

# **FCC Test Report**

APPLICANT : CT Asia

**EQUIPMENT**: Smartphone

BRAND NAME : BLU
MODEL NAME : Amo

MODEL NAME : Amour FCC ID : YHLBLUAMOUR

STANDARD : FCC 47 CFR FCC Part 15 Subpart B

CLASSIFICATION : Certification

The product was received on Mar. 22, 2013 and completely tested on Apr. 16, 2013. We, SPORTON INTERNATIONAL (KUNSHAN) INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.4-2003 and shown the 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.

Reviewed by:

Jones Tsai / Manager





Report No.: FC332203

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

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: YHLBLUAMOUR Page Number : 1 of 25 Report Issued Date : Apr. 27, 2013

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## **REVISION HISTORY**

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC332203	Rev. 01	Initial issue of report	Apr. 27, 2013

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**SUMMARY OF TEST RESULT** 

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.107	7.2.4	AC Conducted Emission	< 15.107 limits < RSS-Gen table 2 limits	PASS	Under limit 13.93 dB at 0.660 MHz
3.2	15.109	7.2.3.2	Radiated Emission	< 15.109 limits or < RSS-Gen table 1 limits (Section 6)	PASS	Under limit 7.18 dB at 720.640 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

#### 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. Feature of Equipment Under Test

	Product Feature
Equipment	Smartphone
Brand Name	BLU
Model Name	Amour
FCC ID	YHLBLUAMOUR
EUT supports Radios application	GSM/GPRS /EGPRS/WCDMA/HSPA /WLAN 11bgn/ Bluetooth/Bluetooth v4.0 - LE
HW Version	V0.4
SW Version	S9070A_MP_F2F3F5F8_B2B5_US_BLU_1.04_04_flasher
EUT Stage	Identical Prototype

#### Remark:

- **1.** The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
- 2. There are two different types of EUT. They are single SIM card mobile and dual SIM card mobile. The others are the same including circuit design, PCB board, structure and all components. It is special to declare. After pre-scan two types of EUT, we found test result of the sample that dual SIM was the worst, so we choose dual SIM card mobile to perform all test.

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## 1.4. Product Specification of Equipment Under Test

Product Specification	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 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
By Fraguency Banga	WCDMA Band II: 1932.4 MHz ~ 1987.6 MHz
Rx Frequency Range	802.11b/g/n: 2412 MHz ~ 2462 MHz
	Bluetooth: 2402 MHz ~ 2480 MHz
	GPS : 1.57542 GHz
	FM: 88 MHz ~ 108 MHz
	WWAN : Fixed Internal Antenna
Antenna Type	WLAN: PIFA Antenna
	Bluetooth : PIFA Antenna
	GSM: GMSK
	GPRS: GMSK
	EDGE: GMSK / 8PSK
	WCDMA: QPSK (Uplink)
	HSDPA: QPSK (Uplink)
	HSUPA: QPSK (Uplink)
Type of Modulation	802.11b: DSSS (DBPSK / DQPSK / CCK)
Type of modulation	802.11g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM)
	Bluetooth BDR (1Mbps) : GFSK
	Bluetooth EDR (2Mbps) : π /4-DQPSK
	Bluetooth EDR (3Mbps) : 8-DPSK
	Bluetooth v4.0 - LE: GFSK
	GPS: BPSK
	FM

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### 1.5. Test Site

Test Site	SPORTON INTERNATIONAL (KUNSHAN) INC.			
	No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C.			
Test Site Location	TEL: +86-0512-5790-0158			
	FAX: +86-0512-5790-0958			
		FCC/IC Registration No.		
Test Site No.	CO01-KS 149928/4086E-1			

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.C.			
	TEL: +86-755- 3320-2398			
Toot Site No	Sporton Site No. FCC/IC Registration No.			
Test Site No.	03CH01-SZ 831040/4086F-1			

## 1.6. Applied 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 C63.4-2003

**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 C63.4-2003 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.

		Те	st Condition	on
Item	EUT Configuration	EMI	EMI	EMI
		AC	RE<1G	RE≥1G
1.	Charging Mode (EUT with adapter)			Note 1
2.	Data application transferred mode (EUT with PC)	$\boxtimes$	$\boxtimes$	$\boxtimes$

#### 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.

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Test Items	EUT Configure Mode	Function Type
		Mode 1: GSM850 Idle + WLAN Idle + Bluetooth Idle + USB Cable (Charging from Adapter) + Earphone + Camera + SIM 1 <fig. 1=""></fig.>
AC Conducted Emission	1/0	Mode 2: GSM1900 Idle + WLAN Idle + Bluetooth Idle + USB Cable (Charging from Adapter) + Earphone + MPEG4 + SIM 1 <fig. 1=""></fig.>
	1/2	Mode 3: WCDMA Band V Idle + WLAN Idle + Bluetooth Idle + USB Cable (Charging from Adapter) + Earphone + FM Rx + SIM 1 <fig. 2=""></fig.>
		Mode 4: WCDMA Band II Idle + WLAN Idle + Bluetooth Idle + USB Cable (Data Link with PC) + Earphone + GPS Rx + SIM 1 <fig. 3=""></fig.>
		Mode 1: GSM850 Idle + WLAN Idle + Bluetooth Idle + USB Cable (Charging from Adapter) + Earphone + Camera + SIM 1 <fig. 1=""></fig.>
Radiated	1/2	Mode 2: GSM1900 Idle + WLAN Idle + Bluetooth Idle + USB Cable (Charging from Adapter) + Earphone + MPEG4 + SIM 1 <fig. 1=""></fig.>
Emissions < 1GHz	1/2	Mode 3: WCDMA Band V Idle + WLAN Idle + Bluetooth Idle + USB Cable (Charging from Adapter) + Earphone + FM Rx + SIM 1 <fig. 2=""></fig.>
		Mode 4: WCDMA Band II Idle + WLAN Idle + Bluetooth Idle + USB Cable (Data Link with PC) + Earphone + GPS Rx + SIM 1 <fig. 3=""></fig.>
Radiated Emissions ≥ 1GHz	2	Mode 1: WCDMA Band II Idle + WLAN Idle + Bluetooth Idle + USB Cable (Data Link with PC) + Earphone + GPS Rx + SIM 1 <fig. 3=""></fig.>

#### Remark:

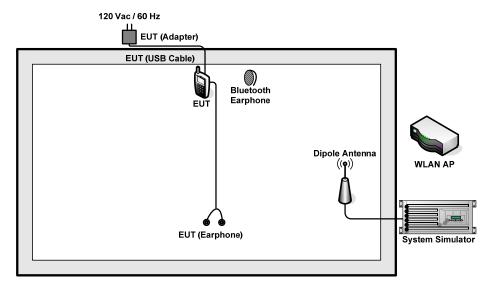
- 1. The worst case of AC Conducted Emission is mode 3; the test data of this mode was reported.
- 2. The USB Link mode of AC Conducted Emission is mode 4; the test data of this mode was also reported.
- 3. The worst case of Radiated Emissions is mode 4; only the test data of this mode was reported.
- 4. Data Link with PC means data application transferred mode between EUT and PC.

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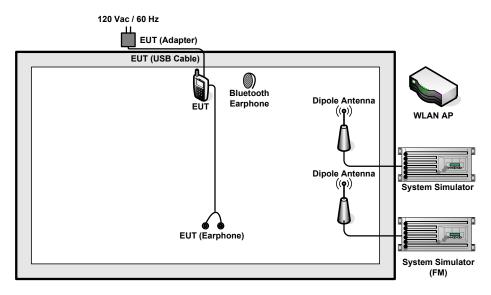


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## 2.2. Connection Diagram of Test System



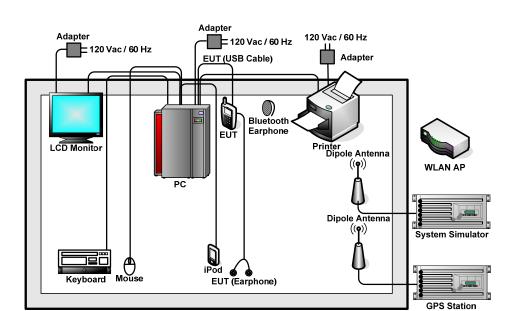
<Fig. 1>



<Fig. 2>

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<Fig. 3>

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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	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	System Simulator	Agilent	E5515C	N/A	N/A	Unshielded, 1.8 m
3.	System Simulator(FM)	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
4.	Signal Generator	R&S	SMR40	N/A	N/A	Unshielded, 1.8 m
5.	GPS Station	ADIVIC	MP9000	N/A	N/A	Unshielded, 1.8 m
6.	GPS Station	T&E	GS-50	N/A	N/A	Unshielded, 1.8 m
7.	PC	Dell	OPTIPLEX390	FCC DoC	N/A	Unshielded, 1.8 m
8.	PC	Dell	MT320	FCC DoC	N/A	Unshielded, 1.8 m
9.	Monitor	Dell	E1910Hc	FCC DoC	Shielded, 1.2 m	Unshielded, 1.8 m
10.	Monitor	Dell	IN1940MWB	FCC DoC	Shielded, 1.2 m	Unshielded, 1.8 m
11.	(USB) Mouse	Dell	N231	FCC DoC	Shielded, 1.8 m	N/A
12.	(USB) Mouse	Dell	MS111-L	FCC DoC	Shielded, 1.5 m	N/A
13.	Bluetooth Earphone	Nokia	BH-106	QTLBH-106	N/A	N/A
14.	Bluetooth Earphone	Nokia	BH-108	2010DP1340	N/A	N/A
15.	(USB) Keyboard	Dell	SK-8115	FCC DoC	Shielded, 1.8 m with core	N/A
16.	(USB) Keyboard	Dell	KB212-B	FCC DoC	Shielded, 1.5 m	N/A
17.	Printer	HP	Laser Jet 1018	FCC DoC	Shielded, 1.8 m	Unshielded, 1.8 m
18.	Printer	SAMSUNG	ML-1610	N/A	Shielded, 1.8 m	Unshielded, 1.8 m
19.	iPod	Apple	A1199	FCC DoC	Shielded, 1.2 m	N/A
20.	iPod	Apple	MC525 ZP/A	FCC DoC	Shielded, 1.0 m	N/A
21.	WLAN AP	D-Link	DIR-855	KA2DIR855A2	N/A	Unshielded, 1.8 m
22.	WLAN AP	D-Link	DIR-615	N/A	N/A	Unshielded, 1.8 m

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#### 2.4. Test Software

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 PC for files transfer with EUT via USB cable.
- 2. Turn on GPS function to make the EUT receive continuous signals from GPS station.
- 3. Turn on FM function to make the EUT receive continuous signals from System Simulator (FM).
- 4. Execute "Video Player" to play MPEG4 files.
- 5. 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

See list of measuring instruments of this test report.

#### 3.1.3 Test Procedure

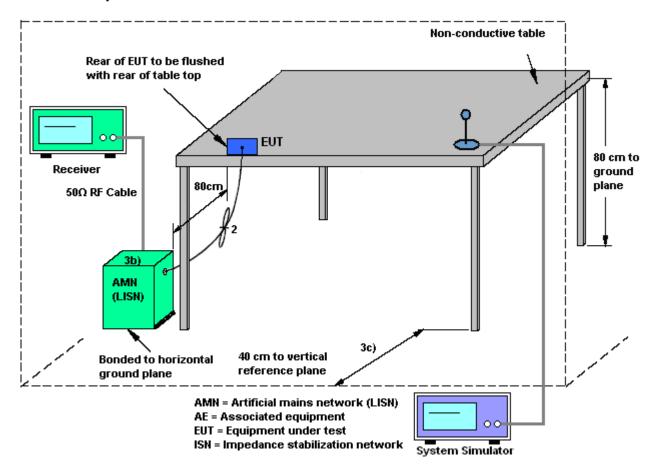
- 1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- 2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- 3. All the support units are connecting to the other 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 with Maximum Hold Mode.

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### 3.1.4 Test Setup



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### 3.1.5 Test Result of AC Conducted Emission

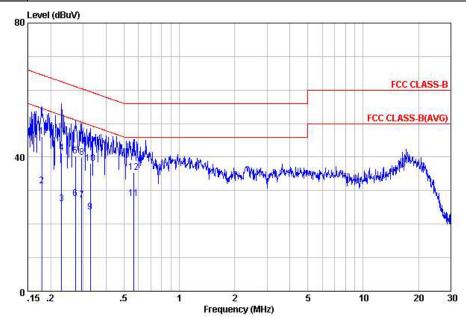
Test Mode :	Mode 3			Temperatu	ıre :	19~20℃		
Test Engineer :	Tom Wang	9		Relative H	lumidity :	39~40%		
Test Voltage :	120Vac / 6	60Hz		Phase :		Line		
Tuno I	WCDMA E	Band V Idle	+ WL/	AN Idle + B	Bluetooth Ic	lle + USB (	Cable (Ch	arging fro
Function Type :	Adapter) +	+ Earphone	+ FM F	Rx + SIM 1				
Remark :	All emission	ons not repo	orted h	ere are moi	re than 10	dB below th	ne prescri	bed limit.
80	Level (dBuV)		, , , ,					
We-co								
							W	
							FCC CLASS-I	8
						FCC (	CLASS-B(AVG	i)
		White the transfer to the	h	Maca			124 - 124-2	
40		THE TYPE	THE PARTY OF	MARIANI MALINA	nac q	11001 11 11	LINN,	
40		- Later Hill U1.7				to a cold first throat and the same trace		
40		4167114		J. Mark. M	May and have made	indian Althoraphia.	An A	<u>\</u>
	.15 .2	4	1	2 Frequency (M	5	10	20	30
<b>O</b> Site	: C001-KS		90.00	2 Frequency (M	5		20	30
O Site Condition Project	: C001-KS	-B LISN-L20130	90.00	2 Frequency (M	5		20	30
<b>O</b> Site Condition Project	: C001-KS :: FCC CLASS- : (FC) 3322 : Mode 3	-B LISN-L20130	90.00	2 Frequency (M	5 IHz)		20	30
<b>O</b> Site Condition Project	: C001-KS :: FCC CLASS- : (FC) 3322 : Mode 3	-B LISN-L20130 203 Over	0306 LINI Limit	2 Frequency (M E Read LI Level Fact	5 IHz)	10	20	30
<b>O</b> Site Condition Project	: COO1-KS :: FCC CLASS- :: (FC) 3322 :: Mode 3  Freq Lev  MHz di  0.31 36 0.31 24 0.39 22 0.39 34 0.44 20 0.44 20 0.44 30 0.50 33	-B LISN-L20130 203 Over evel Limit	D306 LINE Limit Line	Z Frequency (M E Read II Level Fact dBuV 26.00 0. 13.50 0. 11.50 0. 24.40 0. 9.80 0. 9.80 0. 22.70 0. 22.90 0.	SN Cable or Loss I dB dB dB dB d5 10.24 (65 10.24 (10.25 (27 10.25	10  Remark  OF Average Average DP Average OF	20	30

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### FCC Test Report

Test Mode :	Mode 3	Temperature :	19~20℃					
Test Engineer :	Tom Wang	Relative Humidity :	39~40%					
Test Voltage :	120Vac / 60Hz	Phase :	Neutral					
Eurotion Type	WCDMA Band V Idle + WL/	AN Idle + Bluetooth Id	le + USB Cable (Charging from					
Function Type :	Adapter) + Earphone + FM Rx + SIM 1							
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.							



Site : C001-KS Condition: FCC CLASS-B LISN-N20130306 NEUTRAL Project : (FC) 332203 mode : Mode 3

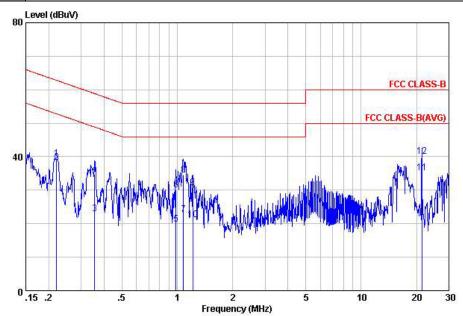
	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
-	MHz	dBu∀	dB	dBu₹	dBu∀	dB	dB	
1	0.18	46.02	-18.53	64.55	34.50	1.31	10.21	QP
2	0.18	31.42	-23.13	54.55	19.90	1.31	10.21	Average
3	0.23	26.06	-26.42	52.48	14.90	0.94	10.22	Average
4 5 6 7	0.23	41.16	-21.32	62.48	30.00	0.94	10.22	QP
5	0.27	40.37	-20.70	61.07	29.31	0.83	10.23	QP
6	0.27	27.67	-23.40	51.07	16.61	0.83	10.23	Average
7	0.29	27.09	-23.32	50.41	16.09	0.76	10.24	Average
8 9	0.29	39.89	-20.52	60.41	28.89	0.76	10.24	QP
9	0.33	23.72	-25.77	49.49	12.90	0.58	10.24	Average
10	0.33	38.12	-21.37	59.49	27.30	0.58	10.24	QP
11	0.57	27.63	-18.37	46.00	17.10	0.27	10.26	Average
12	0.57	35.53	-20.47	56.00	25.00	0.27	10.26	QP

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### FCC Test Report

Test Mode :	Mode 4	Temperature :	19~20℃					
Test Engineer :	Tom Wang	Relative Humidity :	39~40%					
Test Voltage :	120Vac / 60Hz	Phase :	Line					
Function Type :	WCDMA Band II Idle + WLA	AN Idle + Bluetooth Idl	e + USB Cable (Data Link with					
Function Type :	PC) + Earphone + GPS Rx + SIM 1							
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.							



Site : C001-KS Condition: FCC CLASS-B LISN-L20130306 LINE Project : (FC) 332203 mode : Mode 4

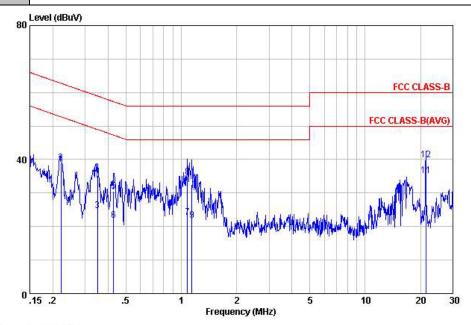
	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
_	MHz	dBuV	dB	dBuV	dBuV	dB	dB	-
1 2 3 4 5 6 7 8 9	0.22		-23.44	62.79	28.18	0.95	10.22	
2	0.22	38.35	-14.44	52.79	27.18	0.95	10.22	Average
3	0.36	22.87	-25.96	48.83	12.20	0.42	10.25	Average
4	0.36	34.87	-23.96	58.83	24.20	0.42	10.25	QP
5	0.98	19.88	-26.12	46.00	9.50	0.10	10.28	Average
6	0.98	29.98	-26.02	56.00	19.60	0.10	10.28	QP
7	1.08	22.78	-23.22	46.00	12.40	0.10	10.28	Average
8	1.08	34.58	-21.42	56.00	24.20	0.10	10.28	QP
9	1.22	30.68	-25.32	56.00	20.30	0.10	10.28	QP
10	1.22	21.08	-24.92	46.00	10.70	0.10	10.28	Average
11	21.37	35.20	-14.80	50.00	24.59	0.10	10.51	
12	21.37	40.10	-19.90	60.00	29.49	0.10	10.51	

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**19~20**℃ Test Mode: Mode 4 Temperature : 39~40% Test Engineer: Tom Wang Relative Humidity: Phase: Test Voltage : 120Vac / 60Hz Neutral WCDMA Band II Idle + WLAN Idle + Bluetooth Idle + USB Cable (Data Link with Function Type: PC) + Earphone + GPS Rx + SIM 1

Remark: All emissions not reported here are more than 10 dB below the prescribed limit.



: C001-KS Site

Condition: FCC CLASS-B LISN-N20130306 NEUTRAL

Project : (FC) 332203 : Mode 4 mode

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBu₹	dB	dBuV	dBu₹	dB	dB	
1 2 3 4 5 6 7 8 9	0.22		-14.09	52.74	27.47	0.96		Average
2	0.22	39.05	-23.69	62.74	27.87	0.96	10.22	QP
3	0.35	24.77	-24.19	48.96	14.01	0.51	10.25	Average
4	0.35	35.17	-23.79	58.96	24.41	0.51	10.25	
5	0.43	30.57	-26.72	57.29	19.95	0.37	10.25	ÖP
6	0.43	21 77	-25.52	47 29	11.15	0.37	10 25	Average
7	1.08	22 79	-23.21	46.00	12.41	0.10		Average
8	1.08		-21.31	56.00	24.31	0.10	10.28	
9	1.14		-24.11	46.00	11.51	0.10		Average
1Ó	1.14		-23.41	56.00	22.21	0.10	10.28	
11	21.37		-14.82	50.00	24.47	0.20	10.51	
12	21.37		-20.02	60.00	29.27	0.20	10.51	

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

#### 3.2.2. Measuring Instruments

See list of measuring instruments 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 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.
- 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 (dBuV/m) = 20 log Emission level (uV/m)
- 9. Corrected Reading: Antenna Factor + Cable Loss + Read Level Preamp Factor= Level

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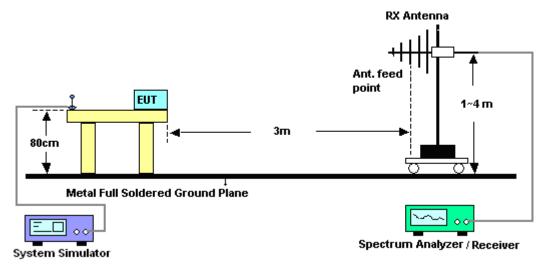
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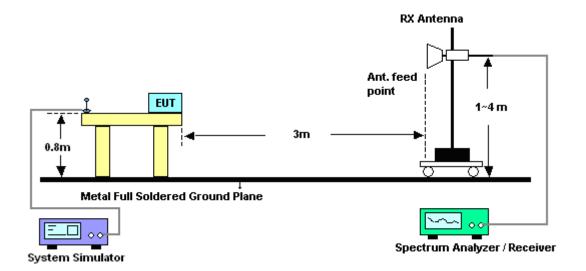
Report No.: FC332203

### 3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



#### For radiated emissions above 1GHz



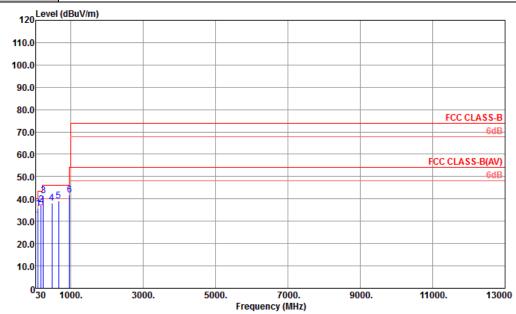
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3.2.5. Test Result of Radiated Emission

Test Mode :	Mode 4	Temperature :	23~24°C						
Test Engineer :	Robin Huang	Relative Humidity :	49~50%						
Test Distance :	3m	Polarization :	Horizontal						
Function Type :	VCDMA Band II Idle + WLAN Idle + Bluetooth Idle + USB Cable (Data Link w								
Function Type :	PC) + Earphone + GPS Rx + SIM 1								



Site : 03CH01-SZ

Condition : FCC CLASS-B 3m LF ANT-H 121202 HORIZONTAL

Project : (FC) 332203 Mode : Mode 4

Freq	Level		Limit Line						T/Pos	Remark
MHz	$\overline{dBuV/m}$	dB	$\overline{\text{dBuV/m}}$	dBuV	dB/m	dB	dB	cm	deg	
2 ! 174.53 3 ! 239.52 4 480.08 5 660.50	35. 60 37. 51 41. 47 38. 19 39. 01 41. 89	-5. 99 -4. 53 -7. 81 -6. 99	43. 50 46. 00 46. 00 46. 00	57. 18 58. 31 48. 31 46. 33	9. 47 11. 73 17. 20 19. 40	1. 28 1. 63 2. 08 2. 40	30. 66 30. 42 30. 20 29. 40 29. 12 28. 72			Peak

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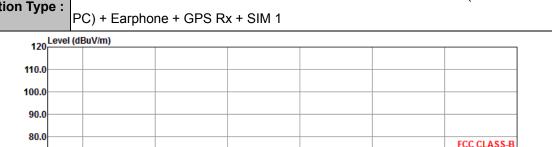


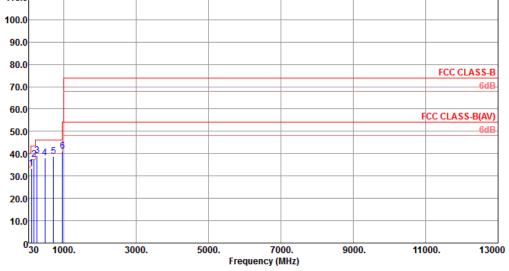
Test Mode: Mode 4 Temperature: 23~24°C

Test Engineer: Robin Huang Relative Humidity: 49~50%

Test Distance: 3m Polarization: Vertical

Function Type: WCDMA Band II Idle + WLAN Idle + Bluetooth Idle + USB Cable (Data Link with PC) + Farphone + GPS Rx + SIM 1





Site : 03CH01-SZ

Condition : FCC CLASS-B 3m LF ANT-V 121202 VERTICAL

Project : (FC) 332203 Mode : Mode 4

	Freq	Level		Limit Line						T/Pos	Remark
	MHz	$\overline{\text{dBuV/m}}$	<del>dB</del>	$\overline{\text{dBuV/m}}$	dBuV	dB/m	dB	dB	cm	deg	
1	102. 75	33. 55	-9. 95	43.50	51. 54	11.50	1. 17	30.66			Peak
2	175. 50	37.37	-6. 13	43.50	57. 21	9.30	1.28	30.42			Peak
3	258. 92	38.98	-7.02	46.00	54.01	13.43	1.68	30.14			Peak
4	480.08	38.03	-7.97	46.00	48. 15	17.20	2.08	29.40			Peak
5	720.64	38.82	-7.18	46.00	45.30	20.08	2.48	29.04	100	240	QP
6	960, 23	41.02	-12.98	54.00	45. 13	21.80	2.81	28, 72			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	Jun. 01, 2012	Mar. 26, 2013	May 31, 2013	Conduction (CO01-KS)
LISN	MessTec	AN3016	60103	9kHz~30MHz	Dec. 29, 2012	Mar. 26, 2013	Dec. 28, 2013	Conduction (CO01-KS)
LISN	MessTec	AN3016	60105	9kHz~30MHz	Dec. 29, 2012	Mar. 26, 2013	Dec. 28, 2013	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP0000008 11	N/A	Nov. 15, 2012	Mar. 26, 2013	Nov. 14, 2013	Conduction (CO01-KS)
System Simulator	R&S	CMU200	837587/066	2G Full-Band	Dec. 29, 2012	Mar. 26, 2013	Dec. 28, 2013	Conduction (CO01-KS)
GPS Station	ADIVIC	MP9000	MP9000-111 046	N/A	Nov. 15, 2012	Mar. 26, 2013	Nov. 14, 2013	Conduction (CO01-KS)
Signal Generator	R&S	SMR40	100455	10MHz~40GHz	Dec. 29, 2012	Mar. 26, 2013	Dec. 28, 2013	Conduction (CO01-KS)
ESCI TEST Receiver	R&S	ESCI	100724	9K-3GHz	Mar. 28, 2013	Apr. 16, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
Spectrum Analyzer	R&S	FSP30	101362	9kHz~30GHz	Mar. 28, 2013	Apr. 16, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
Double Ridge Horn Amtenna	ETS Lindgren	3117	00119436	1GHz~18GHz	Oct. 12, 2012	Apr. 16, 2013	Oct. 11, 2013	Radiation (03CH01-SZ)
Bilog Antenna	SCHAFFNER	CBL6112B	2614	30Mhz~2Ghz	Nov. 03, 2012	Apr. 16, 2013	Nov. 02, 2013	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9K-3000MHz GAIN 30db	Mar. 28, 2013	Apr. 16, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
Amplifier	Yiai	AV3860B	04030	2GHz~26.5GHz	Mar. 28, 2013	Apr. 16, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
GPS Station	T&E	GS-50	N/A	N/A	Oct. 12, 2012	Apr. 16, 2013	Oct. 11, 2013	Radiation (03CH01-SZ)
System Simulator	Agilent	E5515C	MY50264168	GSM/WCDMA /CDMA2000	Sep. 04, 2012	Apr. 16, 2013	Sep. 03, 2013	Radiation (03CH01-SZ)
System Simulator(FM)	R&S	CMU200	108162	2G Full Band	Oct. 11, 2012	Apr. 16, 2013	Oct. 10, 2013	Radiation (03CH01-SZ)

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## 5. Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of	2.26
Confidence of 95% (U = 2Uc(y))	2.20

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.54
Confidence of 35% (0 = 200(y))	

#### **Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)**

Measuring Uncertainty for a Level of	
Confidence of 95%	4.72
(U = 2Uc(y))	

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## Appendix A. Photographs of EUT

Please refer to Sporton report number EP332203 as below.

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