

GSB0520W thru GSB0540W

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

Features

- High current capability
- Low forward voltage drop



SOD-123

Mechanical Data

- Package: SOD-123
- Polarity: Color band denotes cathode end
- Mounting Position: Any



Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

Parameters	Symbol	GSB0520W	GSB0530W	GSB0540W	Unit
Maximum Repetitive Peak 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
Maximum Average Forward Rectified Current	I _{FM}	0.5			A
Peak Forward Surge Current 8.3 ms Single Half Sine-wave	I _{FSM}	5.5			A
Typical Thermal Resistance	R _{θJA}	200			°C/W
Power Dissipation	P _D	500			mW
Storage Temperature Range	T _{STG}	-50 to +150			°C
Voltage Rate of Change	Dv/dt	1000			V/uS

Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameters	Symbol	Test conditions	GSB0520W	GSB0530W	GSB0540W	Unit
Maximum Forward Voltage	V _F	I _F =0.1A	0.330	0.375	-	V
		I _F =0.5A	0.385	0.430	0.510	
		I _F =1.0A	-	-	0.620	
Maximum Reverse Breakdown Voltage	V _R	I _R =250uA	20	-	-	V
		I _R =200uA	-	30	-	
		I _R =20uA	-	-	40	
Maximum Reverse Current	I _R	V _R =10V	75	-	-	uA
		V _R =15V	-	20	-	
		V _R =20V	250	-	10	
		V _R =30V	-	130	-	
		V _R =40V	-	-	20	

Typical Characteristic Curves

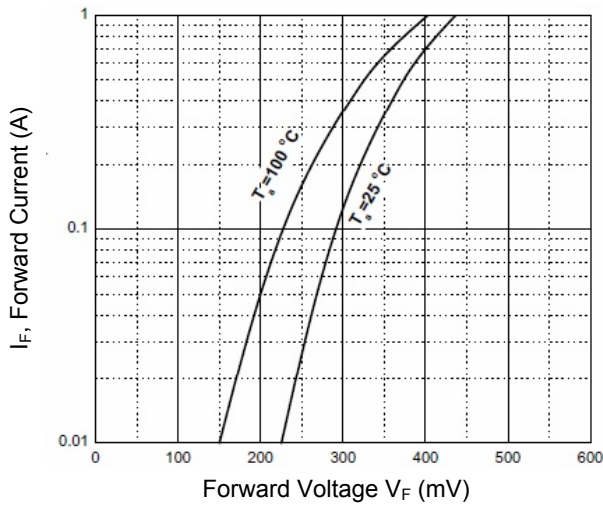


Figure 1. Forward Characteristics

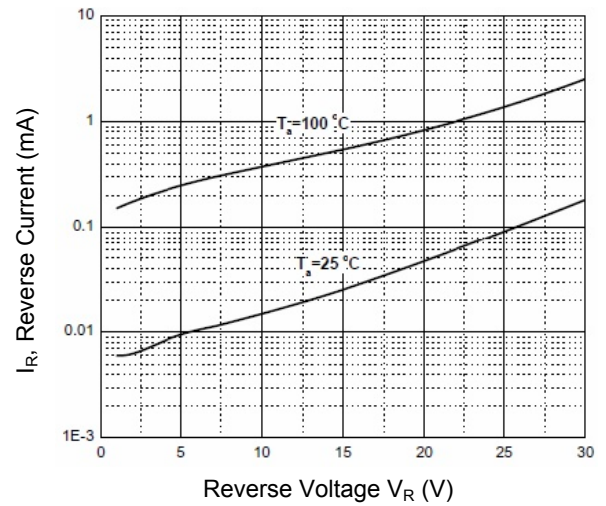


Figure 2. Reverse Characteristics

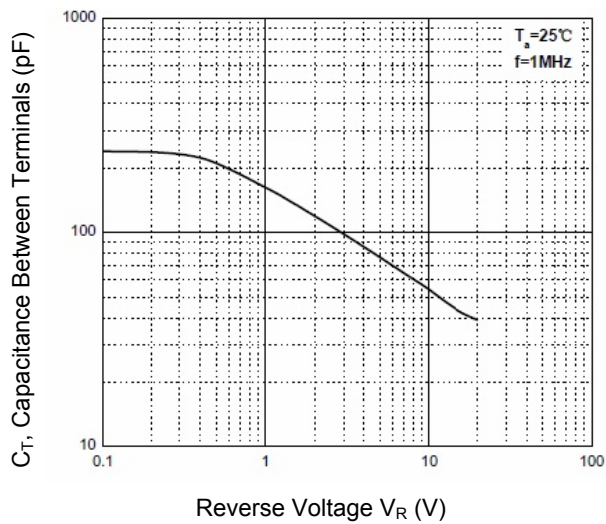


Figure 3. Capacitance Characteristics

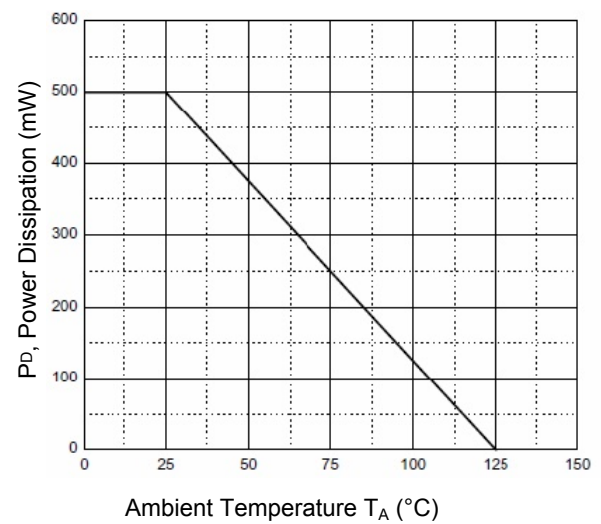
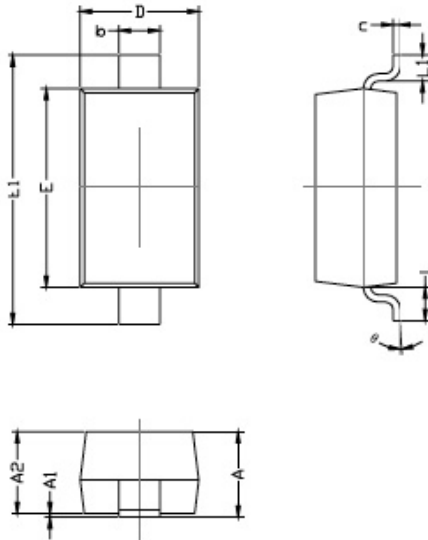


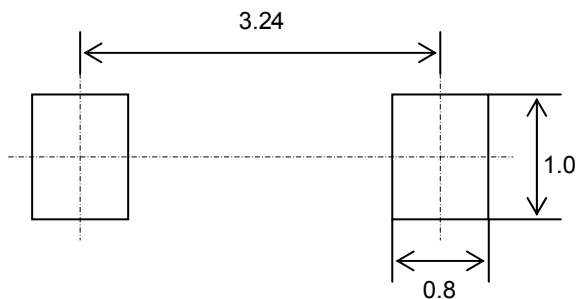
Figure 4. Power Derating Curve

Package Outline Dimensions (SOD-123)



Symbol	Dimensions In Millimeters	
	Min	Max
A	1.050	1.250
A1	0.000	0.100
A2	1.050	1.150
b	0.450	0.650
c	0.080	0.150
D	1.500	1.700
E	2.600	2.800
E1	3.550	3.850
L	0.500 REF	
L1	0.250	0.450
θ	0°	8°

Recommended 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.

Order Information

Device	Package	Marking	Carrier	Quantity	HSF Status
GSB0520W	SOD-123	SD	Tape & Reel	3000pcs / Reel	RoHS Compliant
GSB0530W	SOD-123	SE	Tape & Reel	3000pcs / Reel	RoHS Compliant
GSB0540W	SOD-123	SF	Tape & Reel	3000pcs / Reel	RoHS Compliant