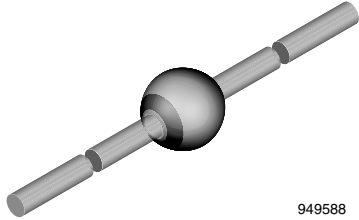


## Standard Avalanche Sinterglass Diode



949588

### FEATURES

- Glass passivated junction
- Hermetically sealed package
- Controlled avalanche characteristics
- Low reverse current
- High surge current loading
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition


**RoHS**  
 COMPLIANT  
 HALOGEN  
**FREE**

### MECHANICAL DATA

**Case:** SOD-64

**Terminals:** plated axial leads, solderable per MIL-STD-750, method 2026

**Polarity:** color band denotes cathode end

**Mounting position:** any

**Weight:** approx. 858 mg

### APPLICATIONS

- Rectification diode, general purpose

| PARTS TABLE |   |         |
|-------------|---|---------|
| PART        | TYPE DIFFERENTIATION                          | PACKAGE |
| 1N5624      | $V_R = 200\text{ V}$ ; $I_{FAV} = 3\text{ A}$ | SOD-64  |
| 1N5625      | $V_R = 400\text{ V}$ ; $I_{FAV} = 3\text{ A}$ | SOD-64  |
| 1N5626      | $V_R = 600\text{ V}$ ; $I_{FAV} = 3\text{ A}$ | SOD-64  |
| 1N5627      | $V_R = 800\text{ V}$ ; $I_{FAV} = 3\text{ A}$ | SOD-64  |

| 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  | 1N5624 | $V_R = V_{RRM}$ | 200           | V                    |
|   |   | 1N5625 | $V_R = V_{RRM}$ | 400           | V                    |
|   |   | 1N5626 | $V_R = V_{RRM}$ | 600           | V                    |
|   |   | 1N5627 | $V_R = V_{RRM}$ | 800           | V                    |
| Peak forward surge current  | $t_p = 10\text{ ms}$ , half sinewave  |        | $I_{FSM}$       | 100           | A                    |
| Repetitive peak forward current   |   |        | $I_{FRM}$       | 18            | A                    |
| Average forward current   |   |        | $I_{FAV}$       | 3             | A                    |
| Pulse avalanche peak power  | $t_p = 20\text{ }\mu\text{s}$ , half sine wave, $T_j = 175\text{ }^\circ\text{C}$ |        | $P_R$           | 1000          | W                    |
| Pulse energy in avalanche mode, non repetitive (inductive load switch off)                    | $I_{(BR)R} = 1\text{ A}$ , $T_j = 175\text{ }^\circ\text{C}$                      |        | $E_R$           | 20            | mJ                   |
| $i^2t$ -rating  |   |        | $i^2t$          | 40            | $\text{A}^2\text{s}$ |
| 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 |
| Junction ambient  | $l = 10\text{ mm}$ , $T_L = \text{constant}$ | $R_{thJA}$ | 25    | K/W  |
|   | On PC board with spacing 25 mm               | $R_{thJA}$ | 70    | K/W  |

# 1N5624, 1N5625, 1N5626, 1N5627



Vishay Semiconductors Standard Avalanche Sinterglass Diode

| ELECTRICAL CHARACTERISTICS ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified) |   |      |            |      |      |      |               |
|---|---|------|------------|------|------|------|---------------|
| PARAMETER   | TEST CONDITION  | PART | SYMBOL     | MIN. | TYP. | MAX. | UNIT          |
| Forward voltage   | $I_F = 3\text{ A}$  |      | $V_F$      | -    | -    | 1    | V             |
| Reverse current   | $V_R = V_{RRM}$   |      | $I_R$      | -    | 0.1  | 1    | $\mu\text{A}$ |
|   | $V_R = V_{RRM}, T_j = 100\text{ }^{\circ}\text{C}$                    |      | $I_R$      | -    | 5    | 10   | $\mu\text{A}$ |
| Breakdown voltage   | $I_R = 100\text{ }\mu\text{A}, t_p/T = 0.01, t_p = 0.3\text{ ms}$     |      | $V_{(BR)}$ | -    | -    | 1600 | V             |
| Diode capacitance   | $V_R = 4\text{ V}, f = 1\text{ MHz}$                                  |      | $C_D$      | -    | 40   | 60   | pF            |
| Reverse recovery time   | $I_F = 0.5\text{ A}, I_R = 1\text{ A}, i_R = 0.25\text{ A}$           |      | $t_{rr}$   | -    | 3.5  | 5    | $\mu\text{s}$ |
|   | $I_F = 1\text{ A}, di/dt = 5\text{ A}/\mu\text{s}, V_R = 50\text{ V}$ |      | $t_{rr}$   | -    | 4.5  | 7.5  | $\mu\text{s}$ |
| Reverse recovery charge   | $I_F = 1\text{ A}, di/dt = 5\text{ A}/\mu\text{s}$                    |      | $Q_{rr}$   | -    | 8    | 12   | $\mu\text{C}$ |

## TYPICAL CHARACTERISTICS ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)

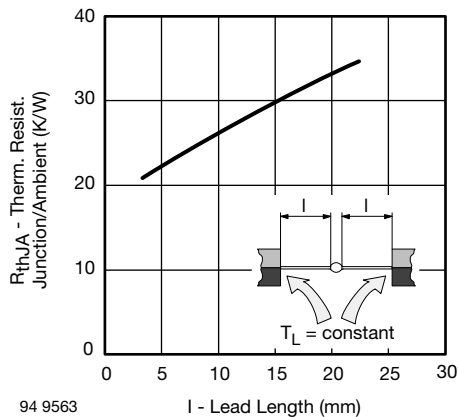


Fig. 1 - Max. Thermal Resistance vs. Lead Length

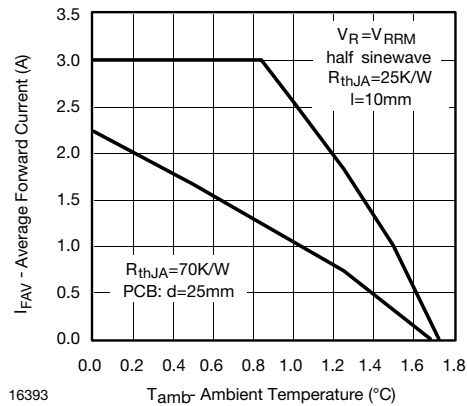


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

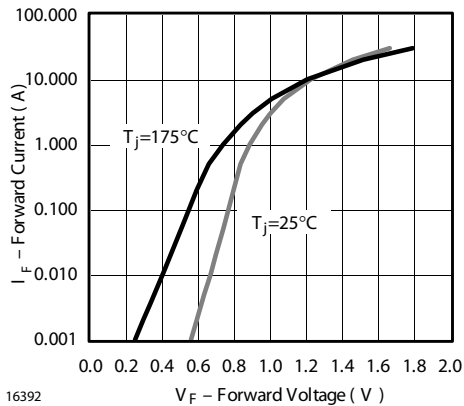


Fig. 2 - Forward Current vs. Forward Voltage

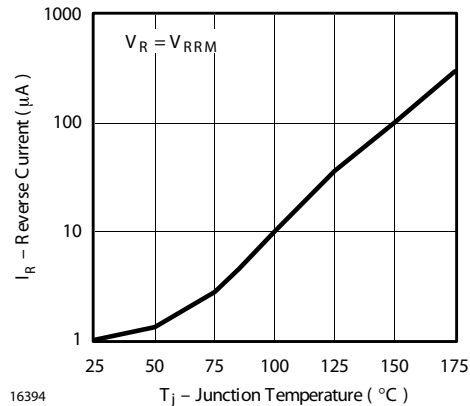


Fig. 4 - Reverse Current vs. Junction Temperature

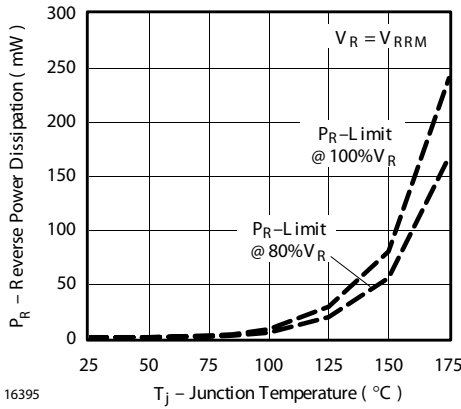


Fig. 5 - Max. Reverse Power Dissipation vs. Junction Temperature

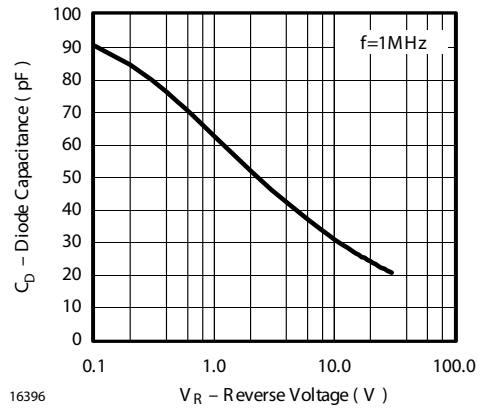
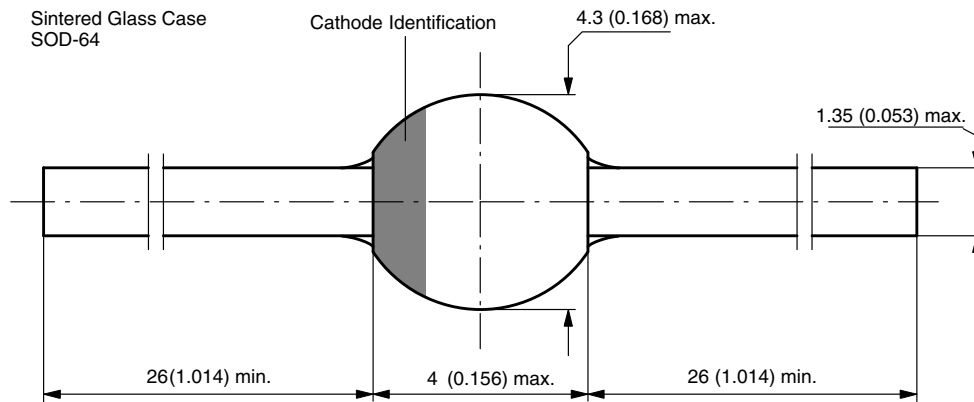


Fig. 6 - Diode Capacitance vs. Reverse Voltage

### PACKAGE DIMENSIONS in millimeters (inches): SOD-64



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 94 9587



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