

# MDQ500 Single 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 <sup>2</sup> S

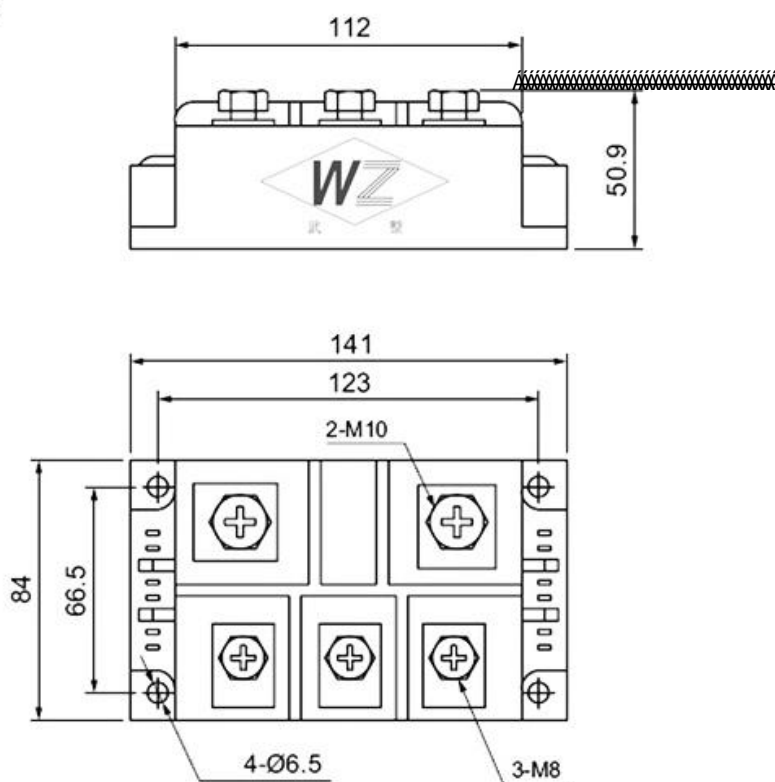
Symb.		parameter	Test Conditions	$T_{J(°C)}$	Value	Unit
Current Tatings	$I_o$	average forward current	180 ° half sine wave 50Hz Single side cooled, $T_C=100\text{ °C}$	150	500	A
	$I_{FSM}$	Surge forward current	10ms half sine wave	150	2.10	KA
	$I^2t$	$I^2t$ for fusing coordination	$V_R=0.6V_{RRM}$	150	22.1	KA <sup>2</sup> S
Characteristics	$V_{RRM}$	Repetitive peak reverse voltage	$V_{RRM} t_p=10ms$ $V_{RSM}=V_{RRM}+200V$	150	600-1600	V
	$I_{RRM}$	Repetitive peak current	$V_{RM}=V_{RRM}$	150	Max.15	Ma
	$V_{FM}$	Peak on-state voltage	$I_{FM}=230A$	25	Max.1.38	V
	$V_{FO}$	Threshold voltage		150	Max.0.80	V
	$r_F$	Forward slop resistance		150	Max.3.8	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		420	g

## Outline:

M50



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