

**isc Silicon NPN Power Transistor**
**BUX10A**
**DESCRIPTION**

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

**APPLICATIONS**

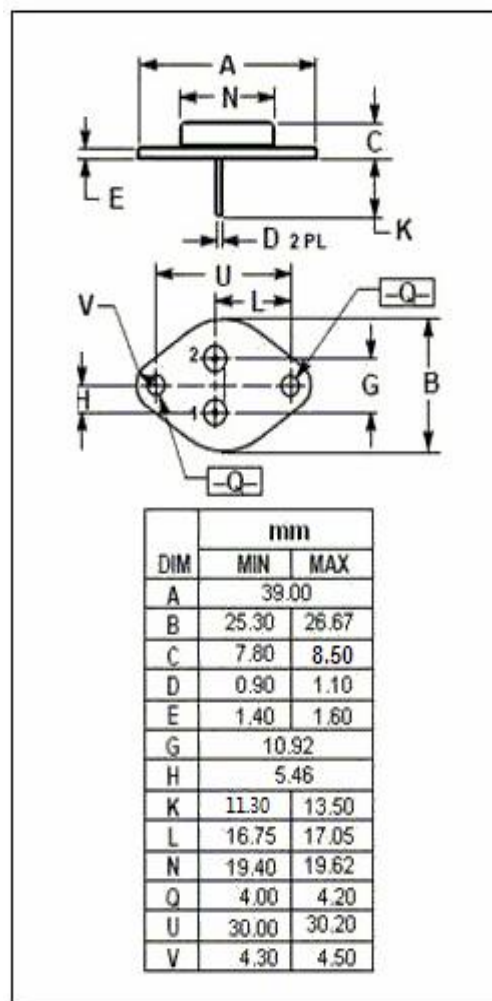
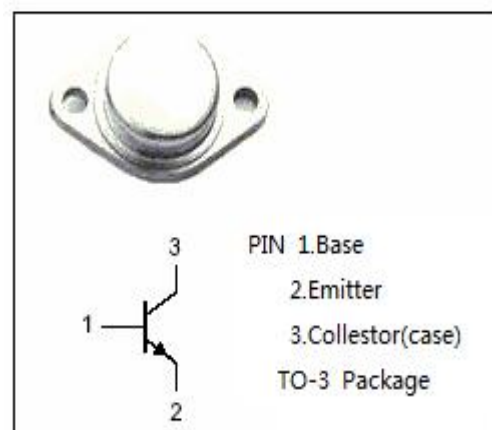
- Designed for control amplifiers and power switching circuits, such as converters, inverters, switching regulators, and switching-control amplifiers.

**Absolute maximum ratings(Ta=25°C)**

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CBO</sub>	Collector-Base Voltage	170	V
V <sub>CER</sub>	Collector-Emitter Voltage R <sub>BE</sub> = 100 Ω	160	V
V <sub>CEX</sub>	Collector-Emitter Voltage V <sub>BE</sub> = -1.5V	170	V
V <sub>CEO</sub>	Collector-Emitter Voltage	125	V
V <sub>EBO</sub>	Emitter-Base Voltage	7	V
I <sub>C</sub>	Collector Current-Continuous	25	A
I <sub>CM</sub>	Collector Current-Peak	30	A
I <sub>B</sub>	Base Current-Continuous	5	A
P <sub>C</sub>	Collector Power Dissipation @T <sub>C</sub> =25°C	150	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	1.17	°C/W



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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; I <sub>B</sub> = 0	125			V
V <sub>CBO(SUS)</sub>	Collector-Base Sustaining Voltage	I <sub>C</sub> = 1mA; I <sub>B</sub> = 0	160			V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = 1mA; I <sub>C</sub> = 0	7			V
V <sub>CE(sat)-1</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 10A; I <sub>B</sub> = 1A			0.6	V
V <sub>CE(sat)-2</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 20A; I <sub>B</sub> = 2A			1.5	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 20A; I <sub>B</sub> = 2A			2.0	V
I <sub>CEO</sub>	Collector Cutoff Current	V <sub>CE</sub> = 125V; I <sub>B</sub> = 0			5.0	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 5V; I <sub>C</sub> = 0			1.0	mA
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 10A; V <sub>CE</sub> = 2V	20		70	
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 20A; V <sub>CE</sub> = 4V	10			

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