

HVC306A

Variable Capacitance Diode for VHF tuner

HITACHI

ADE-208-409A(Z)

Rev 1

Dec. 1998

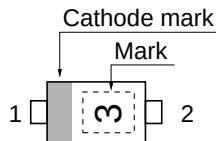
Features

- 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_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	$V_R = 30V$
	I_{R2}	—	—	100		$V_R = 30V, T_a = 60\text{ °C}$
Capacitance	C_2	29.3	—	34.2	pF	$V_R = 2V, f = 1\text{ MHz}$
	C_{25}	2.57	—	2.92		$V_R = 25V, f = 1\text{ MHz}$
Capacitance ratio	n	11.0	—	—	—	C_2 / C_{25}
Series resistance	r_s	—	—	0.75	Ω	$V_R = 5V, f = 470\text{ MHz}$
Matching error	$\Delta C/C^{*1}$	—	—	2.0	%	$V_R = 2\text{ to }25V, f = 1\text{ MHz}$

Note 1. C.C system (Continuous Connected taping system) enable to make any 10 pcs of $\Delta C/C$ 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

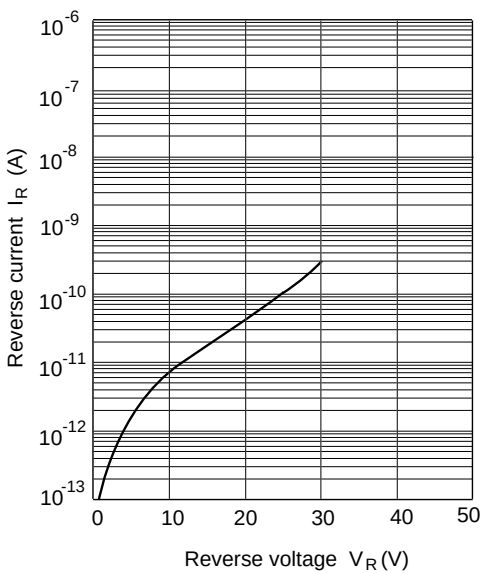


Fig.1 Reverse current Vs. Reverse voltage

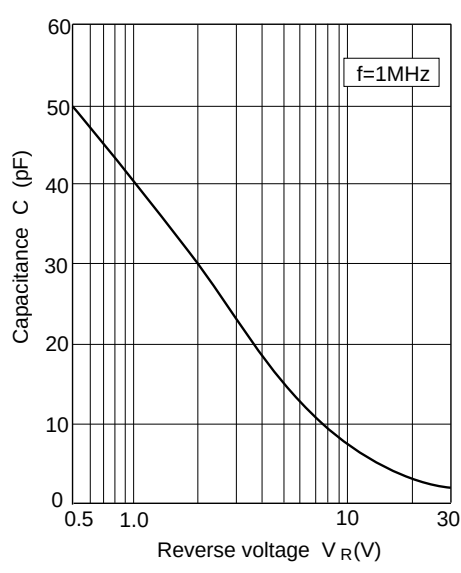


Fig.2 Capacitance Vs. Reverse voltage

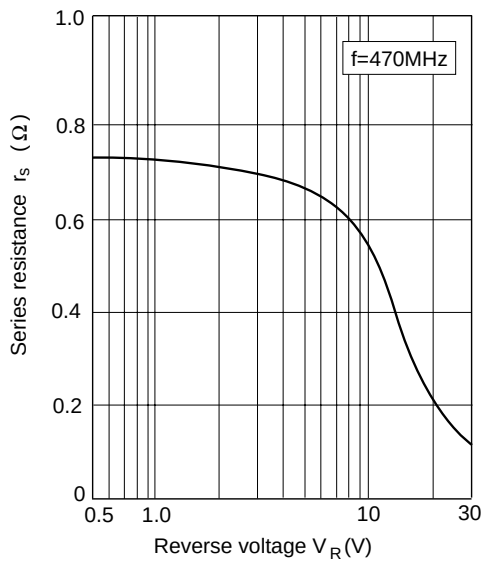


Fig.3 Series resistance Vs. Reverse voltage

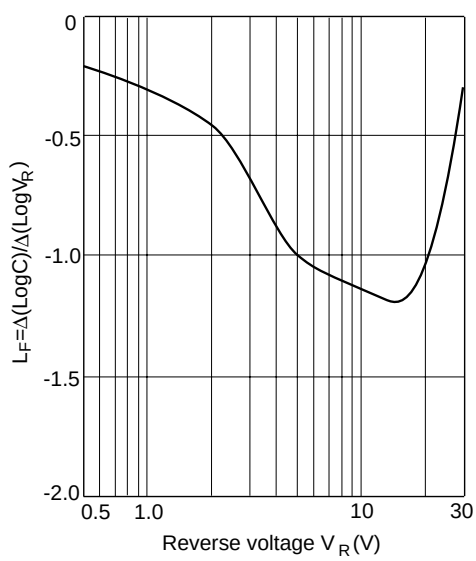
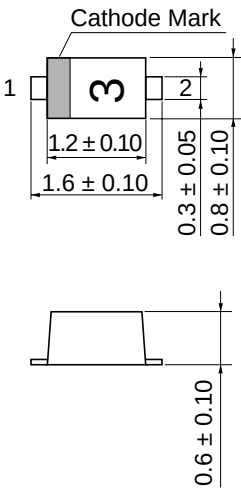


Fig.4 Linearity factor Vs. Reverse voltage

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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