HVL381CM

Variable Capacitance Diode for VCO

REJ03G0037-0300
Rev.3.00
Mar 14, 2006

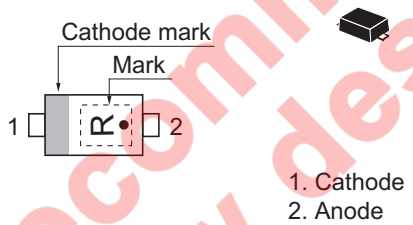
Features

- High capacitance ratio. (n = 1.65 min)
- Low series resistance. (rs = 0.50 Ω max)
- Thin Extremely small Flat Lead Package (TEFP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Name	Package Code
HVL381CM	R	TEFP	PUSF0002ZA-A

Pin Arrangement



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 = 15 V
	I_{R2}	—	—	100		V_R = 15 V, Ta = 60°C
Capacitance	C_1	10.2	—	10.8	pF	V_R = 1 V, f = 1 MHz
	C_3	5.90	—	6.35		V_R = 3 V, f = 1 MHz
Capacitance ratio	n	1.650	—	1.785	—	C_1 / C_3
Series resistance	r_S	—	—	0.50	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.

Main Characteristic

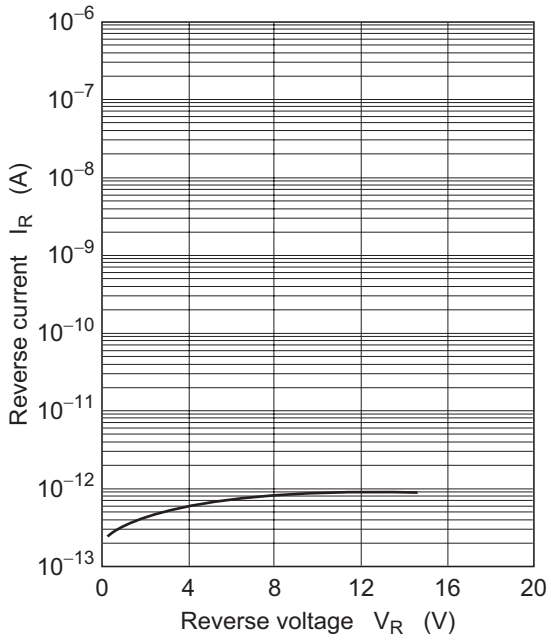


Fig.1 Reverse current vs. Reverse voltage

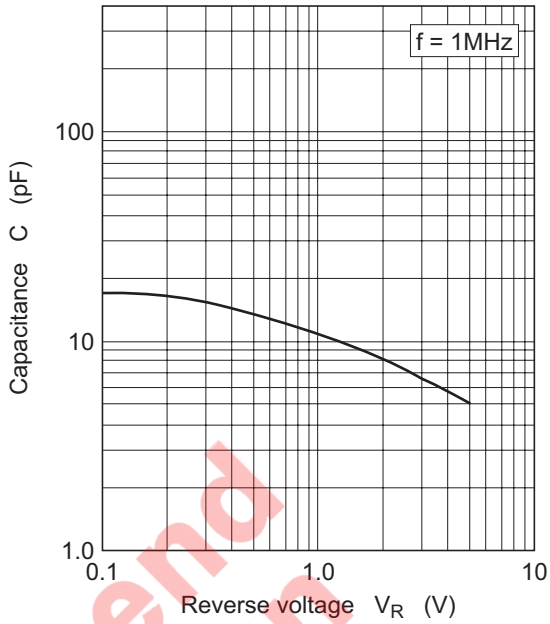


Fig.2 Capacitance vs. Reverse voltage

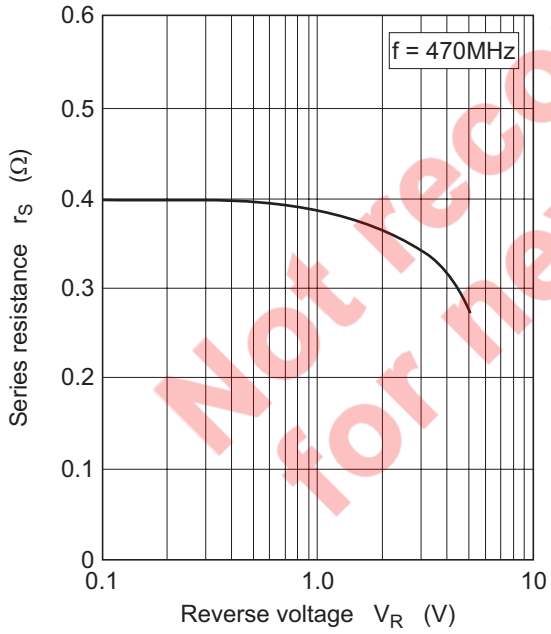
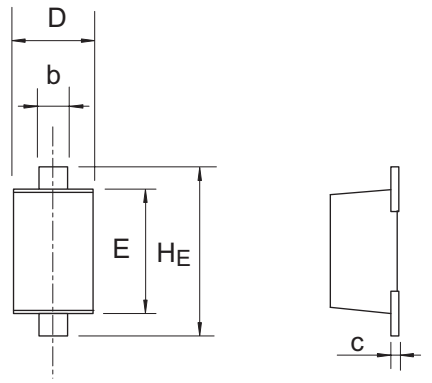
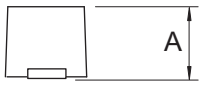


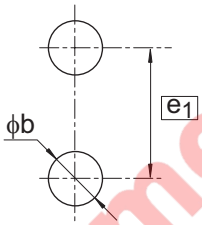
Fig.3 Series resistance vs. Reverse voltage

Package Dimensions

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







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	-

Renesas Technology Corp. Sales Strategic Planning Div. Nippon Bldg., 2-6-2, Ohte-machi, Chiyoda-ku, Tokyo 100-0004, Japan

RENESAS SALES OFFICES

http://www.renesas.com

Refer to "**http://www.renesas.com/en/network**" for the latest and detailed information.

Renesas Technology America, Inc.
450 Holger Way, San Jose, CA 95134-1368, U.S.A
Tel: <1> (408) 382-7500, Fax: <1> (408) 382-7501

Renesas Technology Europe Limited
Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5FH, U.K.
Tel: <44> (1628) 585-100, Fax: <44> (1628) 585-900

Renesas Technology (Shanghai) Co., Ltd.
Unit 204, 205, AZIACenter, No.1233 Lujiazui Ring Rd, Pudong District, Shanghai, China 200120
Tel: <86> (21) 5877-1818, Fax: <86> (21) 6887-7898

Renesas Technology Hong Kong Ltd.
7th Floor, North Tower, World Finance Centre, Harbour City, 1 Canton Road, Tsimshatsui, Kowloon, Hong Kong
Tel: <852> 2265-6688, Fax: <852> 2730-6071

Renesas Technology Taiwan Co., Ltd.
10th Floor, No.99, Fushing North Road, Taipei, Taiwan
Tel: <886> (2) 2715-2888, Fax: <886> (2) 2713-2999

Renesas Technology Singapore Pte. Ltd.
1 Harbour Front Avenue, #06-10, Keppel Bay Tower, Singapore 098632
Tel: <65> 6213-0200, Fax: <65> 6278-8001

Renesas Technology Korea Co., Ltd.
Kukje Center Bldg. 18th Fl., 191, 2-ka, Hangang-ro, Yongsan-ku, Seoul 140-702, Korea
Tel: <82> (2) 796-3115, Fax: <82> (2) 796-2145

Renesas Technology Malaysia Sdn. Bhd
Unit 906, Block B, Menara Amcorp, Amcorp Trade Centre, No.18, Jalan Persiaran Barat, 46050 Petaling Jaya, Selangor Darul Ehsan, Malaysia
Tel: <603> 7955-9390, Fax: <603> 7955-9510

Colophon .6.0