FCC Test Report

APPLICANT : CT Asia

EQUIPMENT: **GSM Mobile Phone**

BRAND NAME : BLU

MODEL NAME : Neo 4.0 JR

FCC ID : YHLBLUNEO40JR

STANDARD : FCC 47 CFR FCC Part 15 Subpart B

CLASSIFICATION: Certification

The product was received on Dec. 23, 2014 and testing was completed on Feb. 05, 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.

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Report Version

Testing Laboratory 2353

: Rev. 01

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC4D2301	Rev. 01	Initial issue of report	Mar. 13, 2015

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SUMMARY OF TEST RESULT

Report Section	FCC Rule Description Limit		Result	Remark	
					Under limit
3.1	15.107	AC Conducted Emission	< 15.107 limits	PASS	8.84 dB at
					0.160 MHz
					Under limit
3.2	15.109	15.109 Radiated Emission	< 15.109 limits	PASS	3.61 dB at
3.2					149.880 MHz
					for Quasi-Peak

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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

Fortune Ship Technology (HK) Limited

6th Floor, Kingson Building, New Energy Innovation Industrial Park, No.1 Chuang Sheng Road, Nanshan District, Shenzhen, P. R. China

1.3. Product Feature of Equipment Under Test

Product Feature					
Equipment	GSM Mobile Phone				
Brand Name	BLU				
Model Name	Neo 4.0 JR				
FCC ID	YHLBLUNEO40JR				
	GSM/GPRS/EGPRS (Downlink Only)/				
EUT supports Radios application	WLAN 2.4GHz 802.11b/g/n HT20/HT40/				
	Bluetooth v3.0 + EDR/Bluetooth v4.0 LE				
HW Version	V537-V0.2				
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 subjective to this standard

Product Specification subjective to this standard					
Tx Frequency	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz				
Rx Frequency	GSM850: 869.2 MHz ~ 893.8 MHz GSM1900: 1930.2 MHz ~ 1989.8 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz				
Antenna Type	WWAN : PIFA Antenna WLAN : PIFA Antenna Bluetooth : PIFA Antenna				
Type of Modulation	GSM: GMSK GPRS: GMSK EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK (Downlink Only) 802.11b: DSSS (DBPSK / DQPSK / CCK) 802.11g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM) Bluetooth LE: GFSK Bluetooth (1Mbps): GFSK Bluetooth (2Mbps): \pi /4-DQPSK Bluetooth (3Mbps): 8-DPSK				

1.5. Modification of EUT

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

SPORTON INTERNATIONAL (SHENZHEN) INC.

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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					
Test Site Location	TEL: +86-755-8637-9589					
	FAX: +86-755-8637-9595					
Took Site No.	Sporton Site No.					
Test Site No.	CO01-SZ					

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

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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 C63.4-2009 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.

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

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.

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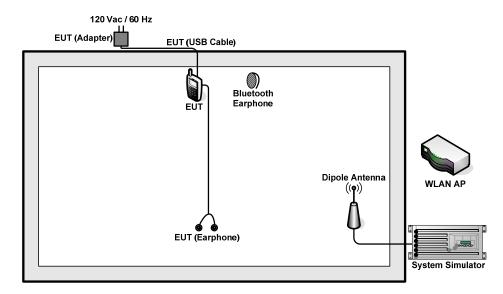
Test Items	EUT Configure Mode	Function Type
		Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera + SIM1 <fig.1></fig.1>
AC Conducted Emission	1/2	Mode 2: GSM1900 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + MPEG4 + SIM1 <fig.1></fig.1>
		Mode 3: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + SIM 1 <fig.2></fig.2>
	1/2	Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera + SIM1 <fig.1></fig.1>
Radiated Emissions < 1GHz		Mode 2: GSM1900 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + MPEG4 + SIM1 <fig.1></fig.1>
		Mode 3: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + SIM 1 <fig.2></fig.2>
Radiated Emissions ≥ 1GHz	2	Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + SIM 1 <fig.2></fig.2>

Remark:

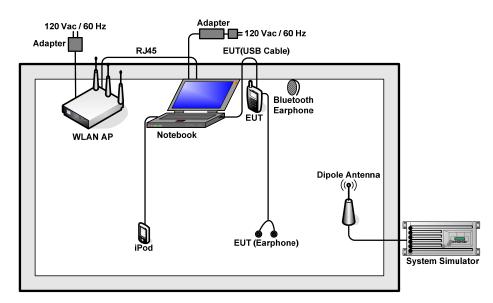
- 1. The worst case of AC is mode 2; and the USB Link mode of AC is mode 3, the test data of these modes are reported.
- 2. The worst case of RE < 1G is mode 3; only the test data of this mode was reported.
- 3. Link with Notebook means data application transferred mode between EUT and Notebook.

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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	Agilent	8960	N/A	N/A	Unshielded, 1.8 m
2.	WLAN AP	D-link	DIR-815	KA2IR815A1	N/A	Unshielded,1.8m
3.	WLAN AP	D-link	DIR-615	N/A	N/A	Unshielded,1.8m
4.	Bluetooth Earphone	Nokia	BH-108	PYAHS-107W	N/A	N/A
5.	Bluetooth Earphone	Lenovo	LBH301	N/A	N/A	N/A
6.	Notebook	Lenovo	E540	FCC DoC	N/A	AC I/P: Unshielded, 1.2m DC O/P: Shielded, 1.8 m
7.	SD Card	SanDisk	4G class 4	FCC DoC	N/A	N/A
8.	iPod nano 8GB	Apple	MC690ZP/A	FCC DoC	Shielded, 1.2 m	N/A
9.	iPod	Apple	MC525ZP/A	FCC DoC	Shielded, 1.0 m	N/A

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2.4. EUT Operation Test Setup

The EUT was in GSM 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. Execute "Video Player" to play MPEG4 files.
- 3. 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			

^{*}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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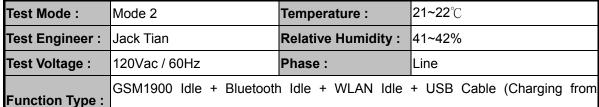
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3.1.4 Test Setup



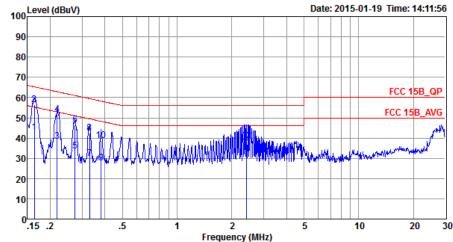
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3.1.5 Test Result of AC Conducted Emission



Type: | GSM 1900 | Idle + Bluetootti | Idle + WEAN | Idle + OSB Cable (Charging from Adapter) + Earphone + MPEG4 + SIM1

Report No.: FC4D2301



Site : CO01-SZ

Condition: FCC 15B_QP LISN_L_20140304 LINE

Project : (FC)4D2301 Mode : Mode 2

				Over	Limit	Read	LISN	Cable	
		Freq	Level	Limit	Line	Level	Factor	Loss	Remark
		MHz	dBuV	dB	dBu∇	dBuV	dB	dB	
1		0.16	42.76	-12.54	55.30	32.20	0.22	10.34	Average
2	*	0.16	56.46	-8.84	65.30	45.90	0.22	10.34	QP
3		0.22	38.40	-14.48	52.88	27.90	0.23	10.27	Average
4		0.22	51.70	-11.18	62.88	41.20	0.23	10.27	QP
5		0.27	33.67	-17.31	50.98	23.20	0.25	10.22	Average
6		0.27	46.67	-14.31	60.98	36.20	0.25	10.22	QP
7		0.33	30.05	-19.39	49.44	19.60	0.26	10.19	Average
8		0.33	42.25	-17.19	59.44	31.80	0.26	10.19	QP
9		0.38	27.75	-20.50	48.25	17.29	0.28	10.18	Average
10		0.38	38.85	-19.40	58.25	28.39	0.28	10.18	QP
11		2.41	35.26	-10.74	46.00	24.80	0.26	10.20	Average
12		2.41	38.86	-17.14	56.00	28.40	0.26	10.20	QP

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Test Mode :	Mode 2			Ten	Temperature :			21~22 ℃		
Test Engineer :	Jack Tian			Rel	Relative Humidity :			41~42%		
Test Voltage :	120Vac /	60Hz		Pha	ise :		Neut	ral		
	GSM190	0 Idle	+ Bluet	ooth Idl	e + W	LAN Idl	e + US	SB Cable	e (Chargir	ng fr
Function Type :	Adapter)	+ Earp	hone + N	MPEG4	+ SIM1					
100 ^L	evel (dBuV)					Da	te: 2015-0	1-19 Time: 1	14:16:24	
90										
80-										
70								ECC 1	5B_QP	
60	3									
50		-						FCC 15	B_AVG	
40	1 4 6	10	,						M	
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10										
0 ^L .1	15 .2	.5	1		2	5	10) 2	20 30	
				Frequ	ency (MHz					
					ency (minz)				
Site	: CO01-S		717 N. 004)				
Conditio	: CO01-S	B_QP LIS	SN_N_201			,				
Conditio	on: FCC 15	B_QP LI: 2301	SN_N_201			,				
Conditio Project	on: FCC 15	B_QP LI: 2301		40304 NE	UTRAL		Cable			
Conditio Project	en: FCC 15 : (FC)4D : Mode 2	B_QP LI: 2301		40304 NE	UTRAL Read		Cable Loss	Remark		
Conditio Project	on: FCC 15 : (FC)4D : Mode 2 Freq	B_QP LIS 2301 Level	Over Limit	40304 NE	UTRAL Read Level	LISN Factor	Loss	Remark		
Conditio Project	en: FCC 15 : (FC)4D : Mode 2	B_QP LI: 2301	Over	40304 NE	UTRAL Read	LISN Factor		Remark		
Conditio Project	on: FCC 15 : (FC)4D : Mode 2 Freq	B_QP LIS 2301 Level	Over Limit	Limit Line dBuV	UTRAL Read Level	LISN Factor dB	Loss dB 10.34	Average		
Condition Project Mode 1 2 *	m: FCC 15: (FC) 4D: Mode 2 Freq MHz 0.17 0.17	B_QP LIS 2301 Level dBuV 41.96 56.16	Over Limit dB -13.25	Limit Line dBuV 55.21 65.21	Read Level dBuV 31.29 45.49	LISN Factor dB 0.33 0.33	dB 10.34 10.34	Average QP		
Condition Project Mode 1 2 * 3	m: FCC 15: : (FC) 4D: : Mode 2 Freq MHz 0.17 0.17 0.22	B_QP LIS 2301 Level dBuV 41.96 56.16 37.20	Over Limit dB -13.25 -9.05 -15.63	Limit Line dBuV 55.21 65.21 52.83	Read Level dBuV 31.29 45.49 26.60	LISN Factor dB 0.33 0.33 0.33	dB 10.34 10.34 10.27	Average QP Average		
Condition Project Mode 1 2 * 3 4	m: FCC 15: : (FC) 4D: : Mode 2 Freq MHz 0.17 0.17 0.22 0.22	B_QP LIS 2301 Level dBuV 41.96 56.16 37.20 51.00	Over Limit dB -13.25 -9.05 -15.63 -11.83	Limit Line dBuV 55.21 65.21 52.83 62.83	Read Level dBuV 31.29 45.49 26.60 40.40	LISN Factor dB 0.33 0.33 0.33 0.33	dB 10.34 10.34 10.27 10.27	Average QP Average QP	•	
Condition Project Mode 1 2 * 3 4 5	m: FCC 15: : (FC) 4D: : Mode 2 Freq MHz 0.17 0.17 0.22 0.22 0.27	B_QP LIS 2301 Level dBuV 41.96 56.16 37.20 51.00 26.57	Over Limit dB -13.25 -9.05 -15.63 -11.83 -24.46	Limit Line dBuV 55.21 65.21 52.83 62.83 51.03	Read Level dBuV 31.29 45.49 26.60 40.40 16.00	LISN Factor dB 0.33 0.33 0.33 0.33 0.35	Loss dB 10.34 10.34 10.27 10.27	Average QP Average QP Average	•	
Condition Project Mode 1 2 * 3 4 5 6	m: FCC 15:	B_QP LIS 2301 Level dBuV 41.96 56.16 37.20 51.00 26.57 36.07	Over Limit dB -13.25 -9.05 -15.63 -11.83 -24.46 -24.96	Limit Line dBuV 55.21 65.21 52.83 62.83 51.03 61.03	Read Level dBuV 31.29 45.49 26.60 40.40 16.00 25.50	LISN Factor dB 0.33 0.33 0.33 0.33 0.35 0.35	dB 10.34 10.27 10.27 10.22 10.22	Average QP Average QP Average	•	
Condition Project Mode 1 2 * 3 4 5	m: FCC 15: (FC) 4D: Mode 2 Freq MHz 0.17 0.17 0.22 0.22 0.27 0.27 0.34	B_QP LIS 2301 Level dBuV 41.96 56.16 37.20 51.00 26.57 36.07 26.76	Over Limit dB -13.25 -9.05 -15.63 -11.83 -24.46	Limit Line dBuV 55.21 65.21 52.83 62.83 51.03 61.03 49.18	Read Level dBuV 31.29 45.49 26.60 40.40 16.00 25.50 16.20	LISN Factor dB 0.33 0.33 0.33 0.35 0.35 0.35	dB 10.34 10.27 10.27 10.22 10.22	Average QP Average QP Average QP Average	•	
Condition Project Mode 1 2 * 3 4 5 6 7	MHz 0.17 0.22 0.22 0.27 0.34 0.34	B_QP LIS 2301 Level dBuV 41.96 56.16 37.20 51.00 26.57 36.07 26.76 39.16	Over Limit ————————————————————————————————————	Limit Line dBuV 55.21 65.21 52.83 62.83 51.03 61.03 49.18 59.18	Read Level dBuV 31.29 45.49 26.60 40.40 16.00 25.50 16.20 28.60	LISN Factor dB 0.33 0.33 0.33 0.35 0.35 0.37 0.37	dB 10.34 10.37 10.27 10.22 10.22 10.19 10.19	Average QP Average QP Average QP Average		
Condition Project Mode 1 2 * 3 4 5 6 7 8	MHz 0.17 0.22 0.27 0.34 0.38 0.38	B_QP LIS 2301 Level dBuV 41.96 56.16 37.20 51.00 26.57 36.07 26.76 39.16 27.16 38.66	Over Limit -13.25 -9.05 -15.63 -11.83 -24.46 -24.96 -22.42 -20.02 -21.05 -19.55	Limit Line dBuV 55.21 65.21 52.83 62.83 51.03 61.03 49.18 59.18 48.21 58.21	Read Level dBuV 31.29 45.49 26.60 40.40 16.00 25.50 16.20 28.60 16.60 28.10	LISN Factor dB 0.33 0.33 0.33 0.35 0.35 0.37 0.37 0.38 0.38	dB 10.34 10.37 10.27 10.22 10.22 10.19 10.18 10.18	Average QP Average QP Average QP Average QP Average		
Condition Project Mode 1 2 * 3 4 5 6 7 8 9	MHz 0.17 0.22 0.27 0.34 0.38 0.38 0.44	B_QP LIS 2301 Level dBuV 41.96 56.16 37.20 51.00 26.57 36.07 26.76 39.16 27.16 38.66 23.86	Over Limit -13.25 -9.05 -15.63 -11.83 -24.46 -24.96 -22.42 -20.02 -21.05	Limit Line dBuV 55.21 65.21 52.83 62.83 51.03 61.03 49.18 59.18 48.21 58.21 47.11	Read Level dBuV 31.29 45.49 26.60 40.40 16.00 25.50 16.20 28.60 16.60 28.10 13.30	LISN Factor dB 0.33 0.33 0.33 0.35 0.35 0.37 0.37 0.38 0.38 0.40	dB 10.34 10.37 10.27 10.22 10.22 10.19 10.18 10.18 10.16	Average QP Average QP Average QP Average QP Average QP Average		

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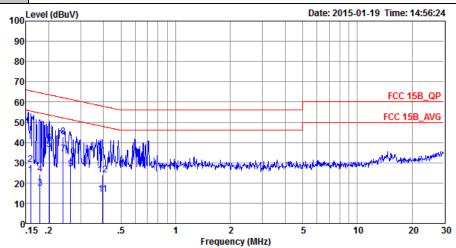


Test Mode: Mode 3 Temperature: 21~22°C

Test Engineer: Jack Tian Relative Humidity: 41~42%

Test Voltage: 120Vac / 60Hz Phase: Line

Function Type: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + SIM 1



Site : CO01-SZ

Condition: FCC 15B_QP LISN_L_20140304 LINE

Project : (FC)4D2301 Mode : Mode 3

			Over	Limit	Read	LISN	Cable	
	Freq	Level	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBu∀	dB	dBu∀	dBuV	dB	dB	
1	0.16	24.17	-31.35	55.52	13.60	0.22	10.35	Average
2	0.16	29.27	-36.25	65.52	18.70	0.22	10.35	QP
3	0.18	17.24	-37.31	54.55	6.70	0.22	10.32	Average
4	0.18	24.24	-40.31	64.55	13.70	0.22	10.32	QP
5 *	0.20	36.61	-16.93	53.54	26.10	0.22	10.29	Average
6	0.20	39.91	-23.63	63.54	29.40	0.22	10.29	QP
7	0.24	34.39	-17.69	52.08	23.90	0.24	10.25	Average
8	0.24	42.89	-19.19	62.08	32.40	0.24	10.25	QP
9	0.26	26.87	-24.42	51.29	16.40	0.24	10.23	Average
10	0.26	32.87	-28.42	61.29	22.40	0.24	10.23	QP
11	0.40	14.25	-33.70	47.95	3.80	0.28	10.17	Average
12	0.40	23.95	-34.00	57.95	13.50	0.28	10.17	QP

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Test Mode :	Mode 3			Ton	peratu	ro :	21~2	2℃			
							_				
Test Engineer :	Jack Tian		Rela	Relative Humidity :			41~42%				
Test Voltage :	120Vac /	60Hz		Pha	se:		Neut	ral			
Function Type :	GSM850				+ WL	AN Idle	+ USI	B Cable	(Data	Link	with
100 L	evel (dBuV)										
90-											
80											
70								FCC 15	B QP		
60								FCC 15E			
50	Million.	-						100 150	<u></u>		
40		Autocolo de de la							. cont		
30				HOULD HAVE PROVIDE	erryalionalismy	und metalogical and the	as the August of the	harman de la	Talkilla.		
20	3 7 9										
10			1								
0		.5	1		2	5	10	20) 30		
	15 12	.5		Frequ	ency (MHz)	_		2.	, ,,		
	: CO01-S on: FCC 15 : (FC)4D : Mode 3	B_QP LI: 2301	SN_N_2014	10304 NE	JTRAL						
	_			Limit	Read		Cable	- 1			
	Freq	Level	Limit	Line	телет	Factor	Loss	Remark			
	MHz	dBu∀	dB	dBu∇	dBu₹	dB	dB				
1 *	0.15	35.79	-20.08	55.87	25.10	0.33	10.36	Average			
2			-24.68		30.50		10.36				
3			-38.23		5.51			Average			
4			-22.93		30.81		10.31				
5 6			-23.81 -23.91					Average			
7			-35.31		6.39			Average			
8						0.34		_			
9						0.35					
10						0.35		_			
11			-26.69					Average			
12	0.32		-29.29		19.90		10.19	_			
Ĭ											

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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.
- 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

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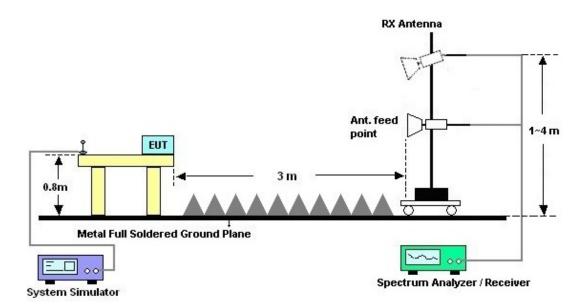
Report No.: FC4D2301

3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz

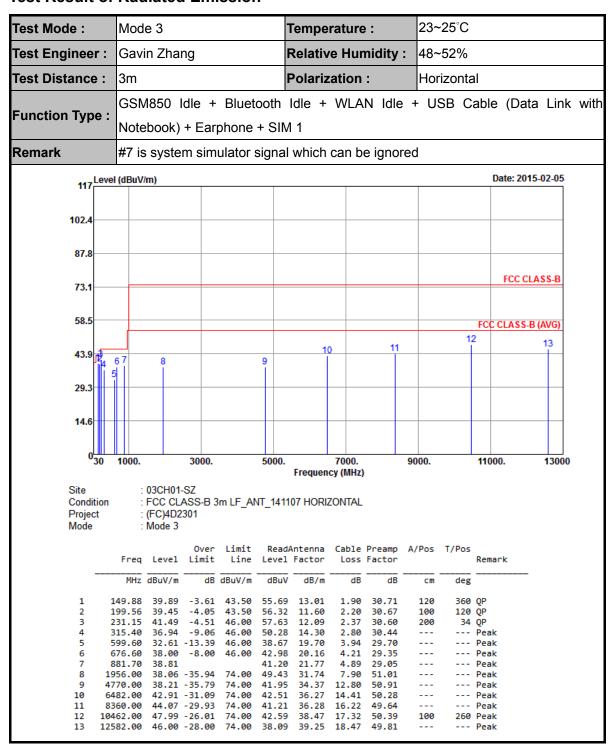


For radiated emissions above 1GHz



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3.2.5. Test Result of Radiated Emission



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Test Mode :	Mode 3		Temperature	e:	23~25°C				
Test Engineer :	Gavin Zhang		Relative Hui	midity:	: 48~52%				
Test Distance :	3m		Polarization	:	Vertical				
Function Type :		GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link Notebook) + Earphone + SIM 1							
Remark	#7 is system s	7 is system simulator signal which can be ignored							
117 Leve	I (dBuV/m)				T	Date: 2015-02-05			
102.4									
87.8									
73.1						FCC CLASS-B			
58.5					FC	C CLASS-B (AVG)			
43.9	67 8	9	10	<u>11</u>	12	13			
29.3									
14.6									
030	1000. 30	000. 5000.			000. 11	000. 13000			
Site Condition Project Mode	Frequency (MHz) Site : 03CH01-SZ Condition : FCC CLASS-B 3m LF_ANT_141107 VERTICAL Project : (FC)4D2301								
	Freq Level Li		dAntenna Cable 1 Factor Loss	Preamp A/ Factor	'Pos T/Pos Re	mark			
	MHz dBuV/m	dB dBuV/m dBu\			cm deg				
2 2 3 2 4 3 5 5 6 6 7 8 8 20		.99 46.00 44.3 .48 46.00 42.56 40.64 .49 74.00 47.09	2 12.06 2.36 7 14.07 2.73 0 14.16 2.76 3 19.63 3.89 6 20.13 4.19 4 21.77 4.88 5 32.29 8.10	30.60 30.48 30.46 29.84 29.36 29.05 50.93	Pe 100 360 Pe Pe Pe Pe Pe Pe Pe Pe	ak ak ak ak ak ak ak			
10 65 11 83 12 104	340.00 42.02 -31 312.00 43.56 -30 94.00 47.07 -26	7.37 74.00 42.5 1.98 74.00 41.66 1.44 74.00 40.74 1.93 74.00 41.66 1.09 74.00 38.00	6 36.29 14.43 4 36.31 16.25 6 38.49 17.32	50.36 49.74 50.40	Pe Pe Pe 200 360 Pe Pe	ak ak ak			

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4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI TEST Receiver	R&S	ESCI7	100768	9kHz~3GHz	May 04, 2014	Feb. 05, 2015	May 03, 2015	Radiation (03CH01-SZ)
Spectrum Analyzer	Agilent Technologies	N9038A	MY52260185	20Hz~26.5GHz	May 26, 2014	Feb. 05, 2015	May 25, 2015	Radiation (03CH01-SZ)
Bilog Antenna	TESEQ	CBL 6112D	37877	30MHz~2GHz	Oct. 15, 2014	Feb. 05, 2015	Oct. 14, 2015	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS Lindgren	3117	00119436	1GHz~18GHz	Oct. 15, 2014	Feb. 05, 2015	Oct. 14, 2015	Radiation (03CH01-SZ)
Amplifier	com-power	PA-103A	161069	1~1000MHz	May 04, 2014	Feb. 05, 2015	May 03, 2015	Radiation (03CH01-SZ)
Amplifier	Yiai	AV3860B	04030	2GHz~26.5GHz	May 08, 2014	Feb. 05, 2015	May 07, 2015	Radiation (03CH01-SZ)
AC Source	Chroma	61601ACSOU RCE	61601000247 0	100Vac~240Vac	NCR	Feb. 05, 2015	NCR	Radiation (03CH01-SZ)
Turn Table	EM Electronics	EM 1000	N/A	0~360 degree	NCR	Feb. 05, 2015	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM Electronics	EM 1000	N/A	1 m~4 m	NCR	Feb. 05, 2015	NCR	Radiation (03CH01-SZ)
EMI TEST Receiver	R&S	ESCI7	100768	9kHz~3GHz	May 04, 2014	Jan. 19, 2015	May 03, 2015	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103912	9kHz~30MHz	Mar. 04, 2014	Jan. 19, 2015	Mar. 03, 2015	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	EMCO	3816/2SH	00103892	9kHz~30MHz	Mar. 04, 2014	Jan. 19, 2015	Mar. 03, 2015	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	61602000089 1	100Vac~250Vac	Sep. 29, 2014	Jan. 19, 2015	Sep. 28, 2015	Conduction (CO01-SZ)

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5. Uncertainty of Evaluation

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

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

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

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