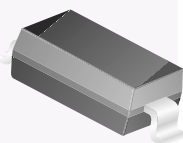


# MBR0520L

## Schottky Rectifier

### Features

- 0.5 Ampere, low forward voltage, less than 385mV
- 400 milliwatt Power Dissipation package
- Compact surface mount package with the same footprint as mini-melf



**SOD123**  
Color Band Denotes Cathode  
Mark: B2

### 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	20	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	Unit
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient *	340	$^{\circ}\text{C}/\text{W}$
$R_{\theta JL}$	Thermal Resistance, Junction to Lead	150	$^{\circ}\text{C}/\text{W}$

\* FR-4 or FR-5 = 3.5 x 1.5 inches using minimum recommended Land Pads.

### Electrical Characteristics

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

Symbol	Parameter	Value	Unit	
$V_F$	Forward Voltage @ $I_F = 100\text{mA}$	$I_F = 100\text{mA}, T_a = 100^{\circ}\text{C}$	300	mV
		$I_F = 100\text{mA}, T_a = 100^{\circ}\text{C}$	220	mV
		$I_F = 500\text{mA}$	385	mV
		$I_F = 500\text{mA}, T_a = 100^{\circ}\text{C}$	330	mV
$I_R$	Reverse Current @ $V_R = 10\text{V}$	$V_R = 10\text{V}, T_a = 100^{\circ}\text{C}$	75	$\mu\text{A}$
		$V_R = 10\text{V}, T_a = 100^{\circ}\text{C}$	5.0	mA
		$V_R = 20\text{V}$	250	$\mu\text{A}$
		$V_R = 20\text{V}, T_a = 100^{\circ}\text{C}$	8.0	mA

### Typical Performance Characteristics

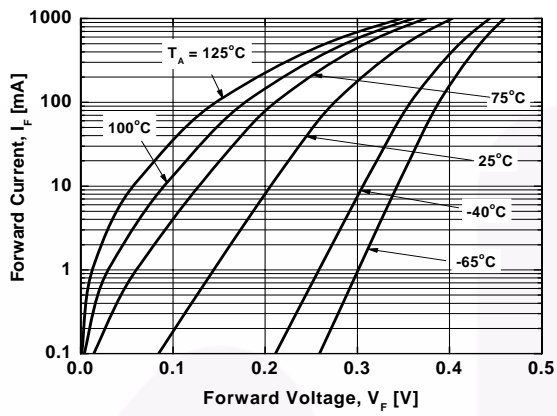


Figure 1. Forward Current vs Forward Voltage

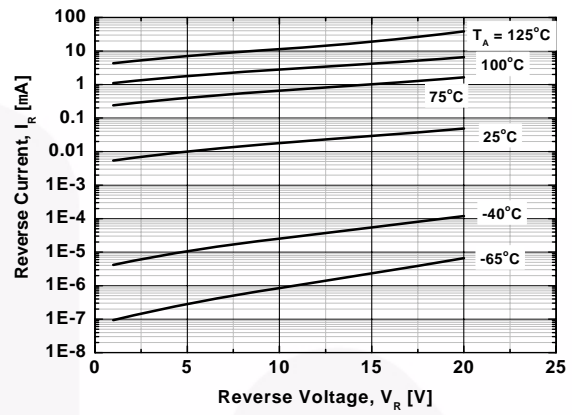


Figure 2. Reverse Current vs Reverse Voltage

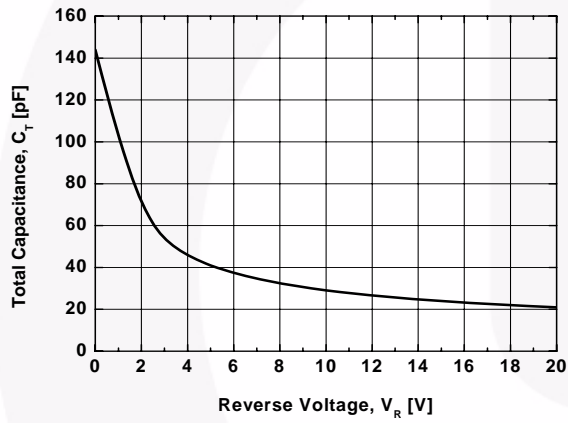






Figure 3. Total Capacitance



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| BitSiC™  | GreenBridge™                                   | QFET®  | TinyBuck™   |
| Build it Now™  | Green FPS™                                     | QS™  | TinyCalc™   |
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| CROSSVOLT™   | GTO™   |  ™                | TinyPower™  |
| CTL™   | IntelliMAX™                                    | Saving our world, 1mW/W/kW at a time™  | TinyPWM™  |
| Current Transfer Logic™  | ISOPLANAR™                                     | SignalWise™  | TinyWire™   |
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