

MTG/MTY300A

Non-Insulated Type Thyristor Module



Features

Non-insulated type, Baseboard servers as the public electrode
 Full crimping structure, super temperature characteristics and power cycle capability
 Lower forward voltage drop

$I_{T(AV)}$	300 A
V_{DRM}/V_{RRM}	400-2600 V
I_{TSM}	9.60KA
I^2T	470KA ² S

Application

AC/DC Motor Control
 Various rectifying power suppliers
 Industry Heating Regulation
 Light Dimming
 Contactless Switches

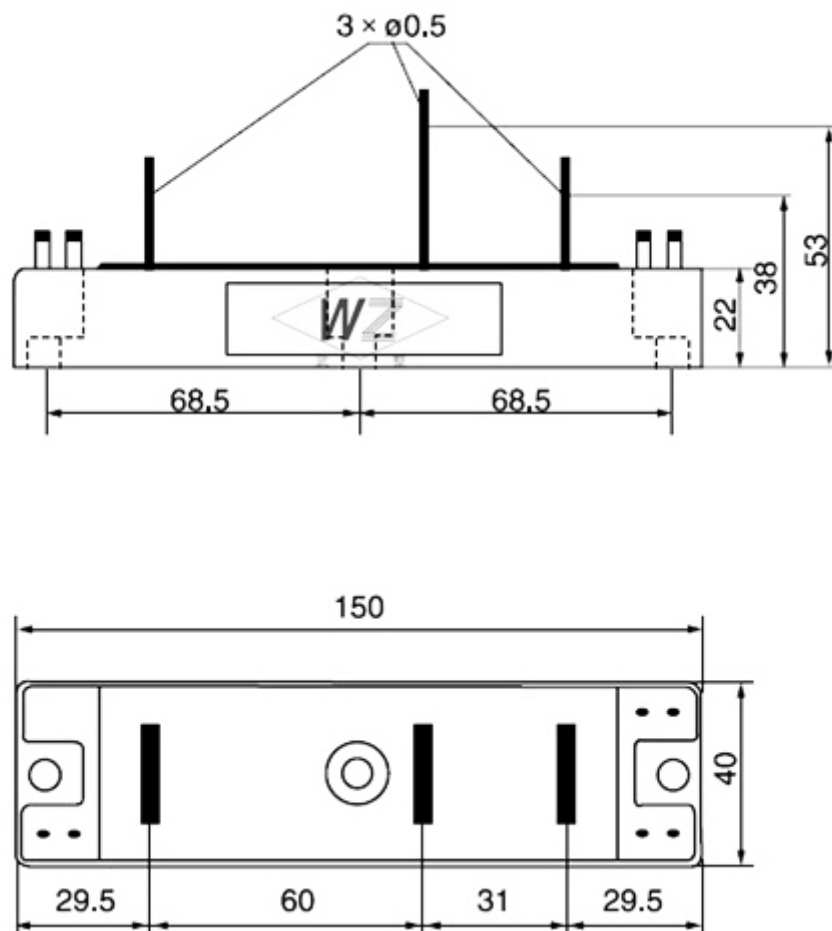
Symb.		parameter	Test Conditions	$T_{J(°C)}$	Value	Unit
Current Ratings	$I_{T(AV)}$	average on-state current	180° half sine wave 50Hz Single side cooled $T_c=90°C$	125	300	A
	$I_{T(RMS)}$	RMS on-state current		125	471	A
	I_{TSM}	Surge on-state current	10ms half sine wave $V_R=0.6V_{RRM}$	125	9.60	KA
	I^2t	I ² T for fusing coordination		125	470	KA ² S
Characteristics	V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	$V_{DRM} \& V_{RRM} t_p=10ms$ $V_{DSM} \& V_{RSM} = V_{DRM} \& V_{RRM} + 100V$	125	400-2600	V
	I_{DRM} I_{RRM}	Repetitive peak current	$V_{DM} = V_{DRM}$ $V_{RM} = V_{RRM}$	125	Max.25	mA
	V_{TO}	Threshold voltage		125	Max.0.80	V
	V_{TM}	Peak on-state voltage	$I_{TM}=900A$	25	Max.1.58	V
	r_T	On-state slop resistance		125	Max.0.72	mΩ
	I_H	Holding current	$V_A=12V, I_A=1A$	25	20-200	ma
Dynamic Parameters	dv/dt	Critical rate of rise of off-state voltage	$V_{DM}=67\% V_{DRM}$	125	Max.800	V/μs
	di/dt	Critical rate of rise of on-state current	Gate trigger current amplitude $I_{GM}=1.5A$, gate tigger current rise time $t_r \leq 1\mu s$	125	Max.100	A/μs
Gate Parameters	I_{GT}	Gate trigger current	$V_A=12V, I_A=1A$	25	30-150	mA
	V_{GT}	Gate trigger voltage		25	0.8-2.5	V
	V_{GD}	Non-trigger gate voltage	$V_{DM}=67\% V_{DRM}$	125	Min.0.2	V

Thermal & Mechanical Data

Symb.	parameter	Test Conditions	Value	Unit
$R_{th(j-c)}$	Thermal resistance Junction to case	single side cooled	Max.0.080	$^{\circ}\text{C}/\text{W}$
$R_{th(c-h)}$	Thermal resistance case to heat sink	single side cooled	Max.0.04	$^{\circ}\text{C}/\text{W}$
F_m	Terminal connection torque(M5)		Min.12	N m
	Mounting force (M6)		Max.6	N m
T_{stg}	Stored temperature		-40+125	$^{\circ}\text{C}$
W_t	Weight		680	g

Outline:

M41



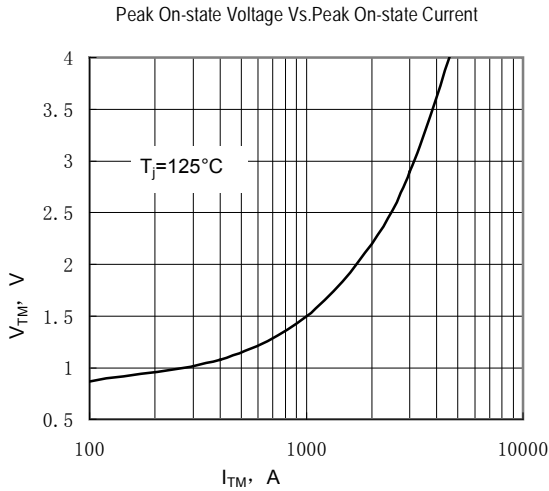


Fig.1

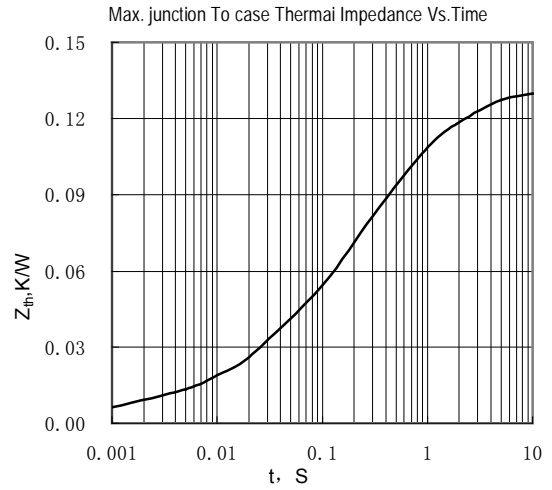


Fig.2

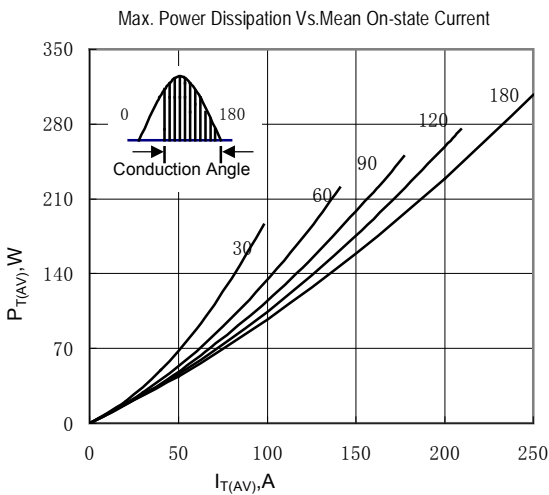


Fig.3

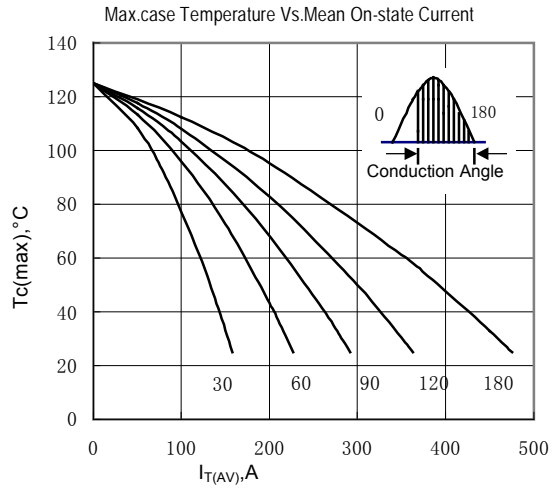


Fig.4

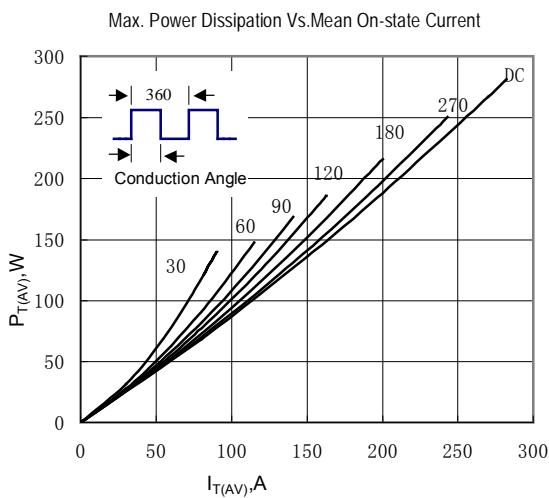


Fig.5

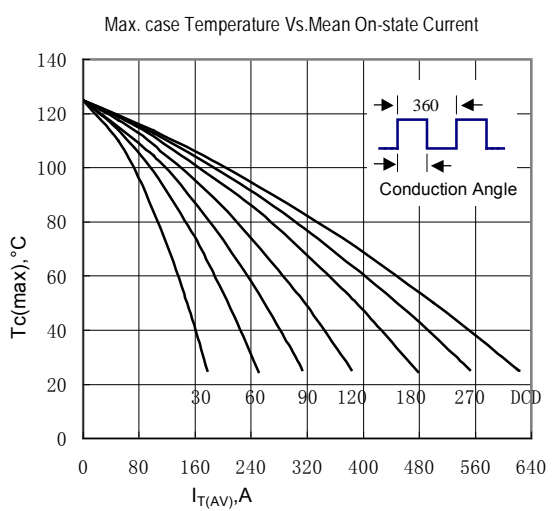


Fig.6

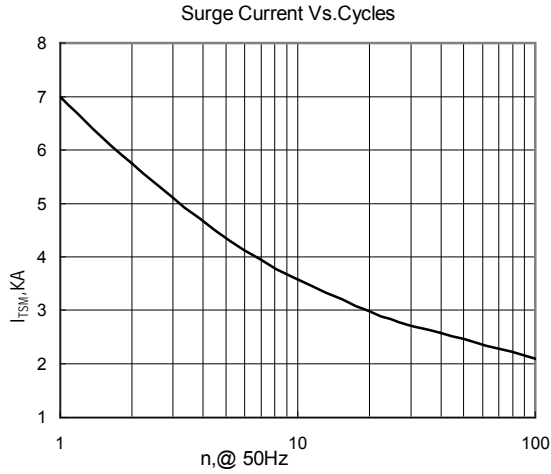


Fig.7

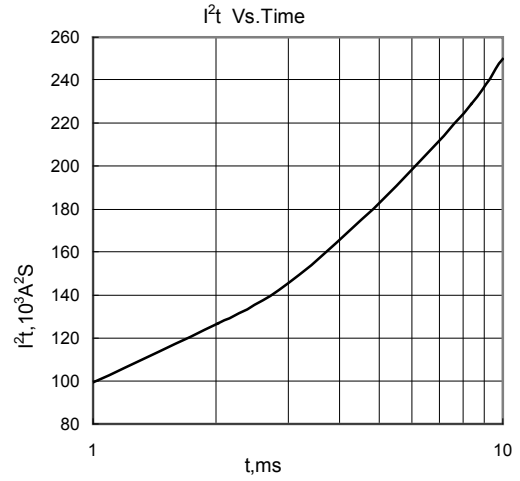


Fig.8

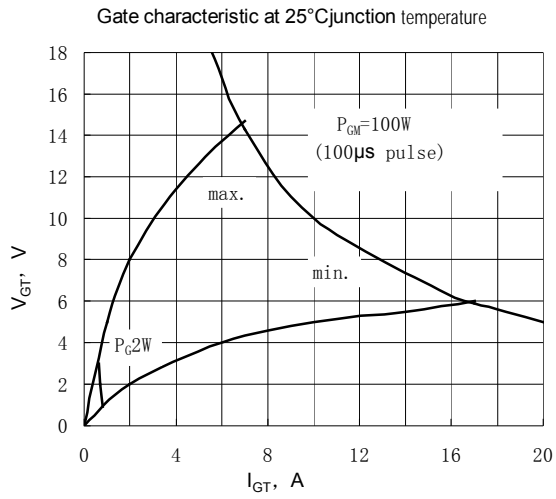


Fig.9

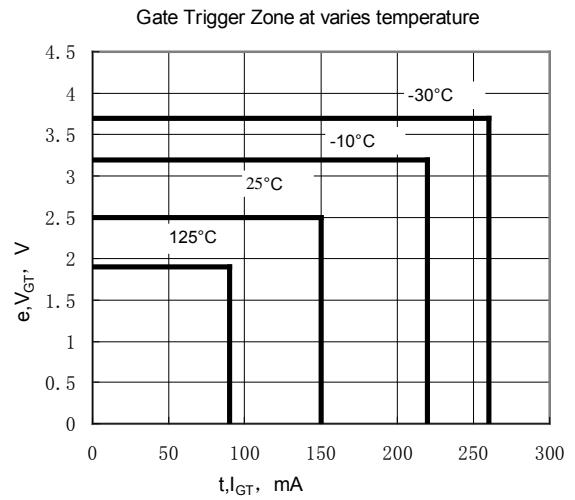


Fig.10

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