
HZS-L Series

Silicon Epitaxial Planar Zener Diode for Low Noise Application

HITACHI

ADE-208-121A(Z)
Rev 1

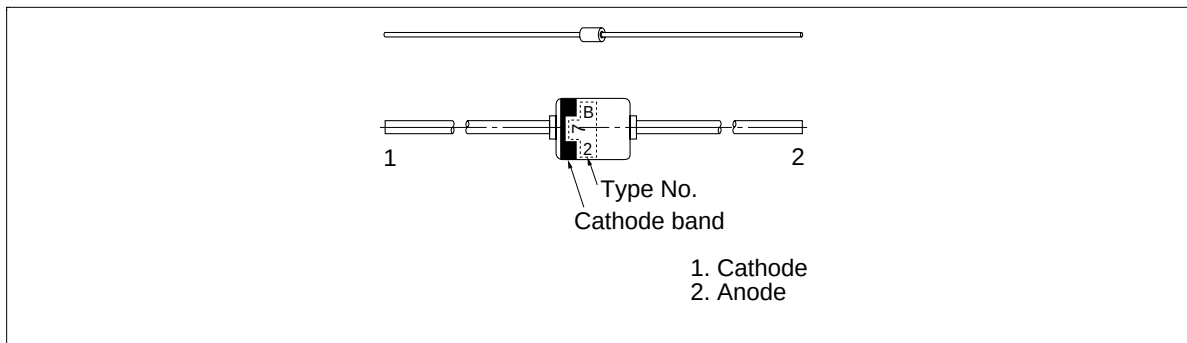
Features

- 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.
- Suitable for 5mm-pitch high speed automatic insertion.

Ordering Information

Type No.	Mark	Package Code
HZS-L Series	Type No.	MHD

Outline



HZS-L Series

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Value	Unit
Power dissipation	Pd	400	mW
Junction temperature	Tj	200	°C
Storage temperature	Tstg	−55 to +175	°C

Electrical Characteristics (Ta = 25°C)

		Zener Voltage		Reverse Current		Dynamic Resistance		
		V _z (V)* ¹		Test Condition	I _R (μA)	Test Condition	r _d (Ω)	Test Condition
Type	Grade	Min	Max	I _z (mA)	Max	V _R (V)	Max	I _z (mA)
HVS6L	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					
HVS7L	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					
HVS9L	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.

HZS-L Series

		Zener Voltage		Reverse Current		Dynamic Resistance		
		V_z (V)*1		Test Condition	I_R (μA)	Test Condition	r_d (Ω)	Test Condition
Type	Grade	Min	Max	I_z (mA)	Max	V_R (V)	Max	I_z (mA)
HZS9L	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					
HZS11L	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					
HZS12L	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					
HZS15L	1	14.1	14.7	0.5	1	13.0	80	0.5
	2	14.5	15.1					
	3	14.9	15.5					
HZS16L	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.

HZS-L Series

		Zener Voltage		Reverse Current		Dynamic Resistance		
		V _z (V)* ¹		Test Condition	I _R (μA)	Test Condition	r _d (Ω)	Test Condition
Type	Grade	Min	Max	I _z (mA)	Max	V _R (V)	Max	I _z (mA)
HZS18L	1	16.9	17.7	0.5	1	15.0	80	0.5
	2	17.5	18.3					
	3	18.1	19.0					
HZS20L	1	18.8	19.7	0.5	1	18.0	100	0.5
	2	19.5	20.4					
	3	20.2	21.1					
HZS22L	1	20.9	21.9	0.5	1	20.0	100	0.5
	2	21.6	22.6					
	3	22.3	23.3					
HZS24L	1	22.9	24.0	0.5	1	22.0	120	0.5
	2	23.6	24.7					
	3	24.3	25.5					
HZS27L	1	25.2	26.6	0.5	1	24.0	150	0.5
	2	26.2	27.6					
	3	27.2	28.6					
HZS30L	1	28.2	29.6	0.5	1	27.0	200	0.5
	2	29.2	30.6					
	3	30.2	31.6					
HZS33L	1	31.2	32.6	0.5	1	30.0	250	0.5
	2	32.2	33.6					
	3	33.2	34.6					
HZS36L	1	34.2	35.7	0.5	1	33.0	300	0.5
	2	35.3	36.8					
	3	36.4	38.0					

Notes: 1. Tested with DC.

2. Type No. is as follows; HZS6A1L, HZS6A2L, HZS36-3L

Main Characteristic

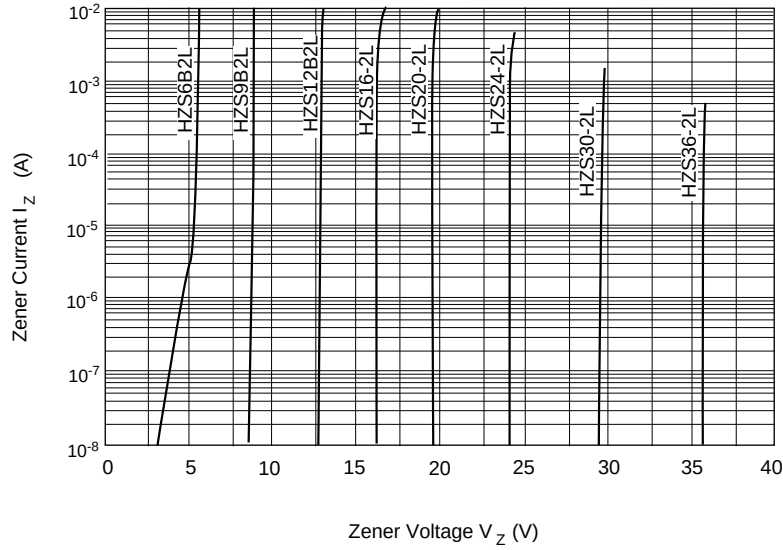


Fig.1 Zener current Vs. Zener voltage

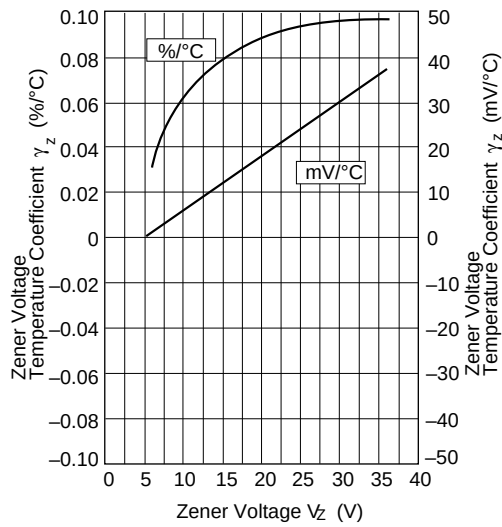


Fig.2 Temperature Coefficient Vs. Zener voltage

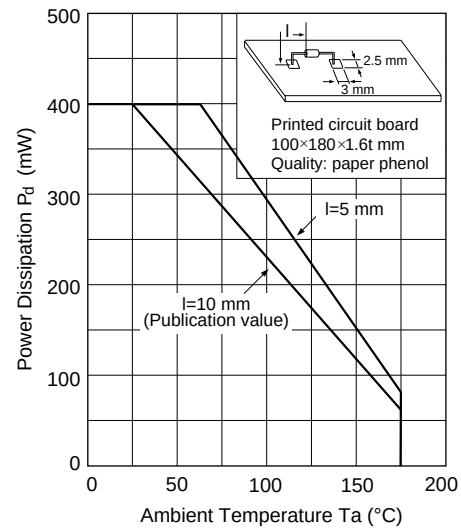


Fig.3 Power Dissipation Vs. Ambient Temperature

HZS-L Series

Package Dimensions

Unit : mm

