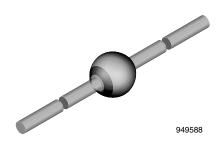


BYT56A, BYT56B, BYT56D, BYT56G, BYT56J, BYT56K, BYT56M

Vishay Semiconductors

Fast Avalanche Sinterglass Diode



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

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

APPLICATIONS

· Very fast rectification and switching diode

ORDERING INFORMATION (Example)						
DEVICE NAME	ORDERING CODE	TAPED UNITS	MINIMUM ORDER QUANTITY			
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 _R = 100 V; I _{F(AV)} = 3 A	SOD-64			
BYT56D	V _R = 200 V; I _{F(AV)} = 3 A	SOD-64			
BYT56G	V _R = 400 V; I _{F(AV)} = 3 A	SOD-64			
BYT56J	$V_R = 600 \text{ V}; I_{F(AV)} = 3 \text{ A}$	SOD-64			
BYT56K	$V_R = 800 \text{ V; } I_{F(AV)} = 3 \text{ A}$	SOD-64			
BYT56M	$V_{B} = 1000 \text{ V}; I_{E(AV)} = 3 \text{ A}$	SOD-64			

ABSOLUTE MAXIMUM RATINGS (T _{amb} = 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	
D	See electrical characteristics	BYT56D	$V_R = V_{RRM}$	200	V	
Reverse voltage = repetitive peak reverse voltage		BYT56G	$V_R = V_{RRM}$	400	V	
voltage		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 _{FSM}	80	Α	
Average forward current	On PC board		I _{F(AV)}	1.5	Α	
Average forward current	I = 10 mm		I _{F(AV)}	3	Α	
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	

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}	25	K/W	
Junction ambient	On PC board with spacing 25 mm	R_{thJA}	70	K/W	

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ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	I _F = 3 A		V_{F}	-	-	1.4	V
Reverse current	$V_R = V_{RRM}$		I _R	-	-	5	μA
	V _R = V _{RRM} , T _j = 150 °C		I _R	-	-	150	μA
Reverse recovery time	$I_F = 0.5 \text{ A}, I_R = 1 \text{ A}, I_R = 0.25 \text{ A}$		t _{rr}	-	-	100	ns

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

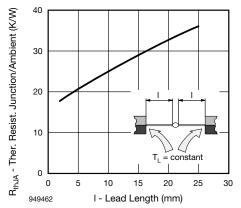


Fig. 1 - Max. Thermal Resistance vs. Lead Length

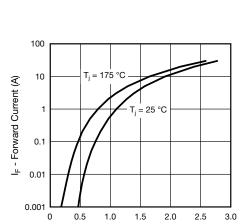


Fig. 2 - Max. Forward Current vs. Forward Voltage

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V_F - Forward Voltage (V)

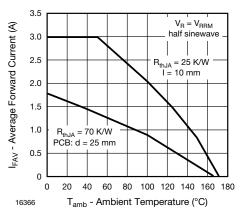


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

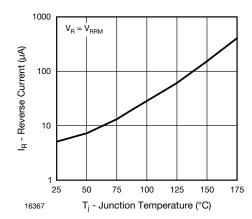


Fig. 4 - Max. Reverse Current vs. Junction Temperature

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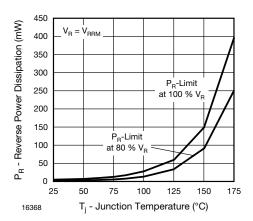


Fig. 5 - Max. Reverse Power Dissipation vs. Junction Temperature

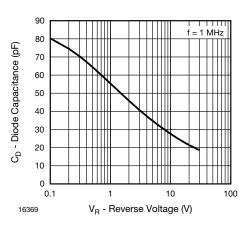
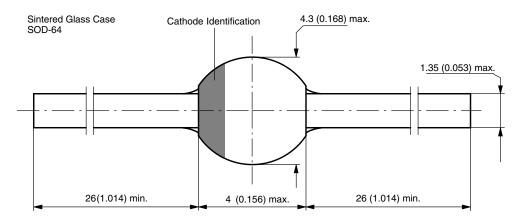


Fig. 6 - Diode Capacitance vs. Reverse Voltage

PACKAGE DIMENSIONS in millimeters (inches): SOD-64



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