



# Thyristor Modules MTx55



AS ENERGI

**$I_{T(AV)}$**  55A  
 **$V_{DRM}/V_{RRM}$**  1900~2500V  
 **$I_{TSM}$**   $1.50 \times 10^3$   
 **$I^2t$**   $11.3 A^2 S \times 10^3$

## 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	$T_f(^{\circ}C)$	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			55	A
$I_{T(RMS)}$	RMS on-state current		125			86	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			10	mA
$I_{TSM}$	Surge on-state current	10ms half sine wave	125			1.50	KA
$I^2t$	$I^2T$ for fusing coordination	$V_R=60\%V_{RRM}$				11.3	$A^2s \times 10^3$
$V_{TO}$	Threshold voltage		125			0.85	V
$r_T$	On-state slop resistance					4.80	$m\Omega$
$V_{TM}$	Peak on-state voltage	$I_{TM}=170A$	25			1.96	V
$dv/dt$	Critical rate of rise of off-state voltage	$V_{DM}=67\%V_{DRM}$	125			800	$V/\mu s$
$di/dt$	Critical rate of rise of on-state current	$I_{TM}=110A$ , Gate source 1.5A $t_r \leq 0.5\mu s$ Repetitive	125			50	$A/\mu s$
$I_{GT}$	Gate trigger current		25	30		100	mA
$V_{GT}$	Gate trigger voltage	$V_A=12V$ , $I_A=1A$		0.8		2.5	V
$I_H$	Holding current			20		150	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				0.49	$^{\circ}C/W$
$R_{th(c-h)}$	Thermal resistance case to heat sink	Single side cooled				0.2	$^{\circ}C/W$
$V_{Iso}$	Isolation voltage	50Hz,R.M.S,t=1min,Iiso:1mA(MAX)	3000				V
$F_m$	Thermal connection torque (M5)				4.0		$N \cdot m$
	Mounting torque (M6)				6.0		$N \cdot m$
$T_{stg}$	Stored temperature		-40			125	$^{\circ}C$
$W_t$	Weight				115		g
Outline							

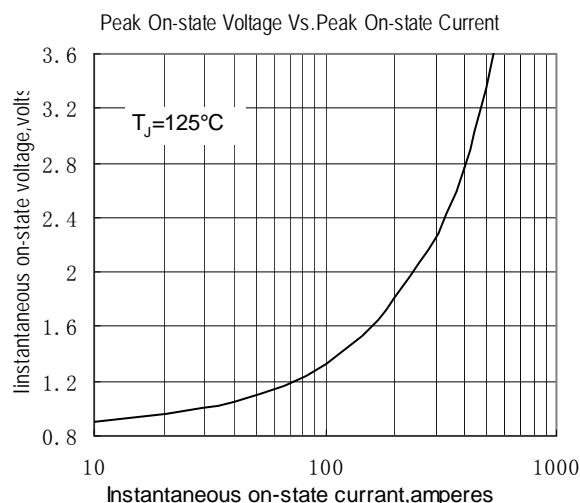


Fig.1

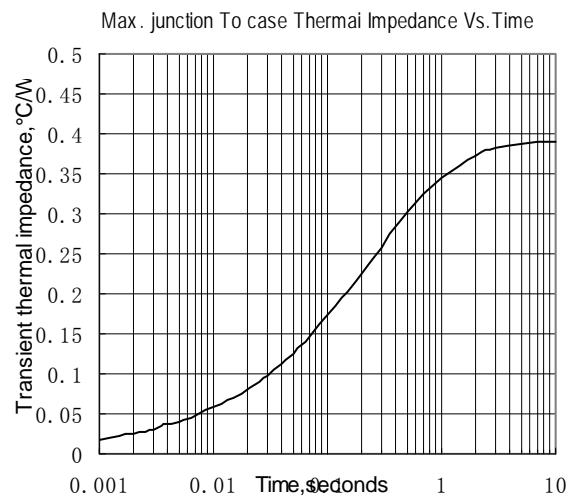


Fig.2

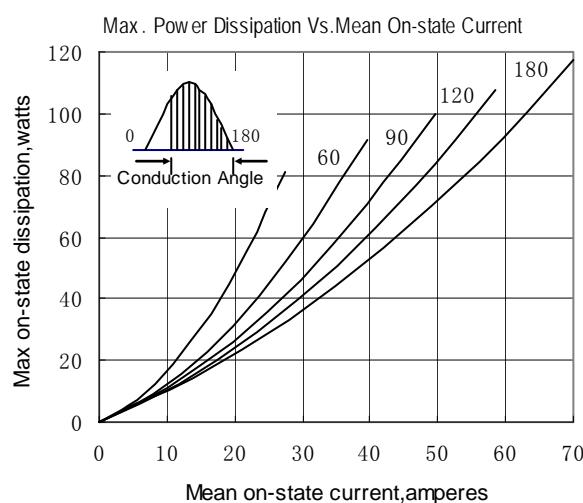


Fig.3

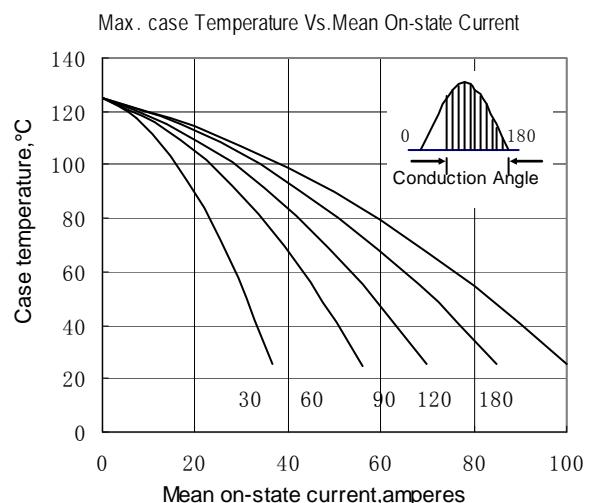


Fig.4

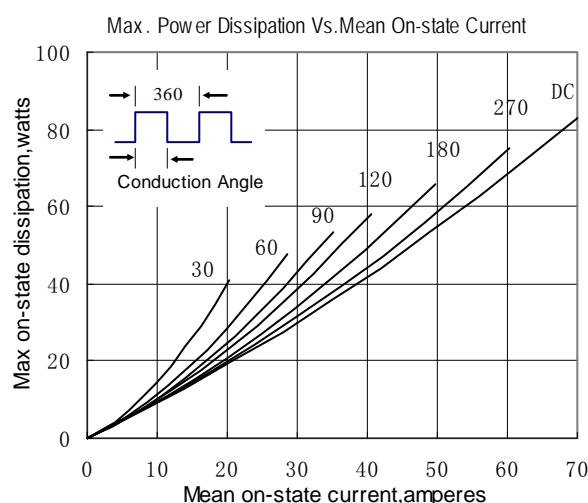


Fig.5

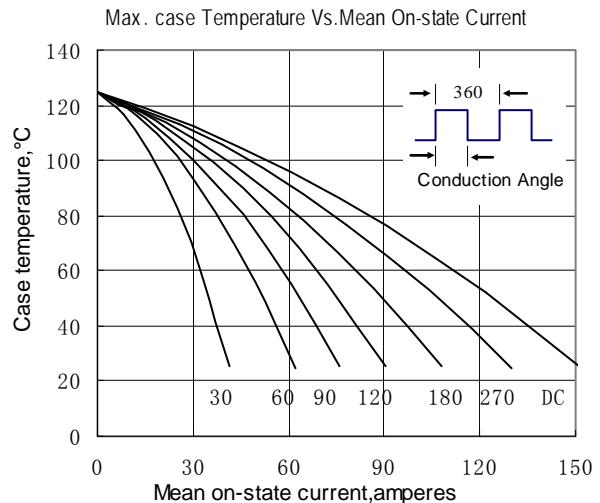


Fig.6

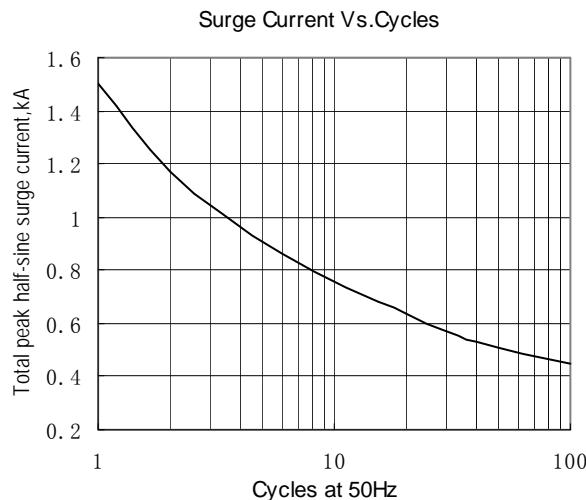


Fig.7

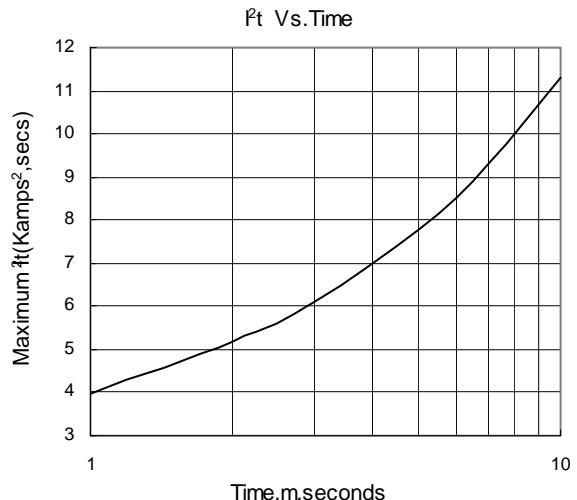


Fig.8

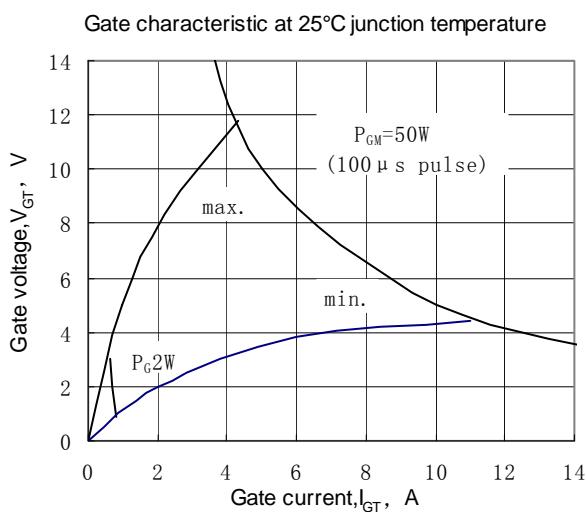


Fig.9

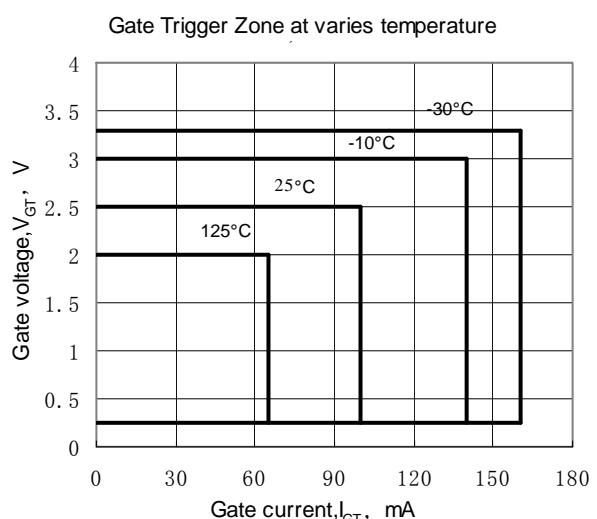


Fig.10

## Outline:

