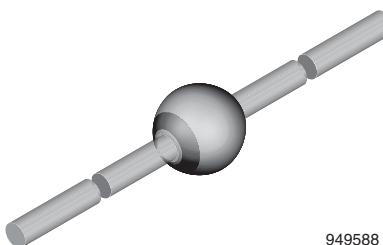


## Standard Avalanche Sinterglass Diode



949588


**RoHS**  
COMPLIANT  
HALOGEN  
FREE

### 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)

### APPLICATIONS

- High voltage rectification
- Efficiency diode in horizontal deflection circuits

### DESIGN SUPPORT TOOLS

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

### 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 ammopack          | 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   | $I_R = 100 \mu\text{A}$                | 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  |

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

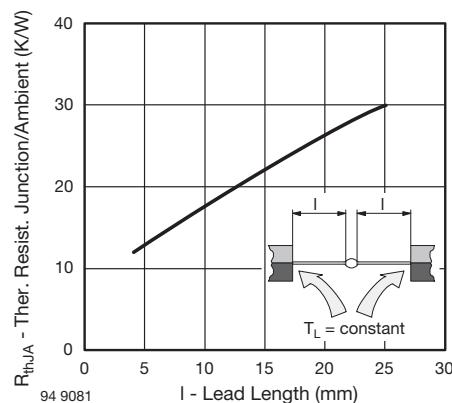
**TYPICAL CHARACTERISTICS** ( $T_{amb} = 25^\circ C$ , unless otherwise specified)


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

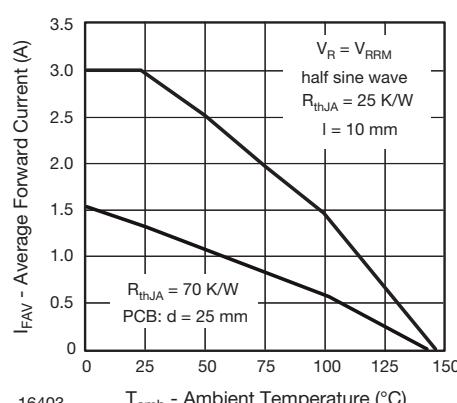


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

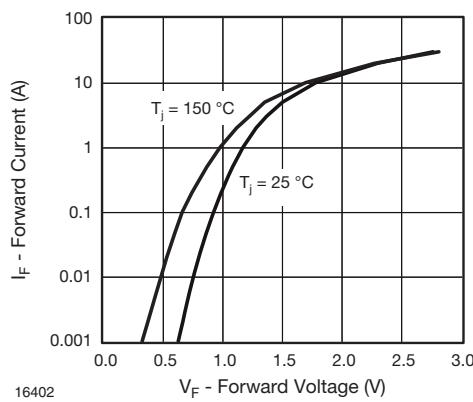


Fig. 2 - Forward Current vs. Forward Voltage

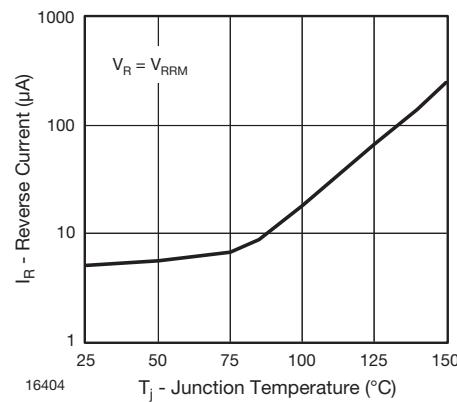


Fig. 4 - Reverse Current vs. Junction Temperature

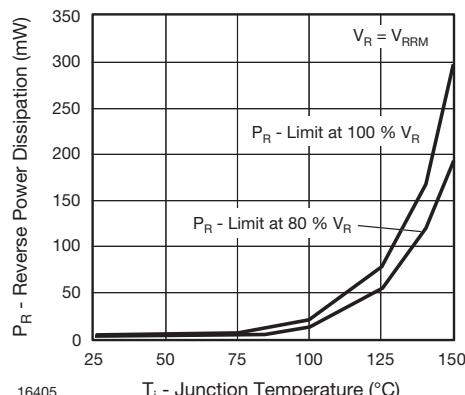


Fig. 5 - Diode Capacitance vs. Reverse Voltage

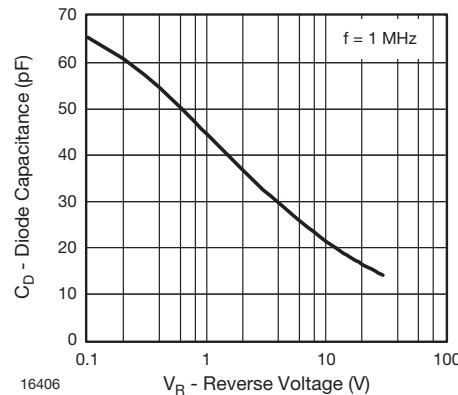
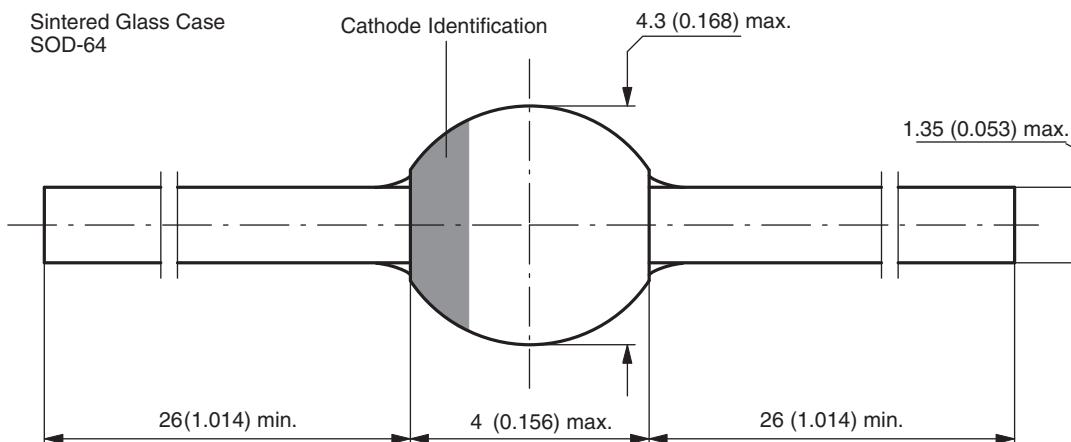


Fig. 6 - Diode Capacitance vs. Reverse Voltage

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



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