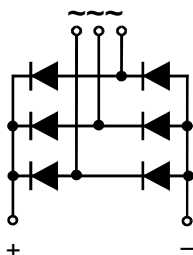


Feature

- International standard package
- Low forward voltage drop
- Isolation voltage 2500V~



Application

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

Maximum value

| Symbol | Parameter | Rating | | | | | | | Unit |
|-----------|-------------------------------------|------------|------------|------------|------------|------------|------------|------------|------|
| | | MDS500-06F | MDS500-08F | MDS500-10F | MDS500-12F | MDS500-14F | MDS500-16F | MDS500-18F | |
| V_{RRM} | Peak reverse repetitive voltage | 600 | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | V |
| V_{RSM} | Peak reverse non-repetitive voltage | 700 | 900 | 1100 | 1300 | 1500 | 1700 | 1900 | V |

| Symbol | Parameter | Test condition | Rating | Unit |
|-----------|-----------------------------------|---|-----------------|----------------------|
| I_o | Output DC current | Three-phase whole wave rectifying circuit $T_c:100^\circ\text{C}$ | 500 | A |
| I_{FSM} | Forward surge current | $t=10\text{ms}, 50\text{HZ}, \text{sin}, T_{jm}$ | 7500 | A |
| I^2t | I^2t value | $V_R = 0.6V_{RRM}, T_{jm}$ | 281250 | A^2S |
| V_{ISO} | Isolation voltage | AC one min | 2500 | V |
| T_j | Operating junction temperature | | -40 to +150 | $^\circ\text{C}$ |
| T_{jm} | Rated junction temperature | | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage temperature | | -40 to +125 | $^\circ\text{C}$ |
| M_d | Mounting torque (copper plate) M6 | | 5±15% | N·m |
| | Mounting torque (terminal) M8 M12 | | 7±15% 12±15% | N·m |
| W_t | weight | | 1100 | g |

Electrical characteristics

| Symbol | Parameter | Test condition | Rating | Unit |
|---------------|-----------------------------------|---|--------|--------------------|
| I_{RRM} | Peak reverse repetitive current | Single-side heat dissipation, $V_R=V_{RRM}$, sine half wave, $T_j=150^\circ\text{C}$ | 10 | mA |
| V_{FM} | Peak forward voltage | $I_{FM}=400\text{A}, T_j=25^\circ\text{C}$ | 1.3 | V |
| $R_{th(j-c)}$ | Thermal impedance (junction-case) | Single-side heat dissipation, sine half wave | 0.12 | $^\circ\text{C/W}$ |

Performance Curves

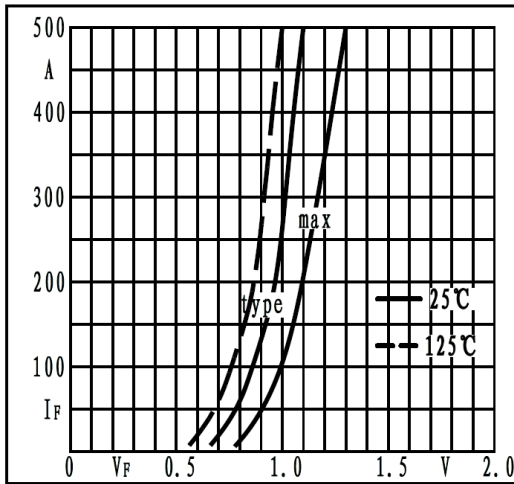


Fig1. Forward characteristics

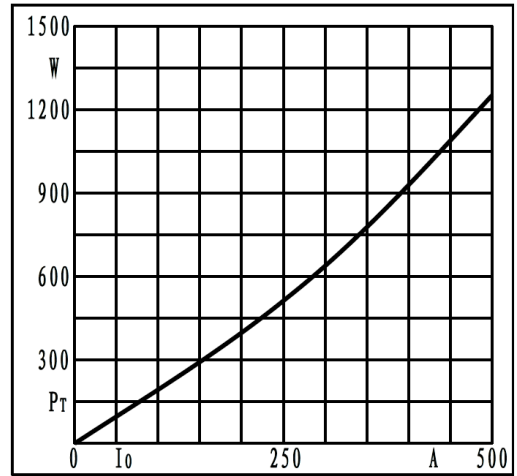


Fig2. Power dissipation

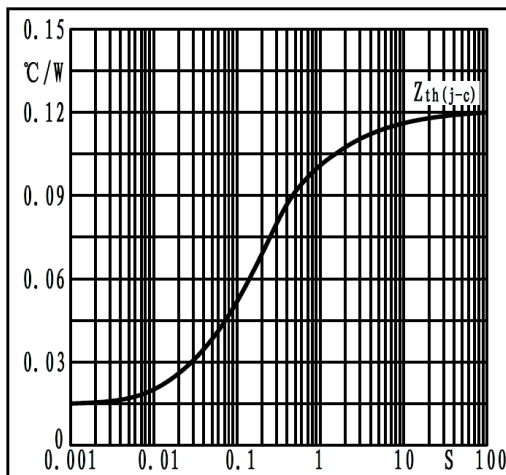


Fig3. Transient thermal impedance

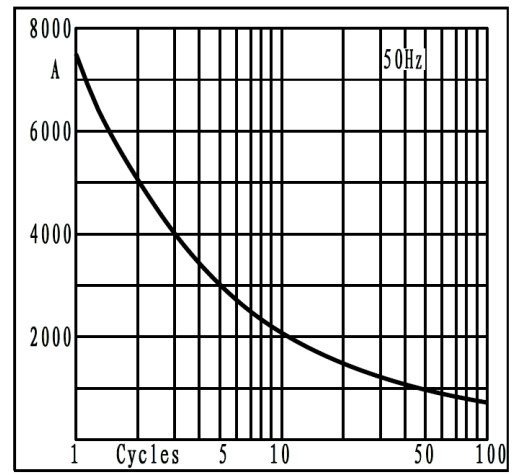


Fig4. Max non-repetitive forward surge current

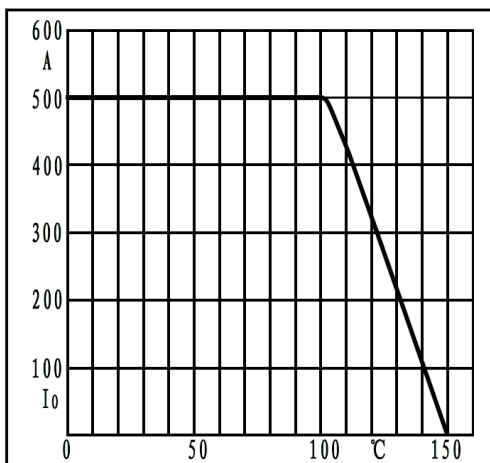
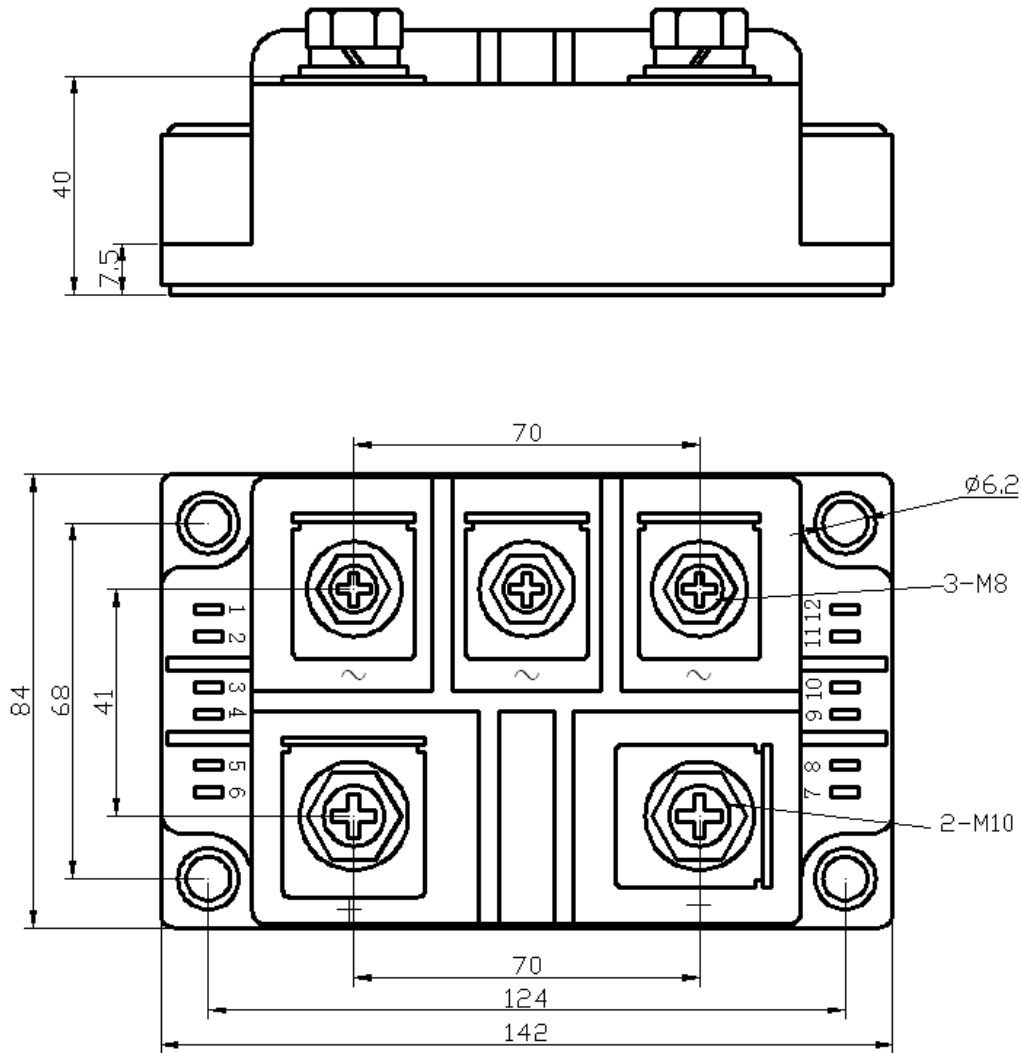


Fig5. Forward current derating curve

Dimension



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