

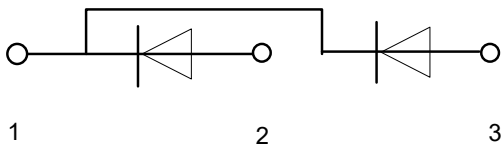
**Features**

- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates Compliant. See Ordering Information)
- Heat Transfer Through Aluminum Oxide DBC Ceramic Isolated Metal Baseplate
- Blocking voltage:1600V
- Glass passivated chip

**Applications**

- Non-Controllable Rectifiers for AC/AC Converters
- Line Rectifiers for Transistorized AC Motor Controllers
- Field Supply for DC Motors

|                 |           |           |
|-----------------|-----------|-----------|
| MCC Part Number | $V_{RRM}$ | $V_{RSM}$ |
| MD36K16D1       | 1600V     | 1700V     |



**36 Amp  
GLASS PASSIVATED  
RECTIFIER DIODE  
MODULES  
1600 Volts**

**D1**

| DIMENSIONS |        |       |       |       |      |
|------------|--------|-------|-------|-------|------|
| DIM        | INCHES |       | MM    |       | NOTE |
|            | MIN    | MAX   | MIN   | MAX   |      |
| A          | 0.768  | 0.807 | 19.50 | 20.50 |      |
| B          | 1.161  | 1.201 | 29.50 | 30.50 |      |
| C          | 0.335  | 0.374 | 8.50  | 9.50  |      |
| D          | 0.315  | 0.354 | 8.00  | 9.00  |      |
| E          | 0.594  | 0.630 | 15.10 | 16.00 |      |
| F          | 0.217  | 0.256 | 5.50  | 6.50  |      |
| G          | 0.531  | 0.571 | 13.50 | 14.50 |      |
| H          | 0.650  | 0.689 | 16.50 | 17.50 |      |
| I          | 3.130  | 3.169 | 79.50 | 80.50 |      |
| J          | 3.642  | 3.681 | 92.50 | 93.50 |      |
| K          |        | 0.256 |       | 6.50  | Φ    |
| L          | 0.413  | 0.453 | 10.50 | 11.50 |      |
| M          | 0.807  | 0.846 | 20.50 | 21.50 |      |

Note:1. High Temperature Solder Exemptions Applied, See EU Directive Annex 7a.

## Maximum Ratings

| Symbol    | Conditions                                       | Values      | Units            |
|-----------|--|-------------|------------------|
| $I_{FAV}$ | Single phase ,half wave 180° conduction Tc=104°C | 36          | A                |
| $I_{FSM}$ | t=10mS Tvj =45°C                                 | 650         | A                |
| $i^2t$    | t=10mS Tvj =45°C                                 | 2100        | A <sup>2</sup> s |
| Visol     | a.c.50HZ;r.m.s.;1min                             | 3000        | V                |
| Tvj       |  | -40 to +150 | °C               |
| Tstg      |  | -40 to +125 | °C               |
| Mt        | To terminals(M5)                                 | 3±15%       | Nm               |
| Ms        | To heatsink(M6)                                  | 5±15%       | Nm               |
| Weight    | Module (Approximately)                           | 100         | g                |

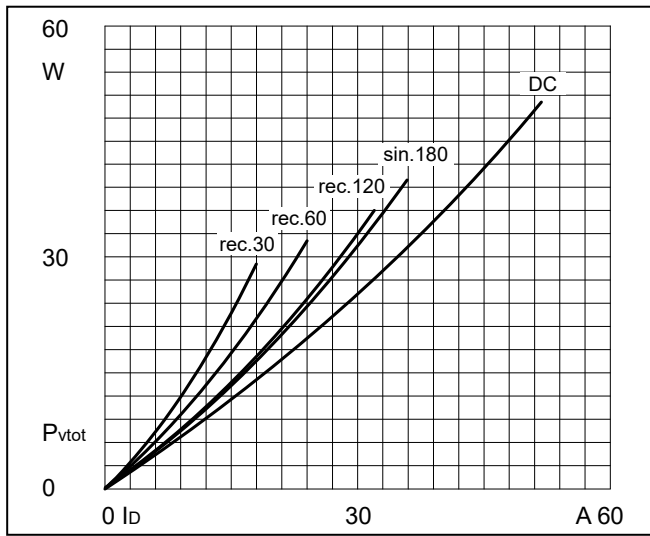
## Thermal Characteristics

| Symbol   | Conditions | Values | Units |
|----------|------------|--------|-------|
| Rth(j-c) | Per diode  | 1.0    | °C/W  |
| Rth(c-s) | Module     | 0.1    | °C/W  |

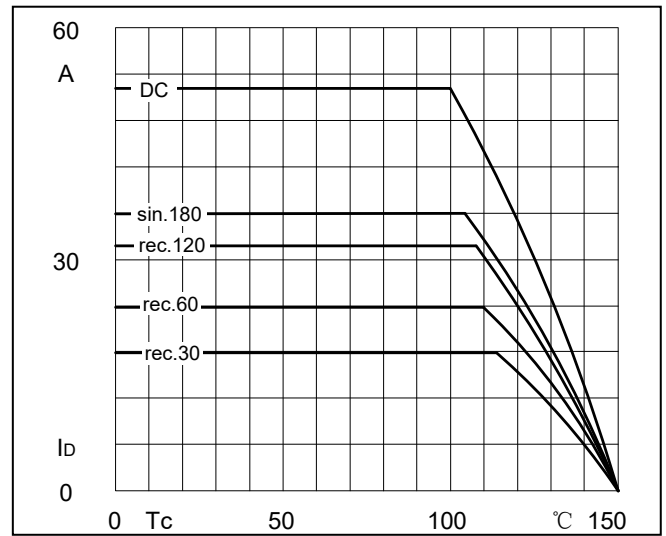
## Electrical Characteristics

| Symbol   | Conditions                   | Values |      |      | Units |
|----------|------------------------------|--------|------|------|-------|
|          |                              | Min.   | Typ. | Max. |       |
| $V_{FM}$ | T=25°C $I_F = 100A$          | —      | 1.25 | 1.40 | V     |
| $I_{RD}$ | Tvj=150°C $V_{RD} = V_{RRM}$ | —      | —    | 5    | mA    |

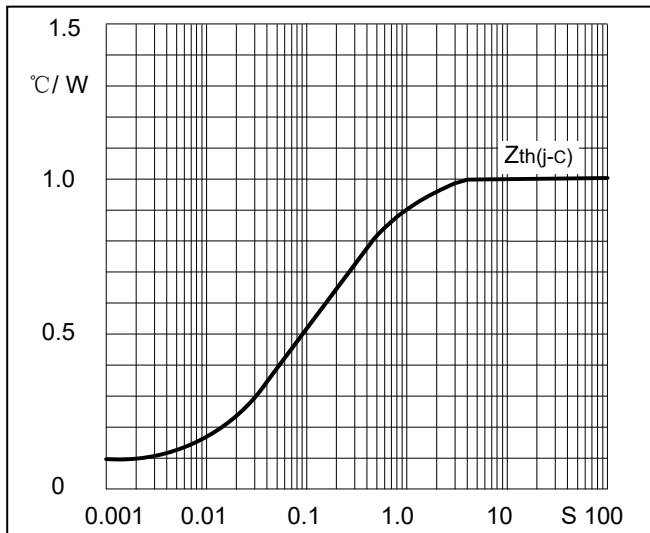
**Performance Curves**



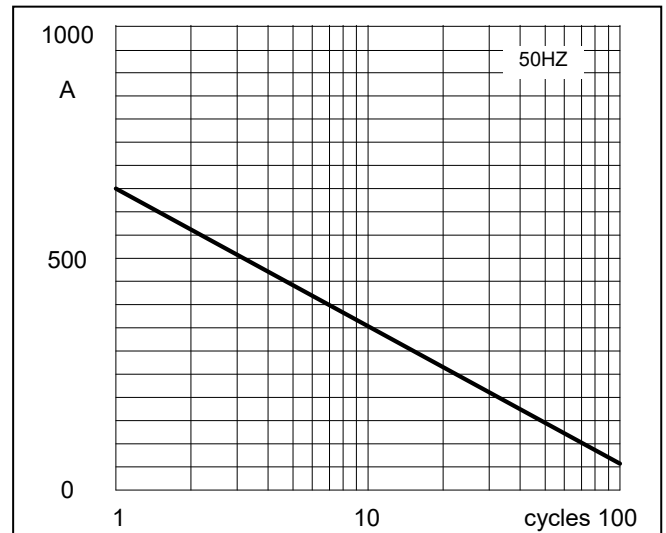
**Fig1. Power dissipation**



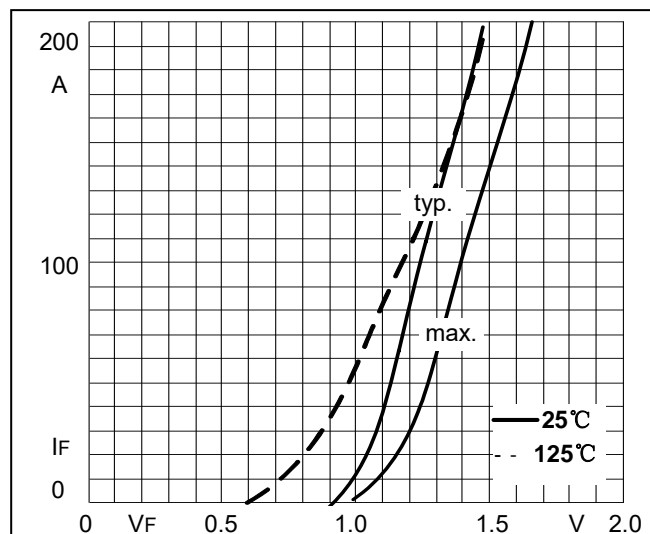
**Fig2. Forward Current Derating Curve**



**Fig3. Transient thermal impedance**



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



**Fig5. Forward Characteristics**

## Ordering Information

| Device         | Packing                     |
|----------------|-----------------------------|
| Part Number-BP | Bulk: 10PCS/BOX ;100PCS/CTN |

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