FCC Test Report

APPLICANT : Brightstar Corporation

EQUIPMENT: Mobile phone

BRAND NAME : Avvio, PULSARE

MODEL NAME : Avvio 795, Avvio 795S, Pulsare 795, Pulsare 795S

FCC ID : WVBA795X

STANDARD : FCC 47 CFR FCC Part 15 Subpart B

CLASSIFICATION: Certification

The product was received on Jun. 11, 2014 and testing was completed on Jul. 13, 2014. 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 C63.4-2003 and has been in compliance with the applicable technical standards.

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

Reviewed by: Louis Wu / Manager

Lunis Win

Approved 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.

TEL: 86-755- 3320-2398 FCC ID: WVBA795X Page Number : 1 of 25
Report Issued Date : Jul. 21, 2014

Testing Laboratory 2353

Report No.: FC461102

TABLE OF CONTENTS

RE	VISIO	N HISTORY	3			
SU	MMAF	RY OF TEST RESULT				
	GENI	ERAL DESCRIPTION	5			
	1.1. 1.2.	Applicant Manufacturer	5			
	1.3. 1.4.	Product Feature of Equipment Under Test	6			
	1.5. 1.6.	Modification of EUT Test Location Applicable Standards	7			
2.	1.7. TEST	TEST CONFIGURATION OF EQUIPMENT UNDER TEST				
	2.1. 2.2. 2.3.	Support Unit used in test configuration and system	10 1			
3.	2.4. TEST	EUT Operation Test Setup				
	3.1. 3.2.	Test of AC Conducted Emission Measurement	12			
4.	LIST	OF MEASURING EQUIPMENT	24			
5.	UNCERTAINTY OF EVALUATION25					
ΑP	PEND	IX A. SETUP PHOTOGRAPHS				

TEL: 86-755- 3320-2398 FCC ID: WVBA795X Page Number : 2 of 25
Report Issued Date : Jul. 21, 2014
Report Version : Rev. 01

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC461102	Rev. 01	Initial issue of report	Jul. 21, 2014

FCC ID : WVBA795X

Page Number : 3 of 25
Report Issued Date : Jul. 21, 2014
Report Version : Rev. 01

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	6.11 dB at
					0.160 MHz
					Under limit
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	7.64 dB at
					35.130 MHz

TEL : 86-755- 3320-2398 FCC ID : WVBA795X Page Number : 4 of 25 Report Issued Date : Jul. 21, 2014

Report No. : FC461102

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

Report No. : FC461102

1.3. Product Feature of Equipment Under Test

	Product Feature
Equipment	Mobile phone
Brand Name	Avvio, PULSARE
Model Name	Avvio 795, Avvio 795S, Pulsare 795, Pulsare 795S
FCC ID	WVBA795X
	GSM/GPRS/EGPRS(DownlinkOnly)/
EUT supports Radios application	WCDMA/HSPA/HSPA+(Downlink Only)
Eo i supports Radios application	WLAN 2.4GHz 802.11b/g/n HT20/HT40/
	Bluetooth v3.0 + EDR/Bluetooth v4.0 LE
EUT Stage	Pre-Production

Remark:

 The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

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 795	Avvio	1
Sample 2	Avvio 795S	Avvio	2
Sample 3	Pulsare 795	PULSARE	1
Sample 4	Pulsare 795S	PULSARE	2

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

 SPORTON INTERNATIONAL (SHENZHEN) INC.
 Page Number
 : 5 of 25

 TEL: 86-755- 3320-2398
 Report Issued Date
 : Jul. 21, 2014

 FCC ID: WVBA795X
 Report Version
 : Rev. 01

1.4. Product Specification subjective to this standard

Product Specification subjective to this standard					
Tx Frequency	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8MHz 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				
Rx Frequency	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				
Antenna Type	WWAN : FPCB Antenna WLAN : FPCB Antenna Bluetooth : FPCB Antenna GPS: FPCB Antenna				
Type of Modulation	GSM: GMSK GPRS: GMSK EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK(Downlink Only) WCDMA: QPSK (Uplink) HSDPA: QPSK (Uplink) HSUPA: QPSK (Uplink) HSPA+: 16QAM (Downlink Only) 802.11b: DSSS (DBPSK / DQPSK / CCK) 802.11g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM) Bluetooth v4.0 LE: GFSK Bluetooth (1Mbps): GFSK Bluetooth (2Mbps): \pi /4-DQPSK Bluetooth (3Mbps): 8-DPSK GPS: BPSK				

TEL: 86-755- 3320-2398 FCC ID: WVBA795X Page Number : 6 of 25
Report Issued Date : Jul. 21, 2014
Report Version : Rev. 01

1.5. Modification of EUT

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

1.6. Test Location

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 Registration No.	
lest site NO.	CO01-SZ	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 C63.4-2003
- Remark: All test items were verified and recorded according to the standards and without any deviation during the test.

SPORTON INTERNATIONAL (SHENZHEN) INC.
TEL: 86-755-3320-2398

FCC ID: WVBA795X

Report Issued Date : Jul. 21, 2014 Report Version : Rev. 01

Page Number

: 7 of 25

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.

Report No.: FC461102

: 8 of 25

Page Number

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.

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

Abbreviations:

EMI AC: AC conducted emissions

• EMI RE ≥ 1G: EUT radiated emissions ≥ 1GHz

• EMI RE < 1G: EUT radiated emissions < 1GHz

SPORTON INTERNATIONAL (SHENZHEN) INC.

Test Items	EUT Configure Mode	Function Type
		Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera + SIM1 <fig1></fig1>
AC Conducted Emission	1/2	Mode 2: GSM1900 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + MPEG4 + SIM1 <fig1></fig1>
		Mode 3: WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + GPS Rx + SIM1 <fig2></fig2>
	1/2	Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera + SIM1 <fig1></fig1>
Radiated Emissions < 1GHz		Mode 2: GSM1900 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + MPEG4 + SIM1 <fig1></fig1>
		Mode 3: WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + GPS Rx + SIM1 <fig2></fig2>
Radiated	GHz 1/2	Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera + SIM1 <fig1></fig1>
Emissions ≥ 1GHz		Mode 2: WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + GPS Rx + SIM1 <fig2></fig2>

Report No. : FC461102

Remark:

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

Page Number

Report Version

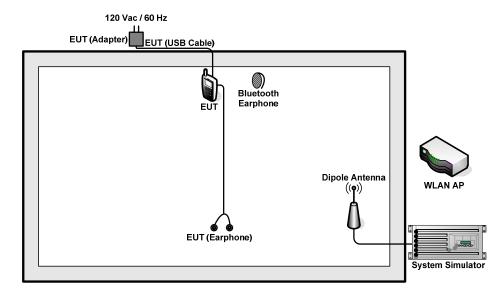
: 9 of 25

: Rev. 01

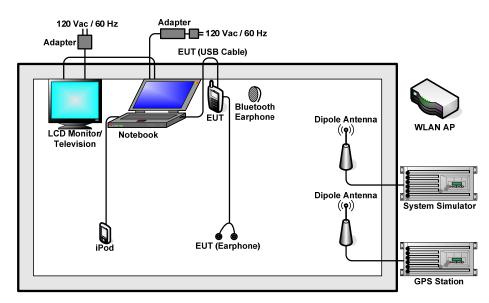
Report Issued Date: Jul. 21, 2014

TEL : 86-755- 3320-2398 FCC ID : WVBA795X

2.2. Connection Diagram of Test System



<Fig1>



<Fig2>

TEL: 86-755- 3320-2398 FCC ID: WVBA795X Page Number : 10 of 25
Report Issued Date : Jul. 21, 2014
Report Version : Rev. 01

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	8960	N/A	N/A	Unshielded, 1.8 m
3.	LCD monitor	changhong	LTE19920EX	N/A	N/A	Unshielded, 1.8 m
4.	GPS Station	ADIVIC	MP9000	N/A	N/A	Unshielded, 1.8 m
5.	WLAN AP	D-link	DIR-815	KA2IR815A1	N/A	Unshielded,1.8m
6.	WLAN AP	D-link	DIR-615	N/A	N/A	Unshielded,1.8m
7.	Bluetooth Earphone	Nokia	BH-108	PYAHS-107W	N/A	N/A
8.	Notebook	Lenovo	G480	FCC DoC	N/A	AC I/P: Unshielded, 1.2m DC O/P: Shielded, 1.8 m
9.	Notebook	Lenovo	E540	FCC DoC	N/A	AC I/P: Unshielded, 1.2m DC O/P: Shielded, 1.8 m
10.	LCD Monitor	DELL	IN1940MWb	FCC DoC	Shielded, 1.6 m	Unshielded, 1.8 m
11.	SD Card	SanDisk	4G class 4	FCC DoC	N/A	N/A
12.	iPod	Apple	MC525 ZP/A	FCC DoC	Shielded, 1.0 m	N/A
13.	iPod nano 8GB	Apple	MC690ZP/A	FCC DoC	Shielded, 1.2 m	N/A

Report No. : FC461102

: 11 of 25

2.4. EUT Operation Test Setup

The EUT was in GSM or WCDMA idle mode during the testing. The EUT was synchronized to the BCCH, and was in continuous receiving mode by setting system simulator's paging reorganization.

At the same time, the EUT was attached to the Bluetooth earphone or WLAN AP, and the following programs installed in the EUT were programmed during the test.

- 1. Data application is transferred between notebook and EUT via USB cable.
- 2. Execute "GPS Test" to make the EUT receive continuous signals from GPS station.
- 3. Execute "Windows Media Player" to play MPEG4 files.
- 4. Turn on camera to capture images.

TEL: 86-755- 3320-2398 Report Issued Date : Jul. 21, 2014 FCC ID: WVBA795X Report Version : Rev. 01

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.

Report No. : FC461102

Frequency of emission	Conducted limit (dBuV)		
(MHz)	Quasi-peak	Average	
0.15-0.5	66 to 56*	56 to 46*	
0.5-5	56	46	
5-30	60	50	

^{*}Decreases with the logarithm of the frequency.

3.1.2 Measuring Instruments

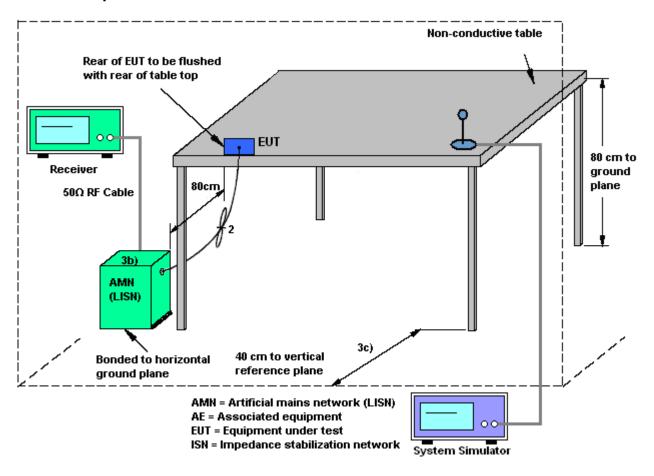
The measuring equipment is listed in the section 4 of this test report.

3.1.3 Test Procedure

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

FCC ID: WVBA795X Report Version: Rev. 01

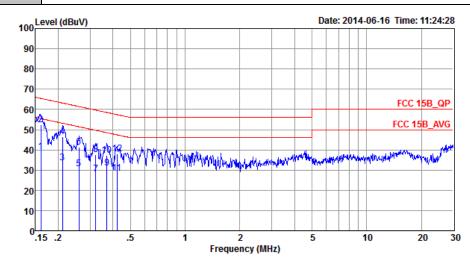
3.1.4 Test Setup



TEL: 86-755- 3320-2398 FCC ID: WVBA795X Page Number : 13 of 25
Report Issued Date : Jul. 21, 2014
Report Version : Rev. 01

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 + WLAN Idle + USB Cable (Charging from Adapter)			
Function Type :	+ Earphone + Camera + SIN	<i>1</i> 1		



Site : CO01-SZ Condition: FCC 15B_QP LISN_L_20140304 LINE

Project : (FC) 461102 : Mode 1

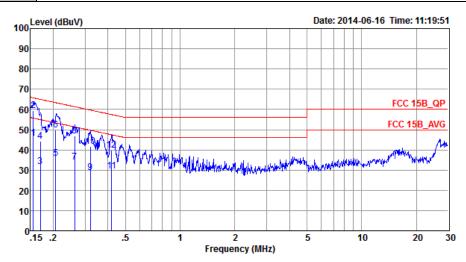
	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBu₹	dB	dBuV	dBu₹	dB	dB	
1	0.16	39.26	-16.17	55.43	28.70	0.22	10.34	Average
2 *	0.16	52.56	-12.87	65.43	42.00	0.22	10.34	QP
3	0.21	33.41	-19.73	53.14	22.91	0.22	10.28	Average
4	0.21	46.51	-16.63	63.14	36.01	0.22	10.28	QP
5	0.26	30.48	-20.94	51.42	20.01	0.24	10.23	Average
6	0.26	41.48	-19.94	61.42	31.01	0.24	10.23	QP
7	0.32	27.95	-21.71	49.66	17.50	0.26	10.19	Average
8	0.32	37.45	-22.21	59.66	27.00	0.26	10.19	QP
9	0.37	30.85	-17.62	48.47	20.40	0.27	10.18	Average
10	0.37	37.45	-21.02	58.47	27.00	0.27	10.18	QP
11	0.42	28.35	-19.07	47.42	17.89	0.29	10.17	Average
12	0.42	37.95	-19.47	57.42	27.49	0.29	10.17	QP

TEL: 86-755-3320-2398 FCC ID: WVBA795X

Page Number : 14 of 25 Report Issued Date: Jul. 21, 2014 Report Version : Rev. 01



Test Mode :	Mode 1	Temperature :	21~22℃				
Test Engineer :	Jack Tian	Relative Humidity :	41~42%				
Test Voltage :	120Vac / 60Hz	Phase :	Neutral				
Fatian Times	GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter)						
Function Type :	+ Earphone + Camera + SIM1						



Site : CO01-SZ

Condition: FCC 15B_QP LISN_N_20140304 NEUTRAL

Project : (FC)461102 Mode : Mode 1

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBu∇	dB	dBu∀	dBu∀	dB	dB	
1	0.16	45.78	-9.91	55.69	35.10	0.33	10.35	Average
2 *	0.16	59.58	-6.11	65.69	48.90	0.33	10.35	QP
3	0.17	31.56	-23.38	54.94	20.90	0.33	10.33	Average
4	0.17	44.26	-20.68	64.94	33.60	0.33	10.33	QP
5	0.21	35.91	-17.45	53.36	25.30	0.32	10.29	Average
6	0.21	49.71	-13.65	63.36	39.10	0.32	10.29	QP
7	0.26	33.78	-17.56	51.34	23.20	0.35	10.23	Average
8	0.26	46.98	-14.36	61.34	36.40	0.35	10.23	QP
9	0.32	28.86	-20.85	49.71	18.30	0.37	10.19	Average
10	0.32	41.66	-18.05	59.71	31.10	0.37	10.19	QP
11	0.42	29.36	-18.10	47.46	18.80	0.39	10.17	Average
12	0.42	39.96	-17.50	57.46	29.40	0.39	10.17	OP

TEL: 86-755- 3320-2398 FCC ID: WVBA795X Page Number : 15 of 25
Report Issued Date : Jul. 21, 2014
Report Version : Rev. 01



Test Mode :	Mode 3	Temperature :	21~22℃				
Test Engineer :	Jack Tian	Relative Humidity :	41~42%				
Test Voltage :	120Vac / 60Hz	Line					
Franctica Tracci	WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with						
Function Type :	Notebook) + Earphone + GPS Rx + SIM1						

100 Level (dBuV) Date: 2014-06-16 Time: 13:51:09 90 80 70 FCC 15B_QP 60 FCC 15B_AVG 50 .5 2 5 10 20 Frequency (MHz)

: CO01-SZ

Condition: FCC 15B_QP LISN_L_20140304 LINE Project : (FC)461102

Mode : Mode 3

			Over	Limit	Read	LISN	Cable	
	Freq	Level	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBu∀	dB	dBu∇	dBu∇	dB	dB	
1	0.17	24.16	-31.05	55.21	13.60	0.22	10.34	Average
2	* 0.17	38.36	-26.85	65.21	27.80	0.22	10.34	QP
3	0.18	15.74	-38.90	54.64	5.20	0.22	10.32	Average
4	0.18	36.54	-28.10	64.64	26.00	0.22	10.32	QP
5	0.19	17.93	-36.13	54.06	7.40	0.22	10.31	Average
6	0.19	35.03	-29.03	64.06	24.50	0.22	10.31	QP
7	0.20	16.91	-36.54	53.45	6.40	0.22	10.29	Average
8	0.20	33.91	-29.54	63.45	23.40	0.22	10.29	QP
9	0.23	15.69	-36.70	52.39	5.20	0.23	10.26	Average
10	0.23	30.99	-31.40	62.39	20.50	0.23	10.26	QP
11	0.27	19.47	-31.56	51.03	9.00	0.25	10.22	Average
12	0.27	29.57	-31.46	61.03	19.10	0.25	10.22	OP

TEL: 86-755-3320-2398 FCC ID: WVBA795X

Page Number : 16 of 25 Report Issued Date: Jul. 21, 2014 Report Version : Rev. 01

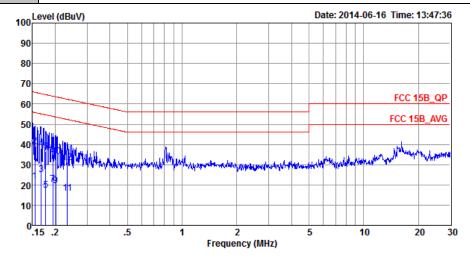


Test Mode : Mode 3 Temperature : 21~22°C

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

Test Voltage : 120Vac / 60Hz Phase : Neutral

Function Type : WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + GPS Rx + SIM1



Site : CO01-SZ

Condition: FCC 15B_QP LISN_N_20140304 NEUTRAL

Project : (FC)461102 Mode : Mode 3

			Over	Limit	Read	LISN	Cable	
	Freq	Level	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBu∀	dB	dBuV	dBuV	dB	dB	
1	0.15	21.68	-34.06	55.74	11.00	0.33	10.35	Average
2 *	0.15	39.28	-26.46	65.74	28.60	0.33	10.35	QP
3	0.17	25.16	-29.92	55.08	14.50	0.33	10.33	Average
4	0.17	38.16	-26.92	65.08	27.50	0.33	10.33	QP
5	0.18	17.44	-37.15	54.59	6.80	0.32	10.32	Average
6	0.18	36.64	-27.95	64.59	26.00	0.32	10.32	QP
7	0.19	20.42	-33.42	53.84	9.80	0.32	10.30	Average
8	0.19	35.12	-28.72	63.84	24.50	0.32	10.30	QP
9	0.20	19.41	-34.13	53.54	8.80	0.32	10.29	Average
10	0.20	33.91	-29.63	63.54	23.30	0.32	10.29	QP
11	0.23	15.99	-36.36	52.35	5.39	0.34	10.26	Average
12	0.23	30.89	-31.46	62.35	20.29	0.34	10.26	QP

TEL : 86-755- 3320-2398 FCC ID : WVBA795X Page Number : 17 of 25
Report Issued Date : Jul. 21, 2014
Report Version : Rev. 01

3.2. Test of Radiated Emission Measurement

3.2.1. Limit of Radiated Emission

The emissions from an unintentional radiator shall not exceed the field strength levels specified in the following table:

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

3.2.2. Measuring Instruments

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

3.2.3. Test Procedures

- 1. The EUT was placed on a turntable with 0.8 meter above ground.
- 2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
- 3. The table was rotated 360 degrees to determine the position of the highest radiation.
- 4. The antenna 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 (dB μ V/m) = 20 log Emission level (μ V/m)
- 9. Corrected Reading: Antenna Factor + Cable Loss + Read Level Preamp Factor = Level

SPORTON INTERNATIONAL (SHENZHEN) INC. TEL: 86-755-3320-2398

FCC ID: WVBA795X

Page Number : 18 of 25 Report Issued Date : Jul. 21, 2014

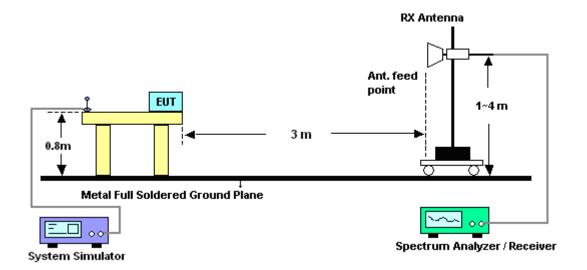
Report No.: FC461102

3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



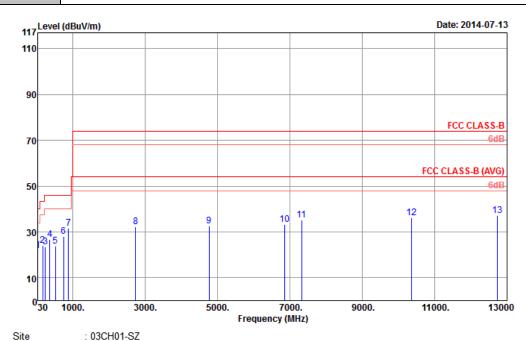
For radiated emissions above 1GHz



TEL: 86-755- 3320-2398 FCC ID: WVBA795X Page Number : 19 of 25
Report Issued Date : Jul. 21, 2014
Report Version : Rev. 01

3.2.5. Test Result of Radiated Emission

Test Mode :	Mode 1	Temperature :	23~25°C				
Test Engineer :	Rock Tang	Relative Humidity :	48~52%				
Test Distance :	3m	Polarization :	Horizontal				
Function Type	GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter)						
Function Type :	+ Earphone + Camera + SIM1						
Remark :	#7 is system simulator signal which can be ignored.						



: FCC CLASS-B 3m LF_ANT_131026 HORIZONTAL Condition

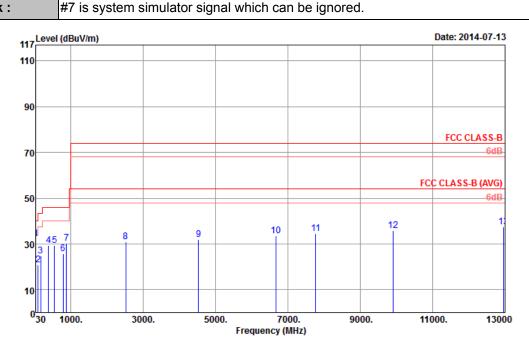
Project Mode : (FC) 461102 : Mode 1

	Freq	Level	Over Limit			Antenna Factor		Preamp Factor		T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	31.62	21.85	-18.15	40.00	33.10	17.90	0.78	29.93			Peak
2	171.75	24.13	-19.37	43.50	44.12	8.37	1.58	29.94			Peak
3	244.38	23.45	-22.55	46.00	40.01	11.53	1.84	29.93			Peak
4	361.60	26.64	-19.36	46.00	39.48	14.91	2.18	29.93			Peak
5	514.90	23.92	-22.08	46.00	33.97	17.30	2.57	29.92			Peak
6	749.40	28.06	-17.94	46.00	34.33	20.60	3.06	29.93	100	204	Peak
7 1	P 881.70	31.57			37.66	20.56	3.29	29.94			Peak
8	2736.00	32.35	-41.65	74.00	50.66	32.73	6.04	57.08			Peak
9	4770.00	32.56	-41.44	74.00	48.15	33.71	8.31	57.61			Peak
10	6852.00	33.38	-40.62	74.00	47.04	33.79	9.87	57.32			Peak
11	7326.00	35.30	-38.70	74.00	48.56	33.90	10.00	57.16			Peak
12	10352.00	36.17	-37.83	74.00	45.09	36.79	12.85	58.56			Peak
13	12728.00	37.08	-36.92	74.00	42.59	38.32	14.28	58.11	100	204	Peak

TEL: 86-755-3320-2398 FCC ID: WVBA795X

Page Number : 20 of 25 Report Issued Date: Jul. 21, 2014 Report Version : Rev. 01

Test Mode :	Mode 1	Temperature :	23~25°C				
Test Engineer :	Rock Tang	Relative Humidity :	48~52%				
Test Distance :	3m	Polarization :	Vertical				
Function Type :	GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter)						
runction type.	+ Earphone + Camera + SIM1						
Remark :	#7 is system simulator signal which can be ignored.						



Site : 03CH01-SZ

Condition : FCC CLASS-B 3m LF_ANT_131026 VERTICAL

Project : (FC) 461102 Mode : Mode 1

				Over					Preamp	-	T/Pos	
		Freq	Level	Limit	Line	Level	Factor	Loss	Factor			Remark
	_	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	Р	35.13	32.36	-7.64	40.00	45.38	16.10	0.81	29.93	100	198	Peak
2		94.80	20.87	-22.63	43.50	39.33	10.25	1.23	29.94			Peak
3		171.75	24.80	-18.70	43.50	44.79	8.37	1.58	29.94			Peak
4		386.10	29.41	-16.59	46.00	41.63	15.46	2.25	29.93			Peak
5		548.50	29.23	-16.77	46.00	38.43	18.07	2.65	29.92			Peak
6		792.10	25.90	-20.10	46.00	32.77	19.92	3.14	29.93			Peak
7		881.00	30.30			36.38	20.58	3.28	29.94			Peak
8		2518.00	31.12	-42.88	74.00	49.85	32.52	5.77	57.02			Peak
9		4532.00	31.78	-42.22	74.00	48.59	33.18	8.07	58.06			Peak
10		6660.00	33.53	-40.47	74.00	46.90	33.91	9.85	57.13			Peak
11		7772.00	34.67	-39.33	74.00	46.50	34.48	10.42	56.73			Peak
12		9914.00	35.84	-38.16	74.00	44.55	36.88	12.54	58.13			Peak
13	1	12956.00	37.50	-36.50	74.00	42.54	38.71	14.34	58.09	100	209	Peak

TEL : 86-755- 3320-2398 FCC ID : WVBA795X Page Number : 21 of 25 Report Issued Date : Jul. 21, 2014

Report No. : FC461102

SPORTON LAB.	FCC Test Re

Test Mode :	Mode	3				Гетре	rature):	23~	~25°C			
Test Engineer :	Rock Tang			ı	Relative Humidity :				48~52%				
Test Distance :	3m Pola				Polariz	ation	:	Horizontal					
Function Type :	WCD	MA Ba	nd V	Idle +	Blue	etooth Idle + WLAN Idle + USB Cable (Data Link w						ık witl	
i unction type.	Note	Notebook) + Earphone + GPS Rx + SIM1											
Remark :	#7 is	systen	n sim	ulator	signal	which	can b	e ignor	ed.				
117 Leve	el (dBuV/n	n)									Date: 2	014-07-13	
110													
1													
90													
											FCC	CLASS-B	
70												-6dB	
											FCC CLAS	e D (AVC)	
50											FCC CLAS	6dB	
24										12		13	
ı di	7	8 			9		10	11				Ĩl	
30													
10													
030	1000.		3000.		5000.		7000.		9000.		11000.	13000	0
						Frequen)					
Site Condition		3CH01-S FCC CLA		m I F Al	UT 1310	26 HORE	7ΟΝΤΔΙ						
Project	: (FC) 4611		2,		2011011							
Mode IMEI		Mode 3 35576905	000237	'8									
		Level	0ver	Limit		Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark		
												_	
		dBuV/m		dBuV/m	dBuV	dB/m	dB	dB	cm	deg	DI-		
1 2		27.73 - 28.72 -						29.93			Peak Peak		
		37.94					1.84	29.93	100		Peak		
		37.47 32.17 -						29.93 29.93			Peak Peak		
		29.60 -						29.93			Peak		
7	882.40	35.37			41.47	20.55	3.29	29.94			Peak		
		34.70 - 33.91 -						57.41 57.61			Peak Peak		
10 6	672.00	34.83 -	39.17	74.00	48.22	33.90		57.14			Peak		
11 7	706.00	35.60 -	38.40	74.00	47.72	34.36	10.32	56.80			Peak		

7766.00 35.60 -38.40 74.00 47.72 34.36 10.32 56.80 10048.00 37.01 -36.99 74.00 45.51 36.97 12.70 58.17 12734.00 38.39 -35.61 74.00 43.90 38.32 14.28 58.11

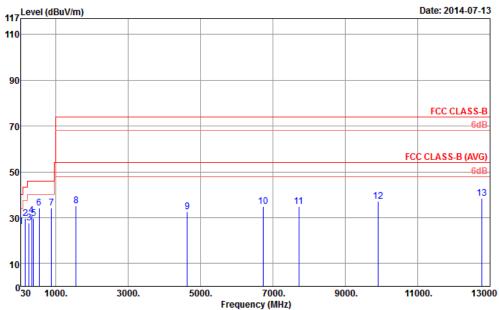
11 12 13

TEL: 86-755-3320-2398 FCC ID: WVBA795X

Page Number : 22 of 25 Report Issued Date: Jul. 21, 2014 Report Version : Rev. 01

--- Peak --- Peak 206 Peak

Test Mode :	Mode 3	Temperature :	23~25°C				
Test Engineer :	Rock Tang	Relative Humidity :	48~52%				
Test Distance :	3m	Polarization :	Vertical				
WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link							
Function Type :	Notebook) + Earphone + GPS Rx + SIM1						
Remark :	#7 is system simulator signal which can be ignored.						
·							



Site : 03CH01-SZ

Condition : FCC CLASS-B 3m LF_ANT_131026 VERTICAL

Project : (FC) 461102

Mode : Mode 3

IMEI : 355769050002378

			Over	Limit	Read/	Antenna	Cable	Preamp	A/Pos	T/Pos	
	Fre	q Level	Limit	Line	Level	Factor	Loss	Factor			Remark
	МН	z dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	31.0	8 26.19	-13.81	40.00	36.95	18.40	0.77	29.93			Peak
2	161.7	5 29.80	-13.70	43.50	49.37	8.82	1.55	29.94			Peak
3	258.6	9 27.56	-18.44	46.00	43.08	12.52	1.89	29.93			Peak
4	334.3	31.08	-14.92	46.00	44.70	14.20	2.11	29.93			Peak
5	386.1	29.74	-16.26	46.00	41.96	15.46	2.25	29.93			Peak
6	538.0	34.08	-11.92	46.00	43.61	17.76	2.63	29.92	100	203	Peak
7	P 881.0	34.20			40.28	20.58	3.28	29.94			Peak
8	1562.0	35.32	-38.68	74.00	60.84	27.57	4.45	57.54			Peak
9	4634.0	32.68	-41.32	74.00	48.97	33.40	8.18	57.87			Peak
10	6726.0	34.87	-39.13	74.00	48.34	33.87	9.86	57.20			Peak
11	7712.0	35.03	-38.97	74.00	47.10	34.39	10.32	56.78			Peak
12	9902.0	37.18	-36.82	74.00	45.94	36.88	12.49	58.13			Peak
13	12778.0	38.49	-35.51	74.00	43.90	38.41	14.29	58.11	100	199	Peak

TEL : 86-755- 3320-2398 FCC ID : WVBA795X

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	Jul. 13, 2014	Feb. 20, 2015	Radiation (03CH01-SZ)
Spectrum Analyzer	Agilent Technologies	N9038A	MY52260185	20Hz~26.5GHz	May 26, 2014	Jul. 13, 2014	May 25, 2015	Radiation (03CH01-SZ)
Bilog Antenna	TESEQ	CBL 6112D	23188	30MHz~2GHz	Oct. 26, 2013	Jul. 13, 2014	Oct. 25, 2014	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS Lindgren	3117	00119436	1GHz~18GHz	Oct. 26, 2013	Jul. 13, 2014	Oct. 25, 2014	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9kHz~3000MHz	Feb. 21, 2014	Jul. 13, 2014	Feb. 20, 2015	Radiation (03CH01-SZ)
Amplifier	Yiai	AV3860B	04030	2GHz~26.5GHz	May 08, 2014	Jul. 13, 2014	May 07, 2015	Radiation (03CH01-SZ)
AC Source(AVR)	Chroma	61601	61601000198 5	100Vac~250Vac	Mar. 25, 2014	Jul. 13, 2014	Mar. 24, 2015	Radiation (03CH01-SZ)
Turn Table	EM Electronics	EM 1000	N/A	0~360 degree	NCR	Jul. 13, 2014	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM Electronics	EM 1000	N/A	1 m~4 m	NCR	Jul. 13, 2014	NCR	Radiation (03CH01-SZ)
ESCIO TEST Receiver	R&S	ESCI	100724	9kHz~3GHz	Feb. 21, 2014	Jun. 16, 2014	Feb. 20, 2015	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103912	9kHz~30MHz	Mar. 04, 2014	Jun. 16, 2014	Mar. 03, 2015	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	EMCO	3816/2SH	00103892	9kHz~30MHz	Mar. 04, 2014	Jun. 16, 2014	Mar. 03, 2015	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	61602000089 1	100Vac~250Vac	Dec. 17, 2013	Jun. 16, 2014	Dec. 16, 2014	Conduction (CO01-SZ)

TEL: 86-755- 3320-2398 FCC ID: WVBA795X Page Number : 24 of 25 Report Issued Date : Jul. 21, 2014

Report No. : FC461102



5. Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of	2.2
Confidence of 95% (U = 2Uc(y))	2.3

Report No. : FC461102

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

Measuring Uncertainty for a Level of	2.0
Confidence of 95% (U = 2Uc(y))	3.3

SPORTON INTERNATIONAL (SHENZHEN) INC. Page Number : 25 of 25 TEL: 86-755-3320-2398 Report Issued Date: Jul. 21, 2014

FCC ID: WVBA795X Report Version : Rev. 01