# **GS1A THRU GS1M**

# SURFACE MOUNT GLASS PASSIVATED RECTIFIER

VOLTAGE: 50 TO 1000V CURRENT: 1.0A



### **FEATURE**

Ideal for surface mount pick and place application Low profile package Built-in strain relief High surge capability High temperature soldering guaranteed 260°C/10sec/at terminals

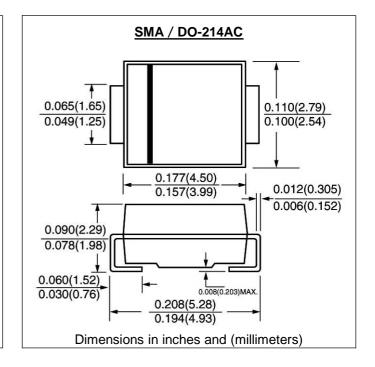
### **MECHANICAL DATA**

Terminal: Plated axial leads solderable per MIL-STD 202E, method 208C

Case: Molded with UL-94 class V-0 recognized Flame

Retardant Epoxy

Polarity: color band denotes cathode



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated, for capacitive load, derate current by 20%)

|   | SYMBOL | GS<br>1A    | GS<br>1B | GS<br>1D | GS<br>1G | GS<br>1J | GS<br>1K | GS<br>1M | units         |
|---|--------|-------------|----------|----------|----------|----------|----------|----------|---------------|
| Maximum Recurrent Peak Reverse Voltage  | Vrrm   | 50          | 100      | 200      | 400      | 600      | 800      | 1000     | V             |
| Maximum RMS Voltage   | Vrms   | 35          | 70       | 140      | 280      | 420      | 560      | 700      | V             |
| Maximum DC blocking Voltage   | Vdc    | 50          | 100      | 200      | 400      | 600      | 800      | 1000     | V             |
| Maximum Average Forward Rectified Current 3/8" lead length at T <sub>L</sub> =100°C | If(av) | 1.0         |          |          |          |          |          |          | А             |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load   | Ifsm   | 30.0        |          |          |          |          | А        |          |               |
| Maximum Instantaneous Forward Voltage at rated Forward current                      | Vf     | 1.1         |          |          |          |          | V        |          |               |
| Maximum DC Reverse Current Ta =25℃  | Ir     | 5.0         |          |          |          |          |          |          | μА            |
| at rated DC blocking voltage Ta =125 $^{\circ}$ C                                   |        | 200.0       |          |          |          |          |          |          | μA            |
| Typical Junction Capacitance (Note 1)   | Cj     | 15.0        |          |          |          |          |          |          | pF            |
| Typical Thermal Resistance (Note 2)   | R(jl)  | 30.0        |          |          |          |          |          |          | °C/W          |
| Storage and Operating Junction Temperature  | Tstg   | -50 to +150 |          |          |          |          |          |          | ${\mathbb C}$ |

#### Note:

- 1. Measured at 1.0 MHz and applied voltage of 4.0Vdc
- 2. Thermal Resistance from Junction to terminal mounted on 5×5mm copper pad area1

<sup>1</sup> Rev.A6 www.gulfsemi.com

#### RATINGS AND CHARACTERISTIC CURVES GS1A THRU GS1M

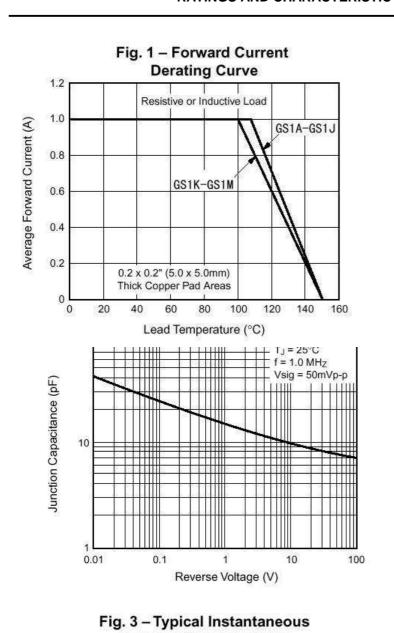


Fig. 2 – Maximum Non-Repetitive Peak
Forward Surge Current

T<sub>L</sub> = 110°C
8.3ms Single Half Sine-Wave
(JEDEC Method)

GS1A-GS1J

GS1K-GS1M

Number of Cycles at 60 Hz

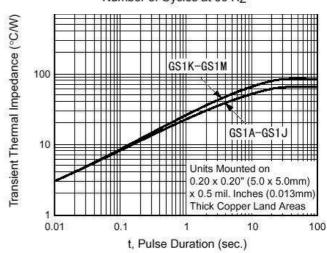
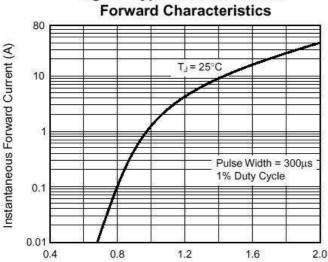
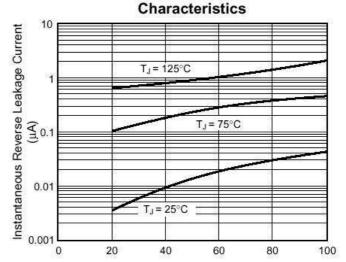


Fig. 4 - Typical Reverse Leakage



Instantaneous Forward Voltage (V)



Percent of Rated Peak Reverse Voltage (%)

<sup>2</sup> Rev.A6 www.gulfsemi.com