

**RGF1A
THRU
RGF1M**

Features

- Low Current Leakage
- Metallurgical Bonded Construction
- Glass Passivation Cavity Free Junction
- Capable Of Meeting MIL-S-19500 Environmental Standards
- Fast Recovery Times For High Efficiency

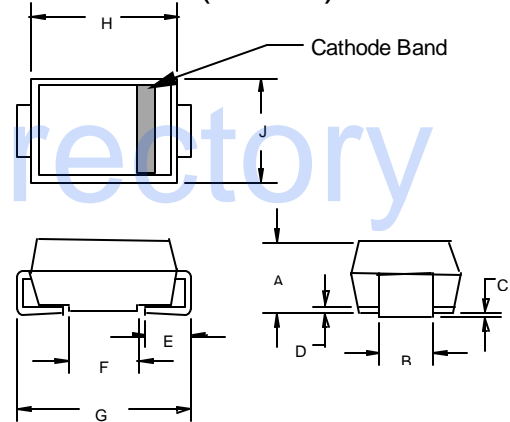
Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +150°C
- Maximum Thermal Resistance; 15°C/W Junction To Ambient

| Microsemi Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------------|----------------|--|---------------------|-----------------------------|
| RGF1A | RGF1A | 50V | 35V | 50V |
| RGF1B | RGF1B | 100V | 70V | 100V |
| RGF1D | RGF1D | 200V | 140V | 200V |
| RGF1G | RGF1G | 400V | 280V | 400V |
| RGF1J | RGF1J | 600V | 420V | 600V |
| RGF1K | RGF1K | 800V | 560V | 800V |
| RGF1M | RGF1M | 1000V | 700V | 1000V |

**Sintered Glass
1 Amp Fast Recovery
Silicon Rectifier
50 to 1000 Volts**

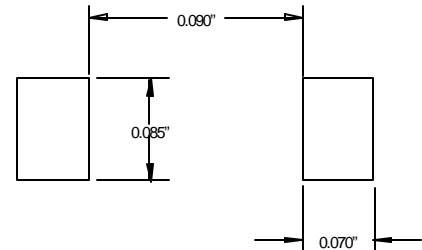
**DO-214AA
(SMBJ)**



| DIM | INCHES | | MM | | NOTE |
|-----|--------|------|------|------|------|
| | MIN | MAX | MIN | MAX | |
| A | .075 | .115 | 1.90 | 2.92 | 1 |
| B | .081 | .087 | 2.06 | 2.21 | |
| C | .004 | .008 | .10 | .20 | |
| D | — | .02 | — | .51 | |
| E | .030 | .060 | .76 | 1.52 | |
| F | .065 | .084 | 1.65 | 2.13 | |
| G | .205 | .220 | 5.21 | 5.59 | |
| H | .160 | .180 | 4.06 | 4.57 | |
| J | .130 | .155 | 3.30 | 3.94 | |

1) Maximum Jeduc Spec is .096" or 2.44 MM

**SUGGESTED SOLDER
PAD LAYOUT**



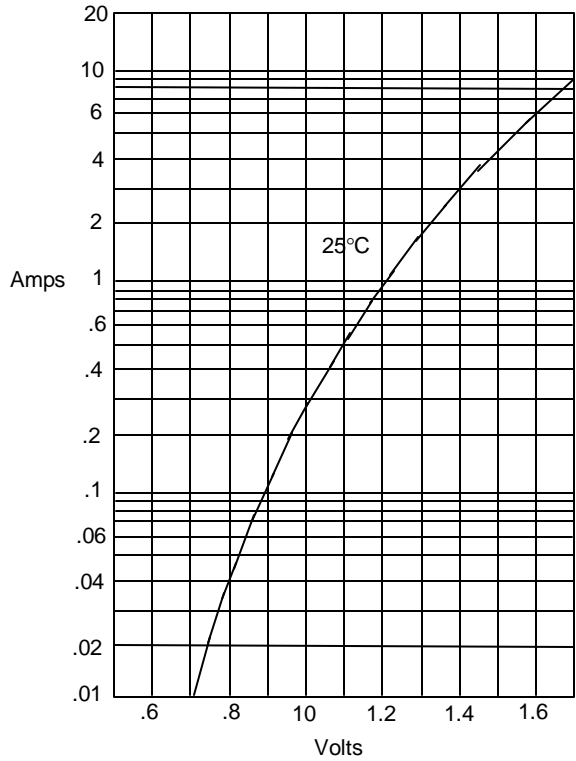
Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|-------------|--------------------------------------|---|
| Average Forward current | $I_{F(AV)}$ | 1.0A | $T_L = 120^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 30A | 8.3ms, half sine |
| Maximum Instantaneous Forward Voltage | V_F | 1.30V | $I_{FM} = 1.0A$; $T_J = 25^\circ\text{C}^*$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 5 μA 100 μA | $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$ |
| Maximum Reverse Recovery Time | T_{rr} | 150ns 250ns 500ns | $I_F = 0.5A$, $I_R = 1.0A$, $I_{rr} = 0.25A$ |
| Typical Junction Capacitance | C_J | 50pF | Measured at 1.0MHz, $V_R = 4.0V$ |

* Pulse test. Pulse width 200 μsec , Duty cycle 2%
 Santa Ana: (714) 979-8220 | Irvine: (949) 941-6300 | Colorado: (303) 469-2161 | Watertown: (617) 926-0404 | Chatsworth: (818) 701-4933
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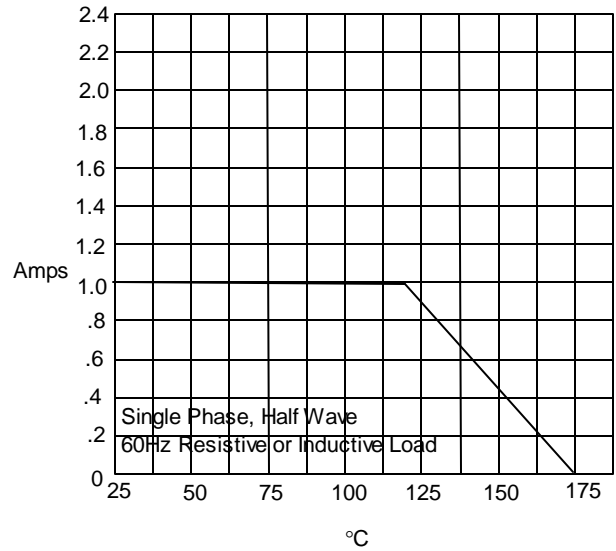
RGF1A thru RGF1M

Figure 1
Typical Forward Characteristics



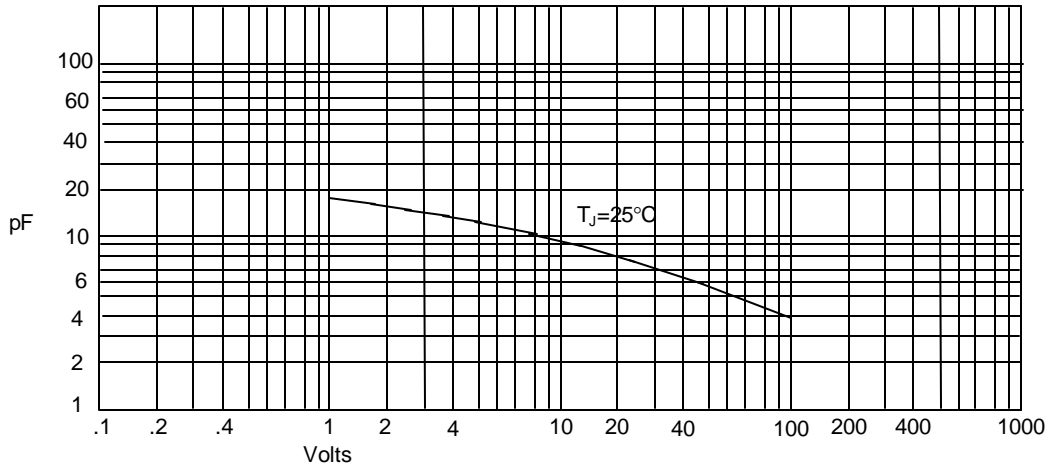
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



Average Forward Rectified Current - Amperes
versus

Figure 3
Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

RGF1A thru RGF1M

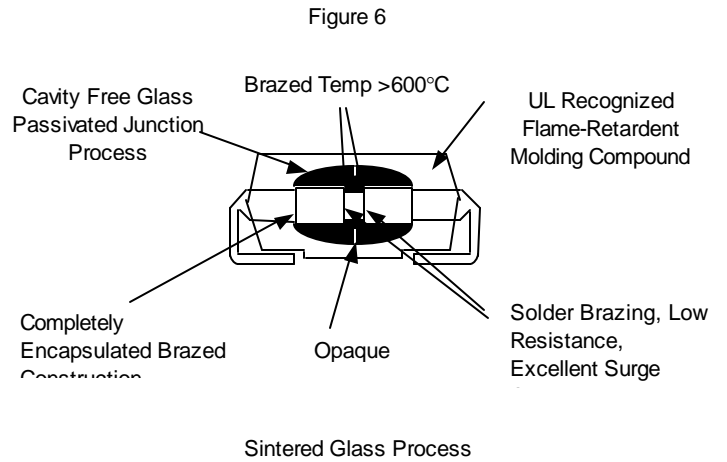
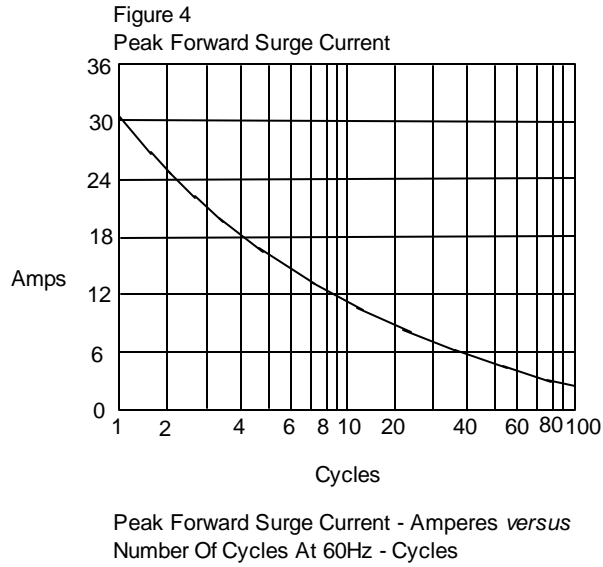
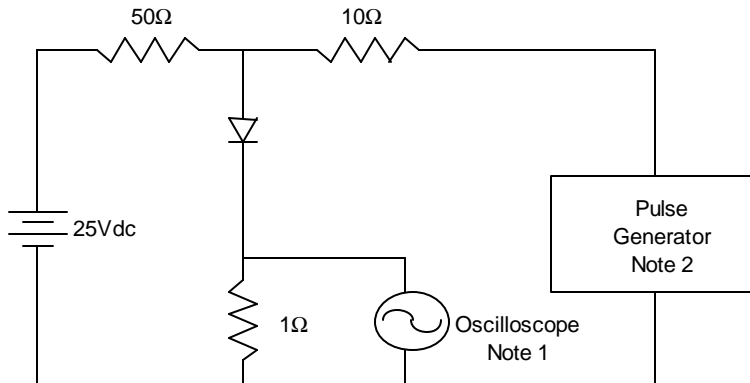


Figure 7
Reverse Recovery Time Characteristic And Test Circuit Diagram



Notes:

1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

