# MD100S-M8



## Glass Passivated Three Phase Rectifier Bridge

**$V_{RRM}$** 800 to1800V
**$I_D$** 100A

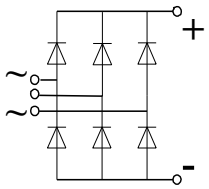
### Applications

- 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 to1800V
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip

Circuit




### Module Type

| TYPE | $V_{RRM}$ | $V_{RSM}$ |
|---|---|---|
| MD100S08M8 | 800V | 900V |
| MD100S12M8 | 1200V | 1300V |
| MD100S16M8 | 1600V | 1700V |
| MD100S18M8 | 1800V | 1900V |

### Maximum Ratings

| Symbol | Conditions | Values | Units |
|---|---|---|---|
| $I_D$ | Three phase, full wave Tc=100℃ | 100 | A |
| $I_{FSM}$ | t=10mS Tvj =45℃ | 920 | A |
| $i^2t$ | t=10mS Tvj =45℃ | 4200 | $A^2s$ |
| Visol | a.c.50HZ;r.m.s.;1min | 3000 | V |
| Tvj | | -40 to +150 | ℃ |
| Tstg | | -40 to +125 | ℃ |
| Mt | To terminals (M5) | 3±15% | Nm |
| Ms | To heatsink (M6) | 5±15% | Nm |
| Weight | Module (Approximately) | 168 | g |

### Thermal Characteristics

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

### Electrical Characteristics

| Symbol | Conditions | Values | | | Units |
|---|---|---|---|---|---|
| | | Min. | Typ. | Max. | |
| $V_{FM}$ | T=25℃ $I_F$ =300A | — | 1.70 | 1.90 | V |
| $I_{RD}$ | $T_{vj}$=25℃ $V_{RD}=V_{RRM}$<br>$T_{vj}$=150℃ $V_{RD}=V_{RRM}$ | — | — | 0.3<br>5 | mA<br>mA |

## Performance Curves

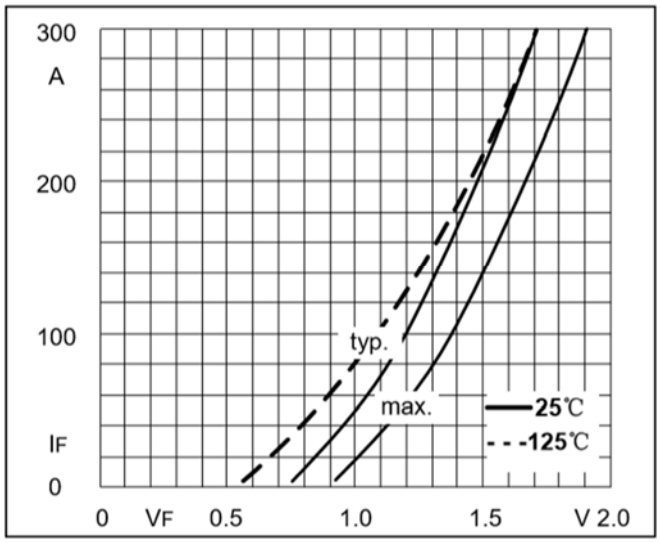



Fig1. Forward Characteristics

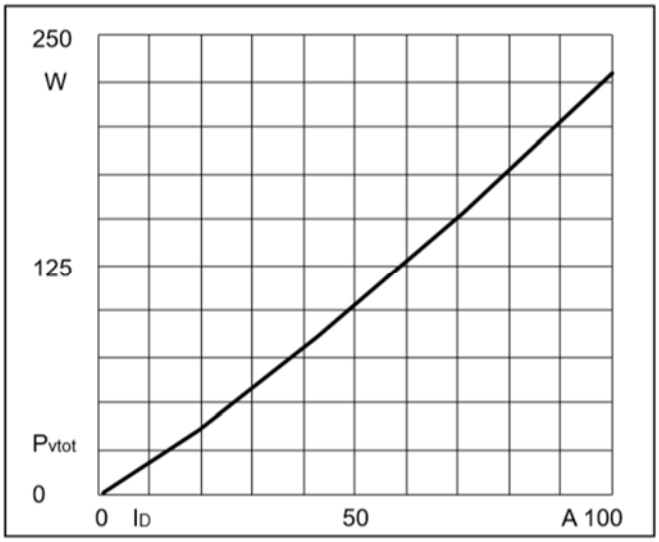



Fig2. Power dissipation

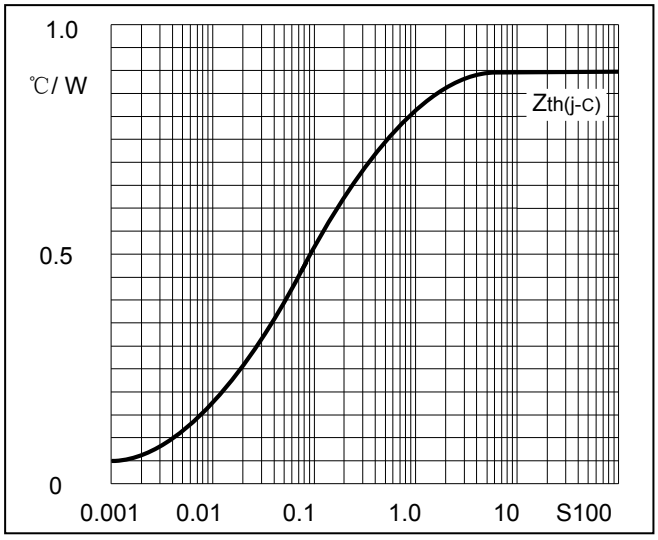



Fig3. Transient thermal impedance

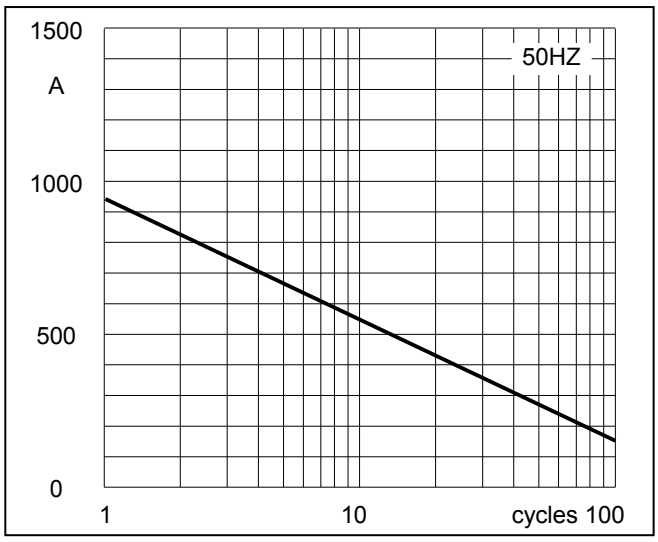



Fig4. Max Non-Repetitive Forward Surge Current

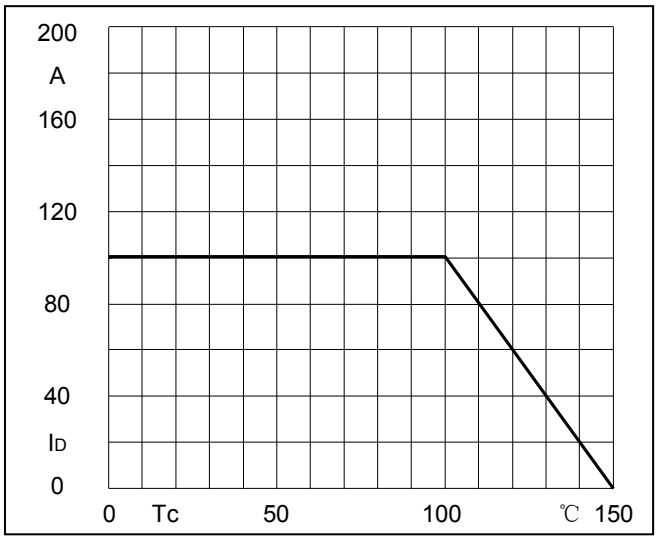
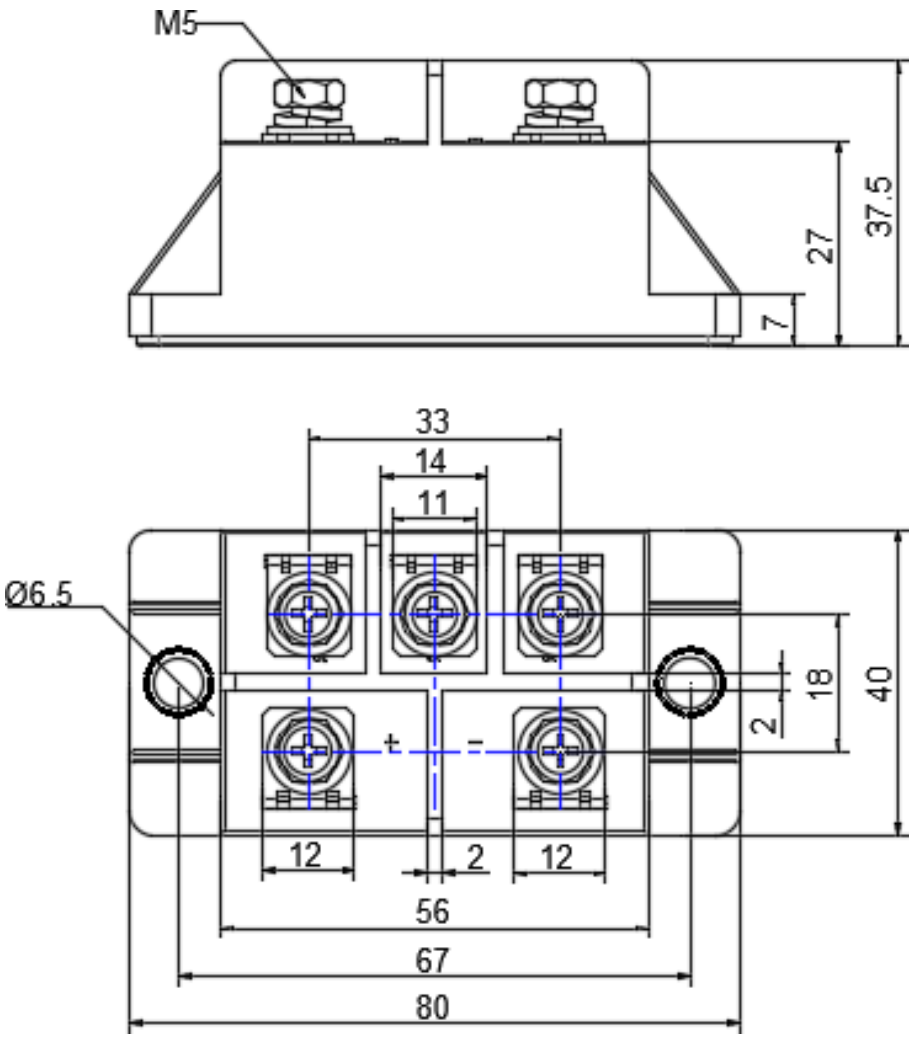



Fig5.Forward Current Derating Curve

**Package Outline Information**

**CASE：M8**




**Dimensions in mm**
**Tolerance：0.5mm**