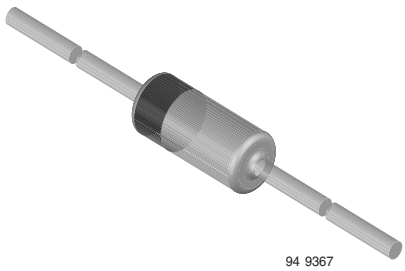
Small Signal Zener Diodes

Features

- Very sharp reverse characteristic
- Siliconic Planar Power Zener Diodes.
- Very high stability
- Low reverse current level
- V_Z-tolerance ± 5 %



Applications

Voltage stabilization

Mechanical Data

Case: DO-35 Glass Case
Weight: approx. 125 mg
Packaging codes/options:
TR / 10 k per 13 " reel, 30 k/box
TAP / 10 k per Ammo tape (52 mm tape), 30 k/box

Absolute Maximum Ratings

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Zener current table (see Table " Characteristics ")				
Power dissipation		P_{tot}	500[1)]	mW

[1)] Valid provided that leads at a distance of 3/8 " from case kept at ambient temperature.

Thermal Characteristics

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Thermal resistance junction to ambient air		R_{thJA}	300[1)]	°C/W
Junction temperature		T_J	175	°C
Storage temperature range		T_S	- 65 to + 175	°C

[1)] Valid provided that leads at a distance of 3/8 " from case kept at ambient temperature.

Electrical Characteristics

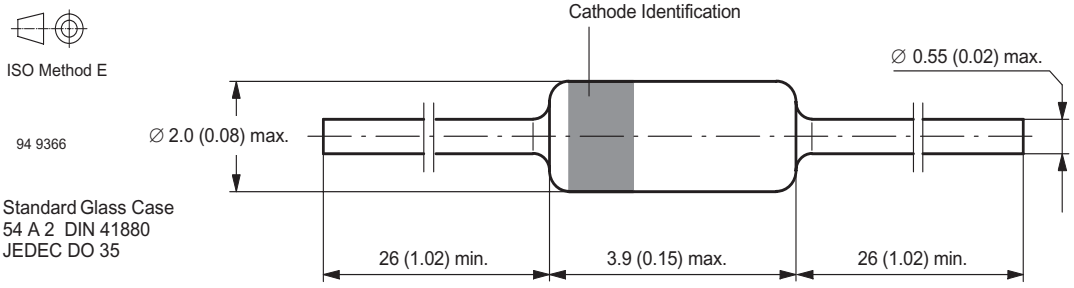
Partnumber	Nominal Zener Voltage	Test Current	Maximum Zener Impedance [1]			Maximum Regulator Current	Maximum Reverse Current	
	V_Z [3]	I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	I_{ZM} [2]	Maximum I_R	Test Voltage V_{dc}
	V	mA	Ω	Ω	mA	mA	µA	V
1N957B	6.8	18.5	4.5	700	1	58	150	5.2
1N958B	7.5	16.5	5.5	700	0.5	53	75	5.7
1N959B	8.2	15	6.5	700	0.5	47	50	6.2
1N960B	9.1	14	7.5	700	0.5	43	25	6.9
1N961B	10	12.5	8.5	700	0.25	40	10	7.6
1N962B	11	11.5	9.5	700	0.25	36	5	8.4
1N963B	12	10.5	11.5	700	0.25	32	5	9.1
1N964B	13	9.5	13	700	0.25	29	5	9.9
1N965B	15	8.5	16	700	0.25	27	5	11.4
1N966B	16	7.8	17	700	0.25	24	5	12.2
1N967B	18	7	21	750	0.25	21	5	13.7
1N968B	20	6.2	25	750	0.25	20	5	15.2
1N969B	22	5.6	29	750	0.25	18	5	16.7
1N970B	24	5.2	33	750	0.25	16	5	18.2
1N971B	27	4.6	41	750	0.25	14	5	20.6
1N972B	30	4.2	49	1000	0.25	13	5	22.8
1N973B	33	3.8	58	1000	0.25	12	5	25.1
1N974B	36	3.4	70	1000	0.25	11	5	27.4
1N975B	39	3.2	80	1000	0.25	10	5	29.7
1N976B	43	3	93	1500	0.25	9.2	5	32.7
1N977B	47	2.7	105	1500	0.25	8.5	5	35.8
1N978B	51	2.5	125	1500	0.25	7.8	5	38.8
1N979B	56	2.2	150	2000	0.25	6.9	5	42.6
1N980B	62	2	185	2000	0.25	6.3	5	47.1
1N981B	68	1.8	230	2000	0.25	5.7	5	51.7
1N982B	75	1.7	270	2000	0.25	5.2	5	56
1N983B	82	1.5	330	3000	0.25	4.7	5	62.2
1N984B	91	1.4	440	3000	0.25	4.3	5	69.2

[1] The Zener Impedance is derived from the 1 kHZ AC voltage which results when an AC current having an RMS value equal to 10 % of the Zener current (I_{ZT}) is superimposed on I_{ZT}. Zener Impedance is measured at two points to insure a sharp knee on the breakdown curve and to eliminate unstable units.

[2] Valid provided that leads at a distance of 3/8" from case are kept at 25 °C ambient temperature.

[3] Measured with device junction in thermal equilibrium.

Package Dimensions in mm (Inches)



Ozone Depleting Substances Policy Statement

It is the policy of **Vishay Semiconductor GmbH** to

1. Meet all present and future national and international statutory requirements.
2. Regularly and continuously improve the performance of our products, processes, distribution and operatingsystems with respect to their impact on the health and safety of our employees and the public, as well as their impact on the environment.

It is particular concern to control or eliminate releases of those substances into the atmosphere which are known as ozone depleting substances (ODSs).

The Montreal Protocol (1987) and its London Amendments (1990) intend to severely restrict the use of ODSs and forbid their use within the next ten years. Various national and international initiatives are pressing for an earlier ban on these substances.

Vishay Semiconductor GmbH has been able to use its policy of continuous improvements to eliminate the use of ODSs listed in the following documents.

1. Annex A, B and list of transitional substances of the Montreal Protocol and the London Amendments respectively
2. Class I and II ozone depleting substances in the Clean Air Act Amendments of 1990 by the Environmental Protection Agency (EPA) in the USA
3. Council Decision 88/540/EEC and 91/690/EEC Annex A, B and C (transitional substances) respectively.

Vishay Semiconductor GmbH can certify that our semiconductors are not manufactured with ozone depleting substances and do not contain such substances.

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