

BYT78-TAP Datasheet



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DiGi Electronics Part Number	BYT78-TAP-DG
Manufacturer	Vishay General Semiconductor - Diodes Division
Manufacturer Product Number	BYT78-TAP
Description	DIODE AVALANCHE 1KV 3A SOD64
Detailed Description	Diode 1000 V 3A Through Hole SOD-64

This model BYT78-TAP is available at DiGi Electronics.

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Purchase and inquiry

Manufacturer Product Number:

BYT78-TAP

Series:

-

Technology:

Avalanche

Current - Average Rectified (Io):

3A

Speed:

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

Current - Reverse Leakage @ Vr:

5 μ A @ 1000 V

Mounting Type:

Through Hole

Supplier Device Package:

SOD-64

Base Product Number:

BYT78

Manufacturer:

Vishay General Semiconductor - Diodes Division

Product Status:

Active

Voltage - DC Reverse (Vr) (Max):

1000 V

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

1.2 V @ 3 A

Reverse Recovery Time (trr):

250 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)

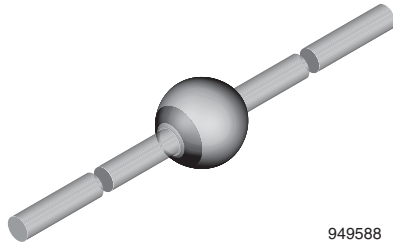
ECCN:

EAR99


www.vishay.com
BYT77, BYT78

Vishay Semiconductors

Fast Avalanche Sinterglass Diode



949588

FEATURES

- Glass passivated junction
- Hermetically sealed package
- Low reverse current
- Soft recovery characteristics
- Controlled avalanche characteristics
- Material categorization:
for definitions of compliance please see
www.vishay.com/doc?99912


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APPLICATIONS

- Fast “soft recovery” rectification 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
BYT78	BYT78-TR	2500 per 10" tape and reel	12 500
BYT78	BYT78-TAP	2500 per ammpack	12 500

PARTS TABLE

PART	TYPE DIFFERENTIATION	PACKAGE
BYT77	$V_R = 800\text{ V}; I_{F(AV)} = 3\text{ A}$	SOD-64
BYT78	$V_R = 1000\text{ V}; I_{F(AV)} = 3\text{ A}$	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	BYT77	$V_R = V_{RRM}$	800	V
		BYT78	$V_R = V_{RRM}$	1000	V
Peak forward surge current	$t_p = 10\text{ ms}$, half sine wave		I_{FSM}	100	A
Average forward current	$T_{amb} \leq 45\text{ }^\circ\text{C}$		$I_{F(AV)}$	3	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	$^\circ\text{C}$

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	1.2	V
Reverse current	$V_R = V_{RRM}$		I_R	-	1	5	μA
	$V_R = V_{RRM}, T_j = 150\text{ }^{\circ}\text{C}$		I_R	-	60	150	μA
Reverse recovery time	$I_F = 0.5\text{ A}, I_R = 1\text{ A}, i_R = 0.25\text{ A}$		t_{rr}	-	-	250	ns

TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

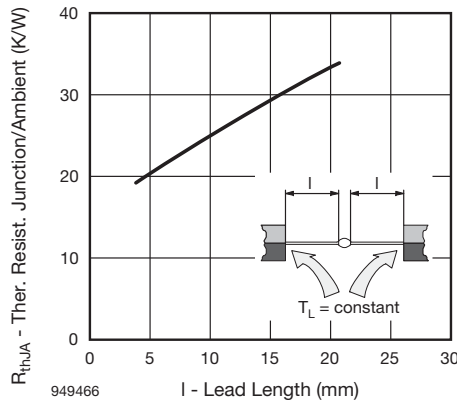


Fig. 1 - Max. Thermal Resistance vs. Lead Length

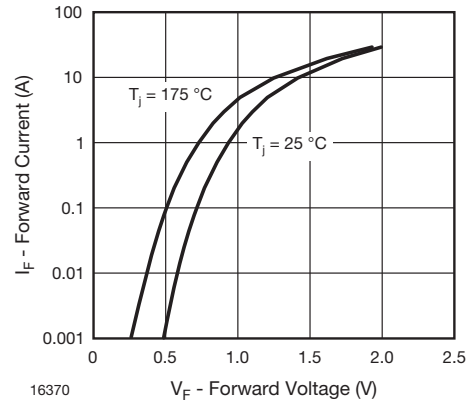


Fig. 3 - Forward Current vs. Forward Voltage

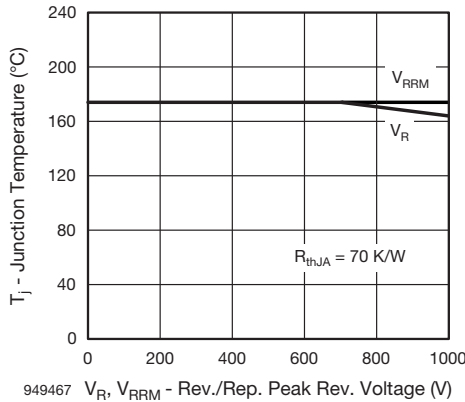


Fig. 2 - Junction Temperature vs. Reverse/Repetitive Peak Reverse Voltage

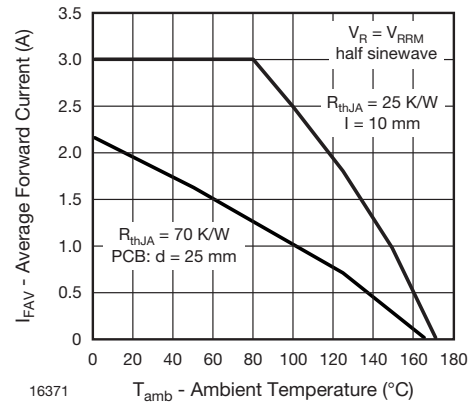


Fig. 4 - Max. Average Forward Current vs. Ambient Temperature

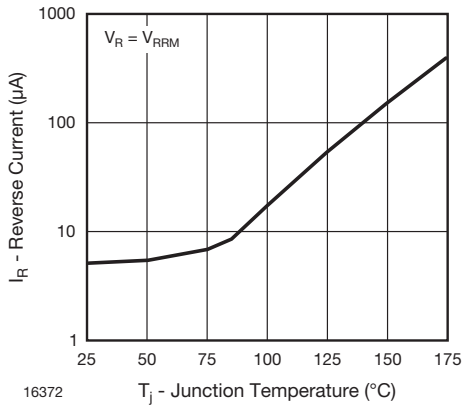


Fig. 5 - Reverse Current vs. Junction Temperature

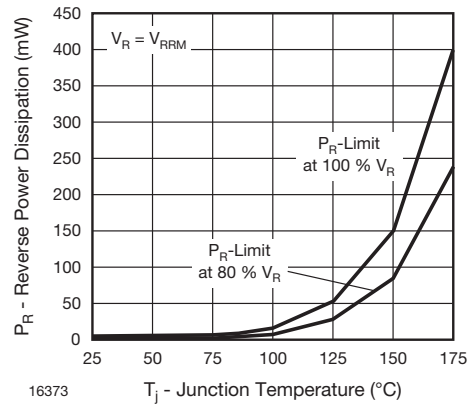


Fig. 6 - Max Reverse Power Dissipation vs. Junction Temperature

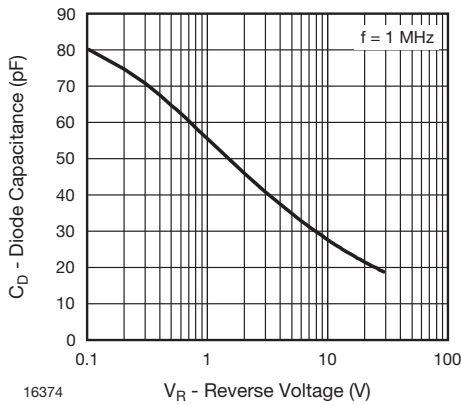
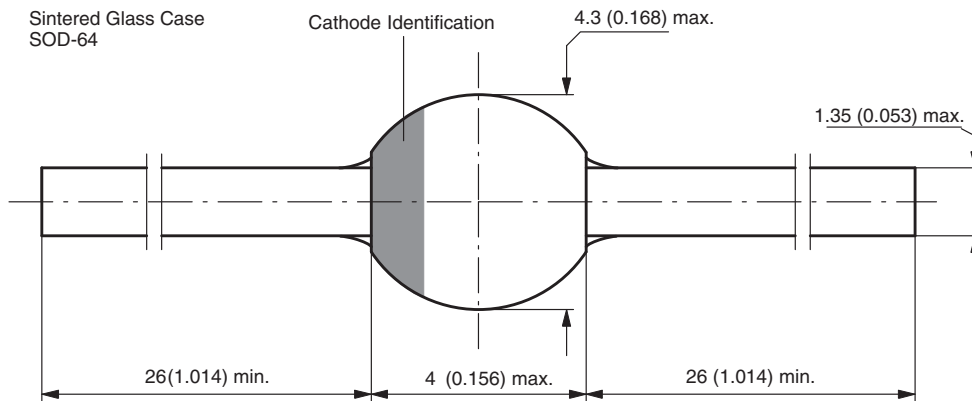


Fig. 7 - Diode Capacitance vs. Reverse Voltage

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



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