

SOD-123 Plastic-Encapsulate Diodes

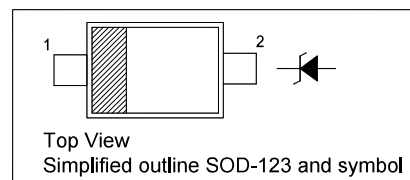
ZENER DIODE

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

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Power Dissipation	P_{tot}	500	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_s	- 55 to + 150	$^\circ\text{C}$

Characteristics at $T_a = 25\text{ }^\circ\text{C}$

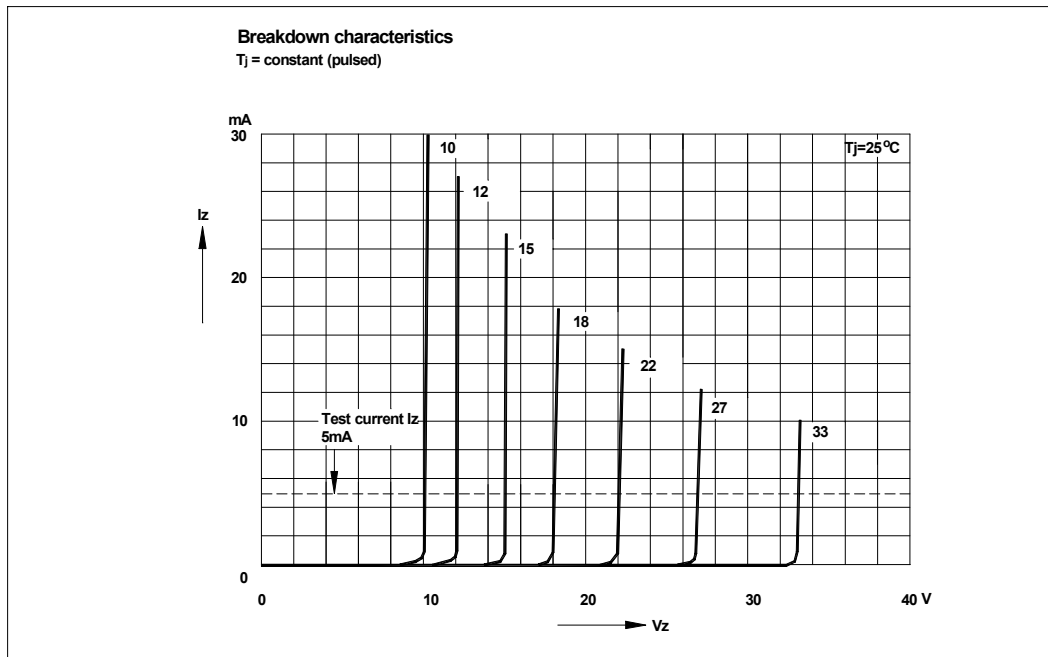
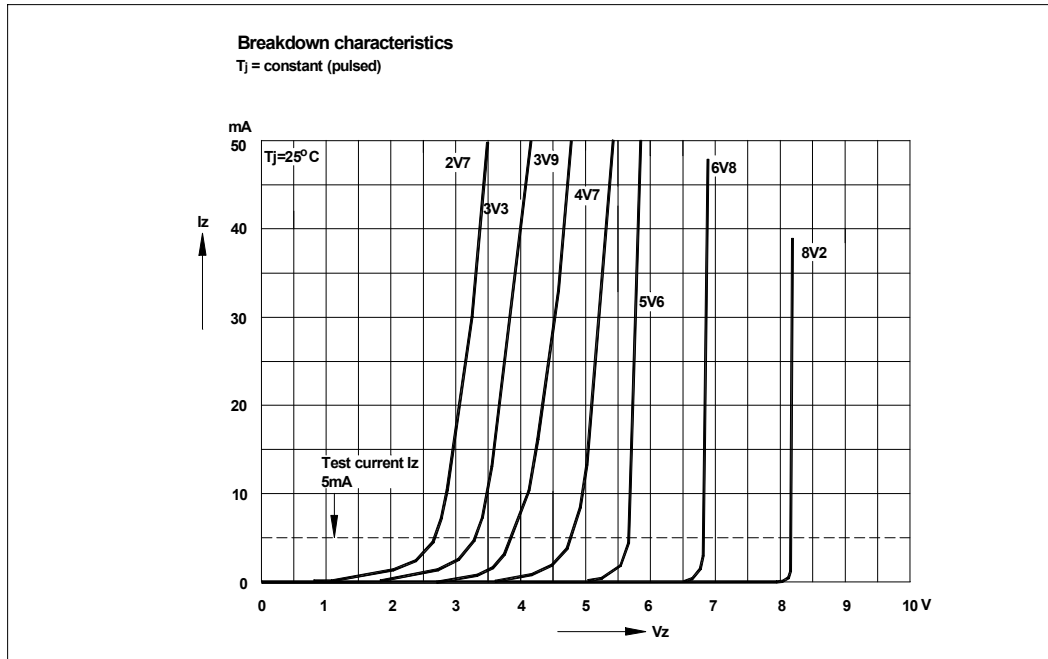
Parameter	Symbol	Max.	Unit
Thermal Resistance Junction to Ambient Air	R_{thA}	340	$^\circ\text{C/W}$
Forward Voltage at $I_F = 10\text{ mA}$	V_F	0.9	V

Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Type	Marking Code	Zener Voltage Range ¹⁾			Dynamic Impedance ²⁾		Reverse Leakage Current	
		V_{znom} V	I_{ZT} mA	for V_{ZT} V	Z_{ZT} (Max.) Ω	at I_Z mA	I_R (Max.) μA	at V_R V
MMSZ2V0	4A	2.0	5	1.8...2.15	100	5	120	0.5
MMSZ2V2	4B	2.2	5	2.08...2.33	100	5	120	0.7
MMSZ2V4	4C	2.4	5	2.28...2.56	100	5	120	1
MMSZ2V7	4D/W1	2.7	5	2.5...2.9	110	5	120	1
MMSZ3V0	4E/W2	3.0	5	2.8...3.2	120	5	50	1
MMSZ3V3	4F/W3	3.3	5	3.1...3.5	130	5	20	1
MMSZ3V6	4H/W4	3.6	5	3.4...3.8	130	5	10	1
MMSZ3V9	4J/W5	3.9	5	3.7...4.1	130	5	5	1
MMSZ4V3	4K/W6	4.3	5	4...4.6	130	5	5	1
MMSZ4V7	4M/W7	4.7	5	4.4...5	130	5	2	1
MMSZ5V1	4N/W8	5.1	5	4.8...5.4	130	5	2	1.5
MMSZ5V6	4P/W9	5.6	5	5.2...6	80	5	1	2.5
MMSZ6V2	4R/WA	6.2	5	5.8...6.6	50	5	1	3
MMSZ6V8	4X/WB	6.8	5	6.4...7.2	30	5	0.5	3.5
MMSZ7V5	4Y/WC	7.5	5	7...7.9	30	5	0.5	4
MMSZ8V2	4Z/WD	8.2	5	7.7...8.7	30	5	0.5	5
MMSZ9V1	5A/WE	9.1	5	8.5...9.6	30	5	0.5	6
MMSZ10	5B/WF	10	5	9.4...10.6	30	5	0.1	7
MMSZ11	5C/WG	11	5	10.4...11.6	30	5	0.1	8
MMSZ12	5D/WH	12	5	11.4...12.7	35	5	0.1	9
MMSZ13	5E/WI	13	5	12.4...14.1	35	5	0.1	10
MMSZ15	5F/WJ	15	5	13.8...15.6	40	5	0.1	11
MMSZ16	5H/WK	16	5	15.3...17.1	40	5	0.1	12
MMSZ18	5J/WL	18	5	16.8...19.1	45	5	0.1	13
MMSZ20	5K/WM	20	5	18.8...21.2	50	5	0.1	15
MMSZ22	5M/WN	22	5	20.8...23.3	55	5	0.1	17
MMSZ24	5N/WO	24	5	22.8...25.6	60	5	0.1	19
MMSZ27	5P/WP	27	5	25.1...28.9	70	2	0.1	21
MMSZ30	5R/WQ	30	5	28...32	80	2	0.1	23
MMSZ33	5X/WR	33	5	31...35	80	2	0.1	25
MMSZ36	5Y/WS	36	5	34...38	90	2	0.1	27
MMSZ39	5Z/WT	39	2.5	37...41	100	2	2	30
MMSZ43	6A/WU	43	2.5	40...46	130	2	2	33
MMSZ47	6B/WV	47	2.5	44...50	150	2	2	36
MMSZ51	6C/X1	51	2.5	48...54	180	2	1	39
MMSZ56	6D/X2	56	2.5	52...60	180	2	1	43
MMSZ62	6E/X3	62	2.5	58...66	200	2	0.2	47
MMSZ68	6F/X4	68	2.5	64...72	250	2	0.2	52
MMSZ75	6H/X5	75	2.5	70...79	300	2	0.2	57

¹⁾ V_Z is tested with pulses (20 ms).

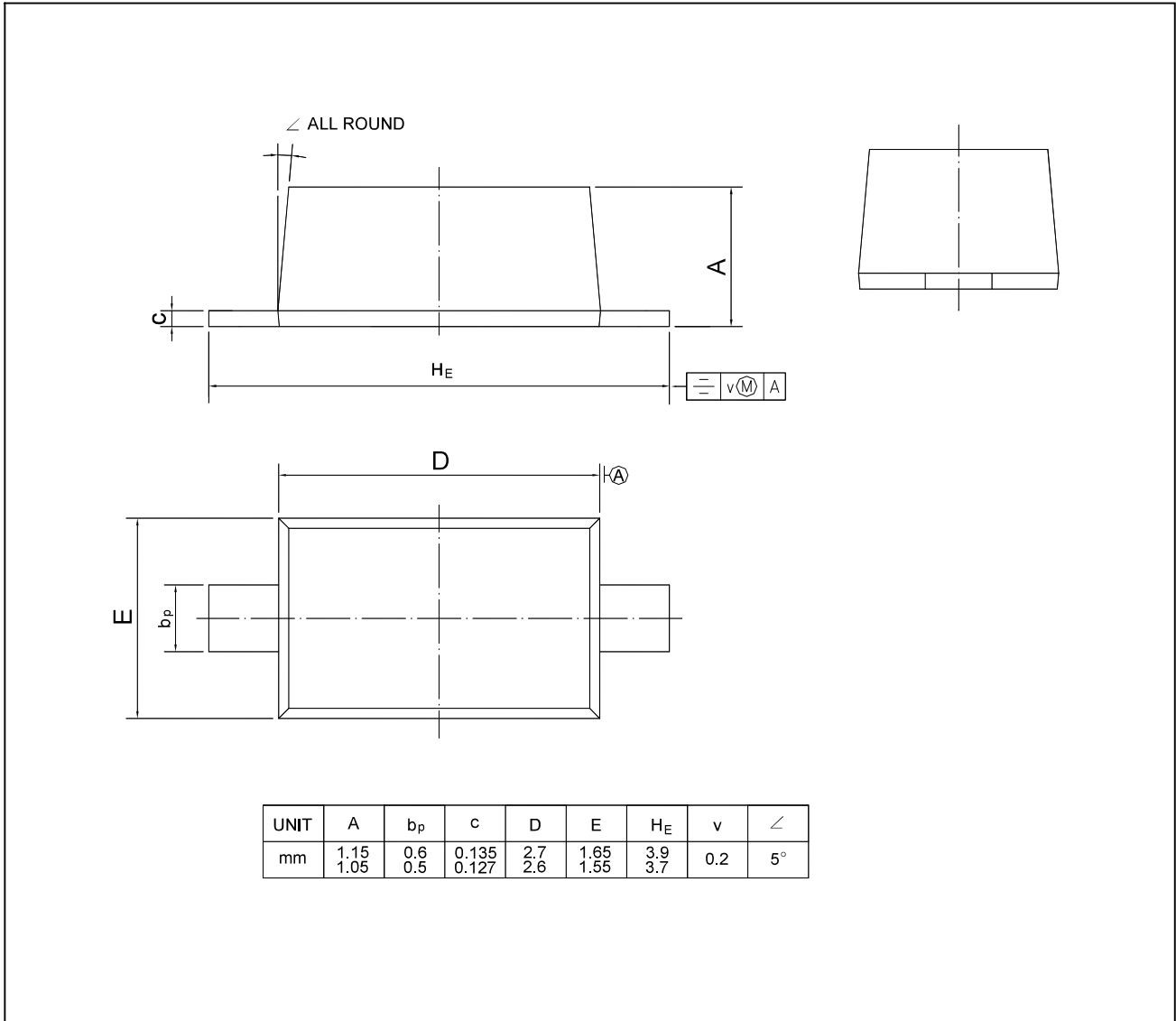
²⁾ Z_{ZT} is measured at I_Z by given a very small A.C. current signal.



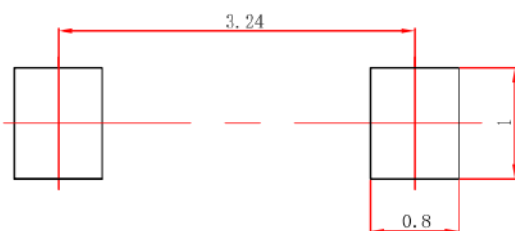
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123



SOD-123 SUGGESTED PAD LAYOUT

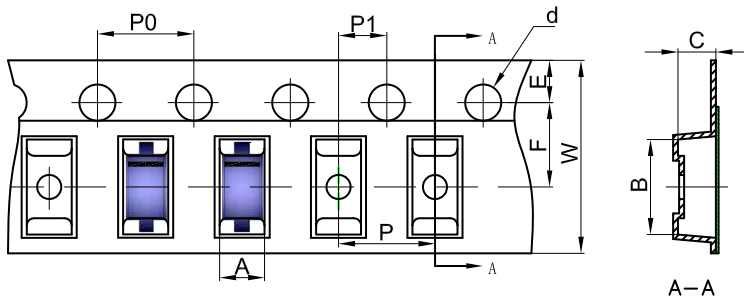


Note:

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

SOD-123 Tape and Reel

SOD-123 Embossed Carrier Tape

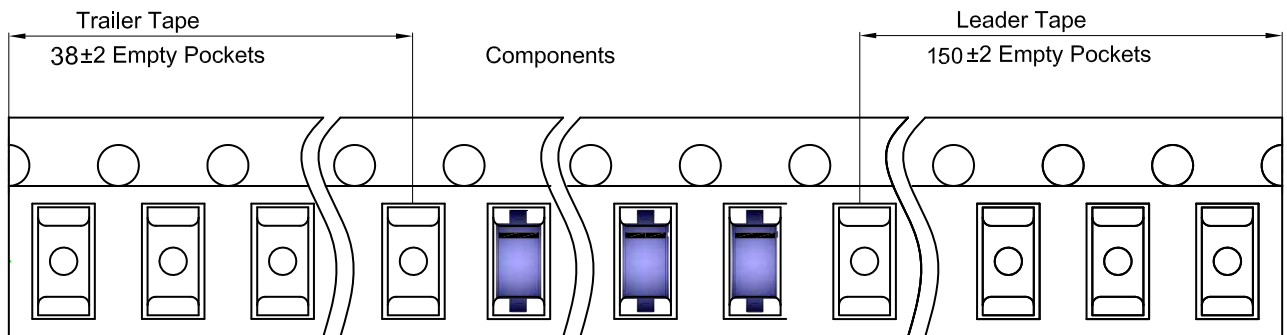


Packaging Description:

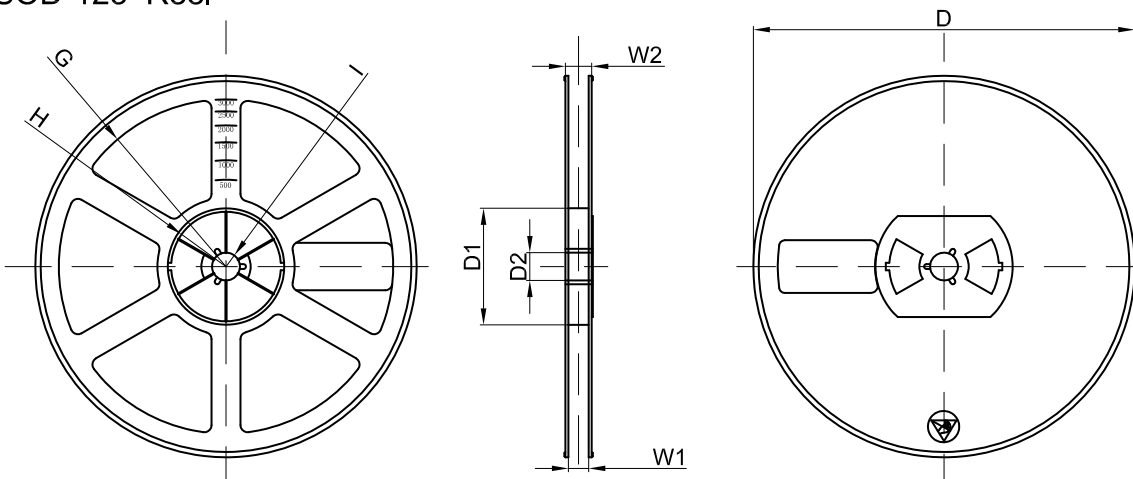
SOD-123 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts 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	24,000 pcs	190×180×105	120,000 pcs	544×200×199	