



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

**GS1A  
THRU  
GS1M**

**TECHNICAL SPECIFICATIONS OF SURFACE MOUNT GLASS PASSIVATED RECTIFIER**

**VOLTAGE RANGE 50 to 1000 Volts**

**CURRENT 1.0 Ampere**

**FEATURES**

- \* Ideal for surface mounted applications
- \* Low leakage current
- \* Glass passivated junction

**MECHANICAL DATA**

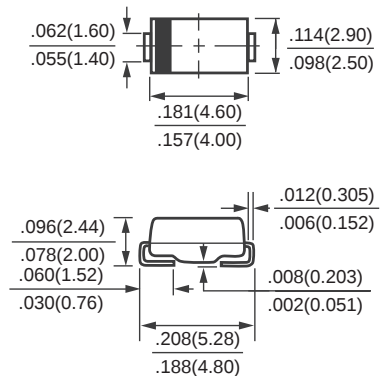
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated, solderable per  
MIL-STD-750, Method 2026
- \* Polarity: As marked
- \* Mounting position: Any
- \* Weight: 0.064 gram

**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%.



**SMA(DO-214AC)**



Dimensions in inches and (millimeters)

|                                                                                                               |             | SYMBOL   | GS1A         | GS1B | GS1D | GS1G | GS1J | GS1K | GS1M | UNITS |
|---------------------------------------------------------------------------------------------------------------|-------------|----------|--------------|------|------|------|------|------|------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                                        |             | VRRM     | 50           | 100  | 200  | 400  | 600  | 800  | 1000 | Volts |
| Maximum RMS Voltage                                                                                           |             | VRMS     | 35           | 70   | 140  | 280  | 420  | 560  | 700  | Volts |
| Maximum DC Blocking Voltage                                                                                   |             | VDC      | 50           | 100  | 200  | 400  | 600  | 800  | 1000 | Volts |
| Maximum Average Forward Rectified Current at TA = 100°C                                                       |             | IO       | 1.0          |      |      |      |      |      |      | Amps  |
| Peak Forward Surge Current IFM(surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) |             | IFSM     | 30           |      |      |      |      |      |      | Amps  |
| Maximum Forward Voltage at 1.0A DC                                                                            |             | VF       | 1.1          |      |      |      |      |      |      | Volts |
| Maximum DC Reverse Current at                                                                                 | @TA = 25°C  | IR       | 5.0          |      |      |      |      |      |      | uAmps |
| Rated DC Blocking Voltage                                                                                     | @TA = 125°C |          | 50           |      |      |      |      |      |      |       |
| Maximum Reverse Recovery Time (Note 3)                                                                        |             | trr      | 2.5          |      |      |      |      |      |      | uSec  |
| Typical Thermal Resistance (Note 2)                                                                           |             | RθJL     | 30           |      |      |      |      |      |      | °C/W  |
| Typical Junction Capacitance (Note 1)                                                                         |             | CJ       | 15           |      |      |      |      |      |      | pF    |
| Operating and Storage Temperature Range                                                                       |             | TJ, TSTG | -65 to + 175 |      |      |      |      |      |      | °C    |

NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0VDC  
2. Thermal Resistance (Junction to Ambient), .24in<sup>2</sup> (6.0mm<sup>2</sup>) copper pads to each terminal.  
3. Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A.

RATING AND CHARACTERISTIC CURVES (GS1A THRU GS1M)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

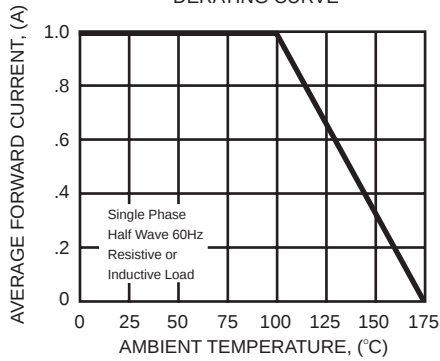


FIG. 2 - MAXIMUM NON-REPETITIVE FOREARD SURGE CURRENT

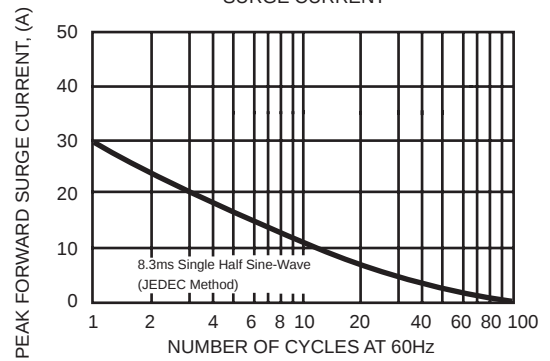


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

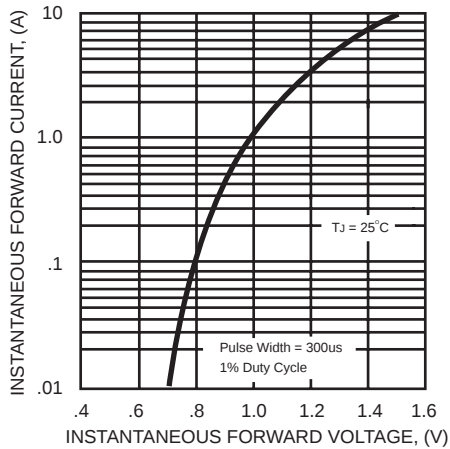


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

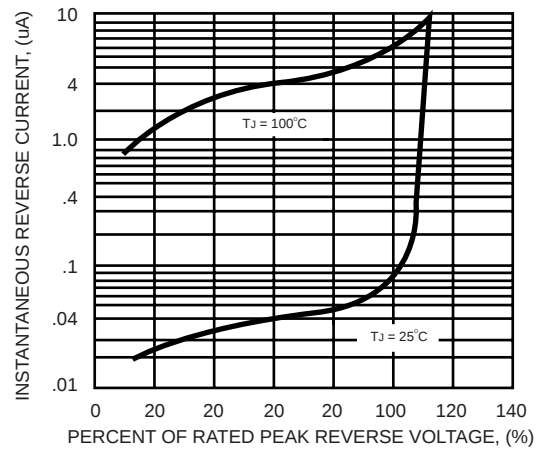
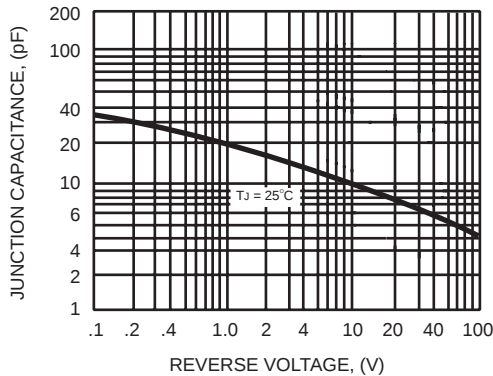


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



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