

isc Silicon NPN Power Transistor

BUX47A

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 450V$ (Min)
- Fast Switching Speed

APPLICATIONS

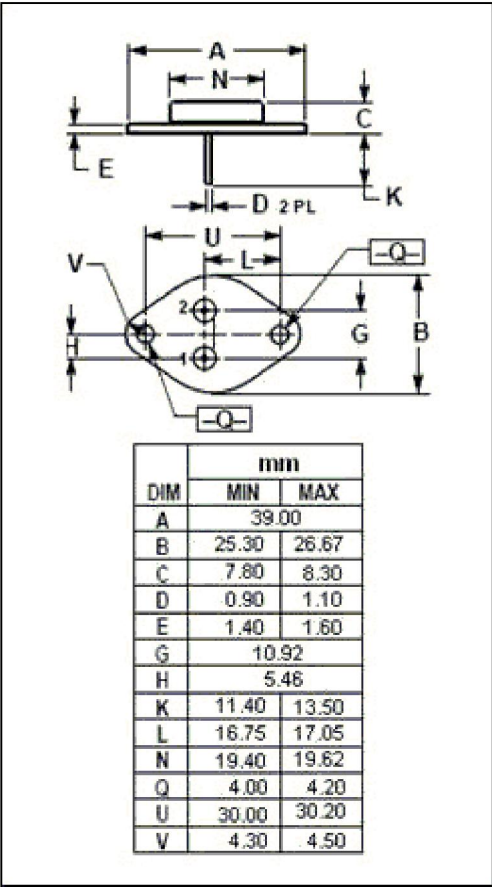
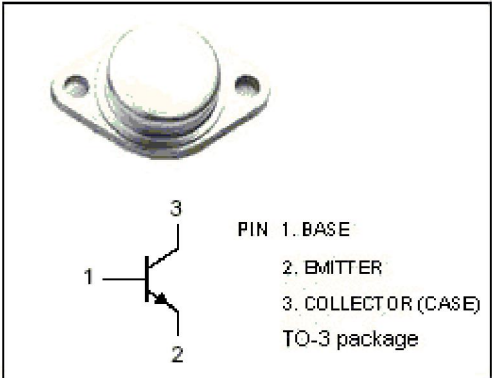
Designed for high voltage, fast switching applications.

Absolute maximum ratings($T_a=25^{\circ}C$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CER}	Collector-Emitter Voltage ($R_{BE} = 10 \Omega$)	1000	V
V_{CES}	Collector-Emitter Voltage ($V_{BE} = 0$)	900	V
V_{CEO}	Collector-Emitter Voltage	450	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	9	A
I_{CM}	Collector Current-Peak $t_p < 5ms$	15	A
I_B	Base Current-Continuous	8	A
I_{BM}	Base Current-peak $t_p < 5ms$	10	A
P_C	Collector Power Dissipation @ $T_C=25^{\circ}C$	125	W
T_j	Junction Temperature	175	$^{\circ}C$
T_{stg}	Storage Temperature Range	-65~175	$^{\circ}C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.2	$^{\circ}C/W$



isc Silicon NPN Power Transistor**BUX47A****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{CEQ(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 0.2A; I _B = 0; L = 25mH	450		V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 50mA; I _C = 0	7	30	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)}	Base-Emitter Saturation Voltage	I _C = 5A; I _B = 1A		1.6	V
I _{CER}	Collector Cutoff Current	V _{CE} = 850V; R _{BE} = 10 Ω V _{CE} = 850V; R _{BE} = 10 Ω; T _C = 125°C		0.4 3	mA
I _{CEV}	Collector Cutoff Current	V _{CE} = 850V; V _{BE} = -2.5V V _{CE} = 850V; V _{BE} = -2.5V; T _C = 125°C		0.15 1.5	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0		1.0	mA

Switching times Resistive Load

t _{on}	Turn-on Time	I _C = 5A; I _{B1} = -I _{B2} = 1A; V _{CC} = 150V		0.7	μ s
t _s	Storage Time			3.0	μ s
t _f	Fall Time			0.8	μ s