



Micro Commercial Components  
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## Features

- Metal of silicon rectifier, majority carrier conduction
- 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 |
|--------------------------|----------------|----------------------------------------|---------------------|-----------------------------|
| MBR1520                  | MBR1520        | 20V                                    | 14V                 | 20V                         |
| MBR1530                  | MBR1530        | 30V                                    | 21V                 | 30V                         |
| MBR1535                  | MBR1535        | 35V                                    | 24.5V               | 35V                         |
| MBR1540                  | MBR1540        | 40V                                    | 28V                 | 40V                         |
| MBR1545                  | MBR1545        | 45V                                    | 31.5V               | 45V                         |
| MBR1560                  | MBR1560        | 60V                                    | 42V                 | 60V                         |
| MBR1580                  | MBR1580        | 80V                                    | 56V                 | 80V                         |
| MBR15100                 | MBR15100       | 100V                                   | 70V                 | 100V                        |

## Electrical Characteristics @ 25°C Unless Otherwise Specified

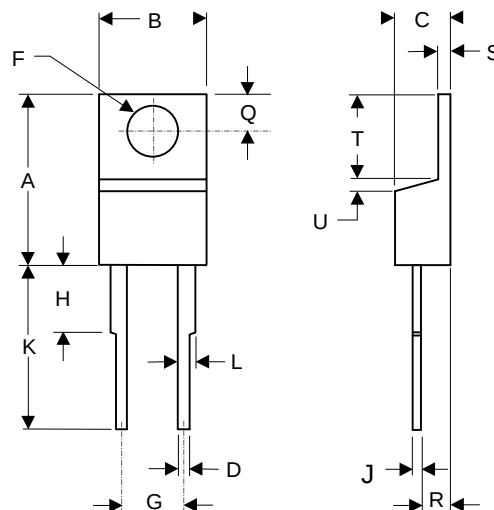
|                                                                                  |             |                      |                                                                                       |
|----------------------------------------------------------------------------------|-------------|----------------------|---------------------------------------------------------------------------------------|
| Average Forward Current                                                          | $I_{F(AV)}$ | 15A                  | $T_C = 125^\circ\text{C}$                                                             |
| Peak Forward Surge Current                                                       | $I_{FSM}$   | 150A                 | 8.3ms, half sine                                                                      |
| Maximum Forward Voltage Drop Per Element MBR1520-1545<br>MBR1560<br>MBR1580-1500 | $V_F$       | .63V<br>.75V<br>.84V | $I_{FM} = 16\text{A mper}$<br>$I_{FM} = 15\text{Amper}$<br>$T_A = 25^\circ\text{C}^*$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage                          | $I_R$       | 0.2 mA               | $T_J = 25^\circ\text{C}$                                                              |

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

## MBR1520 THRU MBR15100

## 15 Amp Schottky Barrier Rectifier 20 to 100 Volts

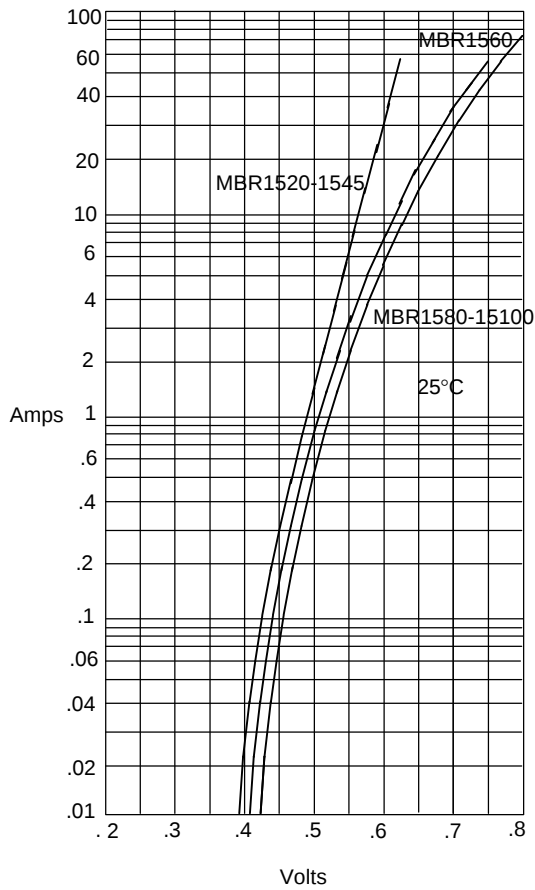
## TO-220AC



| 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  |      |

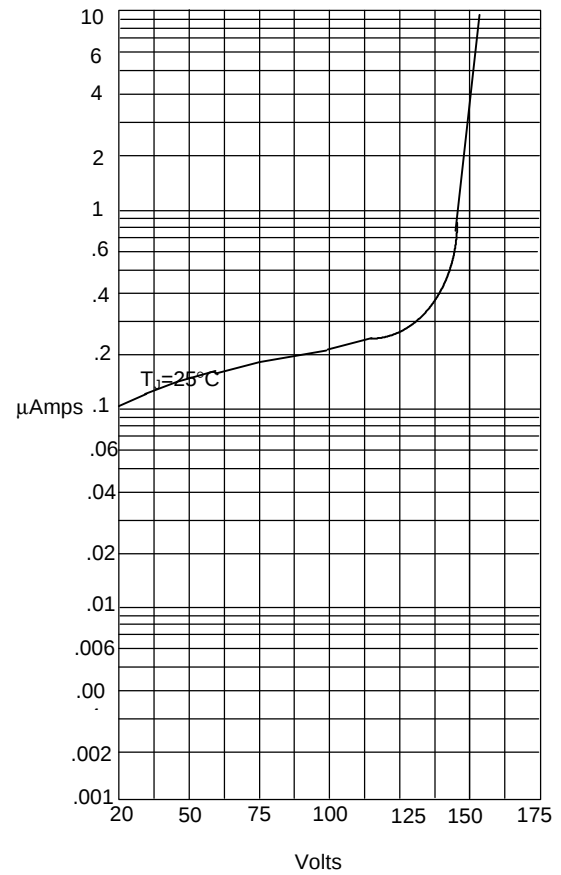
# MBR1520 thru MBR15100

Figure 1  
Typical Forward Characteristics



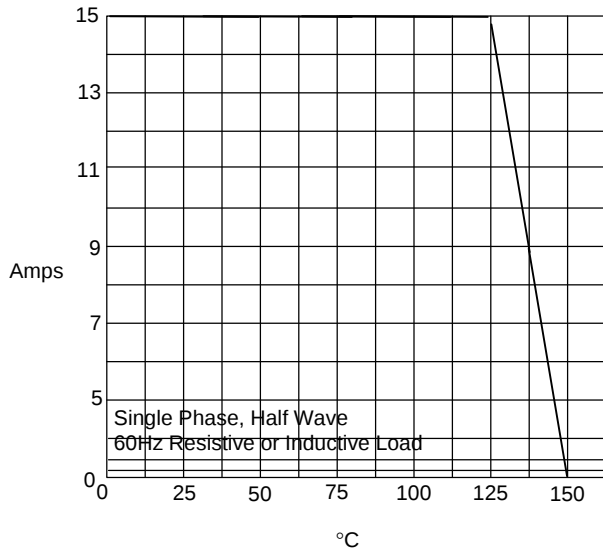
Instantaneous Forward Current - Amperes *versus*  
Instantaneous Forward Voltage - Volts

Figure 2  
Typical Reverse Characteristics



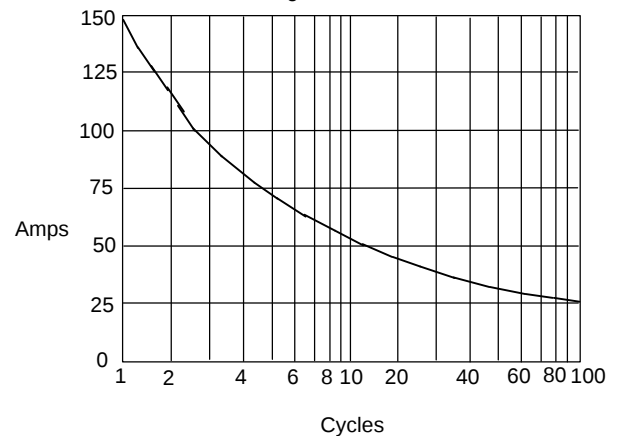
Instantaneous Reverse Leakage Current - MicroAmperes *versus*  
Percent Of Rated Peak Reverse Voltage - Volts

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

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