To our customers,

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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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HVC363B

Variable Capacitance Diode for TV tuner

REJ03G0100-0100Z
(Previous: ADE-208-420)
Rev.1.00
Sep.29.2003

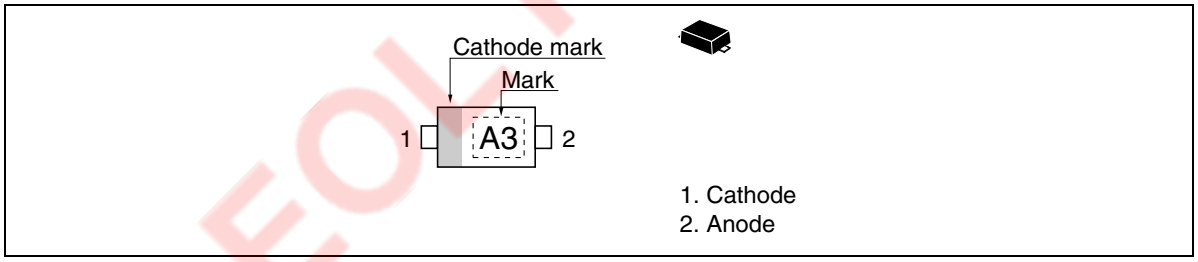
Features

- Low matching error. (ΔC/C = 2.0% max)
- High capacitance ratio. (n = 13.7 min)
- Low series resistance. (rs = 0.75 Ω max)
- Ultra small Flat Package (UFP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Code
HVC363B	A3	UFP

Pin Arrangement



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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 kΩ

Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	I_{R1}	—	—	10	nA	V_R = 32 V
	I_{R2}	—	—	100		V_R = 32 V, Ta = 60°C
Capacitance	C_1	36.0	—	42.0	pF	V_R = 1 V, f = 1 MHz
	C_{28}	2.36	—	2.75		V_R = 28 V, f = 1 MHz
Capacitance ratio	n	13.7	—	—	—	C_1/C_{28}
Series resistance	r_S	—	—	0.75	Ω	V_R = 5 V, f = 470 MHz
Matching error	ΔC/C *1	—	—	2.0	%	V_R = 1 to 28 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,

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

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Main Characteristic

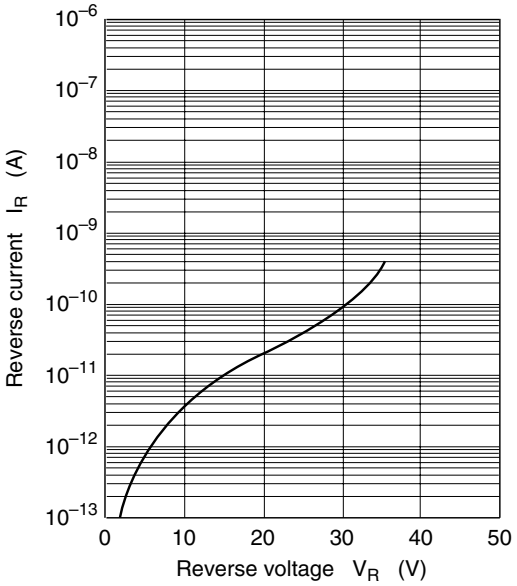


Fig.1 Reverse current vs. Reverse voltage

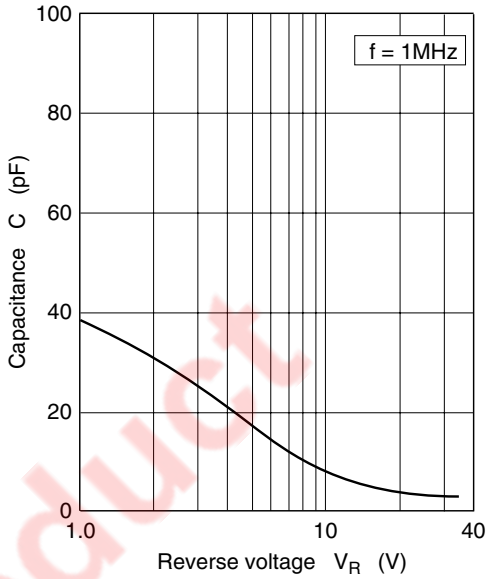


Fig.2 Capacitance vs. Reverse voltage

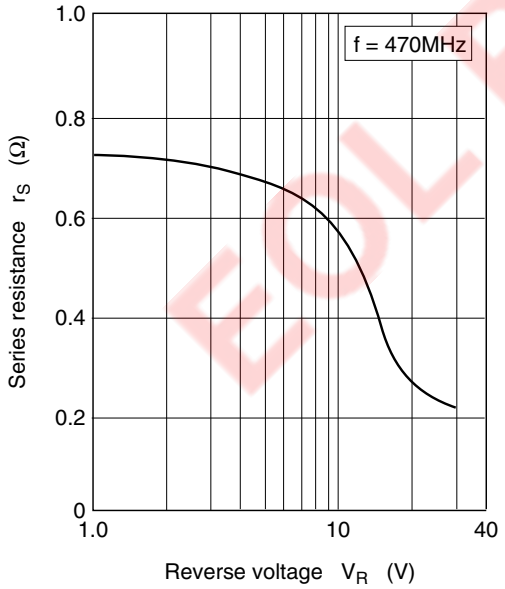


Fig.3 Series resistance vs. Reverse voltage

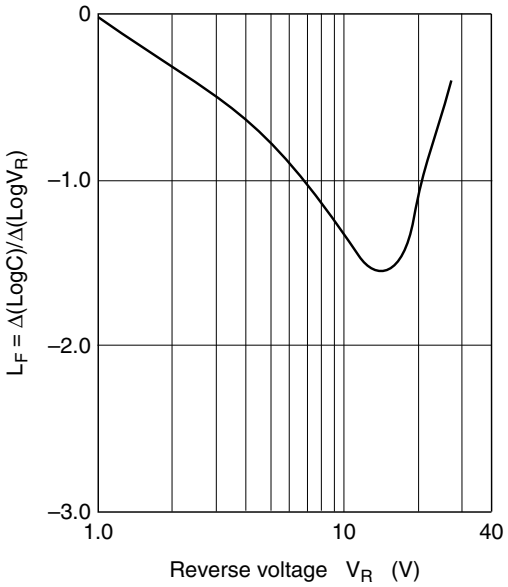


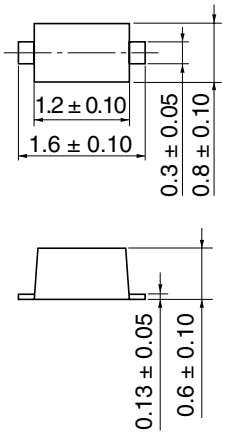
Fig.4 Linearity factor vs. Reverse voltage

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Package Dimensions

As of January, 2003
Unit: mm





Package Code	UFP
JEDEC	—
JEITA	Conforms
Mass (reference value)	0.0016 g

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