



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 | 31.5 | 45V |
| MBR1560 | MBR1560 | 60V | 42V | 60V |
| MBR1580 | MBR1580 | 80V | 56V | 80V |
| MBR15100 | MBR15100 | 100V | 70V | 100V |

Electrical Characteristics @ 25°C Unless Otherwise Specified

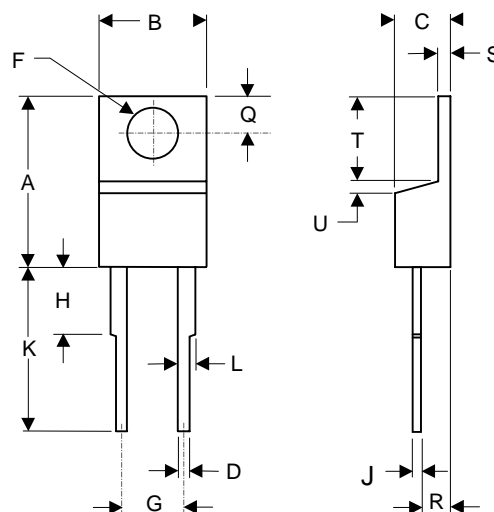
| | | | |
|--|-------------|----------------------|---|
| Average Forward Current | $I_{F(AV)}$ | 15A | $T_C = 125^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 150A | 8.3ms, half sine |
| Maximum Forward Voltage Drop Per Element MBR1520-1545 MBR1560 MBR1580-1500 | V_F | .63V .75V .84V |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

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

MBR1520 THRU MBR15100

15 Amp Schottky Barrier Rectifier 20 to 100 Volts

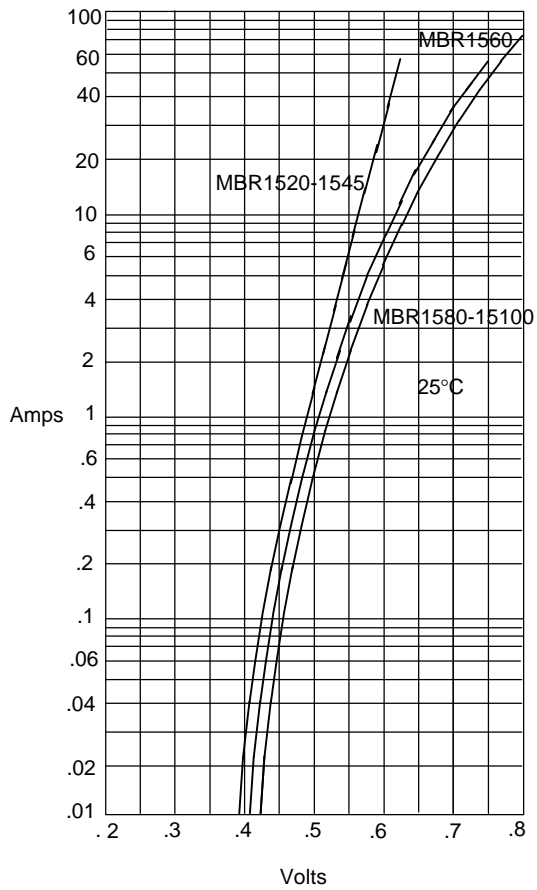
TO-220AC



| 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 | |
| E | .142 | .147 | 3.61 | 3.73 | |
| F | .190 | .210 | 4.83 | 5.33 | |
| G | .110 | .130 | 2.79 | 3.30 | |
| H | .018 | .025 | 0.46 | 0.64 | |
| J | .500 | .562 | 12.70 | 14.27 | |
| K | .045 | .060 | 1.14 | 1.52 | |
| L | .100 | .120 | 2.54 | 3.04 | |
| M | .080 | .110 | 2.04 | 2.79 | |
| N | .045 | .055 | 1.14 | 1.39 | |
| O | .235 | .255 | 5.97 | 6.48 | |
| P | ----- | .050 | ----- | 1.27 | |

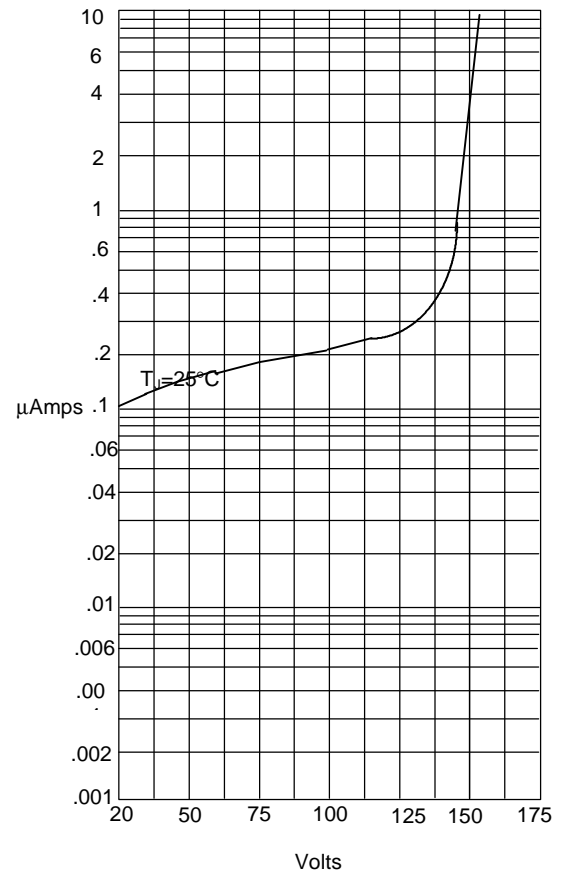
MBR1520 thru MBR15100

Figure 1
Typical Forward Characteristics



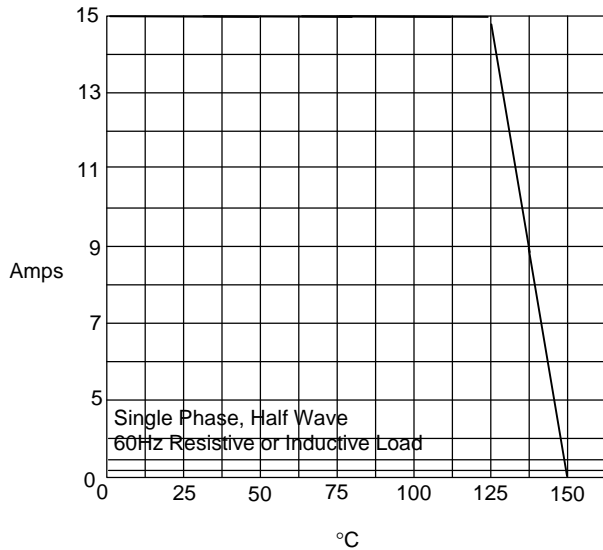
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



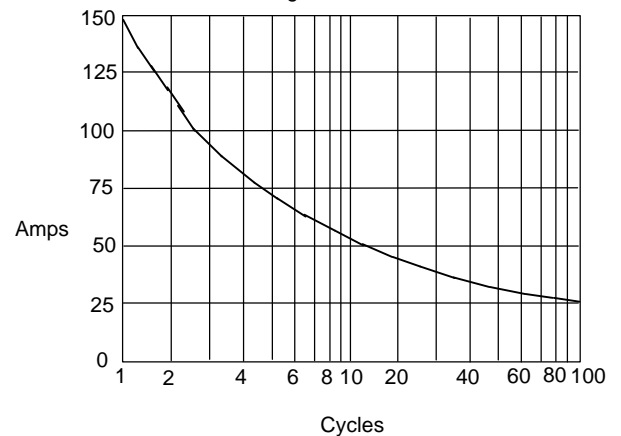
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

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