

TO-126 Plastic-Encapsulate Transistors

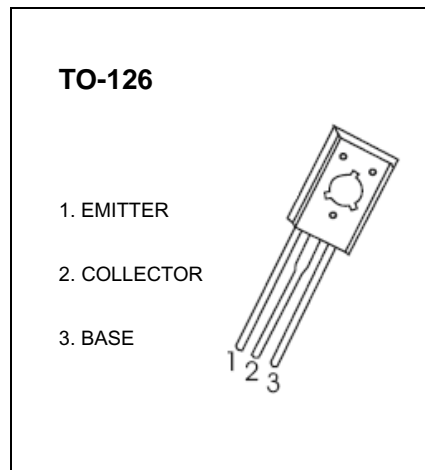
BD233/235/237 TRANSISTOR (NPN)

FEATURES

Complement to BD234/236/238 respectively

MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

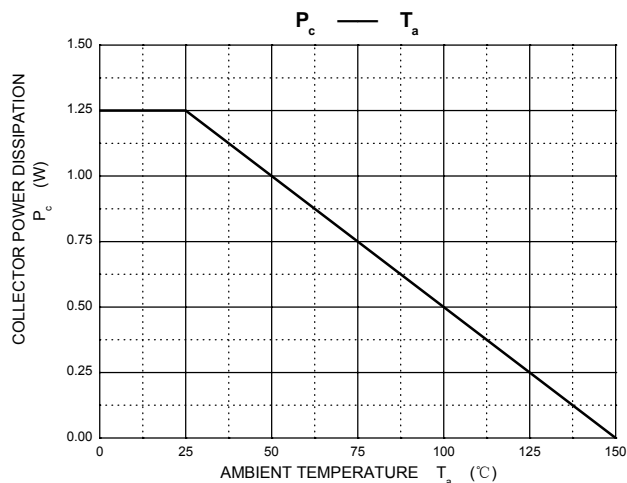
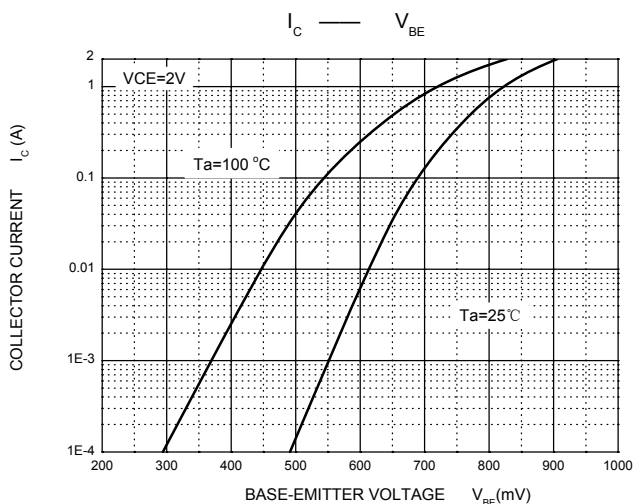
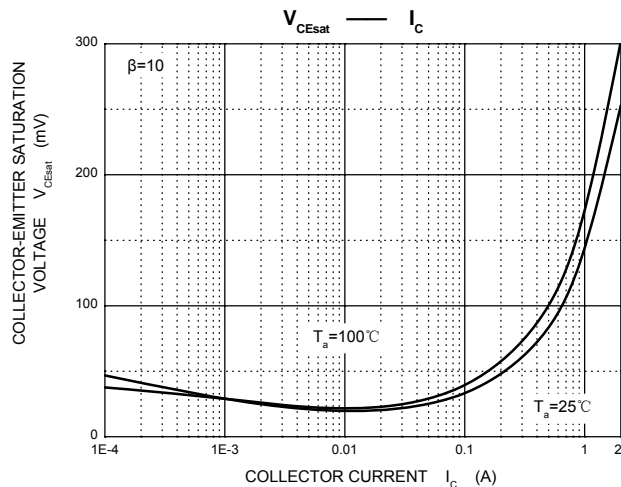
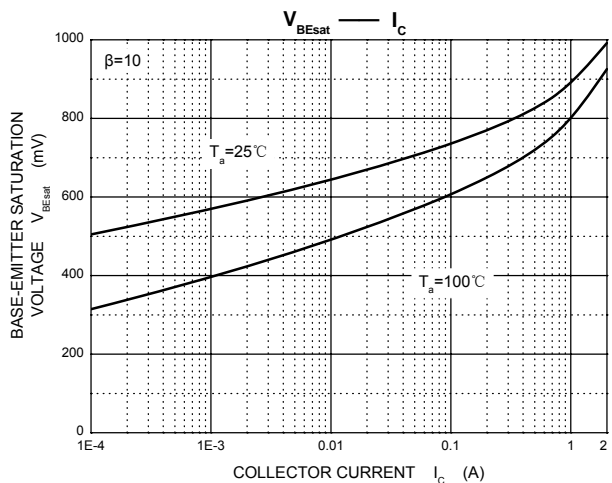
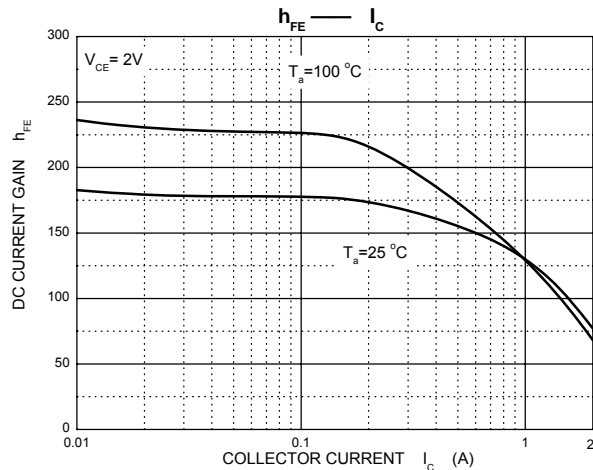
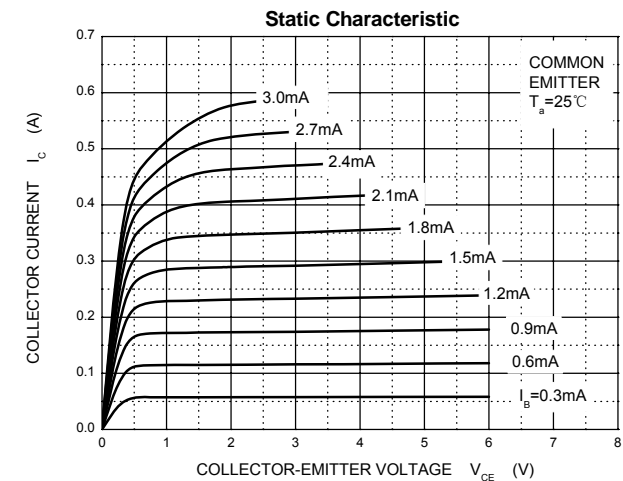
Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	BD233	45
		BD235	60
		BD237	100
V _{CEO}	Collector-Emitter Voltage	BD233	45
		BD235	60
		BD237	80
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current –Continuous	2	A
P _C	Collector Dissipation	1.25	W
P _C	Collector Dissipation (T _c =25°C)	25	W
R _{θJA}	Thermal Resistance from Junction to Ambient	100	°C/W
R _{θJC}	Thermal Resistance from Junction to Case	5	°C/W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~+150	°C



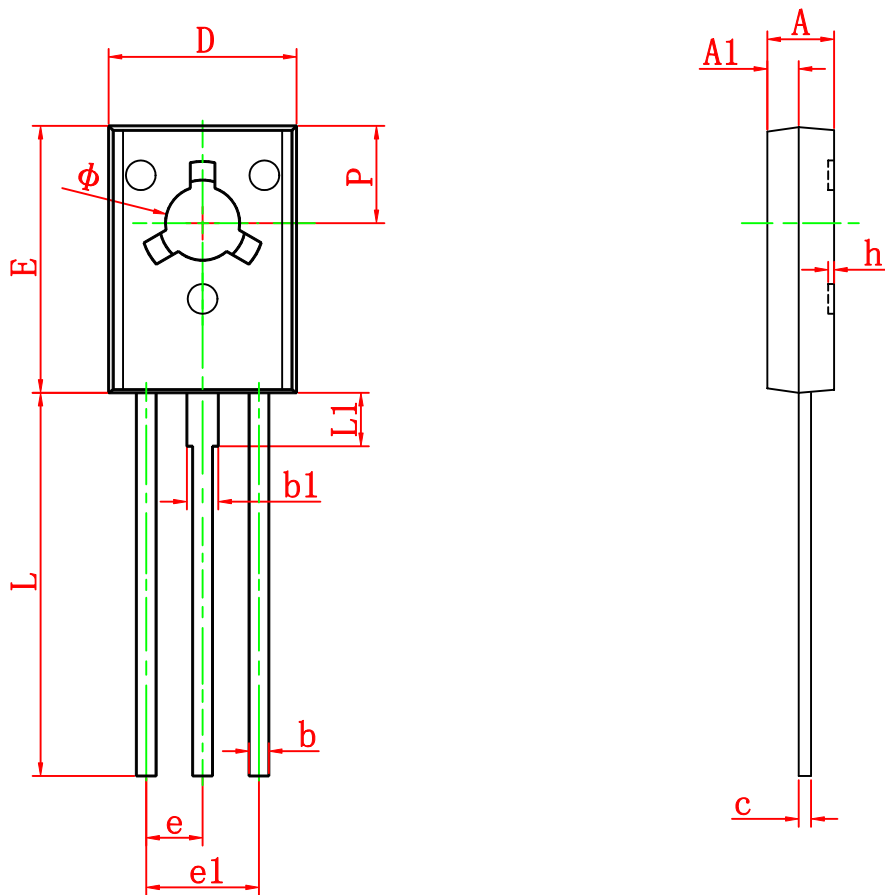
ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	BD233	I _C = 1mA, I _E =0	45		V
	BD235		60		
	BD237		100		
Collector-emitter breakdown voltage	BD233	I _C = 100mA, I _B =0	45		V
	BD235		60		
	BD237		80		
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E = 1mA, I _C =0	5		V
Collector cut-off current	BD233	V _{CB} = 45V, I _E =0			μA
	BD235	V _{CB} = 60V, I _E =0		100	
	BD237	V _{CB} = 100V, I _E =0			
Emitter cut-off current	I _{EBO}	V _{EB} = 5V, I _C =0		1	mA
DC current gain	H _{FE(1)}	V _{CE} = 2V, I _C =150mA	40		
	H _{FE(2)}	V _{CE} =2V, I _C = 1A	25		
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =1A, I _B = 100m A		0.6	V
Transition frequency	f _T	V _{CE} =10V, I _C =250mA f =10MHZ	3		MHz

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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