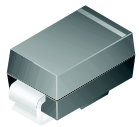
# Fast Rectifiers (Glass Passivated)

# EGF1A, EGF1B, EGF1C, EGF1D



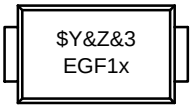
COLOR BAND DENOTES CATHODE

**SMA (DO−214AC)**
**CASE 403AE**

### Features

- Low Forward Voltage Drop
- Low Profile Package
- Fast Switching for High Efficiency
- These Devices are Pb−Free, Halide Free and are RoHS Compliant

### MARKING DIAGRAM




$Y = Logo
&Z = Assembly Plant Code
&3 = 3−Digit Date Code
EGF1x = Specific Device Code (x = A, B, C, D)

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

| Symbol | Parameter | Value | | | | Unit |
|---|---|---|---|---|---|---|
| | | 1A | 1B | 1C | 1D | |
| $V_{RRM}$ | Maximum Repetitive Reverse Voltage | 50 | 100 | 150 | 200 | V |
| $I_{F(AV)}$ | Average Rectified Forward Current, @ $T_L$ = 100°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 |
|---|---|---|---|
| $V_{RRM}$ | Maximum Repetitive Reverse Voltage | 200 | V |
| $P_D$ | Power Dissipation | 2.0 | W |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient* | 85 | °C/W |
| $R_{\theta JL}$ | Thermal Resistance, Junction to Lead* | 30 | °C/W |

*Device mounted on FR−4 PCB 0.013 mm.

### ELECTRICAL CHARACTERISTICS ($T_A$ = 25°C unless otherwise noted)

| Symbol | Parameter | Device | | | | Unit |
|---|---|---|---|---|---|---|
| | | 1A | 1B | 1C | 1D | |
| $V_F$ | Forward Voltage @ 1.0 A | 1.0 | | | | V |
| $t_{rr}$ | Reverse Recovery Time $I_F$ = 0.5 A, $I_R$ = 1.0 A, $I_{RR}$ = 0.25 A | 50 | | | | ns |
| $I_R$ | Reverse Current @ Rated $V_R$ $T_A$ = 25°C $T_A$ = 100°C | 10 100 | | | | 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.

### ORDERING INFORMATION

| Device | Package | Shipping† |
|---|---|---|
| EGF1A | SMA (Pb−Free, Halide Free) | 7500 / Tape & Reel |
| EGF1B | | |
| EGF1C | | |
| EGF1D | | |

†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.

## TYPICAL CHARACTERISTICS

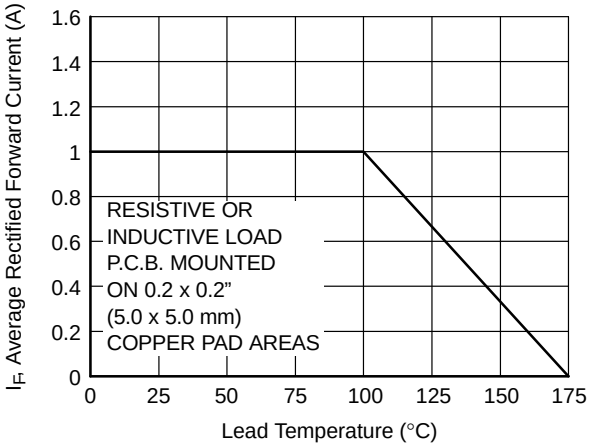



**Figure 1. Forward Current Derating Curve**

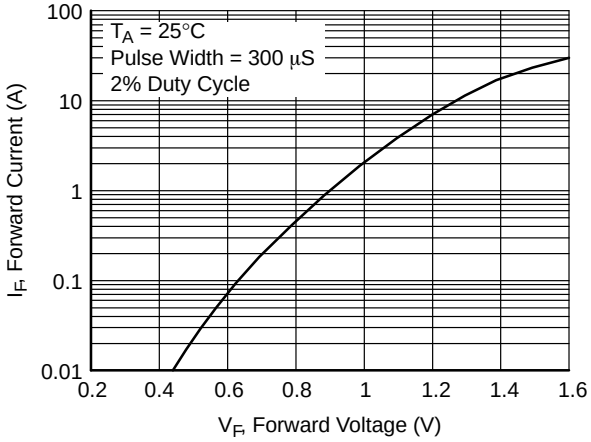



**Figure 2. Forward Voltage Characteristics**

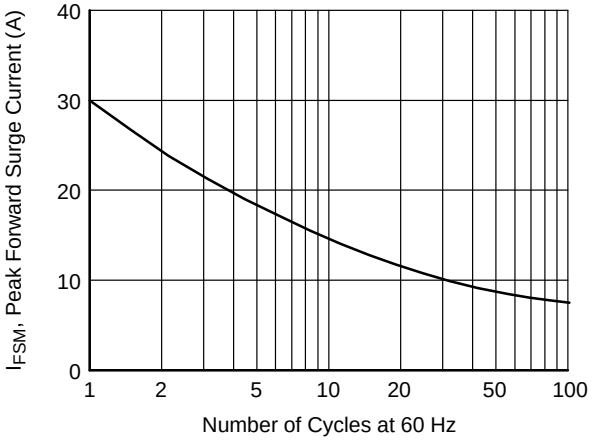



**Figure 3. Non−Repetitive Surge Current**

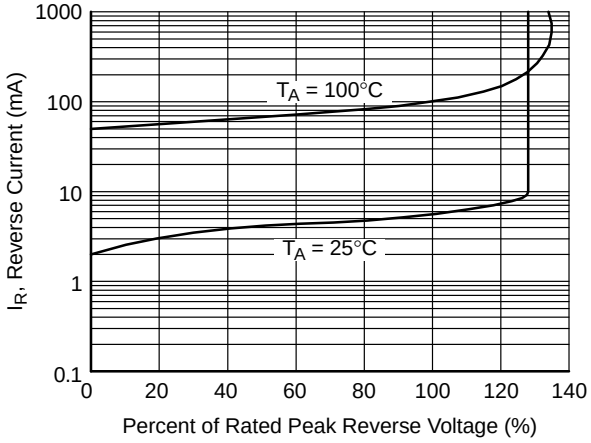



**Figure 4. Reverse Current vs. Reverse Voltage**

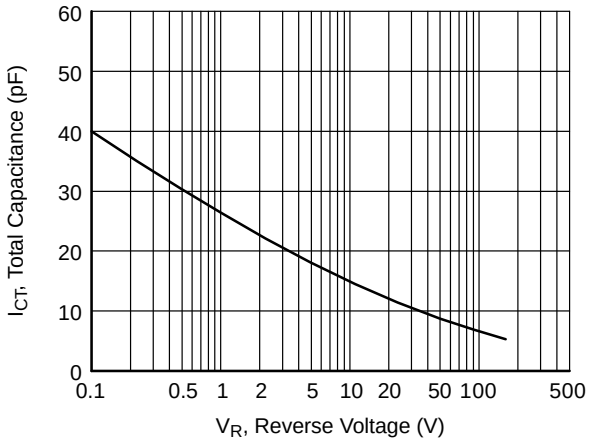
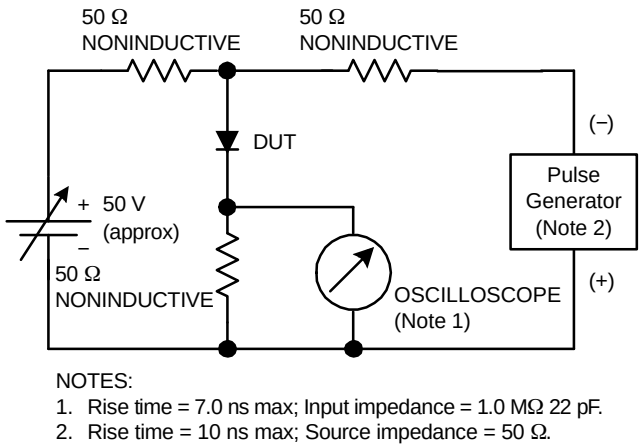



**Figure 5. Total Capacitance**

## REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM




NOTES:
1. Rise time = 7.0 ns max; Input impedance = 1.0 MΩ 22 pF.
2. Rise time = 10 ns max; Source impedance = 50 Ω.

**Figure 6. Test Circuit Diagram**

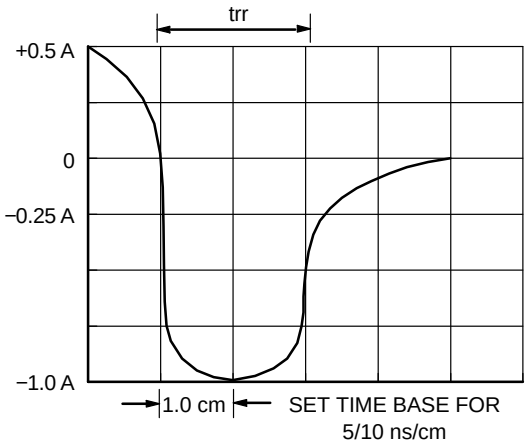
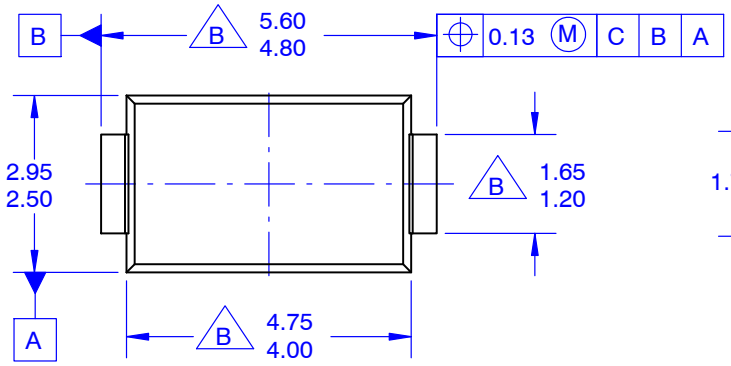


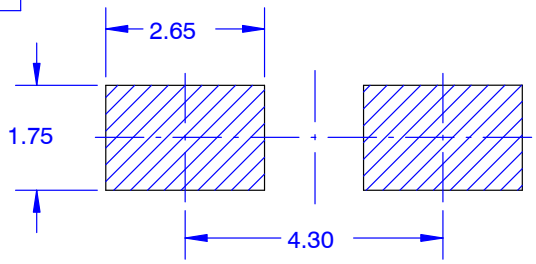

**Figure 7. Reverse Recovery Time Characteristic**

**SMA**
CASE 403AE
ISSUE O

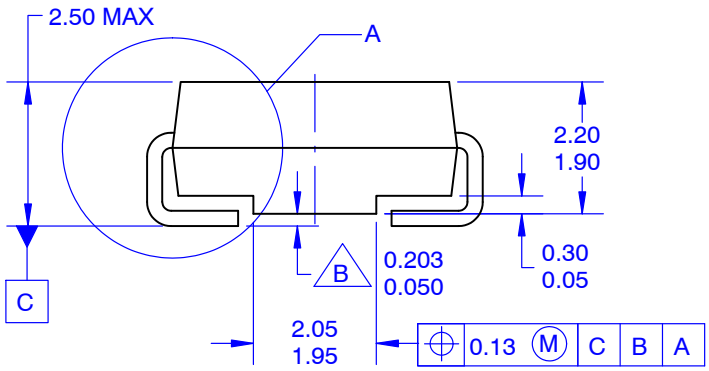
DATE 31 AUG 2016




TOP VIEW



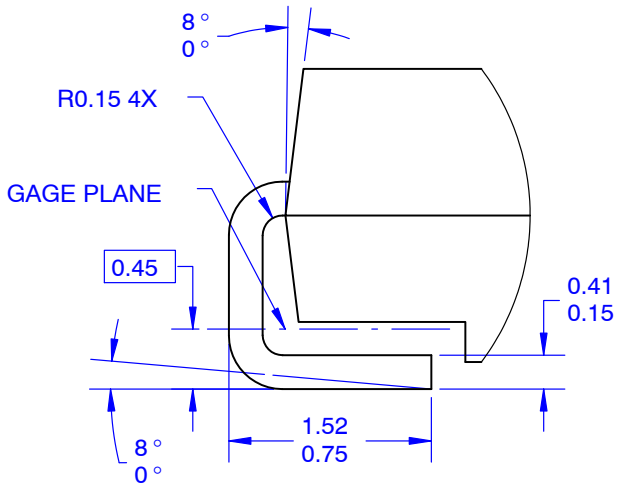

LAND PATTERN RECOMMENDATION




SIDE VIEW

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




DETAIL A
SCALE 20 : 1

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