

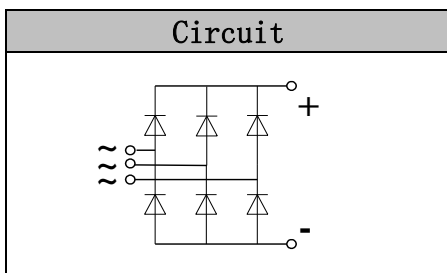


## Glass Passivated Three Phase Rectifier Bridge

**VRRM** 800 to 1800V  
**ID** 150 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
MD150S08M9	800V	900V
MD150S12M9	1200V	1300V
MD150S16M9	1600V	1700V
MD150S18M9	1800V	1900V

### Maximum Ratings

Symbol	Conditions	Values	Units
ID	Three phase, full wave Tc=100°C	150	A
IFSM	t=10mS Tvj =45°C	2250	A
i <sup>2</sup> t	t=10mS Tvj =45°C	25310	A <sup>2</sup> s
Visol	a.c.50HZ;r.m.s.;1min	3000	V
Tvj		-40 to +150	°C
Tstg		-40 to +125	°C
Mt	To terminals(M5)	2.5~3.5	Nm
Ms	To heatsink(M5)	2.5~3.5	Nm
Weight	Module (Approximately)	330	g

### Thermal Characteristics

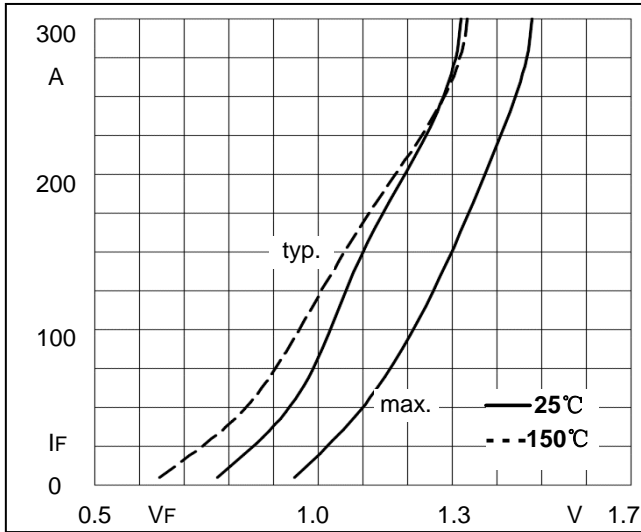
Symbol	Conditions	Values	Units
Rth(j-c)	Per Module	0.11	°C/W
Rth(j-c)	Per Diode	0.66	°C/W
Rth(c-s)	Module	0.03	°C/W



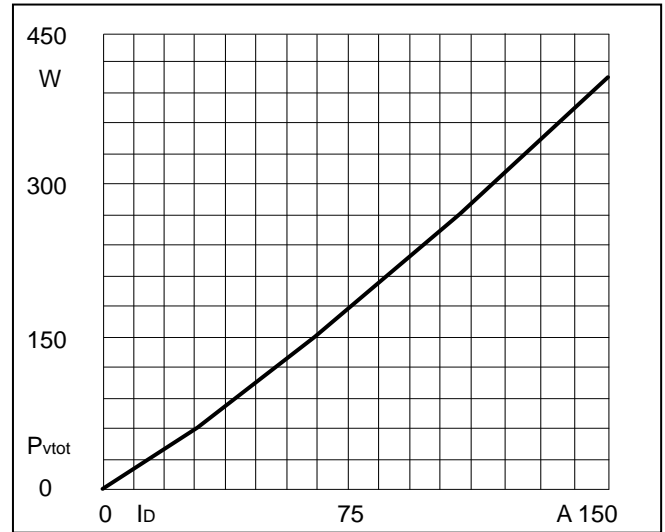
**Electrical Characteristics**

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
$V_{FM}$	$T=25^{\circ}C$ $I_F=150A$	—	1.1	1.3	V
$r_f$	$T_J=150^{\circ}C$		1.96		mΩ
$V_{fO}$	$T_J=150^{\circ}C$		0.74		V
$I_{RD}$	$T_{vj}=25^{\circ}C$ $V_{RD}=V_{RRM}$	—	—	0.1	mA
	$T_{vj}=150^{\circ}C$ $V_{RD}=V_{RRM}$			2	mA

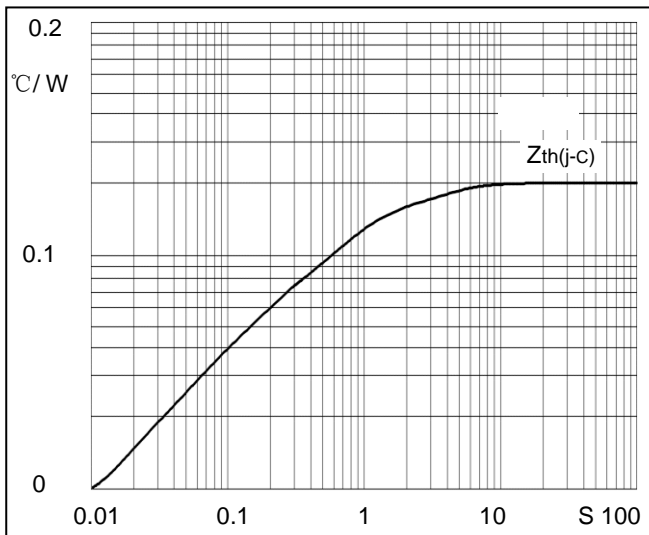
**Performance Curves**



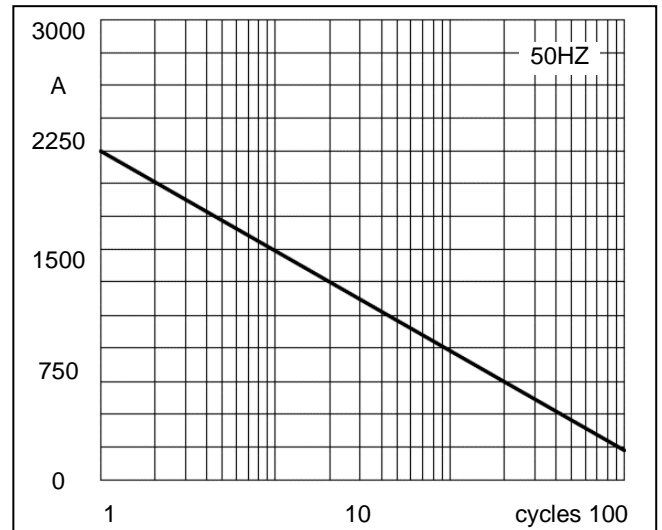
**Fig1. Forward Characteristics**



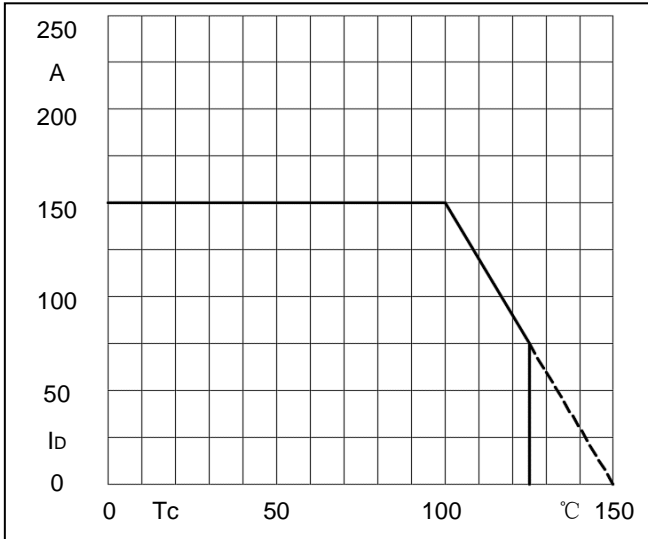
**Fig2. Power dissipation**



**Fig3. Transient thermal impedance**



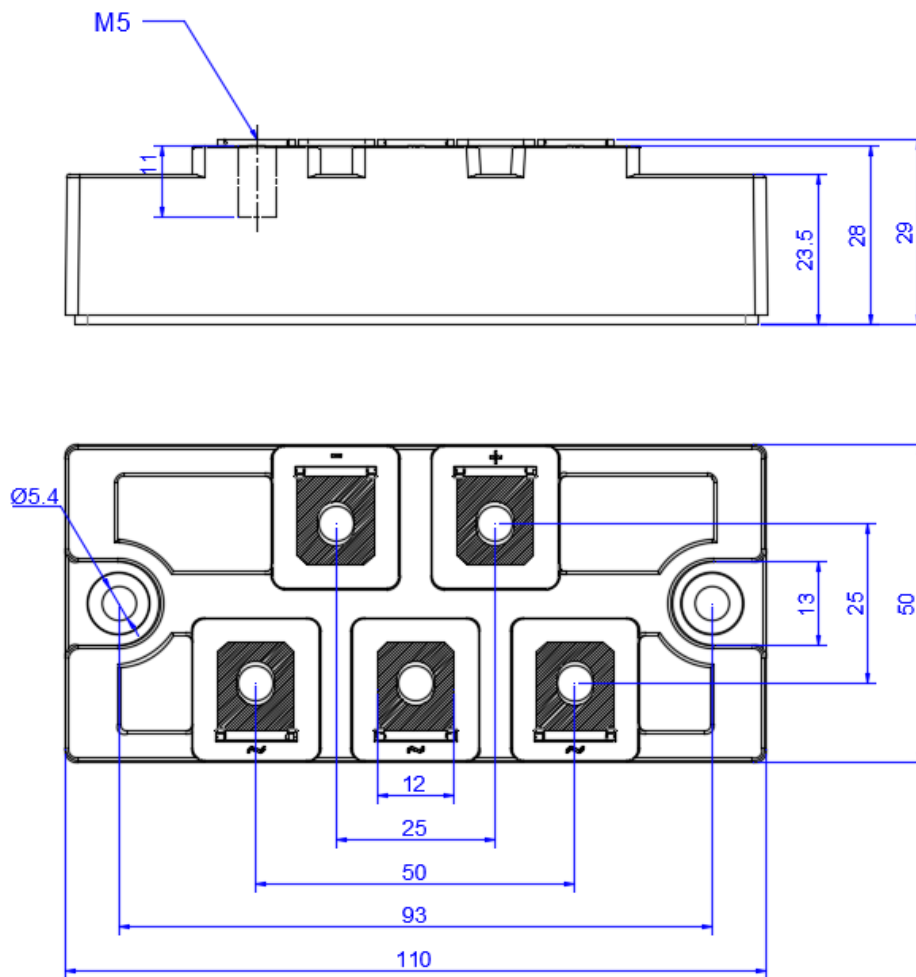
**Fig4. Max Non-Repetitive Forward Surge Current**



**Fig5.Forward Current Derating Curve**

## Package Outline Information

**CASE: M9**



**Dimensions in mm**