FCC TEST REPORT

FOR

Shenzhen FeiCan Technology Co., Limited

2.4G Remote Controller

Model No.: FC-PB-RGB2.4G

Additional model No.: FC-PB-2.4G, FC-PB-RGBW2.4G02, FC-TH-WIFI01, FC-PB-2.4G02

Prepared for	:	Shenzhen FeiCan Technology Co., Limited
Address	:	5F, B Block of E Building,Lianchuang Industrial Area, Zhangge Tangqian village, Guanlan Street,Longhua District, Shenzhen, China

Prepared by	:	Shenzhen LCS Compliance Testing Laboratory Ltd
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Date of receipt of test sample	:	August 21, 2015
Number of tested samples	:	1
Serial number	:	Prototype
Date of Test	:	August 21, 2015 - September 07, 2015
Date of Report	:	September 07, 2015

FCC TEST REPORT **FCC CFR 47 PART 15 C(15.249): 2014**	
Report Reference No. ..... :	**LCS1508211254E**
Date of Issue ..... :	September 07, 2015
Testing Laboratory Name..... :	**Shenzhen LCS Compliance Testing Laboratory Ltd.**
Address ..... :	1/F., Xingyuan Industrial Park, Tongda Road, Bao'an Avenue, 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 ..... :	**Shenzhen FeiCan Technology Co., Limited**
Address ..... :	5F, B Block of E Building,Lianchuang Industrial Area, Zhangge Tangqian village, Guanlan Street,Longhua District, Shenzhen, China
Test Specification	
Standard ..... :	FCC CFR 47 PART 15 C(15.249): 2014
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. ..... :	**2.4G Remote Controller**
Trade Mark ..... :	FEICAN
Model/ Type reference..... :	FC-PB-RGB2.4G
Ratings ..... :	DC 3.0V by battery
Result ..... :	**Positive**

Compiled by:	**Supervised by:**	**Approved by:**
Jacky Li		
Jacky Li/ File administrators	Glin Lu/ Technique principal	Gavin Liang/ Manager

FCC -- TEST REPORT

Test Report No. : LCS1508211254E	September 07, 2015 Date of issue

Type / Model.....	: FC-PB-RGB2.4G
EUT.....	: 2.4G Remote Controller
Applicant.....	**: Shenzhen FeiCan Technology Co., Limited**
Address.....	: 5F, B Block of E Building,Lianchuang Industrial Area, Zhangge Tangqian village, Guanlan Street,Longhua District, Shenzhen, China
Telephone.....	: 0755-66609352
Fax.....	: 0755-21503635
Manufacturer.....	**: Shenzhen FeiCan Technology Co., Limited**
Address.....	: 5F, B Block of E Building,Lianchuang Industrial Area, Zhangge Tangqian village, Guanlan Street,Longhua District, Shenzhen, China
Telephone.....	: 0755-66609352
Fax.....	: 0755-21503635
Factory.....	**: Shenzhen FeiCan Technology Co., Limited**
Address.....	: 5F, B Block of E Building,Lianchuang Industrial Area, Zhangge Tangqian village, Guanlan Street,Longhua District, Shenzhen, China
Telephone.....	: 0755-66609352
Fax.....	: 0755-21503635

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

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT : 2.4G Remote Controller

Model Number : FC-PB-RGB2.4G

Power Supply : DC 3.0V by battery

Frequency Range : 2405.00-2475.00MHz

Channel frequency list : 2405MHz, 2440MHz, 2475MHz

Channel number : 3

Modulation Technology : ASK

Antenna Type and Gain : Integral Antenna, 5.5 dBi(Max.)

Additional models No.			
FC-PB-2.4G	FC-PB-RGBW2.4G02	FC-TH-WIFI01	FC-PB-2.4G02
Remark: PCB board, structure and internal of these model(s) are the same, So no additional models were tested.			

1.2. Host System Configuration List and Details

Manufacturer	Description	Model	Serial Number	Certificate
--	--	--	--	--

1.3. External I/O

I/O Port Description	Quantity	Cable
--	--	--

1.4. Description of Test Facility

Site Description

EMC Lab. : CNAS Registration Number. is L4595.
FCC Registration Number. is 899208.
Industry Canada Registration Number. is 9642A-1.
VCCI Registration Number. is C-4260 and R-3804.
ESMD Registration Number. is ARCB0108.
UL Registration Number. is 100571-492.
TUV SUD Registration Number. is SCN1081.
TUV RH Registration Number. is UA 50296516-001

1.5. 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.

1.6. Measurement Uncertainty

Test Item		Frequency Range	Uncertainty	Note
Radiation Uncertainty	:	9KHz~30MHz	±3.10dB	(1)
		30MHz~200MHz	±2.96dB	(1)
		200MHz~1000MHz	±3.10dB	(1)
		1GHz~26.5GHz	±4.00dB	(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.

1.7. Description Of Test Modes

The EUT operates in the unlicensed ISM band at 2.4GHz. The following operating modes were applied for the related test items. And the new battery is used during the measurement.
The EUT received DC 3.0V power from 2*AA battery which are new and full power. All test modes were tested, only the result of the worst case was recorded in the report.

The EUT is considered a portable unit; it was pre-tested on the positioned of each 3 axis. The worst case was found positioned on X-plane. Therefore only the test data of this X-plane was used for radiated emission measurement test.

Mode of Operations	Transmitting Frequency (MHz)
PWM	2405
	2440
	2475
For Conducted Emission	
Test Mode	N/A
For Radiated Emission	
Test Mode	TX Mode

Note: The EUT is designed to use DC 3.0V 2*AA battery for power supply, so the conducted emission testing is not applicable.

2. TEST METHODOLOGY

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

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 and 15.249 under the FCC Rules Part 15 Subpart C.

2.3. General Test Procedures

2.3.1 Conducted Emissions(N/A)

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 6.2.1 of ANSI C63.10-2013 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 6.3 of ANSI C63.10-2013

3. CONNECTION DIAGRAM OF TEST SYSTEM

3.1. Justification

The system was configured for testing in a continuous transmit condition.

3.2. EUT Exercise Software

N/A

3.3. Special Accessories

N/A

3.4. Block Diagram/Schematics

Please refer to the related document

3.5. Equipment Modifications

Shenzhen LCS Compliance Testing Laboratory Ltd. has not done any modification on the EUT.

3.6. Test Setup

Please refer to the test setup photo.

4. SUMMARY OF TEST RESULTS

FCC Rules	Description Of Test	Result
§15.203	Antenna Requirement	Compliant
§15.207(a)	Conduction Emissions	N/A
§15.205(a), §15.209(a), §15.249(a), §15.249(c)	Radiated Emissions Measurement	Compliant
§15.249	Band Edges Measurement	Compliant
§15.249, §15.215	20 dB Bandwidth	Compliant

5. SUMMARY OF TEST EQUIPMENT

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1	Power Sensor	R&S	NRV-Z51	100458	2015-06-18	2016-06-17
2	Power Sensor	R&S	NRV-Z32	10057	2015-06-18	2016-06-17
3	Power Meter	R&S	NRVS	100444	2015-06-18	2016-06-17
4	DC Filter	MPE	23872C	N/A	2015-06-18	2016-06-17
5	RF Cable	Harbour Industries	1452	N/A	2015-06-18	2016-06-17
6	SMA Connector	Harbour Industries	9625	N/A	2015-06-18	2016-06-17
7	Spectrum Analyzer	Agilent	N9020A	MY50510140	2014-10-27	2015-10-26
8	Signal analyzer	Agilent	E4448A(External mixers to 40GHz)	US44300469	2015-06-16	2016-06-15
9	RF Cable	Hubersuhne	Sucoflex104	FP2RX2	2015-06-18	2016-06-17
10	3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	2015-06-18	2016-06-17
11	Amplifier	SCHAFFNER	COA9231A	18667	2015-06-18	2016-06-17
12	Amplifier	Agilent	8449B	3008A02120	2015-06-16	2016-06-15
13	Amplifier	MITEQ	AMF-6F-260400	9121372	2015-06-16	2016-06-15
14	Loop Antenna	R&S	HFH2-Z2	860004/001	2015-06-18	2016-06-17
15	By-log Antenna	SCHWARZBECK	VULB9163	9163-470	2015-06-10	2016-06-09
16	Horn Antenna	EMCO	3115	6741	2015-06-10	2016-06-09
17	Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170154	2015-06-10	2016-06-09
18	RF Cable-R03m	Jye Bao	RG142	CB021	2015-06-18	2016-06-17
19	RF Cable-HIGH	SUHNER	SUCOFLEX 106	03CH03-HY	2015-06-18	2016-06-17
20	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	101142	2015-06-18	2016-06-17
21	EMI Test Receiver	ROHDE & SCHWARZ	ESPI	101840	2015-06-18	2016-06-17
22	Artificial Mains	ROHDE & SCHWARZ	ENV216	101288	2015-06-18	2016-06-17
23	EMI Test Software	AUDIX	E3	N/A	2015-06-18	2016-06-17
24	Spectrum Analyzer	Agilent	E4407B	MY41440292	2015-06-16	2016-06-15

6. ANTENNA REQUIREMENT

6.1. Standard Applicable

According to §15.203 & RSS-Gen, Antenna requirement.

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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be re-placed by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of Sections 15.211, 15.213, 15.217, 15.219, or 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with Section 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this Part are not exceeded.

6.2. Antenna Connected Construction

6.2.1. Standard Applicable

According to §15.203 & RSS-Gen, 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.

6.2.2. Antenna Connector Construction

The directional gains of antenna used for transmitting is 5.5dBi, and the antenna is connect to PCB board and no consideration of replacement. Please see EUT photo for details.

6.2.3. Results: Compliance.

7. RADIATED EMISSION MEASUREMENT

7.1. Standard Applicable

1. 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.
2. 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 (microvolts/meter)
902-928MHz	50	500
2400-2483.5MHz	50	500
5725-5875MHz	50	500
24.0-24.25GHz	250	2500

Frequencies (MHz)	Field Strength (microvolts/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

7.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. 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, 1 MHz / 10Hz for Average
RB / VB (Emission in non-restricted band)	1000KHz / 1000KHz for peak

7.3. Test Procedure

1) **Sequence of testing 9 kHz to 30 MHz**

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.
--- If the EUT is a tabletop system, a rotatable table with 0.8 m height is used.
--- If the EUT is a floor standing device, it is placed on the ground.
--- Auxiliary equipment and cables were positioned to simulate normal operation conditions.
--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
--- The measurement distance is 3 meter.
--- The EUT was set into operation.

Premeasurement:

--- The turntable rotates from 0 °to 315 °using 45 °steps.
--- The antenna height is 1.5 meter.
--- At each turntable position the analyzer sweeps with peak detection to find the maximum of all emissions

Final measurement:

--- Identified emissions during the premeasurement the software maximizes by rotating the turntable position (0 °to 360 °) and by rotating the elevation axes (0 °to 360 °).
--- The final measurement will be done in the position (turntable and elevation) causing the highest emissions with QPK detector.
--- The final levels, frequency, measuring time, bandwidth, turntable position, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement and the limit will be stored.

2) **Sequence of testing 30 MHz to 1 GHz**

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.
--- If the EUT is a tabletop system, a table with 0.8 m height is used, which is placed on the ground plane.
--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.
--- Auxiliary equipment and cables were positioned to simulate normal operation conditions
--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
--- The measurement distance is 3 meter.
--- The EUT was set into operation.

Premeasurement:

--- The turntable rotates from 0 °to 315 °using 45 °steps.
--- The antenna is polarized vertical and horizontal.
--- The antenna height changes from 1 to 3 meter.
--- At each turntable position, antenna polarization and height the analyzer sweeps three times in peak to find the maximum of all emissions.

Final measurement:

--- The final measurement will be performed with minimum the six highest peaks.
--- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable position (±45 °) and antenna movement between 1 and 4 meter.
--- The final measurement will be done with QP detector with an EMI receiver.
--- The final levels, frequency, measuring time, bandwidth, antenna height, antenna polarization, turntable angle, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.

3) **Sequence of testing 1 GHz to 12.75 GHz**

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.
--- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.
--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.
--- Auxiliary equipment and cables were positioned to simulate normal operation conditions
--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
--- The measurement distance is 3 meter.
--- The EUT was set into operation.

Premeasurement:

--- The turntable rotates from 0 °to 315 °using 45 °steps.
--- The antenna is polarized vertical and horizontal.
--- The antenna height is 1.5 meter.
--- At each turntable position and antenna polarization the analyzer sweeps with peak detection to find the maximum of all emissions.

Final measurement:

--- The final measurement will be performed with minimum the six highest peaks.
--- According to the maximum found antenna polarisation and turntable position of the premeasurement the software maximizes the peaks by rotating the turntable position (0 ° to 360 °). This measurement is repeated for different EUT-table positions (0 °to 150 °in 30 °steps). This procedure is repeated for both antenna polarisations.
--- The final measurement will be done in the position (turntable, EUT-table and antenna polarization) causing the highest emissions with Peak and RMS detector.
--- The final levels, frequency, measuring time, bandwidth, turntable position, EUT-table position, antenna polarization, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.

4) **Sequence of testing above 12.75 GHz**

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.
--- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.
--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.
--- Auxiliary equipment and cables were positioned to simulate normal operation conditions
--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
--- The measurement distance is 1 meter.
--- The EUT was set into operation.

Premeasurement:

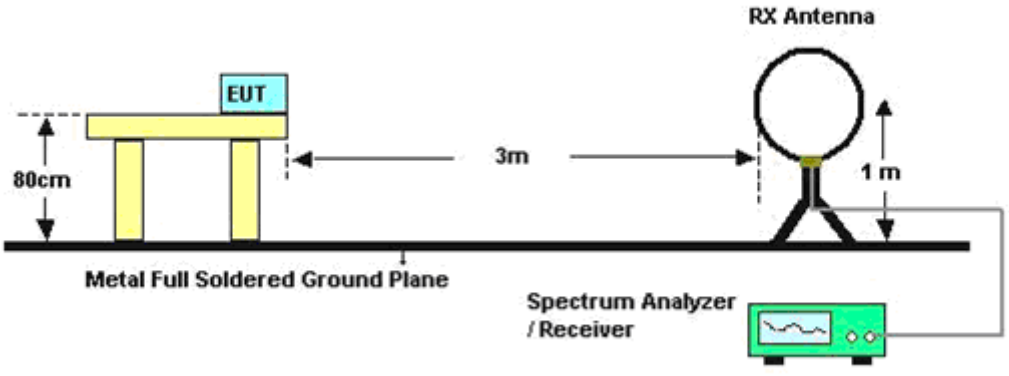
--- The antenna is moved spherical over the EUT in different polarisations of the antenna.

Final measurement:

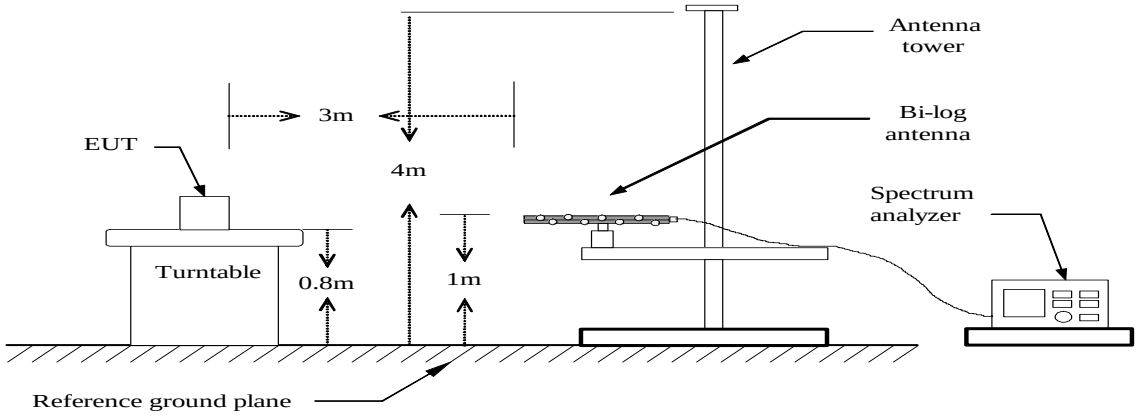
--- The final measurement will be performed at the position and antenna orientation for all detected emissions that were found during the premeasurements with Peak and RMS detector.
--- The final levels, frequency, measuring time, bandwidth, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement and the limit will be stored.

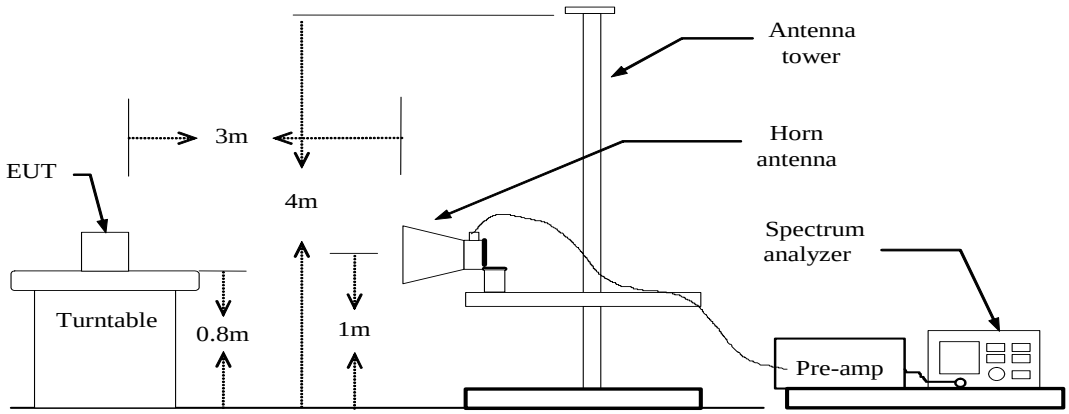
7.4. Block Diagram of Test Setup

For radiated emissions below 30MHz



For radiated emissions above 30MHz





Above 10 GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade form 3m to 1.5m.

Distance extrapolation factor = 20 log (specific distanc [3m] / test distance [1.5m]) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor [6 dB].

7.5. Test Results

Results of Radiated Emissions (9kHz~30MHz)

Frequency (MHz)	Level (dBuV)	Over Limit (dB)	Over Limit (dBuV)	Remark
				See Note

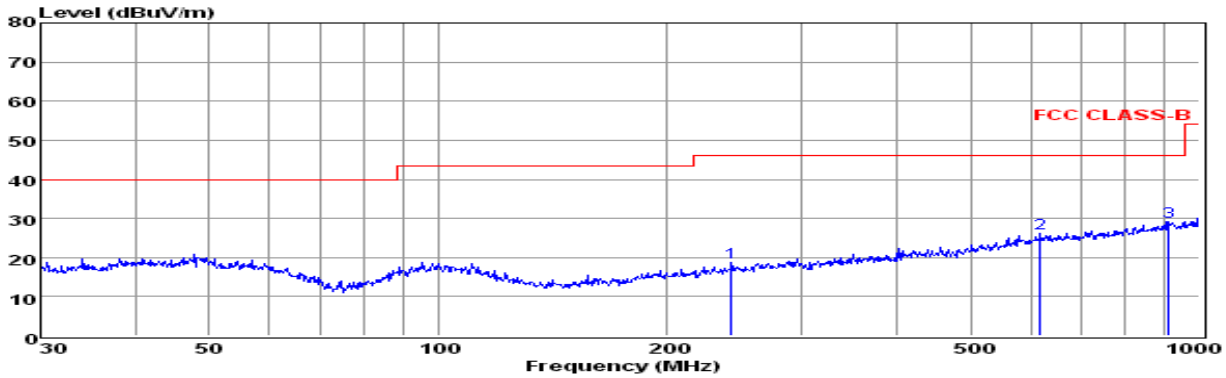
Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Distance extrapolation factor = 40 log (specific distance / test distance) (dB);
Limit line = specific limits (dBuV) + distance extrapolation factor.

Results of Radiated Emissions (30MHz~1000MHz)

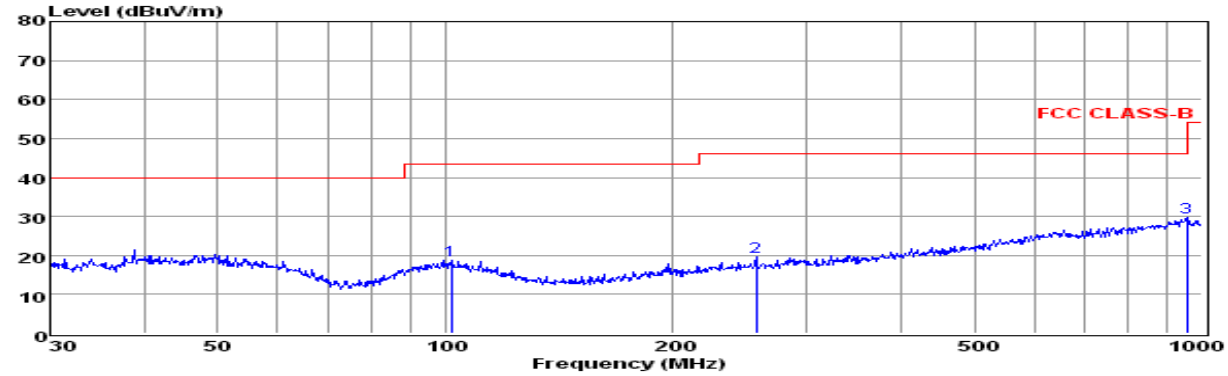
Test Mode (Low 2405MHz)



Env./Ins: 24℃/56%
EUT: 2.4G Remote Controller
M/N: FC-PB-RGB2.4G
Power Rating: DC 3.0V
Test Mode: TX-2405
Operator: Jacky
Memo:
pol: VERTICAL

	Freq	Reading	CabLos	Antfac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	242.53	5.67	0.90	12.08	18.65	46.00	-27.35	QP
2	618.54	6.12	1.51	18.52	26.15	46.00	-19.85	QP
3	912.86	6.18	1.86	21.17	29.21	46.00	-16.79	QP

Note: 1. All readings are Quasi-peak values.
2. Measured= Reading + Antenna Factor + Cable Loss
3. The emission that ate 20db blow the offficial limit are not reported



Env./Ins: 24℃/56%
EUT: 2.4G Remote Controller
M/N: FC-PB-RGB2.4G
Power Rating: DC 3.0V
Test Mode: TX-2405
Operator: Jacky
Memo:
pol: HORIZONTAL

	Freq	Reading	CabLos	Antfac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	101.64	5.22	0.60	13.01	18.83	43.50	-24.67	QP
2	257.42	6.69	1.01	12.06	19.76	46.00	-26.24	QP
3	955.44	6.33	1.89	21.45	29.67	46.00	-16.33	QP

Note: 1. All readings are Quasi-peak values.
2. Measured= Reading + Antenna Factor + Cable Loss
3. The emission that ate 20db blow the offficial limit are not reported

Note: We have test all modes and only record the worst result.

Above 1GHz

Field Strength Of Fundamental-Low channel						
Frequency (MHz)	Pol.	Measure Result (PK, dBuV/m)	Measure Result (AVG, dBuV/m)	Peak Limit (dBuV/m)	AVG Limit (dBuV/m)	Result
2405	H	97.63	89.78	114	94	Pass
2405	V	95.21	88.25	114	94	Pass

Field Strength Of Fundamental-Middle channel						
Frequency (MHz)	Pol.	Measure Result (PK, dBuV/m)	Measure Result (AVG, dBuV/m)	Peak Limit (dBuV/m)	AVG Limit (dBuV/m)	Result
2440	H	98.93	90.58	114	94	Pass
2440	V	96.75	89.75	114	94	Pass

Field Strength Of Fundamental-High channel						
Frequency (MHz)	Pol.	Measure Result (PK, dBuV/m)	Measure Result (AVG, dBuV/m)	Peak Limit (dBuV/m)	AVG Limit (dBuV/m)	Result
2475	H	98.23	89.97	114	94	Pass
2475	V	95.76	88.59	114	94	Pass

The worst test result for Tx-Low Channel:

Freq. MHz	Reading dBuv	Ant. Fac dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuv/m	Limit dBuv/m	Margin dB	Remark	Pol.
4810.25	55.64	33.06	35.04	3.94	57.60	74	-16.40	Peak	Horizontal
4810.25	40.45	33.06	35.04	3.94	42.41	54	-11.59	Average	Horizontal
4810.25	52.82	33.06	35.04	3.94	54.78	74	-19.22	Peak	Vertical
4810.25	38.40	33.06	35.04	3.94	40.36	54	-13.64	Average	Vertical

The worst test result for Tx-Middle Channel:

Freq. MHz	Reading dBuv	Ant. Fac dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuv/m	Limit dBuv/m	Margin dB	Remark	Pol.
4880.58	55.82	33.16	35.15	3.96	57.79	74	-16.21	Peak	Horizontal
4880.58	40.06	33.16	35.15	3.96	42.03	54	-11.97	Average	Horizontal
4880.58	52.14	33.16	35.15	3.96	54.11	74	-19.89	Peak	Vertical
4880.58	39.59	33.16	35.15	3.96	41.56	54	-12.44	Average	Vertical

The worst test result for Tx-High Channel:

Freq. MHz	Reading dBuv	Ant. Fac dB/m	Pre. Fac dB	Cab. Los dB	Measured dBuv/m	Limit dBuv/m	Margin dB	Remark	Pol.
4950.72	55.68	33.26	35.14	3.98	57.78	74	-16.22	Peak	Horizontal
4950.72	40.59	33.26	35.14	3.98	42.69	54	-11.31	Average	Horizontal
4950.72	52.65	33.26	35.14	3.98	54.75	74	-19.25	Peak	Vertical
4950.72	38.34	33.26	35.14	3.98	40.44	54	-13.56	Average	Vertical

Notes:

1. Measuring frequencies from 9k~10th harmonic (ex. 26GHz), No emission found between lowest internal used/generated frequency to 30 MHz.

2. Radiated emissions measured in frequency range from 9k~10th harmonic (ex. 26GHz) were made with an instrument using Peak detector mode.

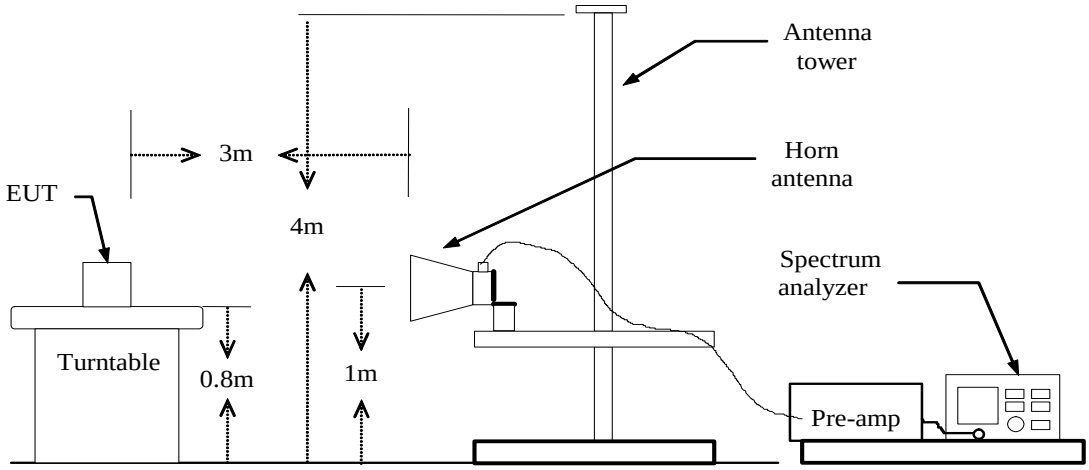
3. 18~25GHz at least have 20dB margin. No recording in the test report.

8. BANDEDGES MEASUREMENT

8.1. 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 Section 15.209, whichever is the lesser attenuation.

8.2. Block Diagram of Test Setup



8.3. Test Procedure

The EUT is placed on a turntable, which is 0.8m above the ground plane. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:

Peak: RBW=VBW=1MHz / Sweep=AUTO

Repeat the procedures until the peak versus polarization are measured.

8.4. Test Results

Only record the worst test case as following:

Tx-2405

Freq. MHz	Reading Level dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
2390.00	48.91	32.89	35.16	3.51	50.15	74	-23.85	Peak	Horizontal
2390.00	36.22	32.89	35.16	3.51	37.46	54	-16.54	Average	Horizontal
2400.00	50.48	32.92	35.16	3.54	51.78	74	-22.22	Peak	Horizontal
2400.00	35.75	32.92	35.16	3.54	37.05	54	-16.95	Average	Horizontal
2390.00	47.97	32.89	35.16	3.51	49.21	74	-24.79	Peak	Vertical
2390.00	33.92	32.89	35.16	3.51	35.16	54	-18.84	Average	Vertical
2400.00	48.07	32.92	35.16	3.54	49.37	74	-24.63	Peak	Vertical
2400.00	35.55	32.92	35.16	3.54	36.85	54	-17.15	Average	Vertical

Tx-2475

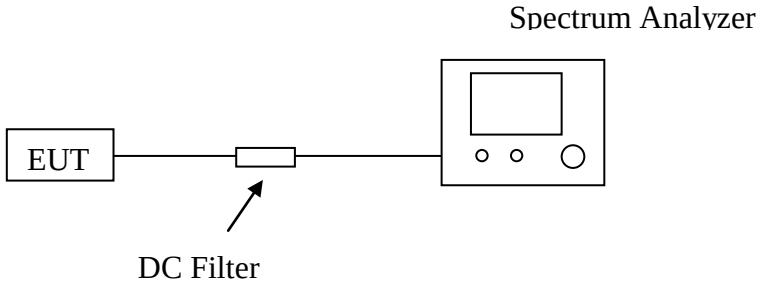
Freq. MHz	Reading Level dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
2483.50	48.66	33.06	35.18	3.60	50.14	74	-23.86	Peak	Horizontal
2483.50	35.88	33.06	35.18	3.60	37.36	54	-16.64	Average	Horizontal
2483.50	48.30	33.06	35.18	3.60	49.78	74	-24.22	Peak	Vertical
2483.50	36.10	33.06	35.18	3.60	37.58	54	-16.42	Average	Vertical

9. 20 DB BANDWIDTH MEASUREMENT

9.1. Standard Applicable

According to §15.215 & RSS-210.

9.2. Block Diagram of Test Setup



9.3. Test Procedure

Use the following spectrum analyzer settings:

Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hopping channel

RBW ≥ 1% of the 20 dB bandwidth

VBW ≥ RBW

Sweep = auto

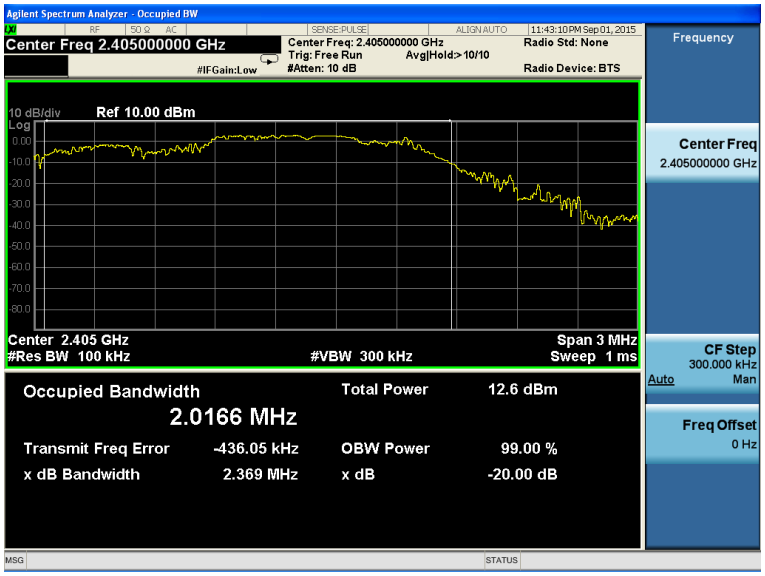
Detector function = peak

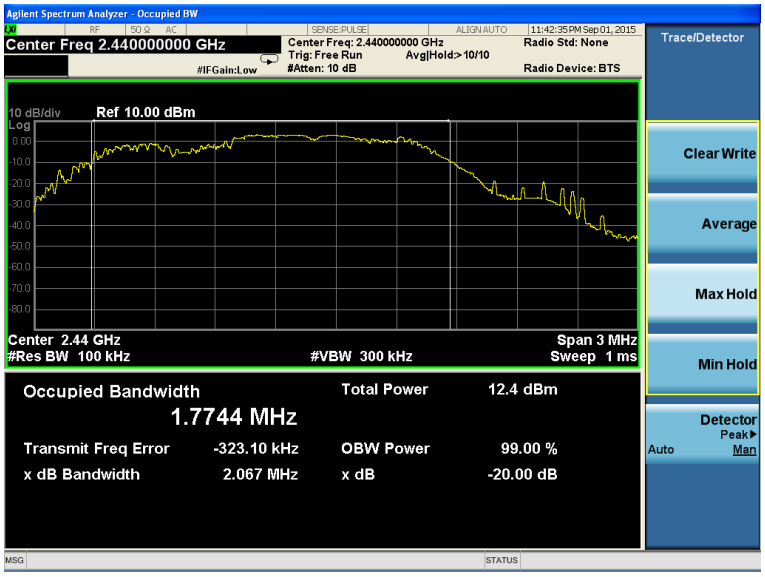
Trace = max hold

The EUT should be transmitting at its maximum data rate. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. Use the marker-delta function to measure 20 dB down one side of the emission. Reset the marker-delta function, and move the marker to the other side of the emission, until it is (as close as possible to) even with the reference marker level. The marker-delta reading at this point is the 20 dB bandwidth of the emission. If this value varies with different modes of operation (e.g., data rate, modulation format, etc.), repeat this test for each variation. The limit is specified in one of the subparagraphs of this Section. Submit this plot(s).

9.4. Test Results

Please refer to the following page.
Result: Pass





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