

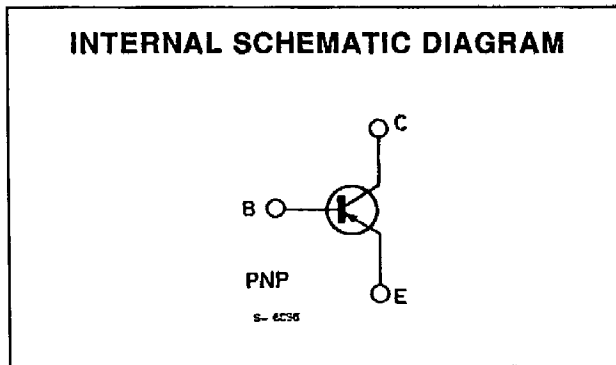
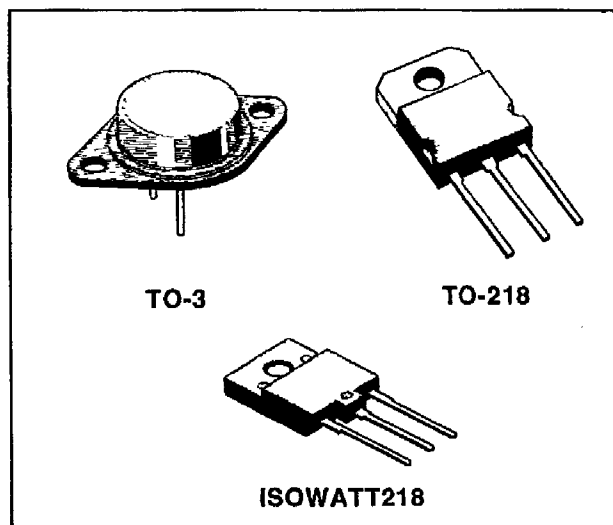
**BUW42/42P/42PFI**  
**BUW42A/42AP/42APFI**

**HIGH VOLTAGE POWER SWITCH**

**DESCRIPTION**

The BUW42/A, BUW42P/42AP and BUW42PFI/APFI are silicon multi-epitaxial mesa PNP transistors mounted respectively in TO-3 metal case, TO-218 plastic package and ISOWATT218 fully isolated package.

They are intended in fast switching applications for high output power.



**ABSOLUTE MAXIMUM RATINGS**

Symbol	Parameter	BUW			Unit
		42/P/PFI	42A/AP/APFI		
V <sub>CEs</sub>	Collector-emitter Voltage (V <sub>BE</sub> = 0)	- 400	- 450		V
V <sub>CEO</sub>	Collector-emitter Voltage (I <sub>B</sub> = 0)	- 350	- 400		V
V <sub>EBO</sub>	Emitter-base Voltage (I <sub>C</sub> = 0)	- 7			V
I <sub>C</sub>	Collector Current	- 15			A
I <sub>CM</sub>	Collector Peak Current	- 30			A
I <sub>B</sub>	Base Current	- 10			A
		TO-3	TO-218	ISOWATT218	
P <sub>tot</sub>	Total Dissipation at T <sub>c</sub> < 25°C	150	105	65	W
T <sub>stg</sub>	Storage Temperature	- 65 to 175	- 65 to 150	- 65 to 150	°C
T <sub>J</sub>	Max. Operating Junction Temperature	175	150	150	°C

### THERMAL DATA

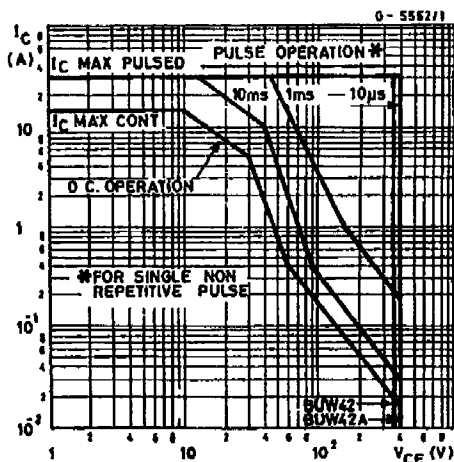
			TO-3	SOT-93	ISOWATT218	Unit
$R_{th J-case}$	Thermal Resistance Junction-case	Max	1.2	1.2	1.92	°C/W

### ELECTRICAL CHARACTERISTICS ( $T_{case} = 25^{\circ}C$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$I_{CES}$	Collector Cutoff Current ( $V_{BE} = 0$ )	$V_{CE} = -400V$ for BUW42/P/PFI $V_{CE} = -450V$ for BUW42A/AP/APFI			-1	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -5V$ for BUW42/P/PFI $V_{EB} = -7V$ for BUW42A/AP/APFI			-1	mA
$V_{CE(sus)}^*$	Collector-emitter Sustaining Voltage ( $I_B = 0$ )	$I_C = -100mA$ for BUW42/P/PFI for BUW42A/AP/APFI	-350 -400			V V
$V_{CE(sat)}^*$	Collector-emitter Saturation Voltage	$I_C = -10A$ $I_B = -3A$			-1.5	V
$V_{BE(sat)}^*$	Base-emitter Saturation Voltage	$I_C = -10A$ $I_B = -3A$			-2	V
$h_{FE}^*$	DC Current Gain	$I_C = -3A$ $V_{CE} = -5V$	12		80	
$t_{on}$ $t_s$ $t_f$	RESISTIVE LOAD Turn-on Time Storage Time Fall Time	$V_{CC} = -250V$ $I_C = -10A$ $I_{B1} = -I_{B2} = -3.3A$		0.3 0.5 0.3	0.6 1.5 0.6	$\mu s$ $\mu s$ $\mu s$

\* Pulsed : pulse duration = 300  $\mu s$ , duty cycle = 1.5 %.

#### Safe Operating Areas. (TO-3).



#### Safe Operating Areas. (TO-218, ISOWATT218).

