Small Signal Zener Diodes



FEATURES

- Silicon planar power Zener diodes
- Low Zener impedance and low leakage current
- Popular in Asian designs
- Compact surface mount device
- Ideal for automated mounting
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC

Pb-free

e3

RoHS COMPLIANT

PRIMARY CHARACTERISTICS		
PARAMETER	VALUE	UNIT
V_Z range nom.	2.0 to 36	V
Test current I_{ZT}	5	mA
V_Z specification	Pulse current	
Int. construction	Single	

ORDERING INFORMATION			
DEVICE NAME	ORDERING CODE	TAPED UNITS PER REEL	MINIMUM ORDER QUANTITY
GDZ-V-series	GDZ-V-series-GS18	10 000 (8 mm tape on 13" reel)	10 000/box
GDZ-V-series	GDZ-V-series-GS08	3000 (8 mm tape on 7" reel)	15 000/box

PACKAGE				
PACKAGE NAME	WEIGHT	MOLDING COMPOUND FLAMMABILITY RATING	MOISTURE SENSITIVITY LEVEL	SOLDERING CONDITIONS
SOD-323	4.3 mg	UL 94 V-0	MSL level 1 (according J-STD-020)	260 °C/10 s at terminals

ABSOLUTE MAXIMUM RATINGS (T_{amb} = 25 °C, unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Power dissipation		P_{tot}	200	mW
Junction temperature		T_j	150	°C
Storage temperature range		T_{stg}	- 55 to + 150	°C

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ELECTRICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

PART NUMBER	MARKING CODE	ZENER VOLTAGE RANGE			TEST CURRENT		REVERSE CURRENT		DYNAMIC RESISTANCE	
		V_Z at I_{ZT1}			I_{ZT1}	I_{ZT2}	I_R at V_R		Z_Z at I_{ZT1}	Z_{ZK} at I_{ZT2}
		V			mA		µA	V	Ω	
		MIN.	NOM.	MAX.			MAX.		MAX.	MAX.
GDZ2V0B-V	02	2.02	2.0	2.2	5	0.5	120	0.5	100	1000
GDZ2V2B-V	12	2.22	2.2	2.41	5	0.5	120	0.7	100	1000
GDZ2V4B-V	22	2.43	2.4	2.63	5	0.5	120	1	100	1000
GDZ2V7B-V	32	2.69	2.7	2.91	5	0.5	100	1	110	1000
GDZ3V0B-V	42	3.01	3.0	3.22	5	0.5	50	1	120	1000
GDZ3V3B-V	52	3.32	3.3	3.53	5	0.5	20	1	120	1000
GDZ3V6B-V	62	3.6	3.6	3.845	5	1	10	1	100	1000
GDZ3V9B-V	72	3.89	3.9	4.16	5	1	5	1	100	1000
GDZ4V3B-V	82	4.17	4.3	4.43	5	1	5	1	100	1000
GDZ4V7B-V	92	4.55	4.7	4.75	5	0.5	2	1	100	800
GDZ5V1B-V	T1	4.98	5.1	5.2	5	0.5	2	1	80	500
GDZ5V6B-V	T2	5.49	5.6	5.73	5	0.5	1	2.5	60	200
GDZ6V2B-V	T3	6.06	6.2	6.33	5	0.5	1	3	60	100
GDZ6V8B-V	T4	6.65	6.8	6.93	5	0.5	0.5	3.5	40	60
GDZ7V5B-V	T5	7.28	7.5	7.6	5	0.5	0.5	4	30	60
GDZ8V2B-V	T6	8.02	8.2	8.36	5	0.5	0.5	5	30	60
GDZ9V1B-V	T7	8.85	9.1	9.23	5	0.5	0.5	6	30	60
GDZ10B-V	T8	9.77	10	10.21	5	0.5	0.1	7	30	60
GDZ11B-V	T9	10.76	11	11.22	5	0.5	0.1	8	30	60
GDZ12B-V	TA	11.74	12	12.24	5	0.5	0.1	9	30	80
GDZ13B-V	TB	12.91	13	13.49	5	0.5	0.1	10	37	80
GDZ15B-V	TC	14.34	15	14.98	5	0.5	0.1	11	42	80
GDZ16B-V	TD	15.85	16	16.51	5	0.5	0.1	12	50	80
GDZ18B-V	TE	17.56	18	18.35	5	0.5	0.1	13	65	80
GDZ20B-V	TH	19.52	20	20.39	5	0.5	0.1	15	85	100
GDZ22B-V	TK	21.54	22	22.47	5	0.5	0.1	17	100	100
GDZ24B-V	TL	23.72	24	24.78	5	0.5	0.1	19	120	120
GDZ27B-V	TM	26.19	27	27.53	5	0.5	0.1	21	150	150
GDZ30B-V	TN	29.19	30	30.69	5	0.5	0.1	23	200	200
GDZ33B-V	TP	32.15	33	33.79	5	0.5	0.1	25	250	250
GDZ36B-V	TT	35.07	36	36.87	5	0.5	0.1	27	300	300

Notes

- The Zener voltage V_Z is measured 40 ms after power is supplied
- The operating resistance (Z_Z, Z_{ZK}) are measured by superimposing a 1 kHz alternating current on the regulated current (I_Z).

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BASIC CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

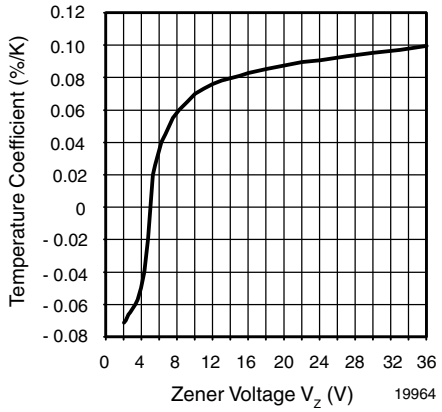
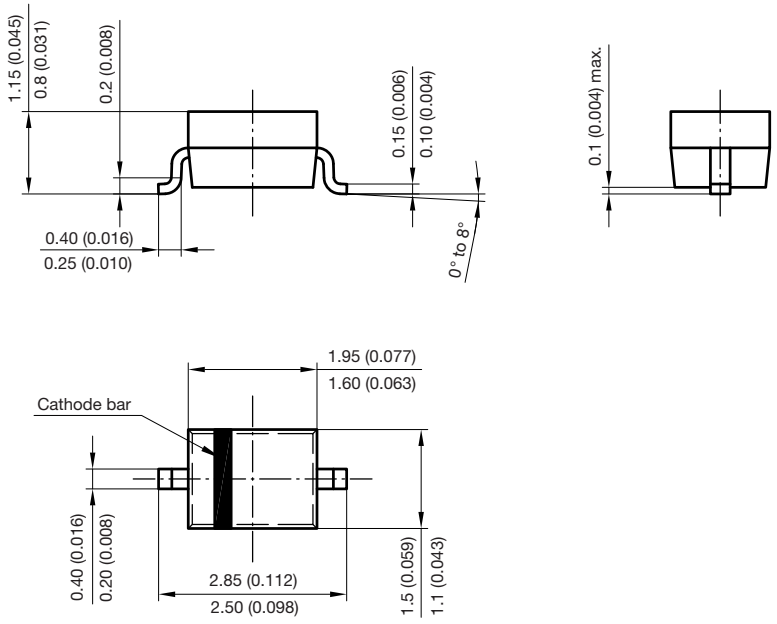
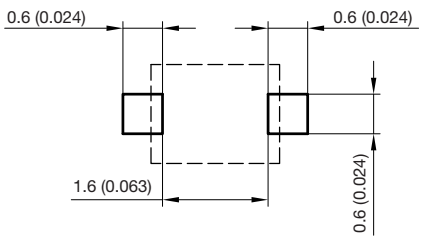


Fig. 1 - Zener Voltage Temperature Coefficient vs. Zener Voltage

PACKAGE DIMENSIONS in millimeters (inches): SOD-323



Foot print recommendation:



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