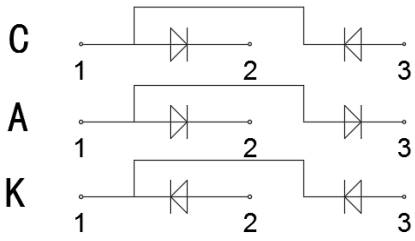


# Glass Passivated Rectifier Diode Modules

**$V_{RRM}$** 2200V
**$I_{FAV}$** 200 A

**Circuit**




## Applications

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

## Features

- Blocking voltage:2200V
- Heat transfer through aluminum oxide ceramic isolated metal baseplate
- Glass passivated chip
- UL recognized applied for file no. E230084

## Module Type

| TYPE | | | $V_{RRM}$ | $V_{RSM}$ |
|---|---|---|---|---|
| MD200C22D2 | MD200A22D2 | MD200K22D2 | 2200V | 2300V |

## Maximum Ratings

| Symbol | Conditions | Values | Units |
|---|---|---|---|
| $I_{FAV}$ | Single phase ,half wave 180° conduction Tc=95℃ | 200 | A |
| $I_{FSM}$ | t=10mS Tvj =45℃ | 6800 | A |
| | t=10mS Tvj =150℃ | 6000 | A |
| $i^2t$ | t=10mS Tvj =45℃ | 231200 | $A^2s$ |
| | t=10mS Tvj =150℃ | 180000 | $A^2s$ |
| $V_{isol}$ | 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 | 0.18 | ℃/W |
| $R_{th(c-s)}$ | Per Module | 0.05 | ℃/W |

## Electrical Characteristics

| Symbol | Conditions | Values | | | Units |
|---|---|---|---|---|---|
| | | Min. | Typ. | Max. | |
| $V_{FM}$ | T=25℃ $I_F$ =300A | 1 | 1.15 | 1.30 | V |
| | T=150℃ $I_F$ =300A | 1 | 1.05 | 1.20 | V |
| $I_{RD}$ | $T_{vj}$=150℃ $V_{RD}=V_{RRM}$ | — | — | 9 | mA |
| $r_f$ | $T_J$=25℃ | | 1.13 | | mΩ |
| | $T_J$=150℃ | | 1.4 | | mΩ |
| $V_{fO}$ | $T_J$=25℃ | | 0.84 | | V |
| | $T_J$=150℃ | | 0.74 | | V |

## Performance Curves

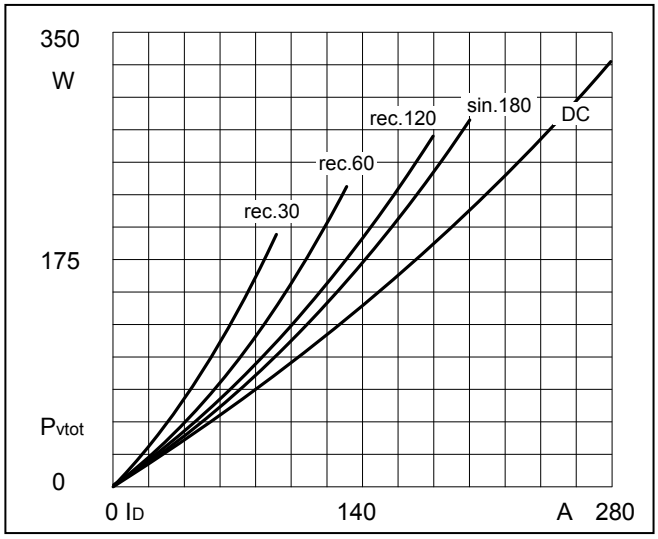



**Fig1. Power dissipation**

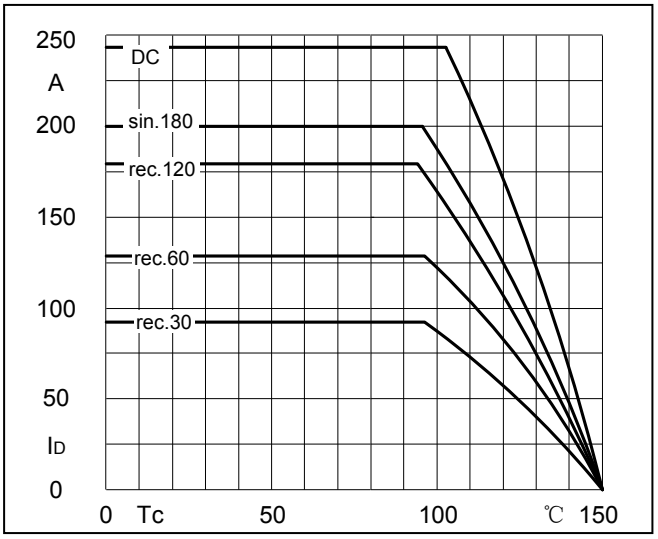



**Fig2.Forward Current Derating Curve**

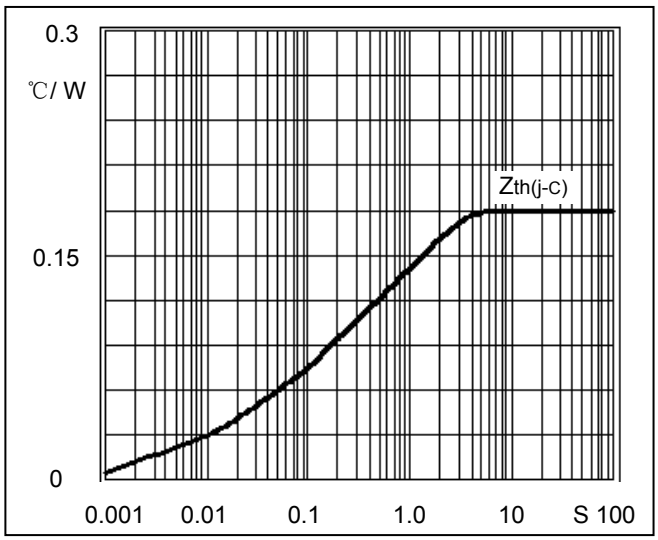



**Fig3. Transient thermal impedance**

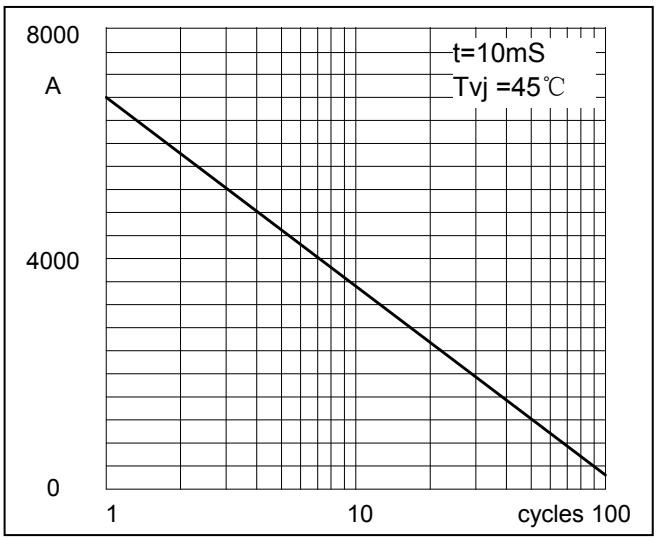



**Fig4. Max Non-Repetitive Forward Surge**

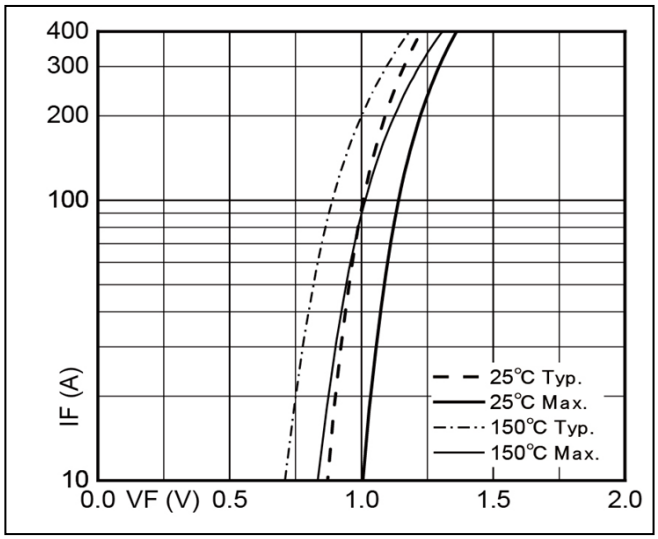
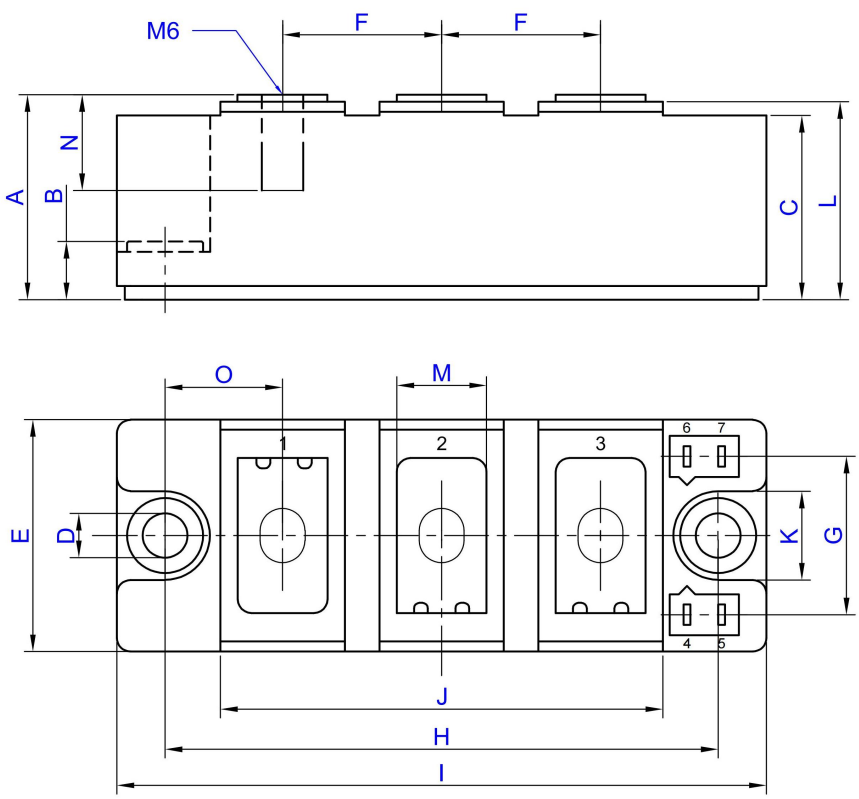



**Fig5. Forward Characteristics**

## Package Outline Information

### CASE: D2




| DIM | Min (mm) | Max (mm) | Note |
|---|---|---|---|
| A | 29.5 | 30.5 | |
| B | 8.0 | 9.0 | |
| C | 26.5 | 27.5 | |
| D | 6.3 | 6.7 | Ø |
| E | 33.5 | 34.5 | |
| F | 22.8 | 23.2 | |
| G | 22.7 | 23.7 | |
| H | 79.5 | 80.5 | |
| I | 93.5 | 94.5 | |
| J | 63.5 | 64.5 | |
| K | 12.5 | 13.5 | |
| L | 28.5 | 29.5 | |
| M | 12.9 | 13.1 | |
| N | 13.5 | 14.5 | |
| O | 16.5 | 17.5 | |

## Packing Standard

| Item | Length: A (mm) | Width: B (mm) | Height: C (mm) | Quantity (PCS) |
|---|---|---|---|---|
| Inner Box | 276 | 258 | 48 | 8 |
| Outer Carton | 545 | 295 | 240 | 80 |

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