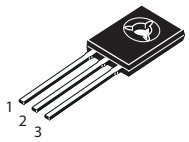
WEITRON

BD135/137/139

NPN Epitaxial Planar Transistors

Pb Lead(Pb)-Free

1. EMITTER
2. COLLECTOR
3. BASE



TO-126

ABSOLUTE MAXIMUM RATINGS(TA=25ºC)

Rating	Symbol	BD135	BD137	BD139	Unit
Collector-Emitter Voltage	V_{CBO}	45	60	80	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	1.5			A
Power Disspation	P_D	1.25			W
Junction Temperature	T_j	150			˚C
Storage , Temperature	T_{stg}	-55 to +150			˚C

Classification Of $h_{FE(2)}$

Rank	6	10	16
Range	40-100	63-160	100-250

Device Marking

BD135 = BD135 , BD137 = BD137 , BD139 = BD139

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted) (Countinued)

Characteristics	Symbol	Min	Max	Unit
Collector-Emitter Breakdown Voltage I_C = 100μA, I_E = 0 BD135 BD137 BD139	$V_{(BR)CBO}$	45 60 80	-	V
Collector-Base Breakdown Voltage I_C = 30mA, I_B = 0 BD135 BD137 BD139	$V_{(BR)CEO}$	45 60 80	-	V
Emitter-Base Breakdown Voltage I_C = 0, I_E = 100μA	$V_{(BR)EBO}$	5.0	-	V
Collector Cutoff Current V_{CB} = 30V, I_E=0	I_{CBO}	-	0.1	μA
Emitter Cutoff Current V_{EB} = 5.0V, I_C=0	I_{EBO}	-	10	μA

ON CHARACTERISTICS

DC Current Gain V_{CE} = 2.0V, I_C = 5mA V_{CE} = 2.0V, I_C = 150A V_{CE} = 2.0V, I_C = 500A	 $h_{FE(1)}$ $h_{FE(2)}$ $h_{FE(3)}$	 25 40 25	 - 250 -	-
Collector-Emitter Saturation Voltage I_C = 0.5A, I_B = 50mA	$V_{CE(sat)}$	-	0.5	V
Base-Emitter Voltage V_{CE} = 2.0V, I_C = 0.5A	V_{BE}	-	1	V

TYPICAL CHARACTERISTICS

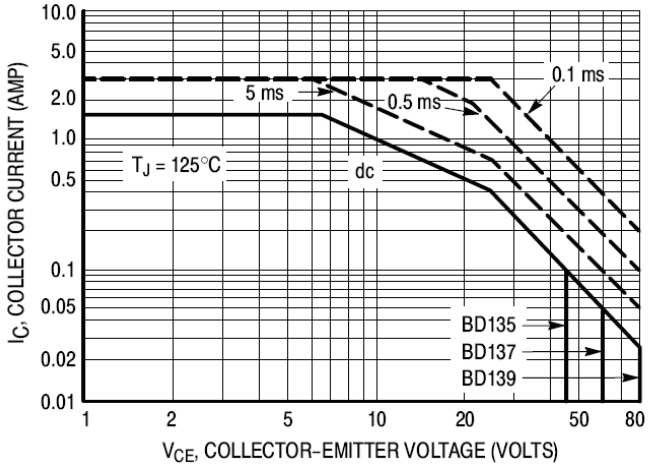
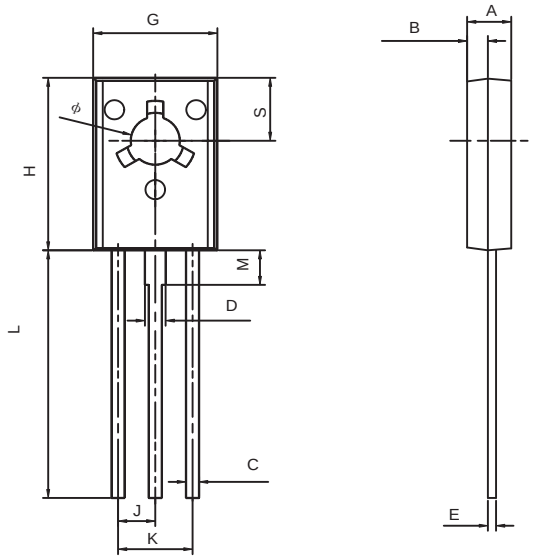


Figure 1. Active–Region Safe Operating Area

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