

MBR0520 THRU MBR0580

0.5 Amp Schottky Rectifier 20 to 80 Volts

Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- For Surface Mount Application
- Low Forward Voltage and Extremely Low Thermal Resistance
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

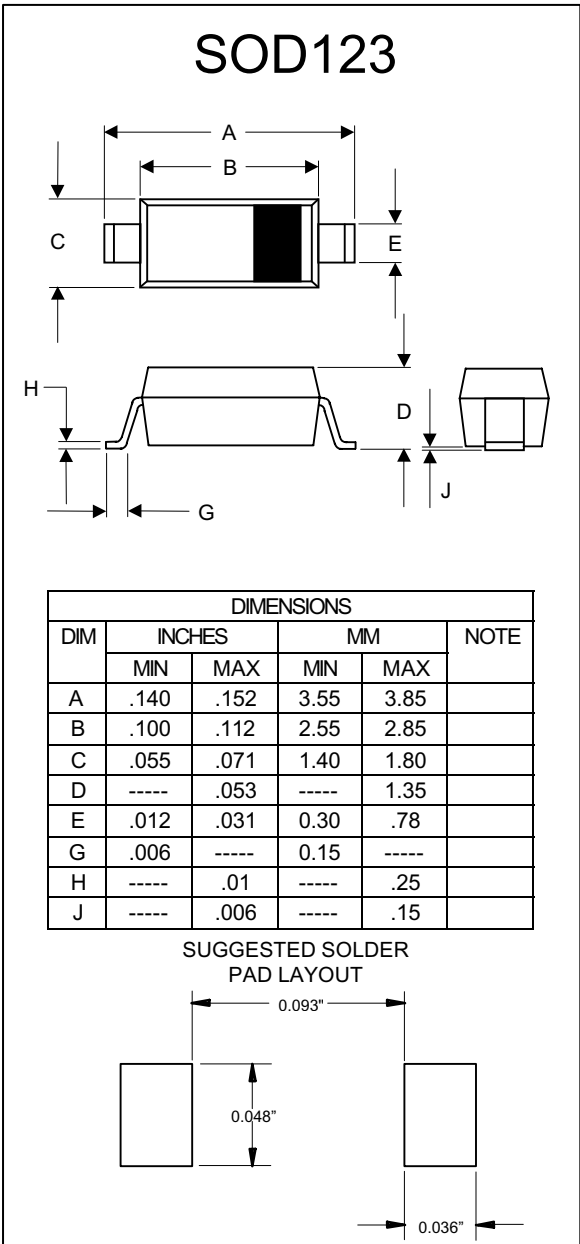
Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance: 244°C/W Junction to Ambient

| 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 |

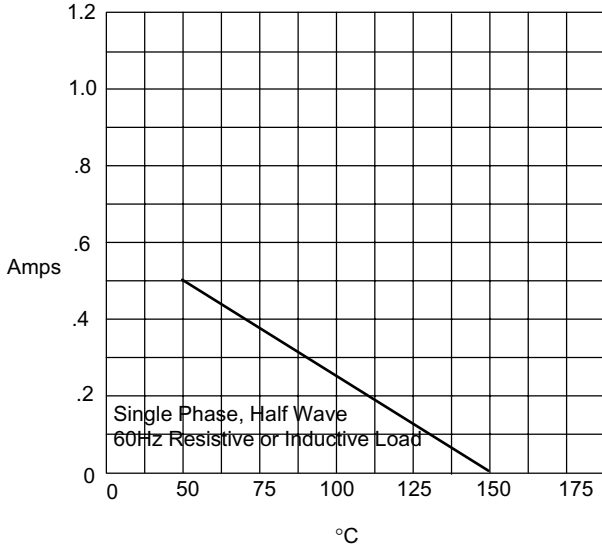
Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|--|-------------|---|--|
| Average Forward Current | $I_{F(AV)}$ | 0.5A | $T_A=50^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 5.5A | 8.3ms half sine |
| Maximum Instantaneous Forward Voltage MBR0520 MBR0530 MBR0540 MBR0560 MBR0580 | V_F | 0.45V 0.55V 0.55V 0.70V 0.80V | $I_{FM}=0.5A$ $T_A=25^\circ\text{C}$ |
| 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, $V_R=4.0\text{V}$ |
| Power dissipation | P_D | 410mW | |



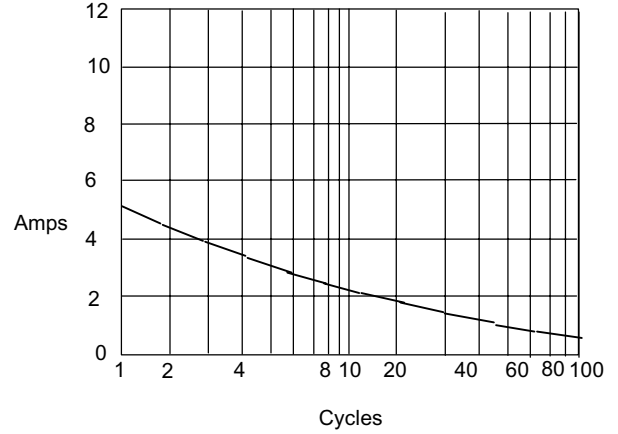
MBR0520 thru MBR0580

Figure 1
Forward Derating Curve



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

Figure 2
Peak Forward Surge Current



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

Figure 3
Typical Forward Characteristics
MBR0520

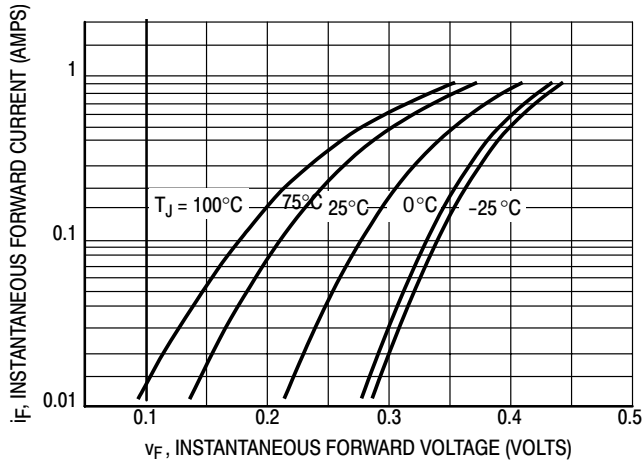


Figure 4
Typical Forward Characteristics
MBR0530~MBR0540

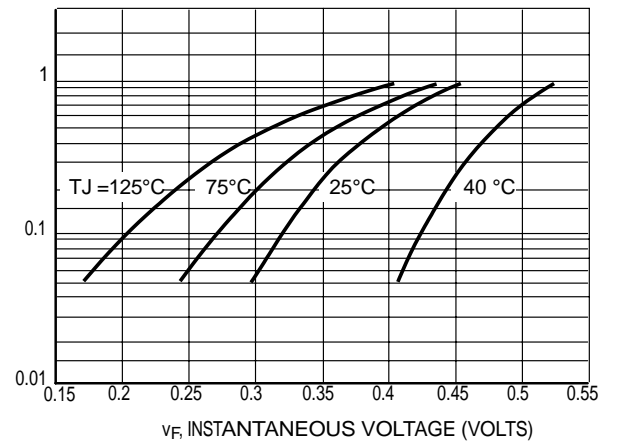


Figure 5
Typical Forward Characteristics
MBR0560

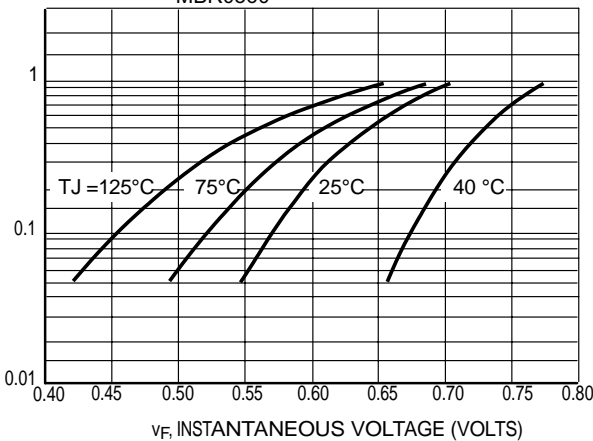
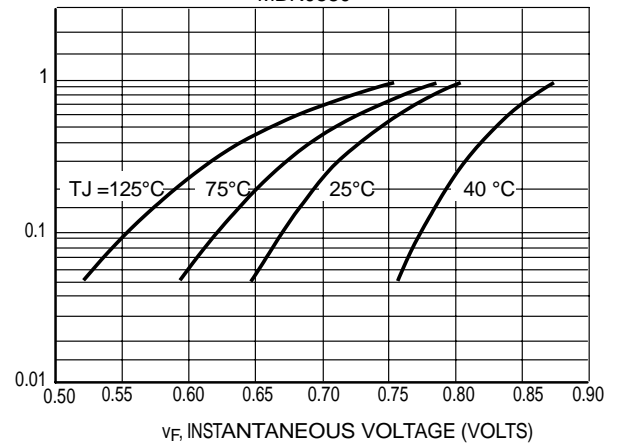


Figure 6
Typical Forward Characteristics
MBR0580





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Ordering Information :

| Device | Packing |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 3Kpcs/Reel |

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