MJE13003

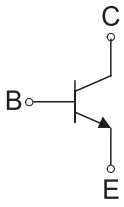
NPN Plastic-Encapsulate Transistors

Features

- Power Switching Applications



TO-126



Package Marking and Ordering Information

Product ID	Pack	Packing Method	Qty(PCS)
MJE13003	TO-126	Bulk	200

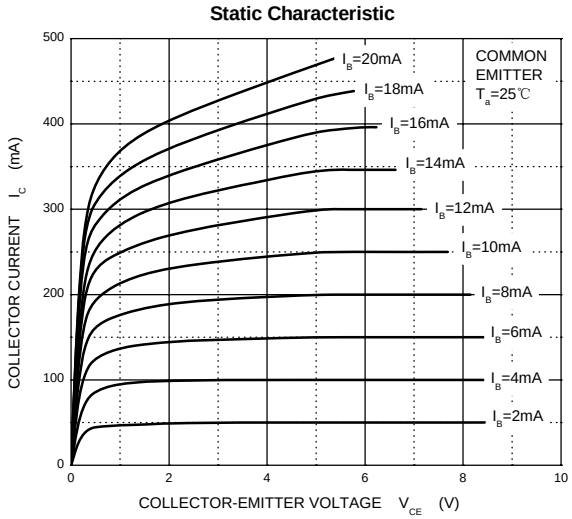
Maximum Ratings (Ta=25°C unless otherwise noted)

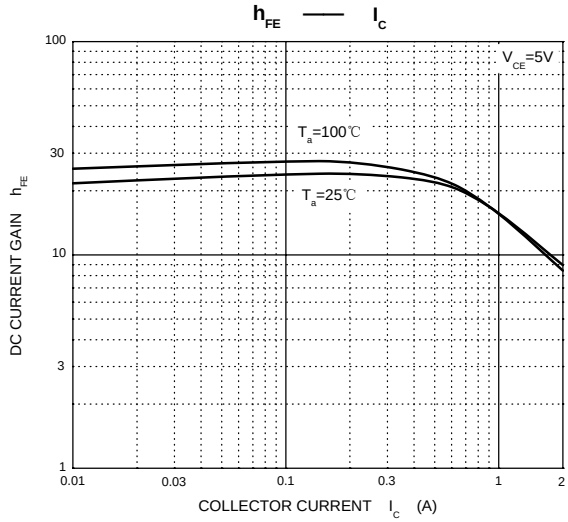
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	700	V
V_{CEO}	Collector-Emitter Voltage	500	V
V_{EBO}	Emitter-Base Voltage	9	V
I_C	Collector Current -Continuous	1.5	A
P_C	Collector Dissipation	1.25	W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

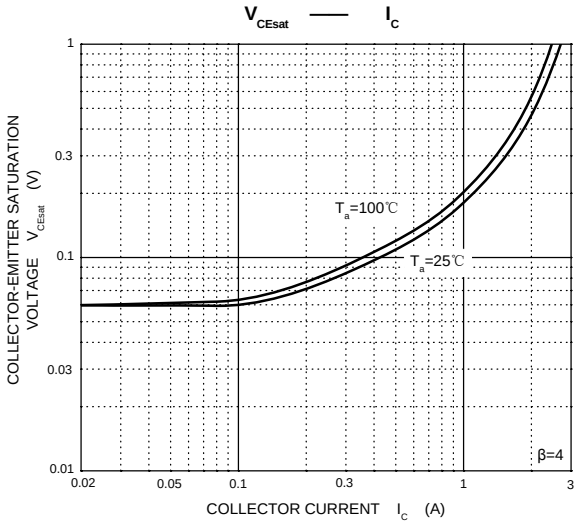
Electrical Characteristics(Ta=25°C unless otherwise specified)

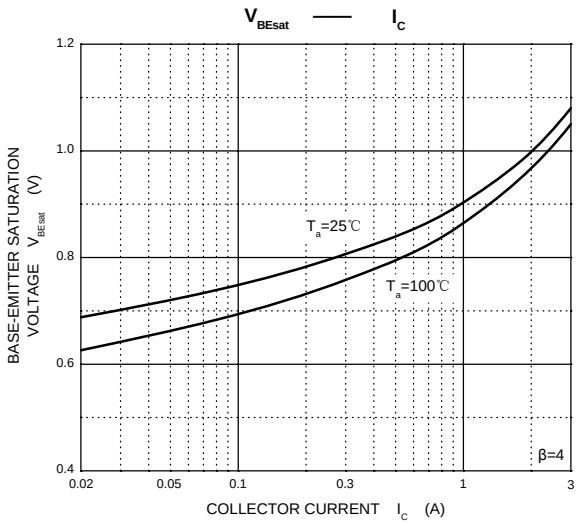
Parameter	symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C =5mA, I_E=0	700		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=10mA, I_B=0	500		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=2mA, I_C=0	9		V
Collector cut-off current	I_{CBO}	V_{CB}=680V,I_E=0		1	mA
Collector cut-off current	I_{CEO}	V_{CE}=410V,I_B=0		0.5	mA
Emitter cut-off current	I_{EBO}	V_{EB}=7V, I_C=0		1	mA
DC current gain	h_{FE1}	V_{CE}=5V, I_C= 0.2 A	20	25	
	h_{FE2}	V_{CE}=5V, I_C= 1A	5		
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=1A,I_B=0.2A		0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=1A,I_B=0.2A		1.2	V
Transition frequency	f_T	V_{CE}=10V,Ic=100mA, f =1MHz	5		MHz
Storage time	t_s	I_C=250mA	2	4	μ s

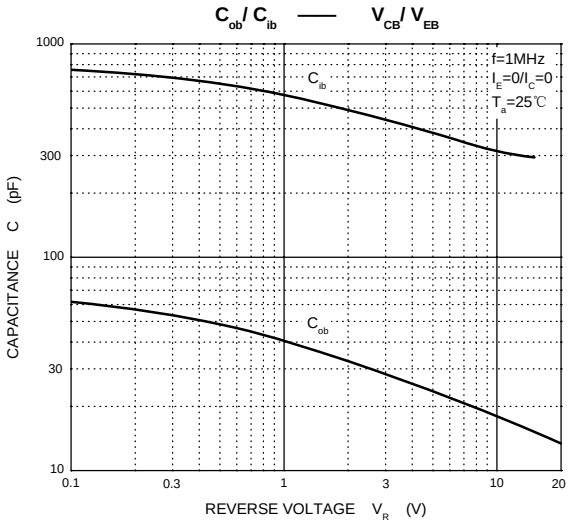
Typical Characteristics

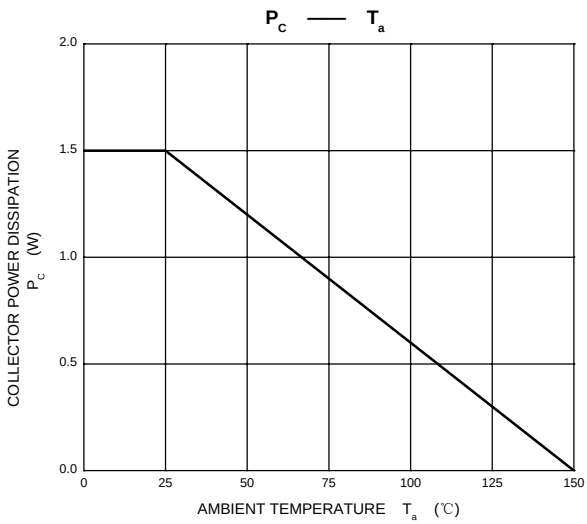




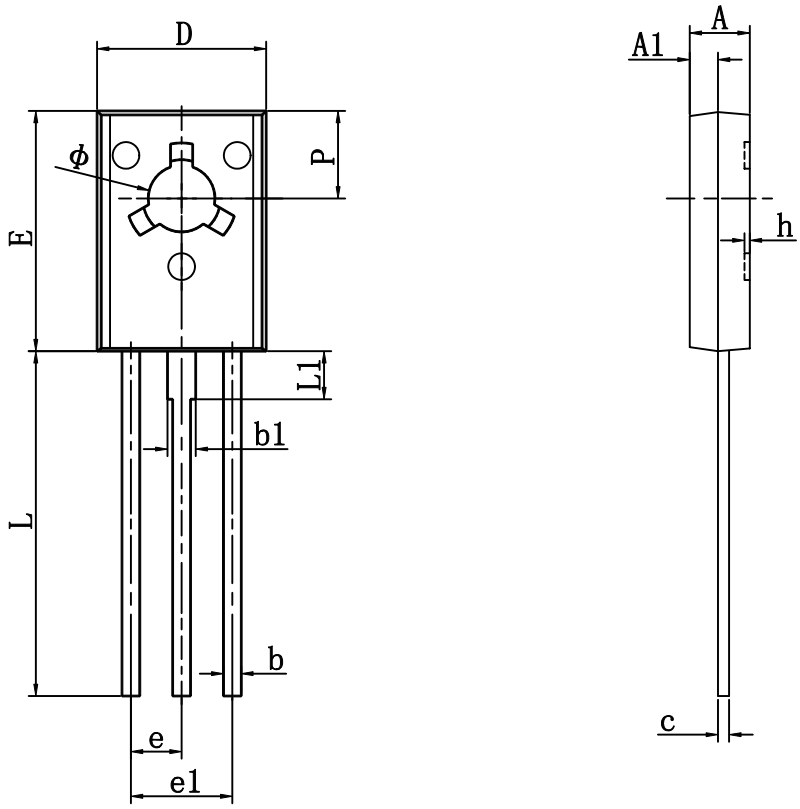








TO-126 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	2.500	2.900	0.098	0.114
A1	1.100	1.500	0.043	0.059
b	0.660	0.860	0.026	0.034
b1	1.170	1.370	0.046	0.054
c	0.450	0.600	0.018	0.024
D	7.400	7.800	0.291	0.307
E	10.600	11.000	0.417	0.433
e	2.290 TYP		0.090 TYP	
e1	4.480	4.680	0.176	0.184
h	0.000	0.300	0.000	0.012
L	15.300	15.700	0.602	0.618
L1	2.100	2.300	0.083	0.091
P	3.900	4.100	0.154	0.161
Φ	3.000	3.200	0.118	0.126

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