



MTC/MTA/MTK/MTX600A THYRISTOR MODULE

Features

Isolated mounting base 2500V
Increased power cycling capability
Space and weight savings

$I_{T(AV)}$	600 A
V_{DRM}/V_{RRM}	400-2600 V
I_{TSM}	13KA
I^2T	845KA ² S

Application

AC/DC Motor drives
Various rectifiers
DC supply for PWM inverter

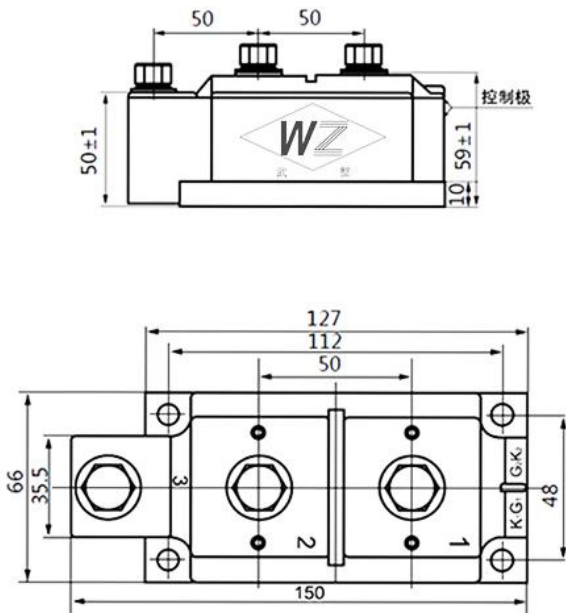
Symb.		parameter	Test Conditions	$T_{J(C)}$	Value	Unit
Current Ratings	$I_{T(AV)}$	average on-state current	180° half sine wave 50Hz Single side cooled $T_c=55^\circ\text{C}$	125	600	A
	$I_{T(RMS)}$	RMS on-state current		125	942	A
	I_{TSM}	Surge on-state current	10ms half sine wave $V_R=0.6V_{RRM}$	125	13	KA
	I^2t	I ² T for fusing coordination		125	845	KA ² S
Characteristics	V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	$V_{DRM}\&V_{RRM}$ $t_p=10\text{ms}$ $V_{DSM}\&V_{RSM}=V_{DRM}\&V_{RRM}+100\text{V}$	125	400-2600	V
	I_{DRM} I_{RRM}	Repetitive peak current	$V_{DM}=V_{DRM}$ $V_{RM}=V_{RRM}$	125	Max.40	mA
	V_{TO}	Threshold voltage		125	Max.0.80	V
	V_{TM}	Peak on-state voltage	$I_{TM}=1500\text{A}$	25	Max.1.90	V
	r_T	On-state slop resistance		125	Max.0.53	mΩ
	I_H	Holding current	$V_A=12\text{V}, I_A=1\text{A}$	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	$I_{TM}=52\text{A}$, gate trigger current amplitude $I_{GM}=1.5\text{A}$, gate tigger current rise time $t_r\leq 0.5\mu\text{s}$	125	Max.100	A/μs
Gate Parameters	I_{GT}	Gate trigger current	$V_A=12\text{V}, I_A=1\text{A}$	25	30-200	mA
	V_{GT}	Gate trigger voltage		25	1.0-3.0	V
	V_{GD}	Non-trigger gate voltage	$V_{DM}=67\%V_{DRM}$	125	Min.0.2	V

Thermal & Mechanical Data

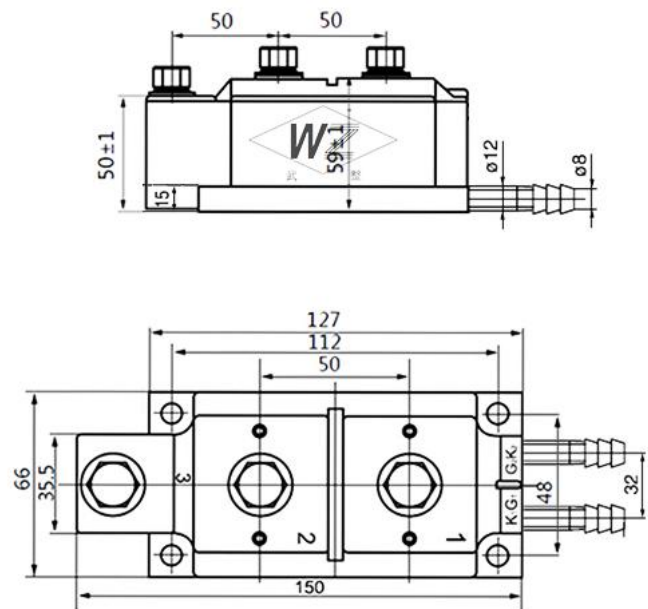
Symb.	parameter	Test Conditions	Value	Unit
$R_{th(j-c)}$	Thermal resistance Junction to case	single side cooled	Max.0.073	°C/W
$R_{th(c-h)}$	Thermal resistance case to heat sink	single side cooled	/	°C/W
V_{iso}	isolated voltage		Min.2500	V
F_m	Terminal connection torque(M5)		Min.12	N m
	Mounting force (M6)		Max.6	N m
T_{stg}	Stored temperature		-40+125	°C
W_t	Weight		1820	g

Outline:

M6



M10



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