



Micro Commercial Components

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# GS1A-LT THRU GS1M-LT

## Features

- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Extremely Low Thermal Resistance
- High Temp Soldering: 260°C for 10 Seconds At Terminals

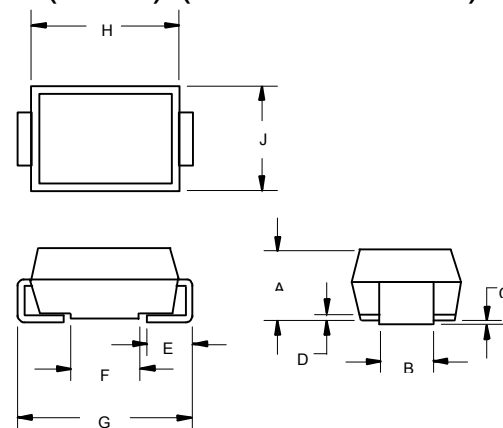
## 1.0 Amp Glass Passivated Rectifier 50 to 1000 Volts

## Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 15°C/W Junction To Lead

## DO-214AC (SMA) (LEAD FRAME)

| MCC Catalog Number | Device Marking | Maximum Reccurent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|--------------------|----------------|--|---------------------|-----------------------------|
| GS1A-LT            | GS1A           | 50V                                    | 35V                 | 50V                         |
| GS1B-LT            | GS1B           | 100V                                   | 70V                 | 100V                        |
| GS1D-LT            | GS1D           | 200V                                   | 140V                | 200V                        |
| GS1G-LT            | GS1G           | 400V                                   | 280V                | 400V                        |
| GS1J-LT            | GS1J           | 600V                                   | 420V                | 600V                        |
| GS1K-LT            | GS1K           | 800V                                   | 560V                | 800V                        |
| GS1M-LT            | GS1M           | 1000V                                  | 700V                | 1000V                       |

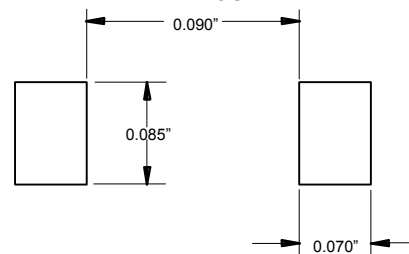


| DIM | INCHES |      | MM   |      | NOTE |
|-----|--------|------|------|------|------|
|     | MIN    | MAX  | MIN  | MAX  |      |
| A   | .079   | .096 | 2.00 | 2.44 |      |
| B   | .050   | .064 | 1.27 | 1.63 |      |
| C   | .002   | .008 | .05  | .20  |      |
| D   | —      | .02  | —    | .51  |      |
| E   | .030   | .060 | .76  | 1.52 |      |
| F   | .065   | .091 | 1.65 | 2.32 |      |
| G   | .189   | .220 | 4.80 | 5.59 |      |
| H   | .157   | .181 | 4.00 | 4.60 |      |
| J   | .090   | .115 | 2.25 | 2.92 |      |

## Electrical Characteristics @ 25°C Unless Otherwise Specified

|   |             |                                      |   |
|---|-------------|--------------------------------------|---|
| Average Forward current                                 | $I_{F(AV)}$ | 1.0A                                 | $T_J = 110^\circ\text{C}$                             |
| Peak Forward Surge Current                              | $I_{FSM}$   | 30A                                  | 8.3ms, half sine,                                     |
| Maximum Instantaneous Forward Voltage                   | $V_F$       | 1.0V                                 | $I_{FM} = 1.0A;$<br>$T_J = 25^\circ\text{C}^*$        |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$       | 10 $\mu\text{A}$<br>50 $\mu\text{A}$ | $T_J = 25^\circ\text{C}$<br>$T_J = 125^\circ\text{C}$ |
| Typical Junction Capacitance                            | $C_J$       | 15pF                                 | Measured at<br>1.0MHz, $V_R=4.0V$                     |

### SUGGESTED SOLDER PAD LAYOUT



\*Pulse test: Pulse width 300  $\mu\text{sec}$ , Duty cycle 2%

# GS1A-LT thru GS1M-LT

Figure 1  
Typical Forward Characteristics

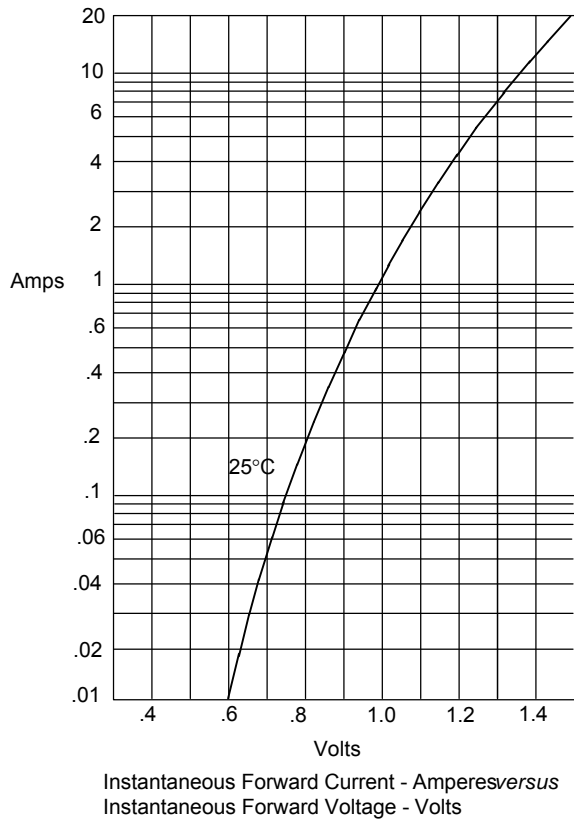
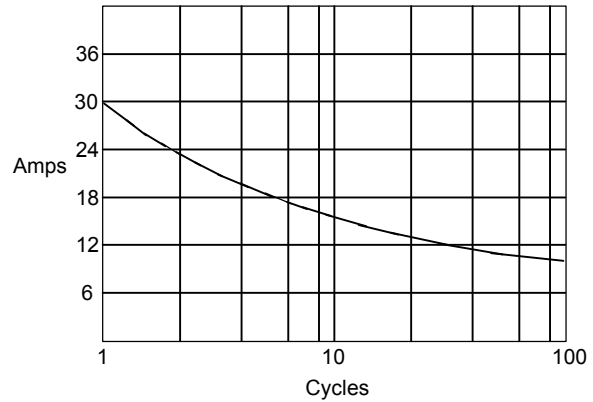
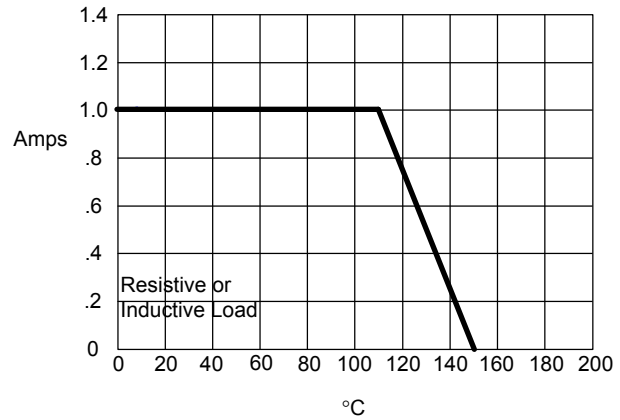


Figure 3  
Maximum Overload Surge Current



Peak Forward Current - Amperes versus Number of Cycles at 60Hz

Figure 4  
Forward Derating Curve



Average Forward Rectified Current - Amperes versus Ambient Temperature - °C

Figure 2  
Junction Capacitance

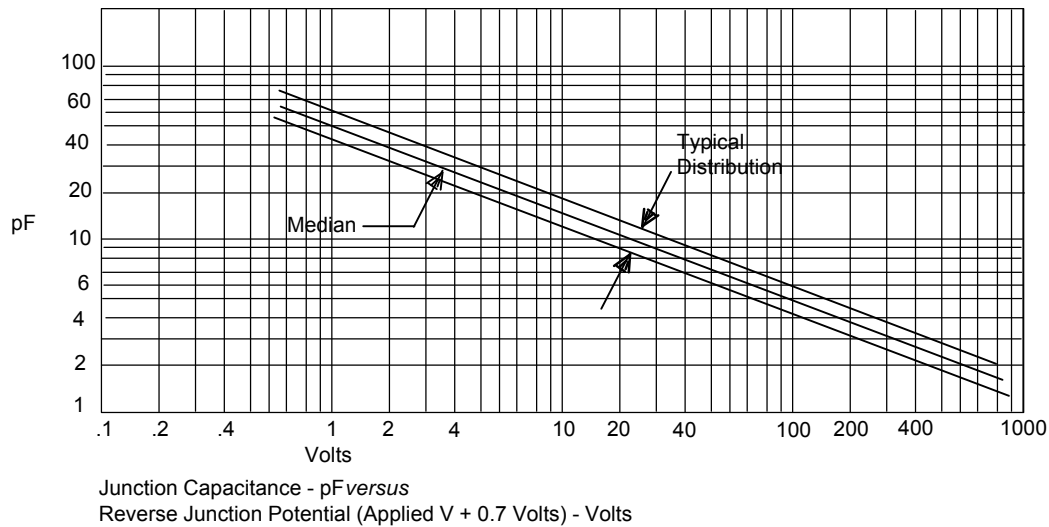
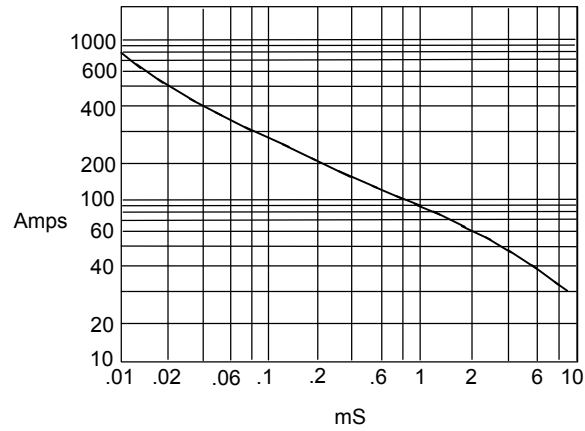


Figure 5  
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*  
Pulse Duration - Milliseconds (mS)



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