

# HVC202A

# Variable Capacitance Diode for UHF/VHF tuner

REJ03G0095-0200Z

(Previous: ADE-208-405A)

Rev.2.00

Sep.23.2003

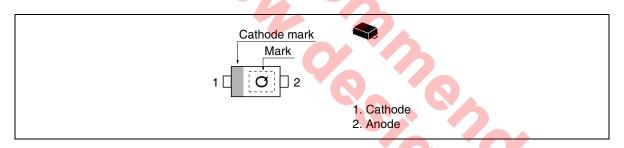
#### **Features**

- Low series resistance and good C-V linearity.
- Ultra small Flat Package (UFP) is suitable for surface mount design.

# **Ordering Information**

Type No.	Laser <mark>Mar</mark> k	Package Code
HVC202A	Q	UFP

#### **Pin Arrangement**



### **Absolute Maximum Ratings**

 $(Ta = 25^{\circ}C)$ 

Item	Symbol	Value	Unit
Reverse voltage	$V_{R}$	34	V
Junction temperature	Tj	125	°C
Storage temperature	Tstg	-55 to +125	°C

# **Electrical Characteristics**

 $(Ta = 25^{\circ}C)$ 

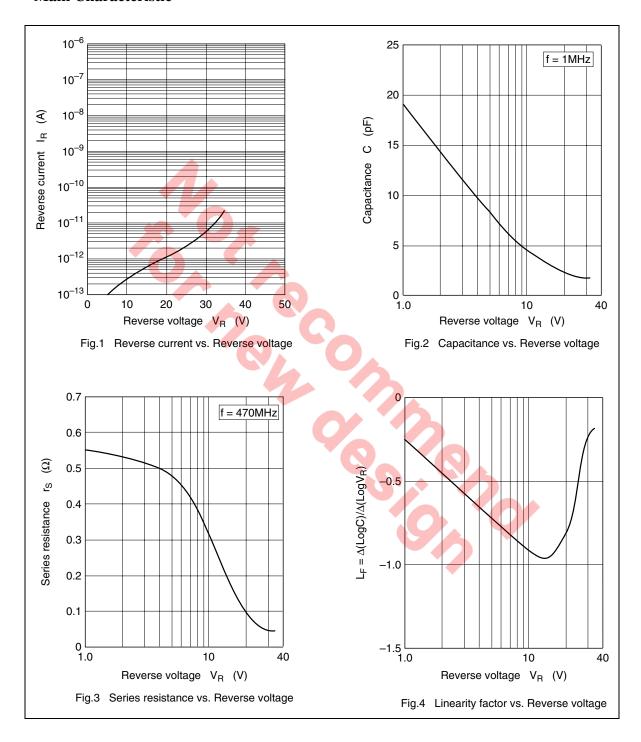
Item	Symbol	Min	Тур	Max	Unit	Test Condition
Reverse current	I <sub>R1</sub>	_	-	10	nA	V <sub>R</sub> = 32 V
	I <sub>R2</sub>	<u> </u>	+	100		V <sub>R</sub> = 32 V, Ta = 60°C
Capacitance	C <sub>2</sub>	14.11	_	16.47	pF	V <sub>R</sub> = 2 V, f = 1 MHz
	C <sub>25</sub>	2.06	_	2.35		V <sub>R</sub> = 25 V, f = 1 MHz
Capacitance ratio	n	6.20		_		C <sub>2</sub> /C <sub>25</sub>
Series resistance	r <sub>s</sub>	_	3/	0.57	Ω	V <sub>R</sub> = 5 V, f = 470 MHz
Matching error	ΔC/C *1	_	_	2.00	%	V <sub>R</sub> = 2 to 25 V, f = 1 MHz

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

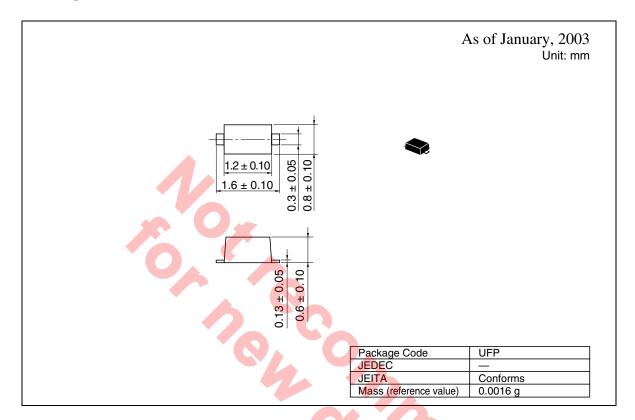
$$\Delta C/C = \frac{(Cmax - Cmin)}{Cmin} \times 100 \text{ (\%)}$$



#### **Main Characteristic**



# **Package Dimensions**



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

Keep safety first in your circuit designs!

Reep sately lins; in your circuit designs, and it is a sately line. The sately lines in your circuit designs, and it is a lawys the possibility that trouble may occur with them. Trouble with semiconductors may lead to personal nijury, fire or property damage.

Remember to give due consideration to safety when making your circuit designs, with appropriate measures such as (i) placement of substitutive, auxiliary circuits, (ii) use of nonflammable material or (iii) prevention against any malfunction or mishap.

Notes regarding these materials

1. These materials are intended as a reference to assist our customers in the selection of the Renesas Technology Corp. product best suited to the customer's application; they do not convey any license under any intellectual property rights, or any other rights, belonging to Renesas Technology Corp. or a third party.

2. Renesas Technology Corp. assumes no responsibility for any damage, or infringement of any third-party's rights, originating in the use of any product data, diagrams, charts, programs, algorithms, or circuit application examples contained in these materials.

3. All information contained in these materials, including product data, diagrams, charts, programs and algorithms represents information on products at the time of publication of these materials, and are subject to change by Renesas Technology Corp. without notice due to product improvements or other reasons. It is therefore recommended that customers contact Renesas Technology Corp. or an authorized Renesas Technology Corp. product distributor for the latest product information described here may contain technical inaccuracies or typographical errors.

Renesas Technology Corp. assumes no responsibility for any damage, liability, or other loss resident product distributor for the latest product home page (http://www.renesas.com).

4. When using any or all of the information contained in these materials, including product data, diagrams, charts, programs, and algorithms, please be sure to evaluate all information as a total system before making a final decision on the applicability of the information and products. Renesas Technology Corp. assumes no responsibility for any damage, liability or other loss resulting from the information on products. Renesas Technology Corp. assumes no responsibility for any damage, liability or other loss resulting from the information on products. Renesas Technology Corp. assumes no responsibility for any damage, liability or other loss resulting from the information contained

- use.

  6. The prior written approval of Renesas Technology Corp. is necessary to reprint or reproduce in whole or in part these materials.

  7. If these products or technologies are subject to the Japanese export control restrictions, they must be exported under a license from the Japanese government and cannot be imported into a country other than the approved destination.

  Any diversion or reexport contrary to the export control laws and regulations of Japan and/or the country of destination is prohibited.

  8. Please contact Renesas Technology Corp. for further details on these materials or the products contained therein.



**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. <03> 0213-0200, Fax. <03> 0270-0001					