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April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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HZ-L Series

Silicon Planar Zener Diode for Low Noise Application

REJ03G0182-0300

Rev.3.00

Nov.06.2007

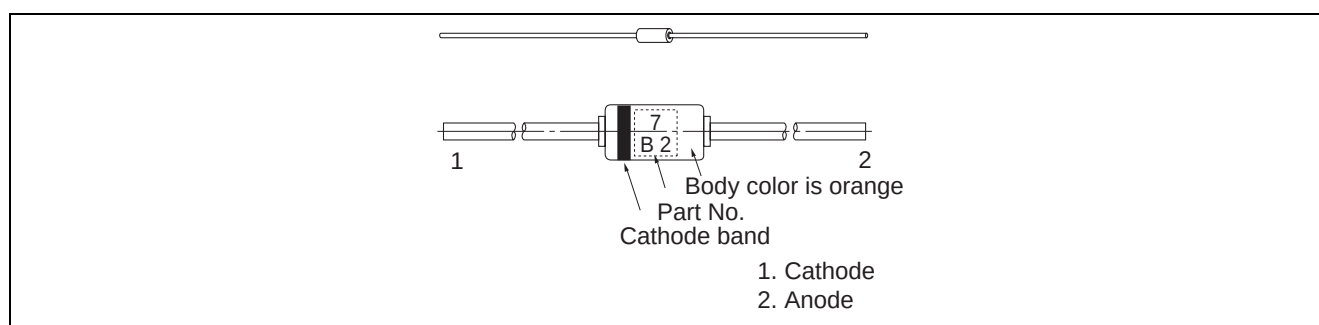
Features

- 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 voltage range from 5.2 V through 38 V of zener voltage provide flexible application.

Ordering Information

Part No.	Cathode Band	Package Name	Package Code
HZ-L Series	Navy blue	DO-35	GRZZ0002ZB-A

Pin Arrangement



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)

Part No.	Zener Voltage			Reverse Current		Dynamic Resistance	
	V _Z (V) * ¹		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)
HZ6A1L	5.2	5.5	0.5	1	2.0	150	0.5
HZ6A2L	5.3	5.6					
HZ6A3L	5.4	5.7					
HZ6B1L	5.5	5.8	0.5	1	2.0	80	0.5
HZ6B2L	5.6	5.9					
HZ6B3L	5.7	6.0					
HZ6C1L	5.8	6.1	0.5	1	2.0	60	0.5
HZ6C2L	6.0	6.3					
HZ6C3L	6.1	6.4					
HZ7A1L	6.3	6.6	0.5	1	3.5	60	0.5
HZ7A2L	6.4	6.7					
HZ7A3L	6.6	6.9					
HZ7B1L	6.7	7.0					
HZ7B2L	6.9	7.2					
HZ7B3L	7.0	7.3					
HZ7C1L	7.2	7.6					
HZ7C2L	7.3	7.7	0.5	1	6.0	60	0.5
HZ7C3L	7.5	7.9					
HZ9A1L	7.7	8.1					
HZ9A2L	7.9	8.3					
HZ9A3L	8.1	8.5					
HZ9B1L	8.3	8.7					
HZ9B2L	8.5	8.9					
HZ9B3L	8.7	9.1	0.5	1	8.0	80	0.5
HZ9C1L	8.9	9.3					
HZ9C2L	9.1	9.5					
HZ9C3L	9.3	9.7					
HZ11A1L	9.5	9.9					
HZ11A2L	9.7	10.1					
HZ11A3L	9.9	10.3					
HZ11B1L	10.2	10.6	0.5	1	8.0	80	0.5
HZ11B2L	10.4	10.8					
HZ11B3L	10.7	11.1					
HZ11C1L	10.9	11.3					
HZ11C2L	11.1	11.6					
HZ11C3L	11.4	11.9					

Note: 1. Tested with DC.

Part No.	Zener Voltage		Reverse Current		Dynamic Resistance		
	V _Z (V) * ¹		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)
HZ12A1L	11.6	12.1	0.5	1	10.5	80	0.5
HZ12A2L	11.9	12.4					
HZ12A3L	12.2	12.7					
HZ12B1L	12.4	12.9					
HZ12B2L	12.6	13.1					
HZ12B3L	12.9	13.4					
HZ12C1L	13.2	13.7					
HZ12C2L	13.5	14.0					
HZ12C3L	13.8	14.3					
HZ15-1L	14.1	14.7	0.5	1	13.0	80	0.5
HZ15-2L	14.5	15.1					
HZ15-3L	14.9	15.5					
HZ16-1L	15.3	15.9	0.5	1	14.0	80	0.5
HZ16-2L	15.7	16.5					
HZ16-3L	16.3	17.1					
HZ18-1L	16.9	17.7	0.5	1	15.0	80	0.5
HZ18-2L	17.5	18.3					
HZ18-3L	18.1	19.0					
HZ20-1L	18.8	19.7	0.5	1	18.0	100	0.5
HZ20-2L	19.5	20.4					
HZ20-3L	20.2	21.1					
HZ22-1L	20.9	21.9	0.5	1	20.0	100	0.5
HZ22-2L	21.6	22.6					
HZ22-3L	22.3	23.3					
HZ24-1L	22.9	24.0	0.5	1	22.0	120	0.5
HZ24-2L	23.6	24.7					
HZ24-3L	24.3	25.5					
HZ27-1L	25.2	26.6	0.5	1	24.0	150	0.5
HZ27-2L	26.2	27.6					
HZ27-3L	27.2	28.6					
HZ30-1L	28.2	29.6	0.5	1	27.0	200	0.5
HZ30-2L	29.2	30.6					
HZ30-3L	30.2	31.6					
HZ33-1L	31.2	32.6	0.5	1	30.0	250	0.5
HZ33-2L	32.2	33.6					
HZ33-3L	33.2	34.6					
HZ36-1L	34.2	35.7	0.5	1	33.0	300	0.5
HZ36-2L	35.3	36.8					
HZ36-3L	36.4	38.0					

Note: 1. Tested with DC.

Main Characteristic

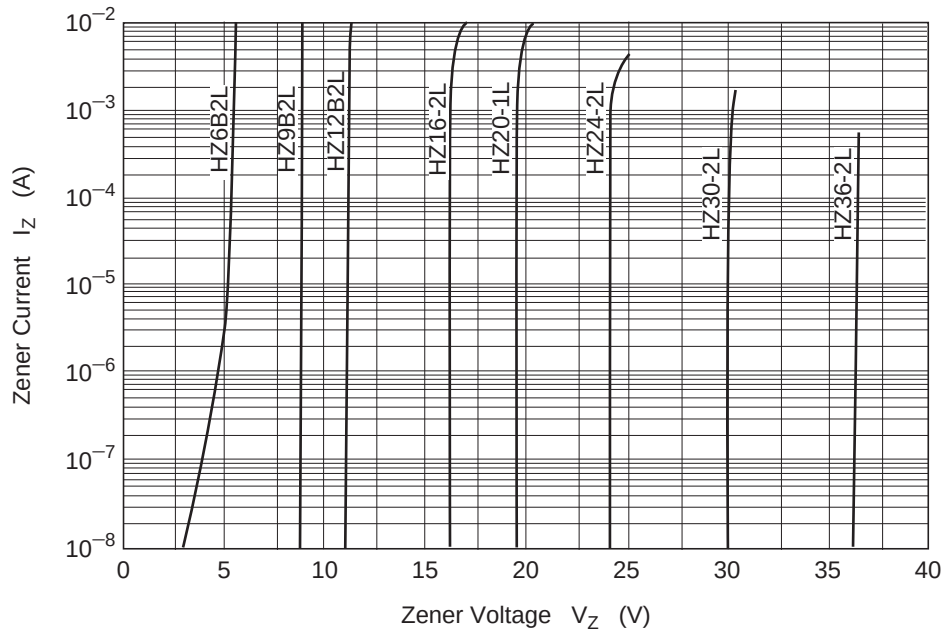


Fig.1 Zener current vs. Zener voltage

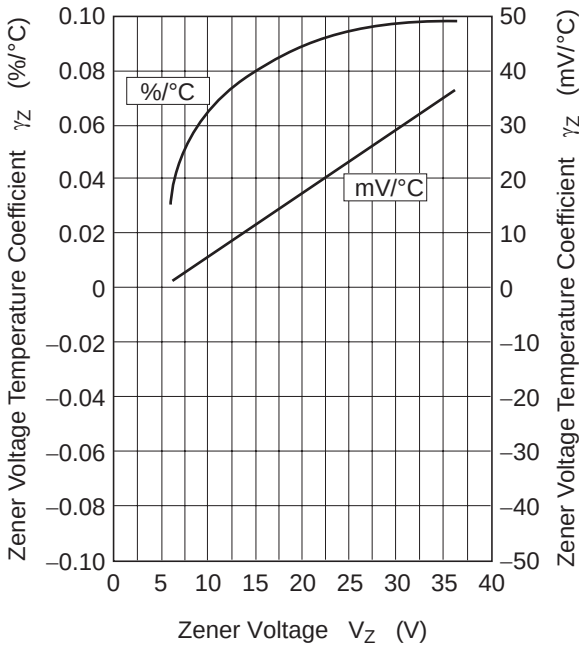


Fig.2 Temperature Coefficient vs. Zener voltage

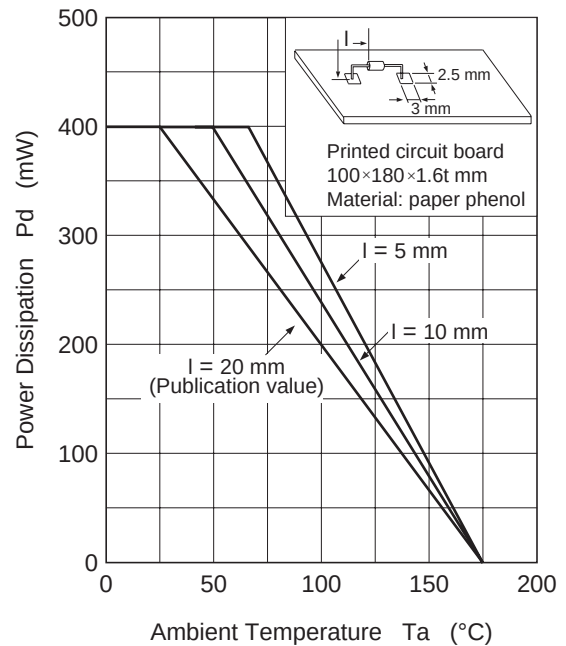
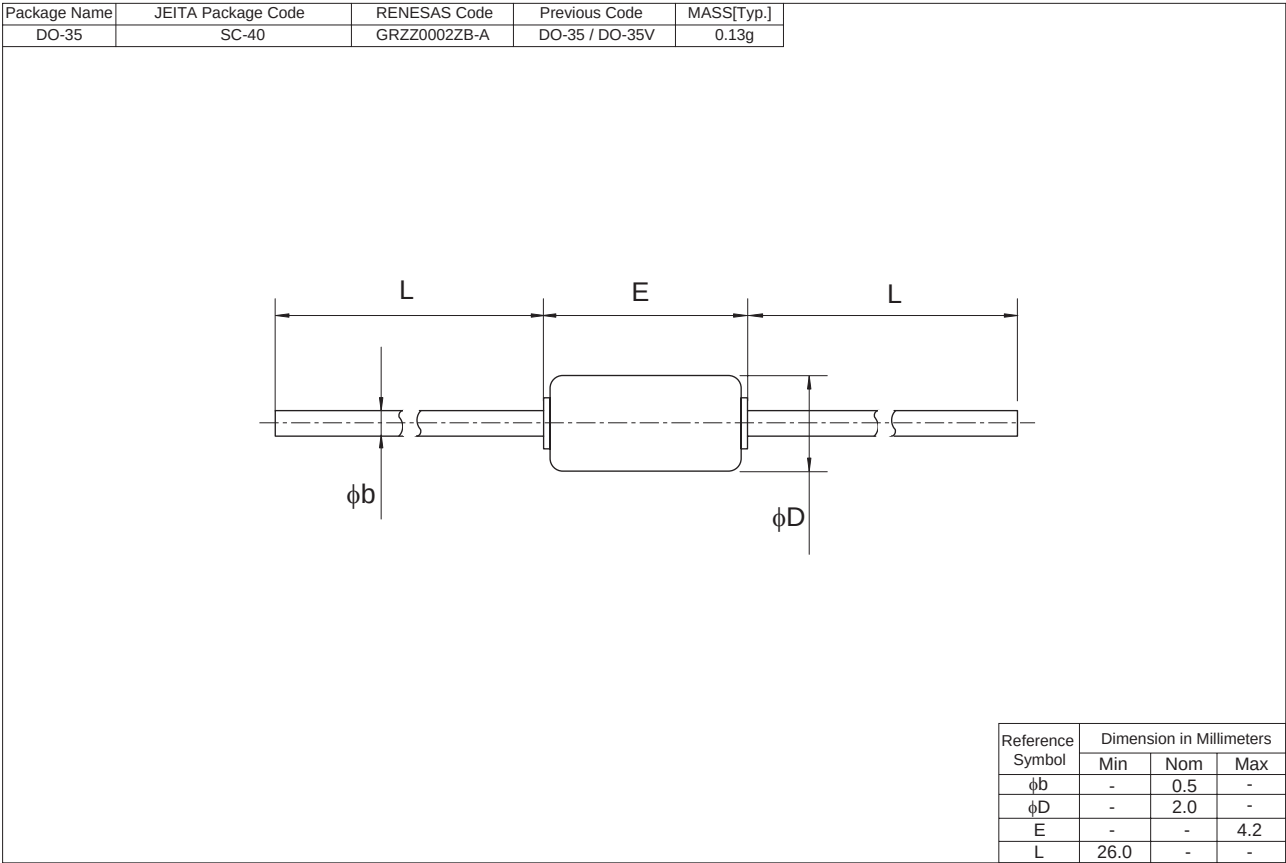


Fig.3 Power Dissipation vs. Ambient Temperature

Package Dimensions



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450 Holger Way, San Jose, CA 95134-1368, U.S.A
Tel: <1> (408) 382-7500, Fax: <1> (408) 382-7501

Renesas Technology Europe Limited
Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5FH, U.K.
Tel: <44> (1628) 585-100, Fax: <44> (1628) 585-900

Renesas Technology (Shanghai) Co., Ltd.
Unit 204, 205, AZIA Center, No.1233 Lujiazui Ring Rd, Pudong District, Shanghai, China 200120
Tel: <86> (21) 5877-1818, Fax: <86> (21) 6887-7858/7898

Renesas Technology Hong Kong Ltd.
7th Floor, North Tower, World Finance Centre, Harbour City, Canton Road, Tsimshatsui, Kowloon, Hong Kong
Tel: <852> 2265-6688, Fax: <852> 2377-3473

Renesas Technology Taiwan Co., Ltd.
10th Floor, No.99, Fushing North Road, Taipei, Taiwan
Tel: <886> (2) 2715-2888, Fax: <886> (2) 3518-3399

Renesas Technology Singapore Pte. Ltd.
1 Harbour Front Avenue, #06-10, Keppel Bay Tower, Singapore 098632
Tel: <65> 6213-0200, Fax: <65> 6278-8001

Renesas Technology Korea Co., Ltd.
Kukje Center Bldg. 18th Fl., 191, 2-ka, Hangang-ro, Yongsan-ku, Seoul 140-702, Korea
Tel: <82> (2) 796-3115, Fax: <82> (2) 796-2145

Renesas Technology Malaysia Sdn. Bhd
Unit 906, Block B, Menara Amcorp, Amcorp Trade Centre, No.18, Jln Persiaran Barat, 46050 Petaling Jaya, Selangor Darul Ehsan, Malaysia
Tel: <603> 7955-9390, Fax: <603> 7955-9510