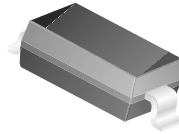


# MBR0530 Schottky Rectifier

## 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 \* $T_a = 25^\circ\text{C}$ 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	$^\circ\text{C}$
$T_{Jmax}$	Operating Junction Temperature	-65 to +125	$^\circ\text{C}$

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

## Thermal Characteristics

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

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

## Electrical Characteristics $T_a = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units	
$V_F$	Forward Voltage	@ $I_F = 100\text{mA}$	375	mV
		$I_F = 100\text{mA}, T_a = 100^\circ\text{C}$	340	mV
		$I_F = 500\text{mA}$	430	mV
		$I_F = 500\text{mA}, T_a = 100^\circ\text{C}$	420	mV
$I_R$	Reverse Current	@ $V_R = 15\text{V}$	20	$\mu\text{A}$
		$V_R = 30\text{V}$	130	$\mu\text{A}$
		$V_R = 30\text{V}, T_a = 100^\circ\text{C}$	5	mA

Typical Performance Characteristics

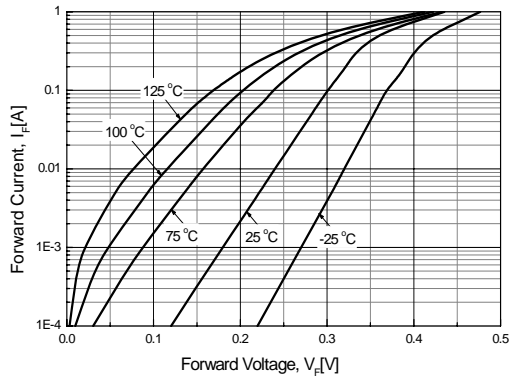


Figure 1. Forward Current vs Forward Voltage

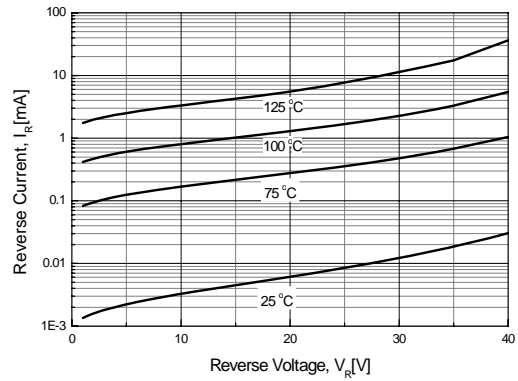


Figure 2. Reverse Current vs Reverse Voltage

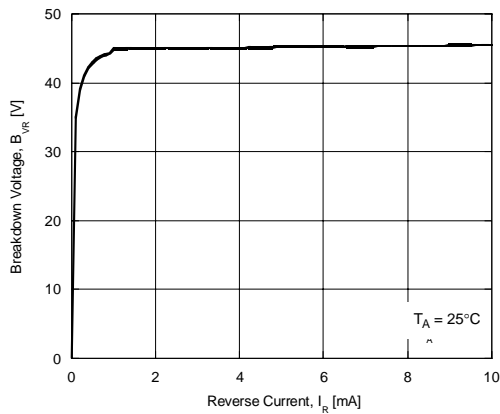


Figure 3. Breakdown Voltage vs Reverse Current

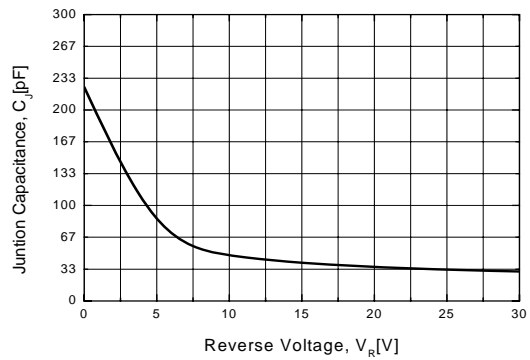


Figure 4. Total Capacitance



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| CorePOWER™               | Green FPS™ e-Series™     | QFET®                                 |  |
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| DEUXPEED®                | ISOPLANAR™               | ™                                     |  |
| Dual Cool™               | MegaBuck™                | Saving our world, 1mW/W/kW at a time™ |  |
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| ESBC™                    | MicroPak™                | SMART START™                          |  |
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