



SLG Asia Test Labs & Service (HK) Limited

Test Report

According to

FCC RULES 47CFR PART 15 / SUBPART B

FCC ID: LQP-WC3120

Test Report Number: H1M21209-0514-P-15



TEST REPORT

Summary | FCC PART 15 B

Test Report No. : H1M21209-0514-P-15

Date of issue..... : 10.10.2012

Testing Laboratory name : SLG Asia Test Labs & Service (HK) Limited

Address..... : 26/F., Tamson Plaza, 161 Wai Yip Street,
Kwun Tong, Kowloon, Hong Kong

Applicant's name : Smarthome Products Ltd.

Address..... : Rm B808-809, 8/F., Blk B, Sea View Estate, 2-8 Watson Road, North
Point, Hong Kong

Manufacturer's name : Smarthome Products Ltd.

Address..... : Rm B808-809, 8/F., Blk B, Sea View Estate, 2-8 Watson Road, North
Point, Hong Kong

Test specification

Standard(s) applied : FCC Rules 47 CFR Part15 Subpart B (2012)

Test item description : Wireless door chime receiver

Brand Name : ---

Tested model..... : WC3120

Rating(s) : 4.5 VDC (3 x AA size batteries)

Summary of Test Results

Pass

The Summary of Test Results based on a technical opinion belongs to the applied standard(s).

Disclaimer

Further details of testing are provided in particular chapters of this Test Report.

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Emphasized conditions or project related conditions:

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1 General Information

1.1 Test Report

Tested by:

10.10.2012

Mr. Karl Lau

Date

Test Engineer

Signature

Approved by:

10.10.2012

Mr. F. Schulz



Date

Laboratory Manager

Signature

SLG Asia Test Labs & Service (HK) Limited



1.2 Test Location

Name: SLG Asia Test Labs & Service (HK) Limited
Address: 26/F., Tamson Plaza, 161 Wai Yip Street
Kwun Tong, Kowloon, Hong Kong

Telephone: +852 2389 2200
Fax: +852 2389 3073
E-mail: service@slg.asia
Website: www.slg.asia

The test facility is accredited by A2LA (The American Association for Laboratory Accreditation) with Testing Certificate number 3175.01. The details of accreditation information with the recognized International Standard EN ISO/IEC 17025 are showing in the website www.slg.asia.

Test facility for final radiated measurements:

Name : Hong Kong Productivity Council
Address: EMC Centre, LG1, HKPC Building, 78 Tat Chee Avenue
Kowloon, Hong Kong

The Hong Kong Laboratory Accreditation Scheme (HOKLAS)
Reg. No.082

FCC registered measurement facility
Reg. No.90656

1.3 Details of applicant

Name: Smarhome Products Ltd.
Address: Rm B808-809, 8/F., Blk B, Sea View Estate, 2-8 Watson Road
North Point, Hong Kong

Contact: Ms. Stella Wong
Telephone: +852 2566 1832
Fax: +852 2510 8742
E-mail:

1.4 Manufacturer

Name: Smarhome Products Ltd.
Address: Rm B808-809, 8/F., Blk B, Sea View Estate, 2-8 Watson Road
North Point, Hong Kong

Contact: Ms. Stella Wong
Telephone: +852 2566 1832
Fax: +852 2510 8742



1.5 Application details

Date of receipt of application: 28.09.2012
Date of receipt of test item: 28.09.2012
Date (s) of performance of tests: 28.09.2012 - 10.10.2012

1.6 Test item

Description of test item: Wireless door chime receiver
Type identification: WC3120
Brand Name: ---

Operation frequency range: 434 MHz
No of channels 1
Operation mode: simplex
Type of antenna: integral
Power supply: 4.5 VDC (3 x AA size batteries)

(All information was provided by the applicant)



1.7 General Test Conditions

Environmental reference conditions

If not defined otherwise by the Technical Committee responsible for the generic standard and/or the product standard the climatic conditions during the tests are to be within the limits specified by the manufacturer for the operation of the EUT and the test equipment.

The climatic conditions during the tests were within the following limits:

Temperature	Humidity	Atmospheric pressure
15 °C - 35 °C	30 % - 60 %	860 hPa - 1060 hPa

If explicitly required in the test base (basic) the climatic values are recorded and documented separately for the respective test.

Calibration of measurement and test equipment

All measurement and testing equipment that has a significant influence on the accuracy of qualitative measurements and tests is subject to a periodical in-house system of calibration and servicing that is part of the quality management system of the EMC laboratory of SLG Asia Test Labs & Service (HK) Limited.

Measurement uncertainties

All tests are subject to measurement uncertainties. The overall measurement uncertainty of a measurement is defined as the range of which can be supposed that it contains the true value with a specified probability. This probability is 95 % for the generally specified measurement uncertainty (so-called expanded measurement uncertainty).

The limits for emission measurements and the test levels for immunity tests in the applied standards were defined taking into consideration the accuracy limits for measurement and testing equipment required by the basic standards.

All measurement and test results of the EMC laboratory of SLG Asia Test Labs & Service (HK) Limited fulfil the requirements for measurement uncertainties according to the standards applied.



2 Test result Summary

Test item : Wireless door chime receiver

Model No. : WC3120

Brand Name : ---

Emission requirements according standard:

FCC Rules 47 CFR Part15 Subpart B /1/

Test case	Test description	Remarks	Verdict
Section 15.109	Radiated disturbance	Class B	P

Test case verdicts

P - Pass *Test item does meet the requirement*
F - Fail *Test item does not meet the requirement*
N.A. - Not Applicable *Test case does not apply to the test object*



3 Test results

3.1 Radiated emission

Test requirement: Section 15.109
Test method: ANSI C63.4 [/2/](#)
Test date: 12.10.2012
Tested by: Mr. Karl Lau
Class: B
EUT operation Test in on mode, according user manual

Equipment used during test

Test equipment	Type	S/N	Manufacturer
Semi-anechoic Chamber	Nil	Nil	Frankonia
Test Reciever	ESU 26	100050	Rohde & Schwarz
Bi-conical Antenna	HK116	841489/016	Rohde & Schwarz
Log.-Periodic Antenna	HL223	841516/020	Rohde & Schwarz
Horn Antenna	3115	9002-3351	EMCO
Active Loop Antenna	6502	9107-2651	EMCO

Test setup

The equipment under test is placed on a non metallic table with 0.8 m height.

The power supply and the RF connection points are close to the equipment under test at the floor inside a connection box. The cables to this connection box are shielded and below the double floor. The receiving antenna is placed in a height at 1.0 m to 4.0 m and in a distance of 3 m.



Measurement results

Measurement above 30 MHz

Calculation of test results:

Such factors like antenna factor and cable loss are already included in the provided measurement results. All results measured with peak detector.

Frequency range	Antenna direction	Frequency in MHz	Worst case Result in dBuV/m	Limit in dBuV/m	Margin to Limit in dB	Verdict
30MHz-200MHz	V	187.054	19.46	43,5	24.04	Pass
30MHz-200MHz	H	198.297	19.16	43,5	24.34	Pass
200MHz-1GHz	V	438.878	16.39	46	29.61	Pass
200MHz-1GHz	H	438.878	23.80	46	22.20	Pass
1GHz-4GHz	V	4000	31.14	54	22.86	Pass
1GHz-4GHz	H	4000	31.31	54	22.69	Pass

Limits (Section 15.109)

Frequency range	Limit
30MHz - 88MHz	100uV/m (40dBuV/m)
88MHz - 216MHz	150uV/m (43.5dBuV/m)
216MHz - 960MHz	200uV/m (46dBuV/m)
Above 960MHz	500uV/m (54dBuV/m)



4 Normative references

- /1/ FCC Rules 47 CFR PART 15: 2012
Radio Frequency Devises
- /2/ ANSI C63.4-2009
Methods of Measurement of Radio-Noise Emission from Low-Voltage Electrical and
Electronic Equipment in the Range of 9 kHz to 40 GHz



5 Disclaimer

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The purpose of conformity testing is to increase the probability of adherence to the essential requirements or conformity specifications, as appropriate. The complexity of the technical specifications means that full and thorough testing is impractical for both technical and economic reasons. Furthermore, there is no guarantee that a test sample which has passed all the relevant tests conforms to a specification. Neither is there any guarantee that such a test sample will interact with other genuinely open systems. The existence of the tests nevertheless provides the confidence that the test sample possesses the qualities as maintained and that its performance generally conforms to representative cases of communications equipment.

The test results of this test report relate exclusively to the item tested as specified in clause 1.6 of this report. The test report may only be reproduced or published in full.

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5.1 Revision Notes

This revised Report replaces the all former Test Reports based on number H1M21209-0514-P-15. These former Test Reports are not longer valid. Every Revision of the original report is recorded below and identified by the || symbol beside the text.

Revision No.	Revision
H1M21209-0514-P-15	Original Test Report