HZ-N Series

Silicon Planar Zener Diode for Stabilized Power Supply

REJ03G1625-0100
Rev.1.00
Mar 25, 2008

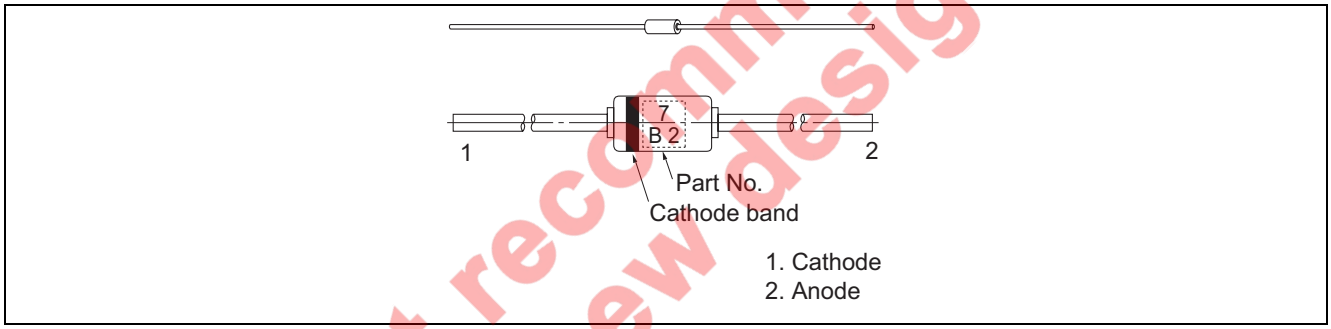
Features

- 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



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

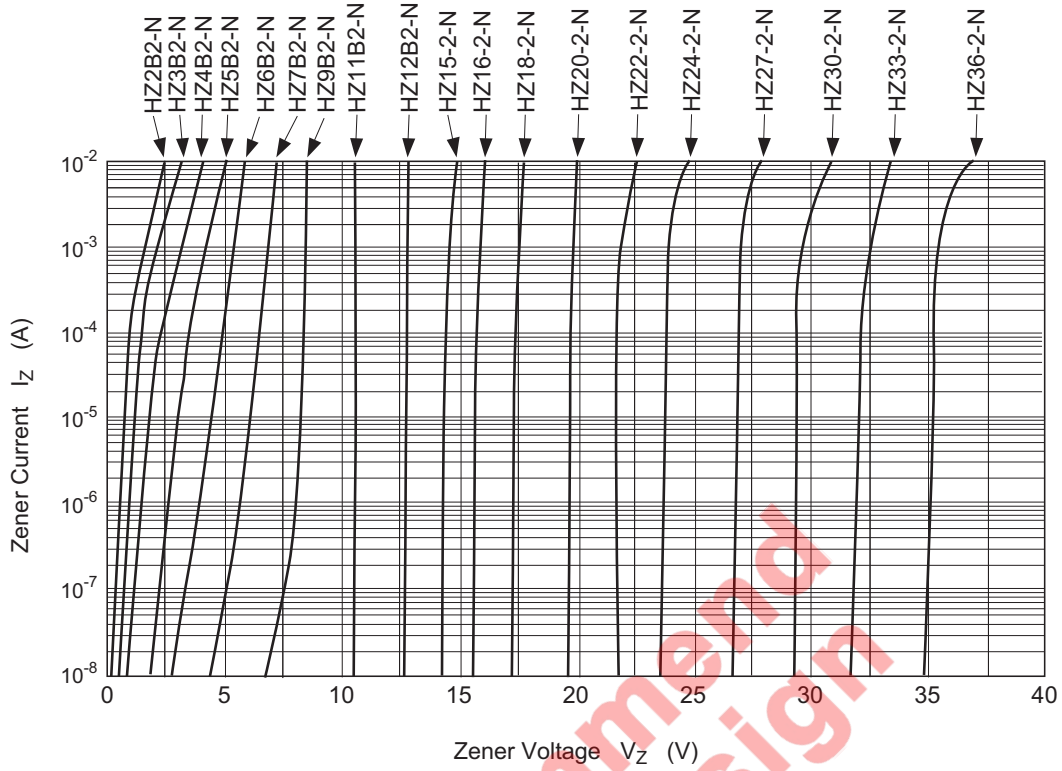


Fig.1 Zener current vs. Zener voltage

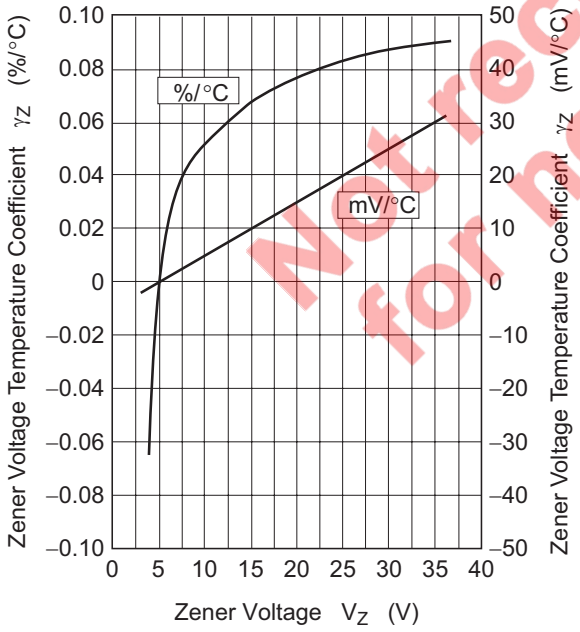


Fig.2 Temperature Coefficient vs. Zener voltage

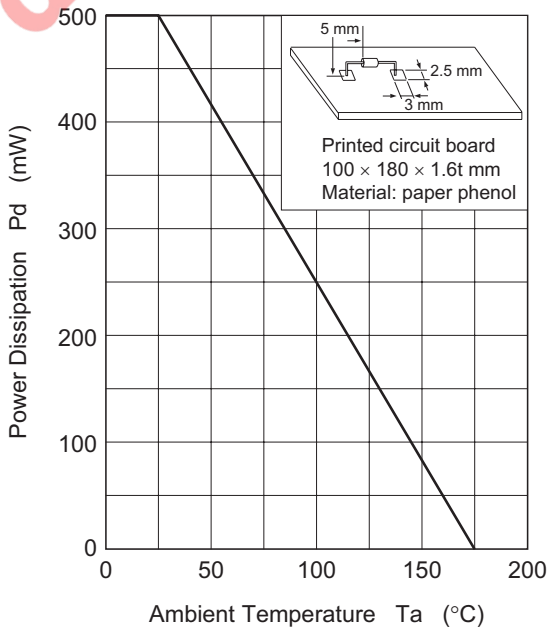
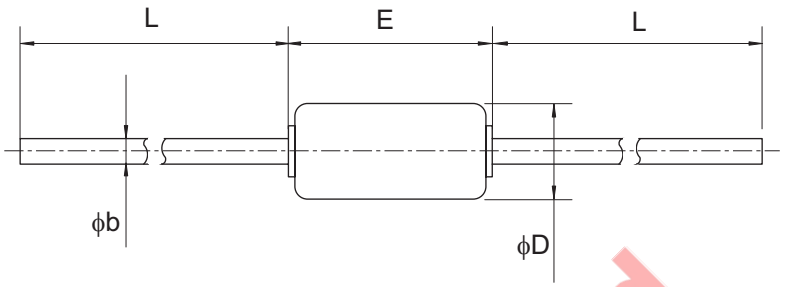


Fig.3 Power Dissipation vs. Ambient Temperature

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	-	-

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