



# Thyristor Modules MTx800



AS ENERGI

**I<sub>T(AV)</sub>** 800A  
**V<sub>DRM/V<sub>RRM</sub></sub>** 1900~2500V  
**I<sub>TSM</sub>** 22A×10<sup>3</sup>  
**I<sup>2</sup>t** 2420A<sup>2</sup> S·10<sup>3</sup>

## 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 <sub>j</sub> (°C)	VALUE			UNIT
				Min	Type	Max	
I <sub>T(AV)</sub>	Mean on-state current	180° half sine wave 50Hz Single side water cooled, T <sub>c</sub> =55°C	125			800	A
I <sub>T(RMS)</sub>	RMS on-state current		125			1256	A
V <sub>DRM</sub> V <sub>RRM</sub>	Repetitive peak off-state voltage Repetitive peak reverse voltage	V <sub>DRM</sub> &V <sub>RRM</sub> tp=10ms V <sub>DsM</sub> &V <sub>RsM</sub> = V <sub>DRM</sub> &V <sub>RRM</sub> +100V respectively	125	1900		2500	V
I <sub>DRM</sub> I <sub>RRM</sub>	Repetitive peak current	at V <sub>DRM</sub> at V <sub>RRM</sub>	125			50	mA
I <sub>TSM</sub>	Surge on-state current	10ms half sine wave	125			22.0	KA
I <sup>2</sup> t	I <sup>2</sup> T for fusing coordination	V <sub>R</sub> =60%V <sub>RRM</sub>				2420	A <sup>2</sup> s*10 <sup>3</sup>
V <sub>TO</sub>	Threshold voltage		125			0.88	V
r <sub>T</sub>	On-state slop resistance					0.47	mΩ
V <sub>TM</sub>	Peak on-state voltage	I <sub>TM</sub> =2400A	25			2.35	V
dv/dt	Critical rate of rise of off-state voltage	V <sub>DM</sub> =67%V <sub>DRM</sub>	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A t <sub>r</sub> ≤0.5μs Repetitive	125			100	A/μs
I <sub>GT</sub>	Gate trigger current		V <sub>A</sub> =12V, I <sub>A</sub> =1A	30		200	mA
V <sub>GT</sub>	Gate trigger voltage			25	1.0	3.0	V
I <sub>H</sub>	Holding current			20		200	mA
V <sub>GD</sub>	Non-trigger gate voltage	V <sub>DM</sub> =67%V <sub>DRM</sub>	125	0.2			V
R <sub>th(j-c)</sub>	Thermal resistance Junction to case	Single side cooled				0.048	°C /W
R <sub>th(c-h)</sub>	Thermal resistance case to heat sink	Single side cooled				0.024	°C /W
V <sub>iso</sub>	Isolation voltage	50Hz,R.M.S,t=1min,I <sub>iso</sub> :1mA(MAX)		3000			V
F <sub>m</sub>	Thermal connection torque(M10)				12		N·m
	Mounting torque(M6)				6.0		N·m
T <sub>stg</sub>	Stored temperature			-40		125	°C
W <sub>t</sub>	Weight				2600		g
Outline							

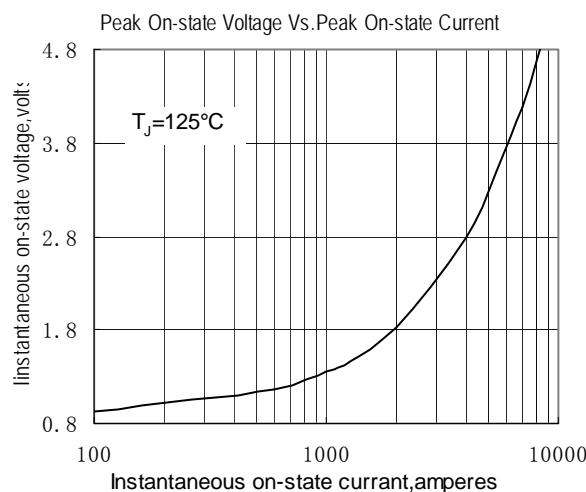


Fig.1

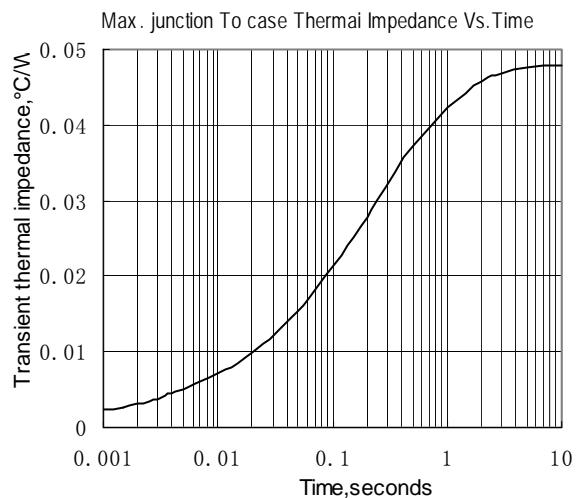


Fig.2

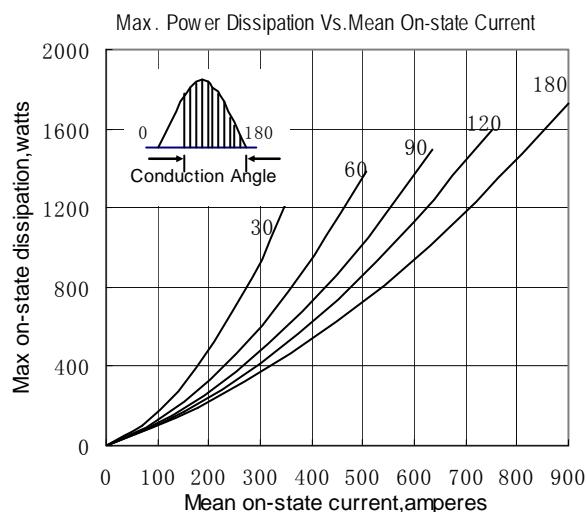


Fig.3

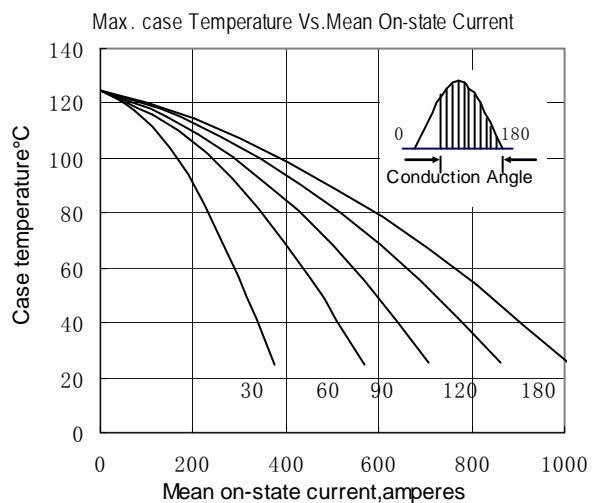


Fig.4

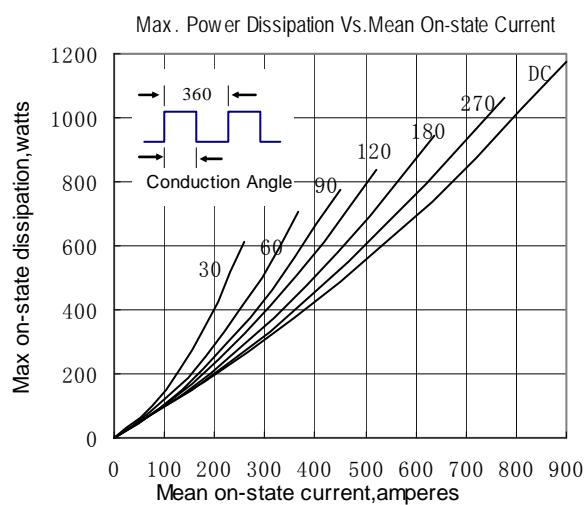


Fig.5

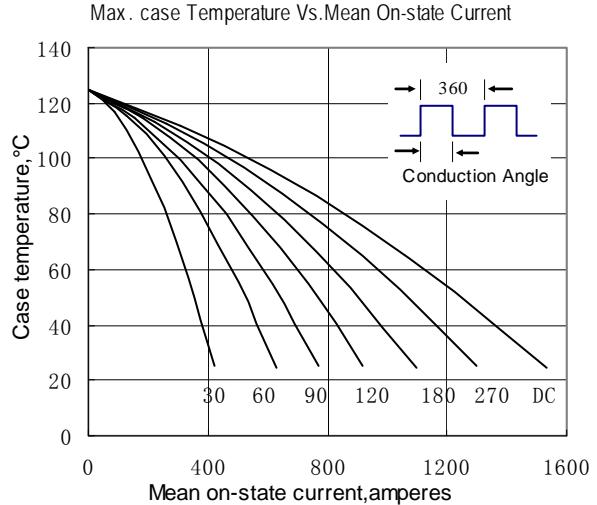


Fig.6

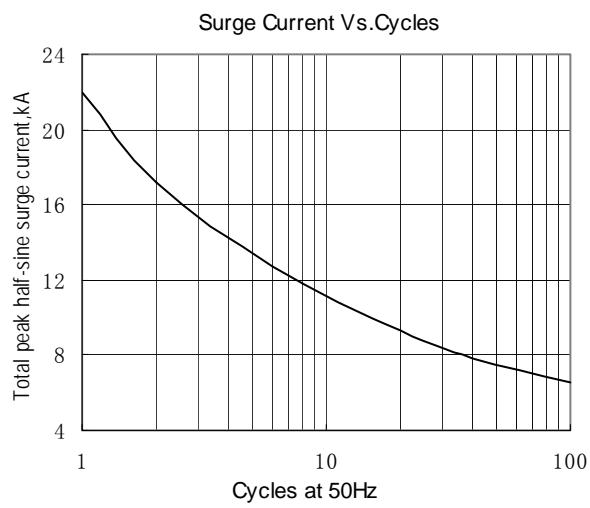


Fig. 7

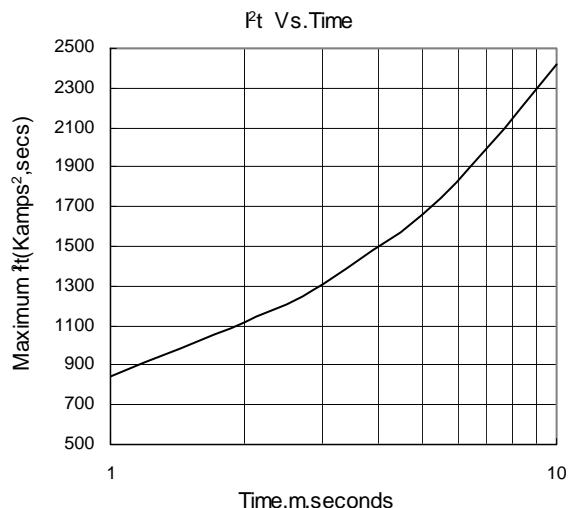


Fig.8

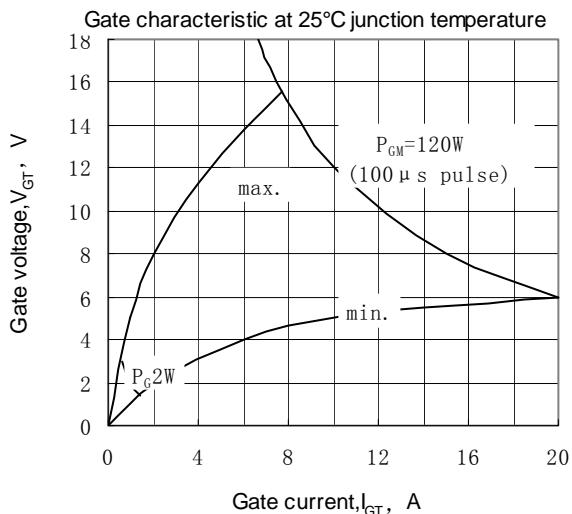


Fig.9

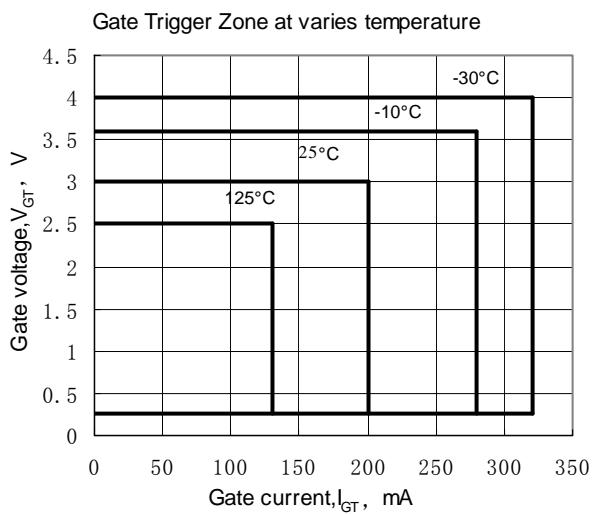


Fig.10

## **Outline:**

