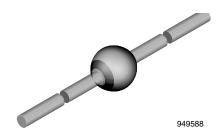
BYW72, BYW73, BYW74, BYW75, BYW76

Vishay Semiconductors



Fast Avalanche Sinterglass 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

FEATURES

- Glass passivated junction
- · Hermetically sealed package
- Low reverse current
- · Soft recovery characteristics
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition

Pho



HOHS COMPLIANT HALOGEN FREE

APPLICATIONS

 Fast rectification and switching diode for example for TV-line output circuits and switch mode power supply

| PARTS TABLE | | | | |
|-------------|--|---------|--|--|
| PART | TYPE DIFFERENTIATION | PACKAGE | | |
| BYW72 | V _R = 200 V; I _{FAV} = 3 A | SOD-64 | | |
| BYW73 | V _R = 300 V; I _{FAV} = 3 A | SOD-64 | | |
| BYW74 | $V_R = 400 \text{ V}; I_{FAV} = 3 \text{ A}$ | SOD-64 | | |
| BYW75 | V _R = 500 V; I _{FAV} = 3 A | SOD-64 | | |
| BYW76 | V _R = 600 V; I _{FAV} = 3 A | SOD-64 | | |

| ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified) | | | | | | |
|--|--------------------------------|-------|----------------------|---------------|------|--|
| PARAMETER | TEST CONDITION | PART | SYMBOL | VALUE | UNIT | |
| Reverse voltage = repetitive peak reverse voltage | See electrical characteristics | BYW72 | $V_R = V_{RRM}$ | 200 | V | |
| | | BYW73 | $V_R = V_{RRM}$ | 300 | V | |
| | | BYW74 | $V_R = V_{RRM}$ | 400 | V | |
| | | BYW75 | $V_R = V_{RRM}$ | 500 | V | |
| | | BYW76 | $V_R = V_{RRM}$ | 600 | V | |
| Peak forward surge current | $t_p = 10$ ms, half sine wave | | I _{FSM} 100 | | Α | |
| Repetitive peak forward current | | | I _{FRM} | 15 | Α | |
| Average forward current | | | I _{FAV} | 3 | Α | |
| Non repetitive reverse avalanche energy | I _{(BR)R} = 0.4 A | | E _R 10 | | mJ | |
| Junction and storage temperature range | | | $T_j = T_{stg}$ | - 55 to + 175 | °C | |

| MAXIMUM THERMAL RESISTANCE (T _{amb} = 25 °C, unless otherwise specified) | | | | | |
|---|--|-------------------|------|-----|--|
| PARAMETER | TEST CONDITION SYMBOL VALUE | | UNIT | | |
| Junction ambient | Lead length I = 10 mm, T _L = constant | R _{thJA} | 25 | K/W | |
| | On PC board with spacing 25 mm | R_{thJA} | 70 | K/W | |



Fast Avalanche Sinterglass Diode Vishay Semiconductors

| ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified) | | | | | | | |
|--|--|------|-----------------|------|------|------|------|
| PARAMETER | TEST CONDITION | PART | SYMBOL | MIN. | TYP. | MAX. | UNIT |
| Forward voltage | I _F = 3 A | | V _F | - | 0.95 | 1.1 | V |
| Reverse current | $V_R = V_{RRM}$ | | I _R | - | 1 | 5 | μΑ |
| | $V_R = V_{RRM}, T_j = 150 ^{\circ}C$ | | I _R | - | 60 | 150 | μΑ |
| Reverse recovery time | $I_F = 0.5 \text{ A}, I_R = 1 \text{ A}, i_R = 0.25 \text{ A}$ | | t _{rr} | - | ı | 200 | ns |

TYPICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

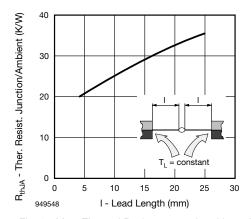


Fig. 1 - Max. Thermal Resistance vs. Lead Length

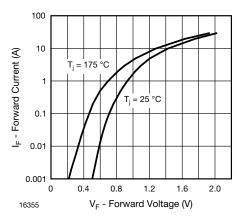


Fig. 2 - Max. Forward Current vs. Forward Voltage

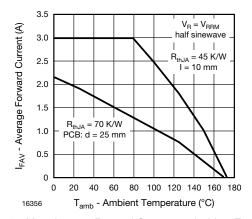


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

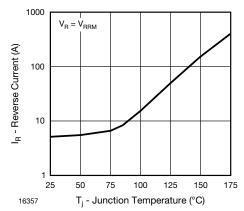


Fig. 4 - Max. Reverse Current vs. Junction Temperature

BYW72, BYW73, BYW74, BYW75, BYW76

Vishay Semiconductors Fast Avalanche Sinterglass Diode



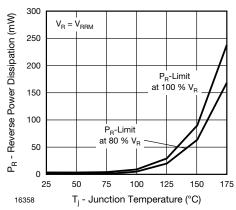


Fig. 5 - Max. Reverse Power Dissipation vs. Junction Temperature

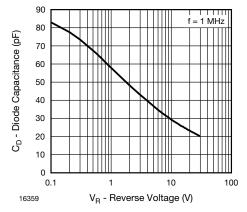


Fig. 6 - Diode Capacitance vs. Reverse Voltage

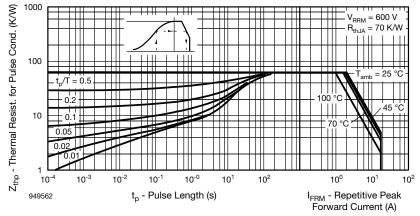
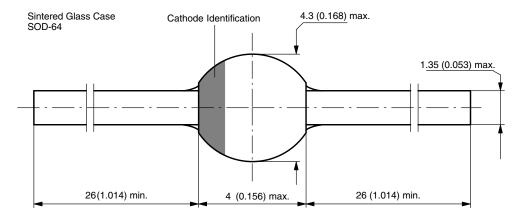


Fig. 7 - Thermal Response

PACKAGE DIMENSIONS in millimeters (inches): SOD-64



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