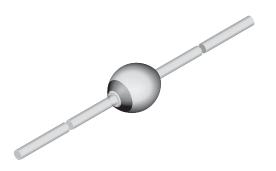


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Fast Avalanche Sinterglass Diode



949539

DESIGN SUPPORT TOOLS

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MECHANICAL DATA

Case: SOD-57 sintered glass case

Terminals: plated axial leads, solderable per MIL-STD-750,

method 2026

Polarity: color band denotes cathode end

Mounting position: any Weight: approx. 369 mg

FEATURES

- Glass passivated junction
- Hermetically sealed package
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



(e2)

ROHS COMPLIANT HALOGEN FREE

APPLICATIONS

 Fast rectification and switching avalanche sinterglass diode for TV-line output circuits an switch mode power supply

ORDERING INFORMATION (Example)					
DEVICE NAME ORDERING CODE TAPED UNITS MINIMUM ORI			MINIMUM ORDER QUANTITY		
BY203-20S	BY203-20STR	5000 per 10" tape and reel	25 000		
BY203-20S	BY203-20STAP	5000 per ammopack	25 000		

PARTS TABLE				
PART	TYPE DIFFERENTIATION	PACKAGE		
BY203-12S	V _R = 1200 V; I _{F(AV)} = 250 mA	SOD-57		
BY203-16S	V _R = 1600 V; I _{F(AV)} = 250 mA	SOD-57		
BY203-20S	V _R = 2000 V; I _{F(AV)} = 250 mA	SOD-57		

ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT	
		BY203-12S	$V_R = V_{RRM}$	1200	V	
Reverse voltage = repetitive peak reverse voltage	I _R = 100 μA	BY203-16S	$V_R = V_{RRM}$	1600	V	
vollago		BY203-20S	$V_R = V_{RRM}$	2000	V	
Peak forward surge current	t _p = 10 ms, half sine wave		I _{FSM}	20	Α	
Average forward current			I _{F(AV)}	0.25	Α	
Non repetitive reverse avalanche energy	I _{(BR)R} = 0.4 A		E _R	10	mJ	
Junction temperature range			Tj	-55 to +150	°C	
Storage temperature range			T _{stg}	-55 to +175	°C	

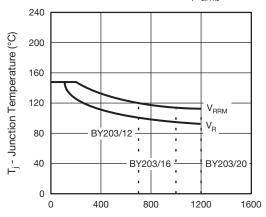


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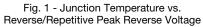
MAXIMUM THERMAL RESISTANCE (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT		
Junction ambient	Lead length I = 10 mm, T _L = constant	R _{thJA}	45	K/W		
	Maximum lead length	R _{thJA}	100	K/W		

ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 0.2 \text{ A}, t_p/T = 0.01, t_p = 0.3 \text{ms}$		V_{F}	-	-	2.4	V
Reverse current	V _R = 700 V	BY203-12S	I _R	-	-	2	μΑ
	V _R = 1000 V	BY203-16S	I _R	-	-	2	μΑ
	V _R = 1200 V	BY203-20S	I _R	-	-	2	μΑ
Breakdown voltage	$I_R = 100 \ \mu\text{A}, \ t_p/T = 0.01, \ t_p = 0.3 \ \text{ms}$	BY203-12S	$V_{(BR)}$	1200	-	-	V
		BY203-16S	$V_{(BR)}$	1600	-	-	V
		BY203-20S	V _(BR)	2000	-	-	V
Reverse recovery time	$I_F = 0.5 \text{ A}, I_R = 1 \text{ A}, i_R = 0.25 \text{ A}$		t _{rr}	-	-	300	ns

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



 $_{\rm 949080}~\rm V_{\rm R}, \rm V_{\rm RRM}$ - Rev./Rep. Peak Rev. Voltage (V)



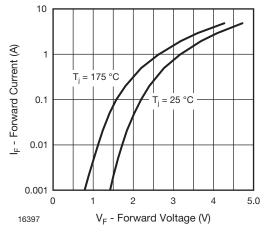


Fig. 2 - Max. Forward Current vs. Forward Voltage

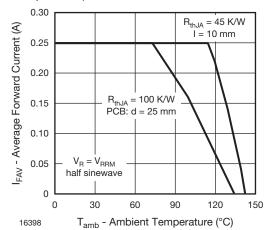


Fig. 3 - Max. Average Forward Current vs.
Ambient Temperature

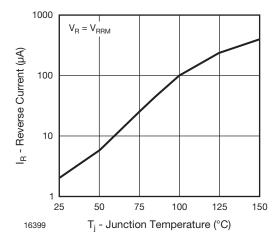


Fig. 4 - Max. Reverse Current vs. Junction Temperature





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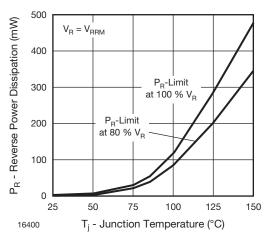


Fig. 5 - Max. Reverse Power Dissipation vs. Junction Temperature

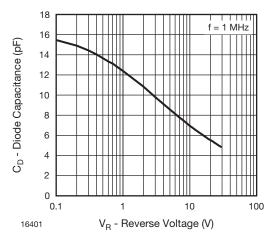
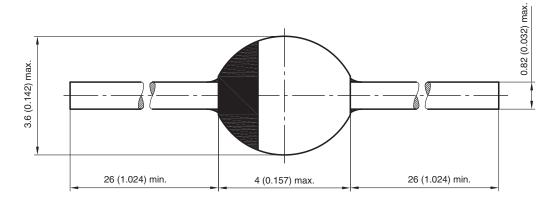


Fig. 6 - Diode Capacitance vs. Reverse Voltage

PACKAGE DIMENSIONS in millimeters (inches): SOD-57



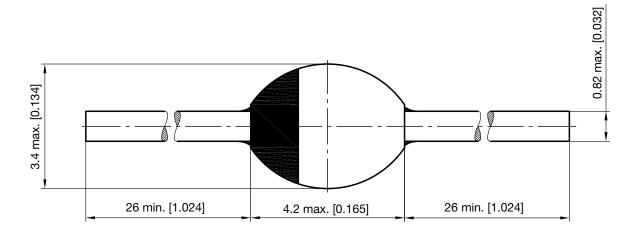
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SOD-57 BYT62-BY203

PACKAGE DIMENSIONS in millimeters (inches)



23194

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