



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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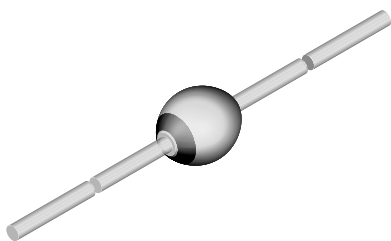
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Standard Avalanche Sinterglass Diode



949539

FEATURES

- Controlled avalanche characteristics
- Glass passivated junction
- Hermetically sealed package
- Low reverse current
- High surge current loading
- AEC-Q101 qualified
- Material categorization:
for definitions of compliance please see
www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE

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

APPLICATIONS

- Rectification, general purpose

ORDERING INFORMATION (Example)

DEVICE NAME	ORDERING CODE	TAPED UNITS	MINIMUM ORDER QUANTITY
BYW56	BYW56-TR	5000 per 10" tape and reel	25 000
BYW56	BYW56-TAP	5000 per ammopack	25 000

PARTS TABLE

PART	TYPE DIFFERENTIATION	PACKAGE
BYW52	$V_R = 200\text{ V}$; $I_{F(AV)} = 2\text{ A}$	SOD-57
BYW53	$V_R = 400\text{ V}$; $I_{F(AV)} = 2\text{ A}$	SOD-57
BYW54	$V_R = 600\text{ V}$; $I_{F(AV)} = 2\text{ A}$	SOD-57
BYW55	$V_R = 800\text{ V}$; $I_{F(AV)} = 2\text{ A}$	SOD-57
BYW56	$V_R = 1000\text{ V}$; $I_{F(AV)} = 2\text{ A}$	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	BYW52	$V_R = V_{RRM}$	200	V
		BYW53	$V_R = V_{RRM}$	400	V
		BYW54	$V_R = V_{RRM}$	600	V
		BYW55	$V_R = V_{RRM}$	800	V
		BYW56	$V_R = V_{RRM}$	1000	V
Peak forward surge current	$t_p = 10\text{ ms}$, half sine wave		I_{FSM}	50	A
Repetitive peak forward current			I_{FRM}	12	A
Average forward current	$\phi = 180^{\circ}$		$I_{F(AV)}$	2	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	8	A ² 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	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	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 1\text{ A}$	V_F	-	0.9	1	V
Reverse current	$V_R = V_{RRM}$	I_R	-	0.1	1	μA
	$V_R = V_{RRM}$, $T_J = 100\text{ }^{\circ}\text{C}$	I_R	-	5	10	μA
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	-	18	-	pF
Reverse recovery time	$I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $i_R = 0.25\text{ A}$	t_{rr}	-	-	4000	ns
	$I_F = 1\text{ A}$, $dI/dt = 5\text{ A}/\mu\text{s}$, $V_R = 50\text{ V}$	t_{rr}	-	-	4000	ns
Reverse recovery charge	$I_F = 1\text{ A}$, $dI/dt = 5\text{ A}/\mu\text{s}$	Q_{rr}	-	-	200	nC

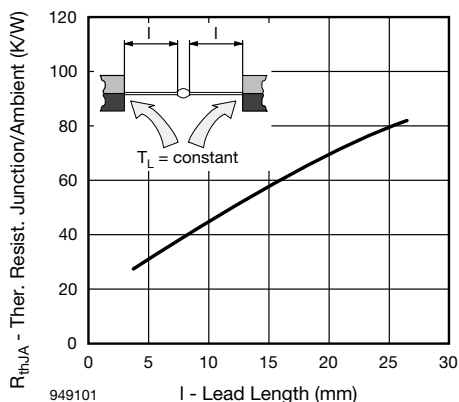
TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)


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

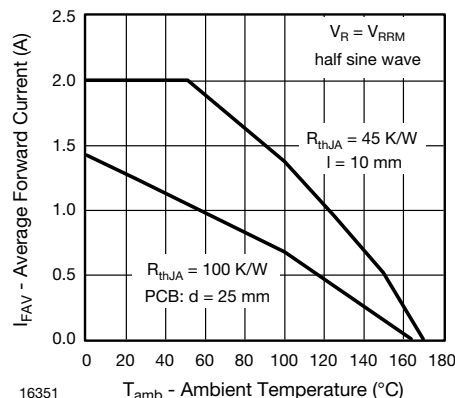


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

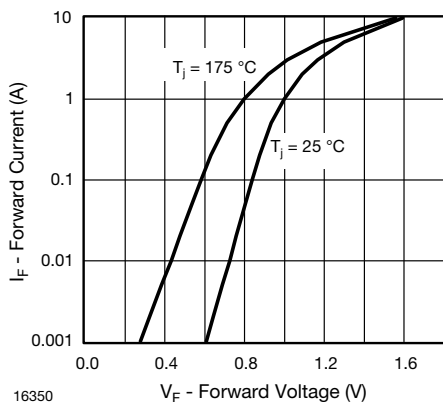


Fig. 2 - Forward Current vs. Forward Voltage

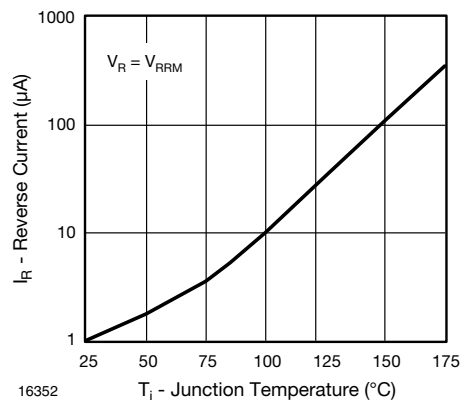


Fig. 4 - Reverse Current vs. Junction Temperature

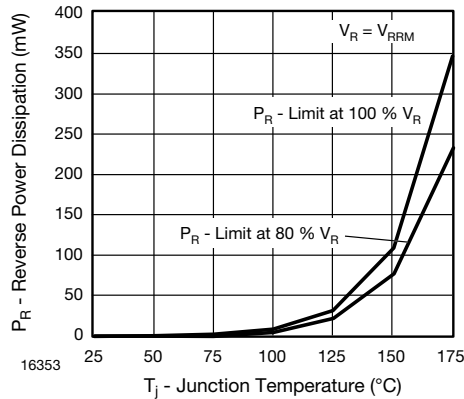


Fig. 5 - Max. Reverse Power Dissipation vs. Junction Temperature

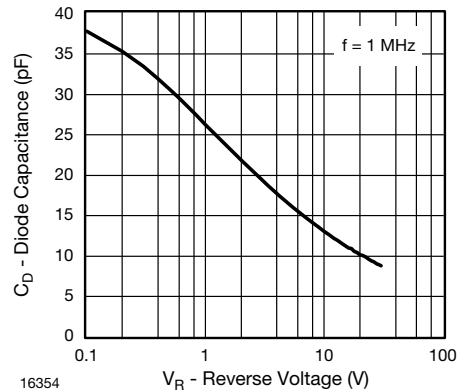


Fig. 6 - Diode Capacitance vs. Reverse Voltage

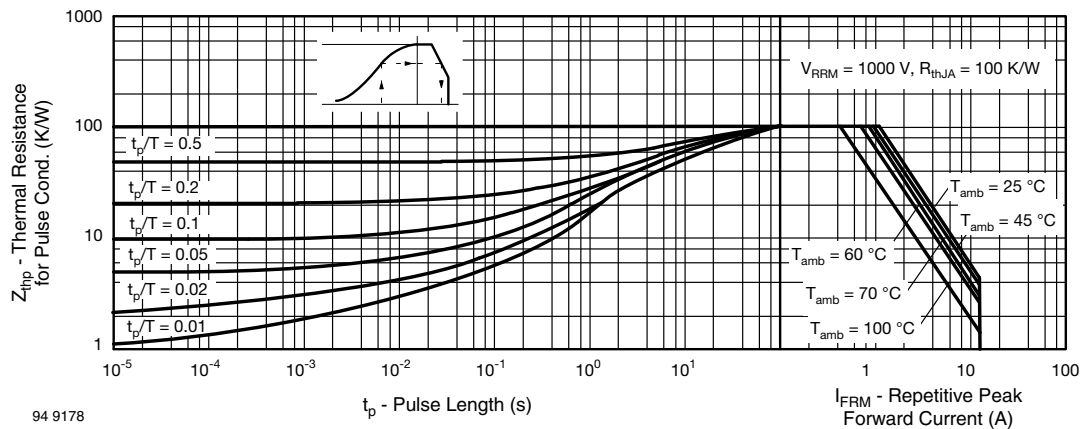
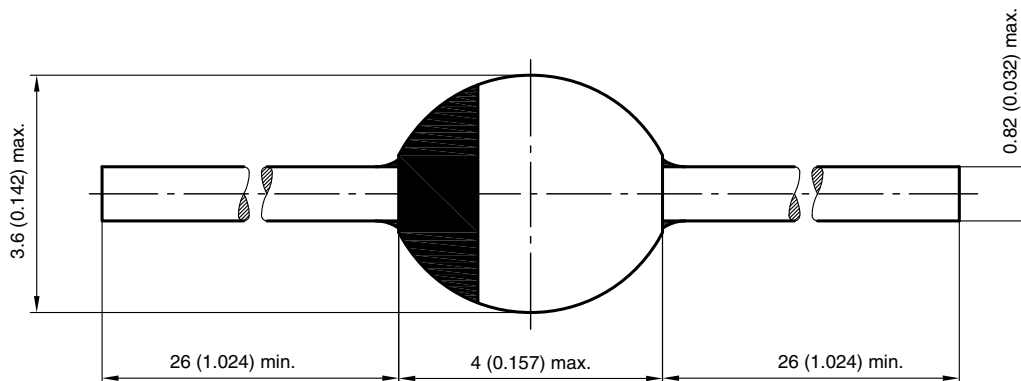


Fig. 7 - Thermal Response

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


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