



Micro Commercial Components



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GS1AE THRU GS1ME

Features

- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Easy Pick And Place
- 260C for 10s and 230 for 45s of High Temp. Soldering
- Low Thermal Resistance
- Halogen free available upon request by adding suffix "-HF"

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
85°C/W Junction To Ambient

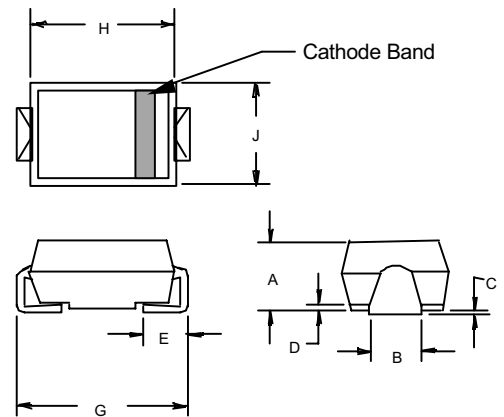
| MCC Catalog Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|--------------------|----------------|--|---------------------|-----------------------------|
| GS1AE | GS1A | 50V | 35V | 50V |
| GS1BE | GS1B | 100V | 70V | 100V |
| GS1DE | GS1D | 200V | 140V | 200V |
| GS1GE | GS1G | 400V | 280V | 400V |
| GS1JE | GS1J | 600V | 420V | 600V |
| GS1KE | GS1K | 800V | 560V | 800V |
| GS1ME | GS1M | 1000V | 700V | 1000V |

Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|-------------|-------------------------------------|---|
| Average Forward current | $I_{F(AV)}$ | 1.0A | $T_J = 75^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 30A | 8.3ms, half sine, |
| Maximum Instantaneous Forward Voltage | V_F | 1.1V | $I_{FM} = 1.0A$; $T_J = 25^\circ\text{C}^*$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 5 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, $V_R=4.0V$ |
| Typical Reverse Recovery Time | T_{rr} | 2000ns | $I_F=0.5A$, $I_R=1.0A$, $I_{rr}=0.25A$ |
| Rating for Fusing | I^2t | 3.735A ² s | |

1.0 Amp Silicon Rectifier 50 to 1000 Volts

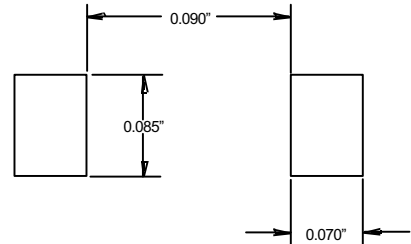
DO-214AC (SMAE)



DIMENSIONS

| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|------|------|------|
| | MIN | MAX | MIN | MAX | |
| A | .079 | .096 | 2.01 | 2.44 | |
| B | .011 | .0075 | 0.28 | 0.19 | |
| C | .002 | .008 | .05 | .20 | |
| D | — | .02 | — | .51 | |
| E | .030 | .060 | .76 | 1.52 | |
| G | .189 | .208 | 4.80 | 5.30 | |
| H | .157 | .180 | 4.00 | 4.57 | |
| J | .090 | .115 | 2.29 | 2.92 | |

SUGGESTED SOLDER PAD LAYOUT



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

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

GS1AE thru GS1ME

Figure 1
Typical Forward Characteristics

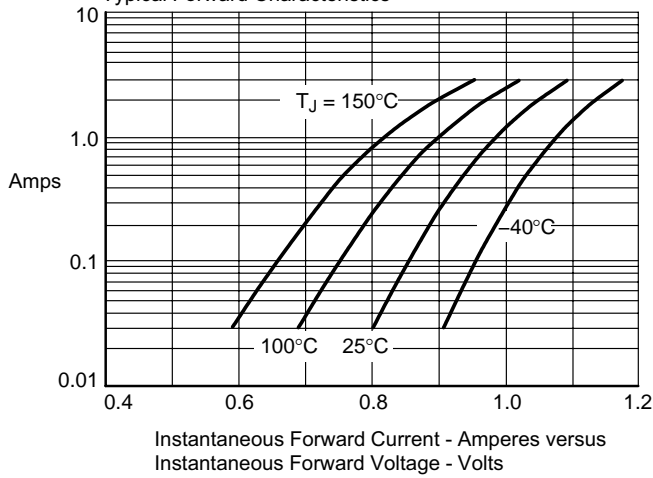


Figure 2
Maximum Forward Surge Current

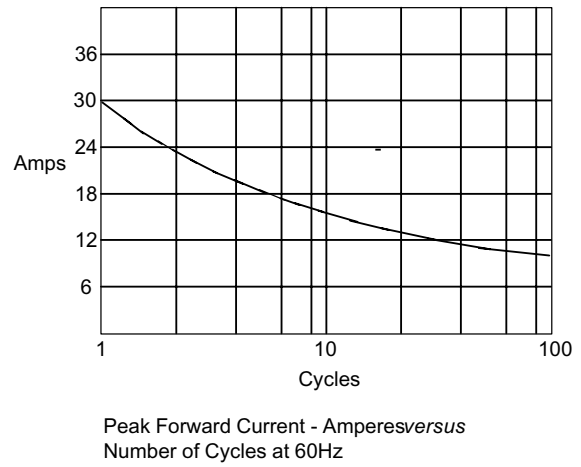


Figure 3
Forward Derating Curve

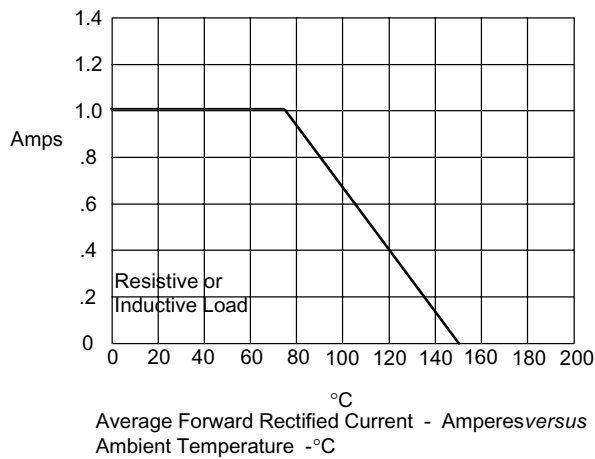
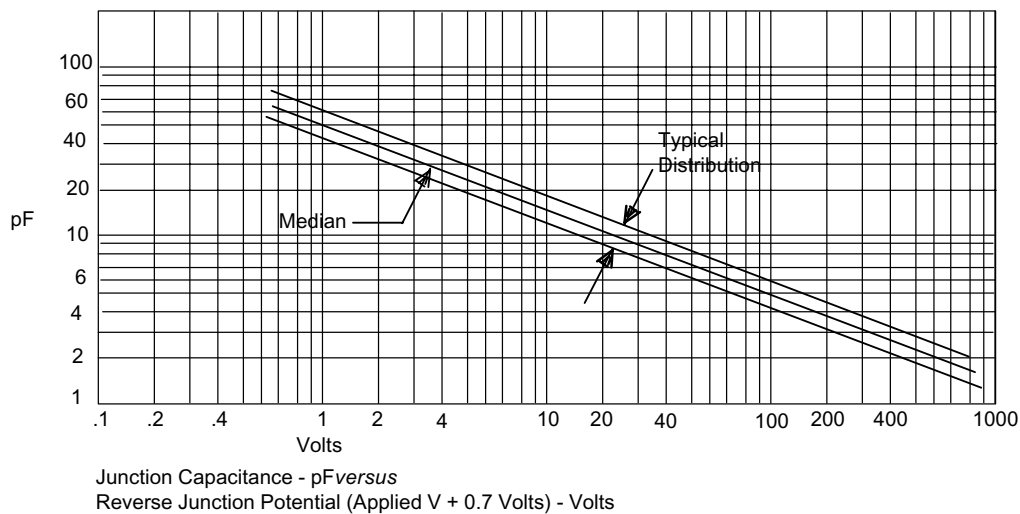
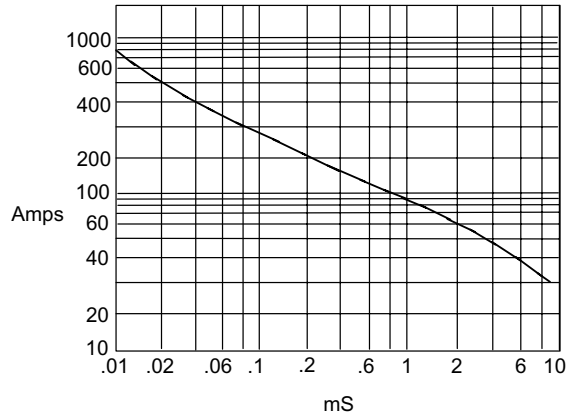


Figure 4
Junction Capacitance



GS1AE thru GS1ME

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: 6Kpcs/Reel |

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

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