

## TO-126 Plastic-Encapsulated Transistors

### BD233/235/237 TRANSISTOR (NPN)

#### FEATURES

Power dissipation

$$P_{CM}: 1.25 \text{ W (Tamb=25°C)}$$

Collector current

$$I_{CM}: 2 \text{ A}$$

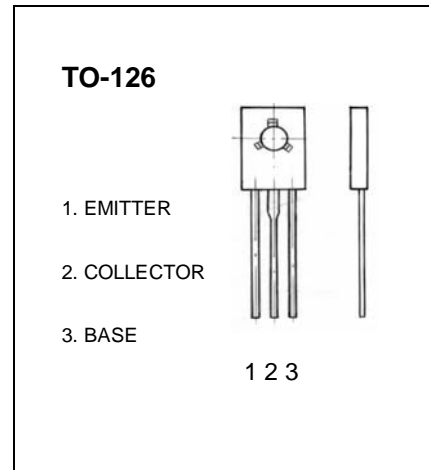
Collector-base voltage

$$V_{(BR)CBO}: \begin{array}{ll} \text{BD233:} & 45 \text{ V} \\ \text{BD235:} & 60 \text{ V} \\ \text{BD237:} & 100 \text{ V} \end{array}$$

Operating and storage junction temperature range

$$T_J: 150^\circ\text{C}$$

$$T_{stg}: -65^\circ\text{C to } +150^\circ\text{C}$$



#### ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	BD233	$I_C = 100\mu\text{A}, I_E = 0$	45		V
	BD235		60		
	BD237		100		
Collector-emitter breakdown voltage	BD233	$I_C = 10\text{mA}, I_B = 0$	45		V
	BD235		60		
	BD237		80		
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 100\mu\text{A}, I_C = 0$	5		V
Collector cut-off current	BD233	$V_{CB} = 45\text{V}, I_E = 0$ $V_{CB} = 60\text{V}, I_E = 0$ $V_{CB} = 100\text{V}, I_E = 0$		100	$\mu\text{A}$
	BD235				
	BD237				
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 5\text{V}, I_C = 0$		1	mA
DC current gain	$H_{FE(1)}$	$V_{CE} = 2\text{V}, I_C = 150\text{mA}$	40		
	$H_{FE(2)}$	$V_{CE} = 2\text{V}, I_C = 1\text{A}$	25		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 1\text{A}, I_B = 100\text{mA}$		0.6	V
Transition frequency	$f_T$	$V_{CE} = 10\text{V}, I_C = 250\text{mA}$ $f = 10\text{MHz}$	3		MHz