Medium Power Transistors

TYPE NO.	POLARITY	CASE	MAXIMUM RATINGS			H_{FE}				$V_{CE(SAT)}$		f_T	Cob	COMPLE-MENTARY TYPE
			P_d (mW)	I_C (A)	V_{CEO} (V)	min	max	I_C (mA)	V_{CE} (V)	max (V)	I_C (A)	min (MHz)	max (pF)	
BC 119	N	TO-39	800	1	30	40	120	150	1	0.35	0.15	40	25	BC 139
BC 138	N	TO-39	800	1	30	35	–	100	10	1.5	1	40	25	–
BC 139	P	TO-39	700	0.5	40	40	–	100	10	0.8	0.3	–	6+	BC 119
BC 140	N	TO-39	800	1	40	40	250#	100	1	1	1	50	25	BC 160
BC 141	N	TO-39	800	1	60	40	250#	100	1	1	1	50	25	BC 161
BC 142	N	TO-39	800	1	60	20	–	200	2	0.4	0.2	40	25	BC 143
BC 143	P	TO-39	800	1	60	20	–	300	1	0.6	0.2	60	20	BC 142
BC 144	N	TO-39	800	1	40	20	–	300	1	0.6	0.5	100+	20	–
BC 160	P	TO-39	800	1	40	40	250#	100	1	1	1	50	30	BC 140
BC 161	P	TO-39	800	1	60	40	250#	100	1	1	1	50	30	BC 141
BC 185	N	TO-39	700	0.5	40	40	–	100	10	0.45	0.3	200	8	–
BC 210	N	TO-18	450	0.7	25	20	120	150	1	–	–	100	8	–
BC 211	N	TO-39	800	1	40	40	250#	150	2	1	1	50	25	BC 313
BC 211A	N	TO-39	800	1	60	40	250#	150	2	1	1	50	25	BC 313A
BC 215	P	TO-18	400	0.5	30	40	300#	150	10	0.9+	0.5	150	8	–
BC 223	N	TO-92F	360	0.4	30	100	450#	50	2	0.3	0.1	100	10	–
BC 231	P	TO-92B	625	0.4	30	100	450	50	5	0.25	0.05	100	10	BC 232
BC 232	N	TO-92B	625	0.4	30	100	450	50	5	0.3	0.1	100	10	BC 231
BC 284	N	TO-18	500	0.2	40	100	600	10	10	1	0.1	50	20	–
BC 286	N	TO-39	800	1	60	20	180	500	2	1	1	150+	11+	BC 287
BC 287	P	TO-39	800	1	60	20	200	500	2	1	1	140+	18+	BC 286
BC 294	P	TO-39	600	0.6	60	100	300	150	10	0.4	0.15	100	–	–
BC 297	P	TO-18	375	1	45	75	260#	100	1	0.7	0.5	250+	8+	BC 377
BC 298	P	TO-18	375	1	25	75	260#	100	1	0.7	0.5	250+	8+	BC 378
BC 300	N	TO-39	850	1	80	40	240#	150	10	0.5	0.15	120+	10+	–
BC 301	N	TO-39	850	1	60	40	240#	150	10	0.5	0.15	120+	10+	BC 303
BC 302	N	TO-39	850	1	45	40	240#	150	10	0.5	0.15	120+	10+	BC 304
BC 303	P	TO-39	850	1	60	40	240#	150	10	0.65	0.15	100+	17+	BC 301
BC 304	P	TO-39	850	1	45	40	240#	150	10	0.65	0.15	100+	17+	BC 302
BC 310	N	TO-39	800	1	70	40	–	200	1	0.4	0.2	90+	12+	BC 311
BC 311	P	TO-39	800	1	70	40	–	200	1	0.5	0.2	200+	13+	BC 310
BC 313	P	TO-39	800	1	40	40	250#	150	2	1	1	50	30	BC 211
BC 313A	P	TO-39	800	1	60	40	250#	150	2	1	1	50	30	BC 211A
BC 327	P	TO-92F	625	0.8	45	100	630#	100	1	0.7	0.5	100+	14+	BC 337
BC 328	P	TO-92F	625	0.8	25	100	630#	100	1	0.7	0.5	100+	14+	BC 338
BC 337	N	TO-92F	625	0.8	45	100	630#	100	1	0.7	0.5	100+	10+	BC 327
BC 338	N	TO-92F	625	0.8	25	100	630#	100	1	0.7	0.5	100+	10+	BC 328
BC 340	N	TO-39	800	0.5	40	40	250#	50	5	0.4	0.15	100+	6.5+	BC 360
BC 341	N	TO-39	800	0.5	60	40	160#	50	5	0.4	0.15	100+	6.5+	BC 361
BC 342	N	TO-39	800	1	60	20	–	500	10	0.8	0.3	100+	20	BC 343
BC 343	P	TO-39	800	1	60	20	–	500	10	0.8	0.3	100	20	BC 342
BC 344	N	TO-39	800	1	80	20	–	150	10	0.8	0.15	100	20	BC 345
BC 345	P	TO-39	800	1	80	20	–	150	10	0.8	0.15	100	20	BC 344
BC 360	P	TO-39	800	0.5	40	40	250#	50	5	0.4	0.15	250+	6.5+	BC 340
BC 361	P	TO-39	800	0.5	60	40	160#	50	5	0.4	0.15	250+	6.5+	BC 341
BC 368	N	TO-92B	800	1	20	85	375	500	1	0.5	1	65+	–	BC 369
BC 369	P	TO-92B	800	1	20	85	375	500	1	0.5	1	65+	–	BC 368
BC 377	N	TO-18	375	1	45	75	500	100	1	0.7	0.5	100	12	BC 297
BC 378	N	TO-18	375	1	25	75	500#	100	1	0.7	0.5	100	12	BC 298
BC 381	P	TO-92F	625	0.2	25	60	–	2.5	5	0.25	0.05	100	10	–
BC 387	N	TO-92F	310	0.6	30	40	300	100	1	0.5	0.1	200	10	BC 388
BC 388	P	TO-92F	310	0.6	30	40	300	100	1	0.5	0.1	200	10	BC 387
BC 431	N	TO-92F	625	0.8	60	63	240#	100	1	0.7	0.5	100+	12+	BC 432
BC 432	P	TO-92F	625	0.8	60	63	240#	100	1	0.7	0.5	100+	17+	BC 431
BC 440	N	TO-39	1000	1	40	40	250#	500	4	1	1	50	25	BC 460

#H_{FE} groupings available + Typical value

Medium Power Transistors

TYPE NO.	POLARITY	CASE	MAXIMUM RATINGS			H_{FE}				$V_{CE(SAT)}$		f_T	Cob	COMPLE-MENTARY TYPE
			P_d (mW)	I_C (A)	V_{CEO} (V)	min	max	I_C (mA)	V_{CE} (V)	max (V)	I_C (A)	min (MHz)	max (pF)	
BC 441	N	TO-39	1000	1	60	40	250#	500	4	1	1	50	25	BC 461
BC 445	N	TO-92F	625	0.3	60	50	460#	2	5	0.25	0.1	100	3+	BC 446
BC 446	P	TO-92F	625	0.3	60	50	460#	2	5	0.25	0.1	100	3+	BC 445
BC 460	P	TO-39	1000	1	40	40	250#	500	4	1	1	50	25	BC 440
BC 461	P	TO-39	1000	1	60	40	250#	500	4	1	1	50	25	BC 441
BC 485	N	TO-92F	625	1	45	60	400#	100	2	0.5	0.5	200+	7+	BC 486
BC 486	P	TO-92F	625	1	45	60	400#	100	2	0.5	0.5	150+	9+	BC 485
BC 487	N	TO-92F	625	1	60	60	400#	100	2	0.5	0.5	200+	7+	BC 488
BC 488	P	TO-92F	625	1	60	60	400#	100	2	0.5	0.5	150+	9+	BC 487
BC 489	N	TO-92F	625	1	80	60	400#	100	2	0.5	0.5	200+	7+	BC 490
BC 490	P	TO-92F	625	1	80	60	400#	100	2	0.5	0.5	150+	9+	BC 489
BC 512	P	TO-92F	300	0.2	45	60	300#	2	5	0.6	0.1	200	5+	–
BC 513	P	TO-92F	300	0.2	25	80	400#	2	5	0.6	0.1	200	5+	–
BC 514	P	TO-92F	300	0.2	20	140	400#	2	5	0.6	0.1	200	5+	–
BC 526	P	TO-92A	625	0.2	50	60	800#	2	5	0.6	0.1	100	5	–
BC 527	P	TO-92A	625	1	60	40	400#	100	1	0.7	0.5	100	15	BC 537
BC 528	P	TO-92A	625	1	80	40	400#	100	1	0.7	0.5	100	15	BC 538
BC 534	P	TO-92A	625	0.5	80	50	–	10	1	0.25	0.1	50	6.5	BC 535
BC 535	N	TO-92A	625	0.5	80	50	–	10	1	0.25	0.1	50	6	BC 534
BC 537	N	TO-92A	625	1	60	40	400#	100	1	0.7	0.5	100	15	BC 527
BC 538	N	TO-92A	625	1	80	40	400#	100	1	0.7	0.5	100	15	BC 528
BC 612	P	TO-92F	300	0.2	70	60	300	2	5	0.72	2	200	10	BC 682
BC 612L	P	TO-92B	300	0.2	70	60	300	2	5	0.72	2	200	10	BC 682L
BC 727	P	TO-92A	625	1.5	40	63	630#	100	1	0.7	0.5	40	20	BC 737
BC 728	P	TO-92A	625	1.5	25	63	630#	100	1	0.7	0.5	40	20	BC 738
BC 737	N	TO-92A	625	1.5	40	63	630#	100	1	0.7	0.5	40	20	BC 727
BC 738	N	TO-92A	625	1.5	25	63	630#	100	1	0.7	0.5	40	20	BC 728
BCW 34	N	TO-18	360	0.6	45	100	350	10	5	0.1	0.01	150	6	BCW 35
BCW 35	P	TO-18	360	0.6	45	100	350	10	5	0.1	0.01	150	6	BCW 34
BCW 36	N	TO-92F	360	0.6	45	100	350	10	5	0.1	0.01	150	6	BCW 37
BCW 37	P	TO-92F	360	0.6	45	100	350	10	5	0.1	0.01	150	6	BCW 36
BCW 73	N	TO-18	450	0.8	32	100	630#	100	1	0.7	0.5	100	12	–
BCW 74	N	TO-18	450	0.8	45	100	630#	100	1	0.7	0.5	100	12	–
BCW 75	P	TO-18	450	0.8	32	63	400#	100	1	0.7	0.5	100	18	–
BCW 76	P	TO-18	450	0.8	45	63	400#	100	1	0.7	0.5	100	18	–
BCW 77	N	TO-39	870	0.8	32	100	630#	100	1	0.7	0.5	100	12	–
BCW 78	N	TO-39	870	0.8	45	100	630#	100	1	0.7	0.5	100	12	–
BCW 79	P	TO-39	870	0.8	32	63	400#	100	1	0.7	0.5	100	18	–
BCW 80	P	TO-39	870	0.8	45	63	400#	100	1	0.7	0.5	100	18	–
BCW 90	N	TO-92F	610	0.8	40	100	400#	150	2	0.25	0.15	100+	15	BCW 92
BCW 90K	N	TO-92F*	750	0.8	40	100	400#	150	2	0.25	0.15	100+	15	BCW 92K
BCW 91	N	TO-92F	610	0.8	60	100	300#	150	2	0.25	0.15	100+	15	BCW 93
BCW 91K	N	TO-92F*	750	0.8	60	100	300#	150	2	0.25	0.15	120+	15	BCW 93K
BCW 92	P	TO-92F	610	0.8	60	100	300#	150	2	0.25	0.15	135	15	BCW 90
BCW 92K	P	TO-92F*	750	0.8	60	100	300#	150	2	0.25	0.15	135	15	BCW 90K
BCW 93	P	TO-92F	610	0.8	60	100	300#	150	2	0.25	0.15	135	10+	BCW 91
BCW 93K	P	TO-92F*	750	0.8	60	100	300#	150	2	0.25	0.15	135	10+	BCW 91K
BCW 94	N	TO-92F	540	0.4	40	100	400#	50	2	0.25	0.05	70+	8	BCW 96
BCW 94K	N	TO-92F*	700	0.4	40	100	400#	50	2	0.25	0.05	70+	8	BCW 96K
BCW 95	N	TO-92F	540	0.4	60	100	300#	50	2	0.25	0.05	70+	8	BCW 97
BCW 95K	N	TO-92F*	700	0.4	60	100	300#	50	2	0.25	0.05	70+	8	BCW 97K
BCW 96	P	TO-92F	540	0.4	40	100	300#	50	2	0.25	0.05	135	10	BCW 94

* With X-67 heat sink # H_{FE} groupings available + Typical value

Medium Power Transistors

TYPE NO.	POLARITY	CASE	MAXIMUM RATINGS			H_{FE}				$V_{CE(SAT)}$		f_T	Cob	COMPLEMENTARY TYPE
			P_d (mW)	I_C (A)	V_{CEO} (V)	min	max	I_C (mA)	V_{CE} (V)	max (V)	I_C (A)	min (MHz)	max (pF)	
BCW 96K	P	TO-92F*	700	0.4	40	100	300#	50	2	0.25	0.05	135	10	BCW 94K
BCW 97	P	TO-92F	540	0.4	40	100	300#	50	2	0.25	0.05	135	10	BCW 95
BCW 97K	P	TO-92F*	540	0.4	60	100	300#	50	2	0.25	0.05	135	10	BCW 95K
BCX 25	N	TO-92F	350	0.2	60	70	400	10	5	0.25	0.1	100	6	BCX 26
BCX 26	P	TO-92F	350	0.2	60	70	400	10	5	0.25	0.1	100	6	BCX 25
BCX 40	N	TO-39	1000	2	80	40	250	500	4	1	0.5	50	–	–
BCX 45	N	TO-92F	625	1	45	50	–	100	2	0.5	0.5	100	12	–
BCX 46	P	TO-92F	625	1	45	50	–	100	2	0.5	0.5	60	15	–
BCX 47	N	TO-92F	625	1	60	50	–	100	2	0.5	0.5	100	12	–
BCX 48	P	TO-92F	625	1	60	50	–	100	2	0.5	0.5	60	15	–
BCX 49	N	TO-92F	625	1	80	50	–	100	2	0.5	0.5	100	12	–
BCX 50	P	TO-92F	625	1	80	50	–	100	2	0.5	0.5	60	15	–
BCX 60	N	TO-39	1000	2	80	40	250	500	4	1	0.5	50	–	–
BCX 73	N	TO-92F	625	0.8	32	100	630#	100	1	1.4	0.5	100	12	–
BCX 74	N	TO-92F	625	0.8	45	100	630#	100	1	1.4	0.5	100	12	–
BCX 75	P	TO-92F	625	0.8	32	100	630#	100	1	1.4	0.5	100	18	–
BCX 76	P	TO-92F	625	0.8	45	100	630#	100	1	1.4	0.5	100	18	–
BD 370A	P	TO-237A	750	1.5	45	40	400#	100	1	0.7	1	50	30	BD 371A
BD 370B	P	TO-237A	750	1.5	60	40	400#	100	1	0.7	1	50	30	BD 371B
BD 370C	P	TO-237A	750	1.5	80	40	400#	100	1	0.7	1	50	30	BD 371C
BD 371A	N	TO-237A	750	1.5	45	40	400#	100	1	0.7	1	50	30	BD 370A
BD 371B	N	TO-237A	750	1.5	60	40	400#	100	1	0.7	1	50	30	BD 370B
BD 371C	N	TO-237A	750	1.5	80	40	400#	100	1	0.7	1	50	30	BD 370C
BFR 10	N	TO-39	800	–	40	60	120	150	10	0.22	0.15	250	8	–
BFR 11	N	TO-18	400	–	40	60	120	150	10	0.22	0.15	250	8	–
BFR 18	N	TO-18	500	0.5	55	60	180	150	1	0.25	0.15	60	20	–
BFR 19	N	TO-39	800	1	35	40	120	150	1	0.25	0.15	60	20	–
BFR 20	N	TO-39	800	1	35	90	450	150	1	0.25	0.15	60	20	–
BFR 21	N	TO-39	800	1	70	40	–	150	1	0.25	0.15	60	20	–
BFR 22	N	TO-39	5000▲	1	65	40	120	150	10	0.15	0.15	–	15	–
BFR 23	P	TO-39	7000▲	1	65	40	140	150	10	0.65	0.15	–	30	–
BFR 24	P	TO-39	7000▲	1	40	50	250	150	10	1.4	0.15	–	30	–
BFR 77	N	TO-39	600	1	80	40	120	150	10	0.5	0.15	50	15	–
BFS 92	P	TO-39	300	0.2	60	30	–	150	10	0.25	0.01	40	20	–
BFS 93	P	TO-39	800	1	60	70	–	150	10	0.35	0.15	40	20	–
BFS 94	P	TO-39	800	1	40	40	–	150	10	0.2	0.15	40	20	–
BFS 95	P	TO-39	800	1	35	70	–	150	10	0.2	0.15	40	20	–
BFT 29	N	TO-18	360	1	80	50	250	100	10	0.95	0.5	100	10	–
BFT 30	N	TO-18	360	1	60	75	250	100	10	0.75	0.5	100	10	–
BFT 31	N	TO-18	360	1	50	100	300	100	10	0.75	0.5	100	10	–
BFT 39	N	TO-39	800	1	80	50	250	100	10	1.6	1	100	10	BFT 79
BFT 40	N	TO-39	800	1	60	75	250	100	10	1.0	1	100	10	BFT 80
BFT 41	N	TO-39	800	1	50	100	300	100	10	1.0	1	100	10	BFT 81
BFW 24	N	TO-39	800	1	60	40	120	150	1	1.0	1	60	25	–
BFW 25	N	TO-39	800	1	40	100	300	150	1	1.0	1	70	25	–
BFW 26	N	TO-39	800	1	40	40	120	150	1	1.0	1	60	25	–
BFW 29	N	TO-39	600	0.4	30	45	–	6	15	0.5	0.15	40	25	–
BFW 31	P	TO-18	500	0.7	30	70	–	100	10	0.4	0.1	–	12	–
BFW 32	N	TO-18	500	0.7	30	70	–	100	10	0.4	0.1	–	12	–
BFW 33	N	TO-39	800	–	80	40	120	150	10	5	0.15	50	15	–
BFW 34	N	TO-39	600	0.2	30	45	–	6	15	0.5	0.05	70	10	–
BFW 35	N	TO-39	600	0.2	30	80	150	6	15	0.5	0.05	70	10	–
BFW 80	N	TO-39	600	0.2	30	90	–	6	15	0.5	0.05	70	10	–

* With x-67 heat sink #H_{FE} groupings available ▲ Tc = 25°c

Medium Power Transistors

TYPE NO.	POLARITY	CASE	MAXIMUM RATINGS			HFE				VCE(SAT)		fT	Cob	COMPLE-MENTARY TYPE
			Pd (mW)	IC (A)	VCEO (V)	min	max	IC (mA)	VCE (V)	max (V)	IC (A)	min (MHz)	max (pF)	
BFX 29	P	TO-39	600	0.6	60	50	125	10	10	0.4	0.15	100	12	–
BFX 30	P	TO-39	600	0.6	65	50	200	10	0.4	–	–	100	12	–
BFX 35	P	TO-18	360	–	40	80	–	10	10	0.3	0.05	200	10	–
BFX 38	P	TO-39	800	1	55	85	–	100	5	0.5	0.5	100	20	–
BFX 39	P	TO-39	800	1	55	40	–	100	5	0.5	0.5	100	20	–
BFX 40	P	TO-39	800	1	75	40	–	100	5	0.5	0.5	100	20	–
BFX 41	P	TO-39	800	1	75	85	–	100	5	0.5	0.5	100	20	–
BFX 68	N	TO-39	700	–	30	100	300	150	10	1.5	0.15	70	25	–
BFX 69	N	TO-39	800	–	30	40	120	150	10	1.5	0.15	60	25	–
BFX 69A	N	TO-39	800	–	40	40	–	150	10	1.2	0.5	60	20	–
BFX 74	P	TO-39	600	–	35	30	90	150	10	1.5	0.15	60	45	–
BFX 74A	P	TO-39	800	–	60	30	–	150	10	0.3	0.15	100	20	–
BFX 84	N	TO-39	800	1	60	30	–	150	10	0.35	0.15	50	12	–
BFX 85	N	TO-39	800	1	60	70	–	150	10	0.35	0.15	50	12	–
BFX 86	N	TO-39	800	1	35	70	–	150	10	0.35	0.15	50	12	–
BFX 87	P	TO-39	600	0.6	50	40	–	150	10	0.4	0.15	100	12	–
BFX 88	P	TO-39	600	0.6	40	40	–	150	10	0.4	0.15	100	12	–
BFX 94	N	TO-18	500	0.8	30	40	120	150	10	1.6	0.5	250	8	–
BFX 94A	N	TO-18	400	0.8	30	35	–	10	10	0.22	0.15	250	8	–
BFX 95	N	TO-18	500	0.8	30	100	300	150	10	1.6	0.5	250	8	–
BFX 95A	N	TO-18	400	0.8	30	100	300	150	10	0.22	0.15	250	8	–
BFX 96	N	TO-39	500	0.8	30	40	120	150	10	1.6	0.5	250	8	–
BFX 96A	N	TO-39	800	0.8	30	40	120	150	10	0.22	0.15	250	8	–
BFX 97	N	TO-39	500	0.8	30	100	300	150	10	1.6	0.5	250	8	–
BFX 97A	N	TO-39	800	0.8	30	100	300	150	10	0.22	0.15	250	8	–
BFY 33	N	TO-39	800	0.5	24	40	–	150	10	1.5	0.15	40	20	–
BFY 34	N	TO-39	800	0.5	30	40	120	150	10	1.5	0.15	60	25	–
BFY 40	N	TO-39	800	0.8	30	40	–	10	10	1.85	0.15	–	20	–
BFY 41	N	TO-39	800	0.6	60	35	–	50	10	5	0.05	–	–	–
BFY 46	N	TO-39	2600▲	0.5	30	100	300	150	10	1.5	0.15	–	–	–
BFY 50	N	TO-39	800	1	35	30	112+	150	10	0.2	0.15	60	12	–
BFY 51	N	TO-39	800	1	30	40	–	150	10	0.35	0.15	50	12	–
BFY 52	N	TO-39	800	1	20	60	–	150	10	0.35	0.15	50	12	–
BFY 53	N	TO-39	800	1	20	30	–	150	10	0.35	0.15	50	–	–
BFY 55	N	TO-39	800	1	35	40	–	150	6	0.2	0.15	60	–	–
BFY 56	N	TO-39	800	1	45	30	150	150	1	1.2	1	40	25	–
BFY 56A	N	TO-39	800	1	55	40	120	150	1	1.2	1	60	25	–
BFY 64	P	TO-39	700	–	40	80	–	10	10	1.8	0.5	200	10	–
BFY 67	N	TO-39	800	0.5	30	40	120	150	10	1.5	0.15	60	25	–
BFY 68	N	TO-39	800	0.5	30	100	300	150	10	1.5	0.15	70	25	–
BFY 72	N	TO-39	800	–	28	40	150	150	10	0.7	0.5	250	8	–
BFY 94	P	TO-39	3000▲	–	40	40	–	0.1	10	0.4	0.05	100	20	–
BSV 15	P	TO-39	5000▲	1	40	40	250#	100	1	1	0.5	50	30	–
BSV 16	P	TO-39	5000▲	1	60	40	250#	100	1	1	0.5	50	30	–
BSV 17	P	TO-39	5000▲	1	80	40	160#	100	1	1	0.5	50	25	–
C 055	P	TO-92A	800*	1.5	20	50	360#	100	1	0.4	0.5	120+	–	C 066
C 055P	P	TO-237A	750	1.5	20	50	360#	100	1	0.4	0.5	120+	–	C 066P
C 066	N	TO-92A	800*	1.5	20	50	360#	100	1	0.4	0.5	120+	–	C 055
C 066P	N	TO-237A	750	1.5	20	50	360#	100	1	0.4	0.5	120+	–	C 055P
C 155	P	TO-92A	800*	2	25	50	360#	100	1	0.45	1	120+	–	C 166
C 155P	P	TO-237A	750	2	25	50	360#	100	1	0.45	1	120+	–	C 166P
C 166	N	TO-92A	800*	2	25	50	360#	100	1	0.45	1	120+	–	C 155
C 166P	N	TO-237A	750	2	25	50	360#	100	1	0.45	1	120+	–	C 155P
C 168	N	TO-92B	625	3	7	300	–	10	1	0.6	2	120+	40+	–

▲T_C = 25°C * With x-67 heat sink #H_{FE} groupings available + Typical value

Medium Power Transistors

TYPE NO.	POLARITY	CASE	MAXIMUM RATINGS			H_{FE}				$V_{CE(SAT)}$		f_T	Cob	COMPLE-MENTARY TYPE
			P_d (mW)	I_C (A)	V_{CEO} (V)	min	max	I_C (mA)	V_{CE} (V)	max (V)	I_C (A)	min (MHz)	max (pF)	
C 169	N	TO-92B	625	3	9	180	360	100	1	0.4	1	100+	40+	–
C 266	N	TO-92A	625	2	60	45	–	100	10	0.5	0.5	–	–	–
C 266P	N	TO-237A	750	2	60	25	–	1	10	0.5	0.5	–	–	–
C 855	P	TO-92A	625*	1.5	60	50	240#	100	2	0.5	0.5	50	25	C 966
C 866	N	TO-92A	625*	1.5	60	50	240#	100	2	0.5	0.5	50	25	C 855
CS 9012	P	TO-92A	625	–	25/12	64	202#	50	1	1	0.25	–	–	–
CS 9013	N	TO-92A	625	–	25/12	64	202#	50	1	1	0.25	–	–	–
CX 906	N	TO-92A	500	0.5	40	50	360#	50	1	0.5	0.25	80	8	CX 956
CX 908	N	TO-92A	625*	1	40	80	360#	100	1	0.5	0.5	60	18	CX 958
CX 956	P	TO-92A	500	0.5	40	50	360#	50	1	0.5	0.25	80	8	CX 906
CX 958	P	TO-92A	625*	1	40	80	360#	100	1	0.5	0.5	60	18	CX 908
KM 904	N	TO-92A	500	0.5	20	64	246#	50	1	0.6	0.15	200+	4.8+	KM 905
KM 905	P	TO-92A	500	0.5	20	64	246#	50	1	0.6	0.15	120+	9+	KM 904
KM 934	N	TO-92A	500	0.5	30	80	360#	50	1	0.6	0.15	180+	4+	KM 935
KM 935	P	TO-92A	500	0.5	30	80	360#	50	1	0.6	0.15	180+	5+	KM 934
MA 8001	N	TO-39	800	0.5	30	30	–	150	10	0.5	0.15	100	12	–
MA 8002	N	TO-39	800	0.5	80	40	200	150	10	0.3	0.15	100	10	–
MA 8003	N	TO-39	800	0.5	60	100	350	150	10	0.3	0.15	100	10	–
MPS 3702	P	TO-92A	360	0.2	25	60	300	50	5	0.25	0.05	100	12	MPS 3704
MPS 3703	P	TO-92A	360	0.2	30	50	150	50	5	0.25	0.05	100	12	MPS 3706
MPS 3704	N	TO-92A	360	0.8	30	100	300	50	2	0.6	0.1	100	12	MPS 3702
MPS 3705	N	TO-92A	360	0.8	30	50	150	50	2	0.8	0.1	100	12	MPS 3702
MPS 3706	N	TO-92A	360	0.8	20	30	600	50	2	1	0.1	100	12	MPS 3703
MPS 4354	P	TO-92A	625	1	60	50	500	10	10	0.5	0.5	100	30	PN 3567
MPS 4355	P	TO-92A	625	1	60	100	400	10	10	0.5	0.5	100	30	PN 3569
MPS 4356	P	TO-92A	625	1	80	50	250	10	10	0.5	0.5	100	30	PN 3568
MPS 6530	N	TO-92A	500	0.6	40	40	120	100	1	0.5	0.1	250+	5	MPS 6533
MPS 6531	N	TO-92A	500	0.6	40	90	270	100	1	0.3	0.1	250+	5	MPS 6534
MPS 6532	N	TO-92A	500	0.6	30	30	–	100	1	0.5	0.1	250+	5	MPS 6535
MPS 6533	P	TO-92A	500	0.6	40	40	120	100	1	0.5	0.1	250+	6	MPS 6530
MPS 6534	P	TO-92A	500	0.6	40	90	270	100	1	0.3	0.1	250+	6	MPS 6531
MPS 6535	P	TO-92A	500	0.6	30	30	–	100	1	0.5	0.1	250+	6	MPS 6532
MPS 6560	N	TO-92A	625	0.6	25	50	200	500	1	0.5	0.5	60	30	MPS 6562
MPS 6561	N	TO-92A	625	0.6	20	50	200	350	1	0.5	0.35	60	30	MPS 6563
MPS 6562	P	TO-92A	625	0.6	25	50	200	500	1	0.5	0.5	60	30	MPS 6560
MPS 6563	P	TO-92A	625	0.6	20	50	200	350	1	0.5	0.35	60	30	MPS 6561
MPS 6591	N	TO-92A	625	0.25	50	40	–	10	10	0.6	0.01	60	12	–
MPS 8000	N	TO-92A	625	0.5	60	30	–	100	2	0.3	0.1	–	–	–
MPS 9416	N	TO-92A	625	0.6	18	50	300#	350	1	0.55	0.5	–	–	MPS 9466
MPS 9416A	N	TO-92A	625	1	18	50	300#	350	1	0.55	0.5	300+	5.5+	MPS 9466A
MPS 9417	N	TO-92A	625	0.6	25	50	300#	350	1	0.55	0.5	–	–	MPS 9467
MPS 9417A	N	TO-92A	625	1	25	50	300#	350	1	0.55	0.5	300+	5.5+	MPS 9467A
MPS 9418	N	TO-92A	625	1.5	25	80	350#	350	4	0.6	1	300+	6+	MPS 9468
MPS 9466	P	TO-92A	625	0.6	18	50	300#	350	1	0.55	0.5	–	–	MPS 9416
MPS 9466A	P	TO-92A	625	1	18	50	300#	350	1	0.55	0.5	300+	12+	MPS 9416A
MPS 9467	P	TO-92A	625	0.6	25	50	300#	350	1	0.55	0.5	300+	–	MPS 9417
MPS 9468	P	TO-92A	625	1.5	25	80	350#	350	4	0.6	1	200+	18+	MPS 9418
MPS 9467A	P	TO-92A	625	1	25	50	300#	350	1	0.55	0.5	300+	12+	MPS 9417A
MPSA 05	N	TO-92A	625	0.5	60	50	–	100	1	0.25	0.1	50	20	MPSA 55
MPSA 06	N	TO-92A	625	0.5	80	50	–	100	1	0.25	0.1	50	20	MPSA 56
MPSA 55	P	TO-92A	625	0.5	60	50	–	100	1	0.25	0.1	100	20	MPSA 05
MPSA 56	P	TO-92A	625	0.5	80	50	–	100	1	0.25	0.1	100	20	MPSA 06
MPSD 05	N	TO-92A	350	0.5	25	50	–	50	5	0.5	0.1	100	–	MPSD 55
MPSD 55	P	TO-92A	350	0.5	25	50	–	50	5	0.5	0.1	100	–	MPSD 05

* With x-67 heat sink = 800 mW # H_{FE} groupings available + Typical value

Medium Power Transistors

TYPE NO.	POLARITY	CASE	MAXIMUM RATINGS			HFE				VCE(SAT)		fT	Cob	COMPLE-MENTARY TYPE
			Pd (mW)	IC (A)	VCEO (V)	min	max	IC (mA)	VCE (V)	max (V)	IC (A)	min (MHz)	max (pF)	
MSB 492	P	TO-92A	625*	2	25 •	80	360#	200	1	0.5	1	100+	28+	–
PN 2221	N	TO-92A	500	0.8	30	40	120	150	10	1.6	0.5	250	8	PN 2906
PN 2221A	N	TO-92A	500	0.8	40	40	120	150	10	1	0.5	250	8	PN 2906A
PN 2222	N	TO-92A	500	0.8	30	100	300	150	10	1.6	0.5	250	8	PN 2907
PN 2222A	N	TO-92A	500	0.8	40	100	300	150	10	1	0.5	300	8	PN 2907A
PN 2906	P	TO-92A	400	0.6	40	40	120	150	10	1.6	0.5	200	8	PN 2221
PN 2906A	P	TO-92A	400	0.6	60	40	120	150	10	1.6	0.5	200	8	PN 2221A
PN 2907	P	TO-92A	400	0.6	40	100	300	150	10	1.6	0.5	200	8	PN 2222
PN 2907A	P	TO-92A	400	0.6	60	100	300	150	10	1.6	0.5	200	8	PN 2222A
PN 3567	N	TO-92A	625	1	40	40	120	150	1	0.25	0.15	60	20	MPS 4354
PN 3568	N	TO-92A	625	1	60	40	120	150	1	0.25	0.15	60	20	MPS 4356
PN 3569	N	TO-92A	625	1	40	100	300	150	1	0.25	0.15	60	20	MPS 4355
2N 656	N	TO-39	800	0.6	60	30	90	200	10	4	0.2	40	20	–
2N 697	N	TO-39	600	0.5	40 •	40	120	150	10	1.5	0.15	50	35	–
2N 699	N	TO-39	600	1	80 •	40	120	150	10	5	0.15	50	20	–
2N 699A	N	TO-39	800	1	80 •	40	120	150	10	5	0.15	50	20	–
2N 699B	N	TO-39	870	1	80 •	40	120	150	10	5	0.15	60	15	–
2N 1132	P	TO-39	600	0.6	35	30	90	150	10	1.5	0.15	60	45	–
2N 1420	N	TO-39	600	1	30 •	100	300	150	10	1.5	0.15	50	35	–
2N 1507	N	TO-39	600	1	30 •	100	300	150	10	1.5	0.15	50	35	–
2N 1566	N	TO-39	600	0.1	60	80	200	5	5	1	0.01	60	10	–
2N 1613	N	TO-39	800	0.5	50 •	40	120	150	10	1.5	0.15	60	25	–
2N 1613A	N	TO-39	1000	0.5	50 •	40	120	150	10	1	0.15	60	25	–
2N 1613B	N	TO-39	1000	0.5	55 •	40	120	150	10	0.2	0.15	60	10	–
2N 1711	N	TO-39	800	1	50 •	100	300	150	10	1.5	0.15	70	25	–
2N 1711A	N	TO-39	1000	1	50 •	100	300	150	10	1	0.15	70	25	–
2N 1711B	N	TO-39	1000	1	55 •	100	300	150	10	0.2	0.15	70	10	–
2N 1889	N	TO-39	800	1	60	40	120	150	10	5	0.15	50	15	–
2N 1890	N	TO-39	800	1	60	100	300	150	10	5	0.15	60	15	–
2N 1893	N	TO-39	800	0.5	80	40	120	150	10	5	0.15	50	15	–
2N 1973	N	TO-39	800	1	80 •	75	–	10	10	1.2	0.05	60	15	–
2N 1974	N	TO-39	800	1	80 •	35	–	10	10	1.2	0.05	50	15	–
2N 1975	N	TO-39	800	1	80 •	15	–	10	10	1.2	0.05	40	15	–
2N 1983	N	TO-39	600	1	25	80	240	5	5	0.25	0.005	40	45	–
2N 1984	N	TO-39	600	1	25	40	120	5	5	0.25	0.005	40	45	–
2N 1985	N	TO-39	600	1	25	20	80	5	5	–	–	40	45	–
2N 1986	N	TO-39	600	0.3	25	60	240	150	10	1.5	0.15	40	35	–
2N 1987	N	TO-39	600	0.3	25	20	80	150	10	1.5	0.15	40	35	–
2N 1988	N	TO-39	600	1	45	35	120	30	10	2	0.03	40	20	–
2N 1989	N	TO-39	600	1	45	20	60	30	10	2	0.03	40	20	–
2N 2017	N	TO-39	1000	1	60	50	200	200	10	2	0.2	–	–	–
2N 2049	N	TO-39	800	0.5	50	100	300	150	10	0.4	0.01	50	25	–
2N 2102	N	TO-39	1000	1	65	40	120	150	10	0.5	0.15	60	10	2N 4036
2N 2192	N	TO-39	800	1	40	100	300	150	10	0.35	0.15	50	20	–
2N 2192A	N	TO-39	800	1	40	100	300	150	10	0.25	0.15	50	20	–
2N 2192B	N	TO-39	800	1	40	100	300	150	10	0.18	0.15	50	20	–
2N 2193	N	TO-39	800	1	50	40	120	150	10	0.35	0.15	50	20	–
2N 2193A	N	TO-39	800	1	50	40	120	150	10	0.25	0.15	50	20	–
2N 2193B	N	TO-39	800	1	50	40	120	150	10	0.18	0.15	50	20	–
2N 2195	N	TO-39	800	1	25	20	–	150	10	0.35	0.15	50	20	–
2N 2195A	N	TO-39	800	1	25	20	–	150	10	0.25	0.15	50	20	–
2N 2195B	N	TO-39	800	1	25	20	–	150	10	0.18	0.15	50	20	–

* With x-67 heatsink #HFE groupings available •VCER + Typical value

Medium Power Transistors

TYPE NO.	POLARITY	CASE	MAXIMUM RATINGS			HFE				VCE(SAT)		fT	Cob	COMPLE-MENTARY TYPE
			Pd (mW)	IC (A)	VCEO (V)	min	max	IC (mA)	VCE (V)	max (V)	IC (A)	min (MHz)	max (pF)	
2N 2218	N	TO-39	800	0.8	30	40	120	150	10	0.4	0.15	250	8	–
2N 2218A	N	TO-39	800	0.8	40	40	120	150	10	1.0	0.5	250	8	–
2N 2219	N	TO-39	800	0.8	30	100	300	150	10	0.4	0.15	250	8	–
2N 2219A	N	TO-39	800	0.8	40	100	300	150	10	1.0	0.5	250	8	–
2N 2221	N	TO-18	500	0.8	30	40	120	150	10	0.4	0.15	250	8	–
2N 2221A	N	TO-18	500	0.8	40	40	120	150	10	1.0	0.5	250	8	–
2N 2222	N	TO-18	500	0.8	30	100	300	150	10	0.4	0.15	250	8	–
2N 2222A	N	TO-18	500	0.8	40	100	300	150	10	1.0	0.5	300	8	–
2N 2237	N	TO-39	600	0.5	20	40	125	100	1	0.25	0.1	100	35	–
2N 2243	N	TO-39	800	1	80	40	120	150	10	0.25	0.15	50	15	–
2N 2243A	N	TO-39	800	1	80	40	120	150	10	0.25	0.15	50	15	–
2N 2297	N	TO-39	800	1	35	40	120	150	10	0.2	0.15	60	12	–
2N 2303	P	TO-39	600	0.5	35	75	200	150	10	1.5	0.15	60	45	–
2N 2309	N	TO-39	600	0.5	30	25	125	0.2	4	–	–	40	25	–
2N 2380	N	TO-39	600	0.5	40	20	120	150	5	1.3	0.15	100	14	–
2N 2380A	N	TO-39	600	0.5	40	20	120	150	5	1.3	0.15	100	14	–
2N 2405	N	TO-39	1000	1	90	60	200	150	10	0.5	0.15	50	15	–
2N 2479	N	TO-39	600	0.5	40	30	120	150	1.5	0.85	0.15	150	14	–
2N 2800	P	TO-39	800	0.8	35	30	90	150	10	0.4	0.15	120	25	–
2N 2801	P	TO-39	800	0.8	35	75	225	150	10	0.4	0.15	120	25	–
2N 2837	P	TO-18	500	0.8	35	30	90	150	10	0.4	0.15	120	25	–
2N 2838	P	TO-18	500	0.8	35	75	225	150	10	0.4	0.15	120	25	–
2N 2868	N	TO-39	800	1	40	40	120	150	10	0.25	0.15	50	20	–
2N 2897	N	TO-18	500	1	45	50	200	150	10	1	0.15	100	15	–
2N 2904	P	TO-39	600	0.6	40	40	120	150	10	0.4	0.15	200	8	–
2N 2905	P	TO-39	600	0.6	40	100	300	150	10	1.6	0.5	200	8	–
2N 2905A	P	TO-39	600	0.6	60	100	300	150	10	1.6	0.5	200	8	–
2N 2906	P	TO-18	400	0.6	40	40	120	150	10	0.4	0.15	200	8	–
2N 2906A	P	TO-18	400	0.6	60	40	120	150	10	1.6	0.5	200	8	–
2N 2907	P	TO-18	400	0.6	40	100	300	150	10	1.6	0.5	200	8	–
2N 2907A	P	TO-18	400	0.6	60	100	300	150	10	1.6	0.5	200	8	–
2N 2927	P	TO-39	800	0.5	25	30	130	50	1	0.25	0.05	100	20	–
2N 2958	N	TO-39	600	0.6	20	40	120	150	10	0.5	0.15	250	8	–
2N 2959	N	TO-39	600	0.6	20	100	300	150	10	0.5	0.15	250	8	–
2N 3019	N	TO-39	800	1	80	100	300	150	10	0.5	0.5	100	12	2N 4033
2N 3020	N	TO-39	800	1	80	40	120	150	10	0.5	0.5	80	12	2N 4031
2N 3036	N	TO-39	800	1	80	50	150	150	10	0.25	0.15	50	15	–
2N 3053	N	TO-39	1000	0.7	40	50	250	150	10	1.4	0.15	100	15	2N 4037
2N 3053A	N	TO-39	1000	0.7	60	50	250	150	10	0.3	0.15	100	15	–
2N 3072	P	TO-39	800	0.5	60	30	130	50	1	1	0.3	130	10	–
2N 3073	P	TO-18	360	0.5	60	30	130	50	1	1	0.3	130	10	–
2N 3081	P	TO-39	600	0.6	50	30	90	150	10	0.3	0.15	150	13	–
2N 3107	N	TO-39	800	1	60	100	300	150	10	1	1	70	20	2N 4032
2N 3108	N	TO-39	800	1	60	40	120	150	10	0.25	0.15	60	20	2N 4030
2N 3109	N	TO-39	800	1	40	100	300	150	10	1	1	70	25	2N 4033
2N 3110	N	TO-39	800	1	40	40	120	150	10	0.25	0.15	60	25	–
2N 3115	N	TO-18	400	0.6	20	40	120	150	10	0.5	0.15	250	8	–
2N 3116	N	TO-18	400	0.6	20	100	300	150	10	0.5	0.15	250	8	–
2N 3120	P	TO-39	800	0.5	45	30	130	50	1	1	0.5	130	10	–
2N 3121	P	TO-18	360	0.5	45	30	130	50	1	1	0.5	130	10	–
2N 3133	P	TO-39	600	0.6	35	40	120	150	10	0.6	0.15	200	10	–
2N 3134	P	TO-39	600	0.6	35	100	300	150	10	0.6	0.15	200	10	–
2N 3135	P	TO-18	400	0.6	35	40	120	150	10	0.6	0.15	200	10	–
2N 3136	P	TO-18	400	0.6	35	100	300	150	10	0.6	0.15	200	10	–
2N 3252	N	TO-39	1000	1	30	30	90	500	1	0.5	0.5	200	12	–

Medium Power Transistors

TYPE NO.	POLARITY	CASE	MAXIMUM RATINGS			HFE				VCE(SAT)		fT	Cob	COMPLE-MENTARY TYPE
			Pd (mW)	IC (A)	VCEO (V)	min	max	IC (mA)	VCE (V)	max (V)	IC (A)	min (MHz)	max (pF)	
2N 3253	N	TO-39	1000	1	40	25	75	500	1	0.6	0.5	175	12	–
2N 3299	N	TO-39	800	0.5	30	40	120	150	10	0.6	0.5	250	8	–
2N 3300	N	TO-39	800	0.5	30	100	300	150	10	0.6	0.5	250	8	–
2N 3301	N	TO-18	360	0.5	30	40	120	150	10	0.6	0.5	250	8	–
2N 3302	N	TO-18	360	0.5	30	100	300	150	10	0.6	0.5	250	8	–
2N 3326	N	TO-39	800	0.8	45	40	120	150	10	1.6	0.5	250	8	–
2N 3402	N	TO-92B*	560*	0.5	25	75	225	2	4.5	0.3	0.05	–	–	–
2N 3403	N	TO-92B*	560*	0.5	25	180	540	2	45	0.3	0.05	–	–	–
2N 3404	N	TO-92B*	560*	0.5	50	75	225	2	4.5	0.3	0.05	–	–	–
2N 3405	N	TO-92B*	560*	0.5	50	180	540	2	4.5	0.3	0.05	–	–	–
2N 3414	N	TO-92B*	360	0.5	25	75	225	2	4.5	0.3	0.05	–	–	–
2N 3415	N	TO-92B*	360	0.5	25	180	540	2	4.5	0.3	0.05	–	–	–
2N 3416	N	TO-92B*	360	0.5	50	75	225	2	4.5	0.3	0.05	–	–	–
2N 3417	N	TO-92B*	360	0.5	50	180	540	2	4.5	0.3	0.05	–	–	–
2N 3444	N	TO-39	1000	1	50	20	60	500	1	0.6	0.5	175	12	–
2N 3502	P	TO-39	800	0.6	45	100	300	150	10	1	0.3	200	8	–
2N 3503	P	TO-39	800	0.6	60	100	300	150	10	1	0.3	200	8	–
2N 3504	P	TO-18	400	0.6	45	100	300	150	10	1	0.3	200	8	–
2N 3505	P	TO-18	400	0.6	60	100	300	150	10	1	0.3	200	8	–
2N 3700	N	TO-18	500	1	80	100	300	150	10	0.5	0.5	100	12	–
2N 3701	N	TO-18	500	1	80	40	120	150	10	0.5	0.5	80	12	–
2N 3702	P	TO-92B	360	0.2	25	60	300	50	5	0.25	0.05	100	12	2N 3704
2N 3703	P	TO-92B	360	0.2	30	30	150	50	5	0.25	0.05	100	12	2N 3706
2N 3704	N	TO-92B	360	0.8	30	100	300	50	2	0.6	0.1	100	12	2N 3702
2N 3705	N	TO-92B	360	0.8	30	50	150	50	2	0.8	0.1	100	12	2N 3702
2N 3706	N	TO-92B	360	0.8	20	30	600	50	2	1	0.1	100	12	2N 3703
2N 3724	N	TO-39	800	0.5	30	60	150	100	1	0.75	1	300	12	–
2N 3724A	N	TO-39	1000	1.2	30	60	150	100	1	0.65	0.8	300	12	–
2N 3725	N	TO-39	800	0.5	50	60	150	100	1	0.95	1	300	10	–
2N 3793	N	TO-92B	250	0.5	20	20	120	10	10	0.4	10	100	10	–
2N 3794	N	TO-92B	250	0.5	20	100	600	10	10	0.4	10	100	10	–
2N 3831	N	TO-39	1000	1.2	40	35	–	150	1	0.3	0.15	200	12	–
2N 3945	N	TO-39	5000▲	1	50	40	250	150	10	0.5	0.15	60	12	–
2N 4030	P	TO-39	800	1	60	40	120	100	5	0.5	0.5	100	20	2N 3108
2N 4031	P	TO-39	800	1	80	40	120	100	5	0.5	0.5	100	20	2N 3020
2N 4032	P	TO-39	800	1	60	100	300	100	5	0.5	0.5	150	20	2N 3107
2N 4033	P	TO-39	800	1	80	100	300	100	5	0.5	0.5	150	20	2N 3109
2N 4036	P	TO-39	1000	1	65	40	140	150	10	0.65	0.15	60	30	2N 2102
2N 4037	P	TO-39	1000	1	40	50	250	150	10	1.4	0.15	60	30	2N 3053
2N 4046	N	TO-39	800	0.5	30	40	150	100	1	0.65	0.8	250	12	–
2N 4047	N	TO-39	800	0.5	50	40	150	100	1	0.8	0.8	250	10	–
2N 4140	N	TO-106	300	0.2	30	40	120	150	10	0.4	0.15	250	8	–
2N 4141	N	TO-106	300	0.2	30	100	300	150	10	0.4	0.15	250	8	–
2N 4142	P	TO-106	300	0.2	40	40	120	150	10	0.4	0.15	200	8	–
2N 4143	P	TO-106	300	0.2	40	100	300	150	10	0.4	0.15	200	8	–
2N 4227	N	TO-106	300	0.2	30	75	150	150	10	0.4	0.15	250	8	–
2N 4228	P	TO-106	300	0.2	40	75	150	150	10	0.4	0.15	200	8	–
2N 4234	P	TO-39	1000	3	40	30	150	250	1	0.6	1	3	100	2N 4237
2N 4235	P	TO-39	1000	3	60	30	150	250	1	0.6	1	3	100	2N 4238
2N 4236	P	TO-39	1000	1	80	30	150	250	1	0.6	1	3	100	2N 4239
2N 4237	N	TO-39	1000	1	40	30	150	250	1	0.6	1	2	100	2N 4234
2N 4238	N	TO-38	1000	1	60	30	150	250	1	0.6	1	2	100	2N 4235
2N 4239	N	TO-39	1000	1	80	30	150	250	1	0.3	0.5	2	100	2N 4236
2N 4314	P	TO-39	1000	1	65	50	250	150	10	1.4	0.15	60	30	–
2N 4400	N	TO-92A	500♦	0.6	40	50	150	150	1	0.75	0.5	200	6.5	2N 4402

* With x-67 heat sink ▲T_C = 25°C ♦310 mW in JEDEC registration

Medium Power Transistors

TYPE NO.	POLARITY	CASE	MAXIMUM RATINGS			H_{FE}				$V_{CE(SAT)}$		f_T	Cob	COMPLE-MENTARY TYPE
			P_d (mW)	I_C (A)	V_{CEO} (V)	min	max	I_C (mA)	V_{CE} (V)	max (V)	I_C (A)	min (MHz)	max (pF)	
2N 4401	N	TO-92A	500♦	0.6	40	100	300	150	1	0.75	0.5	250	6.5	2N 4403
2N 4402	P	TO-92A	500♦	0.6	40	50	150	150	1	0.75	0.5	150	8.5	2N 4400
2N 4403	P	TO-92A	500♦	0.6	40	100	300	150	1	0.75	0.5	200	8.5	2N 4401
2N 4409	N	TO-92A	625	250	50	60	400	10	1	0.2	0.001	60	12	–
2N 4424	N	TO-92B	360	0.5	40	180	540	2	4.5	0.3	0.05	–	–	–
2N 4425	N	TO-92B*	560*	0.5	40	180	540	2	4.5	0.3	0.05	–	–	–
2N 4944	N	TO-106	600	0.5	40	40	120	150	1	0.25	0.15	60	25	–
2N 4945	N	TO-106	600	0.5	60	40	120	150	1	0.25	0.15	60	20	–
2N 4946	N	TO-106	600	0.5	40	100	300	150	1	0.25	0.15	60	25	–
2N 4951	N	TO-92B	360	0.5	30	60	200	150	10	0.3	0.15	250	8	–
2N 4952	N	TO-92B	360	0.5	30	100	300	150	10	0.3	0.15	250	8	–
2N 4953	N	TO-92B	360	0.5	30	200	600	150	10	0.3	0.15	250	8	–
2N 4954	N	TO-92B	360	0.5	30	60	600	150	10	0.3	0.15	250	8	–
2N 4969	N	TO-106	200	0.5	30	40	120	150	10	0.4	0.15	200	8	–
2N 4970	N	TO-106	200	0.5	30	100	350	150	10	0.4	0.15	200	8	–
2N 4971	P	TO-106	200	0.5	40	40	120	150	10	0.15	0.15	200	8	–
2N 4972	P	TO-106	200	0.5	40	100	300	150	10	0.4	0.15	200	8	–
2N 5022	P	TO-39	1000	0.5	50	25	100	500	1	0.2	0.1	170	25	–
2N 5023	P	TO-39	1000	0.5	30	40	100	500	1	0.17	0.1	200	25	–
2N 5042	P	TO-39	800	1	40	40	150	150	1	1.3	1	100	35	2N 3110
2N 5143	P	TO-106	200	0.5	20	30	–	50	1	2	0.3	100	10	–
2N 5220	N	TO-92A	350	0.5	15	30	600	50	10	0.5	0.15	100	10	2N 5221
2N 5221	P	TO-92A	350	0.5	15	30	600	50	10	0.5	0.15	100	15	2N 5220
2N 5225	N	TO-92A	350	0.2	25	30	600	50	10	0.8	0.1	50	20	2N 5226
2N 5226	P	TO-92A	350	0.2	25	30	600	50	10	0.8	0.1	50	20	2N 5225
2N 5354	P	TO-92B*	360	0.5	25	40	120	50	1	1	0.3	100	8	–
2N 5355	P	TO-92B*	360	0.5	25	100	300	50	1	1	0.3	100	8	–
2N 5356	P	TO-92B*	360	0.5	25	250	500	50	1	1	0.3	100	8	–
2N 5365	P	TO-92B*	360	0.5	40	40	120	50	1	1	0.3	100	8	–
2N 5366	P	TO-92B*	360	0.5	40	100	300	50	1	1	0.3	100	8	–
2N 5367	P	TO-92B*	360	0.5	40	250	500	50	1	1	0.3	100	8	–
2N 5368	N	TO-92F	500▲	0.5	30	60	200	150	10	0.3	0.15	250	8	2N 5372
2N 5369	N	TO-92F	500▲	0.5	30	100	300	150	10	0.3	0.15	250	8	2N 5373
2N 5370	N	TO-92F	500▲	0.5	30	200	600	150	10	0.3	0.15	250	8	2N 5374
2N 5371	N	TO-92F	500▲	0.5	30	60	600	150	10	0.3	0.15	250	8	2N 5375
2N 5372	P	TO-92F	500▲	0.5	30	40	120	150	10	0.3	0.15	150	10	2N 5368
2N 5373	P	TO-92F	500▲	0.5	30	100	300	150	10	0.3	0.15	150	10	2N 5369
2N 5374	P	TO-92F	500▲	0.5	30	200	400	150	10	0.3	0.15	150	10	2N 5370
2N 5375	P	TO-92F	500▲	0.5	30	40	400	150	10	0.3	0.15	150	12	2N 5371
2N 5418	N	TO-92B	400	0.5	25	40	120	50	1	1	0.3	–	6	–
2N 5419	N	TO-92B	400	0.5	25	100	300	50	1	1	0.3	–	6	–
2N 5420	N	TO-92B	400	0.5	25	250	500	50	1	1	0.3	–	6	–
2N 5447	P	TO-92F	500▲	0.2	25	60	300	50	5	0.25	0.05	100	12	2N 5449
2N 5448	P	TO-92F	500▲	0.2	30	30	150	50	5	0.25	0.05	100	12	2N 5450
2N 5449	N	TO-92F	500▲	0.8	30	100	300	50	2	0.6	0.1	100	12	2N 5447
2N 5450	N	TO-92F	500▲	0.8	30	50	150	50	2	0.8	0.1	100	12	2N 5448
2N 5451	N	TO-92F	360	0.8	20	30	600	50	2	1	0.1	100	12	–
2N 5810	N	TO-92F	625*	0.75	25	60	200	2	2	0.75	0.5	100	15	2N 5811
2N 5811	P	TO-92F	625*	0.75	25	60	200	2	2	0.75	0.5	100	15	2N 5810
2N 5812	N	TO-92F	625*	0.75	25	150	500	2	2	0.75	0.5	135	15	2N 5813
2N 5813	P	TO-92F	625*	0.75	25	150	500	2	2	0.75	0.5	135	15	2N 5812
2N 5814	N	TO-92F	625*	0.75	40	60	120	2	2	0.75	0.5	100	15	2N 5815
2N 5815	P	TO-92F	625*	0.75	40	60	120	2	2	0.75	0.5	100	15	2N 5814
2N 5816	N	TO-92F	625*	0.75	40	100	200	2	2	0.75	0.5	120	15	2N 5817
2N 5817	P	TO-92F*	800*	0.75	40	100	200	2	2	0.75	0.5	120	15	2N 5816

* With x-67 heat sink ▲360 mW in JEDEC registration ♦310 mW in JEDEC registration

Medium Power Transistors

TYPE NO.	POLARITY	CASE	MAXIMUM RATINGS			H_{FE}				$V_{CE(SAT)}$		f_T	Cob	COMPLE-MENTARY TYPE
			P_d (mW)	I_C (A)	V_{CEO} (V)	min	max	I_C (mA)	V_{CE} (V)	max (V)	I_C (A)	min (MHz)	max (pF)	
2N 5818	N	TO-92F*	800*	0.75	40	150	300	2	2	0.75	0.5	135	15	2N 5819
2N 5819	P	TO-92F*	800*	0.75	40	150	300	2	2	0.75	0.5	135	15	2N 5818
2N 5820	N	TO-92F*	800*	1	60	60	120	2	2	0.75	0.5	140+	15	2N 5821
2N 5821	P	TO-92F*	800*	1	60	60	120	2	2	0.75	0.5	140+	15	2N 5820
2N 5822	N	TO-92F*	800*	1	60	100	200	2	2	0.75	0.5	140+	15	2N 5823
2N 5823	P	TO-92F*	800*	1	60	100	200	2	2	0.75	0.5	140+	15	2N 5822
2SA 497	P	TO-39	600	0.8	80	40	240#	200	2	0.8	0.2	70+	33+	2SC 497
2SA 498	P	TO-39	600	0.8	50	40	240#	200	2	0.8	0.2	70+	33+	2SC 498
2SA 503	P	TO-39	800	0.6	50	30	300#	150	2	0.5	0.15	50	30	2SC 503
2SA 504	P	TO-39	800	0.6	30	30	300#	150	2	0.5	0.15	50	30	2SC 504
2SA 532	P	TO-39	500	0.2	50	40	320#	50	6	1.5	0.1	100+	–	–
2SA 539	P	TO-92B	250	0.2	45	50	232#	50	1	0.5	0.15	100	5.5+	2SC 815
2SA 544	P	TO-39	750	0.2	45	40	200#	10	10	0.4	0.03	80	7	–
2SA 545	P	TO-92B*	400	0.2	60	50	232#	50	1	0.5	0.15	100	7	2SC 853
2SA 606	P	TO-39	700▲	0.7	80	40	200#	200	5	2	0.5	50	50	–
2SA 642	P	TO-92B	250	0.3	15	65	400#	50	1	0.6	0.3	180+	30	2SD 227
2SA 643	P	TO-92B	500	0.5	20	60	285#	100	1	0.6	0.5	110+	30	2SD 261
2SA 659	P	TO-92B	300	0.2	50	40	320#	50	6	1.5	0.1	90+	–	2SC 1175
2SA 708	P	TO-39	800	0.7	60	80	240#	50	2	0.7	0.5	100+	25+	–
2SA 719	P	TO-92B	400	0.5	25	60	340#	150	10	0.6	0.5	160+	15	2SC 1317
2SA 720	P	TO-92B	400	0.5	50	60	340#	150	10	0.6	0.5	160+	15	2SC 1318
2SA 723	P	TO-92B	250	0.5	20	60	285#	100	1	0.6	0.5	110+	–	2SD 327
2SA 730	P	TO-92B*	600	0.5	25	60	340#	150	10	0.6	0.5	160+	15	2SC 1346
2SA 731	P	TO-92B*	600	0.5	50	60	340#	150	10	0.6	0.5	160+	15	2SC 1347
2SA 733	P	TO-92B	250	0.1	40	60	600#	1	6	0.5	0.03	50	12	2SC 945
2SA 817	P	TO-92B	600	0.3	80	70	240#	50	2	0.4	0.2	100+	17+	2SC 1627
2SA 890	P	TO-92A	625	0.5	25	60	340#	150	10	0.6	0.5	200+	15	2SC 1851
2SA 891	P	TO-92A	625	0.5	50	60	340#	150	10	0.6	0.5	200+	15	2SC 1852
2SA 950	P	TO-92B	600	0.8	25	100	320#	100	1	0.7	0.5	120+	19+	2SC 2120
2SB 560	P	TO-92B	750	0.7	80	60	320#	50	5	0.8	0.5	100+	15+	2SD 438
2SB 598	P	TO-92B	500	1	20	60	560#	50	2	0.5	0.5	180+	25+	2SD 545
2SB 621	P	TO-92B	600	1.5	25	60	–	500	10	–	–	200+	20+	–
2SC 32	N	TO-39	750	0.2	25	40	110	10	10	0.5	0.03	120	7	–
2SC 497	N	TO-39	600	0.8	80	40	240#	200	2	0.8	0.2	50+	15+	2SA 497
2SC 498	N	TO-39	600	0.8	50	40	240#	200	2	0.8	0.2	50+	15+	2SA 498
2SC 503	N	TO-39	800	0.6	50	30	300#	150	2	0.5	0.15	50	30	2SA 503
2SC 504	N	TO-39	800	0.6	30	30	300#	150	2	0.5	0.15	50	30	2SA 504
2SC 815	N	TO-92B	250	0.2	45	50	232#	50	1	0.5	0.15	100	8	2SA 539
2SC 853	N	TO-92B*	400	0.2	60	50	232#	50	1	0.5	0.15	150+	–	2SA 545
2SC 875	N	TO-39	500	0.2	75	40	320#	50	6	1.5	0.1	170+	5+	–
2SC 876	N	TO-39	500	0.2	50	40	320#	50	6	1.5	0.1	170+	5+	–
2SC 881	N	TO-92B*	400	0.2	45	50	232#	50	1	0.5	0.15	150+	–	–
2SC 933	N	TO-92B	300	0.3	30	40	560#	20	5	–	–	–	–	–
2SC 934	N	TO-92B	300	0.3	15	40	560#	20	5	–	–	–	–	–
2SC 938	N	TO-92B	250	0.2	60	50	232#	50	1	0.5	0.15	150+	–	–
2SC 959	N	TO-39	700	0.7	80	40	200#	200	5	2	0.5	50	50	–
2SC 1008	N	TO-39	800	0.7	60	80	240#	50	2	0.7	0.5	75+	17+	–
2SC 1175	N	TO-92B	300	0.2	50	40	320#	50	6	1.5	0.1	170+	–	2SA 659
2SC 1317	N	TO-92B	400	0.5	25	60	340#	150	10	0.6	0.5	200+	15	2SA 719
2SC 1318	N	TO-92B	400	0.5	50	60	340#	150	10	0.6	0.5	200+	15	2SA 720
2SC 1346	N	TO-92B	600	0.5	25	60	340#	150	10	0.6	0.5	200+	15	2SA 730
2SC 1347	N	TO-92B	600	0.5	50	60	340#	150	10	0.6	0.5	200+	15	2SA 731

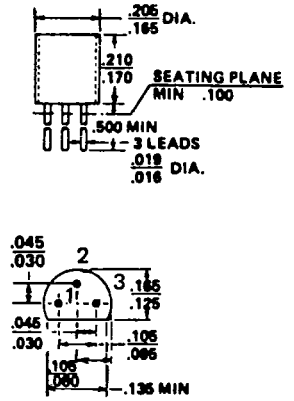
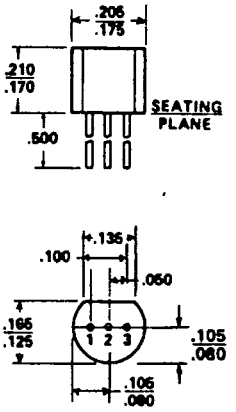
▲T_C = 25°C * With x-67 heat sink #H_{FE} groupings available + Typical value

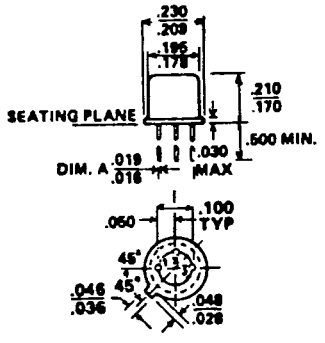
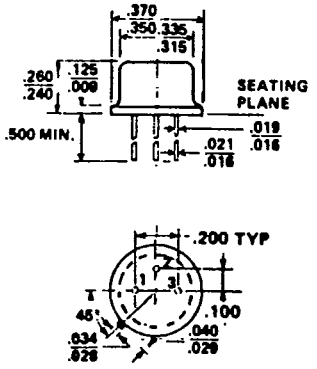
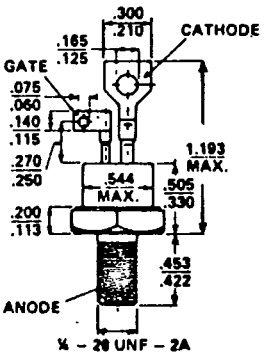
Medium Power Transistors

TYPE NO.	POLARITY	CASE	MAXIMUM RATINGS			H_{FE}				$V_{CE(SAT)}$		f_T	Cob	COMPLEMENTARY TYPE
			P_d (mW)	I_C (A)	V_{CEO} (V)	min	max	I_C (mA)	V_{CE} (V)	max (V)	I_C (A)	min (MHz)	max (pF)	
2SC 1627	N	TO-92B	600	0.3	80	70	240#	50	2	0.4	0.2	100+	10+	2SA 817
2SC 1788	N	TO-92B	600	0.5	20	65	220#	500	2	0.4	0.5	150+	15	–
2SC 1851	N	TO-92A	625	0.5	25	60	340#	150	10	0.6	0.5	200+	15	2SA 890
2SC 1852	N	TO-92A	625	0.5	50	60	340#	150	10	0.6	0.5	200+	15	2SA 891
2SC 2120	N	TO-92B	600	0.8	25	100	320#	100	1	0.5	0.5	120+	13+	2SA 950
2SD 227	N	TO-92B	250	0.3	15	65	400#	50	1	0.5	0.3	120+	–	2SA 642
2SD 261	N	TO-92B*	500	0.5	20	60	285#	100	1	0.6	0.5	120+	–	2SA 643
2SD 327	N	TO-92B	250	0.5	20	60	285#	100	1	0.6	0.5	120+	–	2SA 723
2SD 545	N	TO-92B	500	1	20	60	560#	50	2	0.3	0.5	180+	15+	2SB 598
2SD 592	N	TO-92B	600	1.5	25	60	–	500	10	–	–	200+	10+	–

* With x-67 heat sink # H_{FE} groupings available + Typical value

Packaging Information

PACKAGING INFORMATION	1. CATHODE 2. GATE 3. ANODE	SCR / TRIAC 1. CATHODE / 1. MT 1 2. GATE / 2. GATE 3. ANODE / 3. MT 2
		
	TO-18 (PLASTIC)	TO-92

1. CATHODE 2. GATE 3. ANODE	SCR / TRIAC 1. CATHODE / 1. MT 1 2. GATE / 2. GATE 3. ANODE / 3. MT 2	
		
TO-18	TO-39	TO-48D

littlediode
COMPONENTS FOR ALL

Littlediode supplies new, hard to find or obsolete electronic components and semiconductors all over the world.

With over two million different components listed you are sure to find the part you need.

Feel free to visit us today at our online store:

LittleDiode.com

Looking forward to providing you with the best possible service.