

# BYT56M-TAP Datasheet



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DiGi Electronics Part Number	BYT56M-TAP-DG
Manufacturer	<a href="#">Vishay General Semiconductor - Diodes Division</a>
Manufacturer Product Number	BYT56M-TAP
Description	DIODE AVALANCHE 1KV 3A SOD64
Detailed Description	Diode 1000 V 3A Through Hole SOD-64

This model BYT56M-TAP is available at DiGi Electronics.

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## Purchase and inquiry

Manufacturer Product Number:

BYT56M-TAP

Series:

-

Technology:

Avalanche

Current - Average Rectified (Io):

3A

Speed:

Fast Recovery =< 500ns, > 200mA (Io)

Current - Reverse Leakage @ Vr:

5  $\mu$ A @ 1000 V

Mounting Type:

Through Hole

Supplier Device Package:

SOD-64

Base Product Number:

BYT56

Manufacturer:

Vishay General Semiconductor - Diodes Division

Product Status:

Active

Voltage - DC Reverse (Vr) (Max):

1000 V

Voltage - Forward (Vf) (Max) @ If:

1.4 V @ 3 A

Reverse Recovery Time (trr):

100 ns

Capacitance @ Vr, F:

-

Package / Case:

SOD-64, Axial

Operating Temperature - Junction:

-55°C ~ 175°C

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8541.10.0080

Moisture Sensitivity Level (MSL):

1 (Unlimited)

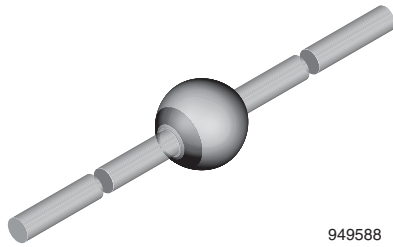
ECCN:

EAR99


**BYT56A, BYT56B, BYT56D, BYT56G, BYT56J, BYT56K, BYT56M**
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Vishay Semiconductors

## Fast Avalanche Sinterglass Diode



949588

### 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](http://www.vishay.com/doc?99912)


**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**

### DESIGN SUPPORT TOOLS

[click logo to get started](#)
**3D**  
Models  
Available

### APPLICATIONS

- Very fast rectification and switching diode

### 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

### 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 ammpack	12 500

### PARTS TABLE

PART	TYPE DIFFERENTIATION	PACKAGE
BYT56A	$V_R = 50 \text{ V}; I_{F(AV)} = 3 \text{ A}$	SOD-64
BYT56B	$V_R = 100 \text{ V}; I_{F(AV)} = 3 \text{ A}$	SOD-64
BYT56D	$V_R = 200 \text{ V}; I_{F(AV)} = 3 \text{ A}$	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	$V_R = 800 \text{ V}; I_{F(AV)} = 3 \text{ A}$	SOD-64
BYT56M	$V_R = 1000 \text{ V}; I_{F(AV)} = 3 \text{ A}$	SOD-64

### ABSOLUTE MAXIMUM RATINGS ( $T_{amb} = 25 \text{ }^\circ\text{C}$ , unless otherwise specified)

PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT
Reverse voltage = repetitive peak reverse voltage	See electrical characteristics	BYT56A	$V_R = V_{RRM}$	50	V
		BYT56B	$V_R = V_{RRM}$	100	V
		BYT56D	$V_R = V_{RRM}$	200	V
		BYT56G	$V_R = V_{RRM}$	400	V
		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	A
Average forward current	$I = 10 \text{ mm}$		$I_{F(AV)}$	3	A
	On PC board		$I_{F(AV)}$	1.5	A
Non repetitive reverse avalanche energy	$I_{(BR)R} = 0.4 \text{ A}$		$E_R$	10	mJ
Junction and storage temperature range			$T_j = T_{stg}$	-55 to +175	$^\circ\text{C}$



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

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MAXIMUM THERMAL RESISTANCE ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Junction ambient	Lead length $l = 10\text{ mm}$ , $T_L = \text{constant}$	$R_{thJA}$	25	K/W
	On PC board with spacing 25 mm	$R_{thJA}$	70	K/W

ELECTRICAL CHARACTERISTICS ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 3\text{ A}$		$V_F$	-	-	1.4	V
Reverse current	$V_R = V_{RRM}$		$I_R$	-	-	5	$\mu\text{A}$
	$V_R = V_{RRM}$ , $T_j = 150\text{ }^{\circ}\text{C}$		$I_R$	-	-	150	$\mu\text{A}$
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 ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)

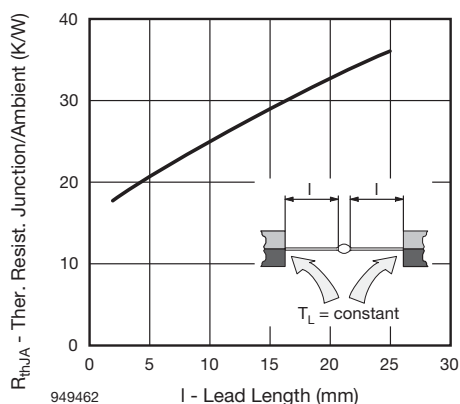


Fig. 1 - Max. Thermal Resistance vs. Lead Length

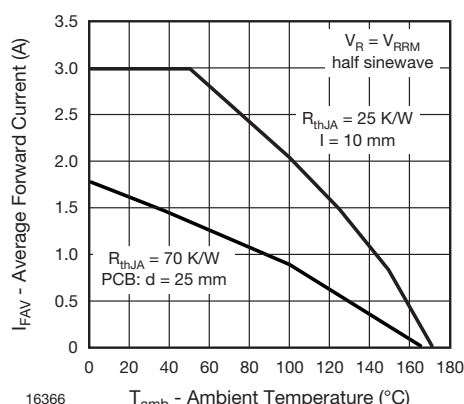


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

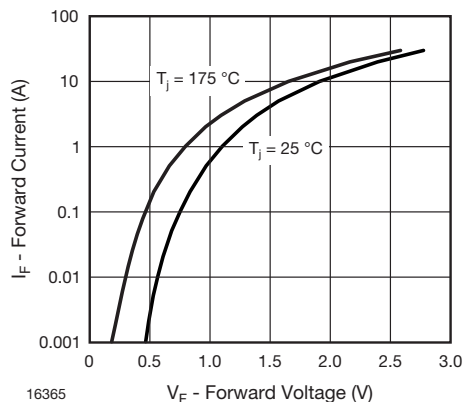


Fig. 2 - Max. Forward Current vs. Forward Voltage

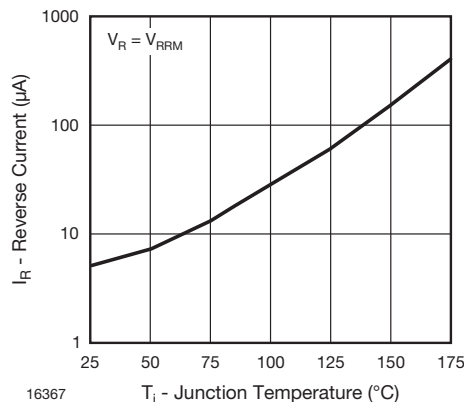


Fig. 4 - Max. Reverse Current vs. Junction Temperature



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

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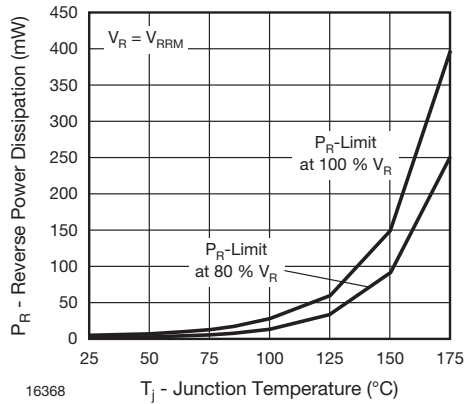


Fig. 5 - Max. Reverse Power Dissipation vs. Junction Temperature

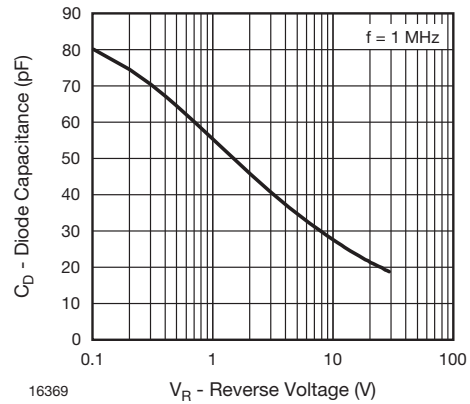
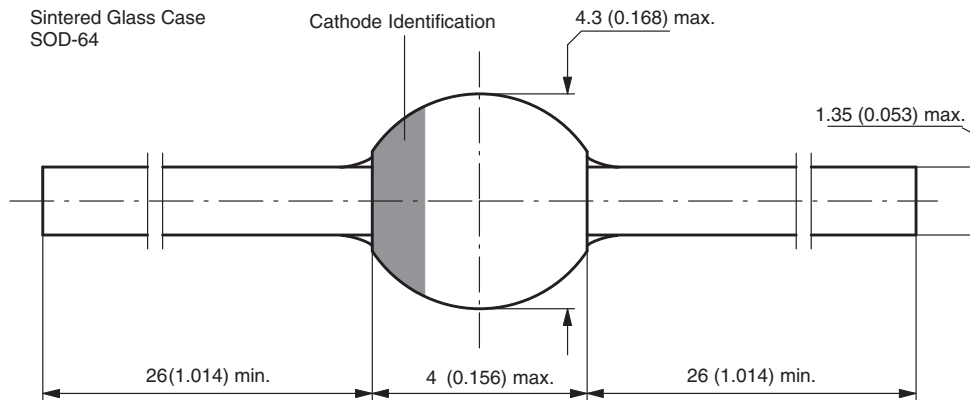


Fig. 6 - Diode Capacitance vs. Reverse Voltage

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



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