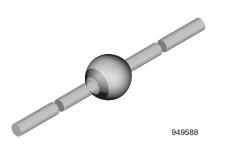


Vishay Semiconductors

Fast Avalanche Sinterglass Diode



DESIGN SUPPORT TOOLS

click logo to get started



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
- Low forward voltage drop
- · High pulse current capability
- Material categorization: for definitions of compliance please see www.vishav.com/doc?99912





HALOGEN FREE

APPLICATIONS

· Fast rectification diode

ORDERING INFORMATION (Example)						
DEVICE NAME	ORDERING CODE	TAPED UNITS	MINIMUM ORDER QUANTITY			
1N5418	1N5418TR	2500 per 10" tape and reel	12 500			
1N5418	1N5418-TAP	2500 per ammopack	12 500			

PARTS TABLE						
PART	TYPE DIFFERENTIATION	PACKAGE				
1N5417	$V_R = 200 \text{ V}; I_{F(AV)} = 3 \text{ A}$	SOD-64				
1N5418	$V_R = 400 \text{ V}; I_{F(AV)} = 3 \text{ A}$	SOD-64				

ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT		
Reverse voltage = repetitive peak reverse	See electrical characteristics	1N5417	$V_R = V_{RRM}$	200	V		
voltage	See electrical characteristics	1N5418	$V_R = V_{RRM}$	400	V		
Peak forward surge current	$t_p = 10$ ms, half sine wave		I _{FSM}	100	Α		
Average forward current	$I = 10$ mm, $T_L = 25$ °C		I _{F(AV)}	3	Α		
Non repetitive reverse avalanche energy	I _{(BR)R} = 1 A		E _R	20	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		
Junction ambient	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	V
	I _F = 9 A		V_{F}	-	-	1.5	V
Reverse current	$V_R = V_{RRM}$		I _R	-	-	1	μΑ
	$V_R = V_{RRM}, T_j = 100 ^{\circ}C$		I _R	-	-	20	μΑ
Reverse recovery time	$I_F = 0.5 \text{ A}, I_R = 1 \text{ A}, i_R = 0.25 \text{ A}$		t _{rr}	-	75	100	ns

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

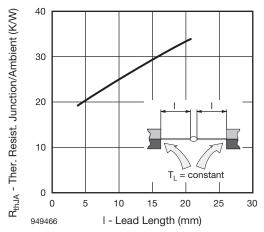


Fig. 1 - Max. Thermal Resistance vs. Lead Length

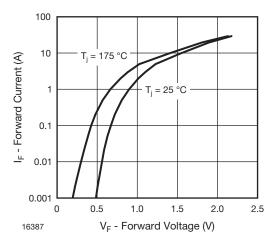


Fig. 2 - Max. Forward Current vs. Forward Voltage

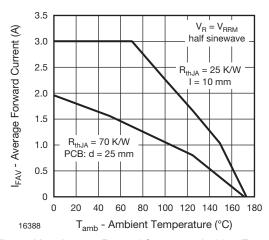


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

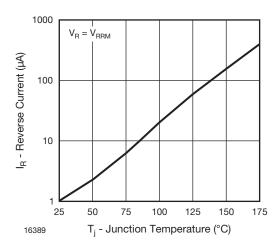
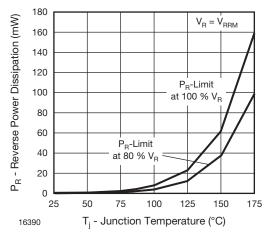


Fig. 4 - Max. Reverse Current vs. Junction Temperature

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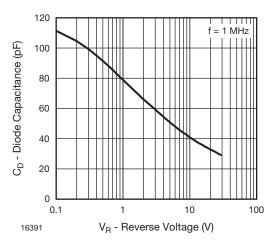


Fig. 6 - Diode Capacitance vs. Reverse Voltage

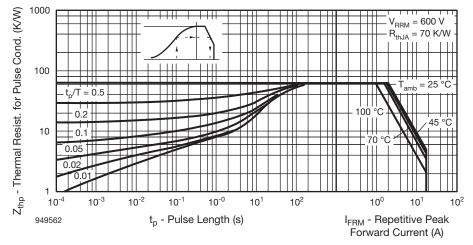
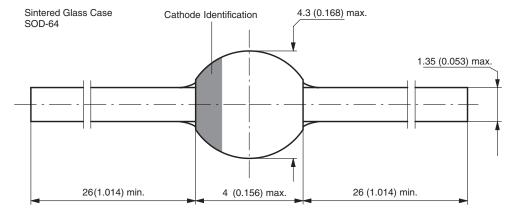


Fig. 7 - Thermal Response

PACKAGE DIMENSIONS in millimeters (inches): SOD-64



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