

Features

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



SOD-323 top view



Schematic diagram



Marking and pin assignment



Pb-Free



Halogen-Free

Maximum Ratings($T_a=25^{\circ}\text{C}$ 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@ $t=8.3\text{ms}$	5.5	A
P_D	Power Dissipation	200	mW
$R_{\theta JA}$	Thermal resistance junction to ambient air	500	$^{\circ}\text{C/W}$
T_J	Operating Junction Temperature Range	$-40\sim+125$	$^{\circ}\text{C}$
T_{stg}	Operation Junction and Storage Temperature Range	$-55\sim+150$	$^{\circ}\text{C}$
dv/dt	Voltage rate of change	1000	$\text{V}/\mu\text{s}$

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

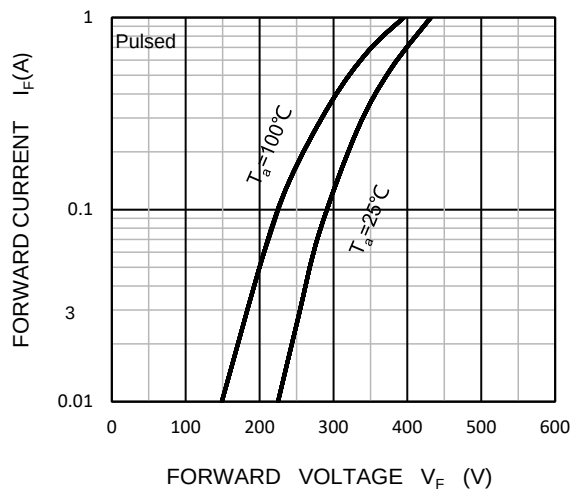
Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)}$	Reverse voltage	$I_R=250\mu\text{A}$	20	--	--	V
I_R	Reverse voltage leakage current	$V_R=10\text{V}$	--	--	75	μA
		$V_R=20\text{V}$	--	--	250	
V_F	Forward voltage	$I_F=0.1\text{A}$	--	--	0.33	V
		$I_F=0.5\text{A}$	--	--	0.39	
C_{tot}	Total capacitance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

Ordering Information (Example)

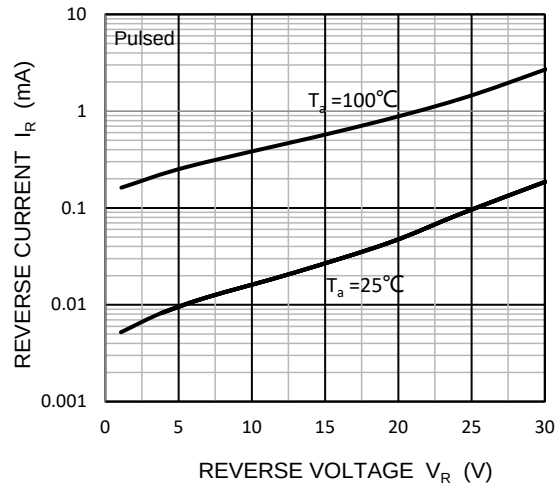
Type	Package	Marking	Minimum	Inner Box	Outer	Delivery
B0520WS	SOD-323	SD	3,000	45,000	180,000	7"reel

Typical Operating Characteristics

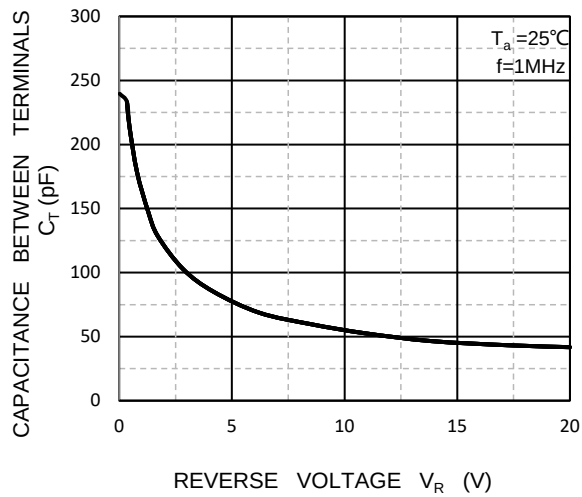
Forward Characteristics



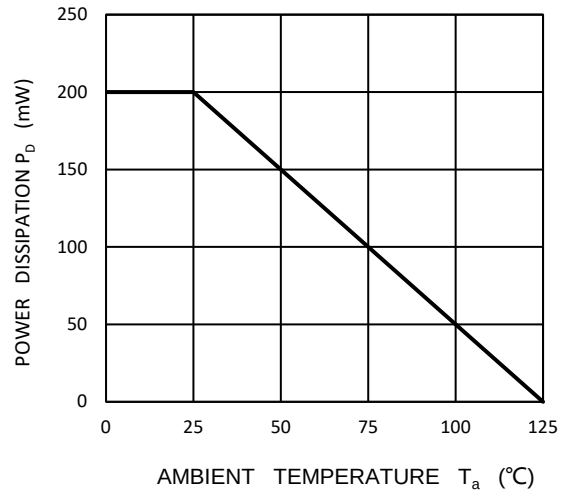
Reverse Characteristics



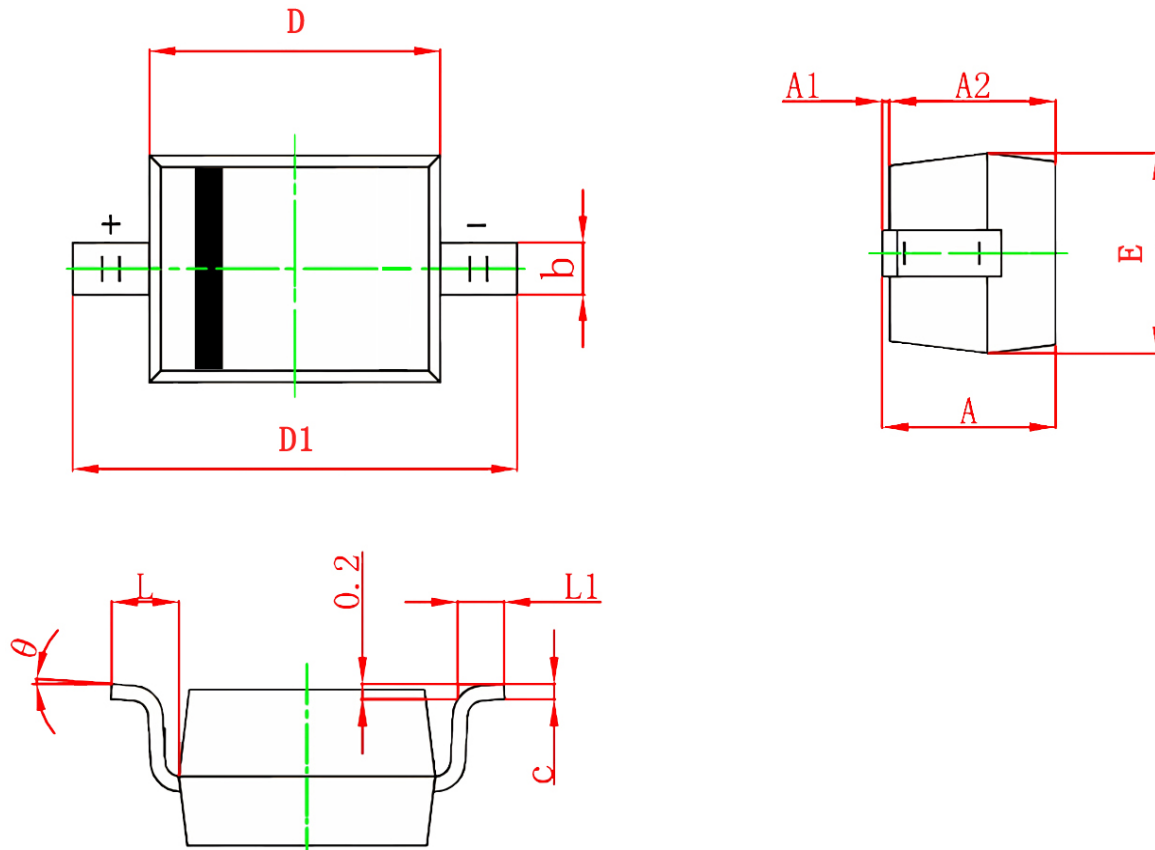
Capacitance Characteristics



Power Derating Curve



SOD-323 Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	-	1.100	-	0.043
A1	0.000	0.100	0.000	0.004
A2	0.800	1.000	0.031	0.039
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.600	1.800	0.063	0.071
D1	2.500	2.750	0.098	0.108
E	1.200	1.400	0.047	0.055
L	0.475 REF		0.019 REF	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°