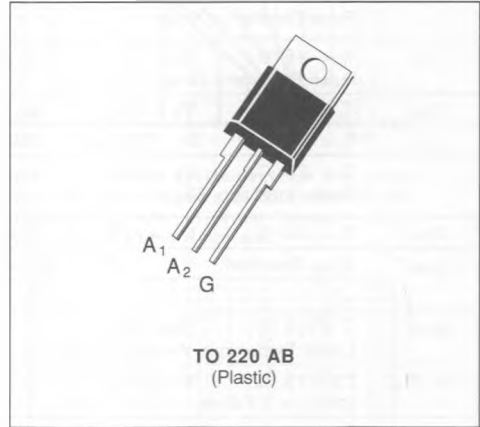


**TRIACS**

- GLASS PASSIVATED CHIP
- EXCELLENT  $(dv/dt)_c > 10 \text{ V}/\mu\text{s}$
- $I_{GT}$  SPECIFIED IN FOUR QUADRANTS
- AVAILABLE IN INSULATED VERSION → BTA SERIES (INSULATING VOLTAGE 2500  $V_{RMS}$ ) OR IN UNINSULATED VERSION → BTB SERIES
- UL RECOGNIZED FOR BTA SERIES (E81734)


**DESCRIPTION**

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

**ABSOLUTE RATINGS** (limiting values)

Symbol	Parameter	Value	Unit
$I_{T(RMS)}$	RMS on-state Current (360° conduction angle)	$T_C = 75 \text{ }^\circ\text{C}$ 12	A
$I_{TSM}$	Non Repetitive Surge Peak on-state Current ( $T_j$ initial = 25 $^\circ\text{C}$ - Half sine wave)	$t = 8.3 \text{ ms}$	125
		$t = 10 \text{ ms}$	120
$I^2t$	$I^2t$ Value for Fusing	$t = 10 \text{ ms}$ 72	$\text{A}^2\text{s}$
$di/dt$	Critical Rate of Rise of on-state Current (1)	Repetitive $F = 50 \text{ Hz}$	10
		Non Repetitive	50
$T_{stg}$ $T_j$	Storage and Operating Junction Temperature Range	- 40 to 150 - 40 to 110	$^\circ\text{C}$ $^\circ\text{C}$

Symbol	Parameter	BTA/BTB 12-					Unit
		200B	400B	600B	700B	800B	
$V_{DRM}$	Repetitive Peak off-state Voltage (2)	200	400	600	700	800	V

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

(2)  $T_j = 110 \text{ }^\circ\text{C}$ .

**THERMAL RESISTANCES**

Symbol	Parameter	Value	Unit
$R_{th(j-a)}$	Junction to Ambient	60	$^\circ\text{C}/\text{W}$
$R_{th(j-c)} \text{ DC}$	Junction to Case for DC	3.3	$^\circ\text{C}/\text{W}$
$R_{th(j-c)} \text{ AC}$	Junction to Case for 360° Conduction Angle ( $F = 50 \text{ Hz}$ )	2.5	$^\circ\text{C}/\text{W}$



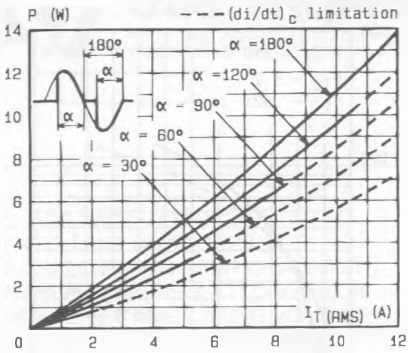


Fig.1 - Maximum mean power dissipation versus RMS on-state current ( $F = 60 \text{ Hz}$ ).

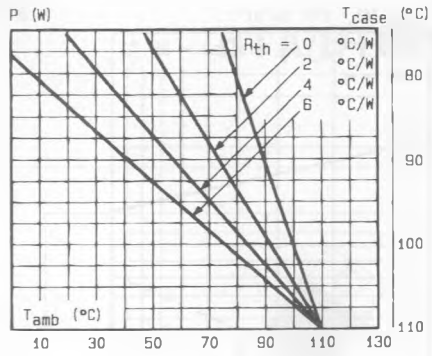


Fig.2 - Correlation between maximum mean power dissipation and maximum allowable temperatures ( $T_{amb}$  and  $T_{case}$ ) for different thermal resistances heatsink + contact.

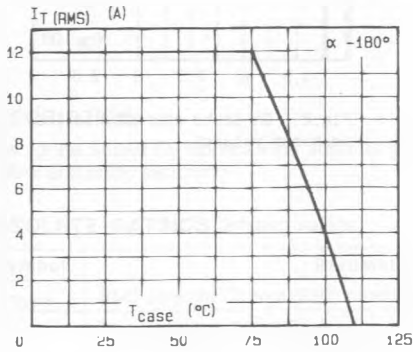


Fig.3 - RMS on-state current versus case temperature.

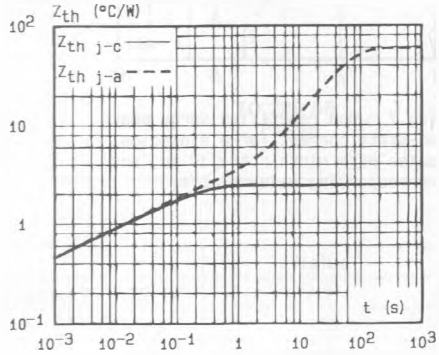


Fig.4 - Thermal transient impedance junction to case and junction to ambient versus pulse duration.

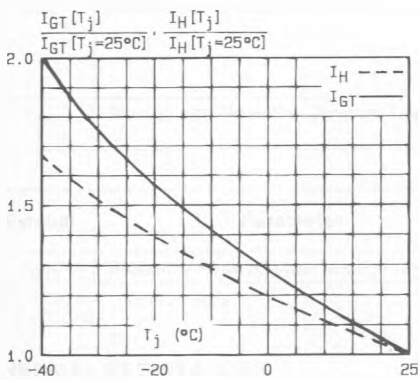


Fig.5 - Relative variation of gate trigger current and holding current versus junction temperature.

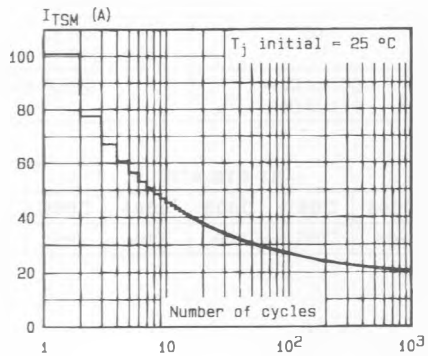


Fig.6 - Non repetitive surge peak on-state current versus number of cycles.

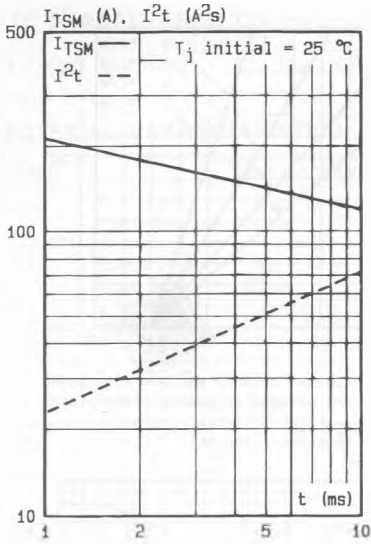


Fig.7 - Non repetitive surge peak on-state current for a sinusoidal pulse with width :  $t \leq 10$  ms, and corresponding value of  $I^2t$ .

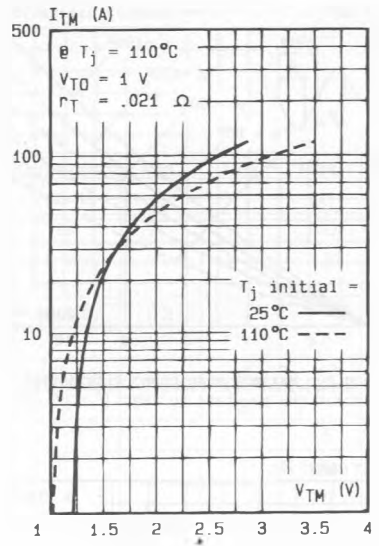


Fig.8 - On-state characteristics (maximum values).