



New Product

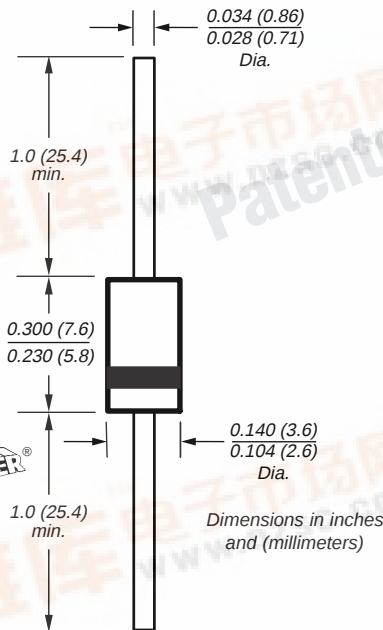
CGP20 and DGP20

Vishay Semiconductors
formerly General Semiconductor

Miniature Clamper/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°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		μA
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°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		μA
Maximum reverse recovery time at $I_F = 0.5\text{A}$, $I_R = 50\text{mA}$	t_{rr}	15	20	μs
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		μs
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 ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig.1 - Forward Current Derating Curve

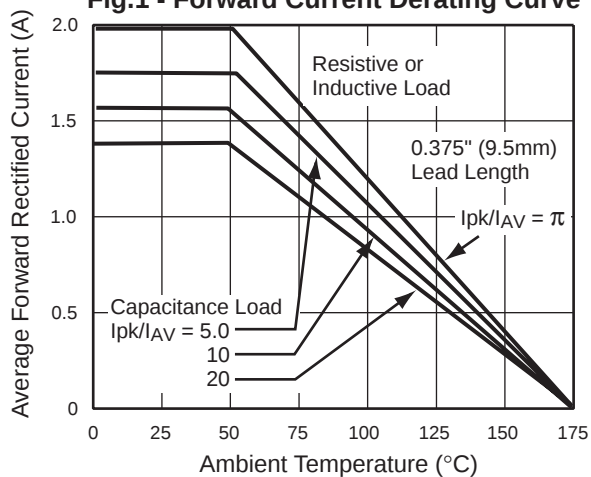


Fig.2 - Maximum Non-Repetitive Peak Forward Surge Current

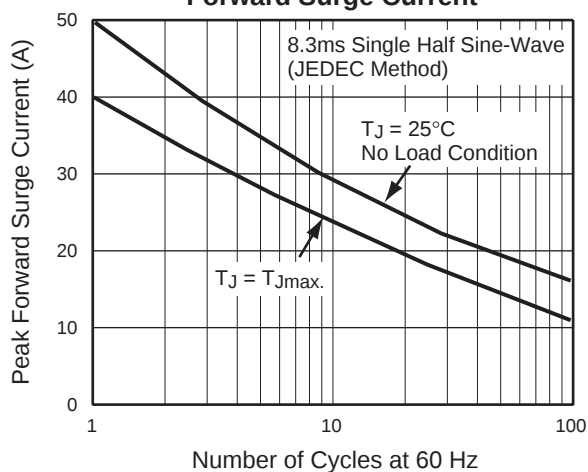


Fig.3 - Typical Instantaneous Forward Characteristics

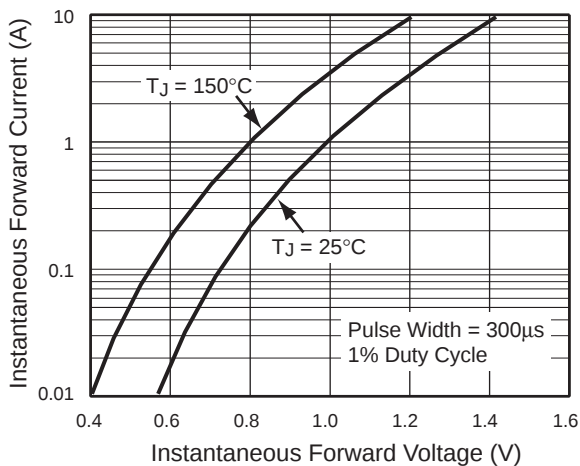


Fig.4 - Typical Reverse Characteristics

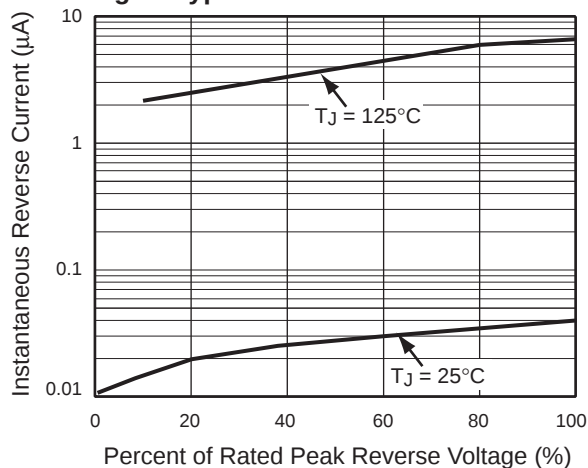


Fig.5 - Typical Junction Capacitance

