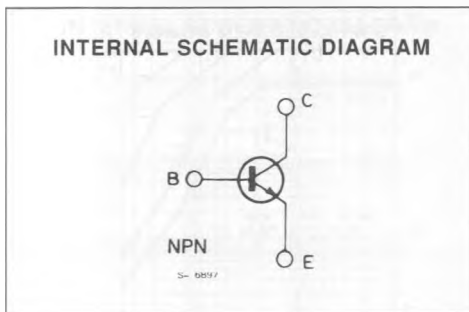
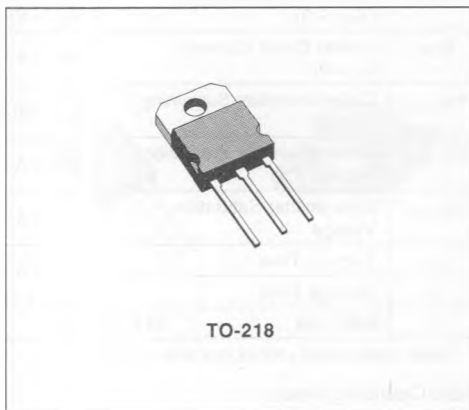


**HIGH VOLTAGE POWER SWITCH**

**DESCRIPTION**

The BUW12 and BUW12A are silicon multiepitaxial mesa NPN transistors in SOT-93 plastic package, particularly intended for high voltage, fast switching industrial applications.



**ABSOLUTE MAXIMUM RATINGS**

Symbol	Parameter	Value		Unit
		BUW12	BUW12A	
$V_{CES}$	Collector-emitter Voltage ( $V_{BE} = 0$ )	850	1000	V
$V_{CEO}$	Collector-emitter Voltage ( $I_B = 0$ )	400	450	V
$I_C$	Collector Current	8		A
$I_{CM}$	Collector Peak Current ( $t_p \leq 2$ ms)	20		A
$I_B$	Base Current	4		A
$I_{BM}$	Base Peak Current ( $t_p \leq 2$ ms)	6		A
$P_{Tot}$	Total Power Dissipation at $T_{case} \leq 25$ °C	100		W
$T_{stg}$	Storage Temperature	- 65 to 150		°C
$T_J$	Junction Temperature	150		°C

**THERMAL DATA**

$R_{th\ j-case}$	Thermal Resistance Junction-case	max	1.25	$^{\circ}C/W$
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**ELECTRICAL CHARACTERISTICS** ( $T_{case} = 25\ ^{\circ}C$  unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$I_{CES}$	Collector Cutoff Current ( $V_{BE} = 0$ )	$V_{CE} = V_{CES}$ $V_{CE} = V_{CES}$ $T_j = 125\ ^{\circ}C$			1 3	mA mA
$I_{EBO}$	Emitter Cutoff Current ( $I_C = 0$ )	$V_{EB} = 9\ V$			10	mA
$V_{CE(sus)}$ *	Collector-emitter Sustaining Voltage	$I_C = 100\ mA$ $L = 25\ mH$	400			V
$V_{CE(sat)}$ *	Collector-emitter Saturation Voltage	$I_C = 6\ A$ $I_B = 1.2\ A$			1.5	V
$V_{BE(sat)}$ *	Base-emitter Saturation Voltage	$I_C = 6\ A$ $I_B = 1.2\ A$			1.5	V
$t_{on}$	Turn-on Time	$I_C = 6\ A$ $I_{B1} = 1.2\ A$ $I_{B2} = 1.2\ A$			1	ns
$t_s$	Storage Time				4	$\mu s$
$t_f$	Fall Time				0.8	$\mu s$

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

**Safe Operating Areas.**

