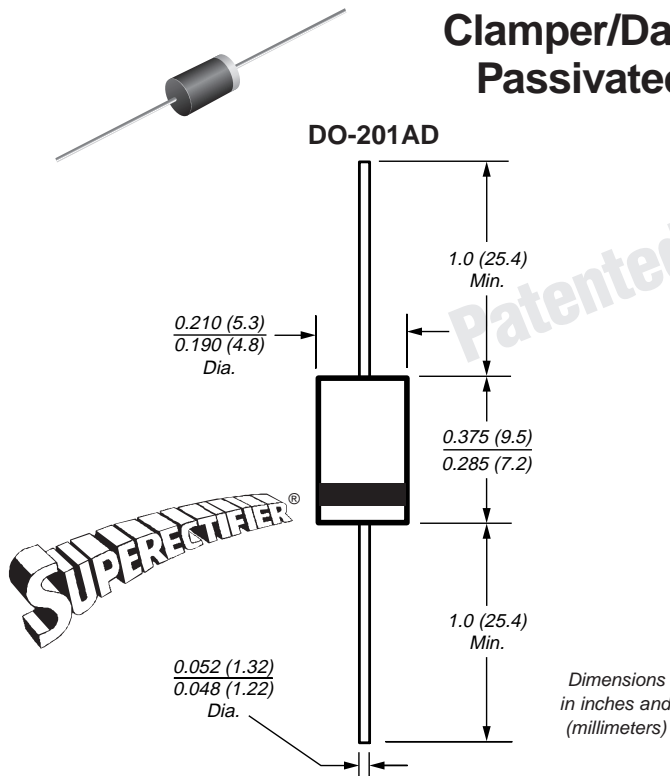


## Clamper/Damper Glass Passivated Rectifier

Reverse Voltage 1400 to 1500V  
Forward Current 3.0A



### Features

- Specially designed for clamping circuits, horizontal deflection systems and damper applications
- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- High temperature metallurgically bonded construction
- Cavity-free glass passivated junction
- 3.0 ampere operation at  $T_A=50^\circ\text{C}$  with no thermal runaway
- Typical  $I_R$  less than  $0.1\mu\text{A}$
- Capable of meeting environmental standards of MIL-S-19500
- High temperature soldering guaranteed:  $350^\circ\text{C}/10$  seconds,  $0.375"$  (9.5mm) lead length, 5 lbs. (2.3kg) tension

### Mechanical Data

**Case:** JEDEC DO-201AD, molded plastic over glass body  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.04 oz., 1.12 g  
**Packaging codes/options:**  
 1/Bulk - 1.5K per container, 15K per box  
 4/1.4K per 13" reel, 5.6K per box  
 23/1K per ammo mag., 9K per box

\* Glass-plastic encapsulation technique is covered by Patent No. 3,996,602 and brazed-lead assembly by Patent No. 3,930,306

## Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	CGP30	DGP30	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	1400	1500	V
Maximum RMS voltage	$V_{RMS}$	980	1050	V
Maximum DC blocking voltage	$V_{DC}$	1400	1500	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A = 50^\circ\text{C}$	$I_{F(AV)}$	3.0		A
Peak forward surge current 8.3ms single half sine wave superimposed on rated load (JEDEC Method) at $T_A = 50^\circ\text{C}$	$I_{FSM}$	100		A
Maximum full load reverse current full cycle average 0.375" (9.5mm) lead length at $T_A = 70^\circ\text{C}$	$I_{R(AV)}$	200		$\mu\text{A}$
Typical thermal resistance (Note 1)	$R_{\theta JA}$	20		$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +175		$^\circ\text{C}$

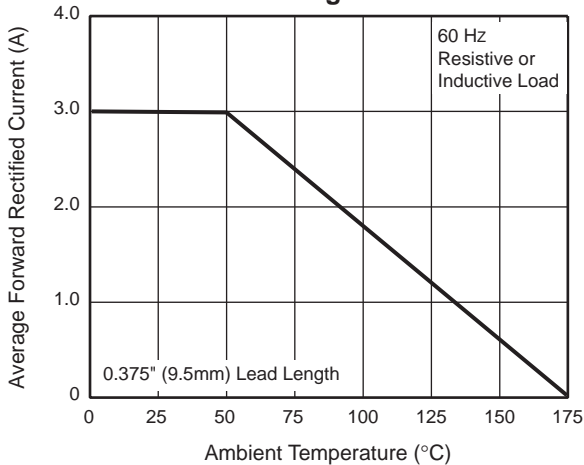
## Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	CGP30	DGP30	Unit
Maximum instantaneous forward voltage at 3.0A	$V_F$	1.2		V
Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 100^\circ\text{C}$	$I_R$	5.0 100		$\mu\text{A}$
Maximum reverse recovery time at $I_F = 0.5\text{A}, I_R = 50\text{mA}$	$t_{rr}$	15	20	$\mu\text{s}$
Maximum reverse recovery time at $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$ typical maximum	$t_{rr}$	1.0 2.0		$\mu\text{s}$
Typical junction capacitance at 4.0V, 1MHz	$C_J$	40		pF

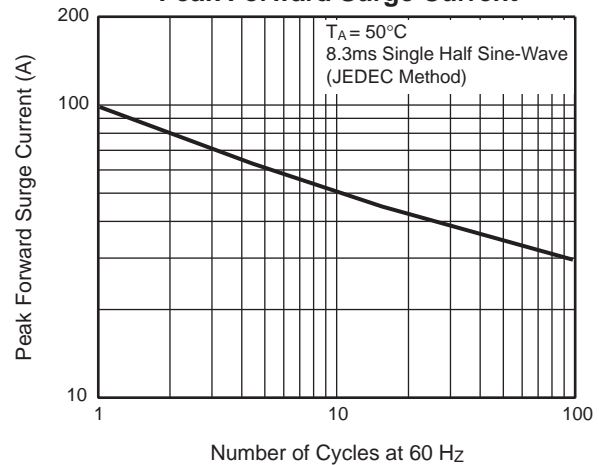
**Note:** (1) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, with leads attached to heat sink

## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

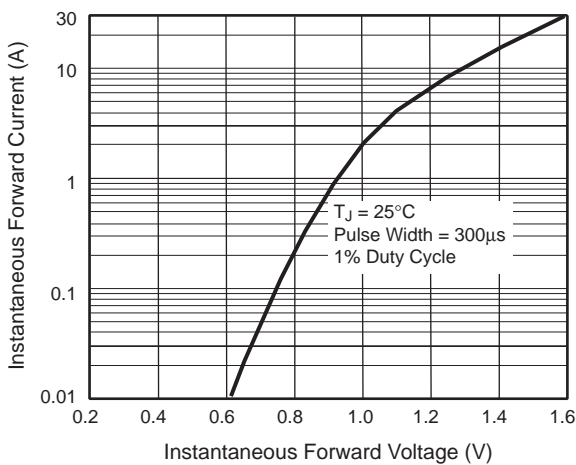
**Fig. 1 – Forward Current Derating Curve**



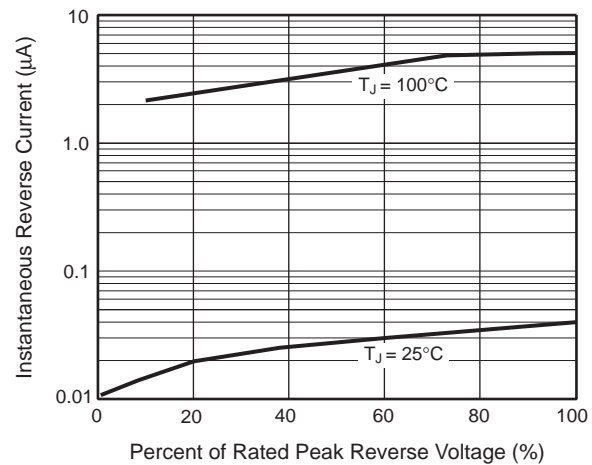
**Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current**



**Fig. 3 – Typical Instantaneous Forward Characteristics**



**Fig. 4 – Typical Reverse Characteristics**



**Fig. 5 – Typical Junction Capacitance**

