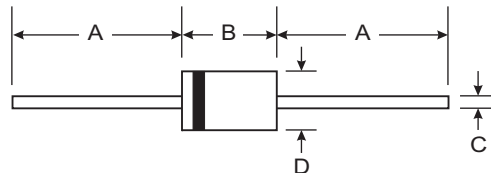


Features

- 500mW Power Dissipation
- High Stability
- Surface Mount Equivalents Available
- Hermetic Package
- V_Z - Tolerance $\pm 5\%$
- **Lead Free Finish, RoHS Compliant (Note 2)**



Mechanical Data

- Case: DO-35
- Case Material: Glass
- Moisture Sensitivity: Level 1 per J-STD-020C
- Leads: Solderable per MIL-STD-202, Method 208
- Terminals: Finish - Sn96.5Ag3.5. Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Marking: Type Number
- Weight: 0.13 grams (approximate)

| DO-35 | | |
|----------------------|-------|------|
| Dim | Min | Max |
| A | 25.40 | — |
| B | — | 4.00 |
| C | — | 0.60 |
| D | — | 2.00 |
| All Dimensions in mm | | |

Maximum Ratings and Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

| Characteristic | Symbol | Value | Unit |
|--|-----------------|-------------|---------------------------|
| Power Dissipation (Note 1) | P_d | 500 | mW |
| Thermal Resistance, Junction to Ambient Air (Note 1) | $R_{\theta JA}$ | 300 | $^\circ\text{C}/\text{W}$ |
| Forward Voltage @ $I_F = 200\text{mA}$ | V_F | 1.1 | V |
| Operating and Storage Temperature Range | T_j, T_{STG} | -65 to +200 | $^\circ\text{C}$ |

- Notes:
1. Valid provided that leads are kept at $T_L \leq 75^\circ\text{C}$ with lead length = 9.5mm (3/8") from case; derate above 75°C .
 2. EC Directive 2002/95/EC (RoHS) revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied where applicable, see EU Directive Annex Notes 5 and 7.



Electrical Characteristics @ T_A = 25°C unless otherwise specified

Table 1

| Type Number | Zener Voltage Range (Note 3) | | | Test Current | Maximum Zener Impedance | | Maximum Reverse Current | | Maximum Temperature Coefficient @ I _{ZT} |
|-------------|----------------------------------|---------|---------|-----------------|-----------------------------------|--|-------------------------|-----------------|---|
| | V _Z @ I _{ZT} | | | I _{ZT} | Z _{zT} @ I _{ZT} | Z _{zK} @ I _{zK} = 0.25mA | I _R | @V _R | |
| | Nom (V) | Min (V) | Max (V) | mA | Ω | Ω | μA | V | |
| 1N5221B | 2.4 | 2.28 | 2.52 | 20 | 30 | 1200 | 100 | 1.0 | -0.085 |
| 1N5222B | 2.5 | 2.38 | 2.63 | 20 | 30 | 1250 | 100 | 1.0 | -0.085 |
| 1N5223B | 2.7 | 2.57 | 2.84 | 20 | 30 | 1300 | 75 | 1.0 | -0.080 |
| 1N5224B | 2.8 | 2.66 | 2.94 | 20 | 30 | 1400 | 75 | 1.0 | -0.080 |
| 1N5225B | 3.0 | 2.85 | 3.15 | 20 | 29 | 1600 | 50 | 1.0 | -0.075 |
| 1N5226B | 3.3 | 3.14 | 3.47 | 20 | 28 | 1600 | 25 | 1.0 | -0.070 |
| 1N5227B | 3.6 | 3.42 | 3.78 | 20 | 24 | 1700 | 15 | 1.0 | -0.065 |
| 1N5228B | 3.9 | 3.71 | 4.10 | 20 | 23 | 1900 | 10 | 1.0 | -0.060 |
| 1N5229B | 4.3 | 4.09 | 4.52 | 20 | 22 | 2000 | 5.0 | 1.0 | +0.055 |
| 1N5230B | 4.7 | 4.47 | 4.94 | 20 | 19 | 1900 | 5.0 | 2.0 | +0.030 |
| 1N5231B | 5.1 | 4.85 | 5.36 | 20 | 17 | 1600 | 5.0 | 2.0 | +0.030 |
| 1N5232B | 5.6 | 5.32 | 5.88 | 20 | 11 | 1600 | 5.0 | 3.0 | +0.038 |
| 1N5233B | 6.0 | 5.70 | 6.30 | 20 | 7.0 | 1600 | 5.0 | 3.5 | +0.038 |
| 1N5234B | 6.2 | 5.89 | 6.51 | 20 | 7.0 | 1000 | 5.0 | 4.0 | +0.045 |
| 1N5235B | 6.8 | 6.46 | 7.14 | 20 | 5.0 | 750 | 3.0 | 5.0 | +0.050 |
| 1N5236B | 7.5 | 7.13 | 7.88 | 20 | 6.0 | 500 | 3.0 | 6.0 | +0.058 |
| 1N5237B | 8.2 | 7.79 | 8.61 | 20 | 8.0 | 500 | 3.0 | 6.5 | +0.062 |
| 1N5238B | 8.7 | 8.27 | 9.14 | 20 | 8.0 | 600 | 3.0 | 6.5 | +0.065 |
| 1N5239B | 9.1 | 8.65 | 9.56 | 20 | 10 | 600 | 3.0 | 7.0 | +0.068 |
| 1N5240B | 10 | 9.50 | 10.50 | 20 | 17 | 600 | 3.0 | 8.0 | +0.075 |
| 1N5241B | 11 | 10.45 | 11.55 | 20 | 22 | 600 | 2.0 | 8.4 | +0.076 |
| 1N5242B | 12 | 11.40 | 12.60 | 20 | 30 | 600 | 1.0 | 9.1 | +0.077 |
| 1N5243B | 13 | 12.35 | 13.65 | 9.5 | 13 | 600 | 0.5 | 9.9 | +0.079 |
| 1N5244B | 14 | 13.30 | 14.70 | 9.0 | 15 | 600 | 0.1 | 10 | +0.082 |
| 1N5245B | 15 | 14.25 | 15.75 | 8.5 | 16 | 600 | 0.1 | 11 | +0.082 |
| 1N5246B | 16 | 15.20 | 16.80 | 7.8 | 17 | 600 | 0.1 | 12 | +0.083 |
| 1N5247B | 17 | 16.15 | 17.85 | 7.4 | 19 | 600 | 0.1 | 13 | +0.084 |
| 1N5248B | 18 | 17.10 | 18.90 | 7.0 | 21 | 600 | 0.1 | 14 | +0.085 |
| 1N5249B | 19 | 18.05 | 19.95 | 6.6 | 23 | 600 | 0.1 | 14 | +0.086 |
| 1N5250B | 20 | 19.00 | 21.00 | 6.2 | 25 | 600 | 0.1 | 15 | +0.086 |
| 1N5251B | 22 | 20.90 | 23.10 | 5.6 | 29 | 600 | 0.1 | 17 | +0.087 |
| 1N5252B | 24 | 22.80 | 25.20 | 5.2 | 33 | 600 | 0.1 | 18 | +0.087 |
| 1N5253B | 25 | 23.75 | 26.25 | 5.0 | 35 | 600 | 0.1 | 19 | +0.089 |
| 1N5254B | 27 | 25.65 | 28.35 | 4.6 | 41 | 600 | 0.1 | 21 | +0.090 |
| 1N5255B | 28 | 26.60 | 29.40 | 4.5 | 44 | 600 | 0.1 | 21 | +0.091 |
| 1N5256B | 30 | 28.50 | 31.50 | 4.2 | 49 | 600 | 0.1 | 23 | +0.091 |
| 1N5257B | 33 | 31.35 | 34.65 | 3.8 | 58 | 700 | 0.1 | 25 | +0.092 |
| 1N5258B | 36 | 34.20 | 37.80 | 3.4 | 70 | 700 | 0.1 | 27 | +0.093 |
| 1N5259B | 39 | 37.05 | 40.95 | 3.2 | 80 | 800 | 0.1 | 30 | +0.094 |
| 1N5260B | 43 | 40.85 | 45.15 | 3.0 | 93 | 900 | 0.1 | 33 | +0.095 |
| 1N5261B | 47 | 44.65 | 49.35 | 2.7 | 105 | 1000 | 0.1 | 36 | +0.095 |
| 1N5262B | 51 | 48.45 | 53.55 | 2.5 | 125 | 1100 | 0.1 | 39 | +0.096 |
| 1N5263B | 56 | 53.20 | 58.80 | 2.2 | 150 | 1300 | 0.1 | 43 | +0.096 |
| 1N5264B | 60 | 57.00 | 63.00 | 2.1 | 170 | 1400 | 0.1 | 46 | +0.097 |
| 1N5265B | 62 | 58.90 | 65.10 | 2.0 | 185 | 1400 | 0.1 | 47 | +0.097 |
| 1N5266B | 68 | 64.60 | 71.40 | 1.8 | 230 | 1600 | 0.1 | 52 | +0.097 |
| 1N5267B | 75 | 71.25 | 78.75 | 1.7 | 270 | 1700 | 0.1 | 56 | +0.098 |

Notes: 3. Based on dc measurement at thermal equilibrium; lead length = 9.5mm (3/8"); thermal resistance of heat sink = 30°C/W.



Ordering Information (Note 5)

| Device | Packaging | Shipping |
|------------------|-----------|----------------|
| (Type Number)-A* | DO-35 | 5K/Ammo Pack |
| (Type Number)-T* | DO-35 | 5K/Tape & Reel |

- Notes: 4. *Add "-A" or "-T" to the appropriate type number in Table 1. Example: 6.2V Zener = 1N5234B-A for ammo pack.
5. For packaging details, visit our website at <http://www.diodes.com/datasheets/ap02008.pdf>.

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