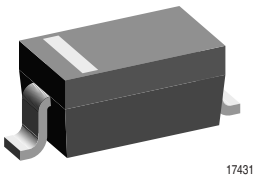
Small Signal Zener Diodes

Features

- Silicon Planar Zener Diodes.
- Standard Zener voltage tolerance is ± 5 %.
- High temperature soldering guaranteed: 250 °C/10 seconds set terminals.
- These diodes are also available in DO-35 case with the type designation 1N4681...1N4717 and SOT-23 case with the type designation MMBZ4681... MMBZ4717.



Mechanical Data

Case: SOD-123 Plastic case
Weight: approx. 9.3 mg
Packaging codes/options:
GS18 / 10 k per 13 " reel (8 mm tape), 10 k/box
GS08 / 3 k per 7 " reel (8 mm tape), 15 k/box

Absolute Maximum Ratings

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

Parameter	Test condition	Symbol	Value	Unit
Zener current (see Table "Characteristics")				
Power dissipation	T_L = 75 °C	P_{tot}	500[1)]	mW

[1)] On FR - 4 or FR - 5 board with minimum recommended solder pad layout.

Thermal Characteristics

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

Parameter	Test condition	Symbol	Value	Unit
Thermal resistance junction to ambient air		R_{thJA}	340[1)]	°C/W
Maximum junction temperature		T_j	150	°C
Storage temperature range		T_S	- 55 to + 150	°C

[1)] On FR - 4 or FR - 5 board with minimum recommended solder pad layout.

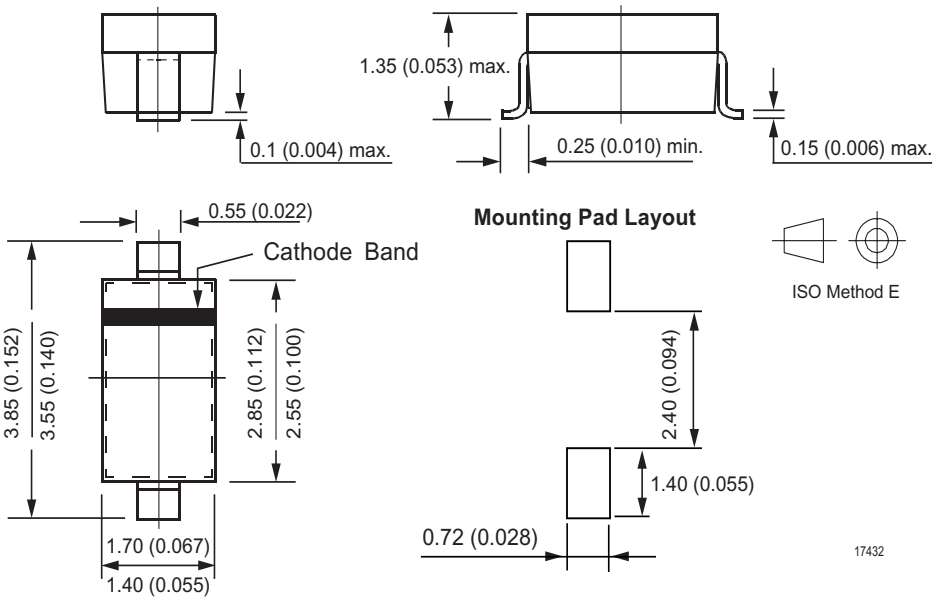
Electrical Characteristics

T_J = 25 ° unless otherwise noted
Maximum V_F = 0.9 V at I_F = 10 mA

Partnumber	Marking Code	Zener Voltage[1)]			Max. Reverse Current	Test Voltage
		V_Z @ I_{ZT} = 50 µA			I_R	V_R
		V			µA	V
		typ	min	max		
MMSZ4681	CF	2.4	2.28	2.52	2	1
MMSZ4682	CH	2.7	2.57	2.84	1	1
MMSZ4683	CJ	3	2.85	3.15	0.8	1
MMSZ4684	CK	3.3	3.14	3.47	7.5	1.5
MMSZ4685	CM	3.6	3.42	3.78	7.5	2
MMSZ4686	CN	3.9	3.71	4.1	5	2
MMSZ4687	CP	4.3	4.09	4.52	4	2
MMSZ4688	CT	4.7	4.47	4.94	10	3
MMSZ4689	CU	5.1	4.85	5.36	10	3
MMSZ4690	CV	5.6	5.32	5.88	10	4
MMSZ4691	CA	6.2	5.89	6.51	10	5
MMSZ4692	CX	6.8	6.46	7.14	10	5.1
MMSZ4693	CY	7.5	7.13	7.88	10	5.7
MMSZ4694	CZ	8.2	7.79	8.61	1	6.2
MMSZ4695	DC	8.7	8.27	9.14	1	6.6
MMSZ4696	DD	9.1	8.65	9.56	1	6.9
MMSZ4697	DE	10	9.5	10.5	1	7.6
MMSZ4698	DF	11	10.5	11.6	0.05	8.4
MMSZ4699	DH	12	11.4	12.6	0.05	9.1
MMSZ4700	DJ	13	12.4	13.7	0.05	9.8
MMSZ4701	DK	14	13.3	14.7	0.05	10.6
MMSZ4702	DM	15	14.3	15.8	0.05	11.4
MMSZ4703	DN	16	15.2	16.8	0.05	12.1
MMSZ4704	DP	17	16.2	17.9	0.05	12.9
MMSZ4705	DT	18	17.1	18.9	0.05	13.6
MMSZ4706	DU	19	18.1	20	0.05	14.4
MMSZ4707	DV	20	19	21	0.01	15.2
MMSZ4708	DA	22	20.9	23.1	0.01	16.7
MMSZ4709	DZ	24	22.8	25.2	0.01	18.2
MMSZ4710	DY	25	23.8	26.3	0.01	19
MMSZ4711	EA	27	25.7	28.4	0.01	20.4
MMSZ4712	EC	28	26.6	29.4	0.01	21.2
MMSZ4713	ED	30	28.5	31.5	0.01	22.8
MMSZ4714	EE	33	31.4	34.7	0.01	25
MMSZ4715	EF	36	34.2	37.8	0.01	27.3
MMSZ4716	EH	39	37.1	41	0.01	29.6
MMSZ4717	EJ	43	40.9	45.2	0.01	32.6

[1)] 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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