



POWER SEMICONDUCTOR

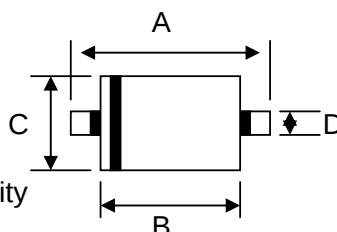
MMSZ5221B - MMSZ5259B



500 mW Surface Mount Zener Diode

FEATURE

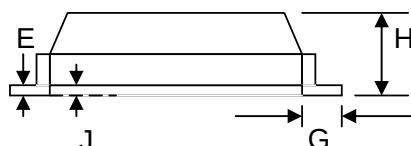
- ◆ Planer Die Construction
- ◆ 500mW Power Dissipation
- ◆ 2.4V - 39V Nominal Zener Voltage
- ◆ 5% Standard Vz Tolerance
- ◆ Designed for Surface Mount Application
- ◆ Plastic Material 'UL' Recognition Flammability Classification 94V-O



Type 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	1.4
J	-	0.1
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, See Page 2
- ◆ Lead Free: For RoHS . Lead Free Version, Add "LF" suffix to Part Number, See Page 3.



MAXIMUM RATINGS @TA=25°C unless otherwise specified

Cheracteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation at TA = 25°C (Note)	Pd	500	m/W
Forward Voltage @ IF = 10mA	VF	0.9	V
Thermal Resistance Junction to Ambient (Note 1)	RθJA	340	-
Operation and Storage Temperature Range	Tj, TSTG	-65 to +150	-

Note 1. Diode on ceramic substrate 10mm x 0.7mm.

**Electrical Characteristics**@T_A=25°C unless otherwise specified

Type Number (Note 1)	Device Marking Code	Zener Voltage Range (Note 2)			Maximum Zener Impedance (Note 3)				Max Reverse Leakage Current		Typical Temp. Coefficient of Zener Voltage (%/K)
		V _Z @ I _{ZT}			Z _{ZT} @ I _{ZT}		Z _{ZK} @ I _{ZK}		I _R	@ V _R	
		Nom (V)	Min (V)	Max (V)	(Ω)	(mA)	(Ω)	(mA)	(μA)	(V)	
MMSZ5221B	C1	2.4	2.28	2.52	30	20	1200	0.25	100	1.0	-0.075
MMSZ5222B	C2	2.5	2.38	2.63	30	20	1250	0.25	100	1.0	-0.075
MMSZ5223B	C3	2.7	2.57	2.84	30	20	1300	0.25	75	1.0	-0.075
MMSZ5225B	C5	3.0	2.85	3.15	30	20	1600	0.25	50	1.0	-0.075
MMSZ5226B	D1	3.3	3.14	3.47	28	20	1600	0.25	25	1.0	-0.070
MMSZ5227B	D2	3.6	3.42	3.78	24	20	1700	0.25	15	1.0	-0.065
MMSZ5228B	D3	3.9	3.71	4.10	23	20	1900	0.25	10	1.0	-0.060
MMSZ5229B	D4	4.3	4.09	4.52	22	20	2000	0.25	5.0	1.0	-0.055
MMSZ5230B	D5	4.7	4.47	4.94	19	20	1900	0.25	5.0	2.0	±0.030
MMSZ5231B	E1	5.1	4.85	5.36	17	20	1600	0.25	5.0	2.0	±0.030
MMSZ5232B	E2	5.6	5.32	5.88	11	20	1600	0.25	5.0	3.0	+0.038
MMSZ5234B	E4	6.2	5.89	6.51	7.0	20	1000	0.25	5.0	4.0	+0.045
MMSZ5235B	E5	6.8	6.46	7.14	5.0	20	750	0.25	3.0	5.0	+0.050
MMSZ5236B	F1	7.5	7.13	7.88	6.0	20	500	0.25	3.0	6.0	+0.058
MMSZ5237B	F2	8.2	7.79	8.61	8.0	20	500	0.25	3.0	6.0	+0.062
MMSZ5239B	F4	9.1	8.65	9.56	10	20	600	0.25	3.0	6.5	+0.068
MMSZ5240B	F5	10	9.50	10.50	17	20	600	0.25	3.0	8.0	+0.075
MMSZ5241B	H1	11	10.45	11.55	22	20	600	0.25	2.0	8.4	+0.076
MMSZ5242B	H2	12	11.40	12.60	30	20	600	0.25	1.0	9.1	+0.077
MMSZ5243B	H3	13	12.35	13.65	13	9.5	600	0.25	0.5	9.9	+0.079
MMSZ5245B	H5	15	14.25	15.75	16	8.5	600	0.25	0.1	11	+0.082
MMSZ5246B	J1	16	15.20	16.80	17	7.8	600	0.25	0.1	12	+0.083
MMSZ5248B	J3	18	17.10	18.90	21	7.0	600	0.25	0.1	14	+0.085
MMSZ5250B	J5	20	19.00	21.00	25	6.2	600	0.25	0.1	15	+0.086
MMSZ5251B	K1	22	20.90	23.10	29	5.6	600	0.25	0.1	17	+0.087
MMSZ5252B	K2	24	22.80	25.20	33	5.2	600	0.25	0.1	18	+0.087
MMSZ5254B	K4	27	25.65	28.35	41	5.0	600	0.25	0.1	21	+0.090
MMSZ5255B	K5	28	26.60	29.40	44	4.5	600	0.25	0.1	21	+0.091
MMSZ5256B	M1	30	28.50	31.50	49	4.2	600	0.25	0.1	23	+0.091
MMSZ5257B	M2	33	31.35	34.65	58	3.8	700	0.25	0.1	25	+0.092
MMSZ5258B	M3	36	34.20	37.80	70	3.4	700	0.25	0.1	27	+0.093
MMSZ5259B	M4	39	37.05	40.95	80	3.2	800	0.25	0.1	30	+0.094

Note : 1. Type numbers listed have standard tolerance on the nominal zener voltage of ±5%

2. Measured with pulses t_p = 1ms

3. f = 1KHz



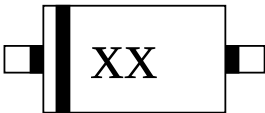
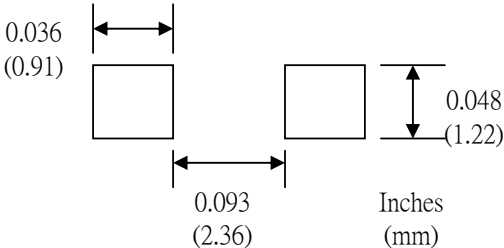
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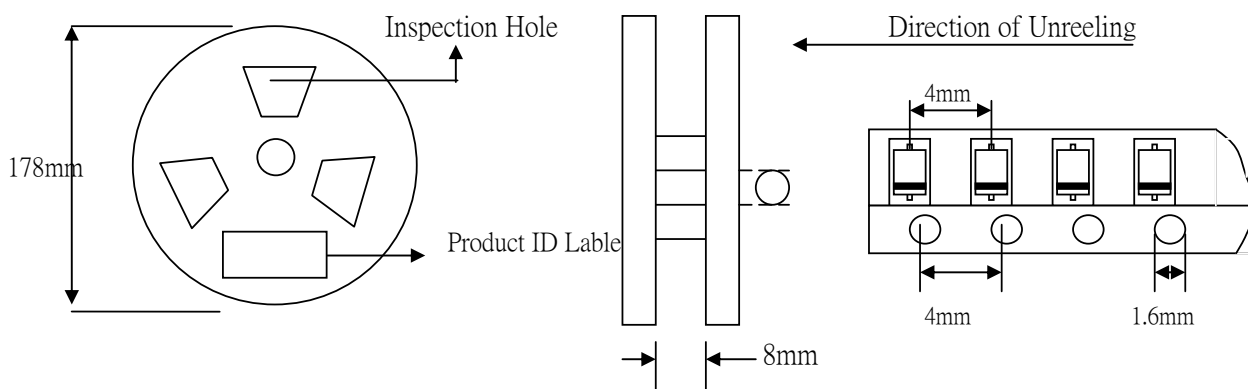


500 mW Surface Mount Zener Diode

MARKING INFORMATION

 Cathode = Polarity Band xx = Device Code, See Page 2	 Inches (mm)
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MARKING INFORMATION



Reel Diameter (mm)	Quantity (PCS)	Inner box Size LxWxH (mm)	Quantity (PCS)	Carton Size LxWxH (mm)	Quantity (PCS)	Approx Gross Weight (KG)
178	3000	187x187x65	15000	390x240x420	150000	10

- 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
MMSZ52XXB-T1	SOD-123	3000/Tape & Reel

- 1). Shipping quantity given is minimum packing quantity only, for minimum.
2). Components are packed in accordance with EIA standard 481-1 and 482-2.