

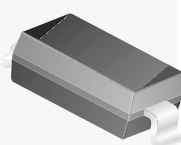


March 2012

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 *

Values are at $T_A=25^{\circ}\text{C}$ unless otherwise noted.

Symbol	Parameter	Value	Unit
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

Values are at $T_A=25^{\circ}\text{C}$ unless otherwise noted.

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

Typical Performance Characteristics

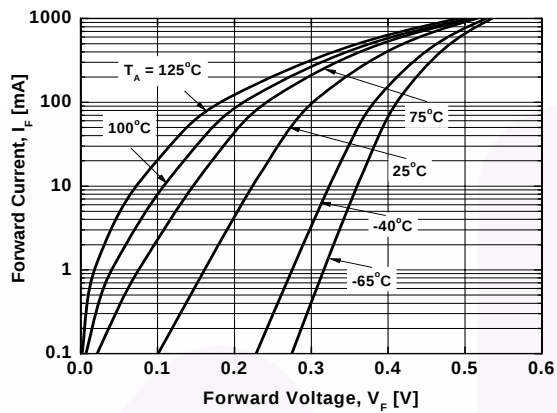


Figure 1. Forward Current vs Forward Voltage

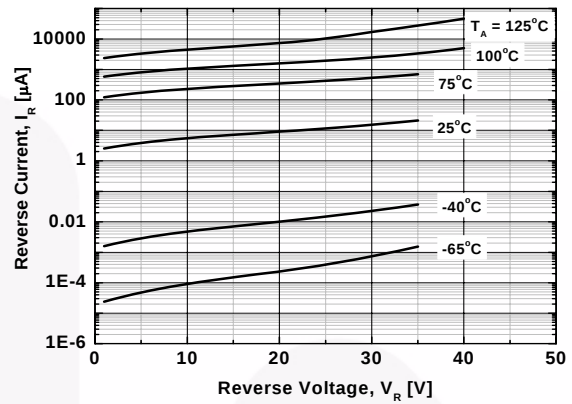


Figure 2. Reverse Current vs Reverse Voltage

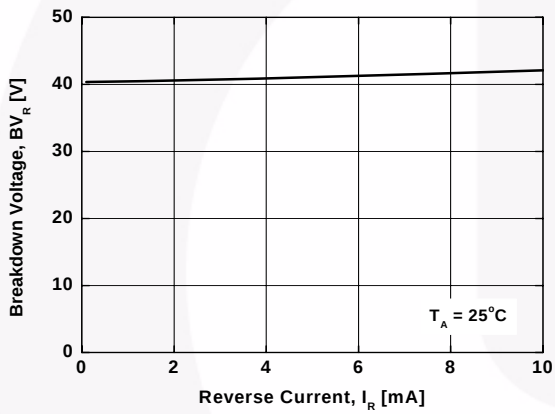


Figure 3. Breakdown Voltage vs Reverse Current

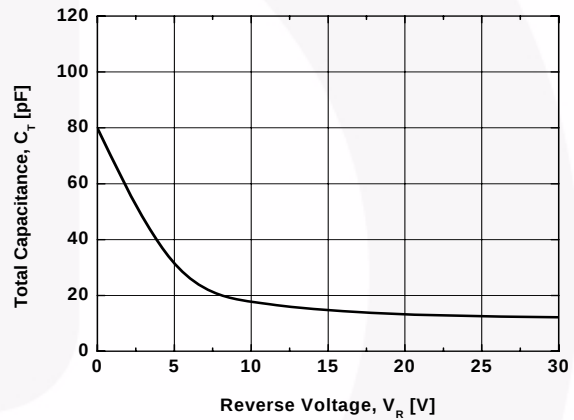


Figure 4. Total Capacitance



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