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# HVC375B

Variable Capacitance Diode for VCO

# HITACHI

ADE-208-625 (Z)

Rev.0

Feb. 1, 1999

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## Features

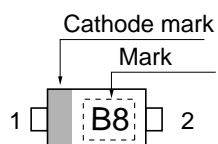
- Low tolerance.
- Low series resistance. ( $r_s=1.1\Omega$  max)
- Good C-V linearity.
- Ultra small Flat Package (UFP) is suitable for surface mount design.

## Ordering Information

Type No.	Laser Mark	Package Code
HVC375B	B8	UFP

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## Outline



1. Cathode  
2. Anode

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## HVC375B

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### 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	$V_R = 10V$
	$I_{R2}$	—	—	100		$V_R = 10V, T_a = 60\text{ °C}$
Capacitance	$C_1$	15.0	—	16.5	pF	$V_R = 1V, f = 1\text{ MHz}$
	$C_3$	5.0	—	6.0		$V_R = 3V, f = 1\text{ MHz}$
	$C_4$	3.3	—	4.0		$V_R = 4V, f = 1\text{ MHz}$
Capacitance ratio	n	4.0	—	—	—	$C_1 / C_4$
Series resistance	$r_s$	—	—	1.1	$\Omega$	$V_R = 2V, f = 470\text{ MHz}$

## Main Characteristic

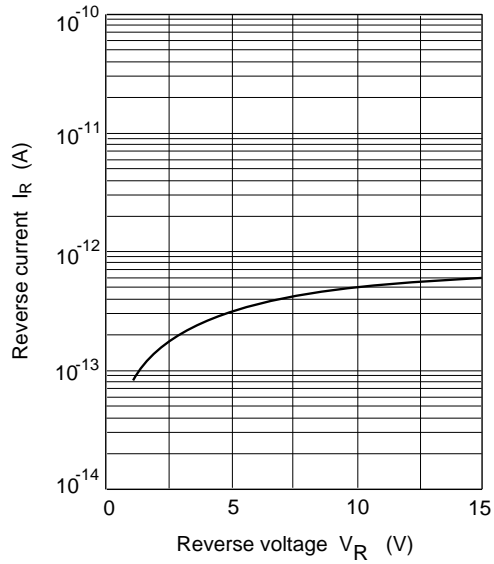


Fig.1 Reverse current Vs. Reverse voltage

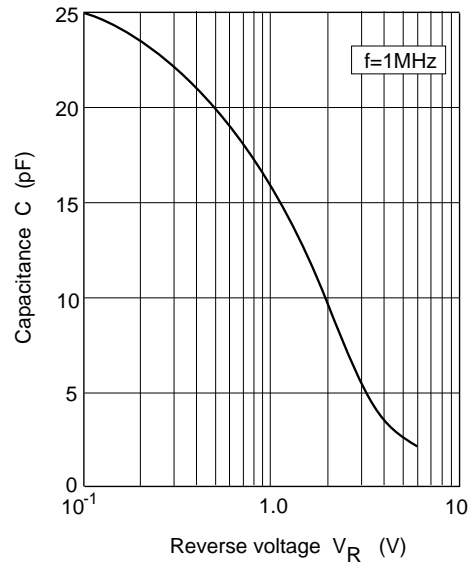


Fig.2 Capacitance Vs. Reverse voltage

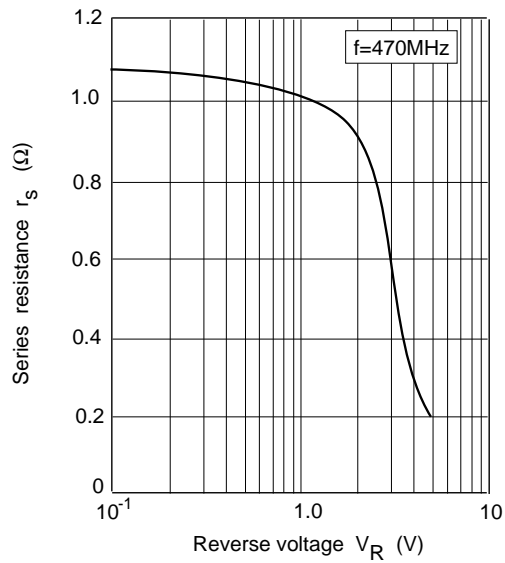


Fig.3 Series resistance Vs. Reverse voltage

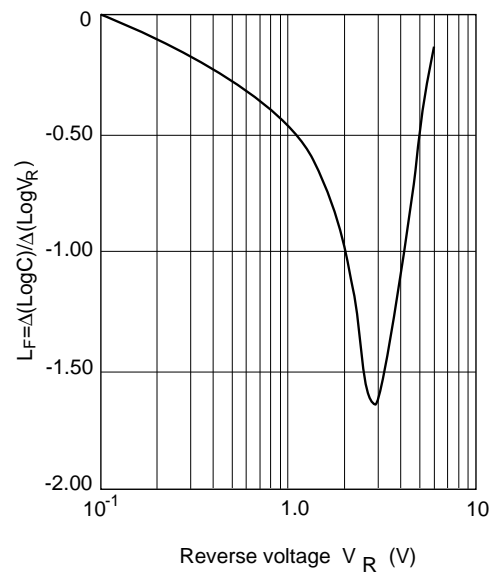
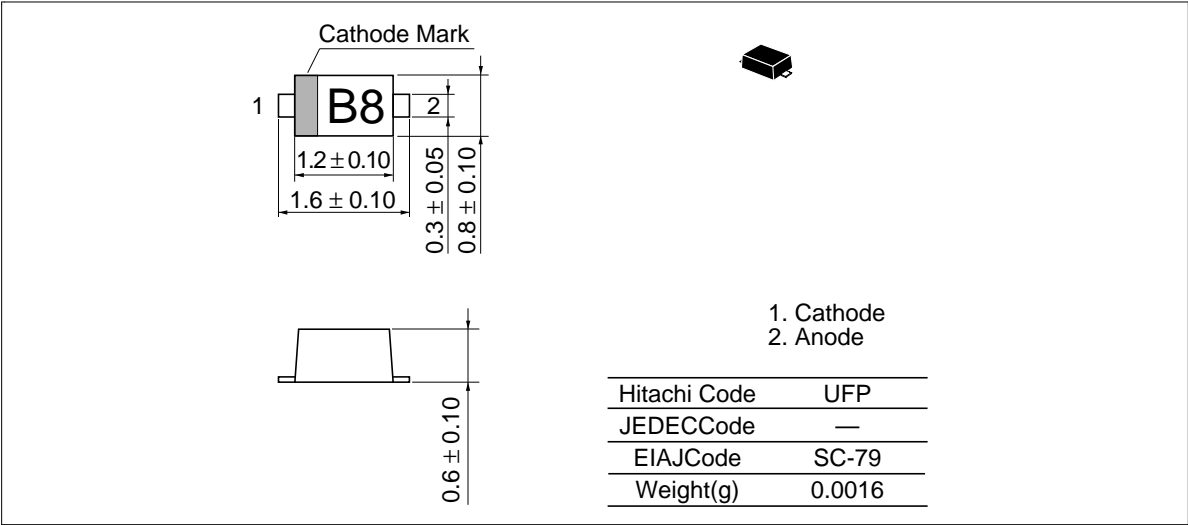


Fig.4 Linearity factor Vs. Reverse voltage

**HVC375B**

**Package Dimensions (Unit : mm)**



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