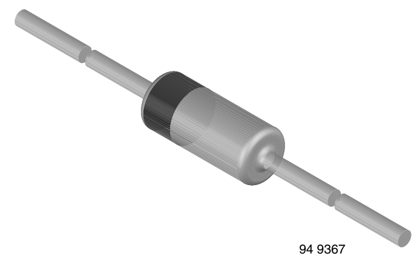
Dioda Zenera BZX55 C2V7;500mW; DO-35

Dane techniczne:
Nazwa: BZX55
Typ: dioda Zenera
Napięcie: 2.7V
Moc: 500mW
Obudowa: DO-35

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

Small Signal Zener Diodes

Features
- Very sharp reverse characteristic
- Low reverse current level
- Very high stability
- Low noise
- Available with tighter tolerances
- Lead (Pb)-free component
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



94 9367

Applications
- Voltage stabilization

Mechanical Data
Case: DO35 glass case
Weight: approx. 125 mg
Cathode Band Color: black
Packaging Codes/Options:
TR/10 k per 13" reel, 30 k/box
TAP/10 k per ammopack (52 mm tape), 30 k/box

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

Parameter	Test condition	Symbol	Value	Unit
Power dissipation	l = 4 mm, T_L = 25 °C	P_{tot}	500	mW
Z-current		I_Z	P_{tot}/V_Z	mA

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

Parameter	Test condition	Symbol	Value	Unit
Thermal resistance junction to ambient air	l = 4 mm, T_L = constant	R_{thJA}	300	K/W
Junction temperature		T_j	175	°C
Storage temperature range		T_{stg}	- 65 to + 175	°C

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			1.5	V

Electrical Characteristics

BZX55C..

Partnumber	Zener Voltage Range		Dynamic Resistance		Test Current	Temperature Coefficient		Test Current	Reverse Leakage Current		
	V_Z at I_{ZT}		r_{zjT} at I_{ZT}, f = 1 kHz	r_{zjK} at I_{ZK}, f = 1 kHz	I_{ZT}	TK_{VZ}		I_{ZK}	I_R at T_{amb} = 25 °C	I_R at T_{amb} = 150 °C	at V_R
	V		Ω		mA	%/K		mA	µA		V
	min	max				min	max				
BZX55C2V4	2.28	2.56	< 85	< 600	5	- 0.09	- 0.06	1	< 50	< 100	1
BZX55C2V7	2.5	2.9	< 85	< 600	5	- 0.09	- 0.06	1	< 10	< 50	1
BZX55C3V0	2.8	3.2	< 85	< 600	5	- 0.08	- 0.05	1	< 4	< 40	1
BZX55C3V3	3.1	3.5	< 85	< 600	5	- 0.08	- 0.05	1	< 2	< 40	1
BZX55C3V6	3.4	3.8	< 85	< 600	5	- 0.08	- 0.05	1	< 2	< 40	1
BZX55C3V9	3.7	4.1	< 85	< 600	5	- 0.08	- 0.05	1	< 2	< 40	1
BZX55C4V3	4	4.6	< 75	< 600	5	- 0.06	- 0.03	1	< 1	< 20	1
BZX55C4V7	4.4	5	< 60	< 600	5	- 0.05	0.02	1	< 0.5	< 10	1
BZX55C5V1	4.8	5.4	< 35	< 550	5	- 0.02	0.02	1	< 0.1	< 2	1
BZX55C5V6	5.2	6	< 25	< 450	5	- 0.05	0.05	1	< 0.1	< 2	1
BZX55C6V2	5.8	6.6	< 10	< 200	5	0.03	0.06	1	< 0.1	< 2	2
BZX55C6V8	6.4	7.2	< 8	< 150	5	0.03	0.07	1	< 0.1	< 2	3
BZX55C7V5	7	7.9	< 7	< 50	5	0.03	0.07	1	< 0.1	< 2	5
BZX55C8V2	7.7	8.7	< 7	< 50	5	0.03	0.08	1	< 0.1	< 2	6.2
BZX55C9V1	8.5	9.6	< 10	< 50	5	0.03	0.09	1	< 0.1	< 2	6.8
BZX55C10	9.4	10.6	< 15	< 70	5	0.03	0.1	1	< 0.1	< 2	7.5
BZX55C11	10.4	11.6	< 20	< 70	5	0.03	0.11	1	< 0.1	< 2	8.2
BZX55C12	11.4	12.7	< 20	< 90	5	0.03	0.11	1	< 0.1	< 2	9.1
BZX55C13	12.4	14.1	< 26	< 110	5	0.03	0.11	1	< 0.1	< 2	10
BZX55C15	13.8	15.6	< 30	< 110	5	0.03	0.11	1	< 0.1	< 2	11
BZX55C16	15.3	17.1	< 40	< 170	5	0.03	0.11	1	< 0.1	< 2	12
BZX55C18	16.8	19.1	< 50	< 170	5	0.03	0.11	1	< 0.1	< 2	13
BZX55C20	18.8	21.2	< 55	< 220	5	0.03	0.11	1	< 0.1	< 2	15
BZX55C22	20.8	23.3	< 55	< 220	5	0.04	0.12	1	< 0.1	< 2	16
BZX55C24	22.8	25.6	< 80	< 220	5	0.04	0.12	1	< 0.1	< 2	18
BZX55C27	25.1	28.9	< 80	< 220	5	0.04	0.12	1	< 0.1	< 2	20
BZX55C30	28	32	< 80	< 220	5	0.04	0.12	1	< 0.1	< 2	22
BZX55C33	31	35	< 80	< 220	5	0.04	0.12	1	< 0.1	< 2	24
BZX55C36	34	38	< 80	< 220	5	0.04	0.12	1	< 0.1	< 2	27
BZX55C39	37	41	< 90	< 500	2.5	0.04	0.12	0.5	< 0.1	< 5	30
BZX55C43	40	46	< 90	< 600	2.5	0.04	0.12	0.5	< 0.1	< 5	33
BZX55C47	44	50	< 110	< 700	2.5	0.04	0.12	0.5	< 0.1	< 5	36
BZX55C51	48	54	< 125	< 700	2.5	0.04	0.12	0.5	< 0.1	< 10	39
BZX55C56	52	60	< 135	< 1000	2.5	0.04	0.12	0.5	< 0.1	< 10	43
BZX55C62	58	66	< 150	< 1000	2.5	0.04	0.12	0.5	< 0.1	< 10	47
BZX55C68	64	72	< 200	< 1000	2.5	0.04	0.12	0.5	< 0.1	< 10	51
BZX55C75	70	79	< 250	< 1500	2.5	0.04	0.12	0.5	< 0.1	< 10	56

Electrical Characteristics

BZX55B..

Partnumber	Zener Voltage Range		Dynamic Resistance		Test Current	Temperature Coefficient		Test Current	Reverse Leakage Current		
	V_Z at I_{ZT}		r_{zjT} at I_{ZT}, f = 1 kHz	r_{zjK} at I_{ZK}, f = 1 kHz	I_{ZT}	TK_{VZ}		I_{ZK}	I_R at T_{amb} = 25 °C	I_R at T_{amb} = 150 °C	at V_R
	V		Ω		mA	%/K		mA	µA		V
	min	max				min	max				
BZX55B2V7	2.64	2.76	< 85	< 600	5	- 0.09	- 0.06	1	< 10	< 50	1
BZX55B3V0	2.94	3.06	< 90	< 600	5	- 0.08	- 0.05	1	< 4	< 40	1
BZX55B3V3	3.24	3.36	< 90	< 600	5	- 0.08	- 0.05	1	< 2	< 40	1
BZX55B3V6	3.52	3.68	< 90	< 600	5	- 0.08	- 0.05	1	< 2	< 40	1
BZX55B3V9	3.82	3.98	< 90	< 600	5	- 0.08	- 0.05	1	< 2	< 40	1
BZX55B4V3	4.22	4.38	< 90	< 600	5	- 0.06	- 0.03	1	< 1	< 20	1
BZX55B4V7	4.6	4.8	< 80	< 600	5	- 0.05	0.02	1	< 0.5	< 10	1
BZX55B5V1	5	5.2	< 60	< 550	5	- 0.02	0.02	1	< 0.1	< 2	1
BZX55B5V6	5.48	5.72	< 40	< 450	5	- 0.05	0.05	1	< 0.1	< 2	1
BZX55B6V2	6.08	6.32	< 10	< 200	5	0.03	0.06	1	< 0.1	< 2	2
BZX55B6V8	6.66	6.94	< 8	< 150	5	0.03	0.07	1	< 0.1	< 2	3
BZX55B7V5	7.35	7.65	< 7	< 50	5	0.03	0.07	1	< 0.1	< 2	5
BZX55B8V2	8.04	8.36	< 7	< 50	5	0.03	0.08	1	< 0.1	< 2	6.2
BZX55B9V1	8.92	9.28	< 10	< 50	5	0.03	0.09	1	< 0.1	< 2	6.8
BZX55B10	9.8	10.2	< 15	< 70	5	0.03	0.1	1	< 0.1	< 2	7.5
BZX55B11	10.78	11.22	< 20	< 70	5	0.03	0.11	1	< 0.1	< 2	8.2
BZX55B12	11.76	12.24	< 20	< 90	5	0.03	0.11	1	< 0.1	< 2	9.1
BZX55B13	12.74	13.26	< 26	< 110	5	0.03	0.11	1	< 0.1	< 2	10
BZX55B15	14.7	15.3	< 30	< 110	5	0.03	0.11	1	< 0.1	< 2	11
BZX55B16	15.7	16.3	< 40	< 170	5	0.03	0.11	1	< 0.1	< 2	12
BZX55B18	17.64	18.36	< 50	< 170	5	0.03	0.11	1	< 0.1	< 2	13
BZX55B20	19.6	20.4	< 55	< 220	5	0.03	0.11	1	< 0.1	< 2	15
BZX55B22	21.55	22.45	< 55	< 220	5	0.04	0.12	1	< 0.1	< 2	16
BZX55B24	23.5	24.5	< 80	< 220	5	0.04	0.12	1	< 0.1	< 2	18
BZX55B27	26.4	27.6	< 80	< 220	5	0.04	0.12	1	< 0.1	< 2	20
BZX55B30	29.4	30.6	< 80	< 220	5	0.04	0.12	1	< 0.1	< 2	22
BZX55B33	32.4	33.6	< 80	< 220	5	0.04	0.12	1	< 0.1	< 2	24
BZX55B36	35.3	36.7	< 80	< 220	5	0.04	0.12	1	< 0.1	< 2	27
BZX55B39	38.2	39.8	< 90	< 500	2.5	0.04	0.12	0.5	< 0.1	< 5	30
BZX55B43	42.1	43.9	< 90	< 600	2.5	0.04	0.12	0.5	< 0.1	< 5	33
BZX55B47	46.1	47.9	< 110	< 700	2.5	0.04	0.12	0.5	< 0.1	< 5	36
BZX55B51	50	52	< 125	< 700	2.5	0.04	0.12	0.5	< 0.1	< 10	39
BZX55B56	54.9	57.1	< 135	< 1000	2.5	0.04	0.12	0.5	< 0.1	< 10	43
BZX55B62	60.8	63.2	< 150	< 1000	2.5	0.04	0.12	0.5	< 0.1	< 10	47
BZX55B68	66.6	69.4	< 200	< 1000	2.5	0.04	0.12	0.5	< 0.1	< 10	51
BZX55B75	73	76.5	< 250	< 1500	2.5	0.04	0.12	0.5	< 0.1	< 10	56

Typical Characteristics

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

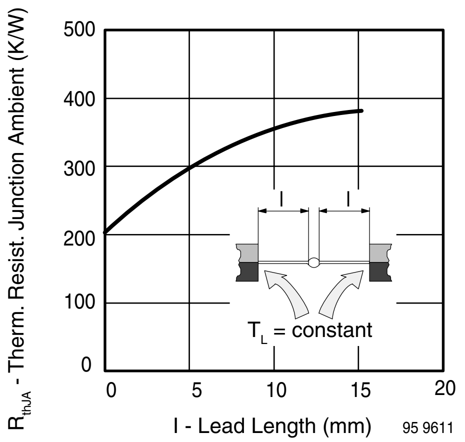


Figure 1. Thermal Resistance vs. Lead Length

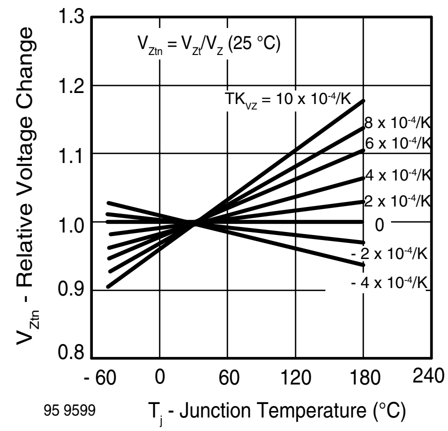


Figure 4. Typical Change of Working Voltage vs. Junction Temperature

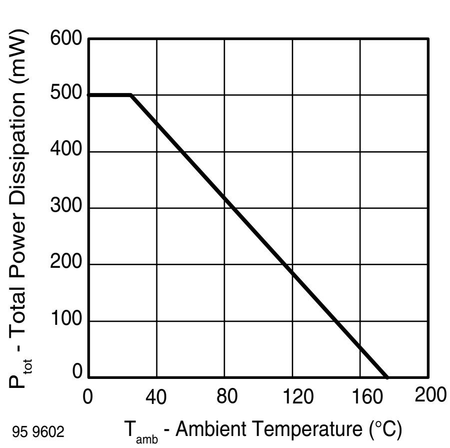


Figure 2. Total Power Dissipation vs. Ambient Temperature

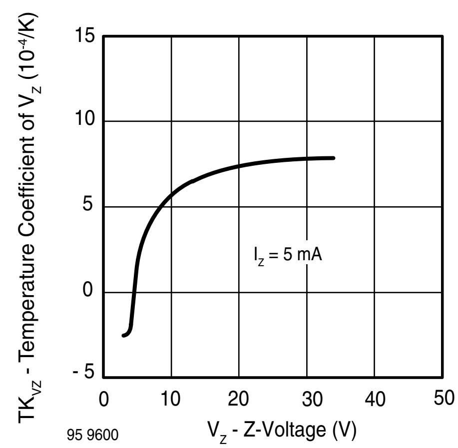


Figure 5. Temperature Coefficient of Vz vs. Z-Voltage

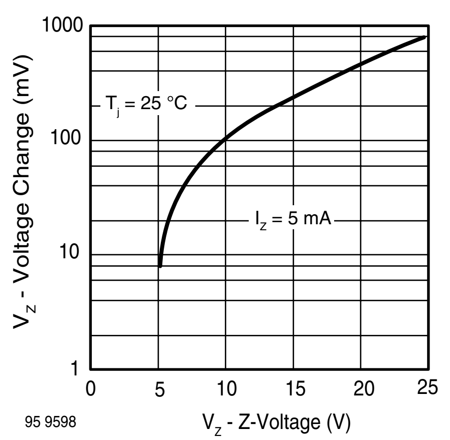


Figure 3. Typical Change of Working Voltage under Operating Conditions at T_{amb} = 25 °C

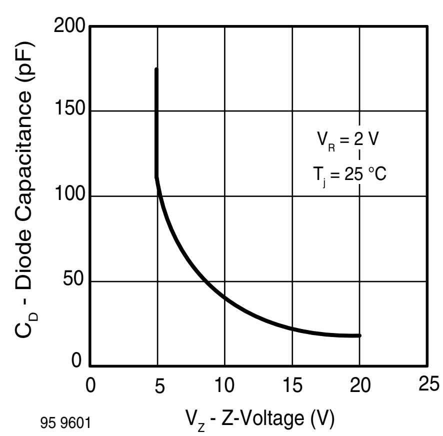


Figure 6. Diode Capacitance vs. Z-Voltage

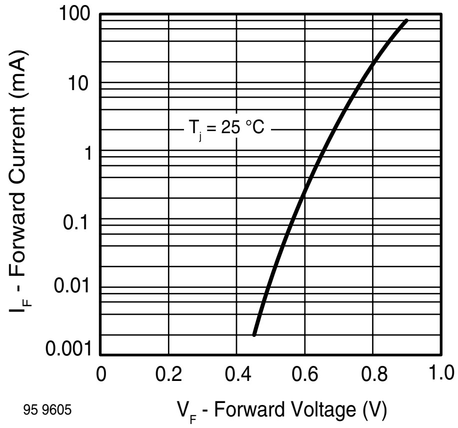


Figure 7. Forward Current vs. Forward Voltage

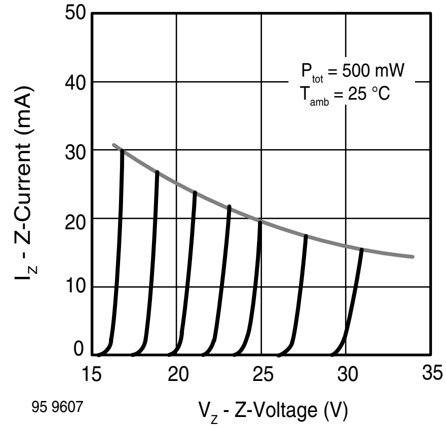


Figure 9. Z-Current vs. Z-Voltage

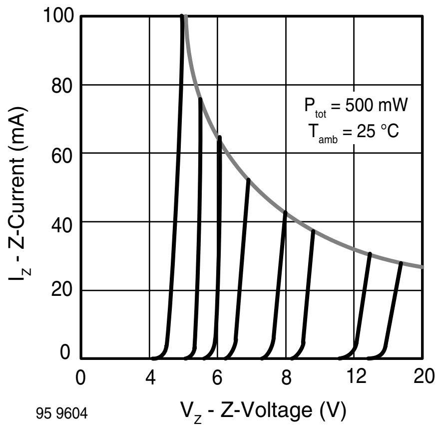


Figure 8. Z-Current vs. Z-Voltage

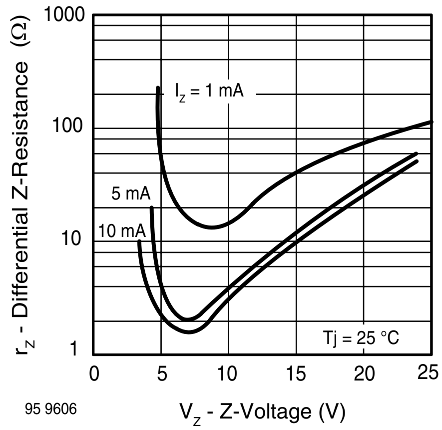


Figure 10. Differential Z-Resistance vs. Z-Voltage

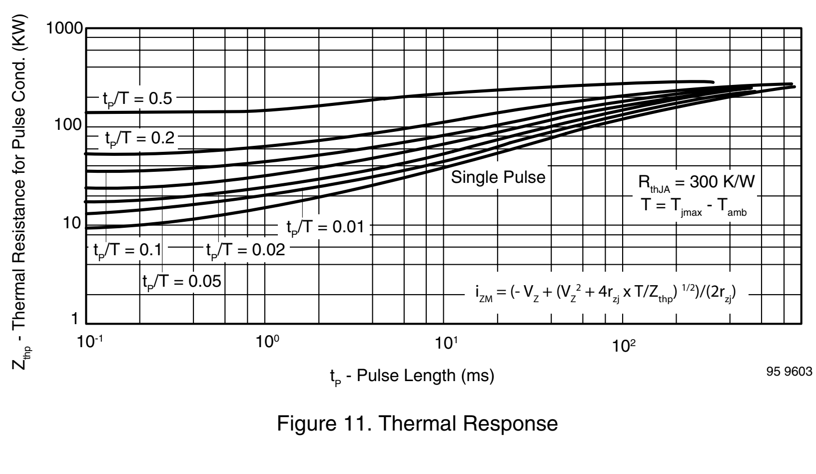
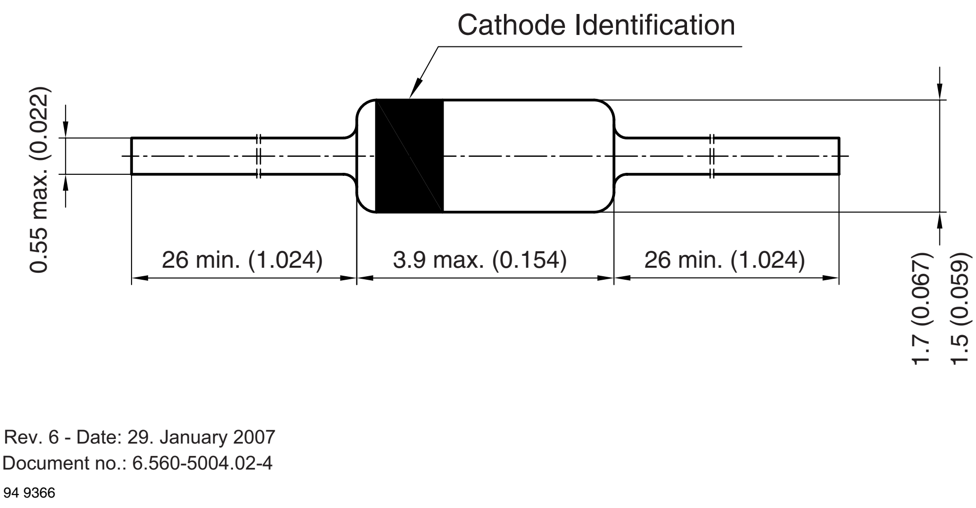


Figure 11. Thermal Response

Package Dimensions in millimeters (inches): DO35



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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