



## Ultra-Fast Avalanche Sinterglass Diode



949539

### FEATURES

- Glass passivated junction
- Hermetically sealed package
- Very low switching losses
- Low reverse current
- High reverse voltage
- Material categorization:  
for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



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HALOGEN  
**FREE**

### DESIGN SUPPORT TOOLS

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### APPLICATIONS

- Switched mode power supplies
- High-frequency inverter circuits

### MECHANICAL DATA

**Case:** SOD-57

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

**Polarity:** color band denotes cathode end

**Mounting position:** any

**Weight:** approx. 369 mg

| ORDERING INFORMATION (Example) |               |                            |                        |
|--------------------------------|---------------|----------------------------|------------------------|
| DEVICE NAME                    | ORDERING CODE | TAPED UNITS                | MINIMUM ORDER QUANTITY |
| BYV26E                         | BYV26E-TR     | 5000 per 10" tape and reel | 25 000                 |
| BYV26E                         | BYV26E-TAP    | 5000 per ammpack           | 25 000                 |

| PARTS TABLE |   |         |
|-------------|---|---------|
| PART        | TYPE DIFFERENTIATION                          | PACKAGE |
| BYV26A      | $V_R = 200\text{ V}; I_{F(AV)} = 1\text{ A}$  | SOD-57  |
| BYV26B      | $V_R = 400\text{ V}; I_{F(AV)} = 1\text{ A}$  | SOD-57  |
| BYV26C      | $V_R = 600\text{ V}; I_{F(AV)} = 1\text{ A}$  | SOD-57  |
| BYV26D      | $V_R = 800\text{ V}; I_{F(AV)} = 1\text{ A}$  | SOD-57  |
| BYV26E      | $V_R = 1000\text{ V}; I_{F(AV)} = 1\text{ A}$ | SOD-57  |

| 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            | BYV26A | $V_R = V_{RRM}$ | 200         | V                |
|   |   | BYV26B | $V_R = V_{RRM}$ | 400         | V                |
|   |   | BYV26C | $V_R = V_{RRM}$ | 600         | V                |
|   |   | BYV26D | $V_R = V_{RRM}$ | 800         | V                |
|   |   | BYV26E | $V_R = V_{RRM}$ | 1000        | V                |
| Peak forward surge current  | $t_p = 10\text{ ms}$ , half sine wave     |        | $I_{FSM}$       | 30          | A                |
| Average forward current   |   |        | $I_{F(AV)}$     | 1           | A                |
| Non repetitive reverse avalanche energy   | $I_{(BR)R} = 1\text{ A}$ , inductive load |        | $E_R$           | 10          | mJ               |
| Junction and storage temperature range  |   |        | $T_j = T_{stg}$ | -55 to +175 | $^\circ\text{C}$ |



| <b>MAXIMUM THERMAL RESISTANCE</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified) |  |            |       |      |
|--|--|------------|-------|------|
| PARAMETER  | TEST CONDITION                               | SYMBOL     | VALUE | UNIT |
| Junction ambient   | $l = 10\text{ mm}$ , $T_L = \text{constant}$ | $R_{thJA}$ | 45    | 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  | $I_F = 1\text{ A}$  |        | $V_F$       | -    | -    | 2.5  | V             |
|  | $I_F = 1\text{ A}$ , $T_j = 175\text{ }^{\circ}\text{C}$          |        | $V_F$       | -    | -    | 1.3  | V             |
| Reverse current  | $V_R = V_{RRM}$   |        | $I_R$       | -    | -    | 5    | $\mu\text{A}$ |
|  | $V_R = V_{RRM}$ , $T_j = 150\text{ }^{\circ}\text{C}$             |        | $I_R$       | -    | -    | 100  | $\mu\text{A}$ |
| Reverse breakdown voltage  | $I_R = 100\text{ }\mu\text{A}$                                    | BYV26A | $V_{(BR)R}$ | 300  | -    | -    | V             |
|  |   | BYV26B | $V_{(BR)R}$ | 500  | -    | -    | V             |
|  |   | BYV26C | $V_{(BR)R}$ | 700  | -    | -    | V             |
|  |   | BYV26D | $V_{(BR)R}$ | 900  | -    | -    | V             |
|  |   | BYV26E | $V_{(BR)R}$ | 1100 | -    | -    | V             |
| Reverse recovery time  | $I_F = 0.5\text{ A}$ , $I_R = 1\text{ A}$ , $i_R = 0.25\text{ A}$ | BYV26A | $t_{rr}$    | -    | -    | 30   | ns            |
|  |   | BYV26B | $t_{rr}$    | -    | -    | 30   | ns            |
|  |   | BYV26C | $t_{rr}$    | -    | -    | 30   | ns            |
|  |   | BYV26D | $t_{rr}$    | -    | -    | 75   | ns            |
|  |   | BYV26E | $t_{rr}$    | -    | -    | 75   | ns            |

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



Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature

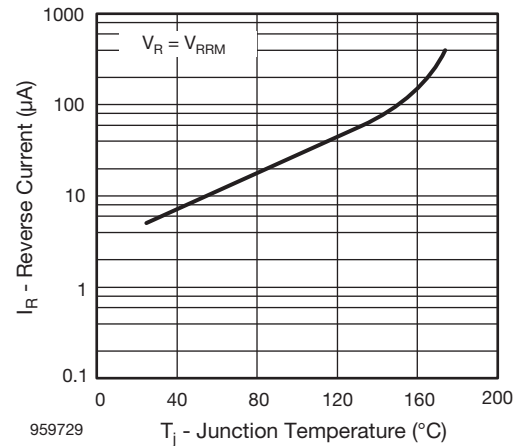


Fig. 2 - Max. Reverse Current vs. Junction Temperature



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



Fig. 5 - Diode Capacitance vs. Reverse Voltage

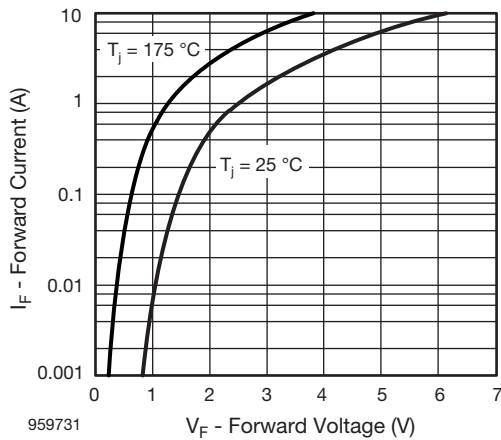


Fig. 4 - Max. Reverse Current vs. Junction Temperature



Fig. 6 - Diode Capacitance vs. Reverse Voltage

## PACKAGE DIMENSIONS in millimeters (inches): SOD-57



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