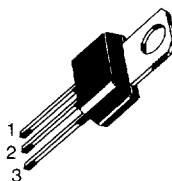


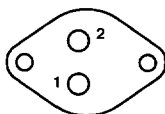
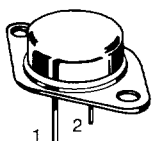
STYLE 1:
PIN 1. EMITTER
2. BASE
3. COLLECTOR



(COLLECTOR CONNECTED TO TAB)

I _C Cont Amps Max	V _{CEO} (sus) Volts Min	Device Type		h _{FE} Min/Max	@ I _C Amp	Resistive Switching			f _T MHz Min	P _D (Case) Watts @ 25°C
		NPN	PNP			t _s μs Max	t _f μs Max	@ I _C Amp		
0.5	300	MPSU10	MPSU60	30 min	0.03				45	10
0.8	40	MPSU02	MPSU52	30 min	0.5				100	10
1	120	MPSU03		40 min	0.01				35	10
	180	MPSU04		40 min	0.01				35	10
2	30	MPSU01	MPSU51	50 min	1				50	10
	40	MPSU01A	MPSU51A	50 min	1				50	10
		MPSU45##	MPSU95##	4k min	1					10
	60	MPSU05	MPSU55	60 min	0.25				50	10
	80	MPSU06	MPSU56	60 min	0.25				50	10
	100	MPSU07	MPSU57	30 min	0.25				50	10

Darlington



STYLE 1:
PIN 1. BASE
2. EMITTER
CASE 3. COLLECTOR

CASE 1-07 — 40 mil pins (TO-204AA)

CASE 197A-03 — 60 mil pins (TO-204AE) (Used for high current types at end of table. See types w/dots.)

I _C Cont Amps Max	V _{CEO} (sus) Volts Min	Device Type		h _{FE} Min/Max	@ I _C Amp	Resistive Switching			f _T MHz Min	P _D (Case) Watts @ 25°C
		NPN	PNP			t _s μs Max	t _f μs Max	@ I _C Amp		
4	200	MJ15018	MJ15019	30 min	1.0				20	150
	250	MJ15020	MJ15021	30 min	1.0				20	150
5	450	MJ16002		5 min	5	3	0.3	3		125
	500	MJ16002A		5 min	5	3	0.3	3		125
	700	MJ8502		7.5 min	1	4	2	2.5		150

Device Numbers in **Bold** type are preferred

TABLE 11 – METAL TO-204, TO-204AE (continued)

I _C Cont Amps Max	V _{CEO(sus)} Volts Min	Device Type		hFE Min/Max	@ I _C Amp	Resistive Switching			f _T MHz Min	P _D (Case) Watts @ 25°C
		NPN	PNP			t _s μs Max	t _f μs Max	@ I _C Amp		
5	800	MJ8503		7.5 min	1	4	2	2.5		150
	700*	BU208A		2.5 min	4.5	8 typ	0.4 typ	4.5	4 typ	90
	750*	MJ12004		2.5 min	4.5		1	4.5	4	100
6	100	2N5758		25/100	3	0.7 typ	0.5 typ	3	1	150
8	60	MJ1000##	MJ900##	1k min	3					90
		2N6055##	2N6053##	750/18k	4	1.5 typ	1.5 typ	4	4#	100
	80	MJ1001##	MJ901##	1k min	3					90
		2N6056##	2N6054##	750/18k	4	1.5 typ	1.5 typ	4	4#	100
	380	MJ6308 ★		5/20	8	2.3**	0.12**	5		125
	400		MJ6503	15 min	2	2	0.5	4		125
	450	MJ16006		5 min	8	2.5	0.25	5		150
		MJ16008		7 min	8	2.2	0.25	5		150
10	500	MJ16006A		5 min	8	3	0.4	5		150
	750*	MJ12005		5 min	5		1	5		100
	40	2N6383##	2N6648##	1k/20k	5				20#	100
	60	2N3715	2N3791	30 min	3	0.3 typ	0.4 typ	5	4	150
		2N5877	2N5875	20/100	4	1	0.8	4	4	150
		MJ3000##	MJ2500##	1k min	5					150
	80	2N3716 [C]	2N3792 [C]	30 min	3	0.3 typ	0.4 typ	5	4	150
		2N5878	2N5876	20/100	4	1	0.8	4	4	150
		MJ3001##	MJ2501##	1k min	5					150
10	140	2N3442		20/70	4					117

I_{hfe} @ MHz, ## Darlington

(continued)

** Inductive Switching

† D Suffix on this device signifies internal C-E Diode

★ New Product

[C] Available as preferred chip

* V_{CES} = 1500 VDevice Numbers in **Bold** type are preferred

TABLE 11 – METAL TO-204, TO-204AE (continued)

I _C Cont Amps Max	V _{CEO} (sus) Volts Min	Device Type		h _{FE} Min/Max	@ I _C Amp	Resistive Switching			f _T MHz Min	P _D (Case) Watts @ 25°C
		NPN	PNP			t _s μs Max	t _f μs Max	@ I _C Amp		
10	200	MJ410		30/90	1				2.5	100
	250	MJ15011	MJ15012	20/100	2					200
	300	MJ3041##		250 min	2.5					175
	325	MJ413 MJ423		20/80 30/90	0.5 1				2.5 2.5	125 125
	350	MJ13014 MJ10006##		8/20 30/300	5 5	2 1.5	0.5 0.5	5 5	10#	150 150
	400	BU323A## MJ10007## MJ10012## MJ13015		150 min 30/300 100/2k 8/20	6 5 6 5	7.5 typ 1.5 15 2	5.2 typ 0.5 15 0.5	6 5 6 5	10#	175 150 175 150
	600	MJ10014##		10/250	10	2.5	0.8	10		175
	800	MJ8505 MJ16018		7.5 min 4 min	1.5 5	4 4.5 typ	2 0.2 typ	5 5		175 150
12	60	2N6057##	2N6050##	750/18k	6	1.6 typ	1.5 typ	6	4#	150
	80	2N6058##	2N6051##	750/18k	6	1.6 typ	1.5 typ	6	4#	150
	100	2N6059## [C]	2N6052## [C]	750/18k	6	1.6 typ	1.5 typ	6	4#	150
15	60	2N3055 [C] 2N3055A 2N6576## 2N5881	MJ2955 [C] MJ2955A 2N5879	20/70 20/70 2k/20k 20/100	4 4 4 6	0.7 typ 2 1	0.3 typ 7 0.8	4 10 6	2.5 0.8 10-200# 4	115 115 120 160
	80	2N5882 [C]	2N5880 [C]	20/100	6	1	0.8	6	4	160
	90	2N6577##		2k/20k	4	2	7	10	10-200#	120
	120	MJ15015 [C] 2N6578##	MJ15016	20/70 2k/20k	4 4	0.7 typ 2	0.3 typ 7	4 10	1 10-200#	180 120
	140	MJ15001	MJ15002	25/150	4				2	200
	150	MJ11018##	MJ11017##	100 min	15				3#	175
	200	BUX41 MJ11020##		8 min 100 min	8 15	1.5	0.4	8	8 3#	120 175
	250	MJ11022## [C]	MJ11019## [C]	100 min	15				3#	175
	300	2N6546	MJ11021##	6/30	10	4	0.7	10	6 to 24	175
	350	2N6251		6/50	10	3.5	1	10	2.5	175

h_{FE}l @ MHz, ## Darlington

(continued)

[C] Available as preferred chip.

Device Numbers in **Bold** type are preferred

TABLE 11 – METAL TO-204, TO-204AE (continued)

I _C Cont Amps Max	V _{CEO(sus)} Volts Min	Device Type		h _{FE} Min/Max	@ I _C Amp	Resistive Switching			f _T MHz Min	P _D (Case) Watts @ 25°C
		NPN	PNP			t _s μs Max	t _f μs Max	@ I _C Amp		
15	400	BUX48		8 min	10	2	0.4	10	6 to 24	175
		2N6547		6/30	10	4	0.7	10		175
		MJ16110		6/20	15	0.8 typ	0.1 typ	10		175
	450	BUX48A		8 min	8	2	0.4	10		175
		MJ16010		5 min	15	1.2 typ	0.2 typ	10		175
		MJ16012		7 min	15	0.9 typ	0.15 typ	10		175
		2N6836		10/30	10	3	0.35	10		175
	500	MJ16010A		5 min	15	3	0.4	10		175
	16	2N5630	2N6030	20/80	8	1.2 typ	1.2 typ	8	1	200
		2N3773 [C]	2N6609	15/60	8	1.1 typ	1.5 typ	8	4	150
		2N5631	2N6031 [C]	15/60	8	1.2 typ	1.2 typ	8	1	200
		200	MJ15022	MJ15023	8				5	250
		250	MJ15024	MJ15025	8				5	250
18	160	BUX41N		8 min	12	1.2	0.25	12	8	120
20	60	2N3772		15/60	10				2	150
		2N6282##	2N6285##	750/18k	10	2.5 typ	2.5 typ	10	4#	160
	75	2N5039		20/100	10	1.5	0.5	10	60	140
	80	2N5303	2N5745	15/60	10	2	1	10	2	200
		2N6283##	2N6286##	750/18k	10	2.5 typ	2.5 typ	10	4#	160
	90	2N5038 [C]		20/100	12	1.5	0.5	12	60	140
	100	2N6284## [C]	2N6287## [C]	750/18k	10	2.5 typ	2.5 typ	10	4#	160
	125	BUX40		8 min	15	1	0.25	15	8	120
	140	MJ15003 [C]	MJ15004 [C]	25/150	5				2	250
	160	BUX11		10 min	15	1.2	0.25	15	8	150
	200	BUV11		10 min	12	1.8	0.4	12	8	150
	350	MJ10000##		40/400	10	3	1.8	10	10#	175
		MJ10004##		40/400	10	1.5	0.5	10	10#	175

I_{hfe} @ MHz, ## Darlington

(continued)

[C] Available as preferred chip

Device Numbers in **Bold** type are preferred

TABLE 11 – METAL TO-204, TO-204AE (continued)

I _C Cont Amps Max	V _{CEO(sus)} Volts Min	Device Type		h _{FE} Min/Max	@ I _C Amp	Resistive Switching			f _T MHz Min	P _D (Case) Watts @ 25°C
		NPN	PNP			t _s μs Max	t _f μs Max	@ I _C Amp		
20	400	MJ10001##		40/400	10	3	1.8	10	10#	175
		MJ10005##		40/400	10	1.5	0.5	10	10#	175
		MJ13333		10/60	5	4	0.7	10		175
	450	MJ10008##		30/300	10	2	0.6	10	8#	175
		MJ16014		5 min	20	2.7	0.35	20		250
		MJ16016		7 min	20	2.2	0.25	20		250
		2N6837		10/30	15	2.5	0.25	15		250
	500	MJ10009##		30/300	10	2	0.6	10	8#	175
		MJ13335		10/60	5	4	0.7	10		175
	750	MJ10024##		50/600	20	5	1.8	10		250
25	850	MJ10025##		50/600	20	5	1.8	10		250
	60	2N5885	2N5883	20/100	10	1	0.8	10	4	200
	80	2N5886 [C]	2N5884 [C]	20/100	10	1	0.8	10	4	200
			2N6436	30/120	10	1	0.25	10	40	200
	100	2N6338	2N6437	30/120	10	1	0.25	10	40	200
	120	2N6339 [C]	2N6438 [C]	30/120	10	1	0.25	10	40	200
	125	BUV10		10 min	20	1.2	0.25	20	8	150
	140	2N6340		30/120	10	1	0.25	10	40	200
28	150	2N6341		30/120	10	1	0.25	10	40	200
	400	BUT13##		20 min	20	2.6	0.8	18		175
	30	2N3771		15/60	15				2	150
		2N5301	2N4398	15/60	15	2	1	10	2	200
		2N5302	2N4399	15/60	15	2	1	10	2	200
		MJ11012##	MJ11011##	1k min	20				4#	200
		90	BUX39	8 min	20	1	0.25	20	8	120
		MJ11014##	MJ11013##	1k min	20				4#	200
		100	2N6328	6/30	30				3	200
		MJ802	MJ4502	25/100	7.5				2	200
		120	MJ11016## [C]	1k min	20				4#	200
	325	BUV23•		8 min	16	1.8	0.4	16	8	250
30	400	BUS98•		8 min	20	2.3	0.4	20		250
		BUX98•				3	0.8	20		250
	450	BUS98A •		8 min	16	2.3	0.4	16		250
		BUX98A •				3	0.8	16		250
30		MJ16020•		5 min	30	1.8	0.2	20		250
		MJ16022•		7 min	30	1.5	0.15	20		250

I_{hfe} @ MHz. ## Darlington

(continued)

• Case 197A-03 (TO-204AE)

[C] Available as preferred chip

Device Numbers in **Bold** type are preferred

TABLE 11 – METAL TO-204, TO-204AE (continued)

I _C Cont Amps Max	V _{CEO(sus)} Volts Min	Device Type		h _{FE} Min/Max	@ I _C Amp	Resistive Switching			f _T MHz Min	P _D (Case) Watts @ 25°C
						t _s μs Max	t _f μs Max	@ I _C Amp		
		NPN	PNP							
40	200	BUV21•		10 min	25	1.8	0.4	25	8	150
	250	BUS52•		15 min	40					350
		BUV22•		10 min	20	1.1	0.35	20	8	250
	350	MJ10022•##		50/600	10	2.5	0.9	20		250
	400	MJ10023•##		50/600	10	2.5	0.9	20		250
	700	BUT35•##		15 min	24	4	1.2	24		250
50	60	2N5685•	2N5683•	15/60	25	0.5 typ	0.3 typ	25	2	300
		MJ11028•##	MJ11029•##	400 min	50					300
	80	2N5686• □	2N5684• □ 2N6377•	15/60 30/120	25 20	0.5 typ 0.8	0.3 typ 0.25	25 20	2 30	300 250
	90	MJ11030•##	MJ11031•##	400 min	50					300
	100	2N6274•	2N6378•	30/120	20	0.8	0.25	20	30	250
	120	2N6275•	2N6379•	30/120	20	0.8	0.25	20	30	250
		MJ11032•##	MJ11033•##	400 min	50					300
	125	BUV20• BUV60•		10 min 10 min	50 80	1.2 1.1	0.25 0.25	50 80	8	250 250
	150	2N6277•		30/120	20	0.8	0.25	20	30	250
	200	BUS51•		15 min	50					350
400	MJ10015•##		10 min	40	2.5	1	20		250	
500	BUT34•##		15 min	32	3	1.5	32		250	
	MJ10016•##		10 min	40	2.5	1	20		250	
56	400	BUT33•##		20 min	36	3.3	1.6	36		250
60	60	MJ14000•	MJ14001•	15/100	50					300
	80	MJ14002•	MJ14003•	15/100	50					300
	200	MJ10020•##		75 min	15	3.5	0.5	30		250
	250	MJ10021•## □		75 min	15	3.5	0.5	30		250
70	125	BUS50•		15 min	50					350
80	100	BUV18A•		10 min	80	1.1	0.25	80		250

|h_{FE}| @ MHz, ## Darlington

• Case 197A-03 (TO-204AE)

□ Available as preferred chip

Device Numbers in **Bold** type are preferred