

FEATURES

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Negligible Reverse Recovery Time
- Low Capacitance

SOD-123



MARKING: SD103AW:S4 SD103BW:S5 SD103CW:S6

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

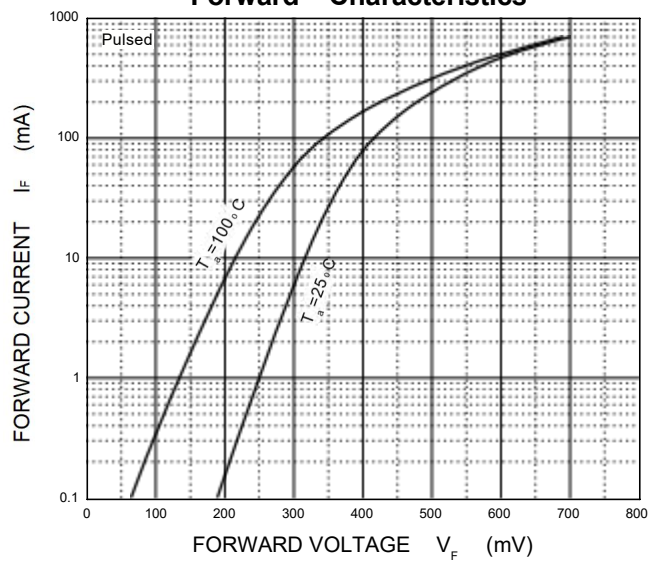
Symbol	Parameter	Value			Unit
		SD103AW	SD103BW	SD103CW	
V_{RRM}	Peak Repetitive Reverse Voltage	40	30	20	V
V_{RWM}	Working Peak Reverse Voltage				
$V_{R(RMS)}$	RMS Reverse Voltage	28	21	14	V
I_{FM}	Forward Continuous Current	350			mA
I_{FSM}	Non-repetitive Peak Forward Surge Current@ $t=8.3\text{ms}$	2			A
P_D	Power Dissipation	400			mW
R_{JA}	Thermal Resistance from Junction to Ambient	250			$^{\circ}\text{C/W}$
T_j	Operating Junction Temperature Range	$-40 \sim +125$			$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	$-55 \sim +150$			$^{\circ}\text{C}$

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

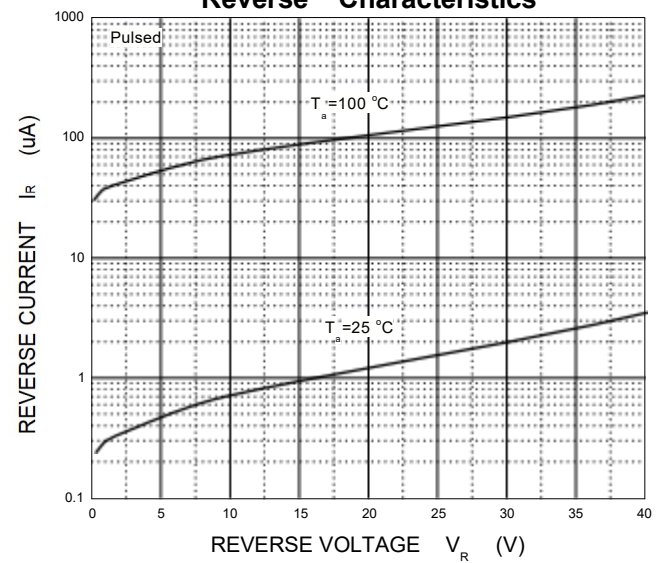
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=100\mu\text{A}$ SD103AW	40			V
		SD103BW	30			
		SD103CW	20			
Reverse current	I_R	$V_R=30\text{V}$ SD103AW			5	μA
		$V_R=20\text{V}$ SD103BW				
		$V_R=10\text{V}$ SD103CW				
Forward voltage	V_F	$I_F=20\text{mA}$			0.37	V
		$I_F=200\text{mA}$			0.6	
Total capacitance	C_{tot}	$V_R=0\text{V}, f=1\text{MHz}$		50		pF
Reverse recovery time	t_{rr}	$I_F=I_R=200\text{mA}, I_{rr}=0.1 \times I_R, R_L=100\Omega$		10		ns

Typical Characteristics

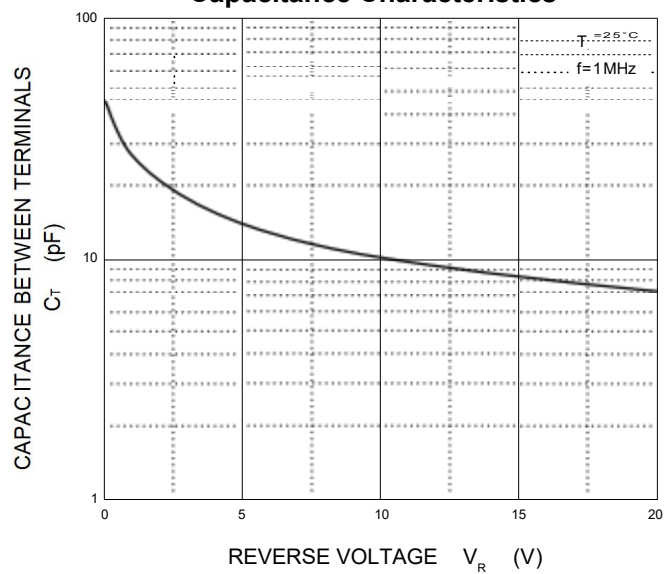
Forward Characteristics



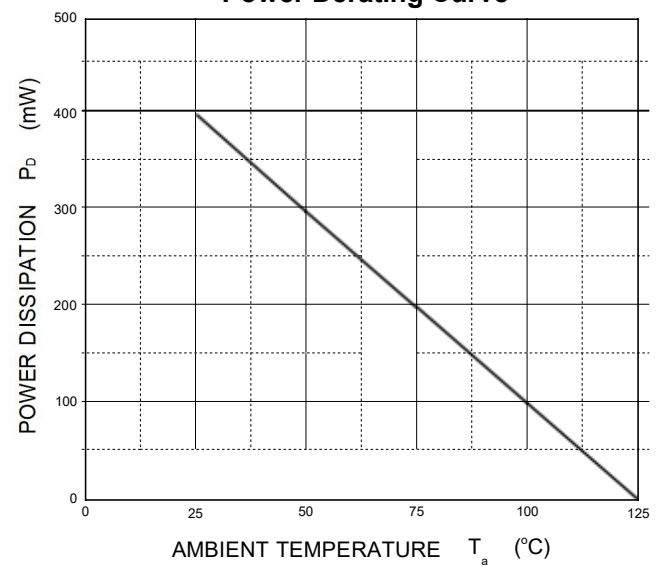
Reverse Characteristics



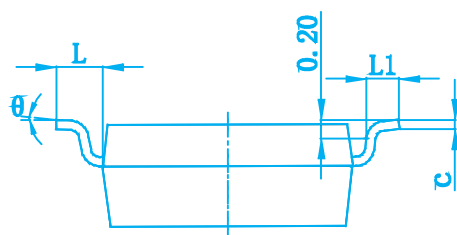
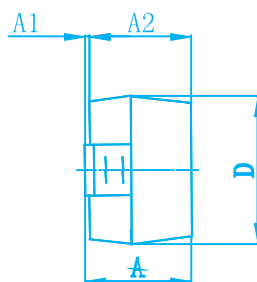
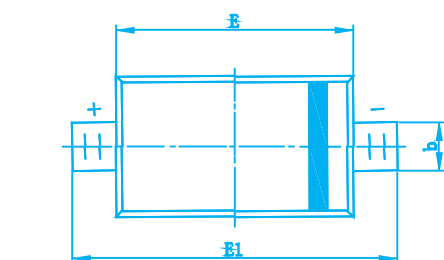
Capacitance Characteristics



Power Derating Curve

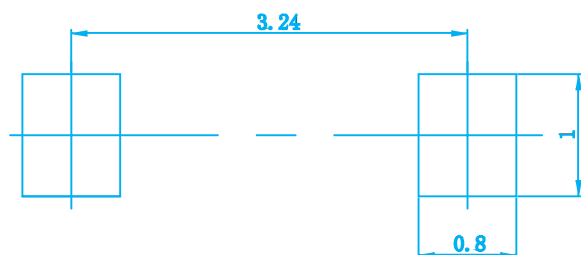


SOD-123 Package Outline Dimensions



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.