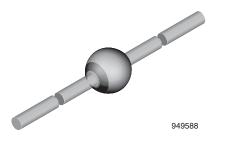
BYT56A, BYT56B, BYT56D, BYT56G, BYT56J, BYT56K, BYT56M



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Vishay Semiconductors

Fast Avalanche Sinterglass Diode



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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

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

• Very fast rectification and switching diode

ORDERING INFORMATION (Example)					
DEVICE NAME	VICE NAME ORDERING CODE TAPED UNITS MINIMUM ORDER QUA				
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	$V_{R} = 50 \text{ V}; \text{ I}_{F(AV)} = 3 \text{ A}$	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 V; I _{F(AV)} = 3 A	SOD-64
BYT56K	V _R = 800 V; I _{F(AV)} = 3 A	SOD-64
BYT56M	V _R = 1000 V; I _{F(AV)} = 3 A	SOD-64

ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT		
	See electrical characteristics	BYT56A	$V_{R} = V_{RRM}$	50	V		
		BYT56B	$V_R = V_{RRM}$	100	V		
		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 ms, half sine wave		I _{FSM}	80	А		
Average forward current	l = 10 mm		I _{F(AV)}	3	А		
Average forward current	On PC board		I _{F(AV)}	1.5	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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BYT56A, BYT56B, BYT56D, BYT56G, BYT56J, BYT56K, BYT56M VISHA

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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}	25	K/W	
	On PC board with spacing 25 mm	R _{thJA}	70	K/W	

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
neverse current	$V_R = V_{RRM}, T_j = 150 \ ^\circ C$		I _R	-	-	150	μA
Reverse recovery time	I _F = 0.5 A, I _R = 1 A, i _R = 0.25 A		t _{rr}	-	-	100	ns

TYPICAL CHARACTERISTICS (Tamb = 25 °C, unless otherwise specified)

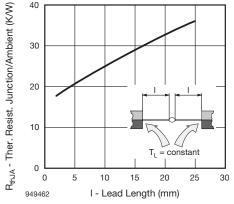


Fig. 1 - Max. Thermal Resistance vs. Lead Length

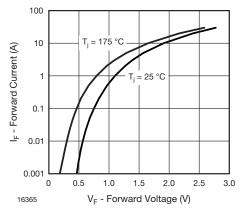


Fig. 2 - Max. Forward Current vs. Forward Voltage

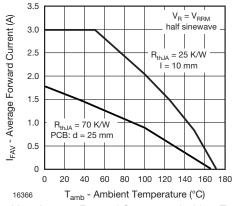


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

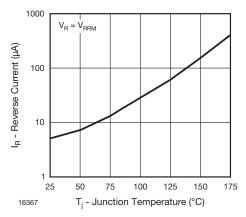


Fig. 4 - Max. Reverse Current vs. Junction Temperature



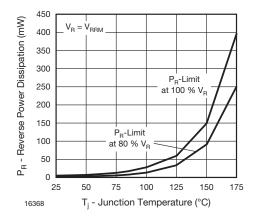


Fig. 5 - Max. Reverse Power Dissipation vs. Junction Temperature

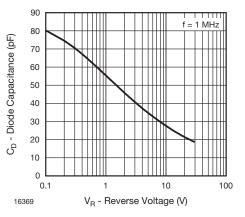
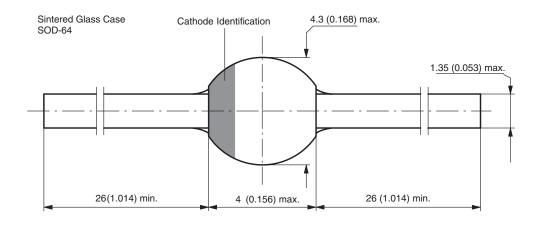


Fig. 6 - Diode Capacitance vs. Reverse Voltage

PACKAGE DIMENSIONS in millimeters (inches): SOD-64



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