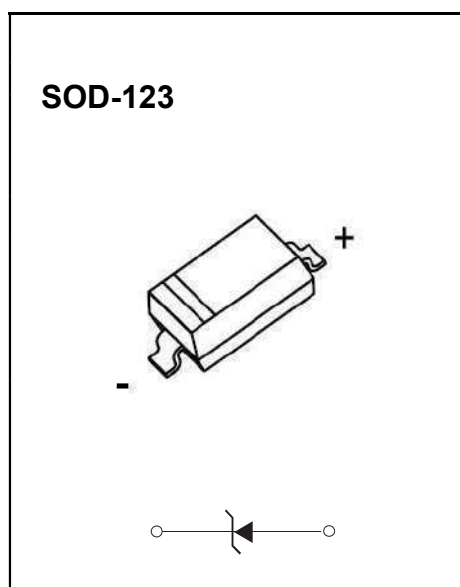


## SOD-123 Plastic-Encapsulate Diodes

ZENER DIODE

### 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	$^{\circ}\text{C}/\text{W}$
Operation Junction and Storage Temperature Range	$T_J, T_{stg}$	-55~+150	$^{\circ}\text{C}$

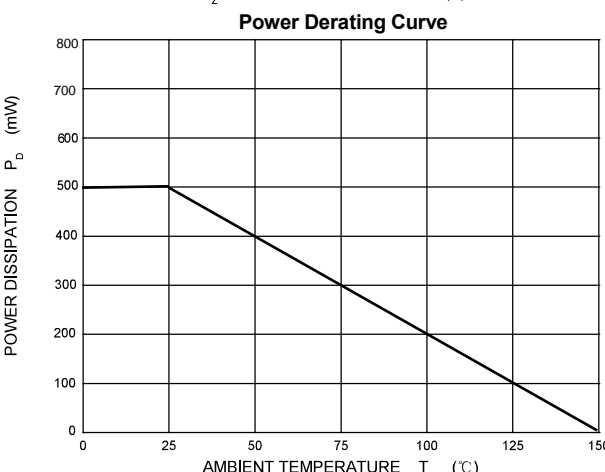
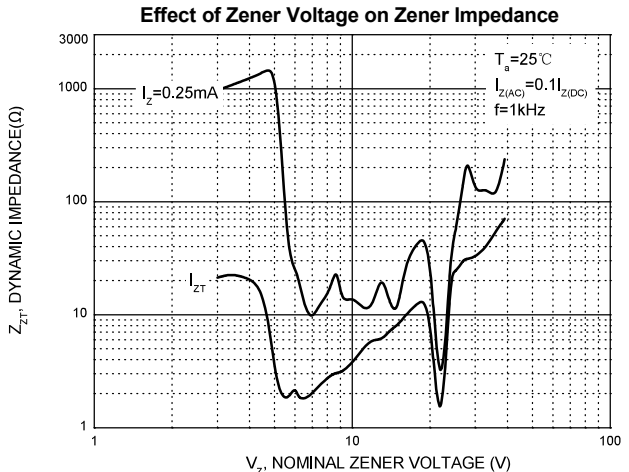
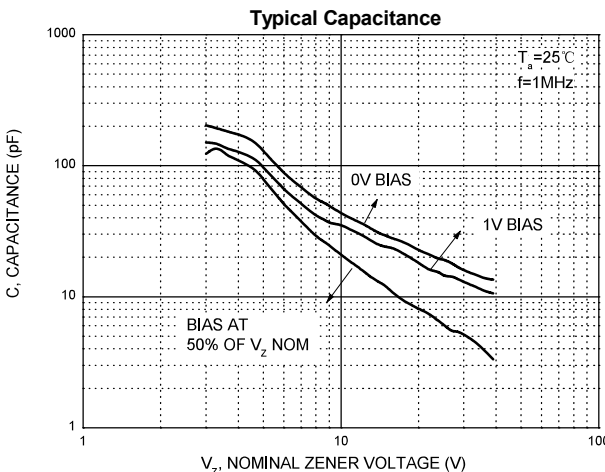
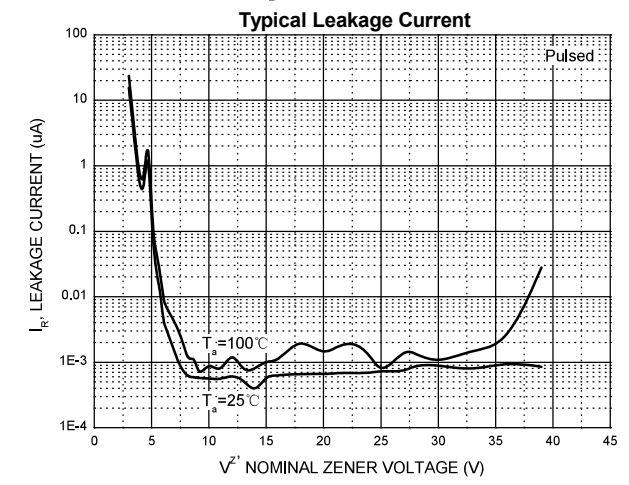
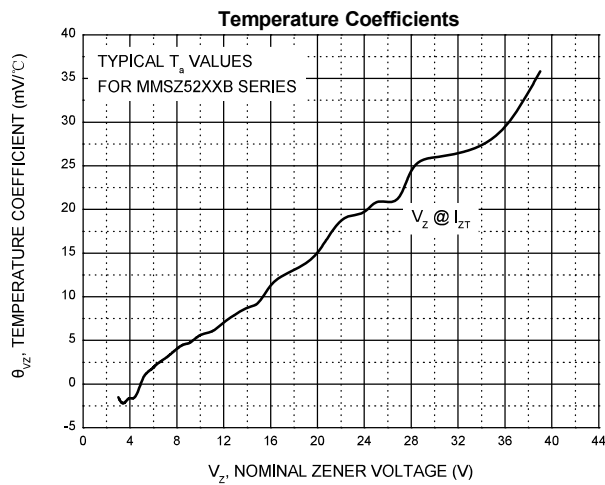
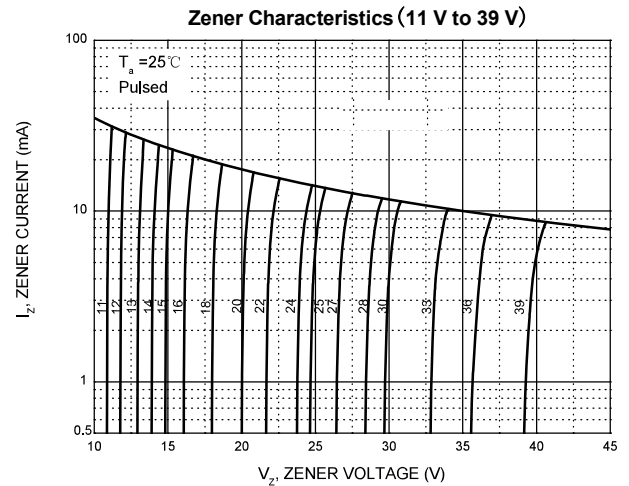
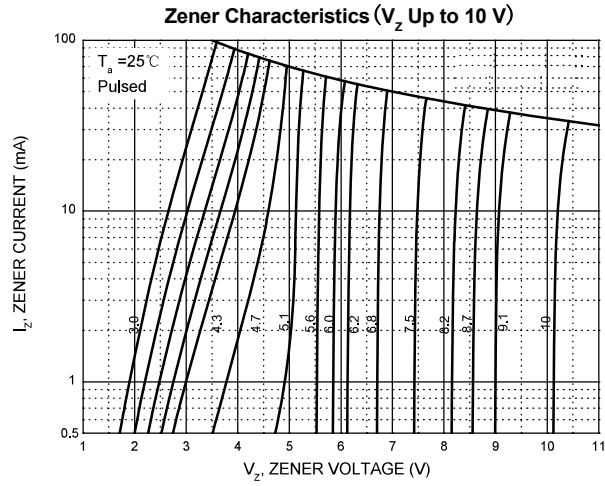
Notes: 1. Device mounted on ceramic PCB; 7.6 mm x 9.4 mm x 0.87 mm with pad areas 25 mm<sup>2</sup>.  
 2. Tested with pulses,  $T_p \leq 1.0\text{ms}$ .

## ELECTRICAL CHARACTERISTICS

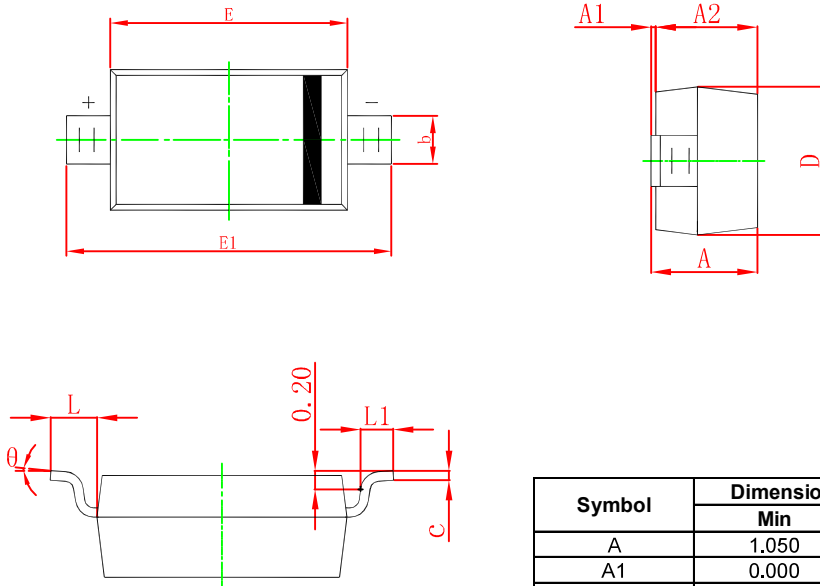
T<sub>a</sub>=25°C unless otherwise specified

Type Number	Code	Zener Voltage Range (Note 4)				Maximum Zener Impedance (Note 3)			Maximum Reverse	
		VZ@IZT			IZT	ZZT@IZT	ZZK@IZ	IZK	IR	VR
		Nom(V)	M	Max(V)	mA	Ω		mA	uA	V
MMSZ5221B	C1/WX/4C	2.4	2.28	2.52	20	30	1200	0.25	100	1.0
MMSZ5223B	C3/W1/4D	2.7	2.57	2.84	20	30	1300	0.25	75	1.0
MMSZ5225B	C5/W2/4E	3.0	2.85	3.15	20	30	1600	0.25	50	1.0
MMSZ5226B	G1/W3/4F	3.3	3.14	3.47	20	28	1600	0.25	25	1.0
MMSZ5227B	G2/W4/4H	3.6	3.42	3.78	20	24	1700	0.25	15	1.0
MMSZ5228B	G3/W5/4J	3.9	3.71	4.10	20	23	1900	0.25	10	1.0
MMSZ5229B	G4/W6/4K	4.3	4.09	4.52	20	22	2000	0.25	5	1.0
MMSZ5230B	G5/W7/4M	4.7	4.47	4.94	20	19	1900	0.25	5	2.0
MMSZ5231B	E1/W8/4N	5.1	4.85	5.36	20	17	1600	0.25	5	2.0
MMSZ5232B	E2/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	E4/WA/4R	6.2	5.89	6.51	20	7	1000	0.25	5	4.0
MMSZ5235B	E5/WB/4X	6.8	6.46	7.14	20	5	750	0.25	3	5.0
MMSZ5236B	F1/WC/4Y	7.5	7.13	7.88	20	6	500	0.25	3	6.0
MMSZ5237B	F2/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	F4/WE/5A	9.1	8.65	9.56	20	10	600	0.25	3	7.0
MMSZ5240B	F5/WF/5B	10	9.50	10.50	20	17	600	0.25	3	8.0
MMSZ5241B	H1/WG/5C	11	10.45	11.55	20	22	600	0.25	2.0	8.4
MMSZ5242B	H2/WH/5D	12	11.40	12.60	20	30	600	0.25	1.0	9.1
MMSZ5243B	H3/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	H5/WJ/5F	15	14.25	15.75	8.5	16	600	0.25	0.1	11
MMSZ5246B	J1/WK/5H	16	15.20	16.80	7.8	17	600	0.25	0.1	12
MMSZ5248B	J3/WL/5J	18	17.10	18.90	7.0	21	600	0.25	0.1	14
MMSZ5250B	J5/WM/5K	20	19.00	21.00	6.2	25	600	0.25	0.1	15
MMSZ5251B	K1/WN/5M	22	20.90	23.10	5.6	29	600	0.25	0.1	17
MMSZ5252B	K2/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	K4/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	M1/WQ/5R	30	28.50	31.50	4.2	49	600	0.25	0.1	23
MMSZ5257B	M2/WR/5X	33	31.35	34.65	3.8	58	700	0.25	0.1	25
MMSZ5258B	M3/WS/5Y	36	34.20	37.80	3.4	70	700	0.25	0.1	27
MMSZ5259B	M4/WT/5Z	39	37.05	40.95	3.2	80	800	0.25	0.1	30
MMSZ5260B	M5/WU/6A	43	40.00	46.00	3.0	100	900	0.25	0.1	33
MMSZ5261B	N1/6B	47	44.00	50.00	2.7	120	1000	0.25	0.1	36
MMSZ5262B	N2	51	48.45	53.55	2.5	125	1100	0.25	0.1	39
MMSZ5263B	N3	56	53.20	58.80	2.2	150	1300	0.25	0.1	43
MMSZ5265B	N5	62	58.90	65.10	2.0	185	1400	0.25	0.1	47
MMSZ5266B	P1	68	64.60	71.40	1.8	230	1600	0.25	0.1	52
MMSZ5267B	P2	75	71.25	78.75	1.7	270	1700	0.25	0.1	56

**Typical Characteristics**

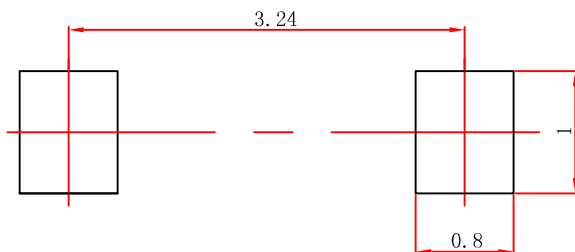


### SOD-123 Package Outline Dimensions



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

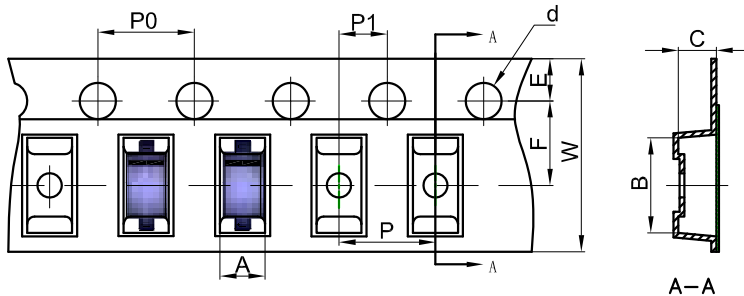


**Note:**

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

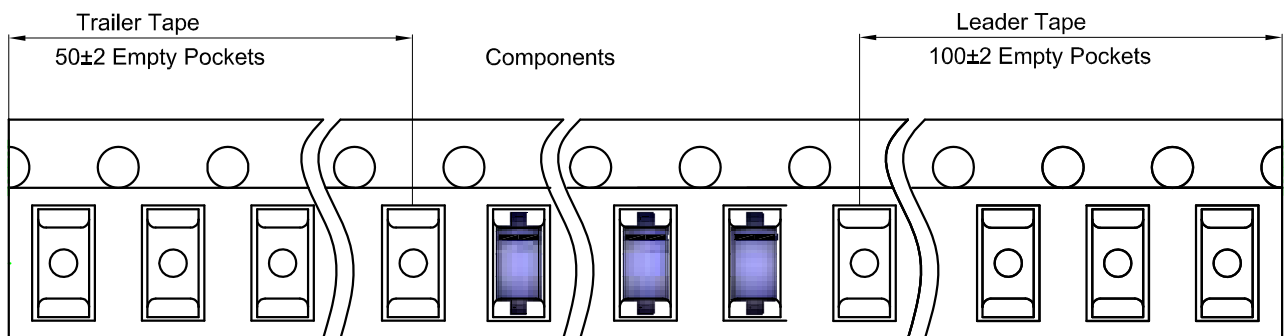


**Packaging Description:**

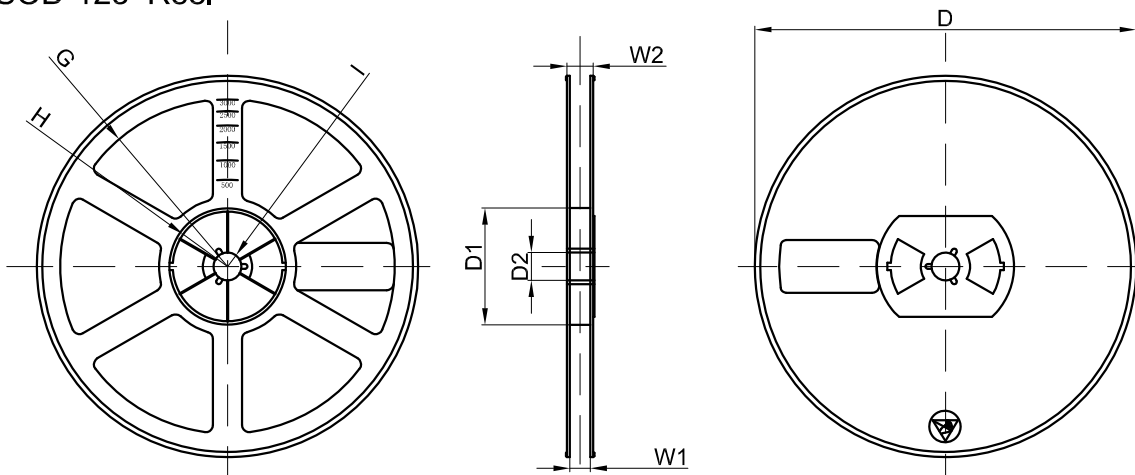
SOD-123 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts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