

# **HZU-LL Series**

# Silicon Epitaxial Planar Zener Diode for Hard Knee Low Noise

REJ03G1216-0500 Rev.5.00 Oct 25, 2007

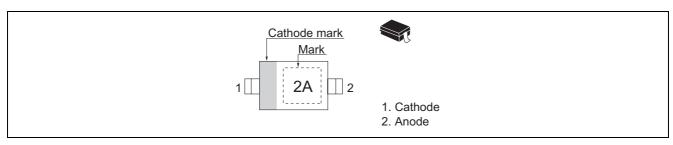
#### **Features**

- Low noise voltage (approximately 1/3 to 1/10 lower than the HZU series).
- Temperature coefficient is approximately 1/2 lower than the HZU series.
- Vz-Iz characteristics are semi-logarithmic linear from  $I_z = 1$  nA to 1 mA.
- Ultra small Resin Package (URP) is suitable for surface mount design.

### **Ordering Information Ordering Information**

Part No.	Laser Mark	Package Name	Package Code
HZU-LL Series	Let to Mark Code	URP	PTSP0002ZA-A

### **Pin Arrangement**



## **Absolute Maximum Ratings**

 $(Ta = 25^{\circ}C)$ 

tem	Symbol	Value	Unit
Power dissipation	Pd *	150	mW
Junction temperature	Tj	150	°C
Storage temperature	Tstg	−55 to +150	°C

Note: See Fig3.

#### **Electrical Characteristics**

 $(Ta = 25^{\circ}C)$ 

	Zener Voltage Reverse Curr		Current	Dynamic Resistance				Linearity				
		V <sub>z</sub> (V) * <sup>1</sup>		I <sub>R</sub> (nA)		<b>Z</b> <sub>ZT</sub> (Ω)		Z <sub>ZK</sub> (kΩ) * <sup>2</sup>		ΔV <sub>Z</sub> (V) * <sup>3</sup>		
Part No.	Min	Max	I <sub>z</sub> (mA)	Max	V <sub>R</sub> (V)	Max	I <sub>ZT</sub> (mA)	Тур	I <sub>zκ</sub> (μA)	Max		
HZU2ALL	1.6	2.0	0.5	100	0.5	350	0.5	(1.2)	50	0.5		
HZU2BLL	1.9	2.3										
HZU2CLL	2.2	2.6				ļ						
HZU3ALL	2.5	2.9	0.5	100	1.0	360	0.5	(1.2)	50	0.5		
HZU3BLL	2.8	3.2			]							
HZU3CLL	3.1	3.5										
HZU4ALL	3.4	3.8	0.5	100	2.0	370	0.5	(1.5)	50	0.5		
HZU4BLL	3.7	4.1										
HZU4CLL	4.0	4.4										
HZU5ALL	4.3	4.7	0.5	100	3.0	380	0.5	(1.5)	50	0.5		
HZU5BLL	4.6	5.0										
HZU5CLL	4.9	5.3										

Notes: 1. Tested with DC.

- 2. Reference only.
- 3.  $\Delta V_Z = V_Z (I_Z = 0.5 \text{ mA}) V_Z (I_Z = 0.05 \text{ mA})$
- 4. Type No. is as follows; HZU2ALL, HZU2BLL, ... HZU5CLL.

#### **Mark Code**

Part No	Mark No.
HZU2ALL	2A
HZU2BLL	2B
HZU2CLL	2C
HZU3ALL	3A
HZU3BLL	3B
HZU3CLL	3C

Part No	Mark No.
HZU4ALL	4A
HZU4BLL	4B
HZU4CLL	4C
HZU5ALL	5A
HZU5BLL	5B
HZU5CLL	5C

#### **Main Characteristic**

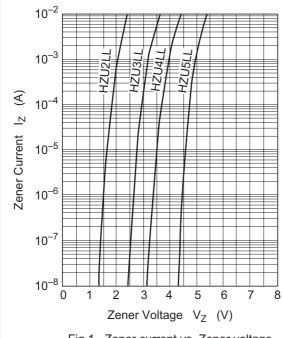


Fig.1 Zener current vs. Zener voltage

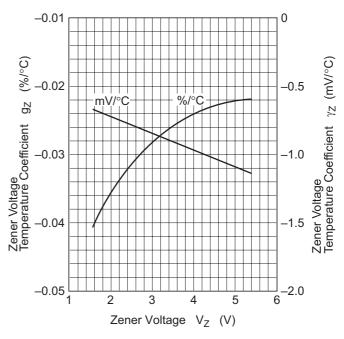


Fig.2 Temperature Coefficient vs. Zener voltage

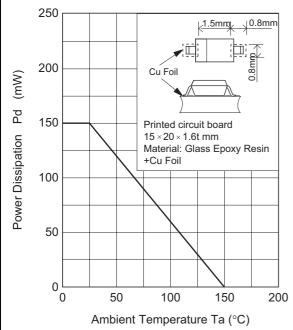
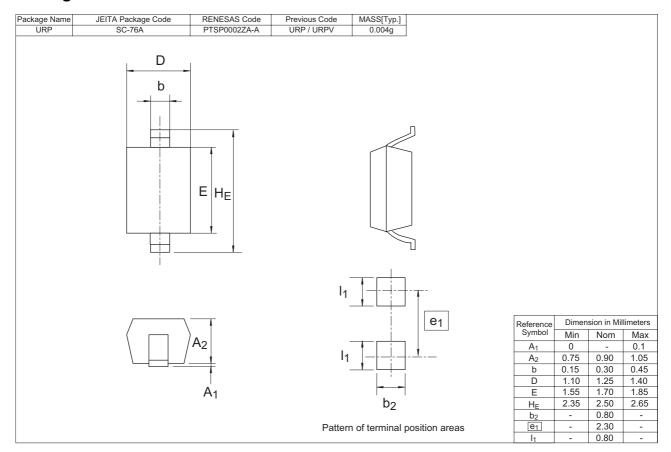


Fig.3 Power Dissipation vs. Ambient Temperature

## **Package Dimensions**



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