



FCC Test Report

APPLICANT : ZTE CORPORATION
EQUIPMENT : LTE/CDMA/WCDMA/GSM(GPRS) Multi-Mode
Digital Mobile Phone
BRAND NAME : ZTE
MODEL NAME : N9137
FCC ID : SRQ-N9137
STANDARD : FCC 47 CFR FCC Part 15 Subpart B
CLASSIFICATION : Certification

The product was received on Jun. 03, 2017 and testing was completed on Jul. 03, 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 Development Zone, Jiangsu, China



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC760302	Rev. 01	Initial issue of report	Jul. 12, 2017



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 8.09 dB at 2.474 MHz
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	Under limit 3.74 dB at 165.540 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/CDMA/WCDMA/GSM(GPRS) Multi-Mode Digital Mobile Phone
Brand Name	ZTE
Model Name	N9137
FCC ID	SRQ-N9137
EUT supports Radios application	CDMA/EV-DO/GSM/GPRS/EGPRS/WCDMA/HSPA/DC-HSDPA/HSPA+ (16QAM uplink is not supported)/LTE WLAN 2.4GHz 802.11b/g/n HT20/HT40 Bluetooth v3.0 + EDR/ Bluetooth v4.0 LE/ Bluetooth v4.2 LE
IMEI Code	Conduction: 990008900004073 Radiation: 990008900005856
HW Version	N9137HW1.0
SW Version	N9137V1.0.0B01
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	
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 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 LTE Band 13 : 779.5 MHz ~ 784.5 MHz LTE Band 25 : 1850.7MHz ~ 1914.3 MHz LTE Band 26 : 814.7 MHz ~ 848.3 MHz LTE Band 41 : 2498.5 MHz ~ 2687.5 MHz CDMA2000 BC0: 824.70 MHz ~ 848.31 MHz CDMA2000 BC1: 1851.25 MHz ~ 1908.75 MHz CDMA2000 BC10 : 817.9 MHz ~ 823.1 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 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 LTE Band 13 : 748.5 MHz ~ 753.5 MHz LTE Band 25 : 1930.7MHz ~ 1994.3 MHz LTE Band 26 : 859.7 MHz ~ 893.3 MHz LTE Band 41 : 2498.5 MHz ~ 2687.5 MHz CDMA2000 BC0: 869.70 MHz ~ 893.31 MHz CDMA2000 BC1: 1931.25 MHz ~ 1988.75 MHz CDMA2000 BC10 : 862.9 MHz ~ 868.1 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz GNSS : 1559 MHz ~ 1610 MHz FM : 88 MHz ~ 108 MHz
Antenna Type	WWAN : PIFA Antenna WLAN : PIFA Antenna Bluetooth : PIFA Antenna GNSS: PIFA Antenna FM: External headset Antenna
Type of Modulation	GSM: GMSK GPRS: GMSK EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK WCDMA : BPSK (Uplink) HSDPA/DC-HSDPA : QPSK (Uplink) HSUPA : QPSK (Uplink) HSPA+ : 16QAM (16QAM uplink is not supported)

	DC-HSDPA : 64QAM LTE: QPSK / 16QAM CDMA2000 : QPSK CDMA2000 1xEV-DO : QPSK/8PSK 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 Glonass: 1602 MHz + $n \times 0.5625\text{MHz}$ ($n=-7,-6,-5,...,0,...,6$) FM : FM
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1.5. Modification of EUT

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

1.6. Test Location

Test Site	Sporton International (KunShan) INC.		
Test Site Location	No.3-2, Pingxiang Road, Kunshan Development Zone, Jiangsu, China TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958		
Test Site No.	Sporton Site No.		FCC Registration No.
	CO01-KS	03CH02-KS	418269

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

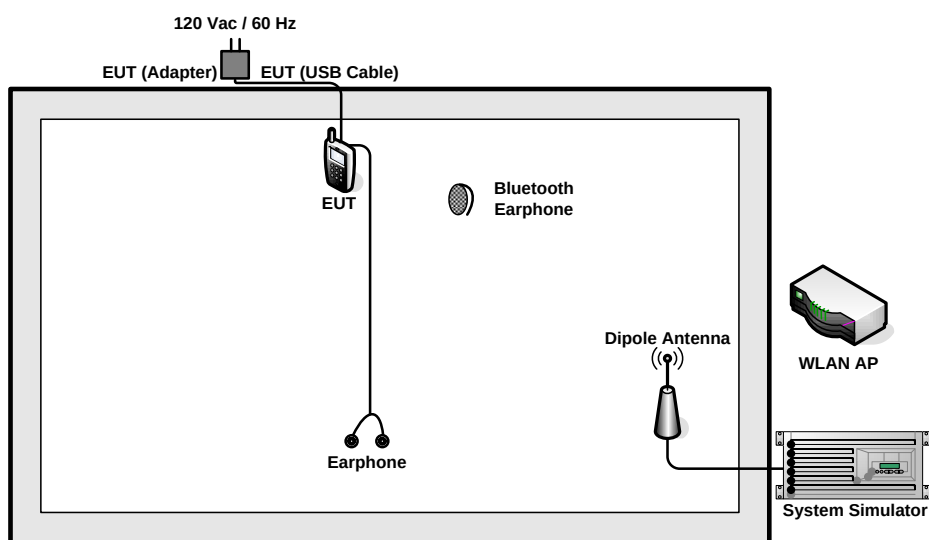
2.1. Test Mode

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.

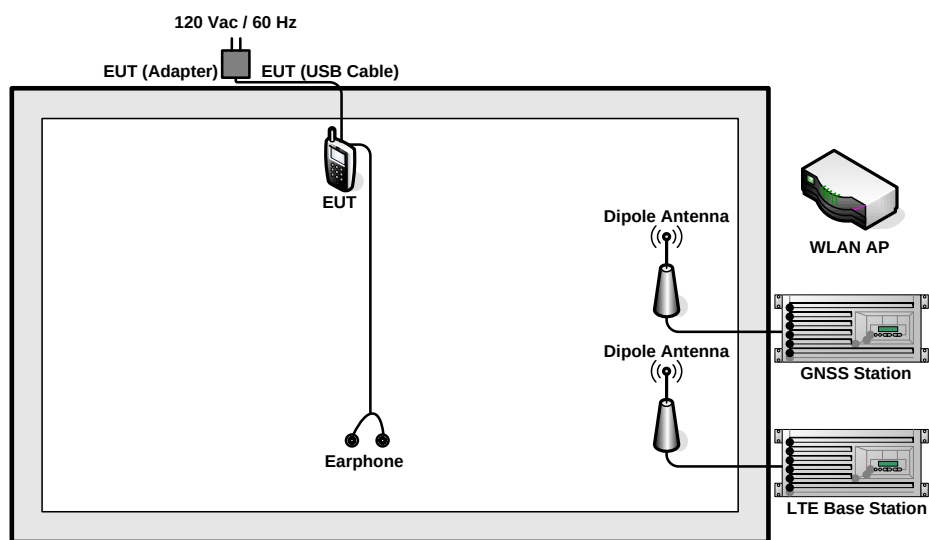
Frequency range investigated: conduction (150 kHz to 30 MHz), radiation (30MHz to the 5th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

Test Items	Function Type
AC Conducted Emission	Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable (Charging from Adapter 1) + Earphone + Battery 1 + Camera(Rear) <Fig.1>
	Mode 2: GSM1900 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable (Charging from Adapter 2) + Earphone + Battery 2 + Camera(Front) <Fig.1>
	Mode 3: WCDMA Band V Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable (Charging from Adapter 3) + Earphone + Battery 2 + MPEG4 <Fig.1>
	Mode 4: LTE Band 4 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable (Charging from Adapter 2) + Earphone + Battery 2 + Glonass Rx <Fig.2>
	Mode 5: LTE Band 12 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable (Data Link with Notebook) + Earphone + Battery 2 + GPS Rx <Fig.3>
Radiated Emissions	Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable (Charging from Adapter 1) + Earphone + Battery 1 + Camera(Rear) <Fig.1>
	Mode 2: GSM1900 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable (Charging from Adapter 2) + Earphone + Battery 2 + Camera(Front) <Fig.1>
	Mode 3: WCDMA Band V Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable (Charging from Adapter 3) + Earphone + Battery 1 + MPEG4 <Fig.1>
	Mode 4: LTE Band 4 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable (Charging from Adapter 3) + Earphone + Battery 1 + Glonass Rx <Fig.2>
	Mode 5: LTE Band 12 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable (Data Link with Notebook) + Earphone + Battery 1 + GPS Rx <Fig.3>
Remark: 1. The worst case of AC is mode 4, and the USB Link mode is mode 5, the test data of these modes are reported. 2. The worst case of RE is mode 5; only the test data of this mode was reported. 3. Data Link with Notebook means data application transferred mode between EUT and Notebook.	

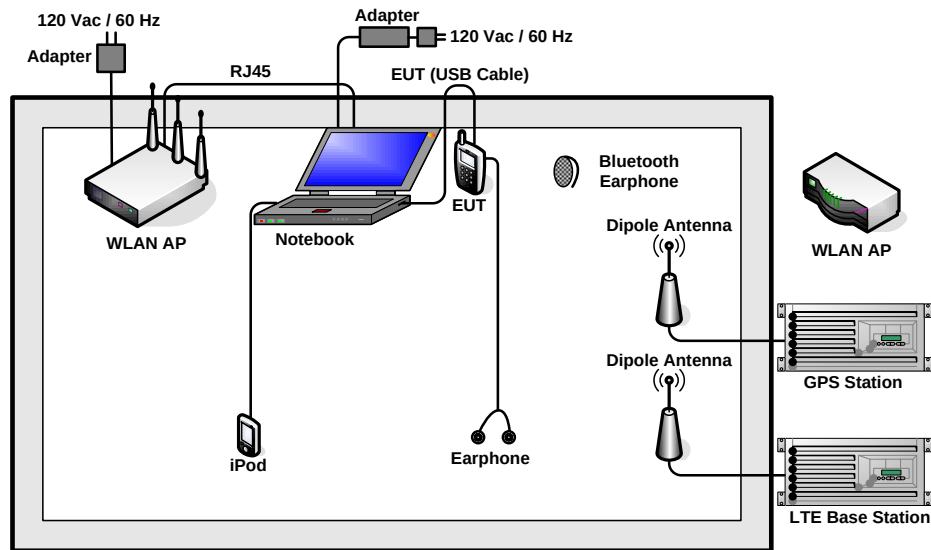
2.2. Connection Diagram of Test System



<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.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded,1.8m
2.	GPS Station	ADIVIE	MP9000	N/A	N/A	Unshielded,1.8m
3.	Glomass Station	RACELOGIC	RLLS03-2RP	N/A	N/A	Unshielded,1.8m
4.	WLAN AP	LINKSYS	WRT600N	Q87-WRT600NV11	N/A	Unshielded,1.8m
5.	WLAN AP	TP-Link	TL-WDR5600	N/A	N/A	Unshielded,1.8m
6.	WLAN AP	D-Link	DIR-855	KA2DIR855A2	N/A	Unshielded,1.8m
7.	Bluetooth Earphone	Lenovo	LBH308	N/A	N/A	N/A
8.	Bluetooth Earphone	Lenovo	LBH301	N/A	N/A	N/A
9.	Notebook	DELL	Latitude3440	N/A	N/A	AC I/P : Unshielded, 1.8m DC O/P : Shielded, 1.8m
10.	Notebook	Lenovo	G480	PRC4	N/A	AC I/P : Unshielded, 1.8m DC O/P : Shielded, 1.8m
11.	Earphone	Lenovo	LH102	N/A	Unshielded,1.2m	N/A
12.	Earphone	Lenovo	SH100	N/A	Unshielded,1.2m	N/A
13.	SD Card	Kingston	SDC4/4GB	N/A	N/A	N/A
14.	SD Card	SanDisk	Uitra	N/A	N/A	N/A
15.	iPod	Apple	A1199	FCC DoC	Shielded, 1.2m	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 GNSS function to make the EUT receive continuous signals from GNSS 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.

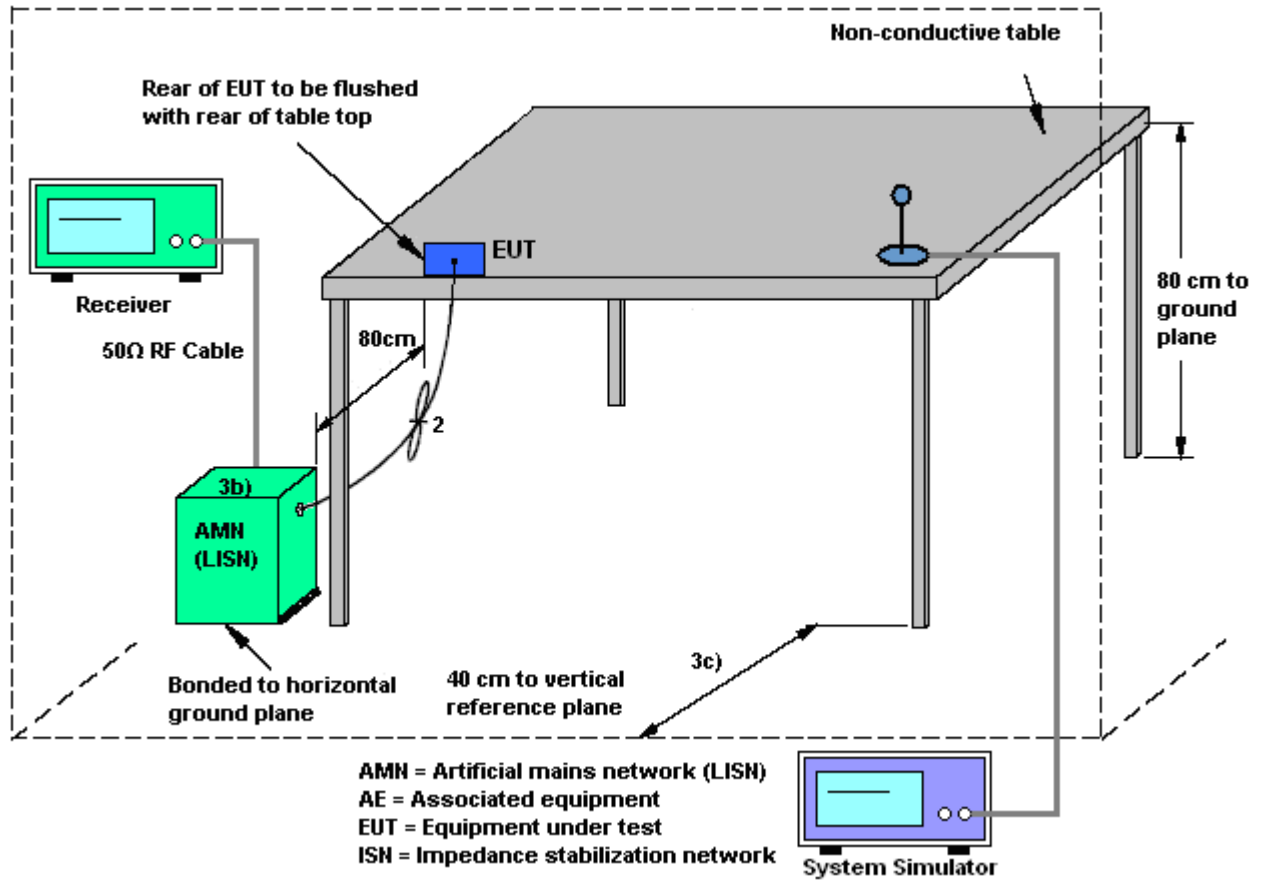
3.1.2 Measuring Instruments

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.

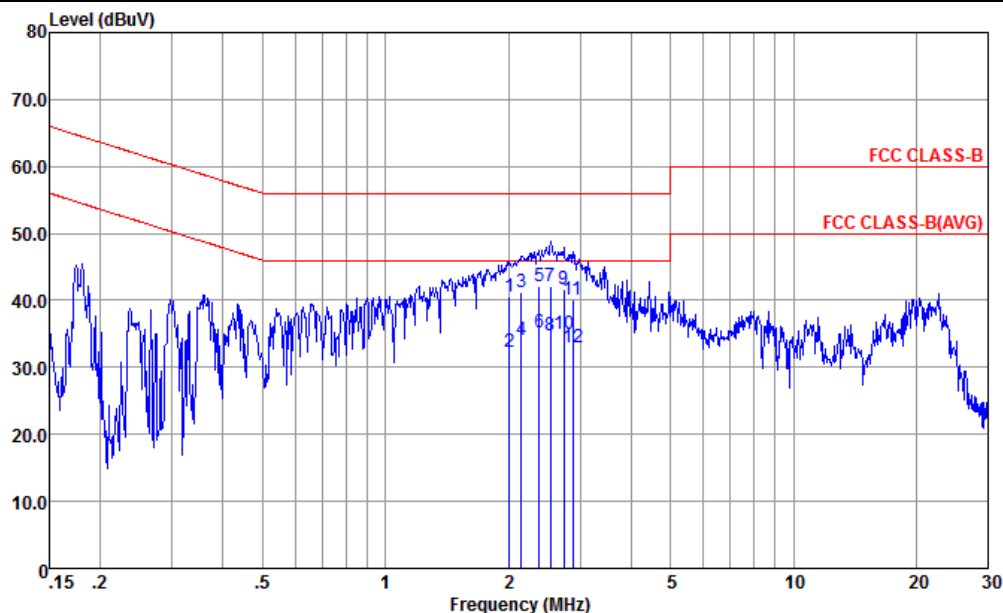
3.1.4 Test Setup





3.1.5 Test Result of AC Conducted Emission

Test Mode :	Mode 4	Temperature :	22~24°C
Test Engineer :	Amos Zhang	Relative Humidity :	42~46%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	LTE Band 4 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable (Charging from Adapter 2) + Earphone + Battery 2 + Glonass Rx		

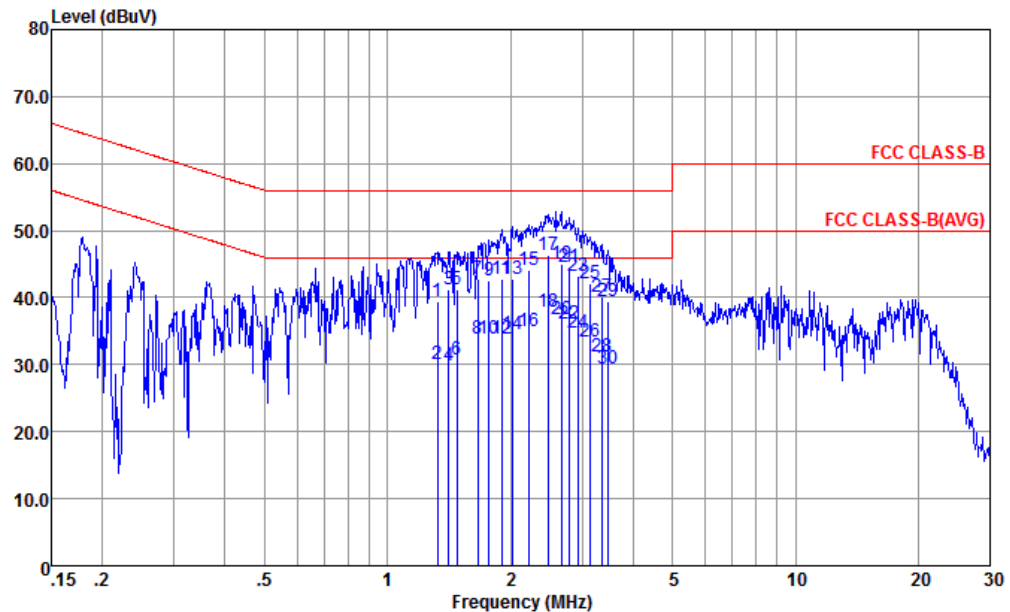


Site : CO01-KS
Condition : FCC CLASS-B LISN-L-161017-060103 LINE
Project : (FC) 760302
mode : Mode 4
: 990008900004073 #7

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	2.012	40.60	-15.40	56.00	30.20	0.21	10.19	QP
2	2.012	32.30	-13.70	46.00	21.90	0.21	10.19	Average
3	2.155	41.30	-14.70	56.00	30.90	0.21	10.19	QP
4	2.155	34.00	-12.00	46.00	23.60	0.21	10.19	Average
5	2.384	42.01	-13.99	56.00	31.60	0.21	10.20	QP
6 *	2.384	35.21	-10.79	46.00	24.80	0.21	10.20	Average
7	2.540	42.02	-13.98	56.00	31.60	0.21	10.21	QP
8	2.540	34.72	-11.28	46.00	24.30	0.21	10.21	Average
9	2.736	41.62	-14.38	56.00	31.20	0.21	10.21	QP
10	2.736	35.02	-10.98	46.00	24.60	0.21	10.21	Average
11	2.884	40.02	-15.98	56.00	29.60	0.21	10.21	QP
12	2.884	33.02	-12.98	46.00	22.60	0.21	10.21	Average



Test Mode :	Mode 4	Temperature :	22~24°C
Test Engineer :	Amos Zhang	Relative Humidity :	42~46%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	LTE Band 4 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable (Charging from Adapter 2) + Earphone + Battery 2 + Glonass Rx		

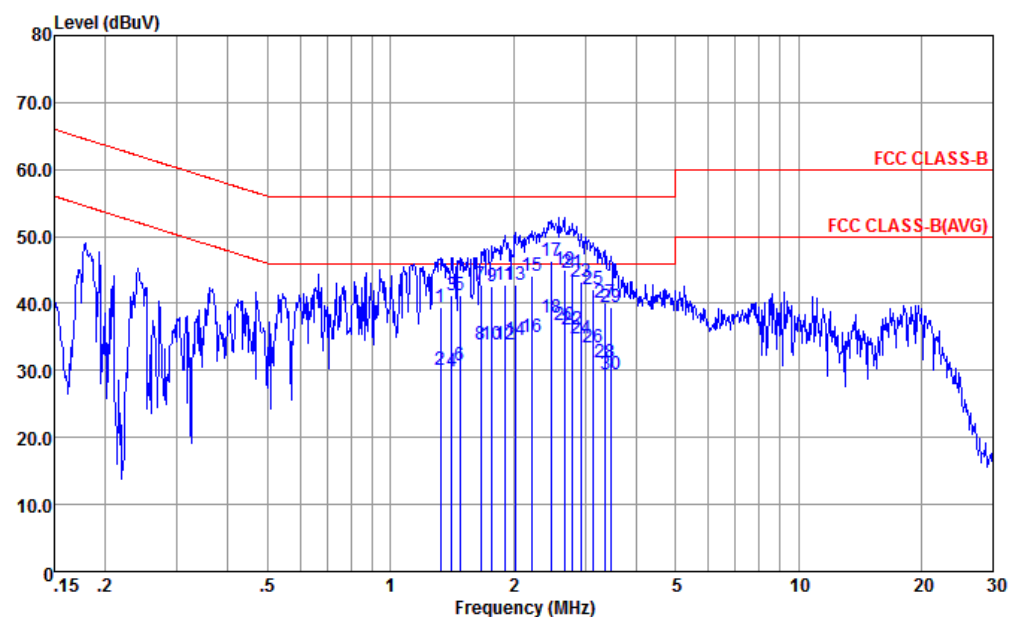


Site : CO01-KS
 Condition : FCC CLASS-B LISN-N-161017-060103 NEUTRAL
 Project : (FC) 760302
 mode : Mode 4
 : 990008900004073 #7

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	1.324	39.39	-16.61	56.00	28.80	0.40	10.19	QP
2	1.324	30.19	-15.81	46.00	19.60	0.40	10.19	Average
3	1.411	41.19	-14.81	56.00	30.60	0.40	10.19	QP
4	1.411	29.89	-16.11	46.00	19.30	0.40	10.19	Average
5	1.480	41.19	-14.81	56.00	30.59	0.41	10.19	QP
6	1.480	30.79	-15.21	46.00	20.19	0.41	10.19	Average
7	1.662	42.90	-13.10	56.00	32.30	0.41	10.19	QP
8	1.662	33.90	-12.10	46.00	23.30	0.41	10.19	Average
9	1.772	42.50	-13.50	56.00	31.90	0.41	10.19	QP
10	1.772	33.90	-12.10	46.00	23.30	0.41	10.19	Average
11	1.908	42.80	-13.20	56.00	32.20	0.41	10.19	QP
12	1.908	33.80	-12.20	46.00	23.20	0.41	10.19	Average
13	2.023	42.80	-13.20	56.00	32.20	0.41	10.19	QP
14	2.023	34.50	-11.50	46.00	23.90	0.41	10.19	Average
15	2.225	44.20	-11.80	56.00	33.59	0.41	10.20	QP
16	2.225	34.90	-11.10	46.00	24.29	0.41	10.20	Average
17	2.474	46.41	-9.59	56.00	35.81	0.40	10.20	QP



Test Mode :	Mode 4	Temperature :	22~24℃
Test Engineer :	Amos Zhang	Relative Humidity :	42~46%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	LTE Band 4 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable (Charging from Adapter 2) + Earphone + Battery 2 + Glonass Rx		

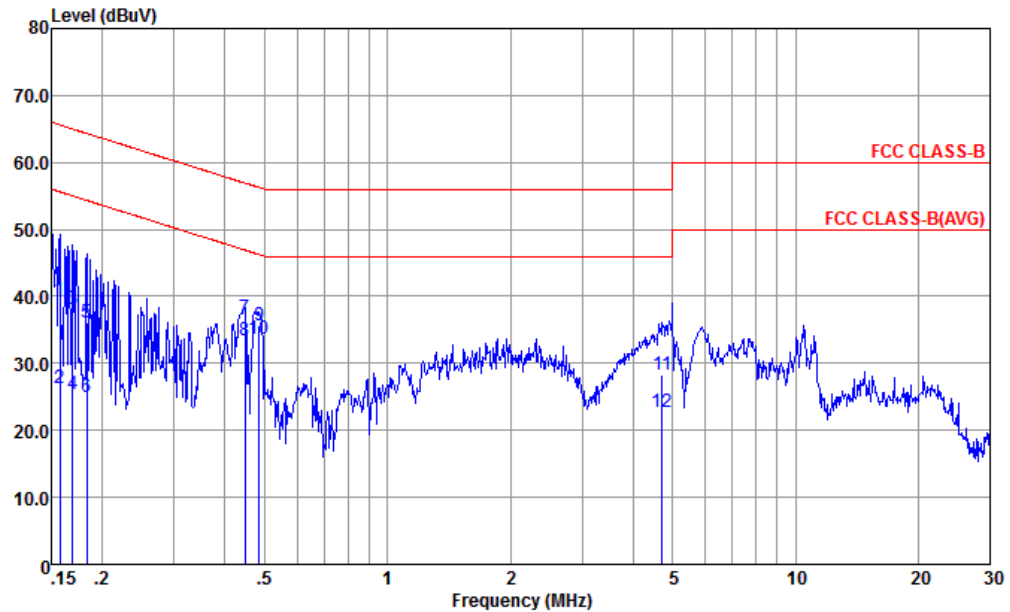


Site : CO01-KS
Condition : FCC CLASS-B LISN-N-161017-060103 NEUTRAL
Project : (FC) 760302
mode : Mode 4
: 990008900004073 #7

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
18 *	2.474	37.91	-8.09	46.00	27.31	0.40	10.20	Average
19	2.664	44.91	-11.09	56.00	34.30	0.40	10.21	QP
20	2.664	36.81	-9.19	46.00	26.20	0.40	10.21	Average
21	2.794	44.51	-11.49	56.00	33.90	0.40	10.21	QP
22	2.794	36.21	-9.79	46.00	25.60	0.40	10.21	Average
23	2.931	43.21	-12.79	56.00	32.59	0.40	10.22	QP
24	2.931	34.81	-11.19	46.00	24.19	0.40	10.22	Average
25	3.140	42.22	-13.78	56.00	31.60	0.40	10.22	QP
26	3.140	33.52	-12.48	46.00	22.90	0.40	10.22	Average
27	3.346	40.22	-15.78	56.00	29.60	0.39	10.23	QP
28	3.346	31.22	-14.78	46.00	20.60	0.39	10.23	Average
29	3.472	39.42	-16.58	56.00	28.80	0.39	10.23	QP
30	3.472	29.52	-16.48	46.00	18.90	0.39	10.23	Average



Test Mode :	Mode 5	Temperature :	22~24℃
Test Engineer :	Amos Zhang	Relative Humidity :	42~46%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	LTE Band 12 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable (Data Link with Notebook) + Earphone + Battery 2 + GPS Rx		

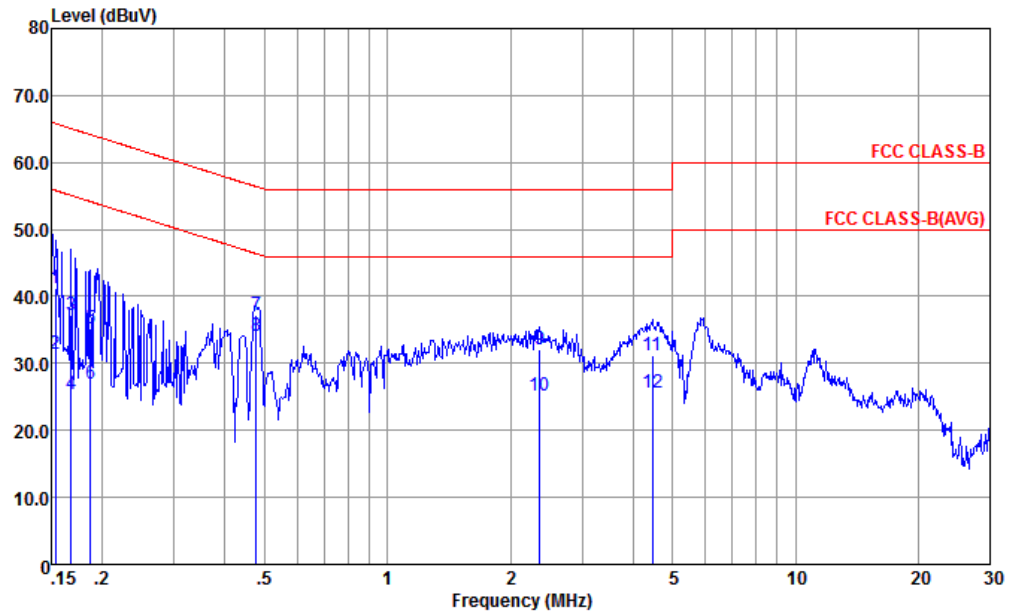


Site : CO01-KS
Condition : FCC CLASS-B LISN-L-161017-060103 LINE
Project : (FC) 760302
mode : Mode 5
: 990008900004073 #7

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.157	39.39	-26.21	65.60	28.51	0.50	10.38	QP
2	0.157	26.39	-29.21	55.60	15.51	0.50	10.38	Average
3	0.169	38.00	-26.99	64.99	27.20	0.43	10.37	QP
4	0.169	25.40	-29.59	54.99	14.60	0.43	10.37	Average
5	0.183	36.00	-28.33	64.33	25.30	0.35	10.35	QP
6	0.183	24.90	-29.43	54.33	14.20	0.35	10.35	Average
7	0.447	36.76	-20.17	56.93	26.30	0.27	10.19	QP
8	0.447	33.36	-13.57	46.93	22.90	0.27	10.19	Average
9	0.484	35.76	-20.51	56.27	25.30	0.27	10.19	QP
10 *	0.484	33.76	-12.51	46.27	23.30	0.27	10.19	Average
11	4.721	28.25	-27.75	56.00	17.80	0.21	10.24	QP
12	4.721	22.65	-23.35	46.00	12.20	0.21	10.24	Average



Test Mode :	Mode 5	Temperature :	22~24℃
Test Engineer :	Amos Zhang	Relative Humidity :	42~46%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	LTE Band 12 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable (Data Link with Notebook) + Earphone + Battery 2 + GPS Rx		



Site : CO01-KS
 Condition : FCC CLASS-B LISN-N-161017-060103 NEUTRAL
 Project : (FC) 760302
 mode : Mode 5
 : 990008900004073 #7

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.153	41.23	-24.59	65.82	30.50	0.34	10.39	QP
2	0.153	31.33	-24.49	55.82	20.60	0.34	10.39	Average
3	0.168	37.31	-27.77	65.08	26.60	0.34	10.37	QP
4	0.168	25.31	-29.77	55.08	14.60	0.34	10.37	Average
5	0.187	35.18	-28.97	64.15	24.50	0.33	10.35	QP
6	0.187	26.98	-27.17	54.15	16.30	0.33	10.35	Average
7	0.476	37.17	-19.24	56.41	26.60	0.38	10.19	QP
8 *	0.476	34.07	-12.34	46.41	23.50	0.38	10.19	Average
9	2.358	32.10	-23.90	56.00	21.50	0.40	10.20	QP
10	2.358	25.20	-20.80	46.00	14.60	0.40	10.20	Average
11	4.454	31.23	-24.77	56.00	20.61	0.38	10.24	QP
12	4.454	25.73	-20.27	46.00	15.11	0.38	10.24	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

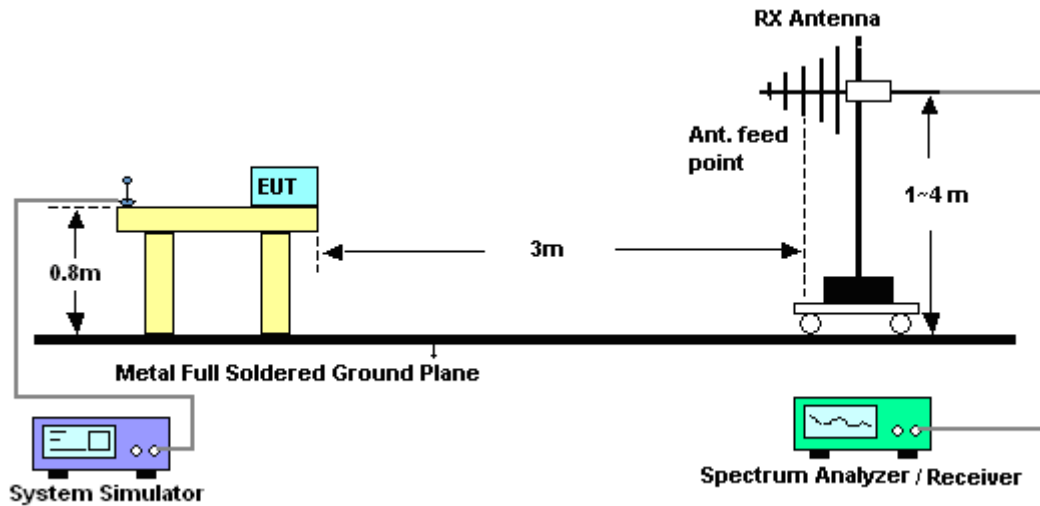
The measuring equipment is listed in the section 4 of this test report.

3.2.3. Test Procedures

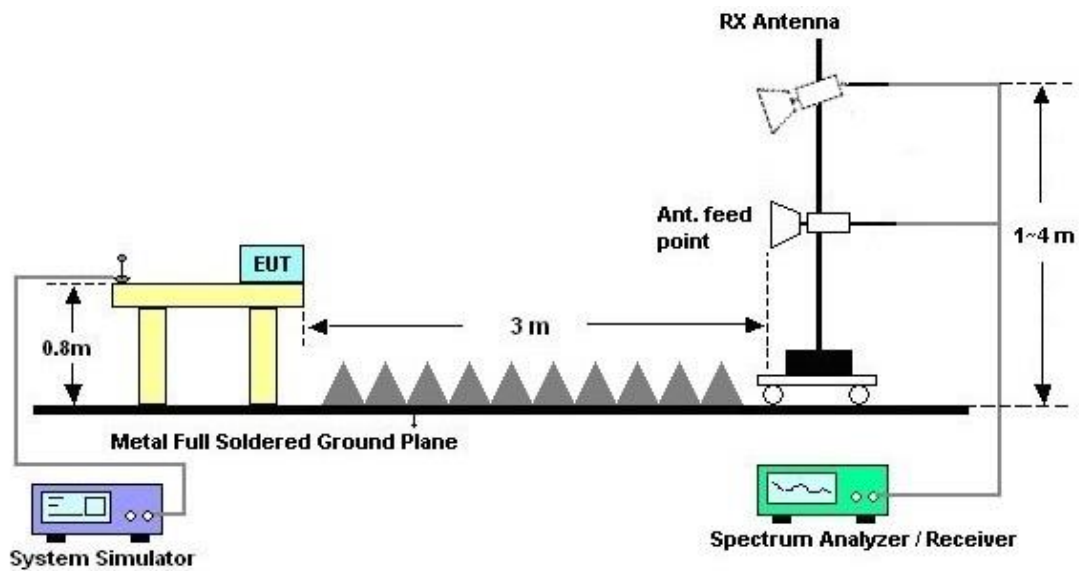
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna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

3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



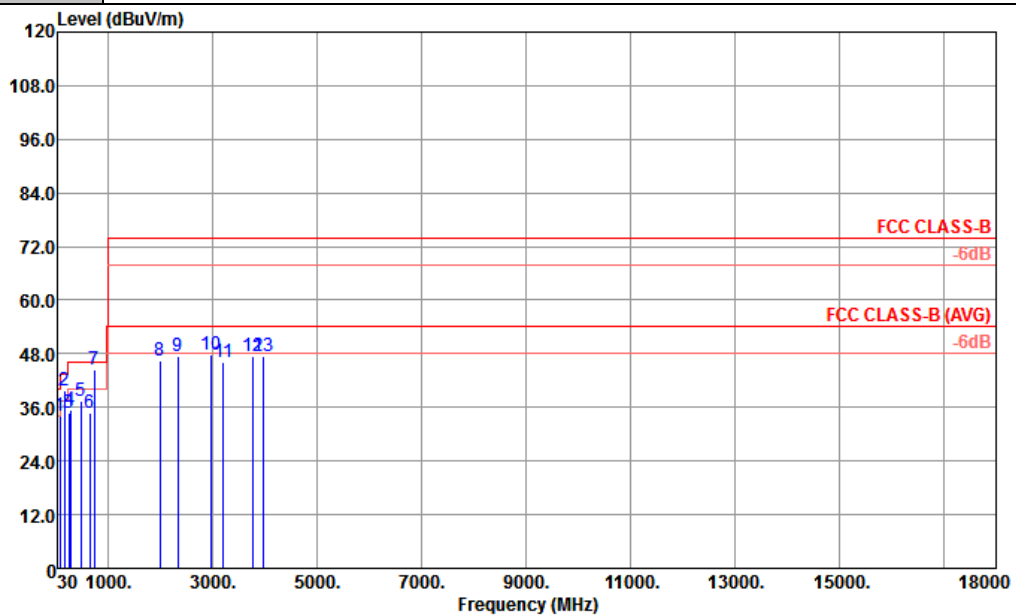
For radiated emissions above 1GHz





3.2.5. Test Result of Radiated Emission

Test Mode :	Mode 5	Temperature :	21~22°C
Test Engineer :	Leo Liao	Relative Humidity :	41~42%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	LTE Band 12 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable (Data Link with Notebook) + Earphone + Battery 1 + GPS Rx		
Remark :	#7 is system simulator signal which can be ignored.		

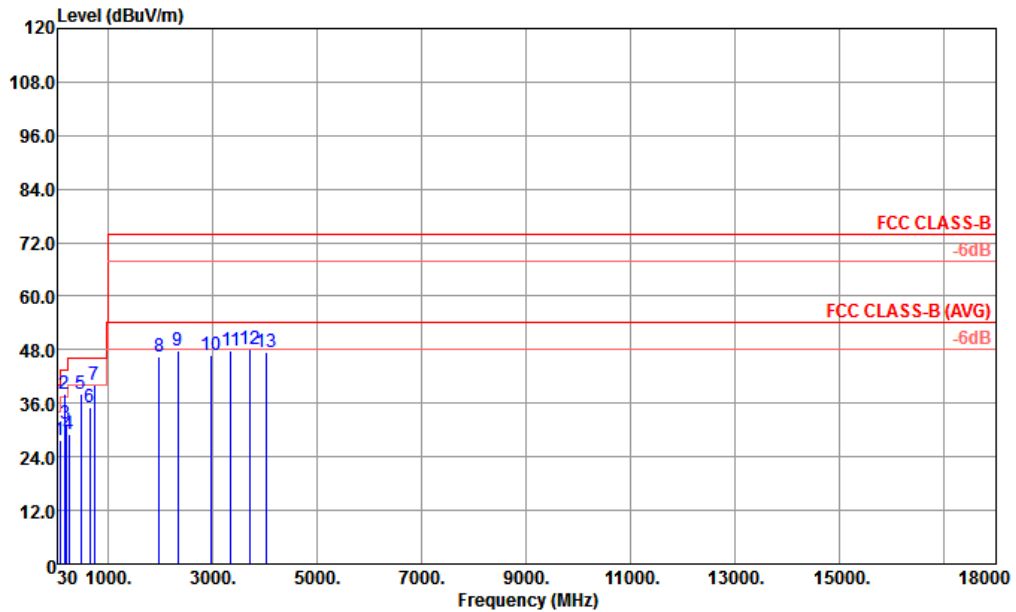


Site : 03CH02-KS
 Condition : FCC CLASS-B 3m 02 LF ANT HORIZONTAL
 Project : (FC) 760302
 Mode : 5
 IMEI : 990008900005856 #12
 Battery : 25%
 : from mode 3
 : PC/NB USB Data Link to EUT (eMMC)

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 !	84.54	34.25	-5.75	40.00	50.35	15.70	0.21	32.01	---	---	Peak
2 !	165.54	39.76	-3.74	43.50	54.20	16.96	0.35	31.75	200	85	QP
3	255.18	34.67	-11.33	46.00	48.59	17.00	0.49	31.41	---	---	Peak
4	283.80	35.37	-10.63	46.00	48.28	17.78	0.56	31.25	---	---	Peak
5	479.90	37.35	-8.65	46.00	43.03	23.62	0.92	30.22	---	---	Peak
6	645.10	34.64	-11.36	46.00	37.53	25.31	1.01	29.21	---	---	Peak
7 !	735.40	44.62			45.31	26.62	1.31	28.62	---	---	Peak
8	1996.00	46.40	-27.60	74.00	44.36	30.20	4.46	32.62	---	---	Peak
9	2336.00	47.41	-26.59	74.00	42.58	31.09	5.64	31.90	---	---	Peak
10	2982.00	47.73	-26.27	74.00	41.12	32.35	3.09	28.83	---	---	Peak
11	3213.00	46.03	-27.97	74.00	37.55	33.11	6.05	30.68	---	---	Peak
12	3765.00	47.50	-26.50	74.00	36.55	34.63	6.44	30.12	---	---	Peak
13	3984.00	47.50	-26.50	74.00	37.06	34.99	6.03	30.58	---	---	Peak



Test Mode :	Mode 5	Temperature :	21~22°C
Test Engineer :	Leo Liao	Relative Humidity :	41~42%
Test Distance :	3m	Polarization :	Vertical
Function Type :	LTE Band 12 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable (Data Link with Notebook) + Earphone + Battery 1 + GPS Rx		
Remark :	#7 is system simulator signal which can be ignored.		



Site : 03CH02-KS
Condition : FCC CLASS-B 3m 02 LF ANT VERTICAL
Project : (FC) 760302
Mode : 5
IMEI : 990008900005856 #12
Battery : 25%
: from mode 3
: PC/NB USB Data Link to EUT (eMMC)

	Freq	Level	Over Limit	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	84.54	27.90	-12.10	40.00	44.00	15.70	0.21	32.01	---	Peak
2 !	165.27	38.05	-5.45	43.50	52.49	16.96	0.35	31.75	200	135 QP
3	195.78	31.52	-11.98	43.50	46.82	15.94	0.41	31.65	---	Peak
4	254.10	29.14	-16.86	46.00	43.06	17.00	0.50	31.42	---	Peak
5	479.90	37.97	-8.03	46.00	43.65	23.62	0.92	30.22	---	Peak
6	645.80	35.16	-10.84	46.00	38.01	25.34	1.02	29.21	---	Peak
7	736.10	39.96			40.64	26.62	1.31	28.61	---	Peak
8	1986.00	46.52	-27.48	74.00	44.61	30.07	4.46	32.62	---	Peak
9	2336.00	47.64	-26.36	74.00	42.81	31.09	5.64	31.90	---	Peak
10	2982.00	46.92	-27.08	74.00	40.31	32.35	3.09	28.83	---	Peak
11	3354.00	47.78	-26.22	74.00	38.99	33.20	5.96	30.37	---	Peak
12	3726.00	48.01	-25.99	74.00	37.36	34.38	6.39	30.12	---	Peak
13	4032.00	47.44	-26.56	74.00	36.90	35.05	6.17	30.68	---	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	100768	9kHz~7GHz;	Apr. 20, 2017	Jul. 03, 2017	Apr. 19, 2018	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060103	9kHz~30MHz	Oct. 13, 2016	Jul. 03, 2017	Oct. 12, 2017	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060105	9kHz~30MHz	Oct. 13, 2016	Jul. 03, 2017	Oct. 12, 2017	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	AC 0V~300V, 45Hz~1000Hz	Oct. 13, 2016	Jul. 03, 2017	Oct. 12, 2017	Conduction (CO01-KS)
EMI Test Receiver	R&S	ESR7	101403	9kHz~7GHz;Ma x 30dBm	Aug. 09.2016	Jul. 03, 2017	Aug. 08.2017	Radiation (03CH02-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150208	10Hz~44G,MAX 30dB	Apr. 18, 2017	Jul. 03, 2017	Apr. 17, 2018	Radiation (03CH02-KS)
Bilog Antenna	TeseQ	CBL6112D	37879	30MHz~2GHz	Aug. 20, 2016	Jul. 03, 2017	Aug. 19, 2017	Radiation (03CH02-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75957	1GHz~18GHz	Oct. 22, 2016	Jul. 03, 2017	Oct. 21, 2017	Radiation (03CH02-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	Aug. 09, 2016	Jul. 03, 2017	Aug. 08, 2017	Radiation (03CH02-KS)
Amplifier	Agilent	8449B	3008A02384	1-26.5GHz Gain 30dB	Oct. 13, 2016	Jul. 03, 2017	Oct. 12, 2017	Radiation (03CH02-KS)
AC Power Source	Chroma	61601	616010002473	N/A	NCR	Jul. 03, 2017	NCR	Radiation (03CH02-KS)
Turn Table	MF	MF7802	N/A	0~360 degree	NCR	Jul. 03, 2017	NCR	Radiation (03CH02-KS)
Antenna Mast	MF	MF7802	N/A	1 m~4 m	NCR	Jul. 03, 2017	NCR	Radiation (03CH02-KS)

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.2dB
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.7dB
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