
HVC397C

Variable Capacitance Diode for VCO

HITACHI

ADE-208-1561 (Z)

Rev.0
Jan. 2003

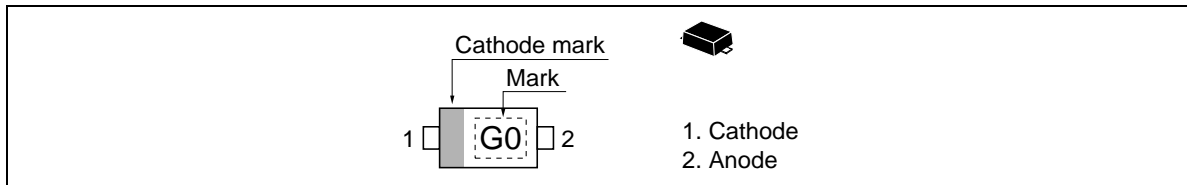
Features

- High capacitance ratio. ($n = 2.9$ min)
- Ultra small Flat Package (UFP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Code
HVC397C	G0	UFP

Pin Arrangement



HVC397C

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V_R	15	V
Junction temperature	T_J	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	27.0	—	28.5	pF	$V_R = 1\text{ V}$, $f = 1\text{ MHz}$
	C_2	18.0	—	20.0		$V_R = 2\text{ V}$, $f = 1\text{ MHz}$
	C_4	6.8	—	8.5		$V_R = 4\text{ V}$, $f = 1\text{ MHz}$
Capacitance ratio	n_1	1.3	—	—	—	C_1 / C_2
	n_2	2.9	—	—	—	C_1 / C_4
Series resistance	r_s	—	—	1.2	Ω	$V_R = 4\text{ V}$, $f = 470\text{ MHz}$

Main Characteristic

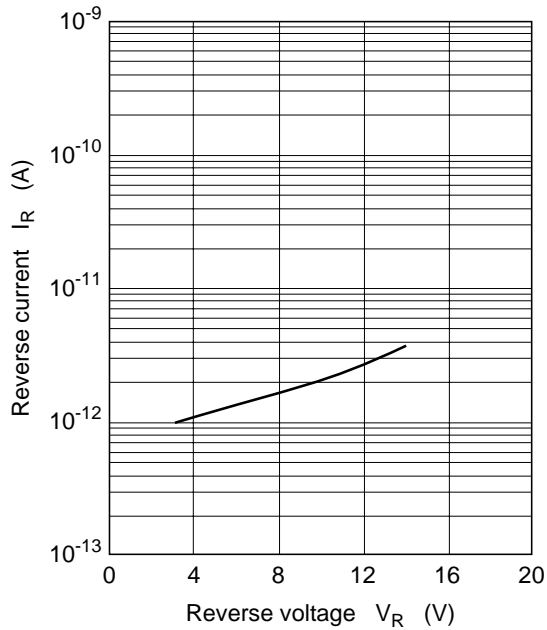


Fig.1 Reverse current vs. Reverse voltage

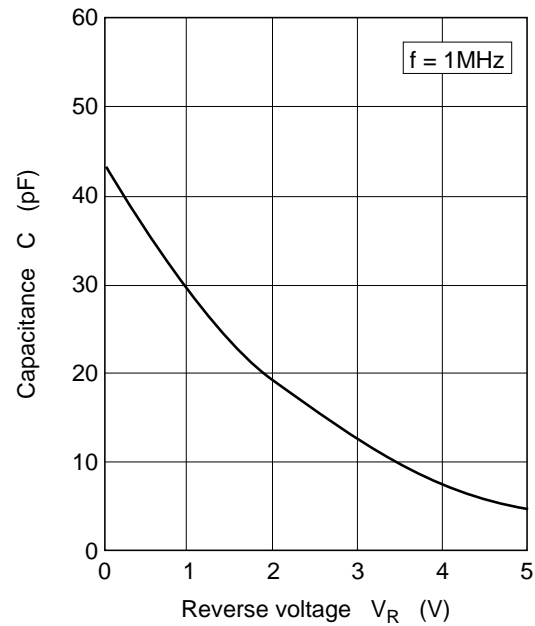


Fig.2 Capacitance vs. Reverse voltage

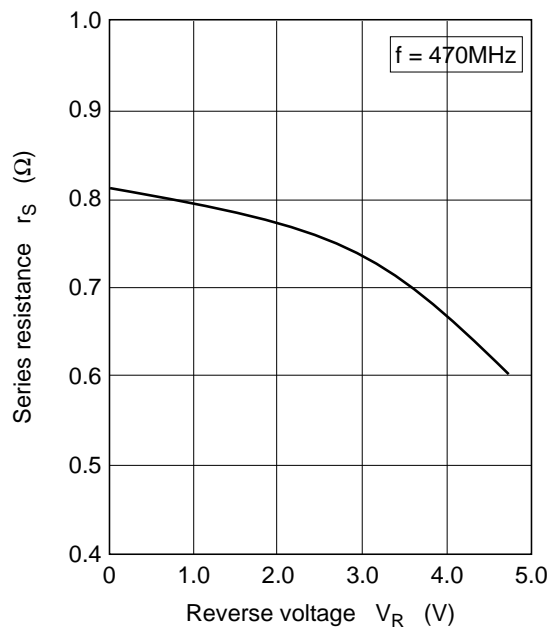


Fig.3 Series resistance vs. Reverse voltage

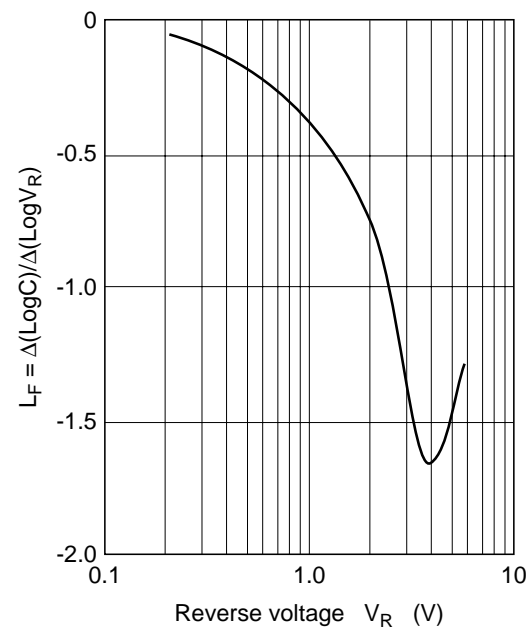
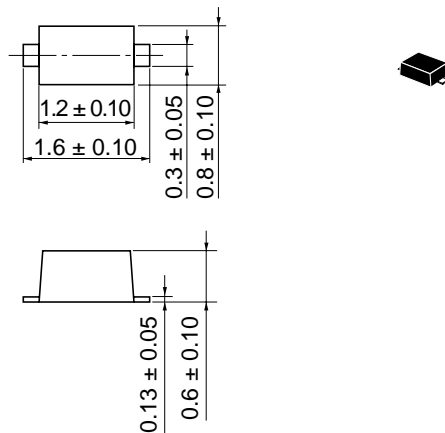


Fig.4 Linearity factor vs. Reverse voltage

HVC397C

Package Dimensions

As of July, 2002
Unit: mm



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

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