

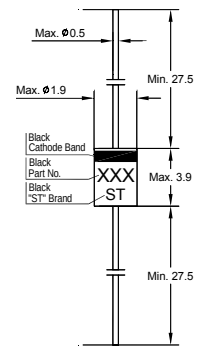
HZ...L Series

SILICON EPITAXIAL PLANER 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 5.2 V through 38 V of zener voltage provide flexible application.



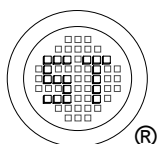
Glass Case DO-35
Dimensions in mm

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

Parameter	Symbol	Value	Unit
Power Dissipation	P_d	400	mW
Junction Temperature	T_j	175	$^\circ\text{C}$
Storage Temperature Range	T_s	- 55 to + 175	$^\circ\text{C}$

Characteristics at $T_a = 25^\circ\text{C}$

Type	Zener Voltage			Maximum Reverse Current		Maximum Dynamic Resistance	
	$V_Z (V)^{1)}$			I_R		r_d	
	Min.	Max.	$I_Z (mA)$	(μA)	$V_R (V)$	(Ω)	$I_Z (mA)$
HZ6LA1	5.2	5.5	0.5	1	2	150	0.5
HZ6LA2	5.3	5.6					
HZ6LA3	5.4	5.7					
HZ6LB1	5.5	5.8				80	0.5
HZ6LB2	5.6	5.9					
HZ6LB3	5.7	6					
HZ6LC1	5.8	6.1	0.5	1	3.5	60	0.5
HZ6LC2	6	6.3					
HZ6LC3	6.1	6.4					
HZ7LA1	6.3	6.6	0.5	1	6	60	0.5
HZ7LA2	6.4	6.7					
HZ7LA3	6.6	6.9					
HZ7LB1	6.7	7					
HZ7LB2	6.9	7.2					
HZ7LB3	7	7.3					
HZ7LC1	7.2	7.6	0.5	1	6	60	0.5
HZ7LC2	7.3	7.7					
HZ7LC3	7.5	7.9					
HZ9LA1	7.7	8.1	0.5	1	6	60	0.5
HZ9LA2	7.9	8.3					
HZ9LA3	8.1	8.5					
HZ9LB1	8.3	8.7					
HZ9LB2	8.5	8.9					
HZ9LB3	8.7	9.1					
HZ9LC1	8.9	9.3					
HZ9LC2	9.1	9.5					
HZ9LC3	9.3	9.7					



SEMTECH ELECTRONICS LTD.

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949:2002
Certificate No. 05103



ISO 14001:2004
Certificate No. 7116



ISO 9001:2000
Certificate No. 0506098

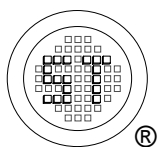
Dated : 22/06/2007

HZ...L Series

Characteristics at $T_a = 25\text{ }^{\circ}\text{C}$

Type	Zener Voltage			Maximum Reverse Current		Maximum Dynamic Resistance	
	$V_Z\text{ (V)}^{1)}$			I_R		r_d	
	Min.	Max.	$I_Z\text{ (mA)}$	(μA)	$V_R\text{ (V)}$	(Ω)	$I_Z\text{ (mA)}$
HZ11LA1	9.5	9.9	0.5	1	8	80	0.5
HZ11LA2	9.7	10.1					
HZ11LA3	9.9	10.3					
HZ11LB1	10.2	10.6					
HZ11LB2	10.4	10.8					
HZ11LB3	10.7	11.1					
HZ11LC1	10.9	11.3					
HZ11LC2	11.1	11.6					
HZ11LC3	11.4	11.9	0.5	1	10.5	80	0.5
HZ12LA1	11.6	12.1					
HZ12LA2	11.9	12.4					
HZ12LA3	12.2	12.7					
HZ12LB1	12.4	12.9					
HZ12LB2	12.6	13.1					
HZ12LB3	12.9	13.4					
HZ12LC1	13.2	13.7					
HZ12LC2	13.5	14	0.5	1	13	80	0.5
HZ12LC3	13.8	14.3					
HZ15L1	14.1	14.7					
HZ15L2	14.5	15.1	0.5	1	14	80	0.5
HZ15L3	14.9	15.5					
HZ16L1	15.3	15.9					
HZ16L2	15.7	16.5	0.5	1	15	80	0.5
HZ16L3	16.3	17.1					
HZ18L1	16.9	17.7					
HZ18L2	17.5	18.3	0.5	1	18	100	0.5
HZ18L3	18.1	19					
HZ20L1	18.8	19.7					
HZ20L2	19.5	20.4	0.5	1	20	100	0.5
HZ20L3	20.2	21.1					
HZ22L1	20.9	21.9					
HZ22L2	21.6	22.6	0.5	1	22	120	0.5
HZ22L3	22.3	23.3					
HZ24L1	22.9	24					
HZ24L2	23.6	24.7	0.5	1	24	150	0.5
HZ24L3	24.3	25.5					
HZ27L1	25.2	26.6					
HZ27L2	26.2	27.6	0.5	1	27	200	0.5
HZ27L3	27.2	28.6					
HZ30L1	28.2	29.6					
HZ30L2	29.2	30.6	0.5	1	30	250	0.5
HZ30L3	30.2	31.6					
HZ33L1	31.2	32.6					
HZ33L2	32.2	33.6	0.5	1	33	300	0.5
HZ33L3	33.2	34.6					
HZ36L1	34.2	35.7					
HZ36L2	35.3	36.8	0.5	1			
HZ36L3	36.4	38					

¹⁾ Tested with pulses $t_p = 20\text{ ms}$.



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Fig.1- Zener current versus zener voltage

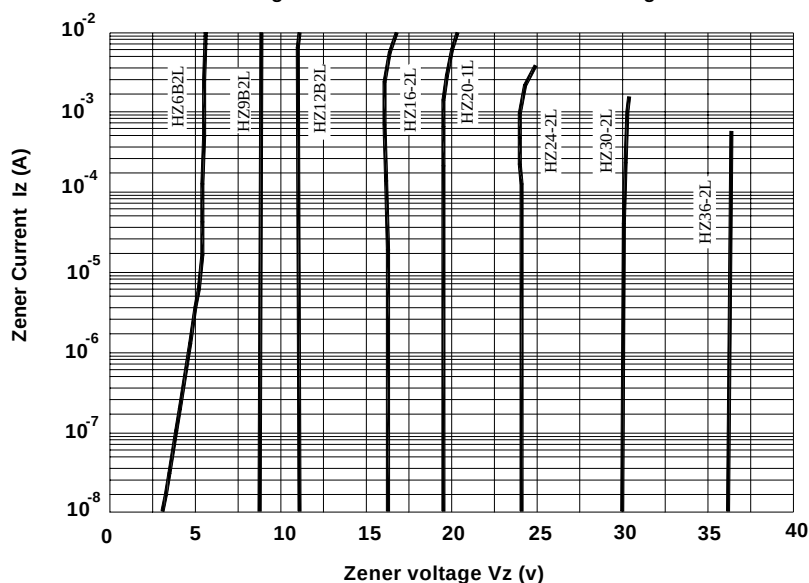


Fig.2 Temperature Coefficient Vs. Zener voltage

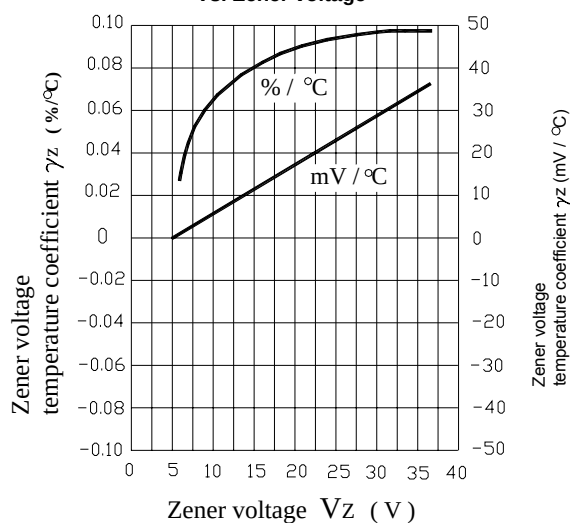
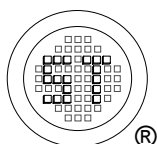
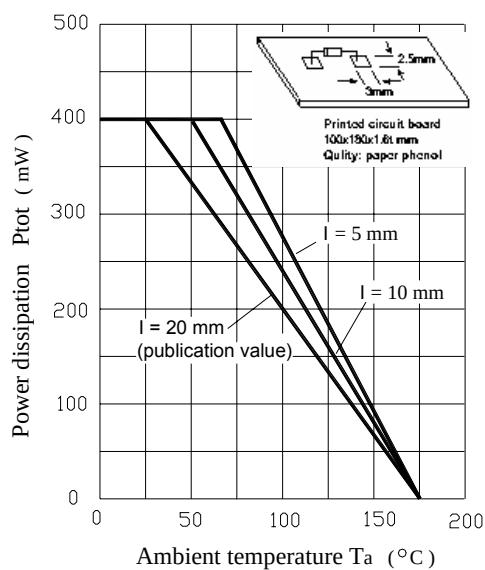


Fig. 3 Power dissipation Vs. Ambient temperature



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