# MD240C(A/K)-D2



## Glass Passivated Rectifier Diode Modules

**VRRM** 800 to 1800V
**IFAV** 240 A

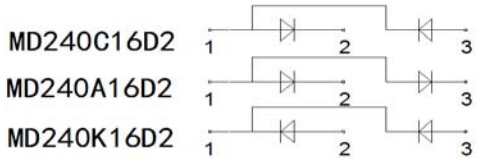
### Applications

- 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 oxide ceramic isolated metal baseplate
- Glass passivated chip

**Circuit**




### Module Type

| TYPE | | | VRRM | VRSM |
|---|---|---|---|---|
| MD240C08D2 | MD240A08D2 | MD240K08D2 | 800V | 900V |
| MD240C12D2 | MD240A12D2 | MD240K12D2 | 1200V | 1300V |
| MD240C16D2 | MD240A16D2 | MD240K16D2 | 1600V | 1700V |
| MD240C18D2 | MD240A18D2 | MD240K18D2 | 1800V | 1900V |

### Maximum Ratings

| Symbol | Conditions | Values | Units |
|---|---|---|---|
| $I_{FAV}$ | Single phase ,half wave 180° conduction Tc=95℃ | 240 | A |
| $I_{FSM}$ | t=10mS Tvj =45℃ | 7550 | A |
| $i^2t$ | t=10mS Tvj =45℃ | 285000 | $A^2s$ |
| $V_{isol}$ | a.c.50HZ;r.m.s.;1min | 3000 | V |
| $T_{vj}$ | | -40 to 150 | ℃ |
| $T_{stg}$ | | -40 to 125 | ℃ |
| Mt | To terminals(M6) | 5±15% | Nm |
| Ms | To heat sink(M6) | 5±15% | Nm |
| Weight | Module (Approximately) | 160 | g |

### Thermal Characteristics

| Symbol | Conditions | Values | Units |
|---|---|---|---|
| $R_{th(j-c)}$ | Per diode | 0.16 | ℃/W |
| $R_{th(c-s)}$ | Module | 0.05 | ℃/W |

# MD240C(A/K)-D2

## Electrical Characteristics

| Symbol | Conditions | Values | | | Units |
|---|---|---|---|---|---|
| | | Min. | Typ. | Max. | |
| $V_{FM}$ | T=25℃ $I_F$ =300A | — | 1.15 | 1.25 | V |
| $I_{RD}$ | $T_{vj}$=150℃ $V_{RD}$=$V_{RRM}$ | — | — | 9 | mA |
| $r_F$ | $T_J$=25℃ | - | 1.16 | - | mΩ |
| | $T_J$=150℃ | - | 1.17 | - | mΩ |
| $V_{FO}$ | $T_J$=25℃ | - | 0.79 | - | V |
| | $T_J$=150℃ | - | 0.67 | - | V |

## Performance Curves

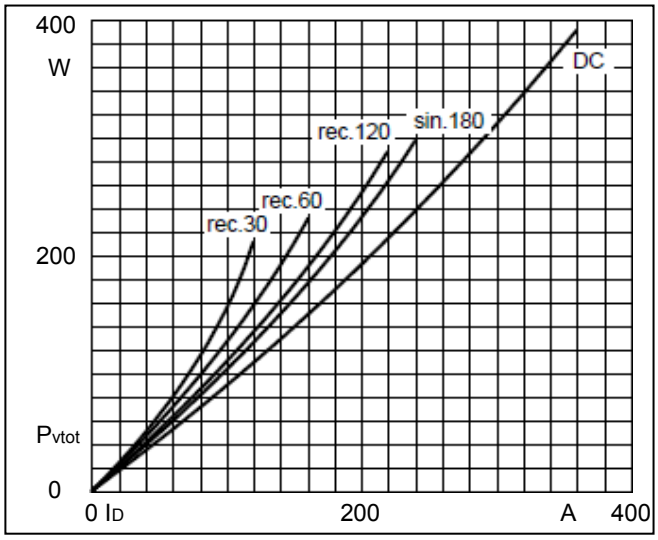



Fig1. Power dissipation

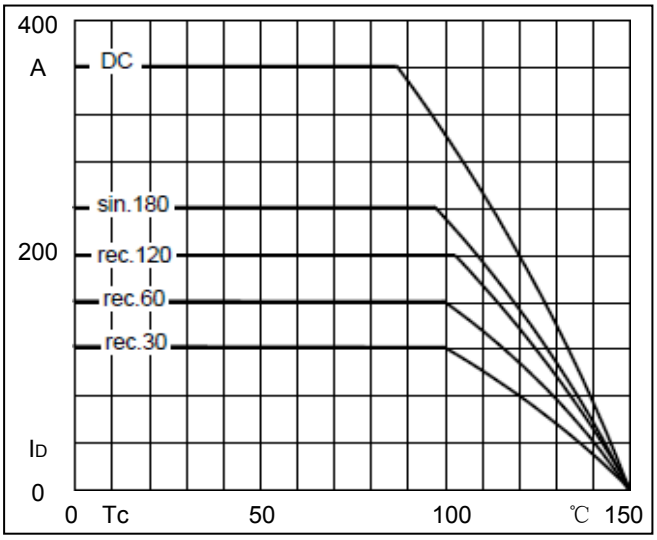



Fig2.Forward Current Derating Curve

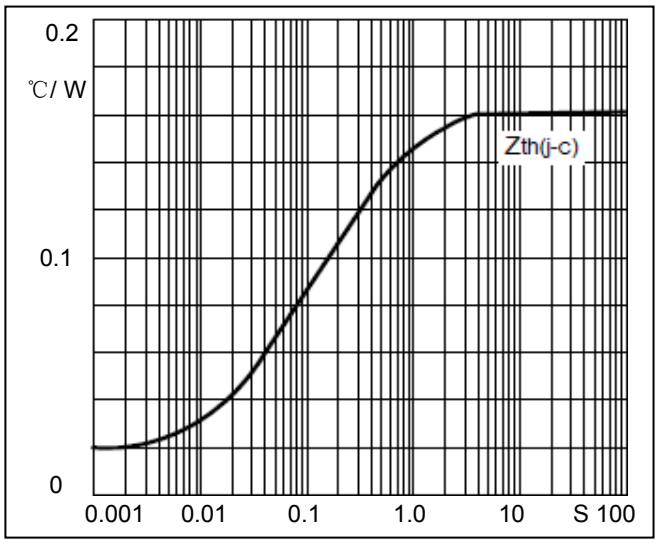



Fig3. Transient thermal impedance

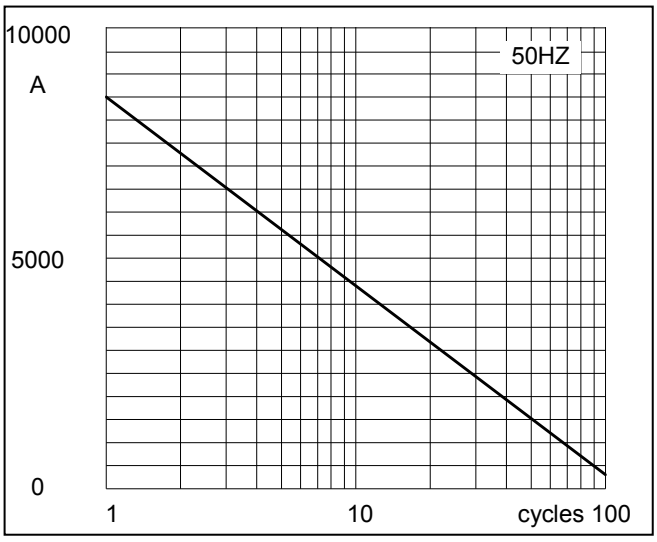



Fig4. Max Non-Repetitive Forward Surge Current

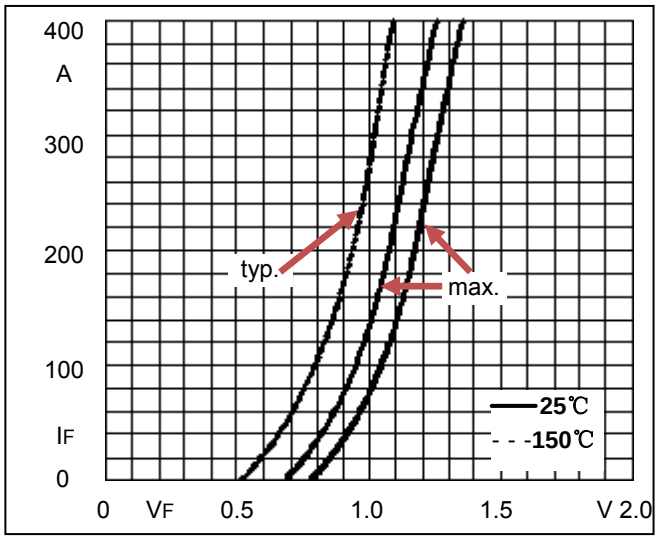
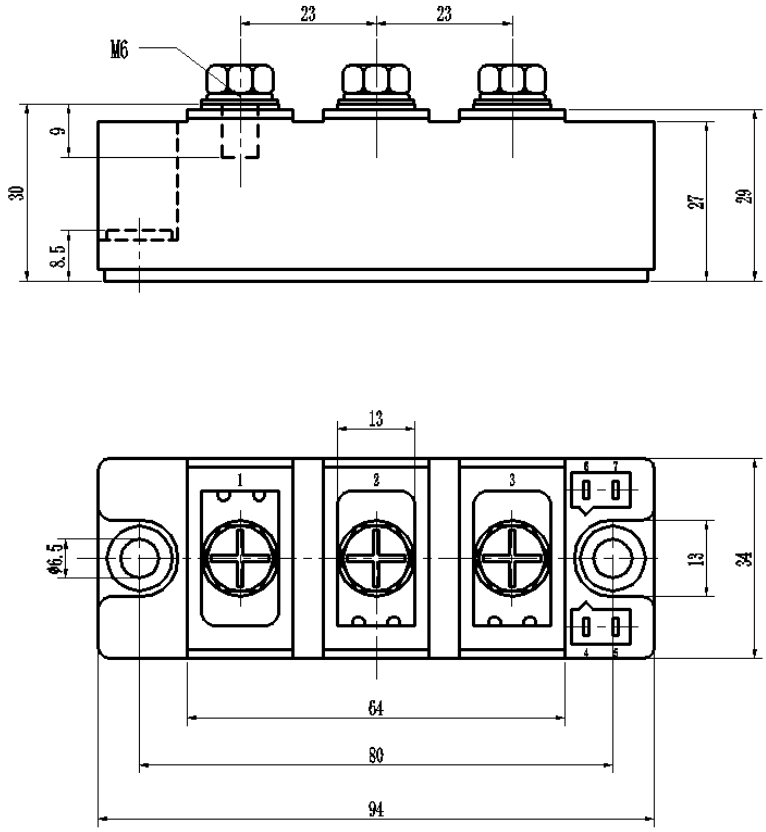



**Fig5. Forward Characteristics**

## Package Outline Information

**CASE: D2**




**Dimensions in mm**