HZ-LL Series

Silicon Epitaxial Planar Zener Diode for Hard Knee Low Noise

REJ03G0183-0200Z
(Previous: ADE-208-119A)
Rev.2.00
Mar.11.2004

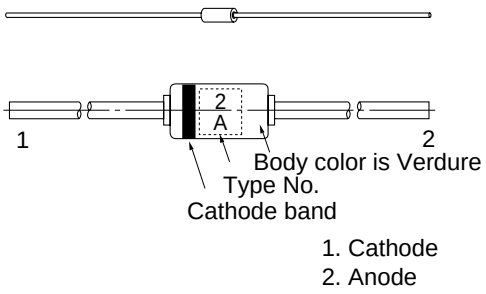
Features

- Vz-Iz characteristics are semi logarithmic linear from I_Z = 1nA to 1mA and have sharper breakdown knees in a low current region, and also lower V_Z temperature coefficients.
- Low dynamic impedance and low noise in the low current region (approximately 1/10 lower than the current zeners).

Ordering Information

Type No.	Mark	Package Code
HZ-LL Series	Type No.	DO-35

Pin Arrangement



1. Cathode
2. Anode

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Power dissipation	Pd	250	mW
Junction temperature	Tj	175	°C
Storage temperature	Tstg	–55 to +175	°C

Electrical Characteristics

(Ta = 25°C)

Type	Grade	V_Z(V) *1			I_R(nA)		Z_{ZT}(Ω)		Z_{ZK}(kΩ) *2		ΔV_{Z1}(V) *3	ΔV_{Z2}(V) *3
		Min	Max	I_Z(mA)	Max	V_R(V)	Max	I_{ZT}(mA)	Typ	I_{ZK}(μA)	Max	Max
HZ2LL	A	1.6	2.0	0.5	100	0.5	350	0.5	(1.2)	50	0.5	0.6
	B	1.9	2.3									
	C	2.2	2.6									
HZ3LL	A	2.5	2.9	0.5	100	1.0	360	0.5	(1.2)	50	0.5	0.6
	B	2.8	3.2									
	C	3.1	3.5									
HZ4LL	A	3.4	3.8	0.5	100	2.0	370	0.5	(1.5)	50	0.5	0.6
	B	3.7	4.1									
	C	4.0	4.4									
HZ5LL	A	4.3	4.7	0.5	100	3.0	380	0.5	(1.5)	50	0.5	0.6
	B	4.6	5.0									
	C	4.9	5.3									

Notes: 1. Tested with DC.
2. Reference only.
3. $\Delta V_{Z1} = V_Z$ (I_Z = 0.5 mA) – V_{Z1} (I_z = 0.05 mA) $\Delta V_{Z2} = V_{Z1}$ (IZ = 0.05 mA) – V_{Z2} (I_z = 0.001 mA)
4. Type No. is as follows; HZ2ALL, HZ2BLL, HZ5CLL.

Main Characteristic

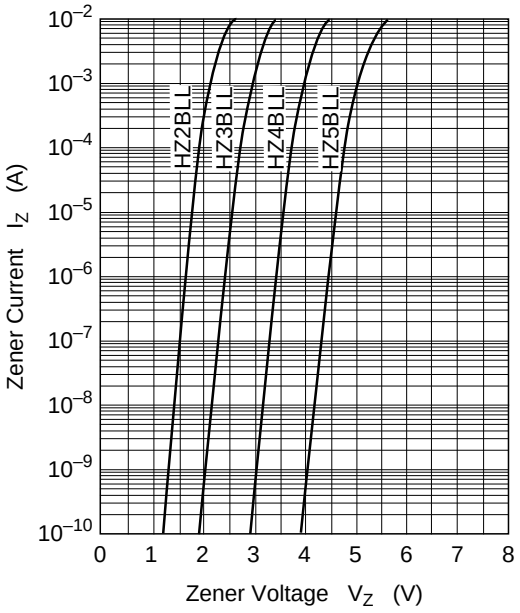


Fig.1 Zener current vs. Zener voltage

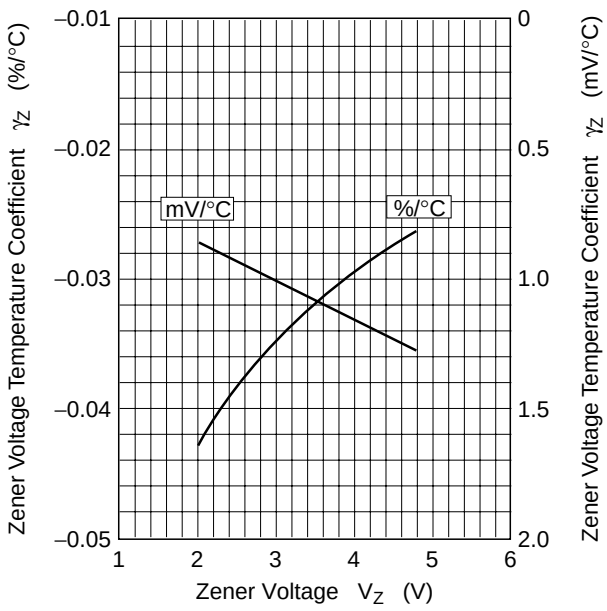


Fig.2 Temperature Coefficient vs. Zener voltage

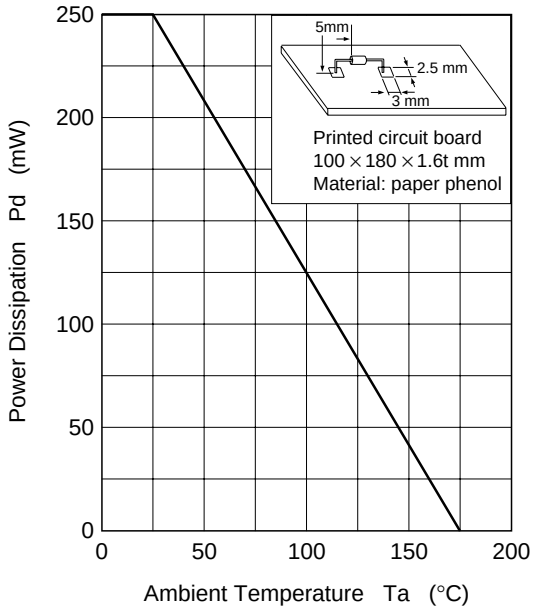
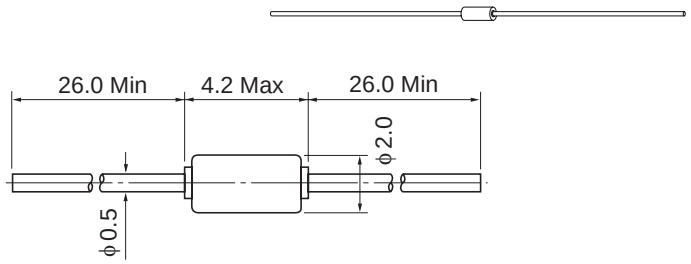


Fig.3 Power Dissipation vs. Ambient Temperature

Package Dimensions

As of January, 2003

Unit: mm



Package Code	DO-35
JEDEC	Conforms
JEITA	Conforms
Mass (reference value)	0.13 g

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

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, United Kingdom
Tel: <44> (1628) 585 100, Fax: <44> (1628) 585 900

Renesas Technology Europe GmbH
Dornacher Str. 3, D-85622 Feldkirchen, Germany
Tel: <49> (89) 380 70 0, Fax: <49> (89) 929 30 11

Renesas Technology Hong Kong Ltd.
7/F., North Tower, World Finance Centre, Harbour City, Canton Road, Hong Kong
Tel: <852> 2265-6688, Fax: <852> 2375-6836

Renesas Technology Taiwan Co., Ltd.
FL 10, #99, Fu-Hsing N. Rd., Taipei, Taiwan
Tel: <886> (2) 2715-2888, Fax: <886> (2) 2713-2999

Renesas Technology (Shanghai) Co., Ltd.
26/F., Ruijin Building, No.205 Maoming Road (S), Shanghai 200020, China
Tel: <86> (21) 6472-1001, Fax: <86> (21) 6415-2952

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

Colophon .1.0