

RADIO TEST REPORT

FOR

Hubsan (HK) Industrial Co., Ltd

RC Hobby Series

Model No.: H107

Prepared for

: Hubsan (HK) Industrial Co., Ltd

Address

: 4/F Hong Fa Hi-Tech Industrial Park, Tangtou Village, Shiyan Town, Baoan district, Shenzhen, China

Prepared by

: Shenzhen LCS Compliance Testing Laboratory Ltd.

Address

: 1F., Xingyuan Industrial Park, Tongda Road, Bao'an Blvd., Bao'an District, Shenzhen, Guangdong, China

Date of receipt of test sample : November 08, 2012

Number of tested samples : 1

Serial number : Prototype

Date of Test : November 08, 2012 – November 15, 2012

Date of Report : November 15, 2012

FCC TEST REPORT
FCC CFR 47 PART 15 C(15.249)

Report Reference No. : **LCS121112065TF**

Date of issue..... : November 15, 2012

Testing Laboratory Name : **Shenzhen LCS Compliance Testing Laboratory Ltd.**

Address : 1F., Xingyuan Industrial Park, Tongda Road, Bao'an Blvd., Bao'an District, Shenzhen, Guangdong, China

Testing location/ procedure : Full application of Harmonised standards Partial application of Harmonised standards
 Other standard testing method

Applicant's name : **Hubsan (HK) Industrial Co., Ltd**

Address : 4/F Hong Fa Hi-Tech Industrial Park, Tangtou Village, Shiyan Town, Baoan district, Shenzhen, China

Test specification

Standard : FCC CFR 47 PART 15 Subpart C; ANSI C63.4-2009;

Test Report Form No. : LCSEMC-1.0

TRF Originator : Shenzhen LCS Compliance Testing Laboratory Ltd.

Master TRF : Dated 2011-03

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Test item description. : **RC Hobby Series**

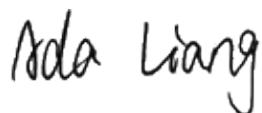
Trade Mark : HUBSAN

Model/Type reference : H107

Ratings : DC 6.0V (4*AAA Battery)

Result : **Positive**

Compiled by:



Ada Liang/ File administrators

Supervised by:



Vito Cao/ Technique principal

Approved by:



Gavin Liang/ Manager

FCC -- TEST REPORT

Test Report No. : **LCS121112065TF**November 15, 2012

Date of issue

Type / Model..... : H107

EUT..... : RC Hobby Series

Applicant..... : Hubsan (HK) Industrial Co., LtdAddress..... : 4/F Hong Fa Hi-Tech Industrial Park, Tangtou Village, Shiyan
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Fax..... : /

Factory..... : Hubsan (HK) Industrial Co., LtdAddress..... : 4/F Hong Fa Hi-Tech Industrial Park, Tangtou Village, Shiyan
Town, Baoan district, Shenzhen, China

Telephone..... : /

Fax..... : /

Test Result:**Positive**

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

TABLE OF CONTENTS

Description	Page
1. GENERAL INFORMATION	5
1.1. Description of Device (EUT).....	5
1.2. Description of Test Facility	5
1.3. Statement of the measurement uncertainty	5
1.4. Measurement Uncertainty	6
2. TEST METHODOLOGY	7
2.1. EUT Configuration	7
2.2. EUT Exercise.....	7
2.3. General Test Procedures	7
2.4. Description Of Test Modes.....	7
3. SUMMARY OF TEST RESULTS	8
4. BANDWIDTH OF THE EMISSION.....	9
4.1. Standard Applicable.....	9
4.2. Test Equipment.....	9
4.3. Test Procedure	9
4.4. Test Results.....	10
5. RESTRICTED BANDS OF OPERATION	12
5.1. Standard Applicable.....	12
5.2. Test Equipment.....	12
5.3. Test Procedure	12
5.4. Test Results.....	14
6. RADIATED EMISSIONS (TRANSMITTER)	16
6.1. Standard Applicable.....	16
6.2. Test Equipment List and Details.....	16
6.3. Measuring Instruments and Setting	17
6.4. Test Procedures.....	17
6.5. Test Setup	19
6.6. Test Data.....	20
7. ANTENNA REQUIREMENT	26
7.1 Standard Applicable.....	26
8. MANUFACTURER/ APPROVAL HOLDER DECLARATION	27

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT : RC Hobby Series

Model Number : H107

Power Supply : DC 6.0V (4*AAA Battery)

Frequency Range : 2410.00-2465.00MHz (Channel Number: 12, Channel Frequency=2410+5(K-1), K=1, 2, 312)

Modulation Type : GFSK

Designation of Emissions : 774KF1D

Antenna Gain : 1.8dBi

1.2. Description of Test Facility

Site Description

EMC Lab. : Accredited by CNAS, June 04, 2010
The Certificate Registration Number. is L4595.

Accredited by FCC, July 14, 2011
The Certificate Registration Number. is 899208.

Accredited by Industry Canada, May. 02, 2011
The Certificate Registration Number. is 9642A-1

1.3. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. To CISPR 16 – 4 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements” and is documented in the LCS quality system acc. To DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

1.4. Measurement Uncertainty

Test Item	Frequency Range	Uncertainty	Note
Radiation Uncertainty	30MHz~200MHz	±2.96dB	(1)
	200MHz~1000MHz	±3.10dB	(1)
	1GHz~26GHz	±4.20dB	(1)
Conduction Uncertainty	150kHz~30MHz	±1.63dB	(1)
Power disturbance	30MHz~300MHz	±1.60dB	(1)

1). This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

2. TEST METHODOLOGY

All measurements contained in this report were conducted with ANSI C63.4-2009, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

The radiated testing was performed at an antenna-to-EUT distance of 3 meters. All radiated and conducted emissions measurement was performed at Shenzhen LCS Compliance Testing Laboratory Ltd..

2.1. EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

2.2. EUT Exercise

The EUT was operated in the engineering mode to fix the TX frequency that was for the purpose of the measurements.

According to its specifications, the EUT must comply with the requirements of the Section 15.203, 15.205, 15.207, 15.209, 15.249 under the FCC Rules Part 15 Subpart C; ANSI C63.4-2009; IC RSS-Gen Issue 3; IC RSS-210 Issue 8.

2.3. General Test Procedures

2.3.1 Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.4 Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using Quasi-peak and average detector modes.

2.3.2 Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 13.1.4.1 of ANSI C63.4

2.4. Description Of Test Modes

The EUT was set to continuous transmitting mode.

GFSK modulation 2.4GHz mode the worst case is Channel Low (2410MHz), Mid Channel (2440MHz) and High Channel (2465MHz), these were chosen for full testing.

Pretest x, y, z position of EUT, final, select the worst case x position test and record the test results in the report.

3. SUMMARY OF TEST RESULTS

FCC CFR 47 Part 15	DESCRIPTION OF TEST	RESULT
§15.203	Antenna requirement	Compliant
§15.215(c)	Bandwidth of the emission	Compliant
§15.207(a)	Conduction Emissions	N/A*
§15.205(a)	Restricted bands of operation	Compliant
§15.205(b), §15.249	Radiated emission 9kHz to 30 MHz	Compliant
§15.205(b), §15.215(b), §15.249	Radiated emission 30 MHz to 40 GHz	Compliant

N/A is not applicable.

4. BANDWIDTH OF THE EMISSION

4.1. Standard Applicable

The 20 dB bandwidth of the emission is measured as the frequency range defined by the points that are 20 dB down relative to the maximum level of the modulated carrier.

For intentional radiators operating under the alternative provisions to the general emission limits the requirement to contain the 20 dB bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage. If a frequency stability is not specified in the regulations, it is recommended that the fundamental emission be kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of-band operation.

The resolution bandwidth of the spectrum analyzer shall be set to a value greater than 5.0% of the allowed bandwidth. If no bandwidth specifications are given, the following guidelines are used:

Fundamental frequency	Minimum resolution bandwidth
9kHz to 30MHz	1kHz
30MHz to 1000MHz	10kHz
1000MHz to 40GHz	100kHz

4.2. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Cal. Data	Due Data
1	Test Receiver	Rohde & Schwarz	ESCS30	828985/018	2012-06-18	2013-06-17
2	DC Filter	MPE	23872C	N/A	2012-06-18	2013-06-17

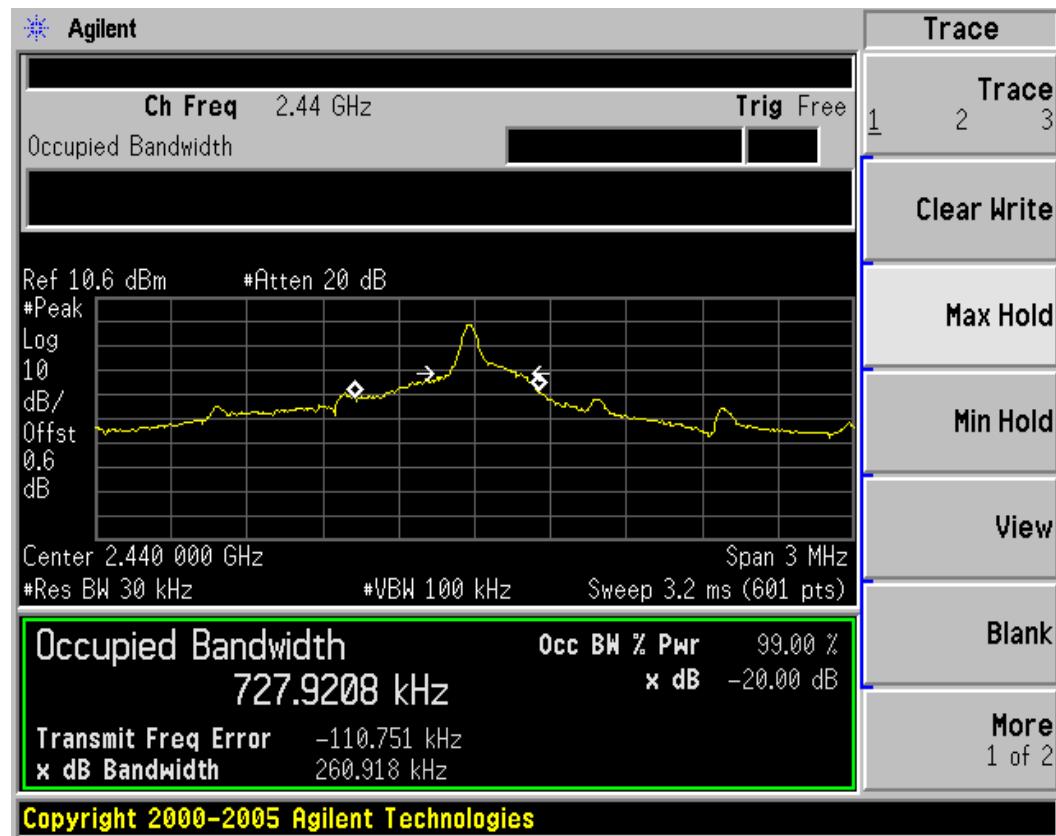
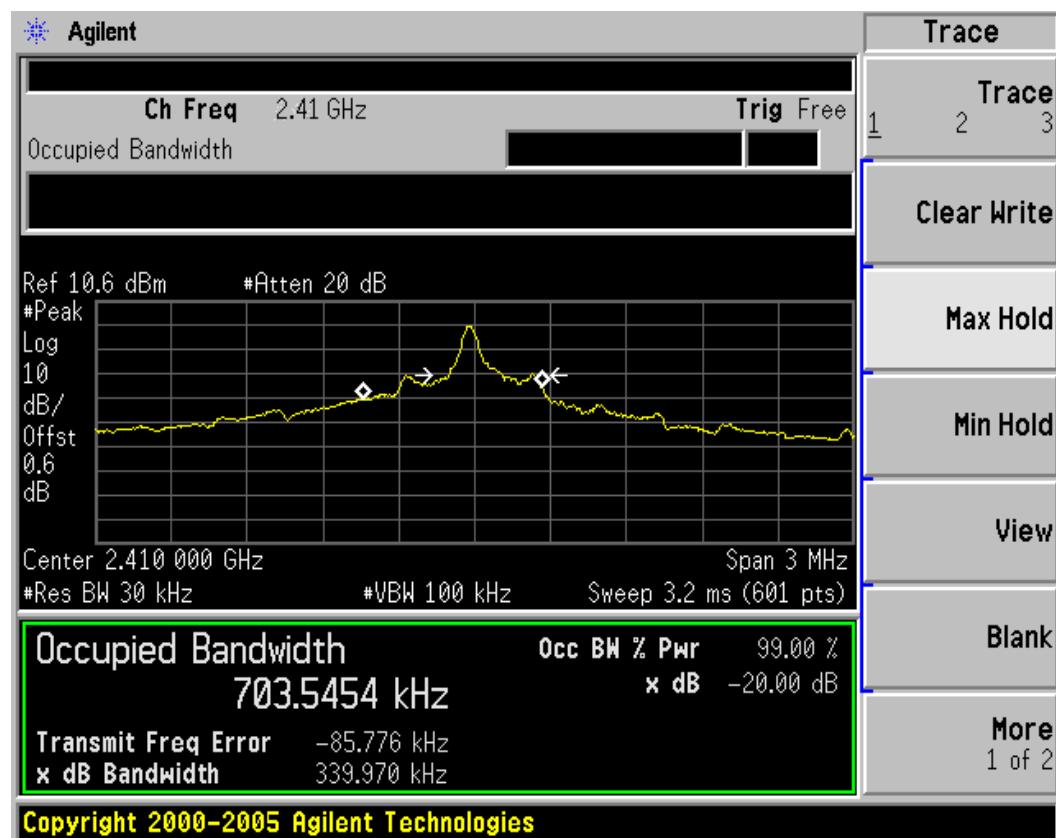
4.3. Test Procedure

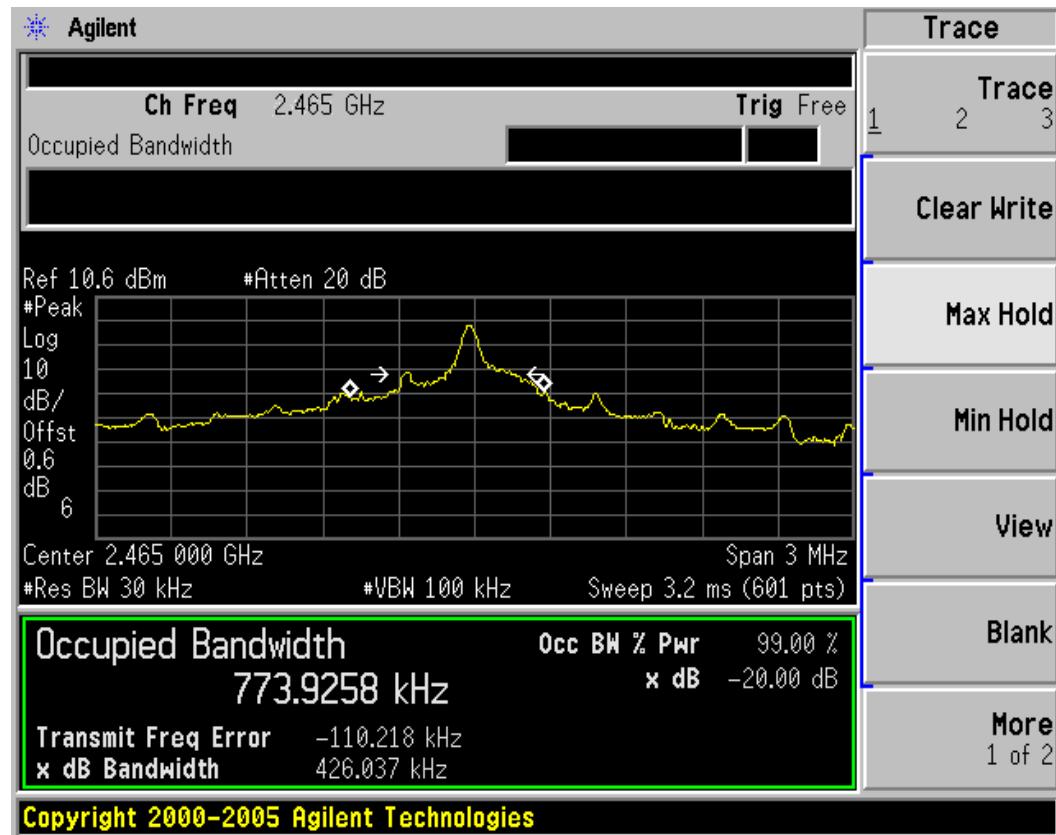
If antenna is detachable bandwidth measurements shall be performed at the antenna connector (conducted measurement) when the transmitter is adjusted in accordance with the tune-up procedure, if applicable. The RF output terminals are connected to a spectrum analyzer. If required, a resistive matching network equal to the impedance specified or employed for the antenna is used as well as dc block and appropriate attenuators (50 Ohms). The electrical characteristics of the radio frequency load attached to the output terminals shall be stated, if applicable.

If radiated measurements are performed the same test setups and instruments are used as with radiated emission measurements for the appropriate frequency range.

The analyzer settings are specified by the test description of the appropriate test record(s).

4.4. Test Results





5. RESTRICTED BANDS OF OPERATION

5.1. Standard Applicable

Only spurious emissions are permitted in any of the frequency bands listed in CFR 47 Part 15, section 15.205(a) .

5.2. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Cal. Data	Due Data
1	Spectrum Analyzer	Agilent	E4407B	MY41440292	2012-06-18	2013-06-17
2	Test Receiver	Rohde & Schwarz	ESCS30	828985/018	2012-06-18	2013-06-17
3	Loop antenna	EMCO	6502	0042963	2012-06-18	2013-06-17
4	Log per Antenna	Schwarzbeck	VULB9163	142	2012-06-18	2013-06-17
5	Horn-antenna	SCHWARZBECK	BBHA9120D	D:266	2012-06-18	2013-06-17
6	DC Filter	MPE	23872C	N/A	2012-06-18	2013-06-17

5.3. Test Procedure

Radiated emission in fully or semi anechoic room is measured in the frequency range from 30 MHz to the maximum frequency as specified in CFR 47 Part 15 section 15.33.

Measurements are made in both the horizontal and vertical planes of polarization in a fully anechoic room using a spectrum analyzer with the detector function set to peak and resolution as well as video bandwidth set to 100 kHz (below 1 GHz) or 1 MHz (above 1 GHz).

Testing up to 1 GHz is performed with a linear polarized logarithmic periodic antenna combined with a 4:1 broadband dipole ("Trilog broadband antenna"). For testing above 1 GHz horn antennas are used.

All tests below 8.2 GHz are performed at a test distance D of 3 meters. For higher frequencies the test distance may be reduced (e.g. to 1 meter) due to the sensitivity of the measuring instrument(s) and the test results are calculated according to CFR 47 Part 15 section 15.31(f)(1) using an extrapolation factor of 20 dB/decade. If required, preamplifiers are used for the whole frequency range. Special care is taken to avoid overload, using appropriate attenuators and filters, if necessary.

If the radiated emission limits are expressed in terms of the average value of the emission there also is a peak limit corresponding to 20 dB above the maximum permitted average limit. Additionally, if pulsed operation is employed, the average field strength is determined by averaging over one complete pulse train, including blanking intervals, as specified in CFR 47 Part 15 section 15.35(c). If the pulse train exceeds 0.1 second that 0.1 second interval during which the value of the emission is at its maximum is selected for calculation. The pulse train correction is added to the peak value of the emission to get the

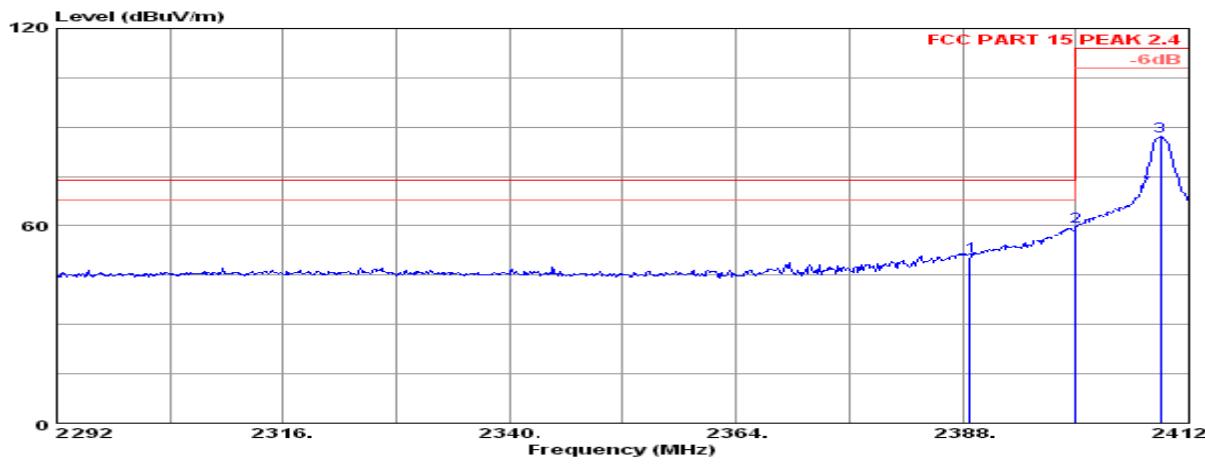
average value.

Hand-held or body-worn devices are rotated through three orthogonal axes to determine which attitude and configuration produces the highest emission relative to the limit and therefore shall be used for final testing.

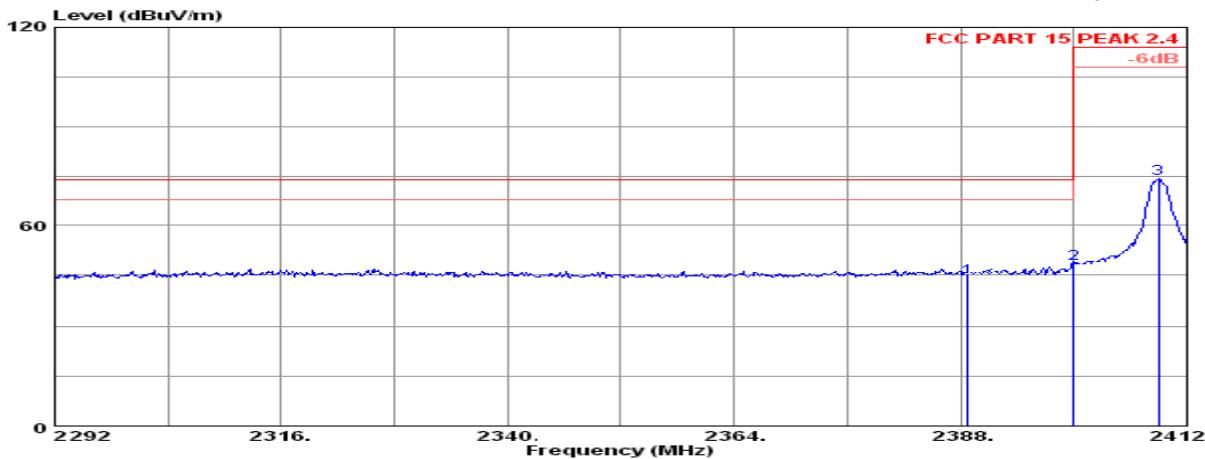
During testing the EUT is rotated all around to find the maximum levels of emissions. Equipment and cables are placed and moved within the range of position likely to find their maximum emissions.

For final testing below 1 GHz an open field test-site is used and the plots recorded in the fully or semi anechoic room are indicated as pre-scans.

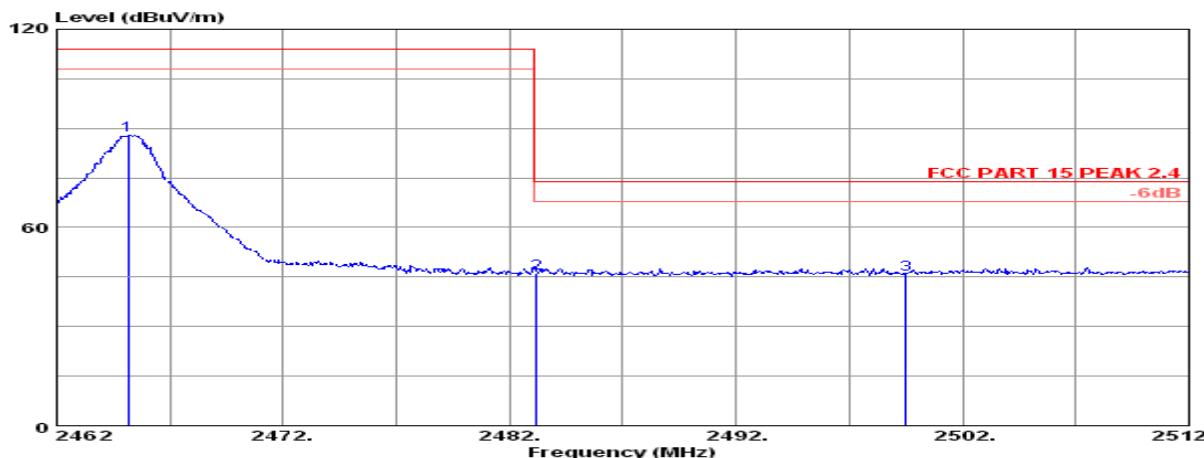
5.4. Test Results



Freq. (MHz)	Level (dBuV/m)	Read Level (dBuV)	Ant. Fac (dB/m)	Pre. Fac (dB)	Cab.Los (dB)	Over limit (dB)	Limits		
							Remark	Pol/Phase	
2390.00	51.82	55.93	27.87	35.86	3.88	-22.18	74.00	Peak	Horizontal
2390.00	35.38	39.49	27.87	35.86	3.88	-18.62	54.00	Average	Horizontal
2400.00	59.79	63.89	27.88	35.87	3.89	-14.21	74.00	Peak	Horizontal
2400.00	41.22	45.32	27.88	35.87	3.89	-12.78	54.00	Average	Horizontal
2410.00	87.08	91.18	27.88	35.87	3.89	-26.92	114.00	Peak	Horizontal
2410.00	71.84	75.94	27.88	35.87	3.89	-22.16	94.00	Average	Horizontal

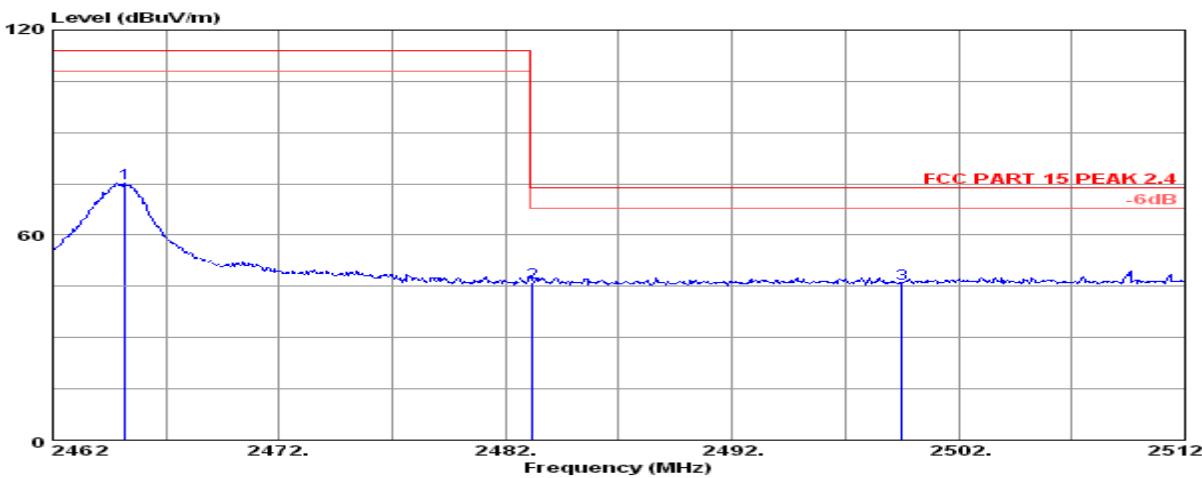


Freq. (MHz)	Level (dBuV/m)	Read Level (dBuV)	Ant. Fac (dB/m)	Pre. Fac (dB)	Cab.Los (dB)	Over limit (dB)	Limits		
							Remark	Pol/Phase	
2390.00	46.21	50.32	27.87	35.86	3.88	-27.79	74.00	Peak	Vertical
2390.00	30.42	34.53	27.87	35.86	3.88	-23.58	54.00	Average	Vertical
2400.00	49.08	53.18	27.88	35.87	3.89	-24.92	74.00	Peak	Vertical
2400.00	32.85	36.95	27.88	35.87	3.89	-21.15	54.00	Average	Vertical
2410.00	74.07	78.17	27.88	35.87	3.89	-39.93	114.00	Peak	Vertical
2410.00	61.35	65.45	27.88	35.87	3.89	-32.65	94.00	Average	Vertical



Site no. : RF Chamber
Dis. / Ant. : 3m 3115(0911) Data no. : 3
Limit : FCC PART 15 PEAK 2.4 Ant. pol. : HORIZONTAL
Env. / Ins. : 23°C/54% Engineer : Leo-Li

Freq. (MHz)	Level (dBuV/m)	Read Level (dBuV)	Ant. Fac (dB/m)	Pre. Fac (dB)	Cab.Los (dB)	Over limit (dB)	Limits		
							Remark	Pol/Phase	
2465.00	88.01	92.28	27.70	35.86	3.89	-25.99	114.00	Peak	Vertical
2465.00	72.66	76.93	27.70	35.86	3.89	-21.34	94.00	Average	Vertical
2483.50	46.06	50.15	27.88	35.87	3.90	-27.94	74.00	Peak	Vertical
2483.50	39.32	43.41	27.88	35.87	3.90	-14.68	54.00	Average	Vertical
2500.00	46.41	50.49	27.88	35.87	3.91	-27.59	74.00	Peak	Vertical
2500.00	33.84	37.92	27.88	35.87	3.91	-20.16	54.00	Average	Vertical



Site no. : RF Chamber Data no. : 3
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
Limit : FCC PART 15 PEAK 2.4

Freq. (MHz)	Level (dBuV/m)	Read Level (dBuV)	Ant. Fac (dB/m)	Pre. Fac (dB)	Cab.Los (dB)	Over limit (dB)	Limits		
							Remark	Pol/Phase	
2465.00	75.18	79.45	27.70	35.86	3.89	-38.82	114.00	Peak	Vertical
2465.00	72.66	76.93	27.70	35.86	3.89	-21.34	94.00	Average	Vertical
2483.50	45.98	50.07	27.88	35.87	3.90	-28.02	74.00	Peak	Vertical
2483.50	39.32	43.41	27.88	35.87	3.90	-14.68	54.00	Average	Vertical
2500.00	45.34	49.42	27.88	35.87	3.91	-28.66	74.00	Peak	Vertical
2500.00	33.84	37.92	27.88	35.87	3.91	-20.16	54.00	Average	Vertical

6. RADIATED EMISSIONS (TRANSMITTER)

6.1. Standard Applicable

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a), and 15.249 limit in the table below has to be followed.

Fundamental Frequency	Field Strength of fundamental (millivolts/meter)	Field Strength of harmonics (micorvolts/meter)
902-928MHz	50	500
2400-2483.5MHz	50	500
5725-5875MHz	50	500
24.0-24.25GHz	250	2500

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

6.2. Test Equipment List and Details

Item	Equipment	Manufacturer	Model No.	Serial No.	Cal. Data	Due Data
1	Spectrum Analyzer	Agilent	E4407B	MY41440292	2012-06-18	2013-06-17
2	Test Receiver	Rohde & Schwarz	ESCS30	828985/018	2012-06-18	2013-06-17
3	Loop antenna	EMCO	6502	0042963	2012-06-18	2013-06-17
4	Log per Antenna	Schwarzbeck	VULB9163	142	2012-06-18	2013-06-17
5	Horn-antenna	SCHWARZBECK	BBHA9120D	D:266	2012-06-18	2013-06-17
6	DC Filter	MPE	23872C	N/A	2012-06-18	2013-06-17

6.3. Measuring Instruments and Setting

The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz/RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz/RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz/RB 120kHz for QP

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (Emission in restricted band)	1MHz/1MHz for Peak, 1MHz/10Hz for Average
RB / VB (Emission in non-restricted band)	1000KHz/1000KHz for peak

6.4. Test Procedures

Radiated emission in the frequency range 9 kHz to 30 MHz is measured using an active loop antenna. First the whole spectrum of emission caused by the equipment is recorded at a distance of 3 meters in a fully or semi anechoic room with the detector of the spectrum analyzer or EMI receiver set to peak. This configuration is also used for recording the spectrum of intentional radiators.

Hand-held or body-worn devices are rotated through three orthogonal axes to determine which attitude and configuration produces the highest emission relative to the limit and therefore shall be used for final testing.

EUT is rotated all around to find the maximum levels of emissions. Equipment and cables are placed and moved within the range of position likely to find their maximum emissions.

If worst case emission of the EUT cannot be recorded with EUT in standard position and loop antenna in vertical polarization the EUT (or the radiating part of the EUT) is rotated by 90 degrees instead of changing the loop antenna to horizontal polarization. This procedure is selected to minimize the influence of the environment (e.g. effects caused by the floor especially with longer distances).

Final measurement is performed at a test distance D of 30 meters using an open field test site. In case the regulation requires testing at other distances, the result is extrapolated by either making measurements at an additional distance D of 10 meters to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). In cases of very low emissions measurements are performed at shorter distances and results are extrapolated to the required distance. The provisions of CFR 47 Part 15 sections 15.31(d) and (f)(2) apply. According to CFR 47 Part 15 section 15.209(d) final measurement is performed with detector function set to quasi-peak except for the frequency bands 9 to 90 kHz and 110 to 490 kHz where, for non-pulsed operation, average detector is employed.

If the radiated emission limits are expressed in terms of the average value of the emission there also is a peak limit corresponding to 20 dB above the maximum permitted average limit. Additionally, if pulsed operation is employed, the average field strength is determined by averaging over one complete pulse train, including blanking intervals, as specified in CFR 47 Part 15 section 15.35(c). If the pulse train exceeds 0.1 second that 0.1 second interval during which the value of the emission is at its maximum is selected for calculation. The pulse train correction is added to the peak value of the emission to get the average value.

Radiated emission in fully or semi anechoic room is measured in the frequency range from 30 MHz to the maximum frequency as specified in CFR 47 Part 15 section 15.33.

Measurements are made in both the horizontal and vertical planes of polarization in a fully anechoic room using a spectrum analyzer with the detector function set to peak and resolution as well as video bandwidth set to 100 kHz (below 1 GHz) or 1 MHz (above 1 GHz).

Testing up to 1 GHz is performed with a linear polarized logarithmic periodic antenna combined with a 4:1 broadband dipole ("Trilog broadband antenna"). For testing above 1 GHz horn antennas are used.

All tests below 8.2 GHz are performed at a test distance D of 3 meters. For higher frequencies the test distance may be reduced (e.g. to 1 meter) due to the sensitivity of the measuring instrument(s) and the test results are calculated according to CFR 47 Part 15 section 15.31(f)(1) using an extrapolation factor of 20 dB/decade. If required, preamplifiers are used for the whole frequency range. Special care is taken to avoid overload, using appropriate attenuators and filters, if necessary.

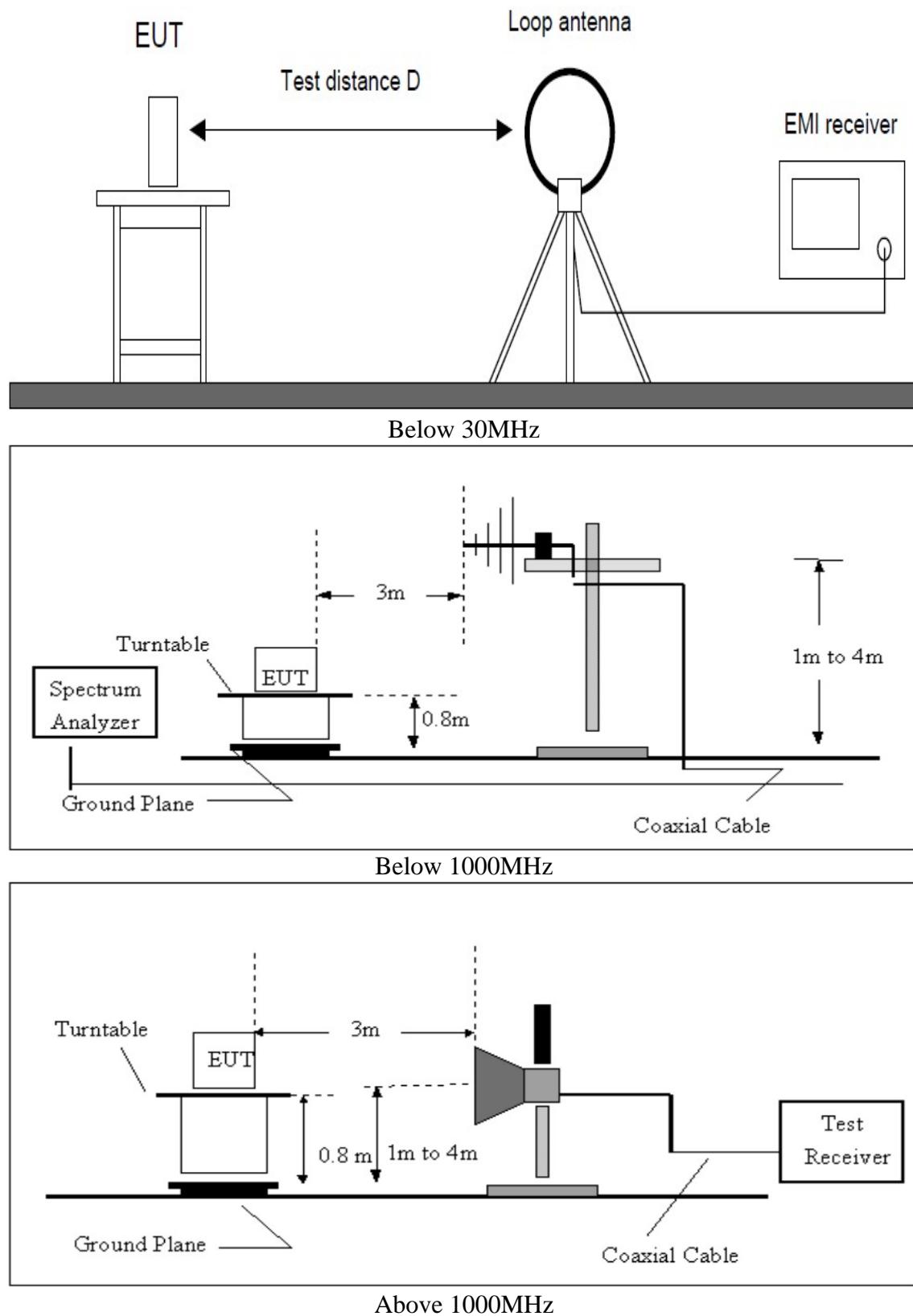
If the radiated emission limits are expressed in terms of the average value of the emission there also is a peak limit corresponding to 20 dB above the maximum permitted average limit. Additionally, if pulsed operation is employed, the average field strength is determined by averaging over one complete pulse train, including blanking intervals, as specified in CFR 47 Part 15 section 15.35(c). If the pulse train exceeds 0.1 second that 0.1 second interval during which the value of the emission is at its maximum is selected for calculation. The pulse train correction is added to the peak value of the emission to get the average value.

Hand-held or body-worn devices are rotated through three orthogonal axes to determine which attitude and configuration produces the highest emission relative to the limit and therefore shall be used for final testing.

During testing the EUT is rotated all around to find the maximum levels of emissions. Equipment and cables are placed and moved within the range of position likely to find their maximum emissions.

For final testing below 1 GHz an open field test-site is used and the plots recorded in the fully or semi anechoic room are indicated as pre-scans.

6.5. Test Setup



6.6. Test Data

Field Strength of Fundamental Carrier Low Channel

Freq. (MHz)	Level (dBuV/m)	Read Level (dBuV)	Ant. Fac (dB/m)	Pre. Fac (dB)	Cab.Los (dB)	Over limit (dB)	Limits (dBuV/m)	Remark	Pol/Phase
2410.00	88.72	92.83	27.87	35.86	3.88	-26.28	114.00	Peak	Horizontal
2410.00	85.99	90.10	27.87	35.86	3.88	-9.01	94.00	Average	Horizontal
2410.00	93.70	97.81	27.87	35.86	3.88	-20.30	114.00	Peak	Vertical
2410.00	90.20	94.31	27.87	35.86	3.88	-3.80	94.00	Average	Vertical

Field Strength of Fundamental Carrier Mid Channel

Freq. (MHz)	Level (dBuV/m)	Read Level (dBuV)	Ant. Fac (dB/m)	Pre. Fac (dB)	Cab.Los (dB)	Over limit (dB)	Limits (dBuV/m)	Remark	Pol/Phase
2440.00	86.26	90.36	27.87	35.86	3.89	-27.74	114.00	Peak	Vertical
2440.00	85.90	90.00	27.87	35.86	3.89	-8.10	94.00	Average	Vertical
2440.00	92.80	96.90	27.87	35.86	3.89	-21.20	114.00	Peak	Vertical
2440.00	90.28	94.38	27.87	35.86	3.89	-3.72	94.00	Average	Vertical

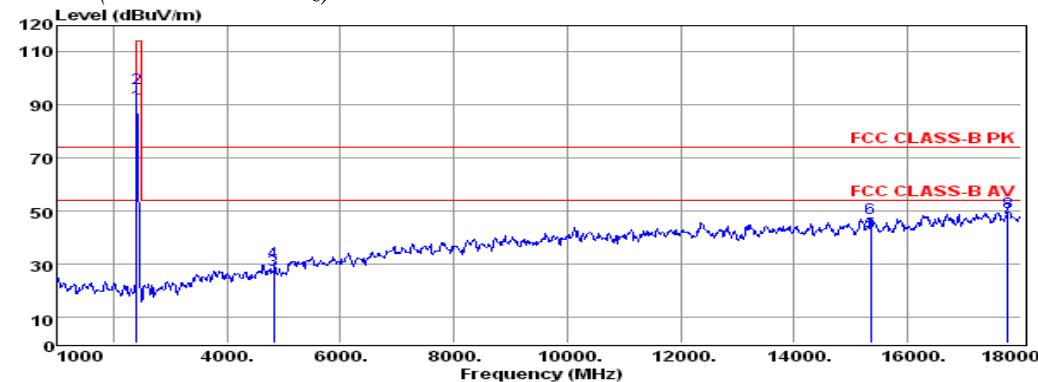
Field Strength of Fundamental Carrier High Channel

Freq. (MHz)	Level (dBuV/m)	Read Level (dBuV)	Ant. Fac (dB/m)	Pre. Fac (dB)	Cab.Los (dB)	Over limit (dB)	Limits (dBuV/m)	Remark	Pol/Phase
2465.00	86.42	90.52	27.87	35.86	3.89	-27.58	114.00	Peak	Vertical
2465.00	84.83	88.93	27.87	35.86	3.89	-9.17	94.00	Average	Vertical
2465.00	91.60	95.70	27.87	35.86	3.89	-22.40	114.00	Peak	Vertical
2465.00	89.69	93.79	27.87	35.86	3.89	-4.31	94.00	Average	Vertical

Note: 1. Emission level=Read level + Ant. Factor + Cable loss +Amp factor

2. Fundamental Carrier measurements for radiated emissions using a Peak detector with 1MHz VBW above 1GHz, A average detector with 10Hz VBW above 1GHz via Spectrum analyzer.

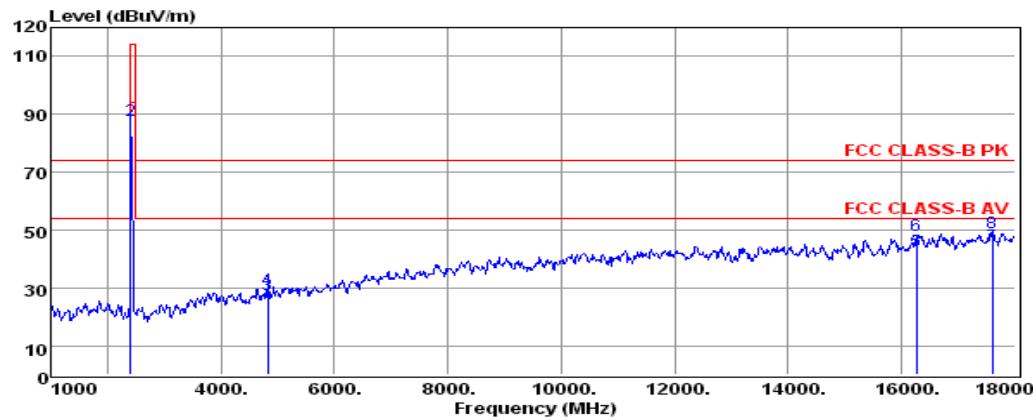
Low channel (above 1000MHz)



Env. / Ins: 24°C/56%
 EUT: RC Hobby Series
 M/N: H107
 Power Rating: DC 6V
 Test Mode: Tx2410
 Operator: KANO
 Memo:
 pol: VERTICAL

Freq. MHz	Reading dBuV	CabLos		AntFac dB	PreFac dB	Measured dBuV/m	Limit dBuV/m	Over dB	Remark
		MHz	dB						
3 4820.00	25.72	4.36	33.35	35.63	27.80	54.00	-26.20		Average
4 4820.00	28.70	4.36	33.35	35.63	30.78	74.00	-43.22		Peak
5 15348.00	32.50	5.94	38.29	34.59	42.14	54.00	-11.86		Average
6 15348.00	37.74	5.94	38.29	34.59	47.38	74.00	-26.62		Peak
7 17762.00	33.81	6.23	41.70	34.36	47.38	54.00	-6.62		Average
8 17762.00	35.98	6.23	41.70	34.36	49.55	74.00	-24.45		Peak

Note: 1. All readings are Quasi-peak values.
 2. Measured = Reading + Antenna Factor + Cable Loss - Amp Factor.
 3. The emission levels that are 20dB below the official limit are not reported.

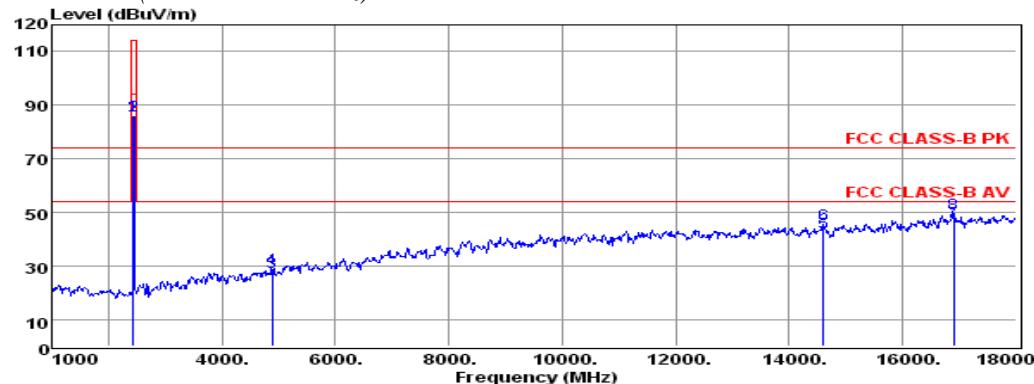


Env. / Ins: 24°C/56%
 EUT: RC Hobby Series
 M/N: H107
 Power Rating: DC 6V
 Test Mode: Tx2410
 Operator: KANO
 Memo:
 pol: HORIZONTAL

Freq. MHz	Reading dBuV	CabLos		AntFac dB	PreFac dB	Measured dBuV/m	Limit dBuV/m	Over dB	Remark
		MHz	dB						
3 4820.00	25.67	4.36	33.35	35.63	27.75	54.00	-26.25		Average
4 4820.00	27.41	4.36	33.35	35.63	29.49	74.00	-44.51		Peak
5 16266.00	32.78	6.05	38.57	34.50	42.90	54.00	-11.10		Average
6 16266.00	37.93	6.05	38.57	34.50	48.05	74.00	-25.95		Peak
7 17592.00	31.39	6.21	41.35	34.37	44.58	54.00	-9.42		Average
8 17592.00	35.78	6.21	41.35	34.37	48.97	74.00	-25.03		Peak

Note: 1. All readings are Quasi-peak values.
 2. Measured = Reading + Antenna Factor + Cable Loss - Amp Factor.
 3. The emission levels that are 20dB below the official limit are not reported.

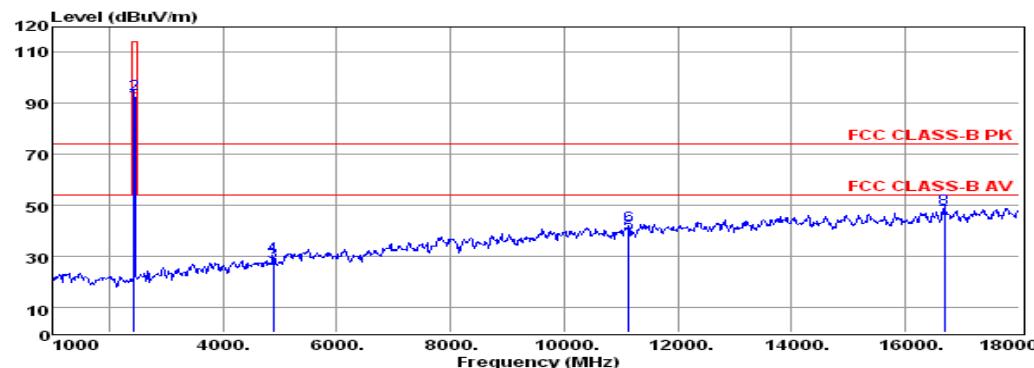
Mid channel (above 1000MHz)



Env. / Ins: 24°C/56%
 EUT: RC Hobby Series
 M/N: H107
 Power Rating: DC 6V
 Test Mode: Tx2440
 Operator: KANO
 Memo:
 pol: VERTICAL

Freq.	Reading	CabLos		AntFac	Prefac	Measured	Limit	Over	Remark
		MHz	dBuV						
3	4880.00	25.22	4.38	33.50	35.62	27.48	54.00	-26.52	Average
4	4880.00	26.93	4.38	33.50	35.62	29.19	74.00	-44.81	Peak
5	14600.00	31.64	5.87	39.43	34.67	42.27	54.00	-11.73	Average
6	14600.00	35.04	5.87	39.43	34.67	45.67	74.00	-28.33	Peak
7	16895.00	34.60	6.13	39.89	34.44	46.18	54.00	-7.82	Average
8	16895.00	38.05	6.13	39.89	34.44	49.63	74.00	-24.37	Peak

Note: 1. All readings are Quasi-peak values.
 2. Measured = Reading + Antenna Factor + Cable Loss - Amp Factor.
 3. The emission levels that are 20dB below the official limit are not reported.

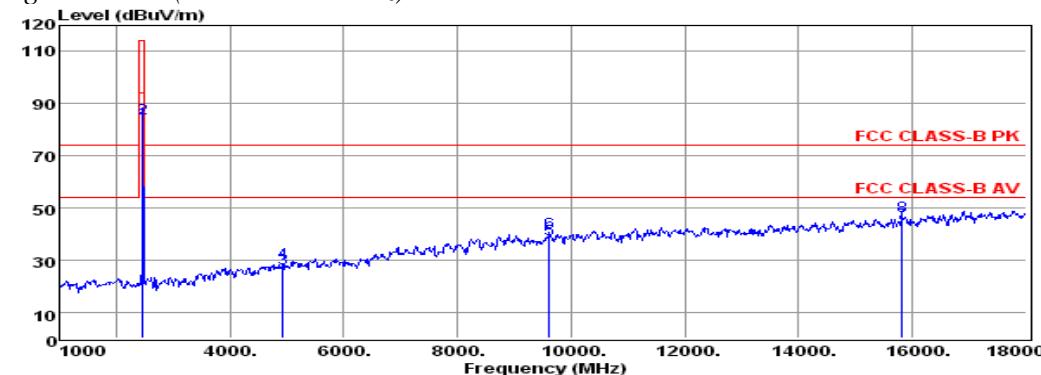


Env. / Ins: 24°C/56%
 EUT: RC Hobby Series
 M/N: H107
 Power Rating: DC 6V
 Test Mode: Tx2440
 Operator: KANO
 Memo:
 pol: HORIZONTAL

Freq.	Reading	CabLos		AntFac	Prefac	Measured	Limit	Over	Remark
		MHz	dBuV						
3	4880.00	25.41	4.38	33.50	35.62	27.67	54.00	-26.33	Average
4	4880.00	27.84	4.38	33.50	35.62	30.10	74.00	-43.90	Peak
5	11132.00	30.47	5.59	37.89	35.01	38.94	54.00	-15.06	Average
6	11132.00	33.43	5.59	37.89	35.01	41.90	74.00	-32.10	Peak
7	16691.00	33.50	6.10	39.46	34.46	44.60	54.00	-9.40	Average
8	16691.00	37.31	6.10	39.46	34.46	48.41	74.00	-25.59	Peak

Note: 1. All readings are Quasi-peak values.
 2. Measured = Reading + Antenna Factor + Cable Loss - Amp Factor.
 3. The emission levels that are 20dB below the official limit are not reported.

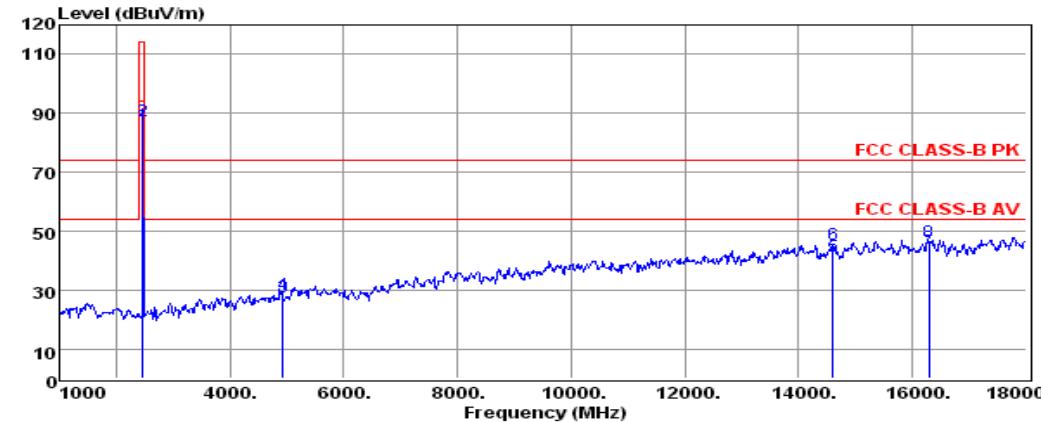
High channel (above 1000MHz)



Env. / Ins: 24°C/56%
 EUT: RC Hobby Series
 M/N: H107
 Power Rating: DC 6V
 Test Mode: Tx2465
 Operator: KANO
 Memo:
 pol: VERTICAL

Freq.	Reading	CabLos		AntFac	PreFac	Measured	Limit	Over	Remark
		MHz	dBuV	dB	dB/m				
3	4930.00	24.50	4.39	33.62	35.61	26.90	54.00	-27.10	Average
4	4930.00	26.60	4.39	33.62	35.61	29.00	74.00	-45.00	Peak
5	9619.00	29.92	5.31	38.02	35.15	38.10	54.00	-15.90	Average
6	9619.00	32.37	5.31	38.02	35.15	40.55	74.00	-33.45	Peak
7	15824.00	35.00	6.00	37.65	34.55	44.10	54.00	-9.90	Average
8	15824.00	37.72	6.00	37.65	34.55	46.82	74.00	-27.18	Peak

Note: 1. All readings are Quasi-peak values.
 2. Measured = Reading + Antenna Factor + Cable Loss - Amp Factor.
 3. The emission levels that are 20dB below the official limit are not reported.

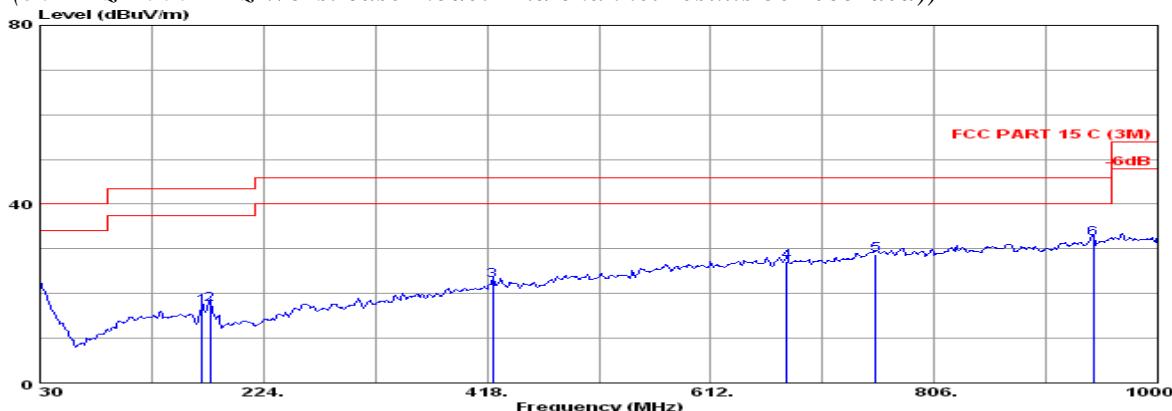


Env. / Ins: 24°C/56%
 EUT: RC Hobby Series
 M/N: H107
 Power Rating: DC 6V
 Test Mode: Tx2465
 Operator: KANO
 Memo:
 pol: HORIZONTAL

Freq.	Reading	CabLos		AntFac	PreFac	Measured	Limit	Over	Remark
		MHz	dBuV	dB	dB/m				
3	4930.00	25.20	4.39	33.62	35.61	27.60	54.00	-26.40	Average
4	4930.00	26.20	4.39	33.62	35.61	28.60	74.00	-45.40	Peak
5	14600.00	30.98	5.87	39.43	34.67	41.61	54.00	-12.39	Average
6	14600.00	35.04	5.87	39.43	34.67	45.67	74.00	-28.33	Peak
7	16283.00	33.30	6.05	38.61	34.50	43.46	54.00	-10.54	Average
8	16283.00	36.40	6.05	38.61	34.50	46.56	74.00	-27.44	Peak

Note: 1. All readings are Quasi-peak values.
 2. Measured = Reading + Antenna Factor + Cable Loss - Amp Factor.
 3. The emission levels that are 20dB below the official limit are not reported.

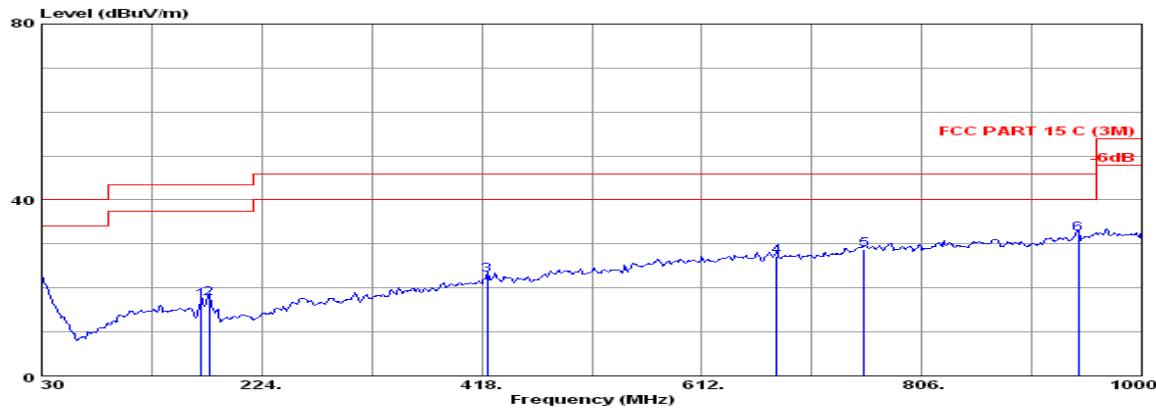
(30MHz-1000MHz Worst case mode: Mid channel results be recorded))



Site no. : 3m Chamber Data no. : 2
 Limit : FCC PART 15 C (3M) Ant. pol. : HORIZONTAL
 Env. / Ins. : 24°C/56% Engineer : Willis

No.	Freq. (MHz)	Ant. Cable		Emission				Remark
		Factor (dB/m)	Loss (dB)	Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	
1	80.430	7.80	0.99	7.28	16.07	40.00	23.93	QP
2	134.761	12.10	1.13	1.77	15.00	43.50	28.50	QP
3	431.580	17.45	3.11	3.84	24.40	46.00	21.60	QP
4	552.831	19.29	3.85	3.60	26.74	46.00	19.26	QP
5	750.710	22.00	4.70	3.11	29.81	46.00	16.19	QP
6	875.840	22.80	5.13	3.43	31.36	46.00	14.64	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 2
 Limit : FCC PART 15 C (3M) Ant. pol. : HORIZONTAL
 Env. / Ins. : 24°C/56% Engineer : Willis

No.	Freq. (MHz)	Ant. Cable		Emission				Remark
		Factor (dB/m)	Loss (dB)	Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	
1	170.655	10.10	1.38	5.70	17.18	43.50	26.32	QP
2	177.440	9.55	1.46	6.70	17.71	43.50	25.79	QP
3	422.850	17.15	3.06	2.74	22.95	46.00	23.05	QP
4	677.950	20.72	4.42	2.12	27.26	46.00	18.74	QP
5	755.560	22.00	4.72	1.94	28.66	46.00	17.34	QP
6	943.741	23.92	5.37	2.96	32.25	46.00	13.75	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Note:

1. Radiated emissions measured in frequency range from 9 kHz to 26GHz were made with an instrument using Peak detector mode.
2. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported. Measuring frequencies from 9 kHz to the 1GHz. No emission found between lowest internal used/generated frequency to 30 MHz.
3. Measurements above show only up to 6 maximum emissions noted.
4. The IF bandwidth of SPA 30MHz to 1GHz was 100KHz.
5. Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB. No emission found above 18GHz.

7. ANTENNA REQUIREMENT

7.1 Standard Applicable

7.1.1. Standard Applicable

According to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

7.1.2. Antenna Construction

Section 15.203 of the rules states that the subject device must meet at least one of the following criteria:

- (a) Antenna must be permanently attached to the unit.
- (b) Antenna must use a unique type of connector to attach to the EUT.
- (c) Unit must be professionally installed. Installer shall be responsible for verifying that the correct antenna is employed with the unit.

7.1.3. Results

EUT uses a PCB antenna with 1.8dBi gain.

Compliance.

8. MANUFACTURER/ APPROVAL HOLDER DECLARATION

The following identical model(s):

H203	--
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All the models are similar except their model name.

Belong to the tested device:

Product description : RC Hobby Series

Model name : H107

No additional models were tested.

-----THE END OF REPORT-----