To our customers,

Old Company Name in Catalogs and Other Documents

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Renesas Electronics website: http://www.renesas.com

April 1st, 2010
Renesas Electronics Corporation

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

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HZC Series

Silicon Epitaxial Planar Zener Diode for Surge Absorb

REJ03G1204-0200
(Previous: ADE-208-1436A)
Rev.2.00
Jul 04, 2005

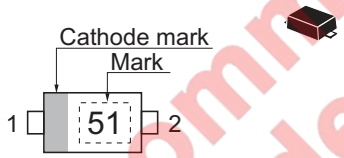
Features

- These diodes are delivered taped.
- Ultra small Flat Lead Package (UFP) is suitable for surface mount design.

Ordering Information Ordering Information

Type No.	Laser Mark	Package Name	Package Code (Previous Code)
HZC Series	Let to Mark Code	UFP	PWSF0002ZA-A (UFP)

Pin Arrangement



1. Cathode
2. Anode

Absolute Maximum Ratings

(Ta = 25°C)

tem	Symbol	Value	Unit
Power dissipation	Pd *	150	mW
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

Note: See Fig2.

Electrical Characteristics

(Ta = 25°C)

Type No.	Zener Voltage			Reverse Current		Dynamic Resistance		ESD-Capability *2
	V_Z (V) *1		Test Condition	I_R (μA)	Test Condition	r_d (Ω)	Test Condition	— (kV) *2
	Min	Max	I_Z (mA)	Max	V_R (V)	Max	I_Z (mA)	Min
HZC2.0	1.90	2.20	5	120.0	0.5	100	5	30
HZC2.2	2.10	2.40	5	120.0	0.7	100	5	30
HZC2.4	2.30	2.60	5	120.0	1.0	100	5	30
HZC2.7	2.50	2.90	5	120.0	1.0	110	5	30
HZC3.0	2.80	3.20	5	50.0	1.0	120	5	30
HZC3.3	3.10	3.50	5	20.0	1.0	130	5	30
HZC3.6	3.40	3.80	5	10.0	1.0	130	5	30
HZC3.9	3.70	4.10	5	10.0	1.0	130	5	30
HZC4.3	4.01	4.48	5	10.0	1.0	130	5	30
HZC4.7	4.42	4.90	5	10.0	1.0	130	5	30
HZC5.1	4.84	5.37	5	5.0	1.5	130	5	30
HZC5.6	5.31	5.92	5	5.0	2.5	80	5	30
HZC6.2	5.86	6.53	5	2.0	3.0	50	5	30
HZC6.8	6.47	7.14	5	1.0	3.5	30	5	30
HZC7.5	7.06	7.84	5	1.0	4.0	30	5	30
HZC8.2	7.76	8.64	5	0.5	5.0	30	5	30
HZC9.1	8.56	9.55	5	0.5	6.0	30	5	30
HZC10	9.45	10.55	5	0.5	7.0	30	5	30
HZC11	10.44	11.56	5	0.5	8.0	30	5	30
HZC12	11.42	12.60	5	0.5	9.0	35	5	30
HZC13	12.47	13.96	5	0.5	10.0	35	5	30
HZC15	13.84	15.52	5	0.5	11.0	40	5	30
HZC16	15.37	17.09	5	0.5	12.0	40	5	30
HZC18	16.94	19.03	5	0.5	13.0	45	5	30
HZC20	18.86	21.08	5	0.5	15.0	50	5	30
HZC22	20.88	23.17	5	0.5	17.0	55	5	30
HZC24	22.93	25.57	5	0.5	19.0	60	5	30
HZC27	25.10	28.90	2	0.5	21.0	70	2	30
HZC30	28.00	32.00	2	0.5	23.0	80	2	30
HZC33	31.00	35.00	2	0.5	25.0	80	2	25
HZC36	34.00	38.00	2	0.5	27.0	90	2	20

Notes: 1. Tested with pulse (Pw = 40 ms).

2. C =150 pF, R = 330 Ω, Both forward and reverse direction 10 pulse
Failure criterion ; According to IR spec

Mark Code

Type No.	Mark No.
HZC2.0	20
HZC2.2	22
HZC2.4	24
HZC2.7	27
HZC3.0	30
HZC3.3	33
HZC3.6	36
HZC3.9	39
HZC4.3	43
HZC4.7	47
HZC5.1	51
HZC5.6	56
HZC6.2	62
HZC6.8	68
HZC7.5	75
HZC8.2	82
HZC9.1	91
HZC10	10 *
HZC11	11 *
HZC12	12 *
HZC13	13 *
HZC15	15 *
HZC16	16 *
HZC18	18 *
HZC20	20 *
HZC22	22 *
HZC24	24 *
HZC27	27 *
HZC30	30 *
HZC33	33 *
HZC36	36 *

Note: HZC10 To HZC36 has ■, on the right of Laser Mark.

Main Characteristic

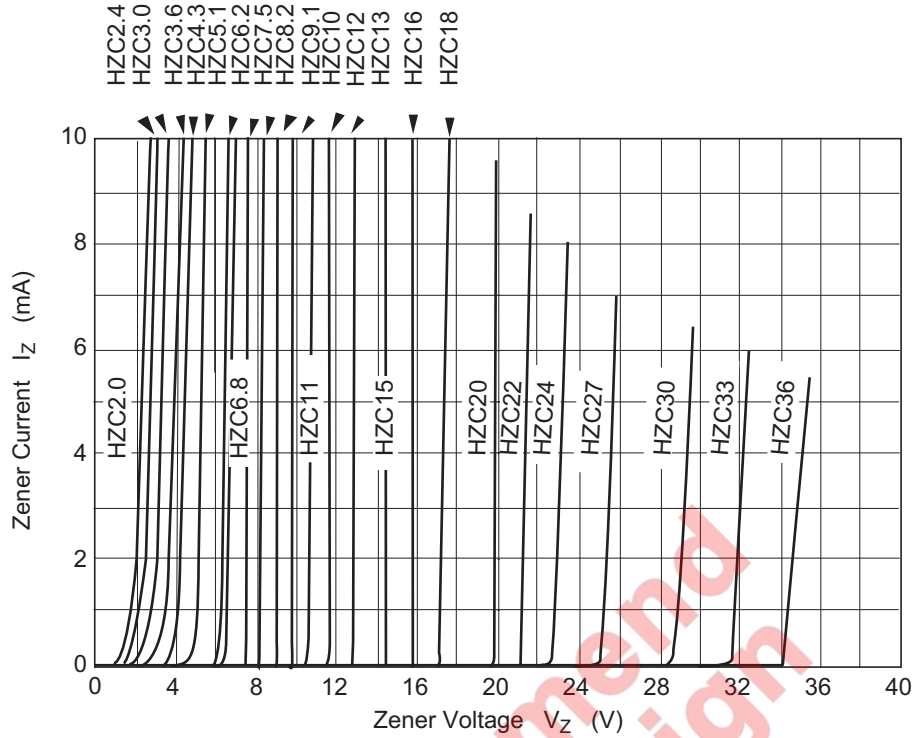


Fig.1 Zener current vs. Zener voltage

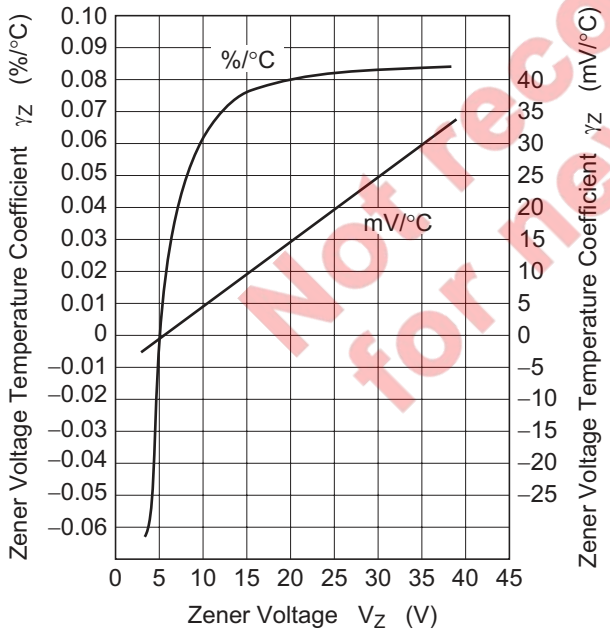


Fig.2 Temperature Coefficient vs. Zener voltage

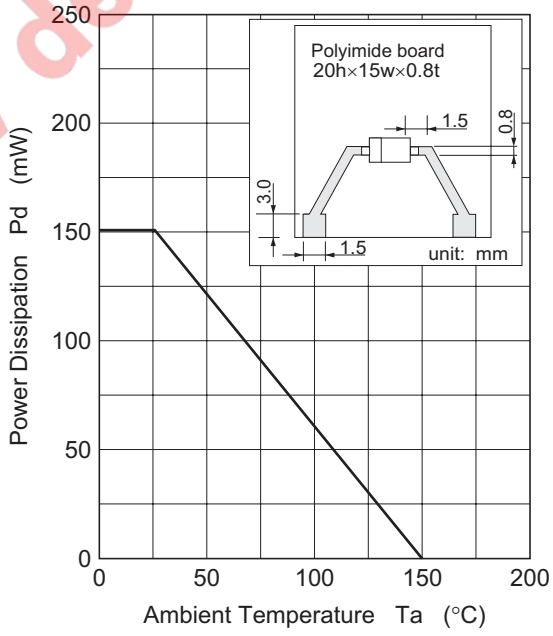
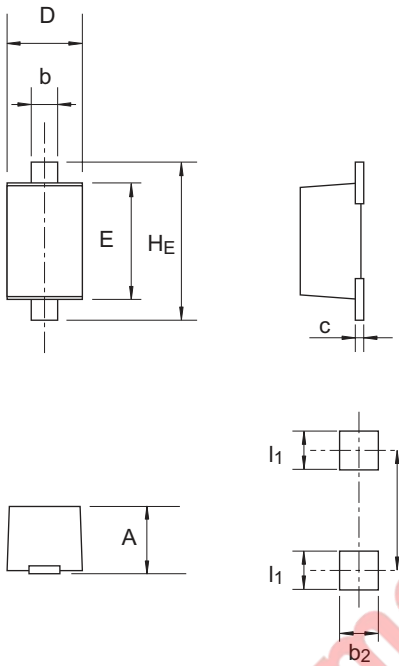


Fig.2 Power Dissipation vs. Ambient Temperature

Package Dimensions

JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
SC-79	PWSF0002ZA-A	UFP / UFPV	0.0016g



Pattern of terminal position areas

Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
A	0.50	0.60	0.70
b	0.25	0.30	0.35
c	0.08	—	0.18
D	0.70	0.80	0.90
E	1.10	1.20	1.30
H_E	1.50	1.60	1.70
b_2	—	0.80	—
e_1	—	1.70	—
l_1	—	0.60	—

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