

## Features

- Low profile, small footprint
- Low forward voltage
- High reliability



SOD-523

## Mechanical Data

- Case: SOD-523
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208



Schematic Diagram

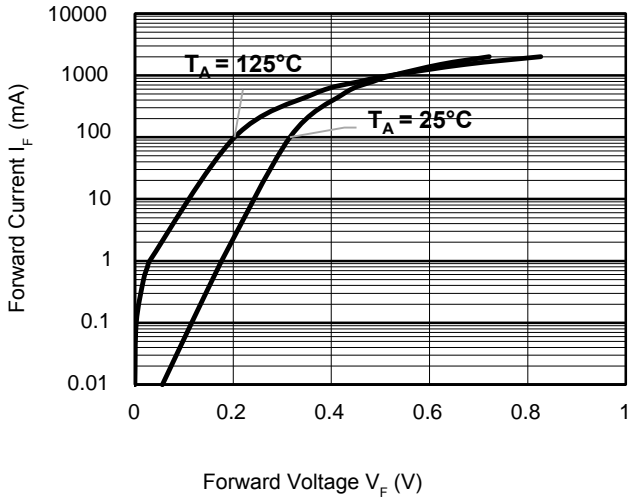
## Absolute Maximum Ratings (T<sub>A</sub>=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	40	V
RMS Reverse Voltage	V <sub>RMS</sub>	28	V
Maximum Average Forward Output Current	I <sub>F(AV)</sub>	0.5	A
Peak Forward Surge Current @t=8.3ms Half Sine-wave	I <sub>FSM</sub>	2	A
Power Dissipation	P <sub>D</sub>	200	mW
Thermal Resistance from Junction to Ambient	R <sub>θJA</sub>	500	°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C

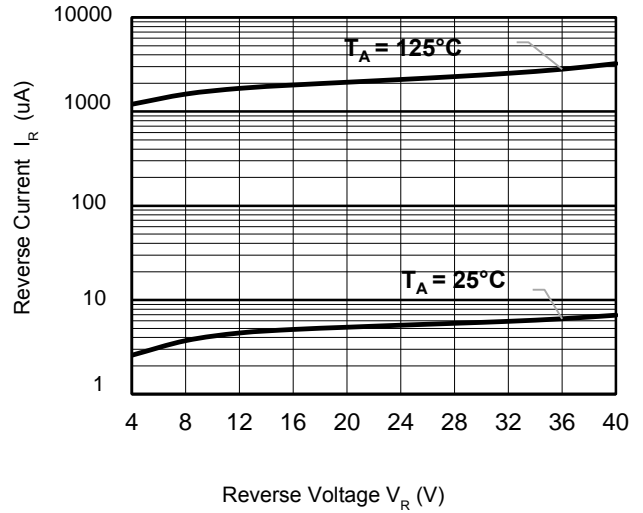
## Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise specified)

Parameter	Symbol	Conditions	Typ	Max	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =10mA	0.25	-	V
		I <sub>F</sub> =100mA	0.35	-	V
		I <sub>F</sub> =500mA	-	0.5	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =40V	-	50	μA

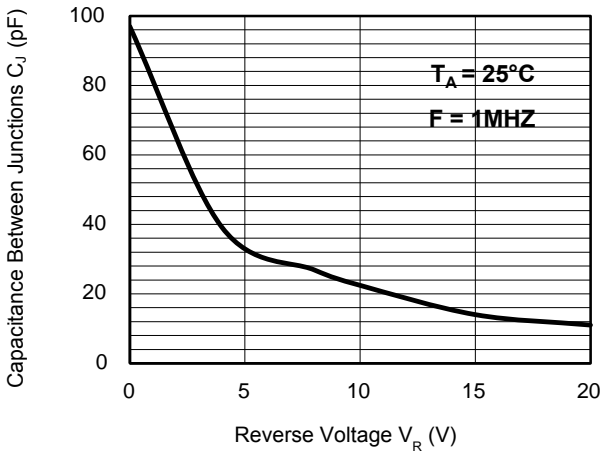
**Typical Characteristic Curves**



**Figure 1. Forward Characteristics**

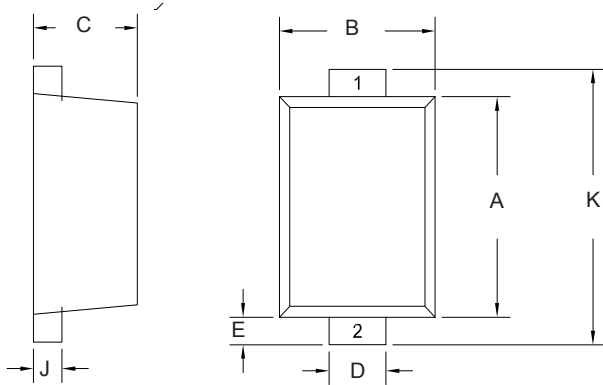


**Figure 2. Reverse Characteristics**



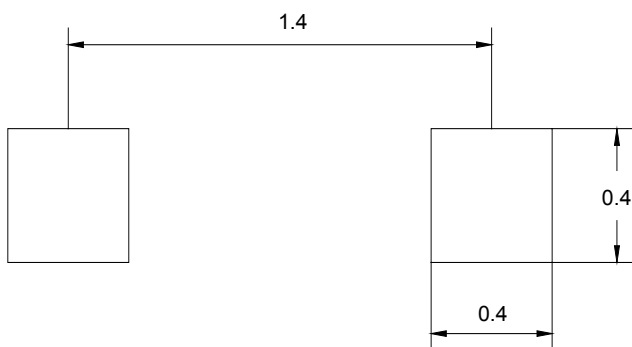
**Figure 3. Capacitance Characteristics**

**Package Outline Dimensions (SOD-523)**



Symbol	Dimensions In Millimeters	
	Min	Max
A	1.10	1.30
B	0.70	0.90
C	0.50	0.70
D	0.25	0.35
E	0.15	0.25
J	0.05	0.15
K	1.50	1.70

**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**

MPN	Package	Marking	Carrier	Quantity	HSF Status
GSBT0540X	SOD-523	SF	Tape & Reel	3000pcs / Reel	RoHS compliant