



Thyristor Modules MTx400



AS ENERGI

$I_{T(AV)}$ 400A
 V_{DRM}/V_{RRM} 1900~2500V
 I_{TSM} 12.5A $\times 10^3$
 I^2t 781A 2 S $\cdot 10^3$

Features:

- Isolated mounting base 3000V~
- 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 (°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			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	1900		2500	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			45	mA
I_{TSM}	Surge on-state current	10ms half sine wave $V_R=60\%V_{RRM}$	125			12.5	KA
I^2t	I^2T for fusing coordination					781	A 2 s $\cdot 10^3$
V_{TO}	Threshold voltage		125			0.82	V
r_T	On-state slop resistance					0.79	mΩ
V_{TM}	Peak on-state voltage	$I_{TM}=1200A$	25			2.18	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				0.110	°C /W
$R_{th(c-h)}$	Thermal resistance case to heat sink	Single side cooled				0.04	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min, $I_{iso}:1mA$ (MAX)	3000				V
F_m	Thermal connection torque(M8)				12		N·m
	Mounting torque(M6)				6.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				1300		g
Outline							

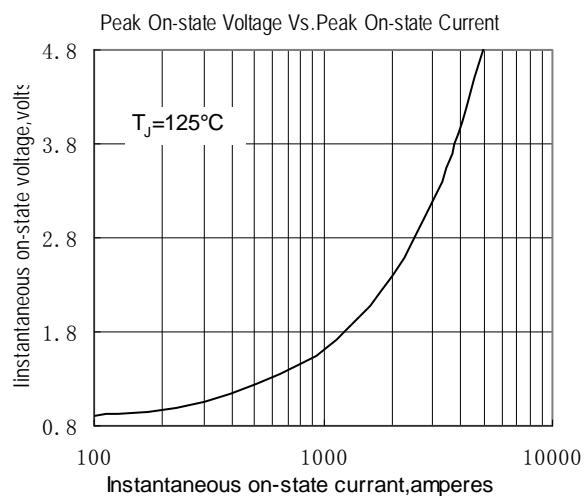


Fig.1

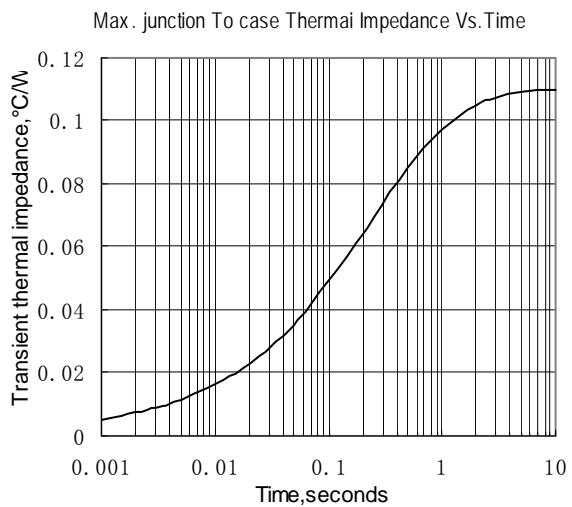


Fig.2

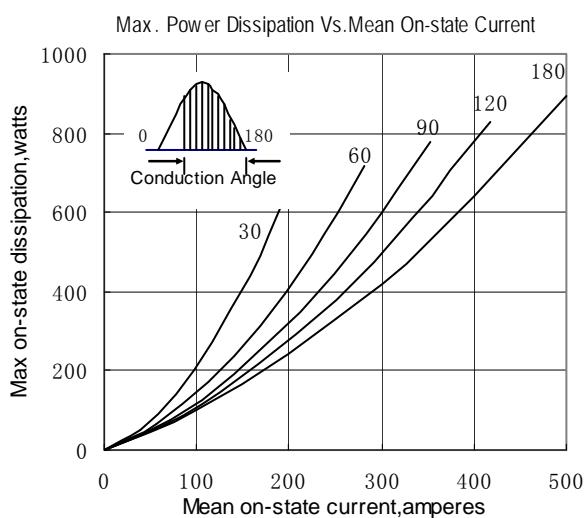


Fig.3

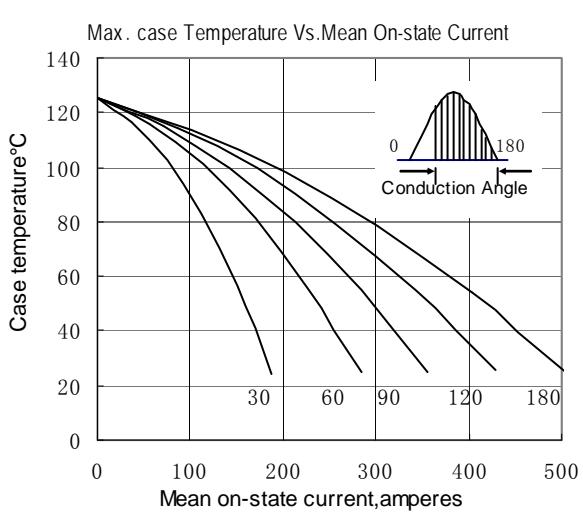


Fig.4

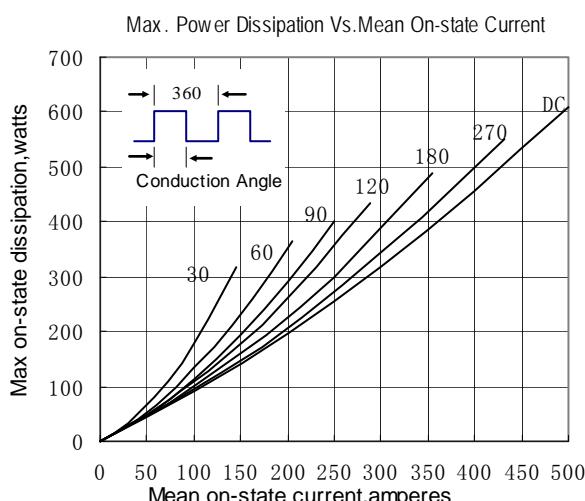


Fig.5

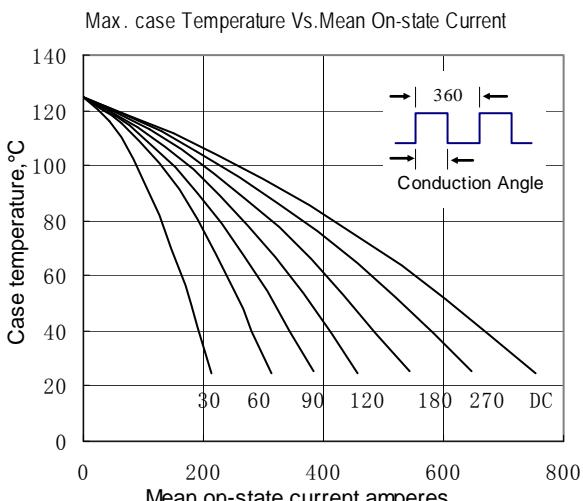


Fig.6

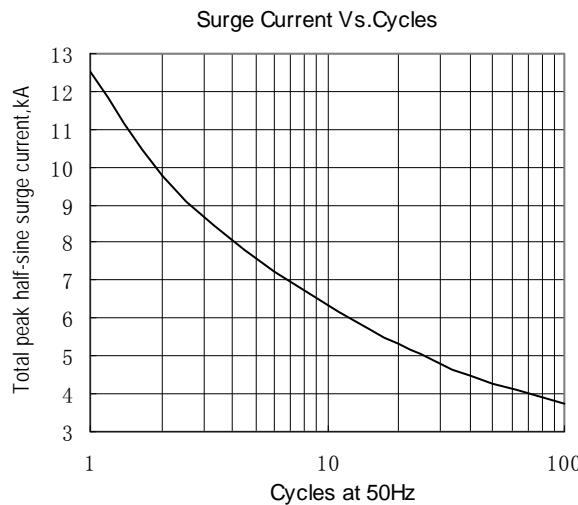


Fig.7

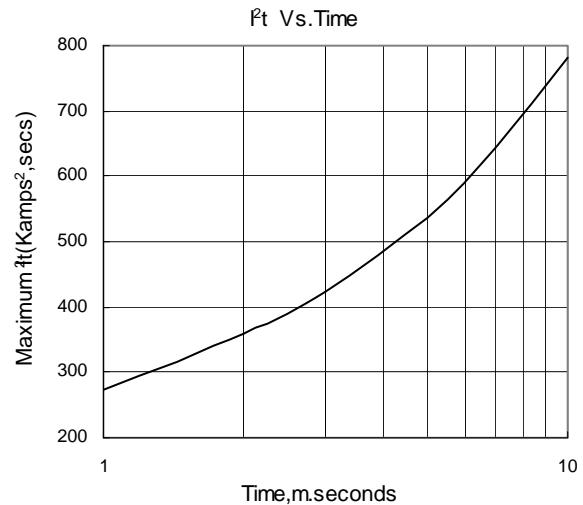


Fig.8

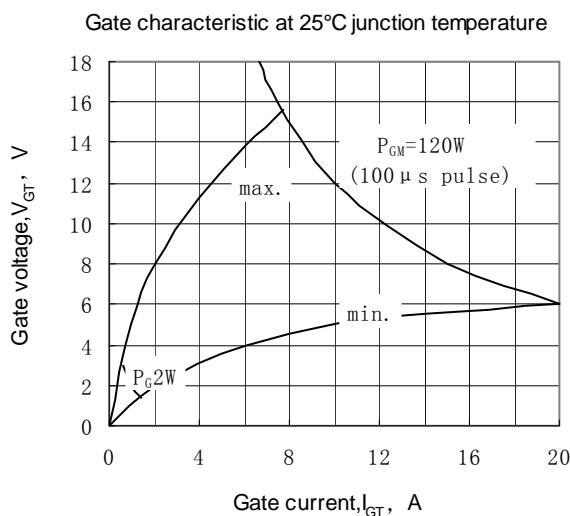


Fig.9

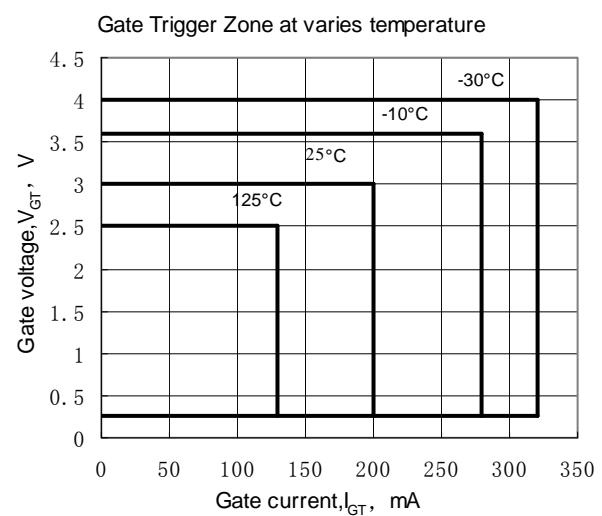


Fig.10

Outline:

