

# GSP1A thru GSP7A

Surface Mount Glass Passivated Rectifiers  
 Reverse Voltage 50-1000V Forward Current 1.0A

## Features

- Glass passivated standard rectifiers
- Low profile, typical thickness 0.8mm
- Low forward voltage drop
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- Heatsink structure
- High temperature soldering guaranteed: 260°C/10 seconds



Package: iSGA  
(SOD-123HS)



## Applications

For use of general purpose rectification in lighting, cell phone, portable device, power supply and other consumer applications.

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

Parameter	Symbol	GS P1A	GS P2A	GS P3A	GS P4A	GS P5A	GS P6A	GS P7A	Unit
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current	I <sub>F(AV)</sub>	1.0							A
Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load)	I <sub>FSM</sub>	40							A
Rating for Fusing (t<8.3ms)	I <sup>2</sup> t	7							A <sup>2</sup> sec
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	- 55 to + 150							°C

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

Parameter	Test Conditions	Symbol	GS P1A	GS P2A	GS P3A	GS P4A	GS P5A	GS P6A	GS P7A	Unit
Minimum Breakdown Voltage	I <sub>R</sub> =100μA	V <sub>BR</sub>	400			600	1000			V
Maximum Instantaneous Forward Voltage	T <sub>A</sub> =25°C I <sub>F</sub> =1.0A T <sub>A</sub> =125°C I <sub>F</sub> =1.0A	V <sub>F</sub>				1.0				
Maximum DC Reverse Current at Rated DC Blocking Voltage	T <sub>A</sub> =25°C T <sub>A</sub> =125°C	I <sub>R</sub>				5 50			μA	
Typical Reverse Recovery Time	I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>rr</sub> =0.25A	t <sub>rr</sub>				1.5			μs	
Typical Junction Capacitance	4.0 V, 1 MHz	C <sub>J</sub>				6.5			pF	

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## Typical Electrical Characteristic Curves

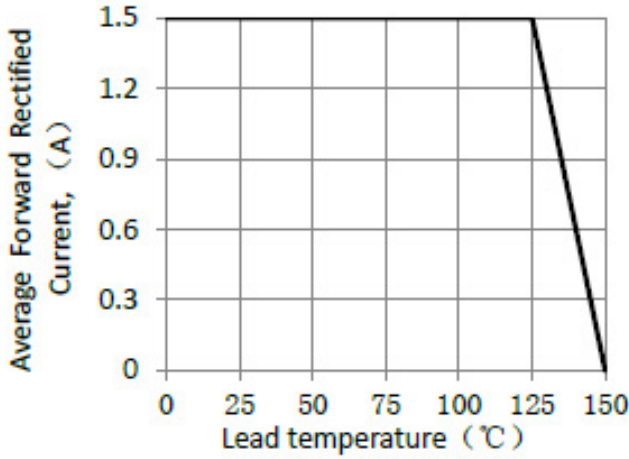


Figure 1. Forward Current Derating Curve

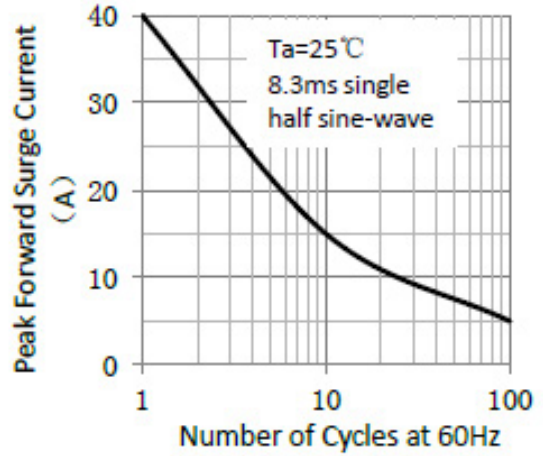


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

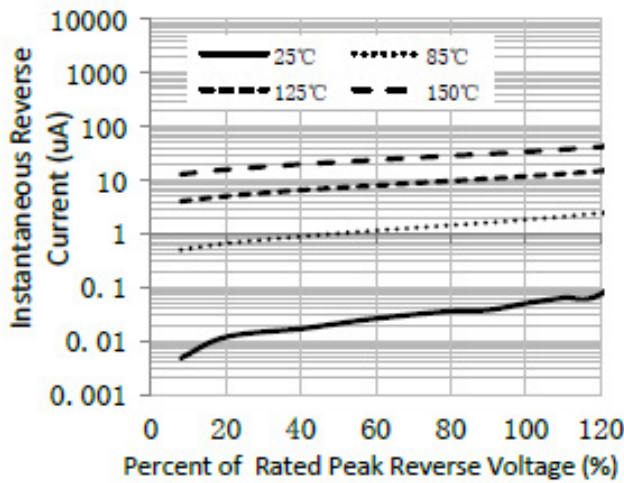


Figure 3. Typical Reverse Characteristics

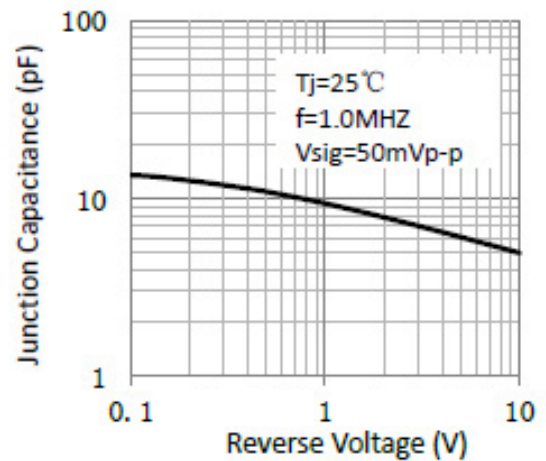


Figure 4. Typical Junction Capacitance

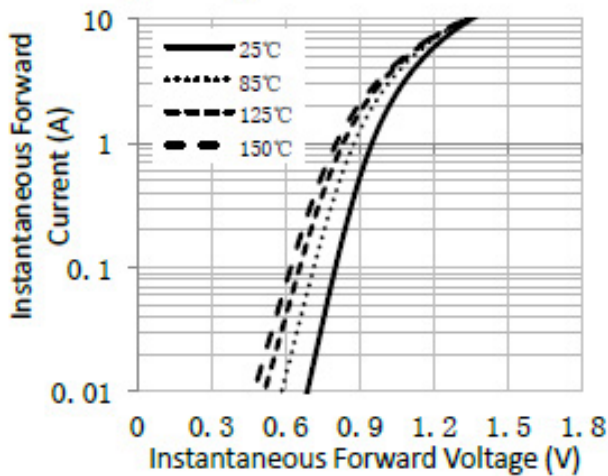
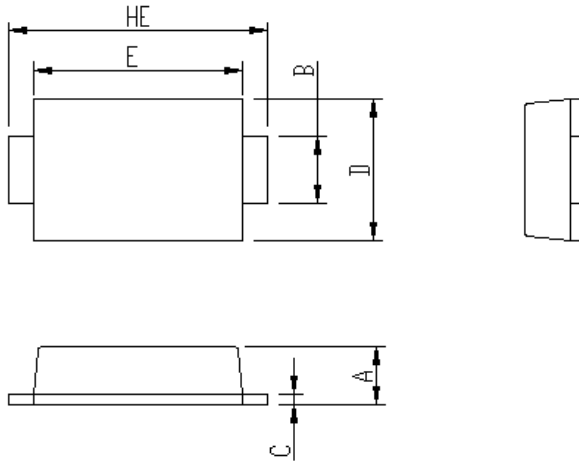


Figure 5. Typical Instantaneous Forward Characteristics

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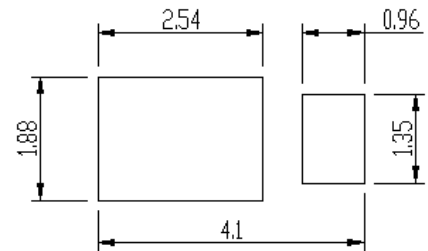
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## Package Outline Dimensions iSGA (SOD-123HS)



Package	iSGA	
Unit:mm	MIN	MAX
A	0.75	0.90
B	0.85	1.05
B1	0.85	1.05
C	0.1	0.25
D	1.9	2.1
E	2.9	3.1
L1	2.0	2.45
L2	0.4	0.85
L3	1.3	1.7
HE	3.5	3.9

### Soldering footprint



## Packing Information

Packing quantities:

Reel Size	Quantity/Reel	Quantity/Inner Box	Quantity/Carton
7"	3K	30K	120K

## Tape & Reel Specification

