To all our customers

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Renesas Technology Corp.
Customer Support Dept.
April 1, 2003

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Keep safety first in your circuit designs!

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   Remember to give due consideration to safety when making your circuit designs, with appropriate measures such as (i) placement of substitutive, auxiliary circuits, (ii) use of nonflammable material or (iii) prevention against any malfunction or mishap.

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HVL358B

Variable Capacitance Diode for VCO

ADE-208-1520 (Z)

Rev.0
Jul. 2002

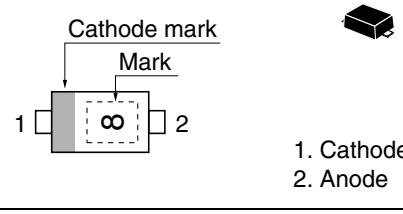
Features

- High capacitance ratio. (n = 2.20 min)
- Low series resistance. (rs = 0.4 Ω max)
- Good C-V linearity.
- Extremely small Flat Package (EFP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Code
HVL358B	8	EFP

Pin Arrangement



Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V_R	15	V
Junction temperature	Tj	125	°C
Storage temperature	Tstg	–55 to +125	°C

Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	I_{R1}	—	—	10	µA	V_R = 15 V
	I_{R2}	—	—	100		V_R = 15 V
Capacitance	C_1	19.5	—	21.0	pF	V_R = 1 V, f = 1 MHz
	C_4	8.00	—	9.30		V_R = 4 V, f = 1 MHz
Capacitance ratio	n	2.20	—	—	—	C_1 / C_4
Series resistance	r_s	—	—	0.4	Ω	V_R = 1 V, f = 470 MHz

Notes: 1. Please do not use the soldering iron due to avoid high stress to the EFP package.
2. The material of lead is exposed for cutting plane. Therefor, soldering nature of lead tip part is considered as unquestioned. Please kindly consider soldering nature.

Main Characteristic

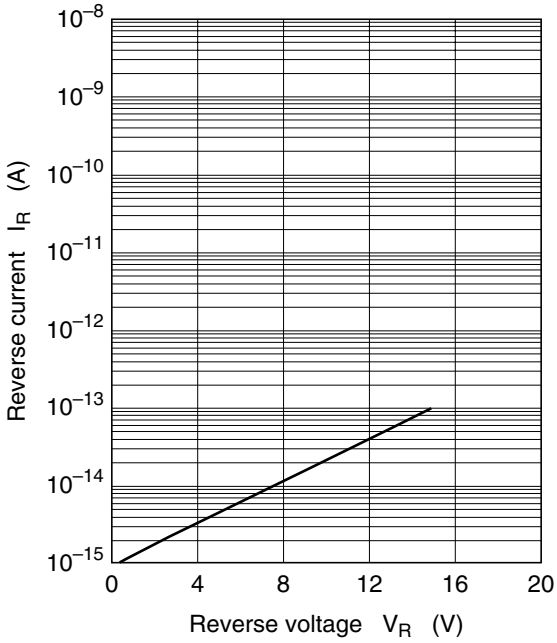


Fig.1 Reverse current vs. Reverse voltage

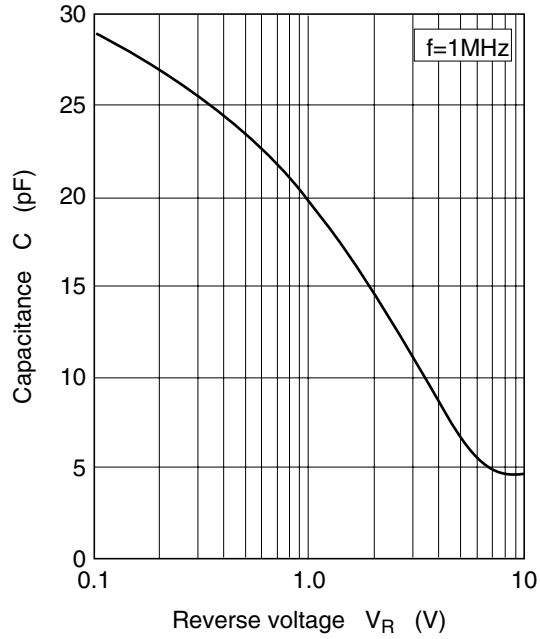


Fig.2 Capacitance vs. Reverse Voltage

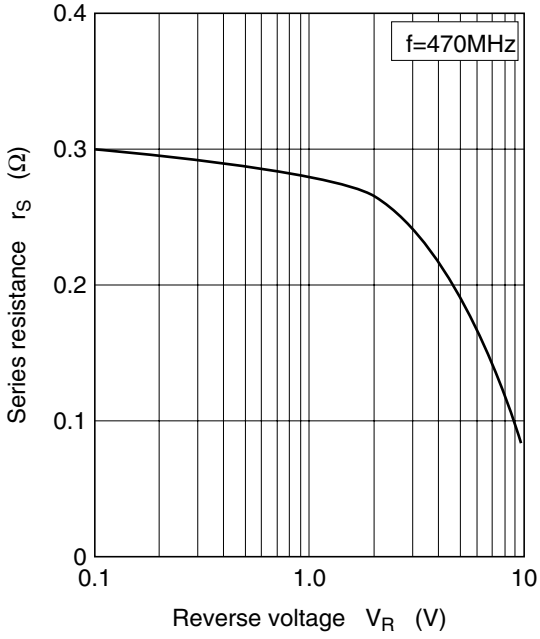


Fig.3 Series resistance vs. Reverse voltage

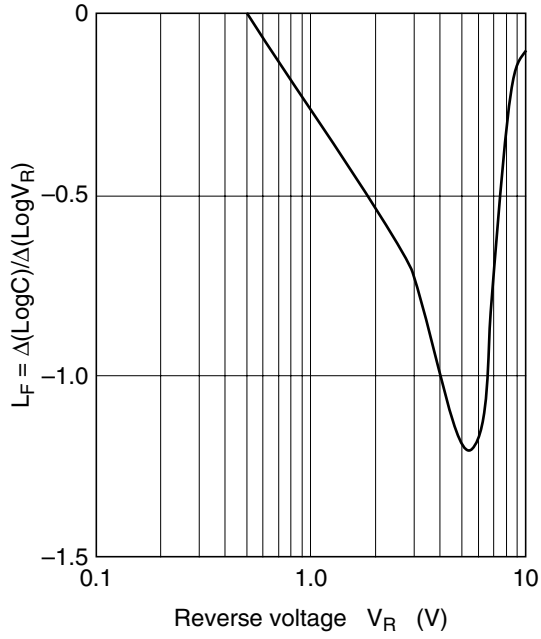
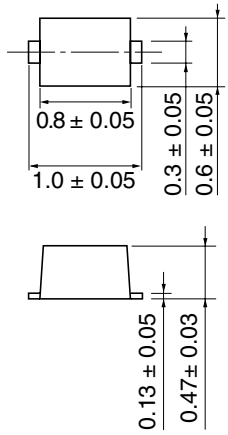


Fig.4 Linearity factor vs. Reverse voltage

Package Dimensions

Unit: mm



Hitachi Code	EFP
JEDEC	—
JEITA	—
Mass (reference value)	0.0007 g

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