

## isc Silicon NPN Power Transistor

2SD1499

## DESCRIPTION

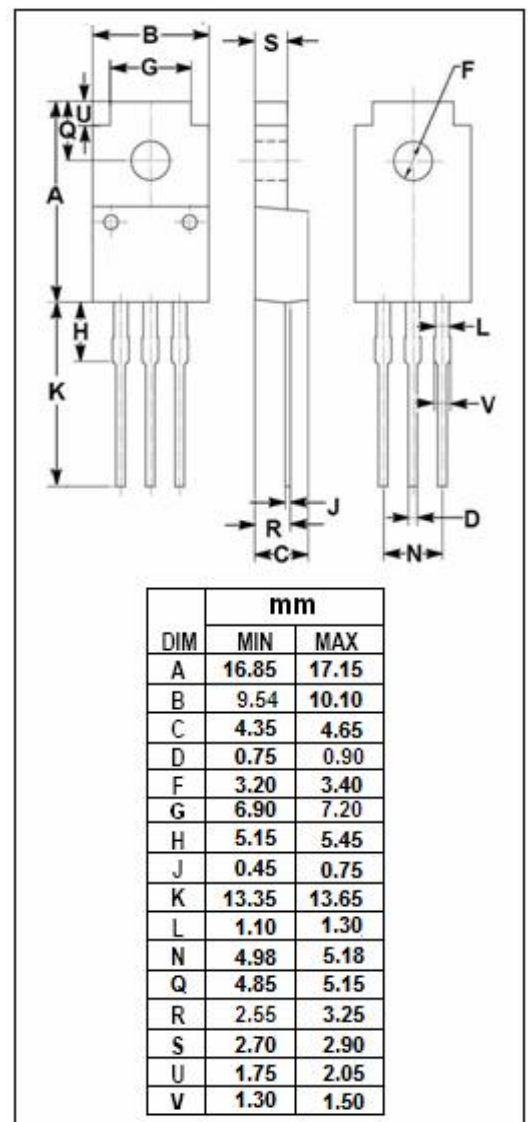
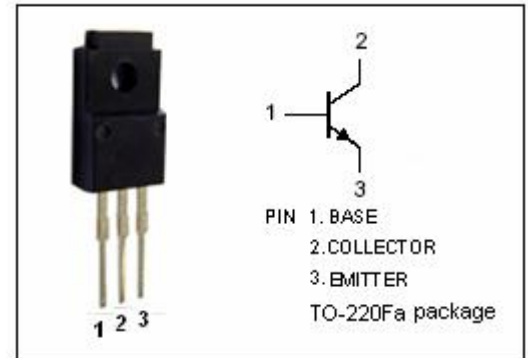
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 100V$  (Min)
- Wide Area of Safe Operation
- Complement to Type 2SB1063
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

- Designed for high power amplifications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	100	V
$V_{CEO}$	Collector-Emitter Voltage	100	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current-Continuous	5	A
$I_{CM}$	Collector Current-Peak	8	A
$P_C$	Collector Power Dissipation @ $T_C=25^{\circ}C$	40	W
	Collector Power Dissipation @ $T_a=25^{\circ}C$	2	
$T_J$	Junction Temperature	150	$^{\circ}C$
$T_{stg}$	Storage Temperature Range	-55~150	$^{\circ}C$



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## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 10mA ; I <sub>B</sub> = 0	100			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 3A; I <sub>B</sub> = 0.3A			2.0	V
V <sub>BE(on)</sub>	Base-Emitter On Voltage	I <sub>C</sub> = 3A ; V <sub>CE</sub> = 5V			1.8	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 100V; I <sub>E</sub> = 0			50	μA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 3V; I <sub>C</sub> = 0			50	μA
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 20mA ; V <sub>CE</sub> = 5V	20			
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 1A ; V <sub>CE</sub> = 5V	60		200	
h <sub>FE-3</sub>	DC Current Gain	I <sub>C</sub> = 3A ; V <sub>CE</sub> = 5V	20			
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = 0.5A; V <sub>CE</sub> = 5V; f <sub>test</sub> = 1.0MHz		20		MHz
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> =0 ; V <sub>CB</sub> = 10V; f <sub>test</sub> = 1.0MHz		90		pF

◆ h<sub>FE-2</sub> classifications

Q	P
60-120	100-200

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