

## isc Silicon NPN Power Transistor

3DD3997

## DESCRIPTION

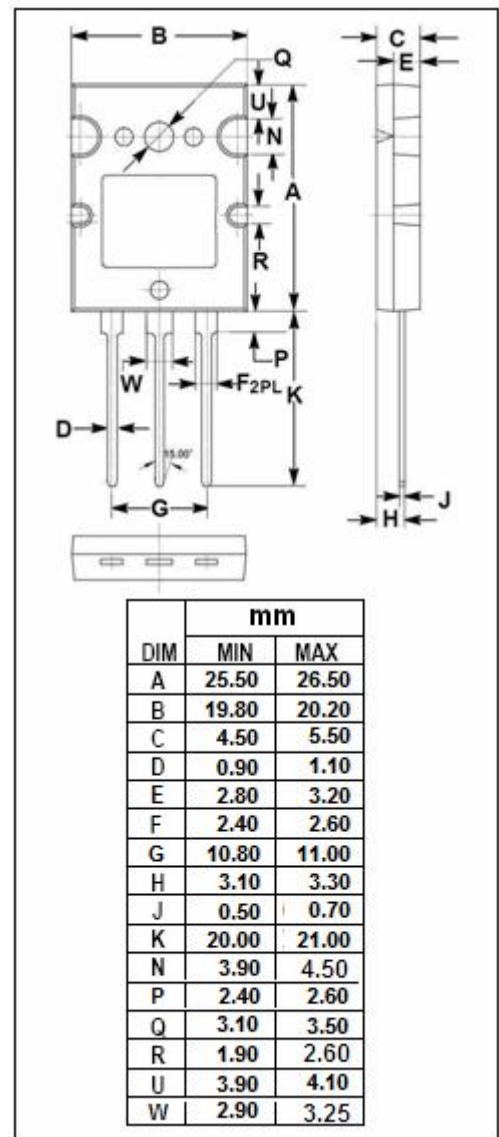
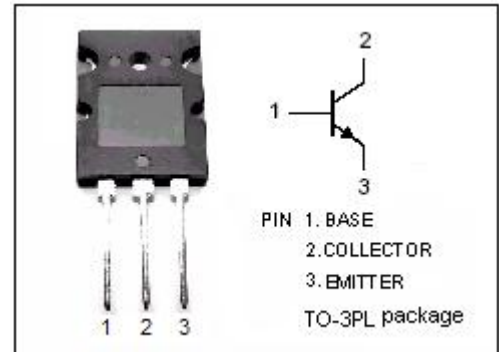
- High Switching Speed
- High Breakdown Voltage-  
:  $V_{(BR)CBO} = 1200V(\text{Min})$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation.

## APPLICATIONS

- High frequency switching power supply
- High frequency power transform
- Commonly power amplifier circuit

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	1200	V
$V_{CEO}$	Collector-Emitter Voltage	800	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current-Continuous	30	A
$I_{CM}$	Collector Current-Pulse	60	A
$P_C$	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	250	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



**isc Silicon NPN Power Transistor****3DD3997****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> = 10mA; I <sub>B</sub> = 0	800			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 20A; I <sub>B</sub> =4A			1.8	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 20A; I <sub>B</sub> =4A			1.5	V
I <sub>CEO</sub>	Collector Cutoff Current	V <sub>CE</sub> = 800V; I <sub>B</sub> = 0			50	μ A
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 1200V; I <sub>E</sub> = 0			10	μ A
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 7V; I <sub>C</sub> = 0			10	μ A
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 1A; V <sub>CE</sub> = 5V	10		30	
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 20A; V <sub>CE</sub> = 5V	3			

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