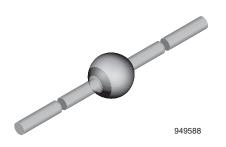




Vishay Semiconductors

Ultra-Fast Avalanche Sinterglass Diode



FEATURES

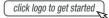
- High reverse voltage
- · Glass passivated
- Low reverse current
- Low forward voltage drop
- · Hermetically sealed axial-leaded glass envelope
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS

COMPLIANT HALOGEN FREE

DESIGN SUPPORT TOOLS





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

APPLICATIONS • Switched mode n

- Switched mode power supplies
- High-frequency inverter circuits

ORDERING INFORMATION (Example)					
DEVICE NAME	DEVICE NAME ORDERING CODE TAPED UNITS MINIMUM ORDER QUANT				
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	$V_R = 50 \text{ V}; I_{F(AV)} = 4 \text{ A}$	SOD-64			
BYV98-100	V _R = 100 V; I _{F(AV)} = 4 A	SOD-64			
BYV98-150	$V_R = 150 \text{ V}; I_{F(AV)} = 4 \text{ A}$	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	TEST CONDITION PART		VALUE	UNIT	
		BYV98-50	$V_R = V_{RRM}$	50	V	
Reverse voltage = repetitive peak reverse	See electrical characteristics	BYV98-100	$V_R = V_{RRM}$	100	V	
voltage		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	Α	
Average forward current	$T_{amb} = 30 ^{\circ}\text{C}, I = 10 \text{mm}$		I _{F(AV)}	4	Α	
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 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	μΑ
	$V_R = V_{RRM}, T_j = 150 ^{\circ}C$		I _R	-	=	200	μΑ
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)

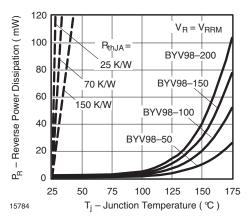


Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature

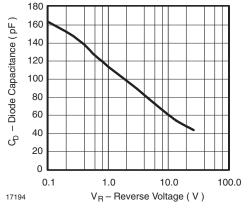


Fig. 3 - Diode Capacitance vs. Reverse Voltage

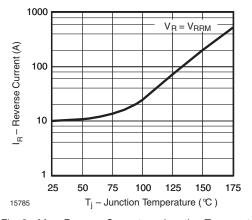


Fig. 2 - Max. Reverse Current vs. Junction Temperature

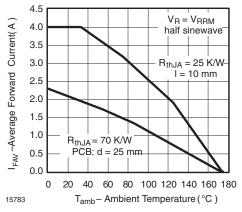


Fig. 4 - Max. Average Forward Current vs. Ambient Temperature

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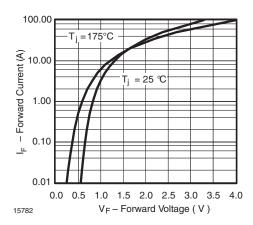
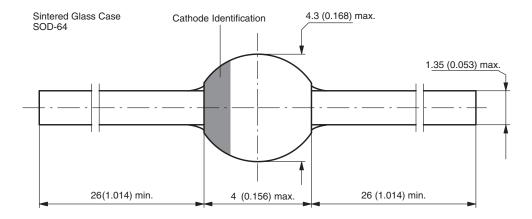


Fig. 5 - Max. Forward Current vs. Forward Voltage

PACKAGE DIMENSIONS in millimeters (inches): SOD-64



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