

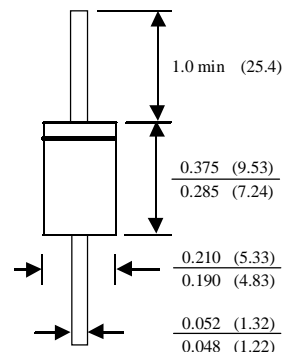
## EGP30A - EGP30K

### 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	$^\circ\text{C}/\text{W}$
$T_{stg}$	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.

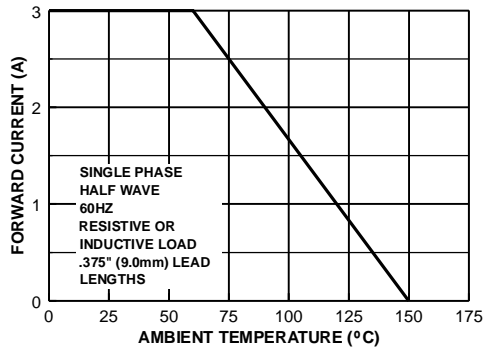
### Electrical Characteristics

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

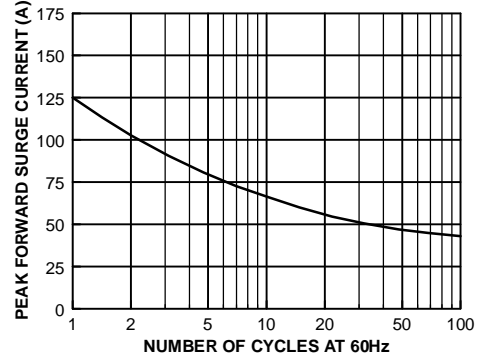
Parameter	Device								Units
	30A	30B	30C	30D	30F	30G	30J	30K	
Peak Repetitive Reverse Voltage	50	100	150	200	300	400	600	800	V
Maximum RMS Voltage	35	70	105	140	210	280	420	560	V
DC Reverse Voltage (Rated V <sub>R</sub> )	50	100	150	200	300	400	600	800	V
Maximum Reverse Current @ rated V <sub>R</sub>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

## Typical Characteristics

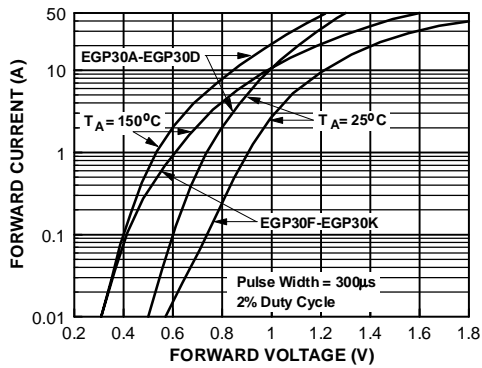
Forward Current Derating Curve



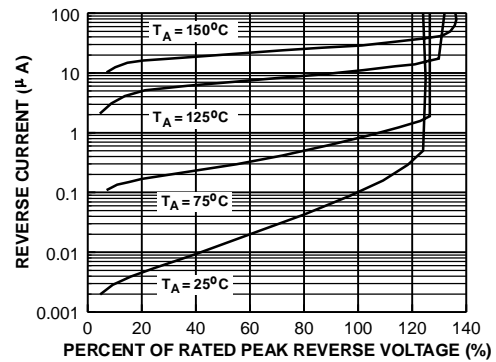
Non-Repetitive Surge Current



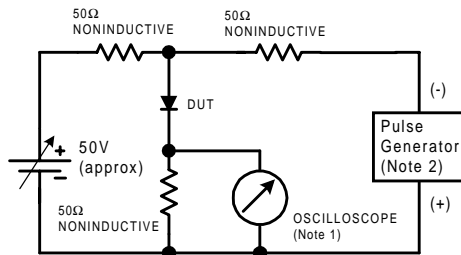
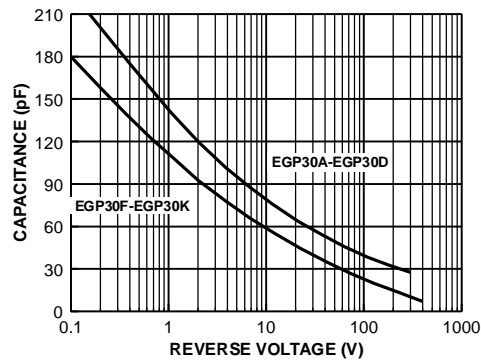
Forward Characteristics



Reverse Characteristics

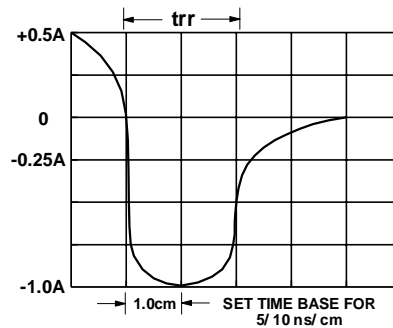


Junction Capacitance



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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FACT™	QS™
FACT Quiet Series™	Quiet Series™
FAST®	SuperSOT™-3
FAST <sub>r</sub> ™	SuperSOT™-6
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