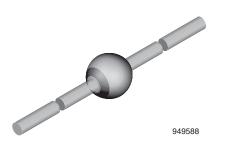
SF5400, SF5401, SF5402, SF5403, SF5404, SF5405, SF5406, SF5407, SF5408

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RoHS

Ultra-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
- · Hermetically sealed axial leaded glass envelope
- Low reverse current
- High reverse voltage
- Material categorization: COMPLIANT For definitions of compliance please see Www.vishay.com/doc?99912

APPLICATIONS

- · Switched mode power supplies
- High-frequency inverter circuits

ORDERING INFORMATION (Example)						
DEVICE NAME	E NAME ORDERING CODE TAPED UNITS MINIMUM ORDER QUANTIT					
SF5408	SF5408-TR	2500 per 10" tape and reel	12 500			
SF5408	SF5408-TAP	2500 per ammopack	12 500			

PARTS TABLE						
PART	TYPE DIFFERENTIATION	PACKAGE				
SF5400	$V_{R} = 50 \text{ V}; \text{ I}_{F(AV)} = 3 \text{ A}$	SOD-64				
SF5401	V _R = 100 V; I _{F(AV)} = 3 A	SOD-64				
SF5402	V _R = 200 V; I _{F(AV)} = 3 A	SOD-64				
SF5403	V _R = 300 V; I _{F(AV)} = 3 A	SOD-64				
SF5404	V _R = 400 V; I _{F(AV)} = 3 A	SOD-64				
SF5405	V _R = 500 V; I _{F(AV)} = 3 A	SOD-64				
SF5406	V _R = 600 V; I _{F(AV)} = 3 A	SOD-64				
SF5407	V _R = 800 V; I _{F(AV)} = 3 A	SOD-64				
SF5408	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	
	See electrical characteristics	SF5400	$V_{R} = V_{RRM}$	50	V	
		SF5401	$V_{R} = V_{RRM}$	100	V	
		SF5402	$V_R = V_{RRM}$	200	V	
		SF5403	$V_R = V_{RRM}$	300	V	
Reverse voltage = repetitive peak reverse voltage		SF5404	$V_{R} = V_{RRM}$	400	V	
		SF5405	$V_R = V_{RRM}$	500	V	
		SF5406	$V_{R} = V_{RRM}$	600	V	
		SF5407	$V_{R} = V_{RRM}$	800	V	
		SF5408	$V_{R} = V_{RRM}$	1000	V	

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ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT	
Peak forward surge current	t _p = 2 ms, half sine wave		1	150	A	
	t _p = 10 ms, half sine wave		IFSM	80		
Average forward current			I _{F(AV)}	3	А	
Junction and storage temperature range			$T_j = T_{stg}$	- 55 to + 175	°C	
Non repetitive reverse avalanche energy	$I_{(BR)R} = 0.4 \text{ A}$		ER	10	mJ	

MAXIMUM THERMAL RESISTANCE (T _{amb} = 25 °C, unless otherwise specified)					
PARAMETER	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	SYMBO L	MIN.	TYP.	MAX.	UNIT
		SF5400	V _F	-	-	1.1	V
		SF5401	V _F	-	-	1.1	V
		SF5402	V _F	-	-	1.1	V
		SF5403	V _F	-	-	1.1	V
Forward voltage	I _F = 3 A	SF5404	V _F	-	-	1.1	V
		SF5405	V _F	-	-	1.7	V
		SF5406	V _F	-	-	1.7	V
		SF5407	V _F	-	-	1.7	V
		SF5408	V _F	-	-	1.7	V
Reverse current	$V_{R} = V_{RRM}$		I _R	-	-	5	μA
Reverse current	$V_R = V_{RRM}, T_j = 125 \ ^\circ C$		I _R	-	-	50	μA
	I _R = 100 μA	SF5400	V _{(BR)R}	60	-	-	V
		SF5401	V _{(BR)R}	110	-	-	V
		SF5402	V _{(BR)R}	220	-	-	V
		SF5403	V _{(BR)R}	330	-	-	V
Reverse breakdown voltage		SF5404	V _{(BR)R}	440	-	-	V
		SF5405	V _{(BR)R}	550	-	-	V
		SF5406	V _{(BR)R}	660	-	-	V
		SF5407	V _{(BR)R}	880	-	-	V
		SF5408	V _{(BR)R}	1100	-	-	V
		SF5400	t _{rr}	-	-	50	ns
		SF5401	t _{rr}	-	-	50	ns
		SF5402	t _{rr}	-	-	50	ns
		SF5403	t _{rr}	-	-	50	ns
Reverse recovery time	$I_F = 0.5 \text{ A}, I_R = 1 \text{ A}, i_R = 0.25 \text{ A}$	SF5404	t _{rr}	-	-	50	ns
		SF5405	t _{rr}	-	-	75	ns
		SF5406	t _{rr}	-	-	75	ns
		SF5407	t _{rr}	-	-	75	ns
		SF5408	t _{rr}	-	-	75	ns

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

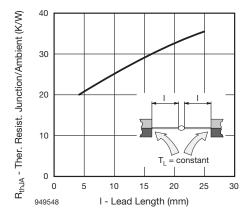


Fig. 1 - Max. Thermal Resistance vs. Lead Length

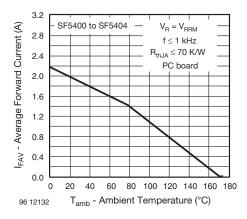


Fig. 2 - Max. Average Forward Current vs. Ambient Temperature

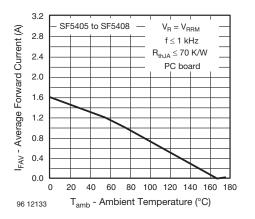


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

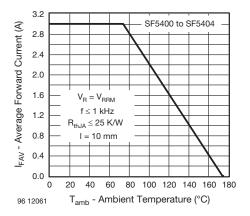


Fig. 4 - Max. Average Forward Current vs. Ambient Temperature

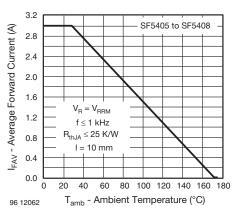


Fig. 5 - Max. Average Forward Current vs. Ambient Temperature

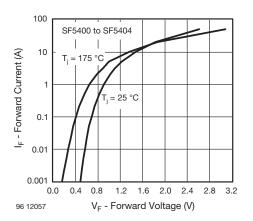


Fig. 6 - Max. Forward Current vs. Forward Voltage

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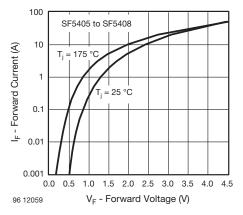


Fig. 7 - Max. Forward Current vs. Forward Voltage

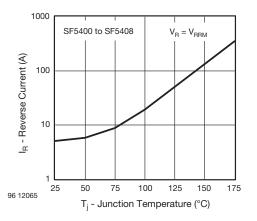


Fig. 8 - Max. Reverse Current vs. Junction Temperature

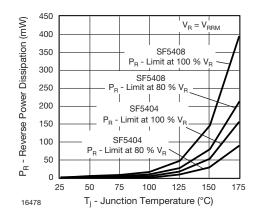


Fig. 9 - Max. Reverse Power Dissipation vs. Junction Temperature

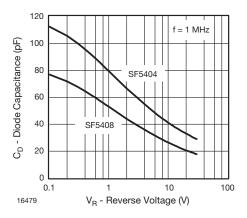
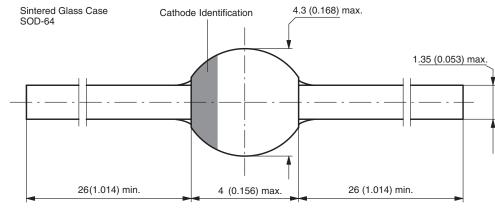


Fig. 10 - Diode Capacitance vs. Reverse Voltage



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PACKAGE DIMENSIONS in millimeters (inches): SOD-64



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