



Glass Passivated Three Phase Rectifier Bridge

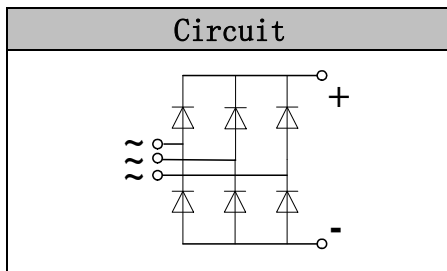
VRRM 800 to 2400V
ID 75 A

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 2400V
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip



Module Type

| TYPE | VRRM | VRSM |
|-----------|-------|-------|
| MD75S08M4 | 800V | 900V |
| MD75S12M4 | 1200V | 1300V |
| MD75S16M4 | 1600V | 1700V |
| MD75S18M4 | 1800V | 1900V |
| MD75S20M4 | 2000V | 2100V |
| MD75S22M4 | 2200V | 2300V |
| MD75S24M4 | 2400V | 2500V |

Maximum Ratings

| Symbol | Conditions | Values | Units |
|-------------------|---------------------------------|-------------|------------------|
| ID | Three phase, full wave Tc=100°C | 75 | A |
| IFSM | t=10mS Tvj =45°C | 1020 | A |
| i ² t | t=10mS Tvj =45°C | 5200 | A ² s |
| V _{isol} | a.c.50HZ;r.m.s.;1min | 3000 | V |
| T _{vj} | | -40 to +125 | °C |
| T _{stg} | | -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 _{th(j-c)} | Per diode | 1.0 | °C/W |
| R _{th(c-s)} | Module (Approximately) | 0.07 | °C/W |



Electrical Characteristics

| Symbol | Conditions | Values | | | Units |
|-----------------|---|--------|------|----------|----------|
| | | Min. | Typ. | Max. | |
| V _{FM} | T=25°C I _F =300A | — | 1.70 | 1.90 | V |
| I _{RD} | T _{vj} =25°C V _{RD} =V _R RM T _{vj} =150°C V _{RD} =V _R RM | — | — | 0.3 5 | mA mA |

Performance Curves

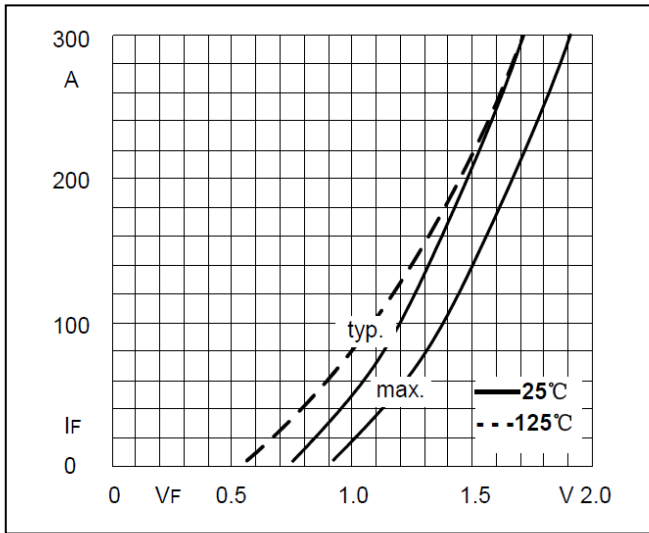


Fig1. Forward Characteristics

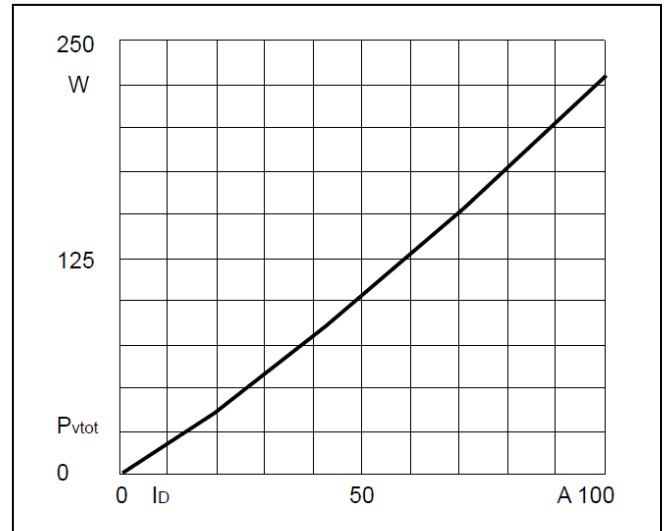


Fig2. Power dissipation

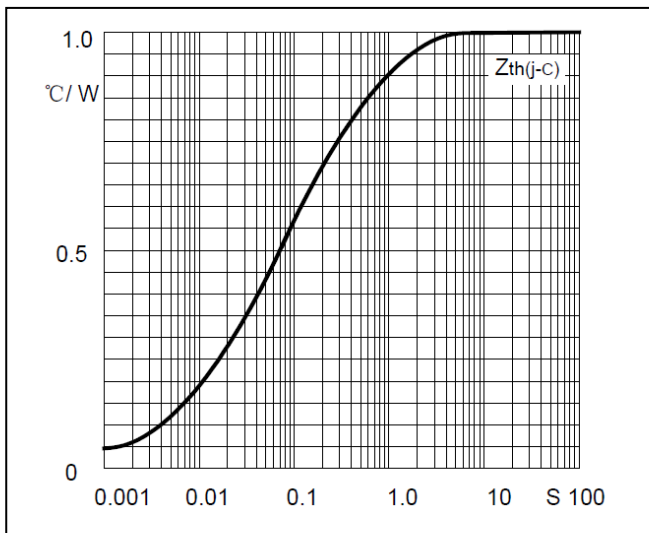


Fig3. Transient thermal impedance

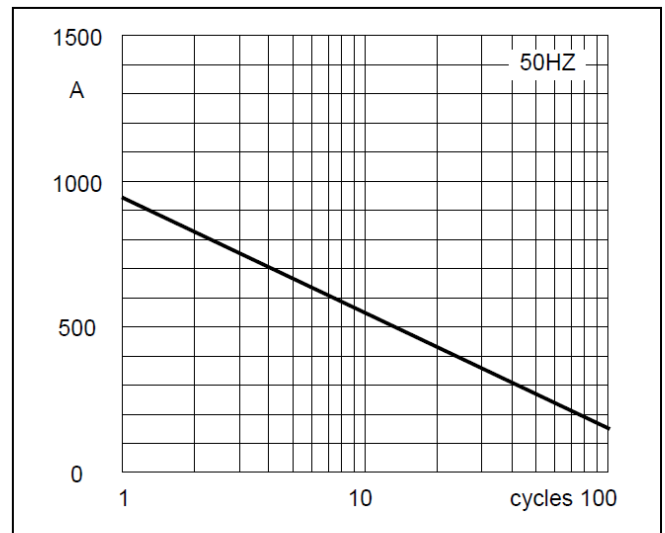


Fig4. Max Non-Repetitive Forward Surge Current

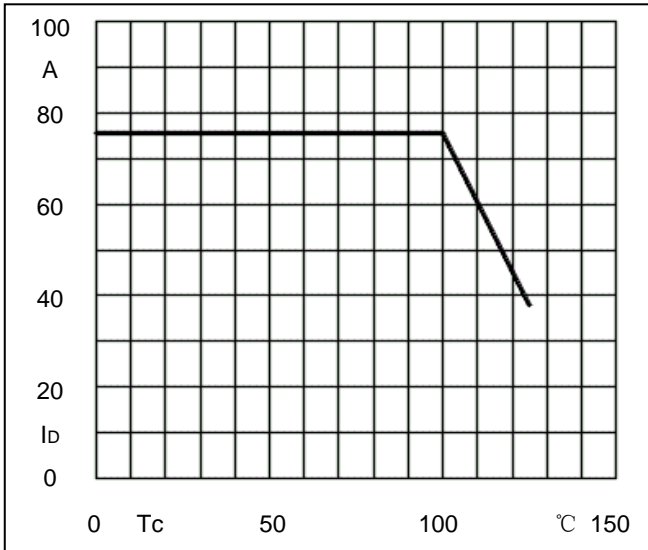


Fig5.Forward Current Derating Curve

Package Outline Information

CASE: M4

