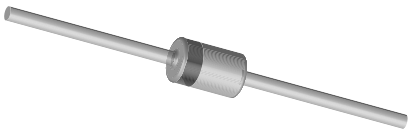
Jameco Part Number 1427031

Zener Diodes

Features

- Silicon Planar Power Zener Diodes
- For use in stabilizing and clipping circuits with high power rating
- Standard Zener voltage tolerance is ± 5 %
- Lead (Pb)-free component
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



Applications

- Voltage stabilization

Mechanical Data

Case: DO-41 Glass case
Weight: approx. 310 mg
Packaging Codes/Options:
TR / 5 k per 13" reel, 25 k/box
TAP / 5 k per Ammo pack (52 mm tape), 25 k/box

Absolute Maximum Ratings

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

Parameter	Test condition	Symbol	Value	Unit
Power dissipation		P_{tot}	1.3[1)]	W
Z-current		I_Z	P_V/V_Z	mA

1) Valid provided that leads at a distance of 4 mm from case are kept at ambient temperature.

Thermal Characteristics

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

Parameter	Test condition	Symbol	Value	Unit
Thermal resistance juntion to ambient air		R_{thJA}	110[1)]	K/W
Junction temperature		T_j	175	°C
Storage temperature range		T_{stg}	- 65 to + 175	°C

1) Valid provided that leads at a distance of 4 mm from case are kept at ambient temperature.

Electrical Characteristics

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

Parameter	Test condition	Symbol	Min	Typ.	Max	Unit
Forward voltage	I_F = 200 mA	V_F			1.2	V

Electrical Characteristics

1N4728A...1N4764A

Partnumber	Nominal Zener Voltage[1]	Test Current	Maximum Dynamic Impedance			Maximum Reverse Leakage Current		Surge Current[3]	Maximum Regulator Current[2]
	V_Z at I_{ZT}	I_{ZT}	Z_{ZT} at I_{ZT}	Z_{ZK} at I_{ZK}	I_{ZK}	I_R	Test Voltage V_R	at T_A = 25 °C I_R	I_{ZM}
	V	mA	Ω	Ω	mA	µA	V	mA	mA
1N4728A	3.3	76	10	400	1	100	1	1380	276
1N4729A	3.6	69	10	400	1	100	1	1260	252
1N4730A	3.9	64	9	400	1	50	1	1190	234
1N4731A	4.3	58	9	400	1	10	1	1070	217
1N4732A	4.7	53	8	500	1	10	1	970	193
1N4733A	5.1	49	7	550	1	10	1	890	178
1N4734A	5.6	45	5	600	1	10	2	810	162
1N4735A	6.2	41	2	700	1	10	3	730	146
1N4736A	6.8	37	3.5	700	1	10	4	660	133
1N4737A	7.5	34	4	700	0.5	10	5	605	121
1N4738A	8.2	31	4.5	700	0.5	10	6	550	110
1N4739A	9.1	28	5	700	0.5	10	7	500	100
1N4740A	10	25	7	700	0.25	10	7.6	454	91
1N4741A	11	23	8	700	0.25	5	8.4	414	83
1N4742A	12	21	9	700	0.25	5	9.1	380	76
1N4743A	13	19	10	700	0.25	5	9.9	344	69
1N4744A	15	17	14	700	0.25	5	11.4	304	61
1N4745A	16	15.5	16	700	0.25	5	12.2	285	57
1N4746A	18	14	20	750	0.25	5	13.7	250	50
1N4747A	20	12.5	22	750	0.25	5	15.2	225	45
1N4748A	22	11.5	23	750	0.25	5	16.7	205	41
1N4749A	24	10.5	25	750	0.25	5	18.2	190	38
1N4750A	27	9.5	35	750	0.25	5	20.6	170	34
1N4751A	30	8.5	40	1000	0.25	5	22.8	150	30
1N4752A	33	7.5	45	1000	0.25	5	25.1	135	27
1N4753A	36	7	50	1000	0.25	5	27.4	125	25
1N4754A	39	6.5	60	1000	0.25	5	29.7	115	23
1N4755A	43	6	70	1500	0.25	5	32.7	110	22
1N4756A	47	5.5	80	1500	0.25	5	35.8	95	19
1N4757A	51	5	95	1500	0.25	5	38.8	90	18
1N4758A	56	4.5	110	2000	0.25	5	42.6	80	16
1N4759A	62	4	125	2000	0.25	5	47.1	70	14
1N4760A	68	3.7	150	2000	0.25	5	51.7	65	13
1N4761A	75	3.3	175	2000	0.25	5	56	60	12
1N4762A	82	3.0	200	3000	0.25	5	62.2	55	11
1N4763A	91	2.8	250	3000	0.25	5	69.2	50	10
1N4764A	100	2.5	350	3000	0.25	5	76.0	45	9

[1] Based on dc-measurement at thermal equilibrium while maintaining the lead temperature (T_L) at 30 °C + 1 °C, 9.5 mm (3/8") from the diode body.

[2] Valid provided that electrodes at a distance of 4 mm from case are kept at ambient temperature.

[3] T_P = 10 ms.

Typical Characteristics

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

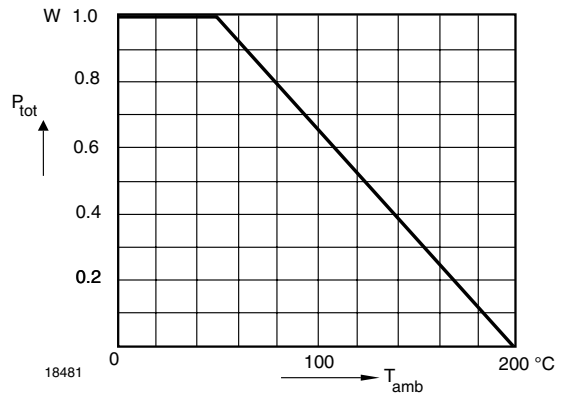
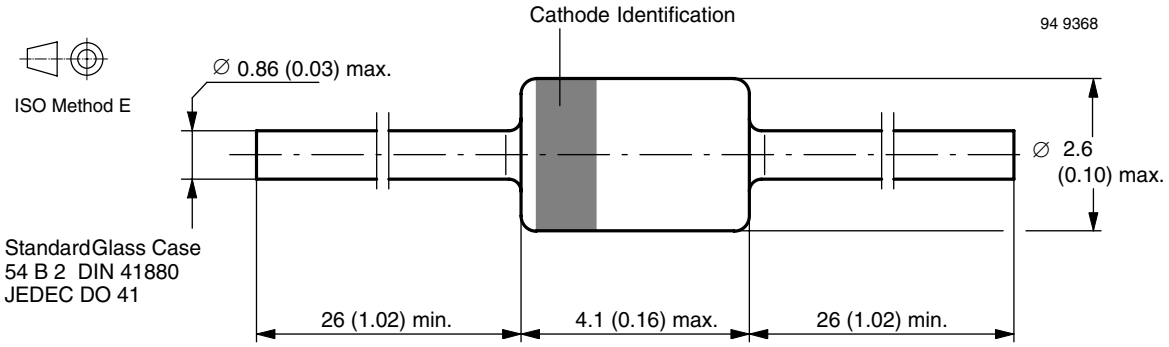


Figure 1. Admissible Power Dissipation vs. Ambient Temperature

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 operating systems 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.

Vishay Semiconductor GmbH, P.O.B. 3535, D-74025 Heilbronn, Germany

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