FCC Test Report

APPLICANT : Planet Avvio LLC

EQUIPMENT: Mobile Phone

BRAND NAME : Avvio

MODEL NAME : Avvio PRO550; PRO550

FCC ID : 2ALTAPRO550X

STANDARD : FCC 47 CFR FCC Part 15 Subpart B

CLASSIFICATION: Certification

The product was received on Apr. 28, 2017 and testing was completed on May 18, 2017. 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 C63.4-2014 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.

Prepared by: Eric Shih / Manager

Frie Shih

Approved by: Jones Tsai / Manager

SPORTON International (ShenZhen) INC.

1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan District, Shenzhen City, Guangdong Province, China

SPORTON International (ShenZhen) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAPRO550X Page Number : 1 of 23
Report Issued Date : May 31, 2017
Report Version : Rev. 01

Testing Laboratory 2353

Report No. : FC742812

TABLE OF CONTENTS

RE	VISIO	N HISTORY	3
		RY OF TEST RESULT	
1.		ERAL DESCRIPTION	
	1.1.	Applicant	
	1.2.	Manufacturer	
	1.3.	Product Feature of Equipment Under Test	
	1.4. 1.5.	Product Specification of Equipment Under Test	
	1.5. 1.6.	Test Location	
	1.7.	Applicable Standards	
2.	TEST	CONFIGURATION OF EQUIPMENT UNDER TEST	8
	2.1.	Test Mode	8
	2.2.	Connection Diagram of Test System	9
	2.3.	Support Unit used in test configuration and system	10
	2.4.	EUT Operation Test Setup	11
3.	TEST	RESULT	12
	3 1	Test of AC Conducted Emission Measurement	
	3.2.	Test of Radiated Emission Measurement	
4.	LIST	OF MEASURING EQUIPMENT	22
5.	UNCI	ERTAINTY OF EVALUATION	23
٠.	3		

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAPRO550X Page Number : 2 of 23
Report Issued Date : May 31, 2017
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.3

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC742812	Rev. 01	Initial issue of report	May 31, 2017

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAPRO550X Page Number : 3 of 23
Report Issued Date : May 31, 2017
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.3

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	11.82 dB at
					0.410 MHz
					Under limit
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	5.16 dB at
					174.990 MHz

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAPRO550X Page Number : 4 of 23
Report Issued Date : May 31, 2017
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.3

1. General Description

1.1. Applicant

Planet Avvio LLC

9725 NW 117th Ave., Medley, FL 33178, United States

1.2. Manufacturer

Heng Da Chuang Xin Technology Limited

Rm14H Taibang Building, 4 Rd. High Tech South, Nanshan, SZ, P. R. C. 518000

1.3. Product Feature of Equipment Under Test

	Product Feature		
Equipment	Mobile Phone		
Brand Name	Avvio		
Model Name	Avvio PRO550; PRO550		
FCC ID	2ALTAPRO550X		
	GSM/GPRS/EGPRS/WCDMA/HSPA/HSPA+/ DC-HSDPA/LTE/		
EUT supports Radios application	WLAN2.4GHz 802.11b/g/n HT20/HT40		
	Bluetooth v3.0 + EDR/Bluetooth v4.0 LE		
IMEI Code	Conduction/Radiation: 358381080000583		
EUT Stage	Production Unit		

Remark:

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

SPORTON International (ShenZhen) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAPRO550X Page Number : 5 of 23
Report Issued Date : May 31, 2017
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.3

1.4. Product Specification of Equipment Under Test

Standards-related Product Specification						
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 LTE Band 2: 1850.7 MHz ~ 1909.3 MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 7: 2502.5 MHz ~ 2567.5 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 LTE Band 2: 1930.7 MHz ~ 1989.3 MHz LTE Band 4: 2110.7 MHz ~ 2154.3 MHz LTE Band 7: 2622.5 MHz~ 2687.5 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz GPS: 1.57542 GHz					
Antenna Type	WWAN: PIFA Antenna WLAN: PIFA Antenna Bluetooth: PIFA Antenna GPS: PIFA Antenna					
Type of Modulation	GSM: GMSK GPRS: GMSK EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK WCDMA: BPSK (Uplink) HSDPA/DC-HSDPA: QPSK (Uplink) HSUPA: QPSK (Uplink) HSPA+: 16QAM DC-HSDPA: 64QAM 802.11b: DSSS (DBPSK / DQPSK / CCK) 802.11g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM) Bluetooth LE: GFSK Bluetooth (1Mbps): GFSK Bluetooth (2Mbps): \pi /4-DQPSK Bluetooth (3Mbps): 8-DPSK GPS: BPSK					

1.5. Modification of EUT

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

SPORTON International (ShenZhen) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAPRO550X Page Number : 6 of 23
Report Issued Date : May 31, 2017
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.3

1.6. Test Location

Test Site	SPORTON International (ShenZhen) INC.					
	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan District,					
	Shenzhen City, Guangdong Province, China					
Test Site Location	TEL: +86-755-8637-9589					
	FAX: +86-755-8637-9595					
Toot Site No	Sporton Site No.					
Test Site No.	CO01-SZ					

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. China TEL: +86-755-3320-2398						
Took Oiko No	Sporton Site No.	FCC Registration No.					
Test Site No.	03CH03-SZ 565805						

Note: The test site complies with ANSI C63.4 2014 requirement.

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 C63.4-2014

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.

SPORTON International (ShenZhen) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAPRO550X Page Number : 7 of 23
Report Issued Date : May 31, 2017
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.3

2. Test Configuration of Equipment Under Test

2.1. Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2014 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).

Test Items	Function Type
	Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Charging from Adapter) + Camera(Rear) <fig. 1=""></fig.>
AC Conducted	Mode 2: GSM1900 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Charging from Adapter) + Camera(Front) <fig. 1=""></fig.>
Emission	Mode 3: WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Charging from Adapter) + MPEG4 <fig. 1=""></fig.>
	Mode 4: LTE Band 7 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Data Link with Notebook) + GPS Rx <fig. 2=""></fig.>
	Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Charging from Adapter) + Camera(Rear) <fig. 1=""></fig.>
Radiated	Mode 2: GSM1900 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Charging from Adapter) + Camera(Front) <fig. 1=""></fig.>
Emissions < 1GHz	Mode 3: WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Charging from Adapter) + MPEG4 <fig. 1=""></fig.>
	Mode 4: LTE Band 7 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Data Link with Notebook) + GPS Rx <fig. 2=""></fig.>
Radiated Emissions ≥ 1GHz	Mode 1: LTE Band 7 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Data Link with Notebook) + GPS Rx <fig. 2=""></fig.>

Remark:

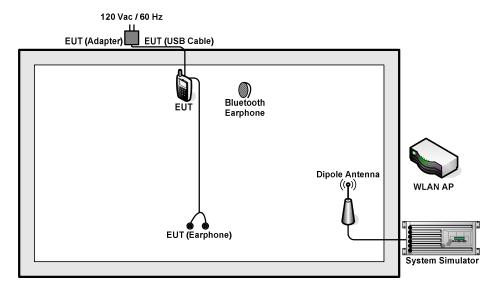
- 1. The worst case of AC is mode 3; and the USB Link mode is mode 4, the test data of these modes are reported.
- 2. The worst case of RE < 1G is mode 4; only the test data of this mode is reported.
- Data Link with Notebook means data application transferred mode between EUT and Notebook.

SPORTON International (ShenZhen) INC.

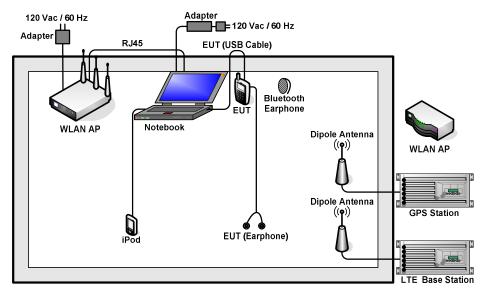
TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAPRO550X Page Number : 8 of 23
Report Issued Date : May 31, 2017
Report Version : Rev. 01

Report No. : FC742812

2.2. Connection Diagram of Test System



<Fig. 1>



<Fig. 2>

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAPRO550X Page Number : 9 of 23
Report Issued Date : May 31, 2017
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.3

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	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m	
2.	LTE Base Station			N/A	N/A	Unshielded, 1.8 m	
3.	GPS Station	ADIVIC	MP9000	N/A	N/A	Unshielded, 1.8 m	
4.	WLAN AP ASUS		RT-AC66U	MSQ-TRAC66U	N/A	Unshielded, 1.8 m	
5.	WLAN AP D-Link		DIR-820L	KA2IR820LAI	N/A	Unshielded, 1.8 m	
6.	Bluetooth Earphone Samsung		HS3000	A3LHS30000	N/A	N/A	
7.	Bluetooth Earphone Nokia		BH-108	PYAHS-107W	N/A	N/A	
8.	Notebook	ook Lenovo E540 Fcc DoC N/A		N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m		
9.	iPod Apple MC5		MC525 ZP/A	FCC DoC	Shielded, 1.2 m	N/A	
10.	iPod nano 8GB	Apple	MC690ZP/A	FCC DoC	Shielded, 1.2m	N/A	
11.	SD Card	Kingston	SDC10/8GB	Fcc DoC N/A		N/A	

SPORTON International (ShenZhen) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAPRO550X Page Number : 10 of 23
Report Issued Date : May 31, 2017
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.3

2.4. EUT Operation Test Setup

The EUT was in GSM or WCDMA or LTE 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. 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 "Video player" to play MPEG4 files.
- 4. Turn on camera to capture images.

SPORTON International (ShenZhen) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAPRO550X Page Number : 11 of 23
Report Issued Date : May 31, 2017
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.3

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

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.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAPRO550X Page Number : 12 of 23
Report Issued Date : May 31, 2017
Report Version : Pay 01

Report No. : FC742812

Report Version : Rev. 01

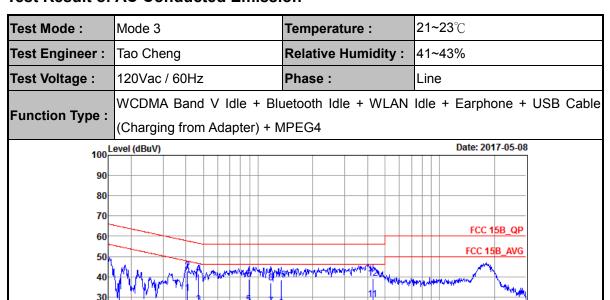
3.1.4 Test Setup



TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAPRO550X Page Number : 13 of 23
Report Issued Date : May 31, 2017
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.3

3.1.5 Test Result of AC Conducted Emission



Frequency (MHz)

Site : CO01-SZ

0<mark>.15 .2</mark>

20 10

Condition: FCC 15B_QP LISN_20170301_L LINE

Project : (FC)742812 Mode : Mode 3

IMEI : 358381080000583

				Over	Limit	Read	LISN	Cable	
		Freq	Level	Limit	Line	Level	Factor	Loss	Remark
		MHz	dBu∀	dB	dBu∀	dBu∀	dB	dB	
1		0.41	31.72	-15.96	47.68	21.50	0.03	10.19	Average
2	*	0.41	42.82	-14.86	57.68	32.60	0.03	10.19	QP
3		0.47	26.31	-20.18	46.49	16.11	0.02	10.18	Average
4		0.47	41.31	-15.18	56.49	31.11	0.02	10.18	QP
5		0.89	26.11	-19.89	46.00	15.90	0.05	10.16	Average
6		0.89	38.81	-17.19	56.00	28.60	0.05	10.16	QP
7		1.18	25.43	-20.57	46.00	15.20	0.08	10.15	Average
8		1.18	37.03	-18.97	56.00	26.80	0.08	10.15	QP
9		1.34	24.34	-21.66	46.00	14.10	0.09	10.15	Average
10		1.34	38.24	-17.76	56.00	28.00	0.09	10.15	QP
11		4.29	28.94	-17.06	46.00	18.50	0.18	10.26	Average
12		4.29	39.04	-16.96	56.00	28.60	0.18	10.26	QP

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAPRO550X Page Number : 14 of 23
Report Issued Date : May 31, 2017
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.3

20



Test Mode :	Mode 3			Ten	emperature : 2			21~23℃		
Test Engineer :	Tao Che	ng		Rel	Relative Humidity: 41~43%					
Test Voltage :	120Vac	60Hz		Pha	Phase : Neutral					
Function Type :		WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + Earphone + (Charging from Adapter) + MPEG4								
100L	evel (dBuV)							Date: 20	17-05-08	
90-										
80										
70								FCC 1	15B_QP	
60		-								
50	A	-		Add and a second	1. 1			FCC 1:	5B_AVG	
40	MANA		whitehear			Marylling Commencer	Malandanan	A Park State of the Land	MANAM	
30	Y Y Y Y	1 1917		7 9		11 1 1	CONTRACTOR OF THE PROPERTY OF	Authorne	MANA	
20										
10										
0										
0.1	15 .2	.5	1		2 ency (MHz)	5	10	:	20 3	0
Site Conditio Project Mode IMEI	: CO01-S on: FCC 15 : (FC)74 : Mode 3 : 358381	B_QP LI 2812	83	_			a.1.1			
	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark		
_	MHz	dBuV	dB	dBuV	dBuV	dB	dB			
1 *	0.41	35.91	-11.82	47.73	25.70	0.02	10.19	Average	e	
2	0.41	43.71	-14.02	57.73	33.50	0.02	10.19	QP		
3	0.48		-13.42	46.32	22.70	0.02		Average	е	
4 5			-15.22 -19.40	56.32 46.00	30.90	0.02 0.05	10.18	QP Average	_	
6			-17.70	56.00	28.10	0.05	10.15	_	-	
7	1.07		-16.80	46.00	19.00	0.05		Average	е	
8	1.07	39.60	-16.40	56.00		0.05	10.15	QP		
9 1.36 29.20								Average	е	
10			-16.00				10.15			
11 12			-19.11 -18.41				10.24	Average	е	
	5.75	3,.03	20.11	55.00	200		10.21	×-		

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAPRO550X Page Number : 15 of 23
Report Issued Date : May 31, 2017
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.3



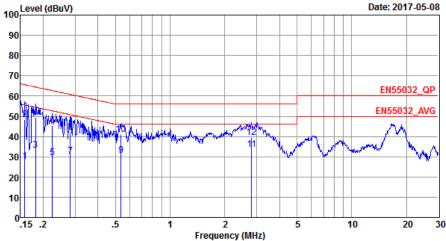
Test Mode :	Mode 4			Ten	nperatu	re:	21~2	23°C			
Test Engineer :	Tao Cheng F			Rela	ative H	umidity :	41~4	1~43%			
Test Voltage :	120Vac /	60Hz		Pha	se :	Line					
Function Type :		TE Band 7 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Data Link vith Notebook) + GPS Rx									
100 ^L	evel (dBuV)	·									
90											
80											
70											
60								EN550	32_QP		
50	VIII VIAA							EN5503	2_AVG		
40	. I I I I I I I I I I I I I I I I I I I	Managar.	Malasaa	i.				Λ			
	3 5 7	MILLI 1 421	Art Abus all his	h ^{all} h <mark>an</mark> tan _{an} a	White Street	NAT AND	Marin Marin La	May 1	Mr. pa		
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20											
10											
0											
°.1	15 .2	.5	1		2 ency (MHz)	5	10) 2	0 30)	
Site	: CO01-S	Z		·	, ,	•					
	n: EN5503		SN_20170	301_L LI	NE						
Project Mode	: (FC)74 : mode 4										
IMEI	: 358381		33								
				Limit	Read	LISN	Cable				
	Freq	Level	Limit	Line	Level	Factor	Loss	Remark			
	MHz	dBu∀	dB	dBu₹	dBuV	dB	dB				
1	0.15	37.93	-17.89	55.82	27.50	0.03	10.40	Average	;		
2	0.15			65.82		0.03		_			
3	0.18			54.42		0.03		Average	;		
4 *	0.18			64.42		0.03	10.28				
5	0.24			52.17		0.03		Average	;		
6	0.24			62.17		0.03					
7 8	0.28			50.94 60.94				Average	;		
9	0.20			49.62				Average			
10	0.32			59.62			10.21	_	,		
11	0.51			46.00				Average	;		
12	0.51			56.00			10.18	_			

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAPRO550X Page Number : 16 of 23 Report Issued Date: May 31, 2017 Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.3



Test Mode :	Mode 4	Temperature :	21~23℃				
Test Engineer :	Tao Cheng	Relative Humidity :	41~43%				
Test Voltage :	120Vac / 60Hz	Phase :	Neutral				
Function Type	LTE Band 7 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Data Link						
Function Type :	with Notebook) + GPS Rx						
400L	evel (dBuV)		Date: 2017-05-08				



: CO01-SZ

Condition: EN55032 QP LISN 20170301 N NEUTRAL

Project : (FC) 742812 Mode : mode 4 IMEI : 358381080000583

		Over	Limit	Read	LISN	Cable	
Freq	Level	Limit	Line	Level	Factor	Loss	Remark
MHz	dBu∀	dB	dBu∀	dBuV	dB	dB	
0.16	27.80	-27.76	55.56	17.40	0.03	10.37	Average
0.16	48.50	-17.06	65.56	38.10	0.03	10.37	QP
0.18	33.11	-21.31	54.42	22.80	0.03	10.28	Average
0.18	49.51	-14.91	64.42	39.20	0.03	10.28	QP
0.22	29.45	-23.21	52.66	19.20	0.03	10.22	Average
0.22	45.25	-17.41	62.66	35.00	0.03	10.22	QP
0.28	30.35	-20.41	50.76	20.10	0.03	10.22	Average
0.28	42.25	-18.51	60.76	32.00	0.03	10.22	QP
0.54	30.50	-15.50	46.00	20.30	0.02	10.18	Average
0.54	41.00	-15.00	56.00	30.80	0.02	10.18	QP
2.81	33.54	-12.46	46.00	23.31	0.03	10.20	Average
2.81	39.34	-16.66	56.00	29.11	0.03	10.20	QP
	MHz 0.16 0.18 0.18 0.22 0.22 0.28 0.28 0.54 0.54 2.81	MHz dBuV 0.16 27.80 0.16 48.50 0.18 33.11 0.18 49.51 0.22 29.45 0.22 45.25 0.28 30.35 0.28 42.25 0.54 30.50 0.54 41.00 2.81 33.54	MHz dBuV dB 0.16 27.80 -27.76 0.16 48.50 -17.06 0.18 33.11 -21.31 0.18 49.51 -14.91 0.22 29.45 -23.21 0.22 45.25 -17.41 0.28 30.35 -20.41 0.28 42.25 -18.51 0.54 30.50 -15.50 0.54 41.00 -15.00 2.81 33.54 -12.46	Freq Level Limit Line MHz dBuV dB dBuV 0.16 27.80 -27.76 55.56 0.16 48.50 -17.06 65.56 0.18 33.11 -21.31 54.42 0.18 49.51 -14.91 64.42 0.22 29.45 -23.21 52.66 0.22 45.25 -17.41 62.66 0.28 30.35 -20.41 50.76 0.28 42.25 -18.51 60.76 0.54 30.50 -15.50 46.00 0.54 41.00 -15.00 56.00 2.81 33.54 -12.46 46.00	Freq Level Limit Line Level MHz dBuV dB dBuV dBuV 0.16 27.80 -27.76 55.56 17.40 0.16 48.50 -17.06 65.56 38.10 0.18 33.11 -21.31 54.42 22.80 0.18 49.51 -14.91 64.42 39.20 0.22 29.45 -23.21 52.66 19.20 0.22 45.25 -17.41 62.66 35.00 0.28 30.35 -20.41 50.76 20.10 0.28 42.25 -18.51 60.76 32.00 0.54 30.50 -15.50 46.00 20.30 0.54 41.00 -15.00 56.00 30.80 2.81 33.54 -12.46 46.00 23.31	Freq Level Limit Line Level Factor MHz dBuV dB dBuV dBuV dB 0.16 27.80 -27.76 55.56 17.40 0.03 0.16 48.50 -17.06 65.56 38.10 0.03 0.18 33.11 -21.31 54.42 22.80 0.03 0.18 49.51 -14.91 64.42 39.20 0.03 0.22 29.45 -23.21 52.66 19.20 0.03 0.22 45.25 -17.41 62.66 35.00 0.03 0.28 30.35 -20.41 50.76 20.10 0.03 0.28 42.25 -18.51 60.76 32.00 0.03 0.54 30.50 -15.50 46.00 20.30 0.02 0.54 41.00 -15.00 56.00 30.80 0.02 2.81 33.54 -12.46 46.00 23.31 0.03	Freq Level Limit Line Level Factor Loss MHz dBuV dB dBuV dBuV dB dB dB 0.16 27.80 -27.76 55.56 17.40 0.03 10.37 0.16 48.50 -17.06 65.56 38.10 0.03 10.37 0.18 33.11 -21.31 54.42 22.80 0.03 10.28 0.18 49.51 -14.91 64.42 39.20 0.03 10.28 0.22 29.45 -23.21 52.66 19.20 0.03 10.22 0.22 45.25 -17.41 62.66 35.00 0.03 10.22 0.28 30.35 -20.41 50.76 20.10 0.03 10.22 0.28 42.25 -18.51 60.76 32.00 0.03 10.22 0.54 30.50 -15.50 46.00 20.30 0.02 10.18 0.54 41.00 -15

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAPRO550X Page Number : 17 of 23 Report Issued Date: May 31, 2017 Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.3

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 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 μ V/m) = 20 log Emission level (μ V/m)
- 9. Corrected Reading: Antenna Factor + Cable Loss + Read Level Preamp Factor = Level

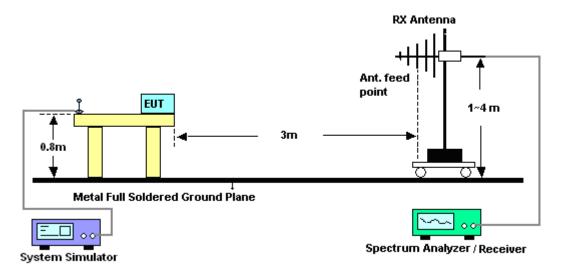
SPORTON International (ShenZhen) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAPRO550X Page Number : 18 of 23
Report Issued Date : May 31, 2017
Report Version : Rev. 01

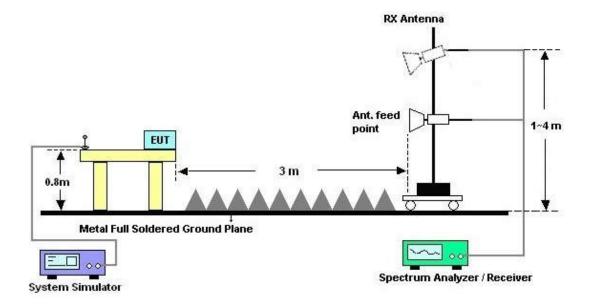
Report No.: FC742812

3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



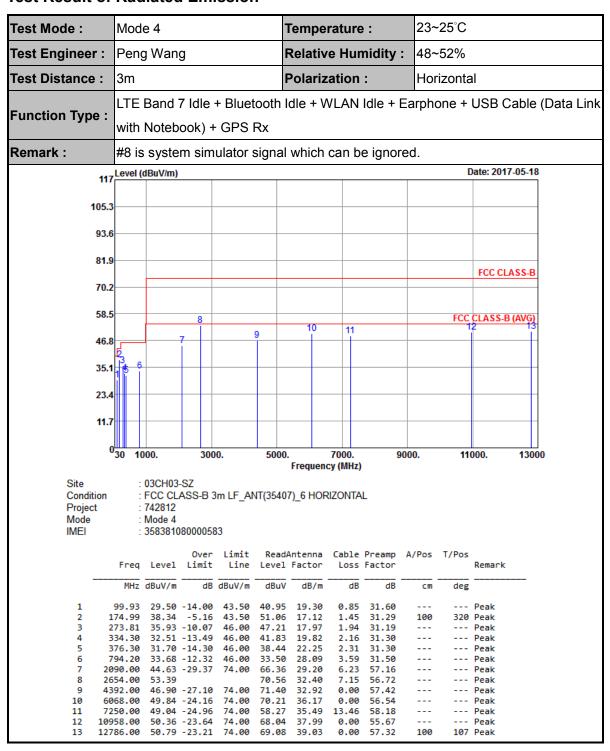
For radiated emissions above 1GHz



TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAPRO550X Page Number : 19 of 23
Report Issued Date : May 31, 2017
Report Version : Rev. 01

Report No.: FC742812

3.2.5. Test Result of Radiated Emission



TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAPRO550X Page Number : 20 of 23
Report Issued Date : May 31, 2017
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.3

Test Mode :	Mode 4			Гетре	rature) :	23~	-25°C		
Test Engineer :	Peng Wang			Relativ	e Hur	nidity :	48~	48~52%		
Test Distance :	3m		F	Polariz	ation	:	Ver	tical		
Function Type :		7 Idle + Blue ook) + GPS		dle + V	VLAN	Idle + E	arph	one +	USB Cal	ble (Data Link
Remark :	#8 is syste	m simulator	signal	which	can b	e ignore	ed.			
117	Level (dBuV/m)							[)ate: 2017-0	5-18
105.3										
93.6										
81.9									FCC CLAS	S-B
70.2										
58.5		8			10			FCC 12	CLASS-B (A	VG)
46.8	5	7	9			11		<u> </u>		
35.1	1 7 1									
23.4										
11.7										
0	30 1000.	3000.	5000.		7000.		000.	110	000.	13000
Site Condition Project Mode IMEI	: 742812 : Mode 4	-SZ ASS-B 3m LF_A 080000583	NT(3540	Frequenc						
	Freq Level	Over Limit Limit Line	Read/ Level	Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark	
	MHz dBuV/m	dB dBuV/m	dBuV	dB/m	dB	dB	cm	deg		_
2 1 3 2 4 3 5 6	77.42 31.90 73.00 28.13 70.70 31.33 93.40 37.62	-17.06 43.50 -11.60 43.50 -17.87 46.00 -14.67 46.00 -8.38 46.00 -13.89 46.00	44.71 39.41 38.50 39.23	17.00 17.97 21.84 26.64	1.47 1.94 2.29 3.25		200	 142	Peak Peak Peak Peak Peak Peak	
7 22 8 26 9 46 10 67	66.00 43.85 54.00 54.10 32.00 46.23 66.00 49.49	-30.15 74.00	63.91 71.27 70.11 55.41	30.41 32.40 33.18 35.95	6.48 7.15 0.00 15.80	56.95 56.72 57.06			Peak Peak Peak Peak Peak Peak	
12 105	26.00 50.27	-23.73 74.00 -23.48 74.00	54.25	37.90		56.53 57.36	100		Peak Peak	

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAPRO550X Page Number : 21 of 23
Report Issued Date : May 31, 2017
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.3

4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Receiver	R&S	ESR7	101630	9kHz~7GHz;	Jan. 06, 2017	May 08, 2017	Jan. 05, 2018	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103892	9kHz~30MHz	Jan. 05, 2017	May 08, 2017	Jan. 04, 2018	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	MessTec	3816/2SH	00103912	9kHz~30MHz	Jan. 05, 2017	May 08, 2017	Jan. 04, 2018	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	61602000089 1	100Vac~250Vac	Jul. 16, 2016	May 08, 2017	Jul. 15, 2017	Conduction (CO01-SZ)
EMI Test Receiver&SA	KEYSIGHT	N9038A	MY54450083	20Hz~8.4GHz	Apr.20, 2017	May 18, 2017	Apr.19, 2018	Radiation (03CH03-SZ)
EXA Spectrum Anaiyzer	KEYSIGHT	N9010A	MY55150246	10Hz~44GHz;	Apr.20, 2017	May 18, 2017	Apr.19, 2018	Radiation (03CH03-SZ
Bilog Antenna	TeseQ	CBL6112D	35408	30MHz-2GHz	May. 14, 2017	May 18, 2017	May. 13, 2018	Radiation (03CH03-SZ)
Double Ridge Horn Antenna	SCHWARZBE CK	BBHA 9120D	9120D-1285	1GHz~18GHz	Jan. 12, 2017	May 18, 2017	Jan. 11, 2018	Radiation (03CH03-SZ)
Amplifier	Burgeon	BPA-530	102210	0.01Hz ~3000MHz	Oct. 11, 2016	May 18, 2017	Oct. 10, 2017	Radiation (03CH03-SZ)
HF Amplifier	MITEQ	AMF-7D-0010 1800-30-10P- R	1943528	1GHz~18GHz	Oct. 11, 2016	May 18, 2017	Oct. 10, 2017	Radiation (03CH03-SZ)
AC Power Source	Chroma	61601	61601000198 5	N/A	NCR	May 18, 2017	NCR	Radiation (03CH03-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	May 18, 2017	NCR	Radiation (03CH03-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	May 18, 2017	NCR	Radiation (03CH03-SZ)

NCR: No Calibration Required

SPORTON International (ShenZhen) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAPRO550X Page Number : 22 of 23
Report Issued Date : May 31, 2017
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.3



5. Uncertainty of Evaluation

Uncertainty of Conducted Emission Measurement (150 kHz ~ 30 MHz)

Measuring Uncertainty for a Level of	2.5dB
Confidence of 95% (U = 2Uc(y))	2.506

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

Measuring Uncertainty for a Level of	5.1dB
Confidence of 95% (U = 2Uc(y))	5.1UB

<u>Uncertainty of Radiated Emission Measurement (1GHz ~ 18GHz)</u>

Measuring Uncertainty for a Level of	5.0dB
Confidence of 95% (U = 2Uc(y))	5.006

SPORTON International (ShenZhen) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAPRO550X Page Number : 23 of 23
Report Issued Date : May 31, 2017
Report Version : Rev. 01

Report Template No.: BU5-FC15B Version 1.3