
HVC396C

Variable Capacitance Diode for VCO

HITACHI

ADE-208-1560 (Z)

Rev.0
Jan. 2003

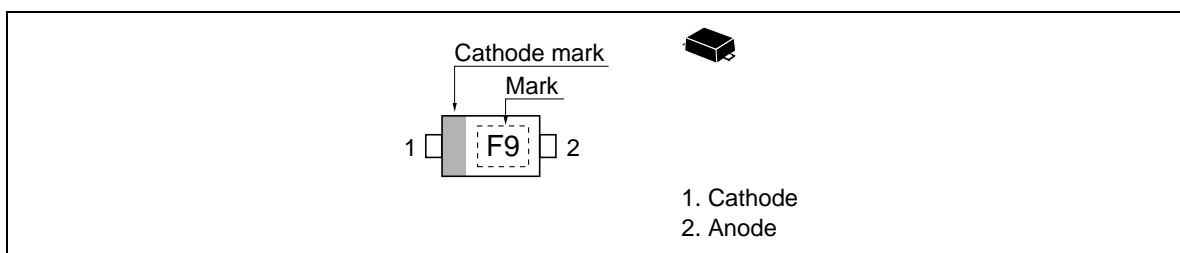
Features

- High capacitance ratio. ($n = 2.30$ min)
- Good linearity of C-V curve.
- Ultra small Flat Package (UFP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Code
HVC396C	F9	UFP

Pin Arrangement



HVC396C

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V_R	10	V
Junction temperature	Tj	125	°C
Storage temperature	Tstg	-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}	—	—	50		$V_R = 10\text{ V}, T_a = 60^\circ\text{C}$
Capacitance	C_1	14.5	—	17.5	pF	$V_R = 1\text{ V}, f = 1\text{ MHz}$
	C_4	5.20	—	6.5		$V_R = 4\text{ V}, f = 1\text{ MHz}$
Capacitance ratio	n	2.30	—	—	—	C_1/C_4
Series resistance	r_s	—	—	0.4	Ω	$V_R = 1\text{ V}, f = 470\text{ MHz}$

Main Characteristic

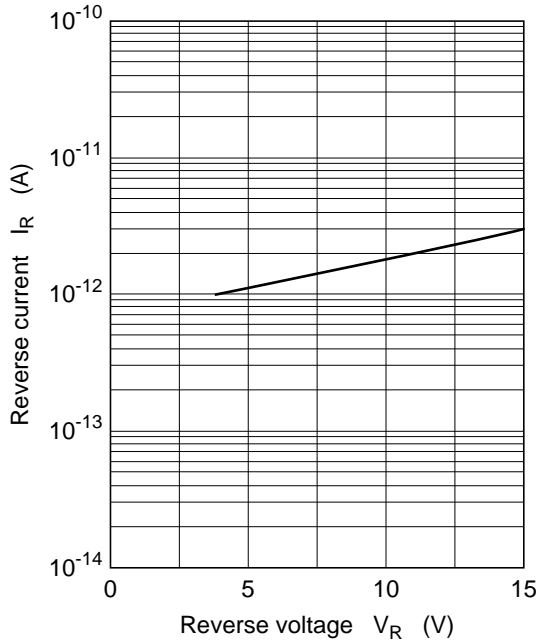


Fig.1 Reverse current vs. Reverse voltage

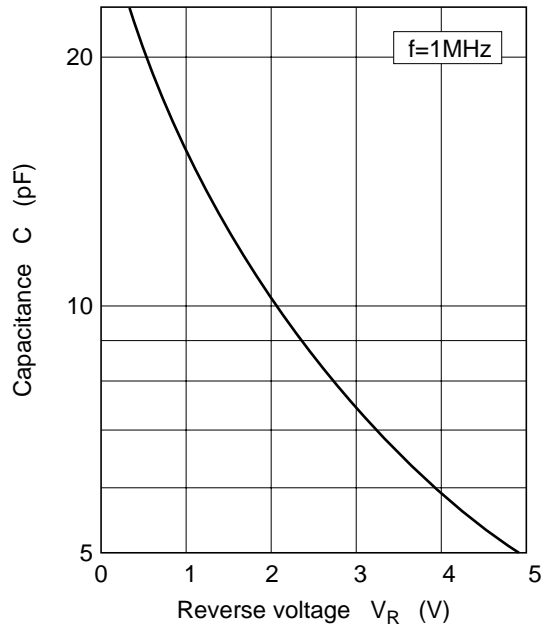


Fig.2 Capacitance vs. Reverse voltage

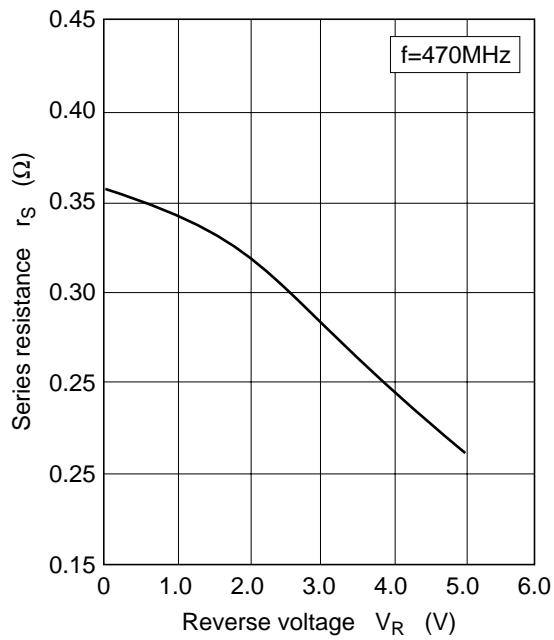


Fig.3 Series resistance vs. Reverse voltage

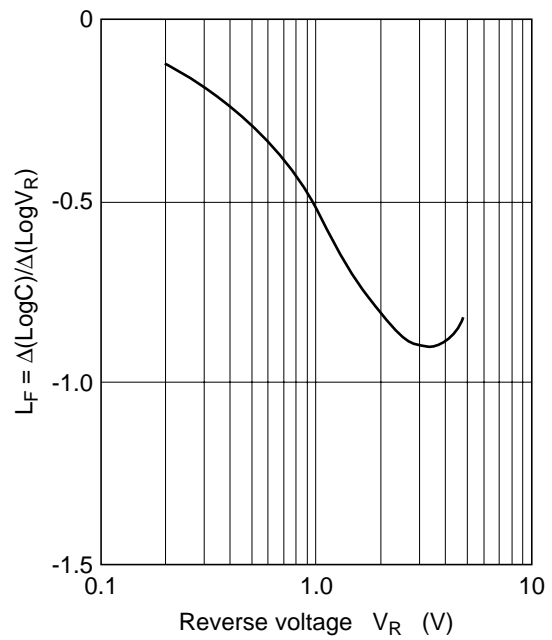
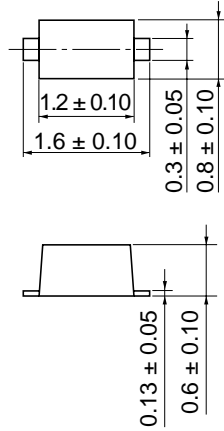


Fig.4 Linearity factor vs. Reverse voltage

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Package Dimensions

As of July, 2002
Unit: mm



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

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