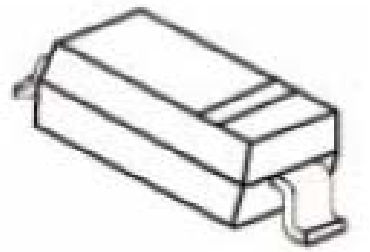
SOD-123 Plastic-Encapsulate Zener Diode

MMSZ52XXB Series

Features

SOD-123



Low Zener Impedance

Power Dissipation of 500mW

High Stability and High Reliability

Mechanical Data

Cases :SOD-123 Small Outline Plastic Package

Polarity: Color band denotes cathode end

Epoxy UL: 94V-0

Mounting Position: Any

Maximum Ratings & Thermal Characteristics

(Ratings at 25℃ ambient temperature unless otherwise specified.)

Parameters	Symbol	Value	Unit
Power Dissipation	P_d	500 1)	mW
Forward Voltage @IF=10mA	V_f	0.9 2)	V
Storage temperature range	T_s	-65-+150	℃

1) Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25mm²

2) Short duration test pulse used to minimize self-heating effect

3) f=1KHz

Electrical Characteristics

(Ratings at 25℃ ambient temperature unless otherwise specified).

Device	Marking	Zener Voltage Range			Maximum Zener Impedance			Maximum Reverse Current	
		Vz@Izt		Izt	Zzt @Izt	Zzk @Izk	Izk	IR	VR
		Min(V)	Max(V)	mA	Ω		mA	uA	V
MMSZ5221B	C1	2.28	2.52	20	30	1200	0.25	100	1.0
MMSZ5223B	C3	2.57	2.84	20	30	1300	0.25	75	1.0
MMSZ5225B	C5	2.85	3.15	20	30	1600	0.25	50	1.0
MMSZ5226B	G1	3.14	3.47	20	28	1600	0.25	25	1.0
MMSZ5227B	G2	3.42	3.78	20	24	1700	0.25	15	1.0
MMSZ5228B	G3	3.71	4.10	20	23	1900	0.25	10	1.0
MMSZ5229B	G4	4.09	4.52	20	22	2000	0.25	5.0	1.0
MMSZ5230B	G5	4.47	4.94	20	19	1900	0.25	5.0	2.0
MMSZ5231B	E1	4.85	5.36	20	17	1600	0.25	5.0	2.0
MMSZ5232B	E2	5.32	5.88	20	11	1600	0.25	5.0	3.0
MMSZ5233B	E3	5.70	6.30	20	7	1600	0.25	5.0	3.5
MMSZ5234B	E4	5.89	6.51	20	7	1000	0.25	5.0	4.0
MMSZ5235B	E5	6.46	7.14	20	5	750	0.25	3	5.0
MMSZ5236B	F1	7.13	7.88	20	6	500	0.25	3	6.0
MMSZ5237B	F2	7.79	8.61	20	8	500	0.25	3	6.5
MMSZ5238B	F3	8.27	9.14	20	8	600	0.25	3	6.5

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Device	Marking	Zener Voltage Range			Maximum Zener Impedance			Maximum Reverse Current	
		Vz@Izt		Izt	Zzt @Izt	Zzk @Izk	Izk	IR	VR
		Min(V)	Max(V)	mA	Ω		mA	uA	V
MMSZ5239B	F4	8.65	9.56	20	10	600	0.25	3	7.0
MMSZ5241B	H1	10.45	11.55	20	22	600	0.25	2.0	8.4
MMSZ5242B	H3	11.40	12.60	20	30	600	0.25	1.0	9.1
MMSZ5243B	H5	12.35	13.65	9.5	13	600	0.25	0.5	9.9
MMSZ5244B	H4	13.30	14.70	9.0	15	600	0.25	0.1	10
MMSZ5245B	H5	14.25	15.75	8.5	16	600	0.25	0.1	11
MMSZ5246B	J1	15.20	16.80	7.8	17	600	0.25	0.1	12
MMSZ5248B	J3	17.10	18.90	7.0	21	600	0.25	0.1	14
MMSZ5250B	J5	19.00	21.00	6.2	25	600	0.25	0.1	15
MMSZ5251B	K1	20.90	23.10	5.6	29	600	0.25	0.1	17
MMSZ5252B	K2	22.80	25.20	5.2	33	600	0.25	0.1	18
MMSZ5253B	K3	23.75	26.25	5.0	35	600	0.25	0.1	19
MMSZ5254B	K4	25.65	28.35	5.0	41	600	0.25	0.1	21
MMSZ5255B	K5	26.60	29.40	4.5	44	600	0.25	0.1	21
MMSZ5256B	M1	28.50	31.50	4.2	49	600	0.25	0.1	23
MMSZ5257B	M2	31.35	34.65	3.8	58	700	0.25	0.1	25
MMSZ5258B	M3	34.20	37.80	3.4	70	700	0.25	0.1	27
MMSZ5259B	M4	37.05	40.95	3.2	80	800	0.25	0.1	30

VF≤0.9V@IF=10Ma

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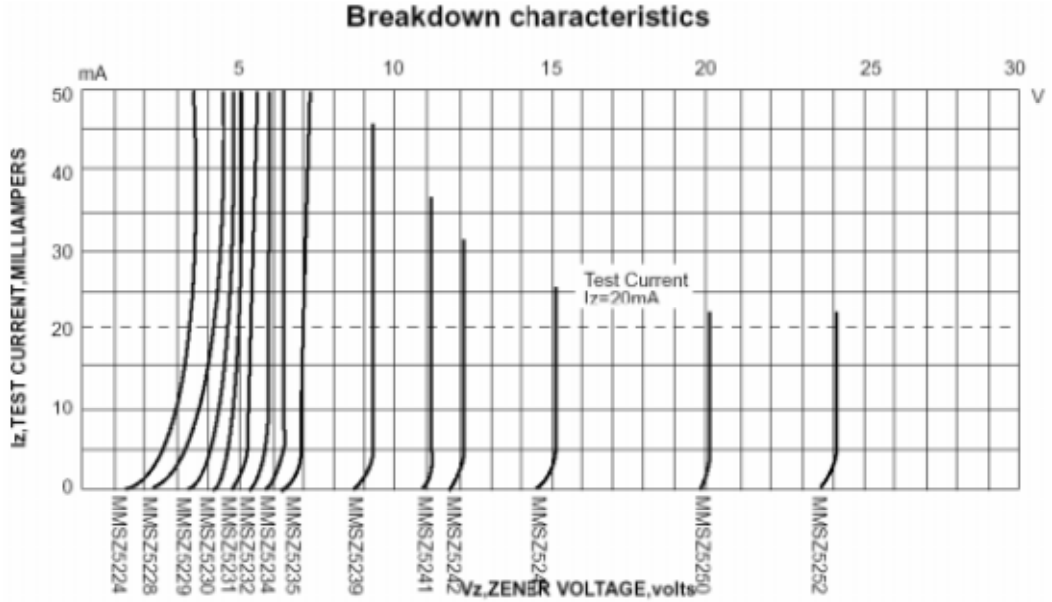

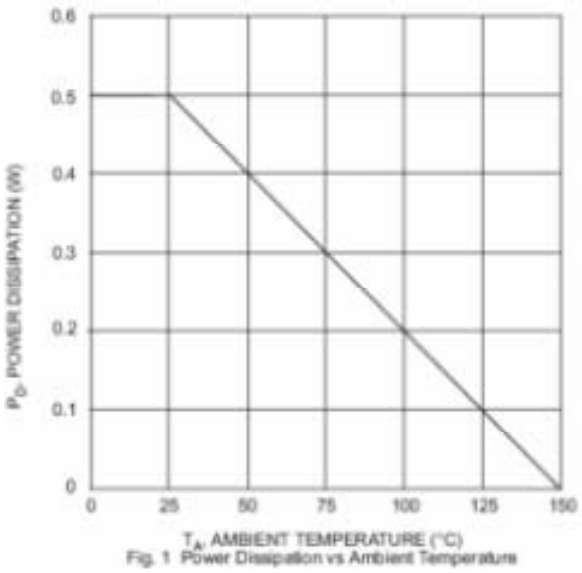

Fig. 1 Power Dissipation vs Ambient Temperature

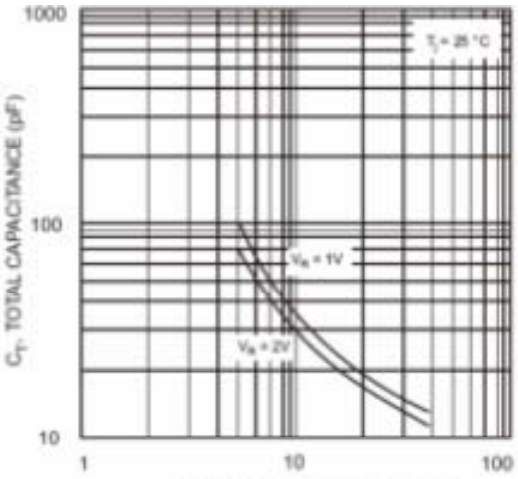

Fig. 2 Total Capacitance vs Nominal Zener Voltage

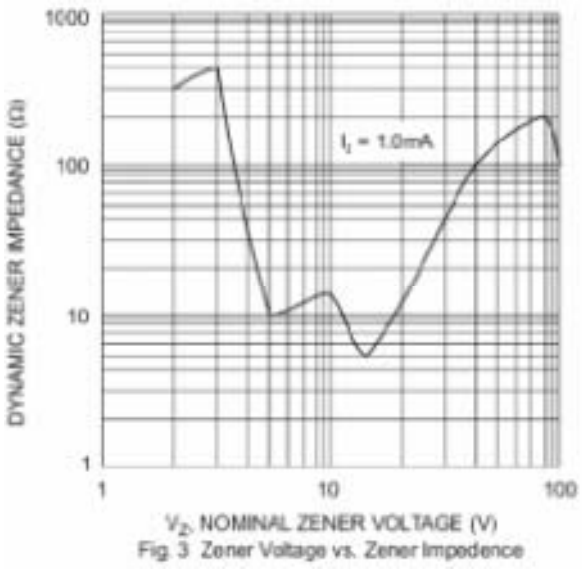

Fig. 3 Zener Voltage vs. Zener Impedence

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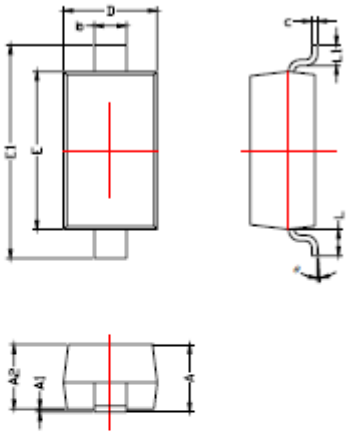
SOD-123 PACKAGE OUTLINE

Plastic surface mounted package

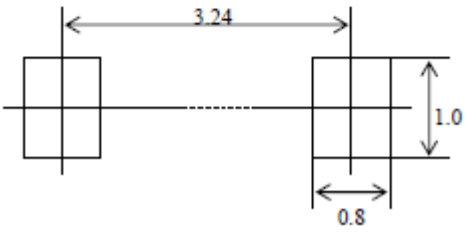


SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	1.050	1.250
A1	0.000	0.100
A2	1.050	1.150
b	0.450	0.650
c	0.080	0.150
D	1.500	1.700
E	2.600	2.800
E1	3.550	3.850
L	0.500REF	
L1	0.250	0.450
θ	0°	8°

焊盘设计参考

Precautions: PCB Design

Recommended land dimensions for SOD-123 diode. Electrode patterns for PCBs



中心距:	3.24
脚 宽:	0.55
焊盘宽:	1.00
脚 长:	0.50
焊盘长:	0.80

技术要求:

1. 塑封体尺寸: 2.70 X 1.60
2. 未注公差为: ±0.05
3. 所有单位: mm