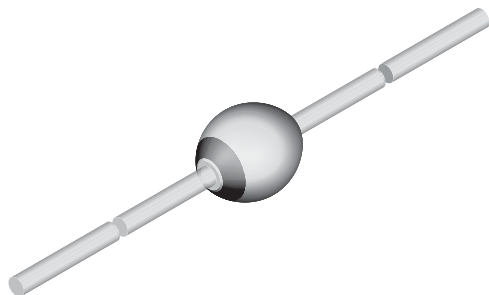


## Fast Avalanche Sinterglass Diode



### 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 fast rectification diode

949539

### 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 |
|-------------|---------------|----------------------------|------------------------|
| BY269       | BY269TR       | 5000 per 10" tape and reel | 25 000                 |
| BY269       | BY269TAP      | 5000 per ammpack           | 25 000                 |

### PARTS TABLE

| PART  | TYPE DIFFERENTIATION                               | PACKAGE |
|-------|----------------------------------------------------|---------|
| BY268 | $V_R = 1400\text{ V}$ ; $I_{F(AV)} = 0.8\text{ A}$ | SOD-57  |
| BY269 | $V_R = 1600\text{ V}$ ; $I_{F(AV)} = 0.8\text{ A}$ | SOD-57  |

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

| PARAMETER                               | TEST CONDITION                        | PART  | SYMBOL          | VALUE         | UNIT               |
|-----------------------------------------|---------------------------------------|-------|-----------------|---------------|--------------------|
| Peak reverse voltage, non repetitive    |                                       | BY268 | $V_{RSM}$       | 1600          | V                  |
|                                         |                                       | BY269 | $V_{RSM}$       | 1800          | V                  |
| Reverse voltage                         | See electrical characteristics        | BY268 | $V_R$           | 1400          | V                  |
|                                         |                                       | BY269 | $V_R$           | 1600          | V                  |
| Peak forward surge current              | $t_p = 10\text{ ms}$ , half sine wave |       | $I_{FSM}$       | 20            | A                  |
| Average forward current                 |                                       |       | $I_{F(AV)}$     | 0.8           | A                  |
| Non repetitive reverse avalanche energy | $I_{(BR)R} = 0.4\text{ A}$            |       | $E_R$           | 10            | 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 $l = 10\text{ mm}$ , $T_L = \text{constant}$ | $R_{thJA}$ | 45    | K/W  |
|                  | On PC board with spacing 25 mm                           | $R_{thJA}$ | 100   | 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       | $I_F = 0.4\text{ A}$                                        |       | $V_F$    | -    | -    | 1.25 | V             |
| Reverse current       | $V_R = 1400\text{ V}$                                       | BY268 | $I_R$    | -    | 1    | 2    | $\mu\text{A}$ |
|                       | $V_R = 1600\text{ V}$                                       | BY269 | $I_R$    | -    | 1    | 2    | $\mu\text{A}$ |
|                       | $V_R = 1400\text{ V}, T_J = 100\text{ }^{\circ}\text{C}$    | BY268 | $I_R$    | -    | -    | 15   | $\mu\text{A}$ |
|                       | $V_R = 1600\text{ V}, T_J = 100\text{ }^{\circ}\text{C}$    | BY269 | $I_R$    | -    | -    | 15   | $\mu\text{A}$ |
| Reverse recovery time | $I_F = 0.5\text{ A}, I_R = 1\text{ A}, i_R = 0.25\text{ A}$ |       | $t_{rr}$ | -    | -    | 400  | ns            |

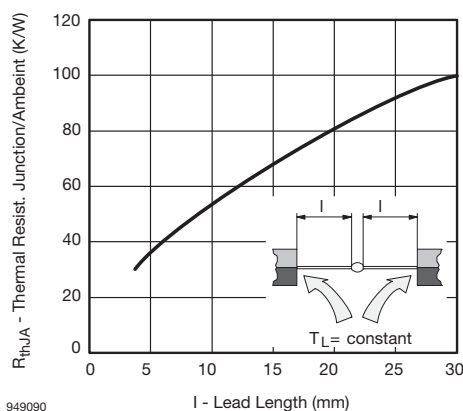
**TYPICAL CHARACTERISTICS** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)


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

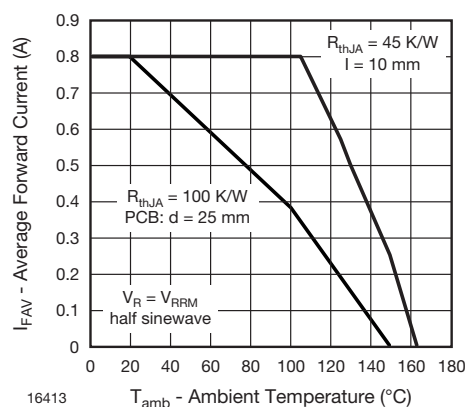


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

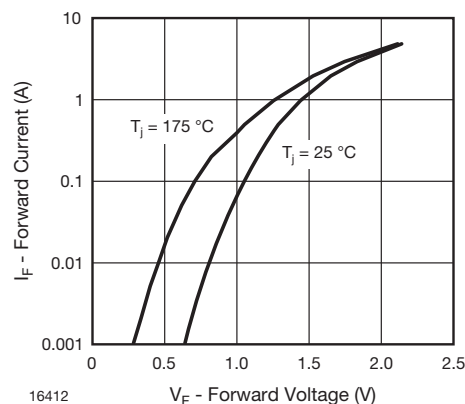


Fig. 2 - Max. Forward Current vs. Forward Voltage

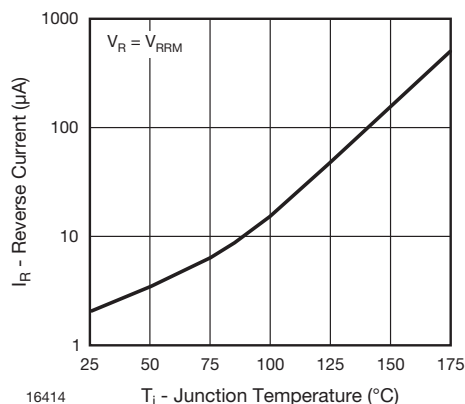


Fig. 4 - Max. Reverse Current vs. Junction Temperature

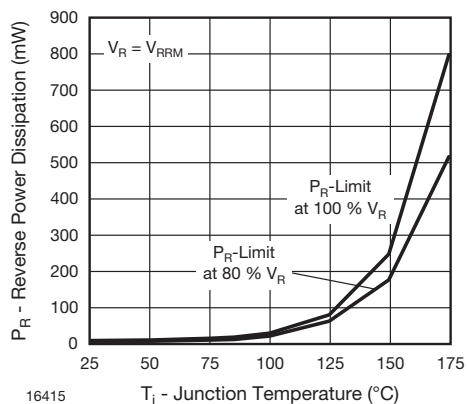


Fig. 5 - Max. Reverse Power Dissipation vs. Junction Temperature

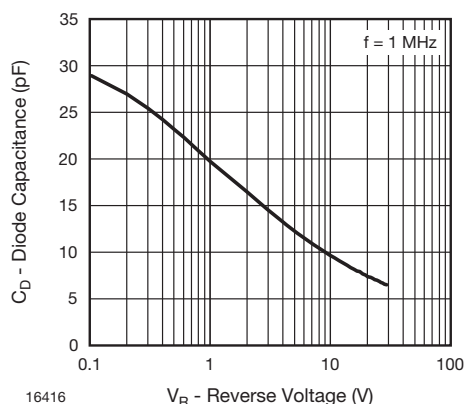
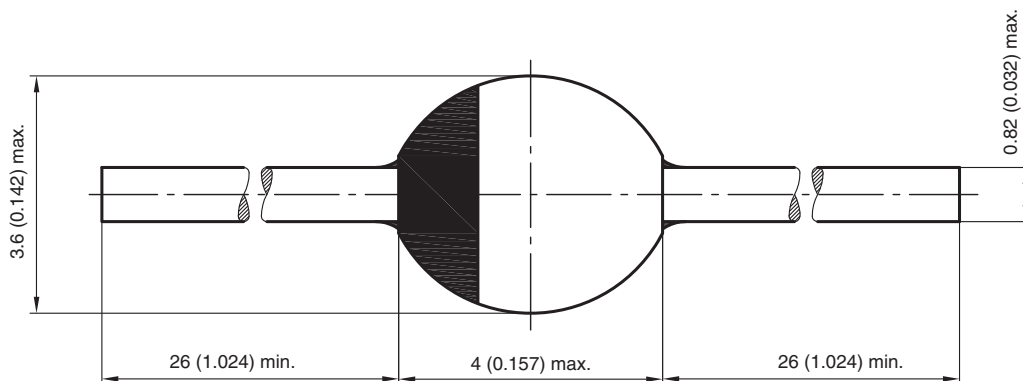


Fig. 6 - Diode Capacitance vs. Reverse Voltage

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



20543  
Rev. 3 - Date: 09.February 2005  
Document no.: 6.563-5006.3-4



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