

HZU Series Silicon Epitaxial Planar Zener Diode for Stabilizer

HITACHI

Rev. 3
Aug. 1995

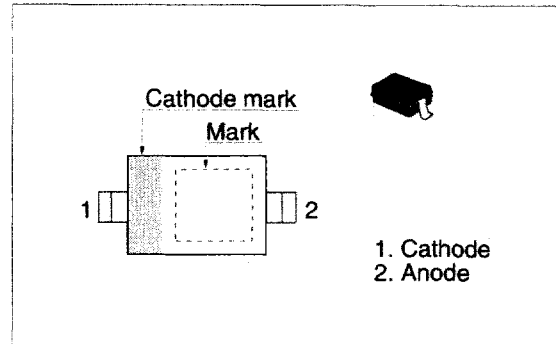
Features

- Ultra small Resin Package (URP) is suitable for surface mount design.
- These diodes are delivered taped.

Ordering Information

Type No.	Laser Mark	Package Code
HZU Series	Let to Mark Code	URP

Outline



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

Item	Symbol	Value	Unit
Power dissipation	P_d *	200	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

* With P.C. Board.

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

Type	Grade	Zener Voltage			Reverse Current		Dynamic Resistance	
		V_Z (V)		Test Condition	I_R (μA)	Test Condition	r_d (Ω)	Test Condition
		Min	Max	I_Z (mA)	Max	V_R (V)	Max	I_Z (mA)
HZU2.0	B	1.90	2.20	5	120	0.5	100	5
HZU2.2	B	2.10	2.40	5	120	0.7	100	5
HZU2.4	B	2.30	2.60	5	120	1.0	100	5
HZU2.7	B1	2.50	2.75	5	120	1.0	110	5
	B2	2.65	2.90					

* Tested with pulse ($P_W=40\text{ms}$)

HZU Series

Type	Grade	Zener Voltage		Test Condition I_Z (mA)	Reverse Current		Dynamic Resistance	
		V_Z (V) Min	Max		I_R (μ A) Max	Test Condition V_R (V)	r_d (Ω) Max	Test Condition I_Z (mA)
HZU3.0	B1	2.80	3.05	5	50	1.0	120	5
	B2	2.95	3.20					
HZU3.3	B1	3.10	3.35	5	20	1.0	130	5
	B2	3.25	3.50					
HZU3.6	B1	3.40	3.65	5	10	1.0	130	5
	B2	3.55	3.80					
HZU3.9	B1	3.70	3.97	5	10	1.0	130	5
	B2	3.87	4.10					
HZU4.3	B1	4.01	4.21	5	10	1.0	130	5
	B2	4.15	4.34					
	B3	4.28	4.48					
HZU4.7	B1	4.42	4.61	5	10	1.0	130	5
	B2	4.55	4.75					
	B3	4.69	4.90					
HZU5.1	B1	4.84	5.04	5	5	1.5	130	5
	B2	4.98	5.20					
	B3	5.14	5.37					
HZU5.6	B1	5.31	5.55	5	5	2.5	80	5
	B2	5.49	5.73					
	B3	5.67	5.92					
HZU6.2	B1	5.86	6.12	5	2	3.0	50	5
	B2	6.06	6.33					
	B3	6.26	6.53					
HZU6.8	B1	6.47	6.73	5	2	3.5	30	5
	B2	6.65	6.93					
	B3	6.86	7.14					
HZU7.5	B1	7.06	7.36	5	2	4.0	30	5
	B2	7.28	7.60					
	B3	7.52	7.84					
HZU8.2	B1	7.76	8.10	5	2	5.0	30	5
	B2	8.02	8.36					
	B3	8.28	8.64					

* Tested with pulse ($P_W = 40\text{ms}$)

HZU Series

Type	Grade	Zener Voltage		Test Condition I_Z (mA)	Reverse Current		Dynamic Resistance	
		V_Z (V)			I_R (μ A)	Test Condition V_R (V)	r_d (Ω)	Test Condition I_Z (mA)
		Min	Max		Max		Max	
HZU9.1	B1	8.56	8.93	5	2	6.0	30	5
	B2	8.85	9.23					
	B3	9.15	9.55					
HZU10	B1	9.45	9.87	5	2	7.0	30	5
	B2	9.77	10.21					
	B3	10.11	10.55					
HZU11	B1	10.44	10.88	5	2	8.0	30	5
	B2	10.76	11.22					
	B3	11.10	11.56					
HZU12	B1	11.42	11.90	5	2	9.0	35	5
	B2	11.74	12.24					
	B3	12.08	12.60					
HZU13	B1	12.47	13.03	5	2	10.0	35	5
	B2	12.91	13.49					
	B3	13.37	13.96					
HZU15	B1	13.84	14.46	5	2	11.0	40	5
	B2	14.34	14.98					
	B3	14.85	15.52					
HZU16	B1	15.37	16.01	5	2	12.0	40	5
	B2	15.85	16.51					
	B3	16.35	17.09					
HZU18	B1	16.94	17.70	5	2	13.0	45	5
	B2	17.56	18.35					
	B3	18.21	19.03					
HZU20	B1	18.86	19.70	5	2	15.0	50	5
	B2	19.52	20.39					
	B3	20.21	21.08					
HZU22	B1	20.88	21.77	5	2	17.0	55	5
	B2	21.54	22.47					
	B3	22.23	23.17					
HZU24	B1	22.93	23.96	5	2	19.0	60	5
	B2	23.72	24.78					
	B3	24.54	25.57					

* Tested with pulse ($P_W = 40\text{ms}$)

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Type	Grade	Zener Voltage			Reverse Current		Dynamic Resistance	
		V_Z (V)		Test Condition	I_R (μ A)	Test Condition	r_d (Ω)	Test Condition
		Min	Max	I_Z (mA)	Max	V_R (V)	Max	I_Z (mA)
HZU27	B	25.10	28.90	2	2	21.0	70	2
HZU30	B	28.00	32.00	2	2	23.0	80	2
HZU33	B	31.00	35.00	2	2	25.0	80	2
HZU36	B	34.00	38.00	2	2	27.0	90	2

* Tested with pulse ($P_W = 40\text{ms}$)

HZU Series

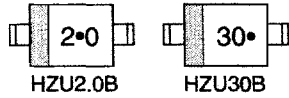
MARK CODE

Type	Grade	MARK No.	Type	Grade	MARK No.	Type	Grade	MARK No.
HZU2.0	B	2•0	HZU7.5	B1	7°5	HZU20	B1	20°
HZU2.2	B	2•2		B2	7•5		B2	20•
HZU2.4	B	2•4		B3	7.5		B3	20.
HZU2.7	B1	2°7	HZU8.2	B1	8°2	HZU22	B1	22°
	B2	2•7		B2	8•2		B2	22•
HZU3.0	B1	3°0		B3	8.2		B3	22.
	B2	3•0	HZU9.1	B1	9°1	HZU24	B1	24°
HZU3.3	B1	3°3		B2	9•1		B2	24•
	B2	3•3		B3	9.1		B3	24.
HZU3.6	B1	3°6	HZU10	B1	10°	HZU27	B	27•
	B2	3•6		B2	10•	HZU30	B	30•
HZU3.9	B1	3°9		B3	10.	HZU33	B	33•
	B2	3•9	HZU11	B1	11°	HZU36	B	36•
HZU4.3	B1	4°3		B2	11•			
	B2	4•3		B3	11.			
	B3	4.3	HZU12	B1	12°			
HZU4.7	B1	4°7		B2	12•			
	B2	4•7		B3	12.			
	B3	4.7	HZU13	B1	13°			
HZU5.1	B1	5°1		B2	13•			
	B2	5•1		B3	13.			
	B3	5.1	HZU15	B1	15°			
HZU5.6	B1	5°6		B2	15•			
	B2	5•6		B3	15.			
	B3	5.6	HZU16	B1	16°			
HZU6.2	B1	6°2		B2	16•			
	B2	6•2		B3	16.			
	B3	6.2	HZU18	B1	18°			
HZU6.8	B1	6°8		B2	18•			
	B2	6•8		B3	18.			
	B3	6.8						

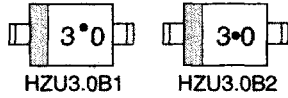
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Example of Marking

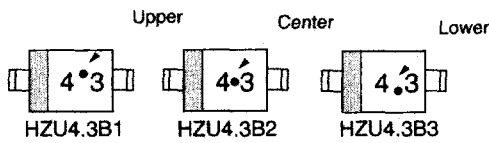
(1) One grade type (grade type B)



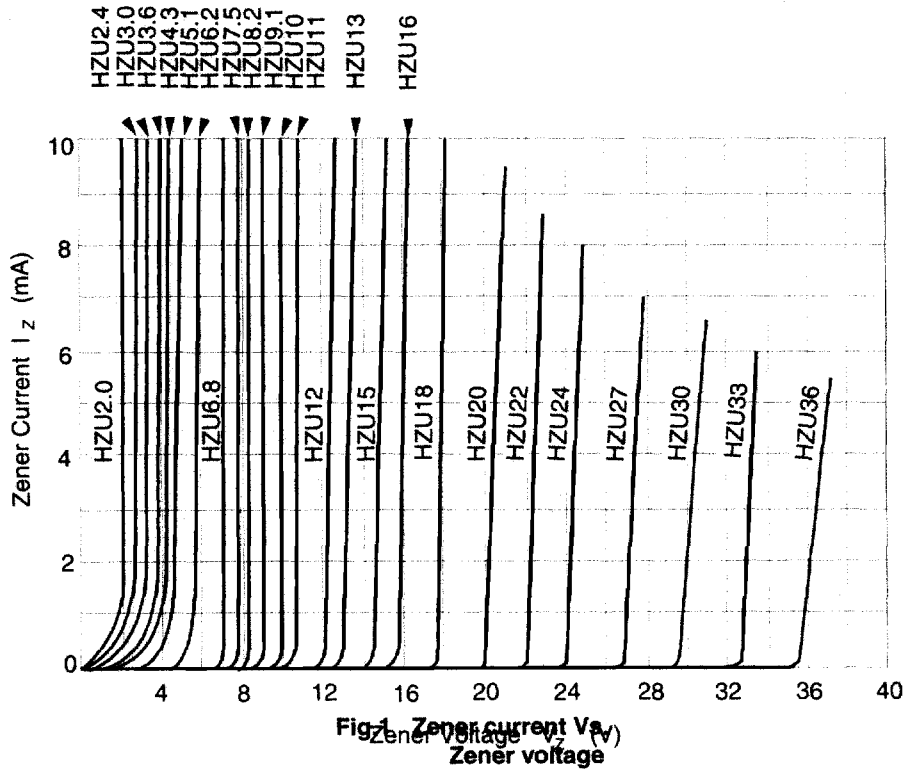
(2) Two grade type (B1, B2)

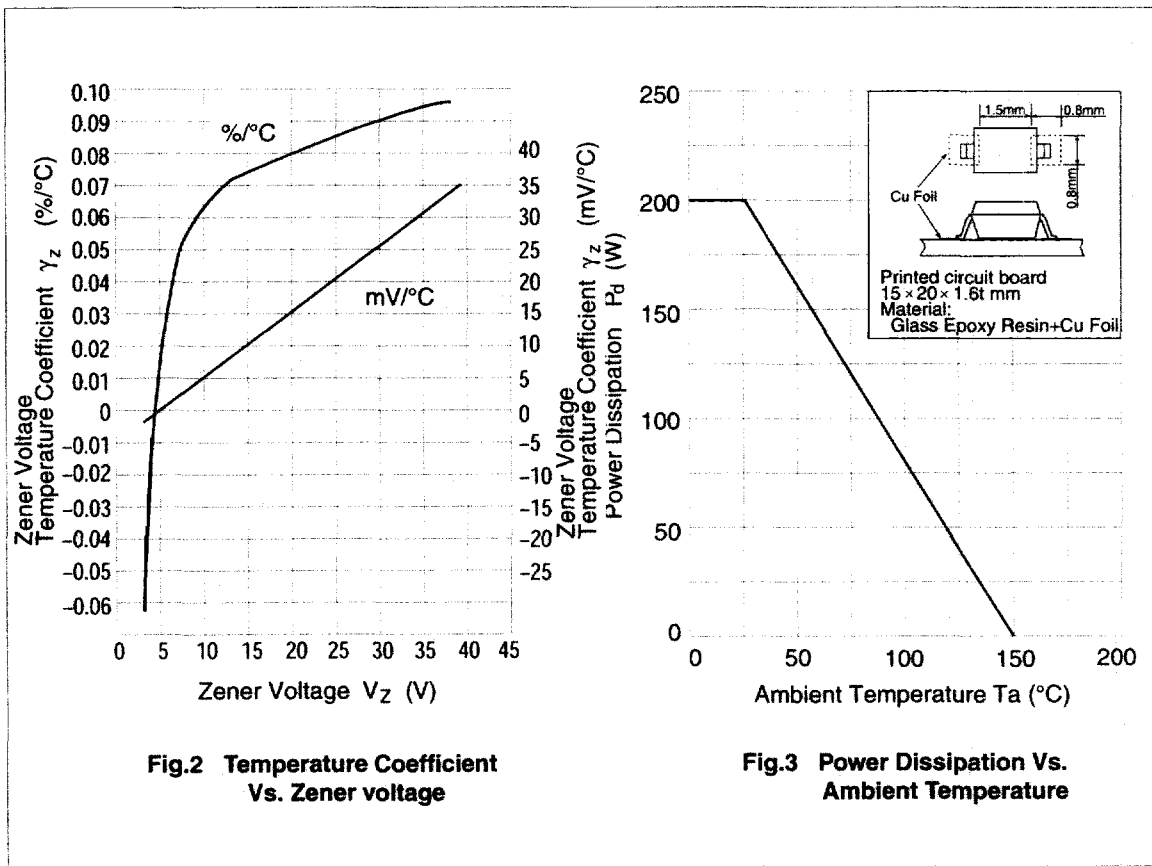


(3) Three grade type (B1, B2, B3)



Notes: 1. Ordering P/N HZU series are delivered taped (TLF/TRF).
 Choose one taping code and adhere to parts No.
 Example: HZU2.0BTLF(or TRF), HZU2.2BTLF(or TRF), HZU36BTLF(or TRF). (Grade B type)
 HZU2.7B1TLF(or TRF), HZU2.7B2TLF(or TRF)••HZU24B3TLF(or TRF). (Grade B1, B2, B3 type)





Package Dimensions

Unit: mm

