

Power Transistors

Bipolar

Table 1. High Voltage Switching Power Transistors

$V_{CE0} \geq 200 \text{ V}$

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	MJ8505★	7.5 min	1.5	4	2	5		175	TO-204/1
		1500	MJ16018★	4 min	5	4.5 typ	0.2 typ	5		150	TO-204/1
		1500	MJH16018★	4 min	5	4.5 typ	0.2 typ	5		125	TO-218/340
	5	1400	MJ8503★	7.5 min	1	4	2	2.5		150	TO-204/1
		1400	MJE8503★	7.5 min	1	4	2	2.5		80	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	
750	20	1000	MJ10024##★	50/600	20	5	1.8	10		250	TO-204/1
	8	1500	MJ12005,D	5 min	5		0.4 typ	5	4 typ	100	TO-204/1
		1500	MJH12005	5 min	5		0.4 typ	5	4 typ	100	TO-218/340
	5	1500	MJ12004★	2.5 min	4.5		1	4.5	4 typ	100	TO-204/1
		1500	MJH12004★	2.5 min	4.5		1	4.5	4 typ	100	TO-204/1
	4	1500	MJ12003	2.5 min	3		1	3	4 typ	100	TO-204/1
	3	1500	MJE16032	4 min	3	2	1.5	2		80	TO-220/221A
		1500	MJH16032	4 min	3	2	1.5	2		125	TO-218/340
2.5	1500	MJ12002★	1.11 min	2		1	2	4 typ	75	TO-204/1	
	1500	MJE12007★	1.1 min	2		1	2	4 typ	65	TO-220/221A	
700	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
	8	1400	MJ10011#	20 min	4		1	4		80	TO-204/1
		1500	BU508,A	2.25 min	4.5	8 typ	0.5 typ	4.5	7	125	TO-218/340
		1500	BU508D,AD	2.25 min	4.5	8 typ	0.5 typ	4.5	7	125	TO-218/340
	5	1200	MJ8502★	7.5 min	1	4	2	2.5	4 typ	125	TO-204/1
1200		MJE8502★	7.5 min	1	4	2	2.5	80		TO-220/221A	
1500		BU208A	2.25 min	4.5	8 typ	0.4 typ	4.5	90		TO-204/1	
1500		BU208D	2.25 min	4.5		0.6 typ	4.5	60		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	MJ10016##★	10 min	40	2.5	1	20		250	TO-204/197
		850	BUT34##	15 min	32	3	1.5	32		250	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}

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

(continued)