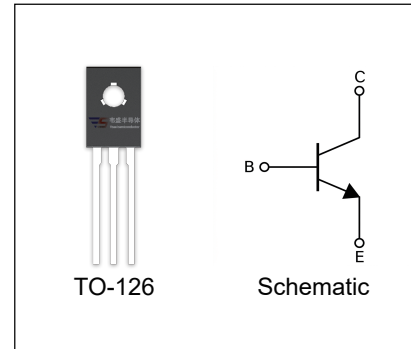


MJE13003 TRANSISTOR (NPN)

FEATURES

- Power Switching Applications



MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	600	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	1	A
P_C	Collector Power Dissipation	1.25	W
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	100	$^{\circ}\text{C/W}$
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	$^{\circ}\text{C}$

T_a=25 °C unless otherwise specified

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C = 0.1mA, I _E =0	600			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C = 1mA, I _B =0	400			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =0.1mA, I _C =0	6			V
Collector cut-off current	I _{CBO}	V _{CB} =600V, I _E =0			100	uA
Collector cut-off current	I _{CEO}	V _{CE} =400V, I _B =0			100	uA
Emitter cut-off current	I _{EBO}	V _{EB} =7V, I _C =0			10	uA
DC current gain	h _{FE(1)} *	V _{CE} =10V, I _C =200mA	20		30	
	h _{FE(2)}	V _{CE} =10V, I _C =250μA	5			
Collector-emitter saturation voltage	V _{CE(sat)1}	I _C =200mA, I _B =40mA			0.5	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C =200mA, I _B =40mA			1.1	V
Transition frequency	f _T	V _{CE} =10V, I _C =100mA, f=1MHz	5			MHz
Fall time	t _f	I _C =100mA			0.5	μs
Storage time	t _S *	I _C =100mA	2		4	

