



GS1A THRU GS1M

1.0 AMP. SURFACE MOUNT RECTIFIERS



FEATURES

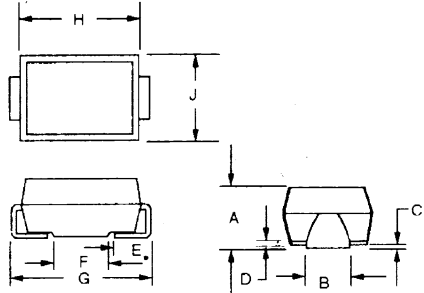
- * For surface mounted application
- * Low forward voltage drop
- * High current capability
- * Easy pick and place
- * High surge current capability
- * Plastic material used carries Underwriters Laboratory classification 94V-0

MECHANICAL DATA

- * Case: Molded plastic
- * Terminals: Solder plated
- * Polarity: Indicated by cathode band
- * Packaging: 12mm tape per EIA STD RS-481
- * Weight: 0.091 gram

VOLTAGE RANGE
50 to 1000 Volts
CURRENT
1.0 Ampere

SMA/DO-214AC*



DIMENSIONS

| | inches | | mm | |
|---|----------|----------|---------|---------|
| | Min | Max | Min | Max |
| A | 0.078(L) | 0.116(L) | 1.98(L) | 2.95(L) |
| A | 0.110(H) | 0.117(H) | 2.80(H) | 2.98(H) |
| B | 0.067 | 0.088 | 1.7 | 2.24 |
| C | | 0.008 | | 0.20 |
| D | | 0.02 | | 0.51 |
| E | 0.030 | 0.060 | 0.76 | 1.52 |
| F | 0.065 | 0.094 | 1.65 | 2.39 |
| G | 0.204 | 0.220 | 5.21 | 5.59 |
| H | 0.160 | 0.180 | 4.06 | 4.57 |
| I | 0.101 | 0.112 | 2.56 | 2.85 |

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| TYPE NUMBER | SYMBOLS | GS1A | GS1B | GS1D | GS1G | GS1J | GS1K | GS1M | UNITS |
|--|-------------|---------------|------|------|------|------|------|------|------------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current @ $T_L = 75^\circ\text{C}$ | $I_{F(AV)}$ | 1.0 | | | | | | | A |
| Peak Forward Surge Current, 8.3 ms half sine | I_{FSM} | 30 | | | | | | | A |
| Maximum Instantaneous Forward Voltage @ 1.0A | V_F | 1.1 | | | | | | | V |
| Maximum D. C Reverse Current @ $T_A = 25^\circ\text{C}$ at Rated D. C. Blocking Voltage @ $T_A = 100^\circ\text{C}$ | I_R | 5.0 | | | | | | | μA |
| | | 50 | | | | | | | μA |
| Maximum Reverse Recovery Time (Note 1) | T_{rr} | 1.8 | | | | | | | μS |
| Typical Junction Capacitance (Note 2) | C_J | 8 | | | | | | | pF |
| Operating Temperature Range | T_J | - 55 to + 150 | | | | | | | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | - 55 to + 150 | | | | | | | $^\circ\text{C}$ |

NOTES: 1. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$
2. Measured at 1 MHz and applied $V_R = 4.0$ volts D. C.

RATINGS AND CHARACTERISTIC CURVES (GS1A THRU GS1M)

FIG. 1 - FORWARD CURRENT DERATING CURVE

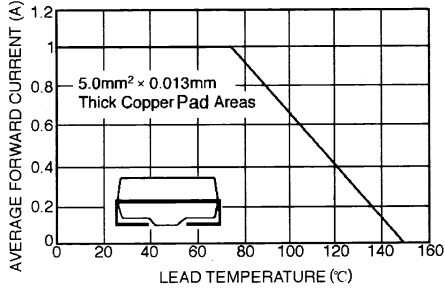


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

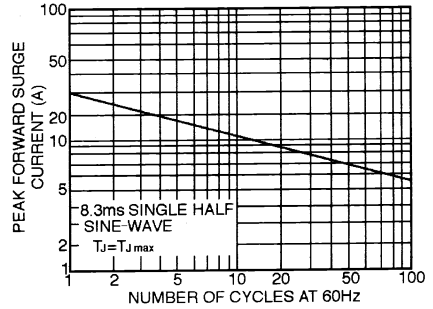


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

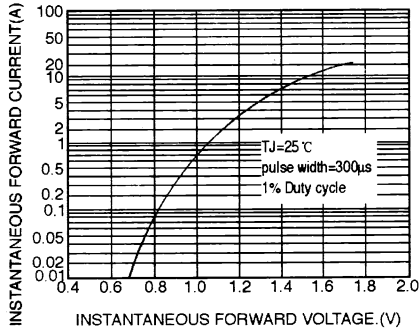


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

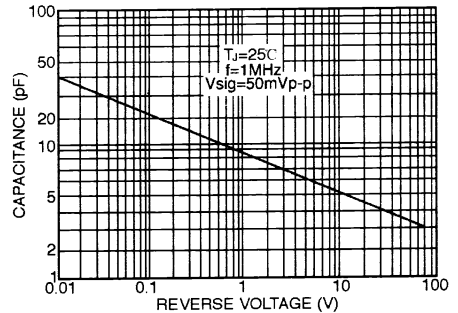


FIG. 5 - TYPICAL REVERSE CHARACTERISTICS

