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[Vishay Semiconductor/Diodes Division](#)  
[BYW172D-TAP](#)

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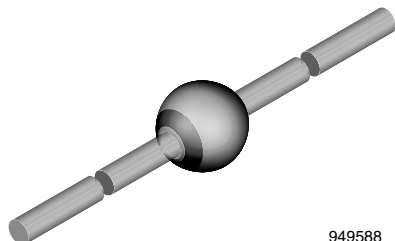


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# BYW172D, BYW172F, BYW172G

Vishay Semiconductors

## Fast Avalanche Sinterglass Diode



949588

### 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
- Low forward voltage drop
- High pulse current capability
- Material categorization:  
For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



RoHS  
COMPLIANT  
HALOGEN  
FREE

### APPLICATIONS

- Fast rectification diode in S.M.P.S

### ORDERING INFORMATION (Example)

DEVICE NAME	ORDERING CODE	TAPED UNITS	MINIMUM ORDER QUANTITY
BYW172G	BYW172G-TR	2500 per 10" tape and reel	12 500
BYW172G	BYW172G-TAP	2500 per ammpack	12 500

### PARTS TABLE

PART	TYPE DIFFERENTIATION	PACKAGE
BYW172D	$V_R = 200\text{ V}; I_{F(AV)} = 3\text{ A}$	SOD-64
BYW172F	$V_R = 300\text{ V}; I_{F(AV)} = 3\text{ A}$	SOD-64
BYW172G	$V_R = 400\text{ V}; I_{F(AV)} = 3\text{ A}$	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	BYW172D	$V_R = V_{RRM}$	200	V
		BYW172F	$V_R = V_{RRM}$	300	V
		BYW172G	$V_R = V_{RRM}$	400	V
Peak forward surge current	$t_p = 10\text{ ms}$ , half sine wave		$I_{FSM}$	100	A
Average forward current			$I_{F(AV)}$	3	A
Non repetitive reverse avalanche energy	$I_{(BR)R} = 1\text{ A}$		$E_R$	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



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ELECTRICAL CHARACTERISTICS (T <sub>amb</sub> = 25 °C, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	I <sub>F</sub> = 3 A		V <sub>F</sub>	-	-	1.1	V
	I <sub>F</sub> = 9 A		V <sub>F</sub>	-	-	1.5	V
Reverse current	V <sub>R</sub> = V <sub>RRM</sub>		I <sub>R</sub>	-	-	1	μA
	V <sub>R</sub> = V <sub>RRM</sub> , T <sub>j</sub> = 100 °C		I <sub>R</sub>	-	-	20	μA
Reverse recovery time	I <sub>F</sub> = 0.5 A, I <sub>R</sub> = 1 A, i <sub>R</sub> = 0.25 A		t <sub>rr</sub>	-	75	100	ns

## TYPICAL CHARACTERISTICS (T<sub>amb</sub> = 25 °C, unless otherwise specified)

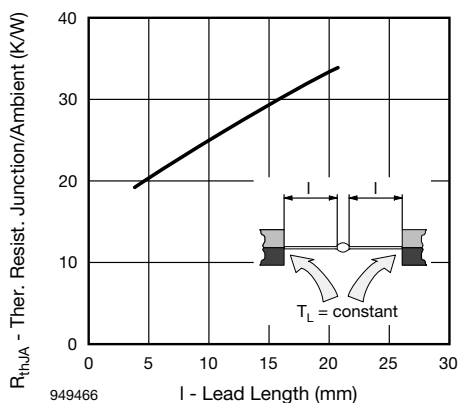


Fig. 1 - Max. Thermal Resistance vs. Lead Length

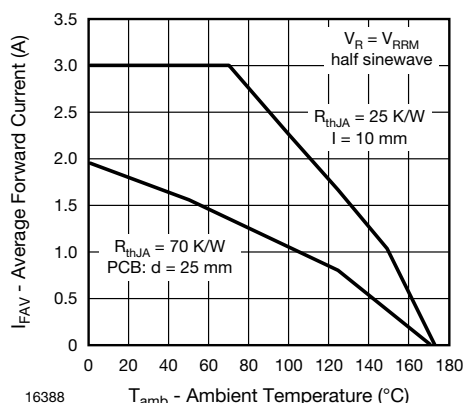


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

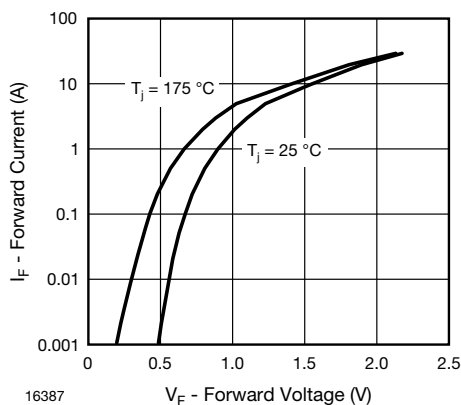


Fig. 2 - Max. Forward Current vs. Forward Voltage

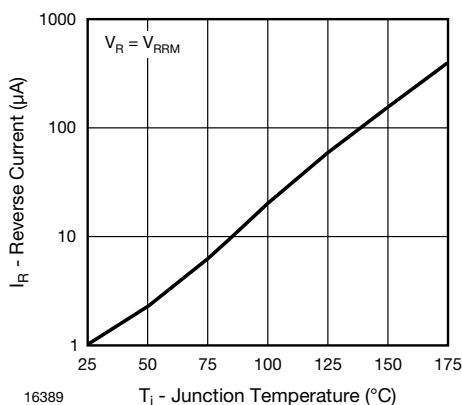


Fig. 4 - Max. Reverse Current vs. Junction Temperature



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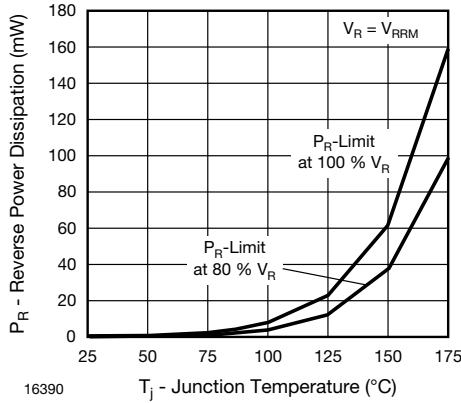


Fig. 5 - Max. Reverse Power Dissipation vs. Junction Temperature

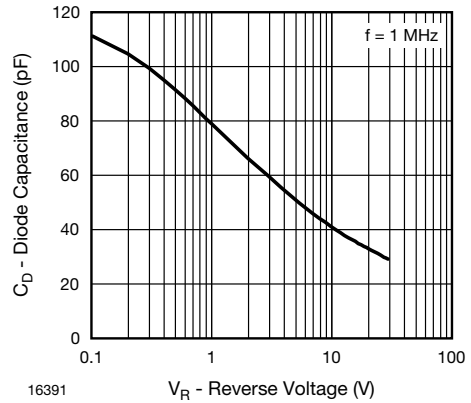


Fig. 6 - Diode Capacitance vs. Reverse Voltage

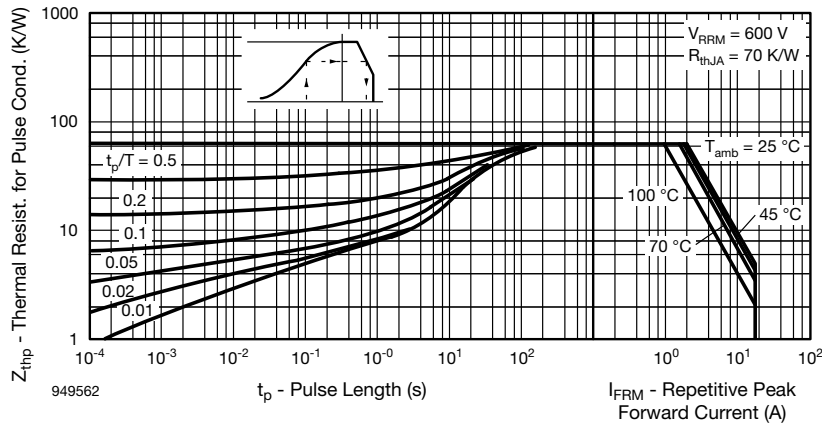
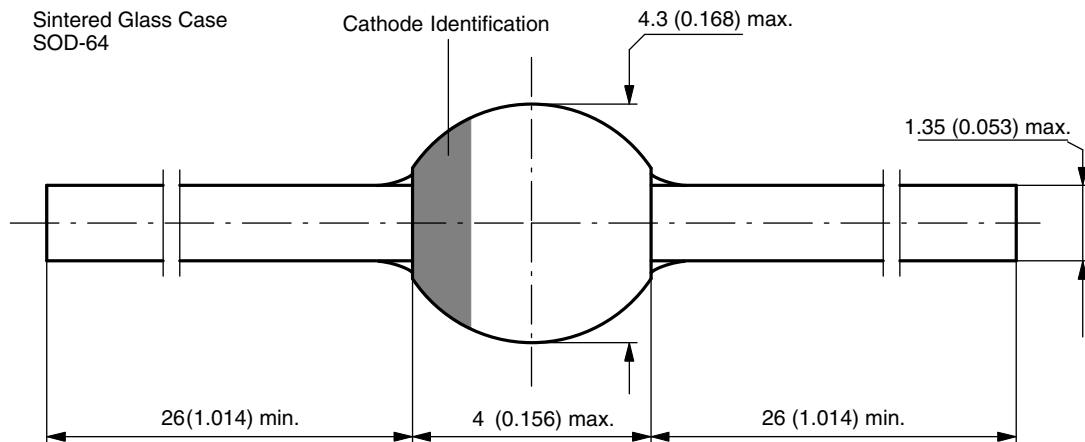


Fig. 7 - Thermal Response

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



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 94 9587



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