# MD800C(A/K)-D7

## Rectifier Diode Module

**$V_{RRM}$** 1200 to 2000V
**$I_{FAV}$** 800A

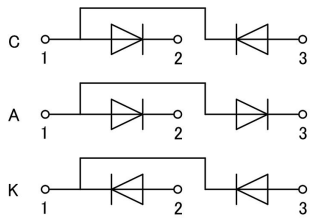
### Applications

- 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 | | | $V_{RRM}$ | $V_{RSM}$ | Units |
|---|---|---|---|---|---|
| MD800C12D7 | MD800A12D7 | MD800K12D7 | 1200 | 1300 | V |
| MD800C14D7 | MD800A14D7 | MD800K14D7 | 1400 | 1500 | V |
| MD800C16D7 | MD800A16D7 | MD800K16D7 | 1600 | 1760 | V |
| MD800C18D7 | MD800A18D7 | MD800K18D7 | 1800 | 2000 | V |
| MD800C20D7 | MD800A20D7 | MD800K20D7 | 2000 | 2200 | V |

### Maximum Ratings

| Symbol | Conditions | Values | Units |
|---|---|---|---|
| $I_{FAV}$ | Single phase ,half wave 180° conduction Tc=85℃ | 800 | A |
| $I_{FSM}$ | t=10ms $T_{vj}$=$T_{vjM}$ | 21000 | A |
| $i^2t$ | t=10ms $T_{vj}$=$T_{vjM}$ | 2205000 | $A^2s$ |
| $V_{isol}$ | a.c.50HZ;r.m.s.;1min,$I_{iso}$:2mA(max) | 2500 | V |
| $T_{vj}$ | | -40 to 150 | ℃ |
| $T_{stg}$ | | -40 to 125 | ℃ |
| Mt | To terminals(M10) | 12±15% | Nm |
| Ms | To heatsink(M6) | 6±15% | Nm |
| Weight | Module (Approximately) | 1820 | g |

### Thermal Characteristics

| Symbol | Conditions | Values | Units |
|---|---|---|---|
| $R_{th(j-c)}$ | per diode | 0.061 | ℃/W |
| $R_{th(c-s)}$ | per diode | 0.02 | ℃/W |

### Electrical Characteristics

| Symbol | Conditions | Values | | | Units |
|---|---|---|---|---|---|
| | | Min. | Typ. | Max. | |
| $V_{FM}$ | T=25℃ $I_F$ =2400A | | | 1.6 | V |
| $I_{RRM}$ | $T_{vj}$=$T_{vjM}$ V=$V_{RRM}$ | | | 35 | mA |
| $V_{FO}$ | $T_{vj}$=$T_{vjM}$ | | | 0.76 | V |
| $r_F$ | $T_{vj}$=$T_{vjM}$ | | | 0.23 | mΩ |

## Performance Curves

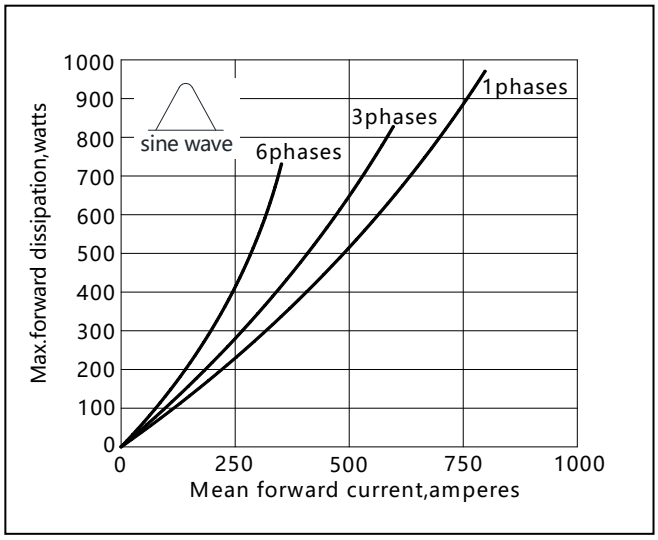



Fig1. Power dissipation

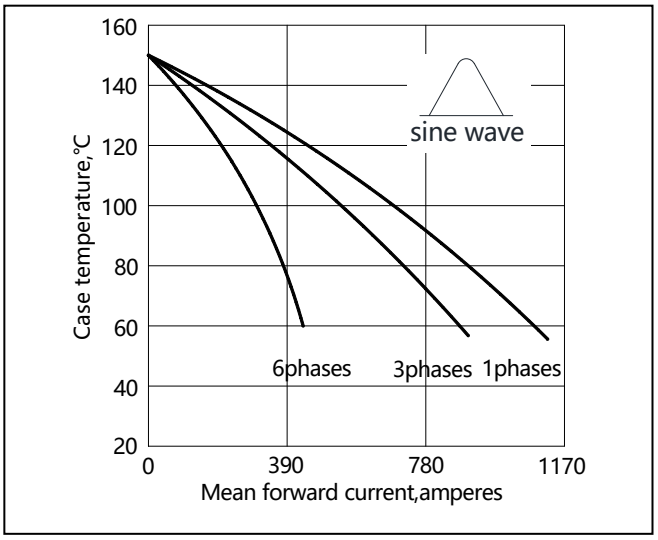



Fig2.Forward Current Derating Curve

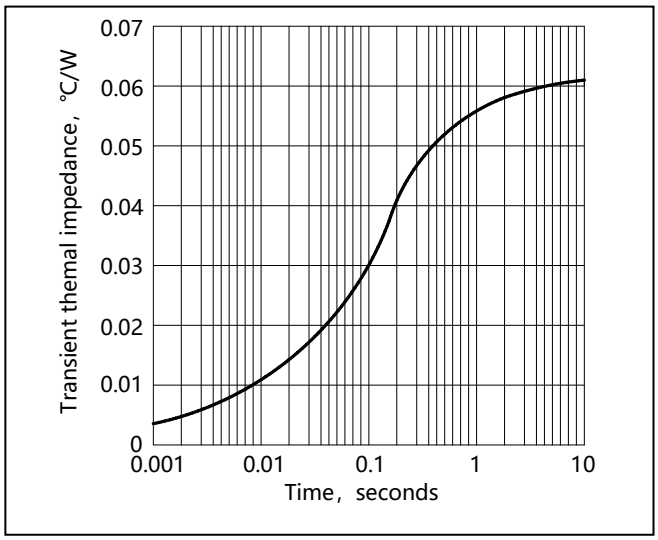



Fig3. Transient thermal impedance

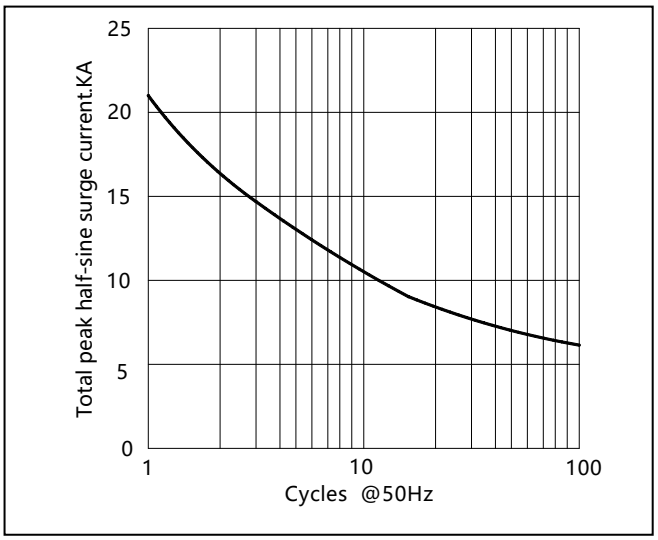



Fig4. Max Non-Repetitive Forward Surge Current

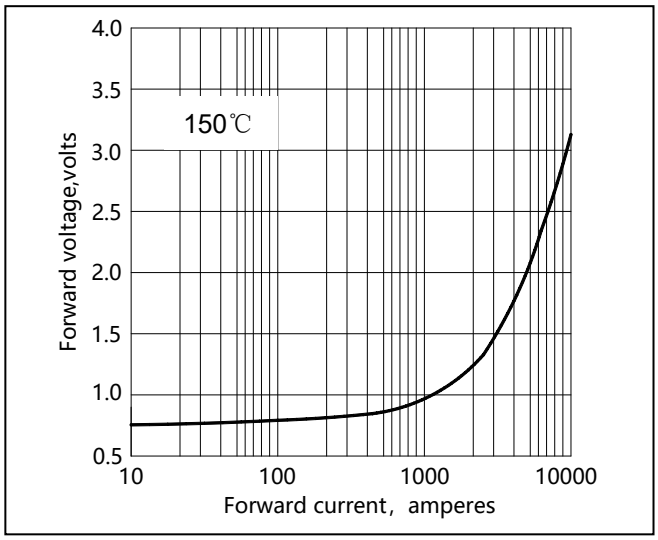
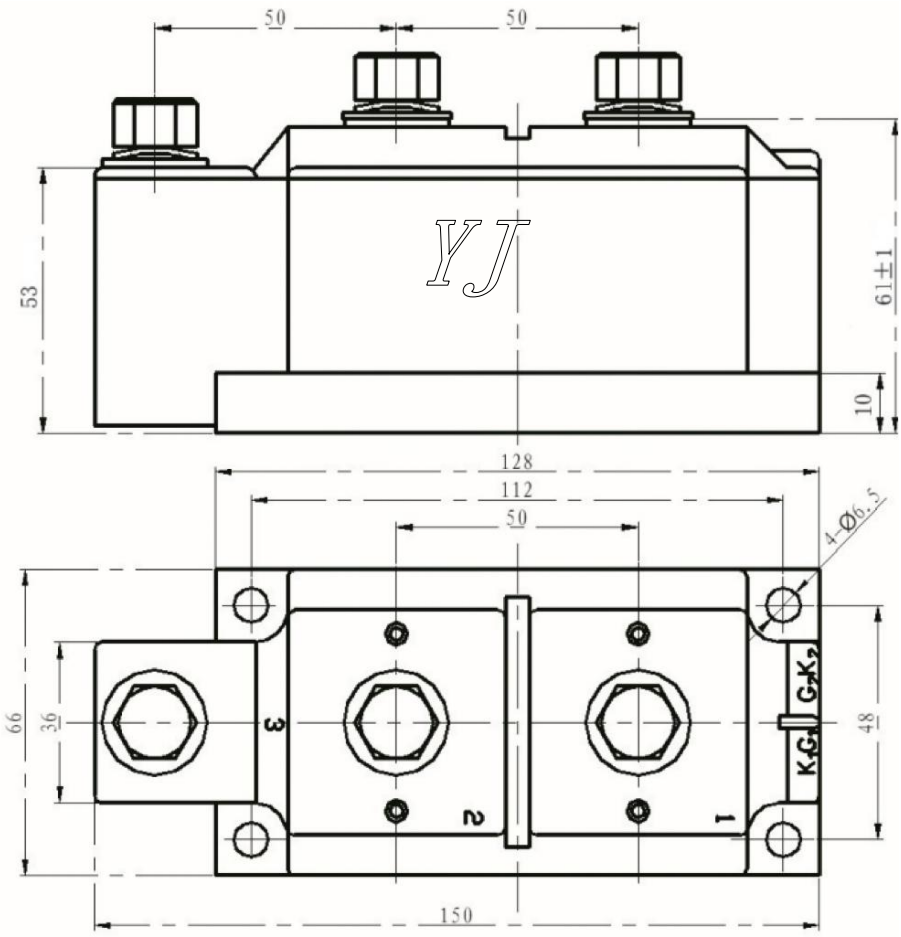



Fig5. Forward Characteristics

## Package Outline Information

**CASE: D7**




**Dimensions in mm**
**Unmarked dimensional tolerance：±0.5mm**

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