



October 2015

## MMSZ5226B - MMSZ5257B Zeners

Tolerance = 5%



SOD-123

\* Band marking denotes cathode.

### Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.

Symbol	Parameter	Value	Units
$P_D$	Power Dissipation at $T_A = 25^\circ\text{C}$	500	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient <sup>(1)</sup>	340	$^\circ\text{C}/\text{W}$
$T_{STG}$	Storage Temperature Range	-55 to +150	$^\circ\text{C}$
$T_J$	Operating Junction Temperature	+150	$^\circ\text{C}$

**Note:**

- FR-4 or FR-5 = 3.5 inch  $\times$  1.5 inch using minimum recommended land pads.

### Electrical Characteristics

Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.

Device	Mark	$V_Z$ (V) @ $I_Z$ (mA)				$Z_Z$ ( $\Omega$ ) @ $I_Z$ (mA)		$Z_{ZK}$ ( $\Omega$ ) @ $I_{ZK}$ (mA)		$I_R$ ( $\mu\text{A}$ ) @ $V_R$ (V)	
		Min.	Typ.	Max.	$I_Z$ (mA)						
MMSZ5226B	D1	3.135	3.3	3.465	20	28	20	1,600	0.25	25	1.0
MMSZ5227B	D2	3.42	3.6	3.78	20	24	20	1,700	0.25	15	1.0
MMSZ5228B	D3	3.705	3.9	4.095	20	23	20	1,900	0.25	10	1.0
MMSZ5229B	D4	4.085	4.3	4.515	20	22	20	2,000	0.25	5.0	1.0
MMSZ5230B	D5	4.465	4.7	4.935	20	19	20	1,900	0.25	5.0	2.0
MMSZ5231B	E1	4.845	5.1	5.355	20	17	20	1,600	0.25	5.0	2.0
MMSZ5232B	E2	5.32	5.6	5.88	20	11	20	1,600	0.25	5.0	3.0
MMSZ5233B	E3	5.7	6	6.3	20	7.0	20	1,600	0.25	5.0	3.5
MMSZ5234B	E4	5.89	6.2	6.51	20	7.0	20	1,000	0.25	5.0	4.0
MMSZ5235B	E5	6.46	6.8	7.14	20	5.0	20	750	0.25	3.0	5.0
MMSZ5236B	F1	7.125	7.5	7.875	20	6.0	20	500	0.25	3.0	6.0
MMSZ5237B	F2	7.79	8.2	8.61	20	8.0	20	500	0.25	3.0	6.5
MMSZ5238B	F3	8.265	8.7	9.135	20	8.0	20	600	0.25	3.0	6.5
MMSZ5239B	F4	8.645	9.1	9.555	20	10	20	600	0.25	3.0	7.0
MMSZ5240B	F5	9.5	10	10.5	20	17	20	600	0.25	3.0	8.0
MMSZ5241B	H1	10.45	11	11.55	20	22	20	600	0.25	2.0	8.4
MMSZ5242B	H2	11.4	12	12.6	20	30	20	600	0.25	1.0	9.1
MMSZ5243B	H3	12.35	13	13.65	9.5	13	9.5	600	0.25	0.5	9.9
MMSZ5244B	H4	13.3	14	14.7	9.0	15	9.0	600	0.25	0.1	10
MMSZ5245B	H5	14.25	15	15.75	8.5	16	8.5	600	0.25	0.1	11
MMSZ5246B	J1	15.2	16	16.8	7.8	17	7.8	600	0.25	0.1	12
MMSZ5247B	J2	16.15	17	17.85	7.4	19	7.4	600	0.25	0.1	13
MMSZ5248B	J3	17.1	18	18.9	7.0	21	7.0	600	0.25	0.1	14
MMSZ5249B	J4	18.05	19	19.95	6.6	23	6.6	600	0.25	0.1	14
MMSZ5250B	J5	19	20	21	6.2	25	6.2	600	0.25	0.1	15
MMSZ5251B	K1	20.92	22	23.1	5.6	29	5.6	600	0.25	0.1	17
MMSZ5252B	K2	22.8	24	25.2	5.2	33	5.2	600	0.25	0.1	18
MMSZ5253B	K3	23.75	25	26.25	5.0	35	5.0	600	0.25	0.1	19
MMSZ5254B	K4	25.65	27	28.35	4.6	41	4.6	600	0.25	0.1	21
MMSZ5255B	K5	26.6	28	29.4	4.5	44	4.5	600	0.25	0.1	21
MMSZ5256B	M1	28.5	30	31.5	4.2	49	4.2	600	0.25	0.1	23
MMSZ5257B	M2	31.35	33	34.65	3.8	58	3.8	700	0.25	0.1	25

$V_F$  Forward Voltage = 0.9 V Maximum at  $I_F = 10$  mA for all MMSZ5200 series

### Typical Performance Characteristics

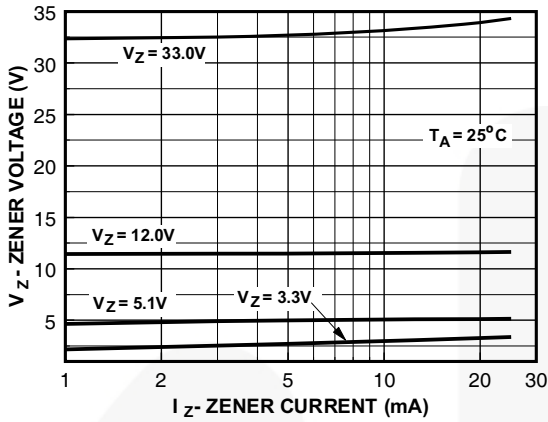


Figure 1. Zener Current vs. Zener Voltage

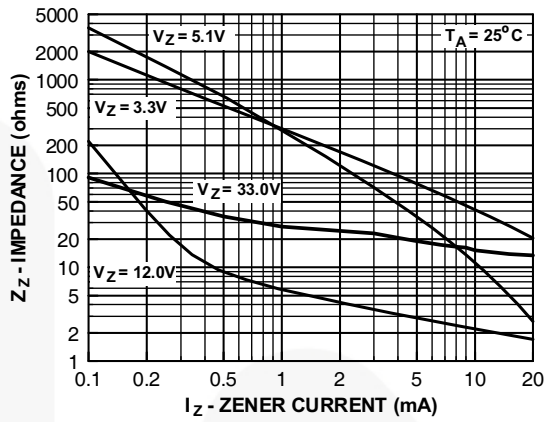


Figure 2. Zener Current vs. Zener Impedance

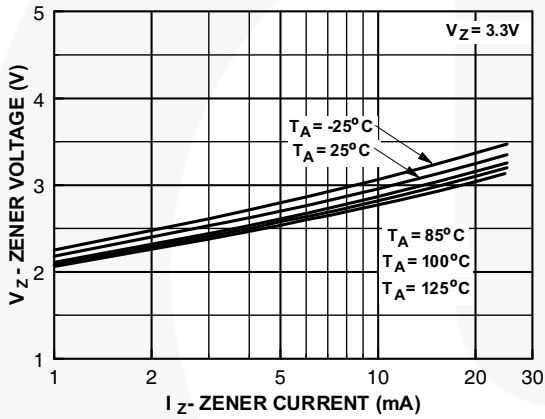


Figure 3. 3.3 Zener Voltage vs. Temperature

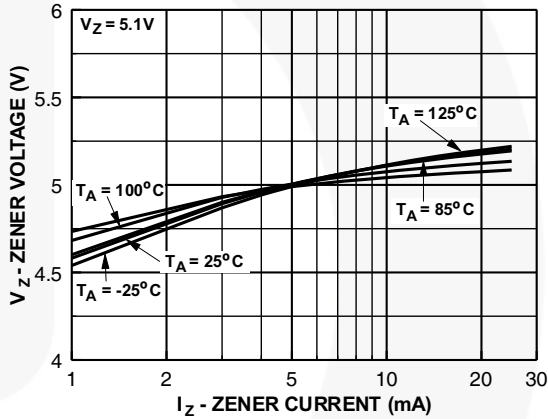


Figure 4. 5.1 Zener Voltage vs. Temperature

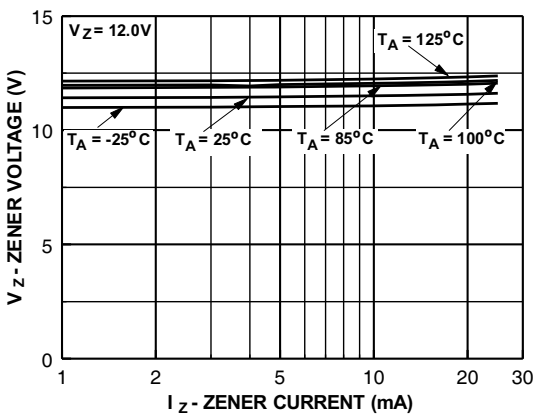


Figure 5. 12 Zener Voltage vs. Zener Temperature

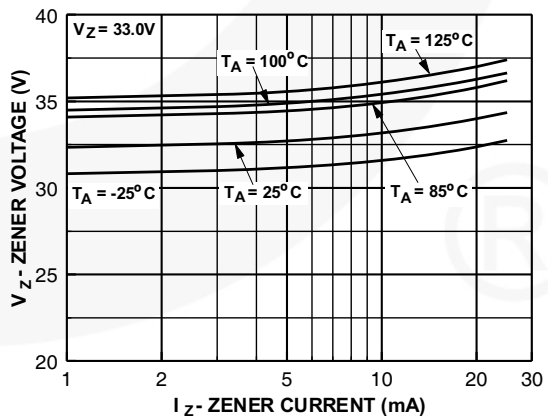


Figure 6. 33 Zener Voltage vs. Zener Temperature

Physical Dimensions

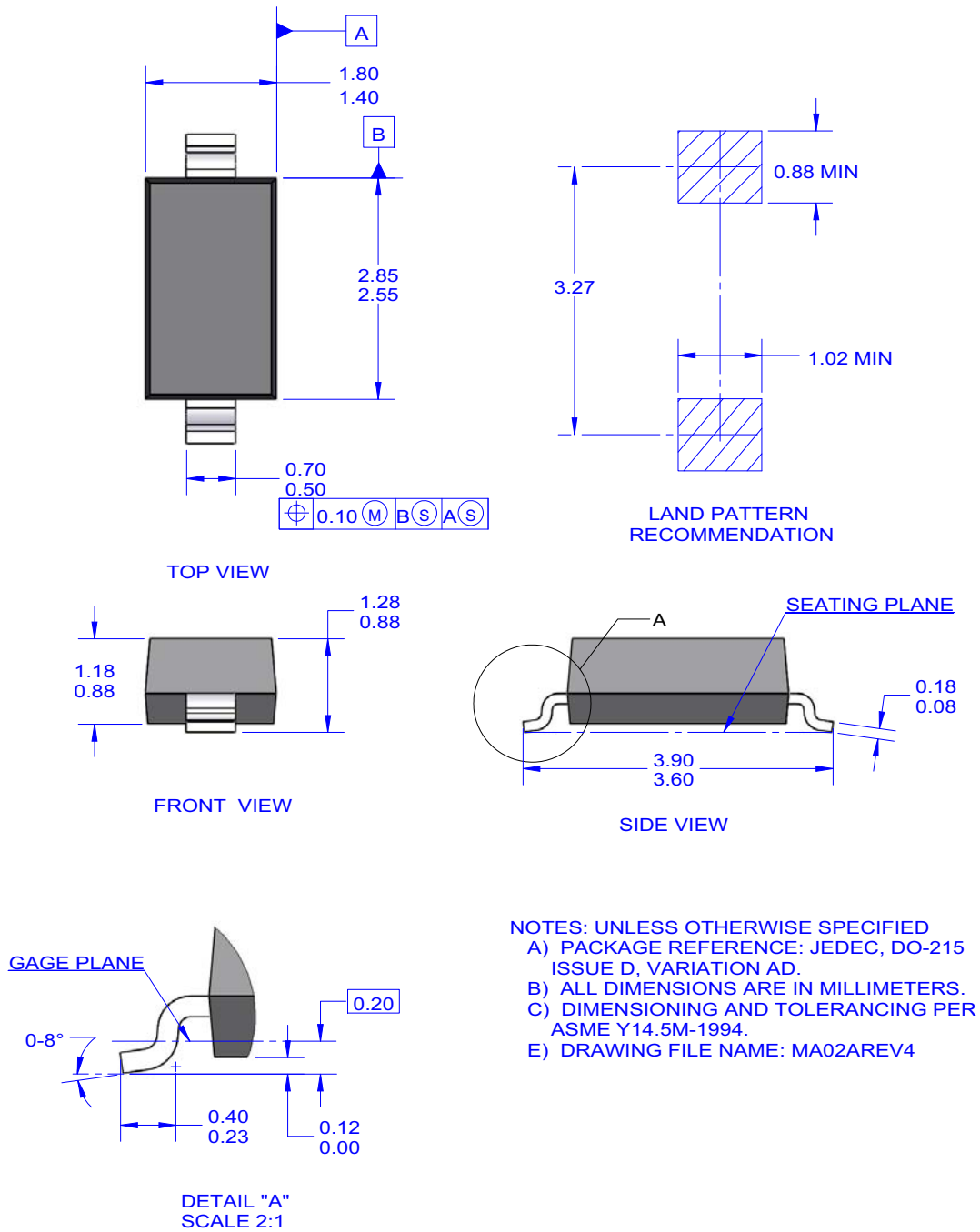


Figure 7. 2-LEAD, SOD123, JEDEC DO-219



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