

Zeners

MMBZ5221B-MMBZ5257B

Tolerance = 5%

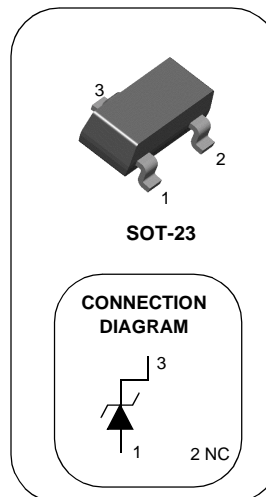
Absolute Maximum Ratings * T_A = 25°C unless otherwise noted

| Symbol | Parameter | Value | Units |
|------------------|--------------------------------|-------------|-------|
| P _D | Power Dissipation | 350 | mW |
| 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.

NOTES:

- 1) These ratings are based on a maximum junction temperature of 150 degrees C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.



Electrical Characteristics T_A = 25°C unless otherwise noted

| Device | Mark | V _Z (V) | Z _Z (Ω) @ I _Z (mA) | Z _{ZK} (Ω) @ I _{ZK} (mA) | I _R (μA) @ V _R (V) |
|-----------|------|--------------------|--|--|--|
| MMBZ5221B | 18A | 2.4 | 30 20 | 1,200 0.25 | 100 1.0 |
| MMBZ5223B | 18C | 2.7 | 30 20 | 1,300 0.25 | 75 1.0 |
| MMBZ5226B | 8A | 3.3 | 28 20 | 1,600 0.25 | 25 1.0 |
| MMBZ5227B | 8B | 3.6 | 24 20 | 1,700 0.25 | 15 1.0 |
| MMBZ5228B | 8C | 3.9 | 23 20 | 1,900 0.25 | 10 1.0 |
| MMBZ5229B | 8D | 4.3 | 22 20 | 1,000 0.25 | 5.0 1.0 |
| MMBZ5230B | 8E | 4.7 | 19 20 | 1,900 0.25 | 5.0 2.0 |
| MMBZ5231B | 8F | 5.1 | 17 20 | 1,600 0.25 | 5.0 2.0 |
| MMBZ5232B | 8G | 5.6 | 11 20 | 1,600 0.25 | 5.0 3.0 |
| MMBZ5233B | 8H | 6.0 | 7.0 20 | 1,600 0.25 | 5.0 3.5 |
| MMBZ5234B | 8J | 6.2 | 7.0 20 | 1,000 0.25 | 5.0 4.0 |
| MMBZ5235B | 8K | 6.8 | 5.0 20 | 750 0.25 | 3.0 5.0 |
| MMBZ5236B | 8L | 7.5 | 6.0 20 | 500 0.25 | 3.0 6.0 |
| MMBZ5237B | 8M | 8.2 | 8.0 20 | 500 0.25 | 3.0 6.5 |
| MMBZ5238B | 8N | 8.7 | 8.0 20 | 600 0.25 | 3.0 6.5 |
| MMBZ5239B | 8P | 9.1 | 10 20 | 600 0.25 | 3.0 7.0 |
| MMBZ5240B | 8Q | 10 | 17 20 | 600 0.25 | 3.0 8.0 |
| MMBZ5241B | 8R | 11 | 22 20 | 600 0.25 | 2.0 8.4 |
| MMBZ5242B | 8S | 12 | 30 20 | 600 0.25 | 1.0 8.1 |
| MMBZ5243B | 8T | 13 | 13 9.5 | 600 0.25 | 500 9.9 |
| MMBZ5244B | 8U | 14 | 15 9.0 | 600 0.25 | 100 10 |
| MMBZ5245B | 8V | 15 | 16 8.5 | 600 0.25 | 100 11 |
| MMBZ5246B | 8W | 16 | 17 7.8 | 600 0.25 | 100 12 |
| MMBZ5247B | 8X | 17 | 19 7.4 | 600 0.25 | 100 13 |

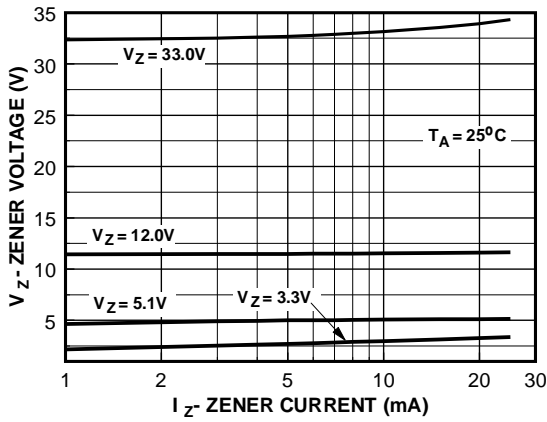
V_F Forward Voltage = 0.9V Maximum @ I_F = 10mA for all MMBZ5200 series

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

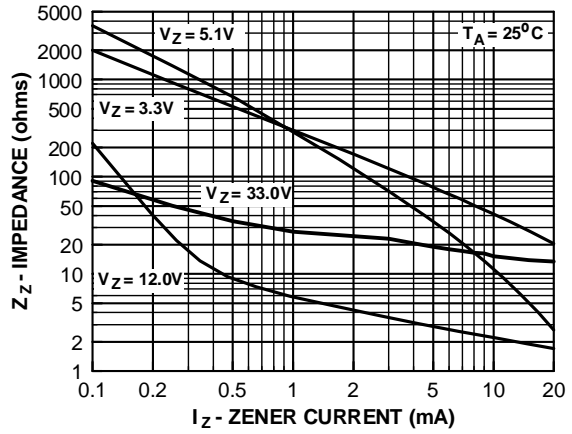
| Device | Mark | V_Z (V) | $Z_Z(\Omega)$ @ I_Z (mA) | | $Z_{ZK}(\Omega)$ @ I_{ZK} (mA) | | I_R (μA) @ V_R (V) | |
|-----------|------|-----------|----------------------------|-----|----------------------------------|------|-------------------------------------|----|
| MMBZ5248B | 8Y | 18 | 21 | 7.0 | 600 | 0.25 | 100 | 14 |
| MMBZ5249B | 8Z | 19 | 23 | 6.6 | 600 | 0.25 | 100 | 14 |
| MMBZ5250B | 81A | 20 | 25 | 6.2 | 600 | 0.25 | 100 | 15 |
| MMBZ5251B | 81B | 22 | 29 | 5.6 | 600 | 0.25 | 100 | 17 |
| MMBZ5252B | 81C | 24 | 33 | 5.2 | 600 | 0.25 | 100 | 18 |
| MMBZ5253B | 81D | 25 | 35 | 5.0 | 600 | 0.25 | 100 | 19 |
| MMBZ5254B | 81E | 27 | 41 | 4.6 | 600 | 0.25 | 100 | 21 |
| MMBZ5255B | 81F | 28 | 44 | 4.5 | 600 | 0.25 | 100 | 21 |
| MMBZ5256B | 81G | 30 | 49 | 4.2 | 600 | 0.25 | 100 | 23 |
| MMBZ5257B | 81H | 33 | 58 | 3.8 | 600 | 0.25 | 100 | 25 |

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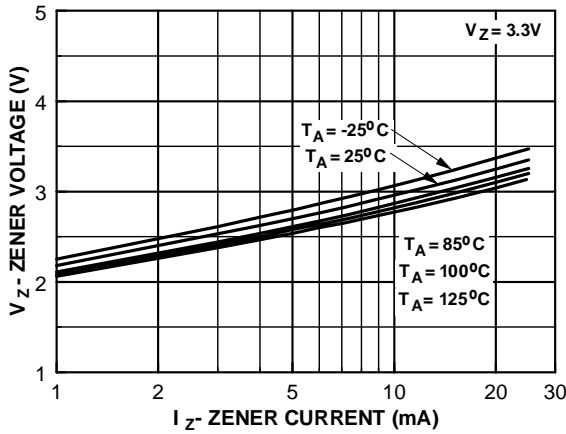
Typical Characteristics



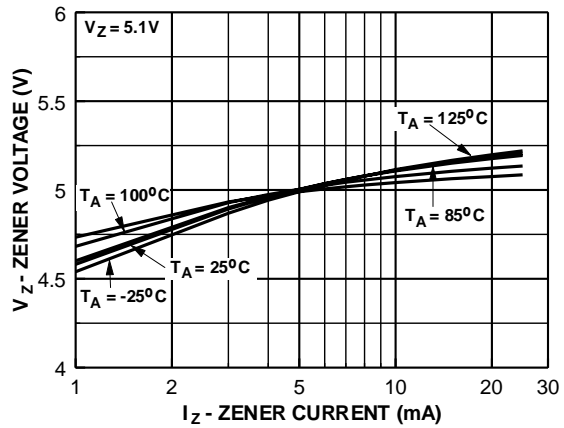
Zener Current vs. Zener Voltage



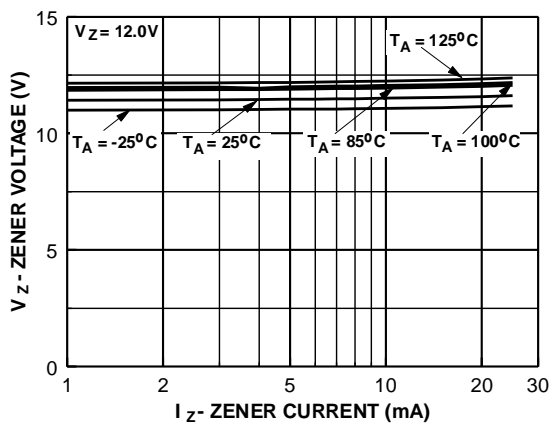
Zener Current vs. Zener Impedance



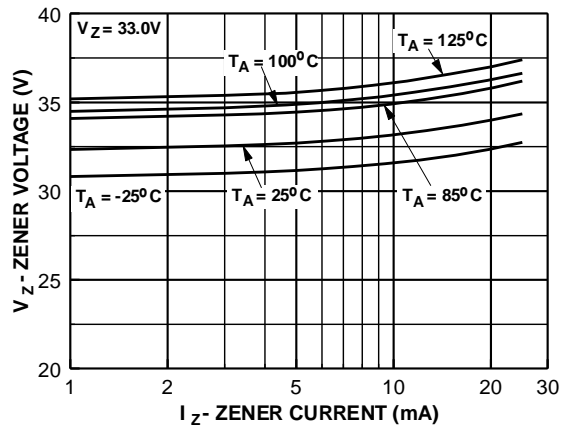
3.3 Zener Voltage vs. Temperature



5.1 Zener Voltage vs. Temperature



12 Zener Voltage vs. Zener Temperature



33 Zener Voltage vs. Zener Temperature

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