

1N5221 - 1N5267

$V_Z : 2.4 - 75 V$
 $P_D : 500 mW$

FEATURES :

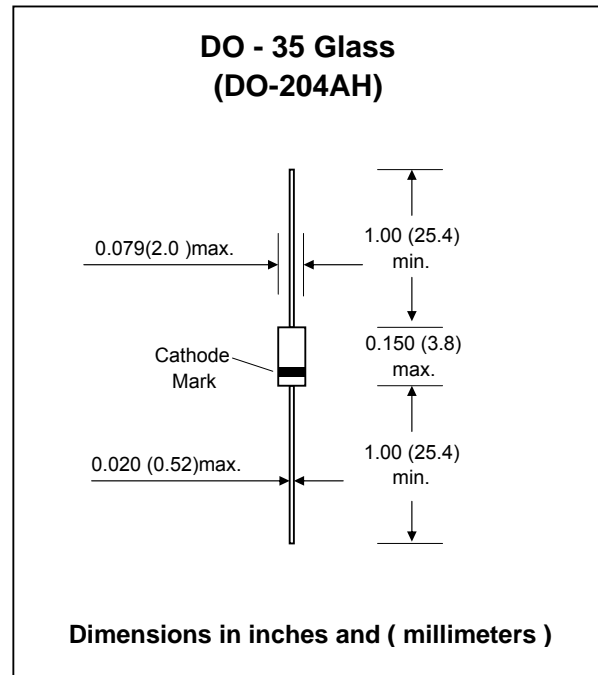
- Silicon planar power zener diodes.
- Standard zener voltage tolerance is $\pm 10\%$.
- Other tolerances are available upon request.
- These diodes are also available in MiniMELF case with the type designation ZMM5221 ... ZMM5267
- Pb / RoHS Free

MECHANICAL DATA :

Case: DO-35 Glass Case

Weight: approx. 0.13g

ZENER DIODES



Maximum Ratings and Thermal Characteristics

Rating at 25 °C ambient temperature unless otherwise specified

| Parameter | Symbol | Value | Unit |
|--|-----------------|--------------------|--------------------|
| Zener Current see Table "Characteristics" | | | |
| Maximum Forward Voltage at $I_F = 200 \text{ mA}$. | V_F | 1.1 | V |
| Power Dissipation at $T_a = 75 \text{ }^\circ\text{C}$ | P_D | 500 ⁽¹⁾ | mW |
| Thermal Resistance Junction to Ambient Air | $R_{\theta JA}$ | 300 ⁽¹⁾ | $^\circ\text{C/W}$ |
| Junction temperature | T_J | 175 | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | -65 to + 175 | $^\circ\text{C}$ |

Note:

(1) Valid provided that leads at a distance of 3/8" from case are kept at ambient temperature.

Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified

| Type | Nominal Zener Voltage $V_Z @ I_{ZT}$ | Test Current I_{ZT} | Maximum Zener Impedance ⁽¹⁾ | | Maximum Reverse Leakage Current | | Typical Temperature Coefficient $\alpha_{VZ}(\%/^{\circ}C)$ | Maximum Regulator Current ⁽²⁾ I_{ZM} |
|--------|---|--------------------------|--|----------------------------|---------------------------------|-----|--|--|
| | | | $Z_{ZT} @ I_{ZT}$ | $Z_{ZK} @ I_{ZK} = 0.25mA$ | $I_R @ V_R$ | | | |
| | | | (Ω) | (Ω) | (μA) | (V) | | |
| 1N5221 | 2.4 | 20 | 30 | 1200 | 100 | 1.0 | -0.085 | 190 |
| 1N5222 | 2.5 | 20 | 30 | 1250 | 100 | 1.0 | -0.085 | 182 |
| 1N5223 | 2.7 | 20 | 30 | 1300 | 75 | 1.0 | -0.080 | 168 |
| 1N5224 | 2.8 | 20 | 30 | 1400 | 75 | 1.0 | -0.080 | 162 |
| 1N5225 | 3.0 | 20 | 29 | 1600 | 50 | 1.0 | -0.075 | 152 |
| 1N5226 | 3.3 | 20 | 28 | 1600 | 25 | 1.0 | -0.070 | 138 |
| 1N5227 | 3.6 | 20 | 24 | 1700 | 15 | 1.0 | -0.065 | 126 |
| 1N5228 | 3.9 | 20 | 23 | 1900 | 10 | 1.0 | -0.060 | 115 |
| 1N5229 | 4.3 | 20 | 22 | 2000 | 5.0 | 1.0 | ± 0.055 | 106 |
| 1N5230 | 4.7 | 20 | 19 | 1900 | 5.0 | 2.0 | ± 0.030 | 97 |
| 1N5231 | 5.1 | 20 | 17 | 1600 | 5.0 | 2.0 | ± 0.030 | 89 |
| 1N5232 | 5.6 | 20 | 11 | 1600 | 5.0 | 3.0 | +0.038 | 81 |
| 1N5233 | 6.0 | 20 | 7 | 1600 | 5.0 | 3.5 | +0.038 | 76 |
| 1N5234 | 6.2 | 20 | 7 | 1000 | 5.0 | 4.0 | +0.045 | 73 |
| 1N5235 | 6.8 | 20 | 5 | 750 | 3.0 | 5.0 | +0.050 | 67 |
| 1N5236 | 7.5 | 20 | 6 | 500 | 3.0 | 6.0 | +0.058 | 61 |
| 1N5237 | 8.2 | 20 | 8 | 500 | 3.0 | 6.5 | +0.062 | 55 |
| 1N5238 | 8.7 | 20 | 8 | 600 | 3.0 | 6.5 | +0.065 | 52 |
| 1N5239 | 9.1 | 20 | 10 | 600 | 3.0 | 7.0 | +0.068 | 50 |
| 1N5240 | 10 | 20 | 17 | 600 | 3.0 | 8.0 | +0.075 | 45 |
| 1N5241 | 11 | 20 | 22 | 600 | 2.0 | 8.4 | +0.076 | 41 |
| 1N5242 | 12 | 20 | 30 | 600 | 1.0 | 9.1 | +0.077 | 38 |
| 1N5243 | 13 | 9.5 | 13 | 600 | 0.5 | 9.9 | +0.079 | 35 |
| 1N5244 | 14 | 9.0 | 15 | 600 | 0.1 | 10 | +0.082 | 32 |
| 1N5245 | 15 | 8.5 | 16 | 600 | 0.1 | 11 | +0.082 | 30 |
| 1N5246 | 16 | 7.8 | 17 | 600 | 0.1 | 12 | +0.083 | 28 |
| 1N5247 | 17 | 7.4 | 19 | 600 | 0.1 | 13 | +0.084 | 27 |
| 1N5248 | 18 | 7.0 | 21 | 600 | 0.1 | 14 | +0.085 | 25 |
| 1N5249 | 19 | 6.6 | 23 | 600 | 0.1 | 14 | +0.086 | 24 |
| 1N5250 | 20 | 6.2 | 25 | 600 | 0.1 | 15 | +0.086 | 23 |
| 1N5251 | 22 | 5.6 | 29 | 600 | 0.1 | 17 | +0.087 | 21 |
| 1N5252 | 24 | 5.2 | 33 | 600 | 0.1 | 18 | +0.088 | 19.1 |
| 1N5253 | 25 | 5.0 | 35 | 600 | 0.1 | 19 | +0.089 | 18.2 |
| 1N5254 | 27 | 4.6 | 41 | 600 | 0.1 | 21 | +0.090 | 16.8 |
| 1N5255 | 28 | 4.5 | 44 | 600 | 0.1 | 21 | +0.091 | 16.2 |
| 1N5256 | 30 | 4.2 | 49 | 600 | 0.1 | 23 | +0.091 | 15.1 |
| 1N5257 | 33 | 3.8 | 58 | 700 | 0.1 | 25 | +0.092 | 13.8 |
| 1N5258 | 36 | 3.4 | 70 | 700 | 0.1 | 27 | +0.093 | 12.6 |
| 1N5259 | 39 | 3.2 | 80 | 800 | 0.1 | 30 | +0.094 | 11.6 |
| 1N5260 | 43 | 3.0 | 93 | 900 | 0.1 | 33 | +0.095 | 10.6 |
| 1N5261 | 47 | 2.7 | 105 | 1000 | 0.1 | 36 | +0.095 | 9.7 |
| 1N5262 | 51 | 2.5 | 125 | 1100 | 0.1 | 39 | +0.096 | 8.9 |
| 1N5263 | 56 | 2.2 | 150 | 1300 | 0.1 | 43 | +0.096 | - |
| 1N5264 | 60 | 2.1 | 170 | 1400 | 0.1 | 46 | +0.097 | - |
| 1N5265 | 62 | 2.0 | 185 | 1400 | 0.1 | 47 | +0.097 | - |
| 1N5266 | 68 | 1.8 | 230 | 1600 | 0.1 | 52 | +0.097 | - |
| 1N5267 | 75 | 1.7 | 270 | 1700 | 0.1 | 56 | +0.098 | - |

Notes :

- (1) The Zener impedance is derived from the 1 kHz 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 leads at a distance of 10 mm from case are kept at ambient temperature
- (3) Standard Zener voltage tolerance is $\pm 10\%$. Add suffix "B" for $\pm 5\%$ tolerance