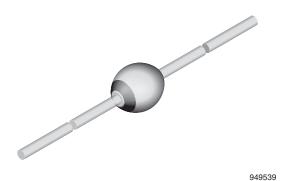


## Vishay Semiconductors

# **Fast Avalanche Sinterglass Diode**



#### **FEATURES**

- · Glass passivated junction
- · Hermetically sealed package
- Material categorization:
  For definitions of compliance please see <a href="https://www.vishay.com/doc?99912">www.vishay.com/doc?99912</a>





ROHS COMPLIANT HALOGEN FREE

#### **APPLICATIONS**

• High voltage fast rectification diode

### **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	ORDERING CODE	PERING CODE TAPED UNITS MINIMUM ORDER QUANTITY				
BY269	BY269TR	5000 per 10" tape and reel	25 000			
BY269	BY269TAP	5000 per ammopack	25 000			

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

<b>ABSOLUTE MAXIMUM RATINGS</b> (T <sub>amb</sub> = 25 °C, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT		
Peak reverse voltage, non repetitive		BY268	$V_{RSM}$	1600	V		
reak reverse voltage, non repetitive		BY269	$V_{RSM}$	1800	V		
Reverse voltage	See electrical characteristics	BY268	$V_R$	1400	V		
neverse voitage	See electrical characteristics	BY269	$V_R$	1600	V		
Peak forward surge current	$t_p = 10 \text{ ms}$ , half sine wave		I <sub>FSM</sub>	20	Α		
Average forward current			I <sub>F(AV)</sub>	0.8	Α		
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 <sub>L</sub> = constant	R <sub>thJA</sub>	45	K/W		
Sunction ambient	On PC board with spacing 25 mm	R <sub>thJA</sub>	100	K/W		



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

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

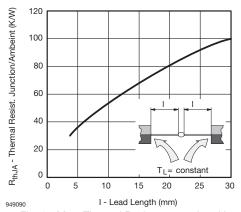


Fig. 1 - Max. Thermal Resistance vs. Lead Length

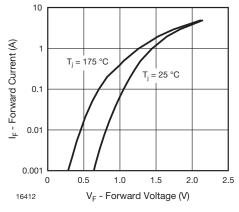


Fig. 2 - Max. Forward Current vs. Forward Voltage

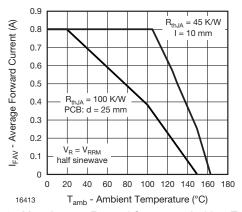


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

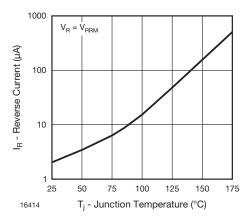


Fig. 4 - Max. Reverse Current vs. Junction Temperature



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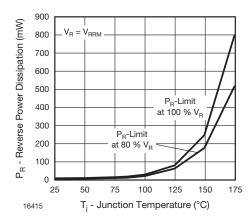


Fig. 5 - Max. Reverse Power Dissipation vs. Junction Temperature

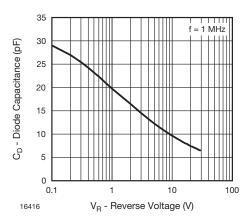
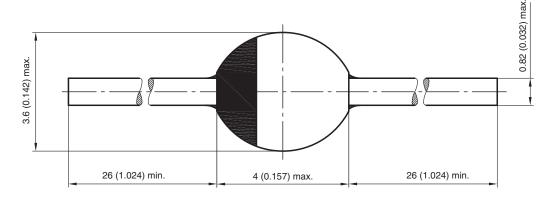


Fig. 6 - Diode Capacitance vs. Reverse Voltage

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



20543

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Vishay

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