

# HZ-L Series

## Silicon Epitaxial Planar Zener Diodes for Low Noise Application

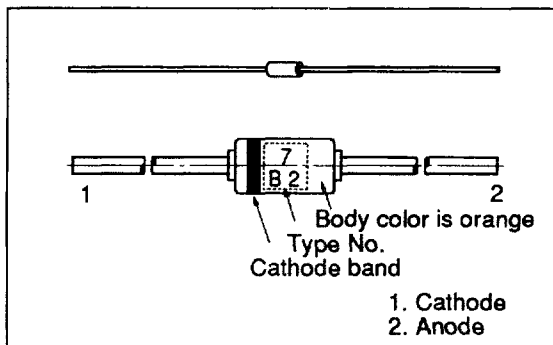
### Features

- 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



### Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Value	Unit
Power dissipation	$P_d$	400	mW
Junction temperature	$T_j$	175	°C
Storage temperature	$T_{stg}$	-55 to +175	°C

### Electrical Characteristics (Ta = 25°C)

Type	Grade	Zener Voltage		Test Condition $I_Z$ (mA)	Reverse Current		Dynamic Resistance	
		$V_Z$ (V) *			$I_R$ (μA)	Test Condition $V_R$ (V)	$r_d$ (Ω)	Test Condition $I_Z$ (mA)
		Min	Max		Max		Max	
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					

\* Tested with DC.

## HZ-L Series

Type	Grade	Zener Voltage		Test Condition $I_Z$ (mA)	Reverse Current		Dynamic Resistance	
		$V_Z$ (V) *			$I_R$ ( $\mu$ A)	Test Condition	$r_d$ ( $\Omega$ )	Test Condition
		Min	Max		Max	$V_R$ (V)	Max	$I_Z$ (mA)
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					
	B1	8.3	8.7					
	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					

\* Tested with DC.

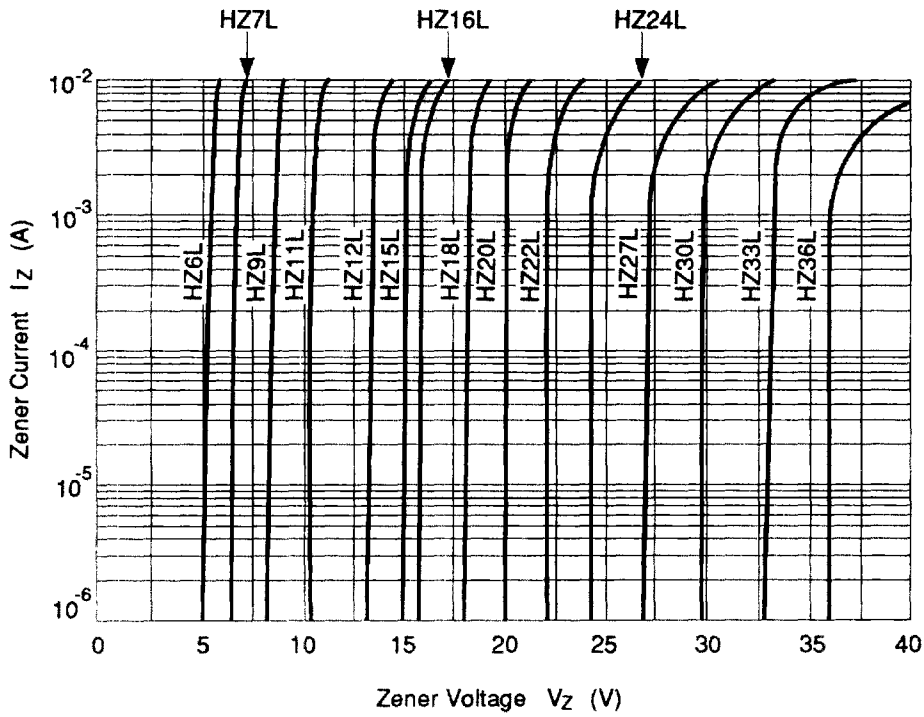
## HZ-L Series

Type	Grade	Zener Voltage		Test Condition $I_Z$ (mA)	Reverse Current		Dynamic Resistance	
		$V_Z$ (V)*			$I_R$ ( $\mu$ A)	Test Condition	$r_d$ ( $\Omega$ )	Test Condition
		Min	Max	Max	$V_R$ (V)	Max	$I_Z$ (mA)	
HZ12L	C1	13.2	13.7	0.5	1	10.5	80	0.5
	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					
HZ18L	1	16.9	17.7	0.5	1	15.0	80	0.5
	2	17.5	18.3					
	3	18.1	19.0					
HZ20L	1	18.8	19.7	0.5	1	18.0	100	0.5
	2	19.5	20.4					
	3	20.2	21.1					
HZ22L	1	20.9	21.9	0.5	1	20.0	100	0.5
	2	21.6	22.6					
	3	22.3	23.3					
HZ24L	1	22.9	24.0	0.5	1	22.0	120	0.5
	2	23.6	24.7					
	3	24.3	25.5					
HZ27L	1	25.2	26.6	0.5	1	24.0	150	0.5
	2	26.2	27.6					
	3	27.2	28.6					
HZ30L	1	28.2	29.6	0.5	1	27.0	200	0.5
	2	29.2	30.6					
	3	30.2	31.6					
HZ33L	1	31.2	32.6	0.5	1	30.0	250	0.5
	2	32.2	33.6					
	3	33.2	34.6					
HZ36L	1	34.2	35.7	0.5	1	33.0	300	0.5
	2	35.3	36.8					
	3	36.4	38.0					

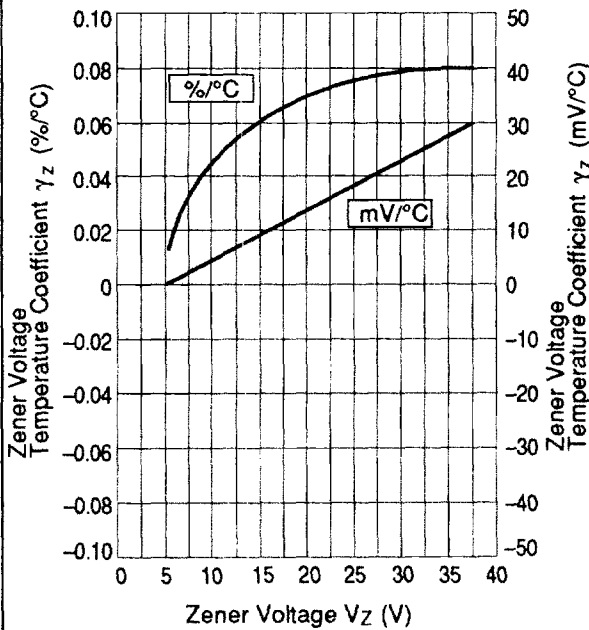
\* Tested with DC.

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

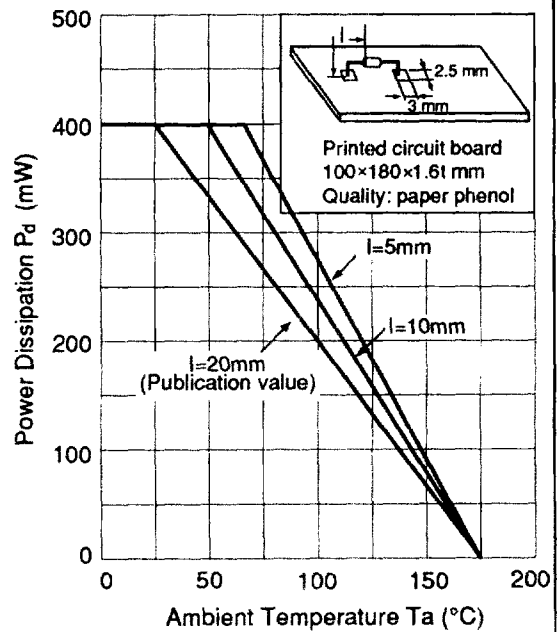
# HZ-L Series



**Fig.1 Zener current Vs. Zener voltage**



**Fig.2 Temperature Coefficient Vs. Zener voltage**



**Fig.3 Power Dissipation Vs. Ambient Temperature**