

# HVU202B

## Variable Capacitance Diode for UHF/VHF tuner

REJ03G0105-0200Z  
(Previous: ADE-208-610A)  
Rev.2.00  
Sep.29.2003

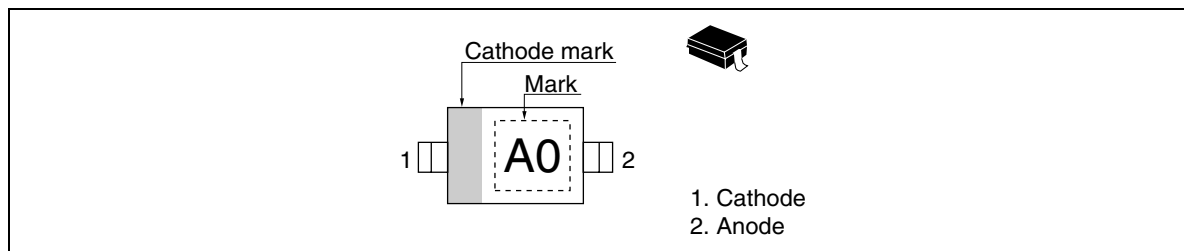
### Features

- Low matching error. ( $\Delta C/C = 1.80\%$  max)
- High capacitance ratio. ( $n = 6.30$  min)
- Low series resistance. ( $r_s = 0.57\ \Omega$  max)
- Ultra small Resin Package (URP) is suitable for surface mount design.

### Ordering Information

Type No.	Laser Mark	Package Code
HVU202B	A0	URP

### Pin Arrangement



## Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Peak reverse voltage	$V_{RM}^{*1}$	35	V
Reverse voltage	$V_R$	32	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	$V_R = 30\text{ V}$
	$I_{R2}$	—	—	100		$V_R = 30\text{ V}$ , Ta = 60°C
Capacitance	$C_2$	14.15	—	15.75	pF	$V_R = 2\text{ V}$ , f = 1 MHz
	$C_{25}$	2.06	—	2.35		$V_R = 25\text{ V}$ , f = 1 MHz
Capacitance ratio	n	6.30	—	—	—	$C_2/C_{25}$
Series resistance	$r_s$	—	—	0.57	$\Omega$	$V_R = 5\text{ V}$ , f = 470 MHz
Matching error	$\Delta C/C^{*1}$	—	—	1.80	%	$V_R = 2\text{ to }25\text{ V}$ , f = 1 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

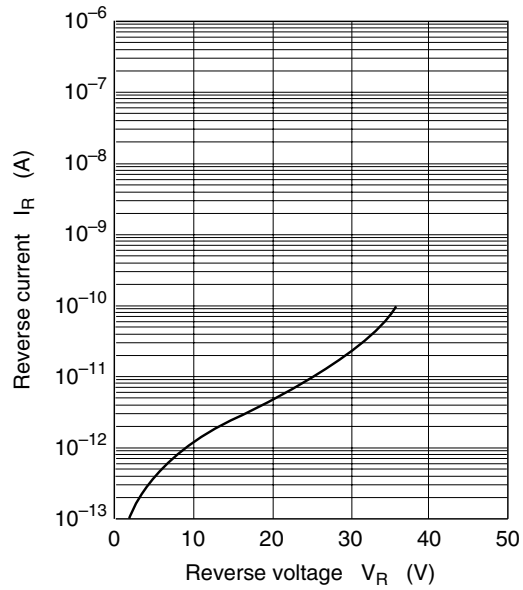


Fig.1 Reverse current vs. Reverse voltage

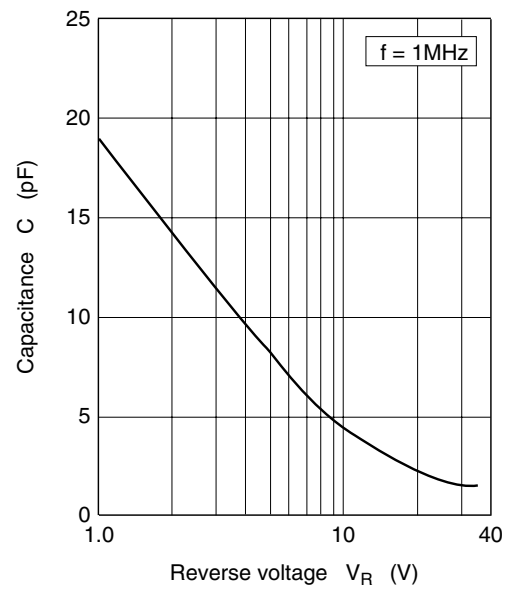


Fig.2 Capacitance vs. Reverse voltage

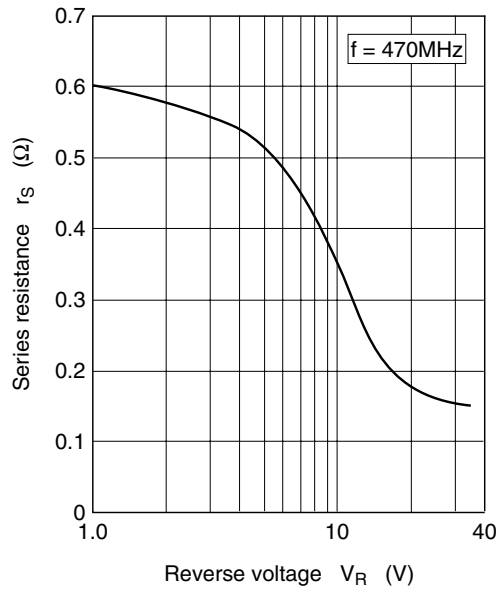


Fig.3 Series resistance vs. Reverse voltage

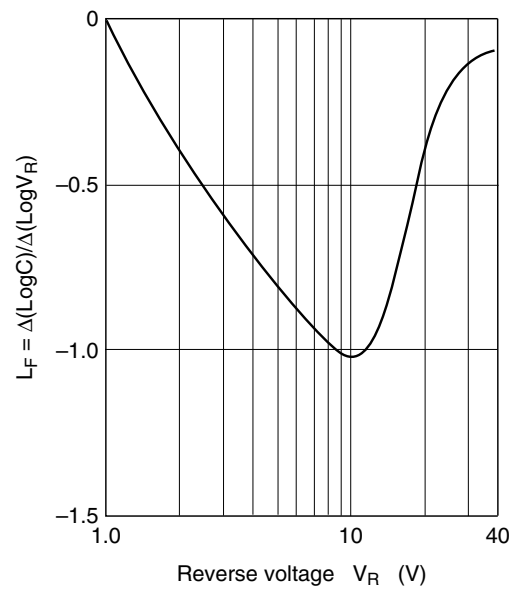
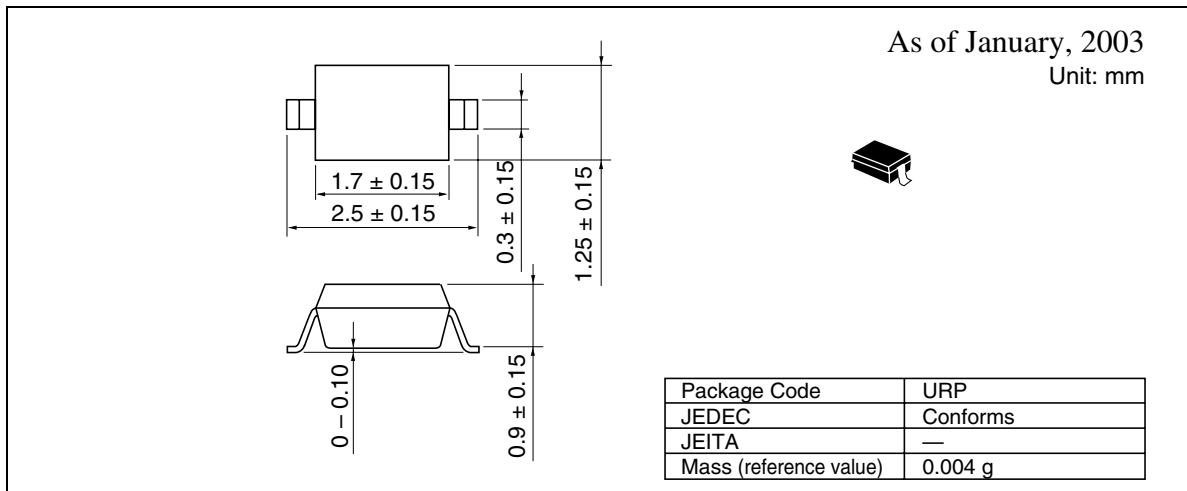


Fig.4 Linearity factor vs. Reverse voltage

## Package Dimensions



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