



## Glass Passivated Three Phase Rectifier Bridge

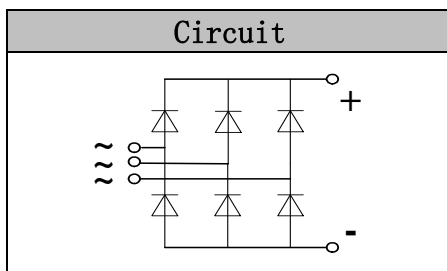
**VRRM** 800 to 1800V  
**ID** 75 A

### 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	VRSM
MD75S08M4	800V	900V
MD75S12M4	1200V	1300V
MD75S16M4	1600V	1700V
MD75S18M4	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)	5±15%	Nm
Ms	To heatsink(M5)	5±15%	Nm
Weight	Module (Approximately)	146	g

### Thermal Characteristics

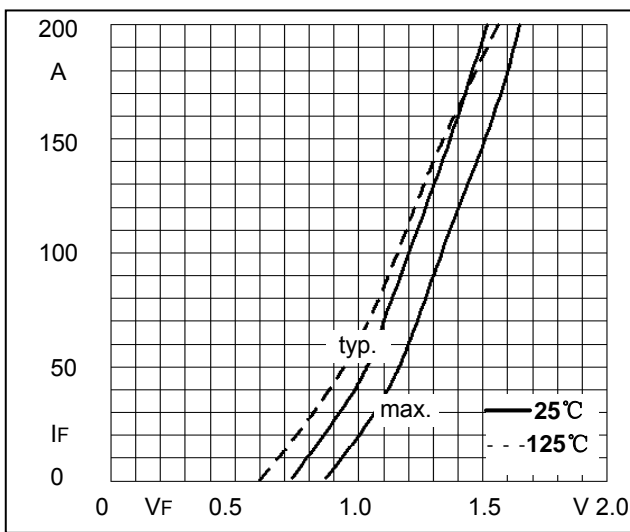
Symbol	Conditions	Values	Units
Rth(j-c)	Per diode	1.1	°C/W
Rth(c-s)	Module (Approximately)	0.07	°C/W



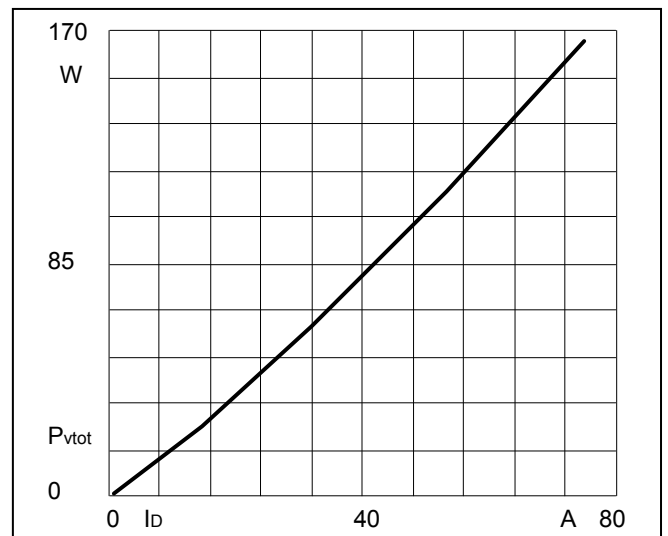
**Electrical Characteristics**

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
$V_{FM}$	$T=25^{\circ}C$ $I_F = 150A$	—	1.38	1.50	V
$r_f$	$T_J=25^{\circ}C$	-	3.5	-	mΩ
$V_{f0}$	$T_J=25^{\circ}C$	-	0.855	-	V
$I_{RD}$	$T_{vj}=25^{\circ}C$ $V_{RD}=V_{RRM}$	—	—	0.3	mA
	$T_{vj}=150^{\circ}C$ $V_{RD}=V_{RRM}$	—	—	5	mA

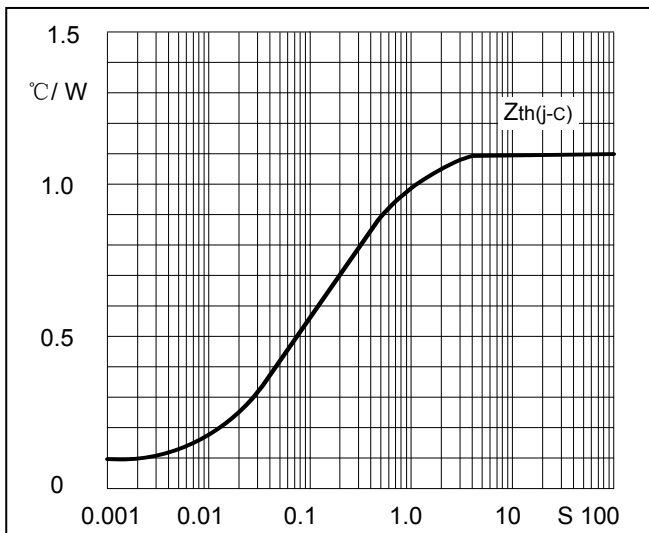
**Performance Curves**



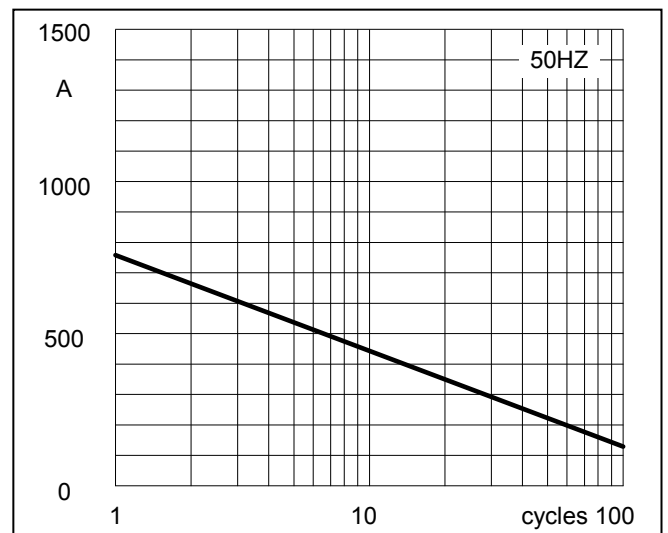
**Fig1. Forward Characteristics**



**Fig2. Power dissipation**



**Fig3. Transient thermal impedance**



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

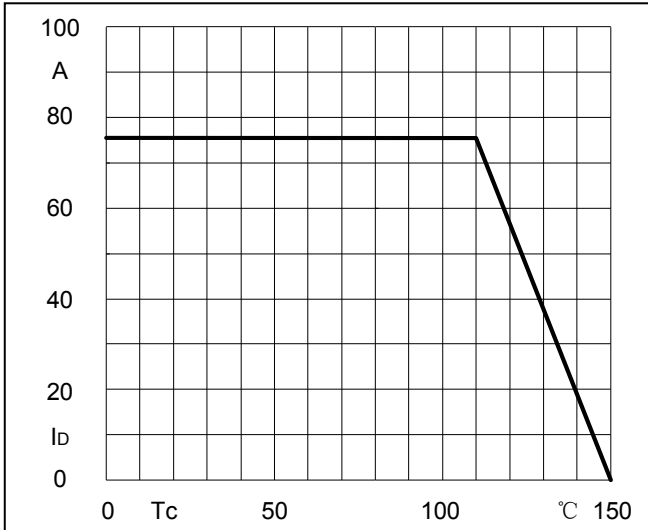
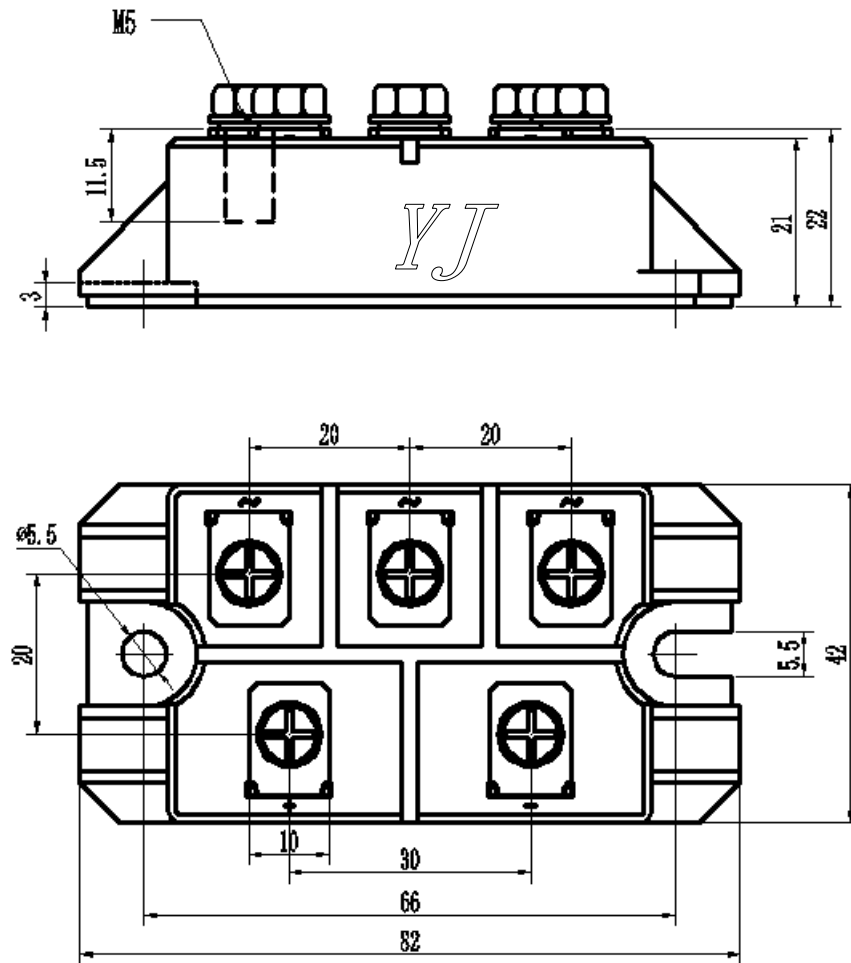


Fig5.Forward Current Derating Curve

### Package Outline Information

CASE: M4



Dimensions in mm