



Micro Commercial Components  
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# MBR0520 THRU MBR05100

## Features

- High Current Capability
- Extremely Low Thermal Resistance
- For Surface Mount Application
- Higher Temp Soldering: 250°C for 10 Seconds At Terminals
- Low Forward Voltage

## Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance: 5°C/W Junction to Lead

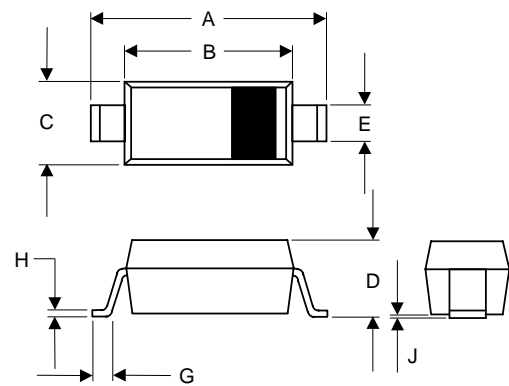
| MCC Catalog Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|--------------------|----------------|--|---------------------|-----------------------------|
| MBR0520            | R2             | 20V                                    | 14V                 | 20V                         |
| MBR0530            | R3             | 30V                                    | 21V                 | 30V                         |
| MBR0540            | R4             | 40V                                    | 28V                 | 40V                         |
| MBR0560            | R6             | 60V                                    | 42V                 | 60V                         |
| MBR0580            | R8             | 80V                                    | 56V                 | 80V                         |
| MBR05100           | RA             | 100V                                   | 70V                 | 100V                        |

## Electrical Characteristics @ 25°C Unless Otherwise Specified

|   |             |       |   |
|---|-------------|-------|---|
| Average Forward Current                                 | $I_{F(AV)}$ | 0.5A  | $T_J=115^\circ\text{C}$                 |
| Peak Forward Surge Current                              | $I_{FSM}$   | 5.5A  | 8.3ms half sine                         |
| Maximum Instantaneous Forward Voltage                   | $V_F$       | 0.45V | $I_{FM}=0.5A$<br>$T_A=25^\circ\text{C}$ |
| MBR0520   |             | 0.55V |   |
| MBR0530   |             | 0.55V |   |
| MBR0540   |             | 0.70V |   |
| MBR0560   |             | 0.80V |   |
| MBR0580-05100   |             |       |   |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$       | 0.2mA | $T_J=25^\circ\text{C}$                  |
| Typical Junction Capacitance                            | $C_J$       | 30pF  | Measured at 1.0MHz, $V_R=4.0\text{V}$   |

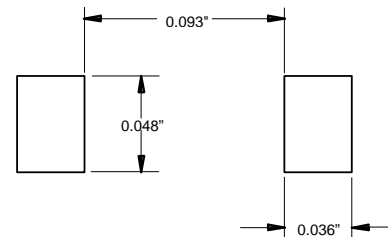
## 0.5 Amp Schottky Rectifier 20 to 100 Volts

## SOD123



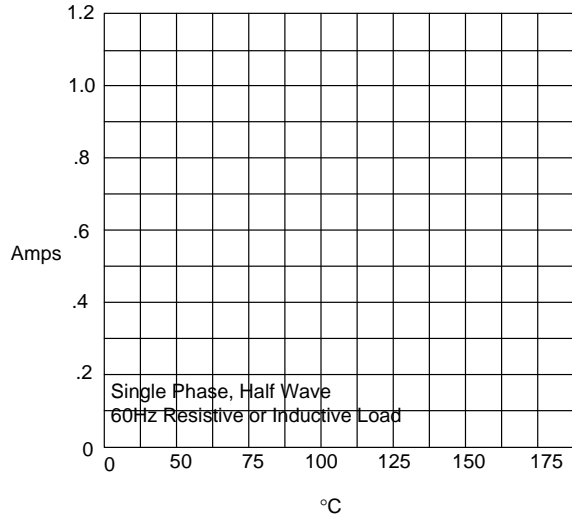
| DIM | DIMENSIONS |      |      |      | NOTE |
|-----|------------|------|------|------|------|
|     | INCHES     |      | MM   |      |      |
| A   | .140       | .152 | 3.55 | 3.85 |      |
| B   | .100       | .112 | 2.55 | 2.85 |      |
| C   | .055       | .071 | 1.40 | 1.80 |      |
| D   | ----       | .053 | ---- | 1.35 |      |
| E   | .012       | .031 | 0.30 | .78  |      |
| G   | .006       | ---- | 0.15 | ---- |      |
| H   | ----       | .01  | ---- | .25  |      |
| J   | ----       | .006 | ---- | .15  |      |

### SUGGESTED SOLDER PAD LAYOUT



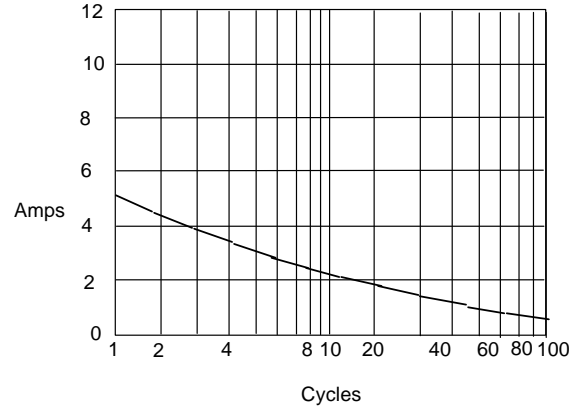
# MBR0520 thru MBR05100

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