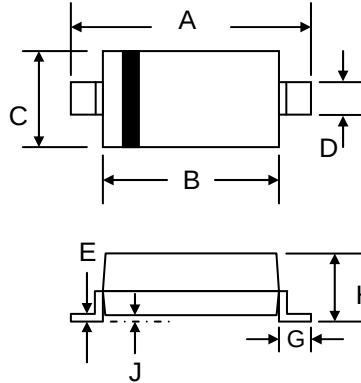


Features

- Planar Die Construction
- 500mW Power Dissipation
- 2.4V – 43V Nominal Zener Voltage
- 5% Standard Vz Tolerance
- Designed for Surface Mount Application
- Plastic Material – UL Recognition Flammability Classification 94V-0



SOD-123		
Dim	Min	Max
A	3.6	3.9
B	2.5	2.8
C	1.4	1.8
D	0.5	0.7
E	—	0.2
G	0.4	—
H	0.95	1.35
J	—	0.12
All Dimensions in mm		

Mechanical Data

- Case: SOD-123, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.01 grams (approx.)
- Marking: Device Code
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 5**

Maximum Ratings @T_A=25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Power Dissipation at T _L = 75°C (Note 1)	P _D	500	mW
Forward Voltage @ I _F = 10mA	V _F	0.9	V
Thermal Resistance, Junction to Ambient (Note 1, 2)	R _{θJA}	340	°C/W
Thermal Resistance, Junction to Lead (Note 1, 2)	R _{θJL}	150	
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150	°C

Note: 1. Mounted on FR-4 PCB with minimum recommended pad layout.
2. Thermal resistance measurement obtained via infrared scan method.

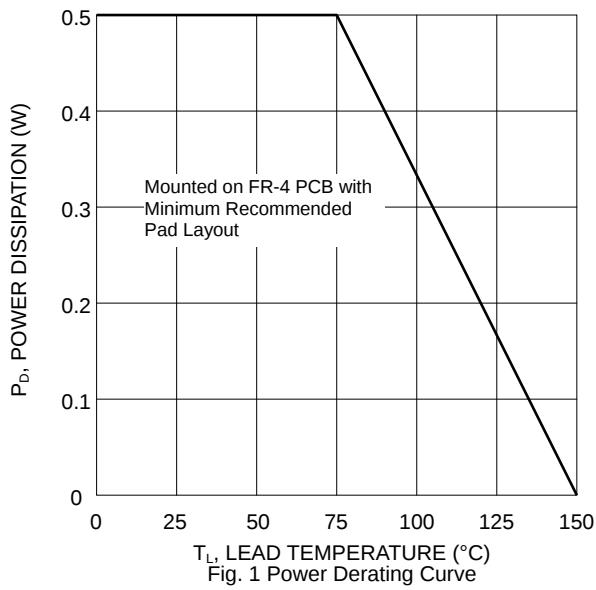


Fig. 1 Power Derating Curve

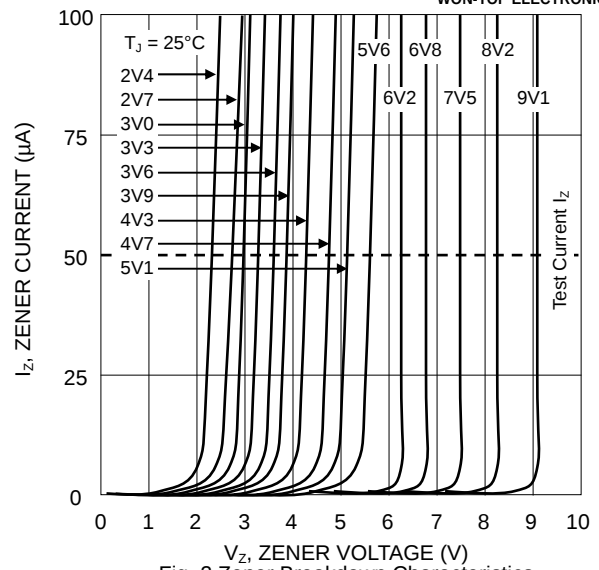


Fig. 2 Zener Breakdown Characteristics

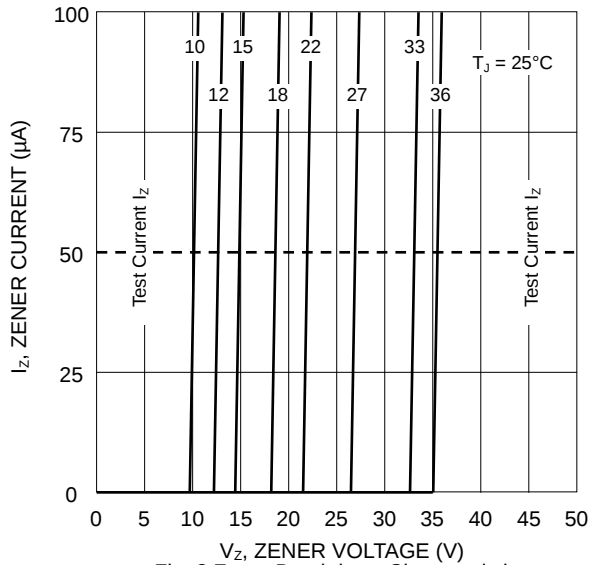


Fig. 3 Zener Breakdown Characteristics

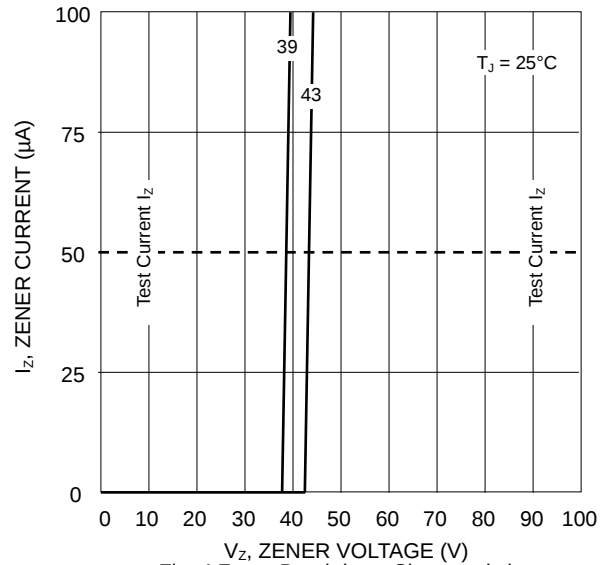


Fig. 4 Zener Breakdown Characteristics

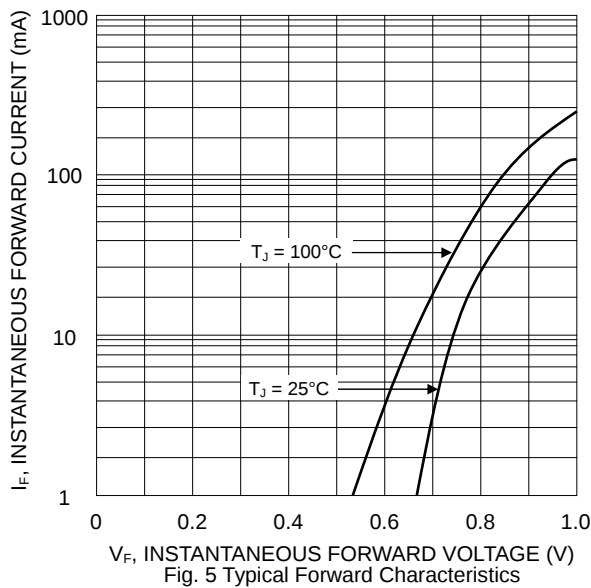


Fig. 5 Typical Forward Characteristics

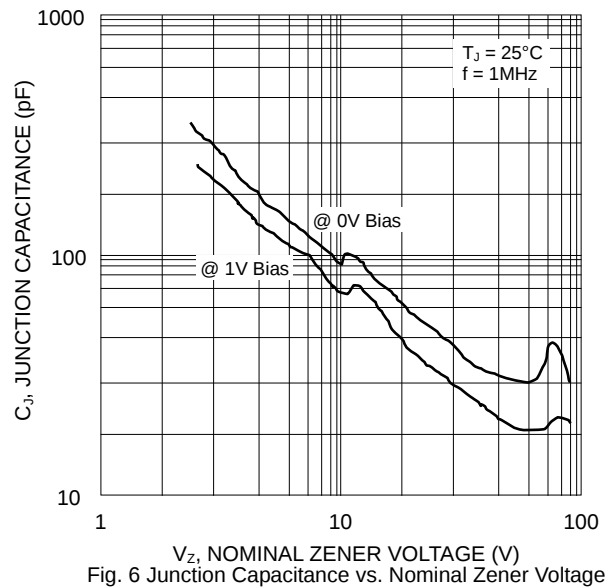


Fig. 6 Junction Capacitance vs. Nominal Zener Voltage

Electrical Characteristics (@T_A=25°C unless otherwise specified) Table 1

Type Number (Note 1)	Device Marking Code (Note 2)		Zener Voltage Range (Note 3)			Test Current	Max Reverse Leakage Current	
			V _Z @ I _{ZT}			I _{ZT}	I _R	@ V _R
	TW	CN	Nom (V)	Min (V)	Max (V)	(mA)	(μA)	(V)
MMSZ4681	TF	CF	2.4	2.28	2.52	0.05	2.00	1.0
MMSZ4682	TH	CH	2.7	2.57	2.84	0.05	1.00	1.0
MMSZ4683	TJ	CJ	3.0	2.85	3.15	0.05	0.80	1.0
MMSZ4684	TK	CK	3.3	3.14	3.47	0.05	7.50	1.5
MMSZ4685	TM	CM	3.6	3.42	3.78	0.05	7.50	2.0
MMSZ4686	TN	CN	3.9	3.71	4.10	0.05	5.00	2.0
MMSZ4687	TP	CP	4.3	4.09	4.52	0.05	4.00	2.0
MMSZ4688	TT	CT	4.7	4.47	4.94	0.05	10.00	3.0
MMSZ4689	TU	CU	5.1	4.85	5.36	0.05	10.00	3.0
MMSZ4690	TV	CV	5.6	5.32	5.88	0.05	10.00	4.0
MMSZ4691	TA	CA	6.2	5.89	6.51	0.05	10.00	5.0
MMSZ4692	TX	CX	6.8	6.46	7.14	0.05	10.00	5.1
MMSZ4693	TY	CY	7.5	7.13	7.88	0.05	10.00	5.7
MMSZ4694	TZ	CZ	8.2	7.79	8.61	0.05	1.00	6.2
MMSZ4695	UC	DC	8.7	8.27	9.14	0.05	1.00	6.6
MMSZ4696	UD	DD	9.1	8.65	9.56	0.05	1.00	6.9
MMSZ4697	UE	DE	10	9.50	10.50	0.05	1.00	7.6
MMSZ4698	UF	DF	11	10.45	11.55	0.05	0.05	8.4
MMSZ4699	UH	DH	12	11.40	12.60	0.05	0.05	9.1
MMSZ4700	UJ	DJ	13	12.35	13.65	0.05	0.05	9.8
MMSZ4701	UK	DK	14	13.30	14.70	0.05	0.05	10.6
MMSZ4702	UM	DM	15	14.25	15.75	0.05	0.05	11.4
MMSZ4703	UN	DN	16	15.20	16.80	0.05	0.05	12.1
MMSZ4704	UP	DP	17	16.15	17.85	0.05	0.05	12.9
MMSZ4705	UT	DT	18	17.10	18.90	0.05	0.05	13.6
MMSZ4706	UU	DU	19	18.05	19.95	0.05	0.05	14.4
MMSZ4707	UV	DV	20	19.00	21.00	0.05	0.01	15.2
MMSZ4708	UA	DA	22	20.90	23.10	0.05	0.01	16.7
MMSZ4709	UZ	DX	24	22.80	25.20	0.05	0.01	18.2
MMSZ4710	UY	DY	25	23.75	26.25	0.05	0.01	19.0
MMSZ4711	ZA	EA	27	25.65	28.35	0.05	0.01	20.4
MMSZ4712	ZC	EC	28	26.60	29.40	0.05	0.01	21.2
MMSZ4713	ZD	ED	30	28.50	31.50	0.05	0.01	22.8
MMSZ4714	ZE	EE	33	31.35	34.65	0.05	0.01	25.0
MMSZ4715	ZF	EF	36	34.20	37.80	0.05	0.01	27.3
MMSZ4716	ZH	EH	39	37.05	40.95	0.05	0.01	29.6
MMSZ4717	ZJ	EJ	43	40.85	45.15	0.05	0.01	32.6

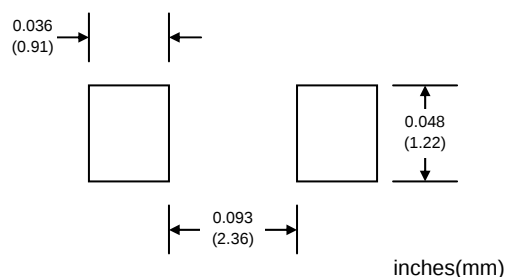
Note: 1. Type numbers listed have standard tolerance on the nominal zener voltage of ±5%.
2. TW: Marking code for Taiwan plant. CN: Marking code for China plant.
3. Measured with device junction in thermal equilibrium.

MARKING INFORMATION



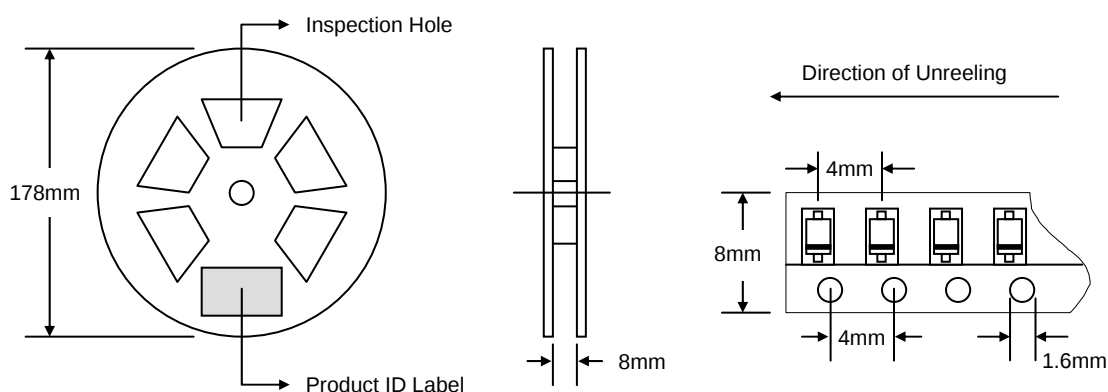
Cathode = Polarity Band
xx = Device Code, See Table 1

RECOMMENDED FOOTPRINT



PACKAGING INFORMATION

TAPE & REEL



Reel Diameter (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
178	3,000	187 x 187 x 65	15,000	390 x 240 x 420	150,000	10.0

Note: 1. Anti-static plastic reel, white, water clear or blue color. Inspection hole might be varied in different alignment.
2. Components are packed in accordance with EIA standard 481-1 and 481-2.

ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
MMSZ4xxx-T1	SOD-123	3000/Tape & Reel

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add “-LF” suffix to part number above. For example, MMSZ4681-T1-LF.**

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