

HVC385B

Variable Capacitance Diode for VCO

HITACHI

ADE-208-1403A (Z)

Rev.1
Feb. 2002

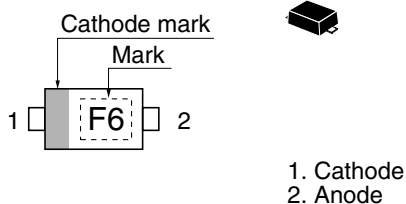
Features

- High capacitance ratio. ($n = 2.43$ min)
- Low series resistance. ($r_s = 0.75 \Omega$ max)
- Ultra small Flat Package (UFP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Code
HVC385B	F6	UFP

Pin Arrangement



Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V_R	15	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}	—	—	100		$V_R = 10\text{ V}, T_a = 60^\circ\text{C}$
Capacitance	$C_{0.5}$	7.20	—	7.70	pF	$V_R = 0.5\text{ V}, f = 1\text{ MHz}$
	$C_{2.5}$	2.70	—	3.20		$V_R = 2.5\text{ V}, f = 1\text{ MHz}$
Capacitance ratio	n	2.43	—	2.57	—	$C_{0.5}/C_{2.5}$
Series resistance	r_s	—	—	0.75	Ω	$V_R = 1\text{ V}, f = 470\text{ MHz}$

Main Characteristic

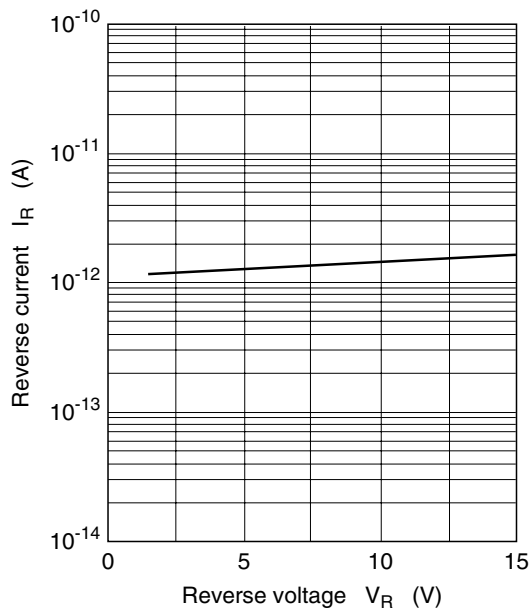


Fig.1 Reverse current vs. Reverse voltage

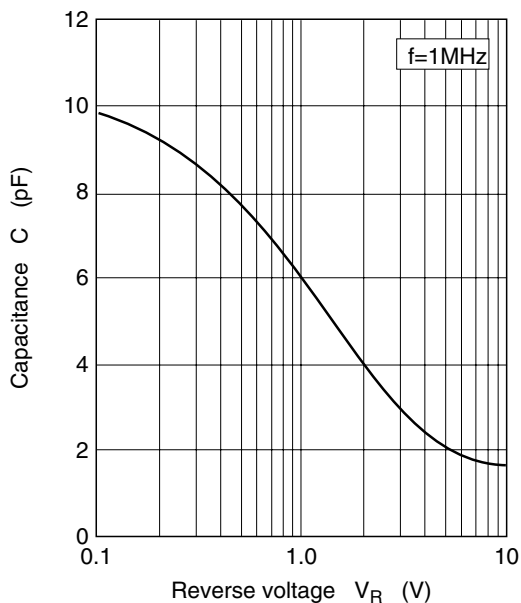


Fig.2 Capacitance vs. Reverse voltage

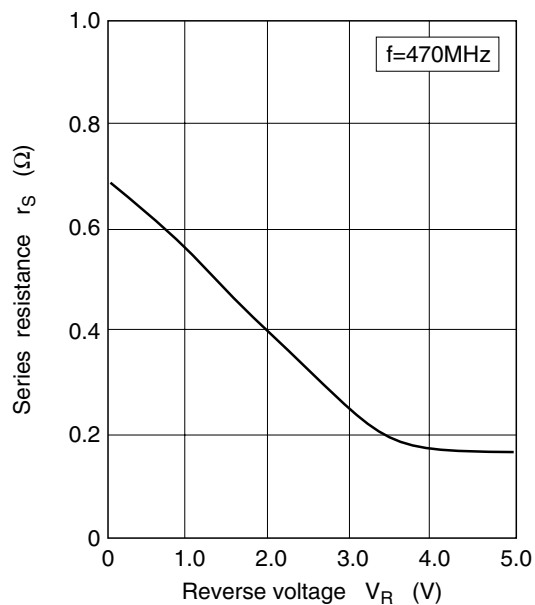


Fig.3 Series resistance vs. Reverse voltage

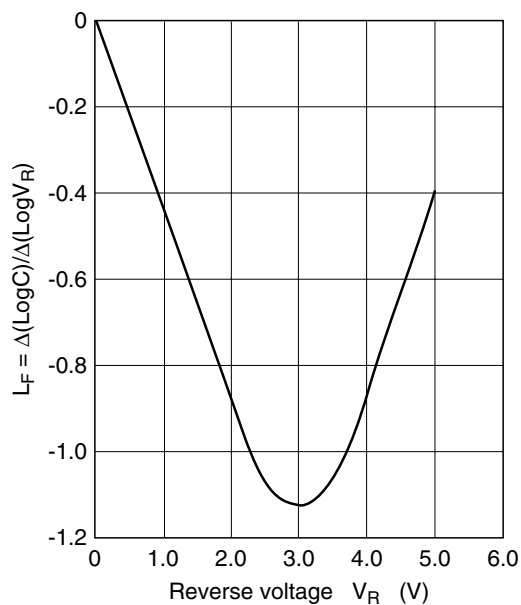
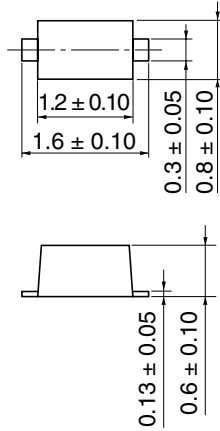


Fig.4 Linearity factor vs. Reverse voltage

Package Dimensions

As of July, 2001
Unit: mm



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

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