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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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HVC326C

Variable Capacitance Diode for UHF/VHF tuner

REJ03G0050-0100Z

Rev.1.00

Jul.07.2003

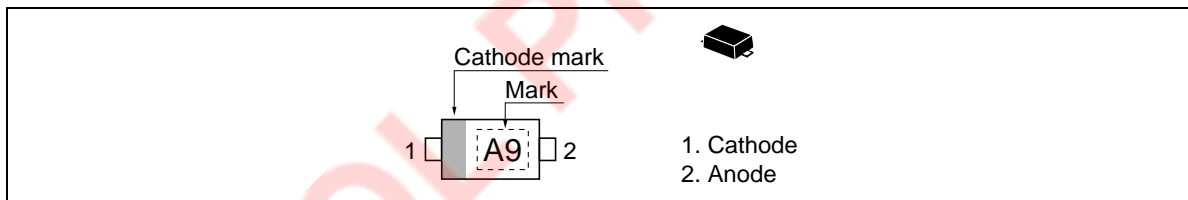
Features

- Low voltage type (tuning voltage 1 to 10 V), it is suitable for ET without DC/DC converter.
- Low series resistance. ($r_s = 0.6 \Omega$ max) and good C-V linearity.
- Ultra small Flat Package (UFP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Code
HVC326C	A9	UFP

Pin Arrangement



Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V _R	15	V
Junction temperature	T _j	125	°C
Storage temperature	T _{stg}	-55 to +125	°C

Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	I _{R1}	—	—	10	nA	V _R = 10 V
	I _{R2}	—	—	100		V _R = 10 V, Ta = 60°C
Capacitance	C ₁	13.0	—	16.0	pF	V _R = 1 V, f = 1 MHz
	C ₁₀	2.0	—	2.3		V _R = 10 V, f = 1 MHz
Capacitance ratio	n	6.0	—	—	—	C ₁ /C ₁₀
Series resistance	r _s	—	—	0.6	Ω	V _R = 5 V, f = 470 MHz
Matching error	ΔC/C ^{*1}	—	—	2.0	%	V _R = 1 to 10 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,

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

Main Characteristic

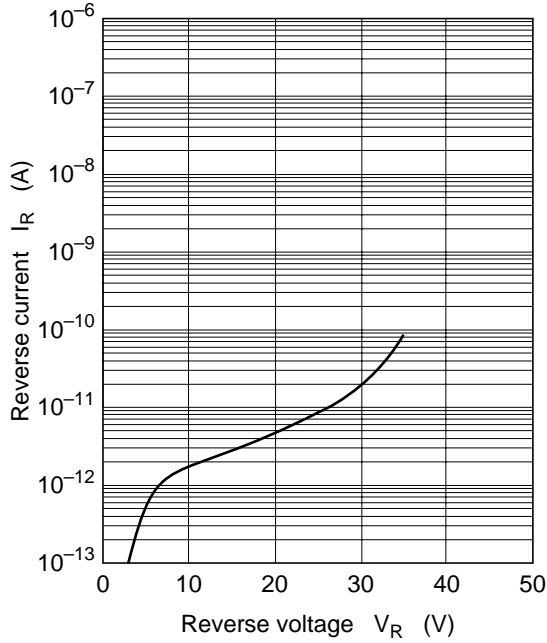


Fig.1 Reverse current vs. Reverse voltage

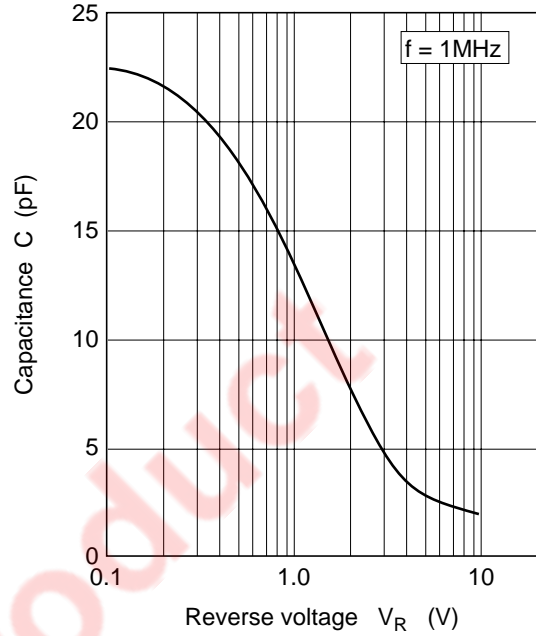


Fig.2 Capacitance vs. Reverse voltage

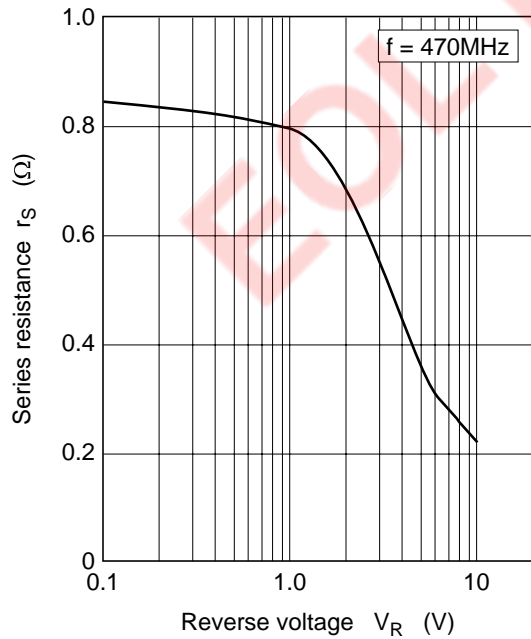


Fig.3 Series resistance vs. Reverse voltage

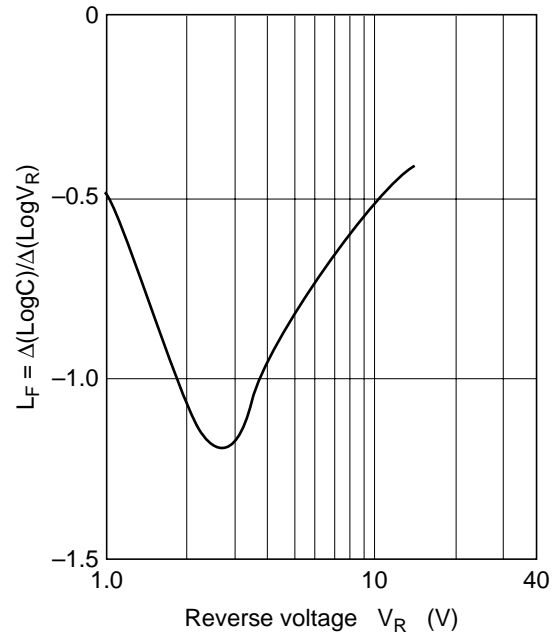
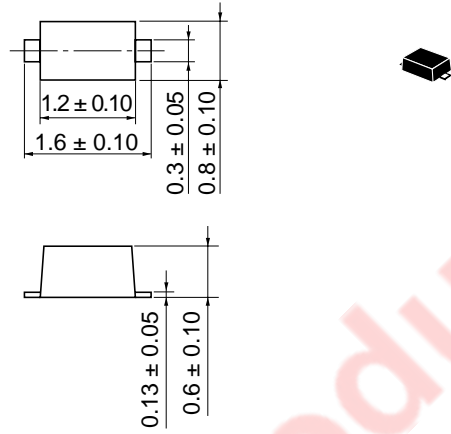


Fig.4 Linearity factor vs. Reverse voltage

Package Dimensions

As of January, 2003
Unit: mm



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

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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