



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

**GS1A / M1  
THRU  
GS1M / M7**

**TECHNICAL SPECIFICATIONS OF SURFACE MOUNT SILICON 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**

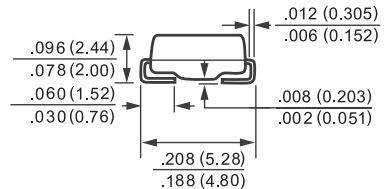
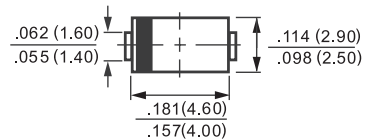
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- \* Polarity: As marked
- \* Mounting position: Any
- \* Weight: 0.064 gram

**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)

|  |                                   | GS1A                     | GS1B | GS1D | GS1G | GS1J | GS1K | GS1M |       |
|--|-----------------------------------|--------------------------|------|------|------|------|------|------|-------|
|  | SYMBOL                            | M1                       | M2   | M3   | M4   | M5   | M6   | M7   | UNITS |
| Maximum Recurrent Peak Reverse Voltage   | V <sub>RRM</sub>                  | 50                       | 100  | 200  | 400  | 600  | 800  | 1000 | Volts |
| Maximum RMS Voltage  | V <sub>RMS</sub>                  | 35                       | 70   | 140  | 280  | 420  | 560  | 700  | Volts |
| Maximum DC Blocking Voltage  | V <sub>DC</sub>                   | 50                       | 100  | 200  | 400  | 600  | 800  | 1000 | Volts |
| Maximum Average Forward Rectified Current at T <sub>A</sub> = 75°C   | I <sub>O</sub>                    | 1.0                      |      |      |      |      |      |      | Amps  |
| Peak Forward Surge Current I <sub>FM</sub> (surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I <sub>FSM</sub>                  | 30                       |      |      |      |      |      |      | Amps  |
| Maximum Forward Voltage at 1.0A DC   | V <sub>F</sub>                    | 1.1                      |      |      |      |      |      |      | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage  | I <sub>R</sub>                    | @ T <sub>A</sub> = 25°C  |      |      |      |      |      |      | uAmps |
|  |                                   | @ T <sub>A</sub> = 125°C |      |      |      |      |      |      |       |
| Maximum Reverse Recovery Time (Note 3)   | t <sub>rr</sub>                   | 2.5                      |      |      |      |      |      |      | uSec  |
| Typical Thermal Resistance (Note 2)  | R <sub>θJL</sub>                  | 30                       |      |      |      |      |      |      | °C/W  |
| Typical Junction Capacitance (Note 1)  | C <sub>J</sub>                    | 15                       |      |      |      |      |      |      | pF    |
| Operating and Storage Temperature Range  | T <sub>J</sub> , T <sub>STG</sub> | -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 )  
M1 M7

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

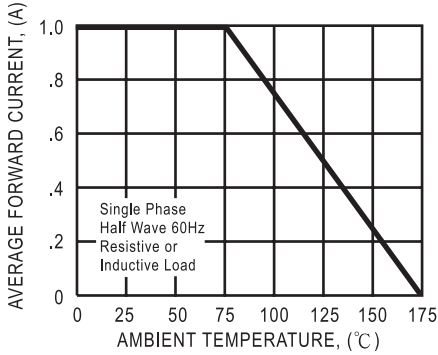


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

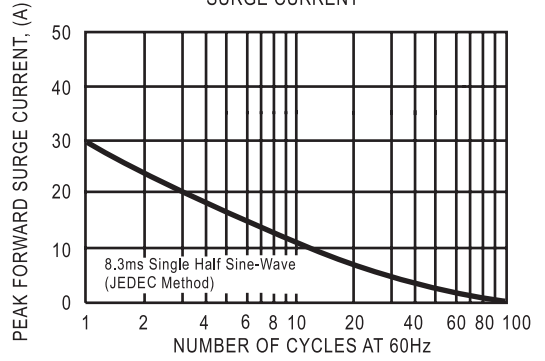


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

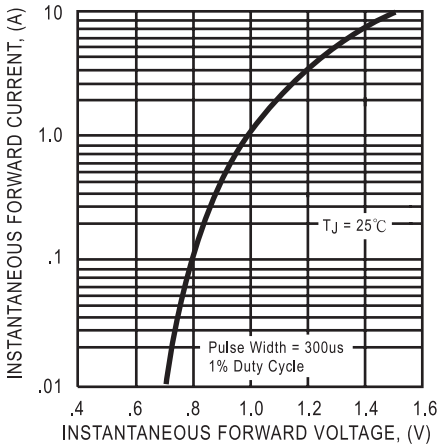


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

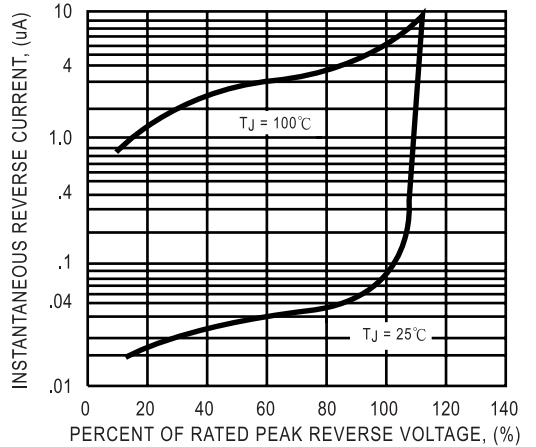
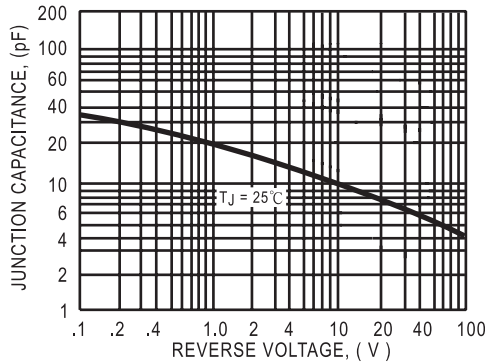


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



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