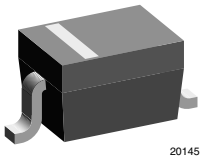
Small Signal Zener Diodes

Features

- Silicon Planar Power Zener Diodes
- Low Zener impedence and low leakage current
- Popular in Asian designs
- Compact surface mount device
- Ideal for automated mounting
- Lead (Pb)-free component
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



Mechanical Data

Case: SOD323 Plastic case

Weight: approx. 5.0 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
Power dissipation		P_d	200	mW

Thermal Characteristics

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

Parameter	Test condition	Symbol	Value	Unit
Junction temperature		T_j	150	°C
Storage temperature range		T_{stg}	- 55 to + 150	

Electrical Characteristics

Partnumber	Marking Code	Zener Voltage Subdivision		Operating Resistance	Rising Operating Resistance	Test Current		Reverse Current	
		V_Z at I_{ZT1}	V_Z at I_{ZT1}	Z_Z at I_{ZT1}	Z_{ZK} at I_{ZT2}	I_{ZT1}	I_{ZT2}	I_R	at V_R
		V	V	Ω		mA	mA	µA	V
		min	max	max	max				
GDZ2V0B-V	0 2	2.020	2.200	100	1000	5	0.5	120	0.5
GDZ2V2B-V	1 2	2.220	2.410	100	1000	5	0.5	120	0.7
GDZ2V4B-V	2 2	2.430	2.630	100	1000	5	0.5	120	1.0
GDZ2V7B-V	3 2	2.690	2.910	110	1000	5	0.5	100	1.0
GDZ3V0B-V	4 2	3.010	3.220	120	1000	5	0.5	50	1.0
GDZ3V3B-V	5 2	3.320	3.530	120	1000	5	0.5	20	1.0
GDZ3V6B-V	6 2	3.600	3.845	100	1000	5	1.0	10	1.0
GDZ3V9B-V	7 2	3.890	4.160	100	1000	5	1.0	5.0	1.0
GDZ4V3B-V	8 2	4.170	4.430	100	1000	5	1.0	5.0	1.0
GDZ4V7B-V	9 2	4.550	4.750	100	800	5	0.5	2.0	1.0
GDZ5V1B-V	T 1	4.980	5.200	80	500	5	0.5	2.0	1.0
GDZ5V6B-V	T 2	5.490	5.730	60	200	5	0.5	1.0	2.5
GDZ6V2B-V	T 3	6.060	6.330	60	100	5	0.5	1.0	3.0
GDZ6V8B-V	T 4	6.650	6.930	40	60	5	0.5	0.5	3.5
GDZ7V5B-V	T 5	7.280	7.600	30	60	5	0.5	0.5	4.0
GDZ8V2B-V	T 6	8.020	8.360	30	60	5	0.5	0.5	5.0
GDZ9V1B-V	T 7	8.850	9.230	30	60	5	0.5	0.5	6.0
GDZ10B-V	T 8	9.770	10.210	30	60	5	0.5	0.1	7.0
GDZ11B-V	T 9	10.760	11.220	30	60	5	0.5	0.1	8.0
GDZ12B-V	T A	11.740	12.240	30	80	5	0.5	0.1	9.0
GDZ13B-V	T B	12.910	13.490	37	80	5	0.5	0.1	10.0
GDZ15B-V	T C	14.340	14.980	42	80	5	0.5	0.1	11.0
GDZ16B-V	T D	15.850	16.510	50	80	5	0.5	0.1	12.0
GDZ18B-V	T E	17.560	18.350	65	80	5	0.5	0.1	13.0
GDZ20B-V	T H	19.520	20.390	85	100	5	0.5	0.1	15.0
GDZ22B-V	T K	21.540	22.470	100	100	5	0.5	0.1	17.0
GDZ24B-V	T L	23.720	24.780	120	120	5	0.5	0.1	19.0
GDZ27B-V	T M	26.190	27.530	150	150	5	0.5	0.1	21.0
GDZ30B-V	T N	29.190	30.690	200	200	5	0.5	0.1	23.0
GDZ33B-V	T P	32.150	33.790	250	250	5	0.5	0.1	25.0
GDZ36B-V	T T	35.070	36.870	300	300	5	0.5	0.1	27.0

Notes:

(1) The Zener voltage $V_{(Z)}$ is measured 40 ms after power is supplied.

(2) The operating resistance (Z_Z, Z_{ZK}) are measured by superimposing a 1 KHz alternating current on the regulated current (I_Z).

Typical Characteristics

T_{amb} = 25 °C unless otherwise specified

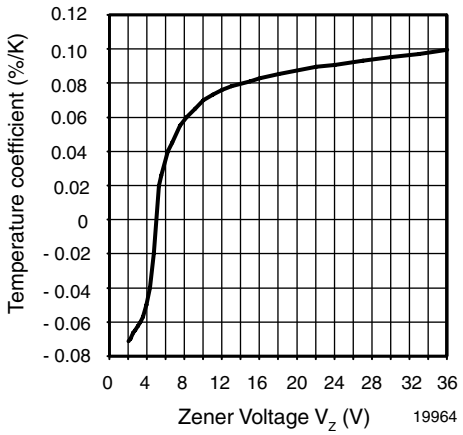
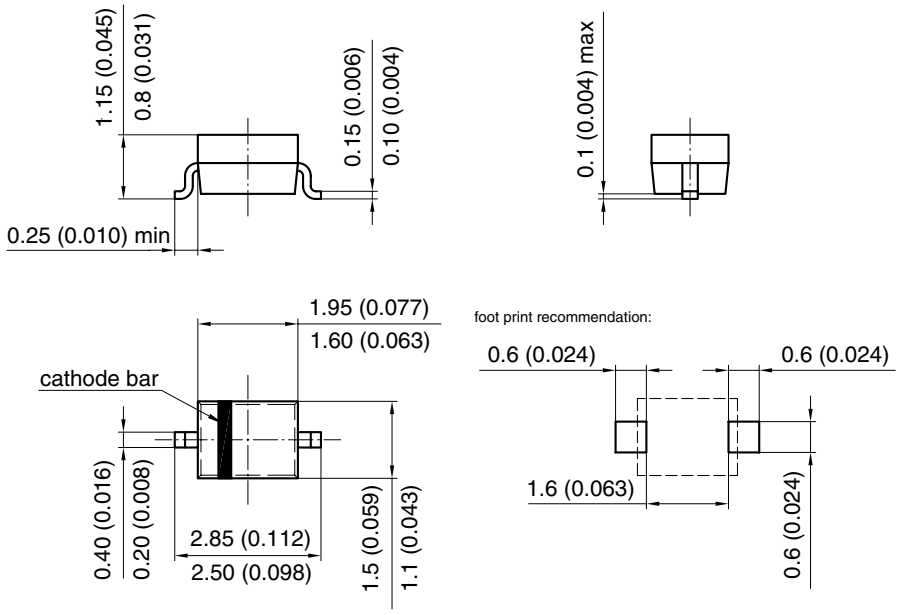


Figure 1. Zener Voltage Temperature Coefficient vs. Zener Voltage

Package Dimensions in mm (Inches): SOD323



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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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