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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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Not recommended
for new design

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HVC381B

Variable Capacitance Diode for VCO

REJ03G0494-0100
 (Previous: ADE-208-990)
 Rev.1.00
 Jan 19, 2005

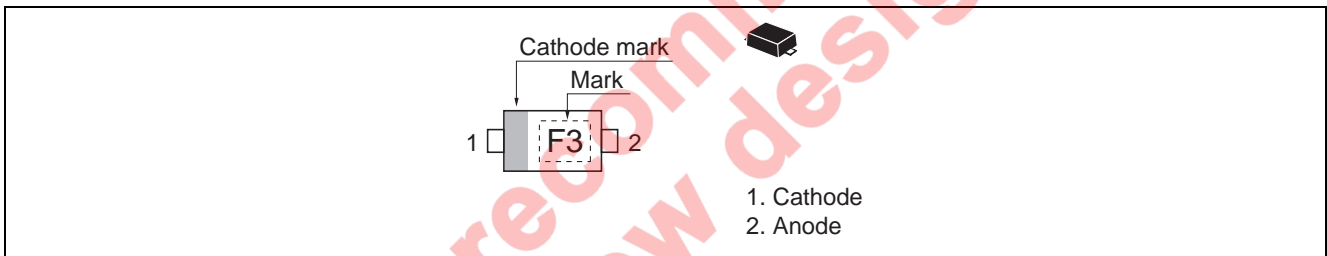
Features

- High capacitance ratio. ($n = 1.65$ min)
- Low series resistance. ($r_s = 0.50 \Omega$ max)
- Ultra Small Flat Lead Package (UFP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Code
HVC381B	F3	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	$V_R = 15\text{ V}$
	I_{R2}	—	—	100		$V_R = 15\text{ V}, T_a = 60^\circ\text{C}$
Capacitance	C_1	10.0	—	11.0	pF	$V_R = 1\text{ V}, f = 1\text{ MHz}$
	C_3	5.80	—	6.40		$V_R = 3\text{ V}, f = 1\text{ MHz}$
Capacitance ratio	n	1.65	—	—	—	C_1 / C_3
Series resistance	r_s	—	—	0.50	Ω	$V_R = 1\text{ V}, f = 470\text{ MHz}$

Not recommended for new design

Main Characteristic

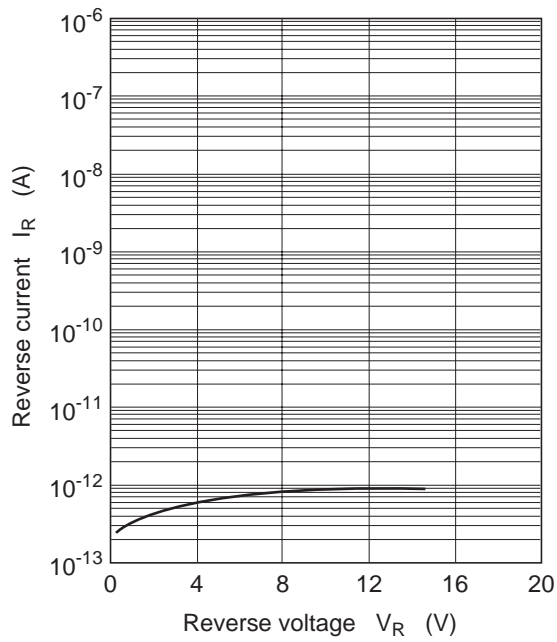


Fig.1 Reverse current vs. Reverse voltage

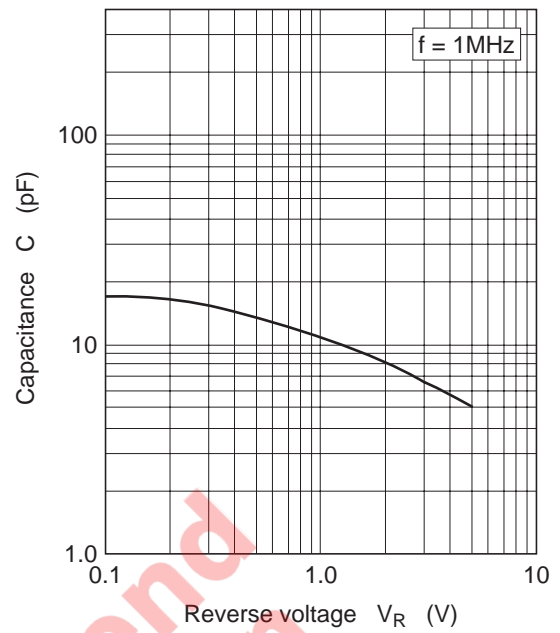


Fig.2 Capacitance vs. Reverse voltage

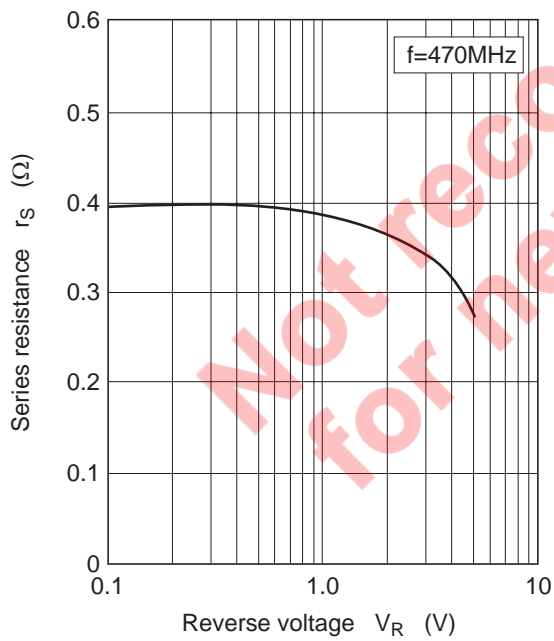


Fig.3 Series resistance vs. Reverse voltage

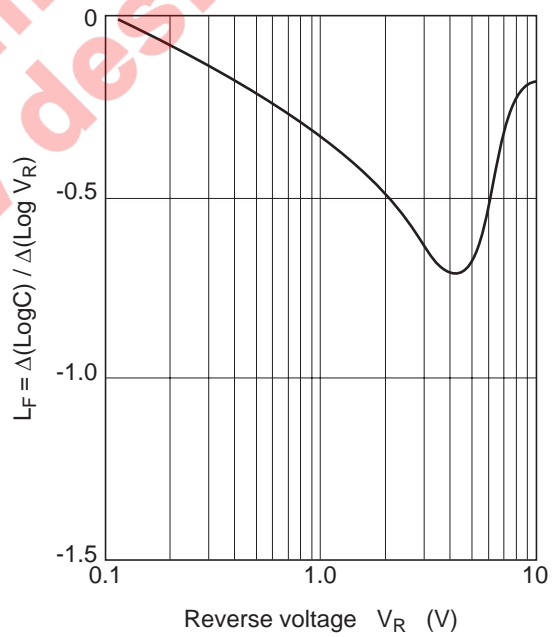
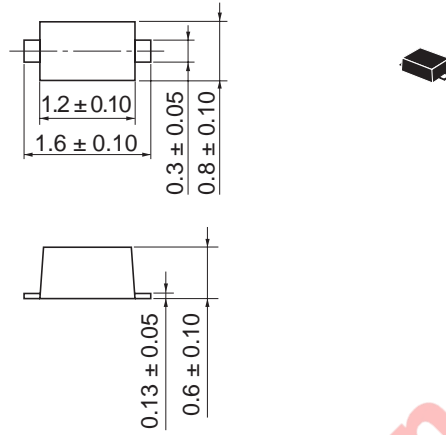


Fig.4 L_F vs. Reverse voltage

Package Dimensions

As of January, 2003
Unit: mm



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

Not recommended
for new designs

Keep safety first in your circuit designs!

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