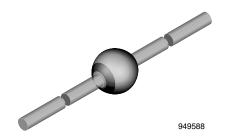


Vishay Semiconductors

Fast Avalanche Sinterglass 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

FEATURES

- Glass passivated junction
- Hermetically sealed package
- Low reverse current
- Soft recovery characteristics
- · Controlled avalanche characteristics
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition





HALOGEN FREE

APPLICATIONS

• Fast "soft recovery" rectification diode

PARTS TABLE					
PART	TYPE DIFFERENTIATION	PACKAGE			
BYT77	V _R = 800 V; I _{FAV} = 3 A	SOD-64			
BYT78	V _R = 1000 V; I _{FAV} = 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	
		BYT78	$V_R = V_{RRM}$	1000	V	
Peak forward surge current	$t_p = 10$ ms, half sine wave		I _{FSM}	100	Α	
Average forward current	T _{amb} ≤ 45 °C		I _{FAV}	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	
	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	1.2	V
Reverse current	$V_R = V_{RRM}$		I _R	-	1	5	μΑ
	$V_R = V_{RRM}$, $T_j = 150 ^{\circ}C$		I _R	-	60	150	μΑ
Reverse recovery time	$I_F = 0.5 \text{ A}, I_R = 1 \text{ A}, i_R = 0.25 \text{ A}$		t _{rr}	-	-	250	ns

Vishay Semiconductors Fast Avalanche Sinterglass Diode



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

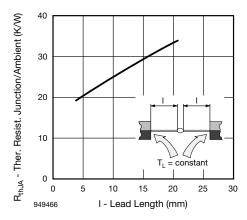


Fig. 1 - Max. Thermal Resistance vs. Lead Length

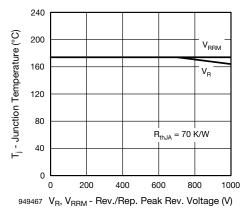


Fig. 2 - Junction Temperature vs. Reverse/Repetitive Peak Reverse Voltage

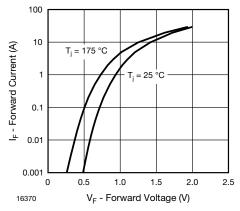


Fig. 3 - Forward Current vs. Forward Voltage

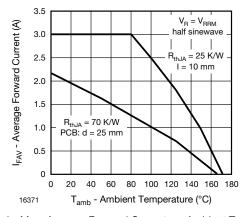


Fig. 4 - Max. Average Forward Current vs. Ambient Temperature

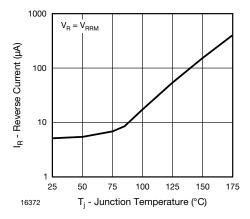


Fig. 5 - Reverse Current vs. Junction Temperature

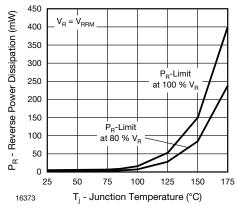


Fig. 6 - Max Reverse Power Dissipation vs. Junction Temperature

Fast Avalanche Sinterglass Diode Vishay Semiconductors

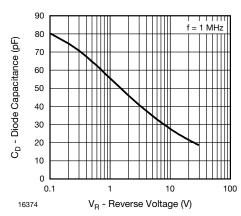
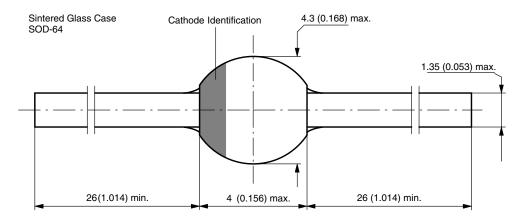


Fig. 7 - Diode Capacitance vs. Reverse Voltage

PACKAGE DIMENSIONS in millimeters (inches): SOD-64



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