

Axial Lead Zener Diodes

(Pb) Lead(Pb)-Free

Features:

- * Low leakage
- * High reliability

Applications:

- * Voltage stabilization

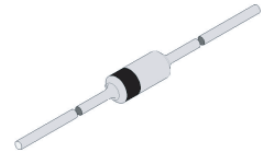
Construction:

- * Silicon epitaxial planar

Mechanical Data:

- * Case : DO-35 Glass Case
- * Weight : Approx 0.13 gram

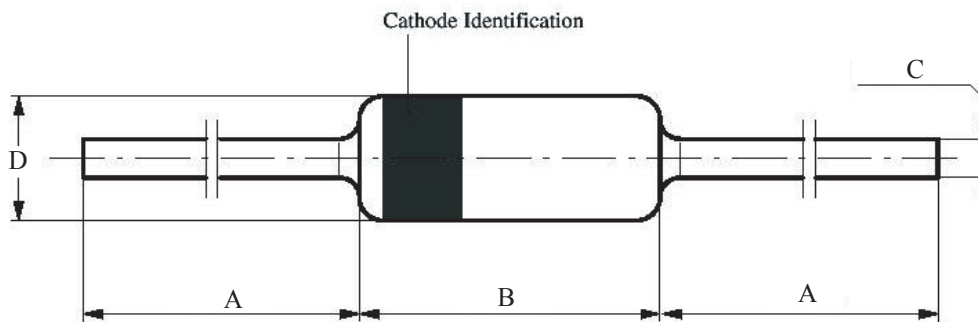
**SMALL SIGNAL
ZENER DIODES
0.5WATTS**



DO-35

DO-35 Outline Dimensions

Unit:mm



| DIM | A | | B | | C | | D | |
|-------|------|-----|-----|------|-----|------|-----|-----|
| | Min | Max | Min | Max | Min | Max | Min | Max |
| DO-35 | 26.0 | - | - | 4.20 | - | 0.55 | - | 2.0 |

Maximum Ratings and Electrical Characteristics ($T_A=25^{\circ}\text{C}$ Unless Otherwise Noted)

| Parameter | Symbol | Value | Unit |
|---|-----------------|----------|--------------------|
| Power dissipation $R_{\theta JA} \leq 300\text{K/W}$ | P_V | 500 | mW |
| Junction ambient on PC board 50mm x 50mm x 1.6mm | $R_{\theta JA}$ | 500 | K/W |
| Junction temperature | T_j | 175 | $^{\circ}\text{C}$ |
| Storage temperature range | T_{stg} | -65~+175 | $^{\circ}\text{C}$ |

Electrical Characteristics $T_j=25^{\circ}\text{C}$

| Type | Zener voltage | | | | Operating resistance | | Rising operating resistance | | Reverse current | |
|--------|---------------|------|-------|------------|-----------------------|------------|-----------------------------|------------|-------------------------|-----------|
| | V_z (V) | | | | Z_{zt} (Ω) | | Z_{zk} (Ω) | | I_R (μA) | |
| | Rank | Min. | Max. | I_z (mA) | Max. | I_z (mA) | Max. | I_z (mA) | Max. | V_R (V) |
| ZJ 2.0 | A | 1.88 | 2.10 | 5 | 100 | 5 | 1000 | 0.5 | 120 | 0.5 |
| | B | 2.02 | 2.20 | | | | | | | |
| ZJ 2.2 | A | 2.12 | 2.30 | 5 | 100 | 5 | 1000 | 0.5 | 100 | 0.7 |
| | B | 2.22 | 2.41 | | | | | | | |
| ZJ 2.4 | A | 2.33 | 2.52 | 5 | 100 | 5 | 1000 | 0.5 | 120 | 1.0 |
| | B | 2.43 | 2.63 | | | | | | | |
| ZJ 2.7 | A | 2.54 | 2.75 | 5 | 110 | 5 | 1000 | 0.5 | 100 | 1.0 |
| | B | 2.69 | 2.91 | | | | | | | |
| ZJ 3.0 | A | 2.85 | 3.07 | 5 | 120 | 5 | 1000 | 0.5 | 50 | 1.0 |
| | B | 3.01 | 3.22 | | | | | | | |
| ZJ 3.3 | A | 3.16 | 3.38 | 5 | 120 | 5 | 1000 | 0.5 | 20 | 1.0 |
| | B | 3.32 | 3.53 | | | | | | | |
| ZJ 3.6 | A | 3.46 | 3.69 | 5 | 100 | 5 | 1000 | 1 | 10 | 1.0 |
| | B | 3.60 | 3.84 | | | | | | | |
| ZJ 3.9 | A | 3.74 | 4.01 | 5 | 100 | 5 | 1000 | 1 | 5 | 1.0 |
| | B | 3.89 | 4.16 | | | | | | | |
| ZJ 4.3 | A | 4.04 | 4.29 | 5 | 100 | 5 | 1000 | 1 | 5 | 1.0 |
| | B | 4.17 | 4.43 | | | | | | | |
| | C | 4.30 | 4.57 | | | | | | | |
| ZJ 4.7 | A | 4.44 | 4.68 | 5 | 90 | 5 | 900 | 1 | 5 | 1.0 |
| | B | 4.55 | 4.80 | | | | | | | |
| | C | 4.68 | 4.93 | | | | | | | |
| ZJ 5.1 | A | 4.81 | 5.07 | 5 | 80 | 5 | 800 | 1 | 5 | 1.5 |
| | B | 4.94 | 5.20 | | | | | | | |
| | C | 5.09 | 5.37 | | | | | | | |
| ZJ 5.6 | A | 5.28 | 5.55 | 5 | 60 | 5 | 500 | 1 | 5 | 2.5 |
| | B | 5.45 | 5.73 | | | | | | | |
| | C | 5.61 | 5.91 | | | | | | | |
| ZJ 6.2 | A | 5.78 | 6.09 | 5 | 60 | 5 | 300 | 1 | 5 | 3.0 |
| | B | 5.96 | 6.27 | | | | | | | |
| | C | 6.12 | 6.44 | | | | | | | |
| ZJ 6.8 | A | 6.29 | 6.63 | 5 | 20 | 5 | 150 | 0.5 | 2 | 3.5 |
| | B | 6.49 | 6.83 | | | | | | | |
| | C | 6.66 | 7.01 | | | | | | | |
| ZJ 7.5 | A | 6.85 | 7.22 | 5 | 20 | 5 | 120 | 0.5 | 0.5 | 4.0 |
| | B | 7.07 | 7.45 | | | | | | | |
| | C | 7.29 | 7.67 | | | | | | | |
| ZJ 8.2 | A | 7.53 | 7.92 | 5 | 20 | 5 | 120 | 0.5 | 0.5 | 5.0 |
| | B | 7.78 | 8.19 | | | | | | | |
| | C | 8.03 | 8.45 | | | | | | | |
| ZJ 9.1 | A | 8.29 | 8.73 | 5 | 25 | 5 | 120 | 0.5 | 0.5 | 6.0 |
| | B | 8.57 | 9.01 | | | | | | | |
| | C | 8.83 | 9.30 | | | | | | | |
| ZJ 10 | A | 9.12 | 9.59 | 5 | 30 | 5 | 120 | 0.5 | 0.2 | 7.0 |
| | B | 9.41 | 9.90 | | | | | | | |
| | C | 9.70 | 10.20 | | | | | | | |
| | D | 9.94 | 10.44 | | | | | | | |

| Type | Zener voltage | | | | Operating resistance | | Rising operating resistance | | Reverse current | |
|-------|---------------|-------|-------|---------|----------------------|---------|-----------------------------|---------|-----------------|--------|
| | Vz (V) | | | | Zzt (Ω) | | Zzk (Ω) | | IR(μA) | |
| | Rank | Min. | Max. | Iz (mA) | Max. | Iz (mA) | Max. | Iz (mA) | Max. | VR (V) |
| ZJ 11 | A | 10.18 | 10.71 | 5 | 30 | 5 | 120 | 0.5 | 0.2 | 8.0 |
| | B | 10.50 | 11.05 | | | | | | | |
| | C | 10.82 | 11.38 | | | | | | | |
| ZJ 12 | A | 11.13 | 11.71 | 5 | 30 | 5 | 110 | 0.5 | 0.2 | 9.0 |
| | B | 11.44 | 12.03 | | | | | | | |
| | C | 11.74 | 12.35 | | | | | | | |
| ZJ 13 | A | 12.11 | 12.75 | 5 | 35 | 5 | 110 | 0.5 | 0.2 | 10 |
| | B | 12.55 | 13.21 | | | | | | | |
| | C | 12.99 | 13.66 | | | | | | | |
| ZJ 15 | A | 13.44 | 14.13 | 5 | 40 | 5 | 110 | 0.5 | 0.2 | 11 |
| | B | 13.89 | 14.62 | | | | | | | |
| | C | 14.35 | 15.09 | | | | | | | |
| ZJ 16 | A | 14.80 | 15.57 | 5 | 40 | 5 | 150 | 0.5 | 0.2 | 12 |
| | B | 15.25 | 16.04 | | | | | | | |
| | C | 15.69 | 16.51 | | | | | | | |
| ZJ 18 | A | 16.22 | 17.06 | 5 | 45 | 5 | 150 | 0.5 | 0.2 | 13 |
| | B | 16.82 | 17.70 | | | | | | | |
| | C | 17.42 | 18.33 | | | | | | | |
| ZJ 20 | A | 18.20 | 18.96 | 5 | 55 | 5 | 200 | 0.5 | 0.2 | 15 |
| | B | 18.63 | 19.59 | | | | | | | |
| | C | 19.23 | 20.22 | | | | | | | |
| | D | 19.72 | 20.72 | | | | | | | |
| ZJ 22 | A | 20.15 | 21.20 | 5 | 30 | 5 | 200 | 0.5 | 0.2 | 17 |
| | B | 20.64 | 21.71 | | | | | | | |
| | C | 21.08 | 22.17 | | | | | | | |
| | D | 21.52 | 22.63 | | | | | | | |
| ZJ 24 | A | 22.05 | 23.18 | 5 | 35 | 5 | 200 | 0.5 | 0.2 | 19 |
| | B | 22.61 | 23.77 | | | | | | | |
| | C | 23.12 | 24.13 | | | | | | | |
| | D | 23.63 | 24.85 | | | | | | | |
| ZJ 27 | A | 24.26 | 25.52 | 5 | 45 | 5 | 250 | 0.5 | 0.2 | 21 |
| | B | 24.97 | 26.26 | | | | | | | |
| | C | 25.63 | 26.95 | | | | | | | |
| | D | 26.29 | 27.64 | | | | | | | |
| ZJ 30 | A | 26.99 | 28.39 | 5 | 55 | 5 | 250 | 0.5 | 0.2 | 23 |
| | B | 27.70 | 29.13 | | | | | | | |
| | C | 28.36 | 29.82 | | | | | | | |
| | D | 29.02 | 30.51 | | | | | | | |
| ZJ 33 | A | 29.68 | 31.22 | 5 | 65 | 5 | 250 | 0.5 | 0.2 | 25 |
| | B | 30.32 | 31.88 | | | | | | | |
| | C | 30.90 | 32.50 | | | | | | | |
| | D | 31.49 | 33.11 | | | | | | | |
| ZJ 36 | A | 32.14 | 33.79 | 5 | 75 | 5 | 250 | 0.5 | 0.2 | 27 |
| | B | 32.79 | 34.49 | | | | | | | |
| | C | 33.40 | 35.13 | | | | | | | |
| | D | 34.01 | 35.77 | | | | | | | |
| ZJ 39 | A | 34.68 | 36.47 | 5 | 85 | 5 | 250 | 0.5 | 0.2 | 30 |
| | B | 35.36 | 37.19 | | | | | | | |
| | C | 36.00 | 37.85 | | | | | | | |
| | D | 36.63 | 38.52 | | | | | | | |