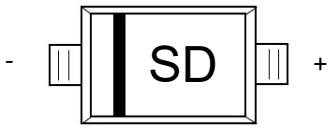
Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- High Conductance
- Also Available in Lead Free Version

SOD-123 top view

Schematic diagram



Marking and pin assignment

Pb-Free RoHS Halogen-Free

Maximum Ratings(T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_R	Reverse Voltage	20	V
V_{RRM}	Maximum recurrent peak reverse voltage		
V_{RWM}	Working Peak Reverse Voltage		
$V_{R(RMS)}$	RMS Reverse Voltage	14	V
I_O	Average Rectified Output Current	0.5	A
I_{FSM}	Non-repetitive Peak Forward Surge Current@t= 8.3ms	5.5	A
P_D	Power Dissipation	500	mW
$R_{\Theta JA}$	Thermal resistance junction to ambient air	200	°C/W
T_J	Operating Junction Temperature Range	-40~+125	°C
T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C
dv/dt	Voltage rate of change	1000	V/μs

ELECTRICAL CHARACTERISTICS(Ta=25℃ unless otherwise specified)

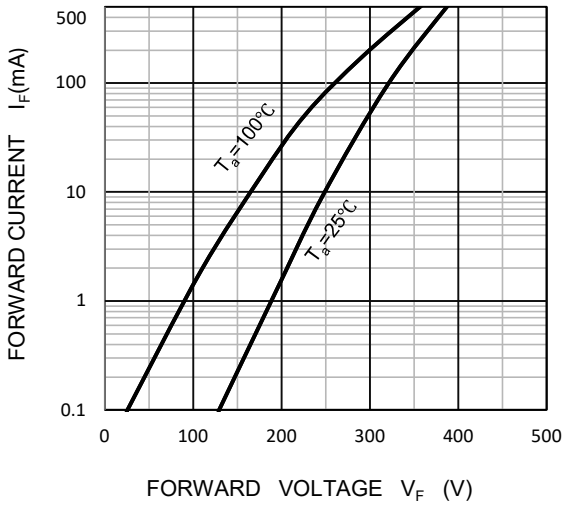
Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)}$	Reverse voltage	I_R=250uA	20	--	--	V
I_R	Reverse voltage leakage current	V_R=10V	--	--	75	A
		V_R=20V	--	--	250	
V_F	Forward voltage	I_F=0.1A	--	--	0.33	V
		I_F=0.5A	--	--	0.39	
C_{tot}	Total capacitance	V_R=1V,f=1MHz	--	170	--	pF

Ordering Information (Example)

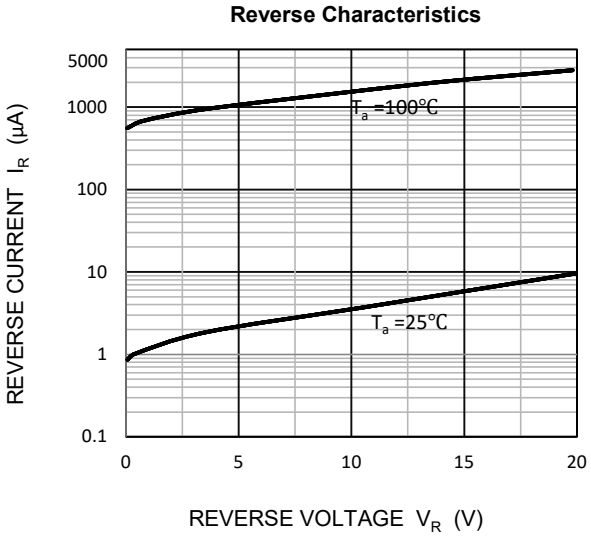
Type	Package	Marking	Minimum	Inner Box	Outer	Delivery
B0520LW	SOD-123	SD	3,000	45,000	180,000	7"reel

Typical Operating Characteristics

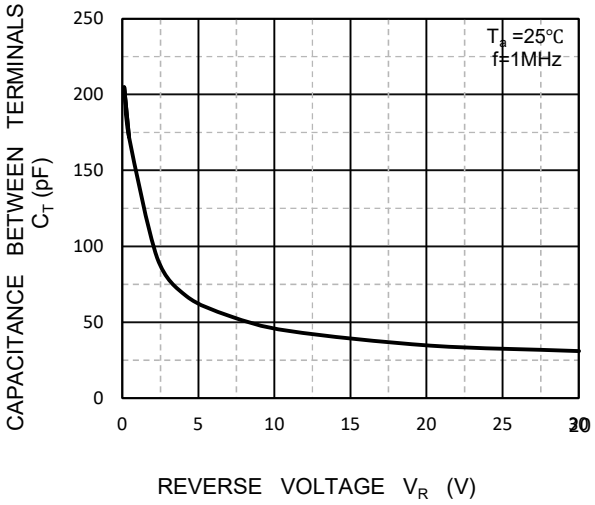
Forward Characteristics



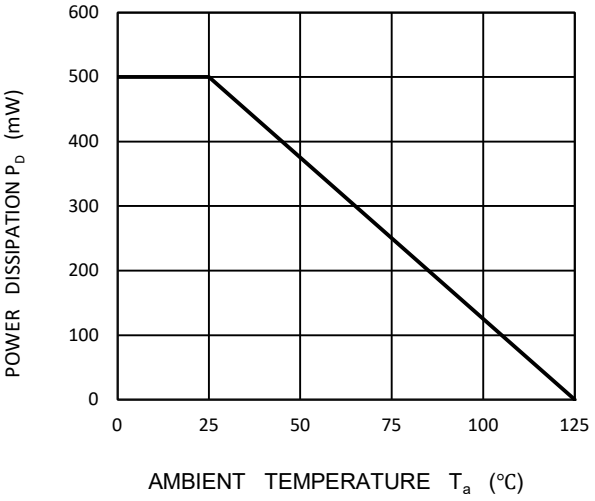
Reverse Characteristics



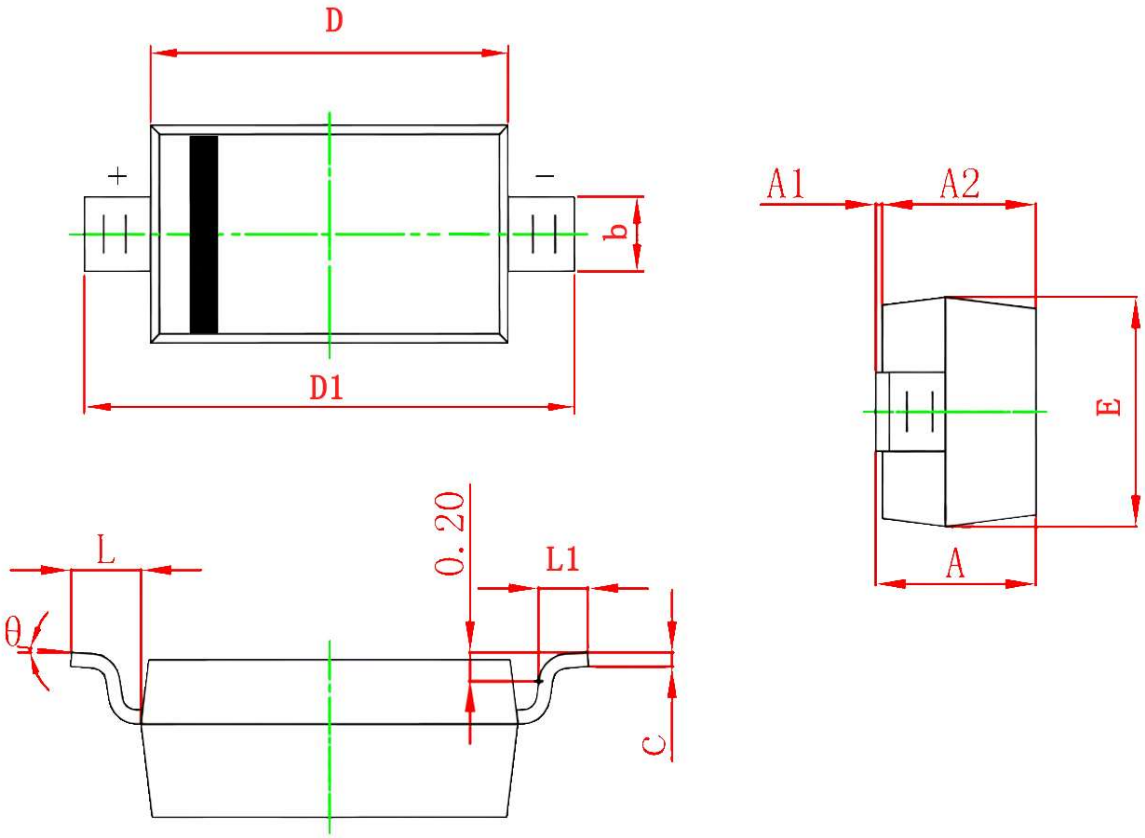
Capacitance Characteristics



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°