

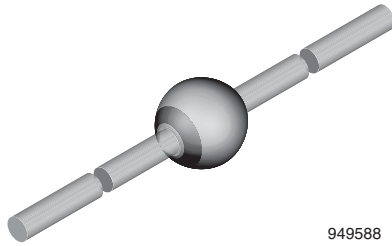


**THE DATASHEET OF
BY228-13TAP**





Standard Avalanche Sinterglass Diode



949588

DESIGN SUPPORT TOOLS

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FEATURES

- Glass passivated junction
- Hermetically sealed package
- Material categorization: for definitions of compliance please see 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 | $I_{(BR)} = 0.4\text{ A}$ | | 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 ($T_{amb} = 25\text{ }^{\circ}\text{C}$, 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 | μA |
| | $V_R = 1200\text{ V}$ | BY228-15 | I_R | - | 2 | 5 | μA |
| | $V_R = 1000\text{ V}, T_J = 140\text{ }^{\circ}\text{C}$ | BY228-13 | I_R | - | - | 140 | μA |
| | $V_R = 1200\text{ V}, T_J = 140\text{ }^{\circ}\text{C}$ | BY228-15 | I_R | - | - | 140 | μA |
| Reverse recovery time | $I_F = 0.5\text{ A}, I_R = 1\text{ A}, I_R = 0.25\text{ A}$ | | t_{rr} | - | - | 2 | μs |
| Total reverse recovery time | $I_F = 1\text{ A}, -di_F/dt = 0.05\text{ A}/\mu\text{s}$ | | t_{rr} | - | - | 20 | μs |

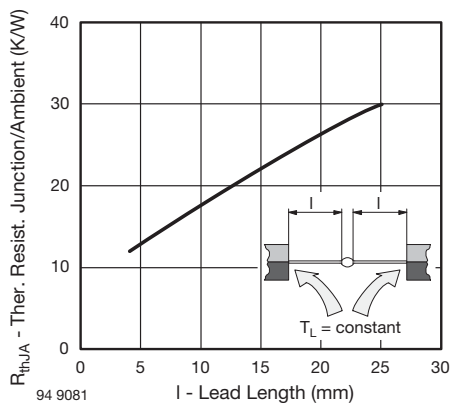
TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)


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

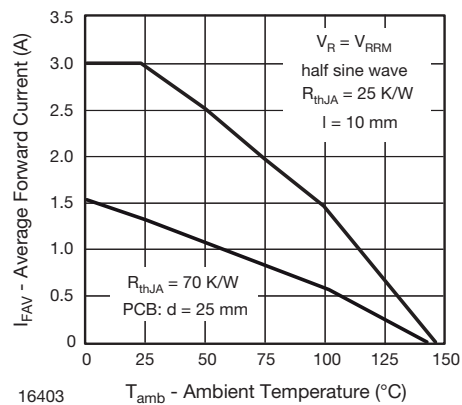


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

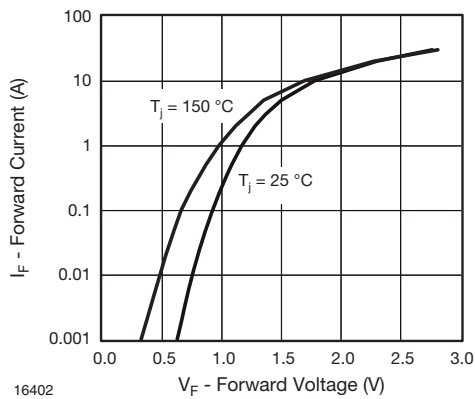


Fig. 2 - Forward Current vs. Forward Voltage

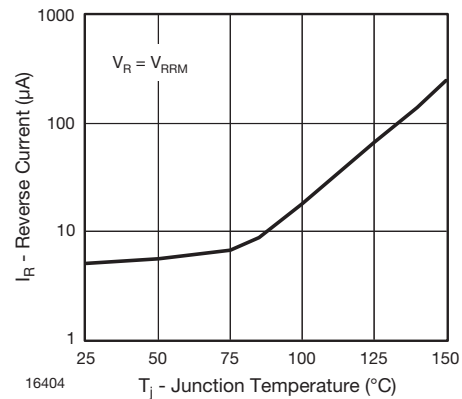


Fig. 4 - Reverse Current vs. Junction Temperature

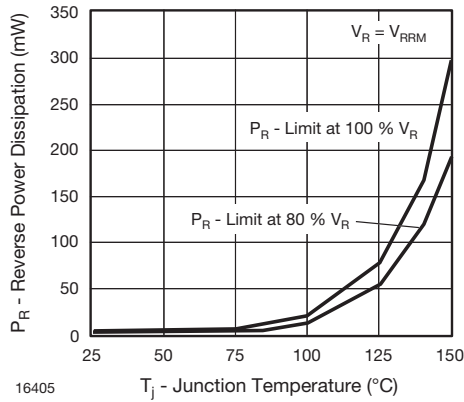


Fig. 5 - Diode Capacitance vs. Reverse Voltage

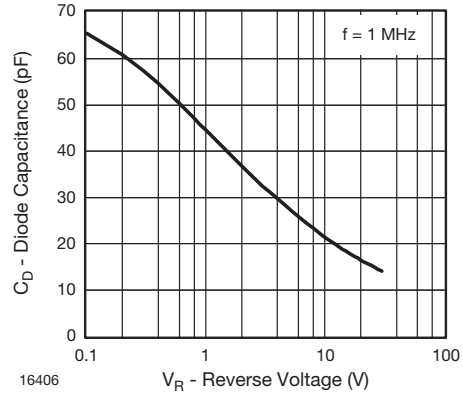
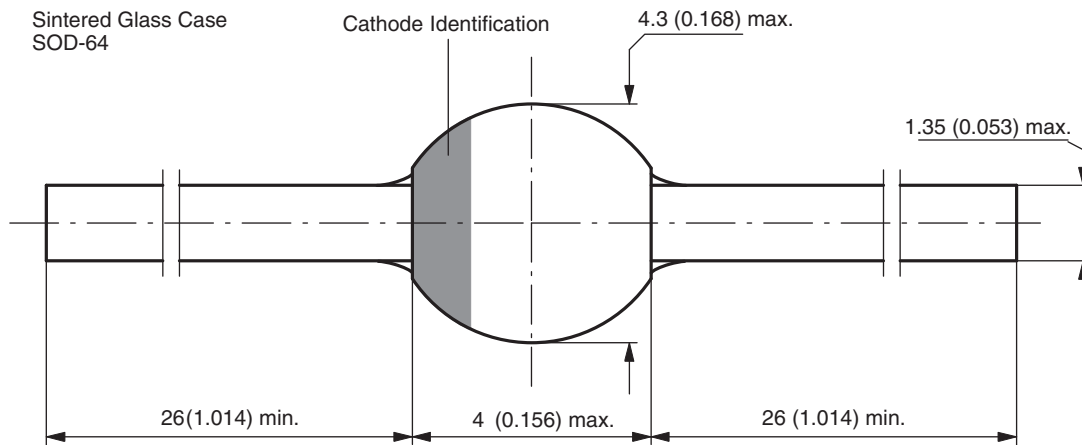


Fig. 6 - Diode Capacitance vs. Reverse Voltage

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



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