



## Rectifier Diode Modules

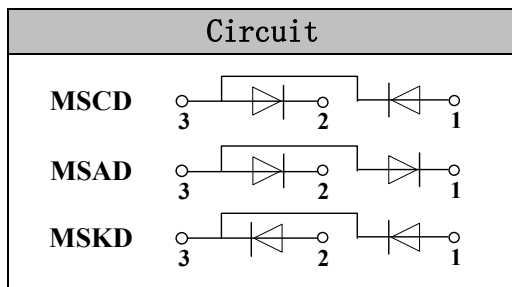
**VRRM** 800 to 1800V  
**IFAV** 250 Amp

### Applications

- Non-controllable rectifiers for AC/AC converters
- Line rectifiers for transistorized AC motor controllers
- Field supply for DC motors

### Features

- Blocking voltage: 800 to 1800V
- Heat transfer through aluminum nitride ceramic isolated metal baseplate



### Module Type

| TYPE       |            |            | VRRM  | VRRM  |
|------------|------------|------------|-------|-------|
| MSCD250-08 | MSAD250-08 | MSKD250-08 | 800V  | 900V  |
| MSCD250-12 | MSAD250-12 | MSKD250-12 | 1200V | 1300V |
| MSCD250-16 | MSAD250-16 | MSKD250-16 | 1600V | 1700V |
| MSCD250-18 | MSAD250-18 | MSKD250-18 | 1800V | 1900V |

### Maximum Ratings

| Symbol            | Conditions           | Values      | Units            |
|-------------------|----------------------|-------------|------------------|
| IFAV              | Tc=85°C              | 250         | A                |
| IFSM              | t=10mS Tvj =45°C     | 8000        | A                |
| i <sup>2</sup> t  | t=10mS Tvj =45°C     | 320000      | A <sup>2</sup> s |
| V <sub>isol</sub> | a.c.50HZ;r.m.s.;1min | 3000        | V                |
| T <sub>vj</sub>   |                      | -40 to +150 | °C               |
| T <sub>stg</sub>  |                      | -40 to +125 | °C               |
| Mt                | To terminals(M8)     | 9±15%       | Nm               |
| Ms                | To heatsink(M6)      | 5±15%       | Nm               |
| Weight            | Module               | 865         | g                |

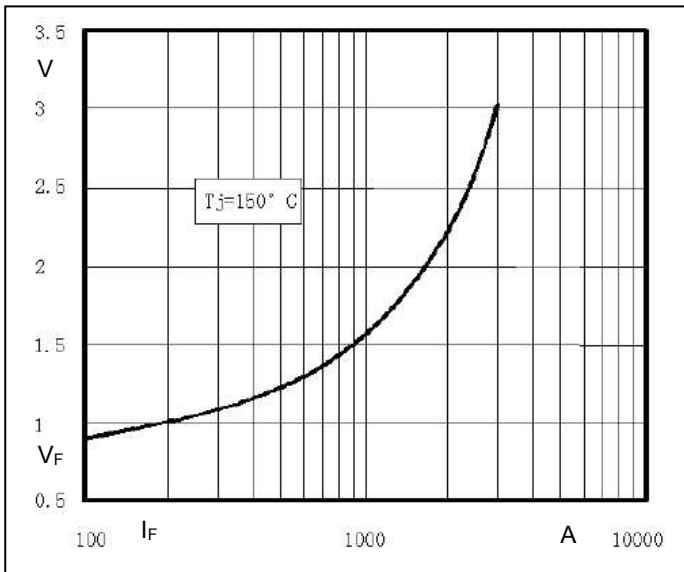
### Thermal Characteristics

| Symbol               | Conditions | Values | Units |
|----------------------|------------|--------|-------|
| R <sub>th(j-c)</sub> | Module     | 0.08   | °C/W  |
| R <sub>th(c-s)</sub> | Module     | 0.05   | °C/W  |

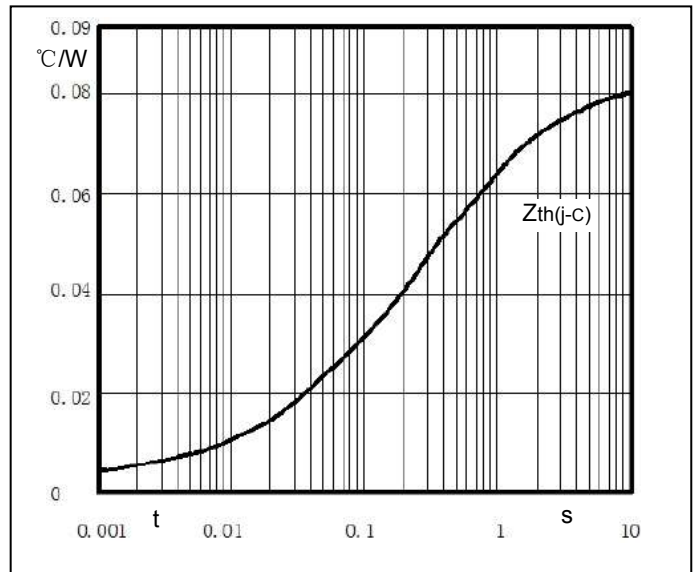
### Electrical Characteristics

| Symbol          | Conditions                                 | Values | Units |
|-----------------|--------------------------------------------|--------|-------|
| V <sub>FM</sub> | T=25°C IFM =750A                           | 1.25   | V     |
| IRD             | T <sub>vj</sub> =T <sub>vjM</sub> VRD=VRRM | ≤15    | mA    |

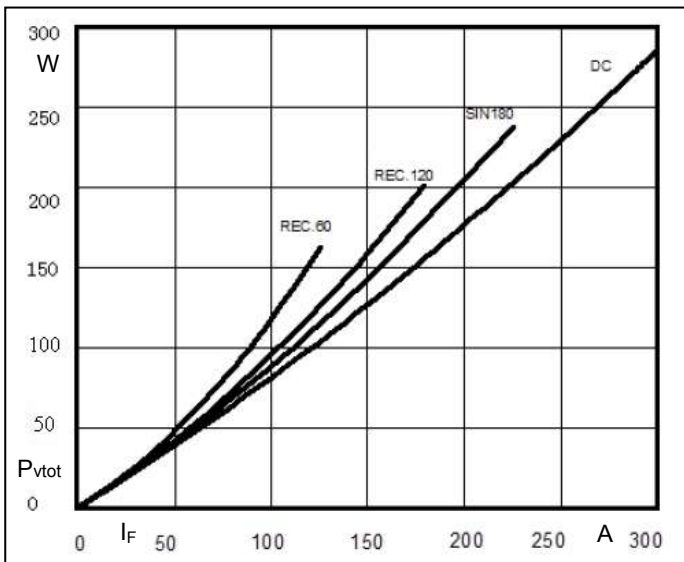
**Performance Curves**



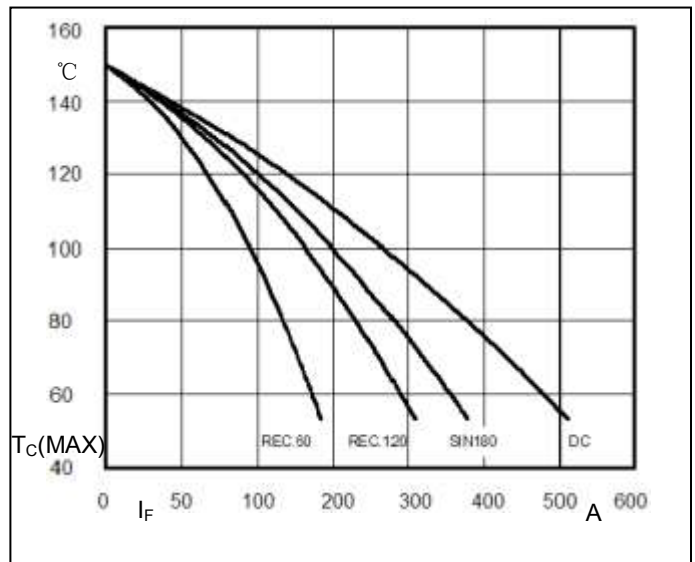
**Fig1. Forward Characteristics**



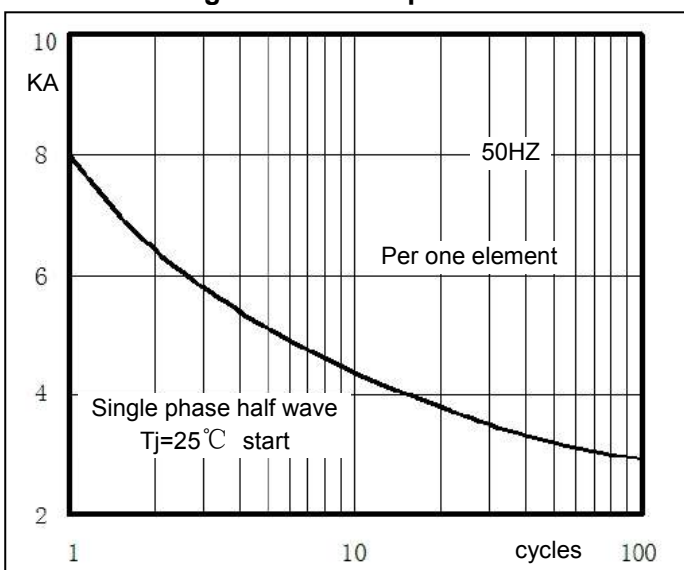
**Fig2. Transient thermal impedance**



**Fig3. Power dissipation**



**Fig4. case temperature vs. forward current**



**Fig5. Max Non-Repetitive Forward Surge Current**

**Package Outline Information**

