RENESAS

HZ-N Series

Silicon Planar Zener Diode for Stabilized Power Supply

REJ03G1625-0100
Rev.1.00
Mar 25, 2008

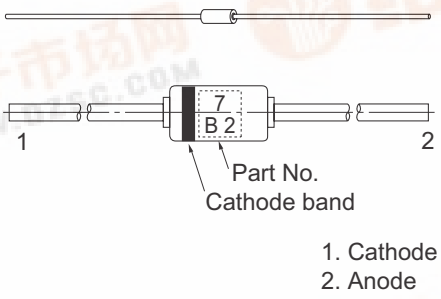
Features

- Low leakage, low zener impedance and maximum power dissipation of 500 mW are ideally suited for stabilized power supply, etc.
- Wide spectrum from 1.9 V through 38 V of zener voltage provide flexible application.

Ordering Information

Part No.	Cathode band	Package Name	Package Code
HZ-N Series	Black	DO-35	GRZZ0002ZB-A

Pin Arrangement



1. Cathode
2. Anode

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Power dissipation	Pd	500	mW
Junction temperature	Tj	175	°C
Storage temperature	Tstg	–55 to +175	°C

Electrical Characteristics

(Ta = 25°C)

Type	Grade	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)
HZ2	B1-N	1.9	2.1	5	5	0.5	100	5
	B2-N	2.0	2.2					
	B3-N	2.1	2.3					
	C1-N	2.2	2.4					
	C2-N	2.3	2.5					
	C3-N	2.4	2.6					
HZ3	A1-N	2.5	2.7	5	5	0.5	100	5
	A2-N	2.6	2.8					
	A3-N	2.7	2.9					
	B1-N	2.8	3.0					
	B2-N	2.9	3.1					
	B3-N	3.0	3.2					
	C1-N	3.1	3.3					
	C2-N	3.2	3.4					
	C3-N	3.3	3.5					
HZ4	A1-N	3.4	3.6	5	5	1.0	100	5
	A2-N	3.5	3.7					
	A3-N	3.6	3.8					
	B1-N	3.7	3.9					
	B2-N	3.8	4.0					
	B3-N	3.9	4.1					
	C1-N	4.0	4.2					
	C2-N	4.1	4.3					
	C3-N	4.2	4.4					
HZ5	A1-N	4.3	4.5	5	5	1.5	100	5
	A2-N	4.4	4.6					
	A3-N	4.5	4.7					
	B1-N	4.6	4.8					
	B2-N	4.7	4.9					
	B3-N	4.8	5.0					
	C1-N	4.9	5.1	5	5	1.5	100	5
	C2-N	5.0	5.2					
	C3-N	5.1	5.3					

Note: 1. Tested with DC.

(Ta = 25°C)

Type	Grade	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)
HZ6	A1-N	5.2	5.5	5	5	2.0	40	5
	A2-N	5.3	5.6					
	A3-N	5.4	5.7					
	B1-N	5.5	5.8					
	B2-N	5.6	5.9					
	B3-N	5.7	6.0					
	C1-N	5.8	6.1					
	C2-N	6.0	6.3					
	C3-N	6.1	6.4					
HZ7	A1-N	6.3	6.6	5	1	3.5	15	5
	A2-N	6.4	6.7					
	A3-N	6.6	6.9					
	B1-N	6.7	7.0					
	B2-N	6.9	7.2					
	B3-N	7.0	7.3					
	C1-N	7.2	7.6					
	C2-N	7.3	7.7					
	C3-N	7.5	7.9					
HZ9	A1-N	7.7	8.1	5	1	5.0	20	5
	A2-N	7.9	8.3					
	A3-N	8.1	8.5					
	B1-N	8.3	8.7					
	B2-N	8.5	8.9					
	B3-N	8.7	9.1					
	C1-N	8.9	9.3					
	C2-N	9.1	9.5					
	C3-N	9.3	9.7					
HZ11	A1-N	9.5	9.9	5	1	7.5	25	5
	A2-N	9.7	10.1					
	A3-N	9.9	10.3					
	B1-N	10.2	10.6					
	B2-N	10.4	10.8					
	B3-N	10.7	11.1					
	C1-N	10.9	11.3					
	C2-N	11.1	11.6					
	C3-N	11.4	11.9					
HZ12	A1-N	11.6	12.1	5	1	9.5	35	5
	A2-N	11.9	12.4					
	A3-N	12.2	12.7					
	B1-N	12.4	12.9					
	B2-N	12.6	13.1					
	B3-N	12.9	13.4					
	C1-N	13.2	13.7					
	C2-N	13.5	14.0					
	C3-N	13.8	14.3					

Note: 1. Tested with DC.

(Ta = 25°C)

Type	Grade	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)
HZ15	-1-N	14.1	14.7	5	1	11	40	5
	-2-N	14.5	15.1					
	-3-N	14.9	15.5					
HZ16	-1-N	15.3	15.9	5	1	12	45	5
	-2-N	15.7	16.5					
	-3-N	16.3	17.1					
HZ18	-1-N	16.9	17.7	5	1	13	55	5
	-2-N	17.5	18.3					
	-3-N	18.1	19.0					
HZ20	-1-N	18.8	19.7	2	1	15	60	2
	-2-N	19.5	20.4					
	-3-N	20.2	21.1					
HZ22	-1-N	20.9	21.9	2	1	17	65	2
	-2-N	21.6	22.6					
	-3-N	22.3	23.3					
HZ24	-1-N	22.9	24.0	2	1	19	70	2
	-2-N	23.6	24.7					
	-3-N	24.3	25.5					
HZ27	-1-N	25.2	26.6	2	1	21	80	2
	-2-N	26.2	27.6					
	-3-N	27.2	28.6					
HZ30	-1-N	28.2	29.6	2	1	23	100	2
	-2-N	29.2	30.6					
	-3-N	30.2	31.6					
HZ33	-1-N	31.2	32.6	2	1	25	120	2
	-2-N	32.2	33.6					
	-3-N	33.2	34.6					
HZ36	-1-N	34.2	35.7	2	1	27	140	2
	-2-N	35.3	36.8					
	-3-N	36.4	38.0					

Notes: 1. Tested with DC.
2. Part No. is as follows; HZ2B1-N, HZ2B2-N, HZ36-3-N.

Main Characteristic

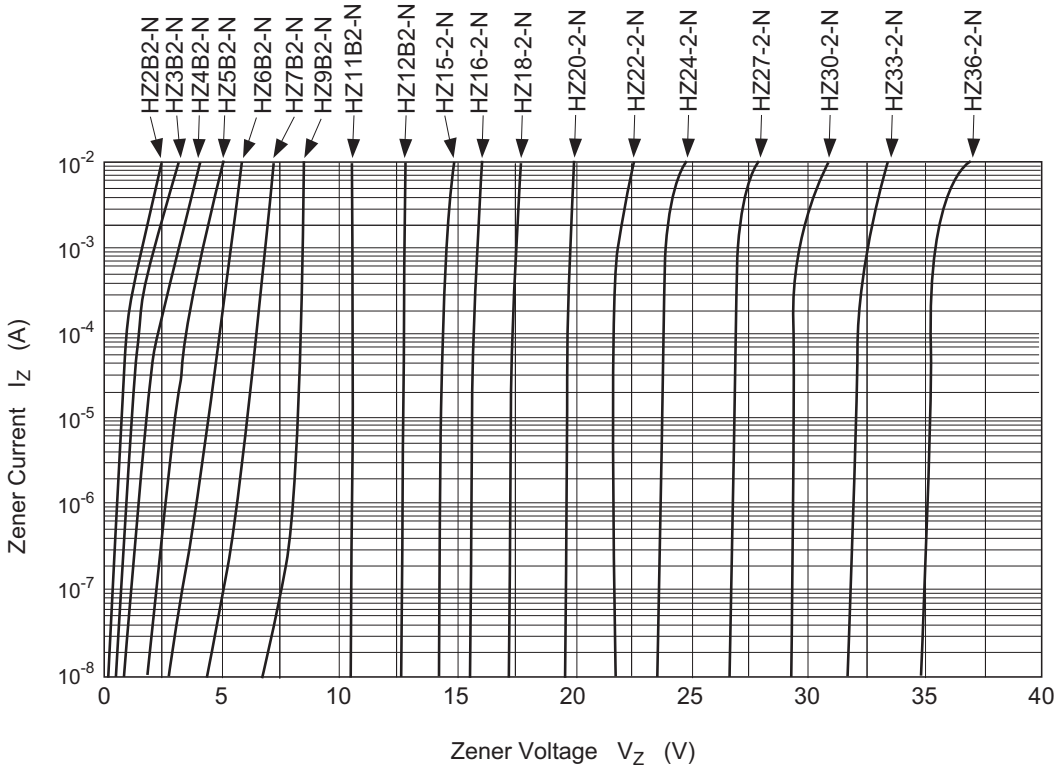


Fig.1 Zener current vs. Zener voltage

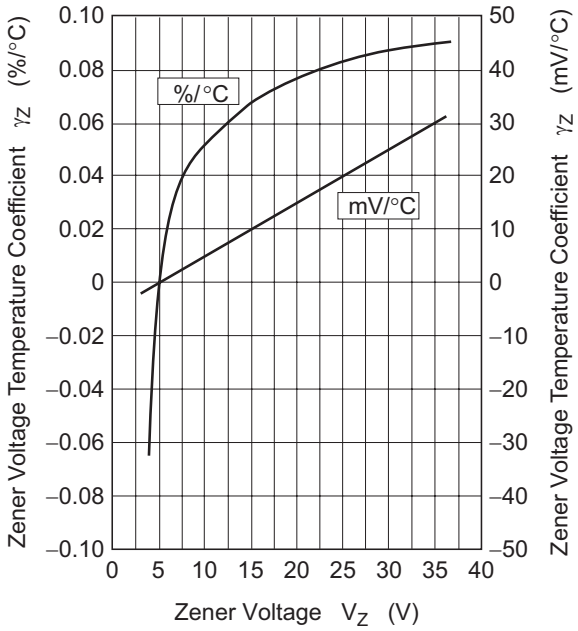


Fig.2 Temperature Coefficient vs. Zener voltage

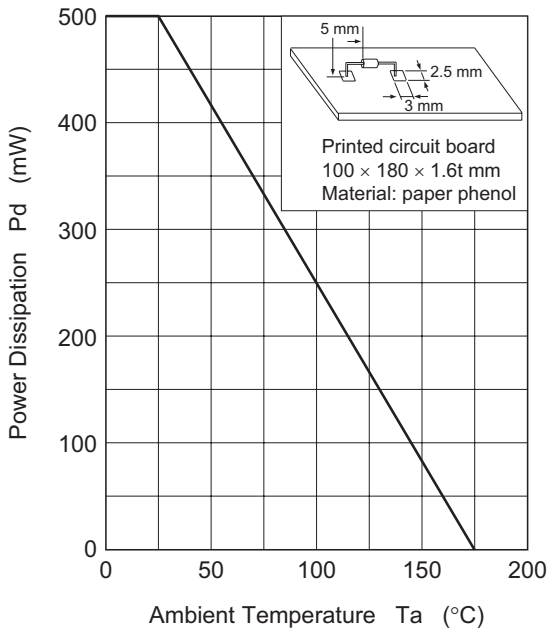
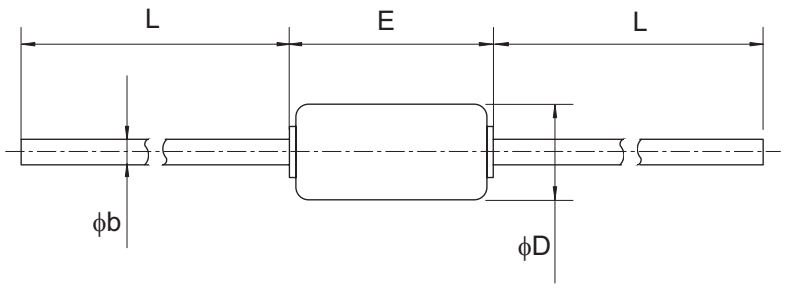


Fig.3 Power Dissipation vs. Ambient Temperature

Package Dimensions

Package Name	JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
DO-35	SC-40	GRZZ0002ZB-A	DO-35 / DO-35V	0.13g



Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
ϕb	-	0.5	-
ϕD	-	2.0	-
E	-	-	4.2
L	26.0	-	-

Renesas Technology Corp. Sales Strategic Planning Div. Nippon Bldg., 2-6-2, Ohte-machi, Chiyoda-ku, Tokyo 100-0004, Japan

RENESAS SALES OFFICES

http://www.renesas.com

Refer to "**http://www.renesas.com/en/network**" for the latest and detailed information.

Renesas Technology America, Inc.
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, AZIACenter, 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