



SLG Asia Test Labs & Service (HK) Limited

Test Report

According to

FCC RULES 47CFR PART 15 / SUBPART C (Section 15.231)

FCC ID: R55GSM5000

Test Report Number: H1M20905-7424-P-15



TEST REPORT

Summary | FCC RULES 47CFR PART 15 / SUBPART C

Test Report No.: H1M20905-7424-P-15

Date of issue.....: 14.07.2009

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: Kids Station Toys International Limited

Address.....: Room 804, 8/F, Empire Centre, No. 68 Mody Road, Tsimshatsui East,
Kowloon, Hong Kong

Manufacturer's name: KIN YIP INDUSTRIAL (H.K.) CO., LTD.

Address.....: FLAT B, 11/F., HUNG MOU IND. BLDG., 62 HUNG TO ROAD,
KWUN TONG, KOWLOON, HONG KONG

Test specification

Standard(s) applied: [FCC Rules 47 CFR Part15 Subpart C \(Section 15.231\)](#)

Test item description: Long Ranges Text Messenger

Brand Name: ---

Model and/or type reference.....: KSD5113

Rating(s): 4.5 VDC (3x AAA size battery)

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.

This document base on General Terms and Conditions of SLG Asia Test Labs & Service (HK) Limited, which the applicant accepted with order confirmation.

Emphasized conditions or project related conditions:

Released Test Reports apply only to the specific samples tested under stated test conditions. It is the applicant's responsibility to assure that additional production units of the tested model(s) are manufactured in same construction and with identical electrical and mechanical components to meet the same quality as tested model(s). The applicant/manufacturer/importer is responsible for any modifications made to the production units which result in non-compliance to the applied and/or relevant regulations. SLG Asia Test Labs & Service (HK) Limited shall have no liability for any deductions, inferences or generalizations drawn by the client or others from any kind of issued reports. Reports are confidential property of the client. As a mutual protection to the applicant, the clients, the public and ourselves, extracts from the test report shall not be reproduced except in full without our written approval.



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1 General Information

1.1 Test Report

Prepared by:

14.07.2009

Mr. Karl Lau

Date

Test Engineer

Signature

Approved by:

14.07.2009

Mr. F. Schulz

Date

Laboratory Manager

Signature



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

The test facility has been authorized to carry out EMC tests according to the European and International standards as listed in the Scope of Authorisation on the attachment to this certificate by order and supervision of SLG Prüf- und Zertifizierungs GmbH.

♦ **DAR** (DAT-P-205/97-02)

Test facility for final radiated measurements:

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

The test facility is accredited according ISO/IEC/EN 17025 by following organisation:

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

FCC registered measurement facility
Reg. No.90656

1.3 Details of applicant

Name: Kids Station Toys International Limited
Address: Room 804, 8/F, Empire Centre, No. 68 Mody Road, Tsimshatsui East,
Kowloon, Hong Kong

Contact: Kathy Lee / Katherine So
Telephone: +852 2723 3308
Fax: +852 2723 8110
E-mail: ---



1.4 Manufacturer

Name: KIN YIP INDUSTRIAL (H.K.) CO., LTD.
Address: FLAT B, 11/F., HUNG MOU IND. BLDG., 62 HUNG TO ROAD
KWUN TONG, KOWLOON, HONG KONG

Contact: Mr. Ken Hua
Telephone: +852 2851 9808
Fax: +852 2341 7218
E-mail: ken@kinyip.com

1.5 Application details

Date of receipt of application: 25.05.2009
Date of receipt of test item: 25.05.2009
Date (s) of performance of tests: 25.05.2009 - 14.07.2009

1.6 Test item

Description of test item: Long Ranges Text Messenger
Type identification: KSD5113
Brand Name: ---
Equipment type: Transceiver
Operation Frequency: 315 MHz
Operation mode: simplex
Modulation: ASK
Type of antenna: integral
Power supply: 4.5 VDC (3x AAA size battery)

(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.

1.8 Test equipment utilized

Test Equipment list (Hong Kong Productivity Council, registration number: 90656)

Test equipment	Type	S/N	Manufacturer	Cal Due Date
Semi-anechoic Chamber	Nil	Nil	Frankonia	27 Feb 10
Test Reciever	ESU 26	100050	Rohde & Schwarz	06 Aug 09
Bi-conical Antenna	HK116	841489/016	Rohde & Schwarz	22 May 10
Log.-Periodic Antenna	HL223	841516/020	Rohde & Schwarz	21 May 10
Horn Antenna	3115	9002-3351	EMCO	27 May 10
Active Loop Antenna	6502	9107-2651	EMCO	15 May 10



1.9 Test procedure

RADIATION INTERFERENCE: The test procedure used was ANSI STANDARD C63.4-2003 6.4 /2/ using a spectrum analyzer. The bandwidth of the spectrum analyzer was 100 kHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The resolution bandwidth was the 100 kHz and the video bandwidth was 300 kHz.

FORMULA OF CONVERSION FACTORS: The Field Strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dBμV) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB.

Example:

Freq (MHz) METER READING + ACF + CABLE LOSS (to the receiver) = FS
 20 dBμV + 10.36 dB + 6 dB = 36.36 dBμV/m @3m

ANSI STANDARD C63.4-2003 6.2.1 MEASUREMENT PROCEDURES: The UUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m (non metallic table). The UUT was placed in the center of the table. The table used for radiated measurements is capable of continuous rotation. The spectrums were scanned from 9 kHz to 30 MHz and 30 MHz to 10th harmonic of the fundamental.

Peak readings were taken in three (3) orthogonal planes and the highest readings. Measurements were made by Hong Kong Productivity Council at the registered test site located at EMC Centre, LG1, HKPC Building, 78 Tat Chee Avenue, Kowloon, Hong Kong. The registration number is 90656.

When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.



2 Test result Summary

Test item : Long Ranges Text Messenger
Model No. : KSD5113
Brand Name : ---

FCC Rules 47CFR PART 15.231			
Transmitter parameter			
Test case	Test description	Remarks	Verdict
Section 15.231	Field strength of the Fundamental Wave		P
Section 15.231, 15.209	Radiated spurious emission		P
Section 15.231(c)	Emission bandwidth		P
Section 15.231(a)	Automatically deactivation		P

Test case verdicts

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



3 Test results (Transmitter parameter)

3.1 Field Strength of the Fundamental Wave

Test results

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 [MHz]	Antenna Polarization	Result [dBμV/m]	Limit [dBμV/m]	Margin (dB)
315.0	Vertical	68.35	75.62	7.27
315.0	Horizontal	67.41	75.62	8.21

Limit 15.231(b)

Fundamental Frequency [MHz]	Limit	
	[μV/m]	[dBμV/m]
315	6041	75.62

Fundamental Frequency [MHz]	Field strength of fundamental limit [μV/m]
40,66 – 40,70	2,250
70 - 130	1.250
130 - 174	1,250 to 3,750**
174 - 260	3.750
260 - 470	3,750 to 12,000**
Above 470	12,000

According to section 15.35(b), when average radiated emission measurements are specified, including emission measurement below 1000MHz, there also is limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit for the frequency being investigated.

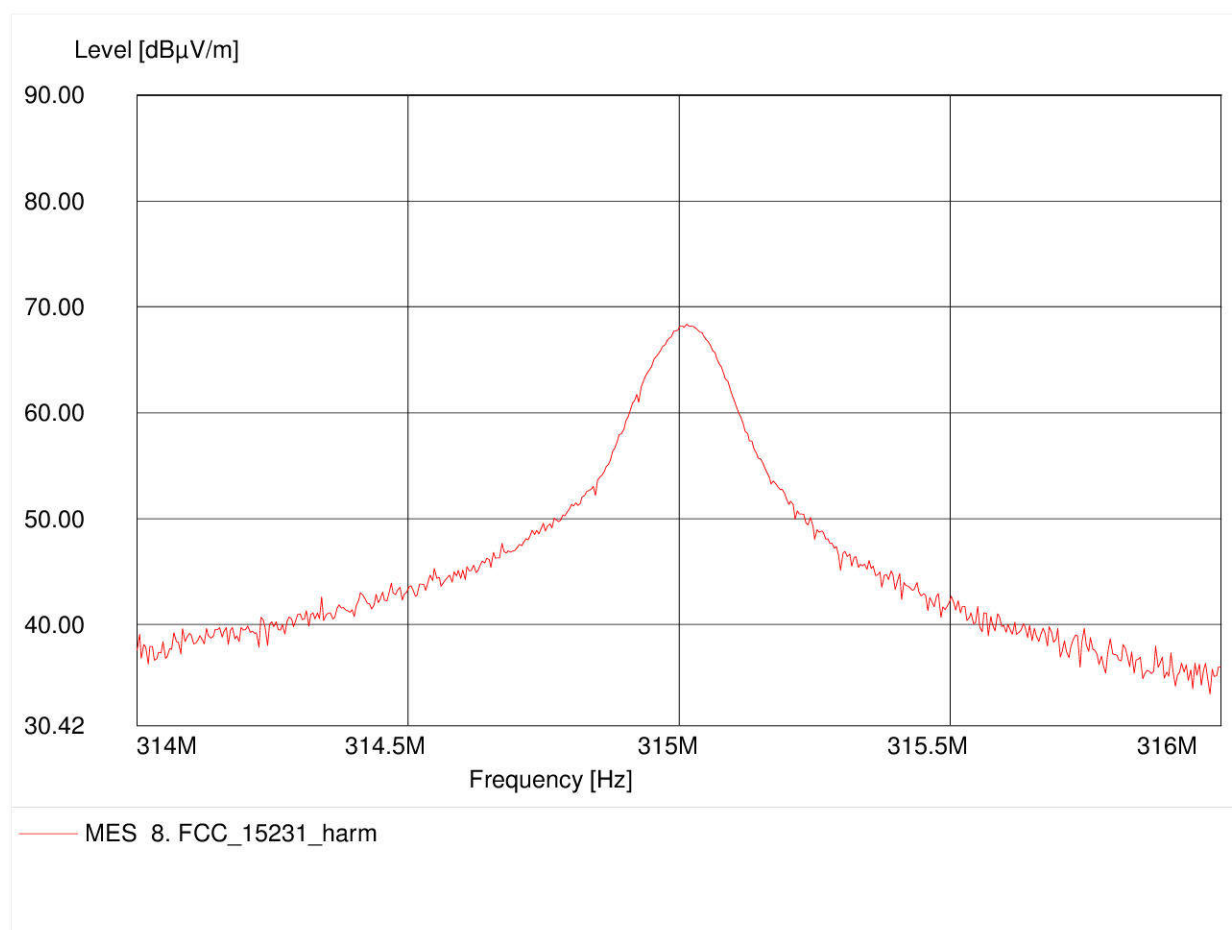


Measurement data

Field Strength of Fundamental

FCC RULES PART 15, SUBPART C

Project No.: H1M20905-7424
Test Site / Operator: HKPC/Mr. Karl Lau
Temperature/Voltage: Temp.: 23°C/ Unom.: 4.5 VDC (3x AAA size battery)
Test Specification: according to Section15.231
Comment 1: Dist.: 3m, Ant.: HL223, Peak detector
Freq: 315.014MHz, Emax: 68.35dBμV/m, RBW: 100kHz





Field Strength of Fundamental

FCC RULES PART 15, SUBPART C

Project No.: H1M20905-7424
Test Site / Operator: HKPC/Mr. Karl Lau
Temperature/Voltage: Temp.: 23°C/ Unom.: 4.5 VDC (3x AAA size battery)
Test Specification: according to Section15.231
Comment 1: Dist.: 3m, Ant.: HL223, Peak detector
Test Specification: according to Section15.231
Comment 1: Dist.: 3m, Ant.: HL223
Freq: 315.022MHz, Emax: 67.41dBμV/m, RBW: 100kHz

