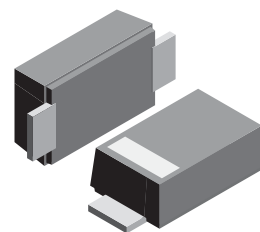


**VOLTAGE RANGE: 50 - 1000V**  
**CURRENT: 1.0 A**

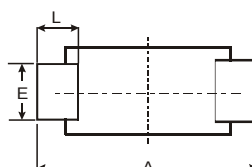
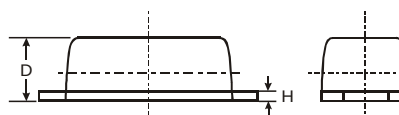
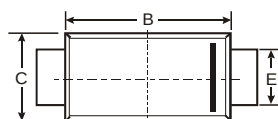


### Features

- Glass Passivated Die Construction
- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop
- Low Power Loss
- Built-in Strain Relief
- Plastic Case Material has UL Flammability Classification Rating 94V-O

### Mechanical Data

- Case: SMAF, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.0018 ounce, 0.064 grams



| 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                    | 0.097 | 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 T<sub>A</sub> = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

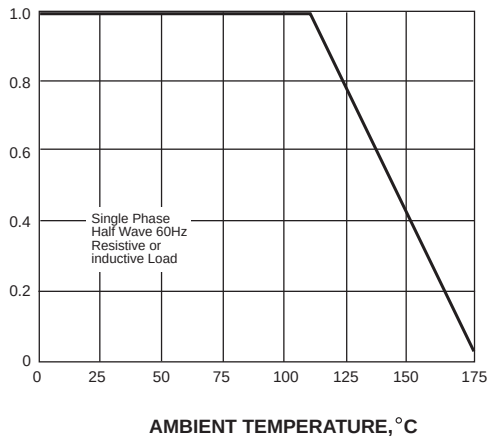
| Characteristic                                                                                                        | Symbol                                                 | GS1AF       | GS1BF | GS1DF | GS1GF | GS1JF | GS1KF | GS1MF | Unit |
|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------|-------|-------|-------|-------|-------|-------|------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                                | V <sub>RRM</sub><br>V <sub>RWM</sub><br>V <sub>R</sub> | 50          | 100   | 200   | 400   | 600   | 800   | 1000  | V    |
| RMS Reverse Voltage                                                                                                   | V <sub>R(RMS)</sub>                                    | 35          | 70    | 140   | 280   | 420   | 560   | 700   | V    |
| Average Rectified Output Current @T <sub>L</sub> = 100°C                                                              | I <sub>O</sub>                                         | 1.0         |       |       |       |       |       |       | A    |
| Non-Repetitive Peak Forward Surge Current<br>8.3ms Single half sine-wave superimposed on<br>rated load (JEDEC Method) | I <sub>FSM</sub>                                       | 30          |       |       |       |       |       |       | A    |
| Forward Voltage @I <sub>F</sub> = 1.0A                                                                                | V <sub>FM</sub>                                        | 1.10        |       |       |       |       |       |       | V    |
| Peak Reverse Current @T <sub>A</sub> = 25°C<br>At Rated DC Blocking Voltage @T <sub>A</sub> = 125°C                   | I <sub>RM</sub>                                        | 5.0<br>200  |       |       |       |       |       |       | μA   |
| Reverse Recovery Time (Note 1)                                                                                        | t <sub>rr</sub>                                        | 2.5         |       |       |       |       |       |       | μs   |
| Typical Junction Capacitance (Note 2)                                                                                 | C <sub>j</sub>                                         | 15          |       |       |       |       |       |       | pF   |
| Typical Thermal Resistance (Note 3)                                                                                   | R <sub>θJL</sub>                                       | 30          |       |       |       |       |       |       | °C/W |
| Operating and Storage Temperature Range                                                                               | T <sub>j</sub> , T <sub>STG</sub>                      | -65 to +175 |       |       |       |       |       |       | °C   |

Note: 1. Measured with I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>rr</sub> = 0.25A,  
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.  
3. Mounted on P.C. Board with 8.0mm<sup>2</sup> land area.

## RATINGS AND CHARACTERISTIC CURVES GS1AF THRU GS1MF

AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT,  
AMPERES

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

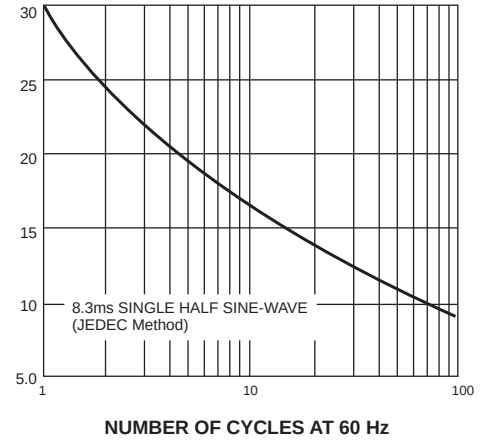
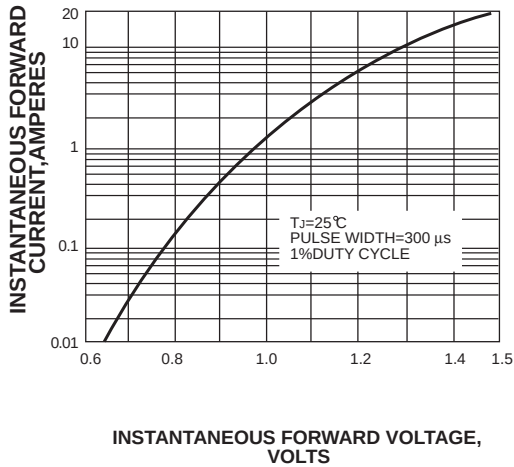


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT,  
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

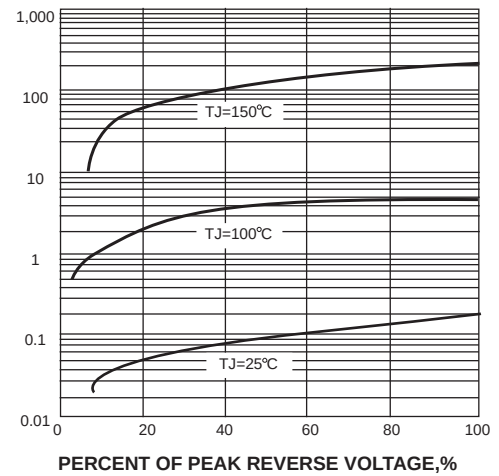
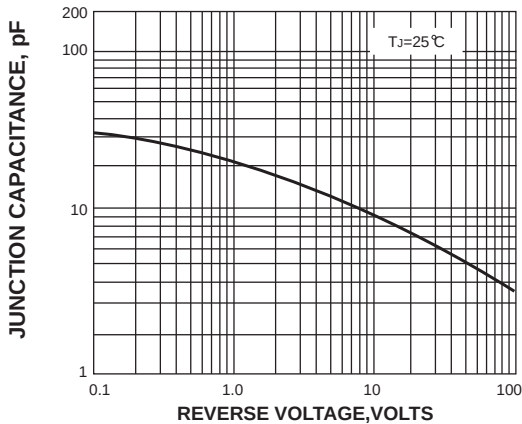


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,  
 $^\circ\text{C}/\text{W}$

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

