# Vishay Semiconductors



# **Standard Avalanche Sinterglass Diode**



949539

#### **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
- Controlled avalanche characteristics
- Low reverse current
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition





ROHS COMPLIANT HALOGEN FREE

#### **APPLICATIONS**

• High voltage rectification diode

PARTS TABLE		
PART	TYPE DIFFERENTIATION	PACKAGE
BYT62	$V_R = 2400 \text{ V}; I_{FAV} = 350 \text{ mA}$	SOD-57

<b>ABSOLUTE MAXIMUM RATINGS</b> (T <sub>amb</sub> = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Reverse voltage = repetitive peak reverse voltage	See electrical characteristics	$V_R = V_{RRM}$	2400	V	
Peak forward surge current	t <sub>p</sub> = 10 ms, half sine wave	I <sub>FSM</sub>	10	Α	
Average forward current	R <sub>thJA</sub> ≤ 60 K/W	I <sub>FAV</sub>	350	mA	
Non repetitive reverse avalanche energy	I <sub>(BR)R</sub> = 1 A, inductive load	E <sub>R</sub>	60	mJ	
Junction temperature		T <sub>j</sub>	175	°C	
Storage temperature range		T <sub>sta</sub>	- 55 to + 190	°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	$R_{thJA}$	60	K/W	

<b>ELECTRICAL CHARACTERISTICS</b> (T <sub>amb</sub> = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX	UNIT
Forward voltage	I <sub>F</sub> = 200 mA	V <sub>F</sub>	-	-	3	V
	I <sub>F</sub> = 1 A	V <sub>F</sub>	-	-	3.6	V
	I <sub>F</sub> = 1 A, T <sub>j</sub> = 175 °C	V <sub>F</sub>	-	-	2.9	V
	I <sub>F</sub> = 1 A, T <sub>j</sub> = - 40 °C	V <sub>F</sub>	-	-	4	V
Reverse current	$V_R = V_{RRM}$	I <sub>R</sub>	-	-	5	μA
	$V_R = V_{RRM}, T_j = 175  ^{\circ}C$	I <sub>R</sub>	-	-	250	μA
	$V_R = V_{RRM}, T_j = -40  ^{\circ}C$	I <sub>R</sub>	-	-	400	nA
Reverse breakdown voltage	I <sub>R</sub> = 100 μA	V <sub>(BR)R</sub>	2500	-	-	V
Reverse recovery time	$I_F = 0.5 \text{ A}, I_R = 1 \text{ A}, i_R = 0.25 \text{ A}$	t <sub>rr</sub>	=	=	5	μs



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

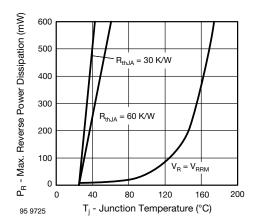


Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature

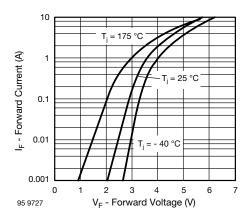


Fig. 3 - Max. Forward Current vs. Forward Voltage

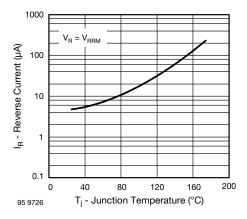
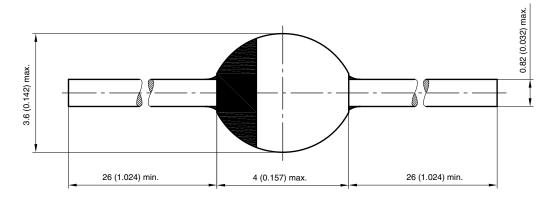


Fig. 2 - Max. Reverse Current vs. Junction Temperature

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



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