
HVC375B

Variable Capacitance Diode for VCO

HITACHI

ADE-208-625 (Z)

Rev.0

Feb. 1, 1999

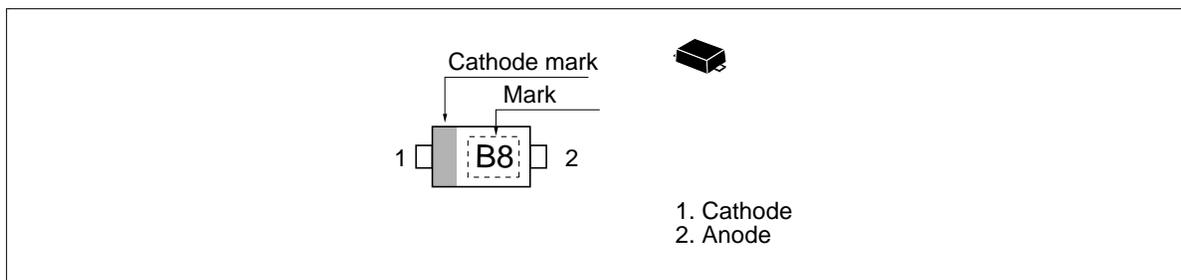
Features

- Low tolerance.
- Low series resistance. ($r_s=1.1\Omega$ max)
- Good C-V linearity.
- Ultra small Flat Package (UFP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Code
HVC375B	B8	UFP

Outline



HVC375B

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V_R	10	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	$V_R = 10V$
	I_{R2}	—	—	100		$V_R = 10V, T_a = 60\text{ °C}$
Capacitance	C_1	15.0	—	16.5	pF	$V_R = 1V, f = 1\text{ MHz}$
	C_3	5.0	—	6.0		$V_R = 3V, f = 1\text{ MHz}$
	C_4	3.3	—	4.0		$V_R = 4V, f = 1\text{ MHz}$
Capacitance ratio	n	4.0	—	—	—	C_1 / C_4
Series resistance	r_s	—	—	1.1	Ω	$V_R = 2V, f = 470\text{ MHz}$

Main Characteristic

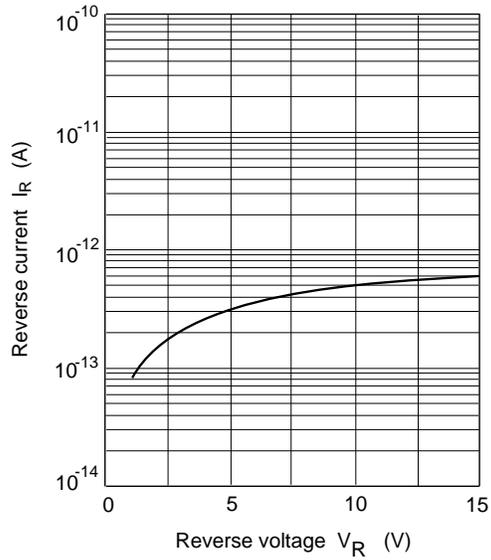


Fig.1 Reverse current Vs. Reverse voltage

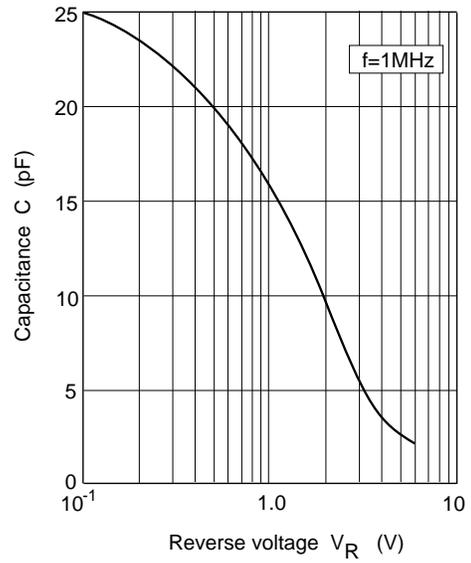


Fig.2 Capacitance Vs. Reverse voltage

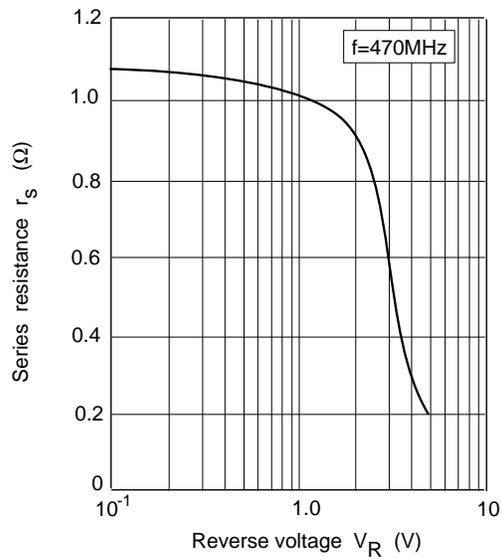


Fig.3 Series resistance Vs. Reverse voltage

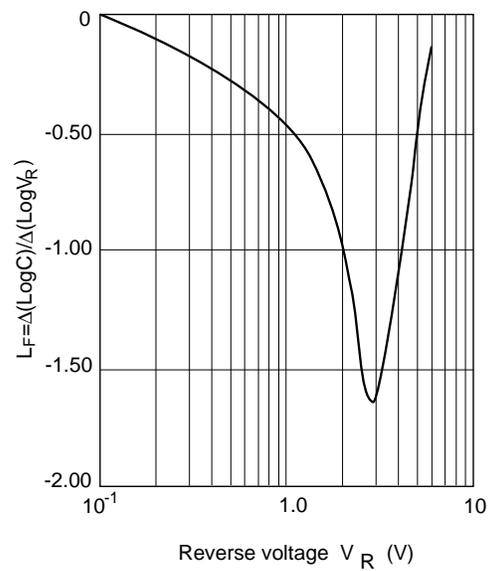
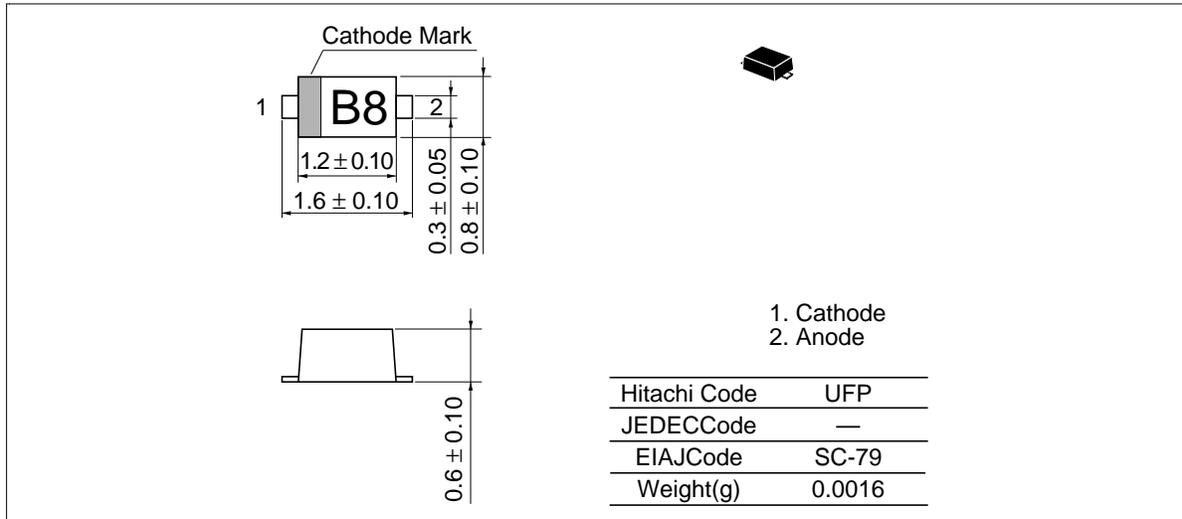


Fig.4 Linearity factor Vs. Reverse voltage

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Package Dimensions (Unit : mm)



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