



# GS1A~GS1M

## SURFACE MOUNT RECTIFIER

VOLTAGE- 50 to 1000 Volts CURRENT - 1.0 Ampere

### FEATURES

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass passivated chip junction
- High temperature soldering : 260°C /10 seconds at terminals

### MECHANICAL DATA

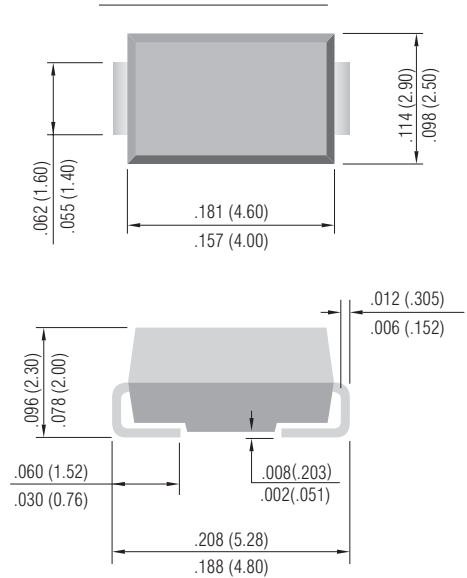
Case: JEDEC DO-214AC molded plastic

Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

Polarity: Indicated by cathode band

Standard packaging: 12mm tape (EIA-481)

Weight: 0.002 ounce, 0.064 gram



Unit: inch ( mm )

SMA / DO-214AC

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

|                                                                                                  | SYMBOLS        | GS1A        | GS1B | GS1D | GS1G | GS1J | GS1K | GS1M | UNIT                      |
|--------------------------------------------------------------------------------------------------|----------------|-------------|------|------|------|------|------|------|---------------------------|
| 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  | 560  | 700  | v                         |
| Maximum DC Blocking Voltage                                                                      | $V_{DC}$       | 50          | 100  | 200  | 400  | 600  | 800  | 100  | V                         |
| Maximum Average Forward Rectified Current, at $T_L=75^\circ\text{C}$                             | $I(AV)$        | 1.0         |      |      |      |      |      |      | A                         |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$      | 30.0        |      |      |      |      |      |      | A                         |
| Maximum Instantaneous Forward Voltage at 1.0A                                                    | $V_F$          | 1.10        |      |      |      |      |      |      | V                         |
| Maximum DC Reverse Current $T_A=25^\circ\text{C}$                                                | $I_R$          | 5.0         |      |      |      |      |      |      | $\mu\text{A}$             |
| at Rated DC Blocking Voltage $T_A=125^\circ\text{C}$                                             |                | 50.0        |      |      |      |      |      |      | $\mu\text{A}$             |
| Maximum Reverse Recovery Time(Note 1) $T_J=25^\circ\text{C}$                                     | $T_{RR}$       | 2.5         |      |      |      |      |      |      | $\mu\text{s}$             |
| Typical Junction Capacitance (Note 2)                                                            | $C_J$          | 12          |      |      |      |      |      |      | pF                        |
| Maximum Thermal Resistance(Note 3) R $\theta$ JA                                                 | R $\theta$ JA  | 30.0        |      |      |      |      |      |      | $^\circ\text{C}/\text{W}$ |
| Operating and Storage Temperature Range                                                          | $T_J, T_{STG}$ | -55 to +150 |      |      |      |      |      |      | $^\circ\text{C}$          |

NOTES:1. Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{rr}=0.25\text{A}$

2. Measured at 1 MHz and applied  $V_r = 4.0$  volts.

3. 8.0 mm<sup>2</sup> ( .013mm thick ) land areas.

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## RATING AND CHARACTERISTIC CURVES

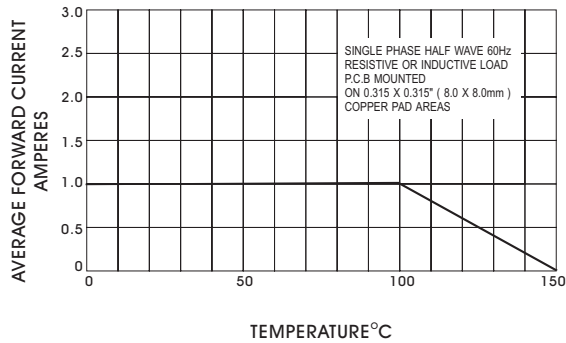


Fig. 1- DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

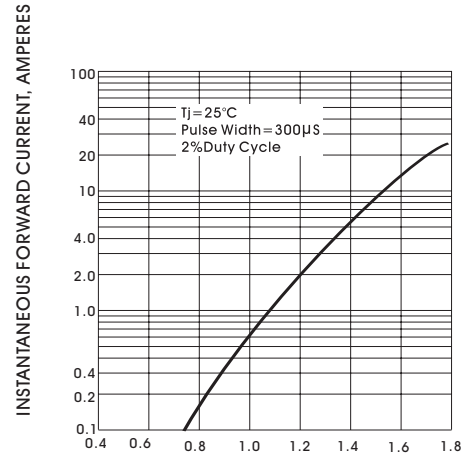


Fig. 2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER ELEMENT

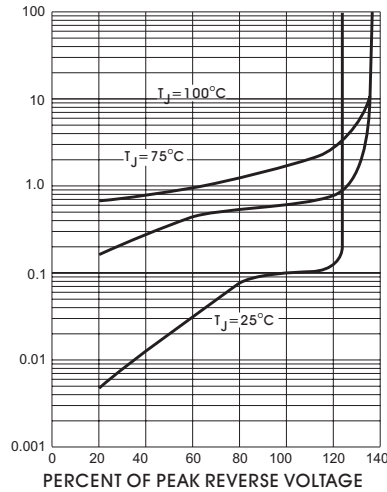


Fig. 3- TYPICAL REAK REVERSE CHARACTERISTICS

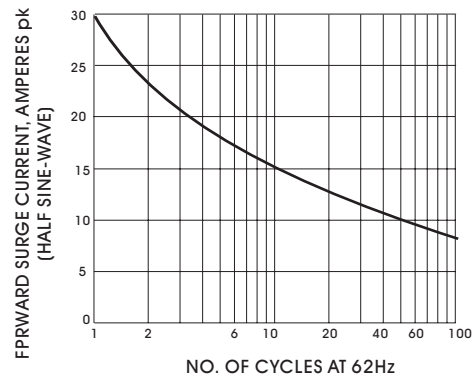


Fig. 4- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

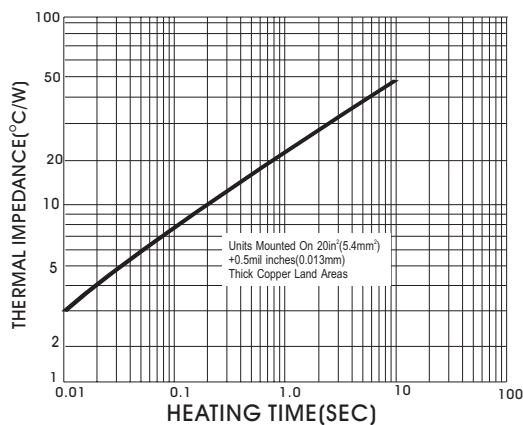


Fig. 5- TRANSIENT THERMAL IMPEDANCE

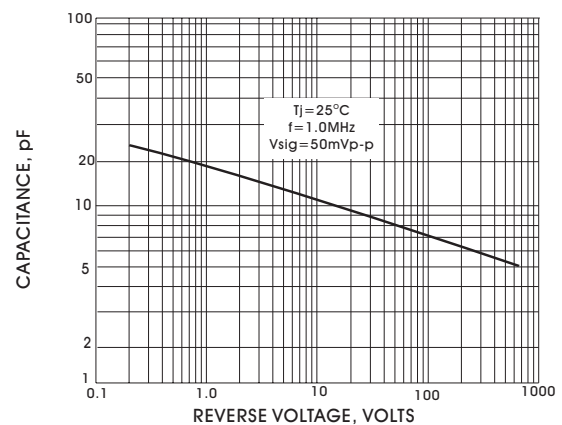


Fig. 6- TYPICAL JUNCTION CAPACITANCE PER ELEMENT