

HZK-LL Series

Silicon Epitaxial Planar Zener Diodes for
Hard Knee Low Noise

REJ03G0020-0200Z
(Previous: ADE-208-128A)
Rev.2.00
May.14.2003

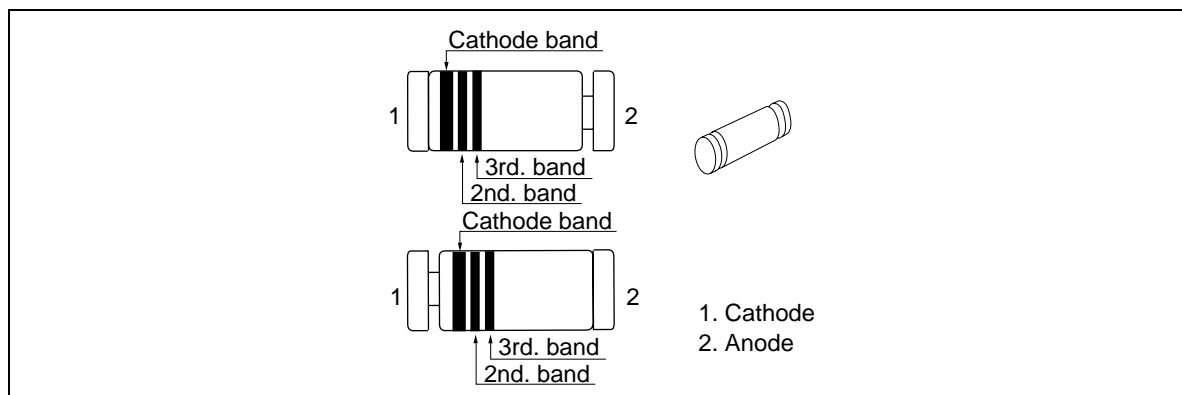
Features

- Low dynamic impedance and low noise in the low current region (approximately 1/10 lower than the current zeners).
- LLD package is suitable for high density surface mounting and high speed assembly.

Ordering Information

| Type No. | Mark | Package Code |
|---------------|------------|--------------|
| HZK-LL Series | Color Code | LLD |

Pin Arrangement



HZK-LL Series

Absolute Maximum Ratings

(Ta = 25°C)

| Item | Symbol | Value | Unit |
|----------------------|--------|-------------|------|
| Power dissipation | Pd * | 250 | mW |
| Junction temperature | Tj | 175 | °C |
| Storage temperature | Tstg | –55 to +175 | °C |

Note: With P.C. Board.

Electrical Characteristics

(Ta = 25°C)

| Type | Grade | V _z (V) *1 | | | I _R (nA) | | Z _{zT} (Ω) | | Z _{zK} *2 (kΩ) | | *3ΔV _{z1} (V) | *4ΔV _{z2} (V) |
|--------|-------|-----------------------|-----|---------------------|---------------------|--------------------|---------------------|----------------------|-------------------------|----------------------|------------------------|------------------------|
| | | Min | Max | I _z (mA) | Max | V _R (V) | Max | I _{zT} (mA) | Typ | I _{zK} (μA) | Max | Max |
| HZK2LL | A | 1.6 | 2.0 | 0.5 | 100 | 0.5 | 350 | 0.5 | (1.2) | 50 | 0.5 | 0.6 |
| | B | 1.9 | 2.3 | | | | | | | | | |
| | C | 2.2 | 2.6 | | | | | | | | | |
| HZK3LL | A | 2.5 | 2.9 | 0.5 | 100 | 1.0 | 360 | 0.5 | (1.2) | 50 | 0.5 | 0.6 |
| | B | 2.8 | 3.2 | | | | | | | | | |
| | C | 3.1 | 3.5 | | | | | | | | | |
| HZK4LL | A | 3.4 | 3.8 | 0.5 | 100 | 2.0 | 370 | 0.5 | (1.5) | 50 | 0.5 | 0.6 |
| | B | 3.7 | 4.1 | | | | | | | | | |
| | C | 4.0 | 4.4 | | | | | | | | | |
| HZK5LL | A | 4.3 | 4.7 | 0.5 | 100 | 3.0 | 380 | 0.5 | (1.5) | 50 | 0.5 | 0.6 |
| | B | 4.6 | 5.0 | | | | | | | | | |
| | C | 4.9 | 5.3 | | | | | | | | | |

Notes: 1. Tested with DC.

2. Reference only

3. $\Delta V_{z1} = V_z (I_z = 0.5 \text{ mA}) - V_{z1} (I_z = 0.05 \text{ mA})$

4. $\Delta V_{z2} = V_{z1} (I_z = 0.05 \text{ mA}) - V_{z2} (I_z = 0.001 \text{ mA})$

Type No. is as follows; HZK2ALL, HZK2BLL, ●●● HZK5CLL.

HZK-LL Series

Mark Color Code

| Type | Cathode Band | Second Band | Third Band |
|---------|--------------|--------------|------------|
| HZK2ALL | Verdure | Yellow Ocher | Pink |
| HZK2BLL | Verdure | Yellow Ocher | Blue |
| HZK2CLL | Verdure | Yellow Ocher | Light Blue |
| HZK3ALL | Verdure | Pink | Pink |
| HZK3BLL | Verdure | Pink | Blue |
| HZK3CLL | Verdure | Pink | Light Blue |
| HZK4ALL | Verdure | Orange | Pink |
| HZK4BLL | Verdure | Orange | Blue |
| HZK4CLL | Verdure | Orange | Light Blue |
| HZK5ALL | Verdure | Yellow | Pink |
| HZK5BLL | Verdure | Yellow | Blue |
| HZK5CLL | Verdure | Yellow | Light Blue |

Main Characteristic

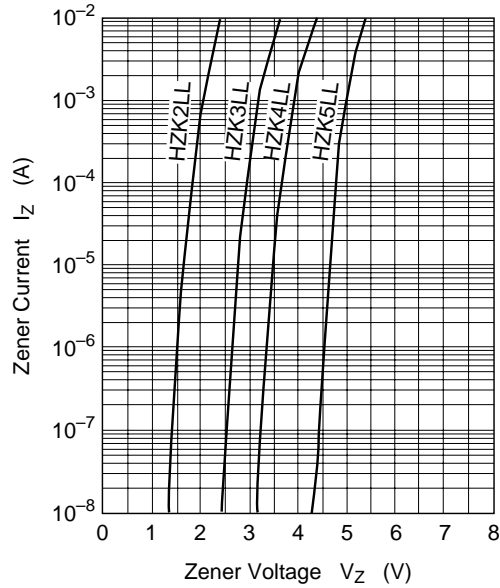


Fig.1 Zener current vs. Zener voltage

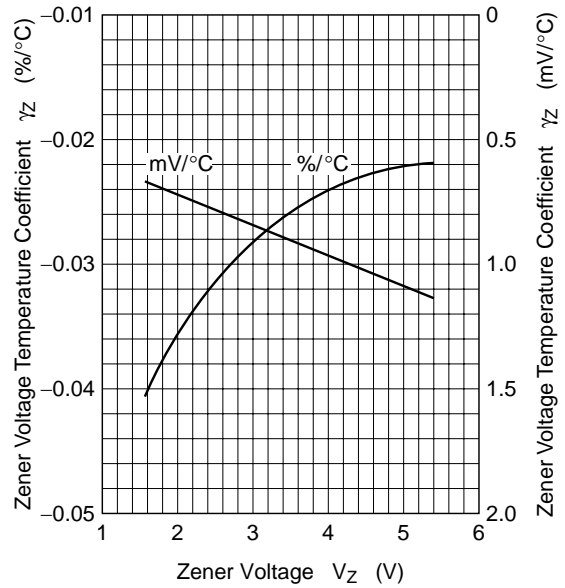


Fig.2 Temperature Coefficient vs. Zener voltage

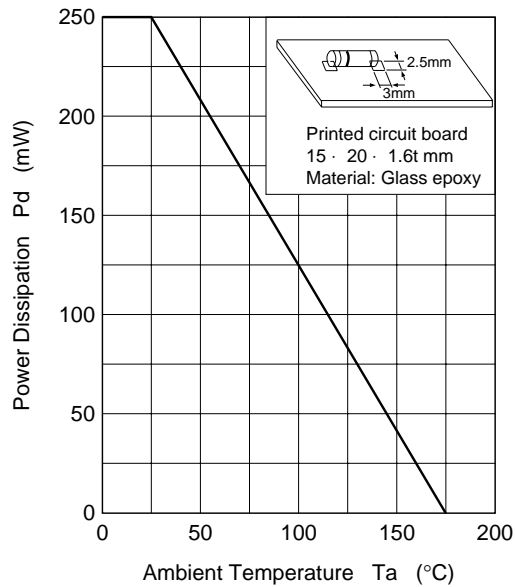
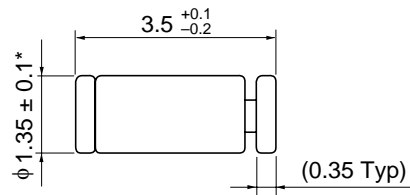


Fig.3 Power Dissipation vs. Ambient Temperature

Package Dimensions

As of January, 2003

Unit: mm



* HSK122: $\phi 1.4 \pm 0.1$ type

| | |
|------------------------|---------|
| Package Code | LLD |
| JEDEC | — |
| JEITA | — |
| Mass (reference value) | 0.027 g |

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