

# 5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION  
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1   MAX. COLL. DISS. @ 25°C (W)	2   DERATE IN FREE AIR W/°C (Hz)	T M A X P	ABS MAX RATINGS @ 25°C				MAX. I <sub>cb</sub> @ V <sub>cb</sub> V <sub>cb</sub> (A)	TYPICAL 'h' PARAMETERS			COMMON EMITTER			Cob (F)	STRUC-TURE	DWG Y200 s/a TO200 Ser	# L E O D E	
					BV <sub>ceo</sub> (V)	BV <sub>ceo</sub> (V)	BV <sub>ceo</sub> (V)	I <sub>c</sub> (A)		V <sub>cb</sub> (V)	I <sub>e</sub> (A)	h <sub>fe</sub>	hoe (mhos)	hie (Ω)	hre					
					h <sub>FE</sub>	h <sub>FE</sub>	h <sub>FE</sub>	h <sub>FE</sub>		h <sub>FE</sub>	h <sub>FE</sub>	h <sub>FE</sub>	h <sub>FE</sub>	h <sub>FE</sub>	h <sub>FE</sub>					h <sub>FE</sub>
1#	2SC1261	300m	2.4m	SJ	20	13	3.0	30m	100n	10	7.0m	100	1				PE	W83	V	
2#	2SC1375H†	300m	2.0m	SJ	25	10	4	100m	50n	0.4	50m	54	†				PE	TO18	V	
3#	2SC1483	300m	2.4m	SJ	20	10	3.0	40m	100n	6.0	10m	100	†				PE	W83	V	
4#	2SC1709	300m	2.4m	SJ	20	20	5.0	300m	15n	1.0	10m	60					PE	R225	A	
5#	2SC1960	300m	2.4m	SJ	20	15	4.0	200m	400n	1.0	10m	60			2.0p		PE	R225	A	
6#	2SC2070†	300m	2.0m	SJ	40	32	5.0	300m	200n	1.0	30m	70	†				PE	TO18	A	
7#	2SD661	300m	2.7m	TJ	35	35	7.0	200m	100n	1.0	2.0m	260	†					B37	D	
8#	2SD1010	300m	3.0m	†J	50	40	15	50m	100n	10	2.0m	2.0k	†				PE	TO92	B	
9#	2SD1011	300m	3.0m	†J	100	100	15	20m	100n	10	2.0m	2.0k	†				PE	TO92	B	
10	BC136	300m	3.0	†J	60	40	5.0	600m	50n	10	10m	30	†			25p		TO105	A	
11#	BF120	300m	2.0m	SJ		220	5.0	50m	200n	10	10m	20	†				PE	TO18	A	
12#	KTS395A	300m		SJ		45	†	100m	0.5	5.0	1.0m	120	†			8.0p		TO18	A	
13#	KTS395B	300m		SJ		45	†	100m	0.5	5.0	1.0m	120	†			8.0p		TO18	A	
14	ST1607	300m			40	20	2.0	2.0	2.0	5.0	10m	120	†			4.0p	PL	TO18	∅	
15	ST1633	300m			70	70	2.0	50m	5.0	10	5.0m	80				1.0p	PL	TO18	∅	
16#	TIS60	300m	3.0m	S	40	25	5.0	400m	100n	2.0	50m	160	†				PE†	TO92	B	
17	TPE5036	300m			35	30	3.0	50m	50u	5.0	5.0m	225	†			300fs	†	TO92	A	
18#	uPA15A*	300m	2.4m	SJ	25	12	5.0	50m	100n	1.0	1.0m	100	†				†	R131h	PD	
19#	ZTX341	300m	3.0m	SA	100	100	5.0	100m	500n	1.0	2.0m	30	†			10p	PL†	B58	A	
20#	ZTX342	300m	3.0m	SA	120	120	5.0	100m	500n	1.0	2.0m	30	†			10p	PL†	B58	A	
21#	BSY79	300m	100ms					30m		1.0	1.0m	30	†			4.0p		TO18	A	
22#	2SC2603	300m	200ms	3.0m	†J	50	50	6.0	200m	100m	6.0	1.0m	90	†		5.5n	E†	X186	B	
23#	2N3462	300m	10m	2.0m	S	50	35	5.0	30m	10u	5.0	150	†			6.0p	∅	TO18	∅	
24	2N4879*	300m	15m	1.7m	S	55	55	7.0	10m	1n	5.0	175	†			8p	∅*	TO71	PA	
25	2N4880*	300m	15m	1.7m	S	45	45	7.0	10m	1n	5.0	100	†			8p	∅*	TO71	PA	
26	2N1390	300m	20m	2.0m	S	20	20	2.0	50m	800n	6.0	1.0m	10	†		10p	∅	TO5	A	
27	2N2432	300m	20m	2.0m	S	30	30	15	100m	0.1u	5.0	1.0m	50	†		12p	∅	TO18	A	
28	2N2432A	300m	20m	2.0m	S	45	45	18	100m	0.1u	5.0	1.0m	50	†		12p	∅	TO18	A	
29	2N4138	300m	20m	2.0m	S	30	30	15	100m	0.1u	5.0	1.0m	50	†		12p	∅	TO46	A	
30	2N4878*	300m	20m	1.7m	S	60	60	7.0	10m	1n	5.0	225	†			8p	∅*	TO71	PA	
31#	BFV89	300m	20m	2.0m	S	30	30	15	100m	0.1u	5.0	1.0m	50	†		12p	∅	W5a	B	
32#	BFV89A	300m	20m	2.0m	S	45	45	18	100m	0.1u	5.0	1.0m	50	†		12p	∅	W5a	B	
33	2N1389	300m	25m	2.0m	SA	50	∅	1.5	50m	500n	6.0	1.0m	4.0	†		6.0p		TO5	A	
34	2N754	300m	30m	3.0m	S	60	60	3.0	50m	1.0u	10	20	†			10p		TO18	A	
35	2N755	300m	30m	3.0m	S	100	80	3.0	50m	1.0u	10	20	†			10p		TO18	A	
36	2N839	300m	30m	3.0m	SJ	45	45	2.0	50m	1.0u	5.0	1.0m	20	†		1.2u	b	80	∅	
37	2N840	300m	30m	3.0m	SJ	45	45	2.0	50m	1.0u	5.0	1.0m	40	†		1.2u	b	80	∅	
38	2N842	300m	30m	3.0m	SJ	45	45	2.0	50m	1.0u	5.0	1.0m	20	†		350nb	40	6.0p	ME	∅
39	2N929	300m	30m	3.0m	SJ	45	45	5.0	30m	10u	5.0	1.0m	60	†		1.0u	b	32	∅	
40	2N930	300m	30m	3.0m	SJ	45	45	5.0	30m	10u	5.0	1.0m	150	†		1.0u	b	32	∅	
41	2N2387	300m	30m	3.0m	SJ	45	45	5.0	30m	10u	5.0	1.0m	60	†		1.0u	b	32	∅	
42	2N2388	300m	30m	3.0m	SJ	45	45	5.0	30m	10u	5.0	1.0m	150	†		1.0u	b	32	∅	
43#	2S501	300m	30m	3.0m	SJ	25	25	5.0	30m	10n	5.0	10u	40	†		8.0p	∅	TO18	∅	
44#	2S502	300m	30m	3.0m	SJ	25	25	5.0	30m	10n	5.0	10u	100	†		8.0p	∅	TO18	∅	
45#	2S503†	300m	30m	3.0m	SJ	25	25	5.0	30m	10n	5.0	10u	180	†		8.0p	∅	TO18	∅	
46#	2SC1636	300m	30m	3.0m	†J	50	25	25	200n	3.0	1.0m	500	†			4.0p	E	X153	B	
47#	2SC1981	300m	30m	3.0m	†J	50	30	100m	20n	3.0	1.0m	2.0k	†			7.0p	∅	TO18	A	
48	3N74	300m	30m	3.0m	S	50	18	20m	0.1u	∅	∅	∅	∅			8p	∅	TO72	GC	
49	JAN3N74	300m	30m	3.0m	SJ	50	20	20m	10n	∅	∅	∅	∅			6.0p	∅	TO72	GC	
50	3N75	300m	30m	3.0m	S	50	18	20m	0.1u	∅	∅	∅	∅			8p	∅	TO72	GC	
51	JAN3N75	300m	30m	3.0m	SJ	50	20	20m	10n	∅	∅	∅	∅			8.0p	∅	TO72	GC	
52	3N76	300m	30m	3.0m	S	50	18	20m	0.1u	∅	∅	∅	∅			8p	∅	TO72	GC	
53	JAN3N76	300m	30m	3.0m	SJ	50	20	20m	10n	∅	∅	∅	∅			8.0p	∅	TO72	GC	
54	3N77	300m	30m	3.0m	S	40	12	20m	0.1u	∅	∅	∅	∅			8p	∅	TO72	GC	
55	3N78	300m	30m	3.0m	S	40	12	20m	0.1u	∅	∅	∅	∅			8p	∅	TO72	GC	
56	3N79	300m	30m	3.0m	S	40	12	20m	0.2u	∅	∅	∅	∅			10p	∅	TO72	GC	
57#	BFV85D	300m	30m	3.0m	SJ	45	45	5.0	30m	10n	5.0	10u	60	†		1.0u	b	32	∅	
58#	BFV85E	300m	30m	3.0m	SJ	45	45	5.0	30m	10n	5.0	10u	150	†		1.0u	b	32	∅	
59#	BFX92	300m	30m	3.0m	S	45	†	30m	∅	5.0	10u	40	†			5.0p	∅	TO18	A	
60#	BFX93	300m	30m	3.0m	S	45	†	30m	∅	5.0	10u	100	†			5.0p	∅	TO18	A	
61	ST1700	300m	30m	3.0m	SJ	60	30	5.0	20n	5.0	10m	80	†			1.0u	b	32	∅	
62#	ZTX330	300m	30m	3.0m	S	30	30	5.0	500m	∅	5.0	100u	100	†			8.0p	∅	B58	A
63#	ZTX330K	300m	30m	3.0m	S	30	30	5.0	500m	∅	5.0	100u	100	†			8.0p	∅	B58	A
64#	ZTX330L	300m	30m	3.0m	S	30	30	5.0	500m	∅	5.0	100u	100	†			8.0p	∅	B58	A
65#	ZTX330M	300m	30m	3.0m	S	30	30	5.0	500m	∅	5.0	100u	100	†			8.0p	∅	B58	A
66#	ZTX331	300m	30m	3.0m	S	45	45	5.0	500m	∅	5.0	100u	100	†			8.0p	∅	B58	A
67#	ZTX331K	300m	30m	3.0m	S	45	45	5.0	500m	∅	5.0	100u	100	†			8.0p	∅	B58	A
68#	ZTX331L	300m	30m	3.0m	S	45	45	5.0	500m	∅	5.0	100u	100	†			8.0p	∅	B58	A
69#	ZTX331M	300m	30m	3.0m	S	45	45	5.0	500m	∅	5.0	100u	100	†			8.0p	∅	B58	A
70	2N2639*	300m	31m	2.0m	S	45	45	5.0	30m	10n	5.0	1.0m	65	†		1.0u	b	32	∅	
71	2N2640*	300m	31m	2.0m	S	45	45	5.0	30m	10n	5.0	1.0m	65	†		1.0u	b	32	∅	
72	2N2641*	300m	31m	2.0m	S	45	45	5.0	30m	10n	5.0	1.0m	65	†		1.0u	b	32	∅	
73	2N2642*	300m	31m	2.0m	S	45	45	5.0	30m	10n	5.0	1.0m	130	†		1.0u	b	32	∅	
74	2N2643*	300m	31m	2.0m	S	45	45	5.0	30m	10n	5.0	1.0m	130	†		1.0u	b	32	∅	
75	2N2644*	300m	31m	2.0m	S	45	45	5.0	30m	10n	5.0	1.0m	130	†		1.0u	b	32	∅	
76	JAN2N2639*	300m	32m	2.0m	S	45	45	5.0	30m	10n	5.0	1.0m	65	†		1.0u	b	32	∅	
77	JAN2N2642*	300m	32m	2.0m	S	45	45	5.0	30m	10n	5.0	1.0m	130	†		1.0u	b	32	∅	
78	2N841	300m	40m																	