



# FCC Test Report

**APPLICANT** : ZTE CORPORATION  
**EQUIPMENT** : LTE/WCDMA/GSM(GPRS) Multi-Mode Digital  
Mobile Phone  
**BRAND NAME** : ZTE  
**MODEL NAME** : Z983  
**FCC ID** : SRQ-Z983  
**STANDARD** : FCC 47 CFR FCC Part 15 Subpart B  
**CLASSIFICATION** : Certification

The product was received on Jan. 12, 2017 and testing was completed on Jan. 25, 2017. We, SPORTON INTERNATIONAL (KUNSHAN) 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 (KUNSHAN) INC., the test report shall not be reproduced except in full.

Prepared by: James Huang / Manager

Approved by: Jones Tsai / Manager



**SPORTON INTERNATIONAL (KUNSHAN) INC.**  
**No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P. R. China**



# TABLE OF CONTENTS

**REVISION HISTORY..... 3**

**SUMMARY OF TEST RESULT ..... 4**

**1. GENERAL DESCRIPTION ..... 5**

    1.1. Applicant..... 5

    1.2. Manufacturer ..... 5

    1.3. Product Feature of Equipment Under Test ..... 5

    1.4. Product Specification of Equipment Under Test ..... 6

    1.5. Modification of EUT ..... 7

    1.6. Test Location ..... 8

    1.7. Applicable Standards ..... 8

**2. TEST CONFIGURATION OF EQUIPMENT UNDER TEST ..... 9**

    2.1. Test Mode ..... 9

    2.2. Connection Diagram of Test System ..... 11

    2.3. Support Unit used in test configuration and system ..... 13

    2.4. EUT Operation Test Setup ..... 14

**3. TEST RESULT ..... 15**

    3.1. Test of AC Conducted Emission Measurement ..... 15

    3.2. Test of Radiated Emission Measurement ..... 22

**4. LIST OF MEASURING EQUIPMENT ..... 27**

**5. UNCERTAINTY OF EVALUATION ..... 28**

**APPENDIX A. SETUP PHOTOGRAPHS**





### 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 4.60 dB at 0.406 MHz
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	Under limit 1.41 dB at 153.390 MHz for Quasi-Peak



# 1. General Description

## 1.1. Applicant

**ZTE CORPORATION**

ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China

## 1.2. Manufacturer

**ZTE CORPORATION**

ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China

## 1.3. Product Feature of Equipment Under Test

Product Feature	
Equipment	LTE/WCDMA/GSM(GPRS) Multi-Mode Digital Mobile Phone
Brand Name	ZTE
Model Name	Z983
FCC ID	SRQ-Z983
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/HSPA/ HSPA+(16QAM uplink is not supported)/LTE/ WLAN 2.4GHz 802.11b/g/n HT20/ Bluetooth v3.0 + EDR/ Bluetooth v4.0 LE/ Bluetooth v4.1 LE/ Bluetooth v4.2 LE
IMEI Code	Conduction: 863132030003849 Radiation: 863132030004391
HW Version	Z983HW1.0
SW Version	Z983V1.0.1
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.



### 1.4. Product Specification of Equipment Under Test

Standards-related Product Specification	
<b>Tx Frequency</b>	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz WCDMA Band IV : 1712.4 MHz ~ 1752.6 MHz WCDMA Band II : 1852.4 MHz ~ 1907.6 MHz LTE Band 2 : 1850.7 MHz ~ 1909.3 MHz LTE Band 4 : 1710.7 MHz ~ 1754.3 MHz LTE Band 5 : 824.7 MHz ~ 848.3 MHz LTE Band 12: 699.7 MHz ~ 715.3 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz
<b>Rx Frequency</b>	GSM850: 869.2 MHz ~ 893.8 MHz GSM1900: 1930.2 MHz ~ 1989.8 MHz WCDMA Band V: 871.4 MHz ~ 891.6 MHz WCDMA Band IV : 2112.4 MHz ~ 2152.6 MHz WCDMA Band II : 1932.4 MHz ~ 1987.6 MHz LTE Band 2 : 1930.7 MHz ~ 1989.3 MHz LTE Band 4 : 2110.7 MHz ~ 2154.3 MHz LTE Band 5 : 869.7 MHz ~ 893.3 MHz LTE Band 12 : 729.7 MHz ~ 745.3 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)



<b>Antenna Type</b>	WWAN : IFA Antenna WLAN : IFA Antenna Bluetooth : IFA Antenna GPS/Glonass: IFA Antenna
<b>Type of Modulation</b>	GSM/GPRS: GMSK EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK WCDMA: BPSK (Uplink) HSPA: QPSK (Uplink) HSPA+: 16QAM (Uplink is not supported) LTE: QPSK / 16QAM 802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) Bluetooth LE : GFSK Bluetooth (1Mbps) : GFSK Bluetooth (2Mbps) : $\pi/4$ -DQPSK Bluetooth (3Mbps) : 8-DPSK GPS/Glonass : BPSK

### 1.5. Modification of EUT

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



### 1.6. Test Location

<b>Test Site</b>	SPORTON INTERNATIONAL (KUNSHAN) INC.	
<b>Test Site Location</b>	No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P. R. China TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958	
<b>Test Site No.</b>	<b>Sporton Site No.</b>	
	CO01-KS	

<b>Test Site</b>	SPORTON INTERNATIONAL (SHENZHEN) INC.	
<b>Test Site Location</b>	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	
<b>Test Site No.</b>	<b>Sporton Site No.</b>	<b>FCC Registration No.</b>
	03CH03-SZ	565805

**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.



## **2. Test Configuration of Equipment Under Test**

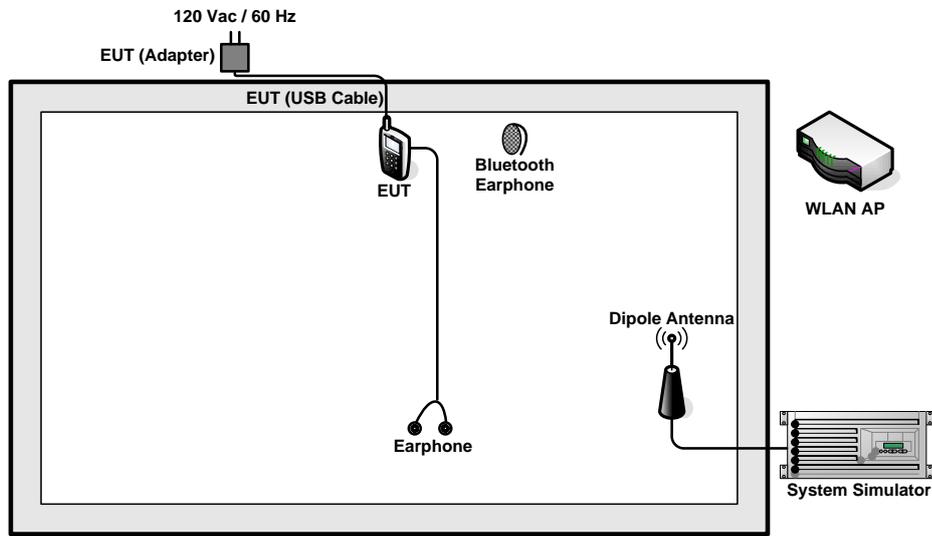
### **2.1. Test Mode**

The EUT has been associated with peripherals pursuant to ANSI C63.4-2014 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

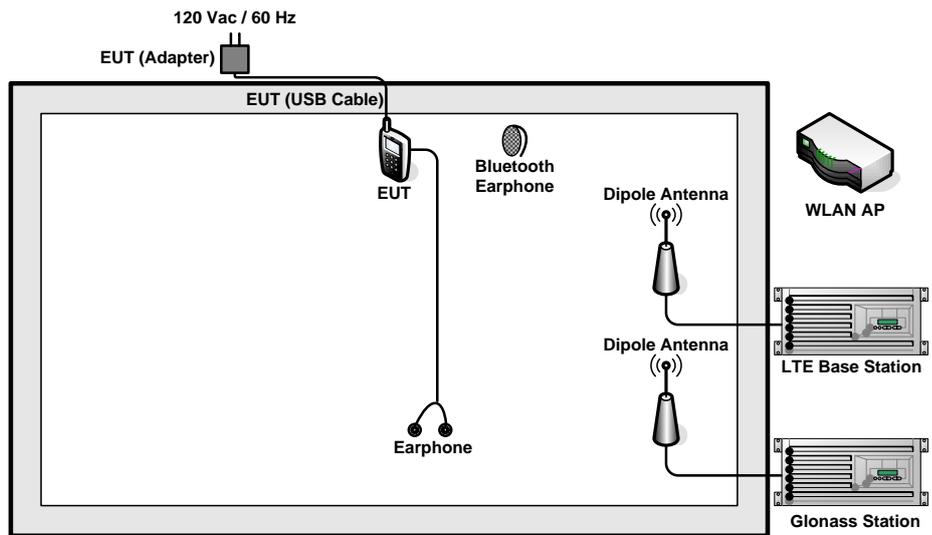
Frequency range investigated: conduction (150 kHz to 30 MHz), radiation (30MHz to the 5th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

Test Items	Function Type
AC Conducted Emission	Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera (Rear) <Fig.1> Mode 2: GSM1900 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera (Front) <Fig.1> Mode 3: WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + MPEG4 <Fig.1> Mode 4: LTE Band 2 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Glonass Rx <Fig.2> Mode 5: LTE Band 4 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + GPS Rx <Fig.3>
Radiated Emissions < 1GHz	Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera (Rear) <Fig.1> Mode 2: GSM1900 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera (Front) <Fig.1> Mode 3: WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + MPEG4 <Fig.1> Mode 4: LTE Band 2 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Glonass Rx <Fig.2> Mode 5: LTE Band 4 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + GPS Rx <Fig.3>
Radiated Emissions ≥ 1GHz	Mode 1: LTE Band 4 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + GPS Rx <Fig.3>
<p><b>Remark:</b></p> <ol style="list-style-type: none"> <li>1. The worst case of AC is mode 2; and the USB Link mode of AC is mode 5, only the test data of these modes were reported.</li> <li>2. The worst case of RE &lt; 1G is mode 5; only the test data of this mode was reported.</li> <li>3. Data Link with Notebook means data application transferred mode between EUT and Notebook.</li> </ol>	

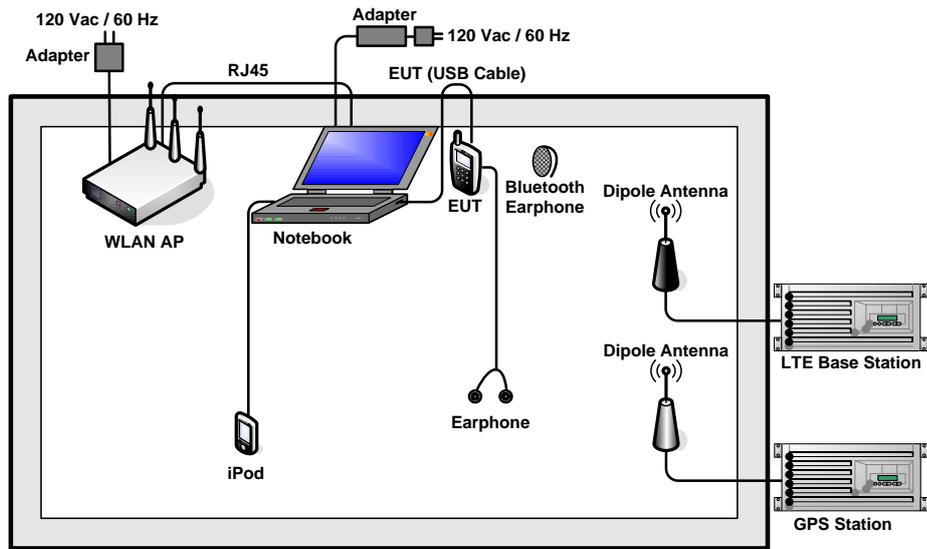
## 2.2. Connection Diagram of Test System



<Fig.1>



<Fig.2>



<Fig.3>

### 2.3. Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	LTE Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	System Simulator	R&S	CMU200	N/A	N/A	Unshielded, 1.8 m
3.	GPS Station	ADIVIC	MP9000	N/A	N/A	Unshielded, 1.8 m
4.	Glomass Station	RACELOGIC	RLLS03-2RP	N/A	N/A	Unshielded, 1.8 m
5.	WLAN AP	ASUSTek	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 2.7m with Core
6.	WLAN AP	D-Link	DIR-855	KA2DIR855A2	N/A	Unshielded, 1.8 m
7.	Bluetooth Earphone	Lenovo	LBH308	N/A	N/A	N/A
8.	Bluetooth Earphone	Samsung	HS3000	A3LHS3000	N/A	N/A
9.	Notebook	Lenovo	E540	Fcc DoC	N/A	shielded cable DC O/P 1.8m Unshielded AC I/P cable 1.8m
10.	Notebook	Lenovo	G480	N/A	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
11.	SD Card	SanDisk	Uitra	N/A	N/A	N/A
12.	SD Card	Kingston	4GB	N/A	N/A	N/A
13.	iPod	Apple	A1199	FCC DoC	Shielded, 1.2 m	N/A
14.	IPod	Apple	MC525 ZP/A	N/A	Shielded, 1.0m	N/A
15.	Earphone	Lenovo	SH102	N/A	Unshielded, 1.2 m	N/A
16.	Earphone	Apple	MC690ZP/A	N/A	Shielded, 1.0m	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. Turn on GPS/Glonass function 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.



### 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.

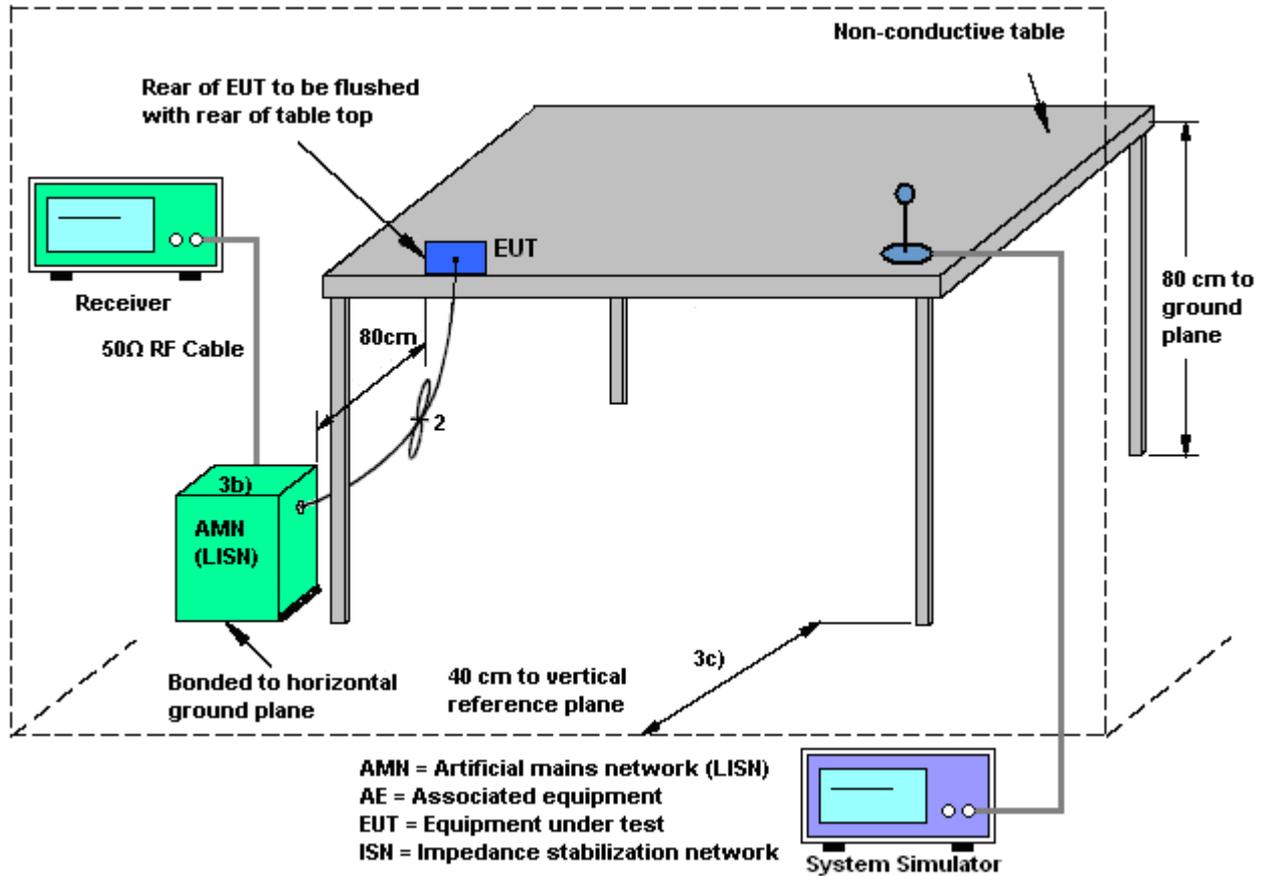
##### 3.1.2 Measuring Instruments

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.

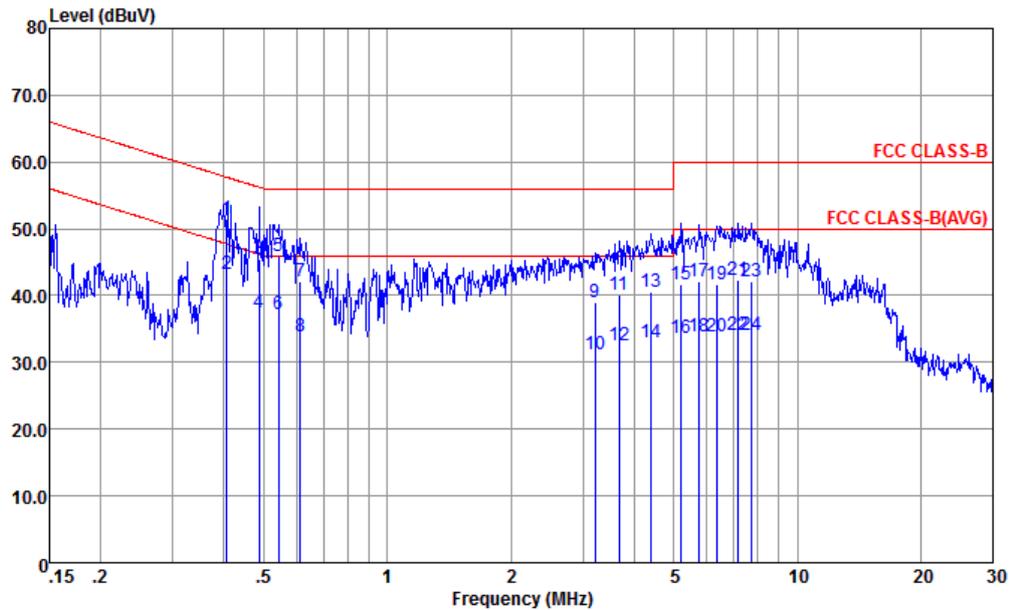
### 3.1.4 Test Setup





3.1.5 Test Result of AC Conducted Emission

Test Mode :	Mode 2	Temperature :	20~22°C
Test Engineer :	Peter Wei	Relative Humidity :	40~42%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM1900 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera (Front)		

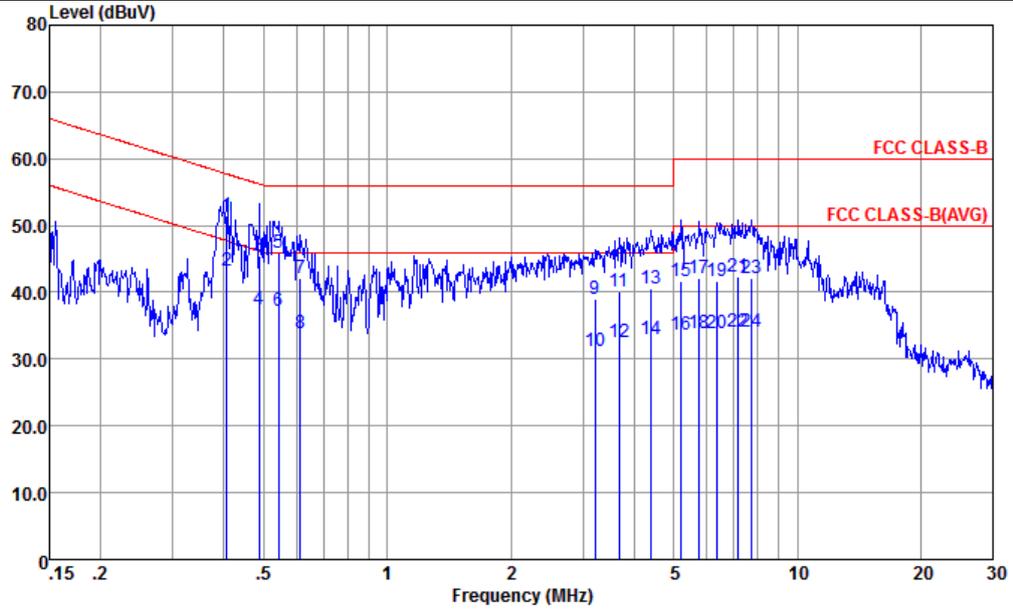


Site : CO01-KS  
 Condition : FCC CLASS-B LISN-L-20151024 LINE  
 Project : (FC) 711205  
 mode : Mode 2

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.406	51.43	-6.30	57.73	41.00	0.23	10.20	QP
2 *	0.406	43.13	-4.60	47.73	32.70	0.23	10.20	Average
3	0.486	45.52	-10.71	56.23	35.10	0.23	10.19	QP
4	0.486	37.52	-8.71	46.23	27.10	0.23	10.19	Average
5	0.544	45.82	-10.18	56.00	35.40	0.23	10.19	QP
6	0.544	37.32	-8.68	46.00	26.90	0.23	10.19	Average
7	0.614	42.02	-13.98	56.00	31.60	0.24	10.18	QP
8	0.614	33.82	-12.18	46.00	23.40	0.24	10.18	Average
9	3.207	39.01	-16.99	56.00	28.60	0.19	10.22	QP
10	3.207	31.21	-14.79	46.00	20.80	0.19	10.22	Average
11	3.681	40.22	-15.78	56.00	29.80	0.19	10.23	QP
12	3.681	32.52	-13.48	46.00	22.10	0.19	10.23	Average
13	4.407	40.63	-15.37	56.00	30.20	0.19	10.24	QP
14	4.407	33.03	-12.97	46.00	22.60	0.19	10.24	Average
15	5.221	41.64	-18.36	60.00	31.20	0.19	10.25	QP
16	5.221	33.54	-16.46	50.00	23.10	0.19	10.25	Average



Test Mode :	Mode 2	Temperature :	20~22°C
Test Engineer :	Peter Wei	Relative Humidity :	40~42%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM1900 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera (Front)		

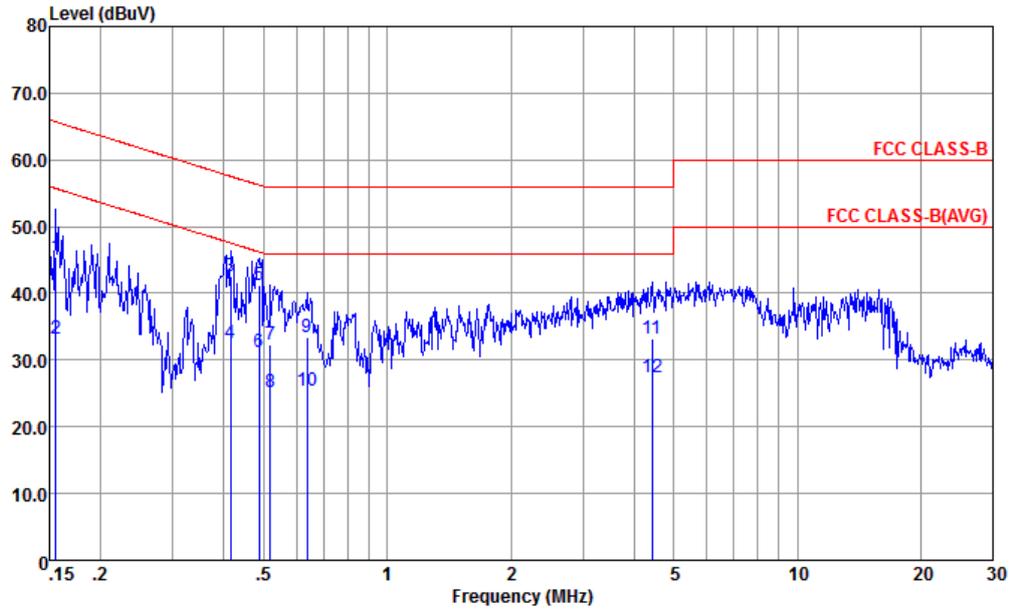


Site : CO01-KS  
 Condition : FCC CLASS-B LISN-L-20151024 LINE  
 Project : (FC) 711205  
 mode : Mode 2

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
17	5.774	42.06	-17.94	60.00	31.59	0.21	10.26	QP
18	5.774	33.86	-16.14	50.00	23.39	0.21	10.26	Average
19	6.352	41.69	-18.31	60.00	31.20	0.22	10.27	QP
20	6.352	33.89	-16.11	50.00	23.40	0.22	10.27	Average
21	7.175	42.32	-17.68	60.00	31.80	0.23	10.29	QP
22	7.175	34.12	-15.88	50.00	23.60	0.23	10.29	Average
23	7.728	42.14	-17.86	60.00	31.60	0.24	10.30	QP
24	7.728	34.04	-15.96	50.00	23.50	0.24	10.30	Average



Test Mode :	Mode 2	Temperature :	20~22°C
Test Engineer :	Peter Wei	Relative Humidity :	40~42%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM1900 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera (Front)		

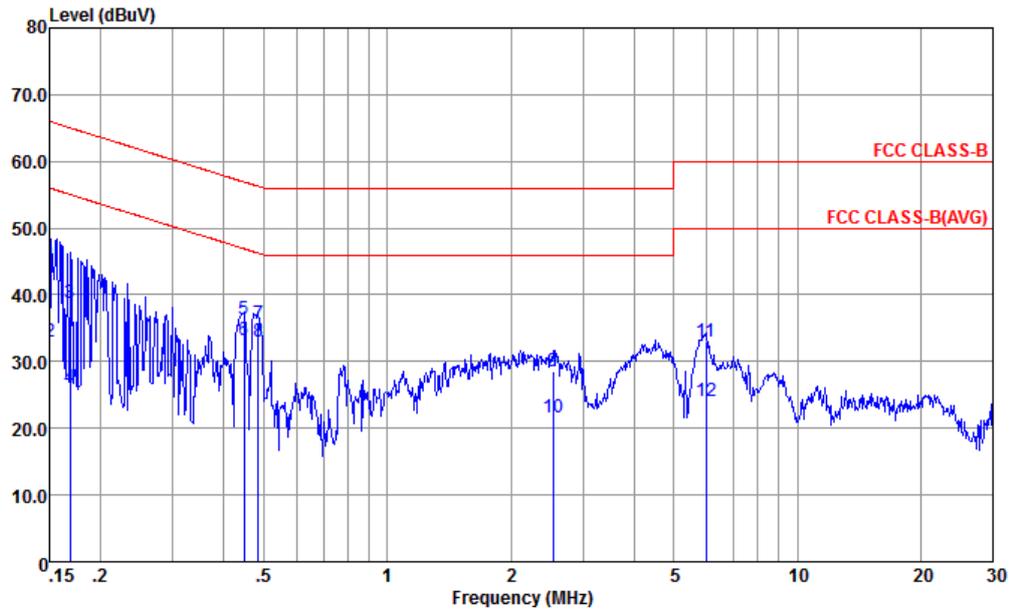


Site : CO01-KS  
 Condition : FCC CLASS-B LISN-N-20151024 NEUTRAL  
 Project : (FC) 711205  
 mode : Mode 2

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.156	45.49	-20.20	65.69	34.80	0.30	10.39	QP
2	0.156	33.19	-22.50	55.69	22.50	0.30	10.39	Average
3	0.415	42.52	-15.03	57.55	32.00	0.32	10.20	QP
4	0.415	32.62	-14.93	47.55	22.10	0.32	10.20	Average
5 *	0.486	41.31	-14.92	56.23	30.80	0.32	10.19	QP
6	0.486	31.31	-14.92	46.23	20.80	0.32	10.19	Average
7	0.518	32.31	-23.69	56.00	21.80	0.32	10.19	QP
8	0.518	25.11	-20.89	46.00	14.60	0.32	10.19	Average
9	0.637	33.41	-22.59	56.00	22.90	0.33	10.18	QP
10	0.637	25.31	-20.69	46.00	14.80	0.33	10.18	Average
11	4.430	33.30	-22.70	56.00	22.70	0.36	10.24	QP
12	4.430	27.40	-18.60	46.00	16.80	0.36	10.24	Average



Test Mode :	Mode 5	Temperature :	20~22°C
Test Engineer :	Peter Wei	Relative Humidity :	40~42%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	LTE Band 4 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + GPS Rx		

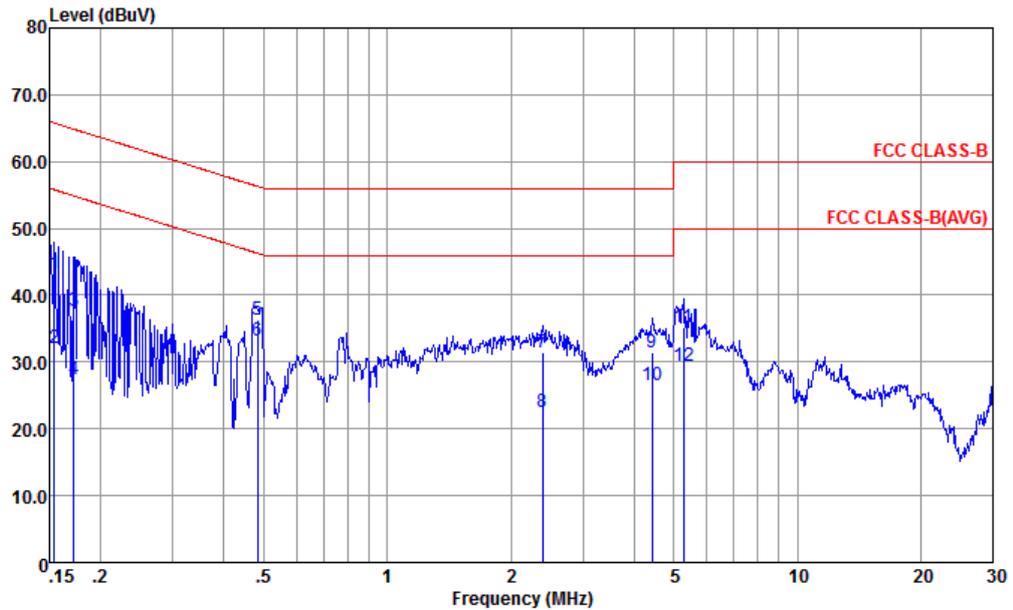


Site : CO01-KS  
 Condition : FCC CLASS-B LISN-L-20151024 LINE  
 Project : (FC) 711205  
 mode : Mode 5

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.150	44.32	-21.68	66.00	33.40	0.53	10.39	QP
2	0.150	33.02	-22.98	56.00	22.10	0.53	10.39	Average
3	0.169	38.68	-26.35	65.03	27.90	0.41	10.37	QP
4	0.169	26.08	-28.95	55.03	15.30	0.41	10.37	Average
5	0.447	36.32	-20.61	56.93	25.90	0.23	10.19	QP
6	0.447	33.12	-13.81	46.93	22.70	0.23	10.19	Average
7	0.484	35.72	-20.55	56.27	25.30	0.23	10.19	QP
8 *	0.484	33.02	-13.25	46.27	22.60	0.23	10.19	Average
9	2.540	28.49	-27.51	56.00	18.10	0.18	10.21	QP
10	2.540	21.59	-24.41	46.00	11.20	0.18	10.21	Average
11	5.993	32.87	-27.13	60.00	22.40	0.21	10.26	QP
12	5.993	23.97	-26.03	50.00	13.50	0.21	10.26	Average



Test Mode :	Mode 5	Temperature :	20~22°C
Test Engineer :	Peter Wei	Relative Humidity :	40~42%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	LTE Band 4 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + GPS Rx		



Site : CO01-KS  
 Condition : FCC CLASS-B LISN-N-20151024 NEUTRAL  
 Project : (FC) 711205  
 mode : Mode 5

	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
			dB	dBuV	dBuV	dB	dB	
1	0.154	43.29	-22.49	65.78	32.60	0.30	10.39	QP
2	0.154	31.99	-23.79	55.78	21.30	0.30	10.39	Average
3	0.172	37.57	-27.29	64.86	26.91	0.30	10.36	QP
4	0.172	27.47	-27.39	54.86	16.81	0.30	10.36	Average
5	0.483	36.31	-19.97	56.28	25.80	0.32	10.19	QP
6 *	0.483	33.11	-13.17	46.28	22.60	0.32	10.19	Average
7	2.396	31.38	-24.62	56.00	20.80	0.38	10.20	QP
8	2.396	22.48	-23.52	46.00	11.90	0.38	10.20	Average
9	4.430	31.40	-24.60	56.00	20.80	0.36	10.24	QP
10	4.430	26.50	-19.50	46.00	15.90	0.36	10.24	Average
11	5.277	35.20	-24.80	60.00	24.60	0.35	10.25	QP
12	5.277	29.50	-20.50	50.00	18.90	0.35	10.25	Average



### 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.

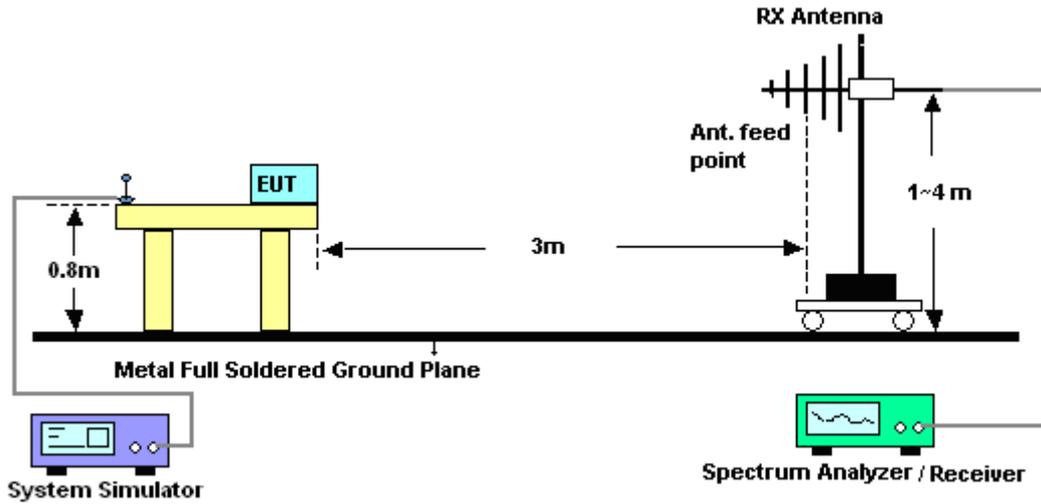


### **3.2.3. Test Procedures**

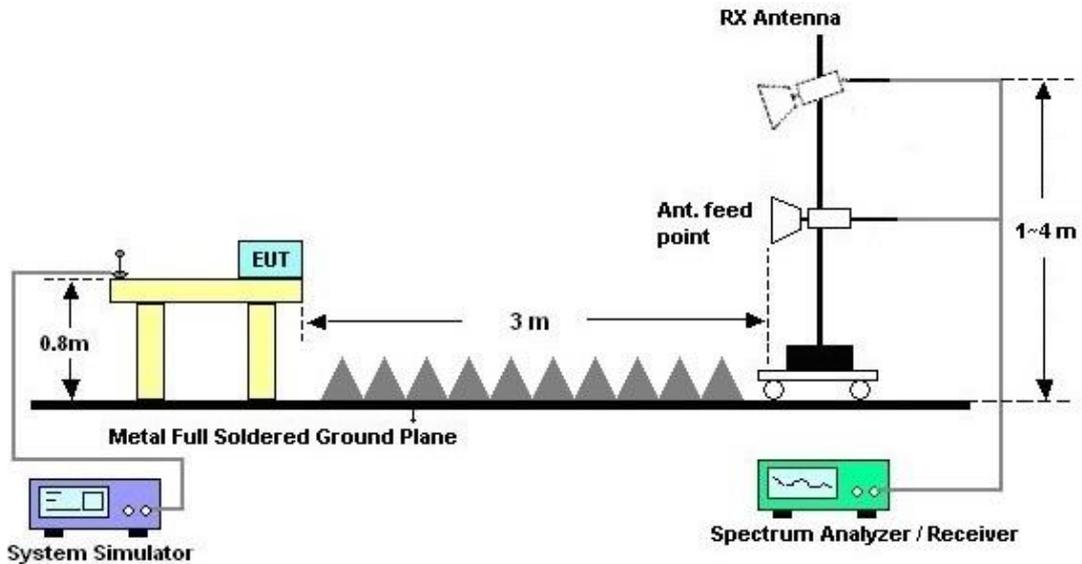
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna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



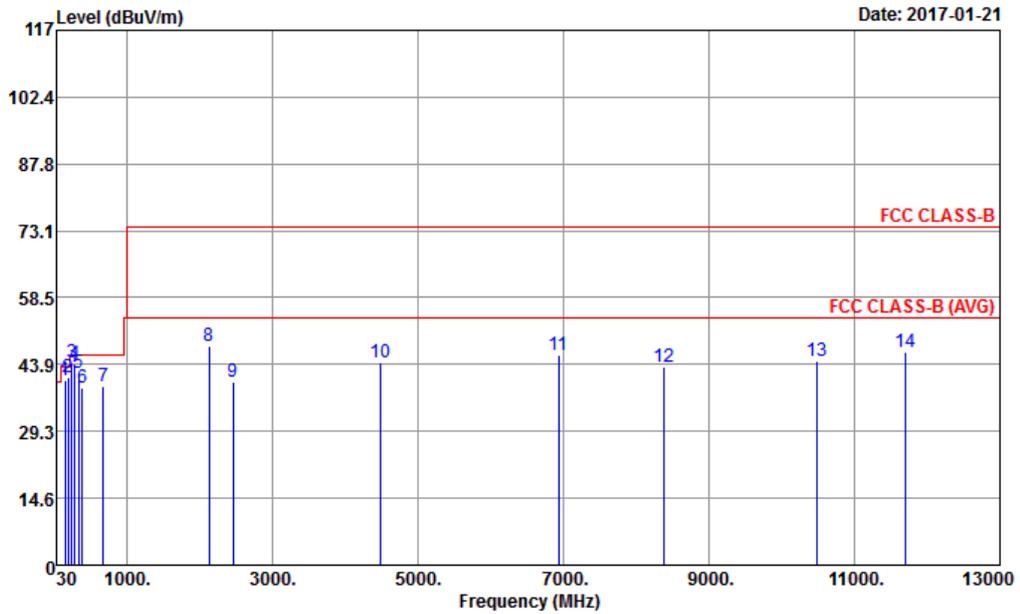
For radiated emissions above 1GHz





3.2.5. Test Result of Radiated Emission

Test Mode :	Mode 5	Temperature :	23~25°C
Test Engineer :	Jeff Yao	Relative Humidity :	48~52%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	LTE Band 4 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + GPS Rx		
Remark :	#8 is system simulator signal which can be ignored.		

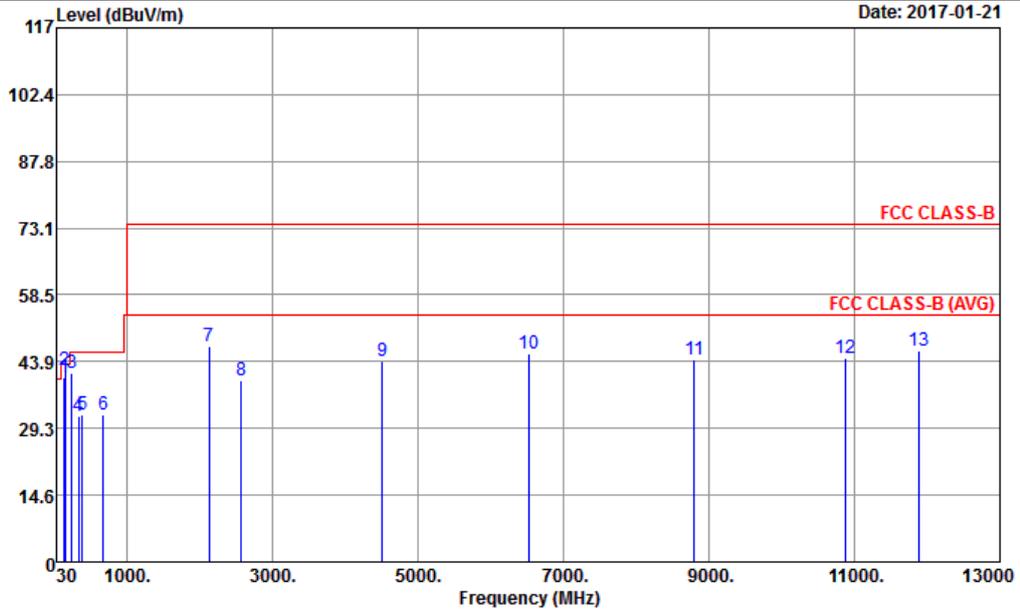


Site : 03CH03-SZ  
 Condition : FCC CLASS-B 3m LF\_ANT41909\_6 HORIZONTAL  
 Project : (FC) 711205  
 Mode : Mode 5

	Freq	Level	Over Limit	Limit Line	ReadAntenna 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	152.31	40.54	-2.96	43.50	52.65	17.89	1.08	31.08	100	123	QP
2	184.98	40.99	-2.51	43.50	54.79	15.95	1.17	30.92	100	216	QP
3	236.55	44.43	-1.57	46.00	56.89	17.07	1.27	30.80	100	236	QP
4	282.72	44.11	-1.89	46.00	54.59	18.93	1.37	30.78	100	124	QP
5	334.30	41.91	-4.09	46.00	51.30	19.92	1.52	30.83	---	---	Peak
6	381.20	38.73	-7.27	46.00	47.29	20.73	1.59	30.88	---	---	Peak
7	677.30	39.02	-6.98	46.00	42.80	25.48	2.05	31.31	---	---	Peak
8	2132.00	48.07			76.08	25.48	3.61	57.10	---	---	Peak
9	2458.00	40.24	-33.76	74.00	66.94	26.13	3.88	56.71	---	---	Peak
10	4480.00	44.48	-29.52	74.00	66.55	29.86	5.46	57.39	---	---	Peak
11	6932.00	45.91	-28.09	74.00	64.04	32.95	6.86	57.94	---	---	Peak
12	8378.00	43.50	-30.50	74.00	53.72	37.45	7.33	55.00	---	---	Peak
13	10490.00	44.72	-29.28	74.00	54.97	37.94	8.36	56.55	---	---	Peak
14	11696.00	46.60	-27.40	74.00	54.72	39.20	8.93	56.25	100	0	Peak



Test Mode :	Mode 5	Temperature :	23~25°C
Test Engineer :	Jeff Yao	Relative Humidity :	48~52%
Test Distance :	3m	Polarization :	Vertical
Function Type :	LTE Band 4 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + GPS Rx		
Remark :	#7 is system simulator signal which can be ignored.		



Site : 03CH03-SZ  
 Condition : FCC CLASS-B 3m LF\_ANT41909\_6 VERTICAL  
 Project : (FC) 711205  
 Mode : Mode 5

	Freq	Level	Over Limit	Limit Line	ReadAntenna 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	143.13	40.40	-3.10	43.50	52.62	17.80	1.08	31.10	100	264	QP
2	153.39	42.09	-1.41	43.50	54.26	17.83	1.08	31.08	100	326	QP
3	240.33	41.28	-4.72	46.00	53.53	17.28	1.27	30.80	---	---	Peak
4	330.80	31.91	-14.09	46.00	41.34	19.87	1.52	30.82	---	---	Peak
5	384.70	32.28	-13.72	46.00	40.76	20.81	1.59	30.88	---	---	Peak
6	675.90	32.18	-13.82	46.00	35.98	25.46	2.05	31.31	---	---	Peak
7	2132.00	47.23			75.24	25.48	3.61	57.10	---	---	Peak
8	2572.00	39.88	-34.12	74.00	66.16	26.41	4.00	56.69	---	---	Peak
9	4506.00	44.06	-29.94	74.00	66.06	29.90	5.49	57.39	---	---	Peak
10	6522.00	45.52	-28.48	74.00	63.35	32.62	6.84	57.29	---	---	Peak
11	8802.00	44.45	-29.55	74.00	54.53	37.28	7.59	54.95	---	---	Peak
12	10866.00	44.66	-29.34	74.00	53.78	38.21	8.53	55.86	---	---	Peak
13	11882.00	46.28	-27.72	74.00	54.36	39.45	8.93	56.46	100	0	Peak



### 4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Receiver	R&S	ESC17	100768	9kHz~7GHz	Apr. 29, 2016	Jan. 25, 2017	Apr. 28, 2017	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060103	9kHz~30MHz	Oct. 13, 2016	Jan. 25, 2017	Oct. 12, 2017	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060105	9kHz~30MHz	Oct. 13, 2016	Jan. 25, 2017	Oct. 12, 2017	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP0000008 11	AC 0V~300V, 45Hz~1000Hz	Oct. 13, 2016	Jan. 25, 2017	Oct. 12, 2017	Conduction (CO01-KS)
EMI Test Receiver&SA	KEYSIGHT	N9038A	MY54450083	20Hz~8.4GHz	May 07, 2016	Jan. 21, 2017	May 06, 2017	Radiation (03CH03-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150246	10Hz~44GHz	May 07, 2016	Jan. 21, 2017	May 06, 2017	Radiation (03CH03-SZ)
Bilog Antenna	TeseQ	CBL6112D	35408	30MHz~2GHz	May 21, 2016	Jan. 21, 2017	May 20, 2017	Radiation (03CH03-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1355	1GHz~18GHz	May 07, 2016	Jan. 21, 2017	May 06, 2017	Radiation (03CH03-SZ)
Amplifier	Burgeon	BPA-530	102210	0.01Hz ~3000MHz	Oct. 11, 2016	Jan. 21, 2017	Oct. 10, 2017	Radiation (03CH03-SZ)
HF Amplifier	MITEQ	AMF-7D-0010 1800-30-10P-R	1943528	1GHz~18GHz	Oct. 11, 2016	Jan. 21, 2017	Oct. 10, 2017	Radiation (03CH03-SZ)
AC Power Source	Chroma	61601	61601000198 5	N/A	NCR	Jan. 21, 2017	NCR	Radiation (03CH03-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Jan. 21, 2017	NCR	Radiation (03CH03-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Jan. 21, 2017	NCR	Radiation (03CH03-SZ)

NCR: No Calibration Required



## 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% ( $U = 2Uc(y)$ )	5.1dB
---	-------

### Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	5.0dB
---	-------