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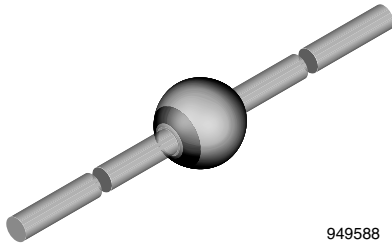
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Ultra-Fast Avalanche Sinterglass Diode



949588

FEATURES

- High reverse voltage
- Glass passivated
- Low reverse current
- Low forward voltage drop
- Hermetically sealed axial-leaded glass envelope
- Material categorization:
For definitions of compliance please see www.vishay.com/doc?99912



RoHS COMPLIANT HALOGEN FREE

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

APPLICATIONS

- Switched mode power supplies
- High-frequency inverter circuits

| ORDERING INFORMATION (Example) | | | |
|--------------------------------|---------------|----------------------------|------------------------|
| DEVICE NAME | ORDERING CODE | TAPED UNITS | MINIMUM ORDER QUANTITY |
| BYV98-200 | BYV98-200-TR | 2500 per 10" tape and reel | 12 500 |
| BYV98-200 | BYV98-200-TAP | 2500 per ammpack | 12 500 |

| PARTS TABLE | | |
|-------------|--|---------|
| PART | TYPE DIFFERENTIATION | PACKAGE |
| BYV98-50 | $V_R = 50\text{ V}; I_{F(AV)} = 4\text{ A}$ | SOD-64 |
| BYV98-100 | $V_R = 100\text{ V}; I_{F(AV)} = 4\text{ A}$ | SOD-64 |
| BYV98-150 | $V_R = 150\text{ V}; I_{F(AV)} = 4\text{ A}$ | SOD-64 |
| BYV98-200 | $V_R = 200\text{ V}; I_{F(AV)} = 4\text{ A}$ | 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 | $T_{amb} = 30\text{ }^\circ\text{C}$, $I = 10\text{ mm}$ | | $I_{F(AV)}$ | 4 | A |
| Junction and storage temperature range | | | $T_j = T_{stg}$ | - 55 to + 175 | $^\circ\text{C}$ |
| Non repetitive reverse avalanche energy | $I_{(BR)} = 1\text{ A}$ | | 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 |



| ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified) | | | | | | | |
|---|---|-----------|--------------------|------|------|------|------|
| PARAMETER | TEST CONDITION | PART | SYMBOL | MIN. | TYP. | MAX. | UNIT |
| Forward voltage | I _F = 5 A | | V _F | - | - | 1.1 | V |
| Reverse current | V _R = V _{RRM} | | I _R | - | - | 10 | μA |
| | V _R = V _{RRM} , T _j = 150 °C | | I _R | - | - | 200 | μA |
| Reverse breakdown voltage | I _R = 100 μA | 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 A, I _R = 1 A, i _R = 0.25 A | | t _{rr} | - | - | 35 | ns |

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

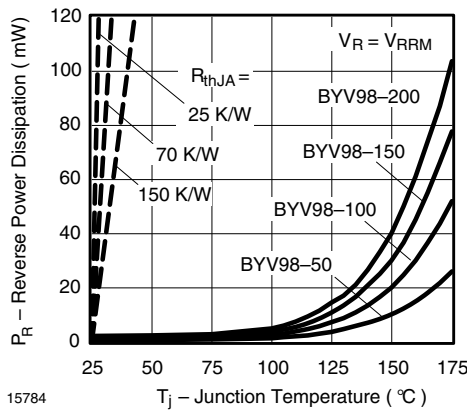


Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature

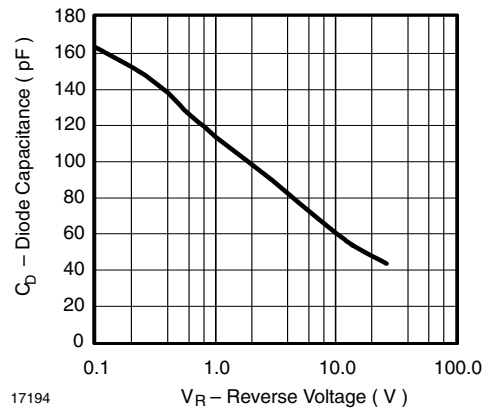


Fig. 3 - Diode Capacitance vs. Reverse Voltage

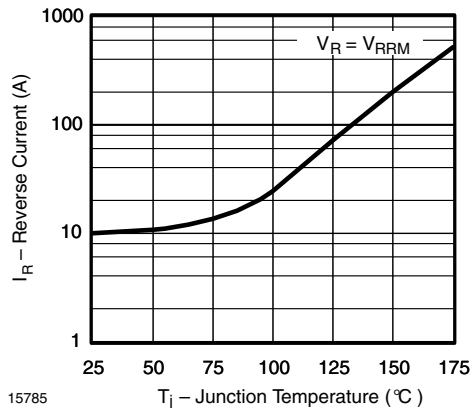


Fig. 2 - Max. Reverse Current vs. Junction Temperature

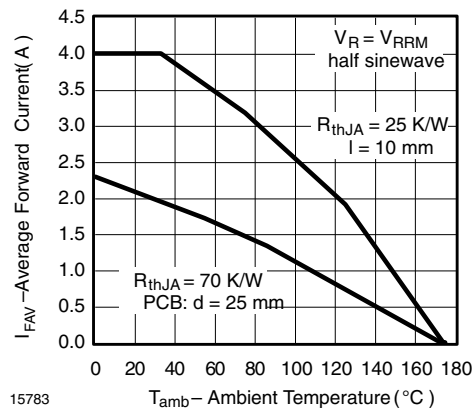


Fig. 4 - Max. Average Forward Current vs. Ambient Temperature

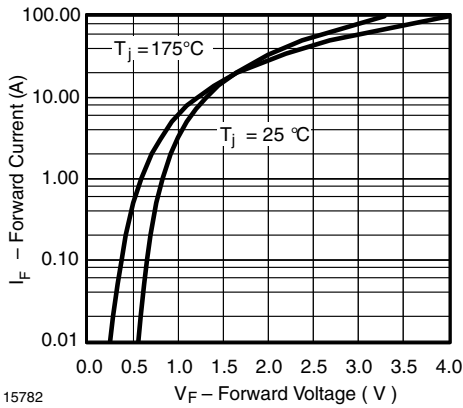
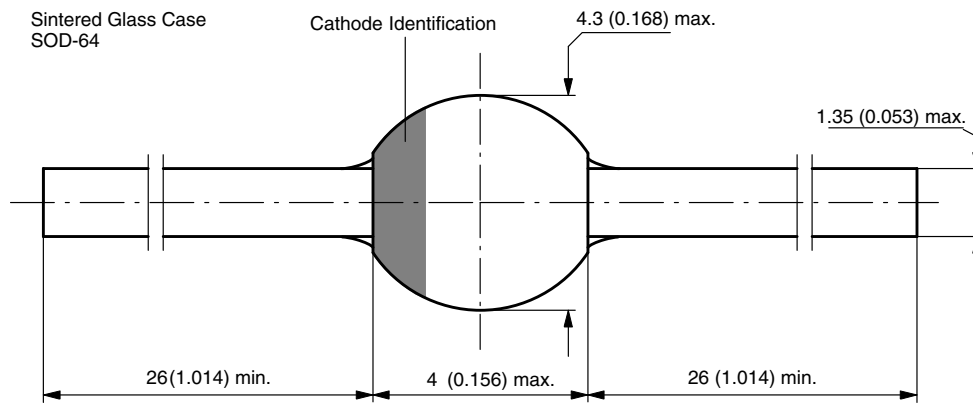


Fig. 5 - Max. Forward Current vs. Forward Voltage

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



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 94 9587



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