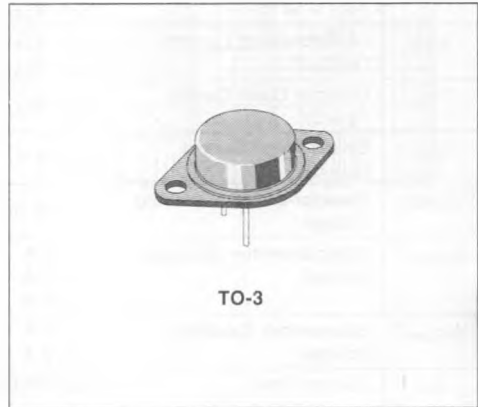


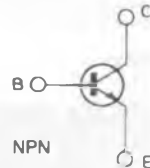
HIGH VOLTAGE SWITCH

DESCRIPTION

The BUX98B and BUX98C are silicon multiepitaxial mesa NPN transistors in Jedec TO-3 metal case intended for use in switching and industrial applications from single and three-phase mains operations.



INTERNAL SCHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value		Unit
		BUX98B	BUX98C	
V_{CER}	Collector-emitter Voltage	1200	1200	V
V_{CES}	Collector-emitter Voltage ($V_{BE} = 0$)	1200	1200	V
V_{CEX}	Collector-emitter Voltage	600	700	V
V_{EBO}	Emitter-base Voltage ($I_C = 0$)	7		V
I_C	Collector Current	30		A
I_{CM}	Collector Peak Current	60		A
I_{CP}	Collector Peak Current non Repetitive	80		A
I_B	Base Current	8		A
I_{BM}	Base Peak Current	30		A
P_{tot}	Total Dissipation at $T_c < 25\text{ }^\circ\text{C}$	250		W
T_{stg}	Storage Temperature	- 65 to 200		$^\circ\text{C}$
T_j	Max. Operating Junction Temperature	200		$^\circ\text{C}$

THERMAL DATA

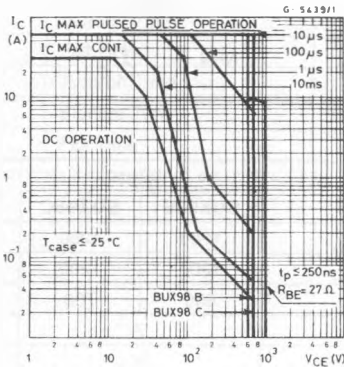
$R_{th(j-c)}$	Thermal Resistance Junction-case	Max	0.7	°C/W
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ELECTRICAL CHARACTERISTICS ($T_{case} = 25\text{ °C}$ unless otherwise specified)

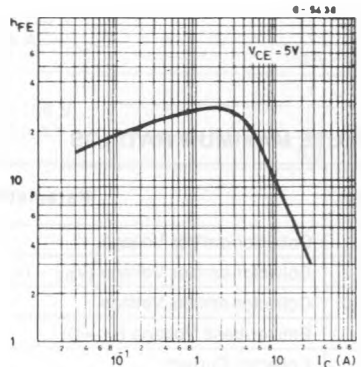
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CEr}	Collector Cutoff Current ($R_{BE} = 10\ \Omega$)	$V_{CE} = V_{CES}$ $V_{CE} = V_{CES}$ $T_{case} = 125\text{ °C}$			1 8	mA mA
I_{CES}	Collector Cutoff Current ($V_{BE} = 0$)	$V_{CE} = V_{CES}$ $V_{CE} = V_{CES}$ $T_{case} = 125\text{ °C}$			1 6	mA mA
I_{CEO}	Collector Cutoff Current ($I_B = 0$)	$V_{CE} = V_{CEO}$			2	mA
I_{EBO}	Emitter Cutoff Current ($I_C = 0$)	$V_{EB} = 5\text{ V}$			2	mA
$V_{CEO(sus)}$ *	Collector-emitter Sustaining Voltage	$I_C = 100\text{ mA}$	700			V
$V_{CE(sat)}$ *	Collector-emitter Saturation Voltage	$I_C = 12\text{ A}$ $I_B = 3\text{ A}$ $I_C = 16\text{ A}$ $I_B = 5\text{ A}$ $I_C = 20\text{ A}$ $I_B = 8\text{ A}$			1.5 2 3	V V V
$V_{BE(sat)}$ *	Base-emitter Saturation Voltage	$I_C = 12\text{ A}$ $I_B = 3\text{ A}$ $I_C = 20\text{ A}$ $I_B = 8\text{ A}$			1.6 2	V V
t_{on}	Turn-on Time	RESISTIVE LOAD		0.5	1	μs
t_s	Storage Time	$V_{CC} = 250\text{ V}$ $I_C = 12\text{ A}$		1.5	3	μs
t_f	Fall Time	$I_{B1} = -I_{B2} = 3\text{ A}$		0.2	0.8	μs

* Pulsed : pulse duration = 300 μs duty cycle = 1.5 %.

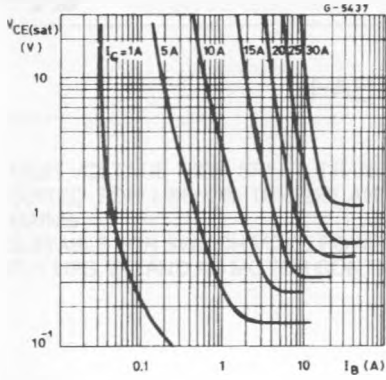
Safe Operating Areas.



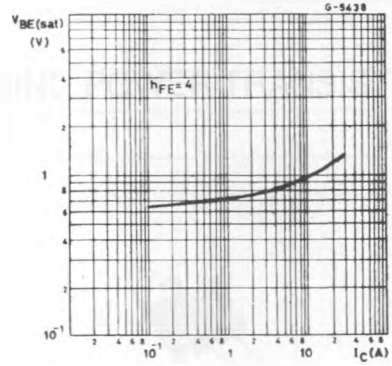
DC Current Gain.



Collector-emitter Saturation Voltage.



Base-emitter Saturation Voltage.



Reverse Biased Operating Area.

