

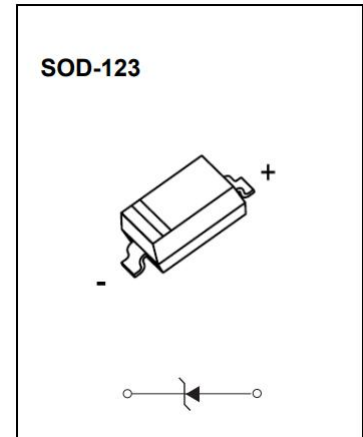


AD-MMSZ4 Series Plastic-Encapsulated Diode

AD-MMSZ4 series Zener diode

FEATURES

- Wide Zener reverse voltage range
- Small package size for high density applications
- ESD rating of class 3 (>16kV) per human body model
- AEC-Q101 qualified

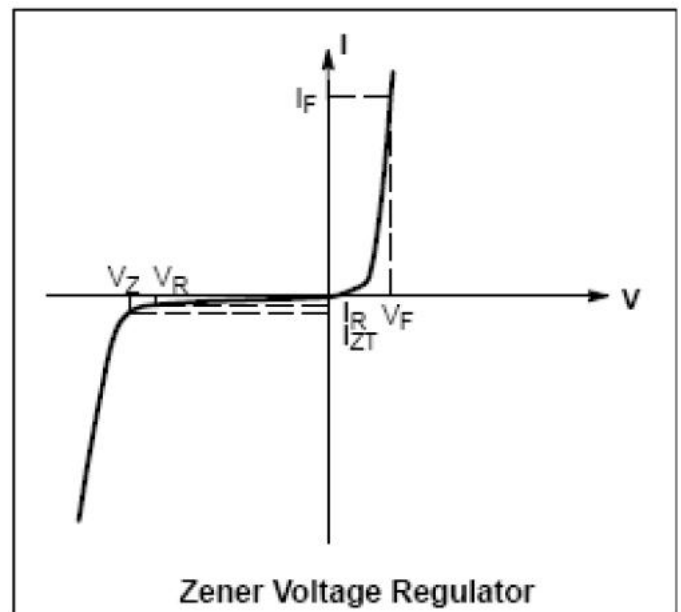


MAXIMUM RATINGS ($T_j = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Forward voltage @ $I_F = 10\text{mA}$	V_F ¹⁾	0.9	V
Power dissipation	P_D ²⁾	500	mW
Thermal resistance from junction to ambient	$R_{\theta JA}$ ²⁾	250	$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	T_j, T_{stg}	-55 ~ 150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_j = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol
Reverse Zener voltage @ I_{ZT}	V_Z
Reverse current	I_{ZT}
Reverse leakage current @ V_R	I_R
Reverse voltage	V_R
Forward current	I_F
Forward voltage @ I_F	V_F

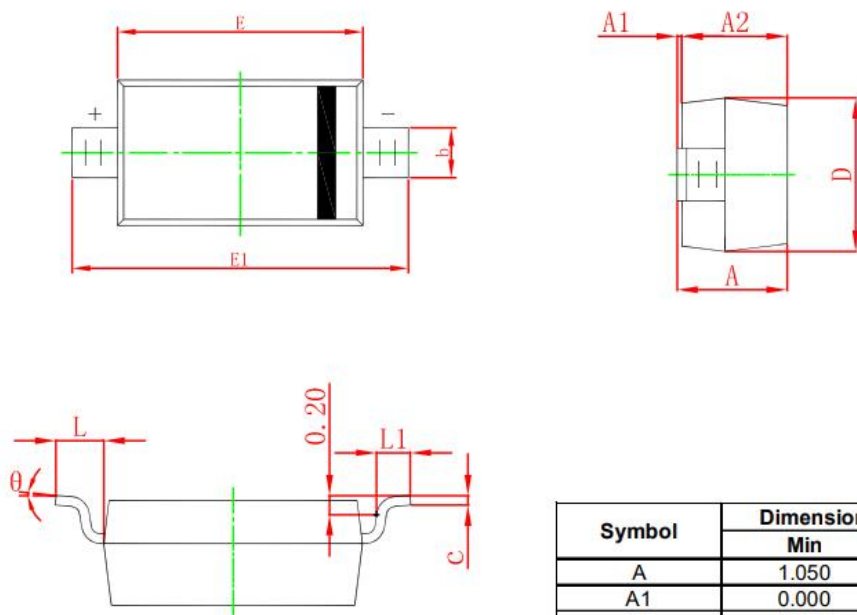


Type number	Marking	Zener voltage range ¹⁾				Maximum reverse current		
		V _Z @ I _{ZT} (V)			I _{ZT} (μ A)	I _R (μ A)	V _R (V)	
		Min	Norm	Max				
AD-MMSZ4678	$\bar{C}C$	1.71	1.8	1.89	50	7.5	1.0	
AD-MMSZ4679	$\bar{C}D$	1.90	2.0	2.10	50	5	1.0	
AD-MMSZ4680	$\bar{C}E$	2.09	2.2	2.31	50	4	1.0	
AD-MMSZ4681	$\bar{C}F$	2.28	2.4	2.52	50	2	1.0	
AD-MMSZ4682	$\bar{C}H$	2.565	2.7	2.835	50	1	1.0	
AD-MMSZ4683	$\bar{C}J$	2.85	3.0	3.15	50	0.8	1.0	
AD-MMSZ4684	$\bar{C}K$	3.13	3.3	3.47	50	7.5	1.5	
AD-MMSZ4685	$\bar{C}M$	3.42	3.6	3.78	50	7.5	2.0	
AD-MMSZ4686	$\bar{C}N$	3.70	3.9	4.10	50	5	2.0	
AD-MMSZ4687	$\bar{C}P$	4.09	4.3	4.52	50	4	2.0	
AD-MMSZ4688	$\bar{C}T$	4.47	4.7	4.94	50	10	3.0	
AD-MMSZ4689	$\bar{C}U$	4.85	5.1	5.36	50	10	3.0	
AD-MMSZ4690	$\bar{C}V$	5.32	5.6	5.88	50	10	4.0	
AD-MMSZ4691	$\bar{C}A$	5.89	6.2	6.51	50	10	5.0	
AD-MMSZ4692	$\bar{C}X$	6.46	6.8	7.14	50	10	5.1	
AD-MMSZ4693	$\bar{C}Y$	7.13	7.5	7.88	50	10	5.7	
AD-MMSZ4694	$\bar{C}Z$	7.79	8.2	8.61	50	1	6.2	
AD-MMSZ4695	$\bar{D}C$	8.27	8.7	9.14	50	1	6.6	
AD-MMSZ4696	$\bar{D}D$	8.65	9.1	9.56	50	1	6.9	
AD-MMSZ4697	$\bar{D}E$	9.50	10	10.50	50	1	7.6	
AD-MMSZ4698	$\bar{D}F$	10.45	11	11.55	50	0.05	8.4	
AD-MMSZ4699	$\bar{D}H$	11.40	12	12.60	50	0.05	9.1	
AD-MMSZ4700	$\bar{D}J$	12.35	13	13.65	50	0.05	9.8	
AD-MMSZ4701	$\bar{D}K$	13.30	14	14.70	50	0.05	10.6	
AD-MMSZ4702	$\bar{D}M$	14.25	15	15.75	50	0.05	11.4	
AD-MMSZ4703	$\bar{D}N$	15.20	16	16.80	50	0.05	12.1	
AD-MMSZ4704	$\bar{D}P$	16.15	17	17.85	50	0.05	12.9	
AD-MMSZ4705	$\bar{D}T$	17.10	18	18.90	50	0.05	13.6	
AD-MMSZ4706	$\bar{D}U$	18.05	19	19.95	50	0.05	14.4	
AD-MMSZ4707	$\bar{D}V$	19.00	20	21.00	50	0.01	15.2	
AD-MMSZ4708	$\bar{D}A$	20.90	22	23.10	50	0.01	16.7	
AD-MMSZ4709	$\bar{D}X$	22.80	24	25.20	50	0.01	18.2	
AD-MMSZ4710	$\bar{D}Y$	23.75	25	26.25	50	0.01	19.0	
AD-MMSZ4711	$\bar{E}A$	25.65	27	28.35	50	0.01	20.4	
AD-MMSZ4712	$\bar{E}C$	26.60	28	29.40	50	0.01	21.2	
AD-MMSZ4713	$\bar{E}D$	28.50	30	31.50	50	0.01	22.8	
AD-MMSZ4714	$\bar{E}E$	31.35	33	34.65	50	0.01	25.0	
AD-MMSZ4715	$\bar{E}F$	34.20	36	37.80	50	0.01	27.3	
AD-MMSZ4716	$\bar{E}H$	37.05	39	40.95	50	0.01	29.6	
AD-MMSZ4717	$\bar{E}J$	40.85	43	45.15	50	0.01	32.6	

1) Tested with pulses, T_P ≤ 1.0ms.

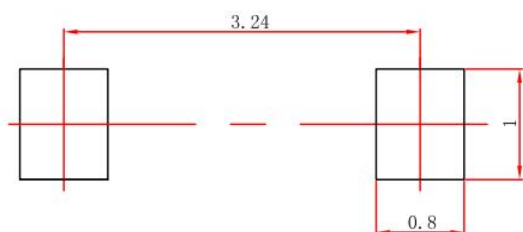
2) Measured with the device mounted on 1 inch2 FR-4 board with 2oz. copper, in a still air environment with Ta = 25°C.

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
theta	0° - 8°		0° - 8°	

SOD-123 SUGGESTED PAD LAYOUT

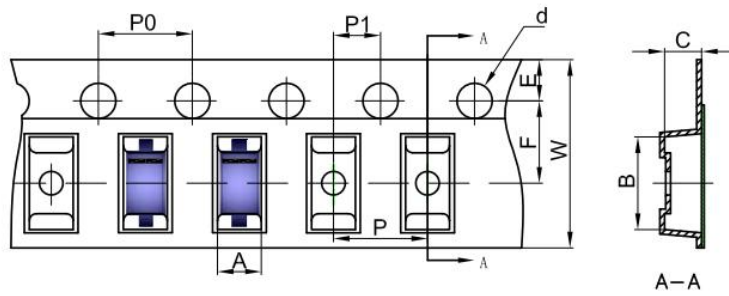


Note:

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

SOD-123 TAPE AND REEL

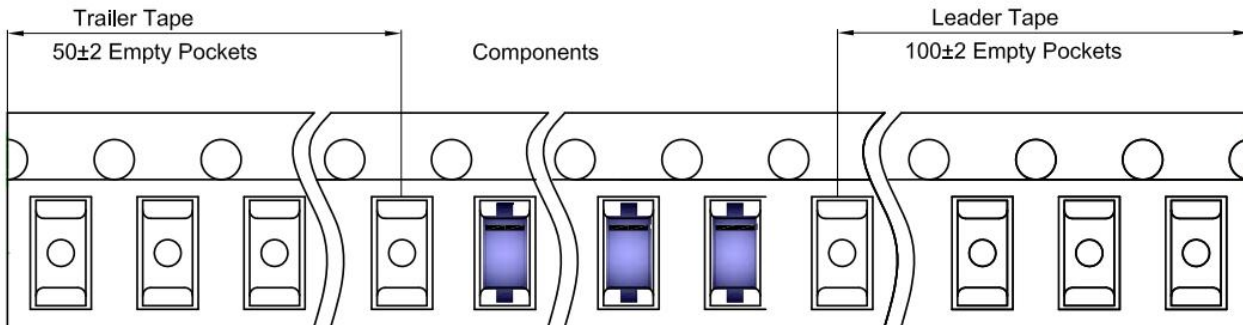
SOD-123 Embossed Carrier Tape



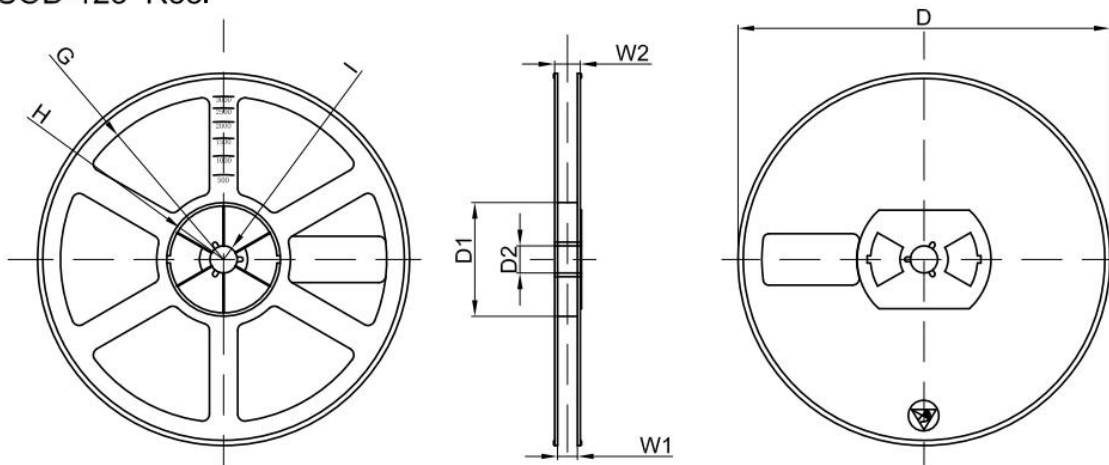
Packaging Description:
 SOD-123 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. 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	45,000 pcs	203×203×195	180,000 pcs	438×438×220	

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