

# isc Silicon NPN Power Transistor

## 2SC2928

### DESCRIPTION

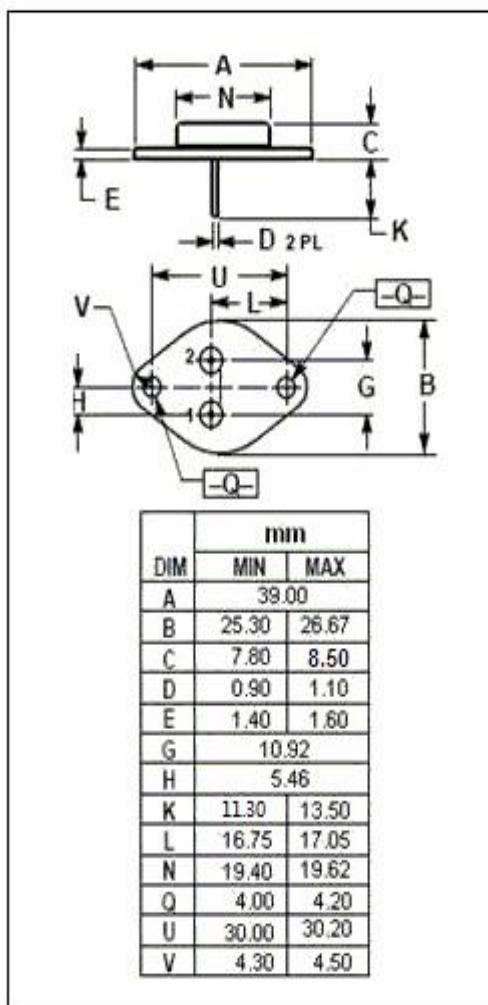
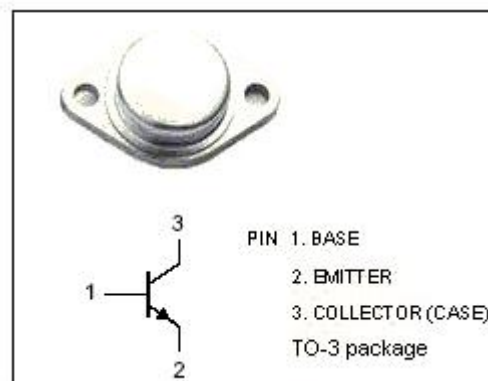
- High Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 800V$  (Min)
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

- Designed for high voltage, high speed and high power applications.

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

SYMBOL	PARAMETER	MAX	UNIT
$V_{CBO}$	Collector-Base Voltage	1500	V
$V_{CEO}$	Collector-Emitter Voltage	800	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current-Continuous	5	A
$I_{CM}$	Collector Current-Peak	7	A
$I_B$	Base Current-Continuous	2.5	A
$P_C$	Collector Power Dissipation @ $T_c=25^{\circ}C$	80	W
$T_j$	Junction Temperature	150	$^{\circ}C$
$T_{stg}$	Storage Temperature Range	-45~150	$^{\circ}C$



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## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEQ(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> =1mA; I <sub>B</sub> =0	800			V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = 10mA; I <sub>C</sub> = 0	7			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 1.5A; I <sub>B</sub> = 0.3A			1.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 1.5A; I <sub>B</sub> = 0.3A			1.5	V
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 0.5A; V <sub>CE</sub> = 5V	15			
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 3A; V <sub>CE</sub> = 5V	7			
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 1200V; I <sub>E</sub> = 0			0.1	mA
I <sub>CEO</sub>	Collector Cutoff Current	V <sub>CE</sub> = 650V; R <sub>BE</sub> = ∞			0.1	mA

## Switching Times

t <sub>on</sub>	Turn-On Time	I <sub>C</sub> = 3A; I <sub>B1</sub> = 0.6A; I <sub>B2</sub> = -1.5A; V <sub>CC</sub> ≈ 250V			1.0	μ s
t <sub>stg</sub>	Storage Time				3.0	μ s
t <sub>f</sub>	Fall Time				1.0	μ s

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