

HIGH POWER NPN SILICON TRANSISTORS

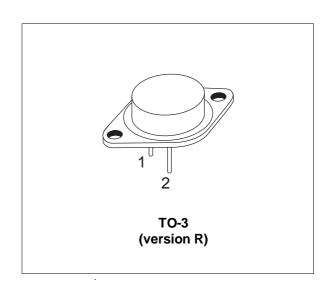
- SGS-THOMSON PREFERRED SALESTYPES
- NPN TRANSISTOR
- HIGH VOLTAGE CAPABILITY
- HIGH CURRENT CAPABILITY
- FAST SWITCHING SPEED

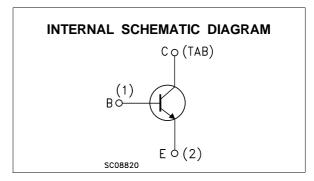
APPLICATIONS

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

DESCRIPTION

The BUX98 and BUX98A are silicon multiepitaxial mesa NPN transistor in jedec TO-3 metal case, intended and industrial applications from single and three-phase mains operation.





ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Va	Unit	
		BUX98	BUX98A	
V _{CER}	Collector-Emitter Voltage (RBE = $\leq 10 \Omega$)	850	1000	V
V _{CES}	Collector-Base Voltage (V _{BE} = 0)	850	1000	V
V _{CEO}	Collector-Emitter Voltage (IB = 0)	400	450	V
V _{EBO}	Emitter-Base Voltage (IC = 0)	7		V
Ic	Collector Current	30		Α
I _{CM}	Collector Peak Current (tp < 5 ms)	60		Α
I _{CP}	Collector Peak Current non Rep. (tp < 20 μs)	80		Α
I _B	Base Current	8		Α
I _{BM}	Base Peak Current (tp < 5 ms)	30		Α
P _{tot}	Total Power Dissipation at T _{case} < 25 °C	250		W
T _{stg}	Storage Temperature	-65 to 200		°C
Tj	Max Operating Junction Temperature	200		°C

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THERMAL DATA

ELECTRICAL CHARACTERISTICS ($T_{case} = 25$ °C unless otherwise specified)

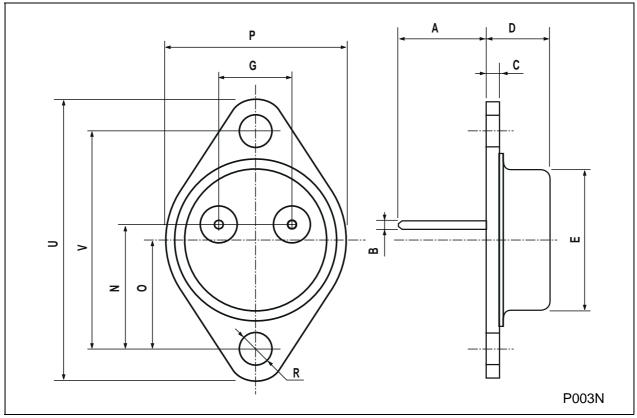
Symbol	Parameter	Test Conditions		Min.	Тур.	Max.	Unit
I _{CER}	Collector Cut-off Current ($R_{BE} = 10 \Omega$)	V _{CE} = V _{CES} V _{CE} = V _{CES}	T _{CASE} = 125 °C			1 8	μA mA
I _{CES}	Collector Cut-off Current (V _{BE} = 0)	Vce = Vces Vce = Vces	T _{CASE} = 125 °C			400 4	μA mA
ICEO	Collector Cut-off Current (I _B = 0)	VCE = VCEO				2	mA
I _{EBO}	Emitter Cut-off Current (I _C = 0)	V _{EB} = 5 V				2	mA
V _{CEO(sus)} *	Collector-Emitter Sustaining Voltage	I _C = 200 mA for BUX98 for BUX98A		400 450			V V
V _{CER(sus)} *	Collector-Emitter Sustaining Voltage	L = 2mH for BUX98 for BUX98A	I _C = 1 A	850 1000			V V
VCE(sat)*	Collector-Emitter Saturation Voltage	for BUX98 I _C = 20 A for BUX98A I _C = 16 A I _C = 24 A	I _B = 4 A I _B = 3.2 A I _B = 5 A			1.5 1.5 5	V V V
V _{BE(sat)} *	Base-Emitter Saturation Voltage	for BUX98 I _C = 20 A for BUX98A I _C = 16 A	I _B = 4 A I _B = 3.2 A			1.6 1.6	V
t _{on}	Turn-on Time	for BUX98				1	μs
ts	Storage Time	V _{CC} = 150 V	$I_C = 20 A$			3	μs
t _f	Fall Time	$I_{B1} = -I_{B2} = 4 A$				0.8	μs
ton	Turn-on Time	for BUX98A	-			1	μs
ts	Storage Time	V _{CC} = 150 V	I _C = 16 A			3	μs
t _f	Fall Time	$I_{B1} = -I_{B2} = 3.2 \text{ A}$				0.8	μs

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



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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