

# FCC Test Report

APPLICANT : CT Asia  
EQUIPMENT : Smartphone  
BRAND NAME : BLU  
MODEL NAME : Studio 5.0  
FCC ID : YHLBLUSTUDIO50  
STANDARD : FCC 47 CFR FCC Part 15 Subpart B  
CLASSIFICATION : Certification

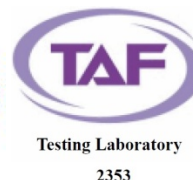
The product was received on Apr. 17, 2013 and completely tested on May 08, 2013. We, SPORTON INTERNATIONAL (SHENZHEN) INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.4-2003 and shown the compliance with the applicable technical standards.

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

Reviewed by:



Jones Tsai / Manager



**SPORTON INTERNATIONAL (SHENZHEN) INC.**

**No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan warehouse, Nanshan District, Shenzhen, Guangdong, P.R.C.**

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## REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC341702	Rev. 01	Initial issue of report	May 24, 2013

## SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.107	AC Conducted Emission	< 15.107 limits	PASS	Under limit 6.17 dB at 0.370 MHz
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	Under limit 5.22 dB at 238.550 MHz

## 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	Studio 5.0
FCC ID	YHLBLUSTUDIO50
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/HSPA/WLAN 11bgn/ Bluetooth EDR/Bluetooth v4.0 - LE
HW Version	V1.0
SW Version	BLU_D530_V04_GENERIC
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 cards 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. For the dual SIM card mobile, after pre-scan two SIM cards, we found test result with SIM1 card was the worst, so we choose SIM1 card to perform all tests.

## 1.4. Product Specification of Equipment Under Test

Product Specification subjective to this standard	
<b>Tx Frequency</b>	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz
<b>Rx Frequency Range</b>	GSM850: 869.2 MHz ~ 893.8 MHz GSM1900: 1930.2 MHz ~ 1989.8 MHz WCDMA Band V: 871.4 MHz ~ 891.6 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 FM: 88 MHz ~ 108 MHz
<b>Antenna Type</b>	WWAN : Fixed Internal Antenna WLAN : PIFA Antenna Bluetooth : PIFA Antenna
<b>Type of Modulation</b>	GSM / GPRS: GMSK EDGE: GMSK / 8PSK WCDMA: QPSK (Uplink) HSDPA: QPSK (Uplink) HSUPA: QPSK (Uplink) 802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) Bluetooth BDR (1Mbps) : GFSK Bluetooth EDR (2Mbps) : $\pi/4$ -DQPSK Bluetooth EDR (3Mbps) : 8-DPSK Bluetooth v4.0 - LE: GFSK GPS : BPSK FM

## 1.5. Test Site

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		
Test Site No.	Sporton Site No.		FCC/IC Registration No.
	TH01-SZ	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.

## 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.

Item	EUT Configuration	Test Condition		
		EMI AC	EMI RE<1G	EMI RE≥1G
1.	Charging Mode (EUT with adapter)	☒	☒	Note 1
2.	Data application transferred mode (EUT with PC)	☒	☒	☒

#### Abbreviations:

- EMI AC: AC conducted emissions
- EMI RE ≥ 1G: EUT radiated emissions ≥ 1GHz
- EMI RE < 1G: EUT radiated emissions < 1GHz

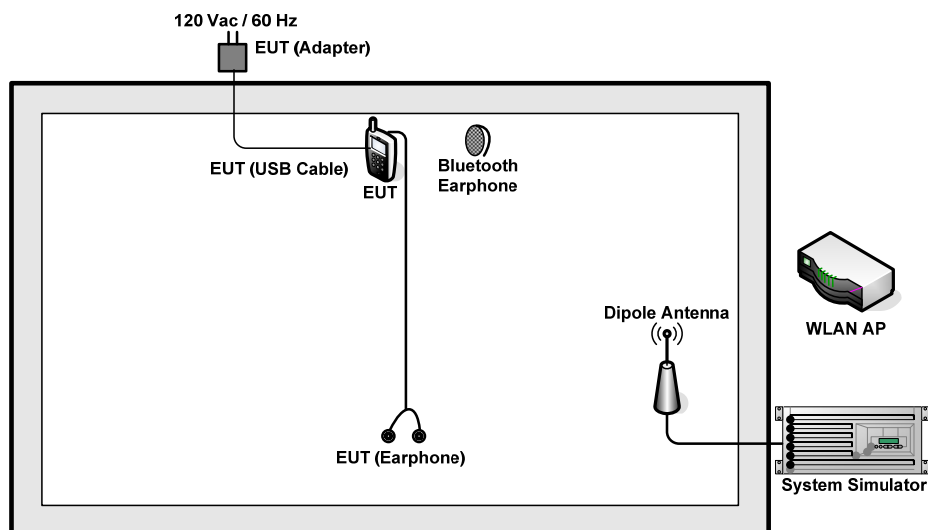
**Note 1:** Testing for this mode is not required or not the worst case.

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

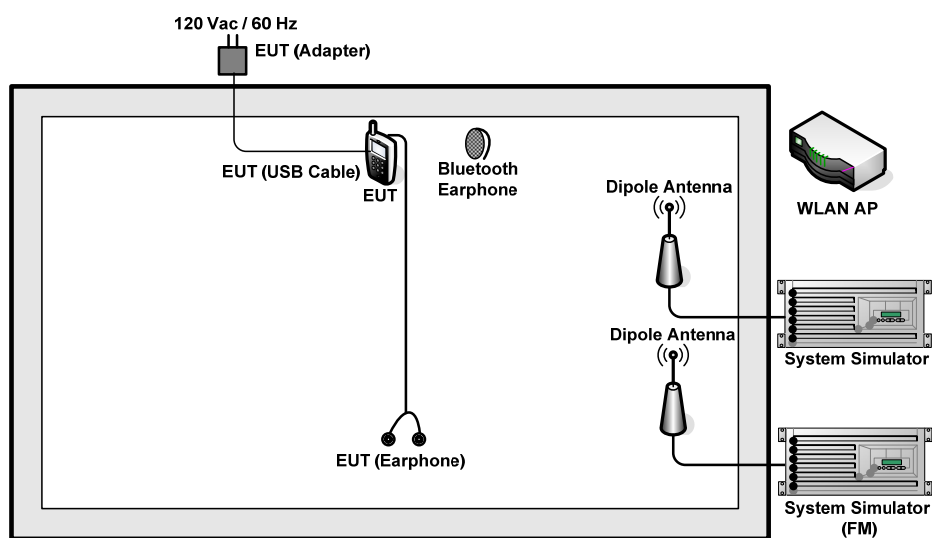


Test Items	EUT Configure Mode	Function Type
AC Conducted Emission	1/2	<p>Mode 1: GSM850 Idle + USB Cable (Charging from Adapter) + Bluetooth Idle + WLAN Idle + Earphone + Camera + SIM1 &lt;Fig. 1&gt;</p> <p>Mode 2: GSM1900 Idle + USB Cable (Charging from Adapter) + Bluetooth Idle + WLAN Idle + Earphone + MPEG4 + SIM1 &lt;Fig. 1&gt;</p> <p>Mode 3: WCDMA Band V Idle + USB Cable (Charging from Adapter) + Bluetooth Idle + WLAN Idle + Earphone + FM Rx + SIM1 &lt;Fig. 2&gt;</p> <p>Mode 4: WCDMA Band II Idle + USB Cable (Data Link with PC) + Bluetooth Idle + WLAN Idle + Earphone + GPS Rx + SIM1 &lt;Fig. 3&gt;</p>
Radiated Emissions < 1GHz	1/2	<p>Mode 1: GSM850 Idle + USB Cable (Charging from Adapter) + Bluetooth Idle + WLAN Idle + Earphone + Camera + SIM1 &lt;Fig. 1&gt;</p> <p>Mode 2: GSM1900 Idle + USB Cable (Charging from Adapter) + Bluetooth Idle + WLAN Idle + Earphone + MPEG4 + SIM1 &lt;Fig. 1&gt;</p> <p>Mode 3: WCDMA Band V Idle + USB Cable (Charging from Adapter) + Bluetooth Idle + WLAN Idle + Earphone + FM Rx + SIM1 &lt;Fig. 2&gt;</p> <p>Mode 4: WCDMA Band II Idle + USB Cable (Data Link with PC) + Bluetooth Idle + WLAN Idle + Earphone + GPS Rx + SIM1 &lt;Fig. 3&gt;</p>
Radiated Emissions ≥ 1GHz	2	<p>Mode 1: WCDMA Band II Idle + USB Cable (Data Link with PC) + Bluetooth Idle + WLAN Idle + Earphone + GPS Rx + SIM1 &lt;Fig. 3&gt;</p>
<b>Remark:</b> <ol style="list-style-type: none"> <li>The worst case of AC Conducted Emission is mode 3; the test data of this mode was reported.</li> <li>The USB Link mode of AC Conducted Emission is mode 4; the test data of this mode was reported.</li> <li>The worst case of Radiated Emissions is mode 4; only the test data of this mode was reported.</li> <li>Link with PC means data application transferred mode between EUT and PC.</li> </ol>		

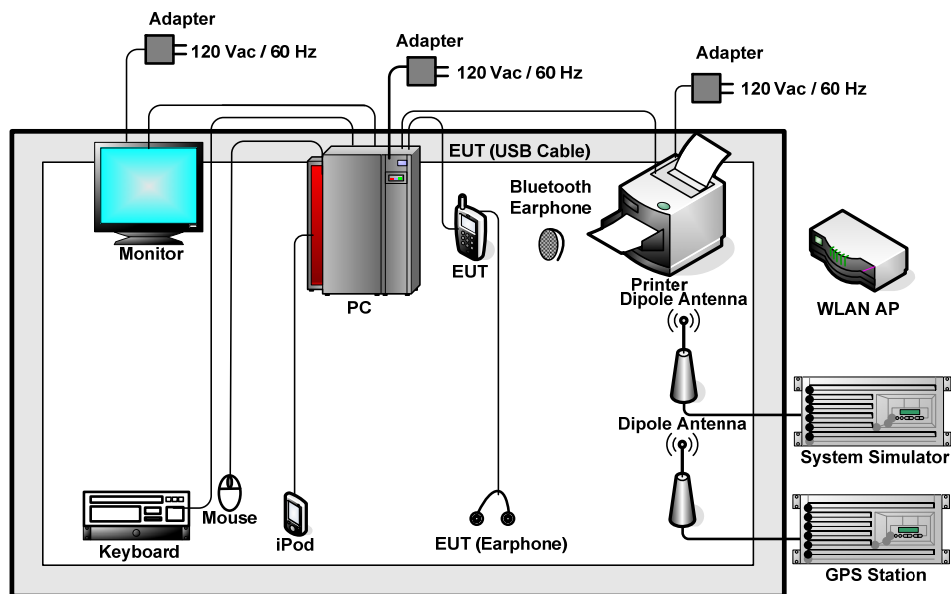
## 2.2. Connection Diagram of Test System



<Fig. 1>



<Fig. 2>



**<Fig. 3>**

### 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	E5515C	N/A	N/A	Unshielded, 1.8 m
2.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
3.	GPS Station	T&E	GS-50	N/A	N/A	Unshielded, 1.8 m
4.	WLAN AP	D-link	DIR-612	N/A	N/A	Unshielded, 1.8 m
5.	WLAN AP	D-link	DIR-615	N/A	N/A	Unshielded, 1.8 m
6.	PC	Dell	OPTIPLEX 390	FCC DoC	N/A	Unshielded, 1.8 m
7.	Monitor	DELL	IN1940MWB	FCC DoC	Shielded, 1.2 m	Unshielded, 1.8 m
8.	(USB) Mouse	Dell	MS111-L	FCC DoC	Shielded, 1.2 m	N/A
9.	(USB) Keyboard	Dell	SK212-B	N/A	N/A	Unshielded, 1.8 m
10.	Bluetooth Earphone	Nokia	BH-108	N/A	N/A	N/A
11.	Printer	HP	Laser Jet 1018	FCC DoC	Shielded, 1.8 m	Unshielded, 1.8 m
12.	Printer	SAMSUNG	ML-1610	N/A	Shielded, 1.8 m	Unshielded, 1.8 m
13.	iPod	Apple	MC525 ZP/A	FCC DoC	Unshielded, 1.0 m	N/A

## 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. Execute GPS function to make the EUT receive continuous signals from GPS station.
3. Turn on FM function to keep EUT receiving continuous signals from System Simulator.
4. Execute "Video Player" to play MPEG4 files.
5. Turn on camera to capture images.

### 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 (MHz)	Conducted limit (dBuV)	
	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.

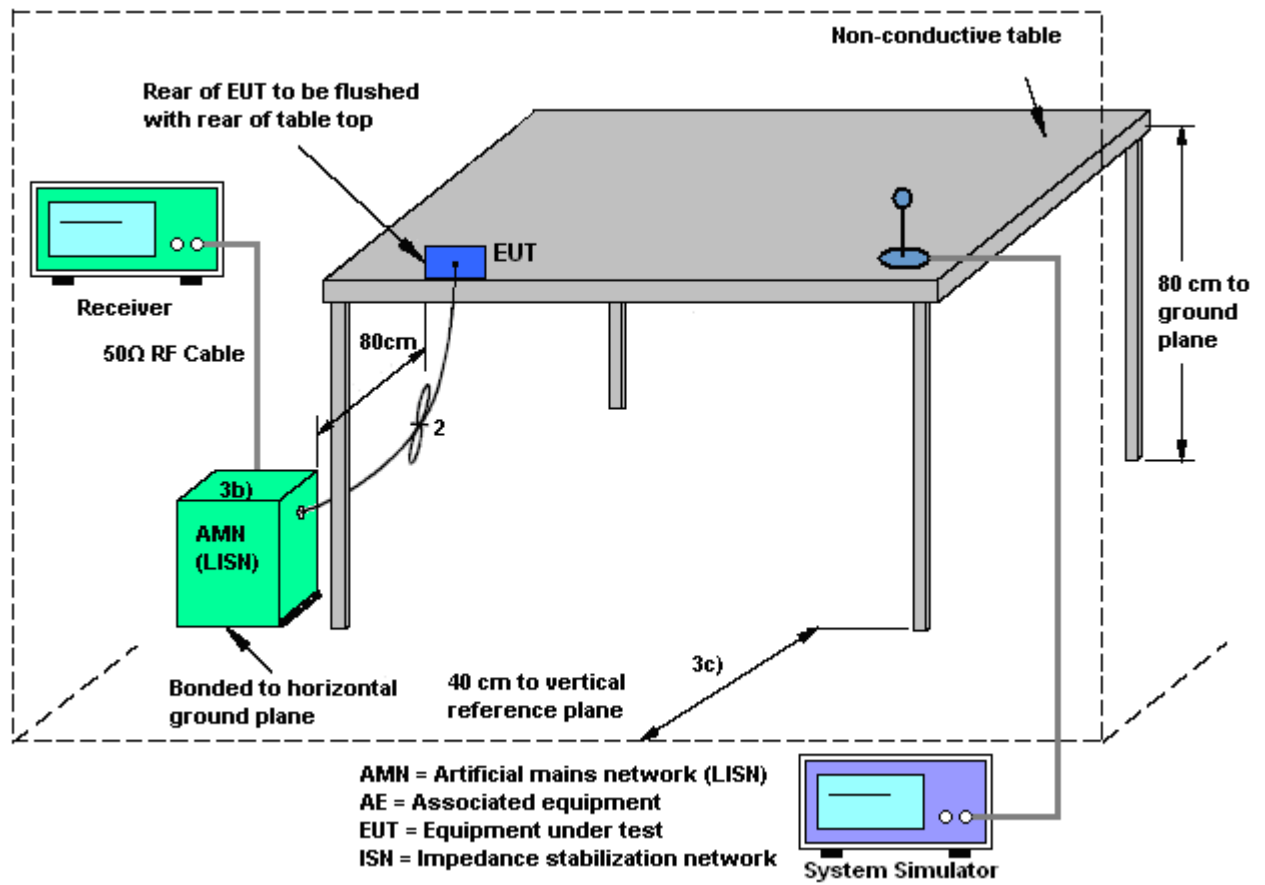
##### 3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

##### 3.1.3 Test Procedure

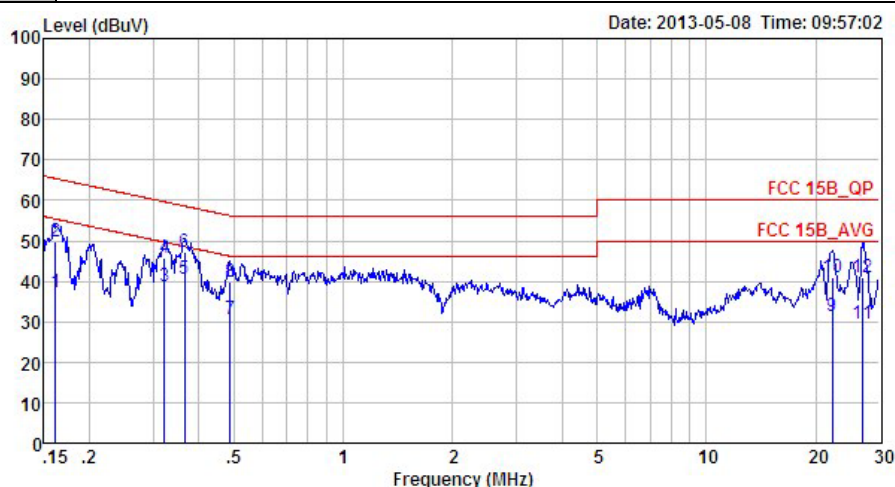
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.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

### 3.1.4 Test Setup



### 3.1.5 Test Result of AC Conducted Emission

<b>Test Mode :</b>	Mode 3	<b>Temperature :</b>	24~25℃
<b>Test Engineer :</b>	Jerry Chen	<b>Relative Humidity :</b>	50~51%
<b>Test Voltage :</b>	120Vac / 60Hz	<b>Phase :</b>	Line
<b>Function Type :</b>	WCDMA Band V Idle + USB Cable (Charging from Adapter) + Bluetooth Idle + WLAN Idle + Earphone + FM Rx + SIM1		
<b>Remark :</b>	All emissions not reported here are more than 10 dB below the prescribed limit.		



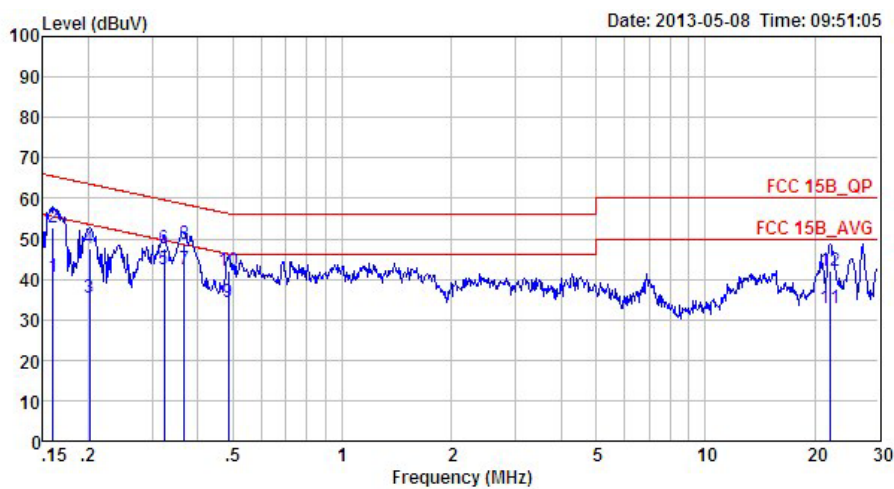
Site : CO01-S2  
Condition: FCC 15B QP LISN\_L\_2000601 LINE

Mode : Mode 3

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.16	37.28	-18.10	55.38	27.20	0.03	10.05	Average
2	0.16	49.68	-15.70	65.38	39.60	0.03	10.05	QP
3	0.32	38.59	-11.07	49.66	28.50	0.02	10.07	Average
4	0.32	45.69	-13.97	59.66	35.60	0.02	10.07	QP
5 *	0.37	40.69	-7.92	48.61	30.60	0.02	10.07	Average
6	0.37	47.29	-11.32	58.61	37.20	0.02	10.07	QP
7	0.49	30.60	-15.59	46.19	20.50	0.02	10.08	Average
8	0.49	40.00	-16.19	56.19	29.90	0.02	10.08	QP
9	22.18	31.29	-18.71	50.00	20.40	0.42	10.47	Average
10	22.18	40.89	-19.11	60.00	30.00	0.42	10.47	QP
11	26.84	29.39	-20.61	50.00	18.40	0.57	10.42	Average
12	26.84	40.79	-19.21	60.00	29.80	0.57	10.42	QP



<b>Test Mode :</b>	Mode 3	<b>Temperature :</b>	24~25°C
<b>Test Engineer :</b>	Jerry Chen	<b>Relative Humidity :</b>	50~51%
<b>Test Voltage :</b>	120Vac / 60Hz	<b>Phase :</b>	Neutral
<b>Function Type :</b>	WCDMA Band V Idle + USB Cable (Charging from Adapter) + Bluetooth Idle + WLAN Idle + Earphone + FM Rx + SIM1		
<b>Remark :</b>	All emissions not reported here are more than 10 dB below the prescribed limit.		

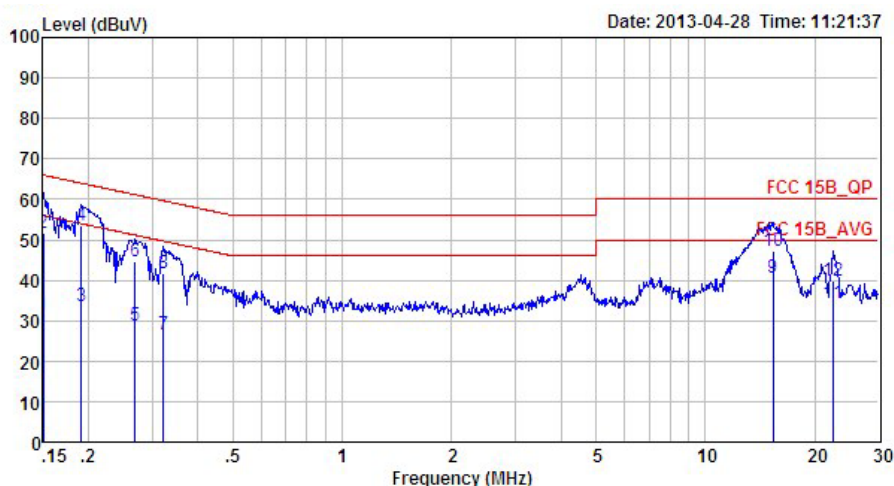


Site : CO01-SZ  
Condition: FCC 15B\_QP LISN\_N\_2000601 NEUTRAL

Mode : Mode 3

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.16	40.67	-14.80	55.47	30.60	0.02	10.05	Average
2	0.16	52.67	-12.80	65.47	42.60	0.02	10.05	QP
3	0.20	35.27	-18.27	53.54	25.19	0.02	10.06	Average
4	0.20	47.47	-16.07	63.54	37.39	0.02	10.06	QP
5	0.32	42.28	-7.34	49.62	32.19	0.02	10.07	Average
6	0.32	47.58	-12.04	59.62	37.49	0.02	10.07	QP
7 *	0.37	42.39	-6.17	48.56	32.30	0.02	10.07	Average
8	0.37	48.59	-9.97	58.56	38.50	0.02	10.07	QP
9	0.49	34.30	-11.93	46.23	24.20	0.02	10.08	Average
10	0.49	42.00	-14.23	56.23	31.90	0.02	10.08	QP
11	22.06	32.99	-17.01	50.00	21.90	0.62	10.47	Average
12	22.06	42.09	-17.91	60.00	31.00	0.62	10.47	QP

<b>Test Mode :</b>	Mode 4	<b>Temperature :</b>	24~25°C
<b>Test Engineer :</b>	Jerry Chen	<b>Relative Humidity :</b>	50~51%
<b>Test Voltage :</b>	120Vac / 60Hz	<b>Phase :</b>	Line
<b>Function Type :</b>	WCDMA Band II Idle + USB Cable (Data Link with PC) + Bluetooth Idle + WLAN Idle + Earphone + GPS Rx + SIM1		
<b>Remark :</b>	All emissions not reported here are more than 10 dB below the prescribed limit.		

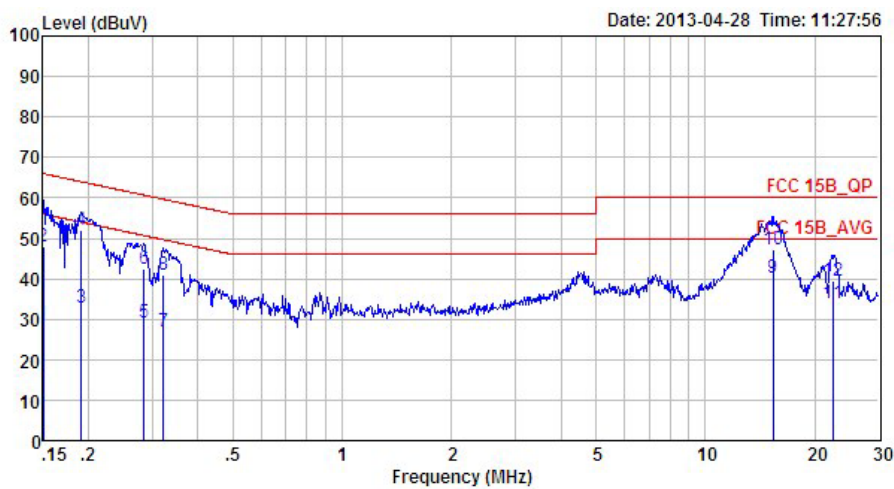


Site : C001-SZ  
Condition: FCC 15B QP LISN\_L\_2000601 LINE

Mode : Mode 4

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.15	31.38	-24.62	56.00	21.30	0.03	10.05	Average
2	0.15	51.68	-14.32	66.00	41.60	0.03	10.05	QP
3	0.19	33.48	-20.50	53.98	23.40	0.03	10.05	Average
4	0.19	53.58	-10.40	63.98	43.50	0.03	10.05	QP
5	0.27	28.68	-22.48	51.16	18.60	0.02	10.06	Average
6	0.27	44.58	-16.58	61.16	34.50	0.02	10.06	QP
7	0.32	26.39	-23.27	49.66	16.30	0.02	10.07	Average
8	0.32	41.69	-17.97	59.66	31.60	0.02	10.07	QP
9 *	15.39	40.70	-9.30	50.00	30.01	0.25	10.44	Average
10	15.39	47.20	-12.80	60.00	36.51	0.25	10.44	QP
11	22.54	34.29	-15.71	50.00	23.41	0.43	10.45	Average
12	22.54	39.69	-20.31	60.00	28.81	0.43	10.45	QP

<b>Test Mode :</b>	Mode 4	<b>Temperature :</b>	24~25°C
<b>Test Engineer :</b>	Jerry Chen	<b>Relative Humidity :</b>	50~51%
<b>Test Voltage :</b>	120Vac / 60Hz	<b>Phase :</b>	Neutral
<b>Function Type :</b>	WCDMA Band II Idle + USB Cable (Data Link with PC) + Bluetooth Idle + WLAN Idle + Earphone + GPS Rx + SIM1		
<b>Remark :</b>	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO01-SZ  
Condition: FCC 15B QP LISN\_N\_2000601 NEUTRAL

Mode : Mode 4

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.15	28.77	-27.23	56.00	18.70	0.02	10.05	Average
2	0.15	48.07	-17.93	66.00	38.00	0.02	10.05	QP
3	0.19	32.77	-21.21	53.98	22.70	0.02	10.05	Average
4	0.19	51.87	-12.11	63.98	41.80	0.02	10.05	QP
5	0.28	29.08	-21.60	50.68	19.00	0.02	10.06	Average
6	0.28	42.28	-18.40	60.68	32.20	0.02	10.06	QP
7	0.32	27.08	-22.58	49.66	16.99	0.02	10.07	Average
8	0.32	40.98	-18.68	59.66	30.89	0.02	10.07	QP
9 *	15.39	40.20	-9.80	50.00	29.41	0.35	10.44	Average
10	15.39	47.20	-12.80	60.00	36.41	0.35	10.44	QP
11	22.42	34.10	-15.90	50.00	23.00	0.64	10.46	Average
12	22.42	39.50	-20.50	60.00	28.40	0.64	10.46	QP

## 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
216 - 960	200	3
Above 960	500	3

### 3.2.2. Measuring Instruments

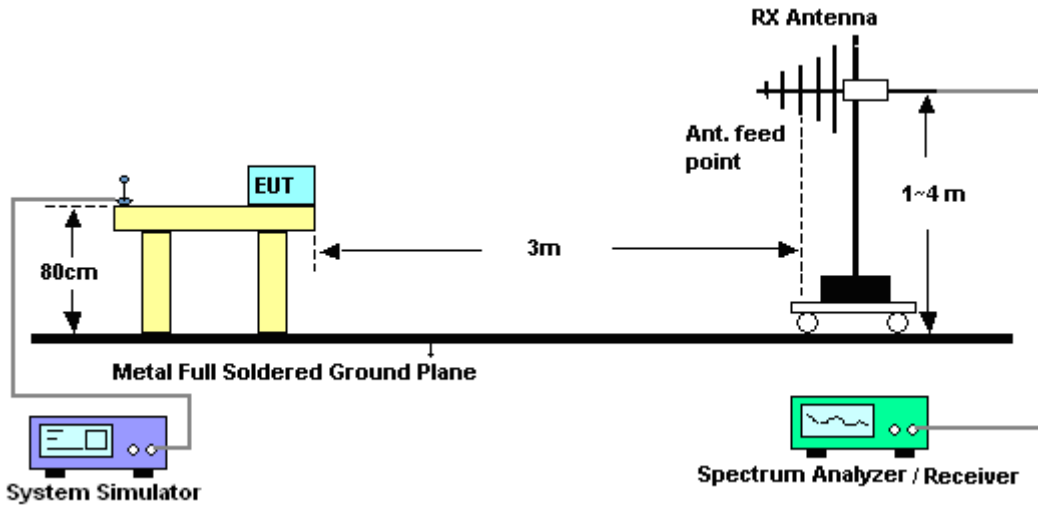
See list of measuring instruments of this test report.

### 3.2.3. Test Procedures

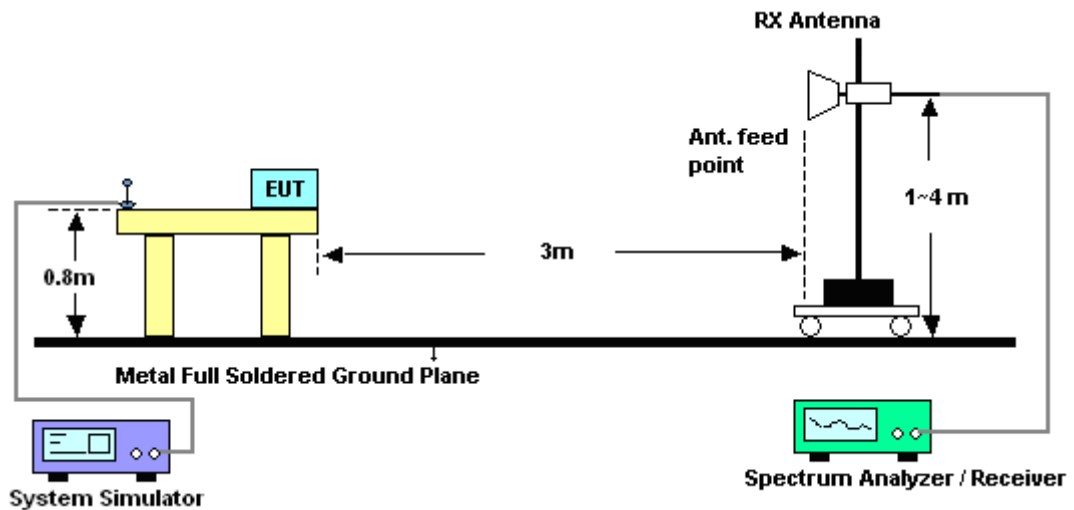
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna 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

### 3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz

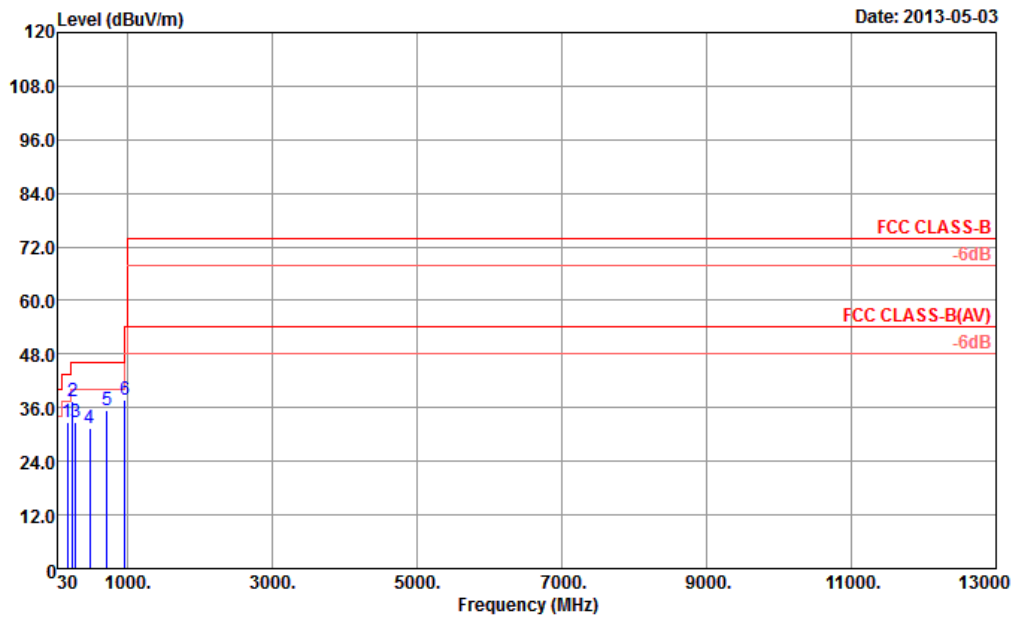


For radiated emissions above 1GHz



**3.2.5. Test Result of Radiated Emission**

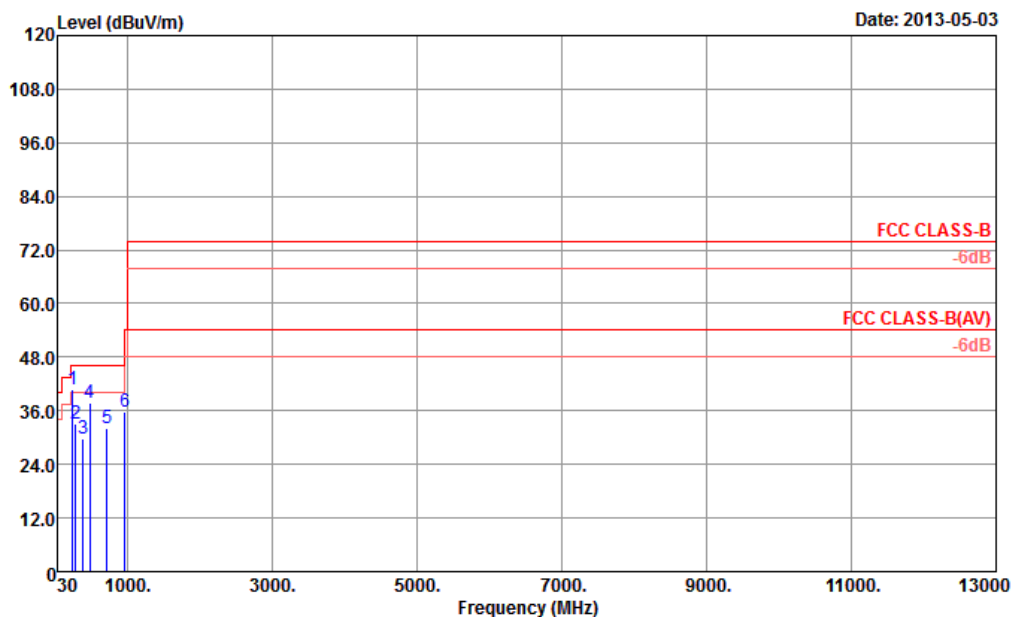
<b>Test Mode :</b>	Mode 4	<b>Temperature :</b>	24~25°C
<b>Test Engineer :</b>	John Zheng	<b>Relative Humidity :</b>	54~56%
<b>Test Distance :</b>	3m	<b>Polarization :</b>	Horizontal
<b>Function Type :</b>	WCDMA Band II Idle + USB Cable (Data Link with PC) + Bluetooth Idle + WLAN Idle + Earphone + GPS Rx + SIM1		



Site : 03CH01-SZ  
 Condition : FCC CLASS-B 3m LF ANT-H 121202 HORIZONTAL  
 Project : (FC) 341702  
 Mode : Mode 4

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	173.56	32.65	-10.85	43.50	52.32	9.47	1.28	30.42	---	---	Peak
2	239.52	37.34	-8.66	46.00	54.18	11.73	1.63	30.20	---	---	Peak
3	285.11	32.73	-13.27	46.00	47.89	13.20	1.69	30.05	---	---	Peak
4	480.08	31.38	-14.62	46.00	41.50	17.20	2.08	29.40	---	---	Peak
5	719.67	35.53	-10.47	46.00	42.09	20.00	2.48	29.04	---	---	Peak
6 P	959.90	37.93	-8.07	46.00	42.04	21.80	2.81	28.72	100	360	Peak

<b>Test Mode :</b>	Mode 4	<b>Temperature :</b>	24~25°C
<b>Test Engineer :</b>	John Zheng	<b>Relative Humidity :</b>	54~56%
<b>Test Distance :</b>	3m	<b>Polarization :</b>	Vertical
<b>Function Type :</b>	WCDMA Band II Idle + USB Cable (Data Link with PC) + Bluetooth Idle + WLAN Idle + Earphone + GPS Rx + SIM1		



Site : 03CH01-SZ  
 Condition : FCC CLASS-B 3m LF ANT-V 121202 VERTICAL  
 Project : (FC) 341702  
 Mode : Mode 4

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 P	238.55	40.78	-5.22	46.00	57.62	11.73	1.63	30.20	100	227
2	284.14	33.24	-12.76	46.00	48.40	13.20	1.69	30.05	---	---
3	383.08	29.71	-16.29	46.00	41.51	16.04	1.88	29.72	---	---
4	480.08	37.61	-8.39	46.00	47.73	17.20	2.08	29.40	---	---
5	717.73	31.93	-14.07	46.00	38.55	19.94	2.48	29.04	---	---
6	959.90	35.85	-10.15	46.00	39.96	21.80	2.81	28.72	---	---



## 4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC LISN	ETS-LINDGREN	3816/2SH	00103912	0.1MHz~108MHz	Feb. 28, 2013	Apr. 28,2013~ May 08, 2013	Feb. 27, 2014	Conduction (CO01-SZ)
AC LISN	ETS-LINDGREN	3816/2SH	00103892	0.1MHz~108MHz	Feb. 28, 2013	Apr. 28,2013~ May 08, 2013	Feb. 27, 2014	Conduction (CO01-SZ)
ESCIO TEST Receiver	R&S	1142.8007.03	100724	9K-3GHz	Mar. 08, 2013	Apr. 28,2013~ May 08, 2013	Mar. 07, 2014	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000891 N/A	N/A	Oct. 12, 2012	Apr. 28,2013~ May 08, 2013	Oct. 11, 2013	Conduction (CO01-SZ)
GPS Station	T&E	GS50	536468	GPS	Oct. 11, 2012	Apr. 28,2013~ May 08, 2013	Oct. 10, 2013	Conduction (CO01-SZ)
System Simulator	R&S	CMU200	100954	GSM	Jun. 14, 2012	Apr. 28,2013~ May 08, 2013	Jun. 13, 2013	Conduction (CO01-SZ)
System Simulator	Agilent	E5515C	MY47511418	2G/3G Full-Band	Nov. 03,2012	Apr. 28,2013~ May 08, 2013	Nov. 02,2013	Conduction (CO01-SZ)
ESCI TEST Receiver	R&S	ESCI	100724	9K-3GHz	Mar. 28, 2013	May 03, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
Spectrum Analyzer	R&S	FSP30	101362	9kHz~30GHz	Oct. 11, 2012	May 03, 2013	Oct. 10, 2013	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS Lindgren	3117	00119436	1GHz~18GHz	Oct. 12, 2012	May 03, 2013	Oct. 11, 2013	Radiation (03CH01-SZ)
Bilog Antenna	SCHAFFNER	CBL6112B	2614	30Mhz~2Ghz	Nov. 03, 2012	May 03, 2013	Nov. 02, 2013	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9K-3000MHz GAIN 30db	Mar. 28, 2013	May 03, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
Amplifier	Yiai	AV3860B	04030	2GHz~26.5GHz	Mar. 28, 2013	May 03, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
GPS Station	T&E	GS50	536468	GPS	Oct. 11, 2012	May 03, 2013	Oct. 10, 2013	Radiation (03CH01-SZ)
System Simulator	R&S	CMU200	100954	GSM	Jun. 14, 2012	May 03, 2013	Jun. 13, 2013	Radiation (03CH01-SZ)
System Simulator	Agilent	E5515C	MY47511418	2G/3G Full-Band	Nov. 03,2012	May 03, 2013	Nov. 02, 2013	Radiation (03CH01-SZ)



## 5. Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2U_c(y)$ )	2.26
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### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2U_c(y)$ )	2.54
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### Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2U_c(y)$ )	4.72
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## **Appendix A. Photographs of EUT**

Please refer to Sporton report number EP341702 as below.