



Micro Commercial Components
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MBR3020 THRU MBR30100

Features

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

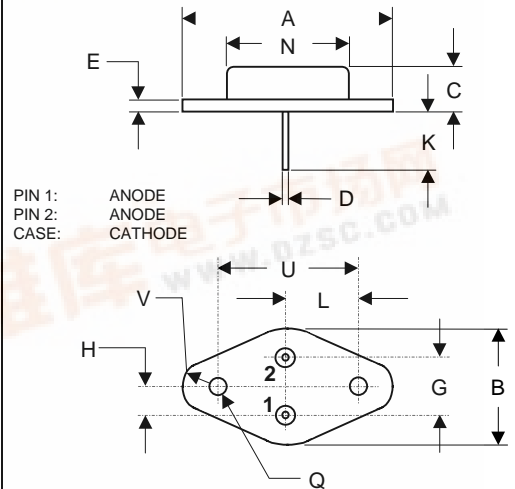
30 Amp Schottky Barrier Rectifier 20 to 100 Volts

Maximum Ratings

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

| MCC Part Number | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|--|---------------------|-----------------------------|
| MBR3020 | 20V | 14V | 20V |
| MBR3030 | 30V | 21V | 30V |
| MBR3035 | 35V | 24.5V | 35V |
| MBR3040 | 40V | 28V | 40V |
| MBR3045 | 45V | 31.5V | 45V |
| MBR3060 | 60V | 42V | 60V |
| MBR3080 | 80V | 56V | 80V |
| MBR30100 | 100V | 70V | 100V |

TO-3



Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|-------------|-------------------------|--|
| Average Forward Current | $I_{F(AV)}$ | 30 A | $T_L = 105^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 400A | 8.3ms, half sine |
| Maximum Instantaneous Forward Voltage | V_F | | $I_{FM} = 30.0\text{A};$ $T_A = 25^\circ\text{C}$ |
| MBR3020-3045 MBR3060 MBR3080-30100 | | .63 V .75 V .84 V | |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 1.0mA | $T_A = 25^\circ\text{C}$ |
| Typical Junction Capacitance | C_J | 200pF | Measured at 1.0MHz, $V_R=4.0\text{V}$ |

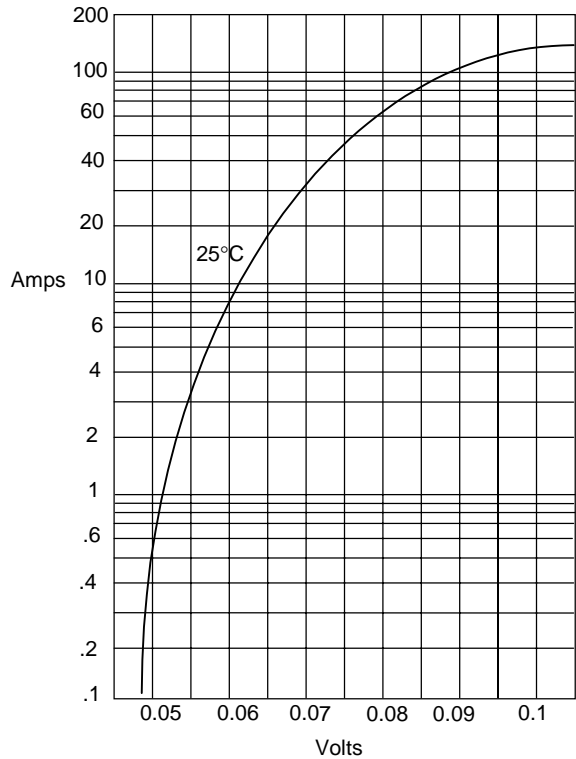
DIMENSIONS

| DIM | INCHES | | MM | |
|-----|--------|-------|-------|-------|
| | MIN | MAX | MIN | MAX |
| A | 1.550 | REF | 39.37 | REF |
| B | ---- | 1.050 | ---- | 26.67 |
| C | .250 | .335 | 6.35 | 8.51 |
| D | .038 | .043 | 0.97 | 1.09 |
| E | .055 | .070 | 1.40 | 1.77 |
| G | .430 | BSC | 10.92 | BSC |
| H | .215 | BSC | 5.46 | BSC |
| K | .440 | .480 | 11.18 | 12.19 |
| L | .665 | BSC | 16.89 | BSC |
| N | ---- | .830 | ---- | 21.08 |
| Q | .151 | .165 | 3.84 | 4.19 |
| U | 1.187 | BSC | 30.15 | BSC |
| V | .131 | 1.88 | 3.33 | 4.77 |

MBR3020 thru MBR30100

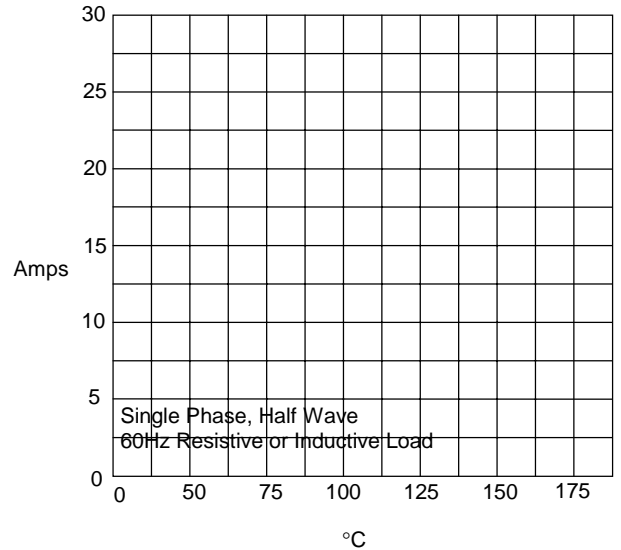


Figure 1
Typical Forward Characteristics



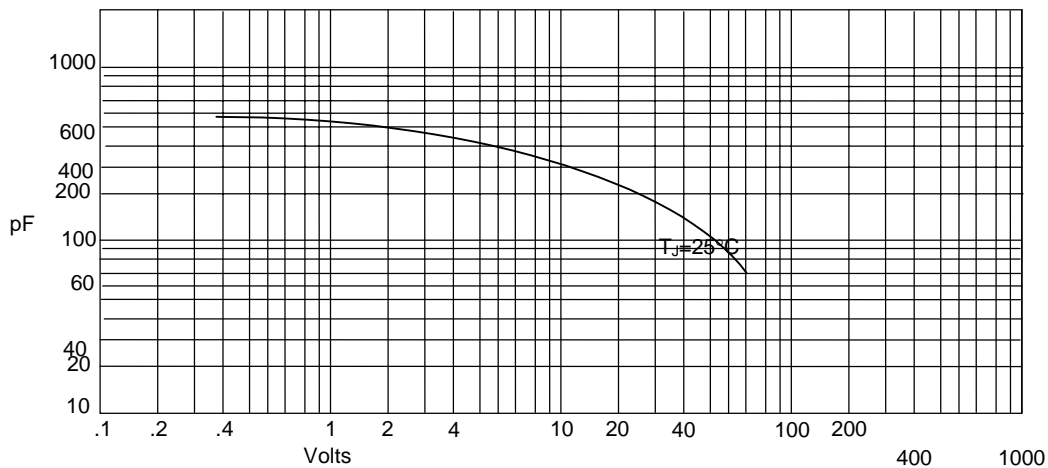
Instantaneous Forward Current - Amperes versus
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



Average Forward Rectified Current - Amperes versus
Ambient Temperature - °C

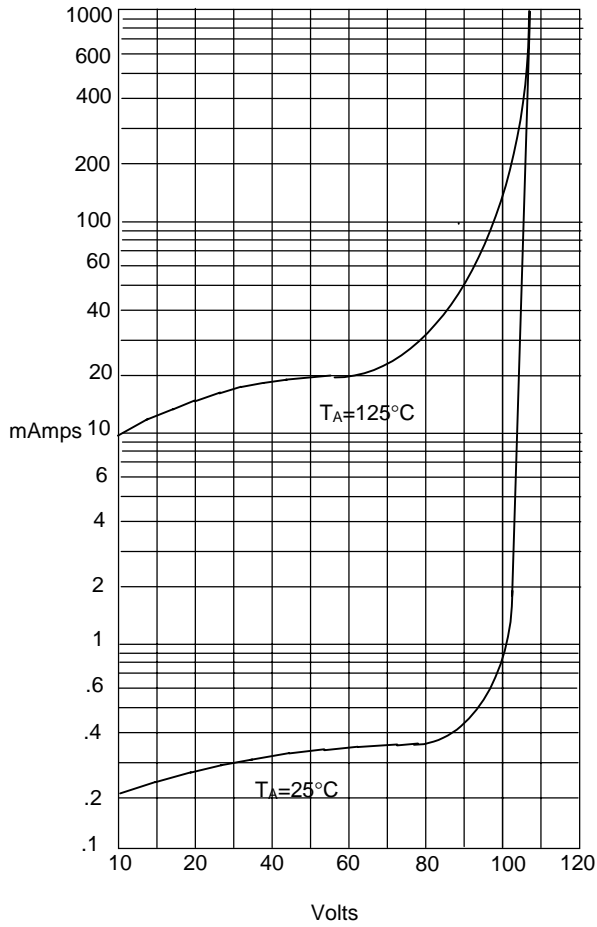
Figure 3
Junction Capacitance



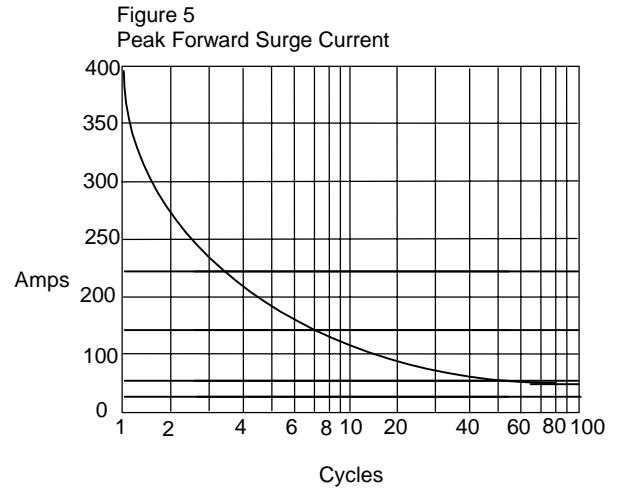
Junction Capacitance - pF versus
Reverse Voltage - Volts



Figure 4
Typical Reverse Characteristics



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



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles