# THE DATASHEET OF

# MBRX0530-TP

Obsolete

Micro Commercial Components

Micro Commercial Components
20736 Marilla Street Chatsworth
CA 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

# MBRX0520 THRU MBRX0560

## 0.5 Amp Schottky Rectifier 20 to 60 Volts

## Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Extremely Low Thermal Resistance
- For Surface Mount Application and High Current Capability
- Higher Temp Soldering: 260°C for 10 Seconds At Terminals
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1

## Maximum Ratings

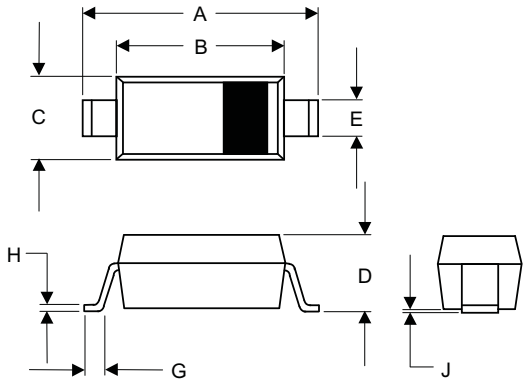
- Operating Temperature: -55°C to +125°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance: 5°C/W Junction to Lead

| MCC Catalog Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|---|---|---|---|---|
| MBRX0520 | 2 | 20V | 14V | 20V |
| MBRX0530 | 3 | 30V | 21V | 30V |
| MBRX0540 | 4 | 40V | 28V | 40V |
| MBRX0560 | 6 | 60V | 42V | 60V |

## Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|---|---|---|
| Average Forward Current | $I_{F(AV)}$ | 0.5A | $T_J$=90°C |
| Peak Forward Surge Current | $I_{FSM}$ | 5A | 8.3ms half sine |
| Maximum Instantaneous Forward Voltage<br>MBRX0520<br>MBRX0530<br>MBRX0540<br>MBRX0560 | $V_F$ | 0.45V<br>0.55V<br>0.55V<br>0.70V | $I_{FM}$=0.5A<br>$T_J$=25°C |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$ | 0.3mA | $T_A$=25°C |
| Typical Junction Capacitance | $C_J$ | 30pF | Measured at 1.0MHz, $V_R$=4.0V |
| Power Dissipation | $P_D$ | 250mW | |

## SOD323




| DIMENSIONS | | | | | |
|---|---|---|---|---|---|
| DIM | INCHES | | MM | | NOTE |
| | MIN | MAX | MIN | MAX | |
| A | .090 | .113 | 2.30 | 2.88 | |
| B | .063 | .071 | 1.60 | 1.80 | |
| C | .045 | .053 | 1.15 | 1.35 | |
| D | .031 | .049 | 0.80 | 1.24 | |
| E | .010 | .016 | 0.25 | 0.40 | |
| G | .004 | .018 | 0.10 | 0.45 | |
| H | .004 | .010 | 0.10 | 0.25 | |
| J | ----- | .006 | ----- | 0.15 | |

SUGGESTED SOLDER PAD LAYOUT

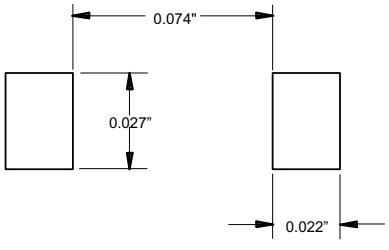


Figure 1
Typical Forward Characteristics
MBRX0520

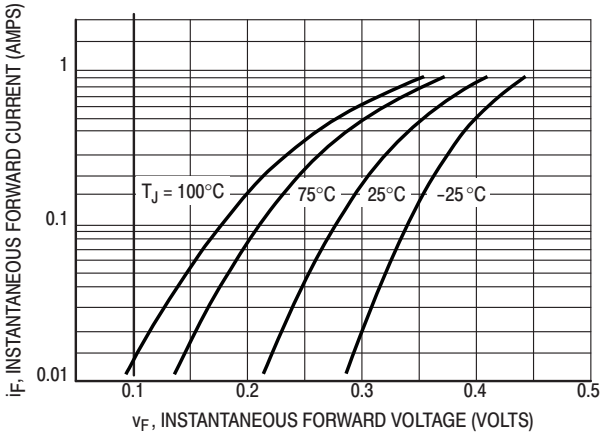



Figure 2
Typical Forward Characteristics
MBRX0530~MBRX0540

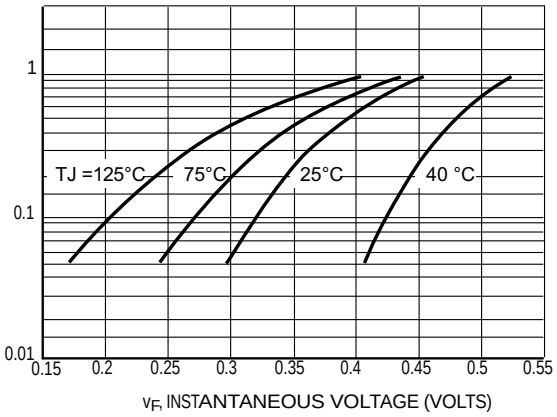



Figure 3
Typical Forward Characteristics
MBRX0560

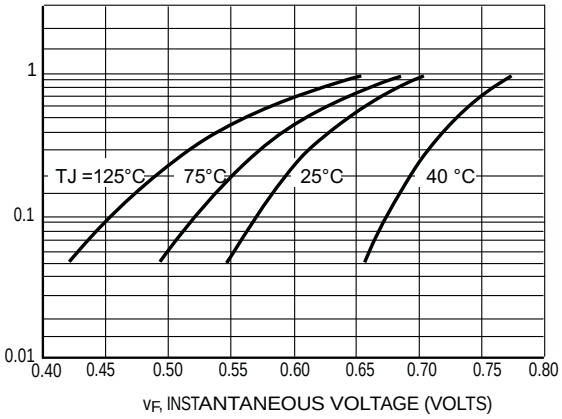



Figure 4
Junction Capacitance

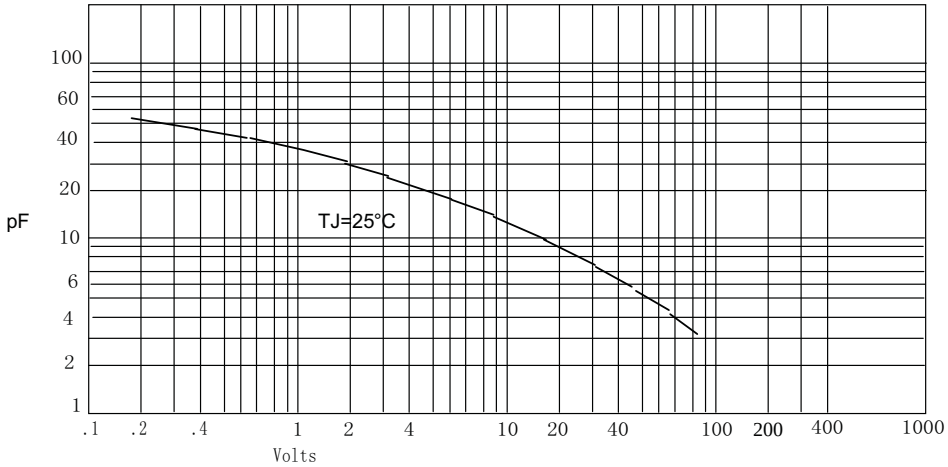
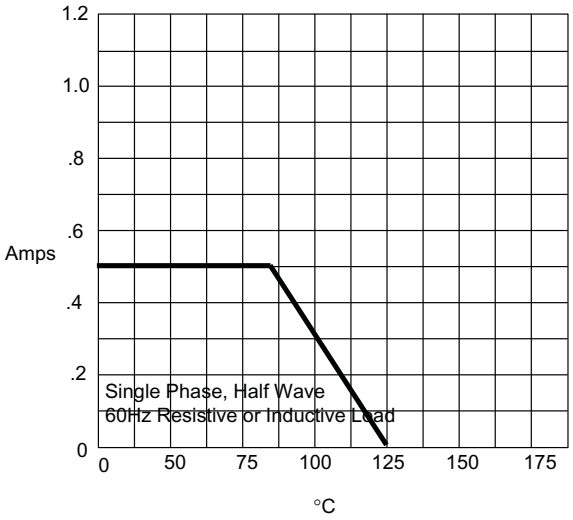
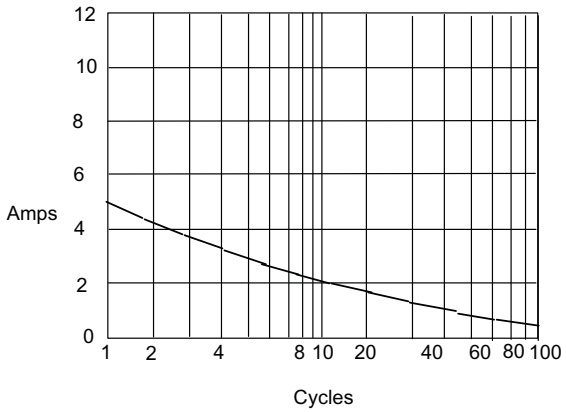


Figure 5
Forward Derating Curve




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

Figure 6
Peak Forward Surge Current




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

## Ordering Information

| Device | Packing |
|---|---|
| (Part Number)-TP | Tape&Reel;3Kpcs/Reel |

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