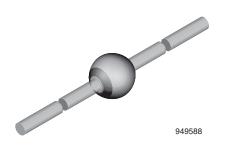




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Vishay Semiconductors

Ultra-Fast Avalanche Sinterglass Diode



DESIGN SUPPORT TOOLS

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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

- · 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





COMPLIANT HALOGEN

APPLICATIONS

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

ORDERING INFORMATION (Example)					
DEVICE NAME	DEVICE NAME ORDERING CODE TAPED UNITS MINIMUM ORDER				
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	$V_R = 100 \text{ V}; I_{F(AV)} = 3.5 \text{ A}$	SOD-64			
BYV28-150	$V_R = 150 \text{ V}; I_{F(AV)} = 3.5 \text{ A}$	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	
	See electrical characteristics	BYV28-50	$V_R = V_{RRM}$	50	V	
Reverse voltage = repetitive peak reverse		BYV28-100	$V_R = V_{RRM}$	100	V	
voltage	See electrical characteristics	BYV28-150	$V_R = V_{RRM}$	150	V	
		BYV28-200	$V_R = V_{RRM}$	200	V	
	See electrical characteristics	BYV28-50	V_{RSM}	55	V	
Peak reverse voltage, non repetitive		BYV28-100	V_{RSM}	110	V	
reak reverse voitage, non repetitive		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	Α	
Repetitive peak forward current			I _{FRM}	25	Α	
Average forward current			I _{F(AV)}	3.5	Α	
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	



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MAXIMUM THERMAL RESISTANCE (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER TEST CONDITION		SYMBOL	SYMBOL VALUE			
Junction ambient	Lead length I = 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
Forward voltage	I _F = 5 A, T _j = 175 °C		V_{F}	-	-	0.89	V
	$V_R = V_{RRM}$		I _R	-	-	1	μΑ
Reverse current	V _{RSM}		I _R	-	-	100	μΑ
	$V_R = V_{RRM}$, $T_j = 165$ °C		I _R	-	-	150	μΑ
Reverse recovery time	$I_F = 0.5 \text{ A}, I_R = 1 \text{ A}, i_R = 0.25 \text{ A}$		t _{rr}	-	-	30	ns

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

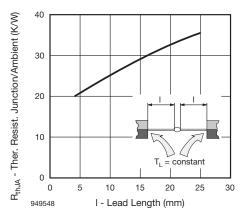


Fig. 1 - Max. Thermal Resistance vs. Lead Length

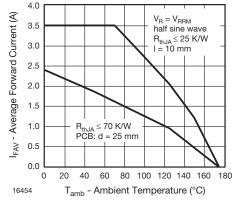


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

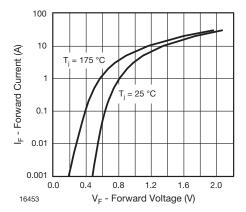


Fig. 2 - Forward Current vs. Forward Voltage

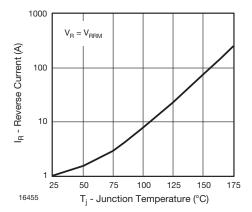


Fig. 4 - Reverse Current vs. Junction Temperature

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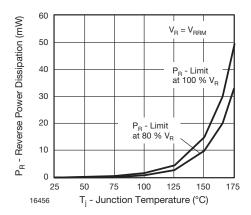


Fig. 5 - Max. Reverse Power Dissipation vs. Junction Temperature

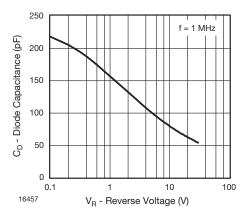
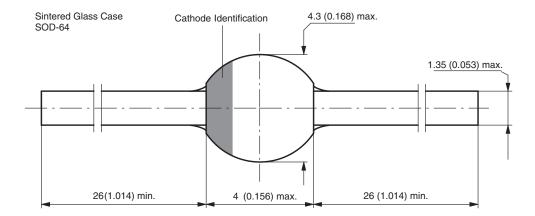


Fig. 6 - Diode Capacitance vs. Reverse Voltage

PACKAGE DIMENSIONS in millimeters (inches): SOD-64



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