To all our customers

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Renesas Technology Corp.
Customer Support Dept.
April 1, 2003

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Keep safety first in your circuit designs!

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   Remember to give due consideration to safety when making your circuit designs, with appropriate measures such as (i) placement of substitutive, auxiliary circuits, (ii) use of nonflammable material or (iii) prevention against any malfunction or mishap.

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HVU307

Variable Capacitance Diode for VHF tuner

ADE-208-069F (Z)

Rev. 6
Aug. 2000

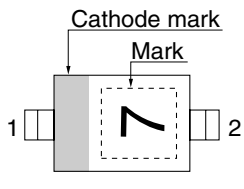
Features

- High capacitance ratio (n = 12.0 min)
- Low series resistance. (rs = 0.85Ω max)
- Ultra small Resin Package (URP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Code
HVU307	7	URP

Pin Arrangement



1. Cathode
2. Anode

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V_R	32	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 = 30 V
	I_{R2}	—	—	100		V_R = 30 V, Ta = 60°C
Capacitance	C_2	32.2	—	37.5	pF	V_R = 2 V, f = 1 MHz
	C_{25}	2.57	—	3.00		V_R = 25 V, f = 1 MHz
Capacitance ratio	n	12.0	12.5	—	—	C_2/C_{25}
Series resistance	r_S	—	—	0.85	Ω	V_R = 5 V, f = 470 MHz
Matching error	$\Delta C/C^{*1}$	—	—	2.0	%	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,

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

Main Characteristic

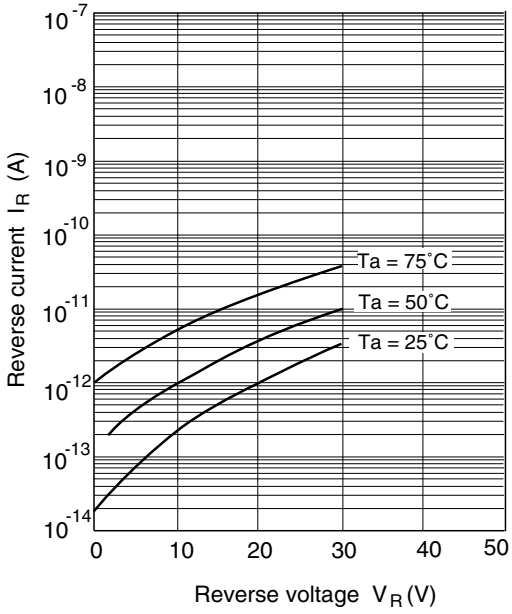


Fig.1 Reverse current Vs. Reverse voltage

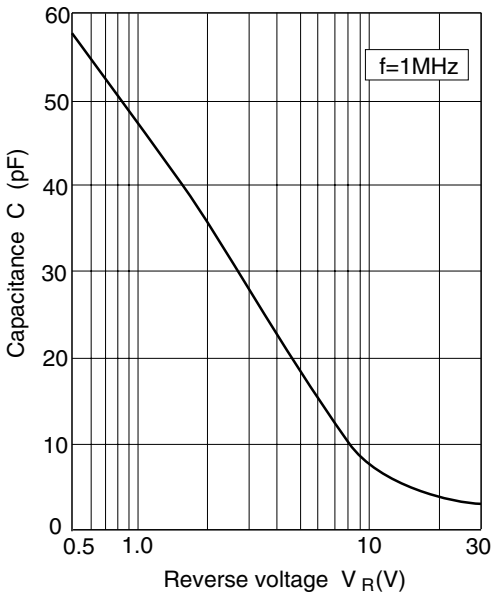


Fig.2 Capacitance Vs. Reverse voltage

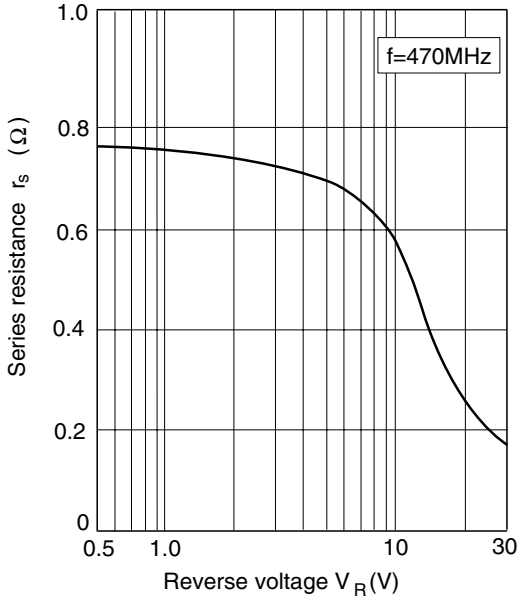


Fig.3 Series resistance Vs. Reverse voltage

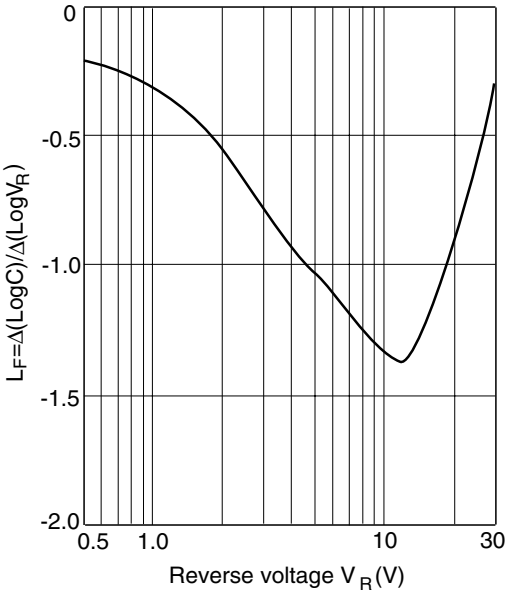
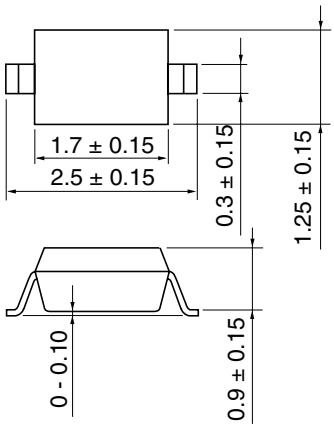


Fig.4 Linearity factor Vs. Reverse voltage

Package Dimensions

Unit: mm



Hitachi Code	URP
JEDEC	—
EIAJ	—
Mass (reference value)	0.004 g

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