

SILICON TRANSISTORS

Planar Medium Power and Switching (p-n-p)

Type No.	Maximum Ratings				Characteristics										Package	Outline Drawing	Comments
	V _{CB0}	V _{CEO(sus)}	V _{EBO}	P _{tot} at 25°C amb. mW	V _{CE(sat)}			h _{FE}				I _{CBO} max. μA	f _T min. MHz				
					max. volts	I _C mA	I _B mA	min.	max.	I _C mA	V _{CE} volts						
BFS96	-60	-30	-5	500	0.35	-150	-15	40	300	-150†	-10	0.1	150	E-Line‡	T21	High gain, low cut-off current, high power Compl'mty to BFS59-61	
BFS97	-60	-40	-5	500	0.25	-150	-15	100	300	-150†	-10	0.1	150	E-Line‡	T21		
BFS98	-80	-60	-5	500	0.35	-150	-15	40	160	-150†	-10	0.1	150	E-Line‡	T21		
ZTX510 BSV33	-12	-12	-4	300	0.2	-30	-3	40	150	-30	-6	0.2	400	E-Line‡	T21	High speed switch t _{on} =60ns, t _{off} =60ns I _C =30mA, I _{B1} =I _{B2} =1.5mA	
ZT180	-25	-25	-4	300	0.2	-10	-1	38	162	-10	-6	0.5	150	TO-18	T2B	For general purpose amplifier and switching applications; Complementary to ZT80 series	
ZT181	-45	-35	-4	300	0.2	-10	-1	38	162	-10	-6	0.5	150	TO-18	T2B		
ZT182	-45	-35	-4	300	0.2	-10	-1	75	250	-10	-6	0.5	150	TO-18	T2B		
ZT183	-45	-45	-4	300	0.2	-10	-1	38	85	-10	-6	0.05	150	TO-18	T2B		
ZT184	-45	-45	-4	300	0.2	-10	-1	75	170	-10	-6	0.05	150	TO-18	T2B		
ZT187	-25	-25	-4	300	0.2	-10	-1	75	250	-10	-6	0.5	150	TO-18	T2B		
ZT189	-70	-70	-4	300	0.2	-50	—	75	250	-10	-6	0.5	150	TO-18	T2B		
ZT210	-60	-40	-7	1000	1.4	-150	-15	20	100	-150	-10	0.25	60	TO-5	T7A	Power: Complementary to ZT90 series	
ZT211	-90	-65	-7	1000	0.65	-150	-15	40	120	-150	-10	0.20	60	TO-5	T7A		
ZT280 To ZT287	SO—12C (TO-46) versions of ZT180 to ZT187												TO-46	T1B			
2N727	-25	-20	-5	300	0.6	-10	-1	30	120	-10	-1	1.0	140	TO-18	T2A	General Purpose amplifier and switching	
2N1131	-50	-35	-5	600	1.3†	-150	-15	20	45	-150†	-10	1.0	50	TO-5	T7C	High speed switch	
2N1132	-50	-35	-5	600	1.3†	-150	-15	30	90	-150†	-10	1.0	60	TO-5	T7C		
2N2894	-12	-12	-4	300	0.2	-30	-3	40	150	-30	-5	0.08	400	TO-18	T2A	High speed switch t _{on} =60ns, t _{off} =90ns, I _C =30mA, I _{B1} =I _{B2} =1.5mA	
2N2904	-60	-40*	-5	600	-0.4	-150	-15	40	120	-150	-10	0.02	200	TO-5	T7A	High speed, medium power switching General purpose applications	
2N2904A	-60	-60*	-5	600	-0.4	-150	-15	40	120	-150	-10	0.01	200	TO-5	T7A		
2N2905	-60	-40*	-5	600	-0.4	-150	-15	100	300	-150	-10	0.02	200	TO-5	T7A		
2N2905A	-60	-60*	-5	600	-0.4	-150	-15	100	300	-150	-10	0.01	200	TO-5	T7A		
2N2906	-60	-40*	-5	400	-0.4	-150	-15	40	120	-150	-10	0.02	200	TO-18	T2A		
2N2906A	-60	-40*	-5	400	-0.4	-150	-15	40	120	-150	-10	0.01	200	TO-18	T2A		
2N2907	-60	-40*	-5	400	-0.4	-150	-15	100	300	-150	-10	0.02	200	TO-18	T2A		
2N2907A	-60	-40*	-5	400	-0.4	-150	-15	100	300	-150	-10	0.01	200	TO-18	T2A		
2N4036	-90	-65	-7	1000	1.4	-150	-15	40	140	-150†	-10	—	60	TO-5	T7A		
2N4037	-60	-40	-7	1000	1.4	-150	-15	50	250	-150†	-10	—	60	TO-5	T7A		

† Pulsed: Pulsed duration ≤300μsec. Duty Cycle 2% *V_{CEO}

‡ Lead Configuration:—The leads of E-Line devices can be preformed, on request, to the TO-5 configuration and when this is done suffix K is added to the type number. Similarly, suffix L indicates that the leads have been preformed to the TO-18 configuration. For flat mounting, suffix M is added to the type number.

Planar High Power V.H.F. and U.H.F. (n-p-n)

Type No.	Maximum Ratings					Characteristics										Jedec Outline	Outline Drawing	Comments
	V _{CB0}	V _{CEO}	I _C	Dissipation Watts		V _{CE(sat)}		R.F. Power Output						Max. c _{ob} at 1MHz pF				
				at Case 25°C	Temp. of 100°C	Max. volts	at I _C amps	Watts min.	f MHz	Pin watts	watts	f MHz	P _{in} watts					
2N3229	105	60	2.5	17.5	10	1	0.5	15	50	2	5	150	1	20†	TO-60§	T12	For AM, FM or CW operation	
2N3375	65	40	1.5	11.6	6.6	1	0.5	7.5	50	1	3	400	1	10	TO-60§	T12		
2N3553	65	40	1.0	7	3	1	0.05	—	—	—	2.5	175	0.25	10	TO-5	T7C		
2N3632	65	40	3.0	23	9.9	1	0.1	13.5	175	3.5	10	260	3.0	20	TO-60§	T12		
2N3733	65	40	3.0	23	9.9	1	0.1	4.5**	260	4	10	400	4	20	TO-60§	T12		
2N3866	55	30	0.4	5	2.8	1	0.02	1.8**	100	0.05	1.0	400	0.1	3	TO-5	T7C		
2N4012	65	40	1.5	11.6	6.6	1	0.5	2.5	100§	1	3	300‡	1	10	TO-60§	T12	Frequency Multiplier	
2N4040	60	40	1.0	17.5	10	2	1	8	400	3	—	—	—	15	—	T23		
2N4041	60	40	0.5	10	5.7	2	0.5	3.3	400	1	—	—	—	8	—	T23		
2N4127	60	40	1.5	20	11.4	1	1	12	150	1.9	—	—	—	25‡	—	T23		
2N4128	60	40	3.0	35	20.0	1	2	20	150	5.0	—	—	—	50‡	—	T23		
2N4427	40	20	0.4	3.5	2.0	0.5	0.1	1.0	175	100	0.4*	470	126	4	TO-5	T7C	For AM, FM or CW operation	
2N4428	55	35	0.425	3.5	2.0	5	0.4	0.75	500	0.075	—	—	—	3.5	TO-5	T7C		
2N4429	55	35	0.425	5	2.85	5	0.4	1	1000	0.300	—	—	—	3.5	—	T23		
2N4430	55	40	1.0	10	5.7	5	1	2.5	1000	0.750	—	—	—	5	—	T24		
2N4431	55	40	2.0	18	10.3	5	2	5	1000	1.57	—	—	—	10	—	T24		

* Typical † at 100 MHz ‡ at 140 kHz § Pulsed: Pulse duration 300 ≤μs, duty cycle ≤2%

CAUTION

This device incorporates BERYLLIUM OXIDE, the dust of which is toxic. The device is completely safe provided it is not dismantled or otherwise tampered with. It is essential that ALL PERSONNEL who handle the device are made fully aware of these facts and of the necessary safety precautions.

DISPOSAL SERVICE

Faulty devices must not be discarded with domestic or industrial refuse but should be returned to, The Chief Inspector, Ferranti Ltd., Gem Mill, Chadderton, Oldham, Lancs. Telephone: 061-624 6661, Ext. 324. Devices to be returned should be securely packed and clearly identified. In the event of devices being broken or otherwise damaged you should contact Ferranti Ltd. as above. They MUST NOT be sent through the post in a damaged condition.