

**isc Silicon NPN Power Transistor**

**BD179**

**DESCRIPTION**

- DC Current Gain-  
:  $h_{FE} = 40-250(\text{Min}) @ I_C = 0.15A$
- Collector-Emitter Sustaining Voltage -  
:  $V_{CEO(\text{SUS})} = 80V(\text{Min})$
- Complement to type BD180

**APPLICATIONS**

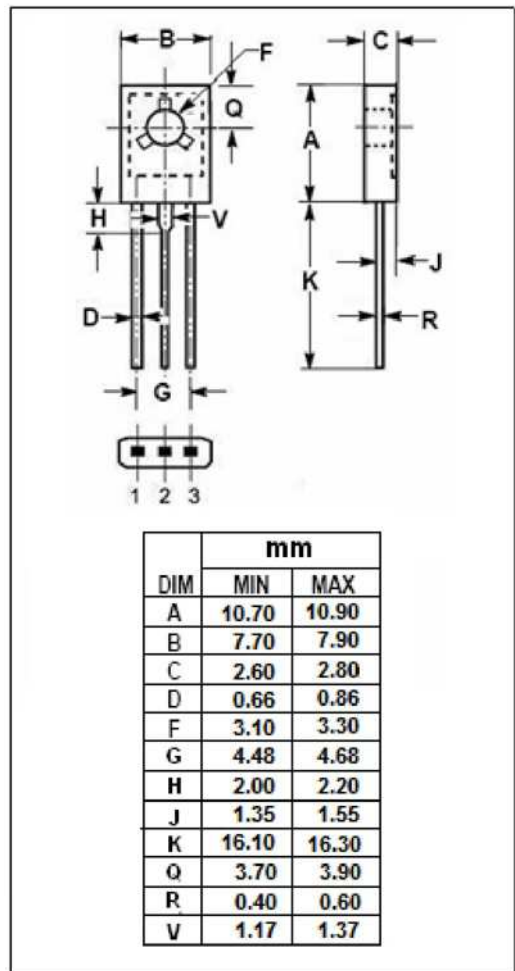
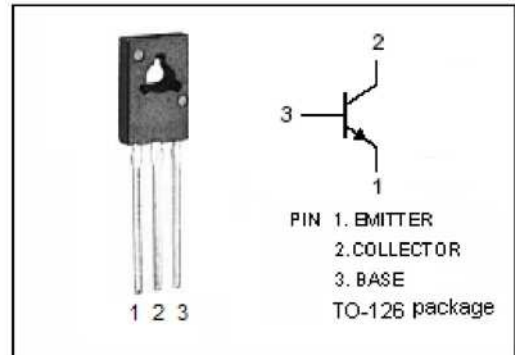
- Designed for medium power linear and switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	80	V
$V_{CEO}$	Collector-Emitter Voltage	80	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current-Continuous	3	A
$I_{CM}$	Collector Current-Pulse	7	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	30	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	8.5	$^\circ\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	70	$^\circ\text{C/W}$



**isc Silicon NPN Power Transistor****BD179****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=100\text{mA}; I_B=0$	80			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=1\text{A}; I_B=0.1\text{A}$			0.8	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=1\text{A}; V_{CE}=2\text{V}$			1.3	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=80\text{V}; I_E=0$			100	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			1	mA
$h_{FE-1}$	DC Current Gain	$I_C=150\text{mA}; V_{CE}=2\text{V}$	40		250	
$h_{FE-2}$	DC Current Gain	$I_C=1\text{A}; V_{CE}=2\text{V}$	15			
$f_T$	Current-Gain—Bandwidth Product	$I_C=0.25\text{A}; V_{CE}=10\text{V}$	3			MHz

◆  **$h_{FE-1}$  Classifications**

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