

CURRENT 1.0 Ampere  
VOLTAGE RANG 50 to 1000 Volts

**GS1AF THRU GS1MF**

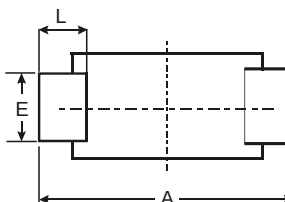
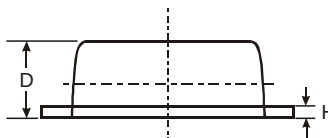
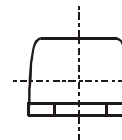
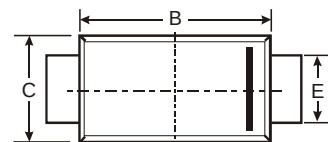
## FEATURES

- For surface mounted applications
- Glass passivated junction
- Low profile package
- Built-in strain relief, ideal for automated placement
- Plastic package has underwrites laboratory flammability Classification 94V-0
- High temperature soldering guaranteed:  
250 /10 second at terminals

## MECHANICAL DATA

- Case: JEDED SMAF molded plastic
- Terminals: Plated axial lead solderable per MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end
- Mounting position: Any
- Weight: 0.0012ounce, 0.062gram

## SMAF



| Dim                  | Min  | Max  | Typ  |
|----------------------|------|------|------|
| A                    | 4.75 | 4.85 | 4.80 |
| B                    | 3.68 | 3.72 | 3.70 |
| C                    | 2.57 | 2.63 | 2.60 |
| D                    | 0.97 | 1.03 | 1.00 |
| E                    | 1.38 | 1.42 | 1.40 |
| H                    | 0.13 | 0.17 | 0.15 |
| L                    | 0.63 | 0.67 | 0.65 |
| All Dimensions in mm |      |      |      |

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25 ambient temperature unless otherwise specified.
- Single phase, half wave, 60Hz, resistive or inductive load.
- For capacitive load derate current by 20%

|                                                                                                                           |                      | SYMBOLS                           | GS1A        | GS1B | GS1D | GS1G | GS1J | GS1K | GS1M | UNIT  |
|---------------------------------------------------------------------------------------------------------------------------|----------------------|-----------------------------------|-------------|------|------|------|------|------|------|-------|
| Maximum Repetitive Peak Reverse Voltage                                                                                   |                      | V <sub>RRM</sub>                  | 50          | 100  | 200  | 400  | 600  | 800  | 1000 | Volts |
| Maximum RMS Voltage                                                                                                       |                      | V <sub>RMS</sub>                  | 35          | 70   | 140  | 280  | 420  | 560  | 700  | Volts |
| Maximum DC Blocking Voltage                                                                                               |                      | V <sub>DC</sub>                   | 50          | 100  | 200  | 400  | 600  | 800  | 1000 | Volts |
| Maximum Average Forward Rectified Current (see Fig.1)                                                                     |                      | I <sub>F(AV)</sub>                | 1.0         |      |      |      |      |      |      | Amps  |
| Peak Forward Surge Current<br>8.3ms single half sine wave superimposed on<br>rated load (JEDEC method) T <sub>L</sub> =90 |                      | I <sub>FSM</sub>                  | 30          |      |      |      |      |      |      | Amps  |
| Maximum Instantaneous Forward Voltage at 1.0A                                                                             |                      | V <sub>F</sub>                    | 1.1         |      |      |      |      |      |      | Volts |
| Maximum DC Reverse Current at rated<br>DC Blocking Voltage at                                                             | T <sub>A</sub> = 25  | I <sub>R</sub>                    | 5.0         |      |      |      |      |      |      | UA    |
|                                                                                                                           | T <sub>A</sub> = 125 |                                   | 50          |      |      |      |      |      |      |       |
| Typical Junction Capacitance (NOTE 1)                                                                                     |                      | R <sub>θJA</sub>                  | 50          |      |      |      |      |      |      | /W    |
|                                                                                                                           |                      | R <sub>θJL</sub>                  | 90          |      |      |      |      |      |      |       |
| Typical Thermal Resistance (NOTE 2)                                                                                       |                      | t <sub>IT</sub>                   | 2           |      |      |      |      |      |      | us    |
| Operating and Storage Temperature Range                                                                                   |                      | T <sub>J</sub> , T <sub>STG</sub> | -55 to +150 |      |      |      |      |      |      |       |

### Notes:

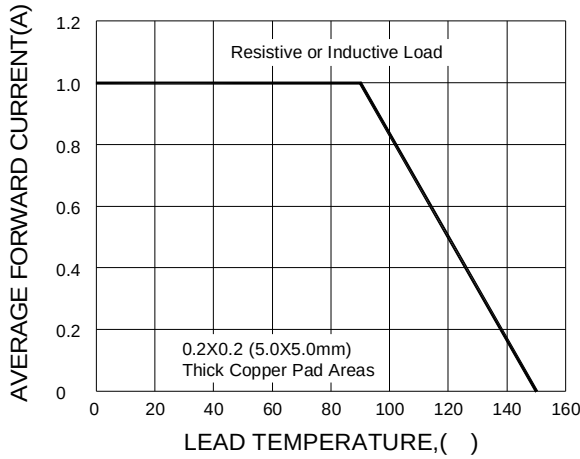
1. Thermal resistance from Junction to ambient and from junction to lead mounted on 0.2×0.2" (5.0 × 5.0mm) copper pad areas.
2. Reverse recovery test condition:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{rr}=0.25A$

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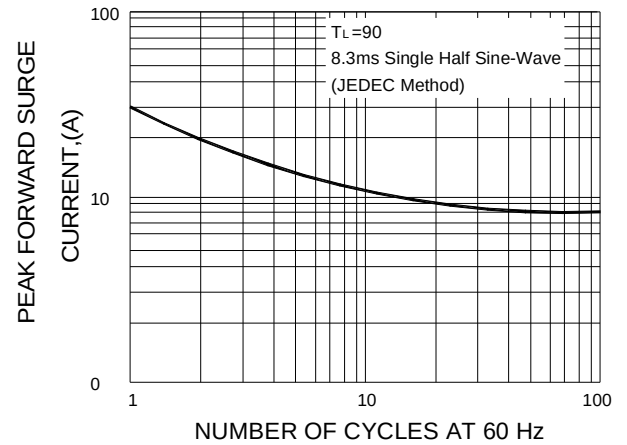
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RATING AND CHARACTERISTIC CURVES GS1A Thru GS1M

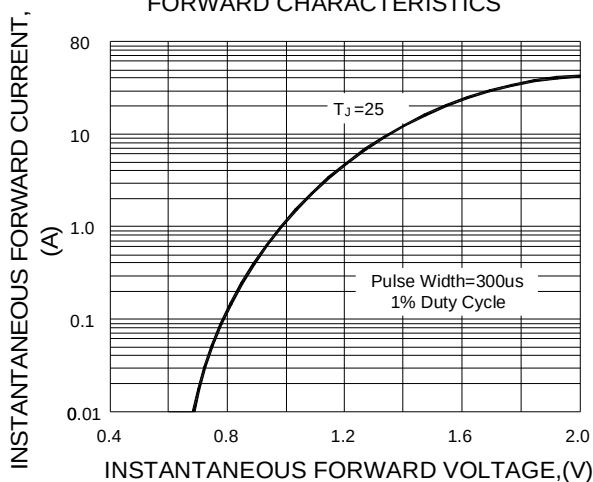
F1G.1-FORWARD CURRENT DERATING CURVE



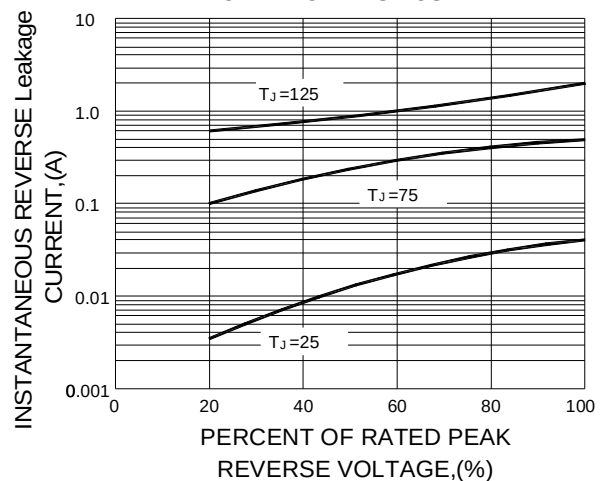
F1G.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



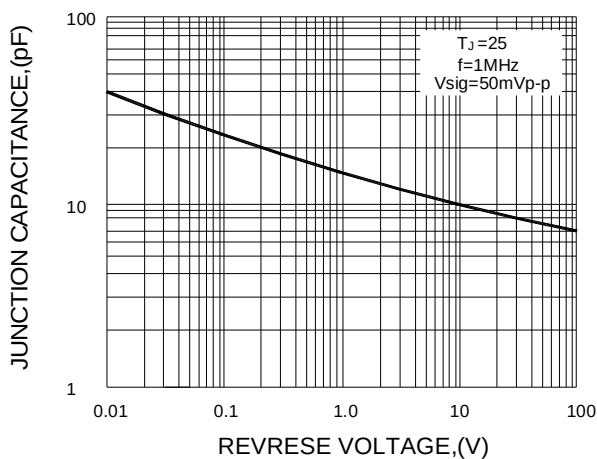
F1G.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



F1G.4-TYPICAL REVERSE CHARACTERISTICS



F1G.5-TYPICAL JUNCTION CAPACITANCE



F1G.6-TRANSIENT THERMAL IMPEDANCE

