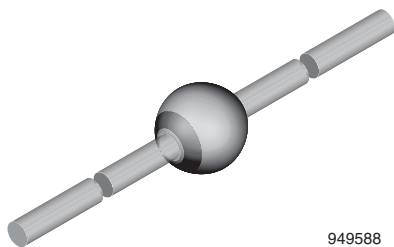




## Standard Avalanche Sinterglass Diode



949588

## DESIGN SUPPORT TOOLS

[click logo to get started](#)3D  
Models  
Available

## FEATURES

- Glass passivated junction
- Hermetically sealed package
- Material categorization:  
for definitions of compliance please see  
[www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

RoHS  
COMPLIANT  
HALOGEN  
FREE

## APPLICATIONS

- High voltage rectification
- Efficiency diode in horizontal deflection circuits

## 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

## ORDERING INFORMATION (Example)

| DEVICE NAME | ORDERING CODE | TAPED UNITS                | MINIMUM ORDER QUANTITY |
|-------------|---------------|----------------------------|------------------------|
| BY228-15    | BY228-15TR    | 2500 per 10" tape and reel | 12 500                 |
| BY228-15    | BY228-15TAP   | 2500 per ammpack           | 12 500                 |

## PARTS TABLE

| PART     | TYPE DIFFERENTIATION                             | PACKAGE |
|----------|--------------------------------------------------|---------|
| BY228-13 | $V_R = 1000\text{ V}$ ; $I_{F(AV)} = 3\text{ A}$ | SOD-64  |
| BY228-15 | $V_R = 1200\text{ V}$ ; $I_{F(AV)} = 3\text{ A}$ | SOD-64  |

ABSOLUTE MAXIMUM RATINGS ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)

| PARAMETER                               | TEST CONDITION                        | PART     | SYMBOL      | VALUE       | UNIT               |
|-----------------------------------------|---------------------------------------|----------|-------------|-------------|--------------------|
| Reverse voltage                         | See electrical characteristics        | BY228-13 | $V_R$       | 1000        | V                  |
|                                         |                                       | BY228-15 | $V_R$       | 1200        | V                  |
| Peak reverse voltage, non repetitive    | $I_R = 100\text{ }\mu\text{A}$        | BY228-13 | $V_{RSM}$   | 1300        | V                  |
|                                         |                                       | BY228-15 | $V_{RSM}$   | 1500        | V                  |
| Peak forward surge current              | $t_p = 10\text{ ms}$ , half sine wave |          | $I_{FSM}$   | 50          | A                  |
| Average forward current                 |                                       |          | $I_{F(AV)}$ | 3           | A                  |
| Junction temperature                    |                                       |          | $T_j$       | 140         | $^{\circ}\text{C}$ |
| Storage temperature range               |                                       |          | $T_{stg}$   | -55 to +175 | $^{\circ}\text{C}$ |
| Non repetitive reverse avalanche energy | $I_{(BR)R} = 0.4\text{ A}$            |          | $E_R$       | 10          | mJ                 |

MAXIMUM THERMAL RESISTANCE ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)

| PARAMETER        | TEST CONDITION                 | SYMBOL     | VALUE | UNIT |
|------------------|--------------------------------|------------|-------|------|
| Junction ambient | On PC board with spacing 25 mm | $R_{thJA}$ | 70    | K/W  |

| <b>ELECTRICAL CHARACTERISTICS</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified) |                                                             |          |          |      |      |      |               |
|----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|----------|----------|------|------|------|---------------|
| PARAMETER                                                                                                | TEST CONDITION                                              | PART     | SYMBOL   | MIN. | TYP. | MAX. | UNIT          |
| Forward voltage                                                                                          | $I_F = 5\text{ A}$                                          |          | $V_F$    | -    | -    | 1.5  | V             |
| Reverse current                                                                                          | $V_R = 1000\text{ V}$                                       | BY228-13 | $I_R$    | -    | 2    | 5    | $\mu\text{A}$ |
|                                                                                                          | $V_R = 1200\text{ V}$                                       | BY228-15 | $I_R$    | -    | 2    | 5    | $\mu\text{A}$ |
|                                                                                                          | $V_R = 1000\text{ V}, T_J = 140\text{ }^{\circ}\text{C}$    | BY228-13 | $I_R$    | -    | -    | 140  | $\mu\text{A}$ |
|                                                                                                          | $V_R = 1200\text{ V}, T_J = 140\text{ }^{\circ}\text{C}$    | BY228-15 | $I_R$    | -    | -    | 140  | $\mu\text{A}$ |
| Reverse recovery time                                                                                    | $I_F = 0.5\text{ A}, I_R = 1\text{ A}, I_R = 0.25\text{ A}$ |          | $t_{rr}$ | -    | -    | 2    | $\mu\text{s}$ |
| Total reverse recovery time                                                                              | $I_F = 1\text{ A}, -di_F/dt = 0.05\text{ A}/\mu\text{s}$    |          | $t_{rr}$ | -    | -    | 20   | $\mu\text{s}$ |

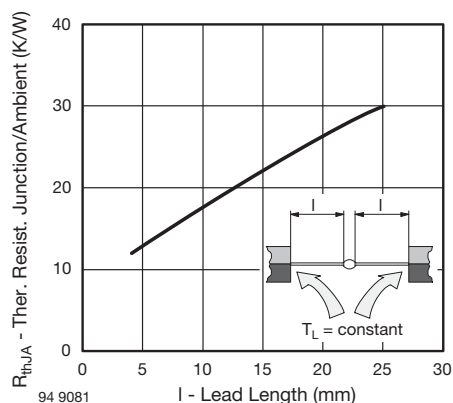
**TYPICAL CHARACTERISTICS** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)


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

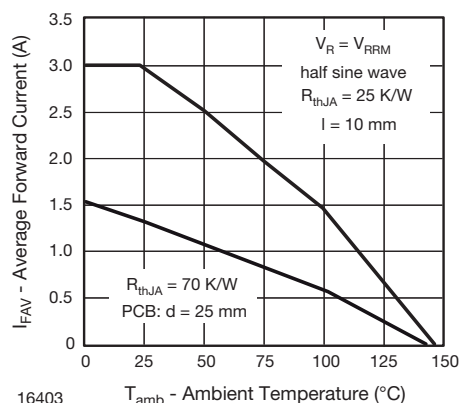


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

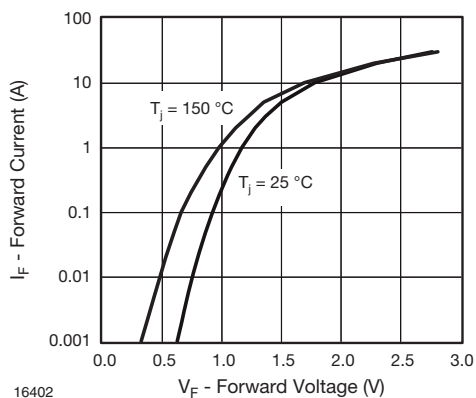


Fig. 2 - Forward Current vs. Forward Voltage

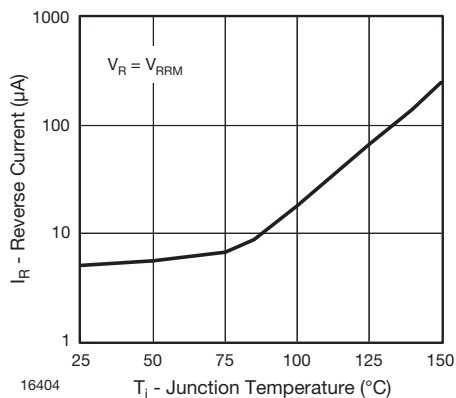


Fig. 4 - Reverse Current vs. Junction Temperature

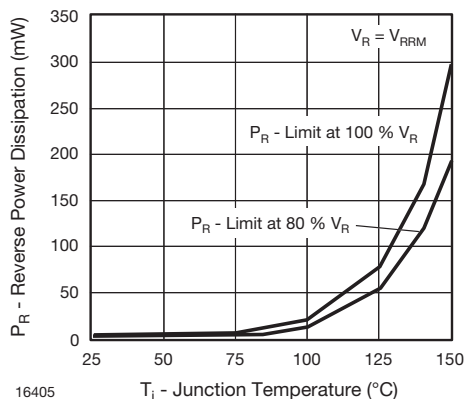


Fig. 5 - Diode Capacitance vs. Reverse Voltage

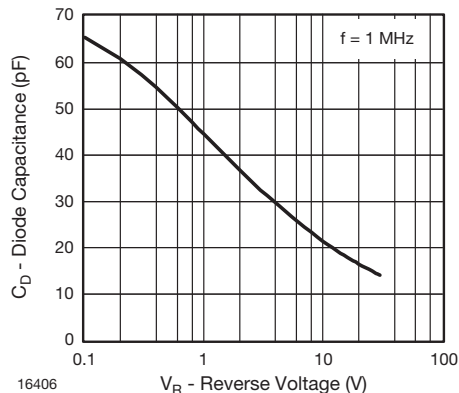
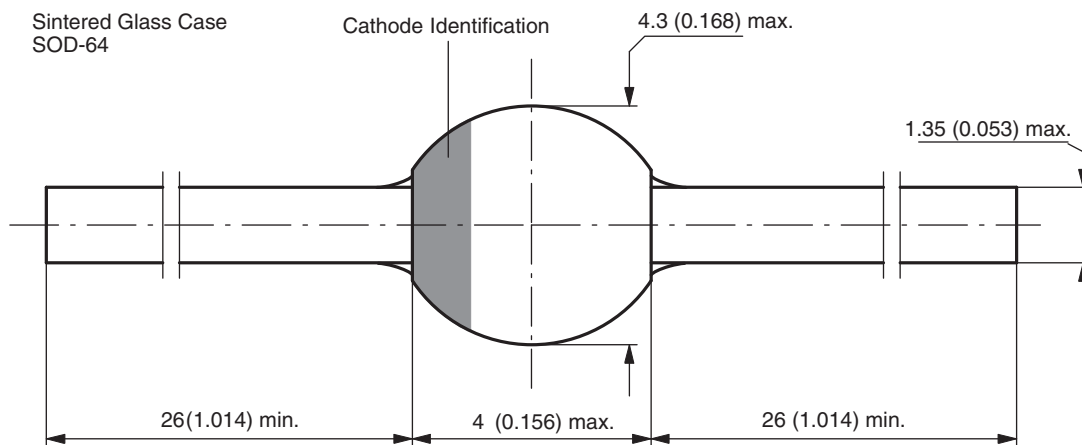


Fig. 6 - Diode Capacitance vs. Reverse Voltage

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



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94 9587



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