

HVC380B

Variable Capacitance Diode for VCO

HITACHI

ADE-208-1125 (Z)

Rev. 0

Apr. 2001

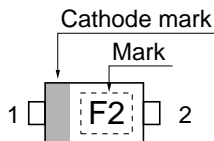
Features

- High capacitance ratio. ($n = 1.70$ min)
- Low series resistance. ($r_s = 0.80 \Omega$ max)
- Ultra small Flat Package (UFP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Code
HVC380B	F2	UFP

Outline



1. Cathode
2. Anode

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Item	Symbol	Value	Unit
Reverse voltage	V_R	15	V
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +125	$^\circ\text{C}$

Electrical Characteristics ($T_a = 25^\circ\text{C}$)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	I_{R1}	—	—	10.0	nA	$V_R = 15\text{ V}$
	I_{R2}	—	—	100		$V_R = 15\text{ V}, T_a = 60^\circ\text{C}$
Capacitance	C_1	2.880	—	3.120	pF	$V_R = 1\text{ V}, f = 1\text{ MHz}$
	C_3	1.660	—	1.795		$V_R = 3\text{ V}, f = 1\text{ MHz}$
	C_4	1.360	—	1.471		$V_R = 4\text{ V}, f = 1\text{ MHz}$
Capacitance ratio	n_1	1.70	—	1.84	—	C_1 / C_3
	n_2	2.08	—	2.25		C_1 / C_4
Series resistance	r_s	—	—	0.80	Ω	$V_R = 1\text{ V}, f = 470\text{ MHz}$

Main Characteristic

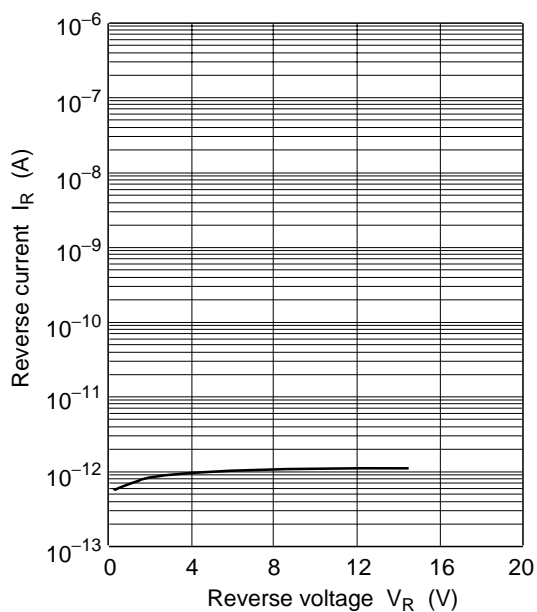


Fig.1 Reverse current vs. Reverse voltage

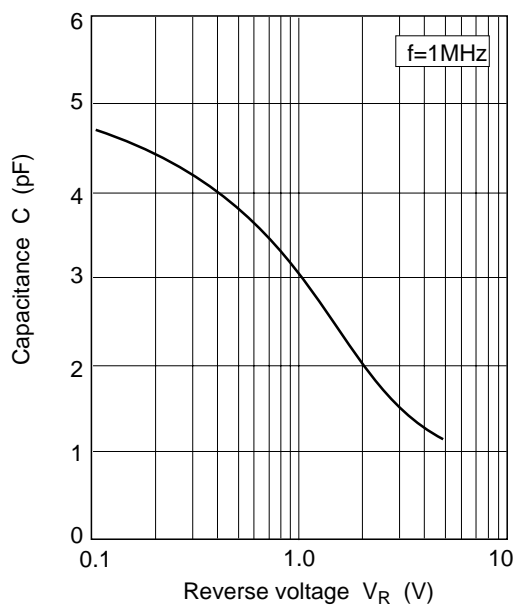


Fig.2 Capacitance vs. Reverse voltage

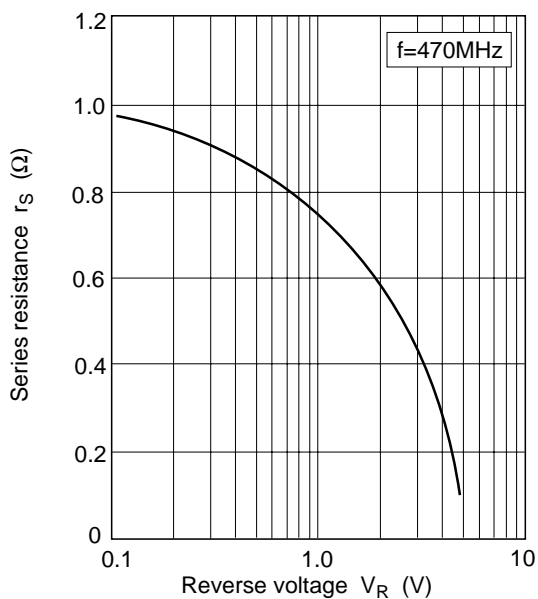


Fig.3 Series resistance vs. Reverse voltage

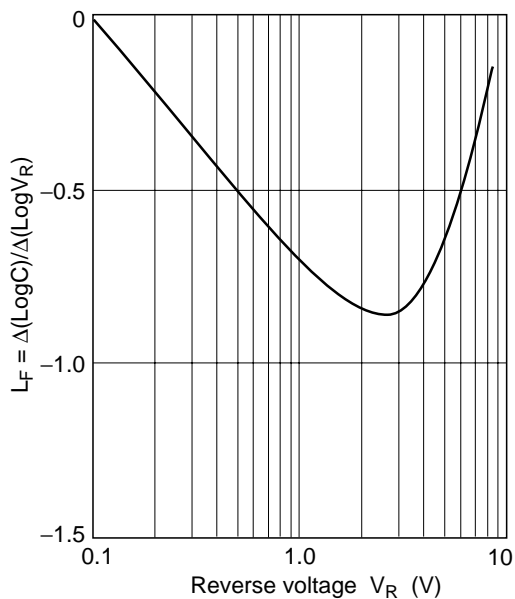
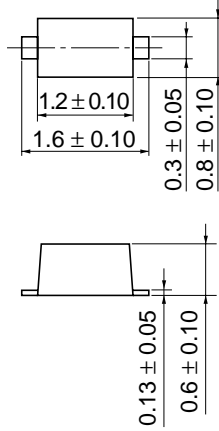


Fig.4 L_F vs. Reverse voltage

Package Dimensions

As of January, 2001
Unit: mm



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

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