

isc Silicon NPN Power Transistor

BUX48A

DESCRIPTION

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

APPLICATIONS

Designed for high-voltage, high-speed, power switching in inductive circuits where fall time is critical. They are particularly suited for line-operated switchmode applications such as:

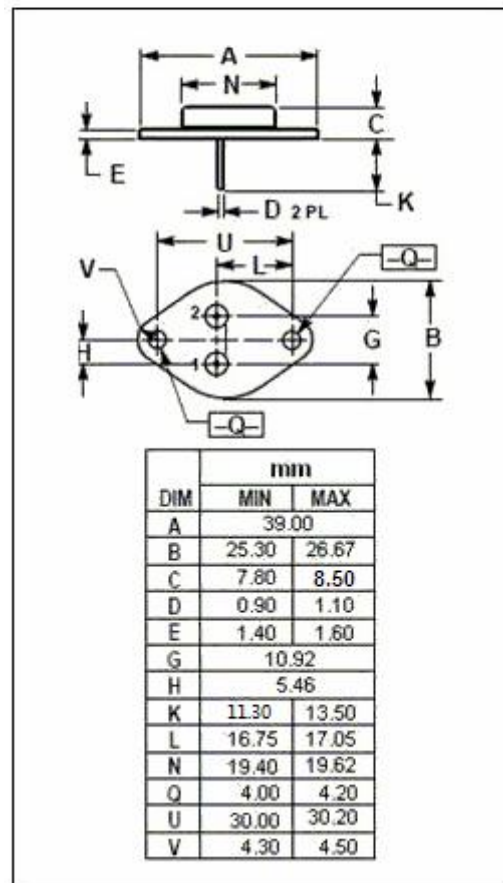
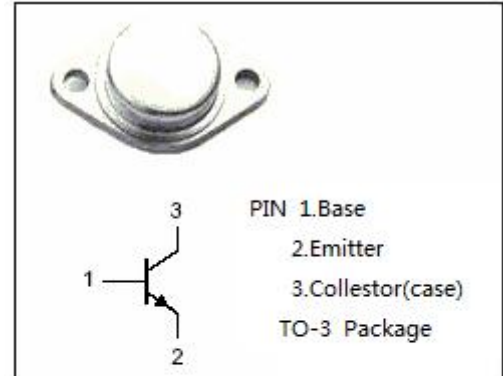
- Switching regulators
- Inverters
- Solenoid and relay drivers
- Motor controls
- Deflection circuits

Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	1000	V
V _{CEO}	Collector-Emitter Voltage	450	V
V _{EBO}	Emitter-Base Voltage	7	V
I _C	Collector Current-Continuous	15	A
I _{CM}	Collector Current-Peak	30	A
I _B	Base Current-Continuous	5	A
I _{BM}	Base Current-peak	20	A
P _C	Collector Power Dissipation @T _C =25°C	175	W
T _J	Junction Temperature	200	°C
T _{stg}	Storage Temperature Range	-65~200	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	1.0	°C/W



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ELECTRICAL CHARACTERISTICS
T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 50mA ; I _B = 0	450		V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 50mA; I _C = 0	7		V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = 8A; I _B = 1.6A I _C = 8A; I _B = 1.6A; T _C = 100°C		1.5 2.0	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 12A ; I _B = 2.4A		5.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 8A; I _B = 1.6A I _C = 8A; I _B = 1.6A; T _C = 100°C		1.6 1.6	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 1000V; I _E = 0 V _{CB} = 100V; I _E = 0; T _C = 125°C		0.2 2	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0		0.1	mA
h _{FE}	DC Current Gain	I _C = 8A ; V _{CE} = 5V	8		

Switching Times

t _{on}	Turn-On Time	I _C = 8A; I _{B1} = I _{B2} = -1.6A; V _{CC} = 150V		1.0	μs
t _{stg}	Storage Time			3.0	μs
t _f	Fall Time			0.8	μs

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