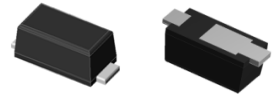


## Features

- Glass passivated superfast recovery 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)



**RoHS**  
COMPLIANT

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

| Parameter  | Symbol                            | GSPU1         | GSPU2 | GSPU3 | GSPU4 | GSPU5 | Unit |
|--|-----------------------------------|---------------|-------|-------|-------|-------|------|
| Maximum Repetitive Peak Reverse Voltage  | V <sub>RRM</sub>                  | 50            | 100   | 200   | 400   | 600   | V    |
| Maximum RMS Voltage  | V <sub>RMS</sub>                  | 35            | 70    | 140   | 280   | 420   | V    |
| Maximum DC Blocking Voltage  | V <sub>DC</sub>                   | 50            | 100   | 200   | 400   | 600   | V    |
| Maximum Average Forward Rectified Current  | I <sub>F(AV)</sub>                | 1             |       |       |       |       | A    |
| Peak Forward Surge Current 8.3ms Single Half Sine- Wave Superimposed on Rated Load | I <sub>FSM</sub>                  | 30            |       |       |       |       | A    |
| 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                         | GSPU1      | GSPU2 | GSPU3 | GSPU4 | GSPU5 | Unit |
|---|---|--------------------------------|------------|-------|-------|-------|-------|------|
| Minimum Breakdown Voltage                               | T <sub>A</sub> =25°C, I <sub>R</sub> =100uA                           | V <sub>BR</sub>                | 200        |       |       | 400   | 600   | V    |
| Maximum Instantaneous Forward Voltage                   | 1 A   | V <sub>F</sub>                 | 0.95       |       |       | 1.3   | 1.7   |      |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | T <sub>A</sub> =25°C<br>T <sub>A</sub> =125°C                         | I <sub>R</sub>                 | 5.0<br>100 |       |       |       |       | µA   |
| Maximum Reverse Recovery Time                           | I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A,<br>I <sub>tr</sub> =0.25A | t <sub>rr</sub>                | 35         |       |       |       |       | nS   |
| Typical Junction Capacitance                            | 4.0 V, 1 MHz  | C <sub>J</sub>                 | 7          |       |       |       |       | pF   |
| Typical Thermal Resistance                              | Juntion to Ambient  | R <sub>θJA</sub> <sup>1)</sup> | 63         |       |       |       |       | °C/W |
|   | Juntion to Lead   | R <sub>θJL</sub> <sup>1)</sup> | 9          |       |       |       |       |      |
|   | Juntion to Case   | R <sub>θJC</sub> <sup>2)</sup> | 39         |       |       |       |       |      |

Note:1),The thermal resistance from junction to ambient or lead, mounted on P.C.B with 5×5mm 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

## Ratings and Characteristics Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

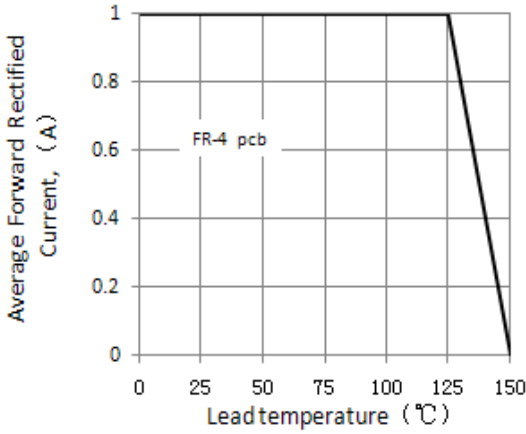


Figure 1. Forward Current Derating Curve

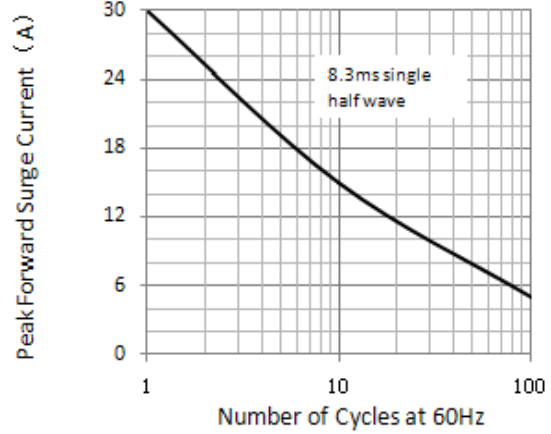


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

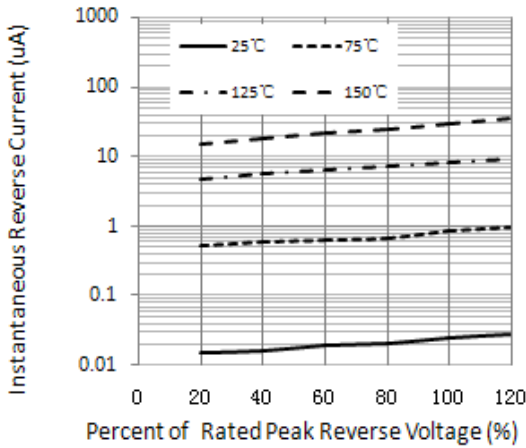


Figure 3. Typical Reverse Characteristics

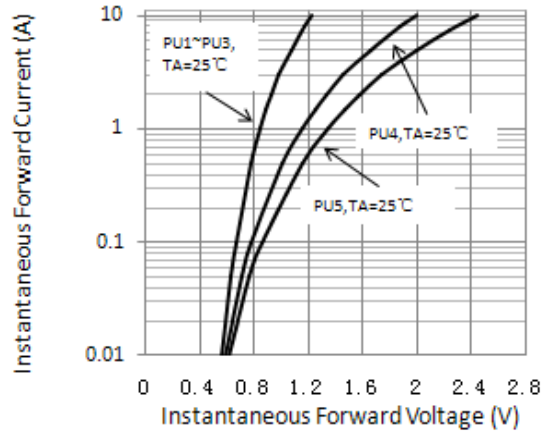


Figure 4. Typical Instantaneous Forward Characteristics

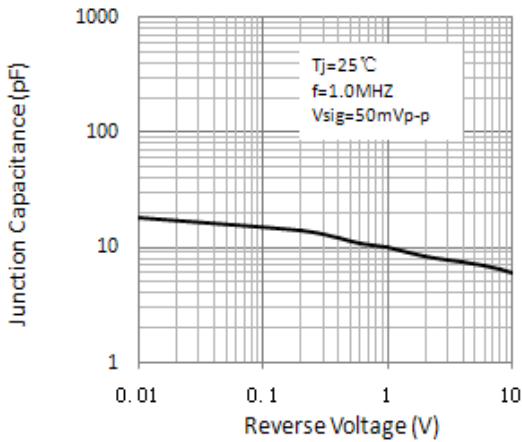


Figure 5. Typical Junction Capacitance

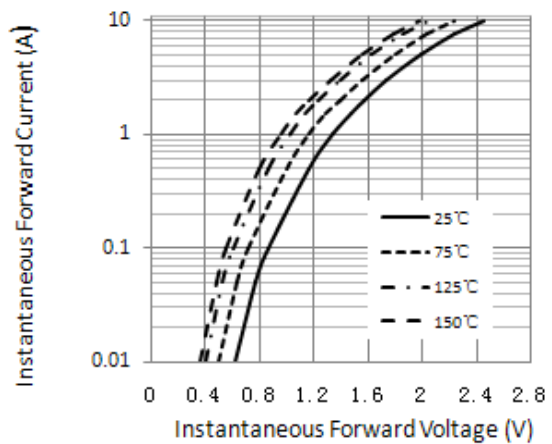
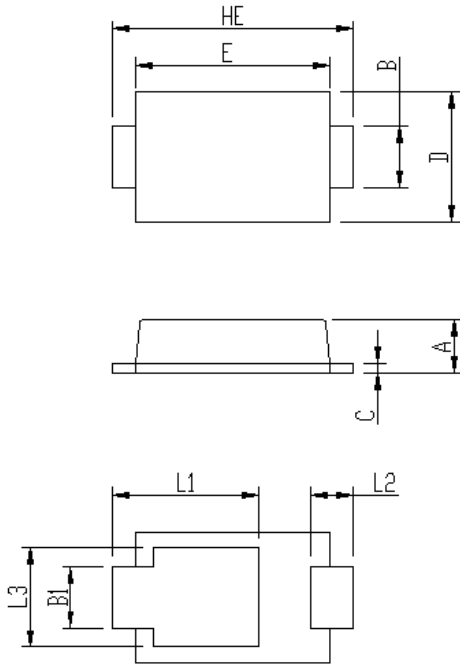


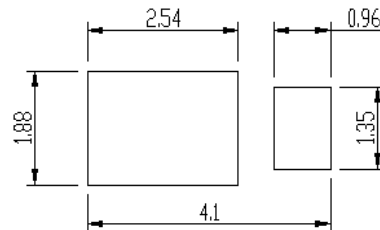
Figure 6. Typical Instantaneous Forward Characteristics (PU5)

## Package Outline Dimensions



| 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

