HVC363A

Variable Capacitance Diode for TV tuner

REJ03G0517-0200
(Previous: ADE-208-427A)
Rev.2.00
Feb 16, 2005

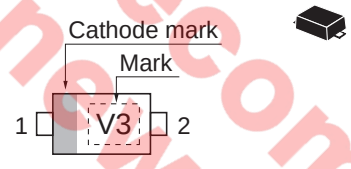
Features

- High capacitance ratio (n = 15.0 Typ)
- Low series resistance (r_s = 0.75 Ω max) and good C-V linearity.
- Ultra small Flat Lead Package (UFP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Renesas Code	Previous Code
HVC363A	V3	PWSF0002ZA-A	UFP

Pin Arrangement



1. Cathode
2. Anode

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 voltage	V_R	32	—	—	V	I_R = 1 μA
Reverse current	I_{R1}	—	—	10	nA	V_R = 30 V
	I_{R2}	—	—	100		V_R = 30 V, Ta = 60°C
Capacitance	C_1	34.65	—	42.35	pF	V_R = 1 V, f = 1 MHz
	C_{28}	2.361	—	2.754		V_R = 28 V, f = 1 MHz
Capacitance ratio	n	13.50	15.00	—	—	C_1/C_{28}
Series resistance	r_S	—	—	0.75	Ω	C = 14 pF, f = 470 MHz
Matching error	ΔC/C *1	—	—	2.0	%	V_R = 1 to 28 V, f = 1 MHz
Linealty factor *2	—	—	-1.20	—	—	ΔlogC / ΔlogV

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,

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

2. Calculate LF (ΔlogC / ΔlogV) at VR = 1 througn 28V , f = 1 MHz .(Reference Value)

Main Characteristic

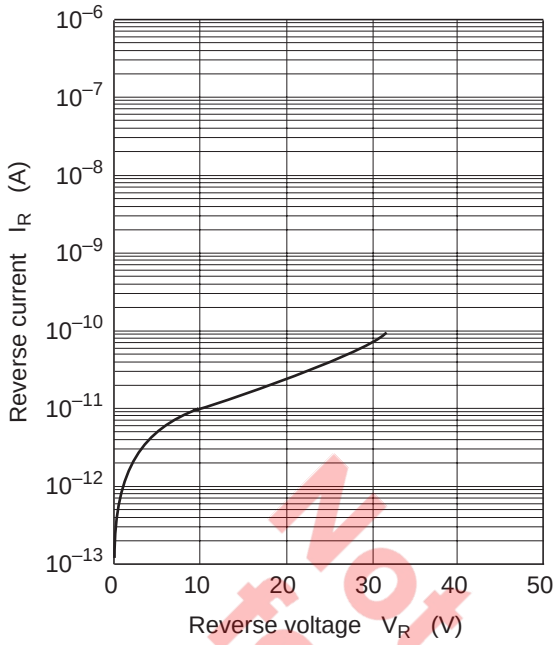


Fig.1 Reverse current vs. Reverse voltage

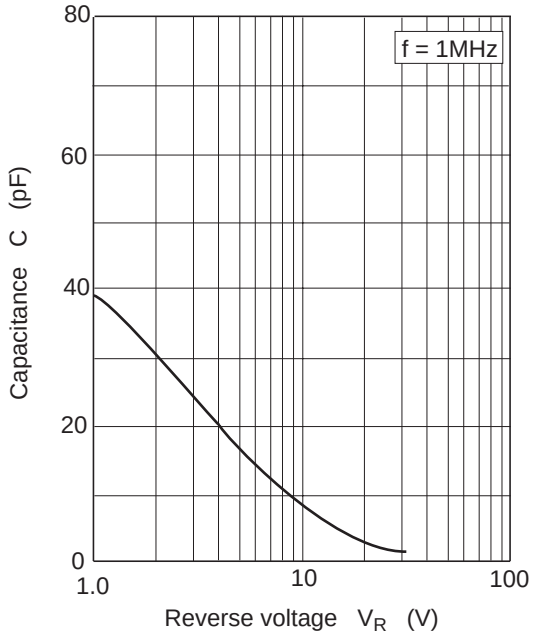


Fig.2 Capacitance vs. Reverse voltage

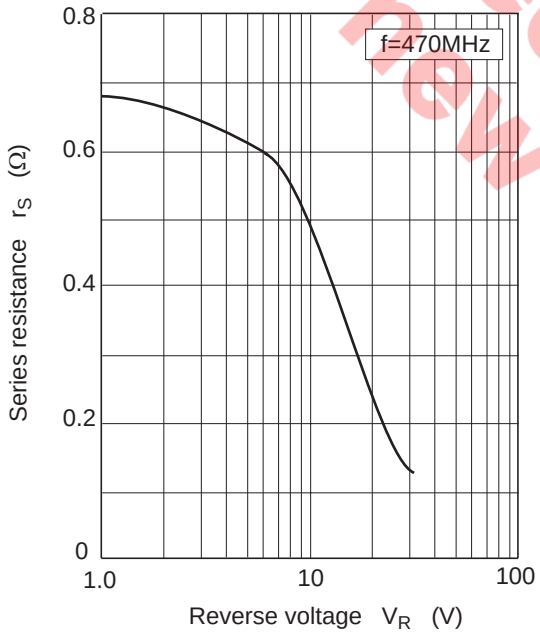


Fig.3 Series resistance vs. Reverse voltage

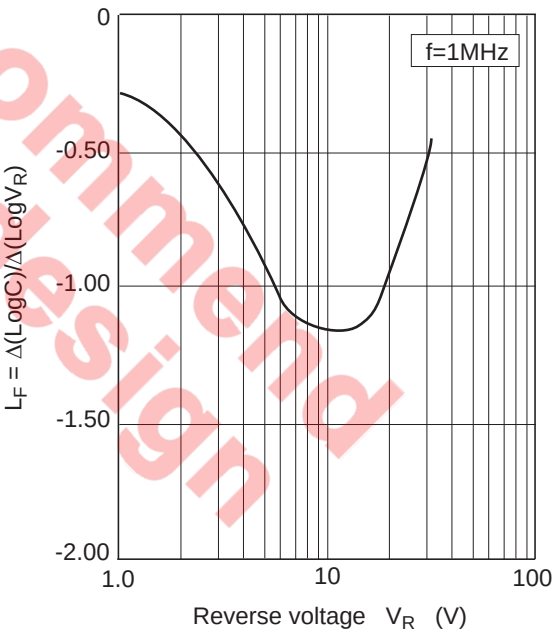
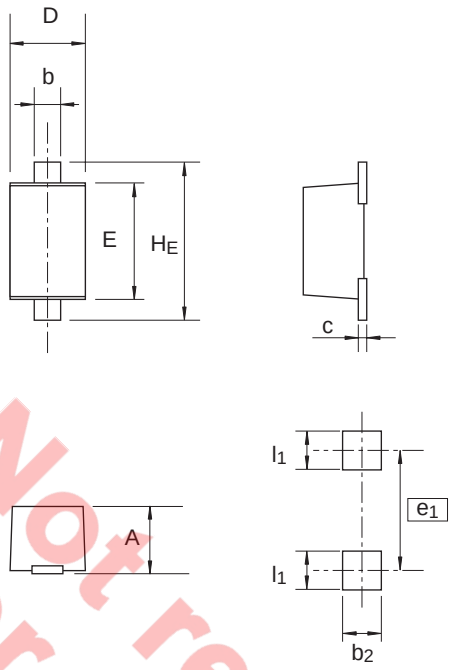


Fig.4 Linearity factor vs. Reverse voltage

Package Dimensions

JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
SC-79	PWSF0002ZA-A	UFP / UFPV	0.0016g



Pattern of terminal position areas

Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
A	0.50	0.60	0.70
b	0.25	0.30	0.35
c	0.08	—	0.18
D	0.70	0.80	0.90
E	1.10	1.20	1.30
H_E	1.50	1.60	1.70
b_2	—	0.80	—
e_1	—	1.70	—
l_1	—	0.60	—

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RENESAS SALES OFFICES

http://www.renesas.com

Refer to "**http://www.renesas.com/en/network**" for the latest and detailed information.

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Colophon 2.0