

### 1.0A Surface Mount Sintered Glass Passivated Rectifier (SGP<sup>®</sup>)

#### Features

- Sintered glass passivated (SGP<sup>®</sup>) rectifier chip
- Low profile surface mounted package
- Sintered glass passivated cavity-free junction
- Plastic package has underwriters laboratory flammability classification 94V-0
- High temperature soldering: 260 °C / 10 seconds at terminals
- RoHS compliant



SMA



#### Mechanical Data

|                   |   |
|-------------------|---|
| <b>Case:</b>      | JEDEC DO-214AC molded plastic                         |
| <b>Terminals:</b> | Solder plated solderable per MIL-STD-750, Method 2026 |
| <b>Polarity:</b>  | Cathode end indicated by color band                   |
| <b>Weight:</b>    | 0.002 Ounce, 0.064 gram                               |

#### Maximum Ratings & Electrical Characteristics (*T<sub>Ambient</sub>*=25°C unless noted)

| Symbol                   | Description   | GF 1A | GF 1B | GF 1D | GF 1G | GF 1J | GF 1K | GF 1M | Unit | Conditions  |
|--------------------------|---|-------|-------|-------|-------|-------|-------|-------|------|---|
| <b>V<sub>RRM</sub></b>   | Maximum Repetitive Peak Reverse Voltage                 | 50    | 100   | 200   | 400   | 600   | 800   | 1000  | V    |   |
| <b>V<sub>RMS</sub></b>   | Maximum RMS Voltage                                     | 35    | 70    | 140   | 280   | 420   | 560   | 700   | V    |   |
| <b>V<sub>DC</sub></b>    | Maximum DC Blocking Voltage                             | 50    | 100   | 200   | 400   | 600   | 800   | 1000  | V    |   |
| <b>I<sub>F(AV)</sub></b> | Maximum Average Forward Rectified Current               | 1.0   |       |       |       |       |       |       | A    |   |
| <b>I<sub>FSM</sub></b>   | Peak Forward Surge Current                              | 30    |       |       |       |       |       |       | A    | 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) |
| <b>V<sub>F</sub></b>     | Maximum Instantaneous Forward Voltage                   | 1.0   |       |       |       |       |       |       | V    | I <sub>F</sub> =1.0A  |
| <b>I<sub>R</sub></b>     | Maximum DC Reverse Current at Rated DC Blocking Voltage | 5.0   |       |       |       |       |       |       | µA   | TA=25° C  |
|                          |   | 30    |       |       |       |       |       |       |      | TA=125° C   |
|                          |   | 50    |       |       |       |       |       |       |      | TA=150° C   |
| <b>C<sub>J</sub></b>     | Typical Junction Capacitance                            | 12    |       |       |       |       |       |       | pF   | VR=4V, f=1MHz   |

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## GF1A - GF1M

| Symbol      | Description                                      | GF 1A       | GF 1B | GF 1D | GF 1G | GF 1J | GF 1K | GF 1M | Unit   | Conditions |
|-------------|--|-------------|-------|-------|-------|-------|-------|-------|--------|------------|
| RthJA       | Typical Thermal Resistance                       | 75          |       |       |       |       |       |       | °C / W | Note       |
| RthJL       |  | 27          |       |       |       |       |       |       |        |            |
| TJ,<br>TSTG | Operating Junction and Storage Temperature Range | -65 to +175 |       |       |       |       |       |       | °C     |            |

**Note:** Thermal resistance from junction to ambient and from junction to lead P.C.B. mounted on 0.2x0.2" (5.0 x5.0mm) copper pad areas.

### Typical Characteristics Curves

Fig.1- Forward Current Derating Curve

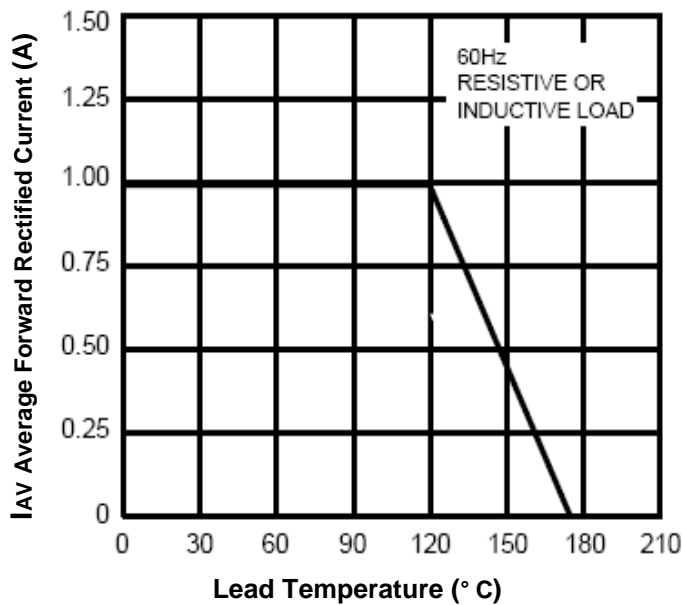
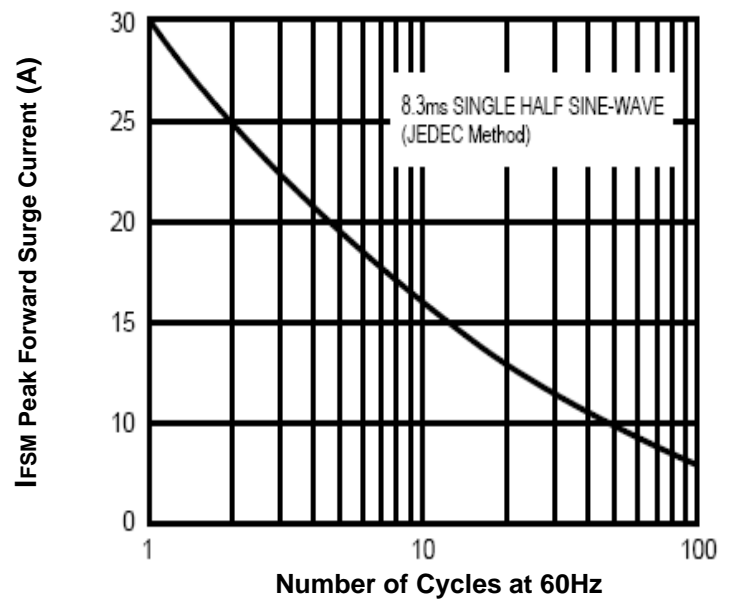


Fig.2- Max. Non-Repetitive Peak Forward Surge Current



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GF1A - GF1M

Fig.3- Typical Instantaneous Forward Characteristics

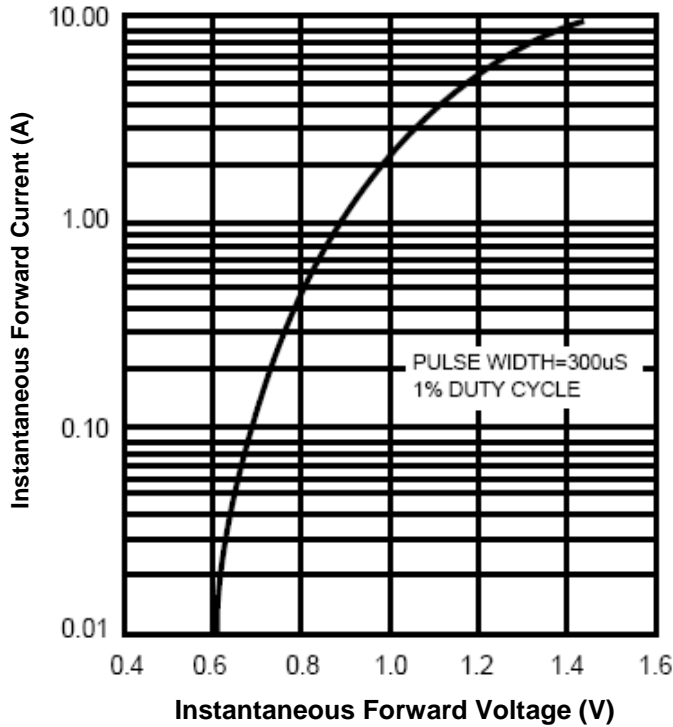


Fig.4- Typical Reverse Characteristics

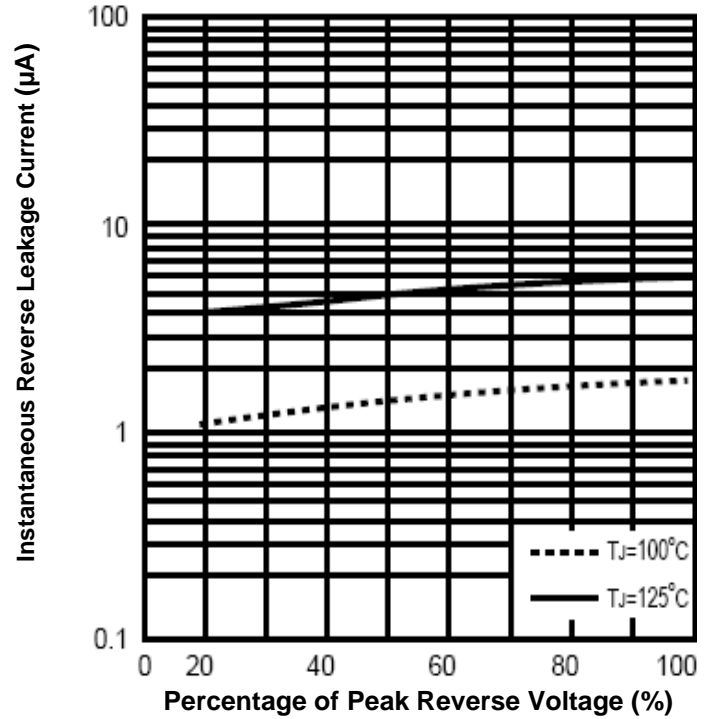
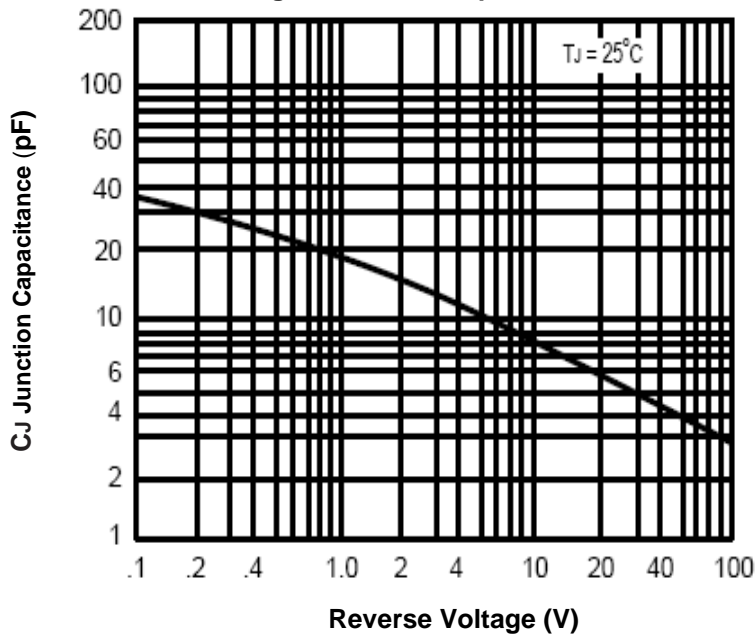


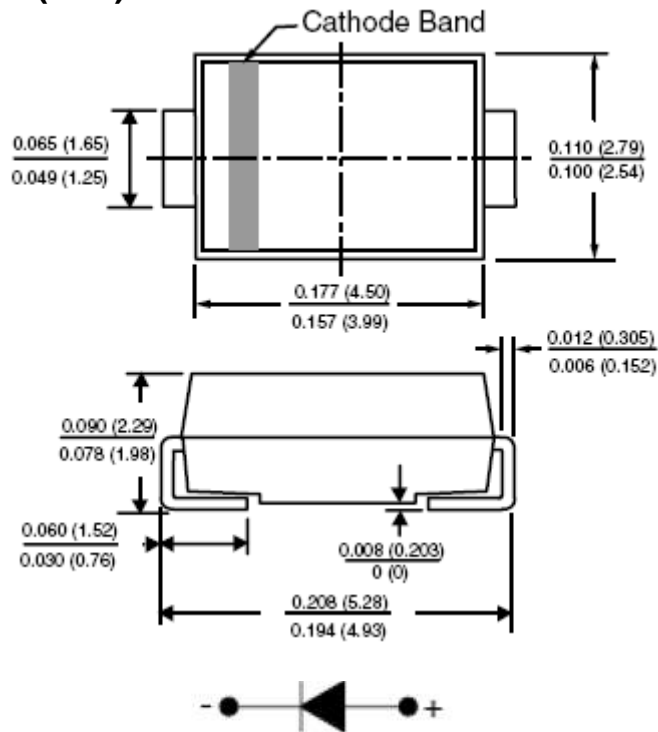
Fig.5- Junction Capacitance



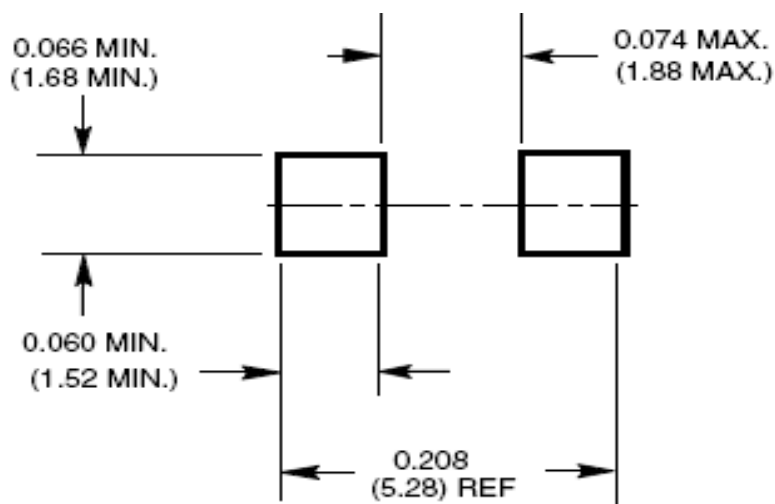
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GF1A - GF1M

Dimensions in inch (mm)



Soldering Pad in inch (mm)



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GF1A - GF1M

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