

BUX80

HIGH VOLTAGE NPN SILICON POWER TRANSISTOR

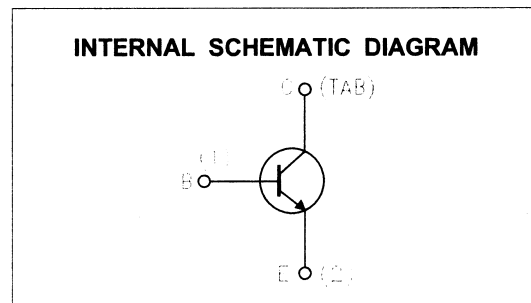
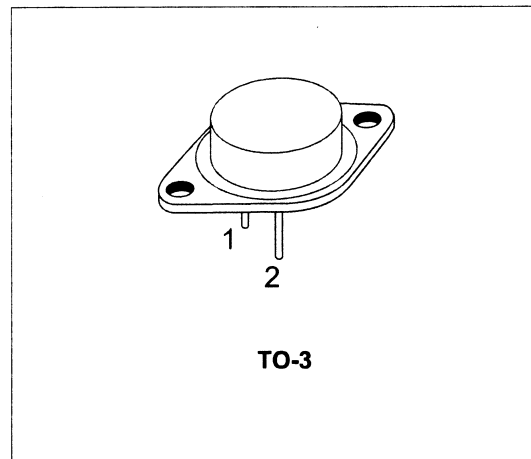
- NPN TRANSISTOR
- FAST SWITCHING SPEED

APPLICATIONS

- SWITCHING REGULATORS
- MOTOR CONTROL
- HIGH FREQUENCY AND EFFICIENCY CONVERTERS

DESCRIPTION

The BUX80 is a silicon multiepitaxial mesa NPN transistor in Jedec TO-3 metal case, particularly intended for converters, inverters, switching regulators and motors control system applications.



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CES}	Collector-emitter Voltage ($V_{BE} = 0$)	800	V
V_{CER}	Collector-emitter Voltage ($R_{BE} = 50\Omega$)	500	V
V_{CEO}	Collector-emitter Voltage ($I_B = 0$)	400	V
V_{EBO}	Emitter-base Voltage ($I_C = 0$)	10	V
I_C	Collector Current	10	A
I_{CM}	Collector Peak Current	15	A
I_B	Base Current	5	A
P_{tot}	Total Power Dissipation at $T_{case} \leq 40^\circ C$	100	W
T_{stg}	Storage Temperature	-65 to 150	$^\circ C$
T_j	Max Operating Junction Temperature	150	$^\circ C$

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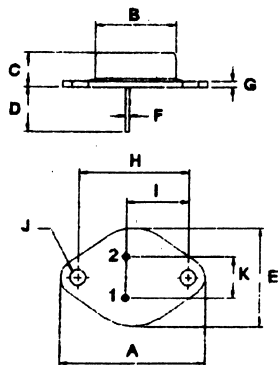
THERMAL DATA

$R_{thj-case}$	Thermal Resistance Junction-case	Max	1.1	$^{\circ}C/W$
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ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CES}	Collector Cut-off Current ($V_{BE} = 0$)	$V_{CE} = 800 V$ $V_{CE} = 800 V$ $T_{case} = 125^{\circ}C$			1 3	mA mA
I_{EBO}	Emitter Cut-off Current ($I_C = 0$)	$V_{BE} = 10 V$			10	mA
$V_{CEO(sus)*}$	Collector-Emitter Sustaining Voltage ($I_B = 0$)	$I_C = 100 mA$	400			V
$V_{CER(sus)*}$	Collector-Emitter Sustaining Voltage ($R_{BE} = 50 \Omega$)	$I_C = 100 mA$	500			V
$V_{CE(sat)*}$	Collector-Emitter Saturation Voltage	$I_C = 5 A$ $I_B = 1 A$ $I_C = 8 A$ $I_B = 2.5 A$			1.5 3	V V
$V_{BE(sat)*}$	Base-Emitter Saturation Voltage	$I_C = 5 A$ $I_B = 1 A$ $I_C = 8 A$ $I_B = 2.5 A$			1.4 1.8	V V
h_{FE*}	DC Current Gain	$I_C = 1.2 A$ $V_{CE} = 5 V$		30		
t_{on}	Turn-on Time	$I_C = 5 A$ $I_{B1} = 1 A$ $V_{CC} = 250 V$			0.5	μs
t_s	Storage Time	$I_C = 5 A$ $I_{B1} = 1 A$ $I_{B2} = -2 A$ $V_{CC} = 250 V$			3.5	μs
t_f	Fall Time	$I_C = 5 A$ $I_{B1} = 1 A$ $I_{B2} = -2 A$ $V_{CC} = -250 V$			0.5	μs

* Pulsed: Pulse duration = 300 μs , duty cycle = 1.5 %



PIN 1.BASE
2.EMITTER
COLLECTOR(CASE)

DIM	MILLIMETERS	
	MIN	MAX
A	38.75	39.96
B	19.28	22.23
C	7.96	9.28
D	11.18	12.19
E	25.20	26.67
F	0.92	1.09
G	1.38	1.62
H	29.90	30.40
I	16.64	17.30
J	3.88	4.36
K	10.67	11.18