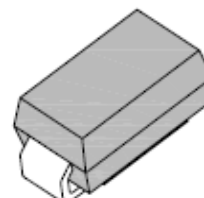


1.0A Sintered Glass Passivated Ultra Fast Rectifier (SGP®)

Features

- Sintered glass passivated (SGP®) rectifier chip
- Glass passivated cavity-free junction
- Ideal for surface mount automotive applications
- Superfast recovery time for high efficiency
- Built-in strain relief
- Easy pick and place
- High temperature soldering guaranteed:260°C/10 seconds, at terminals
- RoHS Compliance



SMA



Mechanical Data

| | |
|-------------------|--|
| Case: | JEDEC DO-214AC(SMA) molded plastic over passivated chip |
| Epoxy: | Plastic package has UL flammability classification 94V-0 |
| Terminals: | Tin plated, solderable per MIL-STD-750, Method 2026 |
| Polarity: | Color band denotes cathode end |
| Weight: | 0.002 ounces, 0.064 gram |

Maximum Ratings and Electrical Characteristics ($T_A=25^{\circ}C$ unless noted otherwise)

| Symbol | Description | UGF1A | UGF1B | UGF1D | UGF1G | UGF1J | UGF1K | UGF1M | Unit | Conditions |
|--------------------------|---|-------|-------|-------|-------|-------|-------|-------|------|---|
| V_{RRM} | Maximum Repetitive Peak Reverse Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| V_{RMS} | Maximum RMS Voltage | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V | |
| V_{DC} | Maximum DC Blocking Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| I_{F(AV)} | Maximum Average Forward Rectified Current | 1.0 | | | | | | | A | T _L =75° C |
| I_{FSM} | Peak Forward Surge Current | 30 | | | | | | | A | 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) |

1.0A Sintered Glass Passivated Ultra Fast Rectifier (SGP®)

UGF1A - UGF1M

| Symbol | Description | UGF1A | UGF1B | UGF1D | UGF1G | UGF1J | UGF1K | UGF1M | Unit | Conditions |
|---------------------------------------|---|-------------|-------|-------|-------|-------|-------|--------|--|------------------------|
| V_F | Maximum Instantaneous Forward Voltage | 1.0 | | | 1.25 | 1.7 | | | V | I _F =1.0A |
| I_R | Maximum DC Reverse Current at Rated DC Blocking Voltage | 5 | | | 5 | | | μA | | T _A =25° C |
| | | 30 | | | 50 | | | | | T _A =125° C |
| | | 50 | | | - | | | | | T _A =150° C |
| T_{rr} | Maximum Reverse Recovery Time | 50 | | | 75 | | | nS | I _F =0.5A, I _R =1.0A, I _{rr} =0.25A | |
| C_J | Typical Junction Capacitance | 15 | | | | | | pF | V _R =4V, f=1MHz | |
| R_{thJA} | Typical Thermal Resistance | 75 | | | | | | °C / W | Note | |
| R_{thJL} | | 25 | | | | | | | | |
| T_J, T_{STG} | 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" (5.0x5.0mm) copper pad areas.

Typical Characteristics Curves

Fig.1- Forward Current Derating Curve

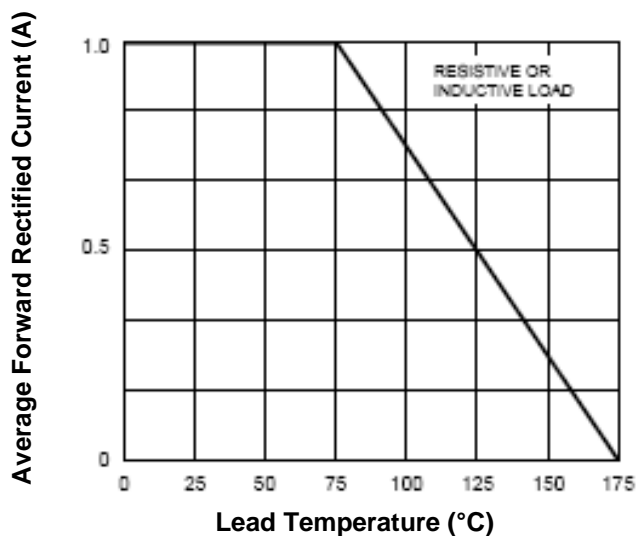
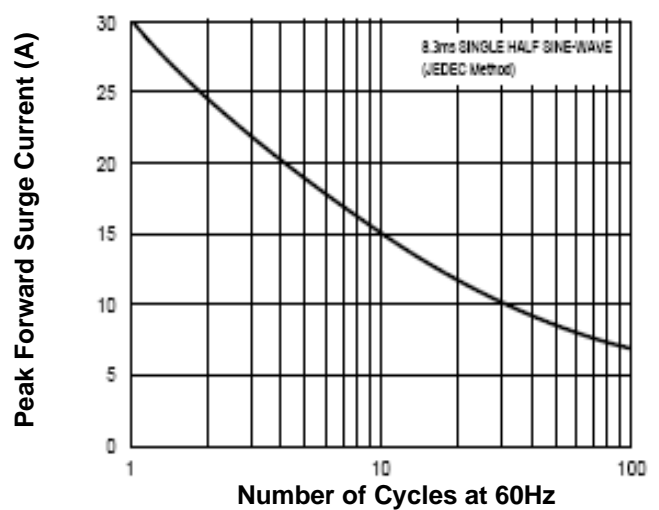


Fig.2-Max. Non-Repetitive Peak Forward Surge Current



1.0A Sintered Glass Passivated Ultra Fast Rectifier (SGP[®])

UGF1A - UGF1M

Fig.3- Typical Instantaneous Forward Characteristics

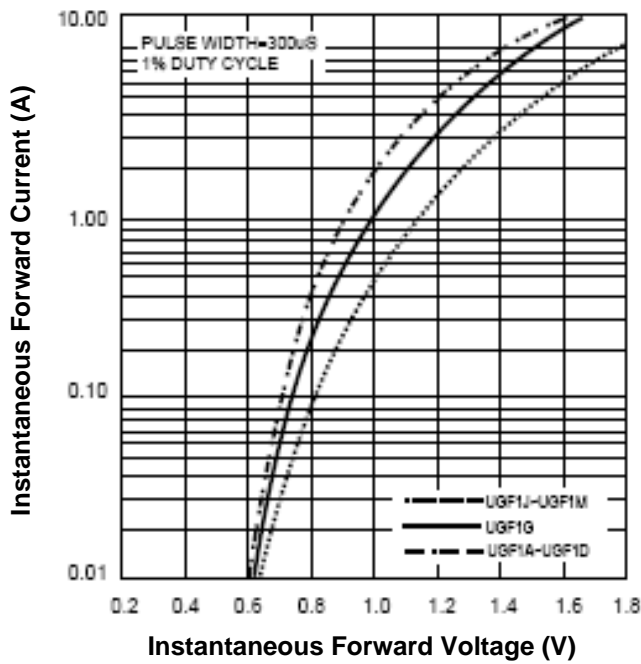


Fig.4-Typical Reverse Characteristics

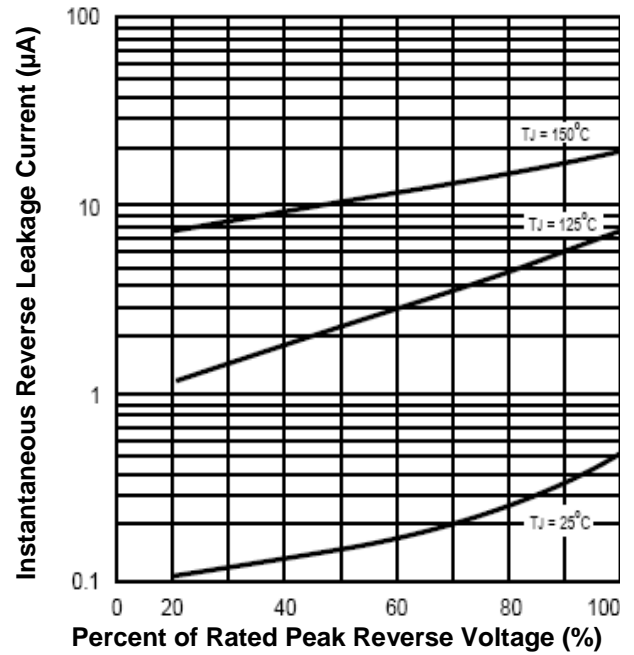
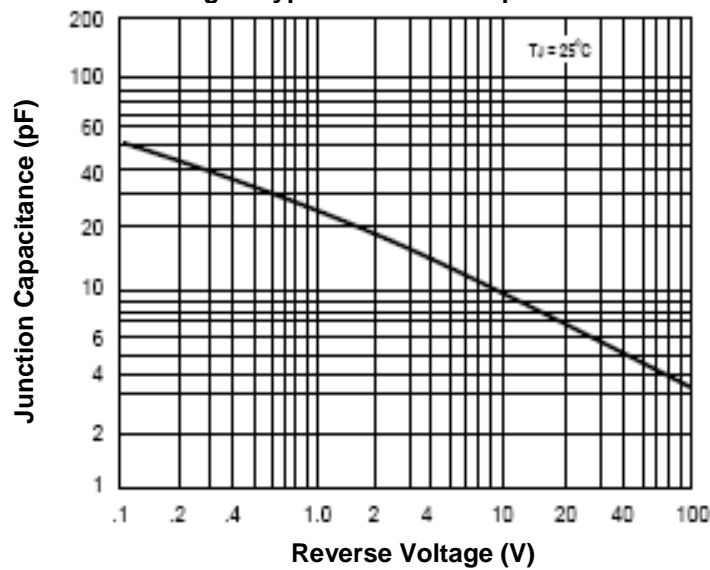


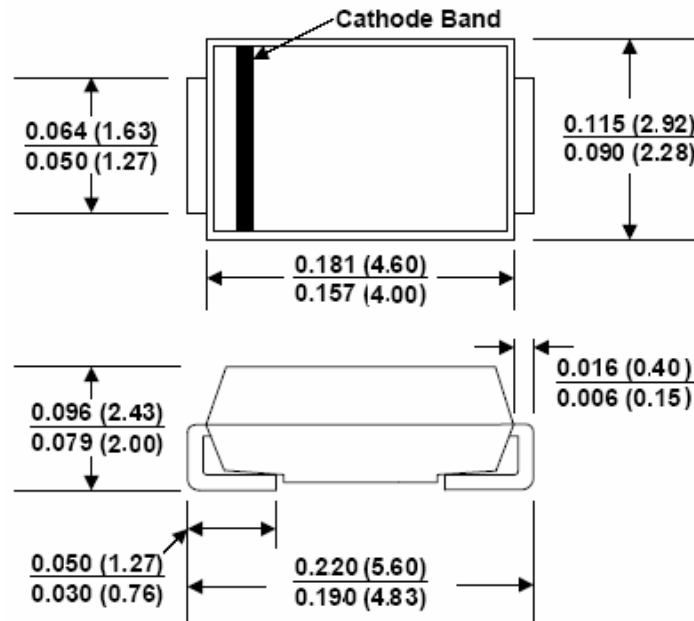
Fig.5- Typical Junction Capacitance



1.0A Sintered Glass Passivated Ultra Fast Rectifier (SGP[®])

UGF1A - UGF1M

Dimensions in inches (mm)



SMA

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