

HVL399C

Variable Capacitance Diode for VCO

REJ03G0052-0200
Rev.2.00
Mar 21, 2006

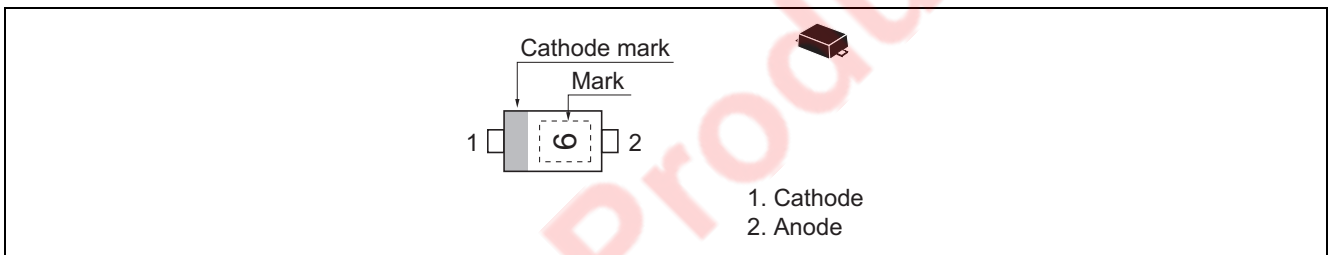
Features

- High capacitance ratio. ($n = 2.30$ to 2.46)
- Low series resistance. ($r_s = 0.40 \Omega$ max)
- Extremely small Flat Lead Package (EFP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Name	Package Code
HVL399C	6	EFP	PXSF0002ZA-A

Pin Arrangement



Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V_R	10	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}	—	—	50		$V_R = 10\text{ V}, T_a = 60^\circ\text{C}$
Capacitance	$C_{0.5}$	18.5	—	20.0	pF	$V_R = 0.5\text{ V}, f = 1\text{ MHz}$
	$C_{2.5}$	7.30	—	8.60		$V_R = 2.5\text{ V}, f = 1\text{ MHz}$
Capacitance ratio	n	2.30	—	2.46	—	$C_{0.5} / C_{2.5}$
Series resistance	r_s	—	—	0.40	Ω	$V_R = 1\text{ V}, f = 470\text{ MHz}$

Note: For EFP package, the material of lead is exposed for cutting plane. There for, soldering nature of lead tip part is considered as unquestioned. Please kindly consider soldering nature.

Main Characteristic

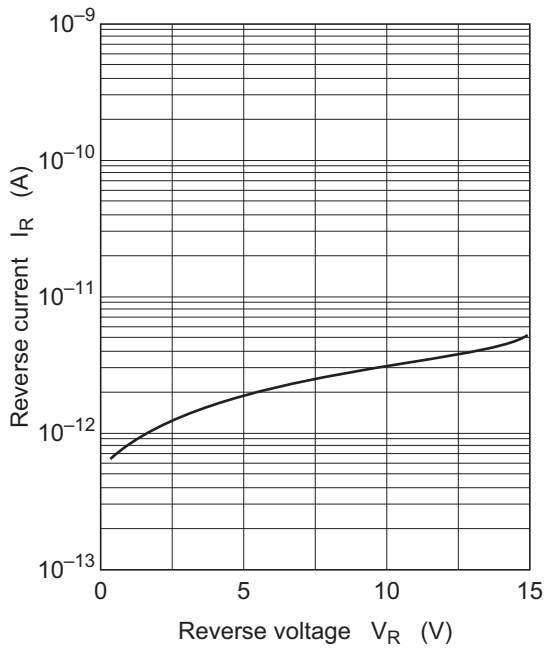


Fig.1 Reverse current vs. Reverse voltage

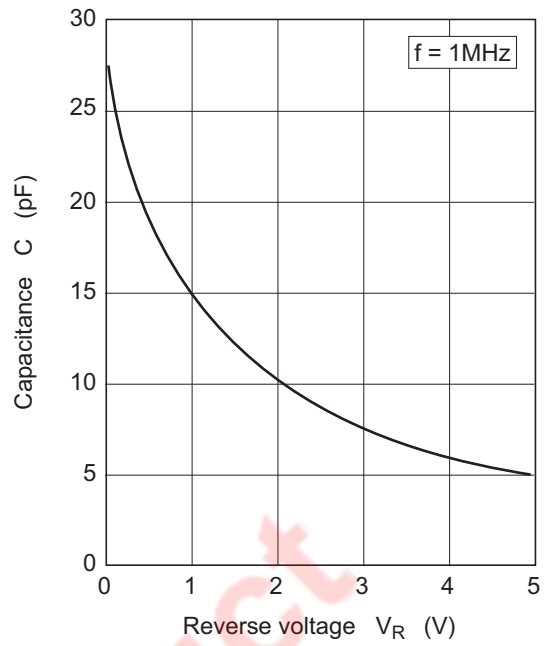


Fig.2 Capacitance vs. Reverse voltage

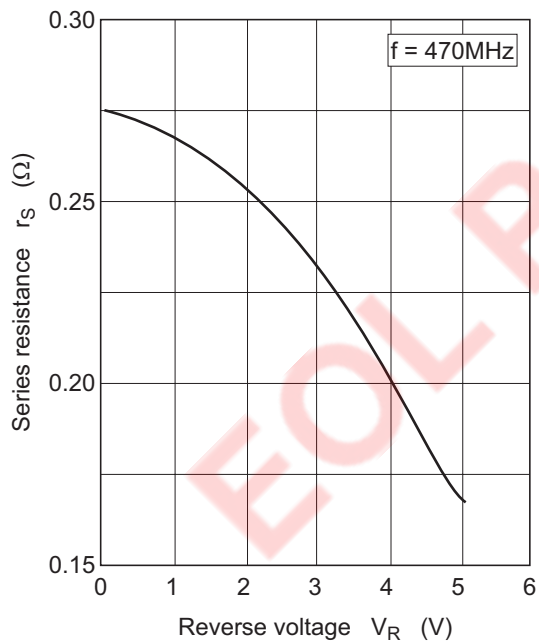
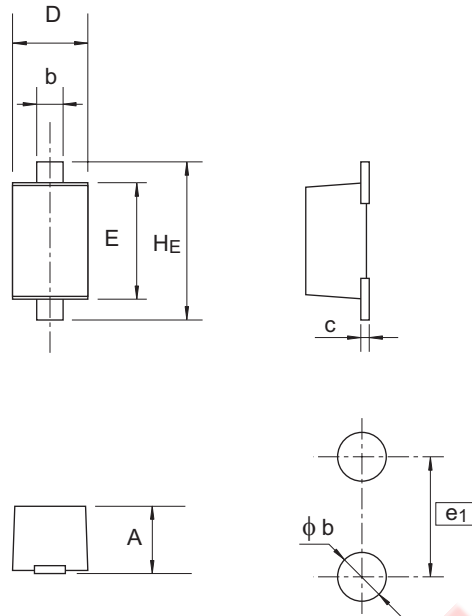


Fig.3 Series resistance vs. Reverse voltage

Package Dimensions

Package Name	JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
EFP	—	PXSF0002ZA-A	EFP / EFPV	0.0007g



Pattern of terminal position areas

Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
A	0.44	0.47	0.50
b	0.25	0.30	0.35
c	0.08	0.13	0.18
D	0.55	0.60	0.65
E	0.75	0.80	0.85
H_E	0.95	1.00	1.05
ϕb	—	0.40	—
e_1	—	1.00	—

EOL Product

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Renesas Technology Singapore Pte. Ltd.

1 Harbour Front Avenue, #06-10, Keppel Bay Tower, Singapore 098632
Tel: <65> 6213-0200, Fax: <65> 6278-8001

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Kukje Center Bldg. 18th Fl., 191, 2-ka, Hangang-ro, Yongsan-ku, Seoul 140-702, Korea
Tel: <82> (2) 796-3115, Fax: <82> (2) 796-2145

Renesas Technology Malaysia Sdn. Bhd

Unit 906, Block B, Menara Amcorp, Amcorp Trade Centre, No.18, Jalan Persiaran Barat, 46050 Petaling Jaya, Selangor Darul Ehsan, Malaysia
Tel: <603> 7955-9390, Fax: <603> 7955-9510

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April 1st, 2010
Renesas Electronics Corporation

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