

# HVC306A

Variable Capacitance Diode for VHF tuner

# HITACHI

ADE-208-409A(Z)

Rev 1

Dec. 1998

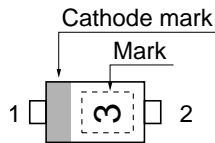
## Features

- High capacitance ratio ( $n=11.0\text{min}$ ).
- Low series resistance and good C-V linearity.
- Ultra small Flat Package (UFP) is suitable for surface mount design

## Ordering Information

Type No.	Laser Mark	Package Code
HVC306A	3	UFP

## Outline



1. Cathode
2. Anode

## Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V <sub>R</sub>	32	V
Junction temperature	T <sub>j</sub>	125	°C
Storage temperature	T <sub>stg</sub>	-55 to +125	°C

## Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	I <sub>R1</sub>	—	—	10	nA	V <sub>R</sub> = 30V
	I <sub>R2</sub>	—	—	100		V <sub>R</sub> = 30V, Ta = 60 °C
Capacitance	C <sub>2</sub>	29.3	—	34.2	pF	V <sub>R</sub> = 2V, f = 1 MHz
	C <sub>25</sub>	2.57	—	2.92		V <sub>R</sub> = 25V, f = 1 MHz
Capacitance ratio	n	11.0	—	—	—	C <sub>2</sub> /C <sub>25</sub>
Series resistance	r <sub>s</sub>	—	—	0.75	Ω	V <sub>R</sub> = 5V, f = 470 MHz
Matching error	ΔC/C <sup>1</sup>	—	—	2.0	%	V <sub>R</sub> = 2 to 25V, f = 1 MHz

Note 1. C.C system (Continuous Connected taping system) enable to make any 10 pcs of ΔC/C continuous in a reel , expect extention to another group.  
Calculate Matching Error,

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

Main Characteristic

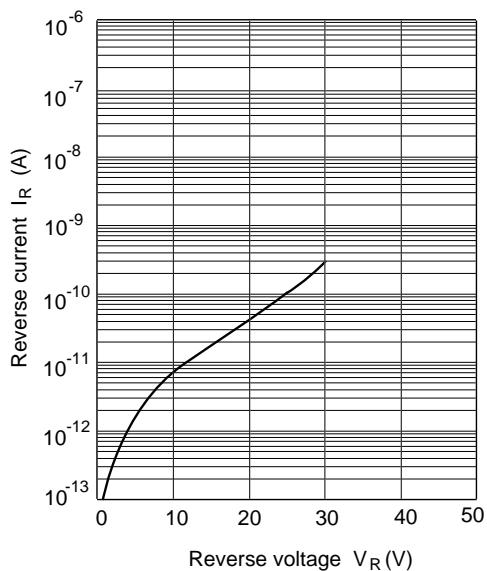


Fig.1 Reverse current Vs. Reverse voltage

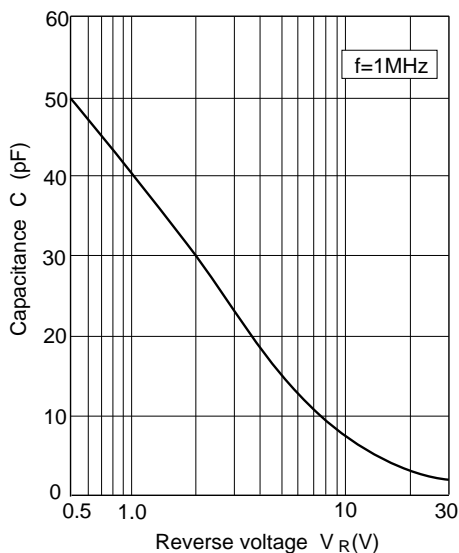


Fig.2 Capacitance Vs. Reverse voltage

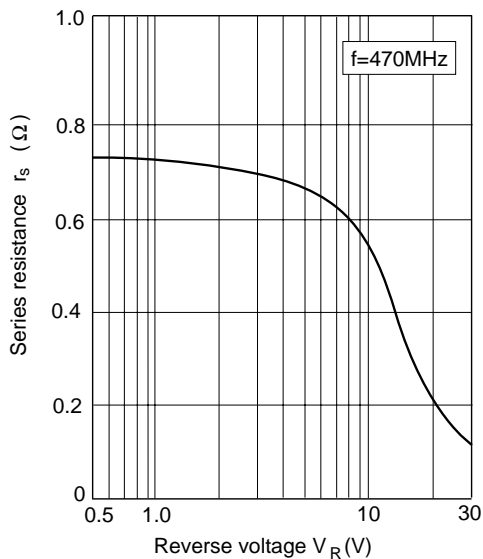


Fig.3 Series resistance Vs. Reverse voltage

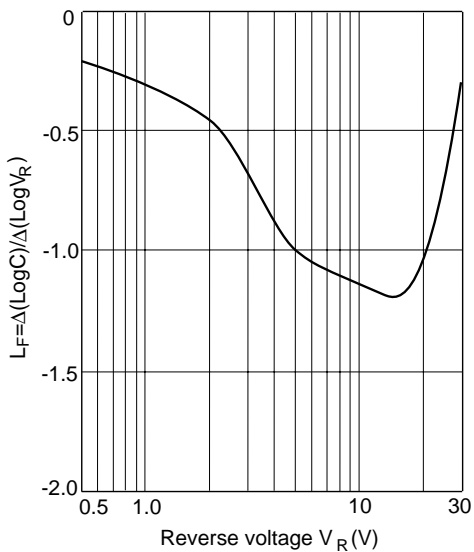
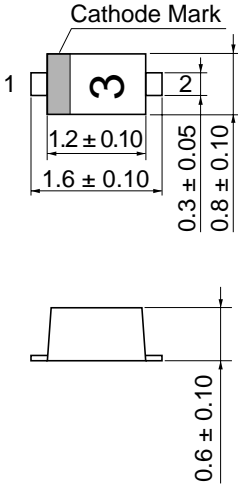


Fig.4 Linearity factor Vs. Reverse voltage

## Package Dimensions

Unit : mm



- 1. Cathode
- 2. Anode

Hitachi Code	<i>UFP</i>
JEDECCode	—
EIAJCode	SC-79
Weight(g)	0.0016

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