FCC Test Report

APPLICANT : BLU Products, Inc.

EQUIPMENT: Mobile phone

BRAND NAME : BLU

MODEL NAME : LIFE ONE X3

FCC ID : YHLBLULIFEONEX3

STANDARD : FCC 47 CFR FCC Part 15 Subpart B

CLASSIFICATION: Certification

The product was received on Sep. 04, 2017 and testing was completed on Sep. 19, 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.



Sporton International (Shenzhen) Inc.

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Sporton International (Shenzhen) Inc.

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Report Issued Date : Sep. 30, 2017
Report Version : Rev. 01

Report No.: FC790406

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC790406	Rev. 01	Initial issue of report	Sep. 30, 2017

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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	11.08 dB at
					0.150 MHz
					Under limit
3.2	15.109 Radiated Emission	45 400 Bulliot 45 at a fine	4 F 400 limita	DACC	5.81 dB at
3.2		< 15.109 limits	PASS	39.180 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	LIFE ONE X3				
FCC ID	YHLBLULIFEONEX3				
	GSM/GPRS/EGPRS/WCDMA/HSPA/DC-HSDPA/HSPA+/LTE				
EUT supports Radios application	WLAN2.4GHz802.11b/g/n HT20/HT40				
	Bluetooth V3.0 + EDR/ Bluetooth V 4.0LE				
IMEI Code	Conduction: 351372098270497/351372098270505				
IIVILI Code	Radiation: 351372098270596/351372098270604				
HW Version	V1.0				
SW Version	BLU_LifeOneX3_V7.0.01.00_GENERIC_30-08-2017_21:20				
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					
2 333 444	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8MHz				
	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 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 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 4 : 2110.7 MHz ~ 2154.3 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				
	Glonass: 1602 MHz + n× 0.5625MHz (n=-7,-6,-5,0,,6)				
	FM: 87.5MHz~108MHz				
	WWAN : PIFA Antenna				
Antonno Typo	WLAN : PIFA Antenna Bluetooth : PIFA Antenna				
Antenna Type	FM: External Headset Antenna				
	GPS/Glonass : PIFA 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				
	DC-HSDPA: 64QAM				
Type of Modulation	LTE: QPSK / 16QAM / 64QAM(Downlink only)				
	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/Glonass : 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.

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Test Site	Sporton International (Shenzhen) Inc.				
Took Cita Lagation	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				
Test Site No.	Sporton Site No.	FCC Test Firm Registration No.			
rest 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 No.			
rest 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).

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Test Items	Function Type
	Mode 1: GSM 850 Idle + USB Cable(Charging from Adapter) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + Camera(Rear) + SIM1 <fig. 1=""></fig.>
	Mode 2: GSM 1900 Idle + USB Cable(Charging from Adapter) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + Camera(Front) + SIM1 <fig. 1=""></fig.>
AC Conducted	Mode 3: WCDMA BandV Idle + USB Cable(Charging from Adapter) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + MPEG4 + SIM1 <fig. 1=""></fig.>
Emission	Mode 4: LTE Band 4 Idle + USB Cable(Charging from Adapter) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + FM RX + SIM1 <fig. 2=""></fig.>
	Mode 5: LTE Band 2 Idle + USB Cable(Charging from Adapter) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + Glonass on + SIM1 <fig. 3=""></fig.>
	Mode 6: LTE Band 7 Idle + USB Cable(Data Link with Notebook) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + GPS on + SIM1 <fig. 4=""></fig.>
	Mode 1: GSM 850 Idle + USB Cable(Charging from Adapter) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + Camera(Rear) + SIM1 <fig. 1=""></fig.>
	Mode 2: GSM 1900 Idle + USB Cable(Charging from Adapter) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + Camera(Front) + SIM1 <fig. 1=""></fig.>
Radiated	Mode 3: WCDMA BandV Idle + USB Cable(Charging from Adapter) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + MPEG4 + SIM1 <fig. 1=""></fig.>
Emissions < 1GHz	Mode 4: LTE Band 4 Idle + USB Cable(Charging from Adapter) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + FM RX + SIM1 <fig. 2=""></fig.>
	Mode 5: LTE Band 2 Idle + USB Cable(Charging from Adapter) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + Glonass on + SIM1 <fig. 3=""></fig.>
	Mode 6: LTE Band 7 Idle + USB Cable(Data Link with Notebook) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + GPS on + SIM1 <fig. 4=""></fig.>
Radiated	Mode 1: LTE Band 2 Idle + USB Cable(Charging from Adapter) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + Glonass on + SIM1 <fig. 3=""></fig.>
Emissions ≥ 1GHz	Mode 2: LTE Band 7 Idle + USB Cable(Data Link with Notebook) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + GPS on + SIM1 <fig. 4=""></fig.>

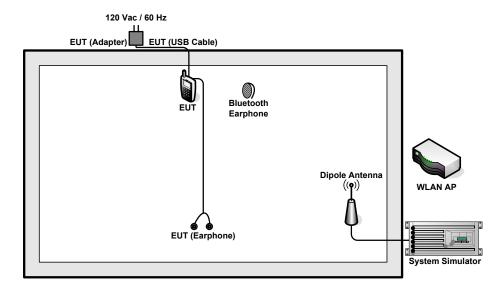
Remark:

- 1. The worst case of AC is mode 6; only the test data of this mode was reported.
- 2. The worst case of RE < 1G is mode 5; and the data link mode is mode 6, the test data of these modes were reported.
- **3.** Data Link with Notebook means data application transferred mode between EUT and Notebook.

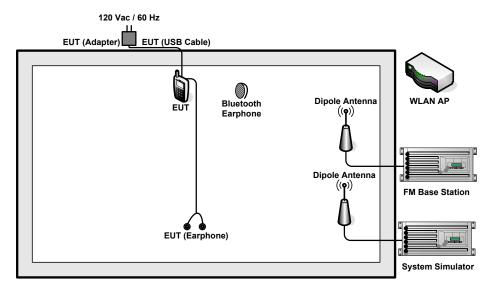
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2.2. Connection Diagram of Test System



<Fig. 1>



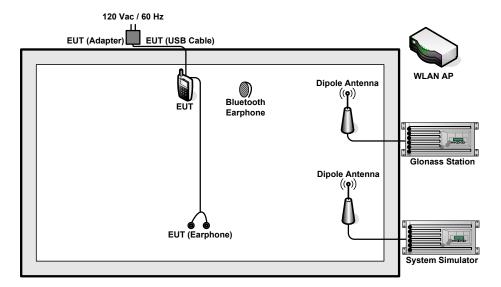
<Fig. 2>

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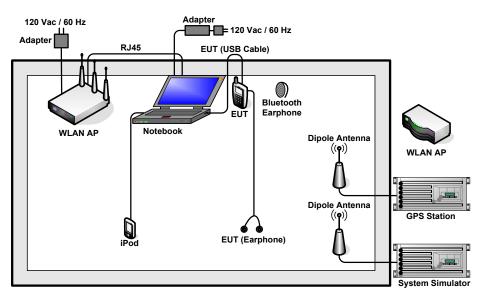
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<Fig. 3>



<Fig. 4>

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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.	Base Station(LTE)	Anritsu	MT8820C	N/A	N/A	Unshielded,1.8m
3.	GPS Station	T&E	GS-50	N/A	N/A	Unshielded, 1.8 m
4.	Glonass Station	RACELOGIC	18645	N/A	N/A	Unshielded,1.8m
5.	WLAN AP	D-Link	DIR-820L	KA2IR820LA1	N/A	Unshielded,1.8m
6.	WLAN AP	Linksys	WRT310W	FCC DoC	N/A	Unshielded, 1.8 m
7.	Bluetooth Earphone	Samsung	EO-MG900	PYAHS-107W	N/A	N/A
8.	Bluetooth Earphone	Lenovo	LBH301	N/A	N/A	N/A
9.	NOTE BOOK	Lenovo	E450	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
10.	iPod nano 8GB	Apple	MC690ZP/A	N/A	Shielded, 1.2m	N/A
11.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A

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/ Glonass station.
- 3. Execute "Video player" to play MPEG4 files.
- 4. Turn on camera to capture images.
- 5. Execute "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

- 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.

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3.1.4 Test Setup

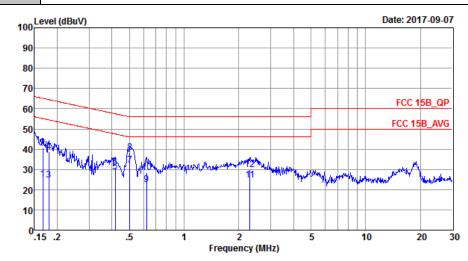


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3.1.5 Test Result of AC Conducted Emission

Test Mode :	Mode 6	Temperature :	22~25 ℃		
Test Engineer :	Peng Wang	Relative Humidity :	50~55%		
Test Voltage :	120Vac / 60Hz	Phase :	Line		
Function Time	LTE Band 7 Idle + USB Cable(Data Link with Notebook) + Earphone + Bluetooth				
Function Type :	Idle + WLAN Idle(2.4G) + GPS on + SIM1				



Site : CO01-SZ Condition: FCC 15B_QP LISN_20170301_L LINE

Project : (FC) 790406

Mode : Mode 6

: 351372098270497/351372098270505

				Over	Limit	Read	LISN	Cable	
		Freq	Level	Limit	Line	Level	Factor	Loss	Remark
		MHz	dBuV	dB	dBu∀	dBu∀	dB	dB	
1		0.17	25.27	-29.85	55.12	14.90	0.03	10.34	Average
2		0.17	40.47	-24.65	65.12	30.10	0.03	10.34	QP
3		0.18	24.82	-29.68	54.50	14.50	0.03	10.29	Average
4		0.18	38.82	-25.68	64.50	28.50	0.03	10.29	QP
5		0.42	28.62	-18.89	47.51	18.40	0.03	10.19	Average
6		0.42	30.92	-26.59	57.51	20.70	0.03	10.19	QP
7	*	0.50	32.20	-13.80	46.00	22.00	0.02	10.18	Average
8		0.50	38.50	-17.50	56.00	28.30	0.02	10.18	QP
9		0.62	22.49	-23.51	46.00	12.30	0.02	10.17	Average
10		0.62	28.29	-27.71	56.00	18.10	0.02	10.17	QP
11		2.31	24.91	-21.09	46.00	14.60	0.13	10.18	Average
12		2.31	29.81	-26.19	56.00	19.50	0.13	10.18	QP

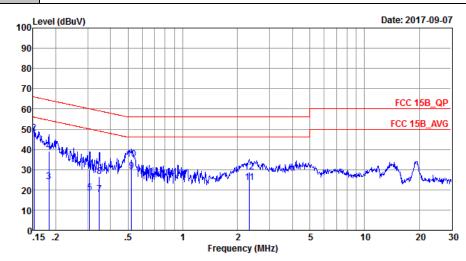
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Test Mode :	Mode 6	Temperature :	22~25 ℃					
Test Engineer :	Peng Wang	Relative Humidity :	50~55%					
Test Voltage :	120Vac / 60Hz	Phase :	Neutral					
	LTE Band 7 Idle + USB Cable(Data Link with Notebook) + Earphone + Bluetooth							

Function Type: LTE Band 7 Idle + USB Cable(Data Link with Notebook) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + GPS on + SIM1



Site : CO01-SZ

Condition: FCC 15B_QP LISN_20170301_N NEUTRAL

Project : (FC)790406 Mode : Mode 6

IMEI : 351372098270497/351372098270505

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
_	MHz	dBu₹	dB	dBu∀	dBu∀	——dB	dB	
1 *	0.15	44.83	-11.08	55.91	34.40	0.03	10.40	Average
2	0.15	48.13	-17.78	65.91	37.70	0.03	10.40	QP
3	0.18	24.01	-30.32	54.33	13.70	0.03	10.28	Average
4	0.18	39.21	-25.12	64.33	28.90	0.03	10.28	QP
5	0.31	18.55	-31.51	50.06	8.30	0.03	10.22	Average
6	0.31	30.05	-30.01	60.06	19.80	0.03	10.22	QP
7	0.35	17.83	-31.22	49.05	7.61	0.02	10.20	Average
8	0.35	26.73	-32.32	59.05	16.51	0.02	10.20	QP
9	0.52	29.30	-16.70	46.00	19.10	0.02	10.18	Average
10	0.52	35.10	-20.90	56.00	24.90	0.02	10.18	QP
11	2.32	23.62	-22.38	46.00	13.40	0.04	10.18	Average
12	2.32	28.82	-27.18	56.00	18.60	0.04	10.18	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	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

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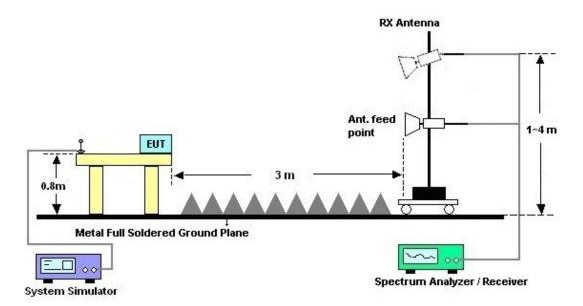
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3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



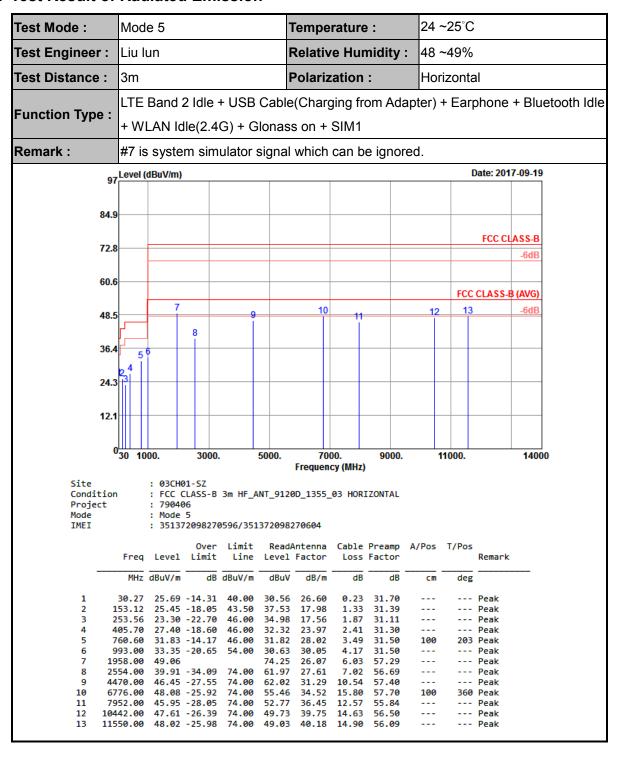
For radiated emissions above 1GHz



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3.2.5. Test Result of Radiated Emission



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SPORTON LAB.	FCC Test Report
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Test Engineer :		Mode 5			rempe	perature: 24 ~25°C							
	Liu lun				Relativ	e Hur	nidity :	48	48 ~49%				
Test Distance :	3m				ı	Polariz	ation	:	Ver	tical			
Function Type :						` `		om Ada	pter)	+ Earp	ohone -	+ Blue	tooth Idle
						s on +							
		is system simulator signal which can be ignored.											
97	Level (dBuV/m)									Date: 2017	′-09-19	
84.9													
72.8											FCC CL/		
												-6dB	
60.6										FCC	CLASS B	(AVC)	
		7				10,				13	CLASS-B	-6dB	
48.5	,			9 			1		12 	Ĭ		oub	
36.4			8										
00.1	5												
24.3	34 ĭ												
12.1	\mathbb{H}												
U.	30 10	00.	3000.		5000.	70 Frequen		9000.	•	11000.		14000	l
Site Condition Project Mode IMEI Plane		: 79046 : Mode	CLASS-B 96			0D_1355_							
	Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg			
						25.10		31.60	100		Peak		
3 14	44.48	23.67	-19.83	43.50	35.58	23.18 18.24	1.26				QP Peak		
						17.91 24.48		31.18 31.30			Peak Peak		
						28.11		31.50			Peak		
		48.85				26.11		57.28			Peak		
						27.90 31.42		56.73 57.35			Peak Peak		
10 674	44.00	47.77	-26.23	74.00	55.24	34.43	15.74	57.64	100	300	Peak		
						35.19					Peak		
						38.87 39.97					Peak Peak		

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SPORTON LAB.	FCC Test Report

Test Engineer: Liu lun Relative Humidity: 48 ~49% Function Type: LTE Band 7 Idle + USB Cable(Data Link with Notebook) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + GPS on + SIM1 Remark: #8 is system simulator signal which can be ignored. #8 is system simulator signal which can be ignored. FCC CLASS-8	Test Mode :	Mode 6					Temperature :			24	24 ~25°C			
Function Type: LTE Band 7 Idle + USB Cable(Data Link with Notebook) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + GPS on + SIM1 Remark: #8 is system simulator signal which can be ignored.	Test Engineer :	Liu I	Liu lun					Relative Humidity :			48 ~49%			
Idle + WLAN Idle(2,4G) + GPS on + SIM1	Test Distance :	3m					Polariz	zation	:	Hor	izonta	al		
Site : 03CH01-5Z Condition FCC CLASS-B MH5 MH5 MBU/M MB MB MB MB MB MB MB	Function Type :						•			oteboo	ok) +	Earpho	one + Bluetod	oth
FCC CLASS-B	Remark :	#8 is	is system simulator signal which can be ignored.											
72.8 60.6	97	Level (dBuV/m)					I				Date: 201	7-09-06	
72.8 60.6 60.6 60.6 60.6 60.6 60.6 60.6 60	84.9)												
### A S	72.8											FCC CL		
36.4	60.6	S		8							FCC	CLASS-E	3 (AVG)	
36.4 2 24.3 1 12.1 1 030 1000. 3000. 5000. 7000. 9000. 11000. 14000 Frequency (MHz) Site : 03CH01-SZ Condition : FCC CLASS-B 3m HF_ANT_9120D_1355_03 HORIZONTAL Project : 790406 Mode : Mode 6 IMEI : 351372098270596/351372098270604 Over Limit ReadAntenna Cable Preamp A/Pos T/Pos Loss Factor Remark Over Limit Line Level Factor Loss Factor Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 38.10 26.67 -13.33 40.00 34.25 23.66 0.36 31.60 Peak 2 147.99 34.38 -9.12 43.59 46.34 18.15 1.29 31.40 Peak 3 221.43 38.18 8.7 82 46.00 50.93 16.69 1.72 31.16 100 155 Peak 4 300.00 37.42 -8.58 46.00 50.93 16.69 1.72 31.16 100 155 Peak 4 300.00 37.42 -8.58 46.00 50.93 16.90 1.72 31.16 100 155 Peak 5 759.20 31.49 Peak 5 759.20 31.49 -20.91 54.00 30.75 29.82 4.02 31.50 Peak 6 964.30 33.09 -20.91 54.00 30.75 29.82 4.02 31.50 Peak 7 1956.00 37.25 -36.75 74.00 62.44 26.07 6.03 57.29 Peak 8 2658.00 51.89 73.52 27.87 7.23 56.73 Peak 9 4586.00 46.54 -27.46 74.00 61.59 31.49 10.64 57.18 Peak 10 6824.00 47.62 -26.38 74.00 54.90 34.65 15.85 57.78 Peak 11 8048.00 46.01 -27.99 74.00 52.41 36.58 12.58 55.55 Peak	48.5	5	7				10	11		12	14		-6dB	
12.1 030 1000. 3000. 5000. 7000. 9000. 11000. 14000 Frequency (MHz) Site : 03CH01-SZ Condition : FCC CLASS-B 3m HF_ANT_9120D_1355_03 HORIZONTAL Project : 790406 Mode : Mode 6 IMEI : 351372098270596/351372098270604	36.4	1 <mark>2</mark> 56												
Site														
Site	(30 10	00.	3000.		5000.	70	00.	9000.		1000.		14000	
Condition : FCC CLASS-B 3m HF_ANT_9120D_1355_03 HORIZONTAL Project : 790406 Mode : Mode 6 IMEI : 351372098270596/351372098270604 Over Limit ReadAntenna Cable Preamp Loss Factor Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 38.10 26.67 -13.33 40.00 34.25 23.66 0.36 31.60 Peak 2 147.99 34.38 -9.12 43.50 46.34 18.15 1.29 31.40 Peak 3 221.43 38.18 -7.82 46.00 50.93 16.69 1.72 31.16 100 155 Peak 4 300.00 37.42 -8.58 46.00 48.18 18.50 2.04 31.30 Peak 5 759.20 31.49 -14.51 46.00 31.48 28.02 3.49 31.50 Peak 6 964.30 33.09 -20.91 54.00 30.75 29.82 4.02 31.50 Peak 7 1956.00 37.25 -36.75 74.00 62.44 26.07 6.03 57.29 Peak 8 2658.00 51.89 73.52 27.87 7.23 56.73 Peak 9 4586.00 46.54 -27.46 74.00 61.59 31.49 10.64 57.18 Peak 10 6824.00 47.62 -26.38 74.00 54.90 34.65 15.85 57.78 Peak 11 8048.00 46.01 -27.99 74.00 52.41 36.58 12.58 55.56 Peak			Frequency (MHz)											
Freq Level Limit Line Level Factor Loss Factor Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 38.10 26.67 -13.33 40.00 34.25 23.66 0.36 31.60 Peak 2 147.99 34.38 -9.12 43.50 46.34 18.15 1.29 31.40 Peak 3 221.43 38.18 -7.82 46.00 50.93 16.69 1.72 31.16 100 155 Peak 4 300.00 37.42 -8.58 46.00 48.18 18.50 2.04 31.30 Peak 5 759.20 31.49 -14.51 46.00 31.48 28.02 3.49 31.50 Peak 6 964.30 33.09 -20.91 54.00 30.75 29.82 4.02 31.50 Peak 7 1956.00 37.25 -36.75 74.00 62.44 26.07 6.03 57.29 Peak 8 2658.00 51.89 73.52 27.87 7.23 56.73 Peak 9 4586.00 46.54 -27.46 74.00 61.59 31.49 10.64 57.18 Peak 10 6824.00 47.62 -26.38 74.00 54.90 34.65 15.85 57.78 Peak 11 8048.00 46.01 -27.99 74.00 52.41 36.58 12.58 55.56 Peak	Condition Project Mode	1	: FCC (: 79040 : Mode	LASS-B 6 6				_03 HOR:	IZONTAL					
1 38.10 26.67 -13.33 40.00 34.25 23.66 0.36 31.60 Peak 2 147.99 34.38 -9.12 43.50 46.34 18.15 1.29 31.40 Peak 3 221.43 38.18 -7.82 46.00 50.93 16.69 1.72 31.16 100 155 Peak 4 300.00 37.42 -8.58 46.00 48.18 18.50 2.04 31.30 Peak 5 759.20 31.49 -14.51 46.00 31.48 28.02 3.49 31.50 Peak 6 964.30 33.09 -20.91 54.00 30.75 29.82 4.02 31.50 Peak 7 1956.00 37.25 -36.75 74.00 62.44 26.07 6.03 57.29 Peak 8 2658.00 51.89 73.52 27.87 7.23 56.73 Peak 9 4586.00 46.54 -27.46 74.00 61.59 31.49 10.64 57.18 Peak 10 6824.00 47.62 -26.38 74.00 54.90 34.65 15.85 57.78 Peak 11 8048.00 46.01 -27.99 74.00 52.41 36.58 12.58 55.56 Peak		Freq	Level	Limit	Line					A/Pos	T/Pos	Remark		
2 147.99 34.38 -9.12 43.50 46.34 18.15 1.29 31.40 Peak 3 221.43 38.18 -7.82 46.00 50.93 16.69 1.72 31.16 100 155 Peak 4 300.00 37.42 -8.58 46.00 48.18 18.50 2.04 31.30 Peak 5 759.20 31.49 -14.51 46.00 31.48 28.02 3.49 31.50 Peak 6 964.30 33.09 -20.91 54.00 30.75 29.82 4.02 31.50 Peak 7 1956.00 37.25 -36.75 74.00 62.44 26.07 6.03 57.29 Peak 8 2658.00 51.89 73.52 27.87 7.23 56.73 Peak 9 4586.00 46.54 -27.46 74.00 61.59 31.49 10.64 57.18 Peak 10 6824.00 47.62 -26.38 74.00 54.90 34.65 15.85 57.78 Peak 11 8048.00 46.01 -27.99 74.00 52.41 36.58 12.58 55.56 Peak										cm	_			
5 759.20 31.49 -14.51 46.00 31.48 28.02 3.49 31.50 Peak 6 964.30 33.09 -20.91 54.00 30.75 29.82 4.02 31.50 Peak 7 1956.00 37.25 -36.75 74.00 62.44 26.07 6.03 57.29 Peak 8 2658.00 51.89 73.52 27.87 7.23 56.73 Peak 9 4586.00 46.54 -27.46 74.00 61.59 31.49 10.64 57.18 Peak 10 6824.00 47.62 -26.38 74.00 54.90 34.65 15.85 57.78 Peak 11 8048.00 46.01 -27.99 74.00 52.41 36.58 12.58 55.56 Peak	2 1 3 2	147.99 121.43	34.38 38.18	-9.12 -7.82	43.50 46.00	46.34 50.93	18.15 16.69	1.29 1.72	31.40 31.16	100	155	Peak Peak		
9 4586.00 46.54 -27.46 74.00 61.59 31.49 10.64 57.18 Peak 10 6824.00 47.62 -26.38 74.00 54.90 34.65 15.85 57.78 Peak 11 8048.00 46.01 -27.99 74.00 52.41 36.58 12.58 55.56 Peak	5 7 6 9 7 19	759.20 964.30 956.00	31.49 33.09 37.25	-14.51 -20.91	46.00 54.00	31.48 30.75 62.44	28.02 29.82 26.07	3.49 4.02 6.03	31.50 31.50 57.29			Peak Peak Peak		
	9 45 10 68 11 80	86.00 824.00 948.00	46.54 47.62 46.01	-26.38 -27.99	74.00 74.00	61.59 54.90 52.41	31.49 34.65 36.58	10.64 15.85 12.58	57.18 57.78 55.56			Peak Peak Peak		

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24 ~25°C Test Mode: Mode 6 Temperature: Test Engineer: Liu lun **Relative Humidity:** 48 ~49% Test Distance: 3m Polarization: Vertical LTE Band 7 Idle + USB Cable(Data Link with Notebook) + Earphone + Bluetooth **Function Type:** Idle + WLAN Idle(2.4G) + GPS on + SIM1 Remark: #8 is system simulator signal which can be ignored. 97 Level (dBuV/m) Date: 2017-09-06 FCC CLASS-B 72.8 -6dB 60.6 FCC CLASS-B (AVG) 8 12.1 0<mark>30</mark> 11000. 14000 3000. 7000. 9000. 1000. 5000. Frequency (MHz) Site : 03CH01-SZ Condition : FCC CLASS-B 3m HF_ANT_9120D_1355_03 VERTICAL : 790406 Project Mode : Mode 6 : 351372098270596/351372098270604 Over Limit ReadAntenna Cable Preamp A/Pos T/Pos Line Level Factor Remark Freq Level Limit Loss Factor MHz dBuV/m dB dBuV/m dBuV dB/m cm deg 36.48 33.06 -6.94 40.00 40.18 24.14 0.34 31.60 100 152 Peak 31.19 -12.31 --- Peak 164.46 43.50 43.62 17.51 1.40 31.34 ---298.65 33.35 -12.65 46.00 44.12 18.48 2.04 31.29 --- Peak 479.90 30.46 -15.54 46.00 35.50 Peak 23.67 2.65 31.36 799.10 32.30 -13.70 46.00 32.09 28.10 3.61 31.50 --- Peak 33.21 -20.79 36.51 -37.49 972.00 54.00 30.77 29.88 4.06 31.50 --- Peak 74.00 --- Peak 1972.00 61.65 26.11 6.03 57.28 2654.00 48.99 70.73 27.83 7.15 56.72 --- Peak 4590.00 46.07 -27.93 74.00 61.12 31.49 10.64 57.18 --- Peak 10 6912.00 48.01 -25.99 74.00 55.96 34.88 15.08 57.91 --- Peak

11

12

8582.00

9942.00

11646.00

46.20 -27.80

46.32 -27.68

47.66 -26.34

74.00

74.00

74.00

51.24

49.49

48.96

37.25

38.78

39.97

12.54

14.23

14.92

54.83

56.18

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--- Peak

--- Peak

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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	Sep. 06, 2017~ Sep. 07, 2017	Jan. 05, 2018	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103912	9kHz~30MHz	Jan. 05, 2017	Sep. 06, 2017~ Sep. 07, 2017	Jan. 04, 2018	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	MessTec	3816/2SH	00103892	9kHz~30MHz	Jan. 05, 2017	Sep. 06, 2017~ Sep. 07, 2017	Jan. 04, 2018	Conduction (CO01-SZ)
AC Power Source	Chroma	61601	61601000198 5	N/A	NCR	Sep. 06, 2017~ Sep. 07, 2017	NCR	Conduction (CO01-SZ)
EMI Test Receiver&SA	Agilent	N9038A	MY52260185	20Hz~26.5GHz	Apr. 20, 2017	Sep. 06, 2017~ Sep. 19, 2017	Apr. 19, 2018	Radiation (03CH01-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270104	0.5GHz~26.5Gh z	Oct. 11, 2016	Sep. 06, 2017~ Sep. 19, 2017	Oct. 10, 2017	Radiation (03CH01-SZ
Bilog Antenna	TeseQ	CBL6112D	23188	30MHz-2GHz	Apr. 25, 2017	Sep. 06, 2017~ Sep. 19, 2017	Apr. 24, 2018	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	SCHWARZBE CK	BBHA 9120D	9120D-1285	1GHz~18GHz	Jan. 12, 2017	Sep. 06, 2017~ Sep. 19, 2017	Jan. 11, 2018	Radiation (03CH01-SZ)
LF Amplifier	Burgeon	BPA-530	102209	0.01~3000Mhz	Apr. 20, 2017	Sep. 06, 2017~ Sep. 19, 2017	Apr. 19, 2018	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	61601000198 5	N/A	NCR	Sep. 06, 2017~ Sep. 19, 2017	NCR	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Sep. 06, 2017~ Sep. 19, 2017	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Sep. 06, 2017~ Sep. 19, 2017	NCR	Radiation (03CH01-SZ)

NCR: No Calibration Required

Sporton International (Shenzhen) Inc.

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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))	2.50B

<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))	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))	5.20В

Sporton International (Shenzhen) Inc.

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