# **FCC Test Report**

APPLICANT : CT Asia

**EQUIPMENT** : Smartphone

BRAND NAME : BLU

MODEL NAME : STUDIO C SUPER CAMERA

FCC ID : YHLBLUSTUDIOCAM

STANDARD : FCC 47 CFR FCC Part 15 Subpart B

**CLASSIFICATION**: Certification

The product was received on Mar. 24, 2015 and testing was completed on May 04, 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

Louis Wu

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

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUDIOCAM Page Number : 1 of 26
Report Issued Date : May 14, 2015

Testing Laboratory

Report No.: FC532407

Report Version : Rev. 01

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## **REVISION HISTORY**

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC532407	Rev. 01	Initial issue of report	May 14, 2015

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## **SUMMARY OF TEST RESULT**

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
		ICES003		< 15.107 limits	PASS	Under limit
3.1	15.107		AC Conducted Emission			13.37 dB at
		Section 6.1		< ICES003 6.1 limits		3.140 MHz
	15.109	105000	Radiated Emission	45 400 limita		Under limit
3.2		ICES003		< 15.109 limits	PASS	2.05 dB at
		Section 6.2		< ICES003 6.2 limits		48.360 MHz

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## 1. General Description

## 1.1. Applicant

#### **CT** Asia

Unit 01, 15/F, Seaview Centre, 139-141 Hoi bun road, Kwun Tong, Kowloon, Hongkong

#### 1.2. Manufacturer

#### Tinno Mobile Technology Corp.

4/F, H-3 Building, OCT Eastern industrial Park, No.1 XiangShan East Road, Nan Shan District, Shenzhen, P.R. China

### 1.3. Product Feature of Equipment Under Test

Product Feature					
Equipment	Smartphone				
Brand Name	BLU				
Model Name	STUDIO C SUPER CAMERA				
FCC ID	YHLBLUSTUDIOCAM				
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/HSPA/HSPA+(Downlink Only)/ WLAN 2.4GHz 802.11b/g/n HT20/HT40/ Bluetooth v3.0 + EDR/Bluetooth v4.0 LE				
IMEI Code	Conduction: 353919026699144/353924026699144 Radiation: 353919026699193/353924026699193				
HW Version	V1.0				
SW Version	S5400AP_PR2_5.0_00_08				
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.

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## 1.4. Product Specification subjective to this standard

Product Specifi	Product Specification subjective to this standard					
Tx Frequency	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz WCDMA Band IV : 1712.4 MHz ~ 1752.6 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz					
Rx Frequency	GSM850: 869.2 MHz ~ 893.8 MHz GSM1900: 1930.2 MHz ~ 1989.8 MHz WCDMA Band V: 871.4 MHz ~ 891.6 MHz WCDMA Band IV: 2112.4 MHz ~ 2152.6 MHz WCDMA Band II: 1932.4 MHz ~ 1987.6 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz GPS: 1.57542 GHz					
Antenna Type	WWAN : 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: QPSK (Uplink) HSDPA: QPSK (Uplink) HSUPA: QPSK (Uplink) HSPA+: 16QAM (Downlink Only) 802.11b: DSSS (DBPSK / DQPSK / CCK) 802.11g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM) Bluetooth v4.0 LE: GFSK Bluetooth (1Mbps): GFSK Bluetooth (2Mbps): \pi /4-DQPSK Bluetooth (3Mbps): 8-DPSK GPS: BPSK					

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#### 1.5. Modification of EUT

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

#### 1.6. **Test Location**

Test Site	SPORTON INTERNATIONAL (SHENZHEN) INC.				
	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 Site 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 Cita No	Sporton Site No. FCC/IC Registration N					
Test Site No.	03CH01-SZ	831040/4086F				

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

#### Abbreviations:

EMI AC: AC conducted emissions

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

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

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Test Items	EUT Configure Mode	Function Type
	1/2	Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera + SIM1 <fig.1></fig.1>
AC Conducted Emission		Mode 2: WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + MPEG4 + SIM1 <fig.1></fig.1>
		Mode 3: WCDMA Band IV Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + GPS Rx + SIM1 <fig.2></fig.2>
	GHz 1/2	Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera + SIM1 <fig.1></fig.1>
Radiated Emissions < 1GHz		Mode 2: WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + MPEG4 + SIM1 <fig.1></fig.1>
		Mode 3: WCDMA Band IV Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + GPS Rx + SIM1 <fig.2></fig.2>
Radiated	4/0	Mode 1: WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + MPEG4 + SIM1 <fig.1></fig.1>
Emissions ≥ 1GHz	1/2	Mode 2: WCDMA Band IV Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + GPS Rx + SIM1 <fig.2></fig.2>

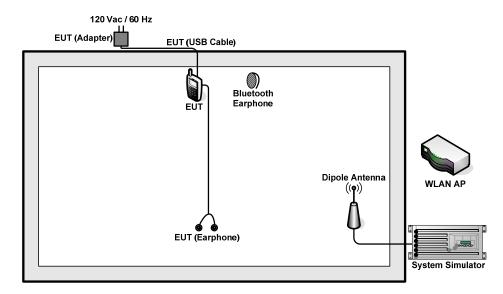
#### Remark:

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

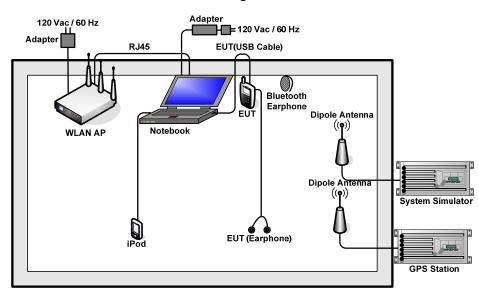
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## 2.2. Connection Diagram of Test System



<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	Agilent	8960	N/A	N/A	Unshielded, 1.8 m
2.	GPS Station	ADIVIC	MP9000	N/A	N/A	Unshielded, 1.8 m
3.	WLAN AP	D-link	DIR-815	KA2IR815A1	N/A	Unshielded,1.8m
4.	WLAN AP	D-link	DIR-615	N/A	N/A	Unshielded,1.8m
5.	Notebook	Lenovo	E540	FCC DoC	N/A	AC I/P: Unshielded, 1.2m DC O/P: Shielded, 1.8 m
6.	Bluetooth Earphone	Nokia	BH-108	PYAHS-107W	N/A	N/A
7.	Bluetooth Earphone	Lenovo	LBH301	N/A	N/A	N/A
8.	SD Card	SanDisk	4G class 4	FCC DoC	N/A	N/A
9.	iPod nano 8GB	Apple	MC690ZP/A	FCC DoC	Shielded, 1.2 m	N/A
10.	iPod	Apple	MC525ZP/A	FCC DoC	Shielded, 1.0 m	N/A

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### 2.4. EUT Operation Test Setup

The EUT was in GSM or WCDMA idle mode during the testing. The EUT was synchronized to the BCCH, and 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.

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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		

<sup>\*</sup>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.
- 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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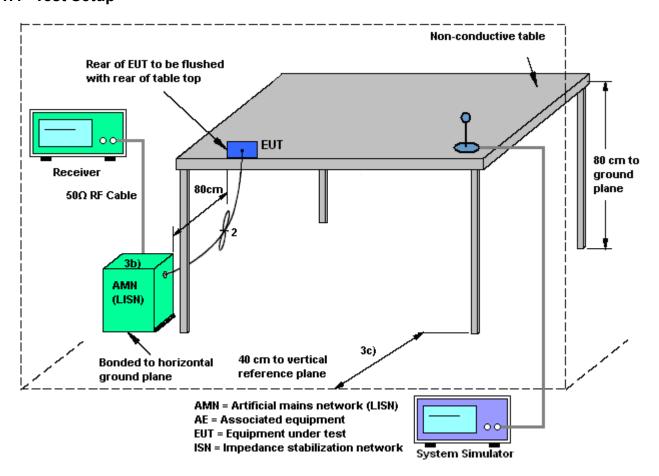
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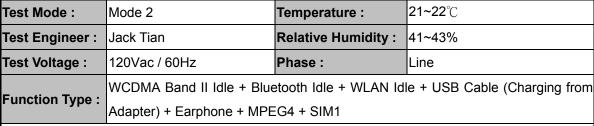
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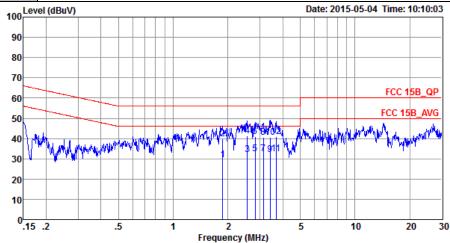
#### 3.1.4 Test Setup



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#### 3.1.5 Test Result of AC Conducted Emission





Site : CO01-SZ

Condition: FCC 15B\_QP LISN\_L\_20140304 LINE

Project : (FC)532407 Mode : Mode 2

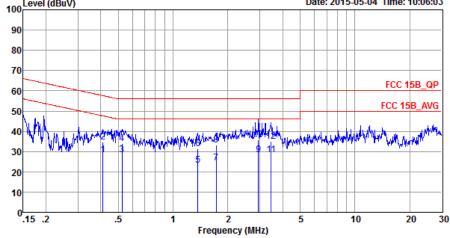
IMEI : 353919026699144/353924026699144

			Over	Limit	Read	LISN	Cable	
	Freq	Level	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBuV	dB	dBu₹	dBu₹	dB	dB	
1	1.87	29.51	-16.49	46.00	19.11	0.22	10.18	Average
2	1.87	39.71	-16.29	56.00	29.31	0.22	10.18	QP
3	2.55	31.98	-14.02	46.00	21.51	0.27	10.20	Average
4	2.55	41.28	-14.72	56.00	30.81	0.27	10.20	QP
5	2.82	32.30	-13.70	46.00	21.79	0.30	10.21	Average
6	2.82	41.10	-14.90	56.00	30.59	0.30	10.21	QP
7 *	3.14	32.63	-13.37	46.00	22.10	0.32	10.21	Average
8	3.14	40.73	-15.27	56.00	30.20	0.32	10.21	QP
9	3.42	32.06	-13.94	46.00	21.50	0.34	10.22	Average
10	3.42	40.66	-15.34	56.00	30.10	0.34	10.22	QP
11	3.68	32.58	-13.42	46.00	22.01	0.35	10.22	Average
12	3.68	41.08	-14.92	56.00	30.51	0.35	10.22	QP

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21~22℃ Test Mode: Mode 2 Temperature: Test Engineer: Jack Tian Relative Humidity: 41~43% Test Voltage: 120Vac / 60Hz Phase: Neutral WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Function Type: Adapter) + Earphone + MPEG4 + SIM1 100 Level (dBuV) Date: 2015-05-04 Time: 10:06:03 90 80



Site : CO01-SZ

Condition: FCC 15B\_QP LISN\_N\_20140304 NEUTRAL

Project : (FC)532407 Mode : Mode 2

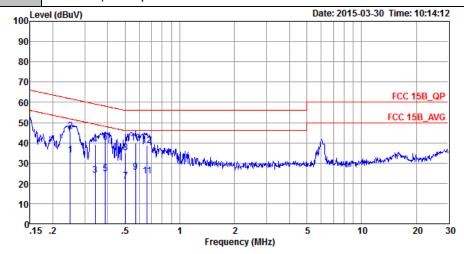
IMEI : 353919026699144/353924026699144

			Over	Limit	Read	LISN	Cable	
	Freq	Level	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBu∀	dB	dBu∀	dBu∀	dB	dB	
1	0.41	28.26	-19.33	47.59	17.70	0.39	10.17	Average
2	0.41	34.66	-22.93	57.59	24.10	0.39	10.17	QP
3	0.52	28.24	-17.76	46.00	17.70	0.39	10.15	Average
4	0.52	34.04	-21.96	56.00	23.50	0.39	10.15	QP
5	1.37	23.12	-22.88	46.00	12.60	0.35	10.17	Average
6	1.37	31.42	-24.58	56.00	20.90	0.35	10.17	QP
7	1.73	24.44	-21.56	46.00	13.90	0.36	10.18	Average
8	1.73	33.14	-22.86	56.00	22.60	0.36	10.18	QP
9	2.95	28.53	-17.47	46.00	17.90	0.42	10.21	Average
10	2.95	35.63	-20.37	56.00	25.00	0.42	10.21	QP
11 *	3.45	28.56	-17.44	46.00	17.90	0.44	10.22	Average
12	3.45	35.16	-20.84	56.00	24.50	0.44	10.22	QP

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Test Mode :	Mode 3	Temperature :	21~22℃				
Test Engineer :	Jack Tian	Relative Humidity :	41~43%				
Test Voltage :	120Vac / 60Hz	Phase :	Line				
Function Type:	WCDMA Band IV Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with						
	Notebook) + Earphone + GPS Rx + SIM1						



Site : CO01-SZ

Condition: FCC 15B\_QP LISN\_L\_20140304 LINE

Project : (FC) 532407

Mode : Mode 3 IMEI : 353919026699144/353924026699144

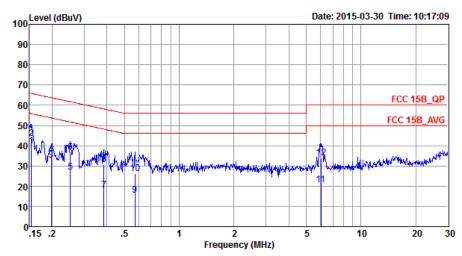
	Freq	Level	Over Limit	Limit Line	Read Level	LISN	Loss	Remark
	MHz	dBu∀	dB	dBu₹	dBuV	——dB	dB	
1	0.25	33.78	-18.00	51.78	23.30	0.24	10.24	Average
2	0.25	45.58	-16.20	61.78	35.10	0.24	10.24	QP
3	0.34	23.85	-25.28	49.13	13.39	0.27	10.19	Average
4	0.34	39.15	-19.98	59.13	28.69	0.27	10.19	QP
5	0.39	24.75	-23.33	48.08	14.30	0.28	10.17	Average
6	0.39	40.25	-17.83	58.08	29.80	0.28	10.17	QP
7	0.50	21.05	-24.95	46.00	10.59	0.30	10.16	Average
8	0.50	35.05	-20.95	56.00	24.59	0.30	10.16	QP
9	0.57	25.31	-20.69	46.00	14.91	0.25	10.15	Average
10 *	0.57	40.01	-15.99	56.00	29.61	0.25	10.15	QP
11	0.66	23.55	-22.45	46.00	13.20	0.20	10.15	Average
12	0.66	38.75	-17.25	56.00	28.40	0.20	10.15	QP

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21~22℃ Test Mode: Mode 3 Temperature: Test Engineer: Jack Tian Relative Humidity: 41~43% Test Voltage: 120Vac / 60Hz Phase: Neutral

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



: CO01-SZ

Condition: FCC 15B\_QP LISN\_N\_20140304 NEUTRAL

Project : (FC) 532407 : Mode 3 Mode

IMEI : 353919026699144/353924026699144

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBu∀	dB	dBu∀	dBu∀	dB	dB	
1 *	0.15	39.68	-16.10	55.78	29.00	0.33	10.35	Average
2	0.15	43.48	-22.30	65.78	32.80	0.33	10.35	QP
3	0.20	32.72	-20.99	53.71	22.10	0.32	10.30	Average
4	0.20	35.52	-28.19	63.71	24.90	0.32	10.30	QP
5	0.25	27.08	-24.61	51.69	16.50	0.34	10.24	Average
6	0.25	36.98	-24.71	61.69	26.40	0.34	10.24	QP
7	0.39	17.96	-30.21	48.17	7.40	0.38	10.18	Average
8	0.39	30.66	-27.51	58.17	20.10	0.38	10.18	QP
9	0.57	15.40	-30.60	46.00	4.90	0.35	10.15	Average
10	0.57	26.30	-29.70	56.00	15.80	0.35	10.15	QP
11	6.02	20.72	-29.28	50.00	10.00	0.46	10.26	Average
12	6.02	34.12	-25.88	60.00	23.40	0.46	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:

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

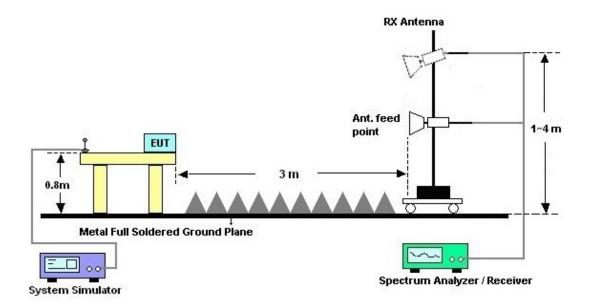
- 1. The EUT was placed on a turntable with 0.8 meter above ground.
- The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
- 3. The table was rotated 360 degrees to determine the position of the highest radiation.
- 4. The 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 $\mu$ V/m) = 20 log Emission level ( $\mu$ 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

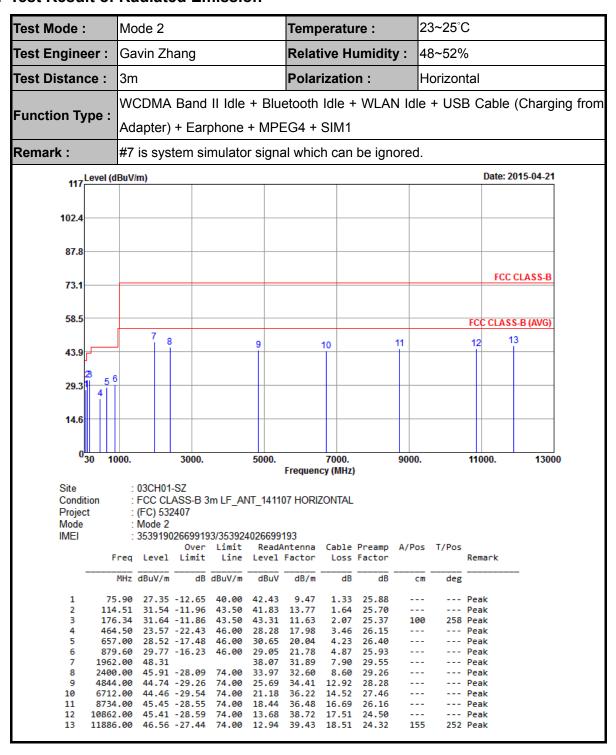


#### For radiated emissions above 1GHz



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#### 3.2.5. Test Result of Radiated Emission



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23~25°C Test Mode: Mode 2 Temperature: Test Engineer: Gavin Zhang **Relative Humidity:** 48~52% Test Distance: 3m Polarization: Vertical WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Function Type: Adapter) + Earphone + MPEG4 + SIM1 Remark: #7 is system simulator signal which can be ignored. 117 Level (dBuV/m) Date: 2015-04-21 102.4 87.8 FCC CLASS-B 73.1 58.5 FCC CLASS-B (AVG) 10 11 12 43.9 29.3 14.6 030 1000. 3000. 5000. 7000. 9000. 11000. 13000 Frequency (MHz) Site 03CH01-SZ Condition FCC CLASS-B 3m LF\_ANT\_141107 VERTICAL Project (FC) 532407 Mode 2 Mode 353919026699193/353924026699193 IMFI ReadAntenna Cable Preamp A/Pos T/Pos Over Limit Freq Level Limit Line Level Factor Remark Loss Factor MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 48.36 37.95 -2.05 40.00 52.13 10.74 25.98 232 Peak 1.06 120 33.27 -10.23 43.50 112.62 43.85 13.50 Peak 1.63 --- Peak 157.71 29.45 -14.05 43.50 40.61 12.36 25.47 ---507.90 25.53 -20.47 46.00 28.86 19.42 26.35 --- Peak --- Peak 5 811.70 30.06 -15.94 46.00 29.10 22.40 4.70 26.14 ---29.89 -24.11 --- Peak 6 965.00 54.00 28.85 5.08 25.38 1960.00 47.84 37.77 31.74 7.90 29.57 --- Peak 2450.00 46.00 -28.00 74.00 33.86 32.65 8.69 29.20 --- Peak ---4258.00 44.91 -29.09 74.00 26.46 34.06 12.40 28.01 --- Peak --- Peak 45.40 -28.60 74.00 ---10 6610.00 22.25 36.26 14.48 27.59 ---11 8842.00 45.67 -28.33 74.00 18.62 36.60 16.52 26.07 --- Peak 45.60 -28.40 10864.00 74.00 13.87 38.72 17.51 24.50 Peak

12832.00

47.38 -26.62

74.00

13.96

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100

230 Peak



23~25°C Test Mode: Mode 3 Temperature: Test Engineer: Gavin Zhang **Relative Humidity:** 48~52% Polarization: Test Distance: 3m Horizontal WCDMA Band IV Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Function Type: Notebook) + Earphone + GPS Rx + SIM1 Remark: #7 is system simulator signal which can be ignored. 117 Level (dBuV/m) Date: 2015-04-22 102.4 87.8 FCC CLASS-B 73.1 58.5 FCC CLASS-B (AVG) 10 12 43.9 29.3 14.6 0<mark>30</mark> 9000. 11000. 13000 1000. 5000. Frequency (MHz) Site : 03CH01-SZ Condition : FCC CLASS-B 3m LF\_ANT\_141107 HORIZONTAL Project : (FC) 532407 Mode 3 Mode  $\colon 353919026699193/353924026699193$ IMFI Cable Preamp A/Pos T/Pos Over Limit ReadAntenna Freq Level Limit Line Level Factor Remark Loss Factor MHz dBuV/m dB dBuV/m dBuV dB/m dB dB deg cm 47.28 25.63 -14.37 40.00 39.41 11.15 1.05 25.98 Peak 34.97 -8.53 36.39 -9.61 Peak 165.54 43.50 46.40 12.00 2.00 25.43 ---268.95 46.00 45.89 13.03 2.58 25.11 Peak 408.50 33.30 -12.70 46.00 40.19 15.75 3.22 25.86 ---Peak 615.00 35.07 -10.93 46.00 37.64 19.79 4.07 26.43 Peak 39.55 -6.45 720.00 46.00 40.81 20.73 4.34 26.33 150 210 Peak 2132.00 32.34 Peak 50.07 38.66 8.14 29.07 ---46.68 -27.32 2968.00 74.00 32.73 33.07 28.89 Peak 4790.00 45.21 -28.79 74.00 26.38 34.38 12.80 28.35 ---10 6648.00 46.57 -27.43 74.00 23.38 36.24 14.50 27.55 Peak 7684.00 46.62 -27.38 74.00 36.37 15.33 ---11 21.49 26.57 ---Peak 46.44 -27.56 74.00 17.17 Peak 12 10758.00 15.11 38.66 24.50 47.75 -26.25 74.00 320 Peak 12854.00 14.30 18.74

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Test Mode :	Mode: Mode 3			Temp	eratu	re :	2	23~25°C		
Test Engineer :	Gavin Zhar		Relati	ive Hu	umidity	<b>/</b> : 4	48~52%			
Test Distance :	3m Polarization : Vertical									
Function Type :		and IV Idle + + Earphone					N Idle	+ USI	B Cable (I	Data Link with
Remark :	#7 is syste	m simulator s	signa	l whicl	h can	be igno	ored.			
117 Level (d	IBuV/m)								Date: 201	15-04-22
102.4										
87.8										
73.1									FCC C	LASS-B
58.5									FCC CLASS-	
43.9	7	8 9		1	10		11	12		13
29.3										
14.6										
030 10	000.	3000. 5	000.	Frequenc	7000. cy (MHz)	<u> </u>	9000.		11000.	13000
Site Condition Project Mode IMEI	: (FC) 53240 : Mode 3	SS-B 3m LF_ANT 07 6699193/35392402	- 266991	93		Preamp	A/Pos	T/Pos		
F	req Level L MHz dBuV/m	imit Line L				Factor 			Remark	
2 165 3 283 4 498 5 645 6 720 7 2132	0.00 24.61 -1 5.27 34.06 -3 8.80 33.01 -1 8.10 30.87 -1 5.10 35.61 -1 9.00 47.70	15.39 40.00 3 9.44 43.50 4 12.99 46.00 4 15.13 46.00 3 10.39 46.00 3 11.05 46.00 3	60.23 5.48 1.86 4.31 67.94 66.21 66.29	19.60 12.03 13.57 19.32 19.97 20.73 32.34	0.85 1.99 2.65 3.57 4.11 4.34 8.14	26.07 25.44 25.07 26.33 26.41 26.33 29.07	100	215	Peak Peak Peak Peak Peak Peak	
9 4586 10 6630 11 8726 12 10016	5.00 44.86 -2 0.00 45.68 -2 5.00 45.66 -2 5.00 45.37 -2	28.53 74.00 3 29.14 74.00 2 28.32 74.00 2 28.34 74.00 1 28.63 74.00 1 26.84 74.00 1	6.28 2.52 8.68 4.26	34.25 36.25 36.46 38.11	12.77 14.48 16.69 18.23		150		Peak Peak 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, 2014	Apr. 21, 2015~ Apr. 22, 2015	May 25, 2015	Radiation (03CH01-SZ)
Spectrum Analyzer	R&S	FSV40	101041	10kHz~40GHz; Max 30dBm	Sep. 25, 2014	Apr. 21, 2015~ Apr. 22, 2015	Sep. 24, 2015	Radiation (03CH01-SZ)
Bilog Antenna	TeseQ	CBL6112D	23188	30MHz~2GHz	Nov. 07, 2014	Apr. 21, 2015~ Apr. 22, 2015	Nov. 06, 2015	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Oct. 15, 2014	Apr. 21, 2015~ Apr. 22, 2015	Oct. 14, 2015	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9kHz~3000MHz / 30 dB	Jan. 28, 2015	Apr. 21, 2015~ Apr. 22, 2015	Jan. 27, 2016	Radiation (03CH01-SZ)
Amplifier	MITEQ	AMF-7D-0010 1800-30-10P- R	1707137	1GHz~18GHz	May 08, 2014	Apr. 21, 2015~ Apr. 22, 2015	May 07, 2015	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	61601000198 5	N/A	NCR	Apr. 21, 2015~ Apr. 22, 2015	NCR	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Apr. 21, 2015~ Apr. 22, 2015	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Apr. 21, 2015~ Apr. 22, 2015	NCR	Radiation (03CH01-SZ)
EMI TEST Receiver	R&S	ESC	100724	9kHz~3GHz	Jan. 28, 2015	Mar. 30, 2015~ May 04, 2015	Jan. 27, 2016	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103912	9kHz~30MHz	Feb. 02, 2015	Mar. 30, 2015~ May 04, 2015	Feb. 01, 2016	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	EMCO	3816/2SH	00103892	9kHz~30MHz	Feb. 02, 2015	Mar. 30, 2015~ May 04, 2015	Feb. 01, 2016	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	61602000089 1	100Vac~250Vac	Sep. 29, 2014	Mar. 30, 2015~ May 04, 2015	Sep. 28, 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 Confidence of 95% (U = 2Uc(y))	2.3dB
=======================================	1

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

Managerian Unacetainty for a Lavel of	T
Measuring Uncertainty for a Level of	3.9dB
Confidence of 95% (U = 2Uc(y))	0.5dB

SPORTON INTERNATIONAL (SHENZHEN) INC.

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