



# Diode Modules MDx160



$I_{F(AV)}$       **160A**  
 $V_{RRM}$         **1900~2500V**  
 $I_{FSM}$         **4.6 A $\times 10^3$**   
 $I^2t$             **105A $^2$  S $\cdot 10^3$**

### Features:

- Isolated mounting base 3000V~
- Pressure contact technology with  
Increased power cycling capability
- Space and weight savings

### Typical Applications

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

| SYMBOL         | CHARACTERISTIC                           | TEST CONDITIONS   | T <sub>J</sub> (°C) | VALUE |      |       | UNIT  |
|----------------|--|---|---------------------|-------|------|-------|-------|
|                |  |   |                     | Min   | Type | Max   |       |
| $I_{F(AV)}$    | Mean forward current                     | 180° half sine wave 50Hz<br>Single side cooled, T <sub>C</sub> =100°C | 150                 |       |      | 160   | A     |
| $I_{F(RMS)}$   | RMS forward current                      |   | 150                 |       |      | 251   | A     |
| $V_{RRM}$      | Repetitive peak reverse voltage          | V <sub>RRM</sub> tp=10ms<br>V <sub>RSM</sub> = V <sub>RRM</sub> +100V | 150                 | 1900  |      | 2500  | V     |
| $I_{RRM}$      | Repetitive peak current                  | at V <sub>RRM</sub>   | 150                 |       |      | 12    | mA    |
| $I_{FSM}$      | Surge forward current                    | 10ms half sine wave   | 150                 |       |      | 4.6   | kA    |
| $I^2t$         | I <sup>2</sup> T for fusing coordination | V <sub>R</sub> =0.6V <sub>RRM</sub>                                   |                     |       |      |       | 105   |
| $V_{FO}$       | Threshold voltage                        |   | 150                 |       |      | 0.84  | V     |
| $r_F$          | Forward slop resistance                  |   |                     |       |      |       | 1.31  |
| $V_{FM}$       | Peak forward voltage                     | I <sub>FM</sub> =480A   | 25                  |       |      | 1.66  | V     |
| $R_{th(j-c)}$  | Thermal resistance<br>Junction to case   | At 180° sine Single side cooled                                       |                     |       |      | 0.230 | °C /W |
| $R_{th(c-h)}$  | Thermal resistance<br>case to heatsink   | At 180° sine Single side cooled                                       |                     |       |      | 0.08  | °C /W |
| $V_{iso}$      | Isolation voltage                        | 50Hz, R.M.S, t=1min, I <sub>iso</sub> :1mA(max)                       |                     | 3000  |      |       | V     |
| $F_m$          | Terminal connection torque(M6)           |   |                     |       | 6    |       | N·m   |
|                | Mounting torque(M6)                      |   |                     |       | 6    |       | N·m   |
| $T_{stg}$      | Stored temperature                       |   |                     | -40   |      | 125   | °C    |
| $W_t$          | Weight                                   |   |                     |       | 320  |       | g     |
| <b>Outline</b> |  |   |                     |       |      |       |       |

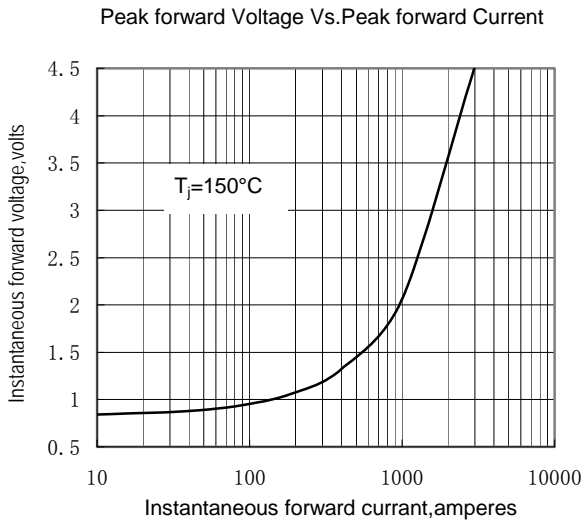


Fig.1

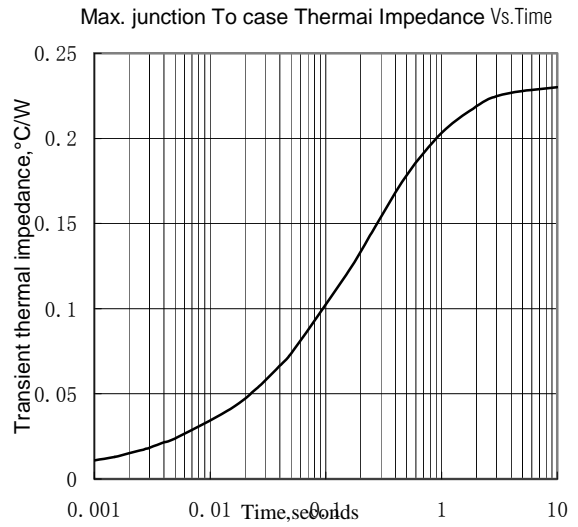


Fig.2

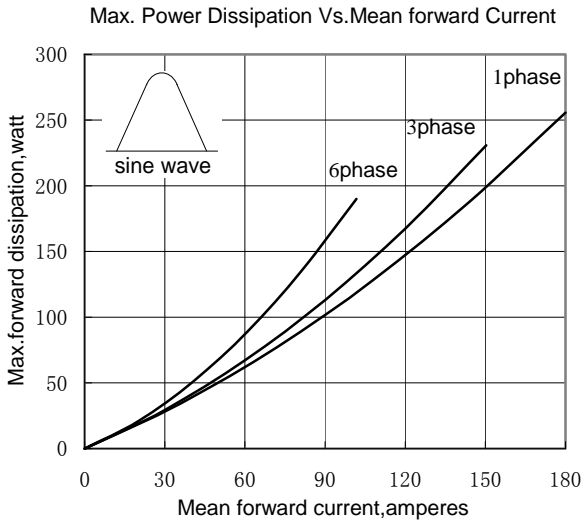


Fig.3

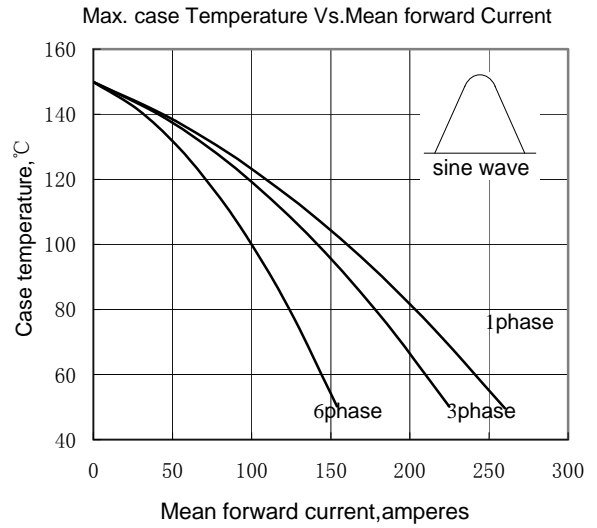


Fig.4

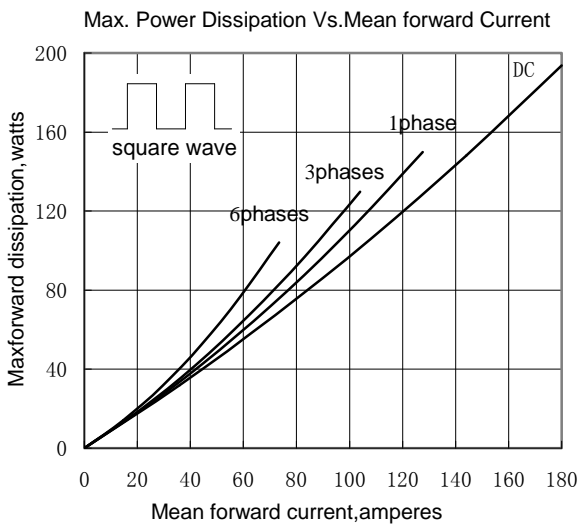


Fig.5

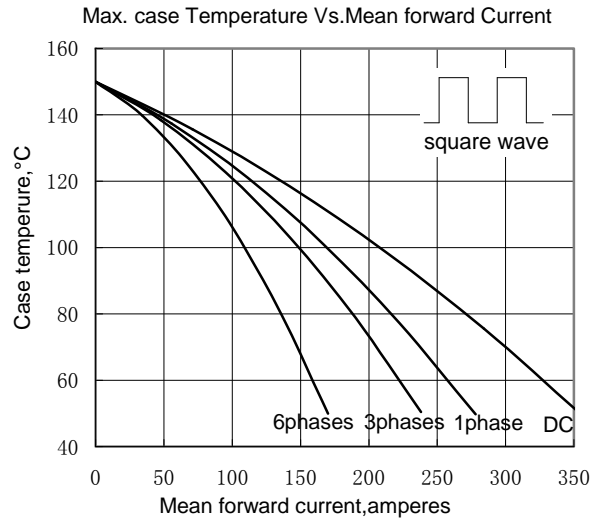


Fig.6

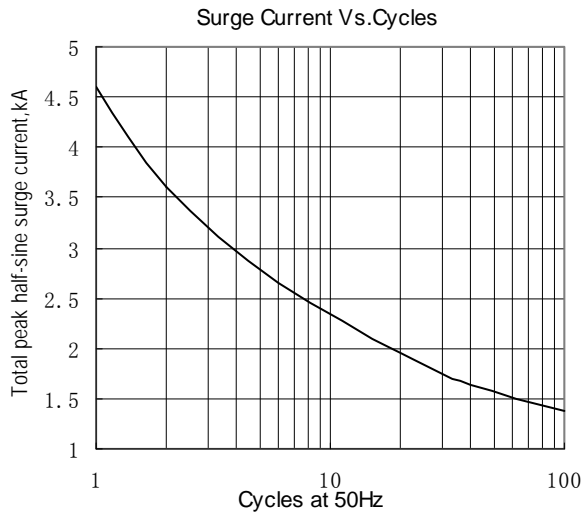


Fig.7

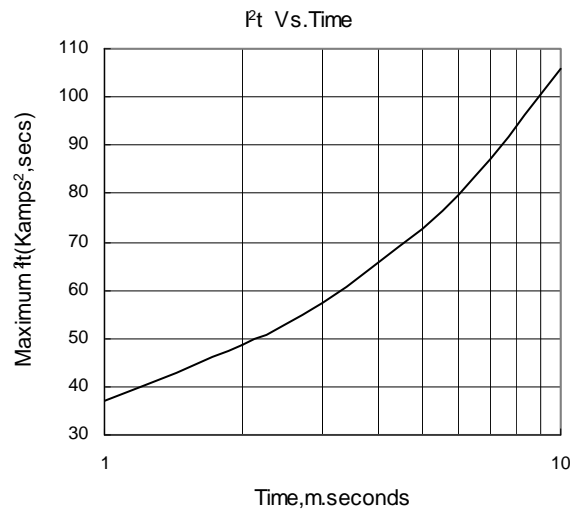


Fig.8

**Outline:**

