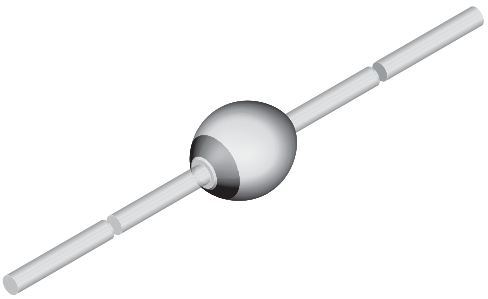
Fast Avalanche Sinterglass Diode



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FEATURES

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

RoHS COMPLIANT

HALOGEN FREE

APPLICATIONS

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

DESIGN SUPPORT TOOLS

click logo to get started

3D Models Available

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

ORDERING INFORMATION (Example)			
DEVICE NAME	**ORDERING CODE**	**TAPED UNITS**	**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**
Reverse voltage = repetitive peak reverse voltage	I_R = 100 µA	BY203-12S	$V_R = V_{RRM}$	1200	V
		BY203-16S	$V_R = V_{RRM}$	1600	V
		BY203-20S	$V_R = V_{RRM}$	2000	V
Peak forward surge current	t_p = 10 ms, half sine wave		I_{FSM}	20	A
Average forward current			$I_{F(AV)}$	0.25	A
Non repetitive reverse avalanche energy	$I_{(BR)R}$ = 0.4 A		E_R	10	mJ
Junction temperature range			T_j	-55 to +150	°C
Storage temperature range			T_{stg}	-55 to +175	°C

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}	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 A, t_p/T = 0.01, t_p = 0.3ms		V_F	-	-	2.4	V
Reverse current	V_R = 700 V	BY203-12S	I_R	-	-	2	µA
	V_R = 1000 V	BY203-16S	I_R	-	-	2	µA
	V_R = 1200 V	BY203-20S	I_R	-	-	2	µA
Breakdown voltage	I_R = 100 µA, t_p/T = 0.01, t_p = 0.3 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 A, I_R = 1 A, i_R = 0.25 A		t_{rr}	-	-	300	ns

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

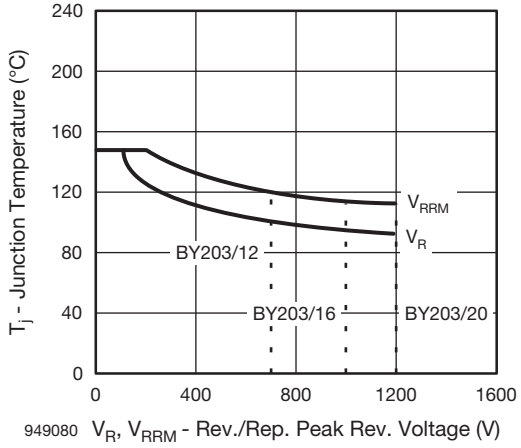


Fig. 1 - Junction Temperature vs. Reverse/Repetitive Peak Reverse Voltage

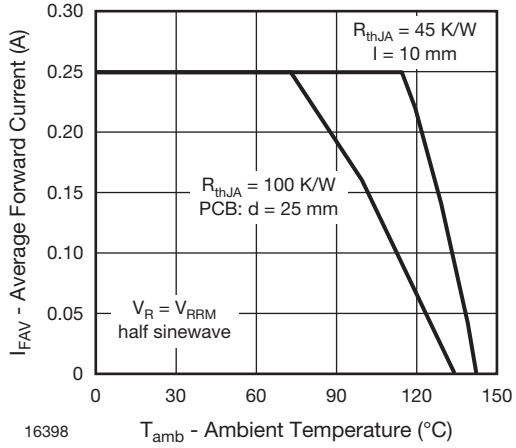


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

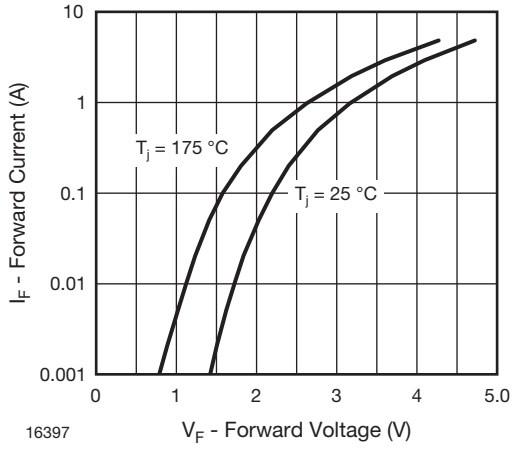


Fig. 2 - Max. Forward Current vs. Forward Voltage

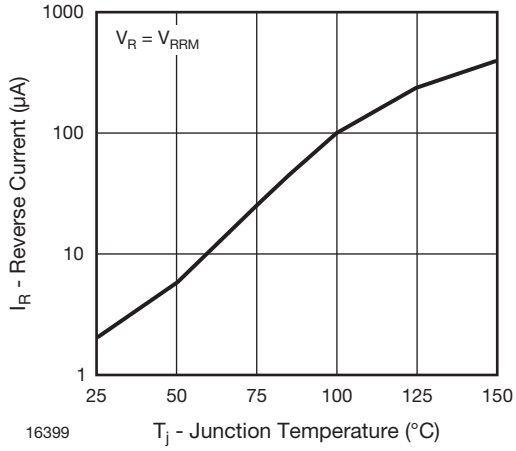


Fig. 4 - Max. Reverse Current vs. Junction Temperature

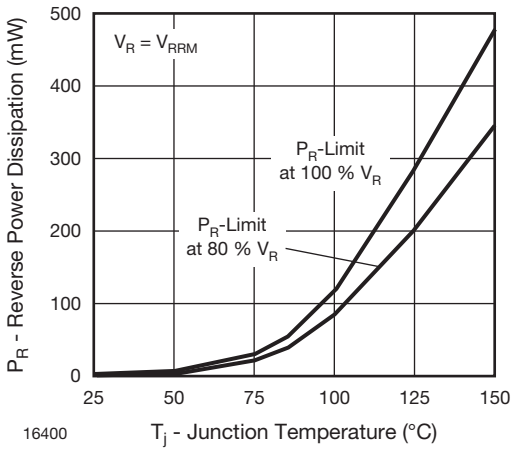


Fig. 5 - Max. Reverse Power Dissipation vs. Junction Temperature

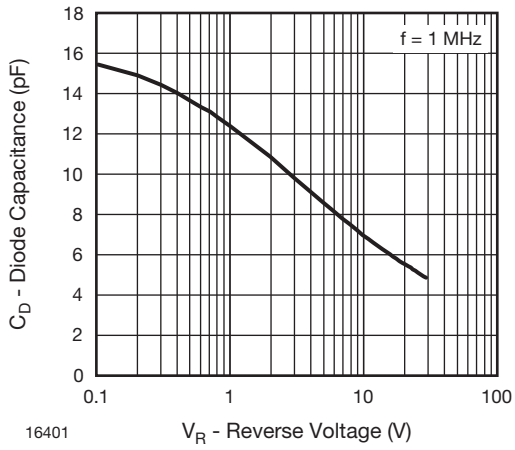
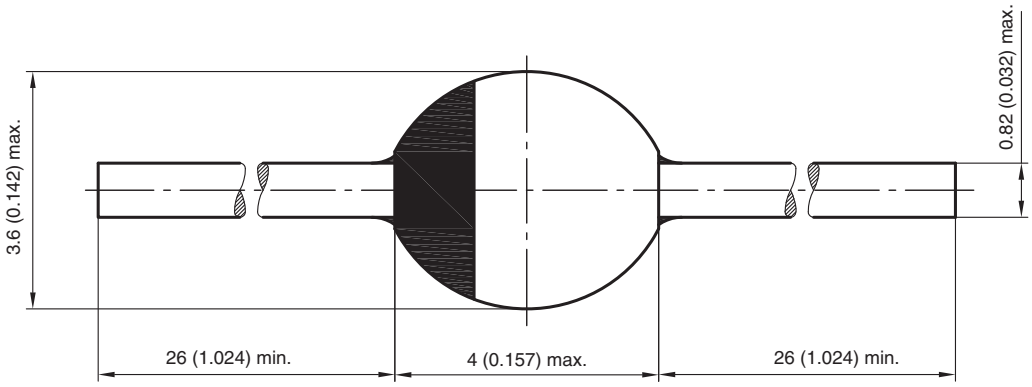


Fig. 6 - Diode Capacitance vs. Reverse Voltage

PACKAGE DIMENSIONS in millimeters (inches): **SOD-57**



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