FCC Test Report

APPLICANT	:	**ZTE CORPORATION**
EQUIPMENT	:	**LTE/WCDMA/GSM(GPRS) Multi-Mode Digital Mobile Phone**
BRAND NAME	:	**ZTE**
MODEL NAME	:	**Z855**
FCC ID	:	**SRQ-Z855**
STANDARD	:	**FCC 47 CFR FCC Part 15 Subpart B**
CLASSIFICATION	:	**Certification**

The product was received on Jul. 19, 2017 and testing was completed on Aug. 24, 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.

James Huang

TESTING
NVLAP LAB CODE 600155-0

Approved by: James Huang / Manager

Sporton International (Kunshan) Inc.
No.3-2 Ping-Xiang Rd, Kunshan Development Zone Kunshan City Jiangsu Province 215335 China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC771905	Rev. 01	Initial issue of report	Sep. 01, 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 6.22 dB at 0.466 MHz
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	Under limit 4.36 dB at 44.04 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	Z855
FCC ID	SRQ-Z855
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/DC-HSDPA/ HSPA/HSPA+(16QAM uplink is not supported)/ LTE WLAN2.4GHz 802.11b/g/n HT20 Bluetoothv3.0+EDR/ Bluetoothv4.0 LE Bluetoothv4.1 LE/ Bluetoothv4.2 LE
IMEI Code	Conduction: 865882030003854 Radiation: 865882030016831
HW Version	Z855HW1.0
SW Version	Z855_MPCSV1.0.0B02
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 66 ： 1710.7 MHz ~ 1779.3 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 66 ：2110.7 MHz ~ 2199.3 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz GPS/Glonass : 1559 MHz ~ 1610 MHz FM: 87.5MHz~108MHz
Antenna Type	WWAN : PIFA Antenna WLAN : PIFA Antenna Bluetooth : PIFA Antenna GPS/Glonass : 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 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/Glonass : BPSK FM: FM

1.5. Modification of EUT

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

1.6. Test Location

Sporton Lab is accredited to ISO 17025 by National Voluntary Laboratory Accreditation Program (NVLAP code: 600155-0) and the FCC designation No is CN5013.

Test Site	Sporton International (Kunshan) Inc.		
Test Site Location	No.3-2 Ping-Xiang Rd, Kunshan Development Zone Kunshan City Jiangsu Province 215335 China TEL : +86-512-57900158 FAX : +86-512-57900958		
Test Site No.	**Sporton Site No.**		**FCC Test Firm Registration No.**
	CO01-KS	03CH02-KS	630927

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.

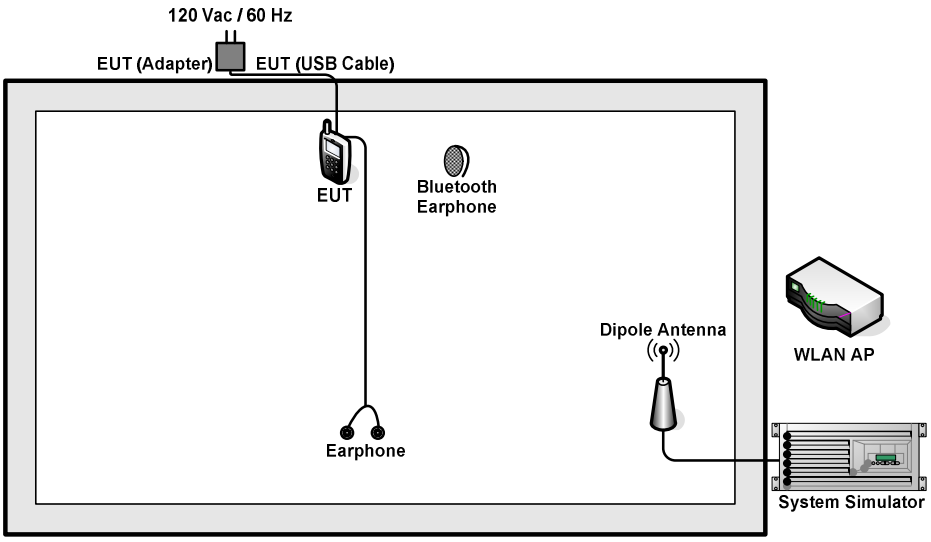
Frequency range investigated: conduction (150 kHz to 30 MHz), radiation (30MHz to the 5th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

Test Items	Function Type
AC Conducted Emission	Mode 1 : GSM 850 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Charging from Adapter1) + Camera(Rear)<Fig.1> Mode 2 : PCS1900 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Charging from Adapter2) + Camera(Front)<Fig. 1> Mode 3 : WCDMA Band V Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Charging from Adapter1) + MPEG4<Fig. 1> Mode 4 : LTE Band 2 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Data Link with Notebook) + GNSS Rx<Fig. 2>
Radiated Emissions	Mode 1 : GSM 850 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Charging from Adapter1) + Camera(Rear)<Fig.1> Mode 2 : PCS1900 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Charging from Adapter2) + Camera(Front)<Fig.1> Mode 3 : WCDMA Band V Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Charging from Adapter1) + MPEG4<Fig.1> Mode 4 : LTE Band 2 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Data Link with Notebook) + GNSS Rx<Fig. 2>

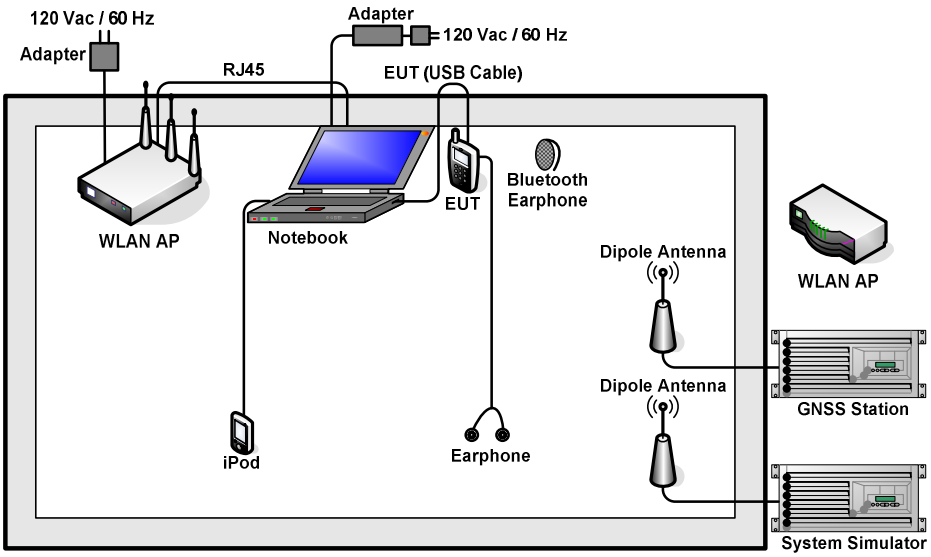
Remark:

1. The worst case of AC is mode 1; and the USB Link mode is mode 4, the test data of these modes were reported.
2. The worst case of RE < 1G is mode 1; and the USB Link mode is mode 4, the test data of these modes were 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>

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	Anritus	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	GPS Station	ADIVIC	MP9000	N/A	N/A	Unshielded, 1.8 m
3.	WLAN AP	LINKSYS	WRT600N	Q87-WRT600NV11	N/A	Unshielded, 1.8 m
4.	WLAN AP	TP-LINK	TL-WDR5600	N/A	N/A	Unshielded, 1.8 m
5.	Router	D-link	DIR-855	KA2DIR855A2	N/A	Unshielded, 1.8 m
6.	Bluetooth Earphone	Lenovo	LBH308	PYAHS-107W	N/A	N/A
7.	Bluetooth Earphone	Lenovo	LBH301	N/A	N/A	N/A
8.	Notebook	Lenovo	G480	PRC4	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
9.	Notebook	Dell	Latitude3440	N/A	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
10.	Earphone	Lenovo	LH102	N/A	N/A	Unshielded, 1.8 m
11.	Earphone	Lenovo	SH100	N/A	N/A	Unshielded, 1.8 m
12.	iPod	Apple	A1199	FCC DoC	Unshielded, 1.2 m	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.	LABSAT GPS Simulator	RACELOGIC	RLLS03-2RP	N/A	N/A	Unshielded,1.8 m
16.	Signal Generator	R&S	SMBV100A	N/A	N/A	Unshielded,1.8m

2.4. EUT Operation Test Setup

The EUT was in GSM or WCDMA or LTE or HSDPA 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 Laptop and EUT via USB cable.
2. Execute "GPS Test" 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.

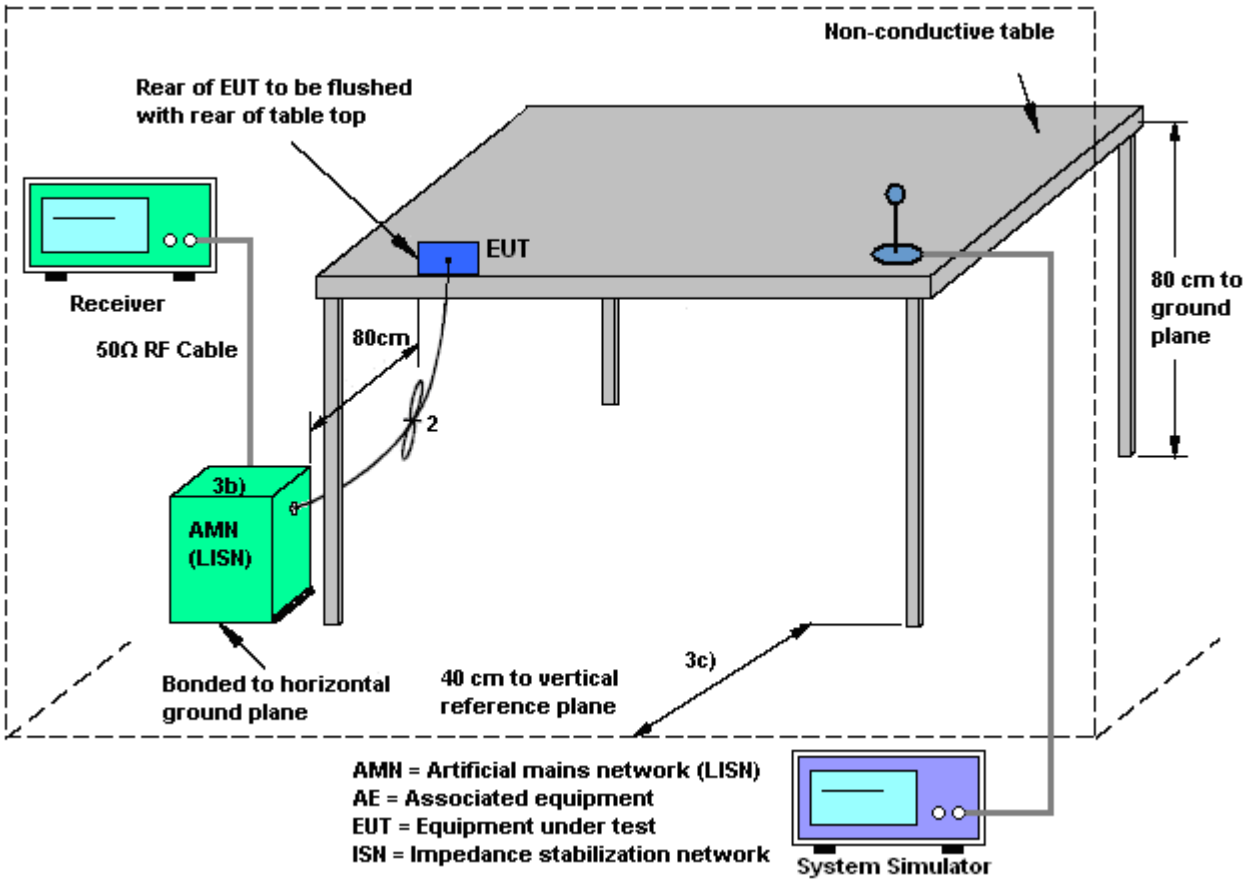
3.1.2 Measuring Instruments

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

3.1.3 Test Procedure

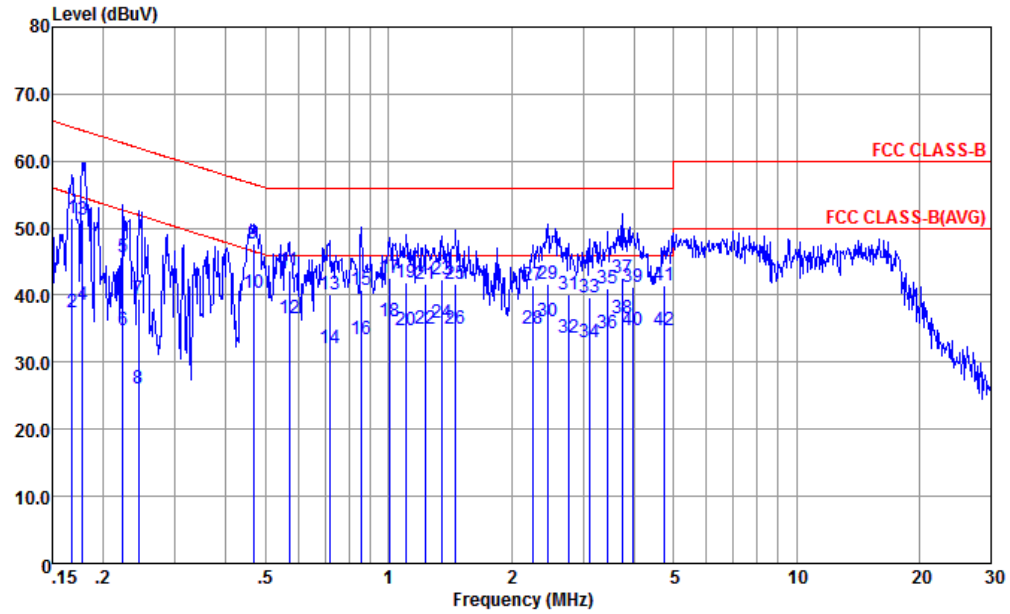
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.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

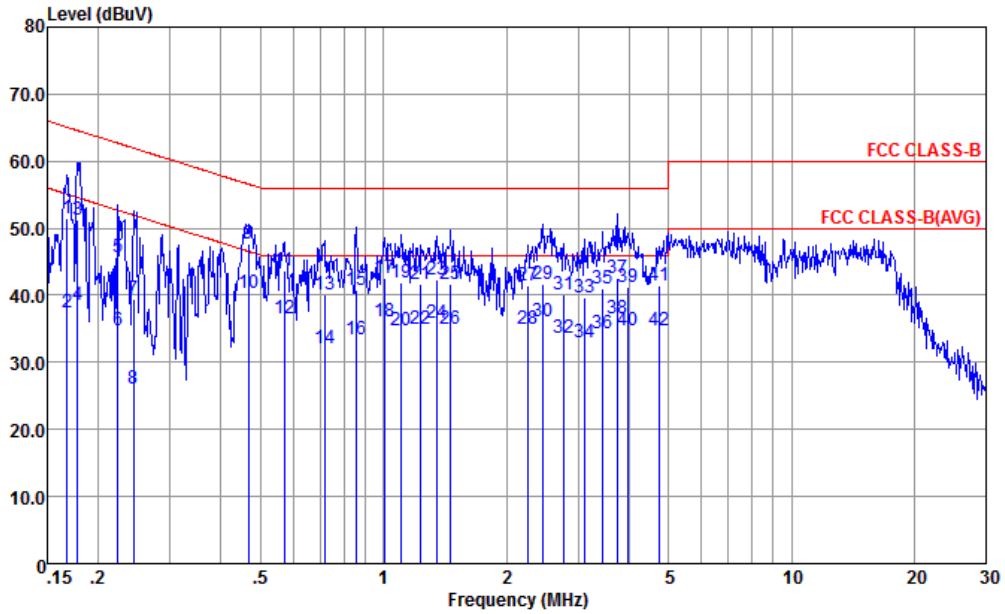
Test Mode :	Mode 1	Temperature :	22~24℃
Test Engineer :	Amos Zhang	Relative Humidity :	42~46%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM 850 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Charging from Adapter1) + Camera(Rear)		



Site : CO01-KS
Condition : FCC CLASS-B LISN-L-161017-060103 LINE

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.168	51.41	-13.67	65.08	40.60	0.44	10.37	QP
2	0.168	37.41	-17.67	55.08	26.60	0.44	10.37	Average
3	0.178	51.34	-13.25	64.59	40.60	0.38	10.36	QP
4	0.178	38.54	-16.05	54.59	27.80	0.38	10.36	Average
5	0.223	45.78	-16.92	62.70	35.20	0.27	10.31	QP
6	0.223	34.68	-18.02	52.70	24.10	0.27	10.31	Average
7	0.244	39.36	-22.59	61.95	28.80	0.27	10.29	QP
8	0.244	26.16	-25.79	51.95	15.60	0.27	10.29	Average
9	0.466	47.76	-8.82	56.58	37.30	0.27	10.19	QP
10 *	0.466	40.36	-6.22	46.58	29.90	0.27	10.19	Average
11	0.570	43.65	-12.35	56.00	33.21	0.26	10.18	QP
12	0.570	36.65	-9.35	46.00	26.21	0.26	10.18	Average
13	0.716	40.03	-15.97	56.00	29.60	0.25	10.18	QP
14	0.716	32.03	-13.97	46.00	21.60	0.25	10.18	Average
15	0.857	40.73	-15.27	56.00	30.29	0.26	10.18	QP
16	0.857	33.33	-12.67	46.00	22.89	0.26	10.18	Average
17	1.005	42.65	-13.35	56.00	32.20	0.26	10.19	QP

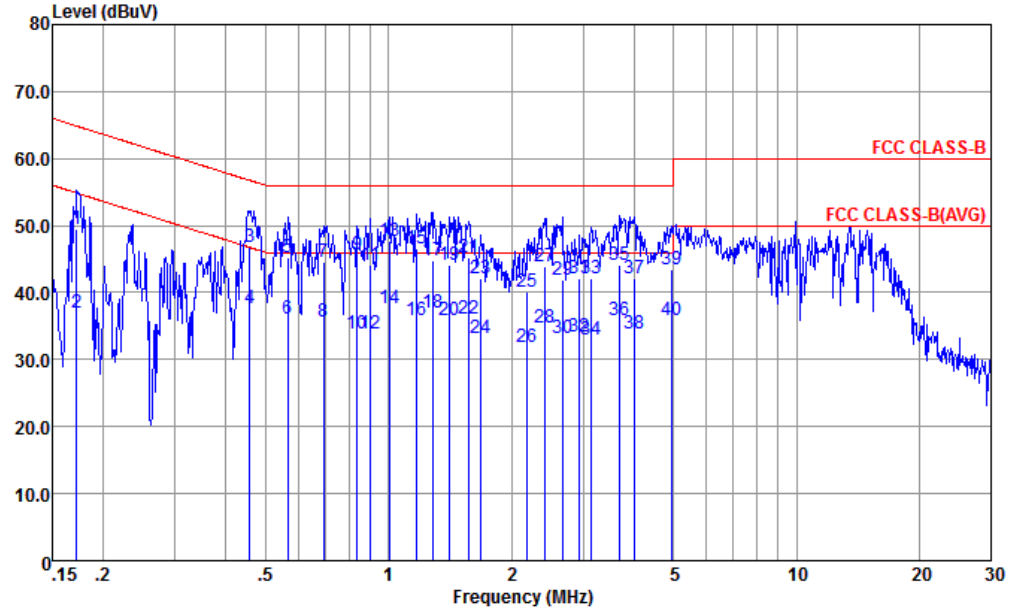
Test Mode :	Mode 1	Temperature :	22~24℃
Test Engineer :	Amos Zhang	Relative Humidity :	42~46%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM 850 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Charging from Adapter1) + Camera(Rear)		



Site : CO01-KS
Condition : FCC CLASS-B LISN-L-161017-060103 LINE

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
18	1.005	36.05	-9.95	46.00	25.60	0.26	10.19	Average
19	1.106	41.94	-14.06	56.00	31.50	0.25	10.19	QP
20	1.106	34.74	-11.26	46.00	24.30	0.25	10.19	Average
21	1.236	41.63	-14.37	56.00	31.20	0.24	10.19	QP
22	1.236	35.03	-10.97	46.00	24.60	0.24	10.19	Average
23	1.352	42.33	-13.67	56.00	31.90	0.24	10.19	QP
24	1.352	35.93	-10.07	46.00	25.50	0.24	10.19	Average
25	1.464	41.62	-14.38	56.00	31.20	0.23	10.19	QP
26	1.464	35.02	-10.98	46.00	24.60	0.23	10.19	Average
27	2.261	41.51	-14.49	56.00	31.10	0.21	10.20	QP
28	2.261	35.01	-10.99	46.00	24.60	0.21	10.20	Average
29	2.461	41.71	-14.29	56.00	31.30	0.21	10.20	QP
30	2.461	36.01	-9.99	46.00	25.60	0.21	10.20	Average
31	2.765	40.02	-15.98	56.00	29.60	0.21	10.21	QP
32	2.765	33.62	-12.38	46.00	23.20	0.21	10.21	Average
33	3.107	39.73	-16.27	56.00	29.30	0.21	10.22	QP
34	3.107	33.03	-12.97	46.00	22.60	0.21	10.22	Average
35	3.454	41.04	-14.96	56.00	30.60	0.21	10.23	QP
36	3.454	34.34	-11.66	46.00	23.90	0.21	10.23	Average
37	3.759	42.65	-13.35	56.00	32.20	0.21	10.24	QP
38	3.759	36.65	-9.35	46.00	26.20	0.21	10.24	Average
39	3.985	41.25	-14.75	56.00	30.80	0.21	10.24	QP
40	3.985	34.75	-11.25	46.00	24.30	0.21	10.24	Average
41	4.746	41.35	-14.65	56.00	30.90	0.21	10.24	QP
42	4.746	34.75	-11.25	46.00	24.30	0.21	10.24	Average

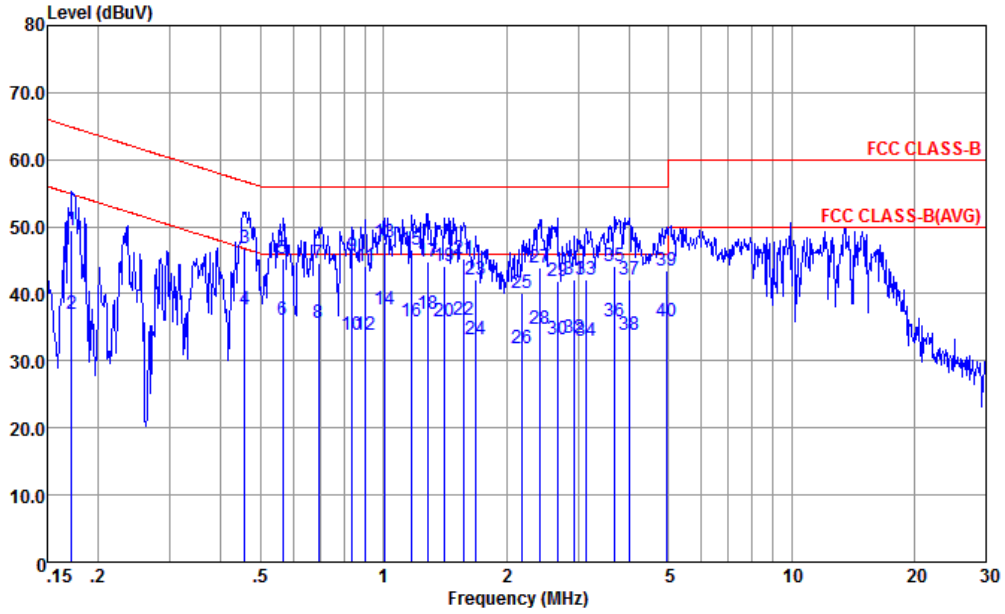
Test Mode :	Mode 1	Temperature :	22~24℃
Test Engineer :	Amos Zhang	Relative Humidity :	42~46%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM 850 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Charging from Adapter1) + Camera(Rear)		



Site : CO01-KS
Condition : FCC CLASS-B LISN-N-161017-060103 NEUTRAL

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1		0.172	49.50	-15.36	64.86	38.80	0.34	10.36	QP
2		0.172	36.90	-17.96	54.86	26.20	0.34	10.36	Average
3		0.456	46.87	-9.89	56.76	36.30	0.38	10.19	QP
4		0.456	37.67	-9.09	46.76	27.10	0.38	10.19	Average
5		0.567	45.16	-10.84	56.00	34.60	0.38	10.18	QP
6		0.567	36.16	-9.84	46.00	25.60	0.38	10.18	Average
7		0.694	44.46	-11.54	56.00	33.90	0.38	10.18	QP
8		0.694	35.76	-10.24	46.00	25.20	0.38	10.18	Average
9		0.839	45.77	-10.23	56.00	35.20	0.39	10.18	QP
10		0.839	33.87	-12.13	46.00	23.30	0.39	10.18	Average
11		0.904	44.08	-11.92	56.00	33.51	0.39	10.18	QP
12		0.904	33.78	-12.22	46.00	23.21	0.39	10.18	Average
13	*	1.005	47.79	-8.21	56.00	37.20	0.40	10.19	QP
14		1.005	37.69	-8.31	46.00	27.10	0.40	10.19	Average
15		1.172	46.49	-9.51	56.00	35.90	0.40	10.19	QP
16		1.172	35.89	-10.11	46.00	25.30	0.40	10.19	Average
17		1.289	44.79	-11.21	56.00	34.20	0.40	10.19	QP

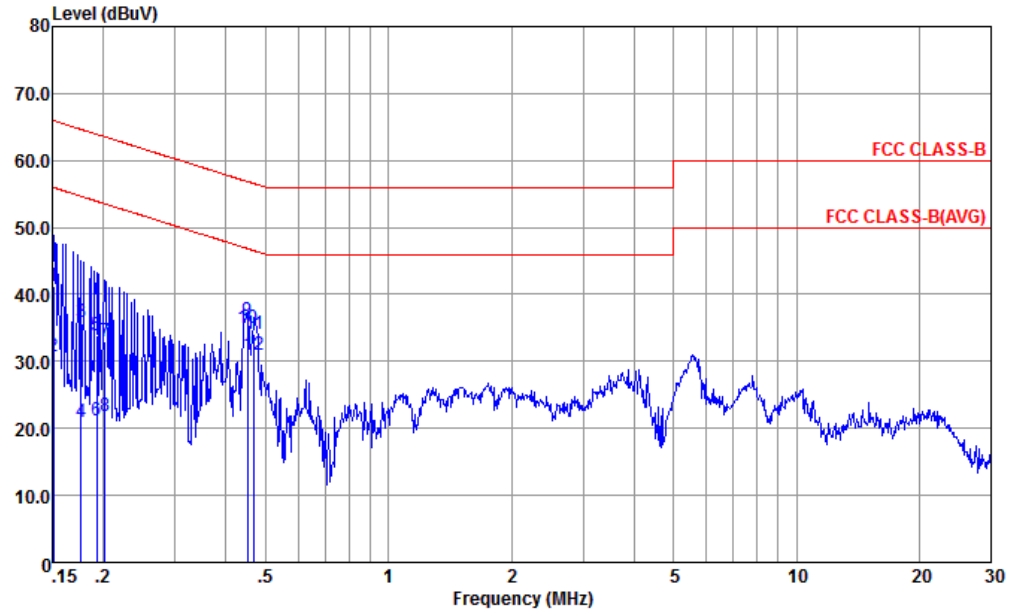
Test Mode :	Mode 1	Temperature :	22~24℃
Test Engineer :	Amos Zhang	Relative Humidity :	42~46%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM 850 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Charging from Adapter1) + Camera(Rear)		



Site : CO01-KS
Condition : FCC CLASS-B LISN-N-161017-060103 NEUTRAL

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
18	1.289	36.89	-9.11	46.00	26.30	0.40	10.19	Average
19	1.411	44.19	-11.81	56.00	33.60	0.40	10.19	QP
20	1.411	35.89	-10.11	46.00	25.30	0.40	10.19	Average
21	1.568	45.19	-10.81	56.00	34.59	0.41	10.19	QP
22	1.568	36.19	-9.81	46.00	25.59	0.41	10.19	Average
23	1.689	42.20	-13.80	56.00	31.60	0.41	10.19	QP
24	1.689	33.20	-12.80	46.00	22.60	0.41	10.19	Average
25	2.190	40.20	-15.80	56.00	29.60	0.41	10.19	QP
26	2.190	31.90	-14.10	46.00	21.30	0.41	10.19	Average
27	2.422	43.81	-12.19	56.00	33.21	0.40	10.20	QP
28	2.422	34.71	-11.29	46.00	24.11	0.40	10.20	Average
29	2.664	41.81	-14.19	56.00	31.20	0.40	10.21	QP
30	2.664	33.21	-12.79	46.00	22.60	0.40	10.21	Average
31	2.946	42.21	-13.79	56.00	31.59	0.40	10.22	QP
32	2.946	33.51	-12.49	46.00	22.89	0.40	10.22	Average
33	3.140	42.12	-13.88	56.00	31.50	0.40	10.22	QP
34	3.140	32.92	-13.08	46.00	22.30	0.40	10.22	Average
35	3.681	44.12	-11.88	56.00	33.50	0.39	10.23	QP
36	3.681	35.82	-10.18	46.00	25.20	0.39	10.23	Average
37	4.006	42.23	-13.77	56.00	31.60	0.39	10.24	QP
38	4.006	33.93	-12.07	46.00	23.30	0.39	10.24	Average
39	4.926	43.52	-12.48	56.00	32.90	0.38	10.24	QP
40	4.926	35.82	-10.18	46.00	25.20	0.38	10.24	Average

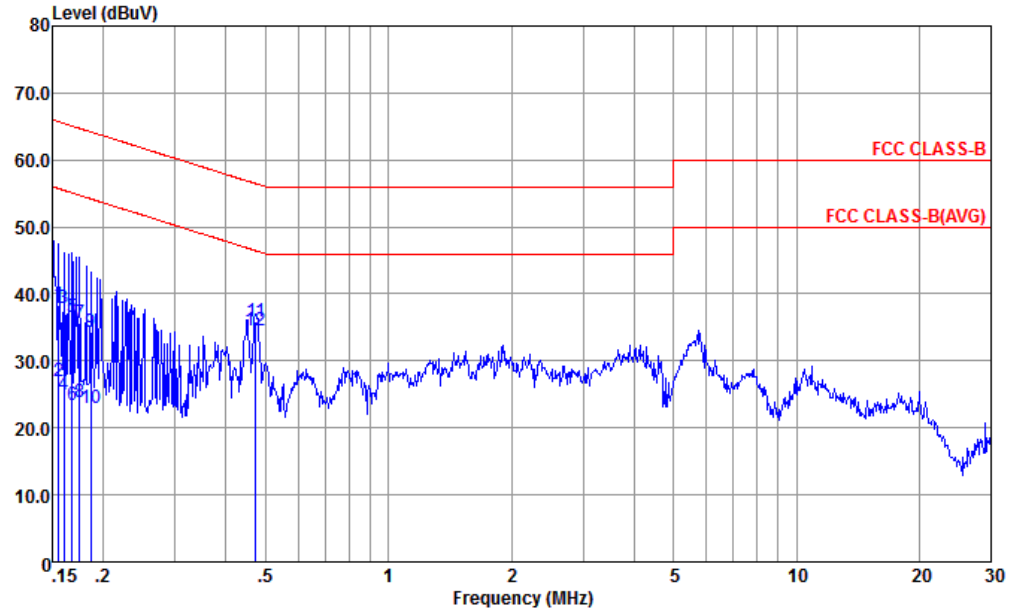
Test Mode :	Mode 4	Temperature :	22~24℃
Test Engineer :	Amos Zhang	Relative Humidity :	42~46%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	LTE Band 2 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Data Link with Notebook) + GNSS Rx		



Site : CO01-KS
Condition : FCC CLASS-B LISN-L-161017-060103 LINE

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.151	41.24	-24.72	65.96	30.30	0.55	10.39	QP
2	0.151	30.84	-25.12	55.96	19.90	0.55	10.39	Average
3	0.177	35.95	-28.69	64.64	25.20	0.39	10.36	QP
4	0.177	21.05	-33.59	54.64	10.30	0.39	10.36	Average
5	0.192	33.94	-29.99	63.93	23.30	0.30	10.34	QP
6	0.192	21.24	-32.69	53.93	10.60	0.30	10.34	Average
7	0.202	32.90	-30.64	63.54	22.30	0.27	10.33	QP
8	0.202	21.80	-31.74	53.54	11.20	0.27	10.33	Average
9	0.452	36.06	-20.79	56.85	25.60	0.27	10.19	QP
10 *	0.452	34.96	-11.89	46.85	24.50	0.27	10.19	Average
11	0.469	34.06	-22.48	56.54	23.60	0.27	10.19	QP
12	0.469	31.06	-15.48	46.54	20.60	0.27	10.19	Average

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 2 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Data Link with Notebook) + GNSS Rx		



Site : CO01-KS
Condition : FCC CLASS-B LISN-N-161017-060103 NEUTRAL

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.156	38.33	-27.36	65.69	27.60	0.34	10.39	QP
2	0.156	26.93	-28.76	55.69	16.20	0.34	10.39	Average
3	0.160	37.92	-27.55	65.47	27.20	0.34	10.38	QP
4	0.160	24.92	-30.55	55.47	14.20	0.34	10.38	Average
5	0.168	36.51	-28.57	65.08	25.80	0.34	10.37	QP
6	0.168	23.51	-31.57	55.08	12.80	0.34	10.37	Average
7	0.175	35.60	-29.12	64.72	24.91	0.33	10.36	QP
8	0.175	23.90	-30.82	54.72	13.21	0.33	10.36	Average
9	0.186	34.28	-29.92	64.20	23.60	0.33	10.35	QP
10	0.186	22.88	-31.32	54.20	12.20	0.33	10.35	Average
11	0.474	35.77	-20.68	56.45	25.20	0.38	10.19	QP
12 *	0.474	34.47	-11.98	46.45	23.90	0.38	10.19	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

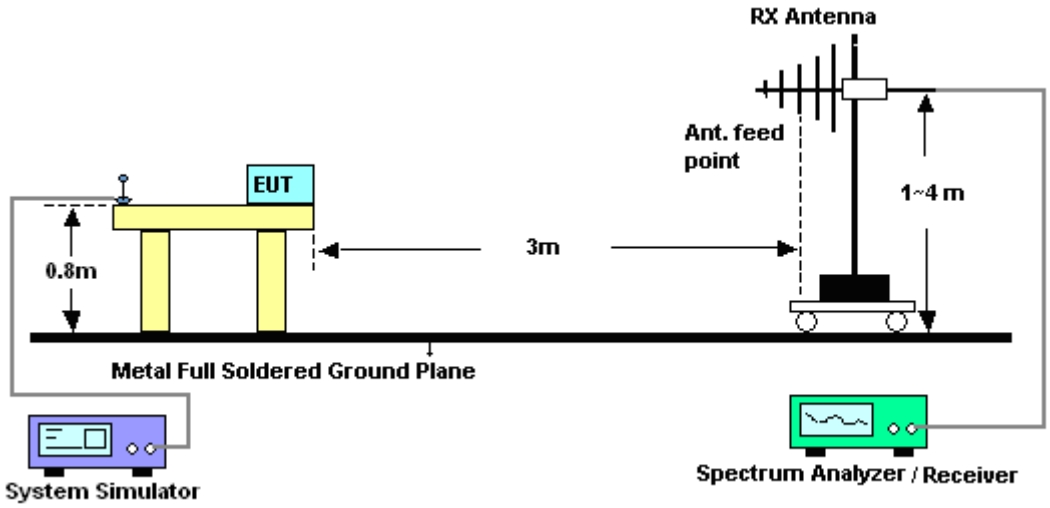
The measuring equipment is listed in the section 4 of this test report.

3.2.3. Test Procedures

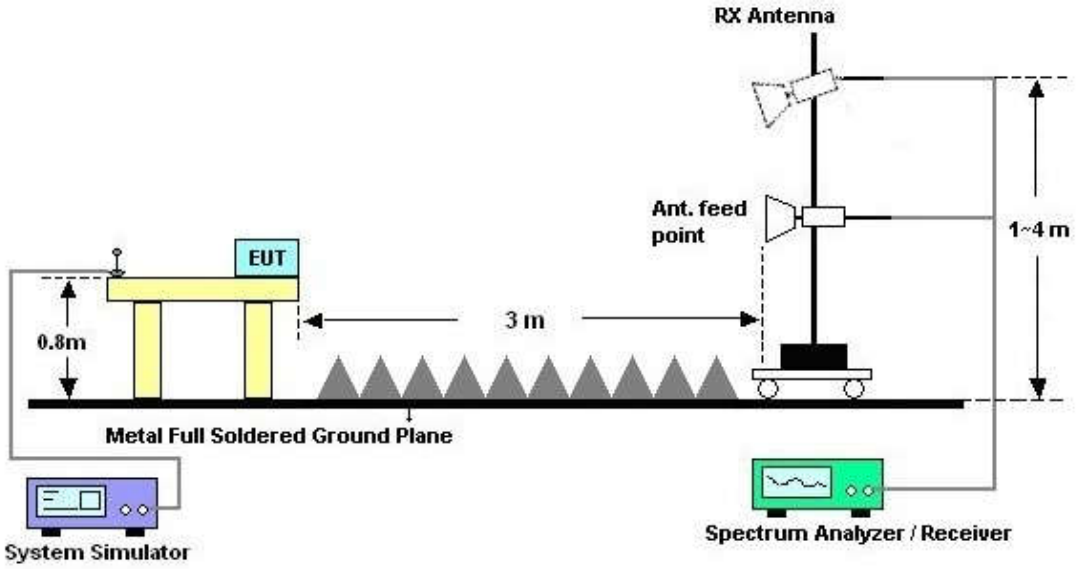
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna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

3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz

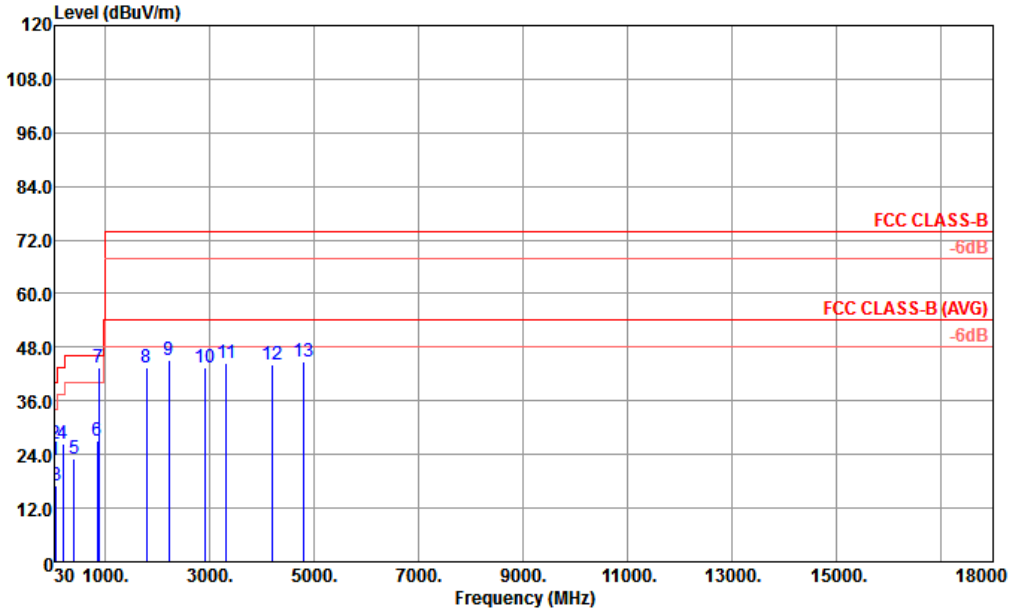


For radiated emissions above 1GHz



3.2.5. Test Result of Radiated Emission

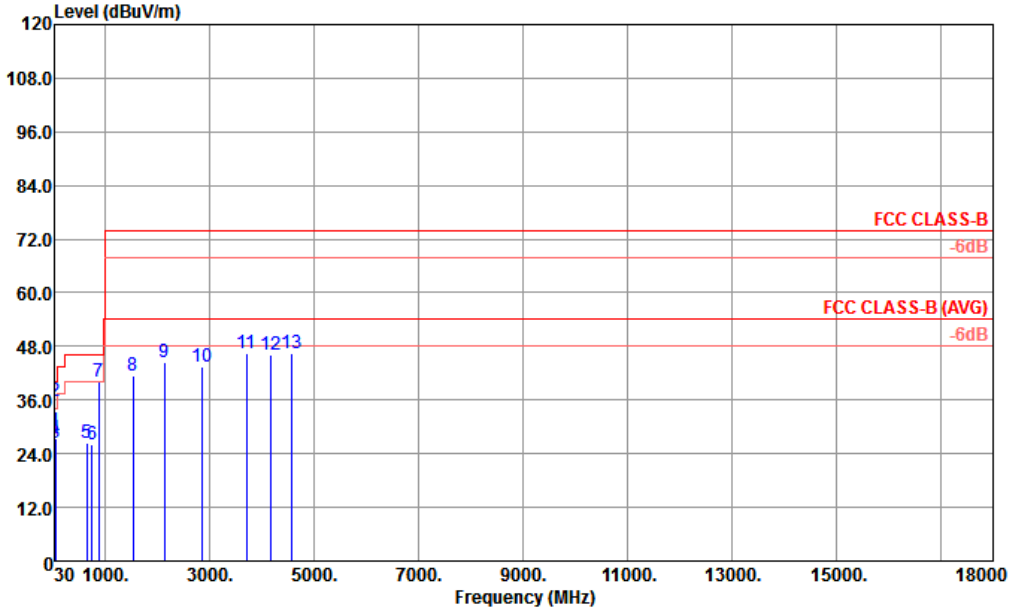
Test Mode :	Mode 1	**Temperature :**	21~22℃
Test Engineer :	Carl Ni	**Relative Humidity :**	41~42%
Test Distance :	3m	**Polarization :**	Horizontal
Function Type :	GSM 850 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Charging from Adapter1) + Camera(Rear)		
Remark :	#7 is system simulator signal which can be ignored.		



Site : 03CH02-KS
Condition : FCC CLASS-B 3m 02 LF ANT HORIZONTAL

		Freq	Level	Limit	Line	Level	Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1		31.62	22.57	-17.43	40.00	29.31	25.23	0.11	32.08	---	---	Peak
2		43.77	26.36	-13.64	40.00	37.72	20.57	0.13	32.06	100	0	Peak
3		60.24	16.96	-23.04	40.00	35.74	13.10	0.16	32.04	---	---	Peak
4		192.00	26.38	-17.12	43.50	41.58	16.07	0.40	31.67	---	---	Peak
5		405.70	23.22	-22.78	46.00	27.31	25.57	0.93	30.59	---	---	Peak
6		850.20	27.05	-18.95	46.00	26.44	27.10	1.37	27.86	---	---	Peak
7	!	881.70	43.37			42.04	27.35	1.59	27.61	---	---	Peak
8		1800.00	43.38	-30.62	74.00	43.13	29.13	4.59	33.47	---	---	Peak
9		2218.00	45.03	-28.97	74.00	41.60	30.84	5.78	33.19	---	---	Peak
10		2924.00	43.55	-30.45	74.00	40.32	32.15	3.00	31.92	---	---	Peak
11		3324.00	44.38	-29.62	74.00	37.37	33.19	5.97	32.15	---	---	Peak
12		4203.00	43.96	-30.04	74.00	34.58	35.32	6.59	32.53	---	---	Peak
13		4788.00	44.72	-29.28	74.00	35.36	35.37	6.09	32.10	---	---	Peak

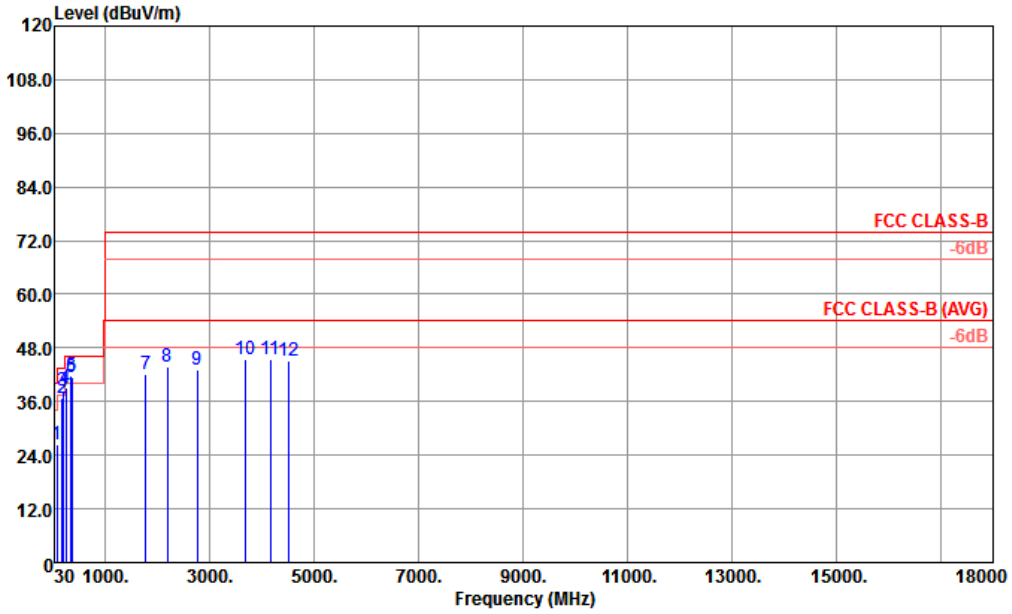
Test Mode :	Mode 1	**Temperature :**	21~22°C
Test Engineer :	Carl Ni	**Relative Humidity :**	41~42%
Test Distance :	3m	**Polarization :**	Vertical
Function Type :	GSM 850 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Charging from Adapter1) + Camera(Rear)		
Remark :	#7 is system simulator signal which can be ignored.		



Site : 03CH02-KS
Condition : FCC CLASS-B 3m 02 LF ANT VERTICAL

	Freq	Level	Limit	Line	Level	Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	33.24	29.00	-11.00	40.00	36.10	24.87	0.11	32.08	---	---	Peak
2 !	44.04	35.64	-4.36	40.00	47.00	20.57	0.13	32.06	100	0	QP
3	51.87	26.46	-13.54	40.00	43.24	15.10	0.15	32.03	---	---	Peak
4	58.08	27.56	-12.44	40.00	45.84	13.60	0.16	32.04	---	---	Peak
5	650.00	26.30	-19.70	46.00	29.06	25.40	1.02	29.18	---	---	Peak
6	747.30	25.97	-20.03	46.00	26.47	26.69	1.35	28.54	---	---	Peak
7 !	881.70	40.04			38.71	27.35	1.59	27.61	---	---	Peak
8	1530.00	41.55	-32.45	74.00	42.94	28.67	3.87	33.93	---	---	Peak
9	2138.00	44.61	-29.39	74.00	41.91	30.60	5.35	33.25	---	---	Peak
10	2860.00	43.46	-30.54	74.00	40.69	31.95	2.85	32.03	---	---	Peak
11	3705.00	46.48	-27.52	74.00	38.03	34.27	6.34	32.16	---	---	Peak
12	4164.00	46.12	-27.88	74.00	36.80	35.27	6.60	32.55	---	---	Peak
13	4563.00	46.33	-27.67	74.00	37.77	35.55	5.06	32.05	---	---	Peak

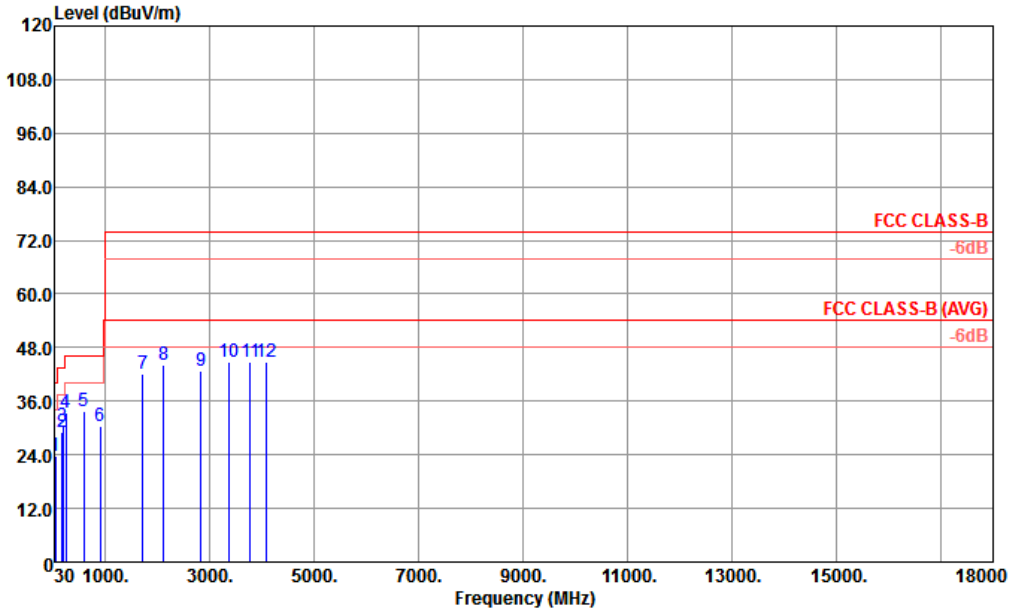
Test Mode :	Mode 4	Temperature :	21~22°C
Test Engineer :	Peter Peng	Relative Humidity :	41~42%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	LTE Band 2 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Data Link with Notebook) + GNSS Rx		



Site : 03CH02-KS
Condition : FCC CLASS-B 3m 02 LF ANT HORIZONTAL

	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	84.54	26.55	-13.45	40.00	42.65	15.70	0.21	32.01	---	---	Peak
2	184.44	36.70	-6.80	43.50	51.66	16.34	0.39	31.69	---	---	Peak
3 !	196.32	38.28	-5.22	43.50	53.58	15.94	0.41	31.65	---	---	Peak
4	254.64	39.24	-6.76	46.00	53.16	17.00	0.49	31.41	---	---	Peak
5 !	344.80	41.86	-4.14	46.00	52.44	19.67	0.71	30.96	100	0	Peak
6 !	361.60	41.45	-4.55	46.00	50.38	21.16	0.77	30.86	---	---	Peak
7	1784.00	42.12	-31.88	74.00	41.95	29.10	4.54	33.47	---	---	Peak
8	2198.00	43.82	-30.18	74.00	40.49	30.75	5.80	33.22	---	---	Peak
9	2762.00	43.13	-30.87	74.00	40.83	31.74	2.81	32.25	---	---	Peak
10	3699.00	45.55	-28.45	74.00	37.15	34.27	6.29	32.16	---	---	Peak
11	4170.00	45.35	-28.65	74.00	36.03	35.27	6.60	32.55	---	---	Peak
12	4506.00	45.29	-28.71	74.00	36.97	35.60	4.75	32.03	---	---	Peak

Test Mode :	Mode 4	Temperature :	21~22°C
Test Engineer :	Carl Ni	Relative Humidity :	41~42%
Test Distance :	3m	Polarization :	Vertical
Function Type :	LTE Band 2 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Data Link with Notebook) + GNSS Rx		



Site : 03CH02-KS
Condition : FCC CLASS-B 3m 02 LF ANT VERTICAL

	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	55.92	23.63	-16.37	40.00	41.42	14.10	0.16	32.05	---	---	Peak
2	180.93	29.08	-14.42	43.50	43.99	16.41	0.38	31.70	---	---	Peak
3	194.16	30.36	-13.14	43.50	45.62	16.00	0.40	31.66	---	---	Peak
4	254.10	33.53	-12.47	46.00	47.45	17.00	0.50	31.42	---	---	Peak
5	598.20	33.66	-12.34	46.00	37.67	24.60	0.90	29.51	100	0	Peak
6	913.20	30.45	-15.55	46.00	28.37	27.74	1.71	27.37	---	---	Peak
7	1722.00	41.99	-32.01	74.00	42.25	28.97	4.38	33.61	---	---	Peak
8	2124.00	44.10	-29.90	74.00	41.46	30.55	5.35	33.26	---	---	Peak
9	2840.00	42.74	-31.26	74.00	40.12	31.90	2.81	32.09	---	---	Peak
10	3378.00	44.79	-29.21	74.00	37.79	33.25	5.94	32.19	---	---	Peak
11	3777.00	44.88	-29.12	74.00	35.96	34.63	6.51	32.22	---	---	Peak
12	4080.00	44.74	-29.26	74.00	35.78	35.13	6.31	32.48	---	---	Peak

4. List of Measuring Equipment

5. 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	Aug. 24, 2017	Apr. 19, 2018	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060103	9kHz~30MHz	Oct. 13, 2016	Aug. 24, 2017	Oct. 12, 2017	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060105	9kHz~30MHz	Oct. 13, 2016	Aug. 24, 2017	Oct. 12, 2017	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	AC 0V~300V, 45Hz~1000Hz	Oct. 13, 2016	Aug. 24, 2017	Oct. 12, 2017	Conduction (CO01-KS)
EMI Test Receiver	Keysight	N9038A	MY56400004	3Hz~8.5GHz;Max 30dBm	Oct. 22.2016	Aug. 22, 2017	Oct.21.2017	Radiation (03CH02-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150208	10Hz-44G,MAX 30dB	Apr. 18, 2017	Aug. 22, 2017	Apr. 17, 2018	Radiation (03CH02-KS)
Bilog Antenna	TeseQ	CBL6112D	35406	25MHz-2GHz	Apr. 22, 2017	Aug. 22, 2017	Apr 21, 2018	Radiation (03CH02-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75957	1GHz~18GHz	Oct. 22, 2016	Aug. 22, 2017	Oct. 21, 2017	Radiation (03CH02-KS)
SHF-EHF Horn	Schwarzbeck	BBHA 9170	BBHA170249	15GHz ~40GHz	Feb. 15, 2017	Aug. 22, 2017	Feb. 14, 2018	Radiation (03CH02-KS)
Amplifier	com-power	PA-103A	161069	1MHz ~1000MHz / 32 dB	Apr 18, 2017	Aug. 22, 2017	Apr 17, 2018	Radiation (03CH02-KS)
Amplifier	Agilent	8449B	3008A02384	1-26.5GHz Gain 30dB	Oct. 13, 2016	Aug. 22, 2017	Oct. 12, 2017	Radiation (03CH02-KS)
AC Power Source	Chroma	61601	616010002473	N/A	NCR	Aug. 22, 2017	NCR	Radiation (03CH02-KS)
Turn Table	MF	MF7802	N/A	0~360 degree	NCR	Aug. 22, 2017	NCR	Radiation (03CH02-KS)
Antenna Mast	MF	MF7802	N/A	1 m~4 m	NCR	Aug. 22, 2017	NCR	Radiation (03CH02-KS)

NCR: No Calibration Required

6. 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))	**5.2 dB**

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

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