

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
- Halogen Free. "Green" Device (Note 1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +125°C
- Storage Temperature Range: -55°C to +150°C
- Maximum Thermal Resistance(Note 2): 244°C/W Junction to Ambient

| MCC Part 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

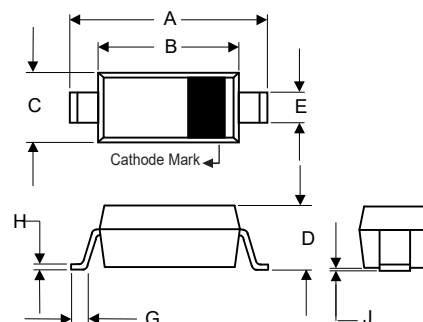
| | | | |
|---|-------------|-------|--|
| Average Forward Current | $I_{F(AV)}$ | 0.5A | $T_A = 50^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 5.5A | 8.3ms Half Sine |
| Maximum Instantaneous Forward Voltage | | | |
| MBR0520 | V_F | 0.45V | $I_{FM}=0.5A;$ $T_J = 25^\circ\text{C}$ |
| MBR0530 | | 0.55V | |
| MBR0540 | | 0.55V | |
| MBR0560 | | 0.70V | |
| MBR0580 | | 0.80V | |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | I_R | 0.1mA | $T_J = 25^\circ\text{C}$ |
| Typical Junction Capacitance | C_J | 30pF | Measured at 1.0MHz, $V_R=4.0V$ |
| Power Dissipation | P_D | 410mW | |

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Note:2. Mounted on FR4 PCB, Single-sided Copper, Suggested Pad Layout.

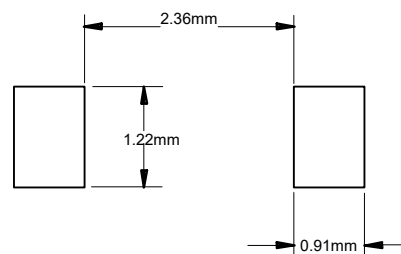
0.5 Amp Schottky Rectifier 20 to 80 Volts

SOD-123



| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|------|------|------|
| | MIN | MAX | MIN | MAX | |
| A | 0.140 | 0.152 | 3.55 | 3.85 | |
| B | 0.100 | 0.112 | 2.55 | 2.85 | |
| C | 0.055 | 0.071 | 1.40 | 1.80 | |
| D | ---- | 0.053 | ---- | 1.35 | |
| E | 0.018 | 0.026 | 0.45 | 0.65 | |
| G | 0.006 | ---- | 0.15 | ---- | |
| H | ---- | 0.010 | ---- | 0.25 | |
| J | ---- | 0.006 | ---- | 0.15 | |

Suggested Solder Pad Layout



Curve Characteristics

Fig. 1 - Forward Characteristics

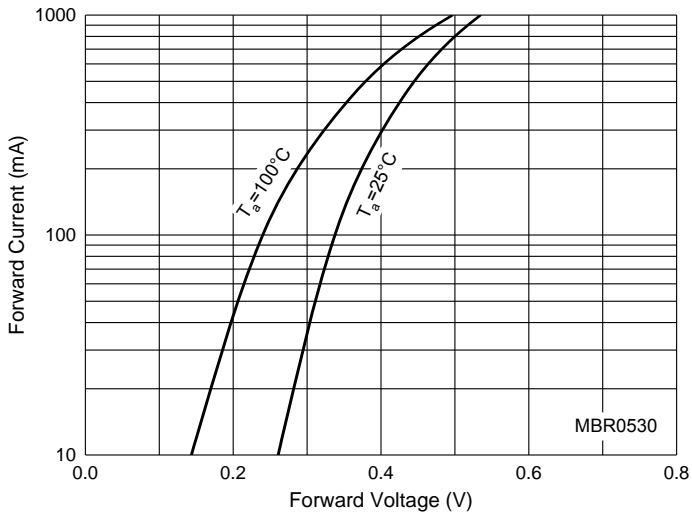


Fig. 2 - Reverse Characteristics

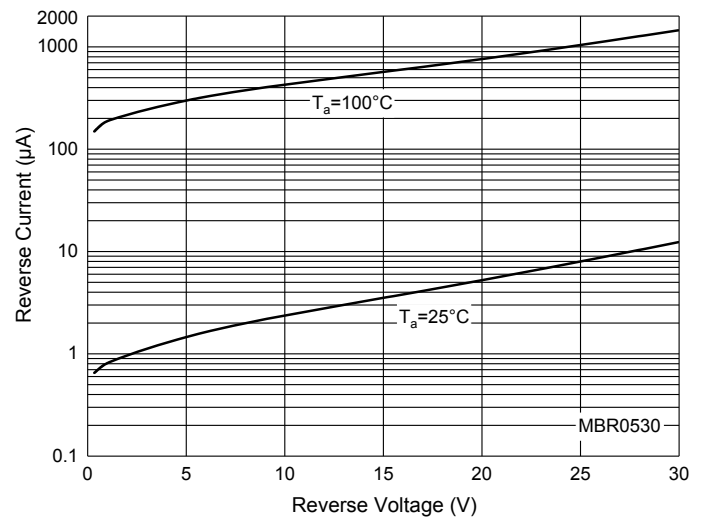


Fig. 3 - Capacitance Characteristics

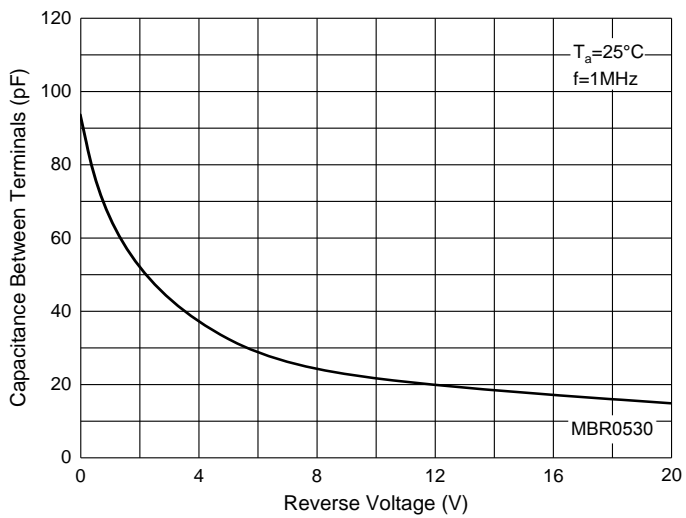
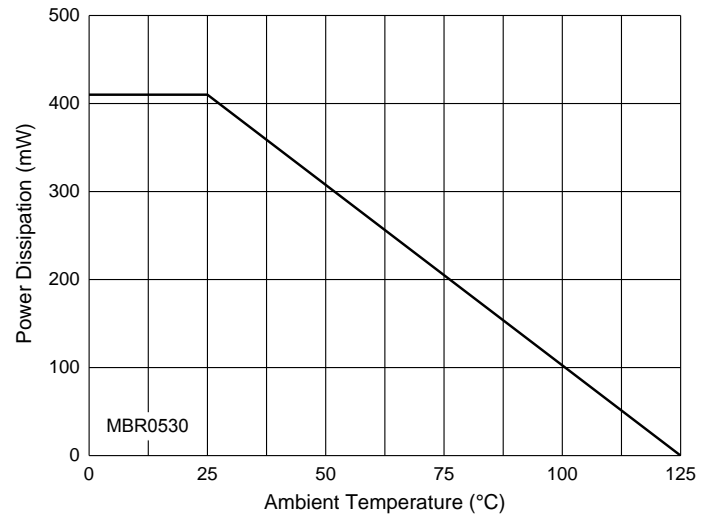


Fig. 4 - Power Derating Curve



Ordering Information

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

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