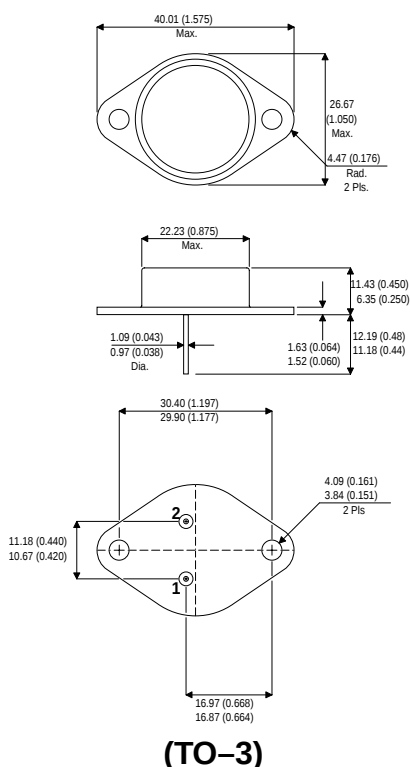


MECHANICAL DATA

Dimensions in mm (inches)



(TO-3)

PIN 1 — Base PIN 2 — Emitter Case is Collector.

HIGH VOLTAGE FAST SWITCHING

Description

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

ABSOLUTE MAXIMUM RATINGS

		BUX98	BUX98A
V_{CER}	Collector – Emitter Voltage ($R_{BE} \leq 10\Omega$)	850	1000
V_{CES}	Collector – Base Voltage ($V_{BE} = 0$)	850	1000
V_{CEO}	Collector – Emitter Voltage ($I_B = 0$)	400	450
V_{EBO}	Emitter – Base Voltage ($I_C = 0$)	7V	
I_C	Collector Current	30A	
I_{CM}	Collector Peak Current non ($t_p = 5ms$)	60A	
I_{CP}	Collector Peak Current non Rep ($t_p = 20\mu s$)	80A	
I_B	Base Current	8A	
I_{BM}	Base Peak Current ($t_p = 5ms$)	30A	
P_{tot}	Total Power Dissipation $T_{case} < 25^\circ C$	250W	
T_{STG}	Storage Temperature	-65 to +150°C	
T_J	Junction Temperature	200°C	

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

Parameter		Test Conditions			Min.	Typ.	Max.	Unit	
V _{CEO(sus)*}	Collector - Emitter Sustaining Voltage	I _C = 200mA		BUX98	400			V	
				BUX98A	450				
V _{CER(sus)*}	Collector - Emitter Sustaining Voltage	I _C = 1A	L = 2mH	BUX98	850				
				BUX98A	1000				
V _{CE(sat)*}	Collector – Emitter Saturation Voltage	I _C = 20A	I _B = 4A	BUX98			1.5		
		I _C = 16A	I _B = 3.2A	BUX98A			1.5		
		I _C = 24A	I _B = 5A				5		
		I _C = 20A	I _B = 4A	BUX98			1.6		
		I _C = 16A	I _B = 3.2A	BUX98A			1.6		
I _{CER}	Collector Cutoff Current	V _{CE} = V _{CES}					1	μA	
		R _{BE} = 10Ω	T _{case} = 125°C				8	mA	
I _{CES}	Collector Cutoff Current	V _{CE} = V _{CES}					400	μA	
		V _{BE} = 0	T _{case} = 125°C				4	mA	
I _{CEO}	Collector Cutoff Current	V _{CES} = V _{CEO}	I _C = 0				2	mA	
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V	I _C = 0				2	mA	
t _{on}	Turn–On Time	V _{CC} = 150V	I _C = 20A	BUX98			1	μA	
t _s	Storage Time	I _{B1} = I _{B2} = 4A					3		
t _f	Fall Time						0.8		
t _{on}	Turn–On Time	V _{CC} = 150V	I _C = 16A	BUX98A			1	μA	
t _s	Storage Time	I _{B1} = I _{B2} = 3.2A					3		
t _f	Fall Time						0.8		

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

THERMAL CHARACTERISTICS

R _{th j-case} Thermal Resistance Junction to Case	0.7max °C/W
--	-------------