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# HVU316

Variable Capacitance Diode for BS/CS tuner

# HITACHI

ADE-208-035C (Z)

Rev. 4  
Nov. 1998

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## Features

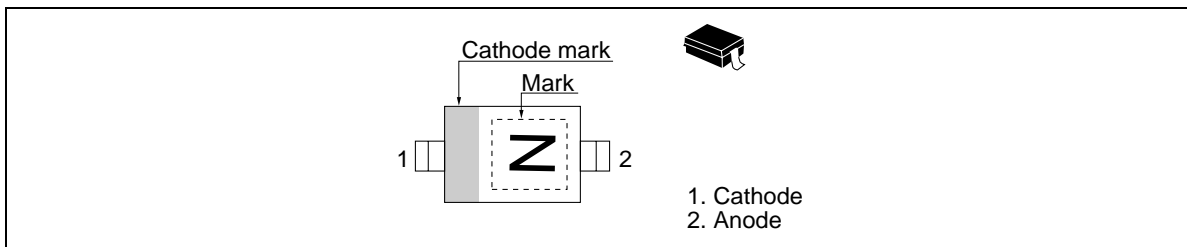
- High capacitance ratio ( $n=9.0\text{min}$ )
- Low series resistance. ( $r_s=1.2\Omega\text{max}$ )
- Ultra small Resin Package (URP) is suitable for surface mount design.

## Ordering Information

Type No.	Laser Mark	Package Code
HVU316	N	URP

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## Outline



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## HVU316

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### Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	$V_R$	30	V
Junction temperature	Tj	125	°C
Storage temperature	Tstg	-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		$V_R = 30V, T_a = 60°C$
Capacitance	$C_1$	5.16	—	7.22	pF	$V_R = 1V, f = 1MHz$
	$C_{25}$	0.48	—	0.76		$V_R = 25V, f = 1MHz$
Capacitance ratio	n	9.0	—	—	—	$C_1/C_{25}$
Series resistance	$r_s$	—	—	1.2	$\Omega$	$V_R = 5V, f = 470MHz$
Matching error	$\Delta C/C^{*1}$	—	—	6.0	%	$V_R = 1 \text{ to } 25V, f = 1 \text{ MHz}$

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

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

Main Characteristic

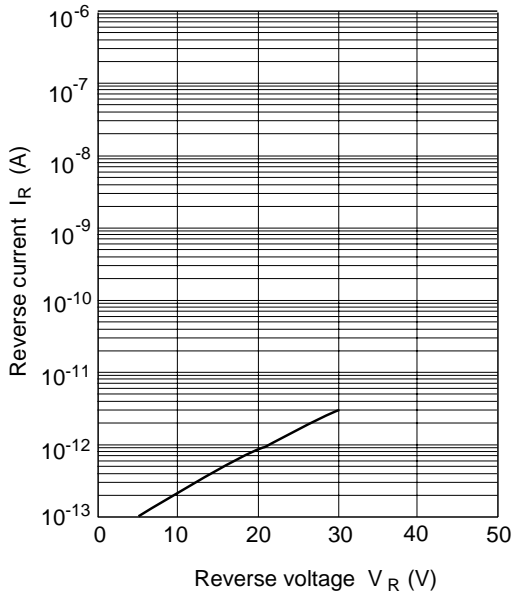


Fig.1 Reverse current Vs. Reverse voltage

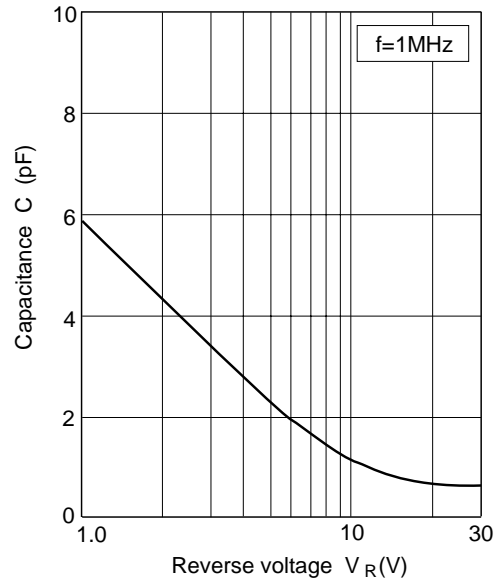


Fig.2 Capacitance Vs. Reverse voltage

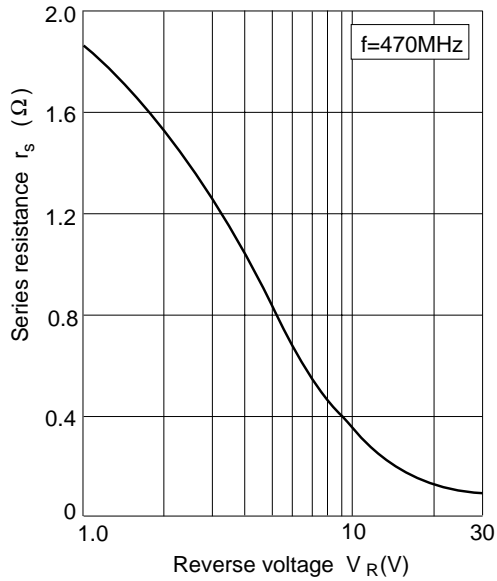


Fig.3 Series resistance Vs. Reverse voltage

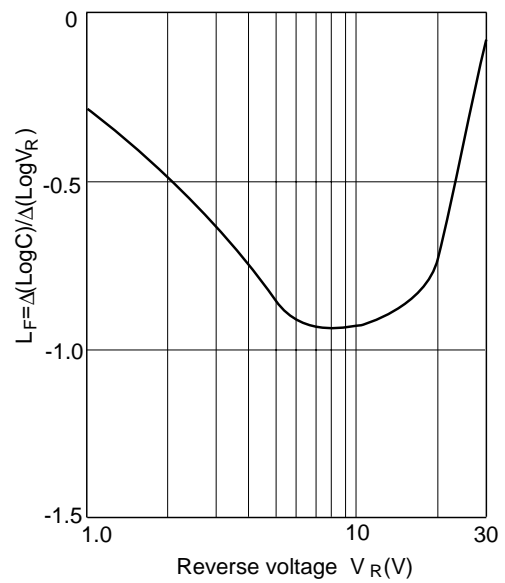
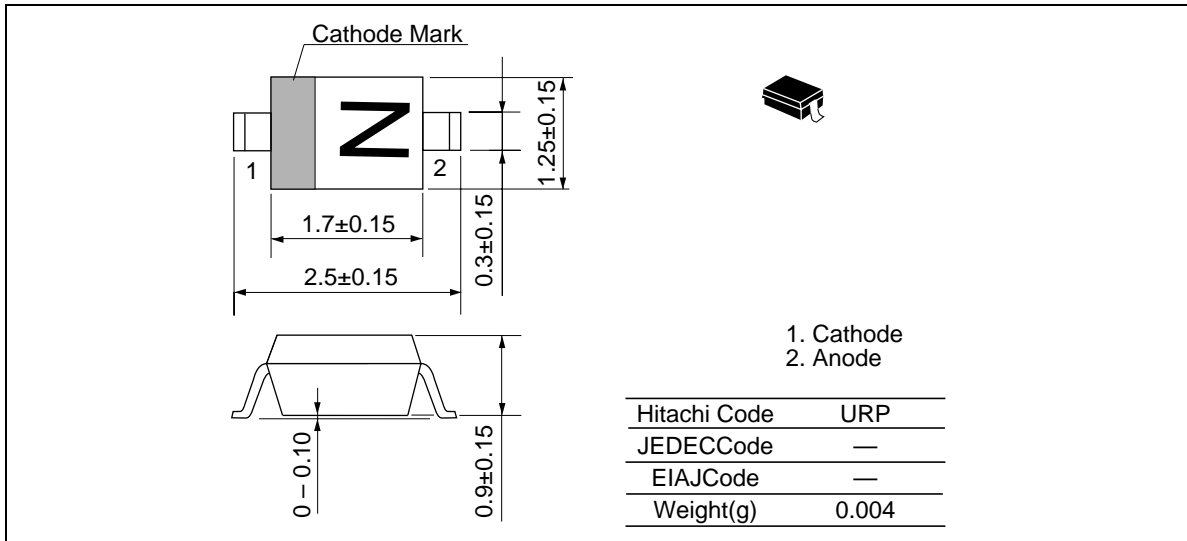


Fig.4 Linearity factor Vs. Reverse voltage

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## Package Dimensions

Unit : mm



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