

**isc Silicon NPN Power Transistor**
**2SC2416**
**DESCRIPTION**

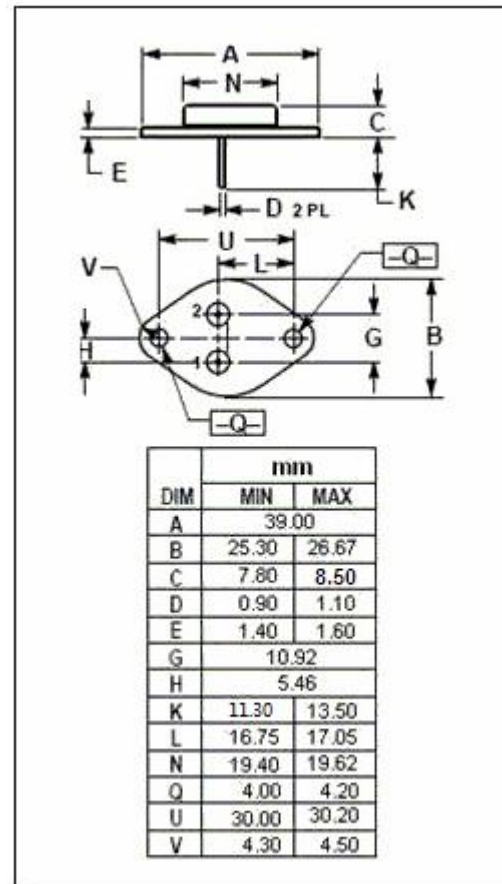
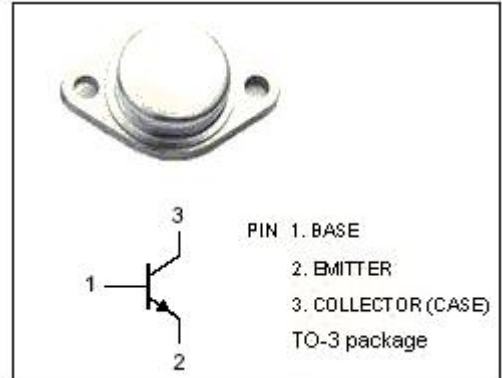
- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 400V$  (Min)
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Designed for high speed power switching applications.

**ABSOLUTE MAXIMUM RATINGS ( $T_a = 25^\circ C$ )**

SYMBOL	PARAMETER	MAX	UNIT
$V_{CBO}$	Collector-Base Voltage	500	V
$V_{CEO}$	Collector-Emitter Voltage	400	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current-Continuous	10	A
$P_C$	Collector Power Dissipation @ $T_c = 25^\circ C$	120	W
$T_j$	Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature Range	-65~150	$^\circ C$



## isc Silicon NPN Power Transistor

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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> = 50mA ; L= 25mH	400			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> = 500V; I <sub>E</sub> = 0			0.1	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 5V; I <sub>C</sub> = 0			0.1	mA
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 0.1A ; V <sub>CE</sub> = 5V	15			
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 5A ; V <sub>CE</sub> = 5V	8			
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = 0.5A; V <sub>CE</sub> = 10V		11		MHz

## Switching Times

t <sub>on</sub>	Turn-On Time	I <sub>C</sub> = 5A ; I <sub>B1</sub> = -I <sub>B2</sub> = 1A			1	μs
t <sub>stg</sub>	Storage Time				3	μs
t <sub>f</sub>	Fall Time				1	μs

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