



Micro Commercial Components  
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# MB5005 THRU MB5010

## Features

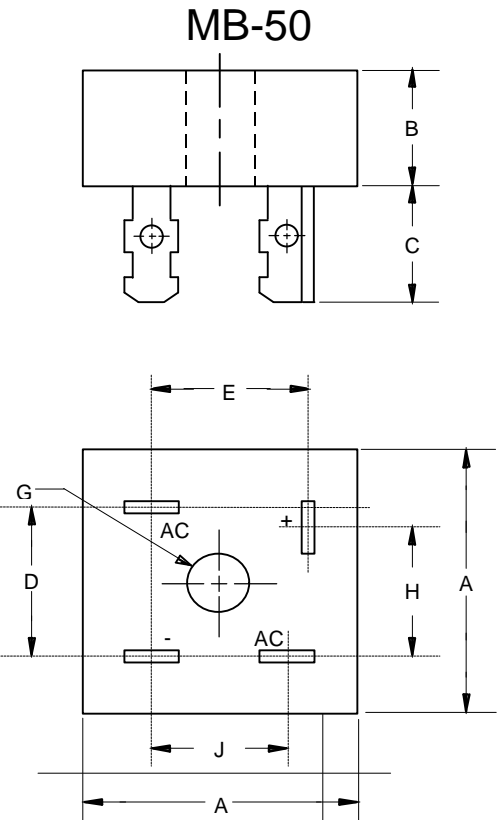
- Mounting Hole For #8 Screw
- Plastic Case With Metal Bottom
- Any Mounting Position
- Surge Rating Of 400 Amps

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

## Maximum Ratings

- Operating Temperature: -50°C to +150°C
- Storage Temperature: -50°C to +150°C

| MCC Catalog Number | Device Marking | Maximum Reccurent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|--------------------|----------------|--|---------------------|-----------------------------|
| MB5005             | MB5005         | 50V                                    | 35V                 | 50V                         |
| MB501              | MB501          | 100V                                   | 70V                 | 100V                        |
| MB502              | MB502          | 200V                                   | 140V                | 200V                        |
| MB504              | MB504          | 400V                                   | 280V                | 400V                        |
| MB506              | MB506          | 600V                                   | 420V                | 600V                        |
| MB508              | MB508          | 800V                                   | 560V                | 800V                        |
| MB5010             | MB5010         | 1000v                                  | 700V                | 1000v                       |



## Electrical Characteristics @ 25°C Unless Otherwise Specified

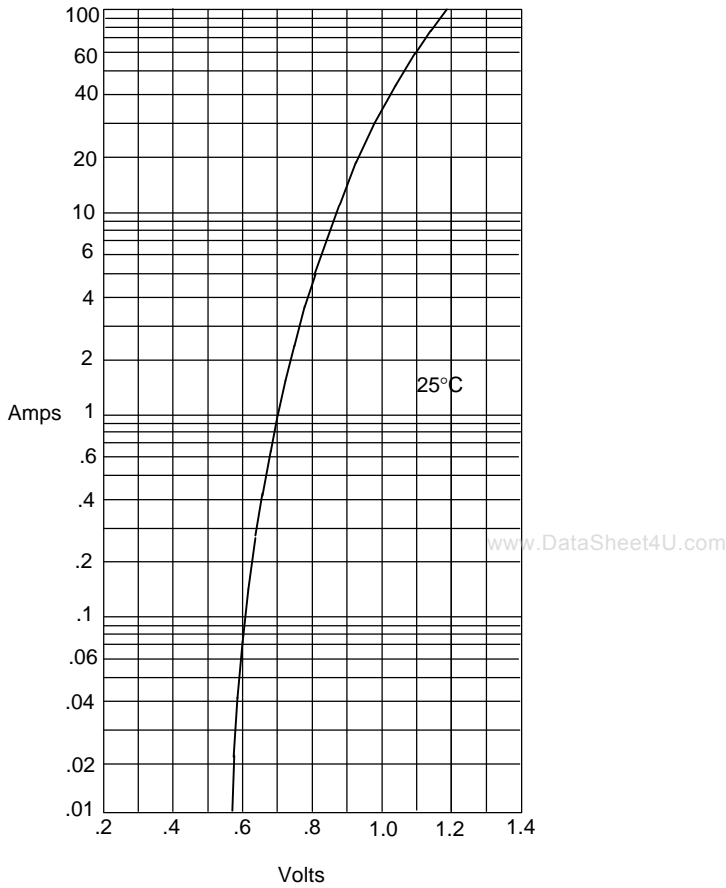
|   |             |                           |  |
|---|-------------|---------------------------|--|
| Average Forward Current                                 | $I_{F(AV)}$ | 50.0A                     | $T_J = 55^\circ\text{C}$   |
| Peak Forward Surge Current                              | $I_{FSM}$   | 400A                      | 8.3ms, half sine   |
| Maximum Forward Voltage Drop Per Element                | $V_F$       | 1.2V                      | $I_{FM} = 25\text{A}$ per element;<br>$T_J = 25^\circ\text{C}^*$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$       | 10 $\mu\text{A}$<br>0.5mA | $T_J = 25^\circ\text{C}$<br>$T_J = 100^\circ\text{C}$            |

\*Pulse test: Pulse width 300  $\mu\text{sec}$ , Duty cycle 1%

| DIM | INCHES |       | MM    |       | NOTE |
|-----|--------|-------|-------|-------|------|
|     | MIN    | MAX   | MIN   | MAX   |      |
| A   | ---    | 1.140 | ---   | 29.00 |      |
| B   | ---    | .452  | ---   | 11.50 |      |
| C   | .425   | .480  | 10.80 | 12.20 |      |
| D   | .693   | .732  | 17.54 | 18.6  |      |
| E   | .637   | .677  | 16.20 | 17.20 |      |
| G   | .188   | ---   | 4.77  | ---   | ∅    |
| H   | .633   | .673  | 16.10 | 17.10 |      |
| J   | .543   | .582  | 13.80 | 14.80 |      |

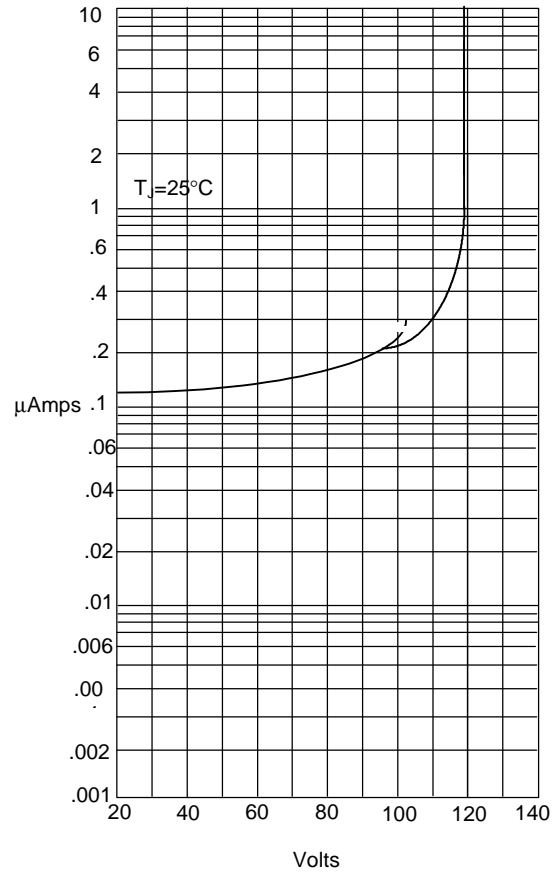
# MB5005 thru MB5010

Figure 1  
Typical Forward Characteristics



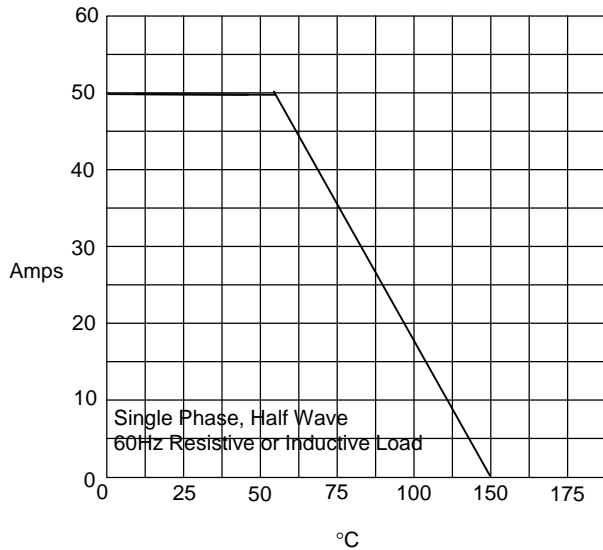
Instantaneous Forward Current - Amperes *versus*  
Instantaneous Forward Voltage - Volts

Figure 2  
Typical Reverse Characteristics



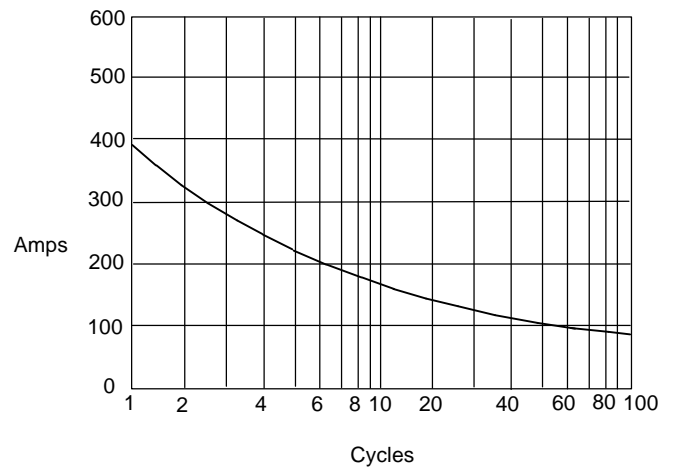
Instantaneous Reverse Leakage Current - MicroAmperes *versus*  
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3  
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*  
Ambient Temperature - °C

Figure 4  
Peak Forward Surge Current



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