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Renesas Electronics website: <http://www.renesas.com>

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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HVC417C

Variable Capacitance Diode for tuner

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

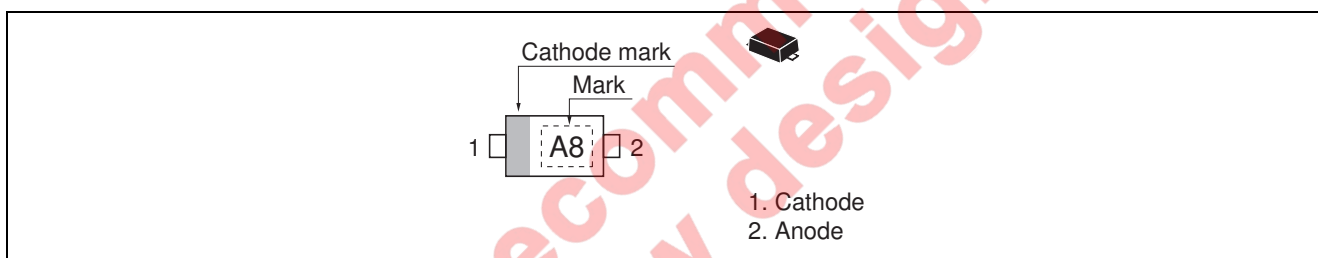
Features

- 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



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 = 25 V
	I _{R2}	—	—	100		V _R = 25 V, Ta = 60°C
Capacitance	C ₁	7.80	—	9.40	pF	V _R = 1 V, f = 1 MHz
	C ₂₅	0.50	—	0.60		V _R = 25V, f = 1 MHz
Capacitance ratio	n	13.00	—	—	—	C ₁ / C ₂₅
Series resistance	r _s	—	—	1.50	Ω	V _R = 5 V, f = 470 MHz
Matching error	ΔC/C *1	—	—	6.00	%	V _R = 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 extension to another group.

Calculate Matching Error,

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

Main Characteristic

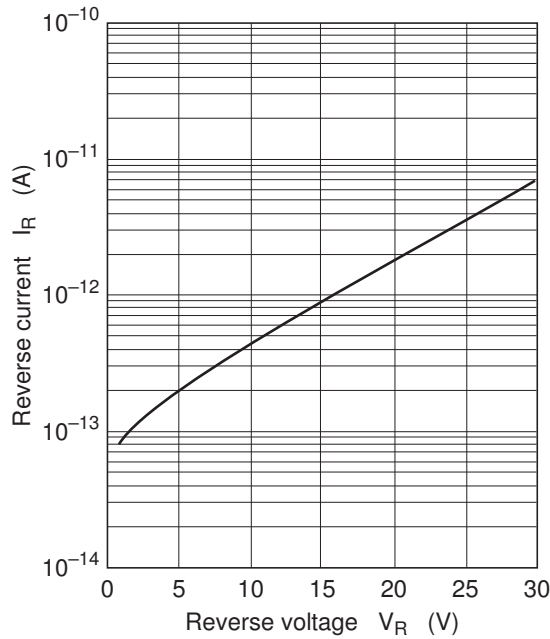


Fig.1 Reverse current vs. Reverse voltage

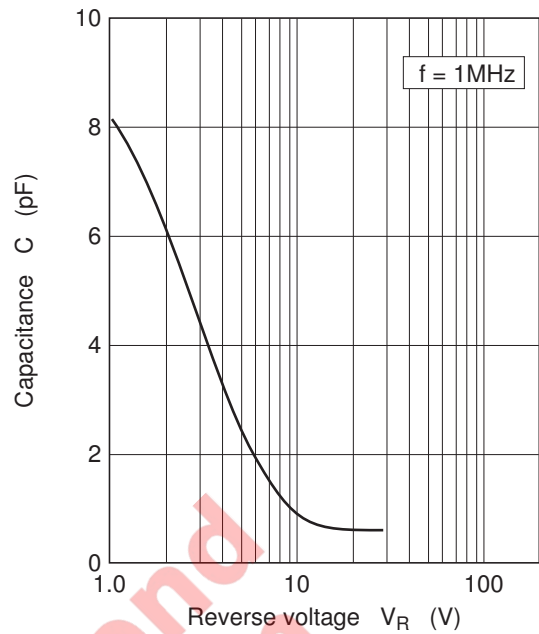


Fig.2 Capacitance vs. Reverse voltage

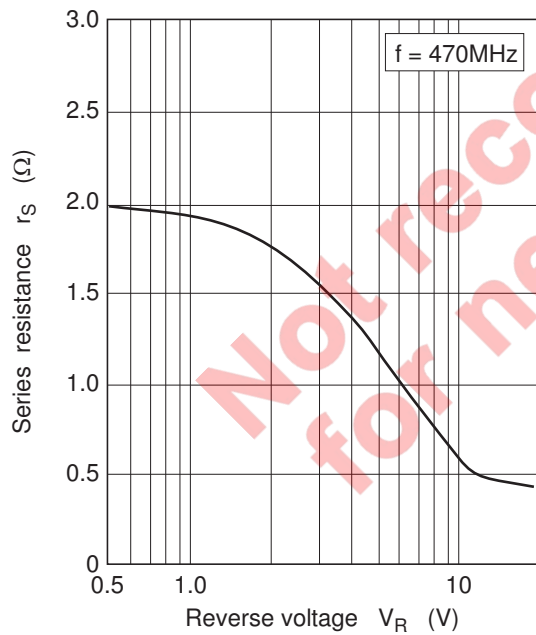


Fig.3 Series resistance vs. Reverse voltage

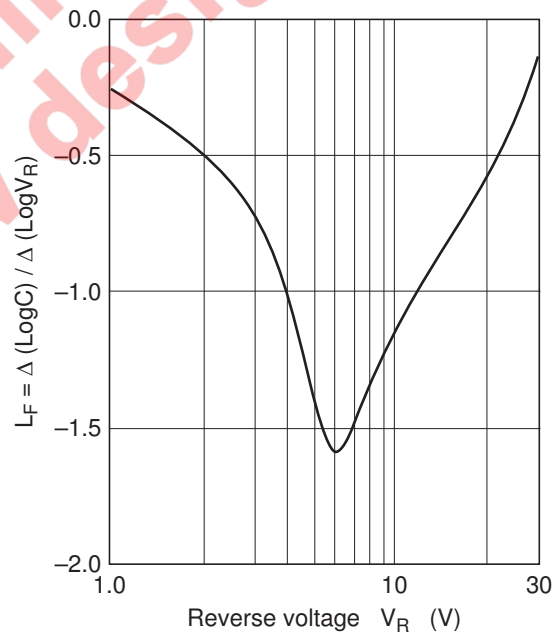
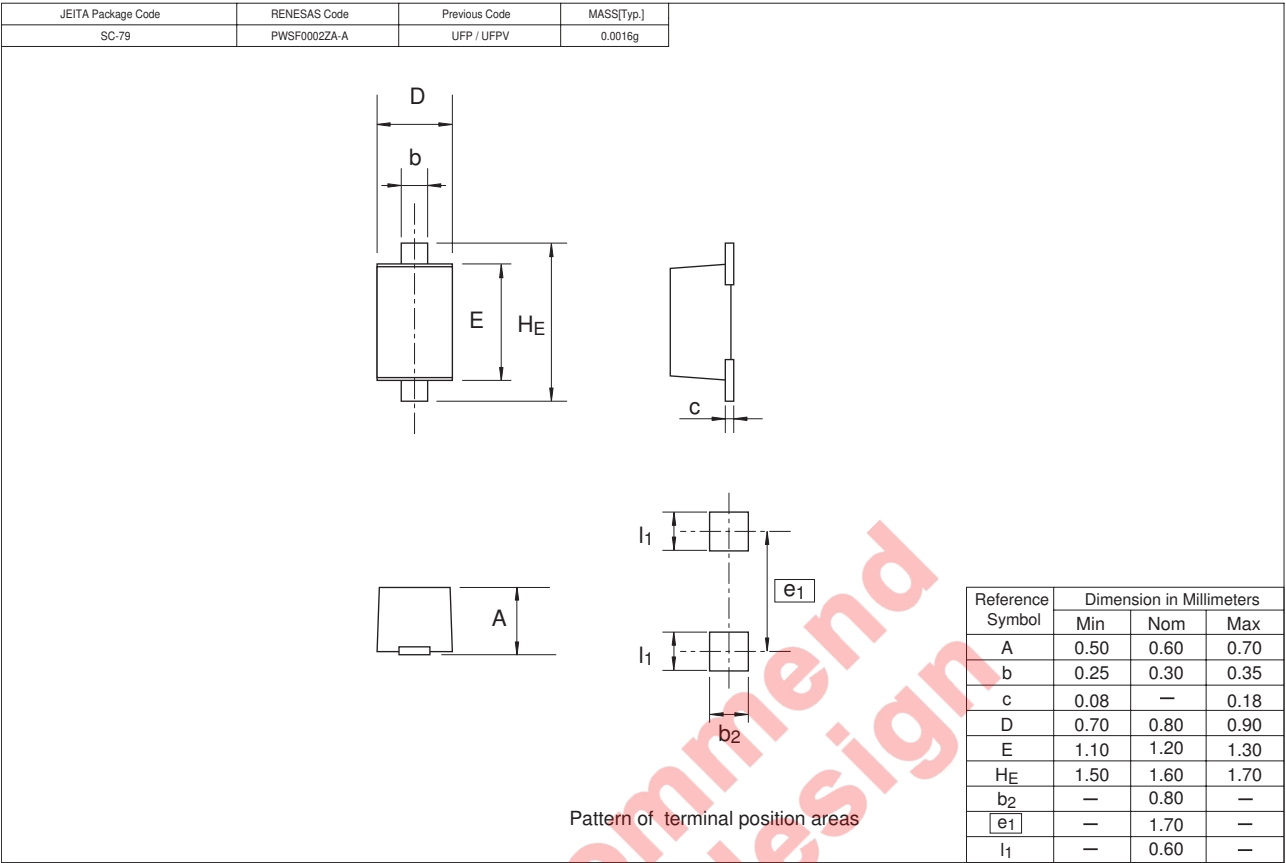


Fig.4 Linearity factor vs. Reverse voltage

Package Dimensions



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