

# MB1005 THRU MB1010

## Features

- Mounting Hole For #6 Screw
- Any Mounting Position
- Surge Rating Of 150 Amps
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant (NOTE 1) ("P" Suffix designates RoHS Compliant. See ordering information)

## Maximum Ratings

- Maximum Mounting Torque: 4.5 in-lbs.
- UL Recognized File # E165989
- Operating Temperature: -55°C to +125°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance: 5°C/W Junction to case

| MCC Catalog Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|--------------------|----------------|----------------------------------------|---------------------|-----------------------------|
| MB1005             | MB1005         | 50V                                    | 35V                 | 50V                         |
| MB101              | MB101          | 100V                                   | 70V                 | 100V                        |
| MB102              | MB102          | 200V                                   | 140V                | 200V                        |
| MB104              | MB104          | 400V                                   | 280V                | 400V                        |
| MB106              | MB106          | 600V                                   | 420V                | 600V                        |
| MB108              | MB108          | 800V                                   | 560V                | 800V                        |
| MB1010             | MB1010         | 1000v                                  | 700V                | 1000v                       |

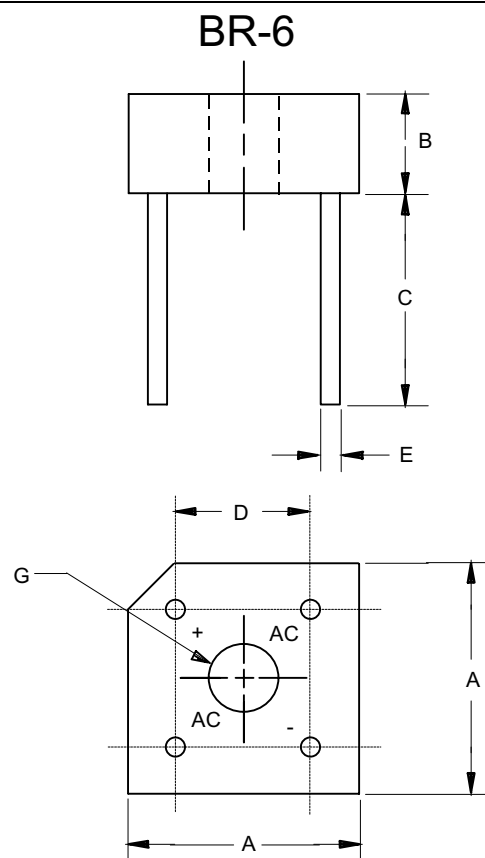
## Electrical Characteristics @ 25°C Unless Otherwise Specified

|                                                         |             |                           |                                                                          |
|---------------------------------------------------------|-------------|---------------------------|--------------------------------------------------------------------------|
| Average Forward Current                                 | $I_{F(AV)}$ | 10.0A                     | $T_c = 50^\circ\text{C}$                                                 |
| Peak Forward Surge Current                              | $I_{FSM}$   | 150A                      | 8.3ms, half sine                                                         |
| Maximum Forward Voltage Drop Per Element                | $V_F$       | 1.1V                      | $I_{FM} = 5.0\text{A}$ per element;<br>$T_J = 25^\circ\text{C}$ (Note 2) |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$       | 10 $\mu\text{A}$<br>1.0mA | $T_J = 25^\circ\text{C}$<br>$T_J = 100^\circ\text{C}$                    |

Notes: 1. High Temperature Solder Exemption Applied, see EU Directive Annex Notes 7

2. Pulse Test: Pulse Width 300usec, Duty Cycle 1%

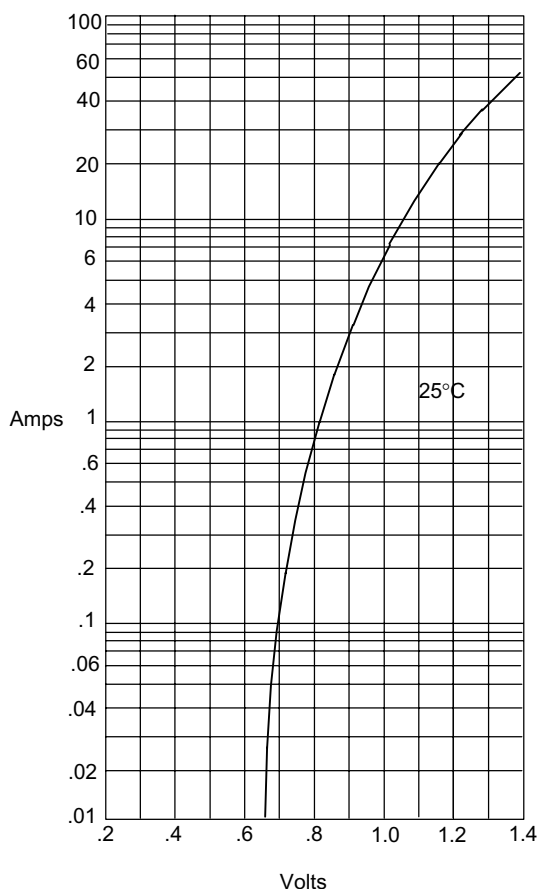
## 10 Amp Single Phase Bridge Rectifier 50 to 1000 Volts



| DIMENSIONS |        |      |       |       |         |
|------------|--------|------|-------|-------|---------|
| DIM        | INCHES |      | MM    |       | NOTE    |
|            | MIN    | MAX  | MIN   | MAX   |         |
| A          | .578   | .618 | 14.69 | 15.71 | 2PL     |
| B          | .230   | .270 | 5.84  | 6.86  |         |
| C          | .750   | ---  | 19.10 | ---   |         |
| D          | .405   | .444 | 10.30 | 11.30 | 2PL     |
| E          | .038   | .042 | 0.97  | 1.07  | 4PL/TYP |
| G          | .145   | ---  | 3.70  | ---   | Ø       |

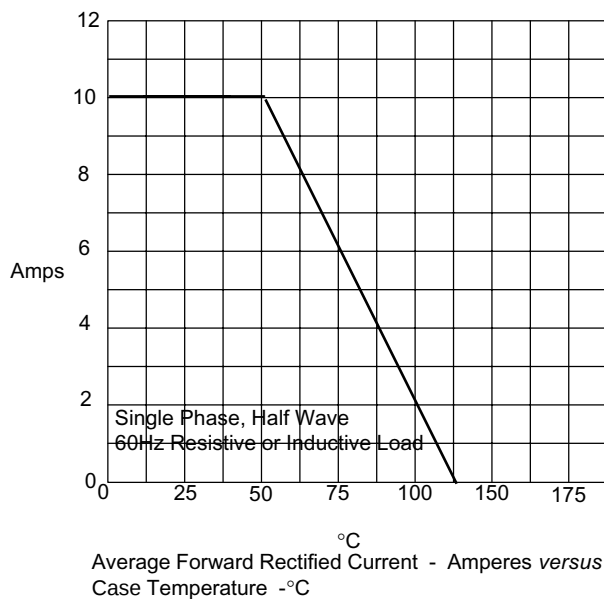
## MB1005 thru MB1010

Figure 1  
Typical Forward Characteristics



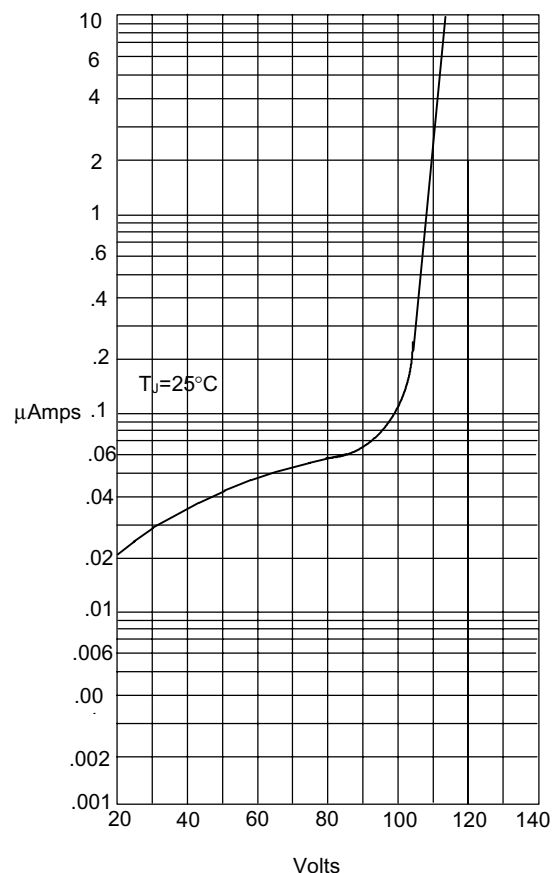
Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 3  
Forward Derating Curve



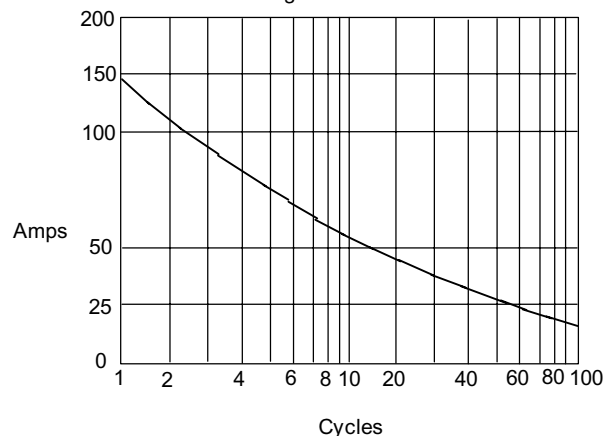
Average Forward Rectified Current - Amperes versus  
Case Temperature - °C

Figure 2  
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes versus  
Percent Of Rated Peak Reverse Voltage - Volts

Figure 4  
Peak Forward Surge Current



Peak Forward Surge Current - Amperes versus  
Number Of Cycles At 60Hz - Cycles



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## Ordering Information :

| Device         | Packing           |
|----------------|-------------------|
| Part Number-BP | Bulk: 1.6kpcs/Ctn |

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