

# MDC/MDA/MDK/MDX300A DIODE MODULE



### Features

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

### Application

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

$I_{F(AV)}$	300A
$V_{RRM}$	400-2600 V
$I_{FSM}$	12.5KA
$I^2t$	797KA <sup>2</sup> S

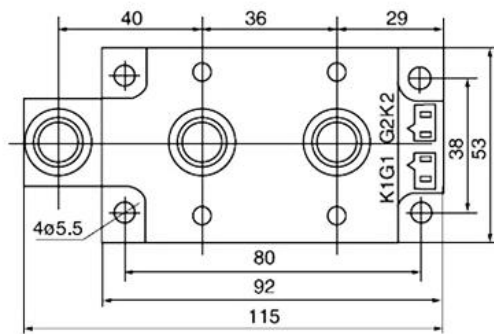
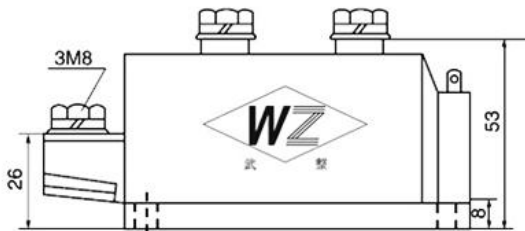
Symb.	parameter	Test Conditions	$T_{J(°C)}$	Value	Unit	
<b>Current Ratings</b>	$I_{F(AV)}$	average forward current	180 ° half sine wave 50Hz Single side cooled, $T_C=100\text{ °C}$	300	A	
	$I_{F(RMS)}$	RMS forward current		471	A	
	$I_{FSM}$	Surge forward current	10ms half sine wave	150	12.5	KA
	$I^2t$	$I^2t$ for fusing coordination	$VR=0.6VRRM$	150	797	KA <sup>2</sup> S
<b>Characteristics</b>	$V_{RRM}$	Repetitive peak reverse voltage	$V_{RRM} tp=10ms$ $V_{RSM}= V_{RRM}+200V$	150	400-2600	V
	$I_{RRM}$	Repetitive peak current	$V_{RM}= vRRM$	150	Max.20	Ma
	$V_{FM}$	Peak on-state voltage	$I_{FM}=900A$	25	Max.1.35	V
	$V_{FO}$	Threshold voltage		150	Max.0.75	V
	$r_F$	Forward slop resistance		150	Max.0.55	mΩ

## Thermal & Mechanical Data

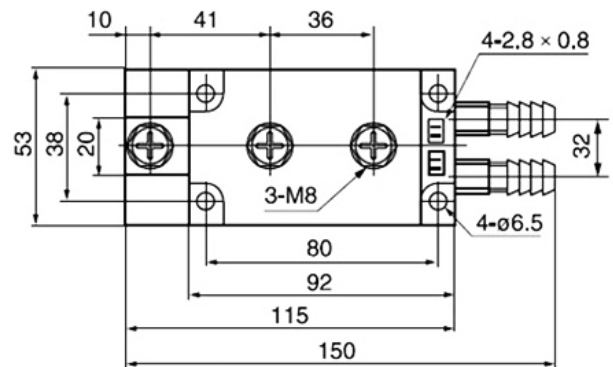
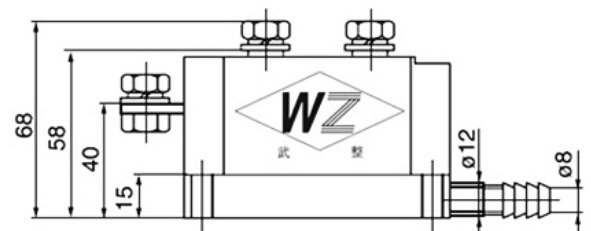
Symb.	parameter	Test Conditions	Value	Unit
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180 °sine wave, single side cooled	Max.0.130	°C/W
$R_{th(c-h)}$	Thermal resistance case to heat sink	At 180 °sine wave, single side cooled	Max.0.04	°C/W
$V_{iso}$	Isolated voltage	50Hz,R.M.S,t=1min,Iso:1mA(max)	Min.2500	V
$F_m$	Terminal connection torque(M5)		Typ.12	N m
	Mounting force (M6)		Typ.6	N m
$T_{stg}$	Stored temperature		-40+125	°C
$W_t$	Weight		860	g

### Outline:

M4



M8



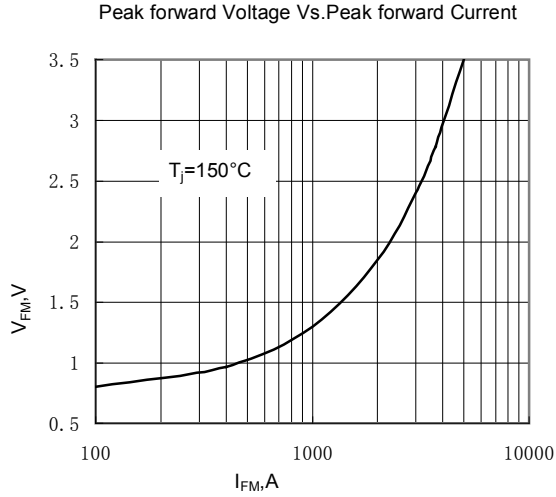


Fig.1

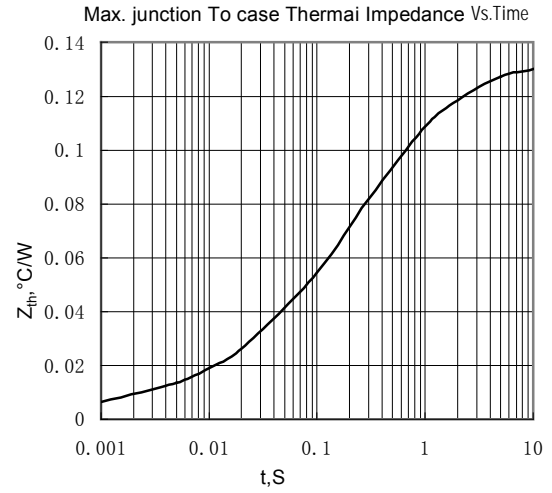


Fig.2

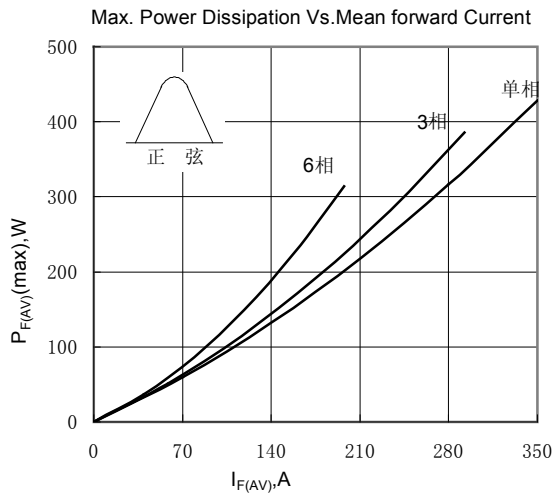


Fig.3

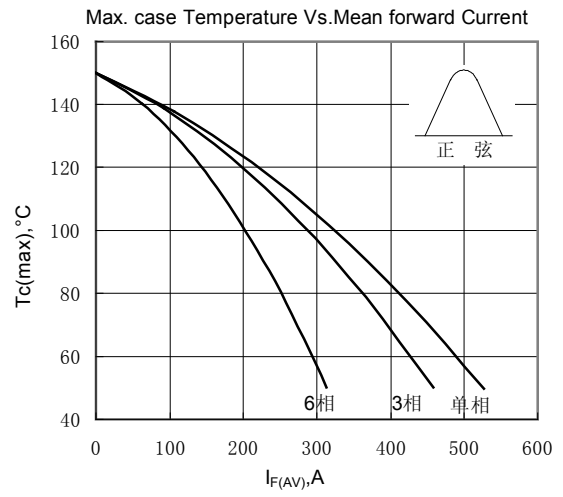


Fig.4

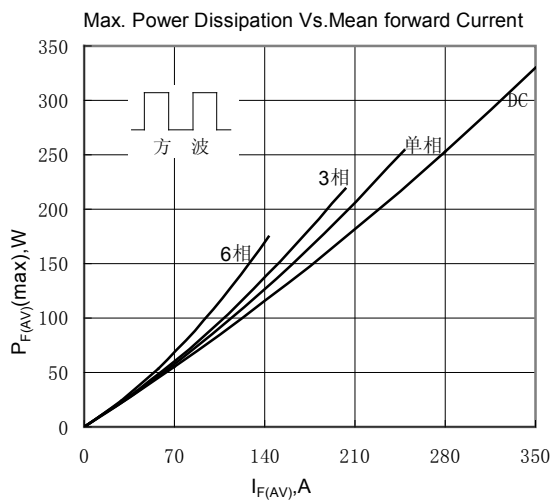


Fig.5

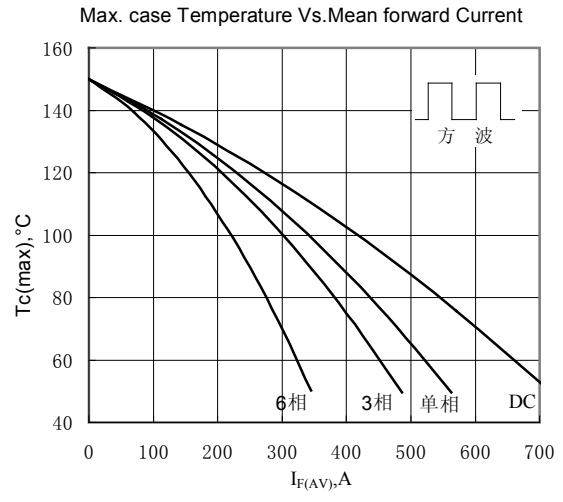
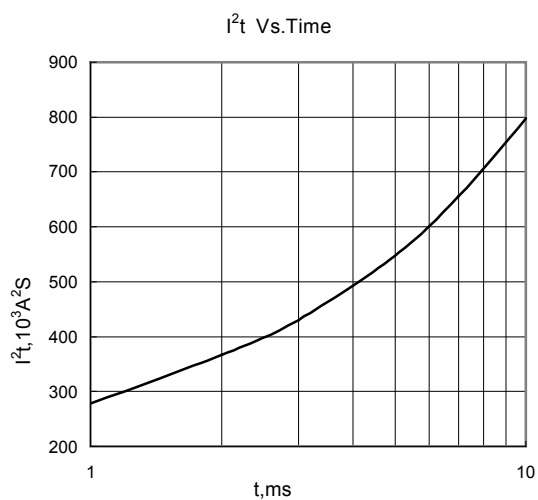
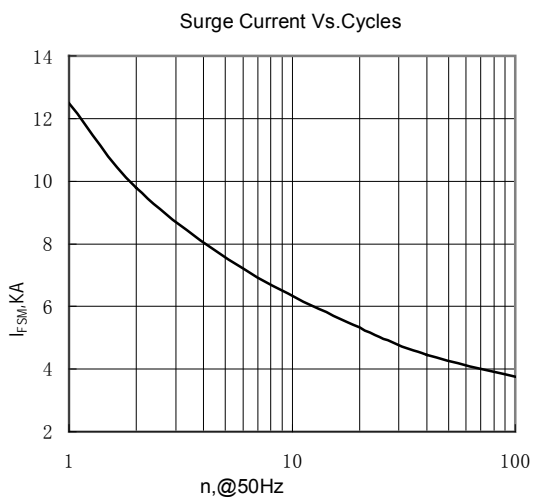


Fig.6




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