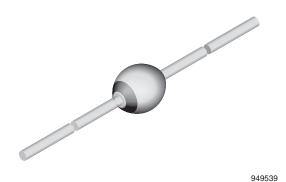


### Vishay Semiconductors

# **Fast Avalanche Sinterglass Diode**



#### **FEATURES**

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

# Ph

(e2)

COMPLIANT HALOGEN FREE

#### **APPLICATIONS**

• High voltage fast rectification diode

### **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	ORDERING CODE	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 <sub>R</sub> = 1400 V; I <sub>F(AV)</sub> = 0.8 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		
Payersa veltaga	See electrical characteristics	BY268	$V_R$	1400	٧		
Reverse voltage		BY269	$V_R$	1600	V		
Deals reverse valtage near repetitive		BY268	$V_{RSM}$	1600	V		
Peak reverse voltage, non repetitive		BY269	$V_{RSM}$	1800	V		
Peak forward surge current	t <sub>p</sub> = 10 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	$I_{(BR)R} = 0.4 A$		E <sub>R</sub>	10	mJ		
Junction and storage temperature range			$T_j = T_{stg}$	-55 to +175	°C		

MAXIMUM THERMAL RESISTANCE (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		
Junction ambient	On PC board with spacing 25 mm	$R_{thJA}$	100	K/W		



# Vishay Semiconductors

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

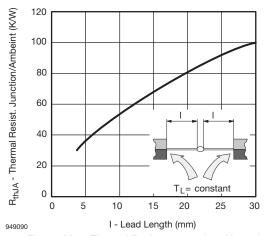


Fig. 1 - Max. Thermal Resistance vs. Lead Length

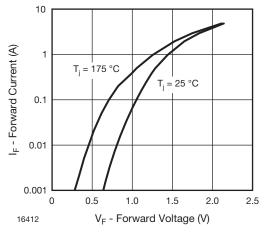


Fig. 2 - Max. Forward Current vs. Forward Voltage

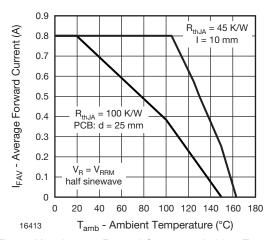


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

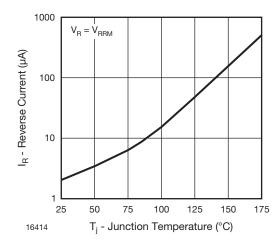


Fig. 4 - Max. Reverse Current vs. Junction Temperature



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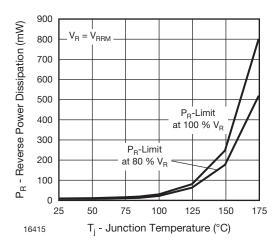


Fig. 5 - Max. Reverse Power Dissipation vs. Junction Temperature

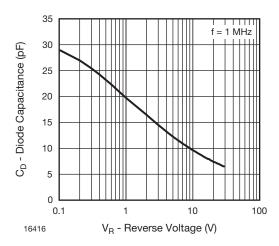
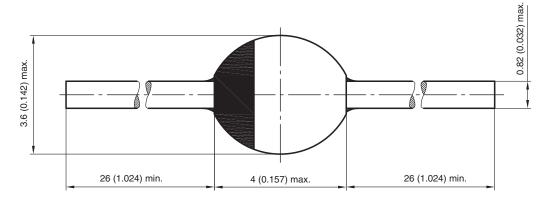


Fig. 6 - Diode Capacitance vs. Reverse Voltage

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



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



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