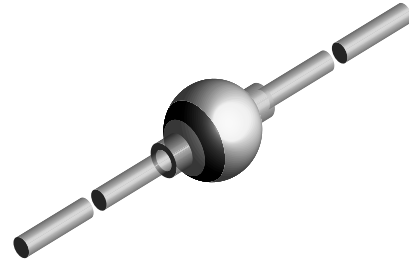


Fast Sinterglass Diode

Features

- High temperature metallurgically bonded construction
- Hermetically sealed package
- Cavity-free glass passivated junction
- 3.0 ampere operation at $T_{amb} = 55\text{ }^{\circ}\text{C}$ with no thermal runaway
- Fast switching for high efficiency



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Mechanical Data

Case: Sintered glass case, G-3

Terminals: Solder plated axial leads, solderable per MILSTD- 750, Method 2026

Mounting Position: Any

Weight: approx. 1100 mg

Polarity: Color band denotes cathode end

Parts Table

Part	Type differentiation	Package
RG3A	$V_{RRM} = 50\text{ V}$	G-3
RG3B	$V_{RRM} = 100\text{ V}$	G-3
RG3D	$V_{RRM} = 200\text{ V}$	G-3
RG3G	$V_{RRM} = 400\text{ V}$	G-3
RG3J	$V_{RRM} = 600\text{ V}$	G-3
RG3K	$V_{RRM} = 800\text{ V}$	G-3
RG3M	$V_{RRM} = 1000\text{ V}$	G-3

Absolute Maximum Ratings

$T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

Parameter	Test condition	Part	Symbol	Value	Unit
Reverse voltage = Repetitive peak reverse voltage	see electrical characteristics	RG3A	$V_R = V_{RRM}$	50	V
		RG3B	$V_R = V_{RRM}$	100	V
		RG3D	$V_R = V_{RRM}$	200	V
		RG3G	$V_R = V_{RRM}$	400	V
		RG3J	$V_R = V_{RRM}$	600	V
		RG3K	$V_R = V_{RRM}$	800	V
		RG3M	$V_R = V_{RRM}$	1000	V
Maximum average forward rectified current	0.375 " (9.5 mm) lead length at $T_{amb} = 55\text{ }^{\circ}\text{C}$		$I_{F(AV)}$	3.0	A
Peak forward surge current	8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		I_{FSM}	100	A

Parameter	Test condition	Part	Symbol	Value	Unit
Maximum average reverse current	at rated peak reverse voltage $T_{amb} = 25\text{ }^{\circ}\text{C}$		$I_{R(AV)}$	2.0	μA
	at rated peak reverse voltage $T_{amb} = 100\text{ }^{\circ}\text{C}$		$I_{R(AV)}$	100	μA
Operating junction and storage temperature range			T_J, T_{STG}	- 55 to + 175	$^{\circ}\text{C}$

Maximum Thermal Resistance

$T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Typical thermal resistance ¹⁾		$R_{\theta JA}$	55	K/W

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

Electrical Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

Parameter	Test condition	Part	Symbol	Min	Typ.	Max	Unit
Maximum instantaneous forward voltage	$I_F = 3.0\text{ A}$		V_F			1.3	V
Maximum reverse current	$V_R = V_{RRM}$		I_R			5.0	μA
Maximum reverse recovery time	$I_F = 0.5\text{ A}, I_R = 1.0\text{ A}, I_{rr} = 0.25\text{ A}$	RG3A	t_{rr}			150	ns
		RG3B	t_{rr}			150	ns
		RG3D	t_{rr}			150	ns
		RG3G	t_{rr}			150	ns
		RG3J	t_{rr}			250	ns
		RG3K	t_{rr}			400	ns
RG3M	t_{rr}					500	ns
Typical junction capacitance	$V_R = 4.0\text{ V}, f = 1\text{ MHz}$		C_j		40		pF

Typical Characteristics ($T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)

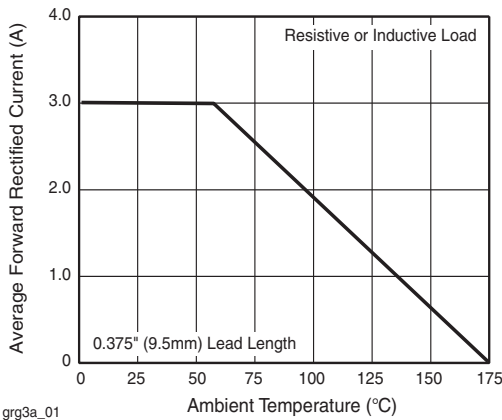


Figure 1. Forward Current Derating Curve

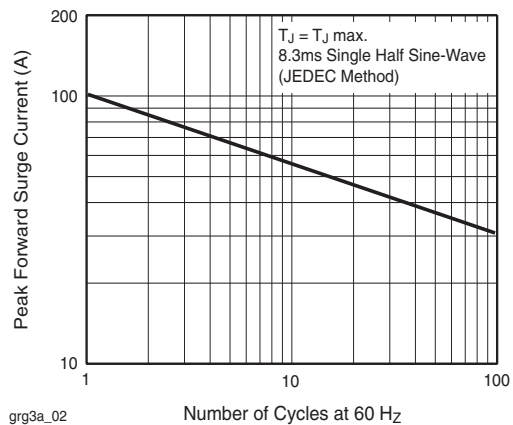


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

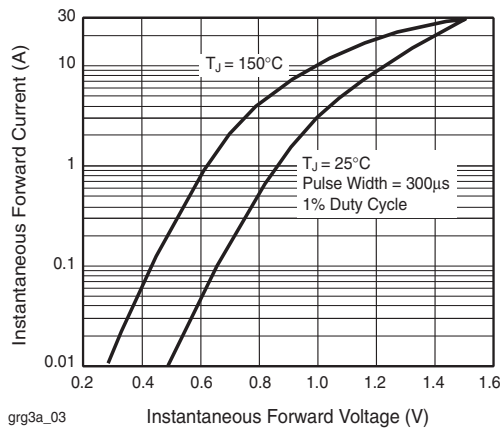


Figure 3. Typical Instantaneous Forward Characteristics

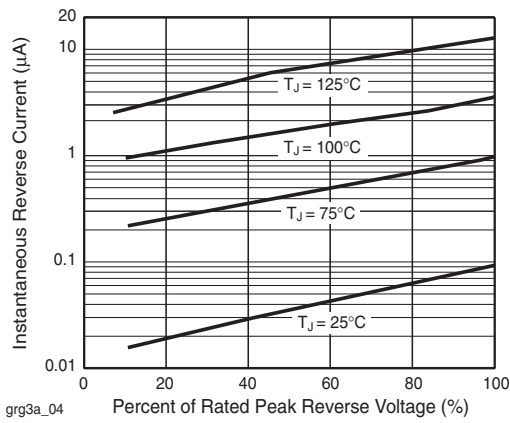


Figure 4. Typical Reverse Characteristics

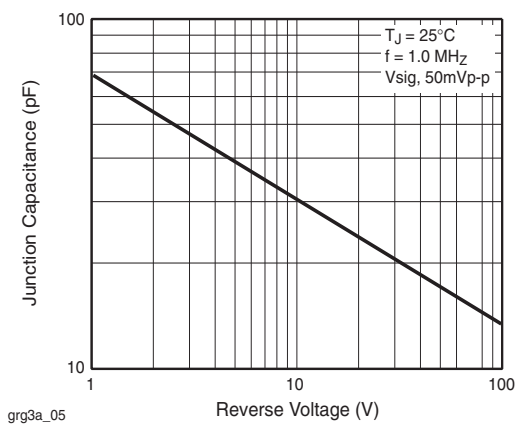
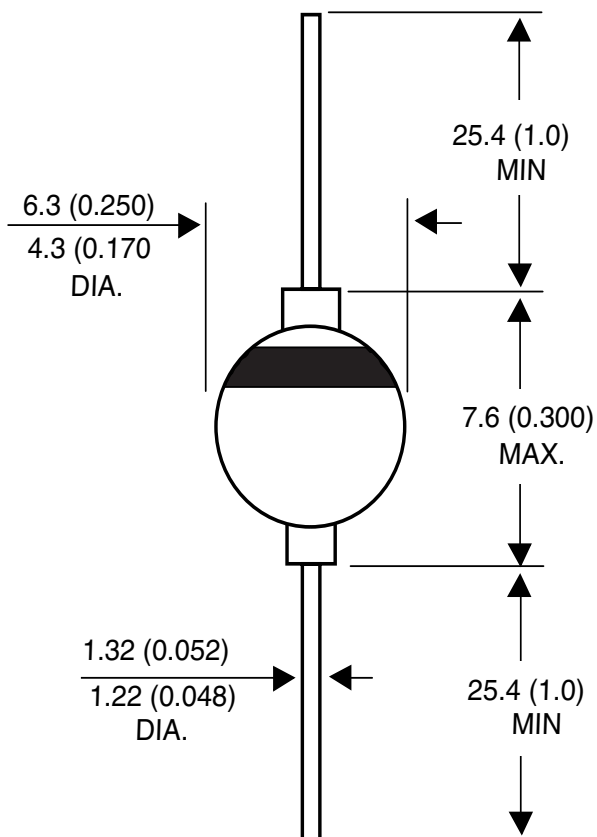


Figure 5. Typical Junction Capacitance

Package Dimensions in mm (Inches)



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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 operating systems 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.

**We reserve the right to make changes to improve technical design
and may do so without further notice.**

Parameters can vary in different applications. All operating parameters must be validated for each customer application by the customer. Should the buyer use Vishay Semiconductors products for any unintended or unauthorized application, the buyer shall indemnify Vishay Semiconductors against all claims, costs, damages, and expenses, arising out of, directly or indirectly, any claim of personal damage, injury or death associated with such unintended or unauthorized use.

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