



Thyristor Modules MTx500



$I_{T(AV)}$ **500A**
 V_{DRM}/V_{RRM} **2600~3600V**
 I_{TSM} **$14.5A \times 10^3$**
 I^2t **$1051A^2 S \cdot 10^3$**

Features:

- Isolated mounting base 3600V~
- Pressure contact technology with Increased power cycling capability
- Space and weight savings

Typical Applications

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	$T_j(^{\circ}C)$	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side water cooled, $T_c=55^{\circ}C$	125			500	A
$I_{T(RMS)}$	RMS on-state current		125			785	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM} & V_{RRM} $t_p=10ms$ V_{DSM} & $V_{RSM} = V_{DRM}$ & $V_{RRM} + 100V$ respectively	125	2600		3600	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			50	mA
I_{TSM}	Surge on-state current	10ms half sine wave	125			14.5	KA
I^2t	I^2t for fusing coordination	$V_R=60\%V_{RRM}$					1051
V_{TO}	Threshold voltage		125			1.09	V
r_T	On-state slop resistance						1.19
V_{TM}	Peak on-state voltage	$I_{TM}=1500A$	25			2.95	V
dv/dt	Critical rate of rise of off-state voltage	$V_{DM}=67\%V_{DRM}$	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A $t_r \leq 0.5\mu s$ Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	$V_A=12V, I_A=1A$	25	30		200	mA
V_{GT}	Gate trigger voltage			1.0		3.0	V
I_H	Holding current			20		200	mA
V_{GD}	Non-trigger gate voltage	$V_{DM}=67\%V_{DRM}$	125	0.2			V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.054	$^{\circ}C/W$
$R_{th(c-h)}$	Thermal resistance case to heat sink	Single side cooled				0.024	$^{\circ}C/W$
V_{iso}	Isolation voltage	50Hz, R.M.S, $t=1min, I_{iso}:1mA(MAX)$		3600			V
F_m	Thermal connection torque(M10)				12		N-m
	Mounting torque(M6)				6.0		N-m
T_{stg}	Stored temperature			-40		125	$^{\circ}C$
W_t	Weight				2600		g
Outline							

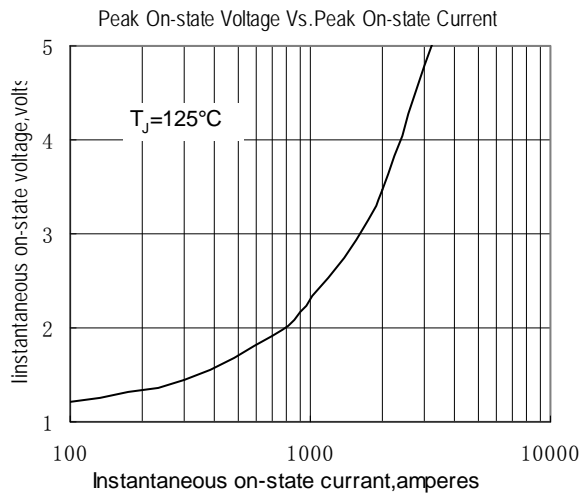


Fig.1

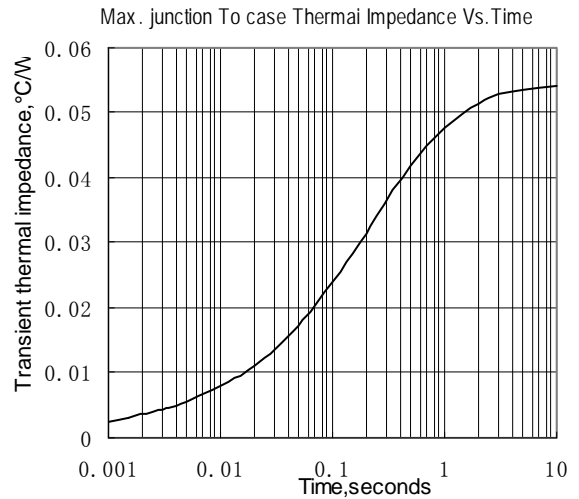


Fig.2

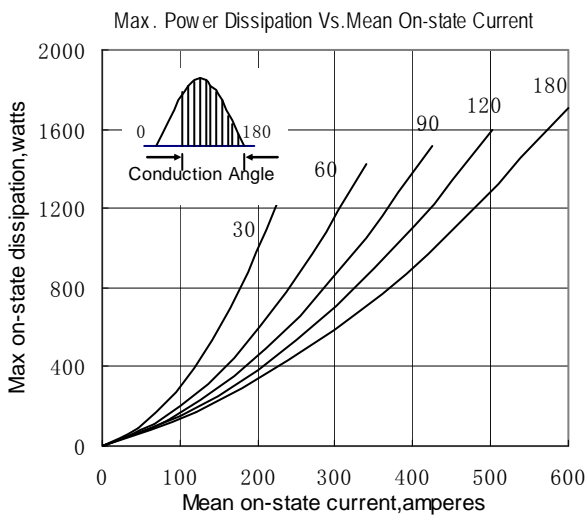


Fig.3

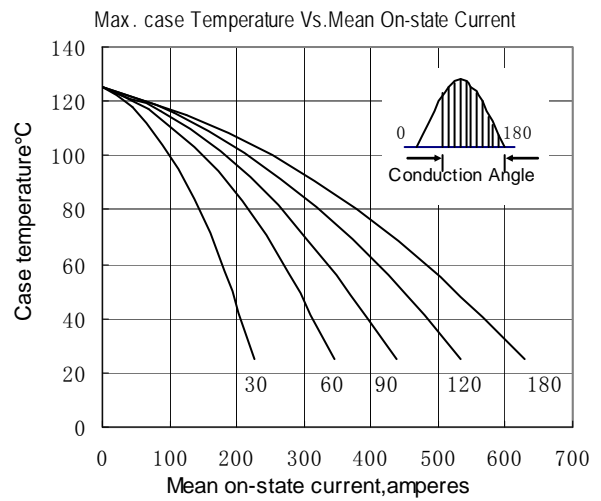


Fig.4

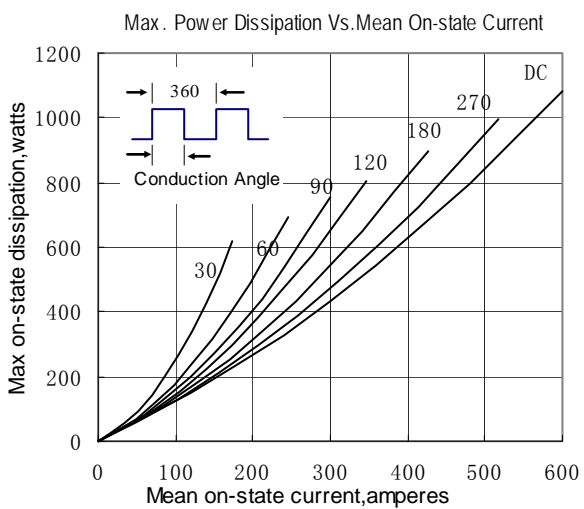


Fig.5

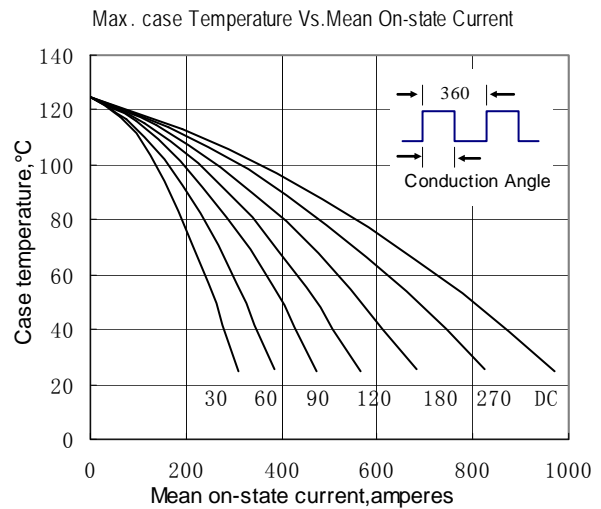


Fig.6

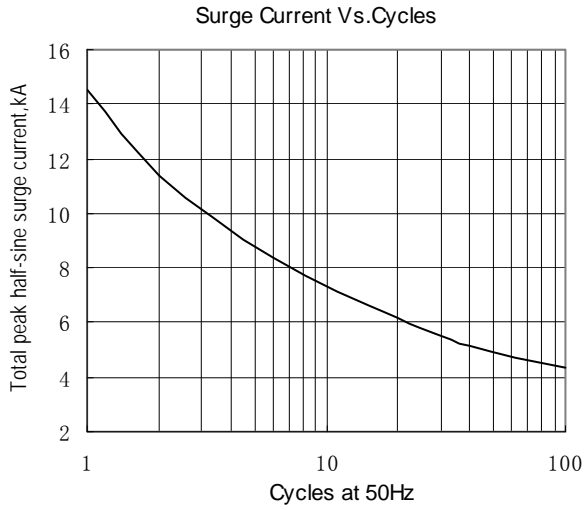


Fig.7

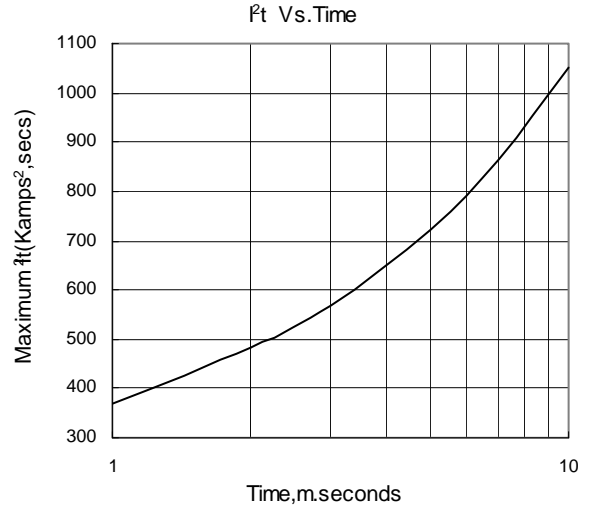


Fig.8

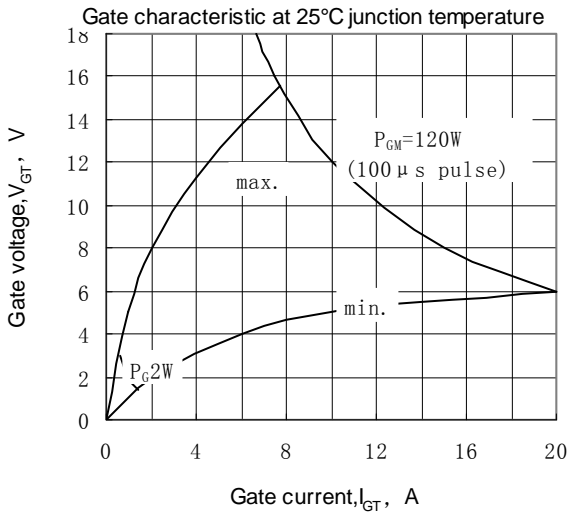


Fig.9

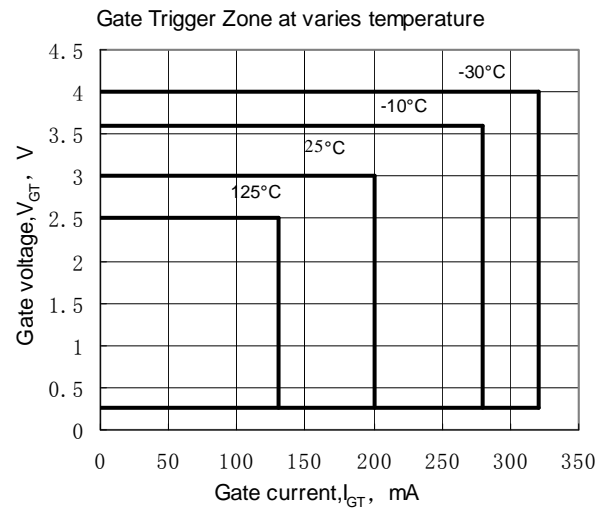


Fig.10

Outline:

