

## isc Silicon NPN Power Transistor

2SC3365

## DESCRIPTION

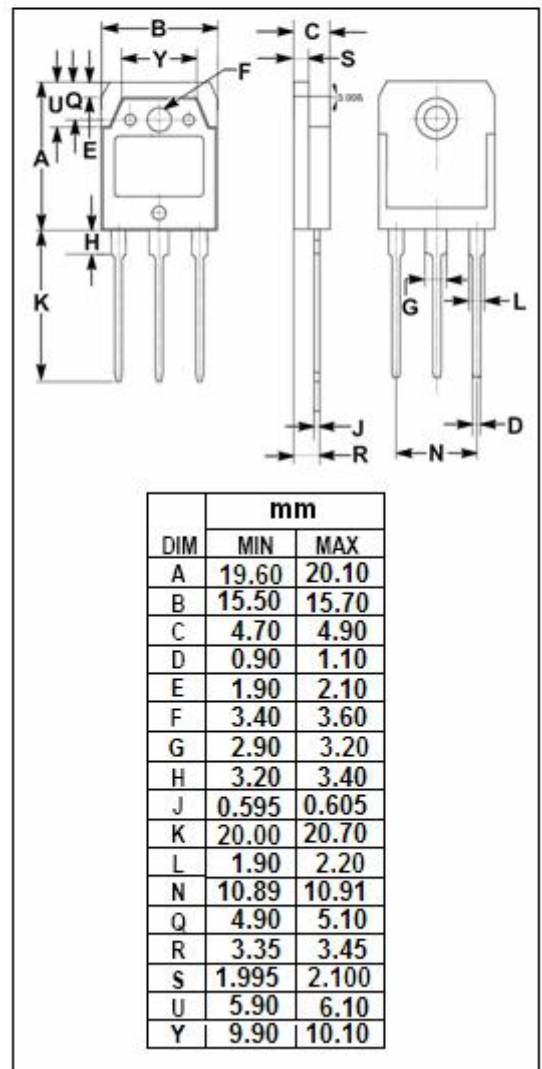
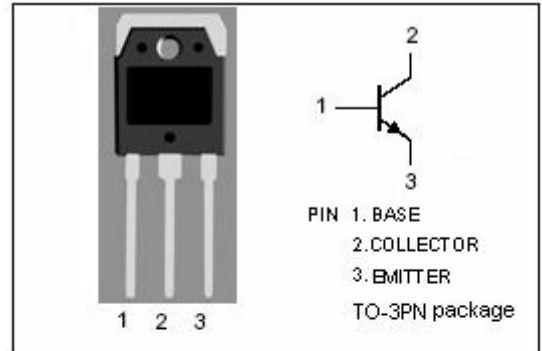
- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 400V(\text{Min})$
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

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

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	500	V
$V_{CEO}$	Collector-Emitter Voltage	400	V
$V_{EBO}$	Emitter-Base voltage	10	V
$I_C$	Collector Current-Continuous	10	A
$I_{CM}$	Collector Current-Peak	20	A
$I_B$	Base Current-Continuous	5	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 Range	-55~150	$^\circ\text{C}$



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## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = 0.2A; R <sub>BE</sub> = ∞; L= 100mH	400			V
V <sub>CEX(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = 10A; I <sub>B1</sub> = 2A; I <sub>B2</sub> = -0.6A; V <sub>BE</sub> = -5V; L= 180 μ H; Clamped	400			V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = 10mA; I <sub>C</sub> = 0	10			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 5A; I <sub>B</sub> = 1A			1.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 5A; I <sub>B</sub> = 1A			1.5	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 400V; I <sub>E</sub> = 0			50	μ A
I <sub>CEO</sub>	Collector Cutoff Current	V <sub>CE</sub> = 350V; R <sub>BE</sub> = ∞			50	μ A
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 5A; V <sub>CE</sub> = 5V	12			
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 10A; V <sub>CE</sub> = 5V	5			

## Switching times

t <sub>on</sub>	Turn-on Time	I <sub>C</sub> = 10A, I <sub>B1</sub> = -I <sub>B2</sub> = 2A; V <sub>CC</sub> ≈ 150V			1.0	μ s
t <sub>stg</sub>	Storage Time				2.5	μ s
t <sub>f</sub>	Fall Time				1.0	μ s

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