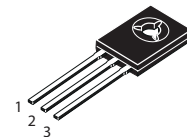


NPN Epitaxial Planar Transistors

 Lead(Pb)-Free

1. EMITTER
2. COLLECTOR
3. BASE



TO-126

ABSOLUTE MAXIMUM RATINGS(TA=25°C)

Rating	Symbol	BD233	BD235	BD237	Unit
Collector-Emitter Voltage	V_{CBO}	45	60	100	V
Collector-Base Voltage	V_{CEO}	45	60	80	V
Emitter-Base Voltage	V_{EBO}	5.0	5.0	5.0	V
Collector Current	I_C	2.0			A
Power Dissipation	P_D	1.25			W
Junction Temperature	T_j	150			°C
Storage , Temperature	T_{stg}	-65 to +150			°C

Device Marking

BD233 = BD233 , BD235 = BD235 , BD237 = BD237

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted) (Continued)

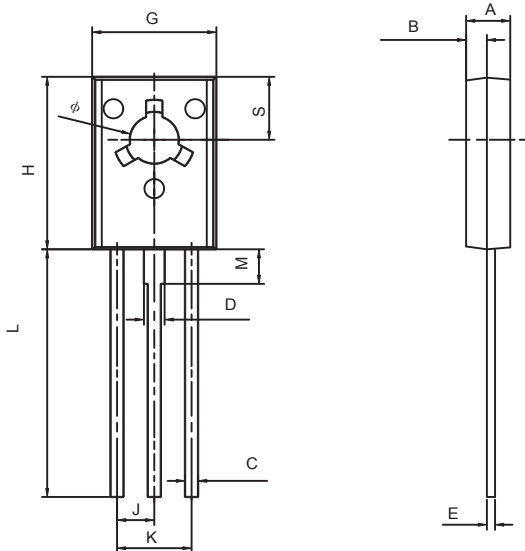
Characteristics	Symbol	Min	Max	Unit
Collector-Emitter Breakdown Voltage $I_C = 100\mu\text{A}, I_E = 0$	BD233 BD235 BD237 $V_{(BR)CBO}$	45 60 100	-	V
Collector-Base Breakdown Voltage $I_C = 10\text{mA}, I_B = 0$	BD233 BD235 BD237 $V_{(BR)CEO}$	45 60 80	-	V
Emitter-Base Breakdown Voltage $I_C = 0, I_E = 100\mu\text{A}$	$V_{(BR)EBO}$	5.0	-	V
Collector Cutoff Current $V_{CB} = 45\text{V}, I_E = 0$ $V_{CB} = 60\text{V}, I_E = 0$ $V_{CB} = 100\text{V}, I_E = 0$	BD233 BD235 BD237 I_{CBO}	-	100	μA
Emitter Cutoff Current $V_{EB} = 5.0\text{V}, I_C = 0$	I_{EBO}	-	1.0	mA

ON CHARACTERISTICS

DC Current Gain $V_{CE} = 2.0\text{V}, I_C = 150\text{mA}$ $V_{CE} = 2.0\text{V}, I_C = 1.0\text{A}$	$h_{FE(1)}$ $h_{FE(2)}$	40 25	-	-
Collector-Emitter Saturation Voltage $I_C = 1.0\text{A}, I_B = 100\text{mA}$	$V_{CE(sat)}$	-	0.6	V
Transition frequency $V_{CE} = 10\text{V}, I_C = 250\text{mA}, f = 10\text{MHz}$	f_T	3.0	-	MHz

TO-126 Outline Dimensions

unit:mm



TO-126		
Dim	Min	MAX
A	2.500	2.900
B	1.100	1.500
C	0.660	0.860
D	1.170	1.370
E	0.450	0.600
G	7.400	7.800
H	10.600	11.000
J	2.290TYP	
K	4.480	4.680
L	15.300	15.700
M	2.100	2.300
S	3.900	4.100
ϕ	3.000	3.200