

## GS1A THRU GS1M

### 1.0A SURFACE MOUNT GLASS PASSIVATED RECTIFIER



#### 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-0
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

#### Circuit Diagram



#### Mechanical Data

- Case: SMA molded plastic body
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.06 grams

#### Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

| Characteristic  | Symbol                            | GS1A        | GS1B | GS1D | GS1G | GS1J | GS1K | GS1M | Units |
|---|-----------------------------------|-------------|------|------|------|------|------|------|-------|
| Peak Repetitive Reverse Voltage   | V <sub>RRM</sub>                  |             |      |      |      |      |      |      |       |
| Working Peak Reverse Voltage  | V <sub>RWM</sub>                  | 50          | 100  | 200  | 400  | 600  | 800  | 1000 | V     |
| DC Blocking Voltage   | V <sub>R</sub>                    |             |      |      |      |      |      |      |       |
| Maximum RMS voltage   | V <sub>RMS</sub>                  | 35          | 70   | 140  | 280  | 420  | 560  | 700  | V     |
| Average Rectified Output Current<br>@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> = 1.0 A  | V <sub>F</sub>                    | 1.10        |      |      |      |      |      |      | V     |
| Peak Reverse Current @T <sub>A</sub> = 25°C   | I <sub>RM</sub>                   | 5.0         |      |      |      |      |      |      | μA    |
| At Rated DC Blocking Voltage @T <sub>A</sub> = 125°C  |                                   | 200         |      |      |      |      |      |      |       |
| Reverse Recovery Time(Note1)  | t <sub>rr</sub>                   | 2.5         |      |      |      |      |      |      | μS    |
| Typical Junction Capacitance(Note2)   | C <sub>J</sub>                    | 15          |      |      |      |      |      |      | pF    |
| Typical Thermal Resistance Junction<br>to Lead (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. Reverse recovery condition I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>rr</sub>=0.25A  
 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 3. Mounted on P.C.B. with 8.0mm<sup>2</sup> land areas.

**Ratings and Characteristics Curves**

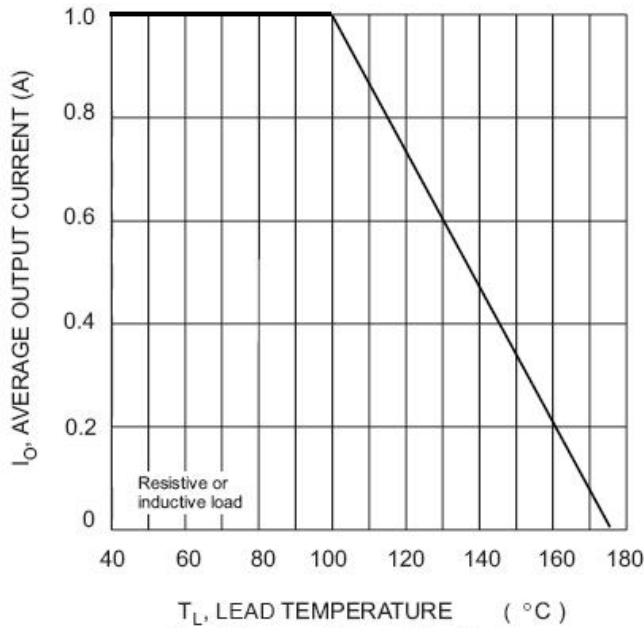


Fig. 1 Forward Current Derating Curve

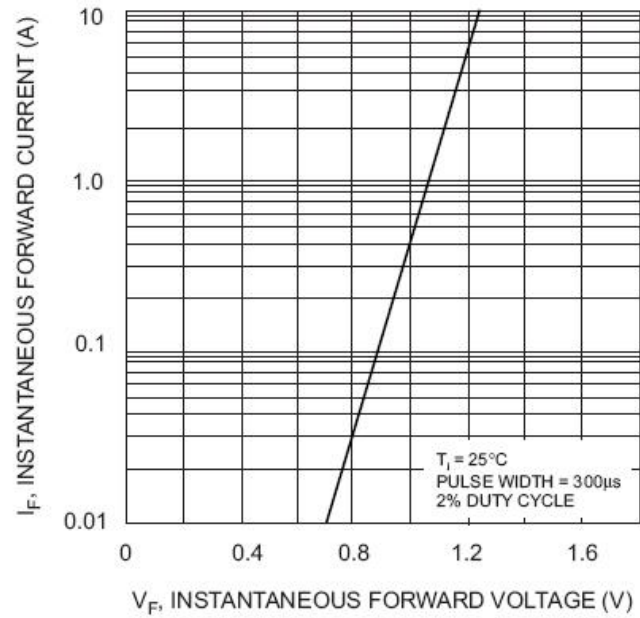


Fig. 2 Typical Forward Characteristics

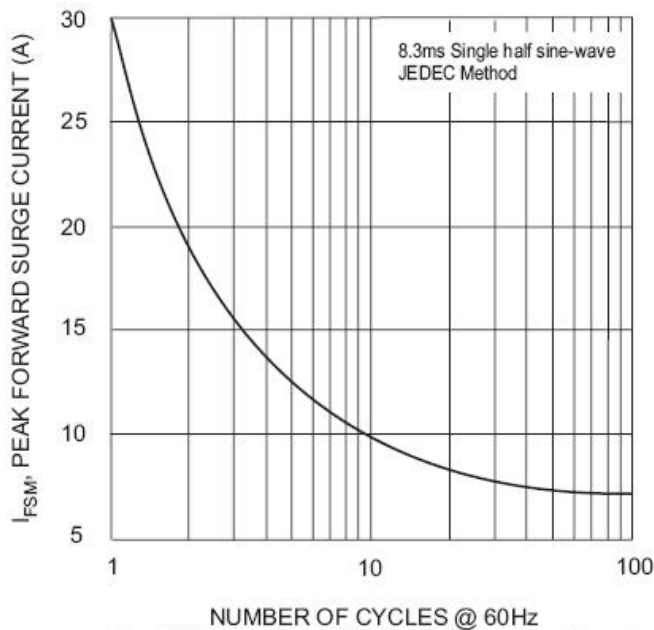


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

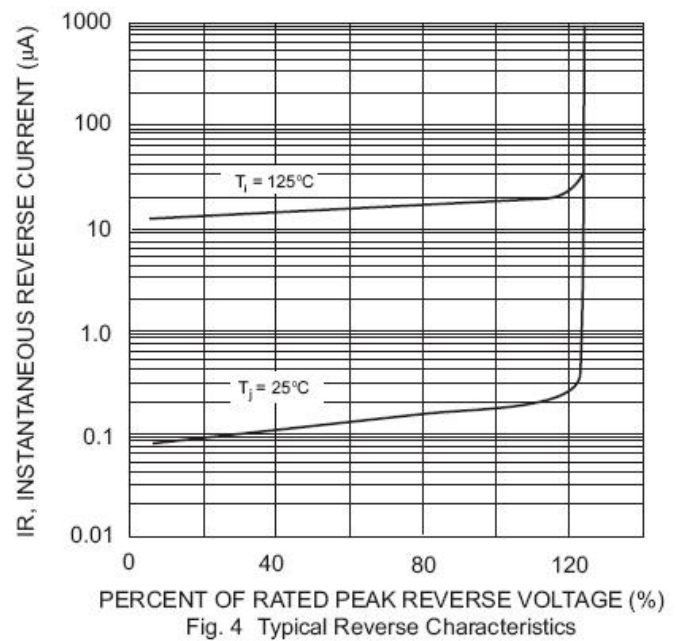
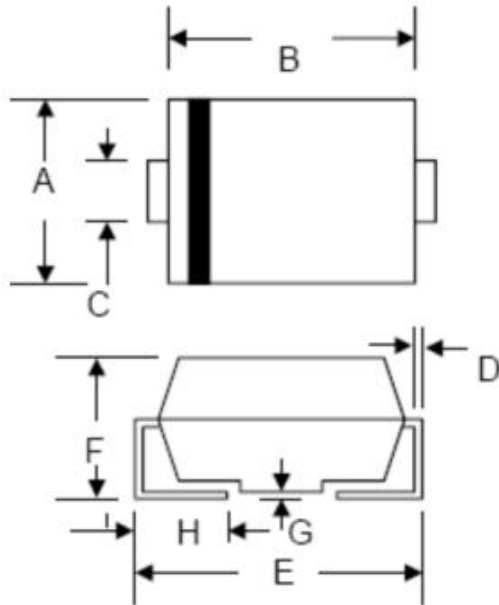


Fig. 4 Typical Reverse Characteristics

**Mechanical Dimensions SMA**



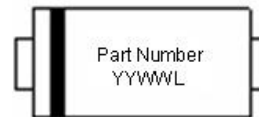
| SYMBOL | Millimeters |       | Inches |       |
|--------|-------------|-------|--------|-------|
|        | Min.        | Max.  | Min.   | Max.  |
| A      | 2.40        | 2.84  | 0.094  | 0.112 |
| B      | 3.99        | 4.75  | 0.157  | 0.187 |
| C      | 1.05        | 1.70  | 0.041  | 0.067 |
| D      | 0.15        | 0.51  | 0.006  | 0.020 |
| E      | 4.80        | 5.66  | 0.189  | 0.223 |
| F      | 1.90        | 2.95  | 0.075  | 0.116 |
| G      | 0.05        | 0.203 | 0.002  | 0.008 |
| H      | 0.76        | 1.52  | 0.030  | 0.600 |

**Ordering Information**

| Device    | Package          | Shipping       |
|-----------|------------------|----------------|
| GS1A-GS1M | SMA<br>(Pb-Free) | 5000pcs / reel |

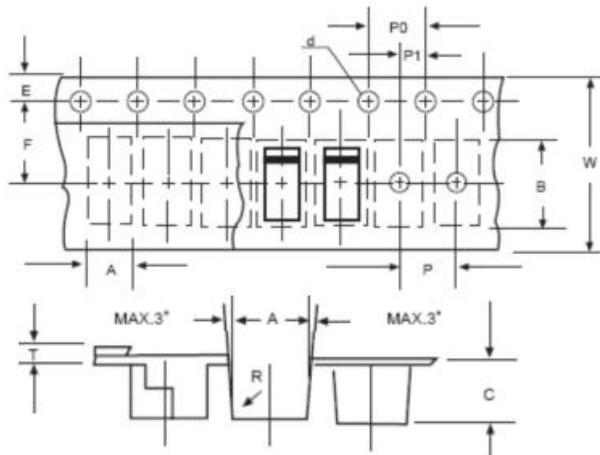
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

**Marking Diagram**



First row: Part Number (GS1A, GS1B, GS1D, GS1G, GS1J, GS1K, GS1M)  
Second row: YYWWL  
YY is the manufacture year,  
WW is the manufacture week code,  
L is the wafer's Lot Number

**Carrier Tape Specification SMA**



| SYMBOL | Millimeters |       |
|--------|-------------|-------|
|        | Min.        | Max.  |
| A      | 2.97        | 3.17  |
| B      | 5.70        | 5.90  |
| C      | 2.32        | 2.52  |
| d      | 1.40        | 1.60  |
| E      | 1.40        | 1.60  |
| F      | 5.60        | 5.70  |
| P      | 3.90        | 4.10  |
| P0     | 3.90        | 4.10  |
| P1     | 1.90        | 2.10  |
| T      | 0.25        | 0.35  |
| W      | 11.80       | 12.20 |

**DISCLAIMER:**

1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the SMC - Sangdest Microelectronics (Nanjing) Co., Ltd sales department for the latest version of the datasheet(s).

2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.

3- In no event shall SMC - Sangdest Microelectronics (Nanjing) Co., Ltd be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). SMC - Sangdest Microelectronics (Nanjing) Co., Ltd assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.

4- In no event shall SMC - Sangdest Microelectronics (Nanjing) Co., Ltd be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.

5- No license is granted by the datasheet(s) under any patents or other rights of any third party or SMC - Sangdest Microelectronics (Nanjing) Co., Ltd.

6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of SMC - Sangdest Microelectronics (Nanjing) Co., Ltd.

7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations..

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for* [Diodes - General Purpose, Power, Switching category:](#)

*Click to view products by* [SMC Diode manufacturer:](#)

Other Similar products are found below :

[MMBD3004S-13-F](#) [RD0306T-H](#) [DSE010-TR-E](#) [BAV17-TR](#) [BAV19-TR](#) [1N3611](#) [NTE156A](#) [NTE574](#) [NTE6244](#) [1SS181-TP](#) [1SS193,LF](#)  
[1SS400CST2RA](#) [SDAA13](#) [SHN2D02FUTW1T1G](#) [LS4151GS08](#) [FC903-TR-E](#) [1N4449](#) [1N456A](#) [1N4934-E3/73](#) [1N914B](#) [1N914BTR](#)  
[1SS226-TP](#) [RFUH20TB3S](#) [D291S45T](#) [BAV300-TR](#) [BAW56DWQ-7-F](#) [BAW75-TAP](#) [MM230L-CAA](#) [IDW40E65D1](#) [JAN1N3600](#) [LL4151-](#)  
[GS18](#) [053684A](#) [SMMSD4148T3G](#) [707803H](#) [NSVDAN222T1G](#) [CDSZC01100-HF](#) [LL4150-M-08](#) [BAV199E6433HTMA1](#) [BAS28-7](#)  
[BAW56HDW-13](#) [BAS28 TR](#) [VS-HFA04SD60STR-M3](#) [NSVM1MA152WKT1G](#) [RGP30D-E3/73](#) [BAV99TQ-13-F](#) [BAS21DWA-7](#) [NTE6250](#)  
[NTE582-4](#) [NTE582-6](#) [MMDB30-E28X](#)