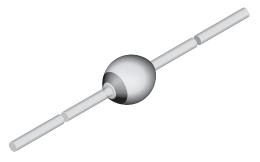
**Vishay Semiconductors** 

# Fast Avalanche Sinterglass Diode



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### **FEATURES**

- Glass passivated junction
- Hermetically sealed package
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>

#### **APPLICATIONS**

• High voltage fast rectification diode





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### **DESIGN SUPPORT TOOLS**



#### **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

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

PARTS TABLE						
PART	TYPE DIFFERENTIATION	PACKAGE				
BY268	V <sub>R</sub> = 1400 V; I <sub>F(AV)</sub> = 0.8 A	SOD-57				
BY269	V <sub>R</sub> = 1600 V; I <sub>F(AV)</sub> = 0.8 A	SOD-57				

<b>ABSOLUTE MAXIMUM RATINGS</b> ( $T_{amb} = 25 \text{ °C}$ , unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT		
Deveree veltere	See electrical characteristics	BY268	V <sub>R</sub>	1400	V		
Reverse voltage		BY269	V <sub>R</sub>	1600	V		
		BY268	V <sub>RSM</sub>	1600	V		
Peak reverse voltage, non repetitive		BY269	V <sub>RSM</sub>	1800	V		
Peak forward surge current	t <sub>p</sub> = 10 ms, half sine wave		I <sub>FSM</sub>	20	А		
Average forward current			I <sub>F(AV)</sub>	0.8	А		
Non repetitive reverse avalanche energy	I <sub>(BR)R</sub> = 0.4 A		E <sub>R</sub>	10	mJ		
Junction and storage temperature range			$T_j = T_{stg}$	-55 to +175	°C		

<b>MAXIMUM THERMAL RESISTANCE</b> (T <sub>amb</sub> = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT		
Junction ambient	Lead length I = 10 mm, $T_L$ = constant	R <sub>thJA</sub>	45	K/W		
	On PC board with spacing 25 mm	R <sub>thJA</sub>	100	K/W		

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<b>ELECTRICAL CHARACTERISTICS</b> ( $T_{amb}$ = 25 °C, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	I <sub>F</sub> = 0.4 A		V <sub>F</sub>	-	-	1.25	V
	V <sub>R</sub> = 1400 V	BY268	I <sub>R</sub>	-	1	2	μA
Reverse current	V <sub>R</sub> = 1600 V	BY269	I <sub>R</sub>	-	1	2	μA
neverse current	V <sub>R</sub> = 1400 V, T <sub>j</sub> = 100 °C	BY268	I <sub>R</sub>	-	-	15	μA
	V <sub>R</sub> = 1600 V, T <sub>j</sub> = 100 °C	BY269	I <sub>R</sub>	-	-	15	μA
Reverse recovery time	$I_F = 0.5 \text{ A}, I_R = 1 \text{ A}, I_R = 0.25 \text{ A}$		t <sub>rr</sub>	-	-	400	ns

TYPICAL CHARACTERISTICS (Tamb = 25 °C, unless otherwise specified)

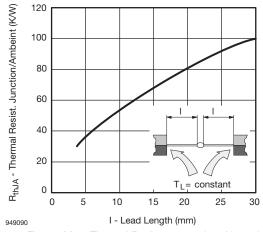


Fig. 1 - Max. Thermal Resistance vs. Lead Length

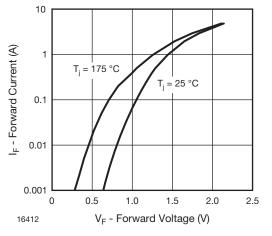


Fig. 2 - Max. Forward Current vs. Forward Voltage

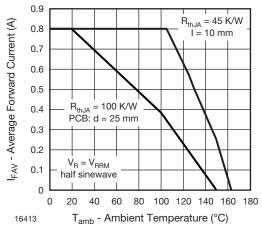


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

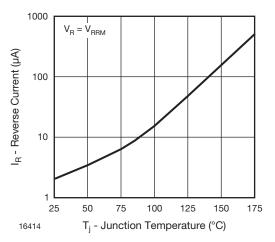


Fig. 4 - Max. Reverse Current vs. Junction Temperature

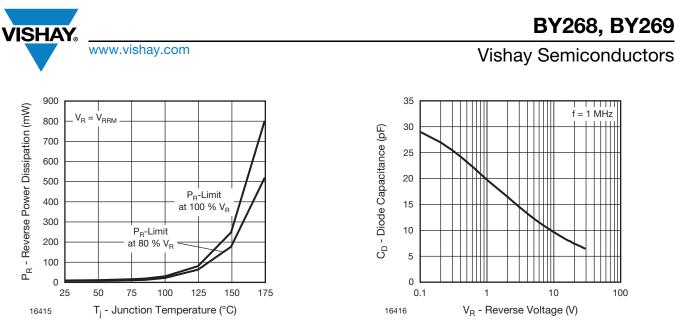
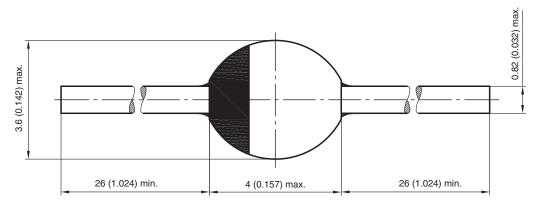


Fig. 5 - Max. Reverse Power Dissipation vs. Junction Temperature



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



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