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Renesas Electronics website: http://www.renesas.com

April 1st, 2010
Renesas Electronics Corporation

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HVU202A

Variable Capacitance Diode for Electronic Tuning

REJ03G0104-0500Z
(Previous: ADE-208-034D)
Rev.5.00
Sep.29.2003

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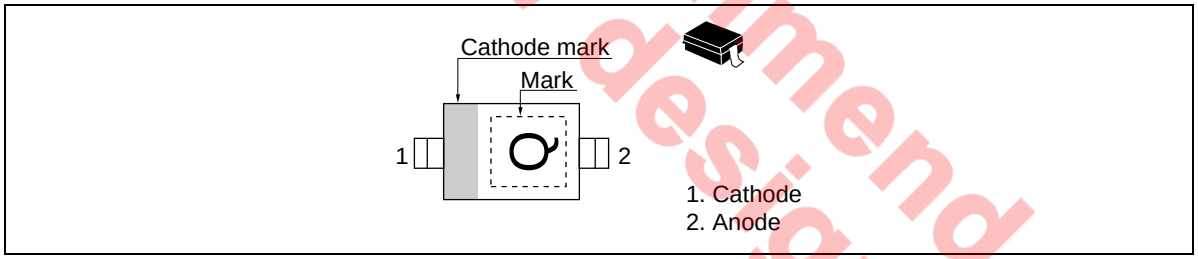
Features

- Low series resistance and good C-V linearity.
- Suitable for compact ET tuner.
- Ultra small Resin Package (URP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Code
HVU202A	Q	URP

Pin Arrangement



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Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V_R	34	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 = 32 V
	I_{R2}	—	—	100		V_R = 32 V, Ta = 60°C
Capacitance	C_2	14.11	—	16.47	pF	V_R = 2 V, f = 1 MHz
	C_{25}	2.06	—	2.35		V_R = 25 V, f = 1 MHz
Capacitance ratio	n	6.20	—	—	—	C_2/C_{25}
Series resistance	r_s	—	—	0.57	Ω	V_R = 5 V, f = 470 MHz
Matching error	ΔC/C *[1]	—	—	2.00	%	V_R = 2 to 25 V, 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,

$$\Delta C/C = \frac{(Cmax - Cmin)}{Cmin} \times 100\ (\%)$$

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Main Characteristic

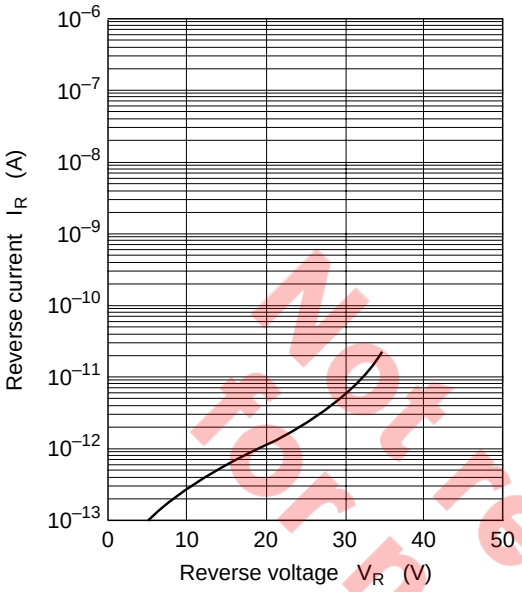


Fig.1 Reverse current vs. Reverse voltage

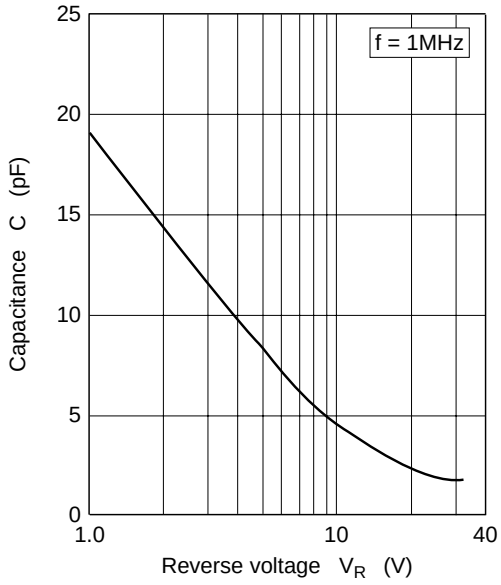


Fig.2 Capacitance vs. Reverse voltage

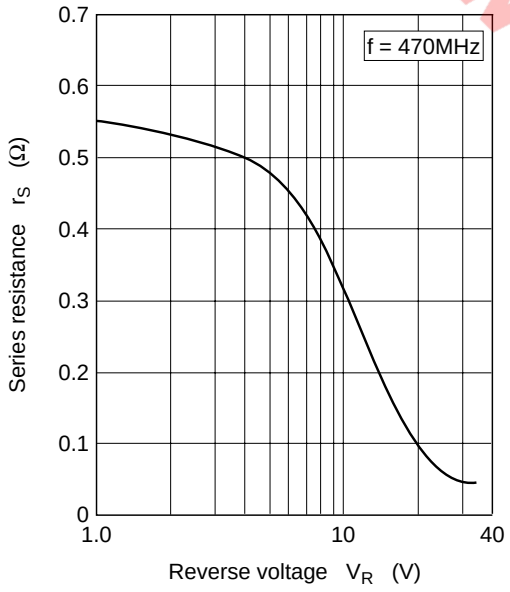


Fig.3 Series resistance vs. Reverse voltage

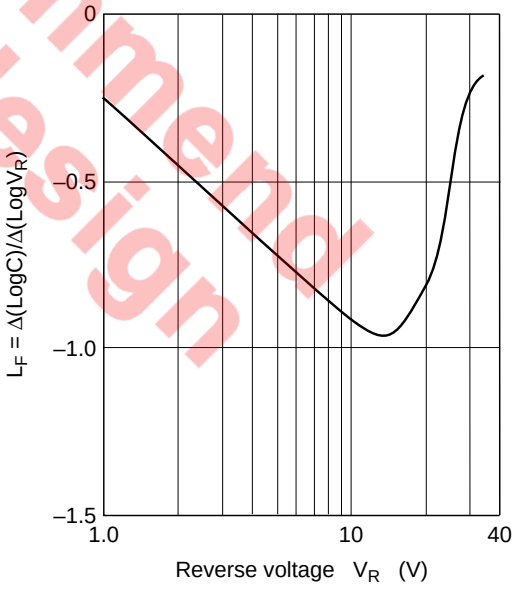


Fig.4 Linearity factor vs. Reverse voltage

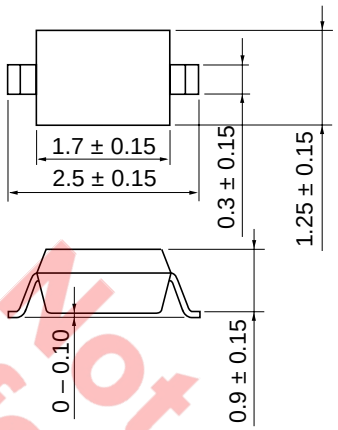
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Package Dimensions

As of January, 2003

Unit: mm





Package Code	URP
JEDEC	Conforms
JEITA	—
Mass (reference value)	0.004 g

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