

To our customers,

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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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HVC202B

Variable Capacitance Diode for UHF/VHF tuner

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

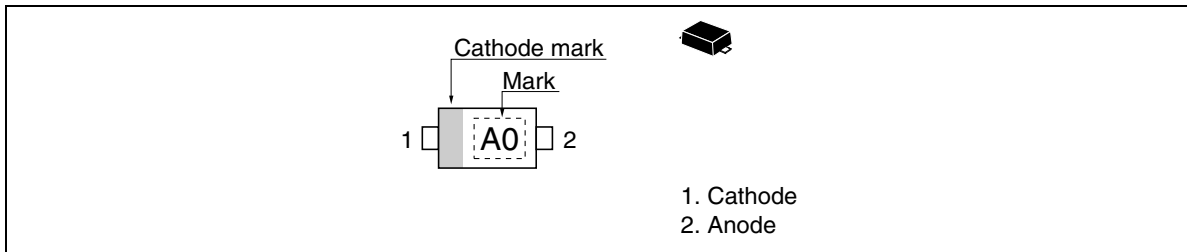
Features

- 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

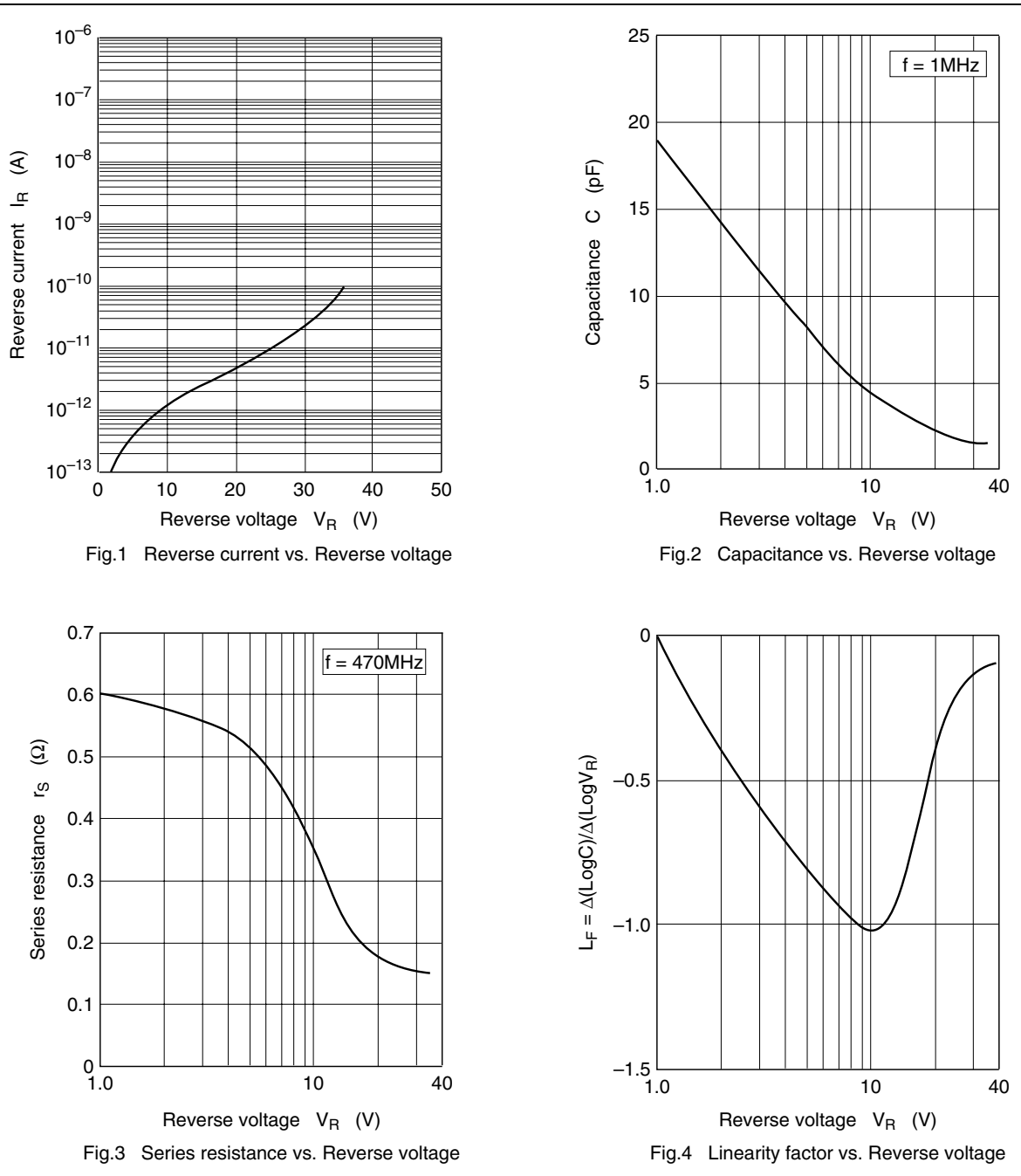
(Ta = 25°C)

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	Ω	$V_R = 5\text{ V}, f = 470\text{ MHz}$
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,

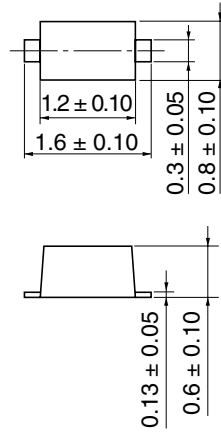
$$\Delta C/C = \frac{(C_{max} - C_{min})}{C_{min}} \times 100 (\%)$$

Main Characteristic



Package Dimensions

As of January, 2003
Unit: mm



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

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