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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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HVC359

Variable Capacitance Diode for VCO

REJ03G0489-0300
(Previous: ADE-208-419B)
Rev.3.00
Jan 17, 2005

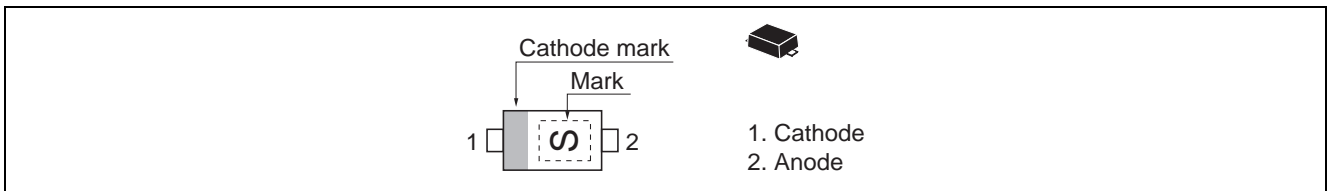
Features

- High capacitance ratio and good C-V linearity.
- To be usable at low voltage.
- Ultra small Flat Lead Package (UFP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Code
HVC359	S	UFP

Pin Arrangement



Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V_R	15	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	$V_R = 10\text{ V}$
	I_{R2}	—	—	100		$V_R = 10\text{ V}, T_a = 60^\circ\text{C}$
Capacitance	C_1	24.8	—	29.8	pF	$V_R = 1\text{ V}, f = 1\text{ MHz}$
	C_4	6.0	—	8.30		$V_R = 4\text{ V}, f = 1\text{ MHz}$
Capacitance ratio	n	3.00	—	—	—	C_1/C_4
Series resistance	r_s	—	—	1.50	Ω	$V_R = 4\text{ V}, f = 100\text{ MHz}$
ESD-Capability *1	—	200	—	—	V	C = 200 pF, R = 0 Ω , Both forward and reverse direction 1 pulse.

Note: 1. Failure criterion ; $I_R \geq 20\text{ nA}$ at $V_R = 10\text{ V}$

Main Characteristic

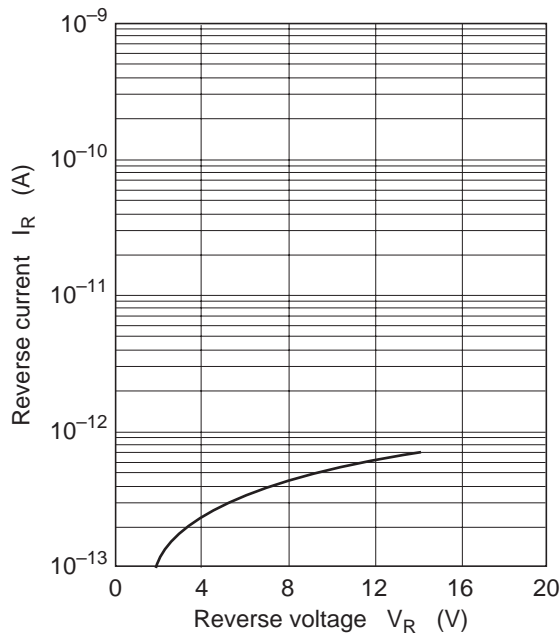


Fig.1 Reverse Current vs. Reverse Voltage

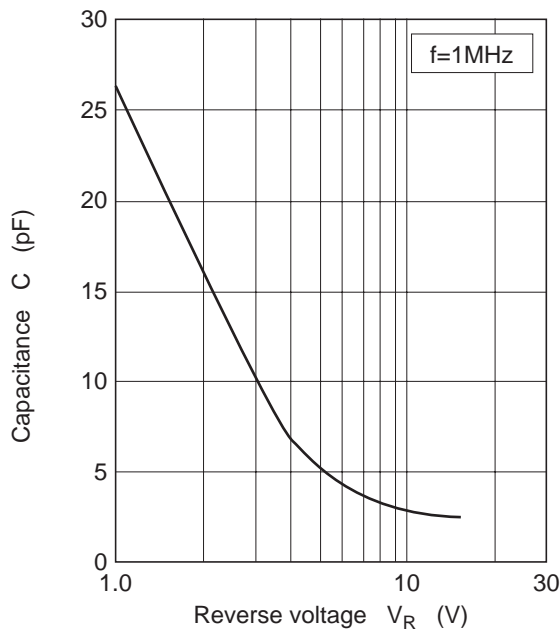
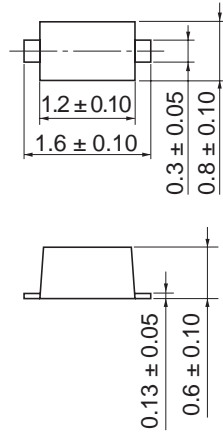


Fig.2 Capacitance vs. Reverse Voltage

Package Dimensions

As of January, 2003
Unit: mm



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

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