



## Glass Passivated Three Phase Rectifier Bridge

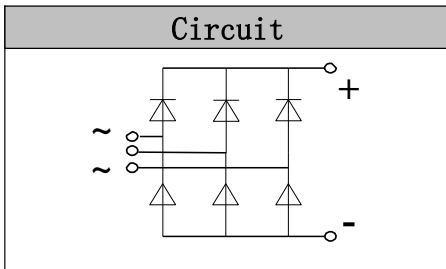
**VRRM** 800 to1800V  
**ID** 75A

### 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 to1800V
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip



### Module Type

TYPE	VRRM	VRSM
MD75S08M8	800V	900V
MD75S12M8	1200V	1300V
MD75S16M8	1600V	1700V
MD75S18M8	1800V	1900V

### Maximum Ratings

Symbol	Conditions	Values	Units
ID	Three phase, full wave Tc=110°C	75	A
IFSM	t=10mS Tvj =45°C	750	A
i <sup>2</sup> t	t=10mS Tvj =45°C	2800	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
Mt	To terminals(M5)	3±15%	Nm
Ms	To heatsink(M6)	5±15%	Nm
Weight	Module (Approximately)	168	g

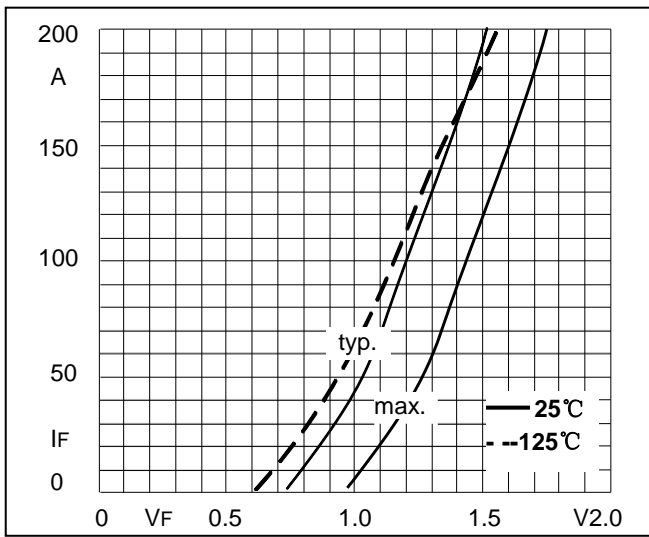
### Thermal Characteristics

Symbol	Conditions	Values	Units
R <sub>th(j-c)</sub>	Per diode	1.1	°C/W
R <sub>th(c-s)</sub>	Module (Approximately)	0.07	°C/W

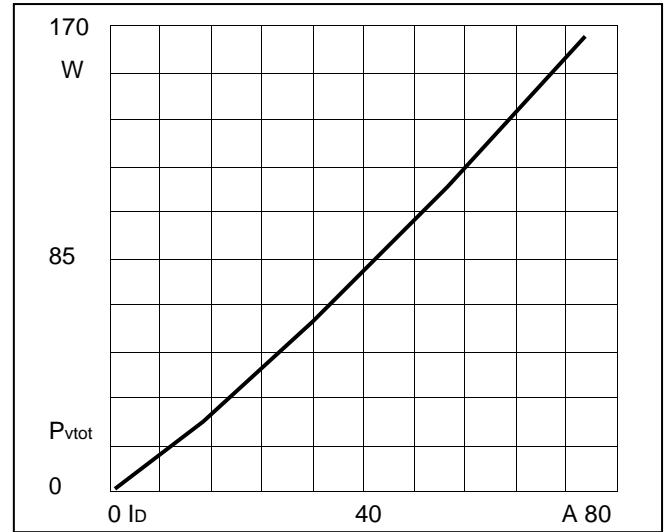
### Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V <sub>FM</sub>	T=25°C I <sub>F</sub> =150A	—	1.38	1.60	V
I <sub>RD</sub>	T <sub>vj</sub> =25°C V <sub>RD</sub> =V <sub>RRM</sub>	—	—	0.3	mA
	T <sub>vj</sub> =150°C V <sub>RD</sub> =V <sub>RRM</sub>	—	—	5	mA

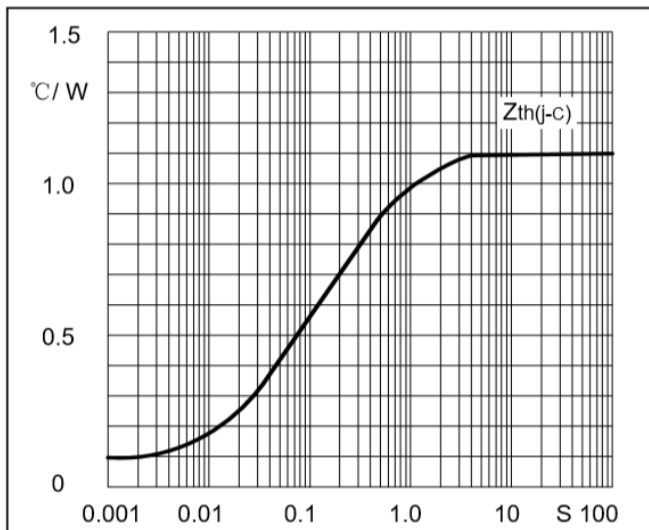
## Performance Curves



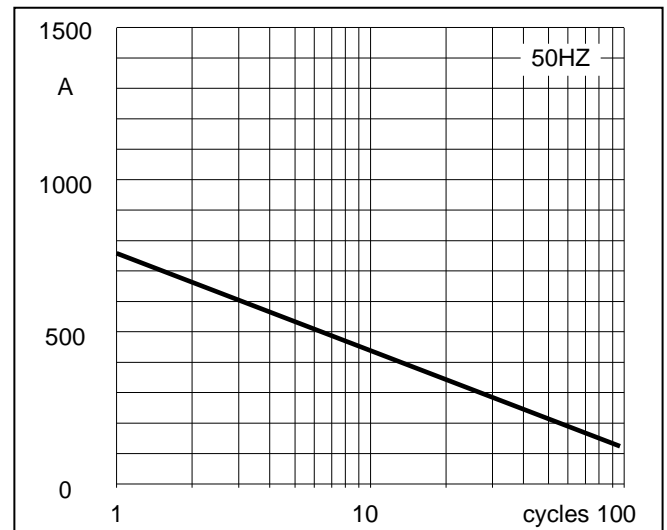
**Fig1. Forward Characteristics**



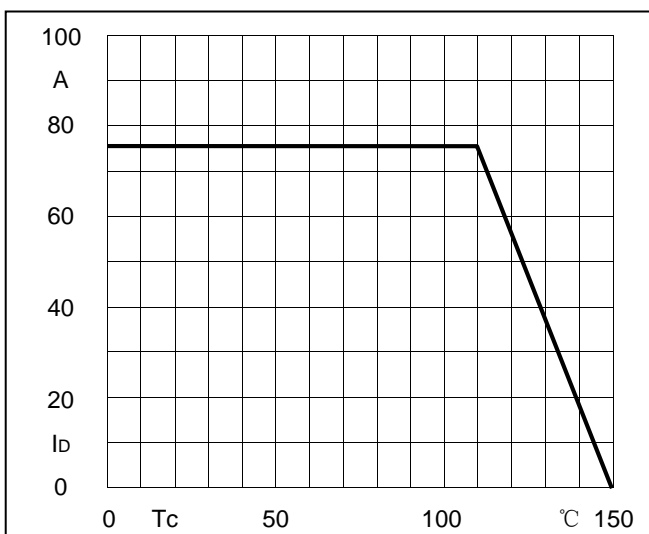
**Fig2. Power dissipation**



**Fig3. Transient thermal impedance**



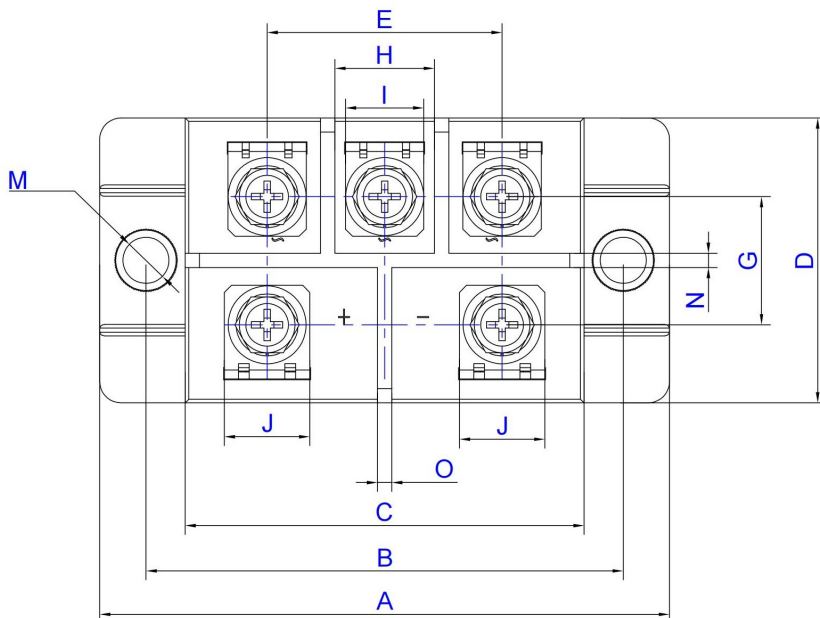
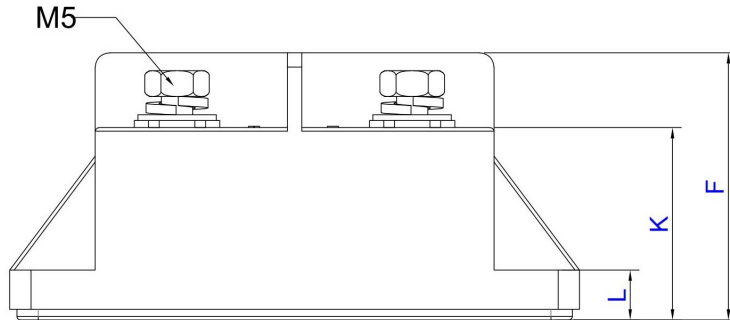
**Fig4. Max Non-Repetitive Forward Surge Current**



**Fig5. Forward Current Derating Curve**

## Package Outline Information

**CASE:M8**



DIM	Min (mm)	Max (mm)	Note
A	79.5	80.5	
B	66.5	67.5	
C	55.5	56.5	
D	39.5	40.5	
E	32.5	33.5	
F	37	38	
G	17.5	18.5	
H	13.5	13.5	
I	10.5	11.5	
J	11.5	12.5	
K	26.5	27.5	
L	6.5	7.5	
M	6	7	∅
N	1.5	2.5	
O	1.5	2.5	

## Packing Standard

Item	Length: A (mm)	Width: B (mm)	Height: C (mm)	Quantity (PCS)
Inner Box	276	258	48	6
Outer Carton	545	295	240	60



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