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MBR1620 THRU MBR1660

Features

- Metal to silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- Low power loss high efficiency
- High surge capacity, High current capability

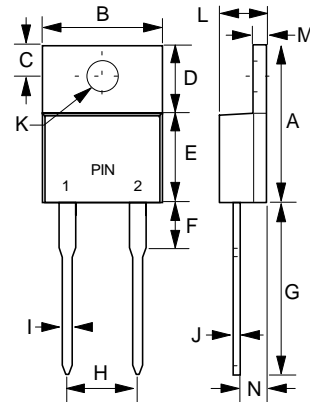
Maximum Ratings

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

| Catalog Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|----------------|----------------|--|---------------------|-----------------------------|
| MBR1620 | MBR1620 | 20V | 14V | 20V |
| MBR1630 | MBR1630 | 30V | 21V | 30V |
| MBR1635 | MBR1635 | 35V | 24.5V | 35V |
| MBR1640 | MBR1640 | 40V | 28V | 40V |
| MBR1645 | MBR1645 | 45V | 31.5V | 45V |
| MBR1660 | MBR1660 | 60V | 42V | 60V |

16 Amp Schottky Barrier Rectifier 20 to 60 Volts

TO-220AC



Electrical Characteristics @ 25°C Unless Otherwise Specified

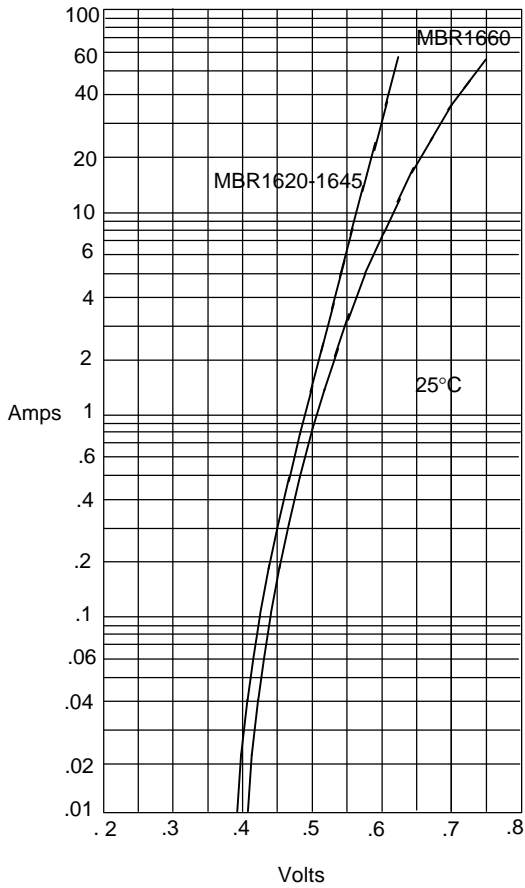
| | | | |
|---|-------------|------------------------------|--|
| Average Forward Current | $I_{F(AV)}$ | 16A | $T_C = 125^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 150A | 8.3ms, half sine |
| Maximum Forward Voltage Drop Per Element MBR1620-1645 MBR1660 MBR1620-1645 MBR1660 | V_F | .63V .75V .57V .65V | $I_{FM} = 16A$ $T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage MBR1620-1645 MBR1660 MBR1620-1645 MBR1660 | I_R | 0.2mA 1mA 40mA 50mA | $T_J = 25^\circ\text{C}$ $T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$ $T_J = 125^\circ\text{C}$ |
| Typical Junction Capacitance | C_J | 450pF | Measured at 1.0MHz, $V_R=4.0V$ |

*Pulse test: Pulse width 300 μsec , Duty cycle 2%

| DIM | INCHES | | MM | | NOTE |
|-----|--------|------|-------|-------|------|
| | MIN | MAX | MIN | MAX | |
| 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 | |
| E | .380 | .420 | 9.65 | 10.67 | |
| 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 | |

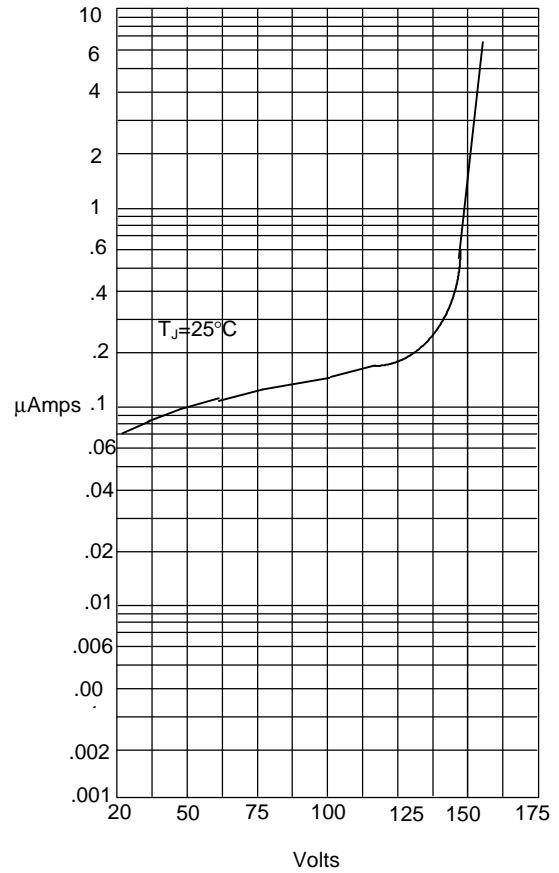
MBR1620 thru MBR1660

Figure 1
Typical Forward Characteristics



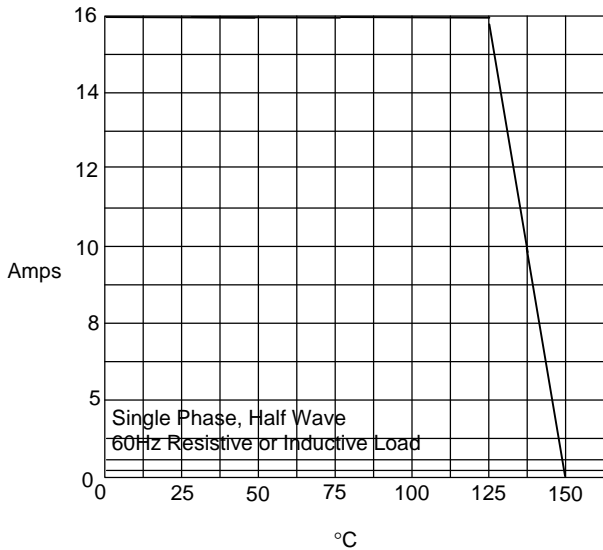
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

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