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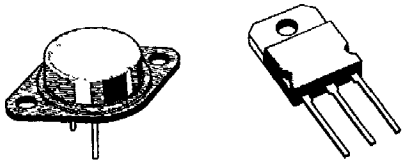
BUW32/32P/32PFI
BUW32A/32AP/32APFI

HIGH VOLTAGE POWER SWITCH

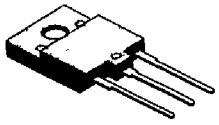
DESCRIPTION

The BUW32/A, BUW32P/AP and BUW32PFI/APFI are silicon multiepitaxial mesa PNP transistors mounted respectively in TO-3 metal case, TO-218 plastic package and ISOWATT218 fully isolated package. They are intended for high voltage, fast switching and industrial applications.



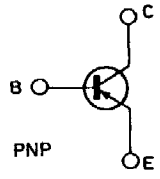
TO-3

TO-218



ISOWATT218

INTERNAL SHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	BUW			Unit
		32/P/PFI		32A/AP/APFI	
V_{CES}	Collector-emitter Voltage (V_{BE} = 0)	– 400		– 450	V
V_{CEO}	Collector-emitter Voltage (I_B = 0)	– 350		– 400	V
V_{EBO}	Emitter-base Voltage (I_C = 0)	– 5		– 7	V
I_C	Collector Current	– 10			A
I_B	Base Current	– 5			A
		TO-3	TO-218	ISOWATT218	
P_{tot}	Total Power Dissipation at T_c < 25 °C	125	105	55	W
T_{stg}	Storage Temperature	– 65 to 175	– 65 to 150	– 65 to 150	°C
T_j	Max. Operating Junction Temperature	175	150	150	°C

THERMAL DATA

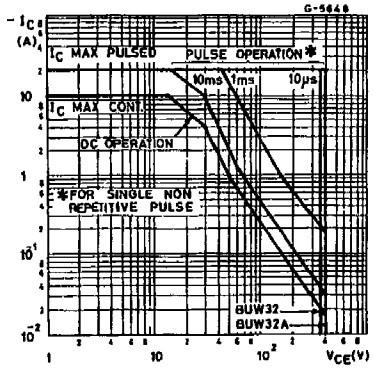
			TO-3	TO-218	ISOWATT218	
$R_{th\ j\text{-}case}$	Thermal Resistance Junction-case	max	1.19	1.19	2.27	°C/W

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

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CES}	Collector Cutoff Current (V_{BE} = 0)	V_{CE} = Rated V_{CES} V_{CE} = Rated V_{CES} T_{case} = 125 °C			− 1 − 5	mA mA
I_{EBO}	Emitter Cutoff Current (I_C = 0)	V_{EB} = Rated V_{EBO}			− 1	mA
$V_{CEO(sus)}$*	Collector-emitter Sustaining Voltage (I_B = 0)	I_C = − 100 mA for **BUW32/P/PFI** for **BUW32A/AP/APFI**	 − 350 − 400			 V V
$V_{CE(sat)}$*	Collector-emitter Saturation Voltage	I_C = − 5 A I_B = − 1.5 A			− 1.5	V
$V_{BE(sat)}$*	Base-emitter Saturation Voltage	I_C = − 5 A I_B = − 1.5 A			− 1.6	V
h_{FE}*	DC Current Gain	I_C = − 1 A V_{CE} = − 5 V	12			
$I_{s/b}$	Second Breakdown Collector Current	V_{CE} = − 30 V for **BUW32/A** for **BUW32P/AP** for **BUW32PFI/APFI**	 − 4.2 − 3.5 − 1.7			 A A A
t_{on}	Turn-on Time	Resistive Load V_{CC} = − 250 V I_C = − 5 A I_{B1} = − I_{B2} = − 1 A		0.3	0.6	µs
t_s	Storage Time			0.7	1.5	µs
t_f	Fall Time			0.25	0.6	µs

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

Safe Operating Areas.



Safe Operating Areas.