

## Zeners

### MMSZ5226B - MMSZ5257B

#### Absolute Maximum Ratings \*

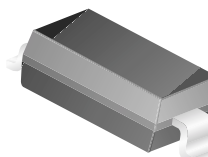
$T_A = 25^\circ\text{C}$  unless otherwise noted

| Symbol          | Parameter                                  | Value       | Units |
|-----------------|--------------------------------------------|-------------|-------|
| $P_D$           | Power Dissipation @25°C                    | 500         | mW    |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient ** | 340         | °C/W  |
| $T_{STG}$       | Storage Temperature Range                  | -55 to +150 | °C    |
| $T_J$           | Operating Junction Temperature             | +150        | °C    |

\* These ratings are limiting values above which the serviceability of the diode may be impaired.

\*\* FR-4 or FR-5 = 3.5 x 1.5 inches using minimum recommended land pads.

Tolerance = 5%



SOD-123

#### Electrical Characteristics

$T_A = 25^\circ\text{C}$  unless otherwise noted

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

$V_F$  Forward Voltage = 0.9V Maximum @  $I_F = 10\text{mA}$  for all MMSZ5200 series

## Typical Characteristics

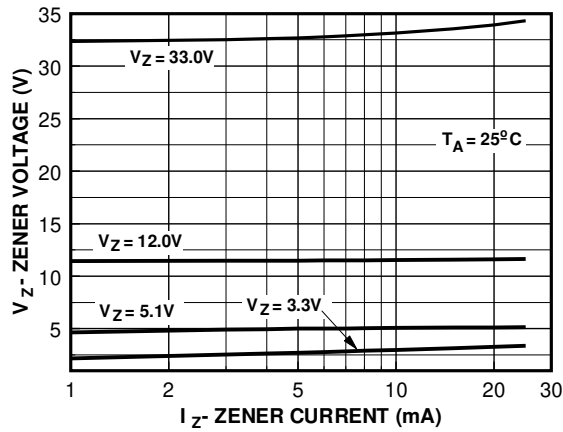


Figure 1. Zener Current vs. Zener Voltage

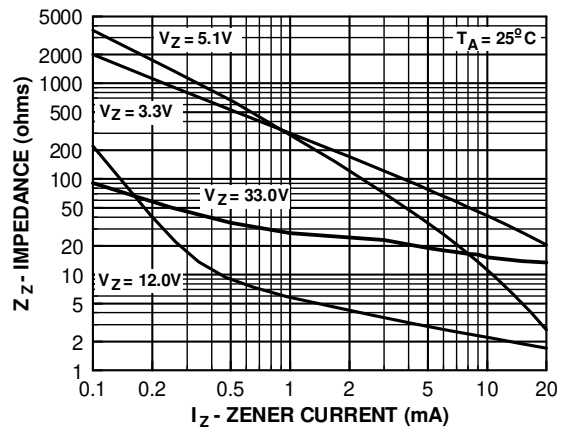


Figure 2. Zener Current vs. Zener Impedance

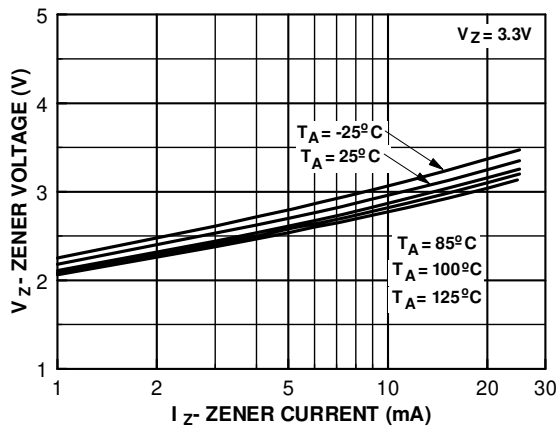


Figure 3. 3.3 Zener Voltage vs. Temperature

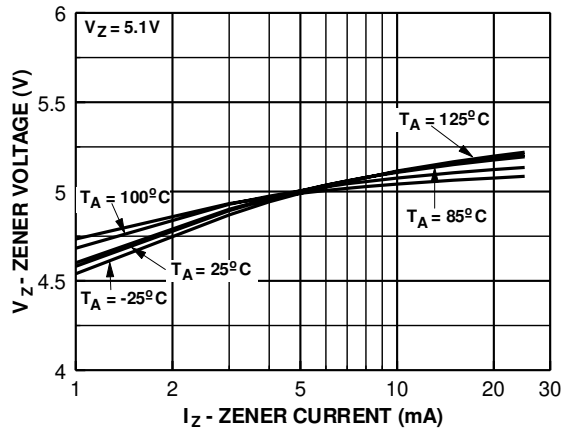


Figure 4. 5.1 Zener Voltage vs. Temperature

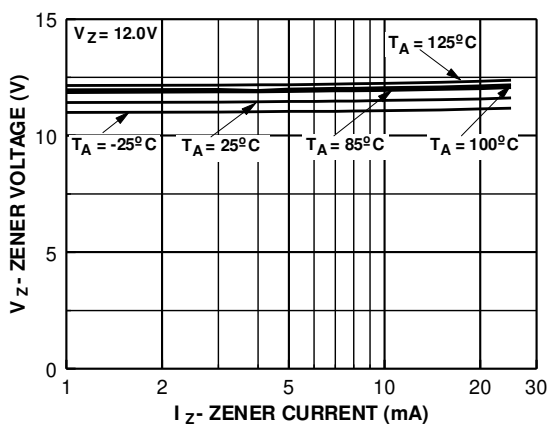


Figure 5. 12 Zener Voltage vs. Zener Temperature

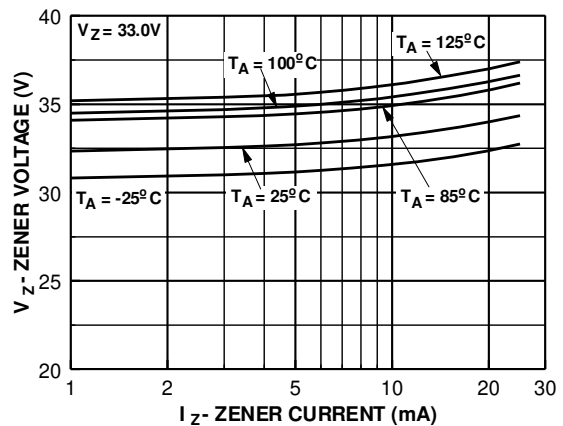


Figure 6. 33 Zener Voltage vs. Zener Temperature

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