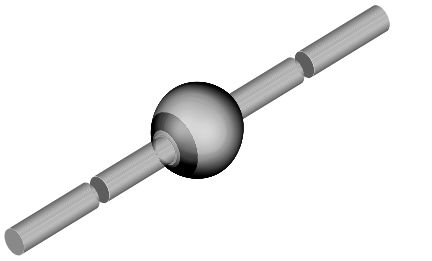
# Fast Avalanche Sinterglass Diode

## Features

- Glass passivated junction
- Hermetically sealed package
- Low reverse current
- Soft recovery characteristics



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## Applications

Fast rectification and switching diode for example for TV-line output circuits and switch mode power supply

## Mechanical Data

**Case:** Sintered glass case, SOD 64

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

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 860 mg, (max. 1000 mg)

## Parts Table

| Part | Type differentiation | Package |
|---|---|---|
| BYW72 | $V_R$ = 200 V; $I_{FAV}$ = 3 A | SOD64 |
| BYW73 | $V_R$ = 300 V; $I_{FAV}$ = 3 A | SOD64 |
| BYW74 | $V_R$ = 400 V; $I_{FAV}$ = 3 A | SOD64 |
| BYW75 | $V_R$ = 500 V; $I_{FAV}$ = 3 A | SOD64 |
| BYW76 | $V_R$ = 600 V; $I_{FAV}$ = 3 A | SOD64 |

## Absolute Maximum Ratings

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

| Parameter | Test condition | Sub type | Symbol | Value | Unit |
|---|---|---|---|---|---|
| Reverse voltage = Repetitive peak reverse voltage | see electrical characteristics | BYW72 | $V_R$ = $V_{RRM}$ | 200 | V |
| | see electrical characteristics | BYW73 | $V_R$ = $V_{RRM}$ | 300 | V |
| | see electrical characteristics | BYW74 | $V_R$ = $V_{RRM}$ | 400 | V |
| | see electrical characteristics | BYW75 | $V_R$ = $V_{RRM}$ | 500 | V |
| | see electrical characteristics | BYW76 | $V_R$ = $V_{RRM}$ | 600 | V |
| Peak forward surge current | $t_p$ = 10 ms, half sinewave | | $I_{FSM}$ | 100 | A |
| Repetitive peak forward current | | | $I_{FRM}$ | 15 | A |
| Average forward current | | | $I_{FAV}$ | 3 | A |
| Junction and storage temperature range | | | $T_j = T_{stg}$ | - 55 to + 175 | °C |
| Non repetitive reverse avalanche energy | $I_{(BR)R}$ = 0.4 A | | $E_R$ | 10 | mJ |

## Maximum Thermal Resistance

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

| Parameter | Test condition | Sub type | Symbol | Value | Unit |
|---|---|---|---|---|---|
| Junction ambient | l = 10 mm, $T_L$ = constant | | $R_{thJA}$ | 25 | K/W |
| | on PC board with spacing 25 mm | | $R_{thJA}$ | 70 | K/W |

## Electrical Characteristics

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

| Parameter | Test condition | Sub type | Symbol | Min | Typ. | Max | Unit |
|---|---|---|---|---|---|---|---|
| Forward voltage | $I_F$ = 3 A | | $V_F$ | | 0.95 | 1.1 | V |
| Reverse current | $V_R = V_{RRM}$ | | $I_R$ | | 1 | 5 | µA |
| | $V_R = V_{RRM}$, $T_j$ = 150 °C | | $I_R$ | | 60 | 150 | µA |
| Reverse recovery time | $I_F$ = 0.5 A, $I_R$ = 1 A, $i_R$ = 0.25 A | | $t_{rr}$ | | | 200 | ns |

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

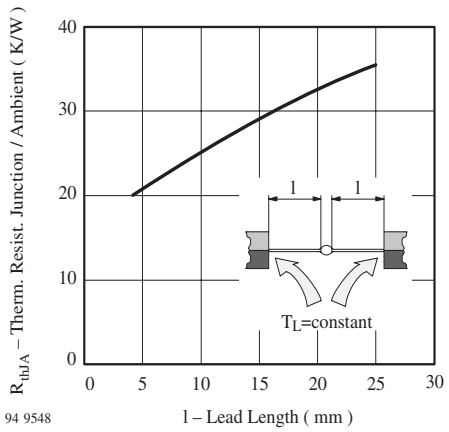



Figure 1. Max. Thermal Resistance vs. Lead Length

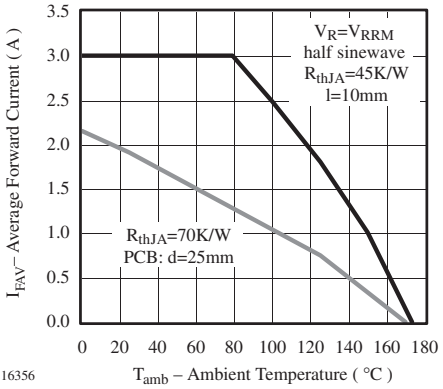



Figure 3. Max. Average Forward Current vs. Ambient Temperature

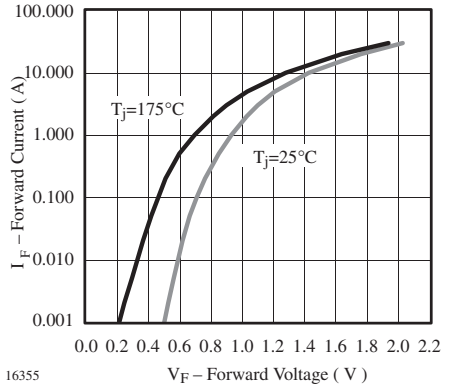



Figure 2. Forward Current vs. Forward Voltage

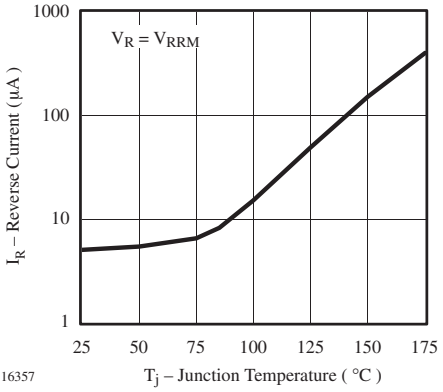



Figure 4. Reverse Current vs. Junction Temperature

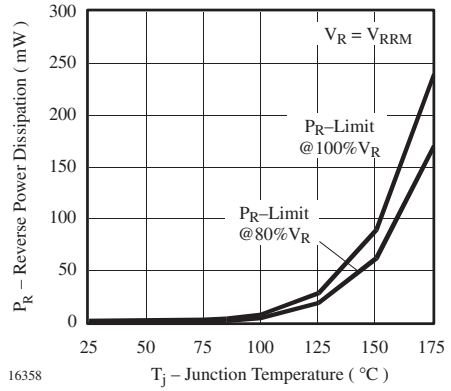



Figure 5. Max. Reverse Power Dissipation vs. Junction Temperature

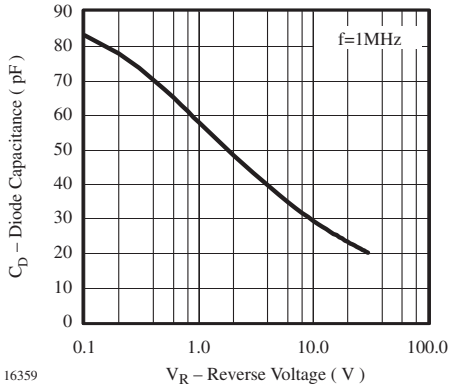



Figure 6. Diode Capacitance vs. Reverse Voltage

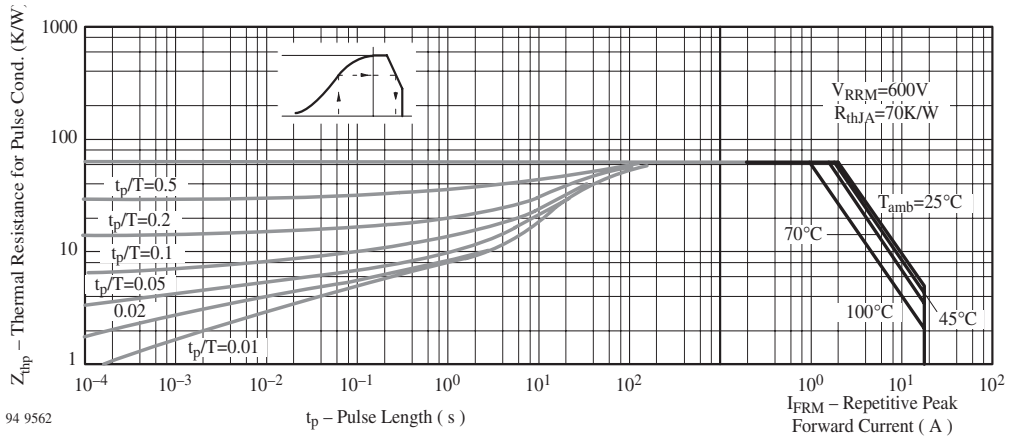
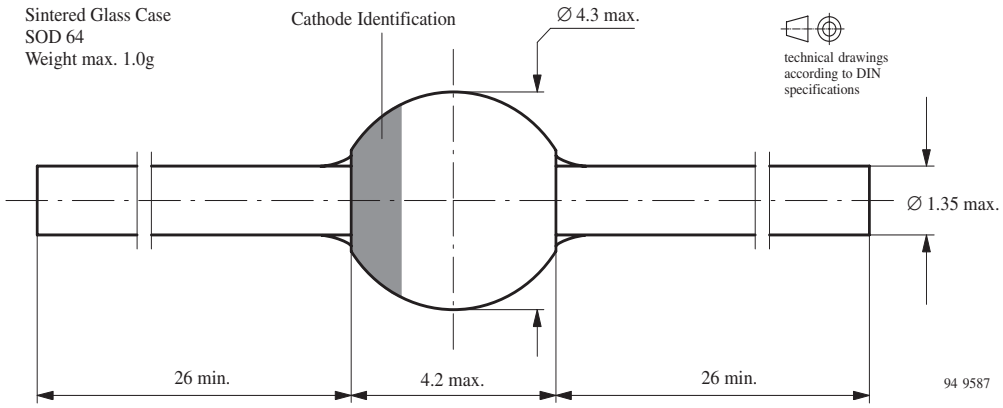



Figure 7. Thermal Response

## Package Dimensions in 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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