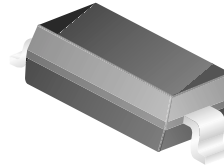




MBR0540

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*

$T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{RRM}	Maximum Repetitive Reverse Voltage	40	V
$I_{F(AV)}$	Average Rectified Forward Current	500	mA
I_{FSM}	Non-repetitive Peak Forward Surge Current half wave, single phase, 60 Hz	5.5	A
T_{stg}	Storage Temperature Range	-65 to +150	$^\circ\text{C}$
T_J	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 **	118	$^\circ\text{C/W}$

*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

$T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_F	Forward Voltage @ $I_F = 500\text{ mA}$, $I_F = 500\text{ mA}$, $T_A = 100^\circ\text{C}$ $I_F = 1.0\text{ A}$, $I_F = 1.0\text{ A}$, $T_A = 100^\circ\text{C}$	510	mV
		460	mV
		620	mV
		610	mV
I_R	Reverse Current @ $V_R = 20\text{ V}$, $V_R = 20\text{ V}$, $T_A = 100^\circ\text{C}$ $V_R = 40\text{ V}$, $V_R = 40\text{ V}$, $T_A = 100^\circ\text{C}$	10	μA
		5.0	mA
		20	μA
		13	mA

Typical Characteristics

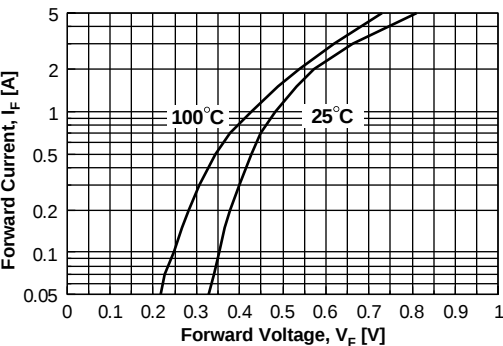


Figure 1. Forward Voltage Characteristics

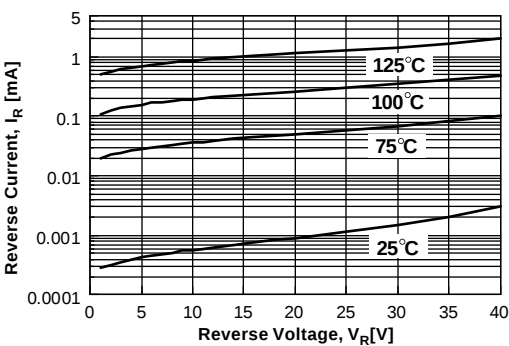


Figure 2. Reverse Current vs Reverse Voltage

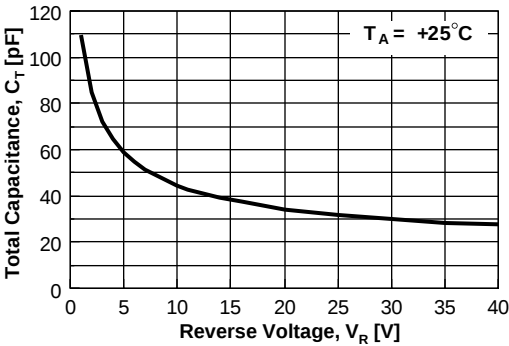


Figure 3. Total Capacitance

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