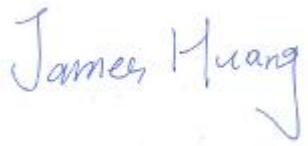
FCC Test Report

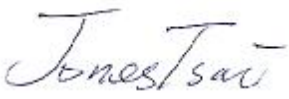
APPLICANT	:	**Brightstar Corporation**
EQUIPMENT	:	**Mobile phone**
BRAND NAME	:	**Avvio/UBER**
MODEL NAME	:	**Avvio L620, Uber L620**
FCC ID	:	**WVBAL620**
STANDARD	:	**FCC 47 CFR FCC Part 15 Subpart B**
CLASSIFICATION	:	**Certification**

The product was received on Sep. 15, 2015 and testing was completed on Oct. 27, 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.



Prepared by: James Huang / Manager



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

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC591506	Rev. 01	Initial issue of report	Oct. 30, 2015

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.107	AC Conducted Emission	< 15.107 limits	PASS	Under limit 3.24 dB at 0.510 MHz
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	Under limit 1.03 dB at 33.780 MHz for Quasi-Peak

1. General Description

1.1. Applicant

Brightstar Corporation
9725 NW 117th Ave., Miami, Florida, FL 33178, United States

1.2. Manufacturer

Heng Da Chuang Xin Technology Limited
Rm14H Taibang Building, 4 Rd. High Tech South, Nanshan, SZ, P. R. C. 518000

1.3. Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile phone
Brand Name	Avvio/UBER
Model Name	Avvio L620, Uber L620
FCC ID	WVBAL620
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/HSPA/HSPA+/DC-HSDPA/ LTE/ WLAN 2.4GHz 802.11b/g/n HT20/HT40/ Bluetooth v3.0 + EDR/Bluetooth v4.0 LE
IMEI Code	Conduction: 498205312416730 Radiation: 160794221833405
HW Version	N316BS-17
SW Version	AVVIO_L620_V1_0_1
EUT Stage	Pre-Production

Remark:

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

2. There are two types of EUT for this project. The differences between them are summary below:

Sample List	Model name	Brand name
Sample 1	Avvio L620	Avvio
Sample 2	Uber L620	UBER

Neither the electrical nor any mechanical differences between the original and new models, so we only choose sample 1 to test.

1.4. Product Specification subjective to this standard

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 II : 1852.4 MHz ~ 1907.6 MHz LTE Band 2 : 1850.7 MHz ~ 1909.3 MHz LTE Band 4 : 1710.7 MHz ~ 1754.3 MHz LTE Band 5 : 824.7 MHz ~ 848.3 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 II : 1932.4 MHz ~ 1987.6 MHz LTE Band 2 : 1930.7 MHz ~ 1989.3 MHz LTE Band 4 : 2110.7 MHz ~ 2154.3 MHz LTE Band 5 : 869.7 MHz ~ 893.3 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 : Internal Antenna WLAN : FPC Antenna Bluetooth : FPC Antenna GPS : FPC Antenna
Type of Modulation	GSM: GMSK GPRS: GMSK EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK WCDMA: QPSK (Uplink) HSDPA/DC-HSDPA: QPSK (Uplink) HSUPA: QPSK (Uplink) HSPA+: 16QAM DC-HSDPA: 64QAM LTE: QPSK / 16QAM / 64QAM 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

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.
Test Site Location	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
Test Site No.	**Sporton Site No.**
	CO01-SZ

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

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

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

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.

Item	EUT Configuration	Test Condition		
		EMI AC	EMI RE<1G	EMI RE≥1G
1.	Charging Mode (EUT with adapter)	☒	☒	☒
2.	Data application transferred mode (EUT connected with Notebook)	☒	☒	☒

Abbreviations:

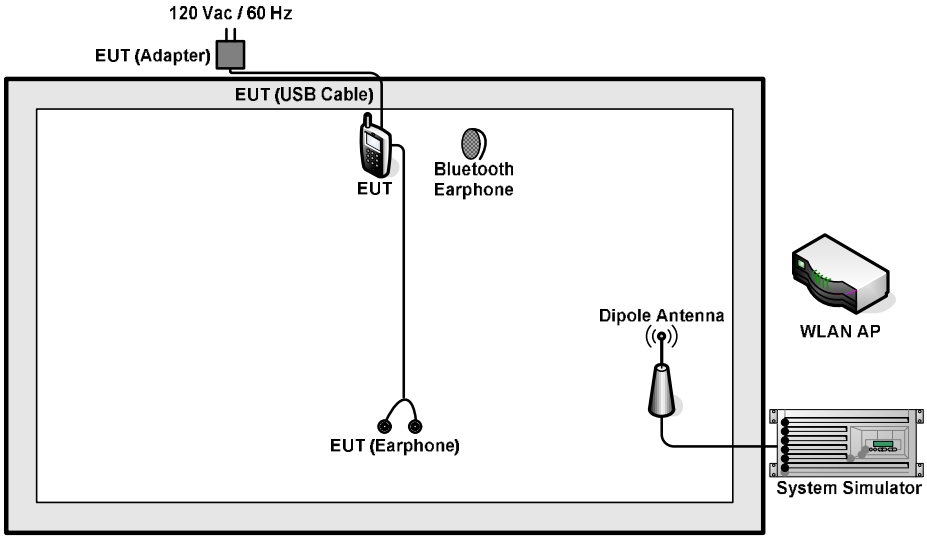
- EMI AC: AC conducted emissions
- EMI RE ≥ 1G: EUT radiated emissions ≥ 1GHz
- EMI RE < 1G: EUT radiated emissions < 1GHz

Test Items	EUT Configure Mode	Function Type
AC Conducted Emission	1/2	Mode 1 : GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + MPEG4 + Battery<Fig.1> Mode 2 : WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera (Back) + Battery<Fig.1> Mode 3 : LTE Band 7 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Data Link with Notebook) + GPS Rx + Battery<Fig.2> Mode 4 : WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera (Front) + Battery<Fig.1>
Radiated Emissions < 1GHz	1/2	Mode 1 : GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + MPEG4 + Battery<Fig.1> Mode 2 : WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera (Back) + Battery<Fig.1> Mode 3 : LTE Band 7 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Data Link with Notebook) + GPS Rx + Battery<Fig.2> Mode 4 : WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera (Front) + Battery<Fig.1>
Radiated Emissions ≥ 1GHz	1/2	Mode 1 : WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera (Back) + Battery<Fig.1> Mode 2 : LTE Band 7 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Data Link with Notebook) + GPS Rx + Battery<Fig.2>

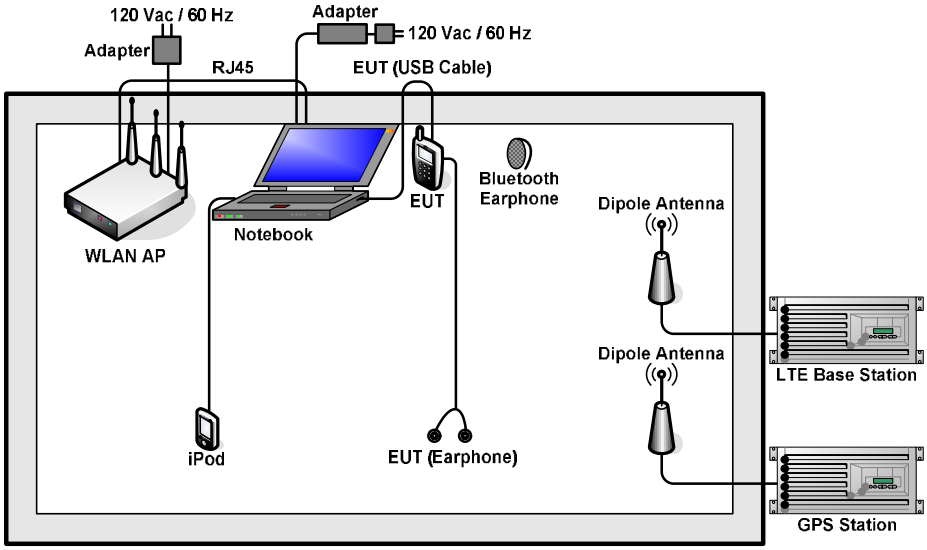
Remark:

1. The worst case of AC is mode 4; 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 2; and the USB Link mode of RE is mode 3; the test data of these modes were reported.
3. Link with Notebook means data application transferred mode between EUT and Notebook.

2.2. Connection Diagram of Test System



<Fig.1>



<Fig.2>

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.	GPS Station	ADIVIC	MP9000	N/A	N/A	Unshielded, 1.8 m
4.	WLAN AP	ASUSTek	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 2.7 m with Core
5.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
6.	Bluetooth Earphone	Nokia	BH-108	PYAHS-107W	N/A	N/A
7.	Bluetooth Earphone	Samsung	HS3000	A3LHS3000	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.	iPod	Apple	MC525ZP/A	FCC DoC	Shielded, 1.0 m	N/A
10.	iPod nano 8GB	Apple	MC690ZP/A	FCC DoC	Shielded, 1.2 m	N/A
11.	SD Card	SanDisk	4G class 4	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 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 "GPS Test" to make the EUT receive continuous signals from GPS station.
3. Execute "Video player" to play MPEG4 files.
4. Turn on camera to capture images.

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 (MHz)	Conducted limit (dBuV)	
	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.

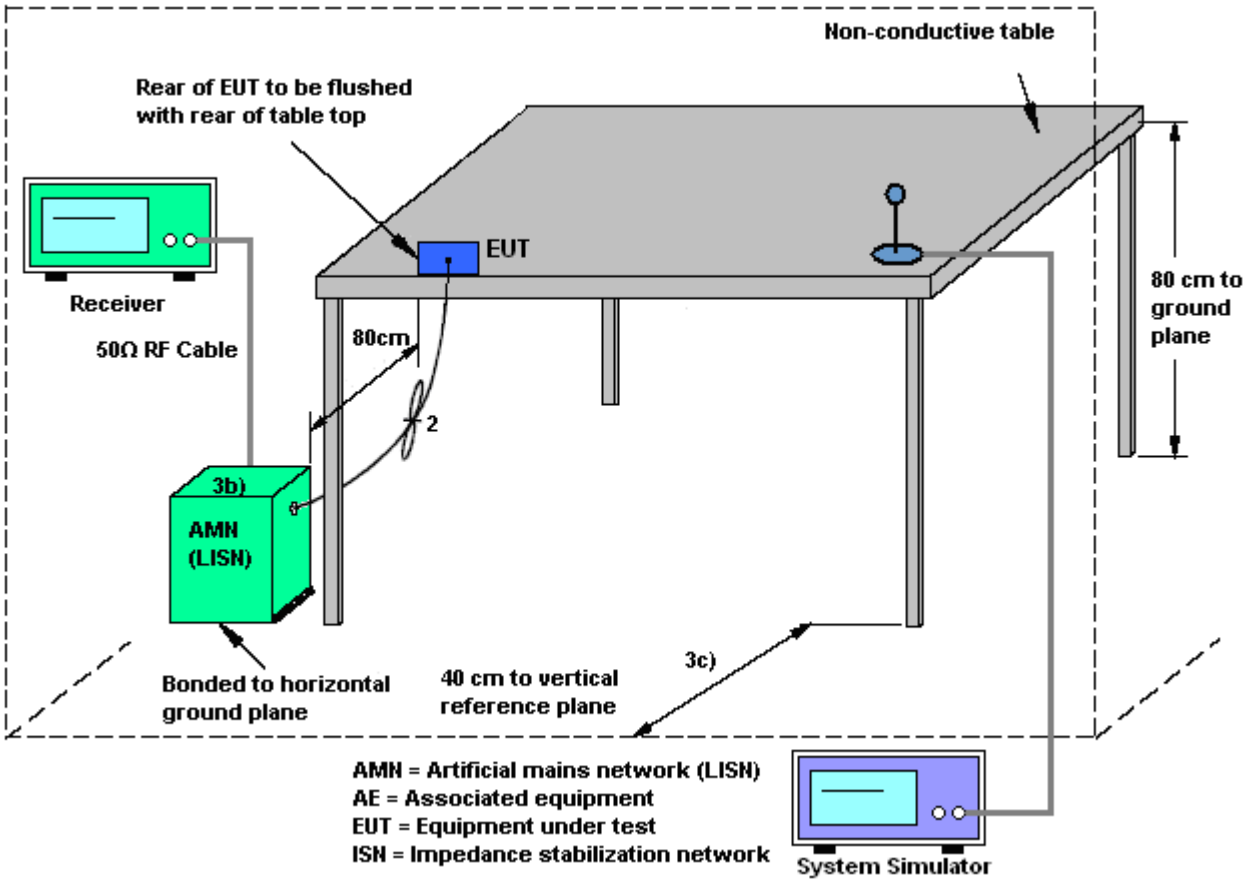
3.1.2 Measuring Instruments

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

3.1.3 Test Procedure

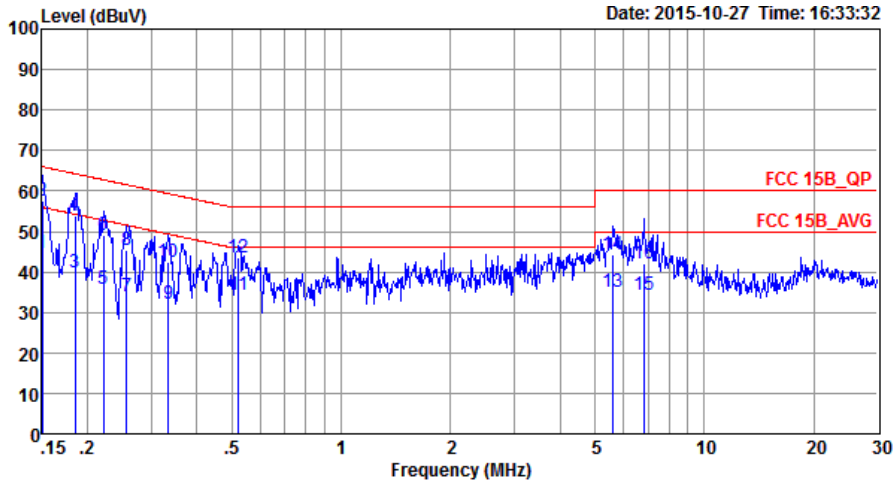
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
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.

3.1.4 Test Setup



3.1.5 Test Result of AC Conducted Emission

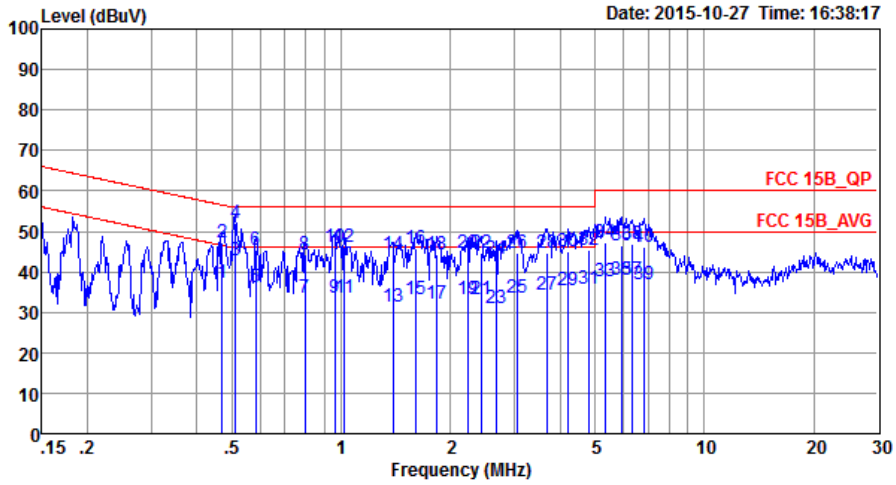
Test Mode :	Mode 4	**Temperature :**	21~23℃
Test Engineer :	Jacky Yang	**Relative Humidity :**	41~43%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Function Type :	WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera (Front) + Battery		



Site : CO01-SZ
Condition: FCC 15B_QP LISN_L_20150304 LINE
Project : (FC)591506
Mode : Mode 4
IMEI : 498205312416730

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1		0.15	44.79	-11.21	56.00	34.00	0.43	10.36	Average
2	*	0.15	57.39	-8.61	66.00	46.60	0.43	10.36	QP
3		0.19	39.91	-14.33	54.24	29.10	0.50	10.31	Average
4		0.19	53.91	-10.33	64.24	43.10	0.50	10.31	QP
5		0.22	35.80	-16.94	52.74	25.00	0.53	10.27	Average
6		0.22	49.20	-13.54	62.74	38.40	0.53	10.27	QP
7		0.26	33.79	-17.77	51.56	23.00	0.55	10.24	Average
8		0.26	45.29	-16.27	61.56	34.50	0.55	10.24	QP
9		0.33	32.25	-17.10	49.35	21.50	0.56	10.19	Average
10		0.33	42.35	-17.00	59.35	31.60	0.56	10.19	QP
11		0.52	34.31	-11.69	46.00	23.51	0.65	10.15	Average
12		0.52	43.71	-12.29	56.00	32.91	0.65	10.15	QP
13		5.59	35.20	-14.80	50.00	24.30	0.65	10.25	Average
14		5.59	44.20	-15.80	60.00	33.30	0.65	10.25	QP
15		6.81	34.15	-15.85	50.00	23.19	0.68	10.28	Average
16		6.81	42.15	-17.85	60.00	31.19	0.68	10.28	QP

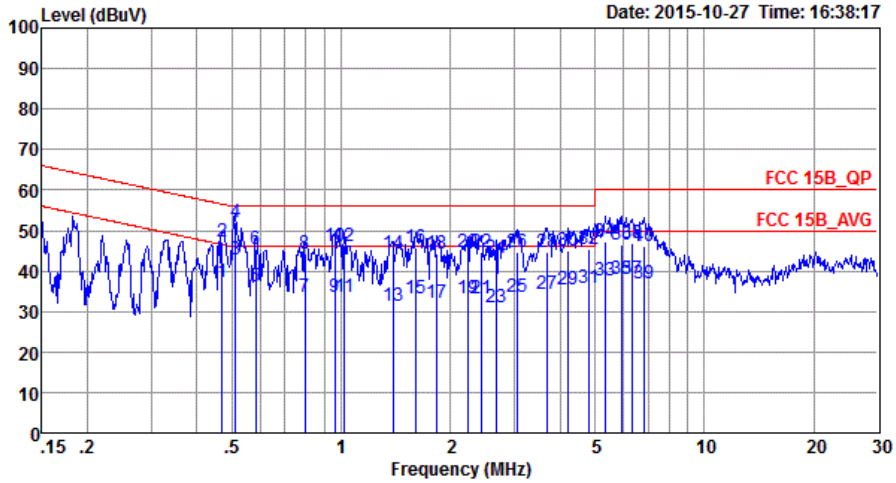
Test Mode :	Mode 4	Temperature :	21~23℃
Test Engineer :	Jacky Yang	Relative Humidity :	41~43%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera (Front) + Battery		



Site : CO01-SZ
Condition: FCC 15B_QP LISN_N_20150304 NEUTRAL
Project : (FC)591506
Mode : Mode 4
IMEI : 498205312416730

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1		0.47	37.25	-9.24	46.49	26.50	0.59	10.16	Average
2		0.47	47.35	-9.14	56.49	36.60	0.59	10.16	QP
3	*	0.51	42.76	-3.24	46.00	31.99	0.61	10.16	Average
4		0.51	52.16	-3.84	56.00	41.39	0.61	10.16	QP
5		0.58	36.13	-9.87	46.00	25.40	0.58	10.15	Average
6		0.58	45.53	-10.47	56.00	34.80	0.58	10.15	QP
7		0.80	33.50	-12.50	46.00	22.80	0.55	10.15	Average
8		0.80	44.40	-11.60	56.00	33.70	0.55	10.15	QP
9		0.96	33.71	-12.29	46.00	23.00	0.56	10.15	Average
10		0.96	46.01	-9.99	56.00	35.30	0.56	10.15	QP
11		1.02	33.51	-12.49	46.00	22.80	0.56	10.15	Average
12		1.02	46.01	-9.99	56.00	35.30	0.56	10.15	QP
13		1.39	31.33	-14.67	46.00	20.60	0.56	10.17	Average
14		1.39	44.43	-11.57	56.00	33.70	0.56	10.17	QP
15		1.60	33.24	-12.76	46.00	22.49	0.57	10.18	Average
16		1.60	45.74	-10.26	56.00	34.99	0.57	10.18	QP
17		1.83	31.95	-14.05	46.00	21.20	0.57	10.18	Average
18		1.83	44.15	-11.85	56.00	33.40	0.57	10.18	QP
19		2.22	33.17	-12.83	46.00	22.40	0.58	10.19	Average
20		2.22	44.77	-11.23	56.00	34.00	0.58	10.19	QP
21		2.43	33.39	-12.61	46.00	22.60	0.59	10.20	Average
22		2.43	44.59	-11.41	56.00	33.80	0.59	10.20	QP
23		2.66	30.90	-15.10	46.00	20.10	0.60	10.20	Average
24		2.66	43.30	-12.70	56.00	32.50	0.60	10.20	QP
25		3.04	33.62	-12.38	46.00	22.80	0.61	10.21	Average
26		3.04	44.82	-11.18	56.00	34.00	0.61	10.21	QP
27		3.70	34.45	-11.55	46.00	23.61	0.62	10.22	Average
28		3.70	44.55	-11.45	56.00	33.71	0.62	10.22	QP
29		4.20	35.37	-10.63	46.00	24.50	0.64	10.23	Average

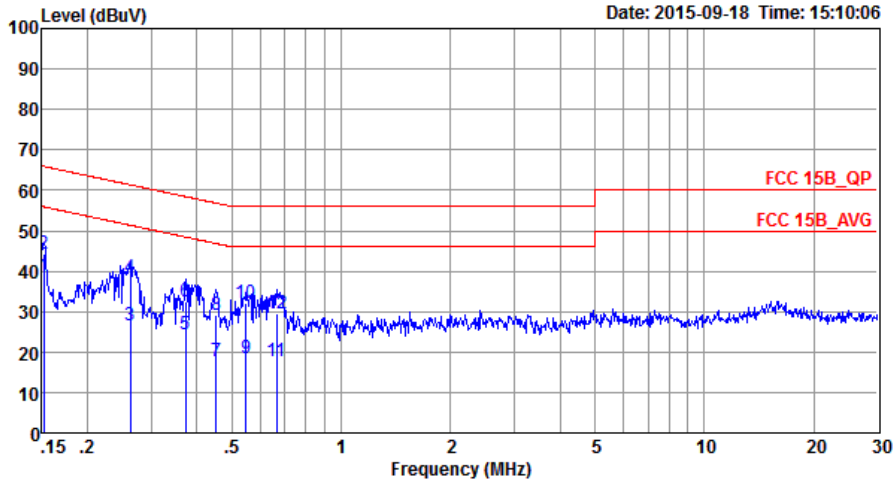
Test Mode :	Mode 4	Temperature :	21~23℃
Test Engineer :	Jacky Yang	Relative Humidity :	41~43%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera (Front) + Battery		



Site : CO01-SZ
Condition: FCC 15B_QP LISN_N_20150304 NEUTRAL
Project : (FC)591506
Mode : Mode 4
IMEI : 498205312416730

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
30	4.20	44.97	-11.03	56.00	34.10	0.64	10.23	QP
31	4.82	35.89	-10.11	46.00	25.00	0.65	10.24	Average
32	4.82	45.29	-10.71	56.00	34.40	0.65	10.24	QP
33	5.33	37.71	-12.29	50.00	26.80	0.66	10.25	Average
34	5.33	47.11	-12.89	60.00	36.20	0.66	10.25	QP
35	5.90	37.93	-12.07	50.00	27.00	0.67	10.26	Average
36	5.90	46.63	-13.37	60.00	35.70	0.67	10.26	QP
37	6.32	38.15	-11.85	50.00	27.20	0.68	10.27	Average
38	6.32	47.05	-12.95	60.00	36.10	0.68	10.27	QP
39	6.81	36.86	-13.14	50.00	25.89	0.69	10.28	Average
40	6.81	46.06	-13.94	60.00	35.09	0.69	10.28	QP

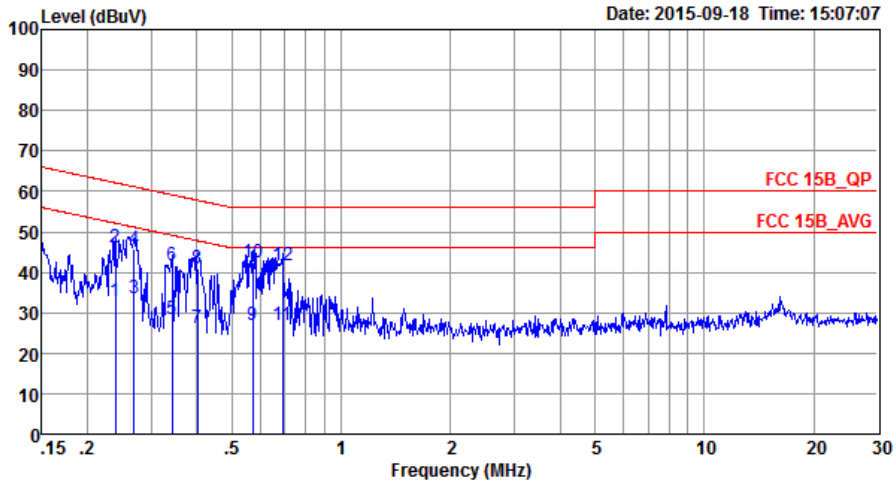
Test Mode :	Mode 3	Temperature :	21~23℃
Test Engineer :	Jacky Yang	Relative Humidity :	41~43%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	LTE Band 7 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Data Link with Notebook) + GPS Rx + Battery		



Site : CO01-SZ
Condition: FCC 15B_QP LISN_L_20150304 LINE
Project : (FC)591506
Mode : Mode 3
IMEI : 498205312416730

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	*	0.15	38.69	-17.22	55.91	27.90	0.43	10.36	Average
2		0.15	44.39	-21.52	65.91	33.60	0.43	10.36	QP
3		0.26	26.38	-24.96	51.34	15.60	0.55	10.23	Average
4		0.26	38.38	-22.96	61.34	27.60	0.55	10.23	QP
5		0.37	24.53	-23.90	48.43	13.80	0.55	10.18	Average
6		0.37	32.33	-26.10	58.43	21.60	0.55	10.18	QP
7		0.45	17.87	-28.98	46.85	7.10	0.61	10.16	Average
8		0.45	29.27	-27.58	56.85	18.50	0.61	10.16	QP
9		0.55	18.39	-27.61	46.00	7.60	0.64	10.15	Average
10		0.55	32.09	-23.91	56.00	21.30	0.64	10.15	QP
11		0.66	17.61	-28.39	46.00	6.90	0.56	10.15	Average
12		0.66	29.41	-26.59	56.00	18.70	0.56	10.15	QP

Test Mode :	Mode 3	**Temperature :**	21~23℃
Test Engineer :	Jacky Yang	**Relative Humidity :**	41~43%
Test Voltage :	120Vac / 60Hz	**Phase :**	Neutral
Function Type :	LTE Band 7 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Data Link with Notebook) + GPS Rx + Battery		



Site : CO01-SZ
Condition: FCC 15B_QP LISN_N_20150304 NEUTRAL
Project : (FC)591506
Mode : Mode 3
IMEI : 498205312416730

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1		0.24	33.00	-19.13	52.13	22.20	0.55	10.25	Average
2		0.24	46.10	-16.03	62.13	35.30	0.55	10.25	QP
3		0.27	33.39	-17.77	51.16	22.59	0.57	10.23	Average
4		0.27	45.89	-15.27	61.16	35.09	0.57	10.23	QP
5		0.34	28.26	-20.87	49.13	17.50	0.57	10.19	Average
6		0.34	41.86	-17.27	59.13	31.10	0.57	10.19	QP
7		0.40	26.12	-21.69	47.81	15.40	0.55	10.17	Average
8		0.40	41.02	-16.79	57.81	30.30	0.55	10.17	QP
9		0.57	26.94	-19.06	46.00	16.20	0.59	10.15	Average
10	*	0.57	42.54	-13.46	56.00	31.80	0.59	10.15	QP
11		0.69	27.00	-19.00	46.00	16.30	0.55	10.15	Average
12		0.69	41.70	-14.30	56.00	31.00	0.55	10.15	QP

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 (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

3.2.2. Measuring Instruments

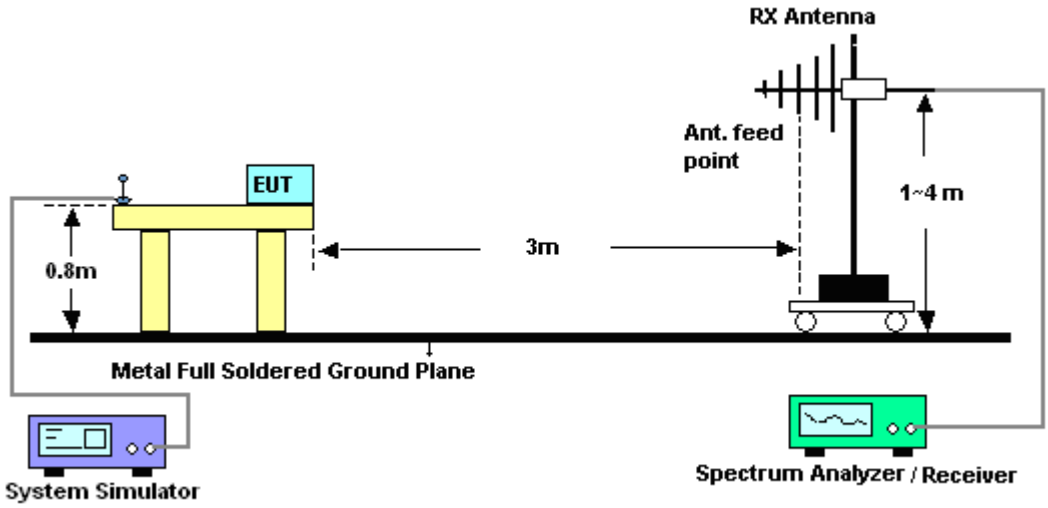
The measuring equipment is listed in the section 4 of this test report.

3.2.3. Test Procedures

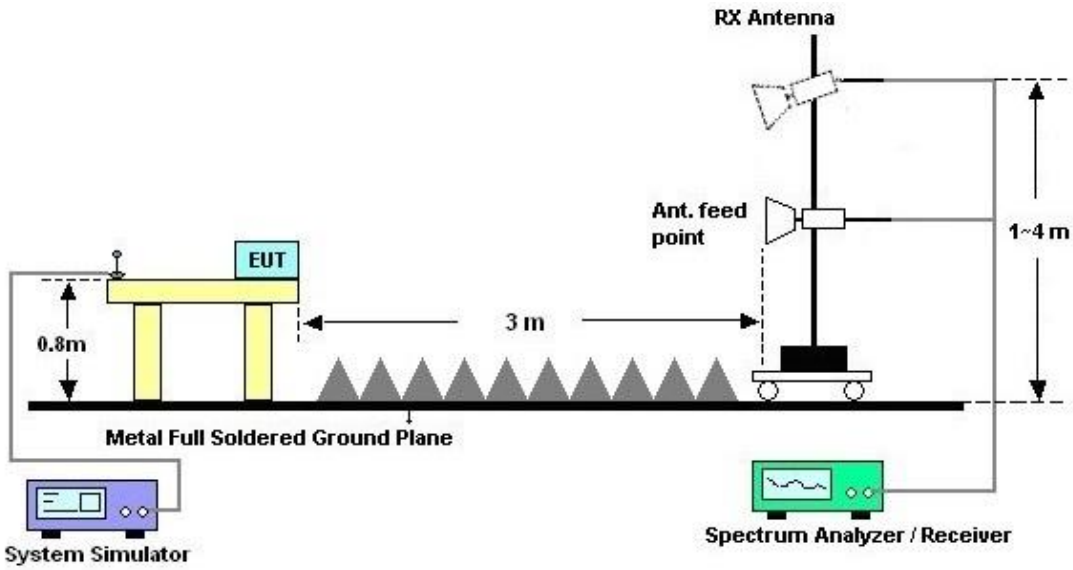
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna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

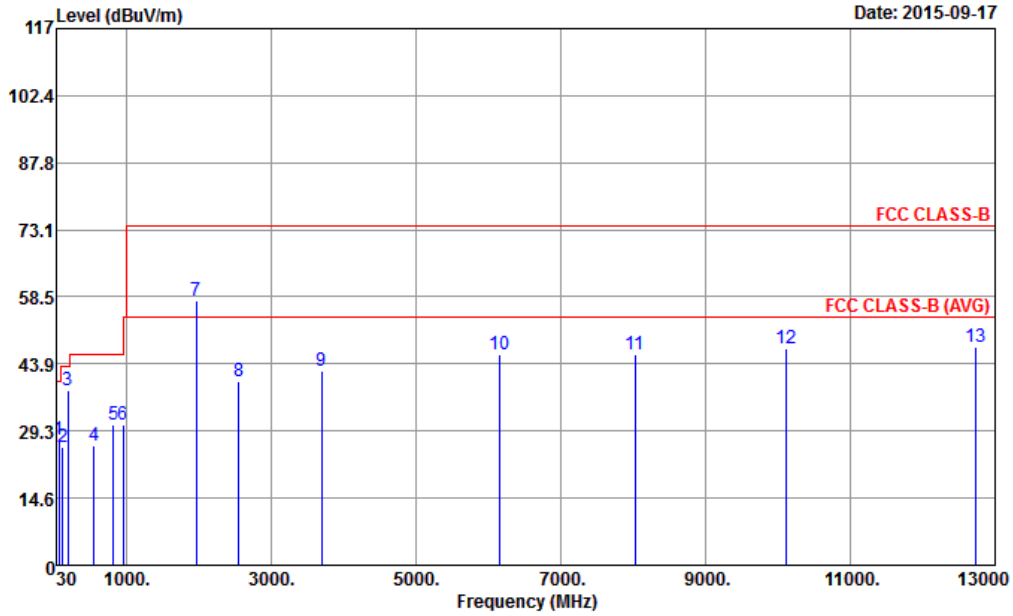


For radiated emissions above 1GHz



3.2.5. Test Result of Radiated Emission

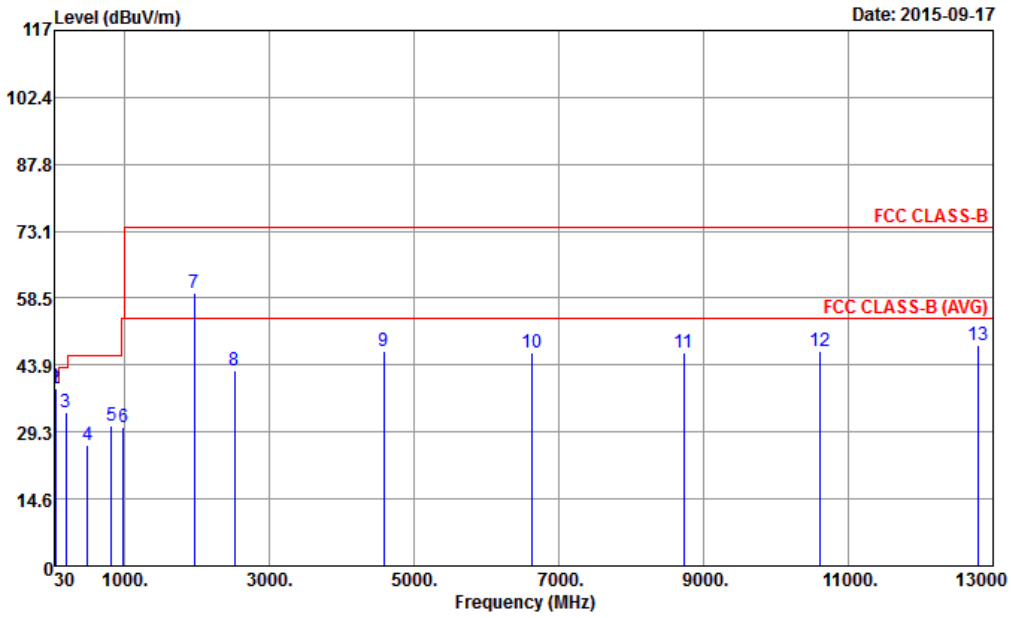
Test Mode :	Mode 2	**Temperature :**	23~25°C
Test Engineer :	Kaer Huang	**Relative Humidity :**	48~52%
Test Distance :	3m	**Polarization :**	Horizontal
Function Type :	WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera (Back) + Battery		
Remark :	#7 is system simulator signal which can be ignored.		



Site : 03CH01-SZ
Condition : FCC CLASS-B 3m LF_ANT_141107 HORIZONTAL
Project : (FC) 591506
Mode : Mode 2
IMEI : 160794221833405

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	61.32	27.48	-12.52	40.00	43.80	8.51	1.11	25.94	---	---	Peak
2	113.97	25.88	-17.62	43.50	36.25	13.77	1.56	25.70	---	---	Peak
3	184.71	38.16	-5.34	43.50	49.95	11.52	2.02	25.33	100	20	Peak
4	545.70	26.17	-19.83	46.00	29.27	19.54	3.75	26.39	---	---	Peak
5	823.60	30.62	-15.38	46.00	29.34	22.29	5.09	26.10	---	---	Peak
6	952.40	30.57	-15.43	46.00	29.12	21.39	5.53	25.47	---	---	Peak
7	1960.00	57.52			67.16	31.74	9.63	51.01	---	---	Peak
8	2554.00	40.09	-33.91	74.00	46.23	32.74	11.58	50.46	---	---	Peak
9	3698.00	42.44	-31.56	74.00	45.92	33.61	13.88	50.97	---	---	Peak
10	6146.00	45.83	-28.17	74.00	43.56	35.95	16.18	49.86	---	---	Peak
11	8030.00	46.09	-27.91	74.00	42.49	36.48	17.41	50.29	---	---	Peak
12	10108.00	47.10	-26.90	74.00	40.02	38.19	18.93	50.04	---	---	Peak
13	12728.00	47.51	-26.49	74.00	39.57	39.16	18.68	49.90	125	80	Peak

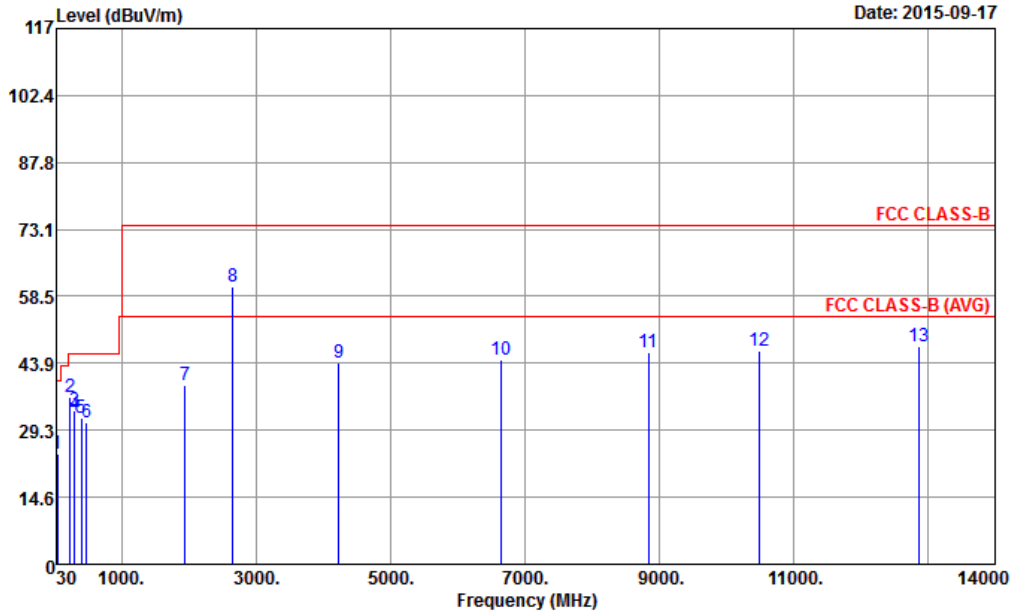
Test Mode :	Mode 2	**Temperature :**	23~25°C
Test Engineer :	Kaer Huang	**Relative Humidity :**	48~52%
Test Distance :	3m	**Polarization :**	Vertical
Function Type :	WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera (Back) + Battery		
Remark :	#7 is system simulator signal which can be ignored.		



Site : 03CH01-SZ
Condition : FCC CLASS-B 3m LF_ANT_141107 VERTICAL
Project : (FC) 591506
Mode : Mode 2
IMEI : 160794221833405

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	33.78	38.97	-1.03	40.00	45.65	18.56	0.80	26.04	125	90	QP
2	47.55	38.74	-1.26	40.00	51.60	12.15	0.97	25.98	100	0	QP
3	184.71	33.71	-9.79	43.50	45.50	11.52	2.02	25.33	---	---	Peak
4	491.80	26.44	-19.56	46.00	30.08	19.05	3.60	26.29	---	---	Peak
5	818.70	30.51	-15.49	46.00	29.22	22.33	5.07	26.11	---	---	Peak
6	979.70	30.35	-23.65	54.00	28.68	21.28	5.65	25.26	---	---	Peak
7	1960.00	59.59			69.23	31.74	9.63	51.01	---	---	Peak
8	2520.00	42.54	-31.46	74.00	48.80	32.71	11.46	50.43	---	---	Peak
9	4586.00	46.86	-27.14	74.00	48.89	34.25	15.23	51.51	---	---	Peak
10	6630.00	46.68	-27.32	74.00	44.24	36.25	16.65	50.46	---	---	Peak
11	8726.00	46.66	-27.34	74.00	41.81	36.46	17.95	49.56	---	---	Peak
12	10598.00	46.89	-27.11	74.00	40.54	38.56	18.29	50.50	---	---	Peak
13	12800.00	48.16	-25.84	74.00	40.25	39.12	18.72	49.93	154	80	Peak

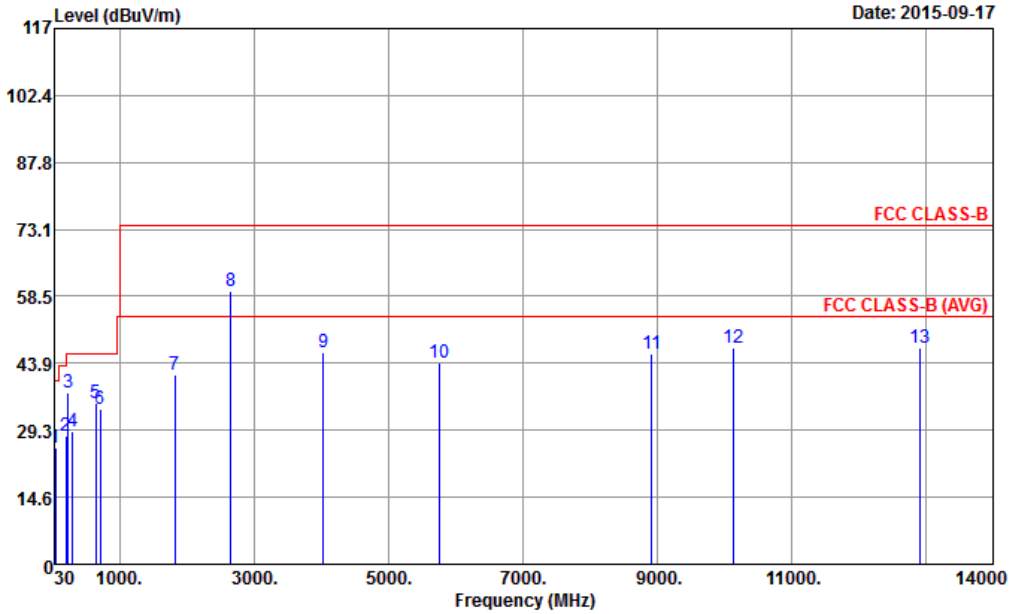
Test Mode :	Mode 3	Temperature :	23~25°C
Test Engineer :	Kaer Huang	Relative Humidity :	48~52%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	LTE Band 7 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Data Link with Notebook) + GPS Rx + Battery		
Remark :	#8 is system simulator signal which can be ignored.		



Site : 03CH01-SZ
Condition : FCC CLASS-B 3m LF_ANT_141107 HORIZONTAL
Project : (FC) 591506
Mode : Mode 3
IMEI : 160794221833405

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	46.20	24.23	-15.77	40.00	36.68	12.57	0.96	25.98	---	---	Peak
2	240.06	36.66	-9.34	46.00	47.22	12.25	2.35	25.16	125	60	Peak
3	298.65	33.43	-12.57	46.00	41.75	14.07	2.65	25.04	---	---	Peak
4	300.00	32.58	-13.42	46.00	40.87	14.10	2.65	25.04	---	---	Peak
5	399.40	31.85	-14.15	46.00	39.13	15.40	3.13	25.81	---	---	Peak
6	479.90	30.90	-15.10	46.00	35.00	18.59	3.54	26.23	---	---	Peak
7	1946.00	39.03	-34.97	74.00	48.82	31.74	9.48	51.01	---	---	Peak
8	2655.00	60.61			66.55	32.82	11.81	50.57	---	---	Peak
9	4232.00	44.05	-29.95	74.00	47.13	34.04	14.67	51.79	---	---	Peak
10	6648.00	44.57	-29.43	74.00	42.14	36.24	16.66	50.47	---	---	Peak
11	8838.00	46.37	-27.63	74.00	41.57	36.60	17.87	49.67	---	---	Peak
12	10482.00	46.60	-27.40	74.00	40.17	38.49	18.34	50.40	---	---	Peak
13	12870.00	47.49	-26.51	74.00	39.64	39.08	18.74	49.97	158	90	Peak

Test Mode :	Mode 3	**Temperature :**	23~25°C
Test Engineer :	Kaer Huang	**Relative Humidity :**	48~52%
Test Distance :	3m	**Polarization :**	Vertical
Function Type :	LTE Band 7 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Data Link with Notebook) + GPS Rx + Battery		
Remark :	#8 is system simulator signal which can be ignored.		



Site : 03CH01-SZ
Condition : FCC CLASS-B 3m LF_ANT_141107 VERTICAL
Project : (FC) 591506
Mode : Mode 3
IMEI : 160794221833405

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	46.20	25.36	-14.64	40.00	37.81	12.57	0.96	25.98	---	---	Peak
2	199.83	27.93	-15.57	43.50	39.44	11.60	2.14	25.25	---	---	Peak
3	240.06	37.34	-8.66	46.00	47.90	12.25	2.35	25.16	169	80	Peak
4	300.00	28.93	-17.07	46.00	37.22	14.10	2.65	25.04	---	---	Peak
5	645.80	35.31	-10.69	46.00	37.36	19.97	4.39	26.41	---	---	Peak
6	715.10	33.95	-12.05	46.00	35.00	20.62	4.67	26.34	---	---	Peak
7	1826.00	41.42	-32.58	74.00	52.68	30.67	9.01	50.94	---	---	Peak
8	2656.00	59.70			65.64	32.82	11.81	50.57	---	---	Peak
9	4032.00	46.27	-27.73	74.00	49.88	33.92	14.27	51.80	---	---	Peak
10	5768.00	43.94	-30.06	74.00	41.89	35.46	16.08	49.49	---	---	Peak
11	8922.00	46.02	-27.98	74.00	41.24	36.70	17.82	49.74	---	---	Peak
12	10146.00	47.34	-26.66	74.00	40.33	38.22	18.87	50.08	152	60	Peak
13	12910.00	47.19	-26.81	74.00	39.37	39.05	18.77	50.00	---	---	Peak

4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Receiver	R&S	ESCI7	100724	9kHz~3GHz;	Jan. 28, 2015	Sep. 18, 2015~ Oct. 27, 2015	Jan. 27, 2016	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	103892	9kHz~30MHz	Feb. 02, 2015	Sep. 18, 2015~ Oct. 27, 2015	Feb. 01, 2016	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	MessTec	AN3016	16850	9kHz~30MHz	Feb. 02, 2015	Sep. 18, 2015~ Oct. 27, 2015	Feb. 01, 2016	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000891	100Vac~250Vac	Aug. 07, 2015	Sep. 18, 2015~ Oct. 27, 2015	Aug. 06, 2016	Conduction (CO01-SZ)
Pulse Limiter	COM-POWER	LIT-153 Transient Limiter	53139	150kHz~30MHz	Oct. 14, 2014 Oct. 20, 2015	Sep. 18, 2015~ Oct. 27, 2015	Oct. 13, 2015 Oct. 19, 2016	Conduction (CO01-SZ)
EMI Test Receiver&SA	Agilent Technologies	N9038A	MY52260185	20Hz~26.5GHz	May 26, 2015	Sep. 17, 2015	May 25, 2016	Radiation (03CH01-SZ)
Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz;Max 30dBm	Jun. 07, 2015	Sep. 17, 2015	Jun. 06, 2016	Radiation (03CH01-SZ)
Bilog Antenna	TeseQ	CBL6112D	23188	30MHz~2GHz	Nov. 07, 2014	Sep. 17, 2015	Nov. 06, 2015	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS Lindgren	3117	00119436	1GHz~18GHz	Oct. 15, 2014	Sep. 17, 2015	Oct. 14, 2015	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9kHz~3000MHz / 30 dB	Jan. 28, 2015	Sep. 17, 2015	Jan. 27, 2016	Radiation (03CH01-SZ)
Amplifier	Agilent Technologies	83017A	MY39501302	500MHz~26.5GHz	Jan. 28, 2015	Sep. 17, 2015	Jan. 27, 2016	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	6160100019985	N/A	NCR	Sep. 17, 2015	NCR	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Sep. 17, 2015	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Sep. 17, 2015	NCR	Radiation (03CH01-SZ)

5. Uncertainty of Evaluation

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

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

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.5dB**