

## isc Silicon NPN Power Transistor

## 2SC2750

## DESCRIPTION

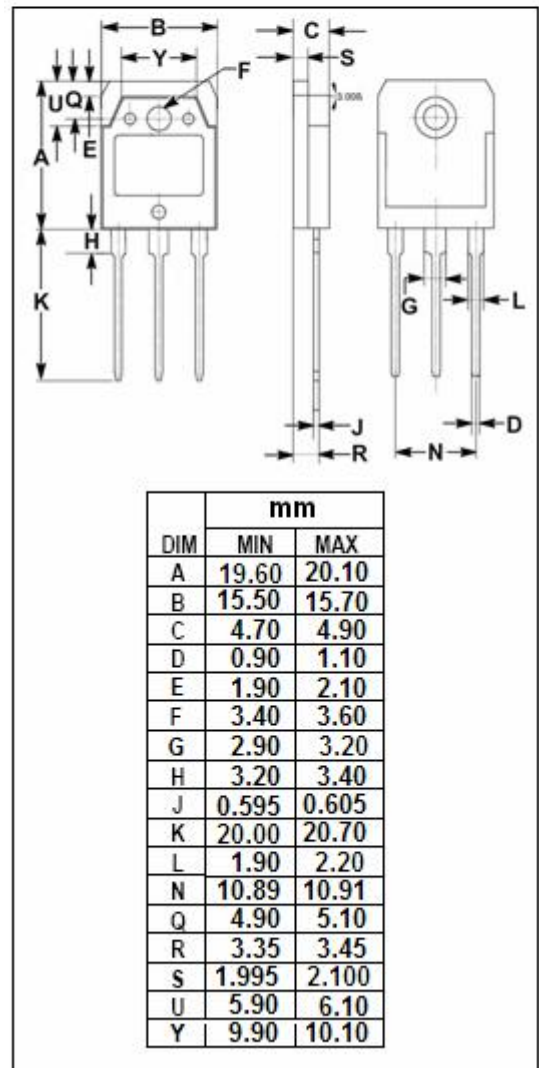
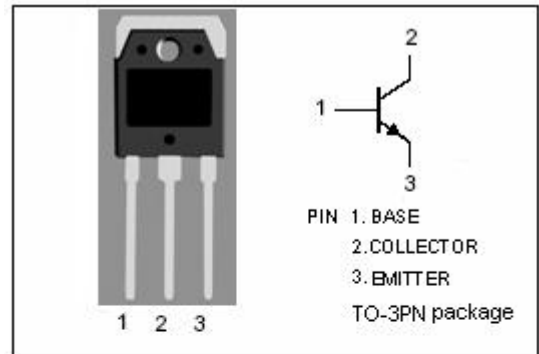
- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 100V(\text{Min})$
- High Current Capability
- High Power Dissipation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

- Designed for high speed, high current switching industrial applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	150	V
$V_{CEO}$	Collector-Emitter Voltage	100	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current-Continuous	15	A
$I_{CM}$	Collector Current-Peak	30	A
$I_B$	Base Current-Continuous	5	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	100	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



**isc Silicon NPN Power Transistor****2SC2750****ELECTRICAL CHARACTERISTICS****T<sub>C</sub>=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = 50mA; I <sub>B1</sub> = 0	100			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 10A; I <sub>B</sub> = 1A			0.6	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 10A; I <sub>B</sub> = 1A			1.5	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 100V; I <sub>E</sub> = 0			10	μ A
I <sub>CER</sub>	Collector Cutoff Current	V <sub>CE</sub> = 100V; R <sub>BE</sub> = 50 Ω; T <sub>a</sub> = 125°C			1.0	mA
I <sub>CEX</sub>	Collector Cutoff Current	V <sub>CE</sub> = 100V; V <sub>BE(off)</sub> = -1.5V; V <sub>CE</sub> = 100V; V <sub>BE(off)</sub> = -1.5V; T <sub>a</sub> =125°C			10 500	μ A
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 5V; I <sub>C</sub> = 0			10	μ A
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 5A; V <sub>CE</sub> = 5V	30		120	
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 10A; V <sub>CE</sub> = 5V	20			

**Switching Times**

t <sub>on</sub>	Turn-on Time	I <sub>C</sub> = 10A, I <sub>B1</sub> = -I <sub>B2</sub> = 1A, V <sub>CC</sub> ≈ 50V; R <sub>L</sub> = 5 Ω			1.0	μ s
t <sub>stg</sub>	Storage Time				1.5	μ s
t <sub>f</sub>	Fall Time				0.3	μ s

**◆ h<sub>FE-1</sub> Classifications**

M	L	K
30-60	40-80	60-120

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