

To our customers,

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## Old Company Name in Catalogs and Other Documents

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

April 1<sup>st</sup>, 2010  
Renesas Electronics Corporation

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

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## HVU202B

Variable Capacitance Diode for UHF/VHF tuner

REJ03G0105-0200Z  
(Previous: ADE-208-610A)  
Rev.2.00  
Sep.29.2003

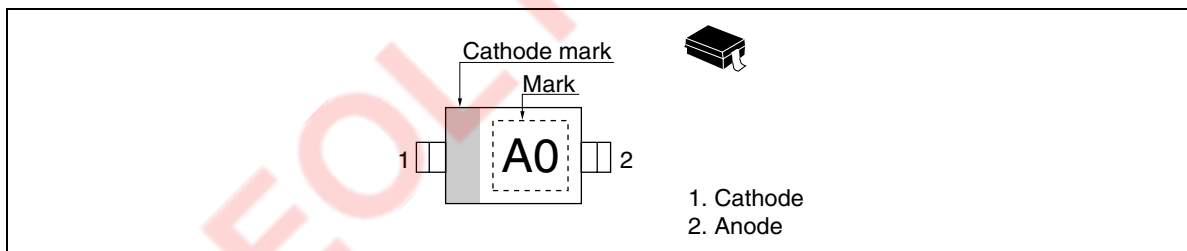
### Features

- Low matching error. ( $\Delta C/C = 1.80\%$  max)
- High capacitance ratio. ( $n = 6.30$  min)
- Low series resistance. ( $r_s = 0.57 \Omega$  max)
- Ultra small Resin Package (URP) is suitable for surface mount design.

### Ordering Information

| Type No. | Laser Mark | Package Code |
|----------|------------|--------------|
| HVU202B  | A0         | URP          |

### Pin Arrangement



### Absolute Maximum Ratings

(Ta = 25°C)

| Item                 | Symbol        | Value       | Unit |
|----------------------|---------------|-------------|------|
| Peak reverse voltage | $V_{RM}^{*1}$ | 35          | V    |
| Reverse voltage      | $V_R$         | 32          | V    |
| Junction temperature | Tj            | 125         | °C   |
| Storage temperature  | Tstg          | -55 to +125 | °C   |

Note: 1.  $R_L = 10\text{ k}\Omega$

### Electrical Characteristics

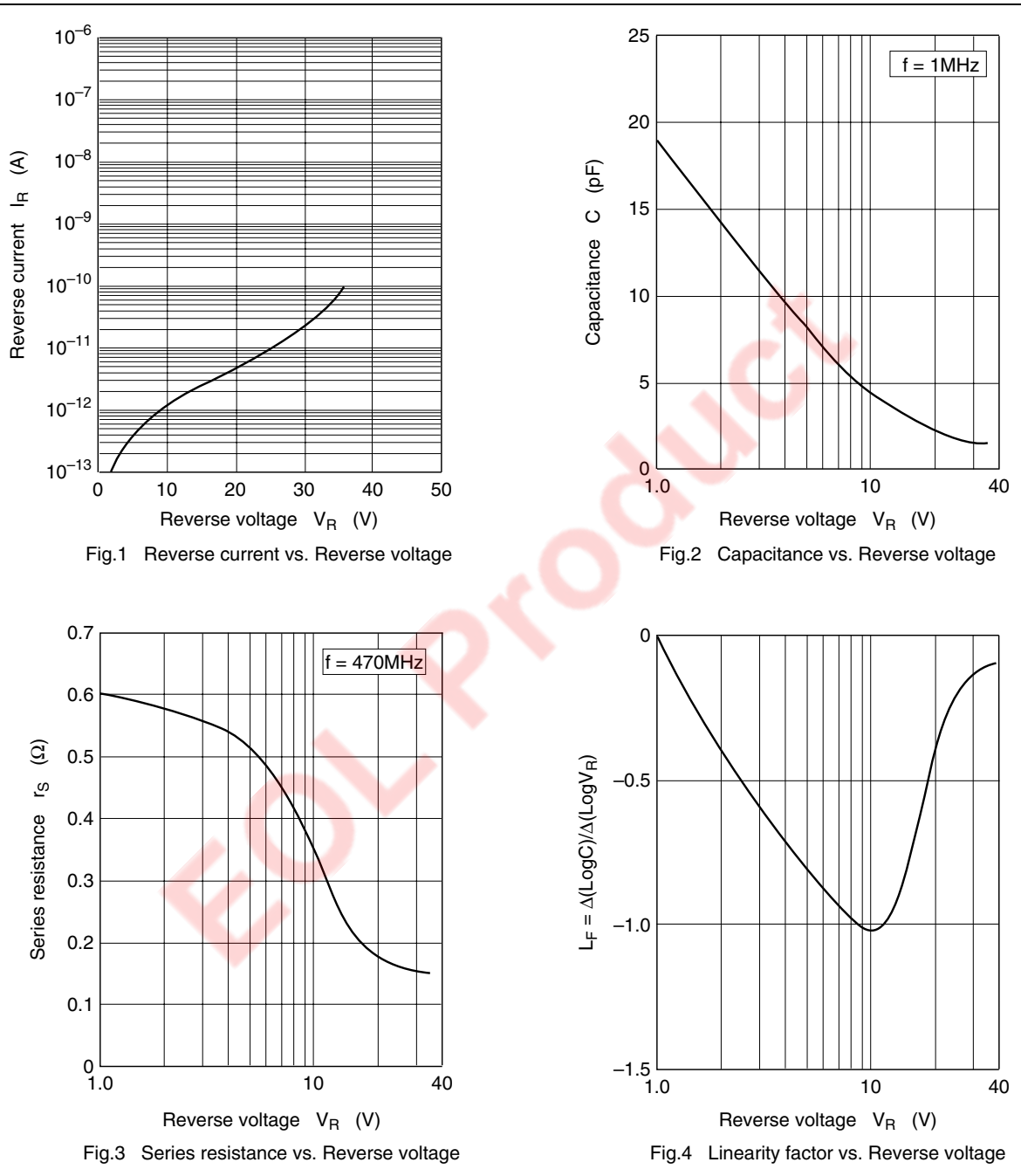
(Ta = 25°C)

| Item              | Symbol            | Min   | Typ | Max   | Unit     | Test Condition                                    |
|-------------------|-------------------|-------|-----|-------|----------|---|
| Reverse current   | $I_{R1}$          | —     | —   | 10    | nA       | $V_R = 30\text{ V}$                               |
|                   | $I_{R2}$          | —     | —   | 100   |          | $V_R = 30\text{ V}, T_a = 60^\circ\text{C}$       |
| Capacitance       | $C_2$             | 14.15 | —   | 15.75 | pF       | $V_R = 2\text{ V}, f = 1\text{ MHz}$              |
|                   | $C_{25}$          | 2.06  | —   | 2.35  |          | $V_R = 25\text{ V}, f = 1\text{ MHz}$             |
| Capacitance ratio | n                 | 6.30  | —   | —     | —        | $C_2/C_{25}$                                      |
| Series resistance | $r_s$             | —     | —   | 0.57  | $\Omega$ | $V_R = 5\text{ V}, f = 470\text{ MHz}$            |
| Matching error    | $\Delta C/C^{*1}$ | —     | —   | 1.80  | %        | $V_R = 2\text{ to }25\text{ V}, f = 1\text{ MHz}$ |

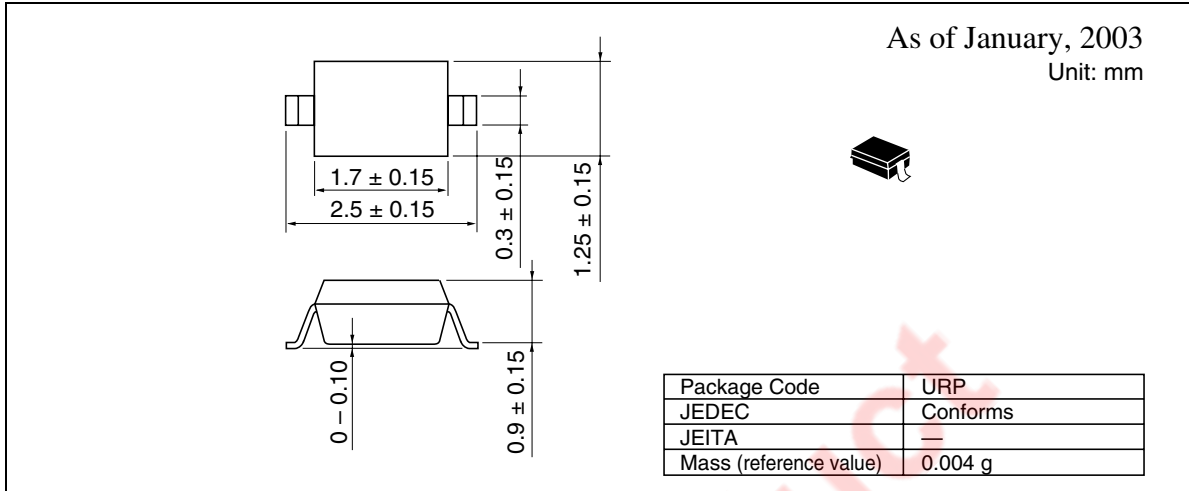
Note: 1. C.C system (Continuous Connected taping system) enable to make any 10 pcs of  $\Delta C/C$  continuous in a reel , expect extention to another group.  
Calculate Matching Error,

$$\Delta C/C = \frac{(C_{max} - C_{min})}{C_{min}} \times 100 (\%)$$

Main Characteristic



Package Dimensions



EOL Product

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

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**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

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

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

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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