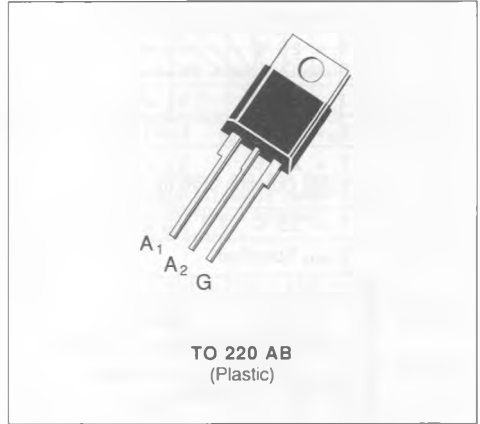


SENSITIVE GATE TRIACS

- GLASS PASSIVATED CHIP
- 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)	$T_C = 75\text{ °C}$ 4	A
I_{TSM}	Non Repetitive Surge Peak on-state Current (T_j initial = 25 °C · Half sine wave)	$t = 8.3\text{ ms}$	52
		$t = 10\text{ ms}$	50
I^2t	I^2t Value for Fusing	$t = 10\text{ ms}$ 12.5	A ² 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	°C
		- 40 to 110	°C

Symbol	Parameter	BTA/BTB 04-					Unit
		200S	400S	600S	700S	800S	
V_{DRM}	Repetitive Peak off-state Voltage (2)	200	400	600	700	800	V

(1) $I_G = 100\text{ mA}$ $di_c/dt = 1\text{ A}/\mu\text{s}$

(2) $T_j = 110\text{ °C}$.

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-a)}$	Junction to Ambient	60	°C/W
$R_{th(j-c)}\text{ DC}$	Junction to Case for DC	8.7	°C/W
$R_{th(j-c)}\text{ AC}$	Junction to Case for 360 ° Conduction Angle ($F = 50\text{ Hz}$)	6.5	°C/W

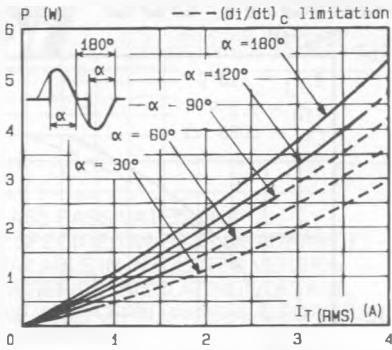


Fig.1 - Maximum mean power dissipation versus RMS on-state current ($F = 60$ Hz).

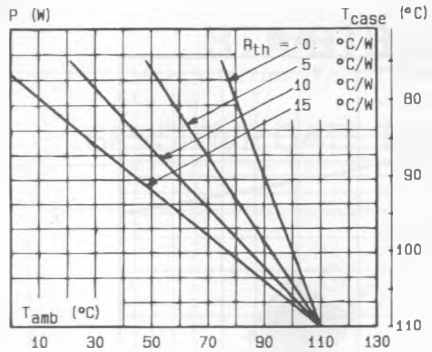


Fig.2 - Correlation between maximum mean power dissipation and maximum allowable temperatures (T_{amb} and T_{case}) for different thermal resistances heatsink + contact.

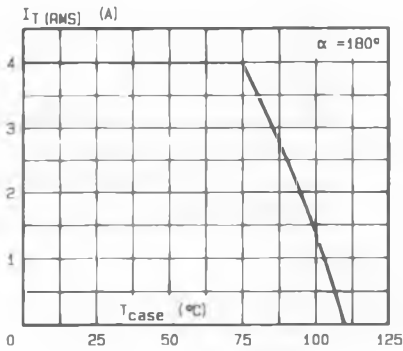


Fig.3 - RMS on-state current versus case temperature.

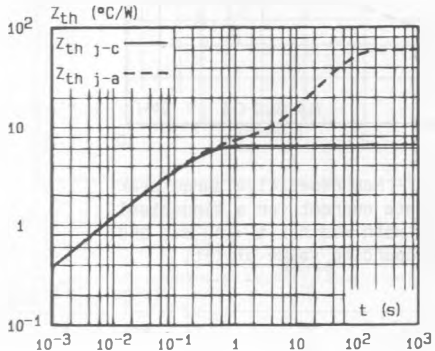


Fig.4 - Thermal transient impedance junction to case and junction to ambient versus pulse duration.

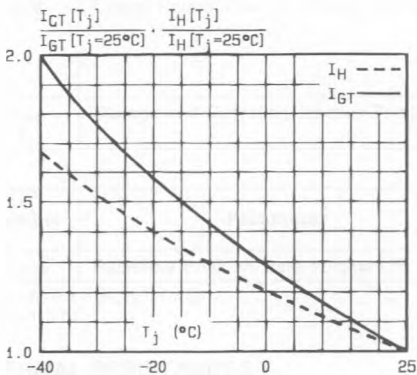


Fig.5 - Relative variation of gate trigger current and holding current versus junction temperature.

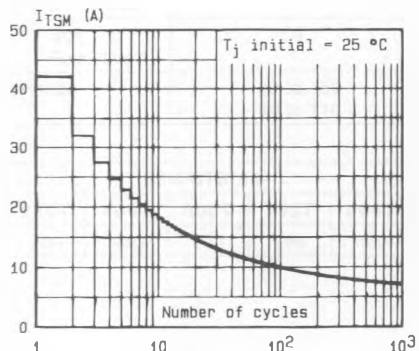


Fig.6 - Non repetitive surge peak on-state current versus number of cycles.

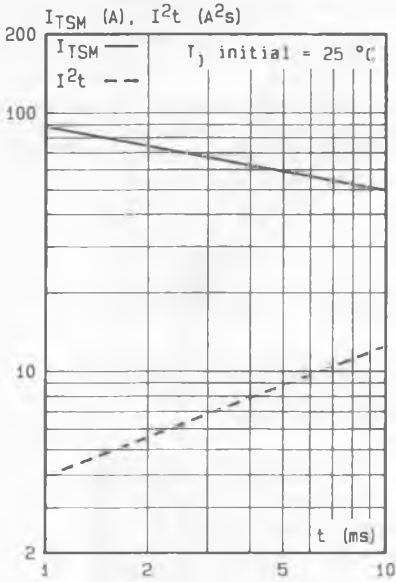


Fig.7 - Non repetitive surge peak on-state current for a sinusoidal pulse with width : $t \leq 10$ ms, and corresponding value of I^2t .

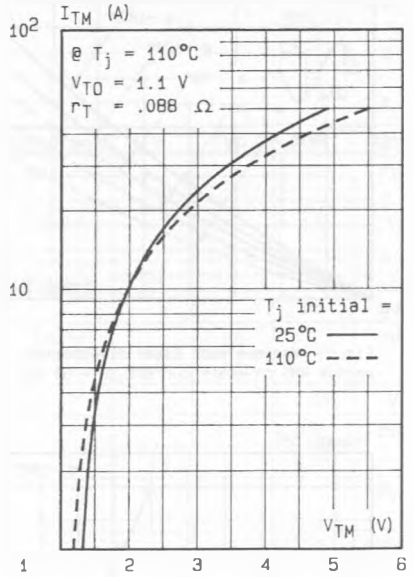


Fig.8 - On-state characteristics (maximum values).