

**isc Silicon NPN Power Transistor**
**2N3055B**
**DESCRIPTION**

- Excellent Safe Operating Area
- DC Current Gain- $h_{FE}=70-140$  @ $I_C = 4A$
- Collector-Emitter Saturation Voltage:  
:  $V_{CE(sat)}= 1.1 V(\text{Max})@ I_C = 4A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

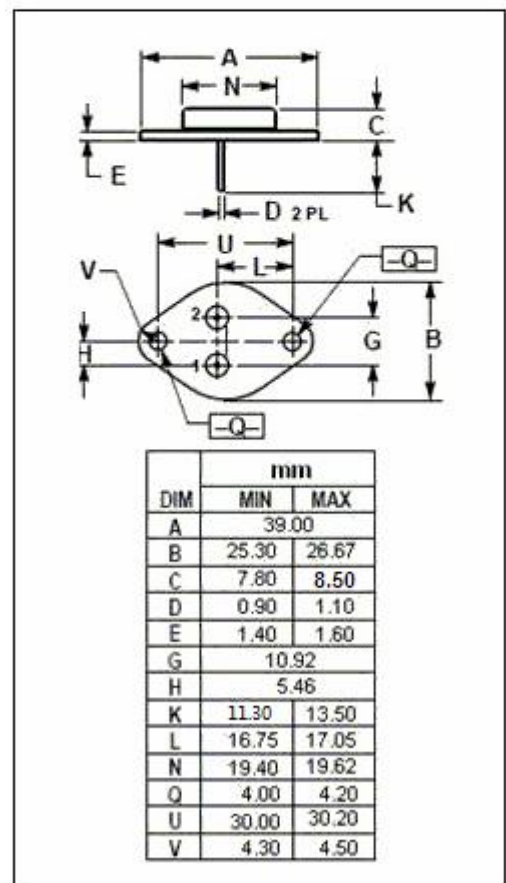
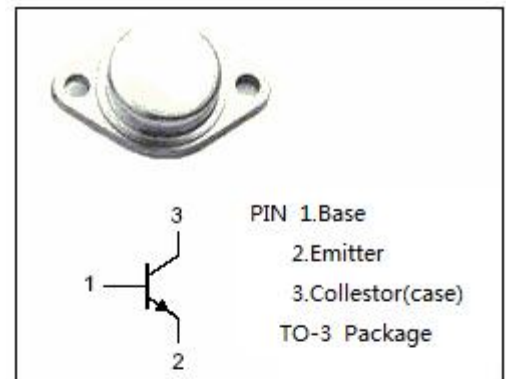
- Designed for general-purpose switching and amplifier applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	100	V
$V_{CEO}$	Collector-Emitter Voltage	60	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current-Continuous	15	A
$I_B$	Base Current	7	A
$P_C$	Collector Power Dissipation@ $T_C=25^\circ\text{C}$	115	W
$T_J, T_{stg}$	Operating and Storage Junction Temperature Range	-65~150	$^\circ\text{C}$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.52	$^\circ\text{C/W}$



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## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V <sub>CE0(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> =30mA; I <sub>B</sub> =0	60		V
V <sub>CE(sat)-1</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 4A; I <sub>B</sub> = 0.4A		1.1	V
V <sub>CE(sat)-2</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 10A; I <sub>B</sub> = 3.3A		3.0	V
V <sub>BE(on)</sub>	Base-Emitter On Voltage	I <sub>C</sub> = 4A; V <sub>CE</sub> = 4V		1.5	V
I <sub>CEO</sub>	Collector Cutoff Current	V <sub>CE</sub> = 30V; I <sub>B</sub> =0		0.7	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 7.0V; I <sub>C</sub> =0		5.0	mA
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 4A; V <sub>CE</sub> = 4V	70	140	
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 10A; V <sub>CE</sub> = 4V	10		
I <sub>s/b</sub>	Second Breakdown Collector Current with Base Forward Biased	V <sub>CE</sub> = 40V, t= 1.0s, Nonrepetitive	2.87		A

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