

HVU300A

Variable Capacitance Diode for Electronic Tuning

HITACHI

ADE-208-065D(Z)

Rev 4

Jun. 1996

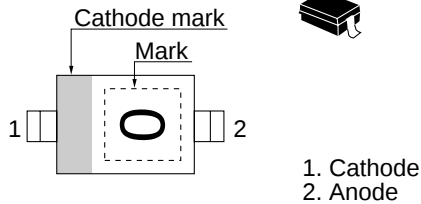
Features

- High capacitance ratio ($n = 14.5\text{min}$) and suitable for wide band tuner.
- Low series resistance and good C-V linearity.
- Ultra small Resin Package (URP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Code
HVU300A	0	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		$V_R = 30V, T_a = 60\text{ °C}$
Capacitance	C_2	39.5	—	47.4	pF	$V_R = 2V, f = 1\text{ MHz}$
	C_{25}	2.60	—	3.03		$V_R = 25V, f = 1\text{ MHz}$
Capacitance ratio	n	14.5	—	—	—	C_2 / C_{25}
Series resistance	r_s	—	—	1.10	Ω	$V_R = 5V, f = 470\text{ MHz}$
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,

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

Main Characteristic

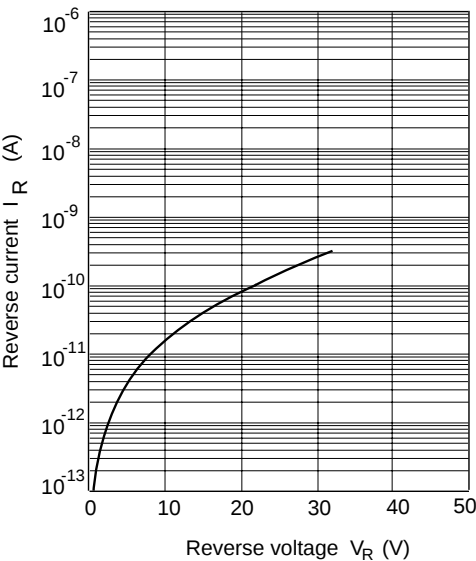


Fig.1 Reverse current Vs. Reverse voltage

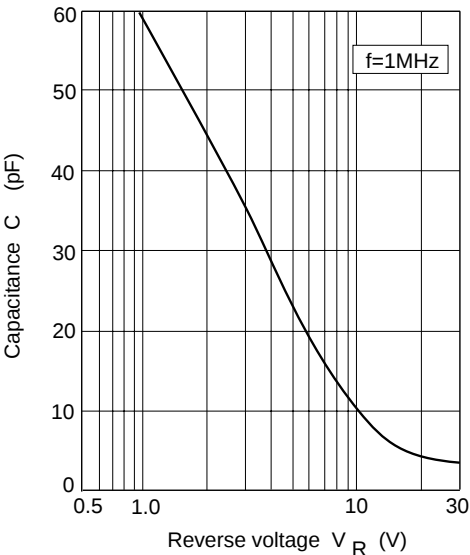


Fig.2 Capacitance Vs. Reverse voltage

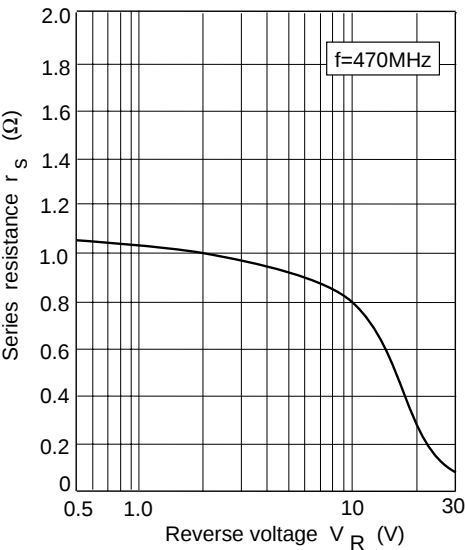


Fig.3 Series resistance Vs. Reverse voltage

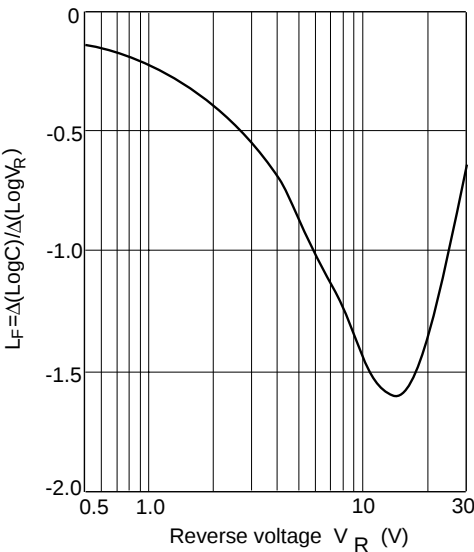
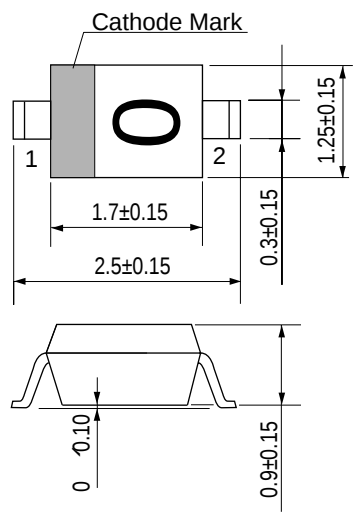


Fig.4 Linearity factor Vs. Reverse voltage

Package Dimensions

Unit : mm



- 1. Cathode
- 2. Anode

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

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