

isc Silicon NPN Power Transistor

BUX97B

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 450V(\text{Min.})$
- High Speed Switching
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

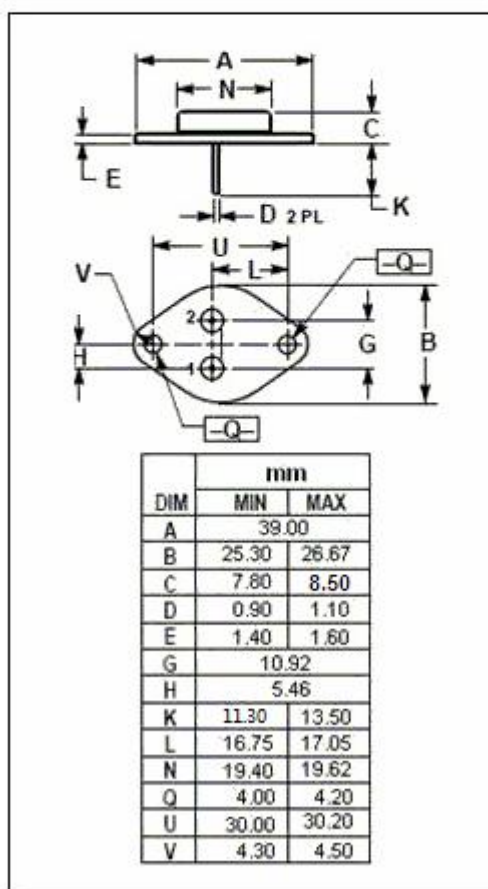
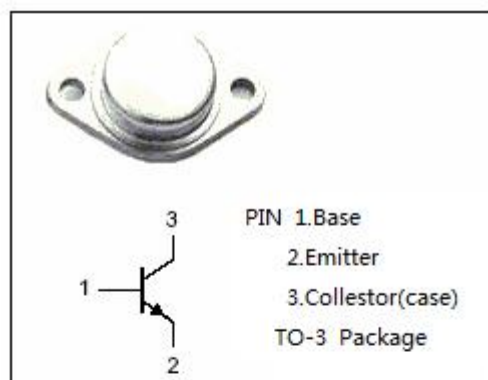
- Designed for use in off-line power supplies and are also well suited for use in a wide range of inverter or converter circuits and pulse-width-modulated regulators.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CES}	Collector-Emitter Voltage	800	V
V_{CEO}	Collector-Emitter Voltage	450	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	6	A
I_{CM}	Collector Current-Peak	8	A
I_B	Base Current	3	A
P_C	Collector Power Dissipation @ $T_c = 25^\circ\text{C}$	60	W
T_j	Junction Temperature	175	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~175	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.67	$^\circ\text{C/W}$



isc Silicon NPN Power Transistor**BUX97B****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	450			V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = 1A; I _B = 0.2A			1.0	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 4A; I _B = 1.25A			3.0	V
V _{BE(sat)-1}	Base-Emitter Saturation Voltage	I _C = 1A; I _B = 0.2A			1.3	V
V _{BE(sat)-2}	Base-Emitter Saturation Voltage	I _C = 4A; I _B = 1.25A			1.8	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 800V; I _E = 0 V _{CB} = 800V; I _E = 0; T _C =150°C			1.0 3.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 7V; I _C = 0			1.0	mA
h _{FE}	DC Current Gain	I _C = 1A; V _{CE} = 5V	10		70	
f _T	Current-Gain—Bandwidth Product	I _C = 0.5A; V _{CE} = 10V		20		MHz

Switching Times ;Resistive Load

t _{on}	Turn-on Time	I _C = 4A; I _{B1} = -I _{B2} = 1.25A; V _{CC} = 100V		0.6		μ s
t _s	Storage Time			3.5		μ s
t _f	Fall Time			0.5		μ s

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