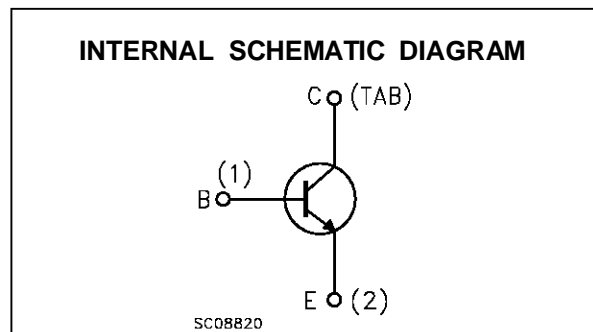
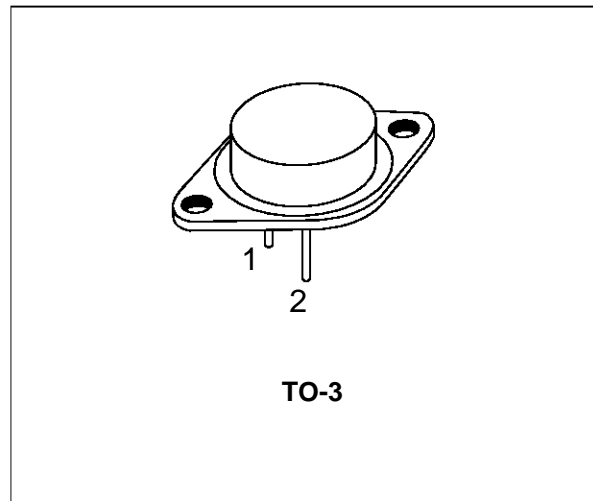


SILICON NPN SWITCHING TRANSISTOR

■ SGS-THOMSON PREFERRED SALESTYPE

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	$^\circ C$

BUX80

THERMAL DATA

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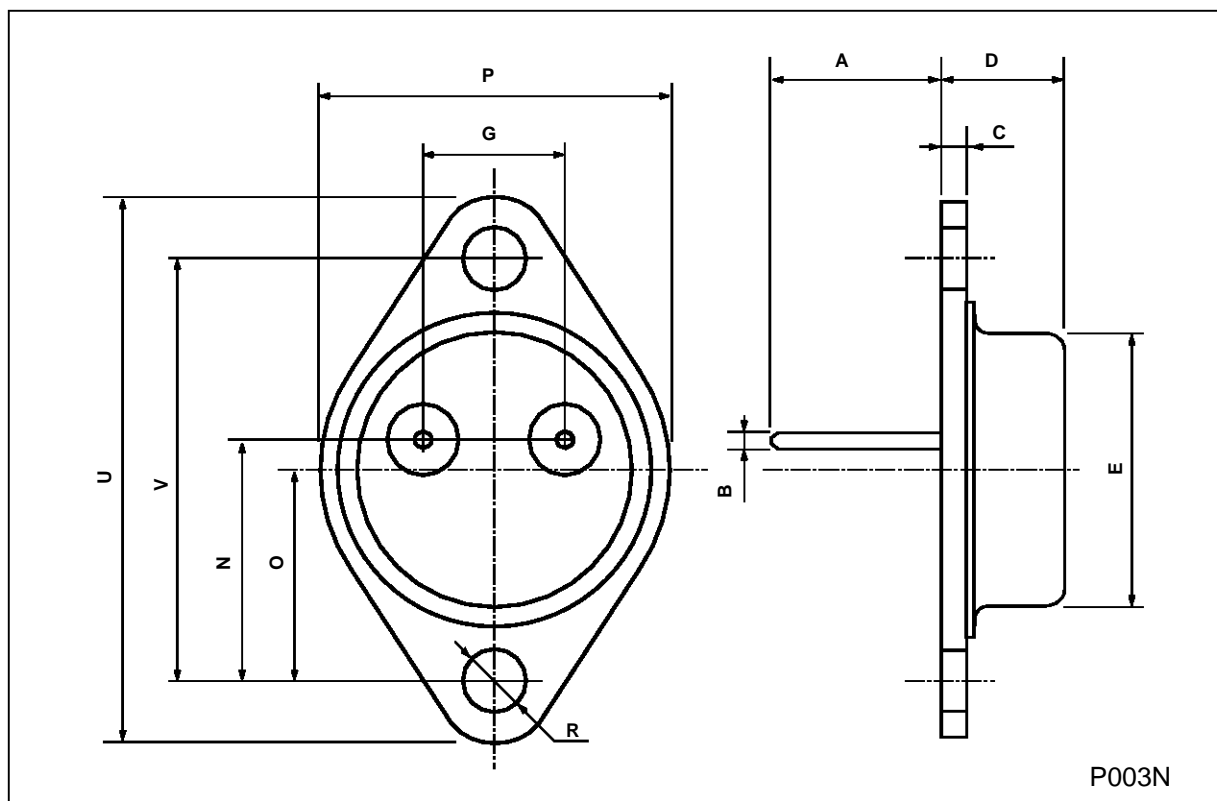
ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise specified)

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 %

TO-3 (H) MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A		11.7			0.460	
B	0.96		1.10	0.037		0.043
C			1.70			0.066
D			8.7			0.342
E			20.0			0.787
G		10.9			0.429	
N		16.9			0.665	
P			26.2			1.031
R	3.88		4.09	0.152		0.161
U			39.50			1.555
V		30.10			1.185	



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