



# GS1004HE SERIES

## SURFACE GENERAL PURPOSE RECTIFIERS

**VOLTAGE** 400 to 1000 Volt **CURRENT** 1 Ampere

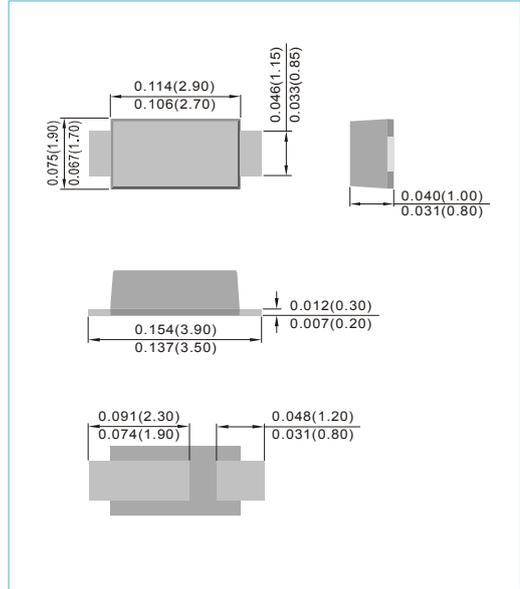
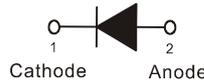
**SOD-123HE** Unit : inch(mm)

### FEATURES

- For surface mounted applications in order to optimize board space
- Ideal for automated placement
- High temperature soldering : 260°C /10 seconds at terminals
- Glass Passivated Chip Junction
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### MECHANICAL DATA

- Case: SOD-123HE, Molded plastic over passivated junction
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0006 ounce, 0.0184 gram
- Standard Packaging: 8mm tape (EIA-481)
- Polarity: Color band denotes cathode end



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

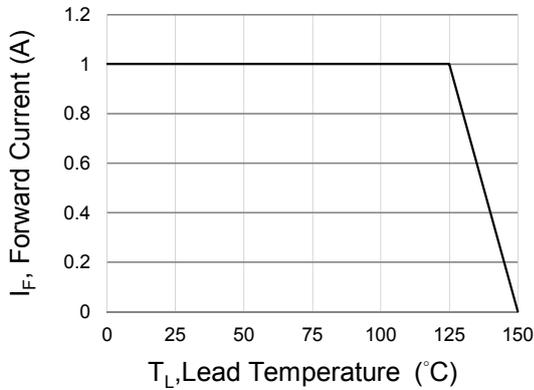
| PARAMETER   | SYMBOL                               | GS1004HE    | GS1006HE | GS1008HE | GS1010HE | UNITS  |
|---|--------------------------------------|-------------|----------|----------|----------|--------|
| Marking Code  | -                                    | H1G         | H1J      | H1K      | H1M      | -      |
| Maximum Recurrent Peak Reverse Voltage  | V <sub>RRM</sub>                     | 400         | 600      | 800      | 1000     | V      |
| Maximum RMS Voltage   | V <sub>RMS</sub>                     | 280         | 420      | 560      | 700      | V      |
| Maximum DC Blocking Voltage   | V <sub>R</sub>                       | 400         | 600      | 800      | 1000     | V      |
| Maximum Average Forward 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      |
| Maximum Forward Voltage at 1A   | V <sub>F</sub>                       | 1.1         |          |          |          | V      |
| Maximum DC Reverse Current at Rated DC Blocking Voltage                               | I <sub>R</sub>                       | 1           |          |          |          | μA     |
| Typical Junction Capacitance at V <sub>R</sub> =0V                                    | C <sub>J</sub>                       | 15          |          |          |          | pF     |
| Typical Thermal Resistance, Junction to Ambient (Note 1)<br>Junction to Lead (Note 2) | R <sub>θJA</sub><br>R <sub>θJL</sub> | 170<br>32   |          |          |          | °C / W |
| Operating Junction Temperature and Storage Temperature Range                          | T <sub>J</sub> , T <sub>STG</sub>    | -55 to +150 |          |          |          | °C     |

NOTES :

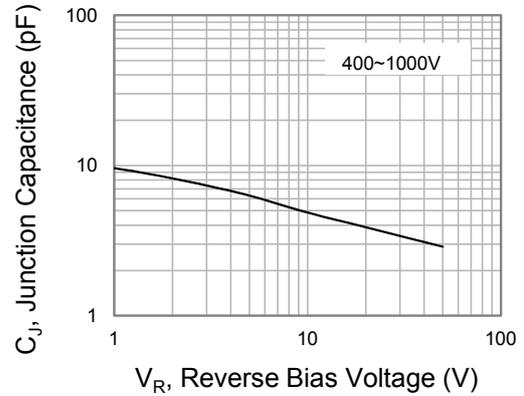
1. Mounted on a FR4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area
2. Mounted on a FR4 PCB, single-sided copper, mini pad.



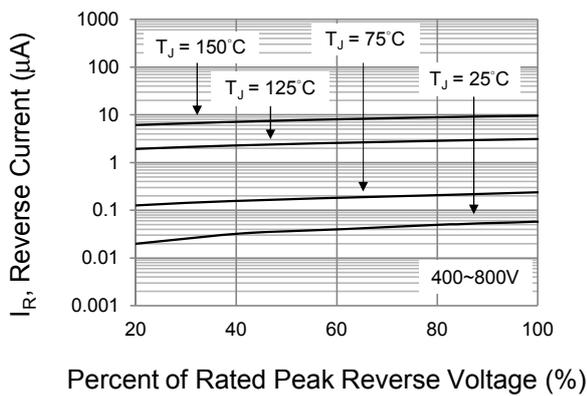
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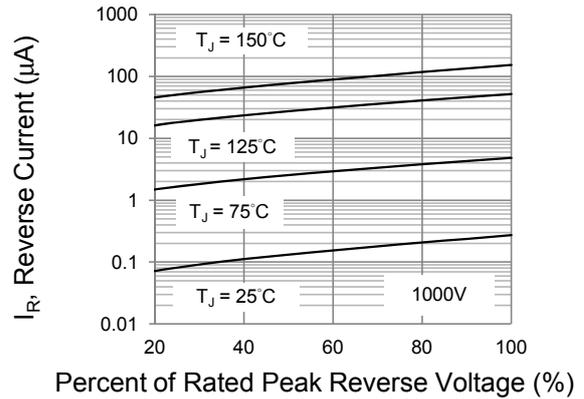
**Fig.1 Forward Current Derating Curve**



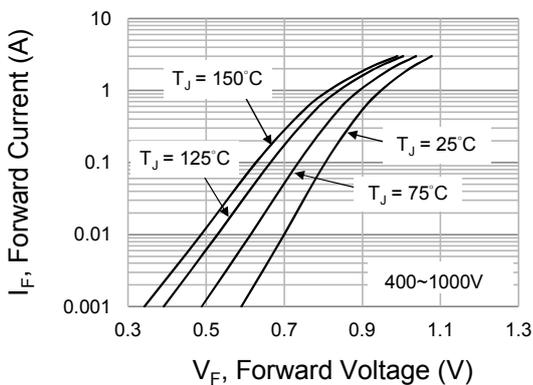
**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Reverse Characteristics**



**Fig.5 Typical Forward Characteristics**

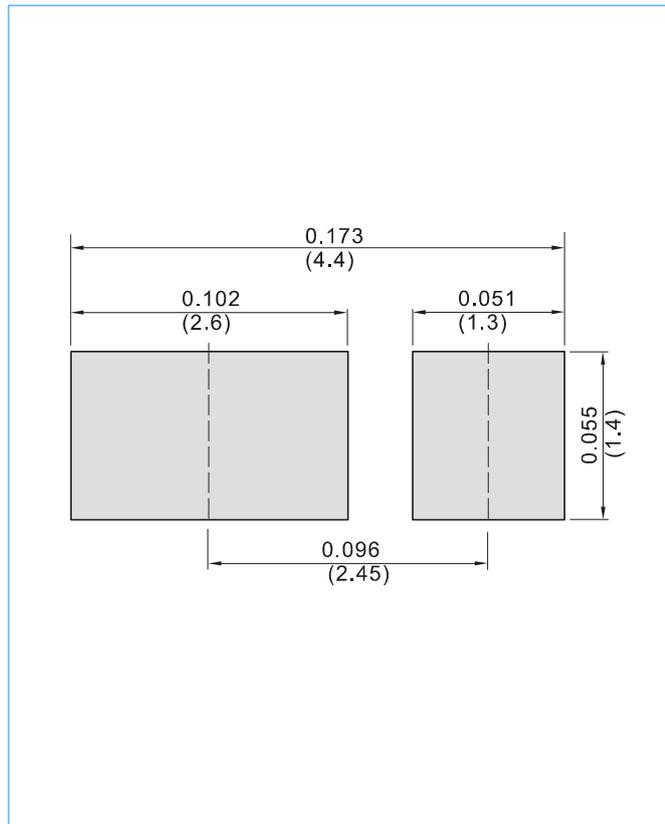


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## MOUNTING PAD LAYOUT

SOD-123HE

Unit : inch(mm)



## ORDER INFORMATION

- Packing information  
T/R - 10K per 13" plastic Reel  
T/R - 3K per 7" plastic Reel



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## Part No\_packing code\_Version

GS1004HE\_R1\_00001

GS1004HE\_R2\_00001

For example :

**RB500V-40\_R2\_00001**



| Packing Code <b>XX</b>               |                      |                                  |                      | Version Code <b>XXXXX</b> |                      |                                       |
|--------------------------------------|----------------------|----------------------------------|----------------------|---------------------------|----------------------|---------------------------------------|
| Packing type                         | 1 <sup>st</sup> Code | Packing size code                | 2 <sup>nd</sup> Code | HF or RoHS                | 1 <sup>st</sup> Code | 2 <sup>nd</sup> ~5 <sup>th</sup> Code |
| Tape and Ammunition Box (T/B)        | A                    | N/A                              | 0                    | HF                        | 0                    | serial number                         |
| Tape and Reel (T/R)                  | R                    | 7"                               | 1                    | RoHS                      | 1                    | serial number                         |
| Bulk Packing (B/P)                   | B                    | 13"                              | 2                    |                           |                      |                                       |
| Tube Packing (T/P)                   | T                    | 26mm                             | X                    |                           |                      |                                       |
| Tape and Reel (Right Oriented) (TRR) | S                    | 52mm                             | Y                    |                           |                      |                                       |
| Tape and Reel (Left Oriented) (TRL)  | L                    | PANASERT T/B CATHODE UP (PBCU)   | U                    |                           |                      |                                       |
| FORMING                              | F                    | PANASERT T/B CATHODE DOWN (PBCD) | D                    |                           |                      |                                       |



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