

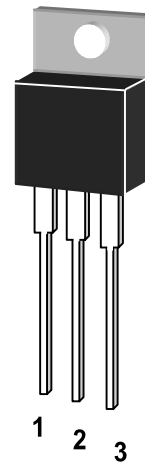
MJE13006 / MJE13007

NPN Silicon Power Transistors

High Voltage Switch Mode Application

High Speed Switching

Suitable for Switching Regulator and Motor Control



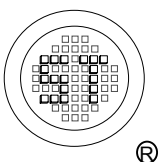
1. Base 2. Collector 3. Emitter

TO-220 Plastic Package

Absolute Maximum Ratings ($T_a=25^{\circ}\text{C}$)

		Symbol	Value	Unit
Collector Base Voltage	MJE13006	V_{CBO}	600	V
	MJE13007		700	V
Collector Emitter Voltage	MJE13006	V_{CEO}	300	V
	MJE13007		400	V
Emitter Base Voltage		V_{EBO}	9	V
Collector Current (DC)		I_C	8	A
Collector Current (Pulse)		I_{CP}	16	A
Base Current		I_B	4	A
Power Dissipation		P_{tot}	80	W
Junction Temperature		T_J	150	$^{\circ}\text{C}$
Storage Temperature Range		T_S	-65 to +150	$^{\circ}\text{C}$

G S P FORM A IS AVAILABLE



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ISO 14001 Certificate No. 7116
Dated : 07/12/2002

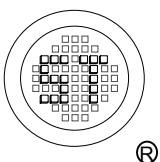
MJE13006 / MJE13007

Characteristics at Ta=25 °C

	Symbol	Min.	Typ.	Max.	Unit	
DC Current Gain						
at V _{CE} =5V, I _C =2A	h _{FE}	8	-	60	-	
at V _{CE} =5V, I _C =5A	h _{FE}	5	-	30	-	
Collector Emitter Breakdown Voltage						
at I _C =10mA	MJE13006 BV _{CEO}	300	-	-	V	
	MJE13007 BV _{CEO}	400	-	-	V	
Emitter Cutoff Current						
at V _{EB} =9V	I _{EBO}	-	-	1	mA	
Collector Emitter Saturation Voltage						
at I _C =2A, I _B =0.4A	V _{CE(sat)}	-	-	1	V	
at I _C =5A, I _B =1A	V _{CE(sat)}	-	-	2	V	
at I _C =8A, I _B =2A	V _{CE(sat)}	-	-	3	V	
Base Emitter Saturation Voltage						
at I _C =2A, I _B =0.4A	V _{BE(sat)}	-	-	1.2	V	
at I _C =5A, I _B =1A	V _{BE(sat)}	-	-	1.6	V	
Current Gain Bandwidth Product						
at V _{CE} =10V, I _C =0.5A	f _T	4	-	-	MHz	
Output Capacitance						
at V _{CB} =10V, f=0.1MHz	C _{ob}	-	110	-	pF	
Turn ON Time	V _{CC} =125V, I _C =5A, I _{B1} =-I _{B2} =1A, R _L =50Ω	t _{ON}	-	-	1.6	μs
Storage Time		t _S	-	-	3	μs
Fall Time		t _F	-	-	0.7	μs

Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2%.

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