



## Glass Passivated Three Phase Rectifier Bridge

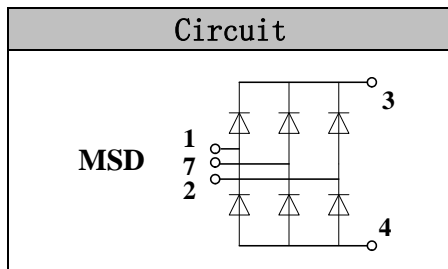
**VRRM** 800 to 1800V  
**ID** 50 Amp

### 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
- UL E243882 approved



### Module Type

TYPE	VRRM	VRSM
MSD50-08	800V	900V
MSD50-12	1200V	1300V
MSD50-16	1600V	1700V
MSD50-18	1800V	1900V

### Maximum Ratings

Symbol	Conditions	Values	Units
ID	Three phase, full wave Tc=96°C	50	A
IFSM	t=10mS Tvj =45°C	420	A
i <sup>2</sup> t	t=10mS Tvj =45°C	880	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
Ms	To heatsink(M5)	3±5%	Nm
Weight	Module (Approximately)	78	g

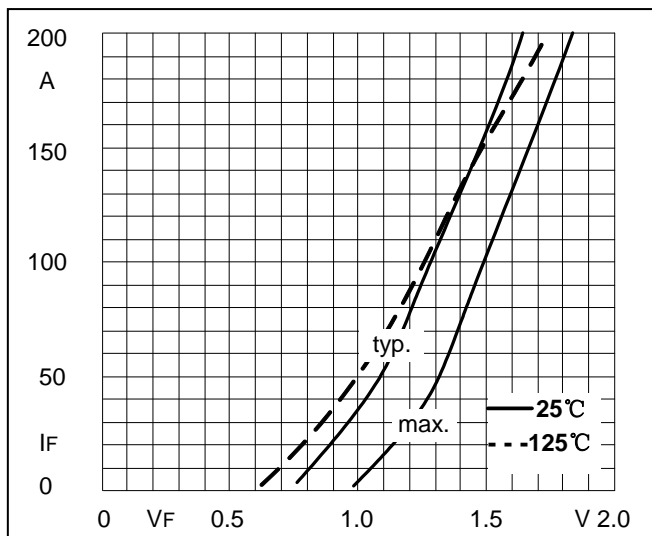
### Thermal Characteristics

Symbol	Conditions	Values	Units
Rth(j-c)	Per diode	1.5	°C/W
Rth(c-s)	Module	0.2	°C/W

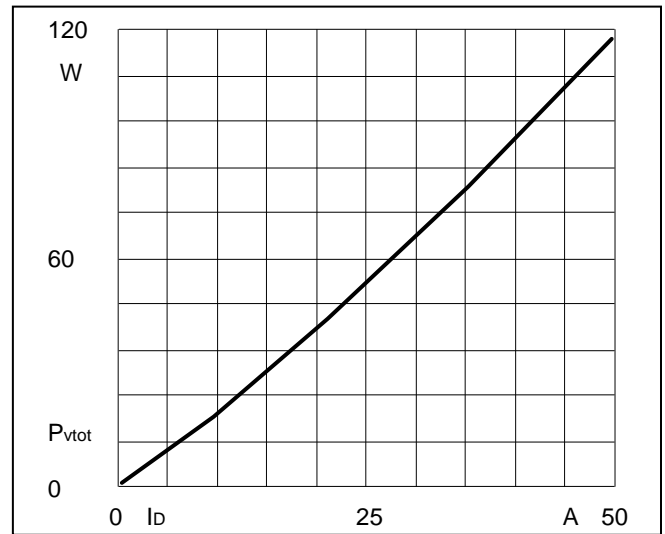
### Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
VFM	T=25°C IF =100A	—	1.30	1.50	V
IRD	Tvj=25°C VRD=VRRM	—	—	0.2	mA
	Tvj=150°C VRD=VRRM	—	—	3	mA

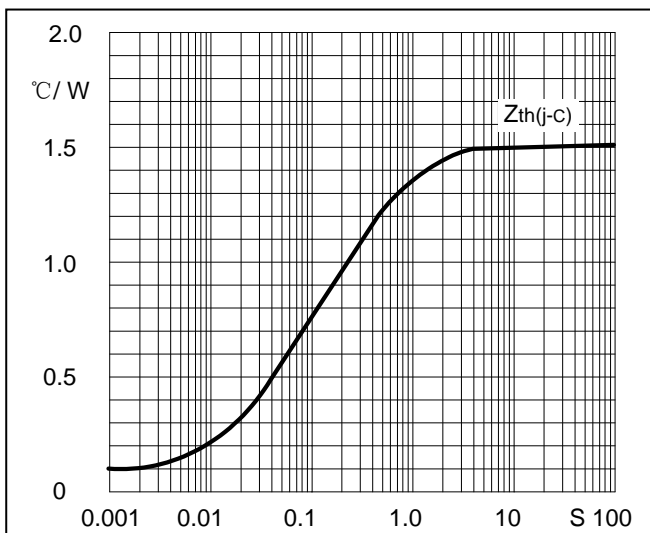
**Performance Curves**



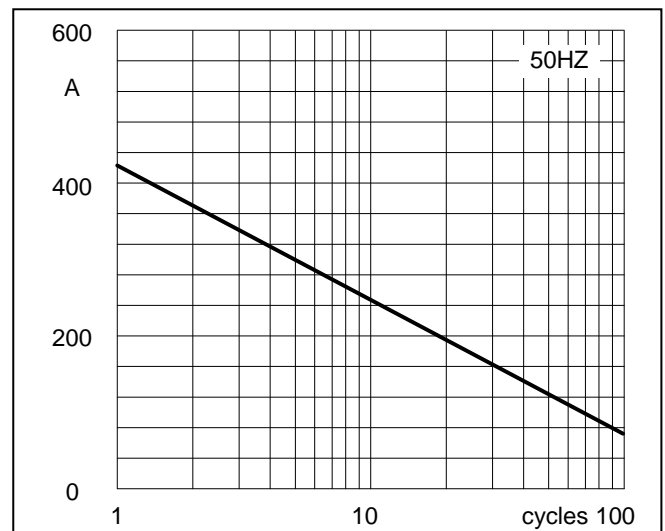
**Fig1. Forward Characteristics**



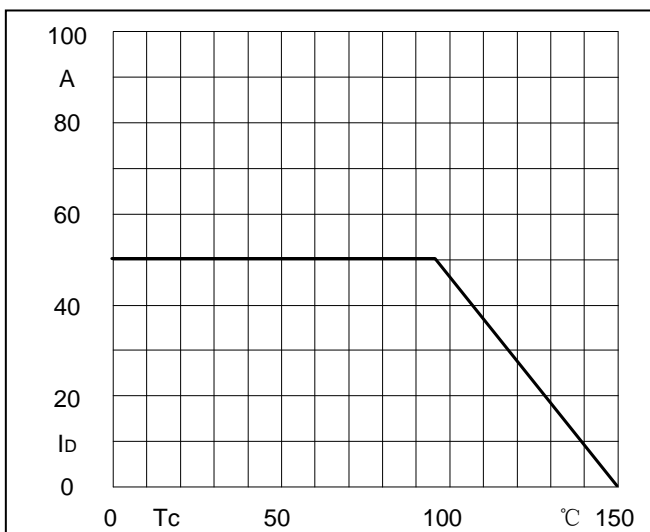
**Fig2. Power dissipation**



**Fig3. Transient thermal impedance**



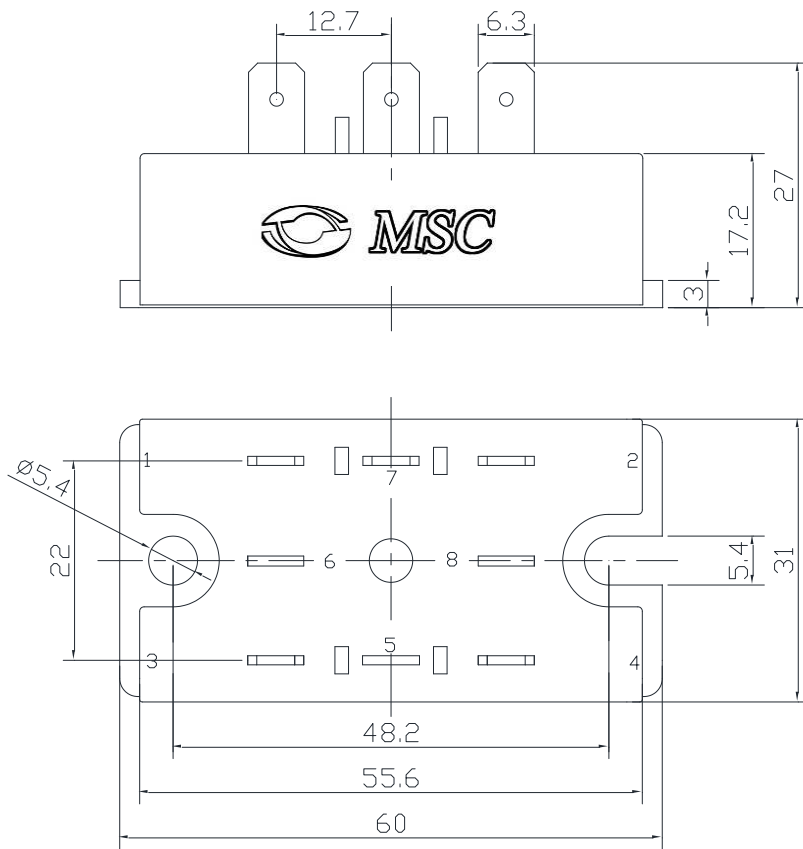
**Fig4. Max Non-Repetitive Forward Surge Current**



**Fig5. Forward Current Derating Curve**

**Package Outline Information**

**CASE: M1**



**Dimensions in mm**