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# MBR0530

## Schottky Rectifier

## Features

- 0.5 Ampere, low forward voltage, less than 430mV
- Compact surface mount package with the same footprint as mini-melf

**SOD123**
Color Band Denotes Cathode
Mark: B3

## Absolute Maximum Ratings * $T_a$ = 25°C unless otherwise noted

| Symbol | Parameter | Value | Units |
|---|---|---|---|
| $V_{RRM}$ | Maximum Repetitive Reverse Voltage | 30 | V |
| $I_{F(AV)}$ | Average Rectified Forward Current | 500 | mA |
| $I_{FSM}$ | Non Repetitive Peak Forward Current (Surge applied at rated load conditions half wave, single, phase, 60Hz) | 5.5 | A |
| $T_{STG}$ | Storage Temperature Range | -65 to +150 | °C |
| $T_{Jmax}$ | Operating Junction Temperature | -65 to +125 | °C |

These ratings are limiting values above which the serviceability of any semiconductor device may by impaired.

## Thermal Characteristics

| Symbol | Parameter | Value | Units |
|---|---|---|---|
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient * | 206 | °C/W |
| $R_{\theta JL}$ | Thermal Resistance, Junction to Lead | 173 | °C/W |

* 1 inch square pad size on FR-4 board.

## Electrical Characteristics $T_C$ = 25°C unless otherwise noted

| Symbol | Parameter | | Value | Units |
|---|---|---|---|---|
| $V_F$ | Forward Voltage | @ $I_F$ = 100mA | 375 | mV |
| | | $I_F$ = 100mA, $T_A$ = 100°C | 340 | mV |
| | | $I_F$ = 500mA | 430 | mV |
| | | $I_F$ = 500mA, $T_A$ = 100°C | 420 | mV |
| $I_R$ | Reverse Current | @ $V_R$ = 15V | 20 | μA |
| | | $V_R$ = 30V | 130 | μA |
| | | $V_R$ = 30V, $T_a$ = 100°C | 5 | mA |

## Typical Performance Characteristics

**Figure 1. Forward Voltage Characteristics**

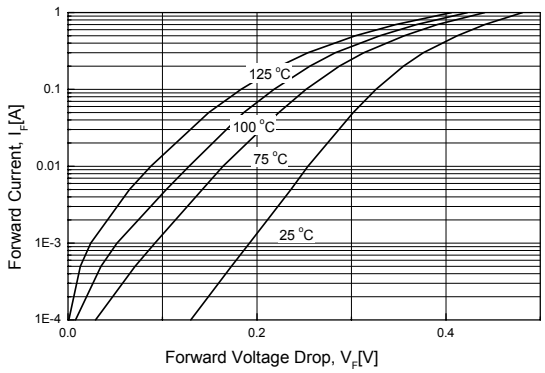



**Figure 2. Reverse Current vs Reverse Voltage**

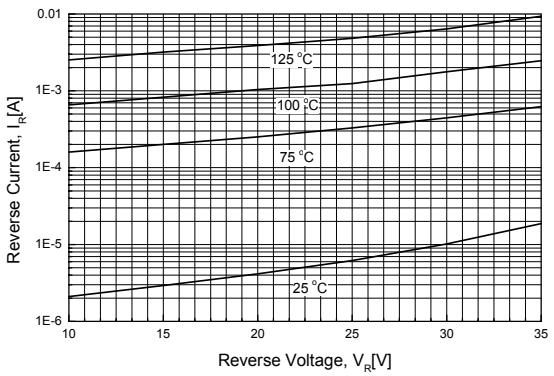
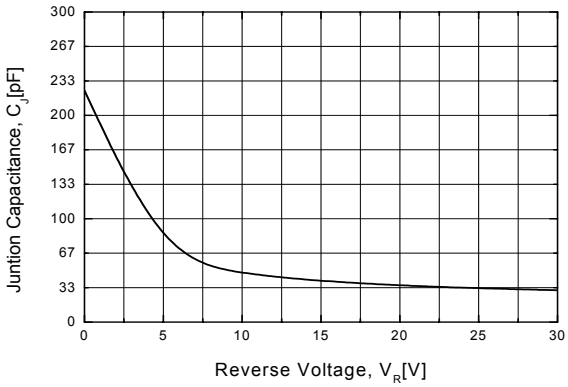



**Figure 3. Total Capacitance**



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