

# GSB0520WS thru GSB0540WS

Schottky Barrier Diode  
 Reverse Voltage 20V to 40V Forward Current 0.5A

## Features

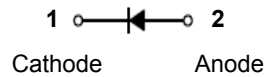
- High current capability
- Low forward voltage drop

## Mechanical Data

- Package: SOD-323, small outline plastic package
- Polarity: Color band denotes cathode end
- Epoxy UL: 94V-0



SOD-323



Schematic Diagram

## Absolute Maximum Ratings (T<sub>A</sub>=25°C unless otherwise specified)

Parameters	Symbol	GSB0520WS	GSB0530WS	GSB0540WS	Unit
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	V
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	V
Maximum Average Forward Rectified Current	I <sub>FM</sub>	0.5			A
Non-Repetitive Peak Forward Surge Current @ 8.3ms Single Half Sine-Wave	I <sub>FSM</sub>	5.5			A
Thermal Resistance Junction to Ambient	R <sub>θJA</sub>	500			°C/W
Power Dissipation	P <sub>D</sub>	200			mW
Junction Temperature	T <sub>J</sub>	125			°C
Storage Temperature Range	T <sub>STG</sub>	-50 to +150			°C
Voltage Rate of Change	Dv/dt	1000			V/uS

## Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise specified)

Parameters	Symbol	Test conditions	GSB0520WS	GSB0530WS	GSB0540WS	Unit
Maximum Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =0.1A	0.330	0.375	-	V
		I <sub>F</sub> =0.5A	0.390	0.450	0.510	
		I <sub>F</sub> =1.0A	-	-	0.620	
Maximum Reverse Breakdown Voltage	V <sub>R</sub>	I <sub>R</sub> =250uA	20	-	-	V
		I <sub>R</sub> =200uA	-	30	-	
		I <sub>R</sub> =20.0uA	-	-	40	
Maximum Reverse Current	I <sub>R</sub>	V <sub>R</sub> =10V	75	-	-	uA
		V <sub>R</sub> =15V	-	80	-	
		V <sub>R</sub> =20V	250	-	10	
		V <sub>R</sub> =30V	-	500	-	
		V <sub>R</sub> =40V	-	-	20	
Typical Capacitance Between Terminals	C <sub>T</sub>	V <sub>R</sub> =4V, f=1MHz	90			pF

## Typical Characteristic Curves

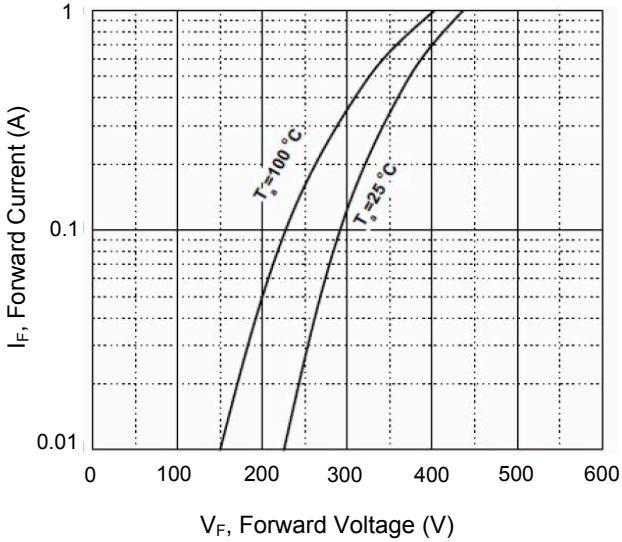


Figure 1. Forward Characteristics

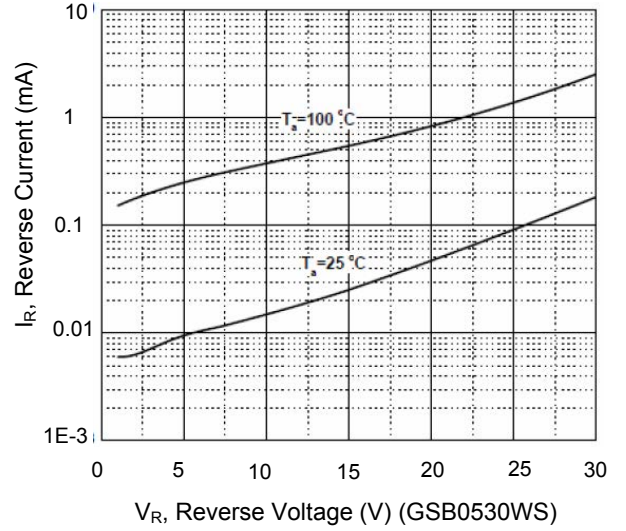


Figure 2. Reverse Characteristics

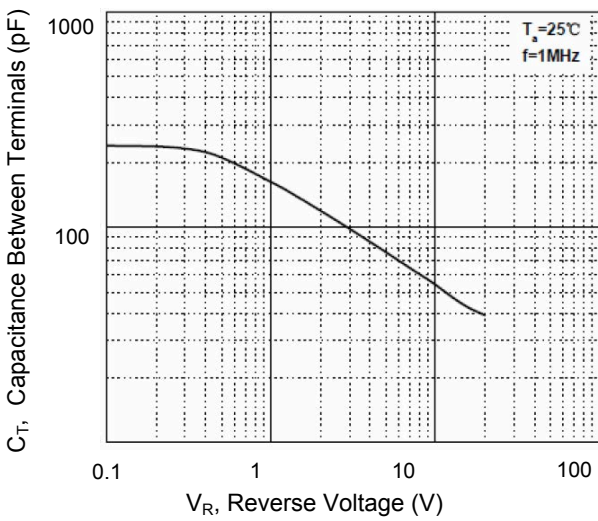


Figure 3. Capacitance Characteristics

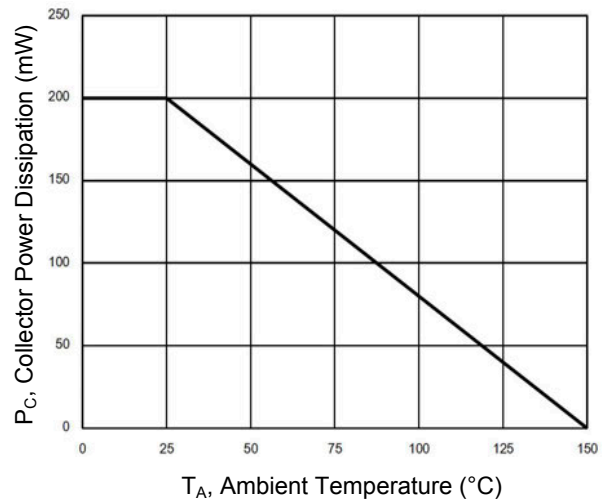
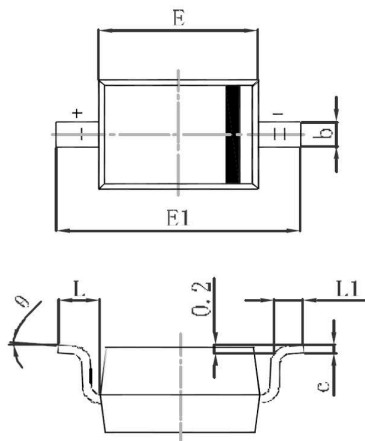


Figure 4. Power Derating Curve

# GSB0520WS thru GSB0540WS

Schottky Barrier Diode  
 Reverse Voltage 20V to 40V Forward Current 0.5A

## Package Outline Dimensions (SOD-323)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	-	1.000	-	0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
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	2.700	0.098	0.106
L	0.475 REF		0.019 REF	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

## Order Information

Device	Package	Marking	Carrier	Quantity
GSB0520WS	SOD-323	SD	Tape & Reel	3,000pcs/ Reel
GSB0530WS	SOD-323	SE	Tape & Reel	3,000pcs/ Reel
GSB0540WS	SOD-323	SF	Tape & Reel	3,000pcs/ Reel