

isc Silicon NPN Power Transistor
BUX33B
DESCRIPTION

Collector-Emitter Sustaining Voltage-

 : $V_{CEO(SUS)} = 500V(\text{Min.})$

- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

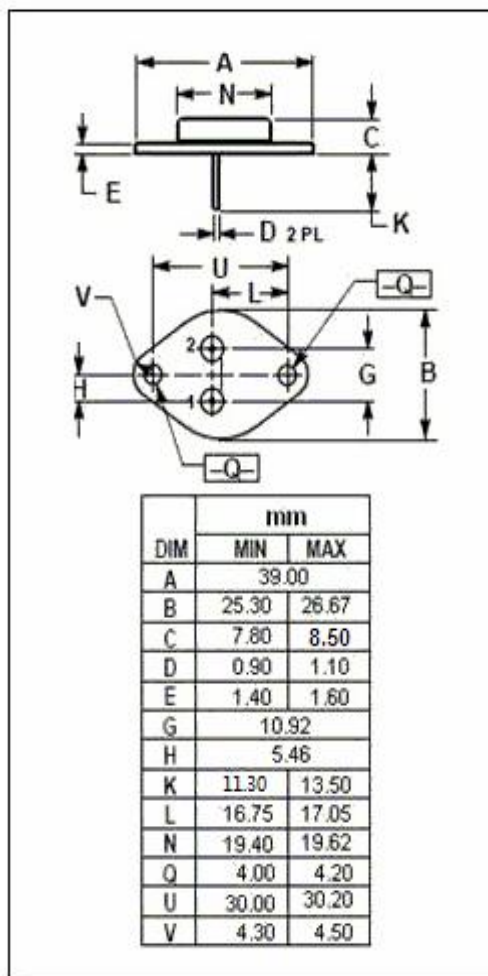
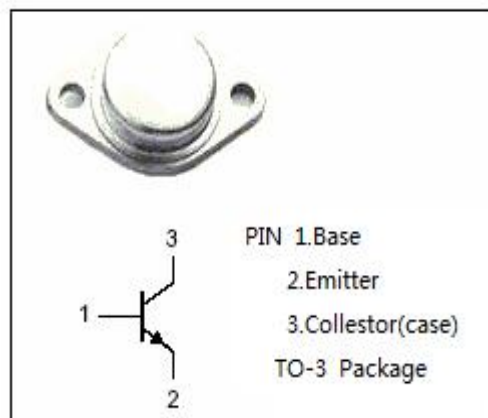
- Converters
- Inverters
- Switching regulators
- Motor controls

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

SYMBOL	PARAMETER	MAX	UNIT
V_{CBO}	Collector-Emitter Voltage	1000	V
V_{CEO}	Collector-Emitter Voltage	500	V
V_{EBO}	Emitter-Base Voltage	8	V
I_C	Collector Current-Continuous	12	A
I_{CM}	Collector Current-Peak	15	A
I_B	Base Current	4	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	150	W
T_j	Junction Temperature	200	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

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



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ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
V _{CE0(SUS)}	Collector-Emitter Voltage	Sustaining I _C = 50mA; I _B = 0	500			V
V _{CE(sat)-1}	Collector-Emitter Voltage	Saturation I _C = 8A; I _B = 2A			1.0	V
V _{CE(sat)-2}	Collector-Emitter Voltage	Saturation I _C = 12A; I _B = 3A			4.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 8A; I _B = 2A			1.3	V
I _{CB0}	Collector Cutoff Current	V _{CB} =1000V; I _E = 0 V _{CB} =1000V; I _E = 0; T _C = 100°C			0.1 1.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 8V; I _C = 0			2.0	mA
h _{FE}	DC Current Gain	I _C = 8A; V _{CE} = 3V	6		40	

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