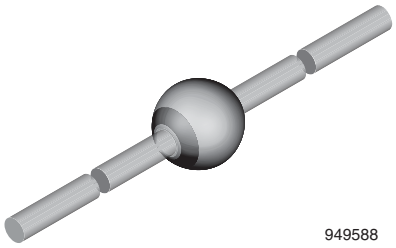
Ultra-Fast Avalanche Sinterglass Diode



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FEATURES

- Controlled avalanche characteristic
- Low forward voltage
- Ultra fast recovery time
- Glass passivated junction
- Hermetically sealed package
- AEC-Q101 qualified
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

RoHS COMPLIANT

HALOGEN FREE

DESIGN SUPPORT TOOLS

click logo to get started

3D Models Available

APPLICATIONS

- Very fast rectification e.g. for switch mode power supply

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
BYV28-200	BYV28-200-TR	2500 per 10" tape and reel	12 500
BYV28-200	BYV28-200-TAP	2500 per ammopack	12 500

PARTS TABLE

PART	TYPE DIFFERENTIATION	PACKAGE
BYV28-50	V_R = 50 V; $I_{F(AV)}$ = 3.5 A	SOD-64
BYV28-100	V_R = 100 V; $I_{F(AV)}$ = 3.5 A	SOD-64
BYV28-150	V_R = 150 V; $I_{F(AV)}$ = 3.5 A	SOD-64
BYV28-200	V_R = 200 V; $I_{F(AV)}$ = 3.5 A	SOD-64

ABSOLUTE MAXIMUM RATINGS (T_{amb} = 25 °C, unless otherwise specified)

PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT
Reverse voltage = repetitive peak reverse voltage	See electrical characteristics	BYV28-50	$V_R = V_{RRM}$	50	V
		BYV28-100	$V_R = V_{RRM}$	100	V
		BYV28-150	$V_R = V_{RRM}$	150	V
		BYV28-200	$V_R = V_{RRM}$	200	V
Peak reverse voltage, non repetitive	See electrical characteristics	BYV28-50	V_{RSM}	55	V
		BYV28-100	V_{RSM}	110	V
		BYV28-150	V_{RSM}	165	V
		BYV28-200	V_{RSM}	220	V
Peak forward surge current	t_p = 10 ms, half sine wave		I_{FSM}	90	A
Repetitive peak forward current			I_{FRM}	25	A
Average forward current			$I_{F(AV)}$	3.5	A
Pulse energy in avalanche mode, non repetitive (inductive load switch off)	$I_{(BR)R}$ = 1 A, Tj = 175 °C		E_R	20	mJ
Junction and storage temperature range			$T_j = T_{stg}$	-55 to +175	°C

MAXIMUM THERMAL RESISTANCE (T_{amb} = 25 °C, unless otherwise specified)				
PARAMETER	**TEST CONDITION**	**SYMBOL**	**VALUE**	**UNIT**
Junction ambient	Lead length l = 10 mm, T_L = constant	R_{thJA}	25	K/W
	On PC board with spacing 25 mm	R_{thJA}	70	K/W

ELECTRICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)							
PARAMETER	**TEST CONDITION**	**PART**	**SYMBOL**	**MIN.**	**TYP.**	**MAX.**	**UNIT**
Forward voltage	I_F = 5 A		V_F	-	-	1.1	V
	I_F = 5 A, T_j = 175 °C		V_F	-	-	0.89	V
Reverse current	$V_R = V_{RRM}$		I_R	-	-	1	µA
	V_{RSM}		I_R	-	-	100	µA
	$V_R = V_{RRM}$, T_j = 165 °C		I_R	-	-	150	µA
Reverse recovery time	I_F = 0.5 A, I_R = 1 A, i_R = 0.25 A		t_{rr}	-	-	30	ns

TYPICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

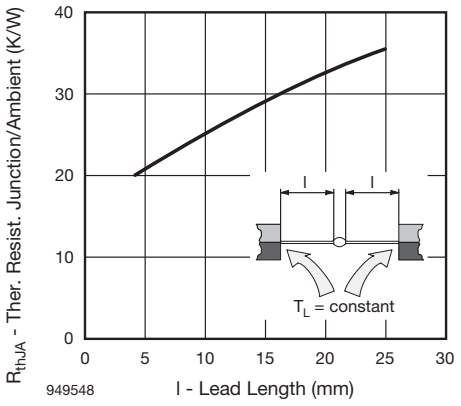


Fig. 1 - Max. Thermal Resistance vs. Lead Length

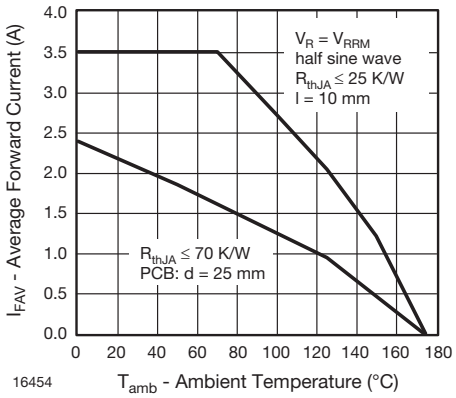


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

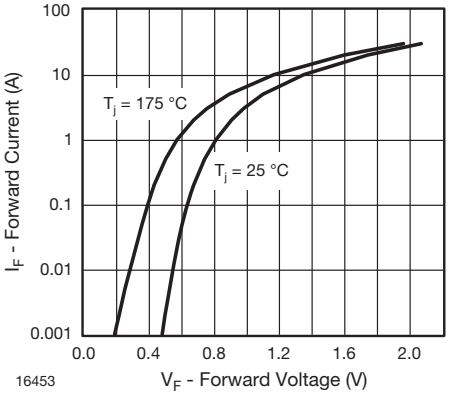


Fig. 2 - Forward Current vs. Forward Voltage

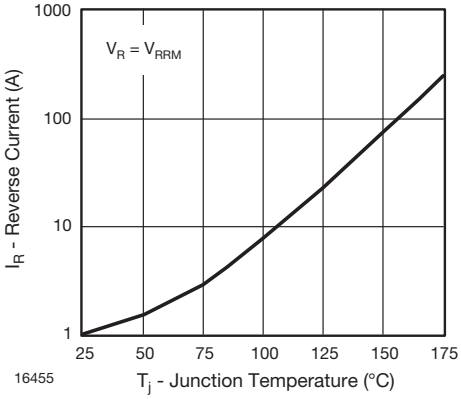


Fig. 4 - Reverse Current vs. Junction Temperature

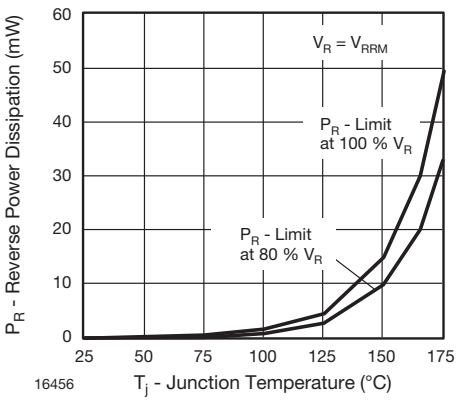


Fig. 5 - Max. Reverse Power Dissipation vs. Junction Temperature

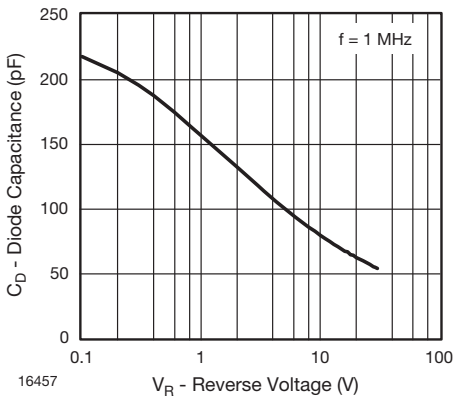
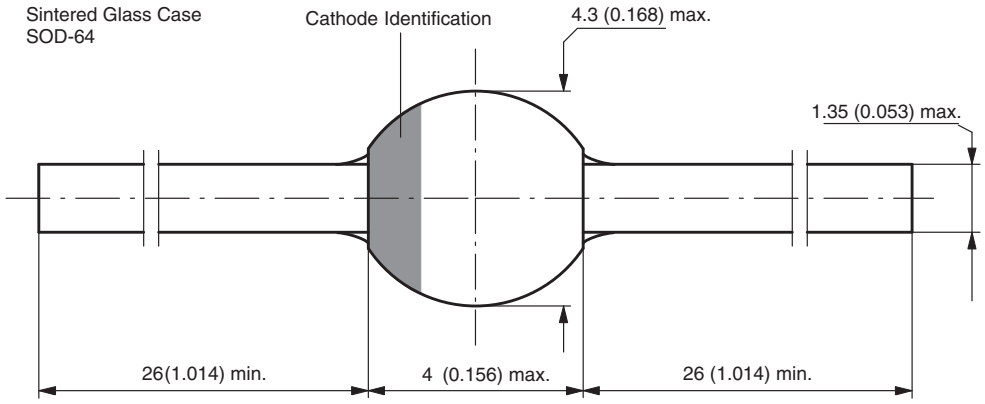


Fig. 6 - Diode Capacitance vs. Reverse Voltage

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



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