

# HVL399CM

## Variable Capacitance Diode for VCO

REJ03G0230-0100Z

Rev.1.00

Apr 13, 2004

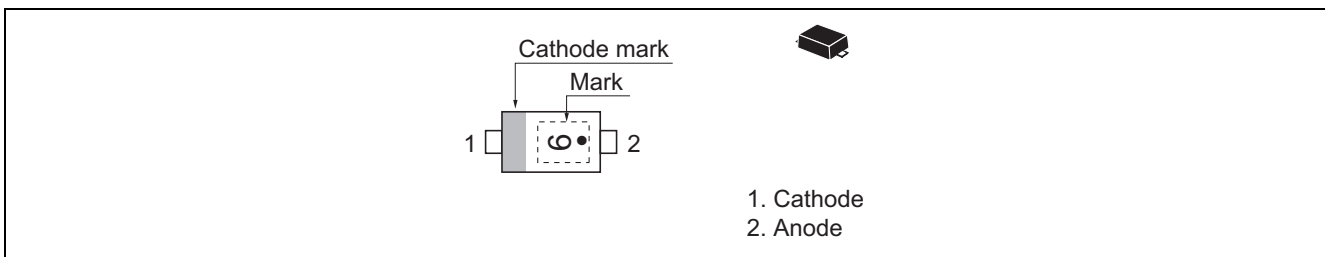
### Features

- High capacitance ratio. ( $n = 2.30$  min)
- Low series resistance. ( $r_s = 0.4 \Omega$  max)
- Thin Extremely small Flat Package (TEFP) is suitable for surface mount design.

### Ordering Information

Type No.	Laser Mark	Package Code
HVL399CM	6	TEFP

### 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	$V_R = 0.5\text{ V}, f = 1\text{ MHz}$
	$C_{2.5}$	7.3	—	8.6		$V_R = 2.5\text{ V}, f = 1\text{ MHz}$
Capacitance ratio	$n$	2.30	—	2.46	—	$C_{0.5}/C_{2.5}$
Series resistance	$r_s$	—	—	0.4	$\Omega$	$V_R = 1\text{ V}, f = 470\text{ MHz}$

Notes: 1. Please do not use the soldering iron due to avoid high stress to the TAFP package.

2. The material of lead is exposed for cutting plane. Therefore, soldering nature of lead tip part is considered as unquestioned. Please kindly consider soldering nature.

Main Characteristic

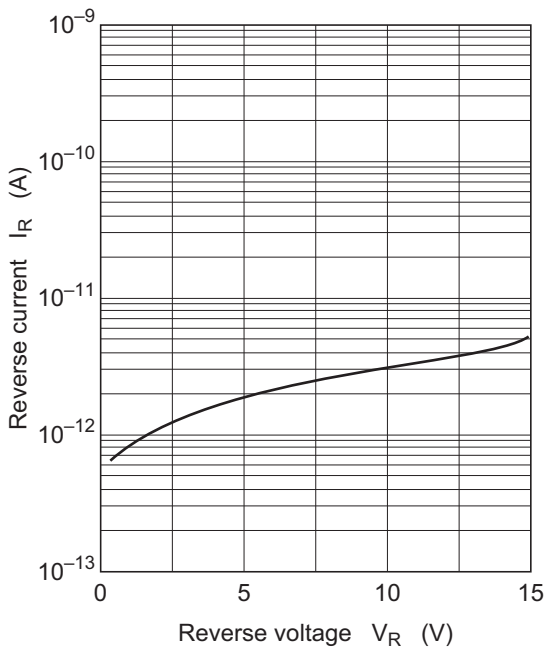


Fig.1 Reverse current vs. Reverse voltage

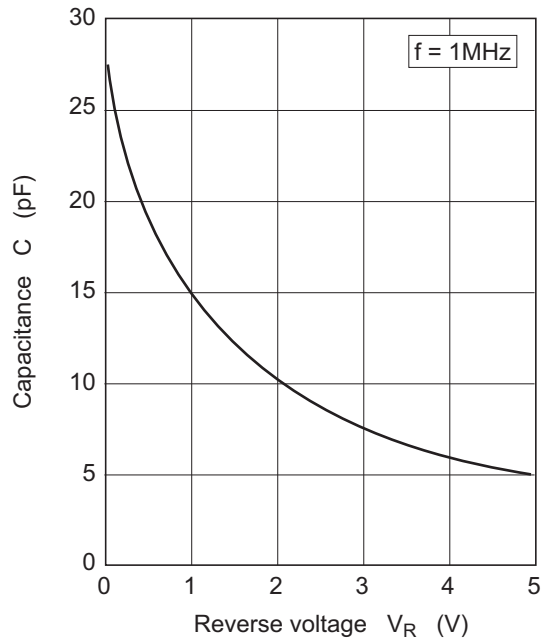


Fig.2 Capacitance vs. Reverse voltage

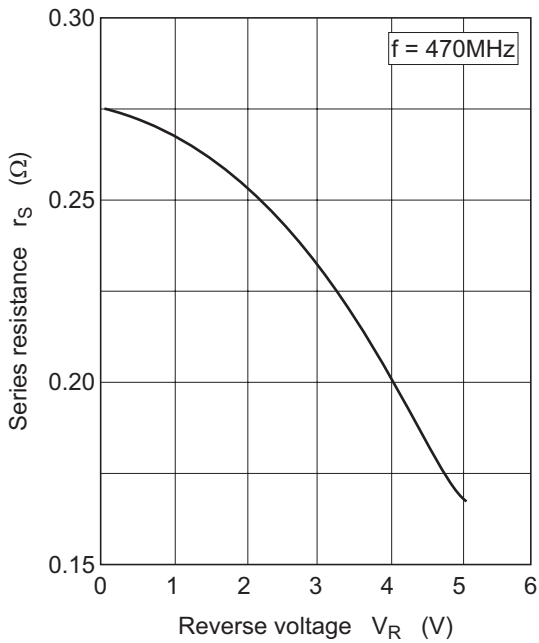


Fig.3 Series resistance vs. Reverse voltage

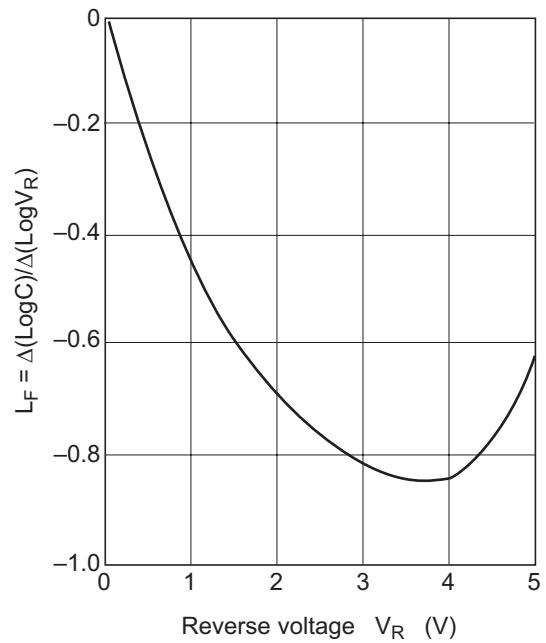
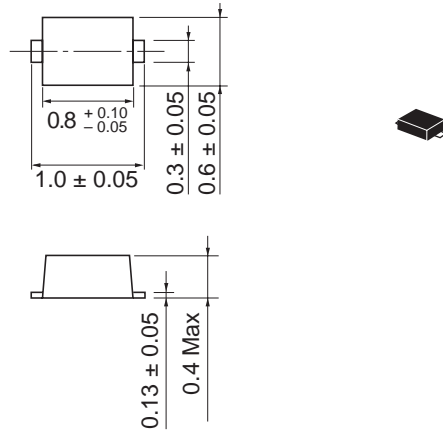


Fig.4 Linearity factor vs. Reverse voltage

Package Dimensions

As of January, 2003  
Unit: mm



Package Code	TEFP
JEDEC	—
JEITA	—
Mass (reference value)	0.0006 g

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