

## isc Silicon NPN Power Transistor

## 2N6934

### DESCRIPTION

- High Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 350V(\text{Min})$
- High Switching Speed
- Wide Area of Safe Operation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

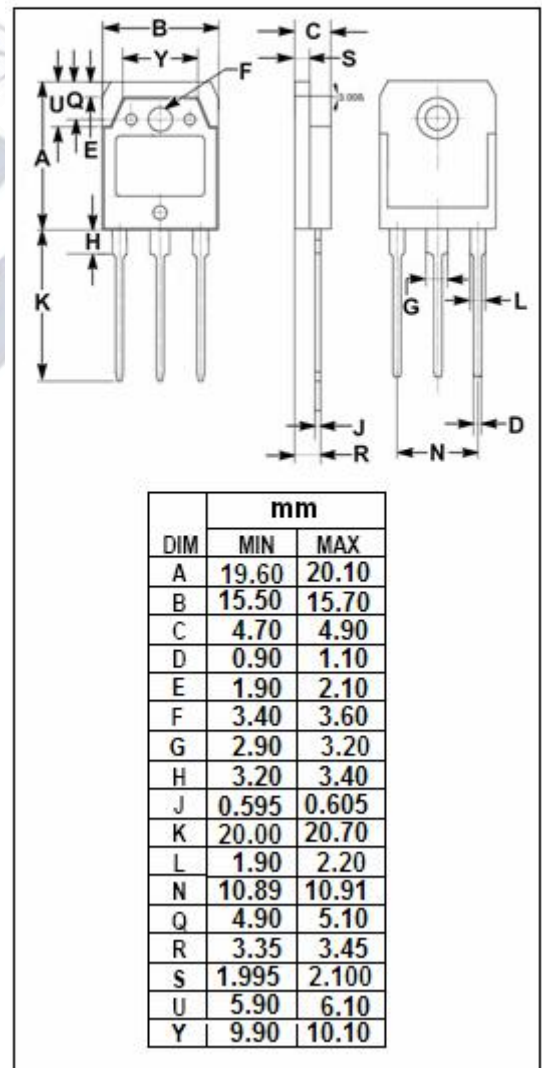
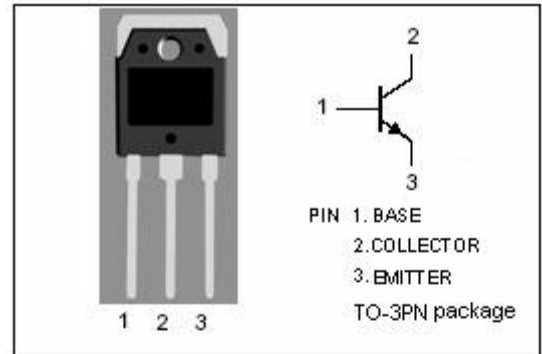
- Designed for off-line power supplies, switching regulator and general purpose applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	550	V
$V_{CEO}$	Collector-Emitter Voltage	350	V
$V_{EBO}$	Emitter-Base voltage	8	V
$I_C$	Collector Current-Continuous	15	A
$I_{CM}$	Collector Current-Peak	23	A
$I_B$	Base Current-Continuous	5	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	175	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
$R_{thj-c}$	Thermal Resistance, Junction to Case	0.71	$^\circ\text{C/W}$



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**ELECTRICAL CHARACTERISTICS**

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CBO</sub>	Collector-Base Breakdown Voltage	I <sub>C</sub> = 1mA; I <sub>E</sub> = 0	550			V
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 10mA; R <sub>BE</sub> = ∞	350			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)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 15A; I <sub>B</sub> = 3.0A			1.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 15A; I <sub>B</sub> = 3.0A			1.5	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 550V ; I <sub>E</sub> = 0			100	μ A
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 8V; I <sub>C</sub> = 0			100	μ A
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 15A ; V <sub>CE</sub> = 3V	8		35	
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> = 0; V <sub>CB</sub> = 10V; f <sub>test</sub> = 1.0MHz	150			pF

## Switching Times

t <sub>d</sub>	Delay Time	I <sub>C</sub> = 15A, I <sub>B1</sub> = -I <sub>B2</sub> = 3A R <sub>L</sub> = 20 Ω ; V <sub>CC</sub> = 300V			0.1	μ s
T <sub>r</sub>	Rise Time				0.7	μ s
t <sub>stg</sub>	Storage Time				2.5	μ s
t <sub>f</sub>	Fall Time				0.5	μ s

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