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April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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HVL399CM

Variable Capacitance Diode for VCO

REJ03G0230-0200

Rev.2.00

Mar 21, 2006

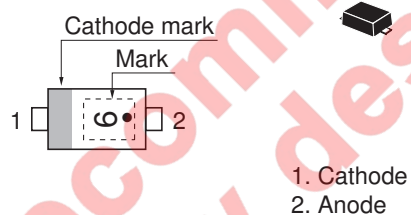
Features

- High capacitance ratio. ($n = 2.30$ to 2.46)
- Low series resistance. ($r_s = 0.4 \Omega$ max)
- Thin Extremely small Flat Lead Package (TEFP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Name	Package Code
HVL399CM	6	TEFP	PUSF0002ZA-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 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.

Not recommended
for new design

Main Characteristic

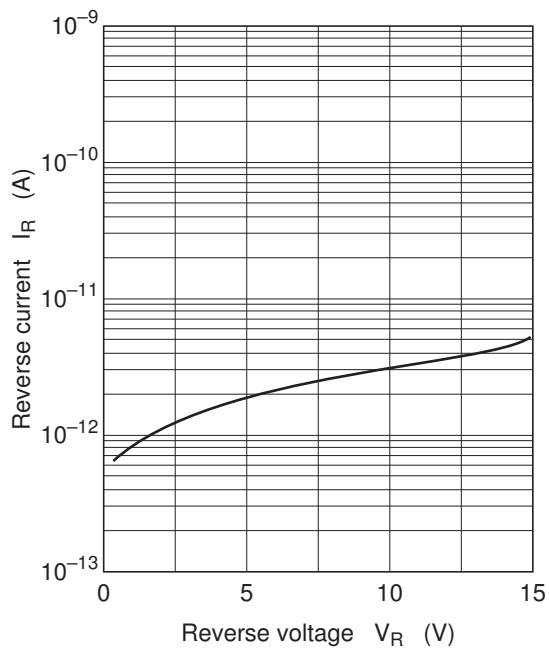


Fig.1 Reverse current vs. Reverse voltage

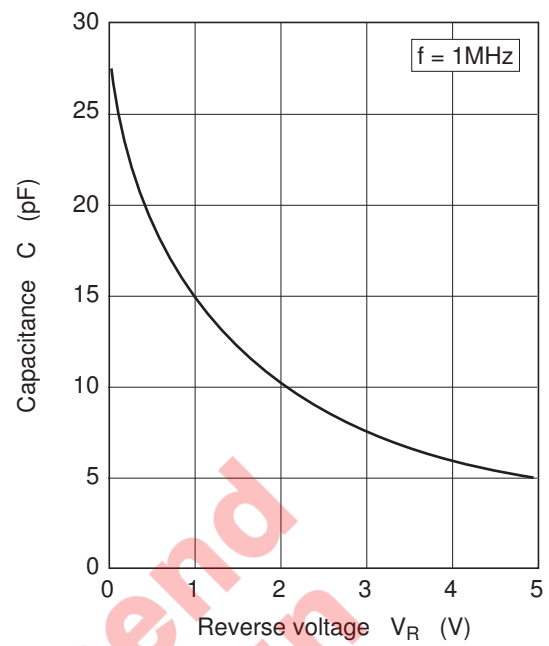


Fig.2 Capacitance vs. Reverse voltage

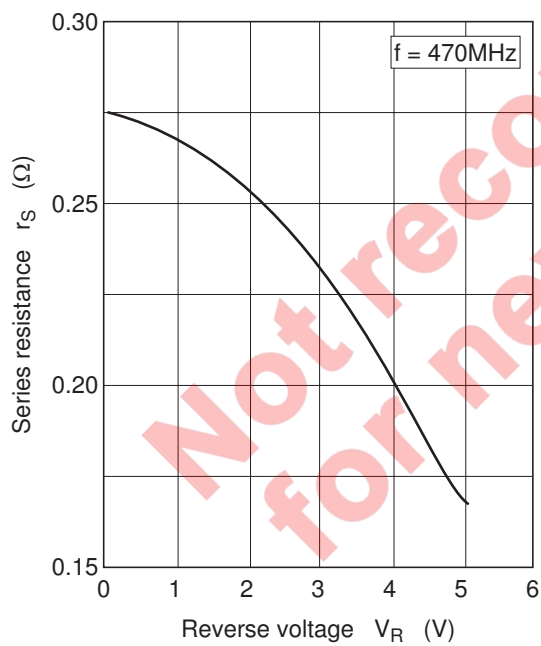
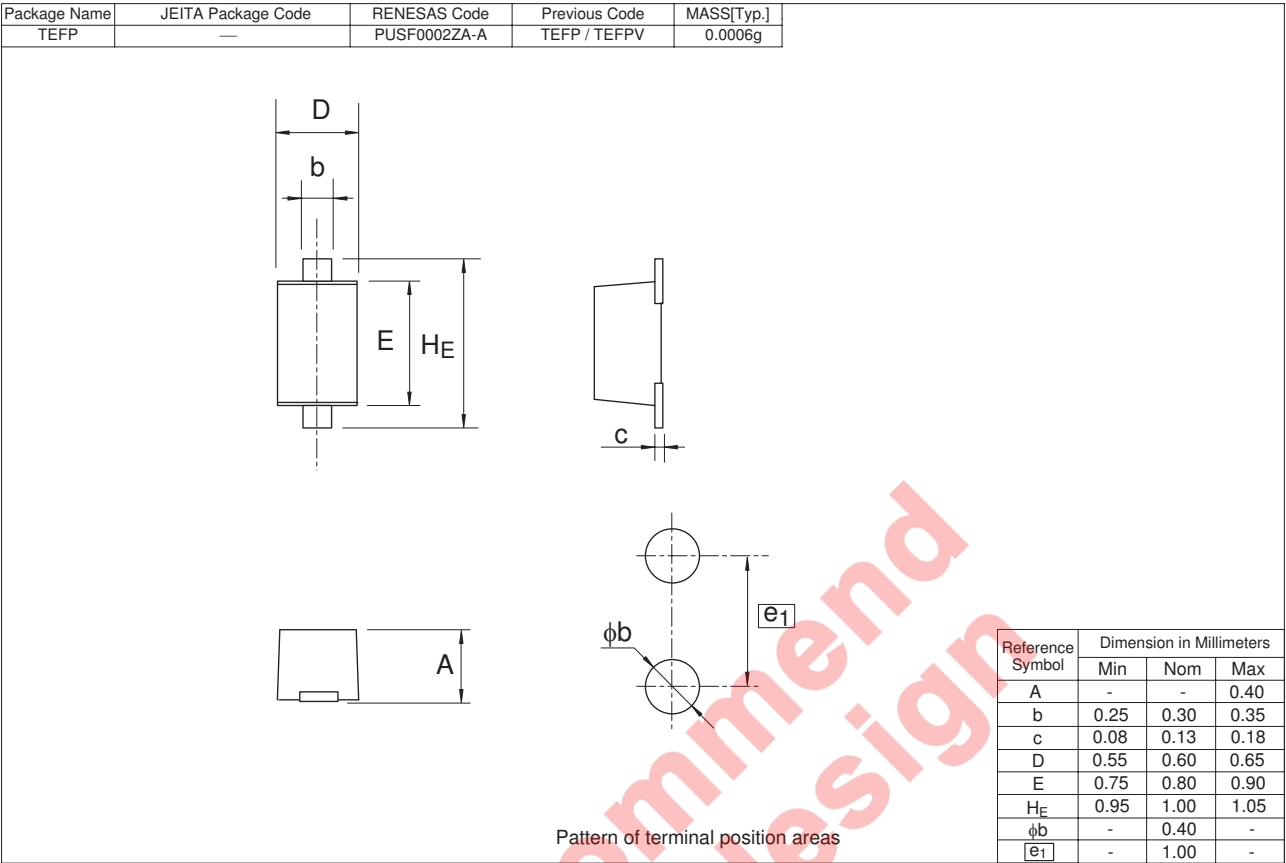


Fig.3 Series resistance vs. Reverse voltage

Package Dimensions



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