

isc Silicon NPN Power Transistors
BUX80
DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 400V(\text{Min})$
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

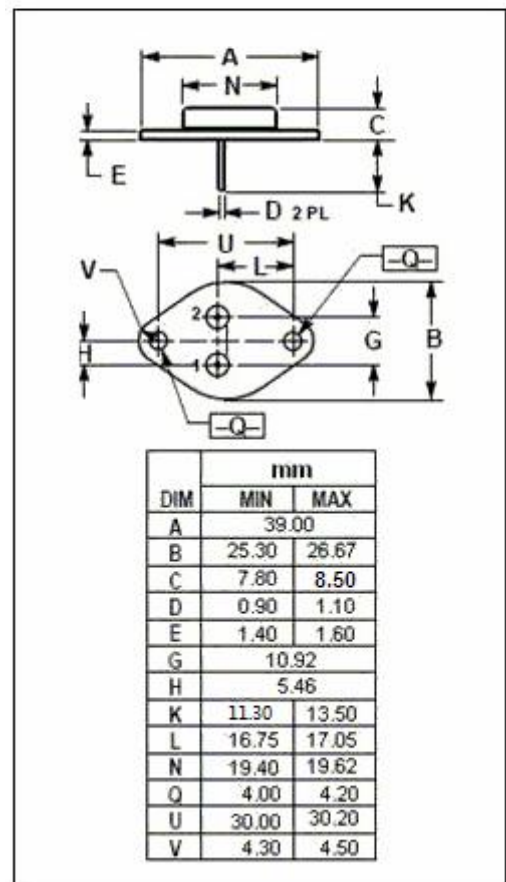
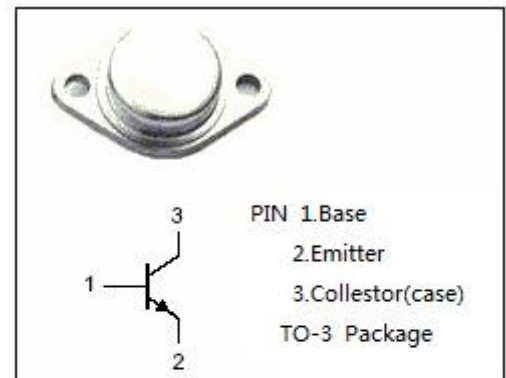
- Switching regulators
- Motor control
- High frequency and efficiency converters

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CES}	Collector-Emitter Voltage $V_{BE} = 0$	800	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{CER}	Collector-Emitter Voltage $R_{BE} = 50 \Omega$	500	V
V_{EBO}	Emitter-Base Voltage	10	V
I_C	Collector Current-Continuous	10	A
I_{CM}	Collector Current-Peak	15	A
I_B	Base Current-Continuous	5	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	100	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	1.1	$^\circ\text{C/W}$



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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 Sustaining Voltage	I _C = 50mA; I _B = 0	400			V
V _{CB0(SUS)}	Collector-Base Sustaining Voltage	I _C = 1mA; I _E = 0	800			V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = 5A; I _B = 1A			1.5	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 8A; I _B = 2.5A			3.0	V
V _{BE(sat)-1}	Base-Emitter Saturation Voltage	I _C = 5A; I _B = 1A			1.4	V
V _{BE(sat)-2}	Base-Emitter Saturation Voltage	I _C = 8A; I _B = 2.5A			1.8	V
I _{CBO}	Collector Cutoff Current	V _{CB} =800V; I _E = 0 V _{CB} =800V; I _E = 0, T _C =125°C			1.0 3.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 10V; I _C = 0			10	mA
h _{FE}	DC Current Gain	I _C = 1.2A; V _{CE} = 5V		30		

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