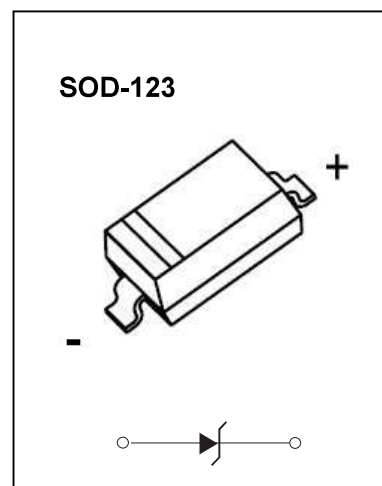


SOD-123 Plastic-Encapsulate Diodes

ZENER DIODE

Features:

- Planar Die Construction
- 500mW Power Dissipation on Ceramic PCB
- General Purpose, Medium Current
- Ideally Suited for Automated Assembly Processes
- Available in Lead Free Version



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 from Junction to Ambient	$R_{\theta JA}$	357	$^{\circ}\text{C/W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~+150	$^{\circ}\text{C}$

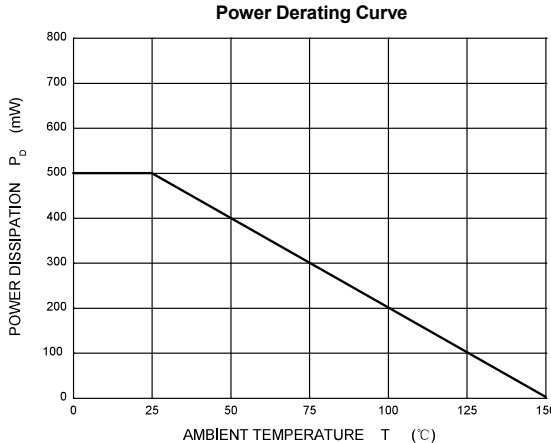
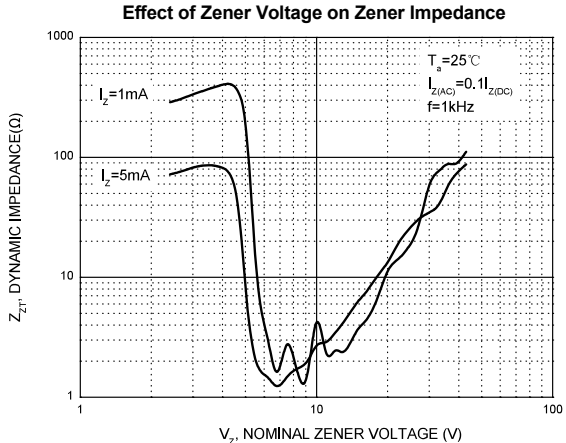
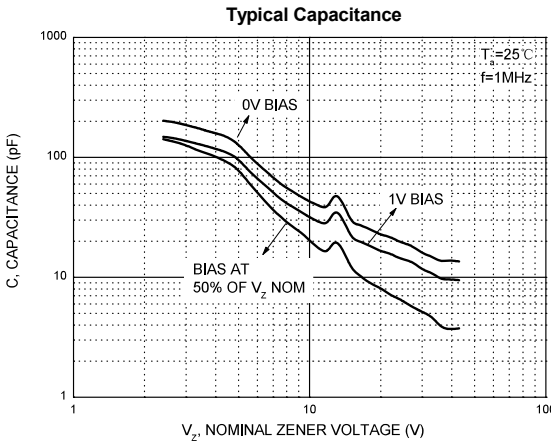
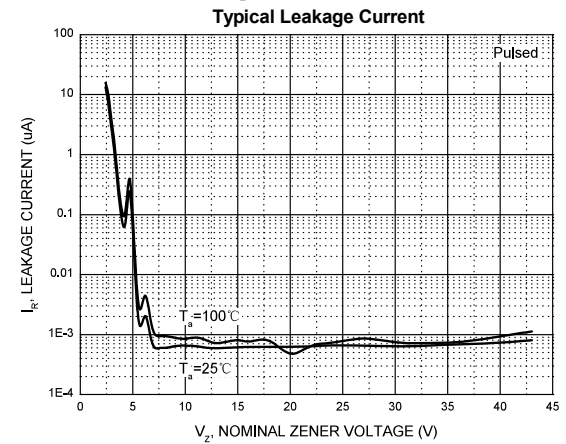
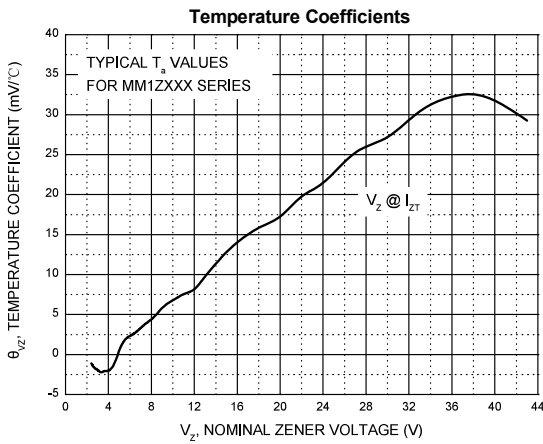
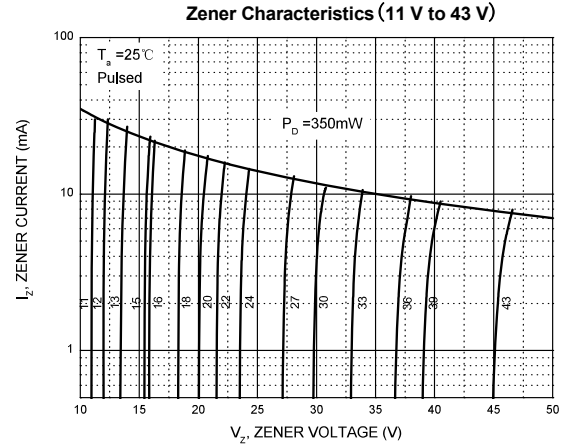
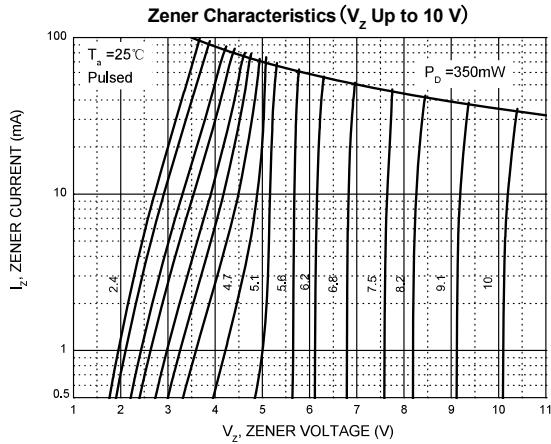
ELECTRICAL CHARACTERISTICS

T_a=25°C unless otherwise specified

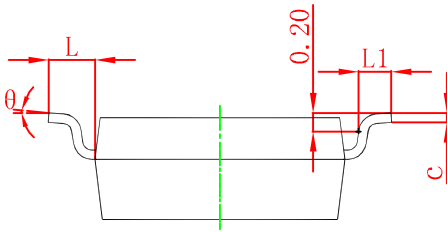
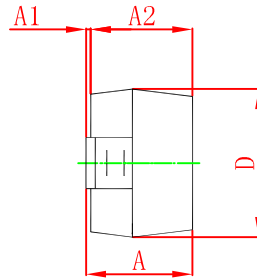
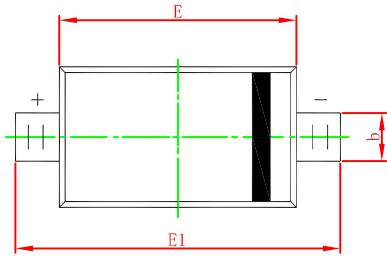
Type Number	Type Code	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 3)			Maximum Reverse Current (Note 2)		Typical Temperature Coefficient @I _{ZTC} mV/°C		Test Current I _{ZTC} mA
		V _Z @I _{ZT}			I _{ZT}	Z _{ZT} @I _{ZT}	Z _{ZK} @I _{ZK}	I _{ZK}	I _R	V _R	Min	Max	
		Nom(V)	Min(V)	Max(V)	mA	Ω		mA	uA	V			
MM1Z2V4	WX 4C	2.4	2.20	2.60	5	100	600	1.0	50	1.0	-3.5	0	5
MM1Z2V7	W1 4D	2.7	2.5	2.9	5	100	600	1.0	20	1.0	-3.5	0	5
MM1Z3V0	W2 4E	3.0	2.8	3.2	5	95	600	1.0	10	1.0	-3.5	0	5
MM1Z3V3	W3 4F	3.3	3.1	3.5	5	95	600	1.0	5	1.0	-3.5	0	5
MM1Z3V6	W4 4H	3.6	3.4	3.8	5	90	600	1.0	5	1.0	-3.5	0	5
MM1Z3V9	W5 4J	3.9	3.7	4.1	5	90	600	1.0	3	1.0	-3.5	0	5
MM1Z4V3	W6 4K	4.3	4.0	4.6	5	90	600	1.0	3	1.0	-3.5	0	5
MM1Z4V7	W7 4M	4.7	4.4	5.0	5	80	500	1.0	3	2.0	-3.5	0.2	5
MM1Z5V1	W8 4N	5.1	4.8	5.4	5	60	480	1.0	2	2.0	-2.7	1.2	5
MM1Z5V6	W9 4P	5.6	5.2	6.0	5	40	400	1.0	1	2.0	-2.0	2.5	5
MM1Z6V2	WA 4R	6.2	5.8	6.6	5	10	150	1.0	3	4.0	0.4	3.7	5
MM1Z6V8	WB 4X	6.8	6.4	7.2	5	15	80	1.0	2	4.0	1.2	4.5	5
MM1Z7V5	WC 4Y	7.5	7.0	7.9	5	15	80	1.0	1	5.0	2.5	5.3	5
MM1Z8V2	WD 4Z	8.2	7.7	8.7	5	15	80	1.0	0.7	5.0	3.2	6.2	5
MM1Z9V1	WE 5A	9.1	8.5	9.6	5	15	100	1.0	0.5	6.0	3.8	7.0	5
MM1Z10	WF 5B	10	9.4	10.6	5	20	150	1.0	0.2	7.0	4.5	8.0	5
MM1Z11	WG 5C	11	10.4	11.6	5	20	150	1.0	0.1	8.0	5.4	9.0	5
MM1Z12	WH 5D	12	11.4	12.7	5	25	150	1.0	0.1	8.0	6.0	10.0	5
MM1Z13	WI 5E	13	12.4	14.1	5	30	170	1.0	0.1	8.0	7.0	11.0	5
MM1Z15	WJ 5F	15	13.8	15.6	5	30	200	1.0	0.1	10.5	9.2	13.0	5
MM1Z16	WK 5H	16	15.3	17.1	5	40	200	1.0	0.1	11.2	10.4	14.0	5
MM1Z18	WL 5J	18	16.8	19.1	5	45	225	1.0	0.1	12.6	12.4	16.0	5
MM1Z20	WM 5K	20	18.8	21.2	5	55	225	1.0	0.1	14.0	14.4	18.0	5
MM1Z22	WN 5M	22	20.8	23.3	5	55	250	1.0	0.1	15.4	16.4	20.0	5
MM1Z24	WO 5N	24	22.8	25.6	5	70	250	1.0	0.1	16.8	18.4	22.0	5
MM1Z27	WP 5P	27	25.1	28.9	5	80	300	0.5	0.1	18.9	21.4	25.3	5
MM1Z30	WQ 5R	30	28.0	32.0	5	80	300	0.5	0.1	21.0	24.4	29.4	5
MM1Z33	WR 5X	33	31.0	35.0	5	80	325	0.5	0.1	23.1	27.4	33.4	5
MM1Z36	WS 5Y	36	34.0	38.0	5	90	350	0.5	0.1	25.2	30.4	37.4	5
MM1Z39	WT 5Z	39	37.0	41.0	2.5	130	350	0.5	0.1	27.3	33.4	41.	2.5
MM1Z43	WU 6A	43	40.0	46.0	2.5	100	700	1.0	0.1	32	10.0	12.	2.5

- 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

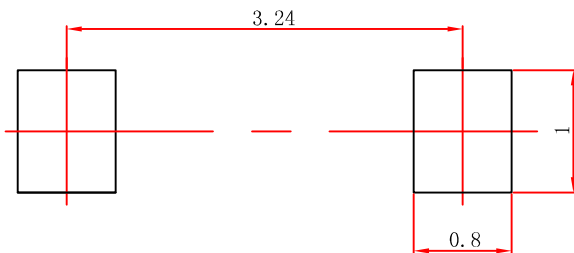


SOD-123 Package Outline Dimensions



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

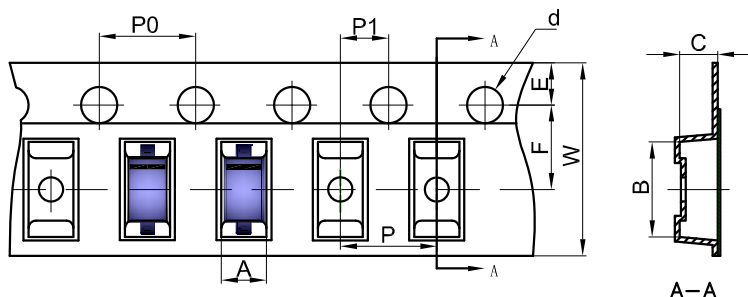


Note:

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

SOD-123 Tape and Reel

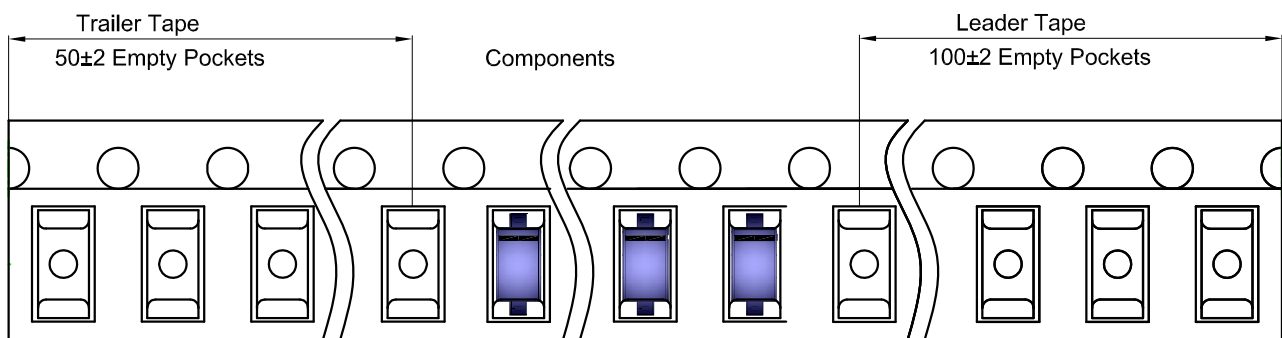
SOD-123 Embossed Carrier Tape



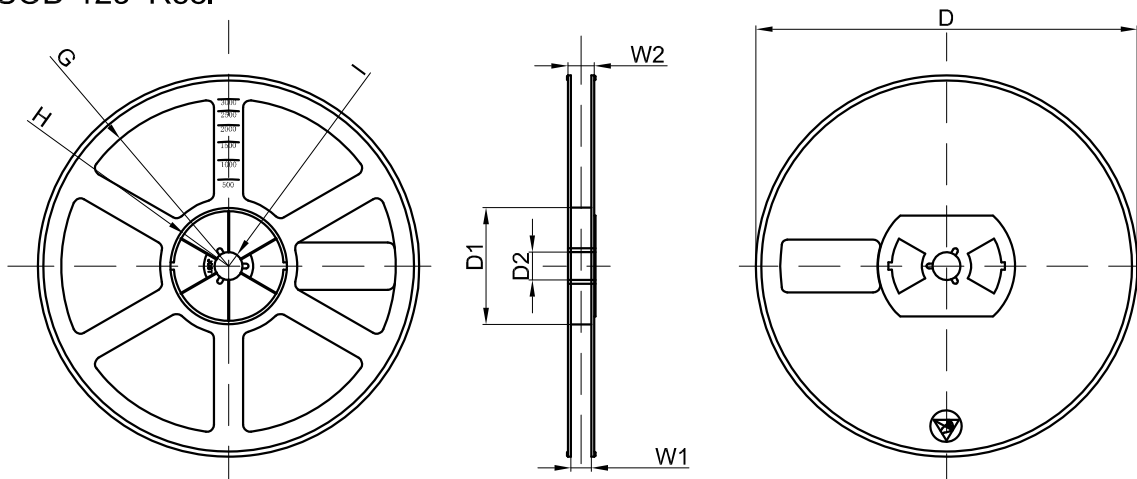
Packaging Description:
 SOD-123 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent.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