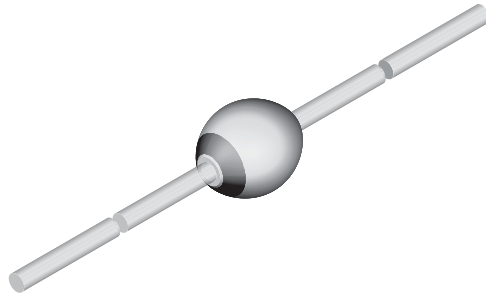




# Fast Avalanche Sinterglass Diode



949539

## DESIGN SUPPORT TOOLS

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## MECHANICAL DATA

Case: SOD-57

Terminals: plated axial leads, solderable per MIL-STD-750, method 2026

Polarity: color band denotes cathode end

Mounting position: any

Weight: approx. 369 mg

## FEATURES

- Glass passivated junction
- Hermetically sealed package
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



RoHS COMPLIANT HALOGEN FREE

## APPLICATIONS

- High voltage fast rectification diode

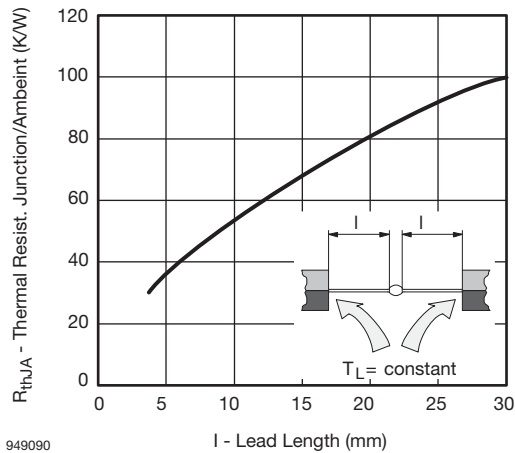
ORDERING INFORMATION (Example)			
DEVICE NAME	ORDERING CODE	TAPED UNITS	MINIMUM ORDER QUANTITY
BY269	BY269TR	5000 per 10" tape and reel	25 000
BY269	BY269TAP	5000 per ammpack	25 000

PARTS TABLE		
PART	TYPE DIFFERENTIATION	PACKAGE
BY268	$V_R = 1400\text{ V}$ ; $I_{F(AV)} = 0.8\text{ A}$	SOD-57
BY269	$V_R = 1600\text{ V}$ ; $I_{F(AV)} = 0.8\text{ A}$	SOD-57

ABSOLUTE MAXIMUM RATINGS ( $T_{amb} = 25\text{ }^\circ\text{C}$ , unless otherwise specified)					
PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT
Reverse voltage	See electrical characteristics	BY268	$V_R$	1400	V
		BY269	$V_R$	1600	V
Peak reverse voltage, non repetitive		BY268	$V_{RSM}$	1600	V
		BY269	$V_{RSM}$	1800	V
Peak forward surge current	$t_p = 10\text{ ms}$ , half sine wave		$I_{FSM}$	20	A
Average forward current			$I_{F(AV)}$	0.8	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	$^\circ\text{C}$

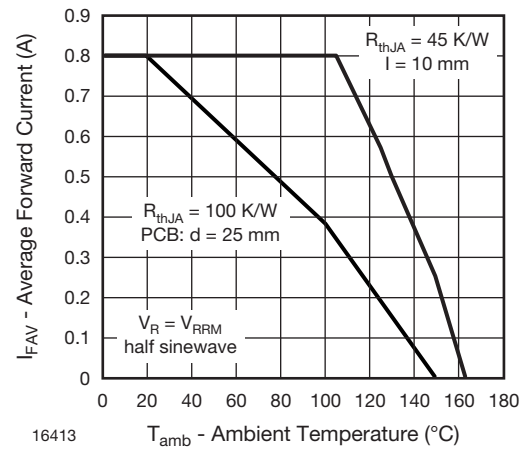
MAXIMUM THERMAL RESISTANCE ( $T_{amb} = 25\text{ }^\circ\text{C}$ , unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Junction ambient	Lead length $l = 10\text{ mm}$ , $T_L = \text{constant}$	$R_{thJA}$	45	K/W
	On PC board with spacing 25 mm	$R_{thJA}$	100	K/W

<b>ELECTRICAL CHARACTERISTICS</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 0.4\text{ A}$		$V_F$	-	-	1.25	V
Reverse current	$V_R = 1400\text{ V}$	BY268	$I_R$	-	1	2	$\mu\text{A}$
	$V_R = 1600\text{ V}$	BY269	$I_R$	-	1	2	$\mu\text{A}$
	$V_R = 1400\text{ V}, T_j = 100\text{ }^{\circ}\text{C}$	BY268	$I_R$	-	-	15	$\mu\text{A}$
	$V_R = 1600\text{ V}, T_j = 100\text{ }^{\circ}\text{C}$	BY269	$I_R$	-	-	15	$\mu\text{A}$
Reverse recovery time	$I_F = 0.5\text{ A}, I_R = 1\text{ A}, t_R = 0.25\text{ A}$		$t_{rr}$	-	-	400	ns

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


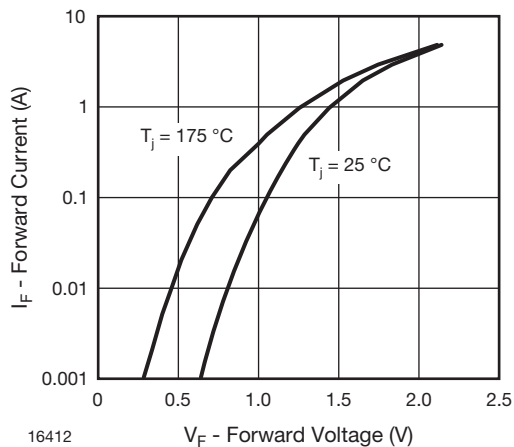
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Fig. 1 - Max. Thermal Resistance vs. Lead Length



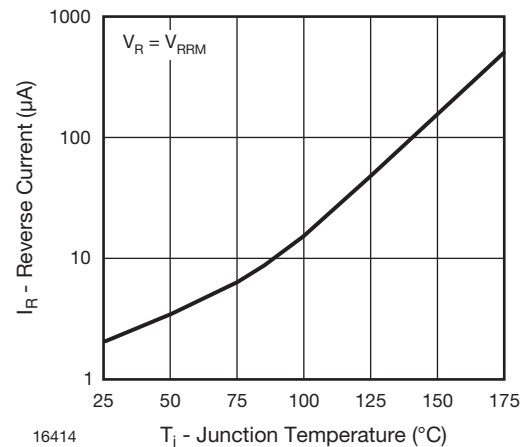
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Fig. 3 - Max. Average Forward Current vs. Ambient Temperature



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



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

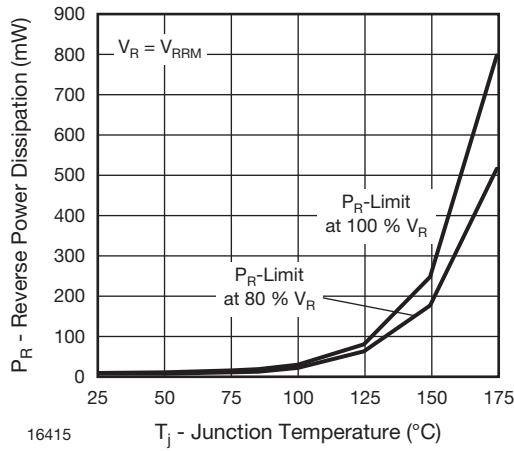


Fig. 5 - Max. Reverse Power Dissipation vs. Junction Temperature

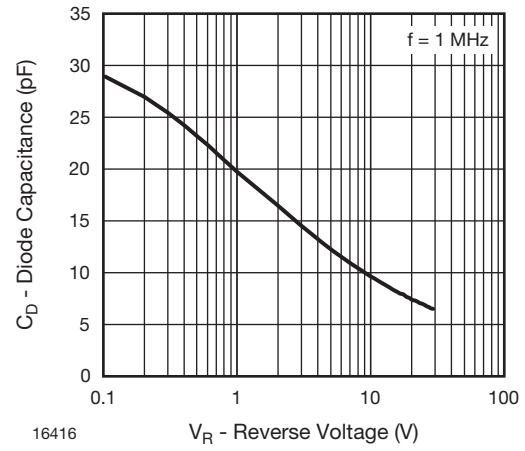
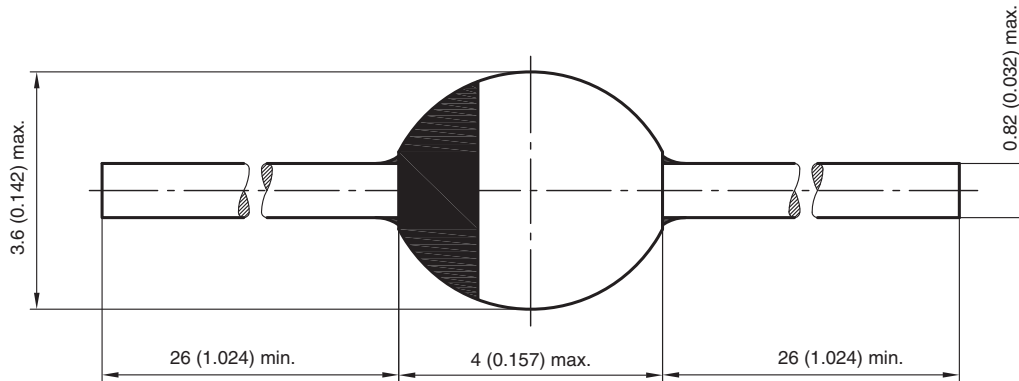


Fig. 6 - Diode Capacitance vs. Reverse Voltage

**PACKAGE DIMENSIONS** in millimeters (inches): **SOD-57**



20543  
 Rev. 3 - Date: 09.February 2005  
 Document no.:6.563-5006.3-4



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