



Micro Commercial Components

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Features

- Metal of siliconrectifier, majonty carrier conducton
- Guard ring for transient protection
- Low power loss high efficiency
- High surge capacity, High current capability
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1

Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +175°C

| MCC Catalog Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|--------------------|----------------|--|---------------------|-----------------------------|
| MBR1020 | MBR1020 | 20V | 14V | 20V |
| MBR1030 | MBR1030 | 30V | 21V | 30V |
| MBR1035 | MBR1035 | 35V | 24.5V | 35V |
| MBR1040 | MBR1040 | 40V | 28V | 40V |
| MBR1045 | MBR1045 | 45V | 31.5V | 45V |
| MBR1060 | MBR1060 | 60V | 42V | 60V |
| MBR1080 | MBR1080 | 80V | 56V | 80V |
| MBR10100 | MBR10100 | 100V | 70V | 100V |

Electrical Characteristics @ 25°C Unless Otherwise Specified

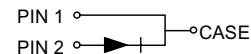
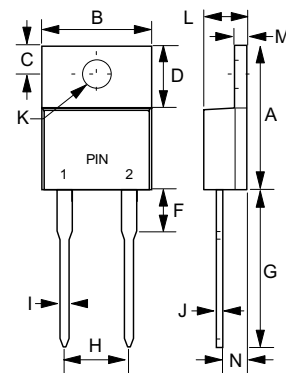
| | | | |
|--|-------------|----------------------|--|
| Average Forward Current | $I_{F(AV)}$ | 10A | $T_C = 125^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 150A | 8.3ms, half sine |
| Maximum Forward Voltage Drop Per Element MBR1020-1045 MBR1060 MBR1080-10100 | V_F | .84V .95V .84V | $I_{FM} = 20 \text{ A mper}$ $T_A = 25^\circ\text{C}$ $I_{FM} = 10 \text{ A mper}$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage MBR1020-1045 MBR1060-10100 | I_R | 0.1mA 0.15mA | $T_J = 25^\circ\text{C}$ |
| Typical Junction Capacitance | C_J | 400pF | Measured at 1.0MHz, $V_R=4.0V$ |

Notes: 1. High Temperature Solder Exemption Applied, see EU Directive Annex 7.

MBR1020 THRU MBR10100

10 Amp Schottky Barrier Rectifier 20 to 100 Volts

TO-220AC



| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|------|-------|-------|------|
| | INCHES | | MM | | |
| A | .560 | .625 | 14.22 | 15.88 | |
| B | .380 | .420 | 9.65 | 10.67 | |
| C | .100 | .135 | 2.54 | 3.43 | |
| D | .230 | .270 | 5.84 | 6.86 | |
| F | ---- | .250 | ---- | 6.35 | |
| G | .500 | .580 | 12.70 | 14.73 | |
| H | .190 | .210 | 4.83 | 5.33 | |
| I | .020 | .045 | 0.51 | 1.14 | |
| J | .012 | .025 | 0.30 | 0.64 | |
| K | .139 | .161 | 3.53 | 4.09 | ∅ |
| L | .140 | .190 | 3.56 | 4.83 | |
| M | .045 | .055 | 1.14 | 1.40 | |
| N | .080 | .115 | 2.03 | 2.92 | |

MBR1020 thru MBR10100

Figure 1
Typical Forward Characteristics

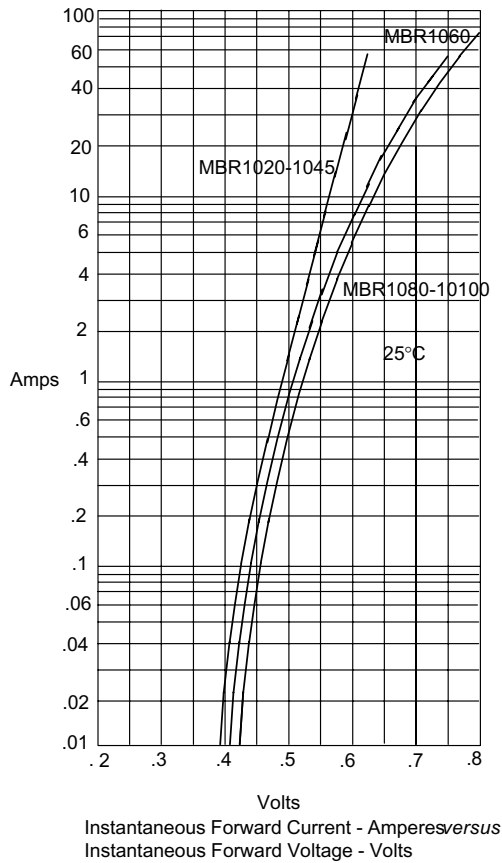


Figure 2
Typical Reverse Characteristics

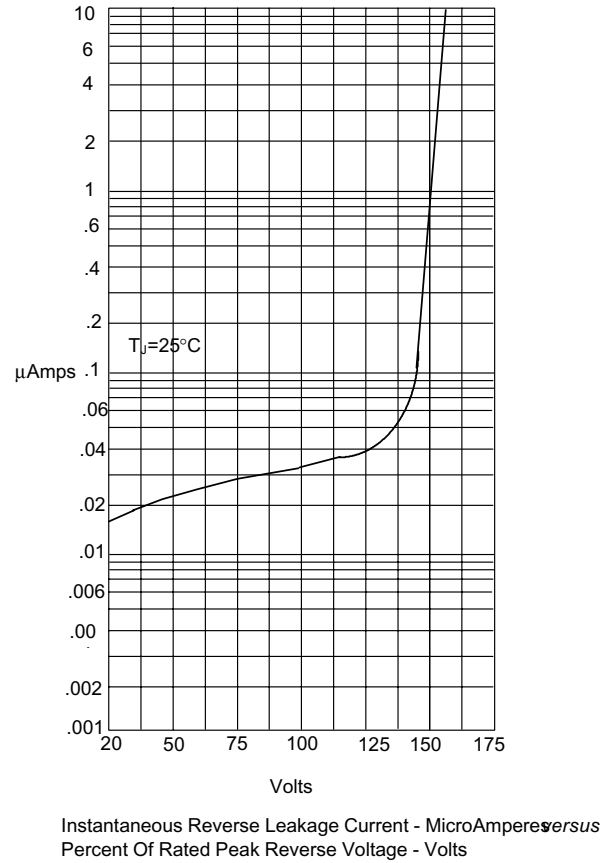


Figure 3
Forward Derating Curve

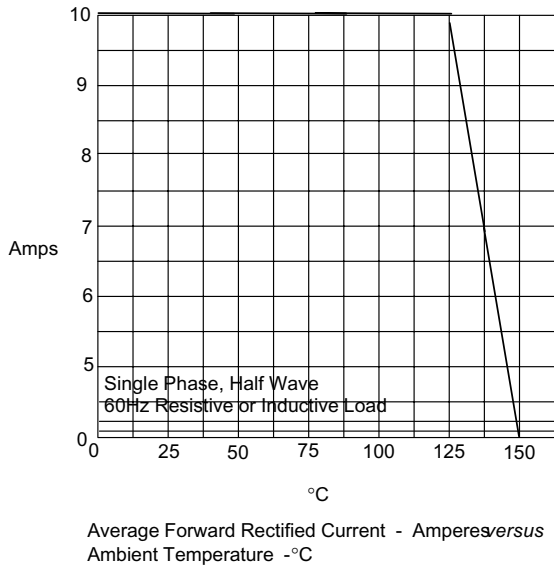
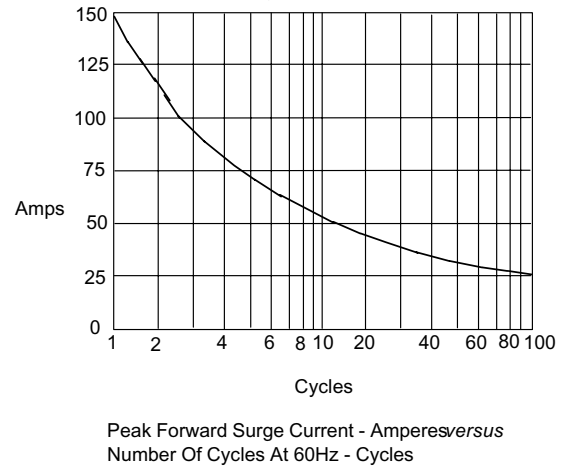


Figure 4
Peak Forward Surge Current





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Ordering Information

| | |
|------------------|----------------|
| Device | Packing |
| (Part Number)-BP | Bulk;1Kpcs/Box |

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