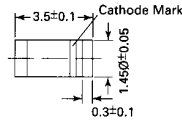


ZMM 5225 ... ZMM 5262

Silicon Planar Zener Diodes

Standard Zener voltage tolerance is $\pm 20\%$. Add suffix "A" for $\pm 10\%$ tolerance and suffix "B" for $\pm 5\%$ tolerance. Other tolerance, non standard and higher Zener voltages upon request.



Glass case MiniMELF

Weight approx. 0.05g

Dimensions in mm

These diodes are also available in DO-35 case with the type designation 1N5225... 1N5262.

These diodes are delivered taped.
Details see "Taping".

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

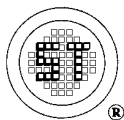
| | Symbol | Value | Unit |
|---|-----------|-------------------|------------------|
| Zener Current see Table "Characteristics" | | | |
| Power Dissipation at $T_{amb} = 75^\circ\text{C}$ | P_{tot} | 500 ¹⁾ | mW |
| Junction Temperature | T_j | 175 | $^\circ\text{C}$ |
| Storage Temperature Range | T_s | -65 to + 175 | $^\circ\text{C}$ |

¹⁾ Valid provided that electrodes are kept at ambient temperature.

Characteristics at $T_{amb} = 25^\circ\text{C}$

| | Symbol | Min. | Typ. | Max. | Unit |
|---|-----------|------|------|-------------------|------|
| Thermal Resistance Junction to Ambient Air | R_{thA} | - | - | 0.3 ¹⁾ | K/mW |
| Forward Voltage at $I_F = 200\text{ mA}$ | V_F | - | - | 1.1 | V |

¹⁾ Valid provided that electrodes are kept at ambient temperature.



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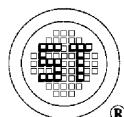


TS 0 9 0 0 2 - 3 4
CERTIFICATE No. 086-024

ZMM 5225 ... ZMM 5262

| Type | Nominal Zener voltage ³⁾ at I_{ZT} V_Z V | Test current I_{ZT} mA | Maximum Zener Impedance ¹⁾ | | Typical temperature coefficient α_{VZ} %/K | Maximum reverse leakage current | | | Maximum regulator current ²⁾ I_{ZM} mA |
|---------|---|-----------------------------|---------------------------------------|--|--|---------------------------------|-------------------------------------|---------------------|--|
| | | | at I_{ZT} Z_{ZT} Ω | at $I_{ZT} = 0.25$ mA Z_{ZK} Ω | | I_R μ A | Test voltage Suffix A V_R V | Suffix B V_R V | |
| ZMM5225 | 3.0 | 20 | 29 | 1600 | -0.075 | 50 | 0.95 | 1.0 | 152 |
| ZMM5226 | 3.3 | 20 | 28 | 1600 | -0.070 | 25 | 0.95 | 1.0 | 138 |
| ZMM5227 | 3.6 | 20 | 24 | 1700 | -0.065 | 15 | 0.95 | 1.0 | 126 |
| ZMM5228 | 3.9 | 20 | 23 | 1900 | -0.060 | 10 | 0.95 | 1.0 | 115 |
| ZMM5229 | 4.3 | 20 | 22 | 2000 | -0.055 | 5 | 0.95 | 1.0 | 106 |
| ZMM5230 | 4.7 | 20 | 19 | 1900 | ± 0.030 | 5 | 1.9 | 2.0 | 97 |
| ZMM5231 | 5.1 | 20 | 17 | 1600 | ± 0.030 | 5 | 1.9 | 2.0 | 89 |
| ZMM5232 | 5.6 | 20 | 11 | 1600 | +0.038 | 5 | 2.9 | 3.0 | 81 |
| ZMM5233 | 6.0 | 20 | 7 | 1600 | +0.038 | 5 | 3.3 | 3.5 | 76 |
| ZMM5234 | 6.2 | 20 | 7 | 1000 | +0.045 | 5 | 3.8 | 4.0 | 73 |
| ZMM5235 | 6.8 | 20 | 5 | 750 | +0.050 | 3 | 4.8 | 5.0 | 67 |
| ZMM5236 | 7.5 | 20 | 6 | 500 | +0.058 | 3 | 5.7 | 6.0 | 61 |
| ZMM5237 | 8.2 | 20 | 8 | 500 | +0.062 | 3 | 6.2 | 6.5 | 55 |
| ZMM5238 | 8.7 | 20 | 8 | 600 | +0.065 | 3 | 6.2 | 6.5 | 52 |
| ZMM5239 | 9.1 | 20 | 10 | 600 | +0.068 | 3 | 6.7 | 7.0 | 50 |
| ZMM5240 | 10 | 20 | 17 | 600 | +0.075 | 3 | 7.6 | 8.0 | 45 |
| ZMM5241 | 11 | 20 | 22 | 600 | +0.076 | 2 | 8.0 | 8.4 | 41 |
| ZMM5242 | 12 | 20 | 30 | 600 | +0.077 | 1 | 8.7 | 9.1 | 38 |
| ZMM5243 | 13 | 9.5 | 13 | 600 | +0.079 | 0.5 | 9.4 | 9.9 | 35 |
| ZMM5244 | 14 | 9.0 | 15 | 600 | +0.082 | 0.1 | 9.5 | 10 | 32 |
| ZMM5245 | 15 | 8.5 | 16 | 600 | +0.082 | 0.1 | 10.5 | 11 | 30 |
| ZMM5246 | 16 | 7.8 | 17 | 600 | +0.083 | 0.1 | 11.4 | 12 | 28 |
| ZMM5247 | 17 | 7.4 | 19 | 600 | +0.084 | 0.1 | 12.4 | 13 | 27 |
| ZMM5248 | 18 | 7.0 | 21 | 600 | +0.085 | 0.1 | 13.3 | 14 | 25 |
| ZMM5249 | 19 | 6.6 | 23 | 600 | +0.086 | 0.1 | 13.3 | 14 | 24 |
| ZMM5250 | 20 | 6.2 | 25 | 600 | +0.086 | 0.1 | 14.3 | 15 | 23 |
| ZMM5251 | 22 | 5.6 | 29 | 600 | +0.087 | 0.1 | 16.2 | 17 | 21 |
| ZMM5252 | 24 | 5.2 | 33 | 600 | +0.087 | 0.1 | 17.1 | 18 | 19.1 |
| ZMM5253 | 25 | 5.0 | 35 | 600 | +0.089 | 0.1 | 18.1 | 19 | 18.2 |
| ZMM5254 | 27 | 4.6 | 41 | 600 | +0.090 | 0.1 | 20 | 21 | 16.8 |
| ZMM5255 | 28 | 4.4 | 44 | 600 | +0.091 | 0.1 | 20 | 21 | 16.2 |
| ZMM5256 | 30 | 4.2 | 49 | 600 | +0.091 | 0.1 | 22 | 23 | 15.1 |
| ZMM5257 | 33 | 3.8 | 58 | 700 | +0.092 | 0.1 | 24 | 25 | 13.8 |
| ZMM5258 | 36 | 3.4 | 70 | 700 | +0.093 | 0.1 | 26 | 27 | 12.6 |
| ZMM5259 | 39 | 3.2 | 80 | 800 | +0.094 | 0.1 | 29 | 30 | 11.6 |
| ZMM5260 | 43 | 3.0 | 93 | 900 | +0.095 | 0.1 | 31 | 33 | 10.6 |
| ZMM5261 | 47 | 2.7 | 105 | 1000 | +0.095 | 0.1 | 34 | 36 | 9.7 |
| ZMM5262 | 51 | 2.5 | 125 | 1100 | +0.096 | 0.1 | 37 | 39 | 8.9 |

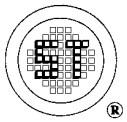
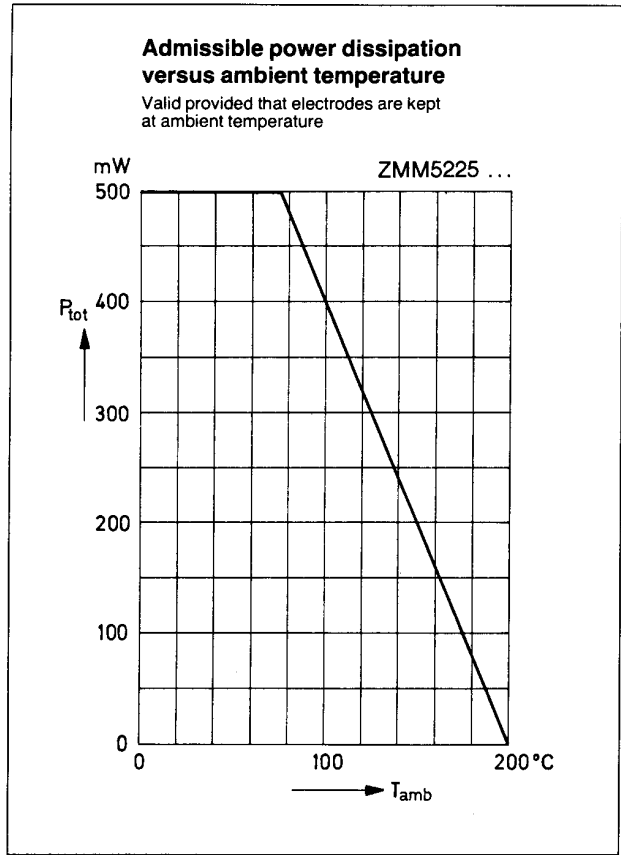
- ¹⁾ The Zener Impedance is derived from the 60 Hz AC voltage which results when an AC current having an RMS value equal to 10% of the Zener current (I_{ZT} or I_{ZK}) is superimposed on I_{ZT} or I_{ZK} . Zener Impedance is measured at two points to insure a sharp knee on the breakdown curve and to eliminate unstable units.
- ²⁾ Valid provided that electrodes are kept at ambient temperature.
- ³⁾ Measured under thermal equilibrium and DC test conditions.



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