

FEATURES

Low Forward Voltage Drop

APPLICATIONS

Low Voltage Rectification

High Efficiency DC/DC Conversion

Switch Mode Power Supply

Inverse Polarity Protection

Low Power Consumption Applications

SOD-123



MARKING: SH

ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	$V_{(BR)}$	$I_R=1\text{mA}$	20			V
Reverse current	I_R	$V_R=10\text{V}$			80	μA
		$V_R=20\text{V}$			100	
Forward voltage	V_F^*	$I_F=1\text{A}$			0.45	V
		$I_F=2\text{A}$			0.55	
Total capacitance	C_{tot}	$V_R=4\text{V}, f=1\text{MHz}$			120	pF

*Pulse test: $t_p \leq 300 \mu\text{s}$; $\delta \leq 0.02$.

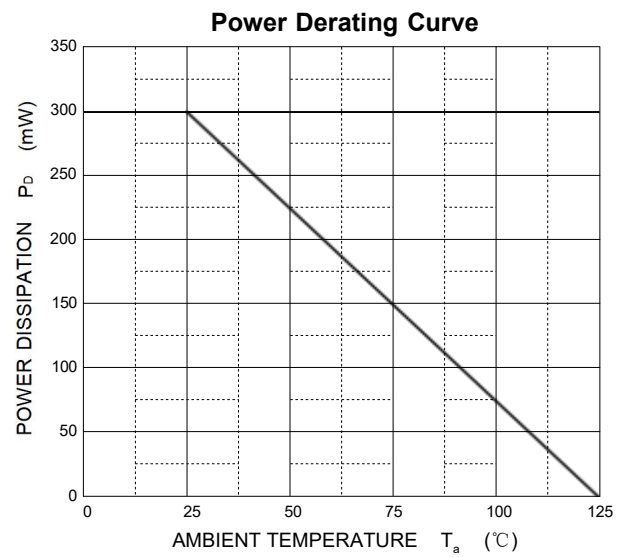
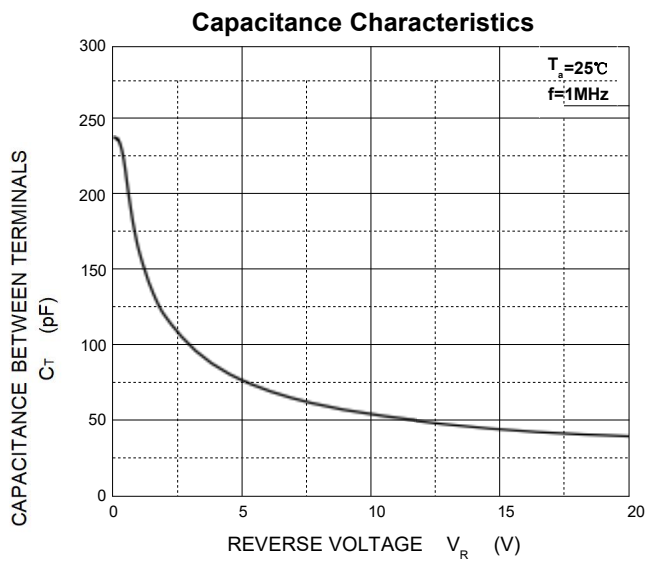
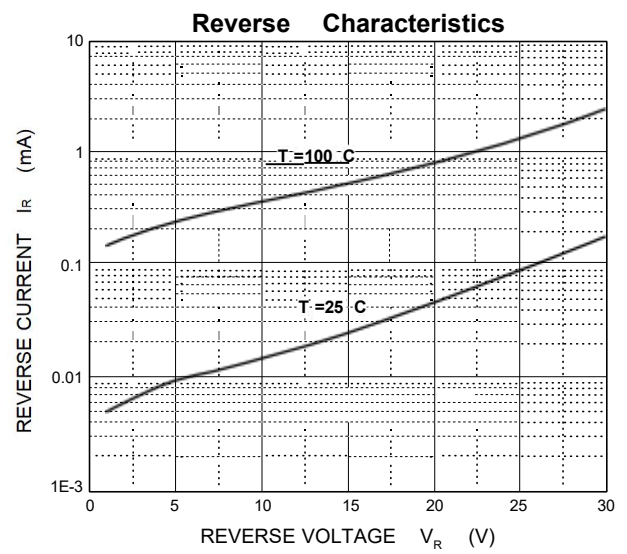
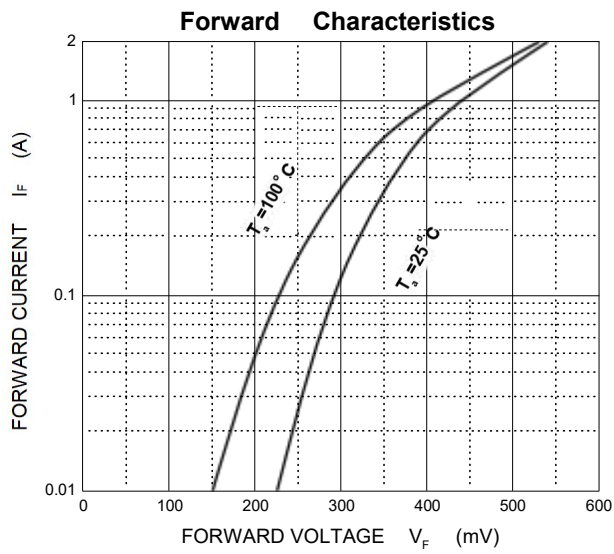
MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

MAXIMUM RATINGS (Ta=25°C unless otherwise noted)				
Symbol	Parameter		Value	Unit
VRRM	Peak Repetitive Reverse Voltage		20	V
VRWM	Working Peak Reverse Voltage			
VR(RMS)	RMS Reverse Voltage		14	V
IF	Continuous Forward Current		2	A
IFSM	Non-repetitive Peak Forward Surge Current @ t=8.3ms		9	A
PD	Power Dissipation	Note1	300	mW
		Note2	670	mW
RJA	Thermal Resistance from Junction to Ambient	Note1	333	°C/W
		Note2	149	°C/W
Tj	Operating Junction Temperature Range		-40 ~ +125	°C
Tstg	Storage Temperature Range		-55 ~ +150	°C

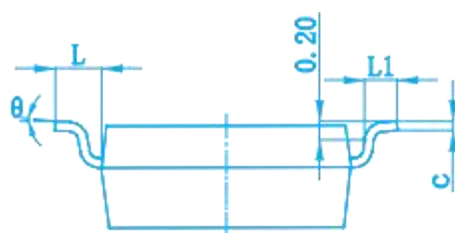
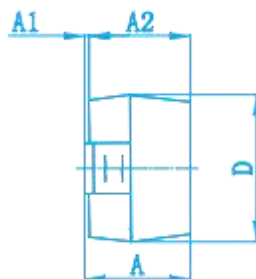
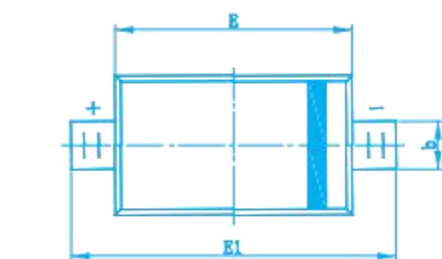
1:Device mounted on an FR4 PCB, single-sided copper, tin-plated and standard footprint.

2:Device mounted on an FR4 PCB, single-sided copper, tin-plated, mounting pad for cathode 1cm^2 .

Typical Characteristics

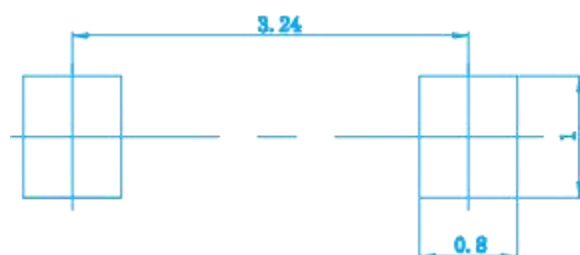


SOD-123 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500 REF		0.020 REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°

SOD-123 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.