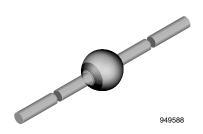


Vishay Semiconductors

Standard 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
- Controlled avalanche characteristics
- Low reverse current
- High surge current loading
- Material categorization:
 For definitions of compliance please see www.vishay.com/doc?99912



(e2)

COMPLIANT HALOGEN

APPLICATIONS

• Rectification diode, general purpose

ORDERING INFORMATION (Example)						
DEVICE NAME	ORDERING CODE	TAPED UNITS	MINIMUM ORDER QUANTITY			
1N5627	1N5627-TR	2500 per 10" tape and reel	12 500			
1N5627	1N5627-TAP	2500 per ammonack	12 500			

PARTS TABLE					
PART	TYPE DIFFERENTIATION	PACKAGE			
1N5624	V _R = 200 V; I _{F(AV)} = 3 A	SOD-64			
1N5625	V _R = 400 V; I _{F(AV)} = 3 A	SOD-64			
1N5626	V _R = 600 V; I _{F(AV)} = 3 A	SOD-64			
1N5627	V _R = 800 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	1N5624	$V_R = V_{RRM}$	200	V		
Reverse voltage = repetitive peak reverse		1N5625	$V_R = V_{RRM}$	400	V		
voltage		1N5626	$V_R = V_{RRM}$	600	V		
		1N5627	$V_R = V_{RRM}$	800	V		
Peak forward surge current	$t_p = 10 \text{ ms}, \text{ half sinewave}$		I _{FSM}	100	Α		
Repetitive peak forward current			I _{FRM}	18	Α		
Average forward current			I _{F(AV)}	3	Α		
Pulse avalanche peak power	$t_p = 20 \mu s$, half sine wave, $T_j = 175 ^{\circ} C$		P _R	1000	W		
Pulse energy in avalanche mode, non repetitive (inductive load switch off)	I _{(BR)R} = 1 A, T _j = 175 °C		E _R	20	mJ		
i ² *t-rating			i ² *t	40	A ² *s		
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	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	V
Reverse current	$V_R = V_{RRM}$		I _R	1	0.1	1	μΑ
neverse current	$V_R = V_{RRM}$, $T_j = 100 ^{\circ}C$		I _R	ı	5	10	μΑ
Breakdown voltage	$I_R = 100 \mu A, t_p/T = 0.01,$ $t_p = 0.3 \text{ ms}$		V _(BR)	-	-	1600	V
Diode capacitance	V _R = 4 V, f = 1 MHz		C_D	-	40	60	pF
Reverse recovery time	$I_F = 0.5 \text{ A}, I_R = 1 \text{ A}, i_R = 0.25 \text{ A}$		t _{rr}	-	3.5	5	μs
neverse recovery time	$I_F = 1 \text{ A}, \text{ dI/d}_t = 5 \text{ A/}\mu\text{s}, V_R = 50 \text{ V}$		t _{rr}	ı	4.5	7.5	μs
Reverse recovery charge	$I_F = 1 A$, $dI/d_t = 5 A/\mu s$		Q_{rr}	-	8	12	μС

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

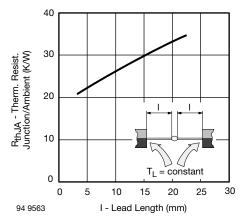


Fig. 1 - Max. Thermal Resistance vs. Lead Length

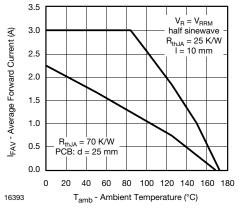


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

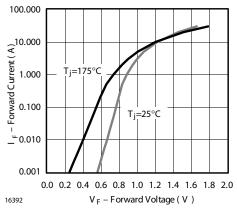


Fig. 2 - Forward Current vs. Forward Voltage

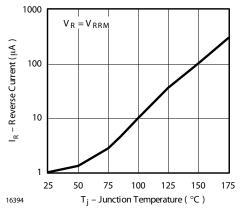


Fig. 4 - Reverse Current vs. Junction Temperature

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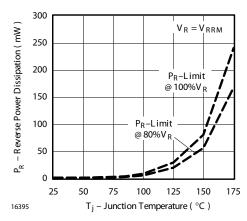


Fig. 5 - Max. Reverse Power Dissipation vs. Junction Temperature

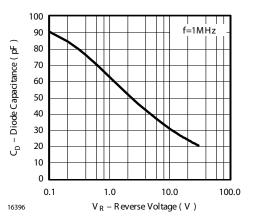
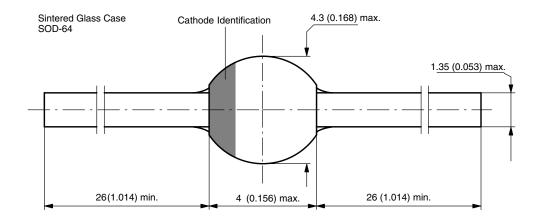


Fig. 6 - Diode Capacitance vs. Reverse Voltage

PACKAGE DIMENSIONS in millimeters (inches): SOD-64



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