

isc Silicon NPN Power Transistor

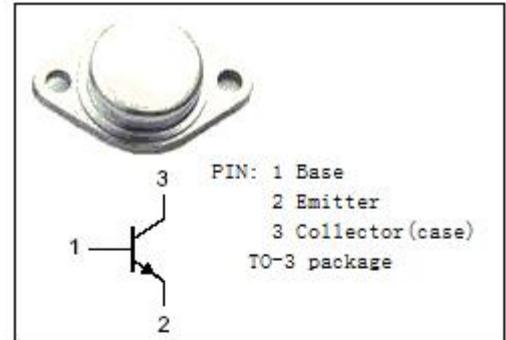
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DESCRIPTION

- High DC Current Gain- $h_{FE}=10(\text{Min})@I_C = 50A$
- Low Saturation Voltage-
 $V_{CE(\text{sat})}= 1.0V(\text{Max})@ I_C = 25A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

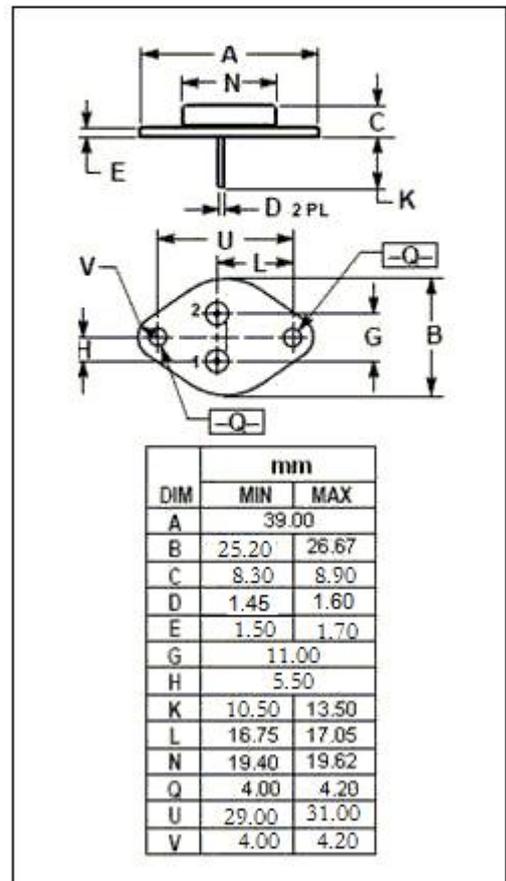
APPLICATIONS

- Designed for use in high power amplifier and switching circuits applications.



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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	200	V
V_{CEO}	Collector-Emitter Voltage	125	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	50	A
I_B	Base Current-Continuous	15	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	250	W
T_J	Junction Temperature	200	$^\circ\text{C}$
T_{stg}	Storage Temperature	-65~200	$^\circ\text{C}$



THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{\text{th j-c}}$	Thermal Resistance, Junction to Case	0.584	$^\circ\text{C/W}$

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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{CEQ(SUS)}	Collector-Emitter Sustaining Voltage	I _C =50mA ; I _B =0	125		V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = 25A; I _B =2.5A		1.0	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 50A; I _B =10A		3.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 25A; I _B =2.5A		2.0	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 25A ; V _{CE} =2V		2.0	V
I _{CEO}	Collector Cutoff Current	V _{CE} =125V; I _B =0		0.5	mA
I _{CBO}	Collector Cutoff Current	V _{CB} = 200V; I _C =0		0.1	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C =0		0.1	mA
h _{FE-1}	DC Current Gain	I _C = 1A ; V _{CE} = 2V	60	200	
h _{FE-2}	DC Current Gain	I _C = 25A ; V _{CE} = 2V	20	70	
h _{FE-3}	DC Current Gain	I _C = 50A ; V _{CE} = 4V	10		
f _T	Current Gain-Bandwidth Product	I _C = 0.5A ; V _{CE} = 10V;f=1.0MHz	10		MHz

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