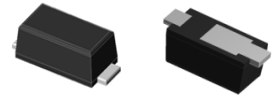


# GSPS22 thru GSPS24

Surface Mount Schottky Rectifier  
 Reverse Voltage 20-40V Forward Current 2A



Package: iSGA  
 (SOD-123HS)



**RoHS**  
 COMPLIANT

## Features

- Heatsink structure
- Low profile, typical thickness 0.8mm
- Low forward voltage drop
- Super low VF schottky barrier diodes
- Moisture sensitivity: level 1, per J-STD-020
- High temperature soldering guaranteed: 260°C/10 seconds

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

Parameter	Symbol	GSPS22	GSPS23	GSPS24	Unit
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	V
Maximum RMS voltage	V <sub>RMS</sub>	14	21	28	V
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	2.0			A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	50			A
Rating for fusing(t<8.3ms)	I <sup>2</sup> t	10			A <sup>2</sup> sec
Operating junction temperature range	T <sub>J</sub>	- 55 to + 150			°C
Storage temperature range	T <sub>STG</sub>	- 55 to + 150			°C

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

Parameter	Test Conditions	Symbol	GSPS22	GSPS23	GSPS24	Unit
Minimum Breakdown voltage	T <sub>A</sub> =25°C, I <sub>R</sub> =1mA	V <sub>BR</sub>	20	30	40	V
Maximum instantaneous forward voltage	I <sub>F</sub> =2A T <sub>A</sub> =25°C	V <sub>F</sub>	0.51			
	I <sub>F</sub> =2A T <sub>A</sub> =125°C	V <sub>F</sub>	0.45			
Maximum DC reverse current at rated DC blocking voltage	T <sub>A</sub> =25°C	I <sub>R</sub>	50			uA
	T <sub>A</sub> =125°C		15			mA
Typical junction capacitance	4.0 V, 1 MHz	C <sub>J</sub>	120			pF
Typical thermal resistance <sup>1)</sup>	junction to ambient	R <sub>θJA</sub>	110			°C/W
	junction to case	R <sub>θJC</sub>	20			
	junction to lead	R <sub>θJL</sub>	15			

Note: 1), The thermal resistance from junction to ambient, case or lead, mounted on FR-4 P.C.B

## Typical Electrical Characteristic Curves

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

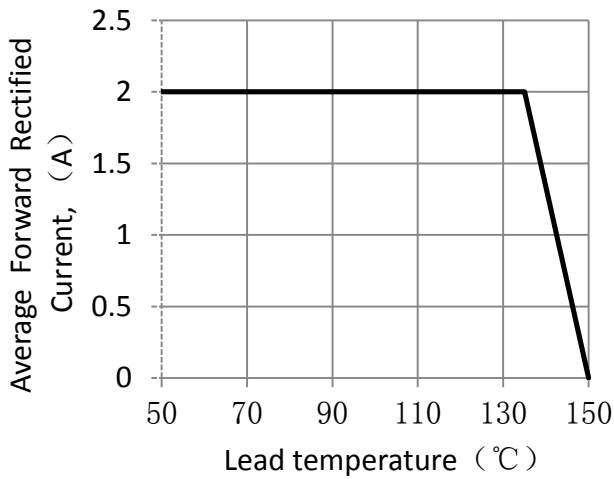


Figure 1. Forward Current Derating Curve

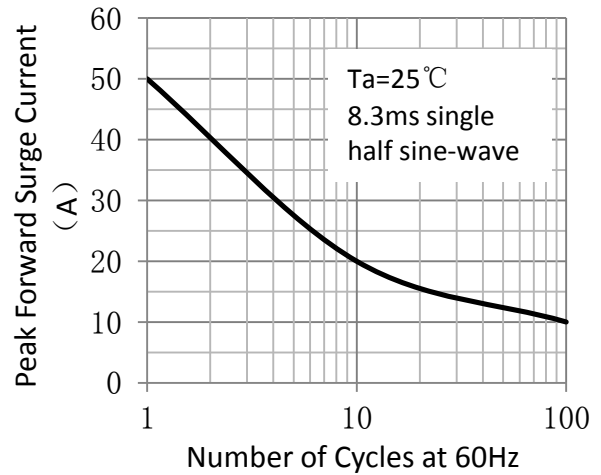


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

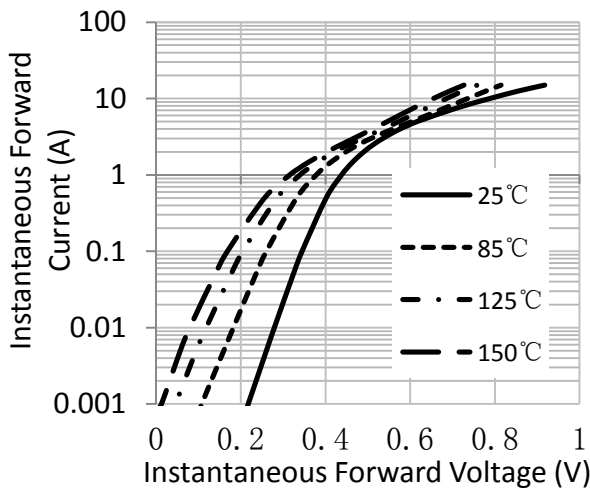


Figure 3. Typical Instantaneous Forward Characteristics

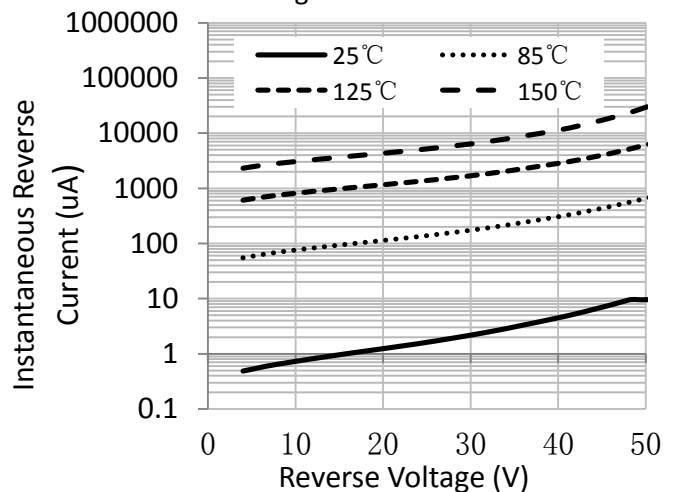


Figure 4. Typical Reverse Characteristics

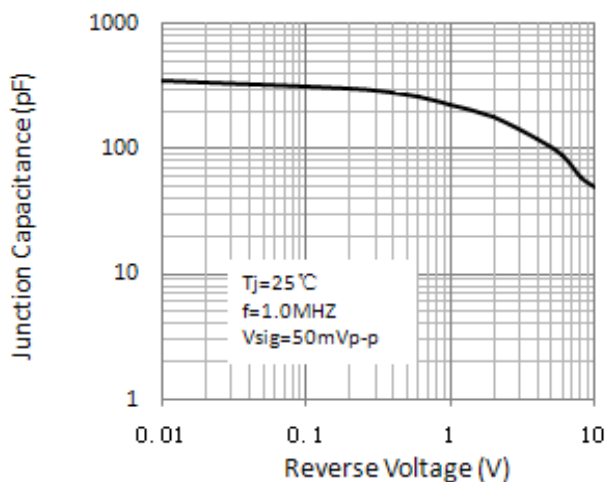


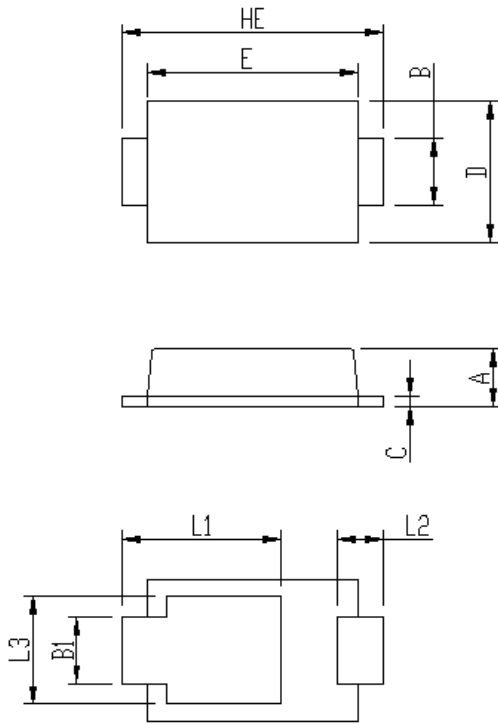
Figure 5. Typical Junction Capacitance

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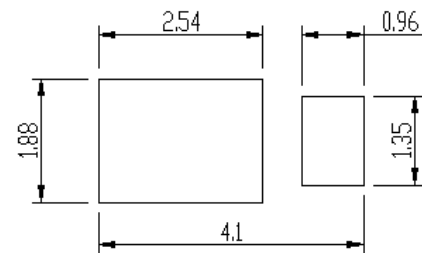
## Package Outline Dimensions

Package: 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



## Order Information

Device	Package	Marking	Carrier	Quantity
GSPS22	iSGA (SOD-123HS)	PS22	Tape & Reel	3,000pcs / Reel
GSPS23	iSGA (SOD-123HS)	PS23	Tape & Reel	3,000pcs / Reel
GSPS24	iSGA (SOD-123HS)	PS24	Tape & Reel	3,000pcs / Reel