

HZU-LL Series Silicon Epitaxial Planar Zener Diodes for Hard Knee Low Noise

HITACHI

Preliminary
Rev. 0
Dec 1993

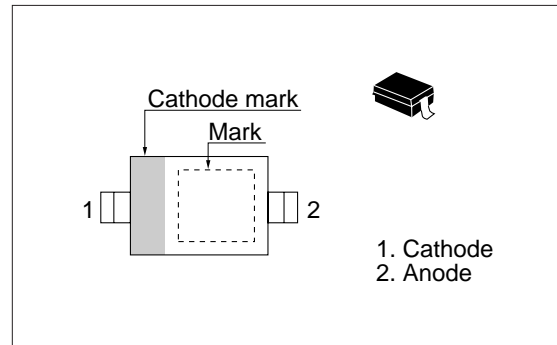
Features

- 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 $I_z=1\text{nA}$ to 1mA .
- Ultra small Resin Package(URP) is suitable for surface mount design.

Ordering Information

Type No.	Mark	Package Code
HZU-LL Series	Let to Mark Code	URP

Outline



Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Item	Symbol	Value	Unit
Power dissipation	P_d	150	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics ($T_a = 25^\circ\text{C}$)

Type	Grade	V_z (V)*		I_z (mA)	I_R (nA)		Z_{ZT} (Ω)		Z_{ZK}^{**} (k Ω)		$^{***}\Delta V_z$ (V)
		Min	Max		Max	V_R (V)	Max	I_{ZT} (mA)	Typ	I_{ZK} (μA)	
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								

* Tested with DC.

HZU-LL Series

Type	Grade	V _Z (V)		I _Z (mA)	I _R (nA)		Z _{ZT} (Ω)		Z _{ZK} ** (kΩ)		***ΔV _Z (V)
		Min	Max		Max	V _R (V)	Max	I _{ZT} (mA)	Typ	I _{ZK} (μA)	Max
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								

* Tested with DC.

**Reference only

***ΔV_Z=V_Z(I_Z=0.5mA)-V_Z(I_Z=0.05mA)

Note: Type No. is as follows; HZU2ALL, HZU2BLL,•••HZU5CCL.

Mark Code

Type	Grade	Mark No.	Type	Grade	Mark No.
HZU2LL	A	2A	HZU4LL	A	4A
	B	2B		B	4B
	C	2C		C	4C
HZU3LL	A	3A	HZU5LL	A	5A
	B	3B		B	5B
	C	3C		C	5C

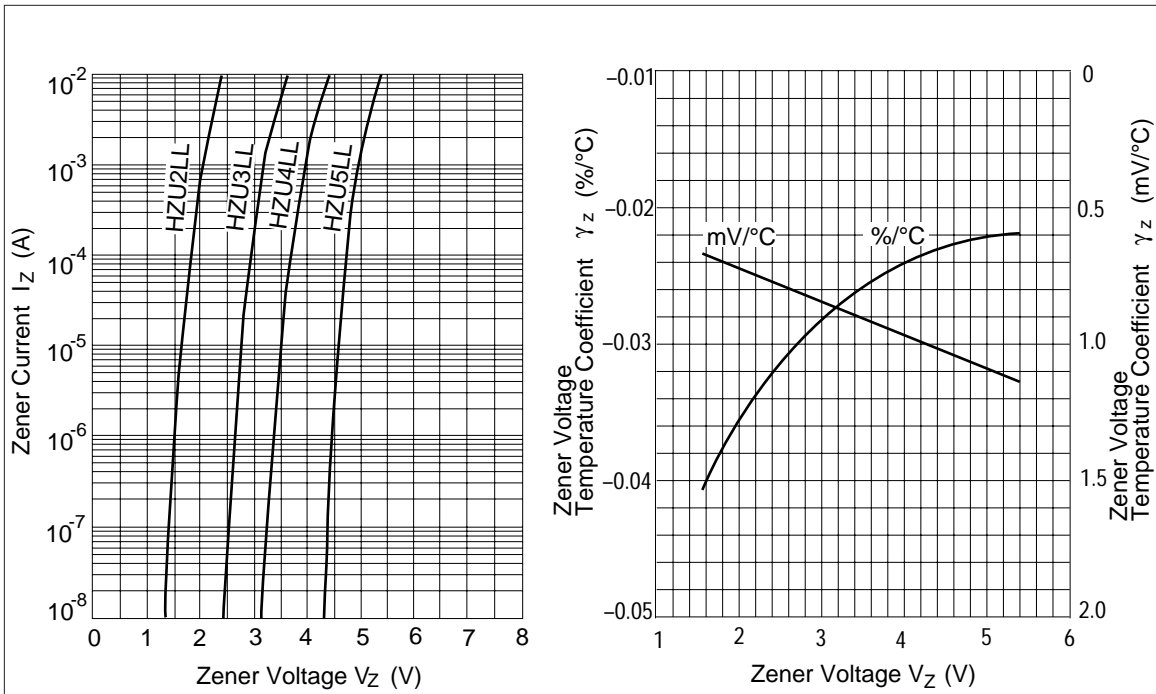


Fig.1 Zener current Vs. Zener voltage

Fig.2 Temperature Coefficient Vs. Zener voltage

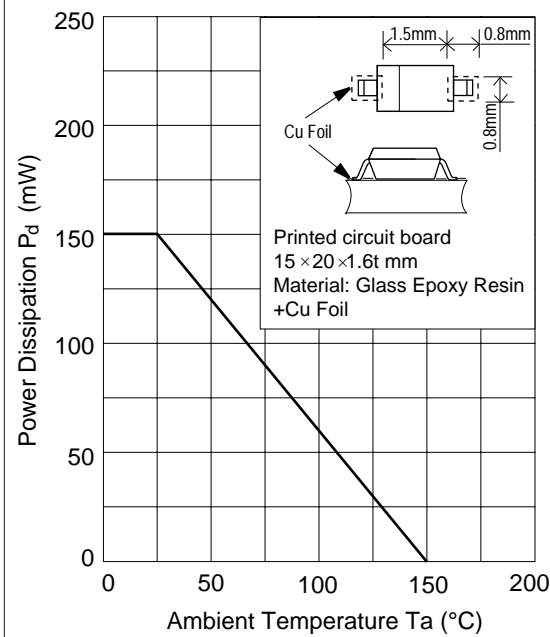


Fig.3 Power Dissipation Vs. Ambient Temperature

HZU-LL Series

Package Dimensions

Unit: mm

