

Silicon NPN Transistors

Type	Con- struction	P <sub>c</sub> Max. (mW)	Typical f <sub>T</sub> or *f <sub>T1</sub> † fab (MHz)	Absolute Max. Ratings				Typical h <sub>FE</sub> at (mA) (or *h <sub>FE</sub> )	Max I <sub>CBO</sub> at V <sub>CB</sub>		Application	Base Ref.
				V <sub>CB0</sub> (V)	V <sub>CE0</sub> (V)	V <sub>EB0</sub> (V)	I <sub>C</sub> (mA)		μA	V		
<b>MULLARD (Continued)</b>												
<i>Current Types (Continued)</i>												
BU126	D	30W	8	750	300	—	6A	15‡ at 1A	—	—	Colour TV switching	1
BU133	D	30W	8	750	250	—	6A	15‡ at 1A	—	—		1
BDY93	D	30W	12	750	350	—	6A	15‡ at 1A	—	—	Switching and control	1
BDY94	D	30W	12	750	300	—	6A	15‡ at 1A	—	—		1
BDY95	D	30W	12	600	250	—	6A	15‡ at 1A	—	—	General purpose	51
BD433	E	36W	3	22	22	—	7A	50‡ at 2A	—	—		51
BD435	E	36W	3	32	32	—	7A	50‡ at 2A	—	—	Switching and control	1
BD437	E	36W	3	45	45	—	7A	40‡ at 2A	—	—		1
BDY96	D	40W	10	750	350	—	15A	15‡ at 2A	—	—	General purpose	1
BDY97	D	40W	10	750	300	—	15A	15‡ at 2A	—	—		1
BDY98	D	40W	10	600	250	—	15A	15‡ at 2A	—	—	Switching and control	1
BDY90	D	40W	70	120	100	—	15A	30‡ at 5A	—	—		1
BDY91	D	40W	70	100	80	—	15A	30‡ at 5A	—	—	General purpose	1
BDY92	D	40W	70	80	60	—	15A	30‡ at 5A	—	—		1
BLW64	PE	40W	900	60	30	—	12A	25‡ at 1A	—	—	R.F.	61
BUY86	PE	50W	100	200	100	—	10A	50‡ at 1A	—	—	Switching	1
BUY87	PE	50W	100	300	150	—	7A	30‡ at 2A	—	—		1
BLX69	PE	50W	1,000	36	18	—	10A	30 at 1A	—	—	R.F.	61
BLX94	PE	50W	1,000	65	33	—	6A	15‡ at 1A	—	—		61
BDX77	E	55W	3	80	80	—	12A	30‡ at 2A	—	—	General purpose	52
BD201	E	60W	3	60	45	—	12A	30‡ at 3A	—	—		52
BD203	E	60W	3	60	60	—	12A	30‡ at 2A	—	—	R.F.	61
BLX13	PE	70W	500	65	36	—	9A	10‡ at 1A	—	—		61
BLY93A	PE	70W	500	65	36	—	10A	10‡ at 1A	—	—	General purpose	61
BLY89A	PE	70W	650	36	18	—	10A	10‡ at 1A	—	—		61
BD181	D	78W	—	55	45	—	15A	20‡ at 3A	—	—	R.F.	61
BLX95	PE	87.5W	1,000	65	33	—	12A	15‡ at 1.4A	—	—		62
BLX14	PE	88W	250	85	36	—	12A	15‡ at 1.4A	—	—	General purpose	1
2N4347	D	100W	1	140	120	—	10A	20‡ at 4A	—	—		61
BLW60	PE	103W	550	36	18	—	20A	50 at 1A	—	—	R.F.	1
2N3055	D	115W	0.8	100	—	7	15A	45 at 4A	—	—		1
BDY20	D	115W	1	100	60	7	15A	45 at 4A	5mA	100	A.F. amplifiers	1
BDY38	D	115W	1	50	40	7	6A	30 at 2A	1mA	50		1
BD182	D	117W	—	70	60	—	15A	20‡ at 4A	—	—	General purpose	1
BD183	D	117W	—	85	80	—	15A	20‡ at 3A	—	—		1
BD184	D	117W	—	95	90	—	15A	20‡ at 4A	—	—	R.F.	62
2N3442	D	117W	1	160	140	—	15A	20‡ at 3A	—	—		62
BLY94	PE	130W	500	65	36	—	12A	10‡ at 1A	—	—	R.F.	62
BLY90	PE	130W	550	36	18	—	20A	10‡ at 1A	—	—		62
BLX15	PE	195W	275	110	55	—	20A	10‡ at 1.4A	—	—	62	

‡ Minimum value

**NEWMARKET**

*Current Types*

NKT10419	—	300	100	25	25	5	10	200 at 0.1	0.01	10	A.F. amplifiers	2
NKT10519	—	300	100	25	25	5	10	400 at 0.1	0.01	10		2
BSY95A	—	300	200	20	15	5	200	125 at 10	0.05	10	R.F. switching	2
BC107	—	300	250	50	45	5	100	310 at 2	—	—	A.F. amplifiers	2
BC108	—	300	250	30	20	5	100	310 at 2	—	—		2
BC109	—	300	250	30	20	5	100	570 at 2	—	—	A.F. pre-amplifiers	2
2N2368	—	360	—	40	15	4.5	500	40 at 10	0.4	20		2
2N2369	—	360	—	40	15	4.5	500	80 at 10	0.4	20	R.F. switching	2
2N2369A	—	360	—	40	15	4.5	500	80 at 10	0.4	20		2
2N2483	—	360	—	60	60	6	50	265 at 1	—	—	A.F. pre-amplifiers	2
2N2484	—	360	—	60	60	6	50	525 at 1	0.01	45		2
NKT13329	—	360	300	30	20	4	500	200 at 10	0.01	10	R.F. switching	2
NKT13429	—	360	300	30	15	5	500	200 at 10	0.01	10		2
BSX19	—	360	400	40	15	4.5	500	40 at 10	0.4	20	R.F. switching	2
BSX20	—	360	500	40	15	4.5	500	80 at 10	0.4	20		2

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				V <sub>CB0</sub> (V)	V <sub>CEO</sub> (V)	V <sub>EB0</sub> (V)	I <sub>C</sub> (mA)		μA	V		
BFY72	—	—	—	—	28	—	500	90 at 500	—	—	General purpose switching	2
BSS15 2N5320	}	—	—	—	75	—	2A	80 at 500	—	—		
BSS16 2N5321											}	
BSS26	—	—	—	—	40	—	1A	45 at 500	—	—		Fast switching
BSV59	—	—	—	—	30	—	500	50 at 500	—	—		
BSV77	—	—	—	—	40	—	1A	50 at 500	—	—		
BSV89	—	—	—	—	10	—	100	45 at 100	—	—		
BSV90	—	—	—	—	13.5	—	100	55 at 100	—	—		
BSV91	—	—	—	—	15	—	100	45 at 100	—	—		
BSV92	—	—	—	—	15	—	100	60 at 100	—	—		
BSV95	—	—	—	—	50	—	800	50 at 500	—	—		
BSX12	—	—	—	—	12	—	1A	60 at 300	—	—		Fast switching
BSX26	—	—	—	—	15	—	300	55 at 100	—	—		
BSX27	—	—	—	—	6	—	30	80 at 10	—	—		
BSX28	—	—	—	—	12	—	100	50 at 100	—	—		
BSX30	—	—	—	—	30	—	300	63 at 150	—	—		
BSX32	—	—	—	—	40	—	500	60 at 1A	—	—		
BSX33	—	—	—	—	55	—	500	80 at 150	—	—		General purpose switching
BSX39	—	—	—	—	20	—	300	40 at 300	—	—		
BSX87	—	—	—	—	15	—	500	55 at 10	—	—		Fast switching
BSX87A	—	—	—	—	15	—	500	65 at 30	—	—		
BSX88	—	—	—	—	15	—	100	45 at 10	—	—		General purpose switching
BSX88A	—	—	—	—	20	—	100	55 at 100	—	—		
BSX93	—	—	—	—	15	—	200	80 at 10	—	—		Fast switching
2N760A	—	—	—	—	60	—	—	76‡ at 1	—	—		
2N929	—	—	—	—	45	—	—	350‡ at 10	—	—		
2N930	—	—	—	—	45	—	—	600‡ at 10	—	—	Low level amplifiers	
2N2483	—	—	—	—	60	—	—	175‡ at 1	—	—		
2N2484	—	—	—	—	60	—	—	250‡ at 1	—	—		
2N2586	—	—	—	—	45	—	—	600‡ at 1	—	—		
2N3117	—	—	—	—	60	—	—	400‡ at 1	—	—		
BFX69	—	—	80	—	30	—	500	80 at 150	—	—		General purpose amplifiers
BFX69A	—	—	84	—	40	—	500	90 at 150	—	—		
BFR18	—	—	90	—	55	—	500	90 at 150	—	—		
BFS89	—	—	90	—	300	—	100	80 at 50	0.05	300	High voltage R.F. amps./osc.	
BF252	—	—	100	—	30	4	—	30 at 2	—	—		Low level, low noise amps.
BFR16	—	—	100	—	60	—	10	350 at 1	—	—		
BFR17	—	—	100	—	60	—	10	530 at 1	—	—		
BFR19	—	—	100	—	35	—	500	80 at 150	—	—	General purpose amplifiers	
BFX68	—	—	100	—	50	—	500	130 at 150	—	—		
BFY50	—	—	100	—	35	—	1A	55 at 150	—	—		
BFY76	—	—	100	—	60	—	5	190 at 1	—	—		Low noise amplifiers
2N3053	—	—	100	—	50	—	—	150 at 150	—	—	High speed switching	
BFY51	—	—	110	—	30	—	1A	70 at 150	—	—		General purpose amplifiers
BFY52	—	—	120	—	20	—	1A	130 at 150	—	—		
2N3444	—	—	150	—	50	—	—	40 at 500	—	—		High speed switching
BCY58	—	—	200	—	32	—	100	520 at 10	—	—	Low level, low noise amps.	
BCY59	—	—	200	—	45	—	100	520 at 10	—	—		
BFX94	—	—	250	—	30	—	—	75 at 150	0.01	30		
BFX95	—	—	250	—	30	—	—	220 at 150	0.01	30		
BFX96	—	—	250	—	30	—	—	75 at 150	0.01	30		
BFX97	—	—	250	—	30	—	—	220 at 150	0.01	30		H.F. amplifiers
BFY74	—	—	360	—	45	—	—	75 at 10	0.01	45		
BFY75	—	—	360	—	45	—	—	114 at 10	0.01	45		
BFX17	—	—	400	—	40	—	—	50 at 500	—	—		
BFR97 2N3866	}	—	500	—	30	—	—	100 at 50	—	—		

Continued

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				V <sub>CB0</sub> (V)	V <sub>CE0</sub> (V)	V <sub>EB0</sub> (V)	I <sub>C</sub> (mA)		μA	V			
<b>TEXAS (Continued)</b>													
<i>Current Types (Continued)</i>													
2N2865	PE	200	600	25	3	3	50	20‡ at 4	—	—	H.F. amplifiers	2	
TIS84	P	250	—	40	30	4	50	30‡ at 4	0.05	10	Tuner R.F. amplifiers	24	
TIS85	P	250	—	40	30	4	50	25‡ at 4	0.05	10	I.F. amplifiers	24	
2N3707	P	250	—	30	30	6	30	250 at 0.1	0.1	20	Low noise amplifiers	24	
2N3708	P	250	—	30	30	6	30	358 at 1	0.1	20	General purpose	24	
2N3709	P	250	—	30	30	6	30	105 at 1	0.1	20		24	
2N3710	P	250	—	30	30	6	30	210 at 1	0.1	20		24	
2N3711	P	250	—	30	30	6	30	420 at 1	0.1	20		24	
BF595	—	250	200	30	20	—	30	80 at 1	—	—		I.F. amplifiers	24
2N3825	PE	250	200	30	15	4	100	20‡ at 2	0.1	15		A.M. receivers	24
BF594	—	250	260	30	20	—	30	142 at 1	—	—	I.F. amplifiers	24	
TIS60	PE	300	—	40	25	5	400	160 at 50	0.1	20	General purpose	24	
TIS60M	PE	300	—	40	25	5	400	160 at 50	0.1	20		24	
2N4010	P	300	—	60	60	10	50	500‡ at 1	0.01	45		2	
2N2432	PE	300	20	30	30	15	100	50‡ at 1	—	—	Choppers	2	
2N929	P	300	30	45	45	5	30	40‡ at 0.01	—	—	Low level, low noise amps.	2	
2N930	P	300	30	45	45	5	30	100‡ at 0.01	—	—		2	
2S501	P	300	30	25	25	5	30	40‡ at 0.01	—	—		2	
2S502	P	300	30	25	25	5	30	100‡ at 0.01	—	—		2	
2S503	P	300	30	25	25	5	30	180‡ at 0.01	—	—		2	
BC182	PE	300	150	60	50	5	200	290 at 2	0.015	50		2	
BC183	PE	300	150	45	30	5	200	475 at 2	0.015	30		2	
BC184	PE	300	150	45	30	5	200	250‡ at 2	0.015	30		2	
BC107	PE	300	225	45	45	5	100	310 at 2	0.015	45	2		
BC108	PE	300	225	20	20	5	100	310 at 2	0.015	20	2		
BC109	PE	300	225	20	20	5	100	570 at 2	0.015	20	2		
2N3117	P	360	—	60	60	6	50	400‡ at 1	0.01	45	Low level amplifiers	2	
2N2483	P	360	—	60	60	6	50	175‡ at 1	0.01	45	Low level, low noise amps.	2	
2N2484	P	360	—	60	60	6	50	250‡ at 1	0.01	45	2		
2N5399	PE	360	—	25	15	2	100	60 at 15	0.01	15	V.H.F./U.H.F. amplifiers	2	
BF237	PE	360	80	45	30	4	30	30‡ at 1	0.1	20	General purpose	24	
BF238	PE	360	80	45	30	4	30	70‡ at 1	0.1	20		24	
2N3704	PE	360	100	50	30	5	800	200 at 50	0.1	20	Audio amplifiers	24	
2N3705	PE	360	100	50	30	5	800	100 at 50	0.1	20		24	
2N3706	PE	360	100	40	20	5	800	315 at 50	0.1	20		24	
BF596	—	360	400	40	30	—	30	26‡ at 4	—	—	Video I.F. amplifiers	24	
BF597	—	360	550	40	25	—	30	38‡ at 7	—	—		24	
TIS86	PE	400	—	30	30	4	50	120 at 4	0.1	15	Mixer	24	
TIS87	PE	400	—	45	45	4	50	90 at 12	0.1	15	I.F. amplifier	24	
2N717	DDP	400	30	60	40	5	—	40 at 150	1	30	Amps./osc.	2	
2N718	DDP	400	30	60	40	5	—	80 at 150	1	30		2	
2N719	DDP	400	30	120	80	5	—	40 at 150	2	60		2	
2N720	DDP	400	30	120	80	5	—	80 at 150	2	60		2	
2S731	P	400	30	30	30	3	50	20*‡ at 5	—	—	H.F. amplifiers	2	
2S732	P	400	30	30	30	3	50	40*‡ at 5	—	—		2	
2S733	P	400	30	30	30	3	50	80*‡ at 5	—	—		2	
2S102	P	400	150	60	60	4.5	50	20*‡ at 5	—	—		2	
2S103	P	400	150	60	60	4.5	50	40*‡ at 5	—	—		2	
2S104	P	400	150	60	60	4.5	50	80*‡ at 5	—	—		2	
BFW31	PE	500	—	50	30	5	700	270* at 10	0.5	30	General purpose	2	
2N720A	DDP	500	30	120	100	7	—	80 at 150	0.01	90	Amps./osc.	2	
2N731	DDP	500	30	60	40	5	1A	80 at 150	1	30		2	
2N870	DDP	500	30	100	80	7	—	80 at 150	0.01	75		2	
2N871	DDP	500	30	100	80	7	—	200 at 150	0.01	75		2	
2N956	DDP	500	30	75	50	7	—	200 at 150	0.01	60	2		
2N2220	PE	500	250	60	30	5	800	20‡ at 150	—	—	H.F. medium power	2	
2N2221A	PE	500	250	60	30	5	800	40‡ at 150	—	—		2	
2N2222	PE	500	250	60	30	5	800	100‡ at 150	—	—		2	
2N2539	PE	500	250	60	30	5	800	50*‡ at 150	—	—		2	
2N2540	PE	500	250	60	30	5	800	100*‡ at 150	—	—		2	

Continued