

# **BUX98APW**

## HIGH VOLTAGE NPN POWER TRANSISTOR

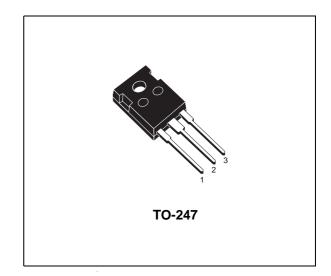
- STMicroelectronics PREFERRED SALESTYPE
- NPN TRANSISTOR
- HIGH VOLTAGE CAPABILITY
- HIGH CURRENT CAPABILITY
- FAST SWITCHING SPEED

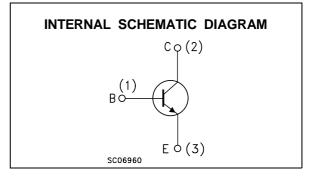
#### **APPLICATIONS**

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

#### DESCRIPTION

The 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	
$V_{CER}$	Collector-Emitter Voltage ( $R_{BE} = \leq 10 \Omega$ )	1000		
$V_{CES}$	Collector-Base Voltage (V <sub>BE</sub> = 0)	1000	V	
$V_{CEO}$	Collector-Emitter Voltage $(I_B = 0)$	450	V	
$V_{EBO}$	Emitter-Base Voltage (I <sub>C</sub> = 0)	7	V	
Ιc	Collector Current	24	А	
Ісм	Collector Peak Current (tp < 5 ms)	36	А	
Ι <sub>Β</sub>	Base Current	5	А	
I <sub>BM</sub>	Base Peak Current (t <sub>p</sub> < 5 ms)	8	А	
P <sub>tot</sub>	Total Power Dissipation at T <sub>case</sub> < 25 °C	200	W	
T <sub>stg</sub>	Storage Temperature	-65 to 150	°C	
Tj	Max Operating Junction Temperature	150	°C	

### THERMAL DATA

R <sub>thj-case</sub> Thermal Resistance Junction-case	Max	0.63	°C/W
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### **ELECTRICAL CHARACTERISTICS** ( $T_{case} = 25$ °C unless otherwise specified)

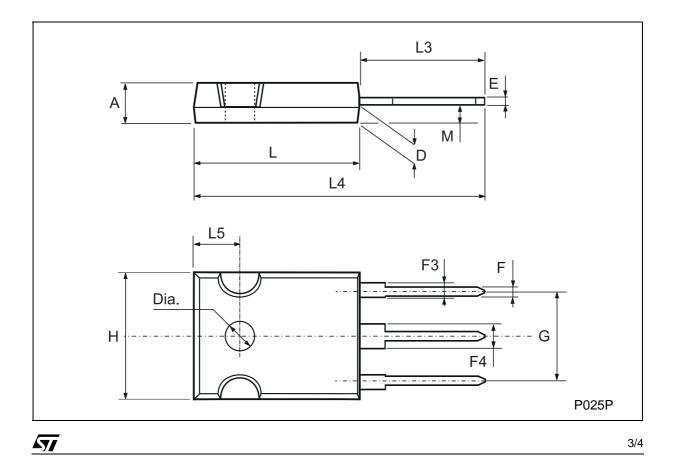
Symbol	Parameter	Test Conditions		Min.	Тур.	Max.	Unit
I <sub>CER</sub>	Collector Cut-off Current ( $R_{BE} = 5 \Omega$ )	V <sub>CE</sub> = 1000 V V <sub>CE</sub> = 1000 V	T <sub>C</sub> = 125 °C			200 2	μA mA
I <sub>CES</sub>	Collector Cut-off Current ( $V_{BE} = 0$ )	V <sub>CE</sub> = 1000 V V <sub>CE</sub> = 1000 V	T <sub>C</sub> = 125 °C			200 2	μA mA
I <sub>CEO</sub>	Collector Cut-off Current ( $I_B = 0$ )	V <sub>CE</sub> = 450 V				2	mA
I <sub>EBO</sub>	Emitter Cut-off Current $(I_C = 0)$	V <sub>EB</sub> = 5 V				2	mA
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage (I <sub>C</sub> = 0)	I <sub>E</sub> = 100 mA		7			V
V <sub>CEO(sus)</sub> *	Collector-Emitter Sustaining Voltage (I <sub>B</sub> = 0)	I <sub>C</sub> = 200 mA	L = 25 mH	450			V
V <sub>CE(sat)</sub> *	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 16 A	I <sub>B</sub> = 3.2 A			1.2	V
V <sub>BE(sat)</sub> *	Base-Emitter Saturation Voltage	I <sub>C</sub> = 16 A	I <sub>B</sub> = 3.2 A			1.5	V
t <sub>on</sub> t <sub>s</sub> t <sub>f</sub>	RESISTIVE LOAD Turn-on Time Storage Time Fall Time	$V_{CC} = 150 V$ $I_{B1} = -I_{B2} = 3.2 A$	I <sub>C</sub> = 16 A			1 3 0.8	μs μs μs

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

57

DIM.	mm		inch			
Divi.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
А	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	
Н	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	
М	2		3	0.079		0.118





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57