

Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Negligible Reverse Recovery Time
- Low Capacitance
- Ultra-small Surface Mount Package



SOD-123 top view



Schematic diagram



Marking and pin assignment



Halogen-Free

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

Symbol	Parameter	Value	Unit
V_R	DC Blocking voltage	50	V
V_{RRM}	Peak Repetitive Peak Reverse Voltage		
V_{RWM}	Working Peak Reverse Voltage		
$V_{R(RMS)}$	RMS Reverse Voltage	35	V
I_{FM}	Forward Continuous Current	15	mA
I_{FSM}	Non-repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	2	A
P_D	Power Dissipation	400	mW
$R_{\theta JA}$	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)

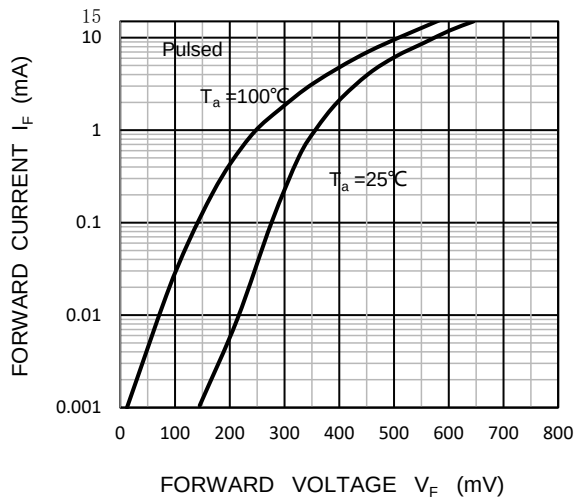
Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)}$	Reverse voltage	$I_R=10\mu\text{A}$	50	--	--	V
I_R	Reverse current	$V_R=40\text{V}$	--	--	0.2	μA
V_F	Forward voltage	$I_F=1\text{mA}$	--	--	0.4	V
		$I_F=15\text{mA}$	--	--	0.95	
C_{tot}	Total capacitance	$V_R=0\text{V}$, $f=1\text{MHz}$	--	--	2.1	pF
t_{rr}	Reverse recovery time	$I_F=I_R=5\text{mA}$ $I_R=0.1X I_R, R_L=100\Omega$	--	--	1	ns

Ordering Information (Example)

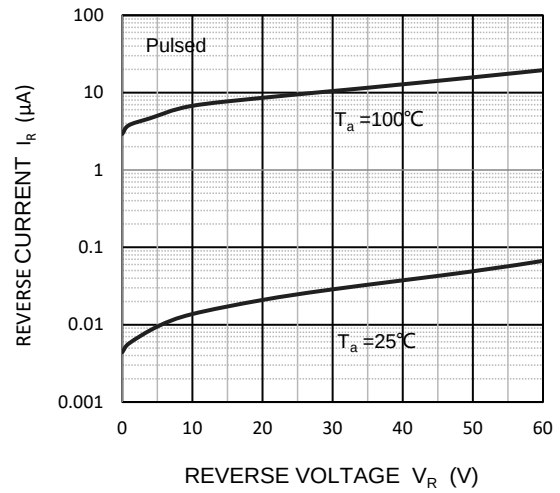
Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
SD101BW	SOD-123	S2	3,000	45,000	180,000	7"reel

Typical Operating Characteristics

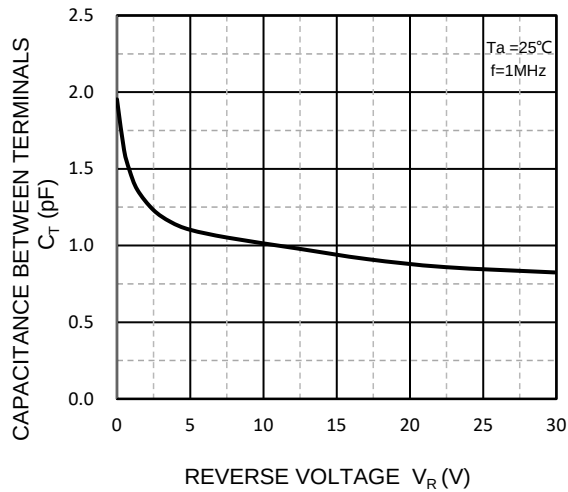
Forward Characteristics



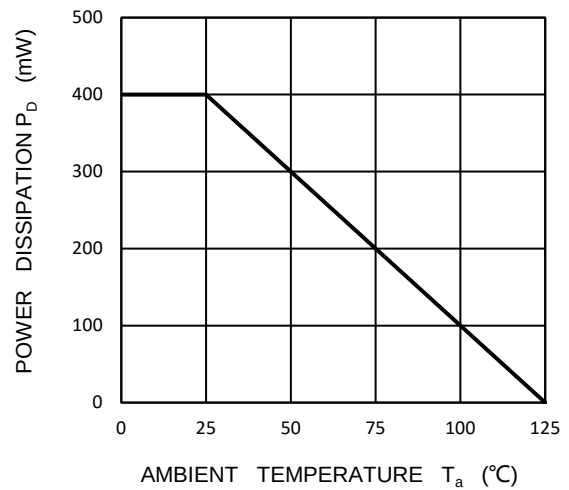
Reverse Characteristics



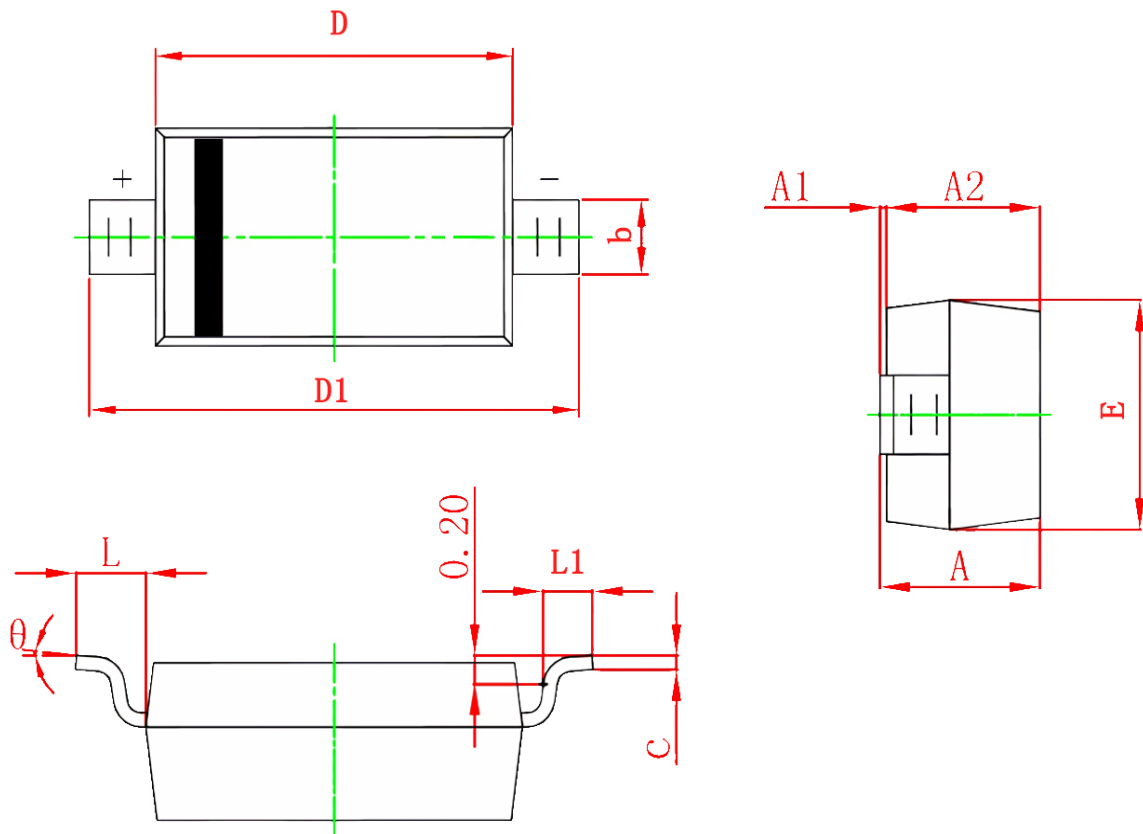
Capacitance Characteristics



Power Derating Curve



SOD-123 Package information



Symbol	Dimensions in Millimeters(mm)		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	2.600	2.800	0.102	0.110
D1	3.550	3.850	0.140	0.152
E	1.500	1.700	0.059	0.067
L	0.500 REF		0.020 REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°