

Features

- Low Forward Voltage Drop
- Very Small SMD Package

Applications

- Low Voltage Rectification
- High Efficiency DC/DC Conversion
- Switch Mode Power Supply
- Inverse Polarity Protection
- Low Power Consumption Applications



SOD-323 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_{RRM}	Peak Repetitive Reverse Voltage	20	V
V_{RWM}	Working Peak Reverse Voltage		V
$V_{R(RMS)}$	RMS Reverse Voltage	14	V
I_F	Forward Continuous Current	2	A
I_{FSM}	Non-repetitive Peak Forward Surge Current@ $t=8.3\text{ms}$	9	A
P_D	Power Dissipation	Note 1	mW
		Note 2	
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	Note 1	$^{\circ}\text{C/W}$
		Note 2	
T_J	Operating Junction Temperature Range	$-40\sim+125$	$^{\circ}\text{C}$
T_{stg}	Operation Junction and Storage Temperature Range	$-55\sim+150$	$^{\circ}\text{C}$

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

2: Device mounted on an FR4 PCB with copper pad 10 x 10 mm.

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

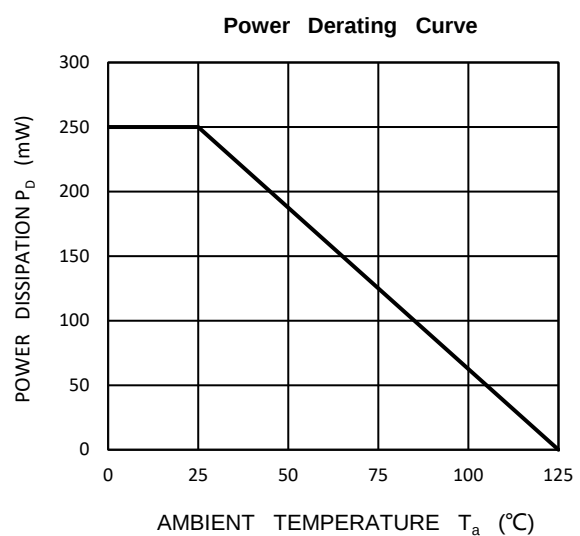
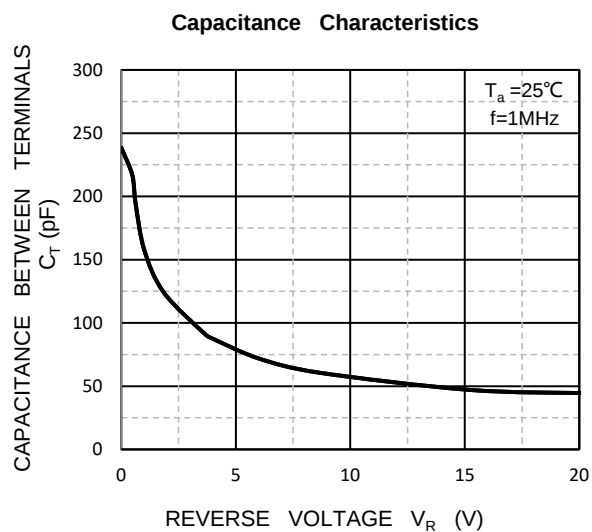
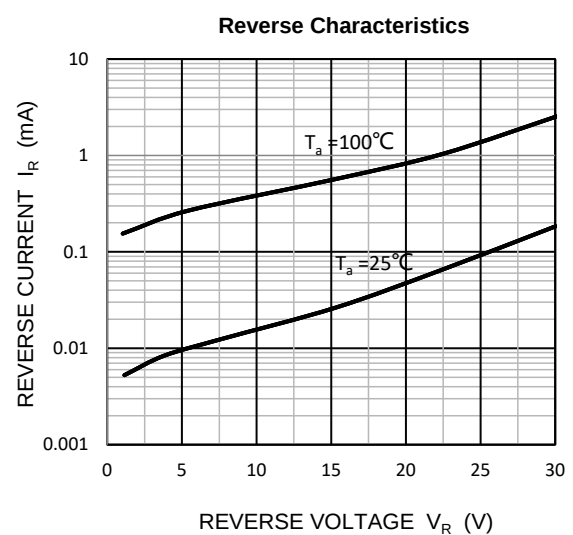
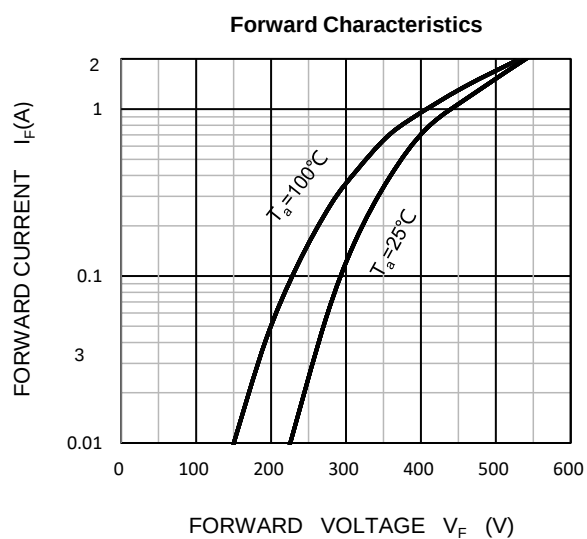
Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)}$	Reverse voltage	$I_R=1\text{mA}$	20	--	--	V
I_R	Reverse voltage leakage current	$V_R=10\text{V}$	--	--	80	μA
		$V_R=20\text{V}$	--	--	100	
V_F^*	Forward voltage	$I_{F1}=1\text{A}$	--	--	0.45	V
		$I_{F1}=2\text{A}$	--	--	0.55	
C_{tot}	Total capacitance	$V_R=4\text{V}, f=1\text{MHz}$	--	--	120	pF

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

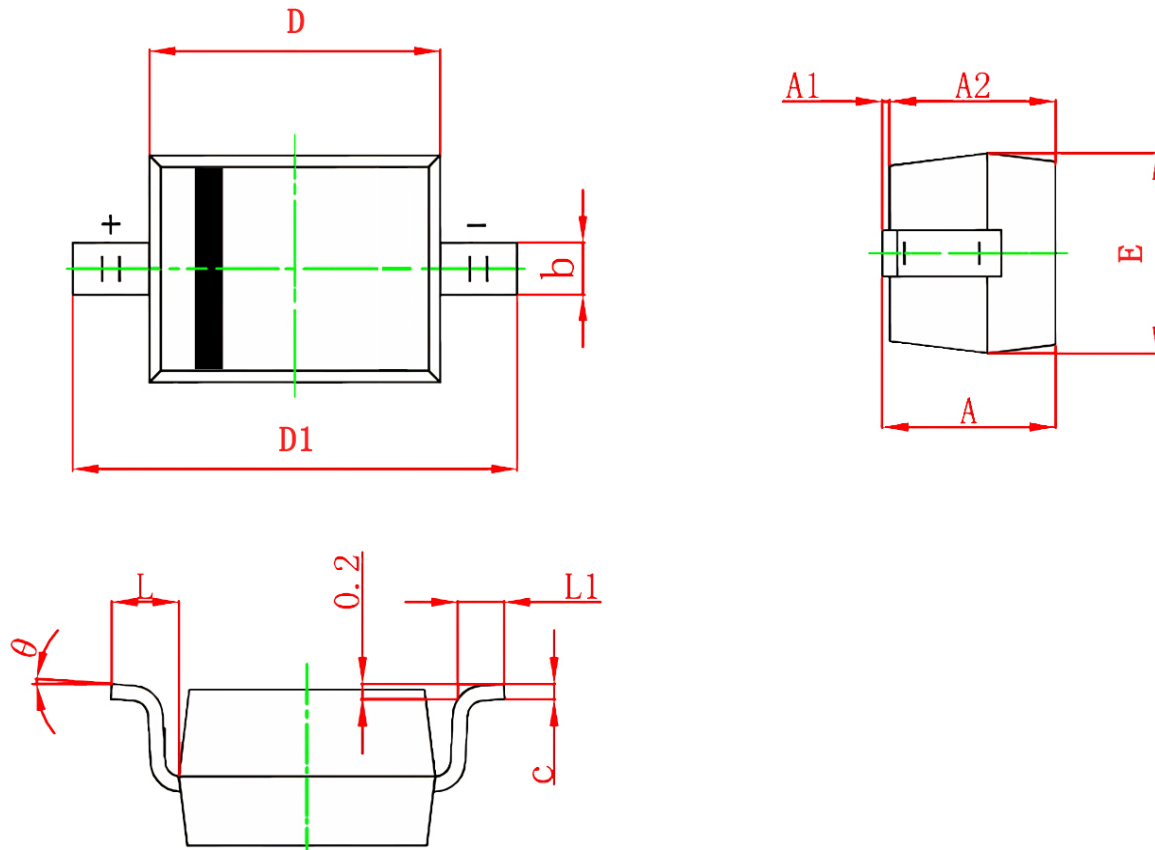
Ordering Information (Example)

Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pc)	Delivery Mode
B2020WS	SOD-323	SH	3,000	45,000	180,000	7"reel

Typical Operating Characteristics



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°