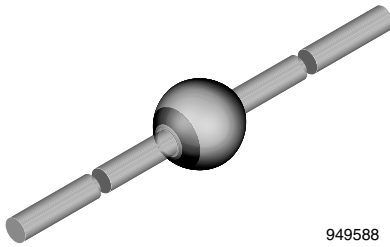


**Fast Avalanche Sinterglass Diode**

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?999912](http://www.vishay.com/doc?999912)


**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**

- Very fast rectification and switching diode

**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	On PC board		$I_{F(AV)}$	1.5	A
	$l = 10 \text{ mm}$		$I_{F(AV)}$	3	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	$I_F = 0.5\text{ A}, I_R = 1\text{ A}, t_R = 0.25\text{ A}$		$t_{rr}$	-	-	100	ns

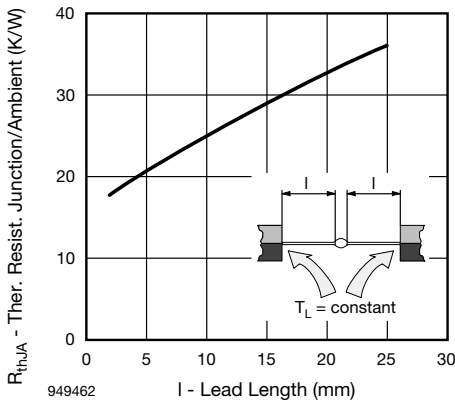
**TYPICAL CHARACTERISTICS** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)


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

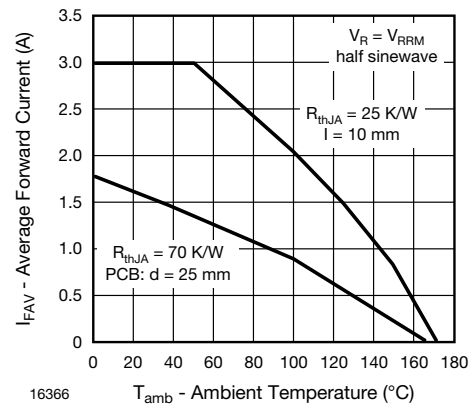


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

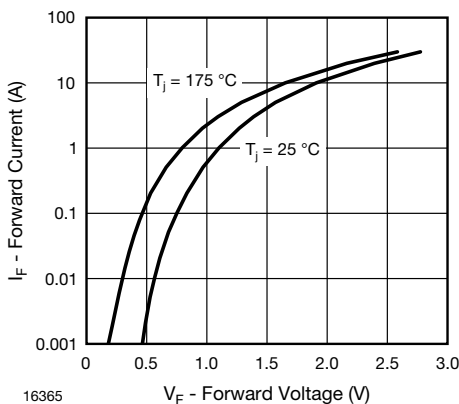


Fig. 2 - Max. Forward Current vs. Forward Voltage

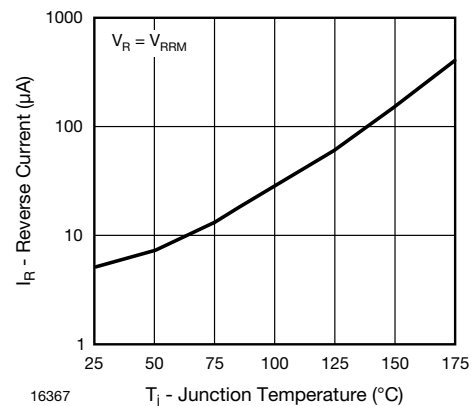


Fig. 4 - Max. Reverse Current vs. Junction Temperature

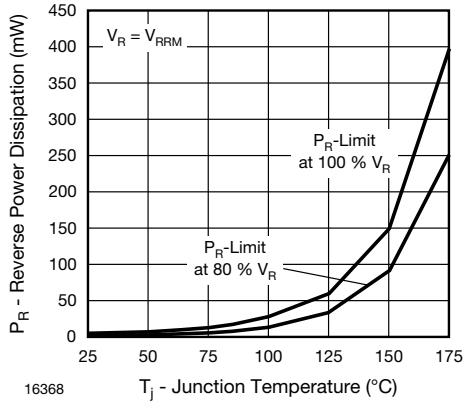


Fig. 5 - Max. Reverse Power Dissipation vs. Junction Temperature

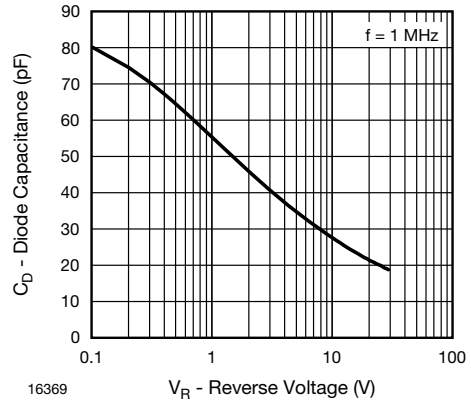
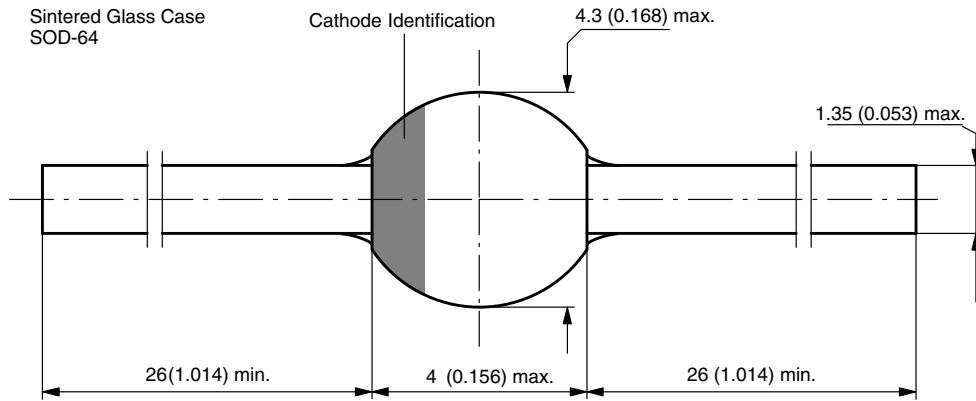


Fig. 6 - Diode Capacitance vs. Reverse Voltage

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



Document-No.: 6.563-5006.4-4  
Rev. 3 - Date: 09.February.2005  
94 9587



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