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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\* $T_a = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
$I_O$	Average Rectified Current .375" lead length @ $T_L = 55^\circ\text{C}$	3.0	A
$I_{f(\text{surge})}$	Peak Forward Surge Current 8.3 ms single half-sine-wave Superimposed on rated load (JEDEC method)	125	A
$P_D$	Total Device Dissipation Derate above $25^\circ\text{C}$	6.25 50	W mW/°C
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	20	°C/W
$R_{\theta JL}$	Thermal Resistance, Junction to Lead	8.5	°C/W
$T_J, T_{STG}$	Junction and Storage Temperature Range	-65 ~ 150	°C

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

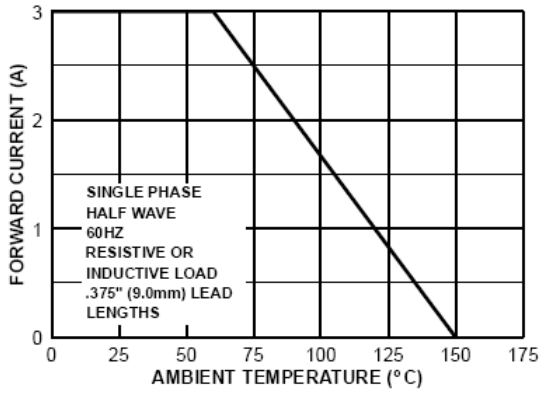
### Electrical Characteristics\* $T_a = 25^\circ\text{C}$ unless otherwise noted

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 $V_R$ )	50	100	150	200	300	400	600	800	V
Maximum Reverse Current @ rated $V_R$ $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$	5.0 100								$\mu\text{A}$ $\mu\text{A}$
Maximum Reverse Recovery Time $I_F = 0.5\text{ A}, I_R = 1.0\text{ A}, I_{rr} = 0.25\text{ A}$	50						75		nS
Maximum Forward Voltage @ 3.0 A	0.95			1.25		1.7			V
Typical Junction Capacitance $V_R = 4.0\text{ V}, f = 1.0\text{ MHz}$	95			75					pF

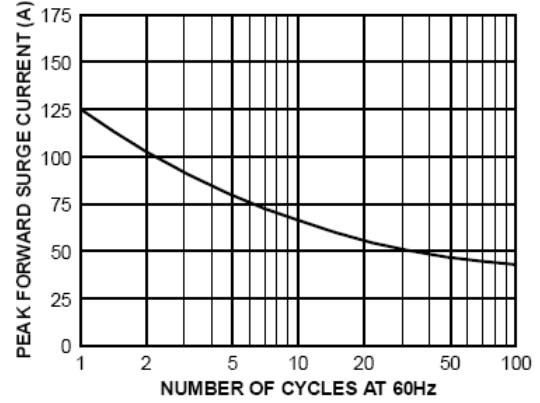
\* Pulse Test: Pulse Width  $\leq 300\mu\text{s}$ , Duty Cycle  $\leq 2\%$

## Typical Performance Characteristics

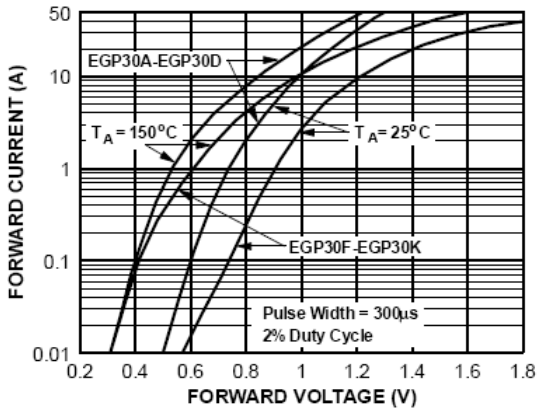
### Forward Current Derating Curve



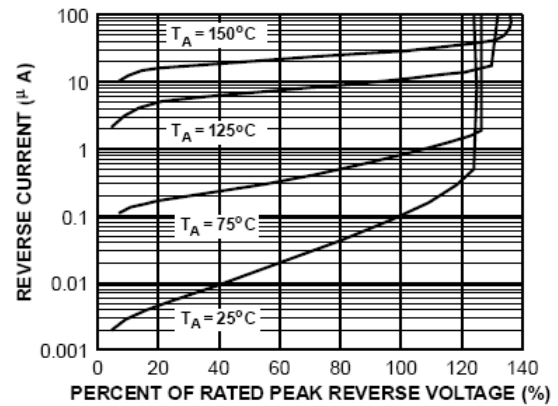
### Non-Repetitive Surge Current



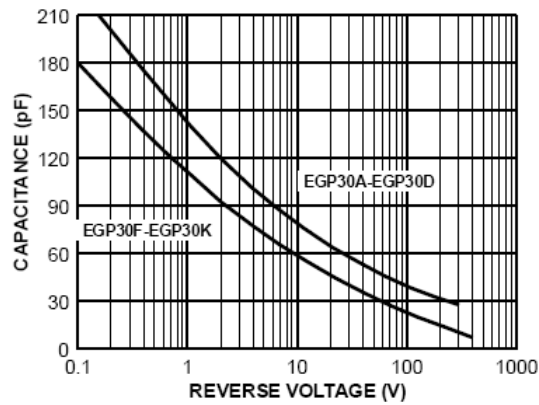
### Forward Characteristics



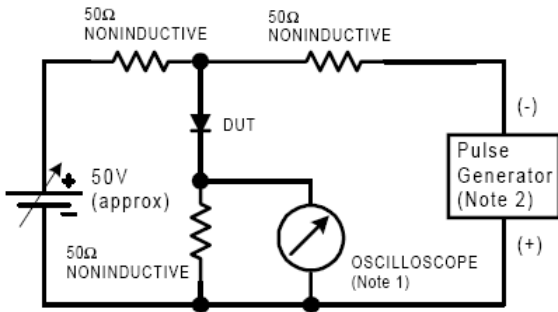
### Reverse Characteristics



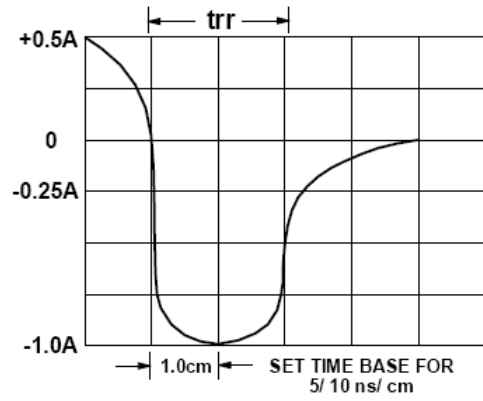
### Junction Capacitance



### 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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