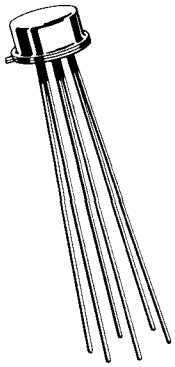
TYPE	MATERIAL	POLARITY	REPLACEMENT	PAGE NUMBER	USE	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS							
						P_D @ 25°C	Ref Point	T_J °C	V_{CB} (volts)	V_{CE-} (volts)	Subscript	h_{FE} @ I_C (min)	(max)	Units	$V_{CE(SAT)}$ @ I_C (volts)	Units	h_{f-}	Subscript	f_- Units	Subscript
2N3374	S	N			HPA	5.0W	C	200	80	80	O	10		0.17A	0.3	0.15A			230M	T
2N3375	S	N		9-74	HPA	11.6W	C	200	65	40	O	10	100	0.25A	1.0	0.25A			400M	T
2N3376 thru 2N3387	Field Effect Transistors, see Table on Page 1-166																			
2N3388	S	N			MSS	0.6W	A	175	125	100	O	60		2.5M	1.0	2.5M			36M	T
2N3389	S	N			MSS	0.6W	A	175	195	160	O	60		7.0M	1.0	7.0M			36M	T
2N3390	S	N	MPS6521	5-109	AFC	0.2W	A	125	25	25	O	400	800	2.0M			400	E		
2N3391	S	N	MPS6515	5-109	AFC	0.2W	A	125	25	25	O	250	500	2.0M			250	E		
2N3391A	S	N	MPS6520	5-109	AFC	0.2W	A	125	25	25	O	250	500	2.0M			250	E		
2N3392	S	N	MPS3392	5-86	AFC	0.2W	A	125	25	25	O	150	300	2.0M			150	E		
2N3393	S	N	MPS3393	5-86	AFC	0.2W	A	125	25	25	O	90	180	2.0M			90	E		
2N3394	S	N	MPS3394	5-86	AFC	0.2W	A	125	25	25	O	55	110	2.0M			55	E		
2N3395	S	N	MPS3395	5-86	AFC	0.2W	A	125	25	25	O	150	500	2.0M			150	E		
2N3396	S	N	MPS3396	5-86	AFC	0.2W	A	125	25	25	O	90	500	2.0M			90	E		
2N3397	S	N	MPS3397	5-86	AFC	0.2W	A	125	25	25	O	55	500	2.0M			55	E		
2N3398	S	N	MPS3398	5-86	AFC	0.2W	A	125	25	25	O	55	800	2.0M			55	E		
2N3399	G	P			RFC	80M	A	100	20			10		1.5M					400M	T
2N3400	G	P			HSS	0.15W	A	100	20	20	O	50	300	10M	0.15	10M			150M	T
2N3401	S	P			CHP	0.25W	A	150	25	25	O				0.25	5.0M	4.0	E	0.1M	B
2N3402	S	N	MPS6513	5-109	AFC	0.56W	A	150	25	25	O	75	225	2.0M	0.3	50M	75	E		
2N3403	S	N	MPS6515	5-109	AFC	0.56W	A	150	25	25	O	180	540	2.0M	0.3	50M	180	E		
2N3404	S	N			AFC	0.56W	A	150	50	50	O	75	225	2.0M	0.3	50M	75	E		
2N3405	S	N			AFC	0.56W	A	150	50	50	O	180	540	2.0M	0.3	50M	100	E		
2N3406	Unijunction Transistor, see Table on Page 1-174																			
2N3407	S	N			RFA	0.2W	A	200	35	18	O	10	100	10M			10	E	300M	T
2N3408	S	P			RFA	4.0W	A	200	40	25	O	10	100	40M			10	E	200M	T
2N3409	S	N		11-33	DFA	0.5W	A	200	60	30	O	30	120	0.1M	0.15	10M			250M	T
2N3410	S	N		11-33	DFA	0.5W	A	200	60	30	O	20	100	10*	0.15	10M			250M	T
2N3411	S	N		11-33	DFA	0.5W	A	200	60	30	O	20	100	10*	0.15	10M			250M	T
2N3412	G	P			AFA	60M	A	100	20	20	S	30	200	10M	0.2	10M	25	E	100M	T
2N3413	S	P			AFA	0.4W	A	200	150	150	O	10	45	50M	1.2	0.1A			0.25M	T
2N3414	S	N	MPS6513	5-109	AFC	0.36W	A	160	25	25	O	75	225	2.0M	0.3	50M	75	E		
2N3415	S	N	MPS6515	5-109	AFC	0.36W	A	160	25	25	O	180	540	2.0M	0.3	50M	180	E		
2N3416	S	N	MPS6515	5-109	AFC	0.36W	A	160	50	50	O	75	225	2.0M	0.3	50M	75	E		
2N3417	S	N	MPS6515	5-109	AFC	0.36W	A	160	50	50	O	180	540	2.0M	0.3	50M	100	E		
2N3418	S	N			PMS	0.8W	A	175	85	60	O	20	60	1.0A	0.25	1.0A			40M	T
2N3419	S	N			PMS	0.8W	A	175	125	80	O	20	60	1.0A	0.25	1.0A			40M	T
2N3420	S	N			PMS	0.8W	A	175	85	60	O	40	120	1.0A	0.25	1.0A			40M	T
2N3421	S	N			PMS	0.8W	A	175	125	80	O	40	120	1.0A	0.25	1.0A			40M	T
2N3422	Thyristor, see Table on Page 1-154																			
2N3423	S	N		11-35	DFA	0.3W	A	200	30	15	O	20	200	3.0M	0.4	10M			600M	T
2N3424	S	N		11-35	DFA	0.3W	A	200	30	15	O	20	200	3.0M	0.4	10M			600M	T
2N3425	S	N		11-35	HPA	0.3W	A	200	40	15	O	30	120	10M	0.4	10M	20	E	300M	T
2N3426	S	N			HSS	0.6W	A	200	25	12	O	30	120	0.3A	0.33	0.3A			450M	T
2N3427	G	P		6-41	AFA	0.2W	A	100	45	30	R	100	350	0.1A	0.2	0.1A	200	E	4.0M	T
2N3428	G	P		6-41	AFA	0.2W	A	100	45	30	R	150	400	0.1A	0.19	0.1A	350	E	5.0M	T
2N3429	S	N	2N3713	7-125	PMS	150W	C	175	50	50	O	10	35	5.0A	1.0	5.0A			20K	E
2N3430	S	N	2N3714	7-125	PMS	150W	C	175	100	100	O	10	35	5.0A	1.0	5.0A			20K	E
2N3431	S	N			PMS	150W	C	175	150	150	O	10	35	5.0A	1.0	5.0A			20K	E
2N3432	S	N			PMS	150W	C	175	200	200	O	10	35	5.0A	1.0	5.0A			20K	E
2N3433	S	N			PMS	150W	C	175	250	250	O	10	35	5.0A	1.0	5.0A			20K	E
2N3434	S	N			PMS	150W	C	175	300	300	O	10	35	5.0A	1.0	5.0A				
2N3435	S	N			HPA	1.0W	A	200	80	60	O	50	200	10M					140M	T
2N3436 thru 2N3438	Field Effect Transistors, see Table on Page 1-166																			
2N3439	S	N	MJ3201	7-200	VID	1.0W	A	200	450	350	O	40	160	20M			25	E	15M	T
2N3440	S	N	MJ3202	7-200	VID	1.0W	A	200	300	250	O	40	160	20M			25	E	15M	T
2N3441	S	N	2N3738	7-133	LPA	25W	C	200	160	140	O	20	80	0.5A	6.0	2.7A	15	E	0.2M	T
2N3442	S	N			LPA	100W	C	200	160	140	O	20	70	3.0A	5.0	10A	12	E	80K	T
2N3443	G	P			RFA	0.3W	A	100	20	15	O	20	150	10M			20	E	750M	T
2N3444	S	N		8-214	HSS	1.0W	A	200	80	50	O	20	60	0.5A	0.35	0.15A			150M	T
2N3445	S	N		7-111	LPA	115W	C	200	80	60	O	20	60	3.0A	1.5	3.0A	20	E	10M	T
2N3446	S	N		7-111	LPA	115W	C	200	100	80	O	20	60	3.0A	1.5	3.0A	20	E	10M	T
2N3447	S	N		7-111	LPA	115W	C	200	80	60	O	40	120	5.0A	1.5	5.0A	40	E	10M	T
2N3448	S	N		7-111	LPA	115W	C	200	100	80	O	40	120	5.0A	1.5	5.0A	40	E	10M	T
2N3449	G	P			HSS	150M	A	100	15	6.0	O	20		10M	0.2	2.0M			300M	T
2N3450	S	N			HSS	0.6W	A	200	120	60	O	40	120	0.15A	0.5	0.15A			100M	T
2N3451	S	P			HSS	0.3W	A	200	6.0	6.0	O	30	120	10M	0.16	10M			500M	T
2N3452 thru 2N3460	Field Effect Transistors, see Table on Page 1-166																			
2N3461	G	P			LPA	5.0W	C	110	60	30	O	90	150	0.5A	0.4	1.0A	40	E	10K	E
2N3462	S	N			LNA	0.3W	A	200	50	35	O	100	300	10*	0.35	5.0M	150	E	10M	T
2N3463	S	N			LNA	0.3W	A	200	60	45	O	120	360	10*	0.35	1.0M	150	E	45M	T
2N3464	S	N			HPA	5.0W	C	200	60	40	O	35	100	0.2A	1.0	0.2A	30	E	50M	T
2N3465 2N3466	Field Effect Transistors, see Table on Page 1-166																			
2N3467	S	P		8-225	HSS	1.0W	A	200	40	40	O	40	120	0.5A	0.3	0.15A			175M	T
2N3468	S	P		8-225	HSS	1.0W	A	200	50	50	O	25	75	0.5A	0.35	0.15A			150M	T
2N3469	S	N			HPA	1.25W	A	200	35	25	O	100	350	0.5A	0.5	1.0A	100	E	20M	T
2N3470	S	N			LPA	150W	C	150	50	50	O	100	500	9.0A	3.5	9.0A	50	E	7.0K	E
2N3471	S	N			LPA	150W	C	150	100	100	O	100	500	9.0A	3.5	9.0A	50	E	7.0K	E
2N3472	S	N			LPA	150W	C	150	150	150	O	100	500	9.0A	3.5	9.0A	50	E	7.0K	E
2N3473	S	N			LPA	150W	C	150	200	200	O	100	500	9.0A	3.5	9.0A	50	E	7.0K	E
2N3474	S	N			LPA	150W	C	150	50	50	O	700	10K	4.0A	3.5	9.0A	100	E	4.0K	E
2N3475	S	N			LPA	150W	C	150	100	100	O	700	10K	4.0A	3.5	9.0A	100	E	4.0K	E

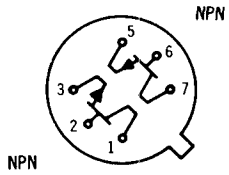
2N3423 (SILICON)
2N3424

V_{CEO} = 15 V
I_C = 50 mA
P_D = 300 mW one side
450 mW both sides



CASE 32A

Dual NPN silicon transistors designed for use as sense and high-frequency differential amplifiers.



Pin Connections Bottom View
All Leads Electrically Isolated from Case

MAXIMUM RATINGS (each side) (T_A = 25°C unless otherwise noted)

Rating	Symbol	Value		Unit
Collector-Emitter Voltage	V_{CEO}	15		Vdc
Collector-Base Voltage	V_{CB}	30		Vdc
Emitter-Base Voltage	V_{EB}	3.0		Vdc
Collector Current	I_C	50		mAdc
Operating & Storage Junction Temperature Range	T_J, T_{stg}	-65 to +200		°C
		One Side	Both Sides	
Total Device Dissipation @ T_A = 25°C	P_D	0.3	0.45	Watt
Derate above 25°C		1.72	2.57	mW/°C
Total Device Dissipation @ T_C = 100°C	P_D	0.344	0.685	Watt
T_C = 25°C		0.6	1.2	Watt
Derate above 25°C		3.44	6.85	mW/°C

2N3423, 2N3424 (continued)

ELECTRICAL CHARACTERISTICS (each side) (T_A = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Sustaining Voltage* (I_C = 3.0 mAdc, I_B = 0)	$BV_{CEO(sus)}$*	15	-	Vdc
Collector-Base Breakdown Voltage (I_C = 1.0 μAdc, I_E = 0)	BV_{CBO}	30	-	Vdc
Emitter-Base Breakdown Voltage (I_E = 10 μAdc, I_C = 0)	BV_{EBO}	3.0	-	Vdc
Collector Cutoff Current (V_{CB} = 15 Vdc, I_E = 0)	I_{CBO}	-	0.01	μAdc
(V_{CB} = 15 Vdc, I_E = 0, T_A = 150°C)		-	1.0	
Emitter Cutoff Current (V_{EB} = 3.0 Vdc, I_C = 0)	I_{EBO}	-	10	μAdc
ON CHARACTERISTICS				
DC Current Gain (I_C = 3.0 mAdc, V_{CE} = 1.0 Vdc)	h_{FE}	20	-	-
(I_C = 3.0 mAdc, V_{CE} = 3.0 Vdc)		20	200	
Collector-Emitter Saturation Voltage (I_C = 10 mAdc, I_B = 1.0 mAdc)	$V_{CE(sat)}$	-	0.4	Vdc
Base-Emitter Saturation Voltage (I_C = 10 mAdc, I_B = 1.0 mAdc)	$V_{BE(sat)}$	-	1.0	Vdc
DYNAMIC CHARACTERISTICS				
Current-Gain — Bandwidth Product (I_C = 4.0 mAdc, V_{CE} = 10 Vdc, f = 100 MHz)	f_T	600	1200	MHz
Output Capacitance (V_{CB} = 0, I_E = 0, f = 140 kHz)	C_{ob}	-	3.0	pF
(V_{CB} = 10 Vdc, I_E = 0, f = 140 kHz)		-	1.7	
Input Capacitance (V_{BE} = 0.5 Vdc, I_C = 0, f = 140 kHz)	C_{ib}	-	2.0	pF
Real Part of Input Impedance (I_C = 3.0 mAdc, V_{CE} = 3.0 Vdc, f = 350 MHz)	$Re(h_{ie})$	-	45	Ohm
MATCHING CHARACTERISTICS				
DC Current Gain Ratio** (I_C = 3.0 mAdc, V_{CE} = 3.0 Vdc) 2N3423	h_{FE1}/h_{FE2}**	0.8	1.0	--
2N3424		0.9	1.0	
Base Voltage Differential (I_C = 3.0 mAdc, V_{CE} = 3.0 Vdc) 2N3423	$\lvert V_{BE1}-V_{BE2}\rvert$	-	10	mVdc
2N3424		-	5.0	
Base Voltage Differential Gradient (I_C = 3.0 mAdc, V_{CE} = 3.0 Vdc, T_{A1} = 25°C, T_{A2} = -55°C)	$\Delta(V_{BE1}-V_{BE2})$			mVdc
2N3423		-	3.2	
2N3424		-	1.6	
(I_C = 3.0 mAdc, V_{CE} = 3.0 Vdc, T_{A1} = 25°C, T_{A2} = 125°C)				
2N3423		-	4.0	
2N3424		-	2.0	

* Pulse Width = 300 μs; Duty Cycle = 1%

** Lowest of the two h_{FE} readings is taken as h_{FE1} for purposes of this ratio.