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April 1st, 2010
Renesas Electronics Corporation

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

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Not recommended
for new design

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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

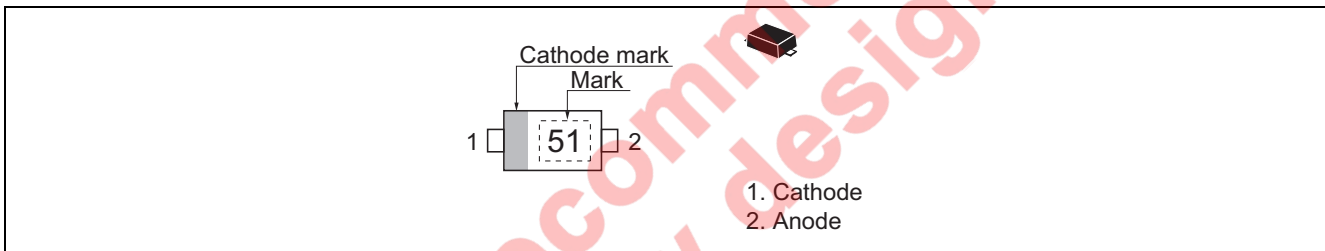
Features

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

Ordering Information

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

Pin Arrangement



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		I _R (μA)	Test Condition	r _d (Ω)	Test Condition	— (kV) *2	
	Min	Max	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.
H2C2.0	20
H2C2.2	22
H2C2.4	24
H2C2.7	27
H2C3.0	30
H2C3.3	33
H2C3.6	36
H2C3.9	39
H2C4.3	43
H2C4.7	47
H2C5.1	51
H2C5.6	56
H2C6.2	62
H2C6.8	68
H2C7.5	75
H2C8.2	82
H2C9.1	91
H2C10	10 *
H2C11	11 *
H2C12	12 *
H2C13	13 *
H2C15	15 *
H2C16	16 *
H2C18	18 *
H2C20	20 *
H2C22	22 *
H2C24	24 *
H2C27	27 *
H2C30	30 *
H2C33	33 *
H2C36	36 *

Note: H2C10 To H2C36 has ■, on the right of Laser Mark.

Main Characteristic

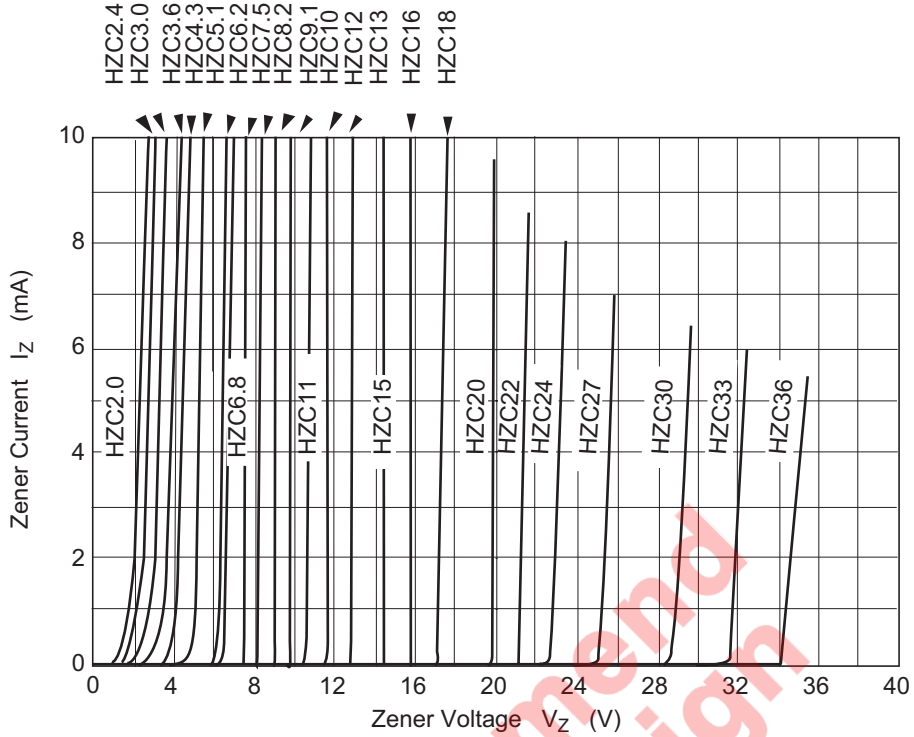


Fig.1 Zener current vs. Zener voltage

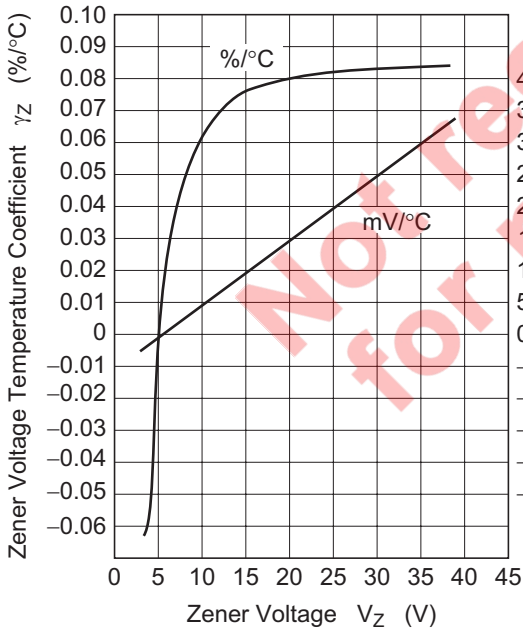


Fig.2 Temperature Coefficient vs. Zener voltage

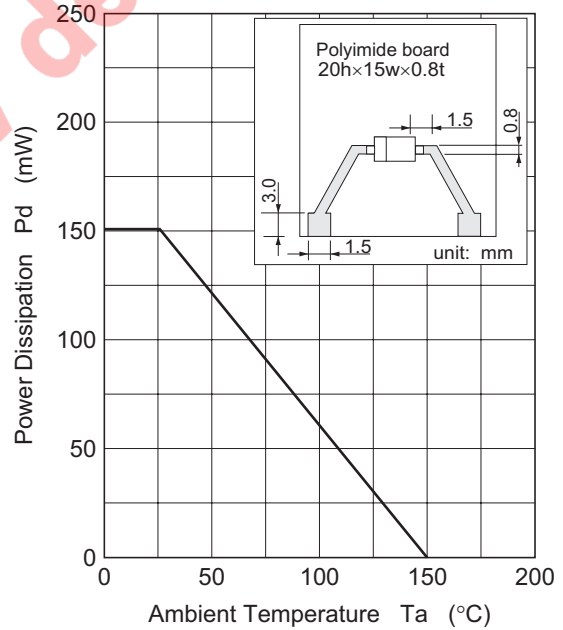
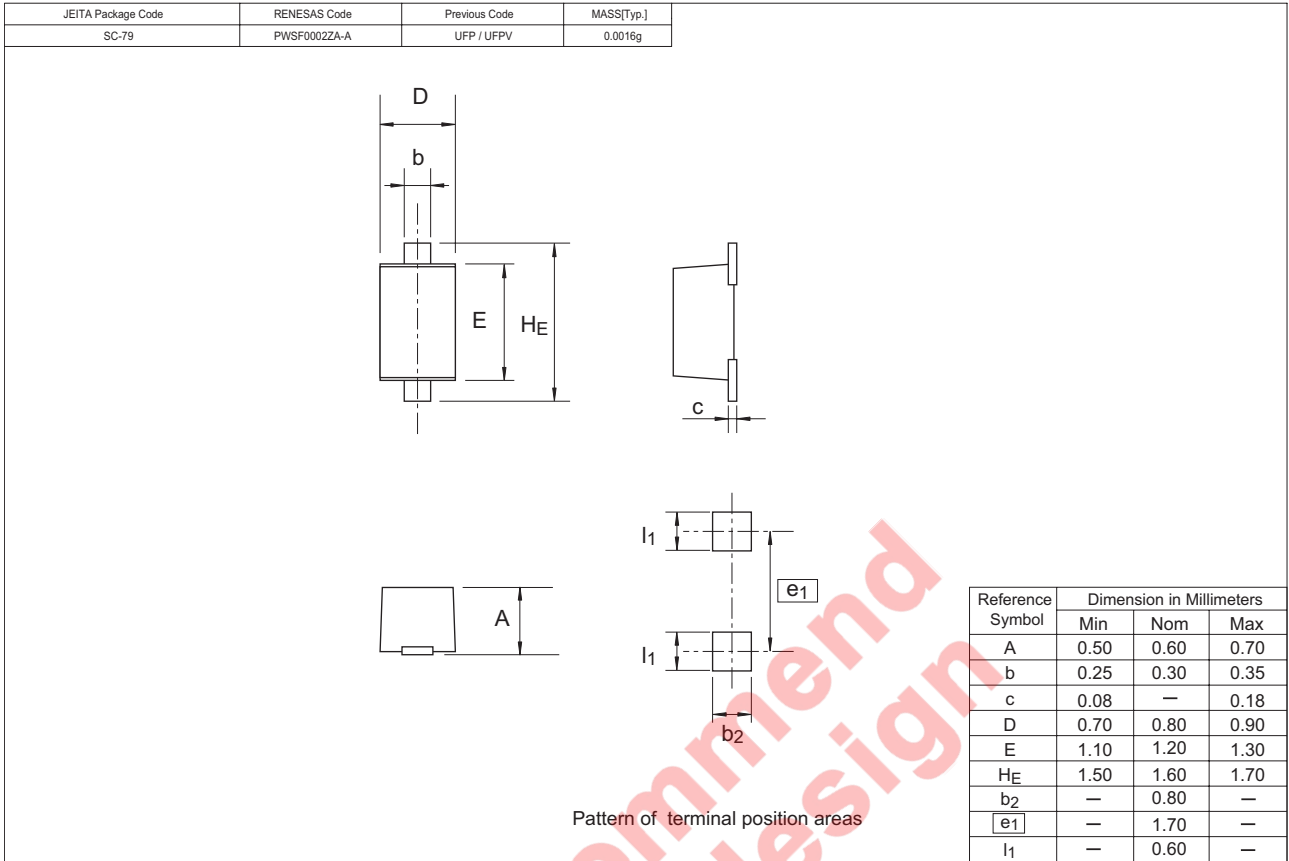


Fig.2 Power Dissipation vs. Ambient Temperature

Package Dimensions



Not recommended for new design

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