

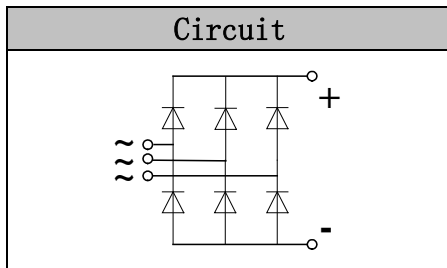


## Glass Passivated Three Phase Rectifier Bridge

**VRRM** 800 to 1800V  
**ID** 100 A

### Applications

- Three phase rectifiers for power supplies
- Rectifiers for DC motor field supplies
- Battery charger rectifiers
- Input rectifiers for variable frequency drives



### Features

- Three phase bridge rectifier
- Blocking voltage:800 to 1800V
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip

### Module Type

TYPE	VRRM	V <sub>RSM</sub>
MD100S08NM2	800V	900V
MD100S12NM2	1200V	1300V
MD100S16NM2	1600V	1700V
MD100S18NM2	1800V	1900V

### Maximum Ratings

Symbol	Conditions	Values	Units
I <sub>D</sub>	Three phase, full wave T <sub>c</sub> =100°C	100	A
I <sub>FSM</sub>	t=10mS T <sub>vj</sub> =45°C	750	A
i <sup>2</sup> t	t=10mS T <sub>vj</sub> =45°C	4200	A <sup>2</sup> s
V <sub>isol</sub>	a.c.50HZ;r.m.s.;1min	3000	V
T <sub>vj</sub>		-40 to +150	°C
T <sub>stg</sub>		-40 to +125	°C
M <sub>t</sub>	To terminals(M5)	3±15%	Nm
M <sub>s</sub>	To heatsink(M5)	3±15%	Nm
Weight	Module (Approximately)	130	g

### Thermal Characteristics

Symbol	Conditions	Values	Units
R <sub>th(j-c)</sub>	Per diode	1.0	°C/W
R <sub>th(c-s)</sub>	Module (Approximately)	0.07	°C/W

### Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V <sub>FM</sub>	T=25°C I <sub>F</sub> =150A	—	1.70	1.90	V
I <sub>RD</sub>	T <sub>vj</sub> =25°C V <sub>RD</sub> =V <sub>RRM</sub> T <sub>vj</sub> =150°C V <sub>RD</sub> =V <sub>RRM</sub>	—	—	0.3 5	mA mA



## Performance Curves

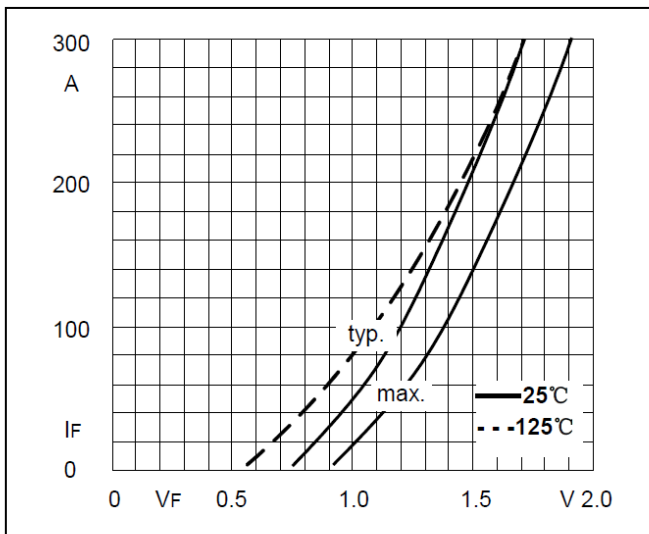


Fig1. Forward Characteristics

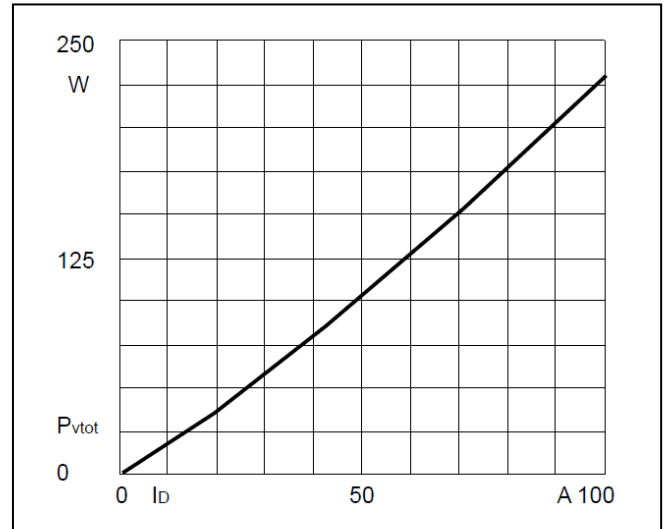


Fig2. Power dissipation

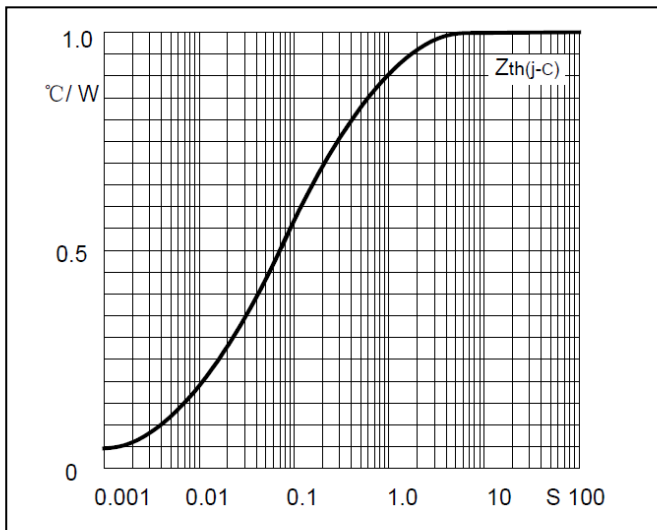


Fig3. Transient thermal impedance

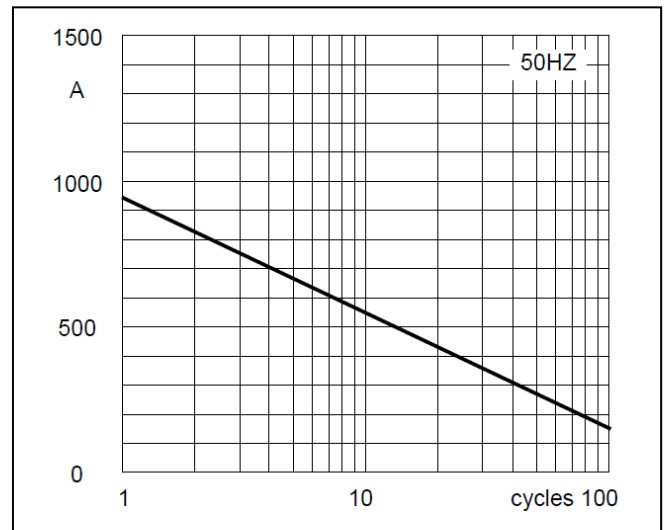


Fig4. Max Non-Repetitive Forward Surge Current

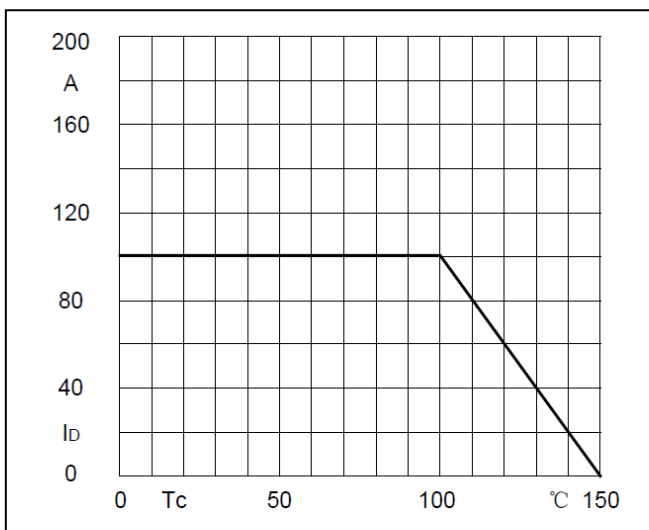
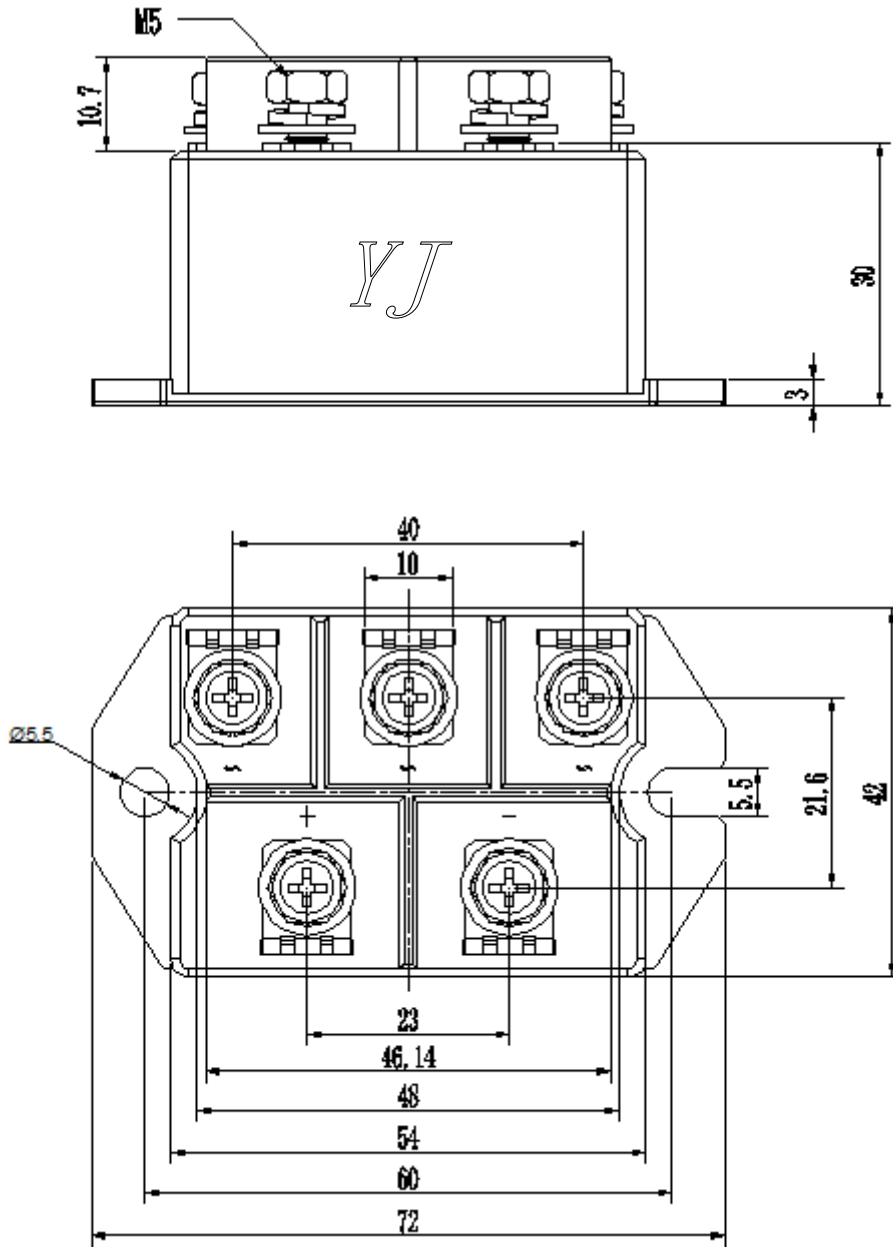


Fig5. Forward Current Derating Curve

## Package Outline Information

CASE: M2



Dimensions in mm