
HZ-L Series

Silicon Epitaxial Planar Zener Diode for Low Noise Application

HITACHI

ADE-208-118A(Z)

Rev 1

November 1996

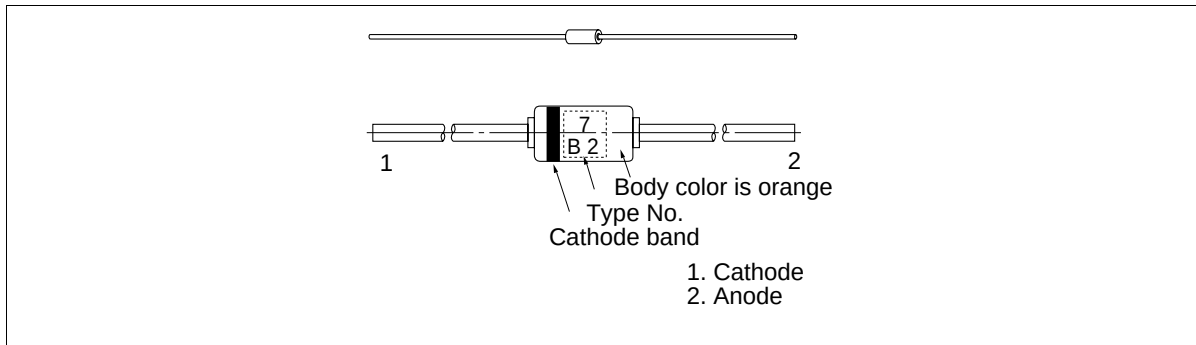
Features

- Diode noise level of this series is approximately 1/3-1/10 lower than the HZ series.
- Low leakage, low zener impedance and maximum power dissipation of 400 mW are ideally suited for stabilized power supply, etc.
- Wide spectrum from 5.2V through 38V of zener voltage provide flexible application.

Ordering Information

Type No.	Mark	Package Code
HZ-L Series	Type No.	DO-35

Outline



HZ-L Series

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Value	Unit
Power dissipation	Pd	400	mW
Junction temperature	Tj	175	°C
Storage temperature	Tstg	-55 to +175	°C

Electrical Characteristics (Ta = 25°C)

		Zener Voltage		Reverse Current			Dynamic Resistance	
		VZ (V)*1		Test Condition	IR (μA)	Test Condition	rd (Ω)	Test Condition
Type	Grade	Min	Max	IZ (mA)	Max	VR (V)	Max	IZ (mA)
HZ6L	A1	5.2	5.5	0.5	1	2.0	150	0.5
	A2	5.3	5.6					
	A3	5.4	5.7					
	B1	5.5	5.8				80	0.5
	B2	5.6	5.9					
	B3	5.7	6.0					
	C1	5.8	6.1				60	0.5
	C2	6.0	6.3					
	C3	6.1	6.4					
HZ7L	A1	6.3	6.6	0.5	1	3.5	60	0.5
	A2	6.4	6.7					
	A3	6.6	6.9					
	B1	6.7	7.0					
	B2	6.9	7.2					
	B3	7.0	7.3					
	C1	7.2	7.6					
	C2	7.3	7.7					
	C3	7.5	7.9					
HZ9L	A1	7.7	8.1	0.5	1	6.0	60	0.5
	A2	7.9	8.3					
	A3	8.1	8.5					

Note: 1. Tested with DC.

HZ-L Series

		Zener Voltage		Reverse Current		Dynamic Resistance		
		VZ (V)*1		Test Condition	IR (μA)	Test Condition	rd (Ω)	Test Condition
Type	Grade	Min	Max	IZ (mA)	Max	VR (V)	Max	IZ (mA)
HZ9L	B1	8.3	8.7	0.5	1	6.0	60	0.5
	B2	8.5	8.9					
	B3	8.7	9.1					
	C1	8.9	9.3					
	C2	9.1	9.5					
	C3	9.3	9.7					
HZ11L	A1	9.5	9.9	0.5	1	8.0	80	0.5
	A2	9.7	10.1					
	A3	9.9	10.3					
	B1	10.2	10.6					
	B2	10.4	10.8					
	B3	10.7	11.1					
	C1	10.9	11.3					
	C2	11.1	11.6					
	C3	11.4	11.9					
HZ12L	A1	11.6	12.1	0.5	1	10.5	80	0.5
	A2	11.9	12.4					
	A3	12.2	12.7					
	B1	12.4	12.9					
	B2	12.6	13.1					
	B3	12.9	13.4					
	C1	13.2	13.7					
	C2	13.5	14.0					
	C3	13.8	14.3					
HZ15L	1	14.1	14.7	0.5	1	13.0	80	0.5
	2	14.5	15.1					
	3	14.9	15.5					
HZ16L	1	15.3	15.9	0.5	1	14.0	80	0.5
	2	15.7	16.5					
	3	16.3	17.1					

Note: 1. Tested with DC.

HZ-L Series

Type	Grade	Zener Voltage		Reverse Current		Dynamic Resistance	
		VZ (V)*1		Test Condition	IR (μA)	Test Condition	rd (Ω)
		Min	Max	IZ (mA)	Max	VR (V)	Max
HZ18L	1	16.9	17.7	0.5	1	15.0	80
	2	17.5	18.3				
	3	18.1	19.0				
HZ20L	1	18.8	19.7	0.5	1	18.0	100
	2	19.5	20.4				
	3	20.2	21.1				
HZ22L	1	20.9	21.9	0.5	1	20.0	100
	2	21.6	22.6				
	3	22.3	23.3				
HZ24L	1	22.9	24.0	0.5	1	22.0	120
	2	23.6	24.7				
	3	24.3	25.5				
HZ27L	1	25.2	26.6	0.5	1	24.0	150
	2	26.2	27.6				
	3	27.2	28.6				
HZ30L	1	28.2	29.6	0.5	1	27.0	200
	2	29.2	30.6				
	3	30.2	31.6				
HZ33L	1	31.2	32.6	0.5	1	30.0	250
	2	32.2	33.6				
	3	33.2	34.6				
HZ36L	1	34.2	35.7	0.5	1	33.0	300
	2	35.3	36.8				
	3	36.4	38.0				

Note: 1. Tested with DC.

Note: 2. Type No. is as follows; HZ6A1L, HZ6A2L, HZ36-3L

Main Characteristic

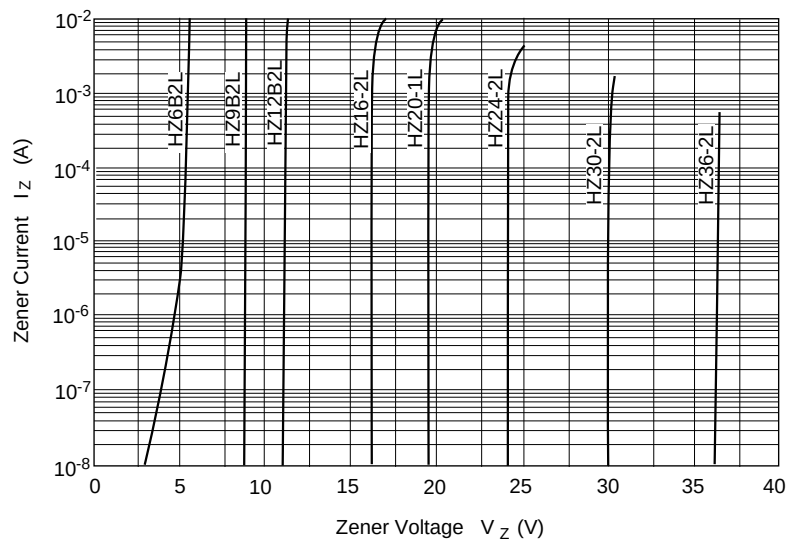


Fig.1 Zener current Vs. Zener voltage

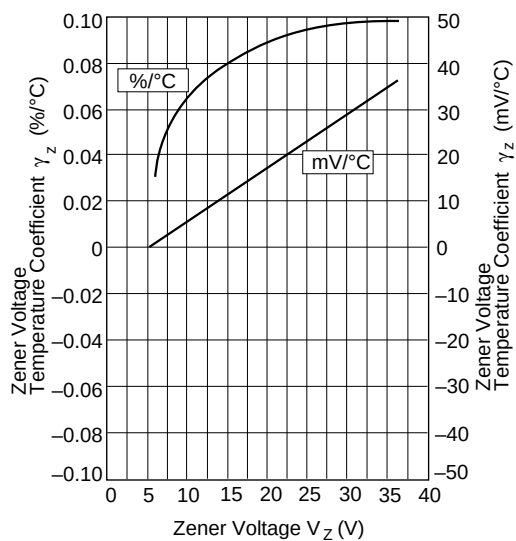


Fig.2 Temperature Coefficient Vs. Zener voltage

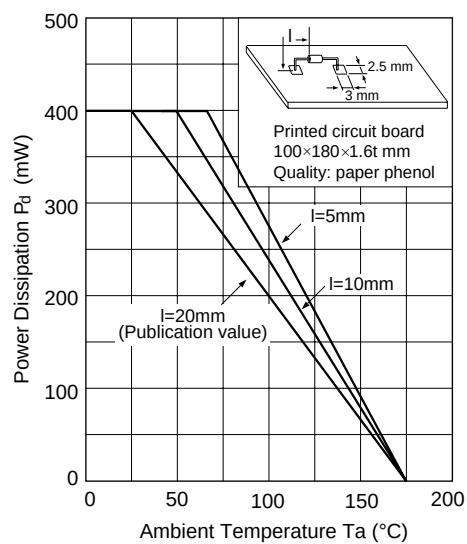


Fig.3 Power Dissipation Vs. Ambient Temperature

HZ-L Series

Package Dimensions

Unit : mm

