

Zener Diodes, AEC-Q101 2.4~51V 500mW SOD-123

MMSZ5221B-A Series

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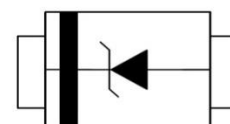
FEATURE

- Zener Voltage Range: 2.4V to 51V
- Power Dissipation: 500mW
- Silicon Planar Zener Diode in SOD-123 package
- Ideally Suited for Automated Assembly Processes
- Application: Power Management Systems, Voltage Regulation
- AEC-Q101 Qualified



MECHANICAL DATA

- Case: SOD-123, Molded Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Band Marking denotes cathode end



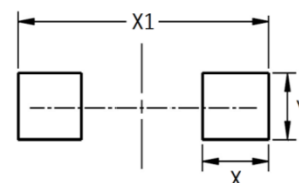
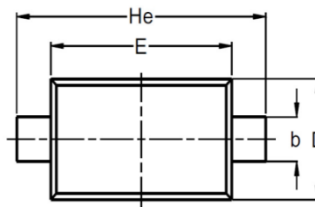
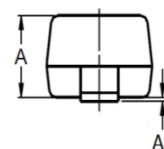
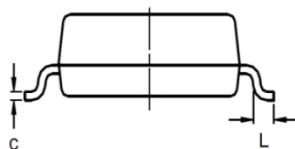
MAXIMUM RATINGS (TA=25 °C unless otherwise noted)



Parameter	Symbols	Value	Unit
Power Dissipation ^(Note 1)	P _D	500	mW
Resistance Junction to Ambient ^(Note 2)	R _{θJA}	430	°C/W
Resistance Junction to Ambient ^(Note 1)	R _{θJA}	325	°C/W
Junction Temperature	T _J	-55~+150	°C
Storage Temperature Range	T _{STG}	-55~+150	°C

DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A	0.95	1.35
A1	-	0.12
b	0.50	0.70
C	-	0.20
D	1.40	1.80
E	2.50	2.80
He	3.60	3.90
L	0.40	-
X	0.97	0.97
X1	3.60	3.90
Y	1.22	1.22



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

Part Number	Nominal Zener Voltage V _Z at I _{ZT}			Max Zener Impedance Z _{ZT} at I _{ZT} , Z _{ZK} at I _{ZK} =0.25mA			Reverse Leakage Current I _R at V _R	
	Nom	Min	Max	Z _{ZT}	I _{ZT}	Z _{ZK}	I _R max	V _R
	(V)	(V)	(V)	(Ω)	(mA)	(Ω)	(μA)	(V)
MMSZ5221B-A	2.4	2.28	2.52	30	20	1200	100	1.0
MMSZ5222B-A	2.5	2.38	2.63	30	20	1250	100	1.0
MMSZ5223B-A	2.7	2.57	2.84	30	20	1300	75	1.0
MMSZ5224B-A	2.8	2.66	2.94	30	20	1400	75	1.0
MMSZ5225B-A	3.0	2.85	3.15	30	20	1600	50	1.0
MMSZ5226B-A	3.3	3.14	3.47	28	20	1600	25	1.0
MMSZ5227B-A	3.6	3.42	3.78	24	20	1700	15	1.0
MMSZ5228B-A	3.9	3.71	4.10	23	20	1900	10	1.0
MMSZ5229B-A	4.3	4.09	4.52	22	20	2000	5.0	1.0
MMSZ5230B-A	4.7	4.47	4.94	19	20	1900	5.0	2.0
MMSZ5231B-A	5.1	4.85	5.36	17	20	1600	5.0	2.0
MMSZ5232B-A	5.6	5.32	5.88	11	20	1600	5.0	3.0
MMSZ5233B-A	6.0	5.70	6.30	7	20	1600	5.0	3.5
MMSZ5234B-A	6.2	5.89	6.51	7	20	1000	5.0	4.0
MMSZ5235B-A	6.8	6.46	7.14	5	20	750	3.0	5.0
MMSZ5236B-A	7.5	7.13	7.88	6	20	500	3.0	6.0
MMSZ5237B-A	8.2	7.79	8.61	8	20	500	3.0	6.0
MMSZ5238B-A	8.7	8.27	9.14	8	20	600	3.0	6.5
MMSZ5239B-A	9.1	8.65	9.56	10	20	600	3.0	6.5
MMSZ5240B-A	10	9.50	10.50	17	20	600	3.0	8.0
MMSZ5241B-A	11	10.45	11.55	22	20	600	2.0	8.4
MMSZ5242B-A	12	11.40	12.60	30	20	600	1.0	9.1
MMSZ5243B-A	13	12.35	13.65	13	9.5	600	0.5	9.9
MMSZ5244B-A	14	13.30	14.70	15	9.0	600	0.1	10.5
MMSZ5245B-A	15	14.25	15.75	16	8.5	600	0.1	11
MMSZ5246B-A	16	15.20	16.80	17	7.8	600	0.1	12
MMSZ5247B-A	17	16.15	17.85	19	7.5	600	0.1	13
MMSZ5248B-A	18	17.10	18.90	21	7.0	600	0.1	14
MMSZ5249B-A	19	18.05	19.95	23	6.6	600	0.1	14
MMSZ5250B-A	20	19.00	21.00	25	6.2	600	0.1	15
MMSZ5251B-A	22	20.90	23.10	29	5.6	600	0.1	17
MMSZ5252B-A	24	22.80	25.20	33	5.2	600	0.1	18
MMSZ5253B-A	25	23.75	26.25	35	5.0	600	0.1	19
MMSZ5254B-A	27	25.65	28.35	41	5.0	600	0.1	21
MMSZ5255B-A	28	26.60	29.40	44	4.5	600	0.1	21
MMSZ5256B-A	30	28.50	31.50	49	4.2	600	0.1	23
MMSZ5257B-A	33	31.35	34.65	58	3.8	700	0.1	25
MMSZ5258B-A	36	34.20	37.80	70	3.4	700	0.1	27
MMSZ5259B-A	39	37.05	40.95	80	3.2	800	0.1	30
MMSZ5260B-A	43	40.85	45.15	93	3.0	900	0.1	33
MMSZ5261B-A	47	44.65	49.35	105	2.7	1000	0.1	36
MMSZ5262B-A	51	48.45	53.55	125	2.5	1100	0.1	39

Notes:

1. Mounted on 100cm² (1mm thick) copper areas. 2. Mounted on a FR-4 PCB, single sided copper, mini pad.

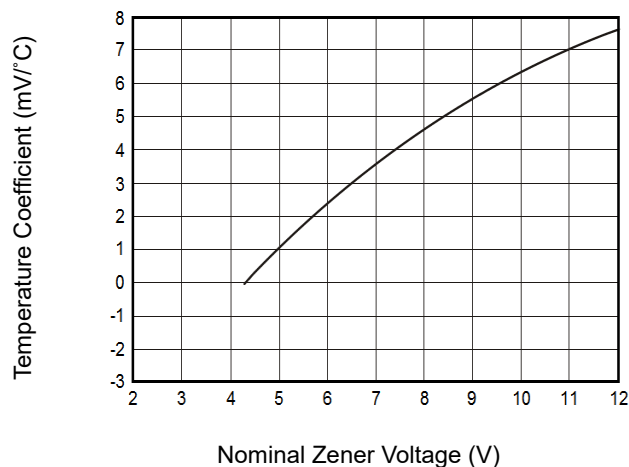
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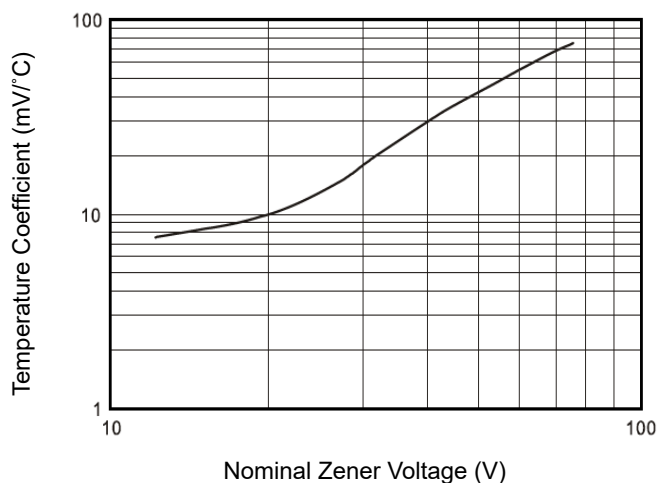
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CHARACTERISTIC CURVES

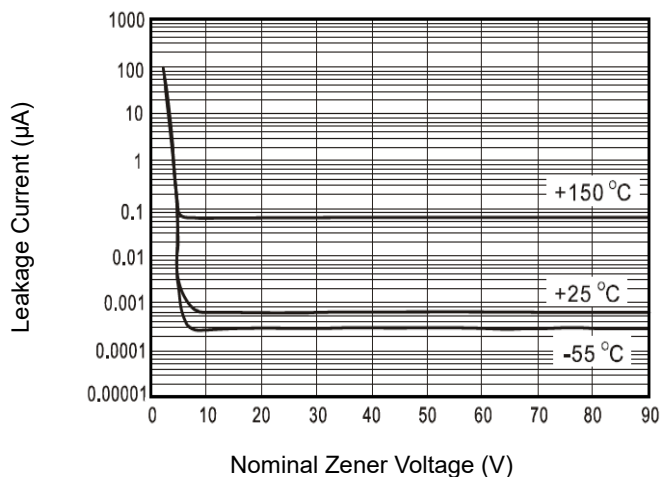
Temperature Coefficient



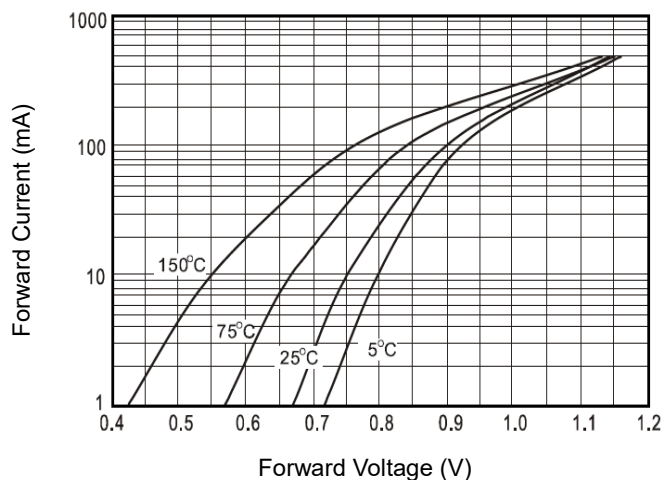
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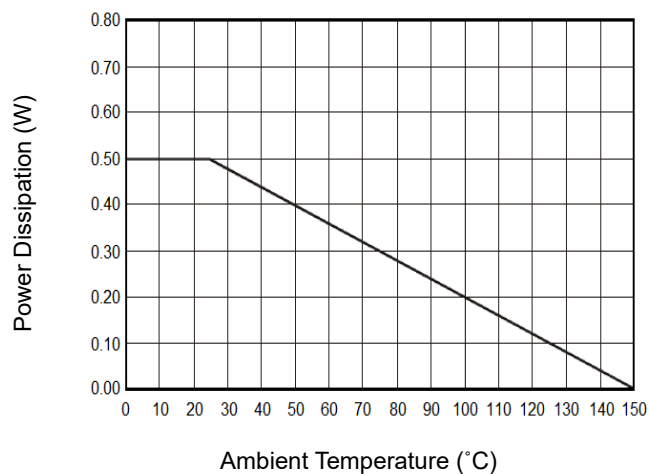
Typical Leakage Current



Typical Forward Voltage



Power Derating



*Specifications subject to change without notice.

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