



# MBR0520L THRU MBR0540L

**0.5 Amp  
Schottky Rectifier  
20 to 40 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
- Halogen free available upon request by adding suffix "-HF"
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

## Maximum Ratings

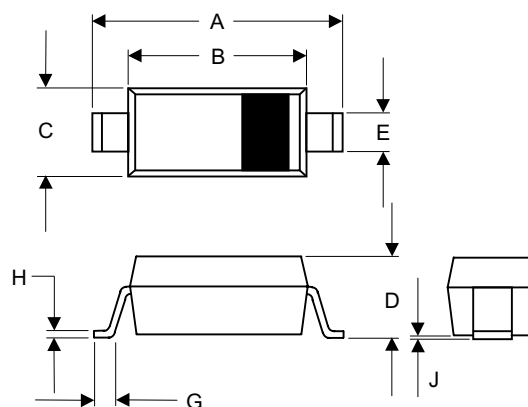
- Operating Temperature: -65°C to +125°C
- Storage Temperature: -65°C to +150°C
- Maximum Thermal Resistance: 305 °C/W Junction to Ambient

| MCC Catalog Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|--------------------|----------------|----------------------------------------|---------------------|-----------------------------|
| MBR0520L           | SD             | 20V                                    | 14V                 | 20V                         |
| MBR0530L           | SE             | 30V                                    | 21V                 | 30V                         |
| MBR0540L           | SF             | 40V                                    | 28V                 | 40V                         |

## Electrical Characteristics @ 25°C Unless Otherwise Specified

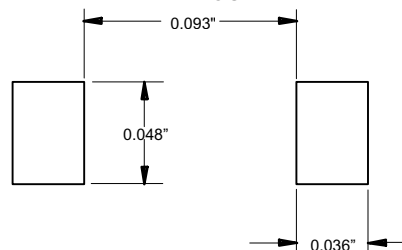
|                                                         |           |        |                 |
|---------------------------------------------------------|-----------|--------|-----------------|
| Average Forward Current                                 | $I_F$     | 0.5A   |                 |
| Peak Forward Surge Current                              | $I_{FSM}$ | 5.5A   | 8.3ms half sine |
| Maximum Forward voltage                                 | $V_F$     | 0.3V   | $I_F=0.1A$      |
| MBR0520L                                                |           | 0.385V | $I_F=0.5A$      |
| MBR0530L                                                |           | 0.375V | $I_F=0.1A$      |
|                                                         |           | 0.43V  | $I_F=0.5A$      |
| MBR0540L                                                |           | 0.51V  | $I_F=0.5A$      |
|                                                         |           | 0.62V  | $I_F=1.0A$      |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$     | 75uA   | $V_R=10V$       |
| MBR0520L                                                |           | 250uA  | $V_R=20V$       |
| MBR0530L                                                |           | 20uA   | $V_R=15V$       |
|                                                         |           | 130uA  | $V_R=30V$       |
| MBR0540L                                                |           | 10uA   | $V_R=20V$       |
|                                                         |           | 20uA   | $V_R=40V$       |
| Typical Junction Capacitance                            | $C_J$     | 170pF  | $V_R=0, f=1MHz$ |
| Power Dissipation                                       | $P_D$     | 410mW  |                 |

## SOD-123



| DIMENSIONS |        |       |       |       |      |
|------------|--------|-------|-------|-------|------|
| DIM        | INCHES |       | MM    |       | NOTE |
|            | MIN    | MAX   | MIN   | MAX   |      |
| 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



# MBR0520L thru MBR0540L

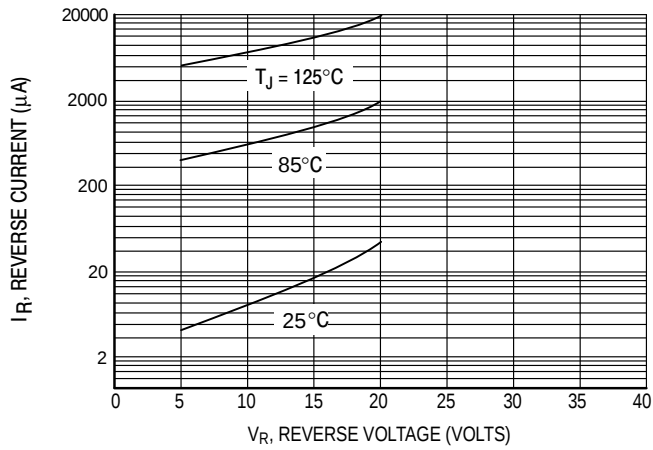


Figure 1. Typical Reverse Current of MBR0520L

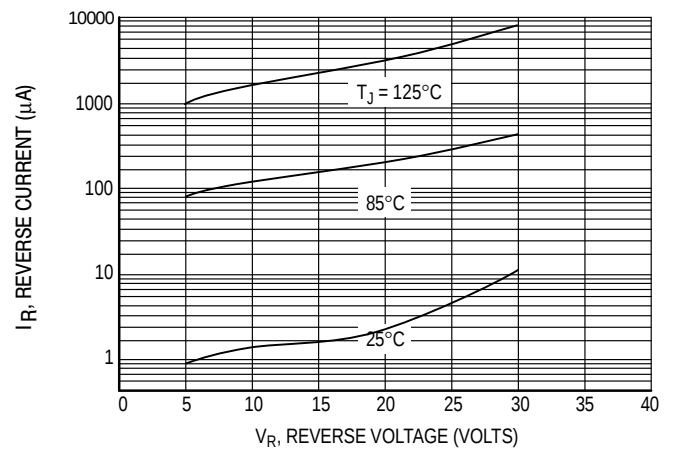


Figure 2. Typical Reverse Current of MBR0530L

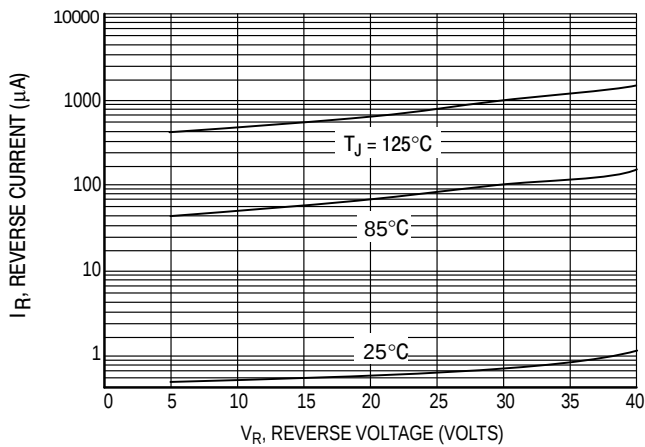


Figure 3. Typical Reverse Current of MBR0540L

## Ordering Information :

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

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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