

# isc Silicon NPN Power Transistor

# BUX48C

## DESCRIPTION

- High Voltage Capability
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

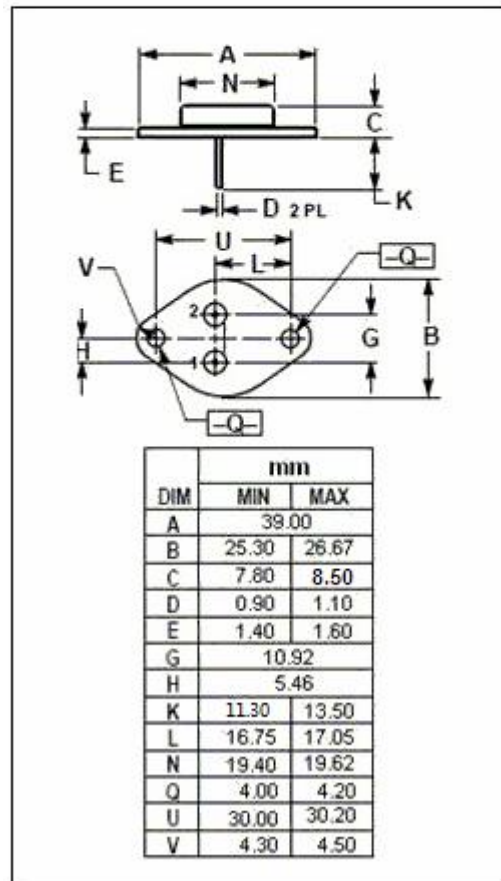
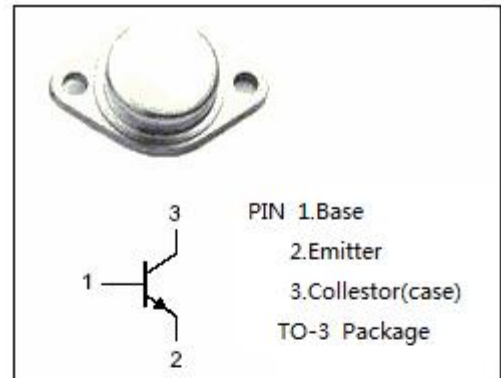
- Designed for switching and industrial applications from single and three-phase mains.

### Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CER</sub>	Collector-Emitter Voltage R <sub>BE</sub> = 10 Ω	1200	V
V <sub>CES</sub>	Collector-Emitter Voltage V <sub>BE</sub> = 0	1200	V
V <sub>CEO</sub>	Collector-Emitter Voltage	700	V
V <sub>EBO</sub>	Emitter-Base Voltage	7	V
I <sub>C</sub>	Collector Current-Continuous	15	A
I <sub>CM</sub>	Collector Current-Peak t <sub>p</sub> <5ms	30	A
I <sub>CP</sub>	Collector Current-Peak t <sub>p</sub> <20 μs	55	A
I <sub>B</sub>	Base Current-Continuous	4	A
I <sub>BM</sub>	Base Current-peak	20	A
P <sub>C</sub>	Collector Power Dissipation @T <sub>C</sub> =25°C	175	W
T <sub>j</sub>	Junction Temperature	200	°C
T <sub>stg</sub>	Storage Temperature Range	-65~200	°C

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal Resistance, Junction to Case	1.0	°C/W



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## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = 50mA; I <sub>B</sub> = 0	700		V
V <sub>CBO(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>E</sub> = 1mA; I <sub>B</sub> = 0	1200		V
V <sub>CE(sat)-1</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 6A; I <sub>B</sub> = 1.5A		1.5	V
V <sub>CE(sat)-2</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 10A ;I <sub>B</sub> = 4A		3.0	V
V <sub>BE(sat)-1</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 6A; I <sub>B</sub> = 1.5A		1.5	V
V <sub>BE(sat)-2</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 10A ;I <sub>B</sub> = 4A		2.0	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 1200V; I <sub>E</sub> = 0 V <sub>CB</sub> = 1200V; I <sub>E</sub> = 0; T <sub>C</sub> =125°C		0.5 3	mA
I <sub>CEO</sub>	Collector Cutoff Current	V <sub>CE</sub> = 700V; I <sub>B</sub> = 0		1	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 6V; I <sub>C</sub> = 0		1	mA

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