

**isc Silicon NPN Power Transistor**
**BD157**
**DESCRIPTION**

- Collector–Emitter Sustaining Voltage–  
:  $V_{CEO(SUS)} = 250V(\text{Min})$
- DC Current Gain–  
:  $h_{FE} = 30\sim 240(\text{Min}) @ I_C = 50\text{mA}$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

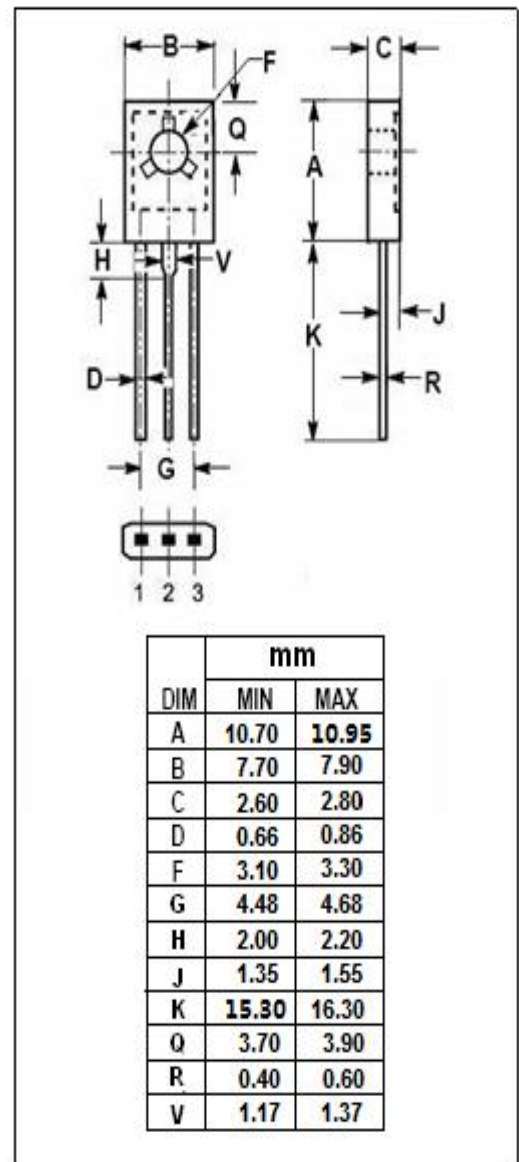
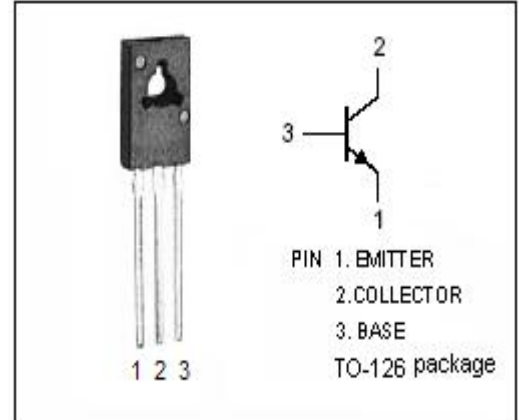
- Designed for power output stages for television, radio, phonograph and other consumer product applications.

**ABSOLUTE MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	275	V
$V_{CEO}$	Collector-Emmitter Voltage	250	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current-Continuous	0.5	A
$I_{CM}$	Collector Current-Peak	1.0	A
$I_B$	Base Current-Continuous	0.25	A
$P_C$	Collector Power Dissipation $T_C=25^\circ\text{C}$	20	W
$T_j$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-65~150	$^\circ\text{C}$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	6.25	$^\circ\text{C}/\text{W}$



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## ELECTRICAL CHARACTERISTICS

T<sub>c</sub> =25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = 1.0mA; I <sub>B</sub> = 0	250		V
V <sub>(BR)CBO</sub>	Collector-Base Breakdown Voltage	I <sub>C</sub> = 0.1mA; I <sub>E</sub> = 0	275		V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = 0.1mA; I <sub>C</sub> = 0	5		V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 50mA ;I <sub>B</sub> = 5mA		1.0	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 275V; I <sub>E</sub> = 0		0.1	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 5V; I <sub>C</sub> = 0		0.1	mA
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 50m A; V <sub>CE</sub> = 10V	30	240	

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