HVL397CM

Variable Capacitance Diode for VCO

REJ03G0014-0200
Rev.2.00
Mar 16, 2006

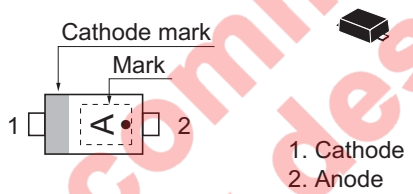
Features

- High capacitance ratio. (n = 2.9 min)
- Good C-V linearity
- Thin Extremely small Flat Lead Package (TEFP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Name	Package Code
HVL397CM	A	TEFP	PUSF0002ZA-A

Pin Arrangement



Not recommend for new design

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V_R	15	V
Junction temperature	Tj	125	°C
Storage temperature	Tstg	–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 V
	I_{R2}	—	—	50		V_R = 10 V, Ta = 60°C
Capacitance	C_1	27.0	—	28.5	pF	V_R = 1 V, f = 1 MHz
	C_2	18.0	—	20.0		V_R = 2 V, f = 1 MHz
	C_4	6.80	—	8.50		V_R = 4 V, f = 1 MHz
Capacitance ratio	n_1	1.3	—	—	—	C_1 / C_2
	n_2	2.9	—	—	—	C_1 / C_4
Series resistance	r_S	—	—	1.2	Ω	V_R = 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.

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Main Characteristic

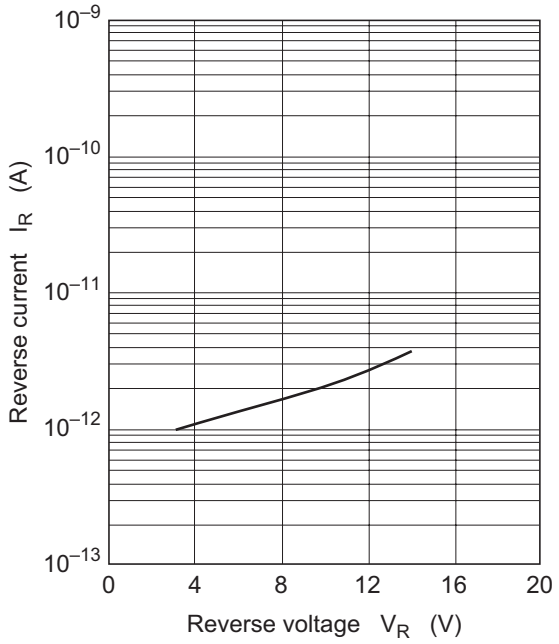


Fig.1 Reverse current vs. Reverse voltage

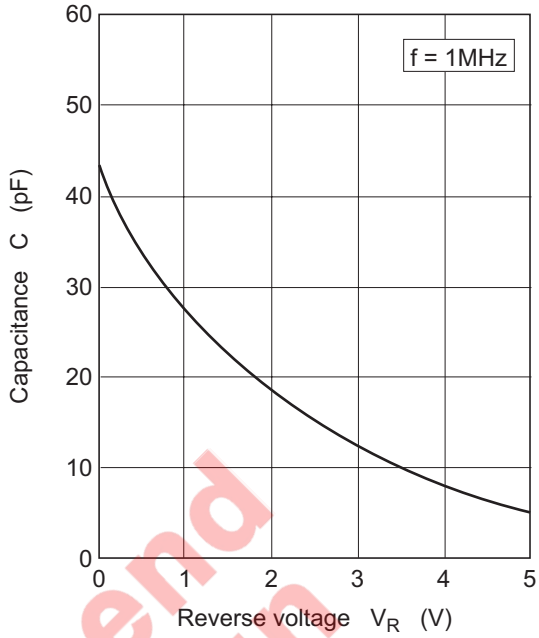


Fig.2 Capacitance vs. Reverse voltage

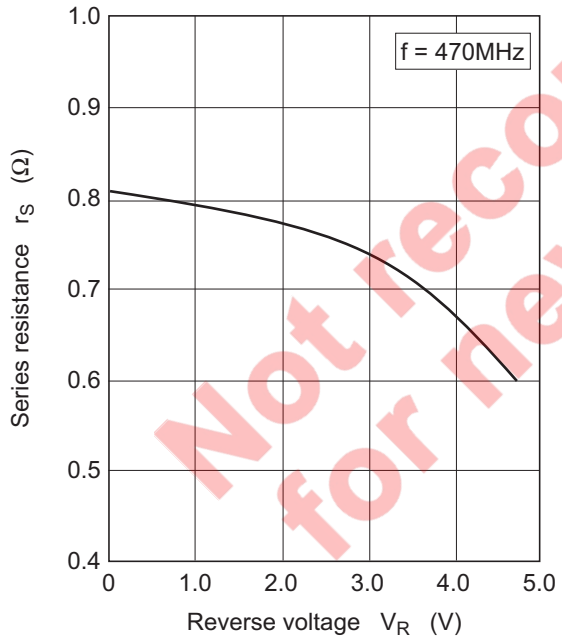
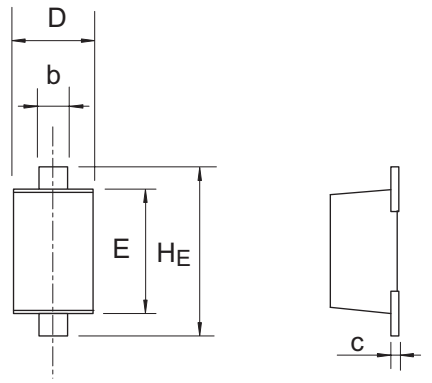


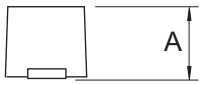
Fig.3 Series resistance vs. Reverse voltage

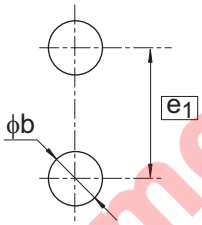
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Package Dimensions

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







Pattern of terminal position areas

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
ϕb	-	0.40	-
e1	-	1.00	-

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