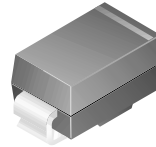


# GF1A - GF1M

## Features

- Low forward voltage drop.
- High current capability.
- Easy pick and place.
- High surge current capability.



**SMA/DO-214AC**  
COLOR BAND DENOTES CATHODE

## General Purpose Rectifiers (Glass Passivated)

### Absolute Maximum Ratings\* T<sub>A</sub> = 25°C unless otherwise noted

| Symbol             | Parameter                                                                 | Value       |     |     |     |     |     |      | Units |
|--------------------|---------------------------------------------------------------------------|-------------|-----|-----|-----|-----|-----|------|-------|
|                    |                                                                           | 1A          | 1B  | 1D  | 1G  | 1J  | 1K  | 1M   |       |
| V <sub>RRM</sub>   | Maximum Repetitive Reverse Voltage                                        | 50          | 100 | 200 | 400 | 600 | 800 | 1000 | V     |
| I <sub>F(AV)</sub> | Average Rectified Forward Current,<br>@ T <sub>L</sub> = 125°C            | 1.0         |     |     |     |     |     |      | A     |
| I <sub>FSM</sub>   | Non-repetitive Peak Forward Surge Current<br>8.3 ms Single Half-Sine-Wave | 30          |     |     |     |     |     |      | A     |
| T <sub>stg</sub>   | Storage Temperature Range                                                 | -65 to +175 |     |     |     |     |     |      | °C    |
| T <sub>J</sub>     | Operating Junction Temperature                                            | -65 to +175 |     |     |     |     |     |      | °C    |

\*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

### Thermal Characteristics

| Symbol           | Parameter                                | Value | Units |
|------------------|------------------------------------------|-------|-------|
| P <sub>D</sub>   | Power Dissipation                        | 1.8   | W     |
| R <sub>θJA</sub> | Thermal Resistance, Junction to Ambient* | 80    | °C/W  |
| R <sub>θJL</sub> | Thermal Resistance, Junction to Lead*    | 26    | °C/W  |

\*Device mounted on PCB with 0.2 x 0.2" (5.0 x 5.0 mm) copper pad areas.

### Electrical Characteristics T<sub>A</sub> = 25°C unless otherwise noted

| Symbol          | Parameter                                                                                         | Device    |    |    |    |    |     |    | Units    |
|-----------------|---------------------------------------------------------------------------------------------------|-----------|----|----|----|----|-----|----|----------|
|                 |                                                                                                   | 1A        | 1B | 1D | 1G | 1J | 1K  | 1M |          |
| V <sub>F</sub>  | Forward Voltage @ 1.0 A                                                                           | 1.0       |    |    |    |    | 1.2 |    | V        |
| t <sub>rr</sub> | Reverse Recovery Time<br>I <sub>F</sub> = 0.5 A, I <sub>R</sub> = 1.0 A, I <sub>rr</sub> = 0.25 A | 2.0       |    |    |    |    |     |    | μs       |
| I <sub>R</sub>  | Reverse Current @ rated V <sub>R</sub><br>T <sub>A</sub> = 25°C<br>T <sub>A</sub> = 125°C         | 5.0<br>50 |    |    |    |    |     |    | μA<br>μA |
| C <sub>T</sub>  | Total Capacitance<br>V <sub>R</sub> = 4.0 V, f = 1.0 MHz                                          | 15        |    |    |    |    |     |    | pF       |

Typical Characteristics

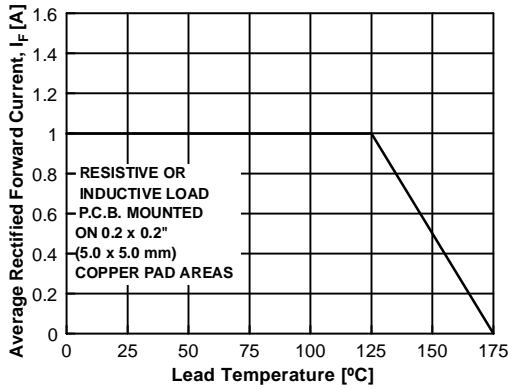


Figure 1. Forward Current Derating Curve

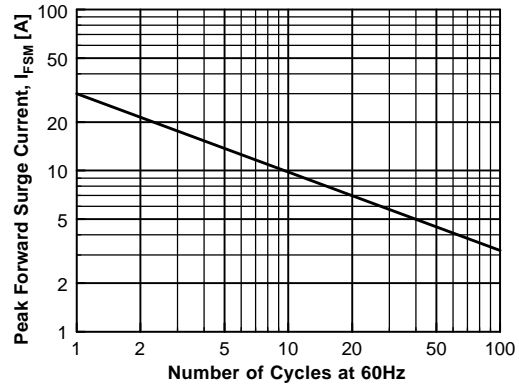


Figure 2. Non-Repetitive Surge Current

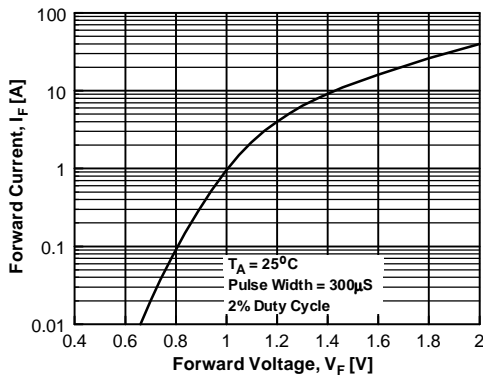


Figure 3. Forward Voltage Characteristics

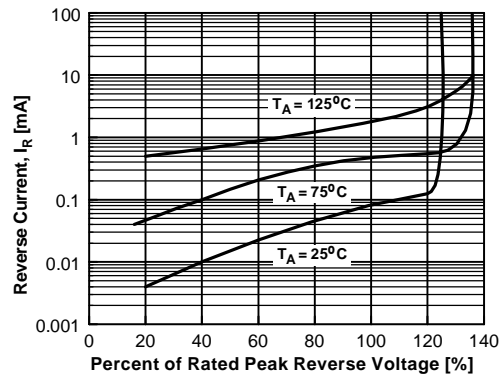


Figure 4. Reverse Current vs Reverse Voltage

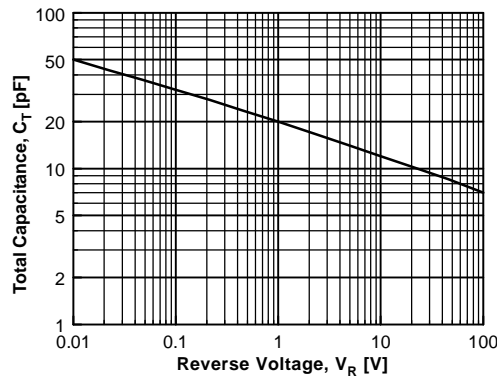


Figure 5. Total Capacitance

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| Bottomless <sup>TM</sup>          | FAST <sub>r</sub> <sup>TM</sup>  | OPTOPLANAR <sup>TM</sup>         | STAR*POWER <sup>TM</sup>     |                   |
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