



## Glass Passivated Three Phase Rectifier Bridge

**VRRM** 800 to 1800V

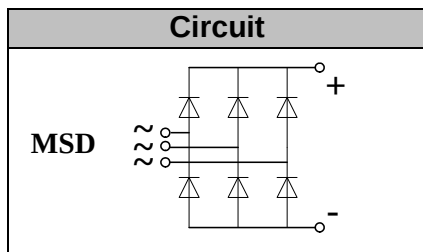
**ID** 100 Amp

### 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 DCB ceramic isolated metal baseplate
- Glass passivated chip



### Module Type

| TYPE        | VRRM  | VRSM  |
|-------------|-------|-------|
| MSD100 – 08 | 800V  | 900V  |
| MSD100 – 12 | 1200V | 1300V |
| MSD100 – 16 | 1600V | 1700V |
| MSD100 – 18 | 1800V | 1900V |

### Maximum Ratings

| Symbol           | Conditions            | Values     | Units            |
|------------------|-----------------------|------------|------------------|
| ID               | T <sub>c</sub> =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                | 230        | g                |

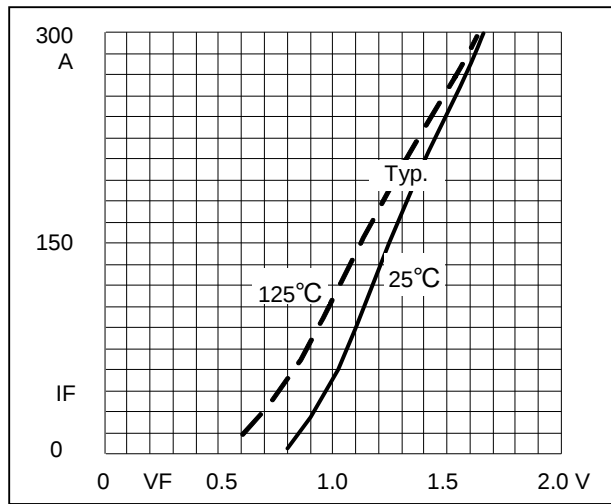
### Thermal Characteristics

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

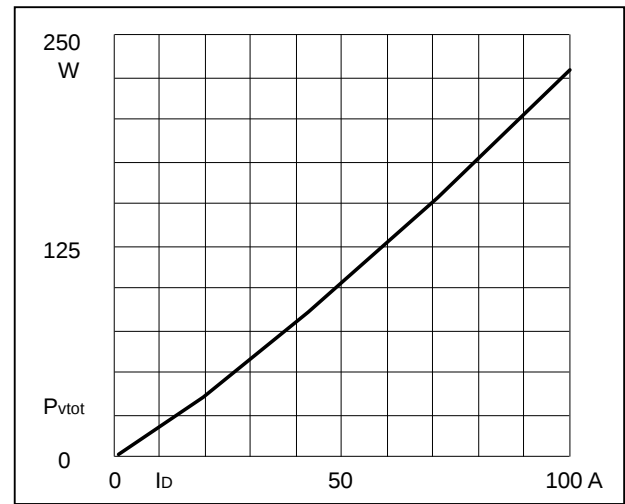
### Electrical Characteristics

| Symbol | Conditions          | Values | Units |
|--------|---------------------|--------|-------|
| VFM    | T=25°C IFM =300A    | 1.9    | V     |
| IRD    | Tvj =25°C VRD=VRRM  | ≤ 0.3  | mA    |
|        | Tvj =150°C VRD=VRRM | ≤ 5    | mA    |

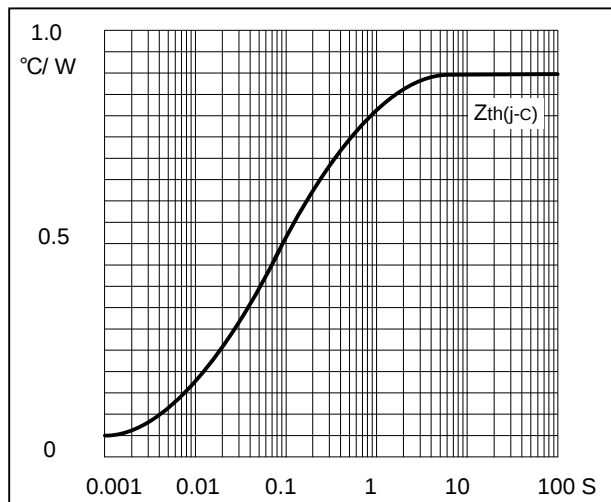
## Performance Curves



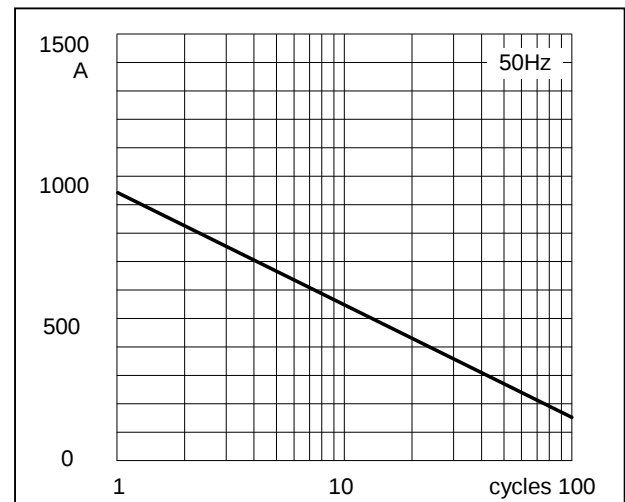
**Fig1. Forward Characteristics**



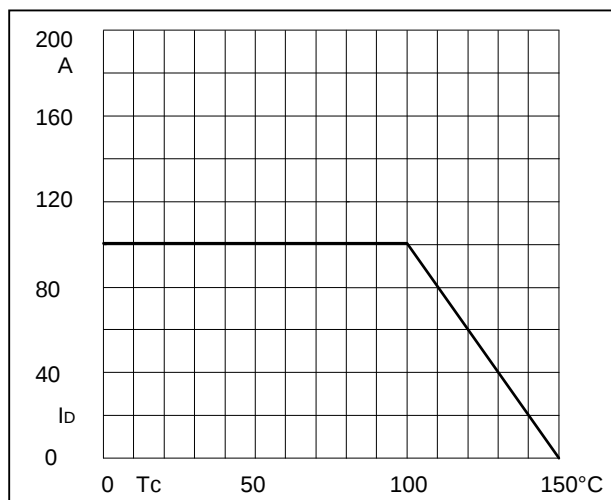
**Fig2. Power dissipation**



**Fig3. Transient thermal impedance**



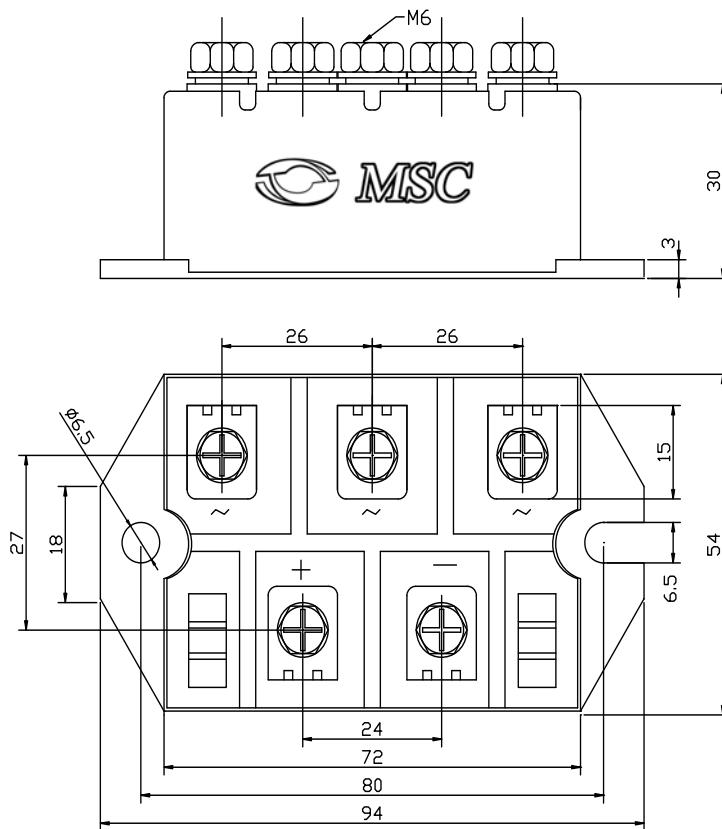
**Fig4. Max Non-Repetitive Forward Surge Current**



**Fig5. Forward Current Derating Curve**

## Package Outline Information

### CASE-M3



### Dimensions in mm