

TRIACS

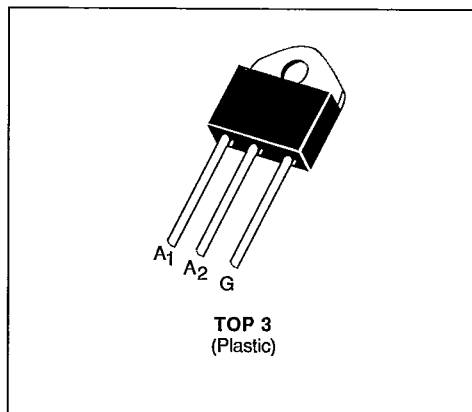
- GLASS PASSIVATED CHIP
- I_{GT} SPECIFIED IN FOUR QUADRANTS

DESCRIPTION

This new design of plastic uninsulated power triacs offers maximum efficiency with maximum ease of mounting.

ADVANTAGES

- NO TAPPING REQUIRED FOR FIXING
- EXCELLENT THERMAL IMPEDANCE AND HIGH RELIABILITY CONSTRUCTION

**ABSOLUTE RATINGS** (limiting values)

Symbol	Parameter	Value	Unit
I _{T(RMS)}	RMS on-state Current (360° conduction angle)	T _C = 90 °C 30	A
I _{TSM}	Non Repetitive Surge Peak on-state Current (T _J initial = 25 °C - Half sine wave)	t = 8.3 ms 260	A
		t = 10 ms 250	
I ² t	I ² t Value for Fusing	t = 10 ms 312.5	A ² s
di/dt	Critical Rate of Rise of on-state Current (1)	Repetitive F = 50 Hz 10	A/μs
		Non Repetitive 50	
T _{stg} T _J	Storage and Operating Junction Temperature Range	- 40 to 125 - 40 to 125	°C °C

Symbol	Parameter	BTB 26-					Unit
		200A	400A	600A	700A	800A	
V _{DRM}	Repetitive Peak off-state Voltage (2)	200	400	600	700	800	V

(1) I_G = 1.5 A di/dt = 1 A/μs(2) T_J = 125 °C.**THERMAL RESISTANCES**

Symbol	Parameter	Value	Unit
R _{th (j-a)}	Junction to Ambient	50	°C/W
R _{th (c-h)}	Contact (case-heatsink) with Grease	0.2	°C/W
R _{th (j-c) DC}	Junction to Case for DC	1.2	°C/W
R _{th (j-c) AC}	Junction to Case for 360 ° Conduction Angle (F = 50 Hz)	0.9	°C/W

GATE CHARACTERISTICS (maximum values)

 $P_{GM} = 40 \text{ W}$ ($t_p = 10 \mu\text{s}$) $I_{GM} = 6 \text{ A}$ ($t_p = 10 \mu\text{s}$) $P_{G(AV)} = 1 \text{ W}$ $V_{GM} = 16 \text{ V}$ ($t_p = 10 \mu\text{s}$)

T-25-17

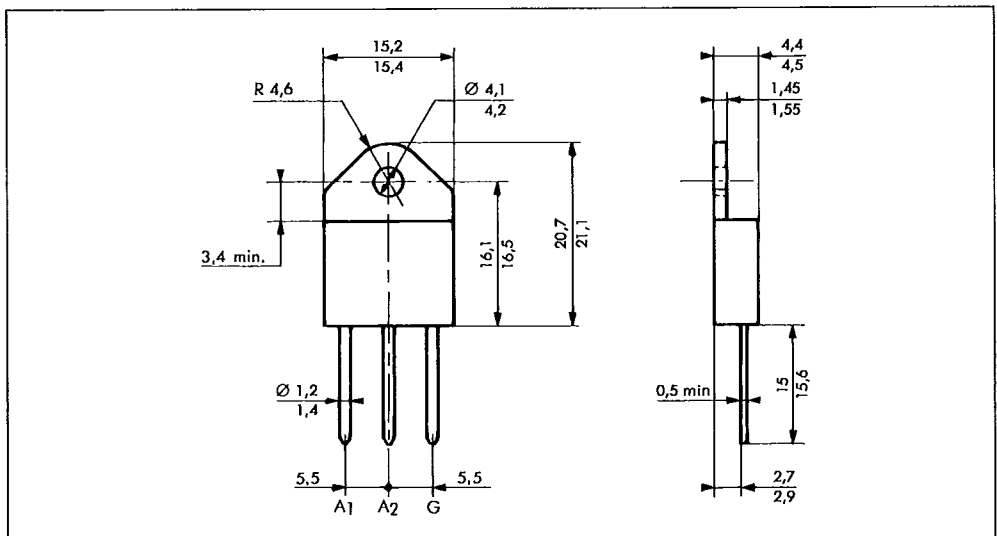
ELECTRICAL CHARACTERISTICS

Symbol	Test Conditions			Quadrants	Min.	Typ.	Max.	Unit
I_{GT}	$T_j = 25 \text{ }^\circ\text{C}$ Pulse Duration $> 20 \mu\text{s}$	$V_D = 12 \text{ V}$	$R_L = 33 \Omega$	I-II-III	1		100	mA
				IV	1		150	
V_{GT}	$T_j = 25 \text{ }^\circ\text{C}$ Pulse Duration $> 20 \mu\text{s}$	$V_D = 12 \text{ V}$	$R_L = 33 \Omega$	I-II-III-IV			1.5	V
V_{GD}	$T_j = 125 \text{ }^\circ\text{C}$	$V_D = V_{DRM}$	$R_L = 3.3 \text{ k}\Omega$	I-II-III-IV	0.2			V
I_H^*	$T_j = 25 \text{ }^\circ\text{C}$	$I_T = 500 \text{ mA}$	Gate Open			30	100	mA
I_L	$T_j = 25 \text{ }^\circ\text{C}$ Pulse Duration $> 20 \mu\text{s}$	$V_D = 12 \text{ V}$	$I_G = 300 \text{ mA}$	I-II-III-IV			150	mA
V_{TM}^*	$T_j = 25 \text{ }^\circ\text{C}$	$I_{TM} = 35 \text{ A}$	$t_p = 10 \text{ ms}$				1.7	V
I_{DRM}^*	$T_j = 125 \text{ }^\circ\text{C}$	V_{DRM} Specified				1.5	6	mA
dv/dt^*	$T_j = 125 \text{ }^\circ\text{C}$	Gate Open Linear Slope up to $V_D = 67\% V_{DRM}$			250			V/ μs
$(dv/dt)_c^*$	$T_c = 90 \text{ }^\circ\text{C}$ $(di/dt)_c = 13.3 \text{ A/ms}$	$V_D = V_{DRM}$	$I_T = 35 \text{ A}$		10			V/ μs
t_{gt}	$T_j = 25 \text{ }^\circ\text{C}$	$V_D = V_{DRM}$ $di_G/dt = 10 \text{ A}/\mu\text{s}$	$I_T = 35 \text{ A}$	I-II-III-IV		2.5		μs

* For either polarity of electrode A_2 voltage with reference to electrode A_1 .

PACKAGE MECHANICAL DATA

TOP 3 Plastic



Cooling method : by conduction (method C)

Marking : type number

Weight : 5 g

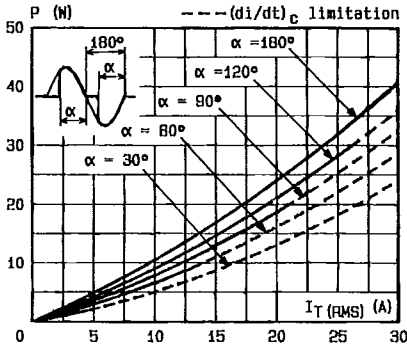


Fig.1 - Maximum mean power dissipation versus RMS on-state current (F = 60 Hz).

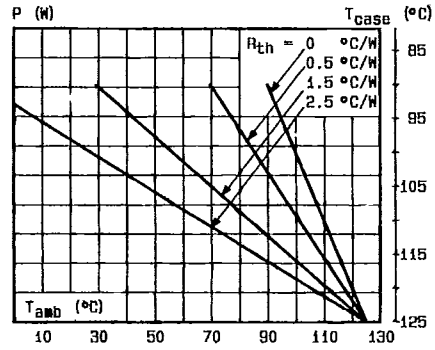


Fig.2 - Correlation between maximum mean power dissipation and maximum allowable temperatures (T_{amb} and T_{case}) for different thermal resistances heatsink + contact.

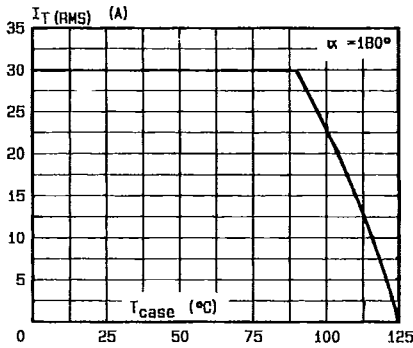


Fig.3 - RMS on-state current versus case temperature.

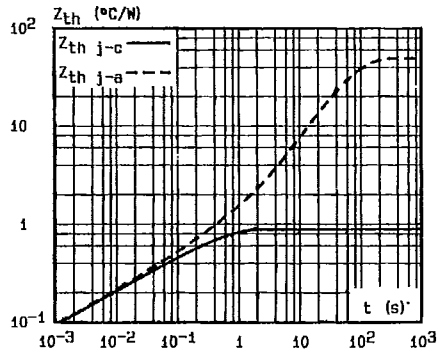


Fig.4 - Thermal transient impedance junction to case and junction to ambient versus pulse duration.

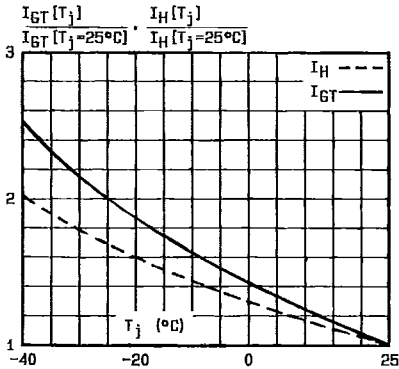


Fig.5 - Relative variation of gate trigger current and holding current versus junction temperature.

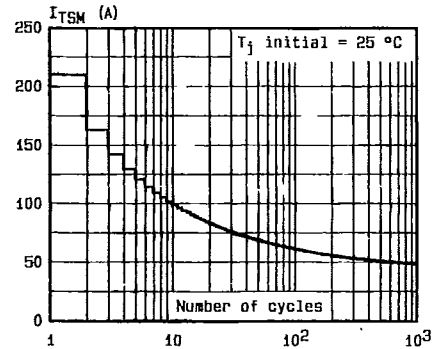


Fig.6 - Non repetitive surge peak on-state current versus number of cycles.

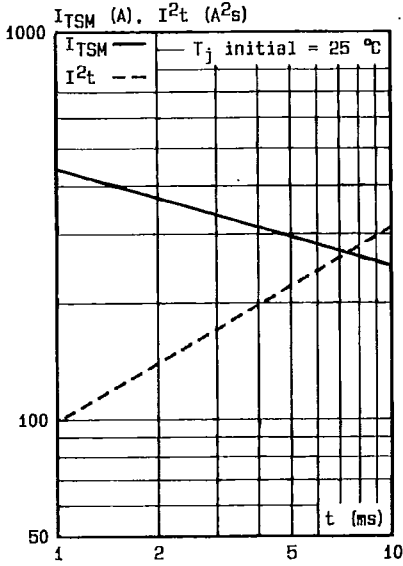


Fig.7 - Non repetitive surge peak on-state current for a sinusoidal pulse with width : $t \leq 10$ ms, and corresponding value of I^2t .

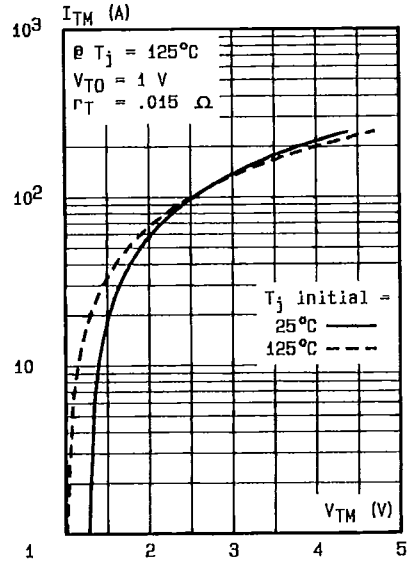


Fig.8 - On-state characteristics (maximum values).