HZU-LL Series

Silicon Epitaxial Planar Zener Diode for Hard Knee Low Noise

REJ03G1216-0500
Rev.5.00
Oct 25, 2007

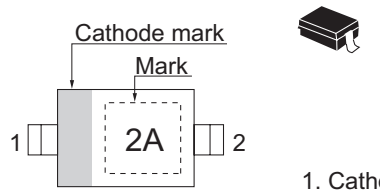
Features

- 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



1. Cathode
2. Anode

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)

Part No.	Zener Voltage			Reverse Current		Dynamic Resistance				Linearity
	V_Z(V) *1			I_R (nA)		Z_{ZT} (Ω)		Z_{ZK} (kΩ) *2		ΔV_Z(V) *3
	Min	Max	I_Z (mA)	Max	V_R (V)	Max	I_{ZT} (mA)	Typ	I_{ZK} (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								
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 mA) – V_Z (I_z = 0.05 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

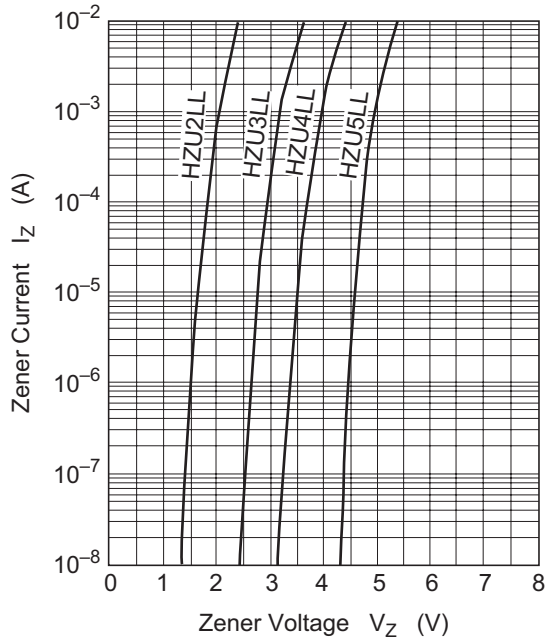


Fig.1 Zener current vs. Zener voltage

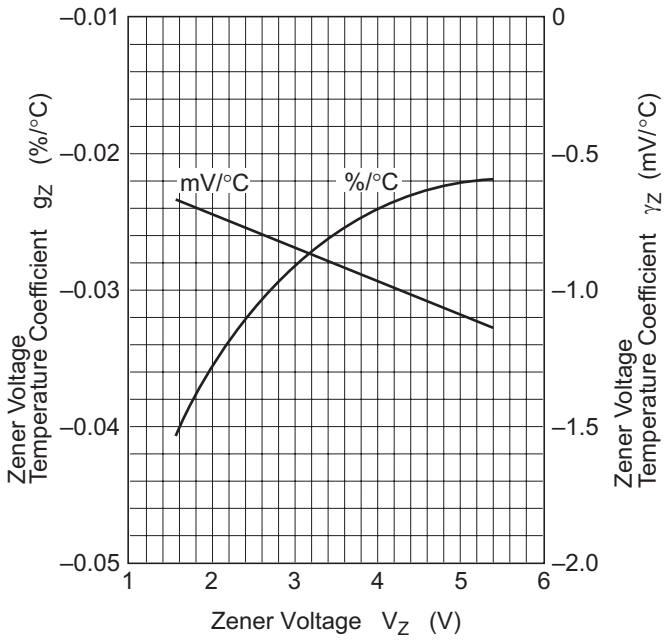


Fig.2 Temperature Coefficient vs. Zener voltage

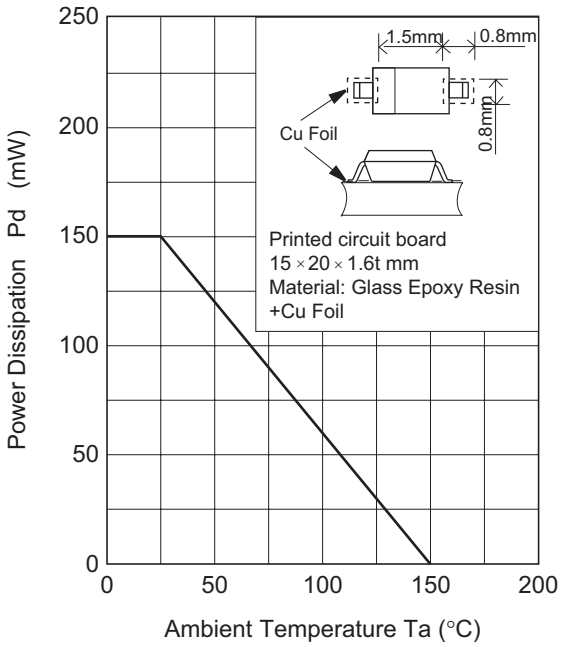
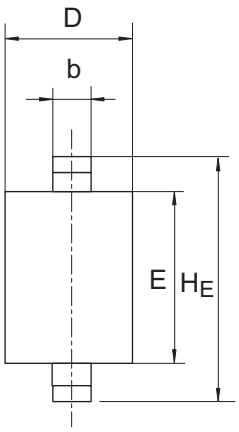
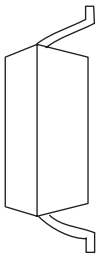


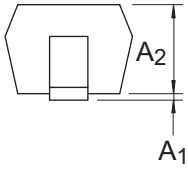
Fig.3 Power Dissipation vs. Ambient Temperature

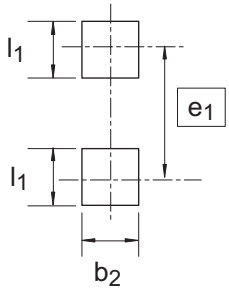
Package Dimensions

Package Name	JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
URP	SC-76A	PTSP0002ZA-A	URP / URPV	0.004g









Pattern of terminal position areas

Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
A_1	0	-	0.1
A_2	0.75	0.90	1.05
b	0.15	0.30	0.45
D	1.10	1.25	1.40
E	1.55	1.70	1.85
H_E	2.35	2.50	2.65
b_2	-	0.80	-
e_1	-	2.30	-
l_1	-	0.80	-

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