



# GS1000FL SERIES

## SURFACE GENERAL PURPOSE RECTIFIERS

**VOLTAGE** 50 to 1000 Volt **CURRENT** 1 Ampere

### FEATURES

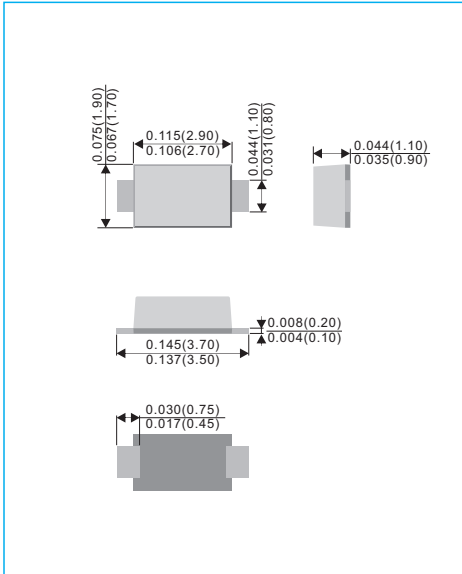
- For surface mounted applications in order to optimize board space
- Low profile package
- Ideal for automated placement
- High temperature soldering : 260°C /10 seconds at terminals
- Glass passivated chip junction
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249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

### MECHANICAL DATA

- Case: SOD-123FL, Molded plastic over passivated junction
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0006 ounces, 0.0173 grams
- Standard Packaging: 8mm tape (EIA-481)
- Polarity: Color band denotes cathode end



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



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| PARAMETER  | SYMBOL      | GS1000FL  | GS1001FL | GS1002FL | GS1004FL | GS1006FL | GS1008FL | GS1010FL | UNITS   |
|--|-------------|-----------|----------|----------|----------|----------|----------|----------|---------|
| Marking Code   |             | 1A        | 1B       | 1D       | 1G       | 1J       | 1K       | 1M       |         |
| Maximum Recurrent Peak Reverse Voltage   | $V_{RRM}$   | 50        | 100      | 200      | 400      | 600      | 800      | 1000     | V       |
| Maximum RMS Voltage  | $V_{RMS}$   | 35        | 70       | 140      | 280      | 420      | 640      | 700      | V       |
| Maximum DC Blocking Voltage  | $V_{DC}$    | 50        | 100      | 200      | 400      | 600      | 800      | 1000     | V       |
| Maximum Average Forward Current  | $I_{F(AV)}$ | 1         |          |          |          |          |          |          | A       |
| Peak One Cycle Surge Forward Current (non-repetitive)  | $I_{FSM}$   | 30 (60Hz) |          |          |          |          |          |          | A       |
| Maximum Forward Voltage at 1A (Note 1)   | $V_F$       | 1.1       |          |          |          |          |          |          | V       |
| Maximum DC Reverse Current at Rated DC Blocking Voltage<br><small><math>T_A=25^{\circ}C</math><br/><math>T_A=125^{\circ}C</math></small> | $I_R$       | 1<br>50   |          |          |          |          |          |          | $\mu A$ |
| Typical Junction Capacitance at 4V, MHz  | $C_J$       | 4         |          |          |          |          |          |          | pF      |

### ELECTRICAL CHARACTERISTICS

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| PARAMETER                               | SYMBOL          | GS1000FL    | GS1001FL | GS1002FL | GS1004FL | GS1006FL | GS1008FL | GS1010FL | UNITS  |
|---|-----------------|-------------|----------|----------|----------|----------|----------|----------|--------|
| Typical Thermal Resistance (Note 2)     | $R_{\theta JA}$ | 65          |          |          |          |          |          |          | °C / W |
| Operating and Storage Temperature Range | $T_J, T_{STG}$  | -50 TO +150 |          |          |          |          |          |          | °C     |

NOTES: 1.Pulse test : 300us pulse width, 1% duty cycle.  
2.Soldering land: 6mm x 6mm



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## RATING AND CHARACTERISTIC CURVES

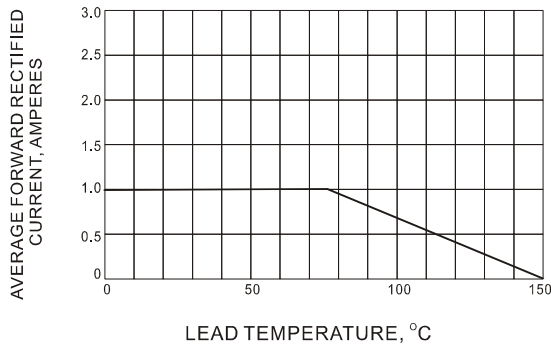


Fig.1 FORWARD CURRENT DERATING CURVE

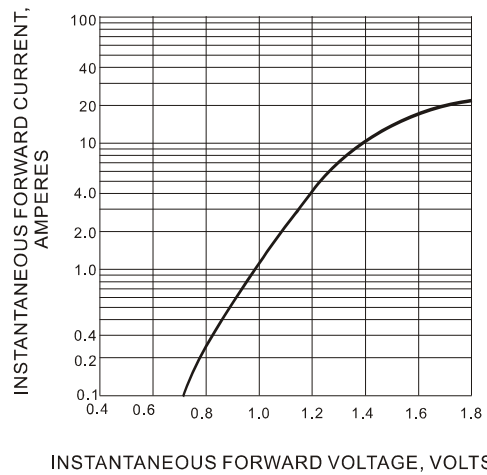


Fig.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

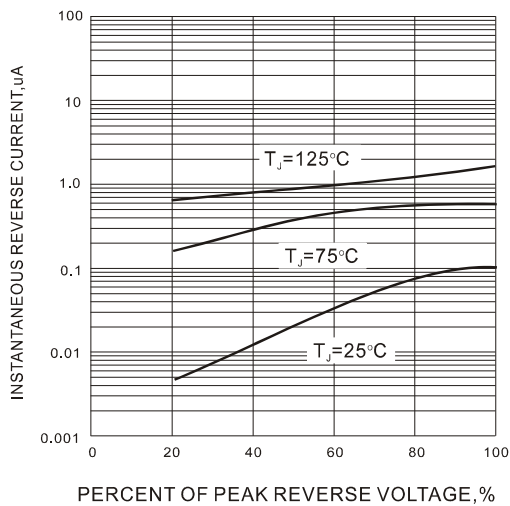


Fig.3 TYPICAL REVERSE CHARACTERISTICS

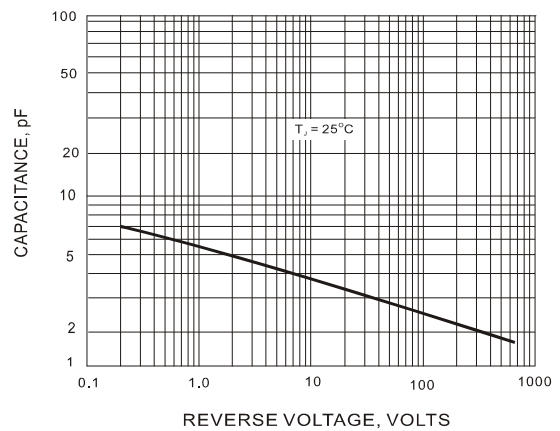


Fig.4 TYPICAL JUNCTION CAPACITANCE

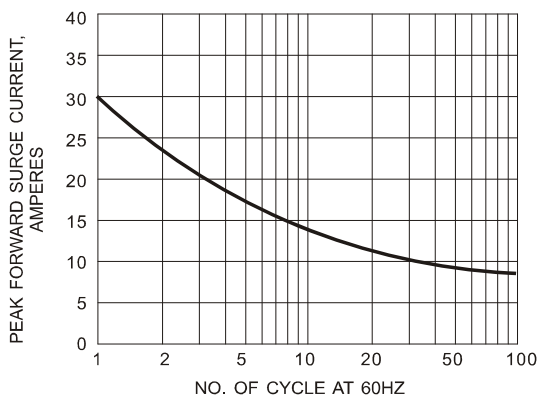
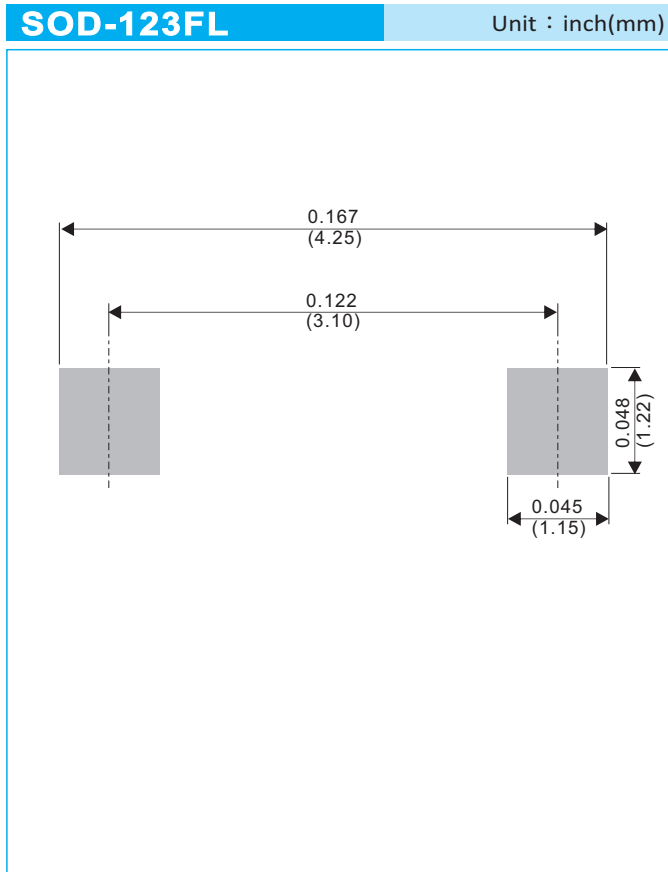


Fig.5- MAXIMUM NON - REPETITIVE SURGE CURRENT



## GS1000FL SERIES

### MOUNTING PAD LAYOUT



### ORDER INFORMATION

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



## GS1000FL SERIES

### Part No.\_packing code\_Version

GS1000FL\_R1\_00001

GS1000FL\_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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