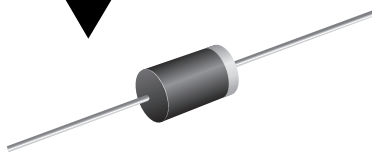




New Product

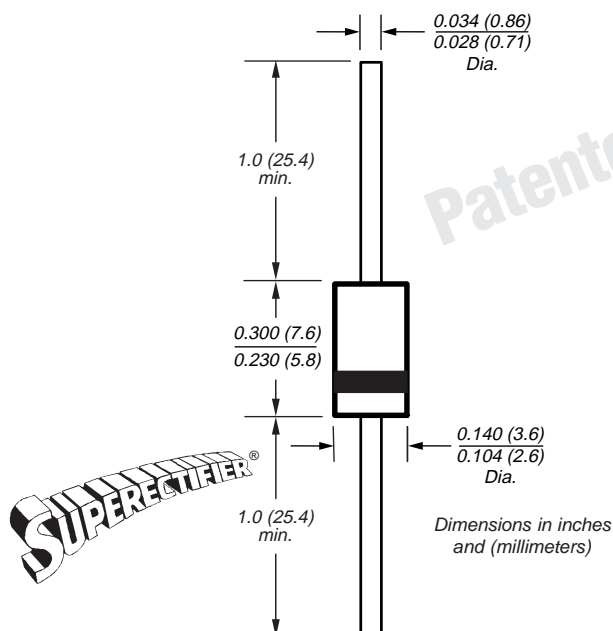
CGP20 and DGP20

Vishay Semiconductors  
formerly General Semiconductor

## Miniature Clamped Damper Glass Passivated Rectifier

**Reverse Voltage** 1400 to 1500V  
**Forward Current** 2.0A

DO204AC (DO-15)



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

### Features

- Specially designed for clamping circuits, horizontal deflection systems and damper applications
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0.
- High temperature metallurgically bonded construction
- Cavity-free glass passivated junction
- 2.0 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-204AC, 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:** 0.015 oz., 0.4 g

### Maximum Ratings & Thermal Characteristics

Ratings at  $25^\circ\text{C}$  ambient temperature unless otherwise specified.

Parameter	Symbol	CGP20	DGP20	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 $T_A = 50^\circ\text{C}$	$I_{F(AV)}$	2.0		A
Peak forward surge current 8.3ms single half sine wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	40		A
Maximum full load reverse current full cycle average 0.375" (9.5mm) lead length at $T_A = 100^\circ\text{C}$	$I_{R(AV)}$	200		$\mu\text{A}$
Typical thermal resistance (Note 1)	$R_{\theta JA}$	55		$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +175		$^\circ\text{C}$

### Electrical Characteristics

Ratings at  $25^\circ\text{C}$  ambient temperature unless otherwise specified.

Parameter	Symbol	CGP20	DGP20	Unit
Maximum instantaneous forward voltage at 2.0A	$V_F$	1.1		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 1.5		$\mu\text{s}$
Typical junction capacitance at 4.0V, 1MHz	$C_J$	15		pF

**Notes:** (1) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

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## Ratings and

## Characteristic Curves (T<sub>A</sub> = 25°C unless otherwise noted)

