

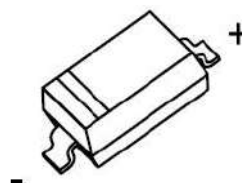
SOD-123 Plastic-Encapsulate Diodes

ZENER DIODE

SOD-123

FEATURES

- Planar Die Construction
- Ultra-Small Surface Mount Package
- General purpose, Medium Current
- Ideally Suited for Automated Assembly Processes



Maximum Ratings($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Characteristic	Symbol	Value	Unit
Forward Voltage (Note 2) @ $I_F = 10\text{mA}$	V_F	0.9	V
Power Dissipation(Note 1)	P_d	500	mW
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	357	$^{\circ}\text{C/W}$
Operation Junction and Storage Temperature Range	T_J, T_{stg}	-55~+150	$^{\circ}\text{C}$

Notes:1. Device mounted on ceramic PCB; 7.6 mm x 9.4 mm x 0.87 mm with pad areas 25 mm².

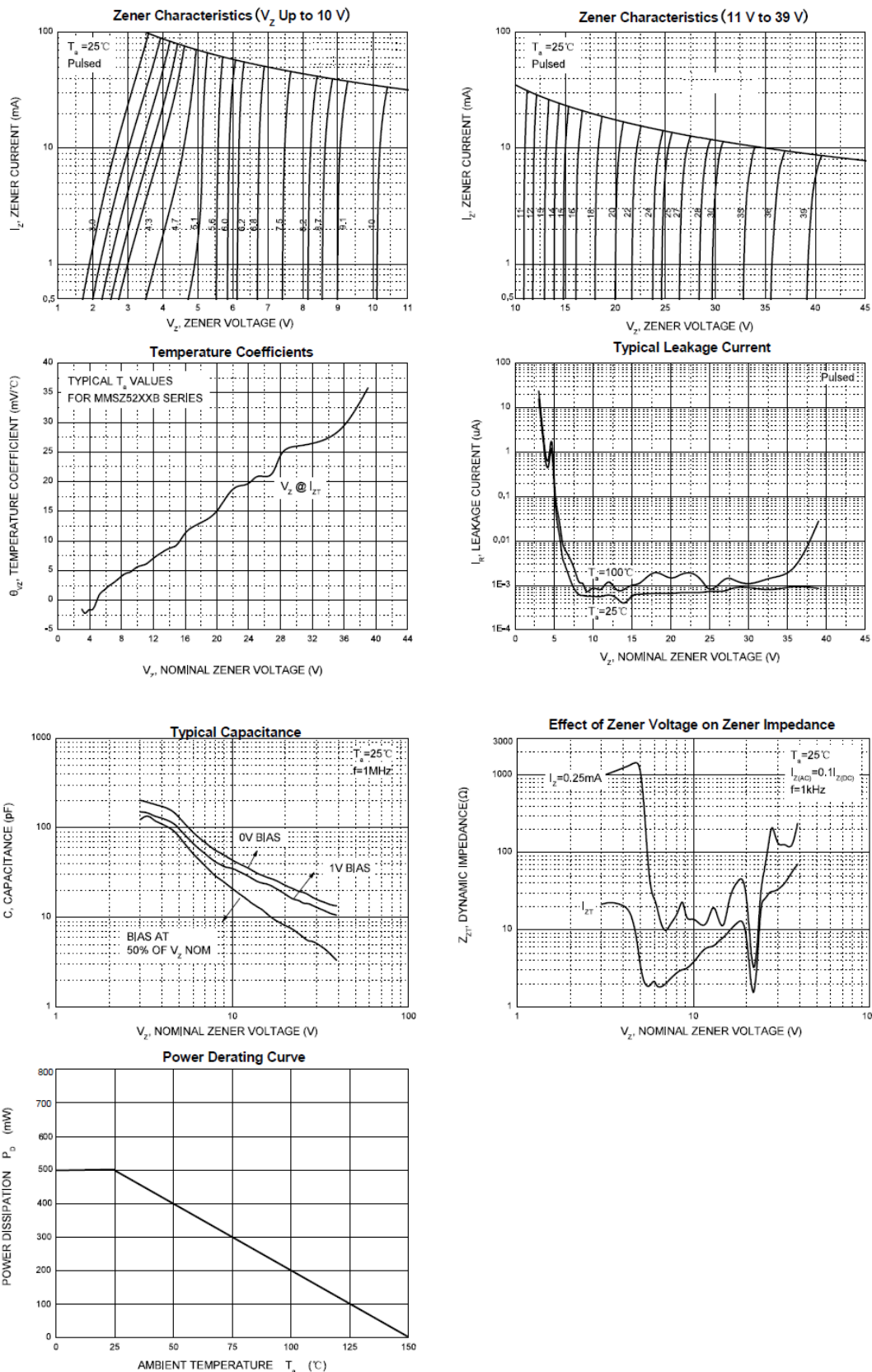
2. Tested with pulses, $T_p \leq 1.0\text{ms}$.

ELECTRICAL CHARACTERISTICS

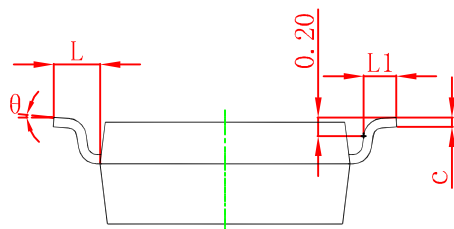
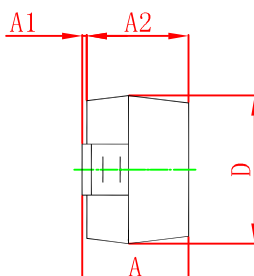
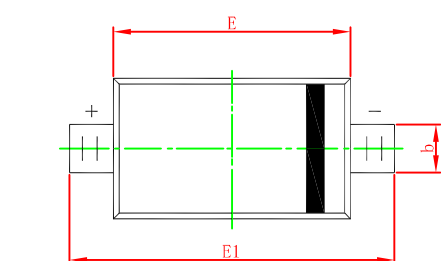
T_a=25°C unless otherwise specified

Type Number	Code		Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 4)			Maximum Reverse Current	
			V _Z @I _{ZT}			I _{ZT}	Z _{VT} @I _{ZT}	Z _{ZK} @I _{ZK}	I _{ZK}	I _R	V _R
			Nom(V)	Min(V)	Max(V)	mA	Ω		mA	uA	V
MMSZ5221B	WX	4C	2.4	2.28	2.52	20	30	1200	0.25	100	1.0
MMSZ5223B	W1	4D	2.7	2.57	2.84	20	30	1300	0.25	75	1.0
MMSZ5225B	W2	4E	3.0	2.85	3.15	20	30	1600	0.25	50	1.0
MMSZ5226B	W3	4F	3.3	3.14	3.47	20	28	1600	0.25	25	1.0
MMSZ5227B	W4	4H	3.6	3.42	3.78	20	24	1700	0.25	15	1.0
MMSZ5228B	W5	4J	3.9	3.71	4.10	20	23	1900	0.25	10	1.0
MMSZ5229B	W6	4K	4.3	4.09	4.52	20	22	2000	0.25	5	1.0
MMSZ5230B	W7	4M	4.7	4.47	4.94	20	19	1900	0.25	5	2.0
MMSZ5231B	W8	4N	5.1	4.85	5.36	20	17	1600	0.25	5	2.0
MMSZ5232B	W9	4P	5.6	5.32	5.88	20	11	1600	0.25	5	3.0
MMSZ5233B	E3		6.0	5.70	6.30	20	7	1600	0.25	5	3.5
MMSZ5234B	WA	4R	6.2	5.89	6.51	20	7	1000	0.25	5	4.0
MMSZ5235B	WB	4X	6.8	6.46	7.14	20	5	750	0.25	3	5.0
MMSZ5236B	WC	4Y	7.5	7.13	7.88	20	6	500	0.25	3	6.0
MMSZ5237B	WD	4Z	8.2	7.79	8.61	20	8	500	0.25	3	6.5
MMSZ5238B	F3		8.7	8.27	9.14	20	8	600	0.25	3	6.5
MMSZ5239B	WE	5A	9.1	8.65	9.56	20	10	600	0.25	3	7.0
MMSZ5240B	WF	5B	10	9.50	10.50	20	17	600	0.25	3	8.0
MMSZ5241B	WG	5C	11	10.45	11.55	20	22	600	0.25	2.0	8.4
MMSZ5242B	WH	5D	12	11.40	12.60	20	30	600	0.25	1.0	9.1
MMSZ5243B	WI	5E	13	12.35	13.65	9.5	13	600	0.25	0.5	9.9
MMSZ5244B	H4		14	13.30	14.70	9.0	15	600	0.25	0.1	10
MMSZ5245B	WJ	5F	15	14.25	15.75	8.5	16	600	0.25	0.1	11
MMSZ5246B	WK	5H	16	15.20	16.80	7.8	17	600	0.25	0.1	12
MMSZ5248B	WL	5J	18	17.10	18.90	7.0	21	600	0.25	0.1	14
MMSZ5250B	WM	5K	20	19.00	21.00	6.2	25	600	0.25	0.1	15
MMSZ5251B	WN	5M	22	20.90	23.10	5.6	29	600	0.25	0.1	17
MMSZ5252B	WO	5N	24	22.80	25.20	5.2	33	600	0.25	0.1	18
MMSZ5253B	K3		25	23.75	26.25	5.0	35	600	0.25	0.1	19
MMSZ5254B	WP	5P	27	25.65	28.35	5.0	41	600	0.25	0.1	21
MMSZ5255B	K5		28	26.60	29.40	4.5	44	600	0.25	0.1	21
MMSZ5256B	WQ	5R	30	28.50	31.50	4.2	49	600	0.25	0.1	23
MMSZ5257B	WR	5X	33	31.35	34.65	3.8	58	700	0.25	0.1	25
MMSZ5258B	WS	5Y	36	34.20	37.80	3.4	70	700	0.25	0.1	27
MMSZ5259B	WT	5Z	39	37.05	40.95	3.2	80	800	0.25	0.1	30
MMSZ5260B	WU	6A	43	40.00	46.00	3.0	100	900	0.25	0.1	33
MMSZ5261B	6B		47	44.00	50.00	2.7	120	1000	0.25	0.1	36

Typical Characteristics

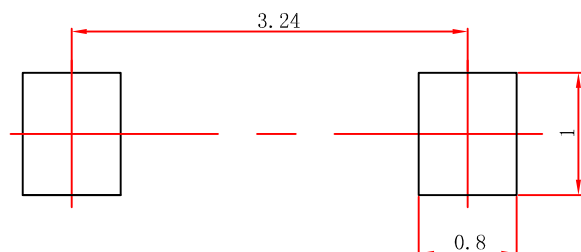


SOD-123 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500 REF		0.020 REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°

SOD-123 Suggested Pad Layout

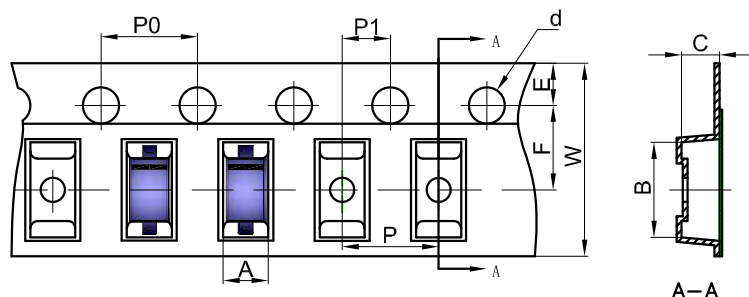


Note:

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

SOD-123 Tape and Reel

SOD-123 Embossed Carrier Tape

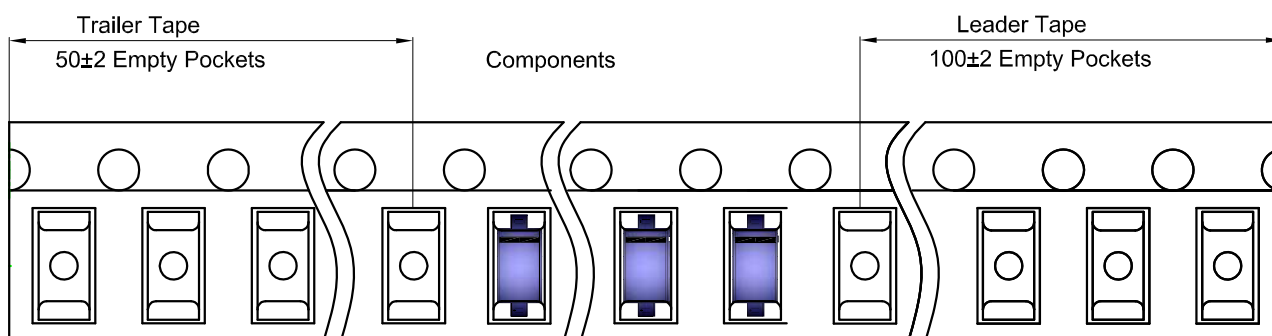


Packaging Description:

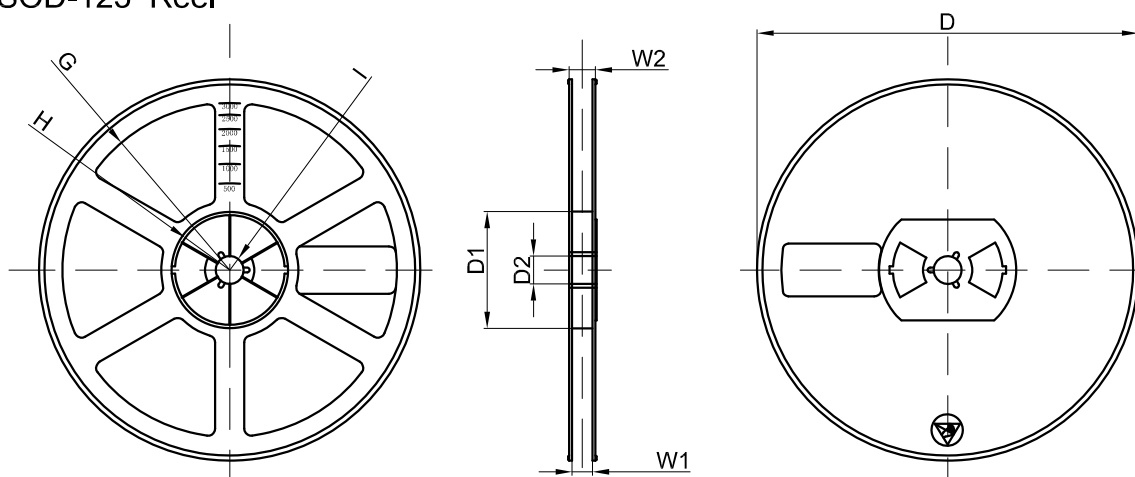
SOD-123 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts 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-123	1.85	3.95	1.57	Ø1.55	1.75	3.50	4.00	4.00	2.00	8.00

SOD-123 Tape Leader and Trailer



SOD-123 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	