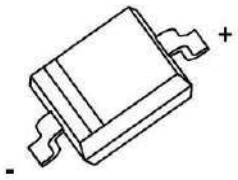
SOD-323 Plastic-Encapsulate Diodes

ZENER DIODE

SOD-323



Feature

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

Maximum Ratings(Ta=25℃ 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	500	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	625	℃/W
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	-55 ~ +150	℃

T_a=25℃ unless otherwise specified

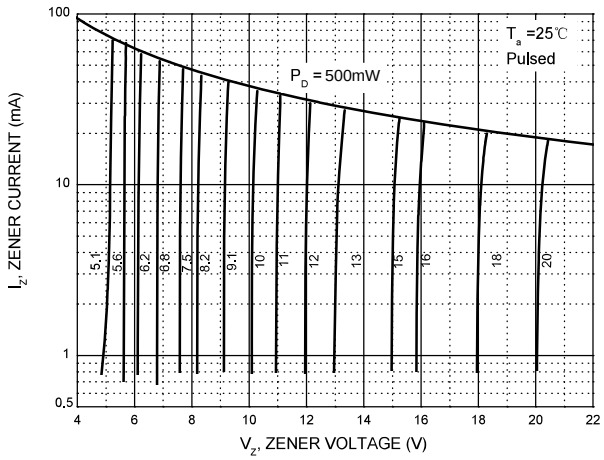
Type Number	Type Code	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 3)			Maximum Reverse Current		Typical Temperature Coefficent @I_{ZTC}		Test Current I_{ZTC}
		V_Z@I_{ZT}			I_{ZT}	Z_{ZT}@I_{ZT}	Z_{ZK}@I_{ZK}	I_{ZK}	I_R	V_R	mV/°C		
		Nom(V)	Min(V)	Max(V)	mA	Ω		mA	μA	V	Min	Max	mA
MM3Z2B4	2WX/DN	2.4	2.35	2.45	5	100	600	1.0	50	1.0	-3.5	0	5
MM3Z2B7	2W1/DP	2.7	2.65	2.75	5	100	600	1.0	20	1.0	-3.5	0	5
MM3Z3B0	2W2/DR	3.0	2.94	3.06	5	95	600	1.0	10	1.0	-3.5	0	5
MM3Z3B3	2W3/DX	3.3	3.23	3.37	5	95	600	1.0	5	1.0	-3.5	0	5
MM3Z3B6	2W4/DY	3.6	3.53	3.67	5	90	600	1.0	5	1.0	-3.5	0	5
MM3Z3B9	2W5/DZ	3.9	3.82	3.98	5	90	600	1.0	3	1.0	-3.5	0	5
MM3Z4B3	2W6/Z0	4.3	4.21	4.39	5	90	600	1.0	3	1.0	-3.5	0	5
MM3Z4B7	2W7/EB	4.7	4.61	4.79	5	80	500	1.0	3	2.0	-3.5	0.2	5
MM3Z5B1	2W8/EC	5.1	5.00	5.20	5	60	480	1.0	2	2.0	-2.7	1.2	5
MM3Z5B6	2W9/ED	5.6	5.49	5.71	5	40	400	1.0	1	2.0	-2.0	2.5	5
MM3Z6B2	2WA/EE	6.2	6.08	6.32	5	10	150	1.0	3	4.0	0.4	3.7	5
MM3Z6B8	2WB/EF	6.8	6.66	6.94	5	15	80	1.0	2	4.0	1.2	4.5	5
MM3Z7B5	2WC/EH	7.5	7.35	7.65	5	15	80	1.0	1	5.0	2.5	5.3	5
MM3Z8B2	2WD/EJ	8.2	8.04	8.36	5	15	80	1.0	0.7	5.0	3.2	6.2	5
MM3Z9B1	2WE/EK	9.1	8.92	9.28	5	15	100	1.0	0.5	6.0	3.8	7.0	5
MM3ZB10	2WF/EM	10	9.80	10.20	5	20	150	1.0	0.2	7.0	4.5	8.0	5
MM3ZB11	2WG/EN	11	10.78	11.22	5	20	150	1.0	0.1	8.0	5.4	9.0	5
MM3ZB12	2WH/EP	12	11.76	12.24	5	25	150	1.0	0.1	8.0	6.0	10.0	5
MM3ZB13	2WI/ER	13	12.74	13.26	5	30	170	1.0	0.1	8.0	7.0	11.0	5
MM3ZB15	2WJ/EX	15	14.70	15.30	5	30	200	1.0	0.1	10.5	9.2	13.0	5
MM3ZB16	2WK/EY	16	15.68	16.32	5	40	200	1.0	0.1	11.2	10.4	14.0	5
MM3ZB18	2WL/EZ	18	17.64	18.36	5	45	225	1.0	0.1	12.6	12.4	16.0	5
MM3ZB20	2WM/FA	20	19.60	20.40	5	55	225	1.0	0.1	14.0	14.4	18.0	5
MM3ZB22	2WN/FB	22	21.56	22.44	5	55	250	1.0	0.1	15.4	16.4	20.0	5
MM3ZB24	2WO/FC	24	23.52	24.48	5	70	250	1.0	0.1	16.8	18.4	22.0	5
MM3ZB27	2WP/FD	27	26.46	27.54	2	80	300	0.5	0.1	18.9	21.4	25.3	2
MM3ZB30	2WQ/FE	30	29.40	30.60	2	80	300	0.5	0.1	21.0	24.4	29.4	2
MM3ZB33	2WR/FF	33	32.34	33.66	2	80	325	0.5	0.1	23.1	27.4	33.4	2
MM3ZB36	2WS/FH	36	35.28	36.72	2	90	350	0.5	0.1	25.2	30.4	37.4	2
MM3ZB39	2WT/FJ	39	38.22	39.78	2	130	350	0.5	0.1	27.3	33.4	41.2	2
MM3ZB43	2WU/XJ	43	41.16	42.84	2	13	350	0.5	0.1	29.4	36.4	45.2	2
MM3ZB47	2WV/XK	47	45.83	48.17	2	170	1000	0.25	0.1	36	42.4	52.2	2
MM3ZB51	2X1/XM	51	49.73	52.27	2	180	1300	0.25	0.1	39	46.4	56.2	2
MM3ZB56	2X2/XN	56	54.60	57.40	2	200	1400	0.25	0.1	43	50.4	65.1	2
MM3ZB62	2X3/XP	62	60.45	63.55	2	225	1400	0.25	0.1	47	53.4	68.4	2

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

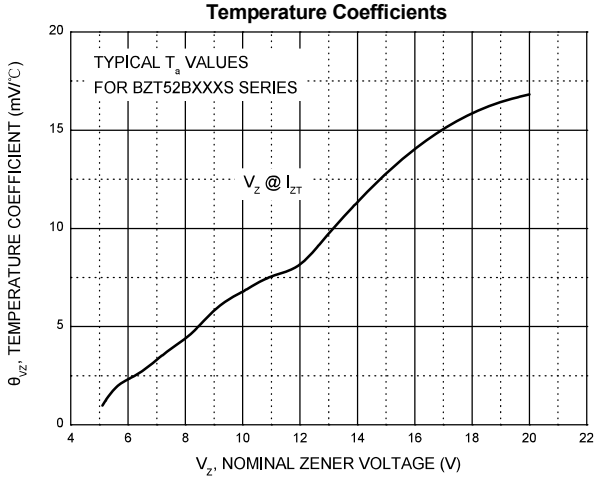
Typical Characteristics

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

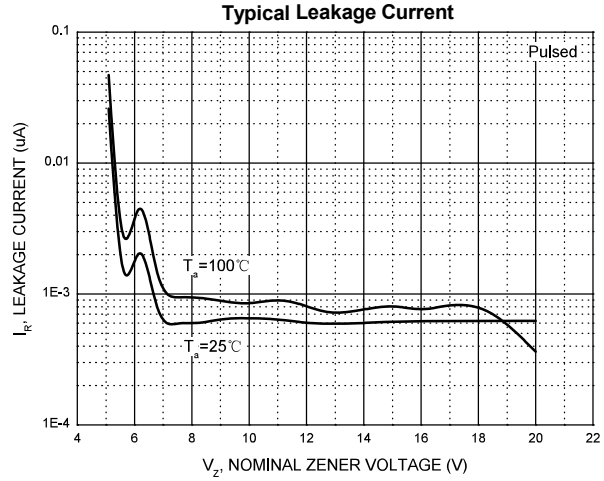
Zener Characteristics (V_Z 5.1V to 20 V)



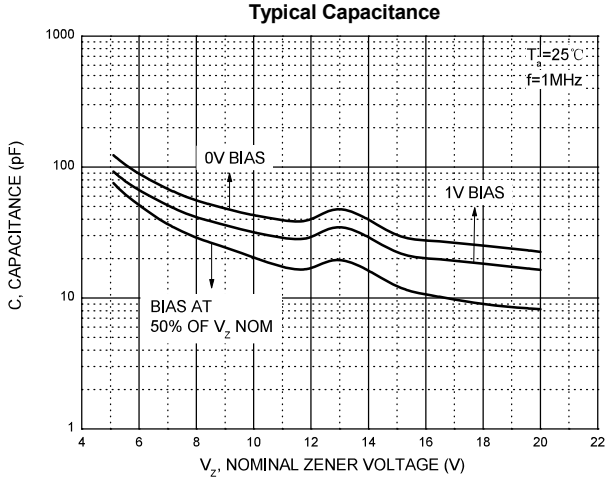
Temperature Coefficients



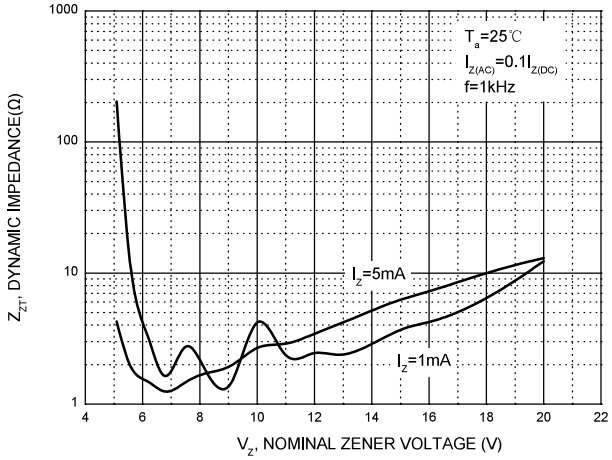
Typical Leakage Current



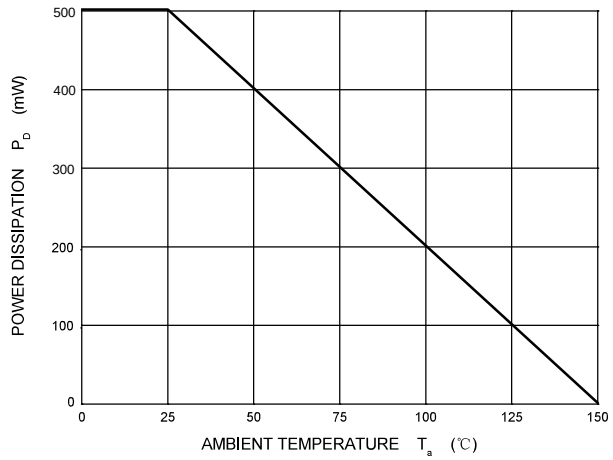
Typical Capacitance



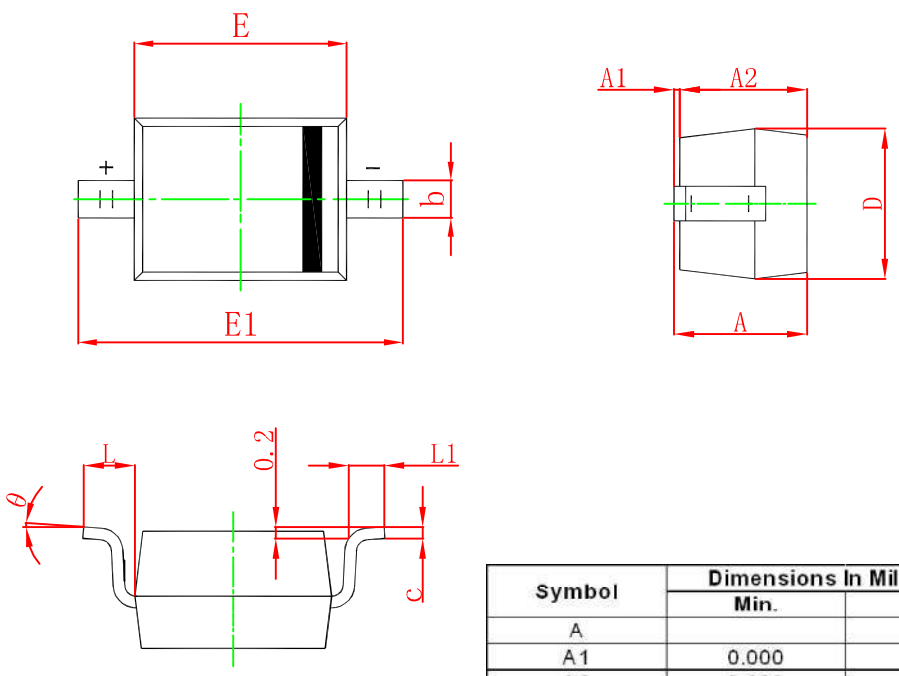
Effect of Zener Voltage on Zener Impedance



Power Derating Curve

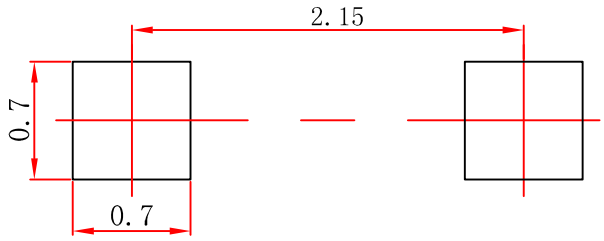


SOD-323 Package Outline Dimensions



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°	0°	8°

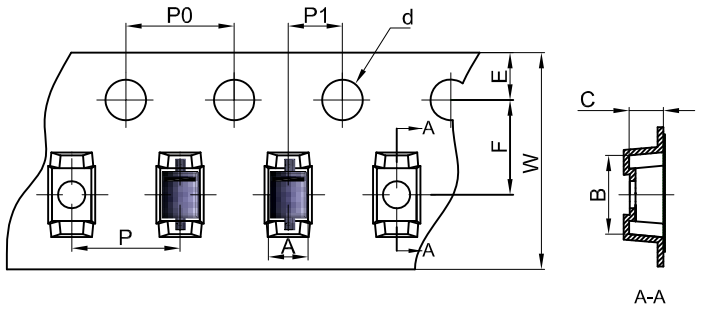
SOD-323 Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

SOD-323 Tape and Reel

SOD-323 Embossed Carrier Tape

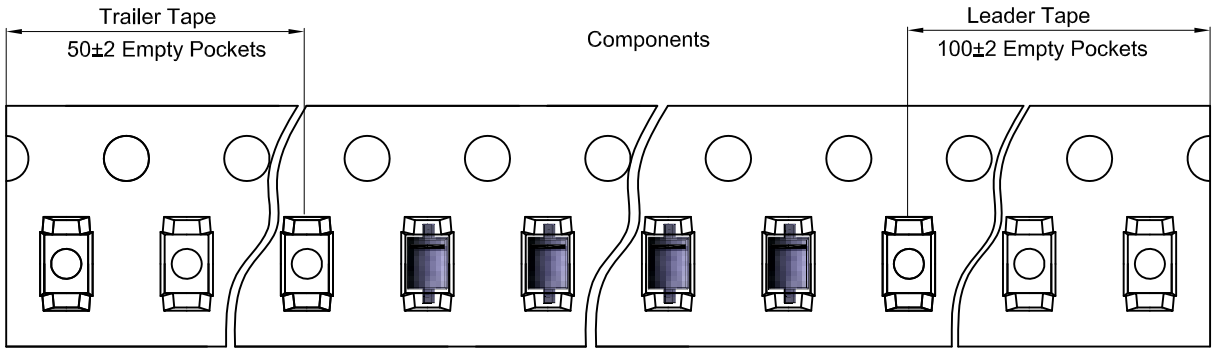


Packaging Description:

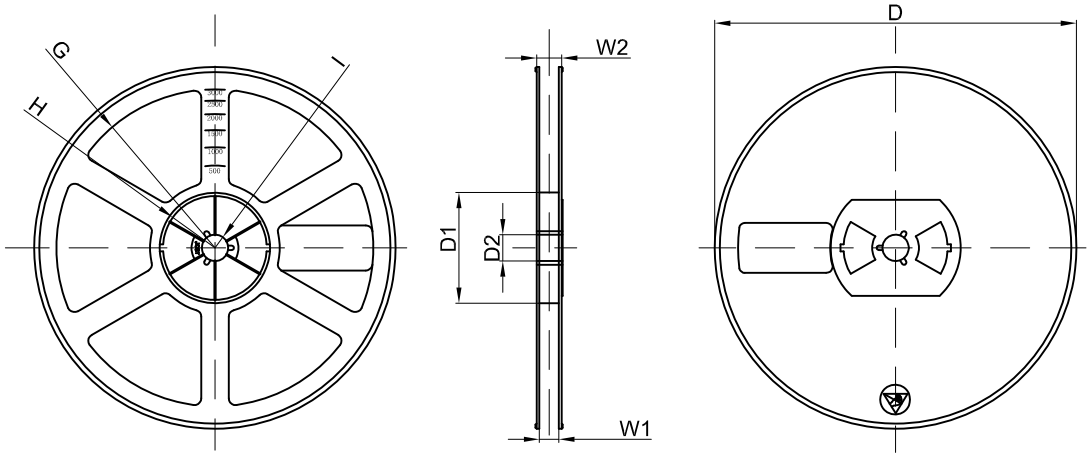
SOD-323 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts 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	W2
7"Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

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	