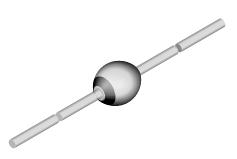
BYW32, BYW33, BYW34, BYW35, BYW36

Vishay Semiconductors

Fast Avalanche Sinterglass Diode



949539

FEATURES

- · Glass passivated junction
- · Hermetically sealed package
- · Low reverse current
- · Soft recovery characteristics
- Material categorization:
 For definitions of compliance please see www.vishay.com/doc?99912





ROHS COMPLIANT HALOGEN FREE

APPLICATIONS

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

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

ORDERING INFORMATION (Example)					
DEVICE NAME	DEVICE NAME ORDERING CODE TAPED UNITS MINI				
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 V; I _{F(AV)} = 2 A	SOD-57			
BYW33	V _R = 300 V; I _{F(AV)} = 2 A	SOD-57			
BYW34	V _R = 400 V; I _{F(AV)} = 2 A	SOD-57			
BYW35	V _R = 500 V; I _{F(AV)} = 2 A	SOD-57			
BYW36	$V_{B} = 600 \text{ V}; I_{E(AV)} = 2 \text{ A}$	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	Α	
Repetitive peak forward current			I _{FRM}	12	Α	
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 ambient	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	μΑ
neverse current	$V_R = V_{RRM}$, $T_j = 150 ^{\circ}C$		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)

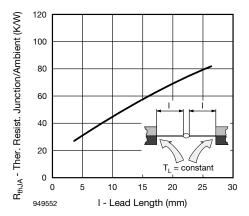
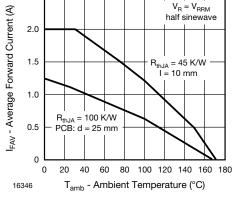


Fig. 1 - Max. Thermal Resistance vs. Lead Length



2.5

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

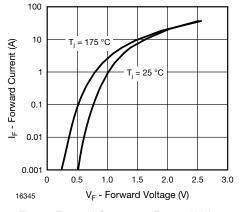


Fig. 2 - Forward Current vs. Forward Voltage

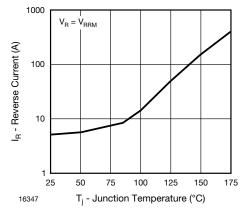


Fig. 4 - Reverse Current vs. Junction Temperature (°C)

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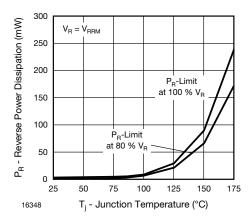


Fig. 5 - Max. Reverse Power Dissipation vs. Junction Temperature

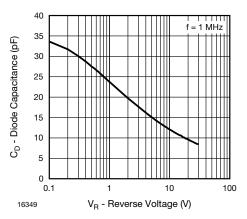


Fig. 6 - Diode Capacitance vs. Reverse Voltage

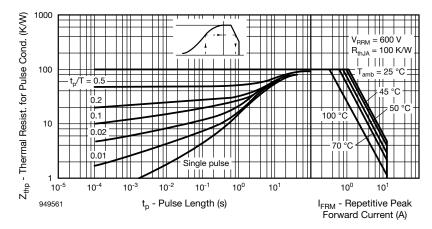
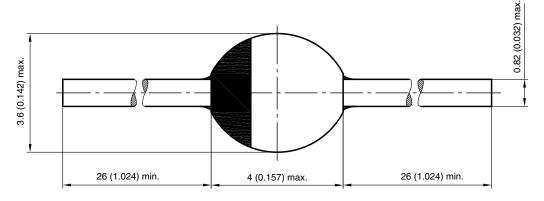


Fig. 7 - Thermal Response

PACKAGE DIMENSIONS in millimeters (inches): SOD-57



20543

Rev. 3 - Date: 09.February 2005 Document no.:6.563-5006.3-4



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