

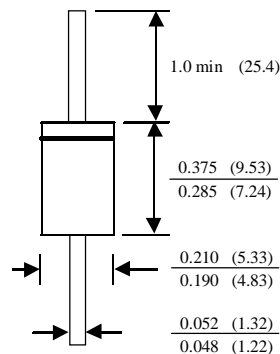
## EGP30A - EGP30K

### 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



Dimensions in inches (mm)

## 3.0 Ampere Glass Passivated High Efficiency Rectifiers

### Absolute Maximum Ratings\*

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

Symbol	Parameter	Value	Units
$I_o$	Average Rectified Current .375" lead length @ $T_A = 55^\circ\text{C}$	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/ $^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	20	$^\circ\text{C}/\text{W}$
$R_{\theta JL}$	Thermal Resistance, Junction to Lead	8.5	$^\circ\text{C}/\text{W}$
$T_{\text{stg}}$	Storage Temperature Range	-65 to +150	$^\circ\text{C}$
$T_J$	Operating Junction Temperature	-65 to +150	$^\circ\text{C}$

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

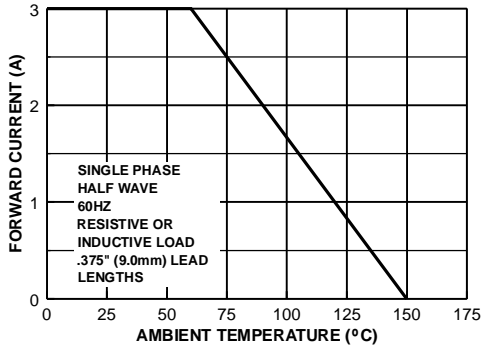
### Electrical Characteristics

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

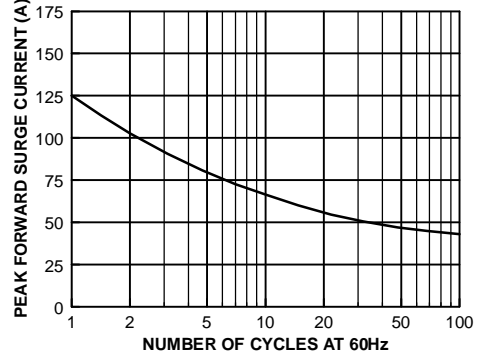
Parameter	Device								Units
	30A	30B	30C	30D	30F	30G	30J	30K	
Peak Repetitive Reverse Voltage	50	100	150	200	300	400	600	800	V
Maximum RMS Voltage	35	70	105	140	210	280	420	560	V
DC Reverse Voltage (Rated $V_R$ )	50	100	150	200	300	400	600	800	V
Maximum Reverse Current @ rated $V_R$ $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$	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

## Typical Characteristics

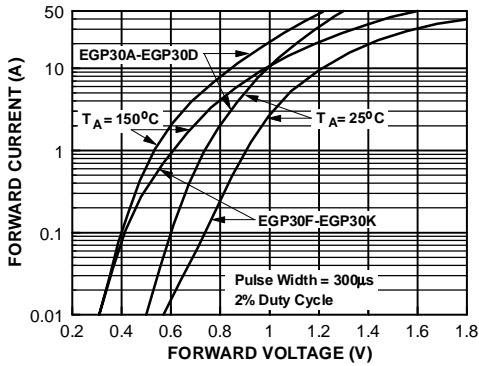
### Forward Current Derating Curve



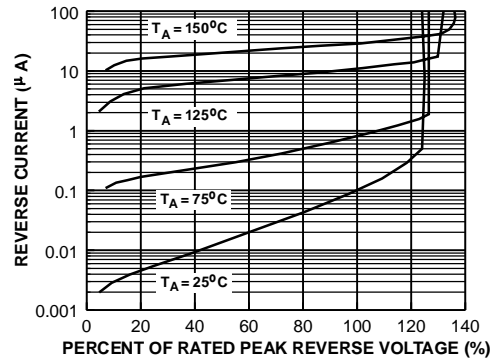
### Non-Repetitive Surge Current



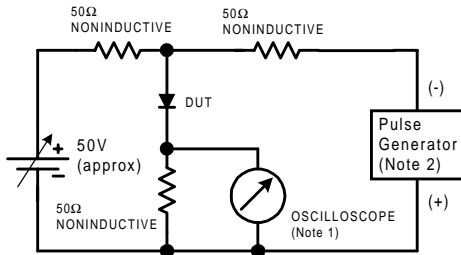
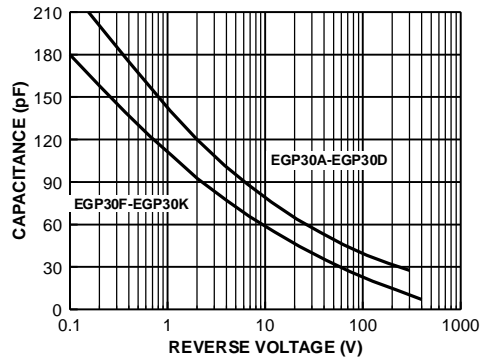
### Forward Characteristics



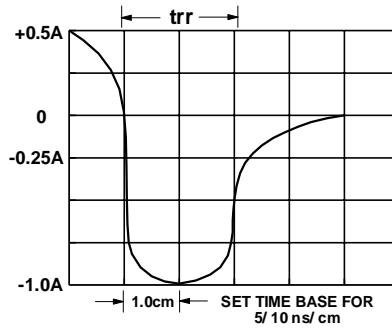
### Reverse Characteristics



### Junction 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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