

To our customers,

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## Old Company Name in Catalogs and Other Documents

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Renesas Electronics website: <http://www.renesas.com>

April 1<sup>st</sup>, 2010  
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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## HVC358B

### Variable Capacitance Diode for VCO

REJ03G0085-0100Z  
(Previous: ADE-208-418)  
Rev.1.00  
Sep.17.2003

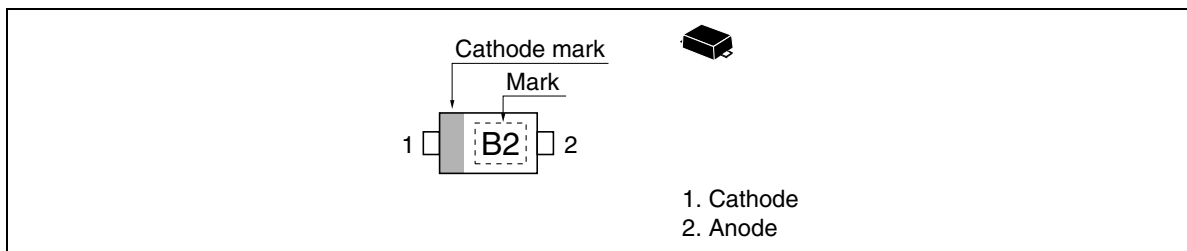
#### Features

- High capacitance ratio. ( $n = 2.2$  min)
- Low series resistance. ( $r_s = 0.4 \Omega$  max)
- Good C-V linearity.
- Ultra small Flat Package (UFP) is suitable for surface mount design.

#### Ordering Information

Type No.	Laser Mark	Package Code
HVC358B	B2	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		$V_R = 15\text{ V}$
Capacitance	$C_1$	19.5	—	21.0	pF	$V_R = 1\text{ V}, f = 1\text{ MHz}$
	$C_4$	8.0	—	9.3		$V_R = 4\text{ V}, f = 1\text{ MHz}$
Capacitance ratio	n	2.2	—	—	—	$C_1/C_4$
Series resistance	$r_s$	—	—	0.4	$\Omega$	$V_R = 1\text{ V}, f = 470\text{ MHz}$

Main Characteristic

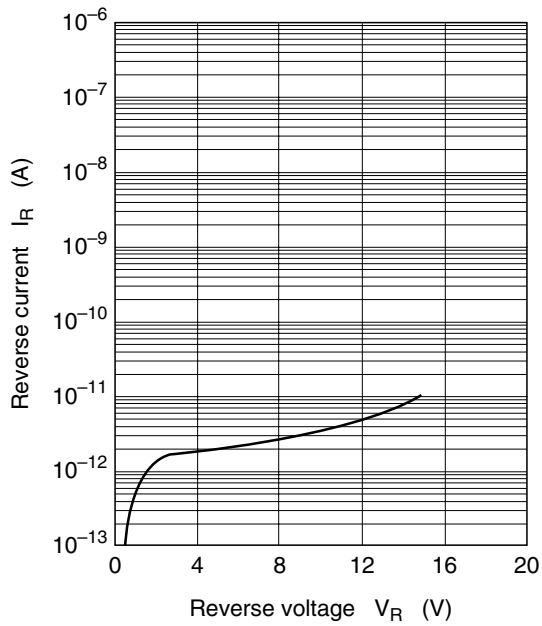


Fig.1 Reverse current vs. Reverse voltage

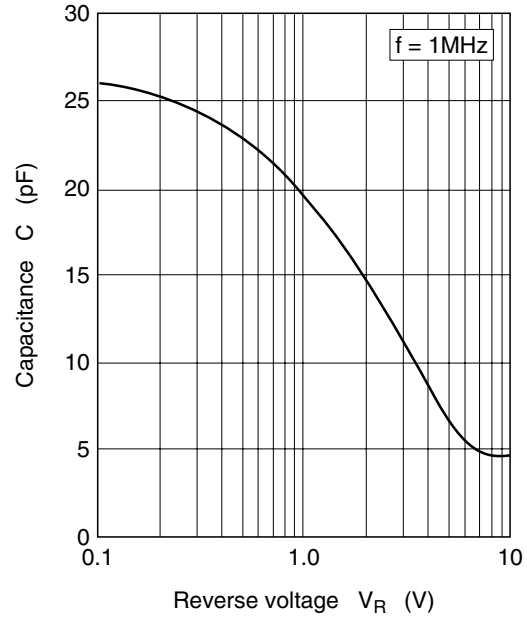


Fig.2 Capacitance vs. Reverse voltage

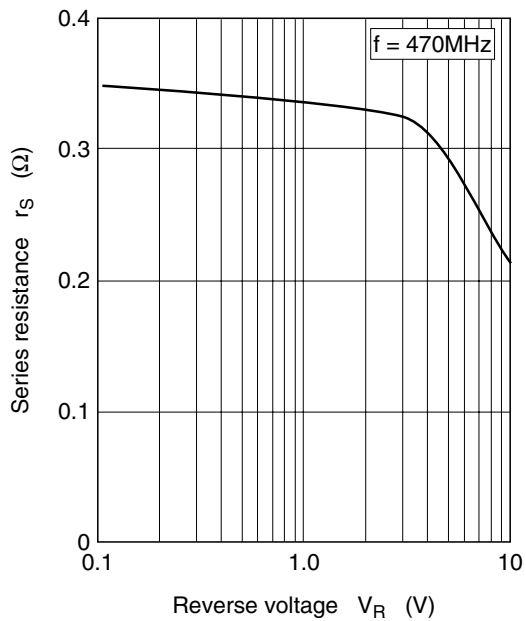


Fig.3 Series resistance vs. Reverse voltage

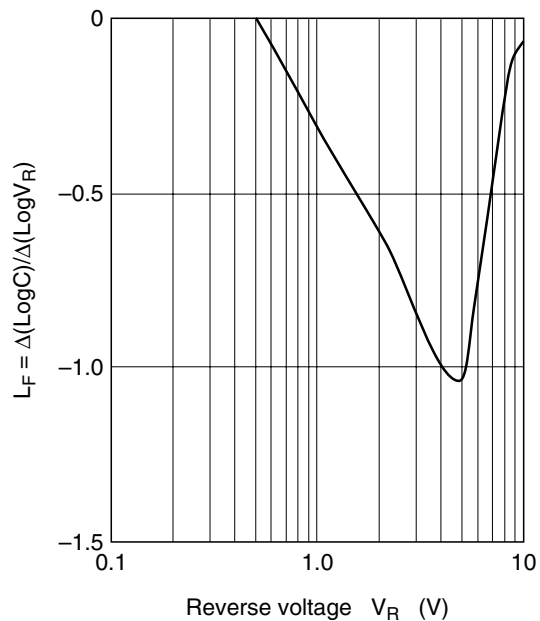
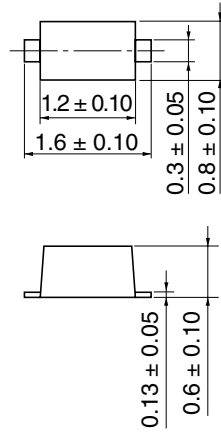


Fig.4 Linearity factor vs. Reverse voltage

Package Dimensions

As of January, 2003  
Unit: mm



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

## RENESAS Technology Corp. Sales Strategic Planning Div. Nippon Bldg., 2-6-2, Ohte-machi, Chiyoda-ku, Tokyo 100-0004, Japan

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450 Holger Way, San Jose, CA 95134-1368, U.S.A  
Tel: <1> (408) 382-7500 Fax: <1> (408) 382-7501

**Renesas Technology Europe Limited.**  
Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5FH, United Kingdom  
Tel: <44> (1628) 585 100, Fax: <44> (1628) 585 900

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Tel: <49> (89) 380 70 0, Fax: <49> (89) 929 30 11

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Tel: <852> 2265-6688, Fax: <852> 2375-6836

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Tel: <886> (2) 2715-2888, Fax: <886> (2) 2713-2999

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26/F., Ruijin Building, No.205 Maoming Road (S), Shanghai 200020, China  
Tel: <86> (21) 6472-1001, Fax: <86> (21) 6415-2952

**Renesas Technology Singapore Pte. Ltd.**  
1, Harbour Front Avenue, #06-10, Keppel Bay Tower, Singapore 098632  
Tel: <65> 6213-0200, Fax: <65> 6278-8001