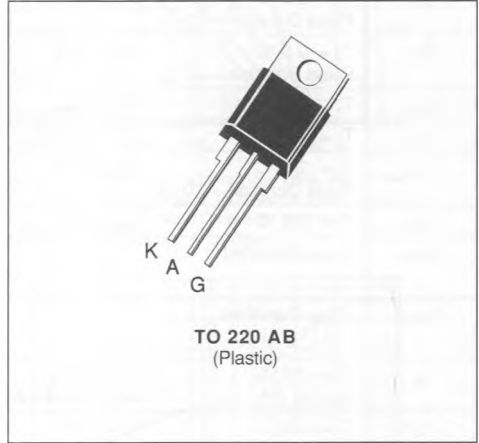




THYRISTORS

- GLASS PASSIVATED CHIP
- POSSIBILITY OF MOUNTING ON PRINTED CIRCUIT
- AVAILABLE IN NON-INSULATED VERSION → TYN SERIES OR IN INSULATED VERSION → TXN SERIES (INSULATING VOLTAGE 2500 V_{RMS})
- UL RECOGNIZED FOR TXN SERIES (E81734)



DESCRIPTION

SCR 's designed for motor control, heating controls, power supplies...

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 °C) (2)	$t = 8.3\text{ ms}$	73
		$t = 10\text{ ms}$	70
I^2t	I^2t Value for Fusing	$t = 10\text{ ms}$ 24.5	A ² s
di/dt	Critical Rate of Rise of on-state Current (3)	50	A/ μ s
T_{stg} T_j	Storage and Operating Junction Temperature Range	- 40 to 110	°C
		- 40 to 110	°C

Symbol	Parameter	TXN/TYN							Unit
		054	104	204	404	604	804	1004	
V_{DRM} V_{RRM}	Repetitive Peak off-state Voltage (4)	50	100	200	400	600	800	1000	V

- (1) Single phase circuit, 180° conduction angle.
 (2) Half sine wave.
 (3) $I_G = 150\text{ mA}$ $di_G/dt = 1\text{ A}/\mu\text{s}$.
 (4) $T_j = 110\text{ }^\circ\text{C}$.

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	Junction-case for D.C.	5	°C/W
$R_{th(j-a)}$	Junction-ambient	60	°C/W

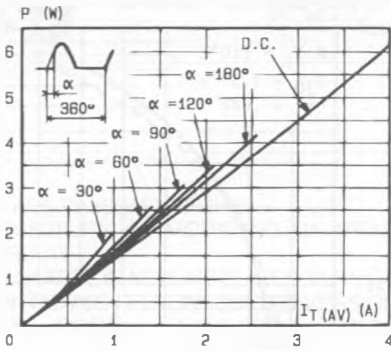


Fig. 1 - Maximum mean power dissipation versus mean on-state current.

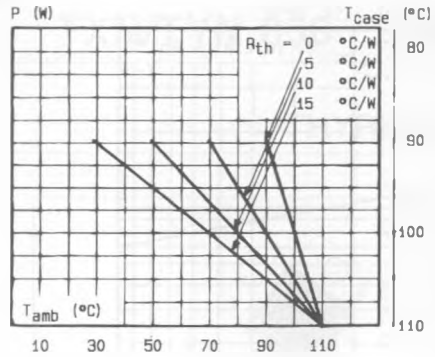


Fig. 2 - Correlation between maximum mean power dissipation and maximum allowable temperatures (T_{amb} and T_{case}) for different thermal resistances (resistances heatsink + contact).

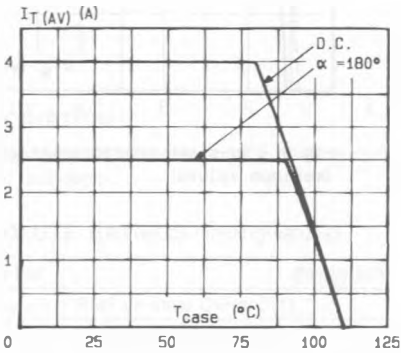


Fig. 3 - Mean on-state current versus case temperature.

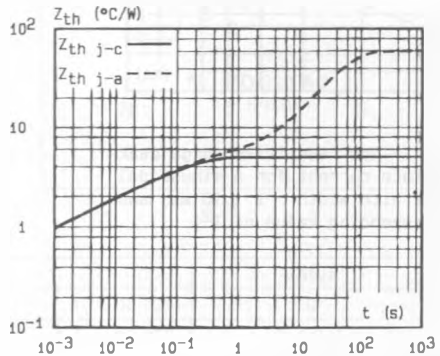


Fig. 4 - Thermal transient impedance junction to case and junction to ambient versus pulse duration.

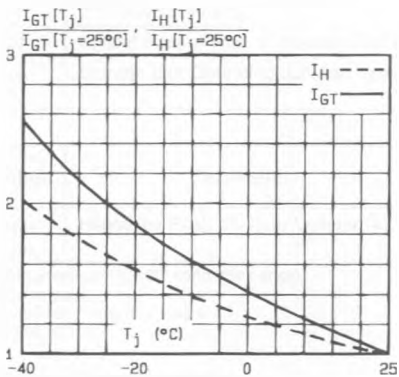


Fig. 5 - Relative variation of gate trigger current and holding current versus junction temperature.

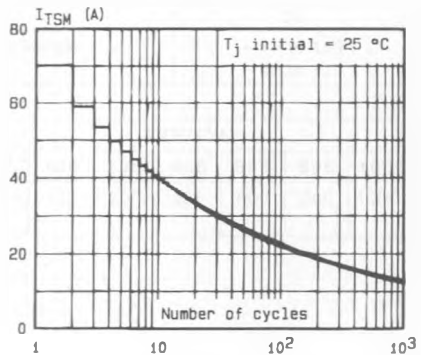


Fig. 6 - Non repetitive surge peak on-state current versus number of cycles.

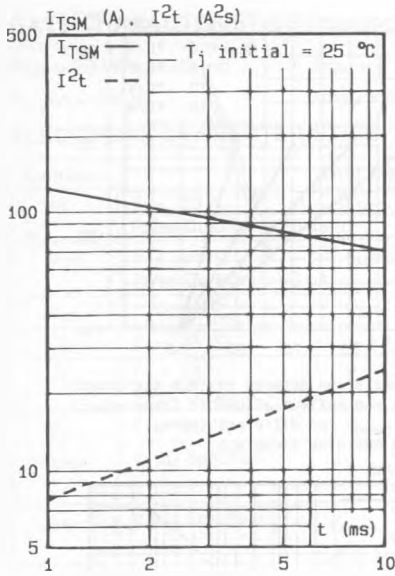


Fig.7 - Non repetitive surge peak on-state current for a sinusoidal pulse with width : $t \leq 10$ ms, and corresponding value of I^2t .

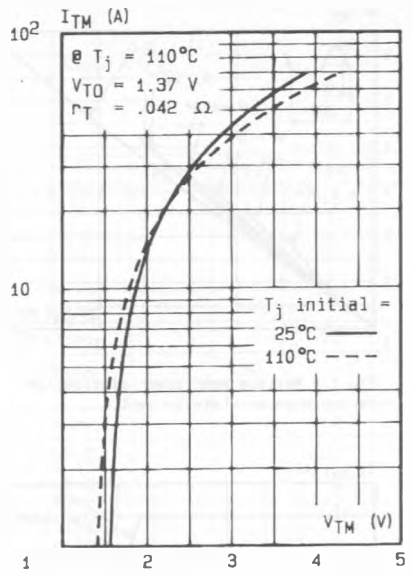


Fig.8 - On-state characteristics (maximum values).