

HIGH VOLTAGE NPN POWER TRANSISTOR

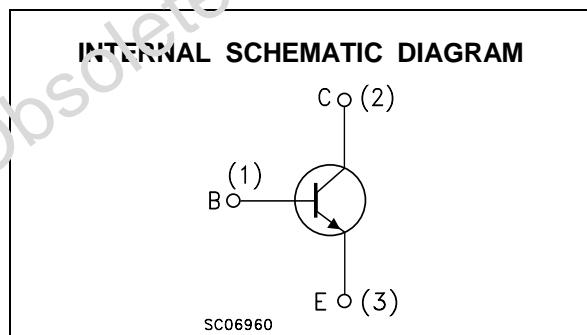
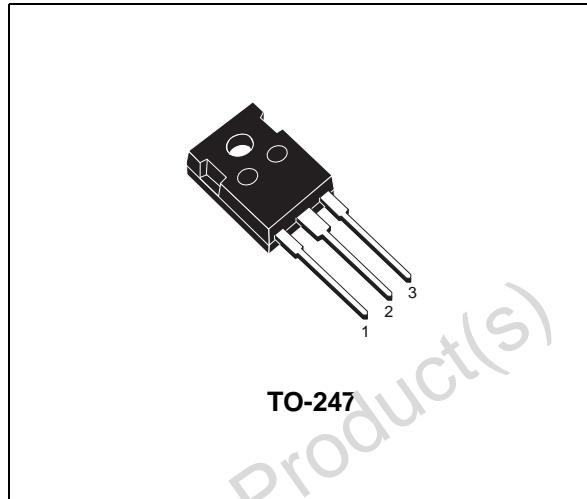
- STMicroelectronics PREFERRED SALES TYPE
- NPN TRANSISTOR
- HIGH VOLTAGE CAPABILITY
- HIGH CURRENT CAPABILITY
- FAST SWITCHING SPEED

APPLICATIONS

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

DESCRIPTION

The BUX98APW is a silicon Multiepitaxial Mesa NPN transistor in TO-247 plastic package. It is intended for use in industrial applications from single and three-phase mains operation.



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CER}	Collector-Emitter Voltage ($R_{BE} = \leq 10 \Omega$)	1000	V
V_{CES}	Collector-Base Voltage ($V_{BE} = 0$)	1000	V
V_{CEO}	Collector-Emitter Voltage ($I_B = 0$)	450	V
V_{EBO}	Emitter-Base Voltage ($I_C = 0$)	7	V
I_C	Collector Current	24	A
I_{CM}	Collector Peak Current ($t_p < 5 \text{ ms}$)	36	A
I_B	Base Current	5	A
I_{BM}	Base Peak Current ($t_p < 5 \text{ ms}$)	8	A
P_{tot}	Total Power Dissipation at $T_{case} < 25^\circ\text{C}$	200	W
T_{stg}	Storage Temperature	-65 to 150	°C
T_j	Max Operating Junction Temperature	150	°C

BUX98APW

THERMAL DATA

R _{thj-case}	Thermal Resistance Junction-case	Max	0.63	°C/W
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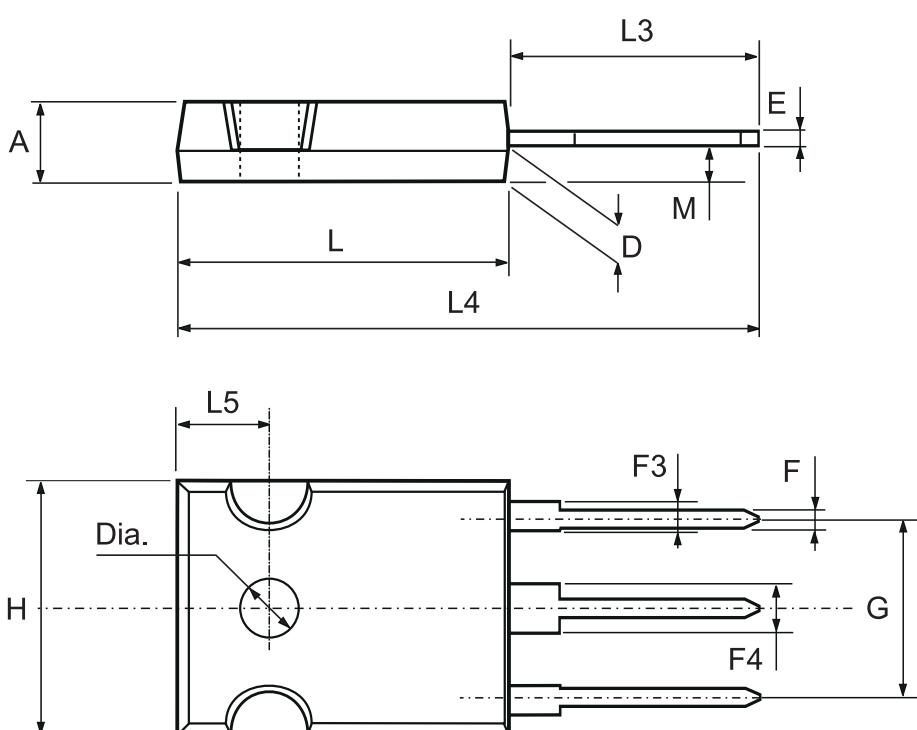
ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{CER}	Collector Cut-off Current (R _{BE} = 5 Ω)	V _{CE} = 1000 V V _{CE} = 1000 V T _C = 125 °C			200 2	μA mA
I _{CES}	Collector Cut-off Current (V _{BE} = 0)	V _{CE} = 1000 V V _{CE} = 1000 V T _C = 125 °C			200 2	μA mA
I _{CEO}	Collector Cut-off Current (I _B = 0)	V _{CE} = 450 V			2	mA
I _{EBO}	Emitter Cut-off Current (I _C = 0)	V _{EB} = 5 V			2	mA
V _{(BR)EBO}	Emitter-Base Breakdown Voltage (I _C = 0)	I _E = 100 mA	7			V
V _{CEO(sus)*}	Collector-Emitter Sustaining Voltage (I _B = 0)	I _C = 200 mA L = 25 mH	450			V
V _{CE(sat)*}	Collector-Emitter Saturation Voltage	I _C = 16 A I _B = 3.2 A			1.2	V
V _{BE(sat)*}	Base-Emitter Saturation Voltage	I _C = 16 A I _B = 3.2 A			1.5	V
t _{on} t _s t _f	RESISTIVE LOAD Turn-on Time Storage Time Fall Time	V _{CC} = 150 V I _C = 16 A I _{B1} = - I _{B2} = 3.2 A			1 3 0.8	μs μs μs

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

TO-247 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	4.7		5.3	0.185		0.209
D	2.2		2.6	0.087		0.102
E	0.4		0.8	0.016		0.031
F	1		1.4	0.039		0.055
F3	2		2.4	0.079		0.094
F4	3		3.4	0.118		0.134
G		10.9			0.429	
H	15.3		15.9	0.602		0.626
L	19.7		20.3	0.776		0.779
L3	14.2		14.8	0.559		0.582
L4		34.6			1.362	
L5		5.5			0.217	
M	2		3	0.079		0.118



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