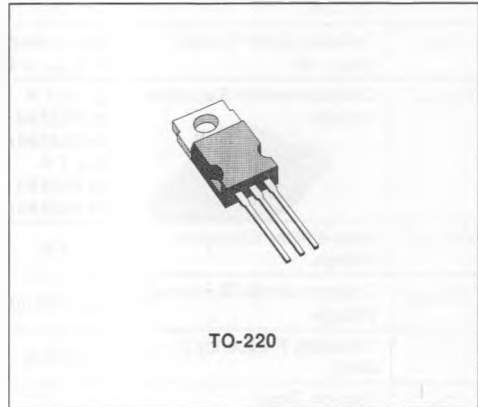


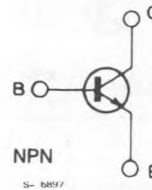
HIGH VOLTAGE SWITCH

DESCRIPTION

The BUX84, and BUX84A are multi-epitaxial mesa NPN transistors, intended for use in converters inverters, switching regulators, motor control system and switching applications. They are mounted in Jecdec TO-220 plastic package.



INTERNAL SCHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CEs}	Collector-emitter Voltage ($I_{BE} = 0$)	800	V
V_{CEO}	Collector-emitter Voltage ($I_B = 0$)	400	V
I_C	Collector Current	2	A
I_{CM}	Collector Peak Current	3	A
I_B	Base Current	0.75	A
P_{Tot}	Total Power Dissipation at $T_{case} \leq 25^\circ C$	40	W
T_{stg}	Storage Temperature	- 65 to 150	$^\circ C$
T_j	Junction Temperature	150	$^\circ C$

THERMAL DATA

$R_{th\ j-case}$	Thermal Resistance Junction-case	Max	3.125	°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_{EBO}	Emitter Cutoff Current ($I_C = 0$)	$V_{EB} = 5\text{ V}$			1	mA
I_{CES}	Collector Cutoff Current ($V_{BE} = 0$)	$V_{CE} = \text{rated } V_{CES}$ at $T_{case} = 125\text{ °C}$			0.2 1.5	mA mA
$V_{CE(sat)}^*$	Collector-emitter Saturation Voltage	$I_C = 0.3\text{ A}$ $I_B = 30\text{ mA}$ for BUX84 for BUX84A $I_C = 1\text{ A}$ $I_B = 0.2\text{ A}$ for BUX84 for BUX84A			1.5 0.8 3 1	V V V V
$V_{BE(sat)}^*$	Base-emitter Saturation Voltage	$I_C = 1\text{ A}$ $I_B = 0.2\text{ A}$			1.1	V
$V_{CEO(sus)}^*$	Collector-emitter Sustaining Voltage	$I_C = 100\text{ mA}$ $L = 25\text{ mH}$	400			V
f_T	Transition Frequency ($f = 1\text{ MHz}$)	$I_C = 0.2\text{ A}$ $V_{CE} = 10\text{ V}$		20		MHz
t_{on}	Turn-on Time	$I_C = 1\text{ A}$ $V_{CC} = 250\text{ V}$ $I_B = 0.2\text{ A}$ $- I_B = 0.4\text{ A}$			0.5	µs
t_s	Storage Time				3.5	µs
t_f	Fall Time				1.4	µs

* Pulsed : pulse duration = 300 µs, duty cycle ≤ 2 %.