

**isc Silicon NPN Power Transistor**
**2N6277**
**DESCRIPTION**

- High Switching Speed
- High DC Current Gain-  
:  $h_{FE} = 30-120 @ I_C = 20A$
- Low Collector Saturation Voltage-  
:  $V_{CE(sat)} = 1.0V(\text{Min.}) @ I_C = 20A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

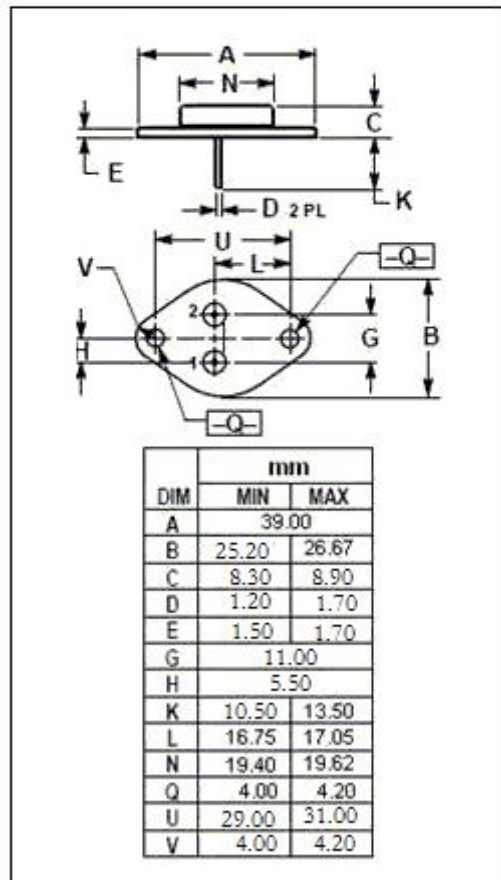
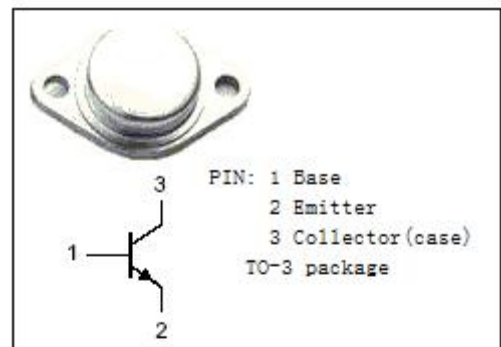
- Designed for use in industrial-military power amplifier and switching circuit applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector- Base Voltage	180	V
$V_{CEO}$	Collector-Emitter Voltage	150	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current-Continuous	50	A
$I_{CM}$	Collector Current-Peak	100	A
$I_B$	Base Current-Continuous	20	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	-65~150	$^\circ\text{C}$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	0.7	$^\circ\text{C/W}$



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## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V <sub>CE(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = 50mA; I <sub>B</sub> = 0	150		V
V <sub>CE(sat)-1</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 20A; I <sub>B</sub> = 2A		1.0	V
V <sub>CE(sat)-2</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 50A; I <sub>B</sub> = 10A		3.0	V
V <sub>BE(sat)-1</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 20A; I <sub>B</sub> = 2A		1.8	V
V <sub>BE(sat)-2</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 50A; I <sub>B</sub> = 10A		3.5	V
V <sub>BE(on)</sub>	Base-Emitter On Voltage	I <sub>C</sub> = 20A; V <sub>CE</sub> = 4V		1.8	V
I <sub>CEO</sub>	Collector Cutoff Current	V <sub>CE</sub> = 75V; I <sub>B</sub> = 0		50	μ A
I <sub>CEX</sub>	Collector Cutoff Current	V <sub>CE</sub> = 180V; V <sub>BE(off)</sub> =1.5V V <sub>CE</sub> = 180V; V <sub>BE(off)</sub> =1.5V; T <sub>C</sub> =150°C		10 1.0	μ A mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 6V; I <sub>C</sub> = 0		0.1	mA
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 1A; V <sub>CE</sub> = 4V	50		
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 20A; V <sub>CE</sub> = 4V	30	120	
h <sub>FE-3</sub>	DC Current Gain	I <sub>C</sub> = 50A; V <sub>CE</sub> = 4V	10		

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