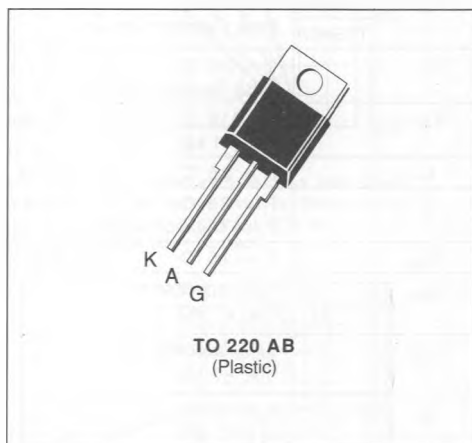


## SENSITIVE GATE THYRISTORS

- OPERATES DIRECTLY FROM LOW SIGNAL
- GLASS PASSIVATED CHIP
- POSSIBILITY OF MOUNTING ON PRINTED CIRCUIT



### ABSOLUTE RATINGS (limiting values)

Symbol	Parameter		Value	Unit
$I_{T(RMS)}$	RMS on-state Current (1)	$T_c = 90\text{ }^\circ\text{C}$	4	A
$I_{T(AV)}$	Mean on-state Current (1)	$T_c = 90\text{ }^\circ\text{C}$	2.5	A
$I_{TSM}$	Non Repetitive Surge Peak on-state Current ( $T_j$ initial = $25\text{ }^\circ\text{C}$ ) (2)	$t = 8.3\text{ ms}$	52	A
		$t = 10\text{ ms}$	50	
$I^2t$	$I^2t$ Value for Fusing	$t = 10\text{ ms}$	12.5	$\text{A}^2\text{s}$
$di/dt$	Critical Rate of Rise of on-state Current (3)		100	$\text{A}/\mu\text{s}$
$T_{stg}$ $T_j$	Storage and Operating Junction Temperature Range		- 40 to 110	$^\circ\text{C}$
			- 40 to 110	$^\circ\text{C}$

Symbol	Parameter	TYS406... or TYS407...						Unit
		0.5	1	2	4	6	8	
$V_{DRM}$ $V_{RRM}$	Repetitive Peak off-state Voltage (4)	50	100	200	400	600	800	V

(1) Single phase circuit,  $180^\circ$  conduction angle.

(2) Half sine wave.

(3)  $I_G = 5\text{ mA}$   $di_G/dt = 1\text{ A}/\mu\text{s}$ .

(4)  $T_j = 110\text{ }^\circ\text{C}$   $R_{GK} = 1\text{ K}\Omega$ .

### THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	Junction-case for DC	5.5	$^\circ\text{C}/\text{W}$
$R_{th(j-a)}$	Junction-ambient	60	$^\circ\text{C}/\text{W}$



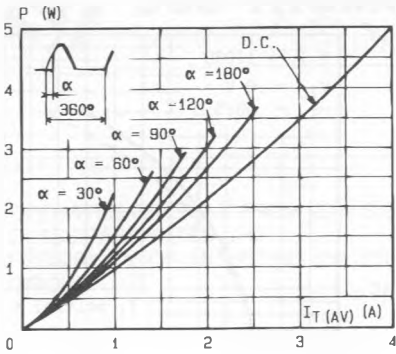


Fig. 1 - Maximum mean power dissipation versus mean on-state current.

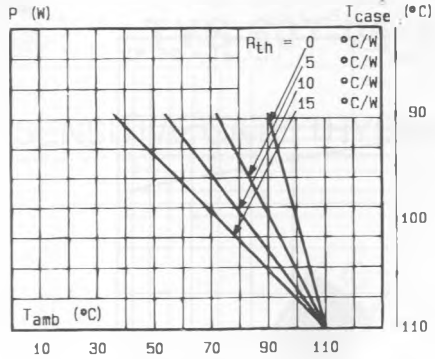


Fig. 2 - Correlation between maximum mean power dissipation and maximum allowable temperatures ( $T_{amb}$  and  $T_{case}$ ) for different thermal resistances heatsink + contact.

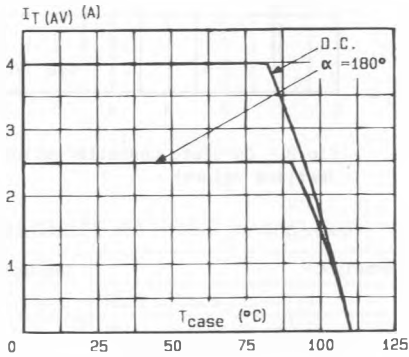


Fig. 3 - Mean on-state current versus case temperature.

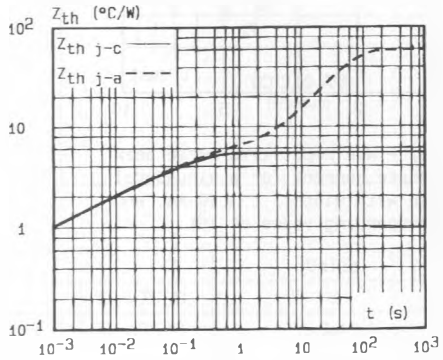


Fig. 4 - Thermal transient impedance junction to case and junction to ambient versus pulse duration.

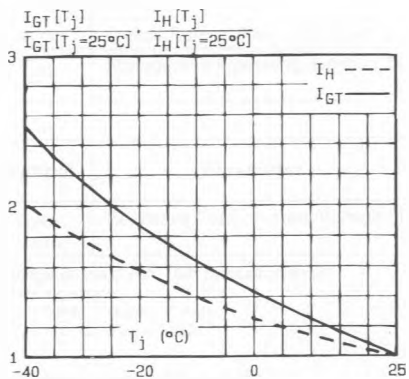


Fig. 5 - Relative variation of gate trigger current and holding current versus junction temperature.

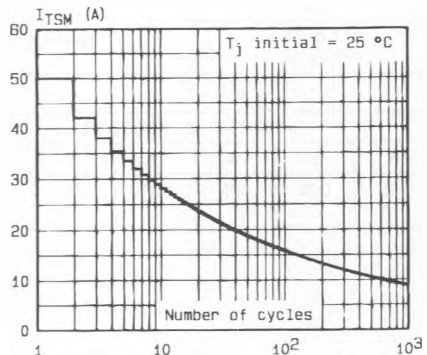


Fig. 6 - Non repetitive surge peak on-state current versus number of cycles.

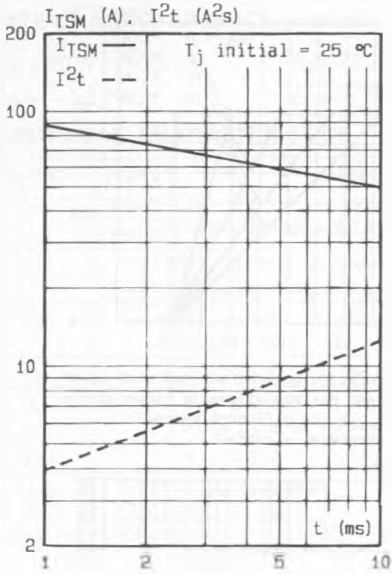


Fig.7 - Non repetitive surge peak on-state current for a sinusoidal pulse with width :  $t \leq 10$  ms, and corresponding value of  $I^2t$ .

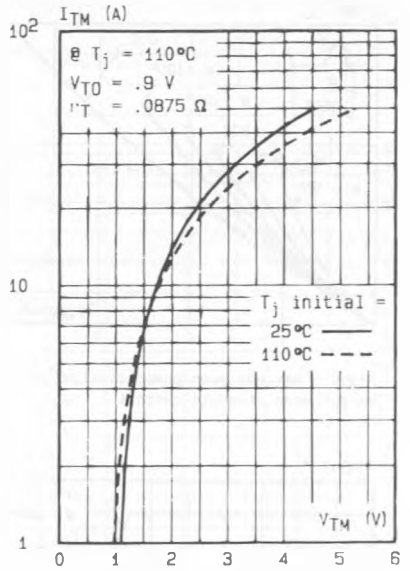


Fig.8 - On-state characteristics (maximum values).