

MDS500 Three Phase Bridge 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_O	500 A
V_{RRM}	600-1600 V
I_{FSM}	2.1KA
I^2t	22.1KA ² S

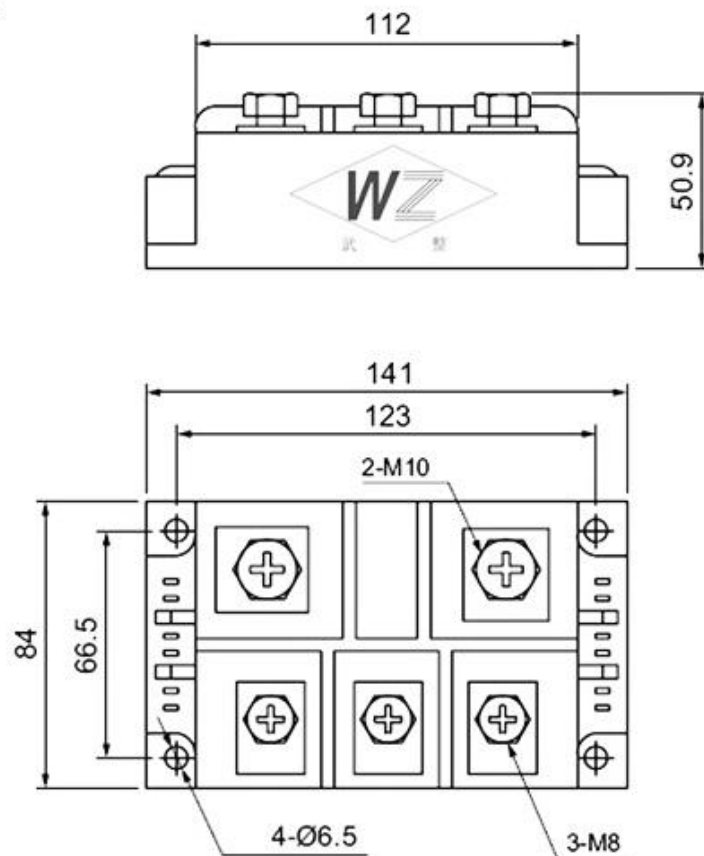
Symb.	parameter	Test Conditions	$T_{J(°C)}$	Value	Unit	
Current Tatings	I_O	average forward current	180 ° half sine wave 50Hz Single side cooled, $T_C=100\text{ °C}$	150	500	A
	I_{FSM}	Surge forward current	10ms half sine wave	150	2.1	KA
	I^2t	I^2t for fusing coordination	$V_R=0.6V_{RRM}$	150	22.1	KA ² S
Characteristics	V_{RRM}	Repetitive peak reverse voltage	V_{RRM} tp=10ms $V_{RSM}=V_{RRM}+200V$	150	600-1600	V
	I_{RRM}	Repetitive peak current	$V_{RM}=V_{RRM}$	150	Max.15	mA
	V_{FM}	Peak on-state voltage	$I_{FM}=200A$	25	Max.1.35	V
	V_{FO}	Threshold voltage		150	Max.0.8	V
	r_F	Forward slop resistance		150	Max.2.8	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.0.10	°C/W
$R_{th(c-h)}$	Thermal resistance case to heat sink	At 180 °sine wave, single side cooled	Max.0.07	°C/W
V_{iso}	Isolated voltage	50Hz,R.M.S,t=1min,Iiso:1mA(max)	Min.2500	V
F_m	Terminal connection torque(M5)		Typ.6.0	N m
	Mounting force (M6)		Typ.4.0	N m
T_{stg}	Stored temperature		-40+125	°C
W_t	Weight		450	g

Outline:

M50



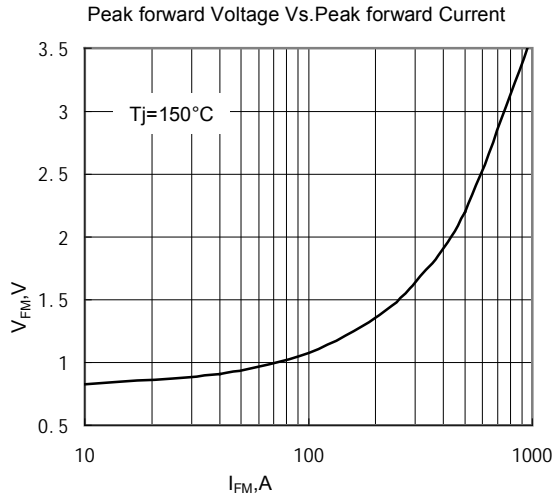


Fig.1

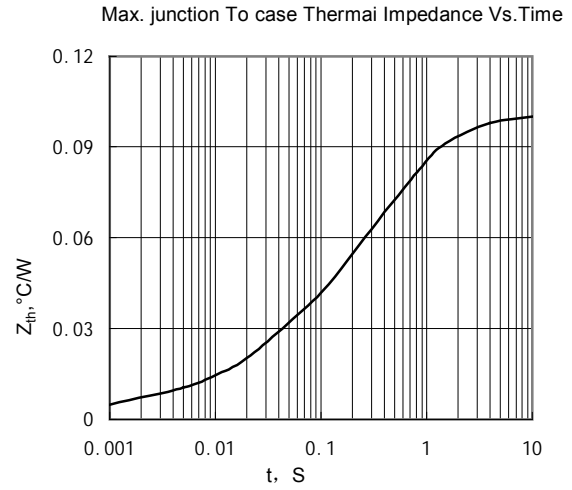


Fig.2

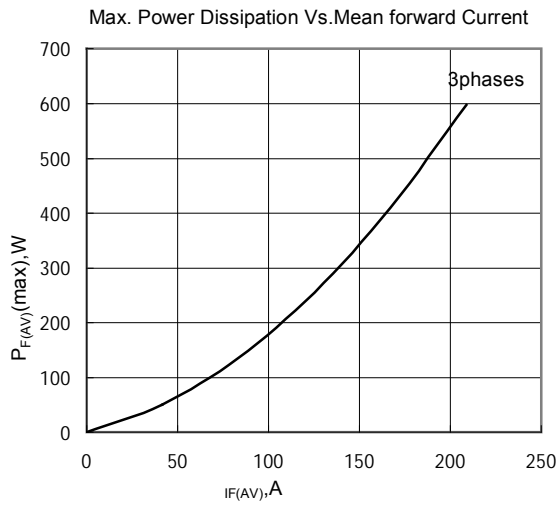


Fig.3

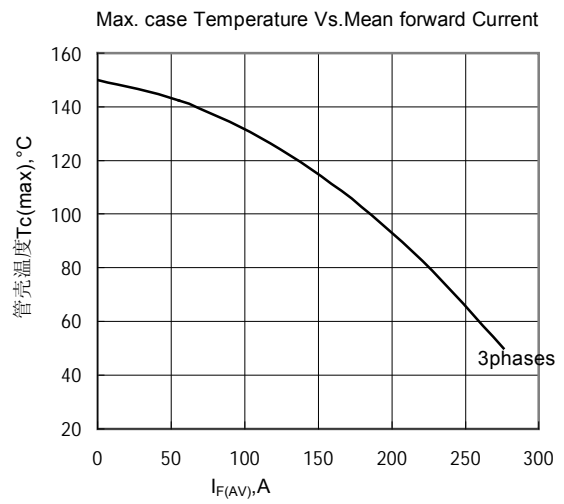


Fig.4

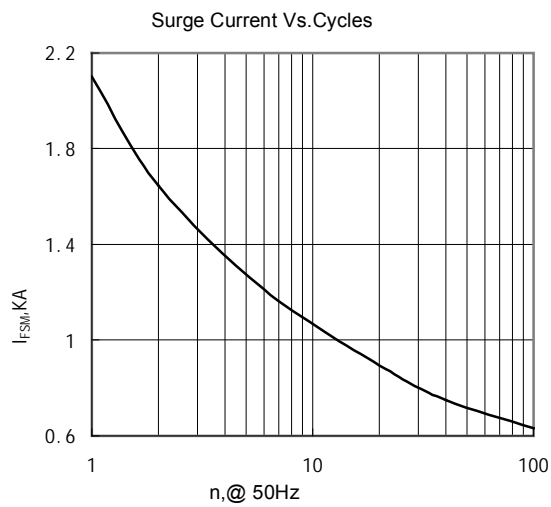


Fig.5

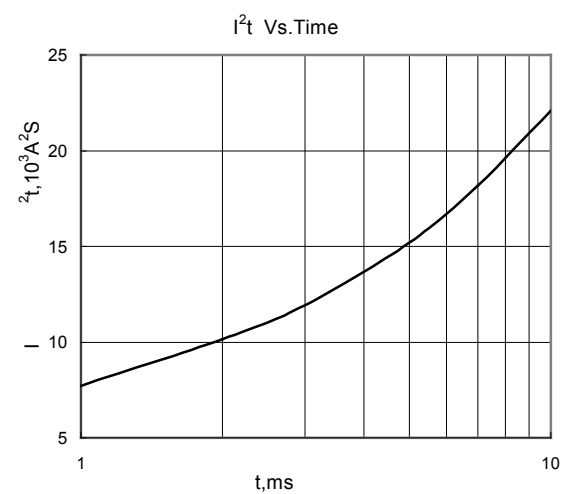
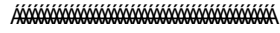


Fig.6



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