

isc Silicon NPN Power Transistor**BUW49****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:

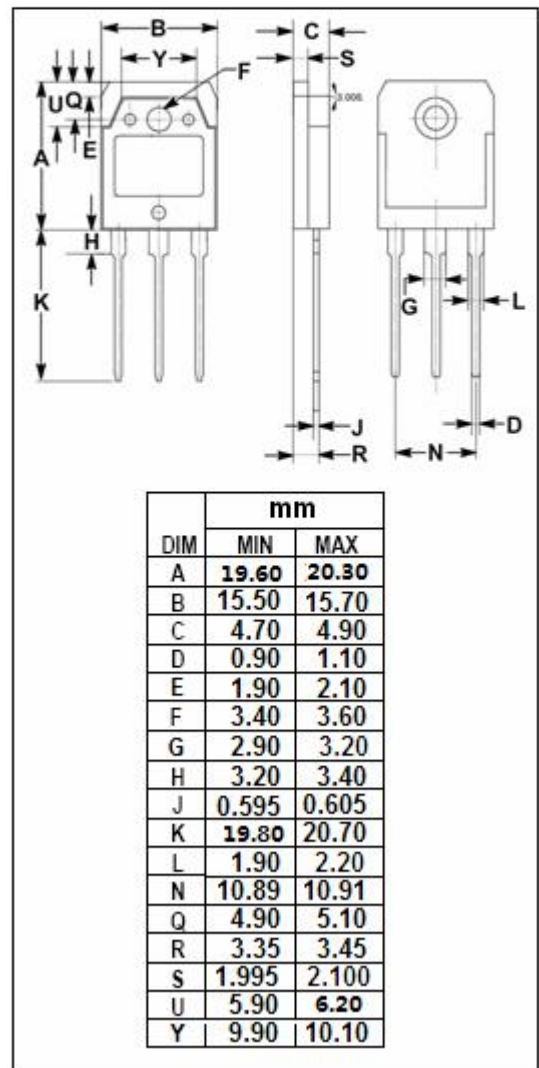
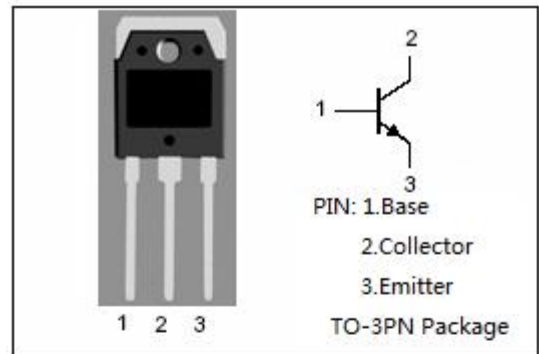
- Switching regulators
- Motor control
- High frequency and efficiency converters

Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CEV}	Collector-Emitter Voltage ($V_{BE} = -1.5V$)	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	10	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ C$	150	W
T_j	Junction Temperature	150	°C
T_{stg}	Storage Temperature Range	-65~150	°C

THERMAL CHARACTERISTICS

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



isc Silicon NPN Power Transistor**BUW49****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 =125°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			
f _T	Current-Gain—Bandwidth Product	I _C = 1A ; V _{CE} = 15V		8		MHz

Switching times Resistive Load

t _{on}	Turn-on Time	I _C = 30A ; I _{B1} = -I _{B2} = 4A; V _{CC} = 80V			1.2	μs
t _s	Storage Time				1.1	μs
t _f	Fall Time				0.25	μs

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