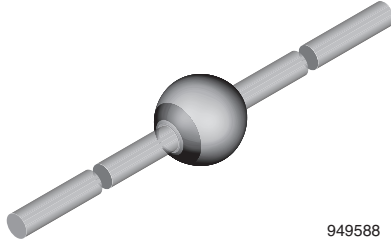


Ultra-Fast Avalanche Sinterglass Diode



949588

FEATURES

- Glass passivated
- Hermetically sealed axial-leaded glass envelope
- Low reverse current
- Ultra fast soft recovery switching
- 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

- TV
- SMPS
- Power feedback systems

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 |
| BYV28-600 | $V_R = 600\text{ V}$; $I_{FAV} = 3.5\text{ A}$ | 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 | BYV28-600 | $V_R = V_{RRM}$ | 600 | V |
| Peak forward surge current | $t_p = 10\text{ ms}$, half sine wave | | I_{FSM} | 90 | A |
| Average forward current | $I = 10\text{ mm}$ | | I_{FAV} | 3.5 | A |
| Non repetitive reverse avalanche energy | Inductive load, $I_{(BR)R} = 1\text{ A}$ | | E_R | 20 | 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 °C, unless otherwise specified) | | | | | | |
|---|---|--------------------|------|------|------|------|
| PARAMETER | TEST CONDITION | SYMBOL | MIN. | TYP. | MAX. | UNIT |
| Forward voltage | I _F = 3.5 A | V _F | - | - | 1.25 | V |
| | I _F = 5 A | V _F | - | - | 1.35 | V |
| | I _F = 3.5 A, T _j = 175 °C | V _F | - | - | 0.95 | V |
| | I _F = 5 A, T _j = 175 °C | V _F | - | - | 1.06 | V |
| Reverse current | V _R = V _{RRM} | I _R | - | - | 5 | μA |
| | V _R = V _{RRM} , T _j = 150 °C | I _R | - | - | 150 | μA |
| Reverse breakdown voltage | I _R = 100 μA | V _{(BR)R} | 600 | - | - | V |
| Reverse recovery time | I _F = 0.5 A, I _R = 1 A, i _R = 0.25 A | t _{rr} | - | - | 50 | ns |
| Forward recovery | I _F = 5 A | V _{FP} | - | 6.2 | - | V |
| Forward recovery time | I _F = 5 A | t _{fr} | - | 210 | - | ns |

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

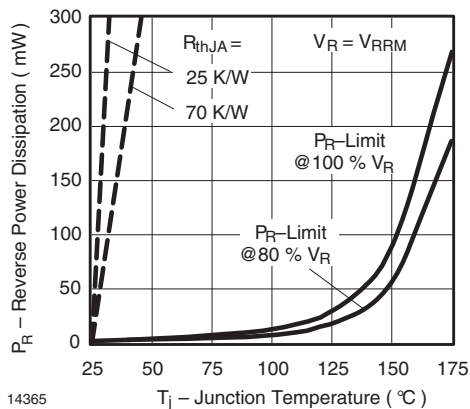


Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature

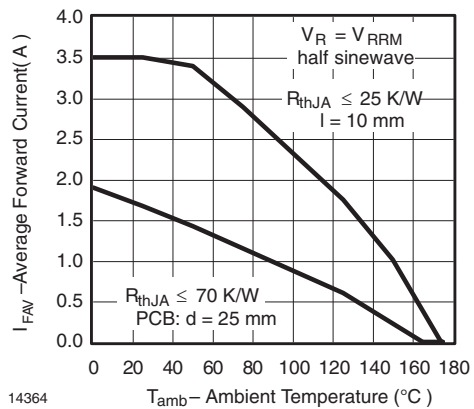


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

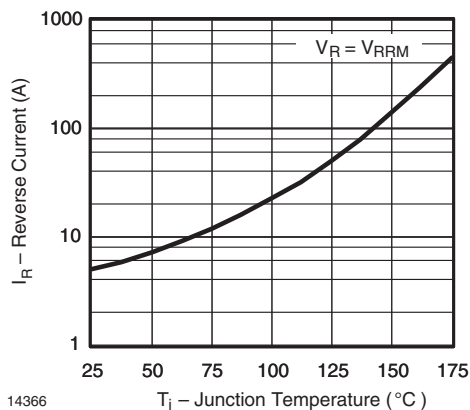


Fig. 2 - Max. Reverse Current vs. Junction Temperature

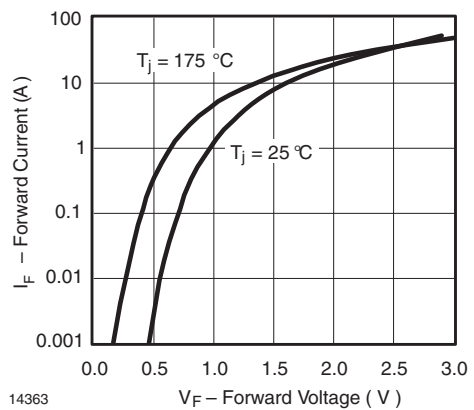


Fig. 4 - Max. Forward Current vs. Forward Voltage

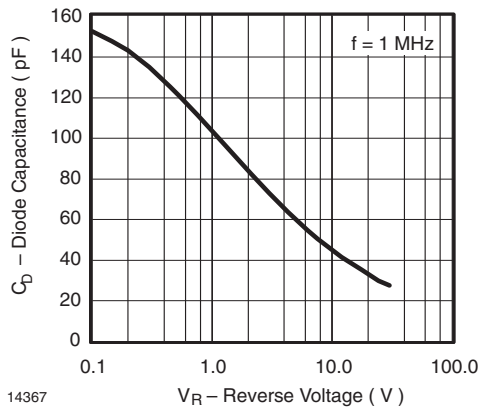
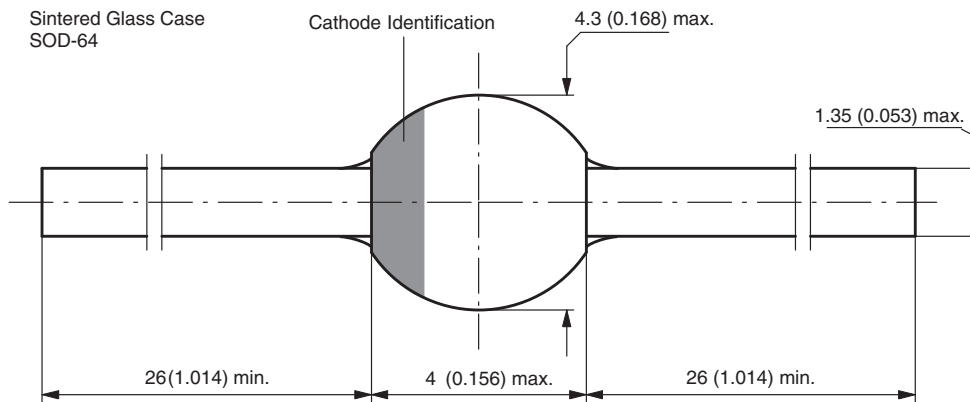


Fig. 5 - Typ. Diode Capacitance vs. Reverse Voltage

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


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 94 9587



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