

# isc Silicon NPN Power Transistor

## 2SC2248

### DESCRIPTION

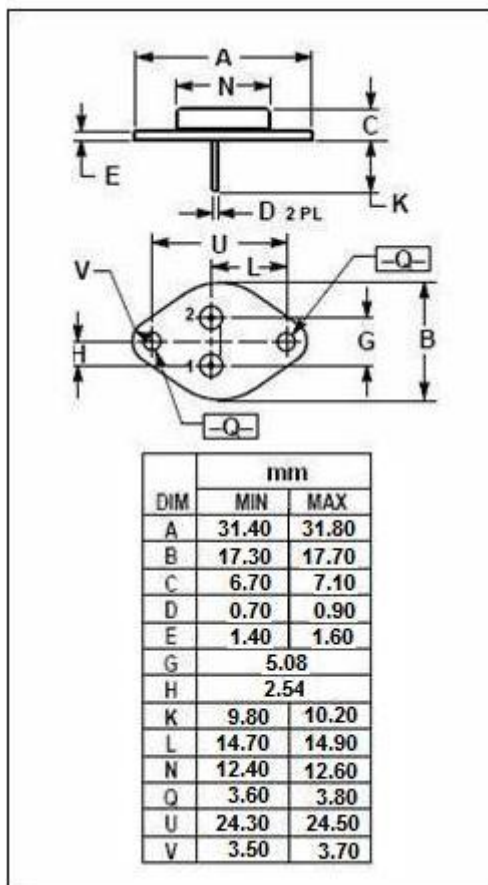
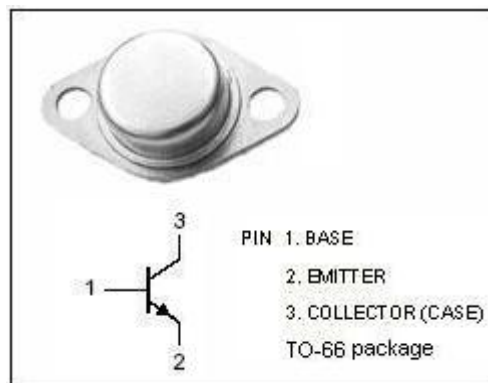
- High Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 400V$  (Min)
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

- Power switching
- Power amplification
- Power driver

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

SYMBOL	PARAMETER	MAX	UNIT
$V_{CBO}$	Collector-Base Voltage	450	V
$V_{CEO}$	Collector-Emitter Voltage	400	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current-Continuous	8	A
$I_{CM}$	Collector Current-Peak	16	A
$I_B$	Base Current-Continuous	3	A
$P_C$	Collector Power Dissipation @ $T_c=25^{\circ}C$	40	W
$T_j$	Junction Temperature	175	$^{\circ}C$
$T_{stg}$	Storage Temperature Range	-65~175	$^{\circ}C$



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## ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C = 50\text{mA}$ ; $L = 25\text{mH}$	400			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 3\text{A}$ ; $I_B = 0.6\text{A}$			1.2	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = 3\text{A}$ ; $I_B = 0.6\text{A}$			1.5	V
$h_{FE}$	DC Current Gain	$I_C = 3\text{A}$ ; $V_{CE} = 5\text{V}$	10			
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = 450\text{V}$ ; $I_E = 0$ $T_C = 125^{\circ}\text{C}$			1.0 4.0	mA
$I_{CEO}$	Collector Cutoff Current	$V_{CE} = 400\text{V}$ ; $I_B = 0$			5.0	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = 5\text{V}$ ; $I_C = 0$			1.0	mA

## Switching Times

$t_r$	Rise Time	$I_C = 3\text{A}$ ; $I_{B1} = -I_{B2} = 0.6\text{A}$			1.0	$\mu\text{s}$
$t_{stg}$	Storage Time				2.0	$\mu\text{s}$
$t_f$	Fall Time				1.0	$\mu\text{s}$

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