

BYV98-50, BYV98-100, BYV98-150, BYV98-200

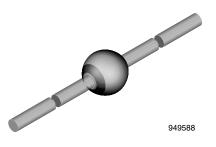
Vishay Semiconductors

RoHS COMPLIANT

HALOGEN

FREE

Ultra-Fast Avalanche Sinterglass Diode



LINKS TO ADDITIONAL RESOURCES



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

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

APPLICATIONS

- Switched mode power supplies
- High-frequency inverter circuits

ORDERING INFORMATION (Example)					
ORDERING CODE	ORDERING CODE TAPED UNITS MINIMUM ORDER QUANT				
BYV98-200-TR	2500 per 10" tape and reel	12 500			
BYV98-200-TAP	2500 per ammopack	12 500			
	ORDERING CODE BYV98-200-TR	ORDERING CODE TAPED UNITS BYV98-200-TR 2500 per 10" tape and reel			

PARTS TABLE					
PART	TYPE DIFFERENTIATION	PACKAGE			
BYV98-50	$V_{R} = 50 \text{ V}; \text{ I}_{F(AV)} = 4 \text{ A}$	SOD-64			
BYV98-100	$V_{R} = 100 \text{ V}; \text{ I}_{F(AV)} = 4 \text{ A}$	SOD-64			
BYV98-150	$V_{R} = 150 \text{ V}; \text{ I}_{F(AV)} = 4 \text{ A}$	SOD-64			
BYV98-200	$V_{R} = 200 \text{ V}; \text{ I}_{F(AV)} = 4 \text{ A}$	SOD-64			

ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)							
PARAMETER	TEST CONDITION	TEST CONDITION PART		VALUE	UNIT		
Reverse voltage = repetitive peak reverse voltage	See electrical characteristics	BYV98-50	$V_R = V_{RRM}$	50	V		
		BYV98-100	$V_{\rm R} = V_{\rm RRM}$ 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	А		
Average forward current	T _{amb} = 30 °C, I = 10 mm		I _{F(AV)}	4	А		
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		VALUE	UNIT	
Junction ambient	Lead length I = 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 μΑ	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	$I_F = 0.5 \text{ A}, I_R = 1 \text{ A}, I_R = 0.25 \text{ A}$		t _{rr}	-	-	35	ns

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

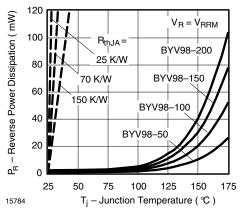


Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature

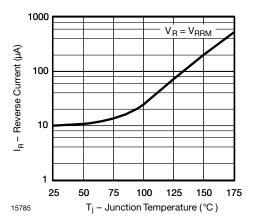


Fig. 2 - Max. Reverse Current vs. Junction Temperature

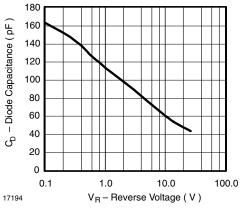


Fig. 3 - Diode Capacitance vs. Reverse Voltage

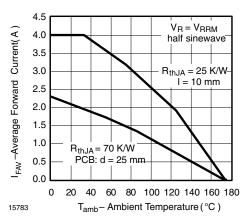


Fig. 4 - Max. Average Forward Current vs. Ambient Temperature

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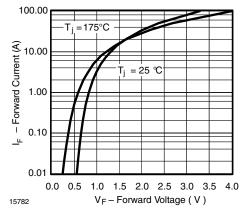
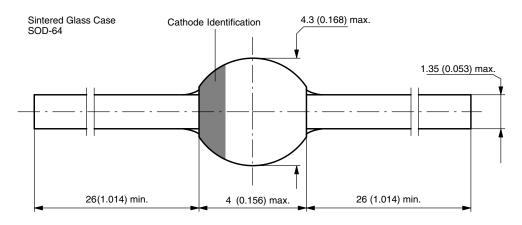


Fig. 5 - Max. Forward Current vs. Forward Voltage

PACKAGE DIMENSIONS in millimeters (inches): SOD-64



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