

# MBR0540

## Features

- 0.5 ampere; forward voltage less than 460 mv.
- 400 milliwatt Power Dissipation package.
- Compact surface mount package with same footprint as mini-melf.



**SOD123**  
Color Band Denotes Cathode  
Mark: B4

## Schottky Rectifiers

### Absolute Maximum Ratings\* T<sub>A</sub> = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V <sub>RRM</sub>	Maximum Repetitive Reverse Voltage	40	V
I <sub>F(AV)</sub>	Average Rectified Forward Current	500	mA
I <sub>FSM</sub>	Non-repetitive Peak Forward Surge Current half wave, single phase, 60 Hz	5.5	A
T <sub>stg</sub>	Storage Temperature Range	-65 to +150	°C
T <sub>J</sub>	Operating Junction Temperature	-65 to +125	°C

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

### Thermal Characteristics

Symbol	Parameter	Value	Units
R <sub>θJA</sub>	Thermal Resistance, Junction to Ambient *	206	°C/W
R <sub>θJL</sub>	Thermal Resistance, Junction to Lead **	118	°C/W

\* 1.0 inch" pad size (1.0 x 0.5 inch for each lead) on FR4 board.

\*\* Device mounted on FR-4 PCB 0.013 mm.

### Electrical Characteristics T<sub>A</sub> = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V <sub>F</sub>	Forward Voltage @ I <sub>F</sub> = 500 mA, I <sub>F</sub> = 500 mA, T <sub>A</sub> = 100°C I <sub>F</sub> = 1.0 A, I <sub>F</sub> = 1.0 A, T <sub>A</sub> = 100°C	510	mV
		460	mV
		620	mV
		610	mV
I <sub>R</sub>	Reverse Current @ V <sub>R</sub> = 20 V, V <sub>R</sub> = 20 V, T <sub>A</sub> = 100°C V <sub>R</sub> = 40 V, V <sub>R</sub> = 40 V, T <sub>A</sub> = 100°C	10	μA
		5.0	mA
		20	μA
		13	mA

Typical Characteristics

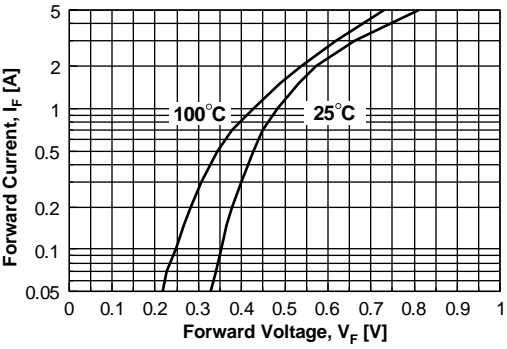


Figure 1. Forward Voltage Characteristics

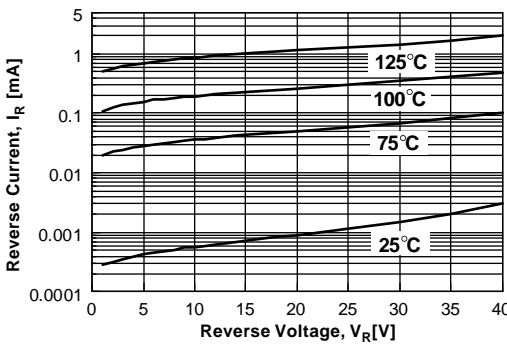


Figure 2. Reverse Current vs Reverse Voltage

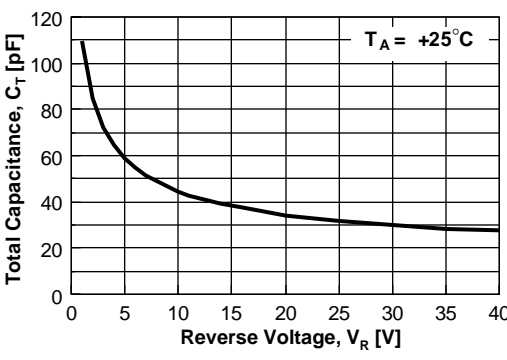


Figure 3. Total Capacitance

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