

## Features

- High breakdown voltage
- Low turn-on voltage
- Guard ring construction for transient protection



SOD-123



Schematic Diagram

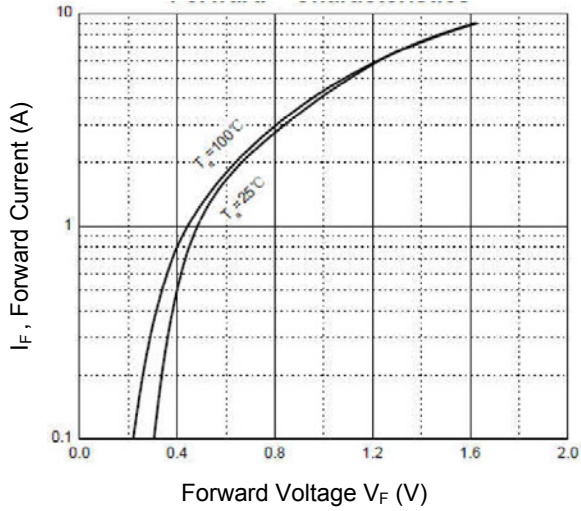
## Absolute Maximum Ratings (T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	40	V
Maximum RMS Voltage	V <sub>RMS</sub>	28	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	40	V
Maximum Average Forward Rectified Current	I <sub>FM</sub>	1.0	A
Peak Forward Surge Current 8.3ms Single Half Sine-wave	I <sub>FSM</sub>	30	A
Power Dissipation	P <sub>D</sub>	500	mW
Thermal Resistance Junction to Ambient Air	R <sub>θJA</sub>	250	°C/W
Junction Temperature Range	T <sub>J</sub>	+125	°C
Storage Temperature Range	T <sub>STG</sub>	-50 to +150	°C

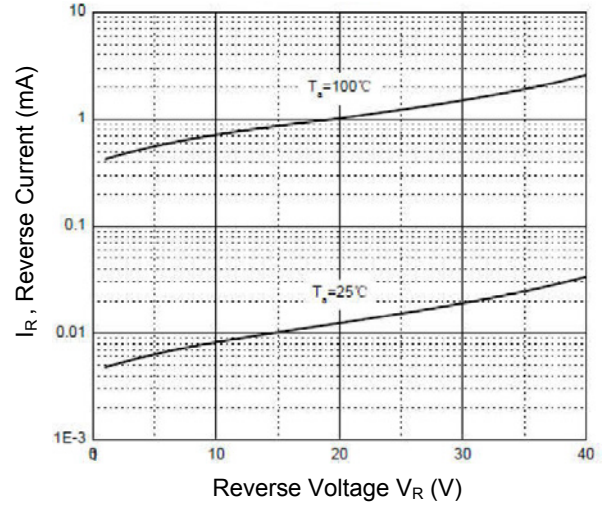
## Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	Value	Unit
Maximum Reverse Breakdown Voltage	V <sub>R</sub>	I <sub>R</sub> =1mA	40	V
Maximum Reverse Current	I <sub>R</sub>	V <sub>R</sub> =40V	1.0	mA
Maximum Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =1.0A	0.45	V
Typical Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> =4.0V, f=1MHz	120	pF

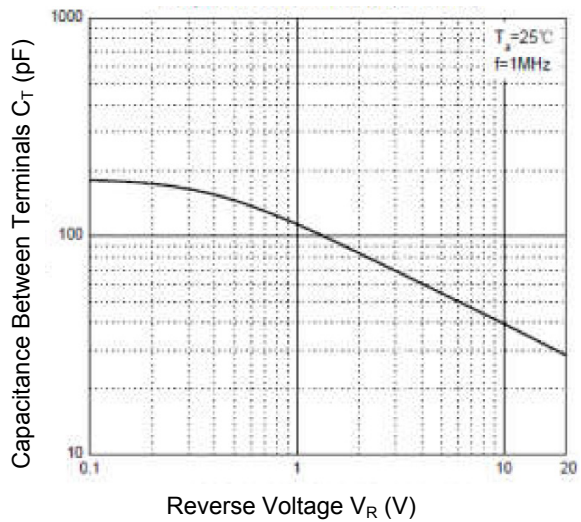
**Typical Electrical and Thermal Characteristic Curves**



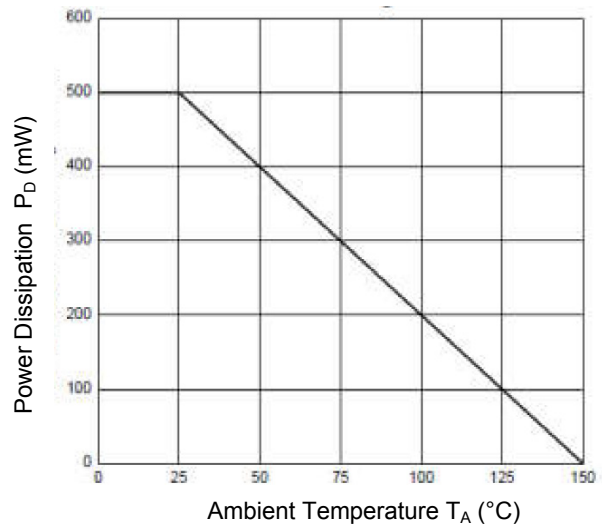
**Figure 1. Forward Characteristics**



**Figure 2. Reverse Characteristics**

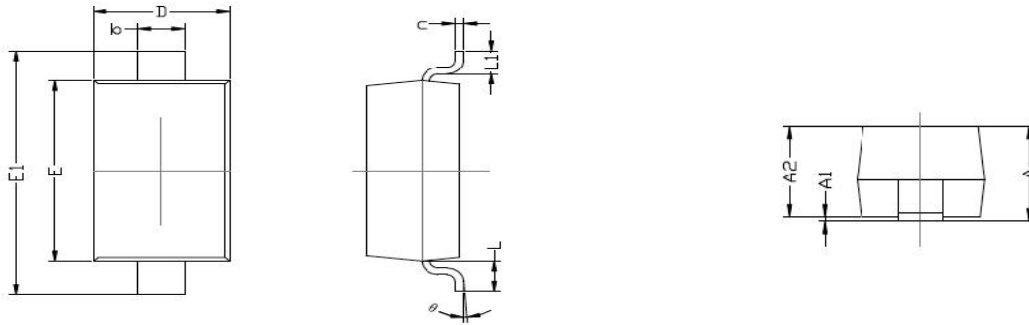


**Figure 3. Capacitance Characteristics**



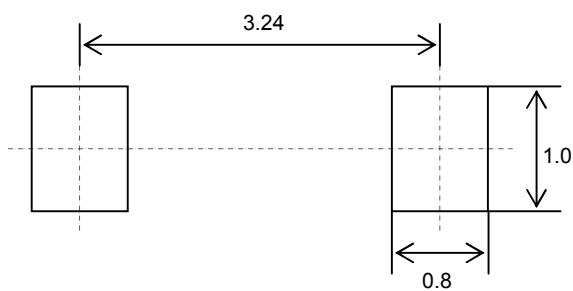
**Figure 4. Power Derating Curve**

**Package Outline Dimensions**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500 REF		0.020 REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	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.

**Marking and Ordering Information**

Device	Package	Carrier	Quantity	Marking
GSB5819WL	SOD-123	Tape & Reel	3,000pcs / Reel	C19