

5. SILICON NPN - LOW POWER TRANSISTORS

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

LINE No.	3 TYPE No.	1 MAX COLL. DISS. @ 25°C (W)	2 DERATE IN fab (Hz)	T ABS MAX RATINGS @ 25°C				MAX. I _{cb} @ MAX V _{cb} (A)	TYPICAL 'h' PARAMETERS						Cob (F)	STRUC-TURE	DWG #200 s/a TO200 Ser.	# L O A D E				
				M A M X P	V _{be} (V)	V _{ce} (V)	V _{be} (V)		I _c (A)	BIAS			COMMON EMITTER									
										V _{cb} (V)	I _e (A)	h _{fe}	hoe (mhos)	hie (Ω)					hre (X.0001)			
1#	BC190	300m	200M	2.0m	\$J	70	64	5.0	200m	15n	5.0	2.0m	312				PE	R216f	A			
2#	BC190A	300m	200M	2.0m	\$J	70	64	5.0	100m	15n	5.0	2.0m	125 Δ				PE	R1018	A			
3#	BC190B	300m	200M	2.0m	\$J	70	64	5.0	100m	15n	5.0	2.0m	240 Δ				PE	R2018	A			
4#	BCY85	300m	200M	2.5m	\$S	100	60	7.0	200m	5.0n	5.0	2.0m	100 Δ				PE	R203c	A			
5#	BCY86	300m	200M	2.5m	\$S	80	50	7.0	200m	5.0n	5.0	2.0m	250 Δ				PE	R203c	A			
6#	BF255(1)	300m	200M	1.3m	\$J	30	20	5.0	30m		10	1.0m	67 †				PE	R207	A			
7#	BF255(2)	300m	200M	3.0m	\$J	30	20	5.0	30m		10	1.0m	67 †				PE	R207	A			
8#	BF495	300m	200M	4.0m	\$J	30	20	5.0	30m		10	1.0m	67 †				PE	R189	C			
9#	BFY37	300m	200M	2.0m	\$J	25	20	5.0	100m	10u	10	10m	35 † Δ				PL	TO18	C			
10#	BSX24	300m	200M	2.0m	\$J	32	32	5.0	100m	.05u	5.0	50m	35 † Δ				PE	TO18	A			
11#	BSX33At	300m*	200M	2.2m	\$J	35	30	5.0	100m	100u	1.0	10m	100 † Δ				PE	TO18	A			
12#	BSX33Bt	300m*	200M	2.2m	\$J	35	30	5.0	100m	100u	1.0	10m	250 † Δ				PE	TO18	A			
13#	BSX89t	300m	200M	2.0m	\$J	25	15	5.0	50m	.50u	1.0	10m	20 † # Δ				DPE	TO18	A			
14#	BSY26t	300m	200M	2.0m	\$J	20	15	6.0	100m	25n	2.0	10m	20 † Δ				PE	TO18	A			
15#	BSY27t	300m	200M	2.0m	\$J	20	15	6.0	100m	25n	2.0	10m	40 † Δ				PE	TO18	A			
16#	BSY95A	300m	200M	2.0m	\$J	20	15	5.0	100m	50n	.35	10m	50 † Δ				PE	TO18	A			
17#	HSE456-RT	300m	200M	3.0m	\$J	30	30	4.0	1.0u	5.0	5.0	20m	100 † Δ				PE	TO98	B			
18#	SA2644*	300m	200M	2.0m	\$J	50	25	5.0	5.0n	5.0	100u	100 † Δ					E*	TO78	A			
19#	SA2648*	300m	200M	2.0m	\$J	50	25	5.0	5.0n	5.0	100u	100 † Δ					E*	TO78	A			
20#	uPA38A*	300m	200M	2.0m	\$J	60	40	5.0	50m	100n	5.0	1.0m	550 †				E*	TO78	QS			
21#	uPA39A*	300m	200M	2.0m	\$J	60	40	5.0	50m	100n	5.0	1.0m	500 †				E*	TO78	QS			
22#	UPI706A	300m	200M	2.0m	\$J	25	20	5.0	100m	10u	1.0	10m	20				ME	TO18	A			
23#	ZT80t	300m	200M	2.4m	\$J	25	25	4.0	500m	.50u	6.0	1.0m	55			5.3u	2.4k	1.5	4.5p	TO18	A	
24#	ZT81t	300m	200M	2.4m	\$J	45	35	4.0	500m	.50u	6.0	1.0m	55			5.3u	2.4k	1.5	4.5p	TO18	A	
25#	ZT82t	300m	200M	2.4m	\$J	45	35	4.0	500m	.50u	6.0	1.0m	90			5.9u	3.2k	1.8	4.5p	TO18	A	
26#	ZT83t	300m	200M	1.8m	\$J	60	45	5.0	500m	.05u	6.0	1.0m	55			5.3u	2.4k	1.5	4.5p	TO18	A	
27#	ZT84t	300m	200M	1.8m	\$J	60	45	5.0	500m	.05u	6.0	1.0m	90			5.9u	3.2k	1.8	4.5p	TO18	A	
28#	ZT86t	300m	200M	1.8m	\$J	100	80	5.0	500m	.05u	6.0	1.0m	55			5.3u	2.4k	1.5	4.5p	TO18	A	
29#	ZT87t	300m	200M	2.4m	\$J	25	25	4.0	500m	.50u	6.0	1.0m	90			5.9u	3.2k	1.8	4.5p	TO18	A	
30#	ZT88t	300m	200M	1.8m	\$J	100	80	5.0	500m	.05u	6.0	1.0m	90			5.9u	3.2k	1.8	4.5p	TO18	A	
31#	ZT89t	300m	200M	1.7m	\$J	70	70	5.0	500m	50n	6.0	1.0m	90			5.9u	3.2k	1.8	4.5p	TO18	A	
32#	ZTX310t	300m	200M	3.0m	\$S	25	12	3.0	500m	200n	1.0	10m	20 † Δ				PL	B58	A			
33#	ZTX310Kt	300m	200M	3.0m	\$S	25	12	3.0	500m	200n	1.0	10m	20 † Δ				PL	B58	A			
34#	ZTX310Lt	300m	200M	3.0m	\$S	25	12	3.0	500m	200n	1.0	10m	20 † Δ				PL	B58	A			
35#	ZTX310Mt	300m	200M	3.0m	\$S	25	12	3.0	500m	200n	1.0	10m	20 † Δ				PL	B58	A			
36#	ZTX311t	300m	200M	3.0m	\$S	20	15	3.0	500m	200n	.35	1.0m	50 † Δ				PL	B58	A			
37#	ZTX311Kt	300m	200M	3.0m	\$S	20	15	3.0	500m	200n	.35	1.0m	50 † Δ				PL	B58	A			
38#	ZTX311Lt	300m	200M	3.0m	\$S	20	15	3.0	500m	200n	.35	1.0m	50 † Δ				PL	B58	A			
39#	ZTX311Mt	300m	200M	3.0m	\$S	20	15	3.0	500m	200n	.35	1.0m	50 † Δ				PL	B58	A			
40#	BSY80	300m	210M	2.0m	\$J	25	18	5.0	100m	1.0u	1.0	1.0m	200 † Δ			15u	12k	1.5	6.0p	TO18	A	
41#	2SC1776t	300m	220M	2.4m	\$J	60	40	6.0	250m	500n	1.0	10m	150 †				PE	R212	A			
42#	BFY18t	300m	245M	2.0m	\$J	40	25	3.0	100m	10u	9.0	10m	64				PE	TO5	A			
43#	2N2256t	300m	250M	2.0m	\$J	7.0	7.0	1.0	100m	10u	1.0	10m	30 †				ME	TO18	A			
44#	2N2257t	300m	250M	2.0m	\$J	7.0	7.0	1.0	100m	10u	1.0	10m	50 †				ME	R110	A			
45#	2N4140t	300m	250M	3.0m	\$J	60	30	5.0	200m	50u#	10	150m	120 † Δ				PE	R110	A			
46#	2N4141t	300m	250M	3.0m	\$J	60	30	5.0	200m	50u#	10	150m	300 † Δ				PE	R110	A			
47#	2N4227t	300m	250M	3.0m	\$J	60	30	5.0	200m	50u#	10	150m	150 † Δ				PE	R110	A			
48#	2S512	300m	250M	2.0m	\$J	25	12	5.0	50m	.50u	1.0	10m	50 † Δ				PE	TO18	A			
49#	2SC979A	300m	250M	3.0m	\$J	100	70	5.0	100m	100n	1.0	10m	140 †				E	TO18	A			
50#	2SC1007t	300m	250M	3.0m	\$J	60	40	8.0	200m	100n	1.0	10m	150 †				E	TO18	B			
51#	2SC2785	300m	250M	3.0m	\$J	60	50	5.0	100m	100n	6.0	1.0m	200 † *				E	X189	B			
52#	2SC2787	300m	250M	3.0m	\$J	50	30	5.0	100m	100n	6.0	1.0m	90 † *				E	X189	B			
53#	BC167A	300m	250M	2.4m	\$J	50	45	5.0	100m	15n	5.0	2.0m	180 †			18u	2.7k	1.5	4.5p	TO92	B	
54#	BC167B	300m	250M	2.4m	\$J	50	45	5.0	100m	15n	5.0	2.0m	290 †			30u	4.5k	2.0	4.5p	TO92	B	
55#	BC168A	300m	250M	2.4m	\$J	30	20	5.0	100m	15n	5.0	2.0m	180 †			18u	2.7k	1.5	4.5p	TO92	B	
56#	BC168B	300m	250M	2.4m	\$J	30	20	5.0	100m	15n	5.0	2.0m	290 †			30u	4.5k	2.0	4.5p	TO92	B	
57#	BC168C	300m	250M	2.4m	\$J	30	20	5.0	100m	15n	5.0	2.0m	520 †			60u	8.7k	3.0	4.5p	TO92	B	
58#	BC171A	300m	250M	3.0m	\$J	45	45	5.0	100m	15n	5.0	2.0m	125 Δ			18u	2.7k	1.5	4.0p	R204	A	
59#	BC171B	300m	250M	3.0m	\$J	45	45	5.0	100m	15n	5.0	2.0m	240 Δ			30u	4.5k	2.0	4.0p	R204	A	
60#	BC172A	300m	250M	3.0m	\$J	20	20	5.0	100m	15n	5.0	2.0m	125 Δ			18u	2.7k	1.5	4.0p	R204	A	
61#	BC172B	300m	250M	3.0m	\$J	20	20	5.0	100m	15n	5.0	2.0m	240 Δ			30u	4.5k	2.0	4.0p	R204	A	
62#	BC172C	300m	250M	3.0m	\$J	20	20	5.0	100m	15n	5.0	2.0m	450 Δ			60u	8.7k	3.0	4.0p	R204	A	
63#	BC174A	300m	250M	3.0m	\$J	64	64	5.0	100m	15u	5.0	10u	90 †			18u	2.7k	1.5	4.5p	TO92	A	
64#	BC174B	300m	250M	3.0m	\$J	64	64	5.0	100m	15u	5.0	10u	150 †			30u	4.5k	2.0	4.5p	TO92	A	
65#	BC237*	300m	250M	2.2m	\$J	50	45	5.0	100m	15n	5.0	2.0m	330 *			30u	4.5k	2.0	4.5p	PE	R204a	C
66#	BC237PA	300m	250M	2.3m	\$J	45	45	6.0	100m	15n	5.0	2.0m	170 †			18u	2.7k	1.5	4.5p	PLT	B58	A
67#	BC237PAK	300m	250M	2.3m	\$J	45	45	6.0	100m	15n	5.0	2.0m	170 †			18u	2.7k	1.5	4.5p	PLT	B58	A
68#	BC237PAL	300m	250M	2.3m	\$J	45	45	6.0	100m	15n	5.0	2.0m	170 †			18u	2.7k	1.5	4.5p	PLT	B58	A
69#	BC237PAM	300m	250M	2.3m	\$J	45	45	6.0	100m	15n	5.0	2.0m	170 †			18u	2.7k	1.5	4.5p	PLT	B58	A
70#	BC237PB	300m	250M	2.3m	\$J	45	45	6.0	100m	15n	5.0	2.0m	290 †			30u	4.5k	2.0	4.5p	PLT	B58	A
71#	BC237PBK	300m	250M	2.3m	\$J	45	45	6.0	100m	15n	5.0	2.0m	290 †			30u	4.5k	2.0	4.5p	PLT	B58	A
72#	BC237PBL	300m	250M	2.3m	\$J	45	45	6.0	100m	15n	5.0	2.0m	290 †			30u	4.5k	2.0	4.5p	PLT	B58	A
73#	BC237PBM	300m	250M	2.3m	\$J	45	45	6.0	100m	15n	5.0	2.0m	290 †</									