

## HVU316

### Variable Capacitance Diode for BS/CS tuner

REJ03G0108-0400Z  
(Previous: ADE-208-035C)  
Rev.4.00  
Sep.29.2003

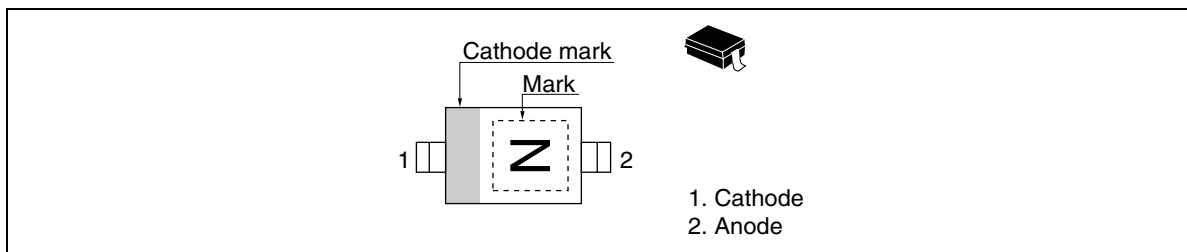
#### Features

- High capacitance ratio. ( $n = 9.0$  min)
- Low series resistance. ( $r_s = 1.2 \Omega$  max)
- Ultra small Resin Package (URP) is suitable for surface mount design.

#### Ordering Information

Type No.	Laser Mark	Package Code
HVU316	N	URP

#### Pin Arrangement



## Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	$V_R$	30	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	$V_R = 30\text{ V}$
	$I_{R2}$	—	—	100		$V_R = 30\text{ V}, T_a = 60^\circ\text{C}$
Capacitance	$C_1$	5.16	—	7.22	pF	$V_R = 1\text{ V}, f = 1\text{ MHz}$
	$C_{25}$	0.48	—	0.76		$V_R = 25\text{ V}, f = 1\text{ MHz}$
Capacitance ratio	n	9.0	—	—	—	$C_1/C_{25}$
Series resistance	$r_s$	—	—	1.2	$\Omega$	$V_R = 5\text{ V}, f = 470\text{ MHz}$
Matching error	$\Delta C/C^{*1}$	—	—	6.0	%	$V_R = 1\text{ to }25\text{ V}, f = 1\text{ MHz}$

Note: 1. C.C system (Continuous Connected taping system) enable to make any 10 pcs of  $\Delta C/C$  continuous in a reel, expect extension to another group.  
Calculate Matching Error,

$$\Delta C/C = \frac{(C_{max} - C_{min})}{C_{min}} \times 100 (\%)$$

Main Characteristic

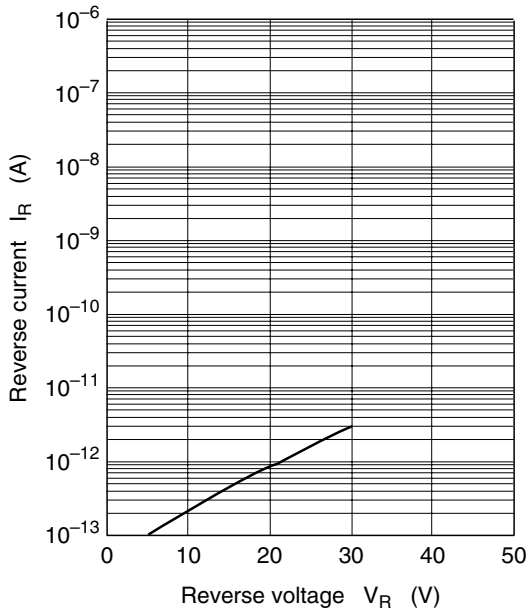


Fig.1 Reverse current vs. Reverse voltage

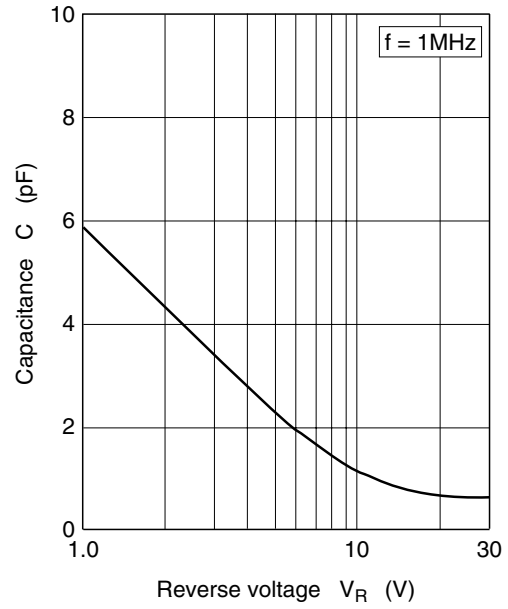


Fig.2 Capacitance vs. Reverse voltage

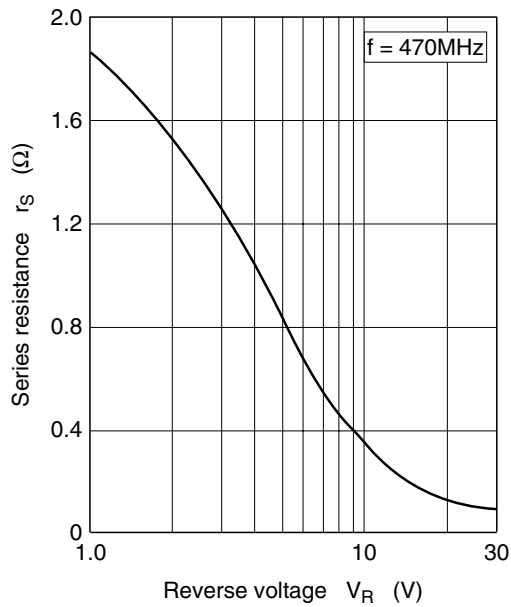


Fig.3 Series resistance vs. Reverse voltage

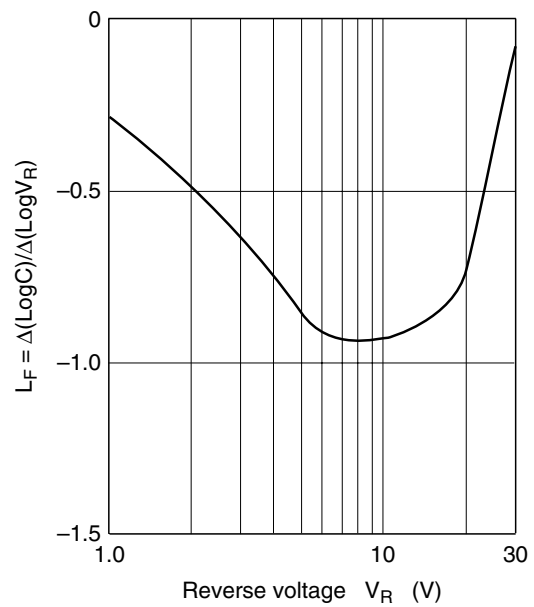
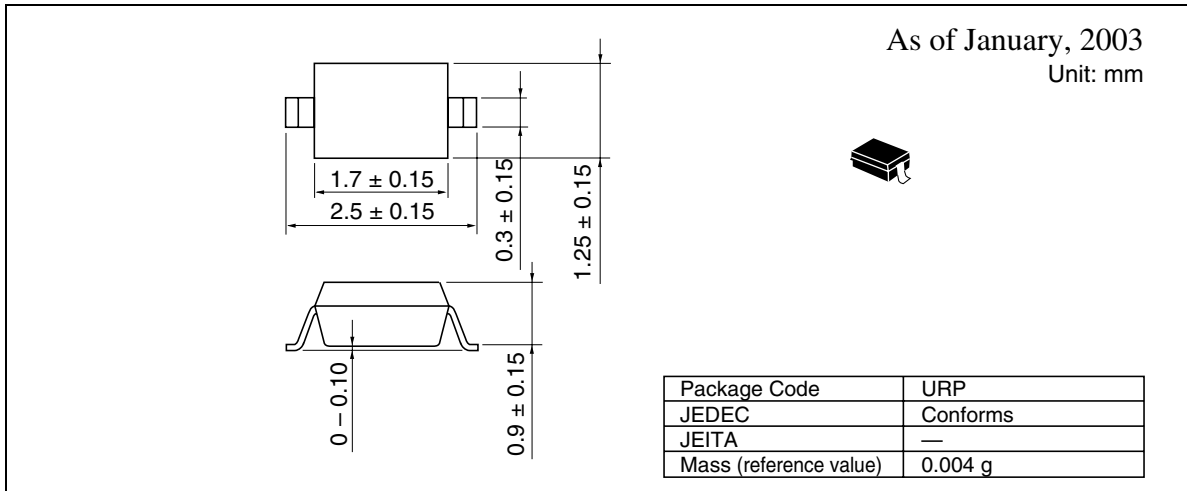


Fig.4 Linearity factor vs. Reverse voltage

Package Dimensions



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