



FCC Test Report

APPLICANT : ZTE CORPORATION
EQUIPMENT : LTE/CDMA Multi-Mode Digital Mobile Phone
BRAND NAME : ZTE
MODEL NAME : Z558VL
FCC ID : SRQ-Z558VL
STANDARD : FCC 47 CFR FCC Part 15 Subpart B
CLASSIFICATION : Certification

The product was received on Sep. 04, 2017 and testing was completed on Sep. 18, 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.



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
FC790401	Rev. 01	Initial issue of report	Oct. 24, 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 7.30 dB at 1.707 MHz
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	Under limit 4.01 dB at 165.810 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 Multi-Mode Digital Mobile Phone
Brand Name	ZTE
Model Name	Z558VL
FCC ID	SRQ-Z558VL
EUT supports Radios application	CDMA/EV-DO/LTE WLAN2.4GHz 802.11b/g/n HT20/ Bluetooth v3.0 +EDR/ Bluetooth v4.0 LE/ Bluetooth v4.1 LE Bluetooth v4.2 LE
IMEI Code	Conduction: 990008940001253 Radiation: 990008940001253
HW Version	Z558VLHVV1.0
SW Version	Z558VLV1.0.0B02
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	LTE Band 2 : 1850.7 MHz ~ 1909.3 MHz LTE Band 4 : 1710.7 MHz ~ 1754.3 MHz LTE Band 13 : 779.5 MHz ~ 784.5 MHz CDMA2000 BC0: 824.70 MHz ~ 848.31 MHz CDMA2000 BC1: 1851.25 MHz ~ 1908.75 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz
Rx Frequency	LTE Band 2 : 1930.7 MHz ~ 1989.3 MHz LTE Band 4 : 2110.7 MHz ~ 2154.3 MHz LTE Band 13 : 748.5 MHz ~ 753.5 MHz CDMA2000 BC0: 869.70 MHz ~ 893.31 MHz CDMA2000 BC1: 1931.25 MHz ~ 1988.75 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz GNSS : 1559 MHz ~ 1610 MHz FM: 87.5MHz~108MHz
Antenna Type	WWAN : PIFA Antenna WLAN : PIFA Antenna Bluetooth : PIFA Antenna GNSS: PIFA Antenna FM: External Headset Antenna
Type of Modulation	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 GNSS: BPSK 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

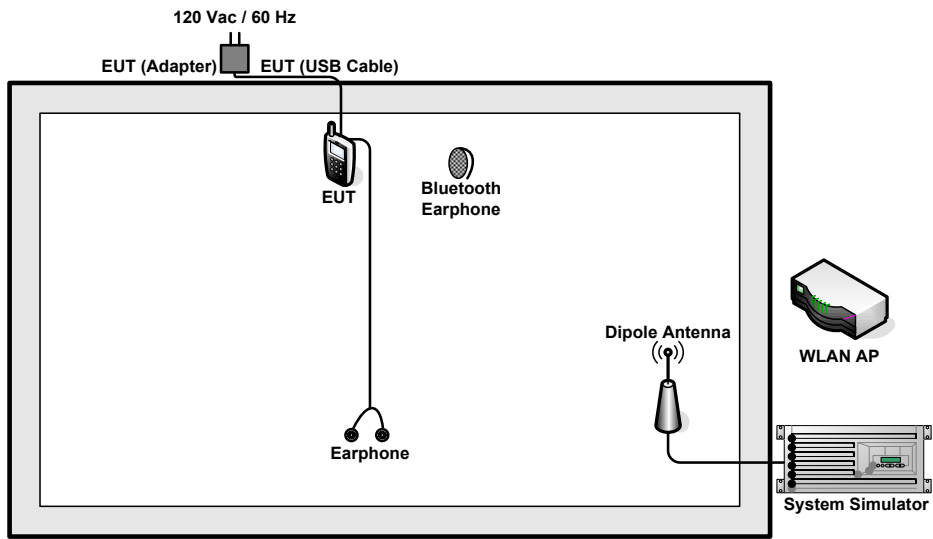
2.1. Test Mode

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.

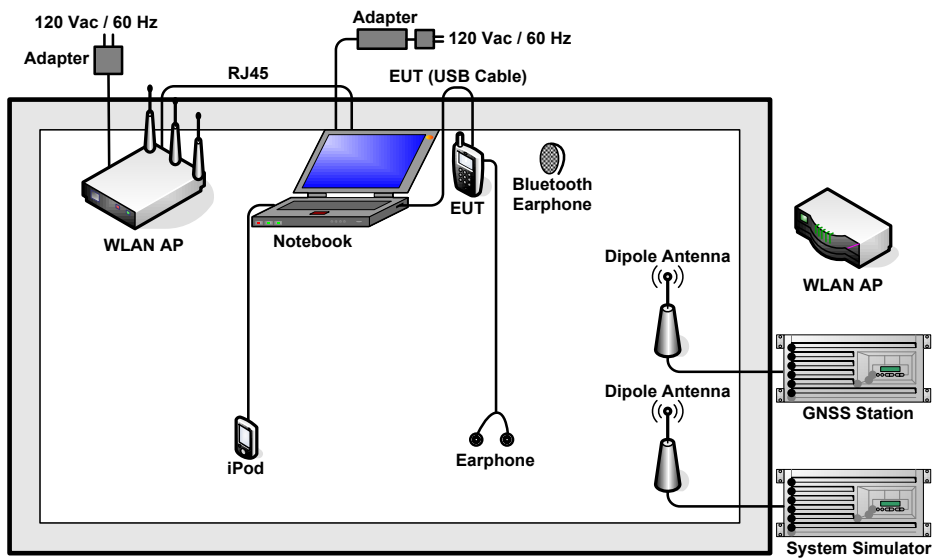
Frequency range investigated: conduction (150 kHz to 30 MHz), radiation (30MHz to the 5th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

Test Items	Function Type
AC Conducted Emission	Mode 1: CDMA 2000 BC0 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Charging from Adapter1) + Camera(Rear) + Battery 1<Fig. 1>
	Mode 2: CDMA2000 BC1 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Charging from Adapter2) + Camera(Front) + Battery 2<Fig. 1>
	Mode 3: LTE Band 4 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Charging from Adapter3) + MPEG4 + Battery 1<Fig. 1>
	Mode 4: LTE Band 13 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Data Link with Notebook) + GNSS Rx + Battery 1<Fig. 2>
Radiated Emissions < 1GHz	Mode 1: CDMA 2000 BC0 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Charging from Adapter1) + Camera(Rear) + Battery 1<Fig. 1>
	Mode 2: CDMA2000 BC1 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Charging from Adapter2) + Camera(Front) + Battery 2<Fig. 1>
	Mode 3: LTE Band 4 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Charging from Adapter3) + MPEG4 + Battery 1<Fig. 1>
	Mode 4: LTE Band 13 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Data Link with Notebook) + GNSS Rx + Battery 1<Fig. 2>
Radiated Emissions ≥ 1GHz	Mode 1: LTE Band 13 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Data Link with Notebook) + GNSS Rx + Battery 1<Fig. 2>
Remark:	
<ol style="list-style-type: none"> The worst case of AC is mode 1; and the USB Link mode is mode 4, the test data of this mode was reported. The worst case of RE < 1G is mode 4; only the test data of this mode was reported. Data Link with Notebook means data application transferred mode between EUT and Notebook. GNSS Rx = GPS Rx + Glonass Rx 	

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.	WLAN AP	LINKSYS	WRT600N	Q87-WRT600NV11	N/A	Unshielded, 1.8 m
3.	WLAN AP	TP-LINK	TL-WDR5600	N/A	N/A	Unshielded, 1.8 m
4.	Bluetooth Earphone	Lenovo	LBH308	PYAHS-107W	N/A	N/A
5.	Bluetooth Earphone	Lenovo	LBH301	N/A	N/A	N/A
6.	Notebook	Lenovo	G480	N/A	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
7.	Notebook	Dell	Latitude3440	N/A	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
8.	Earphone	Lenovo	LH102	N/A	Unshielded, 1.2 m	N/A
9.	Earphone	Lenovo	SH100	N/A	Unshielded, 1.2 m	N/A
10.	iPod	Apple	A1199	FCC DoC	Unshielded, 1.2 m	N/A
11.	SD Card	Kingston	SDC4/4GB	N/A	N/A	N/A
12.	SD Card	SanDisk	Uitra	N/A	N/A	N/A
13.	GNSS Station	RACELOGIC	RLLS03-2RP	N/A	N/A	Unshielded,1.8 m



2.4. EUT Operation Test Setup

The EUT was in CDMA 2000 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. 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.

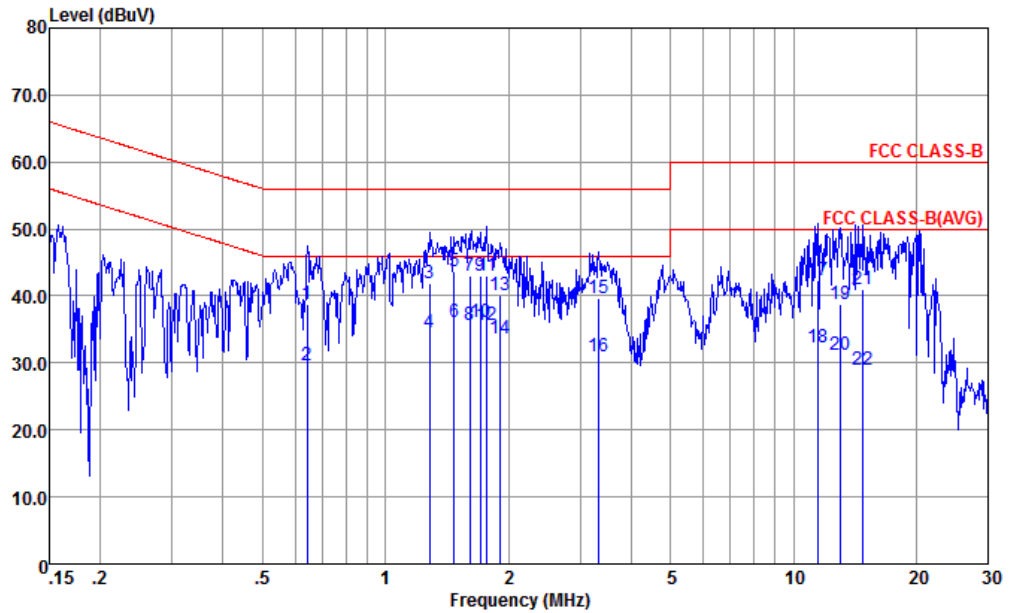
3.1.4 Test Setup





3.1.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	22~24°C
Test Engineer :	Amos Zhang	Relative Humidity :	43~46%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	CDMA 2000 BC0 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Charging from Adapter1) + Camera(Rear) + Battery 1		

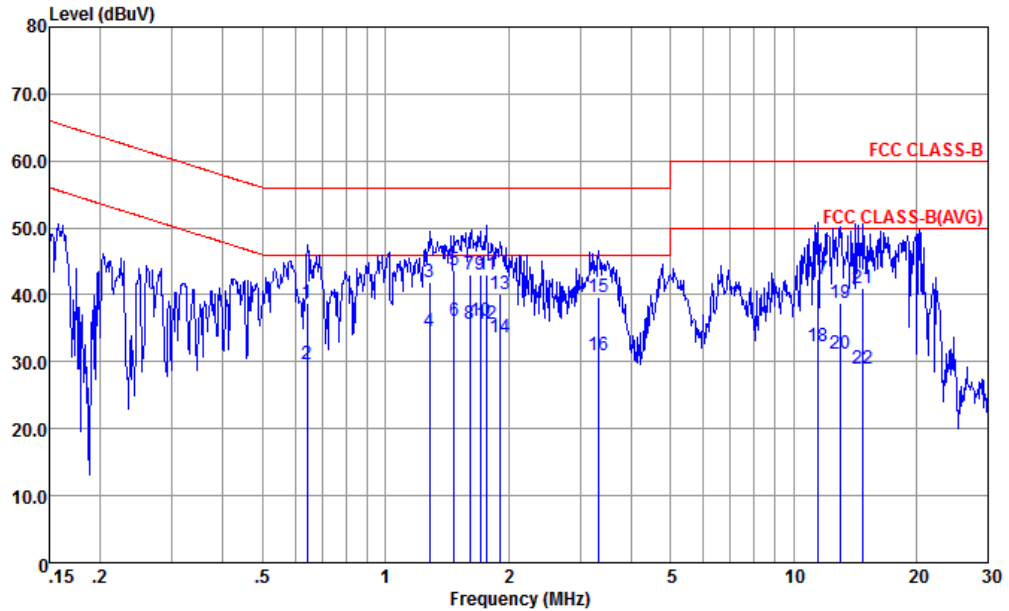


Site : CO01-KS
 Condition : FCC CLASS-B LISN-L-161017-060103 LINE
 Project : (FC) 790401
 mode : Mode 1
 : 990008940001253 #19

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.644	38.75	-17.25	56.00	28.29	0.26	10.20	QP
2	0.644	29.65	-16.35	46.00	19.19	0.26	10.20	Average
3	1.282	41.99	-14.01	56.00	31.60	0.24	10.15	QP
4	1.282	34.59	-11.41	46.00	24.20	0.24	10.15	Average
5	1.472	43.60	-12.40	56.00	33.20	0.23	10.17	QP
6	1.472	36.00	-10.00	46.00	25.60	0.23	10.17	Average
7	1.610	43.01	-12.99	56.00	32.60	0.23	10.18	QP
8	1.610	35.61	-10.39	46.00	25.20	0.23	10.18	Average
9	1.707	43.01	-12.99	56.00	32.60	0.22	10.19	QP
10 *	1.707	36.01	-9.99	46.00	25.60	0.22	10.19	Average
11	1.772	42.91	-13.09	56.00	32.49	0.22	10.20	QP
12	1.772	35.61	-10.39	46.00	25.19	0.22	10.20	Average
13	1.908	40.02	-15.98	56.00	29.60	0.21	10.21	QP
14	1.908	33.72	-12.28	46.00	23.30	0.21	10.21	Average
15	3.328	39.69	-16.31	56.00	29.30	0.21	10.18	QP
16	3.328	30.99	-15.01	46.00	20.60	0.21	10.18	Average
17	11.498	42.25	-17.75	60.00	31.60	0.29	10.36	QP



Test Mode :	Mode 1	Temperature :	22~24°C
Test Engineer :	Amos Zhang	Relative Humidity :	43~46%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	CDMA 2000 BC0 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Charging from Adapter1) + Camera(Rear) + Battery 1		

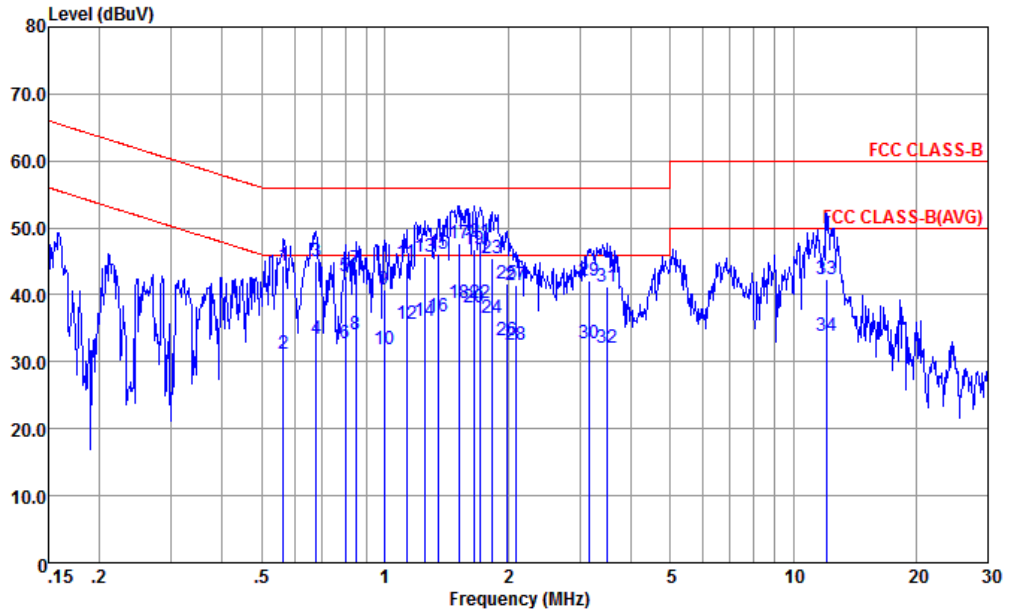


Site : CO01-KS
 Condition : FCC CLASS-B LISN-L-161017-060103 LINE
 Project : (FC) 790401
 mode : Mode 1
 : 990008940001253 #19

Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
MHz	dBuV	dB	dBuV	dBuV	dB	dB	
18	11.498	32.25	-17.75	50.00	21.60	0.29	10.36 Average
19	12.988	38.87	-21.13	60.00	28.20	0.29	10.38 QP
20	12.988	31.27	-18.73	50.00	20.60	0.29	10.38 Average
21	14.828	40.99	-19.01	60.00	30.30	0.28	10.41 QP
22	14.828	28.89	-21.11	50.00	18.20	0.28	10.41 Average



Test Mode :	Mode 1	Temperature :	22~24°C
Test Engineer :	Amos Zhang	Relative Humidity :	43~46%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	CDMA 2000 BC0 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Charging from Adapter1) + Camera(Rear) + Battery 1		

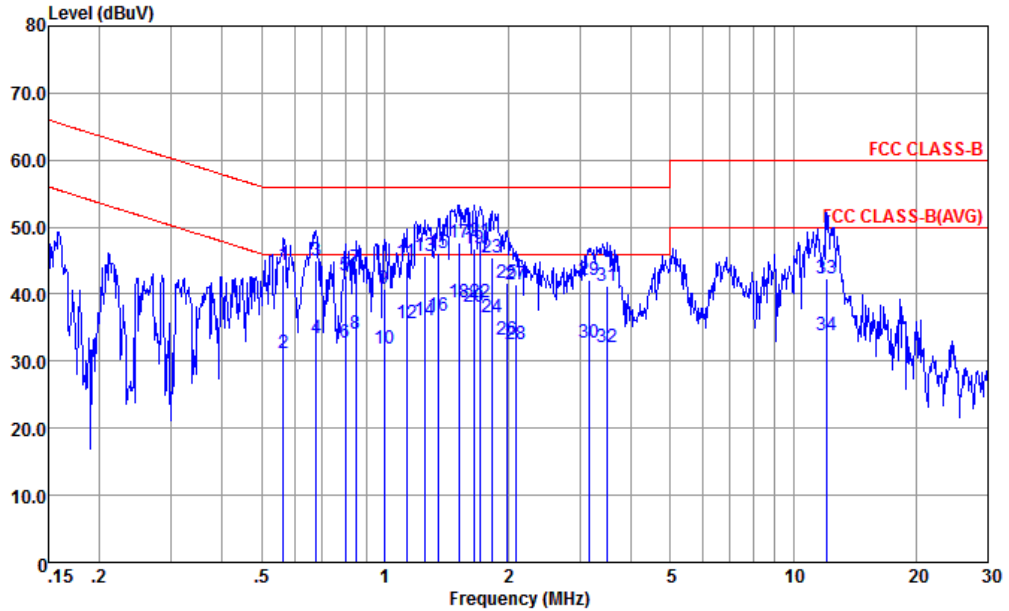


Site : CO01-KS
 Condition : FCC CLASS-B LISN-N-161017-060103 NEUTRAL
 Project : (FC) 790401
 mode : Mode 1
 : 990008940001253 #19

	Over	Limit	Read	LISN	Cable		
Freq	Level	Limit	Line	Level	Factor	Cable	Remark
MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.564	44.44	-11.56	56.00	33.80	0.38	10.26 QP
2	0.564	31.24	-14.76	46.00	20.60	0.38	10.26 Average
3	0.679	45.05	-10.95	56.00	34.50	0.38	10.17 QP
4	0.679	33.45	-12.55	46.00	22.90	0.38	10.17 Average
5	0.800	42.69	-13.31	56.00	32.20	0.39	10.10 QP
6	0.800	32.79	-13.21	46.00	22.30	0.39	10.10 Average
7	0.848	43.99	-12.01	56.00	33.50	0.39	10.10 QP
8	0.848	34.09	-11.91	46.00	23.60	0.39	10.10 Average
9	0.994	40.81	-15.19	56.00	30.30	0.40	10.11 QP
10	0.994	31.81	-14.19	46.00	21.30	0.40	10.11 Average
11	1.129	44.73	-11.27	56.00	34.20	0.40	10.13 QP
12	1.129	35.73	-10.27	46.00	25.20	0.40	10.13 Average
13	1.249	45.75	-10.25	56.00	35.21	0.40	10.14 QP
14	1.249	36.15	-9.85	46.00	25.61	0.40	10.14 Average
15	1.352	46.16	-9.84	56.00	35.61	0.40	10.15 QP
16	1.352	36.76	-9.24	46.00	26.21	0.40	10.15 Average
17	1.519	47.78	-8.22	56.00	37.20	0.41	10.17 QP



Test Mode :	Mode 1	Temperature :	22~24°C
Test Engineer :	Amos Zhang	Relative Humidity :	43~46%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	CDMA 2000 BC0 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Charging from Adapter1) + Camera(Rear) + Battery 1		

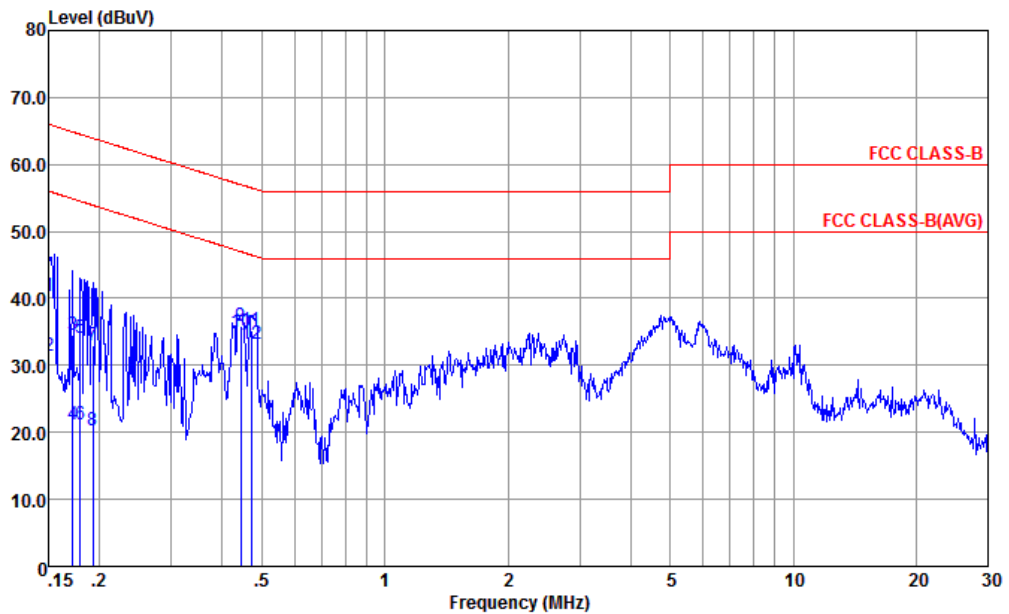


Site : CO01-KS
 Condition : FCC CLASS-B LISN-N-161017-060103 NEUTRAL
 Project : (FC) 790401
 mode : Mode 1
 : 990008940001253 #19

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
18	1.519	38.68	-7.32	46.00	28.10	0.41	10.17	Average
19	1.654	46.89	-9.11	56.00	36.29	0.41	10.19	QP
20	1.654	38.19	-7.81	46.00	27.59	0.41	10.19	Average
21	1.707	47.90	-8.10	56.00	37.30	0.41	10.19	QP
22 *	1.707	38.70	-7.30	46.00	28.10	0.41	10.19	Average
23	1.829	45.41	-10.59	56.00	34.80	0.41	10.20	QP
24	1.829	36.51	-9.49	46.00	25.90	0.41	10.20	Average
25	1.991	41.72	-14.28	56.00	31.10	0.41	10.21	QP
26	1.991	33.22	-12.78	46.00	22.60	0.41	10.21	Average
27	2.099	41.52	-14.48	56.00	30.90	0.41	10.21	QP
28	2.099	32.52	-13.48	46.00	21.90	0.41	10.21	Average
29	3.156	42.18	-13.82	56.00	31.60	0.40	10.18	QP
30	3.156	32.68	-13.32	46.00	22.10	0.40	10.18	Average
31	3.491	41.17	-14.83	56.00	30.61	0.39	10.17	QP
32	3.491	32.17	-13.83	46.00	21.61	0.39	10.17	Average
33	12.060	42.25	-17.75	60.00	31.60	0.28	10.37	QP
34	12.060	33.85	-16.15	50.00	23.20	0.28	10.37	Average



Test Mode :	Mode 4	Temperature :	22~24°C
Test Engineer :	Amos Zhang	Relative Humidity :	43~46%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	LTE Band 13 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Data Link with Notebook) + GNSS Rx + Battery 1		

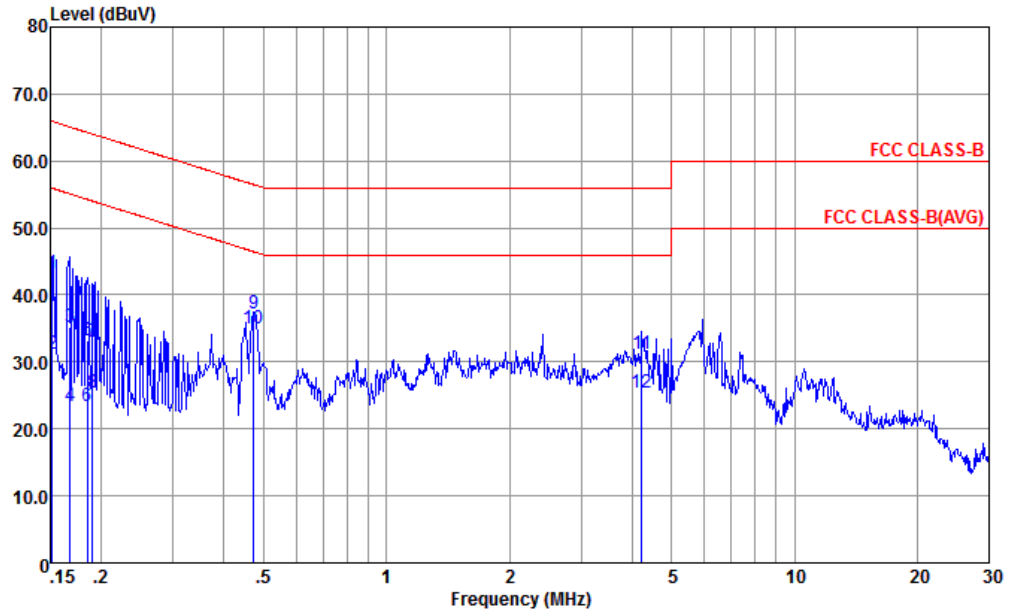


Site : CO01-KS
 Condition : FCC CLASS-B LISN-L-161017-060103 LINE
 Project : (FC) 790401
 mode : Mode 4
 : 990008940001253 #19

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.150	40.37	-25.63	66.00	29.20	0.55	10.62	QP
2	0.150	31.37	-24.63	56.00	20.20	0.55	10.62	Average
3	0.172	34.56	-30.30	64.86	23.61	0.41	10.54	QP
4	0.172	21.16	-33.70	54.86	10.21	0.41	10.54	Average
5	0.180	34.09	-30.41	64.50	23.20	0.37	10.52	QP
6	0.180	21.19	-33.31	54.50	10.30	0.37	10.52	Average
7	0.192	32.98	-30.95	63.93	22.20	0.30	10.48	QP
8	0.192	20.28	-33.65	53.93	9.50	0.30	10.48	Average
9	0.444	35.83	-21.15	56.98	25.20	0.27	10.36	QP
10 *	0.444	34.93	-12.05	46.98	24.30	0.27	10.36	Average
11	0.471	35.20	-21.29	56.49	24.60	0.27	10.33	QP
12	0.471	33.30	-13.19	46.49	22.70	0.27	10.33	Average



Test Mode :	Mode 4	Temperature :	22~24°C
Test Engineer :	Amos Zhang	Relative Humidity :	43~46%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	LTE Band 13 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Data Link with Notebook) + GNSS Rx + Battery 1		



Site : CO01-KS
 Condition : FCC CLASS-B LISN-N-161017-060103 NEUTRAL
 Project : (FC) 790401
 mode : Mode 4
 : 990008940001253 #19

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.152	43.25	-22.66	65.91	32.30	0.34	10.61	QP
2	0.152	31.25	-24.66	55.91	20.30	0.34	10.61	Average
3	0.168	35.19	-29.89	65.08	24.30	0.34	10.55	QP
4	0.168	23.49	-31.59	55.08	12.60	0.34	10.55	Average
5	0.184	33.14	-31.14	64.28	22.31	0.33	10.50	QP
6	0.184	23.44	-30.84	54.28	12.61	0.33	10.50	Average
7	0.190	32.92	-31.10	64.02	22.11	0.33	10.48	QP
8	0.190	25.32	-28.70	54.02	14.51	0.33	10.48	Average
9	0.474	37.31	-19.14	56.45	26.60	0.38	10.33	QP
10 *	0.474	34.91	-11.54	46.45	24.20	0.38	10.33	Average
11	4.224	31.17	-24.83	56.00	20.60	0.39	10.18	QP
12	4.224	25.37	-20.63	46.00	14.80	0.39	10.18	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

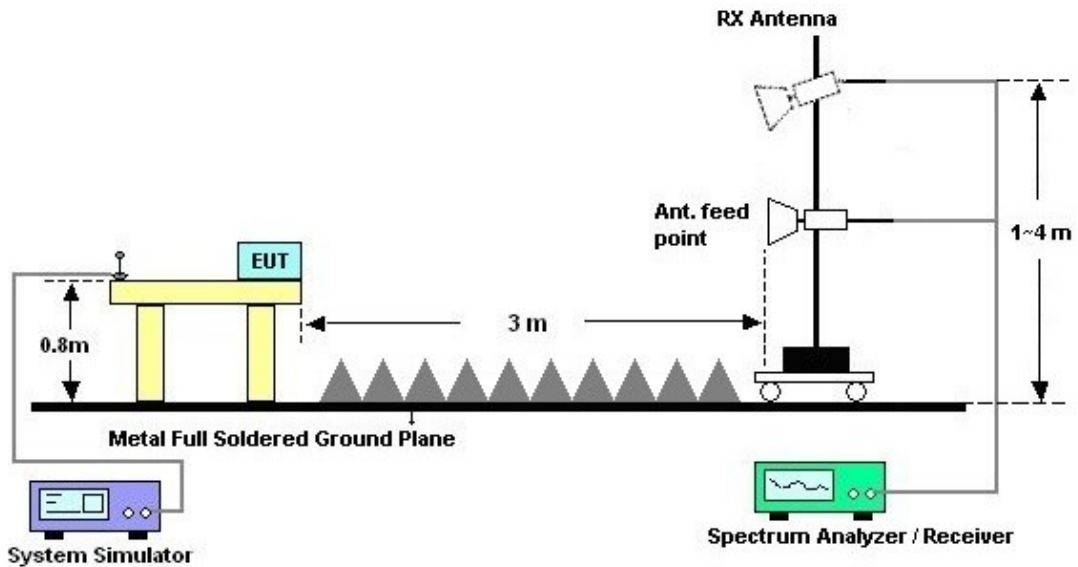
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna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



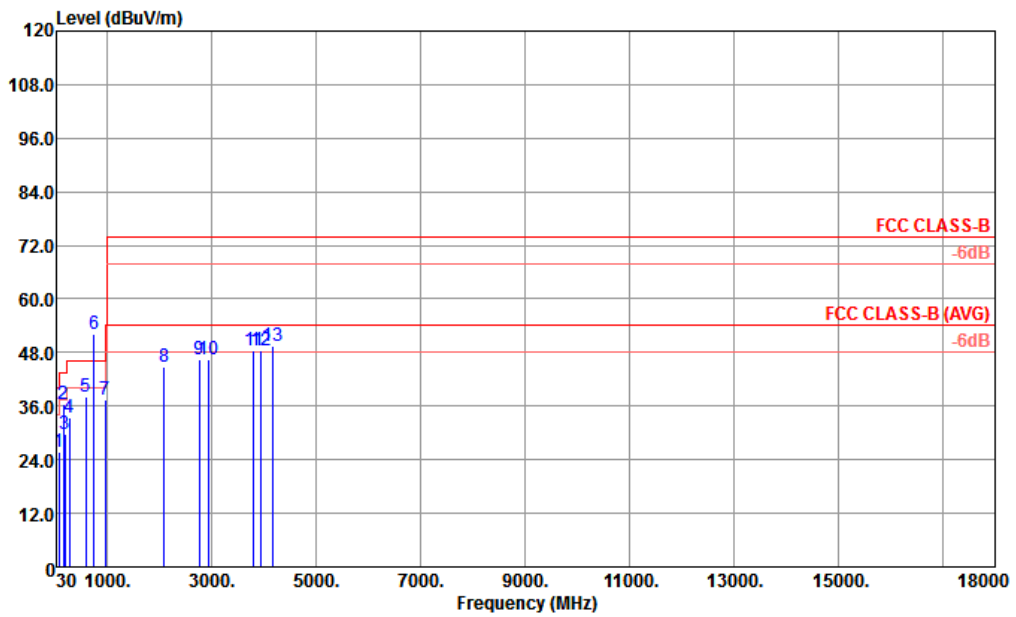
For radiated emissions above 1GHz





3.2.5. Test Result of Radiated Emission

Test Mode :	Mode 4	Temperature :	21~22°C
Test Engineer :	Peter Peng	Relative Humidity :	41~42%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	LTE Band 13 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Data Link with Notebook) + GNSS Rx + Battery 1		
Remark :	#6 is system simulator signal which can be ignored.		

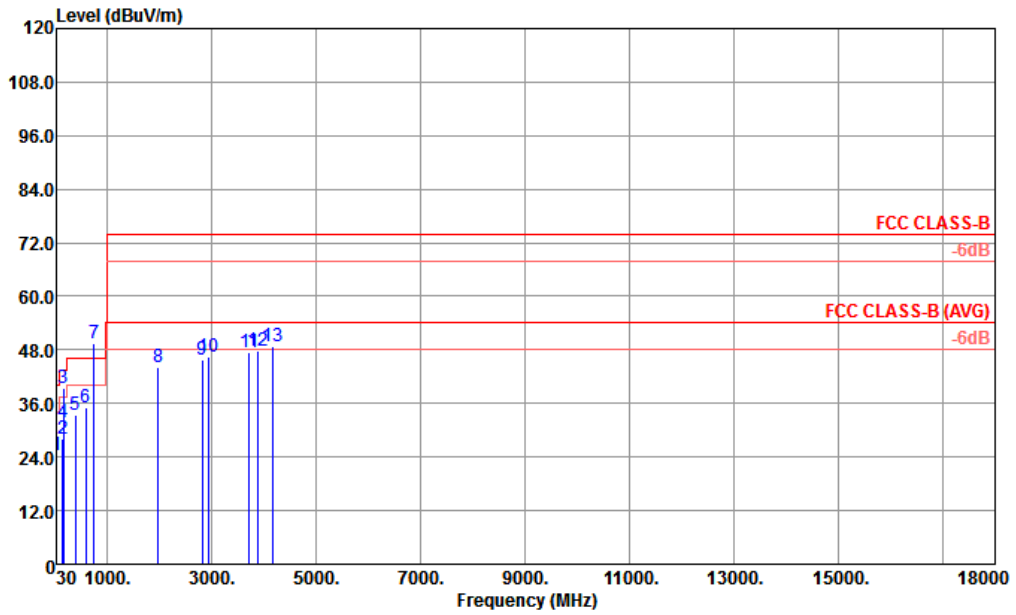


Site : 03CH02-KS
 Condition : FCC CLASS-B 3m 02 LF ANT HORIZONTAL
 Project : (FC) 790401
 Mode : 4
 IMEI : 990008940001253 #19

	Freq	Level	Over	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	25.67	-14.33	40.00	41.07	15.70	0.95	32.05	---	---	Peak
2	165.54	36.40	-7.10	43.50	49.91	16.96	1.32	31.79	100	0	Peak
3	195.78	29.75	-13.75	43.50	44.06	15.94	1.43	31.68	---	---	Peak
4	285.42	33.32	-12.68	46.00	44.86	17.84	1.87	31.25	---	---	Peak
5	598.20	38.18	-7.82	46.00	40.63	24.60	2.62	29.67	---	---	Peak
6 *	748.70	52.30			51.44	26.70	2.82	28.66	---	---	Peak
7	959.90	37.42	-8.58	46.00	32.59	28.70	3.21	27.08	---	---	Peak
8	2094.00	44.76	-29.24	74.00	41.56	30.45	4.79	32.04	---	---	Peak
9	2766.00	46.45	-27.55	74.00	41.33	31.74	5.78	32.40	---	---	Peak
10	2948.00	46.34	-27.66	74.00	40.42	32.25	5.92	32.25	---	---	Peak
11	3813.00	48.39	-25.61	74.00	39.58	34.68	6.63	32.50	---	---	Peak
12	3933.00	48.43	-25.57	74.00	39.34	34.91	6.68	32.50	---	---	Peak
13	4170.00	49.56	-24.44	74.00	39.55	35.27	7.24	32.50	---	---	Peak



Test Mode :	Mode 4	Temperature :	21~22°C
Test Engineer :	Peter Peng	Relative Humidity :	41~42%
Test Distance :	3m	Polarization :	Vertical
Function Type :	LTE Band 13 Idle + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable(Data Link with Notebook) + GNSS Rx + Battery 1		
Remark :	#7 is system simulator signal which can be ignored.		



Site : 03CH02-KS
 Condition : FCC CLASS-B 3m 02 LF ANT VERTICAL
 Project : (FC) 790401
 Mode : 4
 IMEI : 990008940001253 #19

	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	42.96	24.41	-15.59	40.00	35.27	20.57	0.65	32.08	---	---	Peak
2	155.55	28.00	-15.50	43.50	41.24	17.30	1.28	31.82	---	---	Peak
3 !	165.81	39.49	-4.01	43.50	53.00	16.96	1.32	31.79	100	150	QP
4	170.40	31.67	-11.83	43.50	45.28	16.82	1.34	31.77	---	---	Peak
5	399.40	33.41	-12.59	46.00	36.35	25.70	2.07	30.71	---	---	Peak
6	597.50	35.07	-10.93	46.00	37.53	24.60	2.62	29.68	---	---	Peak
7 *	748.00	49.33			48.49	26.69	2.82	28.67	---	---	Peak
8	1986.00	44.07	-29.93	74.00	41.41	30.07	4.61	32.02	---	---	Peak
9	2828.00	45.89	-28.11	74.00	40.51	31.90	5.85	32.37	---	---	Peak
10	2950.00	46.43	-27.57	74.00	40.51	32.25	5.92	32.25	---	---	Peak
11	3729.00	47.46	-26.54	74.00	38.87	34.49	6.57	32.47	---	---	Peak
12	3873.00	47.87	-26.13	74.00	38.91	34.80	6.66	32.50	---	---	Peak
13	4182.00	48.96	-25.04	74.00	38.85	35.30	7.31	32.50	---	---	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	Sep. 18, 2017	Apr. 19, 2018	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060103	9kHz~30MHz	Oct. 13, 2016	Sep. 18, 2017	Oct. 12, 2017	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060105	9kHz~30MHz	Oct. 13, 2016	Sep. 18, 2017	Oct. 12, 2017	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP0000008 11	AC 0V~300V, 45Hz~1000Hz	Oct. 13, 2016	Sep. 18, 2017	Oct. 12, 2017	Conduction (CO01-KS)
EMI Test Receiver	R&S	ESR7	101403	9kHz~7GHz; Max 30dBm	Aug. 08, 2017	Sep. 18, 2017	Aug. 07, 2018	Radiation (03CH02-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150208	10Hz~44GHz, MAX 30dB	Apr. 18, 2017	Sep. 18, 2017	Apr. 17, 2018	Radiation (03CH02-KS)
Bilog Antenna	TeseQ	CBL6112D	23182	30MHz~2GHz	Jan. 22, 2017	Sep. 18, 2017	Jan. 21, 2018	Radiation (03CH02-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75957	1GHz~18GHz	Oct. 22, 2016	Sep. 18, 2017	Oct. 21, 2017	Radiation (03CH02-KS)
High Gain Amplifier	MITEQ	AMF-7D-0010 1800-30-10P	2012228	100MHz~18GHz	Apr. 18, 2017	Sep. 18, 2017	Apr. 17, 2018	Radiation (03CH02-KS)
Amplifier	SONOMA	310N	187289	9kHz~1GHz	Aug. 07, 2017	Sep. 18, 2017	Aug. 06, 2018	Radiation (03CH02-KS)
Amplifier	Agilent	8449B	3008A02384	1GHz~26.5GHz	Oct. 13, 2016	Sep. 18, 2017	Oct. 12, 2017	Radiation (03CH02-KS)
AC Power Source	Chroma	61601	61601000247 3	N/A	NCR	Sep. 18, 2017	NCR	Radiation (03CH02-KS)
Turn Table	MF	MF7802	N/A	0~360 degree	NCR	Sep. 18, 2017	NCR	Radiation (03CH02-KS)
Antenna Mast	MF	MF7802	N/A	1 m~4 m	NCR	Sep. 18, 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))	5.2 dB
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Uncertainty of Radiated Emission Measurement (1GHz ~ 18GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.7 dB
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Uncertainty of Radiated Emission Measurement (18GHz ~ 40GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.3 dB
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