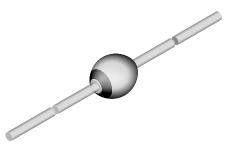


## BYT52A, BYT52B, BYT52D, BYT52G, BYT52J, BYT52K, BYT52M

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 <a href="https://www.vishay.com/doc?99912">www.vishay.com/doc?99912</a>





ROHS COMPLIANT HALOGEN FREE

#### **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

#### **APPLICATIONS**

• Fast rectification and switching diode

ORDERING INFORMATION (Example)					
DEVICE NAME	ORDERING CODE	TAPED UNITS	MINIMUM ORDER QUANTITY		
BYT52M	BYT52M-TR	5000 per 10" tape and reel	25 000		
BYT52M	BYT52M-TAP	5000 per ammopack	25 000		

PARTS TABLE					
PART	TYPE DIFFERENTIATION	PACKAGE			
BYT52A	$V_R = 50 \text{ V}; I_{F(AV)} = 1.4 \text{ A}$	SOD-57			
BYT52B	V <sub>R</sub> = 100 V; I <sub>F(AV)</sub> = 1.4 A	SOD-57			
BYT52D	V <sub>R</sub> = 200 V; I <sub>F(AV)</sub> = 1.4 A	SOD-57			
BYT52G	V <sub>R</sub> = 400 V; I <sub>F(AV)</sub> = 1.4 A	SOD-57			
BYT52J	V <sub>R</sub> = 600 V; I <sub>F(AV)</sub> = 1.4 A	SOD-57			
BYT52K	V <sub>R</sub> = 800 V; I <sub>F(AV)</sub> = 1.4 A	SOD-57			
BYT52M	V <sub>R</sub> = 1000 V; I <sub>F(AV)</sub> = 1.4 A	SOD-57			

ABSOLUTE MAXIMUM RATINGS (T <sub>amb</sub> = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT	
	See electrical characteristics	BYT52A	$V_R = V_{RRM}$	50	V	
		BYT52B	$V_R = V_{RRM}$	100	V	
De la constitución de la constit		BYT52D	$V_R = V_{RRM}$	200	V	
Reverse voltage = repetitive peak reverse voltage		BYT52G	$V_R = V_{RRM}$	400	V	
voltage		BYT52J	$V_R = V_{RRM}$	600	V	
		BYT52K	$V_R = V_{RRM}$	800	V	
		BYT52M	$V_R = V_{RRM}$	1000	V	
Peak forward surge current	$t_p = 10$ ms, half sine wave		I <sub>FSM</sub>	50	Α	
Average forward current	On PC board		I <sub>F(AV)</sub>	0.85	А	
Average forward current	I = 10 mm	I <sub>F(AV)</sub>				
		BYT52J	E <sub>R</sub>	10	mJ	
Non repetitive reverse avalanche energy	$I_{(BR)R} = 0.4 A$	BYT52K	E <sub>R</sub>	10	mJ	
		BYT52M	E <sub>R</sub>	10	mJ	
Junction and storage temperature range			$T_j = T_{stg}$	- 55 to + 175	°C	



# BYT52A, BYT52B, BYT52D, BYT52G, BYT52J, BYT52K, BYT52M

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MAXIMUM THERMAL RESISTANCE (T <sub>amb</sub> = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Junction ambient	Lead length I = 10 mm, T <sub>L</sub> = constant	$R_{thJA}$	45	K/W	
	On PC board with spacing 25 mm	$R_{thJA}$	100	K/W	

<b>ELECTRICAL CHARACTERISTICS</b> (T <sub>amb</sub> = 25 °C, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	I <sub>F</sub> = 1 A		$V_{F}$	-	-	1.3	V
Reverse current	$V_R = V_{RRM}$		I <sub>R</sub>	-	-	5	μΑ
neverse current	$V_R = V_{RRM}$ , $T_j = 150$ °C		I <sub>R</sub>	-	-	150	μΑ
Reverse recovery time	$I_F = 0.5 \text{ A}, I_R = 1 \text{ A}, I_R = 0.25 \text{ A}$		t <sub>rr</sub>	-	-	200	ns

### TYPICAL CHARACTERISTICS (T<sub>amb</sub> = 25 °C, unless otherwise specified)

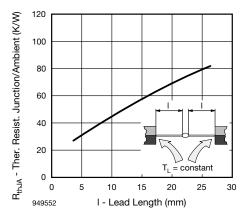


Fig. 1 - Max. Thermal Resistance vs. Lead Length

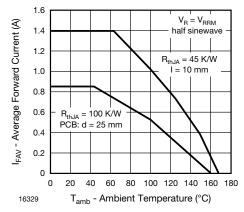


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

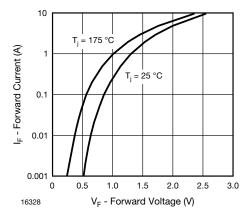


Fig. 2 - Max. Forward Current vs. Forward Voltage

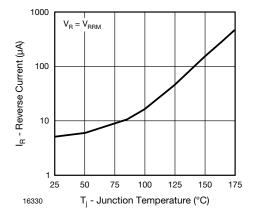


Fig. 4 - Max. Reverse Current vs. Junction Temperature

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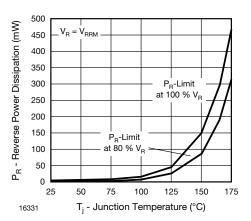


Fig. 5 - Max. Reverse Power Dissipation vs. Junction Temperature

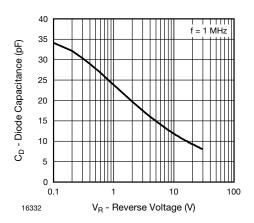
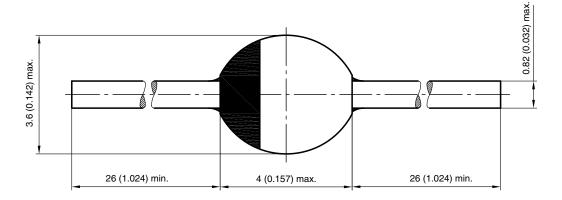


Fig. 6 - Diode Capacitance vs. Reverse Voltage

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



20543 Rev. 3 - Date: 09.February 2005 Document no.:6.563-5006.3-4



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Revision: 02-Oct-12 Document Number: 91000