



Standard Avalanche Sinterglass Diode



949588

DESIGN SUPPORT TOOLS

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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 circuits

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
BY228-15	BY228-15TR	2500 per 10" tape and reel	12 500
BY228-15	BY228-15TAP	2500 per ammopack	12 500

PARTS TABLE		
PART	TYPE DIFFERENTIATION	PACKAGE
BY228-13	$V_R = 1000\text{ V}; I_{F(AV)} = 3\text{ A}$	SOD-64
BY228-15	$V_R = 1200\text{ V}; I_{F(AV)} = 3\text{ A}$	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	BY228-13	V_R	1000	V
		BY228-15	V_R	1200	V
Peak reverse voltage, non repetitive	$I_R = 100\text{ }\mu\text{A}$	BY228-13	V_{RSM}	1300	V
		BY228-15	V_{RSM}	1500	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	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 5\text{ A}$		V_F	-	-	1.5	V
Reverse current	$V_R = 1000\text{ V}$	BY228-13	I_R	-	2	5	μA
	$V_R = 1200\text{ V}$	BY228-15	I_R	-	2	5	μA
	$V_R = 1000\text{ V}, T_J = 140\text{ }^{\circ}\text{C}$	BY228-13	I_R	-	-	140	μA
	$V_R = 1200\text{ V}, T_J = 140\text{ }^{\circ}\text{C}$	BY228-15	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_{rr}	-	-	20	μs

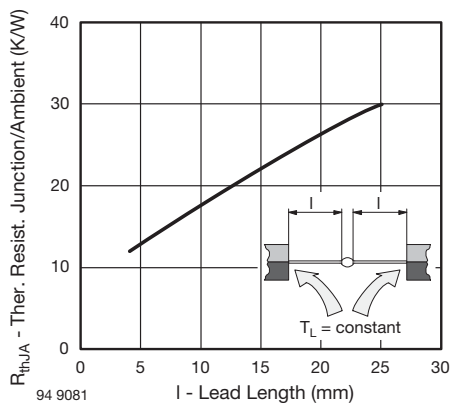
TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)


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

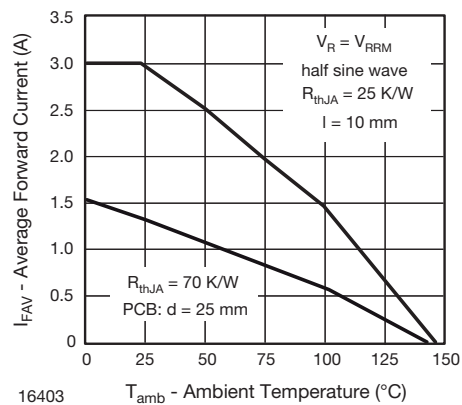


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

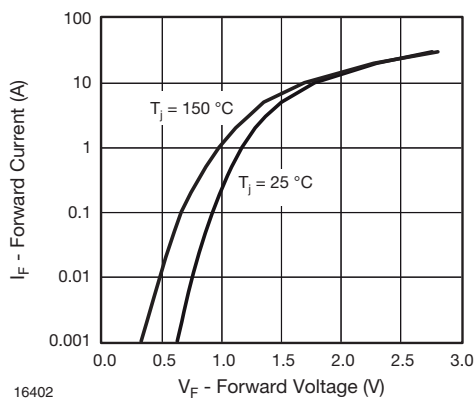


Fig. 2 - Forward Current vs. Forward Voltage

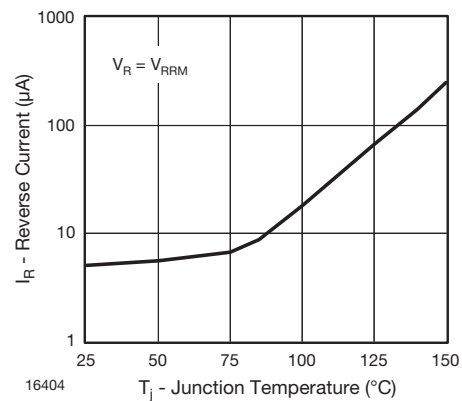


Fig. 4 - Reverse Current vs. Junction Temperature

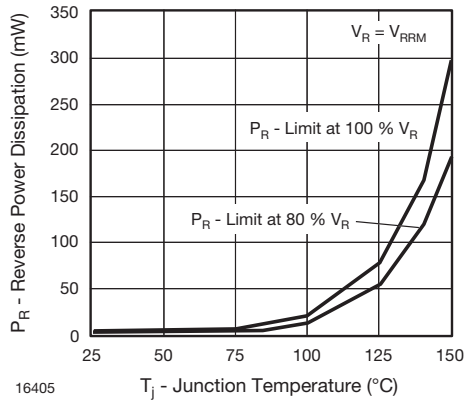


Fig. 5 - Diode Capacitance vs. Reverse Voltage

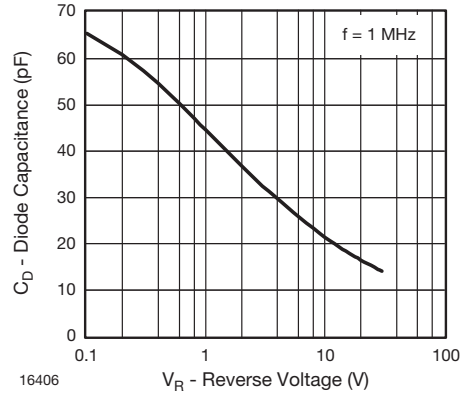
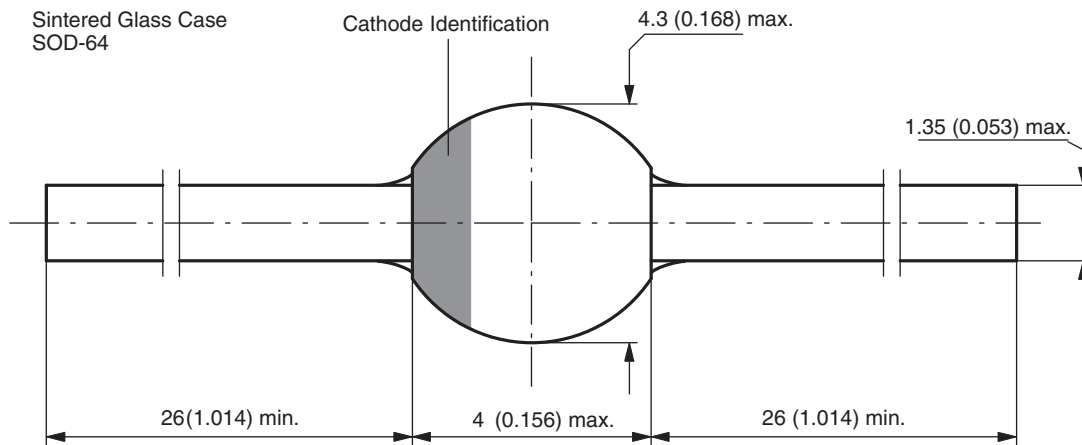


Fig. 6 - Diode Capacitance vs. Reverse Voltage

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



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