

# GF1A - GF1M

**PRV : 50 - 1000 Volts**  
**Io : 1.0 Ampere**

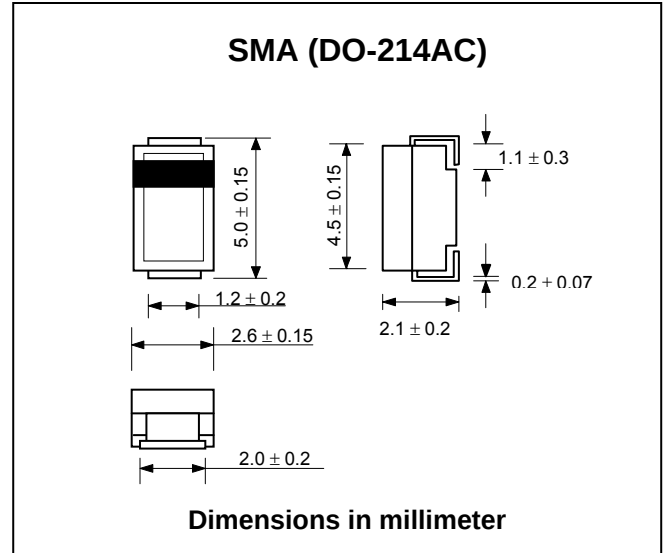
## FEATURES :

- \* Glass passivated chip
- \* High current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Pb / RoHS Free

## MECHANICAL DATA :

- \* Case : SMA Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Lead Formed for Surface Mount
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.067 gram

## GLASS PASSIVATED JUNCTION SILICON SURFACE MOUNT



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specific.  
 Single phase, half wave, 60 Hz, resistive or inductive load  
 For capacitive load, derate current by 20%

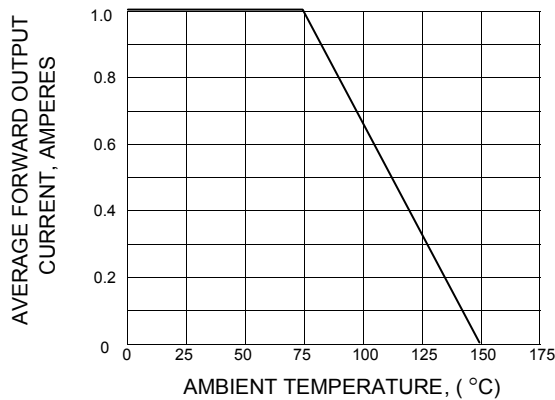
| RATING                                                                                                                            | SYMBOL      | GF1A          | GF1B | GF1D | GF1G | GF1J | GF1K | GF1M | UNIT               |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|------|------|------|------|------|------|--------------------|
| Maximum Repetitive Peak Reverse Voltage                                                                                           | $V_{RRM}$   | 50            | 100  | 200  | 400  | 600  | 800  | 1000 | V                  |
| Maximum RMS Voltage                                                                                                               | $V_{RMS}$   | 35            | 70   | 140  | 280  | 420  | 560  | 700  | V                  |
| Maximum DC Blocking Voltage                                                                                                       | $V_{DC}$    | 50            | 100  | 200  | 400  | 600  | 800  | 1000 | V                  |
| Maximum Average Forward Current $T_a = 75\text{ }^{\circ}\text{C}$                                                                | $I_{F(AV)}$ | 1.0           |      |      |      |      |      |      | A                  |
| Peak Forward Surge Current<br>8.3ms Single half sine wave Superimposed<br>on rated load (JEDEC Method)                            | $I_{FSM}$   | 30            |      |      |      |      |      |      | A                  |
| Maximum Forward Voltage at $I_F = 1.0$ Amp.                                                                                       | $V_F$       | 1.0           |      |      |      |      |      |      | V                  |
| Maximum DC Reverse Current $T_a = 25\text{ }^{\circ}\text{C}$<br>at rated DC Blocking Voltage $T_a = 100\text{ }^{\circ}\text{C}$ | $I_R$       | 5.0           |      |      |      |      |      |      | $\mu\text{A}$      |
|                                                                                                                                   | $I_{R(H)}$  | 50            |      |      |      |      |      |      | $\mu\text{A}$      |
| Typical Reverse Recovery Time ( Note 1 )                                                                                          | $T_{rr}$    | 2.0           |      |      |      |      |      |      | $\mu\text{s}$      |
| Typical Junction Capacitance (Note2)                                                                                              | $C_J$       | 8             |      |      |      |      |      |      | pF                 |
| Junction Temperature Range                                                                                                        | $T_J$       | - 65 to + 150 |      |      |      |      |      |      | $^{\circ}\text{C}$ |
| Storage Temperature Range                                                                                                         | $T_{STG}$   | - 65 to + 150 |      |      |      |      |      |      | $^{\circ}\text{C}$ |

### Notes :

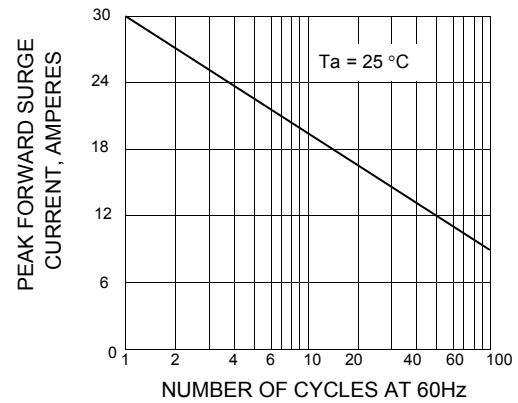
- (1) Reverse Recovery Test Conditions :  $I_F = 0.5\text{ A}$ ,  $I_R = 1.0\text{ A}$ ,  $I_{rr} = 0.25\text{ A}$ .
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Vdc

## RATING AND CHARACTERISTIC CURVES ( GF1A - GF1M )

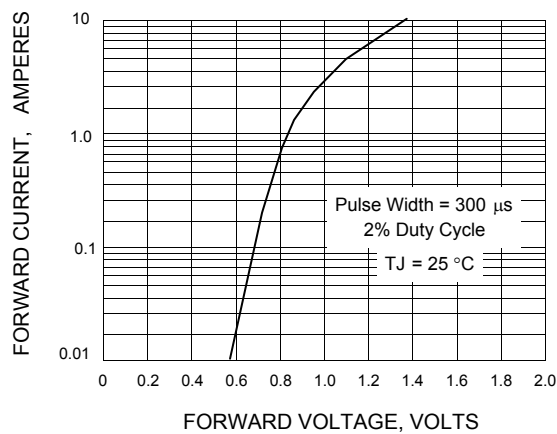
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



**FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

