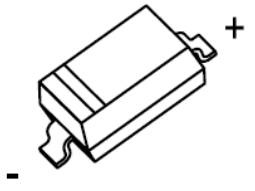
SZCJ

Shenzhen Changji Semiconductor Co., LTD.

SOD-123 Plastic-Encapsulate Diodes

MMSZ5221B-MMSZ5259B ZENER DIODE

SOD-123





FEATURES

- Planar Die Construction
- Ultra-Small Surface Mount Package
- General purpose, Medium Current
- Ideally Suited for Automated Assembly Processes

Marking:



XX= Device code, see table on page2 the marking code

The marking bar indicates the cathode

Solid dot = Green molding compound device.

Maximum Ratings(T_a=25℃ unless otherwise specified)

Characteristic	Symbol	Value	Unit
Forward Voltage (Note 2) @ I_F = 10mA	V_F	0.9	V
Power Dissipation(Note 1)	P_d	500	mW
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	250	℃/W
Operation Junction and Storage Temperature Range	T_J,T_{stg}	-55~+150	℃

Notes:1. Mounted on 1 in^2 FR-4 board with 2oz. Copper, in a still air environment with Ta=25 ℃.

2. Tested with pulses, Tp≤1.0ms.

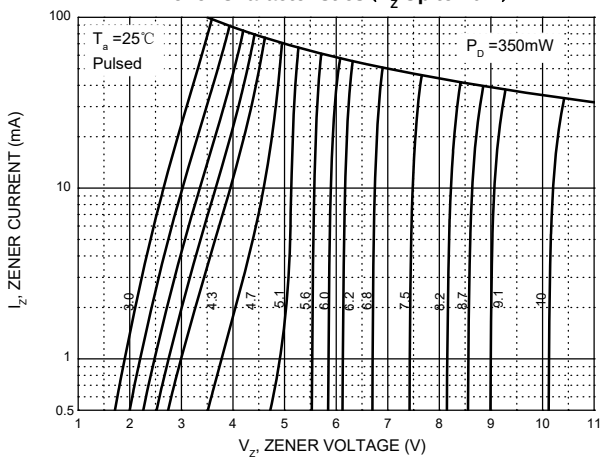
ELECTRICAL CHARACTERISTICS

T_a=25℃ unless otherwise specified

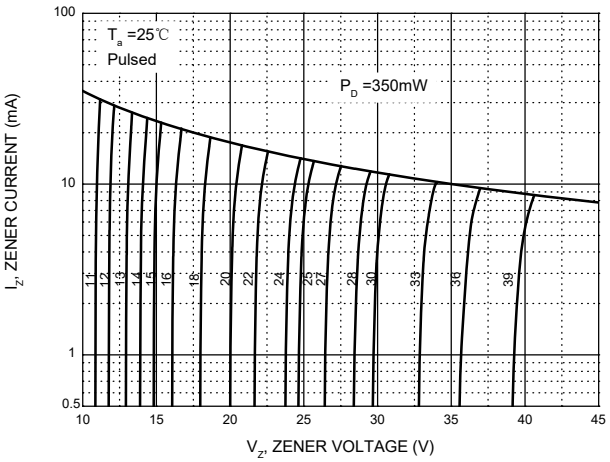
Type Number	Code	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 4)			Maximum Reverse Current	
		V_Z@I_{ZT}			I_{ZT}	Z_{ZT}@I_{ZT}	Z_{ZK}@I_{ZK}	I_{ZK}	I_R	V_R
		Nom(V)	Min(V)	Max(V)	mA	Ω		mA	uA	V
MMSZ5221B	C1	2.4	2.28	2.52	20	30	1200	0.25	100	1.0
MMSZ5223B	C3	2.7	2.57	2.84	20	30	1300	0.25	75	1.0
MMSZ5225B	C5	3.0	2.85	3.15	20	30	1600	0.25	50	1.0
MMSZ5226B	G1	3.3	3.14	3.47	20	28	1600	0.25	25	1.0
MMSZ5227B	G2	3.6	3.42	3.78	20	24	1700	0.25	15	1.0
MMSZ5228B	G3	3.9	3.71	4.10	20	23	1900	0.25	10	1.0
MMSZ5229B	G4	4.3	4.09	4.52	20	22	2000	0.25	5	1.0
MMSZ5230B	G5	4.7	4.47	4.94	20	19	1900	0.25	5	2.0
MMSZ5231B	E1	5.1	4.85	5.36	20	17	1600	0.25	5	2.0
MMSZ5232B	E2	5.6	5.32	5.88	20	11	1600	0.25	5	3.0
MMSZ5233B	E3	6.0	5.70	6.30	20	7	1600	0.25	5	3.5
MMSZ5234B	E4	6.2	5.89	6.51	20	7	1000	0.25	5	4.0
MMSZ5235B	E5	6.8	6.46	7.14	20	5	750	0.25	3	5.0
MMSZ5236B	F1	7.5	7.13	7.88	20	6	500	0.25	3	6.0
MMSZ5237B	F2	8.2	7.79	8.61	20	8	500	0.25	3	6.5
MMSZ5238B	F3	8.7	8.27	9.14	20	8	600	0.25	3	6.5
MMSZ5239B	F4	9.1	8.65	9.56	20	10	600	0.25	3	7.0
MMSZ5240B	F5	10	9.50	10.50	20	17	600	0.25	3	8.0
MMSZ5241B	H1	11	10.45	11.55	20	22	600	0.25	2.0	8.4
MMSZ5242B	H2	12	11.40	12.60	20	30	600	0.25	1.0	9.1
MMSZ5243B	H3	13	12.35	13.65	9.5	13	600	0.25	0.5	9.9
MMSZ5244B	H4	14	13.30	14.70	9.0	15	600	0.25	0.1	10
MMSZ5245B	H5	15	14.25	15.75	8.5	16	600	0.25	0.1	11
MMSZ5246B	J1	16	15.20	16.80	7.8	17	600	0.25	0.1	12
MMSZ5247B	J2	17	16.15	17.85	7.4	19	600	0.25	0.1	13
MMSZ5248B	J3	18	17.10	18.90	7.0	21	600	0.25	0.1	14
MMSZ5250B	J5	20	19.00	21.00	6.2	25	600	0.25	0.1	15
MMSZ5251B	K1	22	20.90	23.10	5.6	29	600	0.25	0.1	17
MMSZ5252B	K2	24	22.80	25.20	5.2	33	600	0.25	0.1	18
MMSZ5253B	K3	25	23.75	26.25	5.0	35	600	0.25	0.1	19
MMSZ5254B	K4	27	25.65	28.35	5.0	41	600	0.25	0.1	21
MMSZ5255B	K5	28	26.60	29.40	4.5	44	600	0.25	0.1	21
MMSZ5256B	M1	30	28.50	31.50	4.2	49	600	0.25	0.1	23
MMSZ5257B	M2	33	31.35	34.65	3.8	58	700	0.25	0.1	25
MMSZ5258B	M3	36	34.20	37.80	3.4	70	700	0.25	0.1	27
MMSZ5259B	M4	39	37.05	40.95	3.2	80	800	0.25	0.1	30

Typical Characteristics

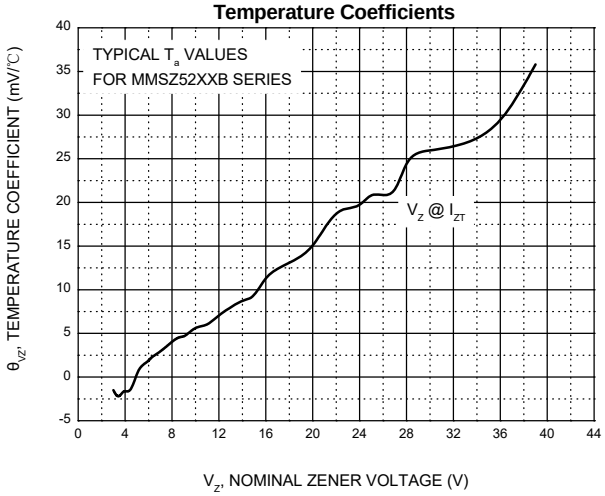
Zener Characteristics (V_z Up to 10 V)



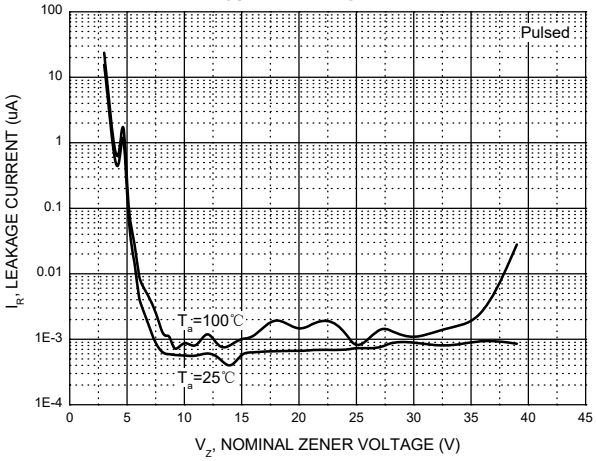
Zener Characteristics (11 V to 39 V)



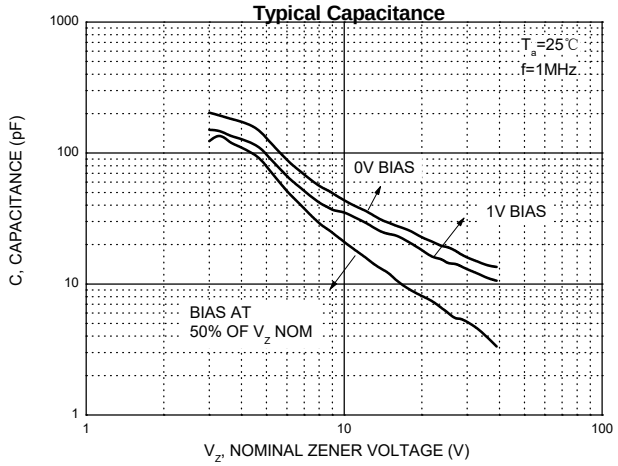
Temperature Coefficients



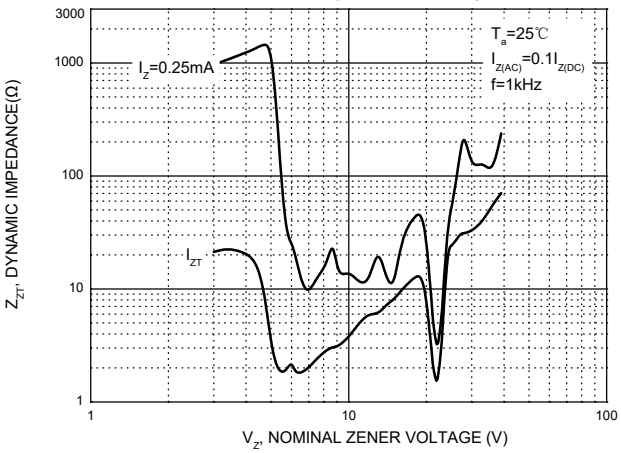
Typical Leakage Current



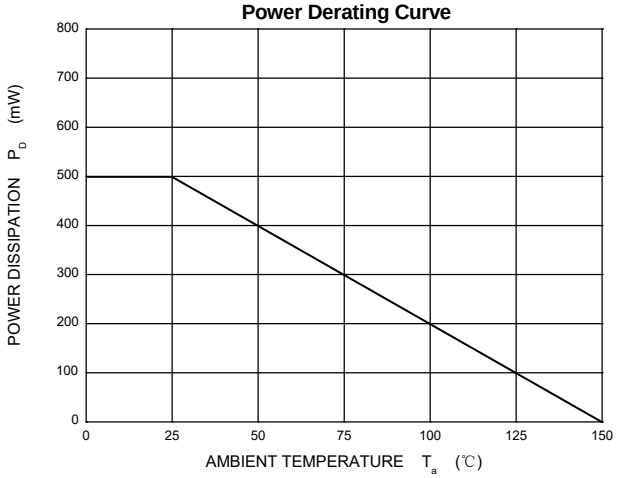
Typical Capacitance



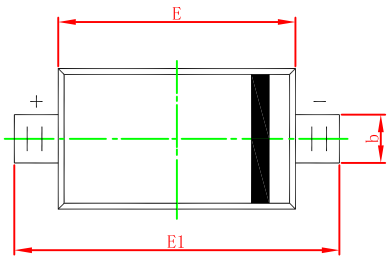
Effect of Zener Voltage on Zener Impedance

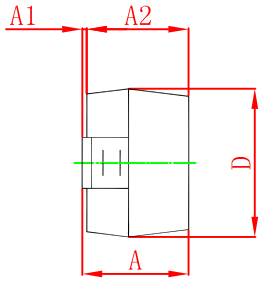


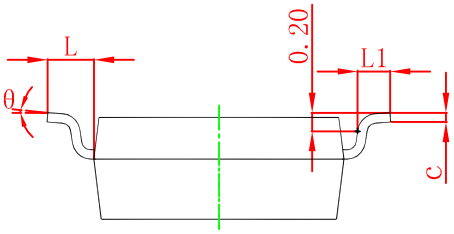
Power Derating Curve



SOD-123 Package Outline Dimensions

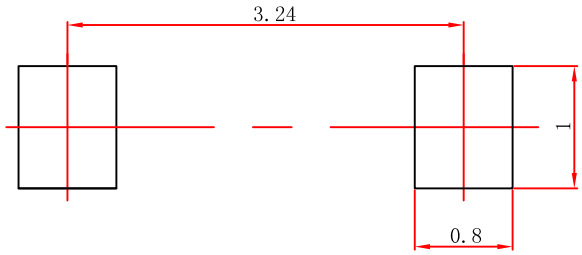






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500 REF		0.020 REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°

SOD-123 Suggested Pad Layout

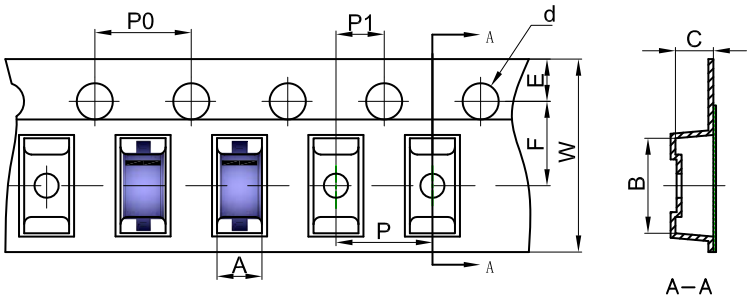


Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.

NOTICE
SZCJ reserves the right to make modifications,enhan nts,improvements,corrections or other es without further notice to any product herein. SZCJ does not assume any liability arising out of the application or use of any product described h

SOD-123 Tape and Reel

SOD-123 Embossed Carrier Tape

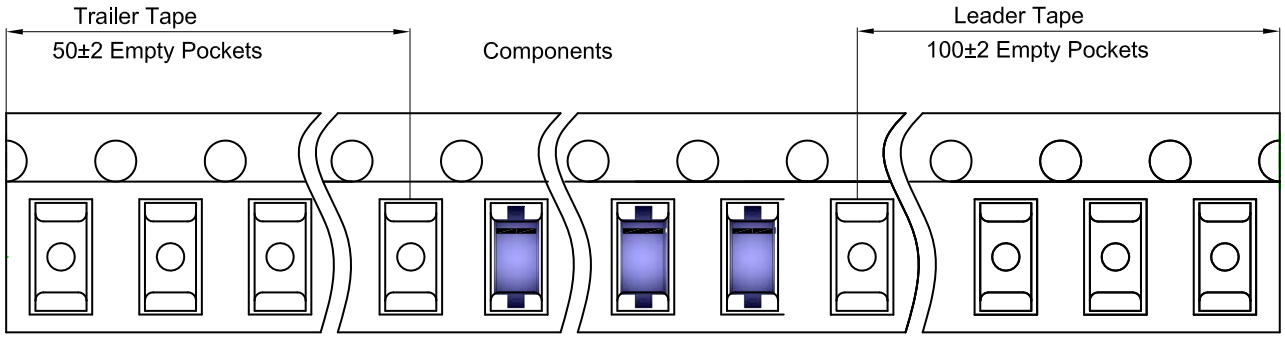


Packaging Description:

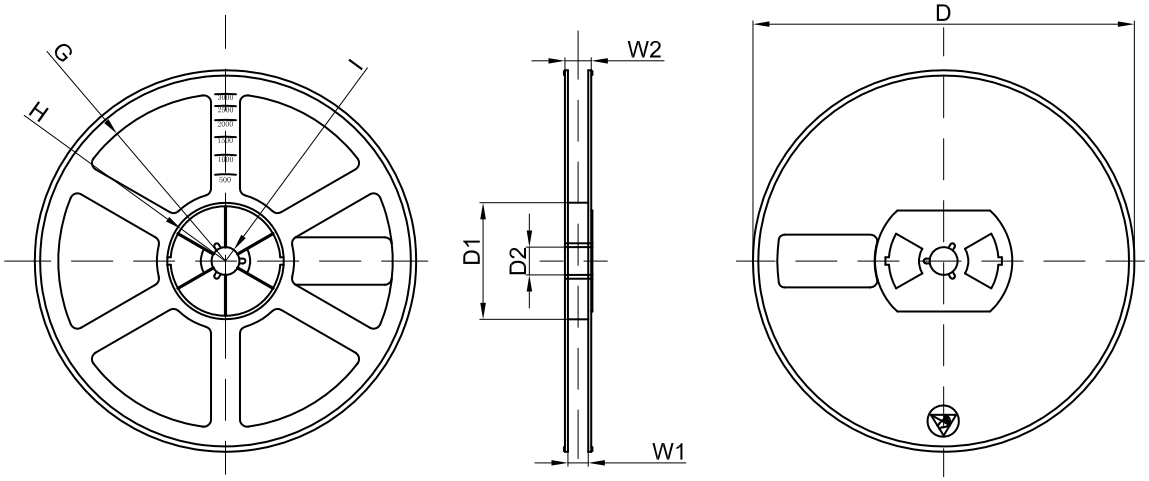
SOD-123 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts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