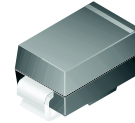


General Purpose Rectifiers (Glass Passivated)

GF1A, GF1B, GF1D, GF1G, GF1J, GF1K, GF1M

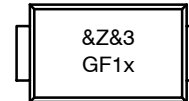


COLOR BAND DENOTES CATHODE
SMA (DO-214AC)
CASE 403AE

Features

- Low Forward Voltage Drop
- High Current Capability
- Easy Pick and Place
- High Surge Current Capability
- These Devices are Pb-Free, Halide Free and are RoHS Compliant

MARKING DIAGRAM



&Z = Assembly Plant Code
 &3 = 3-Digit Date Code
 GF1x = Specific Device Code
 (x = A, B, D, G, J, K, M)

ORDERING INFORMATION

| Device | Package | Shipping [†] |
|--------|----------------------------------|-----------------------|
| GF1A | SMA (Pb-Free, Halide Free) | 7500 / Tape & Reel |
| GF1B | | |
| GF1D | | |
| GF1G | | |
| GF1J | | |
| GF1K | | |
| GF1M | | |

[†]For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, [BRD8011/D](#).

GF1A, GF1B, GF1D, GF1G, GF1J, GF1K, GF1M

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

| Symbol | Parameter | Value | | | | | | | Unit |
|--------------------|---|-------------|-----|-----|-----|-----|-----|------|------|
| | | 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°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 | | | | | | | °C |
| T _J | Operating Junction Temperature | -65 to +175 | | | | | | | °C |

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

THERMAL CHARACTERISTICS

| Symbol | Parameter | Value | Unit |
|------------------|--|-------|------|
| P _D | Power Dissipation | 1.8 | W |
| R _{θJA} | Thermal Resistance, Junction to Ambient* | 80 | °C/W |
| R _{θJL} | 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_A = 25°C unless otherwise noted)

| Symbol | Parameter | Device | | | | | | | Unit |
|-----------------|---|-------------|----|----|----|----|-----|----|----------|
| | | 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 A, I _R = 1.0 A, I _{rr} = 0.25 A | 2.0 | | | | | | | µs |
| I _R | Reverse Current @ Rated V _R T _A = 25°C T _A = 125°C | 5.0 50.0 | | | | | | | µA µA |
| C _T | Total Capacitance V _R = 4.0 V, f = 1.0 MHz | 15 | | | | | | | pF |

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

GF1A, GF1B, GF1D, GF1G, GF1J, GF1K, GF1M

TYPICAL CHARACTERISTICS

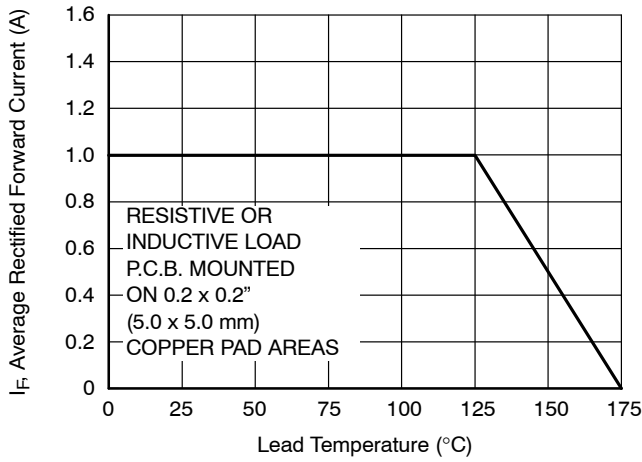


Figure 2. Forward Current Derating Curve

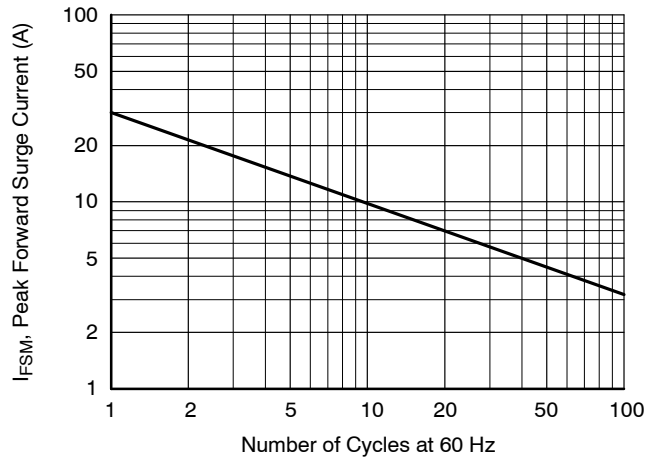


Figure 3. Non-Repetitive Surge Current

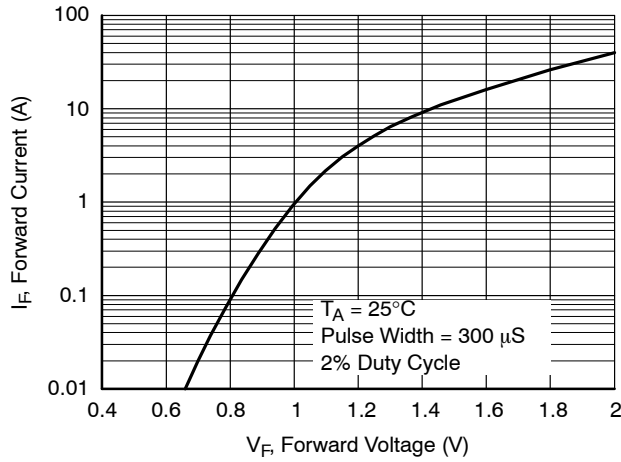


Figure 1. Forward Voltage Characteristics

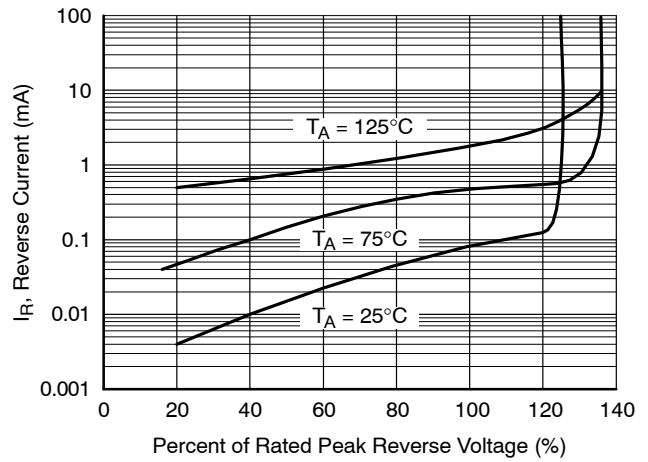


Figure 4. Reverse Current vs. Reverse Voltage

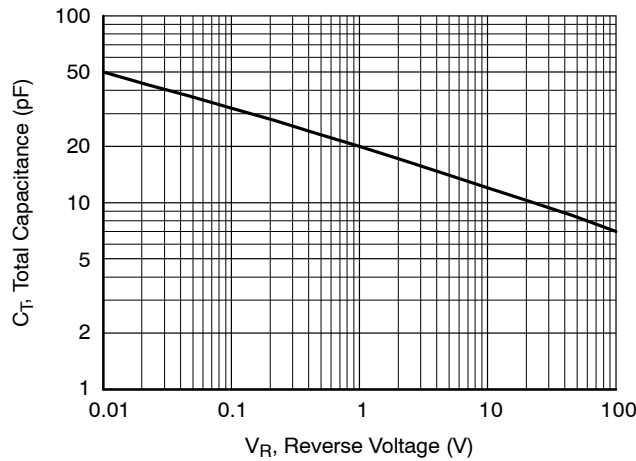


Figure 5. Total Capacitance

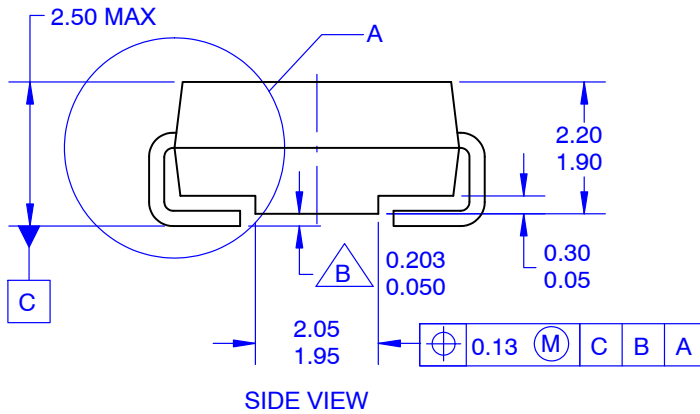
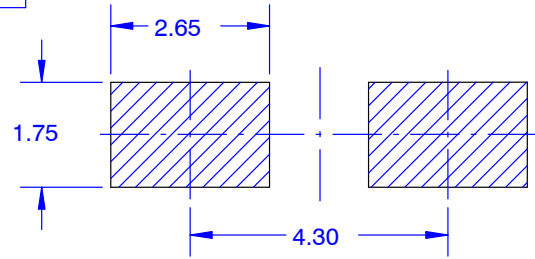
MECHANICAL CASE OUTLINE
PACKAGE DIMENSIONS

ON Semiconductor®



SMA
CASE 403AE
ISSUE O

DATE 31 AUG 2016



NOTES:

- A. EXCEPT WHERE NOTED, CONFORMS TO JEDEC DO214 VARIATION AC.
- B. DOES NOT COMPLY JEDEC STANDARD VALUE.
- C. ALL DIMENSIONS ARE IN MILLIMETERS.
- D. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH AND TIE BAR PROTRUSIONS.
- E. DIMENSIONS AND TOLERANCE AS PER ASME Y14.5-2009.
- E. LAND PATTERN STD. DIOM5025X231M



| | | |
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