

Silicon Planar Zener Diodes

General description

General purpose Zener diode in an small SOD-323 Bend Lead

Surface-Mounted plastic package.

Approximately $\pm 2\%$ tolerance range with nominal working voltage from 2.4V to 75V

Features

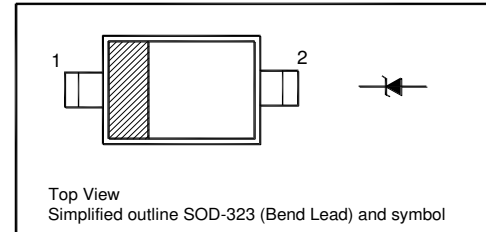
- Total power dissipation: 300 mW (max.)
- Working voltage range nominal 2.4 V to 75 V
- Zener voltage tolerance $\pm 2\%$
- Package designed for optimal automated board assembly
- Small package size for high density applications
- Halogen and Antimony Free(HAF), RoHS compliant

Applications

- General regulation functions

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Total Power Dissipation	P_{tot}	300	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance Junction to Ambient ¹⁾	$R_{\theta\text{JA}}$	417	$^\circ\text{C}/\text{W}$

¹⁾ Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

Characteristics at $T_a = 25^\circ\text{C}$ ($V_F = 0.9\text{ V Max. at } I_F = 10\text{ mA}$)

Type	Marking Code	Zener Voltage Range ¹⁾			Dynamic Impedance		Reverse Leakage Current	
		V_{znom}	V_{ZT}	at I_{ZT}	Z_{ZT}	at I_{ZT}	I_R	at V_R
		(V)	(V)	(mA)	Max. (Ω)	(mA)	Max. (μA)	(V)
MM3Z2B4G	DN	2.4	2.352...2.448	5	100	5	120	1
MM3Z2B7G	DP	2.7	2.646...2.754	5	110	5	120	1
MM3Z3B0G	DR	3.0	2.94...3.06	5	120	5	50	1
MM3Z3B3G	DX	3.3	3.234...3.366	5	130	5	20	1
MM3Z3B6G	DY	3.6	3.528...3.672	5	130	5	10	1
MM3Z3B9G	DZ	3.9	3.822...3.978	5	130	5	5	1
MM3Z4B3G	ZO	4.3	4.214...4.386	5	130	5	5	1
MM3Z4B7G	EB	4.7	4.606...4.794	5	130	5	2	1
MM3Z5B1G	EC	5.1	4.998...5.202	5	130	5	2	1.5
MM3Z5B6G	ED	5.6	5.488...5.712	5	80	5	1	2.5
MM3Z6B2G	EE	6.2	6.076...6.324	5	50	5	1	3
MM3Z6B8G	EF	6.8	6.664...6.936	5	30	5	0.5	3.5
MM3Z7B5G	EH	7.5	7.35...7.65	5	30	5	0.5	4
MM3Z8B2G	EJ	8.2	8.036...8.364	5	30	5	0.5	5
MM3Z9B1G	EK	9.1	8.918...9.282	5	30	5	0.5	6
MM3ZB10G	EM	10	9.8...10.2	5	30	5	0.1	7
MM3ZB11G	EN	11	10.78...11.22	5	30	5	0.1	8
MM3ZB12G	EP	12	11.76...12.24	5	35	5	0.1	9
MM3ZB13G	ER	13	12.74...13.26	5	35	5	0.1	10
MM3ZB15G	EX	15	14.7...15.3	5	40	5	0.1	11
MM3ZB16G	EY	16	15.68...16.32	5	40	5	0.1	12
MM3ZB18G	EZ	18	17.64...18.36	5	45	5	0.1	13
MM3ZB20G	FA	20	19.6...20.4	5	50	5	0.1	15
MM3ZB22G	FB	22	21.56...22.44	5	55	5	0.1	17
MM3ZB24G	FC	24	23.52...24.48	5	60	5	0.1	19
MM3ZB27G	FD	27	26.46...27.54	2	70	2	0.1	21
MM3ZB30G	FE	30	29.4...30.6	2	80	2	0.1	23
MM3ZB33G	FF	33	32.34...33.66	2	80	2	0.1	25
MM3ZB36G	FH	36	35.28...36.72	2	90	2	0.1	27
MM3ZB39G	FJ	39	38.22...39.78	2	100	2	0.1	30
MM3ZB43G	XJ	43	42.14...43.86	2	130	2	0.1	33
MM3ZB47G	XK	47	46.06...47.94	2	150	2	0.1	36
MM3ZB51G	XM	51	49.98...52.02	2	180	2	0.1	39
MM3ZB56G	XN	56	54.88...57.12	2	200	2	0.1	43
MM3ZB62G	XP	62	60.76...63.24	2	215	2	0.1	47
MM3ZB68G	XR	68	66.64...69.36	2	240	2	0.1	52
MM3ZB75G	XX	75	73.5...76.5	2	265	2	0.1	56

¹⁾ V_{ZT} is tested with pulses (20 ms).

Electrical Characteristics Curves

Fig 1. Power Derating Curve

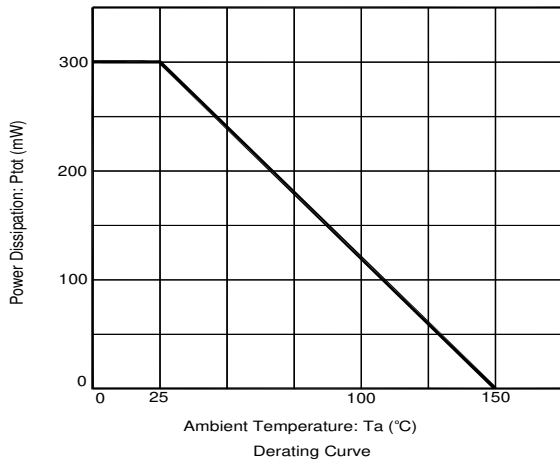


Fig 2. Forward Characteristics Curve

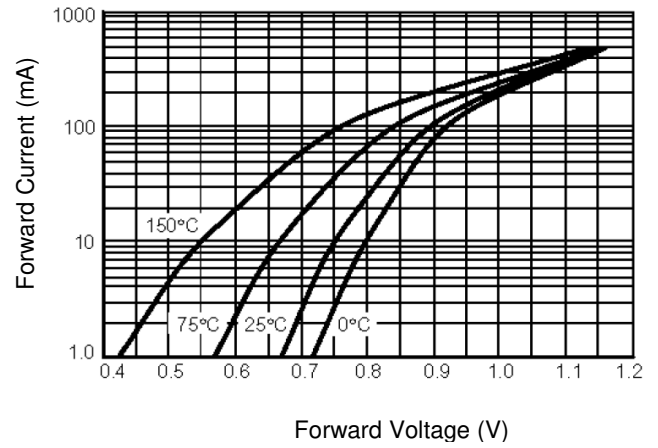


Fig 3. Zener Characteristics Curve

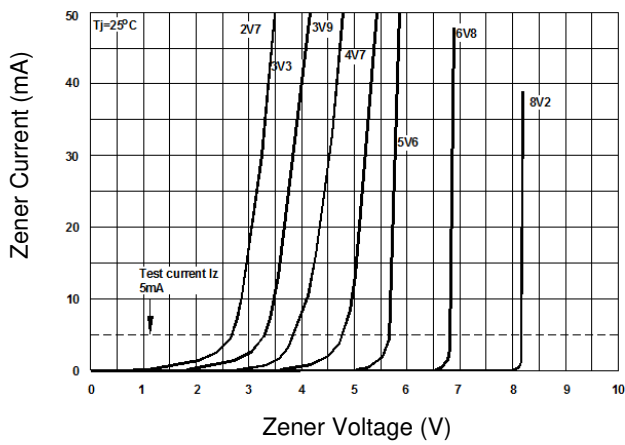
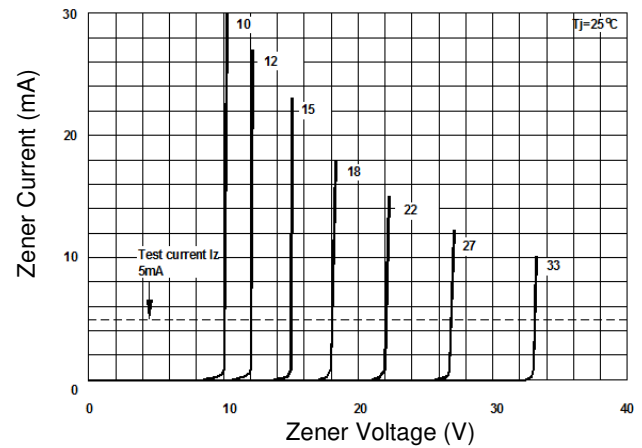


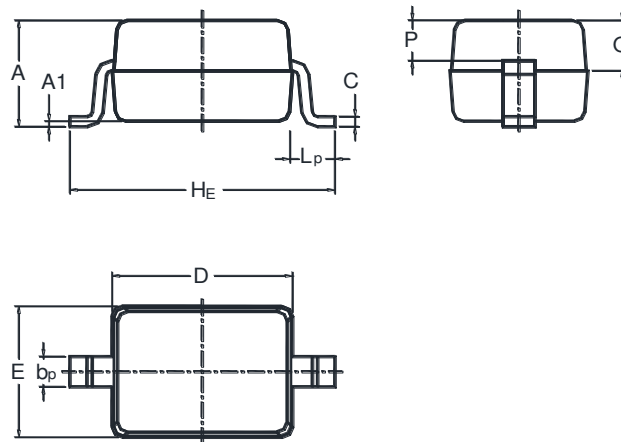
Fig 4. Zener Characteristics Curve



PACKAGE OUTLINE

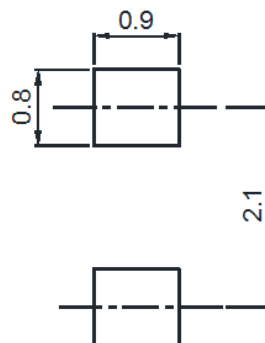
Plastic surface mounted package; 2 leads

SOD-323



UNIT	A	A ₁	b _p	C	D	E	H _E	L _p	Q	P
mm	1.1 0.8	0.1 0	0.4 0.25	0.18 0.09	1.8 1.6	1.35 1.15	2.8 2.3	0.5 0.1	0.5 0.3	0.4 0.3

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOD-323	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

" III " = Cathode line

" • " = HAF (Halogen and Antimony Free)

" ** " = Part No.

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