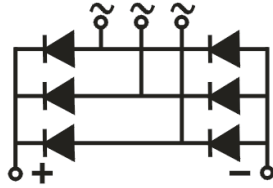


### Three Phase Rectifier Module MDS-75

#### Features

- ▶ International standard package
- ▶ Blocking voltage up to 1800V
- ▶ Low forward voltage drop
- ▶ Isolation voltage 2500V



#### Typical Applications

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

| Symbol | MDS-75-06F | MDS-75-08F | MDS-75-10F | MDS-75-12F | MDS-75-16F | MDS-75-18F | Unit |
|--------|------------|------------|------------|------------|------------|------------|------|
| VRRM   | 600        | 800        | 1000       | 1200       | 1600       | 1800       | V    |
| VRSM   | 700        | 900        | 1100       | 1300       | 1800       | 1900       | V    |

| Symbol           | Parameter                         | Test condition                                     | Rating      | Unit             |
|------------------|-----------------------------------|--|-------------|------------------|
| Id               | Output DC current                 | Three-phase whole wave rectifying circuit Tc:100°C | 75          | A                |
| IFSM             | Forward surge current             | t=10ms,50Hz,sin,Tjm                                | 1000        | A                |
| I <sup>2</sup> t | I <sup>2</sup> t value            | VR = 0.6VRRM, Tjm                                  | 5000        | A <sup>2</sup> S |
| VISO             | Isolation voltage                 | AC one min   | 2500        | V                |
| Tj               | Operating junction temperature    |  | -40 to +150 | °C               |
| Tjm              | Rated junction temperature        |  | 150         | °C               |
| Tstg             | Storage temperature               |  | -40 to +150 | °C               |
| Rth(j-c)         | Thermal impedance (junction-case) | Single-side heat dissipation, sine half- wave      | 0.4         | °C/W             |
| Md               | Mounting torque (copper plate) M6 |  | 5±15%       | N•M              |
|                  | Mounting torque (terminal) M5     |  | 3±15%       | N•M              |
| Wt               | weight                            |  | 185         | g                |

#### Electrical characteristics

| Symbol           | Parameter                       | Test condition   | Rating |      |      | Unit |
|------------------|---------------------------------|--|--------|------|------|------|
|                  |                                 |  | Min.   | Typ. | Max. |      |
| I <sub>RRM</sub> | Peak reverse repetitive current | Single-side heat dissipation, VR=VRRM, sine half wave,Tj=150°C | --     | --   | 5    | mA   |
| V <sub>FM</sub>  | Peak forward voltage            | IFM =75A, Tj=25°C  | --     | 1.0  | 1.2  | V    |

### Three Phase Rectifier Module MDS-75

#### Performance Curves

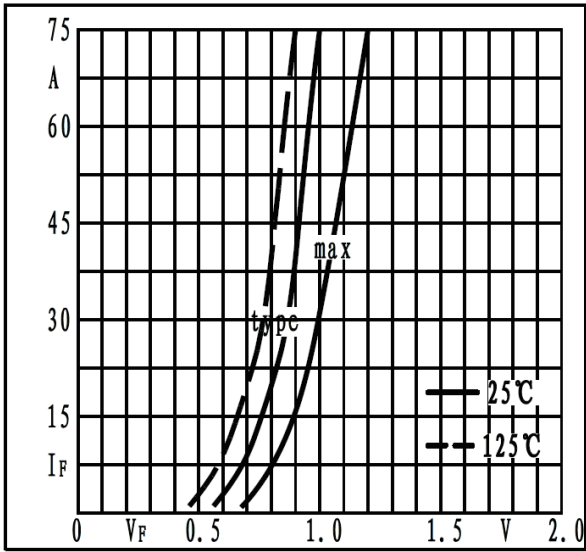


Fig1. Forward characteristics

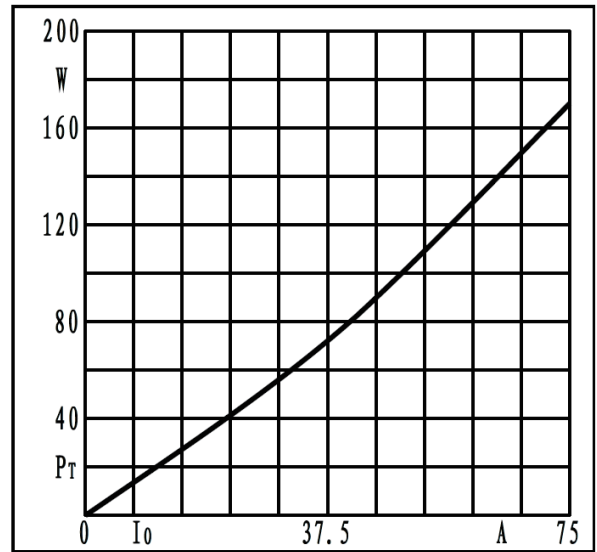


Fig2. Power dissipation

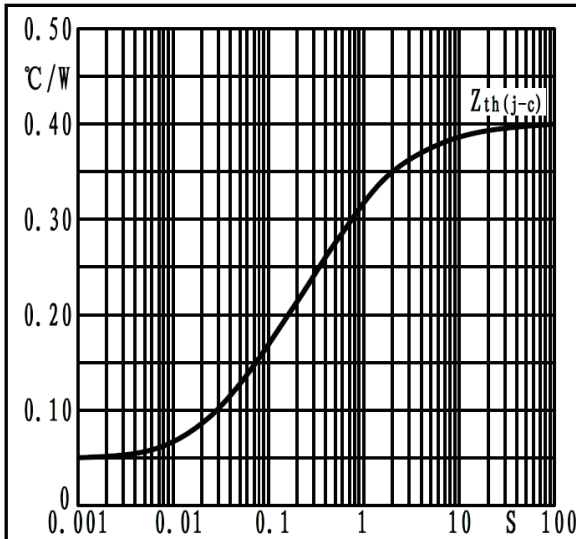


Fig3. Transient thermal impedance

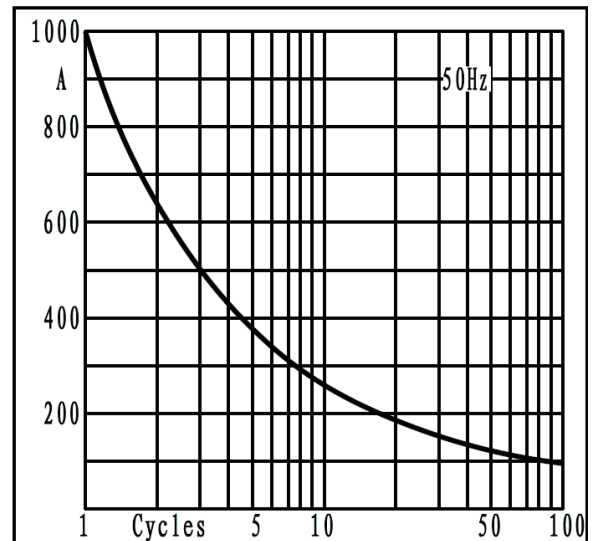


Fig4. Max non-repetitive forward surge current

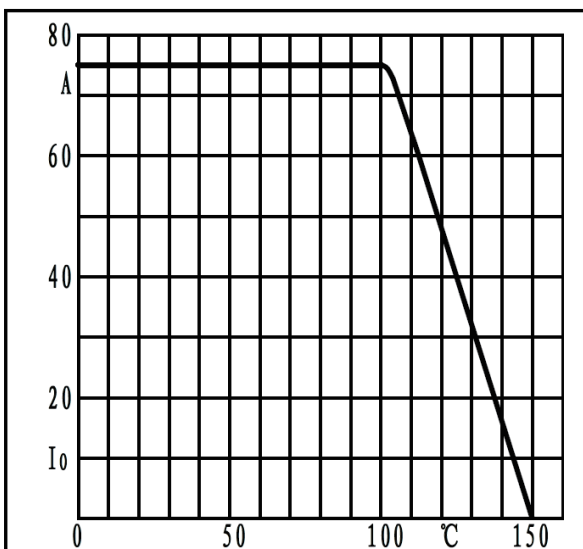


Fig5. Forward current derating curve

## Three Phase Rectifier Module MDS-75

Dimensions in mm

