

FEATURES AND BENEFITS

Product Summary		
P_D	350mW	@25 °C
V_Z	2.4 – 39V	@25 °C
I_{ZT}	2.7 - 20uA	@25 °C

SOD-123



Cathode  Anode

- Constant Voltage control
- Wide Voltage Range Selection 2.4V to 39V
- RoHS Compliant / Green EMC UL Flammability Classification Rating 94V-0
- Matte Tin (Sn) Lead finish Solderable per MIL-STD-202, Method 208
- Moisture Sensitivity: Level 1 per J-STD-020
- Weight: 0.01 grams (Approximate)

Maximum Ratings (TA = 25 °C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Power Dissipation	P_{TM}	350	mW
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55 to +125	°C

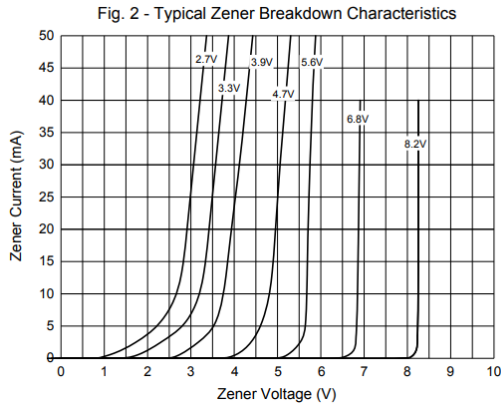
ELECTRICAL CHARACTERISTICS (TA = 25 °C unless otherwise noted)

*1 Pulse width = 10 ms

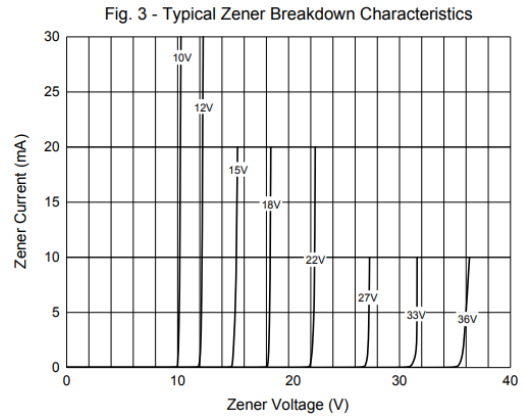
Type Number	Device Marking	Vz (V) @IzT ^{*1}			IzT	ZzT@IzT	ZzK@IzK	Izk	Ir	Vr
		Nom(V)	Min(V)	Max(V)	mA	Ω		(mA)	(uA)	(V)
MMSZ5221C	2C1	2.4	2.35	2.45	20	30	1200	0.25	100	1.0
MMSZ5223C	2C3	2.7	2.65	2.75	20	30	1300	0.25	75	1.0
MMSZ5225C	2C5	3.0	2.94	3.06	20	30	1600	0.25	50	1.0
MMSZ5226C	2G1	3.3	3.23	3.37	20	28	1600	0.25	25	1.0
MMSZ5227C	2G2	3.6	3.53	3.67	20	24	1700	0.25	15	1.0
MMSZ5228C	2G3	3.9	3.82	3.98	20	23	1900	0.25	10	1.0
MMSZ5229C	2G4	4.3	4.21	4.39	20	22	2000	0.25	5	1.0
MMSZ5230C	2G5	4.7	4.61	4.79	20	19	1900	0.25	5	2.0
MMSZ5231C	2E1	5.1	5.00	5.20	20	17	1600	0.25	5	2.0
MMSZ5232C	2E2	5.6	5.49	5.71	20	11	1600	0.25	5	3.0
MMSZ5233C	2E3	6.0	5.88	6.12	20	7	1600	0.25	5	3.5

Type Number	Device Marking	V _z (V) @I _{zT} ^{*1}			I _{zT}	Z _{zT} @I _{zT}	Z _{zK} @I _{zK}	I _{zk} (mA)	I _R (uA)	V _R (V)
		Nom(V)	Min(V)	Max(V)	mA	Ω				
MMSZ5234C	2E4	6.2	6.08	6.32	20	7	1000	0.25	5	4.0
MMSZ5235C	2E5	6.8	6.66	6.94	20	5	750	0.25	3	5.0
MMSZ5236C	2F1	7.5	7.35	7.65	20	6	500	0.25	3	6.0
MMSZ5237C	2F2	8.2	8.04	8.36	20	8	500	0.25	3	6.5
MMSZ5238C	2F3	8.7	8.53	8.87	20	8	600	0.25	3	6.5
MMSZ5239C	2F4	9.1	8.92	9.28	20	10	600	0.25	3	7.0
MMSZ5240C	2F5	10	9.80	10.20	20	17	600	0.25	3	8.0
MMSZ5241C	2H1	11	10.78	11.22	20	22	600	0.25	2.0	8.4
MMSZ5242C	2H2	12	11.76	12.24	20	30	600	0.25	1.0	9.1
MMSZ5243C	2H3	13	12.74	13.26	9.5	13	600	0.25	0.5	9.9
MMSZ5244C	2H4	14	13.72	14.28	9.0	15	600	0.25	0.1	10
MMSZ5245C	2H5	15	14.70	15.30	8.5	16	600	0.25	0.1	11
MMSZ5246C	2J1	16	15.68	16.32	7.8	17	600	0.25	0.1	12
MMSZ5248C	2J3	18	17.64	18.36	7.0	21	600	0.25	0.1	14
MMSZ5250C	2J5	20	19.60	20.40	6.2	25	600	0.25	0.1	15
MMSZ5251C	2K1	22	21.56	22.44	5.6	29	600	0.25	0.1	17
MMSZ5252C	2K2	24	23.52	24.48	5.2	33	600	0.25	0.1	18
MMSZ5253C	2K3	25	24.50	25.50	5.0	35	600	0.25	0.1	19
MMSZ5254C	2K4	27	26.46	27.54	5.0	41	600	0.25	0.1	21
MMSZ5255C	2K5	28	27.44	28.56	4.5	44	600	0.25	0.1	21
MMSZ5256C	2M1	30	29.40	30.60	4.2	49	600	0.25	0.1	23
MMSZ5257C	2M2	33	32.34	33.66	3.8	58	700	0.25	0.1	25
MMSZ5258C	2M3	36	35.28	36.72	3.4	70	700	0.25	0.1	27
MMSZ5259C	2M4	39	38.22	39.78	3.2	80	800	0.25	0.1	30
MMSZ5260C	M5	43	42.14	43.86	3	93	900	0.25	0.1	33
MMSZ5261C	N1	47	46.06	47.94	2.7	105	1000	0.25	0.1	36

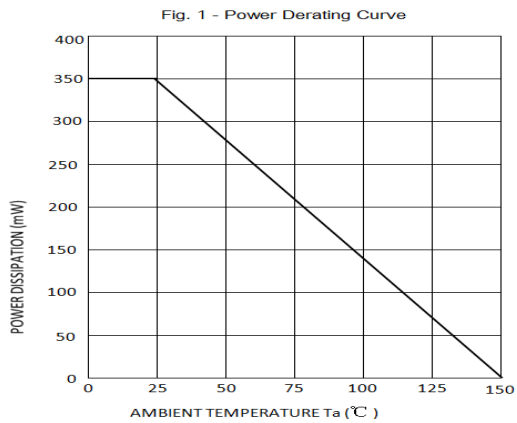
RATING AND CHARACTERISTICS CURVES



Zener current vs Zener voltage



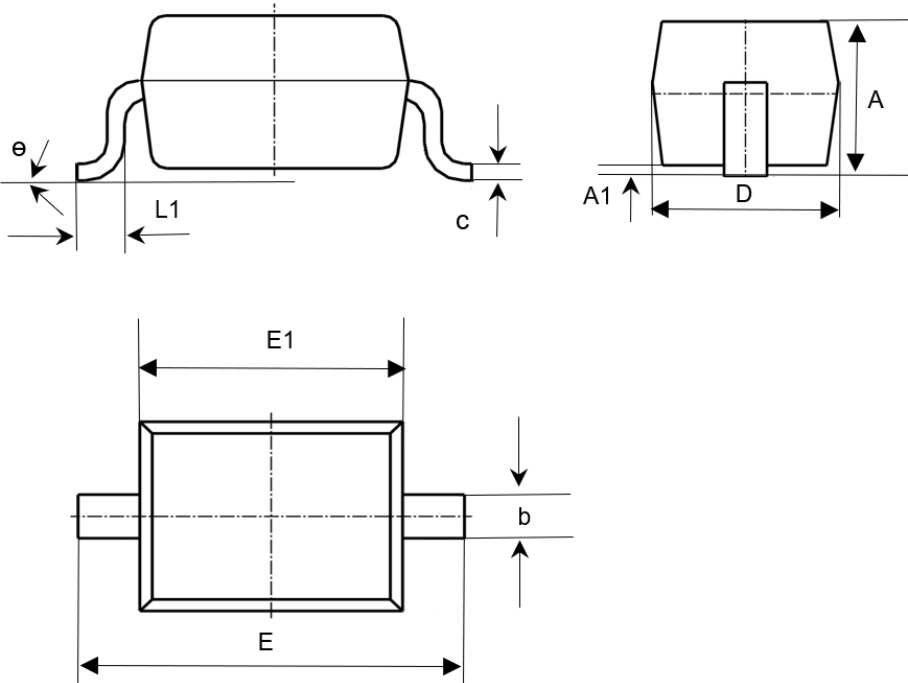
Zener current vs Zener voltage



Power derating curve

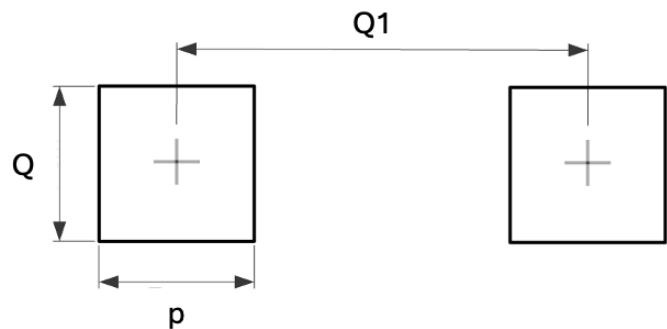
PACKAGE OUTLINE DIMENSIONS

SOD-123



Symbol	MIN	MAX
A	1.05	1.25
A1	0.00	0.10
b	0.45	0.65
c	0.08	0.15
D	1.50	1.70
E	3.55	3.85
E1	2.60	2.80
L1	0.25	0.45
θ	0°	8°
Unit: mm		

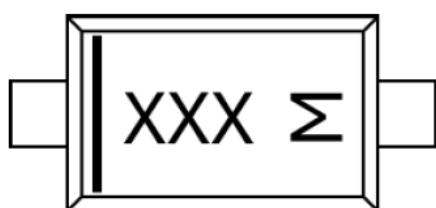
SUGGESTED PAD LAYOUT



Symbol	Typ
Q1	3.24
Q	1.0
p	0.8
Unit: mm	

DEVICE MARKING CODE AND ORDERING INFORMATION

DEVICE	Marking	Quantity	Packing
MMSZ52 series	Refer to Device Marking	3000/7"Reel	Tape & Reel



Cathode Band

XXX: Product Marking Code

Σ : Date Code (Rotate 90° counterclockwise)

Odd Year	Even Year
1	E
2	F
3	H
4	J
5	K
6	L
7	N
8	P
9	U
T	X
V	Y
C	Z

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