

isc Silicon NPN Power Transistor

BUW39

DESCRIPTION

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

APPLICATIONS

Designed for use in high frequency and efficiency converters such as motor controllers and industrial equipment such as:

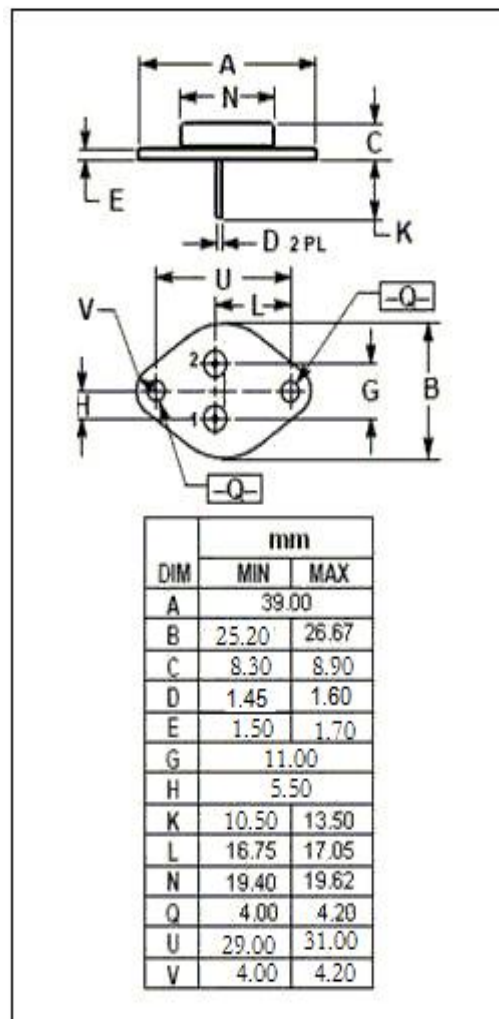
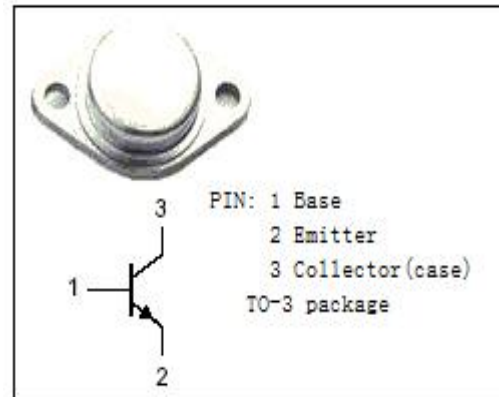
- Switching regulators
- Motor control
- High frequency and efficiency converters

Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	160	V
V _{CEO}	Collector-Emitter Voltage	80	V
V _{EBO}	Emitter-Base Voltage	7	V
I _C	Collector Current-Continuous	30	A
I _{CM}	Collector Current-Peak	40	A
I _B	Base Current-Continuous	6	A
I _{BM}	Base Current-peak	15	A
P _C	Collector Power Dissipation @T _C =25°C	150	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	1.17	°C/W



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ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 50mA; I _B = 0	80			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 = 15A; I _B = 1.5A			0.5	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 30A; I _B = 3A			1.2	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 30A; I _B = 3A			2.0	V
I _{CEX}	Collector Cutoff Current	V _{CE} = V _{CEX} ; V _{BE} = -1.5V V _{CE} = V _{CEX} ; V _{BE} = -1.5V; T _C =100°C			1.0 3.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			1.0	mA
h _{FE}	DC Current Gain	I _C = 5A; V _{CE} = 5V	40			

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