

Plastic TO-3PBL
Pin: 1 — Base, 2 — Collector, 3 — Emitter, 4 — Collector (Style 2, Case 340G-01)

Mir.'s Type		Ic(Cont.) Max.	Vce0(max) ¹ V Min.	hFE Min./Max.	@ Ic (A)	Resistive Switching			fr (MHz) Typ.	Po (Case) Watts @ 25°C
NPN	PNP					ts (μs) Max.	tf (μs) Max.	@ Ic (A)		
MJL3281A MJL21194	MJL1302A MJL21193	15.0 16.0	200 250	60/175 25/75	8.00 7.00	— —	— —	30.0 Typ. 4.0 Min.	200.0 200.0	

Plastic TO-225 Type (Formerly TO-126 Type)
Pin: 1 — Emitter, 2 — Collector, 3 — Base (Style 1, Case 77-07 (TO-225AA))
Pin: 1 — Base, 2 — Collector, 3 — Emitter (Style 3, Case 77-07 (TO-225AA))

Plastic TO-225 Type (Formerly TO-126 Type)										
Pin 1 — Emitter, 2 — Collector, 3 — Base (Style 1, Case 77-07 (TO-225AA))										
Pin: 1 — Base, 2 — Collector, 3 — Emitter (Style 3, Case 77-07 (TO-225AA))										
MJE3439	—	0.3	350	40/160	0.02	—	—	—	15.0	15.0
MJE344	—	0.5	200	30/100	0.05	—	—	—	20.8	—
MJE3490	—	0.5	300	30/240	0.05	—	—	—	—	20.8
2N4921	MJE3508	1.0	40	20/100	0.50	0.60 Typ.	0.300 Typ.	0.5	3.0	30.0
2N4922	2N4919	1.0	60	20/100	0.50	0.60 Typ.	0.300 Typ.	0.5	3.0	30.0
2N4923	2N4920	1.0	60	0.50	0.50	0.60 Typ.	0.300 Typ.	0.5	3.0	30.0
MJE181	MJE172	3.0	60	50/250	0.10	0.60 Typ.	0.1 Typ.	0.1	50.0	2.5
MJE182	MJE172	3.0	80	50/250	0.10	0.60 Typ.	0.120 Typ.	0.1	50.0	12.5
—	MJE371	4.0	40	40 Min.	1.00	—	—	—	—	40.0
2N5191	2N5194	4.0	60	25/100	1.50	0.40 Typ.	0.400 Typ.	0.5	2.0	40.0
MJE800*	MJE700*	4.0	60	750 Min.	1.50	—	—	—	1.0*	40.0
2N6038*	2N6035	4.0	60	750/18 K	2.00	1.70 Typ.	1.200 Typ.	2.0	25.0	40.0
2N5192	MJE195	4.0	80	25/100	1.50	0.40 Typ.	0.400 Typ.	1.5	2.0	40.0
MJE802*	MJE702*	4.0	80	750 Min.	1.50	—	—	—	1.0*	40.0
MJE803*	—	4.0	80	750 Min.	2.00	—	—	—	1.0*	40.0
2N6039*	2N6036*	4.0	80	750/18 K	2.00	1.70 Typ.	1.200 Typ.	2.0	25.0	40.0
MJE243	MJE253	4.0	100	40/120	0.20	0.15 Typ.	0.070 Typ.	0.20	40.0	15.0
MJE200*	MJE210	5.0	25	45/180	0.20	0.13 Typ.	0.035 Typ.	2.0	65.0	15.0

DPAK — Surface Mount Power Package Pin: 1 — Base, 2 — Collector, 3 — Emitter, 4 — Collector (Style 1, Case 39A-10')										
MJD112 ²	—	2.0	100	1000 Min.	2.00	1.70	1.300	2.0	25.0 ²	20.0
MJD31C	—	3.0	100	10 Min.	1.00	0.60	0.300	1.0	3.0	15.0
—	MJD45H11	8.0	80	40 Min.	4.00	0.50	0.140	5.0	50.0 Typ.	20.0

Metal TO-204 (Formerly TO-3), TO-204AE
Pin: 1 — Base, 2 — Emitter, 3 — Collector (Style 1, TO-204AA Case 1-07, TO-204AE Case 197A-03)

MJ3442	—	10.0	140	20/70	4.00	—	—	—	117.0
MJ15011	—	10.0	250	20/100	2.00	—	—	—	200.0
MJ423	—	10.0	325	30/90	1.00	—	—	2.5	125.0
MJ10012 ²	—	10.0	400	100/2 K	6.00	15.00	15.000	6.0	175.0
2N6058 ¹	—	12.0	80	750/18 K	6.00	1.60 Typ.	1.500 Typ.	6.0	4.0 ¹
2N6059 ¹³	2N6052 ¹³	12.0	100	750/18 K	6.00	1.60 Typ.	1.500 Typ.	6.0	4.0 ¹
2N3055 ¹	—	15.0	60	20/70	4.00	0.70 Typ.	0.300 Typ.	4.0	2.5
2N3055A ¹	—	15.0	60	20/70	4.00	—	—	—	115.0
MJ15016	—	15.0	120	20/70	4.00	—	—	—	185.0
MJ15002	—	15.0	140	25/150	4.00	0.70 Typ.	0.300 Typ.	4.0	2.0
MJ11021 ¹	—	15.0	300	6/30	10.00	4.00	0.700	10.0	6.0-24
2N6547	—	15.0	400/850	6/30	10.00	4.00	0.700	10.0	6.0-24
MJ16010	—	15.0	450/850	5 Min.	15.00	1.20 Typ.	0.200 Typ.	10.0	—
MJ16012	—	15.0	450/850	7 Min.	15.00	0.90 Typ.	0.150 Typ.	10.0	—
2N3773 ¹	2N6609 ¹	16.0	140	15/60	8.00	1.10 Typ.	1.500 Typ.	8.0	4.0
—	2N6031 ¹	16.0	140	15/60	8.00	1.20 Typ.	1.200 Typ.	8.0	1.0
MJ15022	MJ15023	16.0	200	15/60	8.00	—	—	5.0	250.0
MJ15024	MJ15025	16.0	250	15/60	8.00	—	—	5.0	250.0
2N3772	—	20.0	60	15/60	10.00	—	—	5.0	250.0
2N6282 ¹	—	20.0	60	750/18 K	10.00	2.50 Typ.	2.500 Typ.	10.0	4.0 ¹
—	2N6286 ¹	20.0	80	750/18 K	10.00	2.50 Typ.	2.500 Typ.	10.0	4.0 ¹
2N5038 ¹	—	20.0	90	20/100	12.00	1.50	0.500	12.0	60.0
2N284 ¹	2N6287 ¹	20.0	100	25/100	12.00	2.50 Typ.	2.500 Typ.	10.0	4.0 ¹
MJ15003 ³	MJ15004 ⁴	20.0	140	750/18 K	15.00	5.00	—	2.0	250.0
MJ10005 ²	—	20.0	400	40/400	10.00	1.50	0.500	10.0	10.0 ¹
MJ13333	—	20.0	400	10/60	5.00	4.00	0.700	10.0	—
MJ10009 ¹	—	20.0	500	30/300	10.00	2.00	0.600	10.0	8.0 ¹
2N5885	—	25.0	80	20/100	10.00	1.00	0.800	10.0	4.0
2N5886 ¹	2N5884 ¹	25.0	80	20/100	10.00	1.00	0.800	10.0	4.0
2N5883 ¹	—	25.0	150	30/20	10.00	1.00	0.250	10.0	40.0
2N3771	—	30.0	40	15/60	15.00	—	—	2.0	150.0
MJ11012 ²	—	30.0	60	1 K Min.	20.00	—	—	2.0	20.0
MJ802	MJ4502	30.0	100	25/100	7.50	—	—	2.0	20.0
MJ11016 ¹³	MJ11015 ¹³	30.0	120	1 K Min.	20.00	—	—	4.0	20.0
MJ10023 ²	—	40.0	400	50/600	10.00	2.50	0.900	20.0	—
2N5686	2N5684 ¹	50.0	80	15/60	25.00	0.50 Typ.	0.300 Typ.	2.0	2.0
MJ11030 ²	—	50.0	90	400/18 K	40.00	—	—	—	300.0
MJ11032 ²	MJ11033 ²	50.0	120	400 Min.	50.00	—	—	—	300.0
MJ10016 ²	—	50.0	500	10 Min.	40.00	2.50	1.000	20.0	—
MJ14002 ²	MJ14003 ³	60.0	80	15/100	50.00	—	—	—	300.0
MJ10021 ²	—	60.0	250	75 Min.	15.00	3.50	0.500	30.0	—

TIP140*	TIP145*	10	60	500 Min.	10.0	2.5 Typ.	2.50 Typ.	5.0	4.0*	125
TIP141*	TIP146*	10	80	500 Min.	10.0	2.5 Typ.	2.50 Typ.	5.0	4.0*	125
TIP142*		10	100	500 Min.	10.0	2.5 Typ.	2.50 Typ.	5.0	4.0*	125
TIP355*	TIP295*	15	60	5 Min.	10.0			2.5	80	
MJ11022*	MJ11021*	15	200	400/15 K	10.0			3.0*	150	
MJ11022*	MJ11021*	15	250	400/15 K	10.0			3.0*	150	
BUV484		15	450	8 Min.	8.0	2.0	0.40	10.0		150
MJE4343		16	160	15 Min.	8.0	1.2 Typ.	0.30 Typ.	8.0	1.0	125
MJE6284*	MJE6287*	10	100	750/18 K	10.0		1.20 Typ.	10.0	1.0	125
TIP35E	TIP36E	20	100	10/75	15.0	0.6 Typ.	0.20	Typ.	3.0	125

¹1HeI @ MHz. ²Darlington. ³Switching tests performed with special application simulator circuit. See data sheet for details. ⁴Available as preferred chip. ⁵When 2 voltages are given, the format is $V_{CE0(SUS)}/V_{CES}$.

Mfr.'s Type	IcCont (A) Max.	VCE(sat) (V) Min.	VCEs (V) Min.	hFE Min./Max.	@ Ic (A)	Resistive Switching			fT (MHz) Min.	Po (Case) Watts @ 25°C
NPN						t _{ON} (μs) Max.	t _{OFF} (μs) Max.	@ Ic (A)		
MJW16018	10	800	1500	4 Min.	5.0	2.45 Typ.	0.20 Typ.	5.0	3.0 Typ.	150
MJW16206	12	500	1200	5/13	10.0	4.25 Typ.	0.25 Typ.	6.5	3.0 Typ.	150

¹1Hd @ MHz. ²Darlington. ³Available as preferred chip. ⁴Case 77, (Style 3). ⁵When 2 voltages are given, the format is V_{CEO(sus)}/V_{CEs}. ⁶Case 369A-10 may be ordered tape and reeled by adding a "T4" suffix; 2500 units/reel. ⁷Case 197A-03 (TO-204AE).