

## Glass Passivated Three Phase Rectifier Bridge



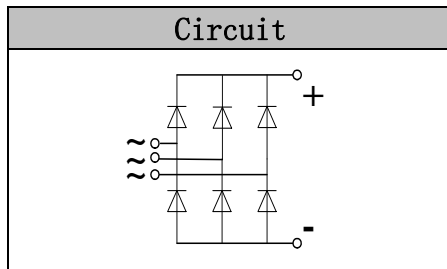
**VRRM** 800 to 1800V  
**ID** 100 A

### 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
- UL recognized applied for file no. E360040



### Module Type

TYPE	VRRM	VRSM
MD100S08M3	800V	900V
MD100S12M3	1200V	1300V
MD100S16M3	1600V	1700V
MD100S18M3	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
Visol	a.c.50HZ;r.m.s.;1min	3000	V
Tvj		-40 to +150	°C
Tstg		-40 to +125	°C
Mt	To terminals(M6)	5±15%	Nm
Ms	To heatsink(M6)	5±15%	Nm
Weight	Module (Approximately)	230	g

### Thermal Characteristics

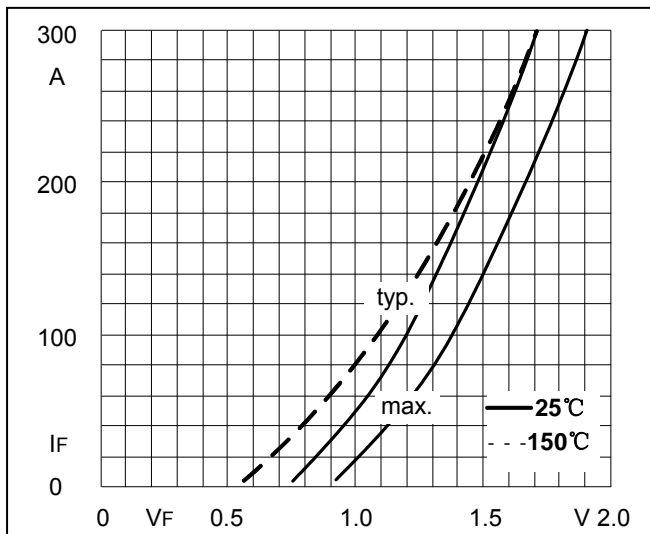
Symbol	Conditions	Values	Units
Rth(j-c)	Per diode	0.9	°C/W
Rth(c-s)	Module	0.03	°C/W



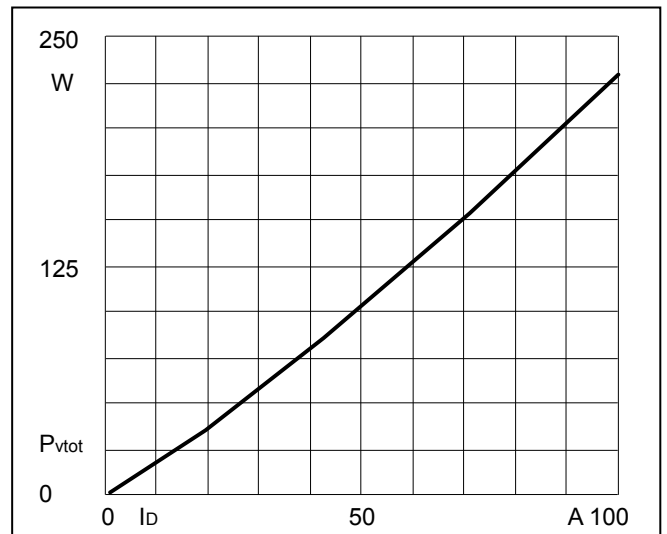
**Electrical Characteristics**

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
$r_f$	$T_J=150^{\circ}\text{C}$	-	3	-	m $\Omega$
$V_{f0}$	$T_J=150^{\circ}\text{C}$	-	0.79	-	V
$V_{FM}$	$T=25^{\circ}\text{C}$ $I_F=300\text{A}$	-	1.70	1.90	V
$I_{RD}$	$T_{vj}=25^{\circ}\text{C}$ $V_{RD}=V_{RRM}$	-	-	0.3	mA
	$T_{vj}=150^{\circ}\text{C}$ $V_{RD}=V_{RRM}$	-	-	5	mA

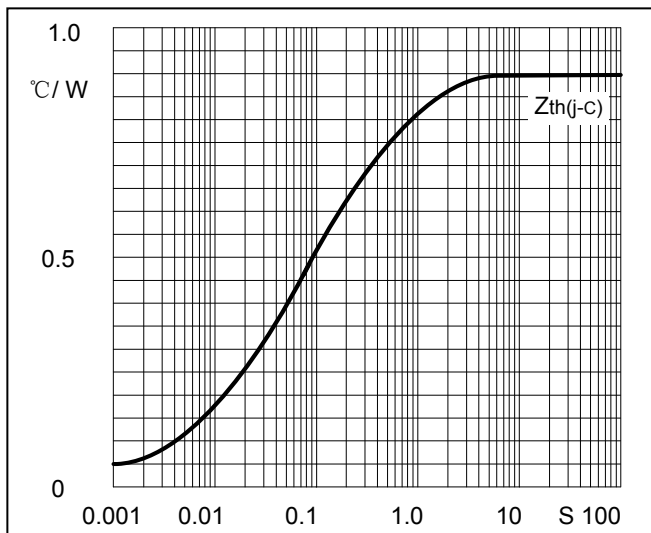
**Performance Curves**



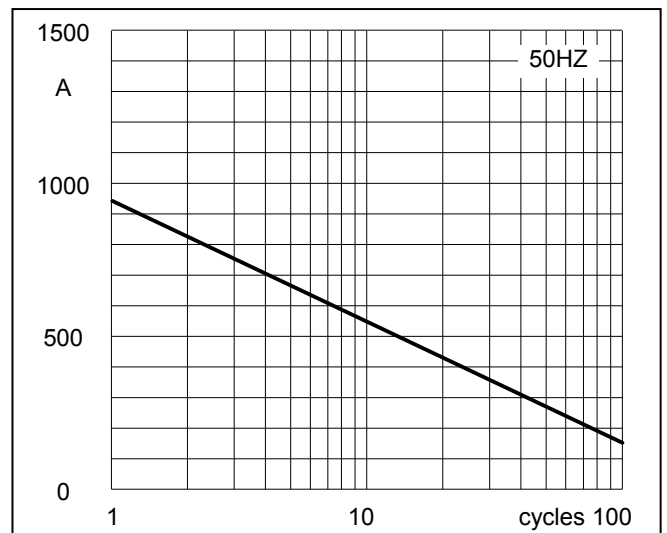
**Fig1. Forward Characteristics**



**Fig2. Power dissipation**



**Fig3. Transient thermal impedance**



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

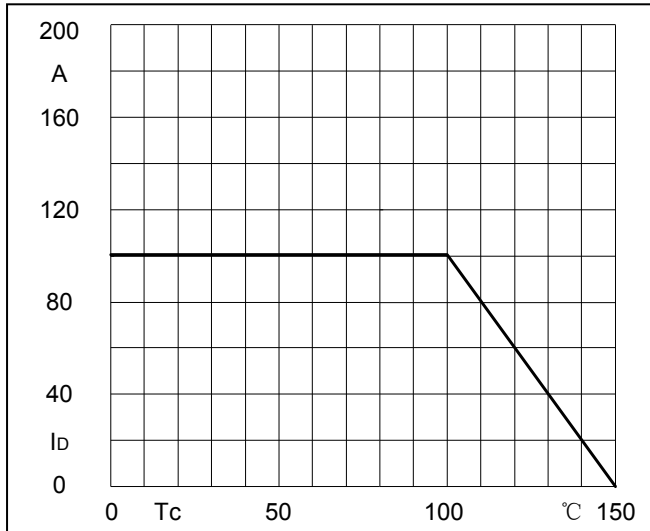
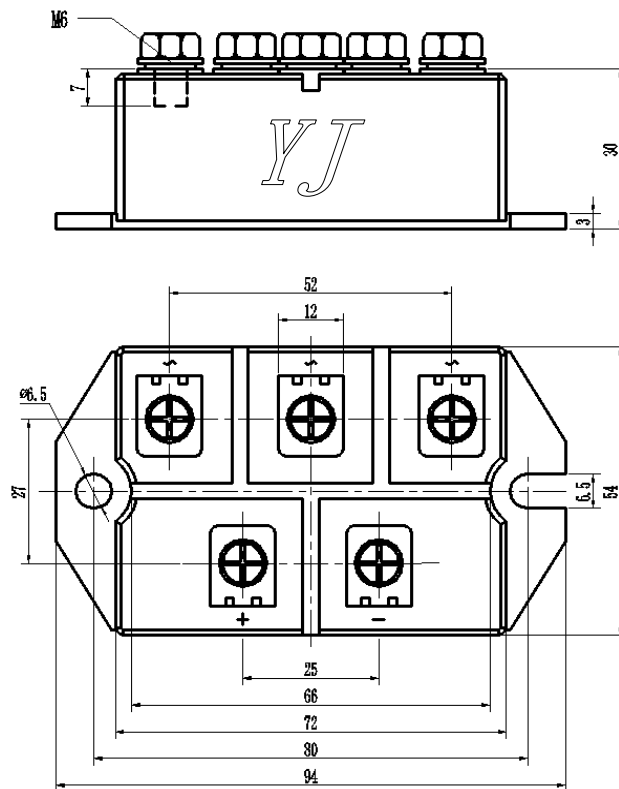


Fig5.Forward Current Derating Curve

### Package Outline Information

CASE: M3



Dimensions in mm