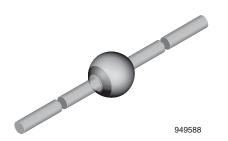


# BYT56A, BYT56B, BYT56D, BYT56G, BYT56J, BYT56K, BYT56M

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Vishay Semiconductors

# **Fast Avalanche Sinterglass Diode**



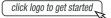
#### **FEATURES**

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



**HALOGEN** FREE

### **DESIGN SUPPORT TOOLS**





### **MECHANICAL DATA**

Case: SOD-64

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

method 2026

Polarity: color band denotes cathode end

Mounting position: any Weight: approx. 858 mg

- · Hermetically sealed package
- · Low reverse current
- · Soft recovery characteristics

#### **APPLICATIONS**

· Very fast rectification and switching diode

ORDERING INFORMATION (Example)						
DEVICE NAME	ORDERING CODE	ERING CODE TAPED UNITS MINIMUM ORDER QUANTIT				
BYT56M	BYT56M-TR	2500 per 10" tape and reel	12 500			
BYT56M	BYT56M-TAP	2500 per ammopack	12 500			

PARTS TABLE				
PART	TYPE DIFFERENTIATION	PACKAGE		
BYT56A	$V_R = 50 \text{ V}; I_{F(AV)} = 3 \text{ A}$	SOD-64		
BYT56B	V <sub>R</sub> = 100 V; I <sub>F(AV)</sub> = 3 A	SOD-64		
BYT56D	V <sub>R</sub> = 200 V; I <sub>F(AV)</sub> = 3 A	SOD-64		
BYT56G	$V_R = 400 \text{ V}; I_{F(AV)} = 3 \text{ A}$	SOD-64		
BYT56J	$V_R = 600 \text{ V}; I_{F(AV)} = 3 \text{ A}$	SOD-64		
BYT56K	V <sub>R</sub> = 800 V; I <sub>F(AV)</sub> = 3 A	SOD-64		
BYT56M	$V_{\rm B} = 1000 \text{ V}; I_{\rm F(AV)} = 3 \text{ A}$	SOD-64		

ABSOLUTE MAXIMUM RATINGS (T <sub>amb</sub> = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT	
		BYT56A	$V_R = V_{RRM}$	50	V	
		BYT56B	$V_R = V_{RRM}$	100	V	
Davage valle and was attained and an arrange		BYT56D	$V_R = V_{RRM}$	200	V	
Reverse voltage = repetitive peak reverse voltage	See electrical characteristics	BYT56G	$V_R = V_{RRM}$	400	V	
Vollage		BYT56J	$V_R = V_{RRM}$	600	V	
		BYT56K	$V_R = V_{RRM}$	800	V	
		BYT56M	$V_R = V_{RRM}$	1000	V	
Peak forward surge current	$t_p = 10 \text{ ms}$ , half sine wave		I <sub>FSM</sub>	80	Α	
Average forward current	I = 10 mm		I <sub>F(AV)</sub>	3	Α	
Average forward current	On PC board		I <sub>F(AV)</sub>	1.5	Α	
Non repetitive reverse avalanche energy	$I_{(BR)R} = 0.4 A$		E <sub>R</sub>	10	mJ	
Junction and storage temperature range			$T_j = T_{stg}$	-55 to +175	°C	

# BYT56A, BYT56B, BYT56D, BYT56G, BYT56J, BYT56K, BYT56M

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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	$R_{thJA}$	25	K/W	
	On PC board with spacing 25 mm	$R_{thJA}$	70	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> = 3 A		$V_{F}$	-	-	1.4	V
Reverse current	$V_R = V_{RRM}$		I <sub>R</sub>	-	-	5	μΑ
neverse current	$V_R = V_{RRM}, T_j = 150  ^{\circ}C$		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>	-	-	100	ns

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

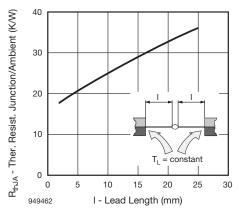


Fig. 1 - Max. Thermal Resistance vs. Lead Length

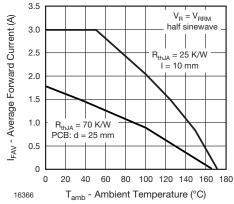


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

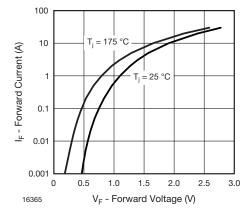


Fig. 2 - Max. Forward Current vs. Forward Voltage

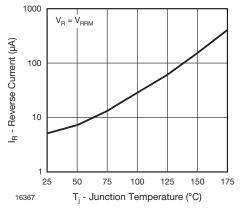


Fig. 4 - Max. Reverse Current vs. Junction Temperature

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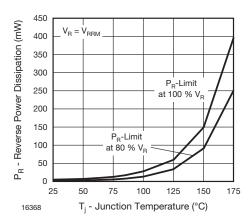


Fig. 5 - Max. Reverse Power Dissipation vs. Junction Temperature

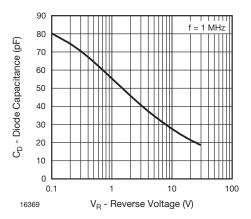
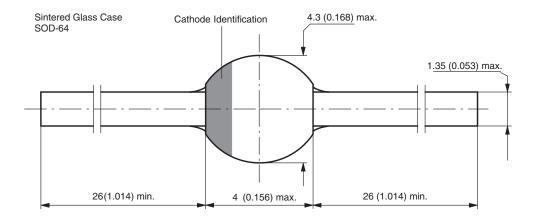


Fig. 6 - Diode Capacitance vs. Reverse Voltage

### PACKAGE DIMENSIONS in millimeters (inches): SOD-64



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