

HIGH POWER NPN SILICON TRANSISTOR

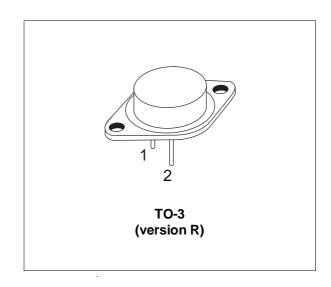
- STMicroelectronics PREFERRED SALESTYPE
- NPN TRANSISTOR
- HIGH VOLTAGE CAPABILITY
- HIGH CURRENT CAPABILITY
- FAST SWITCHING SPEED

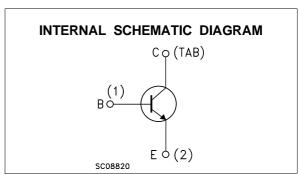
APPLICATIONS:

- HIGH FREQUENCY AND EFFICENCY CONVERTERS
- LINEAR AND SWITCHING INDUSTRIAL EQUIPMENT

DESCRIPTION

The BUX98C is a Silicon Multi Epitaxial Mesa NPN transistor in Jedec TO-3 metal case, intended for use in switching and industrial applications from single and three-phase mains operations.





ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V _{CER}	Collector-Emitter Voltage ($R_{BE} \le 0 \Omega$)	1200	V
V_{CES}	Collector-Emitter Voltage (V _{BE} = 0)	1200	V
V_{CEO}	Collector-Emitter Voltage	700	V
V _{EBO}	Emitter-Base Voltage (I _C = 0)	7	V
Ic	Collector Current	30	А
I _{CM}	Collector Peak Current (t _p < 5 ms)	60	А
I _{CMP}	Collector Peak Current non Repetitive	80	А
Ι _Β	Base Current	8	А
I _{BM}	Base Peak Current (t _p < 5 ms)	30	А
P _{tot}	Total Dissipation at T _c = 25 °C	250	W
T _{stg}	Storage Temperature	-65 to 200	°C
T _i	Max. Operating Junction Temperature	200	°C

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THERMAL DATA

R _{thj-case} Thermal Resistance Junction-case	Max	0.7	°C/W]
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ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

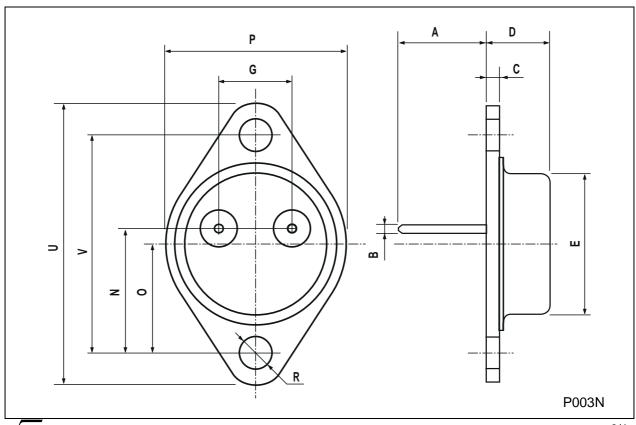
Symbol	Parameter	Test Conditions	Min.	Тур.	Max.	Unit
I _{CER}	Collector Cut-off Current ($R_{BE} = 10 \Omega$)	V _{CE} = V _{CES} V _{CE} = V _{CES} T _{case} = 125 °C			1 8	mA mA
I _{CES}	Collector Cut-off Current (V _{BE} = 0)	V _{CE} = V _{CES} V _{CE} = V _{CES} T _{case} = 125 °C			1 6	mA mA
I _{CEO}	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 _B = 0)	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} t _s t _f	Turn-on Time Storage Time Fall Time	RESISTIVE LOAD VCC = 250 V I _C = 12 A I _{B1} = - I _{B2} = 3 A		0.5 1.5 0.2	1 3 0.8	μs μs μs

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

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TO-3 (version R) MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
А		11.7			0.460	
В	0.96		1.10	0.037		0.043
С			1.70			0.066
D			8.7			0.342
E			20.0			0.787
G		10.9			0.429	
N		16.9			0.665	
Р			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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