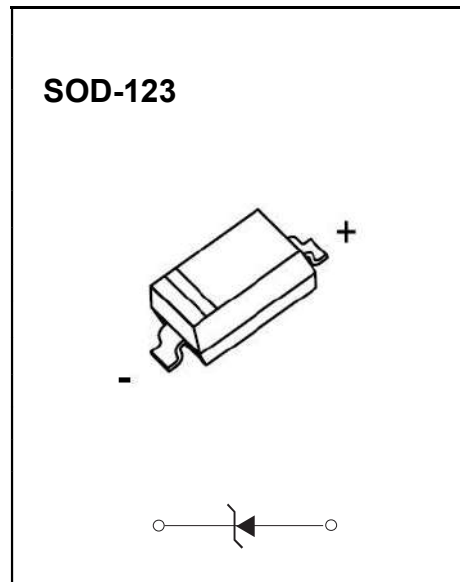


SOD-123 Plastic-Encapsulate Diodes

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	$^{\circ}\text{C}/\text{W}$
Junction Temperature	T_j	150	$^{\circ}\text{C}$
Storage Temperature Range	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.

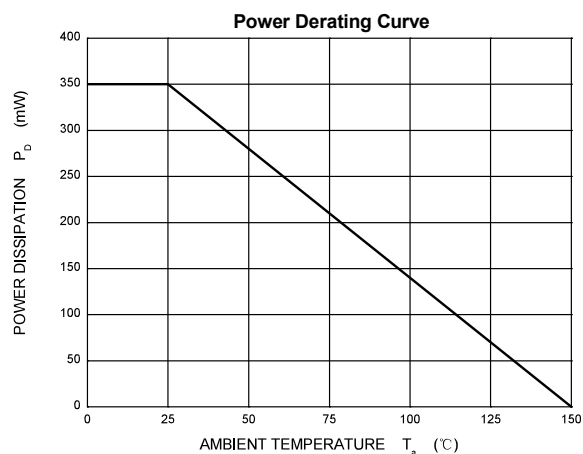
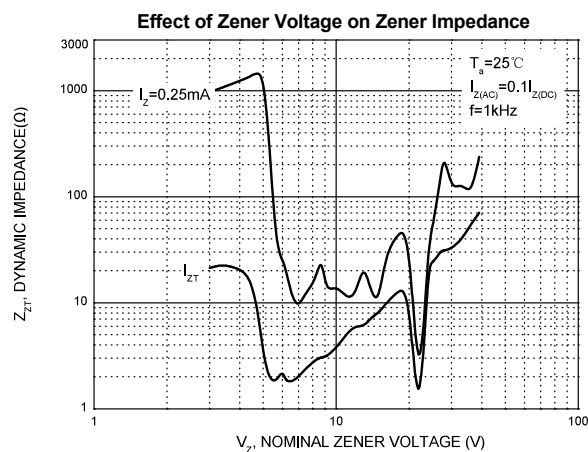
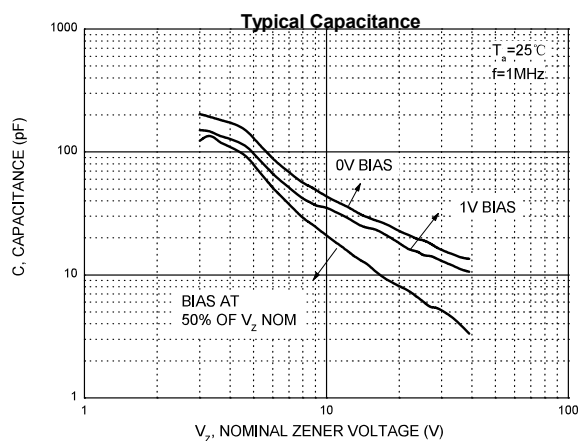
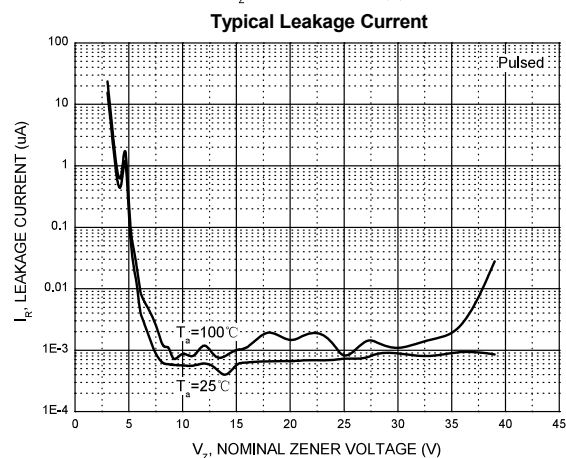
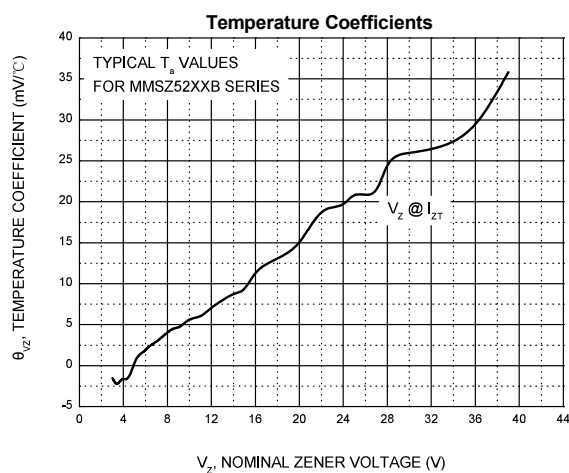
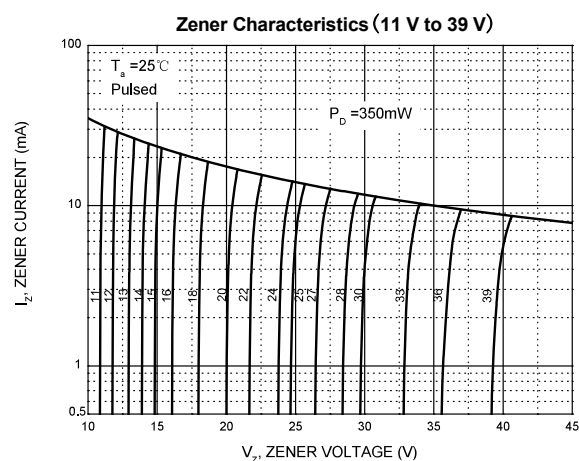
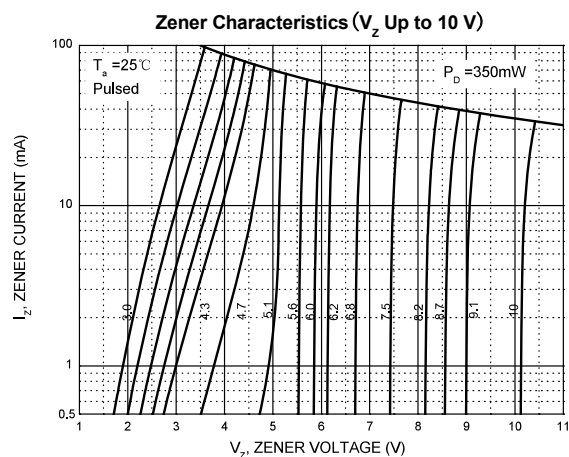
2. Tested with pulses, $T_p \leq 1.0\text{ms}$.

ELECTRICAL CHARACTERISTICS

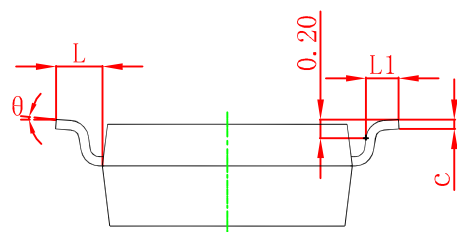
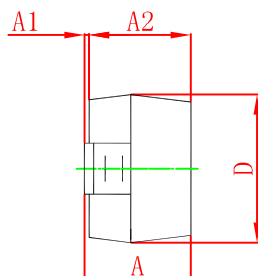
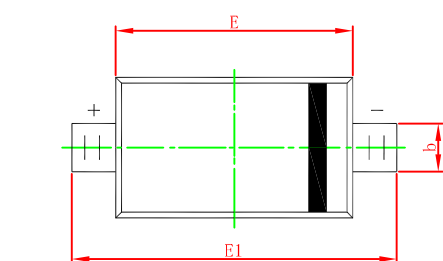
T_a=25°C unless otherwise specified

Type Number	Code	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 4)			Maximum Reverse Current	
		V _Z @I _{ZT}			I _{ZT}	Z _{ZT} @I _{ZT}	Z _{ZK} @I _{ZK}	I _{ZK}	I _R	V _R
		Nom(V)	Min(V)	Max(V)	mA	Ω		mA	μA	V
MM1Z5221B	C1	2.4	2.28	2.52	20	30	1200	0.25	100	1.0
MM1Z5223B	C3	2.7	2.57	2.84	20	30	1300	0.25	75	1.0
MM1Z5225B	C5	3.0	2.85	3.15	20	30	1600	0.25	50	1.0
MM1Z5226B	G1	3.3	3.14	3.47	20	28	1600	0.25	25	1.0
MM1Z5227B	G2	3.6	3.42	3.78	20	24	1700	0.25	15	1.0
MM1Z5228B	G3	3.9	3.71	4.10	20	23	1900	0.25	10	1.0
MM1Z5229B	G4	4.3	4.09	4.52	20	22	2000	0.25	5	1.0
MM1Z5230B	G5	4.7	4.47	4.94	20	19	1900	0.25	5	2.0
MM1Z5231B	E1	5.1	4.85	5.36	20	17	1600	0.25	5	2.0
MM1Z5232B	E2	5.6	5.32	5.88	20	11	1600	0.25	5	3.0
MM1Z5233B	E3	6.0	5.70	6.30	20	7	1600	0.25	5	3.5
MM1Z5234B	E4	6.2	5.89	6.51	20	7	1000	0.25	5	4.0
MM1Z5235B	E5	6.8	6.46	7.14	20	5	750	0.25	3	5.0
MM1Z5236B	F1 / 4Y	7.5	7.13	7.88	20	6	500	0.25	3	6.0
MM1Z5237B	F2	8.2	7.79	8.61	20	8	500	0.25	3	6.5
MM1Z5238B	F3	8.7	8.27	9.14	20	8	600	0.25	3	6.5
MM1Z5239B	F4	9.1	8.65	9.56	20	10	600	0.25	3	7.0
MM1Z5240B	F5	10	9.50	10.50	20	17	600	0.25	3	8.0
MM1Z5241B	H1	11	10.45	11.55	20	22	600	0.25	2.0	8.4
MM1Z5242B	H2	12	11.40	12.60	20	30	600	0.25	1.0	9.1
MM1Z5243B	H3	13	12.35	13.65	9.5	13	600	0.25	0.5	9.9
MM1Z5244B	H4	14	13.30	14.70	9.0	15	600	0.25	0.1	10
MM1Z5245B	H5	15	14.25	15.75	8.5	16	600	0.25	0.1	11
MM1Z5246B	J1	16	15.20	16.80	7.8	17	600	0.25	0.1	12
MM1Z5248B	J3	18	17.10	18.90	7.0	21	600	0.25	0.1	14
MM1Z5250B	J5	20	19.00	21.00	6.2	25	600	0.25	0.1	15
MM1Z5251B	K1	22	20.90	23.10	5.6	29	600	0.25	0.1	17
MM1Z5252B	K2	24	22.80	25.20	5.2	33	600	0.25	0.1	18
MM1Z5253B	K3	25	23.75	26.25	5.0	35	600	0.25	0.1	19
MM1Z5254B	K4	27	25.65	28.35	5.0	41	600	0.25	0.1	21
MM1Z5255B	K5	28	26.60	29.40	4.5	44	600	0.25	0.1	21
MM1Z5256B	M1	30	28.50	31.50	4.2	49	600	0.25	0.1	23
MM1Z5257B	M2	33	31.35	34.65	3.8	58	700	0.25	0.1	25
MM1Z5258B	M3	36	34.20	37.80	3.4	70	700	0.25	0.1	27
MM1Z5259B	M4	39	37.05	40.95	3.2	80	800	0.25	0.1	30

Typical Characteristics

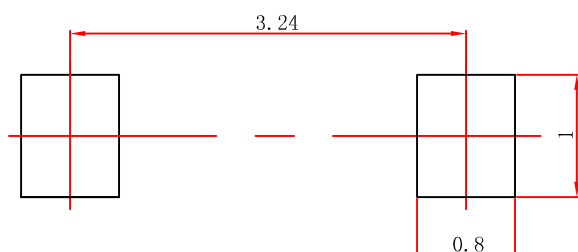


SOD-123 Package Outline Dimensions



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

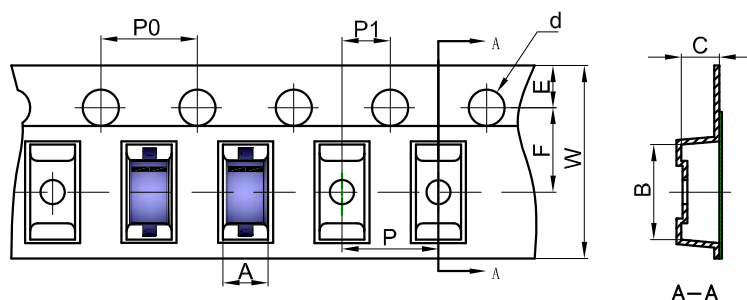


Note:

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

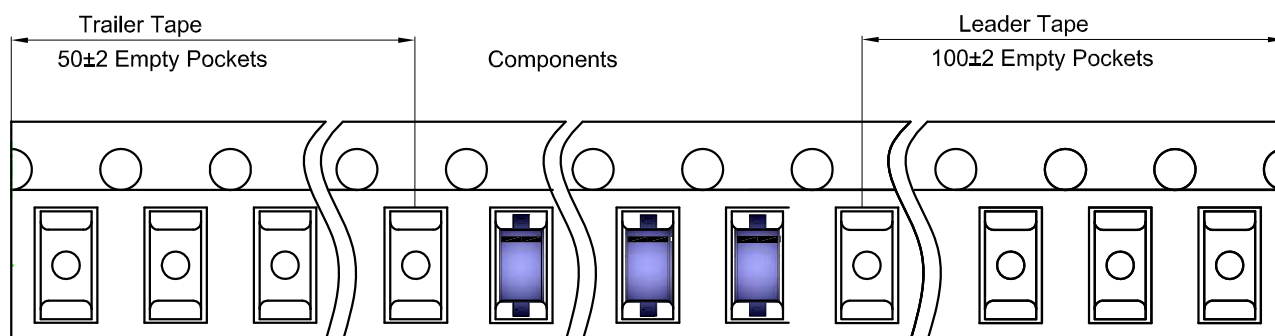


Packaging Description:

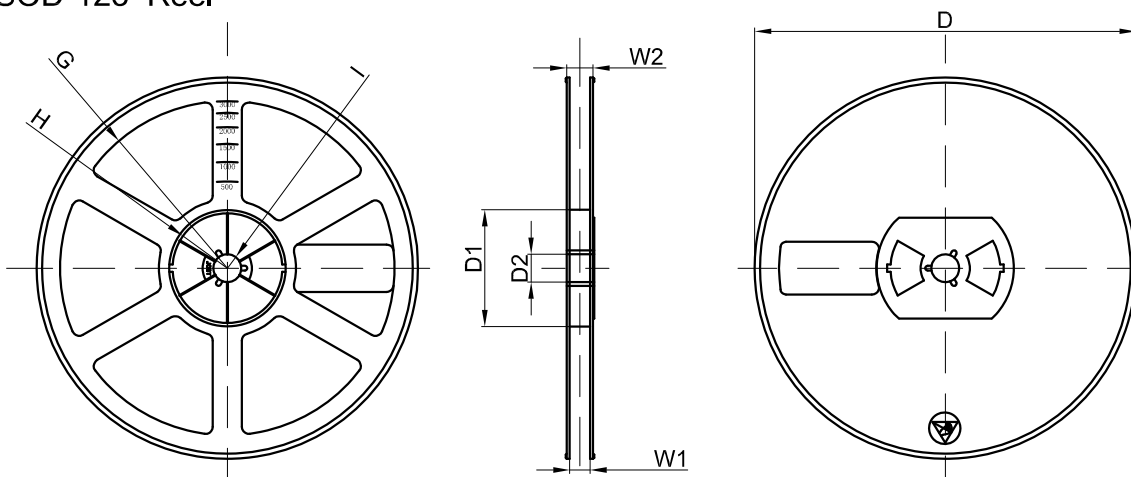
SOD-123 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts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