

BYW32, BYW33, BYW34, BYW35, BYW36

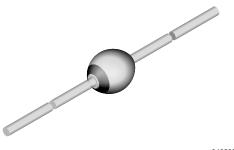
Vishay Semiconductors

ROHS COMPLIANT

HALOGEN

FREE

Fast Avalanche Sinterglass Diode



949539

MECHANICAL DATA

Case: SOD-57

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
- Low reverse current
- Soft recovery characteristics
- Material categorization: For definitions of compliance please see <u>www.vishay.com/doc?99912</u>

APPLICATIONS

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

ORDERING INFORMATION (Example)					
DEVICE NAME	ORDERING CODE	TAPED UNITS	MINIMUM ORDER QUANTITY		
BYW36	BYW36-TR	5000 per 10" tape and reel	25 000		
BYW36	BYW36-TAP	5000 per ammopack	25 000		

PARTS TABLE					
PART	TYPE DIFFERENTIATION	PACKAGE			
BYW32	$V_{R} = 200 \text{ V}; \text{ I}_{F(AV)} = 2 \text{ A}$	SOD-57			
BYW33	$V_{R} = 300 \text{ V}; \text{ I}_{F(AV)} = 2 \text{ A}$	SOD-57			
BYW34	$V_{R} = 400 \text{ V}; \text{ I}_{F(AV)} = 2 \text{ A}$	SOD-57			
BYW35	$V_{R} = 500 \text{ V}; \text{ I}_{F(AV)} = 2 \text{ A}$	SOD-57			
BYW36	$V_{R} = 600 \text{ V}; \text{ I}_{F(AV)} = 2 \text{ A}$	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		BYW32	$V_{R} = V_{RRM}$	200	V		
		BYW33	$V_{R} = V_{RRM}$	300	V		
	See electrical characteristics	BYW34	$V_{R} = V_{RRM}$	400	V		
		BYW35	$V_{R} = V_{RRM}$	500	V		
		BYW36	$V_{R} = V_{RRM}$	600	V		
Peak forward surge current	t _p = 10 ms, half sine wave		I _{FSM}	50	А		
Repetitive peak forward current			I _{FRM}	12	А		
Average forward current	φ = 180°		I _{F(AV)}	2	А		
Non repetitive reverse avalanche energy	$I_{(BR)R} = 0.4 A$		E _R	10	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	VALUE	UNIT		
Junction ambient	Lead length I = 10 mm, T_L = constant	R _{thJA}	45	K/W		
JUNCTION ANDIENT	On PC board with spacing 25 mm	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 = 1 A		V _F	-	0.95	1.1	V
Reverse current	$V_{R} = V_{RRM}$		I _R	-	1	5	μA
	V _R = V _{RRM} , T _j = 150 °C		I _R	-	60	150	μA
Reverse recovery time	$I_F = 0.5 \text{ A}, I_R = 1 \text{ A}, i_R = 0.25 \text{ A}$		t _{rr}	-	-	200	ns

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

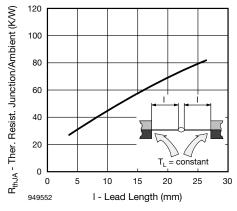


Fig. 1 - Max. Thermal Resistance vs. Lead Length

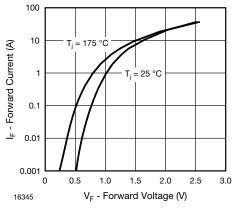


Fig. 2 - Forward Current vs. Forward Voltage

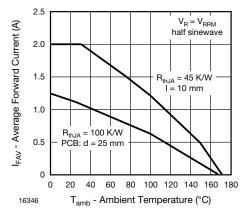


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

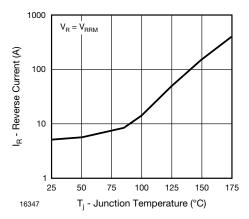


Fig. 4 - Reverse Current vs. Junction Temperature (°C)

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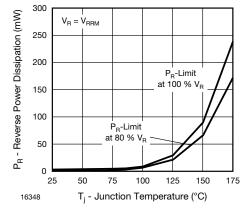


Fig. 5 - Max. Reverse Power Dissipation vs. Junction Temperature

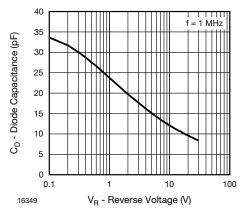


Fig. 6 - Diode Capacitance vs. Reverse Voltage

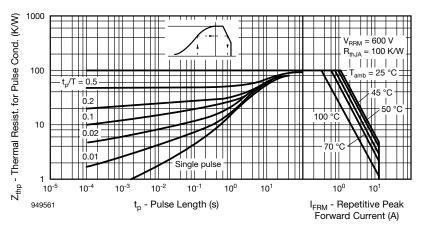
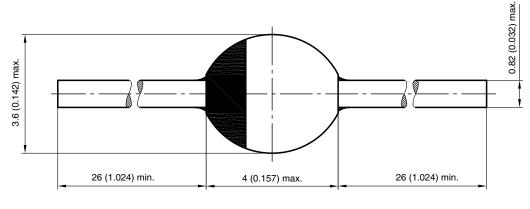


Fig. 7 - Thermal Response

PACKAGE DIMENSIONS in millimeters (inches): SOD-57



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