

HVU202B

Variable Capacitance Diode for UHF/VHF tuner

HITACHI

ADE-208-610A (Z)

Rev. 1

Dec.1998

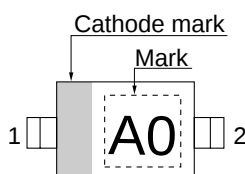
Features

- Low matching error. ($\Delta C/C = 1.8\% \text{max}$)
- High capacitance ratio. ($n = 6.3 \text{min}$)
- Low series resistance. ($r_s = 0.57 \Omega \text{max}$)
- Ultra small Resin Package (URP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Code
HVU202B	A0	URP

Outline



1. Cathode
2. Anode

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Value	Unit
Peak reverse voltage	V_{RM}^{*1}	35	V
Reverse voltage	V_R	32	V
Junction temperature	Tj	125	°C
Storage temperature	Tstg	−55 to +125	°C

Note 1. RL=10KΩ

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		$V_R = 30V, Ta = 60°C$
Capacitance	C_2	14.15	—	15.75	pF	$V_R = 2V, f = 1MHz$
	C_{25}	2.06	—	2.35		$V_R = 25V, f = 1MHz$
Capacitance ratio	n	6.30	—	—	—	C_2/C_{25}
Series resistance	r_s	—	—	0.57	Ω	$V_R = 5V, f = 470MHz$
Matching error	$\Delta C/C^{*1}$	—	—	1.8	%	$V_R = 2 \text{ to } 25V, f = 1 \text{ MHz}$

Note 1. C.C system (Continuous Connected taping system) enable to make any 10 pcs of 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

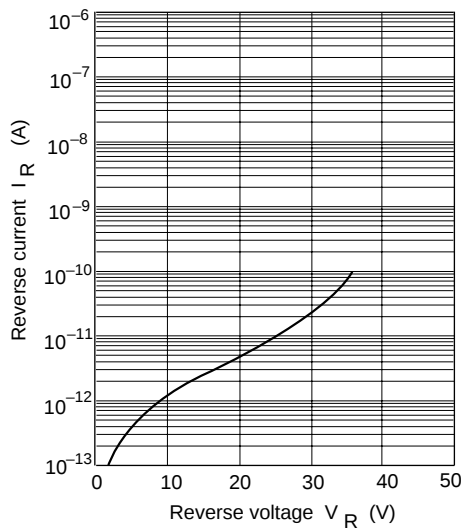


Fig.1 Reverse current Vs. Reverse voltage

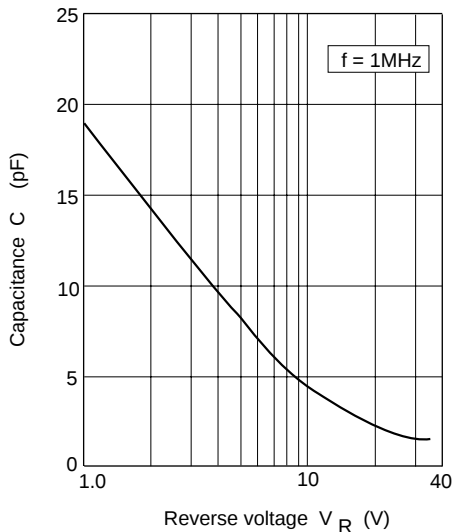


Fig.2 Capacitance Vs. Reverse voltage

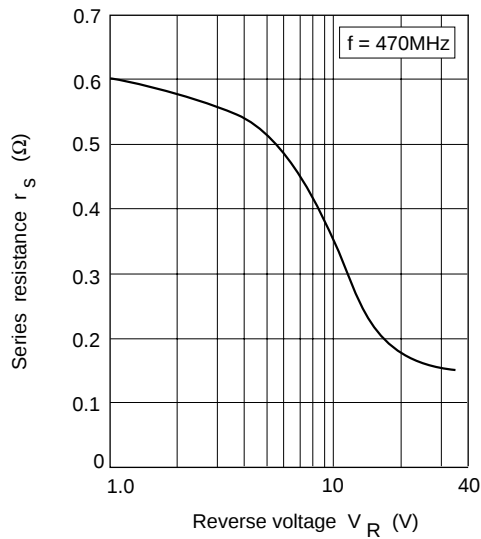


Fig.3 Series resistance Vs. Reverse voltage

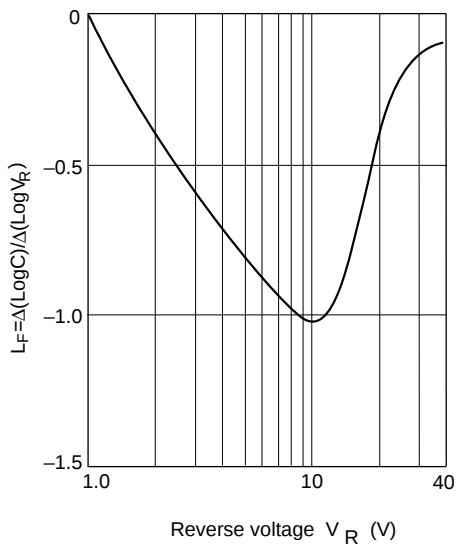
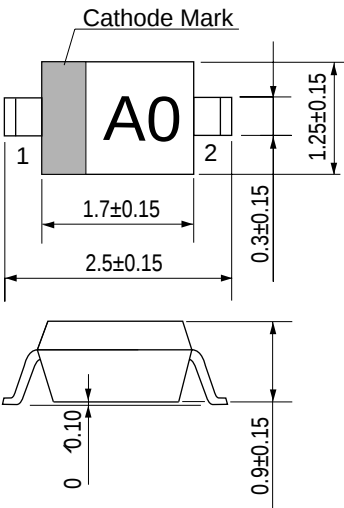


Fig.4 Linearity factor Vs. Reverse voltage

Package Dimensions

Unit : mm



- 1. Cathode
- 2. Anode

Hitachi Code	<i>URP</i>
JEDECCode	—
EIAJCode	—
Weight(g)	0.004

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