



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

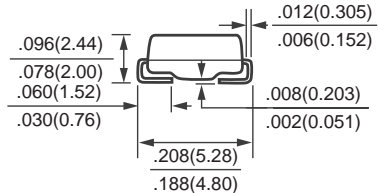
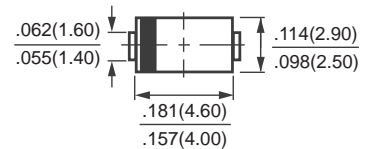
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- * Polarity: As marked
- * Mounting position: Any
- * Weight: 0.064 gram

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 | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC Blocking Voltage | V _{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum Average Forward Rectified Current at T _A = 100°C | I _O | 1.0 | | | | | | | Amps |
| Peak Forward Surge Current I _{FM} (surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I _{FSM} | 30 | | | | | | | Amps |
| Maximum Forward Voltage at 1.0A DC | V _F | 1.1 | | | | | | | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | @ T _A = 25°C | 5.0 | | | | | | | uAmps |
| | @ T _A = 125°C | 50 | | | | | | | |
| Maximum Reverse Recovery Time (Note 3) | t _{rr} | 2.5 | | | | | | | uSec |
| Typical Thermal Resistance (Note 2) | R _{θJL} | 30 | | | | | | | °C/W |
| Typical Junction Capacitance (Note 1) | C _J | 15 | | | | | | | pF |
| Operating and Storage Temperature Range | T _J , T _{STG} | -65 to + 175 | | | | | | | °C |

NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0VDC
 2. Thermal Resistance (Junction to Ambient), .24in²(6.0mm²) copper pads to each terminal.
 3. Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A.

RATING AND CHARACTERISTIC CURVES (GS1A THRU GS1M)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

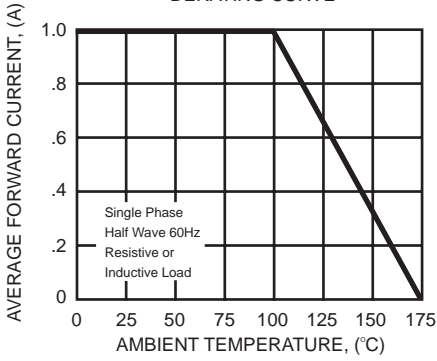


FIG. 2 - MAXIMUM NON-REPETITIVE FOREARD SURGE CURRENT

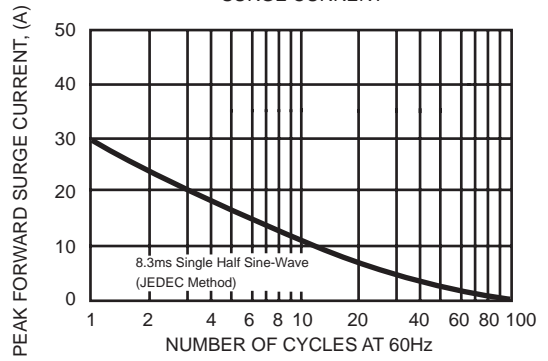


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

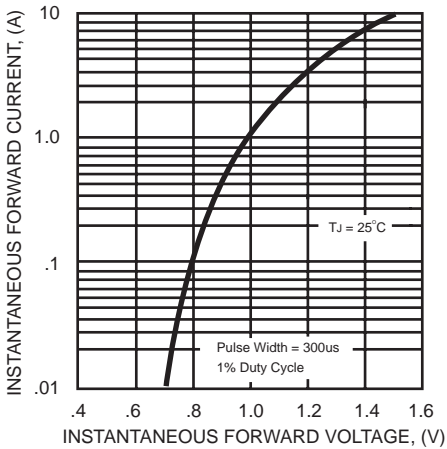


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

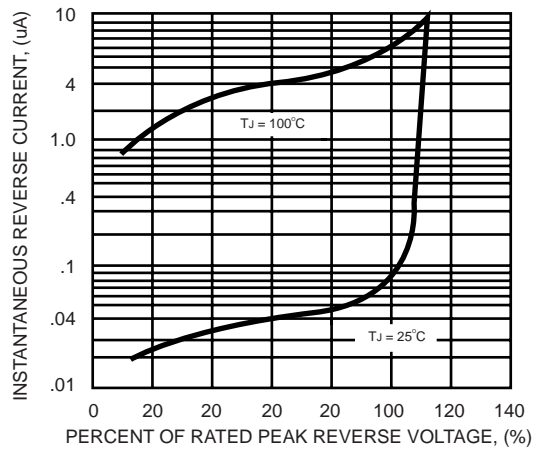
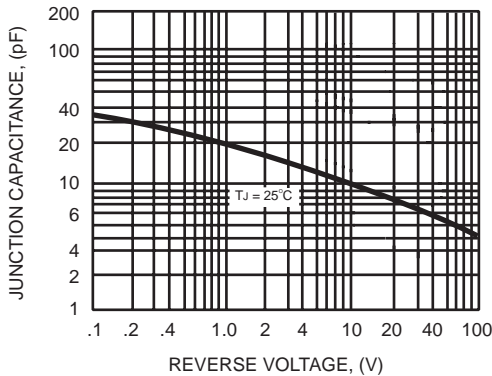


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



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