

SuperDiode – 0.5A, 200mW SOD-323 Plastic-Encapsulate Schottky Barrier Diode





1. Features

- High current capability
- Power dissipation of 200mW
- Low forward voltage drop

2. Mechanical Data

- SOD-323 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Epoxy:94V-0

3. Marking and Circuit

B0520WS	B0530WS	B0540WS	Circuit
			

4. Specification

Absolute Maximum Rating & Thermal Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

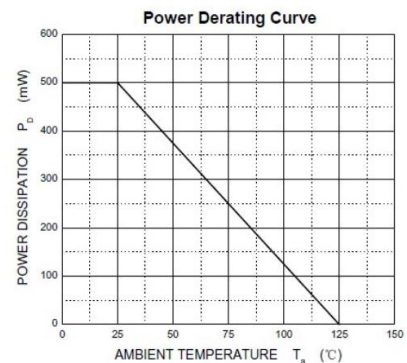
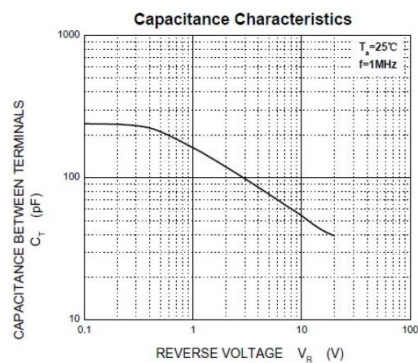
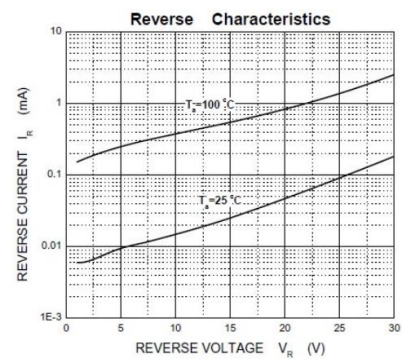
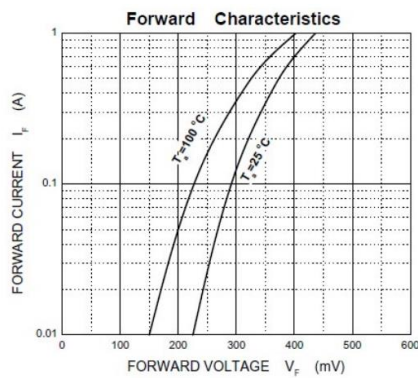
Parameters	Symbol	Value			Unit
		B0520WS	B0530WS	B0540WS	
Peak repetitive reverse voltage	$V_{RRM}$	20	30	40	V
Maximum RMS voltage	$V_{RMS}$	14	21	28	V
Maximum DC blocking voltage	$V_{DC}$	20	30	40	V
Power dissipation	$P_D$	200			mW
Operating junction temperature	$T_J$	125			°C
Storage temperature range	$T_S$	-50~150			°C
Thermal resistance from junction to ambient	$R_{\theta JA}$	500			°C/W
Peak forward surge current 8.3 ms single half sine-wave	$I_{FSM}$	5.5			A
Maximum average forward rectified current	$I_{FM}$	0.5			A
Voltage rate of change	$Dv/dt$	1000			V/us

Valid provided that electrodes are kept at ambient temperature

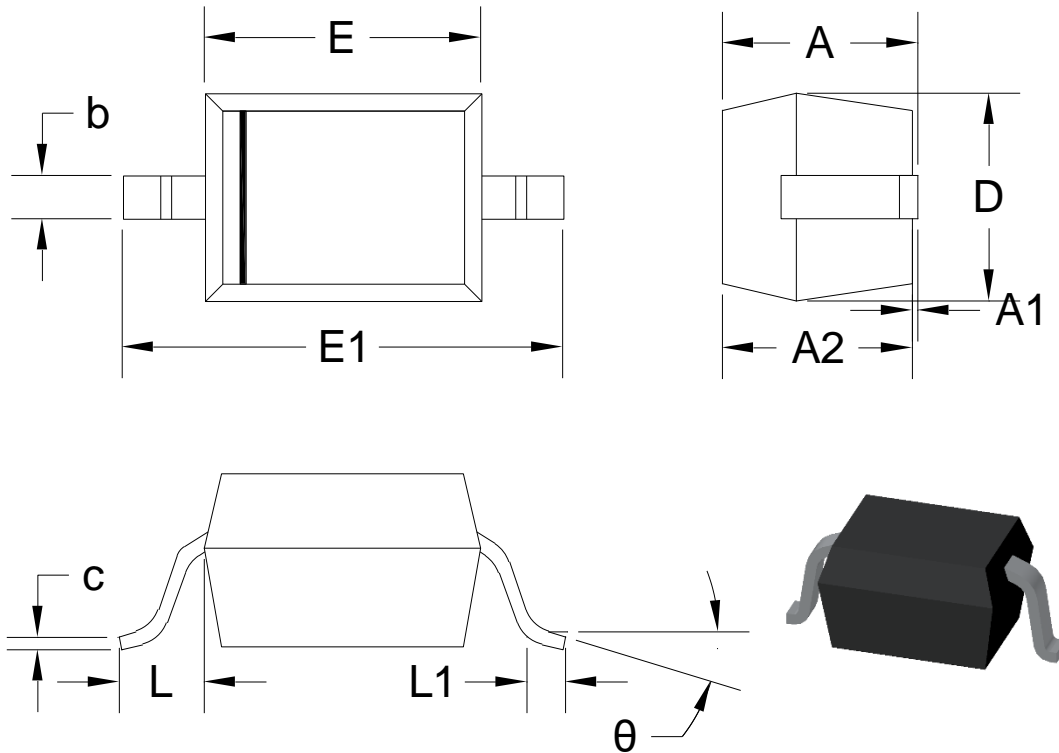
**Electrical Characteristics (At TA = 25°C unless otherwise specified)**

Parameters	Symbol	Test conditions	B0520WS	B0530WS	B0540WS	Unit
Maximum forward voltage	VF	IF = 0.1A	0.33	0.375	---	V
		IF = 0.5A	0.39	0.45	0.51	
		IF = 1.0A	---	---	0.62	
Maximum reverse breakdown voltage	VR	IR=250uA	20	---	---	V
		IR=200uA	---	30	---	
		IR=20.0uA	---	---	40	
Maximum reverse current	IR	VR=10V	75	---	---	uA
		VR=15V	---	80	---	
		VR=20V	250	---	10	
		VR=30V	---	500	---	
		VR=40V	---	---	20	
Capacitance between terminals	CT	VR = 0V, f = 1MHz	170			pF

**5. Typical Characteristic**

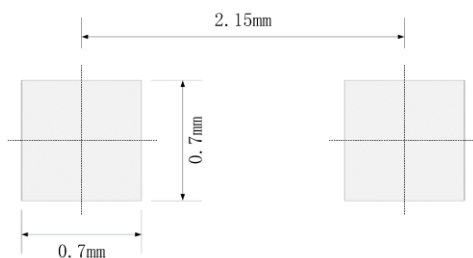


6. Dimension and Patterns (SOD-323)



Units: mm

Symbol	Min.	Max.	Symbol	Min.	Max.
A		1.000	E	1.600	1.800
A1	0.000	0.100	E1	2.550	2.750
A2	0.800	0.900	L	0.475REF	
b	0.250	0.350	L1	0.250	0.400
c	0.080	0.150	θ	0°	8°
D	1.200	1.400			



Note:

1. Controlling dimension: in millimeters
2. General tolerance: ±0.05mm
3. The pad layout is for reference only
4. Unit: mm

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