

SOD-323 Plastic-Encapsulate Diodes

B2020WS Schottky barrier Diode

SOD-323

RoHS
COMPLIANT

Features

- Low Forward Voltage Drop
- Very Small SMD Package

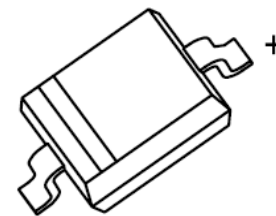
Application

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

Marking



SH=Device code
The marking bar indicates the cathode



Equivalent circuit



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

Parameter	Symbol	Limit	Unit
Peak Repetitive Reverse Voltage	VRRM	20	V
Working Peak Reverse Voltage	VRWM		
RMS Reverse Voltage	VR(RMS)	14	V
Continuous Forward Current	IF	2	A
Non-repetitive Peak forward surge current @ t=8.3ms	IFSM	9	A
Power dissipation (Note1)	PD	250	mW
Power dissipation (Note2)		480	
Thermal Resistance Junction to Ambient (Note1)	R θ JA	400	$^\circ\text{C/W}$
Thermal Resistance Junction to Ambient (Note2)		208	$^\circ\text{C/W}$
Operating Junction Temperature Range	Tj	-40 ~ +125	$^\circ\text{C}$
Storage Temperature Range	Tstg	-55 ~ +150	$^\circ\text{C}$

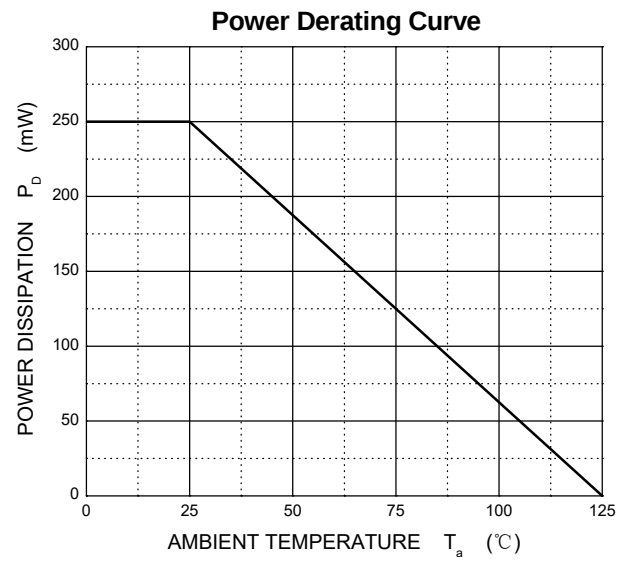
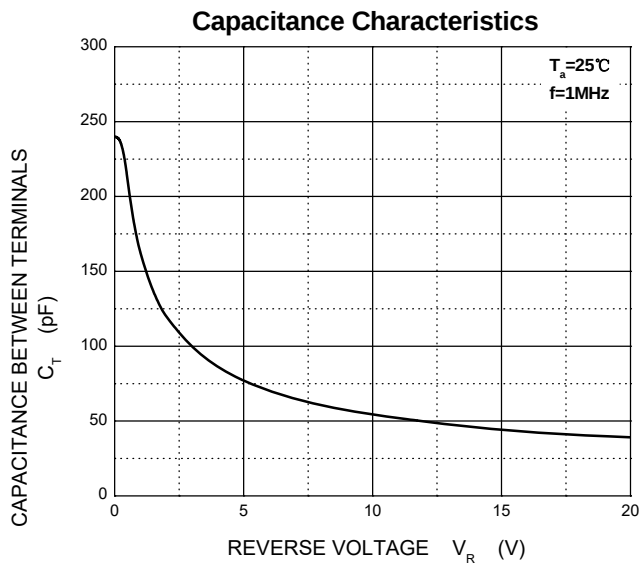
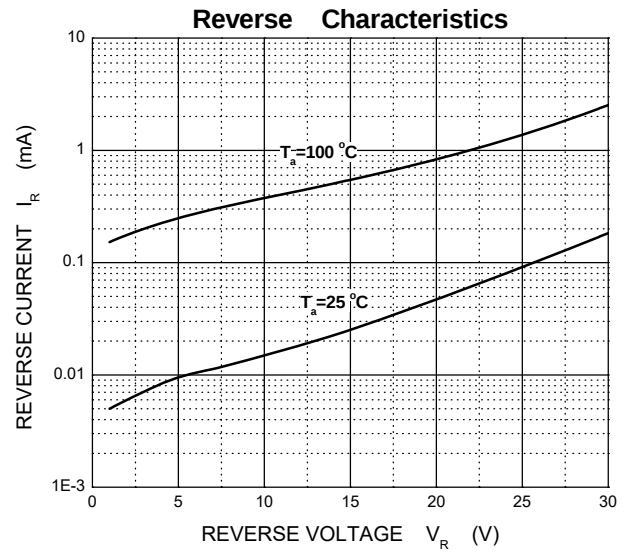
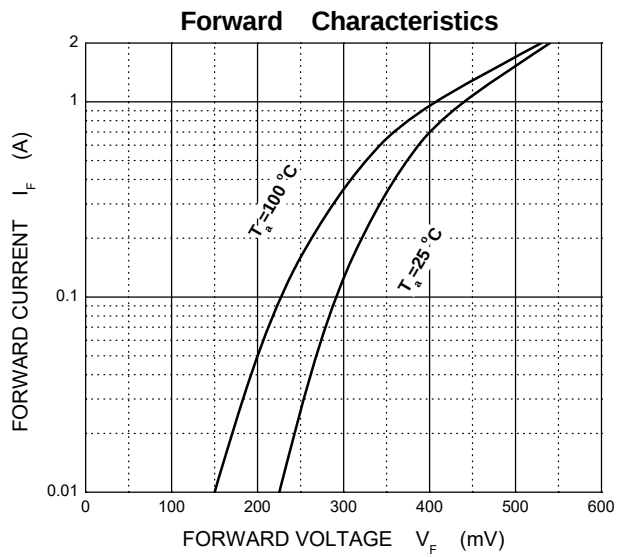
Notes: 1. Device mounted on an FR4 PCB, single-sided copper, tin-plated and standard footprint.
2. Device mounted on an FR4 PCB with copper pad 10 x 10 mm.

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

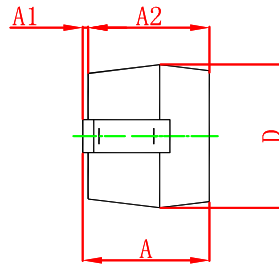
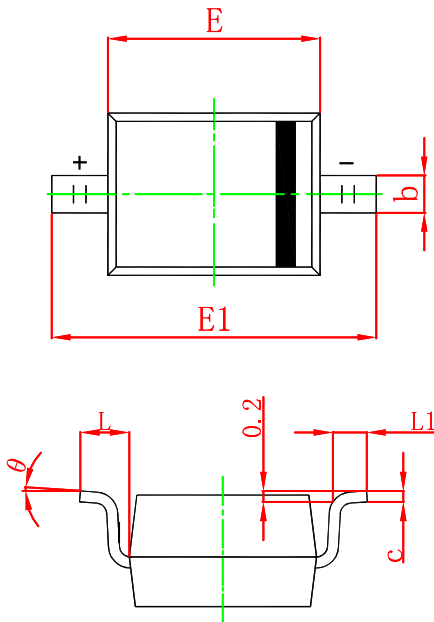
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	V _(BR)	I _R =1mA	20			V
Reverse current	I _R	V _R =10V			80	μA
		V _R =20V			100	
Forward voltage	V _F *	I _F =1A			0.45	V
		I _F =2A			0.55	
Total capacitance	C _{tot}	V _R =0V, f=1MHz			120	pF

*Pulse test: tp ≤ 300 μs ; δ ≤ 0.02.

Typical Characteristics

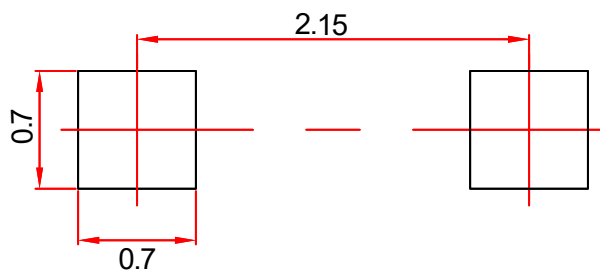


SOD-323 Package Outline Dimensions



Symbol	Dimensions In Millimeters		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	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.500	2.750	0.098	0.108
L	0.475 REF		0.019 REF	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

SOD-323 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.