

**isc Silicon NPN Power Transistor**

**BD799**

**DESCRIPTION**

- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 80V(\text{Min})$
- Low Saturation Voltage
- Complement to Type BD800

**APPLICATIONS**

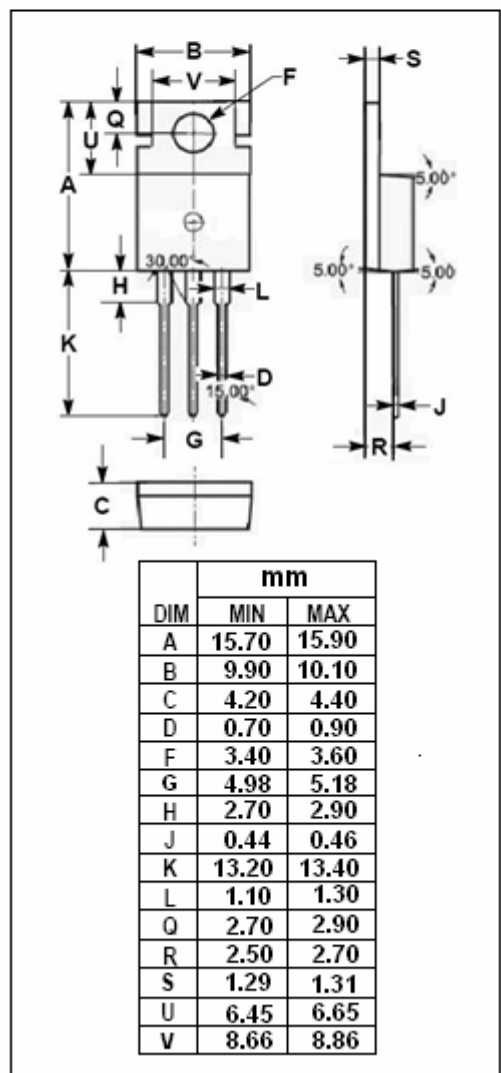
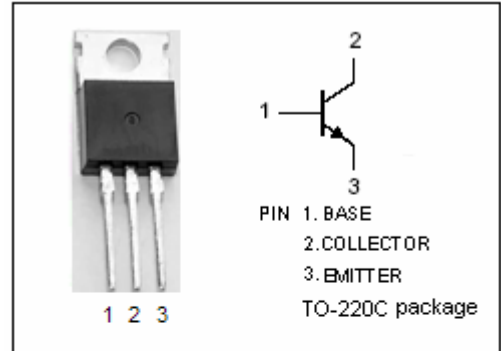
- Designed for a wide variety of medium-power switching and amplifier applications , such as series and shunt regulators and driver and output stages of high-fidelity amplifiers.

**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	8	A
$I_B$	Base Current-Continuous	3	A
$P_C$	Collector Power Dissipation $T_C=25^\circ\text{C}$	65	W
$T_j$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Ttemperature Range	-55~150	$^\circ\text{C}$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.92	$^\circ\text{C/W}$



**isc Silicon NPN Power Transistor****BD799****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	$I_C= 3\text{A}; I_B= 0.3\text{A}$			1	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C= 3\text{A}; V_{CE}= 2\text{V}$			1.6	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}= 80\text{V}; I_E= 0$			0.1	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}= 5\text{V}; I_C= 0$			1	mA
$h_{FE-1}$	DC Current Gain	$I_C= 1\text{A}; V_{CE}= 2\text{V}$	30			
$h_{FE-2}$	DC Current Gain	$I_C= 3\text{A}; V_{CE}= 2\text{V}$	15			
$f_T$	Current-Gain—Bandwidth Product	$I_C= 0.25\text{A}; V_{CE}= 10\text{V}, f_{test}= 1\text{MHz}$	3			MHz