

HVC316

Variable Capacitance Diode for BS/CS tuner

HITACHI

ADE-208-1124 (Z)

Rev.0

Apr. 2001

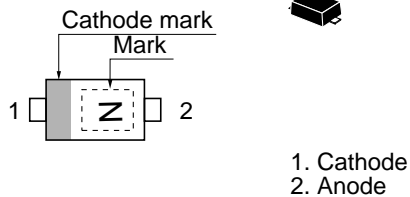
Features

- High capacitance ratio. ($n = 9.0$ min)
- Low series resistance. ($r_s = 2.2 \Omega$ max)
- Ultra small Flat Package (UFP) is suitable for surface mount design and stable rf characteristics in high frequency.

Ordering Information

Type No.	Laser Mark	Package Code
HVC136	N	UFP

Outline



Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V _R	30	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 ₁	5.16	—	7.22	pF	V _R = 1 V, f = 1 MHz
	C ₂₅	0.48	—	0.76		V _R = 25 V, f = 1 MHz
Capacitance ratio	n	9.0	—	—	—	C ₁ /C ₂₅
Series resistance	r _s	—	—	2.2	Ω	V _R = 1 V, f = 470 MHz
Matching error	ΔC/C *	—	—	6.0	%	V _R = 1 to 25 V, f = 1 MHz

Note: C.C system (Continuous Connected taping system) enable to make any 10 pcs of ΔC/C continuous in a reel , expect extension to another group.

Calculate Matching Error.

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

Main Characteristic

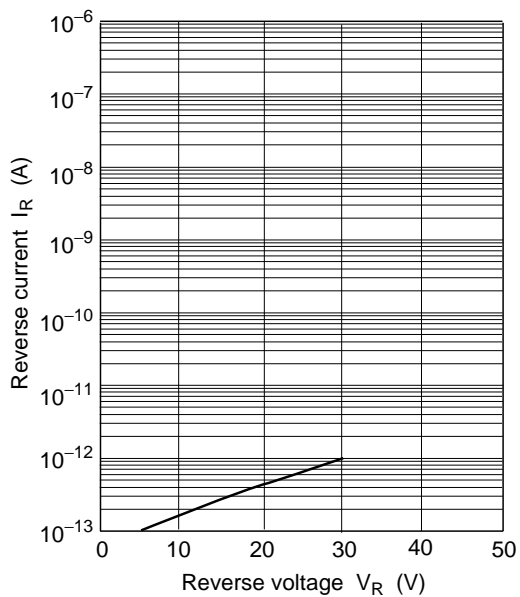


Fig.1 Reverse current vs. Reverse voltage

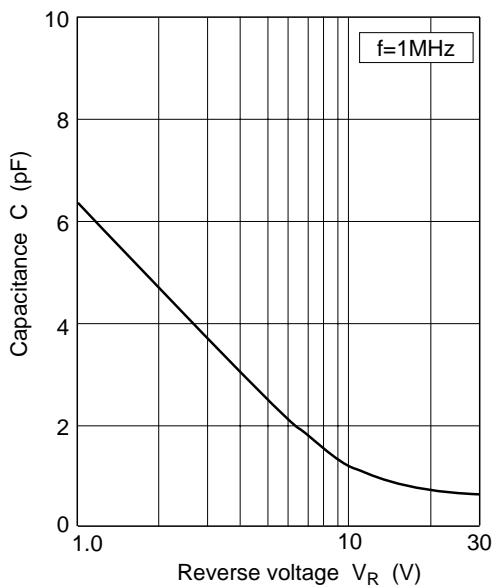


Fig.2 Capacitance vs. Reverse voltage

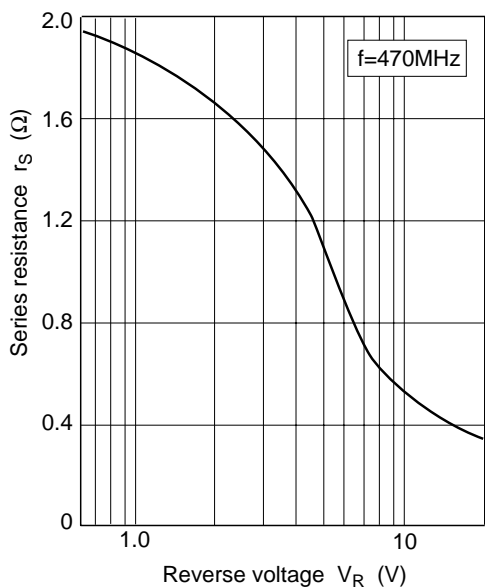


Fig.3 Series resistance vs. Reverse voltage

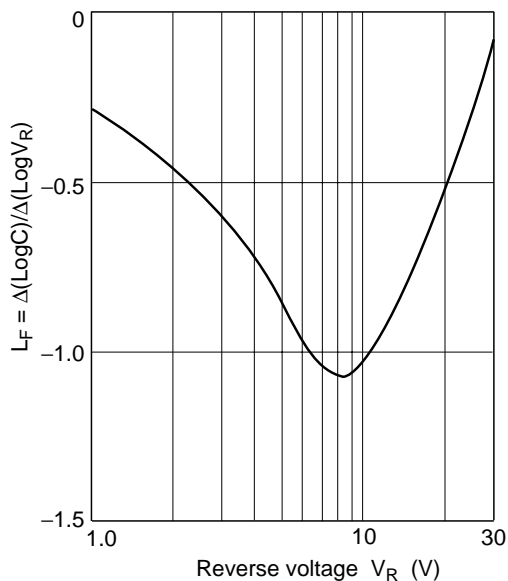
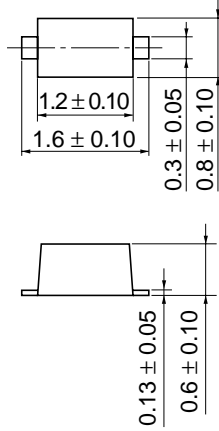


Fig.4 Linearity factor vs. Reverse voltage

Package Dimensions

As of January, 2001
Unit: mm



Hitachi Code	UFP
JEDEC	—
EIAJ	Conforms
Mass (reference value)	0.0016 g

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