

ALPHANUMERIC INDEX — CROSS-REFERENCE (Continued)

Industry Part Number	Motorola Direct Replacement	Motorola Similar Replacement	Page Number	Industry Part Number	Motorola Direct Replacement	Motorola Similar Replacement	Page Number
BU806	BU806		3-380	BUW12A	BUW12A		3-476
BU807	BU807		3-380	BUW13	BUV48P		3-469
BU111		MJE16002	3-976	BUW13A	BUV48A		3-469
BUS12	BUX47		3-499	BUW24	BU326A		3-363
BUS12A	BUX47A		3-499	BUW25	BU326A		3-363
BUS13	BUX48		3-506	BUW26	BUS326A		—
BUS13A	BUX48A		3-506	BUW34	BUX47		3-499
BUS14	BUX98		—	BUW35	BUX47		3-499
BUS14A	BUX98A		—	BUW36	BUX47A		3-499
BUS46P		MJE16002	3-976	BUW44	BUX48		3-506
BUS47	BUX47		3-499	BUW45	BUX48		3-506
BUS47A	BUX47A		3-499	BUW46	BUX48A		3-506
BUS47AP	BUV47A		3-462	BUW72		MJE13008	3-950
BUS47P	BUV47		3-462	BUW74	BUX47		3-499
BUS48	BUX48		3-506	BUW75	BUX47		3-499
BUS48A	BUX48A		3-506	BUW76	BUX47		3-499
BUS48AP	BUV48A		3-469	BUW77	BUX47		3-499
BUS48P	BUV48		3-469	BUW81	MJ10014		3-600
BUS50	BUS50		3-382	BUW81A	MJ10014		3-600
BUS51	BUS51		3-384	BUW84	MJE13003		3-938
BUS52		BUS51	3-384	BUW85	MJE13003		3-938
BUS97	MJ16010		3-758	BUX13	BUX13		3-484
BUS97A	MJ16010A		3-766	BUX14	BUX14		—
BUS98	BUX98		—	BUX14CECCF	BUX14		—
BUS98A	BUX98A		—	BUX14CECCL	BUX14		—
BUT13	BUT13		3-393	BUX15	BUX47A		3-499
BUT14	BUT14		3-399	BUX15CECCF	BUX47A		3-499
BUT15	BUT15		3-405	BUX15CECCL	BUX47A		3-499
BUT33	BUT33		3-411	BUX16	2N6543		3-215
BUT34	BUT34		3-417	BUX16A	2N6543		3-215
BUT35	BUT35		3-423	BUX16B	2N6543		3-215
BUT50P	BUT50P		3-429	BUX16C	2N6543		3-215
BUT51P	BUT51P		3-431	BUX17	BUX48		3-506
BUT90	BUS50		3-382	BUX17A	BUX48		3-506
BUT91	BUS51		3-384	BUX17B	BUX48		3-506
BUT92		BUS51	3-384	BUX17C	BUX48		3-506
BUV10		BUV10N	3-432	BUX18	2N6545		3-221
BUV10N	BUV10N		3-432	BUX18A	2N6545		3-221
BUV11	BUV11		3-435	BUX18B	2N6545		3-221
BUV11N		BUV11	3-435	BUX18C	2N6545		3-221
BUV12	BUV12		3-441	BUX39	BUX39		3-487
BUV18		BUS50	3-382	BUX40	BUX40		3-490
BUV19		BUS50	3-382	BUX41	BUX41		3-493
BUV20	BUV20		3-444	BUX41N		BUX41	3-493
BUV21	BUV21		3-447	BUX42		BUX13	3-484
BUV21N		BUV21	3-447	BUX43		BUX13	3-484
BUV22	BUV22		3-453	BUX47	BUX47		3-499
BUV23	BUV23		3-456	BUX47A	BUX47A		3-499
BUV24		BUS98	3-386	BUX48	BUX48		3-506
BUV25		BUS98A	3-386	BUX48A	BUX48A		3-506
BUV44	BUX47		3-499	BUX48S	BUX48		3-506
BUV45	BUX47A		3-499	BUX66	2N6211		3-161
BUV46	2N6543		3-215	BUX66A	2N6212		3-161
BUV47	BUV47		3-462	BUX66B	2N6212		3-161
BUV47A	BUV47A		3-462	BUX66C	2N6213		3-161
BUV48	BUV48		3-469	BUX67	2N3584		3-20
BUV48A	BUV48A		3-469	BUX67A	2N3584		3-20
BUW11	BUW11		3-476	BUX67B	2N3585		3-20
BUW11A	BUW11A		3-476	BUX67C	2N4240		3-20
BUW12	BUW12		3-476	BUX81		MJ13325	3-700

*Consult Motorola if a direct replacement is necessary.

TABLE 14 — SWITCHMODE POWER TRANSISTORS (continued)

V _{CEO(sus)} Volts Min	I _C Cont Amps Max	V _{CEV} Volts Min	Device Type NPN unless otherwise noted	h _{FE} Min/Max	@ I _C Amp	Resistive Switching			f _T MHz Min	P _D (Case) Watts @ 25°C	Case JEDEC/MOT	
						t _s μs Max	t _f μs Max	@ I _C Amp				
450	15	1000	BUV48A	8 min	8	2	0.4	10		150	TO-218/340D	
	9	1000 1000	BUS47A BUS47AP	7 min 7 min	5 6	2 2	0.4 0.4	5 6		150 128	TO-204/1 TO-218/340D	
	8	850 850 850 850 850 850 1000	2N6835★ MJE16080 MJ12021★ MJ16006★ MJ16008★ MJH16006★ MJH16008★ BUW12A	7.5/3 5 min 5 min 5 min 7 min 5 min 7 min 6 min	5 8 8 8 8 8 8 5	2.5 2 8 2.5 2.2 2.5 2.2 4	0.25 0.5 0.1 typ 0.25 0.25 0.25 0.25 0.8	5 5 8 5 5 5 5 5	10	80	TO-204/1 TO-220/221A TO-204/1 TO-204/1 TO-204/1 TO-218/340 TO-218/340 TO-218/340	
	5	850 850 850 850 850 850 850 1000	2N6834★ MJ12020★ MJ16002★ MJ16004★ MJE16002★ MJE16004★ MJH16002★ MJH16004★ BUW11A	10/30 5 min 5 min 8 min 5 min 7 min 5 min 7 min 6 min	3 5 5 3 5 5 5 5 2.5	2.7 5 3 2.7 3 2.7 3 2.7 4	0.35 0.13 typ 0.3 0.35 0.3 0.35 0.3 0.35 0.8	3 3 3 3 3 3 3 3 2.5	15	125	TO-204/1 TO-204/1 TO-204/1 TO-204/1 TO-220/221A TO-220/221A TO-218/340 TO-218/340 TO-218/340	
	3	1000	BUX85	30 min	0.1	3.5	1.4	1	4	50	TO-220/221A	
	400	56	600	BUT33##	20 min	36	3.3	1.6	36		250	TO-204/197
		50	650	MJ10015##★	10 min	40	2.5	1	20			TO-204/197
		40	600	MJ10023##★	50/600	10	2.5	0.9	20			TO-204/197
		30	850	BUS98	8 min	20	2.3	0.4	20		250	TO-204/197
		28	600	BUT13##	20 min	20	2.6	0.8	18		175	TO-204/1
		20	500 500 500	MJ10001##★ MJ10005##★ MJ13333★	40/400 40/400 10/60	10 10 5	3 1.5 4	1.8 0.5 0.7	10 10 10	10** 10**		TO-204/1 TO-204/1 TO-204/1
		15	650 650 650 850 850 850	MJ13090★ MJ16110 MJH16110 2N6547★ BUX48 BUV48	8 min 6/20 6/20 6/30 8 min 8 min	10 15 15 10 10 10	2.5 0.8 typ 0.8 typ 4 2 2	0.5 0.1 typ 0.1 typ 0.7 0.4 0.4	10 10 10 10 10 10	6 to 24	175 135 175 150	TO-204/1 TO-204/1 TO-218/340 TO-204/1 TO-204/1 TO-218/340D
		12	700	MJE13009★	6/30	8	3	0.7	8	4**		TO-220/221A
		10	950 550 500 500 450	MJ12010 MJ10012# MJ10003##★ MJ10007##★ MJ13015★	4.2 min 100/2k 30/300 30/300 8/20	5 6 5 5 5	5 6 2.5 1.1 2	1 15 1 0.25 0.5	5 15 5 5 5	6 typ 6 10** 10**		TO-204/1 TO-204/1 TO-204/1 TO-204/1 TO-204/1
		9	850 850	BUS47 BUS47P	7 min 7 min	6 5	2 2	0.4 0.4	6 6		150 128	TO-204/1 TO-218/340D

★ Designers Data Sheet characterization # Darlington ## Darlington with speed-up diode * t_{off} ** |h_{FE}| @ 1 MHz (continued)

2