

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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# HVC417C

## Variable Capacitance Diode for tuner

REJ03G0518-0100  
 (Previous: ADE-208-1433)  
 Rev.1.00  
 Feb 17, 2005

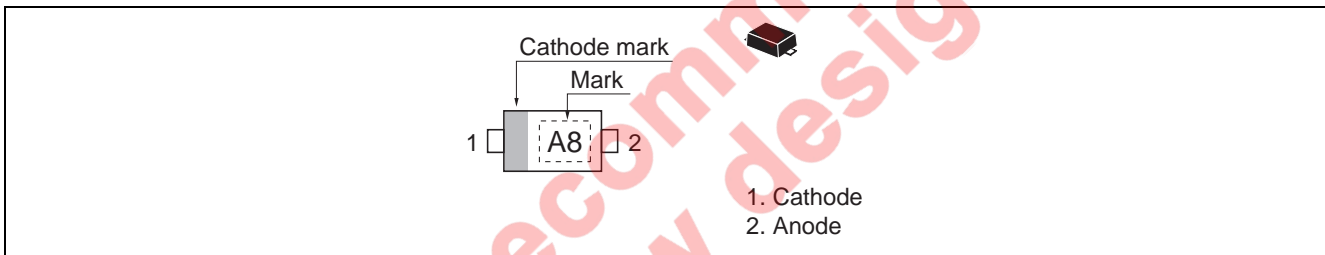
### Features

- High capacitance ratio. (n = 13.00 min)
- Ultra small Flat Lead Package (UFP) is suitable for surface mount design.

### Ordering Information

Type No.	Laser Mark	Renesas Code	Previous Code
HVC417C	A8	PWSF0002ZA-A	UFP

### Pin Arrangement



Not recommended for new design

## Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V <sub>R</sub>	30	V
Junction temperature	T <sub>j</sub>	125	°C
Storage temperature	T <sub>stg</sub>	-55 to +125	°C

## Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	I <sub>R1</sub>	—	—	10	nA	V <sub>R</sub> = 25 V
	I <sub>R2</sub>	—	—	100		V <sub>R</sub> = 25 V, Ta = 60°C
Capacitance	C <sub>1</sub>	7.80	—	9.40	pF	V <sub>R</sub> = 1 V, f = 1 MHz
	C <sub>25</sub>	0.50	—	0.60		V <sub>R</sub> = 25V, f = 1 MHz
Capacitance ratio	n	13.00	—	—	—	C <sub>1</sub> / C <sub>25</sub>
Series resistance	r <sub>s</sub>	—	—	1.50	Ω	V <sub>R</sub> = 5 V, f = 470 MHz
Matching error	ΔC/C *1	—	—	6.00	%	V <sub>R</sub> = 1 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,

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

Not recommended for new designs

Main Characteristic

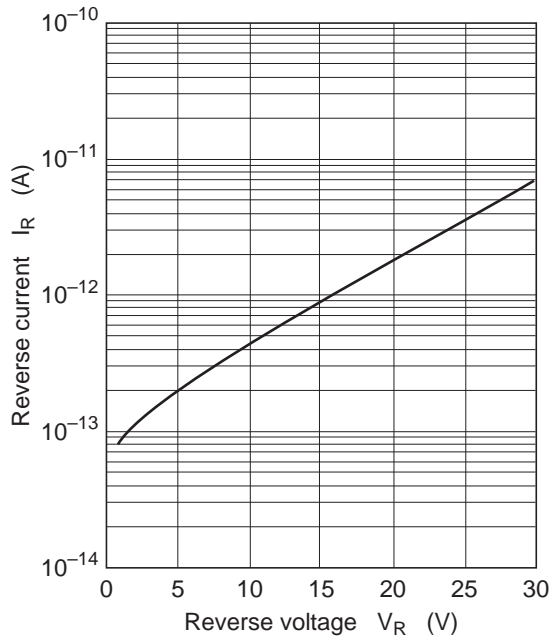


Fig.1 Reverse current vs. Reverse voltage

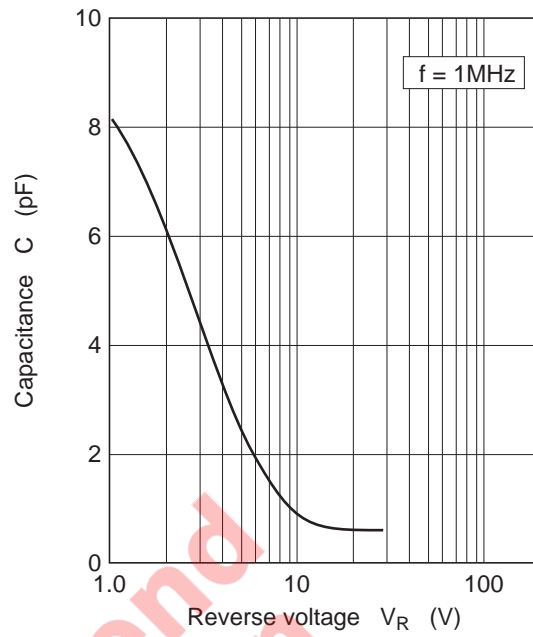


Fig.2 Capacitance vs. Reverse voltage

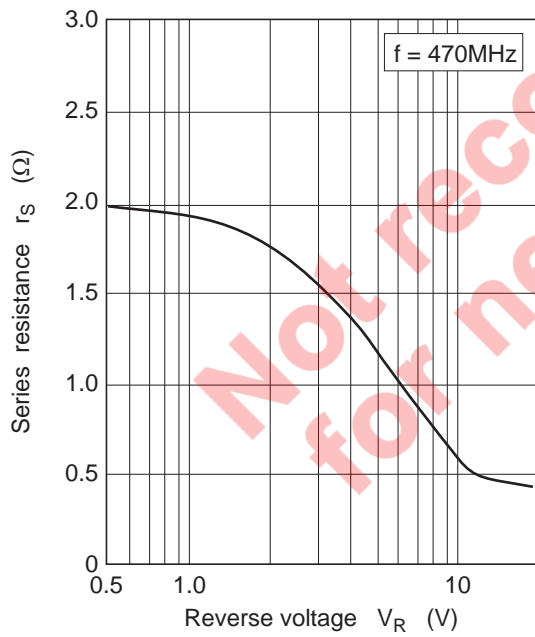


Fig.3 Series resistance vs. Reverse voltage

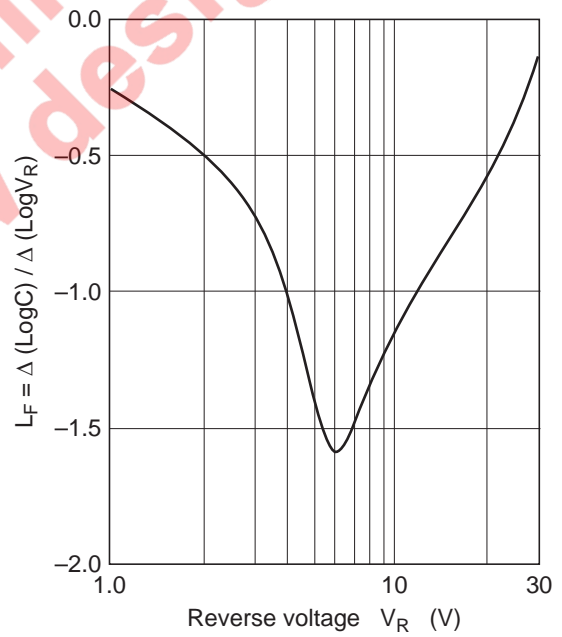
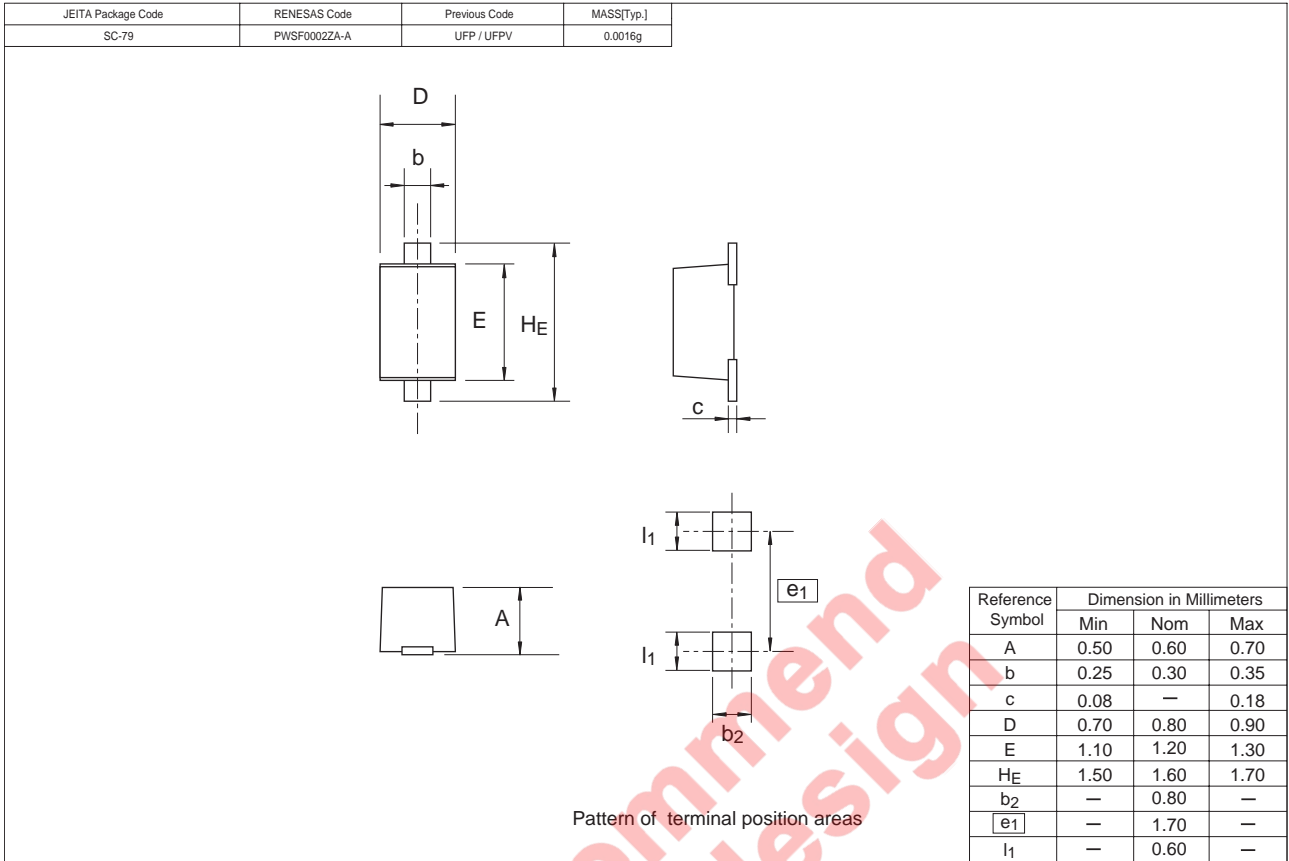


Fig.4 Linearity factor vs. Reverse voltage

Package Dimensions



Not recommended for new design

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