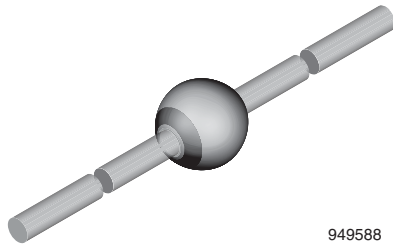




## Fast Avalanche Sinterglass Diode



949588

### FEATURES

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



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**

### DESIGN SUPPORT TOOLS

[click logo to get started](#)



### APPLICATIONS

- Very fast rectification and switching diode

### 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 |
| BYT56M                         | BYT56M-TR     | 2500 per 10" tape and reel | 12 500                 |
| BYT56M                         | BYT56M-TAP    | 2500 per ammpack           | 12 500                 |

| PARTS TABLE |   |         |
|-------------|---|---------|
| PART        | TYPE DIFFERENTIATION                          | PACKAGE |
| BYT56A      | $V_R = 50\text{ V}; I_{F(AV)} = 3\text{ A}$   | SOD-64  |
| BYT56B      | $V_R = 100\text{ V}; I_{F(AV)} = 3\text{ A}$  | SOD-64  |
| BYT56D      | $V_R = 200\text{ V}; I_{F(AV)} = 3\text{ A}$  | SOD-64  |
| BYT56G      | $V_R = 400\text{ V}; I_{F(AV)} = 3\text{ A}$  | SOD-64  |
| BYT56J      | $V_R = 600\text{ V}; I_{F(AV)} = 3\text{ A}$  | SOD-64  |
| BYT56K      | $V_R = 800\text{ V}; I_{F(AV)} = 3\text{ A}$  | SOD-64  |
| BYT56M      | $V_R = 1000\text{ V}; I_{F(AV)} = 3\text{ A}$ | SOD-64  |

| ABSOLUTE MAXIMUM RATINGS ( $T_{amb} = 25\text{ }^\circ\text{C}$ , unless otherwise specified) |                                       |        |                 |             |                  |
|---|---------------------------------------|--------|-----------------|-------------|------------------|
| PARAMETER   | TEST CONDITION                        | PART   | SYMBOL          | VALUE       | UNIT             |
| Reverse voltage = repetitive peak reverse voltage   | See electrical characteristics        | BYT56A | $V_R = V_{RRM}$ | 50          | V                |
|   |                                       | BYT56B | $V_R = V_{RRM}$ | 100         | V                |
|   |                                       | BYT56D | $V_R = V_{RRM}$ | 200         | V                |
|   |                                       | BYT56G | $V_R = V_{RRM}$ | 400         | V                |
|   |                                       | BYT56J | $V_R = V_{RRM}$ | 600         | V                |
|   |                                       | BYT56K | $V_R = V_{RRM}$ | 800         | V                |
|   |                                       | BYT56M | $V_R = V_{RRM}$ | 1000        | V                |
| Peak forward surge current  | $t_p = 10\text{ ms}$ , half sine wave |        | $I_{FSM}$       | 80          | A                |
| Average forward current   | $I = 10\text{ mm}$                    |        | $I_{F(AV)}$     | 3           | A                |
|   | On PC board                           |        | $I_{F(AV)}$     | 1.5         | 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 $l = 10\text{ mm}$ , $T_L = \text{constant}$ | $R_{thJA}$ | 25    | K/W  |
|                  | 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       | $I_F = 3\text{ A}$  |      | $V_F$    | -    | -    | 1.4  | V             |
| Reverse current       | $V_R = V_{RRM}$   |      | $I_R$    | -    | -    | 5    | $\mu\text{A}$ |
|                       | $V_R = V_{RRM}$ , $T_j = 150\text{ }^{\circ}\text{C}$             |      | $I_R$    | -    | -    | 150  | $\mu\text{A}$ |
| Reverse recovery time | $I_F = 0.5\text{ A}$ , $I_R = 1\text{ A}$ , $i_R = 0.25\text{ A}$ |      | $t_{rr}$ | -    | -    | 100  | ns            |

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

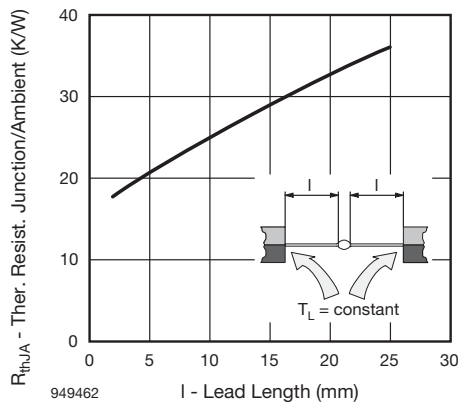


Fig. 1 - Max. Thermal Resistance vs. Lead Length

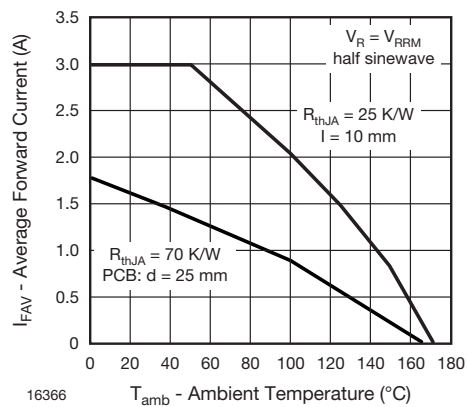


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

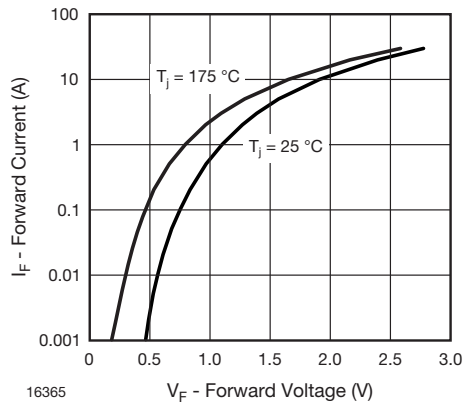


Fig. 2 - Max. Forward Current vs. Forward Voltage

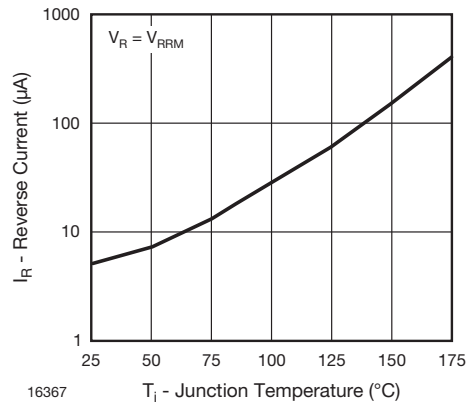


Fig. 4 - Max. Reverse Current vs. Junction Temperature

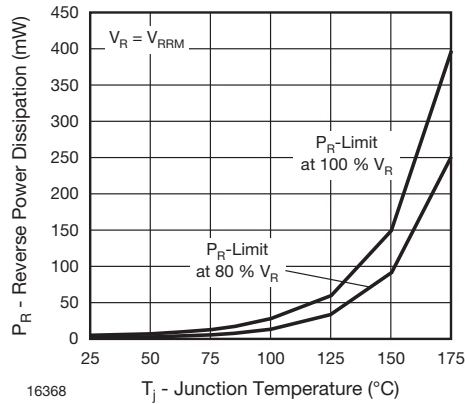


Fig. 5 - Max. Reverse Power Dissipation vs. Junction Temperature

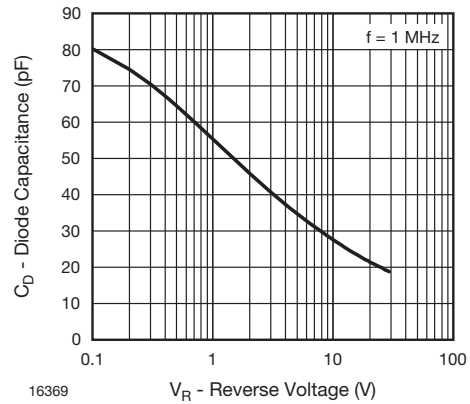
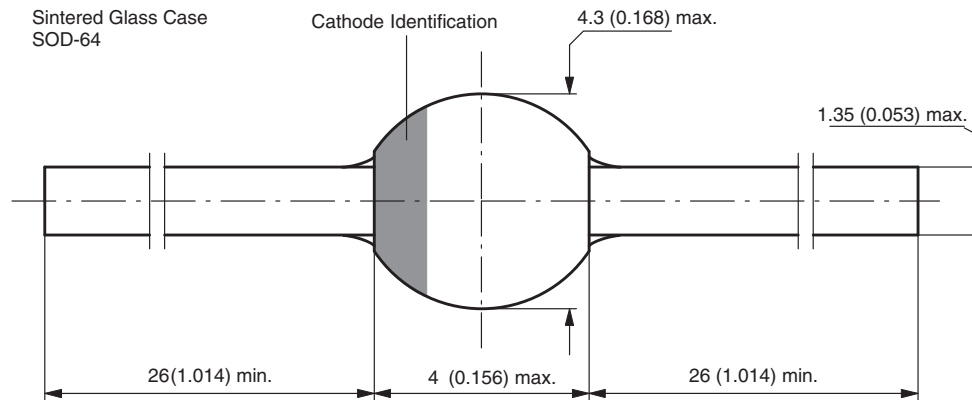


Fig. 6 - Diode Capacitance vs. Reverse Voltage

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



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