

# HVC376B

## Variable Capacitance Diode for VCO

REJ03G0091-0200

Rev.2.00

Sep 05, 2005

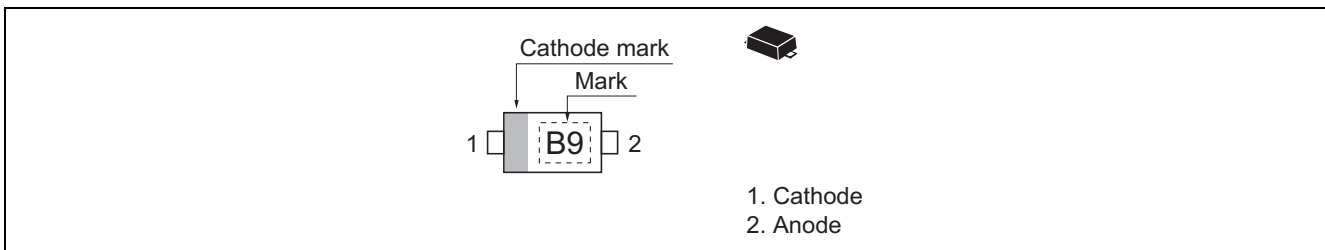
### Features

- High capacitance ratio ( $n = 4.30$  min) and good C-V linearity.
- High Q circuit can be composed due to low series resistance. ( $r_s = 0.8 \Omega$  max)
- To be usable at low voltage.
- Ultra small Flat Lead Package (UFP) is suitable for surface mount design.

### Ordering Information

Type No.	Laser Mark	Package Name	Package Code (Previous Code)
HVC376B	B9	UFP	PWSF0002ZA-A (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	$V_R = 10\text{ V}$
	$I_{R2}$	—	—	100		$V_R = 10\text{ V}, T_a = 60^\circ\text{C}$
Capacitance	$C_{0.2}$	39.5	—	44.5	pF	$V_R = 0.2\text{ V}, f = 1\text{ MHz}$
	$C_1$	25.0	—	28.5		$V_R = 1\text{ V}, f = 1\text{ MHz}$
	$C_{2.3}$	8.75	—	12.05		$V_R = 2.3\text{ V}, f = 1\text{ MHz}$
	$C_4$	4.80	—	6.80		$V_R = 4\text{ V}, f = 1\text{ MHz}$
Capacitance ratio	$n_1$	4.30	—	—	—	$C_1/C_4$
	$n_2$	3.55	—	—	—	$C_{0.2}/C_{2.3}$
Series resistance	$r_s$	—	—	0.8	$\Omega$	$V_R = 1\text{ V}, f = 470\text{ MHz}$

Main Characteristic

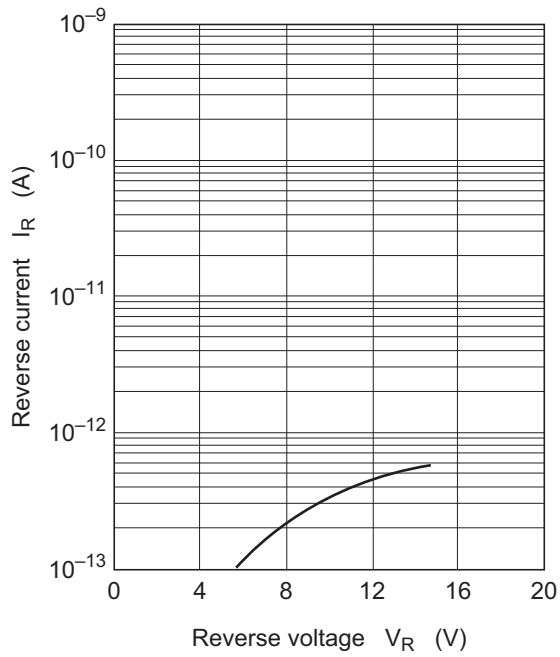


Fig.1 Reverse current vs. Reverse voltage

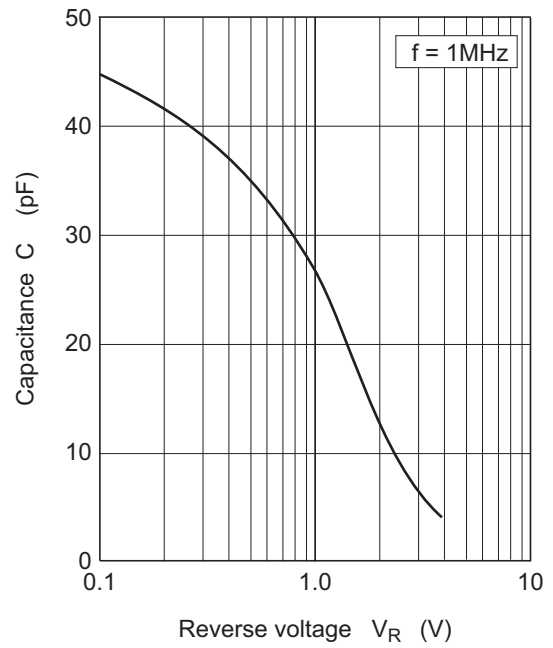


Fig.2 Capacitance vs. Reverse voltage

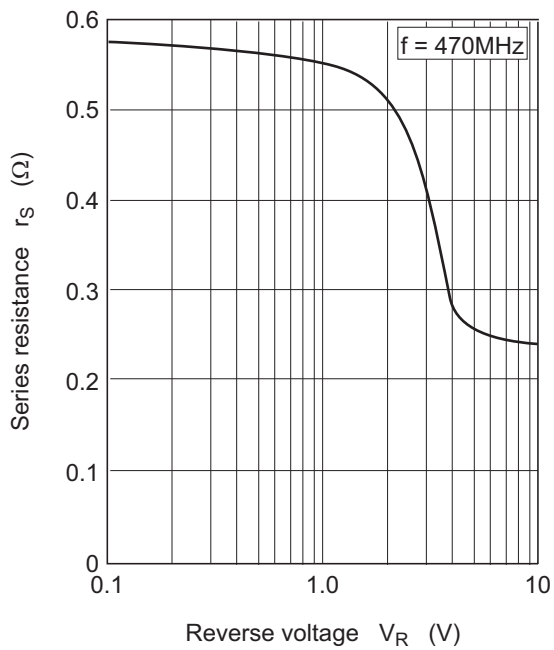
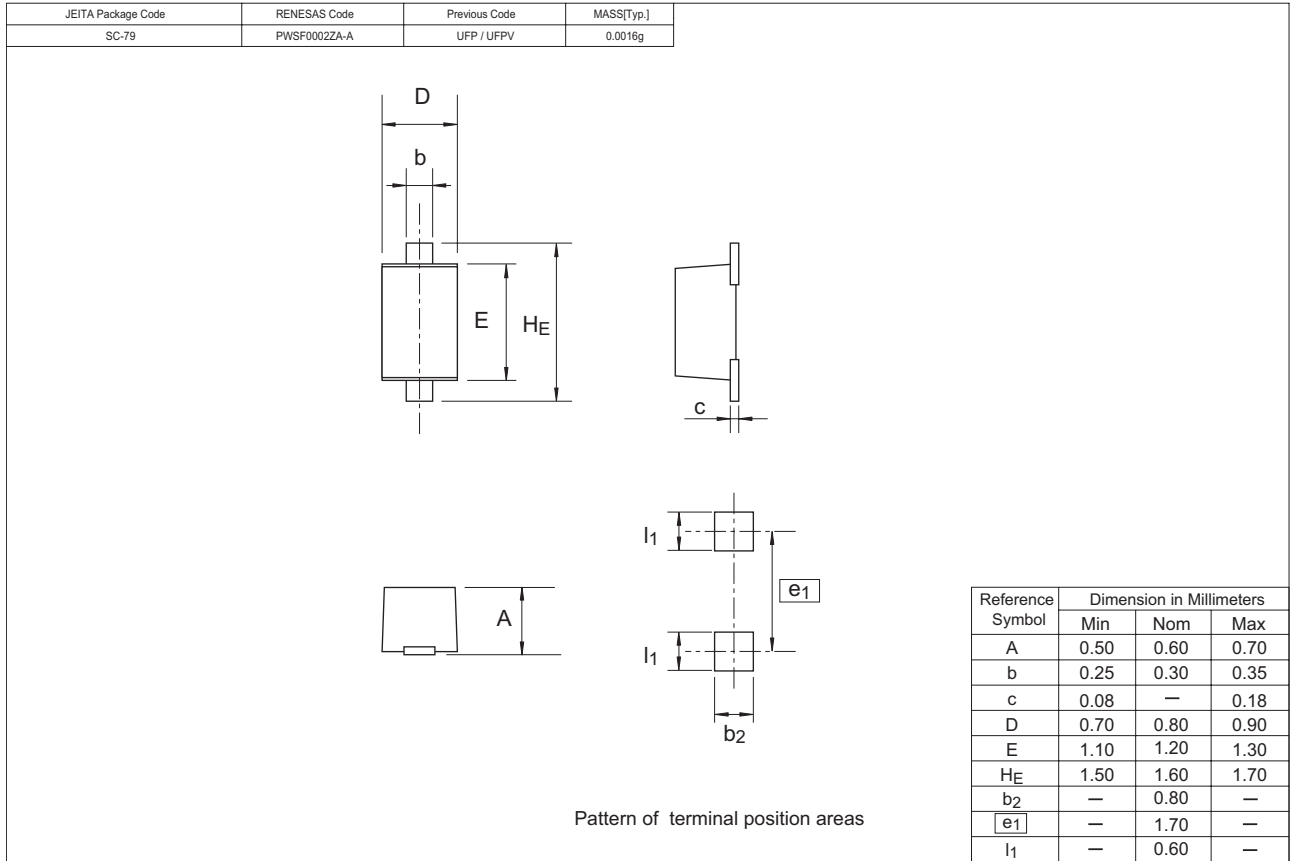


Fig.3 Series resistance vs. Reverse voltage

### Package Dimensions



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