



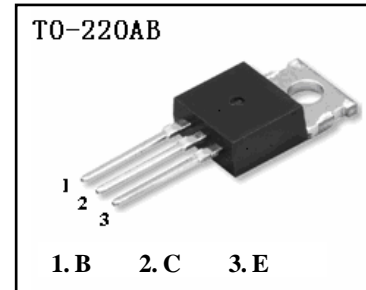
Pb Free Plating Product

E13005-225

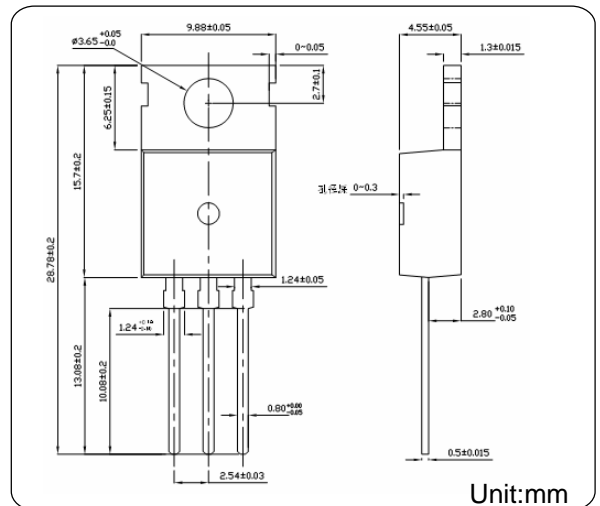
MJE Power Transistor

Silicon NPN Power Transistor Product specification MJE13005 series
DESCRIPTION

Silicon NPN, high power transistors in a plastic envelope, primarily for use in high-speed power switching circuits.

**Absolute Maximum Ratings (Ta = 25°C)**

Parameter	I	Value	Unit
Collector-Base Voltage	V_{CBO}	700	V
Collector-Emitter Voltage	V_{CEO}	400	V
Emitter-Base Voltage	V_{EBO}	9	V
Collector Current	I_C	4.0	A
Base Current	I_B	2.0	A
Total Dissipation at	P_{tot}	70	W
Max. Operating Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55~150	°C

**Electrical Characteristics (Ta = 25°C)**

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector Cut-off Current	I_{CBO}	$V_{CE}=700V, I_E=0$	—	—	10	uA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=6.0V, I_C=0$	—	—	10	uA
Collector-Emitter Sustaining Voltage	V_{CEO}	$I_C=10mA, I_B=0$	400	—	—	V
DC Current Gain	h_{FE}	$V_{CE}=5V, I_C=1.0A$	15	—	30	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=4.0A, I_B=1.0A$	—	—	1.5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=2.0A, I_B=0.5A$	—	—	1.6	V
Current Gain Bandwidth Product	f_T	$V_{CE}=10V, I_C=0.5A$	4	—	—	MHz
Turn Off Time	t_S	$I_{B1}=-I_{B2}=0.5A,$	2.0	2.5	4.0	us