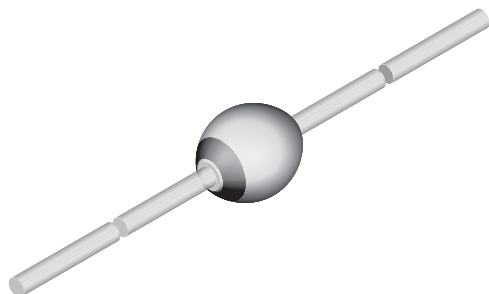


Standard Avalanche Sinterglass Diode



949539

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



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DESIGN SUPPORT TOOLS

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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 ammpack	25 000

PARTS TABLE

PART	TYPE DIFFERENTIATION	PACKAGE
1N5059	$V_R = 200\text{ V}$; $I_{F(AV)} = 2\text{ A}$	SOD-57
1N5060	$V_R = 400\text{ V}$; $I_{F(AV)} = 2\text{ A}$	SOD-57
1N5061	$V_R = 600\text{ V}$; $I_{F(AV)} = 2\text{ A}$	SOD-57
1N5062	$V_R = 800\text{ V}$; $I_{F(AV)} = 2\text{ A}$	SOD-57

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	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	$t_p = 10\text{ ms}$, half sine wave		I_{FSM}	50	A
Average forward current	$T_{thJA} = 45\text{ K/W}$, $T_{amb} = 50\text{ }^{\circ}\text{C}$		$I_{F(AV)}$	2	A
	$T_{thJA} = 100\text{ K/W}$, $T_{amb} = 75\text{ }^{\circ}\text{C}$		$I_{F(AV)}$	0.8	A
Pulse energy in avalanche mode, non repetitive (inductive load switch off)	$I_{(BR)R} = 1\text{ A}$, inductive load		E_R	20	mJ
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	Lead length $l = 10\text{ mm}$, $T_L = \text{constant}$	R_{thJA}	45	K/W
	On PC board with spacing 25 mm	R_{thJA}	100	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	$I_F = 1\text{ A}$		V_F	-	-	1	V
	$I_F = 2.5\text{ A}$		V_F	-	-	1.15	V
Reverse current	$V_R = V_{RRM}$		I_R	-	-	1	μA
	$V_R = V_{RRM}$, $T_j = 100\text{ }^{\circ}\text{C}$		I_R	-	-	10	μA
	$V_R = V_{RRM}$, $T_j = 150\text{ }^{\circ}\text{C}$		I_R	-	-	100	μA
Breakdown voltage	$I_R = 100\text{ }\mu\text{A}$	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	$V_R = 0\text{ V}$, $f = 1\text{ MHz}$		C_D	-	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

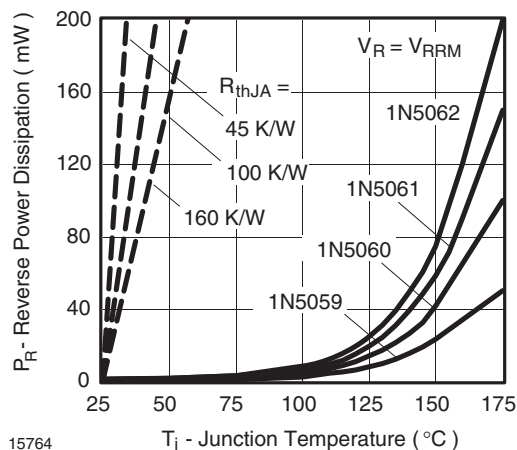
TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

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

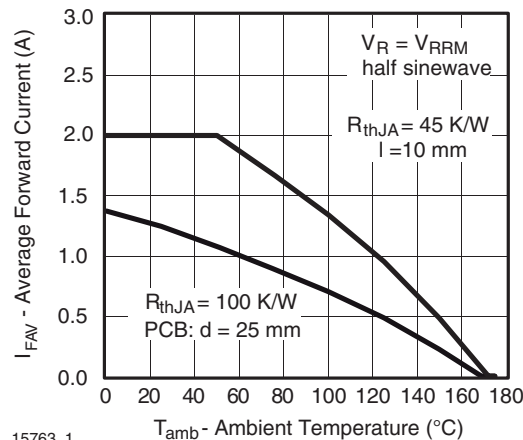


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

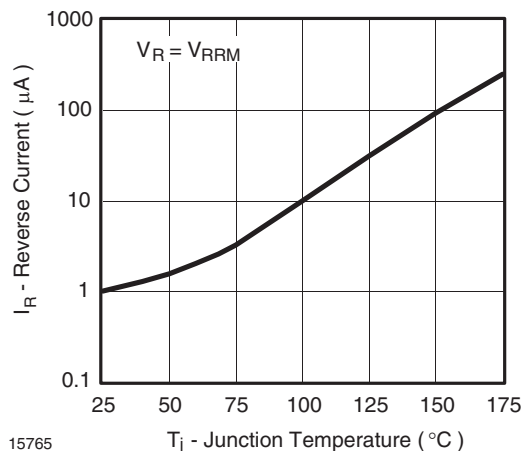


Fig. 2 - Max. Reverse Current vs. Junction Temperature

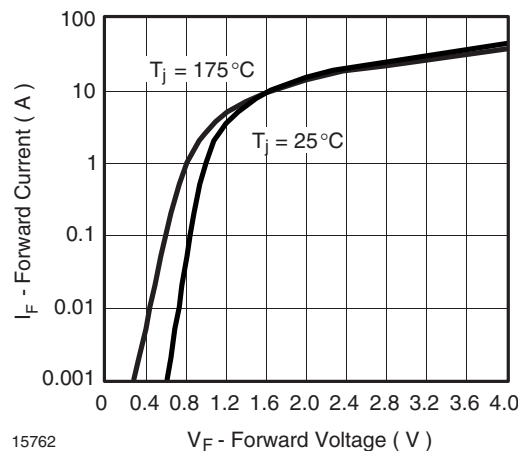


Fig. 4 - Max. Forward Current vs. Forward Voltage

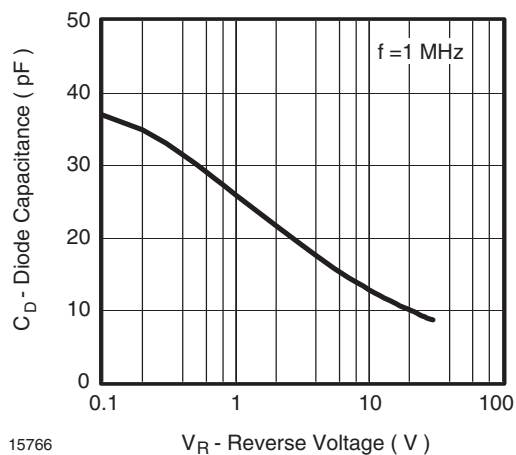
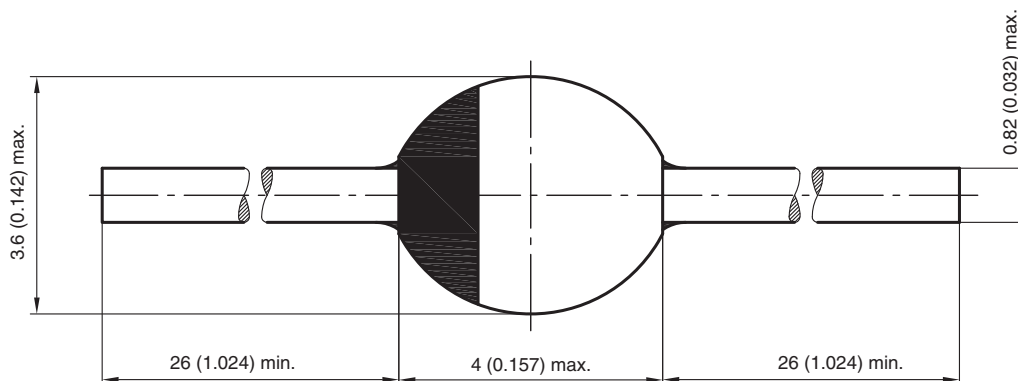


Fig. 5 - Diode Capacitance vs. Reverse Voltage

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



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