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# HZK-LL Series

Silicon Epitaxial Planar Zener Diodes for Hard Knee Low Noise

# HITACHI

ADE-208-128A (Z)

Rev. 1  
Jun. 1994

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## Features

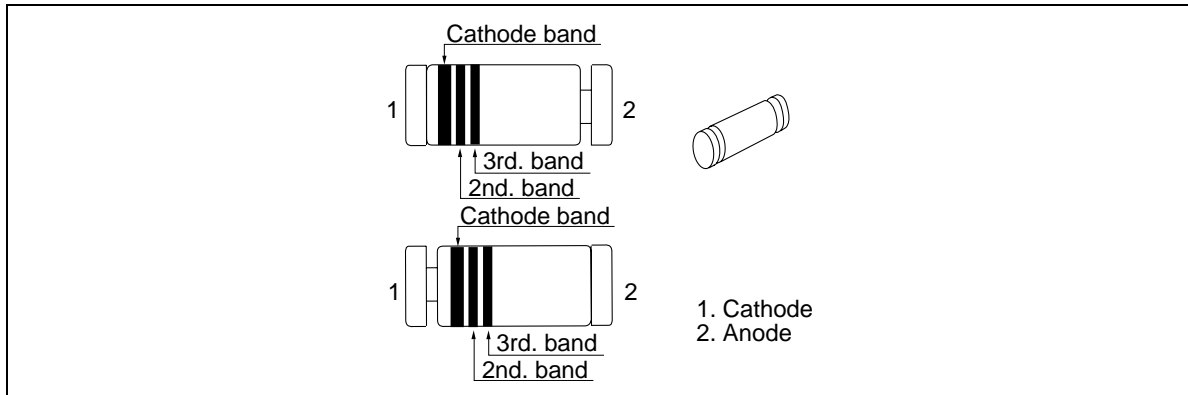
- Low dynamic impedance and low noise in the low current region (approximately 1/10 lower than the current zeners).
- LLD package is suitable for high density surface mounting and high speed assembly.

## Ordering Information

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

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## Outline



## 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

### Electrical Characteristics

(Ta = 25°C)

Type	Grade	V <sub>z</sub> (V) * <sup>1</sup>		I <sub>z</sub> (mA)	I <sub>R</sub> (nA)		Z <sub>ZT</sub> (Ω)		Z <sub>ZK</sub> * <sup>2</sup> (kΩ)		* <sup>3</sup> ΔV <sub>Z1</sub> (V)	* <sup>4</sup> ΔV <sub>Z2</sub> (V)
		Min	Max		Max	V <sub>R</sub> (V)	Max	I <sub>ZT</sub> (mA)	Typ	I <sub>ZK</sub> (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.

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

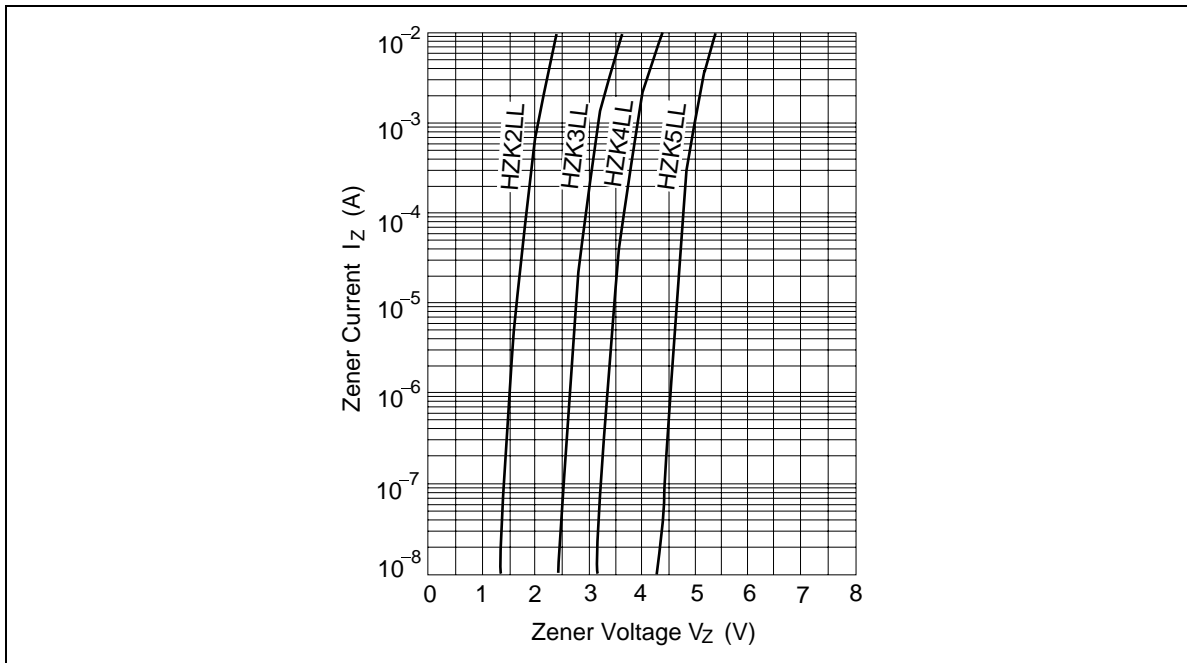
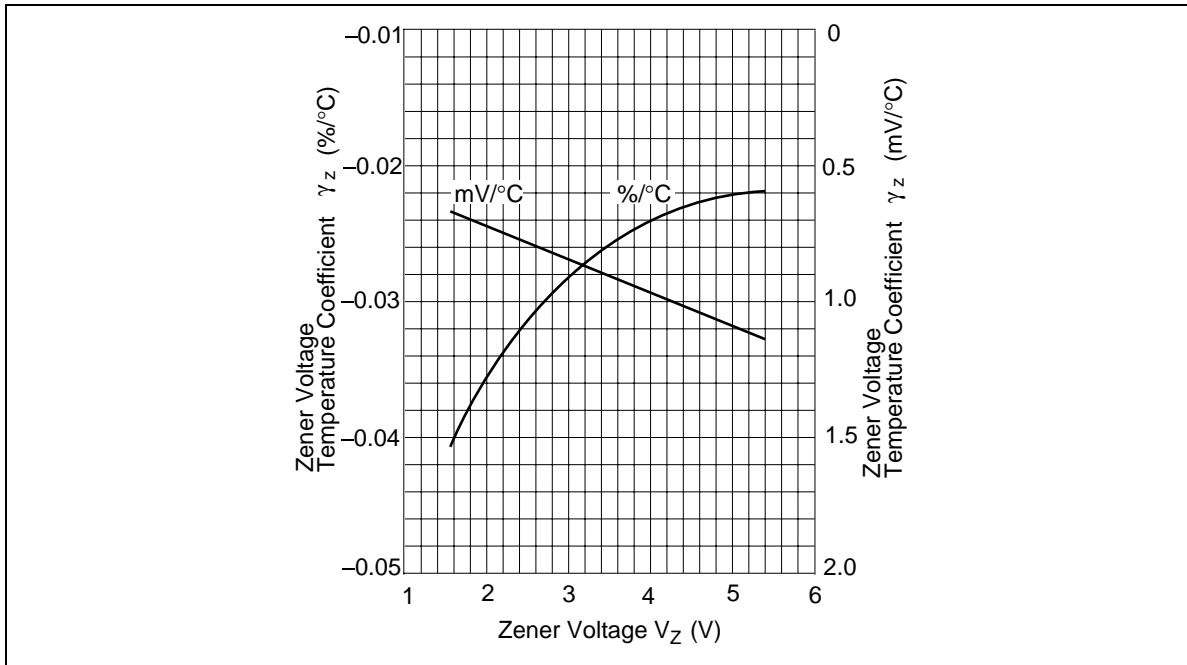
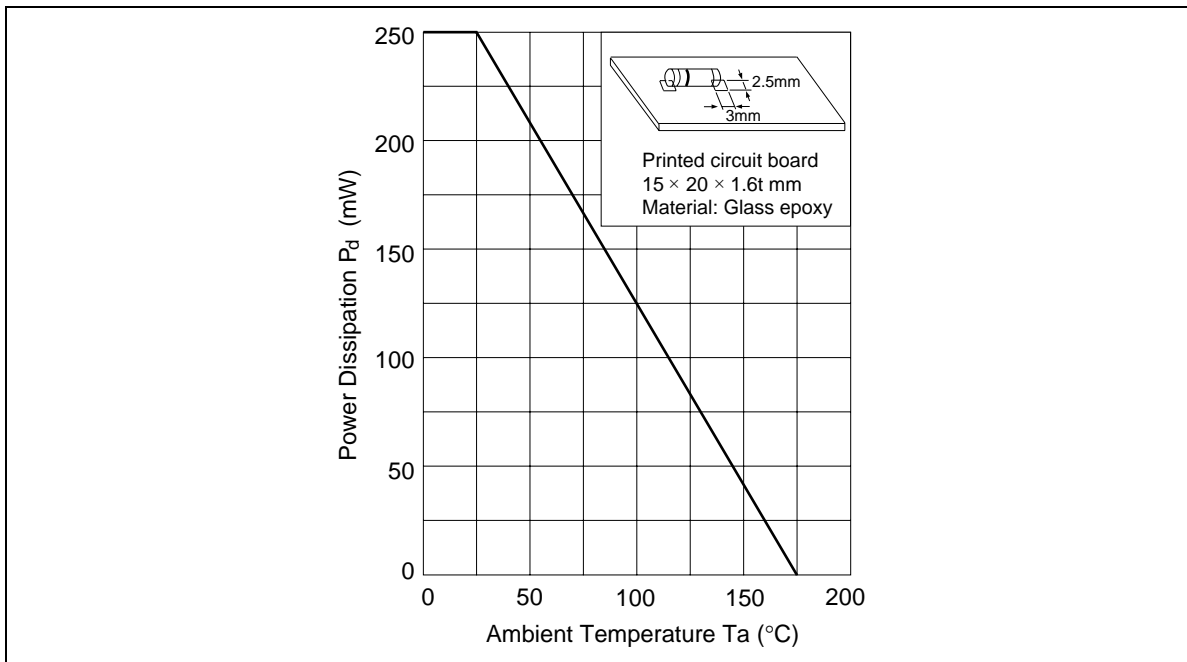


Fig.1 Zener current Vs. Zener voltage

## HZK-LL Series



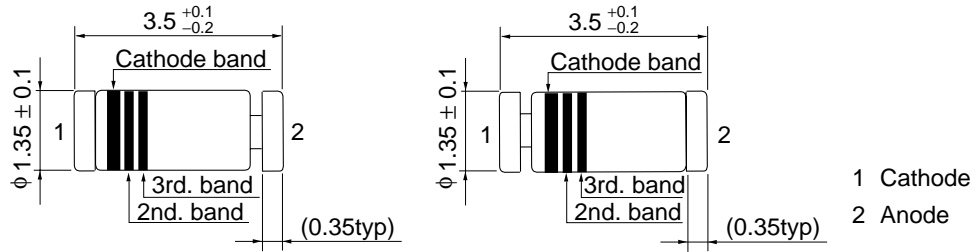
**Fig.2 Temperature Coefficient Vs. Zener voltage**



**Fig.3 Power Dissipation Vs. Ambient Temperature**

Package Dimensions

Unit: mm



( ) : Reference only

HITACHI Code	LLD
JEDEC Code	—
EIAJ Code	—
Weight (g)	0.027

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## HZK-LL Series

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