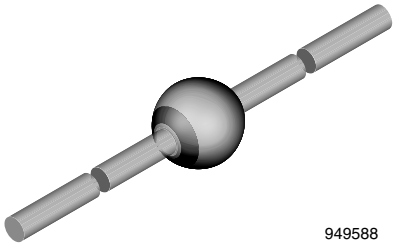
Ultra-Fast Avalanche Sinterglass Diode



FEATURES

- High reverse voltage
- Glass passivated
- Low reverse current
- Low forward voltage drop
- Hermetically sealed axial-leaded glass envelope
- Material categorization:
  for definitions of compliance please see www.vishay.com/doc?99912

Pb
e2
RoHS COMPLIANT
HALOGEN FREE

LINKS TO ADDITIONAL RESOURCES

3D Models

APPLICATIONS

- Switched mode power supplies
- High-frequency inverter 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
BYV98-200	BYV98-200-TR	2500 per 10" tape and reel	12 500
BYV98-200	BYV98-200-TAP	2500 per ammopack	12 500

PARTS TABLE

PART	TYPE DIFFERENTIATION	PACKAGE
BYV98-50	V_R = 50 V; $I_{F(AV)}$ = 4 A	SOD-64
BYV98-100	V_R = 100 V; $I_{F(AV)}$ = 4 A	SOD-64
BYV98-150	V_R = 150 V; $I_{F(AV)}$ = 4 A	SOD-64
BYV98-200	V_R = 200 V; $I_{F(AV)}$ = 4 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	BYV98-50	$V_R = V_{RRM}$	50	V
		BYV98-100	$V_R = V_{RRM}$	100	V
		BYV98-150	$V_R = V_{RRM}$	150	V
		BYV98-200	$V_R = V_{RRM}$	200	V
Peak forward surge current	t_p = 10 ms, half sine wave		I_{FSM}	70	A
Average forward current	T_{amb} = 30 °C, l = 10 mm		$I_{F(AV)}$	4	A
Junction and storage temperature range			$T_j = T_{stg}$	-55 to +175	°C
Non repetitive reverse avalanche energy	$I_{(BR)R}$ = 1 A		E_R	20	mJ

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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

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
Reverse current	$V_R = V_{RRM}$		I_R	-	-	10	µA
	$V_R = V_{RRM}$, T_j = 150 °C		I_R	-	-	200	µA
Reverse breakdown voltage	I_R = 100 µA	BYV98-50	$V_{(BR)R}$	60	-	-	V
		BYV98-100	$V_{(BR)R}$	120	-	-	V
		BYV98-150	$V_{(BR)R}$	170	-	-	V
		BYV98-200	$V_{(BR)R}$	220	-	-	V
Reverse recovery time	I_F = 0.5 A, I_R = 1 A, i_R = 0.25 A		t_{rr}	-	-	35	ns

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

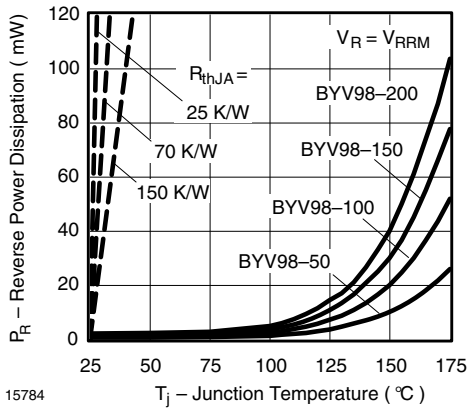

Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature

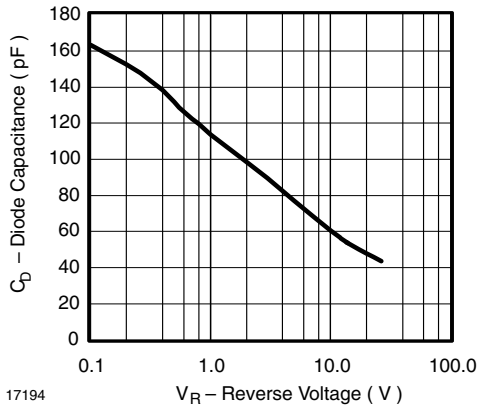

Fig. 3 - Diode Capacitance vs. Reverse Voltage

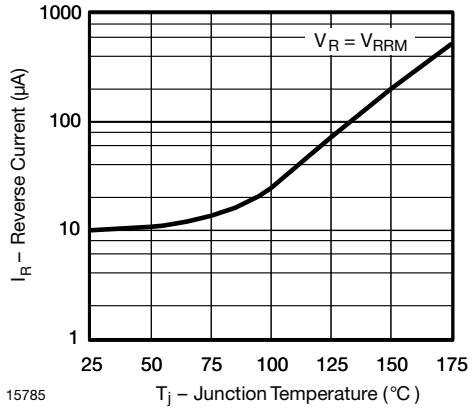

Fig. 2 - Max. Reverse Current vs. Junction Temperature

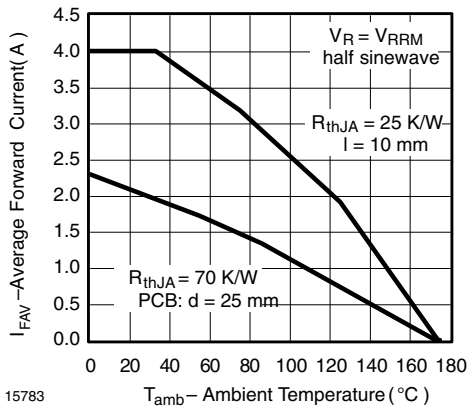

Fig. 4 - Max. Average Forward Current vs. Ambient Temperature

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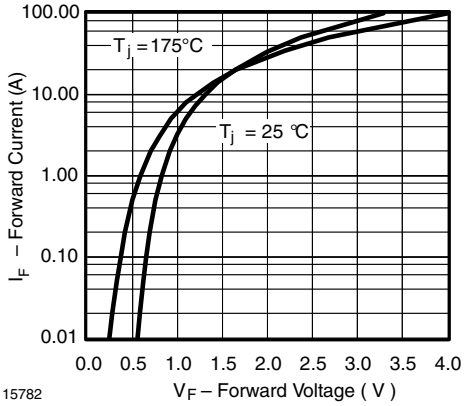
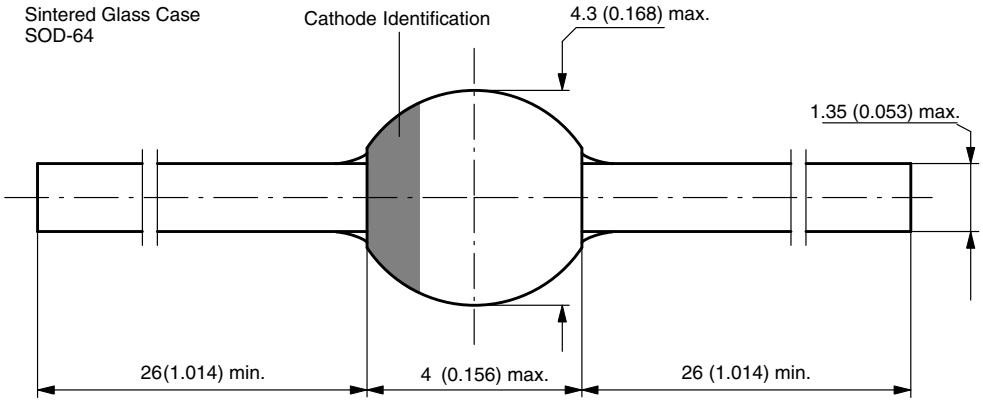


Fig. 5 - Max. Forward Current vs. Forward Voltage

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



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