# **FCC Test Report**

APPLICANT : BLU Products, Inc.

**EQUIPMENT**: Mobile phone

BRAND NAME : BLU

MODEL NAME : NEO X, STUDIO X5

FCC ID : YHLBLUNEOX

STANDARD : FCC 47 CFR FCC Part 15 Subpart B

**CLASSIFICATION**: Certification

The product was received on Jan. 28, 2016 and testing was completed on Feb. 22, 2016. We, SPORTON INTERNATIONAL (KUNSHAN) INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI C63.4-2014 and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL (KUNSHAN) INC., the test report shall not be reproduced except in full.

Prepared by: James Huang / Manager

Approved by: Jones Tsai / Manager

SPORTON INTERNATIONAL (KUNSHAN) INC. No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P. R. China

SPORTON INTERNATIONAL (KUNSHAN) INC. TEL: 86-0512-5790-0158

FAX: 86-0512-5790-0958 FCC ID: YHLBLUNEOX Page Number : 1 of 24
Report Issued Date : Mar. 04, 2016
Report Version : Rev. 01

Testing Laboratory 2627

**Report No. : FC612802** 

Report Template No.: BU5-FC15B Version 1.2

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## **REVISION HISTORY**

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC612802	Rev. 01	Initial issue of report	Mar. 04, 2016

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## **SUMMARY OF TEST RESULT**

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.107	ICES003 Section 6.1	AC Conducted Emission	< 15.107 limits < ICES003 6.1 limits	PASS	Under limit 3.11 dB at 0.480 MHz
3.2	15.109	ICES003 Section 6.2	Radiated Emission	< 15.109 limits < ICES003 6.2 limits	PASS	Under limit 2.22 dB at 187.410 MHz for Quasi-Peak

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# 1. General Description

## 1.1. Applicant

**BLU Products, Inc.** 

10814 NW 33rd St # 100 Doral, FL 33172

### 1.2. Manufacturer

**BLU Products, Inc.** 

10814 NW 33rd St # 100 Doral, FL 33172

## 1.3. Product Feature of Equipment Under Test

	Product Feature		
Equipment	Mobile phone		
Brand Name	BLU		
Model Name	NEO X, STUDIO X5		
FCC ID	YHLBLUNEOX		
	GSM/GPRS/EGPRS(Downlink Only)/		
EUT supports Radios application	WCDMA/HSPA/HSPA+(16QAM uplink is not supported)		
EUT Supports Radios application	WLAN2.4GHz 802.11b/g/n HT20/HT40		
	Bluetooth v3.0+EDR		
	Bluetooth v4.0 LE		
IMEI Code	Conduction: 863911024474565/863911024474573		
INIEI Code	Radiation: 863911024474482/863911024474490		
HW Version	ZH066-V2.0		
SW Version	V01		
EUT Stage	Pre-Production		

Remark:

The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

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# 1.4. Product Specification of Equipment Under Test

Standa	erds-related Product Specification			
	GSM850: 824.2 MHz ~ 848.8 MHz			
	GSM1900: 1850.2 MHz ~ 1909.8MHz			
	WCDMA Band V: 826.4 MHz ~ 846.6 MHz			
Tx Frequency	WCDMA Band IV : 1712.4 MHz ~ 1752.6 MHz			
	WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz			
	802.11b/g/n: 2412 MHz ~ 2462 MHz			
	Bluetooth: 2402 MHz ~ 2480 MHz			
	GSM850: 869.2 MHz ~ 893.8 MHz			
	GSM1900: 1930.2 MHz ~ 1989.8 MHz			
	WCDMA Band V: 871.4 MHz ~ 891.6 MHz			
Rx Frequency	WCDMA Band IV : 2112.4 MHz ~ 2152.6 MHz			
KX Frequency	WCDMA Band II: 1932.4 MHz ~ 1987.6 MHz			
	802.11b/g/n: 2412 MHz ~ 2462 MHz			
	Bluetooth: 2402 MHz ~ 2480 MHz			
	GPS: 1.57542 GHz			
	WWAN: FPC Antenna			
Antenna Type	WLAN: FPC Antenna			
Antenna Type	Bluetooth : FPC Antenna			
	GPS : FPC Antenna			
	GSM: GMSK			
	GPRS: GMSK			
	EDGE: GMSK / 8PSK(Downlink Only)			
	WCDMA: QPSK (Uplink)			
	HSDPA: QPSK (Uplink)			
	HSUPA: QPSK (Uplink)			
Type of Modulation	HSPA+: 16QAM (Uplink is not supported)			
Type of modulation	802.11b: DSSS (DBPSK / DQPSK / CCK)			
	802.11g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM)			
	Bluetooth LE : GFSK			
	Bluetooth (1Mbps) : GFSK			
	Bluetooth (2Mbps) : π /4-DQPSK			
	Bluetooth (3Mbps): 8-DPSK			
	GPS: BPSK			

### 1.5. Modification of EUT

No modifications are made to the EUT during all test items.

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### 1.6. Test Location

Test Site	SPORTON INTERNATIONAL (KUNSHAN) INC.				
	No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P. R. China				
Test Site Location	TEL: +86-0512-5790-0158				
	FAX: +86-0512-5790-0958				
T4 0'4- N-	Sporton S	FCC/IC Registration No.			
Test Site No.	03CH03-KS	CO01-KS	306251/4086E		

# 1.7. Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC 47 CFR FCC Part 15 Subpart B
- ANSI C63.4-2014
- IC ICES-003 Issue 5
- IC RSS-Gen Issue 4

**Remark:** All test items were verified and recorded according to the standards and without any deviation during the test.

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# 2. Test Configuration of Equipment Under Test

### 2.1. Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2014 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

Frequency range investigated: conduction (150 kHz to 30 MHz), radiation (30MHz to the 5th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

The following tables are showing the test modes as the worst cases and recorded in this report.

		Test Condition				
Item	EUT Configuration		EMI RE<1G	EMI RE≥1G		
1.	Charging Mode (EUT with adapter)	$\boxtimes$	$\boxtimes$	Note 1		
2.	Data application transferred mode (EUT with notebook)	$\boxtimes$	$\boxtimes$	$\boxtimes$		

#### Abbreviations:

EMI AC: AC conducted emissions

EMI RE ≥ 1G: EUT radiated emissions ≥ 1GHz

EMI RE < 1G: EUT radiated emissions < 1GHz</li>

Note 1: Testing for this mode is not required or not the worst case.

Remark: For signal above 1GHz, the worst case was test item 2.

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Test Items	EUT Configure Mode	Function Type
		Mode 1: WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera (Front) + SIM1 <fig.1></fig.1>
AC Conducted	1/0	Mode 2: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera (Back) + SIM2 <fig.1></fig.1>
Emission	1/2	Mode 3: GSM1900 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + MPEG4 + SIM1 <fig.1></fig.1>
		Mode 4: WCDMA Band IV Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + GPS Rx + SIM2 <fig.2></fig.2>
	3Hz 1/2	Mode 1: WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera (Front) + SIM1 <fig.1></fig.1>
Radiated		Mode 2: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera (Back) + SIM2 <fig.1></fig.1>
Emissions < 1GHz		Mode 3: GSM1900 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + MPEG4 + SIM1 <fig.1></fig.1>
		Mode 4: WCDMA Band IV Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + GPS Rx + SIM2 <fig.2></fig.2>
Radiated Emissions ≥ 1GHz	2	Mode 1: WCDMA Band IV Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + GPS Rx + SIM2 <fig.2></fig.2>

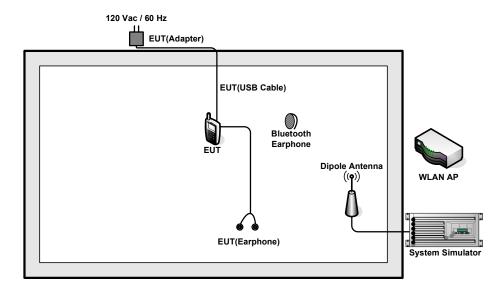
#### Remark:

- 1. The worst case of AC is mode 2; and the USB Link mode of AC is mode 4, only the test data of this mode was reported.
- 2. The worst case of RE < 1G is mode 4; only the test data of this mode was reported.
- Data Link with Notebook means data application transferred mode between EUT and Notebook.

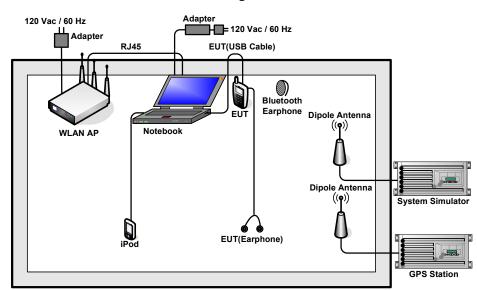
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## 2.2. Connection Diagram of Test System



<Fig.1>



<Fig.2>

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# 2.3. Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	GPS Station	ADIVIC	MP9000	N/A	N/A	Unshielded, 1.8 m
3.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
4.	WLAN AP	ASUSTek	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 2.7 m with Core
5.	Notebook	Lenovo	E540	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
6.	Bluetooth Earphone	Nokia	BH-108	PYAHS-107W	N/A	N/A
7.	Bluetooth Earphone	Samsung	HS3000	A3LHS3000	N/A	N/A
8.	iPod nano 8GB	Apple	MC690ZP/A	FCC DoC	Shielded, 1.2 m	N/A
9.	iPod	Apple	MC525 ZP/A	FCC DoC	Shielded, 1.0 m	N/A
10.	SD Card	SanDisk	4G class 4	FCC DoC	N/A	N/A

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### 2.4. EUT Operation Test Setup

The EUT was in GSM or WCDMA idle mode during the testing. The EUT was synchronized to the BCCH, and is in continuous receiving mode by setting system simulator's paging reorganization.

At the same time, the EUT was attached to the Bluetooth earphone or WLAN AP, and the following programs installed in the EUT were programmed during the test.

- 1. Data application is transferred between Notebook and EUT via USB cable.
- 2. Turn on GPS function to make the EUT receive continuous signals from GPS station.
- 3. Execute "Video Player" to play MPEG4 files.
- 4. Turn on camera to capture images.

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### 3. Test Result

#### 3.1. Test of AC Conducted Emission Measurement

#### 3.1.1 Limits of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of emission	Conducted	limit (dBuV)
(MHz)	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

<sup>\*</sup>Decreases with the logarithm of the frequency.

#### 3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

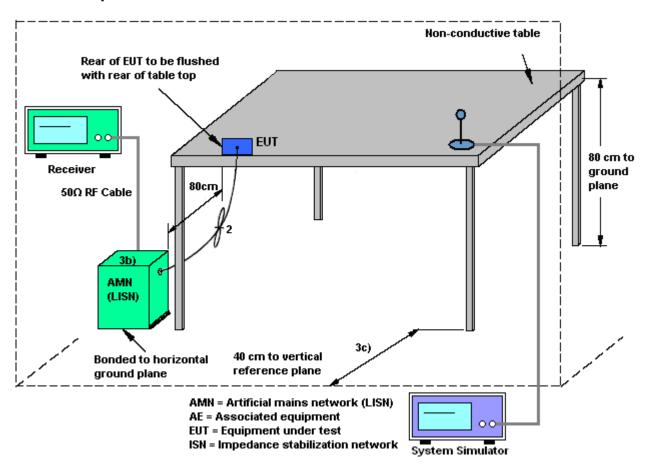
#### 3.1.3 Test Procedure

- The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least
   80 centimeters from any other grounded conducting surface.
- 2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- 3. All the support units are connecting to the other LISN.
- 4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- 5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
- 6. Both sides of AC line were checked for maximum conducted interference.
- 7. The frequency range from 150 kHz to 30 MHz was searched.
- 8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

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### 3.1.4 Test Setup

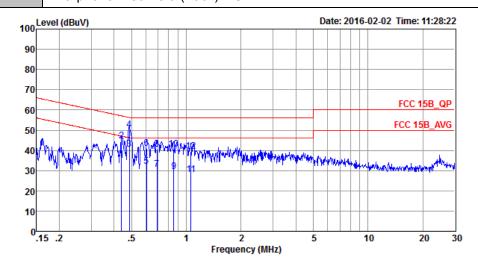


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#### 3.1.5 Test Result of AC Conducted Emission

Test Mode :	Mode 2	Temperature :	<b>21~23</b> ℃		
Test Engineer :	Jacky Yang	Relative Humidity :	41~43%		
Test Voltage :	120Vac / 60Hz	Phase :	Line		
F	GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter)				
Function Type :	  + Earphone + Camera (Bacl	k) + SIM2			



Condition: FCC 15B\_QP LISN\_L\_20160112 LINE

Project : (FC) 612802 Mode : Mode 2

Mode : Mode 2 IMEI : 863911024474565/863911024474573

			Over	Limit	Read	LISN	Cable		
	Freq	Level	Limit	Line	Level	Factor	Loss	Remark	
	MHz	dBu∇	dB	dBu∀	dBu∀	dB	dB		
1	0.44	34.96	-12.11	47.07	24.21	0.59	10.16	Average	
2	0.44	44.76	-12.31	57.07	34.01	0.59	10.16	QP	
3 4	0.49	40.71	-5.52	46.23	29.89	0.66	10.16	Average	
4	0.49	50.11	-6.12	56.23	39.29	0.66	10.16	QP	
5	0.60	32.05	-13.95	46.00	21.30	0.60	10.15	Average	
6	0.60	40.95	-15.05	56.00	30.20	0.60	10.15	QP	
7	0.69	30.80	-15.20	46.00	20.10	0.55	10.15	Average	
8	0.69	40.70	-15.30	56.00	30.00	0.55	10.15	QP	
9	0.85	29.47	-16.53	46.00	18.80	0.52	10.15	Average	
10	0.85	40.77	-15.23	56.00	30.10	0.52	10.15	QP	
11	1.06	28.16	-17.84	46.00	17.50	0.51	10.15	Average	
12	1.06	39.36	-16.64	56.00	28.70	0.51	10.15	QP	

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Test Mode :	Mode 2			Ten	nperatu	re:	21~2	21~23℃			
Test Engineer :	Jacky Ya	ing		Rel	ative H	umidity :	41~4	3%			
Test Voltage :	120Vac /	60Hz		Pha	ise :	Neutral					
Function Type :	GSM850	Idle +	Bluetoot	h Idle +	WLAN I	ldle + US	B Cabl	e (Charging f	rom Adapter)		
i unction Type .	+ Earpho	Earphone + Camera (Back) + SIM2									
100 <sup>L</sup>	evel (dBuV)	(dBuV) Date: 2016-02-02 Time: 11:32:44									
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20									_		
10											
0	15 .2										
				Frequ	iency (MHz	)					
Conditio	on: FCC 15	B OP LT	SN N 201	50112 NF	птрат.						
	: (FC) 61	_		JULIE 142	Olidin						
Mode	: Mode 2		/								
IMEI	: 863911	.0244745	65/86391: Over	Limit Limit		LISN	Cable				
	Freq	Level	Limit		Level			Remark			
_	MHz	dBu∀	dB	dBuV	dBu∀	dB	dB				
1	0.40	33.22	-14.64	47.86	22.50	0.55	10.17	Average			
2	0.40		-13.24					_			
3	0.44	38.34	-8.68	47.02	27.60	0.58	10.16	Average			
4	0.44		-6.68			0.58					
5	0.48		-4.71					Average			
6 *	0.48		-3.11		42.40		10.16				
7	0.57		-15.56					Average			
8	0.57		-12.56	56.00	32.70	0.59	10.15				
9 10	0.60 0.60		-14.87 -12.17					Average OP			
11	0.69		-18.60					Average			
12	0.69		-15.70					_			
13	0.88		-15.79					Average			
14	0.88		-10.89								
15	0.97	27.51	-18.49	46.00	16.80	0.56	10.15	Average			
16	0.97	45.71	-10.29	56.00	35.00	0.56	10.15	QP			

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID : YHLBLUNEOX

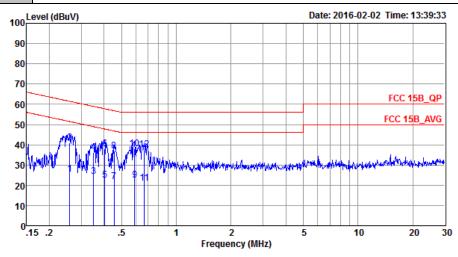
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Test Mode :	Mode 4	Temperature :	21~23℃				
Test Engineer :	Jacky Yang	Relative Humidity :	41~43%				
Test Voltage :	120Vac / 60Hz	Phase: Line					
	WCDMA Band IV Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with						

Function Type: Notebook) + Earphone + GPS Rx + SIM2



Condition: FCC 15B\_QP LISN\_L\_20160112 LINE

Project : (FC) 612802

Mode

: Mode 4 : 863911024474565/863911024474573

			Over	Limit	кеаа	TIN	Capie	
	Freq	Level	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBu∇	dB	dBu∀	dBu∀	dB	dB	
1	0.26	25.49	-25.98	51.47	14.71	0.55	10.23	Average
2	0.26	40.99	-20.48	61.47	30.21	0.55	10.23	QP
3	0.35	24.34	-24.62	48.96	13.61	0.55	10.18	Average
4	0.35	36.04	-22.92	58.96	25.31	0.55	10.18	QP
5	0.40	22.62	-25.15	47.77	11.91	0.54	10.17	Average
6	0.40	37.92	-19.85	57.77	27.21	0.54	10.17	QP
7	0.45	21.67	-25.13	46.80	10.90	0.61	10.16	Average
8	0.45	36.87	-19.93	56.80	26.10	0.61	10.16	QP
9	0.59	22.66	-23.34	46.00	11.90	0.61	10.15	Average
10 *	0.59	38.16	-17.84	56.00	27.40	0.61	10.15	QP
11	0.67	21.21	-24.79	46.00	10.50	0.56	10.15	Average
12	0.67	37.51	-18.49	56.00	26.80	0.56	10.15	_

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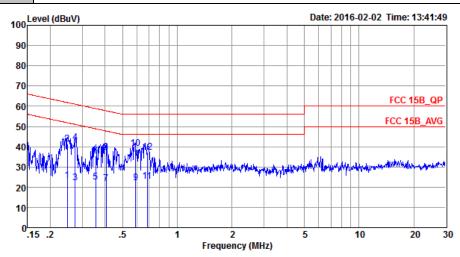
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Test Mode :	Mode 4	Temperature :	<b>21~23</b> ℃
Test Engineer :	Jacky Yang	Relative Humidity :	41~43%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	WCDMA Band IV Idle + Blu	etooth Idle + WLAN Id	le + USB Cable (Data Link with

Notebook) + Earphone + GPS Rx + SIM2



Condition: FCC 15B QP LISN N 20160112 NEUTRAL

Project : (FC) 612802

: Mode 4 Mode

IMEI : 863911024474565/863911024474573 Over Limit Read

	Freq	Level	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBu∀	dB	dBu∀	dBu∀	dB	dB	
1	0.25	23.40	-28.42	51.82	12.61	0.55	10.24	Average
2	0.25	41.20	-20.62	61.82	30.41	0.55	10.24	QP
3	0.27	22.29	-28.69	50.98	11.50	0.57	10.22	Average
4	0.27	41.89	-19.09	60.98	31.10	0.57	10.22	QP
5	0.36	22.35	-26.48	48.83	11.60	0.57	10.18	Average
6	0.36	35.45	-23.38	58.83	24.70	0.57	10.18	QP
7	0.41	21.62	-26.11	47.73	10.90	0.55	10.17	Average
8	0.41	37.22	-20.51	57.73	26.50	0.55	10.17	QP
9	0.59	22.03	-23.97	46.00	11.30	0.58	10.15	Average
10 *	0.59	38.93	-17.07	56.00	28.20	0.58	10.15	QP
11	0.68	22.80	-23.20	46.00	12.10	0.55	10.15	Average
12	0.68	37.30	-18.70	56.00	26.60	0.55	10.15	QP

LISN Cable

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#### 3.2. Test of Radiated Emission Measurement

#### 3.2.1. Limit of Radiated Emission

The emissions from an unintentional radiator shall not exceed the field strength levels specified in the following table:

Frequency	Field Strength	Measurement Distance		
(MHz)	(microvolts/meter)	(meters)		
30 – 88	100	3		
88 – 216	150	3		
216 - 960	200	3		
Above 960	500	3		

#### 3.2.2. Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

#### 3.2.3. Test Procedures

- 1. The EUT was placed on a turntable with 0.8 meter above ground.
- 2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
- 3. The table was rotated 360 degrees to determine the position of the highest radiation.
- 4. The antenna is a Bi-Log antenna and its height is adjusted between one to four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
- 5. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
- Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode (RBW=120kHz/VBW=300kHz for frequency below 1GHz; RBW=1MHz VBW=3MHz (Peak), RBW=1MHz/VBW=10Hz (Average) for frequency above 1GHz).
- 7. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, peak values of EUT will be reported. Otherwise, the emission will be repeated by using the quasi-peak method and reported.
- 8. Emission level (dB $\mu$ V/m) = 20 log Emission level ( $\mu$ V/m)
- 9. Corrected Reading: Antenna Factor + Cable Loss + Read Level Preamp Factor = Level

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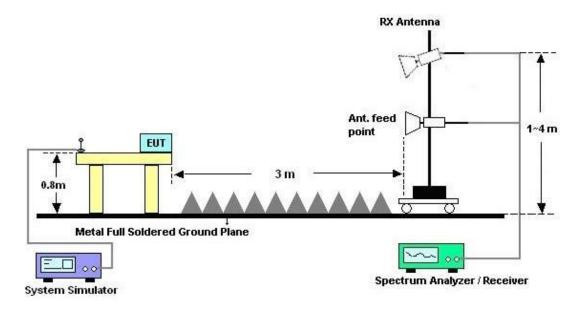
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### 3.2.4. Test Setup of Radiated Emission

#### For radiated emissions from 30MHz to 1GHz



#### For radiated emissions above 1GHz

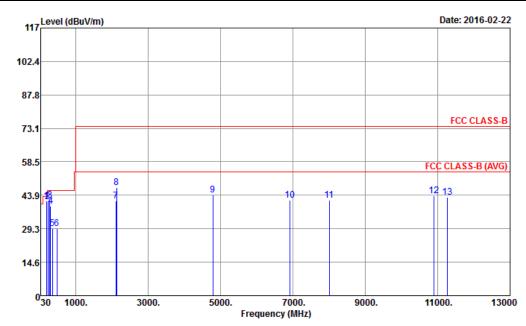


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#### 3.2.5. Test Result of Radiated Emission

Test Mode :	Mode 4	Temperature :	23~25°C				
Test Engineer :	Jeff Yao	Relative Humidity :	48~52%				
Test Distance :	3m	Polarization :	Horizontal				
Function Type :	WCDMA Band IV Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link w Notebook) + Earphone + GPS Rx + SIM2						
Function Type :							
Remark :	#8 is system simulator signa	al which can be ignored	i.				



Site : 03CH03-KS

Condition : FCC CLASS-B 3m LF\_ANT(23188)\_151017 HORIZONTAL

Project : (FC) 612802

Mode : Mode 4

IMEI : 863911024474482/863911024474490

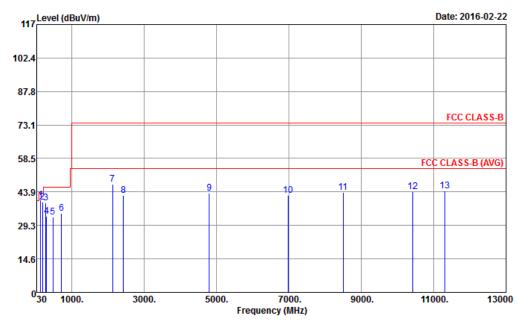
	Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	187.41	41.28	-2.22	43.50	53.57	11.53	1.50	25.32	125	60	QP
2	227.91	41.19	-4.81	46.00	52.79	12.05	1.54	25.19			Peak
3	281.37	41.61	-4.39	46.00	51.65	13.47	1.57	25.08	145	80	QP
4	300.00	39.21	-6.79	46.00	48.44	14.10	1.71	25.04			Peak
5	357.40	29.45	-16.55	46.00	38.13	14.86	1.95	25.49			Peak
6	479.90	29.40	-16.60	46.00	34.92	18.59	2.12	26.23			Peak
7	2108.00	41.23	-32.77	74.00	62.86	32.30	4.76	58.69			Peak
8	2132.00	47.13			68.67	32.34	4.80	58.68			Peak
9	4786.00	44.06	-29.94	74.00	60.71	34.38	7.43	58.46	100	0	Peak
10	6924.00	41.86	-32.14	74.00	54.32	36.13	9.21	57.80			Peak
11	8004.00	41.67	-32.33	74.00	51.95	36.50	11.09	57.87			Peak
12	10892.00	43.80	-30.20	74.00	51.98	38.74	12.53	59.45			Peak
13	11264.00	43.18	-30.82	74.00	51.26	39.01	12.58	59.67			Peak

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FCC Test Report No. : FC612802

Test Mode :	Mode 4	Temperature :	23~25°C					
Test Engineer :	Jeff Yao	Relative Humidity :	48~52%					
Test Distance :	3m	Polarization :	Vertical					
Function Type	WCDMA Band IV Idle + Blu	etooth Idle + WLAN Id	lle + USB Cable (Data Link with					
Function Type :	Notebook) + Earphone + GPS Rx + SIM2							
Remark :	#7 is system simulator signa	#7 is system simulator signal which can be ignored.						



Site : 03CH03-KS

Condition : FCC CLASS-B 3m LF\_ANT(23188)\_151017 VERTICAL

Project : (FC) 612802 Mode : Mode 4

IMEI : 863911024474482/863911024474490

	Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	140.70	40.49	-3.01	43.50	51.03	13.82	1.20	25.56	145	80	QP
2	187.41	39.50	-4.00	43.50	51.79	11.53	1.50	25.32			Peak
3	281.37	38.98	-7.02	46.00	49.02	13.47	1.57	25.08			Peak
4	300.00	33.15	-12.85	46.00	42.38	14.10	1.71	25.04			Peak
5	479.90	33.02	-12.98	46.00	38.54	18.59	2.12	26.23			Peak
6	715.10	34.42	-11.58	46.00	37.49	20.62	2.65	26.34			Peak
7	2132.00	47.29			68.83	32.34	4.80	58.68			Peak
8	2424.00	42.46	-31.54	74.00	63.40	32.63	5.12	58.69			Peak
9	4798.00	43.39	-30.61	74.00	60.04	34.38	7.43	58.46			Peak
10	6982.00	42.27	-31.73	74.00	54.03	36.11	9.30	57.17			Peak
11	8502.00	43.66	-30.34	74.00	53.76	36.20	11.06	57.36			Peak
12	10428.00	43.93	-30.07	74.00	52.24	38.45	12.26	59.02			Peak
13	11302.00	44.32	-29.68	74.00	52.37	39.04	12.59	59.68	100	0	Peak

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# 4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	May 04, 2015	Feb. 02, 2016	May 03, 2016	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060103	9kHz~30MHz	Oct. 24, 2015	Feb. 02, 2016	Oct. 23, 2016	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060105	9kHz~30MHz	Oct. 24, 2015	Feb. 02, 2016	Oct. 23, 2016	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP0000008 11	AC 0V~300V, 45Hz~1000Hz	Oct. 24, 2015	Feb. 02, 2016	Oct. 23, 2016	Conduction (CO01-KS)
EMI Test Receiver	R&S	ESR7	101403	9kHz~7GHz;Ma x 30dBm	Sep. 10, 2015	Feb. 22, 2016	Sep. 09, 2016	Radiation (03CH03-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz-44GHz	Jun. 05, 2015	Feb. 22, 2016	Jun. 04, 2016	Radiation (03CH03-KS)
Bilog Antenna	TeseQ	CBL6112D	23182	25MHz-2GHz	Jan. 16, 2016	Feb. 22, 2016	Jan. 15, 2017	Radiation (03CH03-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1356	1GHz~18GHz	Jun. 25, 2015	Feb. 22, 2016	Jun. 24, 2016	Radiation (03CH03-KS)
Amplifier	Burgeon	BPA-530	102212	0.01MHz-3000 MHz	Aug.10, 2015	Feb. 22, 2016	Aug. 09, 2016	Radiation (03CH03-KS)
Amplifier	Agilent	8449B	3008A02370	1GHz~26.5GHz	Oct. 24, 2015	Feb. 22, 2016	Oct. 23, 2016	Radiation (03CH03-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Feb. 22, 2016	NCR	Radiation (03CH03-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Feb. 22, 2016	NCR	Radiation (03CH03-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Feb. 22, 2016	NCR	Radiation (03CH03-KS)

NCR: No Calibration Required

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# 5. Uncertainty of Evaluation

### **Uncertainty of Conducted Emission Measurement (150 kHz ~ 30 MHz)**

	4
Measuring Uncertainty for a Level of	2.3 dB
Confidence of 95% (U = 2Uc(y))	2.3 UB

#### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of	4.5 dB
Confidence of 95% (U = 2Uc(y))	

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