FCC Test Report

APPLICANT : BLU Products, Inc.

EQUIPMENT : Mobile phone

: BLU **BRAND NAME**

MODEL NAME : VIVO XL3

FCC ID : YHLBLUVIVOXLIII

: FCC 47 CFR FCC Part 15 Subpart B **STANDARD**

CLASSIFICATION : Certification

The product was received on Dec. 20, 2017 and testing was completed on Dec. 31, 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.



Approved by: Eric Shih / Manager

Sporton International (Shenzhen) Inc.

1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan Shenzhen City Guangdong Province 518055 China

Sporton International (Shenzhen) Inc.

TEL: +86-755-8637-9589 FAX: +86-755-8637-9595 FCC ID: YHLBLUVIVOXLIII Page Number : 1 of 26 Report Issued Date: Jan. 23, 2018

Report No.: FC7D2005

Report Version Report Template No.: BU5-FC15B Version 1.3

: Rev. 01

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC7D2005	Rev. 01	Initial issue of report	Jan. 23, 2018

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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	7.73 dB at
					0.170 MHz
					Under limit
2.2	15.109 Radiated	Dedicted Emission	45 400 limita	PASS	5.65 dB at
3.2		Radiated Emission	< 15.109 limits		35.82 MHz
					for Quasi-Peak

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1. General Description

1.1. Applicant

BLU Products, Inc.

10814 NW 33rd St # 100 Doral, FL 33172

1.2. Manufacturer

BLU Products, Inc.

10814 NW 33rd St # 100 Doral, FL 33172

1.3. Product Feature of Equipment Under Test

	Product Feature
Equipment	Mobile phone
Brand Name	BLU
Model Name	VIVO XL3
FCC ID	YHLBLUVIVOXLIII
	GSM/GPRS/EGPRS/WCDMA/HSPA/
EUT supports Radios application	DC-HSDPA/HSPA+(16QAM uplink is not supported)/LTE
EOT Supports Radios application	WLAN 2.4GHz 11b/g/n HT20/HT40
	Bluetooth v3.0 + EDR/ Bluetooth v4.2 LE
IMEI Code	Conduction: 354147042071655/354147042086653
I IWEI Code	Radiation: 354147042071622/354147042086620
HW Version	Vivo XL3_Mainboard_P3
SW Version	Vivo XL3_2302_V2018
EUT Stage	Identical Prototype

Remark:

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

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1.4. Product Specification of Equipment Under Test

Standards-related Product Specification				
	GSM850: 824.2 MHz ~ 848.8 MHz			
	GSM1900: 1850.2 MHz ~ 1909.8MHz			
	WCDMA Band V: 826.4 MHz ~ 846.6 MHz			
	WCDMA Band IV : 1712.4 MHz ~ 1752.6 MHz			
	WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz			
	LTE Band 2 : 1850.7 MHz ~ 1909.3 MHz			
Tx Frequency	LTE Band 4 : 1710.7 MHz ~ 1754.3 MHz			
	LTE Band 5 : 824.7 MHz ~ 848.3 MHz			
	LTE Band 7 : 2502.5 MHz ~ 2567.5 MHz			
	LTE Band 12 : 699.7 MHz ~ 715.3 MHz			
	LTE Band 17 : 706.5 MHz ~ 713.5 MHz			
	802.11b/g/n: 2412 MHz ~ 2462 MHz			
	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 IV : 2112.4 MHz ~ 2152.6 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			
Rx Frequency	LTE Band 5 : 869.7 MHz ~ 893.3 MHz			
	LTE Band 7: 2622.5 MHz ~ 2687.5 MHz			
	LTE Band 12 : 729.7 MHz ~ 745.3 MHz			
	LTE Band 17 : 736.5 MHz ~ 743.5 MHz			
	802.11b/g/n: 2412 MHz ~ 2462 MHz			
	Bluetooth: 2402 MHz ~ 2480 MHz			
	GPS : 1.57542 GHz			
	FM : 88 MHz ~ 108 MHz			
	WWAN : PIFA Antenna			
	WLAN: IFA Antenna			
Antenna Type	Bluetooth : IFA Antenna			
	GPS: IFA Antenna			
	FM: External headset Antenna			
	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 (16QAM uplink is not supported)			
	DC-HSDPA: 64QAM			
Type of Modulation	LTE: QPSK / 16QAM			
	802.11b: DSSS (DBPSK / DQPSK / CCK)			
	802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)			
	Bluetooth LE : GFSK			
	Bluetooth (1Mbps) : GFSK			
	Bluetooth (2Mbps) : π /4-DQPSK			
	Bluetooth (3Mbps) : 8-DPSK			
	GPS: BPSK			
	FM			

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1.5. Modification of EUT

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

1.6. Test Location

Sporton Lab is accredited to ISO 17025 by National Voluntary Laboratory Accreditation Program (NVLAP code: 600156-0) and the FCC designation No. are CN5018 and CN5019.

Test Site	Sporton International (Shenzhen) Inc.			
0"	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan Shenzhen City Guangdong Province 518055 China			
Test Site Location	TEL: +86-755-8637-9589 FAX: +86-755-8637-9595			
Took Cita No	Sporton Site No.	FCC Test Firm Registration No.		
Test Site No.	CO01-SZ	251365		

Test Site	Sporton International (Shenzhen) Inc.			
Test Site Location	No. 3 Bldg the third floor of south, Shahe River west, Fengzeyuan Warehouse, Nanshan District Shenzhen City Guangdong Province 518055 China TEL: +86-755-3320-2398			
Test Site No.	Sporton Site No. FCC Test Firm Registration			
Test Site No.	03CH01-SZ	577730		

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.

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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 C63.4-2014 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(2.4G) + USB Cable(Charging from Adapter) + Earphone + Camera(Rear) + SIM 1 <fig.1></fig.1>
	Mode 2: GSM1900 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Charging from Adapter) + Earphone + Camera(Front) + SIM 1 <fig.1></fig.1>
AC Conducted Emission	Mode 3: WCDMA Band V Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Charging from Adapter) + Earphone + MPEG4 + SIM 1 <fig.1></fig.1>
	Mode 4: LTE Band 4 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Charging from Adapter) + Earphone + FM Rx(98MHz) + SIM 1 <fig.2></fig.2>
	Mode 5: LTE Band 7 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Data Link with Notebook) + Earphone + GPS Rx + SIM 2 <fig.3></fig.3>

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	Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable(Charging from Adapter) + Earphone + Camera(Rear) + SIM 1 <fig.1></fig.1>
	Mode 2: GSM1900 Idle + Bluetooth Idle + WLAN Idle + USB Cable(Charging from Adapter) + Earphone + Camera(Front) + SIM 1 <fig.1></fig.1>
Radiated Emissions < 1GHz	Mode 3: WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + USB Cable(Charging from Adapter) + Earphone + MPEG4 + SIM 1 <fig.1></fig.1>
	Mode 4: LTE Band 4 Idle + Bluetooth Idle + WLAN Idle + USB Cable(Charging from Adapter) + Earphone + FM Rx(98MHz) + SIM 1 <fig.2></fig.2>
	Mode 5: LTE Band 7 Idle + Bluetooth Idle + WLAN Idle + USB Cable(Data Link with Notebook) + Earphone + GPS Rx + SIM 2 <fig.3></fig.3>
Radiated	Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable(Charging from Adapter) + Earphone + Camera(Rear) + SIM 1 <fig.1></fig.1>
Emissions ≥ 1GHz	Mode 2: LTE Band 7 Idle + Bluetooth Idle + WLAN Idle + USB Cable(Data Link with Notebook) + Earphone + GPS Rx + SIM 2 <fig.3></fig.3>

Remark:

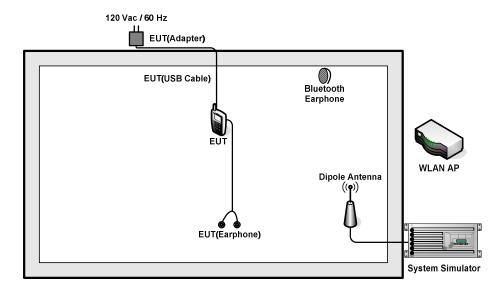
- 1. The worst case of AC is mode 1; and the USB Link mode of AC is mode 5, the test data of these modes are reported.
- 2. The worst case of RE < 1G is mode 1; and the USB link mode of RE is mode 5, the test data of these modes are reported.
- **3.** Data Link with Notebook means data application transferred mode between EUT and Notebook.

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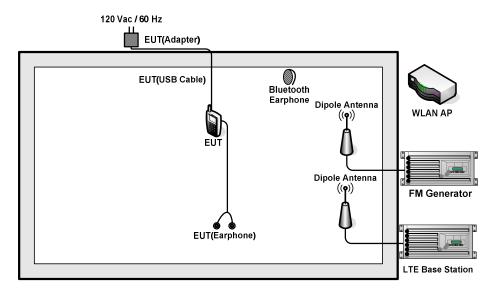
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2.2. Connection Diagram of Test System



<Fig.1>

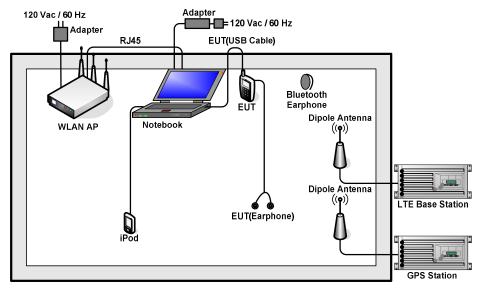


<Fig.2>

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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	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	LTE Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
3.	FM Station	R&S	SMB100A	Fcc DoC	N/A	Unshielded,1.8m
4.	GPS Station	ADIVIC	MP9000	N/A	N/A	Unshielded, 1.8 m
5.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded,1.8m
6.	WLAN AP	D-Link	DIR-820L	KA2IR820LA1	N/A	WLAN AP
7.	Bluetooth Earphone	Samsung	EO-MG900	CCAH14LP1680T5	N/A	N/A
8.	Notebook	Lenovo	E540	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
9.	SD Card	Kingston	SDC4/16GB 122	FCC DoC	N/A	N/A
10.	SD Card	N/A	MicroSD HC	FCC DoC	N/A	N/A
11.	iPod	Apple	MC525 ZP/A	DoC	Shielded, 1.0m	N/A
12.	iPod nano 8GB	Apple	MC690ZP/A	FCC DoC	Shielded, 1.2m	N/A
13.	Earphone	Apple	MC690ZP/A	N/A	Unshielded,1.6m	N/A
14.	Labsat	RACELOGIC	18645	N/A	N/A	Unshielded,1.8m

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. Turn on GPS function 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.
- 5. Turn on FM function.

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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

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 (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

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3.1.4 Test Setup

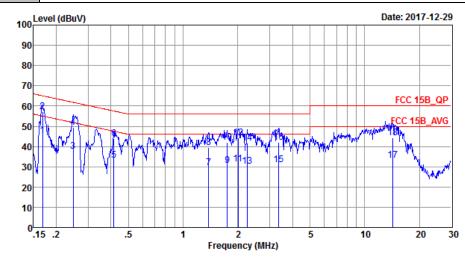


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3.1.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	22~25 ℃
Test Engineer :	Peng wang	Relative Humidity :	50~55%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Tune	GSM850 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Charging from		
Function Type :	Adapter) + Earphone + Cam	nera(Rear) + SIM 1	



Site : CO01-SZ

Condition: FCC 15B_QP LISN_20170907_L LINE

Mode : Mode 1

IMEI : 354147042071655/354147042086653

	. 001117	0120710	00,00111	0120000	-			
			Over	Limit	Read	LISN	Cable	
	Freq	Level	Limit	Line	Level	Factor	Loss	Remark
_	MHz	dBuV	dB	dBu₹	dBu∀	dB	dB	
1	0.17	45.40	-9.63	55.03	35.30	0.03	10.07	Average
2 *	0.17	57.30	-7.73	65.03	47.20	0.03	10.07	QP
3	0.25	37.70	-14.12	51.82	27.60	0.03	10.07	Average
4	0.25	49.40	-12.42	61.82	39.30	0.03	10.07	QP
5	0.41	33.11	-14.44	47.55	23.00	0.03	10.08	Average
6	0.41	43.81	-13.74	57.55	33.70	0.03	10.08	QP
7	1.38	29.69	-16.31	46.00	19.50	0.09	10.10	Average
8	1.38	39.49	-16.51	56.00	29.30	0.09	10.10	QP
9	1.75	30.51	-15.49	46.00	20.30	0.10	10.11	Average
10	1.75	42.11	-13.89	56.00	31.90	0.10	10.11	QP
11	2.01	31.32	-14.68	46.00	21.10	0.11	10.11	Average
12	2.01	44.12	-11.88	56.00	33.90	0.11	10.11	QP
13	2.25	30.24	-15.76	46.00	20.00	0.12	10.12	Average
14	2.25	41.84	-14.16	56.00	31.60	0.12	10.12	QP
15	3.36	30.82	-15.18	46.00	20.50	0.17	10.15	Average
16	3.36	41.92	-14.08	56.00	31.60	0.17	10.15	QP
17	14.29	33.39	-16.61	50.00	22.50	0.49	10.40	Average
18	14.29	44.19	-15.81	60.00	33.30	0.49	10.40	QP

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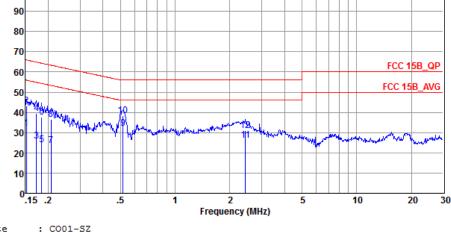
22~25℃ Test Mode: Mode 1 Temperature : Test Engineer: Peng wang Relative Humidity: 50~55% Test Voltage: 120Vac / 60Hz Phase: Neutral GSM850 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Charging from **Function Type:** Adapter) + Earphone + Camera(Rear) + SIM 1 100 Level (dBuV) Date: 2017-12-29 90 80 70 FCC 15B_QP 60 50 40 30 20 10 .15 .2 .5 10 20 Frequency (MHz) Site : CO01-SZ Condition: FCC 15B QP LISN 20170907 N NEUTRAL : Mode 1 Mode : 354147042071655/354147042086653 IMEI Over Limit Read LISN Cable

				0,01	111111111111111111111111111111111111111	11044	2201	Oubio	
		Freq	Level	Limit	Line	Level	Factor	Loss	Remark
		MHz	dBu∀	dB	dBu∇	dBuV	dB	dB	
1		0.58	25.60	-20.40	46.00	15.50	0.02	10.08	Average
2	₩.	0.58	40.10	-15.90	56.00	30.00	0.02	10.08	QP
3		0.91	26.43	-19.57	46.00	16.30	0.04	10.09	Average
4		0.91	38.43	-17.57	56.00	28.30	0.04	10.09	QP
5		1.97	26.46	-19.54	46.00	16.30	0.05	10.11	Average
6		1.97	38.36	-17.64	56.00	28.20	0.05	10.11	QP
7		10.07	25.70	-24.30	50.00	15.20	0.16	10.34	Average
8		10.07	36.30	-23.70	60.00	25.80	0.16	10.34	QP
9		12.32	28.92	-21.08	50.00	18.30	0.25	10.37	Average
10		12.32	41.52	-18.48	60.00	30.90	0.25	10.37	QP
11		14.29	29.31	-20.69	50.00	18.60	0.31	10.40	Average
12		14.29	42.61	-17.39	60.00	31.90	0.31	10.40	QP

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22~25℃ Test Mode: Mode 5 Temperature: Test Engineer: Peng wang Relative Humidity: 50~55% Test Voltage: 120Vac / 60Hz Phase: Line LTE Band 7 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Data Link with **Function Type:** Notebook) + Earphone + GPS Rx + SIM 2 100 Level (dBuV) Date: 2017-12-15 90 80 70 FCC 15B_QP 60



Site

Condition: FCC 15B_QP LISN_20170907_L LINE

Mode : Mode 5

147042071655/354147042086653

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBu∀	dB	dBu∇	dBu∇	dB	dB	
1	0.15	32.19	-23.72	55.91	22.10	0.03	10.06	Average
2	0.15	43.29	-22.62	65.91	33.20	0.03	10.06	QP
3	0.17	26.00	-28.86	54.86	15.90	0.03	10.07	Average
4	0.17	39.40	-25.46	64.86	29.30	0.03	10.07	QP
5	0.18	23.90	-30.38	54.28	13.80	0.03	10.07	Average
6	0.18	37.80	-26.48	64.28	27.70	0.03	10.07	QP
7	0.21	23.60	-29.72	53.32	13.50	0.03	10.07	Average
8	0.21	36.40	-26.92	63.32	26.30	0.03	10.07	QP
9 *	0.52	32.00	-14.00	46.00	21.90	0.02	10.08	Average
10	0.52	38.20	-17.80	56.00	28.10	0.02	10.08	QP
11	2.43	26.16	-19.84	46.00	15.91	0.13	10.12	Average
12	2.43	30.96	-25.04	56.00	20.71	0.13	10.12	QP

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22~25°C Test Mode: Mode 5 Temperature: Test Engineer: Peng wang **Relative Humidity:** 50~55% 120Vac / 60Hz Test Voltage: Phase: Neutral LTE Band 7 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Data Link with Function Type: Notebook) + Earphone + GPS Rx + SIM 2 100 Level (dBuV) Date: 2017-12-15 90 80 70 FCC 15B_QP 60 FCC 15B_AVG 50 40 30 Applications and the safety of 20 10 .15 .2 .5 5 10 20 30 Frequency (MHz) : CO01-SZ Site Condition: FCC 15B_QP LISN_20170907_N NEUTRAL : Mode 5 : 354147042071655/354147042086653 Over Limit Read LISN Cable Freq Level Limit Line Level Factor Loss Remark dB dBuV dBuV dBu∇ dB MHz dB 0.16 25.39 -30.17 55.56 15.30 0.03 10.06 Average 0.16 41.89 -23.67 65.56 31.80 0.17 22.40 -32.32 54.72 12.30 0.17 37.90 -26.82 64.72 27.80 0.03 10.06 QP 0.03 10.07 Average 0.03 10.07 QP 3 5 0.20 25.30 -28.37 53.67 15.20 0.03 10.07 Average 0.20 37.30 -26.37 63.67 27.20 0.24 17.00 -35.13 52.13 6.90 0.03 10.07 QP 0.03 10.07 Average

0.24 30.70 -31.43 62.13 20.60

0.52 29.60 -16.40 46.00 19.50 0.52 36.80 -19.20 56.00 26.70

2.37 20.86 -25.14 46.00 10.70

2.37 25.76 -30.24 56.00 15.60

6 7

9 *

10

11 12

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0.03 10.07 QP

0.04 10.12 QP

0.02 10.08 Average 0.02 10.08 QP

0.04 10.12 Average

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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	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.
- 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

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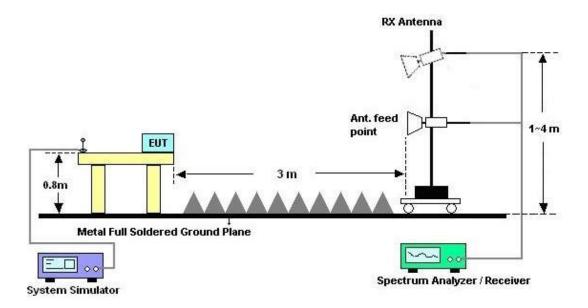
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3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz

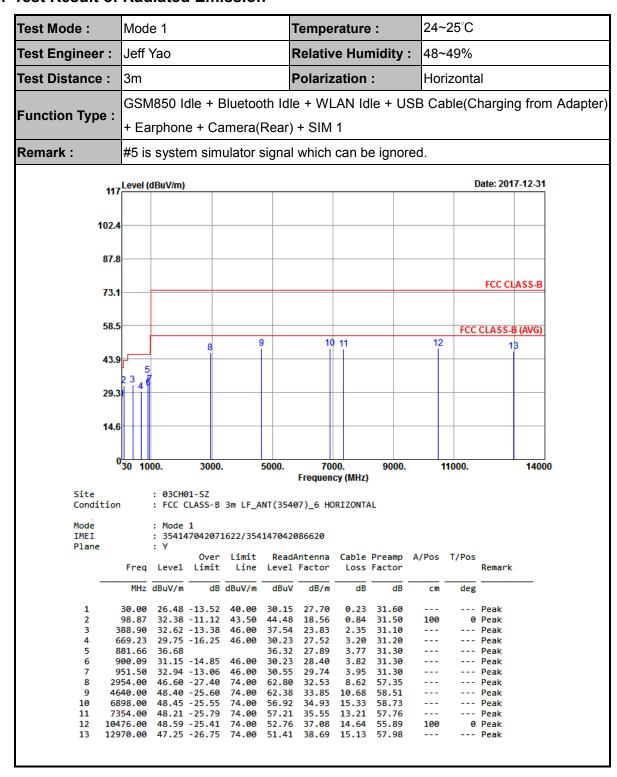


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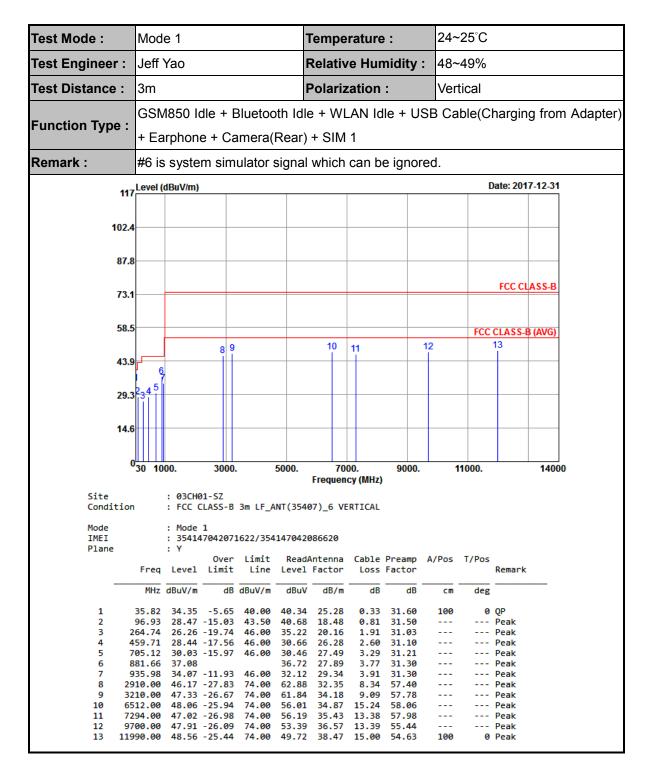
3.2.5. Test Result of Radiated Emission



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SPORTON LAB.	FCC Test Report	Report No. : FC7D2005

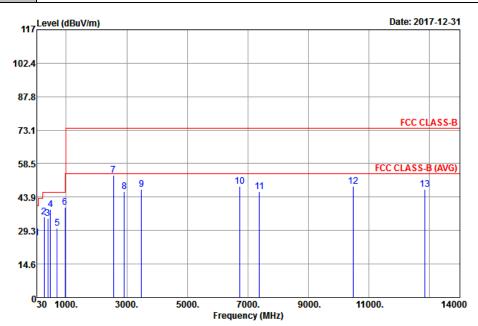


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ON LAB.	FCC Test Report	Report No. : FC7D2005

Test Mode :	Mode 5	Temperature :	24~25°C
Test Engineer :	Jeff Yao	Relative Humidity :	48~49%
Test Distance :	3m	Polarization :	Horizontal

LTE Band 7 Idle + Bluetooth Idle + WLAN Idle + USB Cable(Data Link with Function Type : Notebook) + Earphone + GPS Rx + SIM 2



Site

: 03CH01-SZ : FCC CLASS-B 3m LF_ANT(35407)_6 HORIZONTAL Condition

: 354147042071622/354147042086620 : Y IMEI Plane

Tane		: Y									
			Over	Limit	Read	Antenna	Cable	Preamp	A/Pos	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	30.97	26.23	-13.77	40.00	30.16	27.42	0.25	31.60			Peak
2	269.59	35.31	-10.69	46.00	44.33	20.09	1.93	31.04			Peak
3	396.66	34.65	-11.35	46.00	39.05	24.32	2.38	31.10			Peak
4	480.08	38.37	-7.63	46.00	41.43	25.39	2.65	31.10	100	0	Peak
5	698.33	30.31	-15.69	46.00	30.55	27.69	3.27	31.20			Peak
6	960.23	39.44	-14.56	54.00	36.85	29.93	4.00	31.34			Peak
7	2562.00	53.53	-20.47	74.00	72.25	32.00	7.02	57.74			Peak
8	2916.00	46.41	-27.59	74.00	63.04	32.41	8.34	57.38			Peak
9	3486.00	47.35	-26.65	74.00	62.88	33.41	9.47	58.41			Peak
10	6728.00	48.68	-25.32	74.00	56.39	34.99	15.74	58.44	100	0	Peak
11	7380.00	46.31	-27.69	74.00	55.32	35.58	13.12	57.71			Peak
12	10480.00	48.64	-25.36	74.00	52.81	37.09	14.64	55.90			Peak
13	12842.00	47.11	-26.89	74.00	50.90	38.67	15.11	57.57			Peak

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24~25°C Test Mode: Mode 5 Temperature: Test Engineer: Jeff Yao **Relative Humidity:** 48~49% Test Distance: 3m Polarization: Vertical LTE Band 7 Idle + Bluetooth Idle + WLAN Idle + USB Cable(Data Link with **Function Type:** Notebook) + Earphone + GPS Rx + SIM 2 117 Level (dBuV/m) Date: 2017-12-31 102.4 87.8 FCC CLASS-B 73.1 58.5 FCC CLASS-B (AVG) 10 13 89 11 29.3 ⁰30 1000. 7000. 9000. 11000. 14000 3000. 5000. Frequency (MHz) Site : 03CH01-SZ : FCC CLASS-B 3m LF_ANT(35407)_6 VERTICAL Condition : Mode 5 Mode IMEI : 354147042071622/354147042086620 Plane Over Limit ReadAntenna Cable Preamp A/Pos T/Pos Remark Freq Level Limit Line Level Factor Loss Factor dB dBuV/m MHz dBuV/m dBuV dB/m dB cm deg 34.85 26.71 -13.29 40.00 31.69 26.30 --- Peak 0.32 31.60 325.85 31.33 -14.67 46.00 39.77 20.53 31.10 --- Peak 2.13 41.67 -4.33 0 Peak 480.08 46.00 44.73 25.39 2.65 31.10 100 33.43 640.13 32.63 -13.37 27.28 3.12 --- Peak ___ 727.43 31.38 -14.62 46.00 32.72 26.55 3.37 31.26 --- Peak --- Peak 41.41 -12.59 ---960.23 54.00 38.82 29.93 4.00 31.34 7.02 --- Peak 2560.00 74.00 70.85 52.13 -21.87 32.00 57.74 46.72 -27.28 32.53 2950.00 74.00 62.92 8.62 --- Peak 3148.00 47.30 -26.70 74.00 61.97 33.94 9.01 --- Peak 10 6654.00 47.84 -26.16 46.92 -27.08 74.00 55.55 54.93 34.98 35.75 15.63 58.32 --- Peak --- Peak 7760.00 74.00 12.70 11 56.46 10472.00 48.39 -25.61 74.00 52.56 37.08 14.64 55.89 100 0 Peak 12

48.03 -25.97

74.00

49.35

38.51

15.01

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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	Dec.15, 2017~ Dec. 29, 2017	Jan. 05, 2018	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103912	9kHz~30MHz	Jan. 05, 2017	Dec.15, 2017~ Dec. 29, 2017	Jan. 04, 2018	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	MessTec	3816/2SH	00103892	9kHz~30MHz	Jan. 05, 2017	Dec.15, 2017~ Dec. 29, 2017	Jan. 04, 2018	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	61602000089 1	100Vac~250Vac	Jul. 19, 2017	Dec.15, 2017~ Dec. 29, 2017	Jul. 18, 2018	Conduction (CO01-SZ)
EMI Test Receiver&SA	Agilent	N9038A	MY52260185	20Hz~26.5GHz	Apr. 20, 2017	Dec. 31, 2017	Apr. 19, 2018	Radiation (03CH01-SZ)
Bilog Antenna	TeseQ	CBL6112D	23188	30MHz-2GHz	Apr. 25, 2017	Dec. 31, 2017	Apr. 24, 2018	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS Lindgren	3117	119436	1GHz~18GHz	Jul. 28, 2017	Dec. 31, 2017	Jul. 27, 2018	Radiation (03CH01-SZ)
LF Amplifier	Burgeon	BPA-530	102209	0.01~3000Mhz	Apr. 20, 2017	Dec. 31, 2017	Apr. 19, 2018	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	AMF-7D-0010 1800-30-10P- R	1707137	1GHz~18GHz	Oct. 19, 2017	Dec. 31, 2017	Oct. 18, 2018	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	61601000198 5	N/A	NCR	Dec. 31, 2017	NCR	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Dec. 31, 2017	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Dec. 31, 2017	NCR	Radiation (03CH01-SZ)

NCR: No Calibration Required

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5. Uncertainty of Evaluation

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

	4
Measuring Uncertainty for a Level of	2.5dB
Confidence of 95% (U = 2Uc(y))	2.5uB

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Managerina Unacetainte for a Laval of	
Measuring Uncertainty for a Level of	5.1dB
Confidence of 95% (U = 2Uc(y))	3.1db

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

Measuring Uncertainty for a Level of	
	5.2dB
Confidence of 95% (U = 2Uc(y))	

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