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Supplier Abbreviations

Code	Supplier	Code	Supplier
AV	Avago Technologies	REN	Renesas
APT	Advanced Power Technology	RHM	Rohm
BNS	Bourns (formerly Power Innovations)	SEM	Semelab
FCH	Fairchild Semiconductor	SLX	Vishay - Siliconix
FE	Fuji Electric Device Technology	SKN	Semikron
GS	Vishay - General Semiconductor	SNK	Sanken
INF	Infineon	SNX	Sanrex
IR	International Rectifier	ST	STMicroelectronics
IXYS	IXYS Semiconductor	SY	Sanyo
MC	SPC-Multicomp	TFK	Vishay - Telefunken
MS	Microsemi	TOSH	Toshiba
NXP	NXP (formally Philips Semiconductors)	WCD	Westcode Semiconductors
ON	ON Semiconductor	ZET	Zetex

452286

Transistor Packages and Pin-Outs

Pin-Out Key

211176

	Pin Out						
Package	**1**	**2**	**3**	**4**	**5**	**6**	**7**
TO-18(a)	C	B	E				
TO-18(b)	G	D	S				
TO-71(a)	E1	E2	C2	B2	B1	C1	
TO-71(b)	S1	D1	G1	S2	D2	G2	
TO-72(a)	B	E	C	Scrn			
TO-72(b)	E	B	C	Scrn			
TO-72(c)	D	G	B+case	S			
TO-72(d)	D	G2	G1	S+case			
TO-72(e)	S	D	G	case			
TO-78(a)	S1	G1	D1	C	D2	G2	S2
TO-78(b)	S1	D1	G1	C	S2	D2	G2
TO-92, Straight Leads:							
TO-92(a)	B	C	E				
TO-92(b)	C	B	E				
TO-92(c)	B	E	C				
TO-92(d)	E	B	C				
TO-92(j)	C	E	B				
TO-92(k)	S	G	D				
TO-92(m)	G	S	D				
TO-92(n)	G	D	S				
TO-92(p)	D	G	S				
TO-92, Preformed Leads:							
TO-92(f)	E	B	C				
TO-92(g)	B	E	C				
TO-92(h)	B	C	E				
TO-92(r)	D	S	G				

Low Power Bipolar Transistors - SMD (P_{tot} to 1.0W)

General Purpose Transistors

SOT-666

SOT-323

V_{CEO} max. V	I_C max. mA/A	h_{FE} min.	@	I_C mA/A	P_{tot} mW / W	Mftr.	Package	NPN	PNP
15	0.5A	200		10mA	300mW	NXP	SOT-666	Dual PNP/NPN	PBSS3515VS
15	2A	200		0.5A	0.5W	ST	SOT-23	–	2STR1215
15	2A	200		500mA	0.5W	ST	SOT-23	–	2STR2215
20	25mA	40		7A	250mW	NXP	SOT-23	BFS20	–
25	800mA	250		100mA	350mW	FCH	SOT-23	BC818-40	–
30	0.1A	200		2A	300mW	ON	SOT-23	BC849BLT1G	–
30	100mA	420		2A	250mW	NXP	SOT-23	BC849C	–
30	100mA	200		2A	250mW	NXP	SOT-23	BC850B	–
30	100mA	420		2A	250mW	NXP	SOT-23	–	BC859C
30	100mA	420		2A	350mW	MC	SOT-23	–	BC858C
30	100mA	420		2A	250mW	FCH	SOT-23	BC848C	–
30	1200mA	20000		100mA	350mW	FCH	SOT-23	BCV27	–
30	1200mA	20000		100mA	350mW	FCH	SOT-23	–	BCV26
30	3A	90		–	1.6W	ST	SOT-223	–	STN790A
30	10A	70		–	–	ST	SOT-223	–	STN888
32	100mA	380		2A	250mW	NXP	SOT-23	BCW60D	–
32	100mA	215		10mA	250mW	NXP	SOT-23	–	BCW30
32	100mA	200		0.01	250mW	NXP	SOT-23	BCW32	–

PDF Support

Low Power Bipolar Transistors - SMD (P_{tot} to 1.0W) - continued

General Purpose Transistors - continued

V_{CEO} max.	I_C max.	h_{FE}	I_C	P_{tot}				
32	100mA	420	2A	250mW	NXP	SOT-23	BCW33	–
32	100mA	180	2A	250mW	NXP	SOT-23	BCW60B	–
40	25mA	67	1A	250mW	NXP	SOT-23	BF840	–
40	200mA	100	10mA	350mW	FCH	SOT-23	MMBT3904	–
40	200mA	80	1A	250mW	NXP	SOT-23	–	PMBT3906
40	200mA	100	10mA	350mW	FCH	SOT-23	–	MMBT3906
40	0.2A	100	10mA	330mW	INF	SOT-23	SMBT3904	–
40	0.2A	100	10mA	330mW	INF	SOT-23	–	SMBT3906
40	600mA	100	150mA	250mW	NXP	SOT-23	PMBT4401	–
40	600mA	100	150mA	250mW	NXP	SOT-23	–	PMBT4403
40	0.6A	100	150mA	330mW	INF	SOT-23	SMBT2222A	–
40	1000mA	100	150mA	350mW	FCH	SOT-23	MMBT2222A	–
40	1A	300	500mA	350mW	NXP	SOT-323	PBSS4140U	–
40	1A	300	100mA	350mW	NXP	SOT-323	–	PBSS5140U
45	0.1A	200	2A	250mW	INF	SOT-323	BC847BW	–
45	0.1A	420	2A	200mW	NXP	SOT-323	BC847CW	–
45	100mA	420	2A	250mW	NXP	SOT-23	BC850C	–
45	100mA	125	2A	250mW	NXP	SOT-23	–	BC857
45	100mA	125	2A	250mW	NXP	SOT-23	–	BC857A
45	100mA	220	2A	200mW	NXP	SOT-23	–	BC857B
45	100mA	420	2A	250mW	NXP	SOT-23	–	BC857C
45	100mA	420	2A	250mW	NXP	SOT-23	–	BC860C
45	100mA	215	2A	250mW	NXP	SOT-23	–	BCW70
45	100mA	110	2A	250mW	NXP	SOT-23	BCW71	–
45	100mA	200	2A	250mW	NXP	SOT-23	BCW72	–
45	100mA	110	2A	250mW	NXP	SOT-23	BC847	–
45	100mA	110	2A	250mW	NXP	SOT-23	BC847A	–
45	100mA	200	2A	200mW	NXP	SOT-23	BC847B	–
45	100mA	420	2A	250mW	NXP	SOT-23	BC847C	–
45	100mA	200	2A	200mW	MC	SOT-23	BC847B	–
45	100mA	420	2A	250mW	MC	SOT-23	BC847C	–
45	100mA	420	2A	250mW	NXP	SOT-23	–	BC860C
45	100mA	160	100mA	250mW	NXP	SOT-23	–	BC807-25
45	100mA	180	2A	250mW	NXP	SOT-23	BCX70H	–
45	100mA	180	50mA	250mW	NXP	SOT-23	–	BCX71H
45	500mA	100	100mA	250mW	NXP	SOT-23	–	BC807
45	500mA	100	100mA	250mW	NXP	SOT-23	–	BC807-16
45	500mA	250	100mA	250mW	NXP	SOT-23	–	BC807-40
45	500mA	100	100mA	250mW	NXP	SOT-23	BC817	–
45	500mA	100	100mA	250mW	NXP	SOT-23	BC817-16	–
45	500mA	160	100mA	0.35W	FCH	SOT-23	BC817-25	–
45	500mA	250	100mA	250mW	NXP	SOT-23	BC817-40	–
45	500mA	100	100mA	200mW	NXP	SOT-23	–	BCX17
45	0.5A	160	100mA	250mW	ON	SOT-23	BC817-25LT1G	–
60	600mA	100	1A	250mW	NXP	SOT-23	–	PMBT2907A
60	0.6A	100	150mA	330mW	INF	SOT-23	–	SMBT2907A
60	800mA	100	150mA	350mW	FCH	SOT-23	–	MMBT2907A
60	3A	160	1A	1.6W	ST	SOT-223	2STN1360	–
65	100mA	110	2A	250mW	NXP	SOT-23	BC846	–
65	100mA	110	2A	250mW	NXP	SOT-23	BC846A	–
65	100mA	200	2A	250mW	NXP	SOT-23	BC846B	–
65	100mA	200	2A	250mW	INF	SOT-23	BC846B	–
65	100mA	125	2A	250mW	NXP	SOT-23	–	BC856
65	100mA	200	2A	200mW	INF	SOT-23	–	BC856B
65	0.1A	200	2A	250mW	INF	SOT-323	BC846BW	–
65	0.1A	200	2A	200mW	INF	SOT-323	–	BC856BW
80	500mA	100	10mA	250mW	NXP	SOT-23	PMBTA06	–
160	300mA	80	10mA	250mW	NXP	SOT-23	BSR19A	–
300	100mA	40	10mA	250mW	NXP	SOT-23	PMBTA42	–

Note: SOT-23 and SOT-323 device markings carry a suffix or prefix to denote the country of manufacture: t (Malaysia), p (Hong Kong) or w (China).

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	250+
2STR1215	ST	SMD 129-7994 RL	0.164	0.113	0.090	0.078
BC807	NXP	SMD 108-1219	0.084	0.038	0.028	0.020
BC807-16	NXP	SMD 108-1220	0.070	0.032	0.024	0.018
BC807-25	NXP	SMD 108-1221	0.066	– –	– –	– –
BC807-40	NXP	SMD 108-1222	0.034	– –	– –	– –
BC817	NXP	SMD 108-1223	0.037	0.025	0.021	0.016
BC817-16	NXP	SMD 873-4739 RL	0.139	0.072	0.053	0.031
BC817-25	FCH	SMD 122-8216	0.100	0.063	0.045	0.024
BC817-40	NXP	SMD 108-1225	0.082	– –	– –	– –
BC846	NXP	SMD 108-1227	0.037	0.024	0.018	0.016
BC846A	NXP	SMD 108-1228	0.118	0.052	0.032	0.018
BC846B	NXP	SMD 108-1229	0.072	– –	– –	– –
BC846B	INF	SMD 105-6509 RL	0.046	0.023	0.016	0.009
BC846BW	INF	SMD 105-6510	0.036	0.027	0.021	0.009
BC847BW	INF	SMD 105-6511	0.046	0.029	0.028	0.015
BC847	NXP	SMD 108-1230	0.088	0.039	0.022	0.012
BC847A	NXP	SMD 108-1231	0.088	0.038	0.024	0.011
BC847B	NXP	SMD 108-1232	0.089	0.038	0.022	0.012
BC847C	NXP	SMD 108-1235	0.027	– –	– –	– –
BC847CW	NXP	SMD 108-1236 RL	0.230	0.099	0.063	0.035
BC849C	NXP	SMD 108-1237	0.052	0.029	0.026	0.020
BC850B	NXP	SMD 108-1239	0.170	0.093	0.054	0.049
BC850C	NXP	SMD 108-1241	0.042	0.029	0.023	0.021

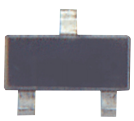
Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	250+
BC856	NXP	SMD 108-1242	0.088	0.038	0.024	0.011
BC856BW	INF	SMD 105-6513	0.033	0.025	0.021	0.010
BC857	NXP	SMD 108-1244	0.040	0.025	0.019	0.017
BC857A	NXP	SMD 108-1245 RL	0.230	– –	– –	– –
BC857B	NXP	SMD 108-1246	0.180	– –	– –	– –
BC857C	NXP	SMD 873-4771	0.061	0.033	0.022	0.012
BC859C	NXP	SMD 108-1248	0.050	0.030	0.028	0.027
BC860C	NXP	SMD 108-1249	0.080	0.042	0.027	0.020
BCW30	NXP	SMD 108-1262	0.105	0.050	0.031	0.023
BCW32	NXP	SMD 108-1264 RL	0.138	0.066	0.045	0.022
BCW33	NXP	SMD 108-1265 RL	0.138	0.066	0.045	0.022
BCW60B	NXP	SMD 108-1266	0.063	0.035	0.020	0.019
BC860C	NXP	SMD 108-1249	0.080	0.042	0.027	0.020
BCW60D	NXP	SMD 108-1267 RL	0.168	– –	– –	– –
BCW70	NXP	SMD 108-1268	0.059	0.040	0.032	0.029
BCW71	NXP	SMD 108-1269	0.134	0.058	0.037	0.023
BCW72	NXP	SMD 108-1270	0.120	0.053	0.034	0.024
BCX17	NXP	SMD 108-1271	0.570	0.250	0.188	0.104
BCX70H	NXP	SMD 108-1282	0.058	0.039	0.031	0.028
BCX71H	NXP	SMD 108-1283	0.062	0.042	0.033	0.030
PMBT4401	NXP	SMD 108-1477 RL	0.094	0.043	0.036	0.022
PMBT4403	NXP	SMD 108-1478	0.117	0.053	0.045	0.029
SMBT2222A	INF	SMD 105-6537 RL	0.053	0.021	0.016	0.015
SMBT2907A	INF	SMD 105-6538 RL	0.048	– –	– –	– –
SMBT3904	INF	SMD 105-6539 RL	0.042	0.024	0.019	0.014
SMBT3906	INF	SMD 105-6540 RL	0.036	0.021	0.016	0.012
			5+	25+	100+	1K+
BF840	NXP	SMD 873-4992 RL	0.172	0.089	0.064	0.045
BFS20	NXP	SMD 873-5000 RL	0.190	0.114	0.086	0.076
BSR19A	NXP	SMD 873-5018 RL	0.330	0.177	0.129	0.084
PBSS4140U	NXP	SMD 873-6197 RL	0.300	0.158	0.115	0.075
PBSS5140U	NXP	SMD 873-6421 RL	0.126	0.065	0.047	0.045
			10+	100+	1K+	3K+
BC817-25LT1G	ON	SMD 955-8608 RL	0.193	0.093	0.059	0.039
BC818-40	FCH	SMD 984-6662 RL	0.111	0.071	0.050	0.027
BC848C	FCH	SMD 984-6670 RL	0.111	– –	– –	– –
BC849BLT1G	ON	SMD 955-8616 RL	0.032	0.019	0.013	0.012
BCV27	FCH	SMD 984-6689 RL	0.136	– –	– –	– –
MMBT3904	FCH	SMD 984-6727 RL	0.084	– –	– –	– –
MMBT2222A	FCH	SMD 984-6700 RL	0.113	– –	– –	– –
BC847B	MC	NEW SMD 157-4343	0.095	0.037	0.026	0.012
BC847C	MC	NEW SMD 157-4344	0.073	0.038	0.026	0.012
BC856B	INF	SMD 105-6512 RL	0.019	0.016	0.014	0.009
BCV26	FCH	SMD 984-6816 RL	0.121	0.077	0.054	0.028
BC858C	MC	NEW SMD 157-4345	0.077	0.050	0.034	0.030
MMBT2907A	FCH	SMD 984-6824 RL	0.095	0.061	0.042	0.018
MMBT3906	FCH	SMD 984-6832 RL	0.099	0.057	0.040	0.017
SMBT2907A	INF	SMD 105-6538 RL	0.048	– –	– –	– –
SMBT3906	INF	SMD 105-6540 RL	0.036	0.021	0.016	0.012
			10+	50+	100+	250+
PMBT2907A	NXP	NEW SMD 162-6500	0.100	0.085	0.063	0.040
PMBT3906	NXP	NEW SMD 162-6501	0.045	0.039	0.029	0.018
PMBTA06	NXP	NEW SMD 162-6502	0.071	0.050	0.036	0.023
PMBTA42	NXP	NEW SMD 162-6503	0.096	– –	– –	– –
			1+	25+	100+	250+
2STN1360	ST	NEW SMD 129-7993 RL	0.340	0.240	0.186	0.161
2STR1215	ST	NEW SMD 129-7994 RL	0.164	0.113	0.090	0.078
2STR2215	ST	NEW SMD 129-8001 RL	0.161	0.112	0.089	0.077
2STR2215	ST	NEW SMD 129-8001 RL	0.161	0.112	0.089	0.077
STN790A	ST	NEW SMD 129-7999 RL	0.620	0.410	0.280	0.230
STN888	ST	NEW SMD 129-8000 RL	0.300	0.220	0.181	0.159

449320

Reels of 3000

Mftrs. List No.	Order Code	Price Per Reel 1+	3+
BC817-40.215	NEW SMD 156-2445	34.60	31.15
BC846B.215	NEW SMD 156-2446	30.73	27.66
BC847.215	NEW SMD 156-2448	30.73	27.66
BC847B.215	NEW SMD 156-2449	30.73	27.66
MMBT2222A	NEW SMD 156-2458	90.89	81.81
MMBT3904	NEW SMD 156-2461	90.89	81.79

General Purpose Transistors



SOT-323

SOT-666

V_{CEO} max. V	I_C max. mA	h_{FE} min.	@	I_C mA	f_T typ. (min.*) MHz	P_{tot} mW	Device Marking	Mftrs. List No.
SOT-323 NPN								
45	500	100		100	100	250	6A	BC817-16
40	25	67		1	380	250	NC	BF840
20	25	40		7	450	250	G1	BFS20
160	300	80		10	300	250	57/U36	BSR19A
SOT-323 PNP								
45	100	420		2	100	250	3G	BC857C
SOT-323 NPN								
40	1	300		500	100	350	41	PBSS4140U
40	1	300		100	150*	350	51	PBSS5140U
SOT-666 NPN								
40	1	300		500	150*	300	22	PBSS4140V

Note: SOT-23 and SOT-323 device markings carry a suffix or prefix to denote the country of manufacture: t (Malaysia), p (Hong Kong) or w (China).

SD78/211407

Order Multiple=10

Mftrs. List No.	Order Code	Price Each 10+	100+	1K+	3K+
PBSS4140U	NEW SMD **873-6197** RL	0.300	0.158	0.115	0.075
PBSS4140V	NEW SMD **873-6200** RL	0.240	0.149	0.116	0.079
PBSS5140U	NEW SMD **873-6421** RL	0.126	0.065	0.047	0.045
BC817-16	SMD **873-4739** RL	0.139	0.072	0.053	0.031
BF840	SMD **873-4992** RL	0.172	0.089	0.064	0.045
BFS20	SMD **873-5000** RL	0.190	0.114	0.086	0.076
BSR19A	SMD **873-5018** RL	0.330	0.177	0.129	0.084
BC857C	SMD **873-4771**	0.061	0.033	0.022	0.012

NPN/PNP Transistors

SOT223

SOT23

SOT563

SOT323

SOT89

- PNP & NPN version
- Ultra small SMD package
- Suitable for automated process
- Low collector emitter saturation voltage
- Ideal for medium amplification and switching applications

V_{CBO} (V)	IC Max(A)	h_{FE} Min.	P_D Max.(W)	Case Style	Order Code	Mftrs. List No.
NPN						
12	0.5	270	0.3	SOT-323	171-0694	2DD2652-7
12	1	270	0.9	SOT-89	171-0678	2DD2661-13
12	1.5	270	0.9	SOT-89	171-0677	2DD2678-13
20	0.1	200	0.6	SOT-23	171-0689	DSS20201L-7
20	0.1	220	0.6	SOT-563	171-0702	DSS4220V-7
20	0.5	220	0.6	SOT-23	171-0688	DSS4320T-7
30	0.5	270	0.3	SOT-323	171-0695	2DD2656-7
30	1.5	270	0.9	SOT-89	171-0681	2DD2679-13
40	0.1	300	0.6	SOT-563	171-0703	DSS4240V-7
40	0.1	300	0.6	SOT-563	171-0704	DSS4140V-7
40	0.1	300	0.4	SOT-323	171-0696	DSS4140U-7
40	0.1	350	0.6	SOT-23	171-0690	DSS4240T-7
40	0.5	220	1.2	SOT-223	171-0672	DJT4031N-13
40	0.5	300	0.9	SOT-89	171-0682	DSS4540X-13
60	0.1	150	1.2	SOT-223	171-0673	DSS60601MZ4-13
60	0.1	250	0.4	SOT-323	171-0697	DSS4160U-7
60	0.1	250	0.6	SOT-563	171-0705	DSS4160V-7
PNP						
12	0.5	270	0.3	SOT-323	171-0698	2DB1689-7
12	1	270	0.9	SOT-89	171-0685	2DB1697-13
12	1.5	270	0.9	SOT-89	171-0684	2DB1713-13
20	0.1	220	0.6	SOT-563	171-0706	DSS5220V-7
20	0.1	250	0.6	SOT-23	171-0691	DSS20200L-7
30	0.5	270	0.3	SOT-323	171-0699	2DB1694-7
30	1.5	270	0.9	SOT-89	171-0686	2DB1714-13
40	0.1	300	0.6	SOT-23	171-0693	DSS5240T-7
40	0.1	300	0.6	SOT-563	171-0707	DSS5240V-7
40	0.1	300	0.6	SOT-563	171-0708	DSS5140V-7
40	0.1	300	0.4	SOT-323	171-0700	DSS5140U-7
40	0.5	220	1.2	SOT-223	171-0675	DJT4030P-13
40	0.5	220	1.2	SOT-223	171-0675	DJT4030P-13
50	1	82	0.9	SOT-89	171-0687	2DA1797-13
60	0.1	150	1.2	SOT-223	171-0676	DSS60600MZ4-13
60	0.1	200	0.6	SOT-563	171-0711	DSS5160V-7
60	0.1	200	0.4	SOT-323	171-0701	DSS5160U-7

535727

Mftrs. List No.	Order Code	Price Each 5+	25+	100+	250+
NPN					
2DD2652-7	SMD **171-0694**	0.166	0.114	0.094	0.073
2DD2661-13	SMD **171-0678**	0.420	0.300	0.230	0.187
2DD2678-13	SMD **171-0677**	0.420	0.300	0.230	0.187
DSS20201L-7	SMD **171-0689**	0.220	0.156	0.125	0.104
DSS4220V-7	SMD **171-0702**	0.220	0.156	0.125	0.104
DSS4320T-7	SMD **171-0688**	0.220	0.156	0.125	0.104
2DD2656-7	SMD **171-0695**	0.166	0.114	0.094	0.073
2DD2679-13	SMD **171-0681**	0.440	0.310	0.250	0.210
DSS4240V-7	SMD **171-0703**	0.220	0.156	0.125	0.104
DSS4140V-7	SMD **171-0704**	0.220	0.156	0.125	0.104

Mftrs. List No.	Order Code	Price Each 5+	25+	100+	250+
NPN					
DSS4140U-7	SMD **171-0696**	0.220	0.153	0.125	0.097
DSS4240T-7	SMD **171-0690**	0.220	0.156	0.125	0.104
DJT4031N-13	SMD **171-0672**	0.600	0.440	0.340	0.280
DSS4540X-13	SMD **171-0682**	0.550	0.400	0.310	0.250
DSS60601MZ4-13	SMD **171-0673**	0.550	0.400	0.310	0.250
DSS4160U-7	SMD **171-0697**	0.220	0.153	0.125	0.097
DSS4160V-7	SMD **171-0705**	0.220	0.156	0.125	0.104
PNP					
2DB1689-7	SMD **171-0698**	0.166	0.114	0.094	0.073
2DB1697-13	SMD **171-0685**	0.420	0.300	0.230	0.187
2DB1713-13	SMD **171-0684**	0.440	0.310	0.250	0.210
DSS5220V-7	SMD **171-0706**	0.220	0.156	0.125	0.104
DSS20200L-7	SMD **171-0691**	0.220	0.156	0.125	0.104
2DB1694-7	SMD **171-0699**	0.166	0.114	0.094	0.073
2DB1714-13	SMD **171-0686**	0.440	0.310	0.250	0.210
DSS5240T-7	SMD **171-0693**	0.220	0.156	0.125	0.104
DSS5240V-7	SMD **171-0707**	0.220	0.156	0.125	0.104
DSS5140V-7	SMD **171-0708**	0.220	0.156	0.125	0.104
DSS5140U-7	SMD **171-0700**	0.220	0.156	0.125	0.104
DJT4030P-13	SMD **171-0675**	0.600	0.440	0.340	0.280
DJT4030P-13	SMD **171-0675**	0.600	0.440	0.340	0.280
2DA1797-13	SMD **171-0687**	0.490	0.350	0.280	0.230
DSS60600MZ4-13	SMD **171-0676**	0.630	0.460	0.350	0.290
DSS5160V-7	SMD **171-0711**	0.220	0.156	0.125	0.104
DSS5160U-7	SMD **171-0701**	0.220	0.156	0.125	0.104

High Gain, SOT-23

- High peak current
- Low saturation voltage
- High forward blocking voltage

Advanced process capability has been used to achieve high current gain hold up making this device ideal for applications requiring high pulsecurrents.

V_{CBO} (V)	Polarity	V_{CBE} (V)	I_C (A)	h_{FE} (@I_C) Min.	P_D Max.(W)	Order Code	List No.
20	NPN	12	2	370	0.35	147-1182	ZXTN25012EFLTA
25	PNP	25	1.5	160	0.35	147-1185	ZXTP25020DFLTA
130	NPN	130	1.5	170	0.35	147-1184	ZXTN25040DFLTA

498170

Mftrs. List No.	Order Code	Price Each 5+	100+	1K+	5K+
NPN					
ZXTN25012EFLTA	SMD **147-1182**	0.570	0.370	0.210	0.164
ZXTN25040DFLTA	SMD **147-1184**	0.240	0.157	0.133	0.129
PNP					
ZXTP25020DFLTA	SMD **147-1185**	0.191	0.129	0.110	0.107

General Purpose SOT-23

V_{CBE} (V)	V_{CBO} (V)	Polarity	I_C (A)	h_{FE} (@I_C) Min.	P_D Max.(W)	Order Code	List No.
45	—	PNP*	0.8	100	0.33	147-1190	BCW68HTA
45	75	NPN	0.8	100	0.33	147-1188	BCW66HTA
150	160	PNP	1	50	0.5	147-1189	FMMT555TA

498178

Mftrs. List No.	Order Code	Price Each 5+	100+	1K+	5K+
BCW66HTA	SMD **147-1188**	0.270	0.182	0.116	0.100
FMMT555TA	SMD **147-1189**	0.300	0.210	0.145	0.126
BCW68HTA	SMD **147-1190**	0.270	0.182	0.116	0.100

SOT-323 High Performance Transistors

V_{CEO} V	V_{CBO} V	$I_{C\ (av)}$ A	h_{FE} min. @	I_C mA	$V_{CE(sat)}$ max. (V) @	I_C mA	f_T min. MHz	P_{tot} W	App'n Code	Mftrs. List No.
NPN										
50	50	1	200	500	0.2	500	215	0.5	GP	ZUMT619
PNP										
20	20	1	200	500	0.175	500	210	0.5	GP	ZUMT718

211074

Order Multiple=10

Mftrs. List No.	Order Code	Price Each 10+	100+	1K+	3K+
ZUMT619	SMD **952-5122**	0.350	0.250	0.173	0.149
ZUMT718	SMD **952-5130**	0.390	0.270	0.190	0.164

Over half a million products available online QGO

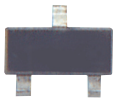
Low Power Bipolar Transistors - SMD (P_{tot} to 1.0W) - continued

Low Saturation, Small-Signal Transistors

SOT-457

SOT-23

SOT-89


SOT-490

V_{CEO} max. V	I_C max. A	h_{FE} min.	@ I_C mA	$V_{ce\ (sat)}$ max. mV	@ I_c mA	P_{tot} mW	Package	Mftrs. List No.
NPN								
20	1	200	1	110	500	480	SOT-23	PBSS4120T
20	2	150	3	70	500	1300	SOT-89	PBSS4320X
20	2	220	0.5	120	1000	480	SOT-23	PBSS4320T
30	2	180	3	60	500	1300	SOT-89	PBSS4330X
30	2	300	0.5	100	500	480	SOT-23	PBSS4230T
40	1	200	1	300	500	250	SOT-23	PMMT491A
40	1	300	0.5	200	100	480	SOT-23	PBSS4140T
40	2	300	0.5	100	500	480	SOT-23	PBSS4240T
40	5	100	5	90	500	1300	SOT-89	PBSS4540X
50	2	300	0.5	90	500	550	SOT-89	PBSS4250X
50	3	300	0.5	80	500	480	SOT-23	PBSS4350T
50	3	300	0.5	80	500	1300	SOT-89	PBSS4350X
60	1	100	1	110	500	480	SOT-23	PBSS4160T
80	4	250	4	40	0.5	1300	SOT-89	PBSS4480X
100	1	80	1	120	500	480	SOT-23	PBSS8110T
PNP								
20	1	200	1	125	500	480	SOT-23	PBSS5120T
20	5	150	5	70	500	1300	SOT-89	PBSS5520X
30	1	210	1	100	100	480	SOT-23	PBSS5130T
30	2	100	2	110	500	480	SOT-23	PBSS5230T
30	2	140	2	70	500	1300	SOT-89	PBSS5330X
40	1	160	1	350	500	250	SOT-23	PMMT591A
40	2	300	0.1	110	500	480	SOT-23	PBSS5240T
40	5	250	0.5	120	500	1300	SOT-89	PBSS5540X
50	3	200	0.5	100	50	750	SOT-457	PBSS5350D
50	3	200	0.5	90	500	480	SOT-23	PBSS5350T
50	2	200	0.5	90	500	1300	SOT-89	PBSS5250X
60	1	100	1	50	500	480	SOT-23	PBSS5160T
80	4	180	1	55	500	1300	SOT-89	PBSS5480X
100	1	125	1	180	500	480	SOT-23	PBSS9110T
100	2	175	-500	395	-3	1.1	SSOT-6	PBSS305PD
NPN/PNP Complement								
40	1	300	0.5	250	50	750	SOT-457	PBSS4140DPN
40	1.35	300	1	75/120	100	750	SOT-457	PBSS4240DPN

387119

Order Multiple=5		Price Each			
Mftrs. List No.	Order Code	5+	100+	1K+	3K+
PBSS305PD	SMD 151-0749 ●	0.290	0.240	0.210	0.176
PBSS4120T	SMD 873-6162 ● RL	0.180	0.097	0.071	0.046
PBSS4140DPN	SMD 873-9900 ● RL	0.230	0.172	0.157	0.138
PBSS4140T	SMD 873-6189 ● RL	0.340	0.180	0.132	0.085
PBSS4160T	SMD 873-6219 ● RL	0.180	0.097	0.071	0.052
PBSS4230T	SMD 873-6227 ● RL	0.200	0.163	0.143	0.132
PBSS4240DPN	SMD 873-6235 ● RL	0.250	0.200	0.181	0.158
PBSS4240T	SMD 873-6243 ● RL	0.230	0.170	0.155	0.134
PBSS4250X	SMD 873-6278 ● RL	0.230	0.164	0.155	0.121
PBSS4320X	SMD 873-6294 ● RL	0.210	0.152	0.123	0.096
PBSS4330X	SMD 873-6308 ● RL	0.290	– –	– –	– –
PBSS4350X	SMD 873-6332 ● RL	0.330	0.230	0.130	0.120
PBSS4480X	SMD 873-6359 ● RL	0.320	0.240	0.181	0.149
PBSS4540X	SMD 873-6375 ● RL	0.410	– –	– –	– –
PBSS5250X	SMD 873-6510 ● RL	0.330	0.250	0.141	0.125
PBSS5330X	SMD 873-6553 ● RL	0.290	0.210	0.126	0.117
PBSS5480X	SMD 873-6600 ● RL	0.330	0.250	0.135	0.125
PBSS5520X	SMD 873-6618 ● RL	0.410	0.310	0.210	0.173
PBSS5540X	SMD 873-6626 ● RL	0.300	0.230	0.140	0.123
PBSS4320T	SMD 873-6286 ● RL	0.140	0.104	0.086	0.070
PBSS4350T	SMD 873-6324 ●	0.220	0.163	0.149	0.129
PBSS5120T	SMD 873-6391 ● RL	0.162	0.086	0.063	0.044
PBSS5130T	SMD 873-6405 ● RL	0.340	0.180	0.132	0.085
PBSS5160T	SMD 873-6448 ● RL	0.340	0.180	0.132	0.085
PBSS5230T	SMD 873-6464 ● RL	0.147	0.104	0.085	0.066
PBSS5240T	SMD 873-6472 ● RL	0.220	0.163	0.149	0.129
PBSS5350D	SMD 873-6561 ● RL	0.210	0.149	0.134	0.126
PBSS5350T	SMD 873-6570 ● RL	0.220	0.163	0.149	0.133
PBSS8110T	SMD 873-6650 ● RL	0.250	0.130	0.096	0.063
PBSS9110T	SMD 873-6685 ● RL	0.390	0.210	0.154	0.101
PMMT491A	SMD 873-8157 ● RL	0.176	0.094	0.069	0.045
PMMT591A	SMD 873-8165 ● RL	0.300	0.156	0.114	0.074

SuperSOT-4 Low Saturation Switching Transistors

SOT-23-6

- Very low conduction losses
- Ideal for battery operated applications
- High current
- High gain
- High power dissipation

V_{CEO} V	V_{CBO} max. V	I_C (pk.) A	h_{FE} min.	@ I_C mA	$V_{CE(sat)}$ max. mV	@ I_C A	P_{tot} W	Device Marking	Mftrs. List No.
NPN									
50	100	5	10	300	1	12	0.1	1.1	ZXT13N50DE6	ZXT13N50DE6
PNP									
12	20	4	15	300	1	10	0.1	1.1	ZXT13P12DE6	ZXT13P12DE6

211371

Order Multiple=5		Price Each				
Mftrs. List No.	Order Code	5+	25+	100+	250+	1K+
ZXT13N50DE6	SMD 952-5394 ● RL	0.35	0.30	0.27	0.25	0.23
ZXT13P12DE6	SMD 952-5408 ● RL	1.11	0.73	0.47	0.39	0.30

NPN Switching Transistors

SOT-23

SOT-89

V_{CEO} max. V	I_C max. A	P_{tot} mW	h_{FE} min.	@ I_C mA	t_{on}/t_{off} max. ns	$V_{ce(sat)}$ max. V	Package	Device Marking	Mftrs. List No.
12	0.1	225	40	10	12/18	0.4	SOT-23	B2*	BSV52
40	0.1	0.25	30	100	65/240	0.2	SOT-23	*1A	PMBT3904
40	0.6	0.25	40	500	35/250	1	SOT-23	*1P	PMBT2222A
40	0.8	250	40	500	35/285	1	SOT-23	U8p	BSR14

Note: Device marking tilda (~) is replaced by either t (Malaysia), p (Hong Kong) or w (China) to denote manufacturing site.

211424

Order Multiple=5		Price Each			
Mftrs. List No.	Order Code	5+	100+	1K+	5K+
BSR16	SMD 108-1311 ● RL	0.260	0.117	0.086	0.053
BSR16	SMD 108-1311 ● RL	0.260	0.117	0.086	0.053
Order Multiple=10		10+	100+	1K+	3K+
PMBT2222A	SMD 108-1475 ● RL	0.155	0.074	0.059	0.031
PMBT3904	SMD 108-1476 ● RL	0.087	0.048	0.038	0.022

SOT-23 (TO-236AB) Switching

ON Semiconductor

FAIRCHILD SEMICONDUCTOR

Supplied on 8mm tape.

V_{CEO} max. V	I_C max. A	P_{tot} mW	h_{FE} min.	@ I_C mA	t_{on}/t_{off} max. ns	$V_{CE(sat)}$ max. V	Device Marking	Mftr.	Mftrs. List No.
NPN									
15	0.2	225	40	10	12/18	0.2	1S	FCH	MMBT2369A
15	3	625	300	200	120*/160*	0.15	617	ZET	FMMT617
20	2.5	625	300	200	170/400	0.2	618	ZET	FMMT618
40	0.2	300	100	10	70/250	0.2	U92	FCH	BSR17A
50	2	625	300	200	170/750	0.22	619	ZET	FMMT619
80	0.5	225	100	100	—	0.25	1GM	ON	MMBTA06LT1G
PNP									
12	2.5	625	100	100	70*/130*	0.22	717	ZET	FMMT717
15	0.2	225	50	10	15*/20*	0.18	3R	FCH	MMBT5771
20	1.5	625	300	100	40*/670*	0.22	718	ZET	FMMT718
40	1.5	625	300	100	40*/435*	0.33	720	ZET	FMMT720
80	0.5	225	100	100	—	0.25	2GM	ON	MMBTA56LT1G

*typ.

211133

Order Multiple=5		Price Each			
Mftrs. List No.	Order Code	5+	100+	1K+	5K+
BSR17A	SMD 984-6697 ● RL	0.106	0.068	0.048	0.025
FMMT617	SMD 952-6420 ● RL	0.560	0.420	0.280	0.230
FMMT618	SMD 952-6439 ● RL	0.690	0.480	0.330	0.290
FMMT619	SMD 952-6447 ● RL	0.610	0.420	0.290	0.260
FMMT717	SMD 952-6455 ● RL	0.460	0.310	0.220	0.188
FMMT718	SMD 952-6463 ● RL	0.450	0.300	0.220	0.186
FMMT720	SMD 952-6471 ● RL	0.470	0.320	0.230	0.196
MMBT2369A	SMD 984-6719 ● RL	0.135	0.093	0.064	0.027
MMBT5771	SMD 984-6840 ● RL	1.130	0.810	0.610	0.460
MMBTA06LT1G	SMD 955-5897 ● RL	0.097	0.049	0.037	0.029
MMBTA56LT1G	SMD 955-5900 ● RL	0.250	0.139	0.092	0.066

SOT-23 High Voltage

V_{CEO} max. V	I_C max. mA	f_T typ. (min.*) MHz	h_{FE} min.	@	I_C mA	P_{tot} mW	Device Marking	Mftrs. List No. NPN	PNP
300	100	60	50		25	250	1Vt/1Wp	BF820.	BF821.

211232

SOT-23 High Voltage

V_{CEO} max. V	I_C max. mA	h_{FE} min.	@	I_C mA	P_{tot} @ 25°C W	Device Marking	Mftr.	Mftrs. List No. NPN	PNP
300	50	50		25	0.25	1V/1W	NXP	BF820	BF821
300	200	40		10	0.35	3E/4E	ZET	FMMTA42	FMMTA92
300	200	40		30	0.35	1D/2D	FCH	MMBTA42	MMBTA92
300	500	40		30	0.35	A92	ST	—	MMBTA92
300	500	40		10	0.35	1D/2D	FCH	KST42	KST92
300	500	100		1	0.5	497/597	ZET	FMMT497	FMMT597
400	150	100		50	0.35	458/558	ZET	FMMT458	FMMT558
500	150	80		50	0.5	560	ZET	—	FMMT560

211135

Order Multiple=5 — **Price Each**

Mftrs. List No.	Order Code	5+	100+	1K+	5K+
BF820	SMD **108-1284** RL	0.230	0.124	0.095	0.063
BF821	SMD **108-1285** RL	0.180	– –	– –	– –
KST42	SMD **109-5135** RL	0.115	0.067	0.050	0.036
KST92	SMD **109-5136** RL	0.034	0.030	0.024	0.019
FMMT458	SMD **952-6684** RL	0.350	0.240	0.172	0.148
FMMT497	SMD **952-5157** RL	0.360	0.250	0.179	0.154
FMMT558	SMD **952-6706** RL	0.340	0.240	0.166	0.144
FMMT560	SMD **952-5114** RL	0.600	0.420	0.290	0.250
FMMT597	SMD **952-5165** RL	0.400	0.280	0.196	0.170
FMMTA42	SMD **952-6277** RL	0.260	0.176	0.124	0.107
FMMTA92	SMD **952-6285** RL	0.270	0.184	0.129	0.111
MMBTA92	SMD **146-0634**	0.073	0.050	0.040	0.033
Order Multiple=10		10+	+	+	+
MMBTA42	SMD **984-6735** RL	0.055	– –	– –	– –
MMBTA92	SMD **984-6859** RL	0.177	– –	– –	– –

SOT-23 High Performance

High performance complementary pairs, supplied on 8mm tape.

V_{CEO} max. V	I_C max. A	f_t min. MHz	h_{FE} min.	@	I_C mA	P_{tot} @ 25°C W	Device Marking	Mftrs. List No. NPN	PNP
15	3	120	300		200	625	617	FMMT617	—
20	2.5	140	300		200	625	618	FMMT618	—
40	1	150	300		500	0.5	41A/91A	FMMT491A	FMMT591A
60	1	150	100		500	0.5	491/591	FMMT491	FMMT591
100	0.8	—	15000		1	0.63	734	—	FMMT734
100	1	150	100		250	0.5	493/593	FMMT493	FMMT593
150	1	100	100		250	0.5	495	FMMT495	—

211136

Order Multiple=5 — **Price Each**

Mftrs. List No.	Order Code	5+	100+	1K+	5K+
FMMT491	SMD **952-6293** RL	0.300	0.210	0.169	0.146
FMMT491A	SMD **952-6692** RL	0.370	0.260	0.184	0.159
FMMT493	SMD **952-6145** RL	0.360	0.250	0.176	0.152
FMMT495	SMD **952-5173** RL	0.330	0.230	0.162	0.139
FMMT591	SMD **952-6307** RL	0.390	0.270	0.188	0.163
FMMT591A	SMD **952-6722** RL	0.330	0.230	0.163	0.140
FMMT593	SMD **952-6161** RL	0.350	0.240	0.172	0.148
FMMT617	SMD **952-6420** RL	0.560	0.420	0.280	0.230
FMMT618	SMD **952-6439** RL	0.690	0.480	0.330	0.290
FMMT734	SMD **952-5106** RL	0.570	0.400	0.280	0.240

V_{CEO} max. V	$I_{C\ (av)}$ max. A	h_{FE} min	@	I_C mA	$V_{CE(sat)}$ max. V	@	I_C mA	f_T min. MHz	P_{tot} @ 25°C mW	Package	Pin Out	Mftr.	Mftrs.List No. NPN	PNP
400	0.3	40		1	0.75		50		625	TO-92	b	FCH	KSP44	—

423671

Order Multiple=5 — **Price Each**

Mftrs. List No.	Order Code	5+	25+	100+	1K+	3K+
MPSA42 (FCH)	**101-7719**	0.290	0.187	0.128	0.076	0.056
MPSA92 (FCH)	**101-7722**	0.310	0.188	0.118	0.085	0.061
KSP44 (FCH)	**109-5133**	0.091	0.052	0.040	0.030	0.028

Low Power Bipolar Transistors - Leaded (P_{tot} to 1.0W)

TO-1, TO-18 General Purpose Amplifiers/Switches

TO-18

V_{CEO} V	V_{CBO} max. V	I_C A	h_{FE} @ 2mA min.	f_T min. (typ.*) MHz	P_{tot} mW	Mftrs. List No. NPN	PNP
20	30	0.2	110	150	600	BC108	—
20	30	0.1	110	150	600	BC108B	—
20	30	0.1	200	150	600	BC108C	—
45	50	0.1	120	200	600	—	BC177
45	50	0.1	180	200	600	—	BC177B
45	50	0.1	110	150	600	BC107	—
45	50	0.1	110	150	600	BC107A	—
45	50	0.1	200	150	600	BC107B	—
80	90	0.15	50	100	360	—	BC477

211410

Order Multiple=5 — **Price Each**

	Order Code	5+	25+	100+	1K+	3K+
BC107	**920-6752**	0.930	0.600	0.430	0.340	0.300
BC107A	**920-6760**	0.990	0.650	0.460	0.370	0.300
BC107B	**920-6779**	0.980	0.640	0.440	0.360	0.290
BC108	**920-6736**	0.690	0.470	0.340	0.270	0.220
BC108B	**920-6744**	0.730	0.450	0.320	0.240	0.200
BC108C	**920-6817**	0.660	0.410	0.300	0.220	0.183
BC177	**920-6825**	1.100	0.690	0.530	0.420	0.340
BC177B	**920-6833**	0.850	0.510	0.410	0.320	0.260
BC477	**920-6841**	1.280	0.760	0.570	0.390	0.380

TO-5, TO-39 General Purpose Amplifiers/Switches

V_{CEO} V	V_{CEO} V	V_{CBO} max. V	I_C A	h_{FE} min.	@	I_C mA	$f_{T\ min.}$ MHz	P_{tot} mW	Package	Mftr.	Mftrs. List No. NPN	PNP
NPN	30	60	1000	40		150	50	800	TO-5	ST	BFY51	—
NPN	35	80	1000	30		150	60	800	TO-5	ST	BFY50	—
PNP	40	40	1	100		100	50	800	TO-39	MC	—	BC160-16
NPN	40	80	1	100		100	50	800	TO-39	MC	BC140-16	—
PNP	60	60	1	100		100	50	800	TO-39	MC	—	BC161-16
PNP	80	80	1	100		100	150	800	TO-39	MC	—	2N4033
NPN	80	120	500	40		150	50		TO-39	ST	2N1893	—

211109

Order Multiple=1 — **Price Each**

Mftrs. List No.	Mftr.	Order Code	1+	10+	100+
BFY50	ST	**980-1596**	1.51	1.15	0.92
BC141-16	MC	**920-7678**	1.25	0.64	0.47
BFY50	ST	**980-1596**	1.51	1.15	0.92
BFY51	ST	**994-6640**	1.49	0.94	0.84
BFY52	-	**120-8599**	0.67	0.48	0.37
2N1893	ST	**101-5768**	1.09	0.72	0.53
2N4033	MC	**920-7058**	1.62	1.00	0.78
BC160-16	MC	**920-7686**	1.26	0.64	0.48

TO-92 General Purpose Amplifiers/Switches

20V to 300V NPN/PNP

V_{CEO} V	V_{CBO} max. V	I_C A	h_{FE} min	@	I_C mA	f_T min (typ.*) MHz	P_{tot} mW	Case Style	Mftr.	Polarity	Mftrs. List No.
20	30	0.1	125		2	150	300	TO-92	MAG	NPN	BC238
25	40	0.025	38		7	550	0.5	TO-92	MC	NPN	BF199
30	30	0.1	200		2	200	625	TO-92	ON	NPN	BC548BZL1G
30	45	200	125		2	150	625	TO-92	FCH	NPN	BC183
30	45	200	240		2	150	625	TO-92	FCH	NPN	BC184L
30	45	200	450		2	150	625	TO-92	FCH	NPN	BC183C
30	45	200	450		2	150	625	TO-92	FCH	NPN	BC183LC
30	45	200	450		2	150	625	TO-92	FCH	NPN	BC184C
30	50	0.1	220		2	300*	625	TO-92	FCH	PNP	BC557B
30	50	0.8	100		50	100	360	TO-92	MC	NPN	2N3704
30	50	0.8	50		50	100	625	TO-92	MAG	NPN	2N3705
30	50	0.8	50		50	100	625	TO-92	MC	NPN	2N3705
40	75	0.6	100		150	300	625	TO-92	ON	NPN	MPS2222AG
40	75	0.6	40		500	300	0.25	SOT-23	NXP	NPN	PMBT2222A
40	60	0.1	30		100	300	0.25	SOT-23	NXP	NPN	PMBT3904
40	40	0.6	100		150	200	625	TO-92	MC	PNP	2N4403
40	60	0.2	100		10	300	500	TO-92	FCH	NPN	2N3904
45	50	100	125		2	100	500	TO-92	NXP	PNP	BC557
45	50	0.1	180		2	75	625	TO-92	ON	PNP	BC557BZL1G
45	50	0.5	100		100	100*	800	TO-92	FCH	PNP	BC327
45	50	0.8	160		100	—	625	TO-92	ON	PNP	BC327-25ZL1G
45	45	1.5	40		150	50*	1000	TO-92	FCH	PNP	BC636
45	50	0.1	200		2	200	350	TO-92	ON	NPN	BC237BG
45	50	0.5	100		100	—	800	TO-92	FCH	NPN	BC337
45	50	1	100		100	—	625	TO-92	FCH	NPN	BC33716
45	50	0.8	160		100	60	625	TO-92	ON	NPN	BC337-25ZL1G
45	50	0.8	250		100	100	625	TO-92	ON	NPN	BC337-40ZL1G

Low Power Bipolar Transistors - Leaded (P_{tot} to 1.0W) - continued

TO-92 General Purpose Amplifiers/Switches - continued

20V to 300V NPN/PNP - continued

V_{CEO}	V_{CBO} max.	I_C	h_{FE}	I_C	f_T min (typ.*)	P_{tot}	Case			Mftrs.
45	50	0.1	200	2	—	500	TO-92	FCH	NPN	BC547B
45	50	0.1	200	2	200	625	TO-92	ON	NPN	BC547BZL1G
45	50	0.1	420	2	200	625	TO-92	ON	NPN	BC547CZL1G
45	50	0.1	200	2	200	350	TO-92	MC	NPN	BC237B
45	50	0.8	160	100	60	625	TO-92	MC	PNP	BC327.25
45	50	0.5	100	100	60	800	TO-92	MC	NPN	BC337
45	50	0.8	160	100	60	625	TO-92	MC	NPN	BC337.25
45	50	0.1	200	2	200	625	TO-92	MC	NPN	BC547B
45	50	0.1	180	2	75	625	TO-92	MC	PNP	BC557B
50	60	0.15	70	2	80	400	TO-92	TOSH	NPN	2SC1815-Y
50	60	0.2	125	2	150	300	TO-92	FCH	NPN	BC182
50	60	0.2	240	2	150	625	TO-92	FCH	NPN	BC182B
50	60	200	125	2	150	625	TO-92	FCH	NPN	BC182L
50	60	200	240	2	150	625	TO-92	FCH	NPN	BC182LB
50	60	0.1	120	2	120	350	TO-92	MC	NPN	BC182B
50	60	0.2	125	2	150	625	TO-92	MC	NPN	BC182L
60	150	5	200	100	—	15	I-PAK	ST	NPN	STD1805-1
65	80	100	75	2	200*	500	TO-92	FCH	PNP	BC556
65	80	100	110	2	—	500	TO-92	FCH	NPN	BC546
65	80	0.1	200	2	150	625	TO-92	ON	NPN	BC546BZL1G
80	100	1	40	150	130	625	TO-92	FCH	PNP	BC640
80	100	1.5	40	150	—	625	TO-92	MC	PNP	BC640
80	80	0.5	50	100	100	625	TO-92	MC	NPN	MPSA06
100	100	2	500	2	—	1.2	TO-92	ST	PNP	STX117-AP

211145

Order Multiple=5			Price Each				
Mftrs. List No.	Mftr.	Order Code	5+	25+	100+	1K+	3K+
NPN							
2N3705	MAG	**120-8606**	0.240	0.167	0.123	0.079	0.073
2N3904	FCH	**984-6743**	0.150	– –	– –	– –	– –
2SC1815-Y	TOSH	**121-3347**	0.158	0.105	0.078	0.059	0.050
BC182	FCH	**984-6760**	0.220	0.138	0.095	0.062	0.043
BC182B	FCH	**101-7649**	0.310	– –	– –	– –	– –
BC182L	FCH	**101-7650**	0.220	0.148	0.103	0.061	0.045
BC182LB	FCH	**101-7651**	0.210	0.142	0.099	0.059	0.043
BC183	FCH	**101-7653**	0.107	0.087	0.073	0.061	0.047
BC183C	FCH	**101-7655**	0.240	0.157	0.107	0.064	0.047
BC183LC	FCH	**101-7656**	0.250	0.161	0.116	0.069	0.051
BC184C	FCH	**101-7657**	0.280	0.173	0.119	0.077	0.054
BC184L	FCH	**101-7658**	0.230	0.144	0.099	0.064	0.045
BC237BG	ON	**955-6389**	0.048	0.034	0.028	0.022	0.019
BC238	MAG	**120-8595**	0.220	0.152	0.108	0.062	0.051
BC557B	FCH	**101-7678**	0.230	0.137	0.111	0.070	0.051
BC640	FCH	**101-7681**	0.320	0.210	0.141	0.084	0.061
PMBT2222A	NXP	SMD **108-1475** RL	0.155	0.074	0.059	0.031	– –
PMBT3904	NXP	SMD **108-1476** RL	0.087	0.048	0.038	0.022	– –
STX117-AP	ST	**108-4548**	0.610	0.420	0.340	0.290	0.250
BC337	FCH	**101-7668**	0.173	0.113	0.085	0.073	0.048
BC33716	FCH	**101-7669**	0.270	0.178	0.123	0.073	0.054
BC337-25ZL1G	ON	**955-8497**	0.079	0.056	0.046	0.038	0.032
BC337-40ZL1G	ON	**955-8675**	0.087	0.063	0.052	0.043	0.035
BC546	FCH	**101-7672**	0.270	0.170	0.116	0.076	0.053
BC546BZL1G	ON	**955-8551**	0.062	0.045	0.036	0.031	0.026
BC547B	FCH	**101-7673**	0.210	0.137	0.096	0.057	0.042
BC33716	FCH	**101-7669**	0.270	0.178	0.123	0.073	0.054
BC547BZL1G	ON	**955-8560**	0.050	0.036	0.030	0.026	0.020
BC547CZL1G	ON	**955-8578**	0.049	0.035	0.029	0.025	0.020
BC548BZL1G	ON	**955-8586**	0.062	0.045	0.036	0.031	0.026
MPS2222AG	ON	**955-6842**	0.114	0.057	0.046	0.034	0.026
STD1805-1	ST	**129-7987**	0.430	0.300	0.240	0.210	0.174
2N3705	MC	**157-4369**	0.084	0.073	0.048	0.037	0.036
MPSA06	MC	**157-4388**	0.360	0.280	0.188	0.115	0.089
2N3704	MC	**157-4393**	0.192	0.098	0.074	0.064	0.060
BC337	MC	**157-4379**	0.084	0.073	0.048	0.025	0.023
BC337.25	MC	**157-4380**	0.142	0.073	0.055	0.048	0.045
BC547B	MC	**157-4381**	0.109	0.055	0.042	0.040	0.037
BC182B	MC	**157-4375**	0.142	0.073	0.055	0.048	0.045
BC182L	MC	**157-4376**	0.097	0.077	0.040	0.031	0.030
BC237B	MC	**157-4377**	0.122	0.097	0.060	0.037	0.036
BF199	MC	**157-4387**	0.178	0.092	0.056	0.035	0.034
PNP							
BC327	FCH	**984-6875**	0.300	0.198	0.136	0.081	0.060
BC327-25ZL1G	ON	**955-8489**	0.067	0.048	0.039	0.032	0.028
BC557BZL1G	ON	**955-8527**	0.060	0.044	0.035	0.030	0.025
BC636	FCH	**101-7680**	0.270	0.165	0.122	0.073	0.054

Order Multiple=5			Price Each				
Mftrs. List No.	Mftr.	Order Code	5+	25+	100+	1K+	3K+
PNP							
BC556	FCH	**101-7677**	0.230	0.137	0.101	0.077	0.057
2N4403	MC	**157-4374**	0.122	0.097	0.060	0.037	0.036
BC327.25	MC	**157-4378**	0.142	0.073	0.055	0.048	0.045
BC557B	MC	**157-4384**	0.109	0.055	0.042	0.037	0.035
BC640	MC	**157-4386**	0.230	0.119	0.089	0.078	0.074

TO-39, TO-92, E-Line High Voltage

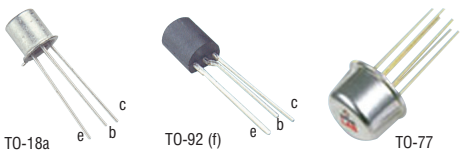
Devices with breakdown voltages of 160V minimum, for applications requiring relatively low collector current, such as lamp drivers and neon tubes.

V_{CEO} max.	$I_{C\ (av)}$ max.	h_{FE} @	I_C	$V_{CE(sat)}$ max. @	I_C ($_{SAT}$) max.	P_{tot} @ 25°C	Package	Mftrs.	Mftrs.List No. NPN	PNP
V	A/mA	min	mA/A	V/mV	mA/A	mW / W				
250V	100mA	50	25mA	0.6V	30mA	830mW	TO-92	NXP	BF422	BF423
250V	0.1A	50	25mA	0.5V	20mA	830mW	TO-92	ON	BF423ZL1G	BF423ZL1G
300V	0.1A	25	30mA	1V	30mA	500mW	TO-39	ST	BF259	BF259
300V	0.1A	25	30mA	1V	30mA	500mW	TO-39	MC	BF259	BF259
300V	0.5A	40	30mA	0.5V	20mA	625mW	TO-92	ON	MPSA42RLRPG	MPSA42RLRPG
300V	0.5A	40	30mA	0.5V	20mA	625mW	TO-92	ON	MPSA92RLRPG	MPSA92RLRPG
300V	500mA	40	10mA	0.5V	20mA	625mW	TO-92	FCH	MPSA42	MPSA42
300V	0.5A	40	10mA	0.5V	20mA	625mW	TO-92	MC	MPSA42	MPSA42
300V	0.5A	40	10mA	0.5V	20mA	625mW	TO-92	MC	MPSA92	MPSA92
400V	300mA	40	100mA	0.75V	50mA	625mW	TO-92	ON	MPSA44G	MPSA44G
400V	0.3A	40	1mA	0.75V	50mA	625mW	TO-92	FCH	KSP44	KSP44
400V	0.75A	5	800mA	0.5V	0.5A	1W	TO-92	ST	STBV42	STBV42
400V	0.3A	40	100mA	0.75V	50mA	625mW	TO-92	MC	MPSA44	MPSA44

452219

Order Multiple=5			Price Each			
Mftrs. List No.	Mftr.	Order Code	5+	25+	100+	1K+
BF259	ST	**980-1588**	1.040	0.770	0.590	0.520
BF259	MC	**920-7112**	0.290	0.260	0.240	0.220
BF423ZL1G	ON	**955-6419**	0.068	0.049	0.040	0.033
KSP44	FCH	**109-5133**	0.091	0.052	0.040	0.030
MPSA42RLRPG	ON	**955-8535**	0.072	0.053	0.043	0.035
MPSA42	FCH	**101-7719**	0.290	0.187	0.128	0.076
MPSA44G	ON	**955-6850**	0.630	0.480	0.380	0.320
MPSA92	FCH	**101-7722**	0.310	0.188	0.118	0.085
MPSA92RLRPG	ON	**955-8543**	0.074	0.061	0.050	0.044
STBV42	ST	**108-4481**	0.490	0.340	0.270	0.240
MPSA42	MC	**157-4390**	0.187	0.094	0.070	0.061
MPSA44	MC	**157-4391**	0.153	0.070	0.063	0.049
MPSA92	MC	**157-4392**	0.095	0.047	0.035	0.031

TO-18, TO-77, TO-92 Low Noise



TO-18a TO-92 (f) TO-77

Suitable for applications requiring low noise and good h_{FE} linearity, eg. audio pre-amplifiers, and instrumentation. The BFY81 is a dual NPN matched differential amplifier, with excellent thermal matching over a wide temperature and current range.

V_{CEO} max.	I_C max.	h_{FE}	@ I_C	F max. (*typ.)	f_T min. (*typ.)	P_{tot} @ 25°C	Package	Pin Out	Mftr.	Mftrs. List No. NPN	PNP
V	A	min.	mA	dB	MHz	mW					
20	0.1	240	2	4	100	300	TO-18	a	SEM	—	BC179
20	0.1	420	2	4	150	600	TO-18	a	MC	BC109C	—
20	0.1	200	2	4	150*	600	TO-18	a	MC	BC109B	BC109
30	100	420	2	1.4*	300*	500	TO-92	f	FCH	BC549C	—
30	0.1	420	2	1.4	300	500	TO-92	f	MC		BC549C
45	100	110	2	3	300*	625	TO-92	f	FCH	BC550	—
Matched Differential Amplifier (Dual NPN)											
45	0.1	10	3	4	—	500	TO-77	—	SEM	BFY81	—

211210

Order Multiple=5			Price Each			
Mftrs. List No.	Mftr.	Order Code	5+	25+	100+	1K+
BC109	MC	**920-6787**	0.560	0.390	0.290	0.230
BC109B	MC	**920-6795**	0.560	0.390	0.290	0.230
BC109C	MC	**920-6809**	0.770	0.510	0.410	0.330
BC179	SEM	**120-8594**	0.630	0.500	0.320	0.240
BFY81	SEM	**120-8600**	22.290	17.050	13.840	9.190
BC549C	FCH	**101-7674**	0.166	0.106	0.075	0.038
BC550	FCH	**101-7675**	0.230	0.144	0.099	0.064
BC549C	MC	**157-4382**	0.119	0.059	0.045	0.040

TO-39, TO-92, E-Line High Voltage

E-Line

TO-92 (h)

TO-39

TO-92 (b)

Devices with breakdown voltages of 160V minimum, for applications requiring relatively low collector current, such as lamp drivers and neon tubes.

V_{CEO} max. V	$I_{C\ (av)}$ max. A	h_{FE} min	@ I_C mA	$V_{CE(sat)}$ max. V	@ I_C mA	f_T min. MHz	P_{tot} @ 25°C mW	Package	Pin Out	Mftr.	Mftrs.List No. NPN	PNP
300	0.1	25	30	1	30	25	500	TO-39	—	ST/ST	BF259	—
300	0.1	25	30	1	30	25	500	TO-39	—	MC/MC	BF259	—

409377

Order Multiple=5		Price Each				
Mftrs. List No.	Order Code	5+	25+	100+	1K+	3K+
BF259 (ST)	**980-1588**	1.040	0.770	0.590	0.520	0.510
BF259 (MC)	NEW **920-7112**	0.290	0.260	0.240	0.220	0.210
MPSA42RLRPG (ON)	**955-8535**	0.072	0.053	0.043	0.035	0.030
MPSA44G (ON)	**955-6850**	0.630	0.480	0.380	0.320	0.260
MPSA92RLRPG (ON)	**955-8543**	0.074	0.061	0.050	0.044	0.029

High Speed Switching

TO-5

TO-39

E-Line

TO-92

TO-18

Fast switching devices exhibiting short turn-off and low saturation voltage characteristics.

V_{CEO} max. V	I_C max. A	$V_{CE(sat)}$ max. V	@ I_C mA	t_{off} max. ns	@ I_C mA	h_{FE} min.	@ I_C mA	P_{tot} @ 25°C mW	Package and Pin Out	Mftr.	Mftrs. List No.
NPN											
15	0.2	0.2	10	18	10	40	10	360	TO-18	MC	2N2369A
15	0.5	0.6	100	21	100	40	10	360	TO-18	MC	BSX20
15	0.2	0.25	10	18	10	40	10	360	TO-18	MC	2N2369
15	0.2	0.2	10	18	10	40	10	360	TO-18	MC	2N2369A
30	0.8	0.4	150	—	—	100	150	500	TO-18	MC	2N2222
40	0.8	0.3	150	60	150	100	150	800	TO-5	ST	2N2219A
40	0.8	0.3	150	60	150	100	150	500	TO-18	ST	2N2222A
40	0.8	0.3	150	60	150	100	150	400	TO-18	MC	2N2222A
40	0.2	0.2	10	250	10	100	10	500	TO-92	FCH	2N3904
40	0.2	0.2	10	250	10	100	10	500	TO-92	ON	2N3904ZL1G
40	600	0.4	150	255	150	40	1	625	TO-92	ON	2N4401G
40	0.2	0.2	10	250	10	100	10	500	TO-92	MC	2N3904
40	0.6	0.4	150	255	150	40	1	625	TO-92	MC	2N4401
60	5	1	5000	1200	5000	40	2000	870	TO-39	MAG	BSV64
120	2	—	—	900	500	40	100	800	TO-39	MAG	BSW67A
PNP											
15	50	0.18	10	20	10	50	10	625	TO-92	FCH	2N5771
40	0.6	0.4	150	30	150	100	150	600	TO-39	MC	2N2905
40	0.6	0.4	150	100	—	100	150	600	TO-18	MC	2N2907
40	0.2	0.25	10	75	10	100	1	250	TO-92	MC	2N3906
60	0.6	0.4	150	30	150	100	150	600	TO-39	MC	2N2905A
60	0.6	0.4	150	30	150	100	150	600	TO-39	ST	2N2905A
60	0.6	0.4	150	50	—	40	500	400	TO-18	MC	2N2906A
60	0.6	0.4	150	100	—	100	150	400	TO-18	MC	2N2907A
60	0.6	0.4	150	30	150	100	150	400	TO-18	ST	2N2907A

211209

			Price Each			
Mftrs. List No.	Mftr.	Order Code	1+	25+	100+	250+
BSV64	MAG	**120-8601**	5.960	4.300	3.410	1.980
BSW67A	MAG	**120-8602**	8.860	6.430	5.020	3.080
BSX20	MC	**920-6876**	1.160	0.740	0.590	0.420
			5+	25+	100+	1K+
2N2219A	ST	**980-1260**	1.090	0.720	0.530	0.450
2N2222	MC	**920-6884**	0.900	0.500	0.470	0.440
2N2222A	ST	**980-1278**	0.470	0.400	0.330	0.320
2N2222A	MC	**920-7120**	0.580	0.510	0.480	0.450
2N2369	MC	**920-6850**	1.200	0.760	0.460	0.340
2N2369A	MC	**920-6868**	1.210	0.760	0.470	0.340
2N2905	MC	**920-7023**	1.250	0.630	0.470	0.420
2N2905A	MC	**920-7031**	1.250	0.640	0.470	0.420
2N2905A	ST	**980-1286**	1.110	0.830	0.620	0.550
2N2906A	MC	**920-6906**	0.830	0.660	0.580	0.520

			Price Each			
Mftrs. List No.	Mftr.	Order Code	1+	25+	100+	250+
2N2907	MC	**920-6892**	0.710	0.570	0.500	0.450
2N2907A	MC	**920-6914**	0.810	0.650	0.570	0.510
2N2907A	ST	**980-1294**	0.560	0.390	0.380	0.370
2N3904	FCH	**984-6743**	0.150	– –	– –	– –
2N3904ZL1G	ON	**955-8420**	0.052	0.038	0.032	0.027
2N4401G	ON	**955-6427**	0.099	0.055	0.035	0.030
2N3904	MC	**157-4370**	0.122	0.087	0.060	0.037
2N3906	MC	**157-4372**	0.122	0.087	0.060	0.037
2N4401	MC	**157-4373**	0.122	0.087	0.060	0.037
			1+	25+	100+	1K+
2N5771	FCH	**101-7646**	1.410	1.010	0.770	0.580

TO-92, NPN, General Purpose

V_{CEO} max. V	I_C max. mA	h_{FE} min.	@ I_C A	P_{tot} mW	Mftrs List No
50	0.2	125	2	300	BC182
40	0.2	100	10	500	2N3904

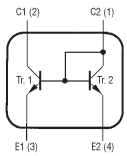
425067

Order Multiple=5		Price Each			
Mftrs. List No.	Order Code	5+	25+	100+	1K+
BC182	**984-6760**	0.220	0.138	0.095	0.062
2N3904	**984-6743**	0.150	– –	– –	– –

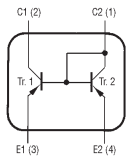
Low Power Transistor Arrays

SOT-143 Current Mirror, Dual Transistors

H = 1.0, W = 2.9, D = 2.6



Config. (a)



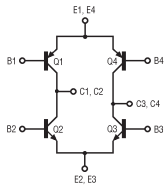
Config. (b)

V_{CEO} max. V	NPN/ PNP	I_C max. mA	f_T MHz	h_{FE} min.	@ I_C mA	$V_{CE(sat)}$ V	@ I_C mA	P_{tot} mW	Pin Config.	Mftr.	Mftrs. List No.
30	NPN	100	250	110	2	0.6	100	300	a	INF	BCV61C
30	NPN/ NPN	100	100	100	0.1	0.6	100	250	a	NXP	BCV61C
30	NPN	100	100	100	2	0.65	100	250	b	NXP	BCV62B
30	PNP/PNP	100	250	125	2	0.65	100	300	b	NXP	BCV62C
30	PNP	100	250	125	2	0.65	100	300	b	INF	BCV62C

211062

Order Multiple=5		Price Each			
Mftrs. List No.	Order Code	5+	100+	1K+	3K+
BCV61C (INF)	SMD **105-6514** RL	0.105	0.064	0.051	– –
BCV61C (PS)	SMD **873-4917** RL	0.280	0.146	0.108	0.070
BCV62B	SMD **108-1261** RL	0.400	0.142	0.116	0.089
BCV62C (PS)	SMD **873-4925** RL	0.280	0.146	0.108	0.070
BCV62C (INF)	SMD **105-6515** RL	0.162	0.123	0.092	0.045

SM-8 Quad Transistors



- H-Bridge configured, complimentary npn/pnp devices
- 8 Lead SOT-223
- Low on-state losses
- Low drive requirements

V_{CEO} V	V_{CBO} V	$I_{C(pk)}$ A	I_C A	h_{FE} (min) npn	h_{FE} (min) pnp	@ I_C mA	$V_{CE(sat)}$ max. (mV) npn	$V_{CE(sat)}$ max. (mV) pnp	@ I_C A	Mftrs. List No.
20	20	6	2.5	300	300	100	150	200	1	ZHB6718

211301

Mftrs			Price Each			
List No.	Order Code		1+	25+	100+	1K+
ZHB6718	SMD **952-6811**		3.27	2.26	1.60	1.37

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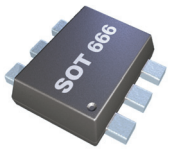
Low Power Digital Transistors

Resistor-Equipped Transistors (RET's)



SOT-363

SOT-23/SC-59

SOT-223

- Small signal devices integrating up to two bias resistors with a transistor on a single die
- Cost effective solution for next-generation consumer products
- Avaiable in SOT-23 (Ptot 250 mW), SOT-323 (Ptot 200 mW), SOT-363 and SOT-666 packages

V_{CEO} = 50V, I_O = 100mA

		SOT-23		SOT-323	
	Ptot	250 mW		200 mW	
R1: Series Base Resistor, R2: Parallel Base Emitter Resistor					
R1 (kΩ)	**R2 (kΩ)**	**NPN**	**PNP**	**NPN**	**PNP**
1	10	BCR523	—	—	—
2.2	2.2	PDTC123ET	PDTA123ET	PDTC123EU	———
2.2	47	PDTC123JT	PDTA123JT	PDTC143EU	—
4.7	4.7	—	PDTA143ET	—	—
4.7	10	PDTC143XT	PDTA143XT	PDTC143XU	—
4.7	47	PDTC143ZT	PDTA143ZT	PDTC143ZU	—
4.7	47	—	—	—	PDTA143ZU
10	10	—	—	PDTC114EU	PDTA114EU
10	47	PDTC114YT	PDTA114YT	PDTC114YU	—
22	22	PDTC124ET	PDTA124ET	PDTC124EU	PDTA124EU
22	47	PDTC124XT	PDTA124XT	PDTC124XU	—
47	22	—	PDTA144WT	PDTC144WU	—
47	47	MMUN2213LT1G	PDTA144ET	—	—
100	100	PDTC115ET	PDTA115ET	———	———
Series Base Resistor Only					
R1 (kΩ)		**NPN**	**PNP**	**NPN**	**PNP**
4.7	—	PDTC143TT	PDTA143TT	—	—
10	—	—	PDTA114TT	PDTC114TU	
22	—	PDTC124TT	———	—	—

		Dual Transistors			
	Ptot	300 mW			
Integrated Resistors, R1/R2				**SOT-666**	**SOT-363**
R1 (kΩ)	**R2 (kΩ)**	**V_{ceo}**	**I_c, mA**	**Mftrs. List No.**	**Mftrs. List No.**
22	22	15	500	—	PBLS1504Y
22	22	50	100	—	PUMD2
47	47	50	100	PUMB2	PUMD3
4.7	—	50	100	PUMB3	PUMD4
10	—	50	100	—	PUMD6
10	47	50	100	—	PUMD9
2.7	47	50	100	PUMB10	PUMD10
10	10	50	100	PUMB11	PUMD12
4.7	47	50	100	—	PUMD13
4.7	4.7	50	100	—	PUMD15
47	47	50	100	—	PUMD48
22	22	50	100	—	PUMH1
47	47	50	100	—	PUMH2
10	—	50	100	—	PUMH4
4.7	—	50	100	—	PUMH7
2.2	47	50	100	—	PUMH10
10	10	50	100	—	PUMH11
4.7	47	50	100	—	PUMH13
22	47	50	100	—	PUMH16

V_{CEO} = 50V, I_O = 500mA

	SOT-23
Ptot	250 mW

R1: Series Base Resistor, R2: Parallel Base Emitter Resistor

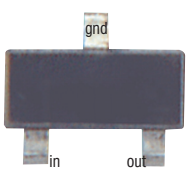
R1 (kΩ)	R2 (kΩ)	NPN	PNP
1	10	—	PDTB113ZT
2.2	2.2	—	PDTB123ET
2.2	10	PDTD123YT	PDTB123YT

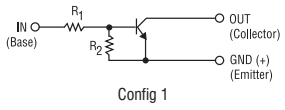
211343

Mftrs List No.	Order Code	Price Each 10+	100+	250+	1K+	3K+
SOT-23, NPN						
PDTC114YT	SMD 873-7061 RL	0.057	0.024	0.016	0.013	0.011
PDTC115ET	SMD 873-7088 RL	0.057	0.024	0.017	0.014	0.011
PDTC123ET	SMD 873-7126 RL	0.057	0.024	0.016	0.013	0.011
PDTC123JT	SMD 873-7142 RL	0.059	0.025	0.017	0.014	0.012
PDTC124ET	SMD 873-7169 RL	0.057	0.024	0.016	0.013	0.011
PDTC124TT	SMD 873-7185 RL	0.040	0.017	0.012	0.011	0.010
PDTC124XT	SMD 873-7207 RL	0.057	0.024	0.017	0.014	0.011
PDTC143TT	SMD 873-7231 RL	0.057	0.024	0.017	0.014	0.011
PDTC143XT	SMD 873-7258 RL	0.059	0.025	0.017	0.014	0.011
PDTC143ZT	SMD 873-7274 RL	0.057	0.024	0.016	0.013	0.011
PDTD123YT	SMD 151-0760	0.066	0.054	0.046	0.041	0.037
BCR523	SMD 115-6452 RL	0.073	0.055	0.042	0.030	0.029
MMUN2213LT1G	SMD 955-6664 RL	0.142	0.080	0.064	0.033	– –
SOT-23, PNP						
PDTA114TT	SMD 873-6723 RL	0.055	0.023	0.016	0.013	0.011
PDTA114YT	SMD 873-6740 RL	0.055	0.023	0.016	0.013	0.011
PDTA115ET	SMD 873-6774 RL	0.050	0.021	0.017	0.012	0.010
PDTA123ET	SMD 873-6812 RL	0.055	0.023	0.016	0.013	0.011
PDTA123JT	SMD 873-6839 RL	0.059	0.025	0.017	0.014	0.011
PDTA124ET	SMD 873-6855 RL	0.059	0.025	0.017	0.014	0.011
PDTA124XT	SMD 873-6898 RL	0.057	0.024	0.016	0.013	0.011
PDTA143ET	SMD 873-6910 RL	0.057	0.024	0.016	0.013	0.011
PDTA143TT	SMD 873-6928 RL	0.055	0.023	0.016	0.013	0.011
PDTA143XT	SMD 873-6944 RL	0.055	0.023	0.016	0.013	0.011
PDTA143ZT	SMD 873-6960 RL	0.059	– –	– –	– –	– –
PDTA144ET	SMD 873-6987 RL	0.052	0.022	0.017	0.012	0.010
PDTA144WT	SMD 873-7029 RL	0.057	0.024	0.017	0.014	0.011
PDTB113ZT	SMD 151-0751	0.066	0.054	0.046	0.041	0.037
PDTB123ET	SMD 151-0752	0.046	0.038	0.032	0.029	0.026
PDTB123YT	SMD 151-0754	0.069	0.056	0.048	0.043	0.038
SOT-323, NPN						
PDTC114EU	SMD 873-7045 RL	0.059	0.026	0.018	0.014	0.012
PDTC114TU	SMD 873-7053 RL	0.045	0.023	0.017	0.014	0.012
PDTC123EU	SMD 873-7134 RL	0.044	0.018	0.013	0.010	0.009
PDTC124EU	SMD 873-7177 RL	0.057	0.024	0.017	0.014	0.011
PDTC143EU	SMD 873-7223 RL	0.061	0.027	0.019	0.015	0.012
PDTC144WU	SMD 873-7304 RL	0.059	0.026	0.018	0.014	0.012
PDTC143XU	SMD 873-7266 RL	0.057	0.024	0.017	0.014	0.011
PDTC143ZU	SMD 873-7282 RL	0.057	0.024	0.017	0.014	0.011
PDTC114YU	SMD 873-7070 RL	0.057	0.024	0.017	0.014	0.011
PDTC124XU	SMD 873-7215 RL	0.047	0.019	0.015	0.011	0.010
SOT-323, PNP						
PDTA114EU	SMD 873-6715 RL	0.055	0.023	0.016	0.013	0.011
PDTA124EU	SMD 873-6863 RL	0.055	0.023	0.016	0.013	0.011
PDTA143ZU	SMD 873-6979 RL	0.057	0.024	0.017	0.014	0.011
SOT-363						
PBLS1504Y	SMD 873-5972 RL	0.280	0.143	0.103	0.069	– –
PUMB2	SMD 873-8254 RL	0.074	0.033	0.025	0.021	0.019
PUMB3	SMD 873-8270 RL	0.072	– –	– –	– –	– –
PUMB10	SMD 873-8181 RL	0.110	– –	– –	– –	– –
PUMB11	SMD 873-8190 RL	0.103	0.046	0.035	0.029	0.024
PUMD2	SMD 873-8360 RL	0.106	0.047	0.036	0.030	0.025
PUMD3	SMD 873-8378 RL	0.050	– –	– –	– –	– –
PUMD4	SMD 873-8386 RL	0.110	0.049	0.037	0.031	0.026
PUMD6	SMD 873-8408 RL	0.057	0.029	0.023	0.021	0.019
PUMD9	SMD 873-8416 RL	0.106	– –	– –	– –	– –
PUMD10	SMD 873-8300 RL	0.106	– –	– –	– –	– –
PUMD12	SMD 873-8319 RL	0.107	0.048	0.036	0.030	0.025
PUMD13	SMD 873-8327 RL	0.102	0.045	0.035	0.029	0.024
PUMD15	SMD 873-8335 RL	0.106	0.047	0.036	0.030	0.025
PUMD16	SMD 873-8343 RL	0.106	– –	– –	– –	– –
PUMD48	SMD 873-8394 RL	0.066	– –	– –	– –	– –
PUMH1	SMD 873-8440 RL	0.102	0.045	0.035	0.029	0.024
PUMH2	SMD 873-8548 RL	0.107	0.048	0.036	0.030	0.025
PUMH4	SMD 873-8572 RL	0.110	– –	– –	– –	– –
PUMH7	SMD 873-8580 RL	0.102	0.045	0.035	0.029	0.024
PUMH10	SMD 873-8459 RL	0.106	0.047	0.036	0.030	0.025
PUMH11	SMD 873-8467 RL	0.106	– –	– –	– –	– –
PUMH13	SMD 873-8475 RL	0.080	– –	– –	– –	– –
PUMH16	SMD 873-8505 RL	0.110	0.049	0.037	0.031	0.026

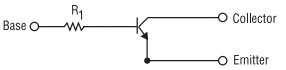
SOT-23 Digital Transistors

ON Semiconductor





Config 1



Config 2

V_{CEO} min. V	I_C max. mA	h_{FE} min.	@ I_C mA	Config.	R1 kΩ	R2 kΩ	Mftrs. List No. NPN	PNP
50	100	35	5	1	10	10	MMUN2211LT1G	MMUN2111LT1G
50	100	60	5	1	22	22	MMUN2212LT1G	—
50	100	80	5	1	47	47	MMUN2213LT1G	—
50	100	80	5	1	10	47	MMUN2214LT1G	—
50	100	160	5	2	10	—	MMUN2215LT1G	MMUN2115LT1G
50	100	160	5	2	4.7	—	MMUN2216LT1G	—

222099

Order Multiple=10			Price Each			
Mftrs. List No.	I.D.	Order Code	10+	100+	1K+	3K+
MMUN2211LT1G	A8A	SMD 955-6648 RL	0.163	– –	– –	– –
MMUN2212LT1G	A8B	SMD 955-6656 RL	0.142	0.080	0.064	0.033
MMUN2213LT1G	A8C	SMD 955-6664 RL	0.142	0.080	0.064	0.033
MMUN2214LT1G	A8D	SMD 955-6672 RL	0.034	– –	– –	– –
MMUN2215LT1G	A8E	SMD 955-6680 RL	0.079	0.046	0.034	0.025
MMUN2216LT1G	A8F	SMD 955-6699 RL	0.032	– –	– –	– –
MMUN2111LT1G	A6A	SMD 955-6702 RL	0.157	0.092	0.059	0.036
MMUN2115LT1G	A6E	SMD 955-6710 RL	0.028	0.015	0.010	0.007

Hybrid Transistors Arrays

Bipolar + Diode Packages

ROHM SEMICONDUCTOR

SMD Packages containing a bipolar transistor and seperate diode, reducing PCB real estate.

UMT-5, L=2, W=1.25, D=0.9
EMT-5, L=1.6, W=1.2, D=0.5

498358

Transistor Polarity	I_C (mA)	Diode, I_F (mA)	$V_{CE(sat)}$ max (V)	Mftrs. List No.	Order Code	Price Each 1+	+	+
Bipolar + Diode Low $V_{CE(sat)}$ (UMT-5)								
NPN	150	100	0.25	UML2NTR	SMD 152-5596	0.057	– –	– –
PNP	500	200	0.25	UML4NTR	SMD 152-5597	0.076	– –	– –
NPN	500	200	0.25	UML6NTR	SMD 152-5598	0.076	– –	– –
Bipolar + Diode Low $V_{CE(sat)}$ (EMT-5)								
PNP (R1=47k, R2=47k)	500	200	—	EML17T2R	SMD 152-5455	0.051	– –	– –
NPN (R1=2.2k, R2=46k)	500	200	—	EML20T2R	SMD 152-5456	0.048	– –	– –

Medium Power Bipolar Transistors (P_{tot} 1W to 3W)

SOT-23

Advanced process capability and package design have been used to maximize the power handling of this small outline transistor.

V_{CEO} V	I_C A	h_{FE} min.	@	I_C A	P_D* W	NPN	PNP
6	5	200		500	1.25	ZXTN23015CFH	ZXTP23015CFH
20	4.5	300		10	1.25	ZXTN25020DFH	—
40	3	300		10	1.25	—	ZXTP25040DFH
40	1	300		100	0.35	—	ZXTP2041F
50	5	190		10	1	ZXTN2031FTA	—
50	4	300		10	1.25	ZXTN25050DFH	—
60	3.5	100		10	1.25	ZXTN25060BFH	ZXTP25060BFH
60	1	100		500	350	ZXTN2038F	—
60	1	100		500	0.35	—	ZXTP2039F
40	1	300		1	0.35	ZXTN2040F	—
140	1	100		10	1.25	—	ZXTP25140BFH

* NOTE: P_D value is obtained when mounted on 18 mm x 18 mm x 1.6 mm FR4 PCB with a very high coverage of 2 oz weight copper in still air conditions

419450

Order Multiple=5			Price Each				
Mftrs. List No.	Order Code		5+	25+	100+	500+	1K+
ZXTN2031FTA	SMD 108-4421 RL		1.070	0.870	0.560	0.490	0.350
Order Multiple=1			1+	25+	100+	500+	1K+
ZXTN2038F	SMD 125-1226 RL		0.430	0.290	0.181	0.150	0.119
ZXTN2040F	SMD 125-1227 RL		0.270	0.210	0.145	0.125	0.101
ZXTN23015CFH	SMD 125-1215 RL		0.470	0.350	0.240	0.210	0.163
ZXTN25020DFH	SMD 125-1214 RL		0.440	0.310	0.210	0.167	0.133
ZXTN25050DFH	SMD 125-1220 RL		0.290	0.210	0.147	0.145	0.141
ZXTN25060BFH	SMD 125-1219 RL		1.080	0.710	0.460	0.370	0.300
ZXTP2039F	SMD 125-1228 RL		0.430	0.290	0.181	0.151	0.119
ZXTP2041F	SMD 125-1229 RL		0.137	0.101	0.067	0.058	0.054
ZXTP23015CFH	SMD 125-1217 RL		0.600	0.470	0.300	0.260	0.210
ZXTP25040DFH	SMD 125-1216 RL		0.980	0.660	0.420	0.340	0.270
ZXTP25060BFH	SMD 125-1225 RL		0.930	0.610	0.390	0.320	0.260
ZXTP25100BFH	SMD 125-1224 RL		0.300	0.220	0.177	0.172	0.168
ZXTP25140BFH	SMD 125-1222 RL		0.290	0.210	0.144	0.124	0.101

Over half a million products available online QGO

SOT-89

NXP SMD

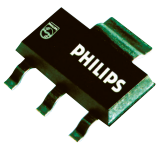
V_{CEO} V	I_C mA	h_{FE} min.	@	I_C mA	P_{tot} mW	f_T typ. MHz	Mftrs. List No.
NPN							
20	1000	160		500	1000mW	100*	BCX6825TA
30	3000	30		3000	1400	50	STF724
40	1000	200		1000	1000mW	—	FCX491ATA
45	1000	63		150	500	180	BCX54
60	1000	63		150	500	180	BCX55
60	1000	100		150	500	180	BCX55-16
60	3000	160		1A	1.4W	—	2STF1360
75	3000	300		500	2000	140	FCX1053A
80	1000	100		150	1000mW	—	BCX5616TA
80	1000	50		500	1000mW	—	BSR43TA
80	1000	63		150	500	180	BCX56
80	1000	100		150	500	180	BCX56-16
PNP							
20	1000	50		5	500	—	BC869
20	1000	160		500	1W	—	BCX6925TA
45	1000	40		500	0.5	50	BCX51
45	1000	100		150	1300	50	BCX51-16
60	1000	100		150	1350	50	BCX52-16
80	1500	140		1000	1.4W	—	STF817A
80	1000	63		150	1350	50	BCX53-10
80	1000	100		150	1300	50	BCX53-16
80	1000	100		150	1W	—	BCX5316TA
80	1000	50		500	1W	—	BSR33TA

211409

Order Multiple=10			Price Each			
List No.	Mftr	Order Code	10+	100+	1K+	3K+
BC869	NXP	SMD 108-1250 RL	0.560	0.280	0.210	0.138
Order Multiple=5			5+	25+	100+	250+
BCX51	NXP	SMD 108-1273 RL	0.460	– –	– –	– –
BCX51-16	NXP	SMD 108-1274 RL	0.125	– –	– –	– –
BCX52-16	NXP	SMD 873-4933 RL	0.340	– –	– –	– –
BCX53-10	NXP	SMD 873-4941 RL	0.330	0.173	0.126	0.083
BCX53-16	NXP	SMD 108-1276 RL	0.320	– –	– –	– –
BCX54	NXP	SMD 108-1277 RL	0.460	– –	– –	– –
BCX55	NXP	SMD 108-1278 RL	1.040	0.520	0.400	0.250
BCX55-16	NXP	SMD 108-1279 RL	0.130	– –	– –	– –
BCX56	NXP	SMD 108-1280 RL	0.430	– –	– –	– –
BCX56-16	NXP	SMD 108-1281 RL	1.000	– –	– –	– –
FCX1053A	ZET	SMD 952-6013 RL	1.080	0.840	0.550	0.460
BCX6925TA	ZET	SMD 147-1212	0.220	0.155	0.132	0.127
BCX5316TA	ZET	SMD 147-1214	0.175	0.123	0.087	0.070
BSR33TA	ZET	SMD 147-1215	0.540	0.340	0.220	0.189
BCX6825TA	ZET	SMD 147-1207	0.330	0.240	0.168	0.147
FCX491ATA	ZET	SMD 147-1208	0.240	0.161	0.105	0.081
BCX5616TA	ZET	SMD 147-1209	0.340	0.210	0.122	0.095
BSR43TA	ZET	SMD 147-1210	0.540	0.340	0.220	0.189
Order Multiple=1			1+	25+	100+	250+
2STF1360	ST	SMD 129-7996 RL	0.570	0.370	0.250	0.200
STF724	ST	SMD 108-4467 RL	0.280	0.197	0.156	0.135
STF817A	ST	SMD 108-4559 RL	0.800	0.660	0.450	0.350

SOT-223

NXP SMD



SOT-223

V_{CEO} V	V_{CBO} V	$I_{C\ av.}$ A	h_{FE} min.	@	I_C A	P_{tot} W	Package	Mftrs. List No. NPN	PNP
20	32	1	85		0.5	1.37	SOT-223	BCP68	BCP69
20	32	1	100		0.5	1.37	SOT-223	—	BCP69-16
20	32	1	160		0.5	1.37	SOT-223	BCP68-25	BCP69-25
40	40	5	250		0.5	2	SOT-223	PBSS4540Z	PBSS5540Z
45	45	1	63		150	1.2	SOT-223	BCP54	BCP51
45	45	1	100		0.015	1.37	SOT-223	BCP54-10	—
80	45	1	63		150	1.3	SOT-223	BCP54-16	BCP51-16
50	60	—	200		0.5	2	SOT-223	PBSS4350Z	PBSS5350Z
60	60	1	63		0.015	1.37	SOT-223	BCP55-10	—
60	60	1	100		0.015	1.37	SOT-223	BCP55-16	BCP52-16
80	100	1	63		150	0.65	SOT-223	BCP56	BCP53
80	100	1	63		0.015	1.37	SOT-223	BCP56-10	BCP53-10
80	100	1	63		150	0.65	SOT-223	BCP56-16	BCP53-16
100	120	—	80		1	2	SOT-223	PBSS8110Z	—
100	120	—	125		1	2	SOT-223	—	PBSS9110Z
300	300	—	40		0.01	1.2	SOT-223	PZTA42	PZTA92
300	300	1	50		0.25	1.2	SOT-223	BF720	—

Medium Power Bipolar Transistors (P_{tot} 1W to 3W) - continued

SOT-223 - continued

211418

Order Multiple=5		Price Each				
Mftrs. List No.	Order Code	5+	25+	100+	250+	1K+
BCP51	SMD 108-1252 RL	0.570	0.260	0.184	0.118	0.089
BCP51-16	SMD 108-1253 RL	0.220	0.151	0.113	0.084	0.063
BCP52-16	SMD 873-4801 RL	0.330	0.173	0.125	0.082	0.077
BCP53	SMD 108-1254 RL	1.240	0.600	0.430	0.290	0.220
BCP53-10	SMD 873-4810 RL	0.330	0.173	0.125	0.082	0.077
BCP53-16	SMD 108-1255 RL	0.520	0.230	0.171	0.109	0.082
BCP54	SMD 108-1256 RL	0.530	0.230	0.154	0.100	0.073
BCP54-10	SMD 873-4828 RL	0.330	0.173	0.125	0.082	0.077
BCP54-16	SMD 873-4836 RL	0.310	0.159	0.115	0.075	0.071
BCP55-10	SMD 873-4844 RL	0.330	0.173	0.125	0.082	0.077
BCP55-16	SMD 873-4852 RL	0.330	– –	– –	– –	– –
BCP56	SMD 108-1257 RL	0.570	0.260	0.184	0.118	0.089
BCP56-10	SMD 873-4860 RL	0.330	– –	– –	– –	– –
BCP56-16	SMD 108-1258 RL	0.520	0.230	0.171	0.109	0.082
BCP68	SMD 873-4879 RL	0.360	– –	– –	– –	– –
BCP68-25	SMD 873-4887 RL	0.360	– –	– –	– –	– –
BCP69	SMD 108-1259 RL	0.340	– –	– –	– –	– –
BCP69-16	SMD 873-4895 RL	0.350	0.187	0.138	0.089	0.083
BCP69-25	SMD 873-4909 RL	0.360	0.192	0.140	0.093	0.086
BF720	SMD 873-4984 RL	0.750	0.400	0.290	0.189	0.177
PBSS4350Z	SMD 873-6340 RL	0.340	0.240	0.135	0.125	0.114
PBSS4540Z	SMD 873-6383 RL	0.430	0.320	0.310	0.250	0.194
PBSS5350Z	SMD 873-6596 RL	0.260	0.200	0.153	0.126	0.104
PBSS5540Z	SMD 873-6634 RL	0.390	0.300	0.200	0.166	0.132
PBSS8110Z	SMD 873-6677 RL	0.260	0.196	0.176	0.141	0.112
PBSS9110Z	SMD 873-6707 RL	0.182	0.137	0.106	0.085	0.078
PZTA42	SMD 873-8637 RL	0.420	0.220	0.162	0.106	0.101
PZTA92	SMD 873-8645 RL	0.400	0.210	0.159	0.104	0.098

SOT-223 General Purpose

V_{CEO} max. V	I_C max. mA	h_{FE} min.	@	I_C A	P_{tot} mW	Device Marking	Transistor Polarity	Mftrs List No
30	3	100		0.01	1.6	N690A	NPN	STN690A
40	1	100		0.15	1	—	NPN	PZT2222A
60	1.5	40		0.15	1	BCP55	NPN	BCP55
60	0.8	100		0.15	1	PZT2907A	PNP	PZT2907A
80	1.2	40		0.15	1	BCP56	NPN	BCP56
80	1.2	40		0.15	1.5	BCP53	PNP	BCP53
300	0.1	40		0.01	1	PZTA92	PNP	PZTA92
300	0.2	40		0.03	1	PZTA42	NPN	PZTA42

425089

Order Multiple=5		Price Each			
Mftrs. List No.	Order Code	5+	25+	100+	250+
BCP53	SMD 984-6778 RL	0.590	0.390	0.270	0.160
BCP55	SMD 984-6620 RL	0.400	– –	– –	– –
BCP56	SMD 984-6638 RL	0.610	0.400	0.280	0.164
PZTA42	SMD 984-6654 RL	0.680	0.400	0.310	0.183
PZTA92	SMD 984-6794 RL	0.330	– –	– –	– –
PZT2222A	SMD 984-6646 RL	0.500	– –	– –	– –
PZT2907A	SMD 984-6786 RL	0.590	0.390	0.270	0.161
STN690A	SMD 146-0629	0.350	0.240	0.193	0.167

SOT-223 General Purpose

Application Code Key: GP=General Purpose Amplifier/Switch, HV=High Voltage

V_{CEO} V	V_{CBO} V	I_C A	@	h_{FE} min.	I_C A	P_{tot} W	App. Code	Mftr.	Mftrs. List No.
NPN									
40	75	1		100	0.15	1	GP	FCH	PZT2222A
60	60	1		40	0.15	1	GP	FCH	BCP55
60	150			90	5000	1.6		ST	STN851
80	100	1		40	0.15	1	GP	FCH	BCP56
80	140			80	500	1.6		ST	STN715
300	300	0.2		40	0.03	1	HV	FCH	PZTA42
400				4	1000	1.6		ST	STN83003
PNP									
-80	-80			80	-500	1.6		ST	STN817A
60	60	0.8		100	0.15	1	GP	FCH	PZT2907A
80	100	1.2		40	0.15	1.5	GP	FCH	BCP53
300	300	0.1		40	0.01	1	HV	FCH	PZTA92
-400				4	-1000	1.6		ST	STN93003

211293

Order Multiple=5		Price Each				
Mftrs. List No.	Order Code	5+	+	+	+	+
BCP53	SMD 984-6778 RL	0.590	0.390	0.270	0.160	0.118
BCP55	SMD 984-6620 RL	0.400	– –	– –	– –	– –
BCP56	SMD 984-6638 RL	0.610	0.400	0.280	0.164	0.120
PZT2222A	SMD 984-6646 RL	0.500	– –	– –	– –	– –
PZT2907A	SMD 984-6786 RL	0.590	0.390	0.270	0.161	0.118
PZTA42	SMD 984-6654 RL	0.680	0.400	0.310	0.183	0.135
PZTA92	SMD 984-6794 RL	0.330	– –	– –	– –	– –
STN715	SMD 108-4490 RL	0.470	0.380	0.300	0.270	0.230
STN817A	SMD 108-4558 RL	0.310	0.220	0.172	0.148	0.126
STN851	SMD 993-5495 RL	0.760	0.500	0.410	0.390	0.330
STN83003	SMD 108-4473 RL	0.470	0.320	0.260	0.220	0.189
STN93003	SMD 108-4551 RL	0.510	0.350	0.280	0.240	0.210

General Purpose TO-92, TO-39, TO-5

TO-39

E-Line

TO-92

High performance, low frequency devices typically with current ratings 1A to 2A. Up to 1W power dissipation.

V_{CEO} max. V	I_C max. A	h_{FE} min.	@	I_C mA	$V_{CE(sat)}$ max. V	@	I_C mA	Package	Pin Out	Mftr.	Mftrs. List No. NPN	Mftrs. List No. PNP
25	2	100		1000	0.5		2000	E-Line	e	ZET	ZTX649	ZTX749
45	1	100		150	0.25		150	E-Line	e	ZET	ZTX450	ZTX550
60	1	50		150	0.35		150	E-Line	e	ZET	ZTX451	ZTX551
60	2	40		500	1		1000	TO-39	—	MAG/	BC441	BC461
60	2	100		500	0.5		2000	E-Line	e	ZET	ZTX651	—
65	1	40		150	0.65		150	TO-39	—	MAG	—	2N4036
75	2	30		500	0.5		500	TO-39	—	MC	2N5320	2N5322
100	1	40		150	0.7		150	E-Line	e	ZET	ZTX453	ZTX553
100	2	100		500	0.5		2000	E-Line	e	ZET	ZTX653	ZTX753
45	1	40		150	0.5		500	TO-92	h	MC	BC635	—
60	2	100		500	0.5		2000	E-Line	e	ZET	—	ZTX751
60	2	40		500	1		1000	TO-39	—	MC	—	BC461

211206

Order Multiple=5		Price Each			
Mftrs. List No.	Order Code	5+	25+	100+	1K+
BC441	120-8596	1.070	0.830	0.550	0.520
BC461	120-8598	1.120	0.760	0.520	0.460
BC461	920-7104	0.500	0.490	0.440	0.400
ZTX450	952-5513	0.280	0.220	0.173	0.167
ZTX451	952-5521	0.340	0.290	0.250	0.230
ZTX453	952-5530	1.000	0.640	0.410	0.350
ZTX550	952-5548	0.480	0.380	0.310	0.250
ZTX551	952-5556	0.580	0.410	0.290	0.250
ZTX553	952-5939	0.360	0.280	0.192	0.136
ZTX649	952-5564	1.430	0.920	0.590	0.510
ZTX651	952-5572	0.590	0.370	0.310	0.280
ZTX653	952-5580	0.530	0.320	0.280	0.260
ZTX749	952-5980	0.690	0.530	0.340	0.250
ZTX751	952-5629	0.510	0.460	0.410	0.390
ZTX753	952-5637	0.580	0.440	0.370	0.340
2N4036	120-8609	1.440	0.980	0.770	0.500
BC635	157-4385	0.109	0.055	0.041	0.037
		5+	25+	100+	1K+
2N5320(MC)	920-7074	2.740	1.710	1.300	0.650
2N5322(MC)	920-7082	2.380	1.170	0.800	0.510

* Preformed leads, 2.54mm (0.1") spacing. TO-220 compatible.

E-Line High Current, 3.5A to 5A

High performance transistors with optimised chip technology to give exceptionally high current capability coupled with very low saturation voltages. TO-92 compatible package.

	V_{CEO} V	I_C max. A	I_C Pulsed A	$V_{CE(sat)}$ V	@	I_C A	h_{FE} min.	@	I_C A	f_T typ. MHz	P_{tot} @ 25°C W	Mftrs. List No.
NPN	25	5	20	0.22		5	300		1	100	1.2	ZTX869
	30	5	20	0.22		5	100		1	100	1.2	ZTX849
	60	5	20	0.25		5	100		2	130	1.2	ZTX851
	100	4	10	0.2		4	100		2	130	1.2	ZTX853
PNP	60	4	15	0.3		4	100		1	120	1.2	ZTX951

211072

Order Multiple=5		Price Each			
Mftrs. List No.	Order Code	5+	25+	100+	1K+
ZTX849	**952-4860**	1.21	0.80	0.47	0.36
ZTX851	**952-4886**	1.95	1.24	0.71	0.56
ZTX853	**952-4894**	1.95	1.24	0.71	0.56
ZTX869	**952-4878**	1.54	1.12	0.72	0.58
ZTX951	**952-4975**	2.05	1.31	0.75	0.59

SOT-223, High Current

Complimentary high current devices, supplied on 12mm tape.

V_{CEO} max V	V_{CBO} max V	I_C max A	$I_{C\ Pulsed}$ max A	h_{FE} min	@ I_C A	P_{tot} W	Mftr.	Mftrs. List No. NPN	PNP
25	35	3	8	100	1	2	ZET	FZT649	FZT749
30	80	7	20	100	7	3	ZET	FZT849	FZT949
60	80	3	6	100	0.5	2	ZET	FZT651	FZT751
60	60	3	5	40	0.5	1.5	INF	BDP949	—
60	150	6	20	100	2	3	ZET	FZT851	FZT951
100	120	2	6	100	0.5	2	ZET	FZT653	FZT753
100	200	6	10	100	2	3	ZET	FZT853	FZT953
300	350	3.5	5	—	—	3	ZET	FZT857	—
400	400	0.5	1	50	0.1	2	ZET	FZT658	FZT758

211139

Order Multiple=5		Price Each			
Mftrs. List No.	Order Code	5+	100+	1K+	3K+
BDP949	SMD **121-4295** RL	0.58	0.41	0.32	0.24
Order Multiple=1		**1+**	**25+**	**100+**	**250+**	**1K+**
FZT649	SMD **952-6560** RL	1.12	0.75	0.48	0.39	0.31
FZT651	SMD **952-5009** RL	1.27	0.84	0.53	0.45	0.35
FZT653	SMD **952-5017** RL	1.24	0.86	0.55	0.46	0.35
FZT658	SMD **952-5246** RL	1.22	0.81	0.52	0.42	0.33
FZT749	SMD **952-6579** RL	1.35	0.89	0.56	0.47	0.36
FZT751	SMD **952-5025** RL	0.79	0.56	0.47	0.40	0.33
FZT753	SMD **952-5033** RL	1.40	0.93	0.59	0.49	0.39
FZT758	SMD **952-5254** RL	1.14	0.76	0.49	0.40	0.31
FZT849	SMD **952-6587** RL	1.39	1.02	0.74	0.61	0.49
FZT851	SMD **952-6323** RL	1.98	1.31	0.83	0.69	0.54
FZT853	SMD **952-6331** RL	1.34	0.98	0.56	0.55	0.51
FZT857	SMD **952-5262** RL	1.54	1.03	0.65	0.54	0.43
FZT949	SMD **952-6595** RL	1.96	1.29	0.82	0.68	0.54
FZT951	SMD **952-6340** RL	1.34	0.93	0.66	0.56	– –
FZT953	SMD **952-6358** RL	1.39	1.04	0.65	0.60	0.59

SOT-223, High Gain at High Current, h_{FE} ≥200

	V_{CEO} V	I_C max. A	I_C Pulsed A	$V_{CE(sat)}$ V	@ I_C A	h_{FE} min.	@ I_C A	f_T min. (*typ.) MHz	P_{tot} @ 25°C W	Mftrs. List No.
NPN	15	4	10	0.45	3	400	3	150	2	FZT688B
	20	3	8	0.35	3	400	2	150	2	FZT689B
	30	5	20	0.25	5	300	1	180	2.5	FZT1049A
	45	3	6	0.5	1	400	1	150	2	FZT690B
	70	2	5	0.5	2	400	0.5	150	2	FZT692B
	75	4.5	10	0.35	4.5	300	1	140	2.5	FZT1053A
PNP	15	3	8	0.45	2	300	2	100	2	FZT788B
	25	3	6	0.45	2	200	2	100	2	FZT789A
	25	4	10	0.35	4	250	0.5	135	2.5	FZT1149A
	40	3	6	0.75	2	250	0.5	100	2	FZT790A
	40	3	5	0.26	1.8	250	0.5	145	2.5	FZT1151A
	70	2	5	0.5	2	250	0.5	100	2	FZT792A

211235

Order Multiple=5		Price Each				
Mftrs. List No.	Order Code	5+	100+	200+	500+	1K+
FZT688B	SMD **952-6609** RL	0.76	0.51	0.32	0.27	0.22
FZT689B	SMD **952-6617** RL	0.85	0.62	0.47	0.45	0.37
FZT690B	SMD **952-5203** RL	1.34	0.89	0.57	0.48	0.36
FZT692B	SMD **952-5211** RL	1.36	0.91	0.57	0.48	0.37
FZT788B	SMD **952-6625** RL	1.47	0.98	0.61	0.52	0.42
FZT789A	SMD **952-6633** RL	1.32	0.88	0.56	0.47	0.36
FZT790A	SMD **952-5220** RL	1.27	0.84	0.53	0.44	0.34
FZT792A	SMD **952-5238** RL	1.33	0.88	0.56	0.47	0.36
FZT1049A	SMD **952-5181** RL	1.34	0.89	0.57	0.48	0.36
FZT1053A	SMD **952-5190** RL	1.33	0.88	0.56	0.47	0.36
FZT1149A	SMD **952-6790** RL	1.38	0.92	0.58	0.48	0.37
FZT1151A	SMD **952-6803** RL	1.62	1.14	0.73	0.59	0.48

E-Line, High Gain at High Current, h_{FE} ≥200

High performance transistors featuring high gain and low saturation voltages at high currents. TO-92 compatible E-line package.

V_{CEO} V	I_C max. A	I_C Pulsed A	$V_{CE(Sat)}$ V	@ I_C A	h_{FE} min.	@ I_C A	f_T min. (*typ) MHz	P_{tot} @ 25°C W	Mftrs. List No.
NPN									
17.5	4	20	0.245	4	300	1	150	1	ZTX1048A
20	3	8	0.5	2	400	2	150	1	ZTX689B
20	3.5	10	0.255	3.5	300	0.2	100	1	ZTX618
40	4	10	0.21	4	300	1	155	1	ZTX1051A
45	2	6	0.5	1	400	1	150	1	ZTX690B
75	3	10	0.25	3	300	1	140	1	ZTX1053A
120	0.5	1	0.5	0.4	400	0.2	130	1	ZTX694B
PNP									
25	3	8	0.45	2	200	2	100	1	ZTX789A
25	3	10	0.2	3	250	0.5	135	1	ZTX1149A
50	3	6	0.75	2	200	1	100	1	ZTX790A
75	2	4	0.5	1	250	0.5	100	1	ZTX792A

211060

Order Multiple=5		Price Each				
Mftrs. List No.	Order Code	5+	25+	100+	1K+	5K+
ZTX618	**952-6528**	0.93	0.57	0.41	0.32	0.25
ZTX689B	**952-5602**	2.03	1.31	0.83	0.72	0.54
ZTX690B	**952-5947**	0.76	0.51	0.41	0.40	0.38
ZTX694B	**952-5610**	1.69	1.09	0.69	0.60	0.44
ZTX789A	**952-6170**	1.22	0.92	0.66	0.60	0.46
ZTX790A	**952-6188**	2.01	1.29	0.82	0.72	0.52
ZTX792A	**952-6137**	2.01	1.29	0.82	0.72	0.52
ZTX1048A	**952-6544**	1.71	1.30	0.77	0.60	0.47
ZTX1051A	**952-6552**	2.01	1.29	0.74	0.58	0.45
ZTX1053A	**952-6390**	1.86	1.18	0.68	0.52	0.40
ZTX1149A	**952-6781**	2.01	1.29	0.74	0.58	0.45

E-Line, TO-92 High Voltage, V_{CEO} ≥300V

V_{CEO} max. V	I_C max. A	h_{FE} min.	@ I_C mA	$V_{CE(sat)}$ V	@ I_C mA	P_{tot} @ 25°C W	Package	Pin Out	Mftrs. List No. Mftr.	NPN	PNP
300	0.5	50	100	0.5	100	1	E-Line	—	ZET	ZTX657	ZTX757
300	3	100	1000	0.25	3000	1.2	E-Line	—	ZET	ZTX857	—
400	0.2	100	50	0.5	50	1	E-Line	—	ZET	—	ZTX558
400	0.3	100	50	0.5	50	1	E-Line	—	ZET	ZTX458	—
400	0.5	40	200	0.5	100	1	E-Line	—	ZET	ZTX658	ZTX758
400	1	5	800	———	———	1	TO-92	———	ST	STBV42	———
400	1	4	1000	———	———	1.5	TO-92	———	ST	STX83003	———

211207

Order Multiple=5		Price Each			
Mftrs. List No.	Order Code	5+	25+	100+	1K+
ZTX458	**952-6668**	0.880	0.560	0.360	0.310
ZTX558	**952-6676**	1.000	0.640	0.410	0.350
STBV42	**108-4481**	0.490	0.340	0.270	0.240
STX83003	**108-4472**	0.220	0.173	0.134	0.102
ZTX657	**952-5599**	1.640	1.050	0.670	0.580
ZTX658	**952-4932**	1.640	1.050	0.670	0.530
ZTX757	**952-5645**	1.310	0.830	0.530	0.460
ZTX758	**952-4959**	1.640	1.050	0.670	0.580
ZTX857	**952-4967**	2.230	1.420	0.910	0.790

High Power Bipolar Transistors - P_{tot} 5W to 250W

NPN/PNP Transistors

SOT23

TO92

TO252

V_{CBO} (V)	IC Max(A)	h_{FE} Min.	P_D Max.(W)	Case Style	Order Code	Mftrs. List No.
NPN						
30	100	210	0.5	SOT-23	174-9422	2STR1230
60	500	180	0.5	SOT-23	174-9421	2STR1160
30	1	100	12.5	SOT-32	174-9417	2SD882
60	2	160	1	TO-92	174-9423	2STX1360
80	8	60	20	TO-252	174-9426	MJD44H11T4
700	4.5	–	150	TO-3	174-9424	BU208A
PNP						
60	2	160	1.4	SOT-89	174-9418	2STF2360
60	4	20	20	TO-252	174-9425	MJD2955T4
80	500	50	12.5	SOT-32	174-9427	MJE172
80	4	7	40	SOT-32	174-9416	2N5195

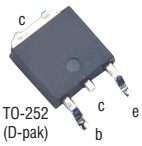
High Power Bipolar Transistors - P_{tot} 5W to 250W - continued

NPN/PNP Transistors - continued

546066

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+
NPN					
2STR1230	SMD 174-9422	0.11	0.09	0.08	0.07
2STR1160	SMD 174-9421	0.11	0.09	0.08	0.07
2SD882	174-9417	0.26	0.23	0.20	0.17
2STX1360	174-9423	0.11	0.09	0.08	0.07
MJD44H11T4	SMD 174-9426	0.28	0.24	0.22	0.18
BU208A	174-9424	2.96	2.59	2.30	1.88
PNP					
2STF2360	SMD 174-9418	0.17	0.15	0.14	0.11
MJD2955T4	SMD 174-9425	0.49	0.43	0.38	0.31
MJE172	174-9427	0.46	0.40	0.36	0.29
2N5195	174-9416	0.52	0.46	0.41	0.33

D-Pak (TO-252), General Purpose



H = 2.38, W = 6.73, D = 10.28

TO-252 (D-pak)

I_C max. A	V_{CEO} max. V	h_{FE} min.	@ I_C A	f_T min MHz	P_{tot} @ 25°C W	Mftrs. List No. NPN	PNP
0.5	300	30	50	—	15	MJD340T4	MJD350T4
3	60	90	3	100	15	—	STD790AT4
1	400	25	0.2	10	15	MJD50G	—
3	100	10	1	3	15	MJD31CG	MJD32CG
5	30	75	5		15	—	STD888T4
8	100	100	8		20	KSH122	KSH127
8	80	40	4	50	20	MJD44H11G	MJD45H11G

222092

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	500+
MJD31CG	SMD 955-7113	0.470	0.260	0.210	0.190
MJD32CG	SMD 955-7121	0.570	0.310	0.230	0.210
MJD44H11G	SMD 955-7806	1.180	0.680	0.510	0.370
MJD50G	SMD 955-5870	1.390	0.740	0.630	0.460
MJD340T4	SMD 993-5274 RL	0.490	0.340	0.270	0.230
MJD350T4	SMD 993-5282 RL	0.430	0.320	0.260	0.198
MJD45H11G	SMD 955-7814	0.620	0.410	0.310	0.270
STD790AT4	SMD 108-4553 RL	0.580	0.400	0.320	0.280
STD888T4	SMD 108-4555 RL	0.500	0.350	0.280	0.250
KSH122	SMD 109-5131 RL	0.910	0.520	0.400	0.290
KSH127	SMD 109-5132 RL	0.610	0.470	0.370	0.270

TO-126, General Purpose

TO-126

$I_{C\ (av)}$ max. A	V_{CEO} max. V	h_{FE} min.	@ I_C A	P_{tot} @ 25°C W	Mftrs. List No. NPN	PNP
0.5	300	30	0.05	20	MJE340	MJE350
1	45	40	0.15	12.5	BD135	BD136
1	60	40	0.15	12.5		BD138
1.5	80	40	0.15	12.5	BD139	BD140
2	80	25	1	26	BD237	BD238
3	80	40	0.15	30	BD179	BD180
4	45	40	2	36	BD437	BD438

333502

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	500+	1K+
BD135	157-4347	0.310	0.260	0.191	0.157	0.150
BD136	157-4348	0.310	0.260	0.191	0.157	0.150
BD138	157-4349	1.110	0.510	0.400	0.300	0.290
BD139	157-4350	0.310	0.260	0.191	0.157	0.150
BD140	157-4351	0.310	0.260	0.191	0.157	0.150
BD179	157-4352	0.510	0.300	0.260	0.189	0.179
BD180	157-4353	0.490	0.300	0.230	0.200	0.189
BD237	157-4354	0.490	0.300	0.230	0.200	0.189
BD238	157-4355	0.490	0.300	0.230	0.200	0.189
BD437	157-4356	0.310	0.260	0.191	0.157	0.150
BD438	157-4357	0.350	0.300	0.220	0.181	0.173
MJE340	157-4367	0.350	0.300	0.260	0.189	0.181
MJE350	157-4368	0.350	0.300	0.260	0.189	0.181

General Purpose

$I_{C\ (av)}$ max. A	V_{CEO} max. V	h_{FE} min.	@ I_C A	P_{tot} @ 25°C W	Package	Mftr.	Mftrs. List No. NPN	PNP
0.14	160	100	0.01	1	TO-126	SY/SY	2SA1209S	2SC2911
0.5	300	30	0.05	20	TO-126	ON/ON	MJE340G	MJE350G
0.5	300	30	0.05	20	TO-126	ST/ST	MJE340	MJE350
1	80	40	0.15	12.5	TO-126	ST	BD139	—
1.5	45	40	0.15	12.5	TO-126	ST/ST	BD135	BD136
1.5	45	25	0.5	12.5	SOT-32	ST	BD135-16	—
1.5	45	100	0.15	1.25	SOT-32	ST	—	BD136-16
1.5	60	40	0.15	12.5	TO-126	ST	—	BD138
1.5	80	25	0.5	12.5	SOT-32	ST	BD139-10	—
1.5	80	25	0.5	12.5	SOT-32	ST	BD139-16	—
1.5	80	40	0.15	12.5	TO-225AA	ON/ON	BD139G	BD140G
1.5	80	63	0.15	1.25	SOT-32	ST	BD140-10	—
1.5	80	100	0.15	1.25	SOT-32	ST	BD140-16	—
2	80	25	1	26	TO-126	ON	BD237G	—
2	80	25	1	26	TO-126	ST/ST	BD237	BD238
3	80	20	0.5	30	TO-126	ON/ON	2N4923G	2N4920G
3	80	40	0.15	30	TO-126	ON/ON	BD179G	BD180G
4	32	50	2	36	TO-126	ST/ST	BD435	BD436
4	45	40	2	36	TO-126	ON/ON	BD437G	BD438G
4	60	25	2	36	SOT-32	ST	BD439	—
4	80	15	2	36	SOT-32	ST	BD441	—
4	80	20	1.5	40	TO-126	ST/ST	2N5192	2N5195G
4	45	40	2	36	TO-126	ST	—	BD438
5	60	40	2	5	TO-39	ST	BFX34	—
5	60	45	0.5	15	TO-126	SEM	BDX36	—
6	50	100	1	10	TO-126	SEM/ST	BUP41	BUP40
10	60	15	10	150	TO-3	ST	2N3772	—
10	80	50	1	150	TO-3	SEM	2N3716	—
10	100	20	0.5	80	TO-247	ST/ST	TIP33C	TIP34C
10	140	20	3	117	TO-3	MC	2N3442	—
10	60	15	10	150	TO-3	MC	2N3772	—
15	40	15	10	150	TO-3	ST	2N3771	—
15	60	5	10	150	TO-3	ST	—	MJ2955
15	60	5	10	115	TO-3	ST	2N3055	—
15	70	20	4	90	TO-247	MC	TIP3055	—
15	60	20	4	150	TO-3	SEM	—	PNP3055
15	60	5	10	150	TO-3	MC	—	MJ2955
15	70	20	4	90	SOT-93	MC	TIP2955	—
15	80	20	5	150	TO-3	SEM	2N6254	—
15	120	20	4	180	TO-3	ON/ON	MJ15015G	MJ15016G
15	60	20	4	115	TO-3	MC	2N3055	—
15	60	20	4	115	TO-3	MC	2N3055H	—
15	60	20	4	115	TO-3	SEM	2N3055H	—
15	70	20	4	90	TO-220	MC	—	TIP2955
16	250	20	0.08	200	TO-247	ON/	—	MJW21195G
16	250	20	0.08	200	TO-247	ON/ON	MJW21196G	—
16	140	15	8	150	TO-3	ON/MC	2N3773G	2N6609
16	200	15	8	250	TO-3	ON/ON	MJ15022G	MJ15023G
16	250	15	8	250	TO-3	ON/ON	MJ15024G	MJ15025G
16	140	15	8	150	TO-3	MC	2N3773	—
16	250	15	8	250	TO-3	MC	MJ15024	—
16	140	15	8	150	TO-3	ON	2N3773G	—
16	200	15	8	250	TO-3	MC	—	MJ15023
16	250	15	8	250	TO-3	MC	—	MJ15025
16	160	15	8	125	SOT-93	ON	—	MJE4353G
20	140	25	5	250	TO-3	ON/MC	MJ15003G	MJ15004G
20	100	20	12	140	TO-3	MC	2N5038	—
20	140	25	5	250	TO-3	MC/MC	MJ15003	MJ15004
20	140	25	5	250	TO-3	ON	—	MJ15004G
25	60	20	10	200	TO-3	SEM	—	2N5883
25	100	10	15	125	TO-247	ST/MC	TIP35C	TIP36C
25	100	25	1.5	125	TO-247	MC	BD249C	—
25	100	10	15	125	TO-3P	MC/MC	TIP35C	TIP36C
30	80	10	30	150	TO-247	SEM	BUW49	—
30	90	25	7.5	200	TO-3	ST	MJ802	—
30	100	6	30	200	TO-3	SEM/SEM	2N6328	2N6331
30	450	—	—	250	TO-3	ST	BUX98A	—
50	125	20	25	250	TO-3	ST	BUV20	—
100	200	—	100	250	ISOTOP	ST	BUT30V	—

211280

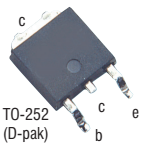
Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	500+	1K+
BD135	ST	980-1529	0.420	0.198	0.158	0.136	0.115
BD136	ST	995-6263	0.260	0.181	0.144	0.125	0.106
BD136-16	ST	SMD 108-4564	0.260	0.178	0.141	0.122	0.104
BD138	ST	995-6271	0.260	0.179	0.142	0.123	0.104
BD139G	ON	955-6052	0.540	0.440	0.350	0.290	0.240
BD139	ST	101-5770	0.250	0.175	0.138	0.120	0.102
BD139-10	ST	SMD 108-4507	0.240	0.164	0.131	0.112	0.096
BD139-16	ST	SMD 108-4508	0.270	0.183	0.146	0.126	0.107
BD140-10	ST	SMD 108-4565	0.280	0.196	0.156	0.134	0.114
BD140-16	ST	SMD 108-4566	0.270	0.189	0.151	0.131	0.111
BD140G	ON	955-6060	0.540	0.440	0.350	0.290	0.240
BD179G	ON	955-7059	0.600	0.440	0.350	0.300	0.250
BD180G	ON	955-7067	0.540	0.300	0.290	0.260	0.220
BD237G	ON	955-7571	0.540	0.400	0.320	0.270	0.220
BD237	ST	994-6560	0.360	0.250	0.200	0.174	0.148
BD238	ST	980-1537	0.500	0.410	0.340	0.290	0.094
BD249C	MC	929-4031	2.920	2.100	1.740	1.510	1.400
BD250C	MC	929-4414	3.510	2.510	2.100	1.800	1.710
BD434	ST	995-6301	0.340	0.240	0.186	0.159	– –
BD435	ST	995-6310	0.280	0.197	0.155	0.132	– –

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	500+	1K+
BD436	ST	995-6328	0.230	0.167	0.137	0.112	– –
BD437G	ON	955-7610	0.540	0.390	0.310	0.260	0.220
BD438G	ON	955-7628	0.490	0.350	0.280	0.240	0.197
BD438	ST	101-5772	0.310	0.200	0.154	0.134	– –
BD439	ST	SMD 108-4509	0.460	0.320	0.250	0.220	0.185
BD441	ST	SMD 108-4510	0.370	0.260	0.200	0.177	0.150
BDX36	SEM	120-8623	2.580	1.830	1.440	0.780	0.700
BFX34	ST	994-6632	2.300	1.830	1.400	1.050	0.980
BUP40	SEM	120-8624	2.250	1.540	0.980	0.680	0.660
BUT30V	ST	993-5240	26.830	21.230	16.890	– –	– –
BUV20	ST	117-5680	17.900	12.400	9.870	8.530	7.250
BUW49	SEM	120-8679	16.200	11.580	8.450	4.950	4.400
BUX98A	ST	980-1855	11.010	8.600	6.410	6.270	5.280
MJ802	ST	994-6578	4.500	3.120	2.490	2.150	1.830
MJ2955	ST	994-6659	1.930	1.340	1.070	0.920	0.780
MJ2955	MC	116-5912	1.010	0.990	0.760	0.580	0.570
MJ15003G	ON	955-6460	3.960	3.130	2.420	1.960	1.590
MJ15003	MC	116-5909	3.110	2.220	1.840	1.620	1.520
MJ15004G	ON	955-6478	3.960	3.130	2.420	1.960	1.590
MJ15004	MC	116-5921	3.210	2.310	1.900	1.660	1.590
MJ15004G	ON	955-6478	3.960	3.130	2.420	1.960	1.590
MJ15015G	ON	955-6486	2.580	2.050	1.610	1.330	1.070
MJ15016G	ON	955-7130	2.970	2.360	1.860	1.530	1.230
MJ15022G	ON	955-7784	3.710	2.430	2.150	1.850	1.640
MJ15023G	ON	955-7792	3.730	2.450	2.150	1.850	1.640
MJ15023	MC	116-5922	6.590	4.700	3.920	3.420	3.190
MJ15024G	ON	955-6729	4.600	3.650	2.820	2.280	1.860
MJ15024	MC	116-5910	6.980	4.970	4.140	3.610	3.400
MJ15025G	ON	955-6737	3.730	2.450	2.150	1.850	1.640
MJ15025	MC	116-5923	7.160	5.140	4.270	3.700	3.490
MJE340G	ON	955-7822	0.630	0.480	0.380	0.320	0.250
MJE340	ST	980-2479	0.810	0.480	0.380	0.270	0.146
MJE350G	ON	955-7830	0.630	0.480	0.380	0.320	0.250
MJE350	ST	980-2487	0.450	0.350	0.330	0.310	0.290
MJE4353G	ON	955-6028	3.930	2.790	2.680	2.170	1.770
MJW21195G	ON	NEW 170-0965	4.850	3.500	2.850	2.390	1.960
MJW21196G	ON	NEW 170-0966	4.850	3.500	2.850	2.390	1.960
PNP3055	SEM	120-8592	2.770	2.370	1.410	1.250	1.140
TIP33C	ST	993-6106	1.180	0.920	0.740	0.680	0.650
TIP34C	ST	993-6114	1.180	0.910	0.890	0.810	– –
TIP35C	MC	929-4350	1.690	1.190	1.010	0.880	0.800
TIP35C	ST	993-6122	1.710	0.920	0.740	0.680	– –
TIP36C	ST	993-6130	1.520	0.930	0.750	0.690	– –
TIP36C	MC	929-4643	1.750	1.250	1.040	0.930	0.850
TIP2955	MC	929-4619	0.950	0.940	0.770	0.630	0.620
TIP2955	MC	993-6084	1.240	0.990	0.950	0.770	0.610
TIP3055	MC	929-4325	1.150	0.840	0.700	0.600	0.570
2N3055	ST	980-1308	1.370	0.860	0.700	0.590	0.550
2N3055	MC	116-5889	0.740	0.710	0.500	0.450	0.440
2N3055H	SEM	120-8631	2.310	1.980	1.800	1.560	1.510
2N3055H	MC	116-5890	1.630	1.170	0.980	0.840	0.780
2N3442	MC	116-5891	1.490	1.050	0.890	0.760	0.730
2N3716	SEM	120-8626	4.490	2.790	2.000	1.230	1.170
2N3771	ST	994-6608	2.660	2.150	1.690	1.670	1.620
2N3772	ST	994-6616	2.930	2.320	1.730	1.450	1.410
2N3772	MC	116-5892	2.900	2.090	1.740	1.510	1.400
2N3773G	ON	955-6745	3.670	2.910	2.250	1.820	1.480
2N3773	MC	116-5893	3.040	2.160	1.800	1.590	1.470
2N4920G	ON	955-6435	0.650	0.510	0.410	0.350	0.290
2N3773G	ON	955-6745	3.670	2.910	2.250	1.820	1.480
2N4923G	ON	955-6443	0.650	0.510	0.410	0.350	0.290
2N5038	MC	116-5894	2.900	2.090	1.740	1.510	1.400
2N5192	ST	980-1324	1.000	0.660	0.490	0.420	0.350
2N5195G	ST	955-6451	0.700	0.530	0.440	0.380	0.310
2N5883	SEM	118-2790	7.430	5.200	4.030	2.640	2.480
2N5884G	ON	955-6044	4.060	3.220	2.490	2.020	1.640
2N5886G	ON	955-6087	3.670	2.910	2.250	1.820	1.480
2N6254	SEM	120-8632	10.500	5.420	4.160	2.700	2.180
2N6328	SEM	118-2792	4.270	2.740	2.110	2.050	2.000
2N6331	SEM	118-2793	10.410	6.500	4.710	2.850	2.660
2N6609	MC	116-5913	3.070	2.190	1.820	1.600	1.500
2SC2911	SY	120-8642	0.800	0.780	0.700	0.560	0.550
BUP41	SEM	120-8625	1.390	1.000	0.700	0.600	0.570
BD135-16	ST	SMD 108-4506	0.250	0.170	0.135	0.116	0.100

Over half a million products available online QGO

D-Pak (TO-252), General Purpose

ON Semiconductor FAIRCHILD SEMICONDUCTOR



TO-252 (D-pak) H = 2.38, W = 6.73, D = 10.28

I_C max. A	V_{CEO} max. V	h_{FE} @ min.	I_C A	f_T min MHz	P_{tot} @ 25°C W	Mftrs. List No. NPN	PNP
0.5	300	30	50	—	15	MJD340T4	MJD350T4
1	400	25	0.2	10	15	MJD50G	—
3	100	10	1	3	15	MJD31CG	MJD32CG
3	80	200	3000 mA		20	MJD44H11TM	—
3	60	90	3	100	15	—	STD790AT4
3	60	200	100 mA	—	15	STD1802T4	—
3	60	80	1000 mA	—	15	STD724T4	—
3	60	100	100 mA	—	15	—	STD826T4
5	30	75	5	—	15	—	STD888T4
8	100	100	8	—	20	KSH122	KSH127
8	80	40	4	50	20	MJD44H11G	MJD45H11G

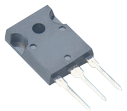
450632

Mftrs. List No.	Mftr.	Order Code	Price Each 5+	25+	100+
KSH122	FCH	SMD 109-5131 RL	0.91	0.52	0.40
KSH127	FCH	SMD 109-5132 RL	0.61	0.47	0.37
MJD31CG	ON	SMD 955-7113	0.47	0.26	0.21
MJD32CG	ON	SMD 955-7121	0.57	0.31	0.23
MJD44H11G	ON	SMD 955-7806	1.18	0.68	0.51
MJD44H11TM	FCH	SMD 122-8219	0.59	– –	– –
MJD45H11G	ON	SMD 955-7814	0.62	0.41	0.31
MJD50G	ON	SMD 955-5870	1.39	0.74	0.63
MJD340T4	ST	SMD 993-5274 RL	0.49	0.34	0.27
MJD350T4	ST	SMD 993-5282 RL	0.43	0.32	0.26
STD724T4	ST	SMD 129-7986 RL	0.40	0.28	0.22
STD790AT4	ST	SMD 108-4553 RL	0.58	0.40	0.32
STD826T4	ST	SMD 129-7998 RL	0.26	0.21	0.17
STD888T4	ST	SMD 108-4555 RL	0.50	0.35	0.28
STD1802T4	ST	SMD 129-7984 RL	0.64	0.44	0.35

High Voltage Power Transistors - Vceo 150V to 800V

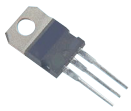
High Voltage Switching

ON Semiconductor multicomp BOURNS FAIRCHILD SEMICONDUCTOR



TO-247

TO-3 (TO-204AA)



TO-220AB (SOT-78B)

TO-126

TO-39

V_{CEO} max. V	$I_{C\ (av)}$ max. A	V_{CES} (V_{CBO}*) max. V	$V_{CE\ sat}$ @ V	I_C A	t_f max. (typ.*) µs	P_{tot} @ 25°C W	Package	Mftr.	Mftrs. List No.
NPN									
200	70	200	0.9	70		300	TO-3	SEM	BUP52
200	50	200	1.2	40		2	TO-3	ST	BUV61
200	10	400	1	5		60	TO-220	MC	BU406
200	7	400	1	5		60	TO-220	ST	BU406
250	60	250	1	60		180	TO-247	ST	BUTW92
250	1	250	1	1		40	TO-220	MC	TIP47
250	1	300	0.5	0.05	—	10	TO-39	ST	2N3440
250	1	300	0.5	0.05		10	TO-39	ST	2N3440
250	1	300	0.5	0.05		10	TO-39	MC	2N3440
300	1	300	0.5	0.05		10	TO-39	ST	2N3439
300	0.25	300	1			11	TO-126	SEM	BD232
400	30	400				250	TO-3	SEM	BUS14
400	15	400	5	15		175	TO-3	ST	BUX48
400	15	800	5	15		175	TO-3	MC	BUX48
400	15	850	5	15		175	TO-3	ST	2N6547
400	15	850	5	15		175	TO-3	MC	2N6547
400	12	700	1.5	8		100	TO-220	ON	MJE13009G
400	10	800	1.5	5		100	TO-3	MC	BUX80
400	10	1000	3.3	8		100	TO-3	MC	BUY69A
400	8	700	1.5	5		80	TO-220	ON	MJE13007G
400	6	900	3	4		70	TO-247	MC	BU426A
400	5	400	0.5			70	TO-220	ST	BUL381D
400	4	400	6	3		60	TO-220	ON	MJE13005G
400	4	400	6	3		60	TO-220	MC	MJE13005
400	4	400	6	3		60	TO-220	ON	MJE13005G
400	4	400	0.7			70	TO-220	ST	BUL128D-B
400	4	400	0.7			70	TO-220	ST	BUL128

High Voltage Power Transistors - Vceo 150V to 800V - continued

High Voltage Switching - continued

V_{CEO} max. V	$I_{C\ (av)}$ max. A	V_{CES} (V_{CBO}*) max. V	$V_{CE\ sat}$ @ V	I_C A	t_f max. (typ.*) µs	P_{tot} @ 25°C W	Package	Mftr.	Mftrs. List No.
NPN									
400	2	800	0.8	0.3		40	TO-220	MC	BUX84
400	1.5	700	1	1		40	TO-126	ON	MJE13003G
400	1	400	1	0.03		40	TO-220AB	ON	TIP50G
400	1	400	1	1		40	TO-220	MC	TIP50
450	160	450	2			270	ISOTOP	ST	BUF460AV
450	50	450	1.2	32		250	ISOTOP	ST	BUV298V
450	30	450	1.5			200	TO-247	ST	BUF420AW
450	30	450	1.5			250	TO-3	SEM	BUS14A
450	30	450	1.5	16		150	ISOTOP	ST	BUV98AV
450	30	1000	1.5	16		250	TO-3	ST	BUX98A
450	15	450	1			125	SOT-93	ST	BUL810
450	15	450	2			125	SOT-93	ST	BUF410A
450	15	450	1.5	8		175	TO-3	ST	BUX48A
450	15	1000	5	0.4		175	TO-3	MC	BUX48A
450	15	1000	2	2		150	TO-247	MC	BUV48A
450	15	1000	2	2		150	SOT-93	ST	BUV48A
450	10	1000	0.8			100	TO-220	ST	BUL510
450	10	450				100	TO-3	SEM	BUX81
450	8	1000	1.5	6		125	TO-247	MC	BUW12A
450	8		1.5			85	TO-220	ST	BUL58D
450	8		0.5			90	TO-220	ST	BUL59
450	8		1.5	0.25		70	TO-220	ST	BUL1102E
450	5	1000				100	TO-3	SEM	BUS11A
450	5		0.5			80	TO-220	ST	BUL38D
450	4	450	1.5			30	TO-220FP	ST	BUL1102EFP
450	4		0.5			70	TO-220	ST	BUL39D
450	3		1			35	TO-252	ST	BULD1101ET4
450	0.5		1	0.2		20	D-PAK	ST	BUXD87T4
450	0.5		1	0.2		40	SOT-93	ST	BUX87
500	10	1000	0.5			36	TO-220FP	ST	BUL310FP
500	5	500	1.1			36	TO-220FP	ST	BUL312FP
500	5	1000	0.5			75	TO-220	ST	BUL310
800	12	1200	1			160	TO-3	SEM	BUX88
800	4	1600	1			90	TO-220	ST	BUL216
400	8.0	450	2	4.0		80	TO-220AB	ON	MJE5852G
375	1	375	1	1		2	TO-220	ON	MJE5731AG

211250

Mftrs. List No.	Fab.	Order Code	Price Each 1+	25+	100+	500+	1K+
2N3439	ST	**101-5769**	1.260	0.920	0.680	0.600	0.480
2N3440	ST	**994-6624**	1.340	0.980	0.720	0.620	– –
2N3440	MC	**920-7040**	0.790	0.490	0.360	0.230	0.193
2N6547	ST	**994-6594**	5.320	4.160	2.990	2.910	– –
2N6547	MC	**116-5898**	3.850	3.000	2.580	2.310	2.190
BD232	SEM	**120-8611**	1.860	1.780	1.210	0.650	0.580
BU406	ST	**980-1782**	1.850	1.290	1.020	0.880	0.750
BU406	MC	**929-4104**	1.020	0.730	0.600	0.540	0.500
BU426A	MC	**929-4112**	2.030	1.430	1.210	1.040	0.990
BUL38D	ST	**108-4526**	1.090	0.720	0.530	0.450	– –
BUL39D	ST	**108-4527**	0.820	0.560	0.450	0.390	0.330
BUL58D	ST	**108-4528**	1.600	1.110	0.880	0.760	0.650
BUL59	ST	**108-4529**	1.110	0.770	0.610	0.530	0.450
BUL128	ST	**993-5177**	0.810	0.470	0.370	0.340	0.300
BUL216	ST	**993-5193**	1.200	0.890	0.720	0.660	0.630
BUL310	ST	**993-5207**	1.320	0.850	0.690	0.630	0.530
BUL310FP	ST	**993-5215**	2.000	1.200	0.970	0.890	0.810
BUL312FP	ST	**108-4545**	0.860	0.600	0.470	0.410	0.350
BUL381D	ST	**108-4524**	1.400	0.970	0.770	0.670	0.570
BUL510	ST	**993-5231**	1.620	1.240	1.000	0.920	– –
BUL810	ST	**108-4514**	3.310	1.870	1.850	1.440	1.280
BUL128D-B	ST	**108-4520**	0.660	0.450	0.360	0.310	0.260
BUL1102E	ST	**108-4539**	1.130	0.780	0.620	0.540	0.460
BUL1102EFP	ST	**108-4542**	1.250	0.860	0.690	0.590	0.500
BUP52	SEM	**120-8613**	19.720	15.750	12.490	10.040	9.510
BUS11A	SEM	**120-8614**	7.720	5.710	4.670	2.770	2.480
BUS14	SEM	**120-8617**	16.520	12.800	10.510	6.520	5.920
BUS14A	SEM	**120-8618**	21.300	15.760	12.760	8.000	7.160
BUV48A	ST	**980-1839**	3.550	2.810	2.090	1.690	1.380
BUV48A	MC	**929-4139**	4.670	3.350	2.780	2.410	2.290
BUV61	ST	**108-4462**	23.000	15.940	12.690	10.960	9.320
BUW12A	MC	**929-4147**	1.250	0.890	0.740	0.650	0.600
BUX48	MC	**116-5899**	4.470	3.170	2.670	2.310	2.180
BUX48A	MC	**116-5900**	4.660	3.330	2.770	2.400	2.270
BUX80	MC	**116-5901**	2.070	1.490	1.240	1.070	1.000
BUX81	SEM	**118-2798**	7.800	5.830	4.680	2.770	2.570
BUX84	MC	**929-4155**	0.950	0.670	0.560	0.480	0.460
BUX88	SEM	**120-8619**	18.900	14.490	11.770	7.360	7.020
BUX98A	ST	**980-1855**	11.010	8.600	6.410	6.270	5.280
BUY69A	MC	**116-5903**	3.350	2.380	2.000	1.730	1.630
BUTW92	ST	**108-4463**	15.590	10.800	8.600	7.430	6.310
BUX48	ST	**108-4475**	8.830	6.120	4.870	4.210	3.580

Mftrs. List No.	Fab.	Order Code	Price Each 1+	25+	100+	500+	1K+
BUXD87T4	ST	SMD **108-4476** RL	1.020	0.710	0.560	0.490	0.420
BUV298V	ST	**108-4477**	69.120	47.890	38.130	32.940	28.010
BUV98AV	ST	**108-4478**	33.310	24.640	20.240	17.790	15.380
BUX87	ST	**108-4479**	0.820	0.570	0.460	0.400	0.330
BUX48A	ST	**108-4480**	8.720	6.040	4.810	4.150	3.530
BULD1101ET4	ST	SMD **108-4493**	1.170	0.810	0.650	0.560	0.470
BUF460AV	ST	**108-4503**	101.230	70.140	55.850	48.240	41.020
BUF410A	ST	**108-4512**	8.120	5.630	4.480	3.870	3.300
BUF420AW	ST	**108-4546**	7.750	6.350	4.610	3.880	3.570
MJE5731AG	ON	**955-6290**	1.460	1.150	0.920	0.770	0.630
MJE5852G	ON	**955-5889**	3.380	2.670	2.060	1.670	1.360
MJE13003G	ON	**955-6273**	0.300	0.210	0.173	0.145	0.119
MJE13005G	ON	**955-7849**	0.780	0.500	0.390	0.330	0.260
MJE13005	MC	**929-4171**	0.950	0.670	0.560	0.480	0.460
MJE13005G	ON	**955-7849**	0.780	0.500	0.390	0.330	0.260
MJE13007G	ON	**955-7857**	1.070	0.830	0.660	0.560	0.460
MJE13009G	ON	**955-7865**	1.770	1.140	0.870	0.730	0.550
TIP47	MC	**929-4376**	0.460	0.450	0.350	0.290	0.280
TIP50G	ON	**116-6989**	0.730	0.420	0.330	0.300	0.250
TIP50	MC	**929-4384**	0.710	0.510	0.420	0.370	0.350

NPN High Voltage Power Modules

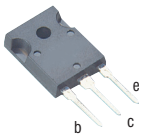
ISOTOP
H=12.2, W=25.4, D=38.2

$I_C$max A	V_{CEO} V	$I_{C(pk)}$ A	h_{FE} typ.	@	I_c A	P_{TOT} W	Mftrs. List No.
150	200	150	27 typ		100	250	BUT30V
160	450	160	15 min		60	270	BUF460AV

423028

Mftrs. List No.	Mftrs.	Order Code	Price Each 1+	25+	100+
BUT30V	ST	**993-5240**	26.83	21.23	16.89
BUF460AV	ST	**108-4503**	101.23	70.14	55.85

TO247 Audio Power Transistors



- Excellent gain linearity
- Pin/package 3/ TO247
- High SOA: 2.25A, 80V, 1 second
- Total harmonic distortion characterized
- High DC current gain, hfe=20 min @ Ic=8Adc

The MJW21195/6 utilize Perforated Emitter technology and are specifically designed for high power audio output, disk head positioners and linear applications.

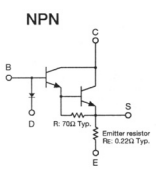
532237

Mftrs. List No.	Transistor Type	Order Code	Price Each 1+	25+	100+	500+
MJW21195G	PNP	**170-0965**	4.85	3.50	2.85	2.39
MJW21196G	NPN	**170-0966**	4.85	3.50	2.85	2.39

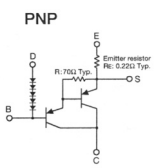
High-Gain Audio Power Output Transistors

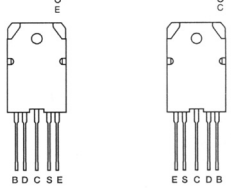
With In-built Temperature Compensating Diodes

NPN



PNP





- Built-in temperature compensation diodes and one emitter resistor
- Real-time temperature compensation
- Symmetrical NPN/PNP pin-out design
- Designed for high quality audio output stages

Body H=28, W=17.8, D=4.5
Lead L=18

$I_{C\ (av)}$ max. A	V_{CEO} max. V	V_{CBO} max. V	$V_{CEO(sat)}$ max. V	I_B max. A	h_{FE} min.	@	I_C A	Emitter resistor Ω	P_{tot} @ 25C W	Mftr.	Mftrs. List No. NPN	PNP
15	160	160	2.0	1	5000		10	0.22	150	SNK	SAP15N	SAP15P

241459

Mftrs. List No.	Order Code	Price Each 1+	10+	25+	100+	250+
SAP15N	**118-2829**	3.79	– –	– –	– –	– –
SAP15P	**118-2830**	2.84	2.79	2.53	2.47	2.41

Audio Power Output Transistors

ON Semiconductor multicomp

TO-220

TO-3

TO-264

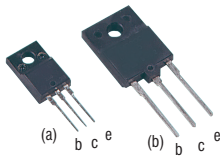
- High power complimentary pairs
- For high quality audio output stages, and general purpose push-pull amplifier configurations
- Silicon epitaxial fabrication
- 2SB817/2SD1047 incorporate ballast resistors for wider SOA, improved f_T vs. I_C, and extended h.f. response

$I_{C\ (av)}$ max. A	V_{CEO} max. V	I_C pk A	V_{CBO} max. V	h_{FE} min.	@ I_C A	P_{tot} @ 25C W	Package	Mftr.	Mftrs. List No. NPN	PNP
1	250	—	250	50	1	50	TO-220	ON	MJE15032G	MJE15033G
1	250	—	250	50	1	50	TO-220	MC	MJE15032	
8	150	16	150	20	4	50	TO-220	ON	MJE15030G	MJE15031G
15	160	—	160	50	5	130	TO-3P	ASN	2SC3519	2SA1386
15	230	—	230	50	5	130	TO-3P	ASN	2SC3263	2SA1294
15	230	—	230	55	1	150	TO-264	MAG	2SC5200-0	2SA1943-0
15	200	200	200	60	7	200	TO-264	ON	MJL3281AG	MJL1302AG
16	250	—	400	25	8	200	TO-264	ON	MJL21194G	MJL21193G
16	250	—	400	25	8	250	TO-3	ON	MJ21194G	MJ21193G
17	180	16	180	30	8	200	MT-200	ASN	2SC2922Y	2SA1216Y
17	230	—	230	50	5	200	MT-200	ASN	2SC3264	2SA1295
With On-board Ballast Resistors for Improved SOA										
12	140	—	160	100	1	100	TO-3PB	SAN	2SD1047-E	—

222098

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	500+	1K+
MJ21193G	ON	**955-6613**	4.60	3.65	2.82	2.28	1.86
MJ21194G	ON	**955-6605**	3.41	2.43	2.15	1.85	1.64
MJE15032G	ON	**955-6621**	1.38	1.09	0.87	0.73	0.60
MJE15033G	ON	**955-6630**	1.38	1.09	0.87	0.73	0.60
MJL1302AG	ON	**955-7040**	4.04	3.20	2.47	2.00	1.63
MJL21193G	ON	**955-5781**	5.09	4.03	3.11	2.52	2.05
MJL21194G	ON	**955-5790**	5.09	4.03	3.11	2.52	2.05
MJE15030G	ON	**955-7091**	1.30	0.79	0.69	0.58	0.44
MJE15031G	ON	**955-7105**	1.52	0.82	0.71	0.60	0.46
MJL3281AG	ON	**117-2585**	4.04	3.20	2.47	2.00	1.63
2SA1216Y	ASN	**119-2132**	8.34	8.19	8.01	7.05	6.76
2SA1294	ASN	**119-2130**	3.20	3.13	3.08	2.66	2.56
2SA1295	ASN	**119-2134**	8.46	8.31	6.38	4.92	4.79
2SA1386	ASN	**119-2128**	2.82	2.76	2.70	2.50	2.40
2SA1943-0	MAG	**121-8390**	3.15	3.10	1.89	1.62	1.57
2SC2922Y	ASN	**119-2131**	8.84	8.67	8.48	7.55	7.25
2SC3263	ASN	**119-2129**	3.40	3.34	3.28	2.84	2.75
2SC3264	ASN	**119-2133**	5.25	5.16	3.96	3.06	2.97
2SC3519	ASN	**118-2828**	4.53	4.44	4.36	4.01	3.87
2SC5200-0	MAG	**121-8389**	3.15	3.10	1.89	1.62	1.57
2SD1047-E	SAN	**119-2126**	2.18	2.14	1.91	1.43	1.37
MJE15032	MC	**157-4337**	1.62	0.79	0.59	0.54	0.49

High Voltage, Switching – Isolated Packages



(a) ISOWATT220
Lead spacing=2.54; Isolation voltage=2kV
(b) ISOWATT218
Lead spacing=5.45; Isolation voltage=4kV

For use in converters, inverters, switch mode power supplies, motor control and other inductive switching applications. Isolated packages offer simpler and safer heatsinking. The MD**FX Series is ideal for use in standard definition HV CRT driving applications, while the HD*FX Series is intended for the new high definition standard CRTs.

$I_{C\ (av)}$ max. A	V_{CEO} max. V	V_{CES} max. V	$V_{CE\ sat}$ V	@ I_C A	t_f max. µs	P_{tot} @ 25°C W	Package	Mftr	Mftrs. List No.
5	450	1000	1.1	1	0.4	35	(a)	ON	MJF18004G
14	700	1500	2.5	7	120ns	62	(a)	ST	MD2310FX
26	700	1500	2	13	230ns	70	(a)	ST	HD1530FX

211219

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	500+	1K+
MJF18004G	**955-7873**	1.18	0.66	0.49	0.42	0.41
HD1530FX	**129-7989**	3.12	2.16	1.72	1.49	1.27
MD2310FX	**129-7992**	2.10	1.46	1.16	1.00	0.85

CRT Deflection Transistors

multicomp

NPN

TO-3

TO-220

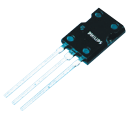
For use in horizontal deflection circuits of CRTs. Suitable for medium, high, and very high resolution monochrome and colour applications.

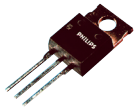
I_C cont. A	V_{CEO} (sus.) A	V_{CES} V	$V_{CE(sat)}$ V	@ I_C A	P_{tot} @ 25°C W	Package	Mftr.	Mftrs. List No.
4	700	1500	1	2	75	TO-220	ST	BU505
5	700	1500	1	4.5	150	TO-3	SEM	BU208A
7	150	330	1	5	60	TO-220	MC	BU407

211218

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	500+
BU208A	SEM	**120-8612**	3.05	2.33	1.89	1.64
BU505	ST	**108-4459**	1.49	1.10	0.90	0.80
Isolated Packages						
BU407	MC	**157-4336**	1.47	0.85	0.71	0.55

SMPS and Lighting Transistors


SOT-82


TO-220AB

V_{CESM} (V)	$I_{C\ (dc)}$ A	t_f (max.) µs	Leaded Packages SOT-82	TO-220AB (SOT-78)
800	0.5	0.28	BUX86P	
1000	0.5	0.28	BUX87P	
1000	2	0.4		BUX85
1000	5	0.8		BUT11A

211320

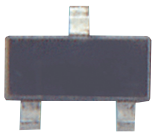
Mftrs. List No.	Order Code	Price Each 1+	25+	100+	500+	1K+
BUT11A	**108-1345**	0.750	0.660	0.570	0.500	0.460
BUX85	**108-1346**	1.820	1.070	0.800	0.560	0.400
BUX86P	SMD **108-1347**	0.510	0.370	0.280	0.198	0.186
BUX87P	**108-1348**	0.760	0.530	0.480	0.410	0.300

Darlington Transistors

Surface Mount Darlington

FAIRCHILD SEMICONDUCTOR ON Semiconductor

TO-252/D-pak


SOT-23/23F

SOT-223

h_{FE}* @ I_C Min	V_{CBO} Max (V)	V_{CEO} Max (V)	I_C Cont (A)	$V_{CE(sat)}$ Max (V)	$F_{T(min)}$ (MHz)	Case Style	Mftrs. List No.	Order Code
NPN								
1000	100	100	8	2	4	D-PAK	MJD122G	955-7075
2000	80	60	0.5	1	170	SOT-89	BCV49TA	147-1205
2000	90	80	0.5	1.3	—	SOT-89	BST52TA	147-1204
2000	90	80	0.5	1.3	—	SOT-89	BST52	873-5026
2000	160	140	2	1.1	150	SOT-223	FZT600	952-6650
3000	140	120	1	1.5	120	SOT-23F	ZXTN04120HFFTA	147-1197
5000	30	30	1	1.6	170	SOT-223	FZTA14TA	147-1163
5000	160	140	2	0.25	150	SOT-223	FZT603TA	147-1162
5000	140	120	1.5	1	150	SOT-223	FZT605	952-6374
10000	40	40	0.3	0.9	—	SOT-23	FMMTA14TA	147-1180
10000	80	60	0.3	1.25	—	SOT-23	FMMT38C	952-6315
10000	80	60	0.5	1	—	SOT-23	BCV47	108-1260
10000	30	30	1.2	1.5	125	SOT-23	MMBTA13	984-6590
15000	120	100	0.9	0.96	140	SOT-23	FMMT634TA	147-1179
PNP								
1000	100	100	2	1.5	—	D-PAK	2SB1316TL	168-0120
1000	100	100	8	-2	4	D-PAK	MJD127G	955-7083
3000	140	120	2	-1.3	—	SOT-223	FZT705	952-6382

1471198 complement to 1471197

**Measured under pulse conditions. Pulse width=300µs. Duty Cycle <2%

498286

Mftrs. List No.	Case Style	Order Code	Price Each 5+	100+	200+	500+	1K+
FZT603TA	SOT-223	SMD **147-1162**	1.120	0.720	0.410	0.320	0.260
FZTA14TA	SOT-223	SMD **147-1163**	0.530	0.390	0.240	0.196	0.162
FMMT634TA	SOT-23	SMD **147-1179**	0.750	0.500	0.290	0.230	0.174
FMMTA14TA	SOT-23	SMD **147-1180**	0.270	0.200	0.146	0.130	0.100
BST52TA	SOT-89	SMD **147-1204**	0.470	0.310	0.197	0.163	0.129
BCV49TA	SOT-89	SMD **147-1205**	0.490	0.330	0.210	0.172	0.136
ZXTN04120HFFTA	SOT-23F	SMD **147-1197**	0.330	0.290	0.260	0.230	0.191
BCV47	SOT-23	SMD **108-1260**	0.142	0.075	0.050	0.043	0.041

Darlington Transistors - continued

Surface Mount Darlington - continued

Mftrs. List No.	Case Style	Order Code	Price Each 5+	100+	200+	500+	1K+
BST52	SOT-89	SMD 873-5026 RL	0.460	0.330	0.320	0.300	0.250
FMMT38C	SOT-23	SMD 952-6315 RL	0.440	0.280	0.183	0.151	0.120
FZT600	SOT-223	SMD 952-6650 RL	1.380	0.920	0.580	0.490	0.370
FZT605	SOT-223	SMD 952-6374 RL	0.850	0.610	0.400	0.350	0.280
FZT705	SOT-223	SMD 952-6382 RL	1.250	0.830	0.520	0.440	0.340
Order Multiple=1			**1+**	**25+**	**100+**	**500+**	**+**
MJD122G	D-PAK	SMD 955-7075	1.210	0.700	0.520	0.380	– –
MJD127G	D-PAK	SMD 955-7083	1.300	0.890	0.700	0.510	– –
			1+	**25+**	**100+**	**250+**	**500+**
2SB1316TL	D-PAK	SMD 168-0120	1.280	0.880	0.680	0.420	0.360
Order Multiple=10			**10+**	**100+**	**250+**	**1K+**	**3K+**
MMBTA13	SOT-23	SMD 984-6590 RL	0.165	0.109	0.075	0.045	0.033

0.3A to 2A TO-92 (TO-226AA)

BOURNS ON Semiconductor FAIRCHILD SEMICONDUCTOR

$I_{C\ (av)}$ max. A	V_{CEO} (max.) V	h_{FE} min.	I_c A	P_{tot} @ 25°C W	Package	Mftr.	Mftrs. List No. NPN	PNP
0.3	30	10000	0.1	0.625	TO-92	FCH	—	MPSA63
0.3	60	20	0.1	625	TO-92	MC	MPSA14	
0.4	30	30000	0.02	0.6	TO-92	FCH	—	BC517
0.4	30	30000	0.02	0.6	TO-92	FCH	—	BC516

428936

Order Multiple=5 Mftrs. List No.	Mftr.	Order Code	Price Each 5+	25+	100+	1K+	5K+
BC516	FCH	101-7670	0.120	0.078	0.074	0.061	0.047
BC517	FCH	101-7671	0.250	0.167	0.115	0.069	0.051
MPSA14	MC	NEW 157-4389	0.350	0.260	0.178	0.162	0.146
MPSA63	FCH	101-7721	0.067	0.046	0.038	0.035	0.026

8A to 60A

TO-3 (TO-204AA)

multicomp ON Semiconductor

$I_{C\ (av)}$ max. A	V_{CEO} (max.) V	h_{FE} min.	I_c A	P_{tot} @ 25°C W	Mftr.	Mftrs. List No. NPN	PNP
10	80	1000	5	150	MC	MJ3001	—
12	80	750	6	150	MC	2N6058	2N6051
12	100	750	6	150	MC	—	2N6052
12	100	750	6	150	MC	—	—
12	100	750	6	150	MC	2N6059	—
16	100	1000	10	150	ST	—	MJ4032
16	120	1000	10	150	SEM	BDX67C	BDX66C
20	100	100	20	160	ST	—	2N6284
20	350	40	10	175	MC	MJ10004	—
20	400	40	10	175	MC	MJ10005	—
30	120	1000	20	200	MC	MJ11016	MJ11015
30	120	1000	20	200	ON	MJ11016G	MJ11015G
60	60	1000	25	300	SEM	MJ11028	—
50	120	1000	25	300	MC	MJ11032	MJ11033
50	120	1000	25	300	SEM	MJ11032	MJ11033/
60	250	75	15	250	MC	MJ10021	—

428937

Order Multiple=1 Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	500+	1K+
BDX66C	SEM	118-2794	11.10	7.75	5.98	3.47	2.95
BDX67C	SEM	118-2795	11.10	6.23	5.01	3.19	2.95
MJ3001	MC	116-5911	2.33	1.69	1.37	1.23	1.13
MJ4032	ST	994-6527	4.99	3.46	2.75	2.38	2.02
MJ10004	MC	116-5904	4.47	3.17	2.67	2.31	2.18
MJ10005	MC	116-5888	6.47	4.31	3.36	2.76	2.48
MJ10021	MC	116-5905	9.10	6.50	5.42	4.70	4.42
MJ11015	MC	116-5917	3.73	2.66	2.23	1.93	1.81
MJ11015G	ON	955-6575	4.10	3.24	2.51	2.03	1.65
MJ11016	MC	116-5906	5.62	4.01	3.36	2.92	2.74
MJ11016G	ON	955-6583	4.06	3.22	2.49	2.02	1.64
MJ11028	SEM	120-8643	23.94	16.81	10.72	6.76	6.19
MJ11032	MC	116-5907	8.90	6.37	5.29	4.61	4.33
MJ11032	SEM	120-8680	8.40	6.80	6.18	4.93	4.81
MJ11033	MC	116-5919	8.13	5.81	4.85	4.21	3.95
MJ11033/	SEM	120-8681	9.38	7.60	6.91	4.93	4.81

Order Multiple=1 Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	500+	1K+
2N6051	MC	116-5916	1.55	1.11	0.94	0.80	0.75
2N6052	MC	116-5915	2.26	1.62	1.34	1.18	1.08
2N6058	MC	116-5897	1.71	1.23	1.03	0.88	0.83
2N6059	MC	116-5895	2.21	1.60	1.32	1.14	1.07
2N6284	ST	108-4502	4.25	3.37	2.51	2.03	1.82

10A to 20A

TO-218 (SOT-93)

multicomp ON Semiconductor

$I_{C\ (av)}$ max. A	V_{CEO} (max.) V	h_{FE} min.	I_c A	P_{tot} @ 25°C W	Mftr.	Mftrs. List No. NPN	PNP
12	80	1000	5	125	—	BDV65A	BDV64A
12	100	1000	5	125	ON	BDV65BG	BDV64BG
12	120	1000	5	125	—	BDV65C	BDV64C
15	400	300	5	135	ST	BU931P	—
15	70	20	4	90	ST/MC	TIP3055	TIP2955
16	100	1000	10	200	SEM	BDV67A	—
16	100	1000	10	200	SEM	BDV67B	BDV66B
20	100	750	10	160	ON	MJH6284G	—
Auto-protected, with built-in 350V zener clamp							
10	350	150	5	150	ON	BU323ZG	—

428939

Order Multiple=1 Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	500+	1K+
BDV64A	SEM	120-8579	2.37	1.92	1.59	1.20	1.07
BDV64BG	ON	955-5943	2.40	1.74	1.41	1.04	0.96
BDV64C	SEM	120-8580	2.65	2.06	1.83	1.52	1.34
BDV65A	SEM	120-8581	2.51	1.66	1.34	1.11	1.07
BDV65BG	ON	955-5951	1.80	1.30	1.05	0.88	0.73
BDV65C	SEM	120-8582	2.82	2.29	1.98	1.60	1.49
BDV66B	SEM	120-8583	10.22	6.98	4.65	3.07	2.83
BDV67A	SEM	120-8584	8.42	5.61	4.15	2.60	2.42
BDV67B	SEM	120-8586	10.22	6.98	4.65	3.07	2.83
BU323ZG	ON	955-5960	2.56	1.85	1.51	1.26	1.04
BU931P	ST	108-4494	2.83	1.52	1.48	1.41	1.12
MJH6284G	ON	955-6010	4.70	3.72	2.87	2.33	1.90
TIP2955	MC	993-6084	1.24	0.99	0.95	0.77	0.61
TIP3055	ST	993-6092	1.09	0.83	0.67	0.61	0.57

0.8A to 1A

E-Line (TO-92 Compatable)

The E-Line package as used in these Darlington transistors uses a silicone encapsulant that is rated to a much higher temperature than the common epoxies used for TO92 manufacture. This feature allows higher temperature operation, higher power rating and much higher reliability.

$I_{C\ (av)}$ max. A	V_{CEO} (max.) V	h_{FE} min.	I_c A	P_{tot} @ 25°C W	Mftrs. List No. NPN	PNP
0.8	60	10000	0.5	1	BCX38C	—
0.8	100	10000	0.5	1	ZTX614	—
1	80	2000	1	1	ZTX603	—
1	120	3000	1	1	—	ZTX705

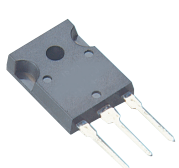
428943

Order Multiple=5 Mftrs. List No.	Order Code	Price Each 5+	25+	100+	1K+	5K+
BCX38C	952-5890	0.75	0.52	0.34	0.27	0.21
ZTX603	952-5904	1.64	1.05	0.67	0.58	0.42
ZTX614	952-5971	0.92	0.59	0.38	0.33	0.24
ZTX705	952-5963	1.37	1.09	0.69	0.57	0.45

10A to 16A

TO-247

multicomp



$I_{C\ (av)}$ max. A	V_{CEO} (max.) V	h_{FE} @ min.	I_c A	P_{tot} @ 25°C W	Mftrs. List No. NPN	PNP
10	380	200	4	125	TIP162	—
10	60	1000	5	125	TIP140	TIP145
10	80	1000	5	125	TIP141	TIP146
10	100	1000	5	125	TIP142	TIP147
16	100	1000	10	200	BDV67A	BDV66A
16	100	1000	10	200	BDV67B	BDV66B

428941

Order Multiple=1		Price Each				
Mftrs. List No.	Order Code	1+	25+	100+	500+	1K+
BDV66A	**929-4422**	2.89	2.08	1.72	1.50	1.39
BDV66B	**929-4430**	1.39	1.21	1.10	1.02	0.98
BDV67A	**929-4040**	2.77	1.97	1.64	1.41	1.34
BDV67B	**929-4058**	2.85	2.03	1.70	1.45	1.37
TIP140	**929-4260**	1.79	1.28	1.07	0.94	0.88
TIP141	**929-4279**	1.80	1.32	1.07	0.96	0.89
TIP142	**929-4287**	1.83	1.35	1.11	0.97	0.93
TIP145	**929-4562**	1.30	0.94	0.77	0.69	0.65
TIP146	**929-4570**	1.85	1.33	1.12	0.97	0.93
TIP147	**929-4589**	1.53	1.13	0.94	0.79	0.76
TIP162	**929-4295**	3.15	2.27	1.87	1.63	1.53

2A to 20A

TO-220 (SOT-78B)

ON Semiconductor

$I_{C\ (av)}$ max. A	V_{CEO} (max.) V	h_{FE} @ min.	I_c A	P_{tot} @ 25°C W	Mftr.	NPN	PNP
0.3	60	20	0.1	625mW	MC	MPSA14	—
2	60	1000	1	50	ST/ST	TIP110	TIP115
2	60	1000	1	50	MC/MC	TIP110	TIP115
2	100	1000	2	50	ST/ST	TIP112	TIP117
2	100	1000	1	50	MC/MC	TIP112	TIP117
4	350	1500	2	80	ST	ST901T	—
5	60	1000	3	65	ST/ST	TIP120	TIP125
5	60	1000	3	65	MC/MC	TIP120	TIP125
5	80	1000	3	65	MC/MC	TIP121	TIP126
5	80	1000	3	65	ST/ST	TIP121	TIP126
5	100	1000	3	65	ST/ST	TIP122	TIP127
5	100	1000	3	65	MC/MC	TIP122	TIP127
5	100	1000	3	65	ON/ON	TIP122G	TIP127G
7	300	15	7	80	MC	TIP150	—
7	400	100	2	75	ST	BU810	—
7	400	15	7	80	MC	TIP152	—
8	100	1	3	80	MC	—	TIP107
8	150	375	4	60	MC	BU806	—
8	60	750	3	62.5	SEM/SEM	BD645	BD646
8	80	750	3	62.5	SEM/SEM	BD647	BD648
8	80	750	3	60	ST	BDX53B	BDX54B
8	100	750	3	62.5	SEM/SEM	BD649	BD650
8	100	750	3	60	ST	BDX53C(G)	—
8	100	750	3	60	ON/ON	BDX53CG	BDX54CG
8	100	1000	3	80	MC	TIP102	—
8	100	1000	4	70	ST/ST	TIP132	TIP137
8	60	1000	4	70	ST	—	TIP135
8	100	1000	4	70	MC/ST	TIP132	TIP137
8	100	1000	3	80	ON	TIP102G	TIP107G
8	80	1000	4	70	MC	TIP131	TIP136
10	80	750	4	70	MC/MC	BDX33B(G)	BDX34B(G)
10	80	1000	3	90	SEM/SEM	BDT63A	BDT62A
10	80	1000	5	65	MC	—	2N6668
10	80	1000	5	40	ST	2N6388	—
10	80	1000	5	40	MC	2N6388	—
10	80	750	4	70	MC	BDX33B	—
10	80	750	4	70	ON	BDX33BG	—
10	100	750	4	70	ST/ST	BDX33C	BDX34C
10	100	750	4	70	ON/ON	BDX33CG	BDX34CG
10	100	750	4	70	MC/MC	BDX33C	BDX34C
10	120	1000	3	90	SEM/SEM	BDT63C	BDT62C
12	80	750	5	80	MC/MC	BDW93B	BDW94B
12	100	750	5	80	MC/MC	BDW93C	BDW94C
12	100	750	5	80	ST/ST	BDW93C	BDW94C
12	80	1000	5	125	SEM/SEM	BDT65A	BDT64A
12	120	1000	5	125	SEM/SEM	BDT65C	BDT64C
15	80	1000	5	85	ON	—	BDW46G
15	100	1000	5	85	ON/ON	BDW42G	BDW47G

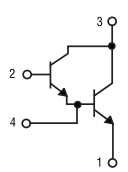
428935

Order Multiple=1			Price Each				
Mftrs. List No.	Mftr.	Order Code	1+	25+	100+	500+	1K+
BD645	SEM	**119-2110**	1.090	0.630	0.540	0.390	0.370
BD646	SEM	**119-2111**	2.180	1.290	1.140	0.680	0.520
BD647	SEM	**119-2112**	2.490	1.410	1.120	0.650	0.550
BD648	SEM	**119-2113**	2.490	1.410	1.120	0.650	0.550
BD649	SEM	**120-8566**	0.940	0.690	0.650	0.550	0.520
BD650	SEM	**120-8567**	0.940	0.690	0.650	0.550	0.520
BDT62A	SEM	**120-8568**	0.820	0.500	0.400	0.390	0.380
BDT62C	SEM	**120-8569**	1.120	0.670	0.510	0.490	0.480
BDT63A	SEM	**120-8570**	2.490	1.410	1.010	0.590	0.550
BDT63C	SEM	**120-8571**	2.750	1.580	1.120	0.680	0.590
BDT64A	SEM	**120-8572**	1.520	0.880	0.600	0.520	0.510
BDT64C	SEM	**120-8574**	3.790	2.590	1.750	1.140	1.040
BDT65A	SEM	**120-8575**	3.640	2.150	1.490	0.860	0.800
BDT65C	SEM	**120-8576**	3.540	2.400	1.590	1.050	0.970
BDW42G	ON	**955-6877**	0.850	0.610	0.490	0.420	0.340

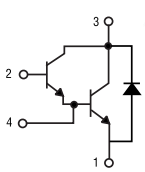
Order Multiple=1			Price Each				
Mftrs. List No.	Mftr.	Order Code	1+	25+	100+	500+	1K+
BDW46G	ON	**116-6983**	0.750	0.540	0.440	0.410	0.350
BDW47G	ON	**955-6885**	1.270	0.990	0.790	0.670	0.540
BDW93B	MC	**929-4066**	0.800	0.590	0.480	0.420	0.400
BDW93C	ST	**101-5773**	0.760	0.520	0.340	0.310	0.300
BDW93C	MC	**929-4074**	0.840	0.620	0.500	0.450	0.420
BDW94B	MC	**929-4449**	0.920	0.630	0.550	0.460	0.440
BDW94C	ST	**994-6470**	1.120	0.740	0.500	0.490	– –
BDW94C	MC	**929-4457**	0.940	0.680	0.560	0.480	0.460
BDX33B	MC	**929-4082**	0.670	0.470	0.400	0.350	0.340
BDX33BG	ON	**955-7725**	1.110	0.800	0.660	0.550	0.450
BDX33C	ST	**994-6489**	0.460	0.310	0.250	0.220	– –
BDX33C	MC	**929-4090**	0.710	0.510	0.420	0.370	0.350
BDX33CG	ON	**955-7733**	1.070	0.830	0.660	0.560	0.460
BDX34B	MC	**929-4465**	0.710	0.510	0.420	0.370	0.350
BDX34C	MC	**929-4473**	0.750	0.540	0.450	0.390	0.370
BDX34CG	ON	**955-7741**	0.710	0.550	0.460	0.390	0.330
BDX33B	MC	**929-4082**	0.670	0.470	0.400	0.350	0.340
BDX34C	ST	**101-5774**	0.700	0.390	0.260	0.230	– –
BDX53B	ST	**101-5775**	0.420	0.290	0.230	0.199	0.168
BDX53C	ST	**994-6497**	0.470	0.300	0.230	0.160	0.137
BDX53CG	ON	**955-7750**	0.850	0.610	0.500	0.420	0.340
BDX54B	ST	**101-5776**	0.800	0.670	0.650	0.570	0.450
BDX54CG	ON	**955-7768**	0.900	0.650	0.530	0.450	0.360
BU806	MC	**929-4120**	1.630	1.170	0.980	0.840	0.780
BU810	ST	**108-4497**	4.180	2.900	2.310	2.000	1.700
ST901T	ST	**108-4498**	0.740	0.510	0.410	0.350	0.300
TIP102G	ON	**955-6362**	0.860	0.570	0.450	0.380	0.290
TIP102	MC	**157-4394**	1.130	0.660	0.480	0.370	0.350
TIP107G	ON	**955-6370**	0.860	0.560	0.450	0.390	0.370
TIP107	MC	**157-4338**	1.120	0.630	0.480	0.370	0.350
TIP117	MC	**157-4340**	0.600	0.390	0.310	0.290	0.280
TIP110	ST	**980-3963**	0.560	0.430	0.390	0.350	0.240
TIP110	MC	**929-4201**	0.550	0.400	0.340	0.300	0.280
TIP112	ST	**980-3971**	0.350	0.220	0.173	0.159	0.157
TIP112	MC	**157-4339**	0.700	0.470	0.390	0.260	0.230
TIP115	ST	**980-3980**	0.620	0.430	0.400	0.350	0.270
TIP115	MC	**929-4511**	0.530	0.370	0.320	0.280	0.260
TIP117	ST	**980-3998**	0.780	0.510	0.380	0.320	0.270
TIP120	ST	**980-4005**	0.740	0.500	0.370	0.310	0.260
TIP120	MC	**929-4210**	0.570	0.420	0.350	0.310	0.290
TIP121	ST	**980-4013**	0.470	0.320	0.260	0.220	0.189
TIP121	MC	**929-4228**	0.490	0.370	0.310	0.280	0.230
TIP122	ST	**980-4021**	0.300	0.220	0.160	0.130	0.126
TIP122G	ON	**955-7881**	0.590	0.470	0.370	0.320	0.260
TIP122	MC	**929-4236**	0.600	0.460	0.370	0.320	0.310
TIP125	ST	**980-4030**	0.820	0.400	0.340	0.300	0.230
TIP125	MC	**929-4520**	0.540	0.400	0.320	0.290	0.280
TIP126	ST	**980-4048**	0.730	0.360	0.250	0.210	0.150
TIP126	MC	**929-4538**	0.570	0.420	0.350	0.310	0.290
TIP127	ST	**980-4056**	0.620	0.350	0.340	0.310	0.220
TIP127G	ON	**955-7890**	0.630	0.460	0.370	0.310	0.260
TIP127	MC	**929-4546**	0.600	0.460	0.370	0.320	0.310
TIP131	MC	**929-4244**	0.750	0.540	0.450	0.390	0.370
TIP132	MC	**929-4252**	0.750	0.540	0.450	0.390	0.370
TIP132	ST	**980-4064**	0.810	0.560	0.450	0.390	0.330
TIP135	ST	**980-4072**	0.700	0.450	0.340	0.230	0.220
TIP136	MC	**929-4554**	0.980	0.700	0.580	0.500	0.470
TIP137	MC	**116-5939**	1.020	0.730	0.600	0.540	0.500
TIP137	ST	**980-4080**	0.850	0.590	0.470	0.410	0.340
TIP147T	ST	**108-4499**	1.270	0.990	0.980	0.780	0.700
TIP150	MC	**144-0104**	2.700	1.630	1.230	0.740	0.690
TIP152	MC	**157-9972**	2.700	1.630	1.230	0.740	0.690
2N6388	ST	**994-6500**	1.170	0.870	0.640	– –	– –
2N6388	MC	**929-4023**	0.780	0.560	0.460	0.410	0.390
2N6668	MC	**929-4406**	0.800	0.580	0.490	0.420	0.400

NPN Darlington Power Modules

ISOTOP
H=12.2, W=25.4, D=38.2



Pin Config. a



Pin Config. b

I_C A	V_{CEO} V	$I_{C(pk)}$ A	I_B A	h_{FE} typ.	@	I_c A	P_{TOT} W	Pin Config.	Mftrs. List No.
120	125	128	2	1200		120	175	b	ESM2012DV
67	300	100	3	300		56	150	b	ESM2030DV
100	300	150	5	300		85	225	b	ESM3030DV
60	450	90	6	150		50	175	b	ESM5045DV
84	450	126	8	120		70	250	b	ESM6045DV

Darlington Transistors - continued

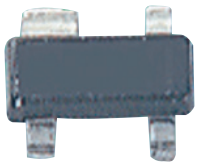
NPN Darlington Power Modules - continued

211179

Mftrs. List No.	Order Code	Price Each 1+	5+	10+	25+	50+
ESM2012DV	980-2290●	37.32	30.48	24.27	20.97	17.83
ESM2030DV	980-2304●	34.94	27.87	22.18	19.17	16.30
ESM3030DV	980-2312●	44.09	– –	– –	– –	– –
ESM5045DV	980-2347●	37.33	28.90	22.12	20.04	17.81
ESM6045DV	980-2363●	59.98	48.26	37.34	36.11	33.05

RF Bipolar Transistors

Silicon Bipolar Darlington Amplifiers



- Small signal gain amplifier
- Operating frequency DC - 2.5GHz
- Unconditionally stable
- 50 Ohms input and output

SMD

SOT-343
H=1, W=2.1, D=2.2

V_d V	I_D mA	P_{tot} mW	Gain (typ.) dB	NF (typ.) dB	Test Freq 1	Gain (typ.) dB	NF (typ.) dB	Test Freq 2	Package	Device I.D	Mftrs.	Mftrs. List No.
Si-MMIC-Amplifiers												
3.4	40	145	15.7	3.6	0.1	15.1	3.7	0.9	SOT-343	1Tx	AV	ADA-4543
3.5	70	270	17.5	3.9	0.1	17.0	4	0.9	SOT-343	2Tx	AV	ADA-4643
3.8	90	370	16.6	4.2	0.1	16.5	4.1	0.9	SOT-343	3Tx	AV	ADA-4743

NB x denotes date code

361081

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
ADA-4743	SMD 782-0542●	0.71	0.55	0.49	0.45	0.43
ADA-4643	SMD 782-0550●	0.50	0.38	0.35	0.32	0.31
ADA-4543	SMD 782-0569●	0.57	0.46	0.41	0.36	0.35

Low Power, Wideband

NXP founded by Philips

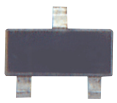
SOT-343

SOT-143

SOT-89

SOT-223

SOT-323



SOT-23

V_{CEO} max V	NPN/ PNP	I_c max mA	P_{tot} W	f_T GHz	h_{FE} min	Case Style	@ I_C mA	Mftr.	Mftrs. List No.
5	NPN	6.5	0.03	1.2	20	SOT-23	1	NXP	BFT25
10	NPN	—	0.36	8	50	SOT-23	5	NXP	PBR941
12	NPN	35	0.3	6	40	SOT-23	30	NXP	BFR93A
12	NPN	35	0.3	5	20	SOT-23	30	NXP	BFT93
15	NPN	25	0.3	1	25	SOT-23	25	NXP	BFS17
15	NPN	25	0.3	2.8	25	SOT-23	25	NXP	BFS17A
15	NPN	50	0.3	1.6	25	SOT-323	2	NXP	BFS17W
15	NPN	25	0.3	5	40	SOT-23	15	NXP	BFR92A
15	NPN	25	0.3	5	40	SOT-323	15	NXP	BFR92AW,115
15	NPN	100	0.5	5	25	SOT-23	50	NXP	BFR106
15	NPN	100	1	5.5	25	SOT-89	70	NXP	BFQ19
15	NPN	150	1	7	80	SOT-223	100	NXP	BFG135
15	NPN	200	2	7	60	SOT-223	70	NXP	BFG591
15	NPN	70	0.3	9	60	SOT-23	20	NXP	BFR520
15	NPN	70	300	9	60	SOT-143B	20	NXP	BFG520
15	NPN	120	0.5	9	100	SOT-23	40	NXP	BFR540
15	NPN	—	—	9	100	SOT-343	40	NXP	BFG540W/X
15	NPN	—	—	9	100	SOT-323	40	NXP	BFS540
15	PNP	—	—	9	20	SOT-23	14	NXP	BFT92

◆ Warning: These products contain a beryllium oxide disc, the disc of which is toxic. Provided this disc is not damaged, the device is entirely safe. Safe disposal precautions must be carried out according to local regulations.

211260

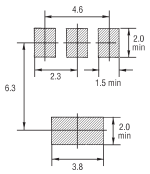
Mftrs. List No.	Mftr.	Order Code	Price Each 1+	30+	100+
BFG135	NXP	SMD 108-1288● RL	2.880	1.740	1.190
BFG520	NXP	SMD 108-1289● RL	0.360	0.280	0.220
BFG591	NXP	SMD 108-1291● RL	0.940	0.670	0.590
BFQ19	NXP	SMD 108-1292● RL	0.740	0.530	0.480
BFR92A	NXP	SMD 108-1297● RL	0.390	0.260	0.125
BFR92AW,115	NXP	SMD 121-2470●	0.670	0.410	0.230
BFR93A	NXP	SMD 108-1300● RL	0.270	0.197	0.104

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	30+	100+
BFR106	NXP	SMD 108-1293● RL	0.390	0.290	0.230
BFR520	NXP	SMD 108-1294● RL	0.540	– –	– –
BFR540	NXP	SMD 108-1295● RL	0.650	– –	– –
Order Multiple=5			**5+**	**25+**	**100+**
BFG540W/X	NXP	SMD 134-9659●	0.440	0.310	0.189
BFS17	NXP	SMD 108-1301● RL	0.200	0.133	0.110
BFS17A	NXP	SMD 108-1302● RL	0.260	– –	– –
BFS17W	NXP	SMD 108-1303● RL	0.149	0.100	0.080
BFS540	NXP	SMD 134-9660●	0.400	0.280	0.187
BFT92	NXP	SMD 134-9662●	0.890	0.390	0.300
Order Multiple=1			**1+**	**30+**	**100+**
BFT25	NXP	SMD 108-1304● RL	0.600	0.350	0.230
BFT93	NXP	SMD 109-7184● RL	0.420	0.320	0.290
Order Multiple=5			**5+**	**30+**	**100+**
PBR941	NXP	SMD 162-6497●	0.240	0.184	0.138

SOT-223, Medium Power - NPN

NXP

H=1.7, W=6.7, Dia.=7.5



Footprint

- Designed for hand held radio equipment
- SMD package
- 900MHz wavebands
- Reliable, gold metalisation process

V_{CEO} max V	I_C av mA	P_{tot} W	f* MHz	V_s* Supply V	P_{Load} *W	G_p* min dB	n_c* min %	Mftrs List No.
9.5	500	2	900	7.5	1.2	6	60	BLT81,115

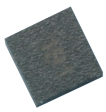
*RF performance at T_s≤60°C in common-emitter Class-B test circuit

211266

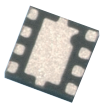
Mftrs. List No.	Order Code	Price Each 1+	30+	100+	1K+
BLT81,115	SMD 121-2471● RL	6.49	3.86	2.53	1.84

GaAs MMIC Amplifiers

Avago TECHNOLOGIES



LPCC
H=0.75, W=2, D=2



SOT-343
H=1, W=2, D=2.1

SOT-363
H=1, W=2.2, D=2.2

SMD

V_{DS} V	I_c (pk) mA	P_{tot} W	Test Freq GHz	NF dB	Gain dB	P_{1dB} dBm	OIP_3 dBm	Package	Device I.D.	Mftrs. List No.
Fixed Gain Amplifiers										
7	65	0.425	1.9	14.2	14.2	17.4	31.7	SOT-343	42	MGA-52543
5.5	70	0.4	1.9	1.3	17.4	18.6	39.1	SOT-343	53x	MGA-53543
Smart Bias Amplifiers										
6	100	0.5	2	0.9	19.3	15.1	31.7	SOT-363	6Ax	MGA-61563
6	100	0.6	0.5	0.93	21.8	18	34.8	SOT-363	62x	MGA-62563

V_{DS} V	I_c (pk) mA	P_{tot} W	Test Freq GHz	Test Voltage V	P_{sat} dBm	Gain dB	PAE %	Package	Device I.D.	Mftrs. List No.
Medium Power Amplifiers										
5	145	0.8	5.8	3.3	22		46	LPCC	4Tx	MGA-545P8
High Isolation Buffer Amplifiers										
V_{DS} V	I_c (pk) mA	P_{tot} W	Test Freq GHz	Test Votage V	P_{sat} dBm	Gain dB	Isolation dB	Package	Device I.D.	Mftrs. List No.
8	67	0.448	2	4	20	21.8	46	LPCC	1Bx	MGA-565P8

361154

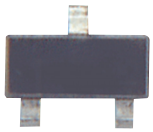
Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
MGA-52543	SMD 782-0429●	2.56	2.10	1.90	1.73	1.67
MGA-53543	SMD 782-0437●	3.01	2.44	2.24	2.02	1.96
MGA-61563	SMD 782-0445●	1.76	1.46	1.32	1.19	1.15
MGA-62563	SMD 782-0453●	1.90	1.57	1.40	1.28	1.25
MGA-545P8	SMD 782-0470●	3.01	2.44	2.24	2.02	1.96
MGA-565P8	SMD 782-0461●	2.53	2.07	1.87	1.70	1.64

RF Transistors

2 to 15V $_{CEO}$

SMD

Infineon technologies



SOT-23

SOT-143

SOT-223

SOT-323

V_{CEO} V	$F_{T(typ)}$ GHz	$I_{C\ (av)}$ A	P_{tot} mW	h_{FE} min.	@	I_C mA	Package	Device I.D.	Mftrs. List No.
4	36	0.05	200	100		30	SOT-343	R4s	BFP640
4.5	25	0.01	55	50		5	SOT-343	ALs	BFP405
4.5	25	0.03	160	50		20	SOT-343	AMs	BFP420
6	9	0.08	380	60		40	TSFP3	FCs	BFR380F
6	14	0.01	60	60		5	TSFP3	FAs	BFR340F
6	14	0.035	210	60		15	TSFP3	FB2	BFR360F
12	6	0.03	300	50		30	SOT-323	R1s	BFR93AW
12	8	0.05	580	50		30	SOT-343	RCs	BFP193W
12	8	0.02	175	50		5	SOT-323	RFs	BFR181W
12	8	0.035	250	50		10	SOT-323	RGs	BFR182W
12	8	0.065	450	50		15	SOT-323	RHs	BFR183W
15	2.5	0.05	280	20		25	SOT-23	MC	BFS17P
15	5	0.03	280	40		14	SOT-23	GF	BFR92P

422853

Order Multiple=1		Price Each		
Mftrs List No.	Order Code	1+	25+	100+
BFP193W	SMD 121-4294 RL	0.410	0.300	0.230
BFP405	SMD 105-6518 RL	0.390	0.300	0.240
BFP420	SMD 105-6519 RL	0.380	0.290	0.230
BFP640	SMD 109-5661 RL	1.280	0.860	0.690
BFR92P	SMD 105-6520 RL	0.143	0.112	0.089
BFR181W	SMD 109-5662 RL	0.300	0.186	0.149
BFR182W	SMD 109-5664 RL	0.300	0.210	0.157
BFR183W	SMD 109-5665 RL	0.300	0.179	0.144
BFR340F	SMD 109-5666	0.250	0.158	0.124
BFR360F	SMD 109-5667	0.290	0.182	0.147
BFR380F	SMD 109-5668	0.310	0.194	0.154
BFS17P	SMD 105-6522 RL	0.105	0.068	0.054
		5+	100+	250+
BFR93AW	SMD 105-6521	0.131	0.103	0.081

Unijunction Transistors

TO-18, TO-92 Unijunction

Package and Pin Out	Intrinsic Standoff Ratio	Interbase Resistance kΩ	Max Point Emitter Current	Emitter Reverse Current @ V_{BE}	Minimum Valley Current	Mftrs. List No.
TO-18	0.56-0.75	4.7 to 9.1	5µA	12µA @ 30V	4mA	2N2646

Programmable Unijunction Transistors

Package and Pin Out	Max Point Current @ R_G=10kΩ	Min valley Current @ R_G=10kΩ	Pulsed Output Voltage V_0	Max dc Anode Current	Mftrs. List No.
TO-92	5µA	70µA	6V min	150mA	2N6027RLRAG
TO-92	1µA	25µA	6V min	150mA	2N6028G

Max. interbase voltage = 35V

211310

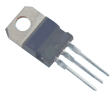
Mftrs.		Price Each			
List No.	Order Code	1+	25+	100+	1K+
2N2646	118-2799	2.670	1.920	1.550	1.340
2N6027RLRAG	955-6591	0.460	– –	– –	– –
2N6028G	955-5935	0.500	0.310	0.220	0.173

Insulated Gate Bipolar Transistors (IGBTs)

600V, IGBT

D-Pak (TO-252)

TO-220FP


TO-220

TO-247

SOT-227

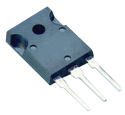
I_C @ T_c=25°C A	I_C pulsed A	$V_{CE(sat)}$ max. V	P_D @ T_c=25°C W	Package	Mftrs. List No.
6	21	2.5	20W*	TO-220FP	STGF6NC60HD
6	21	2.5	20W*	TO-220	STGP6NC60HD
6	21	2.5	20W	TO-220	STGP6NC60HD
9	30	2.5	25W*	TO-220	STGP10NC60KD
9	30	2.5	25W*	TO-220FP	STGF10NC60KD
9	30	2.5	25W*	TO-220FP	STGF10NC60HD
11	50	2.5	—	TO-220	STGP14NC60KD
11	50	2.5	—	TO-220FP	STGF14NC60KD
15	20	1.6	25W*	TO-220FP	STGF7NB60SL
20	100	1.8	25W*	TO-220FP	STGF10NB60SD
60	200	2.5	200W*	TO-247	STGW30NC60WD
70	220	2.5	250W*	TO-247	STGW39NC60VD
70	250	1.7	200W*	TO-247	STGW35NB60SD
150	400	1.2	600W*	ISOTOP	STGE200NB60S

451638

		Price Each				
Mftrs. List No.	Order Code	1+	25+	100+	250+	
STGE200NB60S	129-3645	58.63	42.53	33.83	28.83	
STGP6NC60HD	129-3649	1.72	1.37	1.05	0.79	
STGP14NC60KD	129-3646	2.68	2.14	1.64	1.24	
STGP10NC60KD	129-3647	2.49	1.99	1.52	1.14	
STGP6NC60HD	129-3649	1.72	1.37	1.05	0.79	
STGF14NC60KD	129-3651	2.04	1.63	1.24	0.93	
STGF10NB60SD	129-3652	2.32	1.83	1.38	1.10	
STGF7NB60SL	129-3653	2.33	1.85	1.39	1.11	
STGF10NC60KD	129-3654	1.65	1.32	1.01	0.76	
STGF10NC60HD	129-3656	1.11	0.88	0.66	0.53	
STGF6NC60HD	129-3657	1.65	1.32	1.01	0.76	
STGW35NB60SD	129-3658	7.27	5.59	4.34	3.44	
STGW30NC60WD	129-3659	5.43	4.30	3.20	2.59	
STGW39NC60VD	129-3660	5.86	4.65	3.46	2.80	

IGBT, W/Diode, 1200V

International IOR Rectifier


TO-247

V_{CEO} V	$I_{C\ cont}$ @ 25°C A	$V_{CE(sat)}$ max. V	I_C pulsed A	t_r typ. ns	$t_{f\ max.}$ (*typ.) ns	P_D @ 25°C W	Package	Mftrs. List No.
1200	60	2.66	120	25	75	300	TO-247AD	IRGP30B120KD-EP
1200	105	2.75	240	32	58	595	Super-247	IRGPS60B120KDP
600	28	2.7	58	42	120	100	TO-247AC	IRG4PC30KDPBF

528663

		Price Each				
Mftrs. List No.	Order Code	1+	25+	100+	250+	1K+
IRGP30B120KD-EP	168-8566	7.74	5.53	4.68	4.36	4.12
IRGPS60B120KDP	168-8567	18.25	11.90	9.64	9.26	8.42
IRG4PC30KDPBF	168-8569	4.71	3.36	2.68	2.23	1.96

General Purpose IGBT's

FAIRCHILD SEMICONDUCTOR

300 V to 1200 V_{CEO}

TO-247 (SOT-249)

TO-220 (SOT-78b)

- Optimised for high frequency SMPS or PDP applications
- High voltage switching SOA capability
- Low conduction losses
- Increased reliability – cooler operating temperatures
- Integral anti-parallel Hyperfast™ diode options (Those with 'D' suffix)

$I_{C\ cont.}$ 25°C A	$V_{CE(sat)}$ max. V	I_C pulsed A	t_r typ. ns	t_f max. (*typ.) ns	P_D 25°C W	Flywheel Diode	Package	Mftrs. List No.
V_{CEO} = 600 V								
40	2	160	20	200	165	✓	TO-247	HGTG20N60B3D
54	2.7	96	8	18	167		TO-247	HGTG12N60A4
54	2.7	96	16	95	167	✓	TO-247	HGTG12N60A4D
70	2.7	280	12	32	290	✓	TO-247	HGTG20N60A4D
70	2.7	280	12	32	290		TO-247	HGTG20N60A4
75	2.6	240	12	38	463		TO-247	HGTG30N60A4
75	2.6	240	12	38	463	✓	TO-247	HGTG30N60A4D
V_{CEO} = 1200 V								
54	2.7	160	22		390	✓	TO-247	HGTG18N120BND

211372

		Price Each				
Mftrs. List No.	Order Code	1+	25+	100+	250+	500+
HGTG12N60A4	109-5108	3.16	2.15	1.60	1.52	1.42
HGTG20N60A4	109-5112	4.61	3.14	2.34	2.22	2.07
HGTG30N60A4	109-5113	6.75	4.61	3.71	3.58	3.34
Integral anti-parallel Hyperfast™ Diode						
HGTG12N60A4D	105-7677	4.75	3.25	2.41	2.30	2.13
HGTG18N120BND	109-5111	5.67	3.86	3.12	3.00	2.80
HGTG20N60A4D	105-7679	5.59	3.80	3.08	3.00	2.92
HGTG20N60B3D	984-6603	4.48	3.04	2.26	– –	– –
HGTG30N60A4D	984-6611	9.22	6.28	5.06	4.88	4.55

Warp Speed™ IGBTs

International IOR Rectifier

TO-247AC

D^2Pak (TO-263)

TO-220

- Class-leading low switching losses
- Low-cost alternative to power MOSFETs in switch mode power supplies <150kHz
- Ideal for Power Factor Correction applications

Insulated Gate Bipolar Transistors (IGBTs) - continued

Warp Speed™ IGBTs - continued

V_{CEO} V	$I_{C\ cont}$ 25°C A	$V_{CE(sat)}$ max. V	I_C pulsed A	t_r typ. ns	P_D 25°C W	Package	Mftrs. List No.
600	11.8	2.16	52	14	34	TO-220FP	IRG4IBC20WPBF
600	23	2.7	92	17	100	TO-220	IRG4BC30WPBF
600	40	2.5	160	22	160	TO-220	IRG4BC40WPBF
600	40	2.5	160	23	160	D2-PAK	IRG4BC40W-SPBF
600	40	2.5	160	23	160	TO-247AC	IRG4PC40WPBF
600	40	2.35	80	5	215	TO-220AB	IRGB20B60PD1PBF
600	40	2.35	80	5	220	TO-247AC	IRGP20B60PDPBF
600	40	2.15	120	6	308	TO-247AC	IRGP35B60PDPBF
600	55	2.3	220	33	200	TO-247AC	IRG4PC50WPBF
600	75	2.35	150	10	390	TO-247AC	IRGP50B60PD1PBF
900	51	2.7	204	26	200	TO-247AC	IRG4PF50WPBF
Warp Speed™, with Integral Anti-Parallel Diode							
900	51	2.25	204	52	200	TO-247AC	IRG4PF50WDPBF

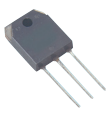
211302

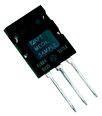
Mftrs. List No.	Order Code	Price Each 1+	25+	100+
IRG4BC30WPBF	**865-0438**	1.23	1.09	0.88
IRG4BC40WPBF	**910-5026**	1.85	1.62	1.61
IRG4BC40W-SPBF	SMD **107-8435**	3.94	2.30	1.75
IRG4IBC20WPBF	**865-0454**	3.88	2.26	1.72
IRG4PC40WPBF	**865-0578**	2.42	2.15	2.10
IRG4PC50WPBF	**865-0632**	3.46	2.62	2.45
IRG4PF50WDPBF	**865-0640**	5.46	– –	– –
IRG4PF50WPBF	**865-0659**	7.32	4.27	3.25
IRGB20B60PD1PBF	**865-9583**	1.82	1.62	1.45
IRGP20B60PDPBF	**865-9656**	6.36	3.71	2.82
IRGP35B60PDPBF	**865-9664**	3.92	3.48	3.27
IRGP50B60PD1PBF	**865-9672**	4.69	4.17	3.64

NPT Trench and Short Circuit Rated IGBT

FAIRCHILD SEMICONDUCTOR™

1000, 1200 V_{CEO}


TO-3P


TO-264

- NPT Trench Technology
- High avalance ruggedness and easy parallel operation
- Ideal for the resonant or soft switching applications such as induction heating, microwave ovens etc.

Using Fairchilds proprietary trench design and advanced Non-punch-through (NPT) technology, these range of IGBT offer superior conduction and switching performances, high avalanche ruggedness and may be connected in parallel configuration.
FGA50N60LS is short-circuit rated; 10 µs @ 100 °C

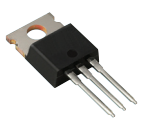
V_{CEO} V	$I_{C\ cont.}$ 25°C A	$V_{CE(sat)}$ max. V	I_C pulsed A	t_r typ. ns	P_D 25°C W	Package	Mftrs. List No.
1000	60	2.9	120	320	180	TO-264	FGL60N100BNTD
1200	50	2.5	75	50	312	TO-3PN	FGA25N120ANTD
1200	50	2.5	90	60	312	TO-3PN	FGA25N120ANTDTU
1200	64	3.2	160	20	500	TO-264	FGL40N120ANTU

423215

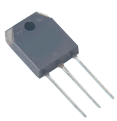
Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
FGA25N120ANTD	**109-5025**	2.78	2.08	1.71	1.35	1.24
FGA25N120ANTDTU	**149-8965**	3.78	2.58	1.91	1.82	1.70
FGL40N120ANTU	**149-5137**	13.15	9.10	6.94	6.48	6.00
FGL60N100BNTD	**109-5037**	7.08	4.91	3.74	3.49	3.25

Switching, 250V to 1200 V

TOSHIBA
International IOR Rectifier


TO-220

TO-247AC


TO-3P(N)

V_{CEO} V	$I_{C\ cont}$ @ 25°C A	$V_{CE(sat)}$ max. V	I_C pulsed A	t_r typ. ns	P_D @ 25°C W	Package	Mftrs. List No.
Ultra-fast Switching, with Integral Soft-Recovery Diode							
600	11.8	2.16	52	14	34	TO-220FP	IRG4IBC20WPBF
600	13	2.4	52	13	60	TO-220	IRG4BC20UPBF
600	13	2.4	52	15	60	TO-220	IRG4BC20UDPBF
600	17	1.95	92	21	45	TO-220FP	IRG4IBC30UDPBF
600	23	2.5	92	21	100	TO-247	IRG4PC30UDPBF
600	23	2.5	92	21	100	TO-220	IRG4BC30UDPBF
600	23	2.5	92	9.6	100	TO-220	IRG4BC30UPBF
600	23	2.5	92	9.6	100	TO-247AC	IRG4PC30UPBF
600	40	2.1	160	57	160	TO-247AC	IRG4PC40UD-EPBF
600	40	2.4	160	57	160	TO-247AC	IRG4PC40UDPBF
600	40	2.4	160	19	160	TO-247AC	IRG4PC40UPBF
600	55	2.4	220	20	200	TO-247AC	IRG4PC50UPBF
600	55	2	220	25	200	TO-247	IRG4PC50UDPBF
600	55	2	220	25	200	TO-247AC	IRG4PC50UD-EPBF
600	85	2	200	94	350	Super-247	IRG4PSC71UDPBF
Ultra-fast Switching, with Integral Soft-Recovery Diode							
600	12	1.7	20	11	77	TO-220	IRGB4045DPBF
600	20	1.6	40	15	101	TO-220	IRGB4064DPBF
1200	30	3.5	120	59	160	TO-247AC	IRG4PH40UDPBF
1200	78	3.9	42	84	350	Super-247	IRG4PSH71KDPBF
1200	78	3.9	42	38	350	Super-247	IRG4PSH71KPBF
1200	80	3.5	160	25	595	TO-274AA	IRGPS40B120UPBF
Fast Switching, with Integral Soft -Recovery Diode							
600	16	1.66	64	20	60	TO-220	IRG4BC20FDPBF
600	31	1.9	120	26	100	TO-220	IRG4BC30FDPBF
600	49	1.8	200	32	160	TO-247AC	IRG4PC40FDPBF
600	70	1.7	280	25	200	TO-247	IRG4PC50FDPBF
Fast Switching, Low Saturation Voltage, with Integral Soft -Recovery Diode							
600	16	1.66	64	17	60	TO-220	IRG4BC20FPBF
600	31	1.9	120	15	100	TO-220	IRG4BC30FPBF
600	49	1.8	200	18	160	TO-220	IRG4BC40FPBF
600	49	1.8	200	18	160	TO-247	IRG4PC40FPBF
600	70	1.7	280	25	200	TO-247	IRG4PC50FPBF
Low Saturation Voltage							
600	23.5	1.6	68	19	45	TO-220FP	IRG4IBC30SPBF
600	34	1.6	68	18	100	TO-220	IRG4BC30SPBF
600	60	1.6	120	18	160	TO-247AC	IRG4PC40SPBF
1200	57	1.47	114	29	200	TO-247AC	IRG4PH50SPBF
Low Saturation Voltage, with Integral Soft-Recovery Diode							
600	19	1.6	38	35	60	TO-220AB	IRG4BC20SDPBF
Ultra-Fast Switching							
1200	30	3.5	120	18	160	TO-247AC	IRG4PH40UPBF
1200	45	3.7	180	15	200	TO-247AC	IRG4PH50UPBF
Ignition IGBT with Integral Gate-Emitter and Gate Collector Clamps							
430	20	1.4		2.8	125	D2-PAK	IRGS14C40LPBF
430	20	1.75		2400	125	TO-220	IRGB14C40LPBF
High Power Switching							
600	20	2.7	40	12	130	TO-3P (N)	GT20J101
600	50	2.7	100	120	200	TO-3P (LH)	GT50J102
600	16	1.55	32	15	99	TO-220	IRGB4060DPBF
600	24	1.55	48	17	140	TO-220	IRGB4056DPBF
600	48	1.65	96	22	250	TO-220	IRGB4062DPBF
600	48	1.65	96	22	250	TO-247	IRGP4062DPBF
1200	10	2.7	20	70	140	TO-3P (N)	GT10Q101
1200	15	2.7	30	50	170	TO-3P (N)	GT15Q102
1200	25	2.7	50	100	200	TO-3P (LH)	GT25Q102
Medium Power Switching							
600	15	2.7	30	120	35	TO-220NIS	GT15J301

386074

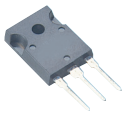
Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+
GT10Q101	**130-0798**	5.25	3.62	2.69	2.04
GT15Q102	**130-0800**	6.68	4.61	3.42	2.59
GT20J101	**130-0801**	4.62	3.18	2.37	1.79
GT25Q102	**130-0802**	9.16	6.31	4.70	3.55
GT50J102	**130-0803**	12.12	8.35	6.21	4.69
IRGB14C40LPBF	**865-0829**	3.67	– –	– –	– –
IRG4BC20FDPBF	**865-0330**	2.47	1.36	1.00	0.94
IRG4BC20FPBF	**865-0349**	2.42	1.34	0.98	0.92
IRG4BC20SDPBF	**865-9435**	1.77	1.57	1.46	1.29
IRG4BC20UPBF	**865-0365**	0.86	0.77	0.62	0.60
IRG4BC20UDPBF	**865-0357**	3.19	1.86	1.41	1.32
IRG4BC30FPBF	**910-5000**	2.74	1.52	1.11	1.05
IRG4BC30FDPBF	**865-0381**	2.93	– –	– –	– –
IRG4BC30SPBF	**865-0403**	3.19	1.76	1.29	1.22
IRG4IBC30SPBF	**865-9478**	2.88	1.69	1.42	1.38
IRG4BC30UPBF	**865-0420**	1.30	1.27	1.23	1.20
IRG4BC30UDPBF	**865-0411**	4.03	2.39	1.98	1.93
IRG4BC40FPBF	**910-5018**	4.24	2.47	1.88	1.76
IRG4IBC20WPBF	**865-0454**	3.88	2.26	1.72	1.61
IRG4IBC30UDPBF	**865-0470**	3.19	2.84	2.61	2.32
IRG4PC30UDPBF	**910-5093**	5.40	3.15	2.39	2.24
IRG4PC30UPBF	**865-0500**	2.11	1.60	1.57	1.52
IRG4PC40FDPBF	**865-0527**	2.86	2.55	2.49	2.31
IRG4PC40FPBF	**910-5107**	5.45	3.18	2.42	2.27
IRG4PC40SPBF	**865-0543**	2.59	2.23	2.18	1.91
IRG4PC40UD-EPBF	**865-9486**	6.37	4.19	4.08	3.97
IRG4PC40UDPBF	**865-0551**	3.27	2.48	2.32	2.28
IRG4PC40UPBF	**865-0560**	3.27	2.48	2.32	2.03
IRG4PC50FPBF	**910-5115**	3.43	3.34	3.25	3.17
IRG4PC50FDPBF	**910-5123**	5.07	3.86	3.55	3.51
IRG4PC50UDPBF	**910-5131**	7.36	5.37	5.23	5.10
IRG4PC50UD-EPBF	**865-0616**	8.92	5.56	4.41	4.22
IRG4PC50UPBF	**865-0624**	4.19	2.75	2.13	1.87
IRG4PH40UDPBF	**865-0683**	7.49	4.37	3.32	3.11
IRG4PH40UPBF	**865-0691**	2.74	2.22	2.16	2.11
IRG4PH50SPBF	**865-0713**	3.93	2.99	2.91	2.84
IRG4PH50UPBF	**865-0730**	4.17	– –	– –	– –
IRG4PSC71UDPBF	**865-0764**	10.37	– –	– –	– –
IRG4PSH71KPBF	**865-0799**	13.69	8.92	7.23	6.95
IRG4PSH71KDPBF	**865-0780**	21.02	14.25	11.74	11.18
IRGPS40B120UPBF	**865-9680**	11.29	7.03	5.83	5.68
GT15J301	**130-0809**	1.39	1.09	1.07	1.04
IRGS14C40LPBF	SMD **910-4895**	1.62	1.41	1.32	1.16

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+
IRGB4056DPBF	**129-8578**	2.14	1.69	1.65	1.60
IRGB4060DPBF	**129-8580**	1.66	1.49	1.29	1.18
IRGB4062DPBF	**129-8582**	3.08	2.39	2.05	1.91
IRGP4062DPBF	**129-8583**	3.49	3.11	2.85	2.66
IRGB4045DPBF	**156-1051**	0.79	0.60	0.57	0.55
IRGB4064DPBF	**156-1052**	1.37	0.88	0.82	0.80

Fast Switching

600 - 1200 V_{CEO}

International IOR Rectifier


TO-247

D^2Pak (TO-263)

TO-220 (SOT-78b)

TO-264

SOT-93 (TO-218)

D-Pak(TO-252)

TO-220 FP

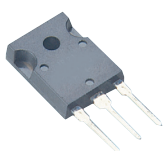
$I_{C\ cont}$ @ 25°C A	$V_{CE(sat)}$ max. V	I_C pulsed A	t_r typ. ns	$t_{f\ max.}$ (*typ.) ns	P_D @ 25°C W	Package	Mftrs. List No.
300 V_{CEO}, Fast Switching, with Integral Soft-Recovery Diode							
17	1.8	120	27	230	100	D2-PAK	IRG4BC30FD-SPBF
600 V_{CEO}, commutation rapide							
16	1.66	64	17	320	60	TO-220	IRG4BC20FPBF
31	1.9	120	15	180	100	TO-220	IRG4BC30FPBF
49	1.8	200	18	170	160	TO-220	IRG4BC40FPBF
49	1.8	200	18	170	160	TO-247	IRG4PC40FPBF
70	1.7	280	25	130	200	TO-247	IRG4PC50FPBF
600 V_{CEO}, commutation rapide, avec diode de redressement doux							
16	1.66	64	20	220	60	TO-220	IRG4BC20FDPBF
17	1.8	120	27	230	100	D2-PAK	IRG4BC30FD-SPBF
31	1.9	120	26	160	100	TO-220	IRG4BC30FDPBF
31	1.8	120	24	210	100	TO-220AB	IRG4BC30FD1PBF
49	1.8	200	32	170	160	TO-247AC	IRG4PC40FDPBF
70	1.7	280	25	140	200	TO-247	IRG4PC50FDPBF

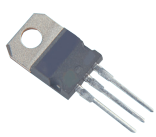
386076

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	250+
IRG4BC20FPBF	IR	**865-0349**	2.42	1.34	0.98	0.92
IRG4BC20FDPBF	IR	**865-0330**	2.47	1.36	1.00	0.94
IRG4BC30FD-SPBF	IR	SMD **101-3521**	4.11	2.43	1.86	1.81
IRG4BC30FD1PBF	IR	**865-9443**	2.72	1.72	1.67	1.62
IRG4BC30FD-SPBF	IR	SMD **101-3521**	4.11	2.43	1.86	1.81
IRG4BC30FPBF	IR	**910-5000**	2.74	1.52	1.11	1.05
IRG4BC30FDPBF	IR	**865-0381**	2.93	– –	– –	– –
IRG4BC40FPBF	IR	**910-5018**	4.24	2.47	1.88	1.76
IRG4PC40FPBF	IR	**910-5107**	5.45	3.18	2.42	2.27
IRG4PC40FDPBF	IR	**865-0527**	2.86	2.55	2.49	2.31
IRG4PC50FPBF	IR	**910-5115**	3.43	3.34	3.25	3.17
IRG4PC50FDPBF	IR	**910-5123**	5.07	3.86	3.55	3.51

Ultrafast Switching

International IOR Rectifier


TO-247 (SOT-249)


TO-220 (SOT-78B)

TO-252 (D-Pak)

V_{CEO} V	$I_{C\ cont}$ @ 25°C A	$V_{CE(sat)}$ max. V	I_C pulsed A	t_r typ. ns	$t_{f\ max.}$ (*typ.) ns	P_D @ 25°C W	Package	Mftrs. List No.
Ultra-Fast Switching								
430	20	1.4	—	2.8	—	125	D2-PAK	IRGS14C40LPBF
430	20	1.75	—	2400	2.8	125	TO-220	IRGB14C40LPBF
600	23	2.1	92	9.6	—	100	D2-PAK	IRG4BC30U-SPBF
600	16	1.66	64	17	320	60	TO-220	IRG4BC20FPBF
600	13	2.4	52	13	120	60	TO-220	IRG4BC20UPBF
600	34	1.6	68	18	590	100	TO-220	IRG4BC30SPBF
600	23	2.5	92	9.6	97	100	TO-220	IRG4BC30UPBF
600	11.8	2.16	52	14	—	34	TO-220FP	IRG4IBC20WPBF
600	31	1.9	120	15	180	100	TO-247AC	IRG4PC30FPBF
600	23	2.5	92	9.6	97	100	TO-247AC	IRG4PC30UPBF
600	60	1.6	120	18	380	160	TO-247AC	IRG4PC40SPBF
600	40	2.4	160	19	180	160	TO-247AC	IRG4PC40UPBF
600	70	1.36	140	30	600	200	TO-247AC	IRG4PC50SPBF
600	55	2.4	220	20	120	200	TO-247AC	IRG4PC50UPBF
600	85	2	200	50	130	350	Super-247	IRG4PSC71UPBF
600	14	1.7	18	28	1100	38	D-PAK	IRG4RC10SPBF
600	8.5	2.6	34	11	180	38	D-PAK	IRG4RC10UPBF
600	75	2	300	42	100	520	TO-247AC	IRG4PC60UPBF
600	22	2.1	44	24	340	66	D-PAK	IRG4RC20FPBF
600	19	1.6	38	9.7	640	60	TO-220	IRG4BC20SPBF
600	31	1.9	120	15	180	100	TO-220	IRG4BC30FPBF
600	31	1.9	120	15	180	100	TO-220	IRG4BC30FPBF
600	49	1.8	200	18	170	160	TO-220	IRG4BC40FPBF
600	49	1.8	200	18	170	160	TO-220	IRG4BC40FPBF
600	49	1.8	200	18	170	160	TO-247	IRG4PC40FPBF
600	70	1.7	280	25	130	200	TO-247	IRG4PC50FPBF
1200	20	3.2	120	30	35	300	TO-247AC	IRGP20B120U-EP
1200	30	3.5	120	18	190	160	TO-247AC	IRG4PH40UPBF
1200	57	1.47	114	29	638	200	TO-247AC	IRG4PH50SPBF
1200	80	3.5	160	25	33	595	TO-274AA	IRGPS40B120UPBF
1200	45	3.7	180	15	500	200	TO-247AC	IRG4PH50UPBF
Ultra-fast Switching, with Integral Soft-Recovery Diode								
600	16	1.66	64	20	220	60	TO-220	IRG4BC20FDPBF
600	13	2.4	52	15	110	60	TO-220	IRG4BC20UDPBF
600	31	1.9	120	26	160	100	TO-220	IRG4BC30FDPBF
600	23	2.5	92	21	80	100	TO-220	IRG4BC30UDPBF
600	17	1.95	92	21	180	45	TO-220FP	IRG4IBC30UDPBF
600	49	1.8	200	32	170	160	TO-247AC	IRG4PC40FDPBF
600	40	2.4	160	57	80	160	TO-247AC	IRG4PC40UDPBF
600	55	2	220	25	110	200	TO-247AC	IRG4PC50UD-EPBF
600	85	2	200	94	167	350	Super-247	IRG4PSC71UDPBF
600	6.8	2.15	27	16	140	25	TO-220FP	IRG4IBC10UDPBF
600	40	2.1	160	57	120	160	TO-247AC	IRG4PC40UD-EPBF
600	16	1.66	64	22	290	60	TO-263 (D2-PAK)	IRG4BC20FD-SPBF
600	11.4	1.85	52	17	220	34	TO-220FP	IRG4IBC20UDPBF
600	23	2.5	92	21	80	100	TO-247	IRG4PC30UDPBF
600	70	1.7	280	25	140	200	TO-247	IRG4PC50FDPBF
600	55	2	220	25	110	200	TO-247	IRG4PC50UDPBF
1200	21	3.1	82	26	200	160	TO-247AD	IRG4PH40UD2-EP
1200	50	2.7	200	77	—	350	TO-247AA	IRG4PSH71UDPBF
1200	30	3.5	120	59	150	160	TO-247AC	IRG4PH40UDPBF
1200	45	3.7	180	24	260	200	TO-247AC	IRG4PH50UDPBF
1200	42	4.1	82	35	360	—	TO-247AC	IRG4PH40UD-EPBF

211285

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+
IRG4BC20FPBF	**865-0349**	2.42	1.34	0.98	0.92
IRG4BC20FDPBF	**865-0330**	2.47	1.36	1.00	0.94
IRG4BC30FDPBF	**865-0381**	2.93	– –	– –	– –
IRG4BC30FPBF	**910-5000**	2.74	1.52	1.11	1.05
IRG4BC20UPBF	**865-0365**	0.86	0.77	0.62	0.60
IRG4BC20UDPBF	**865-0357**	3.19	1.86	1.41	1.32
IRG4BC30SPBF	**865-0403**	3.19	1.76	1.29	1.22
IRG4BC30UPBF	**865-0420**	1.30	1.27	1.23	1.20
IRG4BC30UDPBF	**865-0411**	4.03	2.39	1.98	1.93
IRG4BC40FPBF	**910-5018**	4.24	2.47	1.88	1.76
IRG4IBC10UDPBF	**865-9451**	1.76	– –	– –	– –
IRG4IBC30UDPBF	**865-0470**	3.19	2.84	2.61	2.32
IRG4IBC20WPBF	**865-0454**	3.88	2.26	1.72	1.61
IRG4BC20SPBF	**910-4976**	2.71	1.59	1.25	1.18
IRG4BC30FPBF	**910-5000**	2.74	1.52	1.11	1.05
IRG4BC40FPBF	**910-5018**	4.24	2.47	1.88	1.76
IRG4PC30UPBF	**865-0500**	2.11	1.60	1.57	1.52
IRG4PC30UDPBF	**910-5093**	5.40	3.15	2.39	2.24
IRG4PC40FPBF	**910-5107**	5.45	3.18	2.42	2.27
IRG4PC40FDPBF	**865-0527**	2.86	2.55	2.49	2.31
IRG4PC40SPBF	**865-0543**	2.59	2.23	2.18	1.91
IRG4PC40UD-EPBF	**865-9486**	6.37	4.19	4.08	3.97
IRG4PC40UDPBF	**865-0551**	3.27	2.48	2.32	2.28
IRG4PC40UPBF	**865-0560**	3.27	2.48	2.32	2.03
IRG4PC50FPBF	**910-5115**	3.43	3.34	3.25	3.17
IRG4PC50FDPBF	**910-5123**	5.07	3.86	3.55	3.51
IRG4PC50UDPBF	**910-5131**	7.36	5.37	5.23	5.10
IRG4PC50UD-EPBF	**865-0616**	8.92	5.56	4.41	4.22
IRG4PC50UPBF	**865-0624**	4.19	2.75	2.13	1.87
IRG4PC50SPBF	**865-0608**	3.04	2.65	2.59	2.43
IRG4PC60UPBF	**865-9516**	5.40	4.15	4.04	3.94
IRG4PH40UDPBF	**865-0683**	7.49	4.37	3.32	3.11
IRG4PH40UPBF	**865-0691**	2.74	2.22	2.16	2.11
IRG4PH50SPBF	**865-0713**	3.93	2.99	2.91	2.84
IRG4PH50UDPBF	**865-0721**	8.63	5.94	4.71	4.28
IRG4PH50UPBF	**865-0730**	4.17	– –	– –	– –
IRG4PSC71UDPBF	**865-0764**	10.37	– –	– –	– –
IRG4RC10SPBF	SMD **865-0802**	0.75	0.68	0.66	0.64
IRG4RC20FPBF	SMD **910-4941**	1.41	1.32	1.02	0.88
IRG4BC30U-SPBF	SMD **101-3524**	2.56	1.93	1.66	1.54
IRG4PSH71UDPBF	**107-8441**	21.38	14.49	11.94	11.38
IRGB14C40LPBF	**865-0829**	3.67	– –	– –	– –
IRGP20B120U-EP	**107-8444**	7.14	4.45	3.53	3.37
IRGPS40B120UPBF	**865-9680**	11.29	7.03	5.83	5.68
IRGS14C40LPBF	SMD **910-4895**	1.62	1.41	1.32	1.16

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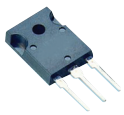
Ultrafast Switching, 10µs Short-Circuit Rated

International IOR Rectifier

TO-220FP

TO-247AC


TO-247

D2-PAK

V_{CEO} V	$I_{C\ cont}$ @ 25°C A	$V_{CE(sat)}$ max. V	I_C pulsed A	t_r typ. ns	t_f max. (*typ.) ns	P_D 25°C W	Package	Mftrs. List No.
Ultra-Fast Switching								
600	9	2.62	18	24	290	38	D-PAK	IRG4RC10KPBF
600	13	1.8	26	17	18	90	TO-220AB	IRGB6B60KPBF
600	13	2.2	56	21	27	167	D2-PAK	IRGS6B60KPBF
600	28	2.2	56	21	56	167	TO-220AB	IRGB8B60KPBF
600	78	2.95	120	28	—	370	D2-PAK	IRGS30B60KPBF
600	42	2.1	84	18	210	160	TO-220	IRG4BC40KPBF
600	78	2.35	120	28	40	370	TO-220AB	IRGB30B60KPBF
1200	11	3.17	22	28	620	60	TO-247AC	IRG4PH20KPBF
1200	20	3.1	40	23	170	100	TO-247	IRG4PH30KPBF
1200	30	2.74	60	22	230	160	TO-247AC	IRG4PH40KPBF
1200	78	3.9	42	38	250	350	Super-247	IRG4PSH71KPBF
Ultra-Fast Switching, with Integral Soft-Recovery Diode								
600	12	2.2	24	22	42	39	TO-220FP	IRGIB7B60KDPBF
600	13	2	26	17	22	90	TO-220AB	IRGB6B60KDPBF
600	19	2.2	38	35	—	52	TO-220FP	IRGIB15B60KD1P
600	22	2.2	44	20	32	104	TO-220AB	IRGB10B60KDPBF
600	28	2.21	58	42	120	100	TO-220	IRG4BC30KDPBF
600	31	2.2	62	16	26	139	TO-220AB	IRGB15B60KDPBF
600	42	2.1	84	37	150	160	TO-247AC	IRG4PC40KDPBF
600	52	1.84	104	49	140	104	TO-247AC	IRG4PC50KDPBF
600	85	2.3	200	107	146	350	Super-247	IRG4PSC71KDPBF
1200	11	3.17	22	30	620	60	TO-247	IRG4PH20KDPBF
1200	20	3.1	40	79	*97	100	TO-247	IRG4PH30KDPBF
1200	30	3.4	60	31	330	160	TO-247	IRG4PH40KDPBF
1200	45	2.77	90	100	300	200	TO-247AC	IRG4PH50KDPBF
1200	78	3.9	42	84	190	350	Super-247	IRG4PSH71KDPBF

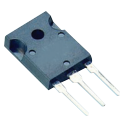
211317

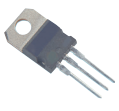
Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+
IRG4BC10KDPBF	**865-0314**	1.26	– –	– –	– –
IRG4BC30KDPBF	**865-0390**	2.26	– –	– –	– –
IRG4PC40KPBF	**107-8439**	5.60	3.27	2.49	2.33
IRG4PC40KDPBF	**865-0535**	2.93	2.56	2.50	2.34
IRG4PC50KDPBF	**865-0586**	4.45	– –	– –	– –
IRG4PH20KDPBF	**910-5085**	4.46	2.60	2.40	2.33
IRG4PH20KPBF	**865-0667**	4.19	2.44	1.86	1.74
IRG4PH30KPBF	**910-5042**	2.19	1.67	1.63	1.43
IRG4PH30KDPBF	**910-5050**	2.59	2.30	1.95	1.84
IRG4PH40KPBF	**865-0675**	5.25	2.98	2.29	1.99
IRG4PH40KDPBF	**910-5077**	3.49	3.05	2.99	2.88
IRG4PH50KDPBF	**865-0705**	5.54	4.86	4.47	4.02
IRG4PSC71KDPBF	**865-0748**	12.21	8.55	7.11	6.85
IRG4PSH71KPBF	**865-0799**	13.69	8.92	7.23	6.95
IRG4PSH71KDPBF	**865-0780**	21.02	14.25	11.74	11.18
IRG4RC10KPBF	SMD **910-4933**	1.76	0.97	0.71	0.67
IRGB10B60KDPBF	**865-9567**	3.63	2.12	1.61	1.51
IRGB15B60KDPBF	**865-9575**	4.24	2.47	1.88	1.76
IRGB30B60KPBF	**865-9591**	3.94	2.30	1.75	1.64
IRGB6B60KPBF	**865-0837**	0.87	0.69	0.64	0.59
IRGB8B60KPBF	**865-0845**	1.09	0.96	0.88	0.81
IRGB6B60KDPBF	**865-9621**	2.18	1.27	0.97	0.91
IRGIB6B60KDPBF	**865-9630**	1.52	– –	– –	– –
IRGIB7B60KDPBF	**865-9648**	3.47	1.92	1.41	1.33
IRGIB15B60KD1P	**101-3530**	3.36	2.53	2.17	2.02
IRGS6B60KPBF	SMD **910-4909**	0.51	– –	– –	– –
IRGS4B60KD1PBF	SMD **101-3527**	0.99	0.83	0.81	0.79
IRGS6B60KDPBF	SMD **865-9702**	1.08	– –	– –	– –
IRGS4B60KPBF	SMD **101-3528**	0.57	– –	– –	– –
IRGS30B60KPBF	SMD **107-8445**	2.15	1.43	1.23	1.17

Ultra-Fast Switching IGBTs

60 - 300kHz

Infineon technologies


TO-247


TO-220

- Ultra-low switching losses
- NPT (Non-Punch Through) technology
- Minimal dynamic losses
- Extremely rugged
- Cost-effective alternative to power MOSFETs in switch mode and uninterruptible power supplies, up to 300kHz
- Ideal for Power Factor Correction (PFC)

V_{CEO} V	$I_{C\ cont}$ @ 25°C A	$V_{CE(sat)}$ max. V	I_{CM} pulsed A	t_r typ. ns	t_f typ. ns	P_D @ 25°C W	Package	Mftrs. List No.
600	41	2.4	112	35	70	250	TO-247AC	SGW30N60
600	40	2.4	80	36	65	179	TO-247	SKW20N60
600	23	2.1	92	9.6	140	100	D2-PAK	IRG4BC30U-SPBF
1200	46	3.6	84	40	39	313	TO-247AC	SKW25N120

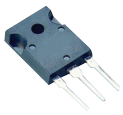
211328

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+
SGW30N60	**105-6535**	3.96	2.94	2.47	– –
SKW20N60	**115-6456**	3.86	2.85	2.44	– –
SKW25N120	**105-6536**	8.03	5.78	4.86	3.75
IRG4BC30U-SPBF	SMD **101-3524**	2.56	1.93	1.66	1.54

General Purpose IGBTs

Infineon

D-PAK (TO-252)


TO-247

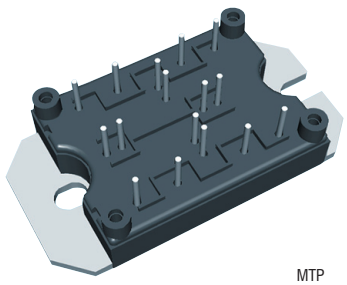
TO-220

498163

Mftrs. List No.	Case Style	V_{CEO} Max. (V)	I_C max.(A)	Order Code	Price Each 1+	25+	100+	250+
IKP10N60T	TO-220	600	10	**147-1741**	1.84	1.38	1.05	0.75
IKP15N60T	TO-220	600	15	**147-1742**	2.66	2.00	1.52	1.09
IKP20N60T	TO-220	600	20	**147-1743**	4.07	3.05	2.32	1.66
IKW30N60T	TO-247	600	25	**147-1748**	5.73	4.30	3.26	2.51
SGW30N60HS	TO-247	600	30	**160-0271**	4.52	3.16	2.73	2.55
IKW50N60T	TO-247	600	50	**147-1750**	6.94	5.21	3.96	2.84
IKW75N60T	TO-247	600	75	**147-1751**	13.17	9.89	7.52	5.39
IKP01N120H2	TO-220	1200	1.3	**147-1735**	2.13	1.60	1.22	0.87
IGP03N120H2	TO-220	1200	3.9	**147-1729**	2.02	1.51	1.15	0.82
IGW03N120H2	TO-247	1200	3.9	**147-1730**	2.44	1.83	1.39	1.00
IKP03N120H2	TO-220	1200	3.9	**147-1736**	1.95	1.46	1.10	0.86
IKW08T120	TO-247	1200	8	**147-1744**	4.57	3.42	2.61	1.86
IKW15T120	TO-247	1200	15	**147-1745**	5.26	3.95	3.01	2.15
IKW25T120	TO-247	1200	25	**147-1747**	7.32	5.50	4.18	3.00
IKW40T120	TO-247	1200	40	**147-1749**	12.30	9.24	7.02	5.02

IGBT Modules

International IOR Rectifier


MTP

- Modules combining high-speed IGBTs with optimised diodes
- Single package offers space and assembly-cost savings compared to discrete solutions
- Fully isolated modules are insulated with a ceramic nitride layer for improved thermal conductivity

Configuration	V_{CES} V	I_C @ T_c=25°C A	I_C pulsed A	$V_{CE(sat)}$ max. V	@ I_C A	P_D @ T_c=25°C W	Mftrs. List No.
Full Bridge	1200	40	100	3.59	20	240W* *Excludes Diode	20MT120UFPBF

338166

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+
20MT120UFPBF	**910-1888**	79.24	49.89	41.58	30.77

Power Modules ISOTOP

International IOR Rectifier

V_{CEO} V	$I_{C\ cont}$ 25°C, A	$V_{CE(sat)}$ typ.,V	I_C pulsed, A	t_r typ. ns	t_f max. ns	P_D 25°C, W	Mftrs. List No.
600	200	1.6	400	75	460	500	GA200SA60UPBF
600	200	1.1	400	60	660	630	GA200SA60SPBF

211341

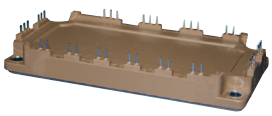
Mftrs. List No.	Mftr.	Order Code	Price Each 1+	+	+	+	+
GA200SA60SPBF	VISH	**910-4950**	43.03	– –	– –	– –	– –
GA200SA60UPBF	VISH	**910-4968**	42.32	– –	– –	– –	– –

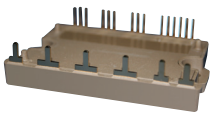
Six Pack IGBT Modules

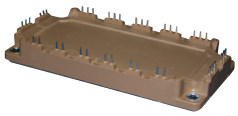
FUJI ELECTRIC DEVICE TECHNOLOGY

New

M636 NTC


M633 NTC


P617


M626

M623

P610/P611

Package	H	W	D
M636 NTC	20	107	45
M633 NTC	20	122	62
M623	20	107	45
M626	20	122	62
P617	16	70	46
P610	31	109	88
P611	31	109	88

- 6-pack IGBT modules configured for motor drive and other inverter applications
- IPM types have on-chip over-current and over-temperature protection and screw-thread power terminals
- All PIM types have through-hole pcb connections and low profile packages, compatible with industry standard rectifier modules
- Trench-Field-Stop PIM types have built-in substrate temperature measurement using an NTC thermistor

V_{CES} V	I_C @ T_c=25°C A	I_C pulsed A	$V_{CE(sat)}$ max. V	@	I_C A	P_D @ T_c=25°C W	Package	Mftrs. List No.
Trench PIM Modules								
1200	75	150	2.35		50	275	M636 NTC	6MBI50U4A-120-50
1200	100	200	2.5		75	390	M633 NTC	6MBI75U4B-120-50
1200	150	300	2.6		100	520	M633 NTC	6MBI100U4B-120-50
1200	200	400	2.8		150	735	M633 NTC	6MBI150U4B-120-50
NPT PIM Modules								
1200	25	50	2.6		15	110	M623	6MBI15S-120-50
1200	35	70	2.6		25	180	M623	6MBI25S-120-50
1200	75	150	2.65		50	360	M623	6MBI50S-120-50
1200	100	200	2.6		75	520	M626	6MBI75S-120-50
1200	150	300	2.6		100	700	M626	6MBI100S-120-50
IPM PT Modules								
600	30	60	2.7		30	85	P617	6MBP30RH-060-50
600	50	100	2.8		50	198	P610	6MBP50RA-060-55
600	100	200	2.8		100	400	P611	6MBP100RA-060-55
IPM NPT Modules								
1200	50	100	2.6		50	400	P611	6MBP50RA-120-55

529314

Mftrs. List No.		Price Each		
Trench PIM Modules	**Order Code**	1+	3+	5+
6MBI50U4A-120-50	**168-9584**	84.91	69.47	63.68
6MBI75U4B-120-50	**168-9585**	123.39	100.95	92.54
6MBI100U4B-120-50	**168-9586**	151.24	123.74	113.43
6MBI150U4B-120-50	**168-9588**	193.90	158.64	145.42
NPT PIM Modules				
6MBI15S-120-50	**168-9589**	38.20	31.25	28.65
6MBI25S-120-50	**168-9590**	48.84	39.96	36.63
6MBI50S-120-50	**168-9591**	68.98	56.44	51.74
6MBI75S-120-50	**168-9592**	115.42	94.43	86.56
6MBI100S-120-50	**168-9593**	153.90	125.91	115.42
IPM PT Modules				
6MBP30RH-060-50	**168-9595**	42.45	34.74	31.85
6MBP50RA-060-55	**168-9596**	96.86	79.25	72.64
6MBP100RA-060-55	**168-9597**	137.19	112.25	102.89
IPM NPT Modules				
6MBP50RA-120-55	**168-9600**	114.10	93.35	85.57

Dual Pack IGBT Modules

FUJI ELECTRIC DEVICE TECHNOLOGY

New

M234

Package	H	W	D
M232	30	92	34
M233	30	92	45
M234	30	108	62

M233

M232

- Dual IGBT modules suitable for use in half-bridge, H-bridge or 6-pack configurations
- Applications include SMPS, UPS, motor drives, inverters, welding and lasers
- Industry standard packages with screw-thread power terminals
- Standard NPT and low-loss Trench Field-Stop options

V_{CES} V	I_C @ T_c=25°C A	I_C pulsed A	$V_{CE(sat)}$ max. V	@	I_C A	P_D @ T_c=25°C W	Package	Mftrs. List No.
NPT Half-Bridge Modules								
600	100	200	2.4		100	310	M232	2MBI100TA-060-50
600	150	300	2.35		150	500	M232	2MBI150U2A-060-50
600	200	400	2.45		200	660	M232	2MBI200U2A-060-50
600	300	600	2.45		300	1000	M233	2MBI300U2B-060-50
600	400	800	2.55		400	1250	M233	2MBI400U2B-060-50
1200	100	200	2.6		75	600	M232	2MBI75S-120-50
1200	150	300	2.6		100	780	M234	2MBI100S-120-50
1200	200	400	2.6		150	1000	M234	2MBI150S-120-50
1200	300	600	2.6		200	1500	M234	2MBI200S-120-50
Trench Half-Bridge Modules								
1200	200	400	2.3		150	735	M232	2MBI150U4A-120-50
1200	200	400	2.2		150	780	M233	2MBI150U4B-120-50
1200	300	600	2.25		200	1040	M233	2MBI200U4B-120-50

529350

Mftrs. List No.		Price Each		
NPT Half-Bridge Modules	**Order Code**	1+	3+	5+
2MBI100TA-060-50	**168-9571**	39.80	32.56	29.85
2MBI150U2A-060-50	**168-9572**	67.67	55.37	50.75
2MBI200U2A-060-50	**168-9573**	73.24	59.93	54.93
2MBI300U2B-060-50	**168-9574**	83.60	68.39	62.69
2MBI400U2B-060-50	**168-9576**	114.13	93.38	85.60
2MBI75S-120-50	**168-9602**	44.44	36.36	33.33
2MBI100S-120-50	**168-9577**	61.36	50.20	46.01
2MBI150S-120-50	**168-9578**	88.89	72.73	66.66
2MBI200S-120-50	**168-9579**	114.10	93.35	85.57
Trench Half-Bridge Modules				
2MBI150U4A-120-50	**168-9581**	79.59	65.13	59.70
2MBI150U4B-120-50	**168-9582**	90.23	73.82	67.67
2MBI200U4B-120-50	**168-9583**	95.51	78.16	71.64

Single 4A IGBT Gate Driver

FUJI ELECTRIC DEVICE TECHNOLOGY

H=26.5mm x W=43mm x D=10mm

New

- Gate resistance 1.1Ω
- High output volatge 14.5V
- Low output volatge -4V
- Rise & fall time 1.0µs
- Operating tempearture -25°C to +60°C
- Pin/Package 15/SIL
- Maximum switching frequency 40kHz
- Single supply voltage range 20V to 22V needed
- Photo coupler input current range 9mA to 11mA
- Built-in over current protection circuit
- Applications include UPS, SMPS & inverter
- Few external components needed
- Isolation voltage 2500V rms

529351

Mftrs. List No.		Price Each		
	Order Code	1+	3+	5+
VLA517-01R	**168-9601**	9.29	7.60	6.97

Seven Pack IGBT 50A/100A Module

FUJI ELECTRIC DEVICE TECHNOLOGY

M712

L=20mm
W=122mm
D=62mm

New

- Ideally suited for motor drives and other inverter applications
- Contains input 3-phase rectifier, low-side brake chopper and 3-phase output inverter
- DC link terminations configured to allow insertion of bus capacitors or PFC converter if required
- Substrate temperature measured by internal thermistor connected between pins 8 and 9
- Low profile package with through-hole pcb connections

V_{CES} V	I_C @ T_c=25°C A	I_C pulsed A	$V_{CE(sat)}$ max. V	@	I_C A	P_D @ T_c=25°C W	Package	Mftrs. List No.
NPT PIM Module								
1200	75	150	2.7		75	360	M712	7MBR50SB-120-50
PT PIM Module								
600	100	200	2.6		100	200	M712	7MBR100SB-060-50

529352

Mftrs. List No.		Price Each		
	Order Code	1+	3+	5+
NPT PIM Module				
7MBR50SB-120-50	**168-9603**	103.15	84.40	77.36
PT PIM Module				
7MBR100SB-060-50	**168-9604**	168.57	137.93	126.43

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Insulated Gate Bipolar Transistors (IGBTs) - continued

High Performance Power Modules

FUJI ELECTRIC DEVICE TECHNOLOGY

- High speed switching
- Single or half-bridge configurations

Additional S-Series Features:

- NPT Technology options (S-Series)
- Square short-circuit SOA at 10 x I_c
- High short-circuit withstand capability
- Low loss
- Soft switching

Package	H	W	D	Package	H	W	D	Package	H	W	D
M127	35	108	62	M233	30	92	45	M235	30	108	62
M232	30	92	34	M234	30	108	62				

V_{CES} V	I_C @ T_c=25°C A	I_C pulsed A	$V_{CE(sat)}$ max. V	@ I_C A	t_r max. ns	t_f max. ns	P_D @ T_c=25°C W	Package	Mftrs. List No.
Half-Bridge Configuration, N-Series									
600	50	100	2.8	50	600	350	250	M232	2MBI50N-060
600	100	200	2.8	100	600	350	400	M232	2MBI100N-060
600	150	300	2.8	150	600	350	600	M233	2MBI150N-060
600	200	400	2.8	200	600	350	780	M233	2MBI200N-060
600	400	800	2.8	400	600	350	1500	M235	2MBI400N-060
Single Switch Configuration, Non-Punch Through S-Series									
1200	300	600	2.6	200	600	300	1500	M127	1MBI200S-120
1200	600	1200	2.6	400	600	300	3100	M127	1MBI400S-120
Half-Bridge Configuration, Non-Punch Through S-Series									
1200	100	200	2.6	75	600	300	600	M232	2MBI75S-120
1200	100	300	2.6	75	600	300	780	M234	2MBI100S-120

339077

Mftrs. List No.		Price Each		
Half-Bridge, N-Series	**Order Code**	**1+**	**3+**	**10+**
2MBI50N-060	**120-8663**	43.89	34.98	27.67
2MBI100N-060	**120-8665**	52.13	41.58	32.86
2MBI150N-060	**120-8666**	81.21	64.78	51.19
2MBI200N-060	**120-8667**	104.99	86.30	69.97
2MBI400N-060	**120-8668**	196.60	156.83	123.94
Single-Bridge, S-Series		**1+**	**3+**	**10+**
1MBI200S-120	**120-8669**	101.95	81.33	64.29
1MBI400S-120	**120-8670**	155.00	123.64	97.71
Half-Bridge, S-Series		**1+**	**3+**	**10+**
2MBI75S-120	**120-8672**	68.58	54.70	43.22
2MBI100S-120	**120-8673**	92.35	73.65	58.20

IGBT Power Modules

DYNEX SEMICONDUCTOR

Outline **M**: H=38, W=108, D=62
Fixing centres 93 x 48, M6

Outline **L**: H=36 (excl. terminals), W=106.4, D=61.4
Fixing centres 93 x 48, M6

Outline **D**: H=38, W=140, D=130
Fixing holes: 6 x 7.0, Fixing centres 124 x 65 x 65

Outline **P**: H=38, W=140, D=73
Fixing centres 124 x 57

V_{CES} V	I_C @ T_c=25°C A	I_C pulsed A	$V_{CE(sat)}$ max. V	@ I_C A	t_r typ. ns	t_f typ. ns	P_D @ T_c=25°C W	Package	Mftrs. List No.
Half-Bridge Configuration									
600	375	750	2.6	350	150	250	1736	W	DIM375WHS06-S000
600	250	500	2.6	250	130	250	1157	W	DIM250WHS06-S000
1200	200	400	2.7	200	95	50	1390	W	DIM200WHS12-A000
1700	200	400	3.4	200	90	300	1390	W	DIM200WHS17-A000
IGBT/Diode Chopper Configuration, Upper Arm Controlled									
1200	200	400	2.7	200	110	70	1390	W	DIM200WKS12-A000
IGBT/Diode Chopper Configuration, Lower Arm Controlled									
1200	200	400	2.7	200	95	50	1390	W	DIM200WLS12-A000

249040

Mftrs. List No.	Order Code	Price Each 1+	3+	10+	25+
DIM200WHS12-A000	**822-8027**	99.80	93.97	84.50	78.86
DIM200WHS17-A000	**822-8035**	229.95	216.50	197.10	183.95
DIM200WKS12-A000	**822-8043**	101.62	95.67	86.02	80.29
DIM200WLS12-A000	**822-8051**	100.36	94.49	86.02	80.29
DIM250WHS06-S000	**822-8060**	103.63	97.58	88.83	82.90
DIM375WHS06-S000	**822-8086**	103.65	101.69	99.74	97.78

Power Modules

Dual IGBTs in 7PM-GA package

- High impedance MOS input (voltage controlled)
- N channel
- Low conduction
- Low switching losses
- Short circuit ruggedness (10µs @ T_C=100 °C, V_{GE})

V_{CES} V	$I_{C\ cont}$ @ 25°C A	I_{CM} @ 25°C A	$V_{CE(sat)}$ V	P_D W	Mftrs. List No.
600	75	150	2.8	310	FMG2G75US60

H=31, W=32, D=90

424980

Mftrs. List No.	Order Code	Price Each 1+	5+	15+
FMG2G75US60	**109-5047**	56.37	42.28	34.80

1200V, Power Modules

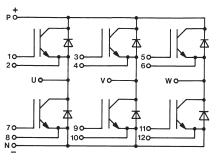
SEMIKRON innovation+service

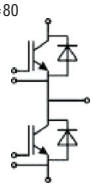
SEMITRANS IGBT Modules – Dual, Semitrans 2, 3 and Six Pack

Six Pack H=24, W=105, D=45
Mounting Holes=5.5 dia.
Fixing centres=93

Dual H=29.5, W=94, D=34
Mounting holes=6.4 dia
Fixing centres=80

Semitrans-2/3





- MOS input (voltage controlled)
- N channel
- Low inductance case
- Very low tail current
- High short circuit capability
- Latch up free
- Fast and soft inverse CAL diodes
- Isolated copper baseplate
- Used with driver module, Order Code 118-2752

Configuration	$I_{C\ cont}$ @ 25°C A	$I_{C\ cont}$ @ 80°C A	$V_{CE(sat)}$ V	Package	Mftrs. List No.
3 Phase	25	15	3/2.7	SEMITRANS 6	SKM22GD123D
3 Phase	40	25	3.3/2.7	SEMITRANS 6	SKM40GD123D
Dual IGBT	50	40	2.8/2.7	SEMITRANS 2	SKM50GB123D
Dual IGBT	70	50	2.5/2.7	SEMITRANS 2	SKM50GB063D
Dual IGBT	200	180	3/2.7	SEMITRANS 3	SKM200GB123D
Dual IGBT	260	190	2.15/2.7	SEMITRANS 3	SKM200GB126D
Dual IGBT	260	190	1.2/2.7	SEMITRANS 3	SKM400GB126D
Dual IGBT	430	310	2.4/2.7	SEMITRANS 3	SKM400GB176D
Dual IGBT	690	480	1.9/2.7	SEMITRANS 3	SKM600GB066D

222090

Mftrs. List No.	Package	Order Code	Price Each 1+	25+
Dual Series IGBT - Semitrans 2				
SKM50GB123D	SEMITRANS 2	**956-3032**	74.57	60.11
Dual Series IGBT - Semitrans 3				
SKM200GB123D	SEMITRANS 3	**956-2915**	133.12	110.24
			1+	**4+**
Dual Series IGBT - Semitrans 2				
SKM50GB063D	SEMITRANS 2	**109-5526**	61.00	43.50
Dual Series IGBT - Semitrans 3				
SKM400GB176D	SEMITRANS 3	**109-5525**	235.58	172.12
SKM200GB126D	SEMITRANS 3	**109-5517**	115.90	91.43
SKM400GB126D	SEMITRANS 3	**109-5519**	209.47	157.10
SKM600GB066D	SEMITRANS 3	**109-5530**	183.92	133.77
3-Phase Controlled Bridge - Semitrans-6				
SKM40GD123D	SEMITRANS 6	**956-3024**	154.71	139.30
SKM22GD123D	SEMITRANS 6	**956-3008**	133.97	106.02

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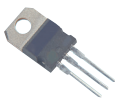
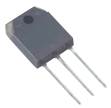
300 V_{CEO}, 600 V_{CEO} & 1200 V_{CEO}, Ultra-Fast IGBT, N-Channel

With Anti-Parallel Hyperfast Diode Options

D²PAK


TO-220

TO-247/AC


TO-3P

- >100kHz or better operation
- 600V switching SOA capability
- Extremely small fall time
- Low conduction losses
- High pulsed current capability

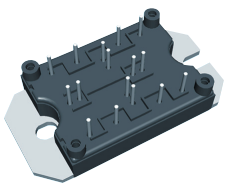
This family of MOS gated high voltage switching devices combine the best features of MOSFETs and bipolar transistors. These devices have the high input impedance of a MOSFET and the low on-state conduction loss of a bipolar transistor.
These IGBT's are ideal for many high voltage switching applications operating at high frequencies where low conduction losses are essential. These devices have been optimised for high frequency switch mode power supplies.

$I_{C\ cont}$ 25°C A	$V_{CE(sat)}$ max. V	I_C pulsed A	t_r typ. ns	t_f max. typ.(max*) ns	P_D 25°C W	Mftr.	Package	Mftrs. List No.
600 V_{CEO}								
14	2.5	50	7	60	80	ST	TO-247	STGP7NC60HD
23	2.1	92	9.6		100	IR	D2-PAK	IRG4BC30U-SPBF
40	2.4	160	19	180	160	IR	TO-220	IRG4BC40UPBF
40	2.4	160	19	180	160	IR	TO-247AC	IRG4PC40UPBF
41	2.4	112	35	70	250	INF	TO-247AC	SGW30N60
55	2.4	220	20	130	200	IR	TO-247AC	IRG4PC50UPBF
60	2.5	100	11.5	75	200	ST	TO-247	STGW20NC60VD
75	2.7	240	15	50	463	FCH	TO-247	FGH50N6S2
75	2.7	240	15	50	463	FCH	TO-247	FGH50N6S2D
80	2.5	200	19	45	260	ST	TO-247MAX	STGY40NC60VD
80	2.6	220	50	50	195	FCH	TO-3P	SGH80N60UFDTU
1200 V_{CEO}								
46	3.6	84	40	39	313	INF	TO-247AC	SKW25N120

424435

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+
FGH50N6S2	FCH	**109-5033**	5.93	5.74	5.59
SGW30N60	INF	**105-6535**	3.96	2.94	2.47
IRG4BC30U-SPBF	IR	SMD **101-3524**	2.56	1.93	1.66
IRG4PC40UPBF	IR	**865-0560**	3.27	2.48	2.32
IRG4PC50UPBF	IR	**865-0624**	4.19	2.75	2.13
IRG4BC40UPBF	IR	**910-4992**	4.02	2.35	1.84
With Integral Anti-Parallel Diode					
FGH50N6S2D	FCH	**109-5034**	10.20	7.82	7.42
SGH80N60UFDTU	FCH	**105-7675**	6.15	4.19	3.12
SKW25N120	INF	**105-6536**	8.03	5.78	4.86
STGP7NC60HD	ST	**951-2527**	2.14	1.70	1.28
STGW20NC60VD	ST	**951-2535**	4.90	3.89	2.89
STGY40NC60VD	ST	**951-2551**	14.95	11.85	8.92

IGBT Modules


MTP

- Modules combining high-speed IGBTs with optimised diodes
- Single package offers space and assembly-cost savings compared to discrete solutions
- Fully isolated modules are insulated with a ceramic nitride layer for improved thermal conductivity

Configuration	V_{CES} V	I_C @ T_c=25°C A	I_C pulsed A	$V_{CE(sat)}$ max. V	@ I_C A	P_D @ T_c=25°C W	Mftrs. List No.
Half-Bridge	600	114	350	2.3	50	658W*	50MT060WHTAPBF

451634

Mftrs. List No.	Order Code	Price Each 1+	10+	25+	50+
50MT060WHTAPBF	**129-7333**	28.56	21.13	18.91	17.73

Powerful and affordable solutions for PCB design

EAGLE www.cadsoft.de

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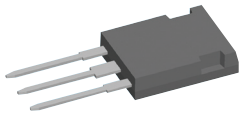
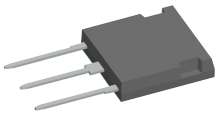
600V to 1700V, Isolated


ISOPLUS-247


ISOI4-PAK

- Isolated Mounting Surface
- 2500 V electrical isolation
- SOA short circuit rated options
- Non-punch through technology

V_{CES} V	I_C @ 25 °C A	$V_{CE(sat)}$ max V	t_{rise} ns	Package	Mftrs. List No.
Non-Punch through (NPT)					
600	75	2	100	ISOPLUS-247	IXGR60N60B2
600	75	2	100	ISOPLUS-247	IXGR60N60B2D1
600	75	2.7	35	ISOPLUS-247	IXGR60N60C2
600	75	2.7	35	ISOPLUS-247	IXGR60N60C2D1
600	60	1.9	82	ISOPLUS-247	IXGR40N60B2
600	60	1.9	82	ISOPLUS-247	IXGR40N60B2D1
600	60	2.2	65	ISOPLUS-247	IXGR50N60B2D1
600	56	2.7	32	ISOPLUS-247	IXGR40N60C2
1200	70	3.3	160	ISOPLUS-247	IXGR35N120B
1200	95	2.1	50	ISOPLUS-247	IXER60N120
1200	50	2.4	70	ISOPLUS-247	IXDR30N120
1200	50	2.4	70	ISOPLUS-247	IXDR30N120D1
1200	50	2.2	50	ISOPLUS-247	IXER35N120D1
1700	38	3.5	250	ISOPLUS-247	IXGR32N170H1
1700	26	3.5	—	ISOi4-PAC	IXGF32N170
1700	26	5.2	50	ISOPLUS-247	IXGR32N170AH1
1700	16	5	40	ISOPLUS-247	IXGR16N170AH1

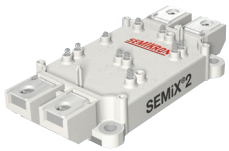
451173

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+
IXDR30N120	**130-0074**	7.33	6.01	5.11	4.90
IXDR30N120D1	**130-0075**	8.01	6.56	5.56	5.10
IXER35N120D1	**130-0078**	12.03	9.82	8.35	7.65
IXER60N120	**130-0079**	12.87	10.50	10.42	10.15
IXGF32N170	**130-0108**	18.63	15.25	12.96	11.85
IXGR16N170AH1	**130-0110**	8.15	7.49	7.22	7.01
IXGR32N170AH1	**130-0111**	12.04	10.46	10.19	9.92
IXGR32N170H1	**130-0112**	20.38	14.66	14.35	13.94
IXGR35N120B	**130-0113**	15.37	12.58	10.67	9.79
IXGR40N60B2	**130-0114**	5.17	4.37	3.79	3.50
IXGR40N60B2D1	**130-0115**	7.07	5.80	4.91	4.50
IXGR40N60C2	**130-0116**	5.86	4.82	4.07	3.72
IXGR50N60B2D1	**130-0119**	10.59	8.67	7.38	6.75
IXGR60N60B2	**130-0121**	8.47	6.94	5.89	5.40
IXGR60N60B2D1	**130-0122**	11.73	9.60	8.16	7.46
IXGR60N60C2	**130-0123**	7.85	6.42	5.47	5.01
IXGR60N60C2D1	**130-0124**	11.73	9.60	8.16	7.45

Dual Trench and Soft Punch Through IGBT Modules

SEMIKRON innovation+service

New


SEMiX 2s

SEMiX 3s

- Thyristor for line frequency
- Long-term stability of blocking currents and voltages
- Ideal for motor control, power conversion, SMPS's, light and temperature control

V_{CES}/ V	I_C max A	I_{CRM} max A	I_{FS} (Diode) A	t_{rise} ns	Type	V_{GT} @ 25°C V	Mftrs. List No.
SEMiX 2s							
1200	270	400	1000	45	IGBT Module	SEMiX 2s	SEMIX252GB126HDS
1600	530	800	1800	125	IGBT Module	SEMiX 2s	SEMIX402GB066HDS
1700	430	600	2000	105	IGBT Module	SEMiX 2s	SEMIX452GB176HDS
SEMiX 3							
600	790	1200	1800	145	IGBT Module	SEMiX 3s	SEMIX603GAR066HDS
1700	650	900	2900	90	IGBT Module	SEMiX 3s	SEMIX653GB176HDS

452812

Mftrs. List No.	Order Code	Price Each 1+	3+	6+	+	+
SEMIX402GB066HDS	**130-0535**	102.48	86.05	83.83	– –	– –
SEMIX603GAR066HDS	**130-0536**	113.72	110.73	107.89	– –	– –
SEMIX252GB126HDS	**130-0537**	58.78	57.73	56.64	– –	– –
SEMIX452GB176HDS	**130-0543**	202.52	160.90	156.42	– –	– –
SEMIX653GB176HDS	**130-0545**	230.02	212.01	206.57	– –	– –

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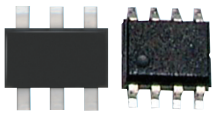
Low Power MOSFETs

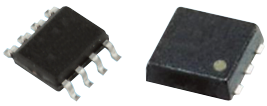
Dual MOSFETs Array

New

SANYO



SOT346 SOT96



ECH8 VCE8 SCH6

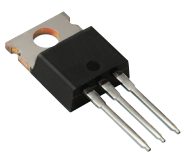
V_{DS}(typ) V	I_D cont @ 25°C A	$R_{DS(on)}$ mΩ	@ Vgs V	P_D @ 25°C W	Package	Order Code	Mftrs. List No.
Dual N Channel							
30	2.5	105	10	900	SOT-346	173-5448	CPH6616-TL-E
30	8	22	10	2.5	SOT-96	173-5471	FW808-TL-E
45	6	34	10	2.2	SOT-96	173-5464	FW248-TL-E
60	1.5	93	10	1.5	ECH8	173-5458	ECH8616-TL-E
100	1	260	10	1.5	ECH8	173-5459	ECH8618-TL-E
Dual P Channel							
12	2	49	4.5	1	VEC8	173-5491	VEC2303-TL-E
12	2	40	4.5	1.5	ECH8	173-5455	ECH8611-TL-E
12	2	33	5	1.5	ECH8	173-5456	ECH8613-TL-E
12	0.5	615	4.5	650	SCH6	173-5489	SCH2315-TL-E
20	1	150	4	1.2	EMH8	173-5463	EMH2301-TL-E
20	2	81	4.5	1	VEC8	173-5490	VEC2301-TL-E
20	2	54	4.5	1.5	ECH8	173-5453	ECH8603-TL-E
20	3	38	4.5	1.5	ECH8	173-5462	ECH8654-TL-H
20	6	40	4	2.5	SOT-96	173-5468	FW705-TL-E
20	0.4	900	4	800	SC-88	173-5483	MCH6635-TL-E
20	0.5	500	4	800	SC-88	173-5480	MCH6617-TL-E
20	0.8	235	4	1.2	SOT-346	173-5446	CPH6601-TL-E
30	0.05	10400	4	800	SC-88	173-5479	MCH6601-TL-E
N & P Channel							
35	6	33	10	2.2	SOT-96	173-5467	FW377-TL-E
45	5	37	10	2.2	SOT-96	173-5466	FW349-TL-E
60	1.5	93	10	1.5	ECH8	173-5460	ECH8619-TL-E
100	1	260	10	1.5	ECH8	173-5461	ECH8620-TL-E

540851

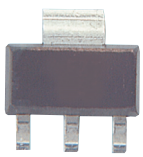
Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
Dual N Channel						
CPH6616-TL-E	SMD 173-5448	0.51	0.43	0.35	0.29	0.25
FW808-TL-E	SMD 173-5471	1.27	1.08	0.88	0.74	0.62
FW248-TL-E	SMD 173-5464	1.10	0.93	0.76	0.64	0.54
ECH8616-TL-E	SMD 173-5458	0.98	0.83	0.67	0.57	0.48
ECH8618-TL-E	SMD 173-5459	1.04	0.88	0.71	0.60	0.51
Dual P Channel						
VEC2303-TL-E	SMD 173-5491	1.10	0.93	0.75	0.64	0.54
ECH8611-TL-E	SMD 173-5455	1.28	1.08	0.88	0.74	0.63
ECH8613-TL-E	SMD 173-5456	1.68	1.42	1.15	0.97	0.82
SCH2315-TL-E	SMD 173-5489	1.04	0.88	0.71	0.60	0.51
EMH2301-TL-E	SMD 173-5463	0.98	0.83	0.67	0.56	0.48
VEC2301-TL-E	SMD 173-5490	1.16	0.98	0.80	0.67	0.57
ECH8603-TL-E	SMD 173-5453	1.22	1.03	0.84	0.71	0.60
ECH8654-TL-H	SMD 173-5462	0.64	0.54	0.44	0.37	0.31
FW705-TL-E	SMD 173-5468	1.23	1.04	0.85	0.71	0.60
MCH6635-TL-E	SMD 173-5483	0.79	0.67	0.54	0.46	0.39
MCH6617-TL-E	SMD 173-5480	0.85	0.72	0.59	0.49	0.42
CPH6601-TL-E	SMD 173-5446	0.91	0.77	0.63	0.53	0.45
MCH6601-TL-E	SMD 173-5479	0.49	0.41	0.34	0.28	0.24
N & P Channel						
FW377-TL-E	SMD 173-5467	1.10	0.93	0.76	0.64	0.54
FW349-TL-E	SMD 173-5466	1.06	0.90	0.73	0.61	0.52
ECH8619-TL-E	SMD 173-5460	0.68	0.58	0.47	0.40	0.33
ECH8620-TL-E	SMD 173-5461	0.76	0.65	0.53	0.44	0.37

N Channel OMNIFET

D2PAK



TO220



SOT223

New

- Linear current limitation
- Thermal shutdown
- Short circuit protection
- Integrated clamp
- Low current drawn from input pin
- Diagnostic feedback through input pin
- ESD protection
- Direct access to the gate of the Power
- MOSFET (analog driving)
- Compatible with standard Power MOSFET

This range of monolithic ONIFET devices, uses STMicroelectronics VIPower M0 Technology, intended for replacement of standard power MOSFETS in DC to 50 kHz applications. Built-in thermal shut-down, linear current limitation and overvoltage clamp protect the chip in harsh enviroments. Fault feedback can be detected by monitoring the voltage at the input pin.

V_{clamp}(typ) V	I_D cont @ 25°C A	$R_{DS(on)}$	@ Vgs V	Package	Order Code	Mftrs. list No.
N Channel						
42	14	0.035ohm	10	D2PAK	173-9404	VNB28N04-E
42	14	0.035ohm	10	TO-220	173-9427	VNP28N04-E
45	0.5	250mohm	5	DPAK	173-9409	VND1NV04TR-E
45	0.5	250mohm	5	SOIC	173-9439	VNS1NV04D-E
45	3.5	60mohm	5	SOIC	173-9442	VNS7NV04TR-E
45	3.5	60mohm	5	DPAK	173-9415	VND7NV04-E
45	3.5	60mohm	5	SOT-223	173-9422	VNN7NV04TR-E
45	7	35mohm	5	DPAK	173-9408	VND14NV04-E
45	7	35mohm	5	TO-220	173-9424	VNP14NV04-E
45	7	35mohm	5	SOIC	173-9437	VNS14NV04TR-E
45	15	13mohm	5	TO-220	173-9429	VNP35NV04-E
70	5	0.1ohm	10	TO-220	173-9423	VNP10N07-E
70	10	0.05ohm	10	TO-220	173-9425	VNP20N07-E
70	10	0.05ohm	10	D2PAK	173-9403	VNB20N07
70	18	0.028ohm	10	TO-220	173-9428	VNP35N07-E
70	18	0.028ohm	10	D2PAK	173-9405	VNB35N07TR-E
NN Channel						
45	1.5	120mohm	5	SOIC	173-9441	VNS3NV04D-E

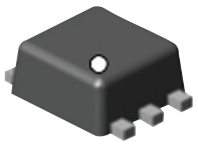
545230

Mftrs. List No.	Order Code	Price Each 1+	10+	100+	250+
N Channel					
VNB28N04-E	SMD 173-9404	3.23	2.58	2.15	1.84
VNP28N04-E	173-9427	3.12	2.49	2.08	1.78
VND1NV04TR-E	SMD 173-9409	1.21	0.97	0.80	0.69
VNS1NV04D-E	SMD 173-9439	1.56	1.25	1.04	0.89
VNS7NV04TR-E	SMD 173-9442	1.46	1.17	0.97	0.83
VND7NV04-E	SMD 173-9415	1.78	1.42	1.19	1.02
VNN7NV04TR-E	SMD 173-9422	1.46	1.16	0.97	0.83
VND14NV04-E	SMD 173-9408	2.34	1.87	1.56	1.34
VNP14NV04-E	173-9424	1.83	1.57	1.38	1.23
VNS14NV04TR-E	SMD 173-9437	2.00	1.60	1.33	1.14
VNP35NV04-E	173-9429	6.77	5.41	4.51	3.87
VNP10N07-E	173-9423	1.35	1.20	1.11	1.03
VNP20N07-E	173-9425	3.16	2.53	2.11	1.81
VNB20N07	SMD 173-9403	3.23	2.58	2.15	1.84
VNP35N07-E	173-9428	5.02	4.02	3.35	2.87
VNB35N07TR-E	SMD 173-9405	5.14	4.11	3.43	2.94
NN Channel					
VNS3NV04D-E	SMD 173-9441	1.90	1.52	1.26	1.08

Dual 1.8V P-Channel PowerTrench MOSFET

FAIRCHILD SEMICONDUCTOR

New



FLMP SSOT-6

- Battery management/charger application
- Load switch

Fairchild's FDC6036P dual P-Channel 1.8V specified MOSFET uses advanced low voltage PowerTrench process. The device's RDS(ON) and thermal properties are optimised for battery power management applications.

V_{DS}(typ) V	$R_{DS(on)}$ mΩ	@ Vgs V	I_D cont @ 25°C A	P_D @ 25°C W	Package	Order Code	Mftrs. list No.
N Channel							
-20	44	-4.5	-5	1.8	SSOT	170-0665	FDC6036P

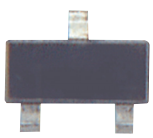
553140

Mftrs. List No.	Order Code	Price Each 1+	25+	100+
FDC6036P	SMD 170-0665	1.36	0.95	0.70

Digital FETs

FAIRCHILD SEMICONDUCTOR

SMD



- Easy to drive
- Replacements for digital bipolar transistors
- Suitable for 5V and 3V logic signals
- >6kV ESD protected
- Industry standard SOT-23 package
- No additional bias resistors required[LineBreak]

V_{DS} V	N/P Channel	$R_{DS(on)}$ @ 2.7V, Ω	I_D A	$I_{D\ pulsed}$ A	$V_{GS(th)}$ V	P_D W	Device I.D.	Mftrs. List No.
25	N	0.6	0.68	2	1.5	0.35	303	FDV303N
25	N	5	0.22	0.5	1.5	0.35	301	FDV301N
25	P	1.5	0.46	0.5	-1.5	0.35	304P	FDV304P
25	P	13	0.12	0.5	-1.5	0.35	302P	FDV302P

211305

Order Multiple = 5		Price Each			
Mftrs. List No.	Order Code	5+	25+	100+	1K+
FDV303N	SMD 984-5020 RL	0.300	0.135	0.119	0.072
FDV301N	SMD 984-5011 RL	0.135	– –	– –	– –
FDV304P	SMD 984-6123 RL	0.300	0.166	0.156	0.108
FDV302P	SMD 984-6115 RL	0.083	– –	– –	– –

SOT-23 Digital FETs

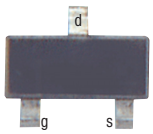
Tape width=8mm

- 100mm reel size
- 500 pieces on each reel
- Complete with leader tape
- Replacements for digital bipolar transistors
- Suitable for 5V and 3V logic signals
- >6kV ESD protected
- No additional bias resistors required

229958

500 Pieces Per Reel		Price Each		
MiniReel List No.	Order Code	1+	3+	5+
FDV301N-MR	SMD 344-8496	36.69	27.63	25.91
FDV302P-MR	SMD 344-8502	36.69	29.82	27.96
FDV303N-MR	SMD 344-8514	78.13	60.45	56.66

SC-75A



- Very small size - 45% smaller footprint than SOT-323
- Very low threshold voltage
- 2000V ESD protected
- Applications include portable communications, remote controls, PC's

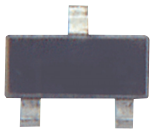
H=0.8, W=1.7, D=1.7 Supplied on 8mm tape.

V_{DS} V	$R_{DS(on)}$ Ω	@ V_{GS} V	I_D cont @ 25°C A	I_D pulsed A	$V_{GS(th)}$ min. V	P_D @ 25°C W	Device Marking	Mftrs. List No.
N Channel								
20	10	1.5	0.14	0.5	0.4	0.25	G	SI1032R
P Channel								
20	20	1.5	0.14	0.5	-0.4	0.25	H	SI1031R-T1-GE3
60	4	10	0.19	0.65	-1	0.25	F	SI1021R

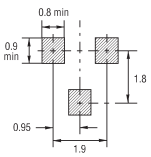
241400

Order Multiple=5			Price Each				
Mftrs. List No.	Order Code		5+	25+	100+	250+	1K+
SI1021R	SMD 955-0461	RL	0.260	0.200	0.169	0.133	0.118
SI1031R-T1-GE3	SMD 955-0488	RL	0.148	0.119	0.092	0.074	0.073
SI1032R	SMD 955-0496	RL	0.142	0.121	0.118	0.114	0.111

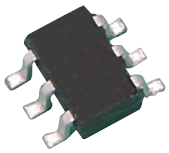
SOT-23 (3 & 6 pin)



H=1.12, W=3.05, D=2.5
Supplied on 8mm tape.



Footprint



SOT-23-6

V_{DS} V	$R_{DS(on)}$ Ω	I_D cont @ 25°C A	I_D pulsed A	$V_{GS(th)}$ max. (*min) V	P_D @ 25°C W	Mftr.	Device Marking	Mftrs. List No.
N Channel								
20	0.25	1.2	7.4	—	0.54	IR	1A	IRLML2402PBF
20	0.045	4.2	33	1.2	1.25	IR	1G	IRLML2502PBF
20	0.052	2.5	—	—	0.5	FCH	337	FDN337N
20	0.055	4.3	21	1	—	ZET	—	ZXMN2B14FH
20	0.07	1.7	8	1.5	0.5	FCH	335	FDN335N
20	0.085	0.75	—	2.4	0.4	ON	N2	MGSF1N02LT1G
20	0.1	2.4	11.8	1	—	ZET	—	ZXMN2B01F
30	0.046	2.7	15	3	0.5	FCH	359A	FDN359AN
30	0.08	2.5	—	—	0.5	FCH	357	FDN357N
30	0.125	1.7	10	2	0.5	FCH	—	NDS355AN
30	0.25	1.2	10	2	0.5	FCH	—	NDS351AN
30	0.3	0.85	—	2.5	0.4	IR	1B	IRLML2803PBF
50	3.5	0.22	0.88	1.5	0.36	FCH	SS	BSS138....
50	10	0.13	0.52	-2	0.36	FCH	SP	BSS84
55	2.3	0.335	1.3	1.3	0.83	NXP	—	BSH111
60	2	0.28	1.5	2.5	0.3	FCH	712	NDS7002A
60	2.5	0.2	3	3	0.33	ZET	MZ	ZVN4106F
60	2.8	0.3	1.2	2.5	0.83	NXP	—	2N7002
60	3.5	0.23	0.92	1.4	0.36	INF	SKs	BSS138N
60	5	0.15	3	3*	0.33	ZET	MV	BS170F
60	5	0.15	3	2.5	0.33	ZET	MY	VN10LF
60	5	0.15	3	2.4	0.33	ZET	MC	ZVN3306F
60	5	0.5	0.8	3	0.3	FCH	—	MMBF170
60	5	0.115	0.8	2.5	0.2	FCH	702	2N7002
60	7.5	0.115	0.8	2.5	0.2	ON	702	2N7002LT1G
60	7.5	0.115	0.8	—	0.2	SLX	72	2N7002-T1-E3
60	7.5	0.18	0.8	3	0.36	SLX	72	2N7002
60	8	0.17	0.68	-2	0.36	INF	YBs	BSS84P
100	3.5	0.15	0.6	2.8	0.25	NXP	—	BSS123
100	6	0.17	0.68	2	0.36	FCH	—	BSS123
100	6	0.17	0.68	2.8	0.225	ON	SA	BSS123LT1G
100	10	0.1	2	2.4	2.4	ZET	MF	ZVN3310F
240	16	0.1	0.4	2	0.36	INF	SRs	BSS131
250	100	0.04	0.12	0.7	0.36	INF	STs	BSS139
P Channel								
12	0.05	4.3	34	—	1.3	IR	—	IRLML6401PBF
20	0.052	2.4	—	-1.5	0.5	FCH	304P	FDN304P
20	0.065	3.7	22	-0.95	1.3	IR	1E	IRLML6402PBF
20	0.07	2	10	-1.5	0.5	FCH	340	FDN340P
20	0.13	1.6	—	—	0.5	FCH	338	FDN338P
20	0.047	3.9	15	0.85	0.75	SLX	M2	SI2312BDS-T1-E3
20	0.41	1	10	-1	0.5	FCH	332	NDS332P....
20	0.6	0.6	—	-1.4	0.4	IR	1C	IRLML6302PBF
30	0.6	0.61	4.8	—	0.54	IR	—	IRLML5103PBF
30	0.5	0.9	10	-2.5	0.5	FCH	—	NDS352AP
30	0.3	1.1	10	-2.5	0.5	FCH	—	NDS356AP
30	0.2	1.6	—	—	0.56	FCH	358	FDN358P
30	0.098	3	—	-2.5	1.25	IR	1H	IRLML5203PBF
30	0.08	2	20	-3	0.5	FCH	360	FDN360P
50	6	0.13	0.52	-2	0.25	NXP		BSS84
60	14	0.9	1.6	-3.5	0.33	ZET	ML	ZVP3306F
60	10	0.12	1	-3.5	0.3	FCH	610	NDS0610
60	5	0.18	1	-3	0.36	FCH	605	NDS0605
60	0.17	1.25	10	-3	0.5	FCH	618	FDN5618P
100	20	0.075	1.2	-3.5	0.33	ZET	MR	ZVP3310F

* y=year code, w=week code, l=lot traceability

211126

Order Multiple=5				Price Each			
Mftrs. List No.	Mftr.	Order Code		5+	25+	100+	1K+
2N7002-T1-E3	SLX	SMD 102-1754	RL	0.095	0.066	0.053	0.045
2N7002	NXP	SMD 151-0761		0.127	– –	– –	– –
BSH111	NXP	SMD 151-0762		0.139	0.112	0.096	0.084
BSS84	NXP	SMD 151-0765		0.230	0.143	0.094	0.064
BSS84	FCH	SMD 109-4997	RL	0.310	0.193	0.133	0.055
BSS84P	INF	SMD 105-6526	RL	0.166	0.082	0.055	0.032
BSS123	NXP	SMD 151-0764		0.066	0.054	0.046	0.041
BSS123	FCH	SMD 984-5321	RL	0.310	– –	– –	– –
BSS131	INF	SMD 105-6524	RL	0.290	0.132	0.068	0.067
BSS138....	FCH	SMD 984-5330	RL	0.098	– –	– –	– –
BSS138N	INF	SMD 115-6434	RL	0.086	0.064	0.049	0.035
BSS123LT1G	ON	SMD 955-8640	RL	0.200	0.106	0.079	0.052
BSS139	INF	SMD 105-6525	RL	0.300	0.240	0.186	– –
BS170F	ZET	SMD 952-6005	RL	0.660	0.520	0.400	0.340
FDN304P	FCH	SMD 984-6298	RL	0.580	– –	– –	– –
FDN335N	FCH	SMD 984-5348	RL	0.440	0.300	0.200	0.100
FDN337N	FCH	SMD 984-5356	RL	0.430	0.290	0.210	0.096
FDN338P	FCH	SMD 984-6301	RL	0.500	0.340	0.220	0.111
FDN340P	FCH	SMD 984-6310	RL	0.580	0.390	0.280	0.131
FDN357N	FCH	SMD 984-5364	RL	0.490	0.330	0.240	0.109
FDN359AN	FCH	SMD 984-5372	RL	0.590	0.380	0.270	0.161
FDN358P	FCH	SMD 984-6328	RL	0.530	0.350	0.260	0.120
FDN360P	FCH	SMD 984-6336	RL	0.500	0.330	0.240	0.112
FDN5618P	FCH	SMD 984-6344	RL	0.510	– –	– –	– –
IRLML2402PBF	IR	SMD 910-2710	RL	0.390	0.230	0.220	0.156
IRLML2502PBF	IR	SMD 910-2981	RL	0.300	0.188	0.150	0.130
IRLML2803PBF	IR	SMD 910-2701	RL	0.290	0.270	0.195	0.122
IRLML5103PBF	IR	SMD 866-0085	RL	0.188	0.114	0.088	0.072
IRLML5203PBF	IR	SMD 910-3511	RL	0.220	– –	– –	– –
IRLML6302PBF	IR	SMD 910-3406	RL	0.380	0.350	0.220	0.166
IRLML6401PBF	IR	SMD 866-0093	RL	0.370	– –	– –	– –
IRLML6402PBF	IR	SMD 910-3503	RL	0.310	– –	– –	– –
MGSF1N02LT1G	ON	SMD 121-6187	RL	0.500	0.350	0.270	0.210
MMBF170	FCH	SMD 984-5399	RL	0.155	0.105	0.078	0.055
NDS0605	FCH	SMD 984-6352	RL	0.440	– –	– –	– –
NDS0610	FCH	SMD 984-6360	RL	0.350	0.230	0.168	0.071
NDS332P....	FCH	SMD 984-6379	RL	0.300	0.200	0.150	0.106
NDS351AN	FCH	SMD 984-5410	RL	0.440	0.300	0.200	0.100
NDS352AP	FCH	SMD 984-6395	RL	0.570	0.380	0.280	0.128
NDS355AN	FCH	SMD 984-5429	RL	0.470	0.310	0.230	0.105
NDS356AP	FCH	SMD 984-6409	RL	0.600	0.410	0.290	0.135
NDS7002A	FCH	SMD 984-5437	RL	0.390	0.250	0.170	0.073
SI2312BDS-T1-E3	SLX	SMD 149-7608		0.260	0.196	0.173	0.161
VN10LF	ZET	SMD 952-6234	RL	1.200	0.830	0.550	0.390
ZVN3306F	ZET	SMD 952-6218	RL	0.700	0.460	0.350	0.300
ZVN3310F	ZET	SMD 952-6242	RL	0.890	0.590	0.460	0.400
ZVN4106F	ZET	SMD 952-6250	RL	0.600	0.410	0.350	0.320
ZVP3306F	ZET	SMD 952-6226	RL	0.830	0.540	0.420	0.360
ZVP3310F	ZET	SMD 952-6269	RL	0.950	0.620	0.470	0.420
2N7002	FCH	SMD 984-5313	RL	0.081	– –	– –	– –
2N7002	SLX	SMD 951-2608	RL	0.095	0.070	0.056	0.048
2N7002LT1G	ON	SMD 955-8624	RL	0.230	– –	– –	– –
				5+	25+	100+	250+
ZXMN2B14FH	ZET	SMD 142-6252		0.770	0.510	0.390	0.330
ZXMN2B01F	ZET	SMD 142-6253		0.560	0.360	0.280	0.250

Low Power MOSFETs - continued

SOT-143 MOSFET, PNP

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont.}$ @ 25°C A	$V_{GS(th)}$ max. V	P_d @ 25°C W	Mftr.	Mftrs. List No.
10	0.045	0.05	2	0.23	NXP	BSS83
10	0.045	0.05	2	0.23	NXP	BSS83

211419

Order Multiple=5

Mftrs. List No.	Order Code	5+	25+	100+	1K+	3K+
BSS83	SMD 108-1312 RL	0.720	0.480	0.440	0.400	0.390
BSS87	SMD 121-4273 RL	0.420	0.310	0.240	0.168	0.162

4 pin DIL

Pin spacing=2.54,
Row spacing=7.62

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont.}$ @ 25°C A	I_D pulsed A	P_D @ 25°C W	Mftrs. List No.
N-Channel					
50	0.1	2.4	19	1.0	IRFD020PBF
60	0.1	2.5	19	1.3	IRFD024PBF
60	0.1	2.5	20	1	IRLD024PBF
60	0.2	1.7	14	1	IRLD014PBF
60	0.2	1.7	14	1.3	IRFD014PBF
100	0.27	1.3	10.4	1.3	IRFD120PBF
100	0.27	1.3	10	1.3	IRLD120PBF
100	0.54	1	8	1.3	IRFD110PBF
100	0.54	1	8	1.3	IRLD110PBF
200	0.8	1.3	6.4	1	IRFD220PBF
200	1.5	0.6	4.8	1	IRFD210PBF
400	3.6	0.35	2.8	1	IRFD310PBF
P-Channel					
60	0.28	1.6	13	1.3	IRFD9024PBF
60	0.5	1.1	8.8	1.3	IRFD9014PBF
100	0.6	1	8	1.3	IRFD9120PBF
100	1.2	0.7	5.6	1.3	IRFD9110PBF

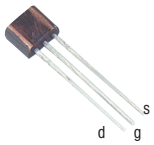
211422

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	500+
IRFD014PBF	910-2337	1.28	– –	– –	– –
IRFD020PBF	910-2396	0.83	0.49	0.44	0.43
IRFD024PBF	910-2345	1.69	0.90	0.64	0.52
IRFD110PBF	910-2353	1.09	0.56	0.37	0.32
IRFD120PBF	910-2361	1.45	0.77	0.55	0.44
IRFD210PBF	910-2370	1.49	0.79	0.57	0.45
IRFD220PBF	910-2388	0.82	0.47	0.37	0.36
IRFD9014PBF	910-3210	0.81	0.39	0.34	0.33
IRFD9024PBF	910-3228	1.52	0.78	0.50	0.45
IRFD9110PBF	910-3236	1.37	0.72	0.46	0.41
IRFD9120PBF	910-3244	1.62	0.70	0.53	0.48
IRLD014PBF	910-2515	2.19	1.18	0.82	0.66
IRLD024PBF	910-2523	2.68	1.41	1.00	0.90
IRLD120PBF	910-2531	1.32	0.71	0.50	0.43
IRFD310PBF	101-3390	2.00	1.06	0.76	0.61
IRLD110PBF	101-3423	1.11	0.61	0.46	0.45

TO-92, E-Line

TO-92 (a),(d)
Pre-formed leads on 2.54 dia. circle

TO-92 (b),(c),(e)
Lead spacing=1.27
TO-92(f)
Lead spacing=2.5



E-Line
Lead spacing=1.27

Pin Out	1	2	3
(a), (e)	S	G	D
(b)	D	G	S
(c), (d), (f)	G	D	S

Pin Outs

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont.}$ @25°C A	I_D pulsed A	P_D @ 25°C W	Package	Pin Config.	Mftr.	Mftrs. List No.
N-Channel								
60	0.45	1.1	20	0.85	E-Line	—	ZET	ZVN4306A
60	2.5	0.3	1.2	0.4	TO-92	—	REN	2SK1336-E
60	1.5	0.6	8	0.7	E-Line	—	ZET	ZVN4206A
60	1.5	0.6	8	0.7	E-Line	—	ZET	ZVN4206AV*
60	2	0.45	8	0.7	E-Line	—	ZET	ZVN2106A
60	2	0.4	2	0.625	TO-92	—	FCH	BS270
60	5	0.27	3	0.625	E-Line	—	ZET	ZVN3306A
60	5	0.5	1.2	0.83	TO-92	(a)	FCH	BS170...
60	5	0.5	—	0.35	TO-92	(e)	ON	BS170G
60	5.3	0.2	0.5	0.4	TO-92	(b)	FCH	2N7000
60	7.5	0.15	1	0.4	TO-92	(b)	ON	VN2222LLG
60	7.5	0.27	3	0.625	E-Line	—	ZET	VN10LP
100	0.65	0.9	12	0.85	E-Line	—	ZET	ZVN4310A
100	4	0.32	6	0.7	E-Line	—	ZET	ZVN2110A
100	10	0.2	2	0.625	E-Line	—	ZET	ZVN3310A
200	10	0.18	2	0.7	E-Line	—	ZET	ZVNL120A
200	28	0.25	0.5	0.35	TO-92	(e)	ON	BS107G
240	6	0.26	1	0.57	E-Line	—	ZET	ZVN4424A
240	2.2	0.3	1.4	0.8	TO-92	(b)	SLX	TN2404KL
450	50	0.09	0.6	0.7	E-Line	—	ZET	ZVN0545A
P-Channel								
50	10	0.17	0.5	0.625	E-Line	—	ZET	ZVP4105A
60	14	0.16	1.6	0.625	E-Line	—	ZET	ZVP3306A
100	8	0.23	3	0.7	E-Line	—	ZET	ZVP2110A
100	4	0.32	6	0.7	E-Line	—	ZET	ZVN2110A
240	15	0.2	1	0.75	E-Line	—	ZET	ZVP4424A
450	150	0.045	0.4	0.7	E-Line	—	ZET	ZVP0545A
NPN Channel								
—	—	—	—	1.1	TO-92	—	ST	STSA1805
—	—	—	—	1.1	TO-92	—	ST	STSA851

*Avalanche energy rated

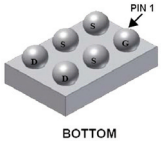
211046

Order Multiple=5

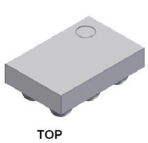
Mftrs. List No.	Mftr.	Order Code	Price Each 5+	25+	100+	1K+
2N7000	FCH	984-5178	0.240	0.175	0.115	0.078
2N7000	ST	993-5118	0.650	0.370	0.167	0.119
BS107G	ON	955-6184	0.360	0.240	0.188	0.150
BS170...	FCH	101-7687	0.350	0.230	0.151	0.102
BS170G	ON	955-6192	0.430	0.210	0.196	0.146
BS170P	ZET	952-4843	1.230	0.780	0.500	0.430
BS270	FCH	101-7689	0.145	0.097	0.072	0.051
VN10LP	ZET	952-5416	0.440	0.300	0.260	0.230
VN2222LLG	ON	955-6834	0.500	0.290	0.260	0.200
			5+	25+	100+	1K+
ZVN0545A	ZET	952-5424	3.310	2.120	1.210	0.940
ZVN2106A	ZET	952-5432	0.550	0.370	0.290	0.280
ZVN2110A	ZET	952-5440	0.610	0.410	0.380	0.330
ZVN3306A	ZET	952-5459	0.440	0.300	0.240	0.230
ZVN3310A	ZET	952-5467	1.180	0.790	0.500	0.440
ZVN4206A	ZET	952-5475	0.720	0.500	0.450	0.380
ZVN4206AV	ZET	952-6196	1.190	0.770	0.440	0.340
ZVN4306A	ZET	952-4924	1.300	0.910	0.730	0.700
ZVN4310A	ZET	952-4991	1.690	1.100	0.920	0.780
ZVN4424A	ZET	952-6200	1.400	0.780	0.650	0.550
ZVNL120A	ZET	952-5483	0.710	0.470	0.420	0.370
ZVP0545A	ZET	952-5491	2.880	1.850	1.060	0.830
ZVP2106A	ZET	952-5505	1.680	1.110	0.640	0.490
ZVP2110A	ZET	952-5955	0.790	0.540	0.430	0.410
ZVP3306A	ZET	952-4851	0.610	0.410	0.340	0.300
ZVP4105A	ZET	952-4916	1.430	0.920	0.530	0.410
ZVP4424A	ZET	952-6129	1.480	1.070	0.670	0.570
STSA1805	ST	993-5800	0.410	0.290	0.230	0.185
STSA851	ST	993-5819	0.780	0.510	0.380	0.320
Order Multiple=1			1+	25+	100+	250+
2SK1336-E	REN	117-4949	1.000	0.720	0.590	0.330

Power MOSFETs

NexFET™ Power MOSFETs



BOTTOM



TOP

6DSBGA

4DSBGA

8SON

- Avalanche rated
- Small footprint
- Ultra low Qg & Qgd
- Low thermal resistance
- Isolated & POL DC-DC converter
- Battery and load management applications

New

V_{DS}(typ) V	I_D cont @ 25°C A	$R_{DS(on)}$ mΩ	@ Vgs V	P_D @ 25°C W	Pins	Package	Order Code	Mftrs. list No.
N Channel								
25	52	9	10	3	8	SON	171-0774	CSD16412Q5A
25	56	8	10	2.7	8	SON	171-0773	CSD16411Q3
25	59	6.8	10	3	8	SON	171-0772	CSD16410Q5A
25	60	4.4	8	3	8	SON	177-8306	CSD16323Q3
25	60	4.2	10	2.7	8	SON	171-0768	CSD16406Q3
25	60	6.2	10	2.6	8	SON	171-0770	CSD16409Q3
25	81	4.1	10	3	8	SON	171-0767	CSD16404Q5A
25	97	4.4	8	3.1	8	SON	177-8305	CSD16322Q5
25	100	3.1	10	3.1	8	SON	171-0775	CSD16413Q5A
25	100	1.5	10	3.2	8	SON	171-0776	CSD16414Q5
25	100	2.1	8	3.1	8	SON	177-8303	CSD16321Q5
25	100	1.3	10	3.1	8	SON	171-0765	CSD16401Q5
25	100	1.7	8	3.1	8	SON	176-2994	CSD16325Q5
25	100	2.2	10	3.1	8	SON	171-0766	CSD16403Q5A
25	100	1.8	10	3.1	8	SON	171-0769	CSD16407Q5
P Channel								
12	1.1	65	4.5	1	4	DSBGA	171-0777	CSD23201W10
20	2.2	62	4.5	1.5	6	DSBGA	171-0778	CSD25301W1015
20	60	8.7	4.5	2.8	8	SON	171-0779	CSD25401Q3

535788

Mftrs. List No.	Order Code	1+	10+	100+	250+	500+
N Channel						
CSD16412Q5A	SMD 171-0774	2.17	1.55	1.21	1.03	0.92
CSD16411Q3	SMD 171-0773	1.58	1.12	0.87	0.75	0.67
CSD16410Q5A	SMD 171-0772	2.47	1.75	1.36	1.17	1.04
CSD16323Q3	SMD 177-8306	1.85	1.69	1.55	1.41	1.32
CSD16406Q3	SMD 171-0768	2.89	2.06	1.60	1.37	1.23
CSD16409Q3	SMD 171-0770	2.47	1.75	1.36	1.17	1.04
CSD16404Q5A	SMD 171-0767	2.89	2.06	1.60	1.37	1.23
CSD16322Q5	SMD 177-8305	2.54	2.31	2.12	1.96	1.82
CSD16413Q5A	SMD 171-0775	3.05	2.16	1.69	1.45	1.29
CSD16414Q5	SMD 171-0776	4.87	3.46	2.69	2.31	2.06
CSD16321Q5	SMD 177-8303	3.69	3.36	3.08	2.85	2.64
CSD16401Q5	SMD 171-0765	6.22	4.44	3.44	2.96	2.63
CSD16325Q5	SMD 176-2994	4.19	3.25	2.65	2.25	2.17
CSD16403Q5A	SMD 171-0766	3.91	2.79	2.16	1.85	1.66
CSD16407Q5	SMD 171-0769	4.35	3.10	2.40	2.06	1.84
P Channel						
CSD23201W10	SMD 171-0777	0.93	0.67	0.52	0.45	0.39
CSD25301W1015	SMD 171-0778	1.13	0.80	0.63	0.54	0.48
CSD25401Q3	SMD 171-0779	3.18	2.27	1.76	1.51	1.35

30V, N-Channel TrenchMOS™ Logic Level FET

SMD NXP New

- Highly efficient
- Source logic gate drive
- Pin/package 4/SOT669
- Applications class D amplifier, motor control, DC/DC converter & PSU

Mftrs. List No.	Max V_{DS} V	Max $R_{DS(on)}$ Ω	Typ $R_{DS(on)}$ mΩ	@ V_{GS} V	$I_{D\ max.}$ @ 25°C A	Pd max. @ 25°C W
PSMN1R7-30YL	30	0.0017	1.29	10	15	109
PSMN2R5-30YL	30	0.0024	1.79	10	100	88
PSMN3R0-30YL	30	0.003	2.19	10	100	81
PSMN3R5-30YL	30	0.0035	2.43	10	100	74
PSMN4R0-30YL	30	0.004	2.72	10	99	69
PSMN5R0-30YL	30	0.005	3.63	10	84	61
PSMN6R0-30YL	30	0.006	4.26	10	73	55
PSMN7R0-30YL	30	0.007	4.92	10	65	51

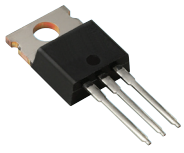
532773

Mftrs. List No.	Order Code	1+	25+	100+	250+	1K+
PSMN1R7-30YL	SMD 169-9701	2.02	1.71	1.30	1.22	1.17
PSMN2R5-30YL	SMD 169-9704	1.43	1.02	0.92	0.82	0.76
PSMN3R0-30YL	SMD 169-9705	1.14	0.82	0.73	0.66	0.61
PSMN3R5-30YL	SMD 169-9706	1.22	0.95	0.78	0.67	0.57
PSMN4R0-30YL	SMD 169-9707	1.09	0.85	0.71	0.59	0.52
PSMN5R0-30YL	SMD 169-9708	1.01	0.79	0.66	0.55	0.48
PSMN6R0-30YL	SMD 169-9709	0.89	0.70	0.57	0.49	0.43
PSMN7R0-30YL	SMD 169-9710	0.81	0.63	0.52	0.44	0.39

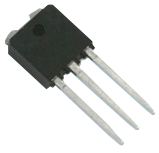
MOSFET, N-Channel

International IOR Rectifier

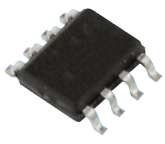
DirectFET



TO-220AB



I-PAK



SO-8

D2-PAK

D2-PAK(7)

New

V_{DS} V	$R_{DS(on)}$ @ V_{GS} = 10V mΩ	I_D cont @ 25°C A	I_D pulsed A	$V_{GS(th)}$ min. V	Package Type	Mftrs. List No.
DirectFET						
25	5.9	12	100	1.35	S1	IRF6709S2TR1PBF
25	4.5	12	100	1.4	S1	IRF6710S2TR1PBF
25	2.2	22	170	1.4	SQ	IRF6713STR1PBF
30	5.1	14	110	1.4	SQ	IRF6721STR1PBF
25	1.1	36	300	1.35	MX	IRF6797MTR1PBF
TO-220AB						
100	5.6	130	550	2	TO-220AB	IRFB4310PBF
60	2.1	270	1080	2	TO-220AB	IRFB3006PBF
150	32	35	140	3	TO-220AB	IRFB4615PBF
200	60	25	100	3	TO-220AB	IRFB4620PBF
200	17	76	300	3	TO-220AB	IRFB4127PBF
SO-8						
25	2	25	200	1.35	SO-8	IRF8252PBF
30	2.3	24	190	1.35	SO-8	IRF8788PBF
D2-PAK						
60	2	270	1080	2	D2-PAK	IRFS3006PBF
75	2.5	230	900	2	D2-PAK	IRFS3107PBF
100	3.9	180	720	2	D2-PAK	IRFS4010PBF
D2-PAK(7)						
60	1.5	293	1172	2	D2-PAK(7)	IRFS3006-7PPBF
75	2.1	260	1060	2	D2-PAK(7)	IRFS3107-7PPBF
100	3.3	190	740	2	D2-PAK(7)	IRFS4010-7PPBF
I-PAK						
40	3.9	130	500	1	I-PAK	IRLU3114ZPBF
55	11	60	240	1	I-PAK	IRLU2905ZPBF
75	17.6	45	180	2	I-PAK	IRFU2607ZPBF
75	12.8	53	210	2	I-PAK	IRFU2307ZPBF

528665

Mftrs. List No.	Order Code	1+	25+	100+	250+	1K+
IRF6709S2TR1PBF	SMD 168-8580	1.34	0.85	0.66	0.61	0.56
IRF6710S2TR1PBF	168-8599	1.73	1.24	0.98	0.81	0.72
IRF6713STR1PBF	SMD 168-8570	2.23	1.59	1.27	1.05	0.93
IRF6721STR1PBF	SMD 168-8573	1.61	1.03	0.80	0.73	0.68
IRF6797MTR1PBF	SMD 168-8576	3.44	2.20	1.70	1.56	1.45
IRFB4310PBF	168-8579	4.83	– –	– –	– –	– –
IRFB3006PBF	168-8594	3.84	– –	– –	– –	– –
IRFB4615PBF	168-8596	2.87	1.84	1.42	1.30	1.21
IRFB4620PBF	168-8597	2.42	1.55	1.20	1.10	1.02
IRFB4127PBF	168-8598	3.29	2.11	1.63	1.49	1.47
IRF8252PBF	SMD 168-8581	1.16	0.74	0.57	0.53	0.49
IRF8788PBF	SMD 168-8582	1.21	0.77	0.60	0.55	0.51
IRFS3006PBF	SMD 168-8584	3.74	2.39	1.85	1.69	1.57
IRFS3006-7PPBF	SMD 168-8585	4.24	2.71	2.10	1.92	1.79
IRFS3107PBF	SMD 168-8586	3.67	2.34	1.81	1.66	1.54
IRFS3107-7PPBF	SMD 168-8587	3.90	2.49	1.93	1.82	1.78
IRFS4010PBF	SMD 168-8588	3.99	2.55	1.97	1.80	1.67
IRFS4010-7PPBF	SMD 168-8589	4.36	2.79	2.15	1.97	1.84
IRLU3114ZPBF	168-8590	1.27	0.81	0.63	0.57	0.53
IRLU2905ZPBF	168-8591	1.14	0.73	0.56	0.52	0.48
IRFU2607ZPBF	168-8592	1.12	0.72	0.56	0.51	0.47
IRFU2307ZPBF	168-8593	1.31	0.94	0.75	0.62	0.55

<50V, Low Voltage MOSFETS

Infineon ON Semiconductor ON

International IOR Rectifier

V_{DS} V	Polarity	$R_{DS(on)}$ Ω	I_D cont @ 25°C A	P_D @ 25°C W	Mftr.	Package	Order Code	Mftrs. list No.
8	P	0.052	3.7	0.96	ON	SOT-23	143-1297	NTR2101PT1G
8	P	0.1	1.4	0.29	ON	SOT-323	145-3612	NTS2101PT1G
12	P	0.007	16	2.5	IR	SOIC	129-8514	IRF7410TRPBF
12	N	8	15	2.5	IR	SOIC	129-8486	IRF7476PBF
14	P	0.007	16	2.5	IR	SOIC	129-8512	IRF7210PBF
20	P	0.0082	15	2.5	IR	SOIC	129-8554	IRF7425PBF
20	N	0.042	24	75	IR	D2-PAK	129-8482	IRL5602STRLPBF
20	N	0.045	4.2	0.77	ON	SOIC	145-3623	NTMS4N01R2G
20	N	0.055	4.3	1	ZET	SOT-23	142-6252	ZXMN2B14FH
20	P	0.065	2.3	1.25	TS	SOT-23	129-9315	TSM2301CX
20	N	0.065	2.4	0.25	TS	SOT-23	129-9316	TSM2302CX
20	N	0.08	3.2	1.25	ON	SOT-23	143-1305	NTR4501NT1G
20	N	0.085	2.8	1.25	ON	SOT-23	145-3618	MGSF2N02ELT1G
20	P	0.085	3.2	0.73	ON	SOT-23	143-1303	NTR4101PT1G
20	N	0.1	2.4	0.625	ZET	SOT-23	142-6253	ZXMN2B01F
20	P	0.12	1.37	0.329	ON	SOT-323	145-3617	NTS4101PT1G
20	P	0.8	0.4	0.225	ON	SOT-23	143-1301	NTR0202PLT1G
20	N	1	0.3	0.15	ON	SOT-323	145-3615	MMBF2201NT1G
20	P	2.2	0.3	0.15	ON	SC-70	143-1300	MMBF2202PT1G
20	N	9	10	2.5	IR	SOIC	129-8507	IRF7459TRPBF
25	N	4.8	100	81	IR	DPAK	129-8551	IRLR8713PBF

Power MOSFETs - continued

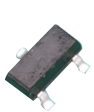
<50V, Low Voltage MOSFETS - continued

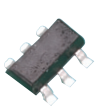
V_{DS} V	Polarity	$R_{DS(on)}$ Ω	I_D cont @ 25°C A	P_D @ 25°C W	Mftr.	Package	Order Code	Mftrs. list No.
30	N	0.0119	11.9		INF	SOIC	147-1691	BSO119N03S
30	N	0.02	8.8		INF	SOIC	147-1693	BSO200N03S
30	N	0.009	58	52	ON	I-PAK	143-1314	NTD4809NH-1G
30	P	0.025	50	125	ON	TO-220	145-3640	MTP50P03HDLG
30	N	0.027	20	74	ON	DPAK	145-9159	NTD20N03L27G
30	P	0.1	5	3.13	ON	SOT-223-4	145-3638	NTF5P03T3G
30	N	0.1	1.6	0.42	ON	SOT-23	145-3636	MGSF1N03LT1G
30	N	0.14	2.5	0.73	ON	SOT-23	143-1309	NTR4503NT1G
30	P	0.2	1.95	1.25	ON	SOT-23	143-1308	NTR4502PT1G
30	N	1.5	0.27	0.33	ON	SOT-323	145-3633	NTS4001NT1G
30	N	1.5	0.56	0.83	ON	SOT-23	145-3635	NTR4003NT1G
30	N	3	200	200	IR	D2-PAK	129-8508	IRL3713STRLPBF
30	N	3.8	21	2.5	IR	SOIC	129-8543	IRF7832ZPBF
20	P	0.125	3.2	1	ROHM	TSMT3	152-5561	RTR030P02TL
30	N	9.5	10	2	ROHM	SOP-8	152-5546	RSS100N03FU6TB
30	N	0.079	3.5	1	ROHM	TUMT6	152-5551	RTL035N03TR
30	N	11	9	2	ROHM	SOP-8	152-5543	RSS090N03FU6TB
40	P	0.015	10.5	2.5	IR	SOIC	129-8500	IRF7240PBF
40	P	0.028	6	1.5	IR	TSSOP	129-8531	IRF7703TRPBF
40	P	0.046	4.6	1.5	IR	TSSOP	129-8532	IRF7704TRPBF
40	P	0.112	3.4	2	IR	SOIC	129-8542	IRF5803D2TRPBF

496209

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	250+
IRL5602STRLPBF	IR	SMD 129-8482 RL	1.460	0.930	0.720	0.660
IRF7476PBF	IR	SMD 129-8486	0.830	0.590	0.480	0.440
IRF7240PBF	IR	SMD 129-8500	1.010	0.770	0.600	0.550
IRF7459TRPBF	IR	SMD 129-8507 RL	0.850	0.630	0.530	0.520
IRL3713STRLPBF	IR	SMD 129-8508 RL	2.430	1.780	1.510	1.340
IRF7210PBF	IR	SMD 129-8512	2.030	1.480	1.280	1.130
IRF7410TRPBF	IR	SMD 129-8514 RL	1.680	1.070	0.830	0.760
IRF7703TRPBF	IR	SMD 129-8531 RL	0.980	0.740	0.650	0.580
IRF7704TRPBF	IR	SMD 129-8532 RL	0.970	0.620	0.480	0.440
IRF5803D2TRPBF	IR	SMD 129-8542 RL	0.600	0.430	0.350	0.340
IRF7832ZPBF	IR	SMD 129-8543	1.100	0.680	0.520	0.510
IRLR8713PBF	IR	SMD 129-8551	0.960	0.620	0.490	0.450
IRF7425PBF	IR	SMD 129-8554	1.270	0.810	0.630	0.580
TSM2301CX	TS	SMD 129-9315	0.210	0.155	0.098	0.083
TSM2302CX	TS	SMD 129-9316	0.210	– –	– –	– –
ZXMN2B01F	ZET	SMD 142-6253	0.560	0.360	0.280	0.250
ZXMN2B14FH	ZET	SMD 142-6252	0.770	0.510	0.390	0.330
NTR2101PT1G	ON	SMD 143-1297	0.450	0.270	0.197	0.153
MMBF2202PT1G	ON	SMD 143-1300	0.143	0.103	0.082	0.070
NTR0202PLT1G	ON	SMD 143-1301	0.310	– –	– –	– –
NTR4101PT1G	ON	SMD 143-1303	0.470	0.300	0.210	0.163
NTR4501NT1G	ON	SMD 143-1305	0.450	– –	– –	– –
NTR4502PT1G	ON	SMD 143-1308	0.490	– –	– –	– –
NTR4503NT1G	ON	SMD 143-1309	1.000	0.620	0.440	0.340
NTD4809NH-1G	ON	SMD 143-1314	0.460	0.290	0.230	0.175
NTS2101PT1G	ON	SMD 145-3612	0.360	0.240	0.186	0.148
MMBF2201NT1G	ON	SMD 145-3615	0.270	0.178	0.141	0.112
NTS4101PT1G	ON	SMD 145-3617	0.340	0.230	0.179	0.142
MGSF2N02ELT1G	ON	SMD 145-3618	0.197	0.146	0.110	0.088
NTMS4N01R2G	ON	SMD 145-3623	1.300	0.840	0.670	0.530
NTS4001NT1G	ON	SMD 145-3633	0.400	– –	– –	– –
NTR4003NT1G	ON	SMD 145-3635	0.137	– –	– –	– –
MGSF1N03LT1G	ON	SMD 145-3636	0.560	0.360	0.290	0.230
NTF5P03T3G	ON	SMD 145-3638	0.960	0.620	0.500	0.400
MTP50P03HDLG	ON	145-3640	5.760	3.770	2.980	2.370
NTD20N03L27G	ON	SMD 145-9159	0.990	0.810	0.710	– –
BSO119N03S	INF	SMD 147-1691	0.390	0.300	0.280	0.270
BSO200N03S	INF	SMD 147-1693	0.480	0.360	0.340	0.320
RTR030P02TL	ROHM	SMD 152-5561	0.290	0.220	0.158	0.097
RSS100N03FU6TB	ROHM	SMD 152-5546	0.660	0.480	0.350	0.220
RTL035N03TR	ROHM	SMD 152-5551	0.142	0.123	0.089	0.080
RSS090N03FU6TB	ROHM	SMD 152-5543	0.200	0.168	0.122	0.110

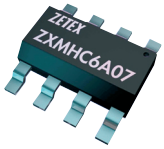
20V - 100V, Low Voltage MOSFETs


SOT-23

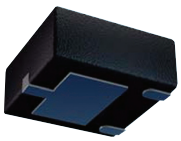

MSOP8

SOT-23-8

SOT-223



SM-8


DFN322

This new generation of trench MOSFETs from Zetex utilizes a unique structure that combines the benefits of low on-resistance with fast switching speed. This makes them ideal for high efficiency, low voltage, power management applications.

U-MOS Trench Technology

V_{DS} V	$R_{DS(on)}$ max. Ω	@ V_{GS} V	$I_{D\ cont.}$ @ 25°C A	$V_{GS(th)}$ min V	Case Style	Mftrs. List No.
N-Channel						
20	0.04	4.5	5.4	0.7	MSOP8	ZXM64N02X
20	0.12	4.5	2.2	0.7	SOT-23	ZXMN2A01FTA
20	0.18	4.5	1.7	0.7	SOT-23	ZXM61N02F
20	0.045	4.5	4.9	0.6	SOT-23	ZXMN2F30FHTA
20	0.06	4.5	4	0.5	SOT-23	ZXMN2F34FHTA
20	0.06	4.5	5.1	0.5	DFN322	ZXMN2F34MATA
30	0.05	10	4.6	1	SOT-23	ZXMN3A03E6
30	0.12	10	2	1	SOT-23	ZXMN3A01F
30	0.22	10	1.4	1	SOT-23	ZXM61N03F
30	0.047	10	4.6	1	SOT-23	ZXMN3F30FHTA
40	0.05	10	7	1	SOT-223	ZXMN4A06GTA
60	0.045	10	6.9	1	SOT-223	ZXMN6A09GTA
60	0.1	10	3	1	SOT-23	ZXMN6A08E6
60	0.14	10	3.8	1	SOT-223	ZXMN6A11G
60	0.4	10	1	1	SOT-23	ZXMN6A07F
100	0.4	10	1.5	2	SOT-23	ZXMN10A08E6
100	0.6	10	1.8	2	SOT-223	ZXMN10A11G
100	1.0	10	0.64	2	SOT-23	ZXMN10A07F
P-Channel						
20	0.6	4.5	0.9	-0.7	SOT-23	ZXM61P02F
20	0.2	4.5	2.3	-0.7	SOT-23	ZXM62P02E6
30	0.35	10	1.1	-1	SOT-23	ZXM61P03F
30	0.15	10	2.6	-1	SOT-23	ZXM62P03E6
30	0.075	10	3.8	-1	MSOP8	ZXM64P03X
30	0.07	10	4	-0.8	SOT-23	ZXMP3A17GTA
30	0.21	10	1.6	-1	SOT-23	ZXMP3A13FTA
40	0.06	10	6.4	-1	SOT-223	ZXMP4A16GTA
N and P Channel complement						
30	0.13(N), 0.27(P)	4.5	2.4	0.7	MSOP8	ZXMD63C02X
30	0.135(N), 0.185(P)	10	2.3	1	MSOP8	ZXMD63C03X
30	0.035(N), 0.048(P)	10	6.4	1	SOIC	ZXMC3A16DN8TA
N-Channel Dual						
20	0.13	4.5	2.4	0.7	MSOP8	ZXMD63N02X
30	0.028	10	7.1	1	SOIC	ZXMN3G32DN8TA
P-Channel Dual						
20	0.27	4.5	1.7	-0.7	MSOP8	ZXMD63P02X
N and P, H-Bridge						
60	1.8(N), 1.5(P)	10	1.8	1	SM-8	ZXMHC6A07T8TA

211334

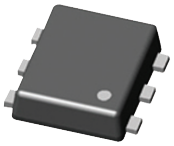
Order Multiple=5 Mftrs. List No.	Order Code	Price Each 5+	25+	100+	250+	1K+
ZXM61N02F	SMD 952-5270 RL	0.510	0.420	0.310	0.280	0.220
ZXM61N03F	SMD 952-5289 RL	0.510	0.410	0.300	0.270	0.210
ZXM61P02F	SMD 952-5297 RL	0.580	0.390	0.290	0.260	0.200
ZXM61P03F	SMD 952-5300 RL	0.620	0.430	0.310	0.280	0.230
ZXM62P02E6	SMD 952-5319 RL	0.670	0.580	0.500	0.410	0.320
ZXM62P03E6	SMD 952-5327 RL	0.860	0.580	0.450	0.390	0.310
ZXM64N02X	SMD 952-5335 RL	1.610	1.060	0.810	0.710	0.570
ZXM64P03X	SMD 952-5343 RL	2.190	1.530	1.150	1.000	0.810
ZXMD63C02X	SMD 952-5351 RL	1.500	1.280	1.120	0.730	0.680
ZXMD63C03X	SMD 952-5360 RL	1.910	1.530	1.150	1.010	0.810
ZXMD63N02X	SMD 952-5378 RL	2.570	1.810	1.370	1.200	0.960
ZXMD63P02X	SMD 952-5386 RL	2.850	2.220	1.690	1.470	1.180
ZXMC3A16DN8TA	SMD 756-4953 RL	1.790	1.190	0.890	0.780	0.620
ZXMHC6A07T8TA	SMD 756-5020 RL	1.260	1.080	0.960	0.850	0.800
ZXMN10A07F	SMD 952-5700 RL	0.510	0.330	0.260	0.230	0.177
ZXMN10A08E6	SMD 952-5718 RL	0.820	0.550	0.410	0.350	0.290
ZXMN10A11G	SMD 952-5726 RL	1.080	0.720	0.550	0.480	0.390
ZXMN2A01FTA	SMD 756-4880 RL	0.260	0.230	0.151	0.123	0.113
ZXMN3A01F	SMD 952-5734 RL	0.610	0.410	0.310	0.260	0.220
ZXMN3A03E6	SMD 952-5742 RL	0.540	0.400	0.310	0.230	0.199
ZXMN4A06GTA	SMD 756-4910 RL	1.790	1.190	0.890	0.780	0.620
ZXMN6A07F	SMD 952-5769 RL	0.580	0.400	0.290	0.260	0.210
ZXMN6A08E6	SMD 952-5777 RL	0.870	0.580	0.430	0.370	0.300
ZXMN6A09GTA	SMD 756-4988 RL	1.790	1.190	0.890	0.780	0.620
ZXMN6A11G	SMD 952-5793 RL	1.120	0.750	0.570	0.500	0.400
ZXMP3A13FTA	SMD 756-4937 RL	0.570	0.390	0.290	0.250	0.200
ZXMP3A17GTA	SMD 756-4929 RL	0.840	0.560	0.430	0.370	0.300
ZXMP4A16GTA	SMD 756-4945 RL	1.580	1.050	0.790	0.700	0.560
ZXMN3G32DN8TA	SMD 158-3671	0.970	0.630	0.490	0.420	0.330
ZXMN2F30FHTA	SMD 158-3664	0.320	0.250	0.210	0.196	0.184
ZXMN2F34FHTA	SMD 158-3665	0.340	0.230	0.174	0.152	0.122
ZXMN2F34MATA	SMD 158-3666	0.167	0.113	0.112	0.109	0.107
ZXMN3F30FHTA	SMD 158-3667	0.350	0.240	0.178	0.156	0.125

Mftrs. List No.		Order Code	Price Per Reel 1+	3+
ZXMP4A16GTA	REEL 1000	SMD 156-2504	431.92	410.24
ZXM61N02FTA	REEL 3000	SMD 156-2529	819.49	
ZXM61N03FTA	REEL 3000	SMD 156-2530	494.35	
ZXM61P02FTA	REEL 3000	SMD 156-2531	759.71	
ZXM61P03FTA	REEL 3000	SMD 156-2532	486.27	
ZXMN3A01FTA	REEL 3000	SMD 156-2533	654.88	
ZXMN6A07FTA	REEL 3000	SMD 156-2534	692.30	

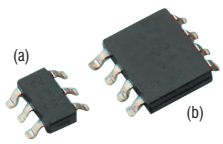
SuperSOT-6 and SuperSOT-8

FAIRCHILD SEMICONDUCTOR

SMD



SuperSOT-6 FLMP



(a) SuperSOT-6: H=1.22, W=3.0, D=3.0
(b) SuperSOT-8: H=1.02, W=4.55, D=4.06

- High power dissipation
- High cell density
- 3V logic-level drive options
- Low $R_{DS(on)}$

V_{DS} V	N/P Channel	$R_{DS(on)}$ Ω	$I_{D\ cont}$ @25°C A	$V_{GS(th)}$ max. V	P_D @ 25°C W	Mftrs. List No.
SuperSOT-6, Single Package						
30	N	0.026	5.5	2	1.6	FDC645N
60	N	0.055	4.3	4	1.6	FDC5612
30	P	0.05	4	-3	1.6	FDC658P
-12	P	0.026	6	-1.5	1.6	FDC606P
-20	P	0.035	5.5	-1.5	1.6	FDC602P
20	P	0.033	5.5	-1.5	1.6	FDC604P
-20	P	0.03	5.8	-1.5	1.6	FDC608PZ
-20	P	0.043	4.5	-1.5	1.6	FDC638APZ
20	P	0.045	4.5	-1.5	1.6	FDC638P
-30	P	0.05	4	-3	1.6	FDC658AP
SuperSOT-6, Dual Package						
20	NN	0.08	2.7	1.5	0.96	FDC6305N
30	NN	0.095	2.5	3	0.96	FDC6561AN
20	PP	0.17	1.9	-1.5	0.96	FDC6306P
30	PP	0.17	3	-3	0.96	FDC6506P
50	PP	2	0.51	10	0.7	NDC7002N
20	N	0.08	2.7	1.5	0.96	FDC6327C
	P	0.17	1.6	1.5	0.96	
25	N	0.68	2.7	1.5	0.9	FDC6321C
	P	0.45	1.6	1.5	0.9	
50	N	2.0	0.34	2.5	0.7	NDC7001C

V_{IN}, V Min	Max	$V_{ON/OFF}$, V	$R_{DS\ (ON)}$ Ω	I_{LOAD} A	$I_{LOAD,\ pulsed}$ A	V_{drop} @ V_{in}=12V V	P_D@25°C W	
3	20	1.5 - 8	0.08	2.3	10	0.2	0.7	FDC6330L

211256

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
FDC5612	SMD 984-5445 RL	0.950	0.600	0.440	0.260	0.240
FDC602P	SMD 149-5223	0.730	0.490	0.370	0.260	0.220
FDC604P	SMD 984-6417 RL	0.640	– –	– –	– –	– –
FDC606P	SMD 149-5224	0.760	– –	– –	– –	– –
FDC608PZ	SMD 149-5225	0.530	0.350	0.270	0.198	0.149
FDC6305N	SMD 984-4805 RL	0.510	0.350	0.250	0.117	0.102
FDC6306P	SMD 984-4929 RL	0.460	0.310	0.220	0.104	0.081
FDC6321C	SMD 984-4848 RL	0.260	0.220	0.193	0.147	0.127
FDC6327C	SMD 984-4856 RL	0.510	– –	– –	– –	– –
FDC6330L	SMD 984-4864 RL	0.620	0.420	0.410	0.400	0.390
FDC638APZ	SMD 149-5226	0.440	0.300	0.220	0.151	0.114
FDC645N	SMD 984-5453 RL	0.720	0.480	0.350	0.250	0.220
FDC6506P	SMD 984-4937 RL	0.550	– –	– –	– –	– –
FDC6561AN	SMD 984-4813 RL	0.520	0.330	0.240	0.151	0.147
FDC658P	SMD 984-6441 RL	0.440	0.300	0.220	0.155	0.134
FDC658AP	SMD 149-5228	0.530	0.370	0.280	0.198	0.171
NDC7001C	SMD 984-4872 RL	0.590	0.370	0.270	0.158	0.134
NDC7002N	SMD 984-4821 RL	0.500	0.340	0.250	0.115	0.100
FDC638P	SMD 984-6433 RL	0.540	0.360	0.260	0.121	0.101

SO-8, Little Foot

VISHAY

V_{DS} V	$R_{DS(on)}$Ω@ V_{GS}=10V	V_{GS}=4.5V	V_{GS}2.5V	I_D A	Typ.Q_g nC	Configuration	Mftrs List No
Single N-Channel, Low Gate Threshhold Vgs=2.5V							
20	-	0.009	0.013	13.2	50	Single	SI4466DY
20	-	0.0035	0.0035	17	47	Single	SI4864DY
Dual N-Channel, Low Gate Threshold Vgs=2.5V							
20	-	0.025	0.035	7.2	25	Dual	SI4966DY
20	-	0.02	0.03	6.2	11	Dual	SI9926BDY
Single N-Channel, 20V to 100V							
30	0.028	0.042	-	7	19.5	Single	SI4412ADY
30	0.024	0.033	-	6.2	15	Single	SI9410BDY
30	0.0185	0.03	-	6.5	8.7	Single	SI4800BDY
30	0.0135	0.02	-	7.5	13	Single	SI4410BDY
30	0.01	0.0135	-	9.5	14.5	Single	SI4886DY
30	0.0085	0.011	-	13.5	16	Single	SI4420BDY-T1-E3

V_{DS} V	$R_{DS(on)}$Ω@ V_{GS}=10V	V_{GS}=4.5V	V_{GS}2.5V	I_D A	Typ.Q_g nC	Configuration	Mftrs List No
Single N-Channel, 20V to 100V							
40	0.0075	0.0095	-	10.4	28	Single	SI7848DP
40	0.009	0.012	-	14	18.5	Single	SI4840DY
60	0.024	0.030	-	7.5	31	Single	SI4450DY
60	0.022	0.031	-	6	18	Single	SI4850EY
80	0.035	—	-	6.2	30		SI4480EY/
100	0.060	0.08	-	4.6	30	Single	SI4482DY
100	0.034	—	-	6.9	—	Single	SI4484EY
Dual N Channel, 30V to 100V							
30	0.036	0.053	-	4.4	13	Dual	SI4936ADY
30	0.035	0.052	-	4.5	8.6	Dual	SI9936BDY
30	0.025	0.035	-	6.9	30	Dual	SI4920DY
30	0.022	0.03	-	7.5	7	Dual	SI4804BDY
30	0.016	0.018	0.024	8	19	Dual	SI4922BDY-T1-E3
30	0.035	0.051	-	6.8	4.5	Dual	SI4936BDY-T1-E3
60	0.041	0.052	-	6.5	9.2	Dual	SI4946BEY-T1-E3
60	0.055	0.075	-	4.5	19	Dual	SI4946EY
Single P-Channel, Low Gate Threshold Vgs=2.5V							
20	-	0.017	0.023	7.3-	—	Single	SI4403BDY
Dual P-Channel, Low Gate Threshold Vgs=2.5V							
12	-	0.035	0.056	4.8-	13	Dual	SI9934BDY
20	-	0.06	0.1	3.6-	6	Dual	SI9933BDY
20	-	0.032	0.05	4.9-	14	Dual	SI4963BDY
Single P-Channel, -20V to -60V							
20	0.011	0.014	0.02	9.8-	—	Single	SI4463BDY-T1-E3
20	-	0.04	-	4.5-	8.8	Single	SI9433BDY
20	-	0.025	-	5.6-	24	Single	SI9424BDY
30	0.042	0.07	-	4.1-	16	Single	SI9435BDY
30	0.012	0.019	-	8.8-	64	Single	SI4425BDY
30	0.0105	0.0125	-	9.7-	47.2	Single	SI4427BDY-T1-GE3
Dual P-Channel, -20V to -60V							
30	0.025	0.041	-	5.3-	33	Dual	SI4925BDY
60	0.170	0.260	-	2.6-	10	Dual	SI9948AEY
60	0.12	0.15	-	2.4-	14.5	Dual	SI4948BEY
Dual N/P-Channel, Low Gate Threshold Vgs=2.5V							
20	-	0.02	0.02	9.1	11	N-Channel	SI4500BDY
20	-	0.1	0.048	3.8	6	P-Channel	
20	-	0.025	0.035	7.1	25	N-Channel	SI4562DY
Dual N/P-Channel, 25V to 60V							
30	0.053	0.075	-	4.9	8	N-Channel	SI4532ADY.
30	0.08	0.135	-	3	10	P-Channel	
30	0.036	0.053	-	5.9	13	N-Channel	SI4539ADY.
30	0.053	0.09	-	3.7	15	P-Channel	
30	0.025	0.035	-	6.9	30	N-Channel	SI4542DY
60	0.055	0.075	-	4.5	19	N-Channel	SI4559EY
60	0.12	0.15	-	3.1	16	P-Channel	

211318

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
SI4403BDY	SMD 815-6336 RL	0.85	0.69	0.59	0.45	0.41
SI4410BDY	SMD 815-6743 RL	0.58	0.45	0.39	0.31	0.28
SI4412ADY	SMD 105-7875	1.10	0.62	0.43	0.34	0.31
SI4420BDY-T1-E3	SMD 149-7615	0.63	0.55	0.47	0.44	0.42
SI4425BDY	SMD 815-6344 RL	1.08	0.88	0.73	0.56	0.52
SI4427BDY-T1-GE3	SMD 815-6751 RL	1.33	1.07	0.91	0.70	0.63
SI4450DY	SMD 955-0550	2.93	1.47	0.99	0.75	0.67
SI4463BDY-T1-E3	SMD 149-7616	0.95	0.72	0.63	0.62	0.60
SI4466DY	SMD 955-0577 RL	1.48	0.74	0.59	0.57	0.56
SI4480EY/	SMD 815-6352 RL	0.60	0.49	0.40	0.35	0.34
SI7848DP	SMD 105-7874 RL	2.12	1.69	1.39	1.07	0.92
SI4482DY	SMD 955-0585	2.37	1.17	0.79	0.59	0.55
SI4484EY	SMD 815-6360 RL	1.71	1.37	1.14	0.91	0.80
SI4500BDY	SMD 815-6379 RL	0.78	0.63	0.53	0.41	0.37
SI4532ADY.	SMD 815-6387 RL	0.64	0.52	0.43	0.35	0.31
SI4539ADY.	SMD 815-6395 RL	0.95	0.75	0.63	0.48	0.45
SI4542DY	SMD 955-0593 RL	2.32	1.17	0.78	0.59	0.54
SI4559EY	SMD 105-7876 RL	2.71	1.40	0.93	0.69	0.64
SI4562DY	SMD 955-0607 RL	3.30	1.65	1.10	0.82	0.76
SI4800BDY	SMD 815-6409 RL	0.52	0.43	0.37	0.29	0.28
SI4804BDY	SMD 815-6417 RL	1.04	0.83	0.70	0.55	0.48
SI4840DY	SMD 815-6425 RL	1.44	1.15	0.98	0.76	0.68
SI4850EY	SMD 815-6433 RL	0.84	0.67	0.58	0.44	0.40
SI4864DY	SMD 815-6441 RL	1.10	0.89	0.78	0.76	0.74
SI4886DY	SMD 815-6450 RL	0.80	0.65	0.54	0.42	0.39
SI4920DY	SMD 955-0615	3.27	1.64	1.09	0.81	0.75
SI4922BDY-T1-E3	SMD 149-7617	1.07	0.84	0.72	0.68	0.64
SI4925BDY	SMD 815-6468 RL	1.11	0.90	0.76	0.59	0.53
SI4936ADY	SMD 815-6476 RL	0.95	0.75	0.63	0.48	0.45
SI4936BDY-T1-E3	SMD 149-7618	0.36	0.28	0.24	0.23	0.22
SI4946BEY-T1-E3	SMD 149-7619	0.81	0.63	0.55	0.54	0.53
SI4946EY	SMD 955-0631	2.40	1.66	1.53	1.11	0.80
SI4948BEY	SMD 815-6484 RL	0.98	0.78	0.66	0.52	0.45
SI4963BDY	SMD 815-6492 RL	0.77	0.62	0.52	0.41	0.37
SI4966DY	SMD 955-0658 RL	3.93	1.31	1.03	0.58	0.50
SI9410BDY	SMD 815-6549 RL	0.72	0.58	0.48	0.39	0.35
SI9424BDY	SMD 815-6557 RL	0.93	0.74	0.62	0.47	0.44
SI9433BDY	SMD 815-6565 RL	0.75	0.61	0.50	0.40	0.36
SI9435BDY	SMD 815-6573 RL	0.70	0.56	0.46	0.37	0.34

Power MOSFETs - continued

SO-8, Little Foot - continued

Mftrs. List No.	Order Code	1+	25+	100+	250+	1K+
		Price Each				
SI9926BDY	SMD 815-6581 RL	0.81	0.65	0.55	0.44	0.37
SI9933BDY	SMD 815-6590 RL	0.88	0.70	0.60	0.45	0.41
SI9934BDY	SMD 815-6840 RL	1.05	0.84	0.70	0.56	0.48
SI9936BDY	SMD 815-6603 RL	1.04	0.83	0.70	0.55	0.48
SI9948AEY	SMD 955-0755	1.48	0.73	0.50	0.36	0.34

Hexfet Mosfet N-CH, 24V-250V

International IOR Rectifier

New

Applications
- High efficiency synchronous rectification
- Uninterruptible power supply
- High speed power switching
- Hard switched and high frequency circuits
- DC motor drive

Features
- Improved gate, avalanche and dynamic dV/dt ruggedness
- Fully characterized capacitance and avalanche SOA
- Enhanced body diode dV/dt and dI/dt capability
- Low Rds

V_{DS} V	$R_{DS(on)}$ mΩ	I_D cont @ 25°C A	PD @ 25°C W	Vgs th Max V	Pin/Package	Order Code	Mftrs. List No.
Single Mosfet							
24	1.5	195	300	4	3/TO-220AB	169-8281	IRF1324PBF
24	1.65	195	300	4	3/D2-PAK	169-8282	IRF1324SPBF
25	5.7	25	63	2.35	3/D-PAK	169-8303	IRLR8256PBF
25	8.7	21	48	2.35	3/D-PAK	169-8304	IRLR8259PBF
25	5.7	25	63	2.35	3/I-PAK	169-8315	IRLU8256PBF
25	8.7	21	48	2.35	3/I-PAK	169-8316	IRLU8259PBF
30	5.8	25	75	2.35	3/I-PAK	169-8317	IRLU8726PBF
30	8.9	25	55	2.35	3/I-PAK	169-8318	IRLU8729PBF
30	5.8	25	75	2.35	3/D-PAK	169-8305	IRLR8726PBF
40	1.75	195	380	4	3/TO-220AB	170-4508	IRFB3004PBF.
40	1.75	195	380	4	3/D2-PAK-7	170-4512	IRFS3004-7PPBF
40	1.75	195	380	4	3/D2-PAK	170-4513	IRFS3004PBF
40	1.7	195	375	2.5	3/TO-220AB	169-8299	IRLB3034PBF
40	1.4	200	380	2.5	7/D2-PAK-7L	169-8307	IRLS3034-7PPBF
40	1.7	195	375	2.5	3/D2-PAK	169-8309	IRLS3034PBF
60	6.8	50	143	2.5	3/D-PAK	169-8302	IRLR3636PBF
60	1.9	180	380	2.5	7/D2-PAK-7L	169-8311	IRLS3036-7PPBF
60	2.4	165	380	2.5	3/TO-220AB	169-8300	IRLB3036PBF
100	26	29	3.8	2	3/D2-PAK	170-4514	IRL2910SPBF
100	28.5	21	91	4	3/D-PAK	169-8290	IRFR540ZPBF
100	4.3	110	370	2.5	3/TO-220AB	169-8301	IRLB4030PBF
100	3.9	110	370	2.5	7/D2-PAK-7L	169-8313	IRLS4030-7PPBF
100	4.3	110	370	2.5	3/D2-PAK	169-8314	IRLS4030PBF
150	15	33	330	5	3/TO-220AB	170-4509	IRFB4228PBF
150	11	62	380	5	3/TO-220AB	169-8286	IRFB4115PBF
150	42	21	144	5	3/D-PAK	169-8288	IRFR4615PBF
150	11.8	63	380	5	7/D2-PAK-7L	169-8292	IRFS4115-7PPBF
150	12.1	62	375	5	3/D2-PAK	169-8293	IRFS4115PBF
150	42	21	144	5	3/D2-PAK	169-8295	IRFS4615PBF
150	42	21	144	5	3/I-PAK	169-8297	IRFU4615PBF
200	78	15	144	5	3/I-PAK	169-8298	IRFU4620PBF
200	78	15	144	5	3/D-PAK	169-8289	IRFR4620PBF
200	22	44	375	5	3/D2-PAK	169-8294	IRFS4127PBF
200	77.5	15	144	5	3/D2-PAK	169-8296	IRFS4620PBF
250	17.5	56	520	5	3/TO-247AC	169-8287	IRFP4768PBF
Dual Mosfet							
30	15.5	8	2.4	2.35	8/SOIC	169-8284	IRF8513PBF

531636

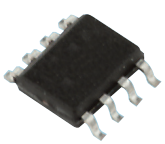
Mftrs. List No.	Order Code	1+	25+	100+	250+
		Price Each			
Single Mosfet					
IRF1324PBF	169-8281	3.08	2.18	1.96	1.72
IRF1324SPBF	SMD 169-8282	3.08	2.18	1.96	1.72
IRLR8256PBF	SMD 169-8303	0.64	0.44	0.39	0.34
IRLR8259PBF	SMD 169-8304	0.52	0.39	0.35	0.31
IRLU8256PBF	169-8315	0.91	0.70	0.62	0.55
IRLU8259PBF	169-8316	0.81	0.62	0.56	0.49
IRLU8726PBF	169-8317	0.84	0.65	0.58	0.51
IRLU8729PBF	169-8318	0.75	0.58	0.52	0.46
IRLR8726PBF	SMD 169-8305	0.65	– –	– –	– –
IRFB3004PBF.	170-4508	3.17	2.38	1.99	1.68
IRFS3004-7PPBF	SMD 170-4512	4.10	3.07	2.57	2.17
IRFS3004PBF	SMD 170-4513	3.62	2.72	2.29	1.92
IRLB3034PBF	169-8299	2.96	2.21	1.98	1.74
IRLS3034-7PPBF	SMD 169-8307	4.33	– –	– –	– –
IRLS3034PBF	SMD 169-8309	3.07	2.33	2.09	1.83
IRLR3636PBF	SMD 169-8302	0.99	0.68	0.60	0.53
IRLS3036-7PPBF	SMD 169-8311	4.08	2.70	2.36	2.11
IRLB3036PBF	169-8300	3.45	– –	– –	– –
IRL2910SPBF	SMD 170-4514	2.70	2.03	1.70	1.43
IRFR540ZPBF	SMD 169-8290	0.78	0.53	0.47	0.42
IRLB4030PBF	169-8301	3.44	2.33	2.09	1.84
IRLS4030-7PPBF	SMD 169-8313	3.90	2.75	2.42	2.16
IRLS4030PBF	SMD 169-8314	2.43	1.84	1.65	1.45
IRFB4228PBF	170-4509	3.69	2.78	2.31	1.96
IRFB4115PBF	169-8286	3.21	– –	– –	– –
IRFR4615PBF	SMD 169-8288	1.04	– –	– –	– –

Mftrs. List No.	Order Code	1+	25+	100+	250+
		Price Each			
Single Mosfet					
IRFS4115-7PPBF	SMD 169-8292	4.93	4.25	3.73	3.33
IRFS4115PBF	SMD 169-8293	3.40	2.40	2.15	1.89
IRFS4615PBF	SMD 169-8295	1.77	1.36	1.22	1.07
IRFU4615PBF	169-8297	0.94	0.71	0.63	0.56
IRFU4620PBF	169-8298	0.91	0.68	0.61	0.54
IRFR4620PBF	SMD 169-8289	1.00	0.68	0.61	0.54
IRFS4127PBF	SMD 169-8294	2.91	2.20	1.97	1.73
IRFS4620PBF	SMD 169-8296	1.24	0.94	0.84	0.73
IRFP4768PBF	169-8287	9.63	8.63	7.59	6.77
Dual Mosfet					
IRF8513PBF	SMD 169-8284	0.58	0.40	0.36	0.31

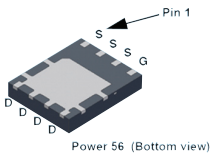
MOSFET, Vishay

VISHAY

Vds, 8 to 150V

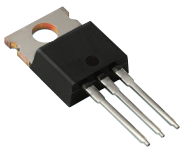


SO-8



PowerPak

Power 56 (Bottom view)



TO-220

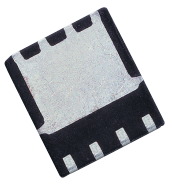
V_{DS} V	$R_{DS(on)}$ Ω	Voltage, Vgs Rds on V	I_D cont @ 25°C A	$V_{GS(th)}$ min. V	$V_{GS(th)}$ max. V	P_D @ 25°C W	Case Style	Mftrs. List No.
N Channel								
20	0.057	4.5	2.9	0.4	0.85	0.71	SOT-23	SI2302CDS-T1-GE3
20	0.0029	10	50	1	2.6	50	PowerPAK	SIR890DP-T1-GE3
20	0.034	4.5	9	0.35	1	13	SC-75	SIB412DK-T1-GE3
20	0.031	4.5	5	0.45	0.85	0.75	SOT-23	SI2312BDS-T1-GE3
20	0.0029	10	50	1	2.6	50	PowerPAK	SIR890DP-T1-E3
25	0.0032	10	50	1	2.6	50	PowerPAK	SIR892DP-T1-E3
30	0.011	10	12	1	3	1.4	SO-8	SI4894BDY-T1-E3
30	0.016	10	15	1	3	40.8	TO-252	SUD50N03-16P-E3
30	0.0019	10	60	1	2.5	104	PowerPAK	SI7192DP-T1-GE3
30	0.006	10	35	1	3	36	PowerPAK	SIR402DP-T1-E3
30	0.007	10	44.5	1	3	25	PolarPAK	SIE844DF-T1-E3
40	0.009	10	19	1	3	6	SO-8	SI4840BDY-T1-E3
40	0.0027	10	110	3.4	4.5	375	TO-263	SUM110N04-2M3L-E3
60	0.0096	10	18	1	3	1.9	PowerPAK	SI7460DP-T1-GE3
60	0.019	10	10	1.5	3.5	1.5	PowerPAK	SI7120DN-T1-GE3
60	0.005	10	90	2.5	4.5	300	TO-220AB	SUP90N06-5M0P-E3
60	0.006	10	90	2.5	4.5	272	TO-220AB	SUP90N06-6M0P-E3
75	0.011	10	28	1.5	2.5	96	PowerPAK	SI7148DP-T1-E3
75	0.007	10	60	2.5	4.5	104	PowerPAK	SI7174DP-T1-GE3
75	0.0068	10	90	2.5	4.5	272	TO-220AB	SUP90N08-6M8P-E3
75	0.0082	10	90	2.8	4.8	150	TO-220AB	SUP90N08-8M2P-E3
80	0.017	10	30	2.5	4.5	62.5	PowerPAK	SI7852ADP-T1-E3
100	0.0088	10	90	2.5	4.5	300	TO-220AB	SUP90N10-8M8P-E3
100	0.0142	10	64	2.5	4.4	125	PolarPAK	SIE854DF-T1-E3
150	0.018	10	90	2.5	4.5	375	TO-220AB	SUP90N15-18P-E3
150	0.018	10	75	2.5	4.5	312.5	TO-263	SUM75N15-18P-E3
P Channel								
8	0.052	4.5	9	0.35	1	13	SC-75	SIB417DK-T1-GE3
12	0.036	4.5	7.8	0.4	1	3	TSOP	SI3447CDV-T1-E3
12	0.06	4.5	9	0.4	1	13.1	SC-75	SIB419DK-T1-GE3
20	0.066	4.5	9	0.4	1	13	SC-75	SIB411DK-T1-GE3
20	0.075	4.5	9	0.6	1.5	13	SC-75	SIB413DK-T1-GE3
30	0.087	10	9	1	3	13	SC-75	SIB415DK-T1-GE3
30	0.018	10	16	1	3	52	PowerPAK	SI7121DN-T1-GE3
30	0.078	10	3.2	1	3	0.75	SOT-23	SI2307BDS-T1-GE3
40	0.0092	10	18.6	1	3	1.9	PowerPAK	SI7463DP-T1-E3
60	0.0093	10	90	1	3	250	TO-220AB	SUP90P06-09L-E3
60	0.064	10	5	1	3	1.5	PowerPAK	SI7465DP-T1-E3
60	0.0195	10	53	1	3	104.2	TO-220AB	SUP53P06-20-E3
100	0.041	10	28	1	3	83	PowerPAK	SI7489DP-T1-E3
Dual N Channel								
20	0.018	4.5	8	0.6	1.5	3.1	SO-8	SI9926CDY-T1-E3
100	0.049	10	5.9	2	4	1.4	SO-8	SI7942DP-T1-E3
Dual P Channel								
20	0.295	4.5	2.6	0.4	1	3.1	SC-75	SIB911DK-T1-GE3
30	0.025	10	7.1	1	3	1.1	SO-8	SI4925BDY-T1-E3
N/P Channel								
40	0.06 (N) 0.085 (P)	10	5 (N) 4.4 (P)	0.8 (N) 0.8 (P)	— 2.2 (P)	2.75 (N) 2.95 (P)	SO-8	SI4567DY-T1-E3
60	0.058 (N) 0.12 (P)	10	5.3 (N) 3.9 (P)	1 (N) 1 (P)	— 3 (P)	3.1 (N) 3.4 (P)	SO-8	SI4559ADY-T1-E3

527676

Mftrs. List No.	Order Code	1+	25+	100+	250+	1K+
		Price Each				
N Channel						
SI2302CDS-T1-GE3	SMD 168-4049	0.360	0.250	0.196	0.164	0.142
SI4894BDY-T1-E3	SMD 168-4052	0.610	0.440	0.360	0.290	0.270
SI4840BDY-T1-E3	SMD 168-4057	0.890	0.630	0.490	0.410	0.370
SIR890DP-T1-GE3	SMD 168-4063	2.030	1.430	1.110	0.910	0.840
SI7852ADP-T1-E3	SMD 168-4065	2.230	1.580	1.220	1.000	0.910
SUD50N03-16P-E3	SMD 168-4066	0.850	0.600	0.470	0.390	0.370
SUM110N04-2M3L-E3	SMD 168-4067	3.390	2.390	1.860	1.530	1.390
SUM75N15-18P-E3	SMD 168-4068	4.210	2.970	2.310	1.890	1.740
SI7192DP-T1-GE3	SMD 168-4070	2.480	1.840	1.470	1.220	1.120

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
N Channel						
SI7460DP-T1-GE3	SMD 168-4075	2.000	1.410	1.090	0.890	0.820
SI7148DP-T1-E3	SMD 168-4080	2.310	1.630	1.270	1.030	0.950
SI7120DN-T1-GE3	SMD 168-4082	1.700	1.200	0.940	0.760	0.700
SI2312BDS-T1-GE3	SMD 168-4084	0.390	0.270	0.220	0.175	0.165
SIR402DP-T1-E3	SMD 168-4086	1.460	1.030	0.800	0.660	0.600
SIR890DP-T1-E3	SMD 168-4087	2.060	1.450	1.130	0.920	0.850
SIR892DP-T1-E3	SMD 168-4088	1.230	1.020	0.880	0.770	0.730
SIE844DF-T1-E3	SMD 168-4089	1.700	1.200	0.940	0.760	0.700
SIE854DF-T1-E3	SMD 168-4090	3.190	2.250	1.750	1.440	1.370
SI7174DP-T1-GE3	SMD 168-4091	2.450	1.730	1.340	1.100	1.050
SUP90N06-5M0P-E3	168-4095	3.590	2.530	1.970	1.610	1.580
SUP90N06-6M0P-E3	168-4096	3.330	2.350	1.830	1.500	1.370
SUP90N08-6M8P-E3	168-4098	3.470	2.440	1.900	1.560	1.420
SUP90N08-8M2P-E3	168-4099	2.850	2.010	1.560	1.280	1.170
SUP90N10-8M8P-E3	168-4100	3.750	2.650	2.060	1.690	1.610
SUP90N15-18P-E3	168-4101	3.940	2.780	2.160	1.770	1.620
SIB412DK-T1-GE3	SMD 168-4105	0.540	0.390	0.300	0.240	0.220
P Channel						
SI3447CDV-T1-E3	SMD 168-4051	0.360	0.250	0.196	0.164	0.142
SI7121DN-T1-GE3	SMD 168-4060	1.000	0.700	0.550	0.450	0.420
SUP90P06-09L-E3	168-4069	3.770	2.660	2.070	1.690	1.550
SI7489DP-T1-E3	SMD 168-4076	2.230	1.580	1.220	1.000	0.910
SI7465DP-T1-E3	SMD 168-4077	1.060	0.750	0.590	0.470	0.440
SI7463DP-T1-E3	SMD 168-4081	2.630	1.850	1.440	1.180	1.080
SI2307BDS-T1-GE3	SMD 168-4083	0.420	0.300	0.220	0.192	0.171
SUP53P06-20-E3	168-4102	2.330	1.650	1.280	1.050	0.960
SIB411DK-T1-GE3	SMD 168-4104	0.540	0.390	0.300	0.240	0.220
SIB413DK-T1-GE3	SMD 168-4106	0.750	0.530	0.410	0.330	0.310
SIB415DK-T1-GE3	SMD 168-4108	0.650	0.460	0.350	0.290	0.270
SIB417DK-T1-GE3	SMD 168-4109	0.650	0.460	0.350	0.290	0.270
SIB419DK-T1-GE3	SMD 168-4110	0.750	0.530	0.410	0.330	0.310
Dual N						
SI9926CDY-T1-E3	SMD 168-4059	0.920	0.650	0.510	0.420	0.380
SI7942DP-T1-E3	SMD 168-4079	2.260	1.600	1.240	1.020	0.940
Dual P						
SI4925BDY-T1-E3	SMD 168-4078	1.210	0.850	0.660	0.540	0.500
SIB911DK-T1-GE3	SMD 168-4111	0.650	0.460	0.350	0.290	0.270
N/P Channel						
SI4567DY-T1-E3	SMD 168-4054	0.720	0.500	0.400	0.320	0.290
SI4559ADY-T1-E3	SMD 168-4055	1.080	– –	– –	– –	– –

PowerPAK™ SO-8



Supplied on 8mm tape.

H=1.07, W=6.15, D=5.15

Vishay's Siliconix PowerPAK™ Power MOSFET family is an innovative leadless package. It provides a direct thermal path between the power MOSFET die and the PCB by directly soldering the die attach copper pad to the board. Leadless technology provides for ultra-thin profiles.

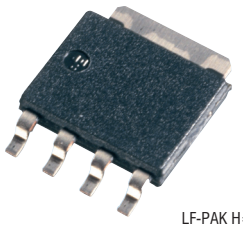
- Higher power capability than equivalent SO-8 package
- 53% smaller footprint, and 55% thinner than D-Pak
- Pin compatible with standard SO-8
- Thermal resistance typically ≤1°C/W

V_{DS} V	$R_{DS(on)}$ Ω	@ V_{GS} V	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	$V_{GS(th)}$ min. V	Q_g tot. nC	P_D @ 25°C W	Mftrs. List No.
Singe N-Channel								
12	0.0047	2.5	35	60	0.4	41	52	SI7102DN-T1-E3
20	0.0065	4.5	13.4	50	0.6	50	1.9	SI7448DP
30	0.0185	10	6.5	40	1	8.7	1.5	SI7804DN
30	0.013	10	8.5	40	0.6	20	1.5	SI7404DN-T1-GE3
60	0.062	10	3.4	20	1	13.5	1.5	SI7810DN
60	0.025	10	5.6	30	1	16	1.5	SI7414DN-T1-GE3
60	0.031	10	6.2	40	1	27	1.8	SI7850DP
80	0.0165	10	7.6	50	2	41	1.9	SI7852DP
100	0.025	10	5.7	40	2	44	1.9	SI7456DP-TI-GE3
150	0.085	10	3	2.4	2	17	1.9	SI7898DP-T1-GE3
150	6.7	10	4	50	2	36	1.9	SI7846DP
200	0.080	10	3.2	40	2	42	1.9	SI7450DP-T1-GE3
Single P-Channel								
30	0.018	10	7.4	30	-1	37.5	1.5	SI7423DN
30	0.0085	10	11	50	-1	56	1.8	SI7491DP
40	0.0092	10	11	60	-1	90	1.9	SI7463DP
60	0.065	10	3.6	30	-1	15	1.5	SI7415DN-T1-GE3
60	0.015	10	8.6	60	-1	121	1.9	SI7461DP-TI-GE3
Dual N Channel								
100	0.195	10	1.8	10	2.5	5.2	1.3	SI7922DN
Dual P Channel								
30	0.02	10	7	30	-1	49	1.4	SI7945DP-T1-GE3

241417

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
SI7102DN-T1-E3	SMD 149-7630	0.980	0.750	0.640	0.610	0.580
SI7404DN-T1-GE3	SMD 815-6760	0.760	0.540	0.470	0.440	0.420
SI7414DN-T1-GE3	SMD 815-6778	1.110	0.790	0.690	0.590	0.570
SI7415DN-T1-GE3	SMD 815-6786	1.240	– –	– –	– –	– –
SI7423DN	SMD 815-6794 RL	1.020	0.700	0.630	0.450	0.400
SI7448DP	SMD 955-0682 RL	1.440	1.120	0.920	0.720	0.610
SI7450DP-T1-GE3	SMD 955-0690 RL	2.190	1.700	1.400	1.070	0.940
SI7456DP-TI-GE3	SMD 955-0704	1.920	1.490	1.230	0.940	0.810
SI7461DP-TI-GE3	SMD 815-6808	1.970	1.390	1.210	0.870	0.840
SI7463DP	SMD 815-6506 RL	1.970	1.360	1.220	0.930	0.910
SI7491DP	SMD 815-6514 RL	2.230	1.530	1.350	0.960	0.870
SI7804DN	SMD 815-6816 RL	0.390	0.280	0.240	0.187	0.179
SI7810DN	SMD 815-6824 RL	0.930	– –	– –	– –	– –
SI7846DP	SMD 955-0720 RL	1.490	1.170	0.950	0.750	0.730
SI7850DP	SMD 955-0739 RL	1.440	1.100	0.920	0.710	0.620
SI7852DP	SMD 955-0747 RL	2.190	1.700	1.400	1.070	0.940
SI7898DP-T1-GE3	SMD 815-6522 RL	0.810	– –	– –	– –	– –
SI7922DN	SMD 815-6832 RL	0.670	0.520	0.450	0.430	0.410
SI7945DP-T1-GE3	SMD 815-6530	1.450	0.990	0.880	0.810	0.790

LFPAK, Logic Level and Ultra-Low Level



- SO-8 equivalent footprint
- Low on-state resistance
- Low threshold voltage

LF-PAK H=1.2, W=6.2, D=5

V_{DS} V	$R_{DS(on)}$ max. mΩ	@ V_{GS} V	$I_{D\ cont.}$ @ 25°C A	$V_{GS(th)}$ min V	P_{tot} @25°C W	Mftrs. List No.
N-Channel						
20	2.7	4.5	100	0.45	62.5	PH2520U
25	2.9	4.5	100	0.45	62.5	PH2925U
30	3.2	4.5	100	1	62.5	PH3230S..
30	8.2	4.5	67	1	62.5	PH8230E.
30	11	4.5	68		62.5	PH7030L

353283

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
PH3230S..	SMD 756-4260 RL	1.69	1.06	0.92	0.66	0.65
PH8230E.	SMD 756-4295 RL	1.06	0.71	0.62	0.45	0.44
PH2520U	SMD 108-1441 RL	1.47	0.97	0.94	0.92	0.89
PH2925U	SMD 108-1442 RL	1.34	– –	– –	– –	– –
PH7030L	SMD 108-1444 RL	1.95	– –	– –	– –	– –

DirectFET™ MOSFETS

The DirectFET power package is a breakthrough surface-mount power MOSFET pa nology. It has the footprint of an SO-8 packag of only 0.7mm. A benefit of this package is tl cooling which is designed to reduce the part count and therefore the board space used by as much as 50% compared with standard SO-8 packages. This means a higher currenty density and lower total system cost. Both conduction and switching losses are also reduced due to low resistance, low charge and ultra-low package inductance. This range of MOSFETs are suitable for a number of applications including high-efficiency DC-to-DC converters, synchronous rectification and CTRL FET notebooks and desktops.

- 1.4°C/W junction to case thermal resistance enable effective top-side cooling
- Less than 1°C/W $R_{th(junction-pcb)}$ in same footprint as SO-8
- Over 90% lower die-free package resistance than SO-8
- 0.7mm profile compared with 1.75mm for SO-8
- Up to 50°C lower operating temperature increases reliability

V_{DS} V	$R_{DS(on)}$ @ V_{GS} = 10V mΩ	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	$V_{GS(th)}$ min. V	P_D @ 25°C W	Package Type	Mftrs. List No.
20	1.2	32	260	1.6	2.8	MT	IRF6691TR1PBF
20	1.65	30	240	1.55	2.8	MX	IRF6619TR1PBF
20	1.8	32	260	—	2.8	MT	IRF6691TR1
20	2	31	250	1.55	1.8	MT	IRF6609TR1PBF
25	1.2	39	320	1.4	3.6	MX	IRF6716MTR1PBF
25	1.25	38	38	1.35	96	L6	IRF6717MTR1PBF
25	1.25	38	38	1.35	96	L6	IRF6717MTR1PBF
25	2.7	29	230	—	2.8	MX	IRF6629TR1PBF
25	3.3	27	220	—	2.8	MX	IRF6628TR1PBF
25	1.6	29	234	1.4	2.8	MX	IRF6714MTR1PBF
25	1.3	34	270	1.4	2.8	MX	IRF6715MTR1PBF
30	1.3	32	250	1.35	2.8	MX	IRF6635TR1PBF
30	1.7	30	240	1.35	2.8	MX	IRF6678TR1PBF
30	2	32	220	—	3.9	MX	IRF6611TR1
30	2.2	170	240	1.35	2.8	MT	IRF6618TR1

Power MOSFETs - continued

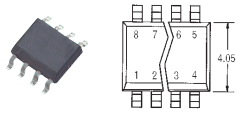
DirectFET™ MOSFETS - continued

V_{DS}	$R_{DS(on)}$ @ V_{GS} = 10V	$I_{D\ cont}$ @ 25°C	I_D pulsed	$V_{GS(th)}$ min.	P_D @ 25°C	Package	Mftrs.
30	3.4	92	200	1.4	3.6	MT	IRF6603TR1
30	8.1	14	120	—	2.1	ST	IRF6617TR1
30	4.7	13	110	1.4	2.2	ST	IRF6722STR1PBF
30	2.4	28	220	1.35	2.8	MX	IRF6725MTR1PBF
30	1.3	32	250	1.35	2.8	MT	IRF6726MTR1PBF
30	1.22	32	260	1.35	2.8	MX	IRF6727MTR1PBF
40	4.6	19	150	—	2.8	MX	IRF6616TR1
40	8.3	55	102	1.35	2.1	ST	IRF6614TR1
60	5.5	86	260	3	2.8	MN	IRF6648TR1PBF
60	5.5	86	260	—	2.8	MN	IRF6648TR1
80	7.6	12	96	3	2.8	MN	IRF6646TR1PBF
80	7.6	12	96	—	2.8	MN	IRF6646TR1
100	10.3	10.3	82	2.8	2.8	MN	IRF6644TR1PBF
100	28	5.7	45	3	3	SJ	IRF6645TR1PBF
100	53	4.2	34	3	2.2	SH	IRF6665TR1PBF
150	34.5	6.2	76	—	2.8	MZ	IRF6643TR1PBF
150	47	28	39	3	89	MZ	IRF6775MTR1PBF
200	59.9	4.6	37	—	2.8	MZ	IRF6641TR1PBF
200	85	19	27	3	57	MZ	IRF6785MTR1PBF

405796

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
IRF6603TR1	SMD 926-6526 RL	3.12	2.00	1.54	1.41	1.31
IRF6611TR1	SMD 107-8408 RL	1.91	1.31	1.02	0.87	0.85
IRF6614TR1	SMD 926-6577 RL	1.23	0.75	0.66	0.61	0.59
IRF6616TR1	SMD 107-8413 RL	2.96	1.64	1.20	1.06	1.02
IRF6617TR1	SMD 107-8414 RL	1.61	– –	– –	– –	– –
IRF6618TR1	SMD 926-6585 RL	1.95	1.23	1.13	1.10	1.07
IRF6646TR1	SMD 107-8424 RL	3.55	– –	– –	– –	– –
IRF6691TR1	SMD 107-8427 RL	4.46	2.85	2.20	2.02	1.88
IRF6648TR1	SMD 108-4634 RL	3.18	– –	– –	– –	– –
IRF6609TR1PBF	SMD 143-6905	1.31	0.98	0.89	0.87	0.84
IRF6619TR1PBF	SMD 143-6916	2.91	1.86	1.44	1.32	1.23
IRF6628TR1PBF	SMD 138-8583	2.34	1.50	1.15	1.06	0.99
IRF6629TR1PBF	SMD 138-8584	0.96	0.79	0.73	0.67	0.62
IRF6635TR1PBF	SMD 143-6923	1.56	1.30	1.26	1.23	1.20
IRF6641TR1PBF	SMD 138-8588	1.98	1.52	1.40	1.23	1.11
IRF6643TR1PBF	SMD 138-5503	4.32	3.63	3.11	2.70	2.62
IRF6644TR1PBF	SMD 143-6926	3.06	– –	– –	– –	– –
IRF6645TR1PBF	SMD 143-6927	2.28	– –	– –	– –	– –
IRF6646TR1PBF	SMD 143-6928	4.19	2.68	2.07	1.90	1.76
IRF6648TR1PBF	SMD 143-6929	3.93	2.52	1.95	1.78	1.65
IRF6665TR1PBF	SMD 143-6932	1.89	1.21	0.93	0.85	0.79
IRF6678TR1PBF	SMD 143-6935	2.89	1.84	1.43	1.31	1.22
IRF6691TR1PBF	SMD 143-6936	2.47	1.93	1.75	1.66	1.59
IRF6716MTR1PBF	SMD 143-6939	2.14	– –	– –	– –	– –
IRF6714MTR1PBF	SMD 160-2259	1.86	1.19	0.92	0.84	0.78
IRF6715MTR1PBF	SMD 160-2260	1.81	1.16	0.89	0.82	0.76
IRF6717MTR1PBF	SMD 170-4493	2.36	1.77	1.48	1.25	– –
IRF6718L2TR1PBF	SMD 174-0788	5.23	– –	– –	– –	– –
IRF6722STR1PBF	SMD 160-2262	1.39	0.97	0.77	0.71	0.66
IRF6725MTR1PBF	SMD 160-2264	2.11	1.48	1.15	1.06	0.98
IRF6726MTR1PBF	SMD 160-2265	2.28	1.46	1.13	1.03	0.96
IRF6727MTR1PBF	SMD 160-2266	2.33	– –	– –	– –	– –
IRF6775MTR1PBF	SMD 160-2267	2.04	1.30	1.01	0.92	0.86
IRF6785MTR1PBF	SMD 160-2268	2.16	1.38	1.07	0.98	0.92

SO-8



H=1.75, W=6.3, D=5.2

Pin Configurations

	1	2	3	4	5	6	7	8
a	NC	S	S	G	D	D	D	D
b	S	S	S	G	D	D	D	D
c	S1	G1	S2	G2	D2	D2	D1	D1

Single or dual high performance MOSFETs in a space efficient, small outline package.

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	P_D @ 25°C W	Mftr.	Mftrs. List No.
Single N-Channel						
12	0.007	16	65	2.5	IR	IRF7410TRPBF
12	0.015	10	79	2	IR	IRF7910PBF
12	8	15	120	2.5	IR	IRF7476PBF
14	0.007	16	100	2.5	IR	IRF7210PBF
20	0.0044	20	160	2.5	IR	IRF3717PBF
20	0.007	15	120	2.5	IR	IRF7457PBF
20	0.0082	15	60	2.5	IR	IRF7425PBF
20	0.022	8.7	35	2.5	IR	IRF7401PBF
20	0.029	6.6	26	2	IR	IRF7311PBF
20	0.045	6	24	2.5	ST	STS6NF20V
20	0.035	6.8	54	2.5	IR	IRF7402PBF
20	0.085	4	17	2.5	IR	IRF1902PBF
20	9	10	100	2.5	IR	IRF7459TRPBF
20	0.05	4.3	17	1.4	IR	IRF7301PBF
20	0.1	3.5	14	2	IR	IRF7101PBF
30	0.0036	21	170	2.5	IR	IRF7831PBF
30	0.0037	21	105	2.5	FCH	FDS8670
30	3.8	21	160	2.5	IR	IRF7832ZPBF
30	0.004	20	160	2.5	IR	IRF7832PBF
30	0.0042	18	90	2.5	FCH	FDS8870
30	0.005	18	150	3.1	IR	IRF7822.PBF
30	6.5mohm	23.7	60	6.25	NXP	PHK28NQ03LT
30	0.0056	17.2	135	2.5	IR	IRF8113PBF
30	8mohm	14	110	2.5	IR	IRF7463PBF
30	0.0085	14.5	100	2.5	IR	IRF7809AVPBF
30	0.0085	14	110	2.5	IR	IRF7477PBF
30	0.009	12.5	50	2.5	IR	SI4420DYPBF
30	0.009	14	109	3.1	IR	IRF7811WPBF
30	0.0091	13.6	100	2.5	IR	IRF7821PBF
30	0.0095	13.6	100	2.5	IR	IRF7828PBF
30	0.009	12	48	2.5	ST	STS12NF30L
30	0.01	12	58	2.5	IR	IRF7413PBF
30	0.0105	11	44	2.5	ST	STS11NF30L
30	0.011	10.8	10.8	2.5	IR	IRF7811AVPBF
30	0.019	9	36	2.5	ST	STS9NF3LL
30	0.022	6.7	27	1.6	IR	IRF7403PBF
30	0.025	8.3	66	2.5	IR	IRF7807APBF
30	0.068	16	120	2.5	IR	IRF7805ZPBF
30	0.01	13	100	2.5	IR	IRF7413ZPBF
30	0.011	13	100	2.5	IR	IRF7805PBF
30	0.0138	11	88	2.5	IR	IRF7807ZPBF
30	0.02	10	45	2.5	IR	IRF7416TRPBF
30	0.025	8.3	66	2.5	IR	IRF7807PBF
30	0.03	7	37	2.5	IR	IRF9410PBF
30	0.03	7.3	58	2.5	IR	IRF7201PBF
30	0.03	6	24	2.5	ST	STS6PF30L
30	0.03	6.7	15	2	FCH	NDS8936
30	0.05	4.9	20	2	IR	IRF7303PBF
30	0.08	3.7	15	2	FCH	NDS9956A
30	0.1	3.5	16	2	IR	IRF9956PBF
30	4.4	20	60	3.5	NXP	PSMN005-30K
40	0.013	10	83	2.5	IR	IRF7471PBF
40	0.013	10	85	2.5	IR	IRF7470.PBF
40	0.0155	9.4	75	2.5	IR	IRF7468PBF
40	0.017	9	73	2.5	IR	IRF7469PBF
40	0.015	10.5	43	2.5	IR	IRF7240PBF
40	0.112	3.4	27	2	IR	IRF5803D2TRPBF
50	0.13	3	10	2	IR	IRF7103PBF
55	0.05	4.7	38	2	IR	IRF7341PBF
60	0.026	4.2	56	2.5	IR	IRF7478PBF
60	0.055	4	16	2.5	ST	STS4DNF60L
80	0.029	6.3	50	2.5	IR	IRF7488PBF
80	0.073	3.6	29	2	IR	IRF7380PBF
100	18	8.3	66	2.5	IR	IRF7853PBF
100	0.022	7.3	58	2.5	IR	IRF7495PBF
100	0.026	6.9	55	2.5	IR	IRF7473.PBF
100	28mohm	11.6	48	8.9	NXP	PHK12NQ10T
100	0.039	5.4	43	2.5	IR	IRF7490PBF
100	0.063	4.5	36	2.5	IR	IRF7474PBF
150	0.28	1.9	15	2.5	IR	IRF7465PBF
150	44	5.2	42	3	IR	IRF7494PBF
150	75mohm	5	20	6.25	NXP	PHK5NQ15T
150	0.09	3.6	29	2.5	IR	IRF7451PBF
150	0.24	2.2	19	2.5	IR	IRF6216PBF
200	0.079	3.7	30	2.5	IR	IRF7492PBF
200	0.17	2.5	20	2.5	IR	IRF7450PBF
80	0.015	9.3	74	2.5	IR	IRF7493PBF
200	0.73	1.2	10	2.5	IR	IRF7464PBF
Single P-Channel						
12	0.007	16	65	2.5	IR	IRF7410PBF
12	0.014	11.5	46	2.5	IR	IRF7420PBF
20	0.06	5.3	21	2.5	IR	IRF7204PBF
20	0.06	5.4	43	2.5	IR	IRF7207PBF
20	0.04	5.3	21	1.6	IR	IRF7404PBF
20	0.03	7	28	2	IR	IRF7331PBF
30	0.0135	11	47	2.5	IR	IRF7424.PBF
30	0.015	8	50	2.5	IR	SI4435DYPBF
30	0.02	8.8	45	2.5	IR	IRF7416PBF
30	0.25	2.5	10	2.5	FCH	NDS9400A
30	0.045	5.2	20	1.6	IR	IRF7406PBF
30	0.05	5.3	15	2.5	FCH	NDS9435A
40	0.041	6.2	25	2.5	IR	IRF7241PBF
Dual P-Channel						
12	0.024	7.8	39	2	IR	IRF7325PBF
12	0.017	9.2	37	2	IR	IRF7329PBF
20	0.018	9	71	2	IR	IRF7324PBF
20	0.025	2.3	10	2.0	IR	IRF7104PBF
20	0.053	4.2	23	1.4	IR	IRF7314PBF
20	0.09	4.3	17	2	IR	IRF7304PBF
30	0.058	4.9	30	2	IR	IRF7316PBF
30	0.1	3	12	1.4	IR	IRF7306PBF
30	0.1	4	—	2	FCH	NDS8947
30	0.017	8	32	2	IR	IRF7328PBF
30	0.2	2.9	10	2	FCH	NDS9953A
30	0.25	2.3	10	2	IR	IRF9953PBF
55	0.105	3.4	27	2	IR	IRF7342PBF
Dual N/P Channel						

V_{DS}	$R_{DS(on)}$	$I_{D\ cont}$ @ 25°C	I_D pulsed	P_D @ 25°C		Mftrs.
Dual N/P Channel						
20	0.029(N), 0.058(P)	6.6(N), 5.3(P)	26(N), 21(P)	2	IR	IRF7317PBF
20	0.05(N), 0.09(P)	5.2(N), 4.3(P)	21(N), 17(P)	2	IR	IRF7307PBF
25	0.1(N), 0.25(P)	3.5(N), 2.3(P)	14(N), 10(P)	2	IR	IRF7105PBF
30	0.029(N), 0.058(P)	6.5(N), 4.9(P)	30(N), 30(P)	2	IR	IRF7319PBF
30	0.05(N), 0.1(P)	4(N), 3(P)	16(N), 12(P)	1.4	IR	IRF7309PBF
30	0.09(N&P)	4.3(N&P)	(N&P)	2.5	IR	IRF7379PBF
30	0.1(N), 0.25(P)	3.5(N), 2.3(P)	16(N), 10(P)	2	IR	IRF9952PBF
35	0.024(N), 0.024(P)	7(N), 5(P)	20(N&P)	2	FCH	FDS8960C
55	0.05(N), 0.105(P)	4.7(N), 3.4(P)	38(N), 27(P)	2	IR	IRF7343PBF
35(N&P)	0.024(N), 0.053(P)	7(N), 5(P)	20(N)	2	FCH	FDS8960C
100(N&P)	0.21(N), 0.48(P)	2.1(N), 1.5(P)	6(p), (n)	2	IR	IRF7350PBF

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Mftrs.			Price Each			
List No.	Mftr.	Order Code	1+	25+	100+	250+
IRF1902PBF	IR	SMD 101-3428	0.56	– –	– –	– –
IRF3717PBF	IR	SMD 101-3429	1.56	1.00	0.77	0.71
IRF7101PBF	IR	SMD 910-2043	1.15	0.70	0.55	0.50
IRF7103PBF	IR	SMD 910-2027	1.29	0.81	0.62	0.54
IRF7104PBF	IR	SMD 101-3369	0.91	0.61	0.46	0.37
IRF7105PBF	IR	SMD 910-2132	0.97	0.61	0.47	0.38
IRF7201PBF	IR	SMD 910-2663	0.97	0.62	0.48	0.44
IRF7201PBF	IR	SMD 910-2663	0.97	0.62	0.48	0.44
IRF7204PBF	IR	SMD 910-3350	1.27	0.77	0.60	0.55
IRF7205PBF	IR	SMD 910-3368	0.99	0.63	0.48	0.37
IRF7241PBF	IR	SMD 910-3457	1.30	0.79	0.62	0.60
IRF7301PBF	IR	SMD 910-2051	1.71	0.94	0.67	0.49
IRF7303PBF	IR	SMD 910-2019	1.22	0.70	0.54	0.42
IRF7304PBF	IR	SMD 101-3370	1.05	0.67	0.52	0.48
IRF7306PBF	IR	SMD 910-2205	1.38	0.77	0.54	0.42
IRF7307PBF	IR	SMD 910-2124	1.41	0.86	0.67	0.66
IRF7309PBF	IR	SMD 910-2175	1.38	0.77	0.54	0.42
IRF7311PBF	IR	SMD 101-3364	2.84	– –	– –	– –
IRF7313PBF	IR	SMD 910-2256	1.16	1.00	0.90	0.76
IRF7314PBF	IR	SMD 910-2213	1.62	0.95	0.91	0.89
IRF7316PBF	IR	SMD 910-2221	2.85	1.82	1.41	1.29
IRF7317PBF	IR	SMD 910-2159	1.29	0.88	0.71	0.61
IRF7319PBF	IR	SMD 910-2167	1.43	– –	– –	– –
IRF7324PBF	IR	SMD 101-3371	1.96	– –	– –	– –
IRF7325PBF	IR	SMD 101-3372	1.53	1.06	0.82	0.70
IRF7328PBF	IR	SMD 101-3374	1.14	0.73	0.56	0.52
IRF7329PBF	IR	SMD 101-3375	1.12	0.69	0.53	0.49
IRF7331PBF	IR	SMD 910-3465	2.13	1.58	1.23	1.12
IRF7341PBF	IR	SMD 910-2035	1.03	0.63	0.49	0.48
IRF7342PBF	IR	SMD 910-2191	0.90	0.55	0.43	0.39
IRF7343PBF	IR	SMD 910-2140	0.83	0.51	0.40	0.39
IRF7350PBF	IR	SMD 101-3368	0.66	0.50	0.40	0.34
IRF7379PBF	IR	SMD 101-3367	1.40	0.96	0.93	0.92
IRF7380PBF	IR	SMD 101-3365	1.50	0.96	0.74	0.68
IRF7401PBF	IR	SMD 910-2604	1.42	1.33	1.26	0.54
IRF7402PBF	IR	SMD 910-2850	1.14	0.70	0.54	0.49
IRF7403PBF	IR	SMD 910-2671	2.23	1.43	1.10	0.97
IRF7404PBF	IR	SMD 910-3384	1.72	0.96	0.68	0.50
IRF7406PBF	IR	SMD 910-3376	1.49	0.86	0.84	0.52
IRF7410PBF	IR	SMD 910-3449	1.29	0.81	0.62	0.51
IRF7413PBF	IR	SMD 910-2680	2.84	– –	– –	– –
IRF7416PBF	IR	SMD 910-3392	2.82	1.92	1.85	1.13
IRF7420PBF	IR	SMD 910-3473	0.96	0.59	0.46	0.42
IRF7424.PBF	IR	SMD 910-3481	1.01	0.62	0.47	0.44
IRF7433.PBF	IR	SMD 910-3490	0.70	0.54	0.44	0.40
IRF7470.PBF	IR	SMD 910-2868	0.72	– –	– –	– –
IRF7473.PBF	IR	SMD 910-2884	1.01	0.71	0.70	0.68
IRF7474PBF	IR	SMD 910-2892	0.82	0.50	0.39	0.36
IRF7477PBF	IR	SMD 910-2906	0.95	0.67	0.52	0.48
IRF7478PBF	IR	SMD 101-3437	0.72	0.46	0.35	0.29
IRF7488PBF	IR	SMD 910-2914	0.77	0.54	0.42	0.38
IRF7490PBF	IR	SMD 910-2922	0.72	– –	– –	– –
IRF7492PBF	IR	SMD 926-4353	0.93	0.76	0.60	0.57
IRF7807APBF	IR	SMD 910-2930	0.62	0.49	0.46	0.42
IRF7809AVPBF	IR	SMD 910-2833	1.14	0.73	0.56	0.52
IRF7811WPBF	IR	SMD 910-2949	0.57	0.36	0.32	0.31
IRF7822.PBF	IR	SMD 910-2957	2.42	1.66	1.28	1.15
IRF7910PBF	IR	SMD 101-3366	1.03	0.66	0.51	0.47
IRF9410PBF	IR	SMD 910-2698	1.25	– –	– –	– –
IRF9952PBF	IR	SMD 910-2183	1.15	0.67	0.64	0.38
IRF9953PBF	IR	SMD 910-2230	1.11	– –	– –	– –
IRF9956PBF	IR	SMD 910-2060	0.98	0.57	0.54	0.34
IRF7413ZPBF	IR	SMD 101-3430	0.64	0.43	0.33	0.27
IRF7457PBF	IR	SMD 101-3431	1.32	0.84	0.66	0.60
IRF7468PBF	IR	SMD 101-3433	1.01	– –	– –	– –
IRF7469PBF	IR	SMD 101-3434	0.81	0.52	0.40	0.37
IRF7471PBF	IR	SMD 101-3436	1.05	0.72	0.57	0.55
IRF7478PBF	IR	SMD 101-3437	0.72	0.46	0.35	0.29

Mftrs.			Price Each			
List No.	Mftr.	Order Code	1+	25+	100+	250+
IRF7805PBF	IR	SMD 101-3438	0.90	0.61	0.52	0.49
IRF7805ZPBF	IR	SMD 101-3441	0.75	– –	– –	– –
IRF7807PBF	IR	SMD 101-3442	0.67	0.43	0.33	0.30
IRF7807ZPBF	IR	SMD 101-3444	0.63	– –	– –	– –
IRF7811AVPBF	IR	SMD 101-3445	0.71	0.46	0.35	0.32
IRF7828PBF	IR	SMD 101-3447	0.50	0.34	0.33	0.32
IRF7831PBF	IR	SMD 101-3448	2.03	1.30	1.00	0.92
IRF7832PBF	IR	SMD 101-3449	1.83	– –	– –	– –
IRF8113PBF	IR	SMD 101-3450	0.96	– –	– –	– –
IRF7450PBF	IR	SMD 101-3459	1.03	– –	– –	– –
IRF7451PBF	IR	SMD 101-3460	1.31	0.86	0.66	0.57
IRF7464PBF	IR	SMD 101-3462	1.27	0.81	0.62	0.57
IRF7465PBF	IR	SMD 101-3463	0.76	– –	– –	– –
IRF7493PBF	IR	SMD 101-3466	0.75	0.64	0.55	0.53
IRF7495PBF	IR	SMD 101-3467	1.86	0.97	0.68	0.64
IRF7463PBF	IR	SMD 101-3469	1.43	0.92	0.71	0.63
IRF7207PBF	IR	SMD 101-3473	1.38	0.90	0.68	0.60
IRF7821PBF	IR	SMD 101-3495	0.73	– –	– –	– –
NDS8936	FCH	SMD 984-4724 RL	1.14	0.81	0.62	0.42
NDS8947	FCH	SMD 984-4880 RL	1.61	1.14	0.88	0.59
NDS9400A	FCH	SMD 101-7728 RL	0.99	0.70	0.54	0.36
NDS9435A	FCH	SMD 984-6182 RL	0.79	– –	– –	– –
NDS9953A	FCH	SMD 101-7729 RL	1.27	0.90	0.68	0.44
NDS9956A	FCH	SMD 101-7730 RL	1.08	0.68	0.49	0.29
PHK12NQ03LT	NXP	SMD 109-7163 RL	0.40	0.26	0.25	0.24
PHK12NQ10T	NXP	SMD 109-7164 RL	1.20	– –	– –	– –
PHK28NQ03LT	NXP	SMD 109-7166 RL	1.41	– –	– –	– –
PHK5NQ15T	NXP	SMD 109-7169 RL	1.59	1.01	0.80	0.59
PSMN005-30K	NXP	SMD 109-7171 RL	1.45	– –	– –	– –
IRF7311PBF	IR	SMD 101-3364	2.84	– –	– –	– –
IRF7380PBF	IR	SMD 101-3365	1.50	0.96	0.74	0.68
IRF7910PBF	IR	SMD 101-3366	1.03	0.66	0.51	0.47
IRF7379PBF	IR	SMD 101-3367	1.40	0.96	0.93	0.92
IRF7350PBF	IR	SMD 101-3368	0.66	0.50	0.40	0.34
IRF7104PBF	IR	SMD 101-3369	0.91	0.61	0.46	0.37
IRF7304PBF	IR	SMD 101-3370	1.05	0.67	0.52	0.48
IRF7324PBF	IR	SMD 101-3371	1.96	– –	– –	– –
IRF7325PBF	IR	SMD 101-3372	1.53	1.06	0.82	0.70
IRF7328PBF	IR	SMD 101-3374	1.14	0.73	0.56	0.52
IRF7329PBF	IR	SMD 101-3375	1.12	0.69	0.53	0.49
IRF1902PBF	IR	SMD 101-3428	0.56	– –	– –	– –
IRF3717PBF	IR	SMD 101-3429	1.56	1.00	0.77	0.71
IRF7413ZPBF	IR	SMD 101-3430	0.64	0.43	0.33	0.27
IRF7457PBF	IR	SMD 101-3431	1.32	0.84	0.66	0.60
IRF7466PBF	IR	SMD 101-3432	0.71	– –	– –	– –
IRF7468PBF	IR	SMD 101-3433	1.01	– –	– –	– –
IRF7469PBF	IR	SMD 101-3434	0.81	0.52	0.40	0.37
IRF7470PBF	IR	SMD 101-3435	1.49	0.99	0.78	0.67
IRF7471PBF	IR	SMD 101-3436	1.05	0.72	0.57	0.55
IRF7478PBF	IR	SMD 101-3437	0.72	0.46	0.35	0.29
IRF7805PBF	IR	SMD 101-3438	0.90	0.61	0.52	0.49
IRF7805ZPBF	IR	SMD 101-3441	0.75	– –	– –	– –
IRF7807PBF	IR	SMD 101-3442	0.67	0.43	0.33	0.30
IRF7807VPBF	IR	SMD 101-3443	1.08	0.66	0.51	0.47
IRF7807ZPBF	IR	SMD 101-3444	0.63	– –	– –	– –
IRF7811AVPBF	IR	SMD 101-3445	0.71	0.46	0.35	0.32
IRF7822PBF	IR	SMD 101-3446	2.12	1.48	1.22	0.91
IRF7828PBF	IR	SMD 101-3447	0.50	0.34	0.33	0.32
IRF7831PBF	IR	SMD 101-3448	2.03	1.30	1.00	0.92
IRF7832PBF	IR	SMD 101-3449	1.83	– –	– –	– –
IRF8113PBF	IR	SMD 101-3450	0.96	– –	– –	– –
IRF3000PBF	IR	SMD 101-3458	0.53	– –	– –	– –
IRF7450PBF	IR	SMD 101-3459	1.03	– –	– –	– –
IRF7451PBF	IR	SMD 101-3460	1.31	0.86	0.66	0.57
IRF7453PBF	IR	SMD 101-3461	0.46	0.40	0.35	0.32
IRF7464PBF	IR	SMD 101-3462	1.27	0.81	0.62	0.57
IRF7465PBF	IR	SMD 101-3463	0.76	– –	– –	– –
IRF7473PBF	IR	SMD 101-3465	1.07	0.89	0.77	0.55
IRF7493PBF	IR	SMD 101-3466	0.75	0.64	0.55	0.53
IRF7495PBF	IR	SMD 101-3467	1.86	0.97	0.68	0.64
IRF7460PBF	IR	SMD 101-3468	0.63	0.50	0.48	0.47
IRF7463PBF	IR	SMD 101-3469	1.43	0.92	0.71	0.63
IRF7207PBF	IR	SMD 101-3473	1.38	0.90	0.68	0.60
IRF7424PBF	IR	SMD 101-3475	1.03	0.86	0.74	0.52
IRF7433PBF	IR	SMD 101-3477	1.07	0.89	0.76	0.61
IRF7821PBF	IR	SMD 101-3495	0.73	– –	– –	– –
SI4420DYPBF	IR	SMD 101-3451	2.11	1.33	1.02	0.92
SI4435DYPBF	IR	SMD 101-3478	1.29	0.85	0.64	0.45
STS11NF30L	ST	SMD 993-5711 RL	0.61	0.48	0.46	0.40
STS4DNF60L	ST	SMD 993-5738 RL	1.26	0.77	0.76	0.72
STS6NF20V	ST	SMD 993-5762 RL	0.54	0.40	0.31	0.26
STS6PF30L	ST	SMD 993-5770 RL	0.84	0.56	0.51	0.44

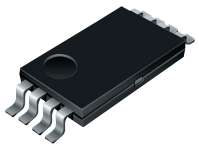
Power MOSFETs - continued

SO-8 - continued

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	250+
STS9NF3LL	ST	SMD 993-5797 RL	0.40	0.31	0.29	0.27
STS12NF30L	ST	SMD 994-6381 RL	0.94	0.71	0.52	0.43
			1+	25+	100+	250+
FDS8670	FCH	SMD 122-8335	0.98	– –	– –	– –
FDS8870	FCH	SMD 122-8336	1.75	1.19	0.87	0.62
FDS8960C	FCH	SMD 122-8338	1.73	1.16	0.87	0.62
			1+	25+	100+	250+
IRF5803D2TRPBF	IR	SMD 129-8542 RL	0.60	0.43	0.35	0.34
IRF6216PBF	IR	SMD 129-8488	0.71	0.55	0.44	0.41
IRF7210PBF	IR	SMD 129-8512	2.03	1.48	1.28	1.13
IRF7240PBF	IR	SMD 129-8500	1.01	0.77	0.60	0.55
IRF7410TRPBF	IR	SMD 129-8514 RL	1.68	1.07	0.83	0.76
IRF7416TRPBF	IR	SMD 129-8502 RL	1.02	– –	– –	– –
IRF7425PBF	IR	SMD 129-8554	1.27	0.81	0.63	0.58
IRF7459TRPBF	IR	SMD 129-8507 RL	0.85	0.63	0.53	0.52
IRF7476PBF	IR	SMD 129-8486	0.83	0.59	0.48	0.44
IRF7494PBF	IR	SMD 129-8546	1.51	– –	– –	– –
IRF7832ZPBF	IR	SMD 129-8543	1.10	0.68	0.52	0.51
IRF7853PBF	IR	SMD 129-8555	1.36	– –	– –	– –

TSSOP-8

International IOR Rectifier



SMD

Overall H=1.2, W=6.4, D=3.1

V_{DS} V	$R_{DS(on)}$ Ω @ V_{GS}=10V	V_{GS}=4.5V	V_{GS}=2.5V	I_D A	$I_{DM\ pulsed}$ A	$V_{GS(th)}$ max., V	Typ. Q_g nC	P_{tot} W	Mftr.	Mftrs. List No.
Single P-Channel										
20	—	0.015	0.024	8.6	68	-1.2	59	1.5	IR	IRF7700PBF

241437

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	+	+
IRF7700PBF	SMD 910-3619 RL	1.58	0.99	0.76	– –	– –

TSOP6/Micro-6™

International IOR Rectifier VISHAY

SMD

Overall H=1.1, W=2.75, D=3.1
Lead pitch 1.0mm

V_{DS} V	$R_{DS(on)}$ max. Ω @ V_{GS}=4.5V	V_{GS}=2.5V	I_D A	$I_{DM\ pulsed}$ A	$V_{GS(th)}$ max. (*min.), V	Typ. Q_g nC	P_{tot} W	Mftr.	Mftrs. List No.
N-Channel									
20	0.1	—	3.2	18	0.7*	4.7	1.7	IR	IRLMS1902PBF
20	0.03	0.045	6.5	20	0.6*	15	2.0	IR	IRLMS2002PBF
P-Channel									
12	0.04	0.053	4.5	20	-0.45*	—	1.1	SLX	SI3447BDV-T1-E3
-20	0.2		2.4	13	0.7*	5.8	1.7	IR	IRLMS6702TRPBF
20	0.09	0.13	2.45	16	-0.45*	—	0.86	SLX	SI3441BDV-T1-E3
-20	0.05	0.1	5.6	45	-1.2	11	2	IR	IRLMS6802TRPBF

241449

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
IRLMS1902PBF	SMD 910-2582 RL	0.480	0.310	0.240	0.220	0.200
IRLMS2002PBF	SMD 910-2590 RL	0.730	– –	– –	– –	– –
IRLMS6702TRPBF	SMD 101-3479 RL	0.710	0.410	0.300	0.250	0.240
IRLMS6802TRPBF	SMD 910-3333 RL	0.660	0.330	0.210	0.169	0.151
SI3441BDV-T1-E3	SMD 121-3157 RL	0.198	0.111	0.106	0.103	0.100
SI3447BDV-T1-E3	SMD 121-3158 RL	0.600	0.330	0.210	0.169	0.159

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The solutions are out there, you just haven't registered yet

SO-8 MOSFET's

FAIRCHILD SEMICONDUCTOR

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont.}$ @25°C A	I_D pulsed A	$V_{GS(th)}$ max. (*min) V	P_D @ 25°C W	Mftrs. List No.
Single N-Channel						
30	0.008	13	50	1*	2.5	FDS6670A
30	0.04	5.5	20	1*	2	FDS6930A
30	0.0125	11	50	3	2.5	FDS6690A
30	0.018	7.5	20	3	2	FDS6990A
30	0.01	11.5	50	3	2.5	FDS6680
30	0.038	6.5	40	3	2.5	FDS6630A
60	0.02	8	50	4	2.5	FDS5680
60	0.014	10	50	4	2.5	FDS5670
100	0.054	4.5	50	4	2.5	FDS3992
150	0.057	4.1	—	4	2.5	FDS2582
100	0.08	4.5	50	4	2.5	FDS3692
150	0.047	4.9	—	4	2.5	FDS2572
Single P-Channel						
20	0.024	8	50	-1.5	2.5	FDS6375
20	0.047	5	50	-1	2.5	FDS8433A
30	0.08	5.3	50	-1*	2.5	FDS9435A
30	0.035	7.9	25	-3	2.5	NDS8435A
30	0.02	8.8	50	-3	2.5	FDS4435
30	0.014	11	50	-3	2.5	FDS6675
Dual N-Channel						
20	0.018	7.5	20	1.5*	2	FDS6890A
30	0.015	8.6	30	3	2	FDS6982
30	0.016	8.6	30	3	2.5	FDS6982S
30	0.03	6.7	15	2.8	2	NDS8936
30	0.035	6	20	1*	1.6	FDS6912A
500	6.2	0.37	1.48	4	2	FQS4903TF
Dual P-Channel						
30	0.032	6	20	-3	2	FDS6975
20	0.03	6	20	-1.5	2	FDS6875
Complementary N and P Channel						
30(N)	0.028	7	20	3	2	FDS8958A
30(P)	0.052	5	20	3	2	

211298

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
FDS2572	SMD 984-5186 RL	1.870	1.330	1.020	– –	– –
FDS2582	SMD 107-6350 RL	1.230	0.770	0.630	– –	– –
FDS3692	SMD 107-6351 RL	0.710	0.440	0.360	– –	– –
FDS3992	SMD 984-5216 RL	1.850	1.290	0.960	– –	– –
FDS4435	SMD 984-6204 RL	0.750	– –	– –	– –	– –
FDS5670	SMD 984-5224 RL	1.840	1.250	0.900	0.790	0.650
FDS5680	SMD 984-5232 RL	1.510	– –	– –	– –	– –
FDS6375	SMD 984-6212 RL	0.660	0.470	0.360	0.270	0.260
FDS6630A	SMD 984-5240 RL	0.570	0.390	0.290	0.200	0.174
FDS6670A	SMD 109-5016 RL	1.290	0.920	0.710	0.470	0.460
FDS6675	SMD 984-6239 RL	1.190	0.840	0.640	0.430	0.420
FDS6680	SMD 101-7698 RL	1.070	– –	– –	– –	– –
FDS6690A	SMD 984-5275 RL	1.860	1.180	0.850	0.620	0.460
FDS6875	SMD 984-4899 RL	1.070	– –	– –	– –	– –
FDS6890A	SMD 984-4732 RL	2.090	– –	– –	– –	– –
FDS6912A	SMD 109-5019 RL	0.850	0.600	0.460	0.310	0.280
FDS6930A	SMD 109-5021 RL	0.820	0.530	0.380	0.230	0.210
FDS6975	SMD 984-4902 RL	1.200	0.840	0.650	0.450	0.430
FDS6982	SMD 984-4740 RL	1.070	0.760	0.580	0.380	0.310
FDS6982S	SMD 984-4759 RL	1.540	1.030	0.780	0.630	– –
FDS6990A	SMD 984-5291 RL	0.960	– –	– –	– –	– –
FDS8433A	SMD 984-6247 RL	0.690	0.440	0.320	0.187	0.160
FDS8958A	SMD 984-4830 RL	2.520	1.570	1.090	0.770	0.620
FQS4903TF	SMD 984-4791 RL	1.400	0.950	0.700	0.490	0.430
FDS9435A	SMD 109-5023 RL	0.570	– –	– –	– –	– –
NDS8435A	SMD 984-6263 RL	1.320	– –	– –	– –	– –
NDS8936	SMD 984-4724 RL	1.140	0.810	0.620	0.420	0.380

Combined MOSFET and Schottky Diode

International IOR Rectifier
FAIRCHILD SEMICONDUCTOR
SMD

D-Pak

TO-263 (D^2-Pak)

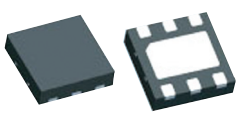
SO-8

Micro8™

SSOT-6

MicroFET

TSSOP-8


Power 33

- Combined MOSFET and Schottky diode
- Very low $R_{ds(on)}$
- Optimum efficiency
- Space saving

V_{DS}	$R_{DS(on)}$	I_D @ 25°C	I_{DM} pulsed	$V_{GS(th)}$ max. (*min.)	P_D @ 25°C	Schottky Diode $I_{F(av)}$	Schottky Diode V_{FM}	Package	Mftr.	Mftrs. List No.
V	Ω	A	A	V	W	A	V			
N Channel										
20	0.009	35	159	2.5	49.5	—	—	I-PAK	FCH	FDU8580
20	0.0055	35	354	2.5	77	—	—	I-PAK	FCH	FDU8586
20	0.009	35	159	2.5	49.5	—	—	DPAK	FCH	FDD8580
20	0.0055	35	354	2.5	77	—	—	DPAK	FCH	FDD8586
30	0.1	3.6	29	1*	2	—	—	SOIC	—	FDS7064SN3
30	0.0024	40	200	2	83	—	—	Power 56	FCH	FDMS8660S
30	0.0025	80	556	2.5	254	—	—	TO-220	FCH	FDP8860
30	0.025	8.3	66	1*	2.5	—	0.5	SOIC	IR	IRF7807D1PBF
30	0.029	6.5	6.5	1*	20	2.7	0.39	SOIC	IR	IRF7353D1PBF
30	0.035	6.4	33	4	2.5	4.0	0.42	SOIC	IR	IRF7421D1PBF
30	0.056	4	20	2.5	—	—	—	SOIC	FCH	FDFS6N754
30	0.123	2.9	10	—	1.5	—	—	MLP-6	FCH	FDFMA3N109
40	0.0019	28	70	4	300	—	—	D2-PAK	FCH	FDB8441
40	0.0047	80	180	4	300	—	—	TO-220	FCH	FDP8441
75	0.011	75	300	4	137	—	—	TO-220	FCH	FDP75N08A
100	0.018	80	320	5.5	255	—	—	TO-220	FCH	FDP3651U
250	0.094	33	132	5	235	—	—	TO-220	FCH	FDP33N25
250	0.094	20	80	5	94	—	—	TO-220F	FCH	FDPF33N25T
250	0.06	28	112	5	117	—	—	TO-220F	FCH	FDPF51N25
250	0.117	3	50	4	2.5	—	—	SOIC	FCH	FDS2734
500	0.38	16.5	66	—	205	—	—	TO-3P	FCH	FDA16N50_F109
600	1	3.9	11.7	5	—	—	—	DPAK	FCH	FCD4N60TM
600	0.6	7	21	5	—	—	—	DPAK	FCH	FCD7N60TM
650	0.95	4.6	13.8	5	—	—	—	DPAK	FCH	FCD5N60TM
Dual N Channel										
20	0.068	3.7	6	1.5	1.4	—	—	MLP-6	FCH	FDMA1028NZ
30	0.028	6.3	20	3	2.5	3.0	0.7	SOIC	FCH	FDS6982S
30	0.016	8.6	30							
40	0.029	6	20	3	2	—	—	SOIC	FCH	FDS8949
500	1.5	4.5	18	—	75	—	—	TO-220FP	INF	SPP04N50C3
P Channel										
20	0.055	4.3	4.3	-1.2*	1.25	—	0.62	Micro8	IR	IRF7534D1PBF
20	0.09	4.6	23	4	2.5	4.0	0.52	SOIC	IR	IRF7422D2PBF
20	0.042	6.6	24	—	2.4	—	—	MLP-6	FCH	FDMA291P
20	0.085	3	15	-0.4	1.5	—	—	WL-CSP	FCH	FDZ191P
30	0.115	3	—	-3	1.6	2	0.58	SOIC	FCH	FDFS2P753Z
150	1.5	3	12	-3	42	—	—	Power 33	FCH	FDMC2523P
Dual P										
20	0.095	3.1	6	-1.5	1.4	—	—	MLP-6	FCH	FDMA1029PZ
30	0.022	6.9	50	-3	1.6	—	—	SOIC	FCH	FDS4935BZ
Dual NP										
20(P)	141	3.1	6	-0.6	1.4	—	—	MLP-6	FCH	FDMA1032CZ
20(N)	0.7	0.6	1	1.5	0.625	—	—	SC-89	FCH	FDY4000CZ
20(P)	1.2	0.35								

211265

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	250+
FDFS2P753Z	FCH	SMD 149-5205	0.175	0.130	0.105	0.094
FDS6982S	FCH	SMD 984-4759 RL	1.540	1.030	0.780	0.630
FDS7064SN3	IR	SMD 109-5022 RL	0.510	0.490	0.480	0.460
IRF7353D1PBF	IR	SMD 910-2426	1.830	– –	– –	– –
FCD4N60TM	FCH	SMD 132-4776	0.840	– –	– –	– –
FCD5N60TM	FCH	SMD 132-4777	1.430	1.090	0.810	0.770
FCD7N60TM	FCH	SMD 132-4778	3.240	2.180	1.610	1.140
FDA16N50_F109	FCH	132-4783	3.270	2.220	1.930	1.890
FDB8441	FCH	SMD 132-4784	2.490	1.840	1.700	1.660
FDD8580	FCH	SMD 132-4785	0.450	0.320	0.270	0.250
FDD8586	FCH	SMD 132-4786	0.610	0.510	0.400	0.360
FDFMA3N109	FCH	SMD 132-4787	0.300	0.210	0.180	0.174
FDFS6N754	FCH	SMD 132-4788	0.450	0.330	0.270	0.260
FDMA1028NZ	FCH	SMD 132-4789	0.330	– –	– –	– –
FDMA1029PZ	FCH	SMD 132-4790	0.680	0.500	0.360	0.210
FDMA291P	FCH	SMD 132-4794	0.300	0.210	0.167	0.146
FDMC2523P	FCH	SMD 132-4795	0.320	0.270	0.210	0.187
FDMS8660S	FCH	SMD 132-4796	1.560	1.070	0.830	0.810
FDP33N25	FCH	132-4798	3.200	– –	– –	– –
FDP3651U	FCH	132-4799	2.520	– –	– –	– –
FDP75N08A	FCH	132-4801	1.410	– –	– –	– –
FDP8441	FCH	132-4803	6.460	4.380	3.220	2.300
FDP8860	FCH	132-4804	1.980	– –	– –	– –
FDPF33N25T	FCH	132-4807	3.050	2.460	1.860	1.310
FDPF51N25	FCH	132-4808	1.920	1.540	1.260	1.060
FDS2734	FCH	SMD 132-4812	3.550	2.410	1.780	1.270
FDS4935BZ	FCH	SMD 132-4813	0.780	0.550	0.420	0.280
FDS8949	FCH	SMD 132-4814	0.890	0.570	0.410	0.400
FDU8580	FCH	132-4815	0.660	0.430	0.310	0.230
FDU8586	FCH	132-4816	0.860	0.550	0.390	0.290
FDY4000CZ	FCH	SMD 132-4817	0.310	0.240	0.189	0.139

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	250+
FDZ191P	FCH	SMD 132-4819	0.250	0.194	0.158	0.155
IRF7421D1PBF	IR	SMD 910-2434	1.060	0.700	0.570	0.480
IRF7422D2PBF	IR	SMD 910-3287	1.180	– –	– –	– –
IRF7534D1PBF	IR	SMD 910-3279	0.470	0.300	0.230	0.177
IRF7807D1PBF	IR	SMD 101-3489	0.460	0.420	0.400	0.390
SPP04N50C3	INF	120-1588	1.470	1.090	0.800	0.580

12V to 200V

TO-92

SOT-363

SOT-23

V_{ds}	$R_{DS(on)}$	$I_{D\ cont}$ @ 25°C	I_{DM} pulsed	$V_{GS(th)}$ max (*typ)	P_d @ 25°C	Package	Mftrs.List No.
V	Ω	A	A	V	W		
Single N Channel							
60	5	0.3	1.2	3	0.83	SOT-23	PMBF170
Dual N Channel							
30	8	0.125	0.25	1.5	0.2	SOT-363	PMGD8000LN
Single P Channel							
12	0.5	0.75	3	0.68	0.417	SOT-23	BSH205

211357

Order Multiple=5

Mftrs. List No.	Order Code	Price Each 5+	25+	100+	250+	1K+
BSH205	SMD 108-1308 RL	0.290	0.210	0.174	0.137	0.107
PMBF170	SMD 108-1473 RL	0.270	0.098	0.096	0.072	0.070
		5+	25+	100+	1K+	3K+
PMGD8000LN	SMD 108-1479 RL	0.187	0.118	0.097	0.065	0.063

P Channel MOSFET 12V to 200V

The high-power MOSFET series which achieve the top level of Low RDS(on) are best for high power motor drive, load switch and low voltage Inverter. The high-voltage MOSFET series which achieve the top level of RDS(on) are best for PFC and main switch of power supply units.

V_{DS}(typ)	I_D cont @ 25°C	RDS(on)	Vgs @ V	P_D @ 25°C	Package	Order Code	Mftrs. list No.
V	A			W			
12	1.1	327mohm	4.5	400	ECSP1208	173-5449	EC4307KF-TR
12	2.4	120mohm	4.5	800	SCH6	173-5484	SCH1301-TL-E
12	3	70mohm	4.5	1	SOT-346	173-5436	CPH3348-TL-E
12	3	70mohm	4.5	1	SC-88	173-5472	MCH3374-TL-E
12	3.5	70mohm	4.5	1.6	SOT-346	173-5441	CPH6337-TL-E
12	5	43mohm	4.5	1.5	SC-88	173-5475	MCH6336-TL-E
12	6	58mohm	4.5	3.5	SOT-89	173-5405	2SJ630-TD-E
12	9.5	16mohm	4.5	1.6	ECH8	173-5451	ECH8304-TL-E
20	2	165mohm	4	800	SCH6	173-5485	SCH1302-TL-E
20	3	83mohm	4.5	1	SC-88	173-5473	MCH3377-TL-E
20	4.5	49mohm	4.5	1.5	SC-88	173-5476	MCH6337-TL-E
20	5	45mohm	4	1.2	SOT-346	173-5435	CPH3340-TL-E
20	5	42mohm	4.5	2	SOT-346	173-5440	CPH6311-TL-E
20	6	69mohm	4	3.5	SOT-89	173-5404	2SJ613-TD-E
20	8	72mohm	4.5	20	TO-251	173-5406	2SJ645-TL-E
30	0.1	10.4ohm	4	0.25	CP	171-3392	3LP01C-TB-E
30	0.1	10.4ohm	4	0.15	MCP	171-3393	3LP01M-TL-E
30	0.1	10.4ohm	4	0.15	SSFP	171-3394	3LP01SS-TL-E
30	0.1	10.4ohm	4	0.15	SMCP	171-3396	3LP01S-TL-E
30	0.2	2.4ohm	4	0.6	MCPH3	171-3402	3LP04MH-TL-E
30	0.25	1.9ohm	4	0.15	MCP	171-3398	3LP03M-TL-E
30	0.25	1.9ohm	4	0.15	SSFP	171-3399	3LP03SS-TL-E
30	0.25	1.9ohm	4	0.15	SMCP	171-3400	3LP03S-TL-E
30	0.9	145mohm	10	900	CPH5	171-3463	CPH5852-TL-E
30	1.8	0.235ohm	10	0.9	MCPH3	171-3377	MCH3360-TL-E
30	2	0.17ohm	10	0.8	SCH6	171-3379	SCH1304-TL-E
30	3.5	0.098ohm	10	1.5	MCPH6	171-3378	MCH6331-TL-E
30	5	0.045ohm	10	1.2	CPH3	171-3367	CPH3341-TL-E
30	5	0.059ohm	10	1.6	CPH6	171-3368	CPH6341-TL-E
30	6	0.069ohm	10	3.5	PCP	171-3361	2SJ616-TD-E
30	6	0.034ohm	10	1.6	SOP	171-3374	FSS174-TL-E
30	7	0.025ohm	10	1.6	ECH8	171-3369	ECH8302-TL-E
30	8	0.075ohm	10	15	TP-FA	171-3363	2SJ646-TL-E
45	6	0.035ohm	10	2.4	SOP	171-3373	FSS173-TL-E
45	14	0.041ohm	10	1	TP-FA	171-3380	SFT1307-TL-E
60	1.2	0.53ohm	10	1	CPH3	171-3364	CPH3324-TL-E
60	1.2	0.53ohm	10	1	MCPH3	171-3375	MCH3316-TL-E
60	2	0.36ohm	10	3.5	PCP	171-3362	2SJ632-TD-E
60	4	0.085ohm	10	1.6	ECH8	171-3370	ECH8305-TL-E
60	12	135mohm	10	20	TO-220ML	173-5407	2SJ650
60	20	0.06ohm	10	2	TO-220ML	171-3432	2SJ651
60	28	38mohm	10	30	TO-220ML	173-5409	2SJ652
60	65	0.0105ohm	10	50	ZP	171-3435	2SJ683-TL-E
100	0.6	1.45ohm	10	1	CPH3	171-3365	CPH3327-TL-E
100	0.6	1.45ohm	10	1	MCPH3	171-3376	MCH3322-TL-E
100	2	0.225ohm	10	1.6	ECH8	171-3372	ECH8306-TL-E
100	8	315mohm	10	20	TO-220ML	173-5411	2SJ654
100	12	0.136ohm	10	2	TO-220ML	171-3433	2SJ655
100	18	0.075ohm	10	2	TO-220ML	171-3434	2SJ656
100	25	52mohm	10	35	TO-220ML	173-5412	2SJ657
200	0.4	5ohm	10	1	CPH3	171-3366	CPH3331-TL-E

Power MOSFETs - continued

P Channel MOSFET
12V to 200V - continued

540833

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
EC4307KF-TR	SMD 173-5449	0.670	0.560	0.460	0.390	0.320
SCH1301-TL-E	SMD 173-5484	0.530	0.450	0.360	0.300	0.260
CPH3348-TL-E	SMD 173-5436	0.350	0.300	0.240	0.210	0.177
MCH3374-TL-E	SMD 173-5472	0.350	0.300	0.240	0.210	0.177
CPH6337-TL-E	SMD 173-5441	0.350	0.300	0.240	0.210	0.177
MCH6336-TL-E	SMD 173-5475	0.400	0.330	0.270	0.230	0.198
2SJ630-TD-E	SMD 173-5405	0.750	0.630	0.520	0.440	0.360
ECH8304-TL-E	SMD 173-5451	0.730	0.610	0.500	0.430	0.350
SCH1302-TL-E	SMD 173-5485	0.350	0.300	0.240	0.210	0.177
MCH3377-TL-E	SMD 173-5473	0.350	0.300	0.240	0.210	0.177
MCH6337-TL-E	SMD 173-5476	0.400	0.330	0.270	0.230	0.198
CPH3340-TL-E	SMD 173-5435	0.610	0.520	0.430	0.350	0.300
CPH6311-TL-E	SMD 173-5440	0.530	0.450	0.360	0.300	0.260
2SJ613-TD-E	SMD 173-5404	0.750	0.630	0.520	0.440	0.360
2SJ645-TL-E	173-5406	0.650	0.540	0.440	0.370	0.310
3LP01C-TB-E	SMD 171-3392	0.260	0.230	0.177	0.156	0.125
3LP01M-TL-E	SMD 171-3393	0.210	0.183	0.145	0.125	0.106
3LP01SS-TL-E	SMD 171-3394	0.210	0.183	0.145	0.125	0.106
3LP01S-TL-E	SMD 171-3396	0.230	0.198	0.156	0.135	0.114
3LP04MH-TL-E	SMD 171-3402	0.470	0.400	0.320	0.270	0.230
3LP03M-TL-E	SMD 171-3398	0.470	0.400	0.320	0.270	0.230
3LP03SS-TL-E	SMD 171-3399	0.440	0.360	0.300	0.250	0.210
3LP03S-TL-E	SMD 171-3400	0.440	0.360	0.300	0.250	0.210
CPH5852-TL-E	SMD 171-3463	0.440	0.370	0.300	0.250	0.220
MCH3360-TL-E	SMD 171-3377	0.430	0.360	0.290	0.250	0.210
SCH1304-TL-E	SMD 171-3379	0.510	0.440	0.350	0.300	0.250
MCH6331-TL-E	SMD 171-3378	0.360	0.310	0.250	0.220	0.177
CPH3341-TL-E	SMD 171-3367	0.650	0.550	0.450	0.370	0.310
CPH6341-TL-E	SMD 171-3368	0.420	0.350	0.280	0.240	0.210
2SJ616-TD-E	SMD 171-3361	0.690	0.580	0.480	0.400	0.340
FSS174-TL-E	SMD 171-3374	0.850	0.720	0.580	0.490	0.420
ECH8302-TL-E	SMD 171-3369	0.600	0.510	0.420	0.340	0.290
2SJ646-TL-E	SMD 171-3363	1.100	0.940	0.760	0.650	0.540
FSS173-TL-E	SMD 171-3373	1.150	0.970	0.790	0.670	0.570
SFT1307-TL-E	SMD 171-3380	1.100	0.940	0.760	0.650	0.540
CPH3324-TL-E	SMD 171-3364	0.490	0.410	0.330	0.280	0.240
MCH3316-TL-E	SMD 171-3375	0.460	0.400	0.310	0.270	0.230
2SJ632-TD-E	SMD 171-3362	0.750	0.630	0.510	0.440	0.360
ECH8305-TL-E	SMD 171-3370	0.780	0.670	0.540	0.460	0.390
2SJ650	173-5407	1.350	1.140	0.940	0.790	0.670
2SJ651	171-3432	1.430	1.210	0.980	0.830	0.700
2SJ652	173-5409	2.730	2.310	1.870	1.580	1.330
2SJ683-TL-E	SMD 171-3435	5.800	4.920	3.990	3.360	2.840
CPH3327-TL-E	SMD 171-3365	0.480	0.410	0.330	0.280	0.230
MCH3322-TL-E	SMD 171-3376	0.340	0.300	0.240	0.200	0.173
ECH8306-TL-E	SMD 171-3372	0.850	0.720	0.580	0.490	0.420
2SJ654	173-5411	1.320	1.120	0.920	0.770	0.650
2SJ655	171-3433	1.290	1.090	0.880	0.750	0.630
2SJ656	171-3434	2.070	1.760	1.430	1.200	1.020
2SJ657	173-5412	3.750	3.170	2.580	2.170	1.830
CPH3331-TL-E	SMD 171-3366	1.100	0.940	0.760	0.650	0.540

N Channel MOSFET
15V to 800V

SANYO New

The semi-power MOSFET series adopt the trench structure realizing high current density, and contribute to miniaturization of the electronic devices by hgh-performance package lineup including ECH8 which adopt the Clip Copper Bond (CCB) technology.
The semi-power MOSFET ATPAK series achieve a good balance between small thin package and high power.

V_{DS}(typ) V	I_D cont @ 25°C A	$R_{DS(on)}$ @ Vgs	Vgs V	P_D @ 25°C W	Package	Order Code	Mftrs. list No.
15	1.8	160mohm	4	650	SCH6	173-5487	SCH1417-TL-E
20	2	0.16ohm	4	0.8	MCPH6	171-3436	MCH6646-TL-E
20	2	0.13ohm	4	900	CPH6	171-3440	CPH6602-TL-E
20	2	0.165ohm	4	800	CPH6	171-3441	CPH6612-TL-E
20	2	145mohm	4	800	MCPH5	171-3461	MCH5837-TL-E
20	2.5	0.095ohm	4	900	CPH6	171-3442	CPH6613-TL-E
20	3	82mohm	4	800	SCH6	173-5486	SCH1402-TL-E
20	4	39mohm	4	1.3	TSSOP	171-3453	FTD2011A-TL-E
20	4	52mohm	4	1	SC-88	173-5474	MCH3427-TL-E
20	6	26mohm	4.5	1.6	SOT-346	173-5442	CPH6411-TL-E
20	6	28mohm	4	1.5	SC-88	173-5478	MCH6429-TL-E
20	6	25mohm	4.5	1.4	EMH8	171-3467	EMH2407-TL-H
20	6	36.5mohm	4.5	1.6	EFCP	171-3470	EFC4602-TR
20	6.5	0.023ohm	4.5	1.5	ECH8	171-3443	ECH8601R-TL-H
20	7	24mohm	4.5	1.3	ECH8	171-3446	ECH8612-TL-E
20	7	22mohm	4	1.2	SOT-346	173-5438	CPH3440-TL-E
20	7.5	17mohm	4.5	1.5	ECH8	171-3451	ECH8649-TL-H
20	8	43mohm	4	3.5	TO-243	173-5418	2SK3486-TD-E
20	8	20mohm	4.5	1.4	ECH8	171-3447	ECH8621R-TL-E
20	8	23mohm	4.5	2.3	SOP	171-3457	FW231A-TL-E
20	9	16mohm	4	1.4	ECH8	173-5452	ECH8411-TL-E
24	6	25mohm	4.5	1.4	EMH8	171-3468	EMH2412-TL-H
24	6	44mohm	4.5	1.6	EFCP	171-3469	EFC4601-TR
24	6	38mohm	4.5	1.6	EFCP	171-3471	EFC4606-TR
24	8	23mohm	4.5	1.6	ECH8	171-3464	ECH8601M-C-TL-H
24	9	17mohm	4.5	1.5	ECH8	171-3452	ECH8655R-TL-H
30	0.15	3.7ohm	4	0.25	CP	171-3381	3LN01C-TB-E
30	0.15	3.7ohm	4	0.15	MCP	171-3382	3LN01M-TL-E
30	0.15	3.7ohm	4	0.15	SSFP	171-3384	3LN01SS-TL-E
30	0.15	3.7ohm	4	0.15	SMCP	171-3385	3LN01S-TL-E
30	0.15	3.7ohm	4	0.25	CPH5	171-3439	CPH5617-TL-E
30	0.35	0.9ohm	4	0.15	MCP	171-3387	3LN03M-TL-E
30	0.35	0.9ohm	4	0.15	SSFP	171-3388	3LN03SS-TL-E
30	0.35	1ohm	4	0.6	MCPH3	171-3389	3LN04MH-TL-E
30	0.35	3.7ohm	4	800	MCPH6	171-3459	MCH6602-TL-E
30	1.5	215mohm	4	800	SCH6	173-5488	SCH1419-TL-E
30	1.8	0.18ohm	10	0.8	MCPH3	171-3356	MCH3475-TL-E
30	5	41mohm	4	1.5	SC-88	173-5477	MCH6412-TL-E
30	5	36mohm	4	1.5	ECH8	171-3445	ECH8607-TL-E
30	6	41mohm	4	1.6	SOT-346	173-5444	CPH6434-TL-E
30	6	26mohm	4	1.4	TSSOP	171-3456	FTD2019A-TL-E
30	6.5	24mohm	4	1.2	SOT-346	173-5439	CPH3442-TL-E
30	7	23mohm	4.5	1.5	ECH8	171-3448	ECH8622R-TL-E
30	7	23.5mohm	4.5	1.4	ECH8	171-3466	ECH8664R-TL-H
30	8	0.039ohm	10	3.5	PCP	171-3338	2SK3490-TD-E
30	8	0.115ohm	10	1	TP-FA	171-3343	2SK4067-TL-E
30	8	26mohm	4	2.5	SOP	171-3458	FW232A-TL-E
30	8	20.5mohm	4.5	1.5	ECH8	171-3465	ECH8663R-TL-H
30	10	0.015ohm	10	1.6	ECH8	171-3347	ECH8402-TL-E
30	14	0.01ohm	10	3.3	SOP	171-3352	FSS804-TL-E
30	20	21mohm	4	20	TO-220FI	173-5428	2SK4043LS
30	50	12mohm	10	40	ATPAK	171-3519	ATP202-TL-H
30	75	8.2mohm	10	50	ATPAK	171-3520	ATP203-TL-H
35	6	0.044ohm	10	1.8	SOP	171-3353	FW217-TL-E
35	8	0.026ohm	10	1.8	SOP	171-3348	FSS218-TL-E
35	14	0.023ohm	10	1	TP-FA	171-3357	SFT1403-TL-E
40	65	9.1mohm	10	50	ATPAK	171-3521	ATP207-TL-H
45	8	0.022ohm	10	2.4	SOP	171-3350	FSS273-TL-E
45	14	0.028ohm	10	1	TP-FA	171-3359	SFT1407-TL-E
50	0.1	7.8ohm	4	0.25	CP	171-3390	5LN01C-TB-E
50	0.1	7.8ohm	4	0.15	MCP	171-3391	5LN01M-TL-E
50	0.25	7.8ohm	4	800	MCPH6	171-3460	MCH6604-TL-E
60	1.8	0.22ohm	10	1	MCPH3	171-3354	MCH3416-TL-E
60	2	220mohm	4	1	SOT-346	173-5437	CPH3430-TL-E
60	2	220mohm	4	1.6	SOT-346	173-5443	CPH6429-TL-E
60	2	0.34ohm	10	3.5	PCP	171-3340	2SK3944-TD-E
60	4	0.145ohm	10	3.5	PCP	171-3339	2SK3614-TD-E
60	6	0.043ohm	10	1.9	SOP	171-3351	FSS275-TL-E
60	18	55mohm	10	20	TO-220ML	173-5419	2SK3702
60	30	26mohm	10	25	TO-220ML	173-5420	2SK3703
60	45	14mohm	10	30	TO-220ML	173-5422	2SK3704
60	60	12.5mohm	10	35	TO-220ML	173-5423	2SK3705
60	90	5mohm	10	40	TO-220FI	173-5434	2SK4073LS
60	100	4.7mohm	10	90	SOT-404	173-5432	2SK4066-DL-E
60	100	0.005ohm	10	1.75	TO-220	171-3430	2SK4094
60	100	0.007ohm	10	1.75	TO-220	171-3431	2SK4171
75	100	6mohm	10	90	SOT-404	173-5431	2SK4065-DL-E
100	0.8	0.89ohm	10	0.9	MCPH3	171-3355	MCH3421-TL-E
100	1	0.63ohm	10	1	CPH3	171-3344	CPH3427-TL-E
100	1	0.57ohm	4	0.9	CPH5	171-3438	CPH5612-TL-E
100	4	0.085ohm	10	2.4	SOP	171-3349	FSS264-TL-E
100	10	0.092ohm	10	1	TP-FA	171-3341	2SK3977-TL-E
100	12	130mohm	10	20	TO-220ML	173-5424	2SK3706
100	20	60mohm	10	25	TO-220ML	173-5425	2SK3707
100	30	33mohm	10	30	TO-220ML	173-5426	2SK3708
100	37	25mohm	10	35	TO-220ML	173-5427	2SK3709
200	0.6	2.4ohm	10	1	CPH3	171-3345	CPH3431-TL-E
200	6	0.45ohm	10	1	TP-FA	171-3342	2SK3979-TL-E
400	12	0.54ohm	10	2	TO-220FI	171-3417	2SK4116LS
400	15	0.42ohm	10	2	TO-220FI	171-3418	2SK4117LS
400	18	0.34ohm	10	2	TO-220FI	171-3419	2SK4118LS
400	21	0.26ohm	10	2	TO-220FI	171-3420	2SK4119LS
450	10	0.68ohm	10	2	TO-220FI	171-3421	2SK4120LS
450	12	0.56ohm	10	2	TO-220FI	171-3422	2SK4121LS
450	15.5	0.42ohm	10	2	TO-220FI	171-3423	2SK4122LS
450	18	0.34ohm	10	2	TO-220FI	171-3424	2SK4123LS
500	8	0.85ohm	10	2	TO-220FI	171-3410	2SK4096LS
500	9.5	0.65ohm	10	2	TO-220FI	171-3411	2SK4097LS
500	14	0.52ohm	10	2	TO-220FI	171-3404	2SK4084LS
500	16	0.43ohm	10	2	TO-220FI	171-3405	2SK4085LS
500	20	0.43ohm	10	2.5	TO-3B	171-3426	2SK4124
525	7.5	0.92ohm	10	70	ZP	171-3429	2SK4181-TL-E
600	7	1.1ohm	10	2	TO-220FI	171-3412	2SK4098LS
600	8.5	0.94ohm	10	2	TO-220FI	171-3414	2SK4099LS
600	11.5	0.75ohm	10	2	TO-220FI	171-3406	2SK4086LS
600	14	0.61ohm	10	2	TO-220FI	171-3407	2SK4087LS
600	17	0.61ohm	10	2.5	TO-3PB	171-3427	2SK4125
650	6	1.35ohm	10	2	TO-220FI	171-3415	2SK4100LS
650	7	1.1ohm	10	2	TO-220FI	171-3416	2SK4101LS
650	11	0.85ohm	10	2	TO-220FI	171-3408	2SK4088LS
650	12	0.72ohm	10	2	TO-220FI	171-3409	2SK4089LS
650	15	0.72ohm	10	2.5	TO-3PB	171-3428	2SK4126

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Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
SCH1417-TL-E	SMD 173-5487	0.400	0.330	0.270	0.230	0.198
MCH6646-TL-E	SMD 171-3436	0.280	0.230	0.192	0.163	0.135
CPH6602-TL-E	SMD 171-3440	1.040	0.880	0.710	0.600	0.510
CPH6612-TL-E	SMD 171-3441	0.980	0.830	0.680	0.570	0.480
MCH5837-TL-E	SMD 171-3461	0.270	0.230	0.187	0.156	0.135
CPH6613-TL-E	SMD 171-3442	1.130	0.970	0.780	0.660	0.560
SCH1402-TL-E	SMD 173-5486	0.400	0.330	0.270	0.230	0.198
FTD2011A-TL-E	SMD 171-3453	1.040	0.880	0.710	0.600	0.510
MCH3427-TL-E	SMD 173-5474	0.390	0.320	0.270	0.230	0.187
CPH6411-TL-E	SMD 173-5442	0.510	0.430	0.350	0.290	0.250
MCH6429-TL-E	SMD 173-5478	0.440	0.370	0.300	0.260	0.220
EMH2407-TL-H	SMD 171-3467	0.550	0.460	0.370	0.320	0.270
EFC4602-TR	SMD 171-3470	0.980	0.830	0.680	0.570	0.480
ECH8601R-TL-H	SMD 171-3443	0.920	0.780	0.630	0.530	0.460
ECH8612-TL-E	SMD 171-3446	1.130	0.970	0.780	0.660	0.560
CPH3440-TL-E	SMD 173-5438	0.610	0.520	0.430	0.350	0.300
ECH8649-TL-H	SMD 171-3451	1.230	1.040	0.840	0.710	0.590
2SK3486-TD-E	SMD 173-5418	0.670	0.560	0.460	0.390	0.320
ECH8621R-TL-E	SMD 171-3447	1.230	1.040	0.840	0.710	0.590
FW231A-TL-E	SMD 171-3457	2.450	2.070	1.690	1.410	1.210
ECH8411-TL-E	SMD 173-5452	0.710	0.590	0.490	0.410	0.340
EMH2412-TL-H	SMD 171-3468	0.610	0.520	0.430	0.350	0.300
EFC4601-TR	SMD 171-3469	0.580	0.490	0.410	0.330	0.290
EFC4606-TR	SMD 171-3471	0.550	0.460	0.370	0.320	0.270
ECH8601M-C-TL-H	SMD 171-3464	0.550	0.470	0.390	0.320	0.270
ECH8655R-TL-H	SMD 171-3452	0.470	0.400	0.330	0.270	0.230
3LN01C-TB-E	SMD 171-3381	0.260	0.230	0.177	0.156	0.125
3LN01M-TL-E	SMD 171-3382	0.210	0.183	0.145	0.125	0.106
3LN01SS-TL-E	SMD 171-3384	0.210	0.183	0.145	0.125	0.106
3LN01S-TL-E	SMD 171-3385	0.210	0.183	0.145	0.125	0.106
CPH5617-TL-E	SMD 171-3439	0.440	0.360	0.300	0.250	0.210
3LN03M-TL-E	SMD 171-3387	0.470	0.400	0.320	0.270	0.230
3LN03SS-TL-E	SMD 171-3388	0.470	0.400	0.320	0.270	0.230
3LN04MH-TL-E	SMD 171-3389	0.440	0.360	0.300	0.250	0.210
MCH6602-TL-E	SMD 171-3459	0.490	0.420	0.330	0.280	0.240
SCH1419-TL-E	SMD 173-5488	0.310	0.260	0.210	0.177	0.156
MCH3475-TL-E	SMD 171-3356	0.320	0.270	0.220	0.187	0.156
MCH6412-TL-E	SMD 173-5477	0.440	0.370	0.300	0.260	0.220
ECH8607-TL-E	SMD 171-3445	1.290	1.090	0.880	0.740	0.620
CPH6434-TL-E	SMD 173-5444	0.670	0.560	0.460	0.390	0.320
FTD2019A-TL-E	SMD 171-3456	1.530	1.300	1.050	0.880	0.750
CPH3442-TL-E	SMD 173-5439	0.660	0.560	0.460	0.390	0.320
ECH8622R-TL-E	SMD 171-3448	1.170	0.980	0.800	0.680	0.570
ECH8664R-TL-H	SMD 171-3466	0.600	0.510	0.420	0.340	0.300
2SK3490-TD-E	SMD 171-3338	0.830	0.710	0.570	0.480	0.410
2SK4067-TL-E	SMD 171-3343	0.510	0.430	0.350	0.290	0.250
FW232A-TL-E	SMD 171-3458	2.520	2.130	1.730	1.460	1.230
ECH8663R-TL-H	SMD 171-3465	0.800	0.680	0.550	0.460	0.390
ECH8402-TL-E	SMD 171-3347	0.580	0.490	0.410	0.330	0.290
FSS804-TL-E	SMD 171-3352	1.490	1.260	1.030	0.860	0.730
2SK4043LS	173-5428	1.770	1.500	1.220	1.020	0.860
ATP202-TL-H	SMD 171-3519	1.320	1.120	0.920	0.770	0.650
ATP203-TL-H	SMD 171-3520	1.530	1.300	1.050	0.880	0.750
FW217-TL-E	SMD 171-3353	1.020	0.860	0.710	0.590	0.500
FSS218-TL-E	SMD 171-3348	0.630	0.540	0.450	0.360	0.320
SFT1403-TL-E	SMD 171-3357	1.070	0.910	0.730	0.610	0.520
ATP207-TL-H	SMD 171-3521	1.530	1.300	1.050	0.880	0.750
FSS273-TL-E	SMD 171-3350	1.070	0.910	0.730	0.610	0.520
SFT1407-TL-E	SMD 171-3359	0.810	0.690	0.560	0.470	0.400
5LN01C-TB-E	SMD 171-3390	0.240	0.210	0.163	0.145	0.115
5LN01M-TL-E	SMD 171-3391	0.240	0.210	0.163	0.145	0.115
MCH6604-TL-E	SMD 171-3460	0.610	0.520	0.430	0.350	0.300
MCH3416-TL-E	SMD 171-3354	0.510	0.440	0.350	0.300	0.250
CPH3430-TL-E	SMD 173-5437	0.700	0.590	0.480	0.410	0.340
CPH6429-TL-E	SMD 173-5443	0.570	0.490	0.400	0.330	0.280
2SK3944-TD-E	SMD 171-3340	0.410	0.340	0.280	0.240	0.198
2SK3614-TD-E	SMD 171-3339	0.510	0.430	0.350	0.290	0.250
FSS275-TL-E	SMD 171-3351	0.850	0.720	0.580	0.490	0.420
2SK3702	173-5419	1.320	1.120	0.920	0.770	0.650
2SK3703	173-5420	1.320	1.120	0.920	0.770	0.650
2SK3704	173-5422	2.250	1.900	1.550	1.300	1.100
2SK3705	173-5423	3.270	2.770	2.250	1.890	1.590
2SK4073LS	173-5434	3.750	3.170	2.580	2.170	1.830
2SK4066-DL-E	SMD 173-5432	3.530	2.990	2.420	2.050	1.730
2SK4094	171-3430	4.420	3.740	3.050	2.560	2.160
2SK4171	171-3431	3.220	2.740	2.220	1.870	1.580
2SK4065-DL-E	SMD 173-5431	4.630	3.920	3.180	2.680	2.270
MCH3421-TL-E	SMD 171-3355	0.340	0.300	0.240	0.200	0.173
CPH3427-TL-E	SMD 171-3344	0.550	0.470	0.390	0.320	0.270
CPH5612-TL-E	SMD 171-3438	1.480	1.240	1.010	0.840	0.720
FSS264-TL-E	SMD 171-3349	1.020	0.860	0.710	0.590	0.500
2SK3977-TL-E	SMD 171-3341	1.150	0.980	0.790	0.670	0.560

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
2SK3706	173-5424	1.020	0.860	0.700	0.590	0.500
2SK3707	173-5425	2.070	1.760	1.430	1.200	1.010
2SK3708	173-5426	2.380	2.020	1.640	1.380	1.170
2SK3709	173-5427	3.090	2.610	2.120	1.790	1.510
CPH3431-TL-E	SMD 171-3345	1.060	0.890	0.730	0.610	0.520
2SK3979-TL-E	SMD 171-3342	1.150	0.980	0.790	0.670	0.560
2SK4116LS	171-3417	1.870	1.590	1.290	1.090	0.920
2SK4117LS	171-3418	2.310	1.960	1.580	1.330	1.120
2SK4118LS	171-3419	2.740	2.310	1.870	1.580	1.340
2SK4119LS	171-3420	3.280	2.780	2.260	1.900	1.610
2SK4120LS	171-3421	1.870	1.590	1.290	1.090	0.920
2SK4121LS	171-3422	2.130	1.810	1.470	1.230	1.040
2SK4122LS	171-3423	2.740	2.310	1.870	1.580	1.340
2SK4123LS	171-3424	3.280	2.780	2.260	1.900	1.610
2SK4096LS	171-3410	1.840	1.560	1.270	1.070	0.910
2SK4097LS	171-3411	2.120	1.800	1.460	1.230	1.040
2SK4084LS	171-3404	1.840	1.560	1.270	1.070	0.910
2SK4085LS	171-3405	2.310	1.960	1.580	1.330	1.120
2SK4124	171-3426	3.690	3.120	2.540	2.130	1.800
2SK4181-TL-E	SMD 171-3429	1.840	1.550	1.260	1.060	0.890
2SK4098LS	171-3412	1.840	1.560	1.270	1.070	0.910
2SK4099LS	171-3414	1.970	1.660	1.350	1.130	0.970
2SK4086LS	171-3406	1.710	1.450	1.180	0.990	0.840
2SK4087LS	171-3407	2.310	1.960	1.580	1.330	1.120
2SK4125	171-3427	3.690	3.120	2.540	2.130	1.800
2SK4100LS	171-3415	1.840	1.560	1.270	1.070	0.910
2SK4101LS	171-3416	1.970	1.660	1.350	1.130	0.970
2SK4088LS	171-3408	2.380	2.020	1.640	1.380	1.170
2SK4089LS	171-3409	3.000	2.540	2.060	1.740	1.470
2SK4126	171-3428	3.410	2.890	2.350	1.980	1.660

SOT-223

V_{DS}<100V

International IOR Rectifier FAIRCHILD SEMICONDUCTOR Infineon SMD

H=1.7, W=6.7, D=7.3
Supplied on 12mm tape.

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	P_D @ 25°C W	$V_{GS(th)}$ max. (*min) V	Mftr.	Mftrs. List No.
N Channel, Enhancement Mode							
30	0.031	4.6	37	2.1	2.5	IR	IRLL3303PBF●
30	0.045	5.5	16	2.1	2.4	IR	IRLL2703PBF●
50	0.3	1.7	6.8	1.5	2	INF	BSP295●
55	0.04	3.8	30	2.1	2.5	IR	IRLL2705PBF●
55	0.045	3.7	30	2.1	2	IR	IRFL4105PBF
55	0.058	5.1	41	2.8	4	IR	IRFL024ZPBF
55	0.065	3.1	12	2.1	2	IR	IRLL024NPBF●
55	0.14	2	16	2.1	2	IR	IRLL014NPBF●
55	0.16	2.7	15	1.0	4	IR	IRFL014NPBF
60	0.2	2.7	22	3.1	2	VISH	IRLL014PBF●
60	0.09	2.6	10.4	1.8	2	INF	BSP318S
60	0.1	3.5	25	3	2	FCH	NDT3055L
60	0.2	2.7	22	3.1	4	VISH	IRFL014PBF
60	0.22	2.3	6.4	2.1	4	IR	IRFL1006PBF
60	1.5	1	8	2	3	ZET	ZVN4206G
60	2	0.7	8	2	2.4	ZET	ZVN2106G
P Channel							
30	0.035	7.3	—	3	-3	FCH	NDT456P●
30	0.065	5	15	3	-2.8	FCH	NDT452AP
60	0.3	2.5	15	3	-4	FCH	NDT2955
60	0.4	1.45	5.8	1.5	-2	INF	BSP171P●
60	0.5	1.8	14	3.1	-4	VISH	IRFL9014PBF
60	0.8	1.17	4.68	1.8	-2	INF	BSP315P●
60	5	0.45	4	2	-3.5	ZET	ZVP2106G

453272

Mftrs. List No.	Mfr.	Order Code	Price Each 1+	100+	200+	500+	1K+
BSP89	INF	SMD 121-4272 RL	0.470	0.350	0.270	0.197	0.192
BSP125	INF	SMD 121-4278 RL	1.200	0.900	0.680	0.490	0.470
BSP129	INF	SMD 121-4279 RL	0.620	0.470	0.350	0.260	0.250
BSP149	INF	SMD 121-4280 RL	0.710	0.540	0.440	0.330	0.320
BSP171P	INF	SMD 115-6441 RL	0.980	0.730	0.560	0.450	0.430
BSP295	INF	SMD 121-4268 RL	0.630	0.480	0.360	0.260	0.250
BSP297	INF	SMD 121-4270 RL	0.670	0.430	0.330	0.240	0.230
BSP298	INF	SMD 121-4281 RL	1.460	1.090	0.830	0.590	0.570
BSP299	INF	SMD 121-4271 RL	1.410	1.060	0.800	0.570	0.550
BSP315P	INF	SMD 121-4289 RL	0.530	0.410	0.300	0.220	0.210
BSP318S	INF	SMD 121-4267 RL	0.590	0.450	0.340	0.240	0.230
BSP372L6327	INF	SMD 121-4283 RL	0.570	0.440	0.330	0.240	0.230
BSP373	INF	SMD 121-4285 RL	0.670	0.500	0.370	0.270	0.260

Power MOSFETs - continued

SOT-223 - continued

V_{DS}<100V - continued

Mftrs. List No.	Mfr.	Order Code	Price Each 1+	25+	100+	250+	1K+
BSP100	NXP	SMD 151-0763	0.290	0.230	0.197	0.175	0.153
IRFL9014PBF	VISH	SMD 864-9200	1.980	– –	– –	– –	– –
IRFL024ZPBF	IR	SMD 865-8315	0.440	0.300	0.240	0.220	0.210
IRFL1006PBF	IR	SMD 865-8323	0.670	0.440	0.330	0.260	0.240
IRFL014PBF	VISH	SMD 864-9146	1.280	0.710	0.530	0.460	0.440
IRFL014NPBF	IR	864-9138	0.380	0.260	0.210	0.190	0.181
IRLL014NPBF	IR	SMD 865-1183	0.380	0.220	0.162	0.145	0.135
IRLL014PBF	VISH	SMD 865-1191	1.350	0.750	0.560	0.490	0.470
IRLL024NPBF	IR	SMD 865-1205	0.440	0.270	0.220	0.190	0.186
IRLL2703PBF	IR	SMD 865-1221	0.860	0.750	0.580	0.540	0.530
IRLL2705PBF	IR	SMD 865-1230	1.010	0.600	0.570	0.370	0.340
IRLL3303PBF	IR	SMD 865-1248	1.230	– –	– –	– –	– –
NDT2955	FCH	SMD 984-6271 RL	0.600	– –	– –	– –	– –
NDT3055L	FCH	SMD 984-5305 RL	0.860	0.560	0.390	0.230	0.210
NDT452AP	FCH	SMD 984-6280 RL	0.790	0.560	0.430	0.280	0.260
NDT456P	FCH	SMD 984-6190 RL	1.330	– –	– –	– –	– –
NDT014	FCH	SMD 155-5163	0.460	– –	– –	– –	– –
			1+	100+	200+	500+	1K+
ZVN2106G	ZET	SMD 952-5041 RL	0.870	0.590	0.440	0.390	0.310
ZVP2106G	ZET	SMD 952-5050 RL	1.510	1.030	0.780	0.680	0.540
ZVN2110G	ZET	SMD 952-6730 RL	1.280	0.850	0.650	0.560	0.460
ZVN4206G	ZET	SMD 952-6366 RL	1.200	0.800	0.600	0.530	0.420
IRFL110PBF	VISH	SMD 864-9162	1.220	– –	– –	– –	– –
IRFL210PBF	VISH	SMD 864-9170	0.900	– –	– –	– –	– –
IRFL214PBF	VISH	SMD 864-9189	1.350	0.790	0.480	0.470	0.460
IRFL4315PBF	IR	SMD 865-8331	0.830	0.530	0.410	0.370	0.350
IRFL9110PBF	VISH	SMD 864-9219	1.830	– –	– –	– –	– –
IRLL110PBF	VISH	SMD 865-1213	1.450	– –	– –	– –	– –
NTF3055-100T1G	ON	SMD 143-1322	0.290	– –	– –	– –	– –
NTF3055L108T1G	ON	SMD 143-1323	0.720	0.520	0.390	0.340	0.260
NTF3055L175T1G	ON	SMD 145-3648	0.770	– –	– –	– –	– –
NTF3055L108T1G	ON	SMD 143-1323	0.720	0.520	0.390	0.340	0.260
NTF6P02T3G	ON	SMD 145-3628	1.220	0.800	0.630	0.500	0.410
NTF5P03T3G	ON	SMD 145-3638	0.960	0.620	0.500	0.400	0.320
NTF3055L175T1G	ON	SMD 145-3648	0.770	– –	– –	– –	– –
NTF2955T1G	ON	SMD 145-3649	0.720	– –	– –	– –	– –
			1+	25+	100+	250+	1K+
STN2NF10	ST	SMD 993-5460 RL	0.500	0.360	0.350	0.340	0.320
STN1N20	ST	SMD 993-5452 RL	0.580	0.430	0.400	0.360	0.310
			1+	100+	200+	500+	1K+
ZVN2110G	ZET	SMD 952-6730 RL	1.280	0.850	0.650	0.560	0.460
ZVN4424G	ZET	SMD 952-6749 RL	1.400	0.930	0.700	0.610	0.500
ZVP4424G	ZET	SMD 952-6757 RL	1.570	1.040	0.790	0.690	0.550

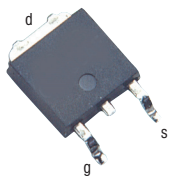
12V to 800V, N Channel

TO-252 (D-Pak)

ON Semiconductor

FAIRCHILD SEMICONDUCTOR

International IOR Rectifier



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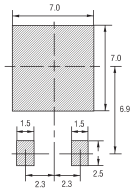


Footprint

V_{DS} V	$R_{DS(on)}$ Ω	I_D cont @ 25°C A	I_D pulsed A	P_D @ 25°C W	Mftr.	Mftrs. List No.
12	90	6.7	54	52	FCH	FDD306P
20	0.009	75	280	88	IR	IRFR3706PBF
25	4.8	100	410	81	IR	IRLR8713PBF
25	4.8	100	410	81	IR	IRLU8713PBF
30	0.0125	46	100	50	FCH	FDD6690A
30	0.013	61	244	87	IR	IRFR3708PBF
30	0.014	25	140	50	ST	STD35NF3LLT4
30	0.031	33	57	57	IR	IRFR3303PBF
30	0.05	17	68	30	ST	STD17NF03LT4
40	0.0052	17.5	80	227	FCH	FDD8444
40	0.0055	42	480	140	IR	IRFR4104PBF
40	0.0067	15.2	85	79	FCH	FDD8445
40	0.009	87	350	140	IR	IRFR3504PBF
40	0.05	7.2	35.3	4.2**	ZET	ZXMN4A06K
50	0.1	14	22	48	FCH	RFD14N05SM
60	0.08	12	48	30	ST	STD12NF06LT4
55	0.0075	91	360	140	IR	IRFR1010ZPBF
55	0.011	42	250	91	IR	IRFR48ZPBF
55	0.013	71	280	140	IR	IRFR3505PBF
55	0.016	56	220	110	IR	IRFR2405PBF
55	0.02	37	150	69	IR	IRFR1205PBF
55	0.0245	30	120	48	IR	IRFR4105ZPBF
55	0.045	25	100	46	IR	IRFR4105PBF
55	0.07	16	68	38	IR	IRFR024NPBF
60	0.014	60	240	110	ST	STD60NF06T4
60	0.027	30	100	50	FCH	FDD5690
60	0.032	24	96	60	ST	STD20NF06T4
60	0.1	14	56	42	VISH	IRFR024PBF
60	0.2	7.7	31	25	VISH	IRFR014PBF
60	7.1	56	315		IR	IRFR1018EPBF
60	12.6	43	170		IR	IRFR3806PBF
75	0.016	42	210	110	IR	IRFR2307ZPBF
75	0.026	42	170	110	IR	IRFR2407PBF
75	7.34	56	310		IR	IRFR3607PBF
80	0.014	70	280	140	IR	IRFR3418PBF
80	0.029	38	150	110	IR	IRFR3518PBF
100	0.018	42	220	140	IR	IRFR3710ZPBF
100	0.03	25	100	100	ST	STD25NF10L
100	0.039	31	125	110	IR	IRFR3410PBF
100	0.06	23	92	70	ST	STD15NF10
100	0.11	15	60	52	IR	IRFR3910PBF
100	0.115	14	56	56	IR	IRFR3911PBF
100	0.21	9.1	38	39	IR	IRFR120NPBF
100	0.27	7.7	31	42	VISH	IRFR120PBF
100	0.54	4.3	17	25	VISH	IRFR110PBF
100	14	63	250	140	IR	IRLU3110ZPBF
200	0.14	15	60	2.5	FCH	FQD18N20V2
200	0.38	9.4	38	86	IR	IRFR9N20DPBF
200	0.6	5	20	43	IR	IRFR220NPBF
200	0.7	6	18	50	ON	MTD6N20ET4G
200	0.8	4.8	19	42	VISH	IRFR220PBF
200	1.5	2.6	10	25	VISH	IRFR210PBF
150	0.18	14	56	86	IR	IRFR13N15DTRLP
250	1.1	3.8	15	42	VISH	IRFR224PBF
400	1.8	3.1	12	42	VISH	IRFR320PBF
400	1.8	3	12	45	ST	STD5NK40ZT4
400	3.6	1.7	6	25	VISH	IRFR310PBF
500	0.8	7.5	30	100	ST	STD5NM50T4
500	1.5	4.4	17.6	70	ST	STD5NK50ZT4
500	3	2.4	8	42	VISH	IRFR420PBF
550	0.38	11	44	100	ST	STD12NM50N
600	2	4	16	70	ST	STD4NK60ZT4
600	4.4	2	8	42	VISH	IRFRC20PBF
650	1	5	20	96	ST	STD5NM60T4

** measured power on 50mm x 50mm x 1.8mm PCB

453274

Mftrs. List No.	Mfr.	Order Code	Price Each 1+	25+	100+	250+
FDD306P	FCH	SMD 995-8827 RL	0.59	0.40	0.30	0.21
FDD5690	FCH	SMD 984-5038 RL	1.24	0.87	0.67	0.50
FDD6690A	FCH	SMD 984-5062 RL	0.93	0.66	0.51	0.34
FDD8444	FCH	SMD 122-8329	2.32	1.57	1.17	0.82
FDD8445	FCH	SMD 122-8331	1.46	0.99	0.73	0.52
FQD18N20V2	FCH	SMD 109-5052 RL	1.30	0.89	0.65	0.47
IRFR9N20DPBF	IR	SMD 864-9928	1.30	0.83	0.73	0.63
IRFR13N15DTRLP	IR	SMD 129-8545 RL	0.62	0.46	0.37	0.36
IRFR48ZPBF	IR	SMD 101-3388	1.19	0.76	0.59	0.54
IRFR014PBF	VISH	SMD 864-9600	1.05	0.58	0.43	0.38
IRFR024PBF	VISH	SMD 864-9634	1.39	0.77	0.57	0.51
IRFR024NPBF	IR	SMD 864-9618	0.70	0.41	0.40	0.25
IRFR110PBF	VISH	SMD 864-9642	0.64	– –	– –	– –
IRFR120PBF	VISH	SMD 101-3484	1.17	0.64	0.48	0.43
IRFR120NPBF	IR	SMD 864-9669	0.65	0.39	0.38	0.31
IRFR210PBF	VISH	SMD 864-9685	1.14	– –	– –	– –
IRFR220PBF	VISH	SMD 864-9707	0.96	0.53	0.41	0.40
IRFR220NPBF	IR	SMD 864-9693	0.45	0.36	0.28	0.25
IRFR224PBF	VISH	SMD 864-9715	0.58	0.48	0.39	0.37
IRFR310PBF	VISH	SMD 864-9740	0.70	0.43	0.42	0.41
IRFR320PBF	VISH	SMD 864-9758	1.60	0.88	0.66	0.58
IRFR420PBF	VISH	SMD 864-9812	0.94	0.52	0.39	0.34
IRFR1010ZPBF	IR	SMD 101-3382	1.58	1.01	0.78	0.71
IRFR1205PBF	IR	SMD 864-9650	1.24	0.79	0.61	0.56
IRFR2307ZPBF	IR	SMD 101-3383	1.22	0.78	0.60	0.56
IRFR2405PBF	IR	SMD 864-9723	0.75	0.59	0.47	0.41
IRFR2407PBF	IR	SMD 864-9731	0.88	– –	– –	– –
IRFR3303PBF	IR	SMD 101-3485	1.24	0.79	0.61	0.56
IRFR3410PBF	IR	SMD 864-9766	0.75	0.61	0.51	0.40
IRFR3418PBF	IR	SMD 864-9774	2.58	1.65	1.28	1.17
IRFR3504PBF	IR	SMD 865-8765	1.02	– –	– –	– –
IRFR3505PBF	IR	SMD 865-8773	1.73	– –	– –	– –
IRFR3518PBF	IR	SMD 864-9782	0.91	0.70	0.59	0.49
IRFR3706PBF	IR	SMD 865-8790	1.05	0.67	0.52	0.48
IRFR3708PBF	IR	SMD 865-8811	1.28	0.82	0.63	0.58
IRFR3710ZPBF	IR	SMD 101-3384	1.38	0.87	0.74	0.72
IRFR3910PBF	IR	SMD 864-9790	0.99	0.59	0.57	0.37
IRFR3911PBF	IR	SMD 865-8820	0.71	0.47	0.37	0.36
IRFR4104PBF	IR	SMD 101-3386	1.36	0.86	0.73	0.71

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	250+
IRFR4105PBF	IR	SMD 864-9804	1.53	0.92	0.89	0.54
IRFR4105ZPBF	IR	SMD 101-3387	0.81	0.62	0.41	0.39
IRFRC20PBF	VISH	SMD 864-9936	1.29	0.71	0.53	0.46
IRLR8713PBF	IR	SMD 129-8551	0.96	0.62	0.49	0.45
IRLU3110ZPBF	IR	129-8556	1.48	1.26	1.05	0.99
IRLU8713PBF	IR	129-8552	0.72	0.57	0.56	0.54
IRFR1018EPBF	IR	SMD 160-2229	1.19	– –	– –	– –
IRFR3607PBF	IR	SMD 160-2230	1.08	0.69	0.54	0.49
IRFR3806PBF	IR	SMD 160-2231	0.77	– –	– –	– –
MTD6N20ET4G	ON	SMD 955-5919 RL	1.55	1.22	0.97	0.77
RFD14N05SM	FCH	SMD 101-7791	0.77	0.49	0.35	0.26
STD4NK60ZT4	ST	SMD 129-1961 RL	0.65	0.53	0.46	0.39
STD5NM50T4	ST	SMD 129-1965 RL	1.78	1.30	1.05	0.90
STD5NM60T4	ST	SMD 993-5428 RL	1.11	0.82	0.77	0.74
STD5NK40ZT4	ST	SMD 129-1962 RL	1.01	0.73	0.60	0.54
STD5NK50ZT4	ST	SMD 129-1963 RL	1.62	1.17	0.95	0.84
STD12NF06LT4	ST	SMD 117-5684 RL	0.64	0.47	0.38	0.32
STD12NM50N	ST	SMD 125-2945 RL	1.81	1.43	1.37	1.32
STD15NF10	ST	SMD 994-6322 RL	0.93	0.68	0.55	0.47
STD17NF03LT4	ST	SMD 129-1958 RL	0.77	0.58	0.50	0.43
STD20NF06T4	ST	SMD 993-5363 RL	0.72	0.53	0.43	0.36
STD25NF10L	ST	SMD 994-6330 RL	1.10	0.82	0.66	0.58
STD35NF3LLT4	ST	SMD 994-6349 RL	0.66	0.40	0.38	0.34
STD60NF06T4	ST	SMD 993-5436 RL	1.29	0.95	0.77	0.65
ZXMN4A06K	ZET	SMD 125-1236 RL	0.74	0.59	0.40	0.35

D-Pak (TO-252)

150V to 700V

ON Semiconductor International Rectifier VISHAY

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	P_D @ 25°C W	Mftr.	Mftrs. List No.
N Channel						
150	0.095	24	96	140	IR	IRFR24N15DPBF
200	0.125	18	72	90	ST	STD20NF20
200	1.5	2.6	10	25	VISH	IRFR210PBF
200	0.8	4.8	19	42	VISH	IRFR220PBF
200	0.7	6	18	50	ON	MTD6N20ET4G
200	0.6	5	20	43	IR	IRFR220NPBF
200	0.38	9.4	38	86	IR	IRFR9N20DPBF
200	0.235	13	52	110	IR	IRFR13N20DPBF
200	0.165	17	68	140	IR	IRFR15N20DPBF
250	0.9	4	16	50	ST	STD4NS25T4
250	1.1	3.8	15	42	VISH	IRFR224PBF
400	3.6	1.7	6	25	VISH	IRFR310PBF
400	1.8	3.1	12	42	VISH	IRFR320PBF
500	3	2.4	8	42	VISH	IRFR420PBF
500	1.7	5	20	110	VISH	IRFR430APBF
600	4.4	2	8	42	VISH	IRFRC20PBF
650	1	5	20	96	ST	STD5NM60T4
P Channel						
150	0.295	13	44	110	IR	IRFR6215PBF
200	3	1.9	7.6	25	VISH	IRFR9210PBF
200	1.5	3.6	14	42	VISH	IRFR9220PBF

383323

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
IRFR9N20DPBF	SMD 864-9928	1.30	0.83	0.73	0.63	0.61
IRFR13N20DPBF	SMD 864-9677	0.94	0.69	0.55	0.48	0.47
IRFR15N20DPBF	SMD 865-8722	1.38	0.88	0.68	0.63	0.58
IRFR210PBF	SMD 864-9685	1.14	– –	– –	– –	– –
IRFR220NPBF	SMD 864-9693	0.45	0.36	0.28	0.25	0.24
IRFR220PBF	SMD 864-9707	0.96	0.53	0.41	0.40	0.39
IRFR224PBF	SMD 864-9715	0.58	0.48	0.39	0.37	0.36
IRFR24N15DPBF	SMD 865-8730	1.08	0.69	0.53	0.49	0.46
IRFR310PBF	SMD 864-9740	0.70	0.43	0.42	0.41	0.40
IRFR320PBF	SMD 864-9758	1.60	0.88	0.66	0.58	0.55
IRFR420PBF	SMD 864-9812	0.94	0.52	0.39	0.34	0.32
IRFR430APBF	SMD 865-8846	0.89	0.52	0.44	0.43	0.42
IRFR6215PBF	SMD 864-9847	0.97	0.62	0.48	0.44	0.41
IRFR9210PBF	SMD 864-9898	0.70	– –	– –	– –	– –
IRFR9220PBF	SMD 864-9901	1.29	– –	– –	– –	– –
IRFR9N20DPBF	SMD 864-9928	1.30	0.83	0.73	0.63	0.61
IRFRC20PBF	SMD 864-9936	1.29	0.71	0.53	0.46	0.45
MTD6N20ET4G	SMD 955-5919 RL	1.55	1.22	0.97	0.77	0.62
STD4NS25T4	SMD 993-5410 RL	0.70	0.40	0.37	0.34	0.33
STD5NM60T4	SMD 993-5428 RL	1.11	0.82	0.77	0.74	0.64
STD20NF20	SMD 145-6348	1.17	1.01	0.80	0.68	0.59

TO-252 (D-Pak), Logic Level

H=2.55, W=6.8, D=10.5

Fairchild Semiconductor, International Rectifier, NXP, ST, VISHAY

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	$V_{GS(th)}$ max. (*min.) V	P_D @ 25°C W	Mftr.	Mftrs. List No.
N Channel							
12	0.0085	84	320	1.9	88	IR	IRLR3802PBF
20	4mohm	120	—	—	—	IR	IRLR3717PBF
20	5.7mohm	93	370	—	79	IR	IRFR3711ZPBF
20	6.5mohm	110	440	—	120	IR	IRFR3711PBF
20	8.4mohm	60	240	—	48	IR	IRFR3704ZPBF
20	0.0085	40	100	0.6*	71	SLX	SUD40N02-08-E3
20	11mohm	49	—	—	—	IR	IRLR3715ZPBF
30	3.3mohm	161	—	—	—	IR	IRLR7843PBF
30	4.5mohm	140	—	—	—	IR	IRLR7833PBF
30	5	75	240	—	—	NXP	PHD101NQ03LT
30	0.0068	110	120	3	140	IR	IRLR8203PBF
30	9.5mohm	56	220	—	50	IR	IRFR3707ZPBF
30	0.01	65	260	1*	75	IR	IRLR7821PBF
30	10	75	240	—	—	NXP	PHD71NQ03LT
30	13.8mohm	40	—	—	—	IR	IRLR7807ZPBF
30	0.014	25	140	1*	50	ST	STD35NF3LLT4
30	0.031	33	140	1*	57	IR	IRLR3303PBF
30	0.045	22	96	1*	38	IR	IRLR2703PBF
50	0.047	16	45	2	60	FCH	RFD16N05LSM
55	0.065	17	—	—	45	IR	IRLR024NPBF
50	0.1	14	20	2	40	FCH	RFD14N05LSM
55	8mohm	89	130	—	130	IR	IRLR3705ZPBF
55	0.014	61	240	3	120	IR	IRLR3915PBF
55	0.027	36	160	2	69	IR	IRLR2905PBF
55	0.037	25	100	3	57	IR	IRLR3105PBF
55	58mohm	16	64	—	35	IR	IRLR024ZPBF
60	32mohm	24	96	—	—	ST	STD20NF06LT4
60	0.08	12	48	2	30	ST	STD12NF06L
60	0.2	7.7	31	2	25	VISH	IRLR014PBF
80	0.028	39	150	2.5	120	IR	IRLR2908PBF
100	0.03	25	100	2.5	100	ST	STD25NF10L
100	0.105	17	60	2	79	IR	IRLR3410PBF
100	0.13	13	52	4	50	ST	STD10NF10T4..
100	0.185	10	—	—	48	IR	IRLR120NPBF
100	0.54	4.3	17	2	25	VISH	IRLR110PBF
600	11.5	1	4	5	2.5	FCH	FQD1N60TF
N Channel HEXFETs Optimised for DC-DC Converters							
30	0.0079	91	363	1*	115	IR	IRLR8103VPBF
30	0.018	44	196	1*	62	IR	IRLR8503PBF
P Channel							
60	0.1	15	45	-3	42	FCH	FDD5614P

211183

Mftrs. List No.		Order Code	Price Each 1+	25+	100+	250+	500+
FDD5614P		SMD 984-6131 RL	0.810	0.580	0.440	– –	– –
FQD1N60TF	NEW	SMD 170-2898	0.360	0.250	0.183	0.130	–
IRFR3704ZPBF		SMD 101-3409	0.760	0.670	0.360	0.350	0.340
IRFR3707ZPBF		SMD 101-3410	0.930	0.590	0.460	0.420	0.390
IRFR3711PBF		SMD 101-3411	1.120	0.710	0.550	0.510	0.460
IRFR3711ZPBF		SMD 101-3412	0.800	0.510	0.390	0.380	0.370
IRLR014PBF		SMD 865-1256	1.280	– –	– –	– –	– –
IRLR024NPBF		SMD 101-3486	0.590	0.380	0.300	0.240	0.220
IRLR024ZPBF		SMD 101-3413	0.680	0.420	0.330	0.290	0.270
IRLR110PBF		SMD 866-0115	1.100	– –	– –	– –	– –
IRLR120NPBF		SMD 101-3487	0.720	– –	– –	– –	– –
IRLR2703PBF		SMD 866-0131	0.620	0.390	0.300	0.280	0.260
IRLR2905PBF		SMD 865-1264	2.030	1.130	0.870	0.850	0.830
IRLR2908PBF		SMD 866-0140	1.010	0.650	0.500	0.460	0.430
IRLR3105PBF		SMD 866-0158	0.850	0.540	0.420	0.390	0.360
IRLR3303PBF		SMD 866-0166	1.730	1.100	0.850	0.780	0.730
IRLR3410PBF		SMD 865-1280	0.730	0.460	0.350	0.280	0.260
IRLR3705ZPBF		SMD 101-3414	1.230	– –	– –	– –	– –
IRLR3715ZPBF		SMD 101-3416	0.460	0.310	0.270	0.260	0.250
IRLR3717PBF		SMD 101-3417	1.340	0.860	0.660	0.600	0.570
IRLR3802PBF		SMD 866-0190	1.400	0.900	0.690	0.640	0.590
IRLR3915PBF		SMD 866-0204	1.090	0.690	0.530	0.430	0.390
IRLR7807ZPBF		SMD 101-3419	0.500	0.330	0.260	0.230	0.220
IRLR7821PBF		SMD 910-2400	0.550	0.460	0.400	0.370	0.340
IRLR7833PBF		SMD 101-3421	1.810	1.160	0.890	0.820	0.760
IRLR7843PBF		SMD 101-3422	1.140	0.730	0.560	0.510	0.480
IRLR8103VPBF		SMD 865-1299	1.050	0.640	0.490	0.460	0.420
IRLR8203PBF		SMD 866-0212	0.820	0.510	0.400	0.390	0.380
IRLR8503PBF		SMD 865-1302	1.660	1.060	0.820	0.750	0.700
PHD101NQ03LT		SMD 108-1447 RL	0.950	0.610	0.530	0.520	0.500
PHD71NQ03LT		SMD 108-1449 RL	0.560	– –	– –	– –	– –
RFD14N05LSM		SMD 101-7790	0.860	0.550	0.390	0.290	0.230
RFD16N05LSM		SMD 101-7794	0.950	– –	– –	– –	– –
STD10NF10T4..		SMD 117-5682 RL	0.780	0.530	0.460	0.390	0.340

Power MOSFETs - continued

TO-252 (D-Pak), Logic Level - continued

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
STD12NF06L	SMD 994-6373 RL	0.680	0.490	0.430	0.360	0.310
STD20NF06LT4	SMD 993-5371 RL	0.710	0.470	0.410	0.350	0.310
STD25NF10L	SMD 994-6330 RL	1.100	0.820	0.660	0.580	– –
STD35NF3LLT4	SMD 994-6349 RL	0.660	0.400	0.380	0.340	0.330
SUD40N02-08-E3	SMD 955-1450 RL	0.980	0.750	0.620	0.550	0.540

TO-252 (D-Pak), 175°C, Logic Level

VISHAY

- TrenchFET technology
- 175°C junction temperature
- PWM Optimised for high efficiency

H=2.55, W=6.8, D=10.5

V_{DS} V	$R_{DS(on)}$ @V_{gs}=10V Ω	$R_{DS(on)}$ @V_{gs}=4.5V Ω	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	P_D @ 25°C W	Mftrs. List No.
N Channel						
20	—	0.006	30	100	100	SUD50N02-06P-E3
30	0.012	0.0175	17.5	40	46.8	SUD50N03-12P-E3
30	0.0065	0.0095	84**	100	88	SUR50N03-06P
60	0.031	0.045	23	50	100	SUD23N06-31L
P Channel						
40	0.013	0.022	48	100	93.7	SUD50P04-13L-E3

** Theoretical max. value, package limited.

372293

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
SUD23N06-31L	SMD 815-6611 RL	0.89	0.71	0.61	0.46	0.42
SUD50N02-06P-E3	SMD 149-7656	1.23	0.96	0.83	0.79	– –
SUD50N03-12P-E3	SMD 149-7657	0.60	0.46	0.41	0.38	– –
SUD50P04-13L-E3	SMD 149-7660	1.18	0.93	0.80	0.77	– –
SUR50N03-06P	SMD 815-6859 RL	1.20	0.97	0.81	0.65	0.58

TO-252 (D-Pak)

FAIRCHILD SEMICONDUCTOR

SMD

New

H=2.55, W=6.8, D=10.5

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	P_D @ 25°C W	Mftr.	Mftrs. List No.
Dual NP Channel						
40	0.024, 0.054	9, 6.5	55, 40	3.1	FCH	FDD8424H

495031

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+
FDD8424H	SMD 149-8953	1.03	0.66	0.47	0.35

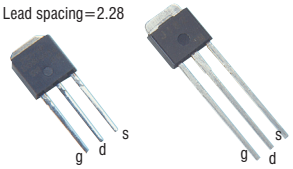
TO-251 (I-Pak)

International IOR Rectifier

FAIRCHILD SEMICONDUCTOR

VISHAY

Lead spacing=2.28



TO-251AA (I-Pak)
FCH, IR, ST
Lead length=9.65 max
D-Pak
HITACHI
Lead length=16.3

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	P_D @ 25°C W	t_r/t_f typ. ns	Mftr.	Mftrs. List No.
N-channel							
30	0.0125	61	244	87	50/3.7	IR	IRFU3708PBF
50	0.1	14	35	48	26/17	FCH	RFD14N05
55	0.09	13	—	35	40/45	FCH	HUF75307D3ST
55	0.075	17	68	45	4.9/16	IR	IRFU024NPBF
55	0.013	71	280	140	74/54	IR	IRFU3505PBF
55	0.0245	30	120	48	10/26	IR	IRFU4105ZPBF
55	0.0075	42	360	140	13/30	IR	IRFU1010ZPBF
60	0.2	8.4	34	30	50/19	VISH	IRFU014PBF
60	0.1	16	64	50	47/37	VISH	IRFU024PBF
60	12.6	43	170	71	6.3/49	IR	IRFU3806PBF
75	7.34	56	310	140		IR	IRFU3607PBF
100	0.27	7.7	31	0	27/14	VISH	IRFU120PBF
100	0.21	9.4	38	48	4.5/32	IR	IRFU120NPBF
100	0.19	8.7	35	35	8.3/27	IR	IRFU120ZPBF
100	0.115	14	56	56	26/25	IR	IRFU3911PBF
100	0.115	16	60	79	27/25	IR	IRFU3910PBF
100	0.044	32	110	130	35/35	IR	IRFU3411PBF
100	0.039	31	125	110	27/13	IR	IRFU3410PBF
100	0.025	48	190	140	68/37	IR	IRFU3412PBF
100	0.018	42	220	140	14/53	IR	IRFU3710ZPBF
200	1.5	2.6	10	25	8.2/14	VISH	IRFU210PBF
200	0.8	4.8	19	42	7.2/19	VISH	IRFU220PBF
200	0.6	5	20	43	11/12	IR	IRFU220NPBF
200	0.235	14	52	110	27/10	IR	IRFU13N20DPBF
250	2	2.2	8.8	25	7/16	VISH	IRFU214PBF
400	3.6	1.7	6	25	7.9/21	VISH	IRFU310PBF
400	1.8	3.1	12	42	10/30	VISH	IRFU320PBF
400	1.47	3	12	45	9.2/22.5	ST	STD5NK40Z-1
450	4.1	1.5	6	30	6.7/8.5	ST	STD2NC45-1
500	3	2.4	7.7	42	8.6/16	VISH	IRFU420PBF
500	1.7	5	20	110	27/16	VISH	IRFU430APBF
600	8	1.4	5.6	45	8/22	ST	STD2NK60Z-1
600	3.3	2.4	9.6	45	9/19	ST	STD3NK60Z-1
P-channel							
50	0.28	9.9	40	42	57/12	VISH	IRFU9020PBF
55	0.175	11	44	38	13/23	IR	IRFU9024NPBF
55	0.11	18	64	57	28/16	IR	IRFU5505PBF
55	0.065	22	110	110	14/39	IR	IRFU5305PBF
60	0.5	5.6	22	30	40/17	VISH	IRFU9014PBF
60	0.28	8.8	35	42	68/29	VISH	IRFU9024PBF
60	0.185	9.4	37.6	38	40/45	FCH	FQU11P06
60	0.134	12	68	79	100/60	FCH	FQU17P06
100	1.2	3.1	12	25	27/17	VISH	IRFU9110PBF
100	0.6	5.6	25	42	29/25	VISH	IRFU9120PBF
100	0.48	6.6	26	39	47/31	IR	IRFU9120NPBF
100	0.205	13	52	66	15/45	IR	IRFU5410PBF
150	0.295	13	44	110	36/37	IR	IRFU6215PBF

211104

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	250+
FQU11P06	FCH	984-6166	0.68	0.46	0.34	– –
FQU17P06	FCH	984-6174	0.83	0.57	0.42	– –
HUF75307D3ST	FCH	984-5143	0.68	0.46	0.33	0.24
IRFU014PBF	VISH	864-9979	1.09	– –	– –	– –
IRFU024PBF	VISH	910-2493	1.07	0.58	0.40	0.39
IRFU024NPBF	IR	864-9987	1.09	0.54	0.36	0.32
IRFU120PBF	VISH	865-8919	0.91	0.48	0.37	0.36
IRFU120NPBF	IR	865-0004	1.07	0.54	0.35	0.34
IRFU210PBF	VISH	865-0012	1.26	0.67	0.47	0.39
IRFU214PBF	VISH	865-0020	1.70	0.90	0.64	0.52
IRFU220NPBF	IR	865-8978	1.11	0.55	0.36	0.32
IRFU220PBF	VISH	865-0039	1.34	0.74	0.55	0.48
IRFU310PBF	VISH	865-0047	1.83	0.98	0.68	0.56
IRFU320PBF	VISH	865-0055	1.70	0.90	0.64	0.51
IRFU3410PBF	IR	865-9028	1.32	0.70	0.49	0.46
IRFU3411PBF	IR	865-9036	1.51	0.82	0.57	0.53
IRFU3412PBF	IR	865-9044	1.99	1.09	0.80	0.76
IRFU3505PBF	IR	865-9060	1.67	0.88	0.62	0.58
IRFU3708PBF	IR	865-9117	0.95	– –	– –	– –
IRFU3910PBF	IR	865-0063	1.11	0.59	0.41	0.39
IRFU3911PBF	IR	865-9133	1.02	0.61	0.47	0.44
IRFU420PBF	VISH	865-0071	1.57	0.84	0.59	0.48
IRFU430APBF	VISH	865-9168	1.09	0.68	0.52	0.41
IRFU5305PBF	IR	865-0080	1.23	0.65	0.45	0.42
IRFU5505PBF	IR	865-9176	1.15	0.57	0.39	0.34
IRFU6215PBF	IR	865-9184	1.00	0.53	0.51	0.50
IRFU9014PBF	VISH	865-0098	1.59	– –	– –	– –
IRFU9020PBF	VISH	865-9192	1.24	0.68	0.57	0.55
IRFU9024NPBF	IR	865-0101	0.53	0.37	0.30	0.26
IRFU9024PBF	VISH	865-0110	1.17	0.67	0.50	0.49
IRFU9110PBF	VISH	865-0128	1.30	0.70	0.49	0.41
IRFU13N20DPBF	IR	865-8943	1.51	0.80	0.56	0.52
IRFU9120NPBF	IR	865-9206	2.11	– –	– –	– –
IRFU9120PBF	VISH	865-0136	1.56	0.83	0.59	0.47
IRFU1010ZPBF	IR	101-3401	1.13	0.76	0.63	0.61
IRFU3710ZPBF	IR	101-3402	1.46	– –	– –	– –
IRFU4105ZPBF	IR	101-3406	1.32	0.70	0.49	0.46
IRFU5410PBF	IR	101-3472	0.91	0.48	0.41	0.40
RFD14N05	FCH	101-7788	0.77	0.49	0.35	0.26
STD2NC45-1	ST	980-2975	0.74	0.54	0.45	0.38
STD2NK60Z-1	ST	951-2683	0.59	0.44	0.35	0.30
STD3NK60Z-1	ST	994-6357	0.75	0.55	0.45	0.38
STD5NK40Z-1	ST	980-2991	0.80	0.59	0.47	0.40
IRFU120ZPBF	IR	143-6982	1.15	0.61	0.42	0.40
IRFU3607PBF	IR	160-2237	0.91	0.59	0.45	0.41
IRFU3806PBF	IR	160-2239	0.82	– –	– –	– –

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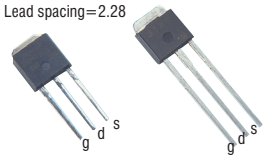
TO-251 (I-Pak), Logic Level



V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont.}$ @ 25°C A	I_D pulsed A	$V_{GS(th)}$ max. V	P_D @ 25°C W	Mftr.	Mftrs List No.
N Channel							
20	0.0042	120	460	2.45	89	IR	IRLU3717PBF
20	0.02	36	140	3	47	IR	IRLU3714PBF
30	0.0033	161	620	2.3	140	IR	IRLU7843PBF
30	0.0095	56	220	2.25	50	IR	IRFU3707ZPBF
30	0.019	55	220	2	107	IR	IRLU3103PBF
30	0.045	22	96	—	38	IR	IRLU2703PBF
50	0.1	14	20	2	40	FCH	RFD14N05L
55	0.014	61	240	3	120	IR	IRLU3915PBF
55	0.027	42	160	2	110	IR	IRLU2905PBF
55	0.037	25	100	3	57	IR	IRLU3105PBF
55	0.058	16	64	—	35	IR	IRLU024ZPBF
55	0.065	17	72	2	46	IR	IRLU024NPBF
55	0.14	10	40	—	28	IR	IRLU014NPBF
60	0.2	7.7	31	2	25	VISH	IRLU014PBF
100	0.185	10	35	2	48	IR	IRLU120NPBF
100	0.54	4.6	18	2	30	VISH	IRLU110PBF
P Channel							
30	0.024	15	45	—	30	SY	2SJ538

211184

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+
IRFU3707ZPBF	**101-3424**	0.99	0.63	0.49	0.45
IRLU014NPBF	**866-0220**	1.07	0.53	0.34	0.31
IRLU014PBF	**865-1310**	1.11	0.61	0.46	0.41
IRLU024NPBF	**865-1329**	1.07	0.53	0.37	0.35
IRLU110PBF	**865-1337**	1.29	0.71	0.53	0.47
IRLU120NPBF	**865-1345**	0.46	0.38	0.30	0.25
IRLU2703PBF	**866-0239**	1.11	0.55	0.36	0.33
IRLU2905PBF	**865-1353**	1.31	0.69	0.57	0.55
IRLU3103PBF	**865-1361**	2.67	– –	– –	– –
IRLU3105PBF	**866-0263**	1.26	0.62	0.41	0.37
IRLU3410PBF	**866-0280**	1.28	0.64	0.47	0.38
IRLU3714PBF	**866-0298**	1.11	– –	– –	– –
IRLU3717PBF	**866-0310**	1.47	0.94	0.67	0.52
IRLU7843PBF	**101-3426**	1.98	1.08	0.81	0.66
IRLU3915PBF	**866-0336**	0.79	– –	– –	– –
RFD14N05L	**101-7789**	0.78	0.50	0.36	0.27
IRLU024ZPBF	**143-6993**	1.11	0.58	0.40	0.38
		1+	**25+**	**100+**	**250+**
2SJ538	**120-8645**	2.34	1.85	1.50	1.25

TO-263 (D^2-Pak)

V_{DS} 20V - 100V

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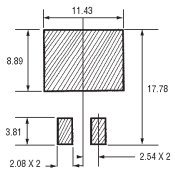

TO-263 (D^2-Pak) H=4.69, W=10.54, D=15.49

D^2-Pak Footprint

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont}$ @ 25°C A	$I_{DM\ pulse}$ @ 25°C A	$V_{GS(th)}$ max. (*min) V	P_D @ 25°C W	Mftr.	Mftrs List No.
N Channel							
20	0.006	92	380	2.45	79	IR	IRF3711ZSPBF
20	0.007	110	420	0.70*	140	IR	IRL3502SPBF
20	0.0085	77	280	2	2.5	IR	IRF3706SPBF
20	0.0125	62	248	3	87	IR	IRF3707SPBF
20	0.013	61	240	2.5	89	IR	IRL3102SPBF
20	0.02	39	160	2.5	57	IR	IRL3302SPBF
20	0.042	24	96	1.0	75	IR	IRL5602STRLPBF
30	0.0016	31	—	3	254	FCH	FDB8860
30	0.003	200	1040	2.5	200	IR	IRL3713SPBF
30	0.0038	150	600	2.3	140	IR	IRL7833SPBF
30	0.006	120	470	2.5	150	IR	IRL3803SPBF
30	0.0063	87	350	2.25	79	IR	IRF3709ZSPBF
30	0.009	90	360	3	120	IR	IRF3709SPBF
30	0.0095	54	—	2.5	55	FCH	FDB8880
30	0.0095	59	230	2.25	57	IR	IRF3707ZSPBF
30	0.014	56	220	2.5	83	IR	IRL3103SPBF
30	3	200	1040	2.5	200	IR	IRL3713STRLPBF
40	0.002	75	1080	4	300	IR	IRF2804SPBF
40	0.0021	80	—	4	254	FCH	FDB8442
40	0.0031	75	790	2.7	200	IR	IRL1404ZSPBF
40	0.0037	75	710	4	200	IR	IRF1404ZSPBF
40	0.004	160	640	3	3.8	IR	IRL1404SPBF
40	0.004	162	650	4	200	IR	IRF1404SPBF
40	0.0036	170	850	3.6	200	IR	IRF2204SPBF
40	0.0055	120	470	4	140	IR	IRF4104SPBF
40	0.0065	110	450	1*	3.1	IR	IRL1004SPBF
40	0.008	104	416	1*	2.4	IR	IRL1104SPBF
40	0.0085	50	100	3*	60	FCH	FDB8447L
40	2.3	280	1080	4	330	IR	IRF2804LPBF
55	0.0026	160	1000	4	300	IR	IRF3805S-7PPBF
55	0.0047	135	700	4	200	IR	IRF2805SPBF
55	0.0049	120	590	4	230	IR	IRF1405ZS-7PPBF
55	0.008	98	390	4	150	IR	IRF3205SPBF
55	0.008	104	360	2	200	IR	IRL2505SPBF
55	0.008	86	340	3	130	IR	IRL3705ZSPBF
55	0.008	80	320	4	300	ST	STB80NF55-08T4
55	0.0065	110	440	4	170	IR	IRF3205ZSPBF
55	0.0075	94	360	4	140	IR	IRF1010ZSPBF
55	0.01	89	310	2	170	IR	IRL3705NSPBF
55	0.0135	51	204	3	80	IR	IRLZ44ZSPBF
55	0.0135	42	240	3	110	IR	IRLR2905ZPBF
55	0.0136	51	200	4	82	IR	IRFZ46ZSPBF
55	0.0139	51	200	4	80	IR	IRFZ44ZSPBF
55	0.014	64	210	4	130	IR	IRFZ48NSPBF
55	0.022	47	160	2	110	IR	IRLZ44NSPBF
55	0.035	30	110	2	3.8	IR	IRLZ34NSPBF
55	0.04	29	100	4	68	IR	IRFZ34NSPBF
55	0.06	18	72	2	3.8	IR	IRLZ24NSPBF
55	0.07	17	68	4	45	IR	IRFZ24NSPBF
55	35	30	110	2	68	IR	IRLZ34NSTRLPBF
55	0.175	12	48	4	45	IR	IRF9Z24NSTRLPBF
55	0.02	74	260	4	200	IR	IRF4905LPBF
55	0.02	74	260	4	200	IR	IRF4905STRLPBF
60	7.1mohm	79	315	4	110	IR	IRF1018ESPBF
60	12.6mohm	43	170	4	71	IR	IRFS3806PBF
60	0.0024	210	840	4	300	IR	IRFS3206PBF
60	0.0033	160	620	4	230	IR	IRFS3306PBF
60	0.0085	84	340	4	140	IR	IRF1010EZSPBF
60	0.012	84	330	4	170	IR	IRF1010ESPBF
60	0.012	57	230	4	92	IR	IRFZ44VZSPBF
60	0.012	72	290	4	150	IR	IRFZ48VSPBF
60	0.016	60	240	1*	110	ST	STB60NF06LT4
60	0.016	60	240	4	110	ST	STB60NF06T4
60	0.0165	55	220	4	115	IR	IRFZ44VSPBF
60	0.022	50	200	4	120	FCH	FQB50N06
60	0.025	48	144	2	100	FCH	NDB6060L
60	0.028	30	120	4	70	IR	IRFZ34VSPBF
60	0.28	11	44			VISH	IRF9Z24SPBF
60	0.14	18	72			VISH	IRF9Z34SPBF
75	7.34mohm	80	310	4	140	IR	IRFS3607PBF
75	0.0033	170	670	4	300	IR	IRFS3207ZPBF
75	0.0094	89	350	4	170	IR	IRF2807ZSPBF
75	0.007	106	550	4	200	IR	IRF3808SPBF
75	0.013	82	280	4	200	IR	IRF2807SPBF
75	0.022	42	80	4	110	IR	IRFR2607ZPBF
75	4.5	170	680	4	330	IR	IRF2907ZLPBF
75	7.8	100	520	4	200	IR	IRF1407STRLPBF
100	14mohm	73	290	4	190	IR	IRFS4610PBF
100	0.015	80	320	4	260	IR	IRF8010SPBF
100	0.018	59	240	4	160	IR	IRF3710ZSPBF
100	0.025	59	236	5.5	200	IR	IRFS59N10DPBF
100	0.026	55	220	4	155	FCH	FQB55N10
100	0.0265	36	140	4	92	IR	IRF540ZSPBF
100	0.028	46	180	4	150	IR	IRF3710SPBF
100	0.028	50	200	4	150	ST	STB40NF10LT4
100	0.036	42	140	4	160	IR	IRF1310NSPBF
100	0.044	36	120	2	140	IR	IRL540NSPBF
100	0.052	33	110	4	140	IR	IRF540NSPBF
100	0.077	28	110	4	150	VISH	IRF540SPBF
100	0.1	17	60	2	79	IR	IRL530NSPBF
100	0.11	17	60	4	79	IR	IRF530NSPBF
100	0.18	10	35	2	48	IR	IRL520NSPBF
100	0.2	9.7	38	4	48	IR	IRF520NSPBF
100	0.54	5.6	20	4	43	VISH	IRF510SPBF
100	0.117	23	76	4	140	IR	IRF9540NLPBF
100	15	80	320	4	260	IR	IRF8010STRLPBF
100	0.3	12	48	4	88	VISH	IRF9530SPBF
100	0.117	23	76	4	140	IR	IRF9540NSTRLPBF
100	0.06	40	140	4	200	IR	IRF5210STRLPBF
100	1.2	2.8	16	4	43	VISH	IRF9510SPBF
100	0.48	6.8	27	4	48	IR	IRF9520NSTRLPBF
100	0.06	40	140	4	200	IR	IRF5210LPBF
100	0.04	30	132	4	127	FCH	FQB33N10TM
150	0.032	60	240	5	320	IR	IRFS52N15DPBF
200	0.054	44	180	5	320	IR	IRFS38N20DTRLP
200	0.8	6.5	26	4	74	VISH	IRF9630STRLPBF
200	0.5	11	44	4	125	VISH	IRF9640STRLPBF
200	26	62	260	5	330	IR	IRFS4227PBF
550	0.38	11	44	4	100	ST	STB12NM50N
600	0.5	13.5	54	4.5	160	ST	STB14NK60ZT4
P-Channel							
55	0.02	64	260	-4	150	IR	IRF4905SPBF
55	0.06	31	110	-4	110	IR	IRF5305SPBF
55	0.1	19	72	-4	68	IR	IRF9Z34NSPBF
55	0.175	12	48	-4	45	IR	IRF9Z24NSPBF
60	0.026	47	188	-4	160	FCH	FQB47P06TM_AM002
60	0.5	6.7	27	-4	43	VISH	IRF9Z14SPBF
100	0.06	40	140	-4	200	IR	IRF5210SPBF

Power MOSFETs - continued

TO-263 (D^2-Pak) - continued

V_{DS} 20V - 100V - continued

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont}$ @ 25°C A	$I_{DM\ pulse}$ @ 25°C A	$V_{GS(th)}$ max. (*min) V	P_D @ 25°C W	Mftr.	Mftrs List No.
P-Channel							
100	0.117	23	27	-4	140	IR	IRF9540NSPBF
100	0.48	6.8	27	-4	48	IR	IRF9520NSPBF
100	0.096	22	88	-4	125	FCH	FQB22P10TM
100	0.2	14	56	-4	79	IR	IRF9530NSPBF
600	0.75	9.2	37	-4	170	VISH	IRFS9N60APBF

** When mounted on 1" square PCB

383336

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	1K+
FDB8442	FCH	SMD 149-5271	2.61	1.78	1.66	1.61
FDB8447L	FCH	SMD 149-5272	1.07	0.72	0.55	0.44
FDB8860	FCH	SMD 122-8326	4.97	3.32	2.53	2.06
FDB8880	FCH	SMD 122-8327	0.90	0.60	0.46	0.37
FQB47P06TM_AM002	FCH	SMD 149-5279	2.84	1.90	1.44	1.18
FQB50N06	FCH	SMD 984-4996 RL	1.45	0.97	0.73	0.60
FQB55N10	FCH	SMD 984-5003 RL	2.18	– –	– –	– –
IRF510SPBF	VISH	SMD 864-8212	1.06	0.59	0.44	0.39
IRF520NSPBF	IR	SMD 864-8220	1.17	0.75	0.58	0.53
IRF530NSPBF	IR	SMD 864-8271	0.88	0.56	0.45	0.41
IRF540NSPBF	IR	SMD 864-8301	1.20	0.77	0.63	0.61
IRF540SPBF	VISH	SMD 101-3379	2.58	1.42	1.06	0.93
IRF540ZSPBF	IR	SMD 865-7700	0.94	0.77	0.62	0.57
IRF1010ESPBF	IR	SMD 865-7319	2.23	1.40	1.23	1.20
IRF1010EZSPBF	IR	SMD 865-7335	1.02	0.90	0.67	0.61
IRF1010ZSPBF	IR	SMD 865-7351	1.45	0.92	0.89	0.82
IRF1310NSPBF	IR	SMD 864-8000	1.32	0.88	0.72	0.60
IRF1404SPBF	IR	SMD 865-7386	2.73	1.74	1.35	1.23
IRF1404ZSPBF	IR	SMD 143-6940	1.44	1.29	1.04	0.91
IRF1405ZS-7PPBF	IR	SMD 149-8185	5.00	3.05	2.38	2.17
IRF2204SPBF	IR	SMD 865-7483	3.31	1.93	1.47	1.38
IRF2804SPBF	IR	SMD 143-6941	3.13	2.01	1.55	1.42
IRF2805SPBF	IR	SMD 865-7513	3.04	1.94	1.50	1.37
IRF2807SPBF	IR	SMD 864-8042	2.27	– –	– –	– –
IRF2807ZSPBF	IR	SMD 865-7530	1.58	1.08	0.96	0.91
IRF2807SPBF	IR	SMD 864-8042	2.27	– –	– –	– –
IRF3205SPBF	IR	SMD 864-8069	5.58	3.12	2.50	1.90
IRF3706SPBF	IR	SMD 864-8131	0.97	0.62	0.54	0.52
IRF3707SPBF	IR	SMD 864-8140	1.61	1.03	0.80	0.73
IRF3709ZSPBF	IR	SMD 143-6944	1.78	1.14	0.88	0.81
IRF3205SPBF	IR	SMD 864-8069	5.58	3.12	2.50	1.90
IRF3205ZSPBF	IR	SMD 865-7564	1.57	1.18	0.92	0.88
IRF3707ZSPBF	IR	SMD 865-7602	1.07	– –	– –	– –
IRF3709SPBF	IR	SMD 865-7629	1.59	1.02	0.79	0.72
IRF3710SPBF	IR	SMD 864-8174	3.00	1.67	1.35	1.03
IRF3710ZSPBF	IR	SMD 101-3376	2.24	1.43	1.11	1.01
IRF3711ZSPBF	IR	SMD 865-7653	1.31	0.84	0.65	0.59
IRF3805S-7PPBF	IR	SMD 149-8187	6.37	4.07	3.15	2.88
IRF3808SPBF	IR	SMD 101-3377	3.25	2.06	1.56	1.28
IRF4104SPBF	IR	SMD 101-3378	1.30	1.11	0.94	0.92
IRF4905SPBF	IR	SMD 910-3201	5.99	– –	– –	– –
IRF5210SPBF	IR	SMD 910-3120	2.20	1.46	1.16	0.99
IRF5305SPBF	IR	SMD 910-3163	1.16	0.74	0.57	0.52
IRF8010SPBF	IR	SMD 865-7831	1.29	1.09	0.95	0.87
IRF9520NSPBF	IR	SMD 910-3597	0.74	0.58	0.47	0.43
IRF9530NSPBF	IR	SMD 910-3147	1.06	0.66	0.53	0.47
IRF9540NSPBF	IR	SMD 910-3155	2.07	1.52	1.21	1.09
IRF9Z14SPBF	VISH	SMD 910-3171	1.61	0.89	0.66	0.58
IRF9Z24NSPBF	IR	SMD 910-3180	0.92	0.56	0.45	0.43
IRF9Z34NSPBF	IR	SMD 910-3139	1.32	0.84	0.65	0.51
IRFR2607ZPBF	IR	SMD 138-5505	1.06	0.90	0.77	0.67
IRFS59N10DPBF	IR	SMD 910-2302	3.04	1.78	1.35	1.30
IRFS3206PBF	IR	SMD 143-6973	3.16	2.02	1.56	1.43
IRFS3207ZPBF	IR	SMD 143-6974	3.15	2.02	1.56	1.51
IRFS3306PBF	IR	SMD 143-6975	2.72	1.74	1.34	1.23
IRFS4610PBF	IR	SMD 905-2038	2.87	2.00	1.55	1.19
IRFS4610PBF	IR	SMD 905-2038	2.87	2.00	1.55	1.19
IRFS9N60APBF	VISH	SMD 101-3505	2.22	1.52	1.23	1.07
IRFZ24NSPBF	IR	SMD 865-0179	0.84	0.71	0.57	0.47
IRFZ34NSPBF	IR	SMD 865-0209	1.03	0.63	0.51	0.50
IRFZ34VSPBF	IR	SMD 865-9265	1.89	0.99	0.70	0.65
IRFZ44NSPBF	IR	SMD 865-0233	1.40	0.90	0.69	0.63
IRFZ44VSPBF	IR	SMD 865-9290	1.47	0.94	0.73	0.67
IRFZ44VZSPBF	IR	SMD 865-9303	0.89	– –	– –	– –
IRFZ44ZSPBF	IR	SMD 865-9320	0.75	0.66	0.50	0.49
IRFZ46ZSPBF	IR	SMD 865-9354	1.03	0.63	0.48	0.44
IRFZ48NSPBF	IR	SMD 101-3480	1.65	1.05	0.82	0.75
IRFZ48VSPBF	IR	SMD 865-0306	1.28	0.79	0.63	0.56
IRL520NSPBF	IR	SMD 865-1051	1.97	1.04	0.73	0.68
IRL530NSPBF	IR	SMD 865-1060	0.99	0.63	0.49	0.45
IRL540NSPBF	IR	SMD 865-1086	0.98	0.68	0.55	0.52
IRL1004SPBF	IR	SMD 865-0861	2.02	1.30	1.08	0.90
IRL1104SPBF	IR	SMD 865-0888	2.02	1.29	1.00	0.91
IRL1404SPBF	IR	SMD 865-9710	3.16	– –	– –	– –
IRL1404ZSPBF	IR	SMD 143-6989	2.70	1.73	1.33	1.22
IRL2505SPBF	IR	SMD 865-0926	2.57	1.65	1.29	0.98
IRL3102SPBF	IR	SMD 865-0950	1.84	1.17	0.91	0.83
IRL3103SPBF	IR	SMD 865-0977	1.43	0.79	0.65	0.57
IRL3302SPBF	IR	SMD 865-0985	1.36	0.87	0.68	0.61
IRL3502SPBF	IR	SMD 865-9753	2.44	1.49	1.17	1.14
IRL3705NSPBF	IR	SMD 865-1027	2.11	1.33	1.03	0.94
IRL3705ZSPBF	IR	SMD 865-9770	1.29	0.81	0.76	0.66
IRL3713SPBF	IR	SMD 865-9796	1.73	1.44	1.11	1.02
IRL3803SPBF	IR	SMD 865-1043	2.77	1.55	1.25	0.96
IRL7833SPBF	IR	SMD 101-3408	2.81	– –	– –	– –
IRLR2905ZPBF	IR	SMD 138-5507	1.06	0.79	0.68	0.59
IRLZ24NSPBF	IR	SMD 101-3482	1.09	0.73	0.57	0.49
IRLZ34NSPBF	IR	SMD 101-3483	0.95	0.60	0.47	0.39
IRLZ44NSPBF	IR	SMD 865-1426	1.22	0.77	0.59	0.52
IRLZ44ZSPBF	IR	SMD 866-0379	0.82	0.62	0.55	0.52
NDB6060L	FCH	SMD 101-7723 RL	1.40	1.00	0.77	0.56
STB40NF10LT4	ST	SMD 117-5681 RL	1.19	0.88	0.71	0.62
STB60NF06LT4	ST	SMD 117-5644 RL	1.07	0.79	0.65	0.56
FQB22P10TM	FCH	SMD 155-5164	1.39	0.93	0.70	0.57
FQB33N10TM	FCH	SMD 155-5165	1.13	0.76	0.57	0.47
IRF1018ESPBF	IR	SMD 160-2225	1.13	0.69	0.53	0.52
IRFS3607PBF	IR	SMD 160-2232	1.36	– –	– –	– –
IRFS3806PBF	IR	SMD 160-2233	0.70	0.45	0.35	0.32

D2-Pak (TO-263) 100V to 650V

100V to 650V

* Theoretical max. value, package limited.

** When mounted on 1" square PCB

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont}$ @ 25°C A	$V_{GS(th)}$ max. V	P_D** @ 25°C W	P_D @ 25°C W	Mftr.	Mftrs List No.
N Channel							
100	0.0048	75	4	250	250	IR	IRFS4310ZPBF
100	0.0072	75	4	230	230	IR	IRFS4410ZPBF
100	0.018	59	4	160	160	IR	IRF3710ZSPBF
100	0.028	46	4	3.7	150	IR	IRF3710SPBF
100	0.044	36	2	3.8	140	IR	IRL540NSPBF
100	0.052	33	4	3.8	140	IR	IRF540NSPBF
100	0.1	17	2	3.8	79	IR	IRL530NSPBF
100	0.11	17	4	3.8	79	IR	IRF530NSPBF
100	0.18	10	2	3.8	48	IR	IRL520NSPBF
100	0.2	9.7	4	3.8	48	IR	IRF520NSPBF
100	0.54	5.6	4	3.7	43	VISH	IRF510SPBF
100	0.54	5.6	4	3.7	43	VISH	IRF510SPBF
150	0.012	83	5	330	330	IR	IRFS4321PBF
150	0.042	43	4	3.8	200	IR	IRF3415SPBF
150	0.045	41	4.5	200	200	IR	IRF3515SPBF
150	0.045	41	5.5	3.1	3.1	IR	IRFS41N15DPBF
150	0.082	21	4	3.8	84	IR	IRF3315SPBF
200	0.0229	62	5	260	260	FCH	FDB2614
200	0.03	65	4	3.75	375	SLX	SUM65N20-30-E3
200	0.054	44	5	320	320	IR	IRFS38N20DPBF.
200	0.075	31	2	180	180	FCH	FQB34N20LTM
200	0.1	24	5.5	3.8	3.8	IR	IRFS23N20DPBF
200	0.15	18	4	150	150	IR	IRF640NSPBF
200	0.17	16	5.5	3.8	140	IR	IRFS17N20DPBF
200	0.18	17	2	3.1	125	VISH	IRL640SPBF
200	0.3	9.3	4	3.8	82	IR	IRF630NSPBF
200	0.3	9	4	74	74	VISH	IRF630SPBF
200	0.8	5.2	4	3	50	VISH	IRF620SPBF
200	1.5	3.3	4	3.0	36	VISH	IRF610SPBF
250	0.0363	50	5	260	260	FCH	FDB2710
250	0.042	45	5	330	330	IR	IRFS4229PBF
300	0.29	14	5	140	140	FCH	FDB14N30TM
400	0.55	10	4	125	125	VISH	IRF740ASPBF
400	0.55	10	4	3.1	125	VISH	IRF740SPBF
400	1	5.5	4.5	74	74	VISH	IRF730ASPBF
500	0.52	11	4	3.1	170	VISH	IRFS11N50APBF
500	0.85	8	4	3.1	125	VISH	IRF840ASPBF
500	0.85	8	4	3.1	125	VISH	IRF840SPBF
500	1.4	5	4	125	125	VISH	IRF830ASPBF
P-Channel							
200	0.5	11	-4	3	125	VISH	IRF9640SPBF

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Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+
FDB14N30TM	FCH	SMD 149-5273	1.52	1.02	0.78
FDB2614	FCH	SMD 149-5274	3.61	– –	– –
FDB2710	FCH	SMD 149-5275	4.83	3.29	2.45
FQB34N20LTM	FCH	SMD 149-5278	1.61	– –	– –
IRF510SPBF	VISH	SMD 864-8212	1.06	0.59	0.44
IRF520NSPBF	IR	SMD 864-8220	1.17	0.75	0.58
IRF530NSPBF	IR	SMD 864-8271	0.88	0.56	0.45
IRF540NSPBF	IR	SMD 864-8301	1.20	0.77	0.63
IRF610SPBF	VISH	SMD 910-2310	1.47	0.86	0.64
IRF620SPBF	VISH	SMD 910-2280	2.07	1.08	0.75
IRF630NSPBF	IR	SMD 864-8352	1.25	0.80	0.62
IRF630SPBF	VISH	SMD 865-7726	1.26	0.70	0.52
IRF640NSPBF	IR	SMD 864-8387	1.74	0.99	0.70
IRF730ASPBF	VISH	SMD 865-7793	1.24	0.75	0.62
IRF740ASPBF	VISH	SMD 865-7815	2.81	1.55	1.16
IRF740SPBF	VISH	SMD 864-8492	2.45	1.35	1.01
IRF830ASPBF	VISH	SMD 864-8530	1.16	0.84	0.66
IRF840ASPBF	VISH	SMD 864-8565	3.09	1.70	1.27
IRF840SPBF	VISH	SMD 864-8590	2.47	1.37	1.02
IRF3315SPBF	IR	SMD 864-8085	2.74	– –	– –
IRF3415SPBF	IR	SMD 864-8107	2.00	1.29	1.12
IRF3515SPBF	IR	SMD 865-7572	2.04	1.42	1.35
IRF3710SPBF	IR	SMD 864-8174	3.00	1.67	1.35
IRF3710ZSPBF	IR	SMD 101-3376	2.24	1.43	1.11
IRF3808SPBF	IR	SMD 101-3377	3.25	2.06	1.56
IRF4104SPBF	IR	SMD 101-3378	1.30	1.11	0.94
IRF9640SPBF	VISH	SMD 910-3112	3.95	2.06	1.43
IRFS11N50APBF	VISH	SMD 864-9944	2.71	1.50	1.12
IRFS17N20DPBF	IR	SMD 910-2299	1.48	0.91	0.74
IRFS23N20DPBF	IR	SMD 864-9952	1.40	1.03	0.83
IRFS38N20DPBF.	IR	SMD 865-8889	1.83	1.16	0.98
IRFS41N15DPBF	IR	SMD 864-9960	2.14	1.31	1.03
IRFS4229PBF	IR	SMD 143-6978	2.93	1.86	1.44
IRFS4310ZPBF	IR	SMD 143-6979	2.70	1.73	1.33
IRFS4321PBF	IR	SMD 143-6980	4.18	3.00	2.63
IRFS4410ZPBF	IR	SMD 143-6981	3.37	1.96	1.49
IRL520NSPBF	IR	SMD 865-1051	1.97	1.04	0.73
IRL530NSPBF	IR	SMD 865-1060	0.99	0.63	0.49
IRL540NSPBF	IR	SMD 865-1086	0.98	0.68	0.55
IRL640SPBF	VISH	SMD 865-1116	2.95	1.63	1.22
SUM65N20-30-E3	SLX	SMD 107-5751 RL	3.84	– –	– –

N Channel, 100V to 900V

International IOR Rectifier VISHAY

SMD

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont}$ @ 25°C A	$V_{GS(th)}$ max. V	P_D** @ 25°C W	P_D @ 25°C W	Mftrs List No.
100	0.015	80	4	260	260	IRF8010SPBF
100	0.0265	36	4	92	92	IRF540ZSPBF
500	0.52	11	4	3.1**	170	IRFS11N50APBF
500	0.85	8	4	3.1**	125	IRF840SPBF
800	3	2.2	4	125	50	IRFBC20SPBF
900	8	1.7	4	3.1**	54	IRFBF20SPBF

**Power Dissipation on 1"² PCB

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Mftrs. List No.	Fab.	Order Code	Price Each 1+	25+	100+
IRF540ZSPBF	IR	SMD 865-7700	0.94	0.77	0.62
IRF840SPBF	VISH	SMD 864-8590	2.47	1.37	1.02
IRF8010SPBF	IR	SMD 865-7831	1.29	1.09	0.95
IRFBC20SPBF	VISH	SMD 865-8048	1.40	0.82	0.79
IRFBF20SPBF	VISH	SMD 864-8875	2.27	1.25	0.94
IRFS11N50APBF	VISH	SMD 864-9944	2.71	1.50	1.12

N & P Channel MOSFETs

TOSHIBA

New

- Small gate charge
- High speed switching
- Low drain-source ON resistance
- High forward transfer admittance
- Mosfets designed using U/π-MOSxx process
- DTMOS super-junction structure that enables an ultra-low ON resistance
- Suitable for relay drive, DC-DC converter and motor drive applications

VDS (typ) V	I_D cont @ 25°C A	RDS (on) Ohm	$R_{DS(on)}$	@ Vgs V	Package	Order Code	Mftrs. List No.
N Channel							
20	0.1	3	3ohm	4	USM	171-4382	SSM3K16FU(TE85L,F)
20	0.1	12	12ohm	2.5	ESM	171-4377	SSM3K03FE(TPL3,F)
20	0.4	0.8	0.8ohm	4	USM	171-4378	SSM3K05FU(TE85L,F)
20	1.1	0.16	0.16ohm	4	US6	171-4384	SSM6K06FU(TE85L,F)
20	4	0.040	0.040ohm	4	UF6	171-4385	SSM6K18TU(TE85L,F)
20	5.5	0.04	0.04ohm	4.5	VS-6	171-4358	TPC6104(TE85L,F)
20	6	0.024	0.024ohm	4.5	VS-6	171-4355	TPC6004(TE85L,F)
20	40	0.0035	0.0035ohm	4.5	SOP	171-4365	TPCA8011-H(TE12L,Q)
30	0.1	4	4ohm	4	SSM	171-4381	SSM3K15FS(TE85L,F)
30	0.4	0.7	0.7ohm	10	USM	171-4379	SSM3K09FU(TE85L,F)
30	2.5	0.2	0.2ohm	4	TSM	171-4376	SSM3K02T(TE85L,F)
30	4	0.039	0.039ohm	10	TSM	171-4380	SSM3K14T(TE85L,F)
30	6	0.024	0.024ohm	10	VS-6	171-4354	TPC6003(TE85L,F)
30	6	0.028	0.028ohm	4.5	VS-6	171-4356	TPC6005(TE85L,F)
30	11	0.017	0.017ohm	10	SOP	171-4361	TPC8021-H(TE12L,Q)
30	18	0.0046	0.0046ohm	10	SOP	171-4360	TPC8018-H(TE12L,Q)
30	40	0.0046	0.0046ohm	10	SOP	171-4362	TPCA8004-H(TE12L,Q
30	45	0.067	0.067ohm	10	SOP	171-4364	TPCA8006-H(TE12LQM
40	3.9	0.075	0.075ohm	10	VS-6	171-4357	TPC6006-H(TE85L,F)
40	35	0.0054	0.0054ohm	10	SOP	171-4366	TPCA8015-H(TE12L,Q
50	0.1	20	20ohm	4	SC70	171-4388	SSM6N17FU(TE85L,F)
50	5	0.15	0.15ohm	10	TO-92MOD	171-4337	2SK2989(TPE6,F)
60	0.2	3	3ohm	10	S-Mini	171-4383	SSM3K7002F(T5L,F,T
60	0.2	3	3ohm	10	US6	171-4389	SSM6N7002FU(TE85LF
60	5	0.1	0.1ohm	10	PW-MOLD2	171-4350	2SK4017(Q)
60	25	0.021	0.021ohm	10	SOP	171-4367	TPCA8016-H(TE12L,Q
75	60	0.0078	0.0078ohm	10	TO-220SIS	171-4369	TK60A08J1(Q)
200	30	0.052	0.052ohm	10	TO-3P	171-4341	2SK3176(F)
500	0.5	18	18ohm	10	PW-Mini	171-4342	2SK3471(TE12L,F)
500	0.5	18	18ohm	10	TO-92MOD	171-4339	2SK2998(TPE6,F)
500	5	1.5	1.5ohm	10	PW-MOLD	171-4352	2SK4103(TE16L1,NQ)
500	13	0.4	0.4ohm	10	TO-220SIS	171-4347	2SK4012(Q)
500	20	0.27	0.27ohm	10	TO-3P	171-4353	2SK4108(F)
600	3	2.2	2.2ohm	10	PW-MOLD2	171-4346	2SK4003(Q)
600	13	0.5	0.5ohm	10	TO-220SIS	171-4349	2SK4016(Q)
600	20	0.190	0.190ohm	10	TO-220SIS	171-4370	TK20A60T(Q)
600	20	0.33	0.33ohm	10	TO-3P	171-4345	2SK3906(Q)
600	40	0.08	0.08ohm	10	TO-3P	171-4371	TK40J60T(Q)
600	70	0.0058	0.0058ohm	10	TO-3P	171-4343	2SK3845(Q)
900	6	2	2ohm	10	TO-220SIS	171-4348	2SK4014(Q)
900	9	1.3	1.3ohm	10	TO-3P	171-4344	2SK3878(F)
1000	8	1.7	1.7ohm	10	TO-3P	171-4336	2SK2613(F)
P Channel							
20	0.1		8ohm	4	SSM	171-4374	SSM3J16FS(TE85L,F)
20	0.2		3.3ohm	4	US6	171-4390	SSM6P05FU(TE85L,F)
30	0.1		12ohm	4	TESM	171-4373	SSM3J15TE(TE85L,F)
30	1.5		0.5ohm	4	TSM	171-4372	SSM3J02T(TE85L,F)
30	4.5		0.060ohm	10	VS-6	171-4359	TPC6108(TE85L,F)
30	40		0.006ohm	10	SOP	171-4368	TPCA8102(TE12L,Q)
60	5		0.17ohm	10	PW-MOLD	171-4335	2SJ668(TE16L1,NQ)
NP Channel							
20	0.1		4ohm	4	ES6	171-4386	SSM6L16FE(TE85L,F)

541585

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+
N Channel					
SSM3K16FU(TE85L,F)	SMD 171-4382	0.168	0.154	0.114	0.086
SSM3K03FE(TPL3,F)	SMD 171-4377	0.440	0.390	0.280	0.220
SSM3K05FU(TE85L,F)	SMD 171-4378	0.440	0.390	0.280	0.220
SSM6K06FU(TE85L,F)	SMD 171-4384	0.530	0.470	0.350	0.260
SSM6K18TU(TE85L,F)	SMD 171-4385	0.570	0.510	0.390	0.290
TPC6104(TE85L,F)	SMD 171-4358	0.560	0.490	0.360	0.280
TPC6004(TE85L,F)	SMD 171-4355	0.480	0.430	0.310	0.240
TPCA8011-H(TE12L,Q)	SMD 171-4365	2.310	1.630	1.220	1.080
SSM3K15FS(TE85L,F)	SMD 171-4381	0.210	0.183	0.139	0.106
SSM3K09FU(TE85L,F)	SMD 171-4379	0.470	0.410	0.300	0.230
SSM3K02T(TE85L,F)	SMD 171-4376	0.360	0.320	0.240	0.181
SSM3K14T(TE85L,F)	SMD 171-4380	0.610	0.550	0.410	0.310
TPC6003(TE85L,F)	SMD 171-4354	0.480	0.430	0.310	0.240
TPC6005(TE85L,F)	SMD 171-4356	0.480	0.430	0.310	0.240
TPC8021-H(TE12L,Q)	SMD 171-4361	1.390	0.980	0.740	0.660
TPC8018-H(TE12L,Q)	SMD 171-4360	1.850	1.640	1.220	0.930
TPCA8004-H(TE12L,Q	SMD 171-4362	2.020	1.790	1.330	1.010
TPCA8006-H(TE12LQM	SMD 171-4364	2.160	1.910	1.430	1.080
TPC6006-H(TE85L,F)	SMD 171-4357	0.450	0.400	0.300	0.230
TPCA8015-H(TE12L,Q	SMD 171-4366	2.110	1.860	1.380	1.050
SSM6N17FU(TE85L,F)	SMD 171-4388	0.290	0.250	0.191	0.145
2SK2989(TPE6,F)	171-4337	0.710	0.620	0.470	0.350
SSM3K7002F(T5L,F,T	SMD 171-4383	0.127	0.112	0.087	0.067
SSM6N7002FU(TE85LF	SMD 171-4389	0.210	0.191	0.142	0.108
2SK4017(Q)	171-4350	0.510	0.450	0.330	0.250
TPCA8016-H(TE12L,Q	SMD 171-4367	1.770	1.570	1.170	0.880
TK60A08J1(Q)	171-4369	3.880	3.430	2.550	1.920
2SK3176(F)	171-4341	5.450	4.830	3.590	2.710
2SK3471(TE12L,F)	SMD 171-4342	0.610	0.550	0.410	0.310
2SK2998(TPE6,F)	171-4339	0.430	0.370	0.280	0.210
2SK4103(TE16L1,NQ)	SMD 171-4352	0.800	0.710	0.530	0.400
2SK4012(Q)	171-4347	2.820	2.510	1.860	1.400
2SK4108(F)	171-4353	3.840	3.390	2.530	1.900
2SK4003(Q)	171-4346	0.760	0.680	0.500	0.390
2SK4016(Q)	171-4349	4.420	3.920	2.910	2.210
TK20A60T(Q)	171-4370	6.790	6.020	4.470	3.380

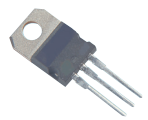
Power MOSFETs - continued

N & P Channel MOSFETs - continued

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+
2SK3906(Q)	171-4345	6.830	6.050	4.500	3.400
TK40J60T(Q)	171-4371	15.080	13.340	9.920	7.510
2SK3845(Q)	171-4343	3.940	3.480	2.590	1.970
2SK4014(Q)	171-4348	2.440	2.160	1.600	1.220
2SK3878(F)	171-4344	3.340	2.950	2.190	1.660
2SK2613(F)	171-4336	4.820	4.260	3.170	2.400
P Channel					
SSM3J16FS(TE85L,F)	SMD 171-4374	0.310	0.270	0.200	0.152
SSM6P05FU(TE85L,F)	SMD 171-4390	0.530	0.480	0.350	0.270
SSM3J15TE(TE85L,F)	SMD 171-4373	0.310	0.270	0.200	0.152
SSM3J02T(TE85L,F)	SMD 171-4372	0.360	0.320	0.250	0.184
TPC6108(TE85L,F)	SMD 171-4359	0.560	0.490	0.360	0.280
TPCA8102(TE12L,Q)	SMD 171-4368	2.040	1.810	1.340	1.020
2SJ668(TE16L1,NQ)	SMD 171-4335	0.520	0.470	0.340	0.260
NP Channel					
SSM6L16FE(TE85L,F)	SMD 171-4386	0.330	0.290	0.220	0.164

HEXFETs™

International IOR Rectifier VISHAY


TO-220

SOT-223

SO-8

D^2-Pak

SOT-227

TO-220 Full Pak

TO-247

I-Pak

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	$V_{GS(th)}$ max. (*min) V	P_D @ 25°C W	Package	Mftrs List No.
Single N Channel							
20	0.0065	16	130	2	2.5	SOIC	IRF7456PBF
20	0.0085	77	280	2	88	TO-220AB	IRF3706PBF
20	0.0085	77	280	2	2.5	D2-PAK	IRF3706SPBF
20	0.009	77	308	3	87	TO-220AB	IRF3704PBF
20	0.009	12	100	2	2.5	SOIC	IRF7459PBF
30	0.0028	210	1000	4	230	TO-247AC	IRFP3703PBF
30	0.005	179	720	1*	270	Super-220	IRLBA3803PPBF
30	0.0075	15	120	2	2.5	SOIC	IRF7455PBF
30	0.008	14	110	3	2.5	SOIC	IRF7458PBF
30	0.012	62	248	2	87	TO-220AB	IRF3708PBF
30	0.012	11	90	2	2.5	SOIC	IRF7467PBF
30	0.012	62	248	2	87	TO-220AB	IRF3708PBF
30	0.0125	62	248	3	87	D2-PAK	IRF3707SPBF
30	0.0135	10	50	1*	2.5	SOIC	SI4410DYPBF
30	0.045	5.5	16	2.4	2.1	SOT-223	IRLL2703PBF
30	0.4	24	96	1*	45	TO-220AB	IRL2703PBF
40	0.009	100	400	4	170	TO-220AB	IRF1104PBF
40	0.008	104	416	1*	2.4	D2-PAK	IRL1104SPBF
40	0.0065	130	520	1*	200	TO-220AB	IRL1004PBF
40	0.0065	110	450	1*	3.1	D2-PAK	IRL1004SPBF
55	0.075	4	11.2	4	2.1	SOT-223	IRFL024NPBF
55	0.065	3.1	12	2	2.1	SOT-223	IRLL024NPBF
60	0.012	72	290	4	150	TO-220AB	IRFZ48VPBF
60	0.0165	55	220	4	115	TO-220AB	IRFZ44VPBF
60	0.028	50	200	3	150	TO-220AB	IRFZ44RPBF
75	0.0038	180	700	4	300	D2-PAK	IRF2907ZS-7PPBF
100	0.014	75	300	4.5	200	TO-220AB	IRFB4710PBF
100	0.06	4.5	36	5.5	2.5	SOIC	IRF7452PBF
100	0.025	59	236	5.5	200	TO-220AB	IRFB59N10DPBF
100	0.0065	180	720	4	480	ISOTOP	FB180SA10PBF
150	0.166	12	48	2	80	TO-220AB	IRL3215PBF
150	0.09	23	92	5.5	136	TO-220AB	IRFB23N15DPBF
150	0.045	41	164	5.5	3.1	D2-PAK	IRFS41N15DPBF
150	0.045	41	164	5.5	200	TO-220AB	IRFB41N15DPBF
200	0.3	9.3	37	4	82	TO-220AB	IRF630NPBF
200	0.235	13	52	5.5	110	DPAK	IRFR13N20DPBF
200	0.15	18	72	4	150	TO-220AB	IRF640NPBF
200	0.15	18	72	4	150	D2-PAK	IRF640NSPBF
200	0.1	24	96	5.5	3.8	D2-PAK	IRFS23N20DPBF
200	0.1	24	96	5.5	170	TO-220AB	IRFB23N20DPBF
200	0.082	31	124	5.5	3.1	D2-PAK	IRFS31N20DPBF
200	0.082	31	124	5.5	200	TO-220AB	IRFB31N20DPBF
200	0.075	30	120	4	214	TO-247AC	IRFP250NPBF
200	0.04	50**	200	4	300	TO-247AC	IRFP260NPBF
200	0.023	98	390	5	650	Super-220	IRFBA90N20DPBF
400	1	5.5	22	4.5	74	TO-220AB	IRF730APBF
400	0.55	10	40	4	125	TO-220AB	IRF740APBF
500	3	2.5	10	4.5	50	TO-220AB	IRF820APBF
500	1.4	5	20	4	125	D2-PAK	IRF830ASPBF
500	1.4	5	20	4	74	TO-220AB	IRF830APBF
500	0.85	8	32	4	125	D2-PAK	IRF840ASPBF
500	0.52	6.6	44	4	60	TO-220FP	IRFIB7N50APBF
500	0.52	11	44	4	170	TO-220AB	IRFB11N50APBF
500	0.4	14	56	4	190	TO-247AC	IRFP450APBF
500	0.28	17	68	5.5	200	TO-220AB	IRFB17N50LPBF
500	0.27	20	80	4	280	TO-247AC	IRFP460APBF
500	0.25	18	72	5.5	200	TO-220AB	IRFB18N50KPBF
500	0.23	22	88	4	277	TO-247AC	IRFP22N50APBF
500	0.23	24	96	4	340	Super-220	IRFBA22N50APBF
500	0.08	57	228	4	625	ISOTOP	FA57SA50LCPBF
600	0.58	11	44	4	180	TO-247AC	IRFPC50APBF
600	0.75	5.5	37	4	60	TO-220FP	IRFIB6N60APBF
600	0.75	9.2	37	4	170	TO-220AB	IRFB9N60APBF
600	1.2	6.2	25	4	125	TO-220AB	IRFBC40APBF
600	2.2	3.6	14	4.5	74	TO-220AB	IRFBC30APBF
600	7	1.4	5.6	4	36	I-PAK	IRFU1N60APBF
650	0.93	5.1	21	4	60	TO-220FP	IRFIB5N65APBF
650	0.93	8.5	21	4	167	TO-220AB	IRFB9N65APBF
Single P Channel							
14	0.012	11	86	-0.6*	2.5	SOIC	IRF7220PBF
Dual N/P Channel							
20	0.135/0.27(P)	2.4(N), 1.7(P)	19(N), 14(P)	0.7*	1.25	Micro8	IRF7507PBF
30	0.029(N), 0.058(P)	7.3(N), 5.3(P)	30(N), 30(P)	1*	2.5	SOIC	IRF7389PBF

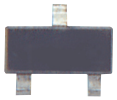
** Denotes calculated value - exceeding package limits

211359

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
FA57SA50LCPBF	910-2965	32.860	20.660	19.650	19.130	18.640
FB180SA10PBF	910-2973	32.430	17.940	13.370	11.720	11.180
IRF630NPBF	864-8344	0.720	0.510	0.440	0.430	0.410
IRF640NPBF	864-8379	0.920	0.720	0.580	0.530	0.510
IRF640NSPBF	SMD 864-8387	1.740	0.990	0.700	0.600	0.590
IRF730APBF	864-8433	1.950	1.040	0.740	0.600	0.590
IRF740APBF	864-8468	2.240	1.220	0.750	0.730	0.710
IRF1104PBF	864-7992	1.470	0.870	0.840	0.810	0.790
IRF3704PBF	864-8115	0.850	0.760	0.710	0.660	0.610
IRF3706PBF	864-8123	0.770	0.560	0.450	0.420	0.410
IRF3706SPBF	SMD 864-8131	0.970	0.620	0.540	0.520	0.510
IRF3707SPBF	SMD 864-8140	1.610	1.030	0.800	0.730	0.680
IRF3708PBF	864-8158	0.850	0.680	0.630	0.590	0.540
IRF7220PBF	SMD 910-3341	1.590	1.010	0.770	0.620	0.570
IRF730APBF	864-8433	1.950	1.040	0.740	0.600	0.590
IRF7389PBF	SMD 910-2116	1.760	1.070	0.840	0.820	0.800
IRF7452PBF	SMD 910-2817	1.790	1.140	0.880	0.810	0.750
IRF7455PBF	SMD 910-2655	1.010	0.620	0.530	0.470	0.460
IRF7456PBF	SMD 910-2639	1.200	0.770	0.600	0.550	0.510
IRF7458PBF	SMD 910-2825	1.290	0.820	0.630	0.580	0.540
IRF7459PBF	SMD 910-2620	1.470	0.940	0.720	0.670	0.610
IRF7467PBF	SMD 910-2647	0.890	0.610	0.600	0.580	0.570
IRF7507PBF	SMD 910-2094 RL	1.230	0.780	0.580	0.510	0.480
IRF820APBF	864-8506	1.870	1.030	0.770	0.630	0.620
IRF830APBF	864-8522	1.890	0.970	0.800	0.740	0.720
IRF830ASPBF	SMD 864-8530	1.160	0.840	0.660	0.630	0.610
IRF840APBF	864-8557	2.820	1.550	1.060	0.950	0.940
IRF840ASPBF	SMD 864-8565	3.090	1.700	1.270	1.110	1.060
IRFB9N60APBF	864-8808	1.890	1.030	0.810	0.790	0.770
IRFB9N65APBF	910-3007	3.010	1.390	1.240	1.140	1.070
IRFB11N50APBF	864-8700	3.100	1.700	1.260	1.090	1.060
IRFB17N50LPBF	864-8719	5.360	2.960	2.210	1.930	1.850
IRFB18N50KPBF	864-8727	4.760	2.930	2.300	2.030	1.970
IRFB23N15DPBF	864-8735	2.150	– –	– –	– –	– –
IRFB23N20DPBF	864-8743	3.630	2.120	1.610	1.510	1.380
IRFB31N20DPBF	864-8751	4.210	2.450	1.870	1.750	1.600
IRFB41N15DPBF	864-8760	3.270	1.900	1.440	1.350	1.240
IRFB59N10DPBF	864-8786	3.360	1.960	1.490	1.400	1.280
IRFB4710PBF	864-8778	1.600	1.340	1.260	1.110	1.080
IRFBA22N50APBF	865-8021	4.220	2.690	2.390	2.330	2.270
IRFBA90N20DPBF	865-8030	11.210	6.990	5.540	5.300	4.850
IRFBC30APBF	864-8816	2.840	– –	– –	– –	– –
IRFBC40APBF	864-8824	2.550	1.400	1.040	0.860	0.840
IRFIB5N65APBF	864-9065	3.210	1.830	1.230	1.130	1.090
IRFIB6N60APBF	864-9073	3.420	1.940	1.480	1.300	1.250
IRFIB7N50APBF	864-9081	3.670	2.010	1.500	1.250	1.210
IRFL024NPBF	SMD 864-9154	0.520	– –	– –	– –	– –
IRFP22N50APBF	864-9243	5.030	3.100	2.370	2.330	2.270
IRFP250NPBF	864-9260	2.050	1.390	1.220	1.160	1.130
IRFP260NPBF	864-9294	3.230	1.830	1.400	1.280	1.170
IRFP3703PBF	864-9367	3.670	2.330	2.270	2.210	2.150
IRFP450APBF	864-9391	5.950	2.980	2.270	2.120	2.070
IRFP460APBF	864-9421	6.710	3.750	2.570	2.390	2.340
IRFPC50APBF	864-9472	8.450	4.930	4.010	3.900	3.790
IRFR1N60APBF	SMD 939-9852	1.180	0.710	0.510	0.490	0.470

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
IRFR13N20DPBF	SMD 864-9677	0.940	0.690	0.550	0.480	0.470
IRFR18N15DPBF	SMD 910-3104	0.870	0.580	0.450	0.410	0.380
IRFS23N20DPBF	SMD 864-9952	1.400	1.030	0.830	0.720	0.710
IRFS31N20DPBF	SMD 910-2272	2.120	1.300	1.170	1.130	1.110
IRFS31N20DPBF	SMD 910-2272	2.120	1.300	1.170	1.130	1.110
IRFS41N15DPBF	SMD 864-9960	2.140	1.310	1.030	1.000	0.970
IRFR1N60APBF	SMD 939-9852	1.180	0.710	0.510	0.490	0.470
IRFU1N60APBF	910-2507	1.170	0.690	0.550	0.440	0.410
IRFZ44RPBF	865-0241	1.930	1.100	0.820	0.680	0.660
IRFZ44VPBF	865-0250	0.750	0.600	0.510	0.420	0.360
IRFZ48VPBF	865-0292	0.850	0.690	0.590	0.580	0.560
IRL1004PBF	865-0853	1.410	1.190	1.150	1.120	1.060
IRL1004SPBF	SMD 865-0861	2.020	1.300	1.080	0.900	0.830
IRL1104PBF	865-0870	1.140	0.940	0.920	0.910	0.830
IRL1104SPBF	SMD 865-0888	2.020	1.290	1.000	0.910	0.850
IRL2703PBF	865-0934	1.630	0.860	0.600	0.560	0.510
IRL3215PBF	910-2736	0.870	0.730	0.690	0.650	0.630
IRL3215PBF	910-2736	0.870	0.730	0.690	0.650	0.630
IRF7452PBF	SMD 910-2817	1.790	1.140	0.880	0.810	0.750
IRF7458PBF	SMD 910-2825	1.290	0.820	0.630	0.580	0.540
IRLBA3803PPBF	865-9966	4.940	2.880	2.190	2.050	1.870
IRLL024NPBF	SMD 865-1205	0.440	0.270	0.220	0.190	0.186
IRLL2703PBF	SMD 865-1221	0.860	0.750	0.580	0.540	0.530
SI4410DYPBF	SMD 910-2612	1.830	1.120	0.860	0.770	0.720

30V to 50V N-Channel PowerMOS



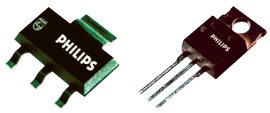
SOT-23

V_{DS} V	$R_{DS(on)}$ Ω	@	V_{GS} V	$I_{D\ max.}$ @ 25°C A	Package	Mftrs. List No.
30	0.5		2.5	0.92	SOT-23	BSH103
50	15		10	0.173	SOT-23	BSN20

211384

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
BSH103	SMD 108-1307 RL	0.540	– –	– –	– –	– –
BSN20	SMD 108-1309 RL	0.240	0.200	0.120	0.060	0.048

55V, N-Channel TrenchMOS™



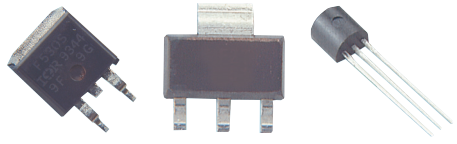
SOT-223 TO-220AB

Mftrs. List No.	V_{DS} V	$R_{DS(on)}$ Ω	@	V_{GS} V	$I_{D\ max.}$ @ 25°C A	Package
PHP21N06LT	55	0.07		5	21	TO-220AB
PHT6N06LT	55	0.15		5	5.5	SOT-223
PHT6N06T	55	0.15		5	5.5	SOT-223
PHT8N06LT	55	0.08		5	7.5	SOT-223

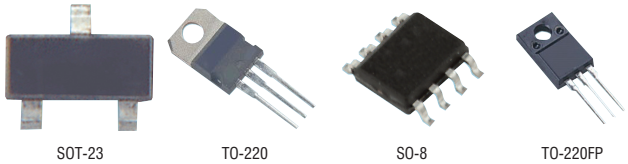
211162

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
PHP21N06LT	108-1452	0.650	0.350	0.250	0.200	0.199
PHT6N06LT	SMD 108-1455 RL	0.600	0.340	0.220	0.124	0.121
PHT6N06T	SMD 108-1456 RL	0.370	0.220	0.144	0.094	0.091
PHT8N06LT	SMD 108-1458	0.430	0.330	0.260	0.137	0.134

50V to 60V MOSFETs



D²-PAK SOT-223 TO-92



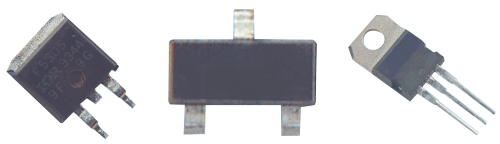
SOT-23 TO-220 SO-8 TO-220FP

V_{DS} V	Polarity	$R_{DS(on)}$ Ω	I_D cont @ 25°C A	P_D @ 25°C W	Mftr.	Package	Order Code	Mftrs. List No.
50	N	3.5	0.2	0.36	ZET	SOT-23	147-1176	BSS138TA
50	N	3.5	0.2	0.225	ON	SOT-23	143-1319	BSS138LT1G
50	P	10	0.13	0.225	ON	SOT-23	143-1318	BSS84LT1G
55	P	0.175	12	45	IR	D2-PAK	129-8481	IRF9Z24NSTRLPBF
55	N	35	30	68	IR	D2-PAK	129-8487	IRLZ34NSTRLPBF
60	N	0.0095	75	214	ON	D2-PAK	145-9154	NTB75N06G
60	P	0.023	80	375	INF	TO-220	147-1809	SPP80P06P
60	N	0.026	45	125	ON	TO-220	145-3656	NTP45N06G
60	N	0.0375	20	60	ON	DPAK	145-9160	NTD20N06G
60	N	0.054	18	55	ON	DPAK	145-9158	NTD18N06LG
60	N	0.09	15	48.4	ON	TO-220	145-3651	NTP18N06G
60	N	0.12	3	2.1	ON	SOT-223	143-1323	NTF3055L108T1G
60	P	0.14	18	88	VISH	D2-PAK	129-8499	IRF9Z34SPBF
60	P	0.17	2.6	1	ON	SOT-223	145-3649	NTF2955T1G
60	N	0.175	2	2.1	ON	SOT-223	145-3648	NTF3055L175T1G
60	P	0.196	12	2.4	ON	TO-220	145-3650	NTP2955G
60	N	0.2	2.5	2.5	ST	SOT-223	129-1978	STN3PF06
60	P	0.28	11	60	VISH	D2-PAK	129-8498	IRF9Z24SPBF
60	P	0.45	5	40	ON	DPAK	145-9139	MTD5P06VT4G
60	N	3.5	0.23	0.36	INF	SOT-23	147-1702	BSS159N E6327
60	N	5	0.2	0.35	ON	TO-92	145-9027	2N7000G
60	N	5	0.5	0.225	ON	SOT-23	143-1321	MMBF170LT1G
60	N	5	0.23	0.5	INF	SOT-323	147-1758	SN7002W L6433
60	N	7.5	0.5	0.33	ZET	SOT-23	147-1177	2N7002TA
Dual Transistors								
60	NP	0.105	3.9	1.25	ZET	SOIC	147-1155	ZXMC4559DN8TA
60	Dual N	0.18	3.2	1.25	ZET	SOIC	147-1151	ZXMN6A11DN8TA

497179

Mftrs. List No.	Mftr.	Order Code	Price Each 5+	25+	100+	1K+	3K+
BSS138TA	ZET	SMD 147-1176	0.490	0.320	0.250	0.220	0.173
BSS138LT1G	ON	SMD 143-1319	0.240	0.167	0.124	0.088	0.066
BSS84LT1G	ON	SMD 143-1318	0.280	0.210	0.144	0.102	0.083
IRF9Z24NSTRLPBF	IR	SMD 129-8481 RL	1.950	1.260	0.970	0.880	0.830
IRLZ34NSTRLPBF	IR	SMD 129-8487 RL	1.020	0.650	0.500	0.460	0.430
NTB75N06G	ON	SMD 145-9154	3.600	2.890	2.320	– –	– –
SPP80P06P	INF	147-1809	2.480	2.190	1.870	– –	– –
NTP45N06G	ON	145-3656	1.310	0.860	0.690	0.550	0.460
NTD20N06G	ON	SMD 145-9160	1.240	1.040	0.840	– –	– –
NTD18N06LG	ON	SMD 145-9158	0.660	0.530	0.430	– –	– –
NTP18N06G	ON	145-3651	0.980	0.650	0.520	0.410	0.340
NTF3055L108T1G	ON	SMD 143-1323	0.720	0.520	0.390	0.340	0.260
IRF9Z34SPBF	VISH	SMD 129-8499	2.990	1.660	1.240	1.080	1.030
NTF2955T1G	ON	SMD 145-3649	0.720	– –	– –	– –	– –
NTF3055L175T1G	ON	SMD 145-3648	0.770	– –	– –	– –	– –
NTP2955G	ON	145-3650	1.380	0.910	0.720	0.570	0.460
STN3PF06	ST	SMD 129-1978 RL	0.400	0.350	0.280	0.240	0.230
IRF9Z24SPBF	VISH	SMD 129-8498	1.230	0.800	0.650	0.640	0.630
MTD5P06VT4G	ON	SMD 145-9139	0.890	0.660	0.540	– –	– –
BSS159N E6327	INF	SMD 147-1702	0.330	0.250	0.190	0.136	0.130
2N7000G	ON	145-9027	0.270	0.240	0.187	– –	– –
MMBF170LT1G	ON	SMD 143-1321	0.092	0.068	0.065	0.053	0.045
SN7002W L6433	INF	SMD 147-1758	0.058	0.044	0.033	0.026	0.024
2N7002TA	ZET	SMD 147-1177	0.260	0.170	0.109	0.094	0.069
ZXMC4559DN8TA	ZET	SMD 147-1155	2.230	1.600	1.340	1.300	– –
ZXMN6A11DN8TA	ZET	SMD 147-1151	1.200	0.860	0.730	0.710	– –

100V to 450V



D²PAK (TO-263AB) SOT-23 TO-247max

SO-8 I-PAK (TO-251) TO-92 PowerFlat

V_{DS} V	Polarity	$R_{DS(on)}$ Ω	I_D cont @ 25°C A	P_D @ 25°C W	Mftr.	Package	Order Code	Mftrs. List No.
100	N	0.01	140	450	ST	TO-247	129-1998	STY140NS10
100	P	0.117	23	140	IR	D2-PAK	129-8541	IRF9540NSTRLPBF
100	P	0.117	23	140	IR	TO-262	129-8540	IRF9540NLPBF
100	N	0.165	12	56.6	ON	DPAK	145-9155	NTD12N10G
100	P	0.3	12	88	VISH	D2-PAK	129-8491	IRF9530SPBF
100	P	0.48	6.8	48	IR	D2-PAK	129-8515	IRF9520NSTRLPBF
100	N	0.6	5.5	40	INF	TO220AB	147-1704	BUZ73AL
100	P	1.2	2.8	43	VISH	D2-PAK	129-8489	IRF9510SPBF
100	N	6	0.17	0.36	ZET	SOT-23	147-1175	BSS123ATA
100	N	14	63	140	IR	I-PAK	129-8556	IRLU3110ZPBF
100	N	18	8.3	2.5	IR	SOIC	129-8555	IRF7853PBF
150	P	0.24	2.2	2.5	IR	SOIC	129-8488	IRF6216PBF
150	N	1.2	0.9	2	IR	TSOP	129-8505	IRF5802TRPBF
150	N	0.032	60	320	IR	D2-PAK	129-8503	IRFS52N15DPBF

Power MOSFETs - continued

100V to 450V - continued

V_{DS} V	Polarity	$R_{DS(on)}$ Ω	I_D cont @ 25°C A	P_D @ 25°C W	Mftr.	Package	Order Code	Mftrs. List No.
150	N	44	5.2	3	IR	SOIC	129-8546	IRF7494PBF
200	N	0.054	44	320	IR	D2-PAK	129-8484	IRFS38N20DTRLP
200	N	0.105	20	80	ST	PowerFLAT 6 x 5	129-1976	STL20NM20N
150	N	0.18	14	86	IR	DPAK	129-8545	IRFR13N15DTRLP
200	P	0.5	11	125	VISH	D2-PAK	129-8497	IRF9640STRLPBF
200	P	0.8	6.5	74	VISH	D2-PAK	129-8494	IRF9630STRLPBF
200	N	2.2	0.6	2	IR	TSOP	129-8504	IRF5801TRPBF
200	N	25	65	330	IR	TO-247	129-8553	IRFP4227PBF
200	N	26	62	330	IR	D2-PAK	129-8538	IRFS4227PBF
300	N	59	46	430	IR	TO-247	129-8480	IRFP4242PBF
450	N	50	0.14	2	ZET	SOT-223	147-1160	ZVN0545GTA

497322

Mftrs. List No.	Mftrs. List No.	Mftr.	Order Code		Price Each 1+	25+	100+
STL20NM20N	PowerFLAT 6 x 5	ST	SMD 129-1976	RL	1.420	1.070	0.970
STY140NS10	TO-247	ST	129-1998		16.170	11.860	9.570
IRFP4242PBF	TO-247	IR	129-8480		3.970	– –	– –
IRFS38N20DTRLP	D2-PAK	IR	SMD 129-8484	RL	3.370	2.150	1.660
IRF6216PBF	SOIC	IR	SMD 129-8488		0.710	0.550	0.440
IRF9510SPBF	D2-PAK	VISH	SMD 129-8489		0.710	0.680	0.660
IRF9530SPBF	D2-PAK	VISH	SMD 129-8491		1.370	0.960	0.810
IRF9630STRLPBF	D2-PAK	VISH	SMD 129-8494	RL	2.650	1.470	1.090
IRF9640STRLPBF	D2-PAK	VISH	SMD 129-8497	RL	3.500	1.930	1.440
IRFS52N15DPBF	D2-PAK	IR	SMD 129-8503		5.090	2.970	2.260
IRF5801TRPBF	TSOP	IR	SMD 129-8504	RL	0.310	0.198	0.160
IRF5802TRPBF	TSOP	IR	SMD 129-8505	RL	0.230	0.198	0.160
IRF9520NSTRLPBF	D2-PAK	IR	SMD 129-8515	RL	0.800	0.590	0.530
IRFS4227PBF	D2-PAK	IR	SMD 129-8538		2.310	1.950	1.830
IRF9540NLPBF	TO-262	IR	129-8540		1.920	1.180	0.920
IRF9540NSTRLPBF	D2-PAK	IR	SMD 129-8541	RL	1.940	1.240	0.960
IRFR13N15DTRLP	DPAK	IR	SMD 129-8545	RL	0.620	0.460	0.370
IRF7494PBF	SOIC	IR	SMD 129-8546		1.510	– –	– –
IRFP4227PBF	TO-247	IR	129-8553		3.220	2.750	2.380
IRF7853PBF	SOIC	IR	SMD 129-8555		1.360	– –	– –
IRLU3110ZPBF	I-PAK	IR	129-8556		1.480	1.260	1.050
NTD12N10G	DPAK	ON	SMD 145-9155		0.880	0.710	0.570
ZVN0545GTA	SOT-223	ZET	SMD 147-1160		0.340	0.240	0.220
BSS123ATA	SOT-23	ZET	SMD 147-1175		0.410	0.310	0.210
BUZ73AL	TO220AB	INF	SMD 147-1704		0.890	0.710	0.620

TO-220

FAIRCHILD SEMICONDUCTOR

● Available in Tubes

V_{DS} V	$R_{DS(on)}$ max. Ω	I_D cont. @ 25°C A	I_D pulsed A	$V_{GS(th)}$ max. (*min) V	P_D @ 25°C W	Mftrs List No.
N Channel						
60	0.01	85	300	4	160	FQP85N06
60	0.014	70	180	4	150	RFP70N06
60	0.016	65	260	4	150	FQP65N06
60	0.022	50	200	4	120	FQP50N06
60	0.022	50	120	4	131	RFP50N06
60	0.07	27	108	-4	120	FQP27P06
60	0.12	17	68	-4	79	FQP17P06
60	0.41	7	28	-4	45	FQP7P06
60	0.41	7	28	-4	45	FQP7P06
100	0.023	57	228	4	160	FQP70N10
100	0.052	33	132	4	127	FQP33N10
200	0.4	9	36	4	100	IRF630
500	0.43	12.5	50	5	170	FQP13N50
500	0.73	9	36	5	147	FQP9N50
500	4.9	2.7	10.8	-5	85	FQP3P50
800	1.95	5.8	23.2	5	158	FQP6N80
800	2.6	4.8	19.2	5	140	FQP5N80
900	3.3	4.2	16.8	5	140	FQP4N90

211048

Mftrs. List No.	Order Code	Price Each 1+	25+	100+
FQP13N50	984-5488	2.74	1.86	1.38
FQP17P06	984-6506	0.96	0.62	0.44
FQP27P06	984-6530	0.89	– –	– –
FQP33N10	984-5534	1.09	– –	– –
FQP3P50	984-6549	1.29	0.87	0.65
FQP4N90	984-5607	1.76	1.20	0.87
FQP50N06	984-5615	1.09	– –	– –
FQP5N80	984-5623	1.70	1.15	0.85
FQP65N06	984-5658	2.05	1.40	1.04
FQP6N80	984-5674	2.09	1.42	1.06
FQP70N10	984-5682	0.97	– –	– –
FQP7P06	984-6557	0.60	0.41	0.31
FQP85N06	984-5739	1.80	1.23	0.88

Mftrs. List No.	Order Code	Price Each 1+	25+	100+
FQP9N50	984-5747	1.47	1.05	0.80
FQP7P06	984-6557	0.60	0.41	0.31
RFP50N06	984-5771	1.29	– –	– –
RFP70N06	984-5780	1.78	– –	– –
IRF630	980-2380	0.81	0.56	0.50

TO-220, QFETS

FAIRCHILD SEMICONDUCTOR

New

Fairchild's proprietary , planar stripe, DMOS technology with the best-in-class ratio of performance and cost.
This advanced technology minimizes on-state resistance, provides superior switching performance, and withstands high energy pulse in avalanche and commutation mode.
These devices are well suited for high efficiency switched-mode power supply, active power factor correction and electronic lamp ballast based on half-bridge topology and FPD system.

V_{DS} V	$R_{DS(on)}$ typ. Ω	$R_{DS(on)}$ max. Ω	I_D cont @ 25°C A	I_D pulsed A	$V_{GS(th)}$ max. V	P_D @ 25°C W	Mftrs. list No.
100	0.052	0.052	28	110	4	107	IRF540A
150	0.034	0.04	45	180	4	220	FQP45N15V2
500	0.65	0.8	8	32	4	134	IRF840B
500	1.14	1.4	5	20	4	73	FQP5N50C
600	0.53	0.65	12	48	4	225	FQP12N60C
600	0.6	0.73	9.5	38	4	156	FQP10N60C
600	3.6	4.7	1.35	8	4	54	FQP2N60C
800	4	4.8	3	12	5	107	FQP3N80C
600	1	1.2	7.5	30	4	147	FQP8N60C
800	2.1	2.5	5.5	22	5	158	FQP6N80C
800	1.57	1.9	6.6	26.4	5	167	FQP7N80C
900	1.12	1.4	8	32	5	205	FQP9N90C
900	1.93	2.3	6	24	5	167	FQP6N90C

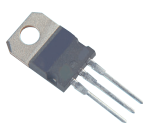
422760

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
FQP10N60C	109-5054	0.72	– –	– –	– –	– –
FQP12N60C	109-5057	0.82	0.62	0.60	0.59	0.57
FQP2N60C	109-5062	0.72	– –	– –	– –	– –
FQP3N80C	109-5065	0.33	0.31	0.29	0.27	0.25
FQP45N15V2	109-5066	2.03	– –	– –	– –	– –
FQP5N50C	109-5068	0.91	– –	– –	– –	– –
FQP6N80C	109-5071	0.86	– –	– –	– –	– –
FQP6N90C	109-5072	1.68	1.19	0.91	0.69	0.63
FQP7N80C	109-5073	1.67	– –	– –	– –	– –
FQP8N60C	109-5074	1.20	0.80	0.60	0.43	0.37
FQP9N90C	109-5077	2.88	1.95	1.45	1.02	0.88
IRF540A	109-5126	1.53	1.04	0.77	0.55	0.46
IRF840B	109-5127	1.32	0.91	0.67	0.47	0.42

TO-220 UltraFETs™

FAIRCHILD SEMICONDUCTOR

N-Channel



V_{DS} V	$R_{DS(on)}$ max. Ω	I_D cont. @ 25°C A	$V_{GS(th)}$ max. V	P_D @ 25°C W	Mftrs List No.
55	0.007	75	3	215	HUF75345P3

211049

Mftrs. List No.	Order Code	Price Each 1+	+	+	+	+
HUF75345P3	984-5755	2.02	– –	– –	– –	– –

TO-220

FAIRCHILD SEMICONDUCTOR ON Semiconductor International IOR Rectifier

V_{DS} V	$R_{DS(on)}$ max. Ω	I_D cont. @ 25°C A	I_D pulsed A	$V_{GS(th)}$ max. V	P_D @ 25°C W	Mftrs List No.
N-Channel						
60	0.01	85	300	4	160	FQP85N06
60	0.016	65	260	4	150	FQP65N06
60	0.022	50	—	4	120	FQP50N06
60	0.047	30	100	2	96	RFP30N06LE
100	0.052	33	—	4	127	FQP33N10
200	0.4	9	36	4	100	IRF630
P-Channel						
100	0.117	19	76	-4	94	IRF9540NPBF
500	6	2	—	-4	75	MTP2P50EG

222085

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	250+	1K+
MTP2P50EG	ON	**955-6893**	2.70	1.50	1.44	1.20	0.99
IRF9540NPBF	IR	**864-8620**	0.88	0.68	0.55	0.49	0.48
FQP50N06	FCH	**984-5615**	1.09	– –	– –	– –	– –
FQP65N06	FCH	**984-5658**	2.05	1.40	1.04	0.73	0.63
RFP30N06LE	FCH	**101-7798**	0.95	– –	– –	– –	– –
FQP33N10	FCH	**984-5534**	1.09	– –	– –	– –	– –
FQP85N06	FCH	**984-5739**	1.80	1.23	0.88	0.82	0.76

TO-220, N Channel 40V to 1500V

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont}$ @ 25°C A	$I_{DM\ pulse}$ @ 25°C A	$V_{GS(th)}$ max. V	P_D @ 25°C W	Mftrs List No.
N Channel						
200	0.034	75	300	4	190	STP75NF20
200	0.125	18	72	4	90	STP20NF20
1500	9	2.5	10	5	140	STP3N150

496477

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+
STP20NF20	**145-6351**	2.01	1.50	1.22	1.09
STP3N150	**145-6344**	6.40	4.69	3.79	3.22
STP75NF20	**145-6354**	3.71	2.94	2.19	1.77

100V N-Channel PowerMOS

SOT-23

- Best-in-class repetitive ruggedness - safe operation during avalanche conditions
- Ruggedness specified in terms of current and time - to ease the design process
- 100% avalanche energy rated
- Low capacitance for improved switching performance

V_{DS} V	$R_{DS(on)}$ @ V_{GS} Ω V		$I_{D\ max}$ @ 25°C A	PACKAGE SOT-23
100	10	5	0.19	BST82

211138

Order Multiple=5

Mftrs. List No.	Order Code	Price Each 5+	25+	100+	250+	1K+
BST82	SMD **108-1313** RL	0.220	0.121	0.077	0.051	0.034

N Channel 100V to 900V

TO-220 (SOT-78B)

$R_{DS(on)}$ Ω	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	P_D @ 25°C W	Mftr.	Mftrs. List No.
20 V V_{DS}					
0.006	110	440	120	IR	IRF3711PBF
100 V V_{DS}					
0.01	96	380	250	IR	IRFB4410PBF
0.014	61	70	150	FCH	FDP3652
0.014	75	300	200	IR	IRFB4710PBF
0.015	80	320	260	IR	IRF8010PBF
0.015	80	320	300	ST	STP80NF10
0.018	59	240	160	IR	IRF3710ZPBF
0.025	73	292	270	FE	2SK3586-01
0.025	59	236	200	IR	IRFB59N10DPBF
0.0265	36	140	92	IR	IRF540ZPBF
0.028	50	200	150	ST	STP40NF10
0.028	46	180	150	IR	IRF3710PBF
0.035	40	160	115	ST	STP35NF10
0.036	41	160	170	IR	IRF1310NPBF
0.045	35	140	115	ST	STP30NF10
0.052	27	110	94	IR	IRF540NPBF
0.06	26	104	85	ST	STP24NF10
0.11	15	60	63	IR	IRF530NPBF
0.16	14	60	88	VISH	IRF530PBF
0.165	9.6	37	44	IR	IRF520VPBF
0.2	9.5	38	47	IR	IRF520NPBF
0.27	9.2	37	60	VISH	IRF520PBF
0.54	5.6	20	43	VISH	IRF510PBF
150 V V_{DS}					
0.032	60	240	320	IR	IRFB52N15DPBF
0.032	60	250	330	IR	IRFB61N15DPBF
0.042	37	150	150	IR	IRF3415PBF
0.045	41	164	200	IR	IRFB41N15DPBF
0.056	33	130	170	IR	IRFB33N15DPBF
0.07	27	108	136	IR	IRF3315PBF
0.09	23	92	136	IR	IRFB23N15DPBF
200 V V_{DS}					
0.04	56	220	380	IR	IRFB260NPBF
0.054	44	180	320	IR	IRFB38N20DPBF
0.055	42.6	180	300	IR	IRFB42N20DPBF
0.082	31	124	200	IR	IRFB31N20DPBF
0.1	24	96	170	IR	IRFB23N20DPBF
0.12	19.4	78	140	FCH	FQP19N20
0.13	21	84	125	INF	BUZ30A
0.15	18	72	150	IR	IRF640NPBF
0.17	16	64	140	IR	IRFB17N20DPBF
0.18	18	72	125	VISH	IRF640PBF
0.2	14.5	58	95	INF	BUZ31
0.3	9.3	37	82	IR	IRF630NPBF
0.4	7	28	40	INF	BUZ73
0.4	9	36	100	ST	IRF630
0.6	5.5	22	40	INF	BUZ73A
0.8	5.2	18	50	VISH	IRF620PBF
0.8	6	24	75	ST	IRF620
1.5	3.3	10	36	VISH	IRF610PBF
250 V V_{DS}					
0.28	14	56	125	VISH	IRF644PBF
300 V V_{DS}					
0.13	32	128	270	FE	2SK3772-01
0.4	9	36	90	ST	STP12NK30Z
400 V V_{DS}					
0.55	9	36	110	ST	STP11NK40Z
0.55	10	40	125	VISH	IRF740PBF
0.55	10	40	125	VISH	IRF740APBF
0.55	10	32	125	VISH	IRF740LCPBF
1	5.5	22	74	VISH	IRF730PBF
1	5.5	22	74	VISH	IRF730APBF
1	5.4	21.6	70	ST	STP7NK40Z
1.8	3	12	40	VISH	IRF720PBF
3.6	1.5	6	20	VISH	IRF710PBF
500 V V_{DS}					
0.52	11	44	170	VISH	IRFB11N50APBF
0.28	17	68	200	VISH	IRFB17N50LPBF
0.25	18	72	200	VISH	IRFB18N50KPBF
0.25	20	80	280	VISH	IRFB20N50KPBF
0.38	19	76	270	FE	2SK3682-01
0.52	10	40	125	ST	STP11NK50Z
0.85	7.2	28.8	110	ST	STP9NK50Z
0.85	8	32	125	VISH	IRF840PBF
0.85	8	32	125	VISH	IRF840APBF
0.85	8	28	125	VISH	IRF840LCPBF
1.5	4.4	17.6	70	ST	STP5NK50Z
1.4	5	20	74	VISH	IRF830APBF
1.5	4.5	18	74	VISH	IRF830PBF
2.7	3	12	45	ST	STP4NK50Z
3	2.5	10	40	VISH	IRF820PBF
3	2.5	10	50	VISH	IRF820APBF
600 V V_{DS}					
0.75	10	36	115	ST	STP10NK60Z
800 V V_{DS}					
1.8	5.2	20.8	125	ST	STP7NK80Z
2.6	4.8	19.2	140	FCH	FQP5N80

211275

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+
BUZ30A	INF	**105-6528**	2.24	1.69	1.29
BUZ31	INF	**105-6531**	1.74	1.40	0.96
BUZ73	INF	**115-6440**	1.24	0.91	0.67
BUZ73A	INF	**115-6438**	1.53	1.11	0.82
FDP3652	FCH	**101-7692**	1.86	1.27	0.91
FQP5N80	FCH	**984-5623**	1.70	1.15	0.85
FQP19N20	FCH	**984-5500**	1.20	– –	– –
IRF510PBF	VISH	**864-8204**	1.18	0.62	0.45
IRF520PBF	VISH	**864-8239**	1.74	– –	– –
IRF610PBF	VISH	**864-8328**	1.88	0.80	0.71
IRF710PBF	VISH	**864-8417**	1.27	0.68	0.48
IRF720PBF	VISH	**864-8425**	2.54	1.33	0.94
IRF730PBF	VISH	**864-8441**	1.57	0.91	0.77
IRF740PBF	VISH	**864-8484**	3.57	2.64	1.77
IRF820PBF	VISH	**864-8514**	1.87	0.82	0.61
IRF830PBF	VISH	**864-8549**	1.40	0.77	0.58
IRF840PBF	VISH	**864-8581**	2.11	1.19	0.87
IRF1310NPBF	IR	**910-3023**	1.37	1.14	1.11
IRF3315PBF	IR	**864-8077**	0.97	0.73	0.59
IRF3415PBF	IR	**864-8093**	1.45	1.12	0.90
IRF3710PBF	IR	**864-8166**	1.12	0.91	0.73
IRF3710ZPBF	IR	**101-3470**	2.88	1.59	1.17
IRF3711PBF	IR	**864-8182**	1.02	0.91	0.83
IRF540ZPBF	IR	**821-0667**	2.31	1.28	0.94
IRF520NPBF	IR	**910-3031**	0.67	0.41	0.36
IRF520VPBF	IR	**865-7688**	1.30	0.75	0.58

Power MOSFETs - continued

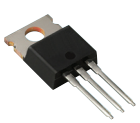
N Channel 100V to 900V - continued

TO-220 (SOT-78B) - continued

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+
IRF530PBF	VISH	864-8280	1.63	0.87	0.62
IRF620	ST	980-2371	0.66	0.50	0.46
IRF620PBF	VISH	864-8336	1.41	0.52	0.46
IRF630	ST	980-2380	0.81	0.56	0.50
IRF630NPBF	IR	864-8344	0.72	0.51	0.44
IRF640NPBF	IR	864-8379	0.92	0.72	0.58
IRF640PBF	VISH	864-8395	1.57	0.84	0.59
IRF644PBF	VISH	864-8409	2.21	1.21	0.89
IRF730APBF	VISH	864-8433	1.95	1.04	0.74
IRF740APBF	VISH	864-8468	2.24	1.22	0.75
IRF740LCPBF	VISH	864-8476	3.26	1.44	1.29
IRF820APBF	VISH	864-8506	1.87	1.03	0.77
IRF830APBF	VISH	864-8522	1.89	0.97	0.80
IRF840APBF	VISH	864-8557	2.82	1.55	1.06
IRF840LCPBF	VISH	864-8573	2.75	1.52	1.12
IRF8010PBF	IR	865-7823	3.48	1.93	1.41
IRFB11N50APBF	VISH	864-8700	3.10	1.70	1.26
IRFB17N50LPBF	VISH	864-8719	5.36	2.96	2.21
IRFB18N50KPBF	VISH	864-8727	4.76	2.93	2.30
IRFB20N50KPBF	VISH	865-7920	5.63	3.20	2.45
IRFB4410PBF	IR	905-2046	1.88	1.66	1.38
IRFB17N20DPBF	IR	865-7904	2.73	1.51	1.10
IRFB260NPBF	IR	865-7939	5.18	3.02	2.30
IRFB23N15DPBF	IR	864-8735	2.15	– –	– –
IRFB23N20DPBF	IR	864-8743	3.63	2.12	1.61
IRFB31N20DPBF	IR	864-8751	4.21	2.45	1.87
IRFB33N15DPBF	IR	865-7947	3.39	1.87	1.37
IRFB38N20DPBF	IR	865-7955	2.54	1.44	1.11
IRFB41N15DPBF	IR	864-8760	3.27	1.90	1.44
IRFB42N20DPBF	IR	865-7971	3.75	2.14	1.64
IRFB4710PBF	IR	864-8778	1.60	1.34	1.26
IRFB52N15DPBF	IR	865-7980	5.47	– –	– –
IRFB59N10DPBF	IR	864-8786	3.36	1.96	1.49
IRFB61N15DPBF	IR	865-7998	4.12	2.41	2.09
STP7NK40Z	ST	980-3300	1.31	1.05	0.83
STP7NK80Z	ST	980-3319	1.89	1.38	1.12
STP10NK60Z	ST	980-3017	1.13	0.86	0.67
STP12NK30Z	ST	993-5533	1.58	– –	– –
STP35NF10	ST	993-5592	0.77	– –	– –
STP80NF10	ST	993-5681	2.00	1.47	1.19
STP24NF10	ST	980-3106	1.15	0.86	0.68
STP30NF10	ST	994-6403	0.91	0.69	0.53
STP40NF10	ST	980-3157	1.42	1.09	0.86
STP4NK50Z	ST	816-5220	0.89	0.68	0.51
STP5NK50Z	ST	816-5270	1.07	0.78	0.58
STP9NK50Z	ST	816-5300	0.85	0.63	0.60
STP11NK40Z	ST	980-3033	1.03	0.77	0.68
STP11NK50Z	ST	980-3050	1.50	1.11	1.07
2SK3586-01	FE	120-8657	2.52	2.00	1.56
2SK3682-01	FE	120-8660	4.07	3.23	2.53
2SK3772-01	FE	120-8659	3.99	3.16	2.49
IRF530NPBF	IR	864-8263	0.74	0.49	0.45
IRF540NPBF	IR	864-8298	0.81	0.63	0.51

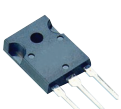
MOSFET, Infineon

N Channel


TO-220

TO-263

SOT-223


TO-247

Vds Typ V	Current, Id Cont A	Resistance, Rds on Ohm	Vgs th typ V	Mftrs. List No.	Order Code
TO-220					
550	23	0.14	3	IPA50R140CP	166-3985
550	17	0.199	3	IPA50R199CP	166-3986
550	13	0.25	3	IPA50R250CP	166-3988
550	12	0.299	3	IPA50R299CP	166-3989
550	10	0.35	3	IPA50R350CP	166-3990
550	9	0.399	3	IPA50R399CP	166-3991
550	7.1	0.52	3	IPA50R520CP	166-3992
650	25	0.125	3	IPA60R125CP	166-3993
650	21	0.165	3	IPA60R165CP	166-3994
650	16	0.199	3	IPA60R199CP	166-3995
650	12	0.25	3	IPA60R250CP	166-3996
650	11	0.299	3	IPA60R299CP	166-3997
650	9	0.385	3	IPA60R385CP	166-3998
650	6.8	0.52	3	IPA60R520CP	166-4000
650	6.1	0.6	3	IPA60R600CP	166-4002
900	5.7	1	3	IPA90R1K0C3	166-4003
900	5.1	1.2	3	IPA90R1K2C3	166-4004
900	15	0.34	3	IPA90R340C3	166-4005
900	11	0.5	3	IPA90R500C3	166-4006
900	6.9	0.8	3	IPA90R800C3	166-4007
550	23	0.14	3	IPP50R140CP	166-4052
550	17	0.199	3	IPP50R199CP	166-4053
550	12	0.299	3	IPP50R299CP	166-4055
550	10	0.35	3	IPP50R350CP	166-4056
560	9	0.399	3	IPP50R399CP	166-4057
550	7.1	0.52	3	IPP50R520CP	166-4058
650	31	0.099	3	IPP60R099CP	166-4059
600	31	0.099	3	IPP60R099CPA	166-4060
650	25	0.125	3	IPP60R125CP	166-4061
650	21	0.165	3	IPP60R165CP	166-4063
650	16	0.199	3	IPP60R199CP	166-4064
650	12	0.25	3	IPP60R250CP	166-4065
650	11	0.299	3	IPP60R299CP	166-4066
650	9	0.385	3	IPP60R385CP	166-4067
650	6.8	0.52	3	IPP60R520CP	166-4068
650	6.1	0.6	3	IPP60R600CP	166-4069
900	5.7	1	3	IPP90R1K0C3	166-4070
900	5.1	1.2	3	IPP90R1K2C3	166-4071
900	15	0.34	3	IPP90R340C3	166-4072
900	11	0.5	3	IPP90R500C3	166-4073
900	6.9	0.8	3	IPP90R800C3	166-4075
650	6.6	0.7	4	SPA07N60CFD	166-4093
600	11	0.44	4	SPA11N60CFD	166-4094
650	13.4	0.33	4	SPA15N60CFD	166-4095
650	15	0.28	3	SPA15N65C3	166-4096
650	11	0.44	4	SPI11N60CFD	166-4113
650	6.6	0.7	4	SPP07N60CFD	166-4121
650	13.4	0.33	4	SPP15N60CFD	166-4122
650	15	0.28	3	SPP15N65C3	166-4123
650	20.7	0.22	4	SPP20N60CFD	166-4124
650	21.7	0.185	4	SPP24N60CFD	166-4125
TO-263					
550	23	0.14	3	IPB50R140CP	166-4009
550	13	0.25	3	IPB50R250CP	166-4011
550	12	0.299	3	IPB50R299CP	166-4012
650	31	0.099	3	IPB60R099CP	166-4014
600	31	0.099	3	IPB60R099CPA	166-4015
650	25	0.125	3	IPB60R125CP	166-4016
650	21	0.165	3	IPB60R165CP	166-4017
650	16	0.199	3	IPB60R199CP	166-4018
650	12	0.25	3	IPB60R250CP	166-4019
650	11	0.299	3	IPB60R299CP	166-4020
650	9	0.385	3	IPB60R385CP	166-4021
650	6.8	0.52	3	IPB60R520CP	166-4022
650	6.1	0.6	3	IPB60R600CP	166-4023
560	11.6	0.38	3	SPB12N50C3	166-4099
560	16	0.28	3	SPB16N50C3	166-4101
800	17	0.29	3	SPB17N80C3	166-4102
TO-252					
550	9	0.399	3	IPD50R399CP	166-4024
550	7.1	0.52	3	IPD50R520CP	166-4026
650	9	0.385	3	IPD60R385CP	166-4027
650	6.8	0.52	3	IPD60R520CP	166-4028
650	6.1	0.6	3	IPD60R600CP	166-4029
900	5.1	1.2	3	IPD90R1K2C3	166-4030
800	2	2.7	3	SPD02N80C3	166-4105
560	3.2	1.4	3	SPD03N50C3	166-4106
560	4.5	0.95	3	SPD04N50C3	166-4107
800	4	1.3	3	SPD04N80C3	166-4108
650	6.2	0.75	3	SPD06N60C3	166-4109
800	6	0.9	3	SPD06N80C3	166-4110
650	7.3	0.6	3	SPD07N60C3	166-4111
560	7.6	0.6	3	SPD08N50C3	166-4112
TO-262					
550	23	0.14	3	IPI50R140CP	166-4031
550	10	0.35	3	IPI50R350CP	166-4032
560	9	0.399	3	IPI50R399CP	166-4033
650	31	0.099	3	IPI60R099CP	166-4034
650	25	0.125	3	IPI60R125CP	166-4036
650	21	0.165	3	IPI60R165CP	166-4038
650	16	0.199	3	IPI60R199CP	166-4039
650	12	0.25	3	IPI60R250CP	166-4040
650	11	0.299	3	IPI60R299CP	166-4041
650	9	0.385	3	IPI60R385CP	166-4042
650	6.8	0.52	3	IPI60R520CP	166-4043
650	6.1	0.6	3	IPI60R600CP	166-4044
900	5.7	1	3	IPI90R1K0C3	166-4045
900	5.1	1.2	3	IPI90R1K2C3	166-4046
900	15	0.34	3	IPI90R340C3	166-4047
900	11	0.5	3	IPI90R500C3	166-4048
650	13.4	0.33	4	SPI15N60CFD	166-4114
650	15	0.28	3	SPI15N65C3	166-4115
650	20.7	0.22	4	SPI20N60CFD	166-4117
TO-251					
550	7.1	0.52	3	IPS50R520CP	166-4076
650	0.8	6	3	SPS01N60C3	166-4126
650	1.8	3	3	SPS02N60C3	166-4127
650	3.2	1.4	3	SPS03N60C3	166-4129
650	4.5	0.95	3	SPS04N60C3	166-4131
650	1.8	3	3	SPU02N60C3	166-4132
650	3.2	1.4	3	SPU03N60C3	166-4133
TO-247					
550	23	0.14	3	IPW50R140CP	166-4077
550	17	0.199	3	IPW50R199CP	166-4078
550	13	0.25	3	IPW50R250CP	166-4079
550	12	0.299	3	IPW50R299CP	166-4080
550	10	0.35	3	IPW50R350CP	166-4081
560	9	0.399	3	IPW50R399CP	166-4082
650	60	0.045	3	IPW60R045CP	166-4083
650	39	0.075	3	IPW60R075CP	166-4084
650	12	0.25	3	IPW60R250CP	166-4085

Vds Typ V	Current, Id Cont A	Resistance, Rds on Ohm	Vgs th typ V	Mftrs. List No.	Order Code
TO-220					
900	36	0.12	3	IPW90R120C3	166-4087
900	5.7	1	3	IPW90R1K0C3	166-4088
900	5.1	1.2	3	IPW90R1K2C3	166-4089
900	15	0.34	3	IPW90R340C3	166-4090
900	11	0.5	3	IPW90R500C3	166-4091
900	6.9	0.8	3	IPW90R800C3	166-4092
650	6.6	0.7	4	SPW07N60CFD	166-4134
650	13.4	0.33	4	SPW15N60CFD	166-4135
560	16	0.28	3	SPW16N50C3	166-4136
650	21.7	0.185	4	SPW24N60CFD	166-4137
650	47	0.065	3	SPW47N65C3	166-4138
SOT-223					
650	0.3	6	3	SPN01N60C3	166-4118
650	0.4	2.5	3	SPN02N60C3	166-4119
650	0.7	1.4	3	SPN03N60C3	166-4120

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Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
IPA50R140CP	**166-3985**	5.29	4.15	3.27	2.40	2.31
IPA50R199CP	**166-3986**	4.20	3.16	2.40	1.72	1.64
IPA50R250CP	**166-3988**	2.72	2.13	1.67	1.24	1.18
IPA50R299CP	**166-3989**	2.96	2.23	1.70	1.22	1.17
IPA50R350CP	**166-3990**	2.65	1.99	1.51	1.08	1.04
IPA50R399CP	**166-3991**	2.40	1.81	1.37	0.98	0.95
IPA50R520CP	**166-3992**	2.00	1.50	1.14	0.81	0.78
IPA60R125CP	**166-3993**	8.51	6.39	4.86	3.47	3.33
IPA60R165CP	**166-3994**	5.88	4.41	3.36	2.40	2.30
IPA60R199CP	**166-3995**	4.85	– –	– –	– –	– –
IPA60R250CP	**166-3996**	4.14	3.11	2.37	1.70	1.62
IPA60R299CP	**166-3997**	3.60	2.70	2.06	1.48	1.41
IPA60R385CP	**166-3998**	2.80	– –	– –	– –	– –
IPA60R520CP	**166-4000**	2.30	1.73	1.31	0.94	0.89
IPA60R600CP	**166-4002**	1.27	1.09	0.92	0.73	0.71
IPA90R1K0C3	**166-4003**	4.38	3.29	2.51	1.79	1.72
IPA90R1K2C3	**166-4004**	3.31	2.48	1.88	1.35	1.29
IPA90R340C3	**166-4005**	10.70	8.39	6.60	4.87	4.68
IPA90R500C3	**166-4006**	8.52	6.40	4.87	3.48	3.34
IPA90R800C3	**166-4007**	5.47	4.11	3.12	2.24	2.14
IPB50R140CP	SMD **166-4009**	3.64	3.13	2.65	2.13	2.06
IPB50R250CP	SMD **166-4011**	4.06	3.14	2.81	2.49	2.38
IPB50R299CP	SMD **166-4012**	2.57	2.02	1.59	1.17	1.13
IPB60R099CP	SMD **166-4014**	11.53	8.65	6.58	4.71	4.51
IPB60R099CPA	SMD **166-4015**	14.18	10.65	8.10	5.79	5.55
IPB60R125CP	SMD **166-4016**	7.95	5.96	4.53	3.25	3.11
IPB60R165CP	SMD **166-4017**	5.03	3.77	2.87	2.05	1.97
IPB60R199CP	SMD **166-4018**	4.71	3.54	2.69	1.92	1.85
IPB60R250CP	SMD **166-4019**	4.29	3.22	2.45	1.76	1.69
IPB60R299CP	SMD **166-4020**	3.04	2.39	1.88	1.39	1.33
IPB60R385CP	SMD **166-4021**	2.47	1.94	1.53	1.13	1.08
IPB60R520CP	SMD **166-4022**	2.30	1.73	1.31	0.94	0.89
IPB60R600CP	SMD **166-4023**	1.84	1.44	1.14	0.83	0.81
IPD50R399CP	SMD **166-4024**	1.99	1.57	1.24	0.91	0.88
IPD50R520CP	SMD **166-4026**	1.84	1.38	1.05	0.75	0.72
IPD60R385CP	SMD **166-4027**	2.67	2.01	1.53	1.09	1.05
IPD60R520CP	SMD **166-4028**	1.86	1.46	1.15	0.85	0.81
IPD60R600CP	SMD **166-4029**	1.98	1.49	1.13	0.81	0.77
IPD90R1K2C3	SMD **166-4030**	3.31	2.49	1.89	1.35	1.30
IPI50R140CP	**166-4031**	5.94	4.45	3.39	2.42	2.33
IPI50R350CP	**166-4032**	2.56	1.92	1.47	1.05	1.00
IPI50R399CP	**166-4033**	1.49	1.27	1.07	0.85	0.83
IPI60R099CP	**166-4034**	11.05	8.29	6.30	4.51	4.33
IPI60R125CP	**166-4036**	4.69	4.02	3.40	2.71	2.63
IPI60R165CP	**166-4038**	3.51	2.99	2.53	2.01	1.95
IPI60R199CP	**166-4039**	2.86	2.46	2.08	1.66	1.61
IPI60R250CP	**166-4040**	2.56	2.19	1.85	1.47	1.42
IPI60R299CP	**166-4041**	2.93	2.30	1.80	1.33	1.28
IPI60R385CP	**166-4042**	2.93	2.21	1.67	1.20	1.15
IPI60R520CP	**166-4043**	1.94	1.52	1.19	0.88	0.84
IPI60R600CP	**166-4044**	2.06	1.55	1.18	0.84	0.81
IPI90R1K0C3	**166-4045**	2.61	2.23	1.89	1.50	1.45
IPI90R1K2C3	**166-4046**	3.31	2.48	1.88	1.35	1.29
IPI90R340C3	**166-4047**	12.55	9.42	7.17	5.13	4.92
IPI90R500C3	**166-4048**	8.52	6.40	4.87	3.48	3.34
IPP50R140CP	**166-4052**	6.15	4.62	3.51	2.52	2.40
IPP50R199CP	**166-4053**	4.18	3.14	2.39	1.71	1.64
IPP50R299CP	**166-4055**	1.83	1.57	1.32	1.05	1.02
IPP50R350CP	**166-4056**	1.62	1.38	1.17	0.94	0.91
IPP50R399CP	**166-4057**	1.48	1.27	1.07	0.85	0.83
IPP50R520CP	**166-4058**	1.95	1.46	1.11	0.79	0.76
IPP60R099CP	**166-4059**	11.53	8.65	6.58	4.71	4.51
IPP60R099CPA	**166-4060**	13.15	9.88	7.51	5.38	5.15
IPP60R125CP	**166-4061**	8.21	6.17	4.69	3.36	3.21
IPP60R165CP	**166-4063**	5.82	4.37	3.33	2.38	2.28
IPP60R199CP	**166-4064**	4.56	3.42	2.60	1.86	1.79
IPP60R250CP	**166-4065**	4.14	3.11	2.37	1.70	1.62

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
IPP60R299CP	**166-4066**	3.03	2.38	1.87	1.38	1.33
IPP60R385CP	**166-4067**	2.94	2.21	1.67	1.21	1.15
IPP60R520CP	**166-4068**	2.44	1.83	1.39	1.00	0.96
IPP60R600CP	**166-4069**	2.06	1.55	1.18	0.84	0.81
IPP90R1K0C3	**166-4070**	4.23	3.17	2.41	1.73	1.65
IPP90R1K2C3	**166-4071**	3.42	2.57	1.96	1.39	1.34
IPP90R340C3	**166-4072**	12.66	9.51	7.23	5.18	4.96
IPP90R500C3	**166-4073**	7.03	5.28	4.01	2.87	2.76
IPP90R800C3	**166-4075**	5.76	4.33	3.30	2.36	2.26
IPS50R520CP	**166-4076**	1.84	1.38	1.05	0.75	0.72
IPW50R140CP	**166-4077**	7.13	5.36	4.08	2.91	2.80
IPW50R199CP	**166-4078**	5.07	3.81	2.89	2.07	1.99
IPW50R250CP	**166-4079**	4.27	3.21	2.44	1.75	1.67
IPW50R299CP	**166-4080**	3.77	2.83	2.15	1.54	1.48
IPW50R350CP	**166-4081**	3.35	2.52	1.91	1.37	1.31
IPW50R399CP	**166-4082**	3.22	2.42	1.84	1.32	1.26
IPW60R045CP	**166-4083**	31.21	24.92	18.96	13.57	13.00
IPW60R075CP	**166-4084**	19.89	15.25	11.61	8.30	7.96
IPW60R250CP	**166-4085**	4.95	3.72	2.83	2.03	1.95
IPW90R120C3	**166-4087**	36.27	27.23	20.72	14.82	14.21
IPW90R1K0C3	**166-4088**	4.10	3.21	2.52	1.86	1.79
IPW90R1K2C3	**166-4089**	4.06	3.05	2.32	1.66	1.59
IPW90R340C3	**166-4090**	13.68	10.27	7.81	5.59	5.36
IPW90R500C3	**166-4091**	9.83	7.37	5.62	4.01	3.85
IPW90R800C3	**166-4092**	6.08	4.57	3.47	2.49	2.38
SPA07N60CFD	**166-4093**	2.12	1.67	1.31	0.97	0.94
SPA11N60CFD	**166-4094**	3.77	2.82	2.15	1.54	1.48
SPA15N60CFD	**166-4095**	3.91	3.07	2.41	1.78	1.71
SPA15N65C3	**166-4096**	3.42	2.69	2.12	1.56	1.50
SPB12N50C3	SMD **166-4099**	1.65	1.41	1.20	0.95	0.92
SPB16N50C3	SMD **166-4101**	3.22	2.42	1.84	1.32	1.26
SPB17N80C3	SMD **166-4102**	6.68	5.01	3.82	2.73	2.61
SPD02N80C3	SMD **166-4105**	1.37	1.03	0.78	0.56	0.54
SPD03N50C3	SMD **166-4106**	1.02	0.80	0.63	0.47	0.45
SPD04N50C3	SMD **166-4107**	1.41	1.06	0.81	0.58	0.55
SPD04N80C3	SMD **166-4108**	2.15	1.61	1.23	0.88	0.84
SPD06N60C3	SMD **166-4109**	1.78	1.33	1.01	0.73	0.70
SPD06N80C3	SMD **166-4110**	2.74	2.05	1.56	1.11	1.07
SPD07N60C3	SMD **166-4111**	2.10	1.58	1.20	0.86	0.82
SPD08N50C3	SMD **166-4112**	1.89	1.41	1.08	0.77	0.74
SPI11N60CFD	**166-4113**	2.24	1.92	1.62	1.29	1.25
SPI15N60CFD	**166-4114**	4.55	3.41	2.59	1.85	1.78
SPI15N65C3	**166-4115**	2.81	2.40	2.02	1.61	1.56
SPI20N60CFD	**166-4117**	3.57	3.05	2.57	2.05	1.99
SPN01N60C3	SMD **166-4118**	0.92	0.69	0.52	0.37	0.35
SPN02N60C3	SMD **166-4119**	1.00	0.75	0.57	0.41	0.40
SPN03N60C3	SMD **166-4120**	1.24	0.94	0.71	0.51	0.49
SPP07N60CFD	**166-4121**	2.47	1.93	1.53	1.13	1.08
SPP15N60CFD	**166-4122**	4.64	3.48	2.65	1.90	1.82
SPP15N65C3	**166-4123**	3.90	3.06	2.40	1.78	1.71
SPP20N60CFD	**166-4124**	5.75	4.32	3.29	2.35	2.25
SPP24N60CFD	**166-4125**	6.48	4.86	3.70	2.65	2.54
SPS01N60C3	**166-4126**	0.88	0.66	0.50	0.36	0.34
SPS02N60C3	**166-4127**	0.93	0.70	0.53	0.40	0.39
SPS03N60C3	**166-4129**	1.12	0.84	0.64	0.46	0.44
SPS04N60C3	**166-4131**	1.47	1.10	0.84	0.60	0.57
SPU02N60C3	**166-4132**	0.86	0.67	0.53	0.39	0.38
SPU03N60C3	**166-4133**	1.17	0.87	0.67	0.48	0.46
SPW07N60CFD	**166-4134**	3.20	2.40	1.83	1.31	1.25
SPW15N60CFD	**166-4135**	5.16	3.87	2.94	2.11	2.02
SPW16N50C3	**166-4136**	4.17	3.13	2.38	1.71	1.63
SPW24N60CFD	**166-4137**	8.28	6.22	4.73	3.38	3.25
SPW47N65C3	**166-4138**	20.43	15.34	11.67	8.35	8.00

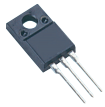
CoolMOS™ Power MOSFETs, 60-650V

TO-252 (D-Pak)

TO-263 (D^2Pak)

TO-220

TO-247


TO-220 Insulated

V_{DS} V	N/P Channel	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	$V_{GS(th)}$ max. V	P_D @ 25°C W	Mftrs. List No.
TO-252						
600	N	7.3	14.6	5.5	83	SPD07N60S5
650	N	1.8	5.4	3.9	25	SPD02N60C3
TO-220						
560	N	21	63	3.9	208	SPP21N50C3
560	N	16	48	3.9	160	SPP16N50C3
600	N	7.3	14.6	5.5	83	SPP07N60S5
600	N	20	40	5.5	208	SPP20N60S5

Power MOSFETs - continued

CoolMOS™ Power MOSFETs, 60-650V - continued

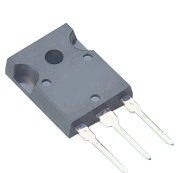
V_{DS} V	N/P Channel	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	$V_{GS(th)}$ max. V	P_D @ 25°C W	Mftrs. List No.
TO-220						
650	N	4.5	13.5	3.9	50	SPP04N60C3
650	N	24.3	72.9	3.9	240	SPP24N60C3
650	N	20.7	62.1	3.9	208	SPP20N65C3
650	N	7.3	21.9	3.9	83	SPP07N60C3
650	N	20.7	62.1	3.9	208	SPP20N60C3
650	N	11	33	3.9	125	SPP11N60C3
800	N	11	33	3.9	156	SPP11N80C3
Isolated TO-220 (TO-220-3-31)						
650	N	20.7	62.1	3.9	34.5	SPA20N60C3
800	N	8	24	3.9	40	SPA08N80C3
800	N	11	33	3.9	41	SPA11N80C3
800	N	17	51	3.9	42	SPA17N80C3
TO-263 (D2-Pak)						
600	N	20	40	5.5	208	SPB20N60S5
650	N	20.7	62.1	3.9	208	SPB20N60C3
TO-247						
560	N	52	156	3.9	417	SPW52N50C3
560	N	32	96	3.9	284	SPW32N50C3
600	N	8.3	52	5	35	SPW20N60CFD
600	N	34.1	85	5	313	SPW35N60CFD
650	N	47	141	3.9	415	SPW47N60C3
650	N	11	28	5	125	SPW11N60CFD
650	N	20	40	5.5	208	SPW20N60S5
650	N	20.7	62.1	3.9	208	SPW20N60C3
800	N	17	51	3.9	208	SPW17N80C3

211073

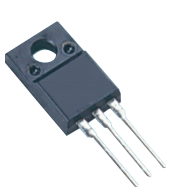
Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
SPA08N80C3	**109-5691**	3.09	2.46	1.89	1.38	1.33
SPA11N80C3	**109-5692**	3.66	– –	– –	– –	– –
SPA17N80C3	**109-5693**	5.36	4.19	3.06	2.34	2.28
SPA20N60C3	**115-6420**	4.38	3.29	2.50	1.79	1.72
SPB20N60C3	SMD **105-6541** RL	4.98	3.74	2.85	2.04	1.96
SPD02N60C3	SMD **115-6419**	1.01	0.76	0.57	0.42	0.40
SPD07N60S5	SMD **115-6431** RL	1.89	1.29	0.98	0.72	0.70
SPP04N60C3	**105-6545**	1.63	1.21	0.89	0.64	0.58
SPP07N60C3	**105-6546**	1.94	1.54	1.18	0.96	0.89
SPP07N60S5	**105-6547**	2.28	1.83	1.40	– –	– –
SPP11N60C3	**105-6549**	1.70	1.51	1.22	– –	– –
SPP11N80C3	**109-5695**	3.66	2.86	2.09	1.52	1.49
SPP16N50C3	**109-5697**	2.89	2.30	1.76	1.30	1.27
SPP20N60C3	**105-6551**	3.11	2.49	1.75	– –	– –
SPP20N60S5	**105-6552**	3.92	2.40	2.33	– –	– –
SPP20N65C3	**109-5700**	5.83	4.38	3.34	2.38	2.29
SPP21N50C3	**109-5701**	3.74	2.92	2.13	1.58	1.57
SPW20N60CFD	**109-5706**	5.43	4.00	3.11	2.21	2.15
SPP24N60C3	**109-5702**	5.70	4.29	3.26	2.33	2.24
SPB20N60S5	SMD **121-4264** RL	6.54	4.57	3.69	2.27	1.96
SPW11N60CFD	**109-5703**	4.74	3.56	2.71	1.93	1.86
SPW17N80C3	**109-5704**	6.43	5.03	3.67	3.19	3.11
SPW20N60C3	**105-6555**	3.63	3.22	2.67	– –	– –
SPW20N60S5	**105-6556**	5.73	3.22	3.00	– –	– –
SPW32N50C3	**109-5707**	9.39	7.05	5.37	3.84	3.68
SPW35N60CFD	**109-5708**	7.82	– –	– –	– –	– –
SPW47N60C3	**105-6557**	9.83	8.73	6.68	– –	– –
SPW52N50C3	**109-5710**	12.16	9.59	6.98	5.43	5.30

CoolMOS™ N-Channel, Power MOSFETs

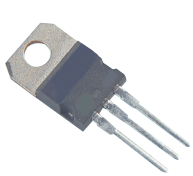
560-800 V



TO-247



TO-220 Insulated



TO-220

V_{DS} V	$R_{DS(on)}$ typ. Ω	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	$V_{GS(th)}$ max. V	P_D @ 25°C W	Mftrs. List No.
TO-220						
560	0.28	16	48	3.9	160	SPP16N50C3
600	0.6	7.3	14.6	5.5	83	SPP07N60S5
600	0.19	20	40	5.5	208	SPP20N60S5
650	0.38	11	33	3.9	125	SPP11N60C3
650	0.19	20.7	62.1	3.9	208	SPP20N60C3
650	0.19	20.7	62.1	3.9	208	SPP20N65C3
560	0.19	21	63	3.9	208	SPP21N50C3
650	0.16	24.3	72.9	3.9	240	SPP24N60C3
650	0.95	4.5	13.5	3.9	50	SPP04N60C3
650	0.6	7.3	21.9	3.9	83	SPP07N60C3
TO-220						
800	0.45	11	33	3.9	156	SPP11N80C3
TO-220 Isolated						
800	0.45	11	33	3.9	41	SPA11N80C3
800	0.65	8	24	3.9	40	SPA08N80C3
800	0.29	17	51	3.9	42	SPA17N80C3
TO-263 (D2-Pak)						
650	0.19	20.7	62.1	3.9	208	SPB20N60C3
TO-247						
560	0.11	32	96	3.9	284	SPW32N50C3
560	0.07	52	156	3.9	417	SPW52N50C3
600	0.22	8.3	52	5	35	SPW20N60CFD
600	0.118	34.1	85	5	313	SPW35N60CFD
650	0.44	11	28	5	125	SPW11N60CFD
650	0.19	20.7	62.1	3.9	208	SPW20N60C3
650	0.19	20	40	5.5	208	SPW20N60S5
650	0.07	47	141	3.9	415	SPW47N60C3
800	0.29	17	51	3.9	208	SPW17N80C3

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
SPA11N80C3	**109-5692**	3.66	– –	– –	– –	– –
SPA17N80C3	**109-5693**	5.36	4.19	3.06	2.34	2.28
SPB20N60C3	SMD **105-6541** RL	4.98	3.74	2.85	2.04	1.96
SPP04N60C3	**105-6545**	1.63	1.21	0.89	0.64	0.58
SPP07N60C3	**105-6546**	1.94	1.54	1.18	0.96	0.89
SPP07N60S5	**105-6547**	2.28	1.83	1.40	– –	– –
SPA08N80C3	**109-5691**	3.09	2.46	1.89	1.38	1.33
SPP11N60C3	**105-6549**	1.70	1.51	1.22	– –	– –
SPP11N80C3	**109-5695**	3.66	2.86	2.09	1.52	1.49
SPP16N50C3	**109-5697**	2.89	2.30	1.76	1.30	1.27
SPP20N60C3	**105-6551**	3.11	2.49	1.75	– –	– –
SPP20N60S5	**105-6552**	3.92	2.40	2.33	– –	– –
SPP20N65C3	**109-5700**	5.83	4.38	3.34	2.38	2.29
SPW11N60CFD	**109-5703**	4.74	3.56	2.71	1.93	1.86
SPW17N80C3	**109-5704**	6.43	5.03	3.67	3.19	3.11
SPW20N60C3	**105-6555**	3.63	3.22	2.67	– –	– –
SPW20N60S5	**105-6556**	5.73	3.22	3.00	– –	– –
SPW47N60C3	**105-6557**	9.83	8.73	6.68	– –	– –
SPP21N50C3	**109-5701**	3.74	2.92	2.13	1.58	1.57
SPP24N60C3	**109-5702**	5.70	4.29	3.26	2.33	2.24
SPW20N60CFD	**109-5706**	5.43	4.00	3.11	2.21	2.15
SPW32N50C3	**109-5707**	9.39	7.05	5.37	3.84	3.68
SPW35N60CFD	**109-5708**	7.82	– –	– –	– –	– –
SPW52N50C3	**109-5710**	12.16	9.59	6.98	5.43	5.30

422877

Mftrs. List No.		Order Code	Price Per Tube 1+	4+	10+
SPW47N60C3	TUBE 30	**156-4143**	215.65	197.86	180.00
SPW20N60C3	TUBE 30	**156-4142**	88.63	79.76	71.79
SPP20N60C3	TUBE 50	**156-4135**	102.18		

N-Channel, 500V - 1500V

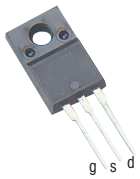
V_{DS} V	Polarity	$R_{DS(on)}$ Ω	$I_{D\ cont}$ @ 25°C A	P_D @ 25°C W	Mftr.	Package	Order Code	Mftrs. List No.
500	N	0.19	21	208	INF	TO-247	147-1815	SPW21N50C3
500	N	0.19	21	34.5	INF	TO-220F	147-1778	SPA21N50C3
500	N	0.38	11.6	33.0	INF	TO-220F	147-1772	SPA12N50C3
500	N	0.38	11.6	33.0	INF	TO-220F	147-1772	SPA12N50C3
500	N	0.6	7.6	32.0	INF	TO-220F	147-1769	SPA08N50C3
550	N	0.1	45	417	ST	TO-247	129-1995	STW45NM50
550	N	0.19	18	140	ST	TO-247	125-2947	STW21NM50N
550	N	0.25	20	214	ST	TO-247	129-1994	STW20NM50
600	N	0.099	31	255	INF	TO-247	147-1753	IPW60R099CP
600	N	0.14	22	160	ST	TO-247	125-2949	STW25NM50N
600	N	0.165	21	192	INF	TO-247	147-1755	IPW60R165CP
600	N	0.22	20.7	35	INF	TO-220F	147-1775	SPA20N60CFD
600	N	0.28	15	156	INF	TO-220	147-1808	SPP15N60C3
600	N	0.44	11	125	INF	TO-220	147-1805	SPP11N60CFD
600	N	0.75	6.2	74	INF	TO-220	147-1802	SPP06N60C3
600	N	0.95	4.5	31	INF	TO-220F	147-1762	SPA04N60C3
600	N	1.4	3.2	29.7	INF	TO-220F	147-1760	SPA03N60C3
650	N	0.1	34.6	313	INF	TO-247	147-1817	SPW35N60C3
650	N	0.19	20.7	34.5	INF	TO-220F	147-1777	SPA20N65C3
650	N	0.28	15	34	INF	TO-220F	147-1773	SPA15N60C3
650	N	0.38	11	033	INF	TO-220F	147-1770	SPA11N60C3
650	N	0.38	11	33.0	INF	TO-220F	147-1771	SPA11N65C3
650	N	0.6	7.3	83	INF	I-PAK	147-1812	SPU07N60C3
650	N	0.6	0.0073	32	INF	TO-220F	147-1767	SPA07N60C3
650	N	0.75	6.2	32	INF	TO-220F	147-1765	SPA06N60C3
700	N	1.2	7.5	156	ST	TO-247	129-1997	STW9NK70Z
800	N	0.13	45	600	ST	ISOTOP	129-1967	STE45NK80ZD
800	N	0.9	6	0.039	INF	TO-220F	147-1766	SPA06N80C3
800	N	0.9	6	83	INF	TO-220	147-1803	SPP06N80C3
800	N	1.3	4	38	INF	TO-220F	147-1763	SPA04N80C3
800	N	2.7	2	30.5	INF	TO-220F	147-1759	SPA02N80C3

V_{DS} V	Polarity	$R_{DS(on)}$ Ω	I_D cont @ 25°C A	P_D @ 25°C W	Mftr.	Package	Order Code	Mftrs. List No.
800	N	4.5	2.5	25	ST	TO-220FP	129-1972	STF3NK80Z
900	N	0.17	40	600	ST	ISOTOP	129-1966	STE40NK90ZD
1500	N	7	4	160	ST	TO-247	125-2936	STW4N150

491652

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	250+
STW4N150	ST	**125-2936**	6.95	5.70	4.14	3.49
STW21NM50N	ST	**125-2947**	4.45	3.26	2.64	2.24
STW25NM50N	ST	**125-2949**	7.61	– –	– –	– –
STE40NK90ZD	ST	**129-1966**	77.78	62.47	50.44	42.90
STE45NK80ZD	ST	**129-1967**	76.50	58.94	47.59	40.48
STF3NK80Z	ST	**129-1972**	1.30	0.97	0.71	0.62
STW20NM50	ST	**129-1994**	5.86	4.65	3.46	2.80
STW45NM50	ST	**129-1995**	9.45	6.54	5.81	5.66
STW9NK70Z	ST	**129-1997**	1.87	1.46	1.22	1.06
IPW60R099CP	INF	SMD **147-1753**	12.35	9.27	7.05	5.04
IPW60R165CP	INF	SMD **147-1755**	6.45	4.85	3.68	2.63
SPA02N80C3	INF	**147-1759**	1.71	1.28	0.97	0.70
SPA03N60C3	INF	**147-1760**	1.32	0.99	0.75	0.54
SPA04N60C3	INF	**147-1762**	1.74	1.29	0.95	0.92
SPA04N80C3	INF	**147-1763**	2.11	1.69	1.29	– –
SPA06N60C3	INF	**147-1765**	1.52	1.19	0.94	0.69
SPA06N80C3	INF	**147-1766**	2.67	2.14	1.64	– –
SPA07N60C3	INF	**147-1767**	2.40	1.80	1.37	0.98
SPA08N50C3	INF	**147-1769**	1.76	1.40	1.07	– –
SPA11N60C3	INF	**147-1770**	3.10	2.48	1.89	– –
SPA11N65C3	INF	**147-1771**	3.80	2.85	2.17	1.55
SPA12N50C3	INF	**147-1772**	2.40	1.92	1.47	– –
SPA12N50C3	INF	**147-1772**	2.40	1.92	1.47	– –
SPA15N60C3	INF	**147-1773**	4.22	3.17	2.41	1.73
SPA20N60CFD	INF	**147-1775**	6.15	4.61	3.51	2.51
SPA20N65C3	INF	**147-1777**	6.15	4.62	3.52	2.52
SPA21N50C3	INF	**147-1778**	3.74	2.92	2.13	– –
SPP06N60C3	INF	**147-1802**	1.84	1.38	1.05	0.75
SPP06N80C3	INF	**147-1803**	2.66	2.12	1.62	– –
SPP11N60CFD	INF	**147-1805**	3.38	2.54	1.93	1.38
SPP15N60C3	INF	**147-1808**	3.92	2.94	2.24	1.60
SPU07N60C3	INF	**147-1812**	2.28	1.72	1.30	0.94
SPW21N50C3	INF	SMD **147-1815**	4.37	3.42	2.50	– –
SPW35N60C3	INF	SMD **147-1817**	11.38	8.54	6.50	4.65

TO-220 Isolated, Zener Protected Gate



Isolated packages offer simplified heatsink mounting, without the need for additional isolating washers, mica etc.

V_{DS} V	$R_{DS(on)}$ Ω	I_D cont @ 25°C A	I_D pulsed A	P_D @ 25°C W	Mftr.	Mftrs. list No.
N Channel						
400	0.25	5.4	21.6	25	ST	STP17NK40ZFP
400	0.55	9	36	30	ST	STP11NK40ZFP
500	0.85	7.2	28.8	30	ST	STP9NK50ZFP
600	3.6	2.4	9.6	20	ST	STP3NK60ZFP
600	1.2	6	24	32	ST	STP6NK60ZFP
800	2.4	4.3	17.2	30	ST	STP5NK80ZFP
800	1.8	5.2	20.8	30	ST	STP7NK80ZFP
800	0.9	9	36	40	ST	STP10NK80ZFP
900	4.8	3	12	25	ST	STP3NK90ZFP

SD114/211065

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
STP3NK60ZFP	**980-3114**	0.86	0.63	0.51	0.44	0.37
STP3NK90ZFP	**980-3130**	1.40	1.04	0.76	0.67	0.54
STP5NK80ZFP	**980-3246**	1.17	0.88	0.87	0.75	0.73
STP6NK60ZFP	**980-3289**	0.98	0.73	0.66	0.60	0.51
STP7NK80ZFP	**980-3327**	2.00	1.46	1.18	1.01	0.86
STP9NK50ZFP	**980-3343**	1.04	0.77	0.75	0.64	0.61
STP10NK80ZFP	**980-3025**	3.13	2.50	1.92	1.44	1.14
STP11NK40ZFP	**980-3041**	1.50	1.10	0.89	0.76	0.65
STP17NK40ZFP	**980-3076**	3.31	2.43	1.96	1.67	1.43

Over half a million products available online QGO

TO-220, N Channel 600V to 1500V

International IOR Rectifier

V_{DS} V	$R_{DS(on)}$ Ω	I_D cont @ 25°C A	I_D pulsed A	P_D @ 25°C W	Mftr.	Mftrs. List No.
600	0.55	13	52	150	ST	STP13NK60Z
600	0.75	10	36	115	ST	STP10NK60Z
600	0.75	9.2	37	170	VISH	IRFB9N60APBF
600	1.2	6	24	110	ST	STP6NK60Z
600	1.2	6	24	110	ST	STP6NK60Z
600	1.2	6.2	25	125	VISH	IRFBC40APBF
600	1.2	6.2	25	125	VISH	IRFBC40PBF
600	1.2	6.2	25	125	VISH	IRFBC40LCPBF
600	2	4	16	70	ST	STP4NK60Z
600	2.2	3.6	14	74	VISH	IRFBC30APBF
600	3.6	2.4	9.6	45	ST	STP3NK60Z
600	3.6	2.4	9.6	45	ST	STP3NK60Z
800	1.8	5.2	20.8	125	ST	STP7NK80Z
800	2.4	4.3	17.2	110	ST	STP5NK80Z
800	3	4.1	16	125	VISH	IRFBE30PBF
800	8	1.5	6	40	INF	SPP02N80C3
900	2	5.8	23.2	140	ST	STP6NK90Z
900	4.8	3	12	90	ST	STP3NK90Z
900	8	1.7	3.1	54	VISH	IRFBF20PBF
1000	3.8	4	12	100	TOSH	2SK1119(F)
1000	5	3.1	12	125	VISH	IRFBG30PBF
1000	11.5	1.3	5.2	50	VISH	IRFBG20PBF
1500	10	2	4	35	SY	2SK3745
TO-220FP						
600	1.2	6	24	32	ST	STP6NK60ZFP

211277

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	250+
SPP02N80C3	INF	**120-1594**	1.64	1.24	0.94	0.68
IRFB9N60APBF	VISH	**864-8808**	1.89	1.03	0.81	0.79
IRFBC40APBF	VISH	**864-8824**	2.55	1.40	1.04	0.86
IRFBC40LCPBF	VISH	**864-8832**	3.78	2.14	1.66	1.41
IRFBC40PBF	VISH	**864-8840**	2.25	1.15	0.87	0.81
IRFBE30PBF	VISH	**864-8859**	1.75	– –	– –	– –
IRFBF20PBF	VISH	**864-8867**	2.27	1.25	0.92	0.77
IRFBG20PBF	VISH	**864-8891**	2.52	1.30	0.89	0.84
IRFBG30PBF	VISH	**864-8905**	3.01	1.65	1.22	1.01
STP3NK90Z	ST	**980-3122**	0.85	0.54	0.37	0.34
STP4NK60Z	ST	**980-3203**	0.68	0.54	0.51	0.46
STP5NK80Z	ST	**951-2764**	1.54	1.13	0.92	0.78
STP6NK60ZFP	ST	**980-3289**	0.98	0.73	0.66	0.60
STP7NK80Z	ST	**980-3319**	1.89	1.38	1.12	0.96
STP6NK90Z	ST	**980-3297**	2.15	1.58	1.28	1.08
STP10NK60Z	ST	**980-3017**	1.13	0.86	0.67	0.54
STP13NK60Z	ST	**993-5541**	1.58	1.20	1.15	1.10
2SK1119(F)	TOSH	**121-8511**	3.63	2.71	2.51	1.90
IRFBC30APBF	VISH	**864-8816**	2.84	– –	– –	– –
2SK3745	SY	**120-8646**	3.39	2.73	2.14	1.93

TO-220, P Channel 20V to 200V V_{DS}

VISHAY FAIRCHILD SEMICONDUCTOR RENESAS International IOR Rectifier

V_{DS} V	$R_{DS(on)}$ Ω	I_D cont. @ 25°C A	P_D @ 25°C W	Mftr.	Mftrs List No.
20	0.075	24	50	FCH	NDP6020P
55	0.02	64	150	IR	IRF4905PBF
55	0.06	31	110	IR	IRF5305PBF
55	0.1	17	56	IR	IRF9Z34NPBF
55	0.172	12	45	IR	IRF9Z24NPBF
	0.06	40	200	IR	IRF5210PBF.
60	0.13	18.6	80	INF	SPP18P06P
60	0.14	18	88	VISH	IRF9Z34PBF
60	0.3	8.8	42	INF	SPP08P06P
60	0.5	4.7	20	VISH	IRF9Z14PBF
100	0.06	40	200	IR	IRF5210PBF.
100	0.117	19	94	IR	IRF9540NPBF
100	0.19	16.5	100	FCH	FQP17P10
100	0.2	13	75	IR	IRF9530NPBF
100	0.2	19	—	VISH	IRF9540PBF
100	0.3	12	—	VISH	IRF9530PBF
100	0.48	6.8	48	IR	IRF9520NPBF
100	0.6	6	40	VISH	IRF9520PBF
100	1.2	3	20	VISH	IRF9510PBF
150	0.29	13	110	IR	IRF6215PBF
200	0.36	11.5	120	FCH	FQP12P20
200	0.5	11	125	VISH	IRF9640PBF
200	1.5	3.5	40	VISH	IRF9620PBF
200	3	1.75	20	VISH	IRF9610PBF

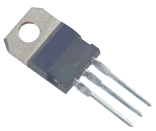
Power MOSFETs - continued

TO-220, P Channel 20V to 200V V_{DS} - continued

211272

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
FQP12P20	984-6492●	1.39	0.97	0.72	– –	– –
FQP17P10	984-6514●	1.03	– –	– –	– –	– –
IRF4905PBF	864-8190●	3.13	1.82	1.39	1.06	1.01
IRF5210PBF.	864-8247●	2.53	1.42	1.01	0.93	0.91
IRF5305PBF	864-8255●	0.75	0.56	0.45	0.41	0.40
IRF6215PBF	101-3514●	0.77	0.61	0.52	0.43	– –
IRF9510PBF	910-3546●	1.96	1.04	0.74	0.60	0.53
IRF9520PBF	910-3554●	1.29	– –	– –	– –	– –
IRF9520NPBF	910-3520●	0.66	0.43	0.40	0.39	0.38
IRF9530NPBF	864-8603●	0.67	0.54	0.43	0.38	0.37
IRF9530PBF	864-8611●	2.10	1.12	0.79	0.64	0.63
IRF9540NPBF	864-8620●	0.88	0.68	0.55	0.49	0.48
IRF9540PBF	864-8638●	1.73	0.92	0.81	0.79	0.77
IRF9610PBF	910-3562●	1.44	0.77	0.51	0.44	0.43
IRF9620PBF	910-3570●	2.28	1.32	1.26	1.24	1.20
IRF9640PBF	864-8654●	2.31	1.23	0.82	0.76	0.72
IRF9Z14PBF	864-8662●	1.68	0.89	0.63	0.52	0.44
IRF9Z24NPBF	864-8670●	0.64	0.42	0.34	0.31	0.30
IRF9Z34NPBF	864-8689●	0.71	0.48	0.41	0.36	0.35
IRF9Z34PBF	864-8697●	2.88	1.59	1.18	1.04	1.00
NDP6020P	101-7724●	1.56	1.06	0.77	0.55	0.47
SPP08P06P	105-6548●	0.99	0.73	0.53	– –	– –
SPP18P06P	105-6550●	0.76	0.68	0.66	– –	– –

TO-220 Logic Level



- Low gate drive
- Ideal for direct logic interfacing
- 2.54 lead spacing

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	$V_{GS(th)}$ max. (*min.) V	P_D @ 25°C W	Mftr.	Mftrs. List No.
N Channel							
20	0.004	180	720	3	210	IR	IRL3716PBF
20	0.01	85	340	0.7*	110	IR	IRL3402PBF
20	0.02	35	140	3	43	IR	IRL3714PBF
30	0.003	200	1040	2.5	200	IR	IRL3713PBF
30	0.0035	80	320	—	300	ST	STP80NF03L-04
30	0.0038	150	600	2.3	140	IR	IRL7833PBF
30	0.006	105	420	2.25	110	IR	IRL8113PBF
30	0.006	120*	480	1*	150	IR	IRL3803PBF
30	0.007	100	400	1*	130	IR	IRL2203NPBF
30	0.0095	60	240	2.5.0	100	ST	STP60NF03L
30	0.009	60	180	3.0	65	FCH	FDP7030BL
30	0.012	56	220	1*	83	IR	IRL3103PBF
30	0.022	40	160	2.5	70	ST	STP40NF03L
30	0.026	34	140	1*	56	IR	IRL3303PBF
30	0.05	22	88	1*	45	ST	STP22NF03L
30	0.4	24	96	1*	45	IR	IRL2703PBF
30	5.5	75	240	2.5	166	NXP	PHP101NQ03LT
40	0.0031	200	790	2.7	230	IR	IRL1404ZPBF
40	0.004	160	640	3	200	IR	IRL1404PBF
40	0.0065	130	520	1*	200	IR	IRL1004PBF
40	0.008	104	416	1*	167	IR	IRL1104PBF
55	0.008	104	360	2	—	IR	IRL2505PBF
55	0.008	86	340	3	130	IR	IRL3705ZPBF
55	0.01	77	310	2.5	130	IR	IRL3705NPBF
55	0.0135	51	204	3	80	IR	IRLZ44ZPBF
55	0.022	41	160	4—	83	IR	IRLZ44NPBF
55	0.035	27	110	2	56	IR	IRLZ34NPBF
55	0.06	18	72	2	45	IR	IRLZ24NPBF
55	0.0063	75	240	4	230	NXP	PSMN005-75P
60	0.014ohm	60	240	—	110	ST	STP60NF06L
60	0.04ohm	30	120	—	70	ST	STP36NF06L
60	0.047	30	100	2.0	96	FCH	RFP30N06LE
60	0.05	30	110	2	88	VISH	IRLZ34PBF
60	0.1	16	64	1*	45	ST	STP16NF06L..
60	0.1	17	68	—	60	VISH	IRLZ24PBF
60	0.2	10	40	2	43	VISH	IRLZ14PBF
60	0.025	48	144	2	100	FCH	NDP6060L
100	0.0075	75	400	—	230	NXP	PSMN009-100P
100	180mohm	10	35	—	48	IR	IRL520NPBF
100	0.2	12	30	2.0	60	FCH	RFP12N10L
100	0.026	55	190	2	200	IR	IRL2910PBF
100	0.033	40	160	2.5	150	ST	STP40NF10L
100	0.044	30	120	2	94	IR	IRL540NPBF
100	0.077	28	110	2.0	150	VISH	IRL540PBF
100	0.1	15	60	2.0	63	IR	IRL530NPBF
100	0.16	14	52	2.0	79	VISH	IRL530PBF
100	0.27	9.2	31	2.0	60	VISH	IRL520PBF
100	0.54	5.6	18	2.0	43	VISH	IRL510PBF
150	14mohm	79	430	—	310	FCH	FDP2532
N Channel							
200	0.18	17	68	2	125	VISH	IRL640PBF
200	0.4	7	28	2.5	40	INF	BUZ73L
200	0.4	9	36	2	74	VISH	IRL630PBF

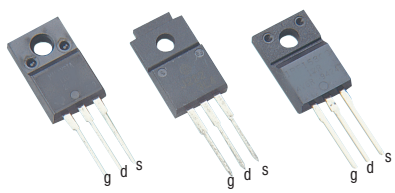
*Exceeds package current handling capacity

● Denotes tables TO-220 package

211101

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	250+
BUZ73L	INF	105-6533●	1.19	0.80	0.58	– –
FDP2532	FCH	109-5014●	3.91	2.67	1.99	1.89
FDP7030BL	FCH	984-5151●	1.30	0.88	0.66	0.47
IRL520NPBF	IR	101-3499●	0.59	0.39	0.31	0.28
IRL1004PBF	IR	865-0853●	1.41	1.19	1.15	1.12
IRL1104PBF	IR	865-0870●	1.14	0.94	0.92	0.91
IRL1404PBF	IR	101-3454●	3.63	– –	– –	– –
IRL1404ZPBF	IR	865-9729●	3.58	2.29	1.77	1.62
IRL2203NPBF	IR	865-0896●	2.70	1.49	1.09	1.03
IRL2505PBF	IR	865-0918●	2.59	2.07	1.73	1.44
IRL2703PBF	IR	865-0934●	1.63	0.86	0.60	0.56
IRL2910PBF	IR	865-0942●	1.35	0.95	0.80	0.78
IRL3103PBF	IR	865-0969●	1.96	1.08	0.79	0.75
IRL3202PBF	IR	101-3498●	0.65	0.53	0.43	0.42
IRL3303PBF	IR	865-0993●	1.99	1.04	0.73	0.68
IRL3402PBF	IR	865-1000●	1.65	0.92	0.70	0.66
IRL3705NPBF	IR	865-1019●	1.24	0.92	0.74	0.69
IRL3705ZPBF	IR	865-9761●	2.54	1.40	1.03	0.97
IRL3713PBF	IR	865-9788●	4.00	2.33	1.77	1.66
IRL3714PBF	IR	865-9800●	1.45	0.76	0.53	0.50
IRL3716PBF	IR	865-9885●	2.92	1.61	1.18	1.12
IRL3803PBF	IR	865-1035●	6.70	4.30	3.30	2.51
IRL510PBF	VISH	910-2779●	0.97	0.55	0.40	0.35
IRL520PBF	VISH	910-2744●	1.42	– –	– –	– –
IRL530PBF	VISH	910-2752●	1.51	0.80	0.56	0.46
IRL530NPBF	IR	910-2787●	0.67	0.44	0.37	0.36
IRL540PBF	VISH	910-2760●	2.90	1.54	1.09	1.02
IRL540NPBF	IR	865-1078●	0.79	0.62	0.50	0.49
IRL630PBF	VISH	865-1108●	1.08	0.66	0.65	0.63
IRL640PBF	VISH	865-9923●	2.55	1.40	1.04	0.86
IRL7833PBF	IR	101-3456●	2.78	1.93	1.50	1.20
IRL8113PBF	IR	865-9931●	2.19	1.21	0.88	0.84
IRLZ24NPBF	IR	865-1388●	1.74	0.91	0.64	0.60
IRLZ14PBF	VISH	865-1370●	0.92	0.51	0.37	0.33
IRLZ24PBF	VISH	101-3457●	0.84	0.45	0.42	0.41
IRLZ34NPBF	IR	865-1396●	0.70	0.47	0.40	0.34
IRLZ34PBF	VISH	865-1400●	1.64	0.87	0.63	0.61
IRLZ44NPBF	IR	865-1418●	0.74	0.58	0.49	0.45
IRLZ44ZPBF	IR	866-0360●	2.03	1.12	0.82	0.78
NDP6060L	FCH	101-7726●	1.45	0.99	0.71	0.66
PHP101NQ03LT	NXP	108-1451●	1.58	– –	– –	– –
PSMN005-75P	NXP	108-1488●	2.80	– –	– –	– –
PSMN009-100P	NXP	108-1489●	3.15	2.02	1.62	1.59
RFP12N10L	FCH	101-7795●	0.99	0.62	0.45	0.33
RFP30N06LE	FCH	101-7798●	0.95	– –	– –	– –
STP16NF06L..	ST	980-3068●	0.95	0.70	0.51	0.45
STP22NF03L	ST	980-3092●	0.53	– –	– –	– –
STP36NF06L	ST	993-5614●	0.83	– –	– –	– –
STP40NF03L	ST	980-3149●	1.09	0.83	0.76	0.69
STP40NF10L	ST	980-3165●	1.36	1.03	0.97	0.89
STP60NF03L	ST	980-3254●	0.94	0.68	0.47	0.34
STP60NF06L	ST	993-5657●	1.51	0.89	0.72	0.62
STP80NF03L-04	ST	951-2578●	3.23	2.56	1.90	1.54

TO-220 Isolated



(a) TO-220 FULLPAK Isolation voltage 2.5kV

(b) TO-220FP/ ISOWATT220 Isolation voltage 2kV

(c) TO-220FM/ SOT-186 Isolation voltage 2kV

Isolated packages offer simplified heatsink mounting, without the need for additional isolating washers, mica etc.

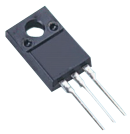
N Channel, V_{DS} <100V

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	P_D @ 25°C W	Package	Mftr.	Mftrs. List No.
55	0.005	60	240	45	(b)	ST	STP80NF55-06FP
55	0.008	64	390	63	(c)	IR	IRFI3205PBF
55	0.024	28	160	38	(c)	IR	IRFIZ44NPBF
55	0.04	19	100	31	(c)	IR	IRFIZ34NPBF
55	0.07	14	68	29	(c)	IR	IRFIZ24NPBF
60	0.01	53	212	62	(a)	FCH	FQPF85N06
60	0.012	39	290	43	(c)	IR	IRFIZ48VPBF
60	0.014	14	56	37	(c)	VISH	IRFIZ24GPBF
60	0.018	50	200	30	(c)	ST	STP55NF06FP
60	0.016	40	160	56	(a)	FCH	FQPF65N06
60	0.018	37	150	50	(c)	VISH	IRFIZ48GPBF
60	0.022	31	124	47	(a)	FCH	FQPF50N06
60	0.028	20	120	30	(c)	IR	IRFIZ34VPBF
60	0.04	18	72	25	(b)	ST	STP36NF06FP
60	0.042	21	100	37	(c)	IR	IRFIZ34EPBF

383288

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
FQPF50N06	**984-5879**	1.13	0.77	0.57	0.41	0.34
FQPF65N06	**984-5887**	0.88	0.64	0.53	0.52	0.51
FQPF85N06	**984-5917**	1.77	1.22	0.88	0.81	0.75
IRFI3205PBF	**864-8921**	1.59	1.34	1.08	0.99	0.97
IRFIZ24GPBF	**865-8250**	0.95	0.57	0.47	0.46	0.45
IRFIZ24NPBF	**926-4388**	1.12	0.61	0.46	0.44	0.43
IRFIZ34EPBF	**865-8269**	1.20	0.75	0.56	0.42	0.38
IRFIZ34NPBF	**864-9111**	1.42	0.75	0.52	0.49	0.44
IRFIZ34VPBF	**865-8285**	1.23	0.68	0.54	0.52	0.51
IRFIZ44NPBF	**864-9120**	1.61	0.85	0.61	0.59	0.58
IRFIZ48GPBF	**865-8293**	3.32	1.83	1.37	1.20	1.14
IRFIZ48VPBF	**865-8307**	2.07	1.08	0.82	0.80	0.78
STP36NF06FP	**993-5606**	0.82	0.54	0.49	0.42	0.36
STP55NF06FP	**980-3220**	1.81	1.45	1.11	0.83	0.66
STP80NF55-06FP	**993-5690**	2.57	1.72	1.59	1.47	1.28

N Channel, V_{DS} 100-500V



FAIRCHILD SEMICONDUCTOR, VISHAY, International IOR Rectifier

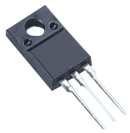
V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	P_D @ 25°C W	Mftr.	Mftrs. List No.
100	0.036	22	140	45	IR	IRFI1310NPBF
100	0.052	18	110	42	IR	IRFI540NPBF
100	0.077	17	68	48	VISH	IRFI540GPBF
100	0.108	11	60	33	IR	IRFI530NPBF
100	0.2	7.6	38	30	IR	IRFI520NPBF
150	0.045	41	164	200	IR	IRFIB41N15DPBF
200	0.066	39	156	37	FCH	FDPF39N20
200	0.15	11.8	48	50	FCH	FQPF19N20
200	0.18	9.8	39	40	VISH	IRFI640GPBF
200	0.4	5.9	24	32	VISH	IRFI630GPBF
250	0.28	7.9	32	40	VISH	IRFI644GPBF
400	0.55	9	36	30	ST	STP11NK40ZFP
400	0.55	5.4	22	40	VISH	IRFI740GPBF
400	0.25	5.4	21.6	25	ST	STP17NK40ZFP
400	1.8	2.6	10	30	VISH	IRFI720GPBF
500	0.85	4.6	18	40	VISH	IRFI840GPBF
500	1.5	3.1	12	32	VISH	IRFI830GPBF
500	3	2.1	8.4	30	VISH	IRFI820GPBF

383295

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	250+
FDPF39N20	FCH	**149-5245**	1.45	0.99	0.71	0.66
FQPF19N20	FCH	**984-5801**	1.53	1.04	0.76	0.55
IRFIB41N15DPBF	IR	**865-8188**	2.78	1.54	1.13	1.07
IRFI520NPBF	IR	**101-3500**	1.13	0.62	0.46	0.38
IRFI1310NPBF	IR	**864-8913**	2.03	1.19	1.16	1.13
IRFI530NPBF	IR	**910-2469**	1.27	0.70	0.52	0.43
IRFI540GPBF	VISH	**864-8930**	2.84	– –	– –	– –
IRFI540NPBF	IR	**864-8948**	1.56	0.86	0.64	0.53
IRFI630GPBF	VISH	**864-8956**	1.70	0.92	0.87	0.84
IRFI640GPBF	VISH	**910-2450**	6.00	3.18	2.14	2.00
IRFI644GPBF	VISH	**864-8964**	4.10	2.33	1.79	1.56
IRFI720GPBF	VISH	**864-8972**	2.36	1.29	0.96	0.79
IRFI740GPBF	VISH	**864-8999**	2.24	1.28	0.96	0.88
IRFI820GPBF	VISH	**864-9006**	2.17	1.18	0.88	0.73
IRFI830GPBF	VISH	**864-9014**	2.16	0.86	0.77	0.72
IRFI840GPBF	VISH	**864-9022**	3.82	2.20	1.55	1.42
STP11NK40ZFP	ST	**980-3041**	1.50	1.10	0.89	0.76
STP17NK40ZFP	ST	**980-3076**	3.31	2.43	1.96	1.67

TO-220F

FAIRCHILD SEMICONDUCTOR



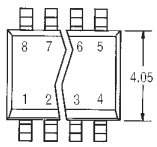
V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont}$ @ 25°C A	$I_{DM\ pulse}$ @ 25°C A	$V_{GS(th)}$ max. V	P_D @ 25°C W	Mftrs List No.
N Channel						
500	0.8	9	36	4	44	FQPF9N50C

TO-220F Lead spacing=2.54

496479

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+
FQPF9N50C	**144-0062**	1.34	0.91	0.67	0.48

SO-8



H=1.75, W=6.3, D=5.2

FAIRCHILD SEMICONDUCTOR, VISHAY, International IOR Rectifier, NXP, SMD

Single or dual high performance MOSFETs in a space efficient, small outline package.

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	P_D @ 25°C W	Mftr.	Mftrs. List No.
Single N-Channel						
12	0.007	16	65	2.5	IR	IRF7410TRPBF
12	0.015	10	79	2	IR	IRF7910PBF
12	8	15	120	2.5	IR	IRF7476PBF
14	0.007	16	100	2.5	IR	IRF7210PBF
20	0.029	6.6	26	2	IR	IRF7311PBF
20	0.0044	20	160	2.5	IR	IRF3717PBF
20	0.007	15	120	2.5	IR	IRF7457PBF
20	0.0082	15	60	2.5	IR	IRF7425PBF
20	0.022	8.7	35	2.5	IR	IRF7401PBF
20	0.045	6	24	2.5	ST	STS6NF20V
20	0.035	6.8	54	2.5	IR	IRF7402PBF
20	0.05	4.3	17	1.4	IR	IRF7301PBF
20	0.085	4	17	2.5	IR	IRF1902PBF
20	0.1	3.5	14	2	IR	IRF7101PBF
20	9	10	100	2.5	IR	IRF7459TRPBF
20	0.04	6.7	27	2.5	IR	IRF7404QPBF
30	0.0036	21	170	2.5	IR	IRF7831PBF
30	0.0036	21	106	2.5	FCH	FDS6699S
30	0.0037	21	105	2.5	FCH	FDS8670
30	3.8	21	160	2.5	IR	IRF7832ZPBF
30	0.004	20	160	2.5	IR	IRF7832PBF
30	0.0042	18	90	2.5	FCH	FDS8870
30	0.005	18	150	3.1	IR	IRF7822.PBF
30	0.0056	17.2	135	2.5	IR	IRF8113PBF
30	6.5mohm	23.7	60	6.25	NXP	PHK28NQ03LT
30	0.0075	14	50	2.5	FCH	FDS6682
30	8mohm	14	110	2.5	IR	IRF7463PBF
30	0.0085	14.5	100	2.5	IR	IRF7809AVPBF
30	0.0085	14	110	2.5	IR	IRF7477PBF
30	0.009	12.5	50	2.5	IR	SI4420DYPBF
30	0.009	14	109	3.1	IR	IRF7811WPBF
30	0.0091	13.6	100	2.5	IR	IRF7821PBF
30	0.0095	13.6	100	2.5	IR	IRF7828PBF
30	0.009	12	48	2.5	ST	STS12NF30L
30	0.01	12	58	2.5	IR	IRF7413PBF
30	0.01	11.5	50	2.5	FCH	FDS6680AS
30	0.0105	11	44	2.5	ST	STS11NF30L
30	0.011	10.8	10.8	2.5	IR	IRF7811AVPBF
30	0.019	9	36	2.5	ST	STS9NF3LL
30	0.022	6.7	27	1.6	IR	IRF7403PBF
30	0.025	8.3	66	2.5	IR	IRF7807APBF
30	0.068	16	120	2.5	IR	IRF7805ZPBF
30	0.01	13	100	2.5	IR	IRF7413ZPBF
30	0.011	13	100	2.5	IR	IRF7805PBF
30	0.0138	11	88	2.5	IR	IRF7807ZPBF
30	0.02	10	45	2.5	IR	IRF7416TRPBF
30	0.025	8.3	66	2.5	IR	IRF7807PBF
30	0.03	7	37	2.5	IR	IRF9410PBF
30	0.03	7.3	58	2.5	IR	IRF7201PBF
30	0.03	6	24	2.5	ST	STS6PF30L
30	0.03	6.7	15	2	FCH	NDS8936
30	0.05	4.9	20	2	IR	IRF7303PBF
30	0.05	4.9	20	2.0	IR	IRF7303QPBF
30	0.08	3.7	15	2	FCH	NDS9956A
30	0.1	3.5	16	2	IR	IRF9956PBF
30	14	11.8	35.3	2.5	NXP	PHK12NQ03LT
30	4.4	20	60	3.5	NXP	PSMN005-30K
30	0.0037	21	170	2.5	IR	IRF7862PBF
30	0.0087	14	110	2.5	IR	IRF8714PBF
30	0.0085	14	110	2.5	IR	IRF8721PBF
30	0.0048	18	144	2.5	IR	IRF8736PBF
30	0.011	13	58	2.5	IR	IRF7413QPBF
30	0.011	13	100	2.5	IR	IRF7805QPBF
40	0.005	18	140	140	IR	IRF7842PBF
40	0.0105ohm	12.8	50	2.5	FCH	FDS8447
40	0.013	10	83	2.5	IR	IRF7471PBF
40	0.013	10	85	2.5	IR	IRF7470.PBF
40	0.0155	9.4	75	2.5	IR	IRF7468PBF

Power MOSFETs - continued

SO-8 - continued

V_{DS}	$R_{DS(on)}$	$I_{D\ cont}$ @ 25°C	I_D pulsed	P_D @ 25°C		Mftrs.
Single N-Channel						
40	0.017	9	73	2.5	IR	IRF7469PBF
40	0.015	10.5	43	2.5	IR	IRF7240PBF
40	0.112	3.4	27	2	IR	IRF5803D2TRPBF
50	0.13	3	10	2	IR	IRF7103PBF
55	0.05	4.7	38	2	IR	IRF7341PBF
60	0.0094	12	97	97	IR	IRF7855PBF
60	0.026	4.2	56	2.5	IR	IRF7478PBF
60	0.055	4	16	2.5	ST	STS4DNF60L
60	0.026	7.6	56	2.5	IR	IRF7478QPBF
80	0.0134	10	79	79	IR	IRF7854PBF
80	0.029	6.3	50	2.5	IR	IRF7488PBF
80	0.073	3.6	29	2	IR	IRF7380PBF
100	18	8.3	66	2.5	IR	IRF7853PBF
100	0.019	7.5		2.5	FCH	FDS3672
100	0.022	7.3	58	2.5	IR	IRF7495PBF
100	0.026	6.9	55	2.5	IR	IRF7473.PBF
100	28mohm	11.6	48	8.9	NXP	PHK12NQ10T
100	0.039	5.4	43	2.5	IR	IRF7490PBF
100	0.063	4.5	36	2.5	IR	IRF7474PBF
150	0.28	1.9	15	2.5	IR	IRF7465PBF
150	44	5.2	42	3	IR	IRF7494PBF
150	75mohm	5	20	6.25	NXP	PHK5NQ15T
150	0.09	3.6	29	2.5	IR	IRF7451PBF
150	0.24	2.2	19	2.5	IR	IRF6216PBF
200	0.079	3.7	30	2.5	IR	IRF7492PBF
200	0.17	2.5	20	2.5	IR	IRF7450PBF
80	0.015	9.3	74	2.5	IR	IRF7493PBF
200	0.73	1.2	10	2.5	IR	IRF7464PBF
Single P-Channel						
12	0.007	16	65	2.5	IR	IRF7410PBF
12	0.014	11.5	46	2.5	IR	IRF7420PBF
12	0.024	8.7	36	2.5	IR	IRF7433.PBF
20	0.06	5.3	21	2.5	IR	IRF7204PBF
20	0.06	5.4	43	2.5	IR	IRF7207PBF
20	0.04	5.3	21	1.6	IR	IRF7404PBF
20	0.03	7	28	2	IR	IRF7331PBF
30	0.07	4.6	15	2.5	IR	IRF7205PBF
30	0.0135	11	47	2.5	IR	IRF7424.PBF
30	0.015	8	50	2.5	IR	SI4435DYPBF
30	0.02	8.8	45	2.5	IR	IRF7416PBF
30	0.25	2.5	10	2.5	FCH	NDS9400A
30	0.045	5.2	20	1.6	IR	IRF7406PBF
30	0.05	5.3	15	2.5	FCH	NDS9435A
40	0.041	6.2	25	2.5	IR	IRF7241PBF
Dual N-Channel						
30	0.028,0.0135	8.6,6.3	30,20	2	FCH	FDS6982AS
30	0.022,0.027	8.2,6.9	30,20	2	FCH	FDS6900AS
30	0.05	4.9	20	2.0	IR	IRF7303QPBF
80	61	3.6	29	2.0	IR	IRF7380QPBF
Dual P-Channel						
12	0.024	7.8	39	2	IR	IRF7325PBF
12	0.017	9.2	37	2	IR	IRF7329PBF
20	0.018	9	71	2	IR	IRF7324PBF
20	0.025	2.3	10	2.0	IR	IRF7104PBF
20	0.053	4.2	23	1.4	IR	IRF7314PBF
20	0.09	4.3	17	2	IR	IRF7304PBF
20	0.09	4.3	17	2.0	IR	IRF7304QPBF
30	0.013	11	55	2.5	FCH	FDS6675BZ
30	0.058	4.9	30	2	IR	IRF7316PBF
30	0.1	3	12	1.4	IR	IRF7306PBF
30	0.1	4	—	2	FCH	NDS8947
30	0.017	8	32	2	IR	IRF7328PBF
30	0.2	2.9	10	2	FCH	NDS9953A
30	0.25	2.3	10	2	IR	IRF9953PBF
30	0.029	6.5	30	2	IR	IRF7313PBF
Dual N/P Channel						
20	0.1(N), 0.058(P)	6.6(N), 5.3(P)	26(N), 21(P)	2	IR	IRF7317PBF
20	0.05(N), 0.09(P)	5.2(N), 4.3(P)	21(N), 17(P)	2	IR	IRF7307PBF
20	0.1(N), 0.058(P)	5.2(N), 4.3(P)	21(N), 17(P)	2.0	IR	IRF7307QPBF
25	0.1(N), 0.25(P)	3.5(N), 2.3(P)	14(N), 10(P)	2	IR	IRF7105PBF
25	0.10(N), 0.25(P)	3.5(N), 2.3(P)	21(N), 17(P)	2.0	IR	IRF7105QPBF
30	0.017(N), 0.0205(P)	8.6(N), 7.3(P)	20(N), 20(P)	2	FCH	FDS8858CZ
30	0.029(N), 0.058(P)	6.5(N), 4.9(P)	30(N), 30(P)	2	IR	IRF7319PBF
30	0.05(N), 0.1(P)	4(N), 3(P)	16(N), 12(P)	1.4	IR	IRF7309PBF
30	0.09(N&P)	4.3(N&P)	46(N), 34(P)	2.5	IR	IRF7379PBF
30	0.1(N), 0.25(P)	3.5(N), 2.3(P)	16(N), 10(P)	2	IR	IRF9952PBF
30	0.10(N), 0.25(P)	3.5(N), 2.3(P)	16(N), 10(P)	2.0	IR	IRF9952QPBF
35	0.024(N), 0.024(P)	7(N), 5(P)	20(N&P)	2	FCH	FDS8960C
100(N&P)	0.21(N), 0.48(P)	2.1(N), 1.5(P)	(N), 6(P)	2	IR	IRF7350PBF

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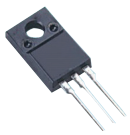
List No.	Mftr.	Order Code	Price Each 1+	25+	100+	250+	1K+
Single N-Channel							
FDS3672	FCH	SMD 149-5207	1.450	1.030	0.790	0.660	0.640
FDS6680AS	FCH	SMD 149-5210	0.850	0.570	0.430	0.300	0.260
FDS6682	FCH	SMD 149-5211	0.410	0.370	0.360	0.350	0.340
FDS6699S	FCH	SMD 149-5213	0.890	0.690	0.520	0.410	0.400

List No.	Mftr.	Order Code	Price Each 1+	25+	100+	250+	1K+
Single N-Channel							
FDS6900AS	FCH	SMD 149-5214	1.450	0.990	0.730	0.510	0.450
FDS6982AS	FCH	SMD 149-5216	1.070	0.720	0.540	0.380	0.330
FDS8447	FCH	SMD 149-5221	1.030	0.760	0.580	0.440	0.380
FDS8858CZ	FCH	SMD 149-8963	1.360	0.930	0.670	0.480	0.420
IRF1902PBF	IR	SMD 101-3428	0.560	– –	– –	– –	– –
IRF3717PBF	IR	SMD 101-3429	1.560	1.000	0.770	0.710	0.660
IRF5803D2TRPBF	IR	SMD 129-8542 RL	0.600	0.430	0.350	0.340	0.330
IRF6216PBF	IR	SMD 129-8488	0.710	0.550	0.440	0.410	0.400
IRF7201PBF	IR	SMD 910-2663	0.970	0.620	0.480	0.440	0.410
IRF7210PBF	IR	SMD 129-8512	2.030	1.480	1.280	1.130	1.070
IRF7240PBF	IR	SMD 129-8500	1.010	0.770	0.600	0.550	0.510
IRF7401PBF	IR	SMD 910-2604	1.420	1.330	1.260	0.540	0.510
IRF7402PBF	IR	SMD 910-2850	1.140	0.700	0.540	0.490	0.460
IRF7403PBF	IR	SMD 910-2671	2.230	1.430	1.100	0.970	0.920
IRF7410TRPBF	IR	SMD 129-8514 RL	1.680	1.070	0.830	0.760	0.710
IRF7413PBF	IR	SMD 910-2680	2.840	– –	– –	– –	– –
IRF7413ZPBF	IR	SMD 101-3430	0.640	0.430	0.330	0.270	0.240
IRF7416TRPBF	IR	SMD 129-8502 RL	1.020	– –	– –	– –	– –
IRF7425PBF	IR	SMD 129-8554	1.270	0.810	0.630	0.580	0.540
IRF7450PBF	IR	SMD 101-3459	1.030	– –	– –	– –	– –
IRF7451PBF	IR	SMD 101-3460	1.310	0.860	0.660	0.570	0.560
IRF7457PBF	IR	SMD 101-3431	1.320	0.840	0.660	0.600	0.560
IRF7459TRPBF	IR	SMD 129-8507 RL	0.850	0.630	0.530	0.520	0.510
IRF7463PBF	IR	SMD 101-3469	1.430	0.920	0.710	0.630	0.590
IRF7464PBF	IR	SMD 101-3462	1.270	0.810	0.620	0.570	0.530
IRF7465PBF	IR	SMD 101-3463	0.760	– –	– –	– –	– –
IRF7468PBF	IR	SMD 101-3433	1.010	– –	– –	– –	– –
IRF7469PBF	IR	SMD 101-3434	0.810	0.520	0.400	0.370	0.340
IRF7476PBF	IR	SMD 129-8486	0.830	0.590	0.480	0.440	0.430
IRF7470.PBF	IR	SMD 910-2868	0.720	– –	– –	– –	– –
IRF7471PBF	IR	SMD 101-3436	1.050	0.720	0.570	0.550	0.540
IRF7473.PBF	IR	SMD 910-2884	1.010	0.710	0.700	0.680	0.630
IRF7474PBF	IR	SMD 910-2892	0.820	0.500	0.390	0.360	0.330
IRF7477PBF	IR	SMD 910-2906	0.950	0.670	0.520	0.480	0.440
IRF7478PBF	IR	SMD 101-3437	0.720	0.460	0.350	0.290	0.260
IRF7488PBF	IR	SMD 910-2914	0.770	0.540	0.420	0.380	0.360
IRF7490PBF	IR	SMD 910-2922	0.720	– –	– –	– –	– –
IRF7492PBF	IR	SMD 926-4353	0.930	0.760	0.600	0.570	0.550
IRF7493PBF	IR	SMD 101-3466	0.750	0.640	0.550	0.530	0.520
IRF7494PBF	IR	SMD 129-8546	1.510	– –	– –	– –	– –
IRF7495PBF	IR	SMD 101-3467	1.860	0.970	0.680	0.640	0.580
IRF7805PBF	IR	SMD 101-3438	0.900	0.610	0.520	0.490	– –
IRF7805ZPBF	IR	SMD 101-3441	0.750	– –	– –	– –	– –
IRF7807PBF	IR	SMD 101-3442	0.670	0.430	0.330	0.300	0.280
IRF7807APBF	IR	SMD 910-2930	0.620	0.490	0.460	0.420	0.400
IRF7807ZPBF	IR	SMD 101-3444	0.630	– –	– –	– –	– –
IRF7809AVPBF	IR	SMD 910-2833	1.140	0.730	0.560	0.520	0.480
IRF7811AVPBF	IR	SMD 101-3445	0.710	0.460	0.350	0.320	0.300
IRF7811WPBF	IR	SMD 910-2949	0.570	0.360	0.320	0.310	0.300
IRF7821PBF	IR	SMD 101-3495	0.730	– –	– –	– –	– –
IRF7822.PBF	IR	SMD 910-2957	2.420	1.660	1.280	1.150	1.070
IRF7828PBF	IR	SMD 101-3447	0.500	0.340	0.330	0.320	0.310
IRF7831PBF	IR	SMD 101-3448	2.030	1.300	1.000	0.920	0.860
IRF7832PBF	IR	SMD 101-3449	1.830	– –	– –	– –	– –
IRF7832ZPBF	IR	SMD 129-8543	1.100	0.680	0.520	0.510	0.500
IRF7842PBF	IR	SMD 143-6945	1.220	– –	– –	– –	– –
IRF7854PBF	IR	SMD 143-6947	1.190	0.760	0.590	0.540	0.500
IRF7855PBF	IR	SMD 143-6948	0.960	0.610	0.500	0.440	0.410
IRF7853PBF	IR	SMD 129-8555	1.360	– –	– –	– –	– –
IRF8113PBF	IR	SMD 101-3450	0.960	– –	– –	– –	– –
IRF9410PBF	IR	SMD 910-2698	1.250	– –	– –	– –	– –
IRF7862PBF	IR	SMD 155-1898	1.270	0.810	0.630	0.580	0.540
IRF8714PBF	IR	SMD 155-1901	0.510	0.310	0.240	0.220	0.210
IRF8721PBF	IR	SMD 155-1902	0.390	0.250	0.192	0.175	0.163
IRF8736PBF	IR	SMD 155-1903	0.540	0.340	0.270	0.260	0.240
IRF7404QPBF	IR	SMD 155-1933	0.810	0.520	0.400	0.370	0.340
IRF7413QPBF	IR	SMD 155-1934	1.010	0.650	0.500	0.460	0.430
IRF7478QPBF	IR	SMD 155-1937	0.760	0.490	0.370	0.340	0.320
IRF7805QPBF	IR	SMD 155-1938	0.480	0.340	0.310	0.300	0.290
PHK5NQ15T	NXP	SMD 109-7169 RL	1.590	1.010	0.800	0.590	0.560
PHK12NQ03LT	NXP	SMD 109-7163 RL	0.400	0.260	0.250	0.240	0.230
PHK12NQ10T	NXP	SMD 109-7164 RL	1.200	– –	– –	– –	– –
PHK28NQ03LT	NXP	SMD 109-7166 RL	1.410	– –	– –	– –	– –
PSMN005-30K	NXP	SMD 109-7171 RL	1.450	– –	– –	– –	– –
SI4420DYPBF	IR	SMD 101-3451	2.110	1.330	1.020	0.920	0.850
STS4DNF60L	ST	SMD 993-5738 RL	1.260	0.770	0.760	0.720	0.600
STS6NF20V	ST	SMD 993-5762 RL	0.540	0.400	0.310	0.260	0.250
STS6PF30L	ST	SMD 993-5770 RL	0.840	0.560	0.510	0.440	0.370
STS9NF3LL	ST	SMD 993-5797 RL	0.400	0.310	0.290	0.270	0.250

List No.	Mftr.	Order Code	Price Each 1+	25+	100+	250+	1K+
Single N-Channel							
STS11NF30L	ST	SMD 993-5711 RL	0.610	0.480	0.460	0.400	– –
STS12NF30L	ST	SMD 994-6381 RL	0.940	0.710	0.520	0.430	0.410
			1+	**25+**	**100+**	**250+**	**1K+**
FDS8670	FCH	SMD 122-8335	0.980	– –	– –	– –	– –
FDS8870	FCH	SMD 122-8336	1.750	1.190	0.870	0.620	0.540
FDS8960C	FCH	SMD 122-8338	1.730	1.160	0.870	0.620	0.530
Single P-Channel							
FDS6675BZ	FCH	SMD 149-5209	1.050	0.710	0.520	0.370	0.320
IRF7204PBF	IR	SMD 910-3350	1.270	0.770	0.600	0.550	0.510
IRF7205PBF	IR	SMD 910-3368	0.990	0.630	0.480	0.370	0.340
IRF7207PBF	IR	SMD 101-3473	1.380	0.900	0.680	0.600	0.590
IRF7241PBF	IR	SMD 910-3457	1.300	0.790	0.620	0.600	0.590
IRF7331PBF	IR	SMD 910-3465	2.130	1.580	1.230	1.120	1.050
IRF7404PBF	IR	SMD 910-3384	1.720	0.960	0.680	0.500	0.460
IRF7406PBF	IR	SMD 910-3376	1.490	0.860	0.840	0.520	0.470
IRF7410PBF	IR	SMD 910-3449	1.290	0.810	0.620	0.510	0.460
IRF7416PBF	IR	SMD 910-3392	2.820	1.920	1.850	1.130	1.030
IRF7420PBF	IR	SMD 910-3473	0.960	0.590	0.460	0.420	0.380
IRF7424.PBF	IR	SMD 910-3481	1.010	0.620	0.470	0.440	0.400
IRF7433.PBF	IR	SMD 910-3490	0.700	0.540	0.440	0.400	0.370
NDS9400A	FCH	SMD 101-7728 RL	0.990	0.700	0.540	0.360	0.300
NDS9435A	FCH	SMD 984-6182 RL	0.790	– –	– –	– –	– –
SI4435DYPBF	IR	SMD 101-3478	1.290	0.850	0.640	0.450	– –
Dual N-Channel							
IRF7101PBF	IR	SMD 910-2043	1.150	0.700	0.550	0.500	0.480
IRF7103PBF	IR	SMD 910-2027	1.290	0.810	0.620	0.540	0.530
IRF7303PBF	IR	SMD 910-2019	1.220	0.700	0.540	0.420	0.380
IRF7301PBF	IR	SMD 910-2051	1.710	0.940	0.670	0.490	0.450
IRF7311PBF	IR	SMD 101-3364	2.840	– –	– –	– –	– –
IRF7341PBF	IR	SMD 910-2035	1.030	0.630	0.490	0.480	0.470
IRF7380PBF	IR	SMD 101-3365	1.500	0.960	0.740	0.680	0.630
IRF7910PBF	IR	SMD 101-3366	1.030	0.660	0.510	0.470	0.440
IRF9956PBF	IR	SMD 910-2060	0.980	0.570	0.540	0.340	0.310
NDS8936	FCH	SMD 984-4724 RL	1.140	0.810	0.620	0.420	0.380
NDS9956A	FCH	SMD 101-7730 RL	1.080	0.680	0.490	0.290	0.240
IRF7303QPBF	IR	SMD 155-1919	0.700	0.450	0.340	0.310	0.290
IRF7380QPBF	IR	SMD 155-1932	0.830	0.530	0.410	0.380	0.350
Dual P-Channel							
IRF7104PBF	IR	SMD 101-3369	0.910	0.610	0.460	0.370	0.340
IRF7304PBF	IR	SMD 101-3370	1.050	0.670	0.520	0.480	0.440
IRF7306PBF	IR	SMD 910-2205	1.380	0.770	0.540	0.420	0.380
IRF7313PBF	IR	SMD 910-2256	1.160	1.000	0.900	0.760	0.640
IRF7314PBF	IR	SMD 910-2213	1.620	0.950	0.910	0.890	0.870
IRF7316PBF	IR	SMD 910-2221	2.850	1.820	1.410	1.290	1.200
IRF7324PBF	IR	SMD 101-3371	1.960	– –	– –	– –	– –
IRF7325PBF	IR	SMD 101-3372	1.530	1.060	0.820	0.700	0.690
IRF7328PBF	IR	SMD 101-3374	1.140	0.730	0.560	0.520	0.480
IRF7329PBF	IR	SMD 101-3375	1.120	0.690	0.530	0.490	0.460
IRF7342PBF	IR	SMD 910-2191	0.900	0.550	0.430	0.390	0.360
IRF9953PBF	IR	SMD 910-2230	1.110	– –	– –	– –	– –
NDS8947	FCH	SMD 984-4880 RL	1.610	1.140	0.880	0.590	0.530
NDS9953A	FCH	SMD 101-7729 RL	1.270	0.900	0.680	0.440	0.410
IRF7304QPBF	IR	SMD 155-1920	0.690	– –	– –	– –	– –
Dual P/N Channel							
IRF7105PBF	IR	SMD 910-2132	0.970	0.610	0.470	0.380	0.360
IRF7307PBF	IR	SMD 910-2124	1.410	0.860	0.670	0.660	0.640
IRF7309PBF	IR	SMD 910-2175	1.380	0.770	0.540	0.420	0.380
IRF7317PBF	IR	SMD 910-2159	1.290	0.880	0.710	0.610	0.600
IRF7319PBF	IR	SMD 910-2167	1.430	– –	– –	– –	– –
IRF7343PBF	IR	SMD 910-2140	0.830	0.510	0.400	0.390	0.380
IRF7350PBF	IR	SMD 101-3368	0.660	0.500	0.400	0.340	– –
IRF7379PBF	IR	SMD 101-3367	1.400	0.960	0.930	0.920	0.900
IRF9952PBF	IR	SMD 910-2183	1.150	0.670	0.640	0.380	0.360
IRF7105QPBF	IR	SMD 155-1918	0.750	0.470	0.370	0.340	0.310
IRF7307QPBF	IR	SMD 155-1922	0.760	0.490	0.370	0.340	0.320
IRF9952QPBF	IR	SMD 155-1939	1.710	1.090	0.850	0.770	0.720

N Channel, V_{DS} 500 V to 1000 V



V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	P_D @ 25°C W	Mftr.	Mftrs. List No.
500	0.38	16	64	38.5	TO-220F	FCH FDPF16N50
500	0.52	10	40	30	TO-220FP	ST STP11NK50ZFP
500	0.52	6.6	44	60	TO-220FP	VISH IRFIB7N50APBF
500	0.85	7.2	28.8	30	TO-220FP	ST STP9NK50ZFP
500	0.85	4.6	18	40	TO-220FP	VISH IRFI840GPBF
500	1.5	4.4	17.6	25	TO-220FP	ST STP5NK50ZFP
500	1.5	3.1	12	32	TO-220FP	VISH IRFI830GPBF
500	3	2.1	8.4	30	TO-220FP	VISH IRFI820GPBF
600	0.75	10	36	35	TO-220FP	ST STP10NK60ZFP
600	0.75	5.5	37	60	TO-220FP	VISH IRFIB6N60APBF
600	1.2	6	24	32	TO-220FP	ST STP6NK60ZFP
600	1.2	3.5	14	40	TO-220FP	VISH IRFIBC40GPBF
600	3.6	2.4	9.6	20	TO-220FP	ST STP3NK60ZFP
600	4.4	1.7	6.8	30	TO-220FP	VISH IRFIBC20GPBF
650	0.93	5.1	21	60	TO-220FP	VISH IRFIB5N65APBF
800	0.9	9	36	40	TO-220FP	ST STP10NK80ZFP
800	1.8	5.2	20.8	30	TO-220FP	ST STP7NK80ZFP
800	2.4	4.3	17.2	30	TO-220FP	ST STP5NK80ZFP
800	6.3	1.5	6	35	TO-220F	FCH FQPF2N80
800	6.5	1.4	5.6	30	TO-220FP	VISH IRFIBE20GPBF
800	3	2.1	8.4	35	TO-220FP	VISH IRFIBE30GPBF
900	4.8	3	12	25	TO-220FP	ST STP3NK90ZFP

383296

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
FDPF16N50	149-8959	4.06	2.76	2.03	1.45	1.24
FQPF2N80	984-5828	0.68	0.47	0.38	0.37	0.36
IRFI820GPBF	864-9006	2.17	1.18	0.88	0.73	0.72
IRFI830GPBF	864-9014	2.16	0.86	0.77	0.72	0.66
IRFI840GPBF	864-9022	3.82	2.20	1.55	1.42	1.40
IRFIBC20GPBF	865-8226	2.62	1.44	1.07	0.88	0.85
IRFIBC40GPBF	864-9090	2.00	1.24	1.14	1.11	1.10
IRFIBE20GPBF	865-8234	3.53	1.93	1.44	1.20	0.87
IRFIBE30GPBF	101-3501	1.90	1.55	1.22	– –	– –
IRFIB5N65APBF	864-9065	3.21	1.83	1.23	1.13	1.09
IRFIB6N60APBF	864-9073	3.42	1.94	1.48	1.30	1.25
IRFIB7N50APBF	864-9081	3.67	2.01	1.50	1.25	1.21
STP10NK80ZFP	980-3025	3.13	2.50	1.92	1.44	1.14
STP3NK60ZFP	980-3114	0.86	0.63	0.51	0.44	0.37
STP3NK90ZFP	980-3130	1.40	1.04	0.76	0.67	0.54
STP5NK50ZFP	993-5649	1.05	0.77	0.62	0.53	0.45
STP5NK80ZFP	980-3246	1.17	0.88	0.87	0.75	0.73
STP6NK60ZFP	980-3289	0.98	0.73	0.66	0.60	0.51
STP7NK80ZFP	980-3327	2.00	1.46	1.18	1.01	0.86
STP9NK50ZFP	980-3343	1.04	0.77	0.75	0.64	0.61
STP10NK60ZFP	993-5517	1.31	0.91	0.74	0.64	0.63
STP11NK50ZFP	993-5525	1.51	0.90	0.73	0.63	0.62

100 V_{DS} to 250 V_{DS}, P-Channel

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	P_D @ 25°C W	Mftrs. List No.
60	0.14	12	48	42	IRFI9Z34GPBF
100	0.2	13	44	42	IRFI9540GPBF
100	0.3	7.7	31	38	IRFI9530GPBF
100	0.6	5.2	21	37	IRFI9520GPBF
200	0.8	4.3	17	35	IRFI9630GPBF
250	1	4.1	16	35	IRFI9634GPBF

383298

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
IRFI9520GPBF	910-3295	2.44	1.34	1.01	0.88	0.84
IRFI9530GPBF	864-9030	2.64	– –	– –	– –	– –
IRFI9540GPBF	865-8145	3.48	1.98	1.51	1.32	1.27
IRFI9630GPBF	864-9049	2.29	1.27	0.93	0.83	0.79
IRFI9634GPBF	865-8161	2.97	1.63	1.22	1.01	0.98
IRFI9Z34GPBF	865-8170	2.82	1.58	1.18	1.03	0.99

TO-220 Isolated, Logic Level

- 2kV dc min. isolation
- Fully compatible with TO-220
- High thermal conductivity moulded resin
- No additional isolation required
- Excellent hermeticity

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	$V_{GS(th)}$ max (* min) V	P_D @ 25°C W	Mftr.	Mftrs. List No.
N channel							
30	0.007	61	400	1*	47	IR	IRLI2203NPBF
55	0.008	58	360	2	63	IR	IRLI2505PBF
55	0.01	47	310	2	47	IR	IRLI3705NPBF
55	0.022	28	160	2	38	IR	IRLIZ44NPBF
55	0.035	20	110	2	31	IR	IRLIZ34NPBF
55	0.06	14	77	2	26	IR	IRLIZ24NPBF

Power MOSFETs - continued

TO-220 Isolated, Logic Level - continued

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	$V_{GS(th)}$ max (* min) V	P_D @ 25°C W	Mftr.	Mftrs. List No.
N channel							
60	0.018	50	200	—	30	ST	STP55NF06FP
60	0.028	30	120	2	48	VISH	IRLIZ44GPBF
60	0.05	20	80	2	42	VISH	IRLIZ34GPBF
60	0.08	25	100	2	35	TOSH	2SK2232(F)
100	0.026	31	190	2	63	IR	IRLI2910PBF
100	0.044	20	120	2	42	IR	IRLI540NPBF
100	0.1	11	60	2	33	IR	IRLI530NPBF
100	0.18	7.7	35	2	27	IR	IRLI520NPBF
150	0.085	14	56	2	45	IR	IRLI3615PBF
200	0.18	9.8	40	2	40	VISH	IRLI640GPBF
200	0.8	4.1	16	2	30	VISH	IRLI620GPBF
P channel							
100	0.32	12	48	2	35	TOSH	2SJ380(F)

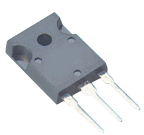
211244

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	250+
IRLI2203NPBF	IR	**865-1124**	2.69	1.53	1.17	1.10
IRLI2505PBF	IR	**865-9982**	6.34	3.61	3.00	2.90
IRLI2910PBF	IR	**865-1132**	2.78	1.58	1.21	0.96
IRLI3615PBF	IR	**865-9990**	1.86	0.98	0.72	0.64
IRLI3705NPBF	IR	**910-2558**	1.17	1.00	0.86	0.83
IRLI520NPBF	IR	**865-1140**	0.94	0.62	0.46	0.43
IRLI530NPBF	IR	**865-1159**	1.42	0.75	0.52	0.49
IRLI540NPBF	IR	**865-1167**	1.05	0.86	0.71	0.69
IRLI620GPBF	VISH	**866-0026**	1.45	0.80	0.59	0.52
IRLI640GPBF	VISH	**866-0042**	2.10	1.22	0.98	0.97
IRLIZ24NPBF	IR	**865-1175**	0.82	0.52	0.40	0.37
IRLIZ34GPBF	VISH	**866-0069**	1.86	– –	– –	– –
IRLIZ34NPBF	IR	**910-2566**	1.50	0.79	0.55	0.52
IRLIZ44GPBF	VISH	**866-0077**	1.32	0.87	0.85	0.83
IRLIZ44NPBF	IR	**910-2540**	1.48	0.81	0.60	0.50
STP55NF06FP	ST	**980-3220**	1.81	1.45	1.11	0.83
2SJ380(F)	TOSH	**121-8512**	2.82	1.87	1.38	1.06
2SK2232(F)	TOSH	**121-8513**	2.85	2.25	1.66	1.27

Standard Power MOSFETs

IXYS

N Channel



TO-247

Mini-Bloc (SOT-227B)

TO-3

V_{DS} V	$R_{DS(on)}$ max. Ω	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	$V_{GS(th)}$ max. V	P_D @ 25°C W	Mftrs. List No.
TO-247						
100	0.02	75	300	4	300	IXTH75N10
200	0.045	50	200	4	300	IXTH50N20
500	0.23	24	96	4	300	IXTH24N50
1000	0.82	14	56	4.5	360	IXTH14N100
Mini-Bloc (SOT-227B)						
500	0.12	36	133	5	400	IXTN36N50
1000	0.55	21	84	4.5	520	IXTN21N100
1000	0.6	15	60	5	400	IXTN15N100
TO-3 (TO-204)						
300	0.085	40	160	4	300	IXTH40N30
500	0.23	24	96	4	300	IXTM24N50

211356

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
IXTH14N100	**935-9303**	16.28	11.60	9.12	7.72	6.99
IXTH24N50	**935-9524**	9.06	6.46	5.08	4.30	3.89
IXTH40N30	**935-9532**	12.67	8.83	5.00	4.87	4.60
IXTH50N20	**935-9540**	11.76	8.38	6.59	5.57	5.05
IXTH75N10	**935-9320**	13.16	9.38	7.37	6.24	5.66
IXTM24N50	**935-9575**	21.01	14.98	11.77	9.96	9.03
		1+	**5+**	**10+**	**25+**	**50+**
IXTN15N100	**935-9559**	40.03	28.54	22.43	18.99	17.20
IXTN21N100	**935-9311**	35.69	29.08	25.22	22.85	21.66
IXTN36N50	**935-9214**	42.80	30.86	24.26	20.54	18.61

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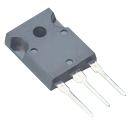
HiPerFET™ Power MOSFETs

IXYS

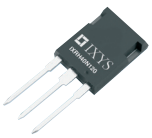
N Channel



TO-247

Mini-Bloc (SOT-227B)

TO-264



Super 247

The HiPerFET™ range feature a high performance, intrinsic fast-recovery diode, significantly improving dv/dt ruggedness, and eliminating the need for additional 'freewheeling' diodes

V_{DS} V	$R_{DS(on)}$ max. Ω	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	$V_{GS(th)}$ max. V	P_D @ 25°C W	Mftrs. List No.
TO- 247						
70	0.011	76	304	3.4	360	IXFH76N07-11
100	0.02	75	300	4	300	IXFH75N10
100	0.01	170	680	4	600	IXFN170N10
200	0.045	50	200	4	300	IXFH50N20
200	0.04	58	232	4	300	IXFH58N20
300	0.06	52	205	4	360	IXFH52N30Q
300	0.045	73	292	4	500	IXFK73N30
300	0.045	73	292	4	520	IXFN73N30
300	0.085	40	160	4	300	IXFH40N30
500	0.25	21	84	4	300	IXFH21N50
500	0.23	24	96	4	300	IXFH24N50
500	0.2	26	104	4	300	IXFH26N50
500	0.2	26	104	4.5	300	IXFH26N50Q
500	0.16	30	120	4	360	IXFH30N50
500	0.15	32	128	4	360	IXFH32N50
500	0.14	40	160	5	500	IXFH40N50Q2
500	0.1	48	192	4	520	IXFN48N50
600	0.35	20	60	4.5	300	IXFH20N60
600	0.25	26	104	4.5	360	IXFH26N60Q
800	0.6	15	60	4.5	300	IXFH15N80
800	0.42	20	80	4.5	360	IXFH20N80Q
1000	2	6	24	4.5	180	IXFH6N100
1000	1.05	12	48	4.5	300	IXFH12N100
1000	1.05	12	48	5.5	300	IXFH12N100Q
1000	0.9	14	56	5	500	IXFH14N100Q2
1000	0.7	15	60	4.5	360	IXFH15N100
Mini-Bloc (SOT-227B)						
70	0.006	200	600	4	520	IXFN200N07
100	0.008	180	720	4	600	IXFN180N10
100	0.006	230	920	4	700	IXFN230N10
150	0.0125	150	600	4	600	IXFN150N15
200	0.017	120	480	4	600	IXFN120N20
200	0.01	180	720	4	700	IXFN180N20.
300	0.022	130	520	4	700	IXFN130N30
500	0.12	44	176	4	500	IXFN44N50Q
500	0.1	48	192	4	500	IXFK48N50
500	0.08	55	220	4.5	600	IXFN55N50
500	0.055	80	320	4.5	780	IXFN80N50
600	0.130	44	176	4	600	IXFN44N60
600	0.075	60	240	4.5	600	IXFN60N60
800	0.32	27	108	4.5	520	IXFN27N80Q
800	0.165	44	800	4	700	IXFN44N80
900	0.3	26	104	5	600	IXFN26N90
1000	0.39	24	96	5	600	IXFN24N100
1000	0.24	36	144	5.5	700	IXFN36N100
1200	0.35	32	128	5	780	IXFN32N120
TO-264						
200	0.02	90	360	4	500	IXFK90N20
600	0.18	36	144	4.5	500	IXFK36N60
1000	0.4	30	120	5	735	IXFK30N100Q2
PLUS-247						
1200	0.75	20	80	5	780	IXFX20N120

211355

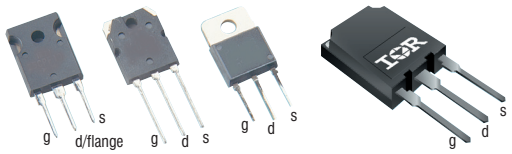
Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
IXFH12N100	**935-9249**	16.97	11.56	9.18	7.91	7.13
IXFH12N100Q	**734-7839**	12.13	10.07	8.01	6.78	6.14
IXFH14N100Q2	**734-7847**	19.69	14.09	11.32	8.59	7.75
IXFH15N80	**734-7855**	17.41	11.87	9.42	8.11	7.31
IXFH15N100	**935-9583**	18.87	13.45	10.58	8.95	8.10
IXFH20N60	**734-7863**	11.49	7.83	6.21	5.36	4.82
IXFH20N80Q	**734-7871**	18.54	12.63	10.02	8.64	7.78
IXFH21N50	**935-9133**	8.72	5.94	4.71	4.06	3.66
IXFH24N50	**734-7898**	9.55	6.50	5.16	4.45	4.01
IXFH26N50	**935-9141**	10.08	6.86	5.45	4.70	4.23
IXFH26N50Q	**734-7901**	10.08	6.86	5.45	4.70	4.23
IXFH26N60Q	**734-7910**	14.67	10.00	7.93	6.84	6.16
IXFH30N50	**734-7936**	15.34	10.93	8.60	7.28	6.59
IXFH32N50	**935-9206**	16.36	11.15	8.85	7.63	6.87
IXFH40N30	**935-9150**	5.91	5.16	5.03	4.91	4.79
IXFH40N50Q2	**734-7944**	13.66	9.73	7.65	6.48	5.87
IXFN48N50	**935-9230**	36.77	26.11	19.98	14.88	12.87
IXFK48N50	**935-9176**	27.20	19.31	14.78	11.01	9.52
IXFH50N20	**935-9168**	9.84	6.71	5.32	4.58	4.14
IXFH52N30Q	**734-7952**	15.28	10.41	8.26	7.12	6.42
IXFH58N20	**935-9516**	10.27	7.00	5.56	5.26	5.13
IXFH6N100	**935-9508**	8.46	6.13	4.86	4.19	3.78
IXFK30N100Q2	**734-7960**	37.42	26.78	21.58	15.94	14.35
IXFK36N60	**734-7979**	19.50	15.33	12.05	10.20	9.25

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
IXFK73N30	**935-9273**	24.72	17.55	13.43	10.01	8.65
IXFH76N07-11	**935-9265**	9.84	6.71	5.54	5.40	5.26
IXFH75N10	**935-9192**	15.71	11.20	8.81	7.46	6.75
IXFK90N20	**935-9184**	23.32	17.01	13.02	9.70	8.39
IXFX20N120	**734-8037**	17.98	13.95	11.22	9.50	8.60
		1+	**5+**	**10+**	**25+**	**50+**
IXFN73N30	**935-9281**	36.66	26.14	20.55	17.39	15.76
IXFN120N20	**935-9257**	43.23	30.69	23.48	17.49	15.13
IXFN130N30	**734-7995**	72.62	51.55	39.45	29.39	25.42
IXFN150N15	**490-5660**	24.36	21.65	16.26	14.21	13.85
IXFN170N10	**935-9222**	41.89	29.86	23.47	19.87	18.00
IXFN180N10	**490-5672**	38.16	27.20	21.39	18.11	16.40
IXFN180N20.	**490-5684**	50.18	35.77	28.12	23.81	21.56
IXFN200N07	**490-5659**	27.34	19.41	14.85	13.49	13.15
IXFN230N10	**358-2073**	27.71	25.77	22.83	– –	– –
IXFN24N100	**490-5568**	25.30	23.53	17.01	14.75	13.83
IXFN26N90	**490-5570**	45.27	32.27	25.38	21.48	19.45
IXFN27N80Q	**490-5593**	37.78	26.94	21.17	17.93	16.23
IXFN32N120	**734-8002**	45.94	34.05	26.77	22.66	20.53
IXFN36N100	**490-5556**	49.65	39.01	36.61	27.27	24.68
IXFN44N50Q	**490-5635**	27.30	19.46	15.30	12.95	11.73
IXFN44N60	**490-5611**	42.28	30.13	23.69	20.05	18.17
IXFN44N80	**734-8010**	45.85	34.25	27.63	23.74	21.67
IXFN55N50	**490-5647**	41.71	29.73	23.38	19.79	17.92
IXFN60N60	**490-5623**	61.45	50.02	41.02	39.91	38.87
IXFN80N50	**734-8029**	73.01	51.83	39.66	29.55	25.55

TO-3P, TO-218, TO-247, Super 247

FAIRCHILD SEMICONDUCTOR™ International IOR Rectifier VISHAY

N Channel, V_{DS} ≤100V



TO-247 TO-3P SOT-93/TO-218 Super-247

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont.}$ @ 25°C A	I_D pulsed A	P_D @ 25°C W	Package	Mftr.	Mftrs List No.
30	0.0028	210	1000	230	TO-247AC	IR	IRFP3703PBF
40	1.35 mohm	350	1390	380	TO-247AC	IR	IRFP4004PBF
55	0.0053	160	640	310	TO-247AC	IR	IRFP1405PBF
55	0.007	75	—	215	TO-247	FCH	HUF75345G3
55	0.008	98	390	150	TO-247AC	IR	IRFP064NPBF
55	0.012	72	290	130	TO-247AC	IR	IRFP054NPBF
55	0.016	62	210	130	TO-247AC	IR	IRFP048NPBF
60	0.0055	130	520	250	TO-247AC	IR	IRFP064VPBF
60	0.0056	170	680	375	TO-3P	FCH	FQA170N06
60	2.4mohm	120	840	280	TO-247AC	IR	IRFP3206PBF
60	3.3mohm	120	620	220	TO-247AC	IR	IRFP3306PBF
75	0.0045	170	680	310	TO-247AC	IR	IRFP2907ZPBF
75	2.8mohm	120	850	340	TO-247AC	IR	IRFP3077PBF
75	1.46 mohm	350	1280	520	TO-247AC	IR	IRFP4368PBF
100	0.009	141	230	441	Super-247	IR	IRFPS3810PBF
100	0.014	72	300	190	TO-247AC	IR	IRFP4710PBF
100	0.023	70	280	214	TO-3P	FCH	FQA70N10
100	0.024	46	230	140	TO-247AC	IR	IRFP150VPBF
100	0.025	57	180	200	TO-247AC	IR	IRFP3710PBF
100	0.036	39	140	140	TO-247AC	IR	IRFP150NPBF
100	3.7mohm	120	670	370	TO-247AC	IR	IRFP4110PBF
100	4.8mohm	120	560	280	TO-247AC	IR	IRFP4310ZPBF
100	7.2mohm	97	390	230	TO-247AC	IR	IRFP4410ZPBF
100	2 mohm	290	1120	520	TO-247AC	IR	IRFP4468PBF
150	4.8 mohm	171	684	517	TO-247AC	IR	IRFP4568PBF
200	8 mohm	130	520	520	TO-247AC	IR	IRFP4668PBF

382892

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	250+	1K+
FQA170N06	FCH	**984-5976**	8.79	5.96	4.40	3.13	2.69
FQA70N10	FCH	**984-6085**	3.43	2.33	1.72	1.22	1.05
HUF75345G3	FCH	**107-6348**	4.55	3.09	2.27	1.62	1.39
IRFPS3810PBF	IR	**865-8668**	10.45	6.52	5.16	4.94	4.53
IRFP048NPBF	IR	**910-3074**	2.26	1.49	1.45	1.41	1.37
IRFP054NPBF	IR	**910-3082**	2.27	1.25	0.92	0.87	0.84
IRFP064NPBF	IR	**864-9227**	2.47	2.25	2.15	0.95	0.86
IRFP064VPBF	IR	**865-8374**	3.28	1.90	1.51	1.47	1.44
IRFP1405PBF	IR	**865-8382**	3.63	2.06	1.57	1.27	1.16
IRFP150NPBF	IR	**864-9235**	1.80	1.10	0.78	0.68	0.62
IRFP150VPBF	IR	**865-8390**	2.71	1.54	1.21	1.18	1.15
IRFP2907ZPBF	IR	**865-8510**	3.27	2.05	1.59	1.43	1.40
IRFP3703PBF	IR	**864-9367**	3.67	2.33	2.27	2.21	2.15
IRFP3710PBF	IR	**864-9375**	4.35	3.12	2.44	1.76	1.49
IRFP4710PBF	IR	**865-8609**	3.34	1.94	1.48	1.39	1.27
IRFP3077PBF	IR	**160-2241**	3.32	2.12	1.64	1.50	1.40

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	250+	1K+
IRFP3206PBF	IR	**160-2242**	2.78	– –	– –	– –	– –
IRFP3306PBF	IR	**160-2243**	2.65	– –	– –	– –	– –
IRFP4110PBF	IR	**160-2244**	3.53	– –	– –	– –	– –
IRFP4310ZPBF	IR	**160-2245**	2.67	1.71	1.32	1.21	1.13
IRFP4410ZPBF	IR	**160-2246**	2.02	1.29	1.00	0.94	0.92
IRFP4568PBF	IR	**168-4525**	7.40	4.73	3.65	3.35	3.11
IRFP4668PBF	IR	**168-4526**	11.12	– –	– –	– –	– –
IRFP4004PBF	IR	**168-4527**	6.33	4.04	3.13	2.86	2.66
IRFP4368PBF	IR	**168-4529**	7.26	4.64	3.59	3.29	3.06
IRFP4468PBF	IR	**168-4531**	10.64	6.80	5.26	4.81	4.48

N Channel, V_{DS} 150-500V

VISHAY. TOSHIBA FAIRCHILD SEMICONDUCTOR™ ST

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont.}$ @ 25°C A	I_D pulsed A	P_D @ 25°C W	Package/ Pin-Out	Mftr.	Mftrs List No.
150	0.012	78	330	310	TO-247AC	IR	IRFP4321PBF
150	0.018	90	360	375	TO-3P	FCH	FQA90N15
150	0.042	43	150	200	TO-247AC	IR	IRFP3415PBF
200	0.023	94	380	580	TO-247AC	IR	IRFP90N20DPBF
200	0.032	65	260	310	TO-3P	FCH	FQA65N20
200	0.035	70	280	417	TO-3P	FCH	FDA70N20
200	0.04	50	200	300	TO-247AC	IR	IRFP260NPBF
200	0.075	30	120	214	TO-247AC	IR	IRFP250NPBF
200	0.085	30	120	180	TO-247AC	VISH	IRFP250PBF
200	0.18	20	80	150	TO-247AC	VISH	IRFP240PBF
300	0.029	57	230	120	TO-247AC	IR	IRFP4332PBF
300	0.038	44	180	310	TO-247AC	IR	IRFP4229PBF
250	0.04	55	220	310	TO-3P	FCH	FQA55N25
250	0.049	59	236	392	TO-3P	FCH	FDA59N25
250	0.075	38	150	280	TO-247AC	VISH	IRFP264PBF
300	0.056	59	236	500	TO-3P	FCH	FDA59N30
400	0.2	23	92	250	TO-247AC	VISH	IRFP360PBF
400	0.2	23	92	280	TO-247AC	VISH	IRFP360LCPBF
400	0.3	16	64	190	TO-247AC	VISH	IRFP350PBF
400	0.55	11	44	150	TO-247AC	VISH	IRFP340PBF
500	0.078	47	190	450	Super-247	VISH	IRFPS43N50KPBF
500	0.1	40	180	450	Super-247	VISH	IRFPS40N50LPBF
500	0.11	52	208	600	TO-247	FE	2SK3680-01
500	0.13	36	144	446	Super-247	VISH	IRFPS37N50APBF
500	0.16	28.4	113.6	310	TO-3P	FCH	FQA28N50
500	0.16	32	130	460	TO-247AC	VISH	IRFP32N50KPBF
500	0.18	31	124	460	TO-247AC	VISH	IRFP31N50LPBF
500	0.2	24	96	290	TO-3P	FCH	FQA24N50
500	0.23	22	88	277	TO-247AC	VISH	IRFP22N50APBF
500	0.27	17	68	190	TO-247	ST	STW20NK50Z
500	0.235	23	92	370	TO-247AC	VISH	IRFP23N50LPBF
500	0.25	20	80	214	TO-247	ST	STW20NM50FD
500	0.27	20	80	280	TO-247AC	VISH	IRFP460PBF
500	0.27	20	80	280	TO-247AC	VISH	IRFP460APBF
500	0.27	20	80	280	TO-247AC	VISH	IRFP460LCPBF
500	0.38	14	48	150	TO-247	ST	STW14NK50Z
500	0.4	14	56	190	TO-247AC	VISH	IRFP450APBF
500	0.4	14	56	190	TO-247AC	VISH	IRFP450PBF
500	0.4	15	—	150	TO-3P	TOSH	2SK2698(F)
500	0.4	14	56	190	TO-247AC	VISH	IRFP450LCPBF
500	0.05	60	240	560	TO-247MAX	ST	STY60NM50
500	0.6	9.5	38	125	SOT-93	INF	SPW12N50C3
500	0.85	8.8	35	150	TO-247AC	VISH	IRFP440PBF

382894

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	250+	1K+
FQA24N50	FCH	**984-5992**	3.56	– –	– –	– –	– –
FQA28N50	FCH	**984-6018**	8.22	5.57	4.11	2.92	2.52
FQA55N25	FCH	**984-6069**	6.78	4.60	3.39	2.40	2.08
FQA65N20	FCH	**984-6077**	7.06	4.78	3.53	2.51	2.16
FQA90N15	FCH	**984-6107**	4.30	3.10	2.62	2.55	2.48
IRFP22N50APBF	VISH	**864-9243**	5.03	3.10	2.37	2.33	2.27
IRFP23N50LPBF	VISH	**865-8455**	4.45	2.53	2.51	2.44	2.37
IRFP31N50LPBF	VISH	**865-8528**	12.34	7.78	6.03	5.43	5.28
IRFP32N50KPBF	VISH	**865-8536**	8.82	5.56	4.32	3.88	3.72
IRFPS37N50APBF	VISH	**910-2990**	8.96	5.49	4.07	3.76	3.61
IRFPS40N50LPBF	VISH	**865-8684**	13.44	8.90	7.06	6.32	6.07
IRFPS43N50KPBF	VISH	**864-9596**	11.89	6.82	5.34	5.02	4.89
IRFP240PBF	VISH	**864-9251**	7.71	3.58	2.51	2.22	2.17
IRFP250NPBF	IR	**864-9260**	2.05	1.39	1.22	1.16	1.13
IRFP250PBF	VISH	**864-9278**	5.35	3.05	2.53	2.47	2.41
IRFP260NPBF	IR	**864-9294**	3.23	1.83	1.40	1.28	1.17
IRFP264PBF	VISH	**864-9308**	6.83	3.88	2.97	2.60	2.54
IRFP340PBF	VISH	**864-9324**	4.29	2.66	2.08	1.84	1.81
IRFP3415PBF	IR	**865-8544**	2.78	1.57	1.20	1.06	0.95
IRFP350PBF	VISH	**864-9332**	4.78	– –	– –	– –	– –
IRFP360LCPBF	VISH	**864-9340**	21.66	13.66	10.59	9.53	9.12
IRFP360PBF	VISH	**864-9359**	7.34	4.17	3.19	2.51	2.35
IRFP4229PBF	IR	**143-6964**	5.55	3.55	2.74	2.51	2.34
IRFP4321PBF	IR	**143-6965**	4.91	3.13	2.42	2.21	2.06
IRFP4332PBF	IR	**143-6966**	6.26	4.00	3.09	2.83	2.64
IRFP440PBF	VISH	**864-9383**	2.36	1.32	1.18	1.14	1.11

Power MOSFETs - continued

N Channel, V_{DS} 150-500V - continued

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	250+	1K+
IRFP450APBF	VISH	864-9391	5.95	2.98	2.27	2.12	2.07
IRFP450PBF	VISH	864-9413	11.37	6.30	4.68	4.11	3.92
IRFP450LCPBF	VISH	864-9405	4.81	2.39	2.36	2.30	2.24
IRFP460APBF	VISH	864-9421	6.71	3.75	2.57	2.39	2.34
IRFP460LCPBF	VISH	864-9430	10.30	6.56	4.89	4.29	4.09
IRFP460PBF	VISH	864-9448	6.39	3.22	2.48	2.27	2.21
IRFP90N20DPBF	IR	865-8617	6.05	3.53	2.68	2.51	2.30
IRFP9240PBF	VISH	864-9456	4.81	2.16	1.84	1.70	1.67
IRFP4242PBF	IR	129-8480	3.97	– –	– –	– –	– –
IRFP4227PBF	IR	129-8553	3.22	2.75	2.38	2.18	2.03
SPW12N50C3	INF	120-1590	3.11	2.32	1.90	1.09	1.02
STW14NK50Z	ST	980-3882	2.41	1.80	1.67	1.46	1.19
STW20NK50Z	ST	980-3890	3.19	2.50	1.95	1.53	1.37
STW20NM50FD	ST	993-6017	6.56	– –	– –	– –	– –
STW5NK100Z	ST	951-2810	4.02	2.95	2.38	2.03	1.74
STY60NM50	ST	993-6068	23.02	18.80	13.68	– –	– –
2SK2698(F)	TOSH	121-8520	2.60	1.91	1.85	1.52	1.43
2SK3680-01	FE	120-8661	9.75	7.73	6.04	5.44	– –
FDA70N20	FCH	122-8356	6.06	4.11	3.03	2.15	1.85
FDA59N25	FCH	122-8352	5.46	3.71	2.72	1.94	1.68
FDA59N30	FCH	122-8354	5.78	3.92	2.89	2.05	1.77

N Channel, V_{DS} >500V

VISHAY FAIRCHILD SEMICONDUCTOR Infineon RENESAS

V_{DS} V	$R_{DS(on)}$ Ω	I_D cont. @ 25°C A	I_D pulsed A	P_D @ 25°C W	Package/ Pin-Out	Mftr.	Mftrs List No.
N Channel							
600	0.16	43	172	600	TO-247	FE	2SK3681-01
600	0.22	27	110	500	TO-247AC	VISH	IRFP27N60KPBF
600	0.24	23.5	94	310	TO-3P	FCH	FQA24N60
600	0.28	22	88	370	TO-247AC	VISH	IRFP22N60KPBF
600	0.32	21	84	330	TO-247AC	VISH	IRFP21N60LPBF
600	0.38	18.5	74	300	TO-3P	FCH	FQA19N60
600	0.55	13	52	150	TO-247	ST	STW13NK60Z
600	0.58	11	44	180	TO-247AC	VISH	IRFPC50APBF
600	0.6	11	44	180	TO-247AC	VISH	IRFPC50PBF
600	0.75	10	36	156	TO-247	ST	STW10NK60Z
600	1.2	6.8	27	150	TO-247AC	VISH	IRFPC40PBF
800	0.75	10.5	42	190	TO-247	ST	STW12NK80Z
800	0.9	9	36	160	TO-247	ST	STW10NK80Z
800	1.2	7.8	32.4	190	TO-247AC	VISH	IRFPE50PBF
800	1.5	6	24	125	SOT-93	INF	SPW11N80C3
800	1.5	6.2	24.8	140	TO-247	ST	STW8NK80Z
800	2	5.4	22	150	TO-247AC	VISH	IRFPE40PBF
900	1.6	6.7	27	190	TO-247AC	VISH	IRFPF50PBF
1000	2	6	24	180	TO-247AC	VISH	IRFPG50PBF
1000	3.5	4.3	17	150	TO-247AC	VISH	IRFPG40PBF
1000	3.7	3.5	14	125	TO-247	ST	STW5NK100Z
1500	10	2	4	100	TO-3PB	SY	2SK3746
1500	12	2.5	7	100	TO-3P	REN	2SK1317-E

382895

Mftrs. List No.	Mfr.	Order Code	Price Each 1+	25+	100+
2SK1317-E	REN	117-4965	18.21	13.65	11.75
2SK3681-01	FE	120-8662	9.75	7.73	6.04
2SK3746	SY	120-8647	3.39	2.73	2.14
FQA19N60	FCH	984-5984	4.29	3.07	2.35
FQA24N60	FCH	984-6000	2.46	1.76	1.74
IRFPC40PBF	VISH	864-9464	2.69	1.53	1.23
IRFPC50PBF	VISH	864-9480	4.11	2.28	2.00
IRFPC50APBF	VISH	864-9472	8.45	4.93	4.01
IRFPE40PBF	VISH	864-9529	5.52	3.11	2.91
IRFPE50PBF	VISH	864-9537	13.92	7.89	5.62
IRFPF50PBF	VISH	864-9553	6.71	4.43	3.52
IRFPG40PBF	VISH	864-9570	4.95	2.80	1.89
IRFPG50PBF	VISH	864-9588	9.53	5.55	4.10
IRFP21N60LPBF	VISH	865-8420	7.91	4.49	3.44
IRFP22N60KPBF	VISH	865-8439	6.75	4.25	3.30
IRFP27N60KPBF	VISH	865-8501	5.20	3.62	3.52
SPW11N80C3	INF	120-1592	4.33	3.38	2.47
STW5NK100Z	ST	951-2810	4.02	2.95	2.38
STW8NK80Z	ST	993-6041	2.55	1.55	1.45
STW10NK60Z	ST	816-5327	2.87	1.34	1.33
STW10NK80Z	ST	980-3840	2.65	1.64	1.51
STW12NK80Z	ST	980-3858	3.23	2.47	2.25
STW13NK60Z	ST	980-3866	1.99	1.55	1.24

P Channel, V_{DS} 60V - 200V

FAIRCHILD SEMICONDUCTOR

V_{DS} V	$R_{DS(on)}$ Ω	I_D cont. @ 25°C A	I_D pulsed A	P_D @ 25°C W		Mftr.	Mftrs List No.
60	0.026	55	220	214	TO-3P	FCH	FQA47P06
200	0.5	12	48	150	TO-247AC	VISH	IRFP9240PBF
200	0.47	12.6	50.4	150	TO-3P	FCH	FQA12P20

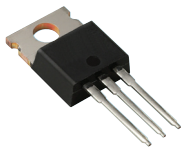
383795

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
FQA12P20	984-6573	1.48	1.00	0.74	0.53	0.45
FQA47P06	984-6581	2.33	1.59	1.14	1.06	0.98
IRFP9240PBF	864-9456	4.81	2.16	1.84	1.70	1.67

Class D Audio N-CH Mosfet

International IOR Rectifier

New



Features
- Low Rdson
- Class D Amplifier
- Low Qg & Qsw
- Junction tempeature max 175°C
- IRFB5620PBF 300W per channel 8Ω load
- IRFB5615PBF 300W per channel 4Ω load
- Pin/Package 3/TO-220AB

This Digital Audio MOSFET is specifically designed for Class-D audio amplifier applications. This MOSFET utilizes the latest processing techniques to achieve low on-resistance per silicon area. Furthermore, Gate charge, body-diode reverse recovery and internal Gate resistance are optimized to improve key Class-D audio amplifier performance factors such as efficiency, THD and EMI. Additional features of this MOSFET are 175°C operating junction temperature and repetitive avalanche capability. These features combine to make this MOSFET a highly efficient, robust and reliable device for ClassD audio amplifier applications.

V_{DS} V	$R_{DS(on)}$ mΩ	I_D cont @ 25°C A	PD @ 25°C W	Vgs th Max V	Order Code	Mftrs. List No.
200	72.5	15	144	20	170-4511	IRFB5620PBF

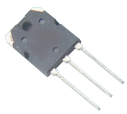
534501

Mftrs. List No.	Order Code	Price Each 1+	+	+	+
IRFB5620PBF	170-4511	1.71	– –	– –	– –

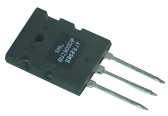
Audio FETs

RENESAS International IOR Rectifier

TO-247


TO-3P

TO-3


TO-264

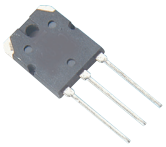
P_D @ 25°C	I_D cont. @ 25°C	$R_{DS(on)}$	V_{DS} V	Package	Mftr.	N-Channel	P-Channel
33 W	14 A	93 mohm	55 V	TO-220FP	IR	—	IRLIB9343PBF
39 W	19 A	42 mohm	55 V	TO-220FP	IR	IRLIB4343PBF	—
100 W	8 A	1.5 ohm	180 V	TO-3P	REN	2SK2220-E	—
125 W	8 A	1.5 ohm	160 V	TO-3	SEM	BUZ900	BUZ905
125 W	8 A	1.5 ohm	160 V	TO-247	SEM	BUZ900P	BUZ905P
125 W	8 A	1.5 ohm	200 V	TO-3	SEM	BUZ901	BUZ906
125 W	8 A	1.5 ohm	200 V	TO-247	SEM	BUZ901P	BUZ906P
250 W	16 A	0.75 ohm	160 V	TO-3	SEM	BUZ900D	BUZ905D
250 W	16 A	0.75 ohm	200 V	TO-3	SEM	BUZ901D	BUZ906D
250 W	16 A	0.75 ohm	200 V	TO-264	SEM	—	BUZ906DP

211220

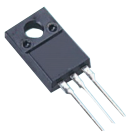
Mftrs. List No.	Mftr	Order Code	Price Each 1+	25+	100+	250+
BUZ900	SEM	118-2824	6.91	6.13	5.29	5.00
BUZ900D	SEM	120-8651	13.20	10.42	8.26	7.29
BUZ900P	SEM	120-8682	4.76	3.77	3.15	3.07
BUZ901	SEM	118-2825	10.70	8.45	6.70	5.90
BUZ901D	SEM	120-8653	15.17	11.95	9.49	8.34
BUZ901P	SEM	120-8683	10.70	8.45	6.70	5.90
BUZ905	SEM	118-2826	6.39	5.02	3.98	3.51
BUZ905D	SEM	120-8654	13.20	10.42	8.25	7.28
BUZ905P	SEM	120-8684	5.96	4.70	3.71	3.28
BUZ906	SEM	118-2827	10.70	8.45	6.69	5.89
BUZ906D	SEM	120-8655	15.17	11.95	9.49	8.34
BUZ906DP	SEM	120-8694	16.64	10.48	8.90	7.83
BUZ906P	SEM	120-8685	10.70	8.45	6.69	5.89
IRLIB4343PBF	IR	993-3859	0.84	0.70	0.58	0.56
IRLIB9343PBF	IR	993-3867	1.03	0.73	0.59	0.58
2SK2220-E	REN	117-4977	14.50	10.86	9.15	5.29

Isolated, TO-3PFM, TO-3PML and TO-220FP

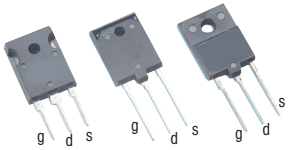
RENESAS



TO-3P



TO-220FP



TO-247 TO-3PFM ISOWATT218

Isolated packages offer simplified heatsink mounting, without the need for additional isolating washers, mica etc. Isolation voltage 4kV, lead spacing 5.45.

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont.}$ @ 25°C A	I_D pulsed A	P_D @ 25°C W	Package	Mftr.	Mftrs List No.
N Channel							
400	0.25	5.4	21.6	25	TO-220FP	ST	STP17NK40ZFP
800	0.9	9	36	40	TO-220FP	ST	STP10NK80ZFP
1500	10	2	4	50	TO-3PML	SY	2SK3747
1500	5.5	4	8	80	TO-3PML	SY	2SK3748
P Channel							
60	0.06	45	180	60	TO-3PFM	REN	2SJ218-E

211103

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
STP10NK80ZFP	**980-3025**	3.13	2.50	1.92	1.44	1.14
STP17NK40ZFP	**980-3076**	3.31	2.43	1.96	1.67	1.43
2SJ218-E	**117-4966**	18.29	13.46	11.41	6.56	6.38
2SK3747	**120-8648**	3.39	2.73	2.14	1.93	– –
2SK3748	**120-8649**	5.20	4.15	3.26	2.99	– –

TO-3

International IOR Rectifier

- High reliability
- Rugged, hermetically sealed package
- Repetitive avalanche rated
- Dynamic dv/dt rating
- Simple drive requirements
- Ease of paralleling

Lead spacing=11,
Fixing centres=30

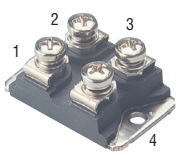
V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont.}$ @ 25°C A	I_D pulsed A	P_D @ 25°C W	Mftr.	Mftrs. List No.
N Channel						
200	0.4	9	36	75	IR	IRF230
200	0.085	30	120	150	IR	IRF250*
400	0.55	10	40	125	IR	IRF340
500	0.27	21	84	300	IR	IRF460*
500	0.4	14.5	58	198	SEM	BFD82
1000	0.125	6	24	198	SEM	BFD63
P Channel						
100	0.2	19	76	125	IR	IRF9140
100	0.3	11	50	75	IR	IRF9130

Pin ∅ 1.0 nom., except where * ∅ 1.6 max.

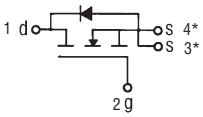
211098

Mftrs. List No./ JEDEC Ref.	Mftr.	Order Code	Price Each 1+	25+	100+	250+
BFD63	SEM	**120-8689**	23.99	21.35	19.73	13.13
BFD82	SEM	**120-8687**	15.56	12.16	10.94	6.79
IRF230	IR	**419-0609**	16.52	10.95	8.68	7.46
IRF250	IR	**664-080**	14.77	9.79	7.76	6.67
IRF340	IR	**419-0634**	17.29	11.46	9.09	7.81
IRF460	IR	**419-0671**	17.73	11.74	9.31	8.01
IRF9130	IR	**419-0683**	10.54	6.98	5.53	4.75
IRF9140	IR	**664-110**	7.56	– –	– –	– –

ISOTOP™ (SOT-227B), N Channel



H=12.2, W=25.4, D=38,
Fixing centres=31.6



Internal schematic diagram

- High power modules
- Isolated base
- 2.5kV rms isolation voltage
- 4mm screw terminals

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont.}$ @ 25°C A	I_D pulsed A	P_D @ 25°C W	Mftr.	Mftrs List No.
100	0.006	180	540	360	ST	STE180NE10
500	0.08	53	212	460	ST	STE53NC50

Mftrs. List No.	Order Code	Price Each 1+	5+	10+	25+	50+
STE53NC50	**994-6390**	27.71	20.68	20.12	19.59	19.09
STE180NE10	**980-3009**	32.16	23.15	18.75	16.18	15.86

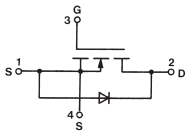
211087

Tube of 10		Price Per Tube		
Mftrs. List No.	Order Code	1+	3+	8+
STE180NE10	**156-4081**	261.63	232.34	227.69

SEMITRANS Module

SEMIKRON innovation+service

N Channel



A: Single H=30, W=80, D=42 **B: Dual** H=30, W=94, D=34
Mounting holes=6.4 dia, Fixing centres=65

- N channel, enhanced mode
- Isolated copper base plate
- Avalanche characteristics
- Short internal connections avoid oscillations (SKM111AR built-in gate resistors)
- Switching kW's in less than 1 µs
- Recommended for use with Driver Module SKHI22A, order code **359-5572**

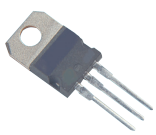
V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont.}$ @ 25°C A	I_D pulsed A	P_D @ 25°C W	Mftrs List No.
100	0.007	200	600	700	SKM111AR

222089

Mftrs. List No.	Order Code	Price Each 1+	25+	100+
SKM111AR	**956-3067**	75.12	68.10	64.70

TO-220, N Channel 20V to 1500V

International IOR Rectifier, FAIRCHILD SEMICONDUCTOR, VISHAY, Infineon, TOSHIBA



TO-220 & TO-220AB
Lead spacing=2.54

Isolated Tab:
TO-220SIS
TO-220FH
TO-220FP

V_{DS} V	$R_{DS(on)}$ Ω	I_D cont @ 25°C A	I_D pulsed A	P_D @ 25°C W	Mftr.	Mftrs. List No.
20	0.004	180	700	230	IR	IRF1302PBF
20	0.0057	92	330	79	IR	IRF3711ZPBF
20	0.006	110	440	120	IR	IRF3711PBF
20	0.0085	77	280	88	IR	IRF3706PBF
20	0.009	77	308	87	IR	IRF3704PBF
30	0.0028	210	1000	230	IR	IRF3703PBF
30	0.0033	240	960	330	IR	IRF1503PBF
30	0.009	90	360	120	IR	IRF3709PBF
30	0.0095	59	230	57	IR	IRF3707ZPBF
30	0.0116	54	65	55	FCH	FDP8880
30	0.012	62	248	87	IR	IRF3708PBF
40	0.002	280	1080	330	IR	IRF2804PBF
40	0.0036	210	850	330	IR	IRF2204PBF
40	0.0037	190	750	220	IR	IRF1404ZPBF
40	0.004	162	650	200	IR	IRF1404PBF
40	0.0046ohm	120	480	300	ST	STP100NF04
40	0.009	100	400	170	IR	IRF1104PBF
40	0.055	120	470	140	IR	IRF4104PBF
55	0.0047	175	700	330	IR	IRF2805PBF
55	0.0049	150	600	230	IR	IRF1405ZPBF
55	0.0053	169	680	330	IR	IRF1405PBF
55	0.0065	80	320	300	ST	STP80NF55-06
55	0.0065	110	440	170	IR	IRF3205ZPBF
55	0.0075	94	360	140	IR	IRF1010ZPBF
55	0.006	75	—	215	FCH	HUF75345P3
55	0.008	80	320	300	ST	STP140NF55
55	0.008	80	320	300	ST	STP80NF55-08
55	0.008	80	320	300	ST	STP80NF55L-06
55	0.008	98	390	150	IR	IRF3205PBF.
55	0.011	61	240	91	IR	IRFZ48ZPBF
55	0.0125	68	270	115	IR	IRF1010NPBF
55	0.0136	51	200	82	IR	IRFZ46ZPBF
55	0.0139	51	200	80	IR	IRFZ44ZPBF
55	0.014	64	210	130	IR	IRFZ48NPBF
55	0.012	75	160	200	FCH	HUF75339P3
55	18mohm	80	—	300	ST	STP80PF55

Power MOSFETs - continued

TO-220, N Channel 20V to 1500V - continued

V_{DS} V	$R_{DS(on)}$ Ω	I_D cont @ 25°C A	I_D pulsed A	P_D @ 25°C W	Mftr.	Mftrs. List No.
55	0.02	46	180	88	IR	IRFZ46NPBF
55	0.024	41	160	83	IR	IRFZ44NPBF
55	0.04	26	100	56	IR	IRFZ34NPBF
55	0.07	17	68	45	IR	IRFZ24NPBF
60	0.0046	80	320	242	FCH	FDP5800
60	0.0085	84	340	140	IR	IRF1010EZPBF
60	0.009	115	360	270	IR	IRFB4215PBF
60	0.012	81	330	170	IR	IRF1010EPBF
60	0.012	57	230	92	IR	IRFZ44VZPBF
60	0.012	72	290	150	IR	IRFZ48VPBF
60	0.016	60	240	110	ST	STP60NF06
60	0.018	50	200	30	ST	STP55NF06
60	0.0165	55	220	115	IR	IRFZ44VPBF
60	0.018	50	290	190	VISH	IRFZ48PBF
60	0.023	48	192	110	IR	IRFZ44EPBF
60	0.025	48	144	100	FCH	NDP6060
60	0.028	30	120	70	IR	IRFZ34VPBF
60	0.028	50	200	150	VISH	IRFZ44RPBF
60	0.028ohm	26	152	80	ST	STP45NF06
60	0.028	50	200	150	VISH	IRFZ44PBF
60	0.042	28	112	68	IR	IRFZ34EPBF
60	0.06	17	68	44	IR	IRFZ24VPBF
60	0.2	10	40	36	VISH	IRFZ14PBF
60	7.1	79	315	110	IR	IRF1018EPBF
60	12.6	43	170	71	IR	IRFB3806PBF
75	3.6mohm	180	720	330	IR	IRFB3207PBF
75	0.0045	170	680	330	IR	IRF2907ZPBF
75	0.007	140	550	330	IR	IRF3808PBF
75	0.0078	130	520	330	IR	IRF1407PBF
75	0.0094	89	350	170	IR	IRF2807ZPBF
75	0.0126	80	320	200	IR	IRF3007PBF
75	0.013	71	280	150	IR	IRF2807PBF
75	3.3	210	850	—	IR	IRFB3077PBF
75	7.34	80	310	140	IR	IRFB3607PBF
80	0.01	95	380	210	IR	IRF1312PBF
100	0.052	28	110	107	FCH	IRF540A
100	0.077	28	110	150	VISH	IRF540PBF
150	0.034	45	180	220	FCH	FQP45N15V2
200	26	65	260	—	IR	IRFB4227PBF
200	0.041	61	244	417	FCH	FDP61N20
450	0.68	10	40	40	TOSH	2SK3869
500	0.14	22	88	160	ST	STP25NM50N
500	0.14	22	88	40	ST	STF25NM50N
500	0.19	18	72	140	ST	STP21NM50N
500	0.23	20	80	250	FCH	FDP20N50
500	0.3	15	60	50	TOSH	2SK3934
500	0.34	14	56	160	ST	STP15NK50ZFP
500	0.38	11	44	100	ST	STP12NM50N
500	0.65	8	32	134	FCH	IRF840B
500	0.85	8	32	74	TOSH	2SK3759
500	0.85	8	32	40	TOSH	2SK3561
500	1.14	5	20	73	FCH	FQP5N50C
500	1.5	5	20	35	TOSH	2SK3563
550	0.35	12	48	160	ST	STP12NM50
600	0.26	16	48	167	FCH	FCP16N60
600	0.38	11	44	25	ST	STF12NM50N
600	0.43	13	52	50	TOSH	2SK3797
600	0.53	12	48	225	FCH	FQP12N60C
600	0.6	9.5	38	156	FCH	FQP10N60C
600	0.75	10	40	45	TOSH	2SK3569
600	0.95	7	28	30	ST	STF9NK60ZD
600	0.95	7	28	30	ST	STP9NK60ZFP
600	1	7.5	30	147	FCH	FQP8N60C
600	1	3.9	11.7	50	FCH	FCP4N60
600	1.25	6	24	40	TOSH	2SK3562
600	2	4	16	25	ST	STP4NK60ZFP
600	2.2	3.5	14	35	TOSH	2SK3567
600	3.6	1.35	8	54	FCH	FQP2N60C
600	4.5	2	5	25	TOSH	2SK3767
650	0.38	11	33	125	FCH	FCP11N60F
700	0.85	8.6	34	110	ST	STP10NK70Z
800	1.5	6.2	24.8	30	ST	STP8NK80ZFP
800	1.57	6.6	26.4	167	FCH	FQP7N80C
800	2.1	5.5	22	158	FCH	FQP6N80C
800	4	3	12	107	FCH	FQP3N80C
800	4.5	2.5	10	25	ST	STF3NK80Z
900	1.12	8	32	205	FCH	FQP9N90C
900	1.3	8	—	50	TOSH	2SK3799
900	1.93	6	24	167	FCH	FQP6N90C
900	2.5	5	15	45	TOSH	2SK3565
900	6.4	2.5	7.5	40	TOSH	2SK3566
900	2	5.8	23.2	30	ST	STP6NK90ZFP
1500	7	4	12	160	ST	STP4N150

*Exceeds package current handling capability
**Denotes fully protected, MESH Overlay™, voltage clamped

450847

Mftrs. List No.	Pkg.	Mftr.	Order Code	Price Each 1+	25+	100+	250+
2SK3561	TO-220SIS	TOSH	**130-0772**	1.45	1.06	0.82	0.64
2SK3562	TO-220SIS	TOSH	**130-0777**	1.79	1.24	0.92	0.70
2SK3563	TO-220SIS	TOSH	**130-0771**	1.05	0.60	0.51	0.49
2SK3566	TO-220SIS	TOSH	**130-0782**	1.22	0.84	0.62	0.47
2SK3565	TO-220SIS	TOSH	**130-0783**	2.12	1.46	1.08	0.82
2SK3567	TO-220SIS	TOSH	**130-0776**	1.26	0.86	0.65	0.49
2SK3569	TO-220SIS	TOSH	**130-0779**	2.78	1.91	1.43	1.08
2SK3759	TO-220AB	TOSH	**130-0786**	0.60	0.47	0.46	0.45
2SK3767	TO-220SIS	TOSH	**130-0774**	0.48	0.34	0.27	0.26
2SK3797	TO-220SIS	TOSH	**130-0780**	3.29	2.28	1.85	1.39
2SK3799	TO-220SIS	TOSH	**130-0784**	4.13	2.85	2.12	1.60
2SK3869	TO-220SIS	TOSH	**130-0769**	1.17	0.80	0.59	0.45
2SK3934	TO-220SIS	TOSH	**130-0773**	2.24	1.56	1.41	1.23
FCP4N60	TO-220	FCH	**149-5236**	1.07	0.87	0.73	0.66
FCP11N60F	TO-220	FCH	**122-8346**	3.51	– –	– –	– –
FCP16N60	TO-220	FCH	**122-8347**	4.89	3.32	2.44	1.74
FDP20N50	TO-220	FCH	**122-8358**	4.36	2.95	2.18	1.55
FDP5800	TO-220	FCH	**149-5237**	1.73	– –	– –	– –
FDP61N20	TO-220	FCH	**122-8360**	2.32	– –	– –	– –
FDP8880	TO-220	FCH	**122-8334**	1.06	0.72	0.52	0.38
FQP2N60C	TO-220	FCH	**109-5062**	0.72	– –	– –	– –
FQP3N80C	TO-220	FCH	**109-5065**	0.33	0.31	0.29	0.27
FQP5N50C	TO-220	FCH	**109-5068**	0.91	– –	– –	– –
FQP6N80C	TO-220	FCH	**109-5071**	0.86	– –	– –	– –
FQP6N90C	TO-220	FCH	**109-5072**	1.68	1.19	0.91	0.69
FQP7N80C	TO-220	FCH	**109-5073**	1.67	– –	– –	– –
FQP8N60C	TO-220	FCH	**109-5074**	1.20	0.80	0.60	0.43
FQP9N90C	TO-220	FCH	**109-5077**	2.88	1.95	1.45	1.02
FQP10N60C	TO-220	FCH	**109-5054**	0.72	– –	– –	– –
FQP12N60C	TO-220	FCH	**109-5057**	0.82	0.62	0.60	0.59
FQP45N15V2	TO-220	FCH	**109-5066**	2.03	– –	– –	– –
HUF75339P3	TO-220AB	FCH	**109-5124**	0.75	0.57	0.46	0.40
HUF75345P3	TO-220AB	FCH	**984-5755**	2.02	– –	– –	– –
IRFB3077PBF	TO-220AB	IR	**129-8539**	3.02	2.55	1.76	1.52
IRFB3207PBF	TO-220AB	IR	**905-2070**	5.85	3.41	2.59	2.43
IRFB4215PBF	TO-220AB	IR	**865-7963**	3.02	1.77	1.34	1.26
IRFB4227PBF	TO-220AB	IR	**129-8536**	2.25	1.94	1.66	1.52
IRFZ14PBF	TO-220AB	VISH	**865-0152**	1.28	0.68	0.48	0.39
IRFZ24NPBF	TO-220AB	IR	**865-0160**	0.60	0.42	0.34	0.29
IRFZ24VPBF	TO-220AB	IR	**865-9222**	1.93	1.02	0.71	0.67
IRFZ34EPBF	TO-220AB	IR	**865-0187**	0.68	– –	– –	– –
IRFZ34VPBF	TO-220AB	IR	**865-9257**	1.18	– –	– –	– –
IRFZ34NPBF	TO-220AB	IR	**865-0195**	0.88	0.62	0.53	0.46
IRFZ44PBF	TO-220AB	VISH	**865-9281**	2.16	1.27	1.01	0.88
IRFZ44VZPBF	TO-220AB	IR	**821-0578**	2.08	1.15	0.84	0.80
IRFZ44ZPBF	TO-220AB	IR	**865-9311**	1.99	1.10	0.81	0.76
IRFZ46ZPBF	TO-220AB	IR	**865-9346**	2.05	1.13	0.83	0.78
IRFZ48ZPBF	TO-220AB	IR	**865-9370**	2.43	1.34	0.98	0.88
IRFZ44EPBF	TO-220AB	IR	**865-0217**	0.81	0.65	0.58	0.57
IRFZ44NPBF	TO-220AB	IR	**865-0225**	0.74	0.58	0.55	0.53
IRFZ44RPBF	TO-220AB	VISH	**865-0241**	1.93	1.10	0.82	0.68
IRFZ44VPBF	TO-220AB	IR	**865-0250**	0.75	0.60	0.51	0.42
IRFZ46NPBF	TO-220AB	IR	**865-0268**	0.76	0.57	0.46	0.40
IRFZ48PBF	TO-220AB	VISH	**865-0276**	2.28	1.24	0.93	0.80
IRFZ48NPBF	TO-220AB	IR	**101-3497**	1.34	1.31	1.27	1.24
IRF540PBF	TO-220	VISH	SMD **864-8310**	1.85	0.99	0.75	0.73
IRFZ48VPBF	TO-220AB	IR	**865-0292**	0.85	0.69	0.59	0.58
IRF540A	TO-220	FCH	**109-5126**	1.53	1.04	0.77	0.55
IRF840B	TO-220	FCH	**109-5127**	1.32	0.91	0.67	0.47
IRF1010EPBF	TO-220AB	IR	**864-7968**	1.71	– –	– –	– –
IRF1010EZPBF	TO-220AB	IR	**865-7327**	3.46	1.90	1.40	1.32
IRF1010NPBF	TO-220AB	IR	**864-7976**	2.82	1.56	1.14	1.08
IRF1010ZPBF	TO-220AB	IR	**865-7343**	1.00	0.86	0.70	0.63
IRF1104PBF	TO-220AB	IR	**864-7992**	1.47	0.87	0.84	0.81
IRF1302PBF	TO-220AB	IR	**865-7360**	3.20	1.77	1.30	1.22
IRF1312PBF	TO-220AB	IR	**865-7378**	3.19	1.86	1.41	1.32
IRF1404PBF	TO-220AB	IR	**864-8018**	1.51	1.32	1.28	1.24
IRF1404ZPBF	TO-220AB	IR	**865-7394**	3.35	1.85	1.35	1.28
IRF1405PBF	TO-220AB	IR	**864-8026**	1.57	1.34	1.32	1.29
IRF1405ZPBF	TO-220AB	IR	**865-7416**	3.50	2.04	1.55	1.45
IRF1407PBF	TO-220AB	IR	**865-7424**	3.75	2.18	1.66	1.56
IRF1503PBF	TO-220AB	IR	**865-7440**	2.17	1.29	0.99	0.94
IRF2204PBF	TO-220AB	IR	**865-7475**	3.75	2.18	1.66	1.56
IRF2804PBF	TO-220AB	IR	**865-7491**	5.41	3.16	2.40	2.25
IRF2805PBF	TO-220AB	IR	**865-7505**	3.92	2.28	1.74	1.63
IRF2807PBF	TO-220AB	IR	**864-8034**	3.64	2.32	1.80	1.64
IRF2807ZPBF	TO-220AB	IR	**865-7521**	3.35	1.85	1.36	1.28
IRF2907ZPBF	TO-220	IR	**865-7548**	4.49	– –	– –	– –
IRF3007PBF	TO-220AB	IR	**865-7556**	2.59	1.44	1.05	0.99
IRF3205PBF.	TO-220AB	IR	**864-8050**	1.31	0.91	0.86	0.77
IRF3205ZPBF	TO-220AB	IR	**821-0640**	3.25	1.80	1.32	1.24
IRF3703PBF	TO-220AB	IR	**865-7580**	5.32	– –	– –	– –

Mftrs. List No.	Pkg.	Mftr.	Order Code	Price Each 1+	25+	100+	250+
IRF3704PBF	TO-220AB	IR	**864-8115**	0.85	0.76	0.71	0.66
IRF3706PBF	TO-220AB	IR	**864-8123**	0.77	0.56	0.45	0.42
IRF3707ZPBF	TO-220AB	IR	**865-7599**	1.93	1.07	0.78	0.74
IRF3708PBF	TO-220AB	IR	**864-8158**	0.85	0.68	0.63	0.59
IRF3709PBF	TO-220AB	IR	**865-7610**	1.38	– –	– –	– –
IRF3711PBF	TO-220AB	IR	**864-8182**	1.02	0.91	0.83	0.77
IRF3711ZPBF	TO-220AB	IR	**865-7645**	1.86	1.19	0.85	0.69
IRF3808PBF	TO-220AB	IR	**865-7661**	3.94	2.30	1.75	1.64
IRF4104PBF	TO-220AB	IR	**865-7670**	2.81	1.59	1.19	1.00
IRF1018EPBF	TO-220	IR	**160-2223**	1.49	0.92	0.70	0.65
IRFB3607PBF	TO-220AB	IR	**160-2227**	1.29	0.82	0.63	0.59
IRFB3806PBF	TO-220AB	IR	**160-2228**	0.92	– –	– –	– –
NDP6060	TO-220AB	FCH	**101-7725**	0.61	0.47	0.45	0.43
STF3NK80Z	TO-220FP	ST	**129-1972**	1.30	0.97	0.71	0.62
STF9NK60ZD	TO-220FP	ST	**129-1975**	2.31	1.84	1.41	1.06
STF12NM50N	TO-220FP	ST	**125-2952**	3.23	2.56	1.90	1.54
STF25NM50N	TO-220FP	ST	**125-2955**	6.95	5.70	4.14	3.49
STP4N150	TO-220	ST	**125-2935**	6.44	5.11	3.80	3.08
STP80NF55-06	TO-220	ST	**129-1987**	2.48	1.99	1.52	1.14
STP80NF55-08	TO-220	ST	**129-1988**	3.05	2.24	1.81	1.54
STP80NF55L-06	TO-220	ST	**129-1989**	3.06	– –	– –	– –
STP140NF55	TO-220	ST	**129-1982**	2.52	2.02	1.54	1.16
STP4NK60ZFP	TO-220FP	ST	**129-1985**	0.54	0.37	0.30	0.29
STP6NK90ZFP	TO-220FP	ST	**129-1986**	2.13	1.56	1.26	1.07
STP8NK80ZFP	TO-220FP	ST	**129-1990**	2.07	1.65	1.26	0.95
STP9NK60ZFP	TO-220FP	ST	**129-1992**	1.67	1.22	0.99	0.84
STP10NK70Z	TO-220	ST	**129-1979**	2.42	1.78	1.44	1.23
STP15NK50ZFP	TO-220	ST	**129-1983**	2.84	2.08	1.68	1.43
STP12NM50	TO-220	ST	**129-1980**	2.69	1.73	1.39	1.21
STP12NM50N	TO-220	ST	**125-2939**	3.96	– –	– –	– –
STP21NM50N	TO-220	ST	**125-2941**	4.30	3.15	2.54	2.16
STP25NM50N	TO-220	ST	**125-2943**	6.95	5.70	4.14	3.49
STP45NF06	TO-220AB	ST	**993-5630**	1.02	0.77	0.64	0.56
STP55NF06	TO-220	ST	**980-3211**	1.20	0.71	0.64	0.55
STP60NF06	TO-220	ST	**980-3262**	1.53	1.08	0.98	0.83
STP80PF55	TO-220AB	ST	**993-5703**	2.14	1.27	1.13	1.10
STP100NF04	TO-220AB	ST	**993-5509**	2.97	1.82	1.30	1.06

500V, 600V TO-220 Isolated

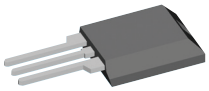
Lead spacing=2.54

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	P_D @ 25°C W	Mftr.	Mftrs. List No.
500	0.14	22	88	40	ST	STF25NM50N
600	0.38	11	44	25	ST	STF12NM50N
600	0.95	7	28	30	ST	STF9NK60ZD

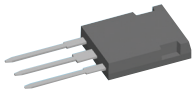
451005

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	250+
STF12NM50N	ST	**125-2952**	3.23	2.56	1.90	1.54
STF25NM50N	ST	**125-2955**	6.95	5.70	4.14	3.49
SuperMESH, Zener Protected						
STF9NK60ZD	ST	**129-1975**	2.31	1.84	1.41	1.06

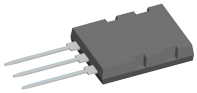
55V to 800V ISOPLUS ™



ISOPLUS-220



ISOPLUS-247



ISOPLUS-264

- Silicon chip on Direct-Copper-Bond substrate
- High power density
- Electrically isolated back surface
- Fast assembly - clip mounted package
- 2500 V electrical isolation

V_{DS} V	$I_{D\ cont}$ @ 25°C A	$R_{DS(on)}$ Ω	Q_{gs} nC	P_D @ 25°C W	T_{RR} ns	Rth_J K/W	Case	Mftrs. List No.
100	165	0.008	65	400	250	0.3	ISOPLUS-247	IXFR180N10
100	133	0.009	235	300	150	0.5	ISOPLUS-247	IXFR200N10P
150	100	0.013	240	300	200	0.5	ISOPLUS-247	IXFR180N15P
200	90	0.022	240	300	200	0.5	ISOPLUS-247	IXFR140N20P
300	82	0.026	185	360	200	0.35	ISOPLUS-247	IXFR140N30P
500	70	0.052	240	625	200	0.2	ISOPLUS-264	IXFL100N50P
500	45	0.072	197	360	200	0.35	ISOPLUS-247	IXFR80N50P
500	35	0.095	150	300	200	0.42	ISOPLUS-247	IXFR64N50P
600	38	0.07	250	280	650	0.45	ISOPLUS-247	IXKR40N60C
600	20	0.2	102	208	200	0.6	ISOPLUS-247	IXFR36N60P
800	25	0.15	170	250	550	0.5	ISOPLUS-247	IXKR25N80C

451039

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+
IXFL100N50P	**130-0085**	22.03	18.45	15.97	14.47
IXFR140N20P	**130-0089**	12.24	10.25	8.87	8.03
IXFR140N30P	**130-0091**	11.90	9.92	8.64	7.80
IXFR180N10	**130-0094**	19.70	16.48	14.28	12.94
IXFR180N15P	**130-0095**	11.06	9.26	8.03	7.25
IXFR200N10P	**130-0096**	10.96	9.18	7.98	7.19
IXFR36N60P	**130-0099**	8.23	6.89	5.98	5.38
IXFR64N50P	**130-0100**	12.22	10.20	8.83	8.02
IXFR80N50P	**130-0103**	10.72	9.88	9.62	9.38
IXKR25N80C	**130-0129**	18.20	15.24	13.21	11.95
IXKR40N60C	**130-0130**	19.24	16.09	13.96	12.63

D^2PAK, N-Channel HEXFET™

H=2.38, W=6.73, D=10.28

7-Pin D^2PAK

- Fully avalanche rated
- Logic drive options
- Fast switching
- Low gate charge

HEXFET™ technology utilises advanced processing techniques to achieve extremely low on-resistance per silicon area. This benefit, combined with the fast switching speed and ruggedized design of these devices, provide an extremely efficient and reliable component choice within their application area.

V_{DS} V	R_{DS} (on) Ω	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	$V_{GS(th)}$ min. V	$V_{GS(th)}$ max. V	t_{rr} ns	E_{AS} mJ	P_D @ 25°C W	Mftrs. List No.
D2-Pak (TO-263)									
30	0.0038	150	600	1.4	2.3*	42	560	140	IRL7833SPBF
40	0.0055	120	470	2	4	23	120	140	IRF4104SPBF
55	0.014	64	210	2	4	100	700	130	IRFZ48NSPBF
55	0.035	30	110	1	2*	76	110	3.8	IRLZ34NSPBF
55	0.06	18	72	1	2*	60	68	3.8	IRLZ24NSPBF
75	0.007	106	550	2	4	93	430	200	IRF3808SPBF
100	0.018	59	240	2	4	50	170	160	IRF3710ZSPBF
100	0.077	28	110	2	4	180	230	150	IRF540SPBF
—	0.75	9.2	37	-2	-4	530	290	170	IRFS9N60APBF
7-Pin D2-Pak									
75	0.0038	180	700	2	4	35	—	300	IRF2907ZS-7PPBF

* denotes logic level drive capable

424483

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+
IRF2907ZS-7PPBF	SMD **107-8405**	2.60	2.26	2.11	1.85
IRF3710ZSPBF	SMD **101-3376**	2.24	1.43	1.11	1.01
IRF3808SPBF	SMD **101-3377**	3.25	2.06	1.56	1.28
IRF4104SPBF	SMD **101-3378**	1.30	1.11	0.94	0.92
IRF540SPBF	SMD **101-3379**	2.58	1.42	1.06	0.93
IRL7833SPBF	SMD **101-3408**	2.81	– –	– –	– –
IRFZ48NSPBF	SMD **101-3480**	1.65	1.05	0.82	0.75
IRLZ24NSPBF	SMD **101-3482**	1.09	0.73	0.57	0.49
IRLZ34NSPBF	SMD **101-3483**	0.95	0.60	0.47	0.39
IRFS9N60APBF	SMD **101-3505**	2.22	1.52	1.23	1.07

D^2PAK, N-Channel

- Avalanche rated
- Logic drive options
- Fast switching
- Low gate charge

H=2.38, W=6.73, D=10.28

V_{DS} V	R_{DS} (on) Ω	$I_{D\ cont}$ @ 25°C A	$V_{GS(th)}$ min. V	$V_{GS(th)}$ max. V	t_{rr} ns	Input Cap pf	E_{AR} mJ	P_D @ 25°C W	Mfftr.	Mftrs. List No.
30	0.0015	34	1	3*	59	11400	—	300	FCH	FDB8832
40	0.0028	110	2.5	4	60	8250	211	437.5	SLX	SUM110N04-03-E3
60	0.025	48	1	2*	—	1630	—	100	FCH	NDB6060L
100	0.0095	110	2	4	70	6700	280	437.5	SLX	SUM110N10-09-E3
150	0.019	85	2	4	130	4750	125	375	SLX	SUM85N15-19-E3
200	0.03	65	2	4	130	5100	61	375	SLX	SUM65N20-30-E3

* denotes logic level drive capable

424504

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
SUM110N04-03-E3	SMD **107-5742** RL	2.10	1.72	1.68	1.64	1.60
SUM110N10-09-E3	SMD **107-5750** RL	3.10	2.12	1.74	1.60	1.56
SUM65N20-30-E3	SMD **107-5751** RL	3.84	– –	– –	– –	– –
SUM85N15-19-E3	SMD **107-5752** RL	5.34	– –	– –	– –	– –
SUM110N04-2M3L	SMD **157-1433**	3.05	2.10	1.72	1.37	1.31
		1+	**25+**	**100+**	**1K+**	
FDB8832	SMD **149-5284**	2.62	1.79	1.33	1.26	
NDB6060L	SMD **101-7723** RL	1.40	1.00	0.77	0.56	

Over half a million products available online QGO

Power MOSFETs - continued

DPAK Logic Level, N-Channel

- Logic drive
- Low on resistance
- -Operating range: 55°C to 175°C

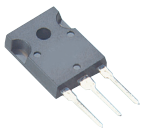
V_{DS} V	R_{DS} (on), Ohm Ω	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	P_D @ 25°C W	Mftr.	Mftrs. List No.
20	4mohm	120	460	89	IR	IRLR3717PBF
20	5.7mohm	93	370	79	IR	IRFR3711ZPBF
20	6.5mohm	110	440	120	IR	IRFR3711PBF
20	8.4mohm	60	240	48	IR	IRFR3704ZPBF
20	11mohm	49	200	40	IR	IRLR3715ZPBF
30	0.38	1	4	1	ROHM	US6M1TR
30	3.3mohm	161	620	140	IR	IRLR7843PBF
30	4.5mohm	140	560	140	IR	IRLR7833PBF
30	5mohm	75	240	166	NXP	PHD101NQ03LT
30	9.5mohm	56	220	50	IR	IRFR3707ZPBF
30	13.8mohm	40	170	40	IR	IRLR7807ZPBF
50	0.047	16	45	60	FCH	RFD16N05LSM
50	0.1	14	20	48	FCH	RFD14N05LSM
55	8mohm	89	130	130	IR	IRLR3705ZPBF
55	58mohm	16	64	35	IR	IRLR024ZPBF
60	32mohm	24	96	60	ST	STD20NF06LT4
60	0.047	16		90	FCH	RFD16N06LESM
60	0.07	17	40	49	FCH	RFD12N06RLESM
60	0.08	12	48	30	ST	STD12NF06L

424507

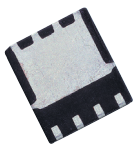
Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+
IRFR3704ZPBF	IR	SMD 101-3409	0.760	0.670	0.360
IRFR3707ZPBF	IR	SMD 101-3410	0.930	0.590	0.460
IRFR3711PBF	IR	SMD 101-3411	1.120	0.710	0.550
IRFR3711ZPBF	IR	SMD 101-3412	0.800	0.510	0.390
IRLR024ZPBF	IR	SMD 101-3413	0.680	0.420	0.330
IRLR3705ZPBF	IR	SMD 101-3414	1.230	– –	– –
IRLR3715ZPBF	IR	SMD 101-3416	0.460	0.310	0.270
IRLR3717PBF	IR	SMD 101-3417	1.340	0.860	0.660
IRLR7807ZPBF	IR	SMD 101-3419	0.500	0.330	0.260
IRLR7833PBF	IR	SMD 101-3421	1.810	1.160	0.890
IRLR7843PBF	IR	SMD 101-3422	1.140	0.730	0.560
RFD14N05LSM	FCH	SMD 101-7790	0.860	0.550	0.390
RFD16N05LSM	FCH	SMD 101-7794	0.950	– –	– –
PHD101NQ03LT	NXP	SMD 108-1447 RL	0.950	0.610	0.530
RFD12N06RLESM	FCH	SMD 109-5139 RL	0.960	– –	– –
RFD16N06LESM	FCH	SMD 109-5140 RL	1.420	0.970	0.710
STD20NF06LT4	ST	SMD 993-5371 RL	0.710	0.470	0.410
STD12NF06L	ST	SMD 994-6373 RL	0.680	0.490	0.430
US6M1TR	ROHM	SMD 152-5602	0.157	0.131	0.101

PowerMOS - MDMesh 2nd Generation

D²Pak (TO-263)

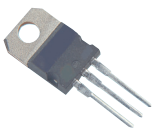


TO-247



PowerFlat

TO-220FP



TO-220

D²Pak (TO-252)

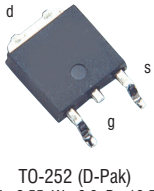
This series of devices is realized with the second generation of MDmesh ™ Technology. This revolutionary MOSFET associates a new verticle structure to the companies strip layout to yield one of the worlds lowest on-resistance and gate charge. It is therefore suitable for the most demanding high efficiency convertors.

V_{DSS} @ $T_{j\ max}$(V)	$R_{DS(on)}$ (Ω)	I_D (A)	P_D (W)	Case Style.	Mftrs List No.
200	0.105	20	80	PowerFLAT 6 x 5	STL20NM20N
300	0.09	30	160	TO-220	STP30NM30N
500	0.14	22	40	TO-220FP	STF25NM50N
500	0.14	22	160	TO-220	STP25NM50N
500	0.19	18	140	TO-220	STP21NM50N
500	0.38	11	100	TO-220	STP12NM50N
550	0.1	45	417	TO-247	STW45NM50
550	0.19	18	140	TO-247	STW21NM50N
550	0.25	20	214	TO-247	STW20NM50
550	0.38	11	100	DPAK	STD12NM50N
550	0.38	11	100	D2-PAK	STB12NM50N
600	0.14	22	160	TO-247	STW25NM50N
600	0.38	11	25	TO-220FP	STF12NM50N
700	1.2	7.5	156	TO-247	STW9NK70Z
1500	7	4	160	TO-247	STW4N150

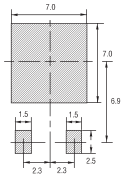
442722

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
STB12NM50N	SMD 129-1949 RL	2.65	1.94	1.57	1.34	1.19
STD12NM50N	SMD 125-2945 RL	1.81	1.43	1.37	1.32	1.16
STF12NM50N	125-2952	3.23	2.56	1.90	1.54	1.25
STF25NM50N	125-2955	6.95	5.70	4.14	3.49	2.91
STL20NM20N	SMD 129-1976 RL	1.42	1.07	0.97	0.87	0.85
STP12NM50N	125-2939	3.96	– –	– –	– –	– –
STP21NM50N	125-2941	4.30	3.15	2.54	2.16	1.86
STP25NM50N	125-2943	6.95	5.70	4.14	3.49	2.91
STP30NM30N	145-6339	5.68	4.41	3.67	3.18	2.77
STW4N150	125-2936	6.95	5.70	4.14	3.49	2.91
STW9NK70Z	129-1997	1.87	1.46	1.22	1.06	0.93
STW20NM50	129-1994	5.86	4.65	3.46	2.80	2.28
STW21NM50N	125-2947	4.45	3.26	2.64	2.24	1.92
STW25NM50N	125-2949	7.61	– –	– –	– –	– –
STW45NM50	129-1995	9.45	6.54	5.81	5.66	5.51

12V to 800V, N Channel



TO-252 (D-Pak)
H=2.55, W=6.8, D=10.5



Footprint

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	P_D @ 25°C W	Mftr.	Mftrs. List No.
12	90	6.7	54	52	FCH	FDD306P
20	0.015	37	144	35	IR	IRLR3714ZPBF
25	0.04	2.7	14	18	FCH	FDD8750
25	4.8	100	410	81	IR	IRLR8713PBF
25	4.8	100	410	81	IR	IRLU8713PBF
25	0.0056	84	340	68	IR	IRLR8711CPBF
30	0.006	94	380	89	IR	IRLR8113PBF
30	0.0065	86	340		IR	IRFR3709ZPBF
30	0.0105	55	100	60	FCH	FDD6680AS
30	0.0125	46	100	50	FCH	FDD6690A
30	0.013	61	244	87	IR	IRFR3708PBF
30	0.014	25	140	50	ST	STD35NF3LLT4
30	0.031	33	57	57	IR	IRFR3303PBF
30	0.05	17	68	30	ST	STD17NF03LT4
30	0.0084	65	260	65	IR	IRLR8721PBF
30	0.0031	160	640	135	IR	IRLR8743PBF
40	0.0052	17.5	80	227	FCH	FDD8444
40	0.0055	42	480	140	IR	IRFR4104PBF
40	0.0067	15.2	85	79	FCH	FDD8445
40	0.009	87	350	140	IR	IRFR3504PBF
40	0.05	7.2	35.3		ZET	ZXMN4A06K
40	0.0049	130	500	140	IR	IRLR3114ZPBF
50	0.1	14	22	48	FCH	RFD14N05SM
55	0.0075	91	360	140	IR	IRFR1010ZPBF
55	0.011	42	250	91	IR	IRFR48ZPBF
55	0.013	71	280	140	IR	IRFR3505PBF
55	0.016	56	220	110	IR	IRFR2405PBF
55	0.02	37	150	69	IR	IRFR1205PBF
55	0.0245	30	120	48	IR	IRFR4105ZPBF
55	0.045	25	100	46	IR	IRFR4105PBF
55	0.07	16	68	38	IR	IRFR024NPBF
60	0.014	60	240	110	ST	STD60NF06T4
60	0.027	30	100	50	FCH	FDD5690
60	0.032	24	96	60	ST	STD20NF06T4
60	0.1	14	56	42	VISH	IRFR024PBF
60	0.2	7.7	31	25	VISH	IRFR014PBF
75	0.016	42	210	110	IR	IRFR2307ZPBF
75	0.026	42	170	110	IR	IRFR2407PBF
80	0.014	70	280	140	IR	IRFR3418PBF
80	0.029	38	150	110	IR	IRFR3518PBF
100	0.014	42	250	140	IR	IRLR3110ZPBF
100	0.018	42	220	140	IR	IRFR3710ZPBF
100	0.018	42	220	140	IR	IRFR3710ZPBF
100	0.19	8.7	35	35	IR	IRFR120ZPBF
100	0.024	44		135	FCH	FDD3672
100	0.03	25	100	100	ST	STD25NF10L
100	0.032	32		95	FCH	FDD3682
100	0.039	31	125	110	IR	IRFR3410PBF
100	0.06	23	92	70	ST	STD15NF10
100	0.11	15	60	52	IR	IRFR3910PBF
100	0.115	14	56	56	IR	IRFR3911PBF
100	0.21	9.1	38	39	IR	IRFR120NPBF

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	P_D @ 25°C W	Mftr.	Mftrs. List No.
100	0.27	7.7	31	42	VISH	IRFR120PBF
100	0.54	4.3	17	25	VISH	IRFR110PBF
100	14	63	250	140	IR	IRLU3110ZPBF
200	0.14	15	60	2.5	FCH	FQD18N20V2
150	0.18	14	56	86	IR	IRFR13N15DTRLP
200	0.38	9.4	38	86	IR	IRFR9N20DPBF
200	0.6	5	20	43	IR	IRFR220NPBF
200	0.7	6	18	50	ON	MTD6N20ET4G
200	0.8	4.8	19	42	VISH	IRFR220PBF
200	1.5	2.6	10	25	VISH	IRFR210PBF
200	0.13	3.6	20	70	FCH	FDD2670
250	1.1	3.8	15	42	VISH	IRFR224PBF
400	1.8	3.1	12	42	VISH	IRFR320PBF
400	1.8	3	12	45	ST	STD5NK40ZT4
400	3.6	1.7	6	25	VISH	IRFR310PBF
500	0.8	7.5	30	100	ST	STD5NM50T4
500	1.5	4.4	17.6	70	ST	STD5NK50ZT4
500	3	2.4	8	42	VISH	IRFR420PBF
500	0.265	18	72		FCH	FDP18N50
550	0.38	11	44	100	ST	STD12NM50N
600	2	4	16	70	ST	STD4NK60ZT4
600	4.4	2	8	42	VISH	IRFRC20PBF
650	1	5	20	96	ST	STD5NM60T4

** measured power on 50mm x 50mm x 1.8mm PCB

430820

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	250+	1K+
FDD306P	FCH	SMD 995-8827 RL	0.590	0.400	0.300	0.210	0.181
FDD2670	FCH	NEW SMD 149-5259	1.040	0.890	0.870	0.850	0.820
FDD3672	FCH	NEW SMD 149-5260	2.090	1.420	1.050	0.750	0.640
FDD3682	FCH	NEW SMD 149-5261	1.210	0.810	0.600	0.450	0.440
FDD5690	FCH	SMD 984-5038 RL	1.240	0.870	0.670	0.500	0.450
FDD6680AS	FCH	NEW SMD 149-5268	1.130	0.770	0.580	0.410	0.350
FDD6690A	FCH	SMD 984-5062 RL	0.930	0.660	0.510	0.340	0.330
FDD8444	FCH	SMD 122-8329	2.320	1.570	1.170	0.820	0.710
FDD8445	FCH	SMD 122-8331	1.460	0.990	0.730	0.520	0.450
FDD8750	FCH	NEW SMD 149-5253	0.540	0.360	0.260	0.181	0.137
FDP18N50	FCH	NEW 149-5258	1.410	1.000	0.910	0.890	0.860
FQD12N20	FCH	SMD 984-5070 RL	0.770	0.520	0.380	0.270	0.240
FQD18N20V2	FCH	SMD 109-5052 RL	1.300	0.890	0.650	0.470	0.400
IRFR9N20DPBF	IR	SMD 864-9928	1.300	0.830	0.730	0.630	0.610
IRFR13N15DTRLP	IR	SMD 129-8545 RL	0.620	0.460	0.370	0.360	0.350
IRFR48ZPBF	IR	SMD 101-3388	1.190	0.760	0.590	0.540	0.500
IRFR014PBF	VISH	SMD 864-9600	1.050	0.580	0.430	0.380	0.360
IRFR024PBF	VISH	SMD 864-9634	1.390	0.770	0.570	0.510	0.480
IRFR024NPBF	IR	SMD 864-9618	0.700	0.410	0.400	0.250	0.230
IRFR3710ZPBF	IR	SMD 101-3384	1.380	0.870	0.740	0.720	0.700
IRFR110PBF	VISH	SMD 864-9642	0.640	– –	– –	– –	– –
IRFR120PBF	VISH	SMD 101-3484	1.170	0.640	0.480	0.430	0.410
IRFR120ZPBF	IR	NEW SMD 143-6967	0.590	0.500	0.410	0.350	0.340
IRFR120NPBF	IR	SMD 864-9669	0.650	0.390	0.380	0.310	0.300
IRFR210PBF	VISH	SMD 864-9685	1.140	– –	– –	– –	– –
IRFR220PBF	VISH	SMD 864-9707	0.960	0.530	0.410	0.400	0.390
IRFR220NPBF	IR	SMD 864-9693	0.450	0.360	0.280	0.250	0.240
IRFR224PBF	VISH	SMD 864-9715	0.580	0.480	0.390	0.370	0.360
IRFR310PBF	VISH	SMD 864-9740	0.700	0.430	0.420	0.410	0.400
IRFR320PBF	VISH	SMD 864-9758	1.600	0.880	0.660	0.580	0.550
IRFR420PBF	VISH	SMD 864-9812	0.940	0.520	0.390	0.340	0.320
IRFR1010ZPBF	IR	SMD 101-3382	1.580	1.010	0.780	0.710	0.660
IRFR1205PBF	IR	SMD 864-9650	1.240	0.790	0.610	0.560	0.520
IRFR2307ZPBF	IR	SMD 101-3383	1.220	0.780	0.600	0.560	0.510
IRFR2405PBF	IR	SMD 864-9723	0.750	0.590	0.470	0.410	0.400
IRFR2407PBF	IR	SMD 864-9731	0.880	– –	– –	– –	– –
IRFR3303PBF	IR	SMD 101-3485	1.240	0.790	0.610	0.560	0.520
IRFR3410PBF	IR	SMD 864-9766	0.750	0.610	0.510	0.400	0.390
IRFR3418PBF	IR	SMD 864-9774	2.580	1.650	1.280	1.170	1.080
IRFR3504PBF	IR	SMD 865-8765	1.020	– –	– –	– –	– –
IRFR3505PBF	IR	SMD 865-8773	1.730	– –	– –	– –	– –
IRFR3518PBF	IR	SMD 864-9782	0.910	0.700	0.590	0.490	0.480
IRFR3708PBF	IR	SMD 865-8811	1.280	0.820	0.630	0.580	0.540
IRFR3709ZPBF	IR	NEW SMD 143-6970	1.600	1.020	0.790	0.720	0.670
IRFR3710ZPBF	IR	SMD 101-3384	1.380	0.870	0.740	0.720	0.700
IRFR3910PBF	IR	SMD 864-9790	0.990	0.590	0.570	0.370	0.330
IRFR3911PBF	IR	SMD 865-8820	0.710	0.470	0.370	0.360	0.350
IRFR4104PBF	IR	SMD 101-3386	1.360	0.860	0.730	0.710	0.690
IRFR4104PBF	IR	SMD 101-3386	1.360	0.860	0.730	0.710	0.690
IRFR4105PBF	IR	SMD 864-9804	1.530	0.920	0.890	0.540	0.500
IRFR4105ZPBF	IR	SMD 101-3387	0.810	0.620	0.410	0.390	0.370
IRFRC20PBF	VISH	SMD 864-9936	1.290	0.710	0.530	0.460	0.450
IRLR3110ZPBF	IR	NEW SMD 143-6990	1.230	0.780	0.610	0.560	0.520
IRLR3714ZPBF	IR	NEW SMD 143-6991	0.960	0.610	0.480	0.440	0.410
IRLR8113PBF	IR	NEW SMD 143-6992	1.670	1.070	0.830	0.760	0.710
IRLR8713PBF	IR	SMD 129-8551	0.960	0.620	0.490	0.450	0.440
IRLU3110ZPBF	IR	129-8556	1.480	1.260	1.050	0.990	0.920

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	250+	1K+
IRLU8713PBF	IR	129-8552	0.720	0.570	0.560	0.540	0.530
MTD6N20ET4G	ON	SMD 955-5919 RL	1.550	1.220	0.970	0.770	0.620
RFD14N05SM	FCH	SMD 101-7791	0.770	0.490	0.350	0.260	0.210
STD4NK60ZT4	ST	SMD 129-1961 RL	0.650	0.530	0.460	0.390	0.370
STD5NM50T4	ST	SMD 129-1965 RL	1.780	1.300	1.050	0.900	0.770
STD5NM60T4	ST	SMD 993-5428 RL	1.110	0.820	0.770	0.740	0.640
STD5NK40ZT4	ST	SMD 129-1962 RL	1.010	0.730	0.600	0.540	0.470
STD5NK50ZT4	ST	SMD 129-1963 RL	1.620	1.170	0.950	0.840	0.750
STD12NF06LT4	ST	SMD 117-5684 RL	0.640	0.470	0.380	0.320	0.270
STD12NM50N	ST	SMD 125-2945 RL	1.810	1.430	1.370	1.320	1.160
STD15NF10	ST	SMD 994-6322 RL	0.930	0.680	0.550	0.470	0.400
STD17NF03LT4	ST	SMD 129-1958 RL	0.770	0.580	0.500	0.430	0.380
STD20NF06T4	ST	SMD 993-5363 RL	0.720	0.530	0.430	0.360	0.310
STD25NF10L	ST	SMD 994-6330 RL	1.100	0.820	0.660	0.580	– –
STD35NF3LLT4	ST	SMD 994-6349 RL	0.660	0.400	0.380	0.340	0.330
STD60NF06T4	ST	SMD 993-5436 RL	1.290	0.950	0.770	0.650	0.560
ZXMN4A06K	ZET	SMD 125-1236 RL	0.740	0.590	0.400	0.350	0.280
TSM1N60CP	TS	SMD 129-9314	0.510	0.360	0.230	0.197	0.178
TSM2N60CP	TS	SMD 129-9317	0.500	0.350	0.230	0.191	0.175
IRLR3114ZPBF	IR	NEW SMD 155-1904	1.740	1.110	0.860	0.790	0.730
IRLR8711CPBF	IR	NEW SMD 155-1906	1.140	0.730	0.560	0.520	0.480
IRLR8721PBF	IR	NEW SMD 155-1907	0.850	0.550	0.420	0.390	0.360
IRLR8743PBF	IR	NEW SMD 155-1908	0.720	0.510	0.450	0.440	0.430

12V to 400V, P Channel

TO-252 (D-Pak)

FAIRCHILD SEMICONDUCTOR™ ON Semiconductor

International IOR Rectifier VISHAY

SMD

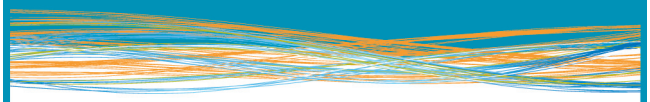
H=2.55, W=6.8, D=10.5

V_{DS} V	$R_{DS(on)}$ Ω	$I_{D\ cont}$ @ 25°C A	I_D pulsed A	P_D @ 25°C W	Mftr.	Mftrs. List No.
40	0.027	32	100	69	FCH	FDD4685
40	0.044	14	60	42	FCH	FDD4243
40	0.06	9.9	—	9.5	ZET	ZXMP4A16K
55	0.065	31	110	110	IR	IRFR5305PBF
55	0.11	18	64	57	IR	IRFR5505PBF
55	0.175	11	44	38	IR	IRFR9024NPBF
60	0.055	10.4	37.5	4.3**	ZET	ZXMP6A18K
60	0.1	15	45	42	FCH	FDD5614P
60	0.28	8.8	35	—	VISH	IRFR9024PBF
60	0.5	5.1	20	25	VISH	IRFR9014PBF
100	0.205	13	5.2	66	IR	IRFR5410PBF
100	0.48	6.6	26	40	IR	IRFR9120NPBF
100	0.6	5.6	22	42	VISH	IRFR9120PBF
100	1.2	3.1	12	25	VISH	IRFR9110PBF
150	0.295	13	44	110	IR	IRFR6215PBF
200	1.5	3.6	14	42	VISH	IRFR9220PBF
250	3	2.7	11	—	VISH	IRFR9214PBF

430813

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	250+
FDD4243	FCH	SMD 149-5262	1.00	0.64	0.46	0.35
FDD4685	FCH	SMD 149-5263	0.95	0.67	0.51	0.38
FDD5614P	FCH	SMD 984-6131 RL	0.81	0.58	0.44	– –
IRFR5305PBF	IR	SMD 864-9820	0.94	0.61	0.47	0.39
IRFR5410PBF	IR	SMD 865-8854	1.24	0.79	0.61	0.56
IRFR5505PBF	IR	SMD 864-9839	0.68	0.43	0.34	0.29
IRFR6215PBF	IR	SMD 864-9847	0.97	0.62	0.48	0.44
IRFR9014PBF	VISH	SMD 864-9855	1.34	– –	– –	– –
IRFR9024PBF	VISH	SMD 101-3507	0.68	0.48	0.39	0.34
IRFR9214PBF	VISH	SMD 101-3508	1.41	0.78	0.58	0.51
IRFR9024NPBF	IR	SMD 864-9863	0.57	0.47	0.39	0.30
IRFR9110PBF	VISH	SMD 864-9871	0.64	– –	– –	– –
IRFR9120PBF	VISH	SMD 865-8862	0.85	0.50	0.38	0.36
IRFR9120NPBF	IR	SMD 864-9880	0.59	– –	– –	– –
IRFR9220PBF	VISH	SMD 864-9901	1.29	– –	– –	– –
ZXMP4A16K	ZET	SMD 125-1237 RL	1.56	1.04	0.79	0.69
ZXMP6A18K	ZET	SMD 125-1239 RL	1.23	0.98	0.67	0.65

element14 | www.element-14.com



The solutions are out there, you just haven't registered yet

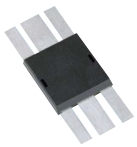
MOSFET/IGBT Drivers

Ultrafast RF MOSFET Drivers

IXYS

New

DEIC515



DEIC420

CMOS high speed, high current gate drivers specifically designed to drive MOSFETs in class D and E in high frequency applications upto 45MHz, as well as any other application that demands ultra-fast rise and fall times (<4ns).
The input of the drivers are fully immune to latch up over the entire operating range. Designed with small internal delays, cross conduction/current shoot-through is virtually eliminated.

- Latch-up protected
- High peak currents
- Wide operating range: 8V to 30V
- Ultrafast rise and fall times
- Highly capacitive load drive capable
- Matched rise and fall times
- 18ns Input to output delay times
- Low output impedance
- Low quiescent supply current

I_D Peak. A	F_{max} MHz	Op, Temp Range V	V_{supply} max. V	Package	Mftrs. List No.
15	45	-40 to 85	30	DEIC515	DEIC515
20	45	-40 to 85	30	DEIC420	DEIC420

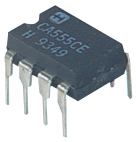
464868

Mftrs. List No.	Order Code	Price Each 1+	10+	25+
DEIC515	SMD 134-7727	20.95	19.04	17.24
DEIC420	SMD 134-7728	19.79	18.00	16.29

Off-Line SMPS Current Mode Controller

With integrated 650V Startup Cell/Depletion CoolMOS™

infineon



- Active burst mode to reach the lowest standby power requirements
- Protection features (Auto Restart Mode) to increase robustness and safety of the system
- Adjustable blanking window for high load jumps to increase system reliability
- 67/100Khz fixed switching frequency
- Few external components required
- 5% current limiting tolerance with a max Duty Cycle of 72%
- Soft driving for low EMI

The Third generation CoolSET™ - F3, provides active burst mode to reach the lowest standby power requirements.Less than 100 mW at no load. As the controller is always active during Active burst mode, there is an imediate response on load jumps without any black out in SMPS. In active Burst Mode, the ripple of the output voltage can be reduced, less than 1%. Futhermore, to increase the robustness and safety of the system, the device enters into Auto restart mode in the cases of over-temperature, VCC overvoltage, output open loop or overload and VCC undervoltage. By means of the internal precise peak current diode can be lowered which leads to more cost effeciency. An adjustable blanking window prevents the IC from entering Auto jumps. The CoolSET™ - F3 family consists a wide power class range of products for various applications.

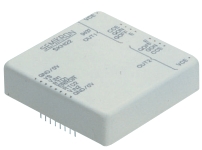
P_D W	$R_{DS(ON)}$ Ω	$V_{DS(MAX)}$ V	Mftrs. List No.
20	1.7	650	ICE3A1565
33	0.65	650	ICE3A2565

425220

Mftrs. List No.	Order Code	Price Each 1+	25+	100+
ICE3A1565	109-5677	1.25	0.98	0.78
ICE3A2565	109-5678	1.01	0.82	0.80

MOSFET/IGBT Driver Module

SEMIKRON innovation+service



H=14, W=55, D=55

- Double driver for Semikron half bridge modules
- Produces negative V_{GE} at switch-off
- Drives MOSFETS $V_{ds(on)}$ <10V
- CMOS compatible inputs
- Short circuit protected
- Drive interlock top/bottom
- Internal isolation transformers
- Supply undervoltage protection (13V)

V_S V	V_{IH} V	I_{IH} mA	$I_{O\ (max)}$ A	f_{max} kHz	V_{CE} V	dv/dt kV/µs	V_{ISOL} kV	Mftrs. List No.
18	18.3	0.29	8	100	1700	50	2500	SKHI22AR

211187

Mftrs. List No.	Order Code	Price Each 1+	10+	50+
SKHI22AR	118-2752	161.20	126.34	105.95

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SKYPER™ 32 and 32 PRO

SEMIKRON innovation+service

SKYPER 32 and SKYPER 32PRO

- Two output channels
- Integrated potential free power supply
- Under voltage protection
- Drive interlock top / bottom
- Dynamic short circuit protection DSCP
- Failure management
- IEC 60068-1 (climate) 40/085/56

Channels Number of	V_{CE} Max. V	Input Signal High V	Input Signal Low V	Output Charge µC	Supply Voltage(V_s) V	Output I_{PEAK} V	F_{MAX} kHz	Mftrs. list No.
2	1700	V_s +0.3	GND - V_s	2.5	16	V_s +0.3	50	SKYPER 32 R
2	1700	V_s +0.3	GND - V_s	6.3	15	V_s +0.3	50	SKYPER 32PRO R

451525

Mftrs. List No.	Order Code	Price Each 1+	3+	+
SKYPER 32 R	130-0530	56.85	47.37	– –
SKYPER 32PRO R	130-0531	92.19	76.83	– –

Smart Power MOSFETs

FPF21XX IntelliMAX™ Series Load Management - SOT-23 (5-Pin)

FAIRCHILD SEMICONDUCTOR

H=1.7, W=6.7, D=7.3

SMD

A family of load switches which provide full protection to systems and loads which may encounter large current conditions. These devices contain a 0.125W current-limited MOSFET. Switch control is by a logic input (ON) capable of interfacing directly with low voltage control signals.Thermal shutdown protection which shuts off the switch to prevent damage to the part when a continuous over-current condition causes excessive heating.When the switch current reaches the current limit, the part operates in a constant-current mode to prohibit excessive currents from causing damage, instantaneous, delayed and reverse current blocking options are available.

Note: 1228312(FPF1005) - MLP package.

- 1.8 to 5.5V input voltage range
- Controlled turn-on
- Current limit options
- Undervoltage lockout
- Less than 1uA shutdown current, with auto-restart ability
- Fast current limit response time, with fault blanking

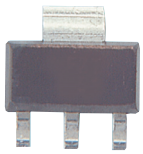
419109

Mftrs. List No.	Order Code	Price Each 1+	10+	100+	250+	500+
FPF1005	SMD 122-8312	0.89	0.57	0.41	0.24	0.22
FPF2100	SMD 108-4435 RL	0.93	0.66	0.50	0.34	0.32
FPF2103	SMD 108-4438 RL	0.96	0.68	0.52	0.34	0.31
FPF2104	SMD 108-4439 RL	1.04	0.74	0.56	0.37	0.30
FPF2106	SMD 108-4441 RL	1.04	0.74	0.56	0.37	0.30
FPF2108	SMD 108-4443 RL	1.80	1.25	0.91	0.63	0.52
FPF2109	SMD 108-4444 RL	1.04	0.74	0.56	0.37	0.33
FPF2116	SMD 122-8313	0.81	0.63	0.48	0.36	0.35
FPF2123	SMD 122-8314	1.11	0.78	0.60	0.40	0.36
FPF2124	SMD 122-8315	0.68	0.57	0.48	0.40	0.39

N-Channel Smart MOS

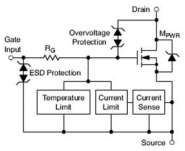
ON Semiconductor

D-PAK (TO-252)

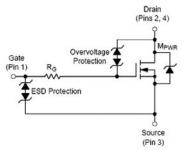


SOT-223

- Protected MOSFETs
- Voltage clamped.
- Various protection options.
- Surface mount.



Config A



Config B

V_{CLAMP} Max. (V)	$R_{DS(on)}$ (Ω)	I_D (Limited) @ 25°C (A)	Shutdown Temp (°C)	P_D @ 25°C (W)	Circuit	Package	Order Code	Mftrs. list No.
40	0.11	6.5	200	1.3	A	DPAK	145-3666	NID5004NT4G
40	0.1	6	175	1.1	A	SOT-223	145-3672	NIF62514T1G
42	0.023	33	175	64	A	DPAK	145-3664	NID5001NT4G
42	0.042	20	175	1.3	A	DPAK	145-3665	NID5003NT4G
42	0.165	2	N/A	1.1	A	SOT-223	145-3669	NIF5002NT1G
42	0.053	14	N/A	1.25	A	SOT-223	145-3670	NIF5003NT1G
52	0.181	9	N/A	28.8	B	DPAK	145-3668	NID9N05CLT4G
52	0.125	2.6	N/A	1.69	B	SOT-223	145-3673	NIF9N05CLT1G
65	0.21	6.5	200	1.3	A	DPAK	145-3667	NID6002NT4G

497203

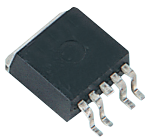
Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+
NID5001NT4G	SMD 145-3664	2.44	1.59	1.26	1.00
NID5003NT4G	SMD 145-3665	1.60	1.05	0.83	0.66
NID5004NT4G	SMD 145-3666	2.31	1.51	1.19	0.95
NID6002NT4G	SMD 145-3667	2.38	1.55	1.23	0.98
NID9N05CLT4G	SMD 145-3668	1.36	0.89	0.70	0.56
NIF5002NT1G	SMD 145-3669	0.89	– –	– –	– –
NIF5003NT1G	SMD 145-3670	2.26	1.48	1.17	0.93
NIF62514T1G	SMD 145-3672	1.77	– –	– –	– –
NIF9N05CLT1G	SMD 145-3673	0.76	– –	– –	– –

TrenchFET Power MOSFETs

Current sensing, temperature sensing, fast switching

VISHAY

SMD



- Temperature- and current-sensing TrenchFETs
- Low thermal resistance package
- 175°C junction temperature

D^2Pak-5L

Current Sensing Diode

V_{ds} V	$R_{DS(on)}$ Ω	I_D* A	I_D pulsed* A	Current Sensing Ratio	P_D @ 25°C W	I_{ar} A	E_{ar} mJ	Mftrs. List No.
75	0.007	60	60	2370	300	60*	180	SUM60N08-07C

Temperature Sensing Diode, N Channel

V_{ds} V	$R_{DS(on)}$ Ω	I_D* A	I_D pulsed* A	Shut-down °C	P_D @ 25°C W	I_{ar} A	E_{ar} mJ	Mftrs. List No.
40	0.0045	60	60	175	200	60*	180	SUM60N04-05LT
40	0.0055	60	60	175	200	60*	180	SUM60N04-06T
40	0.009	60	60	175	110	50	125	SUM60N04-12LT
75	0.007	60	60	175	300		180	SUM60N08-07T

Temperature Sensing Diode, P Channel

V_{ds} V	$R_{DS(on)}$ Ω	I_D* A	I_D pulsed* A	Shut-down °C	P_D @ 25°C W	Gate Charge nC	Mftrs. List No.
55	0.011	60	60	175	200	60	180	SUM60P05-11LT

Fast Switching, Reduced Gate Charge

V_{ds} V	$R_{DS(on)}$ Ω	I_D* A	I_D pulsed* A	Shut-down °C	P_D @ 25°C W	Gate Charge nC	Mftrs. List No.
30	0.0075	85	85		100	13	SUM85N03-08P

* Package limited

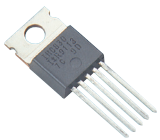
340338

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
SUM50N03-13LC	SMD 537-3232 RL	1.38	0.94	0.71	0.60	0.55
SUM60N04-05LT	SMD 537-3244	1.90	1.54	1.28	1.07	1.07
SUM60N04-06T	SMD 537-3256	2.40	1.64	1.34	1.07	1.03
SUM60N04-12LT	SMD 537-3268 RL	2.21	1.52	1.14	0.95	0.89
SUM60N08-07C	SMD 537-3270	2.95	2.02	1.65	1.33	1.25
SUM60N08-07T	SMD 537-3281	3.49	2.39	1.78	1.49	1.43
SUM60P05-11LT	SMD 537-3293	4.70	3.20	2.41	2.00	1.92
SUM85N03-08P	SMD 537-3323	1.47	0.99	0.76	0.63	0.61

Fully Protected MOSFET Switches

165 °C trip

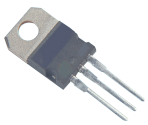
International IOR Rectifier



TO-220/5

SOT-223

SO-8



TO-220

- Short-circuit protected
- Over-temperature protected
- Negative clamped output
- Reverse battery protection
- Open-circuit ground protection
- V_{CC} short-circuit protection
- Low noise charge pump
- Sleep mode supply current
- 4kV ESD protected
- Diagnostic feedback

$R_{DS(on)}$ Ω	V_{clamp} V	V_{in} High min. V	V_{in} Low max. V	Shut-down A	P_D @ 25°C W	Package	Mftrs. List No.
Single Low Sided Switch							
0.25	39	6	-0.3	2.8	2	SOT-223	IPS1051LPBF
0.13	68	6	-0.3	5	1	SOT-223	IPS2041LPBF
0.1	39	6	-0.3	4.5	2	SOT-223	IPS1041LPBF
0.05	36	6	0.3	18	25	TO-220	IPS1031PBF
0.05	36	0.3	6	18	3.1	D2-PAK	IPS1031SPBF
0.05	36	0.3	6	18	2.5	DPAK	IPS1031RPBF
0.025	36	0.3	6	35	25	TO-220	IPS1021PBF
0.025	36	0.3	6	35	3.1	D2-PAK	IPS1021SPBF
0.025	36	0.3	6	35	2.5	DPAK	IPS1021RPBF
0.013	36	0.3	6	85	25	TO-220	IPS1011PBF
0.013	36	0.3	6	85	3.1	D2-PAK	IPS1011SPBF
Single Low Sided Switch							
130mohm	68	-0.3	6	5	1	D-PAK	IPS2041RPBF
100mohm	39	-0.3	6	4.5	2	D-PAK	IPS1041RPBF
Dual Low Sided Switch							
0.25	39	-0.3	6	2.8	1.25	SOIC	IPS1052GPBF
0.1	39	-0.3	6	4.5	1.25	SOIC	IPS1042GPBF

$R_{DS(on)}$ Ω	V_{clamp} V	Package	Mftrs. List No.
High Sided Switch			
0.13	39	SOIC	IPS6041GPBF
0.13	39	DPAK	IPS6041RPBF
0.06	39	TO-220	IPS6031PBF
0.06	39	DPAK	IPS6031RPBF
0.06	39	D2-PAK	IPS6031SPBF
0.03	39	TO-220	IPS6021PBF
0.03	39	DPAK	IPS6021RPBF
0.03	39	D2-PAK	IPS6021SPBF
0.02	40	TO-220	IR3315PBF
0.014	39	TO-220	IPS6011PBF
0.014	39	DPAK	IPS6011RPBF
0.014	39	D2-PAK	IPS6011SPBF
0.012	40	TO-220	IR3314PBF
0.007	40	TO-220	IR3313PBF
70mohm	70	TO-220AB	IPS7081PBF
70mohm	70	D-PAK	IPS7081RPBF
70mohm	70	D2-PAK	IPS7081SPBF
110mohm	70	SO	IPS7071GPBF
120mohm	70	SO	IPS7091GPBF
120mohm	70	TO-220AB	IPS7091PBF
120mohm	70	D2-PAK	IPS7091SPBF
130mohm	39	TO-220	IPS6041PBF
130mohm	39	TO-220	IPS6041PBF
130mohm	39	D2-PAK	IPS6041SPBF

211340

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
IPS1011PBF	138-8572	5.10	3.26	2.52	2.31	2.15
IPS1011SPBF	SMD 138-8573	4.88	3.12	2.41	2.21	2.05
IPS1021PBF	138-8576	3.31	2.11	1.63	1.50	1.39
IPS1021RPBF	SMD 138-8578	2.32	1.48	1.15	1.05	0.98
IPS1021SPBF	SMD 138-8577	2.59	1.65	1.28	1.17	1.09
IPS1031PBF	138-8579	2.83	1.81	1.40	1.28	1.19
IPS1031RPBF	SMD 138-8581	2.31	1.47	1.14	1.04	0.97
IPS1031SPBF	SMD 138-8580	2.81	1.80	1.39	1.27	1.18
IPS1041LPBF	SMD 138-5472	2.11	1.17	0.85	0.81	0.72
IPS1042GPBF	SMD 138-5478	3.06	1.69	1.24	1.17	1.05
IPS1051LPBF	SMD 138-5480	1.78	0.99	0.73	0.69	0.61
IPS1052GPBF	SMD 138-5484	2.63	1.46	1.07	1.01	0.90
IPS2041LPBF	SMD 138-5487	2.57	1.42	1.04	0.98	0.88
IPS6011PBF	138-5490	6.03	3.51	2.67	2.51	2.29
IPS6011RPBF	SMD 138-5491	5.43	3.16	2.41	2.25	2.06
IPS6011SPBF	SMD 138-5492	5.94	3.46	2.63	2.47	2.25
IPS6021PBF	138-5493	4.14	2.42	1.84	1.73	1.58
IPS6021RPBF	SMD 138-5494	3.58	2.08	1.59	1.49	1.36
IPS6021SPBF	SMD 138-5496	4.09	2.38	1.81	1.70	1.55
IPS6031PBF	138-5497	3.51	2.05	1.56	1.46	1.33
IPS6031RPBF	SMD 138-5498	3.35	1.85	1.35	1.28	1.14
IPS6031SPBF	SMD 138-5499	3.43	2.00	1.52	1.42	1.30
IPS6041GPBF	SMD 138-5500	2.28	1.26	0.93	0.87	0.78
IPS6041RPBF	SMD 138-5502	2.81	1.55	1.14	1.08	0.96
IR3313PBF	138-8589	6.12	3.57	2.71	2.54	2.32
IR3314PBF	138-8590	5.31	– –	– –	– –	– –
IR3315PBF	138-8591	4.60	2.68	2.04	1.91	1.75
IPS1041RPBF	SMD 160-2247	1.36	0.95	0.81	0.78	0.77
IPS2041RPBF	SMD 160-2248	2.48	1.46	1.12	1.06	0.96
IPS6041PBF	160-2249	2.64	1.56	1.20	1.13	1.02
IPS6041PBF	160-2249	2.64	1.56	1.20	1.13	1.02
IPS6041SPBF	SMD 160-2250	3.40	2.11	1.62	1.52	1.38
IPS7071GPBF	SMD 160-2252	5.93	3.49	2.69	2.53	2.30
IPS7081PBF	160-2253	4.67	– –	– –	– –	– –
IPS7081RPBF	SMD 160-2254	3.66	2.15	1.66	1.56	1.42
IPS7081SPBF	SMD 160-2255	3.62	2.25	1.78	1.65	1.53
IPS7091GPBF	SMD 160-2256	3.02	1.78	1.37	1.29	1.17
IPS7091PBF	160-2257	2.88	2.01	1.71	1.57	1.42
IPS7091SPBF	SMD 160-2258	3.35	1.97	1.52	1.43	1.30

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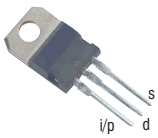
Smart Power MOSFETs - continued

OmniFET™ Fully Protected MOSFET Switches

SO-8



TO-220

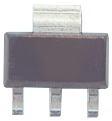
- Current limited
- Thermal shut-down
- Short-circuit protected
- Integral clamp
- High input impedance
- ESD protected to 2KV

V_{clamp} V	$R_{DS(on)}$ Ω	I_{lim} A	P_{tot} mW		Mftrs. List No.
70	0.2	5	31	TO-220	VNP5N07-E
45	0.25	1.7	4	SOIC	VNS1NV04D

211243

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
VNP5N07-E	980-4501▲	1.72	1.37	1.05	0.79	– –
VNS1NV04D	SMD 816-5483●	1.51	1.10	0.89	0.76	0.65

Self-Protected Low-Side Intellifet MOSFET Switch


SOT-223

- Short circuit protected through auto restart
- Low Rds
- surge protected
- Entry protection (ESD)
- High DC current
- Load drop protection (protects active load)

Self protected low side MOSFET. Monolithic over temperature, over current, surge and ESD protected logic level entry functionality. Suitable as an all purpose switch for a variaty of different uses.

Supply Voltage Range	R_{DS} Ω	Polarity O/P Transistor	I_{OUT} max. (A)	Package	Mftrs List No.	Order Code
-0.2 to 10V	0.5	N	1.1	SOT-223	BSP75N	125-1242
-0.2 bis 10V	0.55	N	1.4	SOT-223	BSP75G	125-1243

458168

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+
BSP75N	SMD 125-1242● RL	1.52	1.00	0.76	0.67
BSP75G	SMD 125-1243● RL	1.97	1.30	0.99	0.86

HITFET® Low Side Switches

TO-220

SOT-223

TO-220/5

TO-252 (D-Pak)

- Overload/overvoltage protected
- Short circuit protection
- Logic level input
- Status feedback
- Open load detection in ON or OFF condition
- Current limited
- Thermal shut-down
- ESD protected
- Analogue driving capability

Additional Current Sense HITFET Features:
- Max current adjustment with external resistor
- Current measurement

V_{DS} V	$R_{DS(on)}$ mΩ	$I_{D-NOM/ISO}$ min	I_{D-LIM} min	Package	Mftrs. List No.
42	100	2.4 ISO	10	DPAK	BTS118D
42	50	3.5 ISO	18	DPAK	BTS134D
60	500	0.7 ISO	1	SOT-223	BSP75N
60	100	3.5 ISO	7	TO-220AB	BTS117
60	50	7 ISO	21	DPAK	BTS133
60	28	12 ISO	25	TO-220AB	BTS141

211063

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
BSP75N	SMD 115-6443●	1.01	0.73	0.61	0.49	0.47
BTS117	115-6427●	3.05	2.22	1.61	0.97	0.88
BTS118D	SMD 115-6425●	1.20	0.86	0.73	0.59	0.57
BTS133	115-6447●	3.77	2.16	1.84	1.14	1.12
BTS134D	SMD 115-6426●	1.37	1.00	0.82	0.67	0.64
BTS141	115-6448●	6.92	4.98	3.67	2.17	2.03

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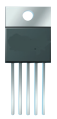
High-Side Power Switches

P-DSO-20

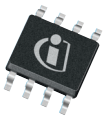

TO-220-5

TO-220-7

P-DSO-14

PG-SOT223-4

P-TO252-5


PG-DSO-8

Infineon has expanded their Smart High Side Power Switches portfolio with PROFET for industrial requirements. For cost optimization, Infineon provides today an industrial optimized solution. . Similar to their BTS/BSP-equivalent the ITS- and ISP-family is capable to drive heavy loads, embedding several protection functions, which make them ideally for use in industrial applications, such as lift or door control, printers, sensors, level metering etc.

- Replaces electromechanical relays, fuses and discrete circuits
- Integrated Inductive load clamping
- Voltage and current limiting
- Low on-state resistances
- Thermal Shutdown
- ESD protected devices
- Single and multiple output options
- Proportional load current sense and current limited
- Loss of ground protection

ReverSave™featured devices include a protection feature that causes the power transistors to switch on in case of reverse polarity, resulting in reduced power dissipation.

On-state Res per Ch, typ. @ 25°C, mΩ	P_D W	Current Limit A	V_{SUPPLY} V	Overvoltage Protection, max V	Package	Order Code	Mftrs. List No.
10	59	33	5.5 to 38	67	P-TO252-5	144-0811	BTS6133D*
10	59	33	5.5 to 38	67	P-TO252-5	144-0813	BTS6143D*
16	42	25	5 to 36	68	P-TO252-5	144-0808	BTS443P*
25	1.4	6	4.7 to 28	41	PG-DSO-12	144-0806	BTS5242-2L
35	75	40	4.75 to 43	52	TO-220-5	142-6196	ITS436L2S
30	85	24	4.7 to 43	43	TO-220-7	142-6201	ITS640S2
50	75	17	4.75 to 41	52	TO-252-5	142-6195	ITS428L2
60	1.4	3.3	4.5 to 28	41	PG-DSO-20	144-0804	BTS5235-2G
90	3.1	12	4.7 to 43	52	P-DSO-12	142-6197	ITS5215L
100	75	8	4.7 to 43	43	TO-220-7	142-6200	ITS621L1
140	3.6	6.5	4.7 to 43	52	DSO	142-6203	ITS716G
140	0.9	3.5	4.5 to 28	—	PG-DSO-14	144-0802	BTS5231-2GS
200	36	4	4.7 to 43	43	TO-220-7	142-6198	ITS612N1
200	3.6	4	4.7 to 43	43	P-DSO-20	142-6202	ITS711L1
200	1.4	1.4	12 to 45	47	PG-SOT223-4	144-0815	ITS4141N
200	1.4	3	12 to 45	48	PG-SOT223-4	144-0816	ITS4142N
200	1.5	1.3	6 to 52	62	PG-DSO-8	144-0817	ISP752R
200	3.3		11 to 45	47	PG-DSO-36	144-0818	ITS4880R
220	50	5	4.7 to 42	65	TO-220-5	142-6194	ITS410E2
1,500	1.7	1.2	4.9 to 60	62	PG-SOT223-4	144-0814	ITS4140N

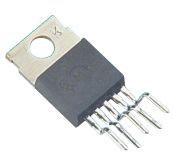
*Devices featuring ReverSave™

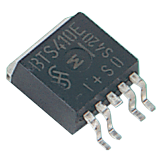
478210

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+
ITS410E2	142-6194●	4.48	3.06	2.43	1.47
ITS428L2	SMD 142-6195●	3.15	2.15	1.72	1.02
ITS436L2S	142-6196●	5.12	3.49	2.80	1.67
ITS5215L	SMD 142-6197●	3.22	2.21	1.76	1.05
ITS612N1	142-6198●	4.15	2.84	2.27	1.36
ITS621L1	142-6200●	5.26	3.63	2.89	1.74
ITS640S2	142-6201●	4.07	3.04	2.33	1.74
ITS711L1	SMD 142-6202●	6.47	4.42	3.53	2.11
ITS716G	SMD 142-6203●	4.67	3.48	2.78	1.67
BTS5231-2GS	SMD 144-0802●	1.66	1.26	1.11	0.91
BTS5235-2G	SMD 144-0804●	3.84	2.62	2.09	1.25
BTS5242-2L	SMD 144-0806●	3.59	2.75	2.40	1.97
BTS443P	SMD 144-0808●	3.58	2.59	2.03	1.53
BTS6133D	SMD 144-0811●	3.97	2.96	2.27	1.71
BTS6143D	SMD 144-0813●	4.35	2.97	2.37	1.43
ITS4140N	SMD 144-0814●	1.24	0.85	0.68	0.46
ITS4141N	SMD 144-0815●	1.83	1.25	1.00	0.62
ITS4142N	SMD 144-0816●	2.12	1.45	1.15	0.70
ISP752R	SMD 144-0817●	2.04	1.39	1.11	0.67
ITS4880R	SMD 144-0818●	12.68	8.66	6.91	4.14

PROFET™ High Sided Switches

Non RoHS for Automotive applications


TO-220/5


TO-220/5 SMD

DSO-20

- 2nd Generation PROFET with additional protection
- Overload/current limited
- Overvoltage protection (inc. load dump)
- Reverse battery protected
- Over/undervoltage shutdown, with auto-restart and hysteresis
- Loss of ground and V_{bb} protection
- ESD protected
- Fast demagnetisation of inductive loads
- Diagnostic feedback
- Open load detection
- CMOS and TTL compatible input

V_{bb} V	$R_{DS(on)}$* mΩ	$I_{L\ (iso)}$* A	$I_{L\ (sc)}$* A	Package	Mftrs. List No.
Single Channel					
42	2.9	158	400	TO-218AB	BTS555.
60	38	11	35	TO-220	BTS432E2.
60	220	1.8	5	TO-220	BTS410E2.
Dual Channel					
43	30	5.5	24	P-DSO-20-9	BTS740S2.
Quad Channel					
40	210	1.9	3.7	DSO-20	BTS711L1.

* per channel

211067

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
BTS410E2.	**743-318**▲	4.74	3.56	2.71	1.94	1.86
BTS711L1.	SMD **743-380**▲	12.72	7.33	6.24	3.28	3.20
BTS740S2.	SMD **410-9314**▲	7.89	5.71	4.73	3.28	3.16
BTS432E2.	**743-343**▲	6.03	4.29	3.44	2.21	2.09
BTS555.	**410-9260**▲	14.62	10.98	8.35	5.98	5.73

RF MOSFETs

465416

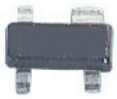
Introduction to High Electron Mobility Transistors(HEMT)
Also called a HFET, these transistors do not use impurities at the source and drain as in a normal FET but instead use GaAs and AlGaAs in the channel, forming a thin layer with fermi levels above the conduction band, allowing for much lower resistances and gate thresholds then conventional FETs.

Low Noise, Pseudomorphic HEMT

AVAGO TECHNOLOGIES

SMD

SOT-363



SOT-343

V_{DS} max. V	I_d/I_{dss} max. mA	P_D max. mW	P_{in} max. dBm	F typ. dB	G_a typ. dB	OIP3 typ. dBm	Test Freq. GHz	Package	Device Marking	Mftrs. List No.
450MHz - 10GHz										
5	100	270	7	0.6	17.7	24.2	2	SOT-343	5F	ATF-55143-TR1G
5	120	360	10	0.5	16.6	36.2	2	SOT-343	4F	ATF-54143-TR1G
5.5	80	300	14	0.4	18.0	19.0	2	SOT-343	5PX	ATF-35143-TR1G
5.5	145	725	17	0.5	17.5	31.5	2	SOT-343	4PX	ATF-34143-TR1G

N.B. Device marking X denotes date code

211333

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
ATF-34143-TR1G	SMD **105-6820**● RL	3.56	2.56	2.06	1.52	1.49
ATF-35143-TR1G	SMD **105-6821**● RL	2.79	1.99	1.59	1.19	1.17
ATF-54143-TR1G	SMD **105-6824**● RL	5.53	3.87	3.22	2.76	2.55
ATF-55143-TR1G	SMD **105-6825**● RL	3.09	2.19	1.73	1.45	1.29

SOT-143

NXP

V_{DS} max. V	Channel	I_D max. mA	I_{dss} min. mA	G_{fs} min. mA/V	P_{tot} @ 25°C mW	Zener Protected Gate	App'n Code	Package and Pin-Out	Mftr.	Mftrs. List No.
12	N	18	2	21	200	×	●●	SOT-143	NXP	BF998

Application Code:
◆ High frequency switch/chopper/communicator (RF/VHF/UHF) — ●● Dual gate (HF) MOSFET

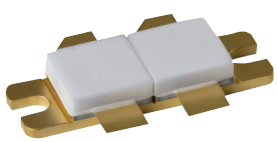
211283

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
BF998	SMD **108-1286**● RL	0.700	0.450	0.260	0.165	0.160

High Power VHF

NXP

SOT-123



SOT-262

Silicon N-channel enhancement mode vertical D-MOS transistor designed for professional transmitter applications in the HF/VHF frequency range. The transistor is encapsulated in a 4-lead, SOT123A flange package, with a ceramic cap. All leads are isolated from the flange.

- Superior quality, professional HF-VHF MOS transistor
- High power gain
- Low noise figure
- Good thermal stability
- Full load mismatch tolerent
- Gold metallisation ensures excellent reliability

V_{DS} max V	I_D A	P_{tot} W	f* MHz	Package	Mftrs. List No.
65	1	5	175	SOT-123	BLF242
65	6	68	175	SOT-123	BLF245
125	4	68	32	SOT-123	BLF175
125	16	220	28	SOT-121	BLF177
125	18	500	—	SOT-262A1	BLF278

*Should only be used as approx guide, as test conditions may vary

422830

Mftrs. List No.	Order Code	Price Each 1+	5+	10+
BLF175	**134-9664**●	45.04	39.20	36.32
BLF177	**134-9665**●	48.88	42.96	39.87
BLF242	**109-7183**●	50.43	36.48	31.51
BLF245	**134-9666**●	42.04	35.37	31.75
BLF278	**162-6496**●	173.95	140.33	114.62

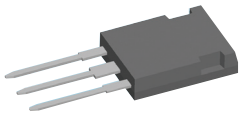
RF MOSFETs

IXYS

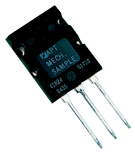
N-Channel Enhancement

SMD

Ultra-fast enhancement mode MOSFETs for use in a multitude of high frequency applications.

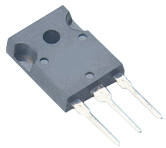


ISOPLUS-247A/B

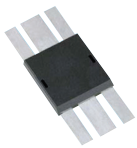


TO-264

DE-150

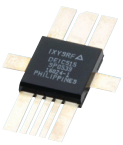


TO-247



DE-275

DE-475



DEIC-515

SOT-227B - miniBLOC

- Optomised for RF operation
- Low capacitance
- Ultra fast rise and fall times
- Various package options available

V_{DS} V	R_{DS} (on) Ω	$I_{D\ cont}$ @ 25°C A	@ 25°C W	C_{iss} typ. (pf)	t_{rise} typ. (ns)	Package	Mftrs. List No.
Single Transistor Package							
125	0.3	15	TBA	425	4	DE-275	IXZ215N12L
200	0.08	25	590	2500	5	DE-275	DE275-201N25A
500	0.085	55	600	6700	20	ISOTOP	IXFN55N50F
500	0.11	44	1800	5500	5	DE-475	DE475-501N44A
500	0.12	44	500	5500	18	TO-264	IXFK44N50F
500	0.19	28	315	3000	13	TO-268	IXFT28N50F
500	0.25	21	300	2600	12	TO-247AD	IXFH21N50F
500	0.4	16	590	1800	2	DE-275	DE275-501N16A
500	0.4	12	180	1870	14	TO-247AD	IXFH12N50F
500	1	10	470	622	4	DE-275	IXZ210N50L
500	1.5	4.5	200	700	4	150	DE150-501N04A
600	0.44	18	TBA	1930	4	ISOPLUS-247	IXZR16N60B
1000	0.39	24	560	6600	18	TO-264	IXFK24N100F
1000	0.39	24	600	6600	18	ISOTOP	IXFN24N100F
1000	0.41	24	1800	5500	5	DE-475	DE475-102N21A
1000	0.5	21	500	5500	16	TO-264	IXFK21N100F
1000	0.95	12	940	2000	3	DE-375	DE375-102N12A
1000	1.05	12	300	2700	12	TO-268	IXFT12N100F
1000	1.9	6	180	1870	14	TO-247AD	IXFH6N100F
1200	2.1	8	880	1960	5	DE-375	IXZ308N120
1200	2.1	8	TBA	1960	5	ISOPLUS-247	IXZR08N120A
1200	2.1	8	300	1960	4	TO-247AD	IXZH08N120
Complimentary Push-Pull							
500	1	10	360	383	16	DE275X2	IXZ2210N50L
1000	0.8	16	1180	1800	2	DE-275X2	DE275X2-102N06A

455973

Mftrs. List No.	Order Code	Price Each 1+	10+	25+	50+
IXZ2210N50L	**134-7729**●	26.09	25.27	24.61	23.98
DE150-501N04A	**134-7730**●	27.57	25.09	22.97	21.04
IXZ210N50L	**134-7732**●	18.10	16.45	14.88	14.58
IXZ215N12L	**134-7733**●	26.81	26.09	25.41	24.75
DE275-201N25A	**134-7735**●	22.93	20.85	18.87	18.50
DE275-501N16A	**134-7736**●	22.93	20.85	18.87	17.42
DE275X2-102N06A	**134-7738**●	35.01	31.83	28.82	26.60
IXZ308N120	**134-7739**●	26.20	23.81	21.56	19.91
DE375-102N12A	**134-7740**●	28.66	26.06	23.60	21.78
DE475-501N44A	**134-7741**●	40.04	36.40	32.96	30.42
DE475-102N21A	**134-7742**●	40.04	36.40	32.96	30.42

RF MOSFETs - continued

RF MOSFETs - continued

N-Channel Enhancement - continued

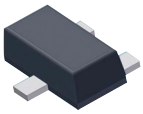
Mftrs. List No.	Order Code	Price Each 1+	10+	25+	50+
IXZR16N60B	134-7744	20.13	19.58	19.07	18.59
IXZR08N120A	134-7745	23.13	21.02	19.03	17.57
IXFN55N50F	134-7748	20.78	20.22	19.69	19.18
IXFN24N100F	134-7749	25.30	23.01	20.83	20.41
IXZH08N120	134-7751	22.47	20.43	18.49	18.12
IXFH12N50F	134-7752	4.66	4.24	3.85	3.75
IXFH21N50F	134-7753	6.43	5.85	5.29	4.89
IXFH6N100F	134-7754	6.47	5.88	5.39	4.93
IXFK21N100F	134-7758	13.88	12.63	11.43	10.55
IXFK24N100F	134-7759	23.98	21.82	20.01	18.33
IXFT28N50F	SMD 134-7760	5.32	5.18	5.04	4.91
IXFT12N100F	SMD 134-7761	8.23	7.48	6.98	6.52

Junction FETs

N Channel JFET

SANYO New

CP



VTFP

Applications for the N channel JFET are multipurpose amplification, tuner, infrared sensor and electric condenser microphone.

SPA

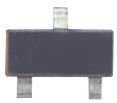
V_{DS} max. V	IDS mA	$V_{GS(off)}$ V	I_{DSS} mA min.	I_{DSS} mA max.	Package	P_{tot} mW	Mftrs. List No.
15	50	1.5	10	32	CP(m)	200	2SK3557-7-TB-E
20	1	1	140	350	VTFP(m)	100	TF252TH-5-TL-H
30	10	2.2	600	6	CP(m)	200	2SK3666-3-TB-E
40	20	2.5	1.2	12	CP(m)	200	2SK771-5-TB-E
40	20	2.5	1.2	12	SPA(m)	300	2SK772E-AC

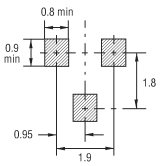
540847

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
2SK3557-7-TB-E	SMD 171-3472	0.310	0.270	0.220	0.187	0.156
TF252TH-5-TL-H	SMD 171-3477	0.104	0.094	0.073	0.062	0.052
2SK3666-3-TB-E	SMD 171-3473	0.125	0.104	0.083	0.073	0.062
2SK771-5-TB-E	SMD 171-3475	0.420	0.350	0.280	0.240	0.210
2SK772E-AC	171-3476	0.280	0.230	0.187	0.156	0.135

SOT-23

NXP SMD





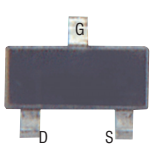
V_{DS} max. V	Channel Polarity	$V_{GS(off)}$ min. V	$V_{GS(off)}$ max. V	I_{DSS} min. mA	I_{DSS} max. mA	Mftrs. List No.
25	N	—	-6.5	12	60	PMBFJ310
25	N	—	2	1	60	BFT46
30	N Channel	-0.4	7.5	6	15	BF545B
40	N Channel	-10	3	5	—	PMBFJ112

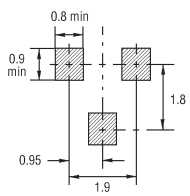
211421

Order Multiple=5 Mftrs. List No.	Order Code	Price Each 5+	25+	100+	250+	1K+
BF545B	SMD 134-9656	0.440	0.310	0.250	0.210	0.196
BFT46	SMD 108-1306 RL	0.290	0.220	0.210	0.194	0.167
PMBFJ112	SMD 134-9667	0.440	0.330	0.300	0.260	0.230
PMBFJ310	SMD 108-1474 RL	0.290	– –	– –	– –	– –

SOT-23

ON Semiconductor ON SMD VISHAY





V_{DS} max. V	Channel Polarity	$V_{GS(off)}$ min. V	$V_{GS(off)}$ max. V	I_{DSS} min. mA	I_{DSS} max. mA	C_{iss} max. pF	$R_{DS(on)}$ max. (*typ.) Ω	Device Marking	Mftr.	Mftrs. List No.
Amplifiers										
25	N	-2.5	6	24	60	5	—	6C	ON	MMBFU310LT1G
25	N	-2	6.5	24	60	5	—	6x	ON	MMBFJ310LT1G
25	N	-1	4	12	30	5	—	6x	ON	MMBFJ309LT1G
30	N	-0.5	3	50	150	14	—	6G	ON	MMBF4393LT1G
30	N	-2	5	50	150	14	—	6K	ON	MMBF4392LT1G
30	N	-4	10	50	150	14	30	6J	ON	MMBF4391LT1G
30	P-depletion	0.8	2.5	1.5	20	11	—	6Y	ON	MMBFJ177LT1G

211251

Order Multiple=5 Mftrs. List No.	Mftr.	Order Code	Price Each 5+	25+	100+	250+	1K+
MMBF4393LT1G	ON	SMD 143-1332	0.370	0.250	0.180	0.139	0.112
MMBFJ177LT1G	ON	SMD 143-1338	0.470	0.290	0.220	0.164	0.133
MMBFU310LT1G	ON	SMD 143-1342	0.410	0.270	0.193	0.150	0.122
MMBF4392LT1G	ON	SMD 143-1331	0.430	0.300	0.210	0.162	0.128
MMBFJ310LT1G	ON	SMD 143-1340	0.430	0.280	0.200	0.158	0.130
MMBF4391LT1G	ON	SMD 143-1329	0.410	0.290	0.210	0.160	0.130
MMBFJ309LT1G	ON	SMD 143-1339	0.430	0.280	0.200	0.158	0.130

TO-92

FAIRCHILD SEMICONDUCTOR

Applications Key:
GPA = General Purpose Amplifier,
HFA = High Frequency Amplifier,
LNA = Low Noise Amplifier,

TO-92 (k),(m),(n),(p)

V_{DS} max. V	I_G (*I_D) max. mA	$V_{GS(off)}$ max. V	I_{dss} min. mA	I_{dss} max. mA	G_{fs} min. mA/V	G_{fs} max. mA/V	P_{tot} @ 25°C mW	Package	Pin-Out	App'n Code	Mftr.	Mftrs. List No.
N Channel												
25	10	8	2	20	2	6.5	200	TO-92	k	GPA	FCH	2N3819
30	10	8	2	6.5	3	6.5	350	TO-92	k	HFA	FCH	BF244A
30	10	8	6	15	3	6.5	350	TO-92	k	HFA	FCH	BF244B
30	10	8	2	6.5	3	6.5	350	TO-92	r	HFA	FCH	BF245A
30	10	8	6	15	3	6.5	350	TO-92	r	HFA	FCH	BF245B
30	10	8	12	25	3	6.5	350	TO-92	r	HFA	FCH	BF245C
P Channel												
40	16	9	4	16	2	6	310	TO-92	n	LNA	FCH	2N5462

211291

Order Multiple=5 Mftrs. List No.	Mfftr.	Order Code	Price Each 5+	25+	100+	1K+
2N5462	FCH	101-7645	0.230	0.159	0.147	0.077
BF244A	FCH	101-7682	0.400	0.250	0.179	0.107
BF244B	FCH	101-7683	0.390	0.240	0.172	0.103
BF245A	FCH	101-7684	0.330	0.300	0.220	0.108
BF245B	FCH	101-7685	0.330	0.220	0.165	0.075
BF245C	FCH	101-7686	0.350	0.220	0.163	0.080
Order Multiple=1			**1+**	**25+**	**100+**	**250+**
2N3819	FCH	101-7644	0.230	0.149	0.101	0.067

TO-92

FAIRCHILD SEMICONDUCTOR

TO-92 (Straight)

V_{DS} V	N/P Channel	I_G mA	V_{DS} V	$V_{GS(off)}$ V	I_{DSS} mA min.	I_{DSS} mA max.	Package	Mftr.	P_{tot} mW	Mftrs. List No.
25	N	10	25	4	12	30	TO-92(m)	FCH	0.35	J309
25	N	10	25	6.5	24	60	TO-92(m)	FCH	0.35	J310
30	P	50	30	6	7	60	TO-92(k)	FCH	0.35	J175
35	N	50	35	10	20	—	TO-92(m)	FCH	0.35	J111..
35	N	50	35	5	5	—	TO-92(m)	FCH	0.35	J112
35	N	50	35	3	2	—	TO-92(m)	FCH	0.35	J113
40	N	50	40	1.5	0.2	1	TO-92(m)	FCH	0.625	J201

228451

Order Multiple=5 Mftrs. List No.	Mftr.	Order Code	Price Each 5+	25+	100+	250+	1K+
J111..	FCH	740-883	0.210	0.131	0.097	0.087	0.080
J112	FCH	101-7712	0.340	0.210	0.141	0.095	0.067
J113	FCH	101-7713	0.300	0.199	0.133	0.089	0.066
J175	FCH	101-7714	0.450	0.300	0.200	0.138	0.106
J201	FCH	101-7715	0.370	0.240	0.159	0.107	0.078
J309	FCH	101-7716	0.430	0.290	0.191	0.129	0.095
J310	FCH	101-7717	0.350	0.220	0.146	0.098	0.070

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Zener Diodes

Dual 6.8V Zener Diode With Very Low Leakage Current

ON Semiconductor

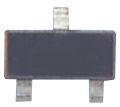
- Pin/Package 3/SC70
- Common anode
- Low leakage current <100µA @ 5V
- Breakdown voltage 6.4V to 7.2V @ 5mA
- Application ESD potection
- Peak power 24W @ 1ms unidirectional
- Peak power 150W @ 20µs unidirectional
- Typical forward voltage 0.8V

533388

Mftrs. List No.	Order Code	Price Each 5+	25+	100+	500+	1K+
DF3A6.8FUT1G	SMD 170-0967	0.290	0.199	0.146	0.113	0.088

BZX84C Series

multicomp



SOT-23
H=1.3, W=2.9, D=0.95

Low voltage, General Purpose

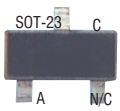
P_{D*} (W)	I_{FRM} (mA)	V_F (V)	Temp	Package	Mftrs. List No.
0.3	250	1.5	-65°C to 150°C	SOT-23	BZX84C

484812

V_Z	Mftrs. List No.	Order Code	Price Each 5+	25+	100+	250+
10	BZX84C10	SMD 146-6581	0.070	0.055	0.040	0.025
11	BZX84C11	SMD 146-6582	0.070	0.055	0.040	0.025
12	BZX84C12	SMD 146-6583	0.070	0.055	0.040	0.025
13	BZX84C13	SMD 146-6584	0.070	0.055	0.040	0.025
15	BZX84C15	SMD 146-6585	0.070	0.055	0.040	0.025
16	BZX84C16	SMD 146-6587	0.070	0.055	0.040	0.025
18	BZX84C18	SMD 146-6588	0.070	0.055	0.040	0.025
20	BZX84C20	SMD 146-6590	0.070	0.055	0.040	0.025
22	BZX84C22	SMD 146-6591	0.070	0.055	0.040	0.025
24	BZX84C24	SMD 146-6593	0.070	0.055	0.040	0.025
27	BZX84C27	SMD 146-6594	0.070	0.055	0.040	0.025
30	BZX84C30	SMD 146-6595	0.070	0.055	0.040	0.025
33	BZX84C33	SMD 146-6596	0.070	0.055	0.040	0.025
36	BZX84C36	SMD 146-6597	0.070	0.055	0.040	0.025
39	BZX84C39	SMD 146-6599	0.070	0.055	0.040	0.025
47	BZX84C47	SMD 146-6601	0.070	0.055	0.040	0.025
4.7	BZX84C4V7	SMD 146-6602	0.070	0.055	0.040	0.025
51	BZX84C51	SMD 146-6603	0.070	0.055	0.040	0.025
5.1	BZX84C5V1	SMD 146-6605	0.070	0.055	0.040	0.025
5.6	BZX84C5V6	SMD 146-6606	0.070	0.055	0.040	0.025
6.2	BZX84C6V2	SMD 146-6607	0.070	0.055	0.040	0.025
7.5	BZX84C7V5	SMD 146-6608	0.070	0.055	0.040	0.025
8.2	BZX84C8V2	SMD 146-6609	0.070	0.055	0.040	0.025
9.1	BZX84C9V1	SMD 146-6610	0.070	0.055	0.040	0.025

BZX84C Series Zener Voltage Regulators

ON Semiconductor



This series of Zener diodes is offered in the convenient, surface mount plastic SOT-23 package. These devices are designed to providevoltage regulation with minimum space requirement. They are well suited for applications such as cellular phones, hand held portables,and high density PC boards.

- 225 mW Rating on FR-4 or FR-5 Board
- Zener Breakdown Voltage Range - 2.4 V to 75 V
- Package Designed for Optimal Automated Board Assembly
- Small Package Size for High Density Applications
- ESD Rating of Class 3 (>16 KV) per Human Body Model

497013

Voltage, V_Z (V)	Mftrs. List No.	Order Code	Price Each 1+	25+	100+	+
3.9	BZX84C3V9LT1G	SMD 145-9050	0.060	0.056	0.053	– –
4.7	BZX84C4V7LT1G	SMD 145-9051	0.059	0.021	0.020	– –
5.1	BZX84C5V1LT1G	SMD 145-9052	0.063	0.058	0.057	– –
12	BZX84C12LT1G	SMD 145-9049	0.059	0.021	0.020	– –

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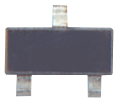
BZB984C Series, 5% Tolerance

Dual Diode, Common Anode



- P_{tot} = 425mW
- Ultra-small flat plastic package

SOT-663
H=0.6, W=1.7, D=1.3

Zener Voltage, V	Mftrs. List No.	Order Code	Zener Voltage, V	Mftrs. List No.	Order Code
2.4	BZB984-C2V4	873-5298	5.1	BZB984-C5V1	873-5379
2.7	BZB984-C2V7	873-5301	5.6	BZB984-C5V6	873-5387
3	BZB984-C3V0	873-5310	6.2	BZB984-C6V2	873-5395
3.3	BZB984-C3V3	873-5328	6.8	BZB984-C6V8	873-5409
3.9	BZB984-C3V9	873-5344	10	BZB984-C10	873-5247
4.3	BZB984-C4V3	873-5352	12	BZB984-C12	873-5263
4.7	BZB984-C4V7	873-5360	15	BZB984-C15	873-5280

386955

Order Multiple=5

Series	Order Code	Price Each 5+	100+	1K+	4K+
BZB984C...	All Values	0.330	0.200	0.144	0.112

Low Power, 2% and 5% Tolerance

SOT-23

DO-35

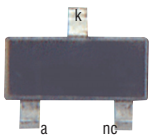
	I_f, mA	P_{tot}	Package
BZX79...Series	250 mA	0.4W	DO-35
BZX84...Series	200 mA	250mW	SOT-23

211347

Order Multiple=10

Zener Voltage, V	Mftrs. List No.	Order Code	Price Each 10+	50+	100+	1K+	5K+
2% Tolerance, DO-35							
4.7	BZX79-B4V7	109-7274	0.144	0.059	0.043	0.029	0.025
5.1	BZX79-B5V1	109-7275	0.144	0.059	0.043	0.029	0.025
5.6	BZX79-B5V6	109-7276	0.154	0.063	0.046	0.031	0.028
6.2	BZX79-B6V2	109-7277	0.154	0.063	0.046	0.031	0.028
12	BZX79-B12	109-7273	0.154	0.063	0.046	0.031	0.028
5% Tolerance, DO-35							
43	BZX79-C43	109-7244	0.126	0.052	0.040	0.024	0.022
51	BZX79-C51	109-7245	0.126	0.052	0.040	0.024	0.022
62	BZX79-C62	109-7247	0.060	0.025	0.020	0.011	0.010
68	BZX79-C68	109-7248	0.124	0.051	0.037	0.025	0.023
Order Multiple=5			**5+**	**100+**	**1K+**	**3K+**	**10K+**
2% Tolerance, SOT-23							
5.1	BZX84-B5V1	SMD 108-1403 RL	0.057	0.040	0.031	0.028	0.027
5.6	BZX84-B5V6	SMD 108-1404 RL	0.055	– –	– –	– –	– –

BZX84C Series, 5% Tolerance



SOT-23
H=1.12, W=3.05, D=2.3

Equivalents to the popular BZX55/BZX79 series, and the BZX85/BZV85 series. Supplied on 8mm tape (SOT-23) and 12mm tape (SOT-223). ±5% working tolerance.

		FCH	NXP			FCH	NXP
4.7	BZX84-C4V7	984-4384	108-1428	10	BZX84-C10	984-4317	108-1405
5.1	BZX84-C5V1	984-4392	108-1430	12	BZX84-C12	984-4325	108-1407
5.6	BZX84-C5V6	984-4406	108-1431	15	BZX84-C15	984-4333	108-1409
6.2	BZX84-C6V2	984-4414	108-1435	16	BZX84-C16	984-4341	—
6.8	BZX84-C6V8	984-4430	108-1436	18	BZX84-C18	984-4350	108-1411
8.2	BZX84-C8V2	984-4449	108-1439	20	BZX84-C20	984-4368	108-1412
9.1	BZX84-C9V1	984-4457	108-1440				

211304

Series		Order Code	Price Each 5+	100+	1K+	3K+	10K+
BZX84C...	FCH	All Values	0.127	0.079	0.054	0.023	0.018
BZX84C...	NXP	All Values	0.086	0.044	0.020	0.018	0.016

BZV55 Series, 5% Tolerance - RoHs Compliant

SOD-80, 500mw

Zener Voltage V	Mftrs. List No.	Order Code	Zener Voltage V	Mftrs. List No.	Order Code	Zener Voltage V	Mftrs. List No.	Order Code
2.4	BZV55-C2V4	109-7193	3.9	BZV55-C3V9	109-7198	5.1	BZV55-C5V1	109-7202
2.7	BZV55-C2V7	109-7194	4.3	BZV55-C4V3	109-7199	5.1	BZV55-B5V1	873-5441
3.3	BZV55-C3V3	109-7197	4.7	BZV55-C4V7	109-7200	5.6	BZV55-C5V6	109-7203

Zener Diodes - continued

BZV55 Series, 5% Tolerance - RoHs Compliant - continued

SOD-80, 500mw - continued

Zener Voltage V	Mftrs. List No.	Order Code	Zener Voltage V	Mftrs. List No.	Order Code	Zener Voltage V	Mftrs. List No.	Order Code
6.2	BZV55-C6V2	109-7204	13	BZV55-C13	109-7186	24	BZV55-C24	109-7190
6.8	BZV55-C6V8	109-7205	15	BZV55-C15	109-7187	27	BZV55-C27.	109-7191
7.5	BZV55-C7V5	109-7206	16	BZV55-C16	109-7188	30	BZV55-C30	108-1362
8.2	BZV55-C8V2	109-7207	18	BZV55-C18	109-7211	33	BZV55-C33	109-7195
9.1	BZV55-C9V1	109-7208	20	BZV55-C20	109-7212	39	BZV55-C39	109-7196
10	BZV55-C10	108-1361	22	BZV55-C22	109-7189	56	BZV55-C56	109-7201
12	BZV55-C12	109-7185						

422866/211296

Order Multiple=5

	Order Code	Price Each 5+	25+	100+	1K+	3K+
BZV55C Series	**All Values**	0.050	0.034	0.027	0.023	0.021

BZG05C and BZG03C Series, 5% Tolerance

SMD VISHAY

- P_{tot} = 3W
- Non-repetitive peak power dissipation; 60W (BZG05C series), 600W (BZG03C series)
- DO-214AC (SMA) package

H = 2.9, W = 2.9, D = 5.6

Zener Voltage (V)	Mftrs. List No.	Order Code	Zener Voltage (V)	Mftrs. List No.	Order Code
10	BZG03-C10	939-8082	3.3	BZG05-C3V3	939-7965
12	BZG03-C12	939-8090	3.6	BZG05-C3V6	939-7973
15	BZG03-C15	939-8104	3.9	BZG05-C3V9	939-7981
18	BZG03-C18	939-8112	4.3	BZG05-C4V3	939-7990
20	BZG03-C20	939-8120	4.7	BZG05-C4V7	939-8007
24	BZG03-C24	939-8139	5.1	BZG05-C5V1	939-8015
27	BZG03-C27	939-8147	5.6	BZG05-C5V6	939-8023
30	BZG03-C30	939-8155	6.2	BZG05-C6V2	939-8031
33	BZG03-C33	939-8163	6.8	BZG05-C6V8	939-8040
56	BZG03-C56	939-8171	7.5	BZG05-C7V5	939-8058
100	BZG03-C100	939-8180	8.2	BZG05-C8V2	939-8066
120	BZG03-C120	939-8198	9.1	BZG05-C9V1	939-8074
150	BZG03-C150	939-8201			
180	BZG03-C180	939-8210			
200	BZG03-C200	939-8228			
270	BZG03-C270	939-8244			

406002

Mftrs. List No.	Order Code	Price Each 5+	100+	1K5+	3K+
BZG05C Series	**All Values** ●	0.61	0.32	0.26	0.22
BZG03C Series	**All Values** ●	0.76	0.40	0.31	0.26

BZX79C Series, 5% Tolerance

FAIRCHILD SEMICONDUCTOR NXP

P_{tot} = 500mW
DO-35 L = 4.5, Dia. = 2.0
V_f=1.5 (FCH)
0.9 (PS)

Zener Voltage, V	Mftrs. List No.	Order Code FCH	Order Code NXP	Zener Voltage, V	Mftrs. List No.	Order Code FCH	Order Code NXP
2.4	BZX79-C2V4	—	109-7223	10	BZX79-C10	—	109-7213
2.7	BZX79-C2V7	—	109-7224	11	BZX79-C11	—	109-7214
3	BZX79-C3V0	—	109-7228	12	BZX79-C12	—	109-7215
3.3	BZX79-C3V3	—	109-7229	13	BZX79-C13	—	109-7216
3.6	BZX79-C3V6	—	109-7230	15	BZX79-C15	984-4511	109-7217
3.9	BZX79-C3V9	—	109-7231	16	BZX79-C16	—	109-7218
4.3	BZX79-C4V3	—	109-7233	18	BZX79-C18	—	109-7219
4.7	BZX79-C4V7	—	109-7235	22	BZX79-C22	—	109-7220
5.1	BZX79-C5V1	—	109-7236	24	BZX79-C24	984-4554	—
5.6	BZX79-C5V6	—	109-7237	27	BZX79-C27	—	109-7221
6.2	BZX79-C6V2	—	109-7238	30	BZX79-C30	—	109-7225
6.8	BZX79-C6V8	—	109-7239	36	BZX79-C36	—	109-7226
7.5	BZX79-C7V5	—	109-7241	39	BZX79-C39	—	109-7227
8.2	BZX79-C8V2	984-4694	109-7242	47	BZX79-C47	—	109-7232
9.1	BZX79-C9V1	—	109-7243	75	BZX79-C75	—	109-7240

211314

Order Multiple=10

Series	Mftr.	Order Code	Price Each 10+	100+	1K+	3K+	5K+
BZX79C...	FCH	**All Values**	0.022	0.017	0.015	0.008	
			10+	**50+**	**100+**	**1K+**	**5K+**
BZX79C...	NXP	**All Values**	0.078	0.035	0.033	0.023	0.021

Leaded Zeners, DO-35, DO-41

FAIRCHILD SEMICONDUCTOR

419708

Mftrs. List No.	V_z	Order Code	Price Each 10+	100+	1K+	3K+	+
BZX79-C4V7	4.7	**984-4597**●	0.058	0.048	0.040	0.019	– –
BZX79-C5V1	5.1	**984-4619**●	0.058	0.048	0.040	0.019	– –
BZX79-C5V6	5.6	**984-4635**●	0.058	0.048	0.040	0.019	– –
BZX79-C6V2	6.2	**984-4651**●	0.058	0.048	0.040	0.019	– –
BZX79-C8V2	8.2	**984-4694**●	0.022	0.017	0.015	0.008	– –
BZX79-C9V1	9.1	**984-4716**●	0.049	0.040	0.033	0.016	– –
BZX79-C10	10	**984-4465**●	0.049	0.040	0.033	0.016	– –
BZX79-C12	12	**984-4481**●	0.058	0.048	0.040	0.019	– –
BZX79-C15	15	**984-4511**●	0.058	0.048	0.040	0.019	– –
BZX79-C20	20	**984-4546**●	0.049	0.040	0.033	0.016	– –
BZX79-C24	24	**984-4554**●	0.017	0.014	0.013	0.007	– –

BZV85C, BZX55C and BZX85C Series, 5% Tolerance

FAIRCHILD SEMICONDUCTOR NXP

Family	Mftr.	Package	L		P_{tot} (W)	V_f
BZX55C	FCH	DO-35	4.8	2	0.5	1.2
BZV85C	NXP	DO-41	4.8	2.6	1	1.0
BZX85C	FCH	DO-41	4.8	2.6	1	1.2

Zener Voltage, V	Mftrs. List No.	Order Code FCH	Mftrs. List No.	Order Code FCH	Mftrs. List No.	Order Code NXP
3.3	BZX55-C3V3	984-4562	BZX85-C3V3	984-4163	—	—
3.6	—	—	BZX85-C3V6	984-4171	—	—
3.9	BZX55-C3V9	984-4570	BZX85-C3V9	984-4198	—	—
4.3	—	—	BZX85-C4V3	984-4228	—	—
6.8	BZX55-C6V8	984-4660	BZX85-C6V8	984-4279	BZV85-C6V8	109-7267
8.2	BZX55-C8V2	984-4686	BZX85-C8V2	984-4295	BZV85-C8V2	109-7270
9.1	BZX55-C9V1	984-4708	BZX85-C9V1	984-4309	BZV85-C9V1	109-7272
11	—	—	BZX85-C11	984-4066	—	—
13	BZX55-C13	984-4490	BZX85-C13	984-4082	—	—
16	BZX55-C16	984-4520	BZX85-C16	984-4104	—	—
22	—	—	BZX85-C22	984-4139	—	—
24	—	—	BZX85-C24	984-4147	—	—
27	—	—	BZX85-C27	984-4155	BZV85-C27	109-7253
30	—	—	BZX85-C30	984-4201	BZV85-C30	109-7254
33	—	—	BZX85-C33	984-4210	BZV85-C33	109-7255
36	—	—	—	—	BZV85-C36	109-7256
39	—	—	—	—	BZV85-C39	109-7257
43	—	—	—	—	BZV85-C43	109-7259
47	—	—	—	—	BZV85-C47	109-7261
51	—	—	—	—	BZV85-C51	108-1363
56	—	—	—	—	BZV85-C56	109-7262
62	—	—	—	—	BZV85-C62	109-7265
75	—	—	—	—	BZV85-C75	109-7268

211342

Order Multiple=5

Series	Mftr.	Order Code	Price Each 5+	25+	100+	1K+	3K+
BZX55C...	FCH	**All Values**	0.098	0.064	0.045	0.021	0.015
BZX85C...	FCH	**All Values**	0.162	0.108	0.075	0.035	0.024
			5+	**100+**	**1K+**	**3K+**	**10K+**
BZV85C...	NXP	**All Values**	0.064	0.047	0.037	0.034	0.033

BZG03C Series, 5% Tolerance

NXP SMD

SOD106A
H=2.65, W=5.5, D=2.5

P_{tot} = 3W
Equivalents to the BZT03 series, supplied on 12mm tape.

Zener Voltage, V	Mftrs. List No.	Order Code
10	BZG03-C10	939-8082
12	BZG03-C12	939-8090
15	BZG03-C15	939-8104
24	BZG03-C24	939-8139
30	BZG03-C30	939-8155
33	BZG03-C33	939-8163
180	BZG03-C180	939-8210

211172

Order Multiple=5

	Order Code	Price Each 5+	100+	1K5+	3K+
BZG03 Series	**All Values**	0.76	0.40	0.31	0.26

BZT03C Series, 5% Tolerance

VISHAY

SOD-57

- P_{tot} = 3.25W
- Clamping time in picoseconds
- SOD57 Package

406449

Zener Voltage, V	Mftrs. List No.	Order Code	Price Each 5+	25+	100+	1K+	5K+
7.5	BZT03-C7V5	**939-8252**●	0.370	0.270	0.260	0.161	0.153
8.2	BZT03-C8V2	**939-8260**●	0.240	0.178	0.173	0.168	0.165
9.1	BZT03-C9V1	**939-8279**●	0.520	0.390	0.310	0.250	0.210
10	BZT03-C10	**939-8287**●	0.690	0.490	0.480	0.290	0.280
12	BZT03-C12	**939-8295**●	0.660	0.470	0.350	0.280	0.220
13	BZT03-C13	**939-8309**●	0.460	0.320	0.250	0.192	0.152
15	BZT03-C15	**939-8317**●	0.660	0.460	0.350	0.270	0.220
16	BZT03-C16	**939-8325**●	0.660	0.470	0.350	0.280	0.220
18	BZT03-C18	**939-8333**●	0.690	0.470	0.360	0.310	0.280
20	BZT03-C20	**939-8341**●	0.480	0.330	0.260	0.200	0.158
22	BZT03-C22	**939-8350**●	0.300	0.220	0.200	0.171	0.167
24	BZT03-C24	**939-8368**●	0.310	0.240	0.230	0.150	0.143
27	BZT03-C27	**939-8376**●	0.300	0.230	0.220	0.145	0.138
30	BZT03-C30	**939-8384**●	0.730	0.510	0.400	0.300	0.240
33	BZT03-C33	**939-8392**●	0.660	0.470	0.350	0.280	0.220
36	BZT03-C36	**939-8406**●	0.800	0.560	0.440	0.330	0.270
39	BZT03-C39	**939-8414**●	0.220	0.195	0.174	0.169	0.166

Zener Voltage, V	Mftrs. List No.	Order Code	Price Each 5+	25+	100+	1K+	5K+
43	BZT03-C43	**939-8422**	0.320	0.240	0.210	0.136	0.129
47	BZT03-C47	**939-8430**	0.660	0.470	0.350	0.280	0.220
51	BZT03-C51	**939-8449**	0.660	0.460	0.350	0.270	0.220
56	BZT03-C56	**939-8457**	0.850	0.630	0.510	0.360	0.310
62	BZT03-C62	**939-8465**	0.520	0.390	0.310	0.250	0.210
68	BZT03-C68	**939-8473**	0.230	0.174	0.162	0.122	0.119
75	BZT03-C75	**939-8481**	0.660	0.460	0.350	0.270	0.220
82	BZT03-C82	**939-8490**	0.550	0.430	0.340	0.270	0.230
91	BZT03-C91	**939-8503**	0.370	0.270	0.260	0.161	0.153
100	BZT03-C100	**939-8511**	0.320	0.240	0.210	0.136	0.129
120	BZT03-C120	**939-8520**	0.770	0.540	0.420	0.320	0.260
130	BZT03-C130	**939-8538**	0.480	0.340	0.260	0.200	0.159
150	BZT03-C150	**939-8546**	0.440	0.320	0.310	0.189	0.178
160	BZT03-C160	**939-8554**	0.660	0.470	0.350	0.280	0.220
180	BZT03-C180	**939-8562**	0.270	0.200	0.176	0.117	0.110
200	BZT03-C200	**939-8570**	0.760	0.540	0.420	0.320	0.270
220	BZT03-C220	**939-8589**	0.760	0.540	0.420	0.320	0.250
270	BZT03-C270	**939-8597**	0.650	0.460	0.350	0.270	0.220

1N5300B Series

ON Semiconductor

Package	L	Dia.	P_{tot} (W)
17-02	8.9	3.7	5

Zener Voltage, V	Mftrs. List No.	Order Code	Zener Voltage, V	Mftrs. List No.	Order Code	Zener Voltage, V	Mftrs. List No.	Order Code
3.3	1N5333BG	955-7903	14	1N5351BG	955-8098	47	1N5368BG	955-8250
3.9	1N5335BG	955-7920	15	1N5352BG	955-8101	51	1N5369BG	955-8268
4.3	1N5336BG	955-7938	16	1N5353BG	955-8110	56	1N5370BG	955-8276
4.7	1N5337BG	955-7946	17	1N5354BG	955-8128	62	1N5372BG	955-8292
5.1	1N5338BG	955-7954	18	1N5355BG	955-8136	68	1N5373BG	955-8306
5.6	1N5339BG	955-7962	20	1N5357BG	955-8152	75	1N5374BG	955-8314
6	1N5340BG	955-7970	22	1N5358BG	955-8160	82	1N5375BG	955-8322
6.2	1N5341BG	955-7989	24	1N5359BG	955-8179	91	1N5377BG	955-8330
6.8	1N5342BG	955-7997	25	1N5360BG	955-8187	100	1N5378BG	955-8349
7.5	1N5343BG	955-8012	27	1N5361BG	955-8195	120	1N5380BG	955-8357
8.2	1N5344BG	955-8020	30	1N5363BG	955-8209	150	1N5383BG	955-8373
9.1	1N5346BG	955-8047	33	1N5364BG	955-8217	160	1N5384BG	955-8381
10	1N5347BG	955-8055	36	1N5365BG	955-8225	180	1N5386BG	955-8390
11	1N5348BG	955-8063	39	1N5366BG	955-8233	200	1N5388BG	955-8403
12	1N5349BG	955-8071	43	1N5367BG	955-8241			
13	1N5350BG	955-8080						

211326

	Order Code	Price Each 1+	25+	100+	500+	1K+
1N5300B Series	**All Values**	0.570	0.350	0.310	0.230	0.192

BZY91C and BZY93C Series, 5% Tolerance

Series	Polarity	Package	P_{tot} (W)
BZY93...	Stud Cathode	DO-4 10/32 UNF 2A	20
BZY93...R	Stud Anode	DO-4 10/32 UNF 2A	20
BZY91...	Stud Cathode	DO-5 28 UNF 2A	75

Suitable for transient suppression in addition to voltage regulation.

Suppressors are normally chosen with a stand-off voltage equal to that of the steady state voltage of the line on which they will be used. The stand-off voltage is the maximum reverse voltage that can be applied without causing significant reverse dissipation.

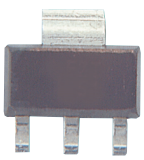
In practice, the stand-off voltage of a device is 'three steps down' in the series from the zener voltage given by the suffix. For example, a BZY93C15 would be used as a voltage regulator on a 15V line and as a transient suppressor on a 11V line.

Zener Voltage, V	Mftrs. List No.	Order Code	Mftrs. List No.	Order Code	Mftrs. List No.	Order Code
7.5	BZY93-C7V5	370-277	BZY93-C7V5R	427-550	—	—
8.2	BZY93-C8V2	370-289	—	—	—	—
—	—	—	—	—	BZY91-C10	119-2116
—	—	—	—	—	BZY91-C12	119-2117
15	BZY93-C15	119-2124				
75	—	—	—	—	BZY91-C75	119-2123

211376

Series	Order Code	Price Each 1+	5+	25+
BZY91...	**All Values**	32.81	21.78	19.59
BZY93...	**All Values**	10.59	8.27	7.29

BVZ90C Series, 5% Tolerance



BZV90C Series: SOT-223
H=1.8, W=6.7, D=7.3

Supplied on 12mm tape (SOT-223). ±5% working tolerance.

BZV90C Series, SOT-223 1.3W

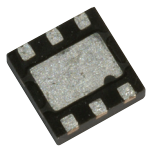
Zener Voltage, V	Mftrs. List No.	Order Code
5.1	BZV90-C5V1	108-1370
5.6	BZV90-C5V6	108-1371
6.2	BZV90-C6V2	108-1372
8.2	BZV90-C8V2	108-1373
12	BZV90-C12	108-1364
15	BZV90-C15.	541-655
20	BZV90-C20	108-1368
27	BZV90-C27	108-1369

418554

Order Multiple=1			Price Each 1+	100+	1K+	3K+	+
BZV90C...	NXP	**All Values**	1.49	0.73	0.54	0.30	– –

Protection Diodes

Unidirectional Suppression Diodes

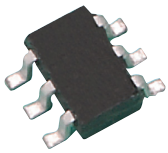


Micro QFN

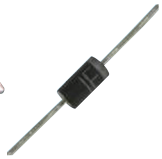
ST0201

DO-214AC

DO-216AA



SOT-23



DO-15

SOT-666IP

Peak Pulse Power W	Vbr V	Stand-off Voltage V	No pin	Case Style	Mftrs. List No.
3	23.1	20	2	DO-201	LNBTVS3-220
3	23.1	20	2	SMB	LNBTVS3-220U
3	23.1	20	2	DO-201	LNBTVS4-220S
3	23.1	20	2	DO-201	LNBTVS4-221S
3	23.1	20	2	SMC	LNBTVS4-222S
3	23.1	20	2	SMC	LNBTVS6-220S
20	8	3	2	ST0201	ESDALC6V1-1U2
25	7.2	3	5	SOT-323	ESDALC6V1W5
30	7.2	3	6	Micro QFN	ESDALC6V1-5M6
30	7.2	3	6	SOT-666	ESDALC6V1-5P6
30	7.2	3	6	Micro QFN	ESDALC6V1M6
30	7.2	3	6	SOT-666IP	ESDALC6V1P6
50	7.2	3	2	SOD-882	ESDALC6V1-1M2
100	7.2	3	6	Micro QFN	ESDA6V1-5M6
100	7.2	3	6	SOT-23	ESDA6V1-5SC6
100	7.2	3	6	SOT-323	ESDA6V1-5W6
100	7.2	3	6	Micro QFN	ESDA6V1M6
150	7.2	3	5	SOT-323	ESDA6V1W5
150	7.2	3	6	SOT-666IP	ESDA6V1P6
150	19	14	6	SOT-23	ESDA17-5SC6
200	3.6	3.3	2	DO-216AA	SM2T3V3A
200	6.8	5	2	DO-216AA	SM2T6V8A
200	7.2	5.25	20	SOIC	ESDA6V1S3
200	18	16	2	DO-216AA	SM2T18A
200	26	24	2	DO-216AA	SM2T27A
300	5.9	3	3	SOT-23	ESDA5V3L
300	30	24	3	SOT-23	ESDA25L
400	5.9	3	5	SOT-23	ESDA5V3SC5
400	5.9	3	6	SOT-23	ESDA5V3SC6
400	6.7	6	2	DO-214AC	SMAJ6.0A-TR
400	6.74	5	2	SMAflat	SMA4F5.0A
400	7.2	6.5	2	DO-214AC	SMAJ6.5A-TR
400	14.4	13	2	DO-214AC	SMAJ13A-TR
400	15.8	12	6	SOT-23	ESDA14V2SC6
400	15.8	12	5	SOT-23	ESDA14V2SC5
400	20	18	2	DO-214AC	SMAJ18A-TR
400	26.7	24	2	DO-214AC	SMAJ24A-TR
400	28.9	26	2	DO-214AC	SMAJ26A-TR
400	30	24	5	SOT-323	ESDA25W5
400	44.4	40	2	DO-214AC	SMAJ40A-TR
400	47.8	43	2	DO-214AC	SMAJ43A-TR
400	53.3	48	2	DO-214AC	SMAJ48A-TR
400	77.8	70	2	DO-214AC	SMAJ70A-TR
400	77.8	170	2	DO-214AC	SMAJ170A-TR
400	209	188	2	DO-214AC	SMAJ188A-TR
600	11.1	10	2	DO-214AA	SMBJ10A-TR
600	17.8	16	2	DO-214AA	SMBJ16A-TR
600	28.9	26	2	DO-214AA	SMBJ26A-TR
600	171	154	2	DO-214AA	SMBJ154A-TR
600	250	213	2	DO-15	P6KE250ARL
1500	6	5	2	SMC	SM5908
1500	22	18.8	2	DO-214AB	SM15T22A
1500	30	25.6	2	DO-214AB	SM15T30A

545901

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
LNBTVS3-220	**174-9284**	0.390	0.330	0.300	0.240	0.210
LNBTVS3-220U	SMD **174-9285**	0.440	0.390	0.340	0.280	0.240
LNBTVS4-220S	**174-9287**	0.550	0.490	0.440	0.350	0.300
LNBTVS4-221S	**174-9288**	0.590	0.520	0.460	0.370	0.320
LNBTVS4-222S	SMD **174-9289**	0.720	0.620	0.550	0.460	0.390
LNBTVS6-220S	SMD **174-9290**	0.750	0.660	0.580	0.480	0.410
ESDALC6V1-1U2	SMD **174-9278**	0.146	0.125	0.114	0.094	0.082
ESDALC6V1W5	SMD **174-9283**	0.510	0.450	0.400	0.320	0.280
ESDALC6V1-5M6	SMD **174-9279**	0.320	0.280	0.250	0.198	0.166
ESDALC6V1-5P6	SMD **174-9280**	0.600	0.530	0.470	0.390	0.320
ESDALC6V1M6	SMD **174-9281**	0.250	0.220	0.198	0.166	0.135
ESDALC6V1P6	SMD **174-9282**	0.430	0.370	0.330	0.270	0.230
ESDALC6V1-1M2	SMD **174-9277**	0.240	0.210	0.187	0.156	0.137
ESDA6V1-5M6	SMD **174-9269**	0.570	0.500	0.450	0.360	0.300

Protection Diodes - continued

Unidirectional Suppression Diodes - continued

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
ESDA6V1-5SC6	SMD 174-9270	0.460	0.400	0.350	0.290	0.250
ESDA6V1-5W6	SMD 174-9271	0.400	0.350	0.310	0.250	0.220
ESDA6V1M6	SMD 174-9272	0.350	0.310	0.270	0.230	0.187
ESDA6V1W5	SMD 174-9276	0.230	0.198	0.177	0.146	0.125
ESDA6V1P6	SMD 174-9273	0.400	0.350	0.310	0.250	0.220
ESDA17-5SC6	SMD 174-9263	0.400	0.350	0.310	0.250	0.220
SM2T3V3A	SMD 174-9296	0.290	0.250	0.220	0.187	0.156
SM2T6V8A	SMD 174-9297	0.260	0.230	0.198	0.166	0.135
ESDA6V1S3	SMD 174-9275	1.030	0.890	0.800	0.660	0.550
SM2T18A	SMD 174-9294	0.290	0.250	0.220	0.187	0.156
SM2T27A	SMD 174-9295	0.270	0.240	0.210	0.177	0.146
ESDA5V3L	SMD 174-9266	0.390	0.330	0.300	0.250	0.210
ESDA25L	SMD 174-9264	0.430	0.370	0.330	0.270	0.230
ESDA5V3SC5	SMD 174-9267	0.230	0.198	0.177	0.146	0.125
ESDA5V3SC6	SMD 174-9268	0.230	0.198	0.177	0.146	0.125
SMAJ6.0A-TR	SMD 174-9311	0.114	0.104	0.094	0.073	0.062
SMA4F5.0A	SMD 174-9300	0.156	0.135	0.114	0.094	0.083
SMAJ6.5A-TR	SMD 174-9312	0.114	0.094	0.083	0.073	0.062
SMAJ13A-TR	SMD 174-9301	0.125	0.104	0.094	0.083	0.062
ESDA14V2SC6	SMD 174-9261	0.320	0.280	0.250	0.210	0.177
ESDA14V2SC5	SMD 174-9334	0.420	0.360	0.320	0.270	0.230
SMAJ18A-TR	SMD 174-9305	0.125	0.104	0.094	0.083	0.062
SMAJ24A-TR	SMD 174-9306	0.125	0.104	0.094	0.083	0.062
SMAJ26A-TR	SMD 174-9307	0.125	0.104	0.094	0.083	0.062
ESDA25W5	SMD 174-9265	0.400	0.350	0.310	0.250	0.220
SMAJ40A-TR	SMD 174-9308	0.125	0.104	0.094	0.083	0.062
SMAJ43A-TR	SMD 174-9309	0.125	0.104	0.094	0.083	0.062
SMAJ48A-TR	SMD 174-9310	0.125	0.104	0.094	0.083	0.062
SMAJ70A-TR	SMD 174-9313	0.125	0.104	0.094	0.083	0.062
SMAJ170A-TR	SMD 174-9302	0.125	0.104	0.094	0.083	0.062
SMAJ188A-TR	SMD 174-9303	0.125	0.104	0.094	0.083	0.062
SMBJ10A-TR	SMD 174-9314	0.125	0.104	0.094	0.083	0.062
SMBJ16A-TR	SMD 174-9317	0.125	0.104	0.094	0.083	0.062
SMBJ26A-TR	SMD 174-9318	0.125	0.104	0.094	0.083	0.062
SMBJ154A-TR	SMD 174-9315	0.135	0.114	0.104	0.083	0.073
P6KE250ARL	174-9291	0.146	0.135	0.114	0.094	0.083
SM5908	SMD 174-9299	0.540	0.470	0.420	0.340	0.290
SM15T22A	SMD 174-9292	0.280	0.240	0.220	0.177	0.146
SM15T30A	SMD 174-9293	0.280	0.240	0.220	0.177	0.146

Protection IC for ringing SLICs

New

The LCP02-150B1 has been developed to protect SLICs operating on both negative and positive battery supplies, as well as high voltage SLICs. It provides crowbar mode protection for both TIP and RING lines. The surge suppression is assumed for each wire by two thyristor structures, one dedicated to positive surges the second one for negative surges. Both positive and negative threshold levels are programmable by two gates (Gn and Gp). The use of transistors decreases the battery currents during surge suppression.
LCP02-150B1 is used to help equipment to meet various standards such as UL1950, IEC 60950 / CSAC22.2, UL1459 and TIA-968-A (formerly FCC part68). Trisils have UL94 V0 resin approved (Trisils are UL497B approved - file: E136224).

Applications
- Central office (CO)
- Private branch exchange (PBX)
- Digital loop carrier (DLC)
- Fiber in the Loop (FITL)
- Wireless local loop (WLL)
- Hybrid fiber coax (HFC)
- ISDN terminal adapter
- Cable modem
- Asymmetrical digital subscriber line (ADSL G.Lite)
- Dual battery supply voltage SLICs, negative battery supply configuration, negative and positive battery supply configuration

Features
- Wide firing voltage range: -120V to +120V
- Low gate triggering current: IG = 5mA max
- Peak pulse current: IPP = 30A (10/1000 µs)
- Holding current: IH = 150mA min
- UL497B approved (file E136224)

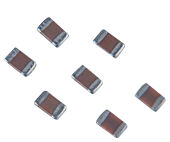
530337

Mftrs. List No.	Pin/Package	Order Code	Price Each 1+	25+	100+	250+	500+
LCP02-150B1RL	8/SOIC	SMD 168-9209	4.08	3.05	2.48	2.08	1.81

PolySURG™ TR Series ESD Suppressor

Bussmann

Bi-directional



- Ideal ESD protection for high frequency, low voltage applications.
- Exceeds testing requirements outlined in IEC 61000-4-2
- Ultra low capacitance (0.15pF maximum)
- Very low leakage current
- Fast response time
- Bi-directional

0603/1608 footprint
L=1.6, W=0.8, D=0.5

Continuous operating Voltage (V)	V_{CLAMP} Typ (V)	V_{CLAMP} Max (V)	Trigger Typ (V)	ESD Threat Voltage capability	List No.	Order Code
24	35	60	125	8-15kV	0603ESDA-TR1	147-0613

497093

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	+	+
0603ESDA-TR1	SMD 147-0613	0.127	0.121	0.116	– –	– –

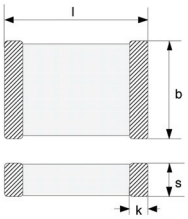
CeraDiodes

EPCOS

SMD

H=0.9mm, W=1.75mm, D=0.9mm

- Multilayer ceramic oxide construction
- 0603 package, one third of the size of conventional TVS diodes
- Very stable capacitance, largely unaffected by temperature fluctuations and DC bias voltages
- No derating up to maximum operating temperature (85°C)
- ESD Protection to **IEC 61000-4-2**
- Bidirectional operation



Symb.	MIN	MAX	Unit
l	1.45	1.75	mm
b	0.7	0.9	mm
s	0.7	0.9	mm
k	0.1	0.4	mm

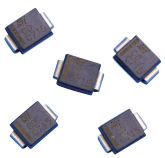
	V_{dc} Max DC Working Voltage V	V_{br} Breakdown Voltage Min. V	Clamping Voltage V_{clamp} max. V	Max. Reverse Leakage Current µA	Capacitance pF	Mftrs. List No.
Std CeraDiode	9	10	30	10	220	CDS3C09GTA.
High Speed CeraDiode	16	150	290	10	3	CDS3C16GTH.
	30	50	120	10	10	CDS3C30GTH.

* Typical V_{br}

342647

Mftrs. List No.	Order Code	Price Each 1+	5+	10+	25+	50+
CDS3C09GTA.	SMD 530-2382 RL	0.310	0.260	0.184	0.148	0.136
CDS3C16GTH.	SMD 530-2412 RL	0.320	0.270	0.191	0.154	0.141
CDS3C30GTH.	SMD 530-2420 RL	0.300	0.250	0.179	0.144	0.131

Transil™ - 3.3V Equipment Protection



- Unidirectional Transil Diode
- Peak Pulse Power: 600 W (10/1000 µs)
- Low clampling factor
- Fast response time
- UL recognised

Reverse stand-off voltage 3.3V
Peak pulse power 600W @ 1ms

Undirectional transil diode designed specifically for protecting 3.3V supplied sensitive equipment against transient overvoltages.Transil diodes provide high overvoltage protection by clamping action. Their instantaneous response to transient overvoltages makes them particularly suited to protect voltage sensistive devices such as MOS technology and low voltage supply IC's

Order Multiple=5

Mftrs. List No.	Order Code	Price Each 5+	10+	50+	100+	500+
SMLVT3V3..	SMD 980-2886 RL	0.73	0.48	0.40	0.37	0.31

204160

Reel of 2500

Mftrs. List No.	Order Code	Price Per Reel 1+	3+
SMLVT3V3	SMD 156-2404	422.85	405.35

PESD Protection Diodes

NXP

SOT-665

SOD323

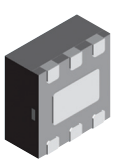
Lines of Protection Unidirectional	Lines of Protection Bidirectional	Standoff Voltage V	V_{br} min. V	Diode Capacitance @ Vr max. pF	P_{pp} W	V_{clamp} max. V	Package	Device Marking	Mftrs. List No.
1	—	3.3	5.2	300	330	5.6	SOD-523	N1	PESD3V3S1UB
1	—	5	6.4	200	260	6.8	SOD-523	N2	PESD5V0S1UB
1	—	5	7	65	500	7.6	SOD-323	AC	PESD5V0L1BA
—	1	3.3	5.8	95	500	6.4	SOD-323	AB	PESD3V3L1BA
—	1	5	5.5	45	130	14	SOD-323	E6	PESD5V0S1BA
—	1	5	6.4	45	130	14	SOD-523	L7	PESD5V0S1BB

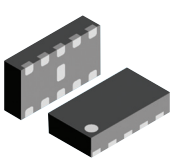
Lines of Protection Unidirectional	Lines of Protection Bidirectional	Standoff Voltage	V_{br} min.	Diode Capacitance @ Vr max.	P_{pp}	V_{clamp} max.	Package	Device Marking	Mftrs. List No.
—	1	12	14.2	13	200	15.9	SOD-323	AD	PESD12VL1BA
—	1	12	14.7	75	180	15	SOD-523	N3	PESD12VS1UB
—	1	15	17.1	11	200	18.9	SOD-323	AE	PESD15VL1BA
—	1	15	17.6	70	160	18	SOD-523	N4	PESD15VS1UB
—	1	24	25.4	9	200	27.8	SOD-323	AF	PESD24VL1BA
—	1	24	26.5	50	160	27	SOD-523	N5	PESD24VS1UB
1	1	3.3	5.8	1.5	80	20	SOT-23	AP	PESD3V3U1UT
1	1	5	5.5	3.5	—	—	SOD-323	AA	PESD5V0U1BA
1	1	5	7	1.5	80	21	SOT-23	AQ	PESD5V0U1UT
1	1	12	14.2	1.5	200	39	SOT-23	AR	PESD12VU1UT
2	—	3.3	5.2	300	330	5.6	SOT-23	*U9	PESD3V3S2UT
4	—	3.3	5.32	28	30	5.6	SOT-353	L1*	PESD3V3L4UG
4	3	3.3	5.32	28	30	5.6	SOT-665	A2	PESD3V3L4UW
4	3	3.3	5.3	300	200	12	SSOT-6	K4	PESD3V3S4UD
4	3	5	6.46	19	30	6.8	SOT-665	A1	PESD5V0L4UW
4	3	5	6.4	220	200	13	SSOT-6	K5	PESD5V0S4UD
4	3	5	6.4	15	16	13	SOT-353	V2	PESD5V0V4UG
4	3	24	25.5	70	200	52	SSOT-6	K8	PESD24VS4UD
—	4	5	6.46	19	30	6.8	SOT-353	L2*	PESD5V0L4UG
5	4	3.3	5.3	28	25	5.6	SOT-363	K3*	PESD3V3L5UY
5	4	5	6.4	19	25	6.8	SOT-363	K4*	PESD5V0L5UY
—	7	5	7.2	10	35	7.6	SOT-505	5V07B	PESD5V0L7BAS
5	4	3.3	5.3	28	25	5.6	SOT-666	E1	PESD3V3L5UV
5	4	3.3	5.3	300	200	12	SSOT-6	E1	PESD3V3S5UD
6	—	5	6.4	19	35	6.8	SOT-96	5V0L6US	PESD5V0L6US
—	7	5	7.2	10	35	7.6	SOT-96	5V0L7BS	PESD5V0L7BS
2 CAN	—	24	25.4	17	200	70	SOT-23	AN	PESD1CAN
2 CAN	—	24	26.2	30	230	41	SOT-23	6R	PESD2CAN
2 FLEXRAY	—	24	25.4	17	200	70	SOT-23	ZJ	PESD1FLEX
1 LIN	—	24	25.4	17	160	70	SOD-323	AM	PESD1LIN

386596

Mftrs. List No.	Order Code	Price Each 5+	100+	1K+	3K+	+
PESD12VL1BA	SMD 873-7363 RL	0.300	0.181	0.129	0.097	– –
PESD12VS1UB	SMD 873-7371 RL	0.280	0.165	0.119	0.087	– –
PESD15VL1BA	SMD 873-7410 RL	0.290	0.176	0.125	0.094	– –
PESD15VS1UB	SMD 873-7428 RL	0.270	0.161	0.116	0.085	– –
PESD24VL1BA	SMD 873-7460 RL	0.300	0.181	0.129	0.097	– –
PESD24VS1UB	SMD 873-7479 RL	0.270	0.160	0.115	0.085	– –
PESD3V3L1BA	SMD 873-7517 RL	0.300	0.181	0.129	0.097	– –
PESD3V3L4UG	SMD 873-7525 RL	0.420	0.260	0.180	0.135	– –
PESD3V3L4UW	SMD 873-7533 RL	0.420	0.260	0.180	0.135	– –
PESD3V3L5UV	SMD 873-7541 RL	0.450	0.280	0.191	0.144	– –
PESD3V3L5UY	SMD 873-7550 RL	0.360	– –	– –	– –	– –
PESD3V3S1UB	SMD 873-7568 RL	0.280	0.165	0.119	0.087	– –
PESD3V3S2UT	SMD 873-7592 RL	0.340	– –	– –	– –	– –
PESD5V0L1BA	SMD 873-7606 RL	0.300	0.181	0.129	0.097	– –
PESD5V0L4UG	SMD 873-7614 RL	0.420	0.260	0.180	0.135	– –
PESD5V0L4UW	SMD 873-7622 RL	0.420	0.260	0.180	0.135	– –
PESD5V0L5UY	SMD 873-7649 RL	0.450	– –	– –	– –	– –
PESD5V0L6US	SMD 873-7665 RL	0.660	0.410	0.290	0.210	– –
PESD5V0L7BAS	SMD 873-7673 RL	0.630	0.390	0.280	0.200	– –
PESD5V0L7BS	SMD 873-7681 RL	0.320	0.193	0.137	0.119	– –
PESD5V0S1BA	SMD 873-7690 RL	0.390	0.250	0.168	0.123	– –
PESD5V0S1BB	SMD 873-7703 RL	0.390	0.250	0.168	0.123	– –
PESD5V0S1UB	SMD 873-7711 RL	0.270	0.155	0.111	0.083	– –
PESD12VU1UT	SMD 151-0698	0.200	0.161	0.139	0.118	– –
PESD1CAN	SMD 151-0703	0.200	0.161	0.139	0.098	– –
PESD1FLEX	SMD 151-0704	0.151	0.121	0.105	0.093	– –
PESD1LIN	SMD 151-0705	0.165	0.135	0.115	0.101	– –
PESD24VS4UD	SMD 151-0707	0.173	0.144	0.127	0.114	– –
PESD2CAN	SMD 151-0712	0.200	0.161	0.139	0.098	– –
PESD3V3S4UD	SMD 151-0714	0.210	0.167	0.145	0.128	– –
PESD3V3S5UD	SMD 151-0715	0.240	0.194	0.166	0.147	– –
PESD3V3U1UT	SMD 151-0716	0.200	0.161	0.139	0.118	– –
PESD5V0S4UD	SMD 151-0720	0.200	0.161	0.139	0.123	– –
PESD5V0U1BA	SMD 151-0723	0.157	0.126	0.109	0.097	– –
PESD5V0U1UT	SMD 151-0724	0.200	0.161	0.139	0.118	– –
PESD5V0V4UG	SMD 151-0726	0.210	0.173	0.151	0.136	– –

VBUS052/3/4
USB & Data Bus ESD Protection Diode Array


LLP75-7L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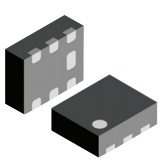

LLP1713-7L

VBUS053
- 3 Line USB ESD protection
- 1 Vbus protection
- Peak Pulse Power 36W max
- Peak Pulse Current 3A
- Low leakage current
- Low load capacitance CD = 0.7 pF
- ESD-protection to IEC 61000-4-2 ±15 kV contact discharge ±15 kV air discharge
- Surge current acc. IEC 6100-4-5 IPP below 3 A
- Nonmagnetic
- Height 0.6mm

VBUS052/4
- VBUS052/4 are 2/4 Line Bus ESD protection
- Peak Pulse Power 63W max
- Peak Pulse Current 3.5A
- Low leakage current
- Low load capacitance CD = 0.8 pF
- ESD-protection to IEC 61000-4-2 ±15 kV contact discharge ±15 kV air discharge
- Height 0.6mm

Typical applications are USB 2.0, eSATA , 1394 Firewire, HDMI in HDTVs, portable gaming systems, MP3 players and mobile phones.

531510

Pin/ Package	Mftrs. List No.	Order Code	Price Each 5+	25+	100+	500+	1K+
7/LLP75	VBUS053AZ-HAF	SMD 169-7038	0.71	0.60	0.49	0.42	0.35
11/LLP2513	VBUS054CD-FHI	SMD 169-7039	0.71	0.60	0.49	0.42	0.35
7/LLP1713	VBUS052CD-FAH	SMD 169-7040	0.71	0.60	0.49	0.42	0.35

Triple Data Line TVS

New

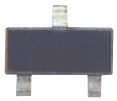
Ethernet protection is located between the RJ45 and the transformer. There is no DC current and crowbar protection can be used to carry high surge currents without risking latch-up. Advantage of the crowbar devices is the short circuit to a few volts, once the breakover voltage is reached. The benefit of the crowbar solution is the surge current capability, keeping the capacitance low enough to be compliant with 100 Mbit/s bit rate. In some cases TPN3021 limits data rates due to junction capacitance.

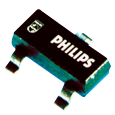
- Triple crowbar protection
- Tripolar overvoltage protection
- Low capacitance
- Low holding current: IH=30mA minimum
- Pin/package 8/SOIC
- Designed to meet T1/E1 & ethernet networks
- Surge current IPP=200A, 2/10µs & IPP=30A, 10/1000µs

531669

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+
TPN3021	SMD 169-7528	3.19	2.92	2.69	2.57

Double ESD Protection Diodes


SOT-663
H=0.6, W=1.7, D=1.3


SOT-23
H=1.12, W=3.05, D=2.3

- Unidirectional double ESD protection diodes in SOT-23 and SOT-663 packages
- Designed to protect up to two transmission or data lines against damage from ESD and other transients

Stand-Off Voltage V_{rm}, V	V_{br} V	V_{clamp} V	Peak Pulse Power W	Device Marking Code	Device Marking Code	Mftrs. List No.	Order Code
Common Cathode							
3.3	5.2 - 6	5.6	330	SOT-23	*7A	PESD3V3S2UAT	873-7576
5	6.4 - 7.2	6.8	260	SOT-23	*7B	PESD5V0S2UAT	873-7738
12	14.7 - 15.3	15	180	SOT-23	*7C	PESD12VS2UAT	873-7380
15	17.6 - 18.4	18	160	SOT-23	*7D	PESD15VS2UAT	873-7436
24	26.5 - 27.5	27	160	SOT-23	*7E	PESD24VS2UAT	873-7487
Common Anode							
3.3	5.2 - 6	5.6	150	SOT-663	E1	PESD3V3S2UQ	873-7584
5	6.4 - 7.2	6.8	150	SOT-663	E2	PESD5V0S2UQ	873-7746
5.2	6.4 - 7.2	9	330	SOT-23	*U1	PESD5V2S2UT	873-7762
12	14.7 - 15.3	15	150	SOT-663	E3	PESD12VS2UQ	873-7398
12	14.7 - 15.3	15	180	SOT-23	*U2	PESD12VS2UT	873-7401
15	17.6 - 18.4	18	160	SOT-23	*U3	PESD15VS2UT	873-7452
24	26.5 - 27.5	27	150	SOT-663	E5	PESD24VS2UQ	873-7495
24	26.5 - 27.5	27	160	SOT-23	*U4	PESD24VS2UT	873-7509
Bidirectional Double Protection							
3.3	5.8 - 6.9	26	350	SOT-23	V3	PESD3V3L2BT	151-0713
5	7 - 8.2	28	350	SOT-23	V4	PESD5V0L2BT	151-0719
5	5.5 - 9.5	14	130	SOT-23	*G5	PESD5V0S2BT	873-7720
5	5.5 - 9.5	—	—	SOT-23	1U*	PESD5V0U2BT	151-0725
12	14.2 - 16.7	37	200	SOT-23	V5	PESD12VL2BT	151-0695
15	17.1 - 20.3	44	200	SOT-23	V6	PESD15VL2BT	151-0699

386507

Order Multiple=5 Mftrs. List No.	Order Code	Price Each 5+	100+	1K+	3K+	+
Common Cathode						
PESD3V3S2UAT	SMD 873-7576 RL	0.350	0.210	0.155	0.114	– –
PESD5V0S2UAT	SMD 873-7738 RL	0.340	0.200	0.149	0.110	– –
PESD12VS2UAT	SMD 873-7380 RL	0.156	0.094	0.067	0.050	– –
PESD15VS2UAT	SMD 873-7436 RL	0.146	0.095	0.072	0.055	– –
PESD24VS2UAT	SMD 873-7487 RL	0.156	0.094	0.067	0.051	– –
Common Anode						
PESD3V3S2UQ	SMD 873-7584 RL	0.350	0.210	0.155	0.114	– –
PESD5V0S2UQ	SMD 873-7746 RL	0.350	0.210	0.155	0.114	– –
PESD5V2S2UT	SMD 873-7762 RL	0.340	0.200	0.149	0.110	– –
PESD12VS2UQ	SMD 873-7398 RL	0.350	0.210	0.155	0.114	– –

Protection Diodes - continued

Double ESD Protection Diodes - continued

Order Multiple=5				Price Each			
Mftrs. List No.	Order Code	5+	100+	1K+	3K+	+
Common Anode						
PESD12VS2UT	SMD 873-7401 RL	0.350	– –	– –	– –	– –
PESD15VS2UT	SMD 873-7452 RL	0.340	0.200	0.149	0.110	– –
PESD24VS2UQ	SMD 873-7495 RL	0.340	0.200	0.149	0.110	– –
PESD24VS2UT	SMD 873-7509 RL	0.340	0.200	0.149	0.110	– –
Bidirectional						
PESD3V3L2BT	SMD 151-0713	0.159	0.130	0.111	0.097	– –
PESD5V0L2BT	SMD 151-0719	0.165	0.135	0.115	0.101	– –
PESD5V0S2BT	SMD 873-7720 RL	0.480	0.300	0.210	0.158	– –
PESD5V0U2BT	SMD 151-0725	0.151	0.121	0.105	0.093	– –
PESD12VL2BT	SMD 151-0695	0.159	0.130	0.111	0.097	– –
PESD15VL2BT	SMD 151-0699	0.159	0.130	0.111	0.097	– –

Double Rail-to-Rail ESD Protection Diodes

SOT-143B

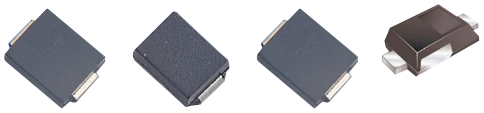
- ESD protection of two high-speed data lines or high frequency signal lines
- Ultra low input/output to ground capacitance, C(I/O-GND)
- IEC 61000-4-2, level 4 (ESD)
- Very low clamping voltage due to an integrated additional ESD protection diode
- Very low leakage current

Standoff Voltage V	V_{br} min. V	C(I/O-GND) pF	V_{clamp} max. V	ESD protection max. kV	Package	Device Marking	Mftrs. List No.
5.5	6	1.8	7.5	12	SOT-143B	*AE	PRTR5V0U2AX
5.5	6	1	7.5	8	SOT-143B	*R1	PRTR5V0U2X

496627

		Price Each			
Mftrs. List No.	Order Code	5+	100+	1K+	3K+
PRTR5V0U2AX	SMD 152-4156	0.330	0.250	0.185	0.175
PRTR5V0U2X	SMD 152-4157	0.330	0.250	0.185	0.175

400W/600W/1500W Unidirectional Transient Suppression Diodes



SMA SMB SMC DO222-AA

TRANSIL™ diodes designed specifically for protecting sensitive equipment against transient overvoltages. Transil diodes provide high overvoltage protection by clamping action. Their instantaneous responseto transient overvoltages makes them particularly suited to protect voltage sensitive devices such as MOS Technology and low voltage supplied IC's.

- 400W/600W/1500W Peak Pulse Power (10/1000µs)
- Fast response time
- Stand off voltage from 3.3V to 188V

Stand-Off Voltage V_{rm}, V	V_{br} V	I_{test} mA	V_{clamp} @ Ipp8/20µs Max V	Peak Pulse Current A	Package	Mftrs. List No.
400W						
5	6.8	1	13.4	174	DO222-AA	SMM4F5.0A-TR
6	7	1	13.7	170	DO222-AA	SMM4F6.0A-TR
6.5	7.5	1	14.5	160	DO222-AA	SMM4F6.5A-TR
8.5	10	1	19.5	124	DO222-AA	SMM4F8.5A-TR
10	12	1	21.7	106	DO222-AA	SMM4F10A-TR
12	14	1	25.3	91	DO222-AA	SMM4F12A-TR
13	15	10	27.2	85	DO222-AA	SMM4F13A-TR
15	18	10	32.5	71	DO222-AA	SMM4F15A-TR
18	22	1	39.3	59	DO222-AA	SMM4F18A-TR
20	24	1	42.8	54	DO222-AA	SMM4F20A-TR
24	28.01	1	50	46	DO222-AA	SMM4F24A-TR
26	30	1	53.5	43	DO222-AA	SMM4F26A-TR
28	33	10	59	39	DO222-AA	SMM4F28A-TR
33	39	1	69.7	33	DO222-AA	SMM4F33A-TR
600W						
3.3	4.1	1	10.3	200	SMB	SMLVT3V3
600W						
5	15.2	10	13.4	298	SMA	SMA6F5.0A-TR
13	6.74	1	23.9	147	SMA	SMA6F13A-TR
600W						
5	6.74	10	13.4	298	SMA	SMA6J5.0A-TR
6	7.05	10	13.7	290	SMA	SMA6J6.0A-TR
6.5	7.58	10	14.5	276	SMA	SMA6J6.5A-TR
8.5	9.9	1	18.7	205	SMA	SMA6J8.5A-TR
10	11.7	1	19.6	184	SMA	SMA6J10A-TR
12	14	1	23.5	157	SMA	SMA6J12A-TR
13	14.4	1	27.2	368	SMB	SMBJ13A-TR.
13	15.2	1	23.9	147	SMA	SMA6J13A-TR
15	17.6	1	27.7	123	SMA	SMA6J15A-TR
18	21.1	1	33.2	102	SMA	SMA6J18A-TR
600W						
20	23.4	1	36.8	93	SMA	SMA6J20A-TR
24	28.1	1	44.3	80	SMA	SMA6J24A-TR
26	30.4	1	47.9	75	SMA	SMA6J26A-TR
28	32.7	1	51.6	68	SMA	SMA6J28A-TR
33	38.6	1	60.8	57	SMA	SMA6J33A-TR
40	46.7	1	73.6	48	SMA	SMA6J40A-TR
48	56.1	1	88.4	40	SMA	SMA6J48A-TR
58	67.8	1	100	33	SMA	SMA6J58A-TR
70	81.9	1	120	27	SMA	SMA6J70A-TR
85	99	1	146	22.5	SMA	SMA6J85A-TR
100	117	1	172	19	SMA	SMA6J100A-TR
130	152	1	223	15	SMA	SMA6J130A-TR
154	180	1	265	12.6	SMA	SMA6J154A-TR
170	199	1	292	11.3	SMA	SMA6J170A-TR
188	220	1	323	10.3	SMA	SMA6J188A-TR
1500W						
5	6.4	10	13.4	746	SMC	SMCJ5.0A-TR
6	6.7	10	13.7	730	SMC	SMCJ6.0A-TR
10	11.1	1	21.7	461	SMC	SMCJ10A-TR
13	14.4	1	27.2	368	SMC	SMCJ13A-TR
15	16.7	1	32.5	308	SMC	SMCJ15A-TR
22	24.4	1	48.3	207	SMC	SMCJ22A-TR
26	28.9	1	53.5	187	SMC	SMCJ26A-TR
28	31.1	1	59	169	SMC	SMCJ28A-TR
30	33.3	1	64.3	156	SMC	SMCJ30A-TR
33	36.7	1	69.7	143	SMC	SMCJ33A-TR
40	44.4	1	84	119	SMC	SMCJ40A-TR
70	77.8	1	146	69	SMC	SMCJ70A-TR
188	209	1	388	26	SMC	SMCJ188A-TR

530079

Unidirectional		Price Each				
Mftrs. List No.	Order Code	1+	25+	100+	250+	500+
400W						
SMM4F5.0A-TR	SMD 168-9313	0.230	0.151	0.126	0.105	0.096
SMM4F6.0A-TR	SMD 168-9314	0.230	0.151	0.126	0.105	0.096
SMM4F6.5A-TR	SMD 168-9315	0.230	0.151	0.126	0.105	0.096
SMM4F8.5A-TR	SMD 168-9316	0.230	0.151	0.126	0.105	0.096
SMM4F10A-TR	SMD 168-9302	0.230	0.151	0.126	0.105	0.096
SMM4F12A-TR	SMD 168-9303	0.230	0.151	0.126	0.105	0.096
SMM4F13A-TR	SMD 168-9304	0.230	0.151	0.126	0.105	0.096
SMM4F15A-TR	SMD 168-9305	0.230	0.151	0.126	0.105	0.096
SMM4F18A-TR	SMD 168-9306	0.230	0.151	0.126	0.105	0.096
SMM4F20A-TR	SMD 168-9308	0.230	0.151	0.126	0.105	0.096
SMM4F24A-TR	SMD 168-9309	0.230	0.151	0.126	0.105	0.096
SMM4F26A-TR	SMD 168-9310	0.230	0.151	0.126	0.105	0.096
SMM4F28A-TR	SMD 168-9311	0.230	0.151	0.126	0.105	0.096
SMM4F33A-TR	SMD 168-9312	0.230	0.154	0.129	0.108	0.098
600W						
SMLVT3V3	SMD 168-9301	1.040	0.690	0.570	0.480	0.440
SMA6F5.0A-TR	SMD 168-9211	0.400	0.260	0.220	0.183	0.166
SMA6F13A-TR	SMD 168-9210	0.400	0.260	0.220	0.183	0.166
SMA6J5.0A-TR	SMD 168-9250	0.350	0.240	0.196	0.163	0.149
SMA6J6.0A-TR	SMD 168-9255	0.330	0.220	0.183	0.153	0.139
SMA6J6.5A-TR	SMD 168-9257	0.330	0.220	0.183	0.153	0.139
SMA6J8.5A-TR	SMD 168-9261	0.330	0.220	0.183	0.153	0.139
SMA6J10A-TR	SMD 168-9214	0.330	0.220	0.183	0.153	0.139
SMA6J12A-TR	SMD 168-9217	0.330	0.220	0.183	0.153	0.139
SMBJ13A-TR.	SMD 168-9264	0.330	0.220	0.181	0.152	0.138
SMA6J13A-TR	SMD 168-9221	0.330	0.220	0.183	0.153	0.139
SMA6J15A-TR	SMD 168-9225	0.330	0.220	0.183	0.153	0.139
SMA6J18A-TR	SMD 168-9233	0.350	0.240	0.196	0.163	0.149
SMA6J20A-TR	SMD 168-9235	0.340	0.230	0.190	0.159	0.145
SMA6J24A-TR	SMD 168-9237	0.330	0.220	0.183	0.153	0.139
SMA6J26A-TR	SMD 168-9239	0.330	0.220	0.183	0.153	0.139
SMA6J28A-TR	SMD 168-9242	0.330	0.220	0.183	0.153	0.139
SMA6J33A-TR	SMD 168-9244	0.330	0.220	0.183	0.153	0.139
SMA6J40A-TR	SMD 168-9246	0.330	0.220	0.183	0.153	0.139
SMA6J48A-TR	SMD 168-9248	0.330	0.220	0.183	0.153	0.139
SMA6J58A-TR	SMD 168-9252	0.330	0.220	0.183	0.153	0.139
SMA6J70A-TR	SMD 168-9259	0.330	0.220	0.183	0.153	0.139
SMA6J85A-TR	SMD 168-9263	0.330	0.220	0.183	0.153	0.139
SMA6J100A-TR	SMD 168-9212	0.330	0.220	0.183	0.153	0.139
SMA6J130A-TR	SMD 168-9219	0.330	0.220	0.183	0.153	0.139
SMA6J154A-TR	SMD 168-9223	0.350	0.240	0.196	0.163	0.149
SMA6J170A-TR	SMD 168-9227	0.350	0.230	0.192	0.161	0.147
SMA6J188A-TR	SMD 168-9231	0.300	0.196	0.163	0.136	0.125
1500W						
SMCJ5.0A-TR	SMD 168-9293	0.630	0.420	0.350	0.290	0.270
SMCJ6.0A-TR	SMD 168-9295	0.600	0.400	0.330	0.280	0.250
SMCJ10A-TR	SMD 168-9268	0.600	0.400	0.330	0.280	0.250
SMCJ13A-TR	SMD 168-9271	0.600	0.400	0.330	0.280	0.250
SMCJ15A-TR	SMD 168-9273	0.600	0.400	0.330	0.280	0.250
SMCJ22A-TR	SMD 168-9280	0.600	0.400	0.330	0.280	0.250
SMCJ26A-TR	SMD 168-9282	0.650	0.430	0.350	0.300	0.270
SMCJ28A-TR	SMD 168-9283	0.600	0.400	0.330	0.280	0.250

Unidirectional		Price Each				
Mftrs. List No.	Order Code	1+	25+	100+	250+	500+
SMCJ30A-TR	SMD 168-9284	0.650	0.430	0.350	0.300	0.270
SMCJ33A-TR	SMD 168-9286	0.600	0.400	0.330	0.280	0.250
SMCJ40A-TR	SMD 168-9288	0.600	0.400	0.330	0.280	0.250
SMCJ70A-TR	SMD 168-9297	0.610	0.400	0.340	0.280	0.260
SMCJ188A-TR	SMD 168-9276	0.600	0.400	0.330	0.280	0.250

400W Transil™ Suppression Diodes

- 400W - 1500W Peak Pulse Power capability
- Low clamping factor
- Low incremental surge resistance
- Fast response time

SMA H = 2.9, W = 2.9, D = 5.6
SMB H = 2.45, W = 5.6, D = 3.95
SMC H = 2.45, W = 8.15, D = 6.25

Max Reverse Leakage Current	V_{br}		V_{clamp}				Mftrs. List No.	
	min.	I_r	P_{pp} max.	I_{fsm}	Package	Unidirectional	Bidirectional
µA @ V_{rm}	V	@ mA	W V	A	Marking	(d.c.)	(a.c.)
SMA Package, 400W							
800 5	6.4	10	400 13.4	40	AE/AA	SMAJ50A-TR	SMAJ50CA-TR
5 12	13.3	1	400 19.9	40	DUK/DBK	SMAJ12A-TR	SMAJ12CA-TR
1 15	16.7	1	400 24.4	40	BM/AJ	SMAJ15A-TR	SMAJ15CA-TR
1 26	28.9	1	400 42.1	40	CE/=2,1064	SMAJ26A-E3/61	—
1 28	31.1	1	400 45.4	40	CG/CH	SMAJ28A-TR	SMAJ28CA-TR
1 30	33.3	1	400 48.4	40	CK/CL	SMAJ30A-TR	SMAJ30CA-TR
1 33	36.7	1	400 53.3	40	CM/CN	SMAJ33A-TR	SMAJ33CA-TR
1 58	64.4	1	400 93.6	40	EUF	SMAJ58A-TR	—
1 44.2	40	1	400 58.1	40	YP/YP	—	SMAJ36CA-E3/61
1 52.8	47.8	1	400 69.4	40	YT/YT	—	SMAJ43CA-E3/61

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Order Multiple=5			Price Each				
Mftrs. List No.	Mftr.	Order Code	5+	25+	100+	250+	1K+
400W Unidirectional							
SMAJ50A-TR	ST	SMD 980-2851 RL	0.290	0.193	0.157	0.132	0.115
SMAJ12A-TR	ST	SMD 980-2754 RL	0.300	0.200	0.163	0.137	0.120
SMAJ15A-TR	ST	SMD 980-2770 RL	0.310	0.156	0.118	0.098	0.089
SMAJ26A-E3/61	VISH	SMD 169-8860	0.450	– –	– –	– –	– –
SMAJ28A-TR	ST	SMD 980-2797 RL	0.340	0.200	0.163	0.137	0.120
SMAJ30A-TR	ST	SMD 980-2819 RL	0.260	0.171	0.138	0.116	0.101
SMAJ33A-TR	ST	SMD 980-2835 RL	0.240	0.161	0.130	0.109	0.096
SMAJ58A-TR	ST	SMD 137-3661	0.440	0.330	0.260	0.210	0.189
400W Bidirectional							
SMAJ50CA-TR	ST	SMD 980-2860 RL	0.300	0.198	0.160	0.134	0.118
SMAJ12CA-TR	ST	SMD 980-2762 RL	0.280	0.189	0.149	0.125	0.109
SMAJ15CA-TR	ST	SMD 980-2789 RL	0.270	0.181	0.147	0.124	0.107
SMAJ28CA-TR	ST	SMD 980-2800 RL	0.400	0.300	0.220	0.190	0.171
SMAJ30CA-TR	ST	SMD 980-2827 RL	0.330	0.220	0.180	0.151	0.131
SMAJ33CA-TR	ST	SMD 980-2843 RL	0.300	0.198	0.160	0.134	0.118
SMAJ33CA-E3/61	VISH	SMD 169-8861	0.500	0.390	0.310	0.260	0.230
SMAJ36CA-E3/61	VISH	SMD 169-8863	0.530	0.410	0.330	0.270	0.240
SMAJ43CA-E3/61	VISH	SMD 169-8864	0.500	0.390	0.310	0.260	0.230

600W Transil™ Suppression Diodes

- 600W Peak Pulse Power capability
- Low clamping factor
- Low incremental surge resistance
- Fast response time

SMB H = 2.45, W = 5.6, D = 3.95

Max Reverse Leakage Current	V_{br}		V_{clamp}				Mftrs. List No.	
	min.	I_r	P_{pp} max.	I_{fsm}	Package	Unidirectional	Bidirectional
µA @ V_{rm}	V	@ mA	W V	A	Marking	(d.c.)	(a.c.)
SMB Package, 600W							
1000 5.8	6.45	10	600 13.4	100	DE/LE	SM6T6V8A	SM6T6V8CA
500 6.4	7.13	10	600 14.5	100	-/LG	—	SM6T7V5CA
1 12.8	14.3	1	600 27.2	100	-/LX	—	SM6T15CA
1 15.3	17.1	1	600 32.5	100	EE/ME	SM6T18A	SM6T18CA
1 23.1	25.7	1	600 48.3	100	EP/-	SM6T27A	—
1 25.6	28.5	1	600 53.5	100	ER/-	SM6T30A	—
1 28.2	31.4	1	600 59	100	ET/MT	SM6T33A	SM6T33CA
1 30.8	34.2	1	600 64.3	100	-/MV	—	SM6T36CA
1 33.3	37.1	1	600 69.7	100	EX/MX	SM6T39A	SM6T39CA

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Order Multiple=5		Price Each				
Mftrs. List No.	Order Code	5+	25+	100+	250+	1K+
600W Unidirectional						
SM6T6V8A	SMD 980-2720 RL	0.310	0.200	0.164	0.138	0.121
SM6T18A	SMD 980-2630 RL	0.195	0.150	0.110	0.090	0.080
SM6T27A	SMD 980-2657 RL	0.280	0.187	0.152	0.128	0.111
SM6T30A	SMD 980-2665 RL	0.280	0.188	0.152	0.128	0.111
SM6T33A	SMD 980-2673 RL	0.250	0.162	0.131	0.110	0.097
SM6T39A	SMD 980-2703 RL	0.260	0.172	0.139	0.116	0.102

Order Multiple=5		Price Each				
Mftrs. List No.	Order Code	5+	25+	100+	250+	1K+
600W Bidirectional						
SM6T6V8CA	SMD 980-2738 RL	0.430	0.260	0.197	0.182	0.138
SM6T7V5CA	SMD 980-2746 RL	0.182	0.120	0.098	0.083	0.073
SM6T15CA	SMD 980-2622 RL	0.620	0.400	0.300	0.260	0.230
SM6T18CA	SMD 980-2649 RL	0.460	0.300	0.187	0.156	0.114
SM6T33CA	SMD 980-2681 RL	0.280	0.186	0.151	0.127	0.110
SM6T36CA	SMD 980-2690 RL	0.188	0.143	0.110	0.090	0.080
SM6T39CA	SMD 980-2711 RL	0.280	0.187	0.152	0.128	0.111

Unidirectional Zener TVS

41A: L=9.5, Dia=5.3

SMB

- Working Peak Reverse Voltage Range: -5V to -100V
- Peak Power -1500W @ 1ms (Mosorb)
- Low leakage <5µA above 10V
- Response time is typically <1ns

V(BR) Typ, (V)	P_{PK} Max, (W)	V_{RWM} Max (V)	I_{RMax} (uA)	Voltage Max. (V)	Package	Mftrs. List No.	Order Code
Mosorb							
6.2	1500	5	300	8.5	41A	1N5908G	1458994
6.3	1500	5	300	9.4	41A	1N6373G	1459008
6.8	1500	5.8	1000	10.5	41A	1N6267AG	1458996
15	1500	12.8	5	21.2	41A	1N6275AG	1458997
16	1500	13.6	5	22.5	41A	1N6276AG	1458998
18	1500	15.3	5	25.2	41A	1N6277AG	1458999
30	1500	25.6	5	41.4	41A	1N6282AG	1459000
33	1500	28.2	5	45.7	41A	1N6283AG	1459002
36	1500	30.8	5	49.9	41A	1N6284AG	1459003
42.4 (min)	1500	36	2	65.2	41A	1N6380G	1459009
Mini-Mosorb (SA5.0AG Series)							
6.7	500	5	600	9.2	59A	SA5.0AG	1459172
1SMBxxxAT3 Series							
6.7	600	5	800	9.2	SMB	1SMB5.0AT3G	1459013
14	600	12	5	19.9	SMB	1SMB12AT3G	1459012
P6SMB15AT3G Series							
6.8	600	5.8	1000	10.5	SMB	P6SMB6.8AT3G	1459166
15	600	12.8	5	21.2	SMB	P6SMB15AT3G	1459162
36	600	30.8	5	49.9	SMB	P6SMB36AT3G	1459164
39	600	33.3	5	53.9	SMB	P6SMB39AT3G	1459165

Designed to protect voltage sensitive components from high voltage, high-energy transients. They have excellent clamping capability, high surge capability, low zener impedance and fast response time. **Mosorb** devices are ON Semiconductor's exclusive, cost-effective, highly reliable Surmetic axial leaded package and are ideally-suited for use in communication systems, numerical controls, process controls, medical equipment, business machines, power supplies and many other industrial/consumer applications, to protect CMOS, MOS and Bipolar integrated circuits.

497066

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	+	+
1N5908G	145-8994	0.650	0.570	0.550	– –	– –
1N6267AG	145-8996	0.660	0.570	0.550	– –	– –
1N6275AG	145-8997	0.540	0.440	0.350	– –	– –
1N6276AG	145-8998	0.540	0.440	0.350	– –	– –
1N6277AG	145-8999	0.540	0.440	0.350	– –	– –
1N6282AG	145-9000	0.600	0.530	0.420	– –	– –
1N6283AG	145-9002	0.540	0.440	0.350	– –	– –
1N6284AG	145-9003	0.540	0.440	0.350	– –	– –
1N6373G	145-9008	0.600	0.530	0.420	– –	– –
1N6380G	145-9009	0.730	0.660	0.530	– –	– –
1SMB12AT3G	SMD 145-9012	0.410	0.280	0.200	– –	– –
1SMB5.0AT3G	SMD 145-9013	0.410	0.280	0.200	– –	– –
P6SMB15AT3G	SMD 145-9162	0.290	0.250	0.189	– –	– –
P6SMB18CAT3G	SMD 145-9163	0.290	0.260	0.250	– –	– –
P6SMB36AT3G	SMD 145-9164	0.290	0.250	0.220	– –	– –
P6SMB39AT3G	SMD 145-9165	0.300	0.270	0.240	– –	– –
P6SMB6.8AT3G	SMD 145-9166	0.280	0.250	0.220	– –	– –
SA5.0AG	145-9172	0.320	0.280	0.270	– –	– –

Trisil™ Voltage Suppression Diodes

- Bi-directional crowbar protection
- No ageing, and no noise
- Holding current = 150mA min. (SMP/SMPTA series)
- Small footprint
- Low capacitance; SMP100**LC**-*** series

SMB H=2.45, W=5.6, D=3.95
SMC H=2.45, W=8.15, D=6.25

Protection Diodes - continued

Trisil™ Voltage Suppression Diodes - continued

Max. Reverse Leakage Current µA	@	V_{rm} V	V_{br} max. V	@	I_r mA	I_H mA	I_{TSM} @50Hz A	Package Marking	Mftrs. List No.
SMB Package, I_{pp}=100A (8/20µs), P_{pp}=5W.									
2		56	82		800	150	30	U01	SMTPA62
2		90	133		800	150	30	U13	SMTPA100
2		108	160		800	150	30	U17	SMTPA120
2		117	173		800	150	30	U19	SMTPA130
2		198	293		800	150	30	U31	SMTPA220
2		243	360		800	150	30	U39	SMTPA270
SMB Package, I_{pp}=250A (8/20µs)									
2		6	15		800	50	35	L08	SMP75-8
2		8	25		800	50	24	PL8	SMP100LC-8
2		25	40		800	150	24	L25	SMP100LC-25
2		160	205		800	150	24	L16	SMP100LC-160
2		200	255		800	150	24	L20	SMP100LC-200
2		230	295		800	150	24	L23	SMP100LC-230
2		270	345		800	150	24	L27	SMP100LC-270
2		320	400		800	150	24	L32	SMP100MC-320
2		400	540		800	150	24	L40	SMP100MC-400
50		35	55		800	150	24	L35	SMP100LC-35

234879

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
SMB Package, I_{pp}=100A (8/20µs), P_{pp}=5W.						
SMTPA62	SMD 980-2959 RL	0.69	0.47	0.38	0.32	0.30
SMTPA100	SMD 980-2908 RL	0.96	0.63	0.52	0.48	0.41
SMTPA120	SMD 980-2916 RL	0.58	0.46	0.40	0.36	0.35
SMTPA130	SMD 980-2924 RL	0.81	0.60	0.51	0.44	0.40
SMTPA220	SMD 980-2932 RL	1.16	0.83	0.69	0.60	0.53
SMTPA270	SMD 980-2940 RL	0.68	0.51	0.45	0.44	0.43
SMB Package, I_{pp}=250A (8/20µs)						
SMP75-8	SMD 980-2894 RL	1.54	1.11	0.91	0.81	0.72
SMP100LC-8	SMD 990-7238 RL	1.18	0.70	0.67	0.56	0.46
SMP100LC-25	SMD 990-7203 RL	1.09	0.72	0.59	0.55	0.47
SMP100LC-35	SMD 990-7211 RL	1.00	0.53	0.43	0.36	0.34
SMP100LC-160	SMD 988-6508 RL	0.54	0.45	0.37	0.31	0.26
SMP100LC-200	SMD 990-7181 RL	1.09	0.54	0.50	0.43	0.38
SMP100LC-230	SMD 990-7190 RL	0.59	0.42	0.30	0.28	0.27
SMP100LC-270	SMD 117-5641	1.09	0.72	0.59	0.55	0.47
SMP100MC-320	SMD 129-5222 RL	0.52	0.35	0.30	– –	– –
SMP100MC-400	SMD 129-5224 RL	0.91	0.60	0.49	– –	– –

Quad ESD Transient Voltage Suppressors

SOT-457

SOT-665

- Monolithic transient voltage suppressors for 4-bit wide ESD transient suppression
- Four unidirectional lines, three bidirectional

Leakage Current I_{rm}	Stand-Off Voltage V_{rm}, V	Peak Pulse Current A	Device Marking Code	Package	Mftrs. List No.	Order Code
SOT-457						
2	3	3	Z6	SOT-457	BZA456A	873-5069
0.7	4	2.66	Z2	SOT-457	BZA462A	873-5077
0.1	15	0.7	Z0	SOT-457	BZA420A	873-5050
SOT-353						
2	3	3.75	Z1%	SOT-353	BZA856A	873-5093
0.7	4	2.9	Z2%	SOT-353	BZA862A	873-5123
0.2	4.3	2.6	Z3%	SOT-353	BZA868A	873-5158
0.1	15	3.75	Z4%	SOT-353	BZA820A	873-5085
0.2	3	3.75	R3%	SOT-353	BZA856AVL	873-5115
SOT-665						
1	3	2.2	Z1	SOT-665	BZA956A	873-5182
0.1	4	2.1	V2	SOT-665	BZA962AVL	873-5212
SOT-457 - Bidirectional						
0.1	5	2	Z8	SOT-457	BZA408B	873-5042

387032

Order Multiple=5		Price Each			
Mftrs. List No.	Order Code	5+	100+	1K+	3K+
BZA408B	SMD 873-5042 RL	0.550	0.340	0.250	0.174
BZA420A	SMD 873-5050 RL	0.154	0.097	0.068	0.065
BZA456A	SMD 873-5069 RL	0.370	0.240	0.162	0.118
BZA462A	SMD 873-5077 RL	0.360	0.220	0.157	0.115
BZA820A	SMD 873-5085 RL	0.390	0.250	0.168	0.123
BZA856A	SMD 873-5093 RL	0.390	0.250	0.168	0.123
BZA856AVL	SMD 873-5115 RL	0.220	0.135	0.094	0.068
BZA862A	SMD 873-5123 RL	0.370	0.230	0.163	0.120
BZA868A	SMD 873-5158 RL	0.270	0.184	0.139	0.106
BZA956A	SMD 873-5182 RL	0.390	0.250	0.168	0.123
BZA962AVL	SMD 873-5212 RL	0.260	0.189	0.139	0.106

USB Port Protection

- Full diode bridge with in-built suppression
- V_{br}=6V min.
- Peak pulse power dissipation=500W
- Low capacitance
- Complies with USB 1.0 and USB 2.0 requirements (USB 2.0 version backwards compatable with USB 1.0 spec)

V_{br} min. V	Protection	I_R µA	I_{pp} A	V_{pp} kV	P_{pk} W	Package	Mftrs. List No.
USB 1.0 Compatable							
6	2 lines	—	25	15	500	SOIC	USB6B1
USB 2.0 Compatable							
6	2 lines	1	—	15	—	SOT-666	USBLC6-2P6
6	4 lines	1	—	15	—	SOT-23	USBLC6-4SC6

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
USB6B1	SMD 980-4358	1.22	0.90	0.66	0.58	0.47
USBLC6-2P6	SMD 129-5310	0.55	0.48	0.47	– –	– –
USBLC6-4SC6	SMD 129-5311	0.56	0.50	0.48	0.47	0.43

211085

18-Way ESD Transient Voltage Suppressors

SO-20 (SOT-163)

- Monolithic transient voltage suppressor for 18-bit wide ESD transient suppression
- 18-fold junction common anode design protects 18 separate lines using only one package
- 18 lines of unidirectional protection, 17 lines bidirectional

Leakage Current I_{rm}	Stand-Off Voltage V_{rm}, V	Peak Pulse Current A	Package	Mftrs. List No.	Order Code
1	5.25	4	SO-20	BZA100	873-5034

387108

Order Multiple=5		Price Each				
Mftrs. List No.	Order Code	5+	25+	100+	1K+	3K+
BZA100	SMD 873-5034 RL	0.59	0.41	0.29	0.25	0.23

600W Transil™ Suppression Diodes

SMB
H = 2.45, W=5.6, D = 3.95

Max Reverse Leakage Current µA	V_{br} min. V	@	V_{clamp} max. V	Package Marking	Mftrs. List No. Unidirectional (d.c.)	Bidirectional (a.c.)
SMB Package, 600W						
800	6.4		9.2	BBZ/BBZ	SMBJ50A-TR	SMBJ50CA-TR
800	6.7		10.3	BUA/BBA	SMBJ6.0A-TR.	SMBJ60CA-TR
500	7.2		11.2	BBB	SMBJ65A-TR	—
1	9.4		14.4	BBC/BBC	SMBJ85A-TR	SMBJ85CA-TR
1	11.1		162	BBD/BBD	—	SMBJ10CA-TR
1	13.3		19.9	LE/BE	SMBJ12A-TR	SMBJ12CA-TR
1	14.4		209	BBF/BBF	SMBJ13A-TR	SMBJ13CA-TR
1	16.7		24.4	BBG/BBG	SMBJ15A-TR	SMBJ15CA-TR
1	20		29.2	BBH/BBH	SMBJ18A-TR	SMBJ18CA-TR
1	22.2		32.4	BBI/BBI	—	SMBJ20CA-TR
1	24.4		35.5	CBH	SMBJ22A-TR	—
1	26.7		38.9	BBJ/BBJ	SMBJ24A-TR	SMBJ24CA-TR
1	31.1		45.4	BBL/BBL	SMBJ28A-TR	SMBJ28CA-TR
1	33.3		48.4	BUM/BBM	SMBJ30A-TR	SMBJ30CA-TR
1	36.7		53.3	BBN/BBN	SMBJ33A-TR	SMBJ33CA-TR
1	44.4		64.5	CBJ /CBJ	SMBJ40A-TR	SMBJ40CA-TR
1	53.3		77.4	BBW/BBW	SMBJ48A-TR	SMBJ48CA-TR
1	64.4		93.6	BBO/BBO	SMBJ58A-TR	SMBJ58CA-TR
1	7.2		113	CBM	SMBJ70A-TR	—
1	111		162	CBQ/CBQ	—	SMBJ100CA-TR
1	144		209	BBS	SMBJ130A-TR	—
1	189		275	CBM/BBU	SMBJ170A-TR	SMBJ170CA-TR

419547

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
Unidirectional						
SMBJ50A-TR	SMD 988-6311 RL	0.330	0.250	0.240	0.184	0.133
SMBJ6.0A-TR.	SMD 988-6354 RL	0.310	0.200	0.164	0.138	0.121
SMBJ65A-TR	SMD 988-6370 RL	0.570	0.350	0.270	0.240	0.210
SMBJ85A-TR	SMD 988-6397 RL	0.220	0.161	0.142	0.126	0.110
SMBJ12A-TR	SMD 988-6060 RL	0.300	0.199	0.161	0.135	0.118

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
Unidirectional						
SMBJ13A-TR	SMD 988-6095 RL	0.300	0.196	0.163	0.137	0.120
SMBJ15A-TR	SMD 988-6117 RL	0.280	0.183	0.148	0.125	0.108
SMBJ18A-TR	SMD 988-6150 RL	0.230	0.162	0.144	0.113	0.089
SMBJ22A-TR	SMD 988-6184 RL	0.280	0.185	0.122	0.104	0.094
SMBJ24A-TR	SMD 988-6192 RL	0.570	0.360	0.270	0.240	0.210
SMBJ28A-TR	SMD 988-6214 RL	0.280	0.187	0.152	0.128	0.111
SMBJ30A-TR	SMD 988-6230 RL	0.230	0.152	0.127	0.106	0.097
SMBJ33A-TR	SMD 988-6257 RL	0.270	0.197	0.166	0.087	0.083
SMBJ40A-TR	SMD 988-6273 RL	0.300	0.187	0.161	0.135	0.118
SMBJ48A-TR	SMD 988-6290 RL	0.230	0.162	0.153	0.137	0.119
SMBJ58A-TR	SMD 988-6338 RL	0.250	0.166	0.135	0.113	0.099
SMBJ70A-TR	SMD 988-6389 RL	0.350	0.260	0.240	0.210	0.153
SMBJ130A-TR	SMD 988-6087 RL	0.270	0.177	0.122	0.104	0.094
SMBJ170A-TR	SMD 988-6133 RL	0.230	0.153	0.133	0.113	0.092
Bidirectional						
SMBJ50CA-TR	SMD 988-6320 RL	0.270	0.182	0.148	0.124	0.108
SMBJ60CA-TR	SMD 988-6362 RL	0.300	0.198	0.160	0.135	0.118
SMBJ85CA-TR	SMD 988-6400 RL	0.340	0.230	0.181	0.153	0.133
SMBJ10CA-TR	SMD 988-6052 RL	0.270	0.177	0.144	0.121	0.105
SMBJ12CA-TR	SMD 988-6079 RL	0.350	0.260	0.240	0.184	0.119
SMBJ13CA-TR	SMD 988-6109	0.230	0.160	0.130	0.109	0.096
SMBJ15CA-TR	SMD 988-6125 RL	0.280	0.185	0.150	0.126	0.110
SMBJ18CA-TR	SMD 988-6168 RL	0.340	0.230	0.183	0.154	0.134
SMBJ20CA-TR	SMD 988-6176 RL	0.320	0.220	0.175	0.147	0.128
SMBJ24CA-TR	SMD 988-6206 RL	0.320	0.190	0.171	0.149	0.130
SMBJ28CA-TR	SMD 988-6222 RL	0.280	0.187	0.152	0.128	0.111
SMBJ30CA-TR	SMD 988-6249 RL	0.350	0.230	0.199	0.184	0.133
SMBJ33CA-TR	SMD 988-6265 RL	0.280	0.185	0.150	0.126	0.110
SMBJ40CA-TR	SMD 988-6281 RL	0.270	0.181	0.147	0.124	0.107
SMBJ48CA-TR	SMD 988-6303 RL	0.230	0.158	0.145	0.122	0.106
SMBJ58CA-TR	SMD 988-6346 RL	0.580	0.390	0.270	0.220	0.176
SMBJ100CA-TR	SMD 988-6044 RL	0.330	0.220	0.184	0.155	0.135
SMBJ170CA-TR	SMD 988-6141 RL	0.280	0.184	0.150	0.126	0.109

600W Transient Voltage Suppression Diodes

FAIRCHILD SEMICONDUCTOR

- Glass passivated junction
- 600W Peak Pulse Power capability
- Excellent clamping capability
- Low incremental surge resistance
- Fast response time

SMB H = 2.44, W = 5.59, D = 3.56

V_{rm} Stand-off Voltage V	V_{br} Breakdown Voltage Min. V	Max. V	I_{test} mA	Clamping Voltage V_{clamp} max. V	Max. Peak Pulse Current A	Max. Reverse Leakage Current µA	Mftrs. List No. Unidirectional (d.c.)	Bidirectional (a.c.)
600W Peak Pulse Power								
5	6.4	7	10	9.2	65.2	800	SMBJ5V0A	SMBJ5V0CA
9	10	11.1	1	15.4	39	10	SMBJ9V0A	SMBJ9V0CA
12	13.3	14.7	1	19.9	30.2	5	SMBJ12A	SMBJ12CA
15	16.7	18.5	1	24.4	24.6	5	SMBJ15A	SMBJ15CA
16	17.8	19.7	1	26	23.1	5	SMBJ16A	SMBJ16CA
18	20	22.1	1	29.2	20.5	5	SMBJ18A	SMBJ18CA
22	24.4	26.9	1	35.5	16.9	5	SMBJ22A	SMBJ22CA
24	26.7	29.5	1	38.9	15.4	5	SMBJ24A	SMBJ24CA
30	33.3	36.8	1	48.4	12.4	5	SMBJ30A	SMBJ30CA
33	36.7	40.6	1	53.3	11.3	5	SMBJ33A	SMBJ33CA
36	40	44.2	1	58.1	10.3	5	SMBJ36A	SMBJ36CA

* Coloured band denotes cathode on unidirectional devices only.
No coloured band on bidirectional devices.

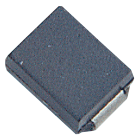
211323

Order Multiple=5 Mftrs. List No.	Order Code	Price Each 5+	25+	100+	500+	1K+
600W Unidirectional						
SMBJ5V0A	SMD 101-7841 RL	0.390	0.260	0.171	0.128	0.096
SMBJ9V0A	SMD 101-7843 RL	0.360	0.240	0.185	0.110	0.108
SMBJ12A	SMD 101-7826 RL	0.390	0.290	0.230	0.172	0.139
SMBJ15A	SMD 101-7828 RL	0.460	0.290	0.230	0.181	0.146
SMBJ16A	SMD 101-7830 RL	0.380	0.290	0.230	0.181	0.146
SMBJ18A	SMD 984-3990	0.320	0.250	0.197	0.146	0.118
SMBJ22A	SMD 101-7833 RL	0.380	0.290	0.230	0.181	0.146
SMBJ24A	SMD 101-7836 RL	0.320	0.250	0.197	0.146	0.118
SMBJ30A	SMD 984-4007	0.530	0.290	0.230	0.181	0.146
SMBJ33A	SMD 984-4015	0.350	0.180	0.120	0.064	0.062
SMBJ36A	SMD 984-4023	0.390	0.290	0.230	0.171	0.135
600W Bidirectional						
SMBJ5V0CA	SMD 101-7842 RL	0.500	0.370	0.290	0.220	0.181
SMBJ9V0CA	SMD 101-7844 RL	0.430	0.320	0.260	0.192	0.156
SMBJ12CA	SMD 101-7827 RL	0.440	0.320	0.260	0.200	0.161
SMBJ15CA	SMD 101-7829 RL	0.600	0.320	0.260	0.200	0.161
SMBJ16CA	SMD 101-7831 RL	0.420	0.320	0.260	0.200	0.161

Order Multiple=5 Mftrs. List No.	Order Code	Price Each 5+	25+	100+	500+	1K+
600W Bidirectional						
SMBJ18CA	SMD 101-7832 RL	0.450	0.340	0.270	0.200	0.163
SMBJ22CA	SMD 101-7835 RL	0.420	0.320	0.260	0.200	0.161
SMBJ24CA	SMD 101-7837 RL	0.420	0.320	0.260	0.200	0.161
SMBJ30CA	SMD 101-7838 RL	0.490	0.330	0.260	0.200	0.161
SMBJ33CA	SMD 101-7839 RL	0.450	0.310	0.200	0.102	0.084
SMBJ36CA	SMD 101-7840 RL	0.440	0.320	0.260	0.200	0.161

1500W Transient Voltage Suppression Diodes

FAIRCHILD SEMICONDUCTOR



- Glass passivated junction
- 1500W peak pulse power capability
- Excellent clamping capability
- Low incremental surge resistance
- Fast response time

SMC H = 2.62, W = 8.23, D = 6.22

V_{rm} Stand-off Voltage V	V_{br} Breakdown Voltage Min. V	Max. V	I_{test} mA	V_{clamp} max. V	Max. Peak Pulse Current A	Max. Reverse Leakage Current µA	Package Marking*	Mftrs. List No. Unidirectional (d.c.)	Bidirectional (a.c.)
1500W Peak Pulse Power									
5	6.4	7	10	9.2	163	1000	GDE	SMCJ5V0A	SMCJ5V0CA
6	6.67	7.37	10	10.3	145.6	1000	GDG	SMCJ6V0A	SMCJ6V0CA
12	13.3	14.7	1	19.9	75.3	5	GEE	SMCJ12A	SMCJ12CA
15	16.7	18.5	1	24.4	61.5	5	GEM	SMCJ15A	SMCJ15CA
18	20	22.1	1	29.2	51.4	5	GET	SMCJ18A	SMCJ18CA
22	24.4	26.9	1	35.5	42.3	5	GEX	SMCJ22A	SMCJ22CA
24	26.7	29.5	1	38.9	38.6	5	GEZ	SMCJ24A	SMCJ24CA
30	33.3	36.8	1	48.4	31	5	GFK	SMCJ30A	SMCJ30CA
33	36.7	40.6	1	53.3	28.1	5	GFM	SMCJ33A	SMCJ33CA
36	40	44.2	1	58.1	25.8	5	GFP	SMCJ36A	SMCJ36CA

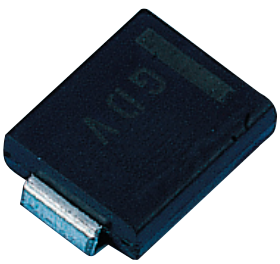
* Coloured band denotes cathode on unidirectional devices only.
No coloured band on bidirectional devices.

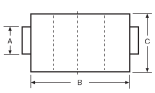
211322

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	500+	1K+
1500W Unidirectional						
SMCJ5V0A	SMD 101-7863 RL	0.810	0.610	0.490	0.370	0.310
SMCJ6V0A	SMD 101-7865 RL	0.540	0.440	0.390	0.260	0.250
SMCJ12A	SMD 101-7845 RL	0.650	0.510	0.410	0.320	0.260
SMCJ15A	SMD 101-7848 RL	0.650	0.510	0.410	0.320	0.260
SMCJ18A	SMD 101-7850 RL	0.650	– –	– –	– –	– –
SMCJ22A	SMD 101-7852 RL	0.650	0.510	0.410	0.320	0.260
SMCJ24A	SMD 984-4031	0.650	0.510	0.410	0.320	0.260
SMCJ30A	SMD 101-7855 RL	0.650	0.510	0.410	0.320	0.260
SMCJ33A	SMD 101-7857 RL	0.650	0.510	0.410	0.320	0.260
SMCJ36A	SMD 101-7861 RL	0.650	0.510	0.410	0.320	0.260
1500W Bidirectional						
SMCJ5V0CA	SMD 101-7864 RL	1.020	0.770	0.620	0.470	0.360
SMCJ6V0CA	SMD 101-7866 RL	0.970	0.740	0.580	0.440	0.350
SMCJ12CA	SMD 101-7847 RL	0.700	0.550	0.450	0.350	0.280
SMCJ15CA	SMD 101-7849 RL	0.700	0.550	0.450	0.350	0.280
SMCJ18CA	SMD 101-7851 RL	0.700	0.550	0.450	0.350	0.280
SMCJ24CA	SMD 101-7854 RL	1.040	0.710	0.630	0.360	0.330
SMCJ30CA	SMD 101-7856 RL	0.700	0.550	0.450	0.350	0.280
SMCJ33CA	SMD 101-7859 RL	0.700	0.550	0.450	0.350	0.280
SMCJ36CA	SMD 101-7862 RL	0.520	0.330	0.260	0.149	0.132

Transient Voltage Suppressors

multicomp





600W: A=2.11 B=4.57 C=3.94
1500W: A=3.15 B=7.11 C=6.22

- Silicon surface mount transient voltage suppressors
- Low profile package
- Excellent clamping capability
- Fast response time
- Glass passivated junction
- High temperature soldering 250°C/10 seconds at terminals
- Plastic package has flammability rating **UL94V-0**

Protection Diodes - continued

Transient Voltage Suppressors - continued

Stand-Off Voltage V_{rm}, V	V_{br} V	V_{clamp} V	I_{test} mA	Peak Pulse Current A	Mftrs. List No.
600W Unidirectional and Bidirectional					
5	6.4 - 7.25	9.2	10	65.2	P6SMBJ5.0A /CA
7.5	8.33 - 9.58	12.9	1	46.5	P6SMBJ7.5A /CA
12	13.3 - 15.3	19.9	1	30.2	P6SMBJ12A /CA
15	16.7 - 19.2	24.4	1	24	P6SMBJ15A /CA
24	26.7 - 30.7	38.9	1	15.4	P6SMBJ24A /CA
30	33.3 - 38.3	48.4	1	12.4	P6SMBJ30A /CA
1500W Unidirectional and Bidirectional					
5	6.4 - 7.25	9.2	10	163	1.5SMCJ5.0A /CA
6	6.67 - 7.67	10.3	10	145.6	1.5SMCJ6.0A /CA
9	10 - 11.5	15.4	1	97.4	1.5SMCJ9.0A /CA
12	13.3 - 15.3	19.9	1	75.3	1.5SMCJ12A /CA
15	16.7 - 19.2	24.4	1	61.5	1.5SMCJ15A /CA
22	24.4 - 28	35.5	1	42.2	1.5SMCJ22A /CA
33	36.7 - 42.2	53.3	1	28.1	1.5SMCJ33A /CA
48	53.3 - 61.3	77.4	1	19.4	1.5SMCJ48A /CA

204135

Order Multiple=5

Mftrs List No.	Order Code	Price Each 5+	50+	100+	250+	1K+	3K+
600W Unidirectional							
P6SMBJ5.0A	SMD 938-1554 RL	0.89	0.75	0.70	0.56	0.54	0.45
P6SMBJ7.5A	SMD 938-1562 RL	0.89	0.75	0.70	0.56	0.54	0.45
P6SMBJ12A	SMD 938-1570 RL	0.92	0.78	0.72	0.59	0.55	0.46
P6SMBJ15A	SMD 938-1589 RL	0.89	0.75	0.70	0.56	0.54	0.45
P6SMBJ24A	SMD 938-1597 RL	0.89	0.75	0.70	0.56	0.54	0.45
P6SMBJ30A	SMD 938-1600 RL	0.79	0.68	0.61	0.45	0.44	0.36
1500W Unidirectional							
1.5SMCJ5.0A	SMD 938-1619 RL	1.13	0.97	0.89	0.73	0.70	0.56
1.5SMCJ6.0A	SMD 938-1627 RL	1.13	0.97	0.89	0.73	0.70	0.56
1.5SMCJ9.0A	SMD 938-1635 RL	0.48	0.41	0.38	0.31	0.30	0.24
1.5SMCJ12A	SMD 938-1643 RL	1.13	0.97	0.89	0.73	0.70	0.56
1.5SMCJ15A	SMD 938-1651 RL	1.13	0.97	0.89	0.73	0.70	0.56
1.5SMCJ22A	SMD 938-1660 RL	1.13	0.97	0.89	0.73	0.70	0.56
1.5SMCJ33A	SMD 938-1678 RL	1.13	0.97	0.89	0.73	0.70	0.56
1.5SMCJ48A	SMD 938-1686 RL	1.13	0.97	0.89	0.73	0.70	0.56
600W Bidirectional							
P6SMBJ5.0CA	SMD 938-1708 RL	0.99	0.87	0.80	0.63	0.59	0.50
P6SMBJ7.5CA	SMD 938-1716 RL	0.99	0.87	0.80	0.63	0.59	0.50
P6SMBJ12CA	SMD 938-1724 RL	0.99	0.87	0.80	0.63	0.59	0.50
P6SMBJ15CA	SMD 938-1732 RL	0.99	0.87	0.80	0.63	0.59	0.50
P6SMBJ24CA	SMD 938-1740 RL	0.99	0.87	0.80	0.63	0.59	0.50
P6SMBJ30CA	SMD 938-1759 RL	0.99	0.87	0.80	0.63	0.59	0.50
1500W Bidirectional							
1.5SMCJ5.0CA	SMD 938-1767 RL	1.24	1.06	0.97	0.81	0.76	0.66
1.5SMCJ6.0CA	SMD 938-1775 RL	1.24	1.06	0.97	0.81	0.76	0.66
1.5SMCJ9.0CA	SMD 938-1783 RL	1.01	0.86	0.79	0.59	0.56	0.49
1.5SMCJ12CA	SMD 938-1791 RL	1.24	1.06	0.97	0.81	0.76	0.66
1.5SMCJ15CA	SMD 938-1805 RL	1.24	1.06	0.97	0.81	0.76	0.66
1.5SMCJ22CA	SMD 938-1813 RL	1.24	1.06	0.97	0.81	0.76	0.66
1.5SMCJ33CA	SMD 938-1821 RL	1.24	1.06	0.97	0.81	0.76	0.66
1.5SMCJ48CA	SMD 938-1830 RL	1.24	1.06	0.97	0.81	0.76	0.66

1500W Transil™ Suppression Diodes

I_{FSM} = 200 A

CB-429: L=9.8, Dia.=5.1, Lead Dia.=1.06

- Unidirectional and bidirectional transient voltage suppressors offering a high surge capability and ultra fast clamping times
- Typical applications include the protection of IC's, MOS, hybrids and other voltage sensitive components
- Unidirectional types are suitable for dc applications and bidirectional types are suitable for ac applications.

Stand-Off Voltage @ V_{rm} V	I_{RM} max µA	Breakdown Voltage V_{br}* V	Clamping Voltage Max. 8/20µs V(8/20µs)	Max. Peak Pulse Current 8/20µs A	Mftrs. List No.
1500W, Unidirectional(A Suffix) und Bidirectional (CA Suffix)**					
5.8	1000	6.45 - 7.48	10.5	746	1.5KE6V8A.. / CA
6.4	500	7.13 - 7.88	11.3	690	1.5KE7V5CA
8.55	10	9.5 - 10.5	14.5	538	1.5KE10A
10.2	1	114 - 126	16.7	461	1.5KE12A / CA
12.8	1	14.3 - 15.8	21.2	662	1.5KE15A / CA
15.3	1	17.1 - 18.9	25.2	59.5	1.5KE18A / CA
18.8	1	20.9 - 23.1	30.6	254	1.5KE22A / CA
20.5	1	22.8 - 25.2	33.2	234	1.5KE24A / CA
23.1	1	25.7 - 28.4	37.5	40	1.5KE27A
28.2	1	31.4 - 34.7	45.7	305	1.5KE33A / CA
25.6	1	28.5 - 31.5	41.5	36	1.5KE30A / CA
30.8	1	34.2 - 37.8	49.9	30	1.5KE36A / CA
33.3	1	37.1 - 41	53.9	143	1.5KE39A / CA
36.8	1	40.9 - 45.2	59.3	25.3	1.5KE43A / CA
40.2	1	44.7 - 49.4	64.3	214	1.5KE47A
47.8	1	53.2 - 58.8	77	100	1.5KE56A
53	1	58.9 - 65.1	85	162	1.5KE62A
58.1	1	64.6 - 71.4	92	83	1.5KE68A
70.1	1	77.9 - 86.1	113	69	1.5KE82A
64.1	1	71.3 - 78.8	103	14.6	1.5KE75CA
85.5	1	95 - 105	137	11	1.5KE100A / CA
102	1	114 - 126	165	47	1.5KE120A / CA
128	1	143 - 158	207	38	1.5KE150A / CA
154	1	171 - 189	246	31.5	1.5KE180A / CA
171	1	190 - 210	274	51	1.5KE200A / CA
171	1	209 - 231	328	26	1.5KE220A / CA
213	1	237 - 263	344	23	1.5KE250A / CA
256	1	285 - 315	414	19	1.5KE300A / CA
299	1	332 - 368	482	16	1.5KE350A / CA
342	1	380 - 420	548	37	1.5KE400A / CA
376	1	418 - 462	603	13	1.5KE440A / CA

* Impulse Test: t_p bei 50 ms, δ > 2 %
** 10/1000 µs Wellenform

203997

Order Multiple=5

Mftrs. List No.	Order Code	Price Each 5+	25+	100+	500+	1K+
1.5KE6V8A..	980-1170	0.580	0.410	0.280	0.155	0.144
1.5KE10A	988-4750	0.590	0.470	0.380	0.290	0.250
1.5KE12A	988-4785	0.580	0.340	0.330	0.270	0.240
1.5KE15A	980-1090	0.560	0.410	0.330	0.260	0.250
1.5KE18A	988-4831	0.340	0.240	0.200	0.176	0.156
1.5KE22A	988-4874	0.330	0.200	0.164	0.139	0.129
1.5KE24A	988-4890	0.580	0.220	0.178	0.150	0.140
1.5KE27A	988-4939	0.580	0.340	0.330	0.270	0.220
1.5KE30A	988-4963	0.580	0.340	0.330	0.270	0.220
1.5KE33A	980-1138	0.510	0.340	0.280	0.240	0.220
1.5KE36A	988-5013	0.330	0.200	0.164	0.139	0.129
1.5KE39A	988-5030	0.340	0.200	0.164	0.139	0.129
1.5KE43A	988-5064	0.590	0.470	0.380	0.290	0.270
1.5KE47A	980-1154	0.560	0.410	0.330	0.260	0.250
1.5KE56A	988-5099	0.330	0.200	0.164	0.147	0.142
1.5KE62A	980-1162	0.480	0.290	0.250	0.210	0.187
1.5KE68A	988-5102	0.340	0.200	0.164	0.139	0.129
1.5KE82A	988-5153	0.580	0.340	0.330	0.270	0.220
1.5KE100A	988-4734	0.340	0.210	0.171	0.145	0.141
1.5KE120A	988-4769	0.390	0.240	0.220	0.185	0.171
1.5KE150A	988-4793	0.340	0.210	0.168	0.142	0.132
1.5KE180A	988-4815	0.420	0.280	0.230	0.192	0.175
1.5KE200A	980-1120	0.250	0.220	0.176	0.149	0.144
1.5KE220A	988-4858	0.840	0.660	0.530	0.410	0.380
1.5KE250A	988-4912	0.310	0.230	0.182	0.154	0.142
1.5KE300A	988-4947	0.760	0.450	0.370	0.310	0.290
1.5KE350A	988-4998	0.320	0.250	0.199	0.168	0.156
1.5KE400A	980-1146	0.580	0.440	0.340	0.270	0.260
1.5KE440A	988-5072	0.330	0.230	0.182	0.154	0.142
1500W Bidirectional		1+	25+	100+	500+	1K+
1.5KE6V8CA	988-5129	0.630	0.430	0.340	0.290	0.250
1.5KE7V5CA	988-5145	0.690	0.420	0.340	0.290	0.260
1.5KE12CA	980-1081	0.660	0.500	0.370	0.300	0.280
1.5KE15CA	980-1103	0.660	0.500	0.370	0.300	0.280
1.5KE18CA	980-1111	0.670	0.440	0.350	0.300	0.260
1.5KE22CA	988-4882	0.660	0.420	0.340	0.280	0.250
1.5KE24CA	988-4904	0.660	0.420	0.340	0.280	0.250
1.5KE30CA	988-4971	0.660	0.440	0.350	0.290	0.260
1.5KE33CA	988-4980	0.540	0.240	0.193	0.164	0.158
1.5KE36CA	988-5021	0.420	0.310	0.250	0.220	0.200
1.5KE39CA	988-5048	0.340	0.260	0.210	0.179	0.165
1.5KE75CA	988-5137	0.700	0.460	0.370	0.310	0.270
1.5KE68CA	988-5110	0.430	0.310	0.250	0.220	0.200
1.5KE82CA	988-5161	0.660	0.420	0.370	0.300	0.280
1.5KE100CA	988-4742	0.660	0.420	0.340	0.280	0.250
1.5KE120CA	988-4777	0.720	0.420	0.330	0.280	0.260
1.5KE150CA	988-4807	0.930	0.720	0.580	0.450	0.380
1.5KE180CA	988-4823	0.450	0.310	0.250	0.220	0.200
1.5KE200CA	988-4840	0.760	0.440	0.350	0.300	0.280
1.5KE220CA	988-4866	0.870	0.550	0.530	0.430	0.360
1.5KE250CA	988-4920	0.720	0.470	0.390	0.310	0.260
1.5KE300CA	988-4955	0.930	0.720	0.580	0.450	0.370
1.5KE350CA	988-5005	0.460	0.330	0.270	0.230	0.220
1.5KE400CA	988-5056	0.460	0.330	0.270	0.230	0.220
1.5KE440CA	988-5080	0.870	0.550	0.530	0.430	0.360

Over half a million products available online QGO

500W Transient Voltage Suppression Diodes

FAIRCHILD SEMICONDUCTOR

DO-15 Body L=7.62, Dia.=3.56

- Glass passivated junction
- 500W Peak Pulse Power capability at 1.0ms
- Excellent clamping capability
- Low incremental surge resistance
- Fast response time

V_{rm} Stand-off Voltage V	V_{br} Breakdown Voltage Min. V	I_{test} mA	Clamping Voltage V_{clamp} max. V	Max. Peak Pulse Current A	Mftrs. List No. Unidirec-tional (d.c.)	Bidirec-tional (a.c.)
500W Peak Pulse Power (1.0W Steady State @ T_a=75°C)						
5	6.4	10	9.2	54.3	SA5V0A	SA5V0CA
12	13.3	1	19.9	25.1	SA12A	SA12CA
13	14.4	1	21.9	23.2	SA13A	SA13CA
15	16.7	1	24.4	20.6	SA15A	SA15CA
18	20	1	29.2	17.2	SA18A	SA18CA
20	22.2	1	32.4	15.4	SA20A	SA20CA
24	26.7	1	38.9	12.8	SA24A	SA24CA
28	31.1	1	45.4	11	SA28A	
30	33.3	1	48.4	10.3	SA30A	SA30CA

211324

Order Multiple=5		Price Each				
Mftrs. List No.	Order Code	5+	25+	100+	500+	1K+
Unidirectional						
SA5V0A	**101-7823**	0.360	0.280	0.230	0.171	0.156
SA12A	**101-7805**	0.390	0.310	0.250	0.193	0.155
SA13A	**101-7807**	0.460	0.350	0.270	0.210	0.164
SA15A	**101-7811**	0.390	0.310	0.250	0.193	0.155
SA18A	**101-7813**	0.460	0.350	0.270	0.210	0.164
SA20A	**101-7815**	0.460	0.350	0.270	0.210	0.164
SA24A	**101-7817**	0.520	0.370	0.280	0.210	0.170
SA28A	**101-7819**	0.460	0.350	0.270	0.210	0.164
SA30A	**101-7820**	0.420	0.310	0.240	0.189	0.151
Bidirectional						
SA5V0CA	**101-7824**	0.450	0.340	0.270	0.200	0.163
SA12CA	**101-7806**	0.430	0.340	0.270	0.210	0.172
SA13CA	**101-7808**	0.210	0.168	0.128	0.084	0.069
SA15CA	**101-7812**	0.430	0.340	0.270	0.210	0.172
SA18CA	**101-7814**	0.310	0.270	0.230	0.182	0.153
SA20CA	**101-7816**	0.450	0.340	0.270	0.200	0.163
SA24CA	**101-7818**	0.450	0.340	0.270	0.200	0.163
SA30CA	**101-7821**	0.450	0.340	0.270	0.200	0.163

600W Transient Voltage Suppression Diodes

FAIRCHILD SEMICONDUCTOR

DO-15 Body L=7.62, Dia.=3.56

- Glass passivated junction
- 600W Peak Pulse Power capability at 1.0ms
- Excellent clamping capability
- Low incremental surge resistance
- Fast response time

V_{rm} Stand-off Voltage V	V_{br} Breakdown Voltage Min. V		I_{test} mA	Clamping Voltage V_{clamp} max. V	Max. Peak Pulse Current A	Package	Mftrs. List No. Unidirec-tional (d.c.)	Bidirec-tional (a.c.)
600W Peak Pulse Power (5.0W Steady State @ T_a=75°C)								
5.8	6.45	7.14	10	10.5	57.1	DO-15	P6KE6V8A	P6KE6V8CA
6.4	7.13	7.88	1	11.3	53.1	DO-15	P6KE7V5A	P6KE7V5CA
7.02	7.79	8.61	1	12.1	50	DO-15	P6KE8V2A	P6KE8V2CA
7.78	8.65	9.55	1	13.4	45	DO-15	P6KE9V1A	P6KE9V1CA
8.55	9.5	10.5	1	14.5	41	DO-15	P6KE10A	P6KE10CA
10.2	11.4	12.6	1	16.7	36	DO-15	P6KE12A	P6KE12CA
11.1	12.4	13.7	1	18.2	33	DO-15	P6KE13A	P6KE13CA
12.8	14.3	15.8	1	21.2	28	DO-15	P6KE15A	P6KE15CA
13.6	15.2	16.8	1	22.5	27	DO-15	P6KE16A	P6KE16CA
15.3	17.1	18.9	1	25.2	24	DO-15	P6KE18A	P6KE18CA
17.1	19	21	1	27.7	22	DO-15	P6KE20A	P6KE20CA
18.8	20.9	23.1	1	30.6	30.6	DO-15	—	P6KE22CA
20.5	22.8	25.2	1	33.2	20	DO-15	P6KE24A	P6KE24CA
28.2	31.4	34.7	1	45.7	13.2	DO-15	P6KE33A	P6KE33CA
30.8	34.2	37.8	1	49.9	12	DO-15	P6KE36A	P6KE36CA
33.3	37.1	41	1	53.9	11.2	DO-15	P6KE39A	P6KE39CA
40.2	44.7	49.4	1	64.8	9.3	DO-15	P6KE47A	P6KE47CA
53	58.9	65.1	1	85	7.1	DO-15	P6KE62A	P6KE62CA
58.1	64.6	71.4	1	92	6.5	DO-15	P6KE68A	P6KE68CA
85.5	95	105	1	137	4.4	DO-15	—	P6KE100CA
128	143	158	1	207	2.9	DO-15	P6KE150A	P6KE150CA
136	152	168	1	219	2.7	DO-15	P6KE160A	P6KE160CA
171	190	210	1	274	2.2	DO-15	P6KE200A	P6KE200CA
342	380	420	1	548	1.1	DO-15	P6KE400A	—
171	190	210	1	274	2.2	DO-15	P6KE200A	P6KE200CA
342	380	420	1	548	1.1	DO-15	P6KE400A	P6KE400CA
376	380	420	1	776	5.2	DO-15	P6KE440A	P6KE440CA

211325

Order Multiple=5		Price Each				
Mftrs. List No.	Order Code	5+	25+	100+	500+	1K+
Bidirectional						
P6KE6V8CA	**101-7777**	0.620	0.470	0.370	0.270	0.230
P6KE7V5CA	**101-7782**	0.620	0.470	0.370	0.270	0.230
P6KE8V2CA	**101-7784**	0.330	0.230	0.191	0.138	0.127
P6KE9V1CA	**101-7786**	0.620	0.470	0.370	0.270	0.230
P6KE10CA	**101-7734**	0.380	0.300	0.240	0.185	0.149
P6KE12CA	**101-7736**	0.450	0.340	0.270	0.200	0.163
P6KE13CA	**101-7738**	0.380	0.300	0.240	0.185	0.149
P6KE15CA	**101-7742**	0.380	0.300	0.240	0.185	0.149
P6KE16CA	**101-7747**	0.380	0.300	0.240	0.185	0.149
P6KE18CA	**101-7749**	0.450	0.340	0.270	0.200	0.163
P6KE20CA	**101-7753**	0.380	0.300	0.240	0.185	0.149
P6KE22CA	**101-7754**	0.340	0.260	0.200	0.143	0.117
P6KE24CA	**101-7757**	0.280	0.240	0.200	0.162	0.135
P6KE30CA	**101-7759**	0.450	0.340	0.270	0.200	0.163
P6KE33CA	**101-7761**	0.450	0.340	0.270	0.200	0.163
P6KE36CA	**101-7763**	0.430	0.310	0.260	0.196	0.163
P6KE39CA	**101-7765**	0.420	0.280	0.220	0.150	0.127
P6KE47CA	**101-7770**	0.400	0.300	0.240	0.176	0.142
P6KE62CA	**101-7772**	0.380	0.300	0.240	0.185	0.149
P6KE68CA	**101-7774**	0.380	0.300	0.240	0.185	0.149
P6KE100CA	**101-7732**	0.380	0.300	0.240	0.185	0.149
P6KE150CA	**101-7740**	0.450	0.340	0.270	0.200	0.163
P6KE160CA	**101-7745**	0.380	0.300	0.240	0.185	0.149
P6KE200CA	**101-7751**	0.310	0.260	0.220	0.171	0.143
P6KE400CA	**101-7768**	0.610	0.460	0.360	0.270	0.220
Undirectional						
P6KE6V8A	**101-7776**	0.450	0.330	0.270	0.197	0.157
P6KE7V5A	**101-7781**	0.530	0.400	0.320	0.230	0.185
P6KE8V2A	**101-7783**	0.530	0.400	0.320	0.230	0.185
P6KE9V1A	**101-7785**	0.410	0.260	0.210	0.136	0.120
P6KE10A	**101-7733**	0.340	0.260	0.210	0.165	0.133
P6KE12A	**101-7735**	0.520	0.390	0.310	0.230	0.183
P6KE13A	**101-7737**	0.250	0.210	0.175	0.144	0.120
P6KE15A	**101-7741**	0.520	0.390	0.310	0.230	0.183
P6KE16A	**101-7746**	0.340	0.260	0.210	0.165	0.133
P6KE18A	**101-7748**	0.520	0.390	0.310	0.230	0.183
P6KE20A	**101-7752**	0.340	0.260	0.210	0.165	0.133
P6KE24A	**101-7756**	0.200	0.128	0.093	0.065	0.063
P6KE33A	**101-7760**	0.500	0.390	0.300	0.220	0.178
P6KE36A	**101-7762**	0.490	0.370	0.300	0.220	0.174
P6KE39A	**101-7764**	0.520	0.390	0.310	0.220	0.178
P6KE47A	**101-7769**	0.500	0.390	0.300	0.220	0.178
P6KE62A	**101-7771**	0.340	0.260	0.210	0.165	0.133
P6KE68A	**101-7773**	0.470	0.350	0.280	0.210	0.165

Transient Voltage Suppressors

multicomp

	min	max	min	max
500W Range:	L=5.8	7.6	Dia=2.6	3.6
1500W Range:	L=7.2	9.5	Dia=4.8	5.3

Silicone axial lead TVS's offering advantages of:-

- Low clamping voltages
- High transient power dissipation
- Small physical size
- Wide voltage range
- No wear-out limitation

Stand-off Voltage V_{rm} V	Breakdown Voltage V_{br} V	Clamping Voltage V_{clamp} V	I_{test} mA	P_{tot} @ T_L=75°C W	Max. Peak Pulse Current A	JEDEC No	Mftrs. List No.
500W Range (Unidirectional - dc)							
5	6.4 - 7.25	9.6	10	1	54.3	—	SA5A
6.5	7.22 - 7.98	11.2	10	3	46	—	SA6.5A
7	7.78 - 8.60	12	10	3	43	—	SA7.0A
7.5	8.33 - 9.21	12.9	1	3	40	—	SA7.5A
8	8.89 - 10.9	13.6	11	3	38	—	SA8.0A
9	10 - 11.1	15.4	1	3	34	—	SA9.0A
10	11.1 - 12.3	17	1	3	30	—	SA10A
12	13.3 - 15.3	19.9	1	1	25.1	—	SA12A
13	14.4 - 15.9	21.5	1	3	24	—	SA13A
15	16.7 - 18.5	24.4	1	1	20.6	—	SA15A
16	17.8 - 19.7	26	1	3	20	—	SA16A
18	22 - 22.1	29.2	1	3	17.9	—	SA18A
20	22.2 - 24.5	32.4	1	3	16	—	SA20A
22	24.4 - 26.9	35.5	1	3	14.7	—	SA22A
24	26.7 - 30.7	38.9	1	1	12.8	—	SA24A
28	31.1 - 34.4	45.4	1	3	11.5	—	SA28A
30	33.3 - 38.3	48.4	1	1	10.3	—	SA30A
33	36.7 - 40.6	53.3	1	3	9.8	—	SA33A
36	40 - 44.2	58.1	1	3	9	—	SA36A
48	53.3 - 58.9	77.4	1	3	6.7	—	SA48A
51	56.7 - 62.7	82.4	1	3	6.3	—	SA51A
75	88.3 - 92.1	121	1	3	4.3	—	SA75A
100	111 - 123	162	1	3	3.2	—	SA100A
120	133 - 147	193	1	3	2.7	—	SA120A
150	167 - 185	243	1	3	2.1	—	SA150A

Protection Diodes - continued

Transient Voltage Suppressors - continued

Stand-off Voltage V_{rm} V	Breakdown Voltage V_{br} V	Clamping Voltage V_{clamp} V	I_{test} mA	P_{tot} @ T_L=75°C W	Max. Peak Pulse Current A	JEDEC No	Mftrs. List No.
1500W Range (Unidirectional - dc)							
5.5	6.45 - 7.14	10.5	10	5	143	1N6267A	1.5KE6.8A
9.4	10.5 - 11.6	15.6	1	5	96	1N6272A	1.5KE11A
13.6	15.2 - 16.8	22.5	1	5	67	1N6276A	1.5KE16A
15.3	17.1 - 18.9	25.2	1	5	59.5	1N6277A	1.5KE18A
18.8	20.9 - 23.1	30.6	1	5	49	1N6279A	1.5KE22A
23.1	25.7 - 28.4	37.5	1	5	40	1N6281A	1.5KE27A
25.6	28.5 - 31.5	41.4	1	5	36	1N6282A	1.5KE30A
28.2	31.4 - 34.7	45.7	1	5	33	1N6283A	1.5KE33A
30.8	34.2 - 37.8	49.9	1	5	30	1N6284A	1.5KE36A
40.2	44.7 - 49.4	64.8	1	5	23.2	1N6287A	1.5KE47A
136	152 - 162	219	1	5	6.8	1N6300A	1.5KE160A
342	380 - 420	548	1	5	4	—	1.5KE400A
500W Range (Bidirectional - ac)							
5	6.4 - 7	9.2	10	1	54.3	—	SA5CA
6.5	7.22 - 7.98	11.2	10	3	46	—	SA6.5CA
7	7.78 - 8.60	12	10	3	43	—	SA7.0CA
7.5	8.33 - 9.21	12.9	1	3	40	—	SA7.5CA
75	88.3 - 92.1	121	1	3	4.3	—	SA75CA
8	8.89 - 10.9	13.6	1	3	38	—	SA8.0CA
9	10 - 11.1	15.4	1	3	34	—	SA9.0CA
10	11.1 - 12.3	17	1	3	30	—	SA10CA
12	13.3 - 14.7	19.2	1	1	25.1	—	SA12CA
13	14.4 - 15.9	21.5	1	3	24	—	SA13CA
15	16.7 - 18.5	24.4	1	1	20.6	—	SA15CA
16	17.8 - 19.7	26	1	3	20	—	SA16CA
18	20 - 22.1	29.2	1	3	17.9	—	SA18CA
20	22.2 - 24.5	32.4	1	3	16	—	SA20CA
22	24.4 - 26.9	35.5	1	3	14.7	—	SA22CA
24	26.7 - 29.5	38.9	1	1	12.8	—	SA24CA
28	31.1 - 34.4	45.4	1	3	11.5	—	SA28CA
30	33.3 - 36.8	48.4	1	1	10.3	—	SA30CA
33	36.7 - 40.6	53.3	1	3	9.8	—	SA33CA
36	40 - 44.2	58.1	1	3	9	—	SA36CA
48	53.3 - 58.9	77.4	1	3	6.7	—	SA48CA
51	56.7 - 62.7	82.4	1	3	6.3	—	SA51CA
100	111 - 123	162	1	3	3.2	—	SA100CA
120	133 - 147	193	1	3	2.7	—	SA120CA
150	167 - 185	243	1	3	2.1	—	SA150CA
1500W Range (Bidirectional - ac)							
5.8	6.45 - 7.14	10.5	10	5	143	1N6267CA	1.5KE6.8CA
9.4	10.5 - 11.6	15.6	1	5	96	1N6272CA	1.5KE11CA
13.6	15.2 - 16.8	22.5	1	5	67	1N6276CA	1.5KE16CA
15.3	17.1 - 18.9	25.2	1	5	59.5	1N6277CA	1.5KE18CA
18.8	20.9 - 23.1	30.6	1	5	49	1N6279CA	1.5KE22CA
23.1	25.7 - 28.4	37.5	1	5	40	1N6281CA	1.5KE27CA
25.6	28.5 - 31.5	41.4	1	5	36	1N6282CA	1.5KE30CA
28.2	31.4 - 34.7	45.7	1	5	33	1N6283CA	1.5KE33CA
30.8	34.2 - 37.8	49.9	1	5	30	1N6284CA	1.5KE36CA
40.2	44.7 - 49.4	64.8	1	5	23.2	1N6287CA	1.5KE47CA
136	152 - 168	219	1	5	6.8	1N6300CA	1.5KE160CA
342	380 - 420	548	1	5	4	—	1.5KE400CA

204084

Mftrs List No.	Order Code	Price Each 1+	25+	100+	500+	1K+
Unidirectional						
SA5A	**956-5329**	0.740	0.670	0.590	0.480	0.430
SA12A	**956-5337**	0.760	0.740	0.660	0.520	0.440
SA15A	**956-5345**	0.760	0.740	0.660	0.520	0.440
SA24A	**956-5353**	0.760	0.740	0.660	0.520	0.440
SA30A	**956-5361**	0.760	0.740	0.660	0.520	0.440
1.5KE6.8A	**956-5370**	1.480	1.360	1.250	0.940	0.850
1.5KE11A	**956-5388**	1.600	1.460	1.310	0.940	0.850
1.5KE16A	**956-5396**	1.600	1.460	1.310	0.940	0.850
1.5KE18A	**956-5400**	1.480	1.360	1.250	0.940	0.850
1.5KE22A	**956-5418**	0.430	0.410	0.380	0.310	0.280
1.5KE27A	**956-5426**	1.600	1.460	1.310	0.940	0.850
1.5KE30A	**956-5434**	1.490	1.360	1.250	0.940	0.850
1.5KE33A	**956-5442**	1.490	1.360	1.250	0.940	0.850
1.5KE36A	**956-5450**	1.600	1.460	1.310	0.940	0.850
1.5KE47A	**956-5469**	0.410	0.390	0.370	0.310	0.290
1.5KE160A	**956-5477**	1.860	1.650	1.520	1.170	1.020
1.5KE400A	**956-5485**	0.630	0.570	0.530	0.410	0.390
SA100A	**157-8895**	0.230	0.151	0.118	0.100	0.095
SA10A	**157-8897**	0.230	0.151	0.118	0.100	0.095
SA120A	**157-8899**	0.180	0.128	0.104	0.090	0.086
SA13A	**157-8902**	0.230	0.151	0.118	0.100	0.095
SA150A	**157-8904**	0.180	0.128	0.104	0.090	0.086
SA16A	**157-8906**	0.230	0.151	0.118	0.100	0.095
SA18A	**157-8908**	0.230	0.151	0.118	0.100	0.095
SA20A	**157-8910**	0.230	0.151	0.118	0.100	0.095
SA22A	**157-8913**	0.230	0.151	0.118	0.100	0.095
SA28A	**157-8915**	0.230	0.151	0.118	0.100	0.095
SA33A	**157-8917**	0.230	– –	– –	– –	– –
SA36A	**157-8919**	0.230	0.151	0.118	0.100	0.095
SA48A	**157-8921**	0.230	0.151	0.118	0.100	0.095
SA51A	**157-8924**	0.230	0.151	0.118	0.100	0.095
SA6.5A	**157-8926**	0.230	0.151	0.118	0.100	0.095

Mftrs List No.	Order Code	Price Each 1+	25+	100+	500+	1K+
Unidirectional						
SA7.0A	**157-8928**	0.230	0.151	0.118	0.100	0.095
SA7.5A	**157-8930**	0.230	0.151	0.118	0.100	0.095
SA75A	**157-8932**	0.230	0.151	0.118	0.100	0.095
SA8.0A	**157-8934**	0.185	0.124	0.097	0.082	0.078
SA9.0A	**157-8937**	0.230	0.151	0.118	0.100	0.095
Bidirectional						
SA5CA	**956-5493**	0.870	0.830	0.750	0.550	0.520
SA12CA	**956-5507**	0.830	0.800	0.750	0.570	0.520
SA15CA	**956-5515**	0.830	0.800	0.750	0.570	0.520
SA24CA	**956-5523**	0.830	0.800	0.750	0.570	0.520
SA30CA	**956-5531**	0.830	0.800	0.750	0.570	0.520
1.5KE6.8CA	**956-5540**	1.690	1.510	1.430	1.090	1.010
1.5KE11CA	**956-5558**	1.850	1.640	1.500	1.090	1.010
1.5KE16CA	**956-5566**	1.850	1.640	1.500	1.090	1.010
1.5KE18CA	**956-5574**	0.400	0.370	0.360	0.300	0.280
1.5KE22CA	**956-5582**	1.850	1.640	1.500	1.090	1.010
1.5KE27CA	**956-5590**	1.850	1.640	1.500	1.090	1.010
1.5KE30CA	**956-5604**	0.800	0.710	0.650	0.470	0.430
1.5KE33CA	**956-5612**	1.690	1.510	1.430	1.090	1.010
1.5KE36CA	**956-5620**	1.850	1.640	1.500	1.090	1.010
1.5KE47CA	**956-5639**	1.690	1.510	1.430	1.090	1.010
1.5KE160CA	**956-5647**	2.040	1.920	1.890	1.520	1.230
1.5KE400CA	**956-5655**	0.970	0.910	0.890	0.730	0.630
SA100CA	**157-8896**	0.260	0.167	0.133	0.112	0.105
SA10CA	**157-8898**	0.290	0.210	0.170	0.147	0.138
SA120CA	**157-8901**	0.260	0.167	0.133	0.112	0.105
SA13CA	**157-8903**	0.260	0.167	0.133	0.112	0.105
SA150CA	**157-8905**	0.200	0.143	0.117	0.101	0.095
SA16CA	**157-8907**	0.260	0.167	0.133	0.112	0.105
SA18CA	**157-8909**	0.260	0.167	0.133	0.112	0.105
SA20CA	**157-8912**	0.260	0.167	0.133	0.112	0.105
SA22CA	**157-8914**	0.260	0.167	0.133	0.112	0.105
SA28CA	**157-8916**	0.260	0.167	0.133	0.112	0.105
SA33CA	**157-8918**	0.260	0.167	0.133	0.112	0.105
SA36CA	**157-8920**	0.260	– –	– –	– –	– –
SA48CA	**157-8922**	0.260	0.167	0.133	0.112	0.105
SA51CA	**157-8925**	0.210	0.138	0.109	0.093	0.086
SA6.5CA	**157-8927**	0.370	0.250	0.193	0.163	0.153
SA7.0CA	**157-8929**	0.290	0.210	0.170	0.147	0.138
SA7.5CA	**157-8931**	0.187	0.150	0.132	0.121	0.116
SA75CA	**157-8933**	0.210	0.144	0.118	0.102	0.096
SA8.0CA	**157-8936**	0.290	0.210	0.170	0.147	0.138
SA9.0CA	**157-8938**	0.370	0.250	0.193	0.163	0.153

Reels of 3500 Mftrs. List No.	Order Code	Price Per Reel 1+	3+
SA15A R0	**156-2408**	108.87	97.99
SA12CA R0	**156-2428**	112.55	101.30
SA30CA R0	**156-2429**	166.62	162.35
SA5.0A R0	**156-2407**	144.60	130.14

Tripolar Protection for ISDN Interfaces

- Bidirectional triple crowbar protection
- Complies with: **CCIT K17-K20, VDE 0433 & VDE 0870 CNET**

SMD

SO-8

I_{rm} µA	@	V_{rm} V	V_{br} Min. V	@	I_r max. mA	I_{tsm} @ f=50Hz A	V_{bo} max. V	I_{bo} max. mA	I_{pp} 2/10µs A	Mftrs. List No.
10		70	80		1	8	120	800	90	TPI8011NRL

229539

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
TPI8011NRL	SMD **117-5678**	3.34	2.21	1.79	1.51	1.31

ISDN Line and Microcontroller Protection

- Array of 8 or 12 diodes configured by cells of 2 diodes, each cell being used to protect signal line form transient overvoltages by clamping action.
- Low input capacitance
- Suitable for digital line protection
- Complies with **IEC-1000-4-2 level 4**

Vpp kV	V_{RRM} Max. V	Ipp 8/12µs A	Ppk mW	Vf V	Irm max. µA	Mftrs. List No.
9	18	12	730	1.2	2	DA108S1
12	18	12	730	1.2	2	DA112S1

228772

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
DA108S1	SMD 980-2215	1.32	0.98	0.72	0.63	0.54
DA112S1	SMD 980-2223	1.96	1.64	1.33	1.12	0.98

T1/E1 Telecommunication Ethernet Protection

Transil™ Suppression Diodes

SMB H = 2.45, W = 5.6, D = 3.95

A very low voltage transient surge arrestor especially designed to protect sensitive telecommunication equipment against lightning strikes and other transients. Its low voltage especially makes it suitable to protect low voltage transformer in T1/E1, ethernet links without satuaration of the transformer.Transil diodes are not subject to ageing and provide a fail safe mode in short circuit for a better protection.

- Bidirectional crowbar protection
- Voltage: 8V
- Low leakage current I_R = 2 µA max
- Repetative peak pulse current: I_{PP} = 75A (10/1000 µs)

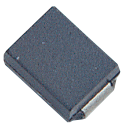
V_{rm}	@	I_r mA	I_{TSM} @ 50 Hz, (A)	Package Marking	Mffts. List No.
6		2	35	L08	SMP75-8

429897

Order Multiple=1		Price Each				
Mftrs. List No.	Order Code	1+	25+	100+	250+	1K+
SMP75-8	SMD 980-2894 RL	1.54	1.11	0.91	0.81	0.72

Telecommunication Equipment Protection

Transil™ Suppression Diodes



SMB H = 2.45, W = 5.6, D = 3.95

General purpose TVS, offering superior equipment protection against lightning strikes and power crossings.Typical application equipment includes analogue and digital line cards (xDSL, T1/E1, ISDN), terminals (phone, fax modem) and central office equipment.Transil diodes are not subject to ageing and provide a fail safe mode in short circuit for a better protection.

- Bidirectional crowbar protection
- Low capacitance (30pf to 45pf typ @ 50V)
- Low leakage current I_H = 150 mA min
- Repetative peak pulse current: I_{PP} = 100A (10/1000 µs)

Max Reverse Leakage Current µA	@	V_{rm}	@	I_r mA	I_{fsm} kA	Package Marking	Mffts. List No.
SMA Package, 400W							
2		8		2	100	PL8	SMP100LC-8
2		25		2	100	L25	SMP100LC-25
2		35		50	100	L35	SMP100LC-35
2		140		2	100	L14	SMP100LC-140
2		160		2	100	L16	SMP100LC-160
2		200		2	100	L20	SMP100LC-200
2		230		2	100	L23	SMP100LC-230
2		270		2	100	L27	SMP100LC-270

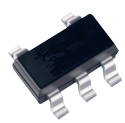
429895

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
SMP100LC-8	SMD 990-7238 RL	1.18	0.70	0.67	0.56	0.46
SMP100LC-25	SMD 990-7203 RL	1.09	0.72	0.59	0.55	0.47
SMP100LC-35	SMD 990-7211 RL	1.00	0.53	0.43	0.36	0.34
SMP100LC-140	SMD 988-6494 RL	1.08	0.54	0.50	0.43	0.38
SMP100LC-160	SMD 988-6508 RL	0.54	0.45	0.37	0.31	0.26
SMP100LC-200	SMD 990-7181 RL	1.09	0.54	0.50	0.43	0.38
SMP100LC-230	SMD 990-7190 RL	0.59	0.42	0.30	0.28	0.27
SMP100LC-270	SMD 117-5641	1.09	0.72	0.59	0.55	0.47

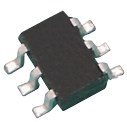
TVS Arrays for ESD Protection

Transil™ Suppression Diodes

SOT-23



SOT-23-5L (SC-59)



SO-8

- 2/4/6 x Unidirectional Transil Diodes
- Low leakage current: I_R max less than 20µA (less than 2µA for ESSDA6V1U1)
- High ESD level

Dual monolithic voltage suppressors, designed to protect components which are connected to data and transmission lines against ESD.They clamp the voltage just above the logic level supply for positive transients, and to a diode drop below ground for negative transients.It can also work as a bidirectional suppressor by connecting only pin1 and pin 2.

$V_{BR\ min}$ V	$V_{BR\ min}$ V	@	I_r mA	P_{PP} W	Package Marking	Package	Mffts. List No.
2 devices							
14.2	15.8		1	300	EL15	SOT-23	ESDA14V2L
6.1	7.2		1	300	EL61	SOT-23	ESDA6V1L
4 devices							
6.1	7.2		1	500	EC61	SOT-23	ESDA6V1SC5
6.1	7.2		1	500	ES61	SOT-23	ESDA6V1SC6
6 devices							
6.1	7.2		1	200	E6VU1	SOIC	ESDA6V1U1

429899

Order Multiple=1		Price Each				
Mftrs. List No.	Order Code	1+	25+	100+	250+	1K+
ESDA14V2L	SMD 980-2240	0.440	0.320	0.270	0.210	0.200
ESDA6V1L	SMD 980-2258	0.530	0.290	0.260	0.210	0.189
ESDA6V1SC5	SMD 980-2266 RL	0.570	0.380	0.310	0.250	0.240
ESDA6V1SC6	SMD 980-2274 RL	0.540	0.410	0.320	0.250	0.230
ESDA6V1U1	SMD 980-2282	0.990	0.700	0.540	0.520	0.500

Bidirectional Suppression Diodes

New

Peak Pulse Power W	Vbr V	Stand-off Voltage V	No pin	Case Style	Mftrs. List No.
30	6.1	3	2	SOD-882	ESDAVLC6V1-1BM2
50	18	12	6	SOT-666	ESDA14V2BP6
80	8	3	6	SOT-23	ESDA6V1-4BC6
140	8	3	2	SOD-882	ESDALC6V1-1BM2
150	30	24	8	SOIC	ESDA25B1
160	27.8	24	2	SOD-323	ESDLIN1524BJ
300	6.5	5	8	SOIC	ITA6V5B1
300	6.5	5	20	SOIC	ITA6V5B3
300	6.51	5	8	SOIC	ITA6V1U1
300	10	8	8	SOIC	ITA10B1
300	18	15	8	SOIC	ITA18B1
400	6.7	6	2	DO-214AC	SMAJ6.0CA-TR
400	7.2	6.5	2	DO-214AC	SMAJ6.5CA-TR
400	11.1	10	2	DO-214AC	SMAJ10CA-TR
400	14.4	13	2	DO-214AC	SMAJ13CA-TR
400	17.1	15.3	2	DO-15	BZW04-15B
400	20	18	2	DO-214AC	SMAJ18CA-TR
400	24.4	22	2	DO-214AC	SMAJ22CA-TR
400	26.7	24	2	DO-214AC	SMAJ24CA-TR
400	28.9	26	2	DO-214AC	SMAJ26CA-TR
400	37.1	33.3	2	DO-15	BZW04-33B
400	47.8	43	2	DO-214AC	SMAJ43CA-TR
400	53.2	47.8	2	DO-15	BZW04-48B
400	53.3	48	2	DO-214AC	SMAJ48CA-TR
400	64.4	58	2	DO-214AC	SMAJ58CA-TR
400	77.8	170	2	DO-214AC	SMAJ170CA-TR
400	77.8	70	2	DO-214AC	SMAJ70CA-TR
400	94	85	2	DO-214AC	SMAJ85CA-TR
400	144	130	2	DO-214AC	SMAJ130CA-TR
400	209	188	2	DO-214AC	SMAJ188CA-TR
400	418	376	2	DO-15	BZW04-376B
600		37	2	DO-15	BZW06-37B
600	24.4	22	2	DO-214AA	SMBJ22CA-TR
600	28.5	25.6	2	DO-15	BZW06-26B
600	28.9	26	2	DO-214AA	SMBJ26CA-TR
600	33	25.6	2	DO-214AA	SM6T30CA
600	37.1	33.3	2	DO-15	BZW06-33B
600	53.2	47.8	2	DO-15	BZW06-48B
600	94	85	2	DO-214AA	SMBJ85CA-TR.
600	380	342	2	DO-15	BZW06-342B
600	418	376	2	DO-15	BZW06-376B
1500	47	40.2	2	DO-201	1.5KE47CARL
Telecom Protection					
	62	56	2	DO-214AC	SMP30-62
	62	56	2	DO-214AC	SMP50-62
	68	61	2	DO-214AC	SMP30-68
	68	61	2	DO-214AC	SMP50-68
	100	90	2	DO-214AC	SMP50-100
	120	108	2	DO-214AC	SMP50-120
	120	108	2	DO-214AA	SMP80MC-120
	120	108	2	DO-15	TPA120
	130	117	2	DO-214AC	SMP50-130
	140	126	2	DO-214AA	SMP100MC-140
	150	135	8	SOIC	THBT15011DRL
	160	144	2	DO-214AA	SMP100MC-160
	180	162	2	DO-214AC	SMP50-180
	180	162	2	DO-214AA	SMTPA180
	200	180	2	DO-214AA	SMP100MC-200
	200	180	2	DO-214AC	SMP50-200
	200	180	2	DO-214AA	SMP80MC-200
	200	180	2	DO-15	TPA200
	220	198	2	DO-214AC	SMP30-220
	220	198	2	DO-214AC	SMP50-220
	220	198	2	DO-15	TPA220
	240	216	2	DO-214AC	SMP30-240
	240	216	2	DO-214AA	SMTPA240
	270	243	2	DO-214AC	SMP30-270
	270	243	2	DO-214AC	SMP50-270
	270	243	2	DO-214AA	SMP80MC-270
	270	243	2	DO-15	TPA270
	320	290	2	DO-214AA	SMP100LC-320
	320	290	2	DO-214AC	SMP50-320
	320	290	2	DO-214AA	SMP80MC-320
	320	290	2	DO-214AA	SMTPA320
	400	360	2	DO-214AA	SMP100LC-400

Protection Diodes - continued

Bidirectional Suppression Diodes - continued

545905

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
ES-DAVLC6V1-1BM2	SMD 174-9338	0.240	0.210	0.187	0.156	0.125
ESDA14V2BP6	SMD 174-9333	0.400	0.350	0.310	0.250	0.220
ESDA6V1-4BC6	SMD 174-9336	0.400	0.350	0.310	0.250	0.220
ESDALC6V1-1BM2	SMD 174-9337	0.198	0.177	0.156	0.125	0.112
ESDA25B1	SMD 174-9335	1.050	0.920	0.820	0.670	0.560
ESDLIN1524BJ	SMD 174-9339	0.330	0.290	0.260	0.220	0.186
ITA6V5B1	SMD 174-9344	1.800	1.570	1.390	1.140	0.970
ITA6V5B3	SMD 174-9345	3.530	3.080	2.740	2.250	1.890
ITA6V1U1	SMD 174-9343	1.910	1.670	1.490	1.220	1.030
ITA10B1	SMD 174-9340	1.600	1.400	1.250	1.020	0.860
ITA18B1	SMD 174-9342	1.800	1.570	1.390	1.140	0.970
SMAJ6.0CA-TR	SMD 174-9360	0.135	0.114	0.104	0.083	0.073
SMAJ6.5CA-TR	SMD 174-9361	0.135	0.114	0.104	0.083	0.073
SMAJ10CA-TR	SMD 174-9347	0.146	0.125	0.114	0.094	0.073
SMAJ13CA-TR	SMD 174-9349	0.135	0.114	0.104	0.083	0.073
BZW04-15B	174-9320	0.230	0.198	0.177	0.146	0.125
SMAJ18CA-TR	SMD 174-9352	0.135	0.114	0.104	0.083	0.073
SMAJ22CA-TR	SMD 174-9354	0.146	0.125	0.114	0.094	0.073
SMAJ24CA-TR	SMD 174-9355	0.135	0.114	0.104	0.083	0.073
SMAJ26CA-TR	SMD 174-9356	0.135	0.114	0.104	0.083	0.073
BZW04-33B	174-9321	0.198	0.177	0.156	0.125	0.104
SMAJ43CA-TR	SMD 174-9357	0.135	0.114	0.104	0.083	0.073
BZW04-48B	174-9323	0.230	0.198	0.177	0.146	0.125
SMAJ48CA-TR	SMD 174-9358	0.135	0.114	0.104	0.083	0.073
SMAJ58CA-TR	SMD 174-9359	0.135	0.114	0.104	0.083	0.073
SMAJ170CA-TR	SMD 174-9350	0.146	0.125	0.114	0.094	0.073
SMAJ70CA-TR	SMD 174-9362	0.135	0.114	0.104	0.083	0.073
SMAJ85CA-TR	SMD 174-9363	0.135	0.114	0.104	0.083	0.073
SMAJ130CA-TR	SMD 174-9348	0.146	0.125	0.114	0.094	0.073
SMAJ188CA-TR	SMD 174-9351	0.135	0.114	0.104	0.083	0.073
BZW04-376B	174-9322	0.187	0.166	0.146	0.114	0.104
BZW06-37B	174-9331	0.177	0.156	0.135	0.114	0.094
SMBJ22CA-TR	SMD 174-9364	0.146	0.125	0.114	0.094	0.073
BZW06-26B	174-9325	0.177	0.156	0.146	0.114	0.094
SMBJ26CA-TR	SMD 174-9366	0.135	0.114	0.104	0.083	0.073
SM6T30CA	SMD 174-9346	0.135	0.114	0.104	0.083	0.073
BZW06-33B	174-9326	0.177	0.156	0.146	0.114	0.094
BZW06-48B	174-9332	0.177	0.156	0.146	0.114	0.094
SMBJ85CA-TR.	SMD 174-9367	0.135	0.114	0.104	0.083	0.073
BZW06-342B	174-9327	0.320	0.280	0.250	0.198	0.166
BZW06-376B	174-9329	0.177	0.156	0.146	0.114	0.094
1.5KE47CARL	174-9319	0.320	0.280	0.250	0.198	0.166
Telecom Protection						
SMP30-62	SMD 174-9374	0.340	0.300	0.270	0.220	0.187
SMP50-62	SMD 174-9388	0.480	0.420	0.370	0.300	0.260
SMP30-68	SMD 174-9379	0.360	0.310	0.280	0.230	0.198
SMP50-68	SMD 174-9391	0.480	0.420	0.370	0.300	0.260
SMP50-100	SMD 174-9380	0.460	0.410	0.350	0.290	0.250
SMP50-120	SMD 174-9381	0.480	0.420	0.370	0.300	0.260
SMP80MC-120	SMD 174-9392	0.620	0.540	0.490	0.400	0.330
TPA120	174-9401	0.680	0.590	0.520	0.430	0.360
SMP50-130	SMD 174-9382	0.480	0.420	0.370	0.300	0.260
SMP100MC-140	SMD 174-9370	0.650	0.560	0.500	0.410	0.340
THBT15011DRL	SMD 174-9399	1.860	1.620	1.450	1.190	1.000
SMP100MC-160	SMD 174-9371	0.650	0.560	0.500	0.410	0.340
SMP50-180	SMD 174-9383	0.480	0.420	0.370	0.300	0.260
SMTPA180	SMD 174-9396	0.390	0.330	0.300	0.240	0.210
SMP100MC-200	SMD 174-9372	0.650	0.560	0.500	0.410	0.340
SMP50-200	SMD 174-9384	0.360	0.320	0.280	0.230	0.198
SMP80MC-200	SMD 174-9393	0.620	0.540	0.490	0.400	0.330
TPA200	174-9402	0.680	0.590	0.520	0.430	0.360
SMP30-220	SMD 174-9375	0.360	0.310	0.280	0.230	0.198
SMP50-220	SMD 174-9385	0.480	0.420	0.370	0.300	0.260
TPA220	174-9403	0.650	0.560	0.500	0.410	0.340
SMP30-240	SMD 174-9376	0.360	0.310	0.280	0.230	0.198
SMTPA240	SMD 174-9397	0.460	0.400	0.350	0.290	0.250
SMP30-270	SMD 174-9378	0.360	0.310	0.280	0.230	0.198
SMP50-270	SMD 174-9386	0.480	0.420	0.370	0.300	0.260
SMP80MC-270	SMD 174-9394	0.620	0.540	0.490	0.400	0.330
TPA270	174-9404	0.680	0.590	0.520	0.430	0.360
SMP100LC-320	SMD 174-9368	0.560	0.490	0.440	0.350	0.300
SMP50-320	SMD 174-9387	0.480	0.420	0.370	0.300	0.260
SMP80MC-320	SMD 174-9395	0.620	0.540	0.490	0.400	0.330
SMTPA320	SMD 174-9398	0.390	0.330	0.300	0.250	0.210
SMP100LC-400	SMD 174-9369	0.560	0.490	0.440	0.350	0.300

400W Unidirectional TransZorb™ Suppression Diodes

VISHAY SMD

SMA: H = 2.9, W = 2.9, D = 5.6

- 400W Peak Pulse Power, I_{FSM} = 40A
- Opimised for LAN applications
- Glass passivated
- Low incremental surge resistance, excellent clamping-capability
- Very fast response time

V_{br} min. V	V_{br} max. V	@ I_{test} mA	V_{clamp} max. V	Max. Reverse Leakage Current µA	@ V_{wm} V	Mftrs. List No.
6.4	7.07	10	9.2	800	5	SMAJ5.0A
13.3	14.7	1.0	19.9	1	12	SMAJ12A
16.7	18.5	1.0	24.4	1	15	SMAJ15A
20.0	24.4	1.0	32.2	1	18	SMAJ18A-E3/61
20.0	22.1	1.0	29.2	1	18	SMAJ18A
26.7	32.6	1.0	43	1	24	SMAJ24A-E3/61
26.7	29.5	1.0	38.9	1	24	SMAJ24A
33.3	40.7	1.0	53.5	1	30	SMAJ30A-E3/61
33.3	36.8	1.0	48.4	1	30	SMAJ30A
36.7	40.6	1.0	53.3	1	33	SMAJ33A
40.0	44.2	1.0	58.1	1	36	SMAJ36A
25.7	28.4	1	37.5	1	23.1	TPSMA27A
28.5	31.5	1	41.4	1	25.6	TPSMA30A

277156

Unidirectional

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
SMAJ12A	SMD 955-0801 RL	0.280	0.210	0.182	0.137	0.127
SMAJ15A	SMD 955-0828 RL	0.270	0.198	0.165	0.122	0.111
SMAJ18A-E3/61	SMD 955-0852 RL	0.210	0.170	0.136	0.107	0.100
SMAJ18A	SMD 955-0844 RL	0.270	0.198	0.165	0.122	0.111
SMAJ24A-E3/61	SMD 955-0879 RL	0.280	– –	– –	– –	– –
SMAJ24A	SMD 955-0860 RL	0.270	0.198	0.165	0.121	0.111
SMAJ30A-E3/61	SMD 955-0895 RL	0.270	0.194	0.165	0.112	0.108
SMAJ30A	SMD 955-0887 RL	0.260	0.189	0.158	0.116	0.106
SMAJ33A	SMD 955-0909 RL	0.270	0.197	0.164	0.122	0.110
SMAJ36A	SMD 955-0925 RL	0.280	0.220	0.184	0.140	0.121
TPSMA27A	SMD 133-6583	0.750	0.530	0.410	0.310	0.250
TPSMA30A	SMD 133-6584	0.770	0.630	0.490	0.370	0.300

400W Transil™ Suppression Diodes

Bidirectional

F-126: L=6.35, Dia.=3.05, Lead Dia.=0.86 **CB-429:** L=9.8, Dia.=5.1, Lead Dia.=1.06

- Bidirectional transient voltage suppressors offering a high surge capability and ultra fast clamping times
- Typical applications include the protection of IC's, MOS, hybrids and other voltage sensitive components
- Bidirectional types are suitable for ac applications.

Stand-Off Voltage V_{rm} V	Breakdown Voltage V_{br} V	Clamping Voltage Max. 8/20µs (8/20µs)V	Max. Peak Pulse Current 8/20µs A	Temp. Coefficient (10^4/°C)	Package	Mftrs. List No.
5.8	6.45 min.	10.5	30	5.7	DO-15	BZW04-5V8B
12.8	14.3 min.	21.2	30	8.4	DO-15	BZW04-13B
28.2	28.2 min.	45.7	30	9.8	DO-15	BZW04-28B

429877

Order Multiple=5

Mftrs. List No.	Order Code	Price Each 5+	25+	100+	500+	1K+
BZW04-5V8B	980-2207	0.530	0.350	0.280	0.240	0.210
BZW04-13B	980-2177	0.510	0.340	0.270	0.230	0.200
BZW04-28B	980-2193	0.480	0.320	0.260	0.220	0.188

600W Transient Voltage Suppression Diodes

TAIWAN SEMICONDUCTOR SMD

SMB H = 2.61, W = 4.75, D = 3.73

- Glass passivated junction
- 600W peak pulse power capability
- Excellent clamping capability
- Fast response time
- Typical I_R less than 1µA above 10V
- Plastic case to **UL 94V-0**

V_{rm} Stand-off Voltage V	V_{br} Breakdown Voltage Min. V	Max. V	I_{test} mA	V_{clamp} max. V	Max. Peak Pulse Current A	Max. Reverse Leakage Current µA	Package Marking*	Mftrs. List No. Unidirectional (d.c.)	Bidirectional (a.c.)
1500W Peak Pulse Power									
5	6.4	7	1	9.2	68	800	KE	SMBJ5.0A	SMBJ5.0CA
7.5	8.33	9.21	10	12.9	48	100	KP	SMBJ7.5A	SMBJ7.5CA
12	13.3	14.7	1	19.9	31	5	LE	SMBJ12A	SMBJ12CA
15	16.7	18.5	1	24.4	25.1	5	LM	SMBJ15A	SMBJ15CA
24	26.7	32.6	1	38.9	14.6	5	LY	SMBJ24A	SMBJ24CA
30	33.3	36.8	1	48.4	13	5	MK	SMBJ30A	SMBJ30CA

* Coloured band denotes cathode on unidirectional devices only.
No coloured band on bidirectional devices.

344036

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
600W Unidirectional						
SMBJ5.0A	SMD **727-7792** RL	0.310	0.250	0.188	0.165	0.144
SMBJ7.5A	SMD **727-7814** RL	0.310	– –	– –	– –	– –
SMBJ12A	SMD **727-7717** RL	0.310	0.250	0.188	0.165	0.144
SMBJ15A	SMD **727-7733** RL	0.310	– –	– –	– –	– –
SMBJ24A	SMD **727-7750** RL	0.310	0.250	0.188	0.165	0.144
SMBJ30A	SMD **727-7776** RL	0.310	0.250	0.188	0.165	0.144
600W Bidirectional						
SMBJ5.0CA	SMD **727-7806** RL	0.370	0.300	0.230	0.200	0.177
SMBJ7.5CA	SMD **727-7822** RL	0.370	– –	– –	– –	– –
SMBJ12CA	SMD **727-7725** RL	0.370	0.300	0.230	0.200	0.177
SMBJ15CA	SMD **727-7741** RL	0.370	0.300	0.230	0.200	0.177
SMBJ24CA	SMD **727-7768** RL	0.370	0.300	0.230	0.200	0.177
SMBJ30CA	SMD **727-7784** RL	0.370	0.300	0.230	0.200	0.177

600W & 1500W Bidirectional TransZorb™ Suppression Diodes

1.5KE

DO-15

- Bidirectional
- Glass passivated chip junction
- Very fast response time
- Excellent clamping capability
- Low incremental surge resistance
- 1500 W peak pulse power capability with a 10/1000µs

New

Stand-Off Voltage V_{rm} V	Breakdown Voltage V_{br} V	Clamping Voltage Max. 8/20µs V	Max. Peak Pulse Current 8/20µs A	Temp. Co-efficient (%/°C)	Mftrs. List No.
40.2	44.7	64.8	9.3	0.101	P6KE47CA-E3/54
30.8	34.2	49.9	30.1	0.099	1.5KE36CA-E3/54
36.8	40.9	59.3	25.3	0.101	1.5KE43CA-E3/54
47.8	53.2	77	19.5	0.103	1.5KE56CA-E3/54

532240

Mftrs. List No.	Package	Order Code	Price Each 1+	25+	100+	250+	500+
P6KE47CA-E3/54	DO-15	**169-8856**	0.50	0.39	0.32	0.26	0.23
1.5KE36CA-E3/54	1.5KE	**169-8852**	0.54	0.45	0.37	0.30	0.26
1.5KE43CA-E3/54	1.5KE	**169-8853**	0.54	0.45	0.37	0.30	0.26
1.5KE56CA-E3/54	1.5KE	**169-8854**	0.54	0.45	0.37	0.30	0.26

600W Unidirectional TransZorb™ Suppression Diodes

- 600W Peak Pulse Power, I_{FSM} = 100A
- Low clamping factor
- Low incremental surge resistance
- Fast response time

SMB: H = 2.45, W = 5.6, D = 3.95

Max. Reverse Leakage Current µA	@ V_{wm} V	V_{br} min. V	V_{br} max. V	@ I_{test} mA	V_{clamp} max. V	Mftrs. List No.
800	5	6.4	7.07	1.0	9.2	SMBJ5.0A
5.0	12	13.3	14.7	1.0	19.9	SMBJ12A
1.0	15	16.7	18.5	1.0	24.4	SMBJ15A
1.0	18	13.3	16.3	1.0	29.2	SMBJ18A
1.0	24	26.7	32.6	1.0	43	SMBJ24
1.0	24	26.7	29.5	1.0	38.9	SMBJ24A
1.0	30	33.3	36.8	1.0	48.4	SMBJ30A
1.0	30.8	34.2	37.8	1.0	64.3	SM6T36A-E3/52
1.0	33	36.7	40.6	1.0	53.3	SMBJ33A
1.0	36	40.0	44.2	1.0	58.1	SMBJ36A

277214

Unidirectional Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
SMBJ5.0A	SMD **955-1107** RL	0.400	0.360	0.240	0.210	0.185
SMBJ12A	SMD **955-0968** RL	0.380	0.340	0.230	0.197	0.176
SMBJ15A	SMD **955-0984** RL	0.340	0.300	0.200	0.188	0.168
SMBJ18A	SMD **955-1000** RL	0.370	0.330	0.230	0.196	0.175
SMBJ24	SMD **955-1034** RL	0.360	0.310	0.220	0.190	0.171
SMBJ24A	SMD **955-1026** RL	0.340	– –	– –	– –	– –
SMBJ33A	SMD **955-1069** RL	0.360	0.320	0.220	0.188	0.175
SMBJ36A	SMD **955-1085** RL	0.370	– –	– –	– –	– –
SMBJ30A	SMD **955-1042** RL	0.390	– –	– –	– –	– –
SM6T36A-E3/52	NEW SMD **169-8857**	0.470	– –	– –	– –	– –

600W E3 Uni/Bidirectional TransZorb™ Suppression Diodes

- E3 - commercial grade
- 600W Peak Pulse Power, I_{FSM} = 100A
- Low clamping factor
- Low incremental surge resistance
- Fast response time

SMB: H = 2.45, W = 5.6, D = 3.95

New

Max. Reverse Leakage Current µA	@ V_{wm} V	V_{br} min. V	V_{br} max. V	@ I_{test} mA	V_{clamp} max. V	Mftrs. List No.
Unidirectional						
1.0	18	20	22.1	1	29.2	SMBJ18A-E3/52
1.0	28	31.1	34.4	1	45.4	SMBJ28A-E3/52
1.0	33	36.7	40.6	1	53.3	SMBJ33A-E3/52.
Bidirectional						
800	5	6.4	7.07	10	9.2	SMBJ5.0CA-E3/52
500	6.5	7.22	7.98	10	11.2	SMBJ6.5CA-E3/52.
5.0	10	11.1	12.3	1	17	SMBJ10CA-E3/52
5.0	12	13.3	14.7	1	19.9	SMBJ12CA-E3/52.
1.0	15	16.7	18.5	1	24.4	SMBJ15CA-E3/52.
1.0	16	17.8	19.7	1	26	SMBJ16CA-E3/52
1.0	18	20	22.1	1	29.2	SMBJ18CA-E3/52.
1.0	24	26.7	29.5	1	38.9	SMBJ24CA-E3/52.
1.0	28	31.1	34.4	1	45.4	SMBJ28CA-E3/52
1.0	30	33.3	36.8	1	48.4	SMBJ30CA-E3/52.
1.0	36	40	44.2	1	58.1	SMBJ36CA-E3/52.
1.0	40	44.4	49.1	1	64.5	SMBJ40CA-E3/52
1.0	45	50	55.3	1	72.7	SMBJ45CA-E3/52.
1.0	48	53.3	58.9	1	77.4	SMBJ48CA-E3/52
1.0	51	56.7	62.7	1	82.4	SMBJ51CA-E3/52

537880

Unidirectional Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
SMBJ18A-E3/52	SMD **169-8869**	0.47	0.36	0.28	0.24	0.21
SMBJ28A-E3/52	SMD **169-8872**	0.47	0.36	0.28	0.24	0.21
SMBJ33A-E3/52.	SMD **169-8876**	0.47	0.36	0.28	0.24	0.21
Bidirectional						
SMBJ5.0CA-E3/52	SMD **169-8882**	0.52	– –	– –	– –	– –
SMBJ6.5CA-E3/52.	SMD **169-8884**	0.53	0.41	0.33	0.27	0.24
SMBJ10CA-E3/52	SMD **169-8865**	0.52	0.41	0.33	0.27	0.24
SMBJ12CA-E3/52.	SMD **169-8866**	0.53	0.41	0.33	0.27	0.24
SMBJ15CA-E3/52.	SMD **169-8867**	0.53	0.41	0.33	0.27	0.24
SMBJ16CA-E3/52	SMD **169-8868**	0.48	0.37	0.30	0.25	0.22
SMBJ18CA-E3/52.	SMD **169-8870**	0.53	0.41	0.33	0.27	0.24
SMBJ24CA-E3/52.	SMD **169-8871**	0.53	0.41	0.33	0.27	0.24
SMBJ28CA-E3/52	SMD **169-8873**	0.52	0.41	0.33	0.27	0.24
SMBJ30CA-E3/52.	SMD **169-8875**	0.53	0.41	0.33	0.27	0.24
SMBJ36CA-E3/52.	SMD **169-8878**	0.50	– –	– –	– –	– –
SMBJ40CA-E3/52	SMD **169-8879**	0.52	0.41	0.33	0.27	0.24
SMBJ45CA-E3/52.	SMD **169-8880**	0.53	0.41	0.33	0.27	0.24
SMBJ48CA-E3/52	SMD **169-8881**	0.52	0.41	0.33	0.27	0.24
SMBJ51CA-E3/52	SMD **169-8883**	0.52	0.41	0.33	0.27	0.24

1500W E3 Uni/Bidirectional TransZorb™ Suppression Diodes

- E3 - commercial grade
- 1500W Peak Pulse Power, I_{FSM} = 200A
- Low clamping factor
- Low incremental surge resistance
- Fast response time

SMB: H = 2.45, W = 5.6, D = 3.95

New

Max. Reverse Leakage Current µA	@ V_{wm} V	V_{br} min. V	V_{br} max. V	@ I_{test} mA	V_{clamp} max. V	Mftrs. List No.
Unidirectional						
1.0	28	31.1	34.4	1	45.4	SMCJ28A-E3/57T
1.0	48	53.3	58.9	1	77.4	SMCJ48A-E3/57T
1.0	58	64.4	71.2	1	93	SMCJ58A-E3/57T..
Bidirectional						
1.0	15	16.7	18.5	1	24.4	SMCJ15CA-E3/57T.
1.0	22	24.4	26.9	1	35.5	SMCJ22CA-E3/57T
1.0	30	33.3	36.8	1	48.4	SMCJ30CA-E3/57T
1.0	33	36.7	40.6	1	53.3	SMCJ33CA-E3/57T
1.0	40	44.4	49.1	1	64.5	SMCJ40CA-E3/57T
1.0	48	53.3	58.9	1	77.4	SMCJ48CA-E3/57T

537888

Unidirectional Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
SMCJ28A-E3/57T	SMD **169-8888**	0.94	0.72	0.58	0.49	0.42
SMCJ48A-E3/57T	SMD **169-8892**	0.76	0.58	0.47	0.39	0.34
SMCJ58A-E3/57T..	SMD **169-8894**	0.76	– –	– –	– –	– –
Bidirectional						
SMCJ15CA-E3/57T.	SMD **169-8885**	0.81	0.72	0.58	0.49	0.42
SMCJ22CA-E3/57T	SMD **169-8887**	0.94	0.72	0.58	0.49	0.42
SMCJ30CA-E3/57T	SMD **169-8889**	0.94	0.72	0.58	0.49	0.42
SMCJ33CA-E3/57T	SMD **169-8890**	0.94	– –	– –	– –	– –
SMCJ40CA-E3/57T	SMD **169-8891**	0.81	0.72	0.58	0.49	0.42
SMCJ48CA-E3/57T	SMD **169-8893**	0.94	0.72	0.58	0.49	0.42

Over half a million products available online QGO

Protection Diodes - continued

600W/1500W Bidirectional Transient Suppression Diodes

SMB SMA SMC

- 600W/1500W Peak Pulse Power (10/1000µs)
- Fast response time
- Stand off voltage from 5V to 188V

TRANSIL™ diodes designed specifically for protecting sensitive equipment against transient overvoltages. Transil diodes provide high overvoltage protection by clamping action. Their instantaneous responseto transient overvoltages makes them particularly suited to protect voltage sensitive devices such as MOS Technology and low voltage supplied IC's.

Stand-Off Voltage V_{rm}, V	V_{br} V	I_{test} mA	V_{clamp} @ Ipp8/20µs Max V	Peak Pulse Current A	Package	Mftrs. List No.
600W						
5	6.74	10	13.4	298	SMA	SMA6J5.0CA-TR
6	7.05	10	13.7	290	SMA	SMA6J6.0CA-TR
6.5	7.58	10	14.5	276	SMA	SMA6J6.5CA-TR
8.5	9.9	1	18.7	205	SMA	SMA6J8.5CA-TR
10	11.7	1	19.6	184	SMA	SMA6J10CA-TR
12	14	1	23.5	157	SMA	SMA6J12CA-TR
13	15.2	1	23.9	147	SMA	SMA6J13CA-TR
15	17.6	1	27.7	123	SMA	SMA6J15CA-TR
18	21.1	1	33.2	102	SMA	SMA6J18CA-TR
20	23.4	1	36.8	93	SMA	SMA6J20CA-TR
24	28.1	1	44.3	80	SMA	SMA6J24CA-TR
26	30.4	1	47.9	75	SMA	SMA6J26CA-TR
28	32.7	1	51.6	68	SMA	SMA6J28CA-TR
33	38.6	1	60.8	57	SMA	SMA6J33CA-TR
40	46.7	1	73.6	48	SMA	SMA6J40CA-TR
48	56.1	1	88.4	40	SMA	SMA6J48CA-TR
58	67.8	1	100	33	SMA	SMA6J58CA-TR
70	81.9	1	120	27	SMA	SMA6J70CA-TR
100	117	1	172	19	SMA	SMA6J100CA-TR
130	152	1	223	15	SMA	SMA6J130CA-TR
154	180	1	265	12.6	SMA	SMA6J154CA-TR
170	199	1	292	11.3	SMA	SMA6J170CA-TR
188	220	1	323	10.3	SMA	SMA6J188CA-TR
600W						
13	14.4	1	27.2	368	SMB	SMBJ13CA-TR.
33	36.7	1	69.7	57	SMB	SMBJ33CA-TR..
1500W						
5	6.4	10	13.4	746	SMC	SMCJ5.0CA-TR
6	6.7	10	13.7	730	SMC	SMCJ6.0CA-TR
10	11.1	1	21.7	461	SMC	SMCJ10CA-TR
13	14.4	1	27.2	368	SMC	SMCJ13CA-TR
15	16.7	1	32.5	308	SMC	SMCJ15CA-TR
18	20	1	39.3	254	SMC	SMCJ18CA-TR
24	26.7	1	50	200	SMC	SMCJ24CA-TR
30	33.3	1	64.3	156	SMC	SMCJ30CA-TR
40	44.4	1	84	119	SMC	SMCJ40CA-TR
48	53.3	1	100	100	SMC	SMCJ48CA-TR.
70	77.8	1	146	69	SMC	SMCJ70CA-TR
85	94.4	1	178	56	SMC	SMCJ85CA-TR
130	144	1	265	38	SMC	SMCJ130CA-TR
188	209	1	388	26	SMC	SMCJ188CA-TR

530310

Unidirectional Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
600W						
SMA6J5.0CA-TR	SMD 168-9251	0.490	0.320	0.260	0.220	0.192
SMA6J6.0CA-TR	SMD 168-9256	0.460	0.300	0.250	0.210	0.181
SMA6J6.5CA-TR	SMD 168-9258	0.440	0.290	0.240	0.200	0.174
SMA6J8.5CA-TR	SMD 168-9262	0.460	0.300	0.250	0.210	0.181
SMA6J10CA-TR	SMD 168-9215	0.470	0.310	0.250	0.220	0.185
SMA6J12CA-TR	SMD 168-9218	0.470	0.310	0.250	0.220	0.185
SMA6J13CA-TR	SMD 168-9222	0.460	0.300	0.250	0.210	0.181
SMA6J15CA-TR	SMD 168-9226	0.490	0.320	0.260	0.220	0.192
SMA6J18CA-TR	SMD 168-9234	0.470	0.310	0.250	0.220	0.185
SMA6J20CA-TR	SMD 168-9236	0.460	0.300	0.250	0.210	0.181
SMA6J24CA-TR	SMD 168-9238	0.460	0.300	0.250	0.210	0.181
SMA6J26CA-TR	SMD 168-9240	0.460	0.300	0.250	0.210	0.181
SMA6J28CA-TR	SMD 168-9243	0.460	0.300	0.250	0.210	0.181
SMA6J33CA-TR	SMD 168-9245	0.490	0.320	0.260	0.220	0.190
SMA6J40CA-TR	SMD 168-9247	0.480	0.320	0.260	0.220	0.188
SMA6J48CA-TR	SMD 168-9249	0.460	0.300	0.250	0.210	0.181
SMA6J58CA-TR	SMD 168-9254	0.460	0.300	0.250	0.210	0.181
SMA6J70CA-TR	SMD 168-9260	0.460	0.300	0.250	0.210	0.181
SMA6J100CA-TR	SMD 168-9213	0.470	0.310	0.250	0.220	0.185
SMA6J130CA-TR	SMD 168-9220	0.410	0.270	0.220	0.183	0.160
SMA6J154CA-TR	SMD 168-9224	0.460	0.300	0.250	0.210	0.181
SMA6J170CA-TR	SMD 168-9229	0.490	0.320	0.260	0.220	0.193
SMA6J188CA-TR	SMD 168-9232	0.460	0.300	0.250	0.210	0.181
SMBJ13CA-TR.	SMD 168-9266	0.450	0.300	0.240	0.200	0.177
SMBJ33CA-TR..	SMD 168-9267	0.450	0.300	0.240	0.200	0.177
1500W						

Unidirectional Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
SMCJ5.0CA-TR	SMD 168-9294	0.750	0.560	0.450	0.390	0.330
SMCJ6.0CA-TR	SMD 168-9296	0.750	0.560	0.450	0.390	0.330
SMCJ10CA-TR	SMD 168-9269	0.750	0.580	0.470	0.400	0.340
SMCJ13CA-TR	SMD 168-9272	0.750	0.560	0.450	0.390	0.330
SMCJ15CA-TR	SMD 168-9274	0.750	0.560	0.450	0.390	0.330
SMCJ18CA-TR	SMD 168-9279	0.840	0.560	0.450	0.390	0.330
SMCJ24CA-TR	SMD 168-9281	0.750	0.560	0.450	0.390	0.330
SMCJ30CA-TR	SMD 168-9285	0.740	0.490	0.400	0.330	0.290
SMCJ40CA-TR	SMD 168-9291	0.750	0.560	0.450	0.390	0.330
SMCJ48CA-TR.	SMD 168-9292	0.750	0.560	0.450	0.390	0.330
SMCJ70CA-TR	SMD 168-9298	0.750	0.580	0.470	0.400	0.340
SMCJ85CA-TR	SMD 168-9299	0.750	0.560	0.450	0.390	0.330
SMCJ130CA-TR	SMD 168-9270	0.750	0.560	0.450	0.390	0.330
SMCJ188CA-TR	SMD 168-9278	0.750	0.580	0.470	0.400	0.340

1500W Unidirectional TransZorb™ Suppression Diodes

- 1500W Peak Pulse Power, I_{FSM} = 200A
- Low clamping factor
- Low incremental surge resistance
- Very fast response time

SMC: H = 2.45, W = 8.15, D = 6.25

Max. Reverse Leakage Current µA	@ V_{wm} V	V_{br} min. V	V_{br} max. V	@ I_{test} mA	V_{clamp} max. V	Mftrs. List No.
1000	5	6.40	7.07	10	9.2	SMCJ5.0A
5.0	12	13.3	16.3	1.0	22	SMCJ12A
1.0	15	16.7	18.5	1.0	24.4	SMCJ15A
1.0	18	20.0	22.1	1.0	29.2	SMCJ18A
1.0	24	26.7	29.5	1.0	38.9	SMCJ24A
1.0	30	33.3	36.8	1.0	48.4	SMCJ30A
1.0	33	36.7	44.9	1.0	59	SMCJ33
1.0	33	36.7	40.6	1.0	53.3	SMCJ33A

277215

Unidirectional Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
SMCJ5.0A	SMD 955-1263 RL	0.87	0.66	0.57	0.39	0.37
SMCJ12A	SMD 955-1123 RL	0.84	0.63	0.55	0.38	0.36
SMCJ15A	SMD 955-1140 RL	0.84	0.63	0.55	0.38	0.36
SMCJ18A	SMD 955-1166 RL	0.84	0.63	0.55	0.38	0.36
SMCJ24A	SMD 955-1182 RL	0.87	– –	– –	– –	– –
SMCJ30A	SMD 955-1204 RL	0.73	– –	– –	– –	– –
SMCJ33	SMD 955-1239 RL	0.73	0.55	0.48	0.33	0.31
SMCJ33A	SMD 955-1220 RL	0.84	– –	– –	– –	– –

1500W Transient Voltage Suppression Diodes

- Glass passivated junction
- 1500W peak pulse power capability
- Excellent clamping capability
- Fast response time
- Typical I_R less than 1A above 10V
- Plastic case to **UL 94V-0**

SMC H = 2.62, W = 8.23, D = 6.22

Stand-off Voltage V	V_{br} Breakdown Voltage Min. V	Max. V	I_{test} mA	V_{clamp} max. V	Max. Peak Pulse Current A	Max. Reverse Leakage Current µA	Package Marking*	Mftrs. List No. Unidirectional (d.c.)	Bidirectional (a.c.)
1500W Peak Pulse Power									
5	6.4	7	1	9.2	171	1000	GDE	SMCJ5.0A	SMCJ5.0CA
6	6.67	7.37	1	10.3	152	1000	GDG	SMCJ6.0A	SMCJ6.0CA
9	10	11.1	1	15.4	102	10	GDV	SMCJ9.0A	SMCJ9.0CA
12	13.3	14.7	1	19.9	79	5	GEE	SMCJ12A	SMCJ12CA
15	16.7	18.5	1	24.4	64	5	GEM	SMCJ15A	SMCJ15CA
22	24.4	29.8	1	39.4	39	5	GEW	SMCJ22A	SMCJ22CA
33	36.7	40.6	1	53.3	29	5	GFM	SMCJ33A	SMCJ33CA
48	53.3	58.9	1	77.4	20	5	GFX	SMCJ48A	SMCJ48CA

* Coloured band denotes cathode on unidirectional devices only.
No coloured band on bidirectional devices.

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
1500W Unidirectional						
SMCJ5.0A	SMD 727-7652 RL	0.560	0.440	0.340	0.250	0.210
SMCJ6.0A	SMD 727-7679 RL	0.660	0.550	0.450	0.350	0.320
SMCJ9.0A	SMD 727-7695 RL	0.860	0.660	0.500	0.360	0.330
SMCJ12A	SMD 727-7555 RL	0.350	0.270	0.210	0.150	0.137
SMCJ15A	SMD 727-7571 RL	0.600	0.470	0.360	0.260	0.230
SMCJ22A	SMD 727-7598 RL	0.590	0.460	0.350	0.250	0.230
SMCJ33A	SMD 727-7610 RL	0.550	0.430	0.330	0.240	0.210
SMCJ48A	SMD 727-7636 RL	0.750	0.580	0.450	0.320	0.290
1500W Bidirectional						
SMCJ5.0CA	SMD 727-7660 RL	0.830	0.650	0.500	0.350	0.330
SMCJ6.0CA	SMD 727-7687 RL	0.470	0.390	0.320	0.240	0.220
SMCJ9.0CA	SMD 727-7709 RL	0.830	0.700	0.570	0.430	0.400

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
1500W Bidirectional						
SMCJ12CA	SMD 727-7563 RL	0.830	0.650	0.500	0.350	0.330
SMCJ15CA	SMD 727-7580 RL	0.830	0.650	0.500	0.350	0.330
SMCJ22CA	SMD 727-7601 RL	0.300	– –	– –	– –	– –
SMCJ33CA	SMD 727-7628 RL	0.550	– –	– –	– –	– –
SMCJ48CA	SMD 727-7644 RL	0.830	0.650	0.500	0.350	0.330

343814

Reel of 3000		Price Per Reel	
Mftrs. List No.	Order Code	1+	3+
SMCJ48A R6	SMD 156-2406	308.78	277.91

1500W Transil™ Suppression Diodes

SMC (DO-214AB)

- 400W - 1500W Peak Pulse Power capability
- Low clamping factor
- Low incremental surge resistance
- Fast response time

SMC H = 2.45, W = 8.15, D = 6.25

Max Reverse Leakage Current μA @ V_{rm}	V_{br} min. V	@ I_r mA	P_{pp} W	V_{clamp} max. V	I_{fsm} A	Package Marking	Mftrs. List No. Unidirectional (d.c.)	Bidirectional (a.c.)
SMC Package, 1500W								
1000	5.8 6.45	10	1500	13.4	200	MDE/BDE	SM15T6V8A	SM15T6V8CA
10	8.55 9.5	1	1500	18.6	200	MDP/-	SM15T10A	—
5	20.5 22.8	1	1500	42.8	200	MEM/-	SM15T24A	—
5	28.2 31.4	1	1500	59	200	MET/-	SM15T33A	—
5	30.8 34.2	1	1500	64.3	200	-/BEV	—	SM15T36CA
5	33.3 37.1	1	1500	69.7	200	MEX/-	SM15T39A	—
5	85.5 95	1	1500	178	200	-/BFX	—	SM15T100CA

429894

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
1500W Unidirectional						
SM15T24A	SMD 980-2576 RL	0.790	0.520	0.430	0.350	0.310
SM15T33A	SMD 980-2584 RL	0.500	0.330	0.270	0.220	0.191
SM15T39A	SMD 980-2606 RL	0.700	0.410	0.290	0.220	0.200
SM15T10A	SMD 988-5609 RL	0.760	0.410	0.290	0.240	0.220
SM15T6V8A	SMD 988-5820 RL	0.400	0.260	0.220	0.181	0.165
1500W Bidirectional						
SM15T6V8CA	SMD 980-2614 RL	0.580	0.390	0.310	0.260	0.230
SM15T36CA	SMD 980-2592 RL	0.720	0.470	0.390	0.320	0.280
SM15T100CA	SMD 980-2568 RL	0.600	0.400	0.320	0.270	0.240

5 KW Transil Suppression Diodes

R6

- Peak pulse power: 5000 W (10/1000uS)
- Low clamping factor
- Fast response time

Transil diodes provide high overvoltage protection by clamping action. Their instantaneous response to transient overvoltages makes them particulary suited to protect voltage sensitive devices such as MOS technology and low voltage supplied IC's

Reverse Leakage Current Max mA @	V_{rm} V	V_{br} min. V	@ I_r mA	P_{pp} W	V_{clamp} max. V	I_{fsm} A	Mftrs. List No.
0.005	15	16.6	1	5000	35	500	BZW50-15
0.005	22	24.4	1	5000	51	500	BZW50-22
0.005	33	36.6	1	5000	76	500	BZW50-33

418035

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	500+	1K+
BZW50-15	988-5250	2.86	2.19	1.77	1.51	1.39
BZW50-22	988-5269	2.93	2.19	1.77	1.51	1.39
BZW50-33	988-5277	2.86	2.13	1.73	1.47	1.35

5kW Uni/Bidirectional Transil Suppression Diodes

- Peak pulse power 5000W
- Non repetitive surge current 500A
- Case style R6
- Time Measured 50ms

New

Transil diodes provide high overvoltage protection by clamping action. Their instantaneous response to transient overvoltages makes them particulary suited to protect voltage sensitive devices such as MOS technology and low voltage supplied IC's.

Stand-Off Voltage V_{rm} V	Breakdown Voltage V_{br} V	Clamping Voltage Max. (8/20μs)V	Mftrs. List No.
Unidirectional			
18	20	41.5	BZW50-18
27	30	62	BZW50-27
39	43.3	90	BZW50-39
56	62.2	129	BZW50-56
68	75.6	157	BZW50-68
82	91	189	BZW50-82
150	166	343	BZW50-150
180	200	410	BZW50-180
Bidirectional			
12	13.3	28	BZW50-12B
15	16.6	35	BZW50-15B
27	30	62	BZW50-27B
33	36.6	76	BZW50-33B
39	43.3	90	BZW50-39B
47	52	108	BZW50-47B
56	62.2	129	BZW50-56B
68	75.6	157	BZW50-68B
82	91	189	BZW50-82B
100	111	228	BZW50-100B
120	133	274	BZW50-120B
150	166	343	BZW50-150B
180	200	410	BZW50-180B

529426

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	500+
Unidirectional					
BZW50-18	168-9191	4.00	3.23	2.65	2.33
BZW50-27	168-9194	4.00	3.23	2.65	2.33
BZW50-39	168-9197	3.80	3.08	2.53	2.22
BZW50-56	168-9201	4.00	3.23	2.65	2.33
BZW50-68	168-9203	4.00	3.04	2.47	2.07
BZW50-82	168-9206	4.00	3.23	2.65	2.33
BZW50-150	168-9188	4.00	3.04	2.47	2.07
BZW50-180	168-9192	4.00	3.23	2.65	2.33
Bidirectional					
BZW50-12B	168-9187	4.42	3.58	2.93	2.58
BZW50-15B	168-9190	4.00	3.23	2.65	2.33
BZW50-27B	168-9195	4.00	3.23	2.65	2.33
BZW50-33B	168-9196	4.00	3.23	2.65	2.30
BZW50-39B	168-9199	4.00	3.23	2.65	2.33
BZW50-47B	168-9200	4.00	3.04	2.47	2.07
BZW50-56B	168-9202	4.00	3.23	2.65	2.33
BZW50-68B	168-9205	4.00	3.23	2.65	2.33
BZW50-82B	168-9207	4.00	3.23	2.65	2.33
BZW50-100B	168-9184	4.00	3.23	2.65	2.33
BZW50-120B	168-9185	4.00	3.23	2.65	2.33
BZW50-150B	168-9189	4.00	3.23	2.65	2.33
BZW50-180B	168-9193	4.00	2.71	2.22	1.87

5kW-6.6kW TransZorb™ & Automotive Unidirectional Suppression Diodes

DO-218AB

5KP

New

- P600, glass passivated chip junction
- Excellent clamping capability
- Very fast response time
- Low incremental surge resistance

Use in sensitive electronics protection against voltage transients induced by inductive load switching and lighting on ICs, MOSFET, signal lines of sensor units for consumer, computer, industrial, automotive and telecommunication.

P600

SM8

- Patented PAR™construction
- Low leakage current
- Low forward voltage drop
- High surge capability
- Meets ISO7637-2 surge specification (varied by test condition)
- Meets MSL level 1per J-STD-020, LF max peak of 245°C

Use in sensitive electronics protection against voltage transients induced by inductive load switching and lighting, especially for automotive load dump protection application

V_{br} V	V_{br} min. V	V_{br} max. V	@ I_{test} mA	V_{wm} V	V_{clamp} max. V	Pppm W	Order Code	Mftrs. List No.
Transzorb								
36.8	33.3	36.8	5	30	48.4	5000	169-8855	5KP30A-E3/54
Automotive								
44.2	40	44.2	5	36	58.1	6600	169-8859	SM8S36A-E3/2D

532613

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
5KP30A-E3/54	169-8855	4.50	3.44	2.79	2.34	2.02
SM8S33A-E3/2D	SMD 169-8858	5.00	3.83	3.10	2.60	2.25
SM8S36A-E3/2D	SMD 169-8859	5.00	3.83	3.10	2.60	2.25

Low Power Signal Diodes

Sanyo High Speed Diodes

New

SANYO

- Miniature package
- Fast switching speed
- Small interterminal capacitance

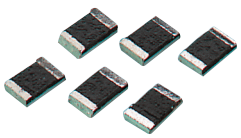
V_{RRM} max. V	I_F av max. mA	trr ns	V_F max. V	@ I_F mA	Package	Mftrs. List No.
Single						
90	100	4	1.2	100	MCP	DSE010-TR-E
Dual Series						
85	100	4	1.2	100	CP	DCC010-TB-E
20	100	–	1	10	CP	DCD010-TB-E
20	100	–	1	10	SOT-323	DCJ010-TL-E
Dual Common Anode						
85	100	4	1.2	100	CP	DCA010-TB-E
85	100	4	1.2	100	SOT-323	DCF010-TL-E
Dual Common Cathode						
85	100	4	1.2	100	CP	DCB010-TB-E
85	100	4	1.2	100	SOT-323	DCG010-TL-E
Triple						
85	100	4	1.2	100	TCP	FC903-TR-E

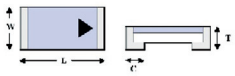
540849

Mftrs. List No.	Order Code	1+	25+	100+	250+	500+
		Price Each				
DSE010-TR-E	SMD 171-3492	0.80	0.68	0.55	0.46	0.39
DCC010-TB-E	SMD 171-3487	0.86	0.73	0.59	0.50	0.42
DCD010-TB-E	SMD 171-3488	0.86	0.73	0.59	0.50	0.42
DCJ010-TL-E	SMD 171-3491	0.80	0.68	0.55	0.46	0.39
DCA010-TB-E	SMD 171-3484	0.80	0.68	0.55	0.46	0.39
DCF010-TL-E	SMD 171-3489	0.80	0.68	0.55	0.46	0.39
DCB010-TB-E	SMD 171-3485	0.80	0.68	0.55	0.46	0.39
DCG010-TL-E	SMD 171-3490	1.56	1.32	1.07	0.91	0.76
FC903-TR-E	SMD 171-3495	0.79	0.68	0.55	0.46	0.39

High Speed Switching

TAIWAN SEMICONDUCTOR





SMD

Item	1206	0805	0603
L	0.135(3.40) 0.119(3.0)	0.088(2.20) 0.072(1.8)	0.071(1.65) 0.59(1.45)
W	0.07(1.70) 0.054(1.30)	0.058(1.45) 0.042(1.05)	0.039(0.9) 0.027(0.7)
T	0.038(0.95) 0.03(0.75)	0.038(0.95) 0.03(0.75)	0.034(0.75) 0.026(0.55)
C	0.03(0.75) 0.014(0.35)	0.026(0.65) 0.01(0.25)	0.018(0.45) 0.010(0.25)

- Ceramic square package, easier to pick and place than round MELF equivalents
- Pad compatible with SOD523 (0603), SOD323 (0805), SOD123 (1206)
- Low forward voltage drop
- High current capability
- Polarity - arrow marks cathode

V_{rrm} V	V_r V	I_{fsm} A	$I_{f(av)}$ mA	V_f V	@	I_f mA	P_d mW	Package	Mftrs. List No.
100	75	2.0	150	1		350	100	0603	TS4148 RZ
100	75	2.0	150	1		500	100	0805	TS4148 RY
100	75	2.0	150	1		500	100	1206	TS4148 RX

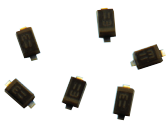
Mftrs. List No.	Order Code	10+	250+	1K+	5K+	10K+
Order Multiple=10		Price Each				
TS4148 RZ	SMD 815-0192	0.058	– –	– –	– –	– –
TS4148 RY	SMD 815-0206 RL	0.029	0.017	0.014	0.011	0.010
TS4148 RX	SMD 815-0214 RL	0.029	0.017	0.014	0.011	0.010

372230

Mftrs. List No.	Order Code	1+	+
Reel of 5000		Price Per Reel	
TS4148 RY	SMD 156-2350	40.34	– –

Small Signal Switching

BOURNS



Bourns small-signal high-speed Switching Diodes for switching digital signal applications in compact chip package0603 offers PCB real estate savings and have a lower profile than most competitive parts.

SMD

CD0603, H=1.7, W=0.8, D=0.6

V_{RRM} max. V	V_R max. V	I_F av max. mA	Ifs max. mA	V_F max. V	@ I_F mA	Mftrs. List No.
90	80	100	1000	1	100	CD0603-S0180
100	75	150	4000	1	50	CD0603-S01575

497089

Mftrs. List No.	Order Code	1+	25+	100+	+	+
		Price Each				
CD0603-S01575	SMD 145-6535	0.058	0.044	0.040	– –	– –
CD0603-S0180	SMD 145-6536	0.054	0.042	0.040	– –	– –

High Speed Diodes

NXP

SOD-80C

SOT-23

Application code key:
HS=High speed
LL=Low Leakage

V_{rrm} V	I_f mA	V_f V	@	I_f mA	Package	Mftrs. List No.
60	125	1		125	SOT-23	BAV74
75	200	—		200	SOD-80C	PMLL4448

211361

Mftrs. List No.	Order Code	10+	100+	250+	1K+	3K+
Order Multiple=10		Price Each				
BAV74	SMD 108-1210 RL	0.152	0.094	0.064	0.026	0.013
PMLL4448	SMD 109-7279 RL	0.045	0.031	0.024	0.020	0.017

High Speed Switching

SMD

Infineon technologies

V_r V	I_f mA	V_{br} V	$I_{r\ (max.)}$ µA	V_r V	V_f V	@	I_f mA	t_{rr} ns	Package	Device I.D.	Mftrs. List No.
Single Diodes											
40	750	40	50	30	0.44		250	—	SOD-323	C	BAT165
75	250	75	5	75	1.25		150	—	SOT-23	JVs	BAS116
85	200	75	1	75	1		50	4	SOT-23	A6s	BAS16
200	250	250	100	200	1.25		100	50	SOT-23	JSs	BAS21
Dual Diode - Common Cathode											
70	200	70	2.5	70	1		50	4	SOT-23	A4s	BAV70
70	200	70	2.5	70	1.25		50	4	SOT-23	A1s	BAW56
Dual Diode - Series											
25	125	75	30	25	1.25		150	4	SOT-23	A7*	BAV99
40	250	40	2	30	0.75		100	—	SOT-323	64	BAT6404WE6327
70	200	70	5	70	1.25		50	3	SOT-23	Jys	BAV199
70	200	70	2.5	70	1.25		150	4	SOT-323	A7s	BAV99W
Quad Diode - Series											
70	200	70	2.5	70	1.25		150	4	SOT-363	A7s	BAV99S

348902

Mftrs List No.	Order Code	10+	100+	1K+	3K+
Order Multiple=10		Price Each			
BAS16	SMD 105-6496 RL	0.040	0.021	0.011	0.009
BAS21	SMD 105-6498 RL	0.051	0.032	0.022	0.012
BAS116	SMD 115-6416 RL	0.039	0.029	0.023	0.013
BAV70	SMD 105-6503 RL	0.044	0.018	0.013	0.011
BAV99	SMD 105-6504 RL	0.062	0.024	0.012	0.011
BAV199	SMD 115-6415 RL	0.062	0.042	0.039	0.022
BAW56	SMD 105-6508 RL	0.073	0.034	0.025	0.016
		10+	**100+**	**250+**	**1K+**	**3K+**
BAT165	SMD 105-6502 RL	0.132	0.096	0.076	0.062	0.053
BAT6404WE6327	SMD 115-6417	0.109	0.076	0.062	0.035	0.030
BAV99S	SMD 105-6506	0.097	0.067	0.051	0.028	0.026
BAV99W	SMD 105-6507	0.035	0.025	0.020	0.014	0.009
		1+	**5+**	**10+**		
		Price Per Reel, 3000 Qty				
BAV99	SMD 115-6418	58.800	37.810	32.450		
BAV199E6327-BOX	SMD 156-2357	88.060	79.250			

High Speed Switching

NXP

SMD

3
2 1
SOT-323

SOT-23

SOD-80C

SOT-143

SOD-110

V_r V	I_f mA	$I_{r\ (max.)}$ µA	V_f V	@	I_f mA	t_{rr} ns	Package	Device I.D.	Mftrs. List No.
5	200	—	—		—	—	SOT-23	*A9	BAS17
60	125	30	1		100	4	SOT-23	JA	BAV74
70	215	500	—		—	4	SOT-23	*5D	PMBD914
75	215	30	1.25		150	4	SOT-23	A6*	BAS16
75	175	30	1.25		150	4	SOT-323	A6	BAS16W
75	215	30	1.25		150	4	SOT-143	JTp	BAS28
75	200	25	1		100	4	SOD-80C	—	BAS32L
75	250	5	1.25		150	—	SOT-23	JVs	BAS116

V_r V	I_f mA	$I_{r\ (max.)}$ µA	V_f V	@	I_f mA	t_{rr} ns	Package	Device I.D.	Mftrs. List No.
75	250	500	—		—	4	SOD-323	A6	BAS316
75	200	500	—		—	3000	SOD-323	D4	BAS416
75	250	500	—		—	4	SOD-523	6	BAS516
75	200	500	—		—	3000	SOD-523	S1	BAS716
75	125	30	1.25		150	4	SOT-23	A4*	BAV70
75	100	30	1.25		150	4	SOT-323	A4	BAV70W
75	125	30	1.25		150	4	SOT-23	A7*	BAV99
75	200	450	—		—	4	SOT-363	K1*	BAV99S
75	130	30	1.25		150	4	SOT-323	A7	BAV99W
75	135	500	—		—	3000	SOT-323	JY*	BAV199W
75	125	30	1.25		150	4	SOT-23	A1*	BAW56
100	200	25	1		10	4	SOD-80C	—	PMLL4148L
100	215	450	—		1	—	SOT-23	—	PMBD7000
100	200	450	—		200	4	SOT-363	16*	BAS16VY
150	200	100	1.25		200	50	SOT-23	JR*	BAS20
150	250	100	1.25		200	50	SOD-80C	—	BAV102
200	125	100	1.25		200	50	SOT-143	L30	BAV23
200	225	625	—		—	50	SOT-23	*V5	BAV23S
200	250	100	1.25		200	50	SOD-80C	—	BAV103
200	200	625	—		—	50	SOT-23	JS*	BAS21
200	200	625	—		—	50	SOD-323	A7	BAS321
300	250	1000	—		—	50	SOD-523	L4	BAS521

452270

Order Multiple=10 — **Price Each**

Mftrs List No.	Mftr.	Order Code	10+	100+	250+
BAV74	NXP	SMD 108-1210 RL	0.152	0.094	0.064
PMLL4448	NXP	SMD 109-7279 RL	0.045	0.031	0.024
			10+	**100+**	**1K+**
BAS16	NXP	SMD 108-1180 RL	0.066	– –	– –
BAS16VY	NXP	SMD 873-4240 RL	0.310	– –	– –
BAS16W	NXP	SMD 108-1181 RL	0.196	0.101	0.075
BAS17	NXP	SMD 873-4259 RL	0.500	0.270	0.195
BAS20	NXP	SMD 108-1182 RL	0.093	– –	– –
BAS21	NXP	SMD 873-4267 RL	0.100	– –	– –
BAS28	NXP	SMD 108-1185 RL	0.108	0.078	0.062
BAS32L	NXP	SMD 109-7173 RL	0.069	0.053	0.031
BAS116	NXP	SMD 873-4232 RL	0.178	0.095	0.070
BAS316	NXP	SMD 873-4275 RL	0.082	0.045	0.032
BAS321	NXP	SMD 873-4283 RL	0.135	0.072	0.051
BAS416	NXP	SMD 873-4399 RL	0.156	0.083	0.061
BAS516	NXP	SMD 873-4402 RL	0.189	0.101	0.073
BAS521	NXP	SMD 873-4410 RL	0.140	0.075	0.053
BAS716	NXP	SMD 873-4500 RL	0.189	0.101	0.073
BAV23	NXP	SMD 108-1207 RL	0.290	0.193	0.180
BAV23S	NXP	SMD 873-4623 RL	0.195	0.106	0.075
BAV70	NXP	SMD 108-1208 RL	0.198	– –	– –
BAV70W	NXP	SMD 108-1209 RL	0.064	0.030	0.025
BAV99	NXP	SMD 108-1211 RL	0.240	0.070	0.049
BAV99S	NXP	SMD 873-4631 RL	0.176	– –	– –
BAV99W	NXP	SMD 108-1212 RL	0.127	0.066	0.042
BAV102	NXP	SMD 109-7174 RL	0.067	0.066	0.043
BAV103	NXP	SMD 109-7175 RL	0.240	0.147	0.097
BAV199W	NXP	SMD 873-4615 RL	0.152	0.081	0.059
BAW56	NXP	SMD 108-1213 RL	0.092	– –	– –
PMLL4148L	NXP	SMD 109-7176 RL	0.260	0.112	0.093
PMBD914	NXP	SMD 873-7800 RL	0.057	0.031	0.022
			10+	**50+**	**100+**
PMBD7000	NXP	SMD 162-6499	0.041	0.035	0.026

Reels of 3000 — **Price Per Reel**

Mftrs. List No.	Order Code	1+	3+
BAS16.215	SMD 156-2354	31.76	28.59

Switching

Mini-melf
L=3.7, Dia.=1.5

Quadro-melf
H=1.5, W=1.5, D=3.7

Micro-melf
L=1.9, Dia.=1.35

Leadless, hermetically sealed versions of the IN4148. The quadro-melf and micro-melf packages have square cross-sectional housings designed to provide stability, and greater 'pick and place' accuracy. Micro-melf has the same footprint as industry standard SOT-23/ SOD-232 outlines. Supplied on 8mm tape.

V_{rrm} V	V_r V	I_{fsm} A	I_{frm}	I_f mA	$I_{f(av)}$ mA	P_d mW	Package	Mftrs. List No.	Mftrs. List No.
100	75	2	500 mA	500	150	500	MiniMELF	MC	LL4148
100	75	2	0.45 mA	200	150	500	MiniMELF	SLX	LL4148
100	75	2	0.45 mA	200	150	500	QuadroMELF	SLX	LS4148
100	75	2	0.45 mA	200	0.15	500	MicroMELF	SLX	MCL4148
—	—	2	—	450	—	500	QuadroMELF	MC	LS4148

Order Multiple=10 — **Price Each**

Mftrs. List No.	Mftr.	Order Code	10+	250+	1K+	2K5+
LL4148	MC	SMD 735-5513 RL	0.076	0.045	0.030	0.024
LL4148	SLX	SMD 954-9986 RL	0.057	– –	– –	– –
LS4148	SLX	SMD 954-9994 RL	0.049	0.032	0.026	0.016
MCL4148	SLX	SMD 955-0089 RL	0.074	0.049	0.038	0.022
LS4148	MC	SMD 162-1884	0.025	0.018	0.015	0.012

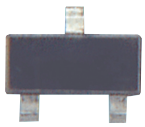
211252

Reel of 2500 — **Price Per Reel**

Mftrs. List No.	Order Code	1+	3+
LL4148-GS08	NEW SMD 156-2352	54.41	48.97

SOT-23

ON Semiconductor



- Low capacitance
- Fast reverse recovery times
- Popular compact Industry standard footprint
- Dual versions available in various configurations

14311 max. V	I_F av max. mA	I_{FS} (t<1 sec) non-rep, max. mA	V_F max. V	@ I_F mA	Configuration	Mftrs. List No.
30	200	600	0.4	10	Common Anode	BAT54ALT1G
30	200	600	0.4	10	Common Cathode	BAT54CLT1G
30	200	600	0.8	100	Common Anode	BAT54LT1G
30	200	600	0.4	10	Series	BAT54SLT1G
50	200	500	1	100	Common Anode	BAV74LT1G
70	100	—	1.25	150	Single	BAL99LT1G
70	15	100	1	15	Series	BAS70-04LT1G
70	215	500	1.25	150		BAV199LT1G
70	200	500	1.25	150	Common Cathode	BAV70LT1G
70	215	500	1.25	150	Series	BAV99LT1G
70	200	500	1.25	150	Series	BAW56LT1G
75	200	500	1.25	150	Single	BAS116LT1G
100	200	500	1	10	Single	MMBD914LT1G
120	200	625	1.25	200	Single	BAS19LT1G
200	200	625	1.25	200	Single	BAS20LT1G
250	200	625	1.25	200	Single	BAS21LT1G

496718

Mftrs. List No.	Order Code	5+	25+	100+	1K+
		Price Each			
BAL99LT1G	SMD 143-1103	0.018	0.013	0.012	0.011
BAS116LT1G	SMD 143-1104	0.177	0.125	0.103	0.078
BAS19LT1G	SMD 143-1105	0.081	0.059	0.051	0.041
BAS20LT1G	SMD 143-1106	0.076	0.056	0.047	0.035
BAS21LT1G	SMD 143-1107	0.084	0.061	0.052	0.042
BAS70-04LT1G	SMD 143-1108	0.240	0.177	0.145	0.128
BAT54ALT1G	SMD 143-1111	0.196	0.140	0.094	0.069
BAT54CLT1G	SMD 143-1112	0.163	0.118	0.096	0.083
BAT54LT1G	SMD 143-1113	0.140	0.103	0.081	0.060
BAT54SLT1G	SMD 143-1114	0.196	0.140	0.094	0.069
BAV199LT1G	SMD 143-1115	0.250	– –	– –	– –
BAV70LT1G	SMD 143-1116	0.097	0.069	0.059	0.040
BAV74LT1G	SMD 143-1117	0.021	0.016	0.014	0.012
BAV99LT1G	SMD 143-1118	0.100	0.071	0.061	0.041
BAW56LT1G	SMD 143-1119	0.097	– –	– –	– –
MMBD914LT1G	SMD 143-1125	0.078	0.057	0.049	0.039

LL-34 and SOT-23

FAIRCHILD SEMICONDUCTOR

LL-34

SOT-23

Characteristic	V_{rrm} V	$I_{f(av)}$ mA	V_f V	@	I_f mA	Device Marking	Package	Mftrs. List No.
	75	200	1		10	5	SOT-23	MMBD914
	75	200	1		10	5H	SOT-23	MMBD4148
High conductance	100	200	1		10	—	LL-34	FDLL4148
	90	200	1		200	L21	SOT-23	BAS31
	100	200	1		100	A8.	SOT-23	BAS19
Small Signal	100	400	0.72		5	—	LL-34	FDLL4448
	180	200	1.1		200	A13	SOT-23	MMBD1503A
	180	200	1.1		200	A14	SOT-23	MMBD1504A
	200	200	1		100	B82	SOT-23	BAS21

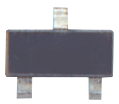
Low Power Signal Diodes - continued

LL-34 and SOT-23 - continued

211295

Mftrs. List No.	Order Code	Price Each 10+	100+	1K+	10K+
BAS19	SMD 984-3833 RL	0.118	0.083	0.060	0.029
BAS21	SMD 984-3728 RL	0.136	– –	– –	– –
BAS31	SMD 984-3671 RL	0.059	– –	– –	– –
FDLL4148	SMD 984-3710 RL	0.053	0.042	0.031	0.015
FDLL4448	SMD 149-5127	0.016	0.012	0.010	0.007
MMBD1503A	SMD 984-3639 RL	0.220	0.142	0.098	0.041
MMBD1504A	SMD 984-3647 RL	0.197	– –	– –	– –
MMBD4148	SMD 984-4040 RL	0.112	0.073	0.050	0.021
MMBD914	SMD 984-4058 RL	0.135	0.085	0.059	0.024

SOT-23 and SOT-223 High Speed Switching



SOT-23
h=1.12, W=3.05, D=2.5

SOD-123

V_{rrm} V	$I_{f(av)}$ mA	V_f V	@	I_f mA	Device Marking	Package	Mftr.	Mftrs. List No.
70	200	1		50	A4	SOT-23	MC	TBAV70
70	200	1.25		150	A1	SOT-23	MC	TBAW56
70	200	1		100	A4	SOT-23	FCH	BAV70
70	200	1		50	A7	SOT-23	FCH	BAV99
70	215	1		50	A7	SOT-23	ON	BAV99LT1G.
70	200	1.25		150	A1	SOT-23	FCH	BAW56
75	200	1		50	A6	SOT-23	ON	BAS16LT1G
75	—	0.855		10	A6	SOT-23	MC	BAS16
75	200	0.855		10	A4	SOT-23	MC	BAV70
75	200	0.855		10	A7	SOT-23	MC	BAV99
75	200	0.855		10	A1	SOT-23	MC	BAW56
85	200	1		50	A6	SOT-23	FCH	BAS16
85	200	1		50	A6	SOT-23	MC	TBAS16
85	215	1		10	—	SOT-23	MC	BAS116
100	200	1		10	51	SOD-123	ON	MMSD4148T1G

Order Multiple=10

Mftrs. List No.	Mftr.	Order Code	Price Each 10+	100+	1K+	3K+
BAS16	FCH	SMD 984-3957 RL	0.123	– –	– –	– –
TBAS16	MC	SMD 920-7147 RL	0.061	0.045	0.031	0.026
BAS16LT1G	ON	SMD 955-8659 RL	0.121	– –	– –	– –
BAV70	FCH	SMD 984-3604 RL	0.112	0.075	0.045	0.025
TBAV70	MC	SMD 920-7180 RL	0.127	0.063	0.048	0.042
BAV99	FCH	SMD 984-3612 RL	0.124	– –	– –	– –
BAV99LT1G.	ON	SMD 955-8667 RL	0.131	0.074	0.057	0.038
BAW56	FCH	SMD 984-3620 RL	0.132	0.077	0.058	0.038
TBAW56	MC	SMD 920-7198 RL	0.127	0.063	0.048	0.042
MMSD4148T1G	ON	SMD 955-6079 RL	0.177	0.120	0.105	0.077
BAS116	MC	SMD 162-1824	0.042	0.030	0.024	0.021
BAS16	MC	SMD 162-1825	0.038	0.028	0.022	0.019
BAV70	MC	SMD 162-1836	0.042	– –	– –	– –
BAV99	MC	SMD 162-1837	0.041	– –	– –	– –
BAW56	MC	SMD 162-1838	0.042	0.030	0.024	0.021

211140

Reels of 1000

Mftrs. List No.	Order Code	Price Per Reel 1+	5+	10+
BAV99	SMD 115-6418	58.80	37.81	32.45
		1+	3+	
BAS16	SMD 156-2358	87.38	78.64	

D Series Diode Network

- Reverse voltage Vr 80V
- Reverse current Ir 1.0µA @ Vr=70V
- Forward current If 100mA
- Forward voltage Vf 1.2V @ If=100mA
- Reverse recovery time trr 4ns @ Vr=6V, If=5mA, RI=50Ω
- Package power 200mW @ 25°C
- Capacitance 5.5pF @ Vr=6V, f=1MHz
- Operating temperature -25°C to +80°C
- Case style single in line (SIL)

529312

Mftrs. List No.	Diode No.	Pin No.	Common Polarity	Diode Circuit	Order Code	Price Each 1+	10+	100+
D63C	3	6	Cathode	Isolated	168-9662	0.77	0.62	0.52
D83A	4	8	Anode	Isolated	168-9669	0.95	0.75	0.62
D83C	4	8	Cathode	Isolated	168-9670	0.95	0.75	0.62
D51A	4	5	Anode	Bussed with pin 1 common	168-9659	0.57	0.46	0.37
D51C	4	5	Cathode	Bussed with pin 1 common	168-9660	0.57	0.46	0.37
D61C	5	6	Cathode	Bussed with pin 1 common	168-9661	0.68	0.54	0.45
D71A	6	7	Anode	Bussed with pin 1 common	168-9663	0.82	0.66	0.55
D71C	6	7	Cathode	Bussed with pin 1 common	168-9664	0.82	0.66	0.55
D72A	6	7	Anode	Bussed with centre common	168-9665	0.82	0.66	0.55
D72C	6	7	Cathode	Bussed with centre common	168-9667	0.82	0.66	0.55
D81C	7	8	Cathode	Bussed with pin 1 common	168-9668	0.95	0.75	0.62
D91A	8	9	Anode	Bussed with pin 1 common	168-9671	1.02	0.81	0.68
D91C	8	9	Cathode	Bussed with pin 1 common	168-9672	1.02	0.81	0.68
D92A	8	9	Anode	Bussed with centre common	168-9673	1.02	0.81	0.68
D92C	8	9	Cathode	Bussed with centre common	168-9674	1.02	0.81	0.68

Small Signal

Application code key:
HS=High speed

V_{rrm} V	$I_{f(av)}$ mA	V_f V	@	I_f mA	Package	App'n Code	Mftrs List No.
30	200	0.4		10	DO-34	HS	BAT85◆
50	200	0.38		0.1	DO-34	HS	BAT86
75	100	1.0		100	DO-35	HS	BAW62
100	200	1.0		10	DO-35	HS	1N4148
75	150	0.72		5	DO-35	HS	1N4448
200	250	1.2		200	DO-35	HS	BAV20
250	250	1.2		200	DO-35	HS	BAV21

◆ Schottky barrier

Order Multiple=5

Mftrs. List No.	Order Code	Price Each 5+	25+	100+	1K+	3K+
BAT85	109-7299	0.141	0.092	0.087	0.079	0.058
BAT86	109-7300	0.230	0.153	0.152	0.141	0.134
BAV20	109-7302	0.037	0.025	0.019	0.014	0.012
BAV21	109-7303	0.040	0.028	0.022		
BAW62	109-7304	0.111	0.055	0.027		
Order Multiple=10		**10+**	**100+**	**250+**	**1K+**	
1N4148	108-1177	0.035	0.021	0.015	0.009	
1N4448	109-7294	0.046	0.012	0.008		

211427

Reel of 10000

Mftrs. List No.	Order Code	Price Per Reel 1+
BAT85.113	156-2331	428.51

Small Signal

Application code key:
GP=General Purpose, HV=High Voltage, SW=High Freq. Switching

V_{rrm} max V	$I_{f(av)}$ max mA	V_f V	@	I_f mA	App'n Code	Mftrs List No.
100	200	1		100	SW	1N4448
100	200	1		10	SW	1N4148
75	200	1		10	SW	1N914

211294

Order Multiple=10

Mftrs. List No.	Order Code	Price Each 10+	100+	1K+	10K+
1N4448	984-3698	0.041	0.029	0.021	0.010
1N914	984-3817	0.041	0.029	0.021	0.010
		10+	**250+**	**1K+**	**5K+**
1N4148	984-3680	0.027	0.023	0.016	0.010

Small Signal

a) L=4.25, Dia=1.85 b) L=5.2, Dia=2.7
c) L=3.81, Dia=1.71 d) L=7.6, Dia=2.7
Coloured band indicates cathode

V_{rrm} V	$I_{f(av)}$ mA	V_f V	@	I_f mA	Package	Mftr	Mftrs List No.
20	350	0.44		10	(a)	ST	BAT47
30	100	0.4		10	(a)	ST	BAT42
30	100	0.45		15	(a)	ST	BAT43
30	110	0.45		10	(d)	SEM	OA47
40	350	0.4		200	(a)	ST	BAT48
75	100	1		100	—	MC	1N4448
75	10	1		100	—	MC	1N4148W
100	150	1		10	(a)	MC	1N4148.
100	100	0.45		1	(a)	ST	BAT41
100	150	0.45		10	(a)	ST	BAT46
115	50	2.1		30	(d)	SEM	OA91/05
115	50	1.85		30	(d)	SEM	OA95/05
150	200	1.3		100	(a)	FCH	BAX16TR
350	400	1.5		2	(b)	VSH	BY206GP

■ Germanium ◆ Silicon Schottky barrier

Order Multiple=5			Price Each			
Mftrs. List No.	Mftr.	Order Code	5+	25+	100+	1K+
BAT41	ST	**980-1421**	0.480	0.290	0.181	0.135
BAT42	ST	**980-1430**	0.480	0.290	0.181	0.135
BAT43	ST	**980-1448**	0.390	0.192	0.114	0.073
BAT46	ST	**980-1456**	0.370	0.230	0.146	0.114
BAT47	ST	**980-1464**	0.410	0.192	0.125	0.083
BAT48	ST	**980-1472**	0.138	0.086	0.065	0.042
			5+	**25+**	**100+**	**1K+**
BY206GP	VSH	**102-1751**	0.350	0.194	0.192	0.113
OA47	SEM	**120-8634**	1.110	0.970	0.850	0.460
OA91/05	SEM	**120-8635**	0.570	0.450	0.360	0.230
OA95/05	SEM	**120-8636**	0.570	0.450	0.360	0.230
Order Multiple=10			**10+**	**100+**	**1K+**	**3K+**
BAX16TR	FCH	**107-6355**	0.030	0.018	0.017	0.006
1N4448	MC	**162-1822**	0.038	0.028	0.023	0.019
1N4148W	MC	SMD **162-1821**	0.040	0.029	0.023	0.020
			10+	**250+**	**1K+**	**5K+**
1N4148	FCH	**984-3680**	0.027	0.023	0.016	0.010
1N4148.	MC	**956-5124**	0.011	0.008	0.007	0.006
			10+	**100+**	**250+**	**1K+**

211387

			Price Per Reel		
Mftrs. List No.		Order Code	1+	3+	+
1N4148TR	REEL 10000	**156-2351**	54.70	49.23	– –
			1+	**3+**	
BAT42	REEL 4000	**156-2336**	175.50	166.66	
BAT48	REEL 4000	**156-2337**	163.03	156.86	

High Voltage Rectifier Stacks

SOD-61

- Glass passivated for excellent stability
- Glass packages with Al-bonded chips allow use under high operating temperature conditions
- Controlled avalanche capable of absorbing transients during flash-over at high voltage output

V_{rwm} kV	V_{rrm} kV	$I_{f(av)}$ mA	t_{rr} ns	Mftrs. List No.	Typical Applications
10	12	5	100	BY8410	TV
12	14	5	100	BY8412.	TV
18	22	3	100	BY8418	TV

*=typical

211263

Order Multiple=5		Price Each			
Mftrs. List No.	Order Code	5+	100+	1K+	3K+
BY584	**367-539**	0.720	0.370	0.260	0.156
BY8410	**164-161**	0.850	0.420	0.290	0.220
BY8412.	**663-803**	0.950	0.270	0.260	0.240
BY8418	**663-815**	0.670	0.340	0.240	0.200

High Voltage

DO-41: Plastic, L=5.2, Dia.=2.7
Coloured band indicates cathode

V_{rwm} kV	V_{rrm} kV	$I_{f(av)}$ mA	I_{frm} A	Package	Mftr.	Mftrs. List No.
0.18	1600	360	15.0	DO-41	GS	BYX10GP
—	—	250	—	SOD-57	TFK	BY203-20S-TAP

Order Multiple=5		Price Each			
Mftrs. List No.	Order Code	5+	100+	1K+	3K+
BY203-20S-TAP	**107-5763**	0.530	0.270	0.198	0.151
BYX10GP	**954-9218**	0.370	0.198	0.197	0.116

211395

Box of 5000		Price Per Box
Mftrs. List No.	Order Code	1+
BY203-20STAP	**156-2359**	2,200.04

Low Power, Low Leakage Diodes

DO-34

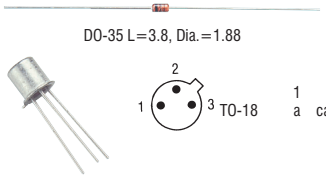
V_{rrm} V	I_F mA	V_F mV	@	I_F mA	Package	Mftrs List No.
125	0.25	1000		100	DO-34	BAS45A

Order Multiple=5		Price Each			
Mftrs. List No.	Order Code	5+	25+	100+	1K+
BAS45A	**109-7293**	0.700	0.360	0.270	0.145

211425

Reel of 10000		Price Per Reel
Mftrs. List No.	Order Code	1+
BAS45A.113	NEW **156-2360**	820.44

Low Leakage



DO-35 L=3.8, Dia.=1.88

TO-18

LL-34 L=3.5, Dia.=1.5

V_{RRM} max V	I_F (av) max mA	V_F V	@	I_F mA	Package	Mftr.	Mftrs List No.
150	200	1		200	DO-35	FCH	FDH300A...
150	200	1.15		300	DO-35	FCH	FDH333
125	200	0.8		10	DO-35	FCH	1N3595

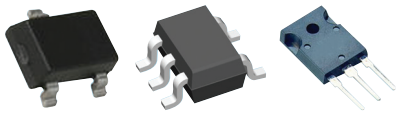
V_{RWM} V	V_{BR} max. V	Test Current mA	Package	Mftr.	Mftrs List No.
5	7.25	10	DO-15	MC	SA5A
12	15.3	1	DO-15	MC	SA12A
24	30.7	1	DO-15	MC	SA24A
30	38.3	1	DO-15	MC	SA30A

211257

Order Multiple=1		Price Each			
Mftrs. List No.	Order Code	1+	25+	100+	1K+
FDH300A...	**984-3752**	0.134	0.082	0.057	0.033
FDH333	**984-3760**	0.155	0.103	0.071	0.047
SA5A	**956-5329**	0.740	0.670	0.590	0.480
SA12A	**956-5337**	0.760	0.740	0.660	0.520
SA30A	**956-5361**	0.760	0.740	0.660	0.520
Order Multiple=10		**10+**	**100+**	**250+**	**1K+**
1N3595	**984-3744**	0.183	0.114	0.092	0.055
SA24A	**956-5353**	0.760	0.740	0.660	0.520

Low Power Schottky Diodes

Small Signal & Power Schottky Barrier Diode



SOT323 SOT666 TO247

- Very low conduction losses
- Negligible switching losses
- Low forward and reverse recovery times
- Extremely fast switching
- Surface mount device
- Low capacitance diode

V_{rrm} V	I_f mA	Vf mV	Max. Junction Temp °C	Case Style	Mftrs. List No.
Single Diode					
30	300	580	150	SOT-323	BAT30SWFILM
30	300	580	150	SOT-666	BAT30-07P6FILM
30	300	580	150	SOT-666	BAT30-09P6FILM
30	300	580	150	SOT-323	BAT30AWFILM
30	300	580	150	SOT-323	BAT30CWFILM
100	200	1000	150	SOD-323	BAT41JFILM
30	30	380	150	TO-247	STPS60L30CW
Dual Diode - Common Cathode					
45	30	500	150	TO-247	STPS60L45CW

545897

Mftrs.		Price Each				
List No.	Order Code	1+	25+	100+	250+	500+
BAT30SWFILM	SMD **174-9247**	0.070	0.060	0.050	0.040	0.030
BAT30-07P6FILM	SMD **174-9248**	0.100	0.090	0.080	0.060	0.058
BAT30-09P6FILM	SMD **174-9251**	0.100	0.090	0.080	0.060	0.058
BAT30AWFILM	SMD **174-9252**	0.070	0.060	0.050	0.040	0.030
BAT30CWFILM	SMD **174-9253**	0.070	0.060	0.050	0.040	0.030
BAT41JFILM	SMD **174-9255**	0.070	0.060	0.050	0.040	0.030
STPS60L30CW	**174-9256**	5.340	4.680	4.160	3.400	3.160
STPS60L45CW	**174-9257**	5.870	5.140	4.570	3.740	3.470

High Frequency Schottky Barrier Diode

SOT23

V_{rrm} V	I_f mA	Vf mV	Mftrs. List No.
Single Diode			
5	0.03	230	1SS350-TB-E
55	0.01	350	1SS345-TB-E
Dual Diode - Series			
5	30	230	1SS351-TB-E
10	35	580	1SS366-TB-E
10	35	580	1SS375-TL-E
Dual Diode - Series Reversed			
2	50	320	SBX201C-TB-E

High-frequency SBD series achieve the top level of low VF and small inter terminal capacitance, and are best for high frequency detection and mixing up to X band.

Low Power Schottky Diodes - continued

High Frequency Schottky Barrier Diode - continued

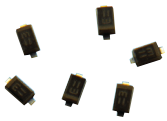
540848

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
1SS350-TB-E	SMD 171-3479	0.73	0.61	0.50	0.43	0.35
1SS345-TB-E	SMD 171-3478	1.12	0.96	0.77	0.66	0.55
1SS351-TB-E	SMD 171-3480	0.73	0.61	0.50	0.43	0.35
1SS366-TB-E	SMD 171-3481	1.01	0.85	0.70	0.58	0.49
1SS375-TL-E	SMD 171-3482	0.85	0.72	0.58	0.50	0.43
SBX201C-TB-E	SMD 171-3483	1.49	1.26	1.03	0.86	0.73

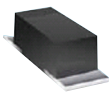
Schottky Barrier Chip Diode Series

BOURNS

SMA, H=3.7, W=2.1, D=1.27



CD0603, H=1.7, W=0.8, D=0.6



CD1607, H=3.5, W=1.5, D=1.5

SMD

Bourns offers small-signal Schottky Barrier Diodes for switching and rectification applications in compact chip packages.

V_{RRM} max. V	I_F av max. A	Ifs max. A	V_F max. V	@ I_F A	Package	Mftrs. List No.
40	1	30	0.5	1	Mini SMA	CD1607-B140LF
40	3	100	0.5	3	SMA	CD214A-B340LF
45	30	—	0.37	0.001	0603	CD0603-B00340
60	1	30	0.7	1	SMA	CD214A-B160LF

497076

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	+	+
CD1607-B140LF	SMD 145-6527	0.141	0.108	0.101	– –	– –
CD214A-B160LF	SMD 145-6528	0.089	0.068	0.060	– –	– –
CD214A-B340LF	SMD 145-6529	0.210	0.162	0.149	– –	– –
CD0603-B00340	SMD 145-6534	0.087	0.066	0.058	– –	– –

Small Signal Schottky Barrier Diodes

NXP

SMD

SOT-323

SOT-666

V_{RRM}	I_F (mA)	Mftr. List No.
SOD-323		
10	2	PMEG1020EA
10	2000	PMEG1020EJ
20	1000	PMEG2010BEA
20	1000	PMEG2010EA
20	1500	PMEG2015EA
20	2000	PMEG2020AEA
20	2000	PMEG2020EJ
20	500	PMEG2005AEA
20	1000	BAT760
30	500	PMEG3005AEA
30	1000	PMEG3010BEA
40	500	PMEG4005AEA
40	1000	PMEG4010BEA
40	200	1PS76SB21
40	120	1PS76SB40
70	70	1PS76SB70
SOT-23		
4	30	PMBD353
20	1000	PMEG2010AET
20	500	PMEG2005ET
40	500	BAT720
40	120	BAS40-06
40	120	BAS40-05
40	120	BAS40
40	500	PMEG4005ET
70	70	BAS70
70	70	BAS70-05
SOD-123F		
10	2000	PMEG1020EH
10	3	PMEG1030EH
20	500	PMEG2005EH
20	1000	PMEG2010AEH
20	2000	PMEG2020EH
30	1500	PMEG3015EH
30	2000	PMEG3020EH
40	500	PMEG4005EH
40	1000	PMEG4010CEH
40	1000	PMEG4010EH
60	1000	PMEG6010CEH
SOD-523		
4	30	1PS79SB17
20	500	PMEG2005EB
20	1000	PMEG2010AEB
30	200	1PS79SB10
30	200	PMEG3002AEB
40	200	1PS79SB30
30	200	1PS79SB31
40	120	1PS79SB40
70	70	1PS79SB70
SOD-323		
15	30	1PS88SB82
40	120	1PS88SB48
70	70	BAS70-07S
SOD-87		
20	1A	PRLL5817
40	A1	PRLL5819
SOD-880		
30	200	1PS70SB10
SOT-416		
40	120	1PS75SB45
SOT-143		
40	120	BAS40-07
70	70	BAS70-07
SOD-80		
50	200	BAS86
SOT-457		
60	1000	PMEG6010AED
SOT-666		
40	1000	PMEG4010BEV
20	500	PMEG2005AEV
10	2000	PMEG1020EV
30	200	BAT54VV
40	120	BAS40-05V

211400

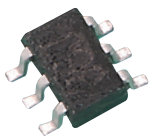
Mftrs. List No.	Order Code	Price Each 5+	100+	1K+	3K+
SOD-123F					
PMEG1020EH	SMD 151-0669	0.270	0.220	0.187	0.142
PMEG1030EH	SMD 151-0670	0.210	0.167	0.145	0.128
PMEG2005EH	SMD 151-0671	0.210	0.167	0.145	0.123
PMEG2010AEH	SMD 151-0673	0.230	0.185	0.159	0.130
PMEG2020EH	SMD 151-0679	0.230	0.189	0.133	0.100
PMEG3015EH	SMD 151-0686	0.230	0.185	0.159	0.140
PMEG3020EH	SMD 151-0687	0.210	0.167	0.145	0.128
PMEG4005EH	SMD 151-0688	0.200	0.161	0.139	0.118
PMEG4010CEH	SMD 151-0690	0.230	0.185	0.159	0.136
PMEG4010EH	SMD 151-0692	0.220	0.178	0.153	0.125
PMEG6010CEH	SMD 151-0694	0.230	0.185	0.159	0.136
SOD-323					
1PS76SB21	SMD 873-4038 RL	0.310	0.133	0.104	0.085
1PS76SB70	SMD 873-4062 RL	0.138	0.060	0.048	0.040
BAT760	SMD 873-4593 RL	0.350	0.210	0.155	0.119
PMEG1020EA	SMD 873-7819 RL	0.420	0.260	0.180	0.141
PMEG1020EJ	SMD 873-7827 RL	0.210	0.128	0.089	0.070
PMEG2005AEA	SMD 873-7843 RL	0.340	0.210	0.148	0.115
PMEG2010BEA	SMD 873-7886 RL	0.360	0.220	0.158	0.121
PMEG2010EA	SMD 873-7908 RL	0.370	0.230	0.164	0.126
PMEG2015EA	SMD 873-7924 RL	0.167	0.107	0.080	0.063
PMEG2020AEA	SMD 873-7940 RL	0.510	0.310	0.220	0.172
PMEG3005AEA	SMD 873-7975 RL	0.340	0.210	0.148	0.115
PMEG3010BEA	SMD 873-7991 RL	0.370	0.230	0.164	0.126
PMEG4005AEA	SMD 873-8025 RL	0.310	0.188	0.134	0.104
PMEG4010BEA	SMD 873-8041 RL	0.340	0.200	0.149	0.114
PMEG2020EJ	SMD 873-7959 RL	0.420	0.260	0.182	0.142
SOD-523					
1PS79SB10	SMD 873-4070 RL	0.310	0.133	0.104	0.086
1PS79SB17	SMD 873-4089 RL	0.127	0.060	0.059	0.058
1PS79SB30	SMD 873-4097 RL	0.162	0.105	0.072	0.056
1PS79SB31	SMD 873-4100 RL	0.460	0.290	0.200	0.156
1PS79SB40	SMD 873-4119 RL	0.280	0.165	0.119	0.093
1PS79SB70	SMD 873-4143 RL	0.280	0.165	0.119	0.093
PMEG2005EB	SMD 873-7860 RL	0.330	0.200	0.142	0.111
PMEG2010AEB	SMD 873-7878 RL	0.310	0.188	0.134	0.104
PMEG3002AEB	SMD 873-7967 RL	0.320	0.194	0.138	0.107
SOD-80					
BAS86	SMD 873-4542 RL	0.159	0.083	0.060	0.041
SOD-880					
1PS70SB10	SMD 873-3880 RL	0.078	0.041	0.033	0.028
SOT-143					
BAS40-07	SMD 873-4364 RL	0.220	0.135	0.096	0.074
BAS70-07	SMD 873-4461 RL	0.220	0.135	0.096	0.074
SOT-23					
BAS40	SMD 873-4291 RL	0.159	0.085	0.060	0.041
BAS70	SMD 873-4429 RL	0.380	0.200	0.142	0.097
BAT720	SMD 873-4569 RL	0.350	0.187	0.133	0.088
BAS40-06	SMD 873-4348 RL	0.159	0.085	0.060	0.041
BAS40-05	SMD 873-4313 RL	0.159	0.085	0.060	0.041
PMEG2005ET	SMD 151-0672	0.210	0.167	0.145	0.114
PMEG2010AET	SMD 151-0674	0.133	0.108	0.092	0.082
PMEG4005ET	SMD 151-0689	0.173	0.144	0.127	0.104
BAS70-05	SMD 108-1186 RL	0.104	0.071	0.055	0.047
SOT-323					
1PS70SB20	SMD 873-3929 RL	0.300	0.128	0.100	0.082
1PS70SB84	SMD 873-3988 RL	0.500	0.210	0.168	0.136
BAS40W	SMD 873-4380 RL	0.133	0.082	0.058	0.046
BAS70W	SMD 873-4496 RL	0.164	0.097	0.069	0.055
1PS70SB14	SMD 873-3899 RL	0.110	0.049	0.037	0.032
1PS70SB16	SMD 873-3910 RL	0.051	0.025	0.020	0.017
1PS70SB15	SMD 873-3902 RL	0.080	0.042	0.034	0.030
BAS40-05W	SMD 873-4330 RL	0.129	0.080	0.056	0.045
BAS40-06W	SMD 873-4356 RL	0.134	0.083	0.058	0.047
BAS70-06W	SMD 873-4453 RL	0.075	0.046	0.033	0.026
BAS70-05W	SMD 873-4445 RL	0.122	0.085	0.081	0.074
BAS40-04W	SMD 873-4305 RL	0.138	0.085	0.060	0.048
BAS70-04W	SMD 873-4437 RL	0.137	0.114	0.101	0.098
SOT-363					
BAS70-07S	SMD 873-4470 RL	0.113	0.058	0.042	0.041
1PS88SB82	SMD 873-4160 RL	0.880	0.460	0.330	0.220
1PS88SB48	SMD 873-4151 RL	0.280	0.144	0.105	0.087
SOT-416					
1PS75SB45	SMD 873-4020 RL	0.088	0.039	0.028	0.026
SOT-457					
PMEG6010AED	SMD 873-8068 RL	0.360	0.220	0.158	0.121
SOT-666					
PMEG1020EV	SMD 873-7835 RL	0.210	0.126	0.092	0.072
PMEG2005AEV	SMD 873-7851 RL	0.122	0.074	0.052	0.050
PMEG4010BEV	SMD 873-8050 RL	0.156	0.092	0.066	0.055
BAS40-05V	SMD 873-4321 RL	0.490	0.300	0.210	0.156
BAT54VV	SMD 873-4550 RL	0.350	0.210	0.145	0.110

Mftrs. List No.	Order Code	Price Each 5+	100+	1K+	3K+
SOT-666					
1PS76SB40	SMD 134-9646 ●	0.078	0.057	0.045	0.037
PMBD353	SMD 873-7789 ● RL	0.210	0.126	0.092	0.071
SOD-87		**5+**	**25+**	**100+**	**250+**
PRLL5817	SMD 108-1485 ● RL	0.520	0.220	0.210	0.187
PRLL5819	SMD 162-6505 ●	0.420	0.300	0.135	0.111

Small Signal Schottky Barrier Diodes

SOD-87

SOT-23, SOT-323


SOT-457

SOD-110

SOT-143B

SOD323

Double Diode

V_{RRM} V	I_F A	Configuration (Dual)	Case Style	Marking	Mfftrs List No.
30	0.2	Common Cathode	SOT-323	43	BAT54CW
30	0.2	Common : K1+A2	SOT-323	44	BAT54SW
30	0.2	Common Anode	SOT-23	L42/*V3	BAT54A
30	0.2	Common : K1+A2	SOT-23	—	BAT54S
30	0.2	Common Cathode	SOT-23	L43/*W1	BAT54C
30	0.2	Common Anode	SOT-23	2L	BAT754A
30	0.2	Common Cathode	SOT-23	2M	BAT754C
30	0.2	Common : K1+A2	SOT-23	2N	BAT754S
30	0.2	Diodes	SOT-143B	L41*	BAT74
40	0.2	Common Anode	SOT-23	L8*	BAT721A
40	0.2	Common Cathode	SOT-23	L9*	BAT721C
40	0.2	Common : K1+A2	SOT-23	L0*	BAT721S
70	70	Common Cathode	SOT-23	75*	BAS70-05
70	0.07	Common Cathode	SOT-23	74	BAS70-04

Single Diode

V_{RRM} V	I_F A	Case Style	Marking	Mfftrs List No.
4	0.03	SOT-23	A3*	BAT17
20	1	SOD-87	—	PRLL5817
25	1	SOT-457	—	1PS74SB23
30	0.2	SOT-23	—	BAT54
30	0.2	SOT-23	2K*	BAT754
30	0.2	SOT-323	L4*	BAT54W
30	0.2	SOD-323	S0	1PS76SB10
30	0.2	SOD-80C	—	BAS85

Mftrs. List No.	Order Code	Price Each 5+	25+	100+	1K+	3K+
1PS74SB23	SMD 108-1178 ●	0.450	0.270	0.220	0.164	0.151
1PS76SB10	SMD 108-1179 ● RL	0.090	0.056	0.043	0.033	0.032
BAS70-05	SMD 108-1186 ● RL	0.104	0.071	0.055	0.047	0.042
BAS85	SMD 109-7282 ● RL	0.440	0.270	0.183	0.115	0.103
BAT17	SMD 108-1187 ● RL	0.350	0.178	0.142	0.107	– –
BAT54	SMD 108-1190 ● RL	0.101	0.068	0.047	0.032	0.022
BAT54A	SMD 108-1191 ● RL	0.210	0.053	0.033	0.029	– –
BAT54C	SMD 108-1192 ● RL	0.186	0.095	0.066	0.040	0.027
BAT54CW	SMD 108-1193 ● RL	0.136	0.069	0.050	0.043	0.021
BAT54S	SMD 108-1194 ● RL	0.168	– –	– –	– –	– –
BAT54SW	SMD 108-1195 ● RL	0.136	0.069	0.050	0.043	0.021
BAT54W	SMD 108-1197 ● RL	0.139	0.069	0.055	0.044	0.031
BAT721A	SMD 108-1198 ● RL	0.152	0.117	0.097	0.090	0.083
BAT721C	SMD 108-1199 ● RL	0.350	0.200	0.166	0.119	0.113
BAT721S	SMD 108-1200 ● RL	0.880	0.520	0.430	0.310	0.290
BAT74	SMD 108-1201 ● RL	0.310	0.163	0.161	0.148	– –
BAT754	SMD 108-1203 ● RL	0.105	0.064	0.050	0.036	0.035
BAT754A	SMD 108-1204 ● RL	0.119	0.084	0.063	0.059	0.050
BAT754C	SMD 108-1205 ● RL	0.120	0.072	0.058	0.044	0.042
BAT754S	SMD 108-1206 ● RL	0.120	0.072	0.058	0.044	0.042
PRLL5817	SMD 108-1485 ● RL	0.520	0.220	0.210	0.187	0.156
BAS70-04	SMD 162-6495 ●	0.310	0.230	0.167	0.109	0.069

423176

Mftrs. List No.		Order Code	Price Per Reel 1+	3+
BAT54.215	REEL 3000	SMD 156-2315 ●	56.41	50.77
BAT54C.215	REEL 3000	SMD 156-2316 ●	59.60	53.64
BAT54S.215	REEL 3000	SMD 156-2317 ●	58.67	52.80
BAT254.115	REEL 3000	SMD 156-2303 ●	192.89	
PRLL5817.115	REEL 2000	SMD 156-2312 ●	231.88	208.70
BAS85.115	REEL 2500	SMD 156-2311 ●	89.24	80.32

'Mini-melf Schottky'

L=3.6, Dia=1.62

I_F (av) A	I_{FSM} A	I_{FRM} A	V_{RRM} V	P_{tot} mW	Mftrs List No.
0.2	4	.5	30	0.2	TMMBAT42FILM
0.35	7.5	1	40	330	TMMBAT48FILM

Ring denotes cathode

211259

Order Multiple=5			Price Each			
Mftrs. List No.	Order Code	5+	100+	250+	1K+	3K+
TMMBAT42FILM	SMD 980-4226 ● RL	0.210	0.135	0.105	0.052	0.041
TMMBAT48FILM	SMD 980-4234 ●	0.240	0.149	0.127	0.071	0.057

Reels of 2500		Price Per Reel	
Mftrs. List No.	Order Code	1+	3+
TMMBAT42FILM.	SMD 156-2280 ●	103.16	97.76
TMMBAT48FILM...	SMD 156-2339 ●	72.11	64.91

Schottky Diodes, 0.03A – 1A

SOD80C (Mini-melf)

L=3.7, Dia.=1.6
Grey band denotes cathode

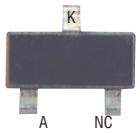
SOT-23

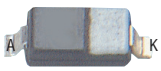
I_F A	V_{RRM} V	Device Marking	Package	Mftrs List No.
0.2	30	—	SOD-80C	BAS85
0.03	4	A3*	SOT-23	BAT17

211404

Order Multiple=5			Price Each		
Mftrs. List No.	Order Code	5+	25+	100+	250+
BAS85	SMD 109-7282 ● RL	0.440	0.270	0.183	0.115
		5+	**100+**	**1K+**	**3K+**
BAT17	SMD 108-1187 ● RL	0.350	0.178	0.142	0.107

High Current, 'SuperBAT' Schottky





- High current capability
- Low forward voltage

SOT-23: H=1.12, W=3.05, D=2.5

SOD-323: H=1.16, W=2.71, D=1.37

V_{RRM} V	I_F mA	V_F mV	@	I_F mA	I_{FSM} A	P_{tot} mW	Package	Device Marking	Mftrs. List No.
	1000	425		1000	12	500	SOT-23	ZS1	ZHCS1000
30	750	490		750	12	500	SOT-23	ZS7	ZHCS750
40	2000	500		2000	20	1100	SOT-23	ZS2	ZHCS2000
40	1500	640		1500	36	1100	SOT-23	L10	ZLLS2000
40	1000	560		1000	22	625	SOT-23	L10	ZLLS1000
40	750	1000		750	13	500	SOT-23	L05	ZLLS500
40	500	550		500	6.75	330	SOT-23	ZS5	ZHCS500
40	400	500		400	3	250	SOD-323	BD	ZHCS400
40	400	610		400	12	330	SOD-323	40	ZLLS400
60	1000	600		1000	12	500	SOT-23	S16	ZHCS1006
60	750	610		750	12	500	SOT-23	S76	ZHCS756
60	500	630		500	5.5	330	SOT-23	S56	ZHCS506

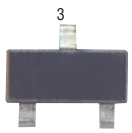
211059

Order Multiple=5			Price Each			
Mftrs. List No.	Order Code	5+	25+	100+	1K+	5K+
ZHCS400	SMD 952-5149 ● RL	0.370	0.250	0.182	0.139	0.118
ZHCS500	SMD 952-5068 ● RL	0.410	0.260	0.193	0.148	0.126
ZHCS506	SMD 952-5076 ● RL	0.500	0.320	0.240	0.185	0.157
ZHCS750	SMD 952-6765 ● RL	0.550	0.350	0.270	0.200	0.170
ZHCS756	SMD 952-5084 ● RL	0.690	0.450	0.280	0.220	0.177
ZHCS1000	SMD 952-6773 ● RL	0.550	0.350	0.270	0.200	0.171
ZHCS1006	SMD 952-5092 ● RL	0.490	0.370	0.260	0.160	0.136
ZHCS2000	SMD 952-5653 ● RL	0.710	0.470	0.340	0.270	0.230
ZLLS400	SMD 952-5661 ● RL	0.420	0.270	0.200	0.155	0.131
ZLLS500	SMD 952-5670 ● RL	0.430	0.270	0.210	0.157	0.134
ZLLS1000	SMD 952-5688 ● RL	0.560	0.370	0.280	0.210	0.179
ZLLS2000	SMD 952-5696 ● RL	0.790	0.520	0.390	0.290	0.250

Reels of 3000		Price Per Reel
Mftrs. List No.	Order Code	1+
ZHCS400TA	SMD 156-2308 ●	687.80
ZHCS500TA	SMD 156-2318 ●	602.12
ZHCS1006TA	SMD 156-2321 ●	1,115.45
ZLLS1000TA	SMD 156-2322 ●	796.52
ZHCS750TA	SMD 156-2323 ●	962.00
ZHCS1000TA	SMD 156-2324 ●	892.36
ZHCS2000TA	SMD 156-2330 ●	512.46

Low Power Schottky Diodes - continued

SOT-23, SOD-323(F), DO-35 Schottky



SOD-323

SOD-323F

SOT-23
H=1.12, W=3.0, D=2.5

Very low turn-on voltage and ultra-fast switching diodes, suitable for UHF detectors and other high frequency switching circuits. Supplied on 8mm tape.

V_{RRM} max. V	I_F av max. mA	V_F max. V	@ I_F mA	Device Marking	Package	Mftr.	Mftrs. List No.
40	300	0.4	10	D86	SOD-323	ST	BAT54JFILM
30	300	0.4	10	D86	SOT-23	ST	BAT54FILM
30	200	0.4	10	L4p	SOT-23	ZET	BAT54
30	100	0.4	10	D94	SOT-23	ST	BAR42FILM
30	200	0.4	10	—	DO-35	MC	BAT42
30	—	0.4	10	S7	SOD-123	MC	BAT42W
30	200	0.4	10	—	SOD-323F	MC	BAT42WS
30	200	0.4	10	LV3	SOT-23	MC	BAT54
30	200	0.4	10	B6	SOT-23	MC	BAT54A
30	200	0.4	10	L43	SOT-23	MC	BAT54C
30	200	0.4	10	L44	SOT-23	MC	BAT54S
30	200	0.32	1	L42	SOT-23	FCH	BAT54A
30	200	0.4	10	L42	SOT-23	ZET	BAT54A
30	200	0.4	10	L42	SOT-23	ST	BAT54AFILM
30	100	0.33	2	D95	SOT-23	ST	BAR43FILM
30	100	0.33	2	DB1	SOT-23	ST	BAR43AFILM
30	300	0.4	10	D87	SOT-23	ST	BAT54CFILM
30	200	0.4	10	L43	SOT-23	ZET	BAT54C
30	200	0.4	10	L43	SOT-23	MC	TBAT54C
30	100	0.33	2	DB2	SOT-23	ST	BAR43CFILM
30	200	0.4	10	L44	SOT-23	ZET	BAT54S
30	100	0.33	2	DA5	SOT-23	ST	BAR43SFILM
40	500	0.7	250	C	SOD-323	INF	BAT165
40	300	0.4	10	D88	SOT-23	ST	BAT54SFILM
40	120	0.38	1	44	SOT-23	INF	BAS40-04
70	70	0.7	1	74	SOT-23	INF	BAS70-04
70	30	0.41	1	D96	SOT-23	ST	BAS70-04FILM
70	30	0.41	1	D76	SOT-23	ST	BAR18FILM
70	15	0.41	1	D76	SOD-323	ST	BAS70JFILM
70	200	0.41	1	74	SOT-23	MC	BAS70-04

Order Multiple=5

Mftrs. List No.	Mftr.	Order Code	Price Each 5+	25+	100+	1K+	3K+
BAR18FILM	ST	SMD 980-1340 RL	0.370	0.196	0.149	0.086	0.077
BAR42FILM	ST	SMD 980-1359 RL	0.360	0.193	0.137	0.079	0.071
BAR43FILM	ST	SMD 980-1367 RL	0.350	0.200	0.149	0.082	0.080
BAR43AFILM	ST	SMD 980-1375 RL	0.410	0.200	0.149	0.082	0.080
BAR43CFILM	ST	SMD 980-1383 RL	0.410	0.200	0.149	0.082	0.080
BAR43SFILM	ST	SMD 980-1391 RL	0.230	0.114	0.082	0.048	0.046
BAS40-04	INF	SMD 105-6500 RL	0.260	0.196	0.149	0.062	0.060
BAS70-04	INF	SMD 105-6501 RL	0.260	0.195	0.150	0.064	0.062
BAS70-04FILM	ST	SMD 980-1405 RL	0.260	0.183	0.123	0.074	0.059
BAS70JFILM	ST	SMD 980-1413 RL	0.270	0.230	0.183	0.135	0.096
BAT54FILM	ST	SMD 980-1480 RL	0.149	0.086	0.080	0.048	0.046
BAT54	ZET	SMD 952-6480 RL	0.175	0.114	0.085	0.066	0.055
TBAT54	MC	SMD 920-7155 RL	0.280	0.126	0.102	0.087	0.076
BAT54AFILM	ST	SMD 988-5188 RL	0.071	0.050	0.042	0.036	0.032
BAT54A	ZET	SMD 952-6498 RL	0.440	0.280	0.210	0.160	0.136
BAT54A	FCH	SMD 122-8222	0.112	0.080	0.061	0.040	0.028
BAT54S	ZET	SMD 952-6510 RL	0.280	0.181	0.135	0.103	0.087
TBAT54A	MC	SMD 920-7163 RL	0.178	0.082	0.057	0.032	0.031
TBAT54A	MC	SMD 920-7163 RL	0.178	0.082	0.057	0.032	0.031
BAT54CFILM	ST	SMD 980-1499	0.149	0.105	0.071	0.042	0.036
BAT54C	ZET	SMD 952-6501 RL	0.280	0.180	0.134	0.103	0.086
TBAT54C	MC	SMD 920-7171 RL	0.178	0.082	0.057	0.032	0.031
BAT54JFILM	ST	SMD 980-1502 RL	0.092	0.060	0.053	0.041	0.035
BAT54SFILM	ST	SMD 980-1510	0.075	0.053	0.045	0.038	0.034
BAT165	INF	SMD 105-6502 RL	0.132	0.096	0.076	0.062	0.053

Order Multiple=10

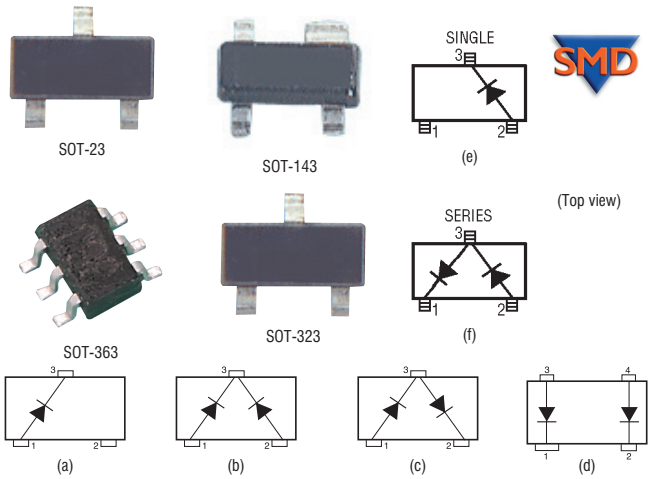
			Price Each 10+	250+	1K+	3K+	
BAS70-04	MC	SMD 162-1826	0.069	0.050	0.042	0.035	– –
BAT42	MC	162-1827	0.037	– –	– –	– –	– –
BAT42W	MC	SMD 162-1829	0.068	– –	– –	– –	– –
BAT42WS	MC	SMD 162-1831	0.058	0.042	0.035	0.030	– –
BAT54	MC	SMD 162-1832	0.050	0.036	0.030	0.025	– –
BAT54A	MC	SMD 162-1833	0.060	0.044	0.036	0.031	– –
BAT54C	MC	SMD 162-1834	0.060	0.044	0.036	0.031	– –
BAT54S	MC	SMD 162-1835	0.060	0.044	0.036	0.031	– –

450739

Reels of 3000

Mftrs. List No.	Order Code	Price Per Reel 1+	3+
BAS70JFILM	SMD 156-2309	380.95	
BAT54JFILM.	SMD 156-2310	144.41	130.00
BAS4004E6327	SMD 156-2313	160.97	144.87
BAS7004E6327	SMD 156-2314	109.86	105.09
BAR43FILM..	SMD 156-2325	208.75	187.85
BAR43CFILM.	SMD 156-2326	234.31	210.88
BAR43SFILM.	SMD 156-2327	219.63	197.66
BAS70-04FILM.	SMD 156-2328	128.20	124.03
BAT54FILM.	SMD 156-2329	132.39	126.49
BAT54SFILM.	SMD 156-2338	219.45	
+BAT165E6327	SMD 156-2306	159.00	145.00

SOT-23, SOT-143, SOT-363 and SOT-323



General Purpose Schottky

Supplied on 8mm tape

Min V_{BR} @ I_R 10µA V	Max V_F mv	Max Power @ 25°C mW	Max C_T @ 1 MHz pF	Device Marking	Package	Pin Config.	Mftrs. List No.
8	340	250	1	C2	SOT-23	c	HSMS-2822-TR1G
15	340	—	1	C0	SOT-23	a	HSMS-2820-TR1G
20	410	250	1.2	B0	SOT-23	a	HSMS-2810-TR1G
20	410	250	1.2	B2	SOT-23	c	HSMS-2812-TR1G
				B4	SOT-23	b	HSMS-2814-TR1G
20	410	250	1.2	B5	SOT-143	d	HSMS-2815-TR1G
70	410	250	2	A0	SOT-23	a	HSMS-2800-TR1G
70	410	250	2	A2	SOT-23	c	HSMS-2802-TR1G

◆I_F=100µA

Order Multiple=5

Mftrs. List No.	Order Code	Price Each 5+	100+	1K+	5K+
HSMS-2800-TR1G	SMD 105-6832 RL	0.71	0.48	0.46	0.30
HSMS-2802-TR1G	SMD 105-6834 RL	0.95	0.67	0.58	0.42
HSMS-2810-TR1G	SMD 105-6833 RL	0.75	0.50	0.49	0.33
HSMS-2812-TR1G	SMD 105-6835 RL	0.99	0.81	0.69	0.43
HSMS-2814-TR1G	SMD 105-6837 RL	1.04	0.70	0.68	0.45
HSMS-2815-TR1G	SMD 105-6838 RL	1.04	0.70	0.68	0.45
HSMS-2820-TR1G	SMD 105-6826 RL	0.69	0.50	0.43	0.33
HSMS-2822-TR1G	SMD 105-6836 RL	0.77	0.61	0.55	0.45

Reels of 3000

Mftrs. List No.	Order Code	Price Per Reel 1+	3+
HSMS-2815-TR1G	SMD 156-2341	1,191.59	1,132.81
HSMS-2800-TR1G	SMD 156-2342	751.59	676.43
HSMS-2812-TR1G	SMD 156-2343	1,165.46	1,106.04
HSMS-2822-TR1G	SMD 156-2345	1,056.32	1,004.86
HSMS-2814-TR1G	SMD 156-2346	1,191.59	1,132.81

Microwave Mixer

Min V_{BR}@ I_R10µA V	Max V_F mV	Max Power @ 25°C mW	Max C_T @ 1MHz pF	Device Marking	Package	Pin Config.	Mftrs. List No.
4	350	75	0.26	R1	SOT-23	e	HSMS-8101-TR1G
4	350	75	0.26	2R	SOT-23	f	HSMS-8202-TR1G

Price Each

Mftrs. List No.	Order Code	1+	100+	1K+	2K5+
HSMS-8101-TR1G	SMD 105-6851 RL	2.14	1.47	1.35	0.92
HSMS-8202-TR1G	SMD 105-6853 RL	1.73	1.53	1.41	1.05

Reel of 3000

Mftrs. List No.	Order Code	Price Per Reel 1+
HSMS-8202-TR1G	SMD 156-2348	2,475.16

Transient Suppression
Microwave Detector

Max. V_F mV @ 1 mA	Max. Power @ 25°C mW	Typ C_T @ 1MHz mW pF	Typical Video Resistance RV (KΩ)	Device Marking	Package	Pin Config.	Mftrs. List No.
250	75	0.3	8.0	P0	SOT-23	a	HSMS-2850-TR1G
250	75	0.3	8.0	P2	SOT-23	f	HSMS-2852-TR1G
350	-	0.3	5.0	T2	SOT-323	c	HSMS-286C-TR1G
350	-	0.3	5.0	TK	SOT-363	-	HSMS-286K-TR1G

		Price Each			
Mftrs. List No.	Order Code	1+	100+	1K+	2K5+
HSMS-2850-TR1G	SMD 105-6849 RL	1.66	1.15	1.07	0.69
HSMS-2852-TR1G	SMD 105-6850 RL	2.00	1.44	1.35	0.91
HSMS-286C-TR1G	SMD 105-6829 RL	1.63	1.27	1.07	0.82
HSMS-286K-TR1G	SMD 105-6830 RL	1.19	0.94	0.79	0.61

227432

Reel of 3000		Price Per Reel
Mftrs. List No.	Order Code	1+
HSMS-2850-TR1G	SMD 156-2347	1,470.99

Schottky Barrier

(a) L=4.32, D=1.93

(b) L=4.06, D=1.85

High performance devices for UHF/VHF applications, detecting, mixing, switching etc. Low turn-off voltage, as low as 0.34V @ 1mA. Pico-second switching speed. High breakdown voltage, up to 70V.

Min V_{BR}@ I_R10µA V	Max V_F mV	Max Power @ 25°C mW	Max C_T @ 1MHz pF	Mftr.	Package	Mftrs. List No.
60	410	400	2.2	ST	(b)	1N6263
70	410	250	2	ST	(a)	1N5711

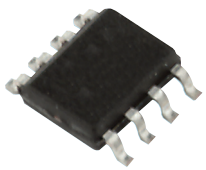
◇ I_R=100 µA

Order Multiple=5				Price Each		
Mftrs. List No.	Order Code	5+	25+	100+	1K+	3K+
1N5711	980-1189	0.480	0.290	0.181	0.135	0.118
1N6263	980-1251	0.480	0.290	0.181	0.135	0.118

211399

Reel of 4000		Price Per Reel
Mftrs. List No.	Order Code	1+
1N5711	156-2349	673.59

Bridge Rectifier, Schottky + Diode



Case Style	SM-8
Current, If av	0.4
Current, Ifs max	13
Time on for IFSM	100
Voltage Vrrm	40

This low leakage Schottky bridge and freewheel diode have been specifically designed for the MR16 LED driver solution.
The key benefits for the ZXSBMR16PT8TA is a compact surface mount solution and reduced component count in MR16 LED drive circuit.

Features
- Optimised bridge and freewheel diode for use in MR16 LED diode circuitry
- Low VF and low reverse leakage current

509617

Mftrs.		Price Each				
List No.	Order Code	1+	25+	100+	250+	1K+
ZXSBMR16PT8TA	SMD 158-3672	1.60	1.05	0.78	0.60	0.51

RF Diodes

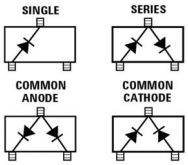
465414

There are 3 types of PIN diodes available:
Attenuation PIN Diodes
Specifically designed to lower the RF power by having a consistant impedance across their designed frequency range.
Switching PIN Diodes
Have relatively lower capacitance then other PIN diodes, facilitating superior switching speeds.
General Purpose PIN Diodes
Can be used as in most general purpose RF applications where superior switching or attenuation characteristics are not needed.

Over half a million products available online QGO

General Purpose RF PIN Diodes

SOT-323 Surface Mount Package



SOT-323.
H=1.4,W=2.25,D=1

SOD-323.
H=2.6,W=1.25,D=1

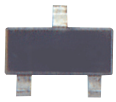
- Small footprint
- Superior high frequency operation
- Low resistance and General Purpose options available
- Low F.I.T (Failure In Time) rate

R_T (Ω)	(I_F), f (mA), (MHz)	C_T max. (pf)	I_F max. (A)	I_F max. (A)	Configuration	Mftrs. List No.
General Purpose						
3.5/1.5*	10mA/100mA*, 100MHz	0.2	1	SOT-323	Series	HSMP-386C-BLKG
3.5/1.5*	10mA/100mA*, 100MHz	0.2	1	SOT-323	Common Cathode	HSMP-386F-BLKG
Low Resistance						
2.5	5mA, 1MHz	0.2	1	SOT-323	Series	HSMP-389C-BLKG
2.5	100mA, 100MHz	0.2	1	SOD-323	Band denotes Cathode	HSMP-389Z-BLKG
Low Distortion						
3	5mA, 100MHz	0.2	1	SOD-323	Band denotes Cathode	HSMP-381Z-BLKG

465305

Mftrs.		Price Each				
List No.	Order Code	1+	25+	100+	250+	500+
HSMP-386C-BLKG	SMD 134-7242	0.720	0.500	0.430	0.370	0.360
HSMP-386F-BLKG	SMD 134-7243	0.470	0.340	0.300	0.260	0.250
HSMP-389C-BLKG	SMD 134-7245	0.490	0.340	0.300	0.290	0.260
HSMP-381Z-BLKG	SMD 134-7239	0.300	0.220	0.192	0.171	0.166
HSMP-389Z-BLKG	SMD 134-7247	0.098	0.076	0.066	0.059	0.057

PIN Diodes



SOT-23

SOT-323

SOT-343
SOT-143, H=3, W=1.4, D=1.1

SOD-323 (SC-76), H=1.8, W=1.35, D=1.1
SC-79 (SOD-523), H=1.25, W=0.85, D=0.65

- Low capacitance
- High switching speed
- Single and Dual Diode Configurations

Max $C_{T(typ)}$ @1MHz pF	@	$V_{R(max)}$ V	$I_{f(av)}$ mA	Mftrs. List No.
SOT-23, Single Diode				
0.9		150	200	BAR66
SOT-23, Dual Diode				
0.25		100	140	BAR14-1
0.25		100	140	BAR15-1
0.25		100	140	BAR16-1
SOT-323, Single Diode				
0.92		35	100	BA592
SOT-323, Dual Diode				
0.23		150	100	BAR64-04W
0.23		150	100	BAR64-05W
0.23		150	100	BAR64-06W
SOD-323 (SC-79), Single Diode				
—		50	50	BAP50-03
0.21		50	100	BAR63-02V
0.22		50	50	BA595
0.23		150	100	BAR64-02V
0.24		50	100	BAR50-02V
0.25**		50	100	BAP70-03
0.35		150	100	BAR67-02V
0.92		35	100	BA892-02V
SOT-343, Single Diode				
0.6		30	100	BAR81W

** f=100 MHz, I_F=100mA

419667

Mftrs.			Price Each			
List No.	Mftr.	Order Code	5+	25+	100+	250+
BA592	INF	SMD 109-5636 RL	0.103	0.066	0.053	0.048
BA595	INF	SMD 109-5637 RL	0.220	0.132	0.095	– –
BA892-02V	INF	SMD 109-5639 RL	0.082	0.063	0.061	0.059
BAP70-03	NXP	SMD 134-9649	0.125	0.089	0.070	0.060
BAR14-1	INF	SMD 109-5642 RL	0.280	0.200	0.158	0.142
BAR15-1	INF	SMD 109-5643 RL	0.290	0.184	0.140	0.130
BAR16-1	INF	SMD 109-5644 RL	0.690	0.460	0.360	0.310
BAR50-02V	INF	SMD 109-5645 RL	0.199	0.113	0.094	0.090
BAR63-02V	INF	SMD 109-5647 RL	0.136	0.078	0.063	0.061
BAR64-02V	INF	SMD 109-5648 RL	0.128	0.081	0.065	0.058
BAR64-04W	INF	SMD 109-5649 RL	0.230	0.155	0.118	0.105

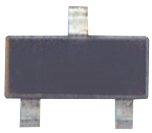
RF Diodes - continued

PIN Diodes - continued

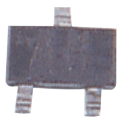
Mftrs. List No.	Mftr.	Order Code	Price Each 5+	25+	100+	250+
BAR64-05W	INF	SMD 109-5652 RL	0.200	0.137	0.109	0.106
BAR64-06W	INF	SMD 109-5653	0.220	0.136	0.109	0.100
BAR66	INF	SMD 109-5656 RL	0.510	0.330	0.310	0.290
BAR67-02V	INF	SMD 109-5657 RL	0.164	0.097	0.078	0.075
BAR81W	INF	SMD 109-5658 RL	0.550	0.360	0.280	0.260
BAP50-03	NXP	SMD 162-6454	0.167	0.115	0.079	0.045

PIN Diodes

SMD Avago TECHNOLOGIES



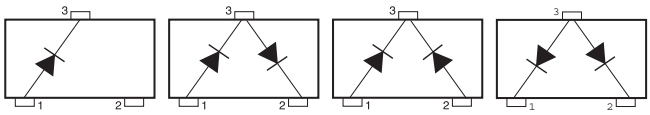
SOT-23



SOT-323

- I_F=1A (pulsed), P_{tot}=250mW
- Characterised for different applications
- Flexible packing options
- High reliability
- Supplied on 8mm tape

(Top view)



(a) Single diode (b) Dual series diode (c) Dual, common cathode (d) Dual, common anode

SOT-23, Low Distortion Attenuator Diodes

Min V_{BR} @ I_R≤10µA V	Max C_T @1MHz pF	@ V_R V	Max R_S @100MHz Ω	@ I_f mA	t_{rr} typ. ns	Pin Config	Device Marking	Mftrs. List No.
50	0.2	50	1.5	100	-	b	L2	HSMP-3862-TR1G
200	0.3	50	1.5	100	80	a	K0	HSMP-3830-TR1G

Min V_{BR} @ I_R≤10µA V	Max C_T @ 1MHz V_R=50V pF	Max R_S @ 100MHz I_F 100mA Ω	Min R_H @ 100MHz Ω	Max R_H @ 100MHz Ω	Pin Config	Mftrs. List No.
100	0.35	3	1500	10	c	HSMP-3810-TR1G
100	0.35	4	1500	10	c	HSMP-3814-TR1G

SOT-23 Low Resistance Switching Diodes

Min V_{BR} @ I_R≤10µA V	Max C_T @ 1MHz pF	@ V_R V	Max R_S @ 100MHz Ω	@ I_F mA	Pin Config	Device Marking	Mftrs. List No.
35	1	20	0.6	10	a	F0	HSMP-3820-TR1G
35	1	20	0.6	10	b	F2	HSMP-3822-TR1G
35	1	20	0.6	10	c	F4	HSMP-3824-TR1G
35	0.3	5	2.5	5	a	G0	HSMP-3890-TR1G
35	0.3	5	2.5	5	b	G2	HSMP-3892-TR1G
100	0.2	100	2.5	1	b	G3	HSMP-3893-TR1G
100	0.2	5	2.5	1	b	G4	HSMP-3894-BLKG

211173

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+
HSMP-3810-TR1G	SMD 105-6823 RL	0.99	0.71	0.58	0.47
HSMP-3814-TR1G	SMD 105-6846 RL	1.38	0.99	0.83	0.58
HSMP-3820-TR1G	SMD 105-6841 RL	0.70	0.50	0.43	0.30
HSMP-3822-TR1G	SMD 105-6844 RL	0.99	0.71	0.58	0.42
HSMP-3824-TR1G	SMD 105-6847 RL	0.99	0.71	0.58	0.42
HSMP-3830-TR1G	SMD 105-6842 RL	1.83	1.50	1.35	1.02
HSMP-3862-TR1G	SMD 105-6848 RL	1.15	0.81	0.70	0.52
HSMP-3890-TR1G	SMD 105-6843 RL	0.49	0.36	0.29	0.26
HSMP-3892-TR1G	SMD 105-6845 RL	0.69	0.50	0.43	0.29
HSMP-3893-TR1G	SMD 105-6831 RL	0.78	0.59	0.51	0.37
HSMP-3894-BLKG	SMD 117-3148	1.59	1.17	0.98	0.66

Reel of 3000 Mftrs. List No.	Order Code	Price Per Reel 1+
HSMP-3814-TR1G	SMD 156-2340	1,341.21

Variable Capacitance and Band Switching

NXP SMD

SOT-23 H=1.1, W=3, D=2.5

SOD-323, H=1.25, W=0.85, D=0.65

Varicap diode specifications

- Excellant Linearity (dC/dv)
- Low series resistance

C_d min pF	bei V_R high (V)	C_d max (pf)	bei V_R low (V)	I_R max @ V_R=28V nA	r_s max. Ω	Config.	Package	Mftrs. List No.
1	28	17	0.5	10	3	Variable Capacitance	SOD-323	BB131
2.1	28	21	0.5	10	0.75	Variable Capacitance	SOD-323	BB135
2.225	28	21.26	1	10	0.75	Variable Capacitance	SOD-323	BB149A,115
2.75	28	41.8	1	10	0.9	Variable Capacitance	SOD-323	BB148
2.75	28	42.35	1	10	0.8	Variable Capacitance	SOD-323	BB153
2.25	28	21.26	1	10	0.75	Variable Capacitance	SOD-323	BB179
5	25	32	0.4	10	0.7	Variable Capacitance	SOT-23	BBY40

Variable capacitance (also known as varactors and varicap diodes), exhibit a reverse voltage to capactiance characteristic making them useful in a wide range of RF applications. Including voltage controlled oscillators and voltage controlled tuning circuits.

Band switching diode specifications

V_R max. V	I_R max @ V_R=25V nA	C_d max @ V_R=3V pF	R_D max. Ω	Package	Mftrs. List No.
35	100	1	0.7	SOT-23	BAT18

* p: made in Hong Kong, t: Malaysia, w: China

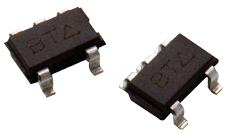
211364

Order Multiple=5 Mftrs. List No.	Order Code	Price Each 5+	100+	250+	1K+
Diodes commutation					
BAT18	SMD 108-1188 RL	0.199	0.154	0.141	0.118
Diodes Varactor					
BB149A,115	SMD 121-2469 RL	0.159	0.078	0.060	0.041
BBY40	SMD 108-1217 RL	0.270	– –	– –	– –
BB131	SMD 134-9651	0.113	0.082	0.063	0.055
BB135	SMD 134-9652	0.093	0.066	0.051	0.044
BB148	SMD 134-9653	0.142	0.101	0.078	0.067
BB153	SMD 134-9654	0.142	0.101	0.078	0.067
BB179	SMD 134-9655	0.092	0.066	0.051	0.045

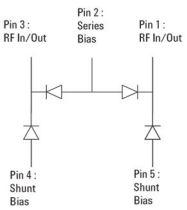
Quad PIN π Attenuator Diodes

Avago TECHNOLOGIES

SOT-25 Surface Mount Package



SOT-25. H=3,W=1.7,D=1.3



SMD

- Small quad diode footprint
- Superior high frequency operation
- 300 KHz to 3 GHz usable frequency band
- Low insertion loss

Total Resistance @ Ω	(I_F), f (mA), (MHz)	C_T typ. (pf)	C_T max. (pf)	I_F max. (A)	Mftrs. List No.
3	100mA, 100MHz	0.35	0.35	1	HSMP-3816-BLKG
22	1mA, 100MHz	0.22	0.22	1	HSMP-3866-BLKG

Low insertion loss (-2.5dB to -3.5dB) Quad package, offers almost flat attenuation over an extremely wide band.

465354

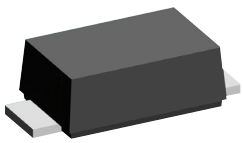
Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
HSMP-3816-BLKG	SMD 134-7237	1.12	0.80	0.69	0.59	0.57
HSMP-3866-BLKG	SMD 134-7241	1.07	0.77	0.66	0.57	0.55

Power Diodes - Standard Recovery

Diode, SMF Glass Passivated

TAIWAN SEMICONDUCTOR

$I_{(AV)}$ = 1A*, I_{FSM} = 30A**



V_{RRM} V	V_F @ 1A V	Mftr.	Mftrs. List No.
50	1.1	TSC	S1AL
100	1.1	TSC	S1BL
200	1.1	TSC	S1DL
400	1.1	TSC	S1GL
600	1.1	TSC	S1JL
800	1.1	TSC	S1KL
1000	1.1	TSC	S1ML

*Maximum Average Forward Rectified Current@T_L =110 °C

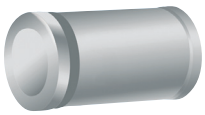
**Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)

503783

Mftrs. List No.	Description	Order Code	Price Each 10+	100+	250+	1K+
S1AL	Diode, SMF GP 1A 50V	SMD 155-9148	0.063	0.043	0.032	0.029
S1BL	Diode, SMF GP 1A 100V	SMD 155-9149	0.063	0.043	0.032	0.029
S1DL	Diode, SMF GP 1A 200V	SMD 155-9150	0.066	– –	– –	– –
S1GL	Diode, SMF GP 1A 400V	SMD 155-9152	0.066	– –	– –	– –
S1JL	Diode, SMF GP 1A 600V	SMD 155-9153	0.067	– –	– –	– –
S1KL	Diode, SMF GP 1A 800V	SMD 155-9154	0.067	0.045	0.034	0.030
S1ML	Diode, SMF GP 1A 1000V	SMD 155-9155	0.067	0.045	0.034	0.030

1A Glass Passivated MELF

multicomp | TAIWAN SEMICONDUCTOR



- Reliable low-cost construction
- Surge overload rating to 30A peak
- Plastic package
- Forward voltage 1.1V @ 1A

SMD

MELF L=5.2, Dia.=2.7

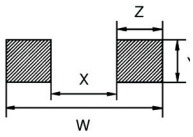
371859

Order Multiple=5

V_{RRM} max. V	Mftr.	Mftrs. List No.	Order Code	Price Each 5+	250+	1K+	2K5+
50	LL4001G	LL4001G	SMD 735-5521 RL	0.168	0.083	0.069	0.062
100	LL4002G	LL4002G	SMD 735-5530 RL	0.174	0.085	0.071	0.063
200	TS	LL4003G	SMD 162-5105	0.121	0.091	0.074	0.062
400	LL4004G	LL4004G	SMD 735-5548 RL	0.179	0.087	0.072	0.066
600	TS	LL4005G	SMD 162-5106	0.126	0.095	0.077	0.064
800	TS	LL4006G	SMD 162-5107	0.166	0.111	0.083	0.067
1000	LL4007G	LL4007G	SMD 735-5556 RL	0.192	0.093	0.083	0.069

SMA, SMB and SMC

VISHAY | FAIRCHILD SEMICONDUCTOR | multicomp



Footprint

SMD

GENERAL SEMICONDUCTOR

High reliability glass passivated rectifiers. GF1 and S1 series equivalent to the 1N4000 series. Supplied on 12mm tape in any quantity.

I_{AV} A	I_{FSM} A	V_F V	I_F @ 25°C A	Package	Mftr	Type/ Series
1	30	1	1	SMA	/FCH/GSMC	S1...
1	30	1.1	1	DO-213AB	VISH	BYM10...
1	30	1.1	1	DO-214BA	GS	GF1...
1	30	1.1	1	DO-213AB	VISH	GL4...
1.5	30	1.1	1.5	SMA	TFK	BYG10M
2	50	1.15	2	SMB	MC	S2...
3	100	1.15	1	SMC	FCH/GS/MC	S3...
4	100	1.15	4	SMC	MC	S4...
5	100	1.15	4	SMC	MC	S5...

	H	L	D	W	X	Y	Z
DO-214BA	3	5.76	2.9	5.9	2.3	1.7	1.8
SMB	2.43	5.45	3.58	6.9	3.3	2.2	1.8
SMC	2.62	2.62	6.22	8.13	5.08	3.2	1.52

211142

Order Multiple=10

V_{RRM} max. V	Mftr.	Order Code	Price Each 10+	100+	200+	500+
50	FCH S1A	SMD 984-3868 RL	0.240	0.161	0.111	0.046
50	GS S1A	SMD 955-0216 RL	0.135	– –	– –	– –
50	MC S1A	SMD 727-7920 RL	0.088	0.059	0.055	0.052
50	GS GF1A	SMD 954-9560 RL	0.128	0.106	0.095	0.076
50	GS S2A	SMD 955-0259 RL	0.320	0.230	0.178	0.145
50	MC S3A	SMD 727-7970 RL	0.260	– –	– –	– –
50	FCH S3A	SMD 101-7803 RL	0.360	0.230	0.173	0.120
50	MC S2A	SMD 727-7954 RL	0.146	– –	– –	– –
50	GS S3A	SMD 955-0291 RL	0.440	0.310	0.250	0.220
50	VISH BYM10-50	SMD 133-6573	0.300	0.210	0.161	0.126
100	GS GF1B	SMD 954-9579 RL	0.144	0.118	0.108	0.086
100	GS S1B	SMD 955-0224 RL	0.146	– –	– –	– –
100	MC S1B	SMD 408-5078 RL	0.088	0.076	0.057	0.047
100	VISH S2B	SMD 133-6565	0.370	0.260	0.210	0.189
100	VISH BYM10-100	SMD 133-6569	0.350	0.240	0.187	0.145
100	VISH S3B	SMD 133-6578	0.650	0.460	0.300	0.220
200	GS GF1D	SMD 954-9587 RL	0.154	0.131	0.121	0.094
200	GS S1D	SMD 955-0232 RL	0.170	0.141	0.119	0.066
200	MC S1D	SMD 408-5086 RL	0.093	0.082	0.059	0.049
200	GS S2D	SMD 955-0267 RL	0.198	0.152	0.119	0.092
200	MC S2D	SMD 408-5094 RL	0.137	0.120	0.089	0.072
200	MC S2G	SMD 727-7962 RL	0.171	0.119	0.098	0.082
200	GS S3D	SMD 955-0305 RL	0.490	0.340	0.280	0.220
200	MC S3D	SMD 727-7989 RL	0.270	0.183	0.151	0.124
200	FCH S3D	SMD 101-7804 RL	0.370	0.240	0.177	0.122
400	GS GF1G	SMD 954-9595 RL	0.161	0.130	0.121	0.099
400	FCH S1G	SMD 984-3850 RL	0.250	0.161	0.111	0.046
400	GS S1G	SMD 955-0240 RL	0.189	– –	– –	– –
400	MC S1G	SMD 727-7938 RL	0.110	0.088	0.086	0.054
400	GS S2G	SMD 955-0275 RL	0.480	0.330	0.270	0.240
400	GS S3G	SMD 955-0313 RL	0.300	0.200	0.167	0.133
400	MC S3G	SMD 727-7997 RL	0.280	0.188	0.154	0.125
400	VISH BYM10-400	SMD 133-6571	0.360	0.250	0.191	0.148
400	VISH GL41G	SMD 133-6572	0.159	0.138	0.116	0.101
600	GS GF1J	SMD 954-9609 RL	0.270	0.210	0.185	0.109
600	FCH S1J	SMD 101-7802 RL	0.119	0.076	0.057	0.040
600	MC S1J	SMD 727-7946 RL	0.131	– –	– –	– –

Order Multiple=10

V_{RRM} max. V	Mftr.	Order Code	Price Each 10+	100+	200+	500+
600	GS S2J	SMD 955-0283 RL	0.240	0.170	0.138	0.133
600	MC S2J	SMD 408-5108 RL	0.153	0.130	0.099	0.078
600	GS S3J	SMD 955-0321 RL	0.310	– –	– –	– –
600	VISH BYM10-600	SMD 133-6574	0.300	0.220	0.164	0.127
800	GS GF1K	SMD 954-9617 RL	0.210	0.174	0.163	0.118
800	VISH S2K	SMD 133-6566	1.070	0.750	0.560	0.430
800	VISH S3K	SMD 133-6579	0.740	0.520	0.390	0.310
1000	GS GF1M	SMD 954-9625 RL	0.210	0.190	0.168	0.127
1000	TFK BYG10M	SMD 954-9170 RL	0.430	0.210	0.200	0.181
1000	FCH S1M	SMD 984-3841 RL	0.270	0.177	0.123	0.051
1000	VISH S2M	SMD 133-6564	1.170	0.810	0.640	0.480
800	VISH BYM10-800	SMD 133-6567	0.350	0.250	0.190	0.147
1000	VISH GL41M	SMD 133-6568	0.210	0.179	0.147	0.126
1000	VISH S3M	SMD 133-6577	0.650	0.460	0.360	0.270
1600	VISH GL41Y	SMD 133-6570	0.530	0.370	0.290	0.220
600	MC S3J	SMD 727-8004 RL	0.290	– –	– –	– –
			5+	**100+**	**250+**	**1K+**
50	FCH S3A	SMD 101-7803 RL	0.360	0.230	0.173	0.120
200	FCH S3D	SMD 101-7804 RL	0.370	0.240	0.177	0.122
1000	FCH S3M	SMD 984-3884 RL	0.370	0.240	0.181	0.124
400	MC S4G	SMD 129-9271	0.220	0.130	0.099	0.084
400	MC S5G	SMD 129-9273	0.360	– –	– –	– –
1000	MC S4M	SMD 129-9272	0.260	0.149	0.113	0.095
1000	MC S5M	SMD 129-9274	0.400	0.230	0.175	0.149
			5+	**100+**	**250+**	**500+**
800	MC S1K	SMD 162-5197	0.124	0.083	0.061	0.042
1000	MC S1M	SMD 162-5198	0.130	0.087	0.064	0.044
100	MC S2B	SMD 162-5199	0.200	0.133	0.100	0.067
800	MC S2K	SMD 162-5200	0.210	0.138	0.104	0.069
1000	MC S2M	SMD 162-5201	0.210	0.138	0.104	0.069
100	MC S3B	SMD 162-5203	0.250	0.185	0.149	0.106
800	MC S3K	SMD 162-5204	0.260	0.192	0.153	0.108
1000	MC S3M	SMD 162-5205	0.370	– –	– –	– –
60	MC S4J	SMD 162-5206	0.132	0.121	0.107	0.100
200	MC S5D	SMD 162-5208	0.190	0.170	0.149	0.136
600	MC S5J	SMD 162-5209	0.194	0.173	0.152	0.139

Mftrs. List No.		Order Code	Price Per Reel 1+	3+
GF1G-E3/67A	REEL 1500	SMD 156-2260	118.28	– –
GF1M-E3/67A	REEL 1500	SMD 156-2261	148.87	133.98
S1M	REEL 7500	SMD 156-2263	320.51	– –

Controlled Avalanche

VISHAY

SMA (DO-214AC)

SOD-57

- High reliability glass passivation process
- Low leakage current
- Good stability
- Guaranteed avalanche energy absorption capability
- Supplied on 8mm tape

211367

Order Multiple=5

V_{rrm} max., V	Mftrs List No.	Case Style	Order Code	Price Each 5+	100+	1K+	3K+
200	BYG20D	SMA	SMD 133-6509	0.184	0.149	0.125	0.107
400	BYG10G	SMA	SMD 133-6581	0.187	0.164	0.134	0.071
400	BYG20G	SMA	SMD 133-6510	0.430	– –	– –	– –
1000	BYW56-TAP	SOD-57	107-5758	0.590	0.380	0.270	0.200

1A to 6A, Standard Axial Rectifiers

ON Semiconductor | GENERAL SEMICONDUCTOR | multicomp | VISHAY

194-04

DO-204AP, G3

DO-41, 30S, DO-201AD, 60S, P600, R-6

I_f (av) A	I_{fsm} A	Package	Mftr.	Type/ *Series
1	30	DO-41	MC	1N4007G
1	25	DO-204AL	VISH	GP10T/GP10Y
1	30	DO-204AL	VISH	GP10K
1.5	50	DO-15	MC	1N539x(G)*
6	250	R-6	TS/MC	6Ax(G)*
1	30	DO-41	GS	1N4007GP
6	400	P600	VSH	GI75x*
6	400	P600	GS	P600M

I_f (av) A	I_{fsm} A			Type/ 1N4004RL
1	30	DO-41	ON	1N4004RL
6	400	P600	MC	P600x*
1	30	DO-41	MC	1N400x*
3	200	DO-201AD	MC	1N54x*
3	200	DO-201AD	ON	1N54xRL*
3	150	DO-201AD	MC	BY25x*
3	125	DO-201AD	MC	1N54xG*
3	100	DO-201AD	VISH	BY255GP

Power Diodes - Standard Recovery - continued

1A to 6A, Standard Axial Rectifiers - continued

V_{RRM} max., V	Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+
Order Multiple=1						
50	P600A	MC	**956-4977**	0.880	0.860	0.450
200	P600D	MC	**956-4985**	0.860	0.850	0.480
400	P600G	MC	**956-4950**	0.850	0.740	0.470
400	1N4004RL	ON	**955-6109**	0.055	0.035	0.020
800	P600K	MC	**956-4969**	0.970	0.750	0.500
1000	P600M	MC	**956-4942**	1.070	0.890	0.560
1000	P600M	GS	**955-0097**	1.290	1.020	0.750
1000	1N4007G	MC	**132-4152**	0.093	0.080	0.056
Order Multiple=1				**1+**	**100+**	**500+**
200	60S2E3	MS	**119-3571**	2.390	1.740	1.360
Order Multiple=1				**1+**	**10+**	**500+**
100	1N5401RL	ON	**955-6125**	0.184	0.119	0.097
200	1N5402RL	ON	**955-6133**	0.184	0.119	0.097
400	1N5404RL	ON	**955-6141**	0.200	0.132	0.107
600	1N5406RL	ON	**955-6150**	0.200	0.132	0.107
1000	1N5408RL	ON	**955-6168**	0.167	0.108	0.087
Order Multiple=5				**5+**	**30+**	**100+**
50	GI750	VSH	**954-9633**	0.870	0.800	0.680
100	GI751	VSH	**954-9641**	0.880	0.830	0.710
200	GI752	VSH	**954-9650**	1.060	1.010	0.830
400	GI754	VSH	**954-9668**	0.540	0.520	0.400
600	GI756	GS	**954-9676**	1.060	0.980	0.800
Order Multiple=5				**5+**	**100+**	**250+**
200	1N5402G	MC	**162-5004**	0.250	0.168	0.126
600	1N5406G	MC	**162-5005**	0.173	0.130	0.105
1000	1N5408G	MC	**162-5006**	0.300	0.198	0.148
Order Multiple=5				**5+**	**25+**	**100+**
50	6A05	MC	**162-5010**	0.340	– –	– –
100	6A10	MC	**162-5011**	0.350	– –	– –
1000	6A100	TS	**162-5012**	0.360	0.240	0.179
1000	6A100G	TS	**162-5013**	0.390	0.300	0.240
200	6A20	TS	**162-5014**	0.350	0.240	0.176
400	6A40	TS	**162-5015**	0.390	0.250	0.189
600	6A60	TS	**162-5016**	0.390	0.250	0.189
600	6A60G	TS	**162-5017**	0.340	0.260	0.210
800	6A80	TS	**162-5018**	0.410	0.270	0.200
200	BY251	MC	**162-5021**	0.165	0.110	0.083
400	BY252	MC	**162-5022**	0.165	0.110	0.083
600	BY253	MC	**162-5023**	0.165	0.110	0.083
800	BY254	MC	**162-5024**	0.165	0.110	0.083
1300	BY255	MC	**162-5025**	0.179	– –	– –
Order Multiple=10				**10+**	**500+**	**1K+**
100	1N5401	MC	**956-5060**	0.310	0.210	0.161
200	1N5402	MC	**956-5078**	0.310	– –	– –
400	1N5404	MC	**956-5086**	0.310	0.210	0.161
600	1N5406	MC	**956-5094**	0.310	0.220	0.162
800	1N5407	MC	**956-5116**	0.310	0.210	0.161
1000	1N5408	MC	**956-5108**	0.310	– –	– –
Order Multiple=10				**10+**	**500+**	**1K+**
50	1N4001.	MC	**956-4993**	0.048	0.045	0.034
100	1N4002.	MC	**956-5000**	0.059	0.049	0.038
200	1N4003.	MC	**956-5019**	0.072	0.058	0.046
400	1N4004	MC	**956-5027**	0.078	0.054	0.042
600	1N4005.	MC	**956-5035**	0.084	0.070	0.057
800	1N4006.	MC	**956-5043**	0.088	0.074	0.060
800	GP10K	VISH	**133-6507**	0.065	0.058	0.048
1000	1N4007.	MC	**956-5051**	0.055	– –	– –
1000	1N4007GP	GS	**954-9129**	0.158	0.110	0.095
1300	GP10T	VISH	**133-6505**	0.290	0.210	0.157
1300	BY255GP	VISH	**133-6508**	0.830	– –	– –
1600	GP10Y	VISH	**133-6506**	0.350	0.250	0.188
Order Multiple=10				**10+**	**100+**	**1K+**
50	1N5391	MC	**162-4992**	0.070	0.047	0.035
100	1N5392	MC	**162-4995**	0.074	– –	– –
200	1N5393	MC	**162-4996**	0.074	0.049	0.037
400	1N5395	MC	**162-4997**	0.078	0.052	0.040
600	1N5397	MC	**162-4999**	0.078	0.052	0.040
600	1N5397G	MC	**162-5000**	0.123	0.082	0.062
800	1N5398	MC	**162-5001**	0.078	0.052	0.038
1000	1N5399	MC	**162-5002**	0.084	0.056	0.042
1000	1N5399G	MC	**162-5003**	0.135	0.090	0.068

211388

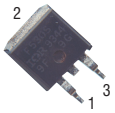
Mftrs. List No.		Order Code	Price Per Reel 1+	3+
P600M	REEL 800	**156-2264**	61.26	55.13
P600G	REEL 800	**156-2266**	55.30	49.77
P600D	REEL 800	**156-2267**	55.30	49.77
1N4001 R0	REEL 5000	**156-2268**	40.34	– –
1N4002 R0	REEL 5000	**156-2269**	37.22	33.50
1N4003 R0	REEL 5000	**156-2270**	29.78	26.81
1N4004 R0	REEL 5000	**156-2271**	29.78	26.81
1N4006 R0	REEL 5000	**156-2272**	29.78	26.81
1N4007 R0	REEL 5000	**156-2273**	40.34	– –
1N5401 R0	REEL 1250	**156-2274**	28.29	25.46
1N5404 R0	REEL 1250	**156-2275**	26.24	23.62
1N5406 R0	REEL 1250	**156-2276**	27.33	24.60
1N5408 R0	REEL 1250	**156-2278**	33.20	29.88

6A to 40A, TO-263 (D^2-Pak)

GENERAL SEMICONDUCTOR

International IOR Rectifier

SMD



Pin Config. 1 2 3
(a) K K A
(b) A K A

I_F (av) A	I_{FSM} A	I_{FRM} A	V_{RRM} V	V_{FM} @ I_{FM} V	I_{RM} @ V_{RM} mA	Mfr.	Mftrs. List No.
6	690	—	45	0.6	8	VISH	6TQ045SPBF
7.5	150	15	45	0.57	0.1	GS	MBRB745
7.5	150		45	0.57	0.1	GS	MBRB745
8	850	—	80	0.72	0.55	VISH	8TQ080S.PBF
8	850	—	100	0.72	—	VISH	8TQ100SPBF
7.5	810	—	45	0.55	—	VISH	15CTQ045S.PBF
16	150	32	60	0.65	1	GS	MBRB1660
16	150		60	0.65	1	GS	MBRB1660
18	1800	—	45	0.6	—	VISH	18TQ045S.PBF
19	700	—	15	0.36	10.5	VISH	19TQ015SPBF
20	700	—	15	0.41	—	VISH	20L15TSPBF
10	850	—	100	0.8	0.5	VISH	MBRB20100CTPBF
15	900	1.75	30	0.49	1.75	VISH	32CTQ030SPBF
15	1000	45	45	0.62	2.0	VISH	30CTQ045SPBF
15	1000	60	60	0.62	0.8	VISH	30CTQ060SPBF
20	850	—	100	0.81	1	VISH	43CTQ100SPBF
20	1000	—	20	0.45	—	VISH	47CTQ020SPBF
20	1240	—	45	0.53	3	VISH	40CTQ045SPBF

413123

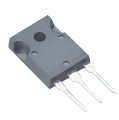
Mftrs. List No.	Order Code	Price Each 1+	25+	100+
15CTQ045S.PBF	SMD **910-1195**	2.03	1.10	0.95
18TQ045S.PBF	SMD **910-0652**	2.43	1.31	1.14
19TQ015SPBF	SMD **910-0679**	2.80	1.70	1.43
20L15TSPBF	SMD **910-0709**	1.11	0.57	0.52
30CTQ045SPBF	SMD **910-0784**	3.00	1.78	1.47
30CTQ060SPBF	SMD **910-0830**	3.06	– –	– –
32CTQ030SPBF	SMD **910-0768**	3.60	2.00	1.32
40CTQ045SPBF	SMD **910-1004**	2.60	1.44	1.07
43CTQ100SPBF	SMD **910-0903**	3.18	1.63	1.28
47CTQ020SPBF	SMD **910-0946**	3.20	1.77	1.32
6TQ045SPBF	SMD **910-1330**	2.87	– –	– –
8TQ080S.PBF	SMD **910-1373**	2.19	1.19	0.99
8TQ100SPBF	SMD **910-1349**	2.90	1.76	1.37
MBRB745	SMD **955-0070**	0.99	0.69	0.58
MBRB1660	SMD **955-0062**	4.04	– –	– –

Input Rectifiers

VISHAY.

TO-220AC

TO-247AC



TO-247

D2-Pak

D-Pak

$I_{F(AV)}$ A	V_{RRM} V	I_{FSM} A	V_F V	@ I_F A	Package	Mftrs. List No.
8	800	200	1	5	D-PAK	8EWS08SPBF
10	800	200	1.1	10	TO-220ACFP	10ETS12FPPBF
10	800	200	1.1	10	D2-PAK	10ETS08SPBF
10	1200	200	1.1	10	TO-220AC	10ETS12PBF
20	1200	300	1	10	TO-220AC	20ETS12PBF
20	1200	300	1	10	D2-PAK	20ETS12SPBF
40	1600	475	1	10	TO-247AC	40EPS16PBF
40	1200	475	1	10	TO-247AC	40EPS12PBF
60	1200	950	1	60	TO-247AC	60EPS12PBF

211180

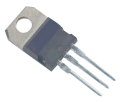
Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
8EWS08SPBF	SMD **910-0474**	1.11	0.62	0.46	0.40	0.39
10ETS08SPBF	SMD **909-9379**	2.00	– –	– –	– –	– –
10ETS12PBF	**909-9352**	1.64	– –	– –	– –	– –
10ETS12FPPBF	**909-9360**	2.76	1.53	1.13	1.00	0.96
20ETS12PBF	**909-9719**	2.47	1.36	1.02	0.89	0.85
20ETS12SPBF	SMD **909-9700**	3.05	– –	– –	– –	– –
40EPS12PBF	**909-9980**	3.63	2.01	1.50	1.31	1.25
40EPS16PBF	**910-0008**	2.79	– –	– –	– –	– –
60EPS12PBF	**910-0121**	6.05	3.35	2.50	2.18	2.09

11A to 56A, 800V to 1600V

IXYS

TO-247AD

TO-220AC



TO-220AB

Mini-Bloc (SOT-227B)

TO-247AD (2-pin)

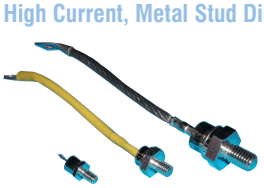
$I_{F(AV)}$ A	V_{rrm} A	I_{fsm} @ 50Hz A	V_F @ I_F V	Single/Dual Diode	Mftrs. List No.
TO-220AB					
11	1200	100	1.15	Dual	DSP 8-12A
TO-220AC					
30	1200	300	1.45	Single	DSI 30-12A
30	800	300	1.45	Single	DSI 30-08A
TO-247AD					
28	1600	300	1.6	Dual	DSP 25-16A
28	1200	300	1.6	Dual	DSP 25-12A
45	1200	480	1.23	Dual	DSP 45-12A
45	1200	480	1.23	Dual	DSP 45-12A
45	1600	480	1.23	Dual	DSP 45-16A
TO-247AD (2-pin)					
48	1600	475	1.18	Single	DSI 45-16A
48	800	475	1.18	Single	DSI 45-08A
Dual Diode, Mini-Bloc (SOT-227B)					
56	1200	650	1.2	Dual	DSI 2 X 55-12A

422961

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	+	+
Single Diode						
DSI 30-08A	**108-0094**	0.59	0.56	0.55	– –	– –
DSI 30-12A	**108-0095**	0.67	0.62	0.58	– –	– –
DSI 45-08A	**108-0096**	1.43	1.35	1.26	– –	– –
DSI 45-12A	**108-0097**	1.18	1.15	1.12	– –	– –
DSI 45-16A	**108-0098**	1.29	1.26	1.23	– –	– –
Dual Diode						
DSP 25-12A	**108-0100**	1.44	1.40	1.36	– –	– –
DSP 25-16A	**108-0101**	1.67	1.58	1.48	– –	– –
DSP 45-12A	**108-0102**	1.89	1.79	1.73	– –	– –
DSP 45-16A	**108-0103**	2.14	2.03	1.90	– –	– –
DSP 8-12A	**108-0104**	0.77	0.73	0.68	– –	– –
DSI 2 X 55-12A	**108-0099**	9.97	9.32	9.08	– –	– –

High Current, Metal Stud Diodes

SEMIKRON innovation+service



- Reverse voltages up to 1200V
- Hermetic metal cases with glass insulators
- Threaded studs ISO M6 (SKR26 also 10-32 UNF)
- SKN: Anode to stud
- SKR: Cathode to stud

333790

$I_{f(av)}$ A	V_{rrm} max. V	Package	Mftrs. List No	Order Code	Price Each 1+	25+	100+
Stud Anode							
25	1200	E8	SKN26/12	**956-4403**	8.37	7.36	6.29
50	1200	E12	SKN45/12	**956-4411**	11.37	10.14	8.68
95	400	E12	SKN70/04	**956-4420**	6.18	5.56	4.81
95	1600	DO-203AB	SKN71/16	**146-7139**	12.67	11.89	10.69
95	1200	E12	SKN70/12	**956-4438**	8.60	7.72	6.67
125	1600	DO-205AC	SKN100/16	**146-7138**	21.00	16.33	14.71
165	400	E14	SKN130/04	**956-4446**	16.59	14.13	12.16
165	1200	E14	SKN130/12	**956-4454**	21.76	19.68	16.99
320	400	E15	SKN240/04	**956-4462**	21.53	19.35	16.68
Stud Cathode							
25	400	E8	SKR26/04	**956-4470**	6.08	5.25	4.45
25	1200	E8	SKR26/12	**956-4489**	8.71	7.41	6.24
50	1200	E12	SKR45/12	**956-4497**	11.40	9.00	7.79
95	400	E12	SKR70/04	**956-4500**	6.57	5.30	4.62
95	1200	E12	SKR70/12	**956-4519**	7.19	6.18	4.98
95	1200	E11	SKR71/12	**956-4527**	9.87	8.38	7.13
125	1600	DO-205AC	SKR100/16	**146-7140**	20.96	16.31	14.67
165	400	E14	SKR130/04	**956-4535**	17.68	14.19	12.16
165	1200	E14	SKR130/12	**956-4543**	21.26	19.22	16.55
165	1600	DO-205AC	SKR 130/16	**145-6963**	40.55	24.61	22.38
320	400	E15	SKR240/04	**956-4551**	21.61	19.42	16.68

High Current, Metal Stud Diodes

VISHAY

Standard and Avalanche

DO-4 (10-32 UNF 2A)

DO-5 (¼-28 UNF 2A)

DO-8 (½-20 UNF 2A)
DO-9 (¾-16 UNF 2A)
DO-10 (¾-80UNF-2A)

Standard Diodes
(* denotes rotating tab)

497270

I_f (av) A	V_{rrm} max. V	Package	Mftrs. List No.	Order Code	Price Each 1+	25+	100+
Stud Cathode							
12	200	DO-4	12F20	**365-397**	2.78	2.00	1.55
12	600	DO-4	12F60	**393-8955**	3.32	2.38	1.85
12	800	DO-4	12F80	**394-0731**	2.73	1.96	1.59
12	1200	DO-4	12F120	**506-606**	3.06	2.21	1.71
16	400	DO-4	16F40	**365-440**	3.21	2.31	1.79
16	800	DO-4	16F80	**365-452**	2.66	1.91	1.49
16	1200	DO-4	16F120	**365-476**	2.86	1.91	1.49
25	100	DO-4	25F10	**394-0743**	3.14	2.26	1.75
25	400	DO-4	25F40	**393-9005**	3.17	2.28	1.77
25	600	DO-4	25F60	**506-620**	3.03	2.33	2.04
25	1000	DO-4	25F100	**394-0755**	3.23	2.32	1.80
25	1200	DO-4	25F120	**506-643**	2.94	2.12	1.64
40	100	DO-5	40HF10	**365-609**	3.10	2.23	1.73
40	200	DO-5	40HF20	**365-622**	2.23	1.35	1.32
40	400	DO-5	40HF40	**365-646**	3.10	2.23	1.73
40	600	DO-5	40HF60	**365-660**	3.23	2.02	1.61
40	800	DO-5	40HF80	**365-683**	3.64	2.62	2.13
40	1000	DO-5	40HF100	**365-701**	4.32	2.69	2.08
40	1200	DO-5	41HF120	**394-0809**	4.05	2.90	2.49
40	1600	DO-5	40HF160	**393-9054**	4.42	3.20	2.75
70	100	DO-5	70HF10	**365-920**	4.74	3.40	2.64
70	200	DO-5	70HF20	**365-944**	4.58	3.29	2.55
70	800	DO-5	70HF80	**366-006**	4.49	3.23	2.40
70	1200	DO-5	70HF120	**366-043**	5.75	4.33	2.76
70	1400	DO-5	70HF140	**393-9066**	7.91	5.69	4.41
70	1600	DO-5	70HF160	**366-067**	6.63	4.84	4.30
85	400	DO-5	85HF40	**366-201**	6.29	4.52	3.51
85	800	DO-5	85HF80	**394-0810**	8.92	6.42	4.97
85	800	DO-5**	86HF80	**394-0822**	7.13	5.61	4.82
85	1200	DO-5	85HF120	**366-286**	8.36	6.00	4.66
					1+	**10+**	**25+**
150	100	DO-8	45L10	**365-762**	20.77	14.23	10.95
150	600	DO-8	45L60	**365-828**	22.24	15.97	12.39
150	800	DO-8	150U80D	**489-6543**	20.40	14.11	11.59
StudAnode					**1+**	**25+**	**100+**
12	200	DO-4	12FR20	**365-415**	2.87	2.06	1.60
16	100	DO-4	16FR10	**365-488**	2.61	1.88	1.46
16	1200	DO-4	16FR120	**365-531**	2.66	1.91	1.49
25	400	DO-4	25FR40	**393-9029**	2.63	1.89	1.47
25	1000	DO-4	25FR100	**394-0780**	2.63	1.89	1.56
25	1200	DO-4	25FR120	**506-655**	2.51	1.87	1.72
40	400	DO-5	40HFR40	**365-658**	3.64	2.62	2.03
40	800	DO-5	40HFR80	**365-695**	3.64	2.62	2.10

Power Diodes - Standard Recovery - continued

High Current, Metal Stud Diodes - continued

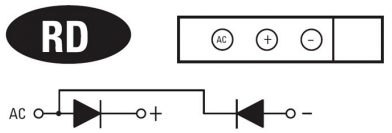
Standard Diodes
(* denotes rotating tab) - continued

I_f (av) A	V_{rrm} max. V	Pack-age	Mftrs. List No.	Order Code	Price Each 1+	25+	100+
40	1000	DO-5	40HFR100	365-713	3.95	2.79	2.16
40	1200	DO-5	40HFR120	365-737	3.80	2.74	2.30
70	100	DO-5	70HFR10	365-932	4.34	2.49	1.87
70	200	DO-5	70HFR20	365-956	5.01	3.60	2.79
70	400	DO-5	70HFR40	365-970	5.01	3.60	2.79
70	1400	DO-5	70HFR140	393-9078	7.03	5.05	3.92
70	1600	DO-5	70HFR160	366-079	7.64	4.76	3.69
85	400	DO-5	85HFR40	366-213	6.29	4.52	3.51
85	400	DO-5	85HFR40	366-213	6.29	4.52	3.51
85	1200	DO-5	85HFR120	366-298	8.89	6.39	4.95
85	800	DO-5*	85HFR80	393-9080	9.25	6.67	5.73
85	1200	DO-5	85HFR120	366-298	8.89	6.39	4.95
					1+	10+	25+
150	200	DO-8	45LR20	365-798	26.86	19.30	14.97

** 86HF series has DO-5 package with extended lead

F18 Diode Module

crydom



H=30mm , W=92mm, D=20mm
Weight =135g

- Load current up to 105A
- Min. gate current 150mA
- Min. gate voltage 3V
- Isolation voltage 2500Vrms
- Industry standard package and circuits
- Power control building blocks
- Voltages to 600VAC

New

534720

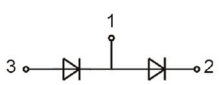
Mftrs. List No.	Load Current A	Operting Voltage VAC	Order Code	Price Each 1+	5+	50+
F1827RD1000	25	380	170-4623	16.00	13.90	13.53
F1827RD1200	25	1200	170-4624	17.76	15.44	15.01
F1827RD1400	25	1400	170-4625	18.21	15.82	15.38
F1827RD1600	25	1600	170-4626	18.82	15.15	12.43
F1842RD1000	40	1000	170-4627	20.80	18.10	17.58
F1842RD1200	40	1200	170-4628	18.48	16.07	15.61
F1842RD1400	40	1400	170-4629	18.95	14.50	12.97
F1842RD1600	40	1600	170-4630	19.59	17.04	16.55
F1857RD1000	55	1000	170-4632	17.13	12.84	10.28
F1857RD1200	55	1200	170-4633	19.00	15.20	13.30
F1857RD1400	55	1400	170-4634	19.49	16.96	16.47
F1857RD1600	55	1600	170-4635	20.17	15.52	12.61
F1892RD1000	90	1000	170-4636	18.81	14.11	10.75
F1892RD1200	90	1200	170-4637	20.89	15.26	11.68
F1892RD1400	90	1400	170-4638	22.73	19.77	19.21
F1892RD1600	90	1600	170-4639	22.15	14.10	11.63
F18107RD1000	105	1000	170-4640	19.56	16.20	11.34
F18107RD1200	105	1200	170-4641	21.74	17.91	14.49
F18107RD1400	105	1400	170-4642	27.90	24.26	23.58
F18107RD1600	105	1600	170-4644	24.02	20.87	20.28

SKKD Diode Module 57A/92A/106A

SEMIKRON innovation+service

Semipack™ 1 6th Generation

New



H=30mm , W=93mm, D=20mm
Weight =75g

Features
- Thermal resistance reduced by 33% compared to 5th generation
- 10% more output current, due to better thermal coupling
- Impoved reliability
- UL recognized, file no. E63532

Typical Applications
- Non-controllable rectifier
- Line rectifiers for transistorized AC motor controllers
- Field supply for DC motors

538635

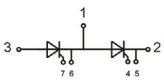
Mftrs. List No.	IFSM @ Tj 25°C 10ms A	Operting Voltage V	V(TO) typ. @ Tj 130°C V	Order Code	Price Each 1+	5+	50+
IFAV 57A							
SKKD 46/16 G6	700	1600	0.75	171-4584	45.14	35.63	30.09
IFAV 92A							
SKKD 81/08 G6	2000	800	0.85	171-4585	45.79	36.15	30.52
SKKD 81/12 G6	2000	1200	0.85	171-4586	45.85	36.20	30.57
SKKD 81/16 G6	2000	1600	0.85	171-4587	48.88	38.59	32.59
IFAV 106A							
SKKD 100/16 G6	2500	1600	0.75	176-1344	38.07	30.31	25.18

SKKT Dual Tyristor Module 28A-119A

SEMIKRON innovation+service

Semipack™ 1 6th Generation

H=30mm , W=93mm, D=20mm
Weight =75g



Features
- Thermal resistance reduced by 33% compared to 5th generation
- 10% more output current, due to better thermal coupling
- Impoved reliability
- UL recognized, file no. E63532

Typical Applications
- DC motor control (e. g. for machine tools) AC motor soft starters
- Temperature control (e. g. for ovens, chemical processes)
- Professional light dimming (studios,theaters)
- Fully controlled rectifier

New

538636

Mftrs. List No.	It av @ Tc 85°C A	Vdrm V	VT(TO) @ Tj 130°C V	ITSM @ Tj 25°C 10ms A	Order Code	Price Each 1+	5+	50+
SKKT 27B08 E G6	28	800	0.85	550	171-4599	26.66	23.27	20.95
SKKT 27B12 E G6	28	1200	0.85	550	171-4601	48.54	38.31	32.35
SKKT 27B16 E G6	28	1600	0.85	550	171-4602	39.05	32.69	28.61
SKKT 57B08 E G6	61	800	0.85	1500	171-4603	31.41	27.42	24.68
SKKT 57B12 E G6	61	1200	0.85	1500	171-4604	41.27	34.55	30.24
SKKT 57B16 E G6	61	1600	0.85	1500	171-4605	55.76	44.02	37.17
SKKT 92B08 E G6	110	800	0.85	2000	171-4606	39.66	34.62	31.16
SKKT 92B12 E G6	110	1200	0.85	2000	171-4607	69.01	54.49	46.01
SKKT 92B16 E G6	110	1600	0.85	2000	171-4608	72.36	57.13	48.24
SKKT 106B12 E G6	122	1200	0.8	2250	171-4597	65.40	51.63	43.60
SKKT 106B16 E G6	122	1600	0.8	2250	171-4598	72.01	56.86	48.01
SKKT 118B16 E G6	138	1600	0.8	2250	176-1348	50.30	40.06	33.28

High Voltage ADD-A-Pak™ Power Modules

International IOR Rectifier

H=37 (incl terminals), W=92, D=20
Mounting Holes=6.2 dia,
Fixing centres=80

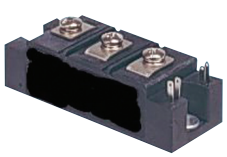
- Industrial standard package
- Thick Al metal die and double stick bonding
- Thick copper baseplate
- **UL** recognised
- 3500V_{RMS} isolating voltage
- Full compatible TO-240AA
- High current surge capability
- Easy heatsink mounting
- Al_2O_3 DBC insulator
- Heatsink grounded

234923

$I_{f\ (AV)}$ T_C=100°C A	I_{FSM} A	V_{RRM}/ V_{DRM} V	Mftrs. List No.	Order Code	Price Each 1+	10+	25+
Dual Diode Configuration							
60	1600	1200	IRKD56/12APBF	909-9298	28.24	20.29	15.73
100	2020	1600	IRKD91/16APBF	909-9336	32.33	23.23	18.01

165A INT-A-PAK™ Diode Modules

VISHAY



H=30 (excl. terminals), W=94, D=35
Mounting holes=6.5, fixing centres=80

- High voltage
- Electrically isolated DBC ceramic (Al_2O_3) base
- 3500V_{RMS} isolating voltage
- Industry standard package
- 4000A surge current rated
- Glass passivated chips

V_{rrm} V	V_{rsm} V	$I_{d\ (av)}$ A @	T_c C	I_{FSM} @50Hz A	Mftrs.List No.
1600	1700	165	100	4000	IRKD166/16PBF

241504

Mftrs. List No.	Order Code	Price Each 1+	10+	25+
IRKD166/16PBF	909-9271	55.83	40.11	31.10

Diode Standard, 190A, Dual

SEMIKRON innovation+service

Features:
- Terminal height 17 mm
- Chips soldered directly to isolated substrate

Typical Applications:
- Input Bridge Rectifier for
- AC/DC motor control
- Power Supply

V_{RRM} (V)	I_{FAV} (A)	I_{FSM} (A)	T_j max °C	V_F max (V)	Case Style	Mftrs. List No.
1600	190	6000	25	1.5	SEMiX 1s	SEMIX191KD16S

504776

Mftrs. List No.	Order Code	Price Each 1+	3+	8+
SEMIX191KD16S	**146-7124**	74.44	57.89	52.10

320A, 2000V MAGN-A-Pak™ Diode Modules

International IOR Rectifier

- High voltage
- Electrically isolated base plate
- 3000 V_{RMS} isolating voltage
- Simplified mechanical designs, rapid assembly
- Industrial standard package
- High current surge capability
- Easy heatsink mounting
- Large creepage distances
- **UL E78996 approved**

H=52, W=50, D=115
Mounting Holes = 38 x 80, dia. 5.5

$I_{f\ (AV)}$ T_C=100°C A	I_{FSM} A	V_{RRM}/ V_{DRM} V	Mftrs. List No.
320A	10110A	2000	IRKE320-20PBF

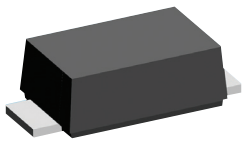
241501

Mftrs. List No.	Order Code	Price Each 1+	+	+
IRKE320-20PBF	**909-9280**	77.97	– –	– –

Power Diodes - Fast Recovery

Diode, SMF Fast Glass Passivated

TAIWAN SEMICONDUCTOR



Features:
- Glass passivated junction chip
- Fast switching for high efficiency
- Plastic material used carries Underwriters Laboratory Classification 94V-0
- High temperature soldering

V_{RRM} V	$I_{(AV)}$ A	I_{FSM} A	V_F @ 0.5A V	Trr nS	Mftr.	Mftrs. List No.
50	0.8	30	1.3	150	TSC	RS1AL
100	0.8	30	1.3	150	TSC	RS1BL
200	0.8	30	1.3	150	TSC	RS1DL
400	0.8	30	1.3	150	TSC	RS1GL
600	0.8	30	1.3	250	TSC	RS1JL
800	0.8	30	1.3	500	TSC	RS1KL
1000	0.8	30	1.3	500	TSC	RS1ML

V_{RRM} 50	$I_{(AV)}$ 0.5	I_{FSM} 10	V_F @ 0.5A 1.3	Trr 150	Mftr. TSC	Mftrs. List No. RSFAL
100	0.5	10	1.3	150	TSC	RSFBL
200	0.5	10	1.3	150	TSC	RSFDL
400	0.5	10	1.3	150	TSC	RSFGL
600	0.5	10	1.3	250	TSC	RSFJL
800	0.5	10	1.3	500	TSC	RSFKL
1000	0.5	10	1.3	500	TSC	RSFML

503788

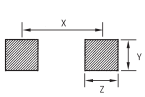
Mftrs. List No.	Description	Order Code	Price Each 10+	100+	250+	1K+
RS1AL	Diode, Fast SMF GP 0.8A 50V	SMD **155-9132**	0.081	0.054	0.041	0.036
RS1BL	Diode, Fast SMF GP 0.8A 100V	SMD **155-9133**	0.087	0.058	0.044	0.040
RS1DL	Diode, Fast SMF GP 0.8A 200V	SMD **155-9134**	0.087	0.058	0.044	0.040
RS1GL	Diode, Fast SMF GP 0.8A 400V	SMD **155-9135**	0.094	0.062	0.047	0.042
RS1JL	Diode, Fast SMF GP 0.8A 600V	SMD **155-9136**	0.094	0.062	0.047	0.042
RS1KL	Diode, Fast SMF GP 0.8A 800V	SMD **155-9137**	0.097	0.064	0.049	0.044
RS1ML	Diode, Fast SMF GP 0.8A 1000V	SMD **155-9139**	0.097	0.064	0.049	0.044
RSFAL	Diode, Fast SMF GP 0.5A 50V	SMD **155-9141**	0.081	0.054	0.041	0.036
RSFBL	Diode, Fast SMF GP 0.5A 100V	SMD **155-9142**	0.080	0.053	0.040	0.035
RSFDL	Diode, Fast SMF GP 0.5A 200V	SMD **155-9143**	0.086	0.057	0.043	0.038
RSFGL	Diode, Fast SMF GP 0.5A 400V	SMD **155-9144**	0.085	0.057	0.043	0.038
RSFJL	Diode, Fast SMF GP 0.5A 600V	SMD **155-9145**	0.093	– –	– –	– –
RSFKL	Diode, Fast SMF GP 0.5A 800V	SMD **155-9146**	0.096	0.063	0.048	0.043
RSFML	Diode, Fast SMF GP 0.5A 1000V	SMD **155-9147**	0.096	0.063	0.048	0.043

SMA, SMB, SMC, SOD-106A

SMD

Glass Passivated

	H	W	D	X	Y	Z
SMA	2.29	5.28	2.79	4.1	1.7	1.8
SMC	2.62	8.13	6.22	6.5	3.2	1.8
SMA	2.15	5.3	2.6	5.5	2.5	3.1



Footprint

Supplied on 12mm tape.

I_F (av.) A	V_{RRM} V	I_{FSM} A	t_{rr} max ns	V_F V	@	I_F A	Package	Mftr.	Mftrs List No.
1	50	30	150	1.3		1	SMA	MC	RS1A
1	50	30	150	1.3		1	SMA	GS	RS1A
1	100	30	150	1.3		1	SMA	MC	RS1B
1	100	30	150	1.3		1	SMA	GS	RS1B
1	200	30	150	1.3		1	SMA	MC	RS1D
1	200	30	150	1.3		1	SMA	GS	RS1D
1	400	30	150	1.3		1	SMA	MC	RS1G
1	400	30	150	1.3		1	SMA	GS	RS1G
1	600	30	250	1.3		1	SMA	MC	RS1J
1	600	30	250	1.3		1	SMA	GS	RS1J
1	800	30	500	1.3		1	SMA	MC	RS1K
1	1000	30	500	1.3		1	SMA	MC	RS1M
1	200	30	50	1		1	SMA	GS	US1D
1	400	30	50	1		1	SMA	GS	US1G.
1.5	1000	300	120	1.5		1.0	SMA	TFK	BYG21M
1.5	100	50	150	1.3		1.5	SMB	GS	RS2B
1.5	200	50	150	1.3		1.5	SMB	GS	RS2D
1.5	400	50	150	1.3		1.5	SMB	GS	RS2G
1.5	600	50	250	1.3		1.5	SMB	GS	RS2J
2	50	50	150	1.3		2	SMB	MC	RS2A
2	100	50	150	1.3		2	SMB	MC	RS2B
2	200	50	150	1.3		2	SMB	MC	RS2D
2	400	50	150	1.3		2	SMB	MC	RS2G
2	600	50	250	1.3		2	SMB	MC	RS2J
2	800	50	500	1.3		2	SMB	MC	RS2K
2	1000	50	500	1.3		2	SMB	MC	RS2M
3	50	100	150	1.3		3	SMC	MC	RS3A
3	100	100	150	1.3		3	SMC	MC	RS3B
3	200	100	150	1.3		3	SMC	MC	RS3D
3	400	100	150	1.3		3	SMC	MC	RS3G
3	600	100	250	1.3		3	SMC	MC	RS3J
3	800	100	500	1.3		3	SMC	MC	RS3K
3	1000	100	500	1.3		3	SMC	MC	RS3M
3	100	100	150	1.3		2.5	SMC	GS	RS3B
3	800	100	500	1.3		2.5	SMC	GS	RS3K

211159

Order Multiple=5

Mftrs. List No.	Mftr.	Order Code	Price Each 5+	100+	1K+	3K+	
BYG21M	TFK	SMD **102-1748** RL	0.450	0.290	0.210	0.166	
Order Multiple=10			**10+**	**100+**	**200+**	**500+**	**1K+**
RS1A	GS	SMD **955-0100** RL	0.330	– –	– –	– –	– –
RS1A	MC	SMD **408-5000** RL	0.300	0.210	0.192	0.122	0.099
RS1B	GS	SMD **955-0119** RL	0.340	0.270	0.250	0.115	0.109
RS1B	MC	SMD **408-5019** RL	0.300	0.210	0.192	0.122	0.099
RS1D	GS	SMD **955-0127** RL	0.340	– –	– –	– –	– –
RS1G	GS	SMD **955-0135** RL	0.420	0.330	0.270	0.139	0.133
RS1G	MC	SMD **408-5035** RL	0.350	0.290	0.230	0.147	0.137
RS1J	GS	SMD **955-0143** RL	0.420	0.340	0.270	0.150	0.135
RS1J	MC	SMD **408-5043** RL	0.350	– –	– –	– –	– –
RS1D	MC	SMD **408-5027** RL	0.310	0.230	0.196	0.136	0.127
Order Multiple=5			**5+**	**100+**	**200+**	**500+**	**1K+**
US1D	GS	SMD **955-1816** RL	0.153	– –	– –	– –	– –
US1G.	GS	SMD **955-1824** RL	0.166	– –	– –	– –	– –
RS2B	GS	SMD **955-0151** RL	0.470	0.320	0.250	0.220	0.196
RS2D	GS	SMD **955-0160** RL	0.184	0.154	0.132	0.114	0.102
RS2G	GS	SMD **955-0178** RL	0.270	0.194	0.153	0.138	0.123
RS2J	GS	SMD **955-0186** RL	0.260	0.185	0.155	0.123	0.112
RS3B	GS	SMD **955-0194** RL	0.520	– –	– –	– –	– –
RS3B	MC	SMD **408-5051** RL	0.350	0.290	0.270	0.210	0.184
RS3K	GS	SMD **955-0208** RL	0.460	– –	– –	– –	– –
RS3K	MC	SMD **408-5060** RL	0.430	– –	– –	– –	– –
			5+	**100+**	**250+**	**1K+**	**+**
RS1K	MC	NEW SMD **162-5181**	0.177	– –	– –	– –	– –
RS1M	MC	NEW SMD **162-5182**	0.196	0.130	0.098	0.078	– –
RS2A	MC	NEW SMD **162-5183**	0.230	0.155	0.115	0.094	– –
RS2B	MC	NEW SMD **162-5185**	0.185	0.128	0.095	0.077	– –
RS2D	MC	NEW SMD **162-5186**	0.185	0.128	0.095	0.077	– –
RS2G	MC	NEW SMD **162-5187**	0.250	0.165	0.124	0.100	– –
RS2J	MC	NEW SMD **162-5188**	0.160	0.121	0.097	0.082	– –
RS2K	MC	NEW SMD **162-5189**	0.178	0.132	0.107	0.089	– –
RS2M	MC	NEW SMD **162-5190**	0.178	0.132	0.107	0.089	– –
RS3A	MC	NEW SMD **162-5191**	0.240	0.180	0.146	0.122	– –
RS3D	MC	NEW SMD **162-5192**	0.370	0.250	0.186	0.149	– –
RS3G	MC	NEW SMD **162-5193**	0.260	0.195	0.156	0.130	– –
RS3J	MC	NEW SMD **162-5194**	0.260	0.195	0.156	0.130	– –
RS3M	MC	NEW SMD **162-5195**	0.270	0.210	0.163	0.136	– –

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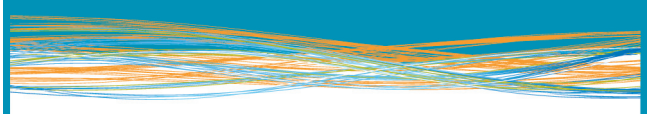

The solutions are out there, you just haven't registered yet

Power Diodes - Fast Recovery - continued

4A to 320A, Fast Recovery Diodes

International IOR Rectifier

D_2Pak

Vrrm V	I_F A	V_F V	trr max ns	List No.
200	8	0.975	35	MURB1620CTTRLP
200	15	1.05	35	30CTH02SPBF
600	4	1.8	38	HFA04SD60SPBF
600	4	1.8	17	HFA04TB60SPBF
600	8	1.7	-	HFA08SD60SPBF
600	30	1.7	-	HFA30TA60CSPBF
1200	8	3	-	HFA08TB120SPBF
1200	16	2.5	-	HFA16TB120SPBF

453196

Mftrs. List No.	Order Code	1+	25+	100+	250+
30CTH02SPBF	SMD 129-8415	3.33	1.95	1.46	1.28
HFA04SD60SPBF	SMD 129-8427	0.57	0.50	0.41	0.39
HFA04TB60SPBF	SMD 129-8417	1.66	1.18	0.89	0.84
HFA08SD60SPBF	SMD 129-8428	0.53	0.44	0.43	0.42
HFA08TB120SPBF	SMD 129-8420	4.30	3.26	3.17	3.09
HFA16TB120SPBF	SMD 129-8424	8.18	6.90	4.64	4.00
HFA30TA60CSPBF	SMD 129-8426	5.28	3.89	3.27	3.18
MURB1620CTTRLP	SMD 129-8416 RL	1.48	0.89	0.68	0.61

0.5A to 6A Axial

multicomp ON Semiconductor TAIWAN SEMICONDUCTOR FAIRCHILD SEMICONDUCTOR

DO-41 L=5.2, Dia.=2.7
DO-201AD L=9.5, Dia.=5.6
R-1 L=3.5, Dia.=2.6

D^2Pak (TO-263AA)

I_F (av) A	V_{RRM} max A	t_{rr} max ns	I_{FSM} A	V_F V	@	I_F A	Package	Mftr	Mftrs. List No./ Series
0.5	400	150	10	1.3		0.5	DO-213AA	VISH	RGL34G
0.5	600	250	10	1.3		0.5	DO-213AA	VISH	RGL34J
1	1000	250	150	1.3		1	DO-41	MC	BA159
1	1000	500	20	1.5		1	DO-41	GS	BA159GP
1	1000	250	30	1.2		1	DO-41	MC	BA159G
1	600	35	30	1.7		1	DO-41	TS	SF18G
1	400	30	150	1.3		1	DO-41	MC	BA157
1	400	150	30	1.2		1	DO-41	MC	BA157G
1	400	35	30	1.3		1	DO-41	TS	SF16G
1	200	35	30	0.95		1	DO-41	TS	SF14G
1	100	35	30	0.95		1	DO-41	TS	SF12G
1	1000	30	500	1.3		1	DO-41	MC	FR107
1	1000	500	500	1.3		1	DO-41	MC	PS1010R
1	400	150	30	1.2		1	DO-41	MC	1N4936
1	400	30	150	1.3		1	R-1	MC	1F4
1	400	30	150	1.3		1	DO-41	MC	BA157/9
1	200	150	30	1.2		1	DO-41	MC	1N4935
1	100	30	30	1.2		1	DO-41	MC	1N4934
1	50	150	30	1.2		1	DO-41	FCH	1N4933
1	200	15	40	0.95		1	DO-204AL	VISH	UG1D
1	600	200	30	1.2		1	DO-204AL	VISH	1N4937GP
1	600	250	30	1.3		1	DO-204AL	VISH	RGP10J
1	600	250	30	1.3		1	SMA	VISH	RS1J
1	800	500	20	1.3		1	DO-204AL	VISH	BA159
1	1000	500	30	1.3		1	DO-213AB	VISH	BYM11-1000
1	200	150	30	1.3		1	DO-213AB	VISH	BYM11-200
1	200	50	30	1		1	DO-213AB	VISH	BYM12-200
1	200	50	30	1		1	DO-213AB	VISH	EGL41D
1	400	150	30	1.3		1	DO-213AB	VISH	BYM11-400
1	400	50	30	1.25		1	DO-213AB	VISH	EGL41G
1	600	250	30	1.3		1	DO-213AB	VISH	BYM11-600
1	600	50	35	1.05		1	SMB	VISH	MURS160
1	800	500	30	1.3		1	DO-213AB	VISH	BYM11-800
1	50	200	30	1.2		1	DO-41	MC	1N4933
1	50	200	30	1.2		1	DO-41	MC	1N4934
1	50	200	30	1.2		1	DO-41	MC	1N4935
1	200	200	30	1.2		1	DO-41	MC	1N4935G
1	50	200	30	1.2		1	DO-41	MC	1N4936
1	50	200	30	1.2		1	DO-41	MC	1N4937
1	600	200	30	1.2		1	DO-41	MC	1N4937G
1	100	150	30	1.2		1	DO-41	MC	FR102
1	200	150	30	1.2		1	DO-41	MC	FR103
1	200	150	30	1.3		1	DO-41	MC	FR103G
1	600	250	30	1.2		1	DO-41	MC	FR105
1	600	250	30	1.3		1	DO-41	MC	FR105G
1	1000	500	30	1.3		1	DO-41	MC	FR107G
1.5	600	250	50	1.3		1.5	DO-204AL	VISH	RGP15J
2	800	70	250	1.3		3	DO-201AD	MC	BY299
2	200	150	60	1.2		2	DO-15	MC	FR203
2	200	150	55	1.3		2	DO-15	MC	FR203G
2	600	250	60	1.2		2	DO-15	MC	FR205
2	600	250	55	1.3		2	DO-15	MC	FR205G
2	1000	500	60	1.2		2	DO-15	MC	FR207
2	1000	500	55	1.3		2	DO-15	MC	FR207G
3	1000	200	500	1.3		3	DO-201AD	MC	PS3010R
3	1000	150	150	1.3		3	DO-201AD	MC	FR307
3	800	250	150	1.2		3	DO-201AD	MC	BY399
3	600	35	125	1.7		3	DO-201AD	TS	SF38G
3	400	35	125	1.3		3	DO-201AD	TS	SF36G
3	200	250	150	1.2		3	DO-201AD	MC	BY397
3	200	300	100	1.25		3	DO-201AD	ON	MR85..
3	200	35	125	0.95		3	DO-201AD	TS	SF34G
3	100	35	125	0.95		3	DO-201AD	TS	SF32G
3	100	150	150	1.2		3	DO-201AD	MC	FR302
3	100	150	125	1.3		3	DO-201AD	MC	FR302G
3	600	250	150	1.2		3	DO-201AD	MC	FR305
3	600	250	125	1.3		3	DO-201AD	MC	FR305G
3	1000	500	125	1.3		3	DO-201AD	MC	FR307G
3	50	100	150	1.25		3	DO-201AD	MC	MR850
3	100	100	150	1.25		3	DO-201AD	MC	MR851
3	400	100	150	1.25		3	DO-201AD	MC	MR854
3	800	150	150	1.3		3	DO-201AD	MC	MR858
6	50	150	250	1.3		6	R-6	MC	FR601G
6	100	150	250	1.3		6	R-6	MC	FR602G
6	200	150	250	1.2		6	R-6	MC	FR603
6	200	150	250	1.3		6	R-6	MC	FR603G
6	400	150	250	1.3		6	R-6	MC	FR604G
6	600	250	250	1.3		6	R-6	MC	FR605G
6	1000	500	250	1.3		6	R-6	MC	FR607G
D^2Pak									
10	200	40	100	1.15		10	D2-PAK	FCH	FFB20UP20DN

211247

Mftrs. List No.	Fab.	Order Code	Price Each 1+	25+	100+
FFB20UP20DN	FCH	SMD 132-4820	1.660	1.060	0.790
			1+	**100+**	**250+**
FR601G	MC	**162-5066**	0.610	0.420	0.310
FR602G	MC	**162-5067**	0.670	– –	– –
FR603	MC	**162-5069**	0.270	0.210	0.164
FR603G	MC	**162-5071**	0.670	0.450	0.330
FR604G	MC	**162-5072**	0.670	0.450	0.330
FR605G	MC	**162-5074**	0.700	0.470	0.350
FR607G	MC	**162-5076**	0.700	0.470	0.350
Order Multiple=5					
			5+	**25+**	**100+**
BA157	MC	**956-5272**	0.210	0.164	0.141
BA157G	MC	**408-4586**	0.071	0.037	0.025
BA159	MC	**956-5280**	0.320	0.270	0.210
BA159G	MC	**408-4594**	0.150	0.079	0.052
BA159GP	GS	**954-9161**	0.162	0.132	0.113
BY397	MC	**162-5026**	0.172	0.128	0.103
BY399	MC	**162-5027**	0.180	0.137	0.110
MR850	MC	**162-5166**	0.131	0.097	0.083
MR851	MC	**162-5167**	0.140	0.103	0.088
MR854	MC	**162-5169**	0.148	0.108	0.094
MR858	MC	**162-5171**	0.160	0.116	0.101
Order Multiple=5			**5+**	**100+**	**1K+**
FR107	MC	**956-5264**	0.106	0.076	0.071
FR307	MC	**956-5299**	0.620	– –	– –
MR852RLG	ON	**955-6346**	0.220	0.148	0.119
MR856RLG	ON	**955-6354**	0.181	0.124	0.100
Order Multiple=10			**10+**	**100+**	**1K+**
1N4933	FCH	**984-3655**	0.025	0.021	0.019
1N4934	MC	**101-7584**	0.045	0.031	0.026
1N4935	MC	**101-7586**	0.083	0.056	0.045
1N4936	MC	**101-7587**	0.035	0.024	0.019
1N4937	FCH	**984-3663**	0.047	0.031	0.023
1N4933	MC	**162-4984**	0.047	0.031	0.023
1N4934	MC	**162-4985**	0.050	0.033	0.025
1N4935	MC	**162-4986**	0.050	0.033	0.025
1N4935G	MC	**162-4987**	0.111	0.074	0.055
1N4936	MC	**162-4988**	0.054	0.036	0.027
1N4937	MC	**162-4990**	0.054	– –	– –
1N4937G	MC	**162-4991**	0.125	0.084	0.062
Order Multiple=5			**5+**	**100+**	**250+**
SF12G	TS	**129-9303**	0.071	0.042	0.031
SF14G	TS	**129-9304**	0.088	0.052	0.040
SF16G	TS	**129-9305**	0.083	0.050	0.037
SF18G	TS	**129-9306**	0.160	0.096	0.072
SF32G	TS	**129-9307**	0.250	0.151	0.113
SF34G	TS	**129-9308**	0.250	0.151	0.113
SF36G	TS	**129-9309**	0.220	0.139	0.108
SF38G	TS	**129-9310**	0.189	0.108	0.084
FR102	MC	**162-5047**	0.039	0.030	0.024
FR103	MC	**162-5048**	0.039	0.030	0.024
FR103G	MC	**162-5049**	0.100	0.067	0.050
FR105	MC	**162-5050**	0.042	0.032	0.026
FR105G	MC	**162-5051**	0.129	0.086	0.064
FR107G	MC	**162-5052**	0.144	0.096	0.072
FR203	MC	**162-5053**	0.082	0.054	0.041
FR203G	MC	**162-5054**	0.185	0.128	0.095
FR205	MC	**162-5055**	0.086	0.057	0.043
FR205G	MC	**162-5057**	0.200	0.135	0.101
FR207	MC	**162-5058**	0.098	0.064	0.049
FR207G	MC	**162-5059**	0.199	0.144	0.115
FR302	MC	**162-5060**	0.180	0.135	0.109
FR302G	MC	**162-5061**	0.250	0.165	0.123

Mftrs. List No.	Fab.	Order Code	Price Each 1+	25+	100+
FR305	MC	**162-5062**	0.198	0.147	0.117
FR305G	MC	**162-5063**	0.260	0.169	0.127
FR307G	MC	**162-5064**	0.340	0.220	0.167
Order Multiple=5			**5+**	**25+**	**100+**
RGP15J	VISH	**133-6511**	0.178	0.149	0.124
UG1D	VISH	**133-6512**	0.168	0.142	0.121
1N4937GP	VISH	**133-6513**	0.079	0.070	0.059
RGP10J	VISH	**133-6515**	0.084	0.074	0.063
RS1J	VISH	SMD **133-6516**	0.186	0.136	0.134
BA159	VISH	**133-6517**	0.101	0.076	0.061
BYM11-1000	VISH	SMD **133-6518**	0.380	0.270	0.210
BYM11-200	VISH	SMD **133-6519**	0.320	0.220	0.171
BYM12-200	VISH	SMD **133-6520**	0.370	0.260	0.198
EGL41D	VISH	SMD **133-6521**	0.128	0.109	0.093
BYM11-400	VISH	SMD **133-6522**	0.320	0.220	0.171
EGL41G	VISH	SMD **133-6523**	0.144	0.121	0.102
BYM11-600	VISH	SMD **133-6524**	0.320	0.220	0.171
MURS160	VISH	SMD **133-6525**	0.420	0.270	0.220
BYM11-800	VISH	SMD **133-6527**	0.320	0.230	0.177
RGL34G	VISH	SMD **133-6528**	0.370	0.260	0.200
RGL34J	VISH	SMD **133-6529**	0.400	0.280	0.220

High Efficiency

multicomp

- Fast reverse recovery time, t_{rr}
- Low forward voltage, V_F
- Low cost axial packages

I_F (av) A	I_{FSM} A	t_{rr} max ns	V_F V	@	I_F A	Package	L	Dia.	Mftrs. List No.
1	30	50	1		1	DO-41	5.2	2.7	HER103
1	30	50	1		1.0	DO-41	5.2	2.7	UF102
1	30	50	1		1	DO-41	5.2	2.7	HER107
1	30	75	1.7		1.0	DO-41	5.2	2.7	UF108
1	30	75	1.7		1	DO-41	5.2	2.7	HER108
1.5	50	50	1		1.5	DO-15	7.6	3.6	HER152
1.5	50	50	1.3		1.5	DO-15	7.6	3.6	HER155
1.5	50	75	1.7		1.5	DO-15	7.6	3.6	HER157
3	150	50	1		3	DO-201AD	9.5	5.6	HER305
3	150	50	1		3	DO-201AD	9.5	5.6	HER307
3	150	50	1.1		3.0	DO-201AD	9.5	5.3	UF304
3	150	75	1.7		3	DO-201AD	9.5	5.6	HER308
6	200	50	1		6	R-6	9.1	7.2	HER601
6	200	50	1		6	R-6	9.1	7.2	HER603
6	200	50	1		6	R-6	9.1	7.2	HER604
6	200	50	1.3		6	R-6	9.1	7.2	HER605

211230

Order Multiple=10	Mftrs.		Price Each			
V_{RRM} max., V	List No.	Order Code	10+	100+	1K+	5K+
200	HER103	**956-5256**	0.118	0.083	0.064	0.059
800	HER107	**956-5191**	0.210	0.131	0.102	0.080
400	HER305	**956-5205**	0.970	– –	– –	– –
800	HER307	**956-5213**	0.760	0.390	0.270	0.210
200	UF102	**938-0892**	0.114	0.098	0.080	0.059
800	UF108	**938-0906**	0.210	0.171	0.147	0.107
Order Multiple=5			**5+**	**100+**	**500+**	**1K+**
400	UF304	**938-0914**	0.860	0.850	0.830	0.570
			5+	**100+**	**250+**	**500+**
1000	HER108	**162-5080**	0.172	0.114	0.086	0.069
100	HER152	**162-5083**	0.179	0.120	0.090	0.073
400	HER155	**162-5085**	0.151	0.113	0.091	0.076
800	HER157	**162-5087**	0.152	0.114	0.092	0.077
1000	HER308	**162-5096**	0.460	0.310	0.230	0.184
Order Multiple=1			**1+**	**100+**	**250+**	**500+**
50	HER601	**162-5097**	0.740	0.490	0.370	0.300
200	HER603	**162-5099**	0.470	0.360	0.290	0.250
300	HER604	**162-5102**	0.740	0.490	0.370	0.300
400	HER605	**162-5103**	0.740	0.490	0.370	0.300

High Efficiency Glass Passivated

multicomp

- Low forward voltage, V_F
- High current capability
- High reliability
- Case to **UL 94V-0**

I_F (av) A	I_{FSM} A	t_{rr} max ns	V_F V	@	I_F A	Package	L	Dia.	Mftrs. List No.
3	125	50	1		3	DO-201AD	9.5	5.6	HER301G
3	125	50	1		3	DO-201AD	9.5	5.6	HER302G
3	125	75	1.7		3	DO-201AD	9.5	5.6	HER307G
3	125	75	1.7		3	DO-201AD	9.5	5.6	HER308G
1	30	50	1		1	DO-41	5.2	2.7	HER102G
1	30	50	1		1	DO-41	5.2	2.7	HER104G
1	30	75	1.7		1	DO-41	5.2	2.7	HER106G
1	30	75	1.7		1	DO-41	5.2	2.7	HER108G
1.5	50	50	1		1.5	DO-15	7.6	3.6	HER153G
1.5	50	75	1.7		1.5	DO-15	7.6	3.6	HER156G
1.5	50	75	1.7		1.5	DO-15	7.6	3.6	HER158G

I_F (av)	I_{FSM}	t_{rr} max	V_F	I_F				Mftrs. List
2	60	50	1	2	DO-15	7.6	3.6	HER202G
2	60	50	1	2	DO-15	7.6	3.6	HER204G
2	60	75	1.7	2	DO-15	7.6	3.6	HER207G
2	60	75	1.7	2	DO-15	7.6	3.6	HER208G
3	125	50	1.3	3	DO-201AD	9.5	5.6	HER305G
3	125	75	1.7	3	DO-201AD	9.5	5.6	HER306G
6	150	50	1	6	R-6	9.1	7.2	HER603G
6	150	75	1.7	6	R-6	9.1	7.2	HER606G

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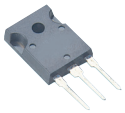
Order Multiple=5

V_{RRM} max., V	Mftrs. List No.	Order Code	Price Each 5+	100+	500+	1K+
50	HER301G	**408-4934**	0.230	0.140	0.104	0.083
100	HER302G	**408-4942**	0.590	0.300	0.200	0.172
800	HER307G	**408-4950**	0.950	0.480	0.330	0.280
1000	HER308G	**408-4969**	0.990	– –	– –	– –
			5+	**100+**	**250+**	**500+**
100	HER102G	**162-5077**	0.121	0.091	0.074	0.061
300	HER104G	**162-5078**	0.121	0.091	0.074	0.061
600	HER106G	**162-5079**	0.126	0.095	0.077	0.064
1000	HER108G	**162-5082**	0.171	0.116	0.086	0.069
200	HER153G	**162-5084**	0.165	0.124	0.100	0.083
600	HER156G	**162-5086**	0.172	0.128	0.103	0.086
1000	HER158G	**162-5088**	0.179	0.133	0.108	0.090
100	HER202G	**162-5089**	0.260	0.172	0.129	0.103
300	HER204G	**162-5090**	0.152	0.114	0.092	0.077
800	HER207G	**162-5091**	0.290	0.193	0.145	0.115
1000	HER208G	**162-5092**	0.310	0.210	0.156	0.125
400	HER305G	**162-5094**	0.510	0.340	0.250	0.200
600	HER306G	**162-5095**	0.420	0.290	0.200	0.167
Order Multiple=1			**1+**	**100+**	**250+**	**500+**
200	HER603G	**162-5101**	0.710	0.470	0.360	0.300
600	HER606G	**162-5104**	0.910	0.600	0.460	0.360

Fast Recovery, Sonic-FRD™ Series

IXYS

TO-220AB



TO-247AD

SOT-227B

TO-220AC

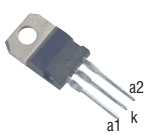
- Small temperature dependence for:
  - forward voltage drop
  - reverse recovery current:
- Optimized for
  - dynamic avalanche ruggedness:
  - low loss performance:
- Exceptionally soft recovery
- Low reverse recovery current characteristic
- Soft recovery current without tail
- Optimized for high frequency hard switching

V_{RRM} max. V	I_F av max. A	Ifs max. A	V_F max. V	Package	Mftrs. List No.
600	20	150	2.15	TO-247AD	DHG20I600HA
600	20	150	2.15	TO-247AD	DHG40C600HB
600	30	200	2.2	TO-247AD	DHG30I600HA
1200	20	135	2.35	TO-247AD	DHG20I1200PA
1200	20	135	2.35	TO-247AD	DHG40C1200HB
1200	10	70	2.38	TO-220AC	DHG10I1200PA
1800	20	150	2.94	TO-247AD	DH20-18A
1800	60	650	2.61	SOT-227B	DH2X61-18A
1800	60	650	2.65	TO-247AD	DH60-18A

496699

Mftrs. List No.	Package	Order Code	Price Each 1+	25+	100+
DH20-18A	TO-247AD	**142-7214**	3.20	2.70	2.14
DH2X61-18A	SOT-227B	**142-7215**	25.72	23.39	20.87
DH60-18A	TO-247AD	**142-7216**	8.12	6.84	5.42
DHG10I1200PA	TO-220AC	**142-7218**	0.93	0.78	0.63
DHG20I1200PA	TO-247AD	**142-7219**	2.03	1.71	1.35
DHG20I600HA	TO-247AD	**142-7220**	2.24	1.88	1.50
DHG30I600HA	TO-247AD	**142-7223**	2.57	2.16	1.72
DHG40C1200HB	TO-247AD	**142-7224**	2.38	2.06	1.66
DHG40C600HB	TO-247AD	**142-7225**	2.83	2.38	1.88

1A to 60A



TO-220

SOD-93

Isolated (DOP-3I)

Power Diodes - Fast Recovery - continued

1A to 60A - continued

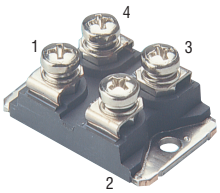
I_f (av) *A	V_{rrm} max. V	t_{rr} (max.) ns	Package	Mftr.	Mftrs List No.
8	400	35	TO-220AC	ST	BYT08P-400
16	400	35	TO-220AB	ST	BYT16P-400
30	400	50	DOP-3I	ST	BYT30PI-400RG
700	200	25	SOD-123	ROHM	RF071M2STR
1	200	25	SOD-106	ROHM	RF101L2STE25
5	200	30	SC-63	ROHM	RF501B2STL

*Total forward current with both diodes conducting

211411

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
BYT08P-400	980-1880	1.240	0.830	0.720	0.600	0.550
BYT16P-400	980-1936	2.090	1.490	1.250	1.090	0.960
BYT30PI-400RG	980-2010	5.040	3.570	3.010	2.620	2.300
RF071M2STR	SMD 168-0040	0.370	0.250	0.183	0.112	0.098
RF101L2STE25	SMD 168-0041	0.400	0.270	0.196	0.120	0.104
RF501B2STL	SMD 168-0042	1.200	0.850	0.680	0.440	0.390

Fast Recovery Power Modules



ISOTOP

V_{RRM} V	I_F* (av) A	t_{rr} max. ns	V_F max. V	Pin out	Mftrs List No.
400	60	100	1.5	a	BYT230PIV-400
400	120	100	1.5	b	BYT261PIV-400

*Total forward current with both diodes conducting

Pin Out	1	2	3	4
a	K1	A2	K2	A1
b	A1	K1	K2	A2

211223

Mftrs. List No.	Order Code	Price Each 1+	5+	10+	25+	50+
BYT230PIV-400	980-1952	17.24	– –	– –	– –	– –
BYT261PIV-400	980-1979	22.86	17.70	13.55	12.28	10.91

Parallel Efficiency Diodes

Glass BY448: L=4.57, Dia=3.81

Parallel efficiency diodes offer high reverse voltage capability and controlled recovery time, for use in horizontal scan circuits of TV monitors and receivers.

V_{RRM} max. V	I_{FWM} max. A	I_{FRM} max. A	Mftrs. List No.
1500	5	8	BY448TAP

425172

Mftrs. List No.	Order Code	Price Each 1+	100+	1K+	3K+
BY448TAP	107-5757	0.129	0.124	0.118	0.114

Box of 5000		Price Per Box
Mftrs. List No.	Order Code	1+
BY448TAP	156-2256	796.92

Fast Diode Modules

H=30mm, W=92mm, D=20mm

Features:
- Heat transfer through ceramic isolated metal baseplate
- Hard soldered joints for high reliability
- SKKD half bridge connection; SKMD common cathode; SKND common anode
- UL recognized, file no. E 63 532

Typical Applications:
- Self commutated inverters
- DC choppers
- AC motor speed control
- Inductive heating
- Uninterruptible power supplies
- Electronic welders
- General power switching applications

V_{RRM}/ (V)	I_F Avarage (A)	I_{FSM} max (A)	V_{ISO} max (V)	V_F @ 150A max (V)	V_{ISOrms}(@ 1min) max (V)	Mftrs. List No.
1400	42	1200	3600	1.85	3600	SKKD42F14
1500	42	1200	3600	1.85	3600	SKMD42F15

504726

Mftrs. List No.	Order Code	Price Each 1+	3+	8+
SKKD42F14	146-7135	85.99	66.88	60.19
SKMD42F15	146-7137	77.84	60.55	54.50

Over half a million products available online QGO

Power Diodes - Ultra-Fast Recovery

Single/Dual Packaged Ultra-Fast Recovery Diodes

New

- Ultrafast recovery
- Low power losses
- High surge capability
- Low leakage current
- High junction temperature

Single Diode

The STTH10R04 is an ultrafast recovery power rectifier dedicated to energy recovery in PDP application. It is especially designed for clamping function in energy recovery block. The compromise between forward voltage drop and recovery time offers optimized performances. The STTH112 uses ST ultrafast high voltage planar technology, it is specially suited for free-wheeling, clamping, snubbering, demagnetization in power supplies and other power switching applications.

The STTH1R04 series uses ST's new 400V planar Pt doping technology. The STTH1R04 is specially suited for switching mode base drive and transistor circuits. Packaged in axial and surface mount packages, this device is intended for use in low voltage, high frequency inverters, free wheeling and polarity protection.

Dual Diode

These series of diodes uses ST's new 400V planar Pt doping and ST Tubro 2 600V technologies. It is specially suited for switching mode base drive and transistor circuits, such as welding equipment.

$I_{f\ (av)}$ A	V_{rrm} V	I_{fsm} A	t_{rr} typ ns	V_f Max V	@ I_f A	Tj Max °C	Package	Mftrs. List No.
Single I/O								
1	400	30	14	1.25	1	175	DO-41	STTH1R04
1	400	30	14	1.25	1	175	DO-15	STTH1R04QRL
16	400	120	25	1.75	16	175	TO-220FPAB	STTH16R04CFP
16	400	120	25	1.75	16	175	TO-220AB	STTH16R04CT
20	400	150	18	1.7	20	175	TO-220FPAC	STTH20R04FP
20	400	150	18	1.7	20	175	D2PAK	STTH20R04G
30	400	300	24	1.45	30	175	D2PAK	STTH30R04G
30	400	300	24	1.45	30	175	DO-247	STTH30R04W
120	200	1000	41	1.2	120	150	ISOTOP	STTH20002TV1
Dual I/P Single O/P								
16	400	120	25	1.75	16	175	D2PAK	STTH16R04CG
Dual I/O								
100	400	1000	40	1.35	100	150	ISOTOP	STTH200R04TV1
120	400	700	31	1.5	120	150	ISOTOP	STTH120R04TV1
120	200	1000	41	1.2	120	150	ISOTOP	STTH20002TV1
120	600	800	85	1.55	120	150	ISOTOP	STTH200L06TV1

530322

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
Single I/O						
STTH1R04	168-9328	0.290	0.210	0.174	0.152	0.133
STTH1R04QRL	168-9329	0.280	0.200	0.170	0.148	0.130
STTH16R04CFP	168-9325	1.930	1.370	1.150	1.000	0.880
STTH16R04CT	168-9327	2.010	1.430	1.200	1.040	0.920
STTH20R04FP	168-9334	3.890	2.760	2.320	2.020	1.780
STTH20R04G	SMD 168-9335	3.540	2.660	2.240	1.950	1.720
STTH30R04G	SMD 168-9336	3.210	2.280	1.910	1.670	1.470
STTH30R04W	168-9337	3.430	2.430	2.040	1.780	1.570
STTH20002TV1	168-9330	34.200	24.230	20.350	17.760	15.620
Dual I/P Single O/P						
STTH16R04CG	SMD 168-9326	1.980	1.400	1.180	1.030	0.900
Dual I/O						
STTH200R04TV1	168-9333	34.810	24.670	20.720	18.090	15.890
STTH120R04TV1	168-9324	36.730	26.030	21.860	19.080	16.780
STTH20002TV1	168-9330	34.200	24.230	20.350	17.760	15.620
STTH200L06TV1	168-9331	34.200	24.230	20.350	17.760	15.620

Diode, High Frequency / Switching

UMN1NTR

RLS4150TE-11
RLS4448TE-11
RLS-73TE-11

RN739FT106

SMD

RLS4150TE-11& RLS4448TE-11 Features:
- Small surface mounting type. (LLDS)
- High speed.
- For surface mounting.
- High reliability.

RLS-73TE-11 Features:
- Ultra small. (LLDS)
- For surface mounting
- High speed (trr=2ns Typ.) & high reliability.

RN731VTE-17 Features:
- Small mold type. (UMD2)
- Low high-frequency forward resistance / low capacitance (CT).

UMN1NTR Features:
- Small mold type. (UMD5)
- High reliability

RN739FT106 Features:
- Small mold type. (UMD3)
- Low high-frequency forward resistance (rF) / low capacitance (CT).

Voltage Vrrm V	Current, If Max mA	Current, Ifs Max A	Voltage, Vf Max mV	Power, Ptot mW	Case Style	Mftrs. List No.
50	600	4	—	500	LL-34	RLS4150TE-11
100	450	2	—	500	LL-34	RLS4448TE-11
90	400	—	1.2	300	LL-34	RLS-73TE-11
50	50	—	1	100	SOT-323	RN731VTE-17
50	50	—	1	100	SOT-323	RN739FT106
80	80	—	0.9	150	SOT-353	UMN1NTR

528125

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
RLS4150TE-11	SMD 168-0045	0.187	0.095	0.066	0.030	0.025
RLS4448TE-11	SMD 168-0046	0.196	0.095	0.062	0.032	0.026
RLS-73TE-11	SMD 168-0047	0.196	0.095	0.062	0.032	0.026
RN731VTE-17	SMD 168-0057	0.240	0.160	0.118	0.072	0.062
RN739FT106	SMD 168-0058	0.440	0.290	0.220	0.132	0.115
UMN1NTR	SMD 168-0108	0.350	0.240	0.174	0.106	0.093

Diode Array

ROHM SEMICONDUCTOR

SMD

Current, If max mA	Voltage, Vf max V	Current, If Vf mA	Power Dissipation mW	No. of Pins	Case Style	Mftrs. List No.
450	1.25	150	225	3	SOT-23	BAW56T116
200	1	10	200	3	SOT-346	DA204KT146
200	1	10	200	3	SOT-323	DA204UT106
200	1	10	150	3	SOT-416	DA221TL
300	1.2	100	150	4	SOT-343	DA227TL
200	1	10	150	3	SOT-346	DAN202KT146
300	1.2	100	200	3	SOT-323	DAN202UT106
300	1.2	100	200	3	SOT-323	DAN217UT106
300	1.2	100	150	3	SOT-416	DAN222TL
—	1	10	150	3	SOT-323	DAN235UT106
300	1.2	100	200	3	SOT-346	DAP202KT146
300	1.2	100	200	3	SOT-323	DAP202UT106
300	1.2	100	150	3	SOT-416	DAP222TL
80	0.9	5	80	5	SC-74A	FMN1T148
80	0.9	5	80	5	SC-74A	FMP1T148
300	1.2	100	300	6	SOT-457	IMN10T108
300	1.2	100	300	6	SOT-457	IMN11T110
300	1.2	100	300	6	SOT-457	IMP11T110
300	1.2	100	150	6	SOT-363	UMN11NTN
200	1.2	100	200	6	SOT-363	UMR12NTN

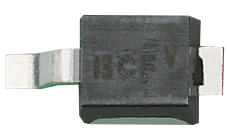
527925

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
BAW56T116	SMD 167-9955	0.240	0.126	0.078	0.040	0.032
DA204KT146	SMD 167-9957	0.260	0.131	0.087	0.044	0.036
DA204UT106	SMD 167-9959	0.250	0.126	0.086	0.040	0.034
DA221TL	SMD 167-9961	0.310	0.149	0.102	0.047	0.041
DA227TL	SMD 167-9962	0.310	0.210	0.151	0.093	0.081
DAN202KT146	SMD 167-9963	0.200	0.102	0.071	0.032	0.028
DAN202UT106	SMD 167-9964	0.250	0.126	0.086	0.041	0.035
DAN217UT106	SMD 167-9965	0.173	0.116	0.085	0.052	0.046
DAN222TL	SMD 167-9966	0.280	0.141	0.095	0.047	0.040
DAN235UT106	SMD 167-9967	0.200	0.135	0.099	0.060	0.053
DAP202KT146	SMD 167-9968	0.200	0.102	0.071	0.032	0.028
DAP202UT106	SMD 167-9969	0.240	0.119	0.078	0.040	0.032
DAP222TL	SMD 167-9970	0.230	0.111	0.071	0.040	0.029
FMN1T148	SMD 167-9984	0.350	0.240	0.172	0.105	0.092
FMP1T148	SMD 167-9985	0.370	0.260	0.187	0.114	0.100
IMN10T108	SMD 167-9987	0.320	0.220	0.159	0.098	0.085
IMN11T110	SMD 167-9988	0.360	0.250	0.178	0.109	0.096
IMP11T110	SMD 167-9989	0.260	0.173	0.126	0.077	0.068
UMN11NTN	SMD 168-0107	0.350	0.240	0.174	0.106	0.093
UMR12NTN	SMD 168-0111	0.390	0.260	0.188	0.115	0.101

Power Diode Package Outlines

59-04(DO-41)

267-03



PowerMite

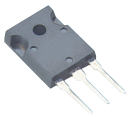
SMB

POWERTAP

SOT93/TO218

D^2 PAK

SMC



TO-247

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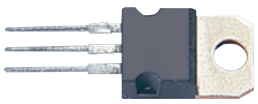
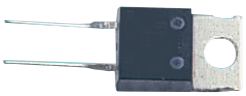


To-220



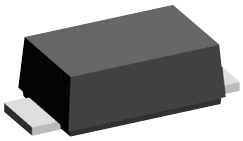
DO-220

211284

Diode, SMF Ultra-Fast

TAIWAN SEMICONDUCTOR

$I_{(AV)}$ = 1A, I_{FSM} = 30A*, Trr = 35nS



V_{RRM} V	V_F V	Mftr.	Mftrs. List No.
50	0.95	TSC	ES1AL
100	0.95	TSC	ES1BL
150	0.95	TSC	ES1CL
200	0.95	TSC	ES1DL
300	1.3	TSC	ES1FL
400	1.3	TSC	ES1GL
500	1.7	TSC	ES1HL
600	1.7	TSC	ES1JL

*Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)

503784

Mftrs. List No.	Description	Order Code	Price Each 5+	100+	250+	1K+
ES1AL	Diode, Ultra-Fast SMF 1A 50V	SMD 155-9123	0.079	0.052	0.040	0.035
ES1BL	Diode, Ultra-Fast SMF 1A 100V	SMD 155-9124	0.131	– –	– –	– –
ES1CL	Diode, Ultra-Fast SMF 1A 150V	SMD 155-9125	0.131	– –	– –	– –
ES1DL	Diode, Ultra-Fast SMF 1A 200V	SMD 155-9127	0.138	– –	– –	– –
ES1FL	Diode, Ultra-Fast SMF 1A 300V	SMD 155-9128	0.138	0.093	0.069	0.061
ES1GL	Diode, Ultra-Fast SMF 1A 400V	SMD 155-9129	0.138	0.093	0.069	0.061
ES1HL	Diode, Ultra-Fast SMF 1A 500V	SMD 155-9130	0.144	0.096	0.071	0.063
ES1JL	Diode, Ultra-Fast SMF 1A 600V	SMD 155-9131	0.144	– –	– –	– –

Ultra-Fast Recovery Diodes

VISHAY

$I_{f\ (av)}$ A	V_{rrm} V	V_{rsm} V	I_{fsm} A	t_{rr} max ns	V_f V	@ I_f A	Package	Mftrs. List No.
6	200	—	50	35	1.2	6	D-PAK	MURD620CTPBF
8	1200	1300	170	80	1.3	8	D-PAK	8EWF12SPBF
8	300	—	100	35	1	8	TO-220AC	8ETH03PBF
8	200	—	100	35	0.975	8	D2-PAK	MURB1620CTPBF
8	200	—	100	25	0.975	8	TO-220AC	MUR820PBF
10	1200	1300	160	80	1.33	10	TO-220AC	10ETF12PBF
10	600	700	160	80	1.33	10	TO-220AC	10ETF06PBF
10	200	—	100	35	1.15	10	TO-220AB	MUR2020CTPBF
10	200	—	100	35	1.15	10	D2-PAK	MURB2020CTPBF
15	300	—	140	40	1.05	15	TO-220AC	15ETH03PBF
15	200	—	200	35	1.05	15	TO-220AC	MUR1520PBF
16	200	—	100	25	0.75	8	TO-220AB	MUR1620CTPBF
20	1200	1300	300	60	1.3	20	TO-220AC	20ETF12PBF
20	600	700	300	60	1.3	20	TO-220AC	20ETF06PBF
20	600	700	300	95	1.3	20	D2-PAK	20ETF06SPBF
30	1200	1300	350	60	1.41	30	TO-247AC	30EPF12PBF
30	1200	1100	350	60	1.41	30	TO-247AC	30CPF12PBF
30	600	300	350	60	1.41	30	TO-247AC	30EPF06PBF
30	600	700	350	60	1.41	30	TO-247AC	30CPF06PBF
30	400	—	200	60	1.17	15	TO-247AC	30CPU04PBF
40	600	700	475	60	1.25	40	TO-247AC	40EPF06PBF
60	1200	1300	700	70	1.1	30	TO-247AC	60EPF12PBF
60	1200	1300	700	70	1.1	30	TO-247AC	60CPF12PBF
60	200	—	830	70	1.1	—	TO-247AC	60EPF06PBF
80	600	700	1000	70	1.1	40	TO-247AC	80EPF06PBF

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
8ETH03PBF	865-7220	0.85	0.54	0.53	0.51	0.50
8EWF12SPBF	SMD 910-1616	2.13	– –	– –	– –	– –
10ETF06PBF	910-1462	2.74	1.52	1.13	1.00	0.96
10ETF12PBF	910-1470	3.22	1.78	1.33	1.17	1.11
15ETH03PBF	865-6940	1.55	0.94	0.70	0.62	0.59
20ETF06PBF	910-1500	2.05	1.23	1.19	1.15	1.12
20ETF06SPBF	SMD 910-1519	5.17	3.07	2.29	2.01	1.91
20ETF12PBF	910-1497	4.48	– –	– –	– –	– –
30CPF06PBF	910-1551	4.43	2.45	1.83	1.60	1.53
30CPF12PBF	910-1543	4.77	2.74	2.27	2.21	2.15
30CPU04PBF	865-7076	2.60	1.43	1.07	0.94	0.90
30EPF06PBF	910-1527	3.16	1.74	1.30	1.14	1.09
30EPF12PBF	910-1535	5.50	3.04	2.27	1.99	1.89

Power Diodes - Ultra-Fast Recovery - continued

Ultra-Fast Recovery Diodes - continued

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
40EPF06PBF	910-1560	5.61	3.11	2.31	2.03	1.93
60CPF12PBF	910-1578	4.74	2.87	2.79	2.72	2.65
60EPF06PBF	910-1586	5.22	3.02	2.85	2.77	2.70
60EPF12PBF	910-1594	9.50	5.25	3.92	3.43	3.28
80EPF06PBF	910-1608	13.87	7.67	5.73	5.02	4.78
MUR820PBF	865-1574	1.25	0.72	0.53	0.46	0.44
MUR1520PBF	865-1540	1.92	1.06	0.79	0.70	0.67
MUR1620CTPBF	865-1558	1.50	0.83	0.62	0.55	0.51
MUR2020CTPBF	865-1566	1.76	1.01	0.76	0.65	0.63
MURB1620CTPBF	SMD 910-1691	0.98	– –	– –	– –	– –
MURB2020CTPBF	SMD 910-1659	1.25	– –	– –	– –	– –
MURD620CTPBF	SMD 910-1667	0.58	0.40	0.37	0.35	0.34

211351

SFx Series Ultra Fast Diodes

multicomp TAIWAN SEMICONDUCTOR

DO-4
H = 5.2mm Dia = 2.7mm

DO-201AD
H = 9.5 mm Dia = 5.6 mm

Features:
- High efficiency, low VF
- High current capability
- High reliability
- High surge current capability

- Low power loss.
- For use in low voltage, high frequency inventor, free wheeling, and polarity protection application

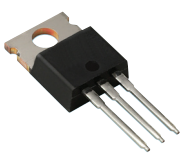
Current If av A	Voltage Vrrm V	Voltage Vf max V	Current Ifsm A	Package	Manf	Mftrs. List No.
1	100	0.95	30	DO-41	MC	SF12
1	150	0.95	30	DO-41	MC	SF13
1	300	1.3	30	DO-41	MC	SF15
1	400	1.3	30	DO-41	MC	SF16
1	600	1.7	30	DO-41	MC	SF18
3	100	0.95	125	DO-201AD	MC	SF32
3	100	0.95	125	DO-201AD	MC	SF32
3	200	0.95	125	DO-201AD	MC	SF34
3	400	1.3	125	DO-201AD	MC	SF36
3	500	1.7	125	DO-201AD	MC	SF37
3	600	1.7	125	DO-201AD	MC	SF38
5	50	0.975	150	DO-201AD	MC	SF51
5	100	0.975	150	DO-201AD	MC	SF52
5	200	0.975	150	DO-201AD	MC	SF54
5	400	1.3	150	DO-201AD	MC	SF56
6	50	0.975	150	DO-201AD	MC	SF61
6	150	0.975	150	DO-201AD	MC	SF63

517760

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	500+	1K+
SF32	162-5216	0.340	0.260	0.210	0.171	0.149
SF34	162-5217	0.550	0.370	0.280	0.220	0.184
SF36	162-5218	0.370	0.280	0.230	0.188	0.161
SF37	162-5219	0.480	0.320	0.250	0.194	0.161
SF38	162-5220	0.480	0.320	0.250	0.194	0.161
SF51	162-5221	0.200	0.180	0.162	0.144	0.131
SF52	162-5222	0.300	0.250	0.210	0.180	0.158
SF54	162-5223	0.220	0.191	0.172	0.155	0.139
SF56	162-5224	0.240	0.210	0.183	0.167	0.150
SF61	162-5227	0.610	0.410	0.310	0.250	0.200
SF63	162-5228	0.490	0.370	0.300	0.260	0.220
Order Multiple=5		**5+**	**25+**	**100+**	**500+**	**1K+**
SF12	162-5210	0.192	0.131	0.097	0.079	0.064
SF13	162-5211	0.134	0.103	0.083	0.070	0.059
SF15	162-5212	0.179	0.122	0.092	0.074	0.061
SF16	162-5213	0.151	0.113	0.091	0.076	0.065
SF18	162-5215	0.159	0.120	0.097	0.081	0.070

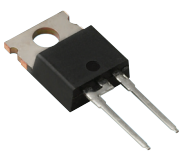
MURx Series Ultra Fast Diodes

multicomp



TO-220AB

Features:
- Ultrafast 35 and 60 Nanosecond Recovery times
- 175°C operating Junction Temperature
- Popular TO-220 Package
- Epoxy meets UL94, V0 @ 1/8”
- High temperature glass passivated junction
- High voltage capability to 600 volts
- Low leakage specified @ 150°C case temperature



TO-220AC

Features:
- High efficiency, Low VF
- High current capability
- High reliability
- High surge current capability
- For use in low voltage, high frequency inventor, free wheeling, and polarity protection application.

Current If av A	Voltage Vrrm V	Voltage Vf max V	Current If Vf A	Time Trr Typ ns	Package	Mftrs. List No.
8	200	0.975	—	25	TO-220AC	MUR820
8	400	1.3	—	50	TO-220AC	MUR840
8	600	1.7	—	50	TO-220AC	MUR860
16	600	1.5	8	60	TO-220AB	MUR1660CT

517755

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
MUR820	162-5178	0.52	0.39	0.33	0.29	0.22
MUR840	162-5179	0.58	0.44	0.37	0.33	0.25
MUR860	162-5180	0.59	0.44	0.37	0.33	0.25
MUR1660CT	162-5174	0.76	0.56	0.48	0.42	0.32

Hyper-Fast Recovery Diodes

VISHAY

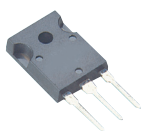
$I_{f(av)}$ A	V_{rrm} V	I_{fsm} A	t_{rr} max ns	V_f V	@ I_f A	Package	Mftrs. List No.
8	600	90	18	2.4	8	TO-220FP	8ETH06FPPBF
8	600	90	40	2.4	8	TO-220AC	8ETH06PBF
8	600	110	16	3	8	TO-220FP	8ETX06FPPBF
8	600	110	16	3	8	TO-220AC	8ETX06PBF
8	600	175	150	1.05	8	TO-220AC	8ETL06PBF
15	600	120	51	2.2	15	TO-220FP	15ETH06FPPBF
15	600	120	51	2.2	15	TO-220AC	15ETH06PBF
15	600	170	18	3.2	15	TO-220FP	15ETX06FPPBF
15	600	250	190	1.05	15	TO-220AC	15ETL06PBF
15	600	250	190	1.05	15	TO-220FP	15ETL06FPPBF
15	600	170	18	3.2	15	TO-220AC	15ETX06PBF
20	300	120	35	1.25	10	TO-220AB	20CTH03PBF
30	200	200	30	1.05	15	TO-220AB	30CTH02PBF
30	300	150	36	1.25	15	TO-220AB	30CTH03PBF
30	600	200	40	2.6	30	TO-220AC	30ETH06PBF

386172

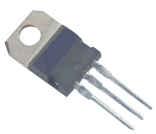
Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
8ETH06FPPBF	865-7238	1.40	0.77	0.58	0.51	0.48
8ETH06PBF	101-3332	1.43	0.79	0.59	0.52	0.49
8ETL06PBF	865-7254	0.70	0.43	0.35	0.34	0.33
8ETX06FPPBF	865-7262	2.33	1.29	0.96	0.85	0.80
8ETX06PBF	865-7270	1.80	1.09	0.81	0.71	0.67
15ETH06FPPBF	865-6959	2.53	1.40	1.04	0.90	0.88
15ETH06PBF	101-3330	2.13	1.26	0.95	0.82	0.78
15ETL06FPPBF	865-6967	2.77	1.53	1.14	1.00	0.95
15ETL06PBF	865-6975	2.26	1.25	0.93	0.82	0.78
15ETX06FPPBF	865-6983	1.74	0.95	0.88	0.86	0.84
15ETX06PBF	865-6991	2.55	1.42	1.04	0.92	0.88
20CTH03PBF	865-7017	1.03	0.70	0.68	0.67	0.65
30CTH02PBF	865-7084	2.05	1.09	0.95	0.92	0.89
30CTH03PBF	865-7092	1.07	0.78	0.75	0.74	0.71
30ETH06PBF	865-7130	3.58	2.13	1.58	1.39	1.32

TO-220 AB/AC, TO-247, Ultra-Fast Recovery

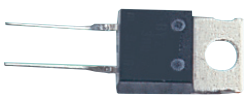
NXP



TO-220AB



TO-247



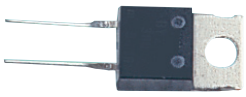
TO-220AC

$I_{f(av)}$ A	V_{rrm} V	I_{fsm} A	t_{rr} max ns	V_f V	@ I_f A	Package	Mftrs. List No.
8	200	80	25	1.05	8	TO-220AC	BYW29E-200
8	200	80	25	0.8	8	TO-220F	BYW29EX-200
9	400	100	60	1.03	8	TO-220AC	BYV29-400
9	500	100	60	1.03	8	TO-220AC	BYV29-500
10	200	50	25	0.8	5	TO-220F	BYQ28X-200
14	500	130	60	1.05	15	TO-220AC	BYT79-500
20	400	120	60	1.05	10	TO-220AB	BYV34-400
30	150	150	28	1.05	15	TO-220AB	BYV42E-150
30	200	150	28	1.05	15	TO-220AB	BYV42E-200

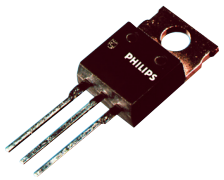
Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
BYQ28X-200	151-0667	0.76	0.60	0.50	0.37	0.33
BYT79-500	108-1350	1.60	1.06	0.91	0.64	0.57
BYV29-400	108-1351	0.65	0.55	0.45	0.35	0.25
BYV29-500	108-1352	1.05	0.75	0.46	0.33	0.31
BYV34-400	108-1356	1.03	– –	– –	– –	– –
BYV42E-150	108-1357	1.45	0.95	0.65	0.54	– –
BYV42E-200	108-1358	1.08	0.78	0.54	0.51	– –
BYW29E-200	108-1360	0.63	0.41	0.28	0.26	– –
BYW29EX-200	151-0668	0.39	0.31	0.27	0.26	0.25

424433

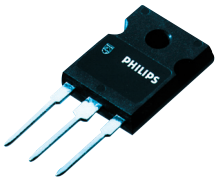
Ultra Fast Epitaxial Rectifiers



SOD-59



TO-220AB



TO-247

- I_{RRM} repetitive ruggedness guaranteed
- Wide package range available (including SMD)
- Best $V_f/I_R/T_j$ combination available giving low losses
- Excellent reverse recovery behaviour gives reduced switching losses:
  150V/200V types offer T_{rr}<25ns
  300V/400V/500V types offer T_{rr} <60ns
- All feature low stored charge giving a soft recovery characteristic

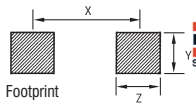
$I_{f\ (av)}$ A	V_{RRM} V	V_F V	PACKAGE LEADED SOD-59 (TO-220AC)	TO-220AB (SOT-78)	TO-247 (SOT-429)
8	200	1.05	BYW29E-200		
9	400	1.03	BYV29-400		
14	500	1.05	BYT79-500		
9	500	1.03	BYV29-500		
2 x 10	200	0.85		BYV32E-200	
2 x 20	400	1.05		BYV34-400	
2 x 30	200	1.05		BYV42E-200	
2 x 10	150	0.85		BYV32E-150	
2 x 30	150	1.05		BYV42E-150	

Price Each

Order Multiple=1	Order Code	1+	25+	100+	250+	1K+
BYT79-500	**108-1350**	1.60	1.06	0.91	0.64	0.57
BYV29-500	**108-1352**	1.05	0.75	0.46	0.33	0.31
		1+	**25+**	**100+**	**1K+**	
BYV32E-150	**108-1353**	0.71	0.55	0.39	0.35	
BYV32E-200	**108-1355**	0.76	0.55	0.41	0.34	
BYV34-400	**108-1356**	1.03	– –	– –	– –	
BYV42E-150	**108-1357**	1.45	0.95	0.65	0.54	
BYV42E-200	**108-1358**	1.08	0.78	0.54	0.51	
		1+	**25+**	**100+**	**250+**	
BYW29E-200	**108-1360**	0.63	0.41	0.28	0.26	

211215

SMA, SMB, SMC, SOD-106A



	H	W	D	X	Y	Z
SMA	2.92	5.59	2.67	4.57	1.63	1.52
SMB	3.56	5.44	2.13	4.32	2.743	2.159
SMC	5.84	7.94	2.41	7.11	3.81	2.794

Supplied on 12mm tape.

V_{RRM} V	$I_{F\ (AV)}$ A	I_{FSM} A	t_{rr} max ns	V_F V	@ I_F A	Package	Mftr	Mftrs. List No.
50	3	100	20	0.9	3	SMC	GS	ES3A
50	1	30	35	0.95	1	SMA	MC	ES1A
50	2	50	35	0.95	2	SMB	MC	ES2A
50	3	100	35	0.95	3	SMC	MC	ES3A
50	1	30	50	1	1	SMA	MC	US1A
100	3	100	35	0.95	3	SMC	TS	ES3B
100	3	100	20	0.9	3	SMC	GS	ES3B
100	2	50	30	0.9	2	SMB	GS	ES2B
100	1	30	15	0.92	1	SMA	GS	ES1B
100	1	30	35	0.95	1	SMA	MC	ES1B
100	1	30	50	1	1	SMA	MC	US1B
100	2	50	35	0.95	2	SMB	MC	ES2B
150	3	100	35	0.95	3	SMC	TS	ES3C
150	3	100	20	0.9	3	SMC	GS	ES3C
150	1	30	35	0.95	1	SMA	TS	ES1C
150	1	30	15	0.92	1	SMA	GS	ES1C
150	2	50	35	0.95	2	SMB	MC	ES2C
200	3	100	35	0.95	3	SMC	TS	ES3D
200	3	100	20	0.9	3	SMC	GS	ES3D
200	2	35	25	1	1	SMA	TFK	BYG22D
200	2	50	30	0.9	2	SMB	GS	ES2D
200	1	30	35	0.95	1	SMA	TS	ES1D
200	1	30	15	0.92	1	SMA	GS	ES1D
200	1	30	50	1	1	SMA	GS	US1D
200	1	30	50	1	1	SMA	MC	US1D
200	2	50	35	0.95	2	SMB	MC	ES2D
300	1	30	35	1.3	1	SMA	FCH	ES1F
300	3	100	35	1.3	3	SMC	MC	ES3F
300	1	30	35	1.3	1	SMA	MC	ES1F
300	2	50	35	1.3	2	SMB	MC	ES2F
400	3	100	35	1.1	3	SMC	GS	ES3G
400	2	50	35	1.1	2	SMB	GS	ES2G
400	1	30	35	1.3	1	SMA	FCH	ES1G
400	1	30	50	1	1	SMA	GS	US1G.
400	1	30	50	1	1	SMA	MC	US1G
400	1	30	35	1.3	1	SMA	MC	ES1G
400	2	50	35	1.3	2	SMB	MC	ES2G
500	1	30	35	1.7	1	SMA	FCH	ES1H
500	3	100	35	1.7	3	SMC	MC	ES3H
500	1	30	35	1.7	1	SMA	MC	ES1H
500	2	50	35	1.7	2	SMB	MC	ES2H
600	1.5	30	75	1.3	1	SMA	TFK	BYG20J
600	1	30	35	1.7	1	SMA	FCH	ES1J
600	1	30	75	1.7	1	SMA	GS	US1J
600	3	100	35	1.7	3	SMC	MC	ES3J
600	1	30	75	1.7	1	SMA	MC	US1J
600	1	30	35	1.7	1	SMA	MC	ES1J
600	2	50	35	1.7	2	SMB	MC	ES2J
800	1	30	75	1.7	1	SMB	MC	US1K
1000	1	30	75	1.7	1	SMA	GS	US1M
1000	1	30	75	1.7	1	SMA	MC	US1M

Price Each

Mftrs. List No.	Mftr.	Order Code	5+	100+	250+	1K+	3K+
BYG20J	TFK	SMD **102-1747** RL	0.280	0.230	0.191	0.173	0.165
BYG22D	TFK	SMD **102-1749** RL	0.810	0.580	0.440	0.340	0.270
ES1B	GS	SMD **954-9226** RL	0.460	0.270	0.260	0.157	0.144
ES1B	MC	SMD **408-4608** RL	0.460	0.230	0.151	0.127	0.115
ES1C	GS	SMD **954-9234** RL	0.490	0.290	0.280	0.171	0.147
ES1C	TS	SMD **408-4616** RL	0.470	0.260	0.162	0.139	0.126
ES1D	GS	SMD **954-9242** RL	0.480	– –	– –	– –	– –
ES1D	TS	SMD **408-4624** RL	0.500	– –	– –	– –	– –
ES1F	FCH	SMD **149-8948**	0.176	0.119	0.085	0.063	– –
ES1G	FCH	SMD **149-8949**	0.220	0.150	0.108	0.081	– –
ES1H	FCH	SMD **149-8950**	0.220	0.150	0.108	0.081	– –
ES1J	FCH	SMD **149-8951**	0.320	0.210	0.137	0.058	– –
ES2B	GS	SMD **954-9250** RL	0.500	0.290	0.280	0.174	0.154
ES2D	GS	SMD **954-9269** RL	0.490	– –	– –	– –	– –
ES2G	GS	SMD **121-5107** RL	0.470	0.450	0.390	0.290	0.250
ES3A	GS	SMD **954-9277** RL	0.490	– –	– –	– –	– –
ES3B	GS	SMD **954-9285** RL	0.690	– –	– –	– –	– –
ES3B	TS	SMD **408-4632** RL	0.310	0.280	0.240	0.220	0.210
ES3C	GS	SMD **954-9293** RL	0.760	– –	– –	– –	– –
ES3C	TS	SMD **408-4640** RL	0.530	0.460	0.360	0.310	0.280
ES3D	TS	SMD **408-4659** RL	0.540	0.470	0.370	0.320	0.290
ES3G	GS	SMD **954-9307** RL	1.280	0.890	0.740	0.510	0.420
ES3G	TS	SMD **408-4667** RL	1.180	0.590	0.400	0.340	0.310
SMBYT01-400	ST	SMD **988-6419** RL	0.570	0.370	0.250	0.200	0.182
SMBYT03-400	ST	SMD **988-6427** RL	0.740	0.470	0.350	0.310	0.280
US1D	GS	SMD **955-1816** RL	0.153	– –	– –	– –	– –
US1G.	GS	SMD **955-1824** RL	0.166	– –	– –	– –	– –
US1J	GS	SMD **955-1832** RL	0.168	– –	– –	– –	– –
US1M	GS	SMD **955-1840** RL	0.300	– –	– –	– –	– –
			5+	**100+**	**250+**	**500+**	**1K+**
ES1A	MC	SMD **162-5028**	0.082	0.068	0.058	0.051	0.046
ES1F	MC	SMD **162-5029**	0.095	0.078	0.068	0.059	0.052
ES1G	MC	SMD **162-5030**	0.101	0.084	0.072	0.062	0.056
ES1H	MC	SMD **162-5031**	0.101	0.084	0.072	0.062	0.056
ES1J	MC	SMD **162-5033**	0.107	0.089	0.076	0.067	0.059
US1A	MC	SMD **162-5278**	0.196	0.130	0.098	0.078	0.064
US1B	MC	SMD **162-5279**	0.196	0.130	0.098	0.078	0.064
US1D	MC	SMD **162-5280**	0.196	0.130	0.098	0.078	0.064
US1G	MC	SMD **162-5281**	0.210	– –	– –	– –	– –
US1J	MC	SMD **162-5282**	0.144	– –	– –	– –	– –
US1K	MC	SMD **162-5283**	0.230	0.153	0.114	0.092	0.076
US1M	MC	SMD **162-5284**	0.250	0.163	0.123	0.099	0.082
			5+	**25+**	**100+**	**250+**	**500+**
ES2A	MC	SMD **162-5034**	0.350	0.240	0.176	0.141	0.116
ES2B	MC	SMD **162-5035**	0.370	0.250	0.184	0.148	0.123
ES2C	MC	SMD **162-5036**	0.370	0.250	0.184	0.148	0.123
ES2D	MC	SMD **162-5037**	0.390	0.260	0.193	0.155	0.129
ES2F	MC	SMD **162-5038**	0.390	0.260	0.193	0.155	0.129
ES2G	MC	SMD **162-5039**	0.410	0.270	0.200	0.161	0.135
ES2H	MC	SMD **162-5040**	0.410	0.270	0.200	0.161	0.135
ES2J	MC	SMD **162-5041**	0.430	0.290	0.210	0.168	0.141
Order Multiple=1			**1+**	**25+**	**100+**	**250+**	**500+**
ES3A	MC	SMD **162-5042**	0.560	0.370	0.290	0.230	0.188
ES3F	MC	SMD **162-5043**	0.610	0.420	0.310	0.250	0.210
ES3H	MC	SMD **162-5045**	0.630	0.430	0.320	0.260	0.220
ES3J	MC	SMD **162-5046**	0.670	0.450	0.330	0.270	0.220

Power Diodes - Ultra-Fast Recovery - continued

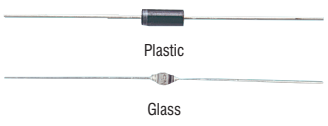
SMA, SMB, SMC, SOD-106A - continued

450661

Mftrs. List No.		Order Code	Price Per Reel 1+	3+
BYG22D-E3/TR	REEL 1800	SMD 156-2246	376.38	356.66
ES1B-E3/61T	REEL 1800	SMD 156-2247	139.64	125.67
ES1D-E3/61T	REEL 1800	SMD 156-2248	114.12	106.66
US1J-E3/61T	REEL 1800	SMD 156-2249	164.15	– –
US1M-E3/61T	REEL 1800	SMD 156-2250	184.32	165.88
ES3D-E3/57T	REEL 850	SMD 156-2252	196.15	184.48
ES3B-E3/57T	REEL 850	SMD 156-2254	196.08	184.40

0.6A to 6A, Axial

multicomp



ON Semiconductor

VISHAY

General Semiconductor

		L	Dia.			L	Dia.
DO-15	Plastic	7.6	3.6	F-126	Glass	6.35	3.05
DO-204AP	Glass	6.1	3.8	MPG-06	Plastic	3.2	2.54
DO-201AD	Plastic	9.5	5.3	SOD-57	Glass	4.6	3.8
DO-41	Plastic	5.2	2.7	267-03	Plastic	9.39	6.35

Voltage Vrrm V	Voltage VF max V	Current If av A	Current If av A	Case Style	Mftrs. List No.
50	0.95	0.6	40	TS-1	UG06A
50	1	3	150	DO-201AD	UF5400
50	1	1	30	DO-41	UF4001
50	1	1	30	DO-41	UF4001
50	1	1	30	DO-41	UF1A
100	1	1	30	DO-41	UF1B
100	0.95	0.6	40	MPG06	UG06B
100	0.95	1	50	DO-204AL	UG1B
100	0.95	2	60	DO-204AC	UG2B
100	1	1	30	DO-41	UF4002
100	1	3	150	DO-201AD	UF5401
100	1	1	30	DO-41	UF4002
150	0.95	0.6	40	TS-1	UG06C
200	1.07	2	50	SOD-57	BYV27-200-TAP
200	1.1	3.5	90	SOD-57	BYV28-200-TAP
200	1	3	150	DO-201AD	UF5402
200	0.975	6	100	TO-220	U12C20A
200	0.975	6	100	TO-220	U12C20C
200	0.975	8	150	TO-220	U16C20A
200	0.975	8	150	TO-220	U16C20C
200	0.975	15	300	TO-247	U30D20A
200	0.975	15	300	TO-247	U30D20C
200	0.89	4	125	DO-201AD	MUR420
200	0.95	2	60	DO-204AC	UG2D
200	1	4	150	DO-201AD	UG4D
200	1	1	30	DO-41	UF4003
200	1	1	30	DO-41	UF1D
200	0.95	0.6	40	TS-1	UG06D
200	0.95	1	40	DO-41	UG1D
200	0.95	2	80	DO-15	UG2D
200	0.95	4	150	DO-201AD	UG4D
200	1	1	30	DO-41	UF4003
400	1	3	150	DO-201AD	UF5404
400	1.3	15	250	TO-247	U30D40C
400	1.7	3	45	DO-201AD	31DF4
400	1.28	4	70	DO-201AD	MUR440
400	1	1	30	DO-41	UF1G
400	1	1	30	DO-41	UF4004
400	1	1	30	DO-41	UF4004
400	1.5	1	30	DO-15	BYT01-400
400	1.5	3	60	DO-201AD	BYT03-400
500	1	3	150	DO-201AD	UF5405
600	2.5	1	30	SOD-57	BYV26C-TAP
600	1.7	3	45	DO-201AD	31DF6
600	1.25	1	35	DO-15	MUR160
600	1.28	4	70	DO-201AD	MUR460
600	1.7	1	30	DO-41	UF1J
600	1.7	1	30	DO-41	UF4005
600	1.7	1	25	DO-41	STTH1R06RL
600	1.7	1	30	DO-41	UF4005
600	1.7	3	150	DO-201AD	UF5406
600	1.25	1	35	DO-41	MUR160RLG
800	2.5	1	30	DO-204AP	BYV26D
800	1.7	1	30	DO-41	UF1K
800	1.7	1	30	DO-41	UF4006
800	1.7	1	30	DO-41	UF4006
800	1.7	3	150	DO-201AD	UF5407
1000	1.7	1	30	SOD-57	SF4007-TR
1000	2.5	1	30	SOD-57	BYV26E-TAP
1000	1.7	1	30	DO-41	UF1M
1000	1.7	1	30	DO-41	UF4007
1000	1.7	1	30	DO-41	UF4007
1000	1.7	3	150	DO-201AD	UF5408
1000	1.75	1	35	DO-41	MUR1100ERLG
1000	1.8	4	70	267-03	MUR4100ERLG

Order Multiple=5

List No.	Mftr.	Order Code	Price Each 5+	100+	250+	1K+
BYT01-400	ST	980-1863	0.280	0.172	0.138	0.113
BYT03-400	ST	980-1871	0.400	0.280	0.230	0.196
STTH1R06RL	ST	816-5513	0.240	0.144	0.116	0.096
			5+	**100+**	**1K+**	**3K+**
BYV26C-TAP	TFK	107-5759	0.490	0.310	0.220	0.173
BYV26D	GS	102-1752	0.220	0.182	0.147	0.090
BYV26E-TAP	TFK	107-5760	0.330	0.230	0.177	0.131
			5+	**25+**	**100+**	**250+**
BYV27-200-TAP	TFK	107-5761	0.870	0.580	0.410	0.300
BYV28-200-TAP	TFK	107-5762	1.440	0.910	0.670	0.620
MUR420	MC	162-5175	0.320	0.270	0.240	0.180
MUR440	MC	162-5176	0.330	0.290	0.250	0.190
MUR160RLG	ON	955-7008	0.270	0.189	0.152	0.126
MUR160	MC	162-5173	0.164	0.121	0.103	0.090
MUR460	MC	162-5177	0.350	0.300	0.260	0.200
MUR1100ERLG	ON	955-7016	0.630	0.410	0.310	0.250
MUR4100ERLG	ON	955-7024	0.620	0.430	0.340	0.280
			5+	**25+**	**100+**	**1K+**
SF4007-TR	TFK	107-5754	0.490	0.320	0.240	0.172
			5+	**100+**	**250+**	**500+**
UF1A	MC	162-5264	0.161	0.107	0.080	0.064
UF1B	MC	162-5265	0.171	0.117	0.087	0.070
UF1D	MC	162-5266	0.139	0.106	0.085	0.071
UF1G	MC	162-5267	0.141	0.107	0.087	0.073
UF1J	MC	162-5268	0.141	0.107	0.087	0.073
UF1K	MC	162-5269	0.147	0.112	0.090	0.075
UF1M	MC	162-5270	0.240	0.158	0.119	0.095
UG06A	MC	162-5271	0.260	0.200	0.160	0.134
UG06C	MC	162-5272	0.260	0.200	0.160	0.134
UG06D	MC	162-5273	0.260	0.200	0.160	0.134
UG1D	MC	162-5274	0.230	0.150	0.111	0.089
UG2D	MC	162-5276	0.450	0.300	0.230	0.179
UG4D	MC	162-5277	0.410	0.300	0.250	0.210
Order Multiple=10			**10+**	**100+**	**500+**	**1K+**
UF4001	GS	955-1620	0.113	0.092	0.087	0.069
UF4001	MC	408-5256	0.100	0.085	0.074	0.069
UF4002	GS	955-1638	0.117	– –	– –	– –
UF4002	MC	408-5264	0.100	– –	– –	– –
UF4003	GS	955-1646	0.110	0.095	0.087	0.061
UF4003	MC	408-5272	0.059	0.053	0.045	0.037
UF4004	GS	955-1654	0.187	0.176	0.166	0.095
UF4004	MC	408-5280	0.126	0.112	0.095	0.080
UF4005	GS	955-1662	0.490	0.400	0.340	0.187
UF4005	MC	408-5299	0.220	0.168	0.136	0.103
UF4006	GS	955-1670	0.390	0.340	0.310	0.199
UF4006	MC	408-5302	0.220	0.168	0.136	0.103
UF4007	MC	408-5310	0.230	0.173	0.139	0.105
UF4007	GS	955-1689	0.370	0.330	0.320	0.210
Order Multiple=5			**5+**	**50+**	**100+**	**1K+**
UF5400	GS	955-1697	0.400	0.390	0.380	0.220
UF5401	GS	955-1700	0.410	0.370	0.360	0.240
UF5402	GS	121-6185	0.490	0.430	0.420	0.390
UF5404	GS	121-6186	1.270	1.140	1.090	0.940
UF5405	GS	133-2639	0.210	0.189	0.182	0.146
UF5406	GS	955-1719	0.290	0.270	0.220	0.168
UF5407	GS	955-1727	0.870	0.520	0.510	0.250
UF5408	GS	955-1735	0.630	– –	– –	– –
			5+	**100+**	**1K+**	**5K5+**
UG06B	GS	955-1743	0.270	– –	– –	– –
UG1B	GS	955-1751	0.450	0.280	0.260	0.138
			5+	**100+**	**1K+**	**4K+**
UG2B	GS	955-1760	0.510	0.300	0.290	0.159
UG2D	GS	955-1778	0.820	0.490	0.420	0.250
Order Multiple=1			**1+**	**100+**	**1K4+**	**4K2+**
UG4D	GS	955-1786	1.170	0.720	0.710	0.410
			1+	**25+**	**100+**	**250+**
U12C20A	MC	144-0105	0.340	0.310	0.260	0.230
U12C20C	MC	144-0106	0.300	0.260	0.220	0.210
U16C20A	MC	144-0107	0.410	0.350	0.320	0.280
U16C20C	MC	144-0108	0.360	0.320	0.270	0.230
U30D20A	MC	144-0109	1.380	1.200	1.040	0.930
U30D20C	MC	144-0110	1.290	1.100	0.970	0.850
U30D40C	MC	144-0113	1.790	1.540	1.340	1.200
31DF4	MC	162-5008	0.570	0.430	0.350	0.290
31DF6	MC	162-5009	0.570	0.430	0.350	0.290

211412

Reel of 1250

Mftrs. List No.	Order Code	Price Per Reel 1+	3+
SF62 R0	156-2257	96.13	92.15

1A to 200A

ON Semiconductor

$I_{F(av)}$ A	V_{RRM} V	I_{FSM} A	t_{rr} ns	V_F V	@ I_F A	Package	Mftrs. List No.
1	200	35	25	0.875	1	59-04	MUR120RLG
1	200	40	35	0.875	1	SMB	MURS120T3G
1	600	35	75	1.25	1	SMB	MURS160T3G
3	200	75	35	0.875	3	SMC	MURS320T3G
4	200	125	25	0.875	3	267-03	MUR420RLG
4	600	70	50	1.25	3	267	MUR460RLG
8	200	100	35	0.975	8	TO-220AC	MUR820G
8	600	100	50	1.5	8	TO-220AC	MUR860G
8	1000	100	75	1.8	8	TO-220AC	MUR8100EG
15	600	150	60	1.5	15	TO-220AC	MUR1560G
16	200	100	35	0.975	8	TO-220AB	MUR1620CTG
16	600	100	60	1.5	8	TO-220AB	MUR1660CTG
30	200	150	35	1.05	15	TO-247AC	MUR3020WTG
30	600	150	60	1.2	15	TO-218AC	MUR3060PTG

Order Multiple=1			**Price Each**			
Mftrs. List No.		**Order Code**	1+	25+	100+	500+
MUR120RLG		**955-7490**	0.260	– –	– –	– –
MUR420RLG		**955-7563**	0.570	0.370	0.270	0.220
MUR460RLG		**955-7431**	0.460	0.310	0.250	0.210
MUR820G		**955-7539**	0.680	0.490	0.460	0.390
MUR860G		**955-7512**	1.020	0.620	0.520	0.440
MUR1560G		**955-7440**	0.840	0.670	0.630	0.600
MUR1620CTG		**955-7482**	0.730	0.540	0.500	0.430
MUR1660CTG		**955-7504**	1.590	0.950	0.810	0.680
MUR3020WTG		**955-7466**	4.890	3.880	2.990	2.290
MUR3060PTG		**955-7474**	4.220	2.190	1.770	1.660
MUR8100EG		**955-7547**	0.990	0.740	0.620	0.520
Order Multiple=5			**5+**	**100+**	**250+**	**500+**
MURS120T3G	SMD	**955-7458** RL	0.440	0.300	0.190	0.139
MURS160T3G	SMD	**955-7520** RL	0.360	0.240	0.165	0.121
MURS320T3G	SMD	**955-7555** RL	0.400	0.260	0.220	0.178

Reels of 2500		**Price Per Reel**	
Mftrs. List No.	**Order Code**	1+	3+
MURS160T3G	SMD **156-2251**	400.47	360.46
MURS320T3G	SMD **156-2255**	284.40	271.80

222096

$I_{F(av)}$ A	V_{RRM} V	I_{FSM} A	t_{rr} ns	V_F V	@ I_F A	Package	Mftrs. List No.
267-03							
4	1000	70	75	1.75	4	267-03	MUR4100ERLG
TO-220AC							
15	200	200	35	1.05	15	TO-220AC	MUR1520G
DO-41							
1	600	35	50	1.05	1	DO-41	MUR160RLG
1	1000	35	75	1.75	1	DO-41	MUR1100ERLG

422998

Order Multiple=1		**Price Each**			
Mftrs. List No.	**Order Code**	1+	25+	100+	250+
MUR1520G	**955-6990**	1.230	0.710	0.590	0.500
Order Multiple=5		**5+**	**25+**	**100+**	**250+**
MUR160RLG	**955-7008**	0.270	0.189	0.152	0.126
MUR1100ERLG	**955-7016**	0.630	0.410	0.310	0.250
MUR4100ERLG	**955-7024**	0.620	0.430	0.340	0.280

Turboswitch™ High Voltage

TO-220AC

DOP-31

SOD-93

TO-220AB

ISOTOP

TO-247

F126

$I_{F(av)}$ A	V_{rrm} V	t_{rr} max (*typ) ns	V_f V	@ I_f A	Package	Mftrs. List No.
1	200	15*	1	1	DO-41	STTH1R02
1	200	20*	0.97	1	DO-41	STTH102
1	200	20*	0.97	1	SMB	STTH102A
1	600	80*	1.3	1	SMB	STTH1L06U
2	200	15*	1	2	SMA	STTH2R02A
2	200	17*	1	2	SMB	STTH2R02U
2	1200	75*	1.75	2	SMB	STTH212U
3	200	16*	1	3	DO-201AD	STTH3R02
3	200	35*	0.75	3	DO-201AD	STTH302RL
3	200	35*	0.75	3	DO-201AD	STTH302
3	1000	75*	1.7	3	DO-201AD	STTH310
3	600	30*	1.7	3	DO-201AD	STTH3R06
3	600	60*	1.3	3	DO-201AD	STTH3L06
4	200	16*	1.05	4	D-PAK	STTH4R02B-TR
4	200	16*	1.05	4	SMB	STTH4R02U
4	200	20*	1.1	4	D-PAK	STTH802CB
5	1200	48*	1.25	5	TO-220AC	STTH512D
5	1200	48*	1.25	5	TO-220FP	STTH512FP
5	600	95*	1.3	5	TO-220FP	STTH5L06FP
5	600	40*	2.9	5	TO-220AC	STTH5R06D
8	200	17*	1.05	8	TO-220AC	STTH802D
8	1000	47*	1.3	8	TO-220AC	STTH810D
8	1000	47*	1.3	8	TO-220ins	STTH810DI
8	1200	50*	1.25	8	TO-220AC	STTH812D
8	1200	50*	1.25	8	TO-220ins	STTH812DI
8	1200	50*	1.25	8	TO-220FP	STTH812FP
5	200	20*	1.1	5	D-PAK	STTH1002CB
5	200	20*	1.1	5	TO-220AB	STTH1002CT
8	600	105*	1.3	8	TO-220FP	STTH8L06FP
10	200	22*	1.1	10	TO-220FP	STTH2002CFP
12	1000	48*	1.3	12	TO-220AC	STTH1210D
12	1000	48*	1.3	12	TO-220FP	STTH1210FP
12	1200	50*	1.25	12	TO-220AC	STTH1212D
12	1200	50*	1.25	12	D2-PAK	STTH1212G
15	200	20*	1.1	15	TO-220AC	STTH1502D
15	1200	53*	1.2	15	TO-220AC	STTH1512D
15	1200	53*	1.2	15	TO-220ins	STTH1512PI
15	1200	53*	1.2	15	TO-247	STTH1512W
15	600	50*	1.8	15	TO-220AC	STTH15R06D
15	600	50*	2.9	15	TO-247	STTH30R06CW
15	200	22*	1.1	15	TO-220AB	STTH2002CT
20	200	16*	1.1	20	TO-220AC	STTH2002D
20	200	16*	1.1	20	TO-220ins	STTH2002DI
20	200	16*	1.1	20	D2-PAK	STTH2002G-TR
20	1000	42*	1.3	20	DOP3I	STTH3010PI
20	1000	42*	1.3	20	TO-247	STTH3010W
20	1200	57*	1.3	20	TO-220AC	STTH3012D
20	600	95*	1.3	20	DO-201AD	STTH5L06
30	600	25*	2.9	30	TO-220AC	STTH8R06D
30	1000	42*	1.3	30	TO-220AC	STTH3010D
30	1200	57*	1.3	30	TO-247	STTH3012W
30	600	45*	2.9	30	TO-220AC	STTH12R06D
30	200	22*	1.05	30	TO-247	STTH6002CW
60	400	14*	0.83	60	DO-247	STTH6004W
60	600	60*	1.85	60	TO-247	STTH6006W
60	1000	49*	1.3	60	TO-247	STTH6010W
60	1200	50*	1.3	60	TO-247	STTH6012W
2 x 8	600	13	3.5	8	TO-220AB	STTH806TTI
2 x 30	1200	45*	1.3	30	ISOTOP	STTH6112TV1
2 x 30	1000	42*	1.3	30	ISOTOP	STTH6110TV1
2 x 30	1000	42*	1.3	30	ISOTOP	STTH6110TV2
2 x 30	600	50*	1.85	30	ISOTOP	STTH6006TV1
2 x 30	300	—	1	30	TO-247	STTH6003CW
2 x 30	200	22*	—	30	TO-220ins	STTH6002CPI
2 x 45	1200	50*	1.2	45	ISOTOP	STTH9012TV1
2 x 45	1200	50*	1.2	45	ISOTOP	STTH9012TV2
2 x 50	200	30*	1	50	ISOTOP	STTH10002TV1
2 x 50	200	20*	1	50	ISOTOP	STTH10002TV2
2 x 60	1200	50*	1.3	60	ISOTOP	STTH12012TV1

211290

			Price Each				
Mftrs. List No.		**Order Code**	1+	25+	100+	250+	1K+
STTH12R06D		**990-7882**	1.270	0.930	0.750	0.650	0.630
STTH15R06D		**990-7904**	2.070	1.470	1.230	1.070	0.950
STTH102		**990-7866**	0.500	0.320	0.250	0.195	0.182
STTH102A	SMD	**990-7874** RL	0.340	0.200	0.184	0.137	0.107
STTH302		**990-7955**	0.550	0.260	0.230	0.176	0.156
STTH310		**990-7980**	0.480	0.350	0.310	0.290	0.260
STTH802CB	SMD	**993-5975**	0.640	0.440	0.290	0.260	0.240
STTH806TTI		**980-3831**	3.810	3.020	2.250	1.820	1.480
STTH6003CW		**980-3815**	4.930	2.610	1.660	1.590	1.550
STTH1L06U	SMD	**990-7939** RL	0.370	0.260	0.240	0.184	0.146
STTH3R06		**990-7998**	0.450	0.340	0.280	0.240	0.200
STTH5L06		**990-8005**	0.660	0.480	0.450	0.390	0.340
STTH8L06FP		**993-5991**	1.080	0.770	0.650	0.560	0.500
STTH8R06D		**990-8030**	1.660	0.990	0.930	0.850	0.760
STTH30R06CW		**990-7971**	4.690	3.720	2.770	2.240	1.820
STTH1002CB	SMD	**993-5827**	0.590	0.510	0.450	0.390	0.290
STTH1002CT		**993-5835**	0.950	0.700	0.510	0.450	0.360
STTH2002CFP		**993-5886**	1.740	1.290	0.950	0.830	– –
STTH2002CT		**993-5894**	1.510	1.120	0.820	0.720	0.580
STTH3L06		**993-5924**	0.650	0.470	0.400	0.310	– –
STTH5L06FP		**993-5932**	0.740	0.560	0.530	0.460	– –
STTH5R06D		**993-5940**	1.800	1.330	0.980	0.860	0.690
STTH6002CW		**993-5967**	3.370	2.570	2.480	2.010	1.720
STTH10002TV1		**129-5225**	28.230	20.250	15.910	13.560	11.960
STTH10002TV2		**129-5227**	21.850	14.890	12.450	11.020	10.740
STTH12012TV1		**129-5229**	36.610	24.960	20.870	17.850	15.590
STTH1210D		**129-5231**	2.110	1.680	1.280	– –	– –
STTH1210FP		**129-5233**	1.750	1.240	1.040	0.910	0.800
STTH1212D		**129-5235**	2.430	1.940	1.480	– –	– –
STTH1212G	SMD	**129-5236**	1.550	1.290	1.270	1.160	1.020
STTH1502D		**129-5237**	1.690	1.250	0.940	– –	– –
STTH1512D		**129-5239**	1.380	1.150	1.060	– –	– –
STTH1512PI		**129-5242**	2.040	1.520	1.310	1.160	1.030

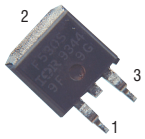
Power Diodes - Ultra-Fast Recovery - continued

Turboswitch™ High Voltage - continued

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
STTH1512W	129-5243	2.280	2.040	1.830	– –	– –
STTH1R02	129-5245	0.210	0.149	0.125	0.109	0.096
STTH2002D	129-5248	2.040	1.630	1.320	1.290	1.250
STTH2002DI	129-5249	4.190	2.970	2.500	2.170	1.910
STTH2002G-TR	SMD 129-5250	2.510	1.740	1.530	1.490	1.450
STTH212U	SMD 129-5254	0.480	0.370	0.330	0.280	0.260
STTH2R02A	SMD 129-5255	0.570	0.360	0.270	– –	– –
STTH2R02U	SMD 129-5256	0.153	0.108	0.092	0.080	0.070
STTH3010D	129-5258	4.220	3.000	2.520	2.190	1.920
STTH3010PI	129-5259	4.840	3.420	2.880	2.510	2.210
STTH3010W	129-5260	2.910	2.300	1.760	1.390	1.350
STTH3012D	129-5261	3.040	2.430	1.860	1.390	1.370
STTH3012W	129-5262	3.230	2.560	1.900	1.540	1.500
STTH302RL	129-5264	0.290	0.200	0.171	0.149	0.130
STTH3R02	129-5267	0.300	0.220	0.164	– –	– –
STTH4R02B-TR	SMD 129-5272	0.500	0.360	0.300	0.260	0.230
STTH4R02U	SMD 129-5277	0.860	0.570	0.470	0.440	0.370
STTH512D	129-5280	1.360	1.010	0.740	– –	– –
STTH512FP	129-5281	1.310	0.930	0.780	0.680	0.600
STTH6002CPI	129-5282	3.690	3.290	2.600	2.110	1.950
STTH6004W	129-5283	3.780	3.000	2.230	– –	– –
STTH6006TV1	129-5284	21.310	15.440	12.910	12.440	12.120
STTH6006W	129-5285	5.310	3.770	3.160	2.770	2.420
STTH6010W	129-5286	5.610	3.970	3.340	2.910	2.560
STTH6012W	129-5288	6.520	4.620	3.880	3.390	2.970
STTH6110TV1	129-5291	24.170	16.480	13.780	11.780	10.290
STTH6110TV2	129-5292	24.740	16.850	14.090	12.040	10.510
STTH6112TV1	129-5293	24.680	16.840	14.070	12.030	10.500
STTH802D	129-5296	1.090	0.720	0.530	– –	– –
STTH810D	129-5297	1.810	1.340	1.000	– –	– –
STTH810DI	129-5298	1.810	1.450	1.110	0.830	0.660
STTH812D	129-5302	1.550	1.100	0.930	0.800	0.710
STTH812DI	129-5303	1.470	1.040	0.880	0.770	0.670
STTH812FP	129-5304	1.500	1.060	0.890	0.780	0.690
STTH9012TV1	129-5307	35.880	26.430	19.990	17.070	15.410
STTH9012TV2	129-5308	28.510	19.390	16.420	16.000	15.000

TO-263

GENERAL SEMICONDUCTOR FAIRCHILD SEMICONDUCTOR



- Ultra-fast recovery times
- Low forward voltage
- Glass passivated chip junctions
- Soft reverse recovery options
- **UL94V-0 rated**

SMD

H=4.83, W-10.67, D=15.88

I_F (av) A	V_{RRM} V	I_{FSM} V	t_{rr} ns	V_F V	@	I_F A	Mftr	Mftrs. List No.
16	200	250	35	0.975		16	GS	FESB16DT
16	600	250	50	1.5		16	GS	FESB16JT
18	200	175	20	1.2		20	GS	UGB18DCT
18	100	150	35	1.15		20	GS	BYVB32-100-E3/45

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	1K+
BYVB32-100-E3/45	SMD 954-9200	1.47	1.06	0.63	0.60
FESB16DT	SMD 954-9315	1.16	0.63	0.53	0.43
FESB16JT	SMD 954-9323	3.47	1.75	1.34	0.94
UGB18DCT	SMD 955-1808 RL	2.60	1.82	1.47	0.79

211058

Reel of 800 Mftrs. List No.	Order Code	Price Per Reel 1+	3+
FESB16JT-E3/81	SMD 156-2258	406.89	366.20

Soft-Recovery, Axial

VISHAY

For Improved EMI Suppression

DO-15 L=7.6, Dia.=3.6
DO-201AD L=9.5, Dia.=5.3

Nitride oxide passivated junction, soft-gold doped. **UL94V-0 rated**.

I_F (av) A	I_{FSM} A	t_{rr} max ns	V_F max V	Package	Series
2	80	15	1.07	DO-15	SBYV27...
3.5	150	20	1.1	DO-201AD	SBYV28...

211237

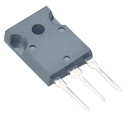
Order Multiple=5

V_{RRM} max., V	Mftrs. List No.	Order Code	Price Each 5+	25+	100+	1K+
100	SBYV27-100	955-0402	0.770	0.440	0.390	0.250
200	SBYV27-200	955-0410	0.440	0.250	0.240	0.144
Order Multiple=1			**1+**	**25+**	**100+**	**1K+**
200	SBYV28-200	955-0437	0.500	0.290	0.280	0.173

Epitaxial Diode (FRED)

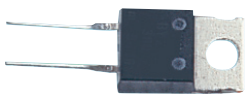
IXYS

TO-220AB


TO-247AD

SOT-227B

D-PAK (TO-252)


TO-220AC

- Planar passivated chips
- Very short recovery time
- Extremely low switching losses
- Low IRM-values
- Soft recovery behaviour
- Epoxy meets UL 94V-0

V_{RRM} max. V	I_F av max. A	Ifs max. A	V_F max. V	Package	Mftrs. List No.
200	123	1200	0.95	SOT-227B	DSEI2X121-02A
200	69	600	0.88	TO-247	DSEI60-02A
200	10	100	0.98	TO-220FPAC	DPG10I200PM
200	10	100	0.98	TO-220FPAB	DPG20C200PN
200	30	300	1.06	TO-3P	DPG60C200QB
200	10	100	0.98	TO-220AC	DPG10I200PA
200	15	150	1	TO-220AB	DPG30C200PB
200	15	150	1	TO-247	DPG30C200HB
300	10	100	0.98	TO-220AB	DPG20C300PB
300	10	100	0.98	TO-220FPAB	DPG20C300PN
300	15	150	1	TO-247AD	DPG30C300HB
300	15	150	1	TO-220AB	DPG30C300PB
300	30	300	1.06	D2-PAK	DPG60C300PC
300	60	550	1.1	D2-PAK	DPG60IM300PC
300	10	100	0.98	TO-220AC	DPG10I300PA
400	10	100	1.04	TO-220ACFP	DPG10I400PM
400	30	300	1.13	TO-3P	DPG60C400QB
400	60	600	1.22	TO-3P	DPG60IM400QB
400	10	100	1.04	TO-220AC	DPG10I400PA
400	15	150	1.08	TO-220	DPG30C400PB
400	60	600	1.22	TO-247	DPG60I400HA
600	30	300	1.4	SOT-227B	DSEI2X31-06C
600	14	100	1.5	TO-220AC	DSEI12-06A
600	37	300	1.4	TO-247AD	DSEI30-06A
600	60	550	1.5	TO-247AD	DSEI60-06A
600	30	300	1.4	TO-247AD	DSEK60-06A
600	96	1200	1.17	SOT-227B	DSEI2X101-06A
1000	60	500	1.8	SOT-227B	DSEI2X61-10B
1000	30	200	2	TO-247AD	DSEI30-10A
1000	65	500	1.8	TO-247AD	DSEI60-10A
1000	12	75	2.1	TO-220AC	DSEI12-10A
1200	17	130	1.87	TO-220AC	DSEI20-12A
1200	28	200	2.2	SOT-227B	DSEI2X31-12B
1200	92	1200	1.61	SOT-227B	DSEI2X101-12A
1200	52	450	2.15	SOT-227B	DSEI2X61-12B
1200	109	600	1.16	TO-247	DSEI120-12A
1200	11	75	2.2	TO-220AC	DSEI12-12A

496704

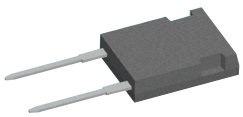
Mftrs. List No.	Package	Order Code	Price Each 1+	25+	100+	250+
DSEI120-12A	TO-247	142-7253	5.38	4.52	3.59	3.59
DSEI12-10A	TO-220AC	142-7254	1.66	1.14	0.82	0.82
DSEI20-12A	TO-220AC	142-7255	2.73	1.86	1.34	1.34
DSEI2X101-12A	SOT-227B	142-7256	15.15	13.00	11.93	11.93
DSEI2X31-12B	SOT-227B	142-7257	15.73	13.48	10.96	10.96
DSEI2X61-12B	SOT-227B	142-7259	15.11	14.05	11.98	11.98
DSEI60-02A	TO-247	142-7261	2.28	1.91	1.90	1.90
DSEI2X101-06A	SOT-227B	935-9427	13.68	12.72	12.01	12.01
DSEI2X121-02A	SOT-227B	935-9419	15.56	14.47	13.71	13.71
DSEI2X31-06C	SOT-227B	935-9400	14.56	12.58	11.44	11.44
DSEI2X61-10B	SOT-227B	935-9435	11.14	10.36	9.88	9.88
DSEI12-06A	TO-220AC	935-9370	0.94	0.83	0.62	0.62
DSEI12-12A	TO-220AC	935-9389	1.42	1.15	0.81	0.81
DSEI30-06A	TO-247AD	935-9338	1.92	1.42	1.38	1.38
DSEI30-10A	TO-247AD	935-9346	2.77	2.51	1.99	1.99
DSEI60-06A	TO-247AD	935-9354	2.76	2.56	2.38	2.38
DSEI60-10A	TO-247AD	935-9362	3.50	3.25	2.73	2.73
DSEK60-06A	TO-247AD	935-9397	3.66	3.40	2.67	2.67
DPG10I200PM	TO-220FPAC	157-2525	0.57	0.48	0.40	0.40
DPG20C200PN	TO-220FPAB	157-2526	0.75	0.62	0.53	0.53
DPG60C200QB	TO-3P	157-2527	1.41	1.24	1.07	1.07
DPG20C300PB	TO-220AB	157-2528	0.75	0.62	0.50	0.50
DPG20C300PN	TO-220FPAB	157-2529	0.75	0.62	0.53	0.53
DPG30C300HB	TO-247AD	157-2530	1.43	1.17	0.98	0.98
DPG30C300PB	TO-220AB	157-2531	0.93	0.76	0.73	0.73
DPG60C300PC	D2-PAK	SMD 157-2534	1.56	1.29	1.24	1.24

Mftrs. List No.	Package	Order Code	Price Each 1+	25+	100+	250+
DPG60IM300PC	D2-PAK	SMD **157-2536**	1.15	0.95	0.93	0.93
DPG10I400PM	TO-220ACFP	**157-2537**	0.50	0.42	0.35	0.35
DPG60C400QB	TO-3P	**157-2538**	1.97	1.66	1.38	1.38
DPG60IM400QB	TO-3P	**157-2539**	1.40	1.21	1.18	1.18
DPG10I200PA	TO-220AC	**157-2540**	0.48	0.39	0.32	0.32
DPG30C200PB	TO-220AB	**157-2542**	0.93	0.76	0.61	0.61
DPG30C200HB	TO-247	**157-2543**	1.43	1.17	0.95	0.95
DPG10I300PA	TO-220AC	**157-2545**	0.48	0.39	0.32	0.32
DPG10I400PA	TO-220AC	**157-2546**	0.52	0.43	0.35	0.35
DPG30C400PB	TO-220	**157-2547**	1.01	0.83	0.68	0.68
DPG60I400HA	TO-247	**157-2548**	1.56	1.28	1.27	1.27

Epitaxial Diodes, Electrically Isolated Back Surface

IXYS

Avalanche rated



ISOPLUS-247 (2-pin)

- Silicon chip on Direct-Copper-Bond substrate
- Isolated Mounting Surface
- 2500 V electrical isolation
- Short recovery time
- Extremely low switching losses
- Epoxy meets UL-94V-0
- Isolated and UL registered E153432

$I_{F(AV)}$ A	V_{rrm} V	I_{fsm} @ 50Hz A	t_{rr} ns	V_f ns	@	I_f A	Mftrs. List No.
Single Diode, ISOPLUS-247 (2-pin)							
15	1200	110	20	4.04		15	DSEP15-12CR
30	600	250	30	2.51		30	DSEP30-06BR
30	1200	200	40	2.74		30	DSEP30-12AR
30	1200	250	20	5		30	DSEP30-12CR
60	1200	500	40	2.66		60	DSEP60-12AR

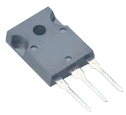
451154

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
DSEP15-12CR	**130-0066**	2.41	1.99	1.63	1.51	– –
DSEP30-06BR	**130-0067**	4.83	3.51	2.88	2.64	– –
DSEP30-12AR	**130-0069**	3.01	2.61	2.54	2.47	– –
DSEP30-12CR	**130-0070**	5.95	4.93	4.00	3.73	– –
DSEP60-12AR	**130-0071**	6.30	5.39	5.23	5.11	– –

Epitaxial Diode (HiPerFRED™)

IXYS

TO-220AB



TO-247AD

SOT-227B

TO-220AC

- Planar passivated chips
- Very short recovery time
- Extremely low switching losses
- Low I_{RM}-values
- Soft recovery behaviour
- Epoxy meets UL 94V-0

V_{RRM} max. V	I_F av max. A	I_{FS} max. A	V_F max. V	Package	Mftrs. List No.
200	30	325	0.95	TO-247AD	DSEC60-02A
300	30	300	0.93	TO-220AC	DSEP29-03A
300	60	600	1.26	SOT-227B	DSEP2X61-03A
300	90	1000	1.3	SOT-227B	DSEP2X91-03A
600	15	110	1.35	TO-220AC	DSEP15-06A
600	30	250	1.26	TO-220AC	DSEP29-06A
600	30	250	1.3	SOT-227B	DSEP2X31-06A
600	60	600	1.48	SOT-227B	DSEP2X61-06A
600	90	1000	1.52	SOT-227B	DSEP2X91-06A
600	120	2000	1.39	SOT-227B	DSEC240-06A
1200	10	40	1.96	TO-220AB	DSEC16-12A
1200	15	90	1.79	TO-220AC	DSEP12-12A
1200	15	90	1.78	TO-247AD	DSEC30-12A
1200	30	200	1.78	TO-247AD	DSEC60-12A
1200	30	200	1.96	SOT-227B	DSEP2X31-12A
1200	30	200	1.81	TO-220AC	DSEP29-12A
1200	60	800	1.7	SOT-227B	DSEP2X61-12A

496707

Mftrs. List No.	Package	Order Code	Price Each 1+	25+	100+
DSEC16-12A	TO-220AB	**142-7239**	1.87	1.58	1.25
DSEC240-06A	SOT-227B	**142-7241**	26.76	22.94	19.40
DSEC30-12A	TO-247AD	**142-7243**	2.42	2.04	1.62
DSEC60-02A	TO-247AD	**142-7244**	4.33	3.64	2.89
DSEC60-12A	TO-247AD	**142-7248**	6.25	5.26	4.17
DSEP12-12A	TO-220AC	**142-7262**	1.24	1.04	0.82
DSEP15-06A	TO-220AC	**142-7263**	0.98	0.82	0.66
DSEP29-03A	TO-220AC	**142-7264**	1.71	1.44	1.14
DSEP29-06A	TO-220AC	**142-7265**	1.53	1.29	1.02
DSEP29-12A	TO-220AC	**142-7266**	2.02	1.70	1.35
DSEP2X31-06A	SOT-227B	**142-7269**	8.66	7.43	6.04
DSEP2X31-12A	SOT-227B	**142-7270**	10.49	8.99	7.31

Mftrs. List No.	Package	Order Code	Price Each 1+	25+	100+
DSEP2X61-03A	SOT-227B	**142-7273**	14.09	12.83	11.44
DSEP2X61-06A	SOT-227B	**142-7274**	35.34	24.09	17.28
DSEP2X61-12A	SOT-227B	**142-7275**	14.29	12.25	9.96
DSEP2X91-03A	SOT-227B	**142-7276**	22.30	19.12	15.55
DSEP2X91-06A	SOT-227B	**142-7277**	15.50	13.28	10.81

High Performance Fast Recovery Diodes (HiPerFRED™ 2nd Gen)

IXYS

TO-220AB

TO-3

TO-220AC

- Planar passivated chips
- Very low leakage current
- Very short recovery time
- Improved thermal behaviour
- Very low Irm-values
- Very soft recovery behaviour
- Avalanche voltage rated for reliable operation
- Soft reverse recovery for low EMI/RFI

V_{RRM} max. V	I_F av max. A	I_{FS} max. A	V_F max. V	Package	Mftrs. List No.
200	15	150	1	TO-220AC	DPG15I200PA
300	60	550	1.1	TO-3P	DPG120C300QB
300	15	150	1	TO-220AC	DPG15I300PA
300	30	300	1.06	TO-247	DPG60C300HB
400	10	100	1.04	TO-220AB	DPG20C400PB
400	15	150	1.07	TO-247	DPG30C400HB

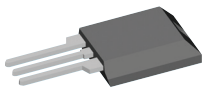
496712

Mftrs. List No.	Package	Order Code	Price Each 1+	25+	100+
DPG120C300QB	TO-3P	**142-7228**	3.08	2.59	2.05
DPG15I200PA	TO-220AC	**142-7229**	0.62	0.53	0.42
DPG15I300PA	TO-220AC	**142-7230**	0.62	0.53	0.42

HiPerDynFRED™ Epitaxial Diodes

IXYS

TO-220AC



SOT-227B

ISOPLUS220

- Silicon chip on Direct-Copper-Bond substrate
- High power dissipation
- Planar passivated chips
- Very short recovery time
- Extremely low switching losses
- Low IRM-values
- Soft recovery behaviour
- Epoxy meets UL 94V-0

V_{RRM} max. V	I_F av max. A	I_{FS} max. A	V_F max. V	Package	Mftrs. List No.
200	15	150	1	TO-220AC	DPG15I200PA
600	35	100	2	SOT-227B	DSEP2X35-06C
1200	10	130	1.12	ISOPLUS220	DSEE15-12CC
1200	25	95	3.3	SOT-227B	DSEP2X25-12C

496715

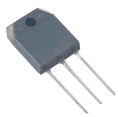
Mftrs. List No.	Package	Order Code	Price Each 1+	25+	100+
DPG15I200PA	TO-220AC	**142-7229**	0.62	0.53	0.42
DSEE15-12CC	ISOPLUS220	**142-7250**	4.37	3.67	2.91
DSEP2X25-12C	SOT-227B	**142-7267**	13.14	11.26	9.16
DSEP2X35-06C	SOT-227B	**142-7272**	10.97	9.55	7.91

4A - 120A, 600V and 1200V

FAIRCHILD SEMICONDUCTOR

TO-220

TO-220F



TO-3P

TO-247

V_{RRM} V	I_F (av) A	I_{FRM} A	I_{FSM} A	t_{rr} max. ns	V_F max. V	Package	Mftrs. List No.
600	4	8	50	22	2.4	TO-220	ISL9R460P2
600	8	—	80	30	2.6	TO-220	FFP08S60STU
600	8	—	60	45	2.1	TO-220F	FFPF08H60STU
600	15	30	200	40	2.2	TO-220	ISL9R1560P2
600	15	30	200	40	2.2	TO-247	ISL9R1560G2
600	30	70	325	45	2.4	TO-220	ISL9R3060P2
600	30	70	325	45	2.4	TO-247	ISL9R3060G2
1200	8	16	100	44	3.3	TO-220	ISL9R8120P2
1200	18	36	200	70	3.3	TO-220	ISL9R18120P2

Power Diodes - Ultra-Fast Recovery - continued

4A - 120A, 600V and 1200V - continued

495044

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	1K+
FFP08S60STU	149-5099	0.92	– –	– –	– –
FFPF08H60STU	149-5109	1.32	0.91	0.66	0.51
ISL9R1560G2	149-5116	3.17	2.15	1.55	1.15
ISL9R1560P2	149-5104	1.35	– –	– –	– –
ISL9R18120P2	149-5105	2.66	1.79	1.30	0.97
ISL9R3060G2	149-5119	2.97	2.02	1.67	1.63
ISL9R3060P2	149-5106	2.64	1.80	1.34	1.27
ISL9R460P2	149-5107	1.18	0.80	0.58	0.44
ISL9R8120P2	149-5108	1.71	– –	– –	– –

8A to 80A Soft-Recovery

Einfach und Zweifach

VISHAY. ST GENERAL SEMICONDUCTOR FAIRCHILD SEMICONDUCTOR ON Semiconductor

Soft recovery diodes offer reduced RFI emission due to the reduced slope of their reverse recovery current characteristic.

V_{RRM} V	I_F (av) A	I_{FRM} A	I_{FSM} A	t_{rr} max. (*t_{rr} min.) ns	V_F max. V	Package	Mftr.	Mftrs. List No.
200	8	—	150	20	1	TO-220AC	GS	UG8DT
200	15	—	200	35	1.05	TO-220AC	ON	MUR1520G
600	4	—	25	42	1.8	TO-220AC	VISH	HFA04TB60PBF
600	8	24	60	55	1.7	TO-220AC	VISH	HFA08TB60PBF
600	8	24	60	55	2.1	D2-PAK	VISH	HFA08TB60SPBF
600	8	16	100	35	2.1	TO-220AC	FCH	RHRP860
600	8	16	100	18	2.4	TO-220AC	FCH	◆ISL9R860P2
600	8	24	60	55	1.7	TO-220AB	VISH	◆HFA16TA60CPBF
600	8	16	100	60	1.5	TO-220	FCH	◆RURP860
600	15	60	150	60	1.7	TO-220AC	VISH	◆HFA15TB60PBF
600	15	60	150	19*	1.7	TO-247AC**	VISH	◆HFA15PB60PBF
600	15	30	200	40	2.1	TO-220AC	FCH	◆RHRP1560
600	25	—	225	23	2	TO-247	ST	◆HFA25PB60PBF
600	25	100	225	75	1.7	TO-220AC	VISH	◆HFA25TB60PBF
600	30	70	325	40	2.1	TO-220AC	FCH	◆RHRP3060
600	80	160	800	85	1.6	TO-247	FCH	◆RURG8060
1200	6	24	80	26	3	TO-220AC	VISH	◆HFA06TB120PBF
1200	8	32	130	28*	3.3	TO-220AC	VISH	◆HFA08TB120PBF
1200	16	—	—	30	3	TO-247AC	ST	HFA16PB120PBF
1200	16	32	190	30	3.3	TO-220AC	VISH	◆HFA16TB120PBF
1200	30	60	300	75	3.2	TO-247	FCH	◆RHRG30120
1200	30	90	120	135	3.93	TO-247AC	VISH	HFA30PB120PBF
1200	75	—	500	85	3.2	TO-247	FCH	RHRG75120
Diodes double								
200	2 x 30	70	325	50	1	TO-247	FCH	◆RURG3020CC
200	2 x 18	—	175	20	1.2	TO-263AB	GS	◆UGB18DCT
300	2 x 30	—	300	55	1.25	TO-247	ST	◆30EPH03PBF
600	2 x 15	60	150	60	2	TO-247AC	VISH	◆HFA30PA60CPBF

◆Denotes reverse avalanche energy rated ** Denotes 2-pin modified TO-247

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	250+
HFA04TB60PBF	VISH	865-7289	1.13	0.80	0.78	0.76
HFA06TB120PBF	VISH	865-7297	4.21	2.59	1.99	1.77
HFA08TB60PBF	VISH	910-1446	3.18	– –	– –	– –
HFA08TB60SPBF	VISH	SMD 910-1454	1.79	1.42	1.38	1.34
HFA08TB120PBF	VISH	864-7933	2.68	2.67	2.60	2.53
HFA15PB60PBF	VISH	910-1390	5.21	2.88	2.15	1.88
HFA15TB60PBF	VISH	910-1381	4.03	2.06	1.35	1.18
HFA16PB120PBF	ST	101-3356	12.56	7.15	5.33	4.67
HFA16TA60CPBF	VISH	864-7941	4.96	2.94	2.28	2.22
HFA16TB120PBF	VISH	864-7950	11.96	5.80	4.79	4.66
HFA25PB60PBF	ST	101-3362	8.33	4.08	2.64	2.57
HFA25TB60PBF	VISH	865-7300	3.02	1.66	1.24	1.09
HFA30PA60CPBF	VISH	910-1411	3.86	2.13	1.59	1.39
HFA30PB120PBF	VISH	910-1438	8.94	6.18	5.87	5.71
MUR1520G	ON	955-6990	1.23	0.71	0.59	0.50
RHRG30120	FCH	984-3914	1.33	1.28	1.24	1.21
RHRG75120	FCH	984-3736	4.59	2.49	2.33	– –
RHRP1560	FCH	984-3892	1.48	1.05	0.81	0.60
RHRP3060	FCH	984-3922	2.56	1.64	1.43	1.06
RURG3020CC	FCH	984-3906	5.03	3.23	2.40	2.02
RURG3060	FCH	107-6353	2.38	1.62	1.16	1.09
RURG8060	FCH	984-3930	5.27	3.59	2.67	2.65
RURP3060	FCH	101-7800	3.19	1.82	1.52	0.79
RURP860	FCH	101-7801	0.92	– –	– –	– –
RHRP860	FCH	984-3949	1.37	0.45	0.42	0.38
RHRP3060	FCH	984-3922	2.56	1.64	1.43	1.06

Mftrs. List No.	Mftr.	Order Code	Price Each 1+	25+	100+	250+
RHRP860	FCH	984-3949	1.37	0.45	0.42	0.38
UG8DT	GS	955-1794	2.01	– –	– –	– –
UGB18DCT	GS	SMD 955-1808 RL	2.60	1.82	1.47	0.79
30EPH03PBF	ST	101-3360	4.28	2.36	1.77	1.55
ISL9R860P2	FCH	109-5128	1.00	0.71	0.54	0.44

211055

Power Diodes - Controlled Avalanche

Controlled Avalanche

SOD-57

Controlled avalanche diodes snub repetitive reverse voltage spikes between specified voltage limits – a common problem in switch mode power supplies, telephony, TV and monitor deflection circuits and other inductive switching circuits.

I_F av A	V_{RRM} max. V	I_R mA	V_F max. V	@	I_F A	Package	Mftr.	Mftrs. List No.
2	1000	0.1	1		2	SOD-57	TFK	BYW56-TAP

211213

Order Multiple=5

Mftrs.List no.	Mftr.	Order code	Price Each 5+	100+	1K+	3K+
BYW56-TAP	TFK	107-5758	0.59	0.38	0.27	0.20

Power Diodes - Schottky

Diode Schottky

ROHM SEMICONDUCTOR

SMD

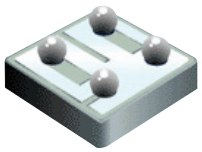
Voltage, Vrrm V	Voltage, Vf max mV	Current, If AV mA	Current Ifsm A	Case Style	Mftrs. List No.
90	490	200	5	TUMD2	RB021VA90TR
40	550	3 A	70	SOD-106	RB050L-40TE25
30	450	3 A	70	PMDT	RB050LA-30TR
40	550	3 A	70	PMDT	RB050LA-40TR
40	450	3 A	70	SOD-106	RB051L-40TE25
40	500	2 A	70	SOD-106	RB060L-40TE25
30	490	2 A	55	SOD-123	RB060M-30TR
30	490	1.5 A	30	SOD-123	RB070M-30TR
40	550	1 A	70	SOD-106	RB160L-40TE25
40	510	1 A	30	SOD-123	RB160M-40TR
40	400	1 A	70	SOD-106	RB161L-40TE25
40	550	500	3	SOT-346	RB400DT146
50	550	500	3	TUMD2	RB400VA-50TR
40	450	100	1	SOT-346	RB420DT146
40	550	100	1	SOT-346	RB425DT146
40	500	400	2	SOT-346	RB495DT146
30	450	100	500 mA	VMD2	RB520G-30T2R
30	470	500	2	SOD-323	RB551V-30TE-17
40	370	30	200 mA	SOT-346	RB705DT146
45	370	30	200 mA	SOT-346	RB706D-40T146
40	370	30	200 mA	SOT-323	RB717FT106
40	370	30	200 mA	SOT-457	RB731UT108
40	370	30	200 mA	SOT-363	RB731XNTR
3	460	—	—	SC-75A	RB851YT2R
30	390	500	5	TUMD2	RSX051VA-30TR
30	390	1 A	45	SOD-123	RSX101M-30TR
30	470	1 A	5	TUMD2	RSX101VA-30TR
30	440	2 A	60	SOD-106	RSX201L-30TE25
30	420	3 A	70	SOD-106	RSX301L-30TE25
30	420	3 A	70	PMDT	RSX301LA-30TR
25	390	5 A	70	SOD-106	RSX501L-20TE25

528143

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
RB021VA90TR	SMD 168-0012	0.490	0.330	0.240	0.149	0.130
RB050L-40TE25	SMD 168-0013	0.990	0.670	0.490	0.300	0.260
RB050LA-30TR	SMD 168-0014	1.020	0.690	0.500	0.310	0.270
RB050LA-40TR	SMD 168-0015	1.020	0.690	0.500	0.310	0.270
RB051L-40TE25	SMD 168-0016	0.600	0.410	0.290	0.181	0.158
RB060L-40TE25	SMD 168-0017	0.950	0.630	0.470	0.290	0.250
RB060M-30TR	SMD 168-0019	0.560	0.370	0.280	0.170	0.148
RB070M-30TR	SMD 168-0021	0.490	0.330	0.240	0.149	0.130
RB160L-40TE25	SMD 168-0022	0.240	0.164	0.120	0.074	0.064
RB160M-40TR	SMD 168-0023	0.290	0.200	0.146	0.089	0.078
RB161L-40TE25	SMD 168-0024	0.310	0.210	0.154	0.095	0.082
RB400DT146	SMD 168-0025	0.570	0.390	0.280	0.174	0.152
RB400VA-50TR	SMD 168-0026	0.510	0.340	0.250	0.155	0.135
RB420DT146	SMD 168-0027	0.270	0.181	0.132	0.081	0.071
RB425DT146	SMD 168-0028	0.310	0.210	0.151	0.094	0.081
RB495DT146	SMD 168-0029	0.470	0.310	0.230	0.140	0.123
RB520G-30T2R	SMD 168-0032	0.350	0.240	0.174	0.106	0.093

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
RB551V-30TE-17	SMD 168-0033	0.360	0.250	0.182	0.111	0.098
RB705DT146	SMD 168-0034	0.350	0.240	0.174	0.106	0.093
RB706D-40T146	SMD 168-0035	0.360	0.250	0.181	0.111	0.097
RB717FT106	SMD 168-0036	0.340	0.240	0.171	0.105	0.092
RB731UT108	SMD 168-0037	0.330	0.220	0.162	0.100	0.086
RB731XNTR	SMD 168-0038	0.520	0.350	0.260	0.159	0.138
RB851YT2R	SMD 168-0039	0.300	0.200	0.149	0.092	0.080
RSX051VA-30TR	SMD 168-0064	0.350	0.240	0.174	0.106	0.093
RSX101M-30TR	SMD 168-0065	0.320	0.220	0.159	0.098	0.085
RSX101VA-30TR	SMD 168-0066	0.300	0.210	0.150	0.093	0.080
RSX201L-30TE25	SMD 168-0068	0.730	0.490	0.360	0.220	0.192
RSX301L-30TE25	SMD 168-0069	0.820	0.550	0.410	0.250	0.220
RSX301LA-30TR	SMD 168-0070	0.830	0.560	0.410	0.250	0.220
RSX501L-20TE25	SMD 168-0071	0.740	0.500	0.360	0.230	0.194

Flipky ™ - 4 pin



- Ultra low V_F per footprint area
- Super low profile (less than 0.8 mm)
- One-fifth footprint of SMA
- Low thermal resistance

H=1.524, W=1.524, D=0.537

The IR140CPS surface-mount Schottky rectifier has been designed for applications requiring low forward drop and very small foot prints on PC boards.
Typical applications are in disk drives, switching power supplies, converters, free-wheeling diodes, battery charging, and reverse battery protection.

V_{RRM} V	$I_{F(AV)}$ A ×	I_{FSM} t_p = 5 µs A	V_F 1 A_{pk} T_J = 125 °C V	Device Marking	Mftrs List No.
40	1	250	0.38	IR140CXXXXZZZZ	IR140CSPTRPBF

**** = Lot Number, ZZZZ = Date code, × = Measured using a rectangular waveform

419385

Mftrs. List No.	Order Code	Price Each 1+	25+	100+
IR140CSPTRPBF	SMD 107-8404 RL	0.49	0.29	0.23

Low V_F SOD-523

- For applications where low voltage drops are needed
- Good power density, PD = 285mW

498177

Mftrs. List No.	I_F (mA)	I_{FS} max (A)	V_{rm} (V)	V_F (V)	Order Code	Price Each 5+	25+
ZHCS350TA	510	4.2	40	0.405	SMD 147-1157	0.39	0.25

0.15A to 10A, SMA, SMB, SMC, SOD-123

ON Semiconductor

MELF
L = 5.2, Dia = 2.7

PowerMite

SMA: H=2.67, W=5.59, D=2.92
SMB: H=2.41, W=5.59, D=3.8
SMC: H=2.41, W=8.13, D=6.10

I_F (AV) A	V_{RRM} V	V_{FM} max. V	I_{RM} max. mA	Package	Mftr.	Mftrs. List No.
0.15	100	1	—	MicroMELF	SLX	MCL4148
0.5	80	1	0.2	MELF	ST	TMBAT49FILM
1	50	0.75	0.4	SMA	MC	SS15
1	90	0.8	0.1	SMA	MC	SS19
1	15	0.44	0.5	SMB	VISH	10BQ015PBF
1	20	0.45	0.2	SMA	VISH	MBRA120TRPBF
1	20	0.45	0.4	POWERMITE	ON	MBRM120LT1G
1	20	0.45	0.1	MELF	TS	LL5817
1	20	0.5	0.4	SMA	MC	SS12
1	30	0.45	0.1	MELF	TS	LL5818
1	30	0.42	0.2	SMB	VISH	STPS1L30UPBF
1	30	0.41	25	SMA	ON	MBRA130LT3G
1	30	0.44	0.5	SMB	VISH	10BQ030PBF
1	30	0.395	—	SMB	ON	MBRS130LT3G
1	30	0.5	0.4	SMA	MC	SS13
1	40	0.45	0.1	MELF	TS	LL5819
1	40	0.55	0.5	MELF	ST	TMBYV10-40FILM
1	40	0.55	25	SMA	ON	MBRA140T3G
1	40	0.75	0.5	SMA	MC	SS14
1	40	0.5	0.2	SMA	GS	SS14
1	40	0.44	0.1	SMB	VISH	10BQ040PBF
1	40	0.6	1	SMB	ON	MBRS140T3G
1	40	0.49	0.5	SMA	VISH	MBRA140PBF
1	40	0.6	0.1	SMB	VISH	MBRS140PBF
1	40	—	—	DO-213AB	VISH	BYM13-40
1	60	0.7	0.5	MELF	ST	TMBYV10-60FILM
1	60	0.44	0.1	SMB	VISH	10BQ060PBF
1	60	0.75	0.5	SMA	MC	SS16
1	60	0.75	0.2	SMA	GS	SS16
1	100	0.86	0.5	SMA	GS	SS1H10
1	100	0.8	0.05	SMA	MC	SS110
1	100	0.75	0.5	SMB	ON	MBRS1100T3G
1	100	0.62	0.5	SMB	VISH	10BQ100PBF
1	100	0.62	0.5	SMB	VISH	MBRS1100TRPBF
1	150	0.95	0.1	SMA	MC	SS115
1.5	20	0.445	0.2	SMA	GS	SL12
1.5	30	0.445	0.2	SMA	GS	SL13
1.5	40	0.62	1	SMA	VISH	10MQ040NPBF
1.5	45	0.5	0.5	SMB	TFK	BYS10/45
1.5	60	0.62	1	SMA	VISH	10MQ060NPBF
1.5	90	0.62	1	SMA	VISH	10MQ100NPBF
1.5	100	0.78	0.1	SMA	VISH	10MQ100NTRPBF
2	20	0.5	0.4	SMB	MC	SS22
2	30	0.44	0.4	SMB	GS	SL23
2	30	0.5	0.5	SMB	FCH	SS23
2	30	0.5	0.4	SMB	MC	SS23
2	40	0.34	0.22	SMB	ST	STPS2L40U
2	40	0.5	0.5	SMB	FCH	SS24
2	30	0.55	0.5	SMB	VISH	20BQ030PBF
2	50	0.7	0.4	SMB	MC	SS25
2	60	0.7	0.7	SMB	FCH	SS26
2	90	0.85	0.1	SMB	MC	SS29
3	20	0.5	0.5	SMC	MC	SS32
3	30	0.5	0.5	SMC	MC	SS33
3	40	0.75	0.5	SMC	MC	SS34
3	40	0.5	2	SMC	ON	MBRS340T3G
3	40	0.49	0.5	SMA	VISH	15MQ040NPBF
3	40	0.35	0.5	SMC	VISH	30BQ040TRPBF
3	40	0.7	—	D-PAK	ON	MBRD640CTT4G
3	50	0.75	0.5	SMC	MC	SS35
3	60	0.35	0.5	SMC	VISH	30BQ060PBF
3	60	0.6	—	D-PAK	ON	MBRD360T4G
3	60	0.72	0.5	SMC	VISH	MBRS360TR.PBF
3	60	0.74	—	SMC	ON	MBRS360T3G
3	60	0.75	0.5	SMC	MC	SS36
3	60	0.75	0.5	SMC	GS	SS36
3	90	0.85	0.1	SMC	MC	SS39
3	100	0.8	4	SMC	GS	SS3H10
3.3	40	0.53	3	D-PAK	VISH	6CWQ04FNPBF
3.3	60	0.61	3	D-PAK	VISH	6CWQ06FNPBF
5	35	0.47	—	D-PAK	ON	MBRD1035CTLG

Order Multiple=1

Mftrs. List No.	Mftr.	Case Style	Order Code	Price Each 1+	25+	100+	250+
BYM13-40	VISH	DO-213AB	SMD 133-6582	0.490	0.340	0.270	0.210
BYS10/45	TFK	SMB	SMD 954-9188	1.040	– –	– –	– –
MBRA120TRPBF	VISH	SMA	SMD 866-0409 RL	0.220	0.121	0.091	0.080
MBRA130LT3G	ON	SMA	SMD 955-5978 RL	0.470	0.280	0.190	0.144
MBRA140T3G	ON	SMA	SMD 955-5986 RL	0.480	0.290	0.200	0.151
MBRA140PBF	VISH	SMA	SMD 866-0417 RL	0.290	– –	– –	– –
MBRD360T4G	ON	D-PAK	SMD 955-6958 RL	0.740	0.530	0.430	0.340
MBRD640CTT4G	ON	D-PAK	SMD 955-6966 RL	0.900	0.640	0.530	0.430
MBRD1035CTLG	ON	D-PAK	SMD 955-6974	1.080	0.700	0.560	0.460
MBRM120LT1G	ON	POWERMITE	SMD 955-5994 RL	0.450	0.270	0.197	0.154
MBRS130LT3G	ON	SMB	SMD 955-6931 RL	0.480	0.290	0.200	0.151
MBRS140PBF	VISH	SMB	SMD 910-0695 RL	0.220	– –	– –	– –
MBRS1100T3G	ON	SMB	SMD 955-5862 RL	0.490	0.290	0.210	0.160
MBRS140T3G	ON	SMB	SMD 955-7237 RL	0.300	0.166	0.144	0.100
MBRS340T3G	ON	SMC	SMD 955-7377 RL	0.250	0.190	0.167	0.122
MBRS360T3G	ON	SMC	SMD 955-6940 RL	0.400	0.210	0.200	0.153
MBRS360TR.PBF	VISH	SMC	SMD 910-1276 RL	0.340	– –	– –	– –
MBRS140T3G	ON	SMB	SMD 955-7237 RL	0.300	0.166	0.144	0.100
MBRS340T3G	ON	SMC	SMD 955-7377 RL	0.250	0.190	0.167	0.122
SL12	GS	SMA	SMD 955-0763 RL	0.189	0.144	0.117	0.097
SL13	GS	SMA	SMD 955-0771 RL	0.200	– –	– –	– –
SL22.	GS	SMB	SMD 955-0780 RL	0.420	0.330	0.280	0.230
SL23	GS	SMB	SMD 955-0798 RL	0.450	– –	– –	– –
SS110	MC	SMA	SMD 408-5140 RL	0.610	0.320	0.210	0.173
SS14	GS	SMA	SMD 955-1280 RL	0.220	– –	– –	– –
SS14	MC	SMA	SMD 408-5159 RL	0.420	– –	– –	– –
SS16	MC	SMA	SMD 408-5167 RL	0.210	– –	– –	– –
SS16	GS	SMA	SMD 955-1298 RL	0.270	– –	– –	– –
SS1H10	GS	SMA	SMD 955-1301 RL	0.310	– –	– –	– –
SS23	FCH	SMB	SMD 984-3795	0.490	0.340	0.230	0.112
SS24	FCH	SMB	SMD 101-7872 RL	0.490	0.340	0.230	0.168
SS26	FCH	SMB	SMD 101-7873 RL	0.440	0.290	0.210	0.098
SS34	MC	SMC	SMD 408-5175 RL	0.950	0.480	0.330	0.280
SS36	MC	SMC	SMD 408-5183 RL	0.990	0.500	0.340	0.290
SS36	GS	SMC	SMD 955-1336 RL	0.820	– –	– –	– –
STPS1L30UPBF	VISH	SMB	SMD 101-3335 RL	0.540	0.300	0.230	0.196
STPS2L40U	ST	SMB	SMD 137-3662 NEW	0.340	0.310	0.260	0.220
TMBAT49FILM	ST	MELF	SMD 137-3664 NEW	0.460	0.300	0.210	0.168

Power Diodes - Schottky - continued

0.15A to 10A, SMA, SMB, SMC, SOD-123 - continued

Order Multiple=1			Price Each			
Mftrs. List No.	Mftr. Case Style	Order Code	1+	25+	100+	250+
TMBYV10-40FILM	ST MELF	SMD 980-4200	0.800	0.510	0.410	0.149
TMBYV10-60FILM	ST MELF	SMD 980-4218	0.490	0.300	0.250	0.132
6CWQ04FNPBF	VISHD-PAK	SMD 910-1055	1.210	– –	– –	– –
6CWQ06FNPBF	VISHD-PAK	SMD 910-1063	1.360	0.870	0.680	0.670
10BQ015PBF	VISHSMB	SMD 864-7763 RL	0.510	0.280	0.210	0.186
10BQ030PBF	VISHSMB	SMD 910-0687 RL	0.270	– –	– –	– –
10BQ040PBF	VISHSMB	SMD 864-7771 RL	0.310	– –	– –	– –
10BQ060PBF	VISHSMB	SMD 864-7780 RL	0.430	0.250	0.190	0.166
10BQ100PBF	VISHSMB	SMD 864-7798 RL	0.350	0.240	0.190	0.168
10BQ015PBF	VISHSMB	SMD 864-7763 RL	0.510	0.280	0.210	0.186
10BQ040PBF	VISHSMB	SMD 864-7771 RL	0.310	– –	– –	– –
10BQ060PBF	VISHSMB	SMD 864-7780 RL	0.430	0.250	0.190	0.166
10BQ100PBF	VISHSMB	SMD 864-7798 RL	0.350	0.240	0.190	0.168
10MQ040NPBF	VISHSMA	SMD 864-7801 RL	0.360	0.199	0.148	0.130
10MQ060NPBF	VISHSMA	SMD 910-0598 RL	0.460	0.250	0.190	0.167
10MQ100NTRPBF	VISHSMA	SMD 865-6916	0.450	0.250	0.188	0.165
10MQ100NPBF	VISHSMA	SMD 910-0580 RL	0.430	0.240	0.177	0.156
15MQ040NPBF	VISHSMA	SMD 910-1268 RL	0.500	– –	– –	– –
20BQ030PBF	VISHSMB	SMD 864-7836 RL	0.260	0.135	0.128	0.113
30BQ015PBF	VISHSMC	SMD 910-1250 RL	1.220	0.740	0.550	0.460
30BQ040TRPBF	VISHSMC	SMD 864-7879 RL	0.780	0.460	0.350	0.300
30BQ060PBF	VISHSMC	SMD 864-7887 RL	0.930	0.580	0.430	0.380
30BQ100PBF	VISHSMC	SMD 910-1241 RL	0.800	0.440	0.330	0.290
15MQ040NPBF	VISHSMA	SMD 910-1268 RL	0.500	– –	– –	– –
SS32	MC SMC	SMD 162-5259	0.350	0.270	0.220	0.174
SS33	MC SMC	SMD 162-5260	0.530	0.350	0.270	0.210
SS35	MC SMC		0.370	0.280	0.230	0.191
SS39	MC SMC	SMD 162-5262	0.470	0.360	0.290	0.250
Order Multiple=5			**5+**	**25+**	**100+**	**250+**
LL5817	TS MELF	SMD 162-5108	0.460	0.230	0.180	0.151
LL5818	TS MELF	SMD 162-5109	0.460	0.230	0.180	0.151
LL5819	TS MELF	SMD 162-5110	0.460	0.230	0.180	0.151
SS115	MC SMA	SMD 162-5249	0.300	0.196	0.147	0.116
SS12	MC SMA	SMD 162-5250	0.129	0.097	0.078	0.065
SS13	MC SMA	SMD 162-5252	0.196	– –	– –	– –
SS15	MC SMA	SMD 162-5253	0.200	0.136	0.102	0.082
SS19	MC SMA	SMD 162-5254	0.260	0.176	0.133	0.106
SS22	MC SMB	SMD 162-5255	0.270	0.200	0.160	0.133
SS23	MC SMB	SMD 162-5256	0.410	0.270	0.200	0.159
SS25	MC SMB	SMD 162-5257	0.420	0.280	0.210	0.165
SS29	MC SMB	SMD 162-5258	0.530	0.350	0.260	0.210

211157

			Price Per Reel	
Mftrs. List No.		Order Code	1+	3+
10MQ100NTRPBF	REEL 7500	SMD 156-2281	2,140.34	– –
10MQ060NTRPBF	REEL 7500	SMD 156-2282	1,011.35	– –
15MQ040NTRPBF	REEL 7500	SMD 156-2283	1,321.07	– –
SL12-E3/61T	REEL 1800	SMD 156-2284	152.71	– –
SS14-E3/61T	REEL 1800	SMD 156-2285	92.97	87.44
SS24	REEL 3000	SMD 156-2288	533.85	480.46
SS26	REEL 3000	SMD 156-2291	613.39	552.06
MBRA130LT3G	REEL 5000	SMD 156-2286	244.63	234.64
MBRA140T3G	REEL 5000	SMD 156-2287	609.32	548.40
MBRS130LT3G	REEL 2500	SMD 156-2296	305.40	274.86
MBRS140T3G	REEL 2500	SMD 156-2297	344.23	309.81
MBRS360T3G	REEL 2500	SMD 156-2301	425.16	– –
MBRS340T3G	REEL 2500	SMD 156-2302	442.29	– –
10BQ040TRPBF	REEL 3000	SMD 161-3961	400.86	– –
10BQ100TRPBF	REEL 3000	SMD 161-3962	1,179.36	– –
30BQ040TRPBF	REEL 3000	SMD 161-3963	677.81	– –
30BQ060TRPBF	REEL 3000	SMD 161-3964	870.02	– –
30BQ100TRPBF	REEL 3000	SMD 161-3965	677.42	– –
10BQ060TRPBF	REEL 3000	SMD 161-4348	401.38	– –
20BQ030TRPBF	REEL 3000	SMD 161-4349	339.13	– –

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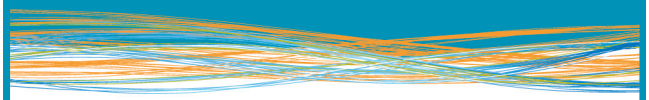


Technical portal and online community for Design Engineers - log on, research, refine and design today!

Minature, Surface Mount, Schottky

- Low Forward Drop
- Easy Pick and Place
- High surge current capability

SMA: H=2.3, W=5.33, D=1.58
SMB: H=2.61, W=3.73, D=2.08
SMC: H=2.62, W=7.11, D=3.27
3-2A1A: H=0.98, W=3.5, D=1.6

Taiwan Semi range also has the following features:

- Laboratory classification to 94V-O (for Taiwan Semis Diodes)
- High Temperature Soldering (260 °C for 10 sec)
- Case molded plastic
- Polarity indicated by Cathode band
- Supplied on 16mm tape

CR* Series by Toshiba has low forward voltage and super flat compact design, ideal in ultra miniture applications.

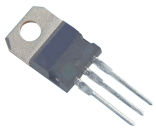
$I_{(AV)}$ A	V_{RRM} V	I_{FSM} A	V_F V	Case style	Mftr.	Mftrs. List No.
1	100	30	0.85	SMB	TS	SK110B
1	90	50	0.86	SMA	VISH	SS1H9
1	60	30	0.75	SMB	TS	SK16B
1	40	30	0.5	SMB	TS	SK14B
1	40	20	0.51	3-2A1A	TOSH	CRS04
1	30	20	0.4	3-2A1A	TOSH	CRS02
1	30	30	0.45	3-2A1A	TOSH	CRS05
1	20	20	0.36	3-2A1A	TOSH	CRS06
1.5	30	30	0.36	3-2A1A	TOSH	CRS08
1.5	30	30	0.46	3-2A1A	TOSH	CRS09
2	90	75	0.79	SMB	VISH	SS2H9
2	60	50	0.7	SMB	MC	SS26
2	60	50	0.7	SMA	TS	SK26A
2	40	50	0.5	SMA	TS	SK24A
2	40	50	0.5	SMB	MC	SS24
2	40	60	0.49	SMA	VISH	SSA24
2	30	50	0.55	SMP	VISH	SS2P3
2	20	50	0.55	SMP	VISH	SS2P2
2	20	50	0.55	SMP	VISH	SS2P2
2	20	50	0.45	SMP	VISH	SS2P2L
3	100	150	0.85	SMB	TS	SK310B
3	100	150	0.85	SMA	TS	SK310A
3	100	100	0.85	SMC	MC	SS310
3	90	100	0.8	SMP	VISH	SS3H9
3	60	100	0.75	SMB	TS	SK36B
3	60	70	0.75	SMA	TS	SK36A
3	40	100	0.5	SMB	TS	SK34B
3	40	70	0.55	SMA	TS	SK34A
4	40	100	0.49	SMB	VISH	SSB44
4	30	100	0.45	SMB	VISH	SSB43L
5	60	100	0.75	SMC	TS	SK56C
5	40	100	0.55	SMC	TS	SK54C
5	40	175	0.49	SMC	VISH	SSC54
5	30	175	0.45	SMC	VISH	SSC53L
3	30	75	0.45	SMA	VISH	SSA33L

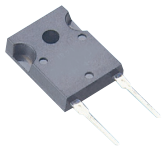
450685

Mftrs.			Price Each			
List No.	Fab.	Order Code	5+	100+	250+	1K+
SS24	MC	SMD 129-9284	0.280	– –	– –	– –
SS26	MC	SMD 129-9285	0.300	– –	– –	– –
SK14B	TS	SMD 129-9280	0.124	0.074	0.055	0.048
SK34B	TS	SMD 129-9287	0.410	– –	– –	– –
SK36B	TS	SMD 129-9288	0.460	0.270	0.199	0.167
SK310B	TS	SMD 129-9289	0.490	0.290	0.210	0.183
SK24A	TS	SMD 129-9275	0.280	0.168	0.127	0.106
SK26A	TS	SMD 129-9276	0.320	– –	– –	– –
SK34A	TS	SMD 129-9277	0.360	– –	– –	– –
SK36A	TS	SMD 129-9278	0.410	– –	– –	– –
SK310A	TS	SMD 129-9279	0.460	– –	– –	– –
SK16B	TS	SMD 129-9282	0.134	0.080	0.059	0.051
SK110B	TS	SMD 129-9283	0.146	0.087	0.064	0.055
SS310	MC	SMD 129-9290	0.470	0.290	0.210	0.175
SK54C	TS	SMD 129-9291	0.650	0.400	0.300	0.250
SK56C	TS	SMD 129-9292	0.700	0.440	0.320	0.270
CRS02	TOSH	SMD 130-0792	0.300	0.210	0.156	0.118
CRS04	TOSH	SMD 130-0793	0.420	0.280	0.210	0.160
CRS05	TOSH	SMD 130-0794	0.168	0.137	0.109	0.106
CRS06	TOSH	SMD 130-0795	0.280	0.192	0.142	0.108
CRS08	TOSH	SMD 130-0796	0.300	0.210	0.156	0.118
CRS09	TOSH	SMD 130-0797	0.300	0.210	0.152	0.115
SS1H9	VISH	SMD 133-6541	0.390	– –	– –	– –
SS2H9	VISH	SMD 133-6549	0.510	0.360	0.270	0.210
SS3H9	VISH	SMD 133-6555	0.650	0.460	0.350	0.270
SS2P2	VISH	SMD 133-6542	0.198	0.164	0.136	0.117
SS2P2L	VISH	SMD 133-6543	0.210	0.171	0.143	0.123
SS2P3	VISH	SMD 133-6544	0.390	0.280	0.210	0.165
SSA23L	VISH	SMD 133-6546	0.420	0.290	0.220	0.173
SSA24	VISH	SMD 133-6548	0.330	0.240	0.180	0.139
SSA33L	VISH	SMD 133-6552	0.430	– –	– –	– –
SSB43L	VISH	SMD 133-6556	0.620	0.440	0.330	0.260
SSB44	VISH	SMD 133-6557	0.700	0.490	0.370	0.300
SSC53L	VISH	SMD 133-6558	0.670	0.480	0.360	0.280
SSC54	VISH	SMD 133-6559	0.810	– –	– –	– –

Schottky Diodes 5 A to 160 A

IXYS


TO-220AB


TO-247AD

SOT-227B

TO-220AC

$I_{F(av)}$ max. A	V_{RRM} max. V	V_F @ $I_{F(AV)}$ max. V	Package	Mftrs. List No.
Single diode				
10	45	0.53	TO-220FPAB	DSB10I45PM
10	100	0.72	TO-220FP	DSA10I100PM
15	45	0.55	TO-262	DSB15IM45IB
15	45	0.63	TO-220AC	DSA15I45PA
15	45	0.63	TO-262	DSA15IM45IB
16	100	0.64	TO-220AC	DSS 16-01A
17	600	3.32	ISOPLUS247	DSS17-06CR
20	15	0.39	TO-220	DSB20I15PA
25	25	0.44	TO-220AC	DSS 25-0025B
25	45	0.59	TO-220AC	DSS 25-0045A
60	45	0.57	TO-247AD	DSS 60-0045B
Dual diode				
5	180	0.62	TO-220AB	DSSK 10-018A
10	150	0.62	TO-220AB	DSSK 20-015A
10	60	0.68	TO-220FPAB	DSA20C60PN
10	45	0.62	TO-220	DSA20C45PB
10	100	0.72	TO-220	DSA20C100PB
10	100	0.72	TO-220FP	DSA20C100PN
10	150	0.74	TO-220AB	DSA20C150PB
10	150	0.74	TO-220FPAB	DSA20C150PN
15	30	0.44	TO-220	DSB30C30PB
15	45	0.62	TO-247	DSA30C45HB
15	45	0.63	TO-220	DSA30C45PB
15	180	0.62	TO-247AD	DSSK 30-018A
15	45	0.54	TO-247AD	DSB30C45HB
15	45	0.55	TO-220AB	DSB30C45PB
15	100	0.73	TO-220AB	DSA30C100PB
15	100	0.73	TO-220FPAB	DSA30C100PN
15	100	0.72	TO-3P	DSA30C100QB
15	60	0.68	TO-220AB	DSA30C60PB
15	60	0.69	TO-220AB	DSB30C60PB
15	150	0.74	TO-247	DSA30C150HB
15	150	0.75	TO-220AB	DSA30C150PB
20	25	0.4	TO-220AC	DSSK 38-0025B
20	80	0.57	TO-247AD	DSSK 40-008B
20	15	0.39	TO-220	DSB40C15PB
25	150	0.68	TO-247AD	DSSK 50-015A
25	150	0.74	TO-247	DSA50C150HB
25	100	0.72	TO-247	DSA50C100HB
25	100	0.72	TO-3P	DSA50C100QB
30	45	0.6	TO-247AD	DSSK 60-0045B
30	150	0.69	TO-247AD	DSSK 60-015A
30	45	0.66	TO-247	DSA60C45HB
30	60	0.67	TO-247AD	DSB60C60HB
30	100	0.78	TO-220AB	DSA60C100PB
30	30	0.47	TO-247AD	DSB60C30HB
30	45	0.67	TO-220AB	DSA60C45PB
30	45	0.60	TO-220AB	DSB60C45PB
30	45	0.58	TO-247AD	DSB60C45HB
30	60	0.68	TO-220AB	DSA60C60PB
30	60	0.69	TO-220AB	DSB60C60PB
30	60	0.65	TO-247	DSA60C60HB
35	80	0.66	TO-247AD	DSSK 70-008A
35	100	0.74	TO-247	DSA70C100HB
35	150	0.74	TO-247	DSA70C150HB
40	8	0.23	TO-247AD	DSSK 80-0008D
40	45	0.45	TO-247AD	DSSK 80-0045B
40	60	0.51	TO-247AD	DSSK 80-006B
40	100	0.7	SOT-227B	DSS 2 X 41-01A
40	45	0.67	TO-247	DSA80C45HB
40	45	0.58	TO-247AD	DSB80C45HB
40	100	0.73	TO-220AB	DSA80C100PB
45	200	0.86	TO-247AD	DSA90C200HB
60	45	0.66	SOT-227B	DSS 2 X 61-0045A
60	100	0.73	SOT-227B	DSS 2 X 61-01A
60	150	0.80	TO-3P	DSA120C150QB
80	100	0.8	SOT-227B	DSS 2 X 160-01A
100	150	0.78	SOT-227B	DSS 2 X 101-015A
120	45	0.59	SOT-227B	DSS 2 X 121-0045B

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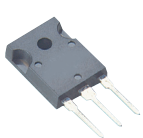
Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+
Single diode					
DSA15IM45IB	**157-2472**	0.43	0.38	0.34	0.33
DSB10I45PM	**157-2473**	0.44	0.36	0.33	0.30
DSB15IM45IB	**157-2474**	0.42	0.41	0.39	0.37
DSA10I100PM	**157-2488**	0.45	0.40	0.33	0.32
DSB20I15PA	**157-2509**	0.50	0.45	0.37	0.36
DSA15I45PA	**157-2511**	0.45	0.40	0.33	0.32

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+
DSS 16-01A	**108-0080**	0.62	0.59	0.55	
DSS17-06CR	**130-0073**	3.30	3.21	3.13	
DSS 25-0025B	**108-0065**	0.56	0.53	0.50	
DSS 25-0045A	**108-0068**	0.78	0.74	0.70	
DSS 60-0045B	**108-0069**	1.53	1.46	1.36	
		1+	**25+**	**100+**	**250+**
Double diode					
DSB40C15PB	**157-2470**	0.72	0.62	0.54	0.53
DSB30C30PB	**157-2471**	0.82	0.71	0.61	0.58
DSA20C45PB	**157-2475**	0.53	0.46	0.44	0.43
DSA30C45HB	**157-2476**	0.93	0.85	0.81	0.80
DSA30C45PB	**157-2478**	0.54	0.50	0.45	0.43
DSA60C45HB	**157-2479**	1.18	1.07	0.96	0.92
DSA80C45HB	**157-2480**	1.74	1.52	1.41	1.38
DSB30C45HB	**157-2481**	1.09	0.97	0.83	0.80
DSB30C45PB	**157-2482**	0.53	0.48	0.43	0.41
DSB80C45HB	**157-2483**	1.74	1.51	1.29	1.23
DSA20C60PN	**157-2484**	0.61	0.53	0.45	0.43
DSB30C60PB	**157-2486**	0.54	0.50	0.48	0.47
DSB60C60HB	**157-2487**	1.18	1.07	1.02	1.01
DSA20C100PB	**157-2492**	0.61	0.53	0.45	0.43
DSA20C100PN	**157-2493**	0.63	0.55	0.51	0.50
DSA30C100PB	**157-2494**	0.79	0.69	0.59	0.56
DSA30C100PN	**157-2495**	0.88	0.77	0.67	0.62
DSA30C100QB	**157-2496**	1.00	0.87	0.83	0.81
DSA50C100HB	**157-2497**	1.60	1.37	1.18	1.15
DSA50C100QB	**157-2498**	1.29	1.13	1.07	1.05
DSA60C100PB	**157-2499**	1.06	0.91	0.78	0.74
DSA70C100HB	**157-2500**	1.85	1.59	1.36	1.30
DSA80C100PB	**157-2501**	1.31	1.12	0.96	0.92
DSA120C150QB	**157-2503**	3.59	3.11	2.65	2.51
DSA20C150PB	**157-2504**	0.63	0.54	0.46	0.44
DSA20C150PN	**157-2505**	0.66	0.56	0.52	0.51
DSA30C150HB	**157-2506**	1.33	1.17	1.09	1.07
DSA90C200HB	**157-2508**	2.62	2.27	1.93	1.84
DSB60C30HB	**157-2510**	1.58	1.36	1.17	1.10
DSA60C45PB	**157-2513**	0.90	0.80	0.68	0.64
DSB60C45PB	**157-2514**	0.99	0.86	0.73	0.69
DSB60C45HB	**157-2515**	1.18	1.07	1.02	1.01
DSA30C60PB	**157-2516**	0.74	0.65	0.55	0.52
DSA60C60PB	**157-2517**	0.99	0.86	0.73	0.69
DSB60C60PB	**157-2518**	0.99	0.85	0.80	0.77
DSA60C60HB	**157-2521**	1.65	1.43	1.23	1.17
DSA30C150PB	**157-2522**	0.83	0.71	0.61	0.59
DSA50C150HB	**157-2523**	1.28	1.17	1.12	1.10
DSA70C150HB	**157-2524**	1.74	1.52	1.33	1.26
		1+	**25+**	**100+**	
DSSK 10-018A	**108-0092**	0.69	0.65	0.60	
DSSK 20-015A	**108-0086**	1.13	1.07	1.00	
DSSK 30-018A	**108-0093**	1.48	1.36	1.05	
DSSK 38-0025B	**108-0066**	0.73	0.70	0.65	
DSSK 40-008B	**108-0078**	2.06	1.89	1.78	
DSSK 50-015A	**108-0087**	1.83	1.74	1.62	
DSSK 60-015A	**108-0089**	2.15	2.09	2.04	
DSSK 60-0045B	**108-0071**	1.65	1.57	1.47	
DSSK 70-008A	**108-0079**	2.49	2.36	2.21	
DSSK 80-006B	**108-0077**	3.02	2.86	2.67	
DSSK 80-0008D	**108-0063**	2.12	2.02	1.88	
DSSK 80-0045B	**108-0072**	2.56	2.35	2.19	
DSS 2 X 41-01A	**108-0083**	9.95	9.26	8.57	
DSS 2 X 61-0045A	**108-0073**	9.43	9.19	8.95	
DSS 2 X 61-01A	**108-0084**	11.36	10.56	9.34	
DSS 2 X 101-015A	**108-0091**	21.53	15.60	11.54	
DSS 2 X 121-0045B	**108-0074**	13.39	12.69	11.86	
DSS 2 X 160-01A	**108-0085**	10.11	9.58	8.95	

2A to 60A

VISHAY

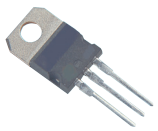

TO-247

TO-220AC

D-PAK (TO-252)

Power Diodes - Schottky - continued

2A to 60A - continued



TO-220

$I_{f(av)}$ A	V_{rrm} V	V_f V	@	I_f A	I_{fsm} A	Package	Mftrs. List No.
Single Diode Configuration							
3	20	0.49		—	490	D-PAK	MBRD320PBF
3	40	0.49		—	490	D-PAK	MBRD340PBF
3.5	30	0.35		3	535	D-PAK	30WQ03FNPBF
3.5	30	0.35		7	535	D-PAK	6CWQ03FNPBF
3.5	30	0.35		3	535	D-PAK	30WQ03FNTRPBF
3.5	40	0.49		3	500	D-PAK	30WQ04FNTRPBF
3.5	60	0.53		3	490	D-PAK	30WQ06FNPBF
3.5	100	0.63		3	440	D-PAK	30WQ10FNPBF
5.5	30	0.35		5	320	D-PAK	50WQ03FNPBF
5.5	30	0.35		5	320	D-PAK	50WQ03FNTRPBF
5.5	40	0.44		5	340	D-PAK	50WQ04FNTRPBF
5.5	60	0.54		5	320	D-PAK	50WQ06FNTRPBF
5.5	100	0.63		5	330	D-PAK	50WQ10FNTRPBF
6	45	0.53		6	690	TO-220AC	6TQ045PBF
6	50	0.65		3	490	D-PAK	MBRD650CTPBF
6	60	0.65		3	490	D-PAK	MBRD660CTPBF
7	30	0.35		3	535	D-PAK	6CWQ03FNTRPBF
7	60	0.61		3	490	D-PAK	6CWQ06FNTRPBF
7	100	0.63		3	440	D-PAK	6CWQ10FNPBF
7.5	35	0.57		7.5	690	TO-220AC	MBR735PBF
7.5	45	0.57		7.5	690	TO-220AC	MBR745PBF
8	100	0.58		8	850	D2-PAK	8TQ100SPBF
10	35	0.57		10	1060	TO-220AC	MBR1035PBF
10	45	0.53		10	400	D-PAK	10WQ045FNPBF
10	100	0.81		10	610	TO-252AA	10WT10FN
12	30	0.37		6	320	D-PAK	12CWQ03FNTRPBF
12	40	0.48		6	550	D-PAK	12CWQ04FNTRPBF
12	60	0.57		6	320	D-PAK	12CWQ06FNTRPBF
12	100	0.65		6	330	D-PAK	12CWQ10FNTRPBF
15	45	0.56		15	990	TO-220AC	12TQ045PBF
15	45	0.82		30	1060	TO-220AB	MBR2545CTPBF
15	45	0.72		20	1020	TO-247AC	MBR3045WTPBF
15	60	0.7		15	810	TO-220AC	15TQ060PBF
16	45	0.63		16	1800	TO-220AC	MBR1645PBF
18	45	0.53		18	1800	D2-PAK	18TQ045S.PBF
19	15	0.32		19	700	D2-PAK	19TQ015SPBF
20	15	0.25		19	700	TO-220AC	20L15TPBF
20	15	0.41		19	700	D2-PAK	20L15TSPBF
20	15	0.41		15	700	TO-220AC	STPS20L15DPBF
20	45	0.61		20	900	TO-252AA	20WT04FN
20	45	0.51		20	1800	TO-220AC	20TQ045PBF
20	60	0.49		20	3200	TO-247AC	MBR4060WTPBF
20	100	0.80		10	850	TO-220	MBR20100CTKPBF
30	35	0.50		15	990	D2-PAK	25CTQ035SPBF
40	45	0.56		20	1020	TO-247AC	MBR4045WTPBF
Dual-Diode							
3	45	0.6		3	440	TO-252AA	6CWT04FN
6	30	0.37		6	320	D-PAK	12CWQ03FNPBF
6	45	0.64		6	690	TO-220AB	12CTQ045PBF
6	60	0.37		6	320	D-PAK	12CWQ06FNPBF
6	100	0.37		6	320	D-PAK	12CWQ10FNPBF
7.5	45	0.51		7.5	810	D2-PAK	15CTQ045S.PBF
10	45	0.57		10	1800	TO-220AB	20CTQ045PBF
10	150	1		20	1030	TO-220AB	20CTQ150PBF
15	30	0.4		30	900	TO-220AB	32CTQ030PBF
15	45	0.56		15	1000	TO-220AB	30CTQ045PBF
15	60	0.56		20	1000	TO-220AB	30CTQ060PBF
15	100	0.76		30	1060	TO-220AB	30CTQ100PBF
15	150	0.5		15	1020	TO-247AC	30CPQ150PBF
20	15	0.25		19	700	TO-220AB	40L15CTPBF
20	15	0.25		19	700	TO-247AC	40L15CWPBF
20	45	0.42		20	1240	TO-247AC	40L45CWPBF
30	45	0.55		30	2900	TO-247AC	MBR6045WTPBF
20	20	0.34		20	1000	D2-PAK	47CTQ020SPBF
20	30	0.38		20	1100	TO-220AB	42CTQ030PBF
20	45	0.48		20	1240	TO-220AB	40CTQ045PBF
20	60	0.58		20	1000	TO-220AB	48CTQ060PBF
20	60	0.58		20	1000	D2-PAK	48CTQ060SPBF
20	100	0.67		20	850	TO-220AB	43CTQ100PBF
20	150	1.16		40	1500	TO-220AB	40CTQ150PBF
30	30	0.56		60	1500	TO-220AB	62CTQ030PBF
30	45	0.68		60	1500	TO-220AB	60CTQ045PBF
30	100	0.67		15	920	TO-247AC	30CPQ100GPBF
30	100	1		60	1500	TO-220AB	63CTQ100PBF
30	150	0.98		60	710	TO-220AB	60CTQ150PBF
40	100	0.61		20	2950	TO-247AC	40CPQ100GPBF

$I_{f(av)}$ A	V_{rrm} V	V_f V	@	I_f A	I_{fsm} A	Package	Mftrs. List No.
Dual Diode, Common Cathode							
6	45	0.64		6	690	TO-220AB	12CTQ045PBF
7.5	45	0.57		7.5	690	TO-220AB	MBR1545CTPBF
10	45	0.57		10	1800	TO-220AB	20CTQ045PBF
10	100	0.81		10	610	TO-252AA	20CWT10FN
15	30	0.4		30	900	TO-220AB	32CTQ030PBF
15	45	0.56		15	1000	TO-220AB	30CTQ045PBF
15	45	0.6		15	880	TO-220AB	30CTT045
20	15	0.25		19	700	TO-220AC	20L15TPBF
20	45	0.51		20	1800	TO-220AC	20TQ045PBF
30	45	0.58		30	2500	TO-247AC	60CPT045

Mftrs. List No.	Package	Order Code	Price Each 1+	25+	100+	250+
6CWQ03FNPBF	D-PAK	SMD 910-1071	1.02	0.57	0.42	0.37
6CWT04FN	TO-252AA	NEW SMD 170-7769	0.92	0.58	0.52	0.47
6TQ045PBF	TO-220AC	910-1322	2.54	1.40	1.05	0.93
8TQ100SPBF	D2-PAK	SMD 910-1349	2.90	1.76	1.37	1.28
10WT10FN	TO-252AA	NEW SMD 170-7768	1.07	0.66	0.60	0.55
12CTQ045PBF	TO-220AB	864-7810	1.56	1.09	0.81	0.73
12CWQ10FNPBF	D-PAK	SMD 910-1152	1.05	– –	– –	– –
12CWQ03FNPBF	D-PAK	SMD 910-1160	1.17	– –	– –	– –
12CWQ06FNPBF	D-PAK	SMD 910-1187	1.13	– –	– –	– –
12TQ045PBF	TO-220AC	865-6924	2.89	1.59	1.20	1.04
15CTQ045S.PBF	D2-PAK	SMD 910-1195	2.03	1.10	0.95	0.79
15TQ060PBF	TO-220AC	865-7009	2.60	1.44	1.07	0.94
18TQ045S.PBF	D2-PAK	SMD 910-0652	2.43	1.31	1.14	0.99
19TQ015SPBF	D2-PAK	SMD 910-0679	2.80	1.70	1.43	1.11
20CTQ045PBF	TO-220AB	864-7844	2.42	1.34	1.00	0.87
20CTQ150PBF	TO-220AB	865-7033	3.08	1.71	1.28	1.12
20CWT10FN	TO-252AA	NEW SMD 170-7767	1.50	– –	– –	– –
20TQ045PBF	TO-220AC	864-7860	2.50	1.38	1.03	0.90
20L15TPBF	TO-220AC	864-7852	1.78	0.99	0.73	0.64
20L15TSPBF	D2-PAK	SMD 910-0709	1.11	0.57	0.52	0.45
20WT04FN	TO-252AA	NEW SMD 170-7770	1.58	1.00	0.88	0.81
30CPQ150PBF	TO-247AC	910-0750	6.83	3.40	2.88	2.81
30CTQ045PBF	TO-220AB	864-7895	2.92	1.62	1.21	1.06
30CTQ060PBF	TO-220AB	910-0822	3.58	1.98	1.48	1.29
30CTQ100PBF	TO-220AB	865-7122	2.01	1.11	0.83	0.73
30CTT045	TO-220AB	NEW 170-7778	3.16	1.99	1.78	1.64
30WQ03FNPBF	D-PAK	SMD 910-1225	1.13	0.63	0.47	0.42
32CTQ030PBF	TO-220AB	864-7909	2.93	1.62	1.21	1.06
40CTQ045PBF	TO-220AB	910-0989	2.14	1.19	0.88	0.77
40CTQ150PBF	TO-220AB	865-7157	2.66	1.47	1.10	0.96
40L15CTPBF	TO-220AB	910-0911	3.36	– –	– –	– –
40L15CWPBF	TO-247AC	910-0920	2.04	1.24	1.02	0.99
40L45CWPBF	TO-247AC	910-0997	2.56	1.55	1.20	1.06
42CTQ030PBF	TO-220AB	910-0954	3.35	1.66	1.34	1.20
43CTQ100PBF	TO-220AB	910-0890	2.43	1.32	1.13	1.10
47CTQ020SPBF	D2-PAK	SMD 910-0946	3.20	1.77	1.32	1.16
48CTQ060PBF	TO-220AB	864-7925	3.17	1.75	1.31	1.15
48CTQ060SPBF	D2-PAK	SMD 910-1039	5.35	– –	– –	– –
50WQ03FNPBF	D-PAK	SMD 910-1292	1.08	0.60	0.45	0.39
60CTQ045PBF	TO-220AB	865-7165	3.36	1.90	1.46	1.35
60CTQ150PBF	TO-220AB	865-7173	3.76	2.08	1.55	1.36
60CPT045	TO-247AC	NEW 170-7779	3.94	2.48	2.23	2.02
62CTQ030PBF	TO-220AB	865-7190	1.73	– –	– –	– –
63CTQ100PBF	TO-220AB	865-7203	5.87	3.25	2.42	2.12
MBR735PBF	TO-220AC	866-0387	0.53	0.33	0.30	0.28
MBR745PBF	TO-220AC	865-1531	0.73	0.40	0.30	0.26
MBR1035PBF	TO-220AC	865-1442	0.80	– –	– –	– –
MBR1545CTPBF	TO-220AB	865-1469	0.51	0.46	0.36	0.31
MBR1645PBF	TO-220AC	865-1485	1.39	0.77	0.57	0.51
MBR2545CTPBF	TO-220AB	865-1507	0.78	0.51	0.50	0.48
MBR3045WTPBF	TO-247AC	910-0806	1.10	0.70	0.59	0.57
MBR4045WTPBF	TO-247AC	865-1523	2.42	– –	– –	– –
MBR4060WTPBF	TO-247AC	910-1047	3.41	1.89	1.41	1.23
MBR6045WTPBF	TO-247AC	910-1080	2.48	1.37	1.02	0.90
STPS20L15DPBF	TO-220AC	101-3333	1.25	0.69	0.51	0.45
			1+	25+	100+	250+
25CTQ035SPBF	D2-PAK	SMD 129-8437	2.20	1.43	1.22	1.19
MBR20100CTKPBF	TO-220	SMD 129-8439	0.76	0.53	0.50	0.49
10WQ045FNPBF	D-PAK	SMD 129-8440	1.56	1.20	1.03	1.01
12CWQ03FNTRPBF	D-PAK	SMD 129-8441 RL	1.38	0.76	0.57	0.49
12CWQ04FNTRPBF	D-PAK	SMD 129-8442 RL	1.11	0.61	0.46	0.40
12CWQ06FNTRPBF	D-PAK	SMD 129-8443 RL	1.30	– –	– –	– –
12CWQ10FNTRPBF	D-PAK	SMD 129-8444 RL	1.26	– –	– –	– –
30WQ03FNTRPBF	D-PAK	SMD 129-8445 RL	0.95	0.53	0.39	0.34
30WQ06FNPBF	D-PAK	SMD 129-8447	1.35	0.75	0.56	0.49
30WQ10FNPBF	D-PAK	SMD 129-8448	1.32	0.74	0.55	0.48
50WQ03FNTRPBF	D-PAK	SMD 129-8449 RL	1.03	– –	– –	– –
50WQ04FNTRPBF	D-PAK	SMD 129-8450 RL	1.19	– –	– –	– –
50WQ06FNTRPBF	D-PAK	SMD 129-8451 RL	1.52	– –	– –	– –
50WQ10FNTRPBF	D-PAK	SMD 129-8452 RL	1.65	0.90	0.68	0.60
6CWQ03FNTRPBF	D-PAK	SMD 129-8453 RL	1.11	0.62	0.46	0.41

Mftrs. List No.	Package	Order Code	Price Each 1+	25+	100+	250+
6CWQ06FNTRPBF	D-PAK	SMD 129-8455 RL	1.55	0.93	0.68	0.60
6CWQ10FNPBF	D-PAK	SMD 129-8456	1.74	0.96	0.72	0.62
MBRD320PBF	D-PAK	SMD 129-8457	1.03	0.57	0.43	0.38
30WQ04FNTRPBF	D-PAK	SMD 129-8464 RL	0.93	– –	– –	– –
30CPQ100GPBF	TO-247AC	129-8465	2.27	– –	– –	– –
MBRD340PBF	D-PAK	SMD 129-8461	0.58	0.52	0.35	0.33
MBRD650CTPBF	D-PAK	SMD 129-8462	0.60	0.44	0.38	0.35
MBRD660CTPBF	D-PAK	SMD 129-8463	0.53	0.33	0.30	0.28
MBR20100CTKPBF	TO-220	SMD 129-8439	0.76	0.53	0.50	0.49
40CPQ100GPBF	TO-247AC	129-8466	1.78	– –	– –	– –

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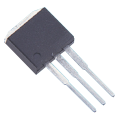
10 to 250V, Power Schottky

ON Semiconductor

SMA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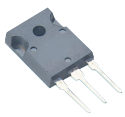
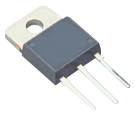

TO-247

D^2PAK

TO-220


SOT-93

TO-220-2

SOD-323
SOD-123

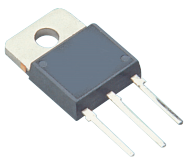
V_{RRM} max. V	I_F av max. A	Ifs max. A	V_F max. V	Package	Mftrs. List No.
10	2	150	0.5	SMA	MBRA210ET3G
15	25	150	0.45	TO-220AC	MBR2515LG
15	40	150	0.54	TO-220	MBR4015CTLG
15	25	150	0.45	D2-PAK	MBRB2515LG
20	1	5	0.44	SOD-323	NSR1020MW2T1G
20	1	25	0.45	Case 59	1N5817RLG
20	1	40	0.53	SOD-123FL	MBR120ESFT1G
20	1	50	0.45	SOD-123FL	MBR120LSFT1G
20	1	45	0.34	SOD-123FL	MBR120VLSFT1G
20	1	40	0.53	SMA	MBRA120ET3G
30	10	—	0.6	TO-92	MBD301G
30	200	1	1.3	SOD-123	MMSD301T1G
30	1	25	0.55	Case 59	1N5818RLG
30	1	5.5	0.45	SOD-123	MBR130T1G
30	3	80	0.5	DO-201AD	1N5821RLG
30	20	150	0.58	TO-220	MBR2030CTLG
30	30	200	0.67	D2-PAK	MBRB3030CTG
30	40	300	0.55	D2-PAK	MBRB4030G
35	10	150	0.84	TO-220AC	MBR1035G
40	1	30	0.55	SOD-123FL	MBR140SFT1G
40	3	100	0.45	SMA	MBRA340T3G
40	3	75	0.6	D-PAK	MBRD340G
45	10	150	0.84	D2-PAK	MBRB1045G
45	15	150	0.84	D2-PAK	MBRB1545CTG
45	8	140	0.55	DO-201AD	80SQ045NG
45	15	150	0.84	TO-220	MBR1545CTG
45	30	150	0.76	TO-220	MBR3045STG
45	30	150	0.82	D2-PAK	MBRB2545CTG
45	40	400	0.8	TO-247	MBR4045WTG
45	60	500	0.75	SOT-93	MBR6045PTG
50	1	25	0.75	DO-41	MBR150RLG
50	3	80	0.74	DO-201AD	MBR350RLG
50	6	75	0.9	D-PAK	MBRD650CTG
60	1	30	0.51	SMA	MBRA160T3G
60	3	80	0.74	DO-201AD	MBR360RLG
60	3	75	0.6	D-PAK	MBRD360G
60	6	75	0.9	D-PAK	MBRD660CTG
60	20	150	0.95	D2-PAK	MBRB2060CTG
60	30	260	0.78	TO-220	MBR30H60CTG
70	0.5	—	0.5	SOD-123	MMSD701T1G
80	10	150	0.8	TO-220AC	MBR1080G
80	20	150	0.95	TO-220	MBR2080CTG
90	10	150	0.8	TO-220AC	MBR1090G
100	3	150	0.79	DO-201AD	MBR3100RLG
100	10	180	0.85	TO-220	MBR10H100CTG
100	16	150	0.84	TO-220	MBR16100CTG
100	20	250	0.88	TO-220	MBR20H100CTG
100	30	250	0.93	TO-220	MBR30H100CTG
100	40	350	0.9	D2-PAK	MBRB41H100CTT4G
100	40	200	0.9	TO-247	MBR40H100WTG
100	40	350	0.9	TO-220	MBR41H100CTG
100	60	350	0.98	TO-220	MBR60H100CTG
200	20	150	1	D2-PAK	MBRB20200CTG
250	40	150	0.97	TO-220	MBR40250TG

482956

Mftrs. List No.	Package	Order Code	Price Each 5+	25+	100+
MBR30H60CTG	TO-220	143-1025	0.870	0.640	0.490
MBRB41H100CTT4G	D2-PAK	SMD 143-1026	2.870	1.960	1.560
NSR1020MW2T1G	SOD-323	SMD 143-1027	0.179	0.122	0.098
1N5817RLG	Case 59	143-1028	0.460	0.270	0.188
1N5818RLG	Case 59	143-1029	0.470	0.270	0.194
1N5821RLG	DO-201AD	143-1032	0.520	0.320	0.250
80SQ045NG	DO-201AD	143-1033	1.030	0.710	0.560
MBD301G	TO-92	143-1034	0.157	0.110	0.089
MBR1035G	TO-220AC	143-1037	0.880	0.700	0.550
MBR1080G	TO-220AC	143-1038	1.110	0.760	0.610
MBR1090G	TO-220AC	143-1039	1.150	0.900	0.720
MBR10H100CTG	TO-220	143-1040	0.950	0.650	0.520
MBR120ESFT1G	SOD-123FL	SMD 143-1041	0.260	0.169	0.136
MBR120LSFT1G	SOD-123FL	SMD 143-1042	0.310	0.192	0.155
MBR120VLSFT1G	SOD-123FL	SMD 143-1044	0.450	0.280	0.191
MBR130T1G	SOD-123	SMD 143-1045	0.400	0.250	0.174
MBR140SFT1G	SOD-123FL	SMD 143-1046	0.390	0.250	0.174
MBR150RLG	DO-41	143-1047	0.118	0.086	0.066
MBR1545CTG	TO-220	143-1049	0.800	0.630	0.500
MBR16100CTG	TO-220	143-1050	1.080	0.770	0.650
MBR2030CTLG	TO-220	143-1052	1.780	1.260	1.010
MBR2080CTG	TO-220	143-1053	1.640	1.120	0.900
MBR20H100CTG	TO-220	143-1056	1.120	0.760	0.610
MBR3045STG	TO-220	143-1058	0.970	0.640	0.500
MBR30H100CTG	TO-220	143-1060	1.180	0.810	0.650
MBR3100RLG	DO-201AD	143-1061	0.690	0.510	0.410
MBR350RLG	DO-201AD	143-1062	0.460	0.330	0.250
MBR360RLG	DO-201AD	143-1063	0.460	0.330	0.250
MBR4015CTLG	TO-220	143-1064	1.150	0.830	0.650
MBR40250TG	TO-220	143-1066	2.970	2.030	1.630
MBR4045WTG	TO-247	143-1068	5.910	4.030	3.240
MBR40H100WTG	TO-247	143-1069	4.950	3.380	2.720
MBR41H100CTG	TO-220	143-1070	2.100	1.430	1.150
MBR6045PTG	SOT-93	143-1071	6.080	4.150	3.330
MBR60H100CTG	TO-220	143-1072	2.680	1.830	1.470
MBRA120ET3G	SMA	SMD 143-1075	0.200	0.131	0.106
MBRA160T3G	SMA	SMD 143-1076	0.490	– –	– –
MBRA210ET3G	SMA	SMD 143-1077	0.144	0.139	0.135
MBRA340T3G	SMA	SMD 143-1078	0.530	0.340	0.270
MBRB1045G	D2-PAK	SMD 143-1081	1.560	1.070	0.860
MBRB1545CTG	D2-PAK	SMD 143-1082	1.610	– –	– –
MBRB20200CTG	D2-PAK	SMD 143-1083	1.990	– –	– –
MBRB2060CTG	D2-PAK	SMD 143-1084	3.430	2.340	1.880
MBRB2515LG	D2-PAK	SMD 143-1085	2.250	– –	– –
MBRB2545CTG	D2-PAK	SMD 143-1086	2.110	1.450	1.160
MBRB3030CTG	D2-PAK	SMD 143-1087	1.400	1.000	0.870
MBRB4030G	D2-PAK	SMD 143-1091	4.370	2.990	2.400
MBRD340G	D-PAK	SMD 143-1096	0.770	0.530	0.420
MBRD360G	D-PAK	SMD 143-1098	0.800	0.530	0.420
MBRD650CTG	D-PAK	SMD 143-1099	0.970	0.670	0.530
MBRD660CTG	D-PAK	SMD 143-1100	0.810	0.530	0.420
MMSD301T1G	SOD-123	SMD 143-1101	0.144	0.093	0.075
MMSD701T1G	SOD-123	SMD 143-1102	0.128	0.083	0.067

1A to 300A

ON Semiconductor


SOT93

TO220

$I_{F(av)}$ A	V_{RRM} A	V_F V	@	I_F A	I_{FSM} A	Package	Mftrs. List No.
1	40	0.6		1	25	DO-41	1N5819RLG
1	100	0.69		1	50	DO-41	MBR1100RLG
7.5	45	0.57		15	150	TO-220AC	MBR745G
8	35	0.41		8	75	D-PAK	MBRD835LG
10	45	0.57		20	150	TO-220AC	MBR1045G
10	60	0.7		10	150	TO-220AC	MBR1060G
10	100	0.7		10	150	TO-220AC	MBR10100G
16	45	0.57		16	150	TO-220AC	MBR1645G
10	45	0.75		20	150	TO-220AB	MBR2045CTG
10	60	0.75		10	150	TO-220AB	MBR2060CTG
10	100	0.95		20	150	D2-PAK	MBRB20100CTG
10	100	0.75		10	150	TO-220AB	MBR20100CTG
10	200	0.75		10	150	TO-220AB	MBR20200CTG
10	100	0.75		10	150	TO-220	MBRF20100CTG
12.5	35	0.47		25	150	TO-220AB	MBR2535CTLG
15	40	0.73		30	150	TO-220AB	MBR2545CTG
30	45	0.55		30	500	TO-247AC	MBR6045WTG

Power Diodes - Schottky - continued

1A to 300A - continued

Order Multiple=1		Price Each			
Mftrs. List No.	Order Code	1+	25+	100+	250+
MBR1045G	955-7342	0.860	0.520	0.440	0.370
MBR1060G	955-7385	0.820	0.540	0.460	0.380
MBR10100G	955-7407	1.110	0.870	0.700	0.590
MBR1100RLG	955-5846	0.550	0.330	0.240	0.185
MBR1645G	955-7253	0.880	0.620	0.500	0.420
MBR2045CTG	955-7261	0.390	0.250	0.240	0.200
MBR2060CTG	955-5854	1.110	0.830	0.700	0.590
MBR20100CTG	955-7172	1.110	0.870	0.690	0.580
MBR20200CTG	955-6222	2.030	1.610	1.270	1.050
MBR2535CTLG	955-7423	1.350	0.800	0.780	0.650
MBR2545CTG	955-7245	1.320	0.770	0.640	0.540
MBR6045WTG	955-7210	4.120	2.370	2.230	2.180
MBR745G	955-7296	0.740	0.590	0.470	0.400
MBRB20100CTG	SMD 955-6230	2.260	1.460	1.170	0.950
MBRD835LG	SMD 955-6249	0.560	– –	– –	– –
MBRF20100CTG	SMD 955-6257	1.230	0.960	0.770	0.640
Order Multiple=5		**5+**	**100+**	**250+**	**1K+**
1N5822RLG	955-7369	0.500	0.310	0.250	0.189
1N5822RLG	955-7369	0.500	0.310	0.250	0.189

222097

General Purpose

ON Semiconductor

D²PAK (TO-263)

SMA/SMB Style

SOD-123

DO-41, DO-201 Style

Latest Schottky Diodes from On Semiconductor

$I_{F(av)}$ A	V_{RRM} A	V_F V	V_F V	I_{FSM} A	Package	Mftrs. List No.
0.1	30	0.385	0.385	1	SOD-923	NSR0130P2T5G
0.35	30	0.35	0.35	0.03	SOD-923	NSR0140P2T5G
0.5	70	0.5	0.5	—	SOD-123	MMSD701T1G
1	10	0.365	0.365	50	PowerMite	MBRM110LT3G
1	20	0.45	0.45	25	59-04	1N5817G
1	20	0.45	0.45	50	Case 457	MBRM120LT3G
1	20	0.53	0.53	50	Case 457	MBRM120ET3G
1	20	0.6	0.6	40	SMB	MBRS120T3G
1	30	0.38	0.38	50	Case 77	MBRM130LT3G
1	30	0.6	0.6	40	SMB	MBRS130T3G
1	40	0.55	0.55	50	PowerMite	MBRM140T1G
1	40	0.55	0.55	50	Case 457	MBRM140T3G
1	40	0.6	0.6	25	59-04	1N5819G
1	90	0.75	0.75	50	SMB	MBRS190T3G
2	10	0.35	0.35	230	SMA	MBRA210LT3G
3	40	0.525	0.525	80	267-03	1N5822G
3	40	0.6	0.6	80	DO-201AD	MBR340G
3	100	0.79	0.79	150	267-03	MBR3100G
30	45	0.82	0.82	150	D2-PAK	MBRB2545CTT4G

497713

			Price Each		
Mftrs. List No.	Case style	Order Code	5+	25+	100+
MMSD701T1G	SOD-123	SMD 143-1102	0.128	0.083	0.067
NSR0130P2T5G	SOD-923	SMD 145-3608	0.164	0.112	0.090
NSR0140P2T5G	SOD-923	SMD 145-3611	0.164	0.112	0.089
1N5817G	59-04	145-8990	0.280	0.230	0.220
1N5819G	59-04	145-8992	0.270	0.230	0.220
1N5822G	267-03	145-8993	0.430	0.330	0.260
MBR3100G	267-03	145-9058	0.550	0.490	0.460
MBR340G	DO-201AD	145-9059	0.390	0.300	0.230
MBRA210LT3G	SMA	SMD 145-9060	0.520	0.350	0.270
MBRB2545CTT4G	D2-PAK	SMD 145-9061	1.740	1.220	0.970
MBRM110LT3G	PowerMite	SMD 145-9062	0.290	0.260	0.220
MBRM120ET3G	Case 457	SMD 145-9063	0.350	0.290	0.240
MBRM120LT3G	Case 457	SMD 145-9064	0.360	0.320	0.240
MBRM130LT3G	Case 77	SMD 145-9066	0.290	0.260	0.210
MBRM140T1G	PowerMite	SMD 145-9067	0.430	0.260	0.186
MBRM140T3G	Case 457	SMD 145-9068	0.400	0.270	0.193
MBRS120T3G	SMB	SMD 145-9069	0.240	0.085	0.069
MBRS130T3G	SMB	SMD 145-9070	0.320	0.260	0.182
MBRS190T3G	SMB	SMD 145-9071	0.390	0.280	0.230

0.5A to 160A

FAIRCHILD SEMICONDUCTOR

SOD-6

ISOWATT-220AB

TO-220AC

TO-220AB

SOT-223

TO-247

ISOTOP

$I_{f(av)}$ A	V_{rrm} V	V_f V	@	I_f A	I_{fsm} A	Package	Mftrs. List No.
0.5	40	0.5		0.5	5.5	SOD-123	STPS0540Z
1	20	0.45		1	25	DO-41	1N5817
1	30	0.3		1	2 x 75	SMA	STPS1L30A
1	30	0.55		1	25	DO-41	1N5818
1	40	0.6		1	25	DO-41	1N5819
1	60	0.67		1	2 x 75	SMB	STPS160U
1	100	0.77		1	2 x 50	SMB	STPS1H100U
1	40	0.5		1	2 x 60	SMB	STPS1L40U
1	40	0.55		1	2 x 60	SMA	STPS140A
2	100	0.79		2	2 x 75	SMB	STPS2H100U
2	60	0.6		2	2 x 75	DO-41	STPS2L60
3	150	0.82		3	2 x 100	SMB	STPS3150U
3	20	0.475		3	80	DO-201AD	1N5820
3	30	0.5		3	80	DO-201AD	1N5821
3	40	0.52		3	75	SMB	STPS340U
3	40	0.525		3	80	DO-201AD	1N5822
3	60	0.62		3	2 x 100	DO-15	STPS3L60Q
3	60	0.62		3	2 x 100	SMB	STPS3L60U
2 x 5	150	0.75		5	2 x 120	TO-220AB	STPS10150CT
2 x 5	100	0.61		5	2 x 180	TO-220AB	STPS10H100CT
5	60	0.61		5	180	TO-220FP	STPS10L60CFP
5	100	0.61		5	180	TO-220FP	STPS10H100CFP
5	25	0.47		5	75	D-PAK	STPS5L25B-TR
2 x 7.5	45	0.5		10	150	TO-220AB	STPS1545CT
7.5	45	0.5		7.5	150	TO-220AC	STPS745D
7.5	100	0.8		7.5	2 x 75	D-PAK	STPS15H100CB
7.5	30	0.48		7.5	2 x 75	D-PAK	STPS15L30CB
2 x 8	150	0.92		8	2 x 150	TO-220AB	STPS16150CT
8	100	0.56		8	250	TO-220AC	STPS8H100D
8	600	2.1		8	30	TO-220AC	STPSC806D
2 x 10	25	0.3		10	2 x 220	TO-220AB	STPS20L25CT
2 x 10	60	0.48		10	2 x 220	TO-220AB	STPS20L60CT
2 x 10	100	0.29		10	2 x 250	TO-220AB	STPS20H100CT
10	25	0.35		10	200	TO-220AC	STPS10L25D
10	45	0.6		10	180	TO-220AC	STPS1045D
10	45	0.57		10	75	D-PAK	STPS1045B
10	100	0.77		10	2 x 250	TO-220FP	STPS20H100CFP
10	600	2.1		10	40	TO-220AC	STPSC1006D
2 x 15	40	0.42		15	2 x 220	TO-247	STPS30L40CW
2 x 15	60	0.58		15	2 x 200	TO-247	STPS3060CW
2 x 15	60	0.5		15	2 x 230	TO-247	STPS30L60CW
15	25	0.3		15	250	TO-220AC	STPS15L25D
2 x 10	100	0.29		10	2 x 250	D2-PAK	STPS20H100CG
2 x 15	30	0.49		15	2 x 250	TO-220AB	STPS3030CT
2 x 15	30	0.46		15	2 x 220	TO-220AB	STPS30L30CT
2 x 15	45	0.55		15	2 x 220	TO-220AB	STPS30L45CT
2 x 15	60	0.6		15	2 x 230	TO-220AB	STPS30L60CT
2 x 15	100	0.8		15	2 x 250	TO-220AB	STPS30H100CT
2 x 15	100	0.8		15	2 x 250	TO-247	STPS30H100CW
2 x 15	170	0.92		15	2 x 220	TO-247	STPS30170CW
15	45	0.55		15	2 x 220	TO-220FP	STPS30L45CFP
2 x 20	45	0.53		20	2 x 230	TO-220AB	STPS40L45CT
2 x 20	100	0.8		20	2 x 220	TO-220AB	STPS41H100CT
2 x 20	170	0.92		20	2 x 250	D2-PAK	STPS40170CG-TR
2 x 20	170	0.92		20	2 x 250	TO-220	STPS40170CT
2 x 30	170	0.94		30	2 x 270	TO-220	STPS60170CT
2 x 30	40	0.44		30	600	TO-247	STPS60L40CW
2 x 10	170	0.9		10	2 x 180	TO-220FP	STPS20170CFP
2 x 10	170	0.9		10	2 x 180	D2-PAK	STPS20170CG-TR
2 x 40	170	0.84		40	2 x 500	TO-247	STPS80170CW
2 x 80	100	0.63		80	2 x 1000	ISOTOP	STPS160H100TV
2 x 100	170	0.85		100	2 x 700	ISOTOP	STPS200170TV1

211289

Order Multiple=5			Price Each		
Mftrs. List No.	Mftr.	Order Code	5+	25+	100+
1N5817	ST	980-1197	0.500	0.310	0.174
1N5818	ST	980-1200	0.162	0.110	0.085
1N5819	ST	980-1219	0.151	0.107	0.070
1N5820	ST	980-1227	0.270	0.188	0.158
1N5821	ST	980-1235	0.240	0.167	0.140
1N5822	ST	980-1243	0.220	0.157	0.132
STPS0540Z	ST	SMD 117-5677	0.420	0.310	0.230
Order Multiple=1			**1+**	**25+**	**100+**
STPS60L40CW	ST	980-3572	6.300	4.840	4.070
STPS10150CT	ST	990-7289	1.340	0.890	0.710
STPS1H100U	ST	SMD 990-7483 RL	0.610	0.390	0.270
STPS1L30A	ST	SMD 990-7491 RL	0.200	0.144	0.121
STPS1L40U	ST	SMD 990-7505 RL	0.188	0.133	0.112
STPS2H100U	ST	SMD 990-7629 RL	0.370	0.260	0.220
STPS2L60	ST	990-7637	0.500	0.330	0.240
STPS3L60Q	ST	990-7750	0.400	0.230	0.199
STPS3L60U	ST	SMD 990-7769 RL	0.330	0.230	0.195
STPS5L25B-TR	ST	SMD 990-7858	0.950	0.590	0.570
STPS8H100D	ST	980-3599	0.930	0.650	0.600

Order Multiple=5			Price Each		
Mftrs. List No.	Mftr.	Order Code	5+	25+	100+
STPS10H100CFP	ST	**990-7300**	1.210	0.550	0.540
STPS10H100CT	ST	**990-7319**	0.710	0.500	0.420
STPS10L60CFP	ST	**990-7343**	0.920	0.550	0.490
STPS10L25D	ST	**980-3360**	1.510	1.120	0.820
STPS140A	ST	SMD **990-7378** RL	0.460	0.300	0.200
STPS15H100CB	ST	SMD **990-7386** RL	1.170	0.850	0.690
STPS15L25D	ST	**980-3408**	2.310	– –	– –
STPS15L30CB	ST	SMD **990-7394** RL	1.510	0.940	0.930
STPS160U	ST	SMD **990-7424** RL	0.260	0.183	0.153
STPS16150CT	ST	**990-7432**	1.400	1.030	0.990
STPS20H100CFP	ST	**990-7556**	1.720	1.220	1.020
STPS20H100CG	ST	SMD **994-6314**	2.050	1.530	1.240
STPS20H100CT	ST	**980-3440**	1.460	0.820	0.770
STPS20L25CT	ST	**980-3459**	2.260	1.600	1.340
STPS20L60CT	ST	**980-3467**	1.220	0.850	0.730
STPS30H100CT	ST	**990-7688**	1.730	1.230	1.030
STPS30H100CW	ST	**990-7696**	2.560	1.490	1.370
STPS30L30CT	ST	**990-7700**	1.780	1.300	1.260
STPS30L45CFP	ST	**990-7718**	1.620	0.780	0.760
STPS30L45CT	ST	**990-7726**	1.480	1.020	0.650
STPS30L60CT	ST	**990-7734**	2.250	1.570	1.380
STPS30L40CW	ST	**980-3521**	1.970	1.390	1.170
STPS30L60CW	ST	**980-3530**	2.610	1.850	1.550
STPS40L45CT	ST	**990-7807**	3.550	2.030	1.840
STPS41H100CT	ST	**990-7815**	3.100	2.200	1.850
STPS160H100TV	ST	**980-3424**	34.210	26.490	20.270
STPS340U	ST	SMD **980-3548**	0.330	0.310	0.290
STPS1045B	ST	SMD **990-7297**	0.890	0.500	0.450
STPS3030CT	ST	**990-7661**	1.150	0.810	0.660
STPS3060CW	ST	**980-3513**	1.570	1.120	0.920
STPS3150U	ST	SMD **990-7742** RL	0.560	0.360	0.310
STPS200170TV1	ST	**129-5321**	16.120	15.210	14.800
STPS20170CFP	ST	**129-5322**	1.010	0.900	0.880
STPS20170CG-TR	ST	SMD **129-5323**	1.010	0.850	0.810
STPS30170CW	ST	SMD **129-5328**	1.960	1.900	1.850
STPS40170CG-TR	ST	SMD **129-5331**	2.270	1.570	1.330
STPS40170CT	ST	**129-5332**	2.220	1.430	1.380
STPS60170CT	ST	**129-5334**	2.200	1.810	1.760
STPS80170CW	ST	**129-5336**	2.980	2.290	2.230
STPS1545CT	ST	**980-3386**	0.880	0.510	0.380
STPS1045D	ST	**980-3351**	0.590	0.450	0.420
STPS745D	ST	**980-3580**	0.740	0.530	0.500
STPSC1006D	ST	NEW **168-9317**	19.580	16.660	13.990
STPSC806D	ST	NEW **168-9318**	17.130	14.580	12.250

1A to 5A, Axial

multicomp

VISHAY

Package	L	Dia
DO-201AD	9.5	5.6
DO-204AR	9.52	6.35

$I_{F(av)}$ max. A	V_{RRM} max. V	V_F V	@	I_F A	I_{FSM} A	Package	Mftr.	Mftrs. List No.
1	30	0.55		1	30	DO-41	MC	SR103
1	40	0.55		1	30	DO-41	MC	SR104
1	60	0.70		1	30	DO-41	MC	SR106
3	90	0.85		3	80	DO-201AD	MC	SR309
3	100	0.85		3	80	DO-201AD	MC	SR310
3.3	30	0.57		3	450	DO-201AD	VISH	31DQ03
3.3	40	0.57		3	450	DO-201AD	VISH	31DQ04
3.3	50	0.62		3	340	DO-201AD	VISH	31DQ05
3.3	60	0.62		3	340	DO-201AD	VISH	31DQ06
3.3	90	0.85		3	210	DO-201AD	VISH	31DQ09
3.3	100	0.85		3	210	DO-201AD	VISH	31DQ10
5	30	0.55		5	150	DO-201AD	TS	SR503
5	40	0.55		5	150	DO-201AD	TS	SR504
5	60	0.7		5	150	DO-201AD	TS	SR506
5	90	0.85		5	120	DO-201AD	MC	SR509
5	100	0.85		5	120	DO-201AD	MC	SR510

429583

			Price Each			
Mftrs. List No.	Mftr.	Order Code	5+	100+	500+	1K+
SR503	TS	**727-8438**	1.100	0.560	0.360	0.310
SR504	TS	**727-8446**	1.100	0.560	0.360	0.310
SR506	TS	**727-8454**	1.230	– –	– –	– –
31DQ03	VISH	**364-605**	0.670	0.340	0.240	0.210
31DQ04	VISH	**364-617**	0.560	0.300	0.200	0.174
31DQ05	VISH	**438-315**	0.720	0.370	0.250	0.220
31DQ06	VISH	**273-650**	0.690	0.440	0.300	0.260
31DQ09	VISH	**393-9972**	0.520	0.290	0.280	0.250
31DQ10	VISH	**364-629**	0.930	0.450	0.310	0.270
SR309	MC	**162-5245**	0.420	0.320	0.260	0.210

			Price Each			
Mftrs. List No.	Mftr.	Order Code	5+	100+	500+	1K+
SR310	MC	**162-5246**	0.680	0.460	0.340	0.280
SR509	MC	**162-5247**	0.580	0.440	0.350	0.290
SR510	MC	**162-5248**	0.600	0.440	0.360	0.300
Order Multiple=5			**5+**	**25+**	**100+**	**500+**
SR103	MC	**162-5233**	0.126	0.084	0.063	0.051
SR104	MC	**162-5234**	0.153	0.102	0.076	0.061
SR106	MC	**162-5235**	0.103	0.078	0.063	0.052

5A to 9A, Axial - High Surge

VISHAY

DO-204AR, L=9.52, DIA=6.35

$I_{F(av)}$ max. A	V_{RRM} max. V	V_F V	@	I_F A	I_{FSM} A	Mftrs. List No.
5	60	0.52		5	1900	50SQ060
5	80	0.52		5	1900	50SQ080.
5	100	0.52		5	1900	50SQ100
8	35	0.44		8	2400	80SQ035
8	40	0.44		8	2400	80SQ040
8	45	0.44		8	2400	80SQ045
9	15	0.25		9	2900	95SQ015
9	40	0.42		9	2150	90SQ040
9	45	0.42		9	2150	90SQ045

429585

Order Multiple=1		Price Each			
Mftrs. List No.	Order Code	1+	25+	100+	500+
50SQ060	**394-1528**	2.33	1.22	0.85	0.72
50SQ080.	**260-083**	2.42	1.26	0.88	0.75
50SQ100	**364-666**	3.23	1.68	1.17	1.00
80SQ035	**273-661**	2.09	1.09	0.76	0.64
80SQ040	**438-327**	2.31	1.21	0.83	0.72
80SQ045	**364-708**	2.66	– –	– –	– –
95SQ015	**506-795**	4.44	2.32	1.61	1.37
90SQ040	**506-771**	0.91	0.66	0.56	0.55
90SQ045	**506-783**	2.36	– –	– –	– –

1A to 5A, Axial

International IOR Rectifier

multicomp

FAIRCHILD SEMICONDUCTOR

TAIWAN SEMICONDUCTOR

GENERAL SEMICONDUCTOR

Package	L	Dia
DO-41	5.2	2.7
DO-201AD	9.5	5.6
DO-204AR	9.52	6.35
59-04	6.6	3.05
267-03	9.65	5.33

$I_{F(av)}$ max. A	V_{RRM} max. V	V_F V	@	I_F A	I_{FSM} A	Package	Mftr.	Mftrs. List No.
1	20	0.45		1	25	DO-41	FCH/MC	1N5817
1	20	0.5		1	35	DO-204AL	VISH	SB120A
1	30	0.55		1	60	DO-41	TS	SR103
1	30	0.5		1	40	DO-41	GS	SB130
1	30	0.48		1	50	DO-204AL	VISH	SB130
1	40	0.87		1	25	DO-41	FCH/FCH	1N5819
1	40	0.55		1	60	DO-41	TS	SR104
1	40	0.5		1	30	DO-41	MC / GS	SB140
1	40	0.9		1	25	DO-204AL	VISH	1N5819
1	40	0.5		1	35	DO-204AL	VISH	SB140A
1	50	0.7		1	35	DO-204AL	VISH	SB150A
1	60	0.75		1	25	59-04	ON	MBR160RLG
1	60	0.7		1	30	DO-41	MC	SB160
1	60	0.7		1	60	DO-41	TS	SR106
1	60	0.65		1	150	DO-41	VSH	MBR160TR
1	60	0.7		1	35	DO-204AL	VISH	SB160A
1	100	0.8		1	30	DO-41	TS	SR110
1	100	0.77		1	50	DO-41	VSH	SB1H100
1	100	0.68		1	200	DO-41	VSH	MBR1100TR
1.1	30	0.55		1	225	DO-41	VISH	11DQ03
1.1	40	0.55		1	225	DO-41	VISH	11DQ04
1.1	50	0.56		1	150	DO-41	VISH	11DQ05
1.1	60	0.56		1	150	DO-41	VISH	11DQ06
1.1	90	0.85		1.1	90	DO-41	VSH	11DQ09
1.1	100	0.85		1	90	DO-41	VISH	11DQ10
3	20	0.47		3	80	DO-201AD	FCH/MC	1N5820
3	30	0.55		3	80	DO-201AD	TS /	SR303
3	30	0.5		3	80	DO-41	FCH/MC	1N5821
3	40	0.55		3	80	DO-201AD	TS	SR304
3	40	0.52		3	80	DO-201AD	FCH/MC	1N5822
3	40	0.5		3	80	DO-201AD	GS	SB340
3	40	0.95		3	80	DO-201AD	VISH	1N5822
3	50	0.75		3	80	DO-201AD	MC	SB350
3	50	0.7		3	80	DO-201AD	TS	SR305
3	60	0.74		3	100	DO-201AD	VSH	SB360
3	60	0.73		3	460	DO-41	VSH	MBR360
3	60	0.7		3	80	DO-201AD	TS	SR306
3	90	0.8		3	100	DO-201AD	VISH	SB3H90
3	100	0.8		3	100	DO-201AD	VSH	SB3H100
5	30	0.55		5	150	DO-201AD	TS	SR503
5	40	0.55		5	150	DO-201AD	TS	SR504
5	60	0.7		5	150	DO-201AD	TS	SR506

Power Diodes - Schottky - continued

1A to 5A, Axial - continued

211228

Mftrs. List No.	Mftr.	Order Code	Price Each 5+	100+	1K+	3K+
1N5817	FCH	984-3787	0.400	0.250	0.163	0.110
1N5819	FCH	101-7589	0.400	0.250	0.163	0.069
1N5820	FCH	101-7590	0.440	0.280	0.210	0.145
1N5821	FCH	101-7591	0.430	0.260	0.210	0.129
1N5822	FCH	984-3809	0.410	0.260	0.168	0.095
11DQ04	VISH	364-459	0.310	0.187	0.106	0.092
11DQ05	VISH	438-297	0.230	0.116	0.081	0.069
11DQ09	VSH	369-4069	0.300	0.210	0.156	0.134
11DQ10	VISH	364-472	0.370	0.196	0.127	0.108
MBR160RLG	ON	955-6761	0.430	0.300	0.210	0.162
MBR160TR	VSH	489-7444	0.250	0.150	0.104	0.088
MBR340RLG	ON	955-6770	0.280	0.188	0.151	0.125
MBR360	VSH	489-7456	0.220	– –	– –	– –
MBR1100TR	VSH	489-7432	0.155	0.081	0.056	0.048
SR103	TS	727-8365	0.140	0.073	0.050	0.040
SR104	TS	727-8373	0.046	0.024	0.017	0.015
SR106	TS	727-8381	0.300	– –	– –	– –
SR110	TS	408-5132	0.156	0.102	0.073	0.068
SB130	GS	955-0330	1.040	0.920	0.630	0.350
SB140	MC	938-1350	0.580	0.400	0.390	0.290
SB140	GS	955-0348	0.750	0.420	0.390	0.230
SB160	MC	938-1368	0.810	0.570	0.530	0.400
SB160	GS	955-0356	0.320	0.220	0.189	0.125
SB340	GS	955-0372	1.010	0.590	0.530	0.310
SB350	MC	938-1376	0.760	0.530	0.440	0.300
SB360	FCH	938-1384	1.210	0.830	0.660	0.460
SB360	VSH	955-0380	0.370	0.260	0.220	0.149
SB3H100	VSH	102-1750	0.750	0.560	0.470	0.410
SR303	TS	727-8390	0.108	0.096	0.083	0.071
SR304	TS	727-8403	0.113	0.104	0.102	0.090
SR305	TS	727-8411	0.300	– –	– –	– –
SR306	TS	727-8420	0.310	0.162	0.105	0.089
SB360	VSH	955-0380	0.370	0.260	0.220	0.149
SB120A	VISH	133-6530	0.102	0.090	0.076	0.066
SB130	VISH	133-6531	0.160	0.135	0.112	0.098
1N5819	VISH	133-6533	0.430	0.230	0.184	0.166
SB140A	VISH	133-6534	0.089	0.077	0.063	0.054
SB150A	VISH	133-6537	0.400	0.260	0.210	0.178
SB160A	VISH	133-6539	0.137	0.114	0.096	0.082
1N5822	VISH	133-6553	0.610	0.410	0.330	0.280
SB3H90	VISH	133-6554	0.410	0.290	0.280	0.250

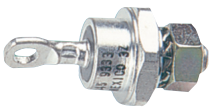
7.5A to 240A

GENERAL SEMICONDUCTOR ON Semiconductor VISHAY multicomp

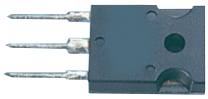
DO-220

TO-220

ISOTOP



¼"28 UNF 2A



TO-3P

SOT-93

$I_{F(av)}$ A	V_{RRM} V	V_F V	@	I_F A	I_{FSM} A	Package	Mftr.	Mftrs. List No.
2 x 5	150	0.73		5	620	TO-220AB	VISH	10CTQ150PBF
2 x 6	45	0.64		6	690	TO-220AB	VISH	12CTQ045PBF
7.5	45	0.84		15	150	TO-220AC	GS	MBR745
7.5	45	0.5		7.5	150	TO-220AC	ST	STPS745D
7.5	60	0.75		10	150	TO-220AC	GS	MBR760
7.5	100	0.92		7.5	150	TO-220AC	MC	MBR7100
7.5	150	0.95		7.5	150	TO-220AC	MC	MBR7150
7.5	35	0.84		7.5	150	TO-220AC	MC	MBR735
7.5	45	0.84		7.5	150	TO-220AC	MC	MBR745
7.5	50	0.75		7.5	150	TO-220AC	MC	MBR750
7.5	60	0.75		7.5	150	TO-220AC	MC	MBR760
7.5	90	0.92		7.5	150	TO-220AC	MC	MBR790
7.5	45	0.57		7.5	690	TO-220AB	VISH	MBR1545CTPBF
2 x 7.5	45	0.5		10	150	TO-220AB	ST	STPS1545CT
8	80	0.58		8	850	TO-220AC	VISH	8TQ080PBF
8	100	0.58		8	850	TO-220AC	VISH	8TQ100PBF
2 x 8	60	0.58		8	850	TO-220	VISH	16CTQ060PBF
2 x 8	100	0.58		8	850	TO-220AB	VISH	16CTQ100PBF
10	35	0.49		10	1050	TO-220AC	VISH	10TQ035PBF
10	45	0.49		10	1050	TO-220AC	VISH	10TQ045PBF
10	100	0.85		10	150	TO-220AC	MC	MBR10100
10	100	0.95		10	120	TO-220AB	MC	MBR10100CT
10	150	1.05		10	150	TO-220AC	MC	MBR10150
10	150	0.98		10	120	TO-220AB	MC	MBR10150CT
10	200	0.98		10	120	TO-220AB	MC	MBR10200CT
10	45	0.7		10	150	TO-220AC	MC	MBR1045
10	45	0.8		10	120	TO-220AB	MC	MBR1045CT
10	60	0.8		10	150	TO-220AC	MC	MBR1060
10	60	0.9		10	120	TO-220AB	MC	MBR1060CT
10	100	0.85		10	120	TO-220AB	MC	SR10100
10	150	0.95		10	120	TO-220AB	MC	SR10150
10	60	0.7		10	120	TO-220AB	MC	SR1060
2 x 10	45	0.57		10	1800	TO-220AB	VISH	20CTQ045PBF
2 x 10	45	0.5		10	180	TO-220AB	ST	STPS2045CT
15	45	0.5		15	220	TO-220AC	ST	STPS1545D
15	100	0.92		15	150	TO-220AB	MC	MBR15100CT
15	45	0.72		15	150	TO-220AB	MC	MBR1545CT
15	60	0.75		15	150	TO-220AB	MC	MBR1560CT
2 x 15	45	0.5		15	220	TO-220AB	ST	STPS3045CT
2 x 15	45	0.5		15	1020	TO-247AC	VISH	30CPQ045PBF
2 x 15	60	0.5		15	1020	TO-247AC	VISH	30CPQ060PBF
2 x 15	100	0.5		15	1020	TO-247AC	VISH	30CPQ100PBF
2 x 15	30	0.4		15	900	TO-220AB	VISH	32CTQ030PBF
2 x 15	45	0.56		15	1000	TO-220AB	VISH	30CTQ045PBF
16	100	0.85		16	150	TO-220AC	MC	MBR16100
16	150	0.95		16	150	TO-220AC	MC	MBR16150
16	45	0.63		16	150	TO-220AC	MC	MBR1645
16	60	0.75		16	150	TO-220AC	MC	MBR1660
16	100	0.9		16	170	TO-220AB	MC	SR16100
16	10	1.05		16	170	TO-220AB	MC	SR16150
16	20	0.55		16	170	TO-220AB	MC	SR1620
16	30	0.55		16	170	TO-220AB	MC	SR1630
16	40	0.55		16	170	TO-220AB	MC	SR1640
16	60	0.7		16	170	TO-220AB	MC	SR1660
18	45	0.53		18	1800	TO-220AC	VISH	18TQ045PBF
19	15	0.32		19	700	TO-220AC	VISH	19TQ015PBF
20	100	0.95		20	150	TO-220AB	MC	MBR20100CT
20	150	0.92		20	150	TO-220AB	MC	MBR20150CT
20	200	1.23		20	150	TO-220AB	MC	MBR20200CT
20	45	0.84		20	150	TO-220AB	MC	MBR2045CT
20	60	0.95		20	150	TO-220AB	MC	MBR2060CT
2 x 20	40	0.43		40	3500	TO-247AC	VISH	40CPQ040PBF
2 x 20	45	0.43		20	3500	TO-247AC	VISH	40CPQ045PBF
2 x 20	45	0.6		40	400	SOT-93	ON	MBR4045PTG
2 x 20	60	0.43		20	3500	TO-247AC	VISH	40CPQ060PBF
2 x 20	100	0.43		20	3500	TO-247AC	VISH	40CPQ100PBF
30	100	0.92		30	200	TO-220AB	MC	MBR25100CT
30	45	0.82		30	200	TO-220AB	MC	MBR2545CT
30	60	0.75		30	200	TO-220AB	MC	MBR2560CT
30	100	0.94		30	200	TO-220AB	MC	MBR30100CT
30	100	0.85		30	200	TO-247AD	MC	MBR30100PT
30	35	0.82		30	200	TO-220AB	MC	MBR3035CT
30	45	0.82		30	200	TO-220AB	MC	MBR3045CT
30	45	0.82		30	200	TO-247AD	MC	MBR3045PT
30	50	0.77		30	200	TO-220AB	MC	MBR3050CT
30	60	0.77		30	200	TO-220AB	MC	MBR3060CT
30	60	0.75		30	200	TO-247AD	MC	MBR3060PT
30	90	0.94		30	200	TO-220AB	MC	MBR3090CT
40	35	0.8		40	330	TO-247AD	MC	MBR4035PT
40	45	0.8		40	330	TO-247AD	MC	MBR4045PT
40	60	0.77		40	330	TO-247AD	MC	MBR4060PT
60	100	0.98		60	420	TO-247AD	MC	MBR60100PT
60	35	0.82		60	420	TO-247AD	MC	MBR6035PT
60	60	0.93		60	420	TO-247AD	MC	MBR6060PT
2 x 60	45	0.52		60	900	ISOTOP	ST	STPS12045TV
2 x 80	45	0.62		80	900	ISOTOP	ST	STPS16045TV
2 x 120	45	0.52		120	1500	ISOTOP	ST	STPS24045TV

Mftrs. List No.	Mfr.	Order Code	Price Each 1+	25+	100+	250+	1K+
8TQ080PBF	VISH	910-1365	3.220	1.940	1.510	1.310	1.260
8TQ100PBF	VISH	910-1357	1.190	0.660	0.490	0.430	0.410
10CTQ150PBF	VISH	910-1136	1.770	1.100	1.070	1.040	1.020
10TQ035PBF	VISH	910-0601	1.180	– –	– –	– –	– –
10TQ045PBF	VISH	910-0628	2.280	1.260	0.940	0.830	0.790
12CTQ045PBF	VISH	864-7810	1.560	1.090	0.810	0.730	0.710
16CTQ060PBF	VISH	910-1217	1.750	0.980	0.730	0.630	0.610
16CTQ100PBF	VISH	910-1209	2.210	– –	– –	– –	– –
18TQ045PBF	VISH	910-0644	3.190	1.760	1.320	1.160	1.110
19TQ015PBF	VISH	910-0660	2.110	1.170	0.880	0.780	0.760
20CTQ045PBF	VISH	864-7844	2.420	1.340	1.000	0.870	0.830
30CPQ035PBF	VISH	101-3354	3.950	2.180	1.630	1.430	1.360
30CPQ045PBF	VISH	910-0776	3.310	– –	– –	– –	– –
30CPQ060PBF	VISH	910-0814	3.450	2.410	2.360	2.300	2.240
30CPQ100PBF	VISH	910-0741	7.220	3.710	2.140	2.080	2.030
30CTQ045PBF	VISH	864-7895	2.920	1.620	1.210	1.060	1.010
32CTQ030PBF	VISH	864-7909	2.930	1.620	1.210	1.060	1.010
40CPQ040PBF	VISH	910-0962	5.940	2.960	2.680	2.640	2.580
40CPQ045PBF	VISH	910-0970	5.950	3.050	2.560	2.270	2.180
40CPQ060PBF	VISH	910-1020	4.160	– –	– –	– –	– –
40CPQ100PBF	VISH	910-0881	9.440	5.590	4.170	3.650	3.480
MBR745	GS	955-0046	2.450	2.010	1.670	0.790	0.720

Mftrs. List No.	Mfr.	Order Code	Price Each 1+	25+	100+	250+	1K+
MBR760	GS	**955-0054**	1.030	0.850	0.710	0.480	0.470
MBR1545CTPBF	VISH	**865-1469**	0.510	0.460	0.360	0.310	0.300
MBR4045PTG	ON	**955-6982**	6.150	3.980	3.220	2.600	2.110
MBR745	GS	**955-0046**	2.450	2.010	1.670	0.790	0.720
STPS745D	ST	**980-3580**	0.740	0.530	0.500	0.430	0.340
STPS1045D	ST	**980-3351**	0.590	0.450	0.420	0.380	0.340
STPS1545CT	ST	**980-3386**	0.880	0.510	0.380	0.340	0.330
STPS1545D	ST	**980-3394**	0.960	0.510	0.490	0.420	0.370
STPS2045CT	ST	**980-3432**	0.730	0.510	0.430	0.370	0.360
STPS3045CT	ST	**980-3505**	1.450	0.760	0.700	0.630	0.560
STPS12045TV	ST	**980-3378**	13.720	11.900	11.580	11.270	10.980
STPS16045TV	ST	**980-3416**	26.740	20.710	15.850	14.360	12.770
STPS24045TV	ST	**980-3475**	38.570	29.870	22.850	20.710	18.410
SR10100	MC	**162-5231**	1.150	0.770	0.570	0.460	0.390
SR10150	MC	**162-5232**	1.310	0.870	0.660	0.520	0.440
SR1060	MC	**162-5236**	1.320	0.880	0.650	0.530	0.440
SR16100	MC	**162-5237**	1.410	0.930	0.700	0.560	0.470
SR16150	MC	**162-5239**	0.530	0.440	0.380	0.340	0.300
SR1620	MC	**162-5241**	1.410	0.950	0.710	0.570	0.470
SR1630	MC	**162-5242**	1.260	0.840	0.630	0.510	0.420
SR1640	MC	**162-5243**	1.410	0.950	0.710	0.570	0.470
SR1660	MC	**162-5244**	1.060	0.800	0.650	0.530	0.460
			1+	**25+**	**100+**	**250+**	**500+**
MBR15100CT	MC	**162-5121**	0.450	0.350	0.280	0.270	0.260
MBR1545CT	MC	**162-5122**	0.450	0.330	0.260	0.240	0.230
MBR1560CT	MC	**162-5124**	0.470	– –	– –	– –	– –
MBR16100	MC	**162-5125**	0.490	0.390	0.310	0.300	0.280
MBR16150	MC	**162-5126**	0.530	– –	– –	– –	– –
MBR1645	MC	**162-5127**	0.450	0.330	0.260	0.240	0.230
MBR1660	MC	**162-5128**	0.450	0.330	0.260	0.240	0.230
MBR20100CT	MC	**162-5129**	0.600	0.460	0.350	0.330	0.310
MBR20150CT	MC	**162-5130**	0.690	0.520	0.400	0.370	0.360
MBR20200CT	MC	**162-5131**	0.780	0.580	0.450	0.430	0.410
MBR2045CT	MC	**162-5132**	0.520	0.400	0.300	0.290	0.270
MBR2060CT	MC	**162-5133**	0.520	0.400	0.300	0.290	0.270
MBR25100CT	MC	**162-5134**	0.740	0.630	0.550	0.500	0.400
MBR2545CT	MC	**162-5136**	0.780	– –	– –	– –	– –
MBR2560CT	MC	**162-5137**	0.780	0.630	0.550	0.480	0.370
MBR30100CT	MC	**162-5138**	1.060	0.880	0.750	0.670	0.510
MBR30100PT	MC	**162-5139**	0.940	0.810	0.710	0.630	0.500
MBR3035CT	MC	**162-5140**	0.640	0.520	0.450	0.400	0.310
MBR3045CT	MC	**162-5141**	0.780	0.630	0.550	0.480	0.370
MBR3045PT	MC	**162-5142**	1.090	0.910	0.780	0.680	0.520
MBR3050CT	MC	**162-5143**	0.650	0.560	0.490	0.440	0.340
MBR3060CT	MC	**162-5144**	0.780	0.650	0.550	0.490	0.370
MBR3060PT	MC	**162-5145**	1.110	0.940	0.800	0.700	0.540
MBR3090CT	MC	**162-5146**	0.610	0.560	0.510	0.480	0.400
MBR4035PT	MC	**162-5148**	1.150	0.990	0.870	0.780	0.620
MBR4045PT	MC	**162-5149**	1.440	1.200	1.030	0.910	0.690
MBR4060PT	MC	**162-5150**	1.500	– –	– –	– –	– –
MBR60100PT	MC	**162-5151**	2.120	1.770	1.520	1.330	1.020
MBR6035PT	MC	**162-5152**	1.670	1.420	1.250	1.110	0.880
MBR6060PT	MC	**162-5153**	2.020	1.670	1.450	1.260	0.970
MBR7100	MC	**162-5154**	0.550	0.410	0.340	0.310	0.240
MBR7150	MC	**162-5155**	0.310	0.270	0.240	0.220	0.184
MBR735	MC	**162-5156**	0.390	0.300	0.270	0.240	0.187
MBR745	MC	**162-5157**	0.420	0.310	0.280	0.250	0.192
MBR750	MC	**162-5158**	0.510	0.370	0.320	0.290	0.220
MBR760	MC	**162-5161**	0.430	0.340	0.300	0.270	0.210
MBR790	MC	**162-5162**	0.370	0.310	0.280	0.260	0.220
Order Multiple=5			**5+**	**25+**	**100+**	**250+**	**500+**
MBR10100	MC	**162-5112**	0.410	0.340	0.260	0.240	0.230
MBR10100CT	MC	**162-5113**	0.410	0.340	0.260	0.240	0.230
MBR10150	MC	**162-5114**	0.430	– –	– –	– –	– –
MBR10150CT	MC	**162-5115**	0.450	0.360	0.280	0.270	0.250
MBR10200CT	MC	**162-5116**	0.480	0.410	0.310	0.290	0.280
MBR1045	MC	**162-5117**	0.410	0.300	0.230	0.220	0.210
MBR1045CT	MC	**162-5118**	0.360	0.290	0.220	0.210	0.200
MBR1060	MC	**162-5119**	0.410	0.300	0.230	0.220	0.210
MBR1060CT	MC	**162-5120**	0.380	0.290	0.250	0.230	0.210

211393

Isolated TO-220, TO-247

(a) ISOWATT220AC

(b) TOP3I

$I_{F(av)}$ A	V_{RRM} V	V_F V	I_F A	I_{FSM} A	Package	Mftrs. List No.
15	45	0.5	15	220	(a)	STPS1545FP
10	45	0.70	10	150	(a)	MBRF1045CT
10	60	0.80	10	150	(a)	MBRF1060CT
10	35	0.5	10	150	(a)	MBRF1035CT
2 x 15	45	0.5	15	220	(b)	STPS3045CPIRG

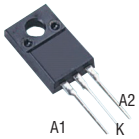
211164

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
STPS1545FP	**995-6344**	0.88	0.63	0.53	0.46	0.40
STPS3045CPIRG	**980-3491**	1.64	1.13	0.96	0.88	0.85
		1+	**25+**	**100+**	**250+**	**500+**
MBRF1035CT	**162-5163**	0.49	0.38	0.33	0.30	0.24
MBRF1045CT	**162-5164**	0.49	0.38	0.34	0.30	0.24
MBRF1060CT	**162-5165**	0.60	0.45	0.39	0.33	0.26

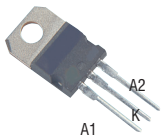
High Temperature Schottky

TAIWAN SEMICONDUCTOR

Dual Diode, Common Cathode.



ITO-220(TO-220FP)



TO-220AB

- Operating Junction Temp: 65°C to +175°C
- Plastic material used carries Underwriters Laboratory
- Classifications 94V-0
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- Guardring for overvoltage protection
- High temperature soldering guaranteed: 260oC/10 seconds,0.25"(6.35mm)from case

V_{RRM} max. V	I_F av max. A	Ifs max. A	V_F max.(@10A) V	Package	Mftrs. List No.
100	10	120	0.85	TO-220AB	MBR10H100CT
100	10	120	0.85	TO-220FP	MBRF10H100CT
100	10	120	0.95	D2-PAK	MBRS10H100CT
100	20	150	0.85	TO-220FP	MBRF20H100CT
100	20	150	0.85	TO-220AB	MBR20H100CT
150	10	120	0.88	TO-220AB	MBR10H150CT
150	10	120	0.97	D2-PAK	MBRS10H150CT
150	20	150	0.88	TO-220AB	MBR20H150CT
150	20	150	0.88	TO-220FP	MBRF20H150CT
150	20	150	0.88	D2-PAK	MBRS20H150CT
200	10	120	0.88	TO-220AB	MBR10H200CT
200	10	120	0.88	TO-220FP	MBRF10H200CT
200	10	120	0.97	D2-PAK	MBRS10H200CT
200	20	150	0.88	TO-220AB	MBR20H200CT
200	20	150	0.88	TO-220FP	MBRF20H200CT
200	20	150	0.88	D2-PAK	MBRS20H200CT

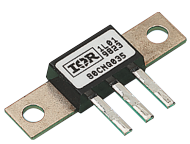
dV/dT = 10,000 V

496347

Mftrs. List No.	Package	Order Code	Price Each 1+	25+	100+
MBR10H150CT	TO-220AB	**145-3399**	0.91	0.66	0.54
MBR10H200CT	TO-220AB	**145-3400**	0.73	0.57	0.49
MBR10H100CT	TO-220AB	**145-3401**	0.34	0.25	0.20
MBR20H150CT	TO-220AB	**145-3402**	0.97	0.82	0.69
MBR20H200CT	TO-220AB	**145-3404**	1.43	1.03	0.84
MBR20H100CT	TO-220AB	**145-3405**	0.52	0.44	0.36
MBRF10H200CT	TO-220FP	**145-3407**	1.02	0.74	0.61
MBRF10H100CT	TO-220FP	**145-3408**	0.54	0.40	0.32
MBRF20H150CT	TO-220FP	**145-3409**	1.33	0.97	0.79
MBRF20H200CT	TO-220FP	**145-3410**	1.46	1.05	0.86
MBRF20H100CT	TO-220FP	**145-3411**	0.66	0.49	0.40
MBRS10H100CT	D2-PAK	SMD **145-3412**	0.52	0.38	0.31
MBRS10H150CT	D2-PAK	SMD **145-3413**	0.52	0.37	0.31
MBRS10H200CT	D2-PAK	SMD **145-3414**	1.02	0.74	0.61
MBRS20H150CT	D2-PAK	SMD **145-3417**	0.64	0.49	0.41
MBRS20H200CT	D2-PAK	SMD **145-3418**	0.59	0.43	0.35

Power Modules

VISHAY.



D61-8

TO-244AB

$I_{f(av)}$ A	V_{rrm} V	I_{fsm} A	V_f V	E_{as} mJ	Package	Mftrs. List No.
40	100	7000	0.81	15	D-61-8	83CNQ100APBF
40	45	5800	0.52	54	D-61-8	80CNQ045APBF
400	150	—	0.85	190	TO-244	409CNQ150PBF

Power Diodes - Schottky - continued

Power Modules - continued

211119

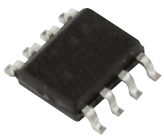
Mftrs. List No.	Order Code	Price Each 1+	25+	100+
80CNQ045APBF	910-1110	13.26	9.53	7.39
83CNQ100APBF	910-1098	11.96	8.60	6.66
409CNQ150PBF	129-8477	44.90	32.26	25.01

GaAs High Speed

IXYS

V_{RRM}=250V

DE-150



SOIC-8

- Extremely Fast Reverse Recovery Times, Typically <15nS
- Much lower forward Voltage than Silicon Carbide
- Isolated, low inductance, surface mount, high power package

This new line of High Speed GaAs Schottky Diodes provide extremely fast recovery times, outperforming both Ultrafast and Silicon Carbide technologies.
The recovery times and low junction capacitances combined with their inherently low forward voltages make this new product family ideal for High Frequency Converters, Resonant Converters and Switch Mode Power Supplies operating from the KHz-MHz range. The GaAs devices are packaged in the low inductance, low profile, electrically isolated, surface mount DE-150 package. The matched thermal coefficient of expansion between the aluminum nitride substrate and the GaAs Diode result in improved reliability and power cycling performance. The GaAs Schottky products have an added advantage when used in conjunction with the DE Series Switch Mode & RF Mosfets. Both products utilize the same package profiles resulting in a convenient single plane to heat sink.

I_F max. A	Configuration	V_F @ I_F = 2 A V	C_j max. A	Package	Mftrs. List No.
4	Dual	1.3	9	SOIC	GS08DI25104
10	Triple, Common Cathode	1.5	18	DE150	GS150TC_25110
10	Triple	1.5	18	DE150	GS150TI_25110

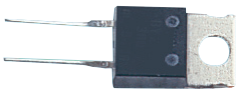
464762

Mftrs. List No.	Order Code	Price Each 1+	10+	25+
GS150TC_25110	SMD 134-7724	11.11	10.17	9.78
GS150TI_25110	SMD 134-7725	14.81	13.47	12.19
GS08DI25104	SMD 134-7726	5.18	4.71	4.26

2A to 12A, Silicon Carbide

infineon

TO-252



TO-220-2-2

Silicon Carbide (SiC) is a new material for power electronics. Its physical properties outperform Si and GaAs by far. These new Schottky diodes combine ultra-low power losses and high reliability

- Worlds first 600V Schottky diode
- Revolutionary semiconductor material - Silicon Carbide
- Switching behavior benchmark
- Negligible forward/reverse recovery times
- Negligible temperature influence on the switching behavior
- Ideal diode for Power Factor Correction up to 800W
- -55 °C to 175 °C working temperature range

V_{RRM} (V)	$I_{F(AV)}$ A	V_F @ I_F A	I_{FSM}, tp=10ms A	Package	Mftrs List No.
600	2	1.75	4.1	TO-220	SDT06S60
600	4	1.4	12.5	D-PAK	SDD04S60
600	4	1.9	32	TO-220	IDT04S60C
600	5	1.7	42	TO-220	IDT05S60C
600	6	1.7	49	TO-220	IDT06S60C
600	8	1.7	59	TO-220	IDT08S60C
600	10	1.7	84	TO-220	IDT10S60C
600	12	1.7	98	TO-220	IDT12S60C
600	12	1.5	36	TO-220	SDT12S60
600	16	1.7	118	TO-220	IDT16S60C

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
SDT04S60	109-5685	5.68	3.70	2.77	– –	– –
SDT06S60	109-5688	7.62	4.93	3.55	– –	– –
SDT12S60	109-5690	14.81	9.39	7.21	– –	– –
IDT04S60C	147-1719	4.64	3.61	3.25	3.07	2.96
IDT05S60C	147-1720	5.12	3.97	3.61	3.39	3.27
IDT06S60C	147-1721	7.44	5.78	5.20	4.90	4.73
IDT08S60C	147-1722	10.95	8.53	7.68	7.24	6.98
IDT10S60C	147-1723	12.17	9.46	8.52	8.02	7.75
IDT12S60C	147-1724	13.24	10.30	9.26	8.75	8.42
IDT16S60C	147-1725	21.89	17.04	15.33	14.47	13.93

Reel of 2500

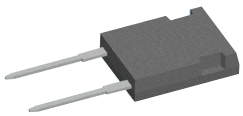
Mftrs. List No.	Order Code	Price Per Reel 1+
SDD04S60	SMD 156-2279	7,576.83

423185

600V HiPerDyn Schottky

IXYS

Electrically Isolated Back Surface



ISOPLUS™247

I_F (av) A	I_{FSM} A	V_{RRM} V	V_{FM} @I_F=15A V	Mftrs. List No.
17	200	600	3.32	DSS17-06CR

Applications:
- Antiparallel diode for high frequency switching devices
- Antisaturation diode
- Snubber diode
- Freewheeling diode in convertors
- SMPS and UPS circuits
- Inductive heating

- Fully avalanche rated - for reliable operation
- Silicon Chip on Direct-Copper-Bond Substrate
- High power dissipation
- Low cathode to tab capacitance (<25pf)
- Soft recovery behaviour

453897

Mftrs. List No.	Order Code	Price Each 1+	25+	100+
DSS17-06CR	130-0073	3.30	3.21	3.13

Single Phase Bridge Rectifiers

Notes:

1. Current ratings (I_0) for small bridge rectifiers are quoted at ambient temperature (T_a). For higher current devices, the ratings are quoted at case temperature (T_C) where it is assumed that some form of heatsink is used to maintain the case temperature.
2. Output current ratings shown relate to resistive loads. For capacitive loads derate to 80% of values shown.
3. On devices above 2.7 amps, the maximum values of I_0 dc quoted are based on the assumption that the device is mounted on a chassis or some form of heatsink.

211432

RMBx Series Bridge Rectifiers

multicomp

0.5A

Features:
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique
- High surge current capability
- Small size, simple installation

Voltage, Vrrm V	Voltage, input RMS V	Current, Ifs max A	Current, Ir max µA	Mftrs. List No.
200	140	30	0.5	RMB2S
400	280	30	0.5	RMB4S
600	420	30	0.5	RMB6S

517286

Order Multiple=5

Mftrs. List No.	Order Code	Price Each 5+	25+	100+	500+	1K+
RMB2S	SMD 162-1768	0.340	0.250	0.210	0.175	0.154
RMB4S	SMD 162-1769	0.340	0.250	0.210	0.175	0.154
RMB6S	SMD 162-1770	0.360	0.260	0.220	0.183	0.160

0.5A - 2A Miniature

GENERAL SEMICONDUCTOR

multicomp

- High reliability, glass passivated (MBS)
- Silver nitride passivated (S series)
- 30A pk surge rating (General Semiconductor), 35A Multicomp

211153

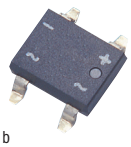
Order Multiple=5

V_{RRM} V	Max. ac Eingangs-spannung	Mftrs. List No.	Hersteller	I_0	Package	Order Code	Price Each 5+	100+	200+
50	35	W005G	SLX	1.5	WOG	133-6498	0.74	0.46	0.35
200	140	MB2S	FCH	0.5	SOIC	SMD 122-8220	0.47	0.31	0.21
200	140	MB2S	GS	0.5	TO-269AA	SMD 955-0003	0.57	0.50	0.42
200	140	MBS2	MC	0.5	MBS	SMD 408-4977	0.48	– –	– –
200	140	RMB2S	VISH	0.5	TO-269AA	SMD 133-6503	0.64	0.42	0.33
400	280	MBS4	MC	0.5	MBS	SMD 408-4985	0.29	0.26	0.21
400	280	MB4S	GS	0.5	TO-269AA	SMD 955-0011	0.27	0.23	0.20
400	280	RMB4S	VISH	0.5	TO-269AA	SMD 133-6504	0.30	0.26	0.21
600	420	MB6S	GS	0.5	TO-269AA	SMD 955-0020	0.67	0.56	0.47
600	420	DFL1506S	VISH	1.5	DFS	SMD 133-6499	0.73	0.48	0.36
600	420	MBS6	MC	0.5	MBS	SMD 408-4993	0.55	0.48	0.39
800	560	MBS8	MC	0.5	MBS	SMD 735-5564	0.57	0.50	0.42
800	560	DFL1508S	VISH	1.5	DFS	SMD 133-6500	0.55	0.47	0.40
800	560	2W08G	VISH	2	WOG	133-6501	0.97	0.81	0.70
1000	700	MBS10	MC	0.5	MBS	SMD 735-5572	0.49	0.43	0.35
1000	700	DFL1510S	VISH	1.5	DFS	SMD 133-6495	0.73	0.48	0.36

1A to 2A, Dual-In-Line

multicomp | TAIWAN SEMICONDUCTOR

a


b

I_0 @ 40°C A	I_{fsm} A	Mftr.	Series	Package
1	30	MC	DB(S)...	a
1	30	MC	DI10...	a
1.5	50	MC	DI15...	a
2	50	TS/MC	DBL....	a
2	50	TS/MC	DBLS....	b

450750

V_{RRM} V	Max Voltage Vac	Herst.	Mftrs. List No.	Order Code	Price Each 5+	25+	100+	250+
Order Multiple=5								
1A series, Glass Passivated								
50	20	TS	DB101G	**956-5302**	0.370	0.260	0.220	0.144
50	35	TS	DBS101G	SMD **735-5440** RL	0.470	0.370	0.320	0.230
100	70	MC	DB102G	**706-772**	0.400	0.270	0.220	0.144
100	70	TS	DBS102G	SMD **735-5459** RL	0.480	0.400	0.330	0.250
200	140	TS	DB103G	**956-5221**	0.420	0.280	0.220	0.145
200	140	TS	DBS103G	SMD **735-5467** RL	0.490	0.420	0.330	0.250
400	280	MC	DB104G	**706-796**	0.430	0.290	0.220	0.145
400	280	TS	DBS104G	SMD **735-5475** RL	0.520	0.430	0.350	0.260
600	420	TS	DB105G	**956-5310**	0.450	0.350	0.270	0.177
600	420	TS	DBS105G	SMD **735-5483** RL	0.560	0.450	0.370	0.310
600	420	MC	DI106	**938-0752**	1.110	0.690	0.500	0.350
800	560	TS	DB106G	**956-5230**	0.470	0.400	0.290	0.200
800	560	TS	DBS106G	SMD **735-5491** RL	0.590	0.470	0.410	0.320
1000	700	MC	DB107G	**956-5248**	0.490	0.400	0.290	0.200
1000	700	TS	DBS107G	SMD **735-5505** RL	0.620	0.490	0.430	0.330
					5+	**25+**	**100+**	**500+**
100	70	MC	DBL102G	**162-1647**	0.280	0.200	0.168	0.145
200	140	MC	DBL103G	**162-1648**	0.210	0.164	0.141	0.124
400	280	MC	DBL104G	**162-1649**	0.210	0.164	0.141	0.124
600	420	MC	DBL105G	**162-1650**	0.210	0.166	0.143	0.126
800	560	MC	DBL106G	**162-1651**	0.280	0.210	0.171	0.147
1000	700	MC	DBL107G	**162-1652**	0.210	0.166	0.143	0.126
50	35	MC	DBLS101G	SMD **162-1653**	0.320	0.230	0.193	0.165
100	70	MC	DBLS102G	SMD **162-1654**	0.320	0.230	0.193	0.165
200	140	MC	DBLS103G	SMD **162-1655**	0.320	0.230	0.193	0.165
400	280	MC	DBLS104G	SMD **162-1656**	0.320	0.230	0.193	0.165
600	420	MC	DBLS105G	SMD **162-1657**	0.320	0.230	0.196	0.166
800	560	MC	DBLS106G	SMD **162-1659**	0.320	– –	– –	– –
1000	700	MC	DBLS107G	SMD **162-1661**	0.320	0.230	0.196	0.166
1.5A series, Glass Passivated					**5+**	**100+**	**500+**	**1K+**
200	140	MC	DI152	**938-0760**	0.240	0.210	0.187	0.137
1000	700	MC	DI1510	**938-0779**	0.290	0.270	0.260	0.200
					5+	**25+**	**100+**	**500+**
50	35	MC	DB151G	**162-1638**	0.230	0.177	0.151	0.133
100	70	MC	DB152G	**162-1639**	0.300	0.220	0.180	0.155
200	140	MC	DB153G	**162-1640**	0.230	0.177	0.151	0.133
400	280	MC	DB154G	**162-1642**	0.300	0.220	0.180	0.155
600	420	MC	DB155G	**162-1643**	0.300	0.220	0.180	0.155
800	560	MC	DB156G	**162-1644**	0.230	0.178	0.156	0.137
1000	700	MC	DB157G	**162-1645**	0.310	0.220	0.186	0.159
50	35	MC	DBS151G	SMD **162-1662**	0.260	0.200	0.172	0.150
100	70	MC	DBS152G	SMD **162-1663**	0.340	0.250	0.210	0.175
200	140	MC	DBS153G	SMD **162-1664**	0.260	0.200	0.172	0.150
400	280	MC	DBS154G	SMD **162-1665**	0.340	0.250	0.210	0.175
600	420	MC	DBS155G	SMD **162-1666**	0.340	0.250	0.210	0.175
800	560	MC	DBS156G	SMD **162-1667**	0.340	0.250	0.210	0.175
1000	700	MC	DBS157G	SMD **162-1668**	0.340	0.250	0.210	0.175
Order Multiple=1								
2 A series, Glass Passivated					**1+**	**100+**	**250+**	**1K+**
200	140	TS	DBL203G	**129-9294**	0.260	0.156	0.120	0.100
200	140	TS	DBLS203G	SMD **129-9298**	0.560	0.330	0.260	0.210
600	420	TS	DBL205G	**129-9295**	0.250	0.147	0.109	0.101
600	420	TS	DBLS205G	SMD **129-9299**	0.610	– –	– –	– –
1000	700	TS	DBL207G	**129-9296**	0.610	0.360	0.280	0.230
1000	700	TS	DBLS207G	SMD **129-9301**	0.610	– –	– –	– –
1400	980	TS	DBL209G	**129-9297**	0.410	0.240	0.183	0.150
1400	980	TS	DBLS209G	SMD **129-9302**	0.410	0.240	0.183	0.150

DBL Series

TAIWAN SEMICONDUCTOR

DIL Package

- Single Phase Rectifer in DIL package
- 5.2mm Pitch

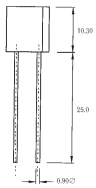
V_{RRM} V	I_D A	I_{FSM} A	Mftrs. List No.
200	2	50	DBL203G
600	2	50	DBL205G
1000	2	50	DBL207G
1400	2	50	DBL209G

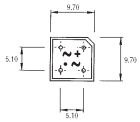
453066

Mftrs. List No.	Order Code	Price Each 1+	100+	250+
DBL203G	**129-9294**	0.260	0.156	0.120
DBL205G	**129-9295**	0.250	0.147	0.109
DBL207G	**129-9296**	0.610	0.360	0.280
DBL209G	**129-9297**	0.410	0.240	0.183

1.2A

VISHAY





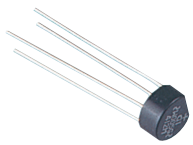
I_0=1.2A dc max @ T_a=45°C
0.68A dc max @ T_a=100°C
I_{FSM}=50A

211416

V_{RRM} V	Max. ac Input Voltage	Mftrs. List No.	Order Code	Price Each 1+	100+	500+
100	40	1KAB10EPBF	**909-8224**	0.59	0.48	0.44
200	80	1KAB20EPBF	**909-8232**	0.70	0.50	0.40
800	320	1KAB80EPBF	**909-8267**	0.50	0.35	0.34
1000	400	1KAB100EPBF	**909-8216**	0.72	0.52	0.41

1.5A

TAIWAN SEMICONDUCTOR | multicomp



Series	I_{FSM} A	Body H	Body Dia	Pin Spacing
AM	30	5.5	9.1	5.6
W..	40	5.5	9.1	5.6

211165

Order Multiple=5

V_{RRM} V	Max. ac Input Voltage	Mftrs. List No.	Order Code	Price Each 5+	25+	100+	250+	500+
1.5A Series - Multicomp								
50	35	AM150	**938-1422**	0.300	0.290	0.280	0.196	0.196
100	70	AM151	**938-1430**	0.310	0.300	0.290	0.280	0.280
200	140	AM152	**938-1449**	0.300	0.290	0.280	0.210	0.210
400	280	AM154	**938-1465**	0.300	0.290	0.280	0.210	0.210
600	420	AM156	**938-1473**	0.340	0.330	0.320	0.230	0.230
800	560	AM158	**938-1481**	0.370	0.360	0.350	0.270	0.270
50	35	W005M	**162-1771**	0.198	0.173	0.145	0.124	0.124
200	140	W02M	**162-1773**	0.198	0.173	0.145	0.124	0.124
800	560	W08M	**162-1777**	0.220	0.193	0.161	0.138	0.138
1.5A Series - Taiwan Semiconductor								
50	35	W005	**956-5132**	0.320	0.210	0.160	0.146	0.146
200	140	W02	**727-8470**	0.400	0.270	0.194	0.175	0.175
400	280	W04	**727-8489**	0.360	0.260	0.177	0.162	0.162
600	420	W06	**727-8497**	0.360	0.260	0.177	0.162	0.162

1.5A/2A

VISHAY

Current, I_{fs} max 50A
Current, I_r max 5µA
Operating temperature -55°C to 150°C
Temperature, Tj max 150°C

H = 5.6, W = 8.6, D = 8.84

496027

V_{RRM} V	V_{RSM} V	Mftrs. List No.	Order Code	Price Each 1+	25+	100+
1.5A Series						
100	70	W01G	**149-7575**	0.76	– –	– –
200	140	W02G	**149-7576**	0.58	0.39	0.33
400	280	W04G	**149-7577**	0.60	0.37	0.28
600	420	W06G	**149-7578**	0.65	0.41	0.30
800	560	W08G	**149-7579**	0.72	– –	– –
1000	700	W10G	**149-7580**	0.79	0.55	0.44
2A Series				**1+**	**25+**	**100+**
50	35	2W005G	**149-7581**	0.74	0.48	0.37
100	70	2W01G	**149-7582**	0.79	0.50	0.42
200	140	2W02G	**149-7584**	0.77	– –	– –
400	280	2W04G	**149-7585**	0.83	0.53	0.39
600	420	2W06G	**149-7586**	0.76	0.48	0.43
1000	700	2W10G	**149-7587**	0.76	0.48	0.40

Over half a million products available online QGO

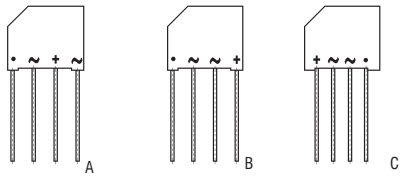
Single Phase Bridge Rectifiers - continued

1.7A to 4A

multicomp TAIWAN SEMICONDUCTOR VISHAY

I_D @	I_{FSM} A	Mftr.	Series	Body H	Body W	Body D	Pin Spacing	Pinout
1.9	50	VISH	2KBB...	15.5	18	7	5.1	A
1.9	50	VISH	2KBB...R	15.5	18	7	5.1	B
2	60	MC/FCH	2KBP...M	12.7	15.24	5.08	4.1	C
2	60	TS	KBP2...	11.68	15.24	3.9	4.1	C
2	60	VSH	2KBP...	15.5	18	7	3.1	C
2	60	MC	KBP...(G)	11.68	15.24	3.9	4.1	C
2	60	TS/MC	KBL4...(G)	11.68	15.24	3.9	4.1	C
4	500	MC	FL4...	15.9	19	6.4	5.1	C

Pin Outs



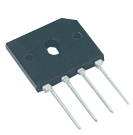
211420

V_{RRM} V	Max. ac, Input Voltage	Mftr	Mftrs. List No.	Order Code	Price Each 1+	100+	500+	
1.9A Series								
100	40	VSH	2KBB10RPBF	**909-8305**	0.530	0.310	0.260	
100	40	VSH	2KBB10PBF	**909-8291**	0.620	0.450	0.350	
200	80	VSH	2KBB20PBF	**909-8313**	0.620	0.450	0.350	
200	80	VSH	2KBB20RPBF	**909-8321**	0.620	0.450	0.350	
400	160	VSH	2KBB40PBF	**909-8330**	0.620	0.450	0.350	
400	160	VSH	2KBB40RPBF	**909-8348**	0.620	0.450	0.350	
600	240	VSH	2KBB60PBF	**909-8364**	0.870	0.620	0.490	
600	240	VSH	2KBB60RPBF	**909-8372**	0.720	0.520	0.410	
800	320	VSH	2KBB80RPBF	**909-8380**	0.870	0.620	0.490	
1000	400	VSH	2KBB100PBF	**909-8275**	0.620	0.450	0.350	
2A Series								
100	40	VSH	2KBP01PBF	**909-8690**	0.660	0.480	0.360	
200	140	TS	KBP203G	**727-7865**	0.260	0.144	0.098	
400	160	VSH	2KBP04PBF	**909-8712**	0.620	0.450	0.350	
600	240	VSH	2KBP06PBF	**909-8739**	0.510	0.330	0.310	
800	560	TS	KBP206G	**727-7873**	1.110	0.610	0.460	
1000	400	VSH	2KBP10PBF	**909-8682**	0.720	0.550	0.530	
					1+	100+	500+	1K+
50	35	MC	2KBP02M..	**938-0957**	0.440	0.370	0.320	
800	560	MC	2KBP08M	**938-0965**	0.530	0.440	0.360	
1000	700	FCH	2KBP10M	**122-8209**	1.150	0.830	0.660	– –
					1+	25+	100+	500+
200	140	MC	KBP203G	**162-1733**	0.300	0.240	0.200	0.179
600	140	MC	KBP205G	**162-1734**	0.330	0.250	0.210	0.186
1000	140	MC	KBP207G	**162-1735**	0.430	0.310	0.260	0.220
					1+	25+	100+	500+
3A Series								
50	35	MC	KBP301G	**162-1736**	0.500	0.360	0.300	0.260
200	140	MC	KBP303G	**162-1738**	0.500	0.360	0.300	0.260
600	420	MC	KBP305G	**162-1739**	0.500	0.360	0.300	0.260
1000	700	MC	KBP307G	**162-1740**	0.550	0.400	0.330	0.290
					1+	100+	500+	1K+
4A Series								
100	70	MC	FL401	**938-0922**	1.130	0.700	0.510	0.360
100	70	TS	KBL402	**727-7830**	0.610	0.310	0.210	0.175
200	140	MC	FL402	**938-0930**	2.180	1.290	0.950	0.660
200	140	TS	KBL403G	**727-7849**	1.250	0.710	0.500	0.340
600	420	TS	KBL405	**727-7857**	1.270	0.630	0.430	0.350
					1+	25+	100+	500+
50	35	MC	KBL401	**162-1727**	0.620	0.450	0.370	0.320
200	140	MC	KBL403	**162-1728**	0.620	– –	– –	– –
800	560	MC	KBL406	**162-1730**	0.660	0.480	0.400	0.340
1000	700	MC	KBL407	**162-1731**	0.660	0.480	0.400	0.340
600	420	MC	KBL405G	**162-1729**	0.470	0.360	0.310	0.270
1000	700	MC	KBL407G	**162-1732**	0.690	0.490	0.420	0.350

2.0A and 8.0A

FAIRCHILD SEMICONDUCTOR

(a) 3N2... Series


(b) GBU Series

- Reliable low cost package
- High surge current rating

(a) Body H=12.7, W=15.2, D=3.9, Pin Spacing=4.1
(b) Body H=18.8, W=22.3, D=3.6, Pin Spacing=5.3

211330

V_{RRM} V	Max. ac Input Voltage	Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+
2.0A @ T_a = 100°C							
400	280	3N256	**101-7647**	0.86	0.60	0.44	0.28
1000	700	3N259	**101-7648**	1.01	0.71	0.52	0.34
8.0A @ T_a = 100°C							
100	70	GBU8B	**101-7702**	2.19	1.54	1.12	0.73
200	140	GBU8D	**101-7703**	2.19	1.54	1.12	0.73
600	420	GBU8J	**101-7705**	2.25	1.58	1.15	0.76
800	560	GBU8K	**101-7707**	1.60	1.25	1.00	0.65

2.5A

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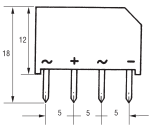


I_0=2.5A @ T_a=45°C
I_{FSM}=80A @ T_{vj}=25°C

H=12, W=19, D=5

211185

V_{RRM} V	V_{RMS} V	Mftrs. List No.	Order Code	Price Each 1+	25+	100+	500+
400	125	SKBB80C1500L5B	**940-1903**	3.45	2.61	2.19	1.39

GBLx Series Bridge Rectifiers

multicomp

4A

Features:
- Single Phase Bridge Rectifier
- UL Recognized File # E-96005
- Glass passivated chip junction
- Ideal for printed circuit board
- High case dielectric strength
- Plastic material has Underwriters Laboratory Flammability Classification 94V-0
- High surge current capability

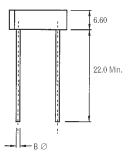
Voltage, Vrrm V	Current, Ir max µA	Current, Ifs max A	Time on for ISFM ms	Mftrs. List No.
100	5	150	8.3	GBL01
200	5	150	8.3	GBL02
400	5	150	8.3	GBL04
600	5	150	8.3	GBL06
800	5	150	8.3	GBL08
1000	5	150	8.3	GBL10

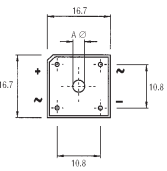
517210

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	500+	1K+
GBL01	**162-1669**	0.78	0.55	0.47	0.40	0.35
GBL02	**162-1670**	0.78	– –	– –	– –	– –
GBL04	**162-1672**	0.81	0.58	0.49	0.42	0.36
GBL06	**162-1673**	0.81	0.58	0.49	0.42	0.36
GBL08	**162-1674**	0.87	0.62	0.52	0.45	0.40
GBL10	**162-1675**	0.67	0.51	0.44	0.39	0.35

6A/8A

VISHAY





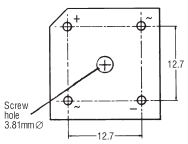
KBPC6 Series I_0=6.0A dc max @ T_c=50°C, 3.45A dc max @ T_c=100°C, I_{FSM}=125A
KBPC8 Series I_0=8.0A dc max @ T_c=50°C, I_{FSM}=125A

211423

V_{RRM} V	Max. ac Input Voltage	Mftrs. List No.	Order Code	Price Each 1+	25+	100+
6A Series						
50	20	KBPC6005PBF	**909-9140**	1.85	1.33	0.99
100	40	KBPC601PBF	**909-9115**	1.54	1.10	0.85
200	80	KBPC602PBF	**909-9123**	1.54	1.10	0.85
400	160	KBPC604PBF	**909-9131**	1.99	1.43	1.11
600	240	KBPC606PBF	**909-9158**	1.54	1.10	0.85
800	320	KBPC608PBF	**909-9166**	1.54	1.10	0.85
1000	400	KBPC610PBF	**909-9107**	1.77	1.27	0.99
8A Series						
50	20	KBPC8005PBF	**909-9212**	2.14	1.55	1.20
100	40	KBPC801PBF	**909-9182**	2.03	1.46	1.02
200	80	KBPC802PBF	**909-9190**	1.70	1.22	0.95
400	160	KBPC804PBF	**909-9204**	1.66	1.20	0.93
600	240	KBPC806PBF	**909-9220**	2.59	1.86	1.45
800	320	KBPC808PBF	**909-9239**	1.57	1.18	0.94
1000	400	KBPC810PBF	**909-9174**	1.80	1.30	1.01

3A/6A/8A/10A

multicomp



- Competitively priced
- High surge current capability
- PCB mounted/screw fixing

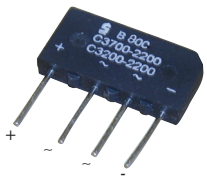
Series	I_O A	@	T_A °C	I_{FSM} A	Body H	Body W/D	Lead L	Lead Spacing	Lead Dia.
CP6...	6		50	125	6.86	15.75	19.1	11.3	1.01typ.
CP8...	8		50	200	7.6	19.1	19.1	12.7	1.3typ.
CP10...	10		50	200	7.6	19.1	19	12.7	1.3typ.

211227

V_{RRM}	Max. ac Input Voltage	Mftrs. List No.	Order Code	Price Each 1+	100+	500+	1K+
6A Series							
50	35	CP600	**938-1295**	1.53	1.32	1.14	0.53
100	70	CP601	**938-1309**	1.60	1.43	1.21	0.55
200	140	CP602	**938-1317**	1.66	1.47	1.22	0.56
600	420	CP606	**938-1325**	1.74	1.52	1.27	0.59
8A Series							
200	140	CP802	**938-1333**	2.93	2.64	2.02	1.44
600	420	CP806	**938-1341**	2.91	2.57	1.95	1.47
10A Series							
50	35	CP1000	**938-1490**	3.70	3.06	2.26	1.57
100	70	CP1001	**938-1503**	3.89	3.22	2.37	1.63
400	280	CP1004	**938-1511**	4.26	3.59	2.62	1.82
600	420	CP1006	**938-1520**	4.45	3.75	2.76	1.91
800	560	CP1008	**938-1538**	4.73	3.93	2.86	2.01

4A

SEMIKRON innovation+service



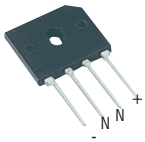
H = 17, W = 32, D =5.6

211186

V_{RRM} V	V_{RMS} V	Mftrs. List No.	Order Code	Price Each 1+	25+	100+
160	80	B80C 3700/2200	**833-6458**	2.94	2.02	1.76
600	250	B250C 3700/2200	**833-6466**	3.16	2.16	1.87
1000	500	B500C 3700/2200	**833-6482**	4.03	2.74	2.39

4A to 8A Glass Passivated

TAIWAN SEMICONDUCTOR



I_O @ 40°C A	I_{FSM} A	Series	Body H	Body W	Body D
4	150	GBU4...	18.8	22.3	3.56
6	175	GBU6...	18.8	22.3	3.56
8	200	GBU8...	18.8	22.3	3.56

- Glass passivated for improved reliability at higher operating temperatures
- Plastic package material classified to **UL 94V-0**

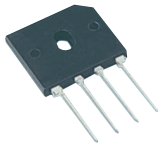
342571

V_{RRM} V	Max. ac Input Voltage	Mftrs. List No.	Order Code	Price Each 1+	10+	100+	500+
4A Series							
50	35	GBU401	**408-4748**	1.210	0.950	0.720	0.520
100	70	GBU402	**408-4756**	1.260	0.990	0.750	0.540
200	140	GBU403	**408-4764**	1.260	0.990	0.750	0.540
600	420	GBU405	**408-4780**	0.310	0.250	0.197	0.151
800	560	GBU406	**408-4799**	0.460	0.360	0.290	0.220
1000	700	GBU407	**408-4802**	1.290	– –	– –	– –
6A Series							
100	70	GBU602	**408-4810**	1.410	1.110	0.850	0.610
200	140	GBU603	**408-4829**	1.410	1.110	0.850	0.610
400	280	GBU604	**408-4837**	0.850	0.740	0.620	0.490
600	420	GBU605	**408-4845**	1.480	– –	– –	– –
800	560	GBU606	**408-4853**	1.620	1.310	0.980	0.720
1000	700	GBU607	**408-4861**	1.070	– –	– –	– –
8A Series							
50	35	GBU801	**408-4870**	0.600	0.470	0.360	0.290
100	70	GBU802	**408-4888**	1.290	1.010	0.790	0.630
200	140	GBU803	**408-4896**	1.050	0.830	0.650	0.520
400	280	GBU804	**408-4900**	1.340	1.040	0.820	0.670
600	420	GBU805	**408-4918**	1.370	1.060	0.830	0.680
800	560	GBU806	**408-4926**	1.410	– –	– –	– –

GBU1x Series Bridge Rectifiers

multicomp

10A



Features:

- Single Phase Bridge Rectifier
- UL Recognized File # E-96005
- Ideal for printed circuit board
- Reliable low cost construction
- Plastic material has Underwriters Laboratory Flammability Classification 94V-0
- High case dielectric strength of 1500VRMS
- Surge overload rating to 200 amperes peak

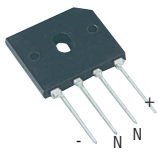
Current, If av A	Voltage, Vrrm V	Mftrs. List No.	Current, If av A	Voltage, Vrrm V	Mftrs. List No.
10	50	GBU1001	10	600	GBU1005
10	100	GBU1002	10	800	GBU1006
10	200	GBU1003	10	1000	GBU1007
10	400	GBU1004			

517282

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	500+	1K+
GBU1001	**162-1719**	0.88	0.68	0.59	0.51	0.46
GBU1002	**162-1720**	1.17	0.84	0.70	0.59	0.52
GBU1003	**162-1721**	1.17	0.84	0.70	0.59	0.52
GBU1004	**162-1722**	1.18	0.85	0.71	0.60	0.53
GBU1005	**162-1723**	1.18	0.85	0.71	0.60	0.53
GBU1006	**162-1724**	1.21	0.87	0.72	0.62	0.54
GBU1007	**162-1726**	0.91	– –	– –	– –	– –

4A to 8A

multicomp TAIWAN SEMICONDUCTOR VISHAY



I_O @ 40°C A	I_{FSM} A	Mftr.	Series	Body H	Body W	Body D
4	150	MC/TS	KBU4...(G)	19.3	23.7	7.1
4	150	VSH/MC	GBU4...	18.8	22.3	3.56
6	175	VSH/MC	GBU6...	18.8	22.3	3.56
6	175	TS/MC	KBU6...(G)	19.3	23.7	7.1
8	200	VSH/MC	GBU8...	18.8	22.3	3.56
8	300	MC	KBU8...(G)	19.3	23.7	7.1

Glass passivated devices offer greater reliability at higher operating temperatures and improved moisture resistance capability. **UL** Recognised.

211166

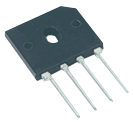
V_{RRM} V	Max. ac Input Voltage	Mftrs. List No.	Fab.	Order Code	Price Each 1+	25+	100+
4A Series							
100	70	KBU4B	MC	**938-0973**	1.500	1.220	1.040
100	70	KBU402	TS	**727-7881**	2.340	1.150	0.780
600	420	KBU405	TS	**727-7890**	1.490	1.150	0.950
800	560	KBU406	TS	**727-7903**	1.650	1.470	1.320
4A Series, Glass Passivated							
100	70	GBU4B	VSH	**954-9439**	1.990	1.570	1.330
100	70	GBU4B	MC	**938-0981**	0.250	0.230	0.210
200	140	GBU4D	VSH	**954-9447**	2.610	2.090	1.690
200	140	GBU4D	MC	**938-0990**	1.820	1.470	1.180
200	140	KBU403G	MC	**162-1753**	0.930	0.670	0.560
400	280	GBU4G.	GS	**102-1745**	2.130	1.770	1.410
600	420	GBU4J	VSH	**954-9455**	2.250	1.820	1.430
600	420	KBU405G	MC	**162-1754**	1.120	0.810	0.680
800	560	GBU4K	VSH	**954-9463**	1.500	– –	– –
800	560	GBU4K	MC	**938-1023**	0.830	0.710	0.700
1000	700	KBU407G	MC	**162-1755**	0.930	0.670	0.560
6A Series							
200	140	KBU6D	MC	**938-1040**	0.300	– –	– –
200	140	KBU603	TS	**727-7911**	1.090	0.840	0.790
6A Series, Glass Passivated							
100	70	GBU6B	VSH	**954-9480**	2.850	2.270	1.790
100	70	GBU6B	MC	**938-1031**	2.310	1.910	1.550
200	140	GBU6D	VSH	**954-9498**	3.150	2.500	2.010
200	140	KBU603G	MC	**162-1756**	0.900	0.710	0.600
600	420	GBU6J..	VSH	**954-9501**	2.800	2.190	1.670
600	420	GBU6J	MC	**938-1058**	2.140	1.750	1.420
600	420	KBU605G	MC	**162-1757**	1.200	0.870	0.720
800	560	GBU6K	VSH	**954-9510**	3.980	3.090	2.400
1000	700	KBU607G	MC	**162-1758**	1.230	0.890	0.740
8A Series							
100	70	KBU802	MC	**162-1759**	1.330	0.960	0.800
200	140	KBU803	MC	**162-1760**	1.000	0.770	0.670
600	420	KBU805	MC	**162-1763**	1.000	0.770	0.670
800	560	KBU806	MC	**162-1765**	1.350	0.980	0.810
1000	700	KBU807	MC	**162-1766**	1.350	0.980	0.810

Single Phase Bridge Rectifiers - continued

4A to 8A - continued

V_{RRM} V	Max. ac Input Voltage	Mftrs. List No.	Fab.	Order Code	Price Each 1+	25+	100+
8A Series, Glass Passivated							
50	35	GBU8A	VSH	**954-9528**	2.110	1.840	1.480
200	140	KBU803G	MC	**162-1761**	1.200	0.860	0.730
600	420	KBU805G	MC	**162-1764**	1.540	1.100	0.930
1000	700	KBU807G	MC	**162-1767**	1.730	1.240	1.040
100	70	GBU8B	MC	**938-1066**	0.210	0.200	0.195
200	140	GBU8D	GS	**954-9536**	3.560	2.800	2.310
400	280	GBU8G	VSH	**954-9544**	3.660	2.880	2.230
800	560	GBU8K	GS	**954-9552**	4.850	– –	– –

6A, 15A, 25A In-Line Bridge Rectifiers



GSIB-5S

- Reliable, glass passivation
- 1500V_{rms} case dielectric strength
- **UL94V-0** rated

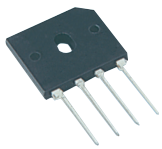
Body H=20, W=30, D=4.6 Lead pitch=7.5 x 7.5 x 10

276840

V_{RRM} V	Max. ac I Voltage	Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
6.0A @ T_c = 100°C								
200	140	GSIB620	**954-9803**	1.18	0.90	0.75	0.65	0.59
400	280	GSIB640	**954-9811**	1.62	1.15	1.02	0.89	0.80
600	420	GSIB660	**954-9820**	1.29	0.92	0.81	0.70	0.63
800	560	GSIB680	**954-9838**	1.24	0.89	0.78	0.66	0.60
15.0A @ T_c = 107°C								
200	140	GSIB1520	**954-9684**	2.04	1.45	1.30	0.84	0.77
400	280	GSIB1540	**954-9692**	2.21	1.68	1.47	0.94	0.87
600	420	GSIB1560	**954-9706**	1.93	1.40	1.21	0.80	0.76
800	560	GSIB1580	**954-9714**	2.23	1.60	1.38	0.92	0.80
25.0A @ T_c = 98°C								
200	140	GSIB2520	**954-9722**	2.85	2.15	1.89	1.32	1.15
400	280	GSIB2540	**954-9730**	1.94	1.38	1.22	0.89	0.86
600	420	GSIB2560	**954-9749**	2.17	1.55	1.37	0.89	0.78
800	560	GSIB2580	**954-9757**	2.23	1.59	1.41	0.92	0.84

KBU1x(G) Series Bridge Rectifiers

10A



KBU1001 - KBU1007 Features:

- Single Phase Bridge Rectifier
- UL Recognized File # E-96005
- High surge current capability
- Ideal for printed circuit board
- Weight: 8 grams
- Reliable low cost construction technique results in inexpensive product

KBU1001G - KBU1007G Features:

- Single Phase Bridge Rectifier
- UL Recognized File # E-96005
- Glass passivated junction
- Ideal for printed circuit board
- Reliable low cost construction
- Surge overload rating to 200 amperes peak
- Weight: 0. 3 ounce, 8.0 grams
- Mounting torque: 5 in. lb. Max.

Voltage, Vrrm V	Current, If av A	Mftrs. List No.	Voltage, Vrrm V	Current, If av A	Mftrs. List No.
50	10	KBU1001	800	10	KBU1006
100	10	KBU1002	1000	10	KBU1007
200	10	KBU1003	200	10	KBU1003G
400	10	KBU1004	600	10	KBU1005G
600	10	KBU1005	1000	10	KBU1007G

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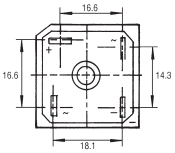
Mftrs. List No.	Order Code	Price Each 1+	25+	100+	500+	1K+
KBU1001	**162-1741**	1.15	0.89	0.77	0.68	0.60
KBU1002	**162-1742**	1.57	1.13	0.95	0.81	0.71
KBU1003	**162-1743**	1.57	1.13	0.95	0.81	0.71
KBU1004	**162-1745**	1.22	0.95	0.82	0.72	0.64
KBU1005	**162-1746**	1.22	– –	– –	– –	– –
KBU1006	**162-1748**	1.67	1.21	1.01	0.86	0.75
KBU1007	**162-1751**	1.65	1.19	0.99	0.85	0.75
KBU1003G	**162-1744**	1.53	1.09	0.91	0.78	0.68
KBU1005G	**162-1747**	1.56	1.13	0.93	0.81	0.70
KBU1007G	**162-1752**	2.00	1.44	1.20	1.03	0.91

12A/25A/35A/50A Glass Passivated



Body H=7.62 (GS), 11.1 (MC), W=28.8, D=28.8
Mounting hole=5.6 dia., Terminals=6.3 x 0.8

I_0 @ 55°C A	I_{FSM} A	Mftr.	Series
12	200	VSH	GBPC12...
25	300	FCH/GS/MC/VISH	GBPC25...
35	400	GS/VISH	GBPC35...
35	475	VISH	GBPC35...A
50	400	MC	GBPC50...

The glass passivation process offers improvements to reliability at high operating temperatures, moisture resistance capability and overall durability. Temperature range -50°C to +150°C, **UL** Recognised.

NOTE:On devices above 2.7 amps, the maximum values of I_0 dc quoted are based on the assumption that the device is mounted on a chassis or some form of heatsink.

211171

V_{RRM} V	Max. ac Input Voltage	Mftrs. List No.	Order Code	Price Each 1+	25+	100+	1K+
12A Series							
50	35	GBPC12005	**954-9331**	4.72	3.67	2.81	1.44
200	140	GBPC1202	**954-9340**	4.57	– –	– –	– –
400	280	GBPC1204	**954-9358**	2.65	2.14	1.69	0.96
25A Series							
50	35	GBPC25-005 (GS)	**954-9366**	3.61	2.82	2.26	1.55
100	70	GBPC25-01 (GS)	**954-9374**	5.59	4.73	3.57	1.63
200	140	GBPC2502-E4/51 (GS)	**954-9382**	2.86	2.43	2.09	1.57
200	140	GBPC2502 (FCH)	**101-7699**	2.15	1.47	1.05	0.99
400	280	GBPC25-04 (GS)	**954-9390**	3.52	2.83	2.14	1.36
400	280	GBPC2504 (FCH)	**101-7700**	2.87	2.38	1.86	1.36
600	420	GBPC25-06 (GS)	**954-9404**	4.45	3.59	3.01	1.79
600	420	GBPC2506A	**909-8623**	3.08	1.90	1.48	1.31
800	560	GBPC2508APBF	**909-8658**	4.37	2.89	2.15	1.88
1000	700	GBPC2510A	**909-8453**	2.36	1.87	1.58	1.39
1200	840	GBPC2512APBF	**909-8496**	5.15	3.06	2.28	2.00
35A Series							
200	140	GBPC3502 (GS)	**954-9412**	3.84	2.73	2.23	1.37
200	140	GBPC3502 (FCH)	**984-3590**	4.09	3.19	2.33	1.61
200	140	GBPC3502APBF	**909-8852**	3.21	2.28	1.62	1.39
400	280	GBPC3504APBF	**909-8941**	3.21	2.37	1.62	1.46
600	420	GBPC3506APBF	**909-8968**	3.89	2.15	1.60	1.40
800	560	GBPC3508APBF	**909-8992**	3.32	2.33	1.69	1.50
1000	700	GBPC3510A	**909-8755**	4.66	2.78	2.07	1.81
1200	840	GBPC3512APBF	**909-8798**	3.15	2.45	1.79	1.66
50A Series							
50	35	GBPC50005	**956-5159**	3.14	2.62	2.25	1.72
200	140	GBPC5002	**956-5167**	10.08	7.97	6.56	4.75
600	420	GBPC5006	**956-5175**	7.01	6.04	5.33	4.35
1000	700	GBPC5010	**162-1718**	4.42	3.68	3.16	2.77

GBPC15,25,35 Series Bridge Rectifiers

15A, 25A, 35A, 50A

Features:

- Single Phase Bridge Rectifier
- UL Recognized file # E-96005
- The plastic material used carries Underwriters Laboratory Flammability Recognition 94V-0
- Integrally molded heatsink provide very low thermal resistance for maximum heat dissipation
- Surge overload ratings from 300 amperes to 400 amperes
- Terminals solderable per MIL-STD-202, Method 208 (For wire type)
- Isolated voltage from case to lead over 2500 volts

Current, If av A	Voltage, Vrrm V	Mftrs. List No.	Current, If av A	Voltage, Vrrm V	Mftrs. List No.
15	50	GBPC15005	35	100	GBPC3501
15	100	GBPC1501	35	400	GBPC3504
15	200	GBPC1502	35	600	GBPC3506
15	400	GBPC1504	35	800	GBPC3508
15	600	GBPC1506	35	1000	GBPC3510
15	800	GBPC1508	50	100	GBPC5001
15	1000	GBPC1510	50	400	GBPC5004
25	1000	GBPC2510	50	800	GBPC5008
35	50	GBPC35005B0	50	1000	GBPC5010

517279

Mftrs. List No.	Order Code	Price Each 1+	10+	100+	250+	500+
GBPC15005	**162-1676**	2.01	1.80	1.43	1.36	1.01
GBPC1501	**162-1678**	2.01	– –	– –	– –	– –
GBPC1502	**162-1680**	2.01	1.80	1.43	1.36	1.01
GBPC1504	**162-1682**	2.01	1.80	1.43	1.36	1.01
GBPC1506	**162-1685**	2.01	1.81	1.44	1.36	1.01
GBPC1508	**162-1687**	2.08	1.87	1.48	1.40	1.04
GBPC1510	**162-1689**	1.78	1.64	1.34	1.29	0.98

Mftrs. List No.	Order Code	1+	10+	100+	250+	500+
		Price Each				
GBPC2510	**162-1698**	2.47	2.05	1.75	1.54	1.18
GBPC35005B0	**162-1700**	2.37	1.98	1.69	1.49	1.13
GBPC3501	**162-1703**	2.38	1.99	1.70	1.49	1.14
GBPC3504	**162-1706**	2.40	2.01	1.72	1.50	1.15
GBPC3506	**162-1708**	2.40	2.01	1.72	1.50	1.15
GBPC3508	**162-1710**	2.43	2.03	1.74	1.52	1.17
GBPC3510	**162-1712**	2.55	2.12	1.81	1.59	1.22
GBPC5001	**162-1715**	2.94	2.53	2.22	1.97	1.57
GBPC5004	**162-1716**	3.86	3.21	2.76	2.41	1.86
GBPC5008	**162-1717**	4.15	3.46	2.96	2.59	2.00
GBPC5010	**162-1718**	4.42	3.68	3.16	2.77	2.12

GBPC15,25,35xW Series Bridge Rectifiers

multicomp

15A, 25A, 35A

Features:

- Single Phase Bridge Rectifier
- UL Recognized file # E-96005
- The plastic material used carries Underwriters Laboratory Flammability Recognition 94V-0
- Integrally molded heatsink provide very low thermal resistance for maximum heat dissipation
- Surge overload ratings from 300 amperes to 400 amperes
- Terminals solderable per MIL-STD-202, Method 208 (For wire type)
- Isolated voltage from case to lead over 2500 volts

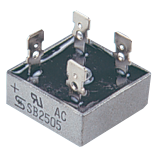
Current, If av A	Voltage, Vrrm V	Mftrs. List No.	Current, If av A	Voltage, Vrrm V	Mftrs. List No.
15	50	GBPC15005W	25	100	GBPC2501
15	100	GBPC1501W	25	200	GBPC2502
15	200	GBPC1502W	25	400	GBPC2504
15	400	GBPC1504W	25	600	GBPC2506
15	600	GBPC1506W	25	800	GBPC2508
15	800	GBPC1508W	35	50	GBPC35005W
15	1000	GBPC1510W	35	100	GBPC3501W
25	50	GBPC25005W	35	200	GBPC3502W
25	100	GBPC2501W	35	400	GBPC3504W
25	200	GBPC2502W	35	600	GBPC3506W
25	400	GBPC2504W	35	800	GBPC3508W
25	600	GBPC2506W	35	1000	GBPC3510W
25	800	GBPC2508W	35	200	GBPC3502
25	1000	GBPC2510W	35	400	GBPC3504
25	50	GBPC25005			

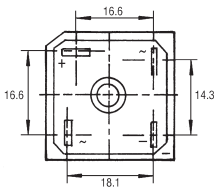
517252

Mftrs. List No.	Order Code	1+	10+	100+	250+
		Price Each			
GBPC15005W	**162-1677**	1.65	1.51	1.24	1.19
GBPC1501W	**162-1679**	2.01	1.80	1.43	1.36
GBPC1502W	**162-1681**	1.65	1.51	1.24	1.19
GBPC1504W	**162-1684**	1.66	1.48	1.18	1.12
GBPC1506W	**162-1686**	1.65	1.52	1.25	1.19
GBPC1508W	**162-1688**	1.71	1.57	1.28	1.23
GBPC1510W	**162-1690**	2.08	1.88	1.48	1.41
GBPC25005W	**162-1691**	1.78	1.48	1.28	1.12
GBPC2501W	**162-1692**	2.19	1.84	1.57	1.37
GBPC2502W	**162-1693**	1.84	1.59	1.38	1.23
GBPC2504W	**162-1694**	1.83	1.58	1.39	1.24
GBPC2506W	**162-1696**	2.26	1.88	1.61	1.41
GBPC2508W	**162-1697**	1.94	1.68	1.46	1.30
GBPC2510W	**162-1699**	2.12	1.80	1.57	1.40
GBPC35005W	**162-1702**	1.95	1.63	1.39	1.22
GBPC3501W	**162-1704**	1.96	1.64	1.40	1.22
GBPC3502W	**162-1705**	1.93	1.67	1.46	1.30
GBPC3504W	**162-1707**	2.40	2.01	1.72	1.50
GBPC3506W	**162-1709**	2.40	2.01	1.72	1.50
GBPC3508W	**162-1711**	2.43	2.03	1.74	1.52
GBPC3510W	**162-1714**	2.55	2.12	1.81	1.59
		1+	**25+**	**100+**	**1K+**
GBPC25005	**408-4675**	2.48	2.00	1.50	1.47
GBPC2501	**408-4683**	2.52	2.03	1.52	1.49
GBPC2502	**408-4691**	2.56	2.06	1.55	1.51
GBPC2504	**408-4705**	2.60	2.09	1.57	1.53
GBPC2506	**408-4713**	2.65	2.13	1.59	1.56
GBPC2508	**408-4721**	2.70	2.16	1.61	1.58
GBPC3502	**408-4730**	2.69	2.16	1.61	1.58
GBPC3504	**101-7701**	4.24	3.31	2.42	1.67

15A/25A/35A/40A/50A

multicomp





I_O = 15A @ T_C = 55°C I_{FSM} = 300A
I_O = 25A @ T_C = 55°C I_{FSM} = 300A
I_O = 35A @ T_C = 55°C I_{FSM} = 400A
I_O = 40A @ T_C = 55°C I_{FSM} = 500A
I_O = 50A @ T_C = 55°C I_{FSM} = 500A

Operating temp. -55°C to +150°C

H (inc. tabs)=25.4, W/D=28.7,
Mounting hole=4.9 dia., Terminals=6.3 x 0.8 fast on

211118

V_{RRM} V	Max. ac Input Voltage	Order Code	1+	10+	100+	500+	1K+
			Price Each				
15A Series							
50	35	**938-1090**	3.39	2.79	2.48	1.53	1.31
100	70	**938-1104**	4.33	3.16	2.52	1.56	1.34
200	140	**938-1120**	3.63	3.03	2.85	1.61	1.39
400	280	**938-1139**	2.55	2.29	2.09	1.33	1.17
600	420	**938-1147**	4.09	3.62	3.26	1.67	1.47
800	500	**938-1155**	4.34	3.80	3.40	1.71	1.48
25A Series							
50	35	**938-1163**	4.37	3.26	2.56	1.61	1.39
100	70	**938-1171**	4.45	3.30	2.63	1.65	1.44
200	140	**938-1198**	4.88	3.59	2.85	1.78	1.55
400	280	**938-1201**	2.17	1.61	1.29	0.80	0.70
600	420	**938-1210**	4.78	3.48	2.76	1.76	1.54
800	500	**938-1228**	4.85	3.58	2.82	1.76	1.54
1000	800	**938-1180**	5.31	3.90	3.11	1.93	1.63
35A Series			**1+**	**10+**	**100+**	**500+**	**1K+**
100	70	**938-1236**	4.81	3.51	2.81	1.88	1.69
200	140	**938-1252**	1.12	0.86	0.70	0.48	0.44
400	280	**938-1260**	5.07	3.72	2.94	1.97	1.81
600	420	**938-1279**	5.17	3.77	2.94	2.06	1.86
800	500	**938-1287**	5.22	3.78	2.90	2.08	1.82
1000	800	**938-1244**	5.43	3.88	2.97	2.10	1.86
40A Series			**1+**	**25+**	**100+**	**1K+**	
200	140	**938-0817**	7.71	6.09	5.03	3.63	
600	420	**938-0825**	7.95	6.29	5.19	3.74	
1000	800	**938-0841**	4.88	3.84	3.18	2.30	
50A Series							
50	35	**938-0850**	10.41	8.22	6.79	4.91	
200	140	**938-0868**	3.78	3.14	2.71	2.42	
600	420	**938-0876**	11.15	8.78	7.26	5.26	
1000	800	**938-0884**	12.73	10.06	8.30	6.01	

17A

SEMIKRON innovation+service

I_O=17A @ T_a=45°C (0.75°C/W heatsink)
6.6A @ T_a=50°C (5°C/W heatsink)
I_{FSM}=320A

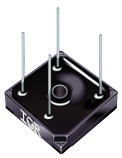
H=10, W=28, D=28
Mounting hole=5.2 dia, Terminals=6.3 x 0.8

211050

V_{RRM} V	Max. ac Input Voltage	Mftrs. List No.	Order Code	1+	25+	100+
				Price Each		
200	80	SKB2502	**940-1806**	8.38	6.12	4.82
800	320	SKB2508	**940-1814**	10.20	7.64	6.12
1200	380	SKB2512	**940-1822**	14.24	10.37	8.15

25A and 35A, Wire Leaded

VISHAY



- High thermal conductivity package
- Electrically insulated case to 2.7kV
- Glass passivated diode chips
- **UL** Recognised

I_O dc @ T_c A	°C	I_{FSM} @ 50Hz A	$R_{th(J-C)}$ (per leg) °C/W	Series
25	60	400	1.7	GBPC25...
35	55	475	1.4	GBPC35...

Mounting hole=5.3 dia.

Body: H=7.5, W=28.5, D=28.5 Lead: L=24.5, Dia.=1.02

234583

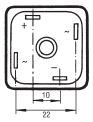
V_{RRM} V	Max. ac Input Voltage	Mftrs. List No.	Order Code	1+	25+	100+
				Price Each		
25A Series						
600	420	GBPC2506W	**909-8631**	2.96	1.80	1.45
800	560	GBPC2508WPBF	**909-8666**	3.32	2.07	1.56
1000	700	GBPC2510WPBF	**909-8461**	3.47	2.06	1.53
35A Series						
400	280	GBPC3504WPBF	**909-8925**	3.41	1.88	1.40
600	420	GBPC3506WPBF	**909-8976**	3.94	2.18	1.62
800	560	GBPC3508WPBF	**909-9000**	3.22	2.13	1.59
1000	700	GBPC3510WPBF	**909-8763**	4.50	2.56	1.91
1200	840	GBPC3512WPBF	**909-8801**	3.99	2.95	2.29

Over half a million products available online QGO

Single Phase Bridge Rectifiers - continued

25A/35A

International IOR Rectifier



I_O dc A	@ T_c °C	I_{FSM} @ 50Hz A	Mftrs. List No.
25	65	400	26MB...
35	60	475	36MB...

Mounting hole=5.1 dia, Terminals=6.3 x 0.8

H=10.5, W=29, D=29

211051

V_{RRM} V	Max. ac Input Voltage	Mftrs. List No.	Order Code	Price Each 1+	25+	100+
25A Series						
50	35	26MB05APBF	**909-8615**	5.73	4.12	3.20
100	70	26MB10APBF	**909-8488**	4.44	3.19	2.48
200	140	26MB20APBF	**909-8526**	4.44	3.19	2.48
400	280	26MB40APBF	**909-8607**	4.94	3.55	2.75
600	420	26MB60APBF	**909-8640**	4.44	3.19	2.48
800	560	26MB80APBF	**909-8674**	4.44	3.19	2.48
1000	700	26MB100APBF	**909-8470**	4.55	3.27	2.53
1200	840	26MB120APBF	**909-8500**	5.34	3.83	2.97
1600	1130	26MB160APBF	**909-8518**	7.34	5.30	4.09
35A Series						
50	35	36MB05APBF	**909-8950**	3.58	3.00	2.18
100	70	36MB10APBF	**909-8780**	5.09	3.79	2.79
200	140	36MB20APBF	**909-8844**	5.68	4.07	3.16
400	280	36MB40APBF	**909-8933**	5.47	3.93	3.05
600	420	36MB60APBF	**909-8984**	6.01	4.32	3.34
800	560	36MB80APBF	**909-9018**	4.78	3.43	2.66
1000	700	36MB100APBF	**909-8771**	5.84	4.19	3.26
1200	840	36MB120APBF	**909-8810**	4.67	3.35	2.60
1400	980	36MB140APBF	**909-8828**	6.56	5.45	4.29
1600	1130	36MB160APBF	**909-8836**	10.09	7.25	5.62

30A

SEMIKRON innovation+service

- Isolated metal case
- High surge current
- M4 x 2 mounting points
- **UL** recognised

I_O = 30A dc @ T_C = 94°C I_{FSM} =370A @ T_{vj} = 25°C

H=24, W=45, D=45

211195

I_O (A)	V_{RRM} (V)	Mftrs. List No.	Order Code	Price Each 1+	25+	100+
30	800	SKB30/08A1	**940-1938**	33.59	26.89	22.42
30	1200	SKB30/12	**940-1873**	31.05	24.95	21.14
30	1600	SKB 30/16 A1	NEW **176-1329**	31.54	25.12	20.86

40A

IXYS

- Planar passivated chips
- Easy to mount
- Low forward voltage drop (less than 1.15V)

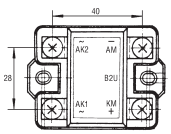
H=12.2, W=38, D=25.4

419518

V_{RRM} V	V_{RMS} V	Mftrs. List No.	Order Code	Price Each 1+	25+	100+	+
800	250	VBO 40-08NO6	**108-0116**	9.01	8.78	8.56	– –
1200	400	VBO 40-12NO6	**108-0117**	9.56	9.43	9.19	– –

60A

SEMIKRON innovation+service



H=34, W=65, D=48
Mounting holes=5.3,
Fixing Centres=49

I_O = 67A dc max @ T_C = 85°C
I_{FSM} = 1000A @ T_{vj} = 25°C

Current ratings (I_O) @ 45°C for the following heatsinks:
175-647 = 30A, 175-648 = 35A, 170-753 = 55A

211091

Mftrs. List No.	V_{RRM} V	Order Code	Price Each 1+	25+	100+
SKB6008	800	**928-6977**	72.15	61.08	51.67
SKB6012	1200	**928-6985**	72.15	65.28	59.47

105A to 125A

IXYS

V_{rrm} V	V_{rms} V	I_d (av) A	@	T_c C	I_{FSM} A	Mftrs.List No.
1200	400	105		85	1500	VBO105-12NO7
1200	400	125		85	1800	VBO125-12NO7

H=31 (excl. terminals), W=67, D=50
Mounting holes=5.5, fixing centres=50

211353

Mftrs. List No.	Order Code	Price Each 1+	5+	10+
VBO105-12NO7	**935-9494**	48.37	45.37	36.24
VBO125-12NO7	**935-9591**	49.64	46.52	37.14

Three Phase Bridge Rectifiers

20A/25A/35A

H=10, W=28.5, D=28.5
Mounting hole=5.2 dia, Terminals=6.3 x 0.8

SKD Series
I_O = 20A dc max @ T_c=73°C
I_{FSM} = 320A

26MT Series
I_O = 25A dc max @ T_c=60°C
I_{FSM}=330A

36MT Series
I_O = 35A dc max @ T_c=60°C
I_{FSM}=475A

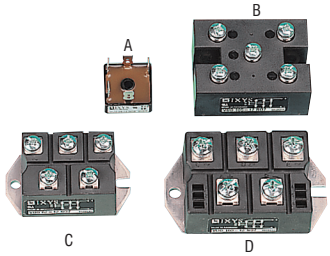
211061

I_O A	V_{RRM} V	Mftr.	Mftrs. List No.	Order Code	Price Each 1+	25+	100+
20	800	SKN	SKD2508	**940-1830**	23.34	16.15	12.33
25	100	VISH	26MT10PBF	**909-8569**	7.46	5.36	4.15
25	600	VISH	26MT60PBF	**909-8585**	9.04	6.50	5.03
25	800	VISH	26MT80PBF	**909-8542**	7.47	5.37	4.16
25	1000	VISH	26MT100PBF	**909-8550**	9.79	7.04	5.45
25	1200	VISH	26MT120PBF	**909-8593**	10.05	7.21	5.61
25	1600	VISH	26MT160PBF	**909-8534**	12.31	8.84	6.86
35	400	VISH	36MT40PBF	**909-8860**	12.10	8.69	6.74
35	600	VISH	36MT60PBF	**909-8909**	10.04	7.20	5.60
35	800	VISH	36MT80PBF	**909-8887**	10.12	7.64	5.36
35	1200	VISH	36MT120PBF	**909-8917**	10.56	7.59	5.89
35	1400	VISH	36MT140PBF	**909-8895**	13.09	9.42	7.30
35	1600	VISH	36MT160PBF	**909-8879**	10.53	7.57	5.87

25A to 186A

IXYS

B6U Configuration



A: H=10 (excl. terminals),W/D=28.5, Mounting holes=5.2 dia.
B: H=31 (excl. terminals),W=67, D=50 Mounting holes=5.5 dia.,fixing centres=50
C: H=30 (excl. terminals), W=72, D=42 Mounting holes=5.3 dia., fixing centres=60
D: H=30 (excl. terminals), W=94, D=54 Mounting holes=6.5 dia., fixing centres=80

$I_{f\ (av)}$ A	@	T_c °C	V_{rr} V	V_{rms} V	I_{FSM} A	Package	Mftrs. List No.
35		62	1200	400	550	A	VUO36-12NO8
63		110	1200	400	550	C	VUO62-12NO7
88		110	1200	400	750	C	VUO82-12NO7
127		110	1200	400	1200	D	VUO110-12NO7
160		85	1200	400	1500	B	VUO105-12NO7
175		110	1200	400	1800	D	VUO160-12NO7

211354

Mftrs. List No.	Order Code	Price Each 1+	5+	25+
VUO36-12NO8	**935-9486**	10.05	9.42	8.34
VUO62-12NO7	**935-9443**	27.97	26.23	23.22
VUO82-12NO7	**935-9460**	32.90	30.85	26.56
VUO105-12NO7	**935-9613**	55.43	50.35	40.62
VUO110-12NO7	**935-9605**	50.33	47.20	41.78
VUO160-12NO7	**935-9478**	65.52	60.93	48.00

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30A

SEMIKRON innovation+service

- Isolated metal base plate
- Fast-on terminals, solder tips
- High surge current rating
- Suitable for wave soldering
- M5 x 2 mounting points

H=23.5, W=63, D=32

I_O=30A @ T_C = 100°C I_{FSM}=370A @ T_{vj} = 25°C

211197

V_{RRM}(V)	Mftrs. List No.	Order Code	Price Each 1+	25+	100+
800	SKD31/08	**940-1890**	54.77	37.49	27.07
1200	SKD31/12	**940-1954**	65.92	45.40	32.44

High Power, High Surge

SEMIKRON innovation+service

SemiPont-3, L=72, W=42, D=30, 60mm hole fixings(M5)

Semipont-2, L=65, W=48, D=35.5 (see datasheet for hole fixings)

SemiPont-4, L=94 W=54, D=30, 80mm hole fixings(M6)

SemiUnk, L=63.5, W=29.5, D=17

498133

Mftrs. List No.	V_{RRM} (V)	I_D (A)	I_{FSM} (A)	Order Code	Price Each 1+	5+	25+	+
2 Phase - SemiPont 3								
SKB52/08	800	60	500	**145-5750**	49.72	44.35	41.23	– –
3 Phase - SemiPont 3								
SKD62/16	1600	86	500	**145-5751**	55.18	49.20	45.75	– –
SKD62/08	800	86	500	**145-5752**	48.65	40.17	33.50	– –
3 Phase - SemiPont-2								
SKD100/16	1600	110	1150	**146-7131**	108.84	84.65	76.18	– –
3 Phase - SemiPont-4								
SKD210/16	1600	207	2000	**146-7132**	101.59	79.02	71.12	– –
3 Phase - SemiUnk								
SKD53/16	1600	53	370	**146-7133**	33.58	27.96	23.95	– –

3-Phase Bridge Rectifier + 3-Phase Bridge Inverter

Semitop 3

SEMIKRON innovation+service

Features:
- Compact Design
- One screw mounting
- Heat transfer and isolation through direct copper
- Ultrafast NPT technology IGBT
- CAL technology FWD
- Integrated NTC temperature sensor

SEMITOP 3 - H=55, W=31, D=15.43

Configuration	V_{CEsat} @ 25°C V	I_F A	V_{RRM} A	I_{TSM} @ 25°C, 10 ms A	Mftrs. list No.
Thyristor / Diode Module	2	25	800	220	SK9DGD065ET
Thyristor / Diode Module	1.8	35	800	370	SK25DGD065ET

518903

Mftrs. List No.	Order Code	Price Each 1+	5+	25+
SK9DGD065ET	**163-1609**	21.95	19.96	18.93
SK25DGD065ET	**163-1610**	30.19	27.45	26.03

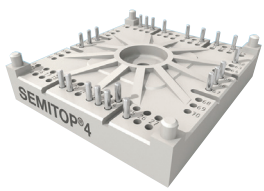
3-Phase Bridge Rectifier + Brake Chopper + 3-Phase Bridge Inverter

Semitop 3 & 4

SEMIKRON innovation+service

Features:
- Compact Design
- One screw mounting
- Heat transfer and isolation through direct copper
- Ultrafast NPT technology IGBT
- CAL technology FWD
- Integrated NTC temperature sensor

SEMITOP 3 - H=55, W=31, D=15.43



Features:
- One screw mounting module
- Fully compatible with Semitop 1,2,3
- Improved thermal performances by aluminium oxide substrate
- Trech IGBT technology
- CAL technology free-wheeling diode
- Integrated NTC temperature sensor

SEMITOP 4 H=55, W=60.25, D=15.8

Configuration	I_C A	V_{CEsat} @ 25°C V	I_F A	V_{RRM} A	I_{FSM} @ 25°C, 10 ms A	Mftrs. list No.
Thyristor / Diode Module	81	1.45	58	800	700	SK75DGDL066T
Thyristor / Diode Module	38	1.45	32	800	700	SK30DGDL066ET

518909

Mftrs. List No.	Package	Order Code	Price Each 1+	5+	25+
SK75DGDL066T	Semitop 4	**163-1611**	68.64	62.40	59.17
SK30DGDL066ET	Semitop 3	**163-1612**	36.77	33.44	31.70

30A

SEMIKRON innovation+service

- Isolated metal case
- High surge current
- M4 x 2 mounting points

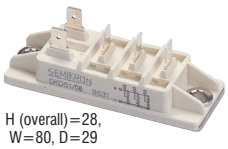
I_O=30A dc @ T_a=98°C I_{FSM}=370A @ T_{vj}=25°C

211191

I_O A	V_{RRM} (V)	Mftrs. List No.	Order Code	Price Each 1+	25+	100+
30	1200	SKD30/12A1	**940-1989**	64.25	54.34	47.39
30	1600	SKD30/16A1	**109-5595**	29.22	24.72	21.52

50A

SEMIKRON innovation+service



- Glass passivated diodes
- Fast-on terminals
- Isolated metal base
- Low thermal impedance
- High surge current capability

H (overall)=28, W=80, D=29

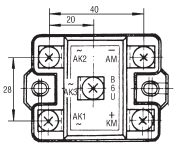
I_O=50A @ T_C=125°C I_{FSM}=775A T_{vj}=25°C

211188

Mftrs. List No.	V_{RRM} (V)	Order Code	Price Each 1+	25+	100+
SKD51/08	800	**928-7078**	57.19	45.12	37.24
SKD51/12	1200	**928-7086**	67.18	53.00	43.75

60A

SEMIKRON innovation+service



H=34, W=65, D=48
Mounting holes=5.3,
Fixing Centres=49

I_O=92A dc max @ T_c=85°C
I_{FSM}=1000A @ T_{vj}=25°C

Current ratings (I_O) @ 45°C for the following heatsinks:
175-647=26A, 175-648=30A, 170-753=60A

211092

Mftrs. List No.	V_{RRM} (V)	Order Code	Price Each 1+	25+	100+
SKD6008	800	**928-6993**	78.36	67.51	57.74
SKD6012	1200	**940-1857**	95.35	83.63	72.38

SEMiX Modules

SEMIKRON innovation+service

SEMiX

- Terminal height of 17mm
- Chip soldier on direct copper bonded Al_2O_3 ceramic
- Heat transfer through Al_2O_3 ceramic isolated baseplate

Typical applications:
- Input Bridge Rectifer for:
- AC/DC motor control
- Power Supplies

V_{RRM} Max. V	I_D@ 85°C Max. A	I_{FSM} Max. A	Order Code	Mftrs. list No.
1600	340	2500	130-0533	SEMIX341D16S
1600	240	2250	130-0534	SEMIX241DH16S

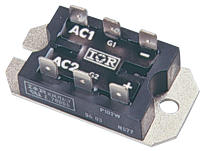
451623

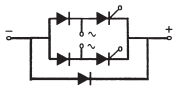
Mftrs. List No.	Order Code	Price Each 1+	4+	12+
SEMIX241DH16S	**130-0534**	102.18	86.37	79.23
SEMIX341D16S	**130-0533**	83.24	70.39	64.54

Controlled Bridge Rectifiers

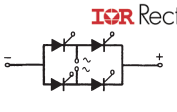
PACE-Pak, 25A and 40A

International IOR Rectifier





Thyristor/diode bridge



Thyristor bridge

Body: H=14 (excl terminals), W=48, D=32
Base plate: W=64, D=32, Fixing Centres=49.5

PACE-pak modules give single phase bridge configurations of thyristors and diodes, mounted on an alumina substrate to provide a completely isolated assembly. A free wheeling diode is included with the half-controlled bridges which are in B2HKF configuration. Connections are by 6.4 x 0.8mm faston terminals. Isolation voltage=2500V.

211386

I_0 @T_C=85°C A	I_{TSM} A	V_{RRM} V	Mftrs. List No.	Order Code	Price Each 1+	10+	25+
Thyristor/Diode Bridges							
25	300	600	P102WPBF	**910-4810**	19.93	14.32	11.10
25	300	1200	P105WPBF	**910-4828**	20.27	14.56	11.29
40	385	600	P402WPBF	**910-4836**	24.45	17.57	13.61
40	385	1200	P405WPBF	**910-4852**	20.61	14.81	11.48
Thyristor Bridge							
25	300	1200	P135PBF	**910-4151**	21.57	15.51	12.02

Controllable Bridge Rectifier

SEMIKRON innovation+service

Features:
- Sturdy isolated metal baseplate
- Fast-on terminals with solder tips
- Suitable for wave soldering
- High surge current rating
- UL recognized, file no. E63 532

H=48mm, W=32mm, D=25.3mm

Typical Applications:
- Controllable single phase rectifier
- DC power supplies
- DC motor controllers
- DC motor field controllers

504718

Mftrs. List No.	Time on, for I_{FSM} ms	I_{FSM} A	V_{RRM} V	Order Code	Price Each 1+	25+	100+
SKBT 28/12	10	320	1200	**145-6964**	54.25	48.03	45.02

SEMIPONT, 30A

SEMIKRON innovation+service

- Typical Applications include:
- Controllable single phase rectifier
- DC power supplies
- DC motor controllers
- DC motor field controllers

H=25.3, W=63, D=32
Mounting holes=5.3 dia
Fixing centres=48

- Isolated base plate to 2500V
- Fast-on terminals with solder tips
- High surge current rating
- Suitable for wave soldering
- UL recognized, file no. E 63 532

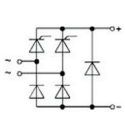
211071

Mftrs. List No.	I_0 @ T_C=85°C A	I_{TSM} (*I_{FSM}) A	V_{RRM} V	Order Code	Price Each 1+	5+	50+
SKCH28/08	30	320	800	**940-1865**	31.52	29.09	27.63
SKCH28/12	30	320	1200	**940-1881**	50.22	44.03	40.19
SKBT28/14	30	320*	1400	**146-7129**	27.71	22.09	20.07

Controlled Bridge Rectifers

SEMIKRON innovation+service

H=50,W=48,D=35



- Fully controlled single phase bridge rectifier
- Robust plastic case with screw terminals
- Large, isolated base plate
- Blocking voltage to 1600V
- High surge currents
- Easy chassis mounting
- UL recognized, file no. E 63 532

Typical Applications:
- For DC drives with a fixed direction of rotation
- Controlled field rectifiers for DC motors
- Controlled battery charger rectifiers

ID @ 85°C (A)	I_{TSM} @ 25°C, t= 10ms (A)	I_{GT} (mA)	V_{GT} (V)	I^2T (A^2s)	dV/dt (V/us)
40	470	150	3	1100	500

497628

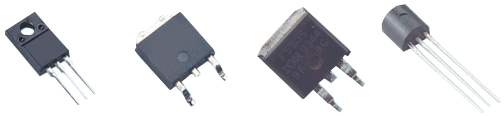
Mftrs. List No.	Order Code	Price Each 1+	5+	25+	+
SKCH40/08 800	**145-5748**	88.85	79.22	73.65	– –
SKCH40/16 1600	**145-5747**	101.89	90.85	84.47	– –

Thyristors

AC Power Switches

General Purpose

SO-8 SOT-223 TO-220AB



TO-220FP D-PAK (TO-252) D_2PAK (TO-263) TO-92

Applications:
- AC static switching in appliance & industrial control systems
- Washing machine with bi-directional induction motor drive.
- Induction motor drive for:
  -refrigerator / freezer compressor.
  -air conditioning compressor.

Benefits:
- Enables equipment to meet EN61000-4-5 standard.
- High off-state reliablity with planar technology.
- Need no external overvoltage protection.
- Reduces the power component count.

V_{RRM} / VDRM V	I_T RMS A	I_{TSM} 1 cycle 50Hz None repetitive A	I_{GT} mA	dV/dt V/<mu/>s	V_{GT} V	Package	Mfftrs List No.
600	0.2	7.3	5	300	0.9	SOIC	ACS102-6T1
600	0.2	7.3	5	300	0.9	TO-92	ACS102-6TA
600	0.8	7.3	10	500	1	TO-92	ACS108-6SA
600	0.8	7.3	10	500	1	SOT-223	ACS108-6SN-TR
700	1	8	10	500	1	SOT-223	ACS110-7SN
700	1.5	45	10	200	1.5	TO-220AB	ACST6-7ST
700	2	20	10	500	1	TO-220AB	ACS120-7ST
700	4	30	10	200	1	TO-220FP	ACST4-7SFP
700	4	30	10	200	1	DPAK	ACST4-7SB
800	2	8	10	500	1.1	DPAK	ACST2-8SB
800	8	80	30	750	1.5	TO-220FP	ACST8-8CFP

489073

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
ACS102-6T1	SMD **129-5337**	0.49	0.35	0.28	0.24	0.21
ACS102-6TA	**129-5338**	0.62	0.46	0.36	0.30	0.26
ACS108-6SA	**129-5339**	0.68	0.50	0.39	0.33	0.28
ACS108-6SN-TR	SMD **129-5340** RL	1.66	1.20	0.98	0.84	0.74
ACS120-7ST	**129-5341**	1.41	1.04	0.81	0.69	0.60
ACS110-7SN	SMD **129-5343** RL	1.26	0.93	0.73	0.61	0.53
ACST4-7SFP	**129-5344**	1.56	1.13	0.92	0.77	0.61
ACST4-7SB	SMD **129-5346**	1.74	1.40	1.06	– –	– –
ACST6-7ST	**129-5348**	2.13	1.70	1.30	– –	– –
ACST2-8SB	SMD **168-9208**	1.06	0.78	0.60	0.51	0.45
ACST8-8CFP	**129-5349**	2.88	2.30	1.76	– –	– –

Thyristors

NXP

- High reliability glass mesa and planar technologies
- Glass passivated, where applicable, for stable voltage blocking beyond 125°C
- Reduces $^{dI}/_{dt}$ rating to eliminate MT2 to MT1 false triggering
- High reliability
- Snubbers and $^{dI}/_{dt}$ limiting inductors can be eliminated

TO-92

$I_{T(rms)}$ A	V_{RRM}	$I_{GT(max)}$, µA	TO-92 (SOT-54)
0.8	400	200	BT149D
0.8	600	50	BT169G

211370

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
BT149D	**108-1323**	0.210	0.112	0.080	0.047	0.045
BT169G	**109-7281**	0.186	0.137	0.115	0.071	0.064

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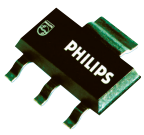
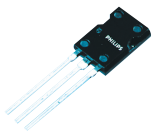
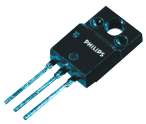
Thyristors and Triacs

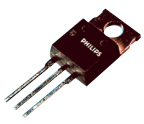

SOT-223

D²-PAK


SOT-82

TO-92


SOT-186A


TO-220AB

- High reliability glass mesa and planar technologies
- Glass passivated, where applicable, for stable voltage blocking beyond 125°C
- High reliability
- SMD package options for optimised PCB size and reduce assembly costs
- Logic level and sensitive gate triacs can be driven directly by low power ICs
- 3 Quadrant Triacs offer enhanced dV_D/dt, dV_{com}/dt and dI_{com}/dt capabilities
- Snubbers and dI/dt limiting inductors can be eliminated

FOUR-QUADRANT TRIACS

I_T (rms) A	VOLTAGE GRADES V	I_{GT} (max.) µA	PACKAGE			
			SOT-223	SOT-82	SOT-186A (isolated TO-220AB)	TO-220AB (SOT-78)
1	500/600/800	D*/E	BT134W			
4	600/800	D*/E/F				BT136
12	500/600/800	E/F				BT138
16	500/600/800	E/F				BT139
25	500/600/800	—				BTA140

THREE-QUADRANT TRIACS

I_T (rms) A	VOLTAGE GRADES V	I_{GT} (max.) µA	PACKAGE				
			SOT-223	D²-PAK (SOT-404)	SOT-82	SOT-186A (isolated TO220AB)	TO-220AB (SOT-78)
	600	B					BTA225

THYRISTORS

I_T (rms) A	VOLTAGE GRADES V	I_{GT} (max.) µA	PACKAGE				
			SOT-223	TO-92 (SOT-54)	SOT-82	TO-220AB (SOT-78)	TO-220F
0.8	400/600	200µA		BT169			
1	600	200µA	BT148/BT168				
12	500/650/800	15mA				BT151	BT151X
20	400/600/800	32mA				BT152	

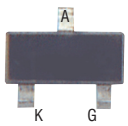
DIAC

* 'D' version Triacs are only available in 500 & 600V range
BT149 has reversed pinning to BT169

453036

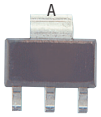
Order Multiple=1		1+	25+	100+	250+	1K+
BT134W-600D	SMD 108-1315 RL	0.930	0.560	0.370	0.188	0.180
BT136-600	108-1316	0.650	0.360	0.290	0.210	0.175
BT137-600	108-1318	0.530	0.380	0.340	0.290	0.260
BT138-600	108-1319	0.720	0.520	0.490	0.360	0.330
BT138-800	108-1320	0.950	0.560	0.550	0.300	0.290
BT139-600	108-1321	0.960	0.680	0.450	0.350	0.340
BT139-800	108-1322	0.930	0.650	0.440	0.320	0.310
BTA140-600	108-1332	1.270	0.870	0.600	0.450	– –
BTA140-800	108-1333	1.010	0.720	0.550	0.410	– –
BT148W-600R	SMD 151-0728	0.480	0.350	0.270	0.200	0.161
BT151-500C	151-0729	0.600	0.490	0.410	0.300	0.240
BT151-500R	108-1324	0.690	0.440	0.320	0.240	0.189
BT151-650R	108-1325	0.500	0.380	0.350	0.260	– –
BT151-800R	108-1326	0.730	0.400	0.370	0.290	0.260
BT151X-500R	151-0730	0.460	0.370	0.320	0.280	0.260
BT152-400R	108-1327	0.900	– –	– –	– –	– –
BT152-600R	108-1328	0.920	0.650	0.490	0.450	0.430
BT152-800R	108-1331	0.930	0.660	0.450	0.440	0.430
BT152-800R	108-1331	0.930	0.660	0.450	0.440	0.430
BT168GW	SMD 151-0732	0.175	0.141	0.122	0.088	0.074
BT169D	151-0734	0.085	0.067	0.059	0.053	0.051
BT169G	109-7281	0.186	0.137	0.115	0.071	0.064

SOT-23, SOT-223 Sensitive Gate



SOT-23

H=1.04, W=3.0, D=2.5



SOT-223

H=1.7, W=36.7, D=7.3

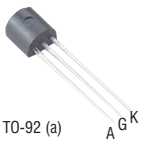
I_T rms	V_{DRM} max.	I_T av	I_{TSM} max.	I_{GT}	V_{GT}	Package	Mftrs. List No.
	V	A	A	µA	V		
0.25	200	0.17	7	200	0.8	SOT-23	P0102BL
0.8	600	0.5	7	200	0.8	SOT-223	P0102MN 5AA4
0.8	600	0.5	7	25	0.8	SOT-223	P0115DA 5AL3.
0.8	400	0.5	7	200	0.8	TO-92	P0102DA5AL3
1.4	600	0.64	22.5	200	0.8	SOT-223	X0202MN 5BA4

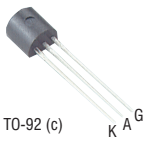
211212

Order Multiple=5			Price Each			
Mftrs. List No.	Order Code	5+	25+	100+	250+	1K+
P0102BL	SMD 980-2533 RL	0.340	0.193	0.156	0.148	0.145
P0102MN 5AA4	SMD 991-0670	0.460	0.350	0.280	0.230	0.210
P0115DA 5AL3.	SMD 991-0689	0.500	0.410	0.320	0.270	0.230
X0202MN 5BA4	SMD 980-4536 RL	0.540	0.330	0.270	0.260	0.250
P0102DA5AL3	129-5315	0.112	0.089	0.071	0.062	0.056

TO-92/TO-126/TO-202/SOT-82, Sensitive Gate

ON Semiconductor


TO-92 (a)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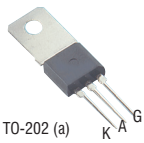
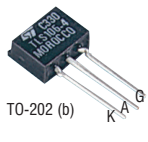

TO-202 (a)


TO-202 (b)

I_T rms A	V_{RRM}/V_{DRM} V	I_T av A	I_{TSM} A	I_{GT} µA	V_{GT} V	Package	Mftr.	Mftrs. List No.
0.8	30	0.32	5	350	1.2	TO-92 (a)	ON	2N5060G
0.8	60	0.32	5	350	1.2	TO-92 (a)	ON	2N5061G
0.8	60	0.32	7	500	1	TO-92 (a)	SEM	C203YY
0.8	100	0.32	5	350	1.2	TO-92 (a)	—	2N5062G
0.8	200	0.32	5	350	1.2	TO-92 (a)	—	2N5064G
0.8	400	0.5	7	50	0.8	TO-92 (a)	ST	P0115DA
1.25	600	0.8	22.5	200	0.8	TO-92 (a)	ST	X0202MA 1BA2
1.25	600	0.8	22.5	200	0.8	TO-92 (c)	ST	X0202MA 1BA2
2.5	400	1.7	17	500	1	TO-126	ON	C106D1G
2.5	600	1.7	17	500	1	TO-126	ON	C106M1G
4	600	2.5	30	200	0.8	TO-202-3 (b)	ST	X0402MF 1AA2
4	600	2.5	30	200	0.8	TO-202-3 (b)	ST	X0403MF 1AA2

229177

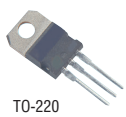
Order Multiple=5				Price Each			
Mftrs. List No.	Mftr.	Order Code	5+	25+	100+	250+	1K+
C106D1G	ON	955-6494	0.780	0.520	0.410	0.320	0.260
C106M1G	ON	955-6508	0.790	0.530	0.410	0.320	0.260
C203YY	SEM	120-8633	1.380	0.960	0.760	0.460	0.440
P0102DA 1AA3	ST	980-2541	0.145	0.114	0.090	0.079	0.072
P0115DA	ST	980-2550	0.163	0.130	0.102	0.090	0.086
Order Multiple=5			**5+**	**25+**	**100+**	**250+**	**1K+**
X0202MA 1BA2	ST	980-4528	0.300	0.240	0.186	0.164	0.149
X0402MF 1AA2	ST	980-4544	0.480	0.320	0.250	0.220	0.200
X0403MF 1AA2	ST	980-4552	0.530	0.350	0.280	0.250	0.230
2N5060G	ON	955-6516	0.420	0.280	0.186	0.143	0.114
2N5061G	ON	955-6524	0.420	0.280	0.186	0.143	0.114
2N5062G	ON	955-6532	0.330	0.220	0.169	0.132	0.106
2N5064G	ON	955-6540	0.310	0.177	0.166	0.125	0.099

TO-92, TO-126, TO-220

ON Semiconductor

TO-92

TO-126


TO-220

TO-220 Full-Pack

I_T rms A	V_{RRM}/V_{DRM} V	I_T (av) A	I_{TSM} A	I_{GT} mA	V_{GT} V	Package	Mftrs. List No.
Standard Gate Sensitivity							
16	800	10	160	30	1.5	TO-220	2N6405G
25	400	16	300	40	1.5	TO-220	2N6507G
25	600	16	300	40	1.5	TO-220	2N6508G
25	800	16	300	40	1.5	TO-220	2N6509G
Sensitive Gate, Reverse Blocking Triode							
0.8	400	-	10	200	0.8	TO-92	MCR100-6G
0.8	600	-	10	200	0.8	TO-92	MCR100-8G
4	600	2.55	25	200	1	TO-126	MCR106-8G

* High performance, reverse blocking thyristor

Thyristors - continued

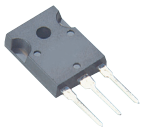
TO-92, TO-126, TO-220 - continued

222093

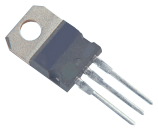
Order Multiple=5		Price Each			
Mftrs. List No.	Order Code	5+	100+	250+	500+
MCR100-6G	955-7270	0.200	0.149	0.122	0.093
MCR100-8G	955-7288	0.410	0.270	0.197	0.103
MCR106-8G	955-7318	0.630	0.480	0.380	0.300
Order Multiple=1		**1+**	**25+**	**100+**	**500+**
2N6405G	955-6176	1.580	1.250	0.990	0.840
2N6507G	955-7199	1.230	0.910	0.810	0.680
2N6508G	955-7180	1.580	1.250	0.990	0.840
2N6509G	955-7202	1.340	0.970	0.810	0.680

10A to 40A

VISHAY



TO-247



TO-220

I_T rms A	V_{RRM}/ V_{drm} V	I_T (av) A	I_{TSM} @ 25°C A	I_{GT} @ 25°C mA	V_{GT} V	Package	Mftrs. List No.
10	800	6.5	140	15	1	TO-220AB	12TTS08PBF
25	1200	16	250	20	1.25	TO-220	25TTS12PBF
30	1200	20	300	60	2.5	TO-247	30TPS12PBF
30	1600	20	300	60	2.5	TO-247	30TPS16PBF
55	1200	35	500	150	2.5	TO-247AC	40TPS12APBF

211346

Mftrs.		Price Each				
List No.	Order Code	1+	25+	100+	250+	1K+
12TTS08PBF	910-4291	2.49	1.37	1.03	0.90	0.86
25TTS12PBF	910-4550	5.07	2.79	2.09	1.83	1.75
30TPS12PBF	910-4658	3.38	– –	– –	– –	– –
30TPS16PBF	910-4666	3.04	1.68	1.25	1.10	1.05
40TPS12APBF	910-4755	3.98	– –	– –	– –	– –

TO-220, TO-218, TO-247

I_T rms A	V_{RRM}/ V_{DRM} V	I_T av A	I_{TSM} A	I_{GT} mA	V_{GT} V	Package	Mftr.	Mftrs. List No.
4	600	2.5	30	200	0.8	TO-220AB	ST	TS420-600T
8	600	5	70	200	0.8	TO-220AB	ST	TS820-600T
12	400	7.5	100	30	1.5	TO-220	ON	2N6397G
12	400	8	120	15	1.5	TO-220	ST	TYN412
12	600	8	120	15	1.5	TO-220	ST	TYN612
12	600	8	120	15	1.5	TO-220	ST	TXN612
12	800	8	120	15	1.5	TO-220	ST	TYN812RG
12	1000	8	120	15	1.5	TO-220	ST	TYN1012
25	600	16	300	40	1.5	TO-220	ST	TYN625
25	800	16	300	40	1.5	TO-220	ST	TYN825
30	1200	19	420	50	1.5	TO-218	ST	BTW68-1200RG
50	600	32	525	80	1.5	TOP-3	ST	BTW69-600RG.
50	800	32	525	80	1.5	TOP-3	ST	BTW69-800RG
50	1200	32	525	80	1.5	TOP-3	ST	BTW69-1200RG

211225

		Price Each				
Mftrs. List No.	Order Code	1+	25+	100+	250+	1K+
BTW68-1200RG	117-5639	9.17	7.31	5.73	5.05	4.94
BTW69-600RG.	980-1774	4.21	– –	– –	– –	– –
BTW69-800RG	105-7302	6.63	5.28	4.14	3.65	3.30
BTW69-1200RG	105-7300	7.87	6.45	4.96	4.83	4.71
TS820-600T	991-0760	0.86	0.67	0.60	0.54	0.49
TS420-600T	980-4269	0.62	0.40	0.33	0.31	0.29
TXN612RG	980-4285	1.61	1.29	1.01	0.95	0.93
TYN412RG	980-4307	0.56	0.45	0.35	0.31	0.29
TYN625RG	980-4331	1.66	1.33	1.04	0.92	0.90
TYN812RG	980-4340	1.62	1.29	1.01	0.89	0.81
TYN825RG	994-6420	1.95	1.55	1.22	1.07	0.97
TYN1012RG	980-4293	1.49	0.93	0.73	0.65	0.58
2N6397G	955-6753	0.73	0.56	0.42	0.33	0.27

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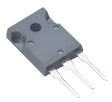
19A to 48A

IXYS



TO-247AD

TO-220

SOT-227B (mini-BLOC)

- Thyristor for line frequency
- Long-term stability of blocking currents and voltages
- Ideal for motor control, power conversion, SMPS's, light and temperature control

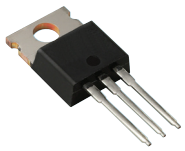
I_T rms A	V_{RRM}/ V_{drm} V	I_T (av) A	I_{TSM} @ 45°C A	I_{GT} @ 25°C mA	V_{GT} @ 25°C V	Mftrs. List No.
TO-220AB						
29	800	19	160	28	1.5	CS 19-08HO1
29	1200	19	160	28	1.5	CS 19-12HO1
SOT-227B (miniBLOC)						
60	1200	38	500	100	1.5	MCD 40-12IO6
TO-247AD						
30	1200	19	200	65	1	CS 20-12IO1
49	1200	31	300	65	1	CS 30-12IO1
75	1200	48	520	100	1.5	CS 45-12IO1
75	1600	48	520	100	1.5	CS 45-16IO1

422982

Mftrs.		Price Each				
List No.	Order Code	1+	25+	100+	+	+
CS 19-08HO1	108-0105	0.97	0.91	0.80	– –	– –
CS 19-12HO1	108-0107	1.10	1.04	0.92	– –	– –
CS 20-12IO1	108-0108	1.87	1.76	1.55	– –	– –
CS 30-12IO1	108-0110	2.27	2.12	1.88	– –	– –
CS 45-12IO1	108-0112	3.02	2.83	2.51	– –	– –
CS 45-16IO1	108-0113	3.68	3.45	3.06	– –	– –
MCD 40-12IO6	108-0114	14.56	13.62	13.00	– –	– –

Thyristors

Littelfuse



TO-220

Features
- RoHS Compliant
- Electrically-isolated package
- High voltage capability - 200V to 1000V
- High surge capability - up to 950 A
- Glass-passivated chip

Compak SCR
- Surface mount package - 1 A series
- New small profile three-leaded Compak package
- Can replace SOT-223

Case Style	Voltage Vdrm V	Voltage, Vgt max. V	Current, Igt max. mA	Current, Itsm @ 50Hz A	Current It rms max. A	Mftrs. List No.	Order Code
TO-220IS	200	1.5	35	300	25	S2025L..	160-5722
TO-220	200	1.5	35	300	25	S2025R..	160-5723
TO-218X	200	2	50	800	65	S2065J	160-5724
TO-218IS	200	2	50	800	65	S2065K	160-5725
TO-220IS	400	1.5	35	300	25	S4025L	160-5726
TO-220	400	1.5	35	300	25	S4025R	160-5727
TO-218IS	400	2	50	800	65	S4065K	160-5728
TO-220	600	1.5	35	300	25	S6025R..	160-5729
TO-218X	600	2	50	800	65	S6065J	160-5730
TO-220	800	1.5	35	300	25	S8025R	160-5731
TO-218X	800	2	50	800	65	S8065J	160-5733

511730

Mftrs.		Price Each				
List No.	Order Code	1+	25+	100+	250+	500+
S2025L..	160-5722	1.40	1.36	1.34	1.30	1.26
S2025R..	160-5723	1.26	1.22	1.19	1.16	1.13
S2065J	160-5724	5.01	4.86	4.74	4.60	4.50
S2065K	160-5725	4.90	4.77	4.64	4.52	4.40
S4025L	160-5726	1.50	1.47	1.43	1.39	1.36
S4025R	160-5727	1.36	1.34	1.30	1.26	1.22
S4065K	160-5728	5.27	5.10	4.97	4.85	4.73
S6025R..	160-5729	1.45	1.40	1.38	1.34	1.31
S6065J	160-5730	5.71	5.56	5.41	5.27	5.14
S8025R	160-5731	1.53	1.49	1.45	1.40	1.38
S8065J	160-5733	6.08	5.91	5.75	5.59	5.45

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16A to 360A, Metal Stud

TO-64, TO-48, TO-65

B1

TO-93, TO-94

Package	Thread Size
B1	M5 2A
TO-64	1/4"28UNF 2A
TO-64 / TO-65	1/4"28UNF 2A
TO-93	3/4"16UNF 2A
TO-94	1/2"20UNF 2A

I_T (rms) A	I_T (av) A	I_{TSM} A	I_{GT} mA	V_{GT} V	Package	Mftrs.	Mftrs. List No./ Series...
16	10	150	30	1.5	TO-64	MAG	BTY79...R
30	10	250	100	3	B1	SKN	SKT10...
50	24	450	100	3	B2	SKN	SKT24...
80	50	1200	100	2.5	TO-65	VISH	50RIA...
125	80	1900	120	2.5	TO-94	VISH	81RIA...
175	110	1750	100	2.5	TO-94	VISH	110/111RKI...
360	230	4890	150	3	TO-93	VISH	ST230S...

211331

V_{RRM} V	Mftrs. List No.	Order Code	Price Each 1+	25+	100+
400	BTY79-400R	**118-2785**	8.59	7.77	6.88
600	BTY79-600R	**118-2787**	11.19	10.07	8.01
800	BTY79-800R	**118-2788**	9.55	8.97	7.98
1000	BTY79-1000R	**118-2789**	14.71	13.94	12.80
1200	SKT10/12E	**118-2756**	18.29	14.63	12.20
1200	SKT24/12E	**118-2757**	20.27	16.65	14.13
			1+	**12+**	**48+**
800	ST230S08P0VPBF	**910-4534**	56.69	40.74	31.58
1200	ST230S12P1VPBF	**910-4518**	82.57	59.33	46.00
			1+	**10+**	**50+**
600	25RIA60PBF	**910-4593**	6.58	4.73	3.66
800	25RIA80PBF	**910-4607**	6.58	4.73	3.66
			1+	**10+**	**25+** **50+**
200	50RIA20PBF	**910-4712**	17.34	9.04	6.28 5.36
400	50RIA40PBF	**910-4720**	20.90	10.90	7.58 6.46
600	50RIA60PBF	**910-4739**	17.34	9.04	6.28 5.36
800	50RIA80PBF	**910-4747**	14.73	7.79	5.99 5.15
1000	50RIA100PBF	**910-4690**	12.04	7.84	6.03 5.15
1200	50RIA120PBF	**910-4704**	17.65	9.20	6.40 5.46
800	81RIA80PBF	**910-4780**	46.94	24.47	17.01 14.51
1200	81RIA120PBF	**910-4771**	68.94	40.96	28.48 24.27
1200	110RKI120PBF	**910-4313**	45.98	29.22	20.32 17.33
1200	111RKI120PBF	**910-4305**	35.57	34.16	24.06 20.51

424903

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	+	+
SKT24/16 E	**109-5597**	20.27	14.47	12.57	– –	– –

Thyristor, 250A 1600V B7

SEMIKRON innovation+service

Features:
- Hermetic metal case with glass insulator
- Threaded stud ISO M24 x 1.5
- High i^2t and I_{TSM} values for easy fusing
- International standard case

Typical Applications:
- DC motor control (e.g. for machine tools)
- Controlled rectifiers (e.g. for battery charging)
- AC controllers (e.g. for temperature control)
- Recommended snubber network

VDRM (V)	I_{RMS} (A)	I_{TSM} (A)	V_{GT} min (V)	I_{GT} min (mA)	Case Style	Mftrs. List No.
1600	450	7000	3	200	TO-209AD	SKT 250/16 E

504771

Mftrs. List No.	Order Code	Price Each 1+	3+	8+
SKT 250/16 E	**145-6966**	117.11	103.66	97.18

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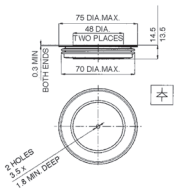
125A to 2913A

VISHAY

TO-93 (¾" 16-UNF 2A) **TO-118** (¾" 16-UNF 2A) **TO-94** (½" 20-UNF 2A)



B-PUK: H=27.0, Dia=58.5 (excl. tab)
E-PUK: H=15.1, Dia=42 (excl. tab)
K-PUK: H=27.5, Dia=74.5 (excl. tab)

I_T rms A	I_T (av) A	I_{TSM} @ 50Hz A	I_{GT} @ T_j=25°C A	V_{GT} @ T_j=25°C V	Package	Mftrs. List No./ Series...
125	80	1990	120	2.5	TO-94	80RIA...
285	180	3800	150	2.5	TO-93	181RKI...
Inverter Grade – Fast Turn-Off						
135	85	2450	200	3	TO-94	ST083S..PFM1

211345

V_{rrm} V	Mftrs. List No.	Order Code	Price Each 1+	4+	12+
800	180RKI80PBF	**910-4640**	21.85	20.44	17.39
1000	181RKI100PBF	**910-4623**	41.24	29.63	22.97
			1+	**10+**	**25+**
800	80RIA80PBF	**910-4348**	22.78	18.78	18.38
1200	80RIA120PBF	**910-4330**	21.35	19.14	14.83
			1+	**5+**	**25+**
800	ST083S08PFM1PBF	**910-4356**	36.02	30.94	29.25

49A to 156A Single Thyristor Module

IXYS

- Isolation voltage 2500 V
- Solid state switches
- Applications include; motor control, soft starter circuits, light and temperature control

SOT-227B - miniBLOC

I_T @ 110 °C rms A	V_{RRM}/ V_{drm} V	I_T (av) A	V_{GT} @ 25 °C V	I_{GT} @ 25 °C mA	I_{TSM} @ 45°C A	Mftrs. List No.
49	1200	31	1.5	55	370	MCO 25-12IO1
85	1600	54	1.4	80	740	MCO 50-16IO1
156	1200	99	1.5	100	1400	MCO 100-12IO1

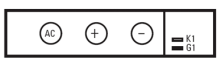
422994

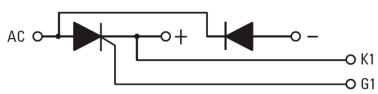
Mftrs. List No.	Order Code	Price Each 1+	25+	100+	+	+
MCO 25-12IO1	**108-0126**	10.87	9.13	7.99	– –	– –
MCO 50-16IO1	**108-0129**	6.89	6.47	5.72	– –	– –
MCO 100-12IO1	**108-0130**	15.91	12.06	10.50	– –	– –

F18 SCR Module

crydom

HD





H=30mm , W=92mm, D=20mm
Weight =135g

- Load current up to 105A
- Min. gate current 150mA
- Min. gate voltage 3V
- Isolation voltage 2500Vrms
- Industry standard package and circuits
- Power control building blocks
- Voltages to 600VAC

New

534823

Mftrs. List No.	Load Current A	Operting Voltage VAC	Order Code	Price Each 1+	5+	50+
F1827HD1000	25	1000	**170-4645**	18.78	16.34	15.86
F1827HD1200	25	1200	**170-4646**	20.87	18.78	15.88
F1827HD1400	25	1400	**170-4647**	21.37	18.57	18.05
F1827HD1600	25	1600	**170-4648**	22.16	19.28	18.75
F1842HD1000	40	1000	**170-4649**	19.55	13.17	9.64
F1842HD1200	40	1200	**170-4650**	21.74	18.90	18.37
F1842HD1400	40	1400	**170-4651**	22.27	19.37	18.82
F1842HD1600	40	1600	**170-4652**	23.03	20.03	19.47
F1857HD1000	55	1000	**170-4653**	20.14	17.52	17.02
F1857HD1200	55	1200	**170-4654**	22.37	19.45	18.90
F1857HD1400	55	1400	**170-4656**	22.91	19.91	19.35
F1857HD1600	55	1600	**170-4657**	23.68	21.24	18.66
F1892HD1000	90	1000	**170-4658**	22.11	19.24	18.69
F1892HD1200	90	1200	**170-4659**	24.59	21.38	20.77
F1892HD1400	90	1400	**170-4660**	25.18	21.90	21.28

Thyristors - continued

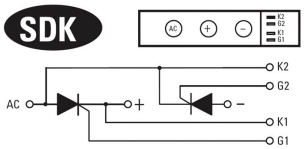
F18 SCR Module - continued

Mftrs. List No.	Load Current A	Operting Voltage VAC	Order Code	Price Each 1+	5+	50+
F1892HD1600	90	1600	**170-4661**	26.02	17.93	14.66
F18107HD1000	105	1000	**170-4662**	23.00	16.11	13.43
F18107HD1200	105	1200	**170-4663**	25.56	23.38	20.45
F18107HD1400	105	1400	**170-4664**	26.19	22.79	22.14
F18107HD1600	105	1600	**170-4665**	27.10	25.10	21.17

F18 SCR/Diode Module

crydom

SDK



H=30mm , W=92mm, D=20mm
Weight =135g

- Load current up to 105A
- Min. gate current 150mA
- Min. gate voltage 3V
- Isolation voltage 2500Vrms
- Industry standard package and circuits
- Power control building blocks
- Voltages to 600VAC

New

534824

Mftrs. List No.	Load Current A	Operating Voltage VAC	Order Code	Price Each 1+	5+	50+
F1827SDK1000	25	1000	**170-4666**	20.51	17.83	16.41
F1827SDK1200	25	1200	**170-4668**	22.74	16.49	16.01
F1827SDK1400	25	1400	**170-4669**	23.34	20.36	18.36
F1827SDK1600	25	1600	**170-4670**	24.11	18.08	14.47
F1842SDK1000	40	1000	**170-4671**	21.32	15.70	12.80
F1842SDK1200	40	1200	**170-4672**	23.70	16.85	13.79
F1842SDK1400	40	1400	**170-4673**	24.28	21.11	20.52
F1842SDK1600	40	1600	**170-4674**	31.41	21.64	17.70
F1857SDK1000	55	1000	**170-4675**	21.91	19.04	18.52
F1857SDK1200	55	1200	**170-4676**	25.84	18.57	14.86
F1857SDK1400	55	1400	**170-4677**	25.00	21.73	21.13
F1857SDK1600	55	1600	**170-4678**	25.81	19.55	15.74
F1892SDK1000	90	1000	**170-4681**	24.09	15.44	13.38
F1892SDK1200	90	1200	**170-4682**	33.48	31.15	26.25
F1892SDK1400	90	1400	**170-4683**	27.42	23.84	23.18
F1892SDK1600	90	1600	**170-4684**	28.36	21.51	16.86
F18107SDK1000	105	1000	**170-4685**	25.89	22.52	21.89
F18107SDK1200	105	1200	**170-4686**	28.77	21.58	16.85
F18107SDK1400	105	1400	**170-4687**	29.50	25.64	24.92
F18107SDK1600	105	1600	**170-4688**	30.50	22.19	17.43

SKKH Tyristor/Diode Module 55A-107A

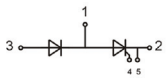
SEMIKRON innovation+service

Semipack™ 1 6th Generation

New

Features
- Thermal resistance reduced by 33% compared to 5th generation
- 10% more output current, due to better thermal coupling
- Impoved reliability
- UL recognized, file no. E63532

H=30mm , W=93mm, D=20mm
Weight =75g



Typical Applications
- DC motor control (e. g. for machine tools) AC motor soft starters
- Temperature control (e. g. for ovens, chemical processes)
- Professional light dimming (studios,theaters)
- Half controlled rectifier

538637

Mftrs. List No.	It av A	Vdrm V	VT (TO) @ Tj 130°C V	ITSM @ Tj 25°C 10ms A	Order Code	Price Each 1+	5+	50+
SKKH 57/08 E G6	61	800	0.85	1500	**171-4590**	30.68	28.32	24.14
SKKH 57/12 E G6	61	1200	0.85	1500	**171-4591**	27.71	26.27	23.52
SKKH 57/16 E G6	61	1600	0.85	1500	**171-4592**	30.41	28.83	25.81
SKKH 72/16 E G6	88	1600	0.9	1600	**171-4593**	35.04	32.34	27.57
SKKH 92/08 E G6	110	800	0.85	2000	**171-4595**	35.06	32.37	27.59
SKKH 92/16 E G6	110	1600	0.85	2000	**171-4596**	42.05	38.81	33.08
SKKH 106/12 E G6	122	1200	0.8	2250	**171-4588**	43.73	40.36	34.40
SKKH 106/16 E G6	122	1600	0.8	2250	**171-4589**	55.94	51.64	44.01

95A Thyristor/Diode Power Module

SEMIKRON innovation+service

SEMIPACK 1 SKNH Series

- Thyristor power module
- Ceramic isolated baseplate to 2.5 kV
- **UL** recognised

The SKNH56/14E is a special module for DC braking of AC induction motors, incoorporating a reverse biased diode in series with a thyristor.

SEMIPACK 1 H=20, W=92, D=30

I_T (RMS) @ T_a = 35°C A	V_{RRM} A	I_{TSM} @ 25°C A	I_{GT} mA	V_{GT} V	Mftrs. list No.
SKNH Series - Back to Back Series Diode + Thyristor					
95	1400	1500	150	3	SKNH56/14E

431147

Mftrs. List No.	Package/Circuit	Order Code	Price Each 1+	5+	50+
SKNH56/14E	A7	**109-5606**	58.64	41.82	36.37

Thyristor/Diode Modules, 18A - 160A

SEMIKRON innovation+service

Semipack 2, (A21 and A22 configurations)

- Isolated base plate to 2.5kV
- Standard 80mm fixing centres

SEMIPACK 2 - H=28.5, W=94, D=34

Applications include general power control, motor speed control, battery charging, welding, lamp dimming etc. Auxiliary gate and cathode connections are made by 2.8 x 0.8 faston tabs (supplied), or may be soldered. Screw terminals are M6.

I_T (RMS) @ T_a = 35°C A	V_{RRM} A	I_{TSM} @ 25°C A	I_{GT} mA	V_{GT} V	Mftrs. list No.
SKKT Series - Dual Series Thyristors					
220	1200	4700	150	2	SKKT132/12E
220	1600	4700	150	2	SKKT132/16E
250	1200	5400	150	2	SKKT162/12E
SKKH Series - Series Thyristor Diode					
220	1600	4700	150	2	SKKH132/16E

431156

Mftrs. List No.	Package Circuit	Order Code	Price Each 1+	5+	50+
SKKT Series - Dual Series Thyristor					
SKKT132/12E	A21	**956-4381**	82.81	72.07	61.53
SKKT132/16E	A21	**956-4560**	93.99	86.76	82.42
SKKT162/12E	A21	**956-4390**	100.15	92.46	82.60
SKKH Series -Thyristor and Series Diode					
SKKH132/16E	A22	**109-5603**	116.09	82.79	72.02

Thyristor Modules, 920A

SEMIKRON innovation+service

Semipack 5, (A60a configuration)

- Isolated base plate to 2.5kV
- Standard 80mm fixing centres

SEMIPACK-5

This high quality dual series thyristor module, offers cutting edge power control for a wide range of industrial applications.Applications include general power control, motor speed control, battery charging, welding, lamp dimming etc. Auxiliary gate and cathode connections are made by 2.8 x 0.8 faston tabs (supplied), or may be soldered.

I_T (RMS) @ T_a = 35°C A	V_{RRM} A	I_{TSM} @ 25°C A	Mftrs. list No.
SKKT Series - Dual Series Thyristors			
850	1600	19000	SKKT570/16E

431236

Mftrs. List No.	V_{RRM}/ V_{DRM} V	Order Code	Price Each 1+	3+	8+
SKKT Series - Dual Thyristor					
SKKT570/16E	1600	**145-5753**	316.23	281.97	262.13

P3 Heatsink and Fan Assemblies

SEMIKRON innovation+service

Number of Devices	b / dϕ mm	R_{thha} Natural cooling, K/W	R_{thha} with Fan SKF 3-320-01 (K/W)	Type
3	20	0,43 (150W)	0,147	P3/180B
3	34	—	0,0847	P3/300B

423070

Mftrs. List No.	Order Code	Price Each 1+	10+	25+
P3 Heatsinks				
P3/180B	**109-5607**	36.86	33.18	27.71
P3/300B	**109-5608**	71.27	64.14	54.24

25A to 41A

IXYS

- Thyristor for line frequency
- Isolation Voltage 2500 V
- Ideal for switching and control of single and 3 phase AC

SOT-227B - mini-BLOC

I_T (av) A	I_T @ 110 °C rms A	V_{RRM}/ V_{drm} V	I_{TSM} @ 45°C A	I_{GT} mA	V_{GT} V	Mftrs. List No.
25	54	1200	400	100	1.5	MMO 62-12IO6
25	54	1600	400	100	1.5	MMO 62-16IO6
34	74	1200	600	100	1.5	MMO 74-12IO6
41	90	1600	800	100	1.5	MMO 90-16IO6

422979

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	+	+
MMO 62-12IO6	**108-0119**	13.49	12.65	11.19	– –	– –
MMO 62-16IO6	**108-0121**	16.22	11.54	10.25	– –	– –
MMO 74-12IO6	**108-0122**	15.29	10.82	10.19	– –	– –
MMO 90-16IO6	**108-0125**	16.00	15.00	13.28	– –	– –

135A, 140A and 160A INT-A-Pak™ Power Modules

VISHAY

IRKT SERIES

- High voltage
- Electrically isolated by DBC ceramic (Al_2O_3)
- 3500V_{RMS} isolating voltage
- Industrial standard package
- High surge capability
- Glass passivated chips
- Simple mounting
- **UL** Recognised

H=37 (incl terminals), W=94, D=36
Mounting Holes=6.5 dia, Fixing centres=80

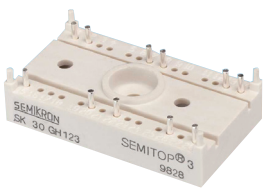
234585

$I_{O\ (AV)}$, A T_C= 85°C	I_{TSM} A	V_{RRM}/ V_{DRM} V	Mftrs. List No.	Order Code	Price Each 1+	10+	25+
Thyristor Modules							
135	3200	1600	IRKT136/16PBF	**910-4100**	60.16	– –	– –
140	4500	1600	IRKT142/16PBF	**910-4119**	66.66	47.90	37.14
160	4870	1200	IRKT162/12PBF	**910-4127**	56.31	40.47	31.37
160	4870	1600	IRKT162/16PBF	**910-4135**	70.29	– –	– –

33A to 68A, SEMITOP 1 and SEMITOP 3

SEMIKRON innovation+service

SEMITOP 1 H=24, W=31, D=15.43



SEMITOP 3 - H=55, W=31, D=15.43

Hole diameter for SEMITOP 1 and 3 = 4.4 mm

- Compact Designs
- One screw mounting
- Heat transfer and isolation through direct copper bonded aluminium oxide ceramic
- Glass passivated thyristor chips
- Up to 1600V reverse voltage
- UL recognized, file no. E 63 532

Configuration	I_T @ temp A	V_{GT} V	I_{GT} A	V_{RRM} @ Temp A	°C	I_{TSM} @ 25°C, 10 ms A	Package	Mftrs. list No.
Thyristor	68	2	100	1600	80	450	SEMITOP 3	SK70DT16

423216

Mftrs. List No.	Order Code	Price Each 1+	4+	10+
SK70DT16	**109-5564**	21.41	19.76	17.72

SCR/Diode module

SEMIKRON innovation+service

SEMIX171KH16S

Features:
- Terminal height 17 mm
- Chips soldered directly to isolated substrate

Typical Applications:
- Input Bridge Rectifier for
- AC/DC motor control
- Power Supply

SKKH250/16 E

Features:
- Heat transfer through aluminium nitride ceramic isolated metal baseplate
- Precious metal pressure contacts for high reliability
- Thyristor with amplifying gate

Typical Applications:
- DC motor control (e.g. for machine tools)
- AC motor starters
- Temperature control (e.g. for ovens, chemical processes)
- Professional light dimming (studios, theaters)

V_{RRM} (V)	I_{TRMS} (A)	I_{TAV} (A)	V_{GT} (V)	I_{GT} (mA)	I_{TSM} (A)	Case Style	Mftrs. List No.
1600	250	170	2	150	5400	SEMiX 1s	SEMIX171KH16S
1600	420	250	3	200	9000	SEMIPACK 3	SKKH250/16 E

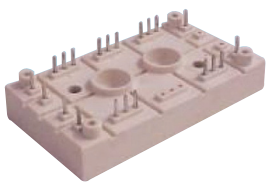
504781

Mftrs. List No.	Order Code	Price Each 1+	3+	8+
SEMIX171KH16S	**146-7123**	79.80	62.07	55.86
SKKH250/16 E	**146-7136**	174.98	136.08	122.48

Thyristor Module

Three Phase Antiparallel

SEMIKRON innovation+service



I_{RMS} A	I_{TSM} A	I_{GT} mA	V_{GT} V	Mftrs. List No.
105	1250	150	3	SKUT115/16T

Features:
- Compact design
- Two screws mounting
- Heat transfer and isolation through direct copper board
- Low resistance in Steady-State and high reliability
- High surge currents
- Glass passived thyristors chips

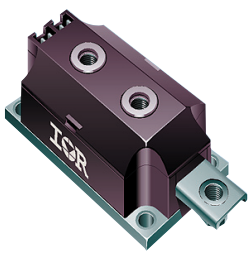
Typical Applications:
- Soft starter
- Light control
- Temperature control

504709

Mftrs. List No.	Order Code	Price Each 1+	5+	25+
SKUT115/16T	**146-7148**	77.20	60.05	54.05

230A and 250A, MAGN-A-Pak™ Power Modules

International IOR Rectifier



- High voltage
- Electrically isolated base plate
- 3000 V RMS isolating voltage
- Industrial standard package
- Simplified mechanical designs, rapid assembly
- High surge capability
- Large creepage distances
- **UL** Recognised

IRKT SERIES

H=37 (incl terminals), W=94, D=36
Mounting Holes=6.5 dia, Fixing centres=80

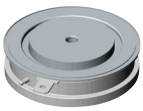
234588

$I_{O\ (AV)}$, A T_C=85°C	I_{TSM} A	V_{RRM}/ V_{DRM} V	Mftrs. List No.	Order Code	Price Each 1+	10+
Thyristor Modules						
250	8500	1200	IRKH250/12PBF	**910-4801**	217.54	199.77
250	8500	1600	IRKT250/16PBF	**910-4143**	218.80	– –

Thyristors - continued

Capsule, Line Frequency

WESTCODE



- Optimized to give low conduction losses
- For line frequencies up to 400 Hz

Applications include:

- Industrial DC drives
- Induction melting
- Wind power convertors
- Electrochemical power supplies

I_T rms A	V_{RRM}/V_{drm} V	I_T (av) @ 55 °C A	I_{TSM} (T_{on} = 10ms) A	I_{GT} @ 25°C mA	V_{GT} @ 25°C V	Mftrs. List No.
1465	1200	734	8400	150	3	N0734YS120
1465	1600	734	8400	150	3	N0734YS160

452804

Mftrs. List No.	Order Code	Price Each 1+	5+	10+
N0734YS120	130-0139	45.84	41.68	38.21
N0734YS160	130-0140	51.99	47.26	43.33
N1265LS160	130-0142	87.29	79.36	72.75

SCR Capsules

SEMIKRON innovation+service

- Hermetic metal/ceramic cases
- International standard cases
- Capsule package for double sided cooling
- Amplifying gates (SKT551/12E)
- Shallow design for single sided cooling
- Supplied with leads

SKT340 series H=14, Dia=41, Lead length=230 SKT551 series H=14, Dia=41, Lead length=230
SKT600 series H=26, Dia=57.3, Lead length=250

V_{RRM} V	$I_{T\ (av)}$ @ 85°C A	I_{TSM} @ 25°C A	V_T V	$R_{th\ j\text{-}c}$ °C/W	F kN	Mftrs. list No.
1200	340	5700	1.65	0.07	10-13	SKT340/12E
1200	600	11500	2	0.038	10-13	SKT600/12E
1600	340	5700	2	0.07	10-13	SKT340/16

211192

Mftrs. List No.	Order Code	Price Each 1+	5+	25+
SKT340/12E	118-2758	53.46	49.35	42.99
SKT340/16	118-2759	79.93	75.95	71.46
SKT600/12E	928-7060	102.75	97.03	84.45

Thyristor Overvoltage Protectors

Thyristor, TVS

DO-214AA & TO-92

Littelfuse

DO-214AA

TO-92

The DO-214AA and TO-92 SIDACtor solid state protection devices protect telecommunications equipment such as modems, line cards, and CPE (telephones, answering machines, and fax machines).

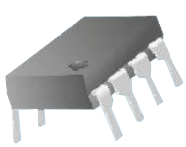
Voltage Vdrm V	Current Peak Pulse @ 10/1000 µS A	Current Peak Pulse @ 8/20 µS A	Current Itsm A	Mftrs. List No.	Order Code
Bidirectional DO-214AA					
6	45	150	20	P0080SALRP	160-5682
6	45	150	20	P0080SALRP	160-5682
6	100	400	30	P0080SCLRP	160-5683
6	100	400	30	P0080SCMCLRP	160-5684
25	45	150	20	P0300SALRP	160-5686
25	45	150	20	P0300SAMCLRP	160-5687
25	80	250	30	P0300SBLRP	160-5688
25	100	400	50	P0300SCLRP	160-5691
25	100	400	30	P0300SCMCLRP	160-5692
58	45	150	20	P0640SALRP	160-5693
58	80	250	30	P0640SBLRP	160-5694
58	100	400	50	P0640SCLRP	160-5695
58	45	150	20	P0642SALRP	160-5696
65	100	400	50	P0720SCLRP	160-5697
75	80	250	80	P0900SBLRP	160-5698
90	100	400	50	P1100SCLRP	160-5699
120	45	150	20	P1300SALRP	160-5701
140	100	400	20	P1500SCLRP	160-5702
170	100	400	50	P1800SCLRP	160-5703
170	100	400	30	P1800SCMCLRP	160-5704
220	80	250	30	P2600SBLRP	160-5706
220	100	400	50	P2600SCLRP	160-5708
275	80	250	30	P3100SBLRP	160-5713
275	100	400	50	P3100SCLRP	160-5714
275	100	400	50	P3100SCRP	160-5715
320	100	400	50	P3500SCLRP	160-5716
320	100	400	50	P3500SCRP	160-5717
Bidirectional TO-92					
25	45	150	20	P0300EAL	160-5685
220	45	150	20	P2600EAL	160-5705
275	45	150	20	P3100EAL	160-5709
Bidirectional TO-92					
275	80	250	30	P3100EBL	160-5710
275	80	250	30	P3100EBLRP2	160-5711
275	45	150	20	P3100SALRP	160-5712
Unidirectional DO-214AA					
95	100	400	50	P1101SCLRP	160-5700

511707

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
P0080SALRP	SMD 160-5682	0.74	0.73	0.70	0.69	0.68
P0080SCLRP	SMD 160-5683	0.89	0.86	0.85	0.82	0.80
P0080SCMCLRP	SMD 160-5684	0.99	0.96	0.93	0.89	0.88
P0300EAL	160-5685	0.65	0.63	0.62	0.61	0.59
P0300SALRP	SMD 160-5686	0.74	0.72	0.70	0.69	0.66
P0300SAMCLRP	SMD 160-5687	0.81	0.80	0.77	0.76	0.74
P0300SBLRP	SMD 160-5688	0.80	0.78	0.76	0.74	0.73
P0300SCLRP	SMD 160-5691	0.89	0.86	0.85	0.82	0.80
P0300SCMCLRP	SMD 160-5692	0.99	0.96	0.93	0.89	0.88
P0640SALRP	SMD 160-5693	0.74	0.72	0.70	0.69	0.66
P0640SBLRP	SMD 160-5694	0.80	0.78	0.76	0.74	0.73
P0640SCLRP	SMD 160-5695	0.89	0.86	0.85	0.82	0.80
P0642SALRP	SMD 160-5696	0.77	0.76	0.73	0.72	0.70
P0720SCLRP	SMD 160-5697	0.89	0.86	0.85	0.82	0.80
P0900SBLRP	SMD 160-5698	0.80	0.78	0.76	0.74	0.73
P1100SCLRP	SMD 160-5699	0.89	0.86	0.85	0.82	0.80
P1101SCLRP	SMD 160-5700	0.97	0.96	0.93	0.89	0.86
P1300SALRP	SMD 160-5701	0.74	0.72	0.70	0.69	0.66
P1500SCLRP	SMD 160-5702	0.89	0.86	0.85	0.82	0.80
P1800SCLRP	SMD 160-5703	0.89	0.86	0.85	0.82	0.80
P1800SCMCLRP	SMD 160-5704	0.99	0.96	0.93	0.89	0.88
P2600EAL	160-5705	0.65	0.63	0.62	0.61	0.59
P2600SBLRP	SMD 160-5706	0.80	0.78	0.76	0.74	0.73
P2600SCLRP	SMD 160-5708	0.89	0.86	0.85	0.82	0.80
P3100EAL	160-5709	0.65	0.63	0.62	0.61	0.59
P3100EBL	160-5710	0.73	0.70	0.69	0.68	0.65
P3100EBLRP2	160-5711	0.77	0.76	0.73	0.72	0.70
P3100SALRP	160-5712	0.74	0.72	0.70	0.69	0.66
P3100SBLRP	SMD 160-5713	0.80	0.78	0.76	0.74	0.73
P3100SCLRP	SMD 160-5714	0.88	0.86	0.84	0.81	0.80
P3100SCRP	SMD 160-5715	0.81	0.80	0.77	0.76	0.73
P3500SCLRP	SMD 160-5716	0.89	0.86	0.85	0.82	0.80
P3500SCRP	SMD 160-5717	0.81	0.80	0.77	0.76	0.73

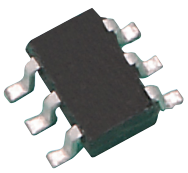
Thyristor Array, TVS

Littelfuse



PDIP

SOIC



SOT-23

The SP720 is an array of SCR/Diode bipolar structures for ESD and overvoltage protection to sensitive input circuits.
The SP721, SP723 is an array of SCR/Diode bipolar structures for ESD and overvoltage protection to sensitive input circuits.
The SP724 is a quad array of transient voltage clamping circuits designed to suppress ESD and other transiet overvoltage events.
The SP725 is an array of SCR/Diode bipolar structures for ESD and overvoltage protection of sensitive input circuits.

Case Style	Voltage Vdrm V	Current Peak Pulse @ 8/20 µS A	Mftrs. List No.	Order Code
PDIP	35	3	SP720APP	160-5742
SOIC	35	3	SP721ABG..	160-5743
PDIP	35	3	SP721APP	160-5745
SOIC	35	7	SP723ABG..	160-5746
PDIP	35	7	SP723APP	160-5747
SOIC	35	14	SP725ABG	160-5749

511777

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
SP720APP	160-5742	2.16	2.11	2.05	1.99	1.93
SP721ABG..	160-5743	1.50	1.47	1.43	1.39	1.36
SP721APP	160-5745	1.50	1.47	1.43	1.39	1.36
SP723ABG..	SMD 160-5746	2.58	2.51	2.44	2.36	2.31
SP723APP	160-5747	2.04	1.97	1.92	1.88	1.82
SP725ABG	SMD 160-5749	1.99	1.93	1.89	1.84	1.80

Over half a million products available online QGO

Triacs

High Temperature & Gerneral Purpose Triacs

TO-220AB

DPAK

SOT-223

TO-92

New

The Z01/Z006 series are suitable for general purpose AC switching applications. They can be found in applications such as home appliances electrovalve, pump, door lock, small lamp-control and fan speed controllers.

T Series

- Current range 8A to 20A
- Junction temperature turn off commutation 150°C maximum
- Low thermal resistance with clip bonding
- Very high three quadrant commutation capability

The T series Triacs are specially designed to operate in high power density or universal motor applications such as vacuum cleaner and washing machine drum motor. The triacs provide a very high switching capability up to junction temperatures of 150° C. The heatsink can be reduced, compared to traditional triacs, according to the high performance at given junction temperatures.

V_{DRM} V	I_T rms A	I_{TSM}(50Hz) A	I_{GT} mA	V_{GT} V	Package	Mftrs. List No.
600	1	8	3	1.3	SOT-223	Z0103MN 5AA4
600	1	8	7	1.3	TO-92	Z0107MA 1AA2.
600	1	8	7	1.3	SOT-223	Z0107MN 5AA4
600	8	80	35	1	D2PAK	T835H-6G
600	8	80	35	1	TO-220AB	T835H-6I
600	8	80	35	1	TO-220AB	T835H-6T
600	8	80	50	1	D2PAK	T850H-6G
600	8	80	50	1	TO-220AB	T850H-6I
600	8	80	50	1	TO-220AB	T850H-6T
600	10	100	35	1	D2PAK	T1035H-6G
600	10	100	35	1	TO-220AB	T1035H-6I
600	10	100	35	1	TO-220AB	T1035H-6T
600	10	100	50	1	D2PAK	T1050H-6G
600	10	100	50	1	TO-220AB	T1050H-6I
600	10	100	50	1	TO-220AB	T1050H-6T
600	12	120	35	1	D2PAK	T1235H-6G
600	12	120	35	1	TO-220AB	T1235H-6T
600	12	120	50	1	D2PAK	T1250H-6G
600	12	120	50	1	TO-220AB	T1250H-6I
600	12	120	50	1	TO-220AB	T1250H-6T
600	16	160	35	1	D2PAK	T1635H-6G
600	16	160	35	1	TO-220AB	T1635H-6I
600	16	160	35	1	TO-220AB	T1635H-6T
600	16	160	50	1	D2PAK	T1650H-6G
600	16	160	50	1	TO-220AB	T1650H-6I
600	16	160	50	1	TO-220AB	T1650H-6T
600	20	200	35	1	D2PAK	T2035H-6G
600	20	200	35	1	TO-220AB	T2035H-6I
600	20	200	35	1	TO-220AB	T2035H-6T
600	20	200	50	1	TO-220AB	T2050H-6T

530320

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	500+
Z0103MN 5AA4	SMD 168-9374	0.570	0.420	0.330	0.280	0.240
Z0107MA 1AA2.	168-9375	0.340	0.250	0.194	0.164	0.142
Z0107MN 5AA4	SMD 168-9376	0.590	0.440	0.340	0.290	0.250
T835H-6G	SMD 168-9363	1.460	1.070	0.830	0.710	0.610
T835H-6I	168-9364	1.700	1.250	0.980	0.830	0.720
T835H-6T	168-9365	1.400	1.030	0.800	0.680	0.590
T850H-6G	SMD 168-9366	1.460	1.070	0.830	0.710	0.610
T850H-6I	168-9367	1.740	1.280	1.000	0.850	0.740
T850H-6T	168-9369	1.400	1.030	0.800	0.680	0.590
T1035H-6G	SMD 168-9339	1.810	1.330	1.040	0.880	0.770
T1035H-6I	168-9340	1.920	1.410	1.100	0.930	0.810
T1035H-6T	168-9341	1.810	1.330	1.040	0.880	0.770
T1050H-6G	SMD 168-9342	1.770	1.300	1.020	0.860	0.750
T1050H-6I	168-9343	1.920	1.410	1.100	0.930	0.810
T1050H-6T	168-9345	1.810	1.330	1.040	0.880	0.770
T1235H-6G	SMD 168-9346	2.030	1.490	1.170	0.990	0.850
T1235H-6T	168-9348	2.050	1.500	1.180	1.000	0.860
T1250H-6G	SMD 168-9349	2.030	1.490	1.170	0.990	0.850
T1250H-6I	168-9350	2.130	1.560	1.220	1.030	0.900
T1250H-6T	168-9351	1.950	1.430	1.120	0.950	0.820
T1635H-6G	SMD 168-9352	2.630	1.920	1.510	1.280	1.110
T1635H-6I	168-9353	2.620	1.920	1.510	1.280	1.110
T1635H-6T	168-9354	2.440	1.790	1.400	1.190	1.030
T1650H-6G	SMD 168-9355	2.480	1.810	1.430	1.210	1.040
T1650H-6I	168-9357	2.620	1.920	1.510	1.280	1.110
T1650H-6T	168-9358	2.540	1.860	1.460	1.240	1.070
T2035H-6G	SMD 168-9359	3.290	2.420	1.890	1.600	1.390
T2035H-6I	168-9360	3.550	2.600	2.040	1.730	1.500
T2035H-6T	168-9361	3.220	2.370	1.860	1.570	1.360
T2050H-6T	168-9362	3.270	2.390	1.880	1.590	1.380

Standard and High Commutation

SanRex

5mA to 30mA Gate Sensitivity, V_{DRM} = 600V

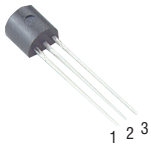
I_T RMS A	I_{TSM} 1 cycle 50Hz Non-repetitive A	I_{GT}, mA t_2+ g+	t_2+ g-	t_2- g-	t_2- g+	Package	Mfftrs List No.
D-PAK							
3	27	15	15	15	—	DPAK	TMG3CQ60D
3	27	5	5	5	10	DPAK	TMG3DQ60D*

* = sensitive gate

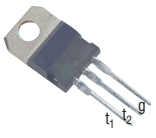
423446

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
TMG3CQ60D	SMD 109-6277 RL	0.71	0.62	0.49	0.44	0.40
TMG3DQ60D	SMD 109-6279 RL	0.48	0.43	0.39	0.38	0.37

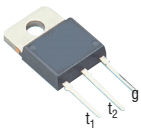
Isolated



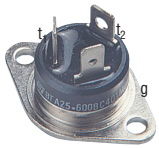
(a), (b) TO-92



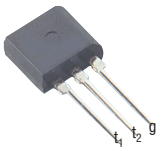
(c) TO-220



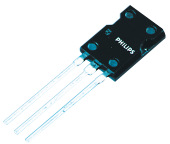
(e) TO-218



(f) TO-3 Flanged



(g) TO202-2



(h) SOT-82

Pin Out	1	2	3
(a)	t_2	g	t_1
(b)	t_1	t_2	g

Isolated devices offer simplified heatsinking without the need for additional insulating hardware, and reduced assembly costs.

V_{DRM} V	I_T rms A	I_{TSM} A	I_{GT}, mA t_2+ g+	t_2+ g-	t_2- g-	t_2- g+	V_{GT} V	V_{DRM} Package	Pack-age	Mftr.	Mftrs. List No.
400	0.8	8.0	5	5	5	7	1.5	TO-92	a	ST	Z0107DA
600	40	300	50	50	50	100	1.5	RD-91	f	ST	BTA40-600B
600	40	300	50	50	100	50	1.5	TOP-3	e	ST	BTA41-600BRG
600	30	260	50	50	50	100	1.5	RD-91	f	ST	BTA25-600B
600	25	250	50	50	100	50	1.5	TOP-3	e	ST	BTA26-600BRG
600	16	170	50	50	50	100	1.5	TO-220AB	c	ST	BTA16-600B
600	16	160	25	—	—	—	1.3	TO-220AB	c	ST	BTA16-600CRG
600	16	170	10	10	10	—	1.3	TO-220AB	c	ST	BTA16-600SWRG
600	12	120	50	50	100	50	1.5	TO-220AB	c	ST	BTA12-600BRG
600	10	100	50	50	100	50	1.5	TO-220AB	c	ST	BTA10-600BRG
600	10	100	25	25	50	25	1.5	TO-220AB	c	ST	BTA10-600CRG
600	8	80	50	50	100	50	1.5	TO-220AB	c	ST	BTA08-600BRG
600	6	60	5	5	5	5	1.5	TO-220AB	c	ST	BTA06-600TRG
600	6	60	50	50	100	50	1.5	TO-220AB	c	ST	BTA06-600BRG
600	4	20	5	5	5	5	1.5	TO-202	g	ST	Z0405MF
600	0.8	8.0	5	5	5	7	1.5	TO-92	a	ST	Z0107MA
600	0.8	8.0	3	3	3	5	1.5	TO-92	a	ST	Z0103MA
600	0.8	10	5	5	5	7	1.5	TO-92	a	ST	Z00607MA
700	40	300	50	50	50	100	1.5	RD-91	f	ST	BTA40-700B
700	40	300	50	50	100	50	1.5	TOP-3	e	ST	BTA41-700BRG
700	30	250	50	50	50	100	1.5	RD-91	f	ST	BTA25-700B
700	25	250	50	50	100	50	1.5	TOP-3	e	ST	BTA26-700BRG
700	12	120	50	50	100	50	1.5	TO-220AB	c	ST	BTA12-700BRG
800	40	300	50	50	100	50	1.5	TOP-3	e	ST	BTA41-800BRG
800	16	160	50	50	100	50	1.5	TO-220AB	c	ST	BTA16-800BRG
800	40	300	50	50	50	100	1.5	RD-91	f	ST	BTA40-800B
800	8	84	25	25	50	25	1.5	TO-220AB	c	ST	BTA08-800C

211144

Order Multiple=1

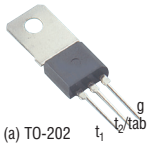
Mftrs. List No.	Mfr.	Order Code	Price Each 1+	25+	100+	250+	1K+
TO-220AB							
BTA06-600BRG	ST	105-7265	1.080	0.580	0.550	0.520	0.450
BTA06-600TWRG.	ST	105-7267	1.320	0.980	0.720	0.630	0.510
BTA08-600BRG	ST	105-7269	1.040	0.490	0.410	0.390	0.370
BTA08-800CRG	ST	980-1626	2.240	1.640	1.290	1.090	0.950
BTA10-600BRG	ST	105-7272	1.320	0.810	0.750	0.670	0.580
BTA10-600CRG	ST	105-7274	0.970	0.730	0.550	0.420	0.400
BTA12-600BRG	ST	105-7275	1.590	1.170	0.860	0.760	0.610
BTA12-700BRG	ST	105-7278	1.700	1.260	0.930	0.820	0.650
BTA16-600BRG	ST	980-1642	1.390	1.020	0.790	0.680	0.580
BTA16-600CRG	ST	991-0506	1.640	0.970	0.930	0.830	0.720
BTA16-600SWRG	ST	105-7280	1.590	0.910	0.740	0.600	0.590
BTA16-800BRG	ST	105-7281	2.440	1.790	1.400	1.190	1.030
RD-91							
BTA25-600B	ST	980-1677	6.590	5.230	3.890	3.150	2.560
BTA25-700B	ST	980-1693	10.670	7.780	6.170	5.130	4.480
BTA40-600B	ST	980-1715	6.390	4.200	4.070	3.420	2.860
BTA40-700B	ST	980-1723	10.200	5.970	5.470	4.910	4.630
BTA40-800B	ST	980-1731	7.780	6.380	4.640	4.330	4.220

Triacs - continued

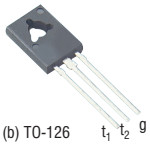
Isolated - continued

Order Multiple=1			Price Each				
Mftrs. List No.	Mfr.	Order Code	1+	25+	100+	250+	1K+
TOP-3							
BTA26-600BRG	ST	**105-7286**	4.890	3.590	2.810	2.380	2.070
BTA26-700BRG	ST	**105-7287**	4.460	3.270	2.560	2.240	2.180
BTA41-600BRG	ST	**105-7288**	4.960	3.630	2.850	2.410	2.090
BTA41-700BRG	ST	**105-7289**	9.020	6.610	5.180	4.390	3.810
BTA41-800BRG	ST	**105-7290**	6.440	5.110	3.800	3.080	2.970
Order Multiple=5			**5+**	**25+**	**100+**	**250+**	**1K+**
TO-92							
Z00607MA 1BA2	ST	**980-4560**	0.240	0.136	0.124	0.112	0.098
Z0103MA 1AA2	ST	**980-4579**	0.350	0.260	0.200	0.173	0.150
Z0107DA 2AL2	ST	**980-4587**	0.300	0.220	0.170	0.144	0.125
Z0107MA 1AA2	ST	**980-4595**	0.370	0.280	0.220	0.184	0.160
Order Multiple=1			**1+**	**25+**	**100+**	**250+**	**1K+**
TO-202-3							
Z0405MF 1AA2	ST	**980-4617**	0.460	0.320	0.250	0.210	0.186

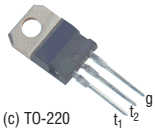
Non-Isolated



(a) TO-202



(b) TO-126



(c) TO-220

(d) TOP-3

(e) TO-48 ¼"-28UNF 2A

(f) TO-252 (D-PAK)

V_{DRM} V	I_T rms A	I_{TSM} A	I_{GT} mA t_2+ g+	t_2+ g-	t_2- g-	t_2- g+	V_{GT} V	Package	Mfr.	Mftrs. List No.
400	4	30	5	5	5	10	2.5	TO-126	ON	2N6073AG
600	30	250	50	50	50	100	1.5	TOP-3	ST	BTB26-600BRG
600	25	200	50	50	50	100	1.5	TO-220AB	ST	BTB24-600BRG
600	16	160	50	50	50	100	1.5	TO-220AB	ST	BTB16-600BRG
600	16	170	10	10	10	—	1.3	TO-220AB	ST	BTB16-600SWRG
600	16	160	25	25	—	50	1.3	TO-220AB	ST	BTB16-600CRG
600	12	120	25	25	25	50	1.5	TO-220AB	ST	BTB12-600CRG
600	8	80	50	50	50	100	1.5	TO-220AB	ST	BTB08-600BRG
600	8	80	10	10	10	10	1.5	TO-220AB	ST	BTB08-600SRG
600	8	80	50	50	50	100	1.3	DPAK	ST	T810-600B
600	8	80	25	25	—	50	1.3	TO-220AB	ST	BTB08-600CRG
600	8	70	—	—	—	—	0.8	TO-220AB	ST	TS820-600T
600	6	60	5	5	5	5	1.5	TO-220AB	ST	BTB06-600TRG
600	6	60	50	50	—	100	1.3	TO-220AB	ST	BTB06-600BRG
600	4	30	5	5	5	—	1.3	DPAK	ST	T405-600B
600	4	30	10	10	10	—	1.5	TO-220	ST	T410-600T
600	4	30	5	5	5	10	2.5	TO-126	ON	2N6075AG
600	4	30	10	10	10	—	1.3	DPAK	ST	T410-600B
600	4	35	10	10	—	25	1.3	TO-220AB	ST	BTB04-600SL
600	4	30	5	—	—		1.3	I-PAK	ST	T405-600H
600	4	30	5	—	—		1.3	TO-220AB	ST	T405-600T
600	4	30	5	—	—		1.3	DPAK	ST	T405Q-600B-TR
600	1	8	10	10	—	10	1.3	SOT-223	ST	Z0109MN 5AA4
600	1	8	25	25	—	25	1.3	SOT-223	ST	Z0110MN 5AA4
800	16	168	50	50	50	—	1.3	TO-220AB	ST	BTA16-800BWRG
800	25	260	50	50	—	50	1.3	TO-220AB	ST	BTA24-800BWRG

211365

			Price Each			
Mftrs. List No.	Mfr.	Order Code	1+	25+	100+	250+
BTA16-800BWRG	ST	**105-7282**	2.19	1.61	1.26	1.07
BTA24-800BWRG	ST	**117-5643**	3.69	2.71	2.12	1.80
BTB04-600SL	ST	**991-0522**	0.60	0.36	0.33	0.29
BTB06-600TRG	ST	**105-7291**	0.95	0.70	0.63	0.61
BTB08-600BRG	ST	**105-7292**	0.80	0.56	0.46	0.40
BTB08-600SRG	ST	**105-7293**	0.86	0.63	0.49	0.42
BTB08-600CRG	ST	**991-0581**	0.82	0.60	0.48	0.41
BTB16-600CRG	ST	**991-0646**	1.03	0.75	0.59	0.50
BTB12-600CRG	ST	**105-7295**	0.78	0.57	0.45	0.39
BTB16-600BRG	ST	**980-1740**	1.02	0.75	0.58	0.50
BTB16-600SWRG	ST	**105-7296**	0.97	0.71	0.56	0.47
BTB24-600BRG	ST	**105-7298**	1.61	1.19	0.93	0.78
BTB26-600BRG	ST	**105-7299**	3.42	2.48	1.96	1.59
T405-600B	ST	SMD **994-6675**	0.68	0.50	0.39	0.33
T410-600B	ST	SMD **994-6667**	1.13	0.82	0.67	0.60
T410-600T	ST	**980-3955**	0.74	0.50	0.43	0.35
T810-600B	ST	SMD **994-6683**	1.29	0.95	0.74	0.62
2N6073AG	ON	**955-6559**	0.58	0.45	0.36	0.31
2N6075AG	ON	**955-6567**	0.38	0.29	0.27	0.23
T405-600H	ST	**991-0719**	0.51	0.36	0.30	0.25

			Price Each			
Mftrs. List No.	Mfr.	Order Code	1+	25+	100+	250+
T405-600T	ST	**991-0727**	0.67	– –	– –	– –
T405Q-600B-TR	ST	SMD **991-0735** RL	0.72	0.57	0.47	0.42
TS820-600T	ST	**991-0760**	0.86	0.67	0.60	0.54
Z0109MN 5AA4	ST	SMD **991-0778**	0.34	– –	– –	– –
Z0110MN 5AA4	ST	SMD **991-0786**	0.61	0.46	0.35	0.30
BTB06-600BRG	ST	**991-0530**	0.69	0.50	0.37	0.28

600 V, Insulated TO-220 and TO-3P Triacs

SanRex

General Purpose

TO-220F/F2

TO-3PF

V_{DRM}	I_T RMS A	I_{TSM} 1 cycle 50Hz None repetitive A	I_{GT} mA t_2+ g+	t_2+ g-	t_2- g-	t_2- g+	Package	Mftrs List No.
600	3	27	15	15	15	—	TO-220F	TMG3CQ60F
600	8	80	30	30	30	—	TO-220F	TMG8CQ60F
600	16	155	30	30	30	—	TO-220F	TMG16CQ60F

423425

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
TMG3CQ60F	**109-6260**	0.91	0.80	0.64	0.57	0.49
TMG8CQ60F	**109-6263**	0.69	0.60	0.55	0.54	0.53
TMG16CQ60F	**109-6267**	0.73	– –	– –	– –	– –
TMG16CQ60L	**109-6270**	2.53	2.21	1.77	1.61	1.35
TMG25CQ60L	**109-6271**	3.35	2.93	2.35	2.13	1.80

3-Quadrant Triacs (High Commutation)

NXP

TO-220/TO-220AB

TO-220F

DPAK

SOT-223

V_{DRM} V	I_T rms A	I_{TSM} A	I_{GT} mA	V_{GT} V	V_{DRM} Package	Mftrs. List No.
600	8	65	10	1.5	TO-220F	BTA208X-600E
600	12	110	35	1.5	TO-220	BTA312Y-600C
800	4	25	10	1.5	TO-220AB	BTA204-800E
800	4	25	10	1.5	DPAK	BTA204S-800E
800	1	25	10	1.5	SOT-223	BTA204W-800E
800	8	65	10	1.5	TO-220AB	BTA208-800E
800	8	65	10	1.5	DPAK	BTA208S-800E

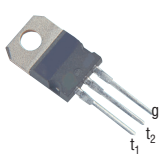
496606

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
BTA204-800E	**152-4127**	0.410	0.320	0.250	0.210	0.183
BTA204S-800E	SMD **152-4128**	0.450	0.340	0.270	0.250	0.220
BTA204W-800E	SMD **152-4129**	0.440	0.320	0.260	0.230	0.220
BTA208-800E	**152-4131**	0.620	0.450	0.360	0.330	0.310
BTA208S-800E	SMD **152-4132**	0.620	0.450	0.360	0.330	0.310
BTA208X-600E	**152-4133**	0.620	0.440	0.360	0.300	0.270
BTA312Y-600C	**152-4134**	0.460	0.340	0.320	0.300	0.280

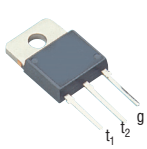
High Commutation, V_{DRM}=600 V

Logic Drive

D_2-PAK



TO-220



TOP-3

RD91

- No additional snubber networks required
- Isolated or non-isolated tab
- Sensitive gate, logic-level drive options
- Optimised for high inductive load switching

I_T rms A	I_{TSM} A	I_{GT} mA t_2+ g+	t_2+ g-	t_2- g-	V_{GT} V	Package	Mftrs. List No.
4	30	35	—	—	1.3	TO-220AB	T435-600T
6	60	5	—	—	1.3	TO-220AB	BTA06-600TWRG
6	60	10	—	—	1.3	TO-220AB	BTA06-600SWRG

I_T rms	I_{TSM}	I_{GT}, mA t_2+	t_2+	t_2-	V_{GT}		Mftrs.
6	60	10	—	—	1.3	TO-220AB	BTB06-600SWRG
6	60	35	—	—	1.3	TO-220AB	BTA06-600CWRG
6	60	50	—	—	1.3	TO-220AB	BTB06-600BWRG
6	63	50	50	50	1.5	TO-220AB	BTA06-600BWRG
8	80	5	5	5	1.5	TO-220AB	BTA08-600TW
8	80	10	10	10	1.5	TO-220AB	BTA08-600SWRG
8	80	35	35	35	1.5	TO-220AB	BTA08-600CWRG
8	80	35	—	—	1.3	D2PAK	T835-600G
8	80	35	—	—	1.3	D2PAK	T835-600G
8	80	35	—	—	1.3	TO-220AB	BTB08-600CWRG
8	80	50	50	50	1.5	TO-220AB	BTA08-600BWRG
10	100	35	—	—	1.3	TO-220AB	BTA10-600CWRG
10	105	50	50	50	1.5	TO-220AB	BTA10-600BWRG
12	126	10	10	10	1.5	TO-220AB	BTA12-600SWRG
12	126	10	—	—	1.3	TO-220AB	BTB12-600SWRG
12	126	35	—	—	1.3	TO-220AB	BTA12-600CWRG
12	126	35	35	35	1.3	D2PAK	T1235-600G
12	126	50	50	50	1.5	TO-220AB	BTA12-600BWRG
12	120	35	35	35	1.5	TO-220AB	BTA12-700CWRG
12	120	50	50	50	1.5	TO-220AB	BTB12-600BWRG
16	170	35	35	35	1.3	D2PAK	T1635-600G
16	160	35	35	35	1.5	TO-220AB	BTA16-600CWRG
16	160	35	—	—	1.3	TO-220AB	BTB16-600CWRG
16	157	50	50	50	1.5	TO-220AB	BTA16-600BWRG
20	210	50	50	50	1.5	TO-220AB	BTA20-600CWRG
24	240	50	50	50	1.5	TO-220AB	BTA24-600BWRG
25	262	50	50	50	1.5	TOP-3	BTA26-600BW
25	250	35	—	—	1.3	TO-220AB	BTA24-600CWRG
25	250	35	—	—	1.3	TO-220AB	BTB24-600CWRG
25	250	50	50	50	1.5	RD-91	BTA25-600BW

Price Each

Mftrs. List No.	Order Code	1+	25+	100+	250+	1K+
BTA06-600BWRG	**105-7266**	1.05	0.49	0.45	0.36	0.35
BTA06-600CWRG	**991-0450**	0.99	0.62	0.59	0.52	0.45
BTA06-600SWRG	**991-0468**	0.78	0.57	0.45	0.37	0.34
BTA06-600TWRG	**991-0476**	1.20	0.88	0.69	0.58	0.51
BTA08-600BWRG	**980-1600**	0.94	0.69	0.53	0.46	0.40
BTA08-600CWRG	**105-7270**	0.92	0.69	0.56	0.46	0.45
BTA08-600SWRG	**105-7271**	1.14	0.84	0.66	0.56	0.48
BTA08-600TWRG	**980-1618**	1.26	0.93	0.73	0.61	0.53
BTA10-600BWRG	**980-1634**	1.46	1.06	0.83	0.71	0.61
BTA10-600CWRG	**991-0484**	1.29	0.75	0.70	0.62	0.54
BTA12-600BWRG	**105-7276**	1.38	0.79	0.76	0.74	0.61
BTA12-600SWRG	**105-7277**	1.27	0.78	0.72	0.62	0.54
BTA12-700CWRG	**105-7279**	1.54	1.13	0.89	0.75	0.65
BTA12-600CWRG	**991-0492**	1.38	1.02	0.79	0.68	0.58
BTA16-600BWRG	**117-5636**	1.60	0.91	0.74	0.60	0.59
BTA16-600CWRG	**980-1650**	1.63	0.76	0.70	0.63	0.60
BTA20-600CWRG	**105-7283**	1.72	1.37	1.05	0.83	0.81
BTA24-600BWRG	**105-7284**	1.94	1.55	1.19	0.89	0.81
BTA24-600CWRG	**991-0514**	2.56	1.59	1.47	1.25	1.08
BTA25-600BW	**980-1685**	6.56	5.38	3.91	3.29	2.75
BTA26-600BWRG	**980-1707**	3.49	– –	– –	– –	– –
BTB06-600BWRG	**991-0549**	0.67	0.41	0.40	0.35	0.31
BTB06-600SWRG	**991-0573**	0.71	– –	– –	– –	– –
BTB08-600CWRG	**991-0590**	0.75	0.53	0.43	0.36	0.31
BTB12-600BWRG	**105-7294**	1.47	– –	– –	– –	– –
BTB12-600SWRG	**991-0620**	0.92	– –	– –	– –	– –
BTB16-600CWRG	**991-0654**	1.17	0.85	0.67	0.56	0.49
BTB24-600CWRG	**991-0662**	1.55	1.14	0.89	0.75	0.65
T435-600T	**991-0743**	0.59	0.39	0.37	0.34	0.29
T835-600G	SMD **991-0751**	0.94	0.71	0.65	0.55	0.48
T1235-600G	SMD **980-3939**	1.60	1.18	0.92	0.78	0.68
T1635-600G	SMD **980-3947**	2.43	1.94	1.48	1.11	0.88
T2550H-600TRG	**991-0700**	2.77	2.06	1.66	1.34	1.31

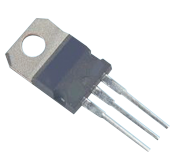
451992

Tube of 50

Mftrs. List No.	Order Code	Price Per Tube 1+	4+
BTA24-600BWRG	**156-4185**	36.16	35.23

TRIAC, 600V TO-220

Littelfuse



TO-220

Features:
- RoHS Compliant
- Glass -passivated junction

V_{DRM} V	$I_{T(RMS)}$ A	I_{TSM} 60/50Hz	I_{GT}	Package	Mftrs. List No.
600	15	200A/167A	1.5A	TO-220	Q6015LT
600	25	250A/208A	80mA	TO-220	Q6025L6

Q6015LT
- Internal trigger diac
- Electrically-isolated package
- High surge capability - up to 200 A
- High voltage capability - 200 V to 600 V

Q6025L6
- High surge current capability
- 2500V ac isolation for L, J, & K Packages
- High commutating dv/dt
- High static dv/dt

503822

Price Each

Mftrs. List No.	Order Code	1+	25+	100+
Q6015LT	**145-6975**	3.54	2.67	1.98
Q6025L6	**145-6976**	4.56	3.45	2.55

Alternistors

ST

TOP3

- High commutation
- High surge current
- High voltage
- Suitable for inductive load power control

I_T rms (A)	V_{DRM} V_{RRM} (V)	I_{TSM}* (A)	I_{GT}, mA t_2+ g+	t_2+ g-	t_2- g-	t_2- g+	V_{GT} (V)	Package	Mftrs. List No.
25	1200	230	150	150	150	—	1.5	TOP-3	TPDV1225RG
40	600	350	200	200	200	—	1.5	TOP-3	TPDV640RG
40	1200	350	200	200	200	—	1.5	TOP-3	TPDV1240RG

* I_{TSM} @ t_P=10ms

211258

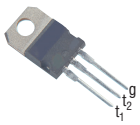
Price Each

Mftrs. List No.	Order Code	1+	25+	100+	250+	1K+
TPDV640RG	**105-7305**	8.40	6.88	5.00	4.58	4.46
TPDV1225RG	**105-7304**	8.53	6.99	6.25	6.09	5.93
TPDV1240RG	**980-4242**	13.68	10.03	7.86	6.66	6.37

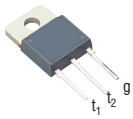
High Commutation, V_{DRM}=600 V

ST

(c) D_2-PAK



(a) TO-220



(b) TOP-3

(d) RD91

- No additional snubber networks required
- Isolated or non-isolated tab
- Sensitive gate, logic-level drive options
- Optimised for high inductive load switching

I_T rms A	I_{TSM} A	I_{GT}, mA t_2+ g+	t_2+ g-	t_2- g-	V_{GT} V	Pack-age	Mftrs. List No.
Isolated tab (to 2.5kV rms), V_{DRM}=600 V							
4	30	35			1.3	TO-220AB	T435-600T
6	63	50	50	50	1.5	TO-220AB	BTA06-600BWRG
6	60	35			1.3	TO-220AB	BTA06-600CWRG
6	60	10			1.3	TO-220AB	BTA06-600SWRG
6	60	5			1.3	TO-220AB	BTA06-600TWRG
8	80	50	50	50	1.5	TO-220AB	BTA08-600BWRG
8	80	35	35	35	1.5	TO-220AB	BTA08-600CWRG
8	80	10	10	10	1.5	TO-220AB	BTA08-600SWRG
8	80	5	5	5	1.5	TO-220AB	BTA08-600TW
8	80	35			1.3	D2PAK	T835-600G
10	105	50	50	50	1.5	TO-220AB	BTA10-600BWRG
10	100	35			1.3	TO-220AB	BTA10-600CWRG
12	140				1.3	TO-220AB	T1235H-600T
12	126	50	50	50	1.5	TO-220AB	BTA12-600BWRG
12	126	10	10	10	1.5	TO-220AB	BTA12-600SWRG
12	126	35			1.3	TO-220AB	BTA12-600CWRG
12	126	35	35	35	1.3	D2PAK	T1235-600G
16	170	35	35	35	1.3	D2PAK	T1635-600G
16	160	35	35	35	1.5	TO-220AB	BTA16-600CWRG
16	157	50	50	50	1.5	TO-220AB	BTA16-600BWRG
20	210	50	50	50	1.5	TO-220AB	BTA20-600CWRG
24	240	50	50	50	1.5	TO-220AB	BTA24-600BWRG
25	262	50	50	50	1.5	TOP-3	BTA26-600BW
25	250	35			1.3	TO-220AB	BTA24-600CWRG
25	250	50	50	50	1.5	RD-91	BTA25-600BW
8	80	35			1.3	D2PAK	T835-600G
Isolated tab (to 2.5kV rms), V_{DRM}=700 V							
12	120	35	35	35	1.5	TO-220AB	BTA12-700CWRG
Non-isolated tab (=t_2)							
6	60	50			1.3	TO-220AB	BTB06-600BWRG
6	60	35			1.3	TO-220AB	BTB06-600CW
6	60	10			1.3	TO-220AB	BTB06-600SWRG
8	80	35			1.3	TO-220AB	BTB08-600CWRG
12	126	10			1.3	TO-220AB	BTB12-600SWRG
12	126				1.3	TO-220AB	BTB12-800BW
12	120	50	50	50	1.5	TO-220AB	BTB12-600BWRG
16	160	35			1.3	TO-220AB	BTB16-600CWRG
25	250	35			1.3	TO-220AB	BTB24-600CWRG

- Low gate drive, logic level devices

Triacs - continued

High Commutation, V_{DRM}=600 V - continued

211152

Mftrs. List No.	Order Code	Price Each 1+	25+	100+	250+	1K+
Isolated Tab						
BTA06-600BWRG	105-7266	1.05	0.49	0.45	0.36	0.35
BTA06-600CWRG	991-0450	0.99	0.62	0.59	0.52	0.45
BTA06-600SWRG	991-0468	0.78	0.57	0.45	0.37	0.34
BTA06-600TWRG	991-0476	1.20	0.88	0.69	0.58	0.51
BTA08-600BWRG	980-1600	0.94	0.69	0.53	0.46	0.40
BTA08-600CWRG	105-7270	0.92	0.69	0.56	0.46	0.45
BTA08-600SWRG	105-7271	1.14	0.84	0.66	0.56	0.48
BTA08-600TWRG	980-1618	1.26	0.93	0.73	0.61	0.53
BTA10-600BWRG	980-1634	1.46	1.06	0.83	0.71	0.61
BTA10-600CWRG	991-0484	1.29	0.75	0.70	0.62	0.54
BTA12-600BWRG	105-7276	1.38	0.79	0.76	0.74	0.61
BTA12-600SWRG	105-7277	1.27	0.78	0.72	0.62	0.54
BTA12-700CWRG	105-7279	1.54	1.13	0.89	0.75	0.65
BTA12-600CWRG	991-0492	1.38	1.02	0.79	0.68	0.58
BTA16-600BWRG	117-5636	1.60	0.91	0.74	0.60	0.59
BTA16-600CWRG	980-1650	1.63	0.76	0.70	0.63	0.60
BTA20-600CWRG	105-7283	1.72	1.37	1.05	0.83	0.81
BTA24-600BWRG	105-7284	1.94	1.55	1.19	0.89	0.81
BTA24-600CWRG	991-0514	2.56	1.59	1.47	1.25	1.08
BTA25-600BW	980-1685	6.56	5.38	3.91	3.29	2.75
BTA25-600BW	980-1685	6.56	5.38	3.91	3.29	2.75
T435-600T	991-0743	0.59	0.39	0.37	0.34	0.29
T835-600G	SMD 991-0751	0.94	0.71	0.65	0.55	0.48
T1235H-600T	991-0697	1.31	0.98	0.79	0.69	0.59
T2550H-600TRG	991-0700	2.77	2.06	1.66	1.34	1.31
Non-isolated Tab						
BTB06-600BWRG	991-0549	0.67	0.41	0.40	0.35	0.31
BTB06-600CW	991-0565	0.34	– –	– –	– –	– –
BTB06-600SWRG	991-0573	0.71	– –	– –	– –	– –
BTB08-600CWRG	991-0590	0.75	0.53	0.43	0.36	0.31
BTB12-600BWRG	105-7294	1.47	– –	– –	– –	– –
BTB12-600SWRG	991-0620	0.92	– –	– –	– –	– –
BTB12-800BW	991-0638	1.23	0.94	0.78	0.64	0.63
BTB16-600CWRG	991-0654	1.17	0.85	0.67	0.56	0.49
BTB24-600CWRG	991-0662	1.55	1.14	0.89	0.75	0.65
T1235-600G	SMD 980-3939	1.60	1.18	0.92	0.78	0.68
T1635-600G	SMD 980-3947	2.43	1.94	1.48	1.11	0.88

Thyristor/Triac Trigger Devices

Diacs

Minimelf
L=3.6, Dia=1.62

DO-35 L=3.05, Dia=1.53

V_{bo} min. V	V_{bo} typ V	V_{bo} max. V	I_{trm} max. A	V_o min. V	I_{bo} max. µA	Package	P_{tot} mW	Mftrs. List No.
28	32	36	2	5	100	MiniMELF	150	TMMDB3
28	32	36	2	5	100	DO-35	150	DB3
35	40	45	2	5	100	DO-35	150	DB4
36	32	36	1	10	50	SOT-23	150	SMDB3

Order Multiple=5

Mftrs. List No.	Order Code	Price Each 5+	25+	100+	250+	1K+
DB3	980-2231	0.460	0.250	0.174	0.130	0.111
DB4	994-6292	0.340	0.189	0.176	0.109	0.096
TMMDB3	SMD 994-6284 RL	0.620	0.400	0.300	0.260	0.230
SMDB3	NEW SMD 168-9300	0.350	0.260	0.191	0.163	0.142

211374

Reel of 5000

Mftrs. List No.	Order Code	Price Per Reel 1+
DB3	156-2395	408.21

DMFC12 Dual Mode Firing Circuits

110V, 230V and 400V AC

united automation limited

New

- Phase angle and burst fire control mode
- Soft start selectable to 30s
- Frequency tracking 4Hz to 400Hz
- Pulse transformer output
- Phase-loss detection
- 24VDC or 18-24VAC supply
- Adjustable output zero and power span
- 0-5V/0-10V, 0-20mA/4-20mA or potentiometer input signal
- Current limit using external circuit, shunt or Hall sensor
- Din rail mounting

H=55mm, W=70mm, D=114mm

The DMFC12 single phase or phase to phase firing circuit offers 3 options of control, phase angle, burst fire or a combination of both. With soft start from 1 to 30 seconds the DMFC12 offers a solution to prevent high inrush current. With frequency tracking from 4-400Hz the unit is ideal for use in applications where the supply is unstable. Adjustable current limit is available via a few external parts. The controller comes complete with a DIN Rail mounting assembly for easy installation.
This unit is applicable to most AC or DC, resistive or inductive loads. Typically used in complete power assemblies (known as stacks) for controlling thyristors, triac or hybrid diodes on single phase to neutral, or phase to phase supplies.

529956

Mftrs. List No.	Order Code	Price Each 1+	10+	25+
DMFC12 110VAC	169-3844	67.60	49.01	47.32
DMFC12 230VAC	169-3845	67.60	49.01	47.32
DMFC12 400VAC	169-3846	67.60	49.01	47.32

Hybrid Burst Firing Trigger Circuit

united automation limited

A hybrid burst firing trigger circuit, which generates virtually no RFI or arcing. Its simple 7-pin SIL package maing it versatile and useful as a low cost firing circuit to suit a wide range of load applications with the addition of a potentiometer and triac.

H = 26 , W = 26, D = 7

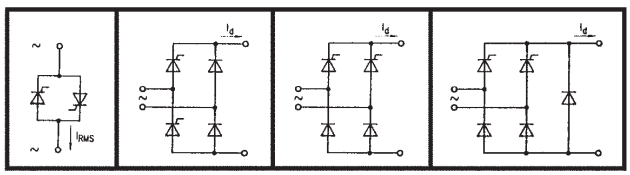
- Supply voltage 240Vac or 110Vac
- Low power consumption (<0.5W)
- Fast cycle time
- Compact 7 pin SIL package

462317

Mftrs. List No.	Order Code	Price Each 1+	10+	25+
BFM-TH-UAL	133-8086	10.87	8.69	7.81

Trigger Modules

Converter Stack Configurations



Typical output configurations for SCR/diode trigger modules.

211122

Three Phase Thyristor Driver and Controller

Commander Controller Display

united automation limited

H = 50, W = 174, D =32

- Compact and user friendly
- Portable (removable) or panel (fixed) mounting
- CM Program locking facility
- Set parameter and copy facility
- Simple RJ45 connections
- Easily read - back-lit LCD display
- Tamper proof 'PIN' protection

Three Phase Driver Modules

The CM-FC(M/MV) Commander module (CM) is a remote 'Human Machine Interface' (HMI) programming and display console. It incorporates a simple keypad to input data and a console that displays all the functional information relating to the firing circuit settings. Connections are made by a standard RJ45 lead.Once connected, all functional parameters and settings may be configured on either the FC36M or FC36MV firing circuit.
The panel is mounted , by clipping into panel cutout (integrated spring clips).

FC36M H=36, W=100, L=160

FC36M H=39, W=167, D=68, DIN Rail Housing

FC36M Features:
- Phase angle or burst firing options
- No external phasing transformers or pcb wiring required
- Opto coupled, digital isolated control 5-25V dc
- Analogue control inputs 0.5V dc or 4-20mA
- Output status indicator
- Selectable current limit switch 0-100mA dc
- Over current latching trip
- Selectable phase reversal switch
- Resistive or inductive load select
- Adjustable ramp control 0-30s

FC36M Specification:

Integral transformer	380/415V ac
Secondary voltage	20V ac
Current consumption	300mA
Initial short circuit gate current	1A
Sustaining short circuit gate current	0.5A
Initial pulse voltage	15V
Voltage signal into 10kW	0-5V
Sustaining pulse voltage	8V
Initial gate pulse rate of rise	1A/µs
Pulse width 50/60Hz	22µs
Pulse train frequency	25kHz
Operating temperature	-5°C to +85°C

X10751 is the DIN rail housing for the FC36M

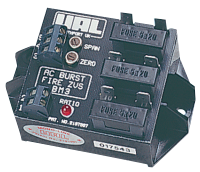
460784

Mftrs. List No.	Order Code	Price Each 1+	5+	10+
Three Phase Thyristor Driver - Base Circuit				
FC36M	**121-3102**	234.33	196.56	176.51
Commander Module				
CM-FC36(M/MV)	**132-9206**	124.70	115.11	108.43
DIN Rail Housing FC36M				
X10751	NEW **170-8420**	9.93	– –	– –

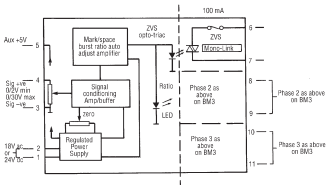
Burst Firing

Three Phase

united automation limited



H (overall) = 43, W = 92, D = 60
Fixing centres = 80 (M5 clear)



Terminals 1-5 Screw clamp, wires 2.5mm² max
6-11 Push on tabs ¼

Burst firing trigger modules for regulating AC heater power stacks from 110V to 440V at 1, 2 or 3 phase into loads up to 2000 A. The varying switching ratio (nominal 1 second time base), is proportional to signal input, as is indicated by a flashing LED.

RFI free firing of thyristors, triacs or thyristor/diode modules, is due to zero voltage, time proportional switching. Opto-isolated output stages eliminate the need for phase timing or matching.

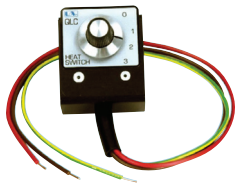
Input power @	18V ac or 24V dc	Trigger o/p rating (cont.)	100mA max.
Signal voltage max	2 to 30V dc	Trigger level (typ.)	5V from zero crossover
Zero offset	0-30% of span	Auxiliary output (protected)	5V dc @ 5mA max
Signal input resistance	5KΩ ±20%	Isolation	2500V rms
Trigger/output channel	1A for 1ms (pk)	Line voltage	110 to 415V rms
Off state dv/dt	430V/µs	Operating Temp (ambient)	60°C max.

211378

	Mftrs. List No.	Order Code	Price Each 1+	10+	25+
Three phase	BM3	**121-3101**	96.39	82.82	68.26

15A Phase Angle Heat Switch

united automation limited



- Single hole fixing
- Rugged and compact
- Optional knob & dial
- Large triac for inrush protection
- Three position & off control

New

H=59mm , W=55mm, D=32mm

The switchable phase angle power regulator is a robust and compact unit, ideal for controlling single phase mains driven loads. The standard QLC units are for 230V supply, with an integral three position and off control switch. The large triac enables the unit to handle high inrush currents with ample safety margin on industrial installations.
Suitable for quartz lamps, conventional resistive heating elements in series or parallel configurations. Applications including ovens, moulders, dryers and some inductive loads, such as, transformers and motors.

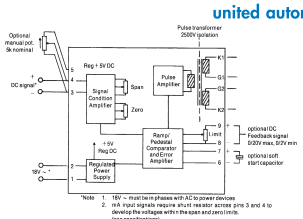
538668

	Mftrs. List No.	Order Code	Price Each 1+	10+	25+
Controller					
15A Switch	QLC 230V	**171-7392**	40.39	37.51	32.82
Label/knob Set					
Switched output	QLC-KL	**121-3121**	3.53	2.91	2.37
Variable output	QVR-KL	**121-3119**	3.45	2.85	2.32

Phase Angle, Single Phase

united automation limited

H = 43, W = 92, D = 60
Fixing centres = 80 (M5 clear)



A versatile, single phase universal trigger module for firing thyristors, triacs and thyristor-diode stacks from 1A to 1000A, of 100V to 1600V rating. The unit provides adjustable signal matching to voltage or current signals, selectable soft start delay and adjustable current limit control.

When used with a suitable transformer (not supplied), the module will trigger to 110V and 240V.

Signal span min	0 to 2V dc	Trigger isolation	2500V rms
Signal span max	0 to 25V dc	AC i/p voltage	18V rms ±15% @ 65mA
Signal zero offset	0 to 30% of span	Auxiliary o/p	5V dc @ 5mA protected
Signal i/p resistance	5000 Ω ±20%	Manual potentiometer	2K, 4K7, 5K or 10K
Trigger pulse height	8V (open circuit)	Thyristor line voltage	110V to 550V rms 50/60Hz
Trigger pulse rating	250mA into 10Ω	Max. ambient temp	65°C operational
Trigger shorted o/p	Protected		

211090

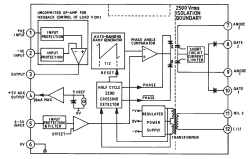
Mftrs. List No.	Order Code	Price Each 1+	5+	50+
AFM-11	**121-3099**	76.96	57.20	48.11

Phase Angle, Integral Transformer

Single Phase

SEMIKRON innovation+service

H=32, W=92, D=70



Fixing centres = 80 (M5 clear)

Advanced trigger module for single phase ac control. Integral 240V supply transformer allows operation at non-standard voltages. Short circuit protected steered gate triggering is used for inductive load control and an uncommitted internal op-amp provides feedback control. Aux 5V reference.

Conforms to **UL94V-0**, **CSA** and **VDE** approvals.

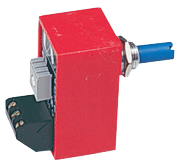
Supply voltage	204V to 264V ac	Off-state dv/dt	500V/µs min.
Supply frequency	45Hz to 65Hz	Auxilliary output	5V, 20mA dc min.
Input range	0 to 5V dc	Isolation voltage	2.5kV rms
Input threshold	0.3V dc typ.	Controllable retard angle	180° typ.
Max. input voltage	25V dc	Gate short-circuit response	250ms to 500ms
Input impedance	100kΩ min.	Op-amp input voltage range	±10.5V
Output current (per gate)	1.9A max.	Operating temperature	0°C to +55°C

211107

Supply Voltage	Mftrs. List No.	Order Code	Price Each 1+	5+	10+
240V	SKPC200-240	**120-8447**	146.06	116.64	103.94

Low Cost, Manual Triac Trigger

united automation limited



- Low cost
- Simple, 3 screw terminal connection
- No heatsink required
- Panel mounted via the control potentiometer
- 110/240V, 50/60Hz operation, 1.5W

H = 42, W = 22, D = 22
Panel fixing 10mm hole dia.

211120

Mftrs. List No.	Order Code	Price Each 1+	10+	50+
MAT	**121-3100**	26.00	16.31	14.22

Power Modules

Combined Trigger Module and 25A Triac

united automation limited

H = 44, W = 73, D = 44

- In-built triac reduces system complexity
- Requires additional heatsink
- Universal span and zero matching to voltage or current control signals
- +5V dc output
- LED output power indicator
- Low power consumption
- Isolated output
- Selectable soft-start on FC11AL/2

N.B. FC11AL/2 requires external RFI Suppression Module, Order Code 663-864
SEE PAGE 0000, for **CE Approval**.

Signal span	0 to 2V dc min. 0 to 25V dc max.	AC input power	18V rms ±15%
		Line voltage	110V to 240V
Signal zero offset	0 to 30% of span	Triac rms on current	25A
Signal i/p resistance	5kΩ, ±20%	Surge current	250A
Manual pot	2kΩ, 5kΩ or 10kΩ @ 1W	Max. pk voltage	600V
Soft start capacitor	22µF 16V	Power consumption	0.5W

211069

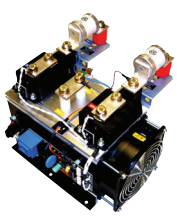
Mftrs. List No.	Order Code	Price Each 1+	10+	50+
Phase angle	FC11AL/2	**121-3097**	69.79	53.26	45.96

Power Regulators

PR3-0 150kW-450kW Power Regulators

united automation limited

New



Power Regulators - continued

PR3-0 150kW-450kW Power Regulators - continued

150kW/225kW H=215mm, W=245mm, D=260mm

325kw/450kW H=215mm, W=215mm, D=285mm

- Power rating 150kW at (209A) @ 415V rms
- Power rating 225kW at (313A) @ 415V rms
- Power rating 325kW at (450A) @ 415V rms
- Power rating 450kW at (620A) @ 415V rms
- Input volatge 400V rms ±10%
- Frequency 50/60Hz
- Control signal via SW1 switch or manual potentiometer
- Alarm relay 125VAC @ 2A
- Temperature trip in/out 90°C/85°C
- High speed semiconductor fuse
- Operating temperature +65°C
- Weight 150kW/225kW 6.5kg
- Weight 325kW/450kW 12kg

The PR3-O range of thyristor stacks provides full seamless control of three phase resistive loads using two thirds control technique. Signal control is by a DC signal. These burst firing control stacks use fast pulse zero volts switching technology, to minimise flicker and eliminate RFI problems. They also incorporate an automatic resetting temperature trip, forced-air cooled and have easy access to signal & power terminals for simple installation.

530473

Mftrs.		Price Each		
List No.	Order Code	1+	10+	25+
PR3-0-8/9-150KW	169-3856	740.00	536.50	518.00
PR3-0-8/9-225KW	169-3857	928.00	672.80	649.60
PR3-0-8/9-325KW	169-3858	1,160.00	841.00	812.00
PR3-0-8/9-450KW	169-3859	1,372.00	994.70	960.40

PR3-E 86kW/105kW AC Power Regulators

united automation limited

H=124mm, W=340mm, D=232mm

New

- Power rating 86kW at (120A) @ 415V rms
- Power rating 105kW at (146A) @ 415V rms
- Input Volatge 400V rms ±10%
- Frequency 50/60Hz
- Control signal via SW1 switch or manual potentiometer
- Alarm relay 125VAC @ 2A
- Temperature trip in/out 90°C/85°C
- High speed semiconductor fuse 160A
- Operating temperature +65°C
- Weight 5.2kg
- Applications dryers, air curtains, heating & ventilation

The PR3 range of thyristor stacks provide full, seamless control of 86kW and 105kW three phase resistive loads using two thirds control technique. Signal control is by a DC signal. These burst firing control stacks use fast pulse zero volts switching technology, to minimise flicker and eliminate RFI problems. They also incorporate an automatic resetting temperature trip, integral semiconductor fuses and heatsink. All are housed in a bespoke enclosure and have easy access to internal signal & power terminals for simple installation.

530474

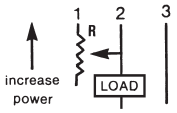
Mftrs.		Price Each		
List No.	Order Code	1+	10+	25+
PR3-E-8/9-86KW	169-3854	457.60	331.76	320.32
PR3-E-8/9-105KW	169-3855	578.24	419.22	404.77

6A, 10A, 15A, Enclosed or IC only

united automation limited

H (excl pins) = 27.7 (small mounting hole series)
34.1 (large mounting hole series)
W = 16.0, D = 6.4

Connections:



AC input 240V ac, R = 250kΩ
AC input 110V ac, R = 120kΩ

H = 44, W = 33, D = 23 (exc spindle), Shaft dia = 6.3
Bush L = 6, Fixing hole dia = 10, Cable L = 170 min
Connections: Red Line 220/240V, 50/60Hz
White Neutral through load

- Solid state reliability
- 0-99% phase angle power control (resistive load)
- Enclosed design incorporates earthable, isolated heatsink
- Power IC offers 6.3mm or 10.3mm mounting holes, and requires an additional potentiometer
- Uses include heating control, lighting and motor speed control
- Earthable heatsink

RMS max. on state current (tab 70°C)	6A, 10A and 15A
Peak one cycle surge current	121-3086, 121-3082=100A 121-3087, 121-3083=120A 121-3089, 121-3084, 121-3085=150A
Minimum holding load current	30mA
Repetitive peak voltage (tab 70°C)	400V
Hysteresis (typical)	5%
Total conduction phase angle (typical)	0 to 160°
Controlled conduction phase angle (typical)	30 to 160°
Tab surface operating range	-40°C to +70°C
Insulation withstand capability (tab 70°C)	1600V for 1 minute

Recommended heatsink to achieve quoted ratings: Below 5A use 8°C/W heatsink, or 7 x 7cm panel. 10A use 4°C/W heatsink or 10 x 10cm panel. 15A use 2°C/W heatsink or 17 x 17cm panel.

Fusing: Use only high speed fuses.

211379

Mftrs.			Price Each			
List No.	Current	Order Code	1+	10+	25+	100+
CSR2-6E	6	121-3086	29.02	20.49	17.70	16.61
CSR2-10E	10	121-3087	29.58	20.91	18.08	17.60
CSR2-15E	15	121-3089	30.96	21.85	18.88	18.38
CSR06-04A	6	121-3082	15.60	11.07	9.69	8.17
CSR10-04A	10	121-3083	16.47	10.02	8.28	7.31
CSR15-04A	15	121-3084	18.33	12.55	11.17	10.95
CSR15-04B	15A	121-3085	22.72	9.72	8.54	8.33

Variable AC Regulator with RFI Suppression

13A Current Capability

united automation limited

- Large Triac for inrush protection
- Three position & off control
- Single hole fixing
- Rugged and compact
- Supplied complete with hairline knob and dial

H = 82 , W = 65, D = 44, 6.3mm shaft dia.

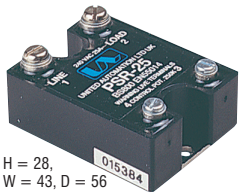
A switchable phase angle power regulator, both compact and robust. This unit is ideal for controlling single phase mains driven loads.Designed for mains 230Vac with an integral 3 position on/off control switch. The large triac enables the unit to handle high inrush currents with ample safety margin on industrial installations. An adhesive backed silver label and hairline knob are supplied.

479519

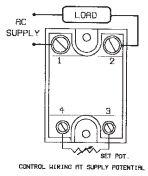
Mftrs.		Price Each		
List No.	Order Code	1+	10+	25+
SPC-240-13	133-8085	27.98	19.29	17.82

25A Enclosed

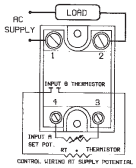
united automation limited



H = 28,
W = 43, D = 56



1213091



1213092

Compact, reliable phase angle power controllers for loads up to 6kW at 240V ac, in epoxy encapsulated, simple to wire packages.

Order code 1213092 incorporates a thermistor input to allow for fan speed regulation in heating, ventilation and air conditioning systems.

Suitable thermistor available seperately.

N.B. Requires external RFI Suppression Module, order code 663-864, for **CE Approval**.

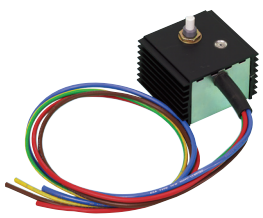
RMS max. on state current	25A	Off state voltage	400V
Hysteresis	15%	Forward voltage drop	1.5V
Leakage current	5mA	Base isolation voltage	1500V rms

Mftrs. List No. PSR-25 =121-3091 TPSR-25 =121-3092

211121

		Price Each			
List Number	Order Code	1+	10+	25+	50+
PSR-25	121-3091	31.74	24.86	19.96	16.03
TPSR-25	121-3092	21.61	17.00	16.58	16.18
Thermistor for TPSR-25					
UQT 1090B	133-8095	9.50	7.32	6.11	– –

17A, With RFI Suppression



H=58, W=65, D=41 (excl. spindle)
Shaft dia.=6.3, bush L=5

united automation limited

- Integrated RFI filter to EMC(Class A) regulations
- Choice of **switched** (QLC) or **variable** (QVR) output control
- QLChas 3 pre-set voltage levels, and 'off' position
- QVR output range is from 0-98%, with 'off' position
- Single 10mm dia. hole fixing
- Compact, rugged design
- **CE approved**
- Optional self-adhesive label and knob sets available
- Applications include quartz lamps, resistance heating, transformers and motors

Triac current limit	25A rms	Isolation voltage	2500V rms
Surge current	320A	It max. for fusing	112As
Max. fwd voltage drop	1.5V	Max. unit temperature	65°C
Max. load @ 20°C	10A		

211307

	Mftrs. List No.	Order Code	Price Each 1+	10+	25+
Controllers					
Switched output	QLC/RFI-17A	**121-3093**	42.06	39.83	35.85
Variable output	QVR/S-RFI 17	**121-3094**	51.04	49.99	45.68
Label/knob Set					
Switched output	QLC-KL	**121-3121**	3.53	2.91	2.37
Variable output	QVR-KL	**121-3119**	3.45	2.85	2.32

25A Phase Angle Power Controller, PAC-2

united automation limited

- Solid -state reliability
- Simple wiring
- Up to 25A
- Low thermal impedance
- High electrical isolation
- Rugged and compact
- High current capability
- Internal snubber
- Resistive and inductive loads

H = 26, W = 43, D = 56 Fixing centres = 48

The PAC2 module is a high power, full wave AC phase angle controller in a compact package capable of regulating up to 6KW (25A) 230Vac. The PAC2 regulator governs the amount of power supplied to the load, by controlling the phase angle of the AC supply. The low thermal impedance and high electrical isolation provides the equipment designer with a greater flexibility in a wide variety of applications.

Applications:

Suitable for most power control applications such as infrared, quartz lamps and ceramic heaters. It can also be used on inductive loads such as transformers and AC motors.

AC Line voltage	230V @ 50/60Hz	AC aux. input supply	10V ac @ 50mA
Max. load current	25A rms.	Max. peak voltage	600V ac.
Peak one cycle surge current	250A	Leakage current	5mA
Min. op. current	0.05A	Control signal	0-5V / 5V Aux. o/p
Isolation voltage	3500V	Power consumption	1.2W
Power terminals	M5 x 10mm	Weight	0.63kg
Potentiometer	5kΩ 1W	Max. operating temperature	65°C
Unit storage temperature	-20 to 85°C		

241491

Mftrs. List No.	Order Code	Price Each 1+	10+	25+
PAC2	**121-3112**	41.08	31.52	27.24

16A, Burst Firing, Dual Voltage

united automation limited

- Low RFI emission, zero voltage cross-over
- Dual voltage input
- Improved heat dissipation
- Low power consumption
- Variable mark/space output 0-100%
- Suitable for resistive loads <3.6kW @ 240V ac
- **CE approved**

H = 55, W = 55, D = 35 (excl. spindle)

Nominal power rating	3.6kW (240V ac) 1.6kW (110V ac)	Input voltage range	100V to 240V rms
		Peak repetative voltage	600V max
On-state current	16A rms max	Power consumption	0.5W
Peak surge current	200A	Operating temperature	-20°C to +70°C

227280

Mftrs. List No.	Order Code	Price Each 1+	10+	50+
ZVS16DV	**121-3096**	37.62	31.52	27.10

Power Controller

2.5KW

united automation limited

This triac control assembly provides full seamless control of resistive loads up to 2.5Kw. The units are solid state switches which uses zero volts switching technology, to minimise RFI problem. They incorporate dc voltage signal control, temperature trip with automatic reset. No additional heatsink is required for this power rating. The unit is Din-Rail mountable, which simplifies installation and maintenance.

Features:

- 2.5KW compact (module only).
- Integral heat sink for maximum power capability.
- 0-10vdc control input.
- Solid State Control.
- Simple DIN Rail or panel mounting.
- LED power level indication.
- Over temperature protection with auto shutdown and reset.

507004

Mftrs. List No.	Order Code	Price Each 1+	3+
PR1-DIN-2.5KW	**155-2411**	37.43	35.78

Over half a million products available online QGO

Special Application Power Controllers

DMPR3 36kW/54kW Dual Mode Power Regulators

united automation limited

New

H=124mm, W=340mm, D=232mm

- Phase angle/burst fire control or combination of both
- Power rating 36kW at (50A) @ 415V rms
- Power rating 54kW at (75A) @ 415V rms
- Input volatge 400V rms ±10%
- Frequency tracking 30Hz to 80Hz
- Integral high speed fuses
- Control signal or manual potentiometer
- Soft start 0-30 seconds
- Over temperature protection
- Operating temperature +65°C maxmium
- Weight 5.2kg

The DMPR3 (36kW/54kW) series are three phase power controllers. The user can choose from three different control modes and the unit is ready to use without any additional heatsink. These units feature voltage/current control input, frequency tracking, over temperature protection and have in line fast acting semiconductor fuses.
Suitable for the control of resistive applications such as furnaces, ovens, dryers, air curtains, hot plates and inductive applications such as transformers.

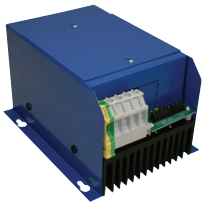
530475

Mftrs. List No.	Order Code	Price Each 1+	10+	25+
DMPR3-E-3/4/5-36KW	**169-3851**	504.00	365.40	352.80
DMPR3-E-3/4/5-54KW	**169-3853**	556.00	403.10	389.20

DMPR1 12kW-30kW Dual Mode Power Regulators

united automation limited

New



H=120mm , W=155mm, D=205mm

The DMPR1 series are single phase (12kW/18kW) and two phase (20kW/30kW) power controllers. The user can choose from three different control modes and the unit is ready to use without any additional heatsink. These units features voltage control input, alarm for over temperature fault, over temperature protection and have a fast acting semiconductor fuse. Suitable for the control of resistive applications such as furnaces, ovens, dryers, air curtains, hot plates and inductive applications such as transformers.

- Phase angle/burst fire control or combination of both
- Frequency tracking 4Hz to 400Hz
- Integral high speed fuses
- Adjustable ramp control 1 to 30 seconds
- Power 12kW (52A): 18kW (78A) @ a typical supply of 240V rms
- Power 20kW (48A): 30kW (72A) @ a typical supply of 400V rms
- Input 230V rms ±10%
- Input 415V rms ±10% phase to phase
- Control input -0 to 5Vdc up to a maximum 24Vdc
  -manual 5K potentiometer 0-20mA/4-20mA

530476

Mftrs. List No.	Order Code	Price Each 1+	10+	25+
DMPR1-E-230-1-12KW	**169-3847**	298.00	216.00	208.60
DMPR1-E-230-1-18KW	**169-3848**	326.00	236.35	228.20
DMPR1-E-400-1-20KW	**169-3849**	298.00	216.00	208.60
DMPR1-E-400-1-30KW	**169-3850**	326.00	236.35	228.20

8V-24V, 40A DC Motor Controller

united automation limited

- Multiple applications
- 2 optional frequency ranges
- Over current protection
- Variable voltage, 8-24V
- Solid state reliability
- Compact and easy to use

Overall H = 26, W = 43, D = 56
Fixing centres = 48

The DCM-24 is a multi-functional, 8-24V DC motor control that can handle loads of up to 40A. Its additional features of optional frequency range and thermistor input allow it to be used for many applications.

Applications:

Motor control (high frequency), lighting/heating control and temperature control

Line Voltage	8V to 24V	Low frequency range	180Hz
Max Current	40A	Thermistor (typical 10K3A1)	5 - 130°C
Control input voltage range	0V to 5Vdc	Operating temperature	0 - 65°C
Control input current @ 5V	1mA	Unit storage temperature	-20 to 85°C
High frequency range	350Hz		

241480

Mftrs. List No.	Order Code	Price Each 1+	10+	25+
DCM-24-40	**121-3113**	38.47	29.35	27.53

Special Application Power Controllers - continued

Infresco Controller

3.5KW

united automation limited

INFRESCO IR 3.5KW

Features:

- Soft Start - up to 30% extended life of Lamp
- Variable Control - Ability to find comfort level
- Simple Installation - Ability to plug directly in 13A Plug with up to 3kW load
- Energy Saving - Automated system. (Only heat when required)
- Temperature Monitoring - If ambient temperature is above preset the Infresco unit remains switched off

The Infresco has been designed specifically to work with Infra Red Heaters, with a rating of 3.5kW it will allow you to control a variety of heating and lighting solution. The Infresco has a 1 to 10 step setting allowing you to find the optimum comfort setting in you specific area. With energy saving a major factor in the design brief, once the Infresco is switched on it will automatically manage the heating system. With a built in temperature sensor only allowing the unit to switch on when required and a PIR that will detects a requirement for the heater to switch on only when needed. An optional remote control allows for the unit to be fitted out of the way so safety is paramount.

507035

Mftrs. List No.	Order Code	Price Each 1+	+
INFRESCO IR 3.5KW	**155-2418**	210.07	– –
INFRESCO REMOTE HANDSET	**155-2419**	28.51	– –
INFRESCO LOCAL SENSOR	**155-2420**	4.65	– –
INFRESCO OUTDOOR SENSOR	**155-2421**	14.62	– –
INFRESCO PIR	**155-2422**	47.51	– –

Infresco Controllers

4KW

united automation limited

The Infresco Controllers are a range of products that have been designed to work with Quartz Infrared Halogen Lamps.

Infresco T

The Infresco-T 4kW switches the lamps on for a pre-determined time period of between 1 and 30 minutes.

Infresco P

The infresco-P 4kW has a built in PIR sensor allowing the lamps to automatically switch on only when people are present. In addition to the PIR, a temperature sensor monitors the outside temperature and inhibits the lamps when the temperature exceeds a pre-determined set point of between 1 and 40 degrees Celsius.

Infresco S

The Infresco-S when operated from a conventional light switch soft starts on switch on and soft stops at switch off each time the lamps are required. The Soft Start feature will add up to 30% addition life to the lamp joined with the benefit of having control. With the addition of a sensor you can monitor the temperature also ensuring the lamps only switch on when theenvironment is cold enough.

507007

Mftrs. List No.	Order Code	Price Each 1+	2+
INFRESCO T 4KW	**155-2412**	73.08	69.85
INFRESCO P 4KW	**155-2413**	80.38	76.84
INFRESCO S 4KW	**155-2414**	48.58	47.33

Infresco Controllers

6KW

united automation limited

The Infresco Controllers are a range of products that have been designed to work with Quartz Infrared Halogen Lamps.

Infresco T

The Infresco-T 6kW switches the lamps on for a pre-determined time period of between 1 and 30 minutes. The microcontroller-based unit incorporates zero-voltage switching and a soft-startfunction to eliminate the lamps' initial high inrush current - potentially increasing lamp life by as much as 30% and reducing the stress on the mains supply.
Typical use is for Infra RedHeating lamps, Garden lighting.

Infresco P

The Infresco-P 6kW has a built in PIR sensor allowing the lamps to automatically switch on only when people are present. In addition to the PIR, a temperature sensor monitors the outside temperature and inhibits the lamps when the temperature exceeds a predetermined set point of between 5 and 25 degrees Celsius. The lamps are switched on for a pre-determined time period of between 5 and 30 minutes. This period is reset each time the PIR detects any further movement.
Typical applications are Pub Patio areas, Smoking Shelters, Restaurants, Warehouses, Work shops. Garden Lighting

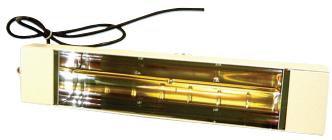
Mains Voltage	230Vac +/- 10% 50 Hz
Operation Current Max	25A
Power Consumption	50mA
Factory Set Temperature trip point	20°C
Max load at 20°C ambient	6.0 kW
IP Rating	65

507009

Mftrs. List No.	Order Code	Price Each 1+	2+
INFRESCO T 6KW	**155-2415**	114.01	105.24
INFRESCO P 6KW	**155-2416**	125.62	115.63

Infresco Heater

united automation limited



Electric heater with scratch-proof body and long life bulb. Increase tube life up to 30% with switch or PR operated soft start controllers (available separately).

IP Rating	65	Supply Frequency	50/60Hz
Supply Voltage	220/240 vAC	Power Rating	1500 Watts

507034

Mftrs. List No.	Order Code	Price Each 1+	2+
INFRESCO 1.5KW HEATER	**155-2423**	137.09	131.43

Power Regulator Accessories

Soft-Start Control Module

united automation limited

H = 26, W = 43, D = 56

- Mains operated
- Adjustable ramp-up 1s-40s.
- 10%–50% pedestal, allows variable set point for voltage ramp-up
- Suitable for loads up to 25A
- In-built snubber network
- High in-rush capability
- Solid state reliability
- 5kV isolation voltage
- Triac limiting current 26A rms
- Unit current rating 15A

211336

Mftrs. List No.	Order Code	Price Each 1+	10+	25+	50+
SSC-25	**121-3104**	37.96	31.73	28.84	26.23

RFI Suppression Modules

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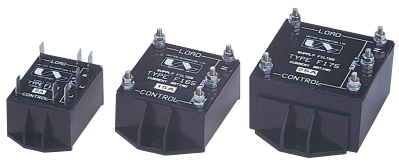

1213114 / 1213115 H=43, W=44, D=72 | 1213116 H=45, W=62, D=92 | 1213117 H=55, W=75, D=105

Choke-capacitor filter modules for use with United Automation phase-angle power controllers.

211199

Current Rating	Mftrs. List No.	Order Code	Price Each 1+	5+	10+	25+
6A	F155-6A	**121-3114**	21.24	17.40	14.74	12.48
10A	F155-10A	**121-3115**	21.77	17.84	15.11	12.80
15A	F165-15A	**121-3116**	27.88	22.84	19.25	16.31
25A	F175-25A	**121-3117**	32.23	26.42	22.39	18.98