FCC Test Report

APPLICANT : CT Asia (HK) Ltd.

EQUIPMENT : Smartphone

BRAND NAME : BLU

MODEL NAME : STUDIO C 5+5 LTE FCC ID : YHLBLUSTC55LTE

STANDARD : FCC 47 CFR FCC Part 15 Subpart B

CLASSIFICATION: Certification

The product was received on Jul. 14, 2015 and testing was completed on Jul. 28, 2015. 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 C63.4-2009 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.

1F & 2F, Building A, Morning Business Center, No. 4003 ShiGu Rd., Xili Town, Nanshan District, Shenzhen, Guangdong, P. R. China

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTC55LTE Page Number : 1 of 23 Report Issued Date : Sep. 08, 2015

Report No. : FC571406

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC571406	Rev. 01	Initial issue of report	Sep. 08, 2015

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SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.107	ICES003 Section 6.1	AC Conducted Emission	< 15.107 limits < ICES003 6.1 limits	PASS	Under limit 4.14 dB at 0.500 MHz
3.2	15.109	ICES003 Section 6.2	Radiated Emission	< 15.109 limits < ICES003 6.2 limits	PASS	Under limit 1.98 dB at 479.900 MHz for Quasi-Peak

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1. General Description

1.1. Applicant

CT Asia (HK) Ltd.

Unit1309-11, 13th Floor 9 Wing Hong Street Cheung Sha Wan Kowloon, Hong Kong

1.2. Manufacturer

CT Asia (HK) Ltd.

Unit1309-11, 13th Floor 9 Wing Hong Street Cheung Sha Wan Kowloon, Hong Kong

1.3. Product Feature of Equipment Under Test

	Product Feature				
Equipment	Smartphone				
Brand Name	BLU				
Model Name	STUDIO C 5+5 LTE				
FCC ID	YHLBLUSTC55LTE				
	GSM/GPRS/EGPRS/WCDMA/HSPA/				
EUT supports Radios application	HSPA+(Downlink Only)/LTE/				
EOT Supports Radios application	WLAN2.4GHz 802.11b/g/n HT20/HT40/				
	Bluetooth v3.0+EDR/ Bluetooth v4.0 LE				
IMEI Code	Conduction: 353919026794416/353924026794416				
I IWEI Code	Radiation: 353919026794374/353924026794374				
HW Version	V1.0				
SW Version	BLU_S0050UU_V04.01_GENERIC				
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.

SPORTON INTERNATIONAL (SHENZHEN) INC.

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1.4. Product Specification subjective to this standard

Product Specification	ication 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 IV: 1712.4 MHz ~ 1752.6 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz LTE Band 4: 1710.7 MHz~1754.3 MHz LTE Band 7: 2502.5 MHz ~ 2567.5 MHz LTE Band 17: 706.5 MHz~713.5 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 IV: 2112.4 MHz ~ 2152.6 MHz WCDMA Band II: 1932.4 MHz ~ 1987.6 MHz LTE Band 4: 2110.7 MHz~2154.3 MHz LTE Band 7: 2622.5 MHz~ 2687.5 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
Antenna Type	WWAN : PIFA Antenna WLAN : Monopole Antenna Bluetooth : Monopole Antenna GPS: Monopole Antenna
Type of Modulation	GSM: GMSK GPRS: GMSK EDGE(MCS 0-4): GMSK/(MCS 5-9): 8PSK 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 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.

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1.6. Test Location

Test Site	SPORTON INTERNATIONAL (SHENZHEN) INC.
	1F & 2F, Building A, Morning Business Center, No. 4003 ShiGu Rd., Xili
Toot Site Leastion	Town, Nanshan District, Shenzhen, Guangdong, P. R. China
Test Site Location	TEL: +86-755-8637-9589
	FAX: +86-755-8637-9595
Took Cita No	Sporton Site No.
Test Site No.	CO01-SZ

Test Site	SPORTON INTERNATIONAL (SHENZHEN) INC.				
	No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan				
Test Site Location	warehouse, Nanshan District, Shenzhen, Guangdong, P. R. China				
	TEL: +86-755- 3320-2398				
Took Site No	Sporton Site No.	FCC/IC Registration No.			
Test Site No.	03CH01-SZ 831040/4086F				

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 C63.4-2009
- IC ICES-003 Issue 5
- IC RSS-Gen Issue 4

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 C63.4-2009 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

Frequency range investigated: conduction (150 kHz to 30 MHz), radiation (30MHz to the 5th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

The following tables are showing the test modes as the worst cases and recorded in this report.

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

Abbreviations:

EMI AC: AC conducted emissions

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

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

Note 1: Testing for this mode is not required or not the worst case.

Remark: For signal above 1GHz, the worst case was test item 2.

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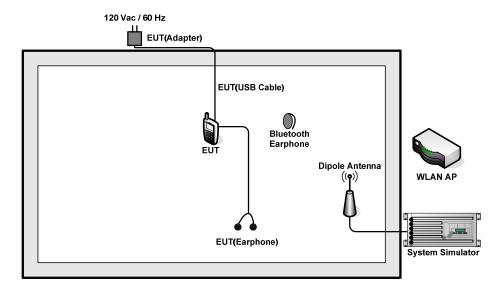
Test Items	EUT Configure Mode	Function Type
		Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera + SIM1 + Battery <fig.1></fig.1>
AC Conducted Emission	1/2	Mode 2: WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + MPEG4 + SIM2 + Battery <fig.1></fig.1>
		Mode 3: LTE Band 7 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + GPS Rx + SIM1 + Battery <fig.2></fig.2>
		Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera + SIM1 + Battery <fig.1></fig.1>
Radiated Emissions < 1GHz	1/2	Mode 2: WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + MPEG4 + SIM2 + Battery <fig.1></fig.1>
		Mode 3: LTE Band 7 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + GPS Rx + SIM1 + Battery <fig.2></fig.2>
Radiated Emissions ≥ 1GHz	2	Mode 1: LTE Band 7 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + GPS Rx + SIM1 + Battery <fig.2></fig.2>

Remark:

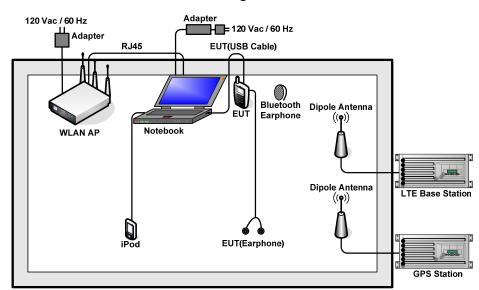
- 1. The worst case of AC is mode 1, and the USB Link mode of AC is mode 3, the test data of these modes were reported.
- 2. The worst case of RE < 1G is mode 3, the test data of this mode was reported.
- 3. Link with Notebook means data application transferred mode between EUT and Notebook.

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2.2. Connection Diagram of Test System



<Fig.1>



<Fig.2>

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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	CMU200	N/A	N/A	Unshielded, 1.8 m
2.	LTE Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
3.	GPS Station	ADIVIC	MP9000	N/A	N/A	Unshielded, 1.8 m
4.	Notebook	Lenovo	E540	PRC4	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
5.	Bluetooth Earphone	Nokia	BH-108	PYAHS-107W	N/A	N/A
6.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
7.	WLAN AP	D-Link	DIR-615	N/A	N/A	Unshielded, 1.8 m with Core
8.	WLAN AP	ASUSTek	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 2.7 m with Core
9.	iPod	Apple	A1199	FCC DoC	N/A	N/A
10.	SD Card	SanDisk	4G class 4	FCC DoC	Unshielded, 1.2 m	N/A
11.	iPod nano 8GB	Apple	MC690ZP/A	FCC DoC	Unshielded, 1.2 m	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 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 "Video Player" to play MPEG4 files.
- 3. Turn on camera to capture images.
- 4. Turn on GPS function to make the EUT receive continuous signals from GPS station.

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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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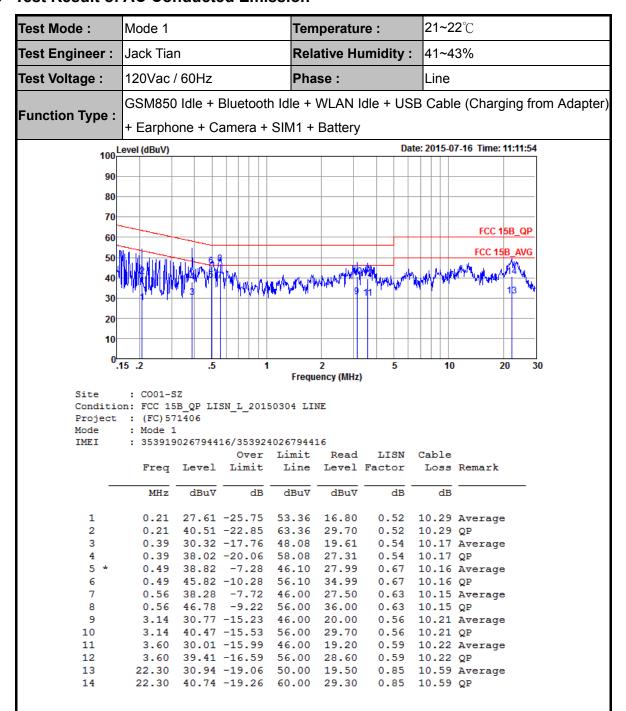
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3.1.4 Test Setup



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3.1.5 Test Result of AC Conducted Emission



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Test Mode :	Mode 1			Tem	peratu	re:	21~2	2° ℃	
Test Engineer :	Jack Tiar	1		Rela	ative Hu	ımidity	: 41~4	-3%	
Test Voltage :	120Vac /	60Hz		Pha	se:		Neut	ral	
	GSM850	ldle + E	Bluetooth	h Idle + \	WLAN I	dle + US	SB Cabl	e (Charg	ing from Adapt
Function Type :	+ Earpho							, J	
	<u> </u>						-4 2045 (7.46 Time.	44.40.45
100	Level (dBuV)				T T	<u>U</u>	ate: 2015-t	7-16 Time:	11:18:15
90									
80									
70									
60								FCC 1	5B_QP
								FCC 15	B_AVG
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U	.15 .2	.5	1		2	5	10) :	20 30
				Frequ	ency (MHz))			
Site	: CO01-S	Z							
	on: FCC 15	B_QP LI	SN_N_201	50304 NE	UTRAL				
		B_QP LI 1406	SN_N_201	50304 NE	UTRAL				
Project	on: FCC 15 : (FC)57 : Mode 1	B_QP LI 1406	SN_N_201						
Project Mode	on: FCC 15 : (FC)57 : Mode 1	B_QP LI 1406	16/35392			LISN	Cable		
Project Mode	on: FCC 15 : (FC)57 : Mode 1 : 353919	B_QP LI 1406 0267944	16/35392	40267944 Limit	16 Read	LISN Factor		Remark	
Project Mode	on: FCC 15 : (FC) 57 : Mode 1 : 353919 Freq	B_QP LI 1406 00267944 Level	16/35392 Over Limit	40267944 Limit Line	16 Read Level	Factor	Loss	Remark	
Project Mode	on: FCC 15 : (FC)57 : Mode 1 : 353919	B_QP LI 1406 0267944	16/35392 Over	40267944 Limit	16 Read			Remark	
Project Mode	on: FCC 15 : (FC) 57 : Mode 1 : 353919 Freq	B_QP LI 1406 .0267944 Level	16/35392 Over Limit	40267944 Limit Line ————————————————————————————————————	Read Level dBuV	Factor	Loss ——dB	Remark	
Project Mode IMEI —	on: FCC 15 : (FC) 57 : Mode 1 : 353919 Freq	B_QP LI 1406 00267944 Level dBuV	16/35392 Over Limit dB	40267944 Limit Line dBuV 46.93	Read Level dBuV	Factor dB	Loss dB	Remark	
Project Mode IMEI — 1	on: FCC 15 : (FC) 57 : Mode 1 : 353919 Freq MHz	B_QP LI 1406 00267944 Level dBuV	16/35392: Over Limit ———————————————————————————————————	40267944 Limit Line dBuV 46.93 56.93	16 Read Level dBuV 23.90 28.60	dB 0.58 0.58	dB 10.16 10.16	Remark	
Project Mode IMEI — 1 2	on: FCC 15 : (FC) 57 : Mode 1 : 353919 Freq MHz 0.45 0.45	B_QP LI 1406 0267944 Level dBuV 34.64 39.34	16/35392 Over Limit dB -12.29 -17.59	40267944 Limit Line dBuV 46.93 56.93 46.00	16 Read Level dBuV 23.90 28.60	0.58 0.58 0.61	10.16 10.16	Average QP Average	
Project Mode IMEI - 1 2 3 * 4 5	on: FCC 15 : (FC) 57 : Mode 1 : 353919 Freq MHz 0.45 0.45 0.50	B_QF LI 1406 0267944 Level dBuV 34.64 39.34 41.86 46.46	16/35392 Over Limit dB -12.29 -17.59 -4.14	40267944 Limit Line dBuV 46.93 56.93 46.00 56.00	16 Read Level dBuV 23.90 28.60 31.09	0.58 0.58 0.61	10.16 10.16 10.16 10.16	Average QP Average	=
Project Mode IMEI - 1 2 3 * 4 5 6	on: FCC 15 : (FC) 57 : Mode 1 : 353919 Freq MHz 0.45 0.45 0.50 0.50 0.62 0.62	B_QP LI 1406 0267944 Level dBuV 34.64 39.34 41.86 46.46 34.70 42.42	16/35392: Over Limit dB -12.29 -17.59 -4.14 -9.54 -11.30 -13.58	40267944 Limit Line dBuV 46.93 56.93 46.00 56.00 46.00 56.00	Read Level dBuV 23.90 28.60 31.09 35.69 23.98 31.70	0.58 0.58 0.61 0.61 0.57	10.16 10.16 10.16 10.15 10.15	Average QP Average QP Average QP Average QP	e e
Project Mode IMEI - 1 2 3 * 4 5 6 7	on: FCC 15 : (FC) 57 : Mode 1 : 353919 Freq MHz 0.45 0.45 0.50 0.50 0.62 0.62 1.05	B_QP LI 1406 0267944 Level dBuV 34.64 39.34 41.86 46.46 34.70 42.42 30.91	16/35392: Over Limit	40267944 Limit Line dBuV 46.93 56.93 46.00 56.00 46.00 56.00	Read Level dBuV 23.90 28.60 31.09 35.69 23.98 31.70 20.20	dB 0.58 0.58 0.61 0.61 0.57 0.57	dB 10.16 10.16 10.16 10.15 10.15	Average QP Average QP Average QP Average QP Average	e e
Project Mode IMEI - 1 2 3 * 4 5 6 7 8	on: FCC 15 : (FC) 57 : Mode 1 : 353919 Freq MHz 0.45 0.45 0.50 0.50 0.62 0.62 1.05 1.05	B_QP LI 1406 0267944 Level dBuV 34.64 39.34 41.86 46.46 34.70 42.42 30.91 37.71	16/35392: Over Limit dB -12.29 -17.59 -4.14 -9.54 -11.30 -13.58 -15.09 -18.29	40267944 Limit Line dBuV 46.93 56.93 46.00 56.00 46.00 56.00 56.00	Read Level dBuV 23.90 28.60 31.09 35.69 23.98 31.70 20.20 27.00	dB 0.58 0.58 0.61 0.61 0.57 0.57 0.56	dB 10.16 10.16 10.16 10.15 10.15 10.15	Average QP Average QP Average QP Average QP Average QP	e e
Project Mode IMEI - 1 2 3 * 4 5 6 7 8 9	on: FCC 15 : (FC) 57 : Mode 1 : 353919 Freq MHz 0.45 0.45 0.50 0.50 0.62 0.62 1.05 1.05 3.31	B_QP LI 1406 00267944 Level dBuV 34.64 39.34 41.86 46.46 34.70 42.42 30.91 37.71 27.63	16/35392 Over Limit ————————————————————————————————————	40267944 Limit Line dBuV 46.93 56.93 46.00 56.00 46.00 56.00 46.00 56.00	Read Level dBuV 23.90 28.60 31.09 35.69 23.98 31.70 20.20 27.00 16.80	dB 0.58 0.58 0.61 0.61 0.57 0.57 0.56 0.61	dB 10.16 10.16 10.16 10.15 10.15 10.15 10.15	Average QP Average QP Average QP Average QP Average QP Average	e e
Project Mode IMEI 1 2 3 * 4 5 6 7 8 9 10	on: FCC 15 : (FC) 57 : Mode 1 : 353919 Freq MHz 0.45 0.45 0.50 0.50 0.62 0.62 1.05 1.05 3.31 3.31	B_QP LI 1406 00267944 Level dBuV 34.64 39.34 41.86 46.46 34.70 42.42 30.91 37.71 27.63 34.43	16/35392 Over Limit ————————————————————————————————————	40267944 Limit Line dBuV 46.93 56.93 46.00 56.00 46.00 56.00 46.00 56.00	Read Level dBuV 23.90 28.60 31.09 35.69 23.98 31.70 20.20 27.00 16.80 23.60	0.58 0.58 0.61 0.61 0.57 0.57 0.56 0.56 0.61	10.16 10.16 10.16 10.15 10.15 10.15 10.15 10.22	Average QP Average QP Average QP Average QP Average QP Average	
Project Mode IMEI - 1 2 3 * 4 5 6 7 8 9	on: FCC 15 : (FC) 57 : Mode 1 : 353919 Freq MHz 0.45 0.45 0.50 0.50 0.62 0.62 1.05 1.05 3.31	B_QP LI 1406 0267944 Level dBuV 34.64 39.34 41.86 46.46 34.70 42.42 30.91 37.71 27.63 34.43 28.34	16/35392 Over Limit ————————————————————————————————————	40267944 Limit Line dBuV 46.93 56.93 46.00 56.00 46.00 56.00 46.00 56.00 56.00 56.00	Read Level dBuV 23.90 28.60 31.09 35.69 23.98 31.70 20.20 27.00 16.80	0.58 0.58 0.61 0.61 0.57 0.57 0.56 0.56 0.61	10.16 10.16 10.16 10.15 10.15 10.15 10.22 10.22	Average QP Average QP Average QP Average QP Average QP Average	

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Test Mode :	Mode 3			Tem	peratu	re:	21~2	22 ℃			
Test Engineer :	Jack Tian				ative Hu	umidity :	41~4	41~43%			
Test Voltage :	120Vac	60Hz		Pha	se :		Line				
	LTE Bar	nd 7 Idl	e + Blu	etooth l	dle + V	VLAN Id	e + US	SB Cabl	le (Da	ıta Link v	vit
Function Type :	Noteboo							e + USB Cable (Data Link wi			
400	_evel (dBuV)	, -	<u> </u>					7-16 Time:	11:53:48	3	
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90											
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10-	3 5 9 15 .2	.5	1		2	5	10) ;	20 3	30	
10-	3 5 9 15 .2	.5	1		2 ency (MHz)	-	10) :	20 3	30	
10 0 Site	: CO01-5	SZ.		Frequ	ency (MHz)	-	10) :	20 3	30	
Site Condition	: CO01-S	SZ SB_QP LI		Frequ	ency (MHz)	-	10) ;	20 3	30	
Site Condition Project	: CO01-S on: FCC 15 : (FC)57	5Z 5B_QP LI 71406		Frequ	ency (MHz)	-	10) :	20 3	30	
10 0 Site Conditio	: CO01-S on: FCC 15 : (FC)57	5Z 5B_QP LI 71406		Frequ	ency (MHz)	-	10) :	20 3	30	
Site Condition Project Mode	: CO01-S on: FCC 15 : (FC)57	5Z 5B_QP LI 71406	SN_L_201	Frequ	ency (MHz))	10		20 3	30	
Site Condition Project Mode	: CO01-8 on: FCC 18 : (FC) 57 : Mode 3	5Z 5B_QP LI 71406 3 90267944	SN_L_201	Frequ 50304 LI 40267944 Limit	ency (MHz) NE 16 Read)	Cable			30	
Site Condition Project Mode	: CO01-8 on: FCC 18 : (FC) 57 : Mode 3	5Z 5B_QP LI 71406 3 90267944	SN_L_201: 16/35392 Over	Frequ 50304 LI 40267944 Limit	ency (MHz) NE 16 Read	LISN	Cable	Remark		30	
Site Condition Project Mode	: CO01-S on: FCC 15 : (FC) 57 : Mode 3 : 353919	5Z 5B_QP LI 11406 3 00267944 Level	SN_L_201: 16/35392 Over Limit	Frequence Freque	ency (MHz) NE 16 Read Level dBuV	LISN Factor	Cable Loss dB	Remark		80	
Site Condition Project Mode IMEI	: C001-S on: FCC 15 : (FC) 57 : Mode 3 : 353919 Freq MHz 0.16 0.16	52 5B_QP LI '1406 3 00267944 Level dBuV 24.19 42.79	SN_L_201: 16/35392: Over Limit dB -31.41 -22.81	Freque 50304 LI 50304	nE Read Level dBuV 13.39 31.99	LISN Factor dB 0.45 0.45	Cable Loss dB 10.35 10.35	Remark Average	e	80	
Site Condition Project Mode IMEI	: C001-S on: FCC 15 : (FC) 57 : Mode 3 : 353919 Freq MHz 0.16 0.16 0.18	52 5B_QP LI '1406 3 00267944 Level dBuV 24.19 42.79 14.80	SN_L_201: 16/35392: Over Limit dB -31.41 -22.81 -39.75	Frequents	ne nead Level dBuV 13.39 31.99 4.00	LISN Factor dB 0.45 0.45 0.45 0.48	Cable Loss dB 10.35 10.35 10.32	Remark Average QP Average	e	80	
Site Conditi Project Mode IMEI	: C001-S con: FCC 1S : (FC) S7 : Mode 3 : 353919 Freq MHz 0.16 0.16 0.18 0.18	6Z 6B_QP LI 71406 80267944 Level dBuV 24.19 42.79 14.80 40.00	SN_L_201: 16/35392: Over Limit dB -31.41 -22.81 -39.75 -24.55	Frequents	ne nead Level dBuV 13.39 31.99 4.00 29.20	LISN Factor dB 0.45 0.45 0.48 0.48	Cable Loss dB 10.35 10.35 10.32 10.32	Remark Average QP Average QP	e e	80	
Site Conditi Project Mode IMEI 1 2 * 3 4 5	: C001-S con: FCC 1S : (FC) S7 : Mode 3 : 353919 Freq MHz 0.16 0.16 0.18 0.18 0.21	6Z 6B_QF LI 71406 80267944 Level dBuV 24.19 42.79 14.80 40.00 13.31	SN_L_2019 16/35392 Over Limit	Frequence 10267944; Limit Line dBuV 55.60 65.60 54.55 64.55 53.05	ne Read Level dBuV 13.39 31.99 4.00 29.20 2.50	LISN Factor dB 0.45 0.45 0.48 0.48 0.53	Cable Loss dB 10.35 10.35 10.32 10.32	Remark Average QP Average QP Average	e e	30	
Site Condition Project Mode IMEI 1 2 * 3 4 5 6	: C001-S con: FCC 1S : (FC) 57 : Mode 3 : 353919 Freq MHz 0.16 0.16 0.18 0.18 0.21 0.21	6Z 6B_QF LI 71406 80267944 Level dBuV 24.19 42.79 14.80 40.00 13.31 36.11	SN_L_2019 16/35392 Over Limit dB -31.41 -22.81 -39.75 -24.55 -39.74 -26.94	Frequents	ne Read Level dBuV 13.39 4.00 29.20 250 25.30	LISN Factor dB 0.45 0.45 0.48 0.48 0.53 0.53	Cable Loss dB 10.35 10.35 10.32 10.32 10.28 10.28	Remark Average QP Average QP Average QP	e e	80	
Site Condition Project Mode IMEI 1 2 * 3 4 5 6 7	: C001-S con: FCC 1S : (FC) 57 : Mode 3 : 353919 Freq MHz 0.16 0.16 0.18 0.18 0.21 0.21	GZ GB_QF LI 11406 G0267944 Level dBuV 24.19 42.79 14.80 40.00 13.31 36.11 16.60	SN_L_2019 16/353920 Over Limit -31.41 -22.81 -39.75 -24.55 -39.74 -26.94 -35.57	Frequence 102679441 1	ne Read Level dBuV 13.39 4.00 29.20 25.30 5.81	LISN Factor dB 0.45 0.45 0.48 0.53 0.53 0.54	Cable Loss dB 10.35 10.35 10.32 10.32 10.28 10.28 10.28	Remark Average QP Average QP Average QP Average	e e	30	
Site Condition Project Mode IMEI 1 2 * 3 4 5 6	: C001-S con: FCC 1S : (FC) 57 : Mode 3 : 353919 Freq MHz 0.16 0.16 0.18 0.18 0.21 0.21	EVEL BE OF LI CONTROL OF LEVEL BUT A CONTROL OF LIVEL BUT A CONTROL OF LIVER BUT A CONTROL OF LIVER BUT A CONTROL	SN_L_2019 16/35392 Over Limit dB -31.41 -22.81 -39.75 -24.55 -39.74 -26.94	Frequence 100	ne Read Level dBuV 13.39 4.00 29.20 25.30 5.81	LISN Factor dB 0.45 0.45 0.48 0.53 0.53 0.54 0.54	Cable Loss dB 10.35 10.35 10.32 10.32 10.28 10.28 10.25 10.25	Remark Average QP Average QP Average QP Average QP	e e e	80	
Site Condition Project Mode IMEI 1 2 * 3 4 5 6 7 8	: C001-S con: FCC 1S : (FC) 57 : Mode 3 : 353919 Freq MHz 0.16 0.18 0.18 0.21 0.21 0.24 0.24	EVEL 1406 BO267944 Level 42.79 14.80 40.00 13.31 36.11 16.60 33.80 14.58	SN_L_2019 16/353920 Over Limit -31.41 -22.81 -39.75 -24.55 -39.74 -26.94 -35.57 -28.37	#0267944 Limit Line dBuV 55.60 65.60 54.55 64.55 53.05 63.05 52.17 62.17 50.90	ne Read Level dBuV 13.39 31.99 4.00 2.50 25.30 5.81 23.01 3.80	LISN Factor dB 0.45 0.45 0.48 0.53 0.53 0.54 0.54 0.56	Cable Loss dB 10.35 10.35 10.32 10.32 10.28 10.28 10.25 10.25	Average QP Average QP Average QP Average QP Average QP Average QP	e e e	30	
Site Condition Project Mode IMEI 1 2 * 3 4 5 6 7 8 9	: C001-S con: FCC 1S : (FC) 57 : Mode 3 : 353919 Freq MHz 0.16 0.16 0.18 0.18 0.21 0.21 0.24 0.24 0.28	GZ GB_QP LI 1406 30267944 Level dBuV 24.19 42.79 14.80 40.00 13.31 36.11 16.60 33.80 14.58 30.78	SN_L_201: 16/35392: Over Limit -31.41 -22.81 -39.75 -24.55 -39.74 -26.94 -35.57 -28.37 -36.32	#02679441 Limit Line dBuV 55.60 65.60 54.55 64.55 53.05 63.05 52.17 62.17 50.90 60.90	ne Read Level dBuV 13.39 31.99 4.00 2.50 25.30 5.81 23.01 3.80	LISN Factor dB 0.45 0.45 0.48 0.53 0.53 0.54 0.54 0.56 0.56	Cable Loss dB 10.35 10.35 10.32 10.28 10.28 10.25 10.25 10.25	Average QP Average QP Average QP Average QP Average QP Average QP	e e e e	30	

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21~22℃ Test Mode: Mode 3 Temperature: Test Engineer: Jack Tian Relative Humidity: 41~43% 120Vac / 60Hz Phase: Test Voltage: Neutral LTE Band 7 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Function Type: Notebook) + Earphone + GPS Rx + SIM1 + Battery 100 Level (dBuV) Date: 2015-07-16 Time: 11:56:15 90 80 70 FCC 15B_QP 60 FCC 15B_AVG 50 20 10 Frequency (MHz) Site : CO01-SZ Condition: FCC 15B_QP LISN_N_20150304 NEUTRAL Project : (FC) 571406 Mode : Mode 3 : 353919026794416/353924026794416 TMET Over Limit Read LISN Cable Freq Level Limit Line Level Factor Loss Remark dBuV dB dBuV MHz dBuV dB dB 0.16 29.91 -25.78 55.69 19.10 0.46 10.35 Average 0.16 43.31 -22.38 65.69 32.50 0.46 10.35 QP 0.18 18.11 -36.39 54.50 7.30 0.49 10.32 Average 0.49 10.32 QP 2 41.41 -23.09 64.50 30.60 0.18 10.32 QP 0.51 10.29 Average 0.20 29.20 -24.38 53.58 18.40 6 0.20 41.90 -21.68 63.58 31.10 0.51 10.29 QP 0.56 10.24 Average 0.56 10.24 QP 0.25 23.10 -28.59 51.69 12.30 0.25 40.90 -20.79 61.69 30.10 8 * 9 0.31 21.88 -28.14 50.02 11.09 0.59 10.20 Average 0.31 37.28 -22.74 60.02 26.49 6.06 19.84 -30.16 50.00 8.91 0.59 10.20 QP 0.67 10.26 Average 10 11 8.91 6.06 33.64 -26.36 60.00 22.71 0.67 10.26 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:

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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

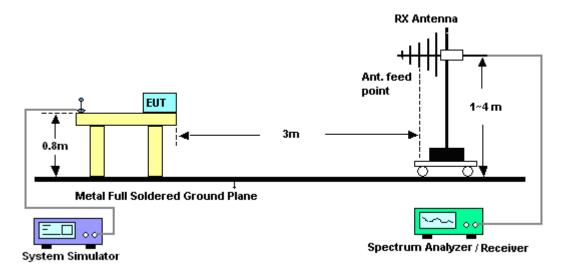
The measuring equipment is listed in the section 4 of this test report.

3.2.3. Test Procedures

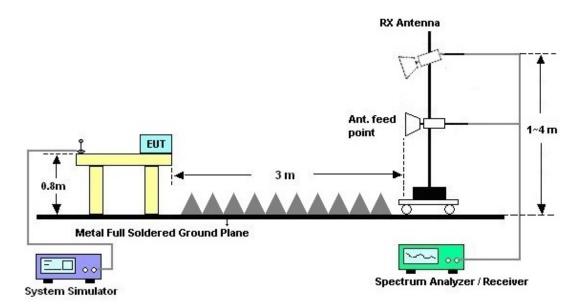
- 1. The EUT was placed on a turntable with 0.8 meter above ground.
- 2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
- 3. The table was rotated 360 degrees to determine the position of the highest radiation.
- 4. The 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

3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



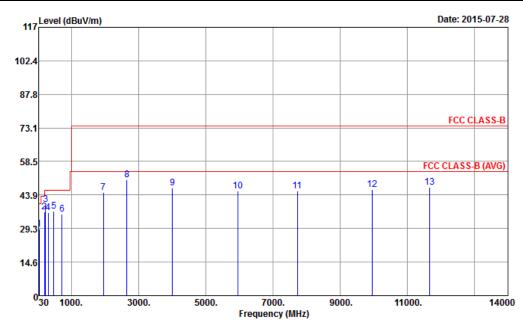
For radiated emissions above 1GHz



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3.2.5. Test Result of Radiated Emission

Test Mode :	Mode 3	Temperature :	23~25°C			
Test Engineer :	Gavin Zhang	Relative Humidity :	48~52%			
Test Distance :	3m	Polarization :	Horizontal			
Eunation Type I	+ USB Cable (Data Link with					
Function Type :	Notebook) + Earphone + GPS Rx + SIM1 + Battery					
Remark :	#8 is system simulator signa	ıl which can be ignored	i.			



Site : 03CH01-SZ

Condition : FCC CLASS-B 3m LF_ANT_141107 HORIZONTAL

Project : (FC) 571406

Mode : Mode 3

IMEI : 353919026794374/353924026794374

			Over			Antenna			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	45.93	29.14	-10.86	40.00	42.10	11.99	1.03	25.98			Peak
2	200.10	36.48	-7.02	43.50	47.93	11.60	2.20	25.25			Peak
3	239.25	39.69	-6.31	46.00	50.21	12.23	2.42	25.17	100	200	Peak
4	314.00	36.32	-9.68	46.00	44.39	14.29	2.79	25.15			Peak
5	479.90	36.94	-9.06	46.00	41.08	18.59	3.50	26.23			Peak
6	720.00	35.53	-10.47	46.00	36.79	20.73	4.34	26.33			Peak
7	1962.00	44.91	-29.09	74.00	34.76	31.89	7.90	29.64			Peak
8	2654.00	50.67			37.90	32.82	9.11	29.16			Peak
9	4016.00	46.98	-27.02	74.00	30.17	33.91	11.46	28.56			Peak
10	5952.00	45.77	-28.23	74.00	24.41	35.73	13.76	28.13			Peak
11	7728.00	45.73	-28.27	74.00	20.41	36.39	15.59	26.66			Peak
12	9950.00	46.39	-27.61	74.00	15.60	38.04	18.06	25.31			Peak
13	11666.00	47.26	-26.74	74.00	14.15	39.29	18.34	24.52	100	320	Peak

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Test Mode :	Mode 3		Temperature	:	23~25°C	
Test Engineer :	Gavin Zhai	ng	Relative Hur	midity:	48~52%	
Test Distance :	3m		Polarization	:	Vertical	
Function Type :		7 Idle + Blueto + Earphone + G				Cable (Data Link with
Remark :		m simulator sigr	nal which can b	e ignored	d.	
117 Level	(dBuV/m)					Date: 2015-07-22
102.4						
87.8						
73.1						FCC CLASS-B
58.5						FCC CLASS-B (AVG)
43.9	7	9	10	11	12	13
29.3						
14.6						
030	1000.	3000. 5000.	7000.	9000.	11000). 14000
Site Condition Project Mode IMEI	: (FC) 571 : Mode 3	ASS-B 3m LF_ANT_1)		
	Freq Level		eadAntenna Cable vel Factor Loss	Preamp A Factor	/Pos T/Pos	Remark
	MHz dBuV/m	•	BuV dB/m dB		cm deg	
2 1 3 2 4 3	13.70 34.13 000.10 34.02 14.00 30.43	-2.93 40.00 52 -9.37 43.50 44 -9.48 43.50 45 -15.57 46.00 38 -1.98 46.00 48	.57 13.63 1.64 .47 11.60 2.20 .50 14.29 2.79	25.71 25.25 25.15		QP Peak Peak Peak OP
6 7 7 20 8 26 9 35	94.90 33.86 974.00 46.36 954.00 50.37 968.00 45.65	-12.14 46.00 33 -27.64 74.00 35 37 -28.35 74.00 29	.07 22.39 4.58 .45 32.27 8.10 .60 32.82 9.11 .37 33.47 11.19	26.18 29.46 29.16 28.38		Peak Peak Peak Peak
11 81 12 108	96.00 45.69 84.00 45.99	-28.38 74.00 24 -28.31 74.00 19 -28.01 74.00 14 -26.18 74.00 14	.53 36.39 16.17 .53 38.73 17.51	26.40 24.78		Peak Peak 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 Test Receiver&SA	Agilent Technologies	N9038A	MY52260185	20Hz~26.5GHz	May 26, 2015	Jul. 22, 2015~ Jul. 28, 2015	May 25, 2016	Radiation (03CH01-SZ)
Spectrum Analyzer	R&S	FSV40	101041	10kHz~40GHz; Max 30dBm	Sep. 25, 2014	Jul. 22, 2015~ Jul. 28, 2015	Sep. 24, 2015	Radiation (03CH01-SZ)
Bilog Antenna	TeseQ	CBL6112D	23188	30MHz~2GHz	Nov. 07, 2014	Jul. 22, 2015~ Jul. 28, 2015	Nov. 06, 2015	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Oct. 15, 2014	Jul. 22, 2015~ Jul. 28, 2015	Oct. 14, 2015	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9kHz~3000MHz / 30 dB	Jan 28, 2015	Jul. 22, 2015~ Jul. 28, 2015	Jan 27, 2016	Radiation (03CH01-SZ)
Amplifier	Agilent Technologies	83017A	MY39501302	500MHz~26.5G Hz	Jan. 28, 2015	Jul. 22, 2015~ Jul. 28, 2015	Jan. 27, 2016	Radiation (03CH01-SZ)
Amplifier	Yiai	AV3860B	04030	2GHz~26.5GHz	May 05, 2015	Jul. 22, 2015~ Jul. 28, 2015	May 04, 2016	Radiation (03CH01-SZ)
EMI Receiver	R&S	ESCI7	100724	9kHz~3GHz	Jan. 28, 2015	Jul. 16, 2015	Jan. 27, 2016	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	103892	9kHz~30MHz	Feb. 02, 2015	Jul. 16, 2015	Feb. 01, 2016	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	MessTec	AN3016	16850	9kHz~30MHz	Feb. 02, 2015	Jul. 16, 2015	Feb. 01, 2016	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	61602000089 1	100Vac~250Vac	Sep. 29, 2014	Jul. 16, 2015	Sep. 28, 2015	Conduction (CO01-SZ)
Pulse Limiter	COM-POWER	LIT-153 Transient Limiter	53139	150kHz~30MHz	Oct. 24, 2014	Jul. 16, 2015	Oct. 24, 2015	Conduction (CO01-SZ)

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5. Uncertainty of Evaluation

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

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

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

Measuring Uncertainty for a Level of	0.040
Confidence of 95% (U = 2Uc(y))	3.9dB

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