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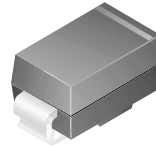


GF1A - GF1M

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*

$T_A = 25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Value | | | | | | | Units |
|-------------|---|-------------|-----|-----|-----|-----|-----|------|------------------|
| | | 1A | 1B | 1D | 1G | 1J | 1K | 1M | |
| V_{RRM} | Maximum Repetitive Reverse Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| $I_{F(AV)}$ | Average Rectified Forward Current, @ $T_L = 125^\circ\text{C}$ | 1.0 | | | | | | | A |
| I_{FSM} | Non-repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave | 30 | | | | | | | A |
| T_{stg} | Storage Temperature Range | -65 to +175 | | | | | | | $^\circ\text{C}$ |
| T_J | Operating Junction Temperature | -65 to +175 | | | | | | | $^\circ\text{C}$ |

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

Thermal Characteristics

| Symbol | Parameter | Value | Units |
|-----------------|--|-------|---------------------------|
| P_D | Power Dissipation | 1.8 | W |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient* | 80 | $^\circ\text{C}/\text{W}$ |
| $R_{\theta JL}$ | Thermal Resistance, Junction to Lead* | 26 | $^\circ\text{C}/\text{W}$ |

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

Electrical Characteristics

$T_A = 25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Device | | | | | | | Units |
|----------|---|-----------|----|----|----|----|-----|----|--------------------------------|
| | | 1A | 1B | 1D | 1G | 1J | 1K | 1M | |
| V_F | Forward Voltage @ 1.0 A | 1.0 | | | | | 1.2 | | V |
| t_{rr} | Reverse Recovery Time $I_F = 0.5\text{ A}, I_R = 1.0\text{ A}, I_{rr} = 0.25\text{ A}$ | 2.0 | | | | | | | μs |
| I_R | Reverse Current @ rated V_R $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$ | 5.0 50 | | | | | | | μA μA |
| C_T | Total Capacitance $V_R = 4.0\text{ V}, f = 1.0\text{ MHz}$ | 15 | | | | | | | pF |

Typical Characteristics



Figure 1. Forward Current Derating Curve

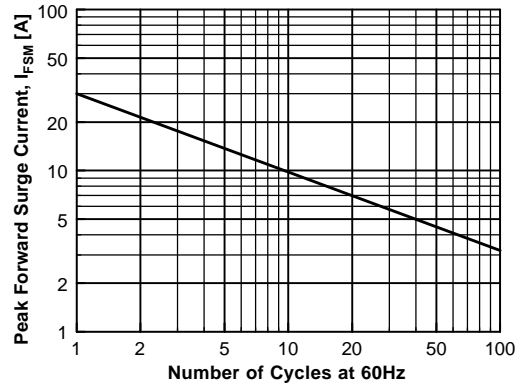


Figure 2. Non-Repetitive Surge Current

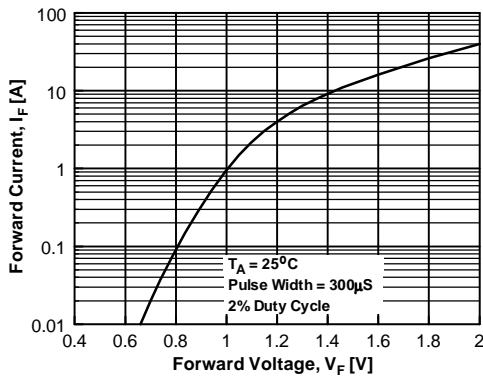


Figure 3. Forward Voltage Characteristics

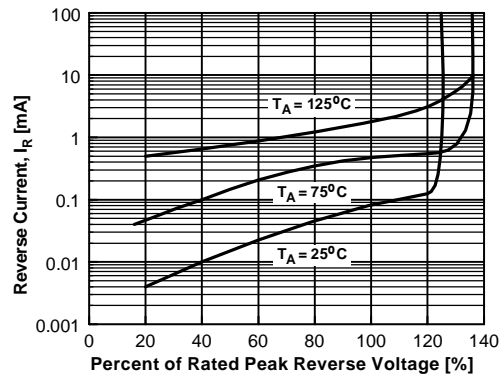


Figure 4. Reverse Current vs Reverse Voltage

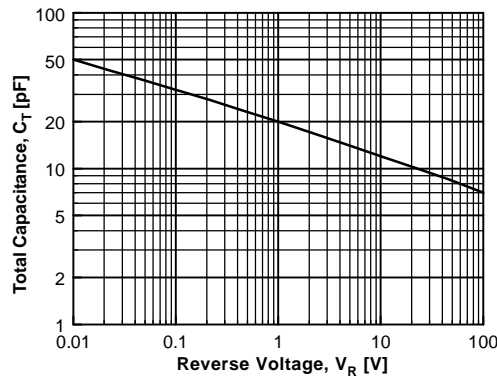


Figure 5. Total Capacitance

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