



# Thyristor Modules MTx400



AS ENERGI

**$I_{T(AV)}$**  400A  
 **$V_{DRM}/V_{RRM}$**  2600~3600V  
 **$I_{TSM}$**  12.5A $\times 10^3$   
 **$I^2t$**  781A $^2$ 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	$T_f(^{\circ}C)$	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled, $T_c=85^{\circ}C$	125			400	A
$I_{T(RMS)}$	RMS on-state current		125			628	A
$V_{DRM}$ $V_{RRM}$	Repetitive peak off-state voltage Repetitive peak reverse voltage	$V_{DRM} \& V_{RRM}$ tp=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			12.5	KA
$I^2t$	$I^2T$ for fusing coordination	$V_R=60\%V_{RRM}$				781	A $^2s \cdot 10^3$
$V_{TO}$	Threshold voltage		125			0.98	V
$r_T$	On-state slop resistance					0.88	mΩ
$V_{TM}$	Peak on-state voltage	$I_{TM}=1200A$	25			2.35	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		25	30		200	mA
$V_{GT}$	Gate trigger voltage	$V_A=12V$ , $I_A=1A$		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	°C/W
$R_{th(c-h)}$	Thermal resistance case to heatsink	Single side cooled				0.024	°C/W
$V_{Iso}$	Isolation voltage	50Hz,R.M.S,t=1min, $I_{Iso}:1mA$ (MAX)	3600				V
$F_m$	Thermal connection torque(M10)				12.0		N·m
	Mounting torque(M6)				6.0		N·m
$T_{stg}$	Stored temperature		-40		125		°C
$W_t$	Weight				2300		g
Outline							

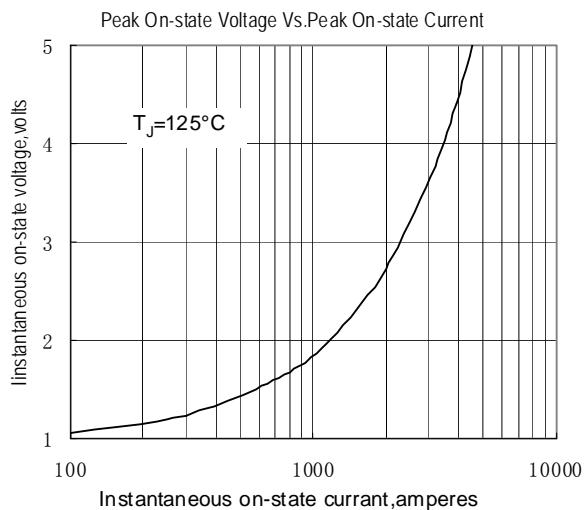


Fig.1

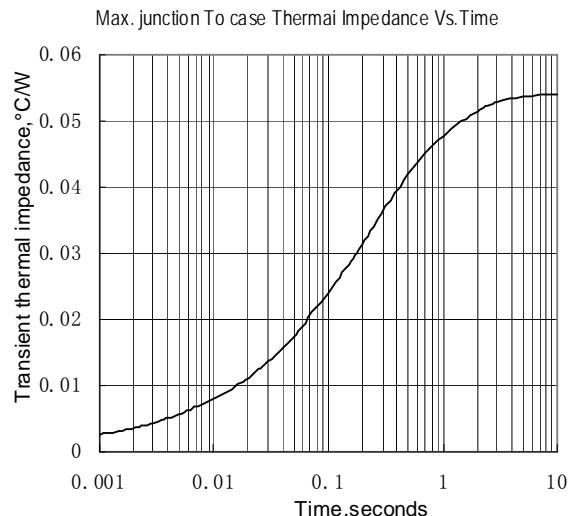


Fig.2

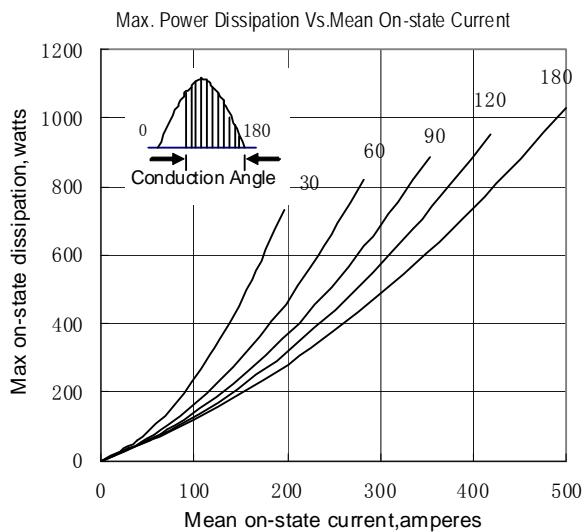


Fig.3

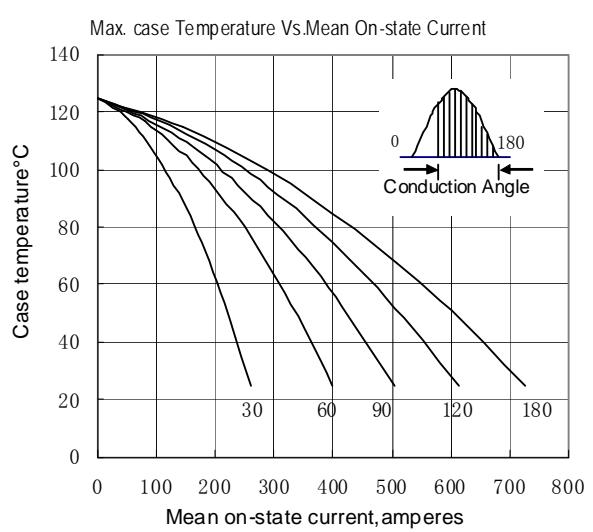


Fig.4

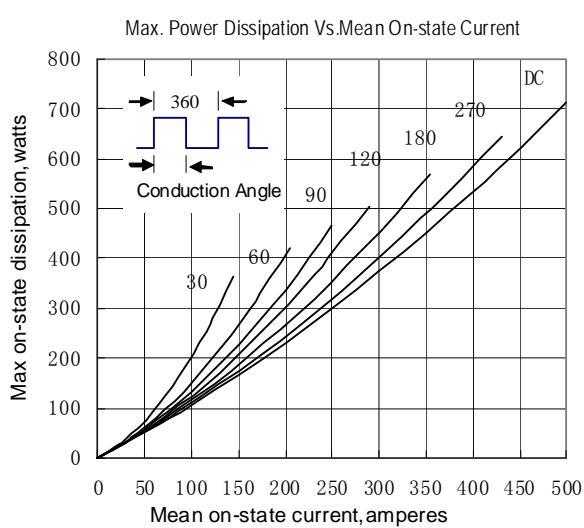


Fig.5

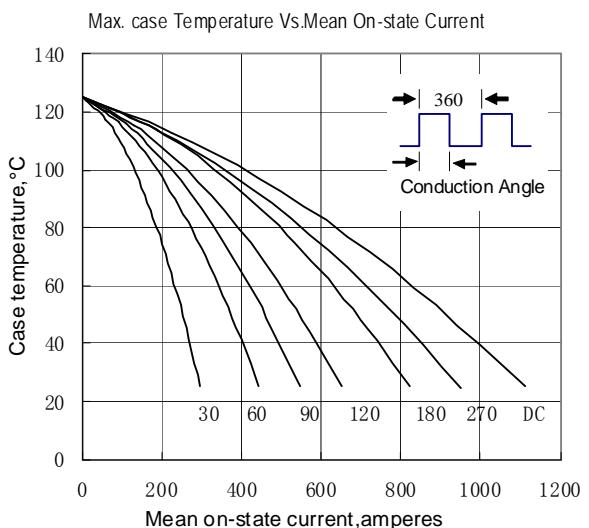


Fig.6

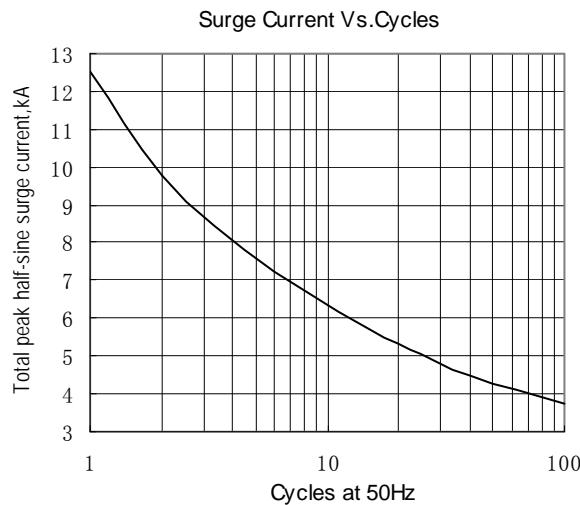


Fig.7

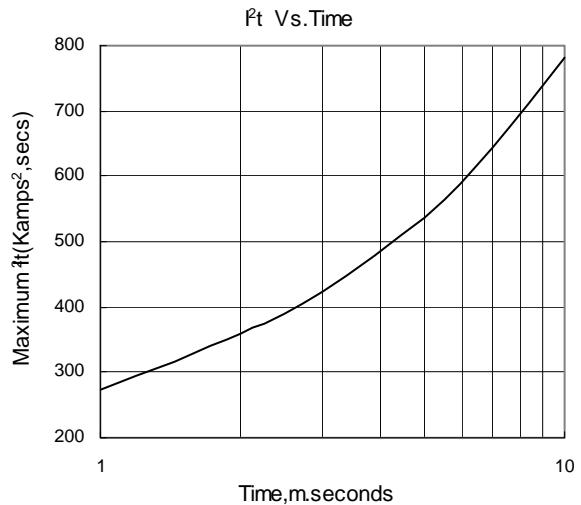


Fig.8

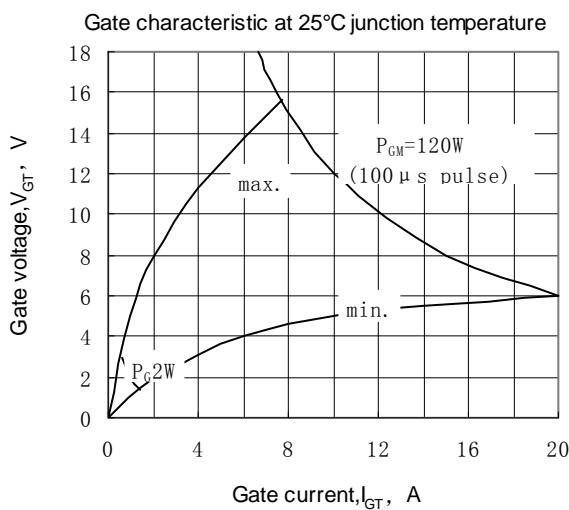


Fig.9

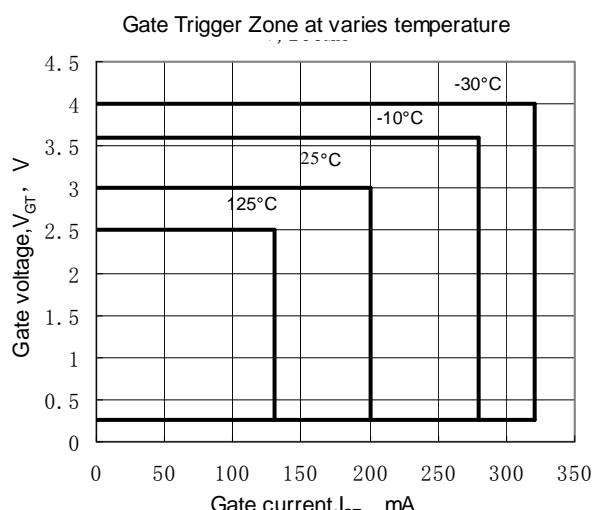


Fig.10

## Outline:

