Dioda Zenera BZX85 C56V;1.3W;DO-41;

Dane techniczne:
Nazwa: BZX85
Typ: dioda Zenera
Napięcie: 56V
Moc: 1.3W
Obudowa: DO-41

Diody Zenera to diody stabilizacyjne, stosowane są do przesuwania poziomów napięć, a także jako element pełniący funkcję zabezpieczenia i działania przeciw przepięciom.

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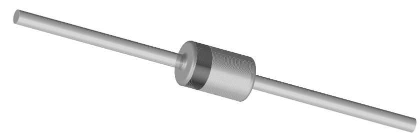
Zener Diodes

Features

- Silicon Planar Power Zener Diodes
- For use in stabilizing and clipping circuits with high power rating
- The Zener voltages are graded according to the international E 24 standard. Replace suffix "C" with "B" for ± 2 % tolerance
- Lead (Pb)-free component
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC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Applications

- Voltage stabilization

Mechanical Data

Case: DO41 Glass case
Weight: approx. 310 mg
Cathode Band Color: black
Packaging Codes/Options:
TR/5 k per 13" reel (52 mm tape), 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
Zener current (see Table "Electrical Characteristics")				
Power dissipation		P_{tot}	1.3[1)]	W

[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 junction to ambient air		R_{thJA}	110[1)]	K/W
Junction temperature		T_j	175	°C
Storage temperature		T_{stg}	- 55 to + 175	°C

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

Electrical Characteristics

Partnumber	Zener Voltage Range [1)]		Dynamic Resistance				Temperature Coefficient of Zener Voltage		Reverse Leakage Current		Admissible Zener Current[2)]
	V_Z at I_{ZT}		r_{ZT}[3)]	at I_{ZT}	r_{ZK}[3)]	at I_{ZK}	α_{VZ} at $I_Z = I_{ZT}$		at I_R	at V_R	I_Z
	V		Ω	mA	Ω	mA	%/°C		µA	V	mA
	min	max					min	max			
BZX85C2V7	2.5	2.9	< 20	80	< 400	1	- 0.08	- 0.05	< 150	1	360
BZX85C3V0	2.8	3.2	< 20	80	< 400	1	- 0.08	- 0.05	< 100	1	330
BZX85C3V3	3.1	3.5	< 20	80	< 400	1	- 0.08	- 0.05	< 40	1	300
BZX85C3V6	3.4	3.8	< 20	60	< 500	1	- 0.08	- 0.05	< 20	1	290
BZX85C3V9	3.7	4.1	< 15	60	< 500	1	- 0.07	- 0.02	< 10	1	280
BZX85C4V3	4	4.6	< 13	50	< 500	1	- 0.05	0.01	< 3	1	250
BZX85C4V7	4.4	5	< 13	45	< 600	1	- 0.03	0.04	< 3	1	215
BZX85C5V1	4.8	5.4	< 10	45	< 500	1	- 0.01	0.04	< 1	1.5	200
BZX85C5V6	5.2	6	< 7	45	< 400	1	0	0.045	< 1	2	190
BZX85C6V2	5.8	6.6	< 4	35	< 300	1	0.01	0.055	< 1	3	170
BZX85C6V8	6.4	7.2	< 3.5	35	< 300	1	0.015	0.06	< 1	4	155
BZX85C7V5	7	7.9	< 3	35	< 200	0.5	0.02	0.065	< 1	4.5	140
BZX85C8V2	7.7	8.7	< 5	25	< 200	0.5	0.03	0.07	< 1	6.2	130
BZX85C9V1	8.5	9.6	< 5	25	< 200	0.5	0.035	0.075	< 1	6.8	120
BZX85C10	9.4	10.6	< 7	25	< 200	0.5	0.04	0.08	< 0.5	7.5	105
BZX85C11	10.4	11.6	< 8	20	< 300	0.5	0.045	0.08	< 0.5	8.2	97
BZX85C12	11.4	12.7	< 9	20	< 350	0.5	0.045	0.085	< 0.5	9.1	88
BZX85C13	12.4	14.1	< 10	20	< 400	0.5	0.05	0.085	< 0.5	10	79
BZX85C15	13.8	15.6	< 15	15	< 500	0.5	0.055	0.09	< 0.5	11	71
BZX85C16	15.3	17.1	< 15	15	< 500	0.5	0.055	0.09	< 0.5	12	66
BZX85C18	16.8	19.1	< 20	15	< 500	0.5	0.06	0.09	< 0.5	13	62
BZX85C20	18.8	21.2	< 24	10	< 600	0.5	0.06	0.09	< 0.5	15	56
BZX85C22	20.8	23.3	< 25	10	< 600	0.5	0.06	0.095	< 0.5	16	52
BZX85C24	22.8	25.6	< 25	10	< 600	0.5	0.06	0.095	< 0.5	18	47
BZX85C27	25.1	28.9	< 30	8	< 750	0.25	0.06	0.095	< 0.5	20	41
BZX85C30	28	32	< 30	8	< 1000	0.25	0.06	0.095	< 0.5	22	36
BZX85C33	31	35	< 35	8	< 1000	0.25	0.06	0.095	< 0.5	24	33
BZX85C36	34	38	< 40	8	< 1000	0.25	0.06	0.095	< 0.5	27	30
BZX85C39	37	41	< 50	6	< 1000	0.25	0.06	0.095	< 0.5	30	28
BZX85C43	40	46	< 50	6	< 1000	0.25	0.06	0.095	< 0.5	33	26
BZX85C47	44	50	< 90	4	< 1500	0.25	0.06	0.095	< 0.5	36	23
BZX85C51	48	54	< 115	4	< 1500	0.25	0.06	0.095	< 0.5	39	21
BZX85C56	52	60	< 120	4	< 2000	0.25	0.06	0.095	< 0.5	43	19
BZX85C62	58	66	< 125	4	< 2000	0.25	0.06	0.095	< 0.5	47	16
BZX85C68	64	72	< 130	4	< 2000	0.25	0.055	0.095	< 0.5	51	15
BZX85C75	70	80	< 135	4	< 2000	0.25	0.055	0.095	< 0.5	56	14
BZX85C82	77	87	< 200	2.7	< 3000	0.25	0.055	0.095	< 0.5	62	12
BZX85C91	85	96	< 250	2.7	< 3000	0.25	0.055	0.095	< 0.5	68	10
BZX85C100	96	106	< 350	2.7	< 3000	0.25	0.055	0.095	< 0.5	75	9.4

1) Measured with pulses t_p = 5 ms

2) Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case

3) Measured with f = 1 kHz

Electrical Characteristics

Partnumber	Zener Voltage Range[1)]		Dynamic Resistance				Temperature Coefficient of Zener Voltage		Reverse Leakage Current		Admissible Zener Current[2)]
	V_Z at I_{ZT}		r_{ZT}[3)]	at I_{ZT}	r_{ZK}[3)]	at I_{ZK}	α_{VZ} at $I_Z = I_{ZT}$		at I_R	at V_R	I_Z
	V		Ω	mA	Ω	mA	%/°C		µA	V	mA
	min	max					min	max			
BZX85B2V7	2.64	2.76	< 20	80	< 400	1	- 0.08	- 0.05	< 150	1	360
BZX85B3V0	2.94	3.06	< 20	80	< 400	1	- 0.08	- 0.05	< 100	1	330
BZX85B3V3	2.24	3.36	< 20	80	< 400	1	- 0.08	- 0.05	< 40	1	300
BZX85B3V6	3.53	3.67	< 20	60	< 500	1	- 0.08	- 0.05	< 20	1	290
BZX85B3V9	3.82	3.98	< 15	60	< 500	1	- 0.07	- 0.02	< 10	1	280
BZX85B4V3	4.21	4.39	< 13	50	< 500	1	- 0.05	0.01	< 3	1	250
BZX85B4V7	4.61	4.79	< 13	45	< 600	1	- 0.03	0.04	< 3	1	215
BZX85B5V1	5	5.2	< 10	45	< 500	1	- 0.01	0.04	< 1	1.5	200
BZX85B5V6	5.49	5.71	< 7	45	< 400	1	0	0.045	< 1	2	190
BZX85B6V2	6.08	6.32	< 4	35	< 300	1	0.01	0.055	< 1	3	170
BZX85B6V8	6.66	6.94	< 3.5	35	< 300	1	0.015	0.06	< 1	4	155
BZX85B7V5	7.35	7.65	< 3	35	< 200	0.5	0.02	0.065	< 1	4.5	140
BZX85B8V2	8.04	8.36	< 5	25	< 200	0.5	0.03	0.07	< 1	6.2	130
BZX85B9V1	8.92	9.28	< 5	25	< 200	0.5	0.035	0.075	< 1	6.8	120
BZX85B10	9.8	10.2	< 7	25	< 200	0.5	0.04	0.08	< 0.5	7.5	105
BZX85B11	10.8	11.2	< 8	20	< 300	0.5	0.045	0.08	< 0.5	8.2	97
BZX85B12	11.8	12.2	< 9	20	< 350	0.5	0.045	0.085	< 0.5	9.1	88
BZX85B13	12.7	13.3	< 10	20	< 400	0.5	0.05	0.085	< 0.5	10	79
BZX85B15	14.7	15.3	< 15	15	< 500	0.5	0.055	0.09	< 0.5	11	71
BZX85B16	15.7	16.3	< 15	15	< 500	0.5	0.055	0.09	< 0.5	12	66
BZX85B18	17.6	18.4	< 20	15	< 500	0.5	0.06	0.09	< 0.5	13	62
BZX85B20	19.6	20.4	< 24	10	< 600	0.5	0.06	0.09	< 0.5	15	56
BZX85B22	21.6	22.4	< 25	10	< 600	0.5	0.06	0.095	< 0.5	16	52
BZX85B24	23.5	24.5	< 25	10	< 600	0.5	0.06	0.095	< 0.5	18	47
BZX85B27	26.5	27.5	< 30	8	< 750	0.25	0.06	0.095	< 0.5	20	41
BZX85B30	29.4	30.6	< 30	8	< 1000	0.25	0.06	0.095	< 0.5	22	36
BZX85B33	32.3	33.7	< 35	8	< 1000	0.25	0.06	0.095	< 0.5	24	33
BZX85B36	35.3	36.7	< 40	8	< 1000	0.25	0.06	0.095	< 0.5	27	30
BZX85B39	38.2	39.8	< 50	6	< 1000	0.25	0.06	0.095	< 0.5	30	28
BZX85B43	42.1	43.9	< 50	6	< 1000	0.25	0.06	0.095	< 0.5	33	26
BZX85B47	46.1	47.9	< 90	4	< 1500	0.25	0.06	0.095	< 0.5	36	23
BZX85B51	50	52	< 115	4	< 1500	0.25	0.06	0.095	< 0.5	39	21
BZX85B56	54.9	57.1	< 120	4	< 2000	0.25	0.06	0.095	< 0.5	43	19
BZX85B62	60.8	63.2	< 125	4	< 2000	0.25	0.06	0.095	< 0.5	47	16
BZX85B68	66.6	69.4	< 130	4	< 2000	0.25	0.055	0.095	< 0.5	51	15
BZX85B75	73.5	76.5	< 135	4	< 2000	0.25	0.055	0.095	< 0.5	56	14
BZX85B82	80.4	83.6	< 200	2.7	< 3000	0.25	0.055	0.095	< 0.5	62	12
BZX85B91	89.2	92.8	< 250	2.7	< 3000	0.25	0.055	0.095	< 0.5	68	10
BZX85B100	98	102	< 350	2.7	< 3000	0.25	0.055	0.095	< 0.5	75	9.4

1) Measured with pulses $t_p = 5$ ms

2) Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case

3) Measured with f = 1 kHz

Typical Characteristics

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

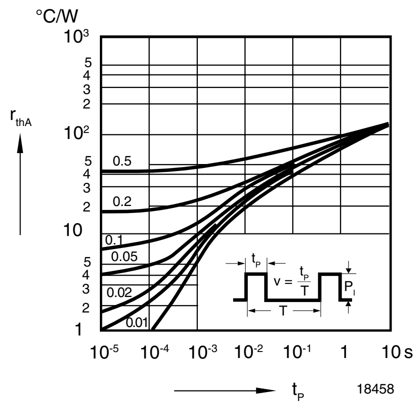


Figure 1. Pulse Thermal Resistance vs. Pulse Duration

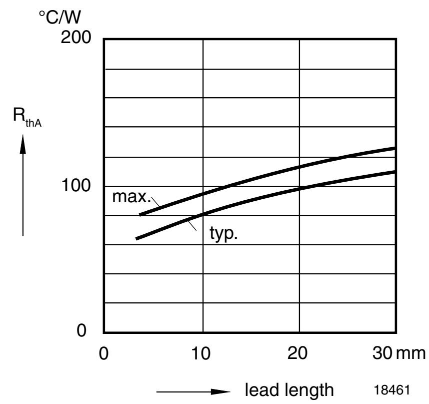


Figure 4. Thermal Resistance vs. Lead Length

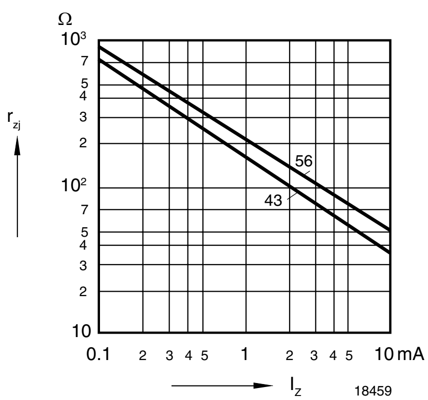


Figure 2. Dynamic Resistance vs. Zener Current

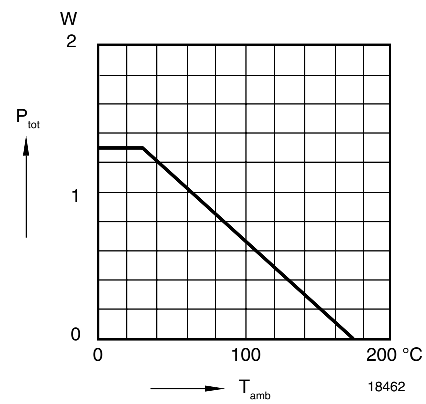


Figure 5. Admissible Power Dissipation vs. Ambient Temperature

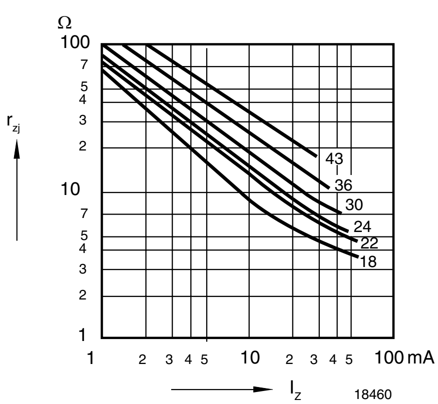


Figure 3. Dynamic Resistance vs. Zener Current

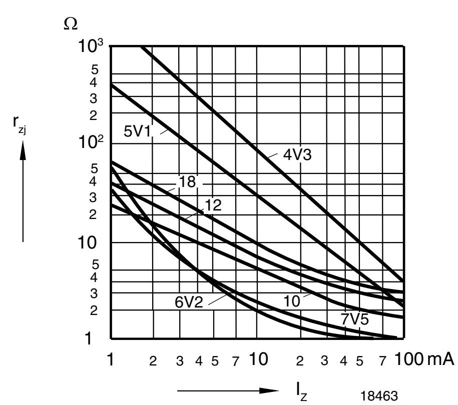


Figure 6. Dynamic Resistance vs. Zener Current

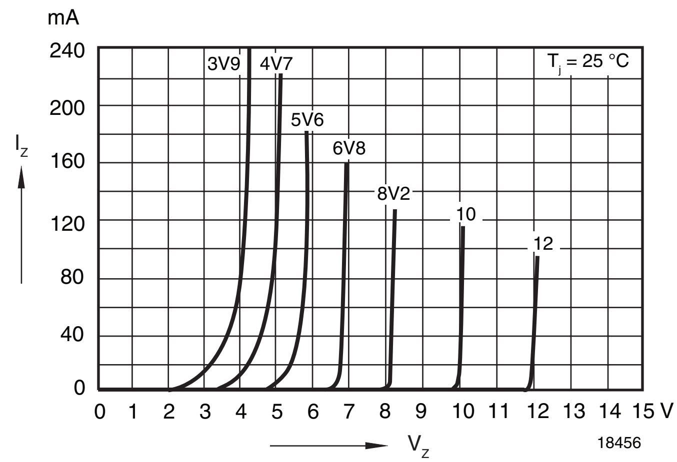


Figure 7. Breakdown Characteristics

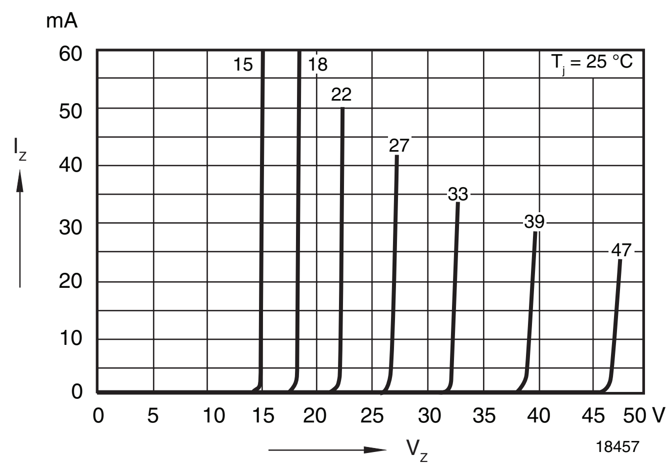
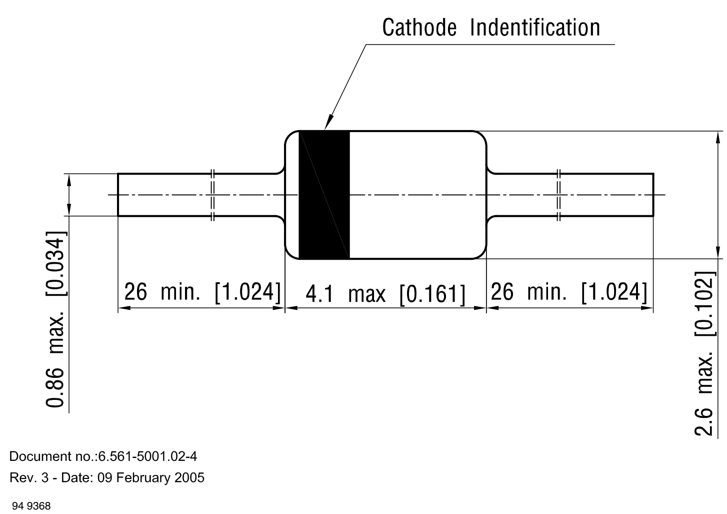


Figure 8. Breakdown Characteristics

Package Dimensions in millimeters (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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