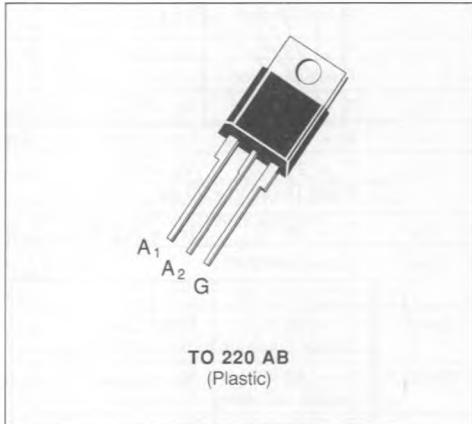


**TRIACS**

- GLASS PASSIVATED CHIP
- EXCELLENT  $(dv/dt)_c > 10 \text{ V}/\mu\text{s}$
- IGT SPECIFIED IN FOUR QUADRANTS
- INSULATING VOLTAGE 2500 V<sub>RMS</sub>
- UL RECOGNIZED (E81734)


**DESCRIPTION**

New range suited for applications such as phase control and static switching.

**ABSOLUTE RATINGS** (limiting values)

Symbol	Parameter	Value		Unit
$I_{T(\text{RMS})}$	RMS on-state Current (360° conduction angle)	$T_C = 80^\circ\text{C}$	16	A
$I_{TSM}$	Non Repetitive Surge Peak on-state Current ( $T_J$ initial = 25 °C - Half sine wave)	$t = 8.3 \text{ ms}$	170	A
		$t = 10 \text{ ms}$	160	
$I^2t$	$I^2t$ Value for Fusing	$t = 10 \text{ ms}$	128	$\text{A}^2\text{s}$
$dI/dt$	Critical Rate of Rise of on-state Current (1)	Repetitive $F = 50 \text{ Hz}$	10	$\text{A}/\mu\text{s}$
		Non Repetitive	50	
$T_{\text{stg}}$ $T_J$	Storage and Operating Junction Temperature Range	-40 to 150 -40 to 125		°C °C

Symbol	Parameter	BTA 16-					Unit
		200B	400B	600B	700B	800B	
$V_{DRM}$	Repetitive Peak off-state Voltage (2)	200	400	600	700	800	V

(1)  $I_G = 1 \text{ A}$     $dI_G/dt = 1 \text{ A}/\mu\text{s}$

(2)  $T_J = 125^\circ\text{C}$ .

**THERMAL RESISTANCES**

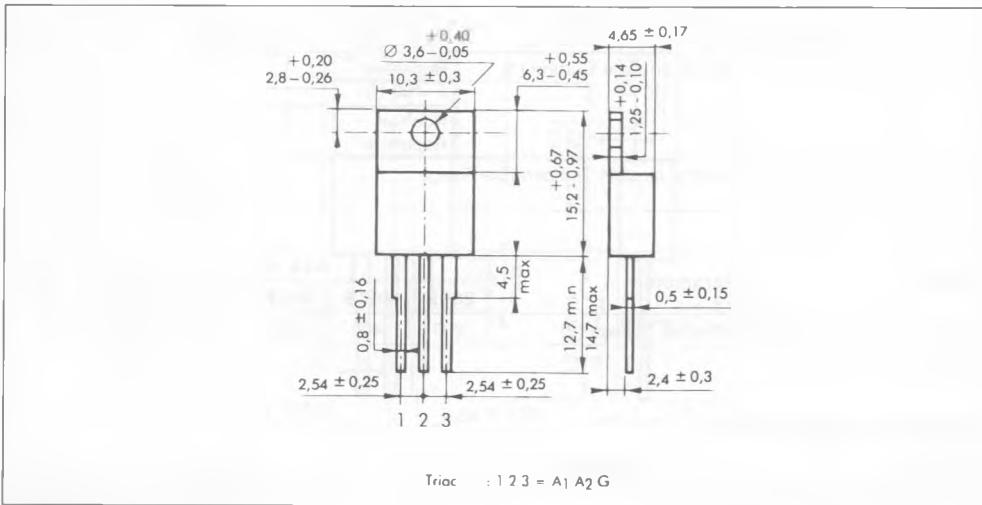
Symbol	Parameter	Value		Unit
$R_{th(j-a)}$	Junction to Ambient	60		°C/W
$R_{th(j-c)}$ DC	Junction to Case for DC	3.33		°C/W
$R_{th(j-c)}$ AC	Junction to Case for 360° Conduction Angle ( $F = 50 \text{ Hz}$ )	2.5		°C/W

**GATE CHARACTERISTICS** (maximum values) $P_{GM} = 40 \text{ W}$  ( $t_p = 10 \mu\text{s}$ ) $I_{GM} = 4 \text{ A}$  ( $t_p = 10 \mu\text{s}$ ) $P_{G(AV)} = 1 \text{ W}$  $V_{GM} = 16 \text{ V}$  ( $t_p = 10 \mu\text{s}$ )**ELECTRICAL CHARACTERISTICS**

Symbol	Test Conditions	Quadrants	Min.	Typ.	Max.	Unit
$I_{GT}$	$T_j = 25^\circ\text{C}$ $V_D = 12 \text{ V}$ $R_L = 33 \Omega$	I-II-III			50	mA
	Pulse Duration > 20 $\mu\text{s}$	IV			100	
$V_{GT}$	$T_j = 25^\circ\text{C}$ $V_D = 12 \text{ V}$ $R_L = 33 \Omega$	I-II-III-IV			1.5	V
$V_{GD}$	$T_j = 125^\circ\text{C}$ $V_D = V_{DRM}$ $R_L = 3.3 \text{ k}\Omega$	I-II-III-IV	0.2			V
$I_H^*$	$T_j = 25^\circ\text{C}$ $I_T = 100 \text{ mA}$ Gate Open				50	mA
$I_L$	$T_j = 25^\circ\text{C}$ $V_D = 12 \text{ V}$ $I_G = 200 \text{ mA}$	I-III-IV		50		mA
	Pulse Duration > 20 $\mu\text{s}$	II		100		
$V_{TM}^*$	$T_j = 25^\circ\text{C}$ $I_{TM} = 22.5 \text{ A}$ $t_p = 10 \text{ ms}$				1.6	V
$I_{DRM}^*$	$V_{DRM}$ Specified	$T_j = 25^\circ\text{C}$			0.01	mA
		$T_j = 125^\circ\text{C}$			0.5	
$dv/dt^*$	$T_j = 125^\circ\text{C}$ Gate Open Linear Slope up to $V_D = 67\% V_{DRM}$		250	500		V/ $\mu\text{s}$
$(dv/dt)_c^*$	$T_C = 80^\circ\text{C}$ $V_D = V_{DRM}$ $I_T = 22.5 \text{ A}$		10			V/ $\mu\text{s}$
$t_{gr}$	$T_j = 25^\circ\text{C}$ $V_D = V_{DRM}$ $I_T = 22.5 \text{ A}$ $dI_G/dt = 3.5 \text{ A}/\mu\text{s}$	I-II-III-IV		2		$\mu\text{s}$

\* For either polarity of electrode A<sub>2</sub> voltage with reference to electrode A<sub>1</sub>.**PACKAGE MECHANICAL DATA**

TO 220 AB Plastic



Cooling method : by conduction (method C)

Marking : type number

Weight : 2 g.

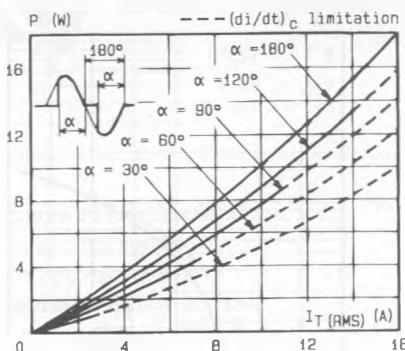


Fig.1 - Maximum mean power dissipation versus RMS on-state current ( $f = 60$  Hz).

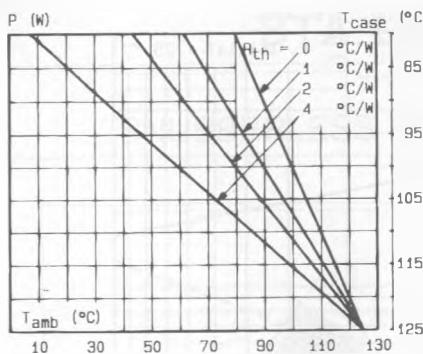


Fig.2 - Correlation between maximum mean power dissipation and maximum allowable temperatures ( $T_{amb}$  and  $T_{case}$ ) for different thermal instances heatsink + contact.

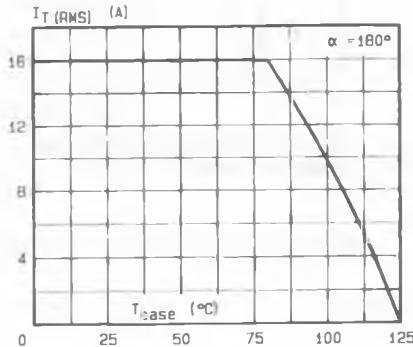


Fig.3 - RMS on-state current versus case temperature.

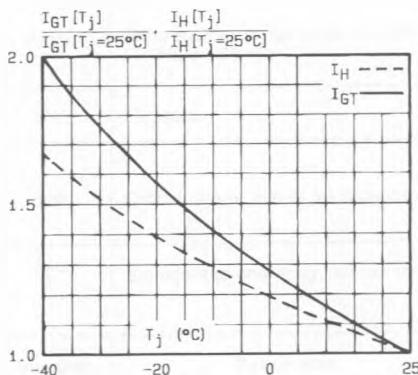


Fig.5 - Relative variation of gate trigger current and holding current versus junction temperature.

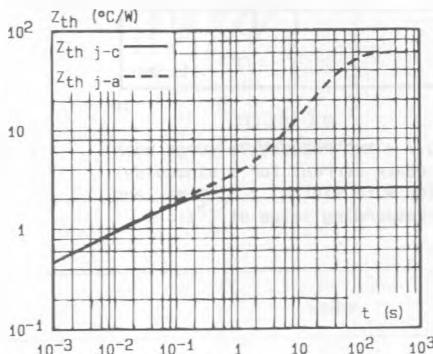


Fig.4 - Thermal transient impedance junction to case and junction to ambient versus pulse duration.

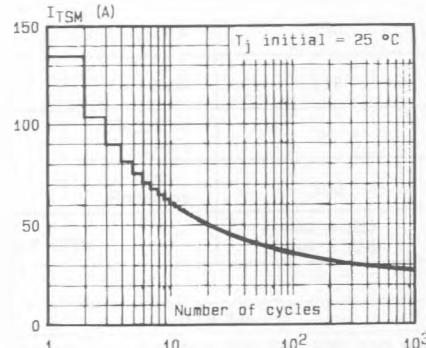


Fig.6 - Non repetitive surge peak on-state current versus number of cycles.

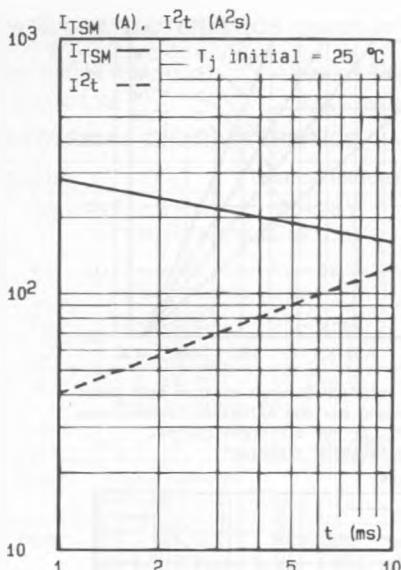


Fig.7 - Non repetitive surge peak on-state current for a sinusoidal pulse with width :  $t \leq 10$  ms, and corresponding value of  $I^2t$ .

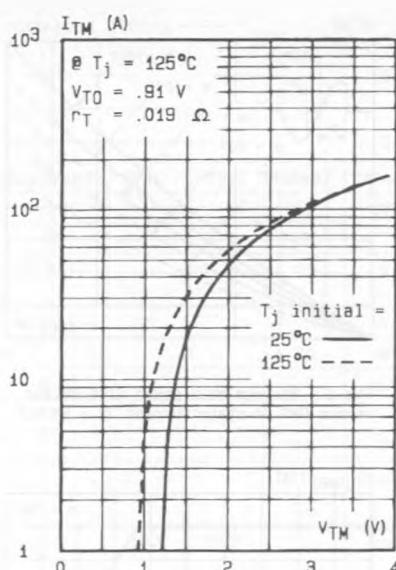


Fig.8 - On-state characteristics (maximum values).