



# GS2004HE SERIES

## SURFACE MOUNT RECTIFIER

**VOLTAGE** 400 to 800 Volts **CURRENT** 2 Amperes

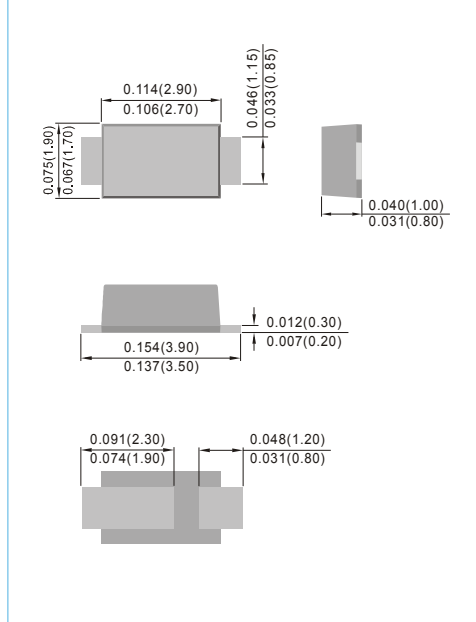
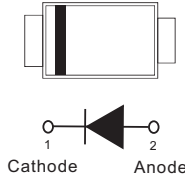
**SOD-123HE** Unit : inch(mm)

### FEATURES

- For surface mounted applications
- Low profile package
- Ideal for automated placement
- Glass Passivated Chip Junction
- Lead free in comply with EU RoHS 2011/65/EU directives.
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

- Case: SOD-123HE, Molded plastic over passivated junction
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0001 ounce, 0.0042 gram
- Standard Packaging : 8mm tape (EIA-481)
- Polarity : Color band denotes cathode end



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| PARAMETER   | SYMBOL          | GS2004HE                | GS2006HE | GS2008HE | UNITS                       |
|---|-----------------|-------------------------|----------|----------|-----------------------------|
| Marking Code  | -               | 4H                      | 6H       | 8H       | -                           |
| Maximum Recurrent Peak Reverse Voltage  | $V_{RRM}$       | 400                     | 600      | 800      | V                           |
| Maximum RMS Voltage   | $V_{RMS}$       | 280                     | 420      | 560      | V                           |
| Maximum DC Blocking Voltage   | $V_{DC}$        | 400                     | 600      | 800      | V                           |
| Maximum Average Forward Current at $T_L=100\text{ }^\circ\text{C}$                                | $I_{F(AV)}$     | 2.0                     |          |          | A                           |
| Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load(JEDEC method) | $I_{FSM}$       | 50                      |          |          | A                           |
| Maximum Forward Voltage at 2.0A   | $V_F$           | 1.1                     |          |          | V                           |
| Maximum DC Reverse Current at Rated DC Blocking Voltage   | $I_R$           | $T_J=25^\circ\text{C}$  | 1.0      |          | $\mu\text{A}$               |
|   |                 | $T_J=125^\circ\text{C}$ | 50       |          |                             |
| Typical Junction capacitance (Note 1)   | $C_J$           | 12                      |          |          | pF                          |
| Typical Thermal Resistance (Note 2)   | $R_{\theta JL}$ | 10                      |          |          | $^\circ\text{C} / \text{W}$ |
| Operating and Storage Temperature Range   | $T_J, T_{STG}$  | -55 to +150             |          |          | $^\circ\text{C}$            |

### NOTES :

1. Measured at 1 MHz and applied  $V_r = 4.0$  volts.
2. 8.0 mm<sup>2</sup> ( .013mm thick ) land areas.



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### RATING AND CHARACTERISTIC CURVES

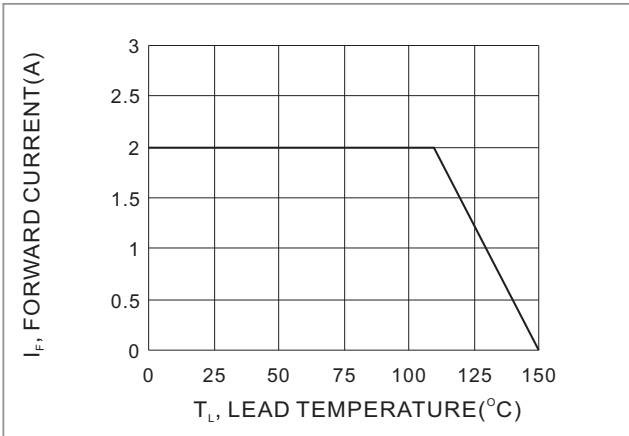


FIG.1 FORWARD CURRENT DERATING CURVE

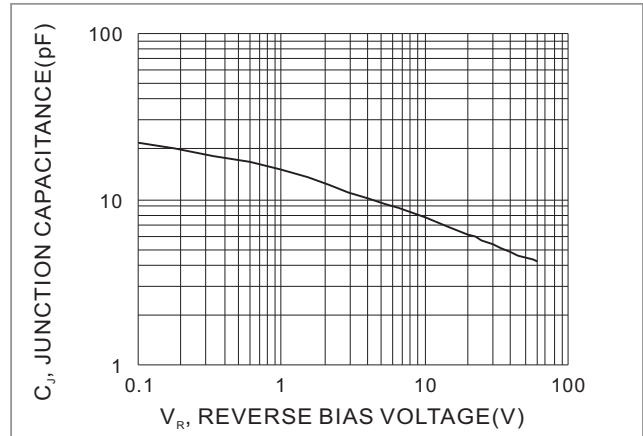


FIG.2 TYPICAL JUNCTION CAPACITANCE

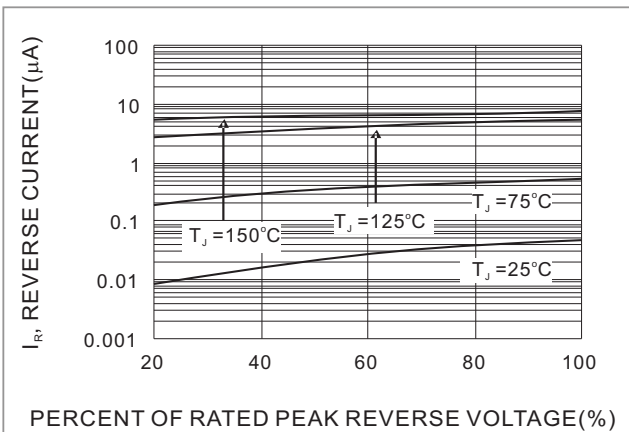


FIG.3 TYPICAL REVERSE CHARACTERISTICS

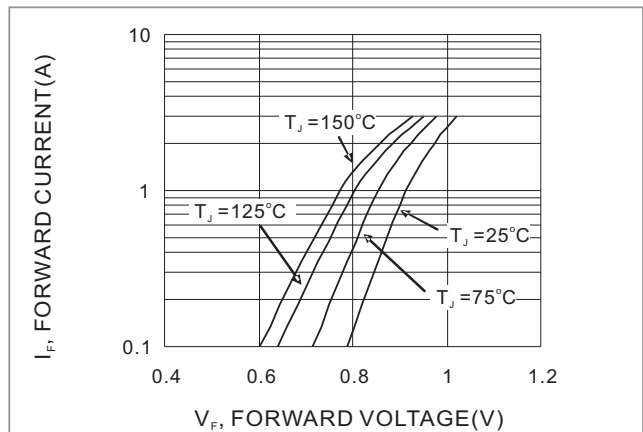
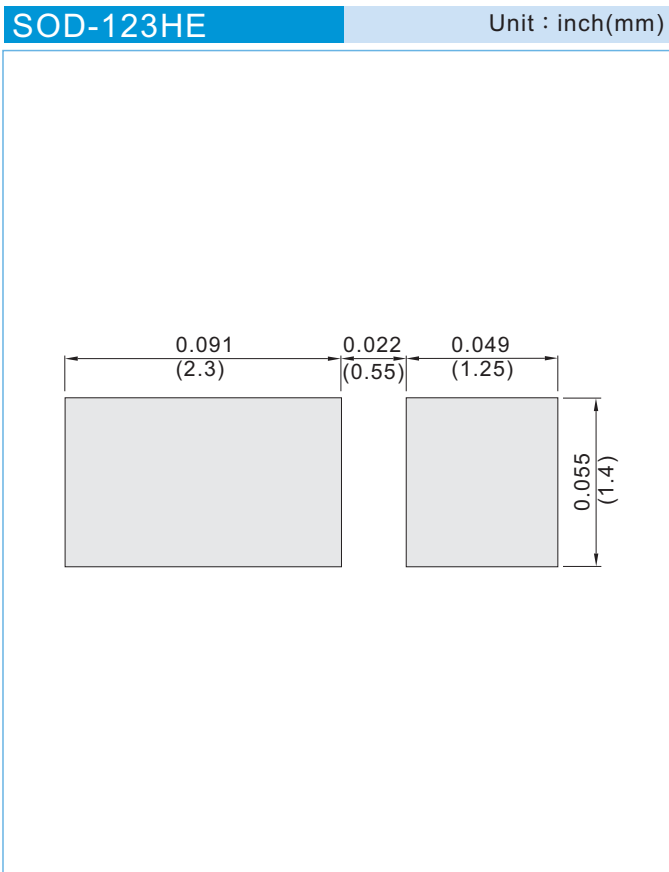


FIG.4 TYPICAL FORWARD CHARACTERISTICS



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### MOUNTING PAD LAYOUT



### 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

GS2004HE\_R1\_00001

GS2004HE\_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)        | <b>A</b>             | N/A                              | <b>0</b>             | <b>HF</b>                 | <b>0</b>             | serial number                         |
| Tape and Reel (T/R)                  | <b>R</b>             | 7"                               | <b>1</b>             | <b>RoHS</b>               | <b>1</b>             | serial number                         |
| Bulk Packing (B/P)                   | <b>B</b>             | 13"                              | <b>2</b>             |                           |                      |                                       |
| Tube Packing (T/P)                   | <b>T</b>             | 26mm                             | <b>X</b>             |                           |                      |                                       |
| Tape and Reel (Right Oriented) (TRR) | <b>S</b>             | 52mm                             | <b>Y</b>             |                           |                      |                                       |
| Tape and Reel (Left Oriented) (TRL)  | <b>L</b>             | PANASERT T/B CATHODE UP (PBCU)   | <b>U</b>             |                           |                      |                                       |
| FORMING                              | <b>F</b>             | PANASERT T/B CATHODE DOWN (PBCD) | <b>D</b>             |                           |                      |                                       |



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