FAIRCHILD
SEMICONDUCTOR®

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°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	°C
T_J	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
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient *	206	°C/W
$R_{\theta JL}$	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_A = 25°C unless otherwise noted

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

Typical Characteristics

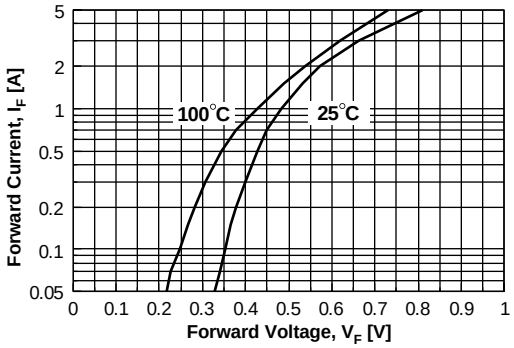

Figure 1. Forward Voltage Characteristics

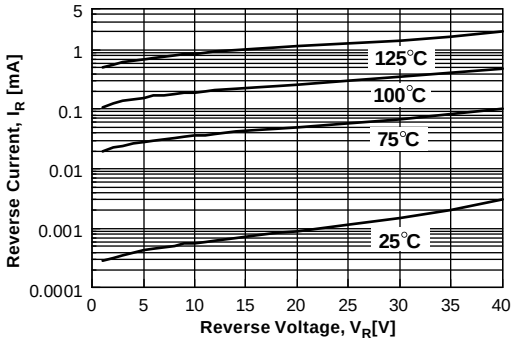

Figure 2. Reverse Current vs Reverse Voltage

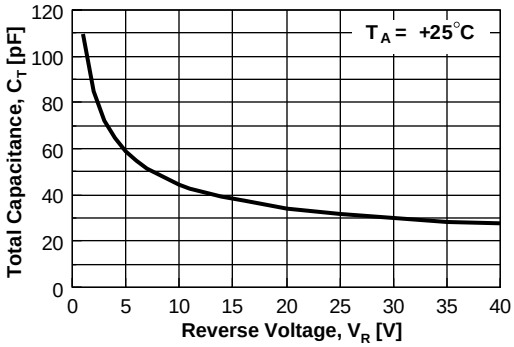

Figure 3. Total Capacitance

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