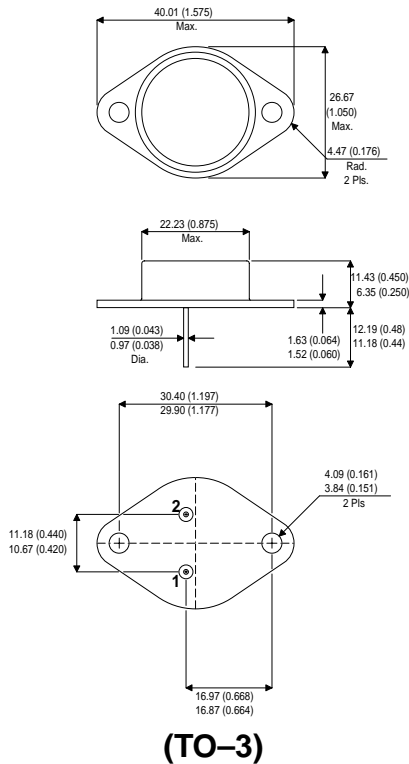


MECHANICAL DATA

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 ($T_{case} = 25^{\circ}C$ 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	
	$I_C = 24A$	$I_B = 5A$	BUX98		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	$V_{CE} = V_{CES}$ $R_{BE} = 10\Omega$	$T_{case} = 125^{\circ}C$			1	μA
					8	mA
I_{CES} Collector Cutoff Current	$V_{CE} = V_{CES}$ $V_{BE} = 0$	$T_{case} = 125^{\circ}C$			400	μA
					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	$V_{CC} = 150V$ $I_{B1} = I_{B2} = 4A$	$I_C = 20A$	BUX98		1	μA
t_s Storage Time				3		
t_f Fall Time				0.8		
t_{on} Turn-On Time	$V_{CC} = 150V$ $I_{B1} = I_{B2} = 3.2A$	$I_C = 16A$	BUX98A		1	μA
t_s Storage Time				3		
t_f Fall Time				0.8		

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

THERMAL CHARACTERISTICS

$R_{th\ j-case}$	Thermal Resistance Junction to Case	0.7max $^{\circ}C/W$
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