

Zener Diodes

2.4~51V 500mW SOD-123

MMSZ5221B Series

MERITEK

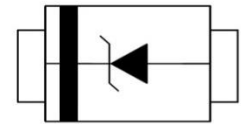
FEATURE

- 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



MECHANICAL DATA

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



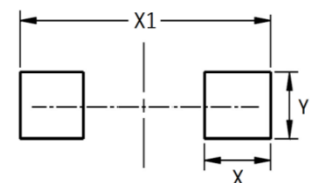
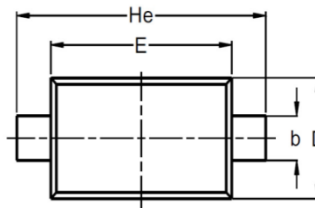
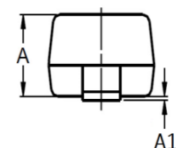
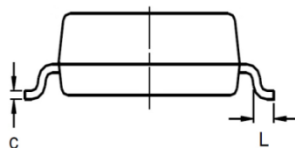
MAXIMUM RATINGS (TA=25 °C unless otherwise noted)



Parameter	Symbols	Value	Unit
Power Dissipation ^(Note 1)	P_D	500	mW
Resistance Junction to Ambient ^(Note 2)	$R_{\theta JA}$	430	°C/W
Resistance Junction to Ambient ^(Note 1)	$R_{\theta JA}$	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



Zener Diodes

2.4~51V 500mW SOD-123

MMSZ5221B Series

MERITEK

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

Zener Diodes

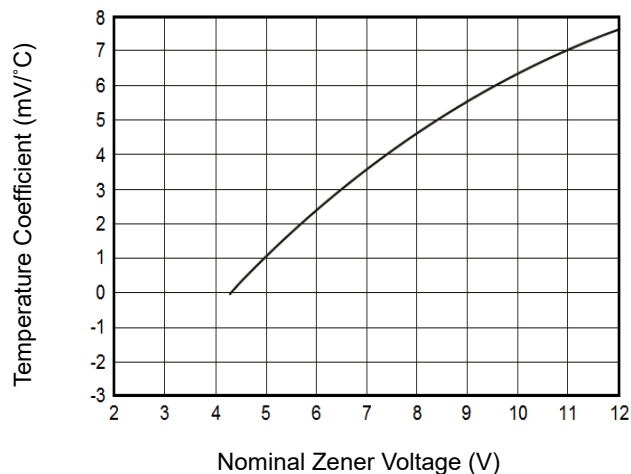
2.4~51V 500mW SOD-123

MMSZ5221B Series

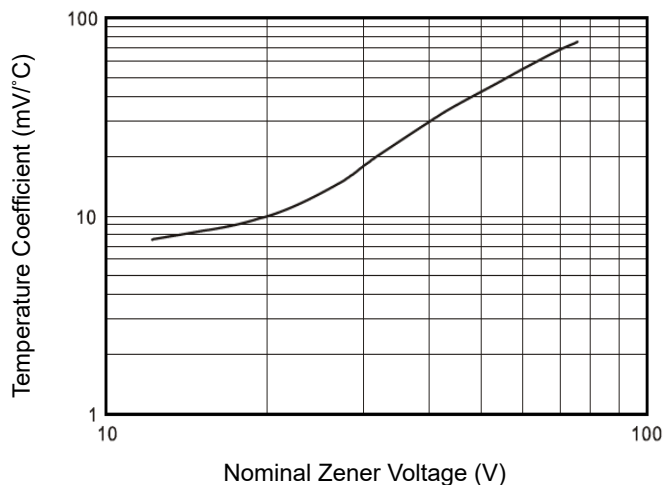
MERITEK

CHARACTERISTIC CURVES

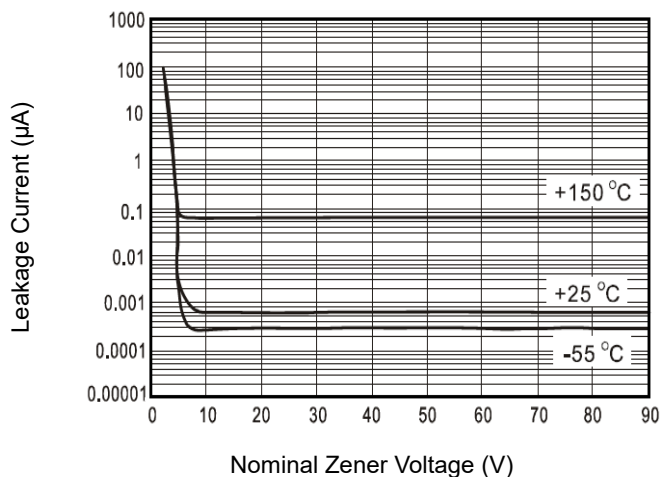
Temperature Coefficient



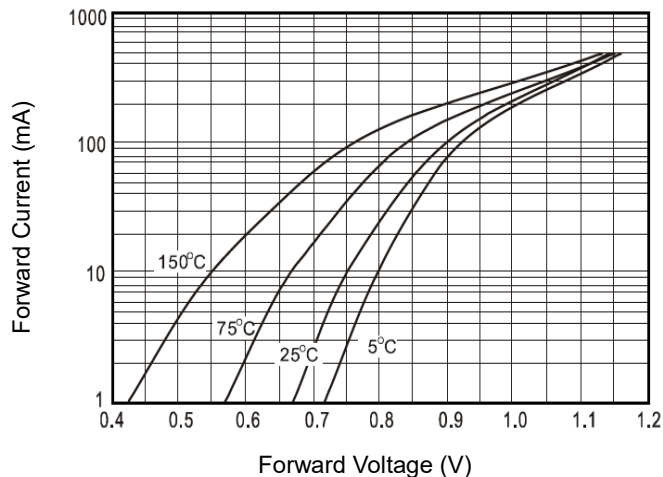
Temperature Coefficient



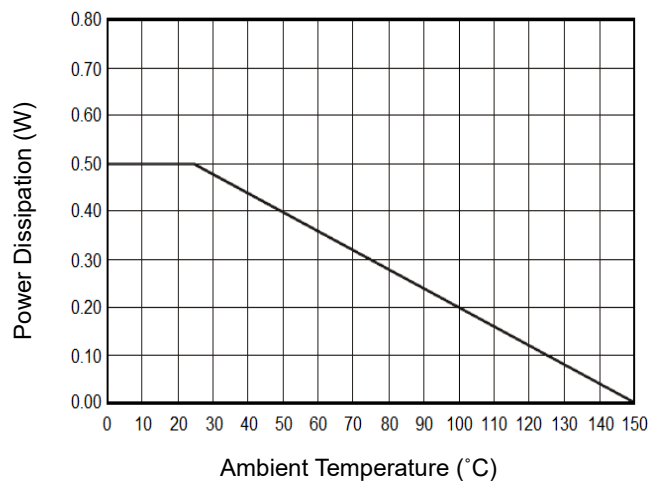
Typical Leakage Current



Typical Forward Voltage



Power Derating



*Specifications subject to change without notice.