

isc Silicon NPN Power Transistor

BUT100

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 125V(\text{Min.})$
- High Current Capability
- High Ruggedness
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

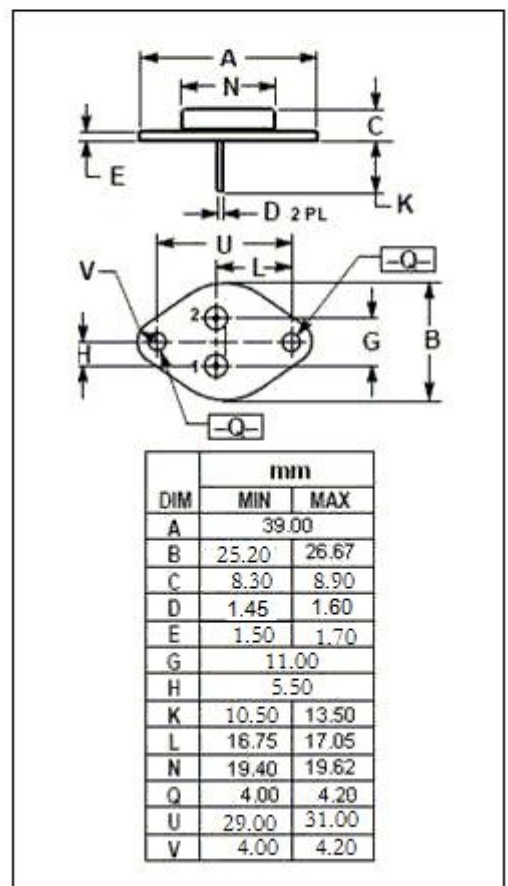
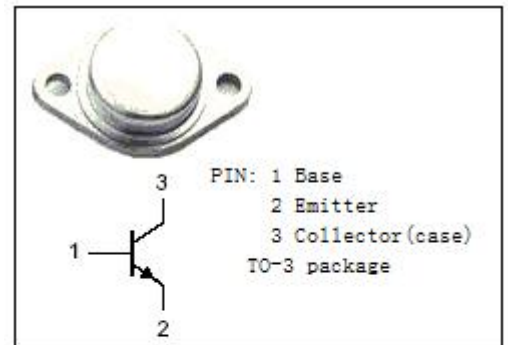


APPLICATIONS

- Motor Control
- Uninterruptable Power Supply

ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	200	V
V_{CEO}	Collector-Emitter Voltage	125	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	50	A
I_{CM}	Collector Current-Peak Repetitive	150	A
P_C	Collector Power Dissipation @ $T_C=75^\circ\text{C}$	300	W
T_J	Junction Temperature	200	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~200	$^\circ\text{C}$



isc Silicon NPN Power Transistor**BUT100****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEQ(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 50mA; I _B = 0	125			V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 1mA; I _E = 0	200			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 1mA; I _C = 0	7			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 50A; I _B = 2.5A I _C = 50A I _B = 2.5A T _j = 100°C			0.9 1.2	V
V _{BE(sat)} *	Base-Emitter Saturation Voltage	I _C = 50A; I _B = 2.5A I _C = 50A I _B = 2.5A T _j = 100°C			1.4 1.4	V
h _{FE}	DC Current Gain	I _C = 1A ; V _{CE} = 5V	50			
I _{CBO}	Collector Cutoff Current	V _{CB} = 200V; I _E = 0			10	μ A
I _{CEO}	Collector Cut-off Current	V _{CE} =125V; I _E = 0 V _{CE} = 125V; T _C = 100°C			1 5	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			10	μ A

* Pulsed: Pulse duration = 3μs, duty cycle = 2 %

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