

isc Silicon NPN Power Transistor
BUY52A
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:

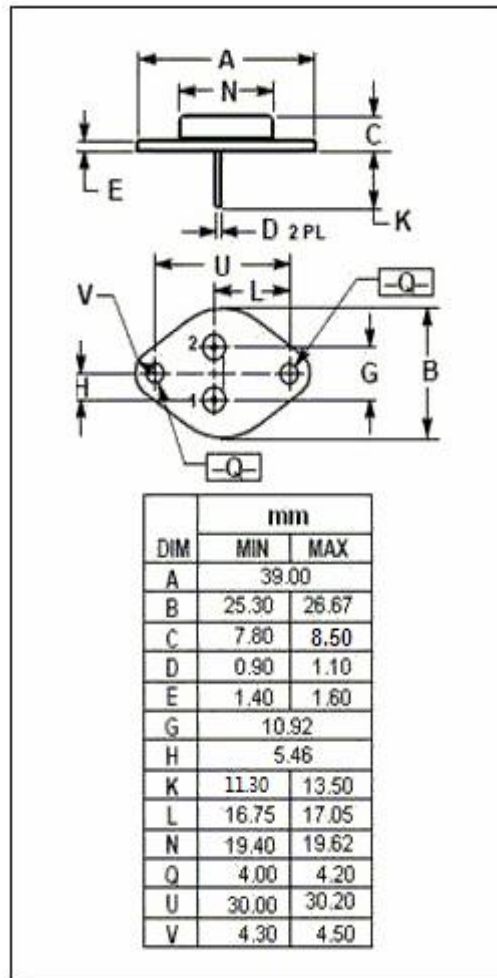
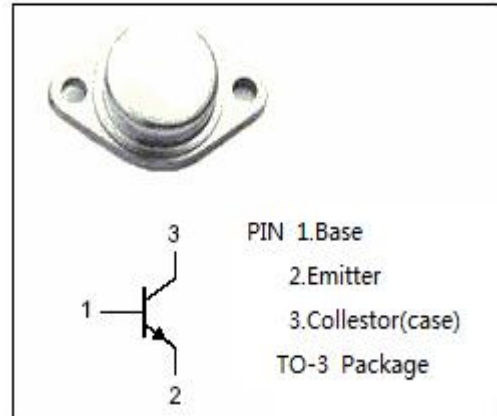
- Switching regulators
- Motor control
- High frequency and efficiency converters

Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	60	V
V _{CEO}	Collector-Emitter Voltage	60	V
V _{EBO}	Emitter-Base Voltage	7	V
I _C	Collector Current-Continuous	30	A
I _{CM}	Collector Current-Peak	45	A
I _B	Base Current-Continuous	8	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	60			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 1mA; I _C = 0	7			V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = 20A; I _B = 2A			1.0	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 30A; I _B = 3A			1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 30A; I _B = 3A			2.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 60V; I _E = 0			0.1	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			0.1	mA
h _{FE}	DC Current Gain	I _C = 15A; V _{CE} = 4V	20		150	
f _T	Current-Gain—Bandwidth Product	I _C = 1A ; V _{CE} = 15V		10		MHz

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