

To our customers,

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## Old Company Name in Catalogs and Other Documents

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April 1<sup>st</sup>, 2010  
Renesas Electronics Corporation

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Not recommended  
for new design

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## HVU306B

Variable Capacitance Diode for VHF tuner

REJ03G0107-0100Z  
(Previous: ADE-208-611)  
Rev.1.00  
Sep.29.2003

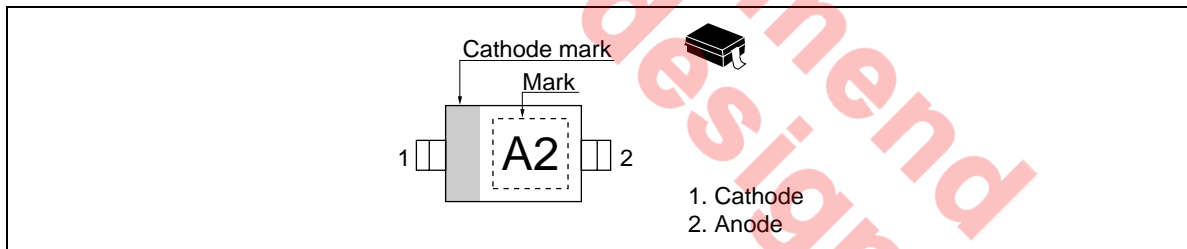
### Features

- Low matching error. ( $\Delta C/C = 2.0\%$  max)
- High capacitance ratio. ( $n = 11.0$  min)
- Low series resistance. ( $r_s = 0.75 \Omega$  max)
- Ultra small Resin Package (URP) is suitable for surface mount design.

### Ordering Information

Type No.	Laser Mark	Package Code
HVU306B	A2	URP

### Pin Arrangement



### Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Peak reverse voltage	$V_{RM}^{*1}$	35	V
Reverse voltage	$V_R$	34	V
Junction temperature	Tj	125	°C
Storage temperature	Tstg	-55 to +125	°C

Note: 1.  $R_L = 10\text{ k}\Omega$

### 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	$C_2$	29.50	—	33.5	pF	$V_R = 2\text{ V}, f = 1\text{ MHz}$
	$C_{25}$	2.60	—	2.90		$V_R = 25\text{ V}, f = 1\text{ MHz}$
Capacitance ratio	n	11.00	—	—	—	$C_2/C_{25}$
Series resistance	$r_s$	—	—	0.75	$\Omega$	$V_R = 5\text{ V}, f = 470\text{ MHz}$
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

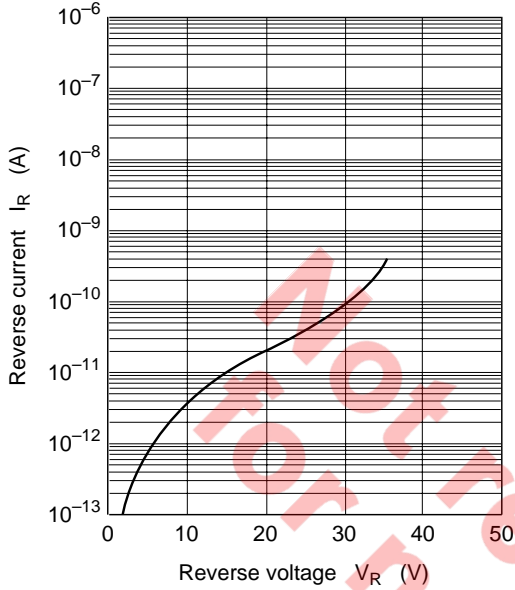


Fig.1 Reverse current vs. Reverse voltage

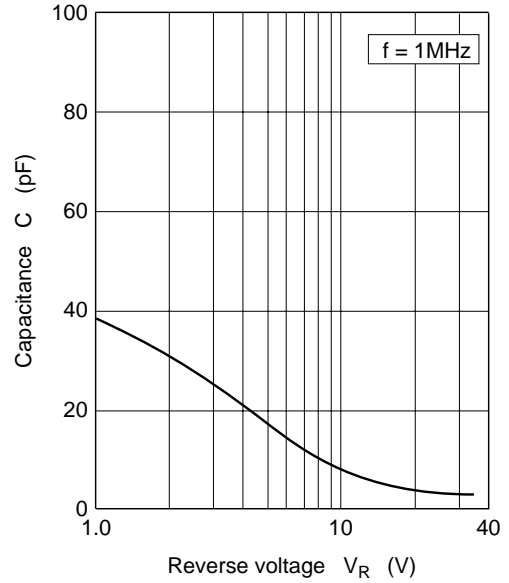


Fig.2 Capacitance vs. Reverse voltage

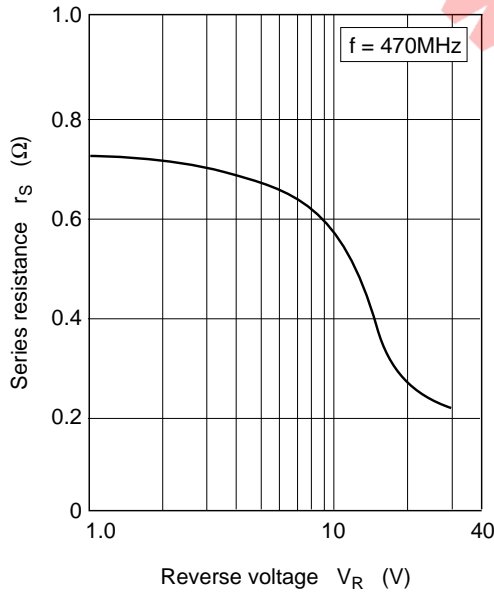


Fig.3 Series resistance vs. Reverse voltage

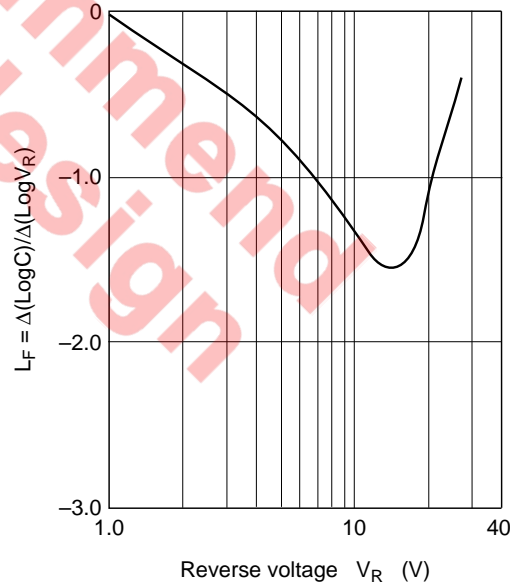
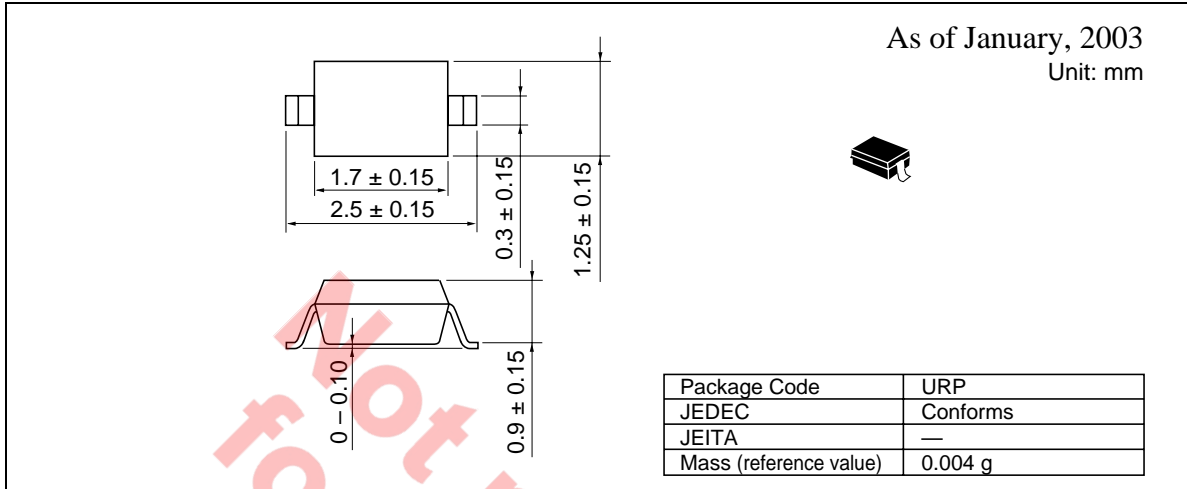


Fig.4 Linearity factor vs. Reverse voltage

Package Dimensions



Not recommend  
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