

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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## HVC202B

Variable Capacitance Diode for UHF/VHF tuner

REJ03G0096-0200Z  
(Previous: ADE-208-406A)  
Rev.2.00  
Sep.23.2003

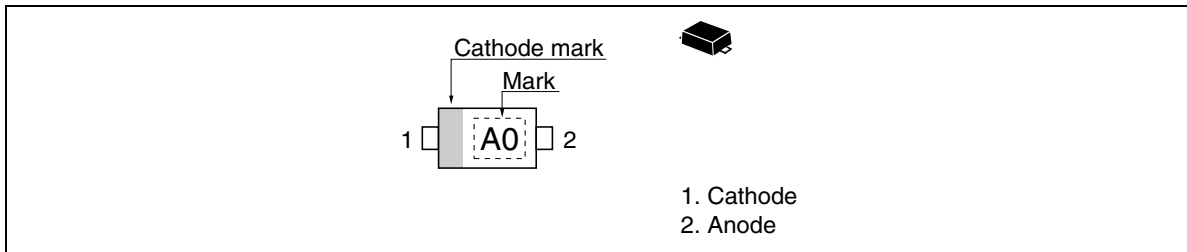
### Features

- 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 Flat Package (UFP) is suitable for surface mount design.

### Ordering Information

Type No.	Laser Mark	Package Code
HVC202B	A0	UFP

### 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

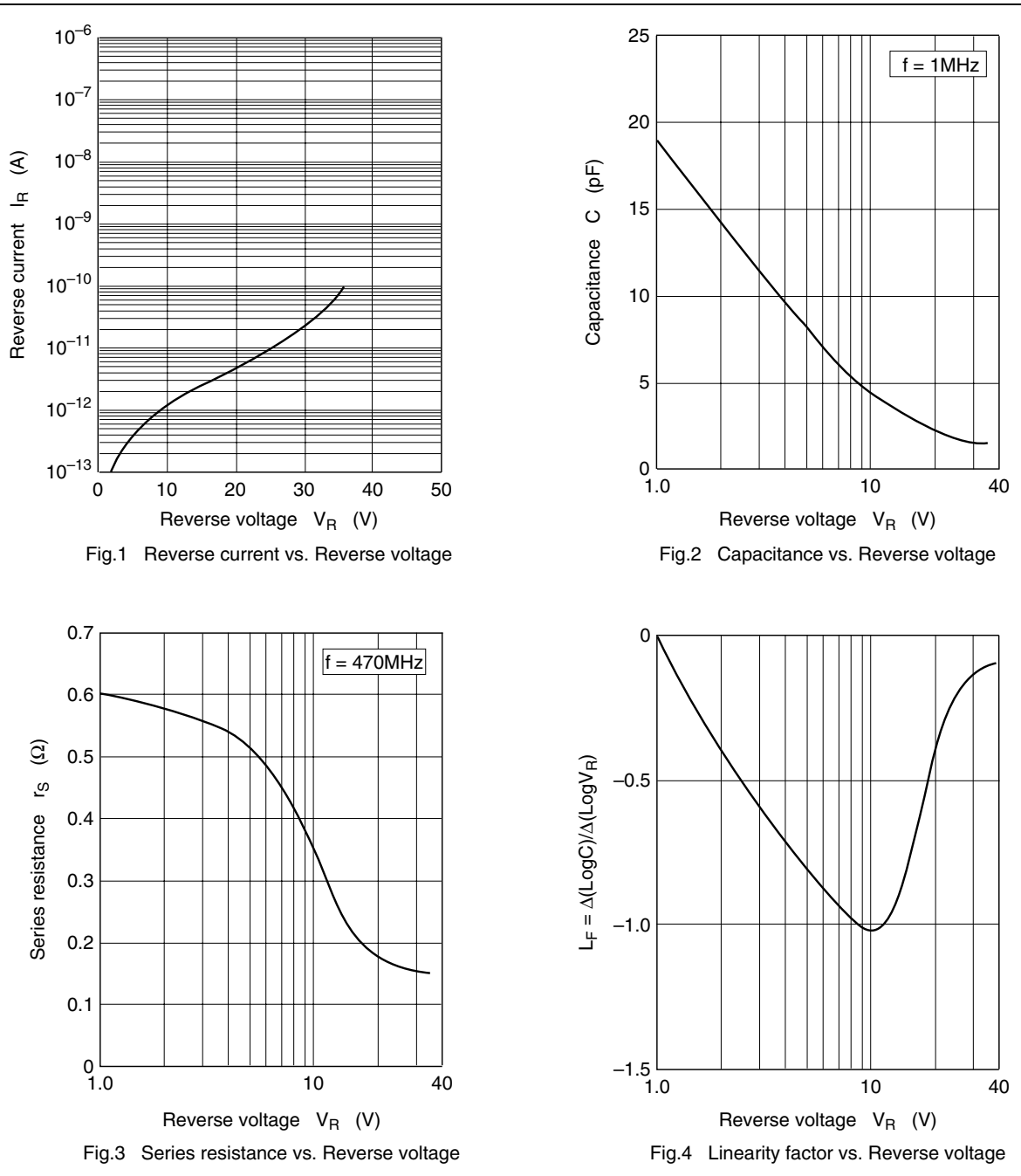
(Ta = 25°C)

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,

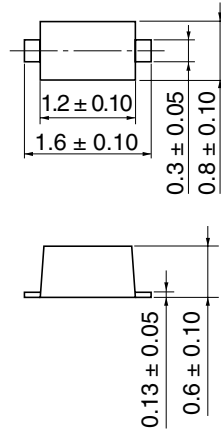
$$\Delta C/C = \frac{(C_{\max} - C_{\min})}{C_{\min}} \times 100 (\%)$$

Main Characteristic



Package Dimensions

As of January, 2003  
Unit: mm



Package Code	UFP
JEDEC	—
JEITA	Conforms
Mass (reference value)	0.0016 g

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

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