

## MMS75.12

### Power Rectifier bridge

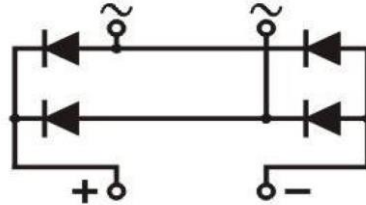
#### Features:

- International standard package
- Low forward voltage drop
- Isolation voltage 2500V ~
- Simple mounting
- UL recognized, file no. E312789



#### Typical applications:

- DC power suppliers for apparatus device
- Input rectifying power supply for PWM converters
- Inverter welders
- Battery chargers



| Symbol        | Characteristics                                 | Test Conditions                                                        | Value |      |      | Unit                    |
|---------------|-------------------------------------------------|------------------------------------------------------------------------|-------|------|------|-------------------------|
|               |                                                 |                                                                        | Min   | Typ  | Max  |                         |
| $V_{RSM/DSM}$ | Non-repetitive reverse/forward blocking voltage | $T_j = 25^{\circ}\text{C}$                                             |       |      | 1300 | V                       |
| $V_{RRM/DRM}$ | Repetitive reverse/forward blocking voltage     | $T_j = 25^{\circ}\text{C}$                                             |       |      | 1200 | V                       |
| $I_D$         | Rectifier bridge output current                 | Three-phase whole wave rectifying circuit, $T_c = 100^{\circ}\text{C}$ |       |      | 75   | A                       |
| $I_{RRM}$     | Repetitive peak reverse current                 | at $V_{RRM}$<br>$T_j = 150^{\circ}\text{C}$                            |       |      | 5    | mA                      |
| $I_{FSM}$     | Forward surge current                           | 10ms half sine wave, $T_j = 150^{\circ}\text{C}$                       |       |      | 1000 | A                       |
| $I^2 t$       | $I^2 t$ for fusing coordination                 | $V_R = 0.6 V_{RRM}$ , $T_j = 150^{\circ}\text{C}$                      |       |      | 5000 | $\text{A}^2\text{s}$    |
| $V_{FO}$      | Threshold voltage                               | $T_j = 150^{\circ}\text{C}$                                            |       |      | 0.90 | V                       |
| $r_T$         | Forward slope resistance                        | $T_j = 150^{\circ}\text{C}$                                            |       |      | 5    | $\text{m}\Omega$        |
| $V_{FM}$      | Peak forward voltage                            | $T = 25^{\circ}\text{C}$ ; $I_T = 112\text{A}$                         |       | 1.00 | 1.20 | V                       |
| $R_{th(j-c)}$ | Thermal resistance junction to case             | per module                                                             |       |      | 0.39 | $^{\circ}\text{C/W}$    |
| $R_{th(c-s)}$ | Thermal resistance case to sink                 | per module                                                             |       |      | 0.07 | $^{\circ}\text{C/W}$    |
| $V_{ISO}$     | Isolation voltage                               | 50Hz, RMS, $t = 1\text{min}$                                           |       |      | 2500 | V                       |
| $F_M$         | Mounting torque - copper plate (M6)             |                                                                        | 4     |      | 6    | $\text{N}\cdot\text{m}$ |
|               | Mounting torque - terminal (M5)                 |                                                                        | 2.5   |      | 4.5  | $\text{N}\cdot\text{m}$ |
| $T_{stg}$     | Storage Temperature                             |                                                                        | -40   |      | 150  | $^{\circ}\text{C}$      |
| $T_j$         | Operating Temperature                           |                                                                        | -40   |      | 150  | $^{\circ}\text{C}$      |
| $W_t$         | Weight                                          |                                                                        |       | 190  |      | g                       |
| Outline       | M18                                             |                                                                        |       |      |      |                         |



# SCOMES

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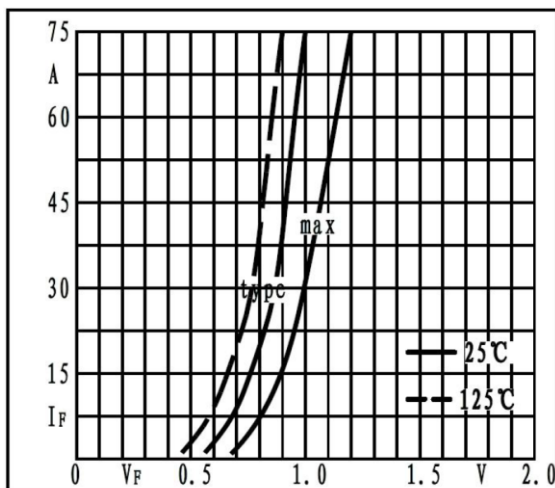


Fig1. Forward characteristics

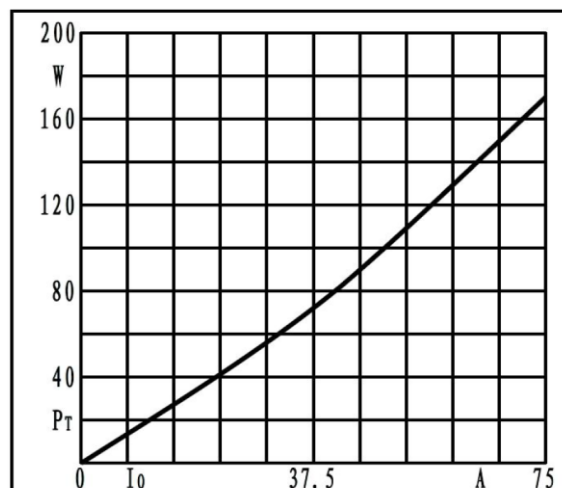


Fig2. Power dissipation

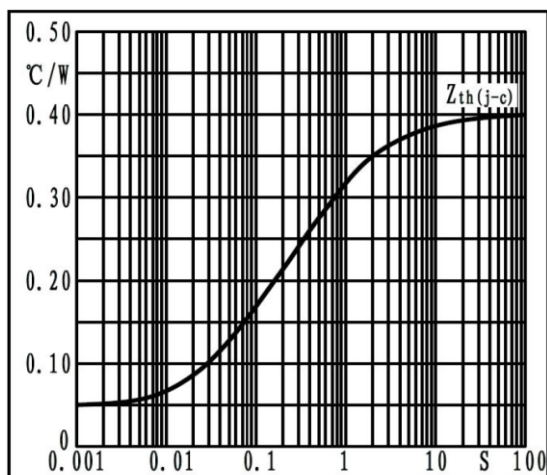


Fig3. Transient thermal impedance

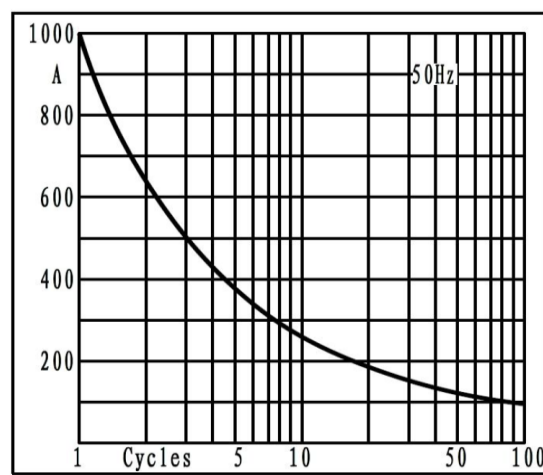


Fig4. Max non-repetitive forward surge current

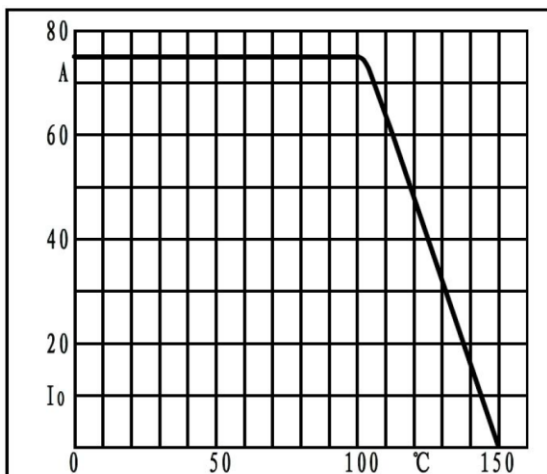
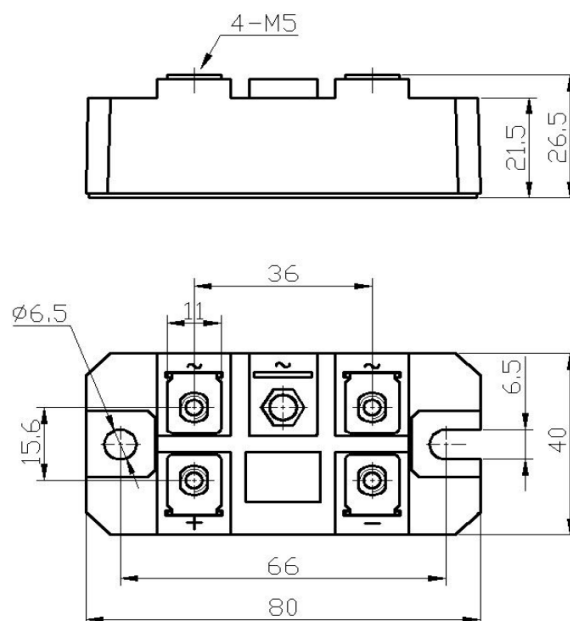


Fig5. Forward current derating curve



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