

## HVC375B

### Variable Capacitance Diode for VCO

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

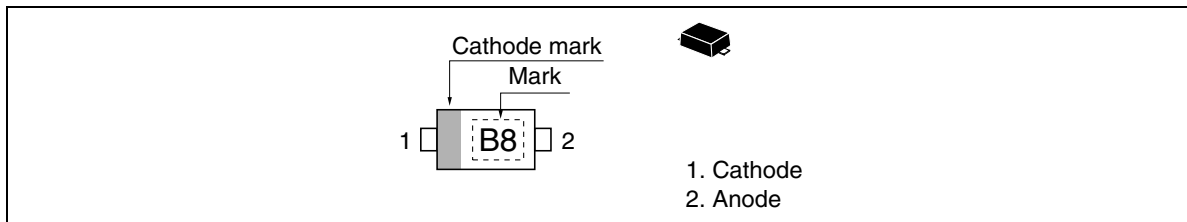
#### Features

- 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	$\Omega$	$V_R = 2\text{ V}, f = 470\text{ MHz}$

Main Characteristic

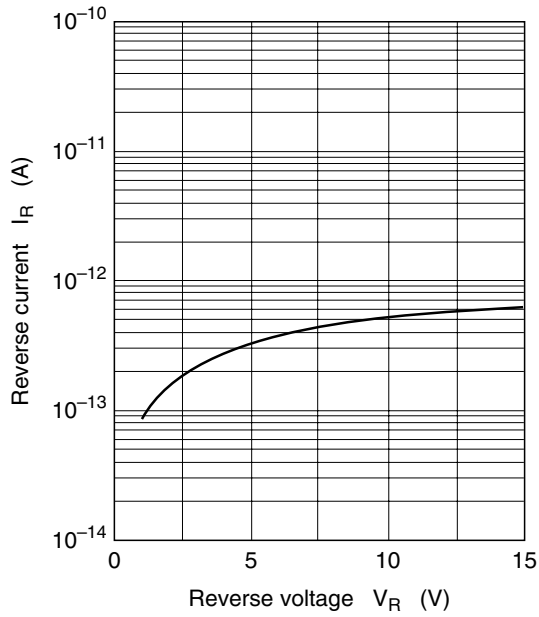


Fig.1 Reverse current vs. Reverse voltage

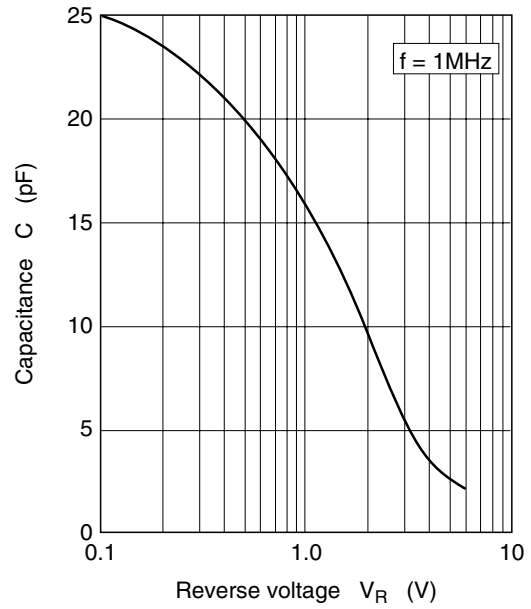


Fig.2 Capacitance vs. Reverse voltage

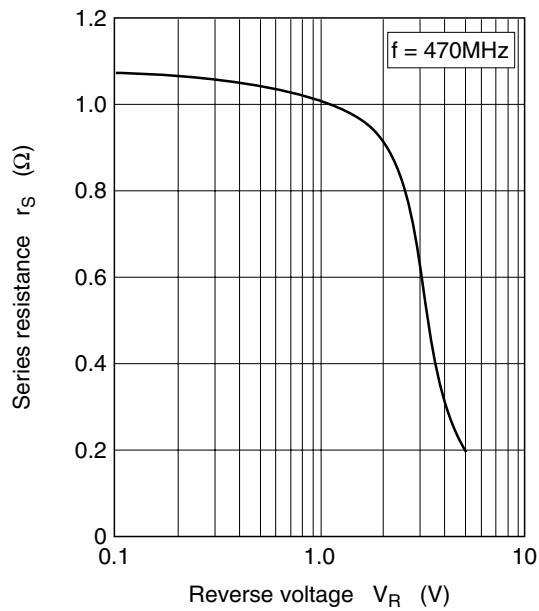


Fig.3 Series resistance vs. Reverse voltage

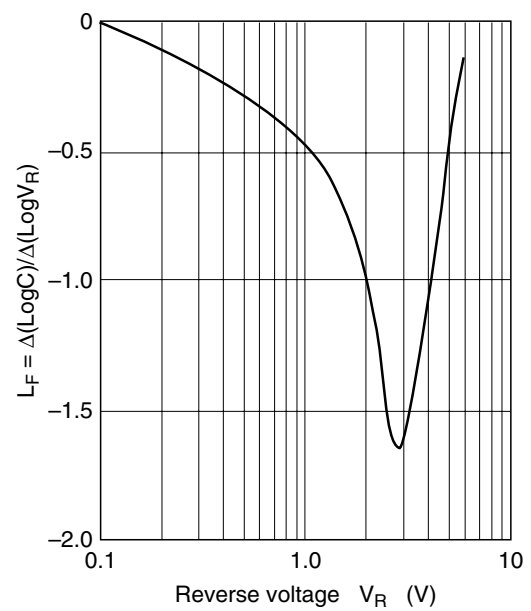
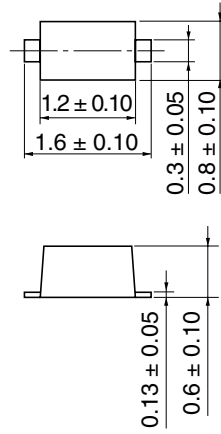


Fig.4 Linearity factor vs. Reverse voltage

Package Dimensions

As of January, 2003  
Unit: mm



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

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**Keep safety first in your circuit designs!**

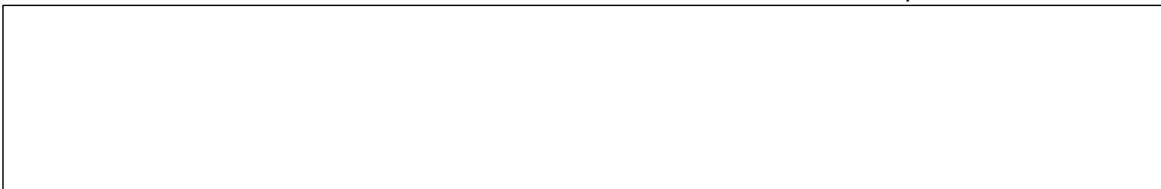
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