

## HVL375C

### Variable Capacitance Diode for VCO

REJ03G0223-0200  
Rev.2.00  
Mar 10, 2006

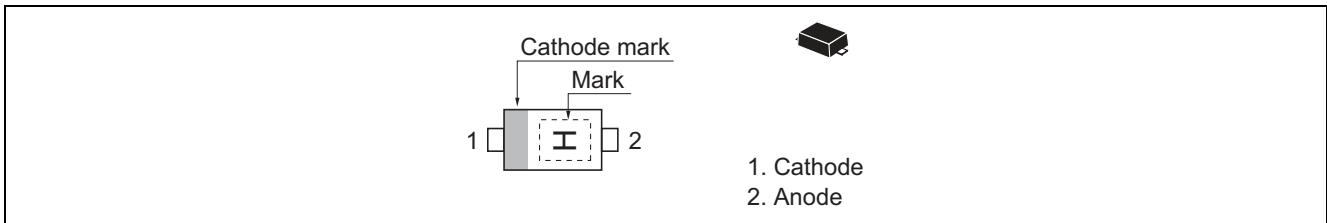
#### Features

- Narrow terminal Capacitance deviation.
- Low series resistance. ( $r_s = 1.1 \Omega$  max)
- Good C-V linearity.
- Extremely small Flat Lead Package (EFP) is suitable for surface mount design.

#### Ordering Information

Type No.	Laser Mark	Package Name	Package Code
HVL375C	H	EFP	PXSF0002ZA-A

#### Pin Arrangement



## Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V <sub>R</sub>	10	V
Junction temperature	T <sub>j</sub>	125	°C
Storage temperature	T <sub>stg</sub>	-55 to +125	°C

## Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	I <sub>R1</sub>	—	—	10	nA	V <sub>R</sub> = 10 V
	I <sub>R2</sub>	—	—	100		V <sub>R</sub> = 10 V, Ta = 60°C
Capacitance	C <sub>1</sub>	15.0	—	16.5	pF	V <sub>R</sub> = 1 V, f = 1 MHz
	C <sub>3</sub>	5.0	—	6.0		V <sub>R</sub> = 3 V, f = 1 MHz
	C <sub>4</sub>	3.3	—	4.0		V <sub>R</sub> = 4 V, f = 1 MHz
Capacitance ratio	n	4.0	—	—	—	C <sub>1</sub> / C <sub>4</sub>
Series resistance	r <sub>S</sub>	—	—	1.1	Ω	V <sub>R</sub> = 2 V, f = 470 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

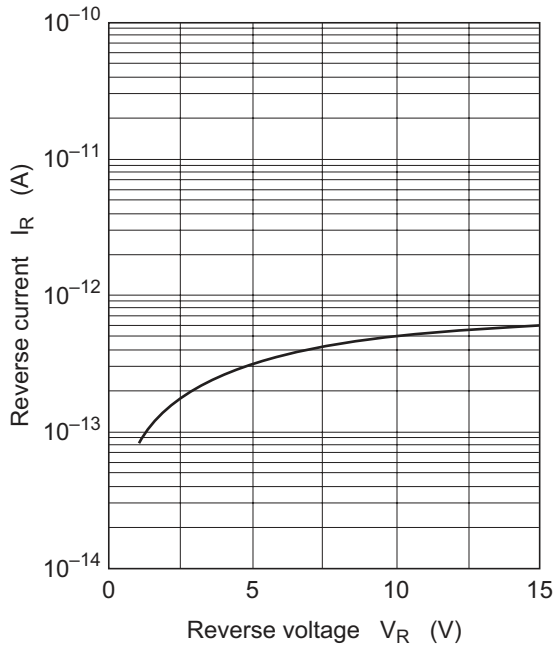


Fig.1 Reverse current vs. Reverse voltage

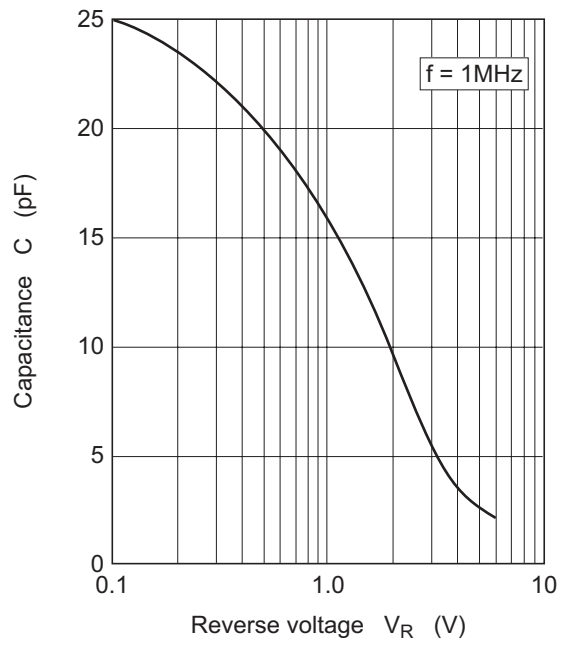


Fig.2 Capacitance vs. Reverse voltage

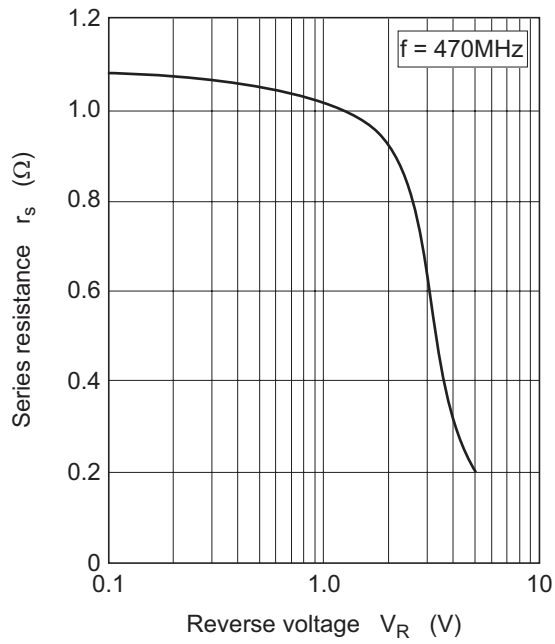
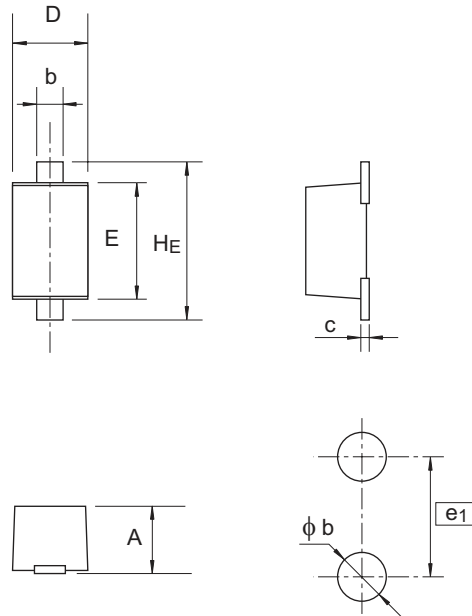


Fig.3 Series resistance vs. Reverse voltage

### 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
$\phi b$	—	0.40	—
$e_1$	—	1.00	—

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