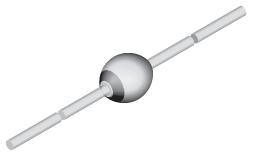
1N5059, 1N5060, 1N5061, 1N5062

Vishay Semiconductors

Standard Avalanche Sinterglass Diode



www.vishay.com

949539

click logo to get started

DESIGN SUPPORT TOOLS



MECHANICAL DATA

Case: SOD-57

Terminals: plated axial leads, solderable per MIL-STD-750, method 2026

Polarity: color band denotes cathode end

Mounting position: any

Weight: approx. 369 mg

ORDERING INFORMATION (Example)					
DEVICE NAME	ORDERING CODE	TAPED UNITS	MINIMUM ORDER QUANTITY		
1N5062	1N5062TR	5000 per 10" tape and reel	25 000		
1N5062	1N5062TAP	5000 per ammopack	25 000		

PARTS TABLE					
PART	TYPE DIFFERENTIATION	PACKAGE			
1N5059	$V_{R} = 200 \text{ V}; \text{ I}_{F(AV)} = 2 \text{ A}$	SOD-57			
1N5060	$V_{R} = 400 \text{ V}; \text{ I}_{F(AV)} = 2 \text{ A}$	SOD-57			
1N5061	$V_{R} = 600 \text{ V}; \text{ I}_{F(AV)} = 2 \text{ A}$	SOD-57			
1N5062	V _R = 800 V; I _{F(AV)} = 2 A	SOD-57			

ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT	
	e See electrical characteristics	1N5059	$V_R = V_{RRM}$	200	V	
Reverse voltage = repetitive peak reverse voltage		1N5060	$V_{R} = V_{RRM}$	400	V	
neverse voltage = repetitive peak reverse voltage		1N5061	$V_R = V_{RRM}$	600	V	
		1N5062	$V_R = V_{RRM}$	800	V	
Peak forward surge current	t _p = 10 ms, half sine wave		I _{FSM}	50	А	
Average forward current	$T_{thJA} = 45$ K/W, $T_{amb} = 50$ °C		I _{F(AV)}	2	А	
Average forward current	T_{thJA} = 100 K/W, T_{amb} = 75 °C		I _{F(AV)}	0.8	А	
Pulse energy in avalanche mode, non repetitive (inductive load switch off)	$I_{(BR)R} = 1$ A, inductive load		E _R	20	mJ	
Junction and storage temperature range			$T_j = T_{stg}$	-55 to +175	°C	

Rev. 1.7, 20-Feb-18

1

Document Number: 86000

For technical questions within your region: <u>DiodesAmericas@vishay.com</u>, <u>DiodesAsia@vishay.com</u>, <u>DiodesEurope@vishay.com</u> THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT <u>www.vishay.com/doc?91000</u>

FEATURES

- · Glass passivated junction
- Hermetically sealed axial-leaded glass envelope
- · Controlled avalanche characteristics
- Low reverse current
- High surge current loading
- Material categorization:
- for definitions of compliance please see <u>www.vishav.com/doc?99912</u>

APPLICATIONS

• Rectification diode, general purpose





Vishay Semiconductors

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}	45	K/W	
	On PC board with spacing 25 mm	R _{thJA}	100	K/W	

ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX	UNIT
Forward voltage	I _F = 1 A		V _F	-	-	1	V
Torward voltage	I _F = 2.5 A		V _F	-	-	1.15	V
Reverse current	$V_{R} = V_{RRM}$		I _R	-	-	1	μA
	$V_R = V_{RRM}, T_j = 100 \ ^\circ C$		I _R	-	-	10	μA
	V _R = V _{RRM} , T _j = 150 °C		I _R	-	-	100	μA
	I _R = 100 μA	1N5059	V _{(BR)R}	225	-	1600	V
Breakdown voltage		1N5060	V _{(BR)R}	450	-	1600	V
breakdown voltage		1N5061	V _{(BR)R}	650	-	1600	V
		1N5062	V _{(BR)R}	900	-	1600	V
Diode capacitance	$V_{R} = 0 V, f = 1 MHz$		CD	-	40	-	pF
Reverse recovery time	$I_F = 0.5 \text{ A}, I_R = 1 \text{ A}, I_R = 0.25 \text{ A}$		t _{rr}	-	-	4	μs

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

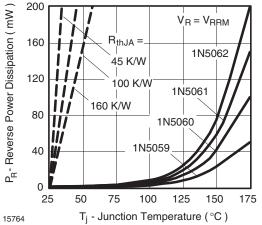
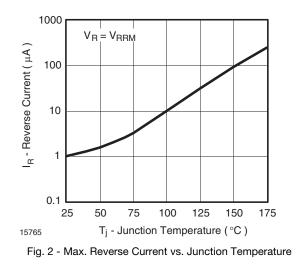


Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature



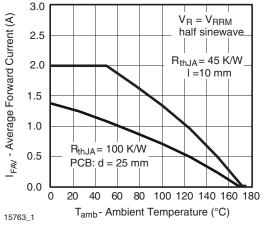
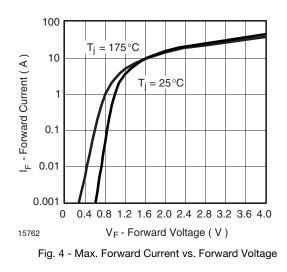


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature



Rev. 1.7, 20-Feb-18

2

Document Number: 86000

For technical questions within your region: <u>DiodesAmericas@vishay.com</u>, <u>DiodesAsia@vishay.com</u>, <u>DiodesEurope@vishay.com</u> THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT <u>www.vishay.com/doc?91000</u>

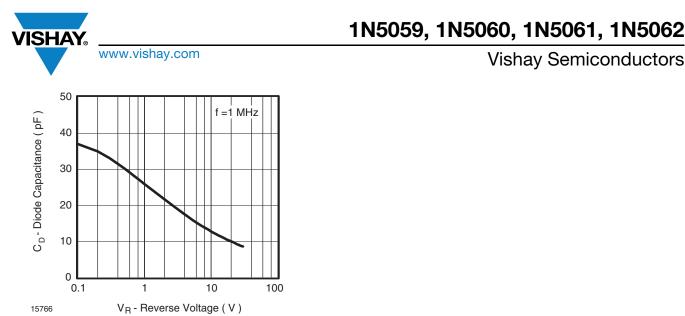
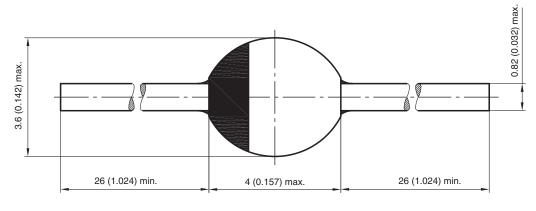


Fig. 5 - Diode Capacitance vs. Reverse Voltage

PACKAGE DIMENSIONS in millimeters (inches): SOD-57



20543 Rev. 3 - Date: 09.February 2005 Document no.:6.563-5006.3-4



Vishay

Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Hyperlinks included in this datasheet may direct users to third-party websites. These links are provided as a convenience and for informational purposes only. Inclusion of these hyperlinks does not constitute an endorsement or an approval by Vishay of any of the products, services or opinions of the corporation, organization or individual associated with the third-party website. Vishay disclaims any and all liability and bears no responsibility for the accuracy, legality or content of the third-party website or for that of subsequent links.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

© 2024 VISHAY INTERTECHNOLOGY, INC. ALL RIGHTS RESERVED

Revision: 01-Jan-2024