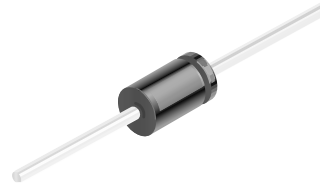


## EGP30A - EGP30K

### Features

- Glass passivated cavity-free junction.
- High surge current capability.
- Low leakage current.
- Superfast recovery time for high efficiency.
- Low forward voltage, high current capability.



**DO-201AD**  
COLOR BAND DENOTES CATHODE

### Fast Rectifiers (Glass Passivated)

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

| Symbol             | Parameter   | Value       |     |     |     |     |     |     |     | Units |
|--------------------|---|-------------|-----|-----|-----|-----|-----|-----|-----|-------|
|                    |   | 30A         | 30B | 30C | 30D | 30F | 30G | 30J | 30K |       |
| V <sub>R</sub>     | Breakdown Voltage   | 50          | 100 | 150 | 200 | 300 | 400 | 600 | 800 | V     |
| I <sub>F(AV)</sub> | Average Rectified Forward Current,<br>.375" lead length @ T <sub>A</sub> = 55°C | 3.0         |     |     |     |     |     |     |     | A     |
| I <sub>FSM</sub>   | Non-repetitive Peak Forward Surge Current<br>8.3 ms Single Half-Sine-Wave       | 125         |     |     |     |     |     |     |     | A     |
| T <sub>stg</sub>   | Storage Temperature Range   | -65 to +150 |     |     |     |     |     |     |     | °C    |
| T <sub>J</sub>     | Operating Junction Temperature  | -65 to +150 |     |     |     |     |     |     |     | °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                       | 6.25  | W     |
| R <sub>θJA</sub> | Thermal Resistance, Junction to Ambient | 20    | °C/W  |
| R <sub>θJL</sub> | Thermal Resistance, Junction to Lead    | 8.5   | °C/W  |

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

| Symbol          | Parameter   | Device |     |     |      |     |     |     |     | Units    |
|-----------------|---|--------|-----|-----|------|-----|-----|-----|-----|----------|
|                 |   | 30A    | 30B | 30C | 30D  | 30F | 30G | 30J | 30K |          |
| V <sub>F</sub>  | Forward Voltage @ 3.0 A   | 0.95   |     |     | 1.25 |     | 1.7 |     |     | 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     |     |     |      |     | 75  |     |     | ns       |
| I <sub>R</sub>  | Reverse Current @ rated V <sub>R</sub><br>T <sub>A</sub> = 25°C<br>T <sub>A</sub> = 125°C         | 5.0    |     |     |      | 100 |     |     |     | μA<br>μA |
| C <sub>T</sub>  | Total Capacitance<br>V <sub>R</sub> = 4.0 V, f = 1.0 MHz  | 95     |     |     |      | 75  |     |     |     | pF       |

### Typical Characteristics

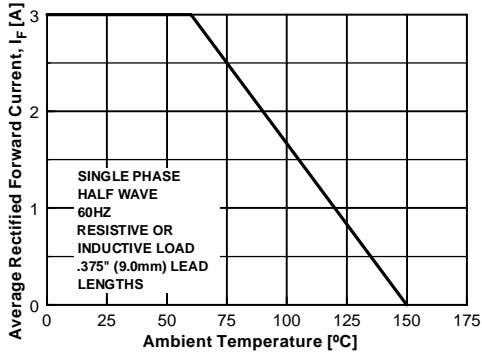


Figure 1. Forward Current Derating Curve

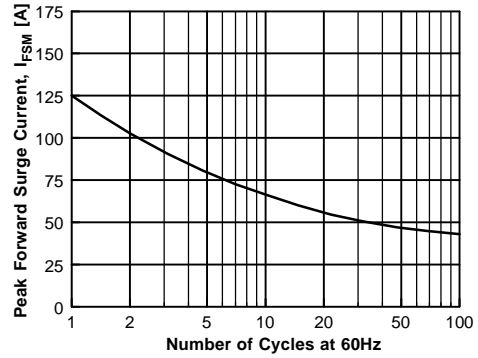


Figure 2. Non-Repetitive Surge Current

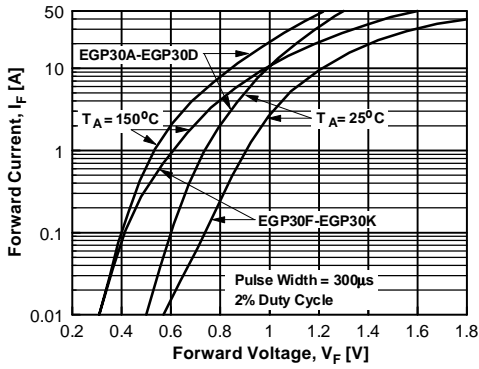


Figure 3. Forward Voltage Characteristics

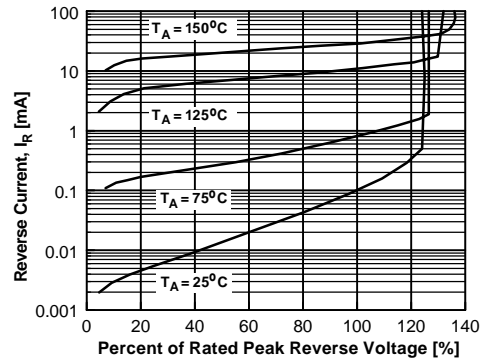


Figure 4. Reverse Current vs Reverse Voltage

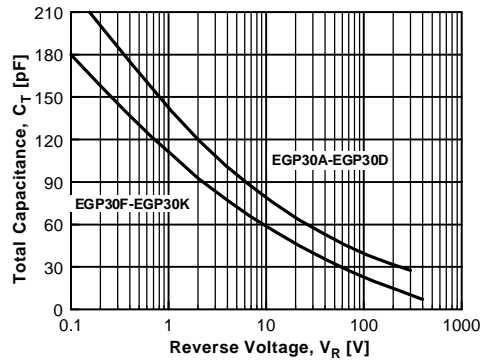
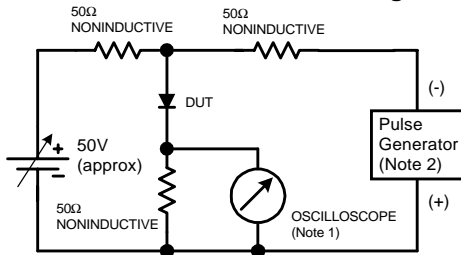
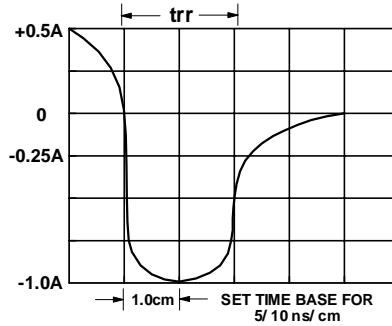


Figure 5. Total Capacitance



- 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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