



Micro Commercial Components



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GS1AFL THRU GS1MFL

Features

- Halogen free available upon request by adding suffix "-HF"
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Extremely Low Thermal Resistance
- High Temp Soldering: 260°C for 10 Seconds At Terminals
- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)

Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 13°C/W Junction To Lead

| MCC Catalog Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|--------------------|----------------|--|---------------------|-----------------------------|
| GS1AFL | GS1A | 50V | 35V | 50V |
| GS1BFL | GS1B | 100V | 70V | 100V |
| GS1DFL | GS1D | 200V | 140V | 200V |
| GS1GFL | GS1G | 400V | 280V | 400V |
| GS1JFL | GS1J | 600V | 420V | 600V |
| GS1KFL | GS1K | 800V | 560V | 800V |
| GS1MFL | GS1M | 1000V | 700V | 1000V |

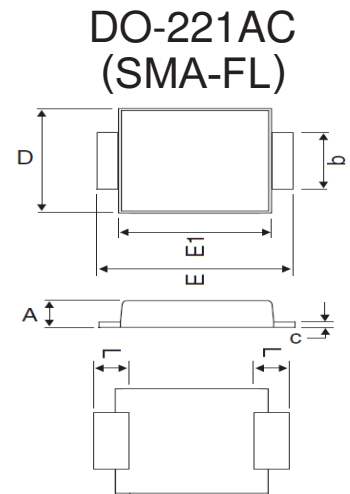
Electrical Characteristics @ 25°C Unless Otherwise Specified

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

*Pulse test: Pulse width 300 μsec , Duty cycle 2%

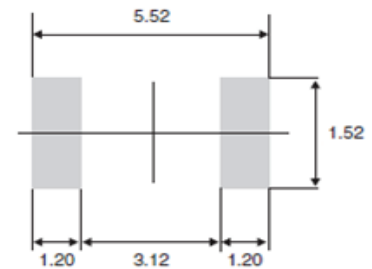
Note 1: High Temperature Solder Exemptions Applied, see EU Directive Annex 7.

1.0 Amp Glass Passivated Rectifier 50 to 1000 Volts



| DIM | INCHES | | MM | | NOTE |
|-----|--------|------|------|------|------|
| | MIN | MAX | MIN | MAX | |
| A | .035 | .047 | 0.90 | 1.20 | |
| b | .049 | .065 | 1.25 | 1.65 | |
| C | .004 | .016 | 0.10 | 0.40 | |
| D | .089 | .116 | 2.25 | 2.95 | |
| E | .173 | .220 | 4.40 | 5.60 | |
| E1 | .126 | .181 | 3.20 | 4.60 | |
| L | .028 | .059 | 0.70 | 1.50 | |

SUGGESTED SOLDER PAD LAYOUT



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GS1AFL thru GS1MFL



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Figure 1
Typical Forward Characteristics

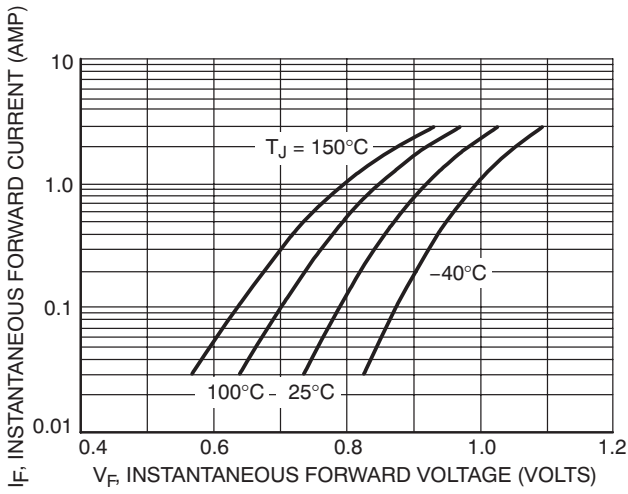
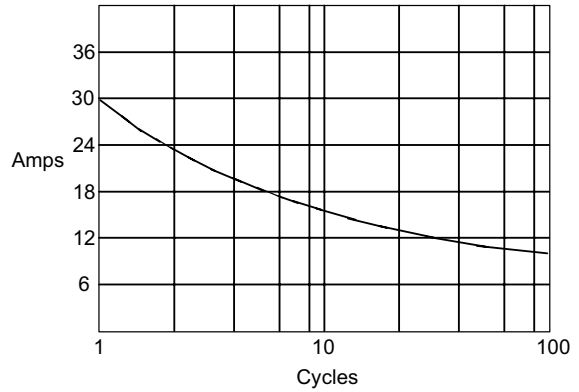
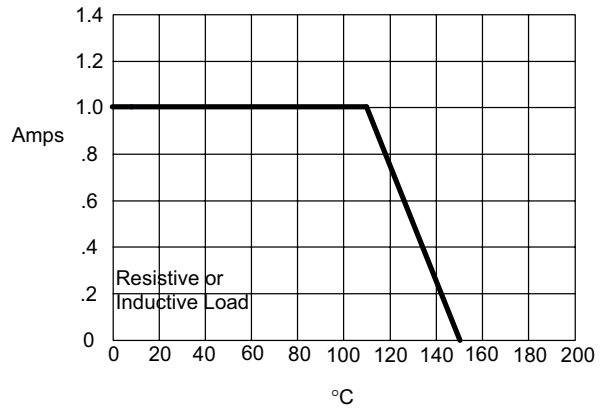


Figure 3
Maximum Overload Surge Current



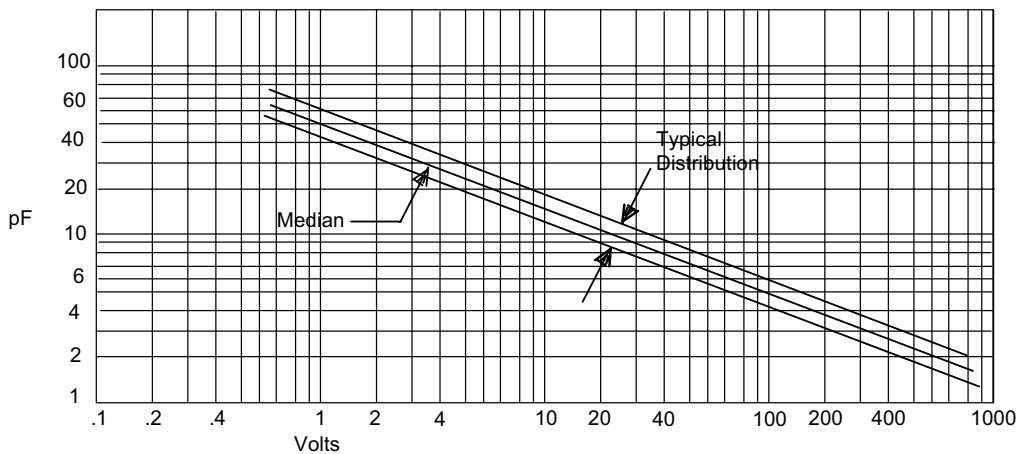
Peak Forward Current - Amperes versus
Number of Cycles at 60Hz

Figure 4
Forward Derating Curve



Average Forward Rectified Current - Amperes versus
Lead Temperature - $^\circ\text{C}$

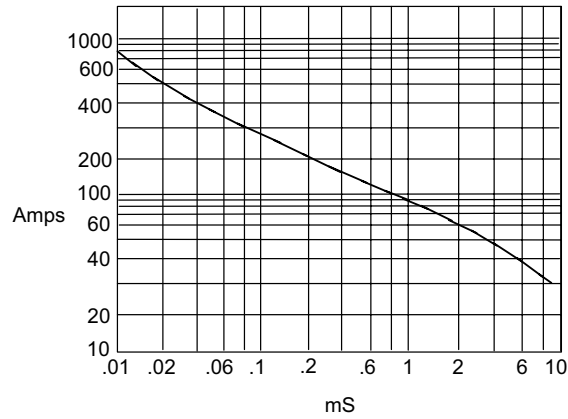
Figure 2
Junction Capacitance



Junction Capacitance - pF versus
Reverse Junction Potential (Applied V + 0.7 Volts) - Volts

GS1AFL thru GS1MFL

Figure 5
Peak Forward Surge Current



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



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Ordering Information :

| Device | Packing |
|----------------|------------------------|
| Part Number-TP | Tape&Reel: 10Kpcs/Reel |

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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