



**Features:**

- High performance thermal insulation materials
- Good thermal fatigue performance
- International standard package

**Typical Applications**

- Various rectifiers
- DC supply for PWM inverter

| V <sub>RSM</sub> | V <sub>RRM</sub> | Type & Outline |
|------------------|------------------|----------------|
| 900V             | 800V             | MDx81-08       |
| 1100V            | 1000V            | MDx81-10       |
| 1300V            | 1200V            | MDx81-12       |
| 1500V            | 1400V            | MDx81-14       |
| 1700V            | 1600V            | MDx81-16       |
| 1900V            | 1800V            | MDx81-18       |

| SYMBOL               | CHARACTERISTIC                           | TEST CONDITIONS   | T <sub>J</sub> (°C) | VALUE |      |       | UNIT                             |
|----------------------|--|---|---------------------|-------|------|-------|----------------------------------|
|                      |  |   |                     | Min   | Type | Max   |                                  |
| I <sub>F(AV)</sub>   | Mean forward current                     | 180° half sine wave 50Hz<br>Single side cooled, T <sub>C</sub> =100°C | 150                 |       |      | 81    | A                                |
| I <sub>F(RMS)</sub>  | RMS forward current                      |   | 150                 |       |      | 127   | A                                |
| I <sub>RRM</sub>     | Repetitive peak current                  | at V <sub>RRM</sub>   | 150                 |       |      | 8     | mA                               |
| I <sub>FSM</sub>     | Surge forward current                    | 10ms half sine wave   | 150                 |       |      | 2.30  | KA                               |
| I <sup>2</sup> t     | I <sup>2</sup> T for fusing coordination | V <sub>R</sub> =0.6V <sub>RRM</sub>                                   |                     |       |      | 26    | A <sup>2</sup> s*10 <sup>3</sup> |
| V <sub>FO</sub>      | Threshold voltage                        |   | 150                 |       |      | 0.80  | V                                |
| r <sub>F</sub>       | Forward slop resistance                  |   |                     |       |      | 1.70  | mΩ                               |
| V <sub>FM</sub>      | Peak forward voltage                     | I <sub>FM</sub> =245A   | 25                  |       |      | 1.45  | V                                |
| R <sub>th(j-c)</sub> | Thermal resistance<br>Junction to case   | At 180° sine: Single side cooled per chip                             |                     |       |      | 0.470 | °C/W                             |
| R <sub>th(c-h)</sub> | Thermal resistance<br>case to heatsink   | At 180° sine: Single side cooled per chip                             |                     |       |      | 0.2   | °C/W                             |
| V <sub>iso</sub>     | Isolation voltage                        | 50Hz, R.M.S, t=1min, I <sub>iso</sub> :1mA(max)                       |                     | 2500  |      |       | V                                |
| F <sub>m</sub>       | Terminal connection torque(M5)           |   |                     |       | 4    |       | N·m                              |
|                      | Mounting torque(M6)                      |   |                     |       | 6    |       | N·m                              |
| T <sub>stg</sub>     | Stored temperature                       |   |                     | -40   |      | 125   | °C                               |
| W <sub>t</sub>       | Weight                                   |   |                     |       | 105  |       | g                                |
| Outline              | M01H                                     |   |                     |       |      |       |                                  |

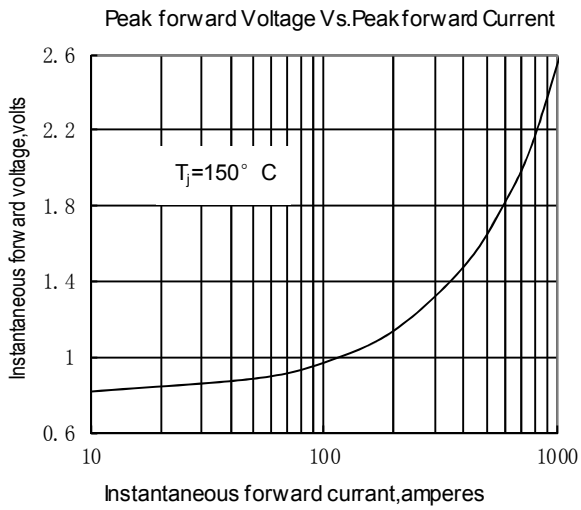


Fig.1

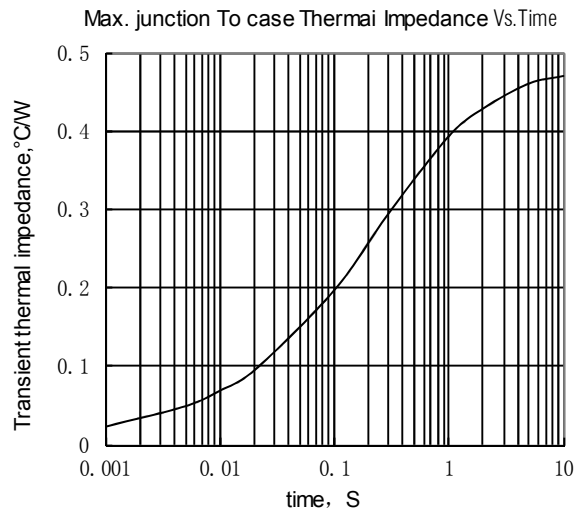


Fig.2

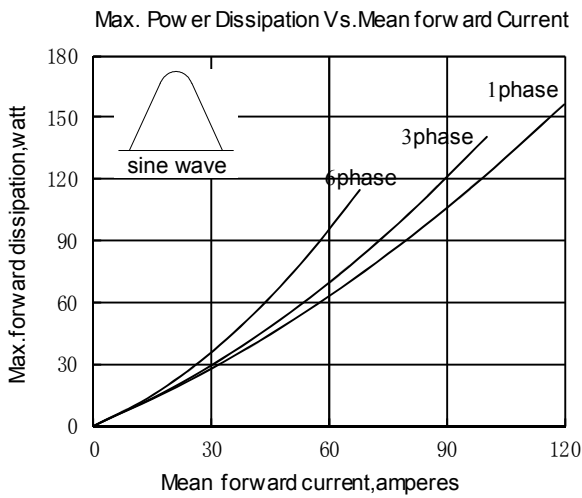


Fig.3

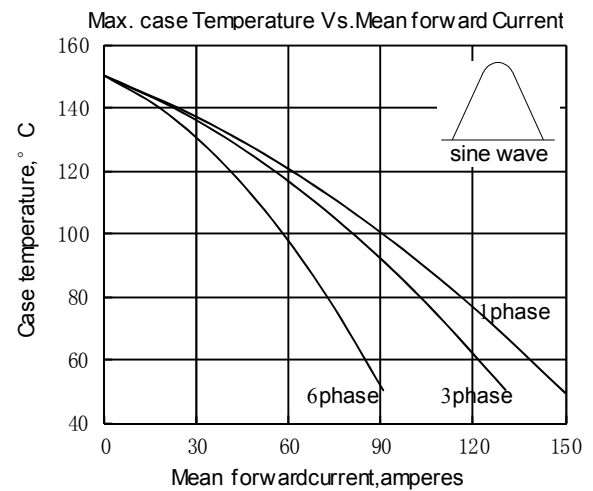


Fig.4

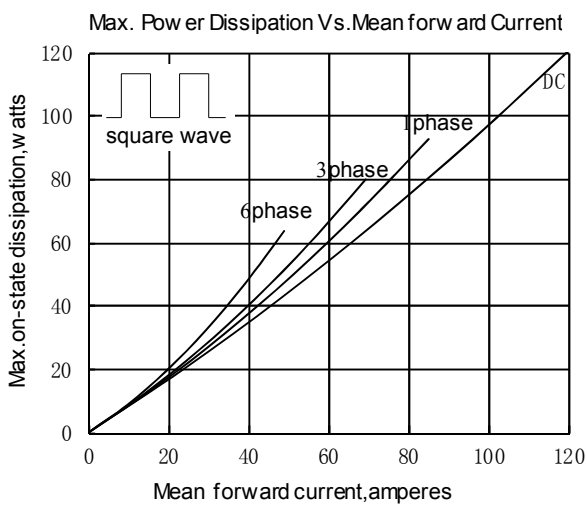


Fig.5

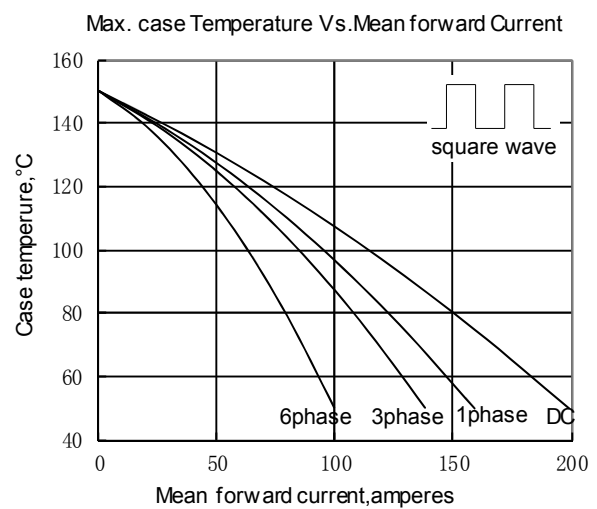


Fig.6

Surge Current Vs.Cycles

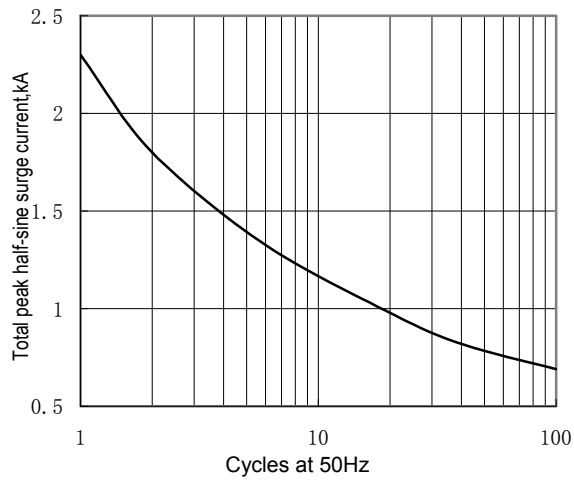


Fig.7

$I^2t$  Vs.Time

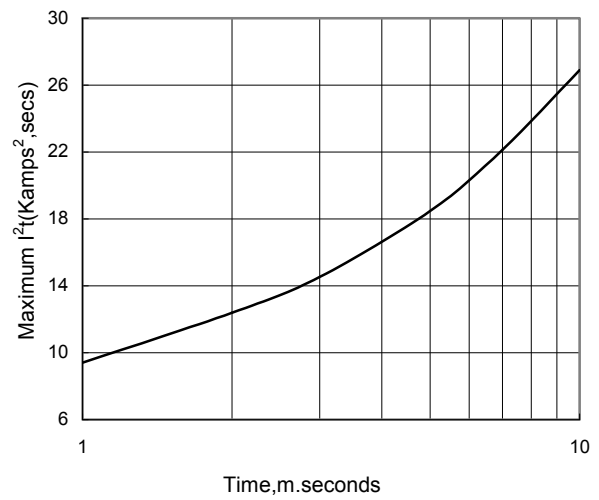
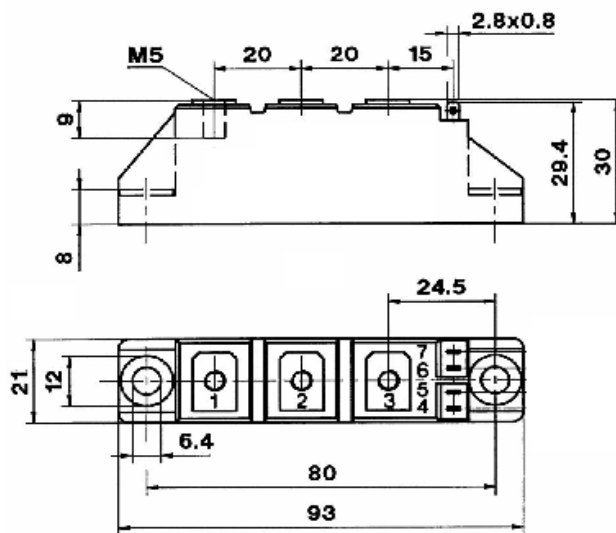


Fig.8

utline:



M01H

