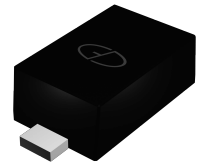


## Features

- Low forward Voltage
- High reliability



Schematic Diagram



SOD-523

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

Parameter	Symbol	Value	Unit
Non-repetitive Peak Reverse Voltage	V <sub>RM</sub>	45	V
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	40	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
RMS Reverse Voltage	V <sub>R(RMS)</sub>	28	V
Forward Current	I <sub>F</sub>	200	mA
Non-repetitive Peak Forward Surge Current @t=8.3ms	I <sub>FSM</sub>	1	A
Power Dissipation	P <sub>D</sub>	150	mW
Thermal Resistance from Junction to Ambient	R <sub>θJA</sub>	667	°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-40 to +125	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	

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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse Voltage	V <sub>(BR)</sub>	I <sub>R</sub> =0.1mA	40	-	-	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =10V	-	-	20	μA
		V <sub>R</sub> =40V	-	-	90	
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =10mA	0.16	-	0.3	V
		I <sub>F</sub> =100mA	0.31	-	0.45	
		I <sub>F</sub> =200mA	0.41	-	0.54	

## Typical Characteristic Curves

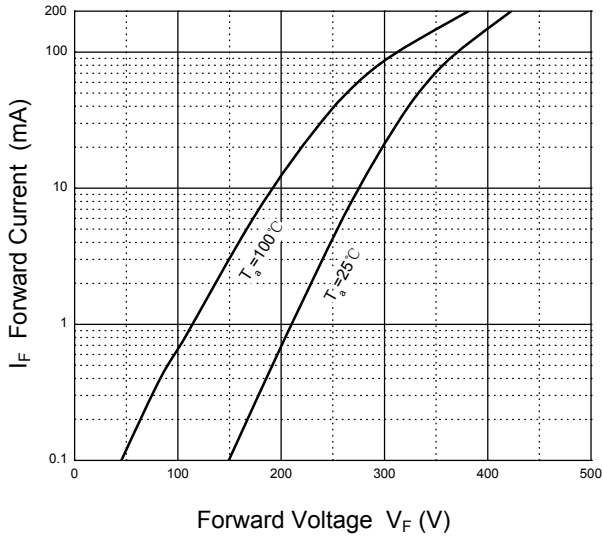


Figure 1. Forward Characteristics

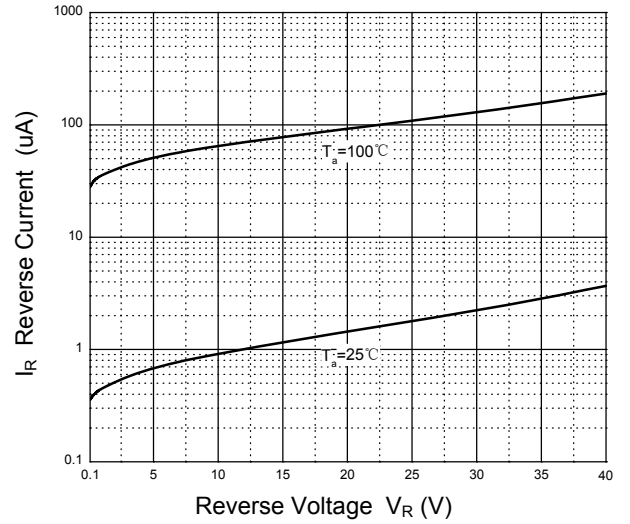


Figure 2. Reverse Characteristics

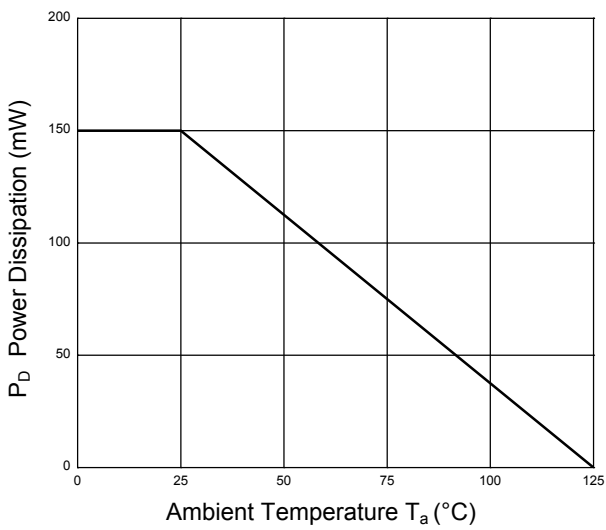
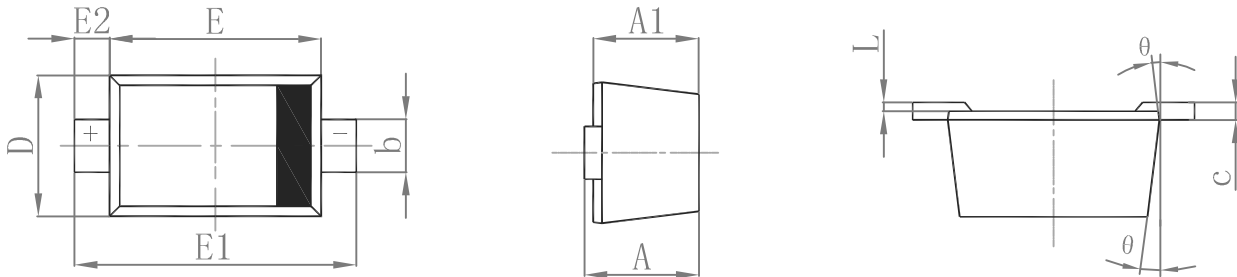


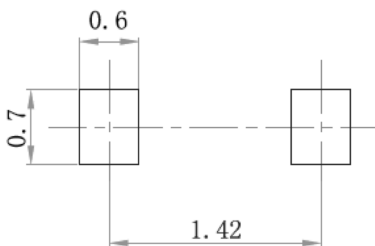
Figure 3. Power Derating Curve

## Package Outline Dimensions SOD-523



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.510	0.770	0.020	0.031
A1	0.500	0.700	0.020	0.028
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	0.750	0.850	0.030	0.033
E	1.100	1.300	0.043	0.051
E1	1.500	1.700	0.059	0.067
E2	0.200 REF		0.008 REF	
L	0.010	0.070	0.001	0.003
θ	7° REF		7° REF	

## Recommended Pad Layout



**Note:**

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05$ mm.
3. The pad layout is for reference purposes only.

## Ordering Information

Device	Package	Marking	Quantity	HSF Status
GSRB521S-40	SOD-523	S	8000pcs / Reel	RoHS Compliant