



# GS1A~GS1N

## SURFACE MOUNT RECTIFIER

**VOLTAGE** 50 to 1200 Volt **CURRENT** 1 Ampere

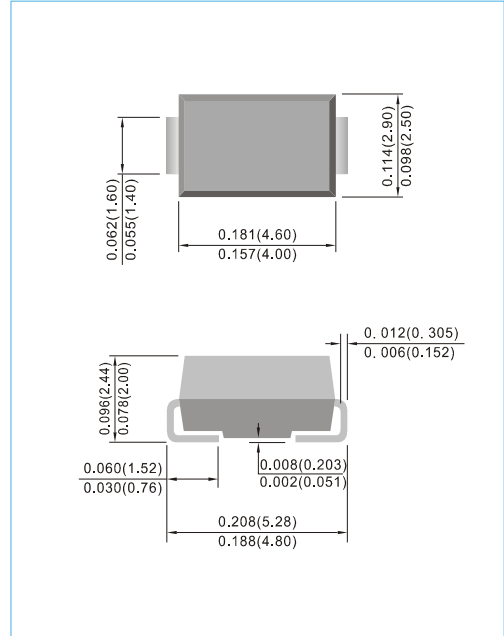
**SMA / DO-214AC** Unit : inch(mm)

### FEATURES

- For surface mounted applications in order to optimize board space
- Easy pick and place
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Low Forward Drop
- High temperature soldering : 260°C /10 seconds at terminals
- Glass Passivated Chip Junction
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### MECHANICAL DATA

- Case: JEDEC DO-214AC molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Standard packaging: 12mm tape (EIA-481)
- Weight: 0.002 ounces, 0.067 grams



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

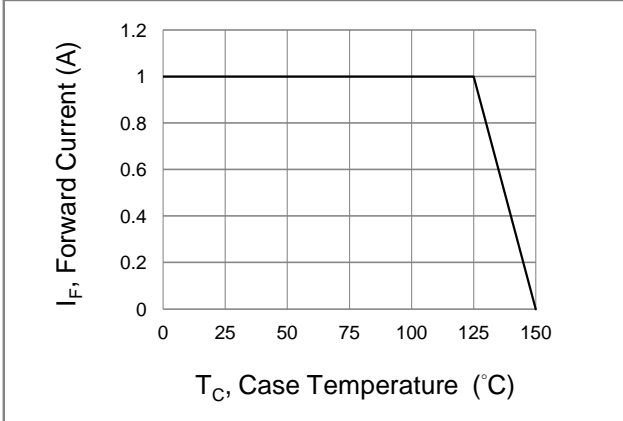
Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| PARAMETER  | SYMBOL                             | GS1A        | GS1B | GS1D | GS1G | GS1J | GS1K | GS1M | GS1N | UNITS                       |
|--|------------------------------------|-------------|------|------|------|------|------|------|------|-----------------------------|
| Maximum Recurrent Peak Reverse Voltage   | $V_{RRM}$                          | 50          | 100  | 200  | 400  | 600  | 800  | 1000 | 1200 | V                           |
| Maximum RMS Voltage  | $V_{RMS}$                          | 35          | 70   | 140  | 280  | 420  | 560  | 700  | 840  | V                           |
| Maximum DC Blocking Voltage  | $V_{DC}$                           | 50          | 100  | 200  | 400  | 600  | 800  | 1000 | 1200 | V                           |
| Maximum Average Forward Current at $T_L=100^\circ\text{C}$   | $I_{F(AV)}$                        | 1           |      |      |      |      |      |      |      | A                           |
| Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load                          | $I_{FSM}$                          | 35          |      |      |      |      |      |      |      | A                           |
| Maximum Forward Voltage at 1A  | $V_F$                              | 1.1         |      |      |      |      |      |      |      | V                           |
| Maximum DC Reverse Current at Rated DC Blocking Voltage<br>$T_J=25^\circ\text{C}$<br>$T_J=125^\circ\text{C}$ | $I_R$                              | 1<br>50     |      |      |      |      |      |      |      | $\mu\text{A}$               |
| Typical Junction Capacitance (Note 1)  | $C_J$                              | 12          |      |      |      |      |      |      |      | pF                          |
| Typical Junction Resistance<br>(Note 2)<br>(Note 3)  | $R_{\theta JL}$<br>$R_{\theta JA}$ | 37<br>150   |      |      |      |      |      |      |      | $^\circ\text{C} / \text{W}$ |
| Operating and Storage Temperature Range  | $T_J, T_{STG}$                     | -55 to +150 |      |      |      |      |      |      |      | $^\circ\text{C}$            |

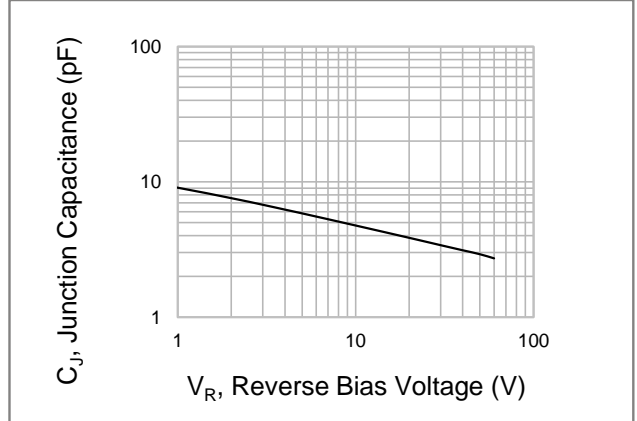
NOTES:1. Measured at 1 MHz and applied  $V_R = 4$  volts.  
2. Mounted on a FR4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area  
3. Mounted on a FR4 PCB, single-sided copper, mini pad.



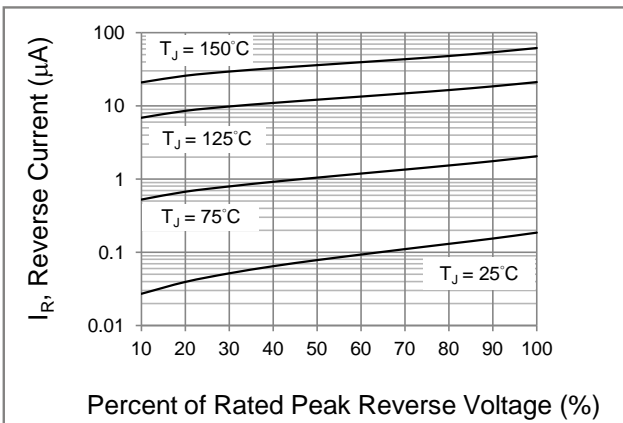
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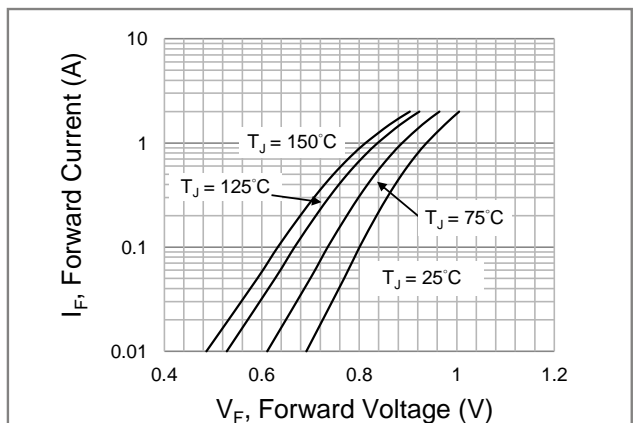
**Fig.1 Forward Current Derating Curve**



**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**

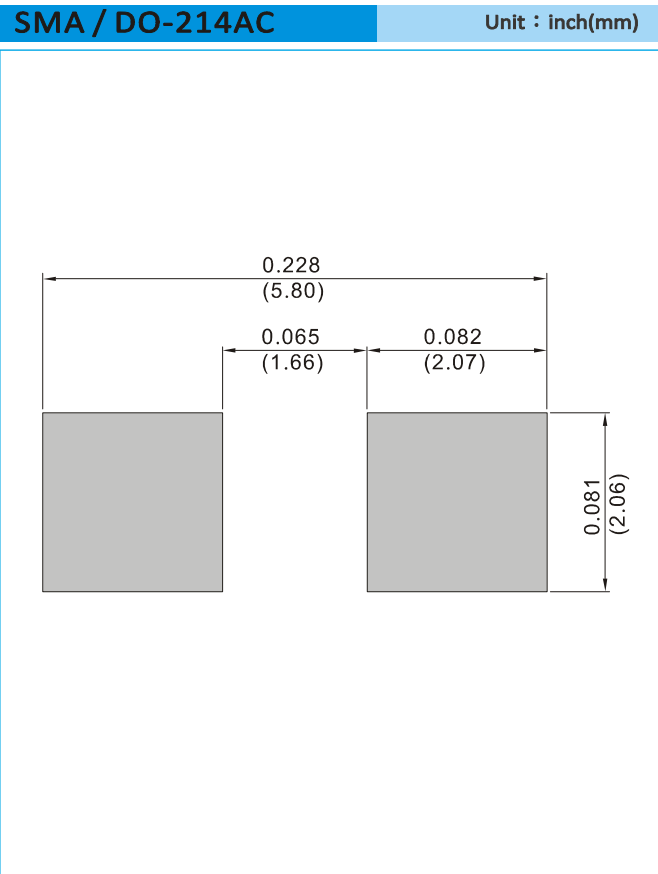


**Fig.4 Typical Forward Characteristics**



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### MOUNTING PAD LAYOUT



### ORDER INFORMATION

- Packing information
  - T/R - 7.5K per 13" plastic Reel
  - T/R - 1.8K per 7" plastic Reel



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### Part No\_packing code\_Version

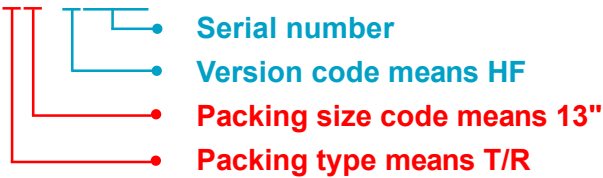
GS1A\_R1\_00001

GS1A\_R2\_00001

For example :

**RB500V-40\_R2\_00001**

Part No.



| Packing Code <b>XX</b>               |                      |                                  |                      | Version Code <b>XXXXXX</b> |                      |                                       |
|--------------------------------------|----------------------|----------------------------------|----------------------|----------------------------|----------------------|---------------------------------------|
| Packing type                         | 1 <sup>st</sup> Code | Packing size code                | 2 <sup>nd</sup> Code | HF or RoHS                 | 1 <sup>st</sup> Code | 2 <sup>nd</sup> ~5 <sup>th</sup> Code |
| Tape and Ammunition Box (T/B)        | <b>A</b>             | N/A                              | <b>0</b>             | <b>HF</b>                  | <b>0</b>             | serial number                         |
| Tape and Reel (T/R)                  | <b>R</b>             | 7"                               | <b>1</b>             | <b>RoHS</b>                | <b>1</b>             | serial number                         |
| Bulk Packing (B/P)                   | <b>B</b>             | 13"                              | <b>2</b>             |                            |                      |                                       |
| Tube Packing (T/P)                   | <b>T</b>             | 26mm                             | <b>X</b>             |                            |                      |                                       |
| Tape and Reel (Right Oriented) (TRR) | <b>S</b>             | 52mm                             | <b>Y</b>             |                            |                      |                                       |
| Tape and Reel (Left Oriented) (TRL)  | <b>L</b>             | PANASERT T/B CATHODE UP (PBCU)   | <b>U</b>             |                            |                      |                                       |
| FORMING                              | <b>F</b>             | PANASERT T/B CATHODE DOWN (PBCD) | <b>D</b>             |                            |                      |                                       |



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