

To our customers,

Old Company Name in Catalogs and Other Documents

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April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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Not recommended
for new design

The Renesas logo, featuring the word "RENESAS" in a bold, sans-serif font with a stylized "R" that has a horizontal bar extending to the left.

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HVU202A

Variable Capacitance Diode for Electronic Tuning

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

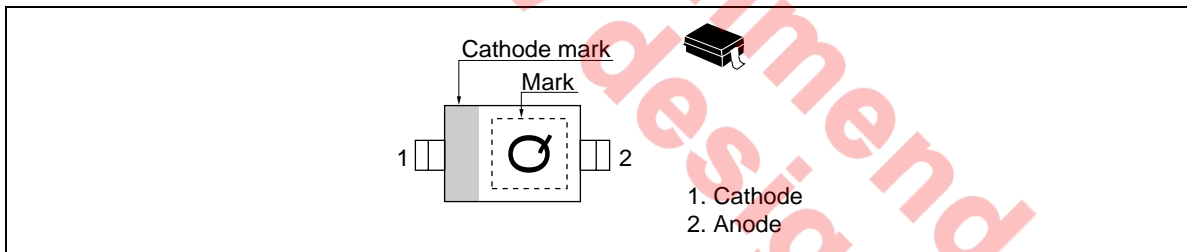
Features

- 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



Absolute Maximum Ratings

(Ta = 25°C)

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

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

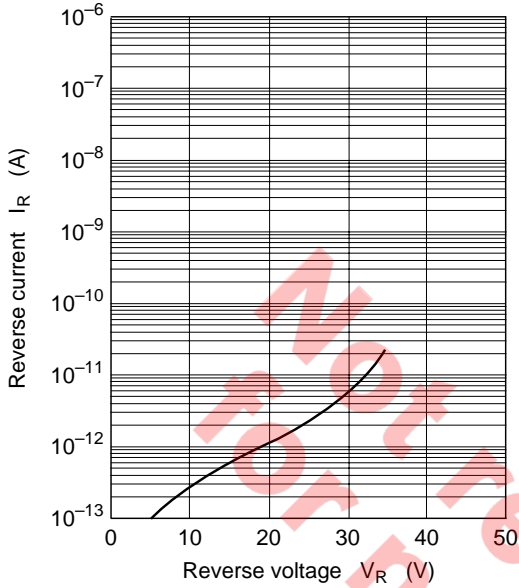


Fig.1 Reverse current vs. Reverse voltage

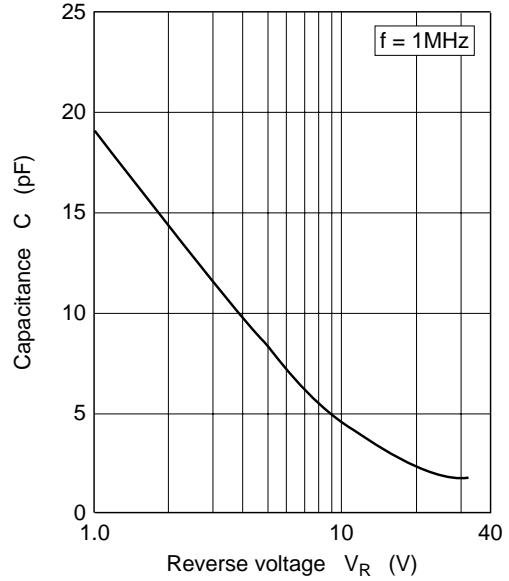


Fig.2 Capacitance vs. Reverse voltage

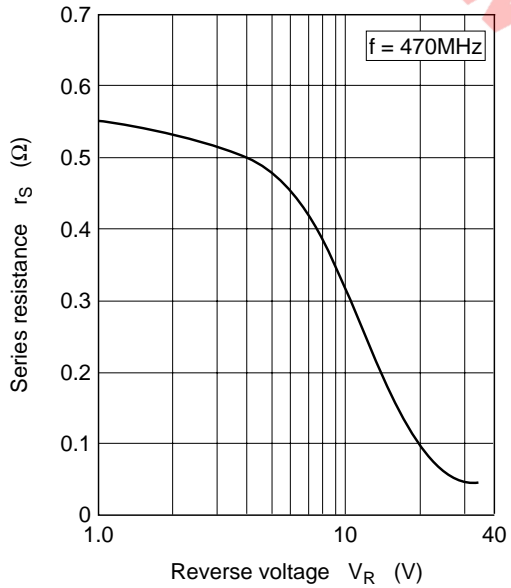


Fig.3 Series resistance vs. Reverse voltage

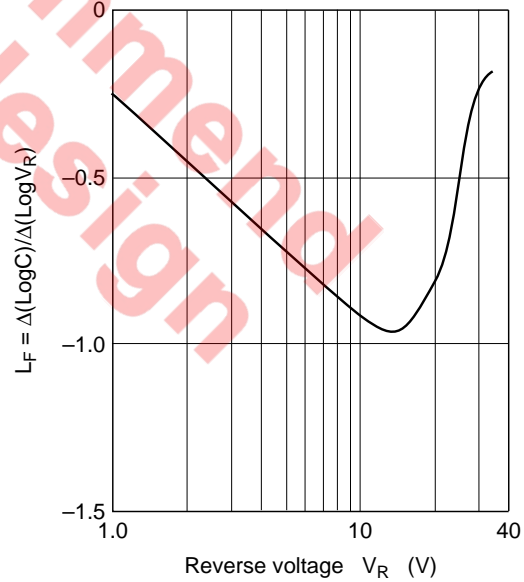
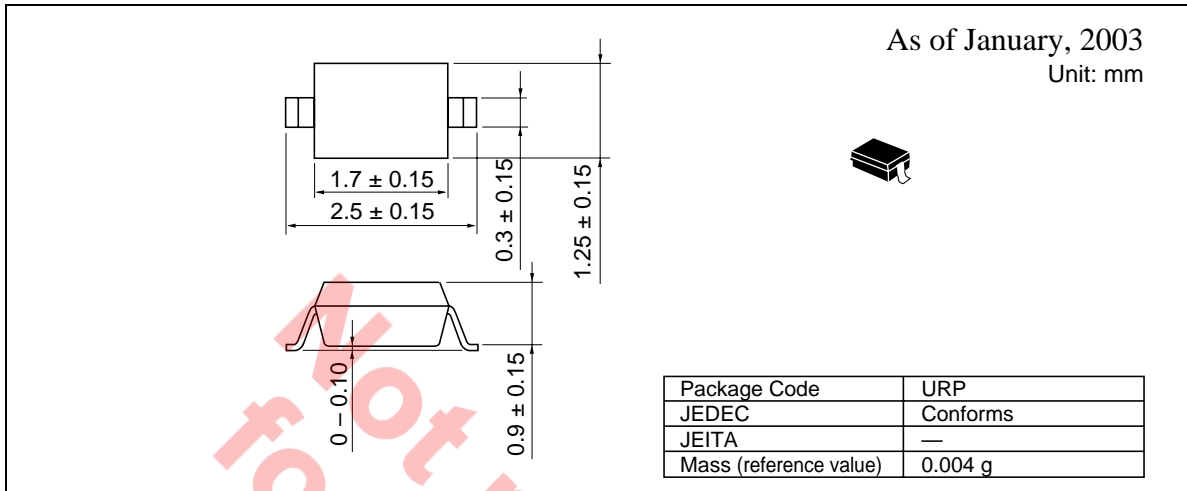


Fig.4 Linearity factor vs. Reverse voltage

Package Dimensions



Not recommend
for new design

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