

HVC200A

Variable Capacitance Diode for VHF tuner

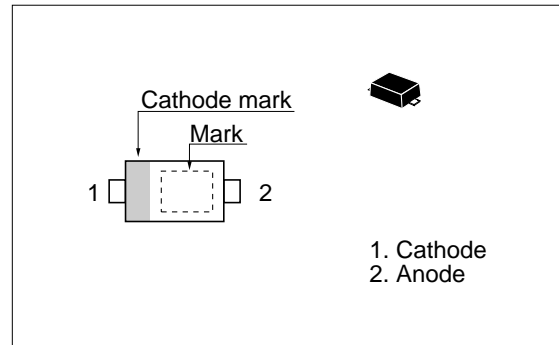
HITACHI

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.

Outline



Ordering Information

Type No.	Laser Mark	Package Code
HVC200A	2	UFP

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 V
	I _{R2}	—	—	100		V _R = 30 V, Ta = 60 °C
Capacitance	C ₂	27.7	—	31.8	pF	V _R = 2 V, f = 1 MHz
	C ₂₅	2.67	—	3.03		V _R = 25 V, f = 1 MHz
	ΔC/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 V, f = 470 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.

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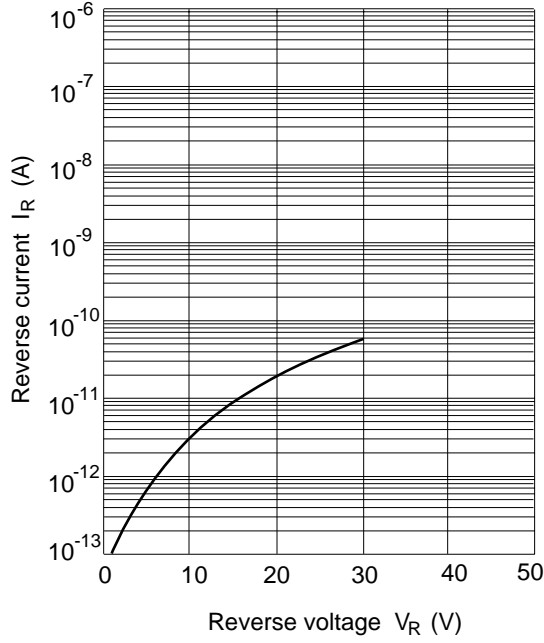


Fig.1 Reverse current Vs. Reverse voltage

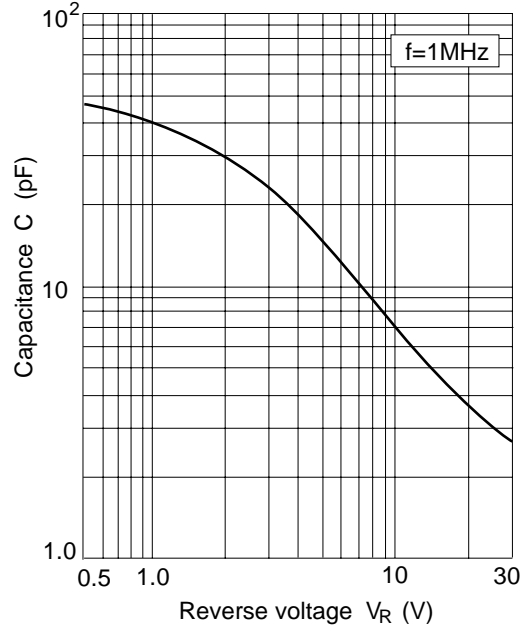


Fig.2 Capacitance Vs. Reverse voltage

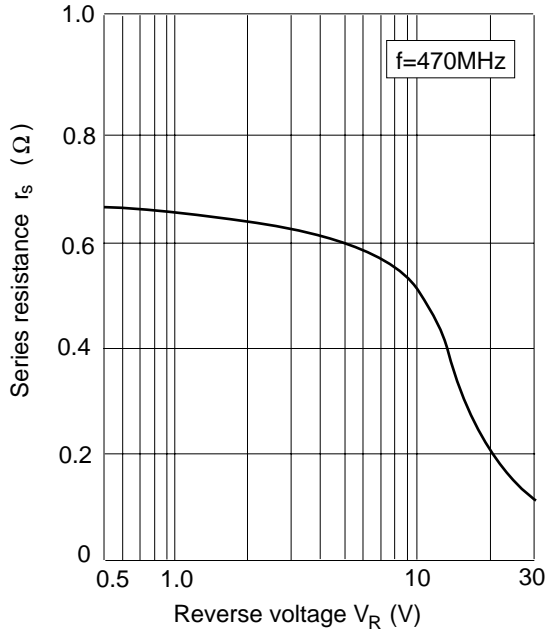


Fig.3 Series resistance Vs. Reverse voltage

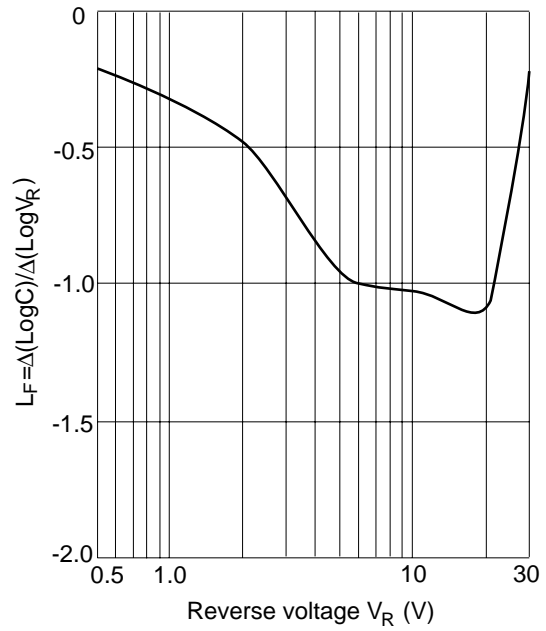
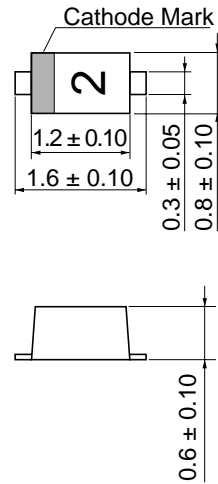


Fig.4 Linearity factor Vs. Reverse voltage

Package Dimensions

Unit: mm



- 1 Cathode
- 2 Anode

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