FAIRCHILD SEMICONDUCTOR®

MBR0520L

SOD123
Color Band Denotes Cathode
Mark: B2

Features

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

Schottky Rectifier

Absolute Maximum Ratings*

T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
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, 60 Hz)	5.5	A
T_{stg}	Storage Temperature Range	-65 to +150	°C
$T_{j\ max}$	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*	340	°C/W
$R_{\theta JL}$	Thermal Resistance Junction to Lead	150	°C/W

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

Electrical Characteristics

T_A = 25°C unless otherwise noted

Symbol	Parameter		Value	Units
V_F	Forward Voltage	@ I_F = 100 mA,	300	mV
		I_F = 100 mA, T_A = 100 °C	220	mV
		I_F = 500 mA,	385	mV
		I_F = 500 mA, T_A = 100 °C	330	mV
I_R	Reverse Current	@ V_R = 10 V,	75	µA
		V_R = 10 V, T_A = 100 °C	5.0	mA
		V_R = 20 V,	250	µA
		V_R = 20 V, T_A = 100 °C	8.0	mA

Typical Characteristics

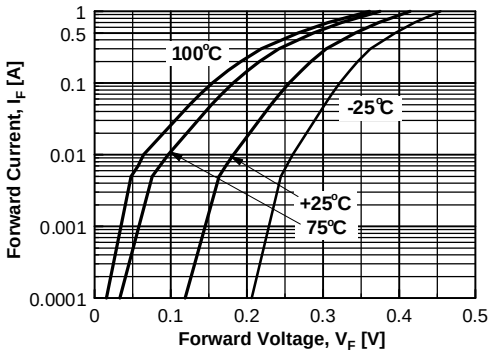

Figure 1. Forward Voltage Characteristics

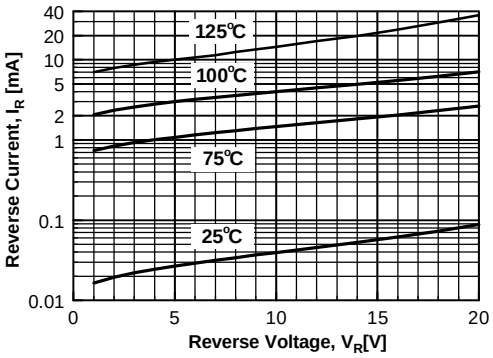

Figure 2. Reverse Current vs Reverse Voltage

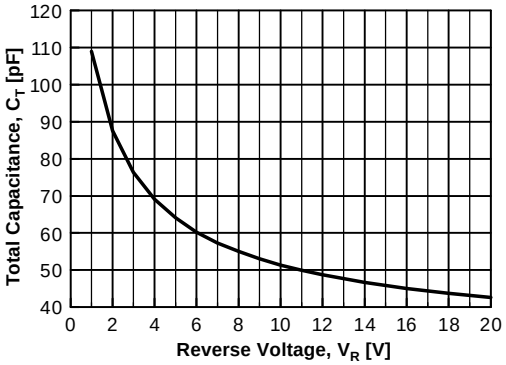

Figure 3. Total Capacitance

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