

HVC200A

Variable Capacitance Diode for VHF tuner

HITACHI

Rev. 0
Nov. 1995

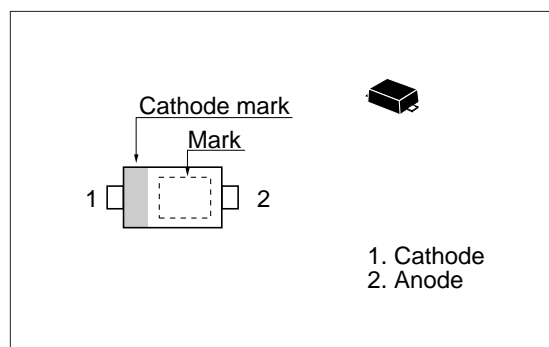
Features

- High capacitance ratio(n=10min) and suitable for wide band tuner.
- Ultra small Flat Package (UFP) is suitable for surface mount design.
- Low series resistance and good C-V linearity.

Ordering Information

Type No.	Laser Mark	Package Code
HVC200A	2	UFP

Outline



Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V_R	32	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	$V_R = 30\text{ V}$
	I_{R2}	—	—	100		$V_R = 30\text{ V}, T_a = 60\text{ °C}$
Capacitance	C_2	27.7	—	31.8	pF	$V_R = 2\text{ V}, f = 1\text{ MHz}$
	C_{25}	2.67	—	3.03		$V_R = 25\text{ V}, f = 1\text{ MHz}$
	$\Delta C/C^*$	—	—	2.0		% C_2, C_{25}
Capacitance ratio	n	10.0	—	—	—	C_2 / C_{25}
Series resistance	r_s	—	—	0.70	Ω	$V_R = 5\text{ V}, f = 470\text{ MHz}$

* A set of HVC200A is of uniform C-V characteristics.

Measure max. value and min. value of capacitance .

Calculate Matching Error,

$$\Delta C/C = \frac{(C_{max} - C_{min})}{C_{min}} \times 100 (\%)$$

** Each group shall uniform a multiple of 4 diodes.

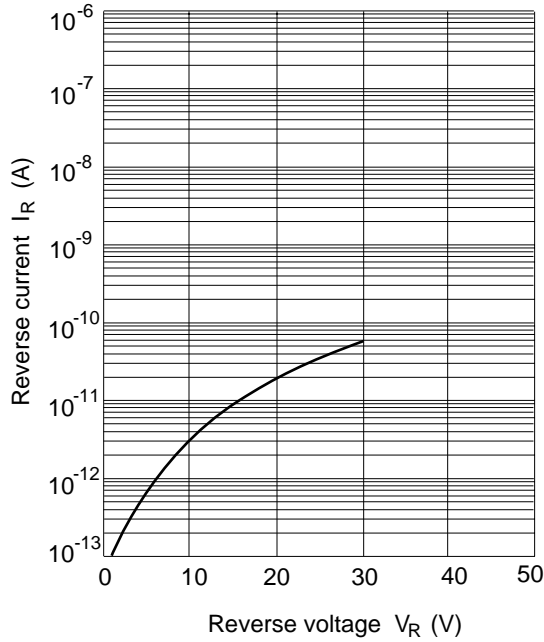


Fig.1 Reverse current Vs. Reverse voltage

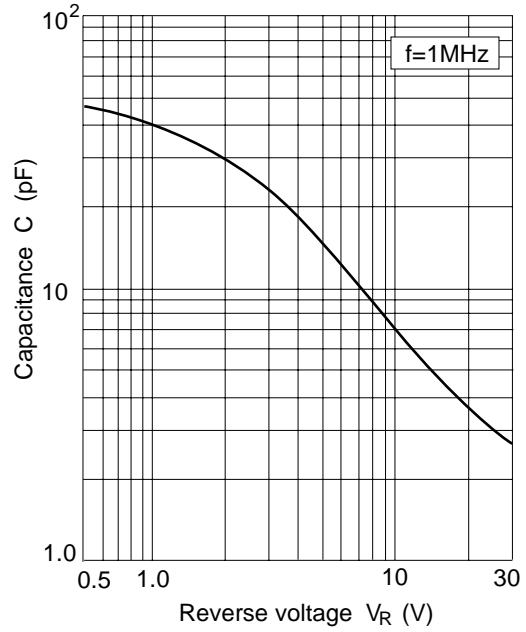


Fig.2 Capacitance Vs. Reverse voltage

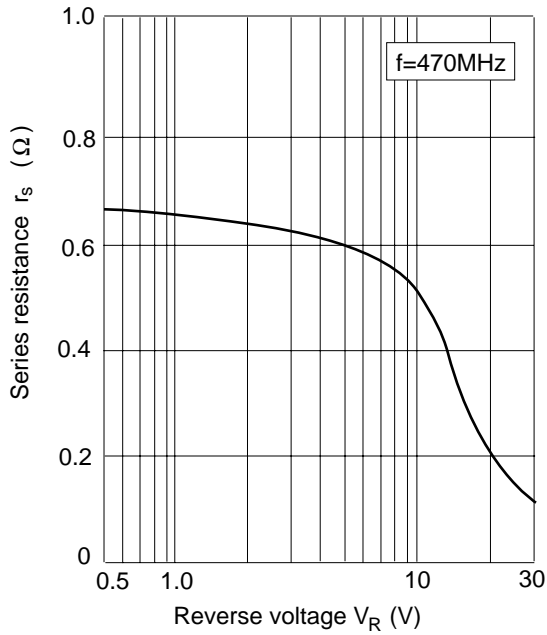


Fig.3 Series resistance Vs. Reverse voltage

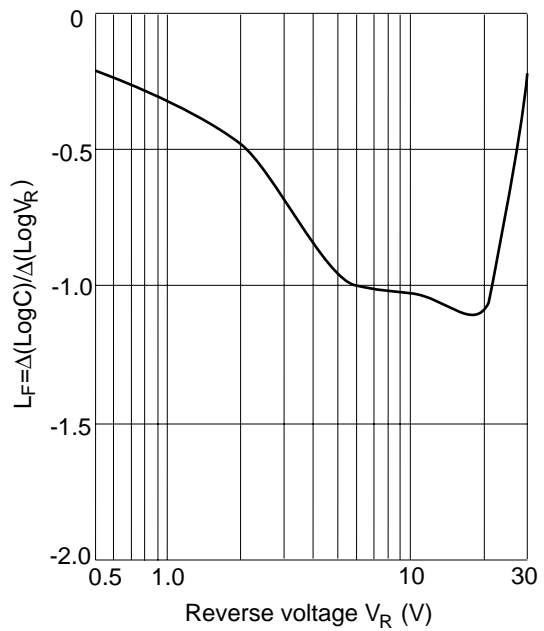
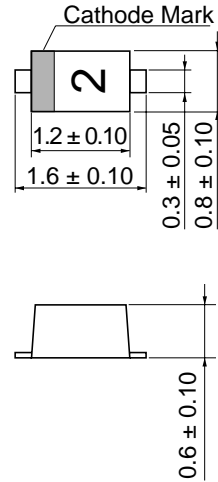


Fig.4 Linearity factor Vs. Reverse voltage

Package Dimensions

Unit: mm



- 1 Cathode
- 2 Anode

HITACHI Code	UFP
JEDEC Code	—
EIAJ Code	SC-79
Weight (g)	0.0016