

**isc Silicon NPN Power Transistor****2SD339****DESCRIPTION**

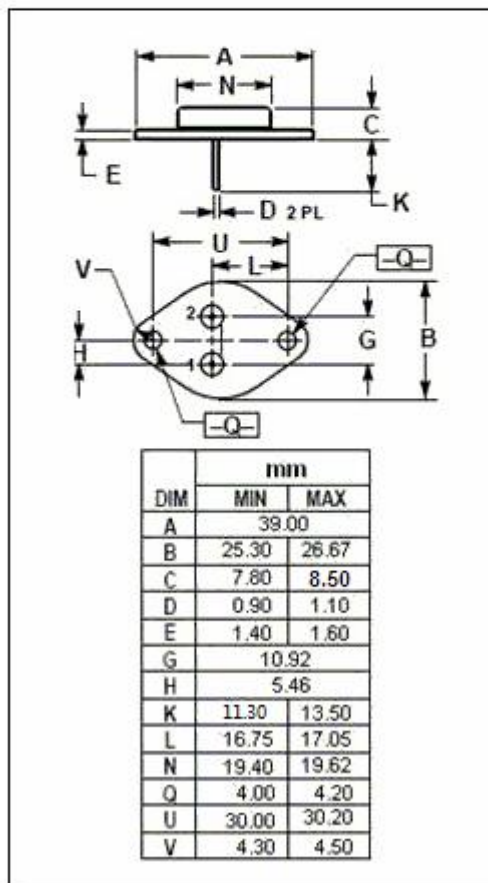
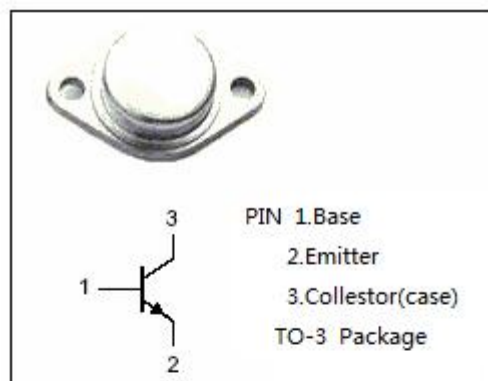
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CE0} = 90V(\text{Min})$
- Excellent Safe Operating Area
- Low Collector-Emitter Saturation Voltage-  
:  $V_{CE(sat)} = 1.0V(\text{Max}) @ I_C = 7.5A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Designed for use in general purpose amplifier and switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	90	V
$V_{CEO}$	Collector-Emitter Voltage	90	V
$V_{EBO}$	Emitter-Base Voltage	8	V
$I_C$	Collector Current-Continuous	10	A
$I_{CM}$	Collector Current-Peak	15	A
$P_C$	Collector Power Dissipation@ $T_C = 25^\circ\text{C}$	80	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-65~150	$^\circ\text{C}$



**isc Silicon NPN Power Transistor****2SD339****ELECTRICAL CHARACTERISTICS****T<sub>C</sub>=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V <sub>CEQ(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = 30mA ; I <sub>B</sub> = 0	90		V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = 1mA ; I <sub>C</sub> = 0	8		V
V <sub>CE(sat)-1</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 7.5A; I <sub>B</sub> = 0.75A		1.0	V
V <sub>CE(sat)-2</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 10A; I <sub>B</sub> = 2A		2.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 7.5A; I <sub>B</sub> = 0.75A		1.8	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 90V; V <sub>EB</sub> = 0		50	uA
I <sub>CEO</sub>	Collector Cutoff Current	V <sub>CE</sub> = 90V; I <sub>B</sub> = 0		0.1	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 7V; I <sub>C</sub> = 0		10	uA
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 1A ; V <sub>CE</sub> = 2V	50	200	
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 4A ; V <sub>CE</sub> = 2V	30		
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = 0.5A ; V <sub>CE</sub> = 10V	5		MHz

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