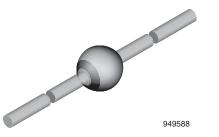
BYT77, BYT78

Vishay Semiconductors

Fast Avalanche Sinterglass Diode



www.vishay.com

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

0	1	
	949588	

click logo to get started

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

APPLICATIONS

· Fast "soft recovery" rectification diode

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 ammopack	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 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	
Reverse voltage = repetitive peak reverse voltage	See electrical characteristics	BYT77	$V_{R} = V_{RRM}$	800	V	
	See electrical characteristics	BYT78	$V_{R} = V_{RRM}$	1000	V	
Peak forward surge current	t _p = 10 ms, half sine wave		I _{FSM}	100	А	
Average forward current	$T_{amb} \le 45 \ ^{\circ}C$		I _{F(AV)}	3	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	

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	

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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	1.2	V
Reverse current	$V_{R} = V_{RRM}$		I _R	-	1	5	μA
	$V_R = V_{RRM}, T_j = 150 \text{ °C}$		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 (Tamb = 25 °C, unless otherwise specified)

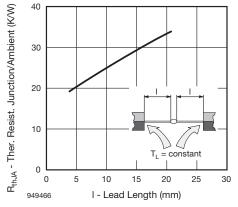


Fig. 1 - Max. Thermal Resistance vs. Lead Length

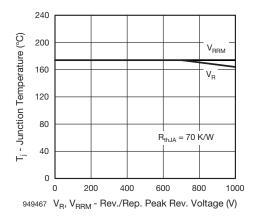


Fig. 2 - Junction Temperature vs. Reverse/Repetitive Peak Reverse Voltage

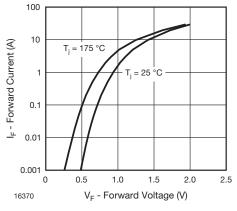


Fig. 3 - Forward Current vs. Forward Voltage

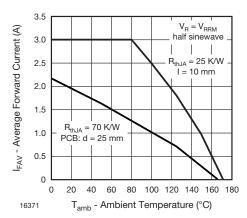


Fig. 4 - Max. Average Forward Current vs. Ambient Temperature



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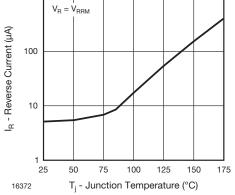


Fig. 5 - Reverse Current vs. Junction Temperature

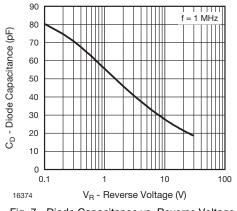
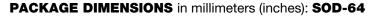
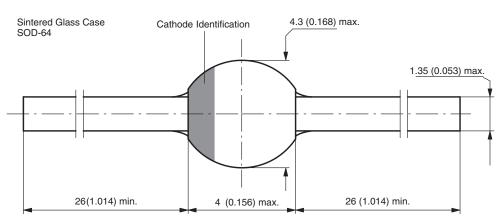


Fig. 7 - Diode Capacitance vs. Reverse Voltage





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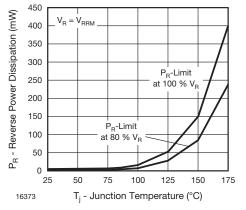


Fig. 6 - Max Reverse Power Dissipation vs. Junction Temperature



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