FCC Test Report

APPLICANT : BLU Products, Inc.

EQUIPMENT: Mobile phone

BRAND NAME : BLU

MODEL NAME : ENERGY X 2

FCC ID : YHLBLUENERGYX2

STANDARD : FCC 47 CFR FCC Part 15 Subpart B

CLASSIFICATION: Certification

The product was received on Jan. 05, 2016 and testing was completed on Jan. 15, 2016. We, SPORTON INTERNATIONAL (SHENZHEN) 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 (SHENZHEN) INC., the test report shall not be reproduced except in full.

Prepared by: Andy Yeh / Manager

Andy Jeh

Approved by: Jones Tsai / Manager

SPORTON INTERNATIONAL (SHENZHEN) INC.

1F & 2F, Building A, Morning Business Center, No. 4003 ShiGu Rd., Xili Town, Nanshan District, Shenzhen, Guangdong, P. R. China

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUENERGYX2 Page Number : 1 of 23
Report Issued Date : Jan. 26, 2016
Report Version : Rev. 01

Testing Laboratory

Report No. : FC610501

TABLE OF CONTENTS

RE	VISIO	N HISTORY	
e i i	R#R# A E	RY OF TEST RESULT	
30	IVIIVIA	RT OF TEST RESULT	4
1.	GENI	ERAL DESCRIPTION	5
	1.1.	Applicant	5
	1.2.	Manufacturer	
	1.3.	Product Feature of Equipment Under Test	
	1.4.	Product Specification of Equipment Under Test	6
	1.5.	Modification of EUT	
	1.6.	Test Location	
	1.7.	Applicable Standards	7
2.	TEST	CONFIGURATION OF EQUIPMENT UNDER TEST	8
	2.1.	Test Mode	8
	2.2.	Connection Diagram of Test System	10
	2.3.	Support Unit used in test configuration and system	11
	2.4.	EUT Operation Test Setup	11
3.	TEST	TRESULT	12
	3.1.	Test of AC Conducted Emission Measurement	12
	3.2.	Test of Radiated Emission Measurement	18
4.	LIST	OF MEASURING EQUIPMENT	22
5.	UNC	ERTAINTY OF EVALUATION	23
		IV A SETUD BUSTOSDADUS	
AΡ	PEND	IX A. SETUP PHOTOGRAPHS	

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUENERGYX2 Page Number : 2 of 23
Report Issued Date : Jan. 26, 2016
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.1

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC610501	Rev. 01	Initial issue of report	Jan. 26, 2016

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUENERGYX2 Page Number : 3 of 23
Report Issued Date : Jan. 26, 2016
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.1

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 6.31 dB at 0.180 MHz
3.2	15.109	ICES003 Section 6.2	Radiated Emission	< 15.109 limits < ICES003 6.2 limits	PASS	Under limit 1.67 dB at 832.000 MHz for Quasi-Peak

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUENERGYX2 Page Number : 4 of 23
Report Issued Date : Jan. 26, 2016
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.1

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	ENERGY X 2			
FCC ID	YHLBLUENERGYX2			
	GSM/GPRS/EGPRS/WCDMA/HSPA/			
EUT supports Radios application	HSPA+(16QAM uplink is not supported)/			
Lot supports Radios application	WLAN 2.4GHz 802.11b/g/n HT20/HT40/			
	Bluetooth v3.0+EDR/Bluetooth v4.0 LE			
IMEI Code	Conduction: 354147042000241/354147042035247			
INIEI Code	Radiation: 354147042000233/354147042035239			
HW Version	ENERGY X 2_MAINBOARD_P3			
SW Version	ENERGY_X_2_0103_V5448			
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.

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUENERGYX2 Page Number : 5 of 23
Report Issued Date : Jan. 26, 2016
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.1

1.4. Product Specification of Equipment Under Test

Standards-related Product Specification				
- Clairear as	GSM850 : 824.2 MHz ~ 848.8 MHz			
	GSM1900: 1850.2 MHz ~ 1909.8MHz			
	WCDMA Band V : 826.4 MHz ~ 846.6 MHz			
Ty Fraguency	WCDMA Band IV: 020.4 MHz ~ 040.6 MHz			
Tx Frequency	WCDMA Band II: 1852.4 MHz ~ 1752.6 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			
	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 : Fixed Internal Antenna			
Antenna Type	WLAN : Fixed Internal Antenna			
Tantonia Typo	Bluetooth : Fixed Internal Antenna			
	GPS : Fixed Internal Antenna			
	GSM: GMSK			
	GPRS: GMSK			
	EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK			
	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.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUENERGYX2 Page Number : 6 of 23
Report Issued Date : Jan. 26, 2016
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.1

1.6. Test Location

Test Site	SPORTON INTERNATIONAL (SHENZHEN) INC.		
	1F & 2F, Building A, Morning Business Center, No. 4003 ShiGu Rd., Xili		
Test Site Location	Town, Nanshan District, Shenzhen, Guangdong, P. R. China		
rest site Location	TEL: +86-755-8637-9589		
	FAX: +86-755-8637-9595		
Took Cita No	Sporton Site No.		
Test Site No.	CO01-SZ		

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			
Toot Site No	Sporton Site No.	FCC/IC Registration No.		
Test Site No.	03CH03-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.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUENERGYX2 Page Number : 7 of 23
Report Issued Date : Jan. 26, 2016
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.1

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 AC	EMI RE<1G	EMI RE≥1G	
1.	Charging Mode (EUT with adapter)	\boxtimes	\boxtimes	Note 1	
2.	Data application transferred mode (EUT connected with notebook)		\boxtimes		

Abbreviations:

EMI AC: AC conducted emissions

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

• EMI RE < 1G: EUT radiated emissions < 1GHz

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.

Page Number : 8 of 23
Report Issued Date : Jan. 26, 2016
Report Version : Rev. 01

Report No. : FC610501

Test Items	EUT Configure Mode	Function Type
	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>
AC Conducted		Mode 2: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera (Back) + SIM2 <fig.1></fig.1>
Emission		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>
	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>

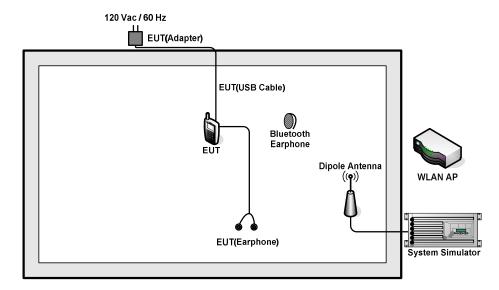
Remark:

- 1. The worst case of AC is mode 1; and the USB Link mode of AC is mode 4, the test data of these modes were 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.

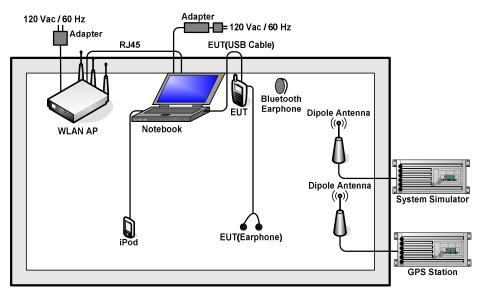
TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUENERGYX2 Page Number : 9 of 23
Report Issued Date : Jan. 26, 2016
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.1

2.2. Connection Diagram of Test System



<Fig.1>



<Fig.2>

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUENERGYX2 Page Number : 10 of 23
Report Issued Date : Jan. 26, 2016
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.1

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	R&S	CMU 200	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.	Notebook	Lenovo	E540	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
5.	Bluetooth Earphone	Nokia	BH-108	PYAHS-107W	N/A	N/A
6.	Bluetooth Earphone	Samsung	HS3000	A3LHS3000	N/A	N/A
7.	iPod nano 8GB	Apple	MC690ZP/A	FCC DoC	Shielded, 1.2 m	N/A
8.	iPod	Apple	MC525 ZP/A	FCC DoC	Shielded, 1.0 m	N/A
9.	SD Card	SanDisk	4G class 4	FCC DoC	N/A	N/A

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 was 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.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUENERGYX2 Page Number : 11 of 23
Report Issued Date : Jan. 26, 2016
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.1

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

^{*}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

- 1. 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.

Report Template No.: BU5-FC15B Version 1.1

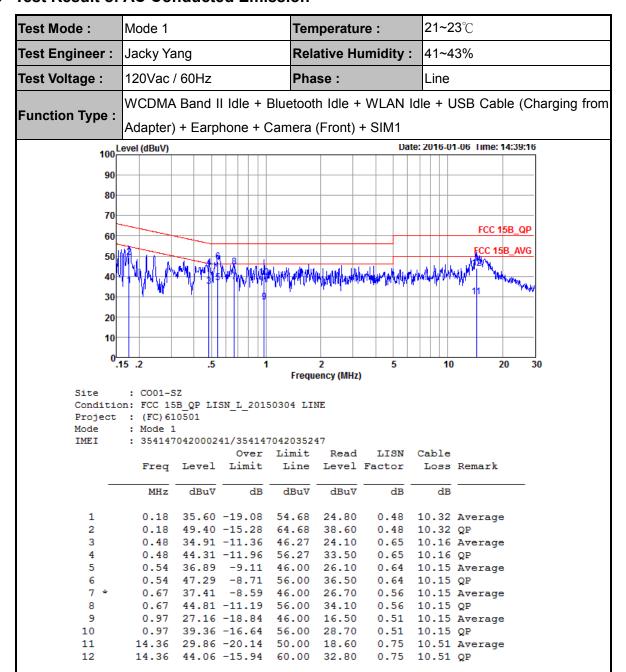
3.1.4 Test Setup



TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUENERGYX2 Page Number : 13 of 23
Report Issued Date : Jan. 26, 2016
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.1

3.1.5 Test Result of AC Conducted Emission



TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUENERGYX2 Page Number : 14 of 23
Report Issued Date : Jan. 26, 2016
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.1



21~23°C Test Mode: Mode 1 Temperature: Test Engineer: **Relative Humidity:** 41~43% Jacky Yang 120Vac / 60Hz Test Voltage: Phase: Neutral WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from **Function Type:** Adapter) + Earphone + Camera (Front) + SIM1 100 Level (dBuV) Date: 2016-01-06 Time: 14:32:59 90 80 70 FCC 15B_QP 60 FCC 15B_AVG 50 THE PROPERTY OF THE PROPERTY O 30 20 10 .15 .2 10 20 2 30 Frequency (MHz) : CO01-SZ Site Condition: FCC 15B QP LISN N 20150304 NEUTRAL Project : (FC) 610501 Mode : Mode 1 TMFT : 354147042000241/354147042035247 Over Limit Read LISN Cable Freq Level Limit Line Level Factor Loss Remark dB dBuV dBuV MHz dBuV dB dB 0.16 32.61 -23.04 55.65 21.80 0.46 10.35 Average 53.61 -12.04 65.65 42.80 0.46 10.35 OP 2 0.16 3 0.18 41.51 -12.91 54.42 30.70 0.49 10.32 Average 0.18 58.11 -6.31 64.42 47.30 0.23 28.40 -24.17 52.57 17.60 4 * 0.49 10.32 QP 0.54 10.26 Average 5 0.23 46.40 -16.17 62.57 35.60 0.54 10.26 QP 31.90 -20.14 52.04 21.10 46.20 -15.84 62.04 35.40 7 0.24 0.55 10.25 Average 0.55 10.25 QP 8 0.24 0.30 31.69 -18.59 50.28 20.90 0.59 10.20 Average 0.30 42.29 -17.99 60.28 31.50 0.36 30.15 -18.63 48.78 19.40 10 0.59 10.20 QP 11 0.57 10.18 Average 0.36 39.05 -19.73 58.78 28.30 0.57 10.18 OP 12 13 0.41 32.63 -14.92 47.55 21.90 0.56 10.17 Average 14 0.41 41.23 -16.32 57.55 30.50 0.56 10.17 QP 34.55 -11.94 46.49 23.80 0.59 10.16 Average 0.47 15 0.47 41.05 -15.44 56.49 30.30 0.59 10.16 QP 0.53 38.25 -7.75 46.00 27.50 0.53 44.05 -11.95 56.00 33.30 0.60 10.15 Average 0.60 10.15 QP 17 18 14.36 30.62 -19.38 50.00 19.40 0.71 10.51 Average 19 42.72 -17.28 60.00 31.50 20 14.36 0.71 10.51 QP 21 15.31 30.35 -19.65 50.00 19.10 0.71 10.54 Average

15.31

43.15 -16.85

60.00

31.90

0.71

10.54 QP

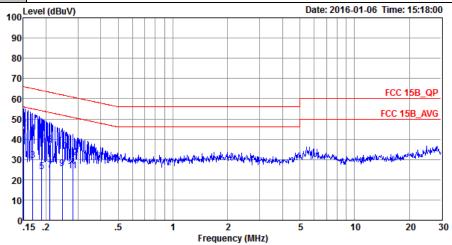
TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUENERGYX2 Page Number : 15 of 23
Report Issued Date : Jan. 26, 2016
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.1

FCC Test Report Report No.: FC610501

Test Mode :	Mode 4	Temperature :	21~23℃	
Test Engineer :	Jacky Yang	Relative Humidity :	41~43%	
Test Voltage :	120Vac / 60Hz	Phase :	Line	
Eurotion Type	WCDMA Band IV Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with			
Function Type:	Notobook) + Earphone + CE	OC DV + CIMO		

Notebook) + Earphone + GPS Rx + SIM2



Site : CO01-SZ

Condition: FCC 15B_QP LISN_L_20150304 LINE

Project : (FC) 610501 : Mode 4 Mode

: 354147042000241/354147042035247 IMEI

	. 001117	OILOUUL	11,00111.	OILOUUL				
			Over	Limit	Read	LISN	Cable	
	Freq	Level	Limit	Line	Level	Factor	Loss	Remark
_	MHz	dBuV	dB	dBuV	dBu₹	dB	dB	
1 *	0.15	36.29	-19.67	55.96	25.50	0.43	10.36	Average
2	0.15	45.29	-20.67	65.96	34.50	0.43	10.36	QP
3	0.17	29.40	-25.59	54.99	18.60	0.47	10.33	Average
4	0.17	42.70	-22.29	64.99	31.90	0.47	10.33	QP
5	0.19	24.01	-30.05	54.06	13.20	0.50	10.31	Average
6	0.19	39.61	-24.45	64.06	28.80	0.50	10.31	QP
7	0.21	24.81	-28.37	53.18	14.00	0.53	10.28	Average
8	0.21	37.21	-25.97	63.18	26.40	0.53	10.28	QP
9	0.25	25.39	-26.52	51.91	14.59	0.55	10.25	Average
10	0.25	33.99	-27.92	61.91	23.19	0.55	10.25	QP
11	0.28	24.48	-26.33	50.81	13.70	0.56	10.22	Average
12	0.28	31.08	-29.73	60.81	20.30	0.56	10.22	QP

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUENERGYX2

: 16 of 23 Page Number Report Issued Date: Jan. 26, 2016 Report Version : Rev. 01

FCC Test Report

Test Mode :	Mode 4			Tem	peratu	re:	21~2	21~23℃				
Test Engineer :	Jacky Ya	ang		Rela	ative Hu	umidity :	41~4	41~43%				
Test Voltage :	120Vac /	/ 60Hz		Pha	se:		Neut	ral				
	Bluetoo	th Idle -	- \Λ/Ι ΔΝΙ Ι	dle + I	ISB Cable (I	Data Link w						
Function Type :		WCDMA Band IV Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link Notebook) + Earphone + GPS Rx + SIM2										
		K) + Ear	priorie +	GPS R	x + 511VI		o: 2046 0	1-06 Time: 15:15:	30			
100 ^L	evel (dBuV)					Dat	e. 2010-0	1-00 Tillie. 15.15.	.59			
90									_			
80									_			
70									_			
60								FCC 15B_Q	P			
								FCC 15B_AV	G			
50												
40		Minus							illo			
30	<u> </u>	THE PLANT	ht world hight who was	and responsibility	Marily water	restante des servicios	bankan adam	gan kalang kerekuran dalah kerekanan	M-W			
20									_			
10									_			
0												
٠.	15 .2	.5	1		2 ency (MHz	5 \	10	20	30			
Site	: CO01-S	37		TTCqu	chey (milz)	,						
	on: FCC 15		SN_N_201	50304 NE	UTRAL							
Project Mode	: (FC)61 : Mode 4											
IMEI	: 354147		44 /05 44 45									
			41/35414	/04203524	47							
				Limit	47 Read	LISN	Cable					
	Freq	Level	Over	Limit	Read	LISN Factor		Remark				
_	Freq		Over	Limit	Read	Factor		Remark				
1		Level dBuV	Over Limit	Limit Line	Read Level dBuV	Factor dB	Loss					
2 *	MHz 0.15 0.15	dBuV 31.71 44.11	Over Limit ———————————————————————————————————	Limit Line dBuV	Read Level dBuV 20.90 33.30	dB - 0.46 0.46	dB 10.35 10.35	Average QP				
2 * 3	MHz 0.15 0.15 0.18	dBuV 31.71 44.11 27.91	Over Limit dB -24.03 -21.63 -26.77	Limit Line dBuV 55.74 65.74 54.68	Read Level dBuV 20.90 33.30 17.11	0.46 0.46 0.48	dB 10.35 10.35 10.32	Average QP Average				
2 * 3 4	MHz 0.15 0.15 0.18 0.18	dBuV 31.71 44.11 27.91 41.11	Over Limit ———————————————————————————————————	Limit Line dBuV 55.74 65.74 54.68 64.68	Read Level dBuV 20.90 33.30 17.11 30.31	Tactor dB 0.46 0.46 0.48 0.48	dB 10.35 10.35 10.32 10.32	Average QP Average QP				
2 * 3 4 5	MHz 0.15 0.15 0.18 0.18 0.20	dBuV 31.71 44.11 27.91 41.11 27.60	Over Limit dB -24.03 -21.63 -26.77 -23.57 -26.16	Limit Line dBuV 55.74 65.74 54.68 64.68 53.76	Read Level dBuV 20.90 33.30 17.11 30.31 16.79	O.46 0.46 0.48 0.48 0.51	Loss dB 10.35 10.35 10.32 10.32 10.30	Average QP Average QP Average				
2 * 3 4 5 6	MHz 0.15 0.15 0.18 0.18 0.20 0.20	dBuV 31.71 44.11 27.91 41.11 27.60 39.30	Over Limit dB -24.03 -21.63 -26.77 -23.57 -26.16 -24.46	Limit Line dBuV 55.74 65.74 54.68 64.68 53.76 63.76	Read Level dBuV 20.90 33.30 17.11 30.31 16.79 28.49	O.46 0.46 0.48 0.48 0.51 0.51	dB 10.35 10.35 10.32 10.32 10.30 10.30	Average QP Average QP Average QP				
2 * 3 4 5	MHz 0.15 0.15 0.18 0.18 0.20	dBuV 31.71 44.11 27.91 41.11 27.60 39.30 24.50	Over Limit dB -24.03 -21.63 -26.77 -23.57 -26.16 -24.46	Limit Line dBuV 55.74 65.74 54.68 64.68 53.76 63.76 52.70	Read Level dBuV 20.90 33.30 17.11 30.31 16.79 28.49 13.70	0.46 0.46 0.48 0.48 0.51 0.51 0.53	dB 10.35 10.35 10.32 10.32 10.30 10.30	Average QP Average QP Average QP Average				
2 * 3 4 5 6 7	MHz 0.15 0.15 0.18 0.18 0.20 0.20 0.22 0.22	dBuV 31.71 44.11 27.91 41.11 27.60 39.30 24.50 36.30	Over Limit dB -24.03 -21.63 -26.77 -23.57 -26.16 -24.46 -28.20	Limit Line dBuV 55.74 65.74 54.68 64.68 53.76 63.76 52.70 62.70	Read Level dBuV 20.90 33.30 17.11 30.31 16.79 28.49 13.70 25.50	O.46 0.46 0.48 0.48 0.51 0.51 0.53	dB 10.35 10.35 10.32 10.32 10.30 10.27 10.27	Average QP Average QP Average QP Average				
2 * 3 4 5 6 7 8	MHz 0.15 0.15 0.18 0.18 0.20 0.20 0.22 0.22	dBuV 31.71 44.11 27.91 41.11 27.60 39.30 24.50 36.30 24.70	Over Limit dB -24.03 -21.63 -26.77 -23.57 -26.16 -24.46 -28.20 -26.40	Limit Line dBuV 55.74 65.74 54.68 64.68 53.76 63.76 52.70 62.70 51.73	Read Level 20.90 33.30 17.11 30.31 16.79 28.49 13.70 25.50 13.91	O.46 0.46 0.48 0.48 0.51 0.51 0.53 0.53	dB 10.35 10.35 10.32 10.32 10.30 10.27 10.27	Average QP Average QP Average QP Average QP Average QP Average				
2 * 3 4 5 6 7 8 9	MHz 0.15 0.15 0.18 0.18 0.20 0.20 0.22 0.22 0.22	dBuV 31.71 44.11 27.91 41.11 27.60 39.30 24.50 36.30 24.70 34.10	Over Limit -24.03 -21.63 -26.77 -23.57 -26.16 -24.46 -28.20 -26.40 -27.03	Limit Line dBuV 55.74 65.74 54.68 64.68 53.76 63.76 52.70 62.70 51.73	Read Level 20.90 33.30 17.11 30.31 16.79 28.49 13.70 25.50 13.91	O.46 0.46 0.48 0.48 0.51 0.51 0.53 0.53 0.55 0.55	dB 10.35 10.35 10.32 10.32 10.30 10.30 10.27 10.27 10.24 10.24	Average QP Average QP Average QP Average QP Average QP Average				

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUENERGYX2 Page Number : 17 of 23 Report Issued Date: Jan. 26, 2016 Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.1

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.
- 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.
- 6. 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 μ V/m) = 20 log Emission level (μ V/m)
- 9. Corrected Reading: Antenna Factor + Cable Loss + Read Level Preamp Factor = Level

Report Version : Rev. 01
Report Template No.: BU5-FC15B Version 1.1

Report Issued Date: Jan. 26, 2016

: 18 of 23

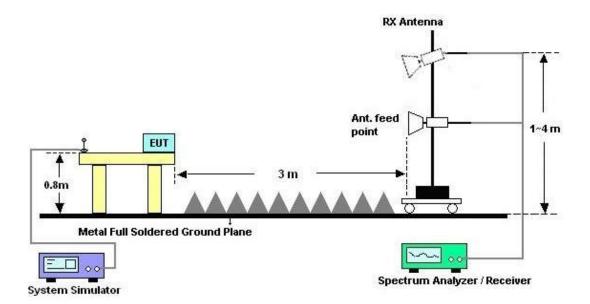
Page Number

3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUENERGYX2 Page Number : 19 of 23
Report Issued Date : Jan. 26, 2016
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.1

3.2.5. Test Result of Radiated Emission

Test Mode :		Mode 4					Tempe	rature	e :	23~25°C				
Test Enginee	er:	Star Wei					Relative Humidity :			48~	48~52%			
Test Distance: 3m							Polarization :			Hor	rizonta	I		
Function Typ	oe :	WCDMA Band IV Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + GPS Rx + SIM2												
Remark :		#7 is	#7 is system simulator signal which can be ignored.											
117	Level	(dBuV/m) Date: 2016-01-15												
102.4	ļ													
87.8	3													
													FCC CLASS-I	3
73.1														
58.5	<u> </u>		7									FCC CI	LASS-B (AVG	<u>)</u>
43.9	23	1-6 5	8		9	10			11		12	2	13	
29.3						\parallel								
14.6	;													
(30	1000.		3000.		5000.	Frequen	7000. cv (MHz)		9000.		11000.	. 130	000
Site Cond Proje Mode IMEI	ct	:	03CH03 FCC CL (FC) 610 Mode 4 3541470	ASS-B 3)501	_		88)_15101							
		Freq	Level		Limit Line		Antenna Factor		Preamp Factor	A/Pos	-	Remark	k 	
			dBuV/m		dBuV/m	dBuV		dB		cm	deg			
1 2							25.60 11.72		26.07 25.23			Peak Peak		
3							14.07		25.04			Peak		
4	6	24.10	44.13	-1.87	46.00	48.15	19.84	2.56	26.42			Peak		
5 6							20.15	2.65		100		Peak		
7			49.24	-1.0/	40.00		22.21 32.34	4.77	26.07 58.68	100	351	۷۲ Peak		
8				-32.62	74.00		32.61		58.66			Peak		
9							33.43					Deak		

58.08

58.14

59.04

59.98

6.29

7.77

10.96

12.28 12.61

100

--- Peak --- Peak
0 Peak
--- Peak
--- Peak

11 12 13

44.36 -29.64

43.94 -30.06

45.79 -28.21

45.06 -28.94 45.66 -28.34

64.26

59.49

56.49

53.32 53.70

34.76

36.48

38.50 39.33

74.00

74.00

74.00 74.00 74.00

3540.00

5218.00

7956.00 10500.00

11728.00

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUENERGYX2 Page Number : 20 of 23 Report Issued Date: Jan. 26, 2016 Report Version : Rev. 01

Report No.: FC610501

23~25°C Test Mode: Mode 4 Temperature: Test Engineer: Star Wei Relative Humidity: 48~52% Test Distance : 3m Polarization: Vertical WCDMA Band IV Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with **Function Type:** Notebook) + Earphone + GPS Rx + SIM2 Remark: #7 is system simulator signal which can be ignored. 117 Level (dBuV/m) Date: 2016-01-15 102.4 87.8 FCC CLASS-B 73.1 58.5 FCC CLASS-B (AVG) 43.9 29.3 14.6 030 5000. 13000 1000. 3000. 9000. 11000. 7000. Frequency (MHz) Site : 03CH03-KS Condition : FCC CLASS-B 3m LF_ANT(23188)_151017 VERTICAL

Project : (FC) 610501

Mode : Mode 4

IMEI : 354147042000233/354147042035239

			0ver	Limit	Read/	Antenna	Cable	Preamp	A/Pos	T/Pos	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor			Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	35.67	30.78	-9.22	40.00	33.57	22.54	0.70	26.03			Peak
2	207.93	31.26	-12.24	43.50	43.27	11.72	1.50	25.23			Peak
3	298.65	30.53	-15.47	46.00	39.79	14.07	1.71	25.04			Peak
4	624.10	39.43	-6.57	46.00	43.45	19.84	2.56	26.42	100	0	Peak
5	778.10	37.44	-8.56	46.00	38.82	22.01	2.82	26.21			Peak
6	832.00	37.10	-8.90	46.00	38.02	22.21	2.94	26.07			Peak
7	2132.00	50.85			72.42	32.34	4.77	58.68			Peak
8	2370.00	42.00	-32.00	74.00	62.98	32.58	5.06	58.62			Peak
9	4940.00	45.95	-28.05	74.00	62.35	34.47	7.54	58.41	100	0	Peak
10	5174.00	43.80	-30.20	74.00	59.17	34.72	7.74	57.83			Peak
11	8578.00	42.69	-31.31	74.00	52.86	36.30	11.03	57.50			Peak
12	10792.00	43.28	-30.72	74.00	51.49	38.68	12.45	59.34			Peak
13	11650.00	45.24	-28.76	74.00	53.26	39.28	12.60	59.90			Peak

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUENERGYX2 Page Number : 21 of 23
Report Issued Date : Jan. 26, 2016
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.1

4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver	R&S	ESR7	101403	9kHz~7GHz;Ma x 30dBm	Sep. 10, 2015	Jan. 15, 2016	Sep. 09, 2016	Radiation (03CH03-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz-44GHz	Jun. 05, 2015	Jan. 15, 2016	Jun. 04, 2016	Radiation (03CH03-KS)
Bilog Antenna	TeseQ	CBL6112D	23182	25MHz-2GHz	Jan. 17, 2015	Jan. 15, 2016	Jan. 16, 2016	Radiation (03CH03-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1356	1GHz~18GHz	Jun. 25, 2015	Jan. 15, 2016	Jun. 24, 2016	Radiation (03CH03-KS)
Amplifier	Burgeon	BPA-530	102212	0.01MHz-3000 MHz	Aug. 10, 2015	Jan. 15, 2016	Aug. 09, 2016	Radiation (03CH03-KS)
Amplifier	Agilent	8449B	3008A02370	1GHz~26.5GHz	Oct. 24, 2015	Jan. 15, 2016	Oct. 23, 2016	Radiation (03CH03-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Jan. 15, 2016	NCR	Radiation (03CH03-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Jan. 15, 2016	NCR	Radiation (03CH03-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Jan. 15, 2016	NCR	Radiation (03CH03-KS)
EMI Receiver	R&S	ESCI7	100724	9kHz~3GHz;	Nov. 23, 2015	Jan. 06, 2016	Nov. 22, 2016	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	103892	9kHz~30MHz	Feb. 02, 2015	Jan. 06, 2016	Feb. 01, 2016	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	MessTec	AN3016	16850	9kHz~30MHz	Feb. 02, 2015	Jan. 06, 2016	Feb. 01, 2016	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	61602000089 1	100Vac~250Vac	Aug. 07, 2015	Jan. 06, 2016	Aug. 06, 2016	Conduction (CO01-SZ)
Pulse Limiter	COM-POWER	LIT-153 Transient Limiter	53139	150kHz~30MHz	Oct. 20, 2015	Jan. 06, 2016	Oct. 19, 2016	Conduction (CO01-SZ)

NCR: No Calibration Required

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUENERGYX2 Page Number : 22 of 23
Report Issued Date : Jan. 26, 2016
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.1



5. Uncertainty of Evaluation

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

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

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

Measuring Uncertainty for a Level of	4 EAD
Confidence of 95% (U = 2Uc(y))	4.5dB

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUENERGYX2 Page Number : 23 of 23
Report Issued Date : Jan. 26, 2016
Report Version : Rev. 01

Report No.: FC610501