



## Glass Passivated Three Phase Rectifier Bridge

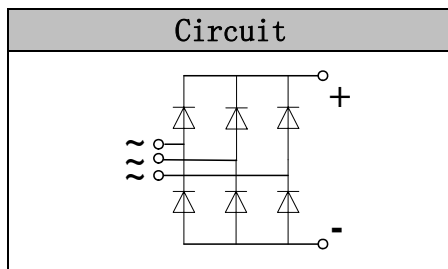
**VRRM** 800 to 1800V  
**ID** 100 A

### 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	VRSM
MD100S08M4	800V	900V
MD100S12M4	1200V	1300V
MD100S16M4	1600V	1700V
MD100S18M4	1800V	1900V

### Maximum Ratings

Symbol	Conditions	Values	Units
ID	Three phase, full wave Tc=100°C	100	A
IFSM	t=10mS Tvj =45°C	920	A
i <sup>2</sup> t	t=10mS Tvj =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
Mt	To terminals(M5)	5±15%	Nm
Ms	To heatsink(M5)	5±15%	Nm
Weight	Module (Approximately)	146	g

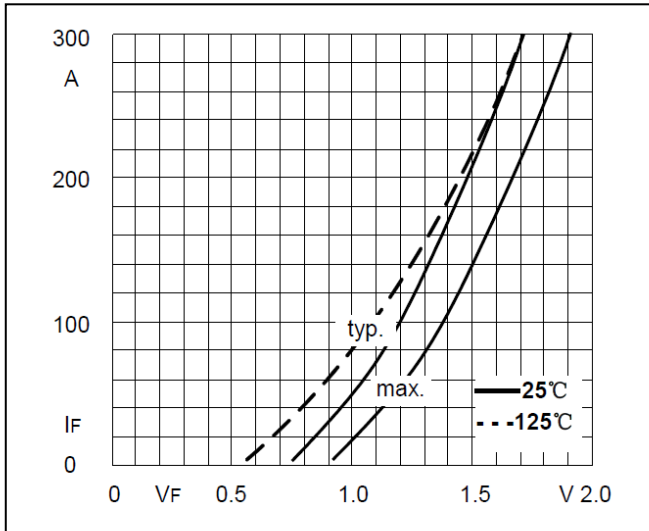
### Thermal Characteristics

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

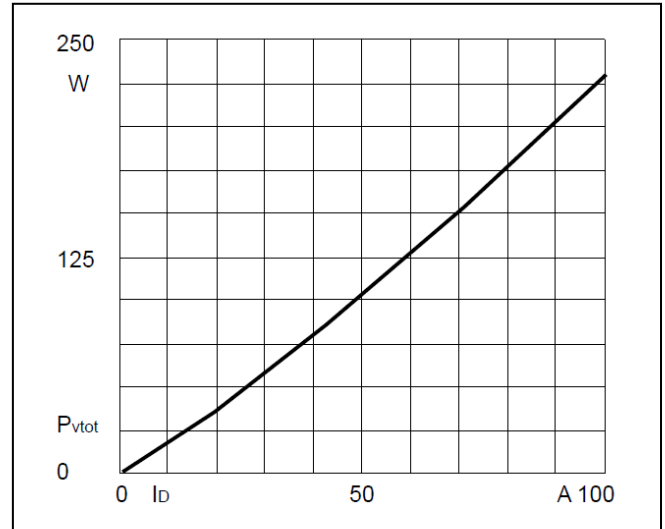
### Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V <sub>FM</sub>	T=25°C I <sub>F</sub> =300A	—	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

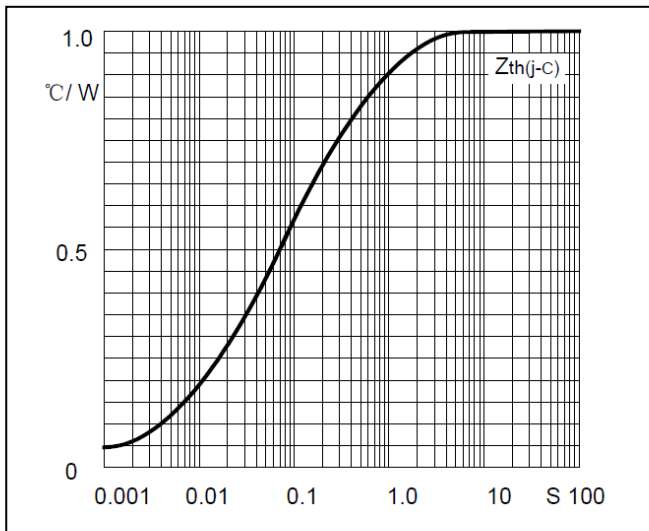
## Performance Curves



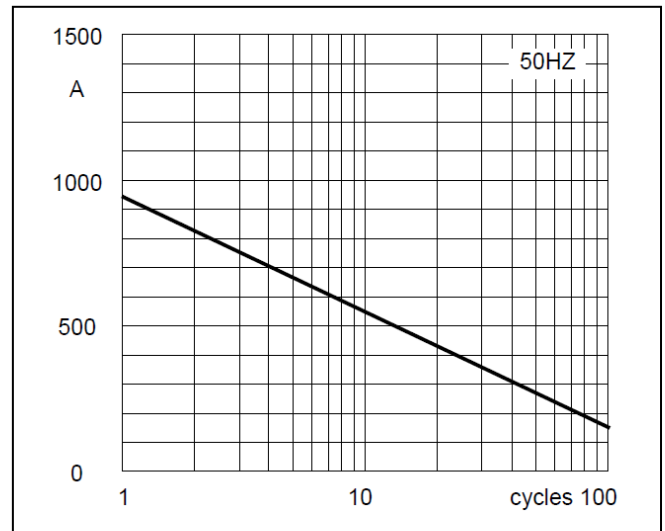
**Fig1. Forward Characteristics**



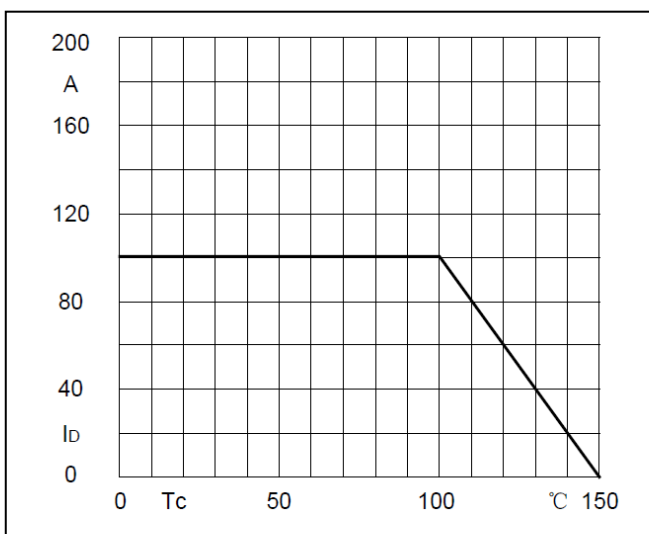
**Fig2. Power dissipation**



**Fig3. Transient thermal impedance**



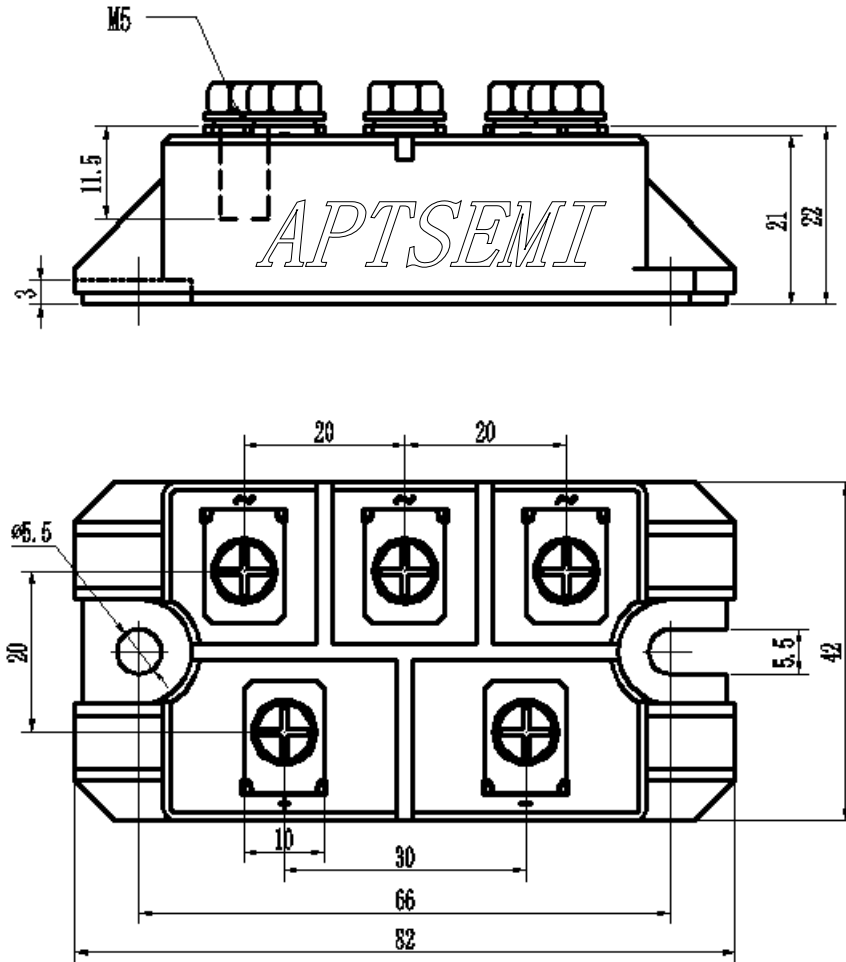
**Fig4. Max Non-Repetitive Forward Surge Current**



**Fig5. Forward Current Derating Curve**

## Package Outline Information

CASE: M4



Dimensions in mm