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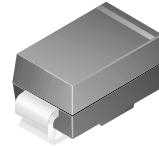
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# EGF1A - EGF1D

## Features

- Low forward voltage drop.
- Low profile package.
- Fast switching for high efficiency.



**SMA/DO-214AC**  
COLOR BAND DENOTES CATHODE

## Fast Rectifiers (Glass Passivated)

### Absolute Maximum Ratings\* T<sub>A</sub> = 25°C unless otherwise noted

| Symbol             | Parameter   | Value       |     |     |     | Units |
|--------------------|---|-------------|-----|-----|-----|-------|
|                    |   | 1A          | 1B  | 1C  | 1D  |       |
| V <sub>RRM</sub>   | Maximum Repetitive Reverse Voltage  | 50          | 100 | 150 | 200 | V     |
| I <sub>F(AV)</sub> | Average Rectified Forward Current, @ T <sub>L</sub> = 100°C               | 1.0         |     |     |     | A     |
| I <sub>FSM</sub>   | Non-repetitive Peak Forward Surge Current<br>8.3 ms Single Half-Sine-Wave | 30          |     |     |     | A     |
| T <sub>stg</sub>   | Storage Temperature Range   | -65 to +175 |     |     |     | °C    |
| T <sub>J</sub>     | Operating Junction Temperature  | -65 to +175 |     |     |     | °C    |

\* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

## Thermal Characteristics

| Symbol           | Parameter                                | Value | Units |
|------------------|--|-------|-------|
| P <sub>D</sub>   | Power Dissipation                        | 2.0   | W     |
| R <sub>θJA</sub> | Thermal Resistance, Junction to Ambient* | 85    | °C/W  |
| R <sub>θJL</sub> | Thermal Resistance, Junction to Lead*    | 30    | °C/W  |

\* Device mounted on FR-4 PCB 0.013 mm.

## Electrical Characteristics T<sub>A</sub> = 25°C unless otherwise noted

| Symbol          | Parameter   | Device    |    |    |    | Units    |
|-----------------|---|-----------|----|----|----|----------|
|                 |   | 1A        | 1B | 1C | 1D |          |
| V <sub>F</sub>  | Forward Voltage @ 1.0 A   | 1.0       |    |    |    | V        |
| t <sub>rr</sub> | Reverse Recovery Time<br>I <sub>F</sub> = 0.5 A, I <sub>R</sub> = 1.0 A, I <sub>RR</sub> = 0.25 A | 50        |    |    |    | ns       |
| I <sub>R</sub>  | Reverse Current @ rated V <sub>R</sub><br>T <sub>A</sub> = 25°C<br>T <sub>A</sub> = 100°C         | 10<br>100 |    |    |    | μA<br>μA |
| C <sub>T</sub>  | Total Capacitance<br>V <sub>R</sub> = 4.0 V, f = 1.0 MHz  | 15        |    |    |    | pF       |

## Typical Characteristics

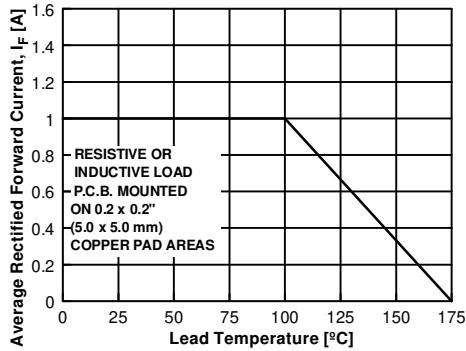


Figure 1. Forward Current Derating Curve

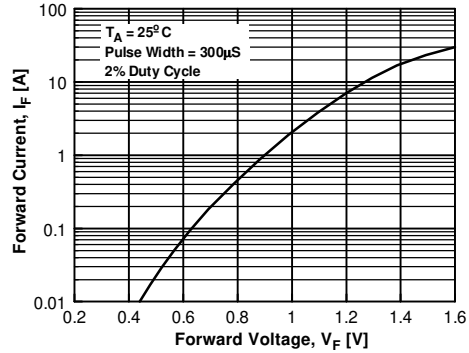


Figure 2. Forward Voltage Characteristics

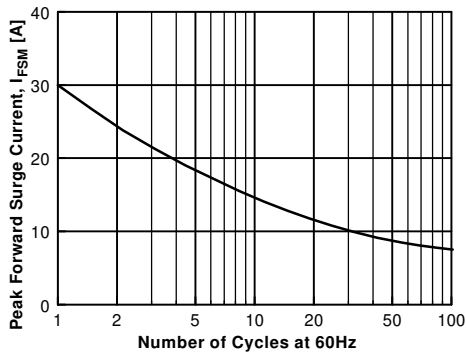


Figure 3. Non-Repetitive Surge Current

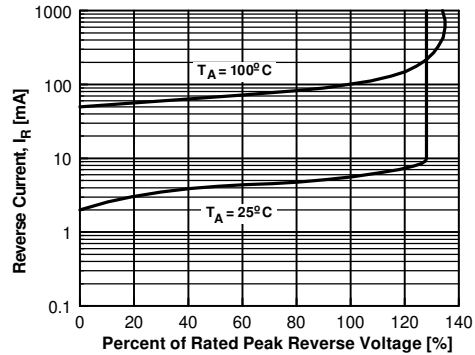


Figure 4. Reverse Current vs Reverse Voltage

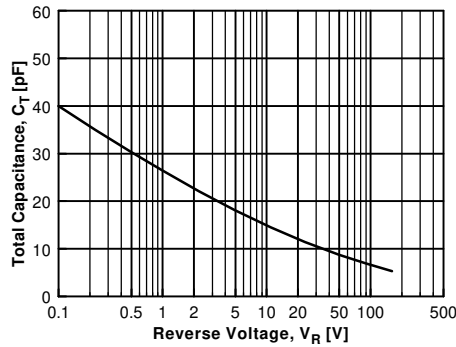
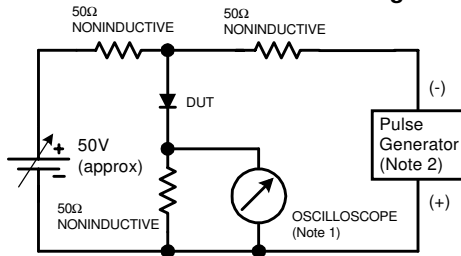
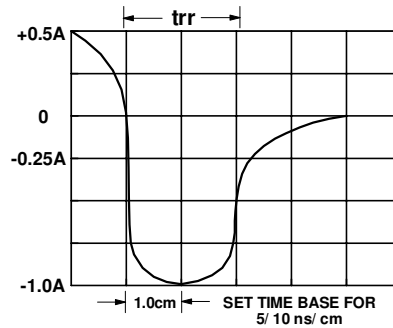


Figure 5. Total Capacitance



NOTES:

1. Rise time = 7.0 ns max; Input impedance = 1.0 megaohm 22 pf.
2. Rise time = 10 ns max; Source impedance = 50 ohms.



Reverse Recovery Time Characteristic and Test Circuit Diagram

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