

# HVL355CM

## Variable Capacitance Diode for VCO

REJ03G0012-0300  
Rev.3.00  
Mar 10, 2006

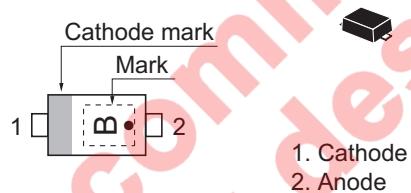
### Features

- High capacitance ratio. ( $n = 2.35$  min)
- Low series resistance. ( $r_s = 0.60 \Omega$  max)
- Thin Extremely small Flat Lead Package (TEFP) is suitable for surface mount design.

### Ordering Information

Type No.	Laser Mark	Package Name	Package Code
HVL355CM	B	TEFP	PUSF0002ZA-A

### Pin Arrangement



**Absolute Maximum Ratings**

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V <sub>R</sub>	15	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> = 15 V
	I <sub>R2</sub>	—	—	100		V <sub>R</sub> = 15 V, Ta = 60°C
Capacitance	C <sub>1</sub>	6.62	—	7.02	pF	V <sub>R</sub> = 1 V, f = 1 MHz
	C <sub>4</sub>	2.60	—	2.95		V <sub>R</sub> = 4 V, f = 1 MHz
Capacitance ratio	n	2.35	—	2.55	—	C <sub>1</sub> / C <sub>4</sub>
Series resistance	r <sub>s</sub>	—	—	0.60	Ω	V <sub>R</sub> = 1 V, f = 470 MHz

Note: For TEFP 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

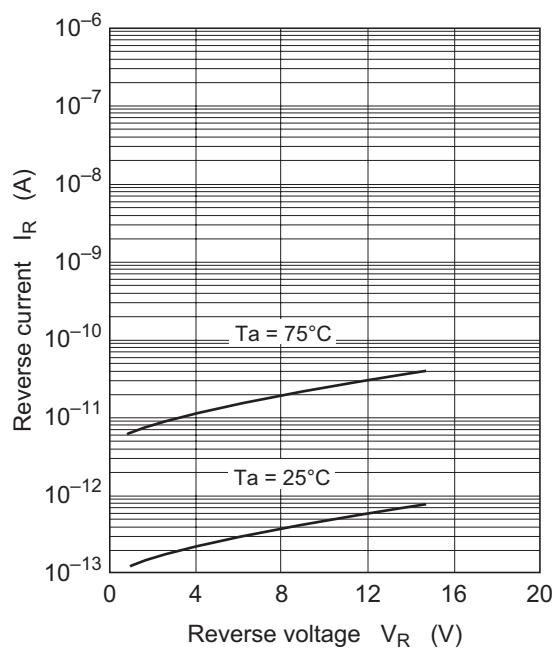


Fig.1 Reverse current vs. Reverse voltage

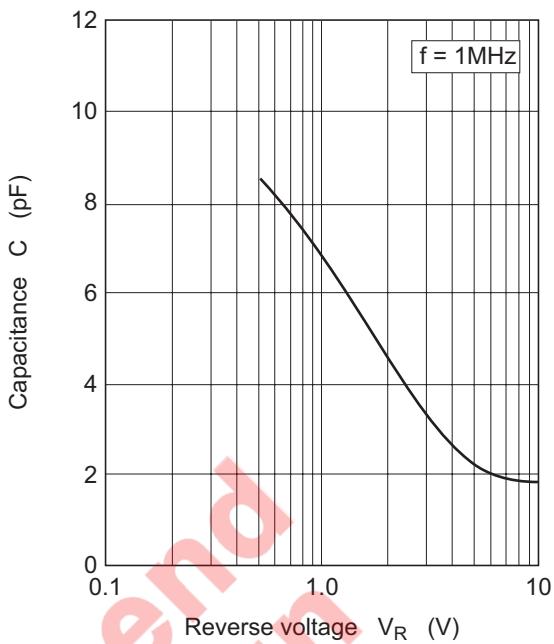


Fig.2 Capacitance vs. Reverse voltage

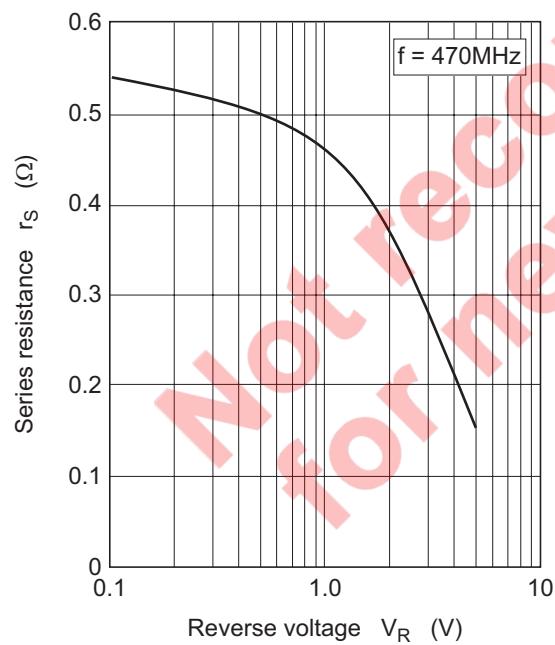
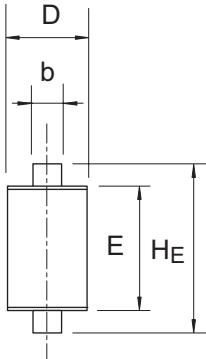


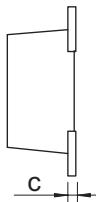
Fig.3 Series resistance vs. Reverse voltage

## Package Dimensions

Package Name	JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
TEFP	—	PUSF0002ZA-A	TEFP / TEFPV	0.0006g



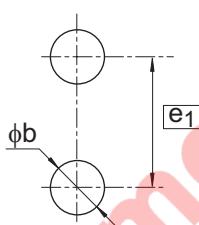
3D perspective view of the TEF-P package. Dimension D is the total width, b is the lead thickness, E is the lead height, and  $H_E$  is the lead thickness at the top.



Side view of the TEF-P package. Dimension C is the lead thickness.



Bottom view of the TEF-P package. Dimension A is the total width.



Pattern of terminal position areas. Dimension  $\phi b$  is the terminal position area diameter, and dimension  $e_1$  is the lead thickness at the bottom.

Pattern of terminal position areas

Not recommend  
for new design

Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
A	-	-	0.40
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	0.90
$H_E$	0.95	1.00	1.05
$\phi b$	-	0.40	-
$e_1$	-	1.00	-

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