

MB1005 THRU MB1010

Features

- Low Forward Voltage Drop
- Ceramic Case
- Any Mounting Position
- Surge Rating Of 150 Amps

10 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

Maximum Ratings

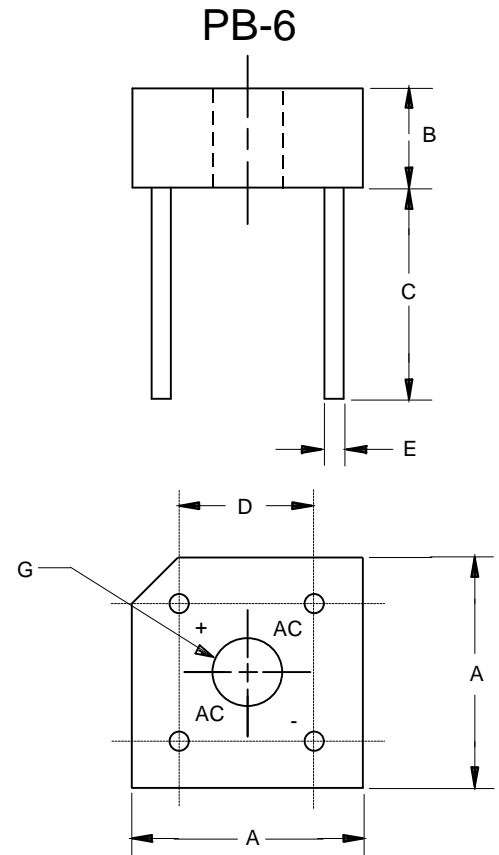
- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C

| Microsemi Catalog Number | Device Marking | Maximum Reccurent 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 | $T_J = 75^\circ\text{C}$ |
| 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; $T_J = 25^\circ\text{C}^*$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 5 μA 1.0mA | $T_J = 25^\circ\text{C}$ $T_J = 100^\circ\text{C}$ |

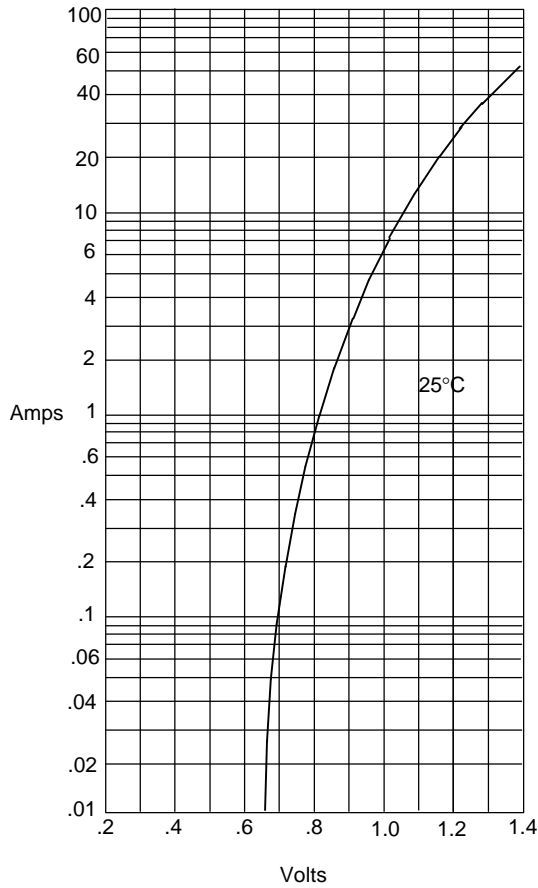
*Pulse test: Pulse width 300 μsec , Duty cycle 1%



| DIM | INCHES | | MM | | NOTE |
|-----|--------|------|-------|-------|---------------|
| | MIN | MAX | MIN | MAX | |
| A | --- | .610 | --- | 15.50 | 2PL |
| B | --- | .250 | --- | 6.33 | |
| C | --- | .750 | --- | 19.20 | |
| D | .405 | .444 | 10.30 | 11.30 | 2PL |
| E | .040 | --- | 1.00 | --- | 4PL/TYP |
| G | .145 | --- | 3.70 | --- | \varnothing |

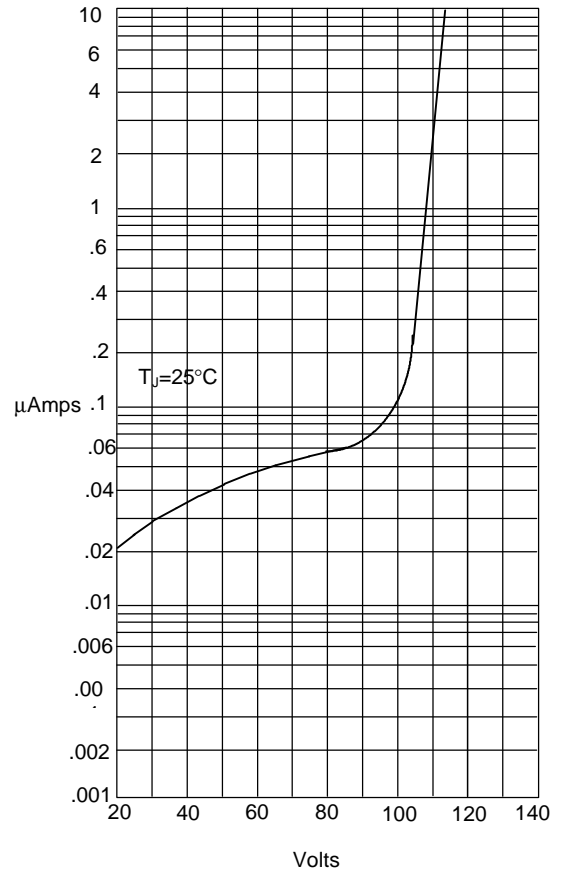
MB1005 thru MB1010

Figure 1
Typical Forward Characteristics



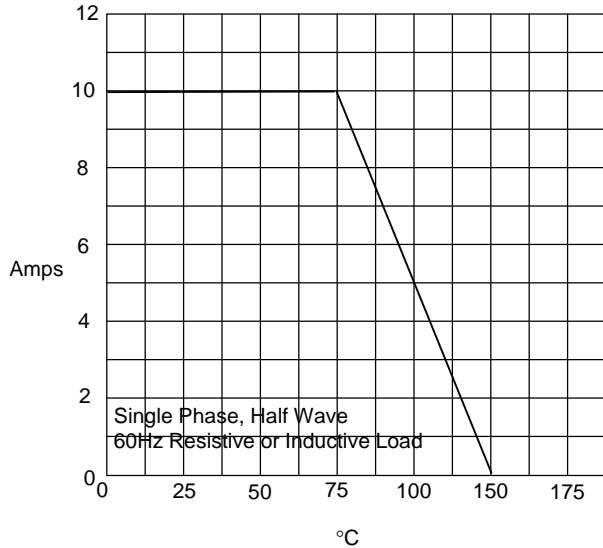
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



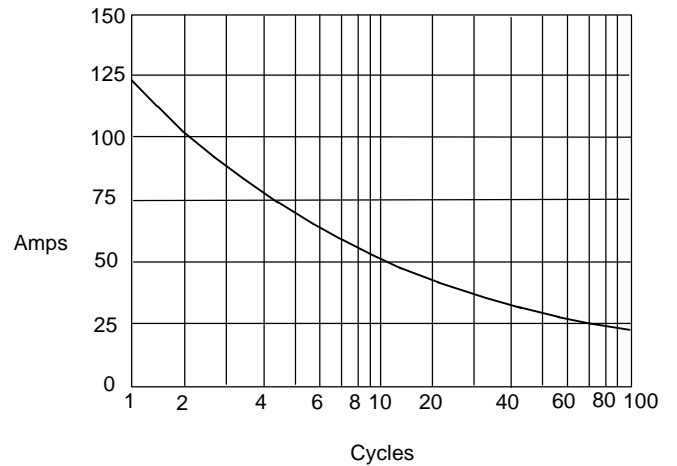
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

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