

SOD123

Color Band Denotes Cathode
Mark: B2

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

Schottky Rectifier

Absolute Maximum Ratings* $T_A = 25^\circ\text{C}$ 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	$^\circ\text{C}$
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	Units
$R_{\theta JA}$	Thermal Resistance Junction to Ambient*	340	$^\circ\text{C/W}$
$R_{\theta JL}$	Thermal Resistance Junction to Lead	150	$^\circ\text{C/W}$

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

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

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

Typical Characteristics

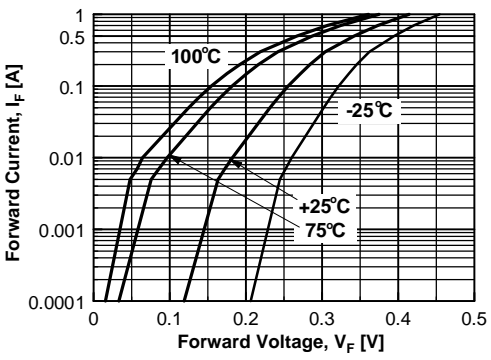


Figure 1. Forward Voltage Characteristics

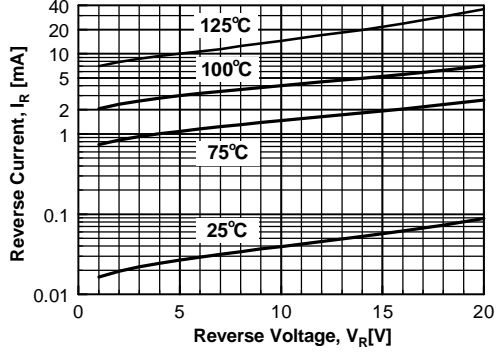


Figure 2. Reverse Current vs Reverse Voltage

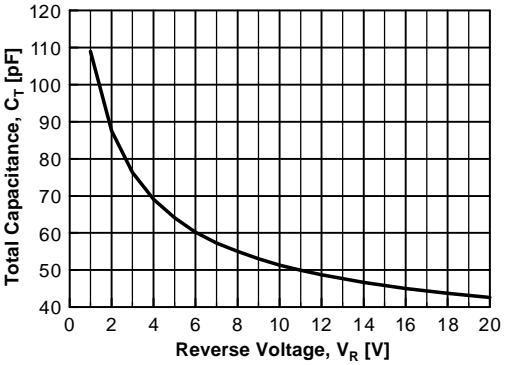


Figure 3. Total Capacitance

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