**Technical Data**
**Data Sheet N0187, Rev. B**

RoHS

# 1N5225 THRU 1N5267 ZENER DIODES

DO-35

## Features

- Silicon Planar Power Zener Diodes
- Standard Zener voltage tolerance is ± 5% with a "B" suffix.
- Other tolerances are available upon request.
- These diodes are also available in Mini-MELF case with the type designation ZMM5225 ... ZMM5267, SOT-23 case with the type designation MMBZ5265 ... MMBZ5267 and SOD-23 case with the types designation MMSZ5225 ... MMSZ5267.
- This is a Pb − Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

## Circuit Diagram


## Mechanical Data

- Case: DO-35 Glass Case
- Terminals: Plated axial leads, solderable per LIL-STD 750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: approx. 0.14 grams

## Maximum Ratings@$T_A$=25°C unless otherwise specified

| Parameter | Symbol | Value | Units |
|---|---|---|---|
| Power Dissipation (Note 1) | $P_D$ | 500 | mW |
| Forward Voltage @ $I_F$ = 200mA | $V_F$ | 1.1 | V |
| Typical Thermal resistance junction to Ambient Air (Note 1) | $R_{\theta JA}$ | 3000 | °C/W |
| Operating Junction and Storage Temperature Range | $T_J$,$T_{STG}$ | -65 to 200 | °C |

Notes: 1. Valid provided that leads are kept at ambient temperature at a distance of 8mm from case

## Ordering Information

| Device | Package | Shipping |
|---|---|---|
| 1N5225-1N5267 | DO-35 (Pb-Free) | 5000pcs / tape |

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

## Marking Diagram


1N5252 = Part Name

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## Electrical Characteristics @$T_A$=25°C unless otherwise specified

| Type | Nominal Zener Voltage(3) at $I_{ZT}$ $V_Z$ (V) | Test Current $I_{ZT}$ (mA) | Maximum Zener impedance(1) at $I_{ZT}$ $Z_{ZT}$ (Ω) | Maximum Zener impedance(1) at $I_{ZK}$=0.25mA $Z_{ZK}$ (Ω) | Typical Temperature Coefficient $\alpha_{VZ}$ (% / K) | Maximum Reverse Leakage Current $I_R$ (μA) | Maximum Reverse Leakage Current Test Voltage $V_R$ (V) | Maximum Regulator Current(2) $I_{ZM}$ (mA) |
|---|---|---|---|---|---|---|---|---|
| 1N5225 | 3.0 | 20 | 29 | 1600 | – 0.075 | 50 | 1.0 | 152 |
| 1N5226 | 3.3 | 20 | 28 | 1600 | –0.070 | 25 | 1.0 | 138 |
| 1N5227 | 3.6 | 20 | 24 | 1700 | –0.065 | 15 | 1.0 | 126 |
| 1N5228 | 3.9 | 20 | 23 | 1900 | –0.060 | 10 | 1.0 | 115 |
| 1N5229 | 4.3 | 20 | 22 | 2000 | –0.055 | 5.0 | 1.0 | 106 |
| 1N5230 | 4.7 | 20 | 19 | 1900 | ±0.030 | 5.0 | 2.0 | 97 |
| 1N5231 | 5.1 | 20 | 17 | 1600 | ±0.030 | 5.0 | 2.0 | 89 |
| 1N5232 | 5.6 | 20 | 11 | 1600 | +0.038 | 5.0 | 3.0 | 81 |
| 1N5233 | 6.0 | 20 | 7 | 1600 | +0.038 | 5.0 | 3.5 | 76 |
| 1N5234 | 6.2 | 20 | 7 | 1000 | +0.045 | 5.0 | 4.0 | 73 |
| 1N5235 | 6.8 | 20 | 5 | 750 | +0.050 | 3.0 | 5.0 | 67 |
| 1N5236 | 7.5 | 20 | 6 | 500 | +0.058 | 3.0 | 6.0 | 61 |
| 1N5237 | 8.2 | 20 | 8 | 500 | +0.062 | 3.0 | 6.5 | 55 |
| 1N5238 | 8.7 | 20 | 8 | 600 | +0.065 | 3.0 | 6.5 | 52 |
| 1N5239 | 9.1 | 20 | 10 | 600 | +0.068 | 3.0 | 7.0 | 50 |
| 1N5240 | 10 | 20 | 17 | 600 | +0.075 | 3.0 | 8.0 | 45 |
| 1N5241 | 11 | 20 | 22 | 600 | +0.076 | 2.0 | 8.4 | 41 |
| 1N5242 | 12 | 20 | 30 | 600 | +0.077 | 1.0 | 9.1 | 38 |
| 1N5243 | 13 | 9.5 | 13 | 600 | +0.079 | 0.5 | 9.9 | 35 |
| 1N5244 | 14 | 9.0 | 15 | 600 | +0.082 | 0.1 | 10 | 32 |
| 1N5245 | 15 | 8.5 | 16 | 600 | +0.082 | 0.1 | 11 | 30 |
| 1N5246 | 16 | 7.8 | 17 | 600 | +0.083 | 0.1 | 12 | 28 |
| 1N5247 | 17 | 7.4 | 19 | 600 | +0.084 | 0.1 | 13 | 27 |
| 1N5248 | 18 | 7.0 | 21 | 600 | +0.085 | 0.1 | 14 | 25 |
| 1N5249 | 19 | 6.6 | 23 | 600 | +0.086 | 0.1 | 14 | 24 |
| 1N5250 | 20 | 6.2 | 25 | 600 | +0.086 | 0.1 | 15 | 23 |
| 1N5251 | 22 | 5.6 | 29 | 600 | +0.087 | 0.1 | 17 | 21 |
| 1N5252 | 24 | 5.2 | 33 | 600 | +0.087 | 0.1 | 18 | 19.1 |
| 1N5253 | 25 | 5.0 | 35 | 600 | +0.089 | 0.1 | 19 | 18.2 |
| 1N5254 | 27 | 4.6 | 41 | 600 | +0.090 | 0.1 | 21 | 16.8 |
| 1N5255 | 28 | 4.5 | 44 | 600 | +0.091 | 0.1 | 21 | 16.2 |
| 1N5256 | 30 | 4.2 | 49 | 600 | +0.091 | 0.1 | 23 | 15.1 |
| 1N5257 | 33 | 3.8 | 58 | 700 | +0.092 | 0.1 | 25 | 13.8 |
| 1N5258 | 36 | 3.4 | 70 | 700 | +0.093 | 0.1 | 27 | 12.6 |
| 1N5259 | 39 | 3.2 | 80 | 800 | +0.094 | 0.1 | 30 | 11.6 |
| 1N5260 | 43 | 3.0 | 93 | 900 | +0.095 | 0.1 | 33 | 10.6 |
| 1N5261 | 47 | 2.7 | 105 | 1000 | +0.095 | 0.1 | 36 | 9.7 |
| 1N5262 | 51 | 2.5 | 125 | 1100 | +0.096 | 0.1 | 39 | 8.9 |
| 1N5263 | 56 | 2.2 | 150 | 1300 | +0.096 | 0.1 | 43 | – |
| 1N5264 | 60 | 2.1 | 170 | 1400 | +0.097 | 0.1 | 46 | – |
| 1N5265 | 62 | 2.0 | 185 | 1400 | +0.097 | 0.1 | 47 | – |
| 1N5266 | 68 | 1.8 | 230 | 1600 | +0.097 | 0.1 | 52 | – |
| 1N5267 | 75 | 1.7 | 270 | 1700 | +0.098 | 0.1 | 56 | – |

Note: (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 (IZT or IZK) is superimposed on IZT or IZK. 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) Measured with device junction in thermal equilibrium

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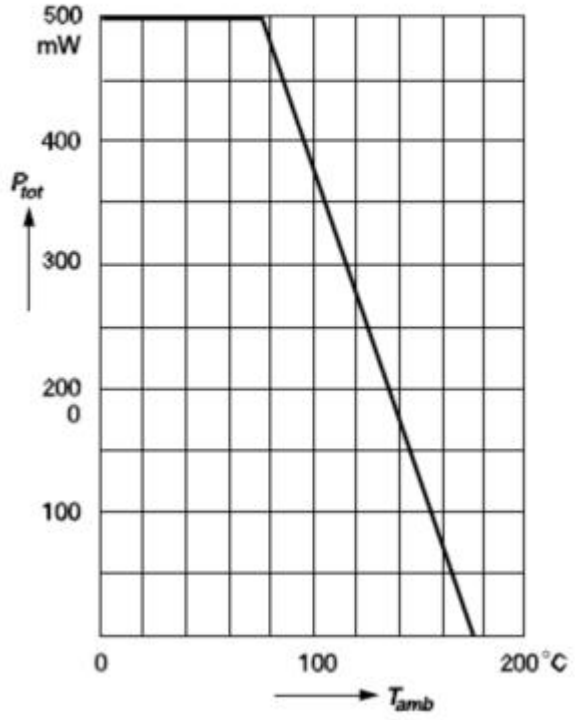
## Ratings and Characteristics Curves

**Admissible power dissipation versus ambient temperature**

Valid provided that leads at a distance of 10 mm from case are kept at ambient temperature



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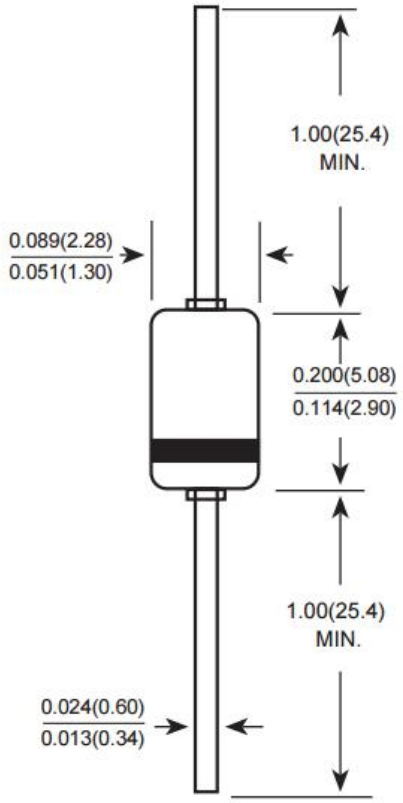
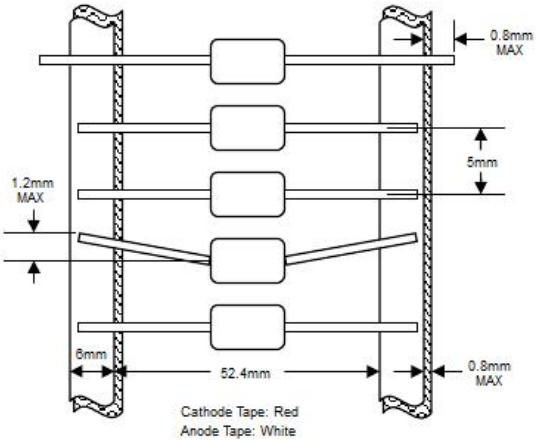
## Mechanical Dimensions DO-35(Inches/Millimeters)




## Carrier Tape Specification DO-35



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