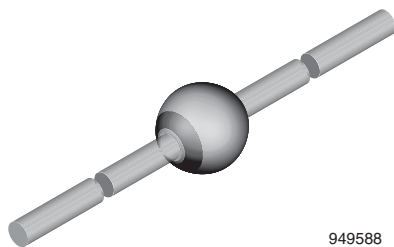


## Fast Avalanche Sinterglass Diode



### FEATURES

- Glass passivated junction
- Hermetically sealed package
- Low reverse current
- Soft recovery characteristics
- Low forward voltage drop
- High pulse current capability
- Material categorization:  
For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**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

- Fast rectification diode

### ORDERING INFORMATION (Example)

| DEVICE NAME | ORDERING CODE | TAPED UNITS                | MINIMUM ORDER QUANTITY |
|-------------|---------------|----------------------------|------------------------|
| 1N5418      | 1N5418TR      | 2500 per 10" tape and reel | 12 500                 |
| 1N5418      | 1N5418-TAP    | 2500 per ammpack           | 12 500                 |

### PARTS TABLE

| PART   | TYPE DIFFERENTIATION                            | PACKAGE |
|--------|-------------------------------------------------|---------|
| 1N5417 | $V_R = 200\text{ V}$ ; $I_{F(AV)} = 3\text{ A}$ | SOD-64  |
| 1N5418 | $V_R = 400\text{ V}$ ; $I_{F(AV)} = 3\text{ A}$ | 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                          | 1N5417 | $V_R = V_{RRM}$ | 200           | V                  |
|                                                   |                                                         | 1N5418 | $V_R = V_{RRM}$ | 400           | V                  |
| Peak forward surge current                        | $t_p = 10\text{ ms}$ , half sine wave                   |        | $I_{FSM}$       | 100           | A                  |
| Average forward current                           | $I = 10\text{ mm}$ , $T_L = 25\text{ }^{\circ}\text{C}$ |        | $I_{F(AV)}$     | 3             | A                  |
| Non repetitive reverse avalanche energy           | $I_{(BR)} = 1\text{ A}$                                 |        | $E_R$           | 20            | mJ                 |
| 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 | Lead length $l = 10\text{ mm}$ , $T_L = \text{constant}$ | $R_{thJA}$ | 25    | K/W  |
|                  | On PC board with spacing 25 mm                           | $R_{thJA}$ | 70    | K/W  |

| ELECTRICAL CHARACTERISTICS ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified) |                                                             |      |          |      |      |      |               |
|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------|------|----------|------|------|------|---------------|
| PARAMETER                                                                                         | TEST CONDITION                                              | PART | SYMBOL   | MIN. | TYP. | MAX. | UNIT          |
| Forward voltage                                                                                   | $I_F = 3\text{ A}$                                          |      | $V_F$    | -    | -    | 1.1  | V             |
|                                                                                                   | $I_F = 9\text{ A}$                                          |      | $V_F$    | -    | -    | 1.5  | V             |
| Reverse current                                                                                   | $V_R = V_{RRM}$                                             |      | $I_R$    | -    | -    | 1    | $\mu\text{A}$ |
|                                                                                                   | $V_R = V_{RRM}, T_j = 100\text{ }^{\circ}\text{C}$          |      | $I_R$    | -    | -    | 20   | $\mu\text{A}$ |
| Reverse recovery time                                                                             | $I_F = 0.5\text{ A}, I_R = 1\text{ A}, i_R = 0.25\text{ A}$ |      | $t_{rr}$ | -    | 75   | 100  | ns            |

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

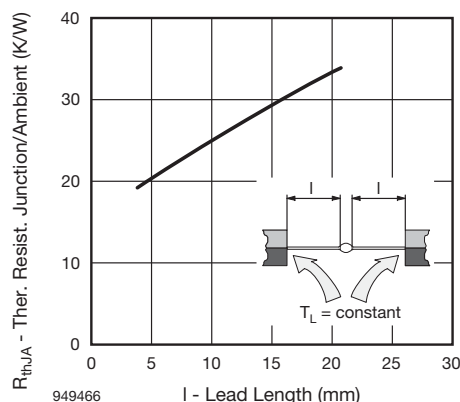


Fig. 1 - Max. Thermal Resistance vs. Lead Length

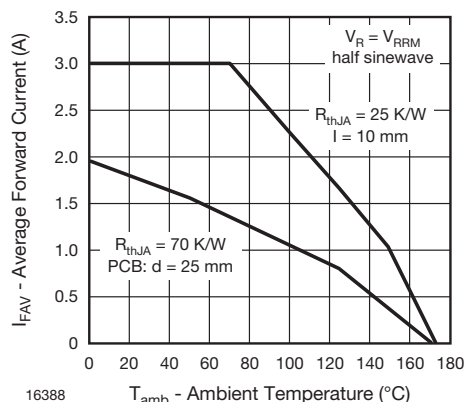


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

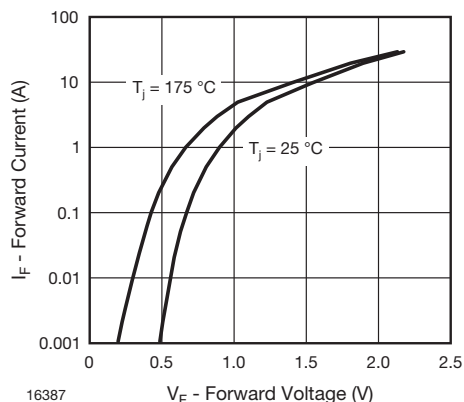


Fig. 2 - Max. Forward Current vs. Forward Voltage

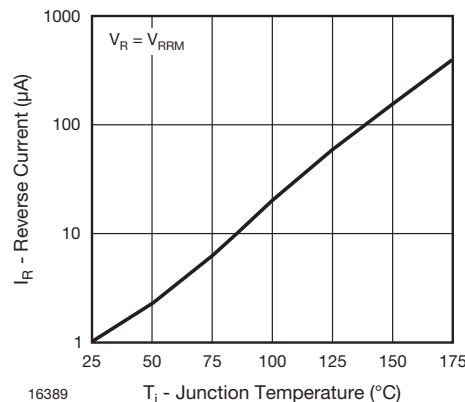


Fig. 4 - Max. Reverse Current vs. Junction Temperature

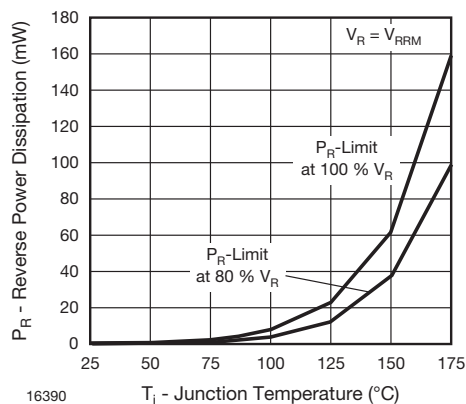


Fig. 5 - Max. Reverse Power Dissipation vs. Junction Temperature

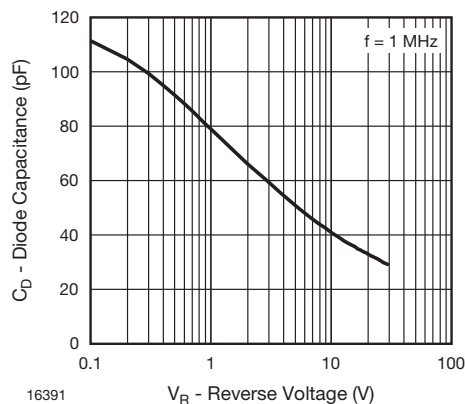


Fig. 6 - Diode Capacitance vs. Reverse Voltage

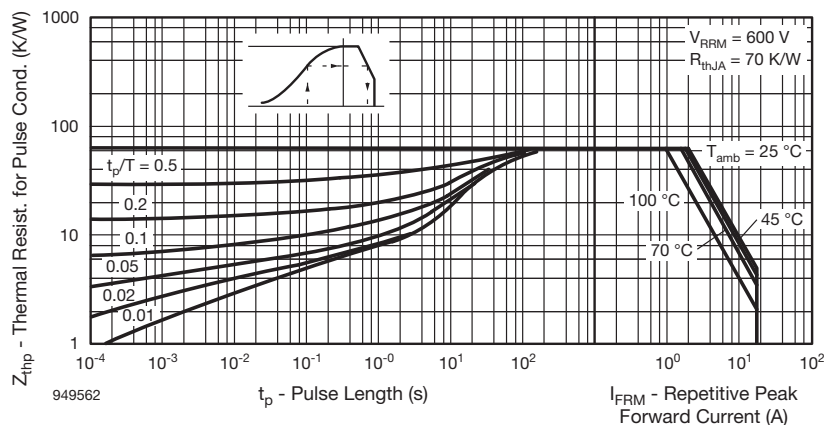
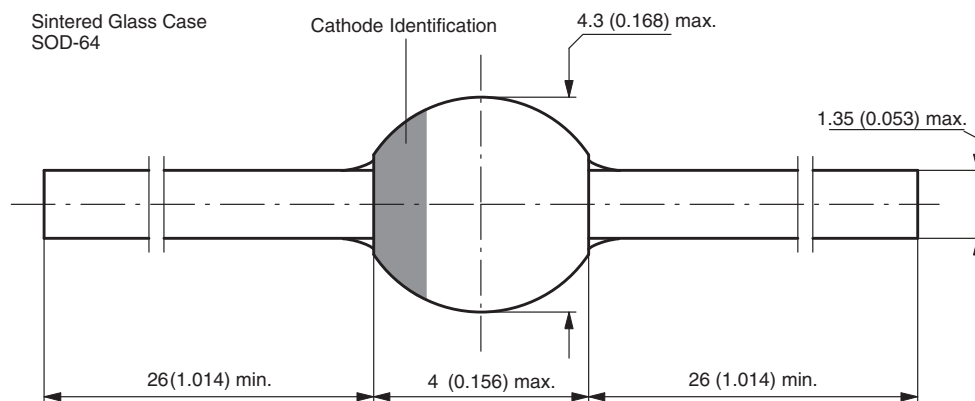


Fig. 7 - Thermal Response

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



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- Консультации по применению компонента;
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- Техническая поддержка проекта;
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#### Как с нами связаться

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