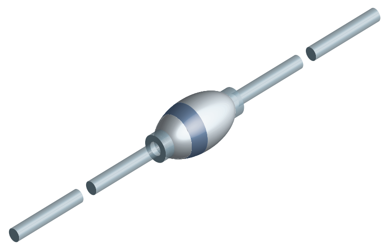
Ultra Fast Sinterglass Diode

Features

- High temperature metallurgically bonded construction
- Glass passivated cavity-free junction
- Superfast recovery time for high efficiency
- Low forward voltage, high current capability
- Hermetically sealed package
- High surge capability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Mechanical Data

Case: Sintered glass case, DO-204AP

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 560 mg

Parts Table

Part	Type differentiation	Package
GI1001	V_{RRM} = 50 V	DO-204AP (G1)
GI1002	V_{RRM} = 100 V	DO-204AP (G1)
GI1003	V_{RRM} = 150 V	DO-204AP (G1)
GI1004	V_{RRM} = 200 V	DO-204AP (G1)

Absolute Maximum Ratings

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Part	Symbol	Value	Unit
Reverse voltage = Repetitive peak reverse voltage	see electrical characteristics	GI1001	$V_R = V_{RRM}$	50	V
	see electrical characteristics	GI1002	$V_R = V_{RRM}$	100	V
	see electrical characteristics	GI1003	$V_R = V_{RRM}$	150	V
	see electrical characteristics	GI1004	$V_R = V_{RRM}$	200	V
Maximum average forward rectified current	0.375 " (9.5 mm) lead length at T_L = 75 °C		$I_{F(AV)}$	1.0	A
Peak forward surge current	8.3 ms single half sine-wave superimposed on rated load (JEDEC Method), at T_L = 75 °C		I_{FSM}	30	A
Operating junction and storage temperature range			T_J, T_{STG}	- 55 to + 175	°C

Maximum Thermal Resistance

T_{amb} = 25 °C, unless otherwise specified

Parameter			Symbol	Value	Unit
Typical thermal resistance [1), 2)] - junction to ambient			$R_{\theta JA}$	65	K/W
Typical thermal resistance [1), 2)] - junction to lead			$R_{\theta JL}$	20	K/W

Electrical Characteristics

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition		Symbol		Typ.	Max	Unit
Maximum instantaneous forward voltage [1)]	I_F = 1.0 A		V_F			0.975	V
Maximum reverse current	$V_{R/>}$ = VRRM, Tamb = 25 °C		I_R			2.0	µA
	$V_{R/>}$ = VRRM, Tamb = 100 °C		I_R			50	µA
Maximum reverse recovery time	I_F = 0.5 A, I_R = 1.0 A, I_{rr} = 0.25 A		t_{rr}			25	ns
Typical junction capacitance	V_R = 4 V, f = 1 MHz		C_J		45		pF

[1)] Pulse test: 300 µs pulse width, 1 % duty cycle

Typical Characteristics (T_{amb} = 25 °C unless otherwise specified)

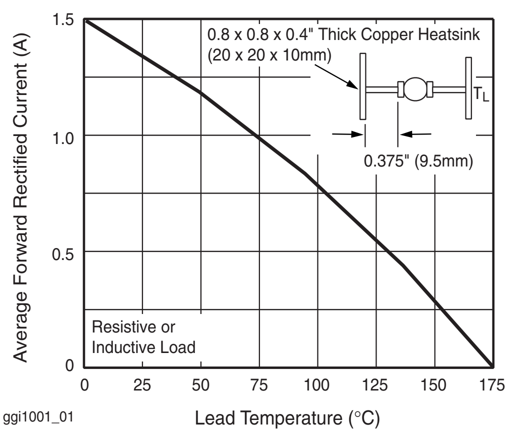


Figure 1. Forward Current Derating Curve

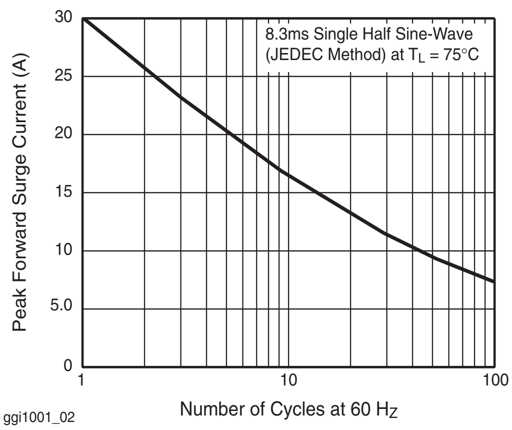


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

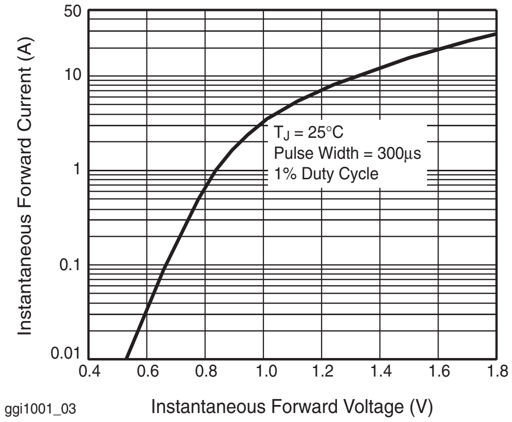


Figure 3. Typical Instantaneous Forward Characteristics

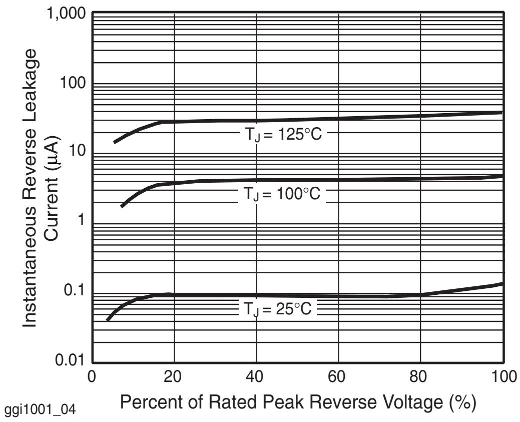


Figure 4. Typical Reverse Leakage Characteristics

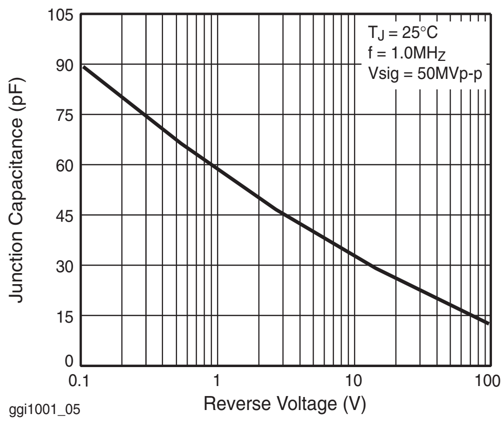
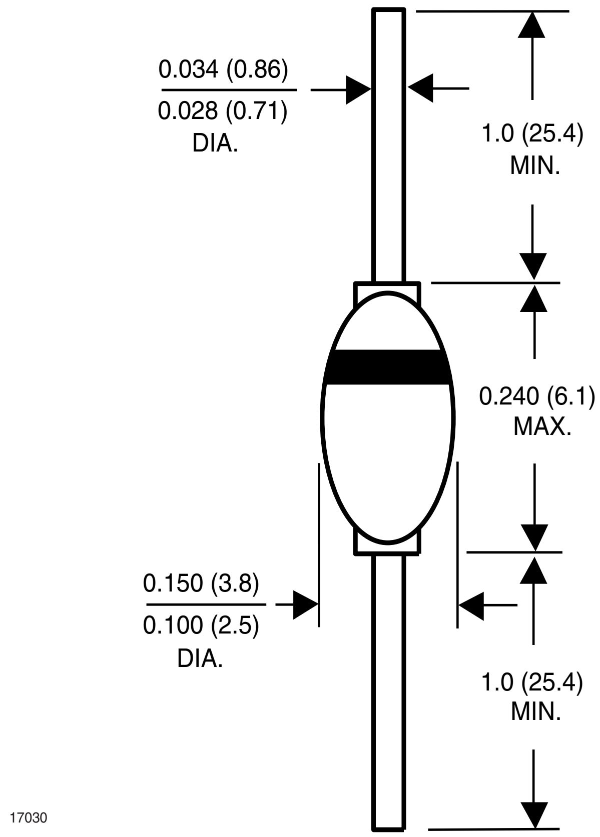


Figure 5. Typical Junction Capacitance

Package Dimensions in Inches (mm)



Ozone Depleting Substances Policy Statement

It is the policy of **Vishay Semiconductor GmbH** to

1. Meet all present and future national and international statutory requirements.
2. Regularly and continuously improve the performance of our products, processes, distribution and operatingsystems with respect to their impact on the health and safety of our employees and the public, as well as their impact on the environment.

It is particular concern to control or eliminate releases of those substances into the atmosphere which are known as ozone depleting substances (ODSs).

The Montreal Protocol (1987) and its London Amendments (1990) intend to severely restrict the use of ODSs and forbid their use within the next ten years. Various national and international initiatives are pressing for an earlier ban on these substances.

Vishay Semiconductor GmbH has been able to use its policy of continuous improvements to eliminate the use of ODSs listed in the following documents.

1. Annex A, B and list of transitional substances of the Montreal Protocol and the London Amendments respectively
2. Class I and II ozone depleting substances in the Clean Air Act Amendments of 1990 by the Environmental Protection Agency (EPA) in the USA
3. Council Decision 88/540/EEC and 91/690/EEC Annex A, B and C (transitional substances) respectively.

Vishay Semiconductor GmbH can certify that our semiconductors are not manufactured with ozone depleting substances and do not contain such substances.

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