



## Rectifier Diode Module

**VRRM** 2200 to 2800V  
**IFAV** 500A

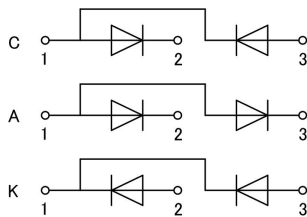
### Applications

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

### Features

- International standard package
- High Surge Capability
- Simple Mounting

### Circuit



### Blocking Characteristics

| TYPE       |            |            | VRRM | VRS  | Units |
|------------|------------|------------|------|------|-------|
| MD500C22D6 | MD500A22D6 | MD500K22D6 | 2200 | 2400 | V     |
| MD500C24D6 | MD500A24D6 | MD500K24D6 | 2400 | 2600 | V     |
| MD500C26D6 | MD500A26D6 | MD500K26D6 | 2600 | 2800 | V     |
| MD500C28D6 | MD500A28D6 | MD500K28D6 | 2800 | 3000 | V     |

### Maximum Ratings

| Symbol           | Conditions                                      | Values     | Units            |
|------------------|-------------------------------------------------|------------|------------------|
| IFAV             | Single phase ,half wave 180° conduction Tc=100℃ | 500        | A                |
| IFSM             | t=10ms Tvj=TVjM                                 | 16000      | A                |
| i <sup>2</sup> t | t=10ms Tvj=TVjM                                 | 1280000    | A <sup>2</sup> s |
| Visol            | a.c.50HZ;r.m.s.;1min,Iiso :2mA(max)             | 3000       | V                |
| Tvj              |                                                 | -40 to 150 | ℃                |
| Tstg             |                                                 | -40 to 125 | ℃                |
| Mt               | To terminals(M10)                               | 12±15%     | Nm               |
| Ms               | To heatsink(M6)                                 | 6±15%      | Nm               |
| Weight           | Module (Approximately)                          | 1550       | g                |

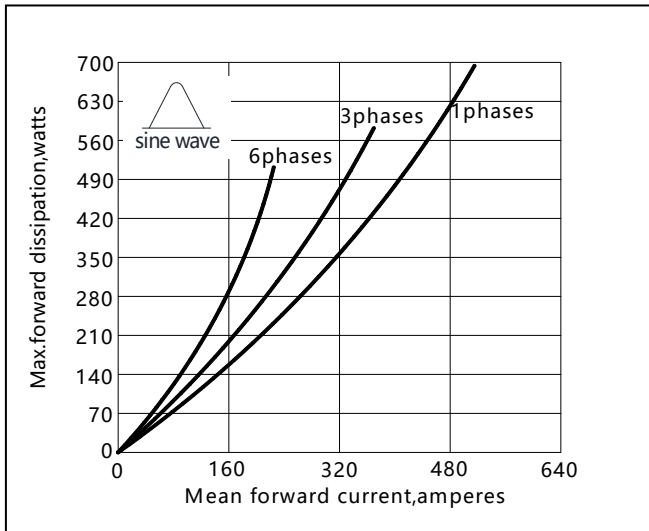
### Thermal Characteristics

| Symbol   | Conditions | Values | Units |
|----------|------------|--------|-------|
| Rth(j-c) | per diode  | 0.073  | ℃/W   |
| Rth(c-s) | per diode  | 0.04   | ℃/W   |

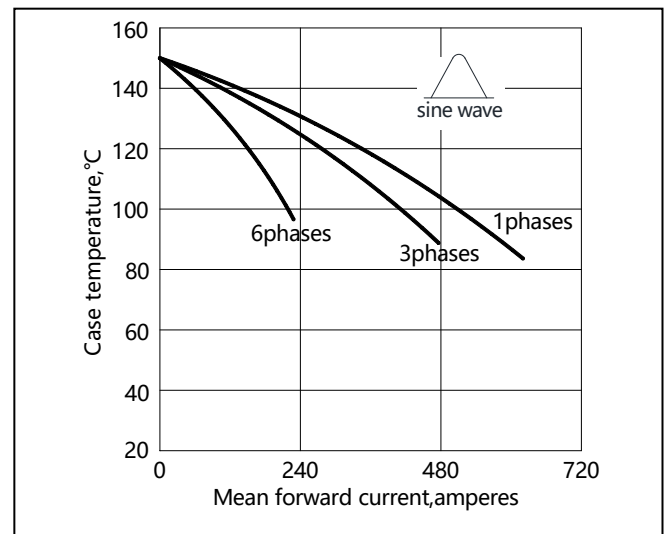
### Electrical Characteristics

| Symbol | Conditions      | Values |      |      | Units |
|--------|-----------------|--------|------|------|-------|
|        |                 | Min.   | Typ. | Max. |       |
| VFM    | T=25℃ IF =1500A |        |      | 1.45 | V     |
| IRRM   | Tvj=TVjM V=VRRM |        |      | 30   | mA    |
| VFO    | Tvj=TVjM        |        |      | 0.85 | V     |
| rF     | Tvj=TVjM        |        |      | 0.38 | mΩ    |

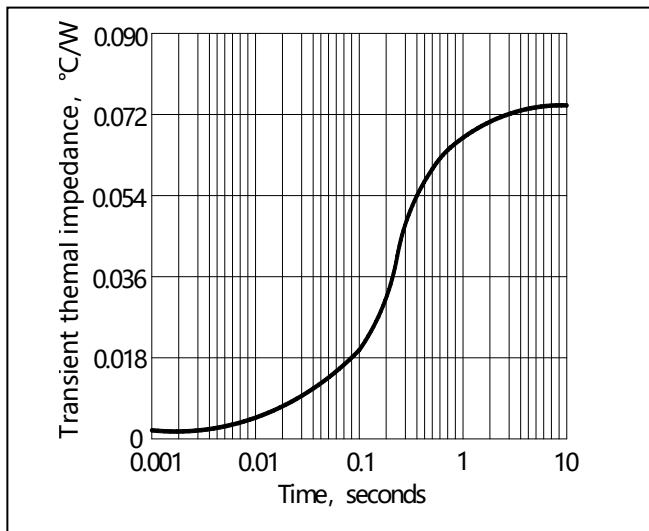
## Performance Curves



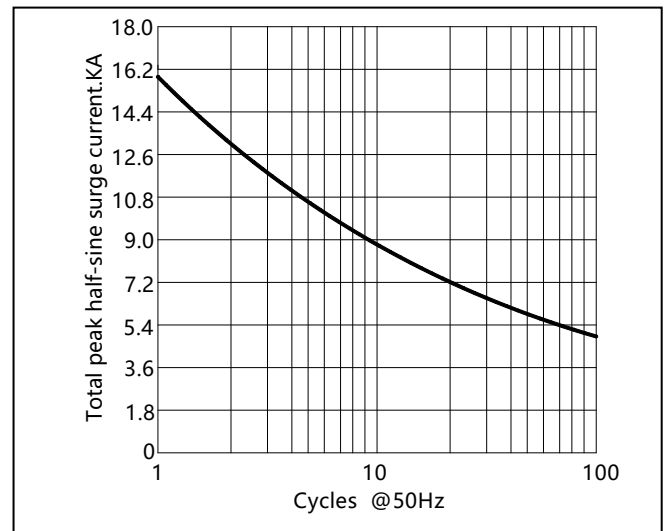
**Fig1. Power dissipation**



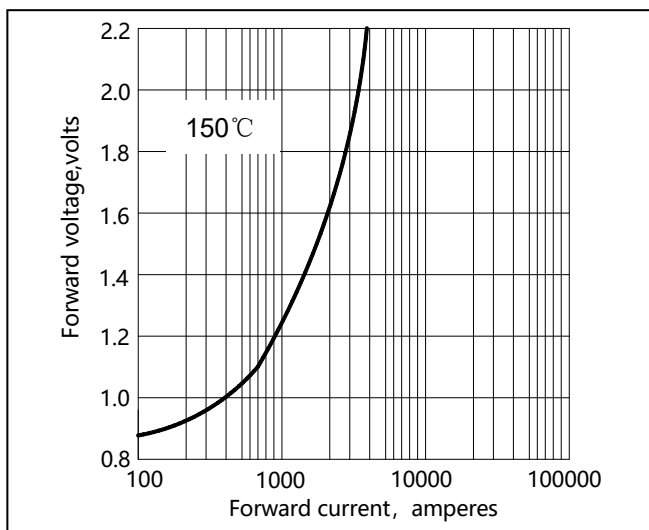
**Fig2. Forward Current Derating Curve**



**Fig3. Transient thermal impedance**



**Fig4. Max Non-Repetitive Forward Surge Current**



**Fig5. Forward Characteristics**

## CASE: D6





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