

**MBR2020  
 THRU  
 MBR20100**

**20 Amp  
 Schottky Barrier  
 Rectifier  
 20 to 100 Volts**

**Features**

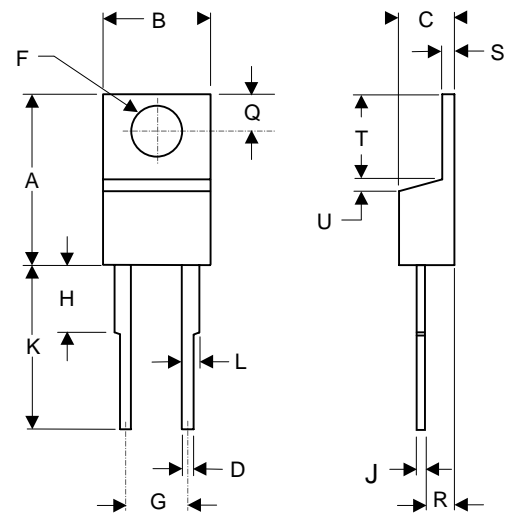
- Metal of siliconrectifier, majonty carrier conducton
- Guard ring for transient protection
- Low power loss high efficiency
- High surge capacity, High current capability

**Maximum Ratings**

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C

| Microsemi Catalog Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|--------------------------|----------------|--|---------------------|-----------------------------|
| MBR2020                  | MBR2020        | 20V                                    | 14V                 | 20V                         |
| MBR2030                  | MBR2030        | 30V                                    | 21V                 | 30V                         |
| MBR2035                  | MBR2035        | 35V                                    | 24.5V               | 35V                         |
| MBR2040                  | MBR2040        | 40V                                    | 28V                 | 40V                         |
| MBR2045                  | MBR2045        | 45V                                    | 31.5V               | 45V                         |
| MBR2060                  | MBR2060        | 60V                                    | 42V                 | 60V                         |
| MBR2080                  | MBR2080        | 80V                                    | 56V                 | 80V                         |
| MBR20100                 | MBR20100       | 100V                                   | 70V                 | 100V                        |

**TO-220AC**



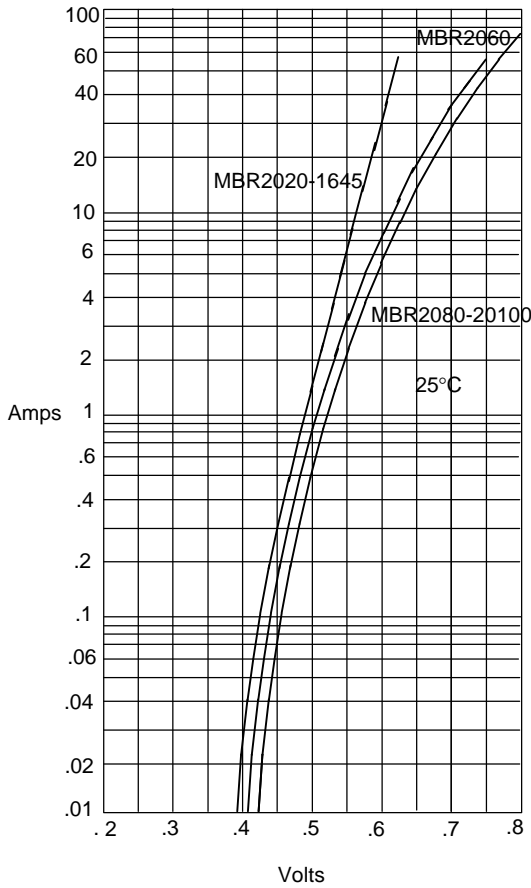
**Electrical Characteristics @ 25°C Unless Otherwise Specified**

|   |             |                      |  |
|---|-------------|----------------------|--|
| Average Forward Current   | $I_{F(AV)}$ | 20A                  | $T_C = 135^\circ\text{C}$  |
| Peak Forward Surge Current  | $I_{FSM}$   | 150A                 | 8.3ms, half sine   |
| Maximum Forward Voltage Drop Per Element MBR2020-2045 MBR2060 MBR2080-20100 | $V_F$       | .63V<br>.75V<br>.84V | $I_{FM} = 20\text{A per element};$<br>$T_A = 25^\circ\text{C}^*$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage                     | IR          | 0.1mA                | $T_J = 25^\circ\text{C}$   |

| DIM | INCHES |      | MM    |       | NOTE |
|-----|--------|------|-------|-------|------|
|     | MIN    | MAX  | MIN   | MAX   |      |
| A   | .595   | .620 | 15.11 | 15.75 |      |
| B   | .380   | .405 | 9.65  | 10.29 |      |
| C   | .160   | .190 | 4.06  | 4.82  |      |
| D   | .025   | .035 | 0.64  | 0.89  |      |
| F   | .142   | .147 | 3.61  | 3.73  |      |
| G   | .190   | .210 | 4.83  | 5.33  |      |
| H   | .110   | .130 | 2.79  | 3.30  |      |
| J   | .018   | .025 | 0.46  | 0.64  |      |
| K   | .500   | .562 | 12.70 | 14.27 |      |
| L   | .045   | .060 | 1.14  | 1.52  |      |
| Q   | .100   | .120 | 2.54  | 3.04  |      |
| R   | .080   | .110 | 2.04  | 2.79  |      |
| S   | .045   | .055 | 1.14  | 1.39  |      |
| T   | .235   | .255 | 5.97  | 6.48  |      |
| U   | -----  | .050 | ----- | 1.27  |      |

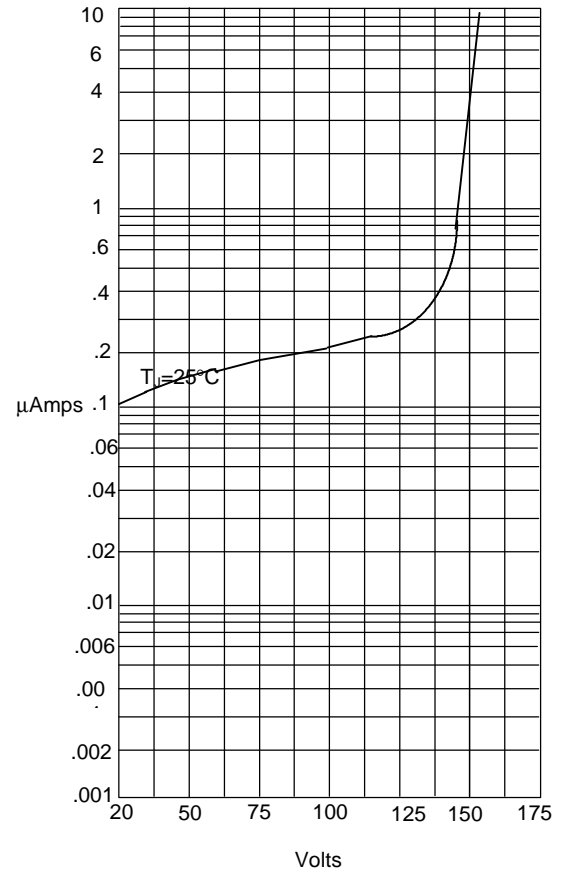
# MBR2020 thru MBR20100

Figure 1  
Typical Forward Characteristics



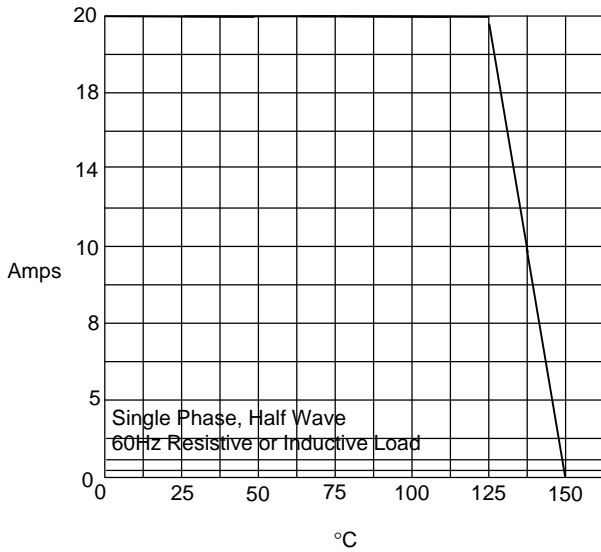
Instantaneous Forward Current - Amperes *versus*  
Instantaneous Forward Voltage - Volts

Figure 2  
Typical Reverse Characteristics



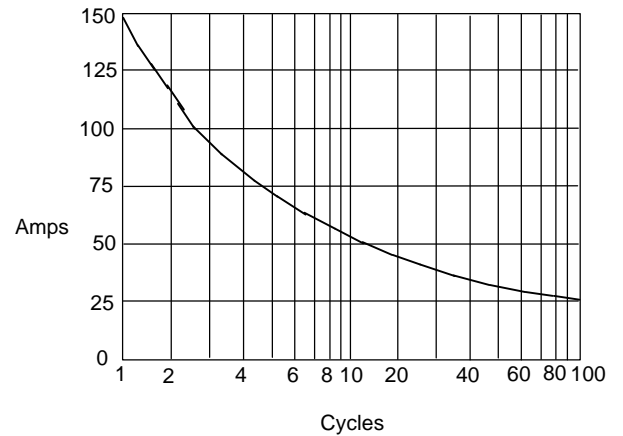
Instantaneous Reverse Leakage Current - MicroAmperes *versus*  
Percent Of Rated Peak Reverse Voltage - Volts

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