

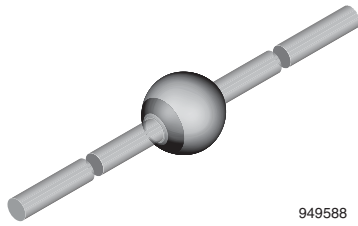


**THE DATASHEET OF  
1N5625GP-E3/54**





## Standard Avalanche Sinterglass Diode



949588

### DESIGN SUPPORT TOOLS

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### 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](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**

### APPLICATIONS

- Rectification diode, general purpose

### 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

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 ammpack	12 500

PARTS TABLE		
PART	TYPE DIFFERENTIATION	PACKAGE
1N5624	$V_R = 200\text{ V}; I_{F(AV)} = 3\text{ A}$	SOD-64
1N5625	$V_R = 400\text{ V}; I_{F(AV)} = 3\text{ A}$	SOD-64
1N5626	$V_R = 600\text{ V}; I_{F(AV)} = 3\text{ A}$	SOD-64
1N5627	$V_R = 800\text{ V}; I_{F(AV)} = 3\text{ A}$	SOD-64

ABSOLUTE MAXIMUM RATINGS ( $T_{amb} = 25\text{ }^\circ\text{C}$ , unless otherwise specified)					
PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT
Reverse voltage = repetitive peak reverse voltage	See electrical characteristics	1N5624	$V_R = V_{RRM}$	200	V
		1N5625	$V_R = V_{RRM}$	400	V
		1N5626	$V_R = V_{RRM}$	600	V
		1N5627	$V_R = V_{RRM}$	800	V
Peak forward surge current	$t_p = 10\text{ ms}$ , half sine wave		$I_{FSM}$	100	A
Repetitive peak forward current			$I_{FRM}$	18	A
Average forward current			$I_{F(AV)}$	3	A
Pulse avalanche peak power	$t_p = 20\text{ }\mu\text{s}$ , half sine wave, $T_j = 175\text{ }^\circ\text{C}$		$P_R$	1000	W
Pulse energy in avalanche mode, non repetitive (inductive load switch off)	$I_{(BR)R} = 1\text{ A}$ , $T_j = 175\text{ }^\circ\text{C}$		$E_R$	20	mJ
$i^2t$ -rating			$i^2t$	40	$\text{A}^2\cdot\text{s}$
Junction and storage temperature range			$T_j = T_{stg}$	-55 to +175	$^\circ\text{C}$

MAXIMUM THERMAL RESISTANCE ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Junction ambient	$l = 10\text{ mm}$ , $T_L = \text{constant}$	$R_{thJA}$	25	K/W
	On PC board with spacing 25 mm	$R_{thJA}$	70	K/W

ELECTRICAL CHARACTERISTICS ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 3\text{ A}$		$V_F$	-	-	1	V
Reverse current	$V_R = V_{RRM}$		$I_R$	-	0.1	1	$\mu\text{A}$
	$V_R = V_{RRM}$ , $T_j = 100\text{ }^{\circ}\text{C}$		$I_R$	-	5	10	$\mu\text{A}$
Breakdown voltage	$I_R = 100\text{ }\mu\text{A}$ , $t_p/T = 0.01$ , $t_p = 0.3\text{ ms}$		$V_{(BR)}$	-	-	1600	V
Diode capacitance	$V_R = 4\text{ V}$ , $f = 1\text{ MHz}$		$C_D$	-	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	$\mu\text{s}$
	$I_F = 1\text{ A}$ , $d_I/d_t = 5\text{ A}/\mu\text{s}$ , $V_R = 50\text{ V}$		$t_{rr}$	-	4.5	7.5	$\mu\text{s}$
Reverse recovery charge	$I_F = 1\text{ A}$ , $d_I/d_t = 5\text{ A}/\mu\text{s}$		$Q_{rr}$	-	8	12	$\mu\text{C}$

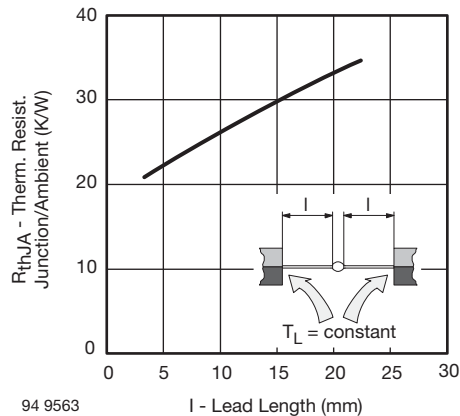
**TYPICAL CHARACTERISTICS** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)


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

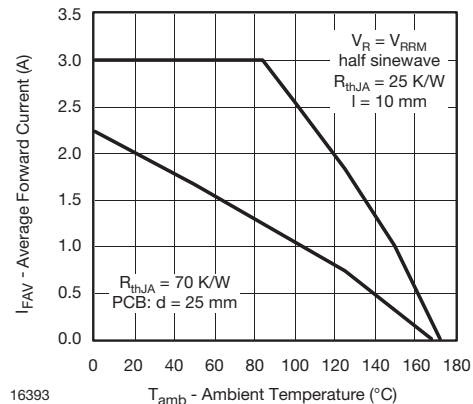


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

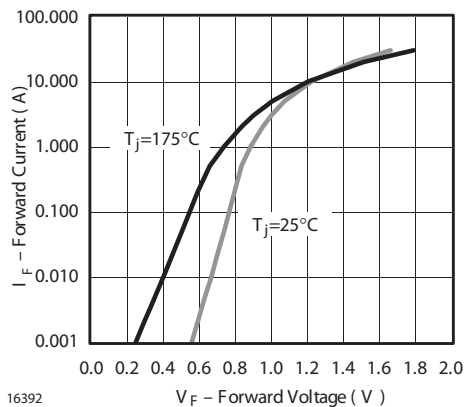


Fig. 2 - Forward Current vs. Forward Voltage

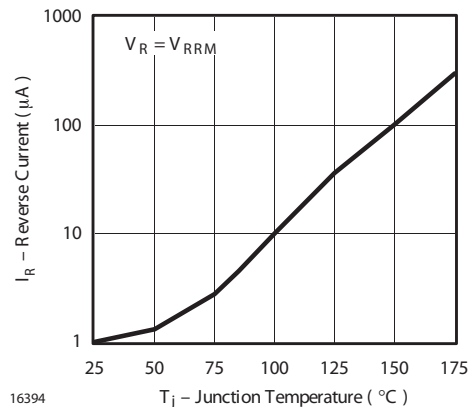
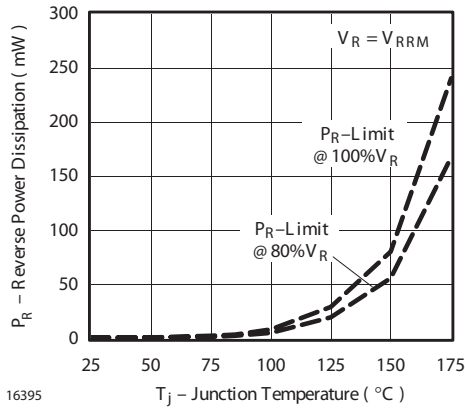
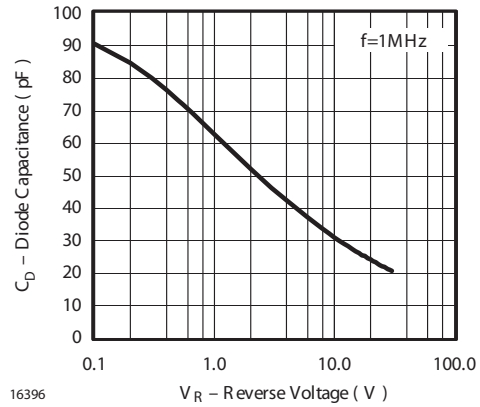


Fig. 4 - Reverse Current vs. Junction Temperature



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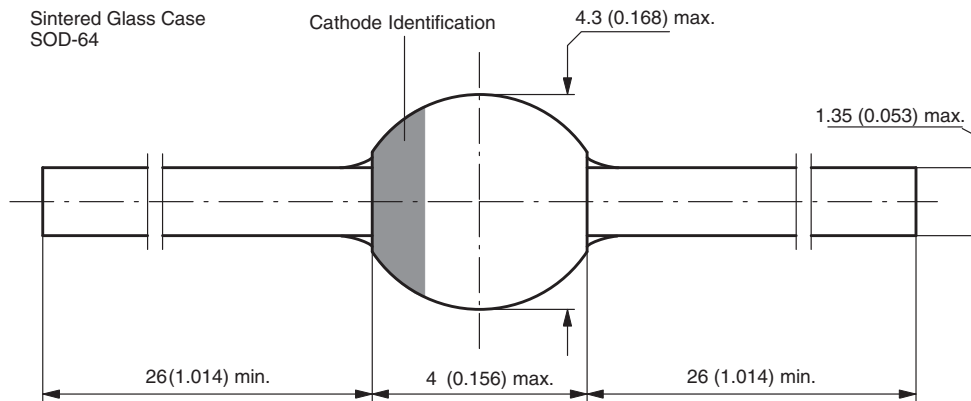
Fig. 5 - Max. Reverse Power Dissipation vs. Junction Temperature



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Fig. 6 - Diode Capacitance vs. Reverse Voltage

### PACKAGE DIMENSIONS in millimeters (inches): SOD-64



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 94 9587



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