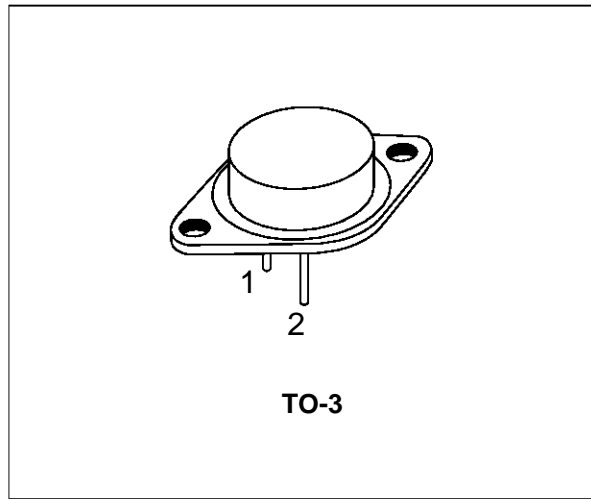


**HIGH VOLTAGE NPN SILICON POWER TRANSISTOR**

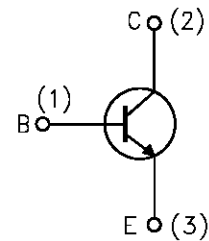
■ SGS-THOMPSON PREFERRED SALESTYPE

**DESCRIPTION**

The BUX98C is a silicon multiepitaxial mesa NPN transistor in jedec TO-3 metal case intended for use in switching and industrial application from single and three-phase mains operations.



**INTERNAL SCHEMATIC DIAGRAM**



SC06960

**ABSOLUTE MAXIMUM RATINGS**

Symbol	Parameter	Value	Unit
$V_{CER}$	Collector-Emitter Voltage	1200	V
$V_{CES}$	Collector-Emitter Voltage ( $v_{BE} = 0$ )	1200	V
$V_{CEX}$	Collector-Emitter Voltage	700	V
$V_{EBO}$	Emitter-Base Voltage ( $I_C = 0$ )	7	V
$I_C$	Collector Current	30	A
$I_{CM}$	Collector Peak Current	60	A
$I_{CP}$	Collector Peak Current non Repetitive	80	A
$I_B$	Base Current	8	A
$I_{BM}$	Base Peak Current	30	A
$P_{tot}$	Total Power Dissipation at $T_{case} \leq 25\text{ }^\circ\text{C}$	250	W
$T_{stg}$	Storage Temperature	-65 to 200	$^\circ\text{C}$
$T_j$	Max Operating Junction Temperature	200	$^\circ\text{C}$

## BUX98C

### THERMAL DATA

$R_{thj-case}$	Thermal Resistance Junction-case	Max	0.7	$^{\circ}C/W$
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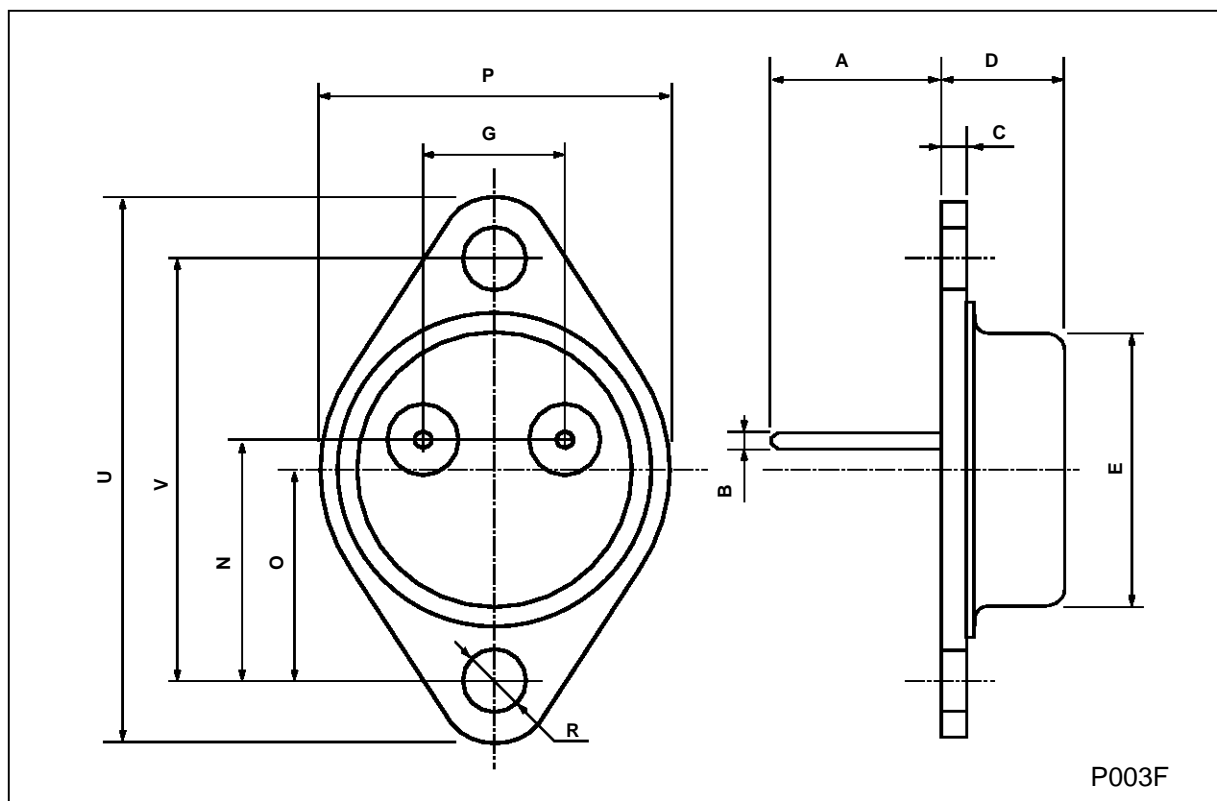
### ELECTRICAL CHARACTERISTICS ( $T_{case} = 25^{\circ}C$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$I_{CER}$	Collector Cut-off Current ( $R_{BE} = 10 \Omega$ )	$V_{CE} = V_{CES}$ $V_{CE} = V_{CES}$ $T_{CASE} = 125^{\circ}C$			1 8	mA mA
$I_{CES}$	Collector Cut-off Current ( $V_{BE} = 0$ )	$V_{CE} = V_{CES}$ $V_{CE} = V_{CES}$ $T_{CASE} = 125^{\circ}C$			1 6	mA mA
$I_{CEO}$	Collector Cut-off Current ( $I_B = 0$ )	$V_{CE} = V_{CEO}$			2	mA
$I_{EBO}$	Emitter Cut-off Current ( $I_C = 0$ )	$V_{CB} = 5 V$			2	mA
$V_{CEO(sus)*}$	Collector-Emitter Sustaining Voltage	$I_C = 100 mA$	700			V
$V_{CE(sat)*}$	Collector-Emitter Saturation Voltage	$I_C = 12 A$ $I_B = 3 A$ $I_C = 16 A$ $I_B = 5 A$ $I_C = 20 A$ $I_B = 8 A$			1.5 2 3	V V V
$V_{BE(sat)*}$	Base-Emitter Saturation Voltage	$I_C = 12 A$ $I_B = 3 A$ $I_C = 20 A$ $I_B = 8 A$			1.6 2	V V
$t_{on}$	Turn-on Time	RESISTIVE LOAD		0.5	1	$\mu s$
$t_s$	Storage Time	$V_{CC} = 250 V$ $I_C = 12 A$		1.5	3	$\mu s$
$t_f$	Fall Time	$I_{B1} = - I_{B2} = 3 A$		0.2	0.8	$\mu s$

\* Pulsed: Pulse duration = 300  $\mu s$ , duty cycle = 1.5 %

**TO-3 MECHANICAL DATA**

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	11.00		13.10	0.433		0.516
B	0.97		1.15	0.038		0.045
C	1.50		1.65	0.059		0.065
D	8.32		8.92	0.327		0.351
E	19.00		20.00	0.748		0.787
G	10.70		11.10	0.421		0.437
N	16.50		17.20	0.649		0.677
P	25.00		26.00	0.984		1.023
R	4.00		4.09	0.157		0.161
U	38.50		39.30	1.515		1.547
V	30.00		30.30	1.187		1.193



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