

isc Silicon NPN Power Transistor
BUV51
DESCRIPTION

- High Current Capability
- Low Collector Saturation Voltage-
: $V_{CE(sat)} = 0.8V$ (Max.) @ $I_C = 5A$
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

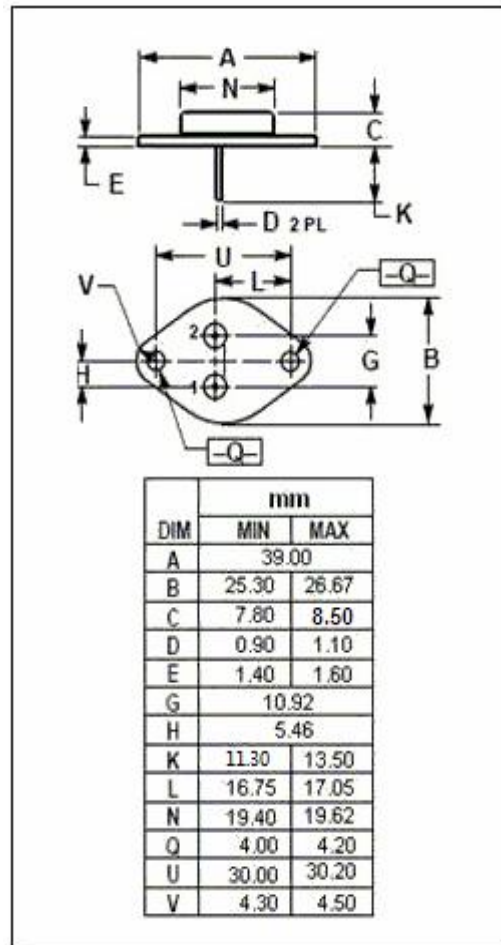
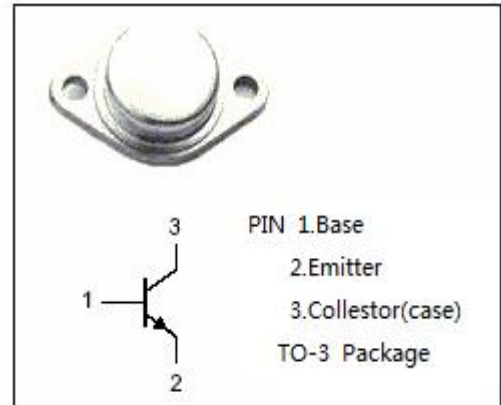
- Designed for high current, high speed, high power applications.

Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CEV}	Collector-Emitter Voltage (V _{BE} = -1.5V)	300	V
V_{CEO}	Collector-Emitter Voltage	200	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	20	A
I_{CM}	Collector Current-Peak	28	A
I_B	Base Current-Continuous	4	A
I_{BM}	Base Current-peak	7	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	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 50mA; I _B = 0	200		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 = 5A; I _B = 0.25A I _C = 5A; I _B = 0.25A; T _C = 100°C		0.8 0.9	V
V _{CE (sat)-2}	Collector-Emitter Saturation Voltage	I _C = 10A; I _B = 1A I _C = 10A; I _B = 1A; T _C = 100°C		0.9 1.5	V
V _{CE (sat)-3}	Collector-Emitter Saturation Voltage	I _C = 14A; I _B = 1.75A I _C = 14A; I _B = 1.75A; T _C = 100°C		1.2 1.9	V
V _{BE(sat)-1}	Base-Emitter Saturation Voltage	I _C = 10A; I _B = 1A I _C = 10A; I _B = 1A; T _C = 100°C		1.4 1.4	V
V _{BE(sat)-2}	Base-Emitter Saturation Voltage	I _C = 14A; I _B = 1.75A I _C = 14A; I _B = 1.75A; T _C = 100°C		1.7 1.7	V
I _{CER}	Collector Cutoff Current	V _{CE} = V _{CEV} ; R _{BE} = 10 Ω V _{CE} = V _{CEV} ; R _{BE} = 10 Ω; T _C =100°C		0.5 2.5	mA
I _{CEV}	Collector Cutoff Current	V _{CE} = V _{CEV} ; V _{BE} = -1.5V V _{CE} = V _{CEV} ; V _{BE} = -1.5V; T _C =100°C		0.5 2.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0		1.0	mA

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