

Standard Avalanche Sinterglass Diode



949588

FEATURES

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


RoHS
 COMPLIANT
 HALOGEN
FREE

APPLICATIONS

- High voltage rectification
- Efficiency diode in horizontal deflection circuit

DESIGN SUPPORT TOOLS

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3D
 Models
 Available

MECHANICAL DATA

Case: SOD-64

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

Polarity: color band denotes cathode end

Mounting position: any

Weight: approx. 858 mg

ORDERING INFORMATION (Example)			
DEVICE NAME	ORDERING CODE	TAPED UNITS	MINIMUM ORDER QUANTITY
BY228	BY228TR	2500 per 10" tape and reel	12 500
BY228	BY228TAP	2500 per ammopack	12 500

PARTS TABLE		
PART	TYPE DIFFERENTIATION	PACKAGE
BY228	$V_R = 1500\text{ V}$; $I_{F(AV)} = 3\text{ A}$	SOD-64

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	BY228	V_R	1500	V
Repetitive peak reverse voltage	$I_R = 100\text{ }\mu\text{A}$		V_{RRM}	1650	V
Peak forward surge current	$t_p = 10\text{ ms}$, half sine wave		I_{FSM}	50	A
Average forward current			$I_{F(AV)}$	3	A
Junction temperature			T_j	140	$^\circ\text{C}$
Storage temperature range			T_{stg}	-55 to +175	$^\circ\text{C}$
Non repetitive reverse avalanche energy	$I_{(BR)} = 0.4\text{ A}$		E_R	10	mJ

MAXIMUM THERMAL RESISTANCE ($T_{amb} = 25\text{ }^\circ\text{C}$, unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Junction ambient	On PC board with spacing 25 mm	R_{thJA}	70	K/W

ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 5\text{ A}$	V_F	-	-	1.5	V
Reverse current	$V_R = 1500\text{ V}$	I_R	-	2	5	μA
	$V_R = 1500\text{ V}, T_j = 140\text{ }^{\circ}\text{C}$	I_R	-	-	140	μA
Reverse recovery time	$I_F = 0.5\text{ A}, I_R = 1\text{ A}, i_R = 0.25\text{ A}$	t_{rr}	-	-	2	μs
Total reverse recovery time	$I_F = 1\text{ A}, -di_F/dt = 0.05\text{ A}/\mu\text{s}$	t_{tr}	-	-	20	μs

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


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

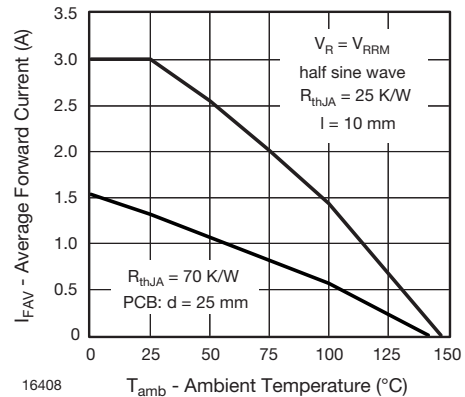


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

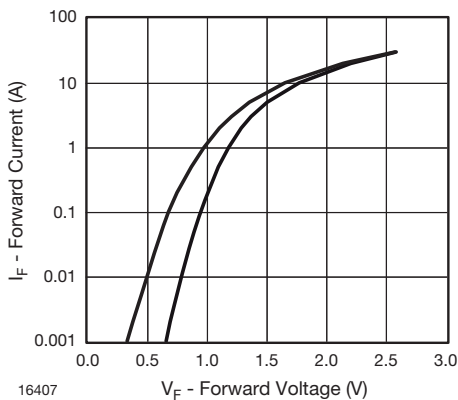


Fig. 2 - Forward Current vs. Forward Voltage

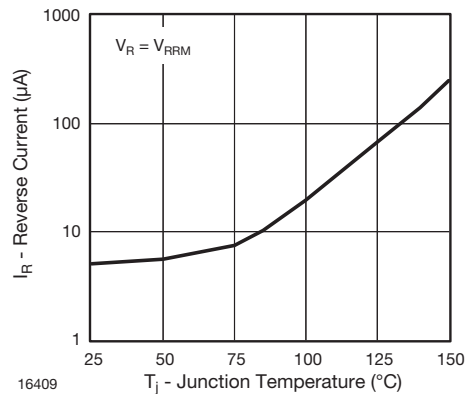


Fig. 4 - Reverse Current vs. Junction Temperature

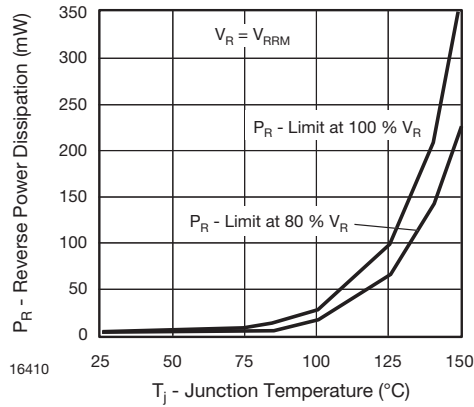


Fig. 5 - Max. Reverse Power Dissipation vs. Junction Temperature

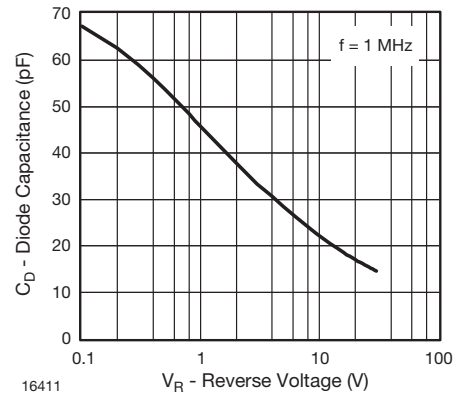
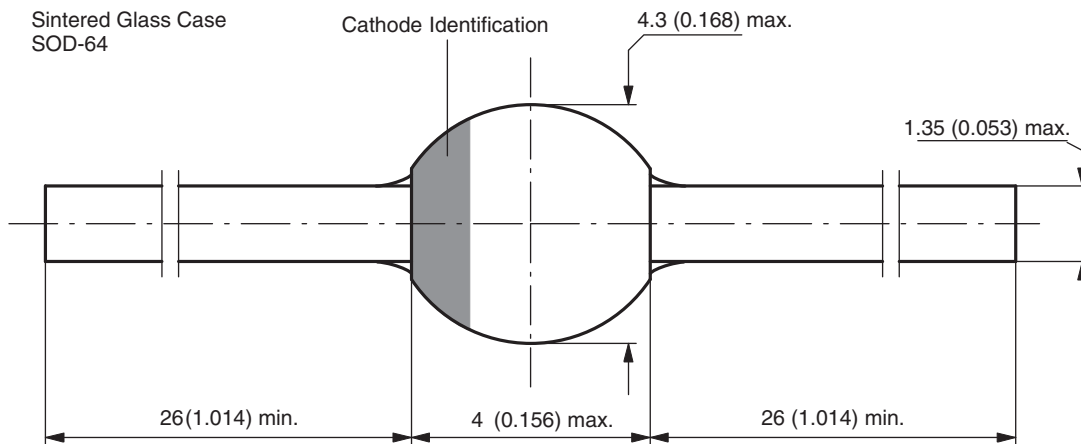


Fig. 6 - Diode Capacitance vs. Reverse Voltage

PACKAGE DIMENSIONS in millimeters (inches): **SOD-64**



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