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# EGP30A - EGP30K

## 3.0 Ampere Glass Passivated High Efficiency Rectifiers

### 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 Glass case**  
COLOR BAND DENOTES CATHODE

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

| Symbol                            | Parameter   | Value      | Units      |
|-----------------------------------|---|------------|------------|
| I <sub>O</sub>                    | Average Rectified Current<br>.375 " lead length @ T <sub>L</sub> = 55°C                                 | 3.0        | A          |
| i <sub>f(surge)</sub>             | Peak Forward Surge Current<br>8.3 ms single half-sine-wave<br>Superimposed on rated load (JEDEC method) | 125        | A          |
| P <sub>D</sub>                    | Total Device Dissipation<br>Derate above 25°C   | 6.25<br>50 | W<br>mW/°C |
| 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       |
| T <sub>J</sub> , T <sub>STG</sub> | Junction and Storage Temperature Range  | -65 ~ 150  | °C         |

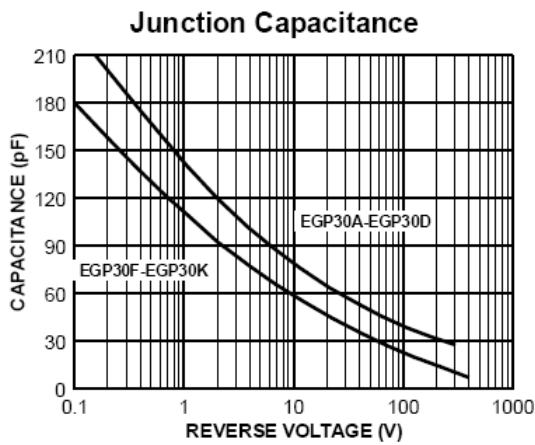
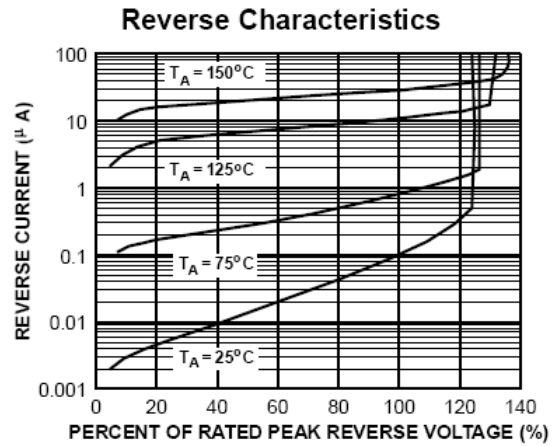
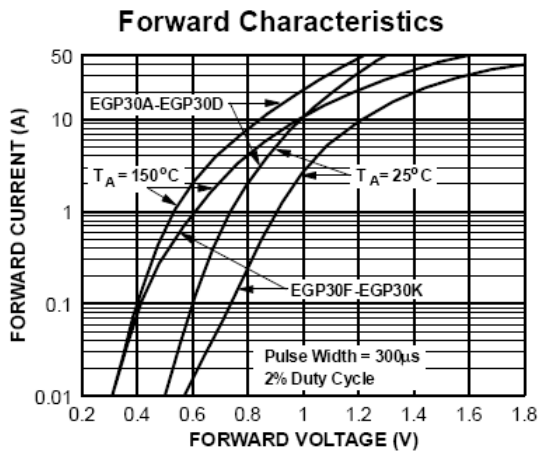
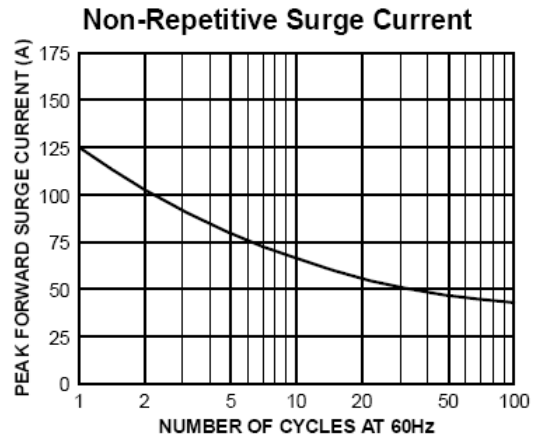
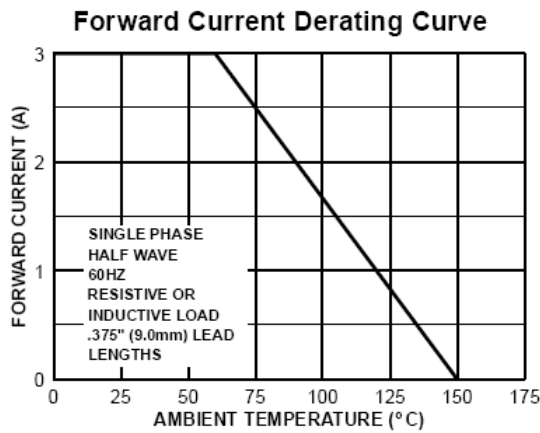
\* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

### Electrical Characteristics\* T<sub>a</sub> = 25°C unless otherwise noted

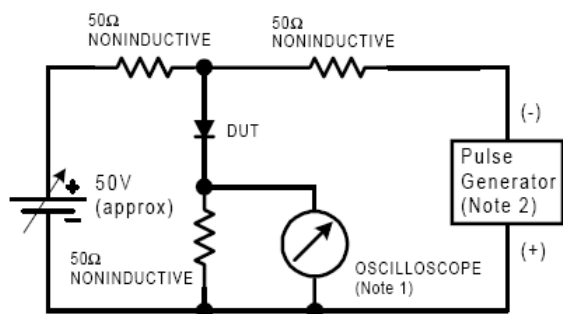
| Parameter   | Device     |     |     |      |     |     |     |     | Units    |
|---|------------|-----|-----|------|-----|-----|-----|-----|----------|
|   | 30A        | 30B | 30C | 30D  | 30F | 30G | 30J | 30K |          |
| Peak Repetitive Reverse Voltage   | 50         | 100 | 150 | 200  | 300 | 400 | 600 | 800 | V        |
| Maximum RMS Voltage   | 35         | 70  | 105 | 140  | 210 | 280 | 420 | 560 | V        |
| DC Reverse Voltage (Rated V <sub>R</sub> )  | 50         | 100 | 150 | 200  | 300 | 400 | 600 | 800 | V        |
| Maximum Reverse Current<br>@ rated V <sub>R</sub> T <sub>A</sub> = 25°C<br>T <sub>A</sub> = 125°C         | 5.0<br>100 |     |     |      |     |     |     |     | μA<br>μA |
| Maximum 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       |
| Maximum Forward Voltage @ 3.0 A   | 0.95       |     |     | 1.25 |     | 1.7 |     |     | V        |
| Typical Junction Capacitance<br>V <sub>R</sub> = 4.0 V, f = 1.0 MHz                                       | 95         |     |     | 75   |     |     |     |     | pF       |

\* Pulse Test: Pulse Width ≤ 300 μs, Duty Cycle ≤ 2%

Typical Performance Characteristics

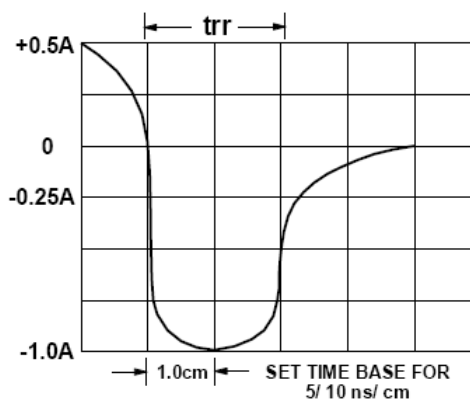


### Reverse Recovery Time Characteristic and Test Circuit Diagram



**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.





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