

# HVU307

Variable Capacitance Diode for VHF tuner

# HITACHI

ADE-208-069E (Z)

Rev 5

Nov. 1998

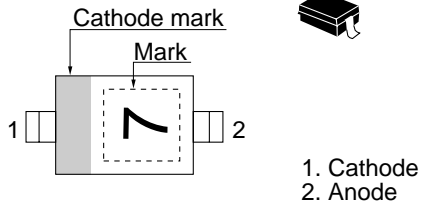
## Features

- High capacitance ratio ( $n=12.0\text{min}$ )
- Low series resistance. ( $r_s=0.85\Omega\text{max}$ )
- Ultra small Resin Package (URP) is suitable for surface mount design.

## Ordering Information

Type No.	Laser Mark	Package Code
HVU307	7	URP

## Outline



**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		$V_R = 30V, T_a = 60°C$
Capacitance	$C_2$	32.2	—	37.5	pF	$V_R = 2V, f = 1MHz$
	$C_{25}$	2.57	—	3.00		$V_R = 25V, f = 1MHz$
Capacitance ratio	n	12.0	12.5	—	—	$C_2/C_{25}$
Series resistance	$r_s$	—	—	0.85	$\Omega$	$V_R = 5V, f = 470MHz$
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

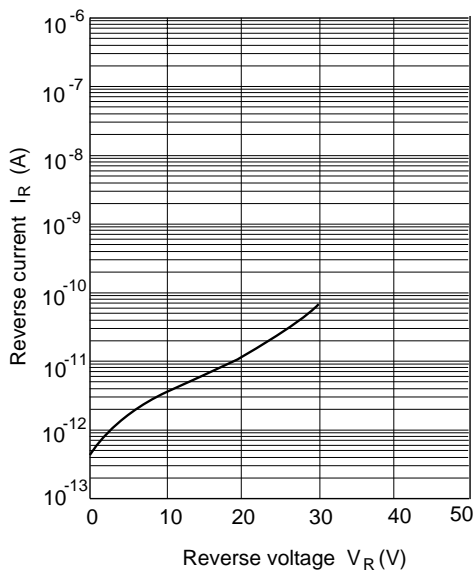


Fig.1 Reverse current Vs. Reverse voltage

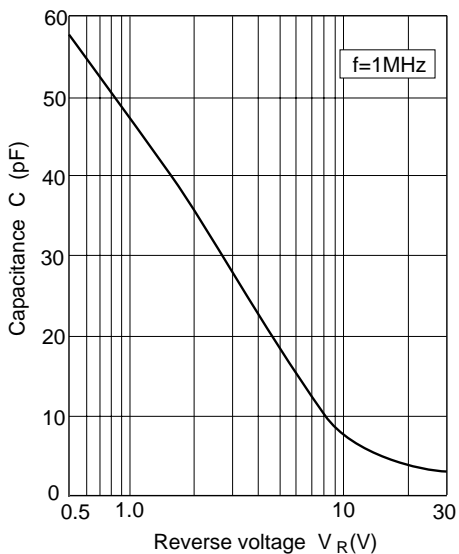


Fig.2 Capacitance Vs. Reverse voltage

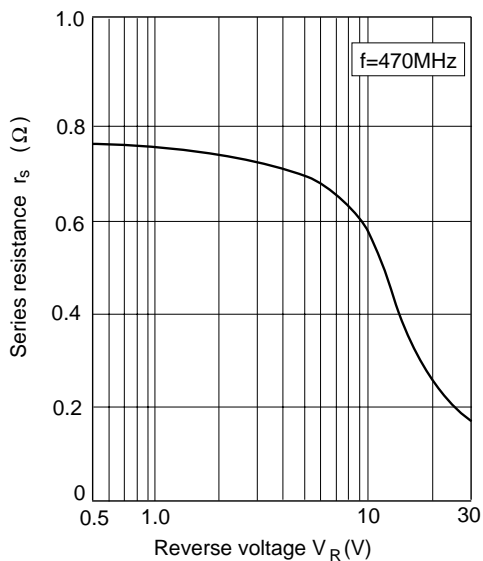


Fig.3 Series resistance Vs. Reverse voltage

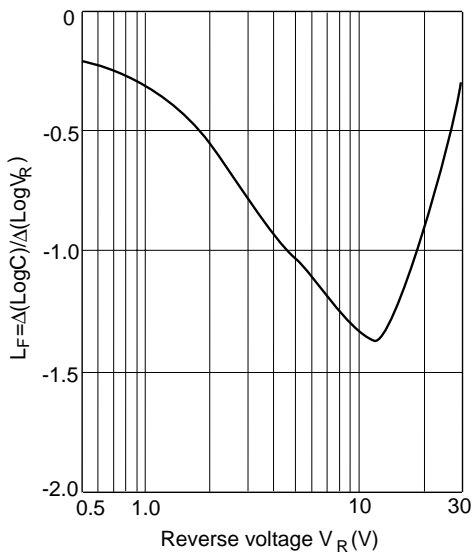
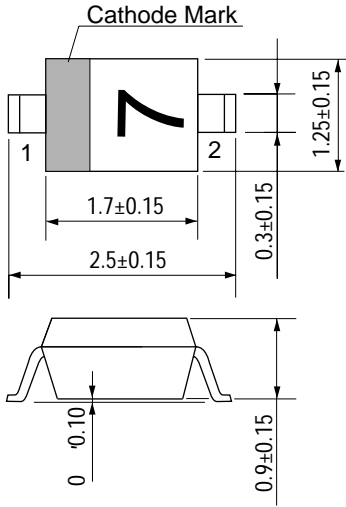


Fig.4 Linearity factor Vs. Reverse voltage

Package Dimensions

Unit : mm



- 1. Cathode
- 2. Anode

Hitachi Code	URP
JEDECCode	—
EIAJCode	—
Weight(g)	0.004

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