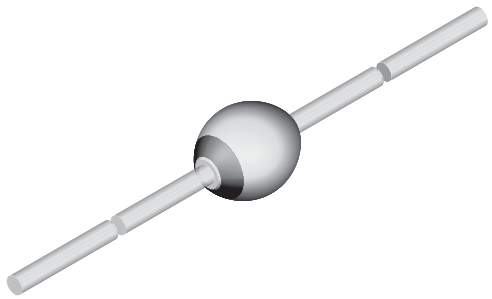
Standard Avalanche Sinterglass Diode



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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 www.vishay.com/doc?99912

Pb
e2
RoHS COMPLIANT
HALOGEN FREE

DESIGN SUPPORT TOOLS

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3D Models Available

APPLICATIONS

- Rectification diode, general purpose

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 V; $I_{F(AV)}$ = 2 A	SOD-57
1N5060	V_R = 400 V; $I_{F(AV)}$ = 2 A	SOD-57
1N5061	V_R = 600 V; $I_{F(AV)}$ = 2 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
Reverse voltage = repetitive peak reverse voltage	See electrical characteristics	1N5059	$V_R = V_{RRM}$	200	V
		1N5060	$V_R = V_{RRM}$	400	V
		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	A
Average forward current	T_{thJA} = 45 K/W, T_{amb} = 50 °C		$I_{F(AV)}$	2	A
	T_{thJA} = 100 K/W, T_{amb} = 75 °C		$I_{F(AV)}$	0.8	A
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

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MAXIMUM THERMAL RESISTANCE (T_{amb} = 25 °C, unless otherwise specified)				
PARAMETER	**TEST CONDITION**	**SYMBOL**	**VALUE**	**UNIT**
Junction ambient	Lead length l = 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
	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 °C		I_R	-	-	10	µA
	$V_R = V_{RRM}$, T_j = 150 °C		I_R	-	-	100	µA
Breakdown voltage	I_R = 100 µA	1N5059	$V_{(BR)R}$	225	-	1600	V
		1N5060	$V_{(BR)R}$	450	-	1600	V
		1N5061	$V_{(BR)R}$	650	-	1600	V
		1N5062	$V_{(BR)R}$	900	-	1600	V
Diode capacitance	V_R = 0 V, f = 1 MHz		C_D	-	40	-	pF
Reverse recovery time	I_F = 0.5 A, I_R = 1 A, i_R = 0.25 A		t_{rr}	-	-	4	µs

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

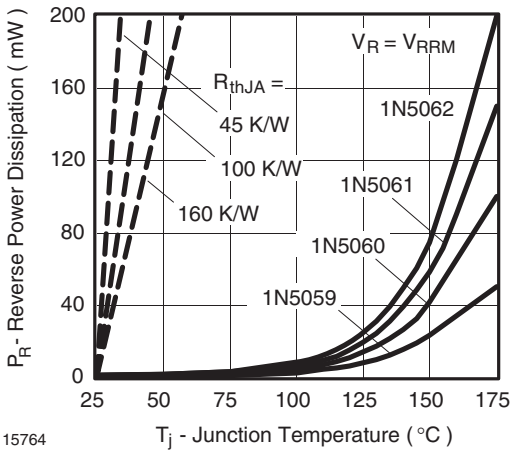

Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature

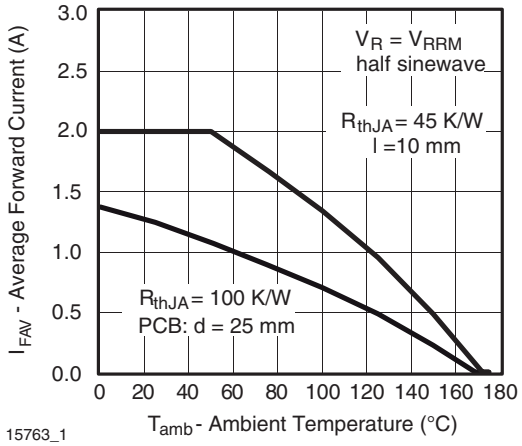

Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

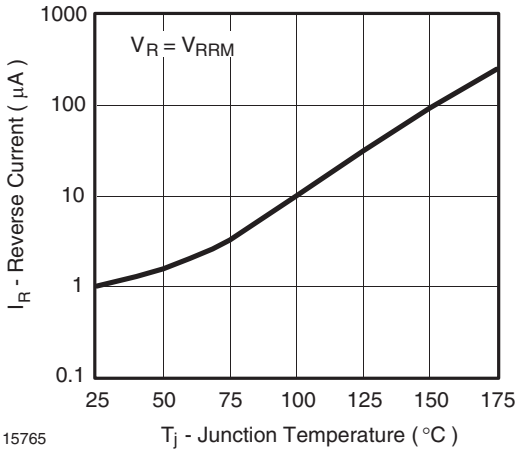

Fig. 2 - Max. Reverse Current vs. Junction Temperature

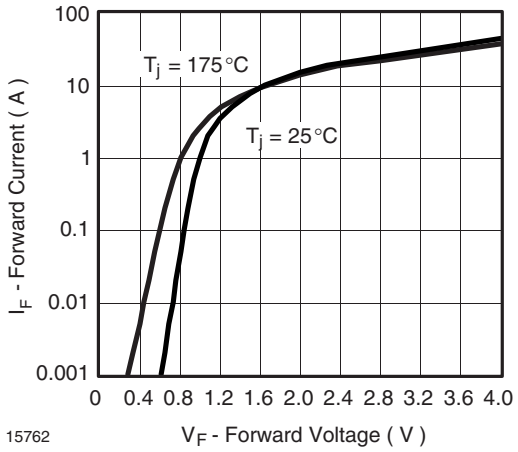

Fig. 4 - Max. Forward Current vs. Forward Voltage

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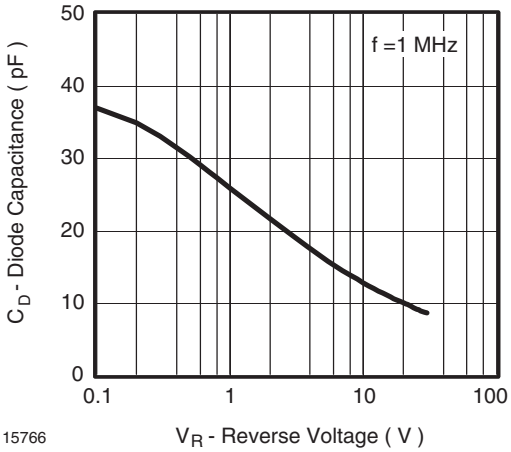
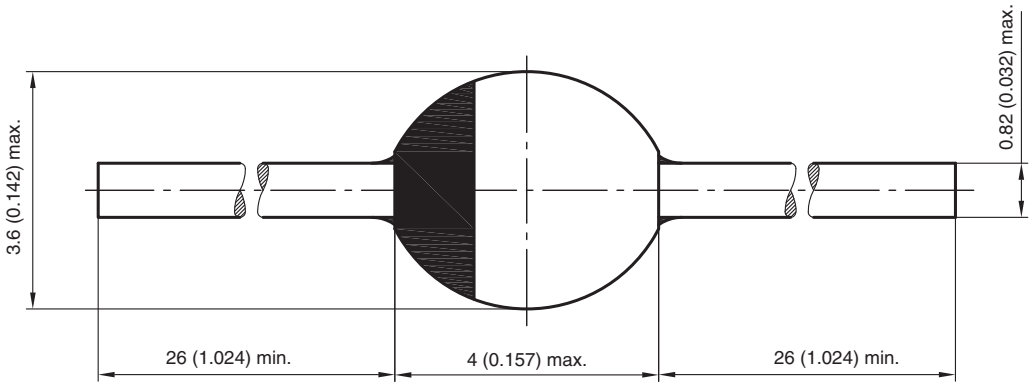


Fig. 5 - Diode Capacitance vs. Reverse Voltage

PACKAGE DIMENSIONS in millimeters (inches): **SOD-57**



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

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