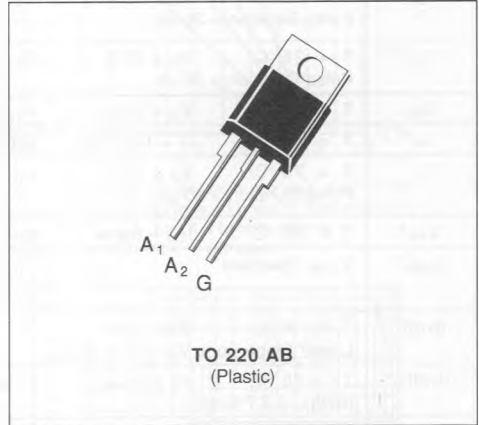


## TRIACS

- GLASS PASSIVATED CHIP
- EXCELLENT  $(dv/dt)_c > 5 V/\mu s$
- $I_{GT}$  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)	$T_C = 75^\circ C$ 6	A
$I_{TSM}$	Non Repetitive Surge Peak on-state Current ( $T_j$ initial = 25 °C - Half sine wave)	$t = 8.3$ ms	63
		$t = 10$ ms	60
$I^2t$	$I^2t$ Value for Fusing	$t = 10$ ms	18
$di/dt$	Critical Rate of Rise of on-state Current (1)	Repetitive $F = 50$ Hz	10
		Non Repetitive	50
$T_{stg}$ $T_j$	Storage and Operating Junction Temperature Range	- 40 to 150	°C
		- 40 to 110	°C

Symbol	Parameter	BTA/BTB 06-					Unit
		200C	400C	600C	700C	800C	
$V_{DRM}$	Repetitive Peak off-state Voltage (2)	200	400	600	700	800	V

(1)  $I_G = 500$  mA  $di_G/dt = 1$  A/ $\mu$ s

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

### 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	6.1	°C/W
$R_{th(j-c)}$ AC	Junction to Case for 360° Conduction Angle ( $F = 50$ Hz)	4.6	°C/W



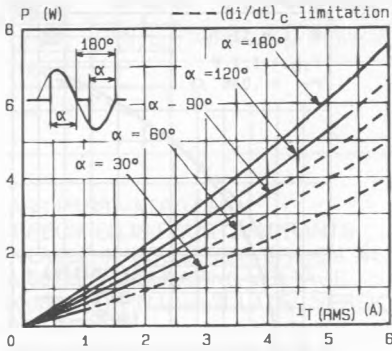


Fig. 1 - Maximum mean power dissipation versus RMS on-state current ( $F = 60$  Hz).

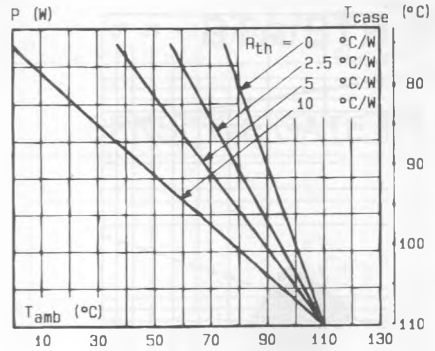


Fig. 2 - Correlation between maximum mean power dissipation and maximum allowable temperatures ( $T_{amb}$  and  $T_{case}$ ) for different thermal resistances heatsink + contact.

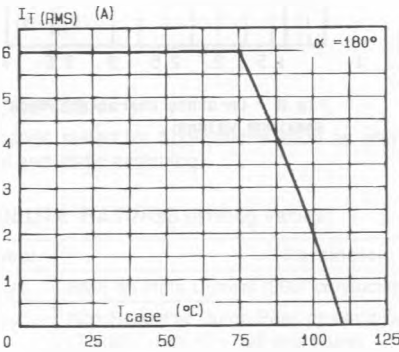


Fig. 3 - RMS on-state current versus case temperature.

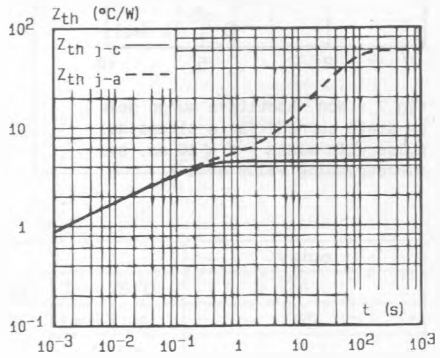


Fig. 4 - Thermal transient impedance junction to case and junction to ambient versus pulse duration.

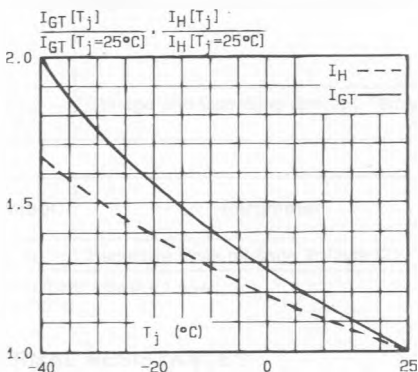


Fig. 5 - Relative variation of gate trigger current and holding current versus junction temperature.

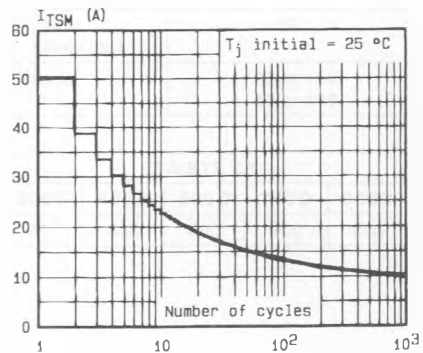


Fig. 6 - Non repetitive surge peak on-state current versus number of cycles.

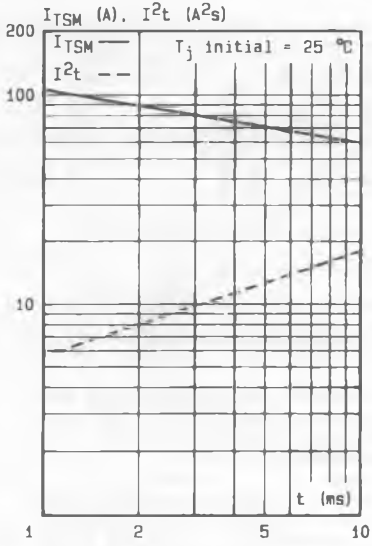


Fig.7 - Non repetitive surge peak on-state current for a sinusoidal pulse with width :  $t \leq 10$  ms, and corresponding value of  $I^2t$ .

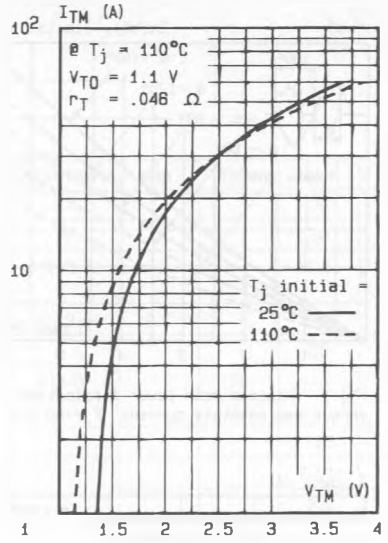


Fig.8 - On-state characteristics (maximum values).