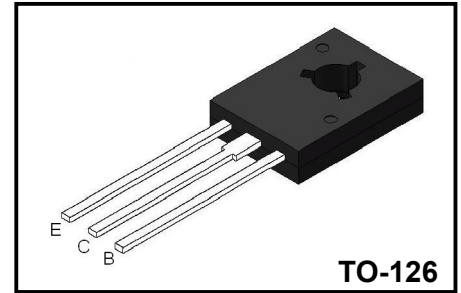


**NPN Plastic-Encapsulate Transistors**
**Medium Power Linear and Switching Applications**

†Complement to BD136, BD138 and BD140 respectively


**Absolute Maximum Ratings (Ta=25°C)**

Parameter	Symbol	Value			Unit
		BD135	BD137	BD139	
Collector-Base Voltage	$BV_{CBO}$	45	60	80	V
Collector-Emitter Voltage	$BV_{CEO}$	45	60	80	V
Emitter-Base Voltage	$BV_{EBO}$	5			V
Collector Current	$I_C$	1.5			A
Collector Power Dissipation	$P_C$	12.5			W
Junction Temperature	$T_j$	150			°C
Storage Temperature	$T_{stg}$	-55~150			°C

**Electrical Characteristics (Ta=25°C)**

Parameter		Symbol	Conditions	Value			Unit
				Min	Typ	Max	
Collector-base breakdown voltage	BD135 BD137 BD139	$BV_{CBO}$	$I_C = 100\mu A, I_E = 0$	45 60 80			V
Collector-emitter breakdown voltage	BD135 BD137 BD139	$BV_{CEO}$	$I_C = 10mA, I_B = 0$	45 60 80			V
Emitter-base breakdown voltage		$BV_{EBO}$	$I_E = 100\mu A, I_C = 0$	5			V
Collector cut-off current	BD135 BD137 BD139	$I_{CBO}$	$V_{CB} = 30V, I_E = 0$			100	$\mu A$
Emitter cut-off current		$I_{EBO}$	$V_{EB} = 5V, I_C = 0$			10	$\mu A$
DC current gain	ALL DEVICE ALL DEVICE BD135 BD137, BD139	$h_{FE}$	$V_{CE} = 2V, I_C = 5mA$ $V_{CE} = 2V, I_C = 0.5A$ $V_{CE} = 2V, I_C = 150mA$	25 25 40 40		250 160	
Collector-emitter saturation voltage		$V_{CE(SAT)}$	$I_C = 500mA, I_B = 50mA$			0.5	V
Base -emitter saturation voltage		$V_{BE(ON)}$	$V_{CE} = 2V, I_C = 0.5A$			1	V

 **$h_{FE}$  Classification**

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

Package Dimensions

TO-126

Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	2.40	2.80	0.094	0.110
A1	1.00	1.40	0.039	0.055
b	0.66	0.86	0.026	0.034
b1	1.17	1.37	0.046	0.054
c	0.40	0.60	0.016	0.024
D	7.30	7.70	0.287	0.303
E	10.60	11.00	0.417	0.433
e	2.25	2.33	0.089	0.092
e1	4.50	4.66	0.177	0.183
L	14.00	15.00	0.551	0.591
L1	1.90	2.50	0.075	0.098
Φ	3.10	3.30	0.122	0.130

ORDERING INFORMATION

Package	Packing Method	Pack
TO-126	Bulk	500PCS/bag