

# HZU-LL Series

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

REJ03G1216-0400  
(Previous: ADE-208-236C)  
Rev.4.00  
Jul 08, 2005

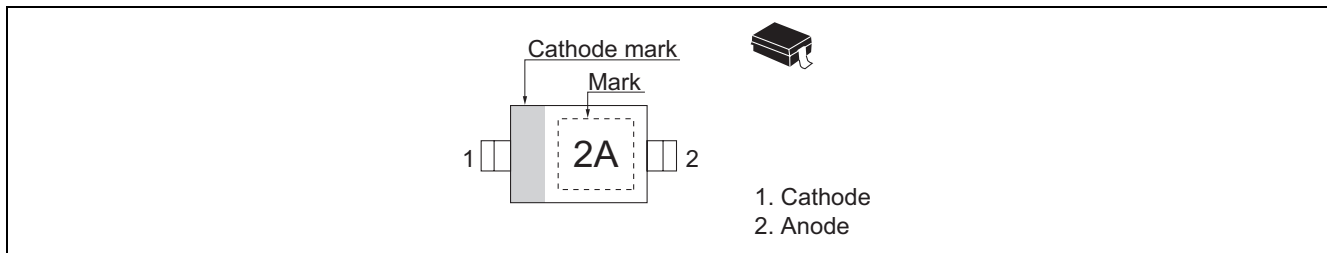
### Features

- 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.
- $V_z$ - $I_z$  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

Type No.	Laser Mark	Package Name	Package Code (Previous Code)
HZU-LL Series	Let to Mark Code	URP	PTSP0002ZA-A (URP)

### Pin Arrangement



## Absolute Maximum Ratings

(Ta = 25°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°C)

Type No.	Grade	Zener Voltage			Reverse Current		Dynamic Resistance				Linearity
		Vz(V) *1		Iz (mA)	IR (nA)		ZzT (Ω)		ZzK (kΩ) *2		ΔVz(V) *3
		Min	Max		Max	VR (V)	Max	IzT (mA)	Typ	IzK (μA)	Max
HZU2LL	A	1.6	2.0	0.5	100	0.5	350	0.5	(1.2)	50	0.5
	B	1.9	2.3								
	C	2.2	2.6								
HZU3LL	A	2.5	2.9	0.5	100	1.0	360	0.5	(1.2)	50	0.5
	B	2.8	3.2								
	C	3.1	3.5								
HZU4LL	A	3.4	3.8	0.5	100	2.0	370	0.5	(1.5)	50	0.5
	B	3.7	4.1								
	C	4.0	4.4								
HZU5LL	A	4.3	4.7	0.5	100	3.0	380	0.5	(1.5)	50	0.5
	B	4.6	5.0								
	C	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

Type	Grade	Mark No.
HZU2LL	A	2A
	B	2B
	C	2C
HZU3LL	A	3A
	B	3B
	C	3C
HZU4LL	A	4A
	B	4B
	C	4C
HZU4LL	A	5A
	B	5B
	C	5C

Main Characteristic

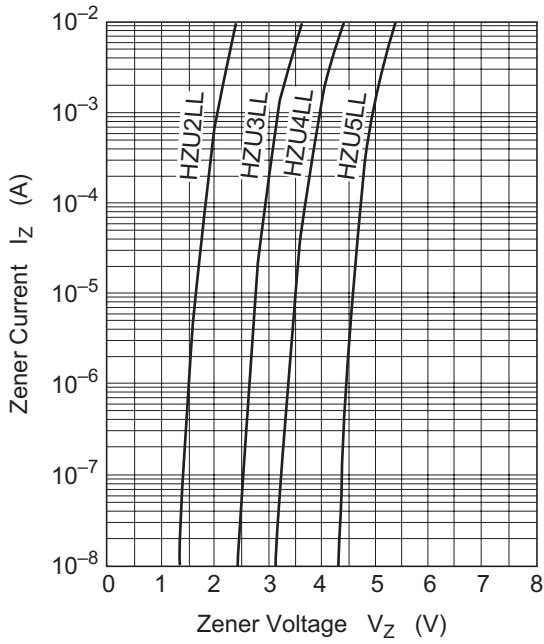


Fig.1 Zener current vs. Zener voltage

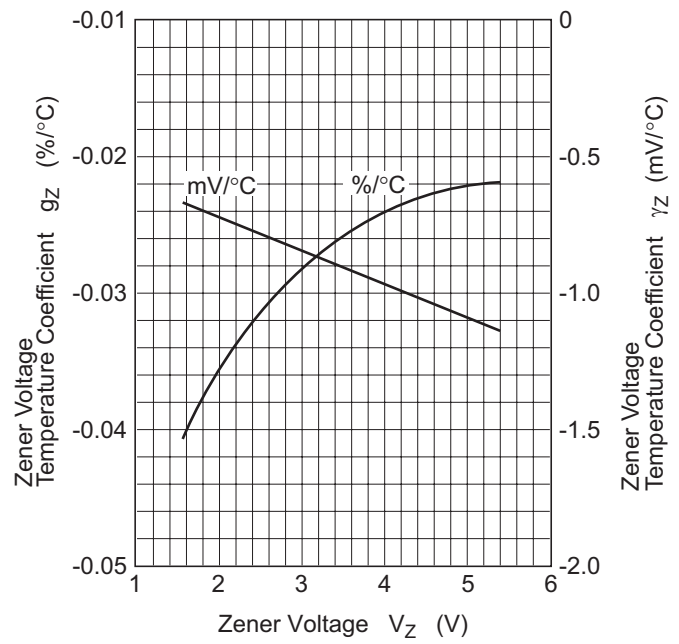


Fig.2 Temperature Coefficient vs. Zener voltage

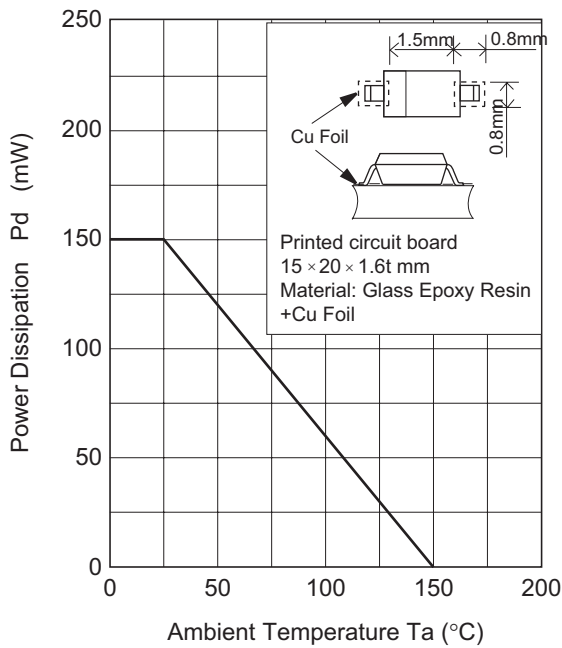
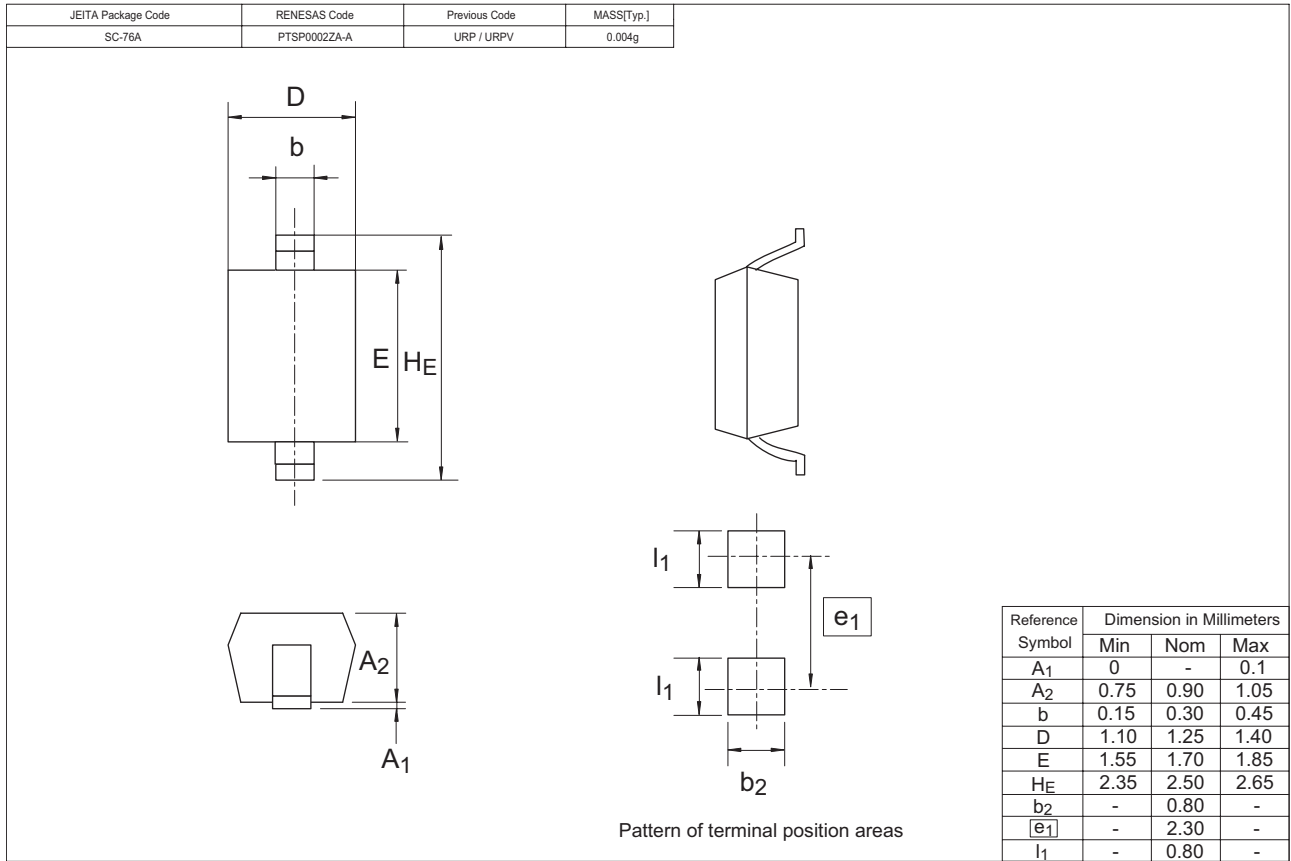


Fig.3 Power Dissipation vs. Ambient Temperature

Package Dimensions



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