

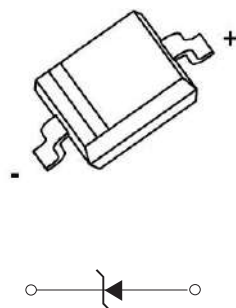
SOD-323 Plastic-Encapsulate Diodes

SOD-323

ZENER DIODE

Features:

- Planar Die Construction
- General Purpose, Medium Current
- Ideally Suited for Automated Assembly Processes
- Available in Lead Free Version



Maximum Ratings(Ta=25°C unless otherwise specified)

Characteristic	Symbol	Value	Unit
Forward Voltage (Note 2) @ I _F = 10mA	V _F	0.9	V
Power Dissipation(Note 1)	P _d	200	mW
Thermal Resistance from Junction to Ambient	R _{θJA}	625	°C/W
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _{stg}	-55 ~ +150	°C

ELECTRICAL CHARACTERISTICS

T_a=25°C unless otherwise specified

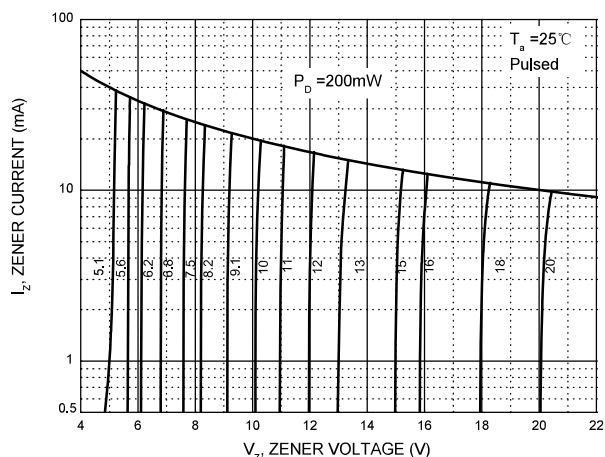
Type Number	Type Code	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 3)			Maximum Reverse Current		Typical Temperature Coefficient @I _{ZTC} mV/°C		Test Current I _{ZTC}
		V _Z @I _{ZT}			I _{ZT}	Z _{ZT} @I _{ZT}	Z _{ZK} @I _{ZK}	I _{ZK}	I _R	V _R			
		Nom(V)	Min(V)	Max(V)	mA	Ω		mA	μA	V	Min	Max	mA
MM3Z2B4	2WX	2.4	2.35	2.45	5	100	600	1.0	50	1.0	-3.5	0	5
MM3Z2B7	2W1	2.7	2.65	2.75	5	100	600	1.0	20	1.0	-3.5	0	5
MM3Z3B0	2W2	3.0	2.94	3.06	5	95	600	1.0	10	1.0	-3.5	0	5
MM3Z3B3	2W3	3.3	3.23	3.37	5	95	600	1.0	5	1.0	-3.5	0	5
MM3Z3B6	2W4	3.6	3.53	3.67	5	90	600	1.0	5	1.0	-3.5	0	5
MM3Z3B9	2W5	3.9	3.82	3.98	5	90	600	1.0	3	1.0	-3.5	0	5
MM3Z4B3	2W6	4.3	4.21	4.39	5	90	600	1.0	3	1.0	-3.5	0	5
MM3Z4B7	2W7	4.7	4.61	4.79	5	80	500	1.0	3	2.0	-3.5	0.2	5
MM3Z5B1	2W8	5.1	5.00	5.20	5	60	480	1.0	2	2.0	-2.7	1.2	5
MM3Z5B6	2W9	5.6	5.49	5.71	5	40	400	1.0	1	2.0	-2.0	2.5	5
MM3Z6B2	2WA	6.2	6.08	6.32	5	10	150	1.0	3	4.0	0.4	3.7	5
MM3Z6B8	2WB	6.8	6.66	6.94	5	15	80	1.0	2	4.0	1.2	4.5	5
MM3Z7B5	2WC	7.5	7.35	7.65	5	15	80	1.0	1	5.0	2.5	5.3	5
MM3Z8B2	2WD	8.2	8.04	8.36	5	15	80	1.0	0.7	5.0	3.2	6.2	5
MM3Z9B1	2WE	9.1	8.92	9.28	5	15	100	1.0	0.5	6.0	3.8	7.0	5
MM3Z10B	2WF	10	9.80	10.20	5	20	150	1.0	0.2	7.0	4.5	8.0	5
MM3Z11B	2WG	11	10.78	11.22	5	20	150	1.0	0.1	8.0	5.4	9.0	5
MM3Z12B	2WH	12	11.76	12.24	5	25	150	1.0	0.1	8.0	6.0	10.0	5
MM3Z13B	2WI	13	12.74	13.26	5	30	170	1.0	0.1	8.0	7.0	11.0	5
MM3Z15B	2WJ	15	14.70	15.30	5	30	200	1.0	0.1	10.5	9.2	13.0	5
MM3Z16B	2WK	16	15.68	16.32	5	40	200	1.0	0.1	11.2	10.4	14.0	5
MM3Z18B	2WL	18	17.64	18.36	5	45	225	1.0	0.1	12.6	12.4	16.0	5
MM3Z20B	2WM	20	19.60	20.40	5	55	225	1.0	0.1	14.0	14.4	18.0	5
MM3Z22B	2WN	22	21.56	22.44	5	55	250	1.0	0.1	15.4	16.4	20.0	5
MM3Z24B	2WO	24	23.52	24.48	5	70	250	1.0	0.1	16.8	18.4	22.0	5
MM3Z27B	2WP	27	26.46	27.54	2	80	300	0.5	0.1	18.9	21.4	25.3	2
MM3Z30B	2WQ	30	29.40	30.60	2	80	300	0.5	0.1	21.0	24.4	29.4	2
MM3Z33B	2WR	33	32.34	33.66	2	80	325	0.5	0.1	23.1	27.4	33.4	2
MM3Z36B	2WS	36	35.28	36.72	2	90	350	0.5	0.1	25.2	30.4	37.4	2
MM3Z39B	2WT	39	38.22	39.78	2	130	350	0.5	0.1	27.3	33.4	41.2	2

- Notes: 1. Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25mm².
2. Short duration test pulse used to minimize self-heating effect.
3. f = 1kHz.

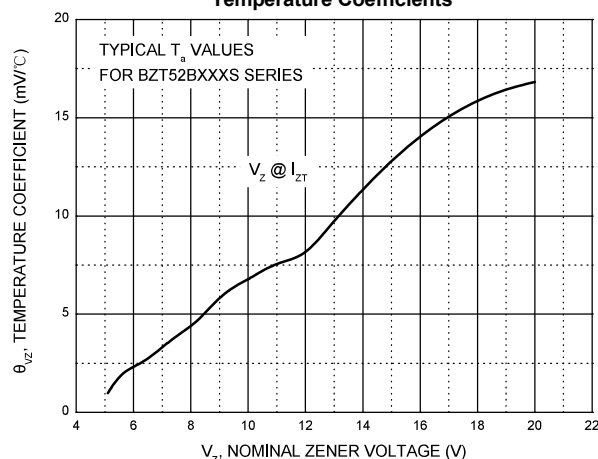
Typical Characteristics

Notes: Our company currently provide 5.1 V - 20 V products only

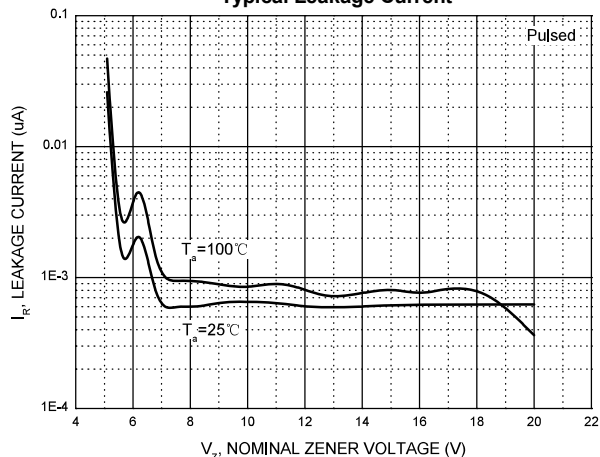
Zener Characteristics (V_z 5.1V to 20 V)



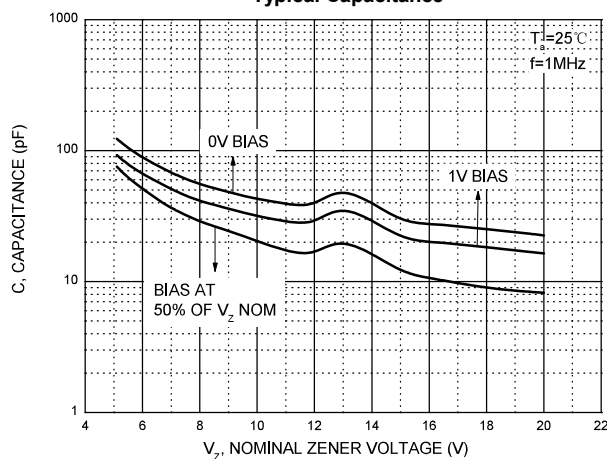
Temperature Coefficients



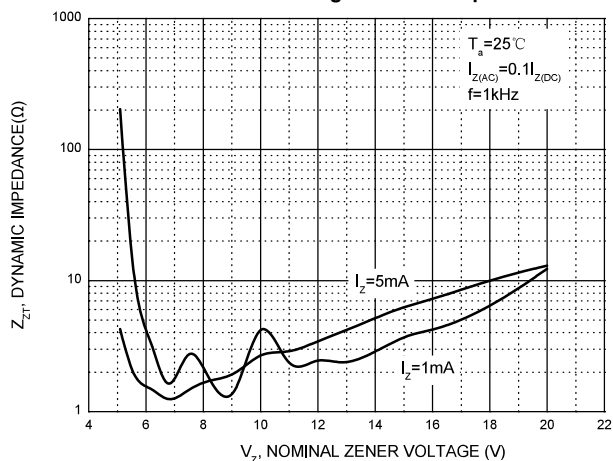
Typical Leakage Current



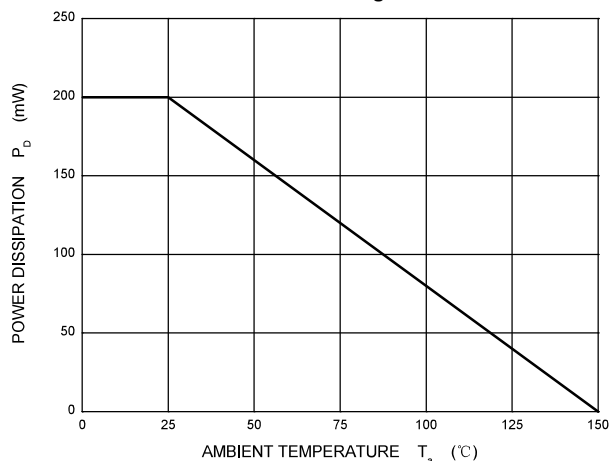
Typical Capacitance



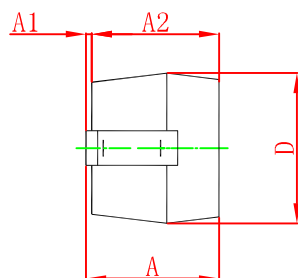
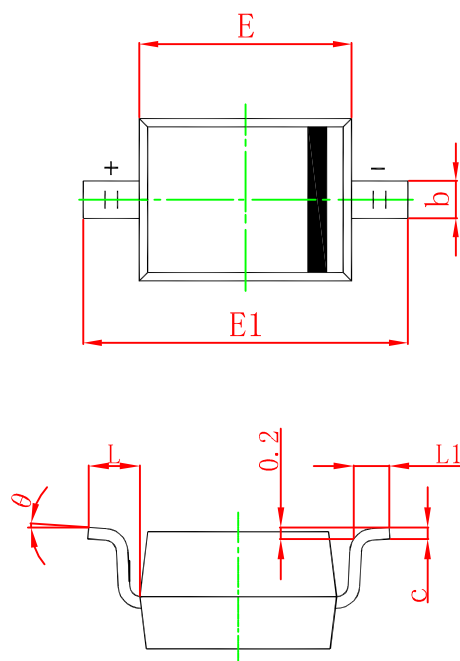
Effect of Zener Voltage on Zener Impedance



Power Derating Curve

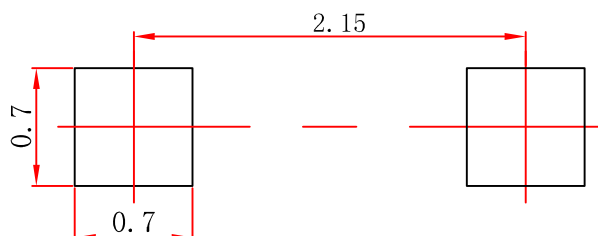


SOD-323 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A		1.000		0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.550	2.750	0.100	0.108
L	0.475 REF.		0.019 REF.	
L1	0.250	0.400	0.010	0.016
θ	0°		8°	

SOD-323 Suggested Pad Layout

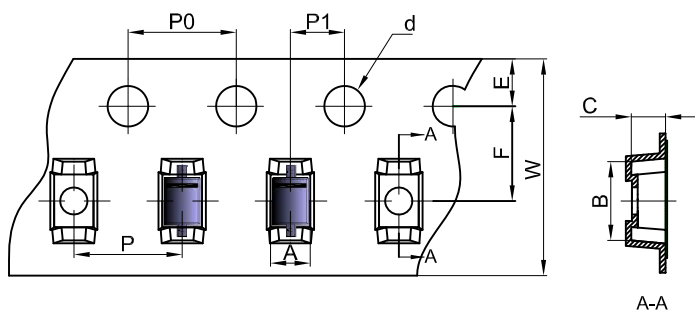


Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

SOD-323 Tape and Reel

SOD-323 Embossed Carrier Tape

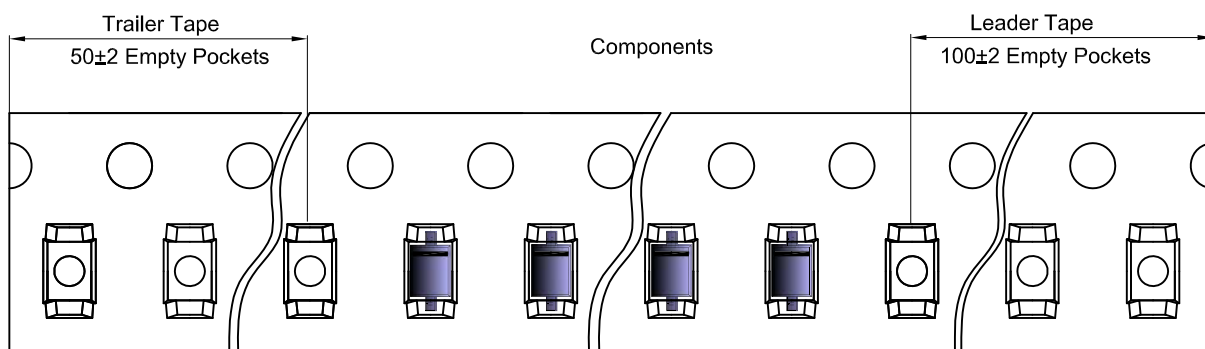


Packaging Description:

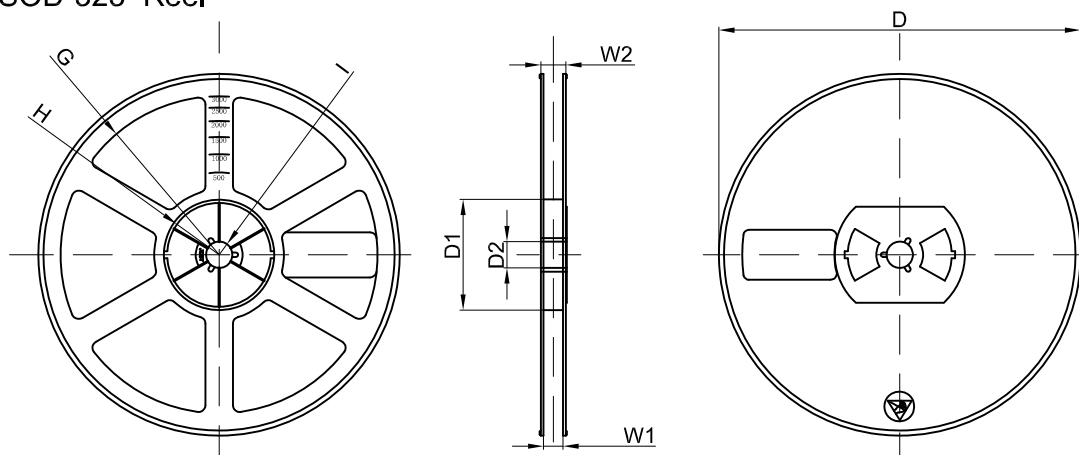
SOD-323 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOD-323	1.48	3.3	1.25	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOD-323 Tape Leader and Trailer



SOD-323 Reel



Dimensions are in millimeter							
Reel Option	D	D1	D2	G	H	I	W1
7"Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	45,000 pcs	203×203×195	180,000 pcs	438×438×220	