

## isc Silicon NPN Power Transistor

BD799

## DESCRIPTION

- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 80V(\text{Min})$
- Low Saturation Voltage
- Complement to Type BD800
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

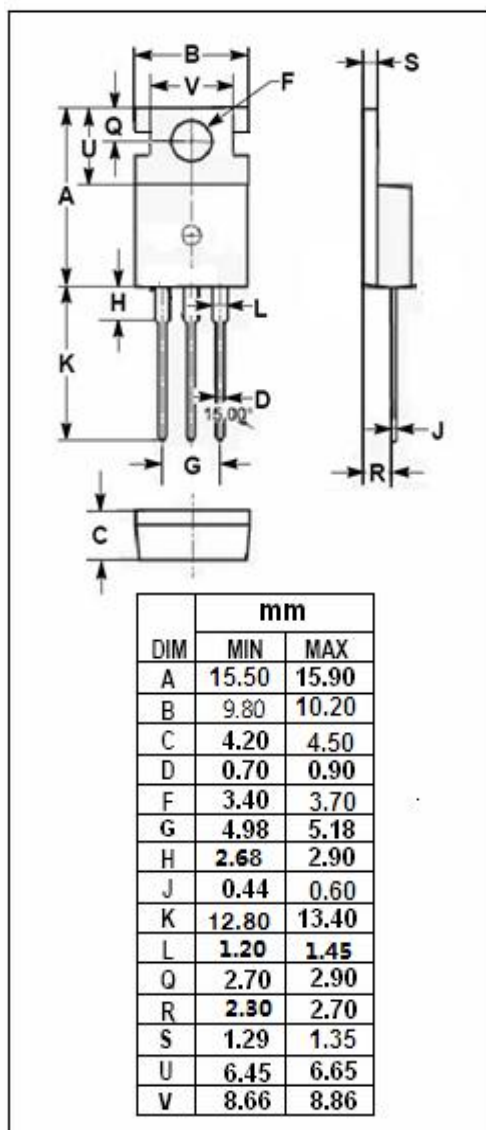
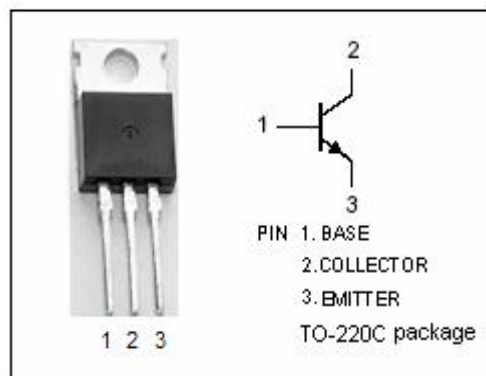
- Designed for a wide variety of medium-power switching and amplifier applications , such as series and shunt regulators and driver and output stages of high-fidelity amplifiers.

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 Temperature 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<sub>C</sub>=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = 30mA; I <sub>B</sub> = 0	80			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 3A; I <sub>B</sub> = 0.3A			1	V
V <sub>BE(on)</sub>	Base-Emitter On Voltage	I <sub>C</sub> = 3A ; V <sub>CE</sub> = 2V			1.6	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 80V; 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			1	mA
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 1A ; V <sub>CE</sub> = 2V	30			
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 3A ; V <sub>CE</sub> = 2V	15			
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = 0.25A ; V <sub>CE</sub> = 10V, f <sub>test</sub> = 1MHz	3			MHz

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