

# isc Silicon NPN Power Transistor

## 2SC4582

### DESCRIPTION

- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 450V(\text{Min})$
- Fast Switching speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

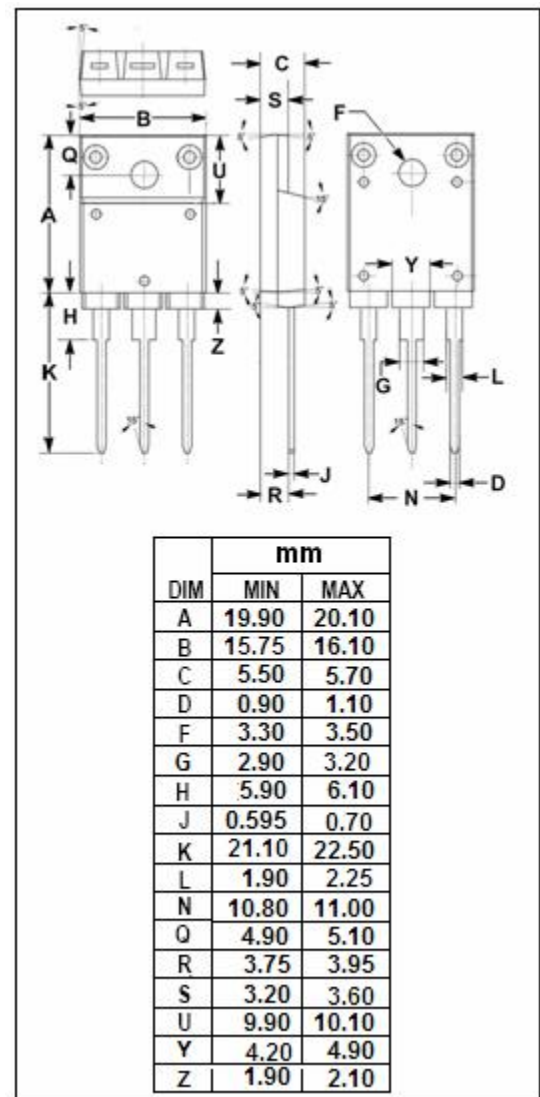
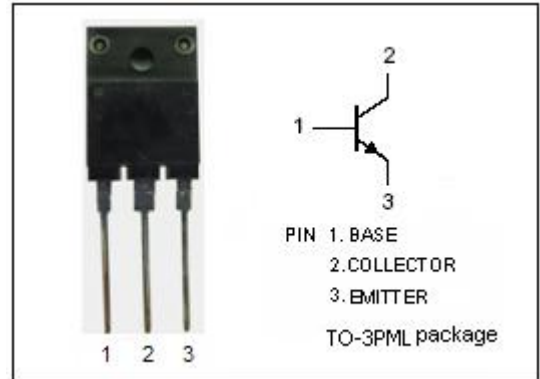
- Designed for power switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	600	V
$V_{CEO}$	Collector-Emitter Voltage	450	V
$V_{CEX}$	Collector-Emitter Voltage $V_{EB}=5V$	600	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	6	A
$I_{BM}$	Base Current-Peak	12	A
$P_T$	Total Power Dissipation @ $T_C=25^\circ\text{C}$	75	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$

### THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.67	$^\circ\text{C/W}$



**isc Silicon NPN Power Transistor****2SC4582****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>B</sub> = 0	450			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 7.5A; I <sub>B</sub> = 1.5A			1.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 7.5A; I <sub>B</sub> = 1.5A			1.5	V
I <sub>CBO</sub>	Collector Cutoff Current	At rated Voltage			100	μ A
I <sub>CEO</sub>	Collector Cutoff Current	At rated Voltage			100	μ A
I <sub>EBO</sub>	Emitter Cutoff Current	At rated Voltage			100	μ A
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 7.5A; V <sub>CE</sub> = 5V	10			
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 1A; V <sub>CE</sub> = 5V	5			
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = 1.5A; V <sub>CE</sub> = 10V		20		MHz

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