FCC Test Report

APPLICANT : CT Asia

EQUIPMENT : Smartphone

BRAND NAME : BLU

MODEL NAME : ADVANCE 4.0 L

FCC ID : YHLBLUADVANCE4L

STANDARD : FCC 47 CFR FCC Part 15 Subpart B

CLASSIFICATION: Certification

The product was received on Mar. 24, 2015 and testing was completed on Apr. 22, 2015. 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 C63.4-2009 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.

Reviewed by: Louis Wu / Manager

Louis Wu

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: YHLBLUADVANCE4L Page Number : 1 of 24

2353

Report No.: FC532405

Report Issued Date: May 06, 2015
Report Version: Rev. 01

TABLE OF CONTENTS

RE	VISIO	N HISTORY	3
		RY OF TEST RESULT	
		ERAL DESCRIPTION	
•	1.1. 1.2. 1.3. 1.4. 1.5. 1.6. 1.7.	Applicant	6
2.	2.1. 2.2. 2.3. 2.4.	Support Unit used in test configuration and system	10 1
3.	3.1. 3.2.	Tool of the Conducted Emission Medicarement	13
		OF MEASURING EQUIPMENT	
ΑP	PEND	IX A. SETUP PHOTOGRAPHS	

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUADVANCE4L Report No.: FC532405

Report Issued Date : May 06, 2015 Report Version : Rev. 01

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC532405	Rev. 01	Initial issue of report	May 06, 2015

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUADVANCE4L Page Number : 3 of 24
Report Issued Date : May 06, 2015

Report No. : FC532405

SUMMARY OF TEST RESULT

Report Section	FCC Rule Description		FCC Rule Description Limit		Remark	
					Under limit	
3.1	15.107	AC Conducted Emission	< 15.107 limits	PASS	8.75 dB at	
					0.510 MHz	
					Under limit	
2.2	3.2 15.109 Radiated	15.109 Radiated Emission	15.109 Radiated Emission < 15.109 limits	< 15 100 limita	PASS	1.48 dB at
3.2			< 15.109 IIIIIIIS	PASS	199.830 MHz	
					for Quasi-Peak	

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUADVANCE4L Page Number : 4 of 24

Report No.: FC532405

Report Issued Date : May 06, 2015 Report Version : Rev. 01

1. General Description

1.1. Applicant

CT Asia

Unit 01, 15/F, Seaview Centre, 139-141 Hoi bun road, Kwun Tong, Kowloon, Hongkong

1.2. Manufacturer

Tinno Mobile Technology Corp.

4/F, H-3 Building, OCT Eastern industrial Park, No.1 XiangShan East Road.,Nan Shan District, Shenzhen, P.R. China

1.3. Product Feature of Equipment Under Test

	Product Feature				
Equipment	Smartphone				
Brand Name	BLU				
Model Name	ADVANCE 4.0 L				
FCC ID	YHLBLUADVANCE4L				
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/HSPA/HSPA+(Downlink Only) WLAN 2.4GHz 802.11b/g/n HT20/HT40/ Bluetooth v3.0 + EDR/Bluetooth v4.0 LE				
IMEI Number	Conduction: 353919026689699/353924026689699 Radiation: 353919026689681/353924026689681				
HW Version	V1.0				
SW Version	S4050AP_PR_4.4_BLU_US_03_01				
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: YHLBLUADVANCE4L Page Number : 5 of 24
Report Issued Date : May 06, 2015

Report No.: FC532405

1.4. Product Specification subjective to this standard

Product Specif	ication subjective to this standard				
	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				
TAX I requestey	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 : PIFA Antenna				
Antenna Type	WLAN : PIFA Antenna				
Antenna Type	Bluetooth : PIFA Antenna				
	GPS : PIFA 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 (Downlink Only)				
Type of inequiation	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.

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUADVANCE4L Page Number : 6 of 24
Report Issued Date : May 06, 2015

Report No. : FC532405

1.6. Test Location

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

Test Site	SPORTON INTERNATIONAL (SHENZHEN) INC.				
Test Site Location	No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan warehouse, Nanshan District, Shenzhen, Guangdong, P. R. China				
	TEL: +86-755- 3320-2398				
Toot Site No.	Sporton Site No. FCC Registration N				
Test Site No.	03CH01-SZ 831040				

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 C63.4-2009

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: YHLBLUADVANCE4L Page Number : 7 of 24
Report Issued Date : May 06, 2015

Report No.: FC532405

2. Test Configuration of Equipment Under Test

2.1. Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2009 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	EMI	EMI	
		AC	RE<1G	RE≥1G	
1.	Charging Mode (EUT with adapter)	\boxtimes	\boxtimes	Note1	
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

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.

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUADVANCE4L

: 8 of 24 Page Number Report Issued Date: May 06, 2015

Report No.: FC532405

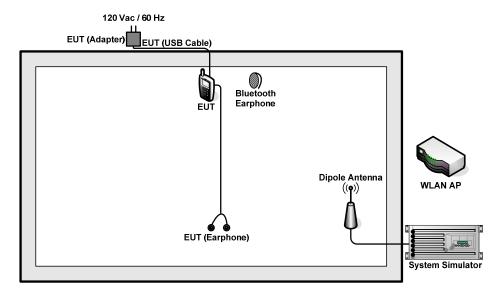
Test Items	EUT Configure Mode	Function Type
AC Conducted Emission	1/2	Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera + SIM 1 Mode 2: GSM1900 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Charging from Adapter) + MPEG4 + SIM 1 Mode 3: WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Data Link with Notebook) + GPS Rx + SIM 1
Radiated Emissions < 1GHz	1/2	Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera + SIM 1 Mode 2: GSM1900 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Charging from Adapter) + MPEG4 + SIM 1 Mode 3: WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Data Link with Notebook) + GPS Rx + SIM 1
Radiated Emissions ≥ 1GHz	2	Mode 1: WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Data Link with Notebook) + GPS Rx + SIM 1

Remark:

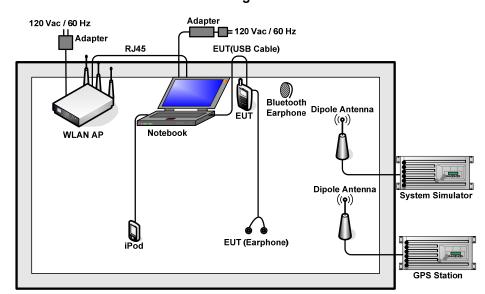
- 1. The worst case of AC is mode 1; and the USB Link mode of AC is mode 3; the test data of these modes are reported.
- 2. The worst case of RE < 1G is mode 3; only the test data of this mode was reported.
- 3. Link with Notebook means data application transferred mode between EUT and Notebook.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUADVANCE4L Page Number : 9 of 24
Report Issued Date : May 06, 2015
Report Version : Rev. 01

2.2. Connection Diagram of Test System



<Fig.1>



<Fig.2>

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUADVANCE4L Page Number : 10 of 24
Report Issued Date : May 06, 2015

Report No.: FC532405

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-815	KA2IR815A1	N/A	Unshielded, 1.8 m
4.	WLAN AP	ASUSTek	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded,2.7m
5.	Notebook	Lenovo	E540	FCC DoC	N/A	AC I/P: Unshielded, 1.2m DC O/P: Shielded, 1.8 m
6.	Bluetooth Earphone	Lenovo	LBH301	N/A	N/A	N/A
7.	Bluetooth Earphone	Nokia	BH-108	PYAHS-107W	N/A	N/A
8.	SD Card	SanDisk	4G class 4	FCC DoC	N/A	N/A
9.	iPod	Apple	MC525 ZP/A	FCC DoC	Shielded, 1.0 m	N/A
10.	iPod nano 8GB	Apple	MC690 ZP/A	FCC DoC	Shielded, 1.2 m	N/A

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUADVANCE4L Page Number : 11 of 24
Report Issued Date : May 06, 2015

Report No.: FC532405

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. Execute the program, "Winthrax" under WIN7 installed in notebook for files transfer with 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

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUADVANCE4L Page Number : 12 of 24
Report Issued Date : May 06, 2015

Report No.: FC532405

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.

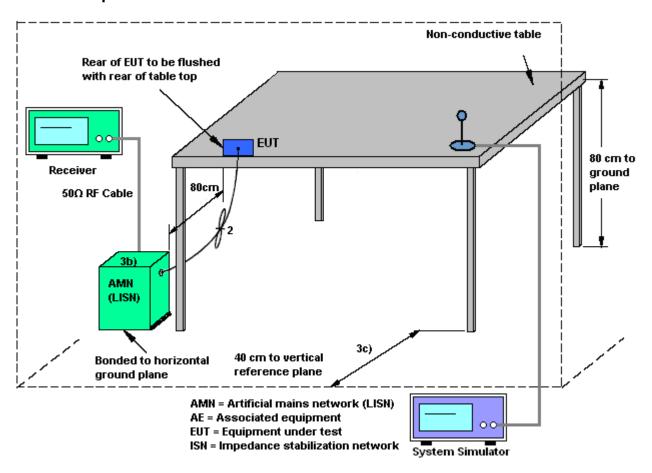
3.1.3 Test Procedure

- 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.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUADVANCE4L Page Number : 13 of 24
Report Issued Date : May 06, 2015

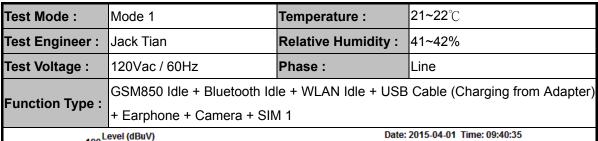
Report No.: FC532405

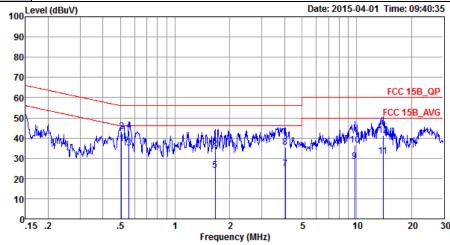
3.1.4 Test Setup



TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUADVANCE4L Page Number : 14 of 24
Report Issued Date : May 06, 2015
Report Version : Rev. 01

3.1.5 Test Result of AC Conducted Emission





Site : CO01-SZ

Condition: FCC 15B_QP LISN_L_20140304 LINE

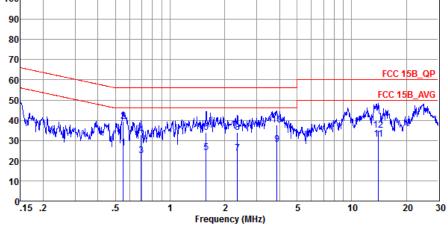
Project : (FC)532405 Mode : Mode 1

			Over	Limit	Read	LISN	Cable	
	Freq	Level	Limit	Line	Level	Factor	Loss	Remark
_	MHz	dBu∇	dB	dBuV	dBu∀	dB	dB	
1 *	0.51	37.25	-8.75	46.00	26.80	0.29	10.16	Average
2	0.51	43.05	-12.95	56.00	32.60	0.29	10.16	QP
3	0.56	35.01	-10.99	46.00	24.60	0.26	10.15	Average
4	0.56	43.71	-12.29	56.00	33.30	0.26	10.15	QP
5	1.66	23.81	-22.19	46.00	13.40	0.23	10.18	Average
6	1.66	35.61	-20.39	56.00	25.20	0.23	10.18	QP
7	4.05	24.90	-21.10	46.00	14.30	0.37	10.23	Average
8	4.05	35.60	-20.40	56.00	25.00	0.37	10.23	QP
9	9.76	28.45	-21.55	50.00	17.50	0.63	10.32	Average
10	9.76	36.65	-23.35	60.00	25.70	0.63	10.32	QP
11	13.99	31.10	-18.90	50.00	19.30	1.31	10.49	Average
12	13.99	41.50	-18.50	60.00	29.70	1.31	10.49	OP

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUADVANCE4L Page Number : 15 of 24
Report Issued Date : May 06, 2015
Report Version : Rev. 01



Test Mode :	Mode 1						Tem	pera	ture	:		2	1~2	2° ℃					
Test Engineer :	Jack Tia	ack Tian			Rela	ative	Hum	idi	ty:	4	41~42%								
Test Voltage :	120Vac	/ 60I	Hz				Pha	se:				N	eut	ral					
Function Type :		GSM850 Idle + Bluetooth Id + Earphone + Camera + SII						WLAN	1 Idle	e +	US	ВС	abl	e (Ch	argi	ing fr	om A	Adap	ter)
100 L	evel (dBuV)										Dat	e: 20	15-0	4-01 Tin	ne: 0	9:43:27	1		
90-											+		+						
80-										+	+	+							



: CO01-SZ Site

Condition: FCC 15B_QP LISN_N_20140304 NEUTRAL Project : (FC)532405

: Mode 1 Mode

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBu₹	dB	dBu∀	dBu∇	dB	dB	
1	0.55	26.21	-19.79	46.00	15.70	0.36	10.15	Average
2 '	* 0.55	39.61	-16.39	56.00	29.10	0.36	10.15	QP
3	0.69	22.60	-23.40	46.00	12.20	0.25	10.15	Average
4	0.69	32.70	-23.30	56.00	22.30	0.25	10.15	QP
5	1.58	23.93	-22.07	46.00	13.39	0.36	10.18	Average
6	1.58	33.83	-22.17	56.00	23.29	0.36	10.18	QP
7	2.35	23.59	-22.41	46.00	13.00	0.39	10.20	Average
8	2.35	33.99	-22.01	56.00	23.40	0.39	10.20	QP
9	3.88	28.08	-17.92	46.00	17.39	0.46	10.23	Average
10	3.88	37.58	-18.42	56.00	26.89	0.46	10.23	QP
11	14.06	30.47	-19.53	50.00	18.49	1.48	10.50	Average
12	14.06	35.07	-24.93	60.00	23.09	1.48	10.50	QP

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID : YHLBLUADVANCE4L Page Number : 16 of 24 Report Issued Date: May 06, 2015 Report Version : Rev. 01



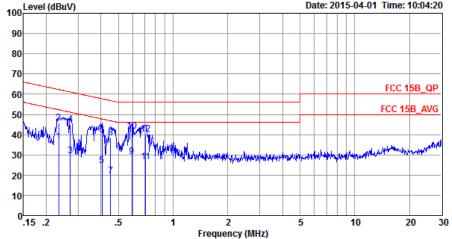
Test Mode :	Mode 3			Ten	nperatu	re:	21~2	22 ℃	
Test Engineer :	Jack Tia	n		Rel	ative H	umidity	: 41~4	12%	
Test Voltage :	120Vac	/ 60Hz		Pha	ise :		Line		
	WCDMA	Band	V Idle +	Blueto	oth Idle	+ WLA	N Idle	+ Earphone	+ (
Function Type :	(Data Lir	nk with I	Noteboo	k) + GP:	S Rx + \$	SIM 1			
ا مود	_evel (dBuV)			,			te: 2015-0	4-01 Time: 10:06	5:23
90									
80-									_
70	_								_
60		-					++++	FCC 15B_0	ДÞ
50								FCC 15B_A	VG
40	Na.								
30-		AND AN	Mark.					the delate and a to delivery	And A
	13 "	* #17 T	111	ph () Hall the Cale of the Cale	hada katarakan	Mary Mary	A Maria	YMY '''	
20									
10									
0 ^L	15 .2	.5	1		2	5	10) 20	30
				Frequ	ency (MHz)			
Site Condition	: CO01-5		SN T. 2014	40304 T.TI	NF				
Project	: (FC)53	32405	DII	10001 11					
Mode	: Mode 3	3							
				Limit			Cable		
	Freq	Level	Limit	Line	Level	Factor	Loss	Remark	
_	MHz	dBu∀	dB	dBu₹	dBu∇	dB	dB		-
1	0.25	24.58	-27.28	51.86	14.09	0.24	10.25	Average	

	MHz	dBuV	dB	dBu∀	dBu∇	dB	dB	
1	0.25	24.58	-27.28	51.86	14.09	0.24	10.25	Average
2	0.25	37.28	-24.58	61.86	26.79	0.24	10.25	QP
3	0.27	23.57	-27.63	51.20	13.09	0.25	10.23	Average
4 *	0.27	37.27	-23.93	61.20	26.79	0.25	10.23	QP
5	0.39	22.85	-25.23	48.08	12.40	0.28	10.17	Average
6	0.39	30.75	-27.33	58.08	20.30	0.28	10.17	QP
7	0.45	21.35	-25.58	46.93	10.90	0.29	10.16	Average
8	0.45	27.75	-29.18	56.93	17.30	0.29	10.16	QP
9	0.57	17.11	-28.89	46.00	6.71	0.25	10.15	Average
LO	0.57	29.01	-26.99	56.00	18.61	0.25	10.15	QP
1	0.70	19.33	-26.67	46.00	9.00	0.18	10.15	Average
12	0.70	30.03	-25.97	56.00	19.70	0.18	10.15	QP

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUADVANCE4L Page Number : 17 of 24
Report Issued Date : May 06, 2015
Report Version : Rev. 01



Test Mode :	Mode 3					Tem	perat	ure	:		2	1~	22 ℃						
Test Engineer :	Jack Tia	ın				Rela	tive H	lum	idi	ty:	4	1~	42%						
Test Voltage :	120Vac	/ 60Hz	<u>'</u>			Phas	se:				N	leι	ıtral						
Function Type :	WCDMA	A Band	١V	ldle ·	+ Blu	ietoo	th Idl	e +	WL	_AN	l lo	lle	+ E	arph	one	+	USE	Ca	able
	(Data Li		No	teboo	ok) +	GPS	Rx +	SIN	<i>l</i> 1										
100 ^L	evel (dBuV)									Date	e: 20	15-	04-01	Time:	10:04	4:20			
100																			



Site : CO01-SZ

Condition: FCC 15B_QP LISN_N_20140304 NEUTRAL

Project : (FC)532405 Mode : Mode 3

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBu∀	dB	dBu∀	dBu₹	dB	dB	
1	0.23	36.39	-15.91	52.30	25.79	0.34	10.26	Average
2	0.23	45.69	-16.61	62.30	35.09	0.34	10.26	QP
3	0.27	29.67	-21.40	51.07	19.10	0.35	10.22	Average
4	0.27	44.97	-16.10	61.07	34.40	0.35	10.22	QP
5	0.41	24.56	-23.17	47.73	14.00	0.39	10.17	Average
6	0.41	39.96	-17.77	57.73	29.40	0.39	10.17	QP
7	0.45	19.56	-27.29	46.85	9.00	0.40	10.16	Average
8	0.45	38.26	-18.59	56.85	27.70	0.40	10.16	QP
9	0.59	29.08	-16.92	46.00	18.60	0.33	10.15	Average
10 *	0.59	41.68	-14.32	56.00	31.20	0.33	10.15	QP
11	0.70	26.40	-19.60	46.00	16.00	0.25	10.15	Average
12	0.70	40.20	-15.80	56.00	29.80	0.25	10.15	QP

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUADVANCE4L Page Number : 18 of 24
Report Issued Date : May 06, 2015
Report Version : Rev. 01

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.
- 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.
- 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

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUADVANCE4L Page Number : 19 of 24
Report Issued Date : May 06, 2015

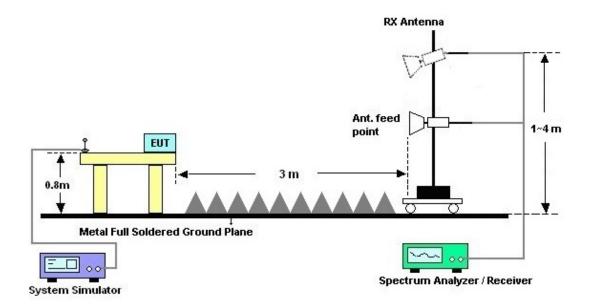
Report No.: FC532405

3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



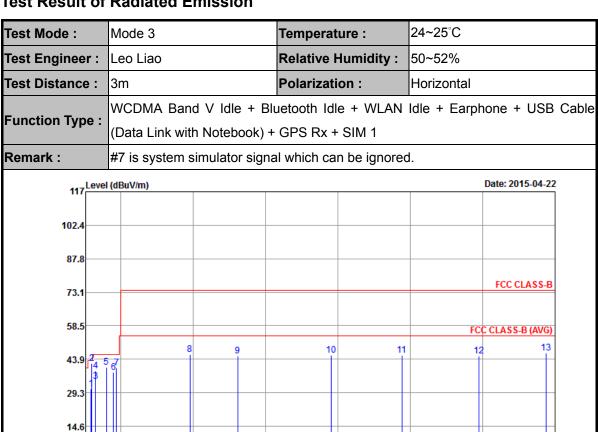
For radiated emissions above 1GHz



TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUADVANCE4L Page Number : 20 of 24
Report Issued Date : May 06, 2015

Report No.: FC532405

3.2.5. Test Result of Radiated Emission



Site : 03CH01-SZ

Condition : FCC CLASS-B 3m LF_ANT_141107 HORIZONTAL

3000.

Project : (FC)532405 Mode : Mode 3

1000.

	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	176.88	31.02	-12.48	43.50	42.69	11.63	2.07	25.37			Peak
2	199.83	42.02	-1.48	43.50	53.47	11.60	2.20	25.25	100	230	QP
3	299.19	34.16	-11.84	46.00	42.37	14.10	2.73	25.04			Peak
4	307.70	38.89	-7.11	46.00	47.02	14.20	2.77	25.10			Peak
5	599.60	40.41	-5.59	46.00	43.21	19.70	3.94	26.44			Peak
6	799.80	38.22	-7.78	46.00	37.30	22.50	4.59	26.17			Peak
7	881.00	39.96			39.24	21.77	4.88	25.93			Peak
8	2912.00	45.81	-28.19	74.00	31.89	33.02	9.68	28.78			Peak
9	4230.00	45.35	-28.65	74.00	26.98	34.04	12.34	28.01			Peak
10	6812.00	45.59	-28.41	74.00	22.22	36.18	14.52	27.33			Peak
11	8766.00	45.61	-28.39	74.00	18.43	36.52	16.78	26.12			Peak
12	10892.00	45.25	-28.75	74.00	13.42	38.74	17.62	24.53			Peak
13	12760.00	46.58	-27.42	74.00	13.14	39.14	18.70	24.40	100	215	Peak

5000.

7000.

Frequency (MHz)

9000.

11000.

13000

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUADVANCE4L Page Number : 21 of 24
Report Issued Date : May 06, 2015
Report Version : Rev. 01



Test Mode :	Mod	e 3				Tempe	rature):	24~	-25°C						
Test Engineer :	Leo	Liao				Relativ	e Hur	nidity	: 50~	-52%						
Test Distance :	3m					Polariz	ation	:	Ver	tical						
Function Type :						etooth GPS R			V Idle	Idle + Earphone + USB (
Remark :	#7 is	syste	m sim	ulator	signal	which	can b	e ignor	ed.							
117 Lev	el (dBuV/	m)										Date: 20	15-04-22			
102.4																
87.8																
73.1												FCC (CLASS-B			
58.5													-B (AVG)			
43.9 2	56 ⁷	8			9		10	11			12					
29.3																
14.6	1000.		3000.		5000.		7000.		9000.		1100	00	1300	0		
Site Condition Project Mode	:	03CH01- FCC CL/ (FC)532- Mode 3	ASS-B 3	dm LF_Af	NT_1411	Frequen 07 VERT										
	Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	A/Pos	T/Pos	Rema	ark				
		dBuV/m		dBuV/m	dBuV		dB		cm	deg			-			
3 4 5	199.83 299.19 599.60 658.40	41.04 35.41 42.97 37.73	-2.46 -10.59 -3.03 -8.27	43.50 46.00 46.00 46.00	52.49 43.62 45.77 39.84	11.99 11.60 14.10 19.70 20.05 22.50	2.20 2.73 3.94 4.24	25.98 25.25 25.04 26.44 26.40 26.17	100	270 	Peal QP Peal Peal Peal Peal	c c				
7 8 2 9 4 10 6	881.70 396.00 558.00 666.00	39.87 46.21 45.15 44.70	-27.79 -28.85 -29.30	74.00 74.00 74.00	39.14 34.27 26.50 21.48	21.77 32.60 34.23 36.24 36.23	4.89 8.60 12.78 14.50	25.93 29.26 28.36 27.52			Peal Peal Peal Peal Peal	C C C C				
12 10	742.00	46.34	-27.66	74.00	15.06	38.64 39.49	17.17	24.53	100		Peal Peal	c				

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUADVANCE4L Page Number : 22 of 24
Report Issued Date : May 06, 2015
Report Version : Rev. 01

4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver&SA	Agilent Technologies	N9038A	MY52260185	20Hz~26.5GHz	May 26, 2014	Apr. 22, 2015	May 25, 2015	Radiation (03CH01-SZ)
Spectrum Analyzer	R&S	FSV40	101041	10kHz~40GHz; Max 30dBm	Sep. 25, 2014	Apr. 22, 2015	Sep. 24, 2015	Radiation (03CH01-SZ)
Bilog Antenna	TeseQ	CBL6112D	23188	30MHz~2GHz	Nov. 07, 2014	Apr. 22, 2015	Nov. 06, 2015	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Oct. 15, 2014	Apr. 22, 2015	Oct. 14, 2015	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9kHz~3000MHz / 30 dB	Jan. 28, 2015	Apr. 22, 2015	Jan. 27, 2016	Radiation (03CH01-SZ)
Amplifier	MITEQ	AMF-7D-0010 1800-30-10P- R	1707137	1GHz~18GHz	May 08, 2014	Apr. 22, 2015	May 07, 2015	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	61601000198 5	N/A	NCR	Apr. 22, 2015	NCR	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Apr. 22, 2015	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Apr. 22, 2015	NCR	Radiation (03CH01-SZ)
EMI TEST Receiver	R&S	ESCI7	100768	9kHz~3GHz	May 04, 2014	Apr. 01, 2015	May 03, 2015	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103912	9kHz~30MHz	Feb. 02, 2015	Apr. 01, 2015	Feb. 01, 2016	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	EMCO	3816/2SH	00103892	9kHz~30MHz	Feb. 02, 2015	Apr. 01, 2015	Feb. 01, 2016	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	61602000089 1	100Vac~250Vac	Sep. 29, 2014	Apr. 01, 2015	Sep. 28, 2015	Conduction (CO01-SZ)

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUADVANCE4L Page Number : 23 of 24
Report Issued Date : May 06, 2015

Report No.: FC532405



5. Uncertainty of Evaluation

<u>Uncertainty of Conducted Emission Measurement (150 kHz ~ 30 MHz)</u>

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

<u>Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)</u>

Measuring Uncertainty for a Level of	0.040
Confidence of 95% (U = 2Uc(y))	3.9dB

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUADVANCE4L Page Number : 24 of 24
Report Issued Date : May 06, 2015

Report No. : FC532405