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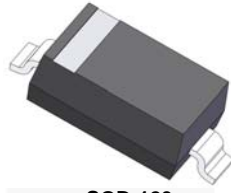
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October 2015

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 ⁽¹⁾ | 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:

1. 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 (Ω) @ I_Z (mA) | | Z_{ZK} (Ω) @ I_{ZK} (mA) | | I_R (μA) @ 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

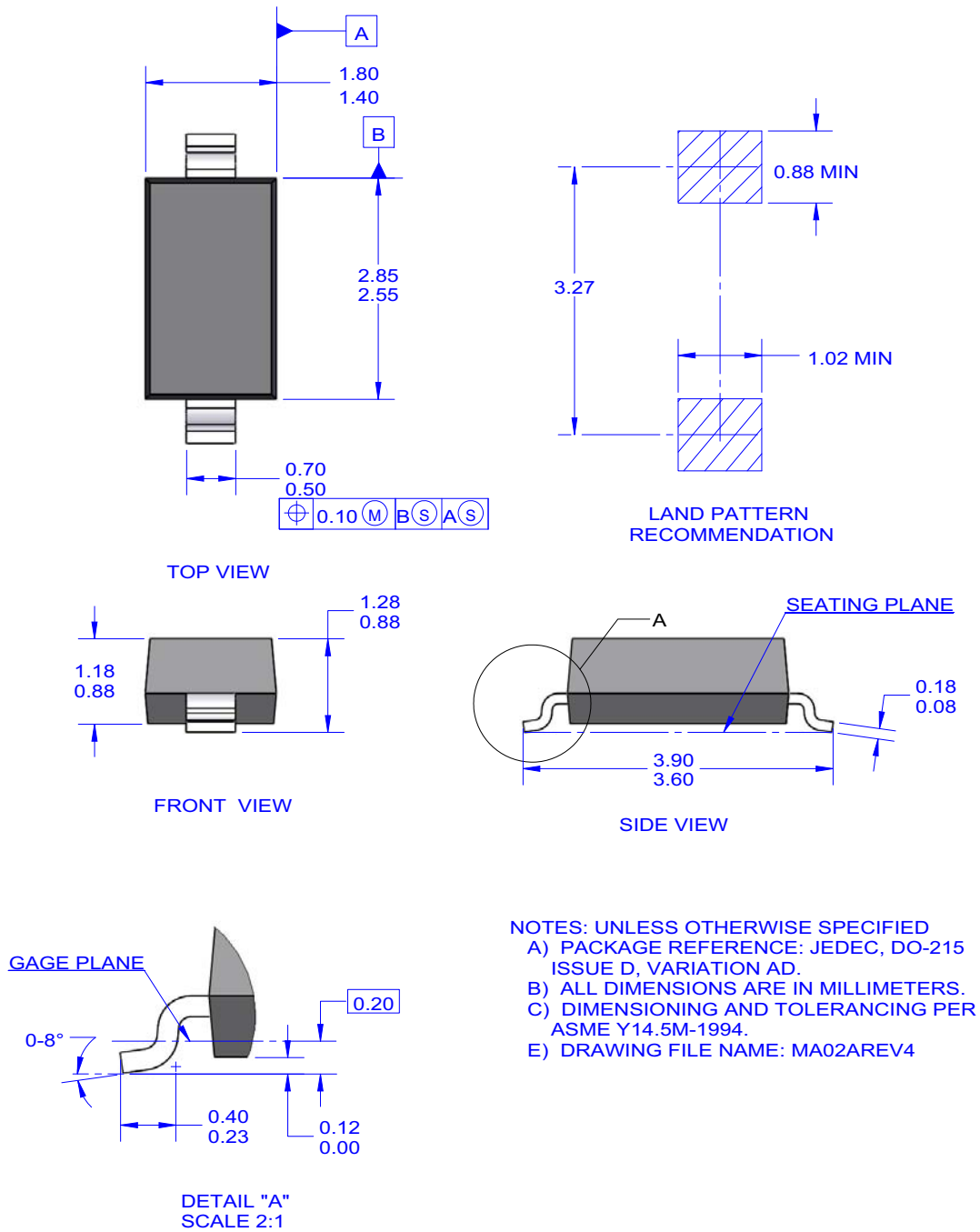







Figure 7. 2-LEAD, SOD123, JEDEC DO-219



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