

# HVU316

Variable Capacitance Diode for BS/CS tuner

# HITACHI

ADE-208-035C (Z)

Rev 4

Nov. 1998

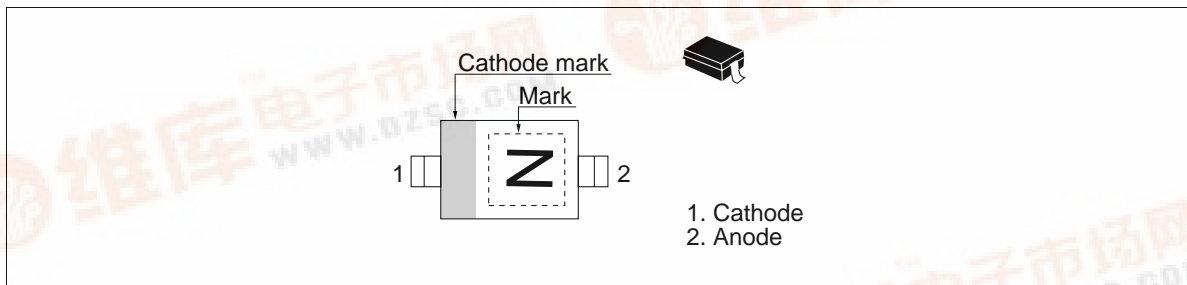
## Features

- High capacitance ratio ( $n=9.0\text{min}$ )
- Low series resistance. ( $r_s=1.2\Omega\text{max}$ )
- Ultra small Resin Package (URP) is suitable for surface mount design.

## Ordering Information

Type No.	Laser Mark	Package Code
HVU316	N	URP

## Outline



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

Item	Symbol	Value	Unit
Reverse voltage	V <sub>R</sub>	30	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>1</sub>	5.16	—	7.22	pF	V <sub>R</sub> = 1V, f = 1MHz
	C <sub>25</sub>	0.48	—	0.76		V <sub>R</sub> = 25V, f = 1MHz
Capacitance ratio	n	9.0	—	—	—	C <sub>1</sub> /C <sub>25</sub>
Series resistance	r <sub>s</sub>	—	—	1.2	Ω	V <sub>R</sub> = 5V, f = 470MHz
Matching error	ΔC/C* <sup>1</sup>	—	—	6.0	%	V <sub>R</sub> = 1 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

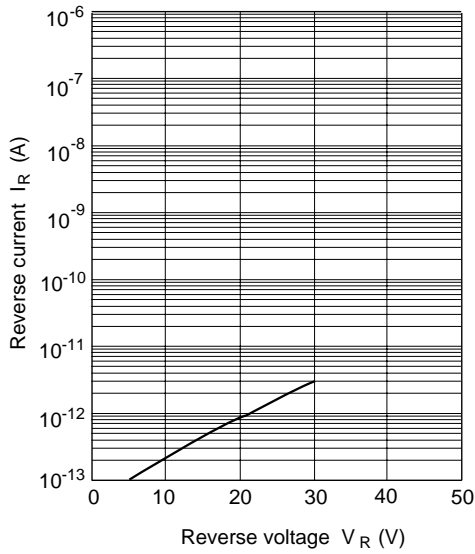


Fig.1 Reverse current Vs. Reverse voltage

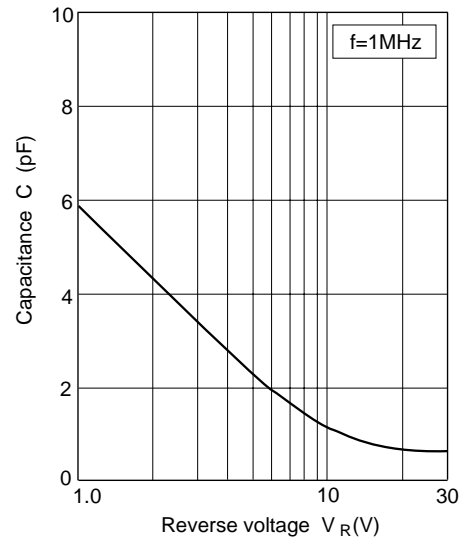


Fig.2 Capacitance Vs. Reverse voltage

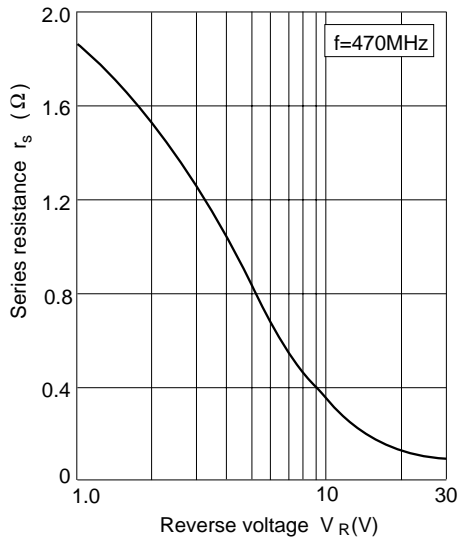


Fig.3 Series resistance Vs. Reverse voltage

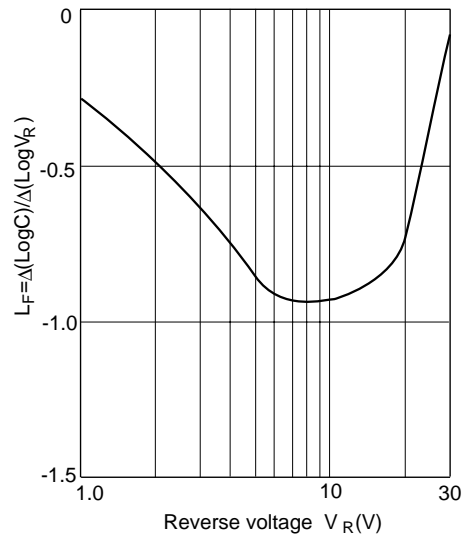


Fig.4 Linearity factor Vs. Reverse voltage

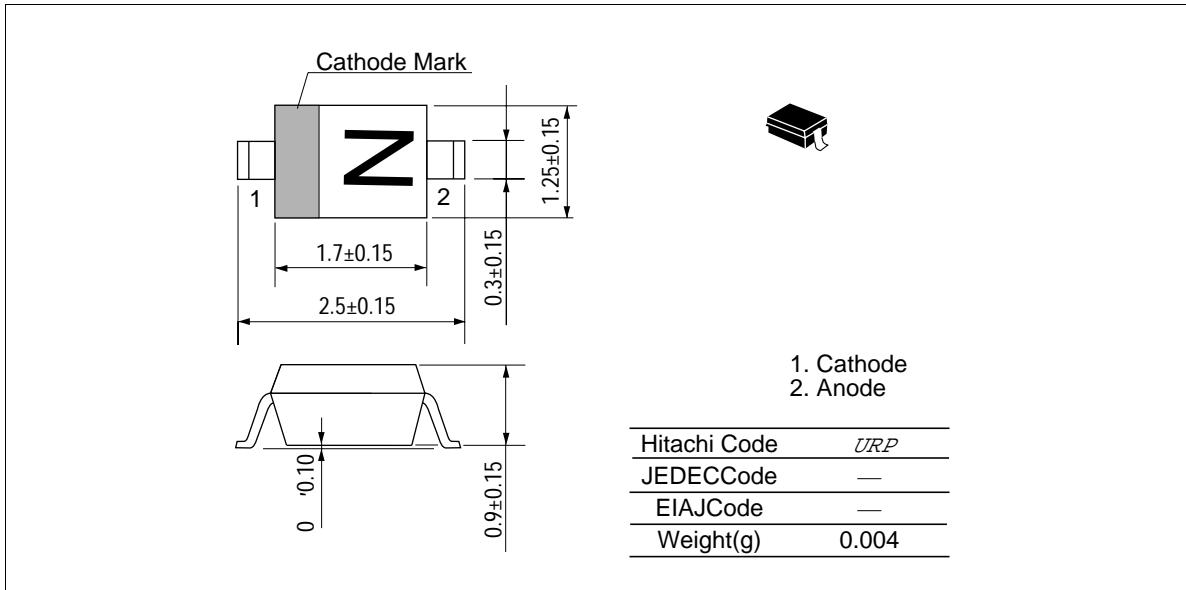
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## Package Dimensions

Unit : mm



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