

12. SWITCHING TRANSISTORS

IN ORDER OF (1) MAX RISE TIME, (2) fab & (3) TYPE No.

LINE No.	TYPE No.	fab	MAX RISE TIME tr (s)	MAX DELAY TIME td (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX. P _c IN FREE AIR @ 25°C (W)	BIAS			MAX. SAT. RES. (Ω)	Cob (F)	r _{bb} X Cob (s)	STRUCTURE P-NPN N-PNP	M A T	MAX. TEMP (°C)	DWG # Y200 s/a TO200 Ser.	L C O D E
								V _{cb} (V)	I _e (A)	hFE								
1#	BSS87R#	300MΔ	35n	35n	200n	50n	200m	1.0	50m	80 Δ	2.0	4.0p	N	Si	175J	X136a	B	
2#	EN3904	300MΔ	35n	35n	200n	50n	700m	1.0	1.0m	100 Δ #	20	4.0p	N-DPE	Si	175J	TO106	A	
3#	FMMT3904	300MΔ	35n	35n	200n	50n	200m	1.0	1.0m	70 Δ #	20	4.0p	N-PLT	Si	175A	X156a	A	
4#	GES222A	300MΔ	35n	35n	200n	50n	285m	1.0	1.0m	300 Δ #	2.0 #	8.0p	N-PE	Si	150S	TO122	A	
5#	LDS203	300MΔ	35n	35n	200n	50n	380m	1.0	1.0m	80 Δ #	2.0	8.0p	PE	Si	150J	TO18	A	
6#	MM3904	300MΔ	35n	35n	200n	50n	360m	1.0	1.0m	70 Δ #	2.0	5.0p	N-AN	Si	200J	TO52	A	
7#	MPS3725	300MΔ	35n	35n	200n	50n	360m	1.5	1.0m	100m	1.0	10p	N-ANT	Si	150J	TO82	A	
8#	NS3904	300MΔ	35n	35n	200n	50n	360m	1.0	1.0m	100m	1.0	4.0p	N	Si	150J	TO18	A	
9#	NTM3904	300MΔ	35n	35n	200n	50n	200m	1.0	1.0m	100m	1.0	4.0p	N	Si	150J	X156b	A	
10#	PN3251	300MΔ	35n	35n	200n	50n	625m	1.0	1.0m	300 Δ #	1.0	6.0p	P-DPE	Si	150J	TO82	A	
11#	PN3251A	300MΔ	35n	35n	200n	50n	500m	1.0	1.0m	300 Δ #	1.0	6.0p	NDPE	Si	150J	TO82	A	
12#	PN3947	300MΔ	35n	35n	200n	50n	500m	1.0	1.0m	300 Δ #	1.0	4.0p	NDPE	Si	150J	TO92	A	
13#	ZTX3904	300MΔ	35n	35n	200n	50n	500m	1.0	1.0m	100 Δ #	2.0	4.0p	N-PLT	Si	175J	B58	A	
14#	2N1204	320MΔ	35n	35n	200n	50n	200m	1.5	400m	15 Δ #	2.5	7.0p	P-AD	Ge	100S	TO39	A	
15#	2N1494	320MΔ	35n	35n	200n	50n	400m	1.5	400m	15 Δ #	2.5	7.0p	P-AD	Ge	100S	TO31	A	
16#	2N83	350MΔ	35n	25n	125n	75n	300m	1.0	1.0m	25 Δ	2.5	4.0p	N	Si	175J	TO18	A	
17#	2N4349	350MΔ	35n	20n	125n	75n	7.0	1.0	1.0m	25 Δ	500m	4.0p	N-PE	Si	200J	TO5	A	
18#	40220	350MΔ	35n	20n	125n	75n	300m	1.0	1.0m	25 Δ	2.5	4.0p	N	Si	175J	TO52	A	
19#	2N6013	360MΔ	35n	10n	450n	75n	1.0	1.0m	250 Δ	8.0	15p	P	Si	150J	R203a	A		
20#	2N6017	360MΔ	35n	10n	450n	75n	1.0	1.0m	250 Δ	8.0	15p	P	Si	150J	R203a	A		
21#	2SA153	400MΔ	35n	10n	225n	25n	600m	-2	5	50	5.0p	PE	Si	150J	TO92	A		
22#	2SC2720	400MΔ	35n	225n	275n	600m	1.0	150m	150	3.5p	NE	Si	150J	TO93	B			
23#	BSS226	400MΔ	35n	60n	60n	360m	1.0	100u	40	4.8p	N	Si	200J	TO18	A			
24#	BSY77	400MΔ	35n	60n	60n	800m	1.0	100m	60	4.8p	N	Si	200J	TO39	A			
25#	BSV95	400MΔ	35n	60n	60n	800m	1.0	100m	20 Δ	4.8p	N	Si	200J	TO39	A			
26#	BSY58	400MΔ	35n	60n	60n	800m	2.6	100m	42 t	4.5p	N-DPE	Si	200J	TO39	A			
27#	MM3734	400MΔ	35n	60n	60n	800m	2.6	1.5	35	25 #	15p	N-AN	Si	200J	TO39	A		
28#	MM3735	400MΔ	35n	60n	60n	800m	4.0	1.0	35	25 #	15p	N-AN	Si	200J	TO39	A		
29#	BSX59	475MΔ	35n	60n	60n	800m	1.0	150m	70 Δ	2.0	10p	N-PE	Si	200J	TO5	A		
30#	JAN2N3253	500MΔ	35n	15n	40n	30n	5.0	1.0	20	1.2	12p	N-E	Si	200S	TO5	A		
31#	JAN2N3253S	500MΔ	35n	15n	40n	30n	1.0	5.0	1.0	20	1.2	12p	N-E	Si	200S	TO5	A	
32#	JAN2N3444	500MΔ	35n	15n	40n	30n	5.0	1.0	15	1.2	12p	N-E	Si	200S	TO5	A		
33#	JAN2N3444S	500MΔ	35n	15n	40n	30n	1.0	5.0	1.0	15	1.2	12p	N-E	Si	200S	TO5	A	
34#	2N285	600MΔ	35n	25n	75n	360m	1.0	10m	50	2.6p	N-PE	Si	300	TO18	A			
35#	JAN2N3762	600MΔ	35n	8.0n	80n	35n	1.0	10m	35 Δ	1.0 #	15p	P	Si	200J	TO5	A		
36#	JAN2N3763	600MΔ	35n	8.0n	80n	35n	1.0	10m	35 Δ	1.0 #	15p	P	Si	200J	TO5	A		
37#	JAN2N3764	600MΔ	35n	8.0n	80n	35n	500m	1.0	10m	35 Δ	1.0 #	15p	P	Si	200J	TO46	A	
38#	JAN2N3765	600MΔ	35n	8.0n	80n	35n	500m	1.0	10m	35 Δ	1.0 #	15p	P	Si	200J	TO46	A	
39#	JAN2N3250A	900MΔ	35n	35n	175n	50n	1.2	10m	50 Δ	25	6.0p	P	Si	200S	TO18	A		
40#	JAN2N3250A	900MΔ	35n	35n	200n	50n	1.2	10m	100 Δ #	25	6.0p	P	Si	200S	TO18	A		
41#	2N5413	250MΔ	37n	5.0n	50n	35n	5.0	1.0	30	Δ #	16p	N	Si	200S	TO39	A		
42#	2N5413	250MΔ	37n	5.0n	60n	35n	5.0	1.0	50m	30 Δ #	16p	N	Si	200S	TO39	A		
43#	2N3862	600MΔ	37n	39n	25n	25n	360m	1.0	10m	50 Δ #	25	4.0p	N	Si	200A	TO18	A	
44#	2N3972	600MΔ	40n	40n	100n	80n	1.8	1.0	100	1.0	16p	N	Si	200S	TO18	DB		
45#	JAN2N4093	40n	40n	40n	100n	80n	360m	1.0	1.0	100	1.0	16p	N	Si	175A	TO18	DB	
46#	2N4093A	40n	40n	20n	80n	1.8	1.0	1.0	100	1.0	80	1.0	16p	N	Si	200S	TO18	DB
47#	2N5189	40n	40n	20n	70n	1.0	1.0	1.0	100	1.0	80	1.0	16p	N	Si	200S	R179q	A
48#	2SC1072	40n	40n	50n	60n	800m	1.0	500m	35 Δ	1.0	12p	N-PE	Si	175J	R179n	A		
49#	2SC1072A	40n	40n	50n	60n	800m	1.0	500m	35 Δ	1.0	3.0p	N-PE	Si	175J	R179n	A		
50#	2SC1385H	40n	40n	50n	60n	800m	1.2	500m	20 Δ	1.0	12p	N-PE	Si	175J	TO39	A		
51#	3N177	40n	35n	150n	225m	150m	225m	1.0	225m	20 Δ	500	7.0p	NMOS	Si	200S	TO72	DR	
52#	3N183	40n	40n	160n	180n	500m	1.0	500m	20 Δ	75	3.0p	PMOS	Si	200S	TO72	DM		
53#	BFV51	40n	40n	50n	50n	150m	10	500m	20 Δ	3.3	8.0p	NPE	Si	200J	S5a	P		
54#	BFV53	40n	40n	50n	50n	150m	10	500m	20 Δ	3.3	8.0p	NPE	Si	200J	S5a	P		
55#	BFX30	40n	15n	250n	50n	600m	4	-10m	50 Δ	80	16p	P-PE	Si	200J	TO39	A		
56#	J4093	40n	20n	80n	350m	1.8	1.0	1.0	100	1.0	80	1.0	16p	N	Si	150S	TO92	DE
57#	MFE2004	40n	20n	80n	350m	1.8	1.0	1.0	100	1.0	80	1.0	16p	N	Si	175J	TO18	DB
58#	MPS3644K	40n	40n	100n	1.2	100u	170	5.0	100u	170	5.0	100u	PPL	Si	175A	X167	A	
59#	MPS3644L	40n	40n	100n	1.2	100u	170	5.0	100u	170	5.0	100u	PPL	Si	175A	X168	A	
60#	MPS3644M	40n	40n	100n	1.2	100u	170	5.0	100u	170	5.0	100u	PPL	Si	175A	X169	A	
61#	MPS3645K	40n	40n	100n	1.2	100u	170	5.0	100u	170	5.0	100u	PPL	Si	175A	X167	A	
62#	MPS3645L	40n	40n	100n	1.2	100u	170	5.0	100u	170	5.0	100u	PPL	Si	175A	X168	A	
63#	MPS3645M	40n	40n	100n	1.2	100u	170	5.0	100u	170	5.0	100u	PPL	Si	175A	X169	A	
64#	U1899E	40n	20n	80n	350m	1.8	1.0	1.0	100	1.0	80	1.0	16p	N	Si	125J	R97b	DB
65#	BFX84	50MΔ	40n	15n	300n	60n	800m	1.0	150m	30 Δ	1.0	12p	N-PE	Si	200J	TO39	A	
66#	BFX85	50MΔ	40n	15n	300n	60n	800m	1.0	150m	70 Δ	1.0	12p	N-PE	Si	200J	TO39	A	
67#	BFX86	50MΔ	40n	15n	300n	60n	800m	1.0	150m	70 Δ	1.0	12p	N-PE	Si	200J	TO39	A	
68#	BFY51	50.0MΔ	40n	15n	300n	60n	5.0	10	85	1.6	12p	N-PE	Si	200J	TO5	A		
69#	BFY52	50.0MΔ	40n	15n	300n	60n	5.0	10	90	1.6	12p	N-PE	Si	200J	TO5	A		
70#	ZSC849	60.0MΔ	40n	500n	60n	500m	4.0	10m	160	1.0	12p	N	Si	175J	TO18	A		
71#	BFY50	60.0MΔ	40n	15n	300n	60n	5.0	10	80	1.0	12p	N-PE	Si	200J	TO5	A		
72#	2N771	100MΔ	40n	25n	40n	150m	1.0	20m	30 Δ	2.5	3.5p	N	Si	150S	TO18	A		
73#	2N1663	100MΔ	40n	25n	40n	150m	1.0	20m	150	2.5	3.5p	N	Si	150S	TO9	A		
74#	2N3883	100MΔ	40n	15n	70n	40n	300m	1.0	200m	30 Δ	2.5	8.0p	P	Si	100S	TO5	A	
75#	ZSC366G	100MΔ	40n	15n	250n	30n	400m	1.0	100m	240 Δ	5.0	10p	N-E	Si	125J	TO92	B	
76#	BCX26	100MΔ	40n	20n	450n	100n	1.0	5.0	10m	160	2.5	8.0p	PAN	Si	150J	R210a	F	
77#	BCX28	100MΔ	40n	20n	450n	100n	1.0	5.0	10m	160	2.5	8.0p	PAN	Si	150J	TO18	F	
78#	BCX30	100MΔ	40n	20n	450n	100n	1.0	5.0	10m	160	2.5	8.0p	PAN	Si	150J	R210a	F	
79#	BSS42	100MΔ	40n	700n	5.0	5.0	1.0	1.0	45	6.0	10p	N-PE	Si	200J	TO39	A		
80#	BSX36	100MΔ	40n	100n	1.2	10	10m	40	Δ #	1.0	8.0p	PAN	Si	200J	TO18	A		
81#	XGS7001	120MΔ	40n	100n	5.0	2.0	2.0	2.0	20	1.0	40p	N	Si	200J	TO39	A		
82#	XGS7002	120MΔ	40n	100n	5.0	2.0	2.0	15	Δ #	1.0	40p	N	Si	200J	TO39	A		