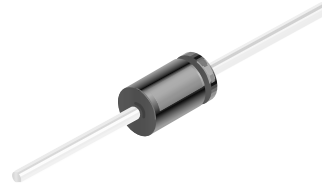


EGP30A - EGP30K

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_A = 25°C unless otherwise noted

| Symbol | Parameter | Value | | | | | | | | Units |
|--------------------|---|-------------|-----|-----|-----|-----|-----|-----|-----|-------|
| | | 30A | 30B | 30C | 30D | 30F | 30G | 30J | 320 | |
| V _R | Breakdown Voltage | 50 | 100 | 150 | 200 | 300 | 400 | 600 | 800 | V |
| I _{F(AV)} | Average Rectified Forward Current, .375" lead length @ T _A = 55°C | 3.0 | | | | | | | | A |
| I _{FSM} | Non-repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave | 125 | | | | | | | | A |
| T _{stg} | Storage Temperature Range | -65 to +150 | | | | | | | | °C |
| T _J | 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 _D | Power Dissipation | 6.25 | W |
| R _{θJA} | Thermal Resistance, Junction to Ambient | 20 | °C/W |
| R _{θJL} | Thermal Resistance, Junction to Lead | 8.5 | °C/W |

Electrical Characteristics T_A = 25°C unless otherwise noted

| Symbol | Parameter | Device | | | | | | | | Units |
|-----------------|---|--------|-----|-----|------|-----|-----|-----|-----|----------|
| | | 30A | 30B | 30C | 30D | 30F | 30G | 30J | 320 | |
| V _F | Forward Voltage @ 3.0 A | 0.95 | | | 1.25 | | 1.7 | | | V |
| t _{rr} | Reverse Recovery Time I _F = 0.5 A, I _R = 1.0 A, I _{rr} = 0.25 A | 50 | | | | | 75 | | | ns |
| I _R | Reverse Current @ rated V _R T _A = 25°C T _A = 125°C | 5.0 | | | | 100 | | | | μA μA |
| C _T | Total Capacitance V _R = 4.0 V, f = 1.0 MHz | 95 | | | | 75 | | | | pF |

Typical Characteristics

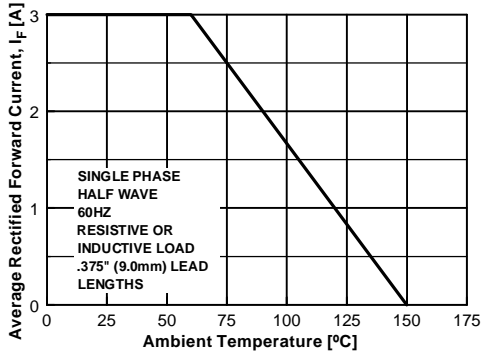


Figure 1. Forward Current Derating Curve

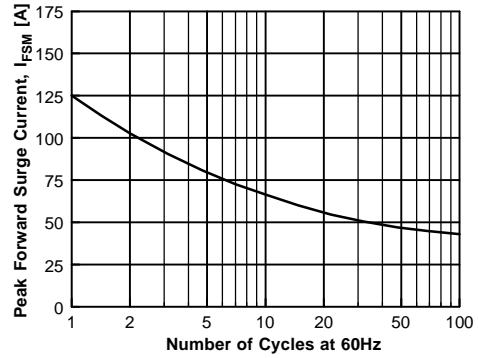


Figure 2. Non-Repetitive Surge Current

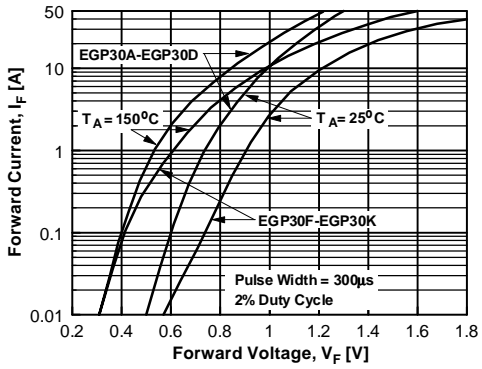


Figure 3. Forward Voltage Characteristics

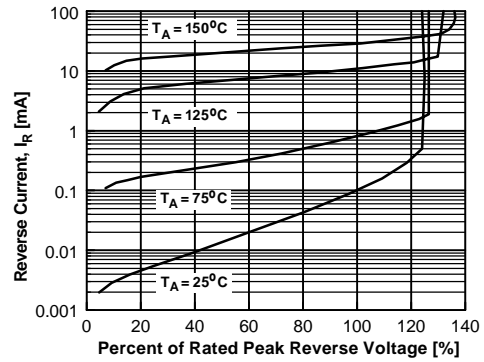


Figure 4. Reverse Current vs Reverse Voltage

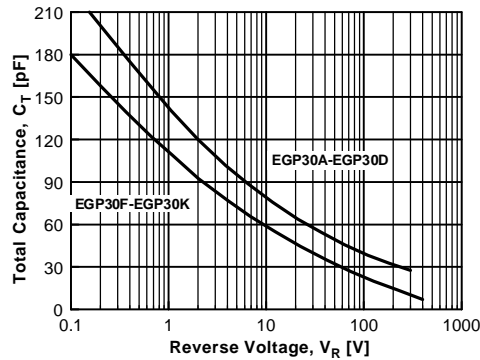
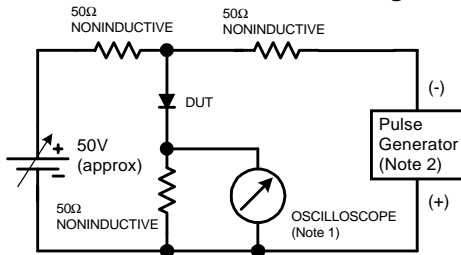
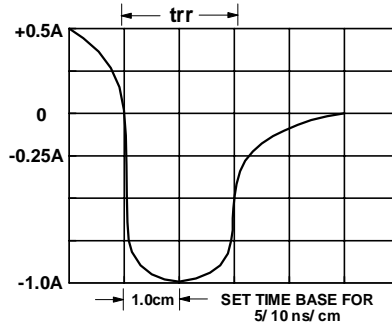


Figure 5. Total Capacitance



- 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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