

## Rectifier Diode Module

**VRRM** 3800 to 4400V  
**IFAV** 950A

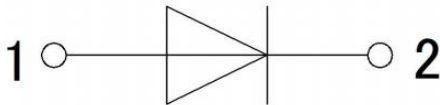
### Applications

- Bridge Circuits
- Industry converter
- Battery Supplies

### Features

- International standard package
- High Surge Capability
- Simple Mounting

### Circuit



### Blocking Characteristics

| TYPE       | VRRM | VRSM | Units |
|------------|------|------|-------|
| MD950U38I6 | 3800 | 4000 | V     |
| MD950U40I6 | 4000 | 4200 | V     |
| MD950U42I6 | 4200 | 4400 | V     |
| MD950U44I6 | 4400 | 4600 | V     |

### Maximum Ratings

| Symbol            | Conditions                                      | Values     | Units            |
|-------------------|-------------------------------------------------|------------|------------------|
| IFAV              | Single phase ,half wave 180° conduction Tc=100℃ | 950        | A                |
| IFSM              | t=10ms Tvj=TvjM                                 | 29000      | A                |
| i <sup>2</sup> t  | t=10ms Tvj=TvjM                                 | 4205000    | A <sup>2</sup> s |
| V <sub>isol</sub> | a.c.50HZ;r.m.s.;1min,I <sub>iso</sub> :2mA(max) | 5000       | V                |
| TvjM              |                                                 | 160        | ℃                |
| Tstg              |                                                 | -40 to 150 | ℃                |
| Mt                | To terminals(M12)                               | 12±15%     | Nm               |
| Ms                | To heatsink(M6)                                 | 6±15%      | Nm               |
| Weight            | Module (Approximately)                          | 2700       | g                |

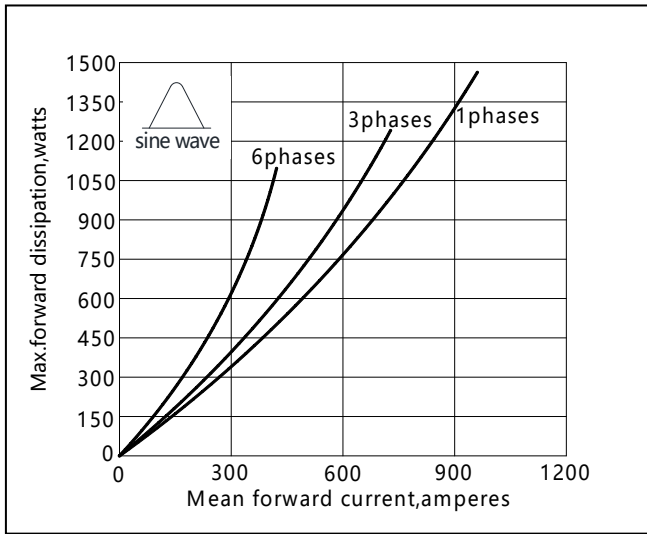
### Thermal Characteristics

| Symbol   | Conditions | Values | Units |
|----------|------------|--------|-------|
| Rth(j-c) | per diode  | 0.042  | ℃/W   |
| Rth(c-s) | per diode  | 0.010  | ℃/W   |

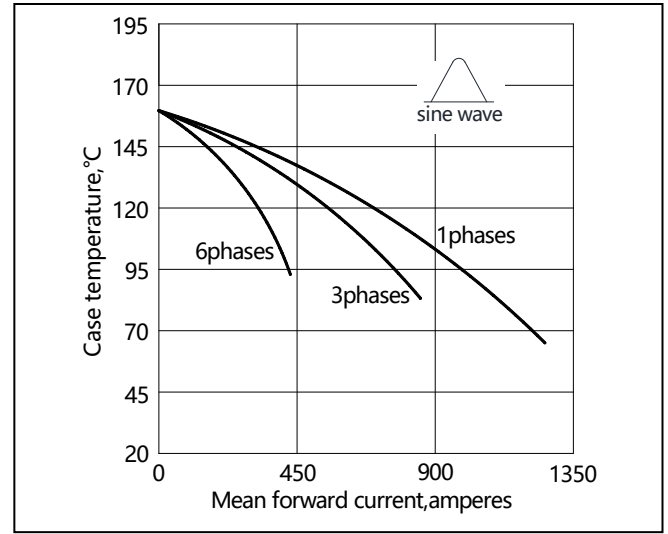
### Electrical Characteristics

| Symbol           | Conditions      | Values |      |      | Units |
|------------------|-----------------|--------|------|------|-------|
|                  |                 | Min.   | Typ. | Max. |       |
| V <sub>FM</sub>  | T=25℃ IF =3000A |        |      | 1.8  | V     |
| I <sub>RRM</sub> | Tvj=TvjM V=VRRM |        |      | 50   | mA    |
| V <sub>FO</sub>  | Tvj=TvjM        |        |      | 0.85 | V     |
| r <sub>F</sub>   | Tvj=TvjM        |        |      | 0.28 | mΩ    |

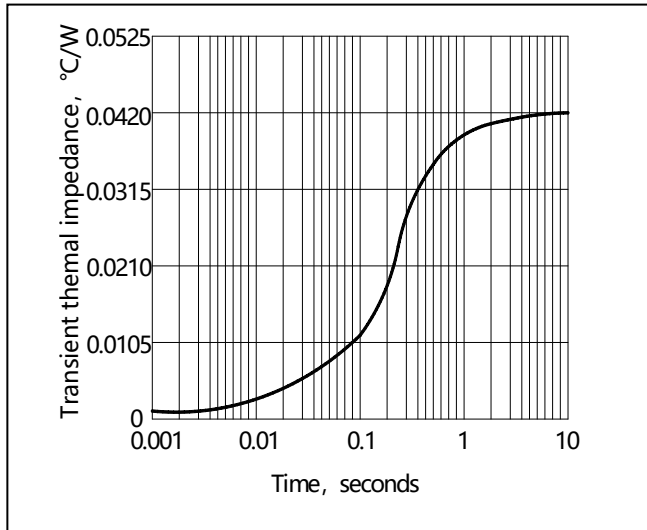
## Performance Curves



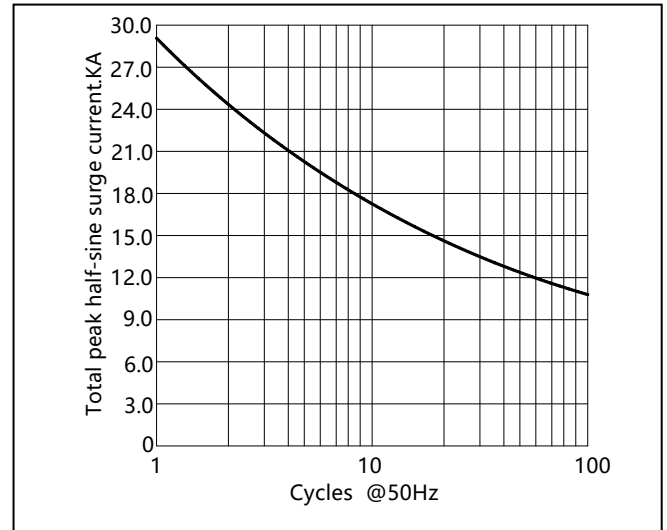
**Fig1. Power dissipation**



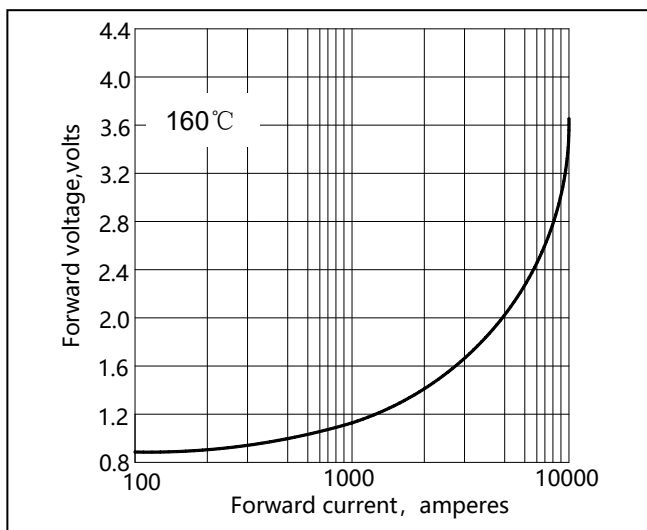
**Fig2. Forward Current Derating Curve**



**Fig3. Transient thermal impedance**



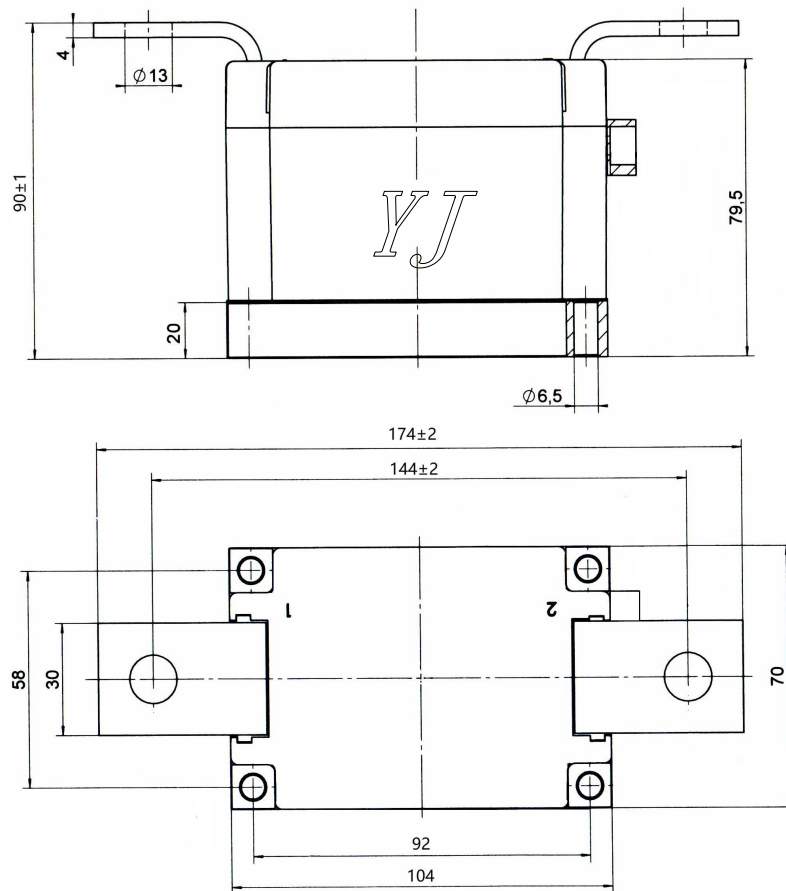
**Fig4. Max Non-Repetitive Forward Surge Current**



**Fig5. Forward Characteristics**

## Package Outline Information

### CASE: I6



Dimensions in mm

Unmarked dimensional tolerance:  $\pm 0.5\text{mm}$



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