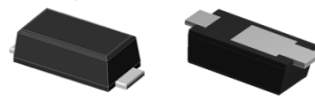


# GSPF1 thru GSPF7

Surface Mount Glass Passivated Fast Recovery Rectifier  
 Reverse Voltage 50-1000V Forward Current 1A

## Features

- Glass passivated fast recovery rectifiers
- Heatsink structure
- Low profile, typical thickness 0.8mm
- Low forward voltage drop
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- Solder dip 260°C, 10s



iSGA  
(SOD-123HS)



**RoHS**  
COMPLIANT

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

Parameter	Symbol	GS PF1	GS PF2	GS PF3	GS PF4	GS PF5	GS PF6	GS PF7	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>	30							A
Rating for Fusing(t<8.3ms)	I <sup>2</sup> t	3.8							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 PF1	GS PF2	GS PF3	GS PF4	GS PF5	GS PF6	GS PF7	Unit	
Minimum Breakdown Voltage	T <sub>A</sub> =25°C, I <sub>R</sub> =100uA	V <sub>BR</sub>	400			600	1000				
Maximum Instantaneous Forward Voltage	I <sub>F</sub> =1 A, T <sub>A</sub> =25°C	V <sub>F</sub>	1.3								V
	I <sub>F</sub> =1 A, T <sub>A</sub> =125°C		0.98								
Maximum DC Reverse Current at Rated DC Blocking Voltage	T <sub>A</sub> =25°C	I <sub>R</sub>	5.0								uA
	T <sub>A</sub> =125°C		50								
Maximum 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>	150			250			nS		
Typical Junction Capacitance	4.0 V, 1 MHz	C <sub>J</sub>	7.5								pF
Typical Thermal Resistance	Junction to Ambient	R <sub>θJA</sub> <sup>1</sup>	63								°C/W
	Junction to Case	R <sub>θJC</sub> <sup>1</sup>	9								
	Junction to Lead	R <sub>θJL</sub> <sup>2</sup>	39								

Note:1) The thermal resistance from junction to ambient or lead, mounted on P.C.B with 5x5mm copper pads,2 OZ,FR4 PCB

2) The thermal resistance from junction to case, mounted on P.C.B with recommended copper pads,2 OZ,FR4 PCB

## Typical Electrical Characteristic Curves

( $T_A=25^\circ\text{C}$  unless otherwise noted)

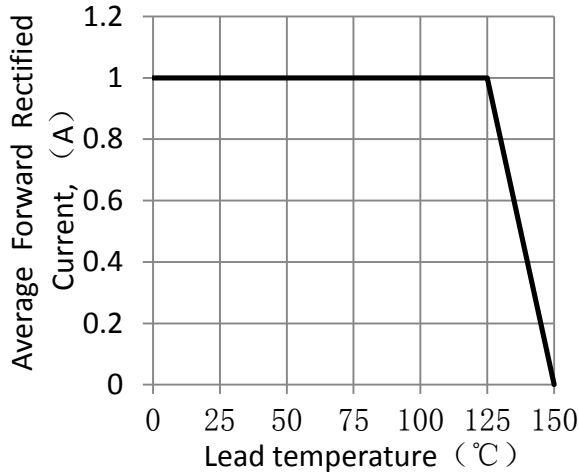


Figure 1. Forward Current Derating Curve

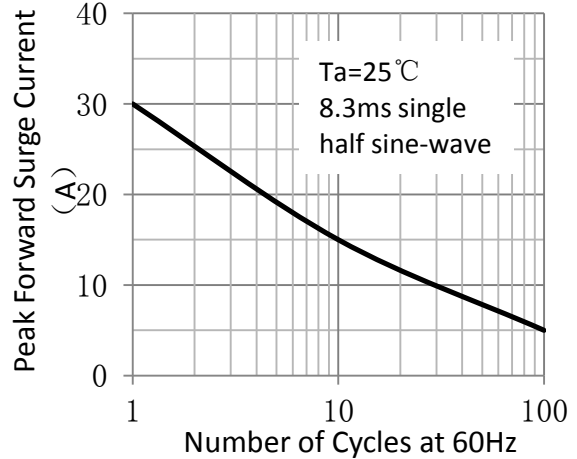


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

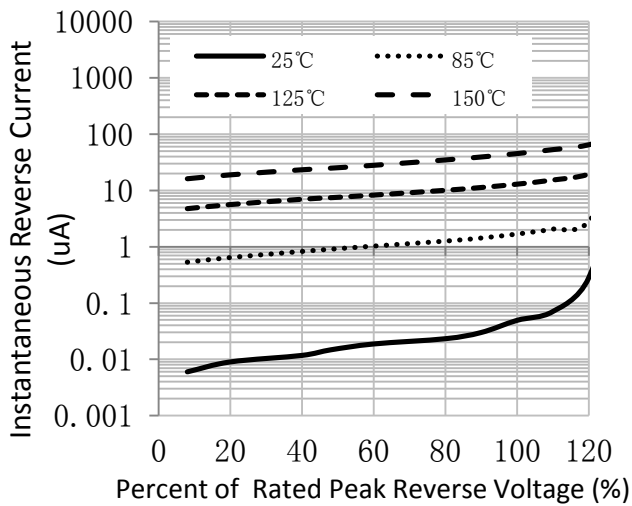


Figure 3. Typical Reverse Characteristics

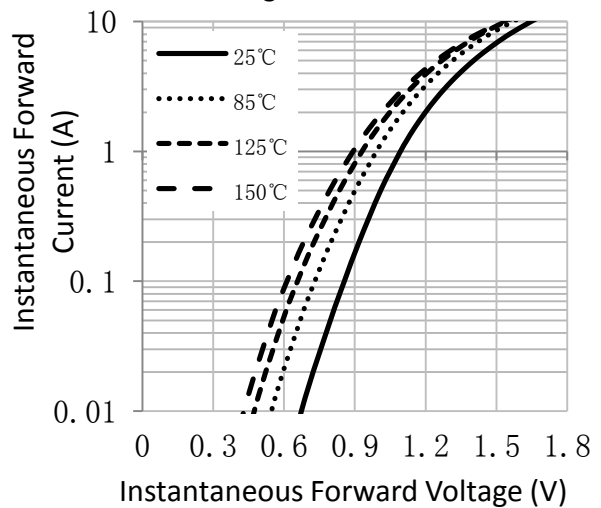


Figure 4. Typical Instantaneous Forward Characteristics

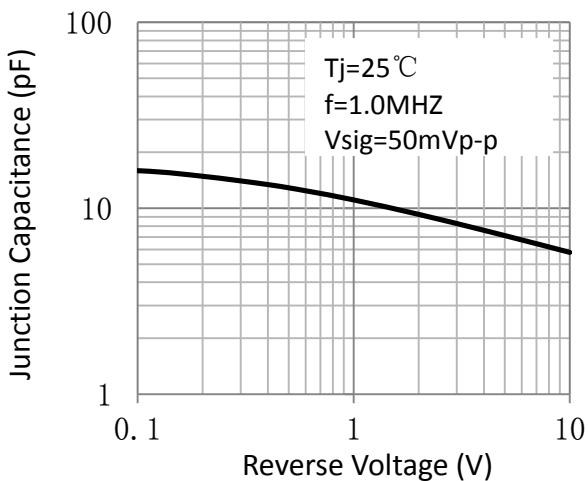


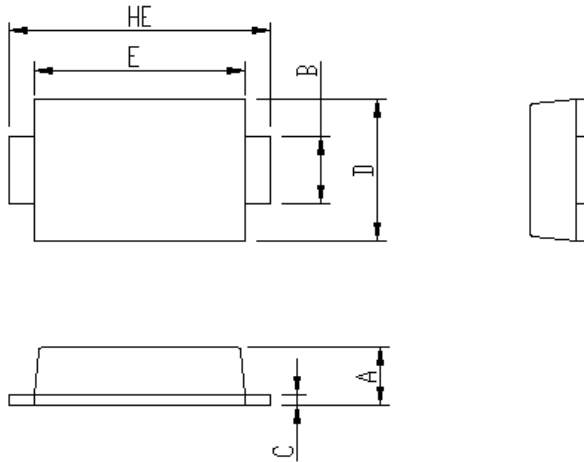
Figure 5. Typical Junction Capacitance

# GSPF1 thru GSPF7

Surface Mount Glass Passivated Fast Recovery Rectifier  
 Reverse Voltage 50-1000V Forward Current 1A

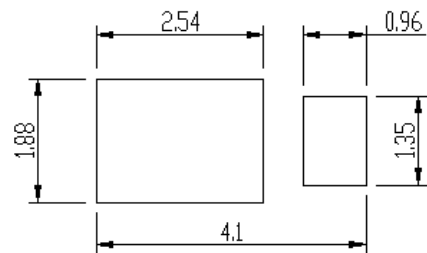
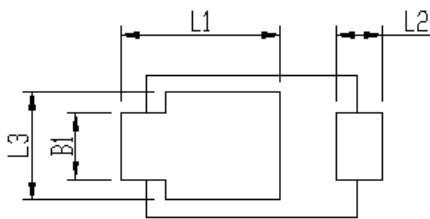
## Package Outline Dimensions

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/Cartron
7"	3K	30K	120K

### Packing Tape Specification

