To our customers,

Old Company Name in Catalogs and Other Documents

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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

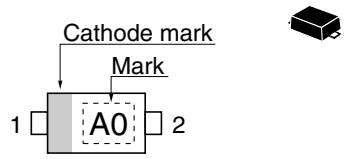
Features

- Low matching error. (ΔC/C = 1.80% max)
- High capacitance ratio. (n = 6.30 min)
- Low series resistance. (rs = 0.57 Ω 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



1. Cathode
2. Anode

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 kΩ

Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	I_{R1}	—	—	10	nA	V_R = 30 V
	I_{R2}	—	—	100		V_R = 30 V, Ta = 60°C
Capacitance	C_2	14.15	—	15.75	pF	V_R = 2 V, f = 1 MHz
	C_{25}	2.06	—	2.35		V_R = 25 V, f = 1 MHz
Capacitance ratio	n	6.30	—	—	—	C_2/C_{25}
Series resistance	r_s	—	—	0.57	Ω	V_R = 5 V, f = 470 MHz
Matching error	ΔC/C *1	—	—	1.80	%	V_R = 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.
Calculate Matching Error,

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

Main Characteristic

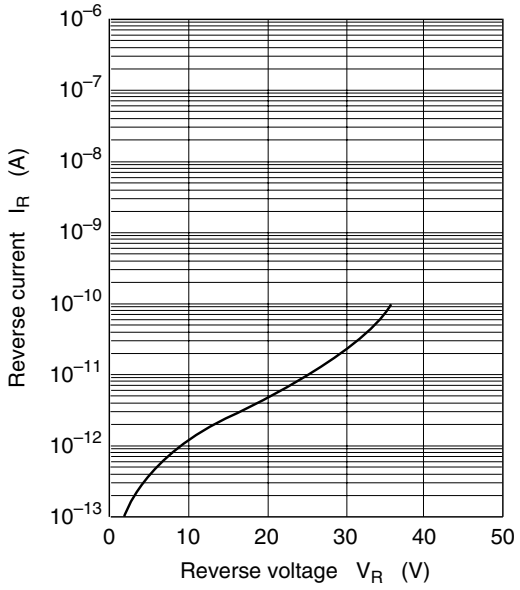


Fig.1 Reverse current vs. Reverse voltage

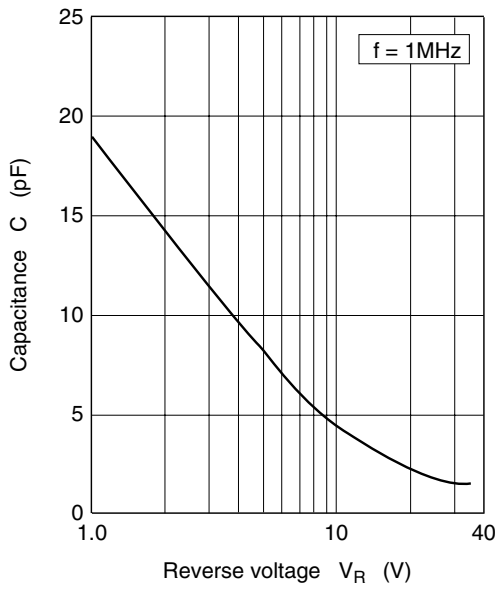


Fig.2 Capacitance vs. Reverse voltage

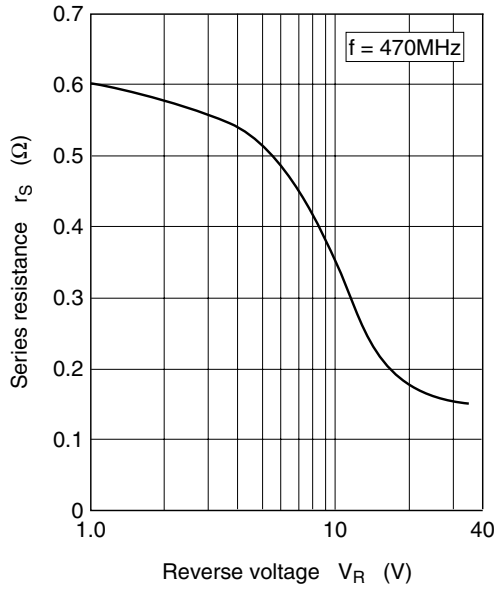


Fig.3 Series resistance vs. Reverse voltage

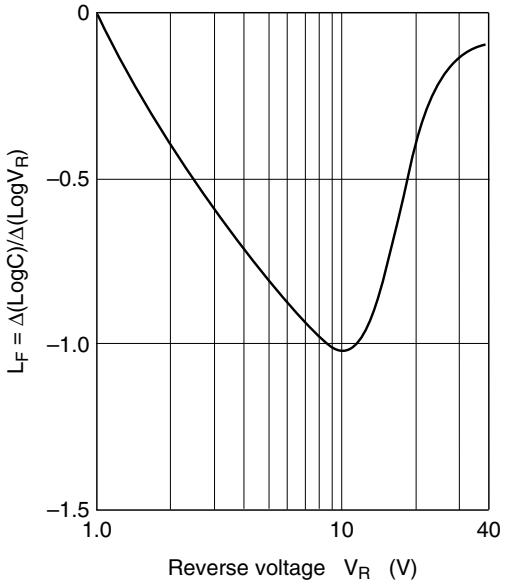
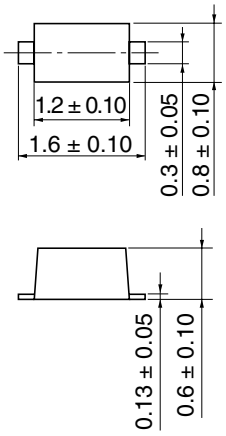


Fig.4 Linearity factor vs. Reverse voltage

Package Dimensions

As of January, 2003
Unit: mm



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

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