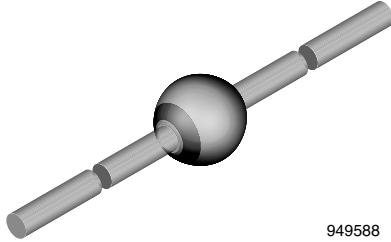


Ultra Fast Avalanche Sinterglass Diode



949588

FEATURES

- High reverse voltage
- Glass passivated
- Low reverse current
- Low forward voltage drop
- Hermetically sealed axial-leaded glass envelope
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



RoHS
COMPLIANT
HALOGEN
FREE

APPLICATIONS

- Switched mode power supplies
- High-frequency inverter 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

| PARTS TABLE | | |
|-------------|---|---------|
| PART | TYPE DIFFERENTIATION | PACKAGE |
| BYV98-50 | $V_R = 50\text{ V}$; $I_{FAV} = 4\text{ A}$ | SOD-64 |
| BYV98-100 | $V_R = 100\text{ V}$; $I_{FAV} = 4\text{ A}$ | SOD-64 |
| BYV98-150 | $V_R = 150\text{ V}$; $I_{FAV} = 4\text{ A}$ | SOD-64 |
| BYV98-200 | $V_R = 200\text{ V}$; $I_{FAV} = 4\text{ A}$ | 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 | BYV98-50 | $V_R = V_{RRM}$ | 50 | V |
| | | BYV98-100 | $V_R = V_{RRM}$ | 100 | V |
| | | BYV98-150 | $V_R = V_{RRM}$ | 150 | V |
| | | BYV98-200 | $V_R = V_{RRM}$ | 200 | V |
| Peak forward surge current | $t_p = 10\text{ ms}$, half sine wave | | I_{FSM} | 70 | A |
| Average forward current | $T_{amb} = 30\text{ }^\circ\text{C}$, $l = 10\text{ mm}$ | | I_{FAV} | 4 | A |
| Junction and storage temperature range | | | $T_j = T_{stg}$ | - 55 to + 175 | $^\circ\text{C}$ |
| Non repetitive reverse avalanche energy | $I_{(BR)R} = 1\text{ A}$ | | E_R | 20 | mJ |

| 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 |

BYV98-50, BYV98-100, BYV98-150, BYV98-200



Vishay Semiconductors Ultra Fast Avalanche Sinterglass Diode

| 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 | - | - | 1.1 | V |
| Reverse current | $V_R = V_{RRM}$ | | I_R | - | - | 10 | μA |
| | $V_R = V_{RRM}, T_j = 150\text{ }^{\circ}\text{C}$ | | I_R | - | - | 200 | μA |
| Reverse breakdown voltage | $I_R = 100\text{ }\mu\text{A}$ | BYV98-50 | $V_{(BR)R}$ | 60 | - | - | V |
| | | BYV98-100 | $V_{(BR)R}$ | 120 | - | - | V |
| | | BYV98-150 | $V_{(BR)R}$ | 170 | - | - | V |
| | | BYV98-200 | $V_{(BR)R}$ | 220 | - | - | V |
| Reverse recovery time | $I_F = 0.5\text{ A}, I_R = 1\text{ A}, i_R = 0.25\text{ A}$ | | t_{rr} | - | - | 35 | ns |

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

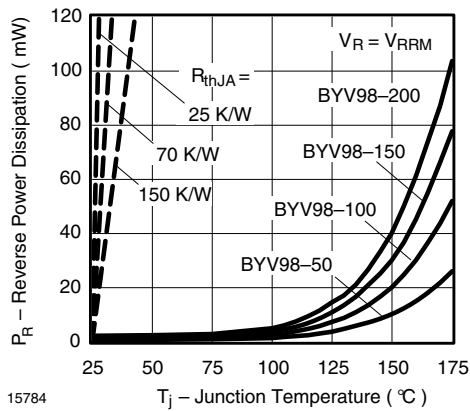


Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature

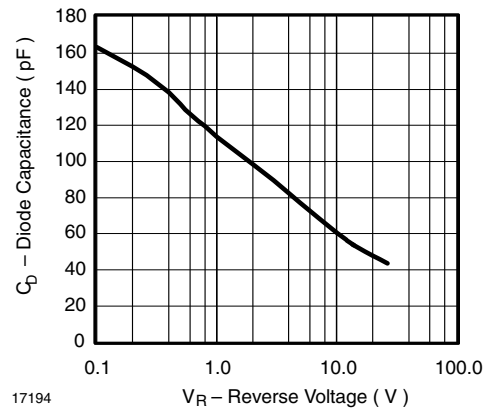


Fig. 3 - Diode Capacitance vs. Reverse Voltage

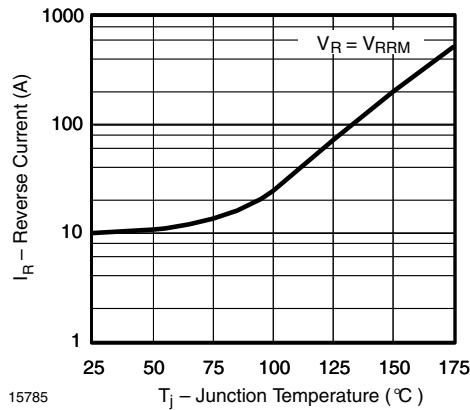


Fig. 2 - Max. Reverse Current vs. Junction Temperature

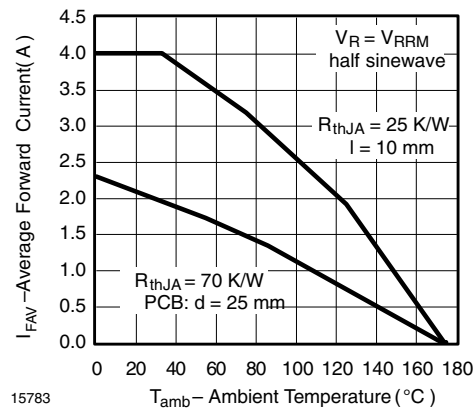


Fig. 4 - Max. Average Forward Current vs. Ambient Temperature



BYV98-50, BYV98-100, BYV98-150, BYV98-200

Ultra Fast Avalanche Sinterglass Diode Vishay Semiconductors

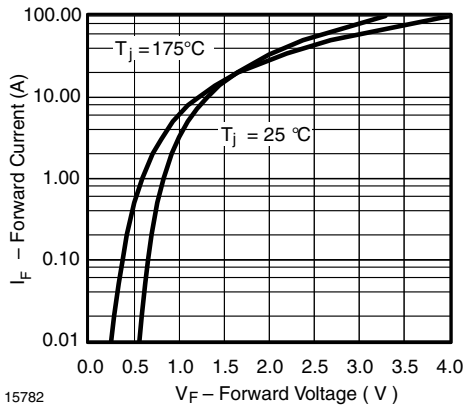
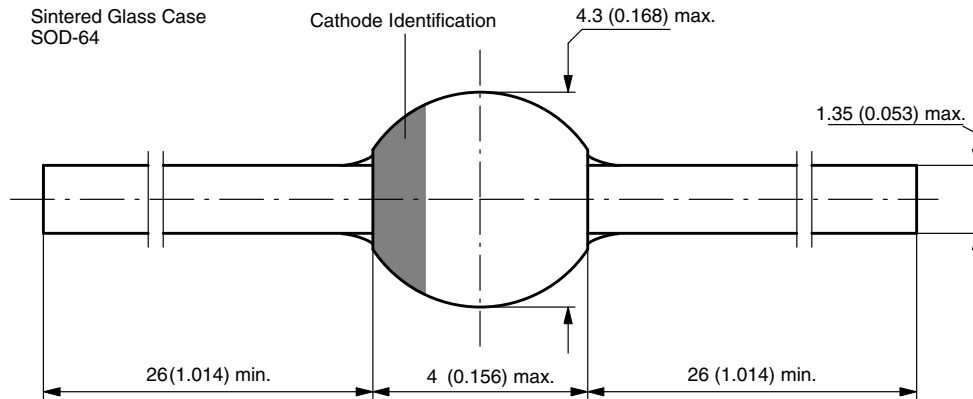


Fig. 5 - Max. Forward Current vs. Forward Voltage

PACKAGE DIMENSIONS in millimeters (inches): SOD-64



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