



# FCC Test Report

**APPLICANT** : Brightstar Corporation  
**EQUIPMENT** : Mobile phone  
**BRAND NAME** : Avvio, PULSARE  
**MODEL NAME** : Avvio 361S, Avvio 361, Pulsare 361S, Pulsare 361  
**FCC ID** : WVBA361X  
**STANDARD** : FCC 47 CFR FCC Part 15 Subpart B  
**CLASSIFICATION** : Certification

The product was received on Nov. 25, 2014 and testing was completed on Jan. 09, 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.

*Louis Wu*

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Reviewed by: Louis Wu / Manager

*Jones Tsai*

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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**



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## REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC4N2501	Rev. 01	Initial issue of report	Jan. 13, 2015

## 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 8.01 dB at 0.170 MHz
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	Under limit 2.95 dB at 839.70 MHz for Quasi-Peak

# 1. General Description

## 1.1. Applicant

**Brightstar Corporation**

9725 NW 117th Ave., Miami, Florida, FL 33178, United States

## 1.2. Manufacturer

**Heng Da Chuang Xin Technology Limited**

Rm 1910 South Block, Cangsong Building, No. 7 Tairan Rd., Che Gongmiao Futian Dist., SZ, China

## 1.3. Product Feature of Equipment Under Test

Product Feature	
<b>Equipment</b>	Mobile phone
<b>Brand Name</b>	Avvio, PULSARE
<b>Model Name</b>	Avvio 361S, Avvio 361, Pulsare 361S, Pulsare 361
<b>FCC ID</b>	WVBA361X
<b>EUT supports Radios application</b>	GSM Bluetooth v3.0+EDR
<b>HW Version</b>	KC6012_MB_V1.0 2014_09_27
<b>SW Version</b>	AVVIO361_SE_V1_0_1
<b>EUT Stage</b>	Production Unit

**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 four types of EUT for this project. The differences between them are summary below:

Sample List	Model name	Brand name	SIM Slots
Sample 1	Avvio 361	Avvio	1
Sample 2	Avvio 361S	Avvio	2
Sample 3	Pulsare 361	PULSARE	1
Sample 4	Pulsare 361S	PULSARE	2

Avvio and PULSARE are identical on hardware. The only difference is for different market purpose

## 1.4. Product Specification subjective to this standard

Product Specification subjective to this standard	
<b>Tx Frequency</b>	GSM850 : 824.2 MHz ~ 848.8 MHz GSM1900 : 1850.2 MHz ~ 1909.8MHz Bluetooth: 2402 MHz ~ 2480 MHz
<b>Rx Frequency</b>	GSM850 : 869.2 MHz ~ 893.8 MHz GSM1900 : 1930.2 MHz ~ 1989.8 MHz Bluetooth: 2402 MHz ~ 2480 MHz
<b>Antenna Type</b>	WWAN : FPCB Antenna Bluetooth : FPCB Antenna
<b>Type of Modulation</b>	GSM: GMSK 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.

## 1.6. Test Location

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

<b>Test Site</b>	SPORTON INTERNATIONAL (SHENZHEN) INC.	
<b>Test Site Location</b>	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	
<b>Test Site No.</b>	<b>Sporton Site No.</b>	<b>FCC Registration No.</b>
	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.

## 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.

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

**Abbreviations:**

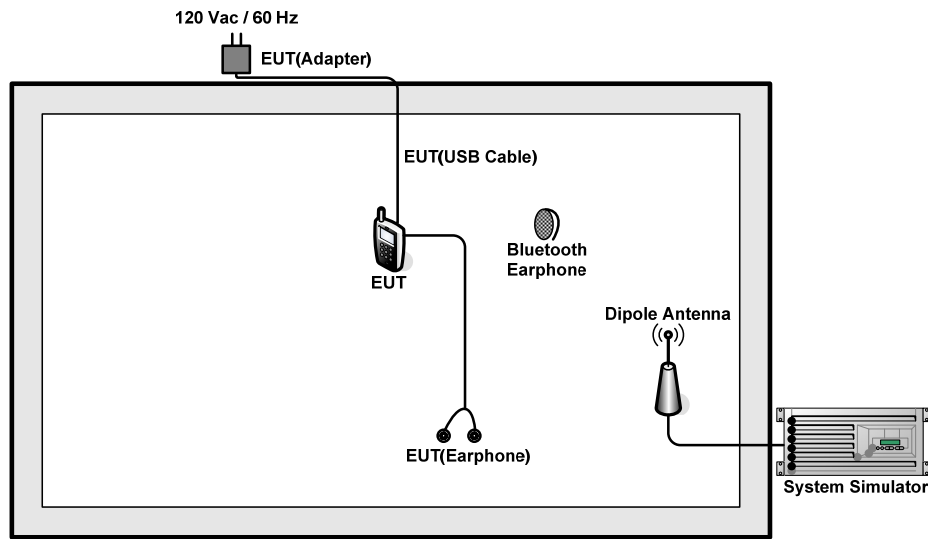
- EMI AC: AC conducted emissions
- EMI RE ≥ 1G: EUT radiated emissions ≥ 1GHz
- EMI RE < 1G: EUT radiated emissions < 1GHz

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

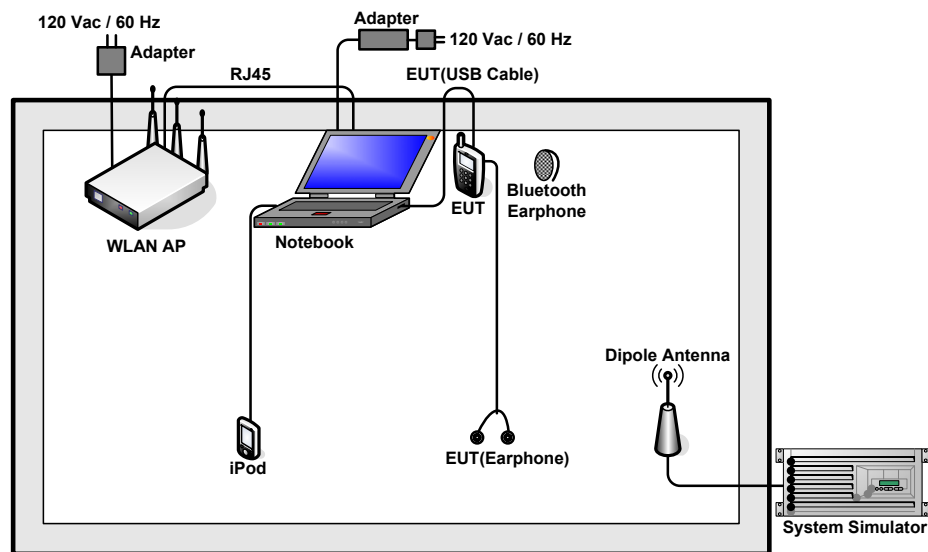


Test Items	EUT Configure Mode	Function Type
AC Conducted Emission	1/2	Mode 1: GSM850 Idle + Bluetooth Idle + USB Cable (Charging from Adapter) + Earphone + Camera + SIM 1<Fig.1> Mode 2: GSM1900 Idle + Bluetooth Idle + USB Cable (Charging from Adapter) + Earphone + MP3 + SIM 2<Fig.1> Mode 3: GSM850 Idle + Bluetooth Idle + USB Cable (Data Link with Notebook) + Earphone + SIM 1<Fig.2>
Radiated Emissions < 1GHz	1/2	Mode 1: GSM850 Idle + Bluetooth Idle + USB Cable (Charging from Adapter) + Earphone + Camera + SIM 1<Fig.1> Mode 2: GSM1900 Idle + Bluetooth Idle + USB Cable (Charging from Adapter) + Earphone + MP3 + SIM 2<Fig.1> Mode 3: GSM850 Idle + Bluetooth Idle + USB Cable (Data Link with Notebook) + Earphone + SIM 1<Fig.2>
Radiated Emissions ≥ 1GHz	1/2	Mode 1: GSM850 Idle + Bluetooth Idle + USB Cable (Charging from Adapter) + Earphone + Camera + SIM 1<Fig.1> Mode 2: GSM850 Idle + Bluetooth Idle + USB Cable (Data Link with Notebook) + Earphone + SIM 1<Fig.2>
<b>Remark:</b> <ol style="list-style-type: none"> <li>The worst case of AC is mode 1; and the USB Link mode of AC is mode 3; the test data of these modes were reported.</li> <li>The worst case of RE &lt; 1G is mode 1; and the USB Link mode of RE is mode 3; the test data of these modes were reported.</li> <li>Link with Notebook means data application transferred mode between EUT and Notebook.</li> </ol>		

## 2.2. Connection Diagram of Test System



<Fig.1>



<Fig.2>

## 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	CMW 500	N/A	N/A	Unshielded, 1.8 m
2.	System Simulator	Agilent	E5515C	N/A	N/A	Unshielded, 1.8 m
3.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8 m
4.	WLAN AP	D-Link	DIR-815	KA2DIR815A1	N/A	Unshielded, 1.8 m
5.	Bluetooth Earphone	Lenovo	LBH301	N/A	N/A	N/A
6.	Bluetooth Earphone	Nokia	BH-108	PYAHS-107W	N/A	N/A
7.	Notebook	Lenovo	E540	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
8.	Notebook	Lenovo	G480	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
9.	SD Card	SanDisk	4G class 4	FCC DoC	N/A	N/A
10.	iPod nano 8GB	Apple	MC690 ZP/A	FCC DoC	Shielded, 1.2m	N/A
11.	iPod	Apple	MC525 ZP/A	FCC DoC	Shielded, 1.0 m	N/A

## 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 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 / iPod.
2. Execute "Music Player" to play MP3 file.
3. 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.

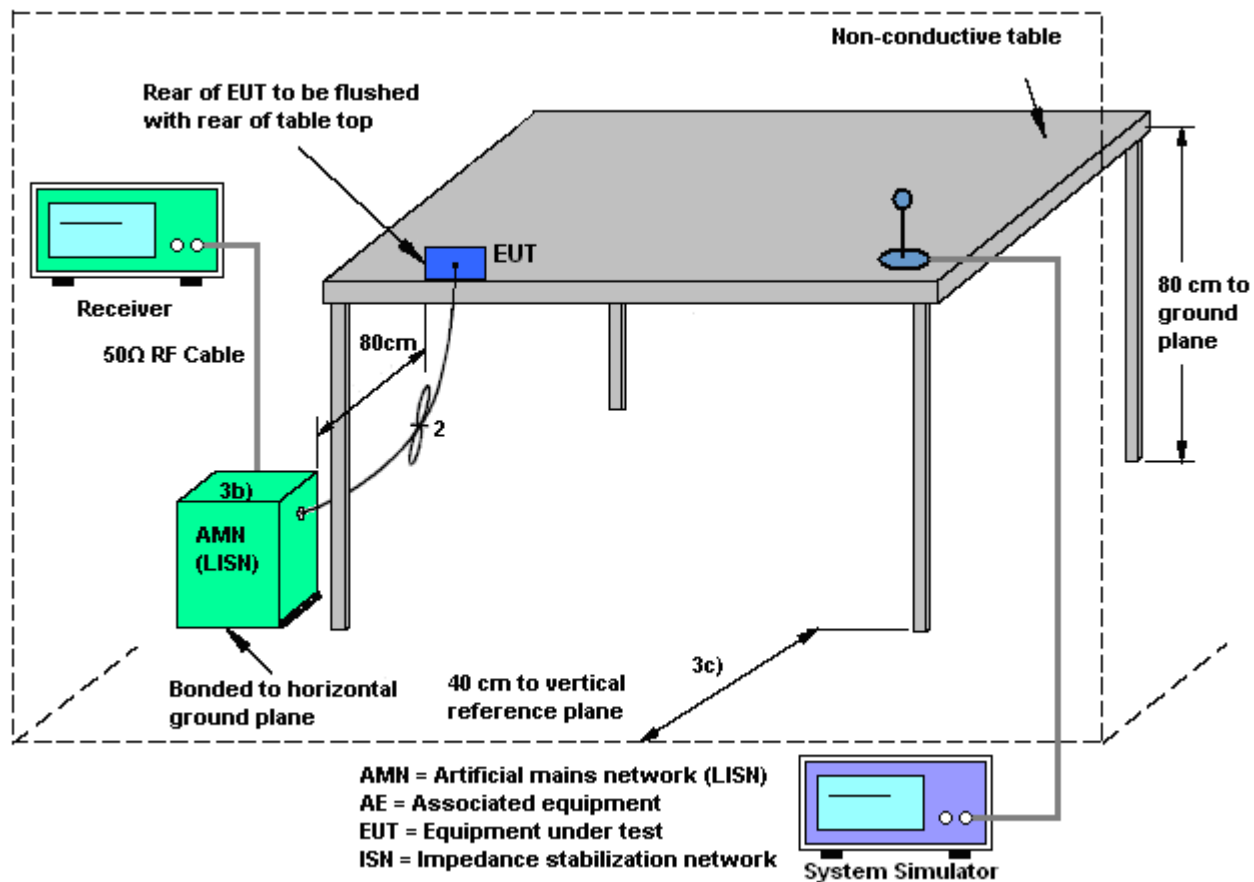
##### 3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

##### 3.1.3 Test Procedure

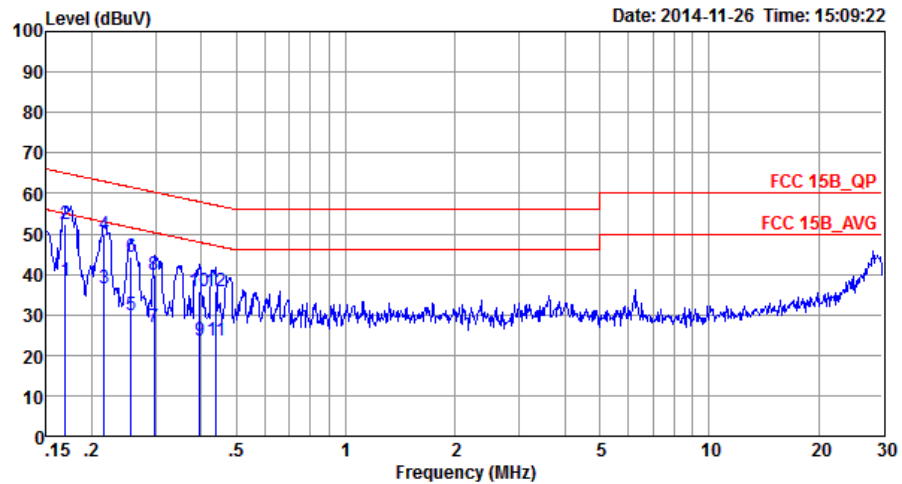
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

### 3.1.4 Test Setup



### 3.1.5 Test Result of AC Conducted Emission

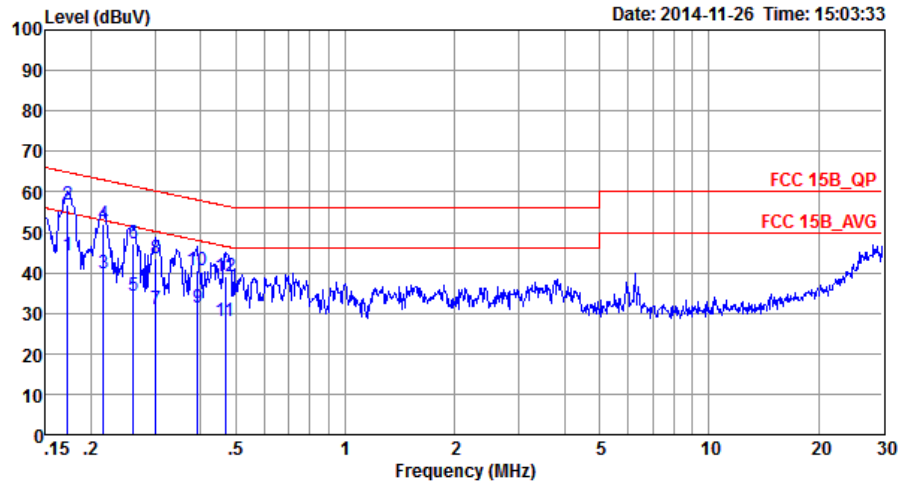
Test Mode :	Mode 1	Temperature :	21~22℃
Test Engineer :	Jack Tian	Relative Humidity :	41~42%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 Idle + Bluetooth Idle + USB Cable (Charging from Adapter) + Earphone + Camera + SIM 1		



Site : CO01-SZ  
Condition: FCC 15B\_QP LISN\_L\_20140304 LINE  
Project : (FC) 4N2501  
Mode : Mode 1

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.17	38.25	-16.74	54.99	27.70	0.22	10.33	Average
2 *	0.17	52.25	-12.74	64.99	41.70	0.22	10.33	QP
3	0.22	36.40	-16.56	52.96	25.89	0.23	10.28	Average
4	0.22	49.80	-13.16	62.96	39.29	0.23	10.28	QP
5	0.26	29.98	-21.58	51.56	19.50	0.24	10.24	Average
6	0.26	44.28	-17.28	61.56	33.80	0.24	10.24	QP
7	0.30	26.76	-23.56	50.32	16.31	0.25	10.20	Average
8	0.30	39.86	-20.46	60.32	29.41	0.25	10.20	QP
9	0.40	23.55	-24.40	47.95	13.10	0.28	10.17	Average
10	0.40	35.95	-22.00	57.95	25.50	0.28	10.17	QP
11	0.44	23.65	-23.42	47.07	13.20	0.29	10.16	Average
12	0.44	35.75	-21.32	57.07	25.30	0.29	10.16	QP

<b>Test Mode :</b>	Mode 1	<b>Temperature :</b>	21~22℃
<b>Test Engineer :</b>	Jack Tian	<b>Relative Humidity :</b>	41~42%
<b>Test Voltage :</b>	120Vac / 60Hz	<b>Phase :</b>	Neutral
<b>Function Type :</b>	GSM850 Idle + Bluetooth Idle + USB Cable (Charging from Adapter) + Earphone + Camera + SIM 1		

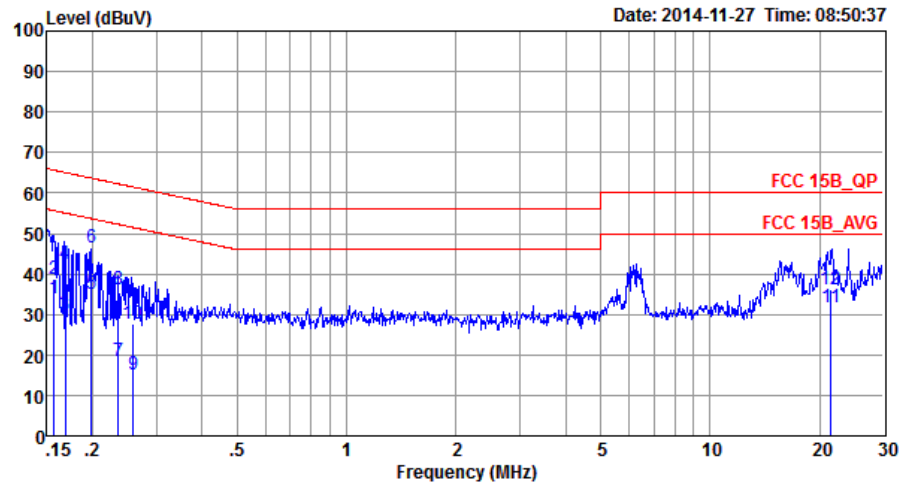


Site : CO01-SZ  
 Condition: FCC 15B\_QP LISN\_N\_20140304 NEUTRAL  
 Project : (FC)4N2501  
 Mode : Mode 1

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.17	44.15	-10.71	54.86	33.49	0.33	10.33	Average
2 *	0.17	56.85	-8.01	64.86	46.19	0.33	10.33	QP
3	0.22	39.80	-13.16	52.96	29.19	0.33	10.28	Average
4	0.22	52.00	-10.96	62.96	41.39	0.33	10.28	QP
5	0.26	34.38	-17.00	51.38	23.80	0.35	10.23	Average
6	0.26	47.28	-14.10	61.38	36.70	0.35	10.23	QP
7	0.30	30.96	-19.23	50.19	20.40	0.36	10.20	Average
8	0.30	43.56	-16.63	60.19	33.00	0.36	10.20	QP
9	0.39	31.26	-16.73	47.99	20.70	0.39	10.17	Average
10	0.39	40.76	-17.23	57.99	30.20	0.39	10.17	QP
11	0.47	28.16	-18.38	46.54	17.60	0.40	10.16	Average
12	0.47	39.16	-17.38	56.54	28.60	0.40	10.16	QP



Test Mode :	Mode 3	Temperature :	21~22℃
Test Engineer :	Jack Tian	Relative Humidity :	41~42%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 Idle + Bluetooth Idle + USB Cable (Data Link with Notebook) + Earphone + SIM 1		



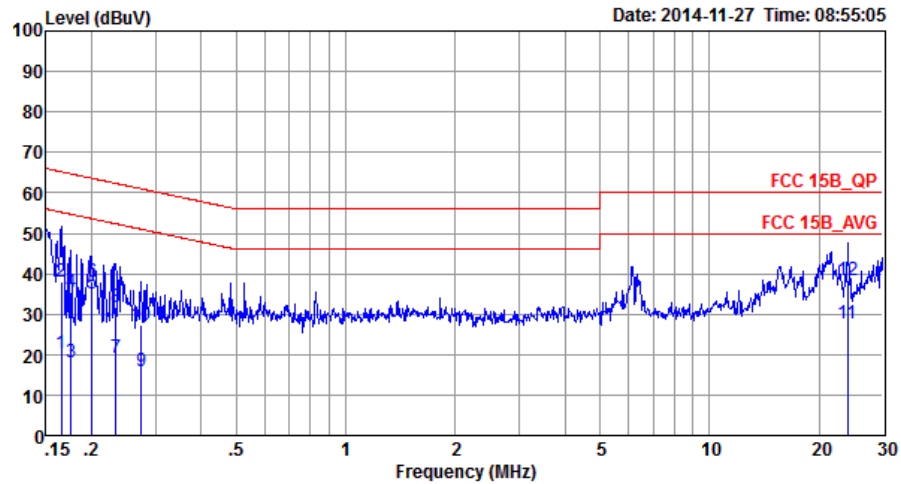
Site : C001-SZ  
Condition: FCC 15B\_QP LISN\_L\_20140304 LINE  
Project : (FC)4N2501  
Mode : Mode 3

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.16	34.07	-21.58	55.65	23.50	0.22	10.35	Average
2	0.16	38.87	-26.78	65.65	28.30	0.22	10.35	QP
3	0.17	29.85	-25.18	55.03	19.30	0.22	10.33	Average
4	0.17	42.45	-22.58	65.03	31.90	0.22	10.33	QP
5	0.20	35.02	-18.65	53.67	24.50	0.22	10.30	Average
6 *	0.20	46.52	-17.15	63.67	36.00	0.22	10.30	QP
7	0.24	18.59	-33.67	52.26	8.10	0.23	10.26	Average
8	0.24	36.19	-26.07	62.26	25.70	0.23	10.26	QP
9	0.26	15.08	-36.39	51.47	4.61	0.24	10.23	Average
10	0.26	27.78	-33.69	61.47	17.31	0.24	10.23	QP
11	21.49	31.84	-18.16	50.00	19.40	1.84	10.60	Average
12	21.49	36.24	-23.76	60.00	23.80	1.84	10.60	QP





<b>Test Mode :</b>	Mode 3	<b>Temperature :</b>	21~22℃
<b>Test Engineer :</b>	Jack Tian	<b>Relative Humidity :</b>	41~42%
<b>Test Voltage :</b>	120Vac / 60Hz	<b>Phase :</b>	Neutral
<b>Function Type :</b>	GSM850 Idle + Bluetooth Idle + USB Cable (Data Link with Notebook) + Earphone + SIM 1		



Site : C001-SZ  
 Condition: FCC 15B\_QP LISN\_N\_20140304 NEUTRAL  
 Project : (FC)4N2501  
 Mode : Mode 3

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.17	20.16	-35.05	55.21	9.49	0.33	10.34	Average
2	0.17	38.16	-27.05	65.21	27.49	0.33	10.34	QP
3	0.18	18.05	-36.63	54.68	7.41	0.32	10.32	Average
4	0.18	35.45	-29.23	64.68	24.81	0.32	10.32	QP
5 *	0.20	35.11	-18.47	53.58	24.50	0.32	10.29	Average
6	0.20	37.91	-25.67	63.58	27.30	0.32	10.29	QP
7	0.23	19.09	-33.26	52.35	8.49	0.34	10.26	Average
8	0.23	31.89	-30.46	62.35	21.29	0.34	10.26	QP
9	0.27	15.87	-35.11	50.98	5.30	0.35	10.22	Average
10	0.27	27.37	-33.61	60.98	16.80	0.35	10.22	QP
11	24.01	27.78	-22.22	50.00	15.00	2.22	10.56	Average
12	24.01	38.48	-21.52	60.00	25.70	2.22	10.56	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

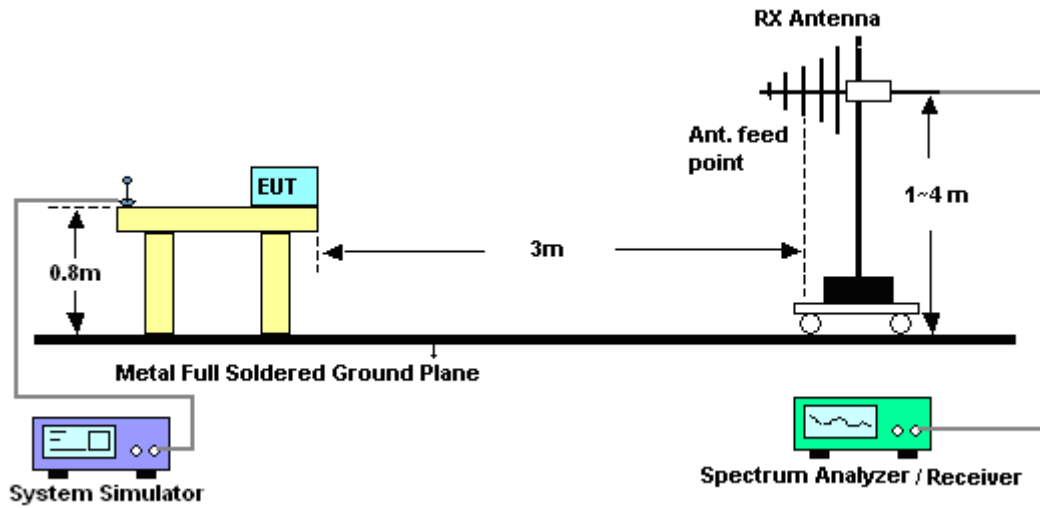
The measuring equipment is listed in the section 4 of this test report.

### 3.2.3. Test Procedures

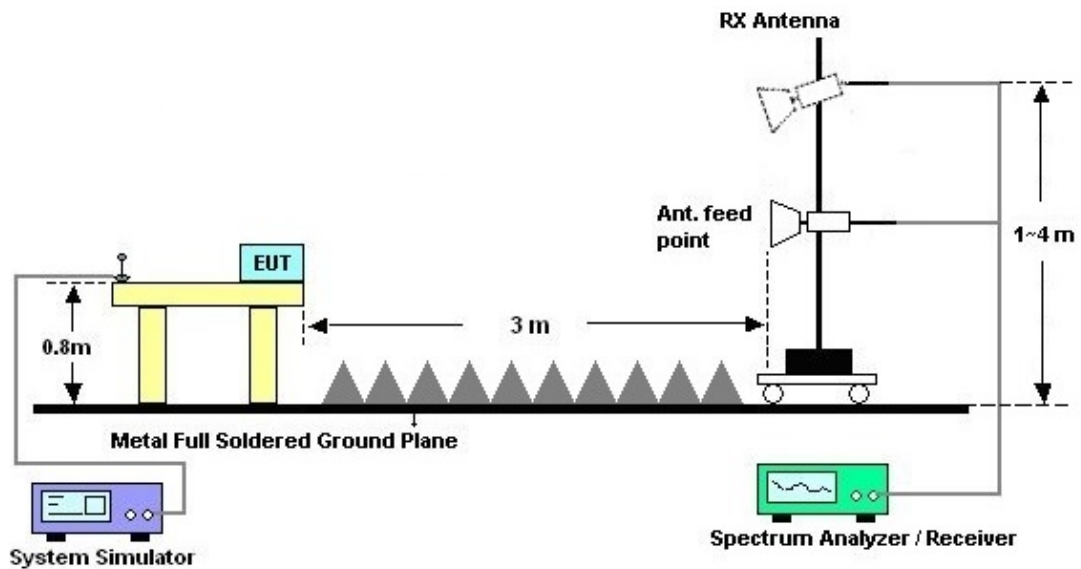
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna 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.
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 $\mu$ V/m) = 20 log Emission level ( $\mu$ V/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



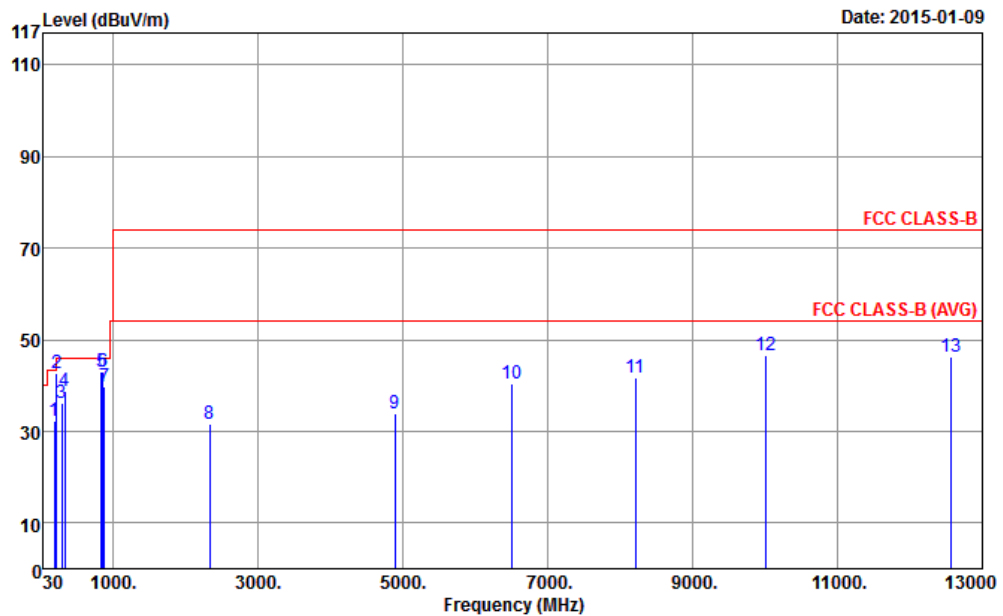
For radiated emissions above 1GHz





## 3.2.5. Test Result of Radiated Emission

Test Mode :	Mode 1	Temperature :	23~25°C
Test Engineer :	Kaer Huang	Relative Humidity :	48~52%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	GSM850 Idle + Bluetooth Idle + USB Cable (Charging from Adapter) + Earphone + Camera + SIM 1		
Remark :	#7 is system simulator signal which can be ignored.		

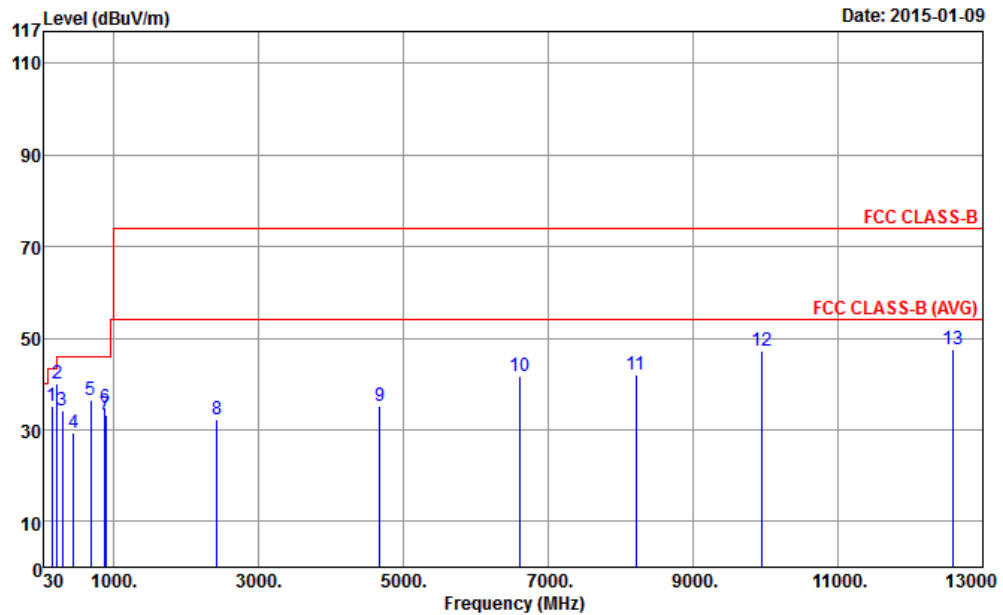


Site : 03CH01-SZ  
Condition : FCC CLASS-B 3m LF\_ANT\_141107 HORIZONTAL  
Project : (FC) 4N2501

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamp Loss	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	192.00	32.29	-11.21	43.50	49.25	11.56	2.16	30.68	---	Peak
2	225.48	42.71	-3.29	46.00	58.96	12.02	2.34	30.61	100	360 QP
3	288.12	36.10	-9.90	46.00	50.23	13.70	2.67	30.50	---	Peak
4	335.70	38.83	-7.17	46.00	51.77	14.57	2.89	30.40	---	Peak
5	839.70	43.05	-2.95	46.00	45.32	22.14	4.74	29.15	100	210 QP
6	864.20	43.01	-2.99	46.00	45.33	21.92	4.83	29.07	100	250 QP
7	881.70	39.75			42.14	21.77	4.89	29.05	---	Peak
8	2334.00	31.71	-42.29	74.00	41.38	32.53	8.43	50.63	---	Peak
9	4894.00	33.77	-40.23	74.00	36.88	34.44	12.98	50.53	---	Peak
10	6510.00	40.56	-33.44	74.00	40.17	36.30	14.41	50.32	---	Peak
11	8206.00	41.76	-32.24	74.00	39.16	36.38	16.17	49.95	---	Peak
12	10020.00	46.54	-27.46	74.00	40.14	38.13	18.23	49.96	150	20 Peak
13	12564.00	46.27	-27.73	74.00	38.34	39.26	18.47	49.80	---	Peak



Test Mode :	Mode 1	Temperature :	23~25°C
Test Engineer :	Kaer Huang	Relative Humidity :	48~52%
Test Distance :	3m	Polarization :	Vertical
Function Type :	GSM850 Idle + Bluetooth Idle + USB Cable (Charging from Adapter) + Earphone + Camera + SIM 1		
Remark :	#6 is system simulator signal which can be ignored.		

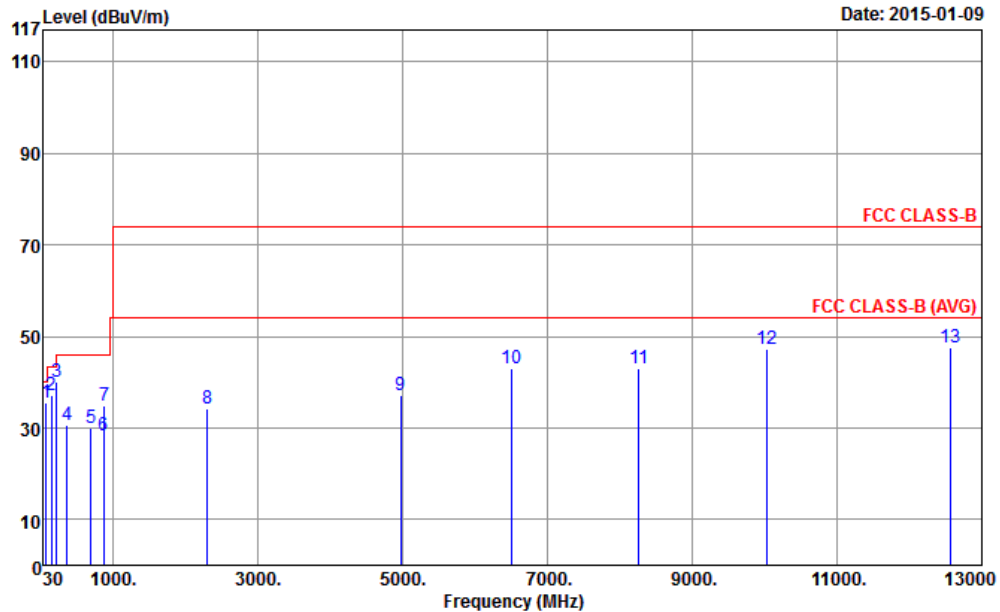


Site : 03CH01-SZ  
Condition : FCC CLASS-B 3m LF\_ANT\_141107 VERTICAL  
Project : (FC) 4N2501

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	143.94	35.14	-8.36	43.50	50.42	13.58	1.86	30.72	---	---	Peak
2	223.59	40.07	-5.93	46.00	56.37	11.98	2.33	30.61	125	20	Peak
3	288.12	34.22	-11.78	46.00	48.35	13.70	2.67	30.50	---	---	Peak
4	445.60	29.22	-16.78	46.00	38.86	17.21	3.38	30.23	---	---	Peak
5	685.00	36.53	-9.47	46.00	41.36	20.21	4.30	29.34	---	---	Peak
6	881.70	34.82			37.21	21.77	4.89	29.05	---	---	Peak
7	895.70	33.26	-12.74	46.00	35.80	21.64	4.85	29.03	---	---	Peak
8	2422.00	32.21	-41.79	74.00	41.48	32.63	8.60	50.50	---	---	Peak
9	4678.00	35.31	-38.69	74.00	39.49	34.30	12.76	51.24	---	---	Peak
10	6618.00	41.59	-32.41	74.00	41.29	36.26	14.48	50.44	---	---	Peak
11	8210.00	42.00	-32.00	74.00	39.40	36.38	16.17	49.95	---	---	Peak
12	9942.00	47.12	-26.88	74.00	40.94	38.04	18.06	49.92	---	---	Peak
13	12584.00	47.73	-26.27	74.00	39.82	39.25	18.47	49.81	100	20	Peak



Test Mode :	Mode 3	Temperature :	23~25°C
Test Engineer :	Kaer Huang	Relative Humidity :	48~52%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	GSM850 Idle + Bluetooth Idle + USB Cable (Data Link with Notebook) + Earphone + SIM 1		
Remark :	#7 is system simulator signal which can be ignored.		

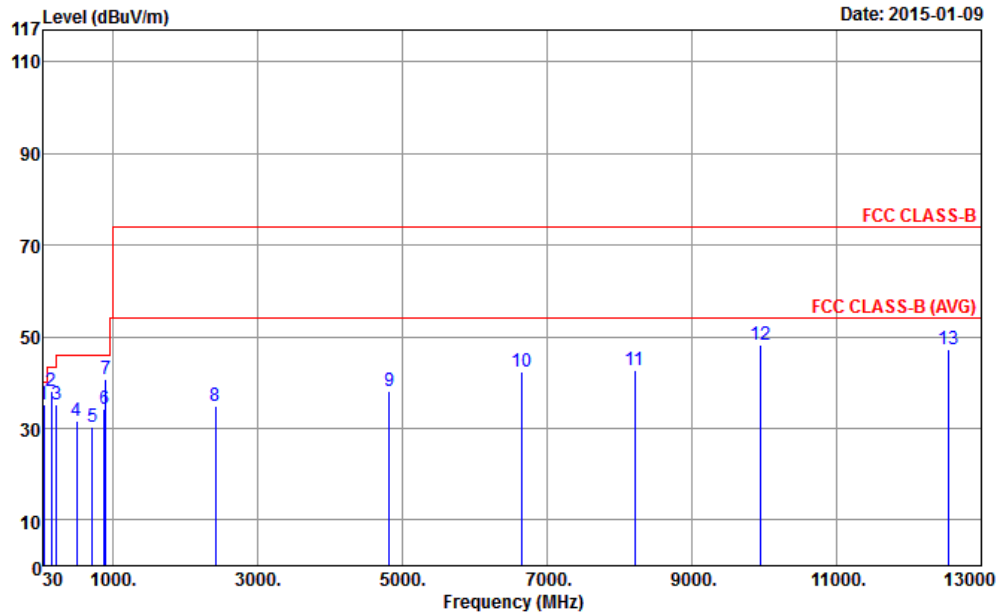


Site : 03CH01-SZ  
Condition : FCC CLASS-B 3m LF\_ANT\_141107 HORIZONTAL  
Project : (FC) 4N2501

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamp Loss	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	72.12	35.62	-4.38	40.00	56.21	8.89	1.29	30.77	---	Peak
2	143.94	37.31	-6.19	43.50	52.59	13.58	1.86	30.72	200	QP
3	216.03	39.99	-6.01	46.00	56.48	11.86	2.29	30.64	---	Peak
4	360.20	30.65	-15.35	46.00	43.17	14.88	3.01	30.41	---	Peak
5	696.90	30.13	-15.87	46.00	35.05	20.28	4.27	29.47	---	Peak
6	867.70	28.29	-17.71	46.00	30.64	21.89	4.82	29.06	---	Peak
7	881.70	34.71			37.10	21.77	4.89	29.05	---	Peak
8	2306.00	34.12	-39.88	74.00	43.92	32.51	8.34	50.65	---	Peak
9	4974.00	37.09	-36.91	74.00	39.75	34.49	13.10	50.25	---	Peak
10	6508.00	42.86	-31.14	74.00	42.47	36.30	14.41	50.32	---	Peak
11	8264.00	43.10	-30.90	74.00	40.34	36.34	16.26	49.84	---	Peak
12	10036.00	47.31	-26.69	74.00	41.04	38.14	18.11	49.98	---	Peak
13	12566.00	47.58	-26.42	74.00	39.65	39.26	18.47	49.80	100	20 Peak



<b>Test Mode :</b>	Mode 3	<b>Temperature :</b>	23~25°C
<b>Test Engineer :</b>	Kaer Huang	<b>Relative Humidity :</b>	48~52%
<b>Test Distance :</b>	3m	<b>Polarization :</b>	Vertical
<b>Function Type :</b>	GSM850 Idle + Bluetooth Idle + USB Cable (Data Link with Notebook) + Earphone + SIM 1		
<b>Remark :</b>	#6 is system simulator signal which can be ignored.		



Site : 03CH01-SZ  
Condition : FCC CLASS-B 3m LF\_ANT\_141107 VERTICAL  
Project : (FC) 4N2501

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	cm	deg	
1	42.15	35.28	-4.72	40.00	51.79	13.25	1.00	30.76	---	Peak
2	144.21	38.26	-5.24	43.50	53.62	13.50	1.86	30.72	100	QP
3	216.03	35.12	-10.88	46.00	51.61	11.86	2.29	30.64	---	Peak
4	498.80	31.57	-14.43	46.00	38.72	19.32	3.57	30.04	---	Peak
5	715.10	30.30	-15.70	46.00	35.07	20.62	4.30	29.69	---	Peak
6	881.70	34.19			36.58	21.77	4.89	29.05	---	Peak
7	897.10	40.72	-5.28	46.00	43.26	21.63	4.86	29.03	---	Peak
8	2416.00	35.03	-38.97	74.00	44.34	32.61	8.60	50.52	---	Peak
9	4814.00	38.26	-35.74	74.00	41.81	34.39	12.86	50.80	---	Peak
10	6652.00	42.28	-31.72	74.00	42.01	36.24	14.50	50.47	---	Peak
11	8212.00	42.84	-31.16	74.00	40.24	36.38	16.17	49.95	---	Peak
12	9952.00	48.11	-25.89	74.00	41.84	38.06	18.14	49.93	150	20 Peak
13	12554.00	47.38	-26.62	74.00	39.51	39.26	18.41	49.80	---	Peak



## 4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
ESCIO TEST Receiver	R&S	ESCI	100724	9kHz~3GHz	Feb. 21, 2014	Nov. 26, 2014~ Nov. 27, 2014	Feb. 20, 2015	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103912	9kHz~30MHz	Mar. 04, 2014	Nov. 26, 2014~ Nov. 27, 2014	Mar. 03, 2015	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	EMCO	3816/2SH	00103892	9kHz~30MHz	Mar. 04, 2014	Nov. 26, 2014~ Nov. 27, 2014	Mar. 03, 2015	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	61602000089 1	100Vac~250Vac	Sep. 29, 2014	Nov. 26, 2014~ Nov. 27, 2014	Sep. 28, 2015	Conduction (CO01-SZ)
ESCIO TEST Receiver	R&S	ESCI	100724	9kHz~3GHz	Feb. 21, 2014	Jan. 09, 2015	Feb. 20, 2015	Radiation (03CH01-SZ)
Spectrum Analyzer	Agilent Technologies	N9038A	MY52260185	20Hz~26.5GHz	May 26, 2014	Jan. 09, 2015	May 25, 2015	Radiation (03CH01-SZ)
Bilog Antenna	TESEQ	CBL 6112D	37877	30MHz~2GHz	Oct. 15, 2014	Jan. 09, 2015	Oct. 14, 2015	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS Lindgren	3117	00119436	1GHz~18GHz	Oct. 15, 2014	Jan. 09, 2015	Oct. 14, 2015	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9kHz~3000MHz	Feb. 21, 2014	Jan. 09, 2015	Feb. 20, 2015	Radiation (03CH01-SZ)
Amplifier	Yiai	AV3860B	04030	2GHz~26.5GHz	May 08, 2014	Jan. 09, 2015	May 07, 2015	Radiation (03CH01-SZ)
AC Source(AVR)	Chroma	61601	61601000198 5	100Vac~250Vac	Mar. 25, 2014	Jan. 09, 2015	Mar. 24, 2015	Radiation (03CH01-SZ)
Turn Table	EM Electronics	EM 1000	N/A	0~360 degree	NCR	Jan. 09, 2015	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM Electronics	EM 1000	N/A	1 m~4 m	NCR	Jan. 09, 2015	NCR	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% ( $U = 2U_c(y)$ )	2.3
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### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2U_c(y)$ )	3.9
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