

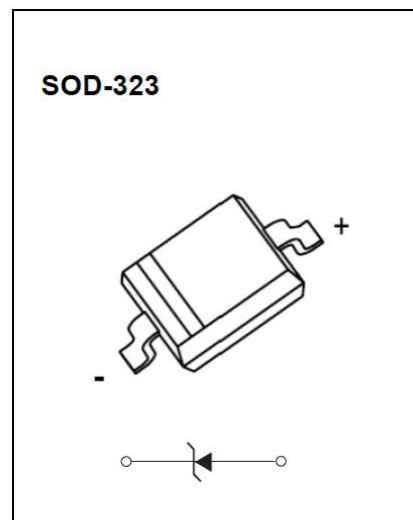


## AD-MMSZ52\*BS Series Plastic-Encapsulated Diode

AD-MMSZ52\*BS series Zener diode

### FEATURES

- Planar die construction
- Ultra-small surface mount package
- General purpose, medium current
- Ideally suited for automated assembly processes
- AEC-Q101 qualified



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

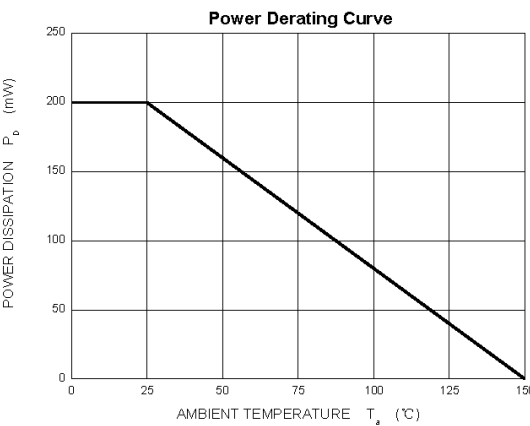
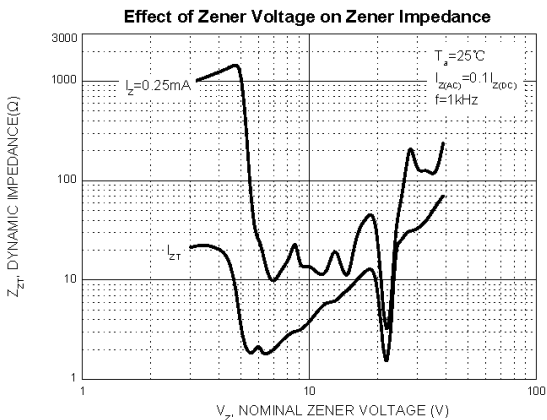
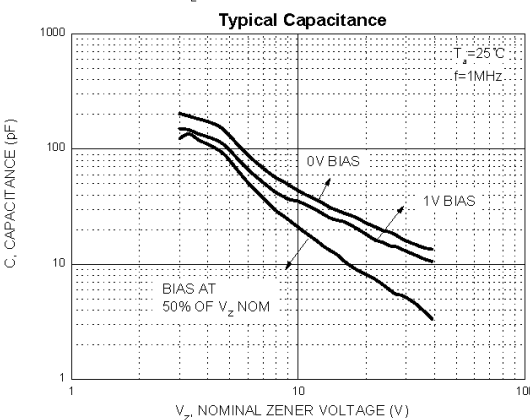
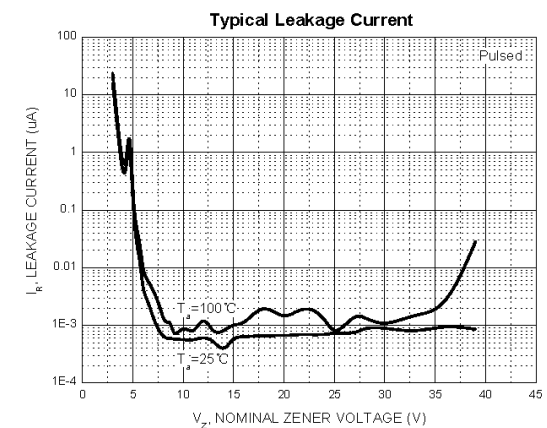
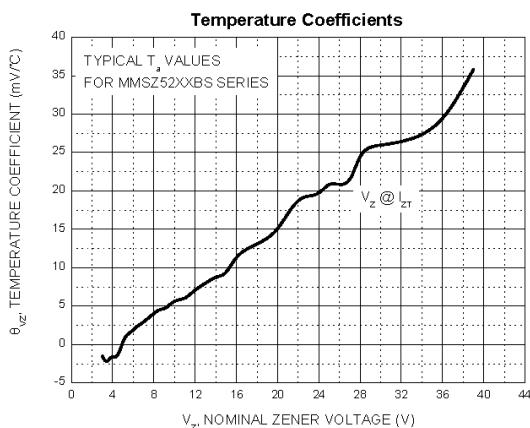
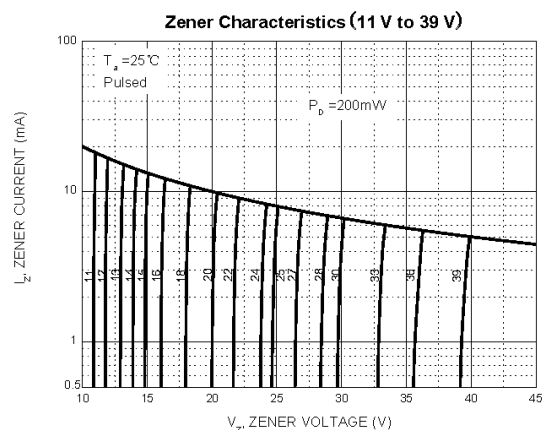
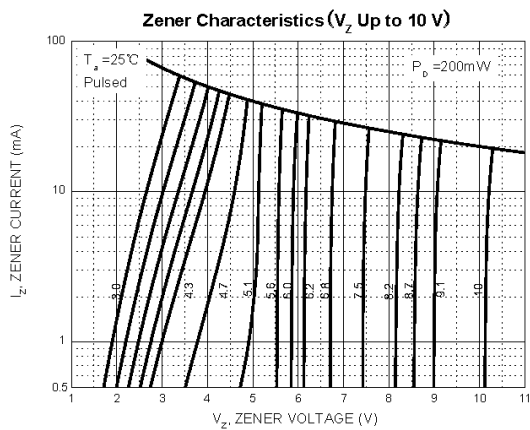
Parameter	Symbol	Value	Unit
Forward voltage @ $I_F = 10\text{mA}$	$V_F^{1)}$	0.9	V
Power dissipation	$P_D^{2)}$	200	mW
Thermal resistance from junction to ambient	$R_{\theta JA}^{2)}$	625	$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	$T_j, T_{stg}$	-55 ~ 150	$^\circ\text{C}$

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

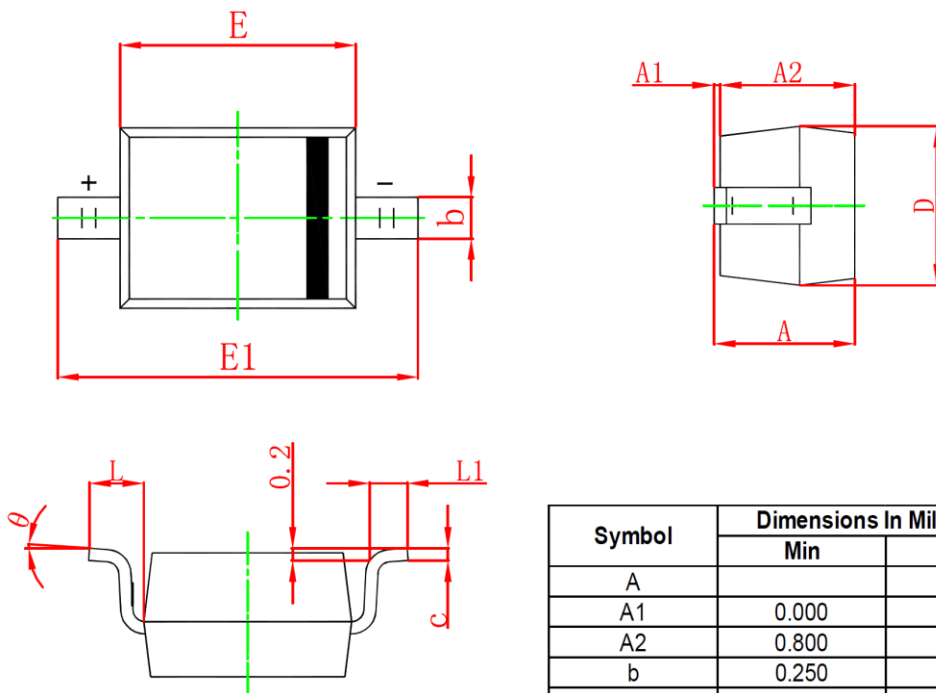
Type number	Marking	Zener voltage range <sup>1)</sup>			Maximum Zener impedance <sup>3)</sup>			Maximum reverse current		
		$V_Z @ I_{ZT}$ (V)			$I_{ZT}$ (mA)	$Z_{ZT} @ I_{ZT}$ ( $\Omega$ )	$Z_{ZK} @ I_{ZK}$ ( $\Omega$ )	$I_{ZK}$ (mA)	$I_R$ ( $\mu\text{A}$ )	$V_R$ (V)
		Min	Norm	Max						
AD-MMSZ5225BS	C5	2.85	3.0	3.15	20	30	1600	0.25	50	1.0
AD-MMSZ5226BS	G1	3.14	3.3	3.47	20	28	1600	0.25	25	1.0
AD-MMSZ5227BS	G2	3.42	3.6	3.78	20	24	1700	0.25	15	1.0
AD-MMSZ5228BS	G3	3.71	3.9	4.10	20	23	1900	0.25	10	1.0
AD-MMSZ5229BS	G4	4.09	4.3	4.52	20	22	2000	0.25	5	1.0
AD-MMSZ5230BS	G5	4.47	4.7	4.94	20	19	1900	0.25	5	2.0
AD-MMSZ5231BS	E1	4.85	5.1	5.36	20	17	1600	0.25	5	2.0
AD-MMSZ5232BS	E2	5.32	5.6	5.88	20	11	1600	0.25	5	3.0
AD-MMSZ5233BS	E3	5.70	6.0	6.30	20	7	1600	0.25	5	3.5
AD-MMSZ5234BS	E4	5.89	6.2	6.51	20	7	1000	0.25	5	4.0
AD-MMSZ5235BS	E5	6.46	6.8	7.14	20	5	750	0.25	3	5.0
AD-MMSZ5236BS	F1	7.13	7.5	7.88	20	6	500	0.25	3	6.0
AD-MMSZ5237BS	F2	7.79	8.2	8.61	20	8	500	0.25	3	6.5
AD-MMSZ5238BS	F3	8.27	8.7	9.14	20	8	600	0.25	3	6.5
AD-MMSZ5239BS	F4	8.65	9.1	9.56	20	10	600	0.25	3	7.0
AD-MMSZ5240BS	F5	9.50	10	10.50	20	17	600	0.25	3	8.0
AD-MMSZ5241BS	H1	10.45	11	11.55	20	22	600	0.25	2.0	8.4
AD-MMSZ5242BS	H2	11.40	12	12.60	20	30	600	0.25	1.0	9.1
AD-MMSZ5243BS	H3	12.35	13	13.65	9.5	13	600	0.25	0.5	9.9
AD-MMSZ5244BS	H4	13.30	14	14.70	9.0	15	600	0.25	0.1	10
AD-MMSZ5245BS	H5	14.25	15	15.75	8.5	16	600	0.25	0.1	11
AD-MMSZ5246BS	J1	15.20	16	16.80	7.8	17	600	0.25	0.1	12
AD-MMSZ5248BS	J3	17.10	18	18.90	7.0	21	600	0.25	0.1	14
AD-MMSZ5250BS	J5	19.00	20	21.00	6.2	25	600	0.25	0.1	15
AD-MMSZ5251BS	K1	20.9	22	23.10	5.6	29	600	0.25	0.1	17
AD-MMSZ5252BS	K2	22.8	24	25.20	5.2	33	600	0.25	0.1	18
AD-MMSZ5253BS	K3	23.75	25	26.25	5.0	35	600	0.25	0.1	19
AD-MMSZ5254BS	K4	25.65	27	28.35	5.0	41	600	0.25	0.1	21
AD-MMSZ5255BS	K5	26.60	28	29.40	4.5	44	600	0.25	0.1	21
AD-MMSZ5256BS	M1	28.50	30	31.50	4.2	49	600	0.25	0.1	23
AD-MMSZ5257BS	M2	31.35	33	34.65	3.8	58	700	0.25	0.1	25
AD-MMSZ5258BS	M3	34.20	36	37.80	3.4	70	700	0.25	0.1	27
AD-MMSZ5259BS	M4	37.05	39	40.95	3.2	80	800	0.25	0.1	30

1) Tested with pulses,  $T_P \leq 1.0\text{ms}$ .2) Measured with the device mounted on ceramic PCB; 7.6 mm x 9.4 mm x 0.87 mm with pad area 25 mm<sup>2</sup>.3)  $f = 1\text{kHz}$ .

# TYPICAL CHARACTERISTICS

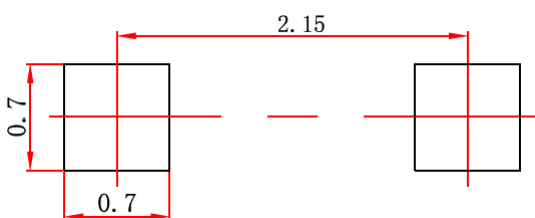


### SOD-323 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A		1.100		0.043
A1	0.000	0.100	0.000	0.004
A2	0.800	1.000	0.031	0.039
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.500	2.750	0.098	0.108
L	0.475 REF		0.019 REF	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

### SOD-323 SUGGESTED PAD LAYOUT

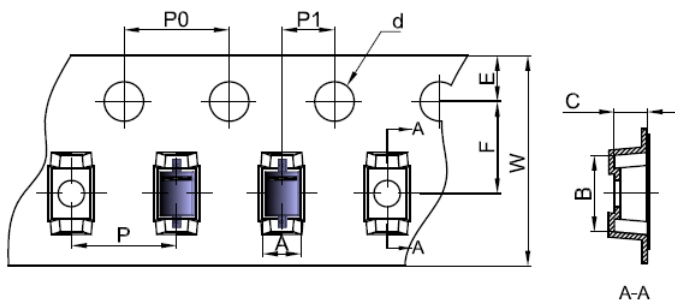


**Note:**

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

### SOD-323 TAPE AND REEL

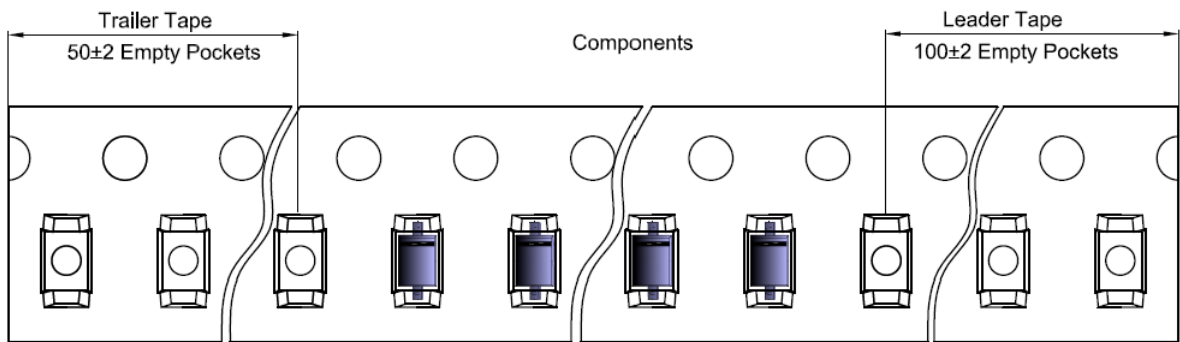
#### SOD-323 Embossed Carrier Tape



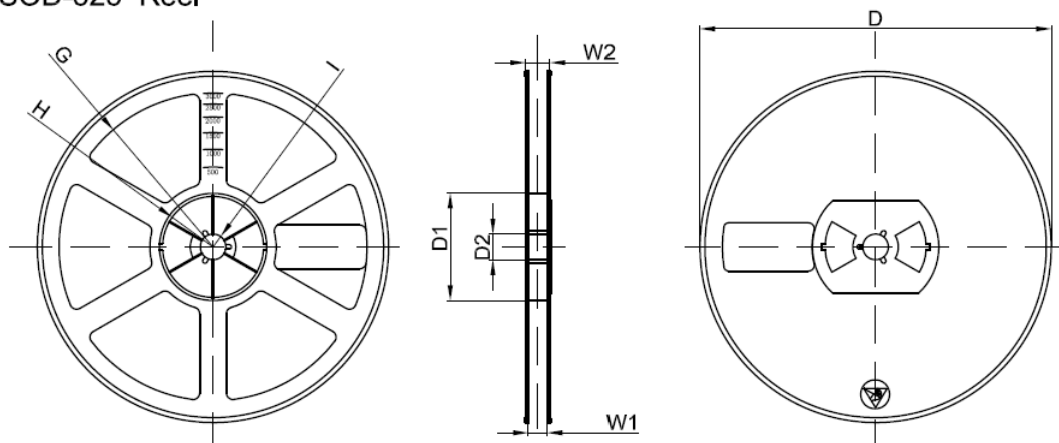
**Packaging Description:**  
 SOD-323 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed 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-323	1,48	3,3	1,25	Ø1,50	1,75	3,50	4,00	4,00	2,00	8,00

#### SOD-323 Tape Leader and Trailer



#### SOD-323 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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13th Floor, C Block, Tengfei Building, Yan Chuang Yuan, Nanjing Jiangbei New Area, China

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