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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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HVC375B

Variable Capacitance Diode for VCO

REJ03G0064-0100Z
(Previous: ADE-208-625)
Rev.1.00
Jul.24.2003

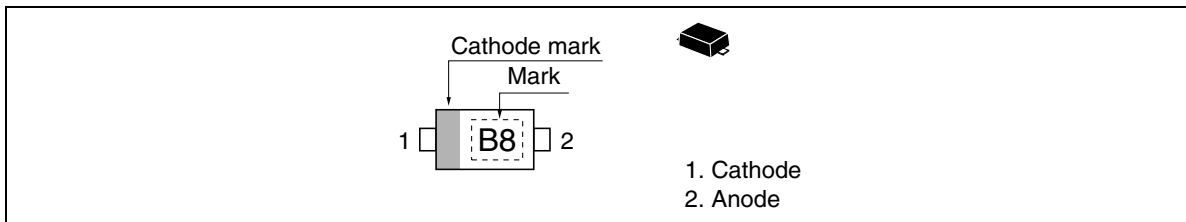
Features

- Narrow terminal Capacitance deviation.
- Low series resistance. ($r_s = 1.1 \Omega$ max)
- Good C-V linearity.
- Ultra small Flat Package (UFP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Code
HVC375B	B8	UFP

Pin Arrangement



Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V_R	10	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	$V_R = 10\text{ V}$
	I_{R2}	—	—	100		$V_R = 10\text{ V}, T_a = 60^\circ\text{C}$
Capacitance	C_1	15.0	—	16.5	pF	$V_R = 1\text{ V}, f = 1\text{ MHz}$
	C_3	5.0	—	6.0		$V_R = 3\text{ V}, f = 1\text{ MHz}$
	C_4	3.3	—	4.0		$V_R = 4\text{ V}, f = 1\text{ MHz}$
Capacitance ratio	n	4.0	—	—	—	C_1 / C_4
Series resistance	r_s	—	—	1.1	Ω	$V_R = 2\text{ V}, f = 470\text{ MHz}$

Main Characteristic

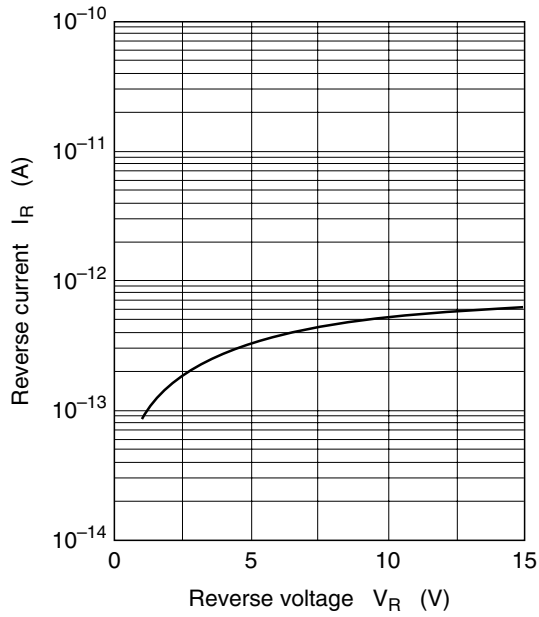


Fig.1 Reverse current vs. Reverse voltage

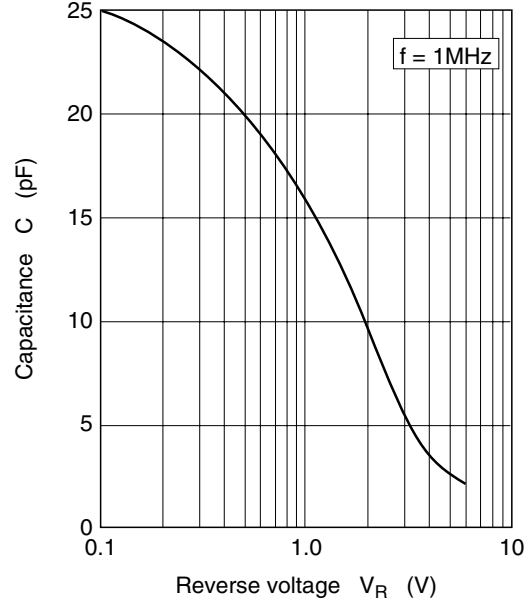


Fig.2 Capacitance vs. Reverse voltage

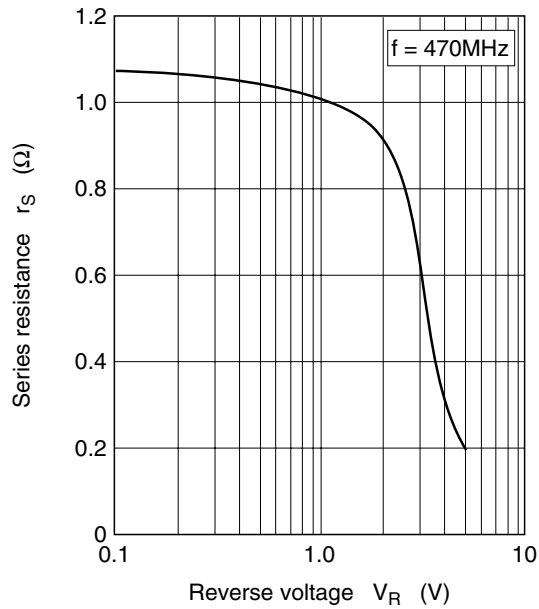


Fig.3 Series resistance vs. Reverse voltage

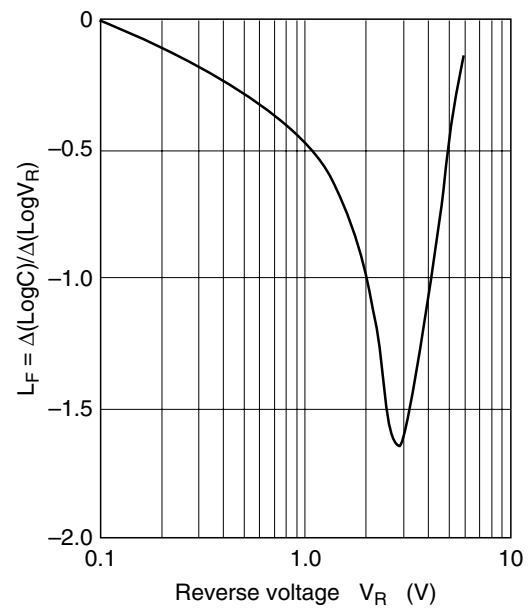
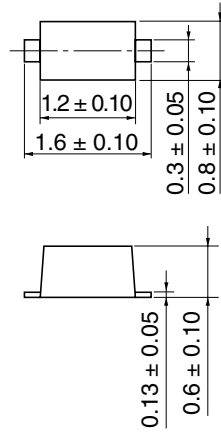


Fig.4 Linearity factor vs. Reverse voltage

Package Dimensions

As of January, 2003
Unit: mm



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

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