

Power Transistors

Bipolar

Table 1. High Voltage Switching Power Transistors

$V_{CE0} \geq 200$ V

Devices are listed in descending order of $V_{CE0(sus)}$, and I_{CCont}

$V_{CE0(sus)}$ Volts Min	I_{CCont} 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			
900	2	1800	MJE1320	3 min	1	4 typ	0.8 typ	1		80	TO-220/221A
850	20	1200	MJ10025##★	50/600	20	5	1.8	10		250	TO-204/1
	3	1500 1500	MJE16034 MJH16034	4 min 4 min	3 3	2 2	1.5 1.5	2 2		80 125	TO-220/221A TO-218/340
800	10	1400 1500 1500	MJ8505★ MJ16018★ MJH16018★	7.5 min 4 min 4 min	1.5 5 5	4 4.5 typ 4.5 typ	2 0.2 typ 0.2 typ	5 5 5		175 150 125	TO-204/1 TO-204/1 TO-218/340
	5	1400 1400	MJ8503★ MJE8503★	7.5 min 7.5 min	1 1	4 4	2 2	2.5 2.5		150 80	TO-204/1 TO-220/221A
	2.5	1400 1400	MJ8501★ MJE8501★	7.5 min 7.5 min	0.5 0.5	4 4	2 2	1 1		125 65	TO-204/1 TO-220/221A
	20	1000	MJ10024##★	50/600	20	5	1.8	10		250	TO-204/1
	8	1500 1500	MJ12005,D MJH12005	5 min 5 min	5 5		0.4 typ 0.4 typ	5 5	4 typ 4 typ	100 100	TO-204/1 TO-218/340
	5	1500 1500	MJ12004★ MJH12004★	2.5 min 2.5 min	4.5 4.5		1 1	4.5 4.5	4 typ 4 typ	100 100	TO-204/1 TO-204/1
750	4	1500	MJ12003	2.5 min	3		1	3	4 typ	100	TO-204/1
	3	1500 1500	MJE16032 MJH16032	4 min 4 min	3 3	2 2	1.5 1.5	2 2		80 125	TO-220/221A TO-218/340
	2.5	1500 1500	MJ12002★ MJE12007★	1.11 min 1.1 min	2 2		1 1	2 2	4 typ 4 typ	75 65	TO-204/1 TO-220/221A
	40	1000	BUT35##	15 min	24	4	1.2	24		250	TO-204/197
	20	1000	BUT15##	15 min	12	2.5	0.8	12		175	TO-204/1
	10	1200	MJ8504★	7.5 min	1.5	4	2	5		175	TO-204/1
700	8	1400 1500 1500	MJ10011# BU508,A BU508D,AD	20 min 2.25 min 2.25 min	4 4.5 4.5	8 typ 8 typ	1 0.5 typ 0.5 typ	4 4.5 4.5	7 7	80 125 125	TO-204/1 TO-218/340 TO-218/340
	5	1200 1200 1500 1500	MJ8502★ MJE8502★ BU208A BU208D	7.5 min 7.5 min 2.25 min 2.25 min	1 1 4.5 4.5	4 4 8 typ	2 2 0.4 typ 0.6 typ	2.5 2.5 4.5 4.5	4 typ	125 80 90 60	TO-204/1 TO-220/221A TO-204/1 TO-204/1
	2.5	1200	MJE8500★	7.5 min	0.5	4	2	1		65	TO-220/221A
600	10	700	MJ10014##★	10/250	10	2.5	0.8	10		175	TO-204/1
550	8	1200	BUT47C	8 min	2		4*	4	12	100	TO-220/221A
500	50	750 850	MJ10016##★ BUT34##	10 min 15 min	40 32	2.5 3	1 1.5	20 32		250 250	TO-204/197 TO-204/197
	25	850	BUT14##	15 min	16	2.8	0.8	16		175	TO-204/1

★ Designers Data Sheet characterization

Darlington ## Darlington with speed-up diode

* t_{off}

** $|h_{fe}|$ @ 1 MHz

(continued)