

1A, 40V Surface Mounted Schottky Rectifiers

Features

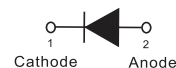
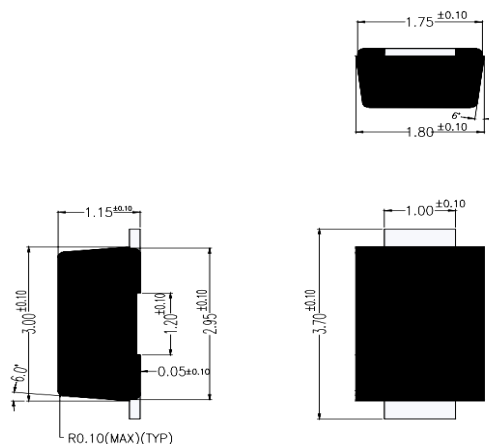
- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- High forward surge capability
- Compliant with RoHS standards, halogen-free

Mechanical Data

- Package: SOD-123FL
- Terminals : Solderable per MIL-STD-750, Method 2026 Approx
- Polarity: Color band cathode

SOD-123FL

Unit : inch(mm)



Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	40	V
RMS Reverse Voltage	$V_R(RMS)$	28	V
Average Rectified Output Current	I_O	1	A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	45	A
Power Dissipation (Note 1)	P_D	450	mW
Typical Thermal Resistance Junction to Ambient (Note 1)	$R_{\theta JA}$	222	$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to + 125	$^\circ\text{C}$

Notes : 1. FR-4 Board = 70 x 60 x 1mm.

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

Characteristic	Symbol	Test Condition	MIN.	TYP.	MAX.	Unit
Reverse Breakdown Voltage (Note 2)	$V_{(BR)R}$	$I_R=1\text{mA}$	40	-	-	V
Forward Voltage	V_F	$I_F=0.1\text{A}$ $I_F=1\text{A}$ $I_F=3\text{A}$	- - -	- - -	0.32 0.45 0.75	V
Reverse Leakage Current (Note 2)	I_R	$V_R=40\text{V}, T_A=25^\circ\text{C}$ $V_R=40\text{V}, T_A=100^\circ\text{C}$ $V_R=4\text{V}, T_A=25^\circ\text{C}$ $V_R=4\text{V}, T_A=100^\circ\text{C}$ $V_R=6\text{V}, T_A=25^\circ\text{C}$ $V_R=6\text{V}, T_A=100^\circ\text{C}$	- - - - - -	- 8.5 10 1 15 1.5	220 - 50 - 75 -	μA mA μA mA μA mA
Total Capacitance	C_T	$V_R=4\text{V}, f=1\text{MHz}$	-	50	-	pF

Notes : 2. Short duration pulse test used to minimize self-heating effect.
3. Mounted on metal core PCB.



Characteristics (Typical)

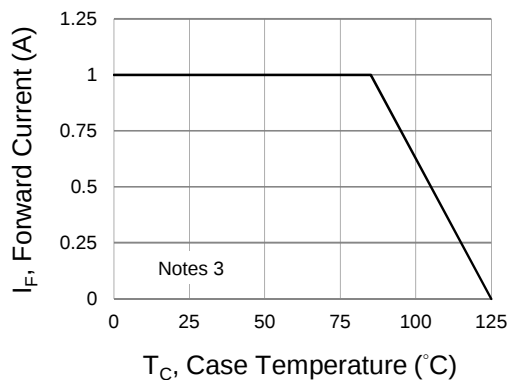


Fig.1 Forward Current Derating Curve

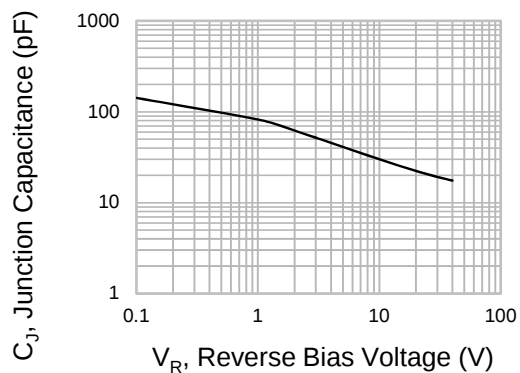


Fig.2 Typical Junction Capacitance

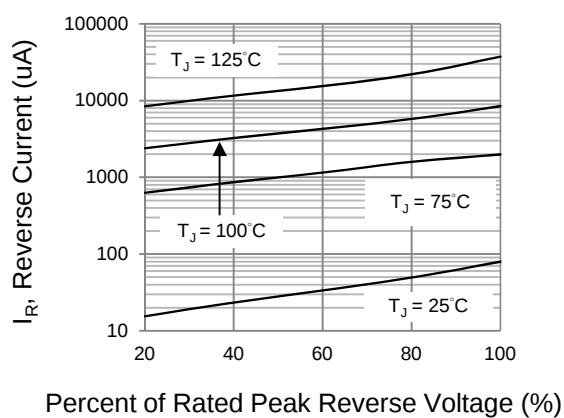


Fig.3 Typical Reverse Characteristics

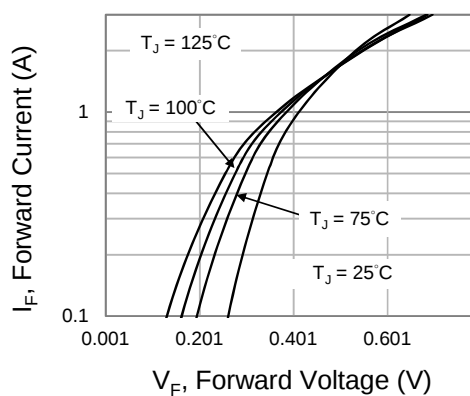


Fig.4 Typical Forward Characteristics

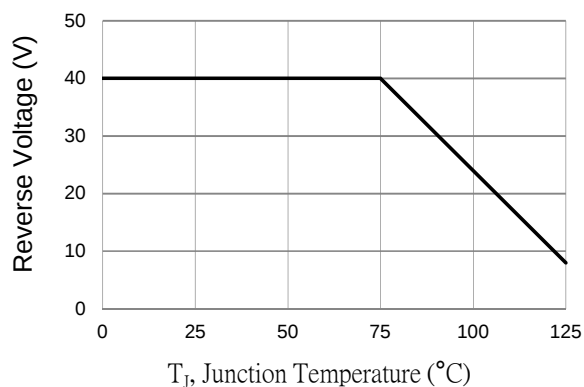


Fig.5 Operating Temperature Derating Curve