

FCC Test Report

APPLICANT: Brightstar Corporation

EQUIPMENT: mobile phone

BRAND NAME : Avvio

MODEL NAME : Avvio761/Avvio761S

FCC ID : WVBA761X

STANDARD : FCC 47 CFR FCC Part 15 Subpart B

CLASSIFICATION: Certification

The product was received on Apr. 24, 2013 and completely tested on May 15, 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



Report No.: FC342404

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
FC342404	Rev. 01	Initial issue of report	May 20, 2013



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	7.69 dB at
					0.590 MHz
					Under limit
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	7.12 dB at
					177.440 MHz

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1. General Description

1.1. Applicant

Brightstar Corporation

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

1.2. Manufacturer

Heng Da Chuang Xin Technology Limited

A601 Guoren Building, 3rd Rd.of High-Tech park, Nanshan District, SZ, China

1.3. Feature of Equipment Under Test

	Product Feature
Equipment	mobile phone
Brand Name	Avvio
Model Name	Avvio761/Avvio761S
FCC ID	WVBA761X
EUT supports Radios application	GSM/GPRS/WCDMA/HSPA/WLAN 11bgn/Bluetooth EDR
HW Version	UP815_v1.3
SW Version	Avvio761_Mexico_ES_V001_0422_SMT
EUT Stage	Production Unit

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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 (model name: Avvio761) and dual SIM cards mobile (model name: Avvio761S). The others are the same including circuit design, PCB board, structure and all components. It is special to declare.

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1.4. Product Specification of Equipment Under Test

Product Specification subjective to this standard						
Tx Frequency	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					
Rx Frequency Range	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 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					
Antenna Type	WWAN : PIFA Antenna WLAN : PIFA Antenna Bluetooth : PIFA Antenna					
Type of Modulation	GSM/GPRS: GMSK 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 GPS: BPSK FM					

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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, Gu	uangdong, P.R.C.			
	TEL: +86-755- 3320-2398					
Took Oito No	Sporton Site No. FCC/IC Registration No.					
Test Site No.	TH01-SZ	831040/4086F-1				

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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.

		Te	st Condition	on
Item	EUT Configuration	EMI AC	EMI RE<1G	EMI 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 + USB Cable (Charging from Adapter) + Bluetooth Idle + WLAN Idle + Earphone + Camera <fig. 1=""></fig.>
AC Conducted	1/2	Mode 2: GSM1900 Idle + USB Cable (Charging from Adapter) + Bluetooth Idle + WLAN Idle + Earphone + MPEG4 <fig. 1=""></fig.>
Emission	1/2	Mode 3: WCDMA Band V Idle + USB Cable (Charging from Adapter) + Bluetooth Idle + WLAN Idle + Earphone + FM Rx <fig. 2=""></fig.>
		Mode 4: WCDMA Band II Idle + USB Cable (Data Link with PC) + Bluetooth Idle + WLAN Idle + Earphone + GPS Rx <fig. 3=""></fig.>
		Mode 1: GSM850 Idle + USB Cable (Charging from Adapter) + Bluetooth Idle + WLAN Idle + Earphone + Camera <fig. 1=""></fig.>
Radiated	1/2	Mode 2: GSM1900 Idle + USB Cable (Charging from Adapter) + Bluetooth Idle + WLAN Idle + Earphone + MPEG4 <fig. 1=""></fig.>
Emissions < 1GHz		Mode 3: WCDMA Band V Idle + USB Cable (Charging from Adapter) + Bluetooth Idle + WLAN Idle + Earphone + FM Rx <fig. 2=""></fig.>
		Mode 4: WCDMA Band II Idle + USB Cable (Data Link with PC) + Bluetooth Idle + WLAN Idle + Earphone + GPS Rx <fig. 3=""></fig.>
Radiated Emissions ≥ 1GHz	2	Mode 1: WCDMA Band II Idle + USB Cable (Data Link with PC) + Bluetooth Idle + WLAN Idle + Earphone + GPS Rx <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 reported.
- 3. The worst case of Radiated Emissions is mode 4; only the test data of this mode was reported.
- 4. Link with PC means data application transferred mode between EUT and PC.

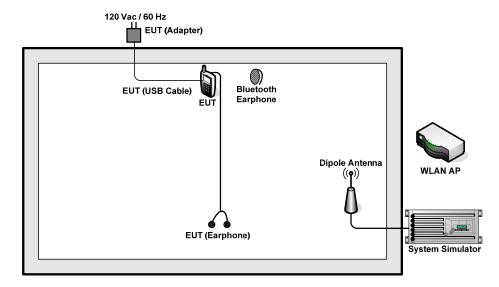
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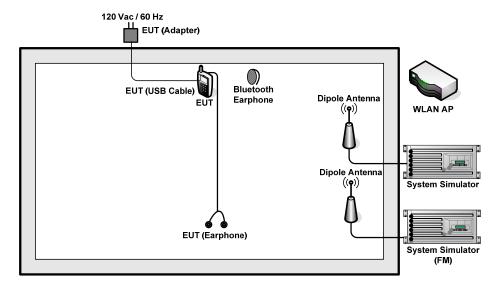


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2.2. Connection Diagram of Test System



<Fig. 1>



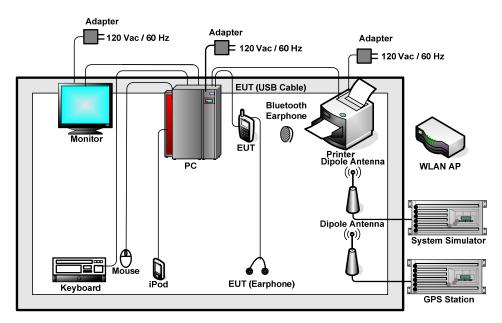
<Fig. 2>

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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	Agilent	E5515C	N/A	N/A	Unshielded, 1.8 m
2.	System Simulator (FM)	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-616	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	SAMSUNG	ML-1610	N/A	Shielded, 1.8 m	Unshielded, 1.8 m
12.	iPod	Apple	MC525 ZP/A	FCC DoC	Unshielded,1.0 m	N/A

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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. 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.

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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

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.

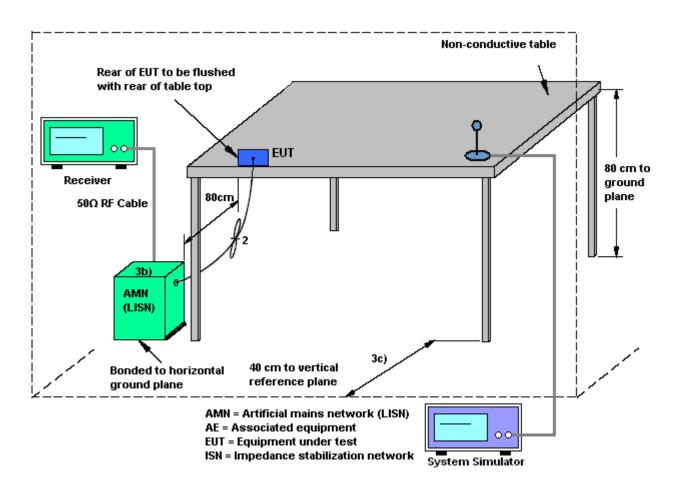
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3.1.4 Test Setup



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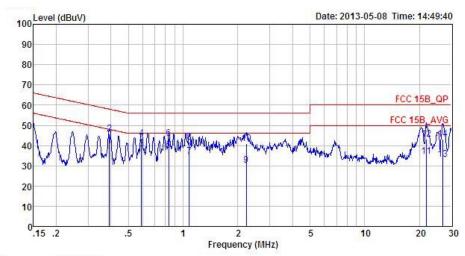
3.1.5 Test Result of AC Conducted Emission

Test Mode :	Mode 3			Ten	peratu	re:	24~2	.5° ℃		
Test Engineer :	Leo Liao	Leo Liao		Rela	Relative Humidity :		50~5	51%		
Test Voltage :	120Vac /	120Vac / 60Hz			Phase: Lir		Line	Line		
	WCDMA	WCDMA Band V Idle + USB Cable (Charging from Adapter) + Bluetooth Idle								
Function Type :	vpe : WLAN Idle + Earphone + FN									
Remark :	All emiss	All emissions not reported here are more than 10						low the pre	escrib	
100	_evel (dBuV)	1/2 1/2				Da	te: 2013-0	5-08 Time: 14:4	13:41	
90										
80		71 71								
70										
8000	-							FCC 15B	QP	
60								amintana e	a verse	
50		-		450				FCC 15B_A	AVG	
40	MAA	Allan	A D # L x # A A A	Mulliman	MICH.	Management		141	MY	
5-200	W W W	MANANA	Y Y AND A MANAGEMENT OF THE PROPERTY OF THE PR	Are marille	Milah	A Managharden	the property	alexander 1	K I V	
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20										
20										
20 10	15 .2	.5	1		2	5	10	20	30	
20 10	15 .2	.5	1		2 ency (MHz		10	20	30	
20 10	15 .2 : C001-S		1		CONTRACTOR OF THE PARTY OF THE		10	20	30	
20 10 0 Site Conditi	: CO01-S	Z B_QP LIS		Frequ	ency (MHz		10	20	30	
20 10 0 Site Conditi Project	: CO01-S on: FCC 15 : (FC) 3	Z B_QP LIS 42404		Frequ	ency (MHz		10	20	30	
20 10 0 Site Conditi	: CO01-S	Z B_QP LIS 42404		Frequ	ency (MHz		10	20	30	
20 10 0 Site Conditi Project	: CO01-S on: FCC 15 : (FC) 3	Z B_QP LIS 42404	SN_L_2000	Frequ	ency (MHz)	10	20	30	
20 10 0 Site Conditi Project	: CO01-S on: FCC 15 : (FC) 3 : Mode 3	Z B_QP LIS 42404	SN_L_2000	Frequ	ency (MHz E Read)	Cable	20 Remark	30	
20 10 0 Site Conditi Project	: CO01-S on: FCC 15 : (FC) 3 : Mode 3	Z B_QP LIS 42404	SN_L_2000	Frequ	ency (MHz E Read	lisn	Cable		30	
20 10 0 Site Conditi Project	: C001-S on: FCC 15. : (FC) 3 : Mode 3 Freq MHz	Z B_QP LIS 42404 Level	Over Limit	Frequi Limit Line dBuV	Read Level	LISN Factor	Cable Loss dB		30	
20 10 0 Site Conditi Project Mode	: C001-S on: FCC 15: : (FC) 3 : Mode 3 Freq MHz 0.39	Z B_QP LIS 42404 Level dBuV 34.70	Over Limit	Frequence of Limit Line dBuV 48.03	Read Level	LISN Factor dB	Cable Loss dB	Remark Average	30	
20 10 0 Site Conditi Project Mode	: C001-S on: FCC 15: : (FC) 3 : Mode 3 Freq MHz 0.39 0.39	Z B_QP LIS 42404 Level dBuV 34.70	Over Limit dB -13.33	Frequence of Limit Line dBuV 48.03	Read Level dBuV 24.61	LISN Factor dB	Cable Loss dB 10.07 10.07	Remark Average	300	
20 10 0 Site Conditi Project Mode	: C001-5 cn: FCC 15 : (FC) 3 : Mode 3 Freq MHz 0.39 0.39 0.69 0.69	Z B_QP LIS 42404 Level dBuV 34.70 42.90 31.62 40.22	Over Limit dB -13.33 -15.13 -14.38 -15.78	Limit Line dBuV 48.03 58.03 46.00 56.00	Read Level dBuV 24.61 32.81 21.50 30.10	LISN Factor dB 0.02 0.02 0.02 0.02 0.02	Cable Loss dB 10.07 10.07 10.10 10.10	Remark Average QP Average QP	30	
20 10 0 Site Conditi Project Mode 1 * 2 3 4 5	: C001-S on: FCC 15: : (FC) 3 : Mode 3 Freq MHz 0.39 0.69 0.69 0.83	Z B_QP LIS 42404 Level dBuV 34.70 42.90 31.62 40.22 32.63	Over Limit dB -13.33 -15.13 -14.38 -15.78 -13.37	Limit Line dBuV 48.03 58.03 46.00 56.00 46.00	Read Level dBuV 24.61 32.81 21.50 30.10 22.50	LISN Factor dB 0.02 0.02 0.02 0.02 0.02 0.02 0.02	Cable Loss dB 10.07 10.10 10.10 10.11	Remark Average QP Average QP Average	30	
20 10 0 Site Conditi Project Mode 1 * 2 3 4 5 6	: C001-S on: FCC 15: : (FC) 3 : Mode 3 Freq MHz 0.39 0.69 0.69 0.69 0.83 0.83	Z B_QP LIS 42404 Level dBuV 34.70 42.90 31.62 40.22 32.63 40.53	Over Limit dB -13.33 -15.13 -14.38 -15.78 -13.37 -15.47	Limit Line dBuV 48.03 58.03 46.00 56.00 46.00 56.00	Read Level dBuV 24.61 32.81 21.50 30.10 22.50 30.40	LISN Factor dB 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.0	Cable Loss dB 10.07 10.10 10.10 10.11 10.11	Remark Average QP Average QP Average QP	30	
20 10 0 Site Conditi Project Mode 1 * 2 3 4 5 6 7	: C001-S on: FCC 15 : (FC) 3 : Mode 3 Freq MHz 0.39 0.39 0.69 0.69 0.83 0.83 1.12	Z B_QP LIS 42404 Level dBuV 34.70 42.90 31.62 40.22 32.63 40.53 31.45	Over Limit ———————————————————————————————————	Limit Line dBuV 48.03 58.03 46.00 46.00 56.00 46.00	Read Level dBuV 24.61 32.81 21.50 30.10 22.50 30.40 21.30	LISN Factor dB 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.0	Cable Loss dB 10.07 10.10 10.10 10.11 10.11 10.12	Remark Average QP Average QP Average QP Average	30	
20 10 0 Site Conditi Project Mode 1 * 2 3 4 5 6 7 8	: CO01-S on: FCC 15: : (FC) 3: Mode 3 Freq MHz 0.39 0.69 0.69 0.69 0.83 0.83 1.12 1.12	Z B_QP LIS 42404 Level dBuV 34.70 42.90 31.62 40.22 32.63 40.53 31.45 41.15	Over Limit dB -13.33 -15.13 -14.38 -15.78 -13.37 -15.47 -14.55 -14.85	dBuV 48.03 58.03 46.00 56.00 46.00 56.00 56.00	Read Level dBuV 24.61 32.81 21.50 30.10 22.50 30.40 21.30 31.00	LISN Factor dB 0.02 0.02 0.02 0.02 0.02 0.03 0.03 0.03	Cable Loss dB 10.07 10.10 10.11 10.11 10.11 10.12 10.12	Remark Average QP Average QP Average QP Average QP	30	
20 10 0 Site Conditi Project Mode 1 * 2 3 4 5 6 7 8 9	: CO01-S on: FCC 15 : (FC) 3 : Mode 3 Freq MHz 0.39 0.69 0.69 0.69 0.83 0.83 1.12 1.12 2.11	Z B_QP LIS 42404 Level dBuV 34.70 42.90 31.62 40.22 32.63 40.53 31.45 41.15 27.99	Over Limit dB -13.33 -15.13 -14.38 -15.78 -13.37 -15.47 -14.55 -14.85 -18.01	dBuV 48.03 58.03 46.00 56.00 46.00 56.00 46.00	Read Level dBuV 24.61 32.81 21.50 30.10 22.50 30.40 21.30 31.00 17.79	LISN Factor dB 0.02 0.02 0.02 0.02 0.02 0.02 0.03 0.03	Cable Loss dB 10.07 10.10 10.11 10.11 10.12 10.12 10.16	Remark Average QP Average QP Average QP Average QP Average QP	30	
20 10 0 Site Conditi Project Mode 1 * 2 3 4 5 6 7 8	: C001-S on: FCC 15: : (FC) 3: Mode 3 Freq MHz 0.39 0.69 0.69 0.83 0.83 1.12 1.12 2.11 2.11	Z B_QP LIS 42404 Level dBuV 34.70 42.90 31.62 40.22 32.63 40.53 31.45 41.15 27.99 38.69	Over Limit dB -13.33 -15.13 -14.38 -15.78 -15.47 -15.47 -14.55 -14.85 -18.01 -17.31	D601 LINI Limit Line dBuV 48.03 58.03 46.00 56.00 46.00 56.00 46.00 56.00	Read Level dBuV 24.61 32.81 21.50 30.10 22.50 30.40 22.50 31.00 17.79 28.49	LISN Factor dB 0.02 0.02 0.02 0.02 0.02 0.03 0.03 0.0	Cable Loss dB 10.07 10.07 10.10 10.11 10.11 10.12 10.12 10.16 10.16	Remark Average QP Average QP Average QP Average QP Average QP	30	

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Test Mode :	Mode 3	Temperature :	24~25℃			
Test Engineer :	Leo Liao	Relative Humidity :	50~51%			
Test Voltage :	120Vac / 60Hz	Phase :	Neutral			
Eurotion Type	WCDMA Band V Idle + USB Cable (Charging from Adapter) + Bluetooth Idle +					
Function Type :	WLAN Idle + Earphone + FM Rx					
Remark :	All emissions not reported h	ere are more than 10 c	dB below the prescribed limit.			



Site : C001-SZ

Condition: FCC 15B_QP LISN_N_2000601 NEUTRAL

Project : (FC) 342404 Mode : Mode 3

	Freq	Level	Over	Limit Line	Read Level	LISN	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	-
1	0.39	39.89	-8.10	47.99	29.80	0.02	10.07	Average
2 *	0.39	45.89	-12.10	57.99	35.80	0.02	10.07	QP
3 *	0.59	38.31	-7.69	46.00	28.20	0.02	10.09	Average
4 5	0.59	43.61	-12.39	56.00	33.50	0.02	10.09	QP
5	0.83	37.53	-8.47	46.00	27.40	0.02	10.11	Average
6	0.83	43.53	-12.47	56.00	33.40	0.02	10.11	QP
7	1.08	34.54	-11.46	46.00	24.40	0.02	10.12	Average
8	1.08	41.54	-14.46	56.00	31.40	0.02	10.12	QP
9	2.22	30.20	-15.80	46.00	20.00	0.04	10.16	Average
.0	2.22	40.80	-15.20	56.00	30.60	0.04	10.16	QP
1	21.83	34.65	-15.35	50.00	23.57	0.60	10.48	Average
2	21.83	43.25	-16.75	60.00	32.17	0.60	10.48	QP
3	26.84	33.21	-16.79	50.00	21.90	0.89	10.42	Average
4	26.84	43.11	-16.89	60.00	31.80	0.89	10.42	QP

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24~25°C Test Mode: Mode 4 Temperature: Relative Humidity: 50~51% Test Engineer: Leo Liao 120Vac / 60Hz Phase: Test Voltage: Line WCDMA Band II Idle + USB Cable (Data Link with PC) + Bluetooth Idle + WLAN Function Type: Idle + Earphone + GPS Rx All emissions not reported here are more than 10 dB below the prescribed limit. Remark: 100 Level (dBuV) Date: 2013-05-09 Time: 14:15:18 90 80 70 FCC 15B_QP 60 FCC 15B_AVG 50 404 30 20 10 0.15 .2 10 Frequency (MHz) : C001-SZ Condition: FCC 15B_QP LISN_L_2000601 LINE Project : (FC) 342404 Mode : Mode 4 Over Limit Read LISN Cable Freq Level Limit Line Level Factor Loss Remark dB dBuV dBuV dBuV MHz dB dB 1 * 0.18 37.68 -16.91 54.59 27.60 0.03 10.05 Average 42.88 -21.71 0.18 64.59 32.80 0.03 10.05 QP 0.25 27.89 -23.71 51.60 17.81 0.02 10.06 Average 0.25 34.99 -26.61 61.60 24.91 0.54 20.51 -25.49 46.00 10.40 0.02 10.06 QP 0.02 10.09 Average 0.54 33.01 -22.99 56.00 22.90 0.02 10.09 QP 0.91 17.53 -28.47 46.00 7.39 0.91 30.93 -25.07 56.00 20.79 7.39 0.03 10.11 Average 0.03 10.11 QP 4.45 24.86 -21.14 46.00 14.61 0.06 10.19 Average 9 10 4.45 32.46 -23.54 56.00 22.21 0.06 10.19 QP 21.95 24.89 -25.11 50.00 14.00 0.41 10.48 Average 21.95 31.09 -28.91 60.00 20.20 0.41 10.48 QP 11

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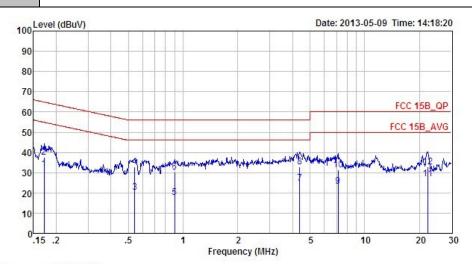
 Test Mode :
 Mode 4
 Temperature :
 24~25°C

 Test Engineer :
 Leo Liao
 Relative Humidity :
 50~51%

 Test Voltage :
 120Vac / 60Hz
 Phase :
 Neutral

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

Remark: 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

Project : (FC) 342404 Mode : Mode 4

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor		Remark
	-	MHz	dBu∀	dB	dBu∀	dBu∇	dB	dB	·
1		0.17	31.68	-23.22	54.90	21.61	0.02	10.05	Average
2		0.17	37.78	-27.12	64.90	27.71	0.02	10.05	QP
3		0.54	20.40	-25.60	46.00	10.29	0.02	10.09	Average
4		0.54	32.70	-23.30	56.00	22.59	0.02	10.09	QP
5		0.90	17.53	-28.47	46.00	7.40	0.02	10.11	Average
6		0.90	30.33	-25.67	56.00	20.20	0.02	10.11	QP
7	*	4.38	24.66	-21.34	46.00	14.40	0.07	10.19	Average
8		4.38	32.76	-23.24	56.00	22.50	0.07	10.19	QP
9		7.14	23.33	-26.67	50.00	13.00	0.13	10.20	Average
10		7.14	31.23	-28.77	60.00	20.90	0.13	10.20	QP
11		22.18	26.89	-23.11	50.00	15.80	0.62	10.47	Average
12		22.18	32.99	-27.01	60.00	21.90	0.62	10.47	QP

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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		
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.
- 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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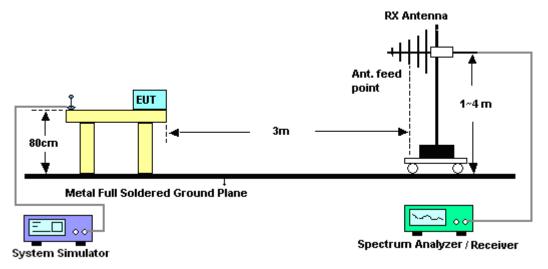
Report No.: FC342404



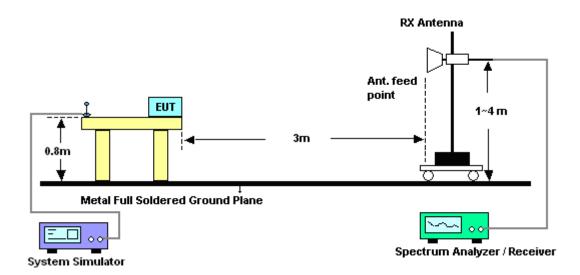
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3.2.4. Test Setup of Radiated Emission

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		Temperatur	е:	24~25°C		
Test Engineer :	John Zheng		Relative Hu	midity:	54~56%		
Test Distance :	3m		Polarization	า :	Horizontal		
Function Type :	WCDMA Ba	nd II Idle + US	B Cable (Dat	a Link wit	h PC) + Blu	etooth Idle + W	/LA
Function Type :	Idle + Earph	one + GPS Rx					
120 Leve	el (dBuV/m)					Date: 2013-05-15	
108.0							
96.0							
84.0						FCC CLASS-B	
72.0						-6dB	
60.0					F	CC CLASS-B (AVG)	
48.0						-6dB	
36.0 2							
24.0	6						
12.0							
030	1000.	3000. 5000). 7000. Frequency (MH:		000. 11	13000	
Site Condition Project Mode	: 03CH01-S. : FCC CLAS : (FC) 34240 : Mode 4	SS-B 3m LF ANT-H 1	21202 HORIZONTA	AL			
	Freq Level I		adAntenna Cable el Factor Loss	e Preamp A s Factor		emark	
	MHz dBuV/m	dB dBuV/m dBu	ıV dB/m dI	B dB	cm deg		
2 P 3 4 5	235.64 27.86 -1 272.50 29.07 -1 384.05 30.09 -1	7. 12 43. 50 56. 4 8. 14 46. 00 45. 0 6. 93 46. 00 44. 0	46 9.05 1.28 05 11.40 1.62 33 12.85 1.68 35 16.08 1.88	30.41 2 30.21 3 30.09 3 29.72	Pe 200 360 Pe Pe Pe Pe Pe	eak eak eak eak	

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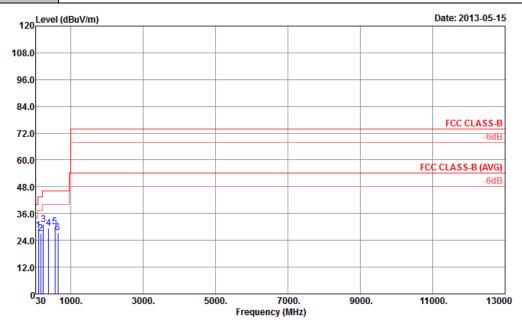


Test Mode: Mode 4 Temperature: 24~25°C

Test Engineer: John Zheng Relative Humidity: 54~56%

Test Distance: 3m Polarization: Vertical

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



Site : 03CH01-SZ

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

Project : (FC) 342404 Mode : Mode 4

	Freq	Level						Preamp Factor		T/Pos	Remark
	MHz	$\overline{dBuV/m}$	dB	$\overline{\tt dBuV/m}$	dBuV	$\overline{dB/m}$	dB	dB	cm	deg	
1 2 3 P 4	165. 80 238. 55	27. 17 31. 14	-16.33 -14.86	43.50 43.50 46.00 46.00	46. 45 47. 98	9. 90 11. 73	1. 27 1. 63	30. 45 30. 20		147	Peak
5		30.19	-15.81	46.00	38.57	18.64	2.23	29.25			Peak

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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	May 08, 2013~ May 09, 2013	Feb. 27, 2014	Conduction (CO01-SZ)
AC LISN	ETS-LINDGREN	3816/2SH	00103892	0.1MHz~108MHz	Feb. 28, 2013	May 08, 2013~ May 09, 2013	Feb. 27, 2014	Conduction (CO01-SZ)
ESCIO TEST Receiver	R&S	1142.8007. 03	100724	9K-3GHz	Mar. 08, 2013	May 08, 2013~ May 09, 2013	Mar. 07, 2014	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000891 N/A	N/A	Oct. 12, 2012	May 08, 2013~ May 09, 2013	Oct. 11, 2013	Conduction (CO01-SZ)
GPS Station	T&E	GS50	536468	GPS	Oct. 11, 2012	May 08, 2013~ May 09, 2013	Oct. 10, 2013	Conduction (CO01-SZ)
System Simulator	R&S	CMU200	100954	GSM	Jun. 14, 2012	May 08, 2013~ May 09, 2013	Jun. 13, 2013	Conduction (CO01-SZ)
System Simulator	Agilent	E5515C	MY47511418	2G/3G Full-Band	Nov. 03,2012	May 08, 2013~ May 09, 2013	Nov. 02,2013	Conduction (CO01-SZ)
ESCI TEST Receiver	R&S	ESCI	100724	9K-3GHz	Mar. 28, 2013	May 15, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
Spectrum Analyzer	R&S	FSP30	101362	9kHz~30GHz	Oct. 11, 2012	May 15, 2013	Oct. 10, 2013	Radiation (03CH01-SZ)
Double Ridge Horn Amtenna	ETS Lindgren	3117	00119436	1GHz~18GHz	Oct. 12, 2012	May 15, 2013	Oct. 11, 2013	Radiation (03CH01-SZ)
Bilog Antenna	SCHAFFNER	CBL6112B	2614	30Mhz~2Ghz	Nov. 03, 2012	May 15, 2013	Nov. 02, 2013	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9K-3000MHz GAIN 30db	Mar. 28, 2013	May 15, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
Amplifier	Yiai	AV3860B	04030	2GHz~26.5GHz	Mar. 28, 2013	May 15, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
GPS Station	T&E	GS50	536468	GPS	Oct. 11, 2012	May 15, 2013	Oct. 10, 2013	Radiation (03CH01-SZ)
System Simulator	R&S	CMU200	100954	GSM	Jun. 14, 2012	May 15, 2013	Jun. 13, 2013	Radiation (03CH01-SZ)
System Simulator	Agilent	E5515C	MY47511418	2G/3G Full-Band	Nov. 03,2012	May 15, 2013	Nov. 02, 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	
Confidence of 95% (U = 2Uc(y))	2.26

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

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 EP342404 as below.

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