

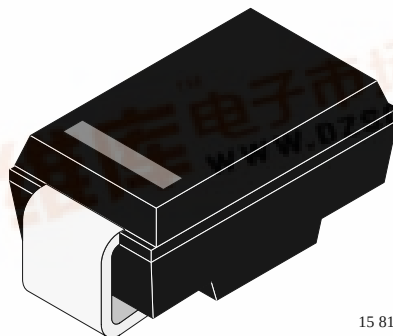


BZG47..A
Vishay Telefunken

Silicon Z-Diodes

Features

- Glass passivated junction
- High reliability
- Voltage range 3.3 V to 100 V
- Fits onto 5 mm SMD footpads
- Wave and reflow solderable
- $V_{Znom} \pm 5\%$ tolerance



15 811

Applications

Voltage stabilization

Absolute Maximum Ratings

$T_j = 25^\circ\text{C}$

Parameter	Test Conditions	Type	Symbol	Value	Unit
Power dissipation	$R_{thJA} < 100\text{K/W}$, $T_{amb} = 25^\circ\text{C}$		P_V	1.25	W
Non repetitive peak surge power dissipation	$t_p = 100\mu\text{s}$ sq.pulse, $T_j = 25^\circ\text{C}$ prior to surge		P_{ZSM}	50	W
Junction temperature			T_j	150	$^\circ\text{C}$
Storage temperature range			T_{stg}	$-65...+150$	$^\circ\text{C}$

Maximum Thermal Resistance

$T_j = 25^\circ\text{C}$

Parameter	Test Conditions	Symbol	Value	Unit
Junction lead		R_{thJL}	35	K/W
Junction ambient	mounted on epoxy-glass hard tissue, Fig. 1a	R_{thJA}	150	K/W
	mounted on epoxy-glass hard tissue, Fig. 1b	R_{thJA}	125	K/W
	mounted on Al-oxid-ceramic (Al_2O_3), Fig. 1b	R_{thJA}	100	K/W

Electrical Characteristics

$T_j = 25^\circ\text{C}$

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F = 0.2\text{A}$		V_F			1.2	V



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Type	V _{Znom}	I _{ZT} 1)	for r _{zIT}	r _{zik}	at I _{ZK}	I _R	at V _R
	V	mA	Ω	Ω	mA	μA	V
BZG4728A	3.3	76	< 10	< 400	1.0	< 100	1
BZG4729A	3.6	69	< 10	< 400	1.0	< 100	1
BZG4730A	3.9	64	< 9	< 400	1.0	< 50	1
BZG4731A	4.3	58	< 9	< 400	1.0	< 10	1
BZG4732A	4.7	53	< 8	< 500	1.0	< 10	1
BZG4733A	5.1	49	< 7	< 550	1.0	< 10	1
BZG4734A	5.6	45	< 5	< 600	1.0	< 10	2
BZG4735A	6.2	41	< 2	< 700	1.0	< 10	3
BZG4736A	6.8	37	< 3.5	< 700	1.0	< 10	4
BZG4737A	7.5	34	< 4.0	< 700	0.5	< 10	5
BZG4738A	8.2	31	< 4.5	< 700	0.5	< 10	6
BZG4739A	9.1	28	< 5.0	< 700	0.5	< 10	7
BZG4740A	10	25	< 7	< 700	0.25	< 10	7.6
BZG4741A	11	23	< 8	< 700	0.25	< 5	8.4
BZG4742A	12	21	< 9	< 700	0.25	< 5	9.1
BZG4743A	13	19	< 10	< 700	0.25	< 5	9.9
BZG4744A	15	17	< 14	< 700	0.25	< 5	11.4
BZG4745A	16	15.5	< 16	< 700	0.25	< 5	12.2
BZG4746A	18	14	< 20	< 750	0.25	< 5	13.7
BZG4747A	20	12.5	< 22	< 750	0.25	< 5	15.2
BZG4748A	22	11.5	< 23	< 750	0.25	< 5	16.7
BZG4749A	24	10.5	< 25	< 750	0.25	< 5	18.2
BZG4750A	27	9.5	< 35	< 750	0.25	< 5	20.6
BZG4751A	30	8.5	< 40	< 1000	0.25	< 5	22.8
BZG4752A	33	7.5	< 45	< 1000	0.25	< 5	25.1
BZG4753A	36	7.0	< 50	< 1000	0.25	< 5	27.4
BZG4754A	39	6.5	< 60	< 1000	0.25	< 5	29.7
BZG4755A	43	6.0	< 70	< 1500	0.25	< 5	32.7
BZG4756A	47	5.5	< 80	< 1500	0.25	< 5	35.8
BZG4757A	51	5.0	< 95	< 1500	0.25	< 5	38.8
BZG4758A	56	4.5	< 110	< 2000	0.25	< 5	42.6
BZG4759A	62	4.0	< 125	< 2000	0.25	< 5	47.1
BZG4760A	68	3.7	< 150	< 2000	0.25	< 5	51.7
BZG4761A	75	3.3	< 175	< 2000	0.25	< 5	56.0
BZG4762A	82	3.0	< 200	< 3000	0.25	< 5	62.2
BZG4763A	91	2.8	< 250	< 3000	0.25	< 5	69.2
BZG4764A	100	2.5	< 350	< 3000	0.25	< 5	76

1) Based on dc-measurement at thermal equilibrium while maintaining the lead temperature (T_L) at 30°C ± 1°C.

Characteristics ($T_j = 25^\circ\text{C}$ unless otherwise specified)

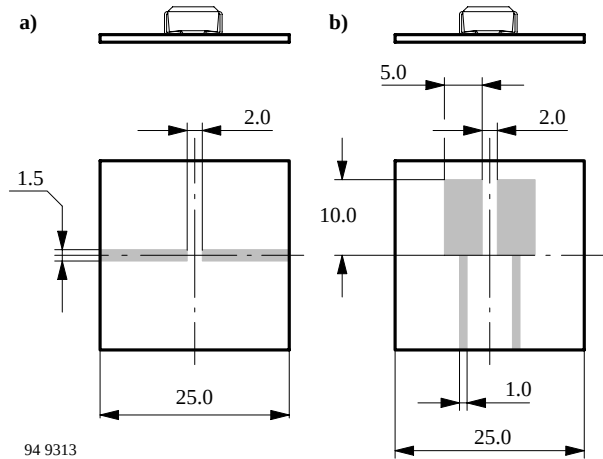


Figure 1. Boards for R_{thJA} definition
(copper overlay 35μ)

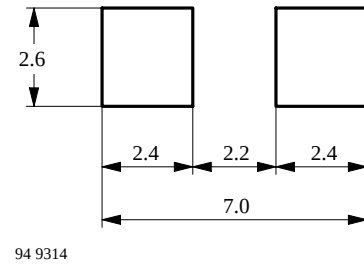
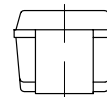
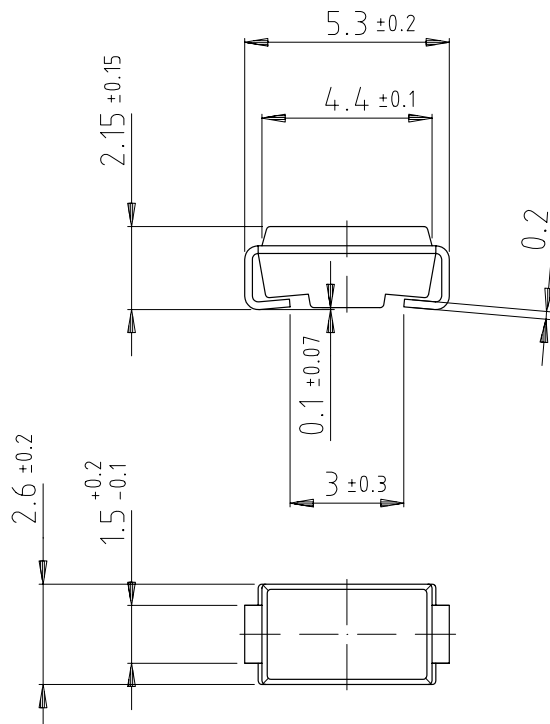
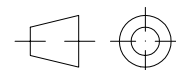


Figure 2. Recommended foot pads (in mm)

Dimensions in mm



Plastic case JEDEC DO 214
similar to SMA
Cathode indicated by a band



technical drawings
according to DIN
specifications

14275



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.

We reserve the right to make changes to improve technical design and may do so without further notice.

Parameters can vary in different applications. All operating parameters must be validated for each customer application by the customer. Should the buyer use Vishay-Telefunken products for any unintended or unauthorized application, the buyer shall indemnify Vishay-Telefunken against all claims, costs, damages, and expenses, arising out of, directly or indirectly, any claim of personal damage, injury or death associated with such unintended or unauthorized use.

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