

# HZ-LL Series

## Silicon Epitaxial Planar Zener Diode for Hard Knee Low Noise

REJ03G0183-0200Z  
 (Previous: ADE-208-119A)  
 Rev.2.00  
 Mar.11.2004

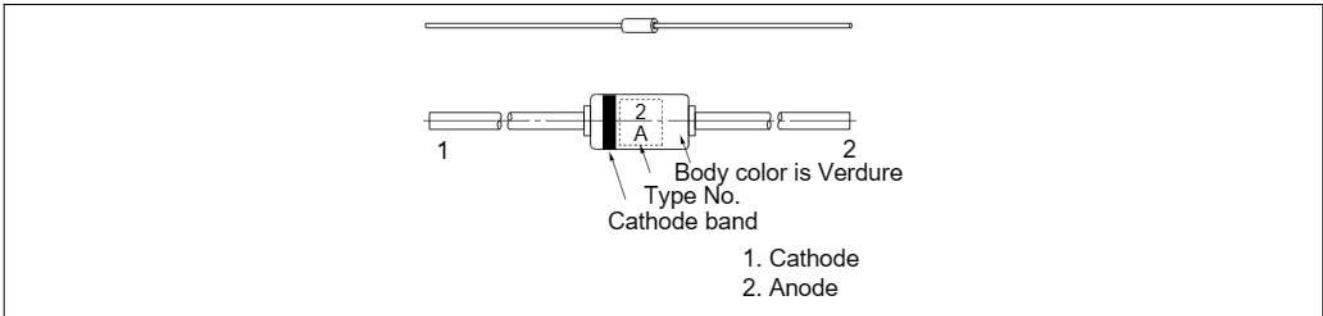
### Features

- $V_Z$ - $I_Z$  characteristics are semi logarithmic linear from  $I_Z = 1\text{nA}$  to  $1\text{mA}$  and have sharper breakdown knees in a low current region, and also lower  $V_Z$  temperature coefficients.
- Low dynamic impedance and low noise in the low current region (approximately 1/10 lower than the current zeners).

### Ordering Information

Type No.	Mark	Package Code
HZ-LL Series	Type No.	DO-35

### Pin Arrangement



**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> (kΩ) * <sup>2</sup>		ΔV <sub>Z1</sub> (V) * <sup>3</sup>		ΔV <sub>Z2</sub> (V) * <sup>3</sup>	
		Min	Max		Max	V <sub>R</sub> (V)	Max	I <sub>ZT</sub> (mA)	Typ	I <sub>ZK</sub> (μA)	Max	Max		
HZ2LL	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											
HZ3LL	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											
HZ4LL	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											
HZ5LL	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.  $\Delta V_{Z1} = V_Z (I_Z = 0.5 \text{ mA}) - V_{Z1} (I_Z = 0.05 \text{ mA})$        $\Delta V_{Z2} = V_{Z1} (I_Z = 0.05 \text{ mA}) - V_{Z2} (I_Z = 0.001 \text{ mA})$ 

4. Type No. is as follows; HZ2ALL, HZ2BLL, HZ5CCL.

Main Characteristic

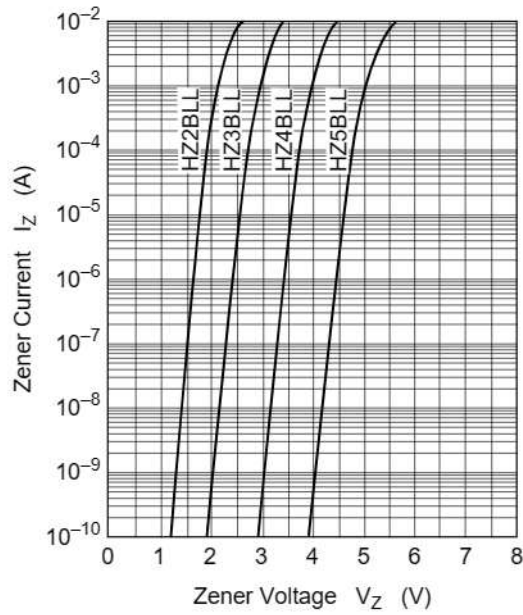


Fig.1 Zener current vs. Zener voltage

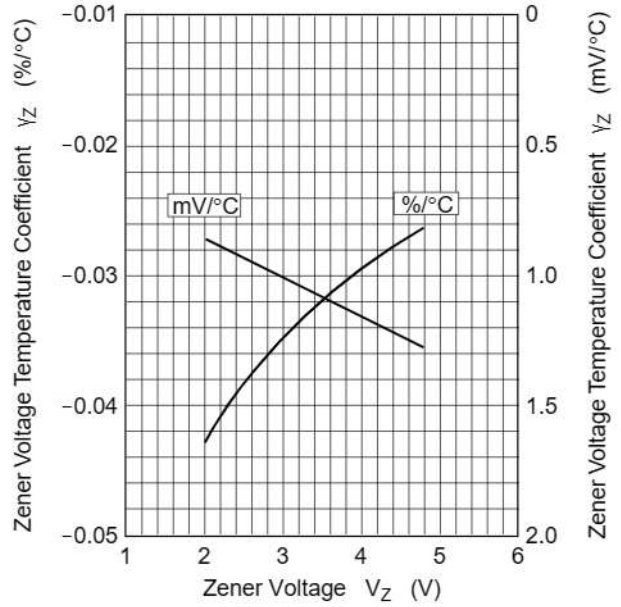


Fig.2 Temperature Coefficient vs. Zener voltage

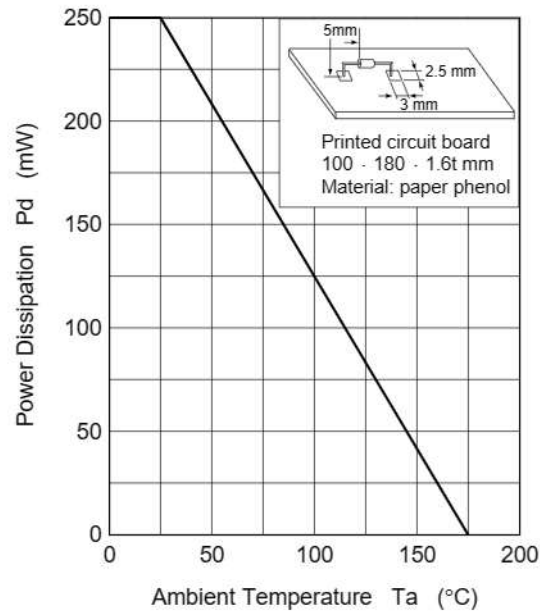
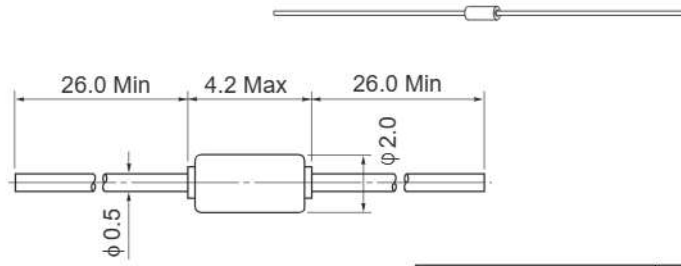


Fig.3 Power Dissipation vs. Ambient Temperature

Package Dimensions

As of January, 2003  
Unit: mm



Package Code	DO-35
JEDEC	Conforms
JEITA	Conforms
Mass (reference value)	0.13 g

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