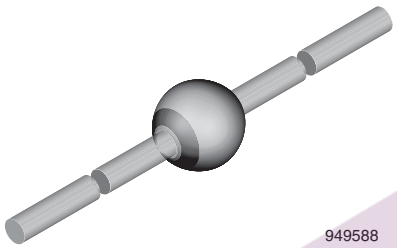
Ultra-Fast Avalanche Sinterglass Diode



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FEATURES

- Glass passivated
- Hermetically sealed axial-leaded glass envelope
- Low reverse current
- Ultra fast soft recovery switching
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

RoHS COMPLIANT

HALOGEN FREE

DESIGN SUPPORT TOOLS

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3D Models Available

APPLICATIONS

- TV
- SMPS
- Power feedback systems

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
BYV28-600	BYV28-600-TR	2500 per 10" tape and reel	12 500
BYV28-600	BYV28-600-TAP	2500 per ammopack	12 500

PARTS TABLE

PART	TYPE DIFFERENTIATION	PACKAGE
BYV28-600	V_R = 600 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	BYV28-600	$V_R = V_{RRM}$	600	V
Peak forward surge current	t_p = 10 ms, half sine wave		I_{FSM}	90	A
Average forward current	l = 10 mm		$I_{F(AV)}$	3.5	A
Non repetitive reverse avalanche energy	Inductive load, $I_{(BR)R}$ = 1 A		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**	**SYMBOL**	**MIN.**	**TYP.**	**MAX.**	**UNIT**
Forward voltage	I_F = 3.5 A	V_F	-	-	1.25	V
	I_F = 5 A	V_F	-	-	1.35	V
	I_F = 3.5, T_j = 175 °C	V_F	-	-	0.95	V
	I_F = 5 A, T_j = 175 °C	V_F	-	-	1.06	V
Reverse current	$V_R = V_{RRM}$	I_R	-	-	5	µA
	$V_R = V_{RRM}$, T_j = 150 °C	I_R	-	-	150	µA
Reverse breakdown voltage	I_R = 100 µA	$V_{(BR)R}$	600	-	-	V
Reverse recovery time	I_F = 0.5 A, I_R = 1 A, i_R = 0.25 A	t_{rr}	-	-	50	ns
Forward recovery	I_F = 5 A	V_{FP}	-	6.2	-	V
Forward recovery time	I_F = 5 A	t_{fr}	-	210	-	ns

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

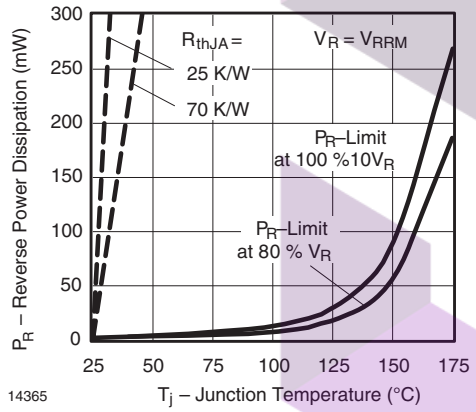


Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature

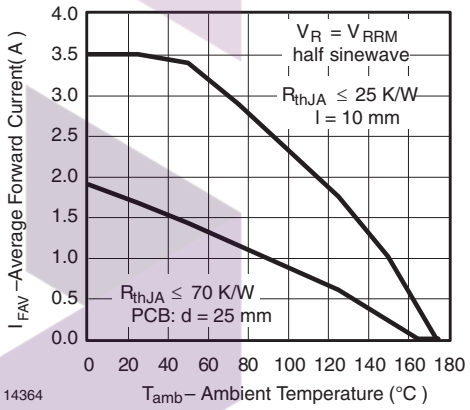


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

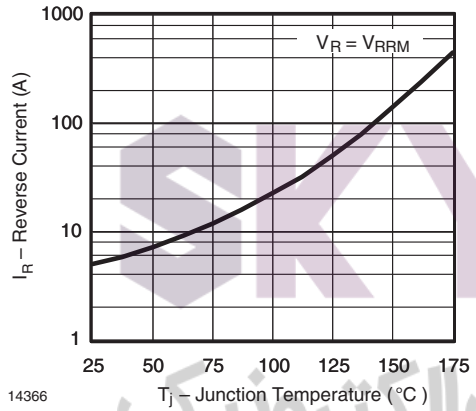


Fig. 2 - Max. Reverse Current vs. Junction Temperature

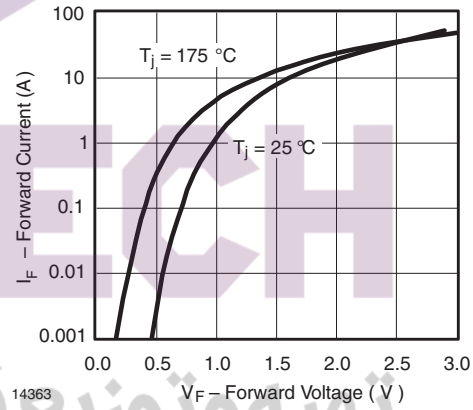


Fig. 4 - Max. Forward Current vs. Forward Voltage

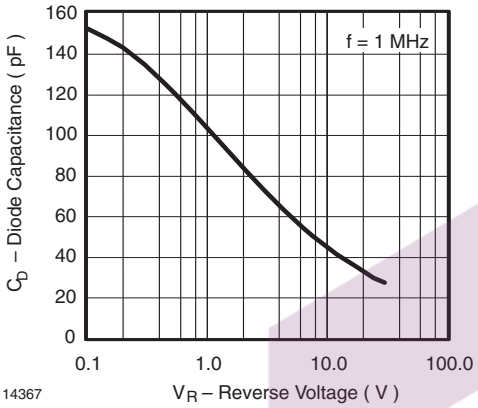
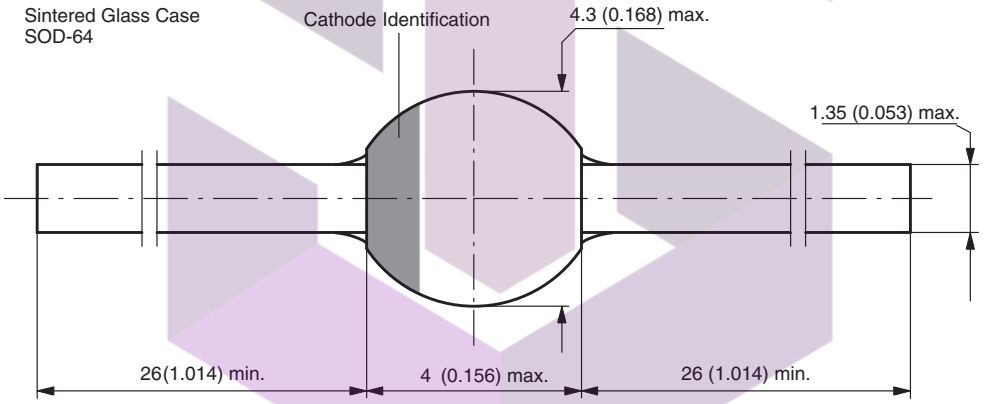


Fig. 5 - Typ. Diode Capacitance vs. Reverse Voltage

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



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