ADE-208-409(Z)

HVC306A
Variable Capacitance Diode for VHF tuner

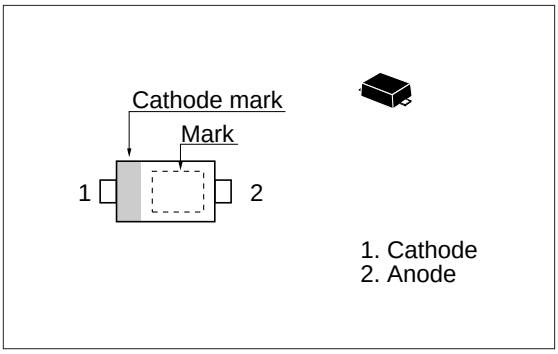
HITACHI

Rev. 0
Nov. 1995

Features

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

Outline



Ordering Information

Type No.	Laser Mark	Package Code
HVC306A	3	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	29.3	—	34.2	pF	V_R = 2 V , f = 1 MHz
	C_{25}	2.57	—	2.92		V_R = 25 V , f = 1 MHz
	ΔC/C*	—	—	2.0	%	C_2 , C_{25}
Capacitance ratio	n	11.0	—	—	—	C_2 / C_{25}
Series resistance	r_s	—	—	0.75	Ω	V_R = 5 V , f = 470 MHz

* A set of HVC306A is of uniform C-V characteristics.
Measure max. value and min. value of capacitance .
Calculate Matching Error, $\Delta C/C = \frac{(Cmax-Cmin)}{Cmin} \times 100\ (\%)$

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

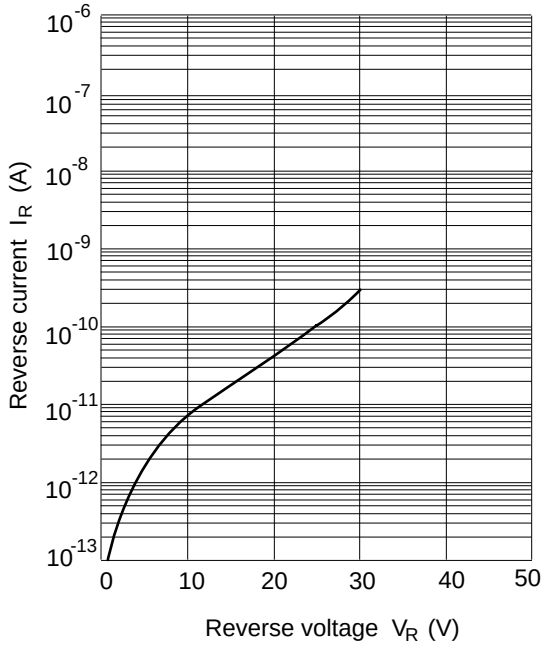


Fig.1 Reverse current Vs. Reverse voltage

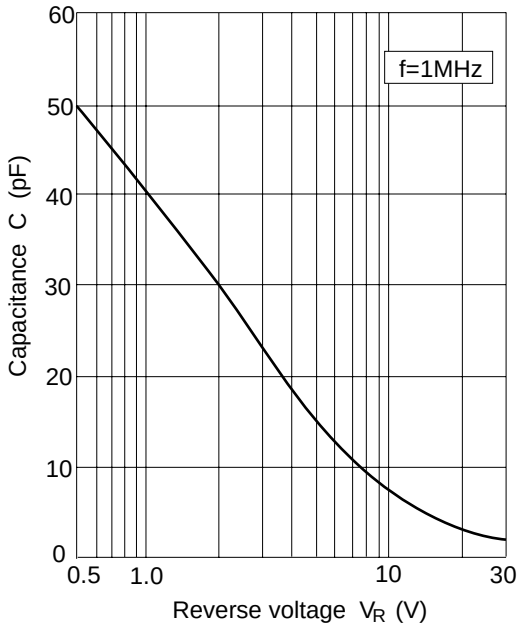


Fig.2 Capacitance Vs. Reverse voltage

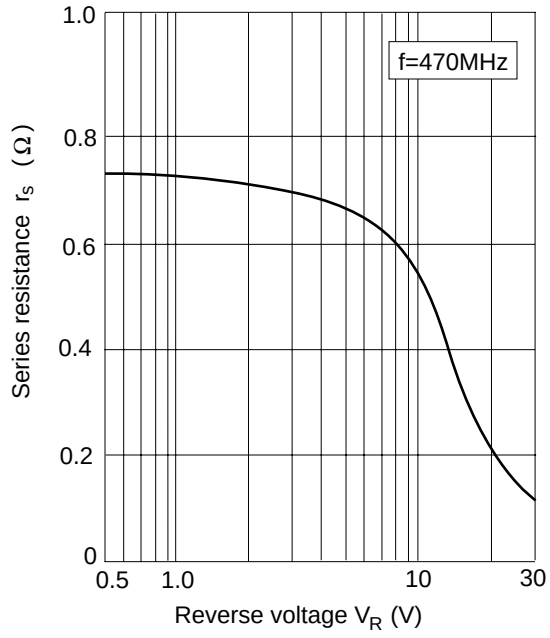


Fig.3 Series resistance Vs. Reverse voltage

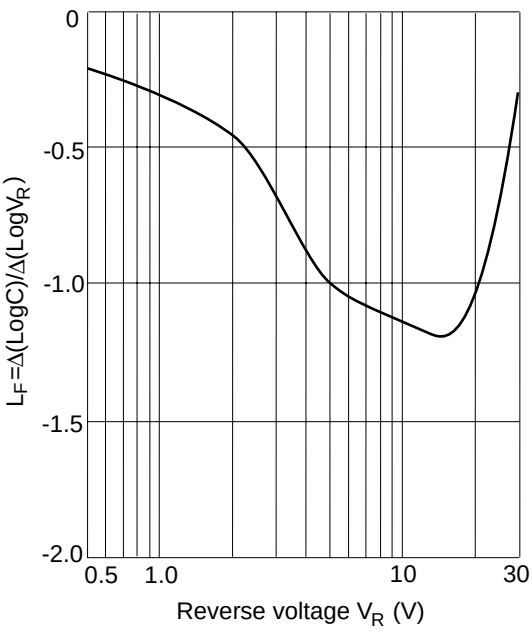
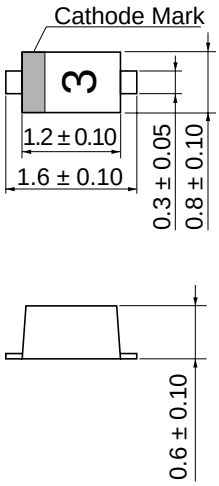


Fig.4 Linearity factor Vs. Reverse voltage

Package Dimensions

Unit: mm



1 Cathode
2 Anode

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