FCC 15B TEST REPORT

No. I20Z60720-EMC01

for

TCL Communication Ltd.

GSM/UMTS/LTE Mobile phone

Model Name: 5007W,5007Z

FCC ID: 2ACCJH128

with

Hardware Version: 04

Software Version: 7HS05000

Issued Date: 2020-07-01

Note:

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Test Laboratory:

CTTL, Telecommunication Technology Labs, CAICT

No. 52, Huayuan North Road, Haidian District, Beijing, P. R. China 100191.

Tel:+86(0)10-62304633-2512, Fax:+86(0)10-62304633-2504

Email: cttl_terminals@caict.ac.cn, website: www.caict.ac.cn

REPORT HISTORY

Report Number	Revision	Description	Issue Date
I20Z60720-EMC01	Rev.0	1st edition	2020-06-22
I20Z60720-EMC01	Rev.1	Adding the FM function	2020-07-01

CONTENTS

1. Test Laboratory

1.1. Testing Location

Location 1: CTTL(huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing, P. R. China 100191

1.2. Testing Environment

Normal Temperature: 15-35℃

Relative Humidity: 20-75%

1.3. Project data

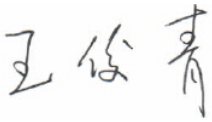
Testing Start Date: 2020-05-28

Testing End Date: 2020-06-08

1.4. Signature

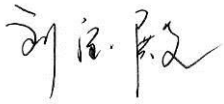
Zhang Ying

(Prepared this test report)



Wang Junqing

(Reviewed this test report)



Liu Baodian

(Approved this test report)

2. Client Information

2.1. Applicant Information

Company Name:	TCL Communication Ltd.
Address /Post:	5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong
Contact:	Gong Zhizhou
Email:	zhizhou.gong@tcl.com
Telephone:	0086-755-36611722
Fax:	0086-755-36612000-81722

2.2. Manufacturer Information

Company Name:	TCL Communication Ltd
Address /Post:	5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong
Contact:	Gong Zhizhou
Email:	zhizhou.gong@tcl.com
Telephone:	0086-755-36611722
Fax:	0086-755-36612000-81722

3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

Description	GSM/UMTS/LTE Mobile phone
Model Name	5007W,5007Z
FCC ID	2ACCJH128

This device contains the receivers which tune and operate between 30MHz-960MHz in the following bands:
GSM850MHz, WCDMA850MHz, LTE bands 5/12/26/71.

Note: Components list, please refer to documents of the manufacturer; it is also included in the original test record of CTTL,Telecommunication Technology Labs, Academy of Telecommunication Research, MIIT.

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version
EUT7	015735000206650	04	7HS05000

*EUT ID: is used to identify the test sample in the lab internally.

3.3. Internal Identification of AE used during the test

AE ID*	Description	SN	Remarks
AE10	Battery	/	/
AE21	charger	/	/
AE24	USB	/	/
AE25	USB	/	/

AE10

Model	TLp034F1 CAC3400011C1
Manufacturer	BYD
Capacity	3500mAh
Nominal Voltage	3.85V

AE21

Model	UC13US CBA0059BGMC5
Manufacturer	PUAN
Length of cable	/

AE24

Model	CDA0000150C2
Manufacturer	/
Length of cable	/

AE25

Model	CDA0000150C1
Manufacturer	/

Length of cable /

*AE ID: is used to identify the test sample in the lab internally.

3.4. EUT set-ups

EUT set-up No.	Combination of EUT and AE	Remarks
Set.11	EUT7 + AE10 + AE21 + AE24	Charger
Set.12	EUT7 + AE10 + AE21 + AE25	Charger
Set.13	EUT7 + AE10 + AE24	USB + FM
Set.14	EUT7 + AE10 + AE25	USB + FM

4. Reference Documents

4.1. Reference Documents for testing

The following documents listed in this section are referred for testing.

Reference	Title	Version
FCC Part 15, Subpart B	Radio frequency devices - Unintentional Radiators	10-1-16 Edition
ANSI C63.4	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2014

Note: The test methods have no deviation with standards.

5. LABORATORY ENVIRONMENT

Semi-anechoic chamber SAC-1 (23 meters×17meters×10meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 ˚C, Max. = 35 ˚C
Relative humidity	Min. = 15 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz, >60dB; 1MHz - 1000MHz, >90dB.
Electrical insulation	> 2 MΩ
Ground system resistance	< 4 Ω
Normalised site attenuation (NSA)	< ±4 dB, 10 m distance
Site voltage standing-wave ratio (S_{VSWR})	Between 0 and 6 dB, from 1GHz to 6GHz
Uniformity of field strength	Between 0 and 6 dB, from 80 to 3000 MHz

Semi-anechoic chamber SAC-2 (10 meters×6.7meters×6.1meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 ˚C, Max. = 30 ˚C
Relative humidity	Min. = 35 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 2MΩ
Ground system resistance	< 1Ω
Normalised site attenuation (NSA)	< ±4 dB, 3 m distance, from 30 to 1000 MHz
Site voltage standing-wave ratio (S_{VSWR})	Between 0 and 6 dB, from 1GHz to 18GHz
Uniformity of field strength	Between 0 and 6 dB, from 80 to 3000 MHz

Shielded room did not exceed following limits along the EMC testing:

Temperature	Min. = 15 ˚C, Max. = 35 ˚C
Relative humidity	Min. = 20 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz, >60dB; 1MHz－1000MHz, >90dB.
Electrical insulation	> 2 MΩ
Ground system resistance	< 4 Ω

6. SUMMARY OF TEST RESULTS

Abbreviations used in this clause:		
Verdict Column	P	Pass
	NA	Not applicable
	F	Fail
Location Column	1/2/4	The test is performed in test location 1/2/4 which is described in section 1.1 of this report

Items	Test Name	Clause in FCC rules	Section in this report	Verdict	Test Location
1	Radiated Emission	15.109(a)	A.1	P	1
2	Conducted Emission	15.107(a)	A.2	P	1

7. Test Equipments Utilized

NO.	Description	TYPE	SERIES NUMBER	MANUFACTURE	CAL DUE DATE	CALIBRATION INTERVAL
1	Test Receiver	ESCI 3	100344	Rohde & Schwarz	2021-02-26	1 year
2	LISN	ENV216	101200	R&S	2021-05-17	1 year
3	EMI Antenna	VULB 9163	483	Schwarzbeck	2020-09-17	1 year
4	EMI Antenna	3117	00139065	ETS-Lindgren	2020-11-15	1 year
6	PC	OPTIPLEX 380	2X1YV2X	DELL	N/A	N/A
7	Printer	P1606dn	VNC3L52122	HP	N/A	N/A
8	Keyboard	L100	CN0RH659658907ATOI40	DELL	N/A	N/A
9	Mouse	M-UAE119	LZ935220ZRC	Lenovo	N/A	N/A
10	Test Receiver	ESU26	100235	Rohde & Schwarz	2021-03-05	1 year
11	Signal generator	SMB100A	102063	R&S	2021-03-31	1 year
12	Universal Radio Communication Tester	CMW500	116588	R&S	2020-12-05	1 year

Location 1: CTTL(huayuan North Road)

Test Item	Test Software and Version	Software Vendor
Radiated Continuous Emission	EMC32 V9.01.0	R&S
Conducted Emission	EMC32 V8.52.0	R&S

ANNEX A: MEASUREMENT RESULTS

A.1 Radiated Emission

Reference

FCC: CFR Part 15.109(a).

A.1.1 Method of measurement

The field strength of radiated emissions from the unintentional radiator (charging mode and FM mode) at distances of 10 meters(for 30MHz-1GHz) and 3 meters (for above 1GHz) is tested. Tested in accordance with the procedures of ANSI C63.4 – 2014, section 8.3.

The EUT was placed on a non-conductive table. The measurement antenna was placed at a distance of 3/10 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

A.1.2 EUT Operating Mode:

The MS is operating in the charging mode and FM. During the test MS is connected to a charger in the case.

The EUT was tested while operating in licensed band Rx mode. All licensed band receivers that tune in the range of 30MHz-960MHz, as listed in Section 2.2, are investigated. Only the worst case emissions are reported.

All equipment is placed on the test table top and arranged in a typical configuration in accordance with ANSI C63.4-2014 and manipulated to obtain worst case emissions.

A.1.3 Measurement Limit

Frequency range (MHz)	Field strength limit (μV/m)		
	Quasi-peak	Average	Peak
30-88	100		
88-216	150		
216-960	200		
960-1000	500		
>1000		500	5000

Note: the above limit is for 3 meters test distance. 10 meters' limit is got by converting.

Limit(10m) = limit(3m) + 20(log(3/10))

A.1.4 Test Condition

Frequency range (MHz)	RBW/VBW	Sweep Time (s)	Detector
30-1000	120kHz (IF Bandwidth)	5	Peak/Quasi-peak
Above 1000	1MHz/3MHz	15	Peak, Average

A.1.5 Measurement Results

A "reference path loss" is established and the A_{Rpl} is the attenuation of “reference path loss”. It includes the antenna factor of receive antenna and the path loss.

The measurement results are obtained as described below:

Result = $P_{Mea} + A_{Rpl} = P_{Mea} + G_A + G_{PL}$

Where

G_A: Antenna factor of receive antenna

G_{PL}: Path Loss

P_{Mea}: Measurement result on receiver.

Measurement uncertainty (worst case): 30MHz-1GHz：5.16dB, 1GHz-18GHz：5.44dB, *k*=2.

Measurement results for Set.11:

Charging and GSM850MHz idle QP detector

Frequency (MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity
17984.700	56.3	-25.5	43.4	38.4	74.0	17.7	H
17983.567	56.2	-25.5	43.4	38.3	74.0	17.8	H
17987.533	55.8	-25.5	43.4	37.9	74.0	18.2	V
17858.333	55.7	-25.7	43.4	38.0	74.0	18.3	H
17997.733	55.3	-25.5	43.4	37.4	74.0	18.7	H
17998.300	55.2	-25.5	43.4	37.3	74.0	18.8	H

Charging and GSM850MHz idle Average detector

Frequency (MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity
17977.333	47.4	-25.5	43.4	29.5	54.0	6.6	H
17984.700	47.2	-25.5	43.4	29.3	54.0	6.8	H
17998.300	47.1	-25.5	43.4	29.2	54.0	6.9	V
17900.267	46.8	-25.7	43.4	29.1	54.0	7.2	H
17994.900	46.7	-25.5	43.4	28.8	54.0	7.3	H
17994.333	46.6	-25.5	43.4	28.7	54.0	7.4	H

Charging and WCDMA band 5 idle QP detector

Frequency (MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity
17968.267	56.0	-25.5	43.4	38.1	74.0	18.0	H
17979.600	55.6	-25.5	43.4	37.7	74.0	18.4	H
17872.500	55.5	-25.7	43.4	37.8	74.0	18.5	V
17949.567	55.5	-25.5	43.4	37.6	74.0	18.5	H
17990.933	55.4	-25.5	43.4	37.5	74.0	18.6	H
17854.367	55.4	-25.7	43.4	37.7	74.0	18.6	H

Charging and WCDMA band 5 idle Average detector

Frequency (MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity
17955.800	47.6	-25.5	43.4	29.7	54.0	6.4	H
17993.767	47.1	-25.5	43.4	29.2	54.0	6.9	H
17982.433	46.9	-25.5	43.4	29.0	54.0	7.1	V
17976.200	46.8	-25.5	43.4	28.9	54.0	7.2	H
17989.800	46.6	-25.5	43.4	28.7	54.0	7.4	H
17967.133	46.5	-25.5	43.4	28.6	54.0	7.5	H

Charging and LTE Band 5 idle QP detector

Frequency (MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity
17980.733	56.0	-25.5	43.4	38.1	74.0	18.0	H
17916.700	55.7	-25.5	43.4	37.8	74.0	18.3	H
17980.167	55.6	-25.5	43.4	37.7	74.0	18.4	V
17992.633	55.5	-25.5	43.4	37.6	74.0	18.5	H
17990.933	55.4	-25.5	43.4	37.5	74.0	18.6	H
17984.700	55.2	-25.5	43.4	37.3	74.0	18.8	H

Charging and LTE Band 5 idle Average detector

Frequency (MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity
17996.033	47.2	-25.5	43.4	29.3	54.0	6.8	H
17994.900	47.2	-25.5	43.4	29.3	54.0	6.8	H
17993.200	47.1	-25.5	43.4	29.2	54.0	6.9	V
17996.600	47.0	-25.5	43.4	29.1	54.0	7.0	H
17896.867	46.9	-25.7	43.4	29.2	54.0	7.1	H
17993.767	46.8	-25.5	43.4	28.9	54.0	7.2	H

Charging and LTE Band 12 idle QP detector

Frequency (MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity
17996.600	57.2	-25.5	43.4	39.3	74.0	16.8	H
17997.167	55.5	-25.5	43.4	37.6	74.0	18.5	H
17991.500	55.5	-25.5	43.4	37.6	74.0	18.5	V
17987.533	55.4	-25.5	43.4	37.5	74.0	18.6	H
17978.467	55.4	-25.5	43.4	37.5	74.0	18.6	H
17892.900	55.3	-25.7	43.4	37.6	74.0	18.7	H

Charging and LTE Band 12 idle Average detector

Frequency (MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity
17998.300	47.4	-25.5	43.4	29.5	54.0	6.6	H
17998.867	47.2	-25.5	43.4	29.3	54.0	6.8	H
17980.167	47.1	-25.5	43.4	29.2	54.0	6.9	V
17967.700	46.9	-25.5	43.4	29.0	54.0	7.1	H
17994.333	46.8	-25.5	43.4	28.9	54.0	7.2	H
17993.767	46.8	-25.5	43.4	28.9	54.0	7.2	H

Charging and LTE Band 26 idle QP detector

Frequency (MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity
17990.367	55.4	-25.5	43.4	37.5	74.0	18.6	H
17964.867	55.4	-25.5	43.4	37.5	74.0	18.6	H
17981.867	55.3	-25.5	43.4	37.4	74.0	18.7	V
17989.233	55.3	-25.5	43.4	37.4	74.0	18.7	H
17995.467	55.3	-25.5	43.4	37.4	74.0	18.7	H
17985.833	55.2	-25.5	43.4	37.3	74.0	18.8	H

Charging and LTE Band 26 idle Average detector

Frequency (MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity
17998.300	47.9	-25.5	43.4	30.0	54.0	6.1	H
17993.200	47.6	-25.5	43.4	29.7	54.0	6.4	H
17973.367	47.2	-25.5	43.4	29.3	54.0	6.8	V
17989.233	47.1	-25.5	43.4	29.2	54.0	6.9	H
17960.333	47.0	-25.5	43.4	29.1	54.0	7.0	H
17983.567	46.9	-25.5	43.4	29.0	54.0	7.1	H

Charging and LTE Band 71 idle QP detector

Frequency (MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity
17867.967	55.8	-25.7	43.4	38.1	74.0	18.2	H
17792.600	55.6	-25.7	43.4	37.9	74.0	18.4	H
17894.033	55.6	-25.7	43.4	37.9	74.0	18.4	V
17953.533	55.1	-25.5	43.4	37.2	74.0	18.9	H
17994.333	55.0	-25.5	43.4	37.1	74.0	19.0	H
17997.733	55.0	-25.5	43.4	37.1	74.0	19.0	H

Charging and LTE Band 71 idle Average detector

Frequency (MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity
17994.333	47.0	-25.5	43.4	29.1	54.0	7.0	H
17967.700	46.7	-25.5	43.4	28.8	54.0	7.3	H
17990.367	46.6	-25.5	43.4	28.7	54.0	7.4	V
17972.233	46.6	-25.5	43.4	28.7	54.0	7.4	H
17989.800	46.6	-25.5	43.4	28.7	54.0	7.4	H
17962.033	46.5	-25.5	43.4	28.6	54.0	7.5	H

Charging and Rear Camera QP detector

Frequency (MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity
17975.067	56.5	-25.5	43.4	38.6	74.0	17.5	H
17991.500	56.4	-25.5	43.4	38.5	74.0	17.6	H
17985.267	56.0	-25.5	43.4	38.1	74.0	18.0	V
17983.000	55.8	-25.5	43.4	37.9	74.0	18.2	H
17977.333	55.6	-25.5	43.4	37.7	74.0	18.4	H
17972.233	55.3	-25.5	43.4	37.4	74.0	18.7	H

Charging and Rear Camera Average detector

Frequency (MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity
17980.733	47.7	-25.5	43.4	29.8	54.0	6.3	H
17996.600	47.5	-25.5	43.4	29.6	54.0	6.5	H
17984.133	47.0	-25.5	43.4	29.1	54.0	7.0	V
17973.933	46.8	-25.5	43.4	28.9	54.0	7.2	H
17938.800	46.7	-25.5	43.4	28.8	54.0	7.3	H
17998.300	46.6	-25.5	43.4	28.7	54.0	7.4	H

Measurement results for Set.12:

Charging and Front Camera QP detector

Frequency (MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity
17984.133	56.6	-25.5	43.4	38.7	74.0	17.4	H
17969.400	56.3	-25.5	43.4	38.4	74.0	17.7	H
17964.300	56.1	-25.5	43.4	38.2	74.0	17.9	V
17903.100	55.5	-25.7	43.4	37.8	74.0	18.5	H
17951.267	55.5	-25.5	43.4	37.6	74.0	18.5	H
17898.000	55.4	-25.7	43.4	37.7	74.0	18.6	H

Charging and Front Camera Average detector

Frequency (MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity
17993.200	48.1	-25.5	43.4	30.2	54.0	5.9	H
17973.933	46.8	-25.5	43.4	28.9	54.0	7.2	H
17885.533	46.8	-25.7	43.4	29.1	54.0	7.2	V
17951.267	46.7	-25.5	43.4	28.8	54.0	7.3	H
17966.000	46.6	-25.5	43.4	28.7	54.0	7.4	H
17993.767	46.6	-25.5	43.4	28.7	54.0	7.4	H

Measurement results for Set.13:

USB /QP detector

Frequency (MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity
17977.333	56.4	-25.5	43.4	38.5	74.0	17.6	H
17993.200	55.7	-25.5	43.4	37.8	74.0	18.3	H
17987.533	55.6	-25.5	43.4	37.7	74.0	18.4	V
17992.067	55.5	-25.5	43.4	37.6	74.0	18.5	H
17991.500	55.5	-25.5	43.4	37.6	74.0	18.5	H
17810.167	55.1	-25.7	43.4	37.4	74.0	18.9	H

USB /Average detector

Frequency (MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity
17992.633	47.7	-25.5	43.4	29.8	54.0	6.3	H
17976.767	47.5	-25.5	43.4	29.6	54.0	6.5	H
17980.733	47.5	-25.5	43.4	29.6	54.0	6.5	V
17947.300	46.9	-25.5	43.4	29.0	54.0	7.1	H
17977.333	46.7	-25.5	43.4	28.8	54.0	7.3	H
17898.567	46.7	-25.7	43.4	29.0	54.0	7.3	H

Measurement results for Set.14:

USB /QP detector

Frequency (MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity
17975.067	57.7	-25.5	43.4	39.8	74.0	16.3	H
17959.200	57.7	-25.5	43.4	39.8	74.0	16.3	H
17974.500	57.5	-25.5	43.4	39.6	74.0	16.5	V
17932.567	57.3	-25.5	43.4	39.4	74.0	16.7	H
17946.733	57.2	-25.5	43.4	39.3	74.0	16.8	H
17994.333	57.1	-25.5	43.4	39.2	74.0	16.9	H

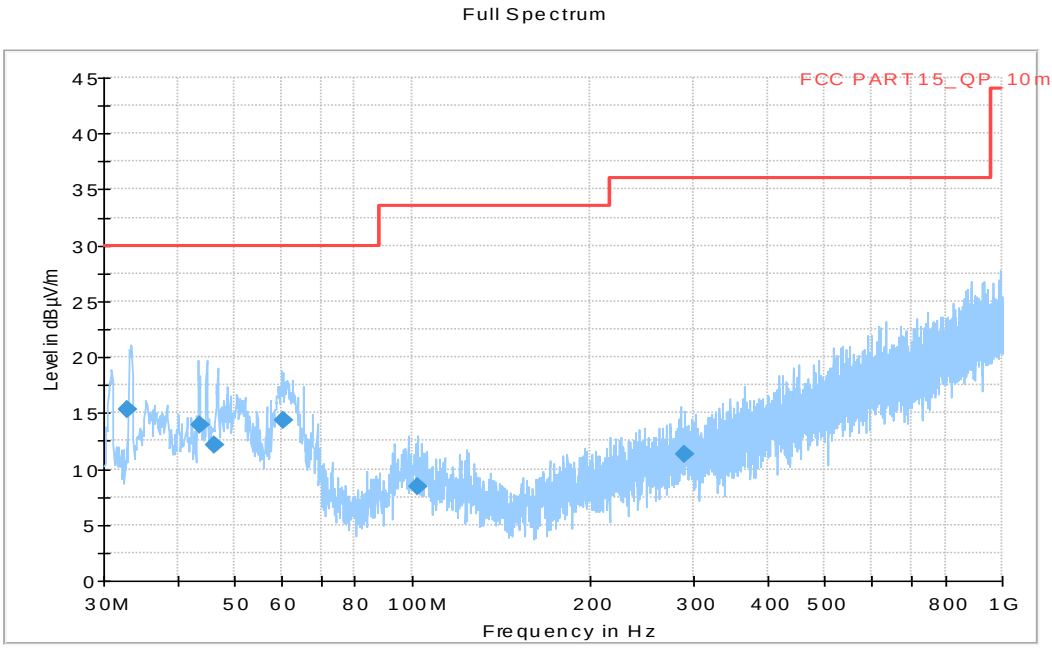
USB /Average detector

Frequency (MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity
17992.067	50.4	-25.5	43.4	32.5	54.0	3.6	H
17974.500	50.2	-25.5	43.4	32.3	54.0	3.8	H
17952.967	49.7	-25.5	43.4	31.8	54.0	4.3	V
17962.600	49.7	-25.5	43.4	31.8	54.0	4.3	H
17911.600	49.6	-25.7	43.4	31.9	54.0	4.4	H
17981.867	49.6	-25.5	43.4	31.7	54.0	4.4	H

Sample calculation: Peak detector, 17992.067 MHz

Result =P_{Mea} (32.5dBμV)+ G_A (43.4dB/m)+ G_{PL}(-25.5dB) =50.4dBμV/m

Charging and GSM850MHz idle Mode, Set.11



Final_Result

Frequency (MHz)	QuasiPeak (dBuV//m)	Limit (dBuV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
32.855000	15.36	30.00	14.64	1000.0	120.000	115.0	V	61.0
43.626000	13.96	30.00	16.04	1000.0	120.000	125.0	V	112.0
46.181000	12.16	30.00	17.84	1000.0	120.000	225.0	V	70.0
60.407000	14.38	30.00	15.62	1000.0	120.000	115.0	V	106.0
102.034000	8.39	33.50	25.13	1000.0	120.000	103.0	V	120.0
290.357000	11.31	36.00	24.71	1000.0	120.000	102.0	V	116.0

Figure A.1 Radiated Emission from 30MHz to 1GHz

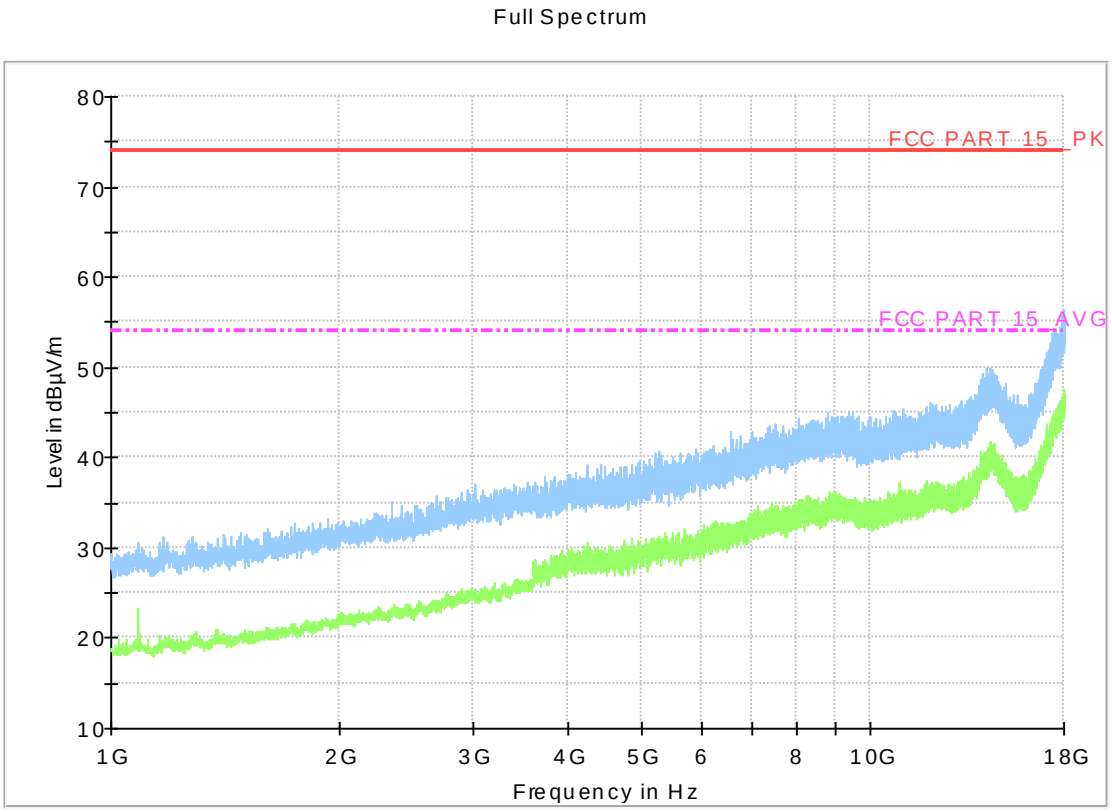
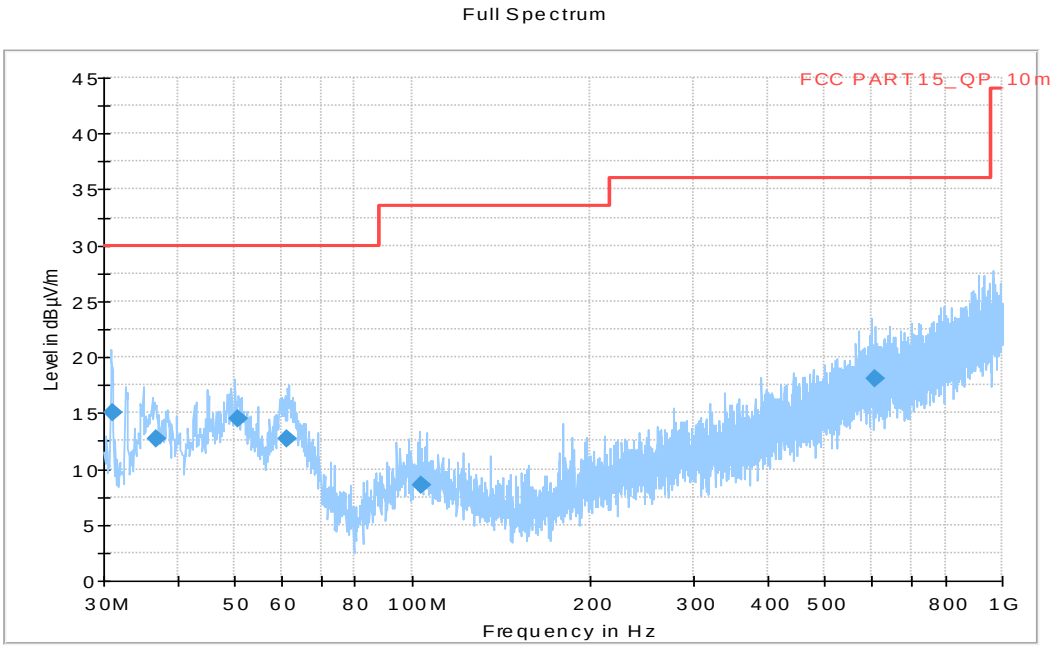


Figure A.2 Radiated Emission from 1GHz to 18GHz

Charging and WCDMA band 5 idle Mode, Set.11



Final_Result

Frequency (MHz)	QuasiPeak (dBuV//m)	Limit (dBuV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
31.113000	14.98	30.00	15.02	1000.0	120.000	100.0	V	68.0
36.808000	12.72	30.00	17.28	1000.0	120.000	212.0	V	120.0
50.559000	14.56	30.00	15.44	1000.0	120.000	111.0	V	120.0
61.336000	12.66	30.00	17.34	1000.0	120.000	216.0	V	77.0
103.447000	8.58	33.50	24.94	1000.0	120.000	108.0	V	61.0
610.490000	18.12	36.00	17.90	1000.0	120.000	225.0	V	89.0

Figure A.3 Radiated Emission from 30MHz to 1GHz

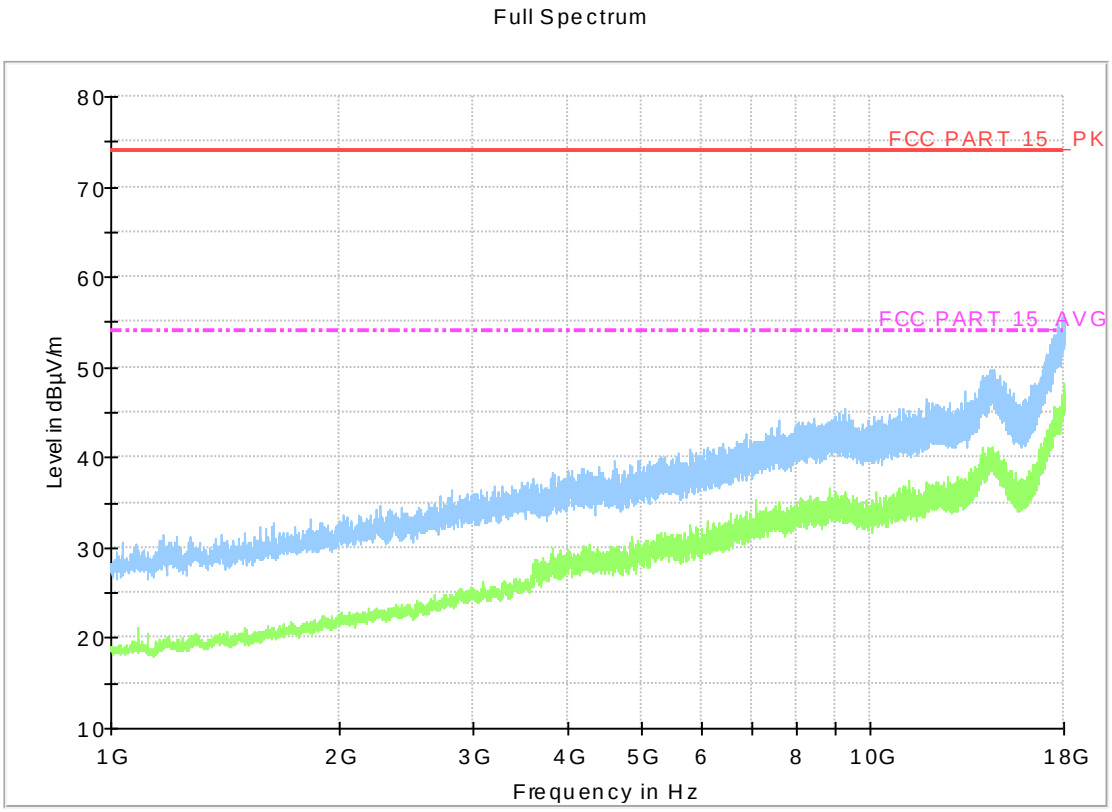
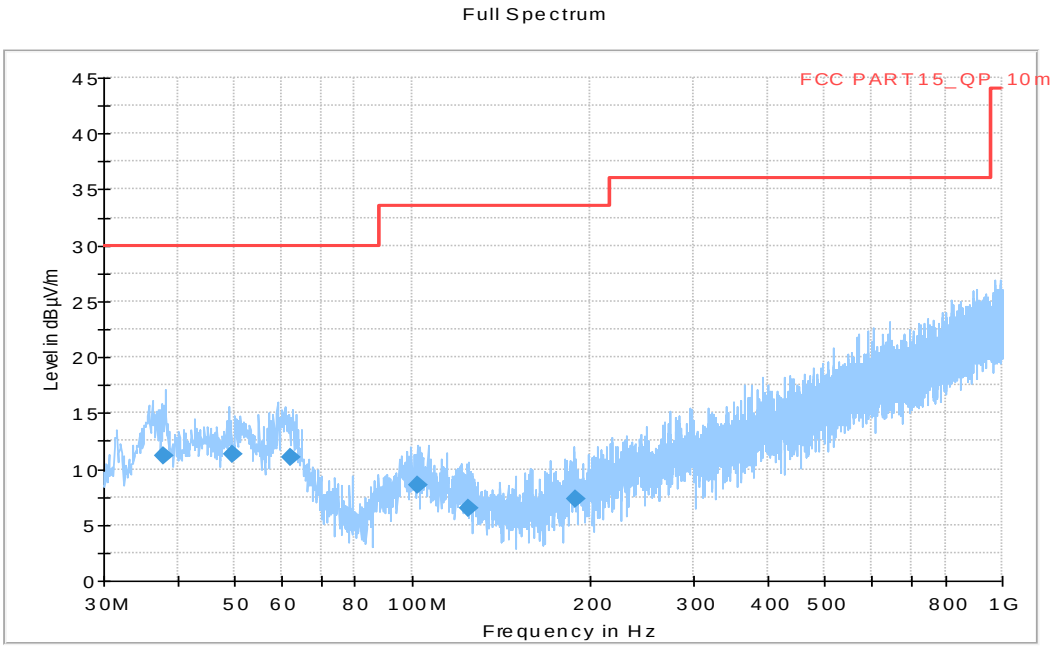


Figure A.4 Radiated Emission from 1GHz to 18GHz

Charging and LTE Band 5 idle Mode, Set.11



Final_Result

Frequency (MHz)	QuasiPeak (dBuV//m)	Limit (dBuV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
37.848000	11.19	30.00	18.81	1000.0	120.000	215.0	V	94.0
49.515000	11.36	30.00	18.64	1000.0	120.000	125.0	V	110.0
62.306000	11.07	30.00	18.93	1000.0	120.000	100.0	V	62.0
102.477000	8.50	33.50	25.02	1000.0	120.000	106.0	V	71.0
124.215000	6.48	33.50	27.04	1000.0	120.000	116.0	V	82.0
188.761000	7.33	33.50	26.19	1000.0	120.000	175.0	V	105.0

Figure A.5 Radiated Emission from 30MHz to 1GHz

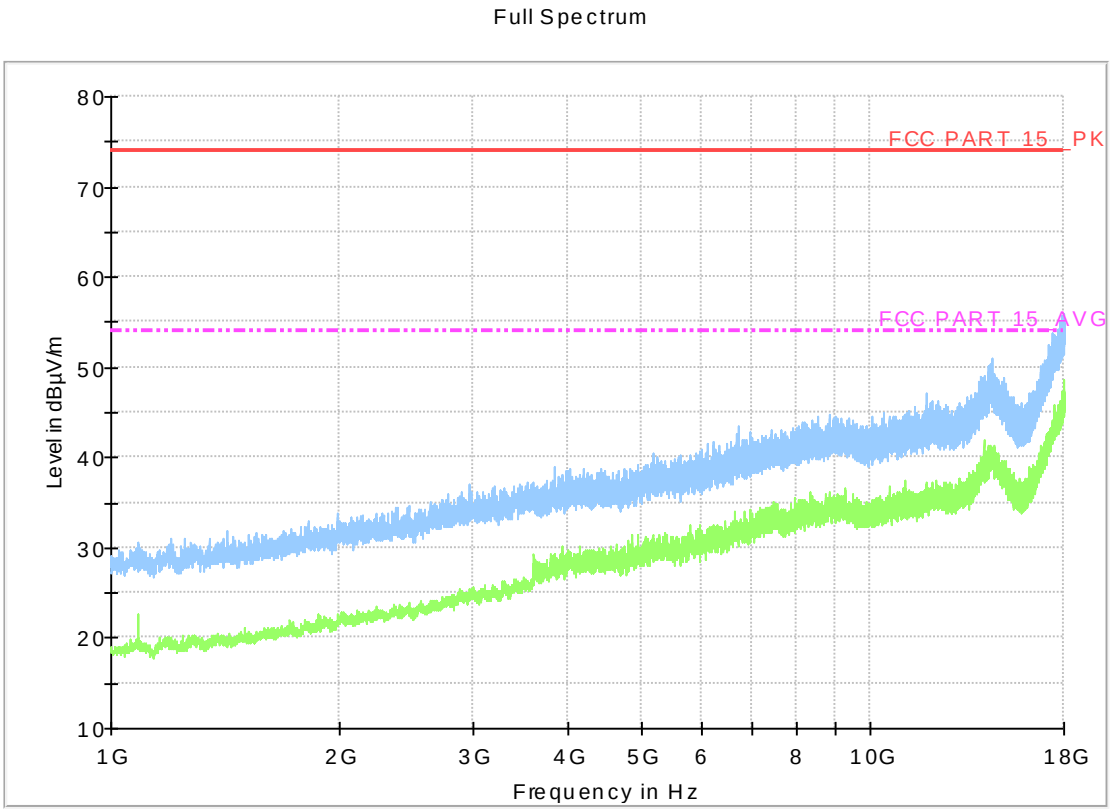
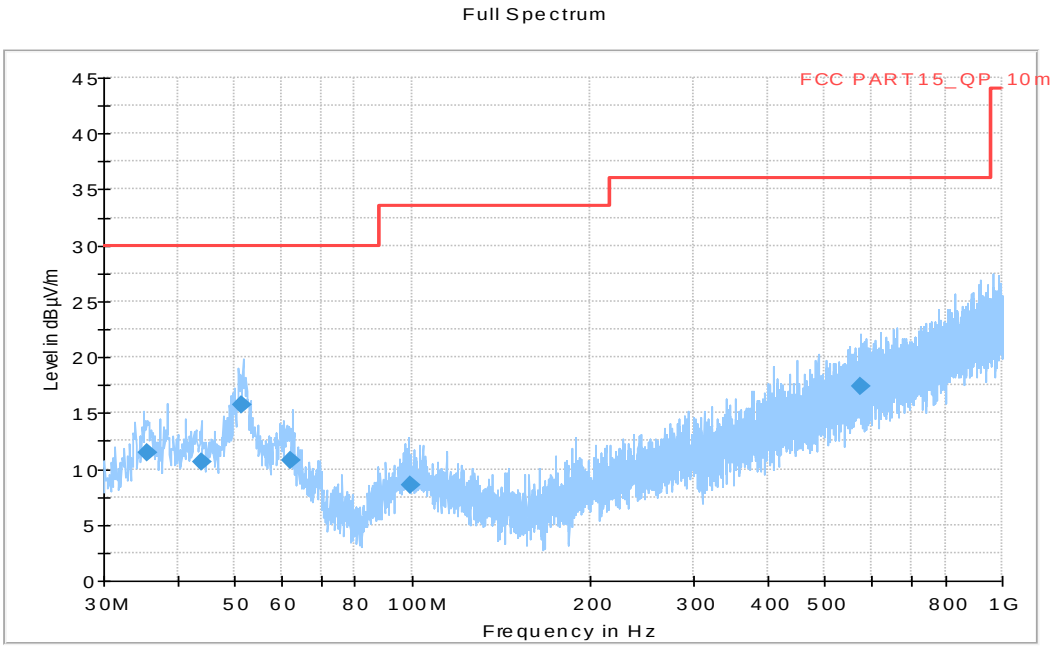


Figure A.6 Radiated Emission from 1GHz to 18GHz

Charging and LTE Band 12 idle Mode, Set.11



Final_Result

Frequency (MHz)	QuasiPeak (dBuV//m)	Limit (dBuV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
35.464000	11.43	30.00	18.57	1000.0	120.000	219.0	V	120.0
43.931000	10.56	30.00	19.44	1000.0	120.000	181.0	V	60.0
51.571000	15.75	30.00	14.25	1000.0	120.000	180.0	V	60.0
62.089000	10.72	30.00	19.28	1000.0	120.000	107.0	V	99.0
98.985000	8.56	33.50	24.96	1000.0	120.000	101.0	V	79.0
575.306000	17.39	36.00	18.63	1000.0	120.000	125.0	V	78.0

Figure A.7 Radiated Emission from 30MHz to 1GHz

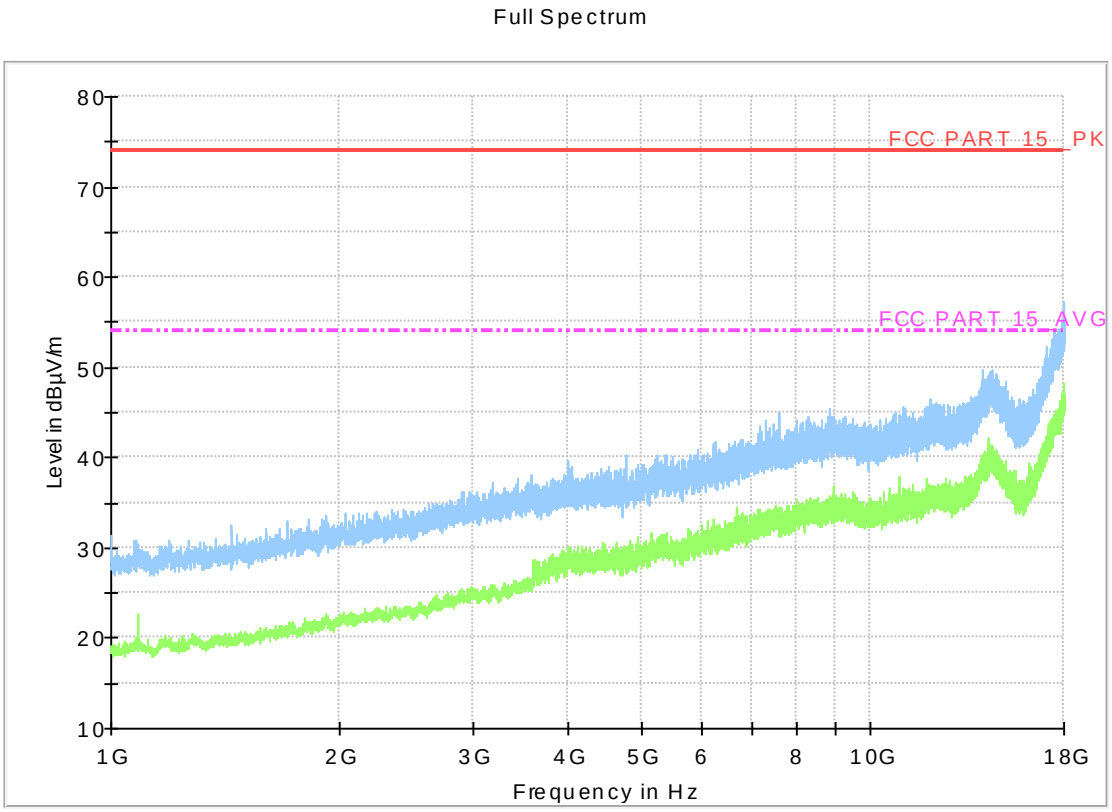
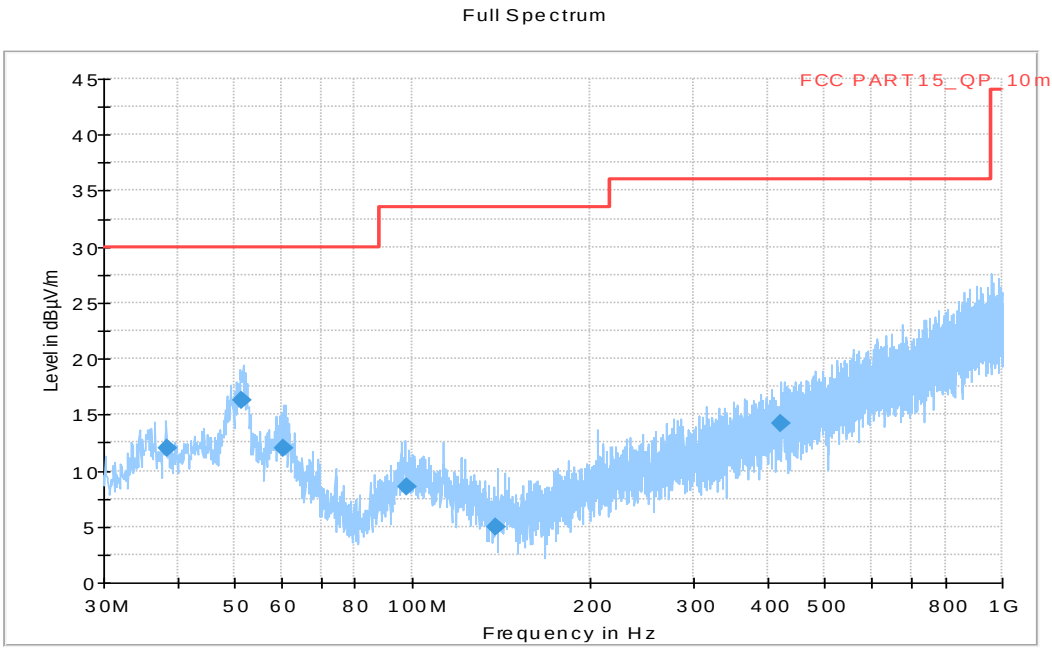


Figure A.8 Radiated Emission from 1GHz to 18GHz

Charging and LTE Band 26 idle Mode, Set.11



Final_Result

Frequency (MHz)	QuasiPeak (dBuV//m)	Limit (dBuV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
38.365000	12.07	30.00	17.93	1000.0	120.000	125.0	V	60.0
51.229000	16.22	30.00	13.78	1000.0	120.000	125.0	V	107.0
60.620000	12.03	30.00	17.97	1000.0	120.000	125.0	V	120.0
97.627000	8.59	33.50	24.93	1000.0	120.000	125.0	V	70.0
139.019000	5.03	33.50	28.49	1000.0	120.000	182.0	V	73.0
422.088000	14.21	36.00	21.81	1000.0	120.000	187.0	V	99.0

Figure A.9 Radiated Emission from 30MHz to 1GHz

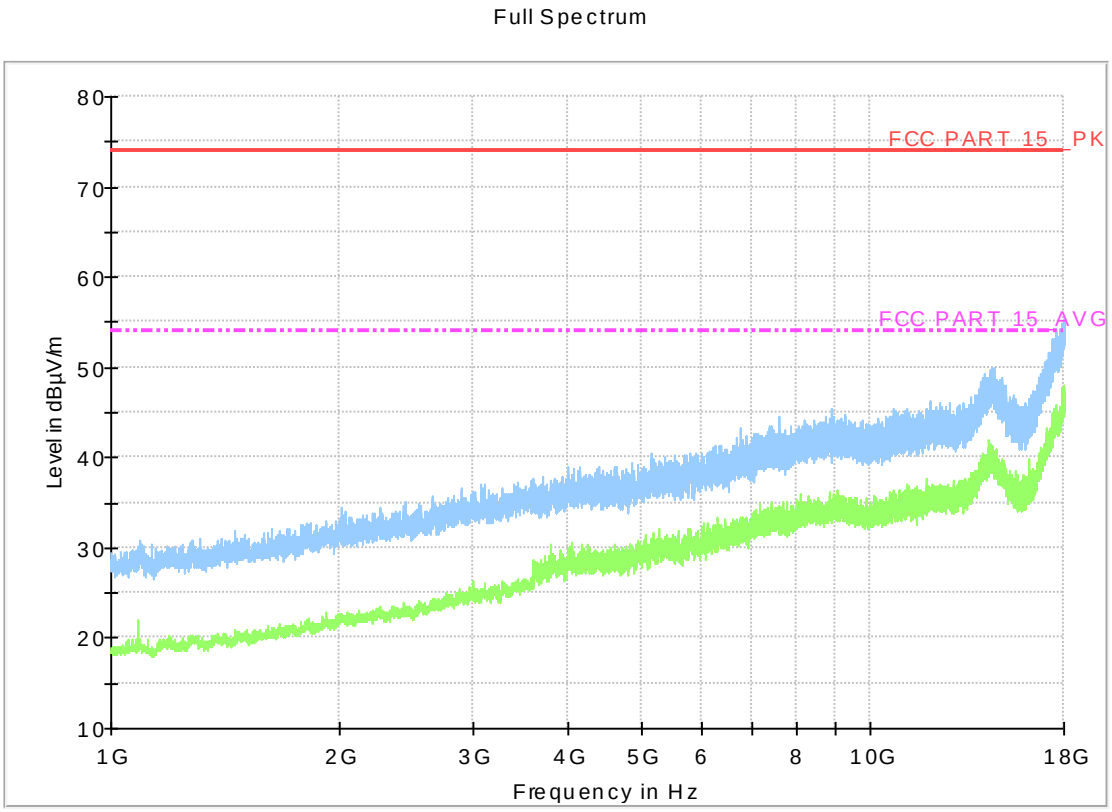
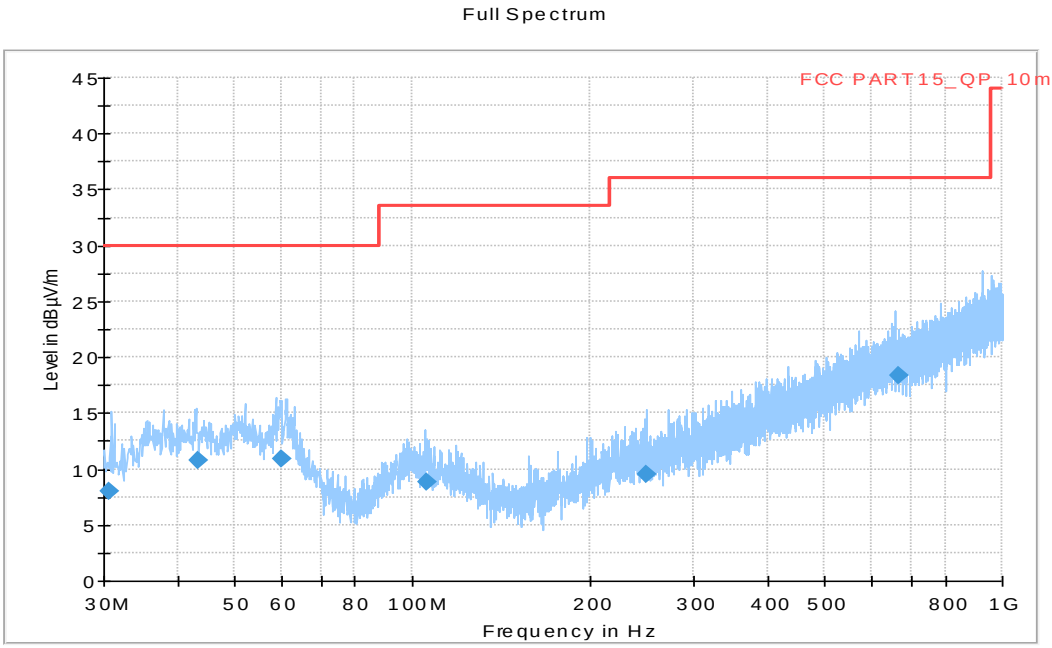


Figure A.10 Radiated Emission from 1GHz to 18GHz

Charging and LTE Band 71 idle Mode, Set.11



Final_Result

Frequency (MHz)	QuasiPeak (dBuV//m)	Limit (dBuV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
30.730000	8.07	30.00	21.93	120.00	102.9	V	88.	30.73000
43.418000	10.71	30.00	19.29	120.00	225.0	V	21	43.41800
60.102000	10.97	30.00	19.03	120.00	102.9	V	30.	60.10200
106.127000	8.79	33.50	24.73	120.00	125.0	V	81.	106.1270
249.770000	9.54	36.00	26.48	120.00	103.3	V	16	249.7700
669.549000	18.31	36.00	17.71	120.00	225.0	V	12	669.5490

Figure A.9 Radiated Emission from 30MHz to 1GHz

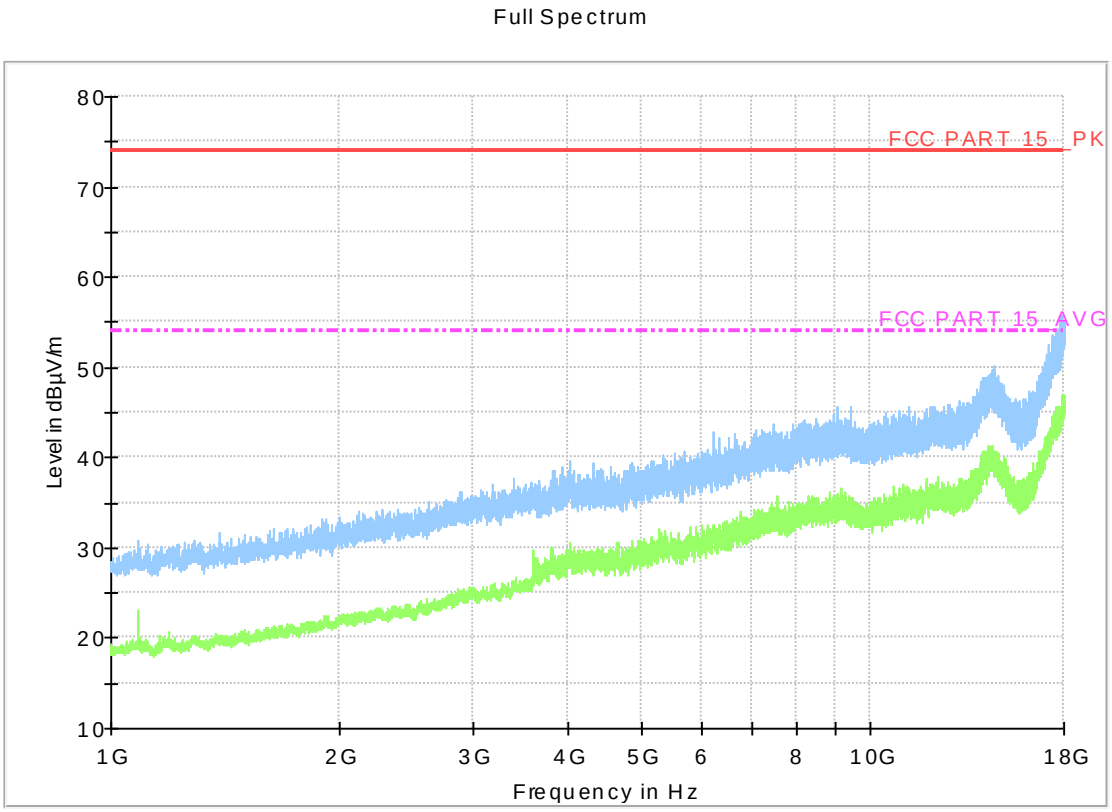
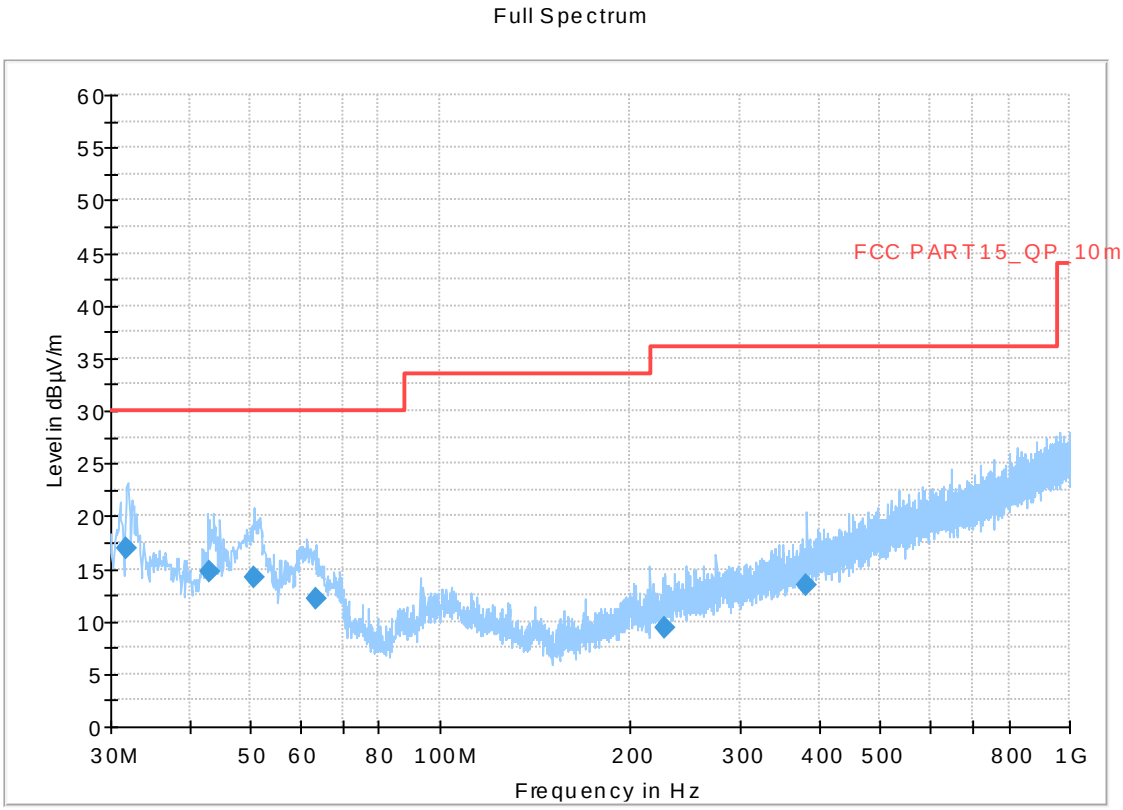


Figure A.10 Radiated Emission from 1GHz to 18GHz

Charging and Rear Camera Mode, Set.11



Final_Result

Frequency (MHz)	QuasiPeak (dBuV//m)	Limit (dBuV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
31.806000	16.86	30.00	13.14	1000.0	120.000	217.0	V	271.0
43.137000	14.73	30.00	15.27	1000.0	120.000	189.0	V	196.0
50.541000	14.23	30.00	15.77	1000.0	120.000	120.0	V	259.0
63.502000	12.20	30.00	17.80	1000.0	120.000	312.0	V	290.0
227.284000	9.43	36.00	26.59	1000.0	120.000	100.0	V	182.0
382.286000	13.41	36.00	22.61	1000.0	120.000	125.0	V	285.0

Figure A.11 Radiated Emission from 30MHz to 1GHz

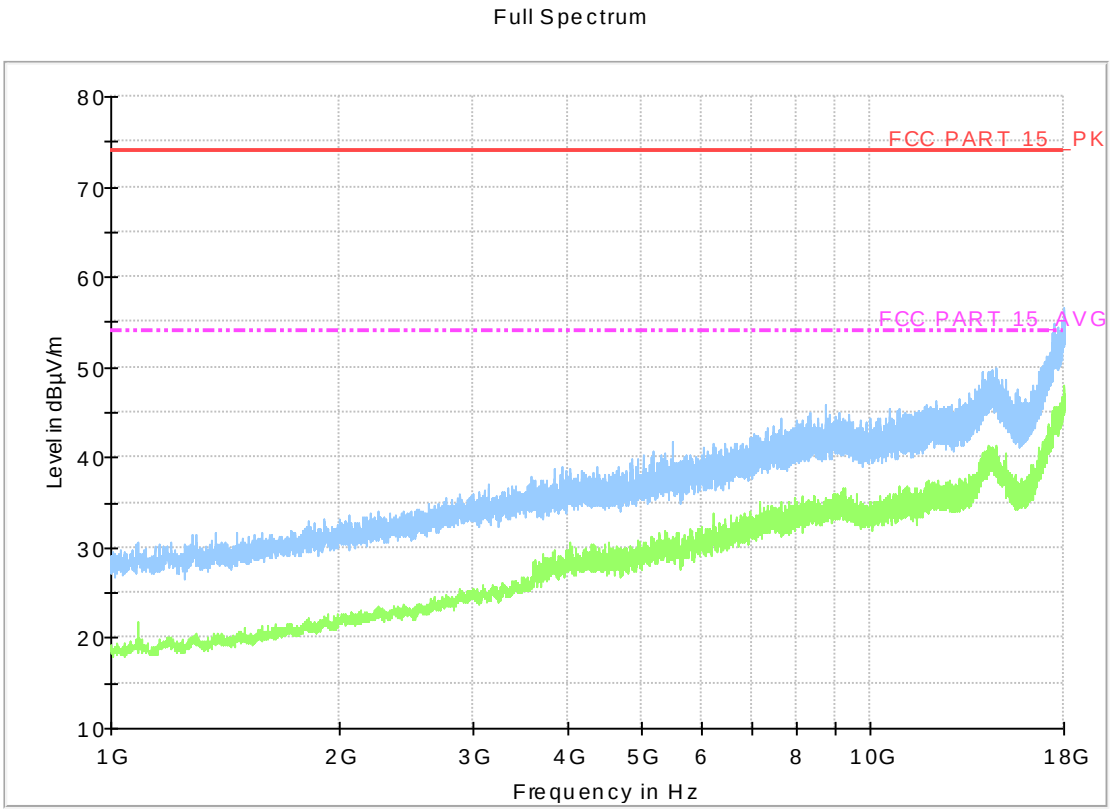
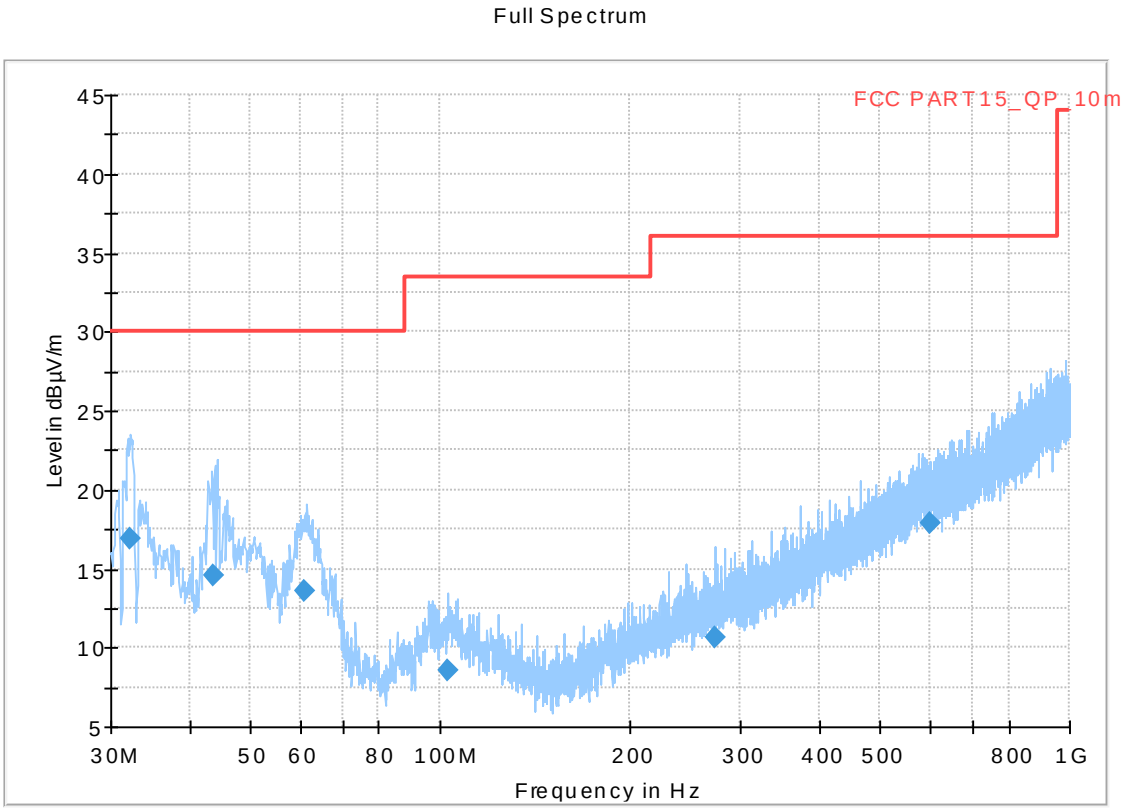


Figure A.12 Radiated Emission from 1GHz to 18GHz

Charging and Front Camera Mode, Set.12



Final_Result

Frequency (MHz)	QuasiPeak (dBuV//m)	Limit (dBuV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
32.185000	16.91	30.00	13.09	1000.0	120.000	124.0	V	25.0
43.622000	14.56	30.00	15.44	1000.0	120.000	214.0	V	205.0
60.985000	13.60	30.00	16.40	1000.0	120.000	388.0	V	77.0
103.198000	8.54	33.50	24.98	1000.0	120.000	410.0	V	30.0
273.549000	10.65	36.00	25.37	1000.0	120.000	125.0	V	106.0
600.679000	17.85	36.00	18.17	1000.0	120.000	214.0	V	120.0

Figure A.13 Radiated Emission from 30MHz to 1GHz

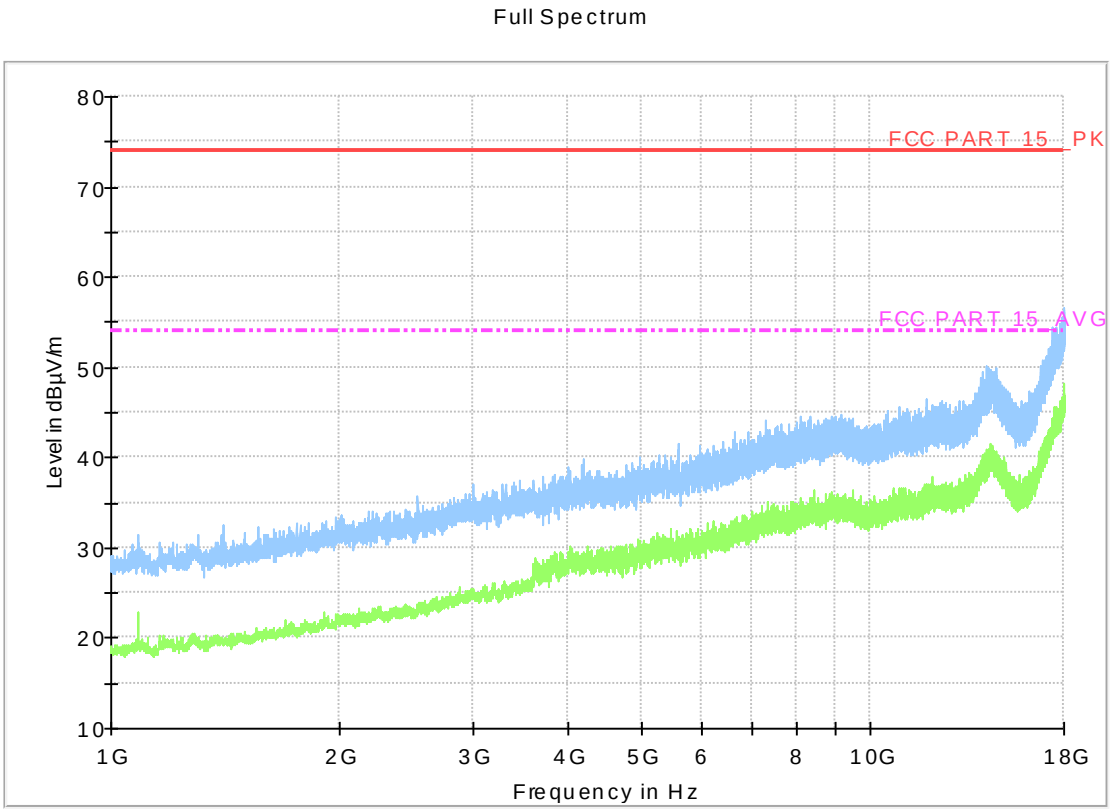
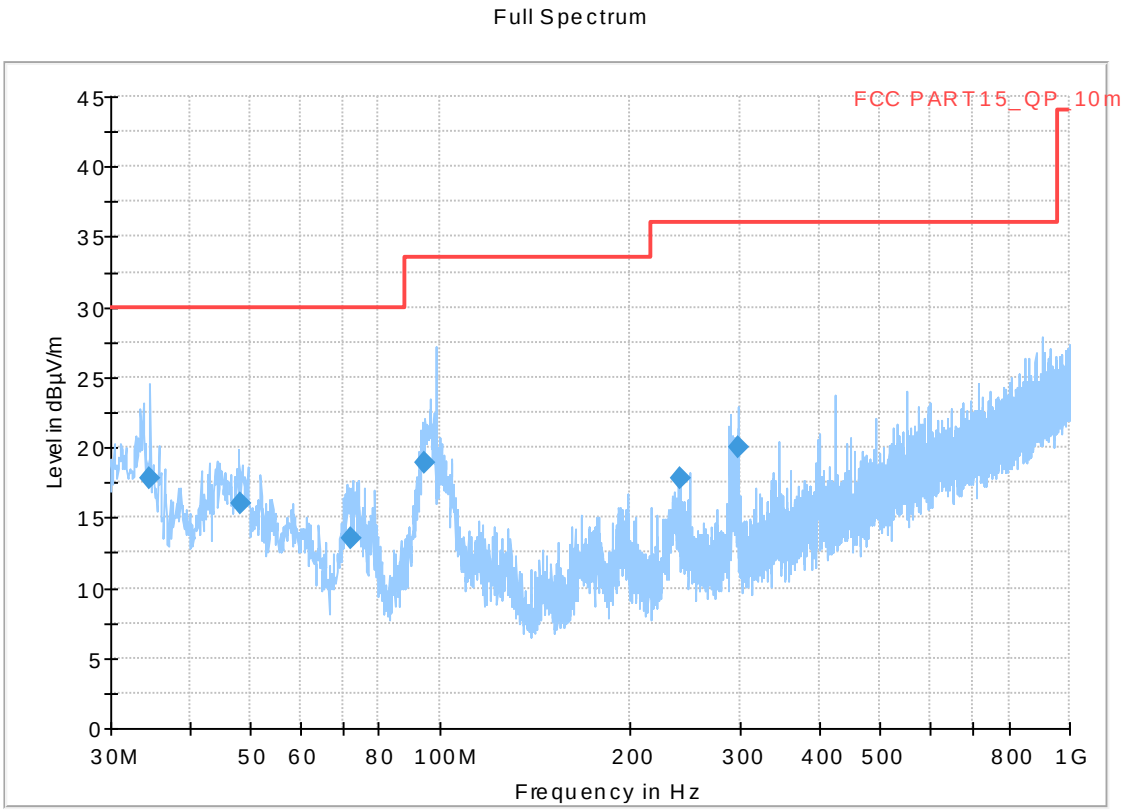


Figure A.14 Radiated Emission from 1GHz to 18GHz

USB + FM Mode, Set.13



Final_Result

Frequency (MHz)	QuasiPeak (dBuV//m)	Limit (dBuV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
34.536000	17.78	30.00	12.22	1000.0	120.000	219.0	V	60.0
48.245000	16.00	30.00	14.00	1000.0	120.000	216.0	V	162.0
72.417000	13.49	30.00	16.51	1000.0	120.000	113.0	V	60.0
94.676000	18.97	33.50	14.55	1000.0	120.000	120.0	V	210.0
239.987000	17.87	36.00	18.15	1000.0	120.000	109.0	V	63.0
297.646000	20.01	36.00	16.01	1000.0	120.000	103.0	V	175.0

Figure A.15 Radiated Emission from 30MHz to 1GHz

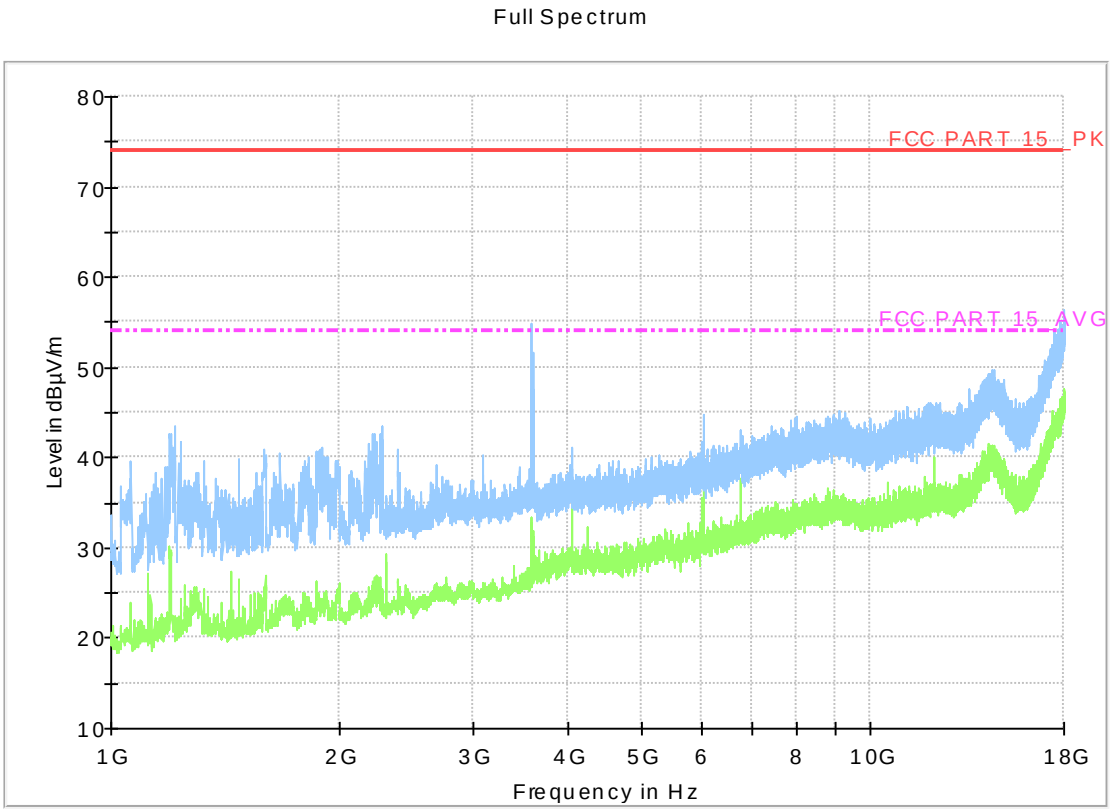
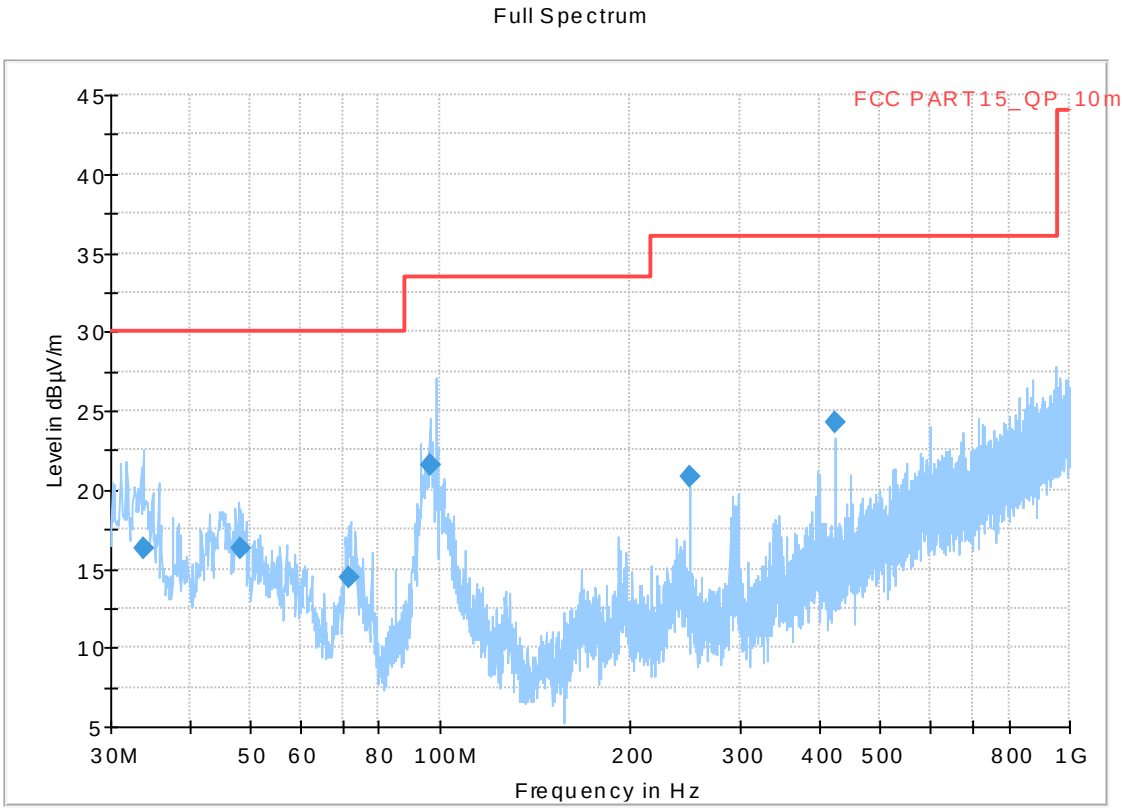


Figure A.16 Radiated Emission from 1GHz to 18GHz

USB + FM Mode, Set.14



Final_Result

Frequency (MHz)	QuasiPeak (dBuV//m)	Limit (dBuV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
33.783000	16.27	30.00	13.73	1000.0	120.000	100.0	V	205.0
48.222000	16.28	30.00	13.72	1000.0	120.000	225.0	V	182.0
71.641000	14.45	30.00	15.55	1000.0	120.000	225.0	V	97.0
96.339000	21.53	33.50	11.99	1000.0	120.000	105.0	V	210.0
249.996000	20.83	36.00	15.19	1000.0	120.000	103.0	V	192.0
424.984000	24.28	36.00	11.74	1000.0	120.000	98.0	V	83.0

Figure A.17 Radiated Emission from 30MHz to 1GHz

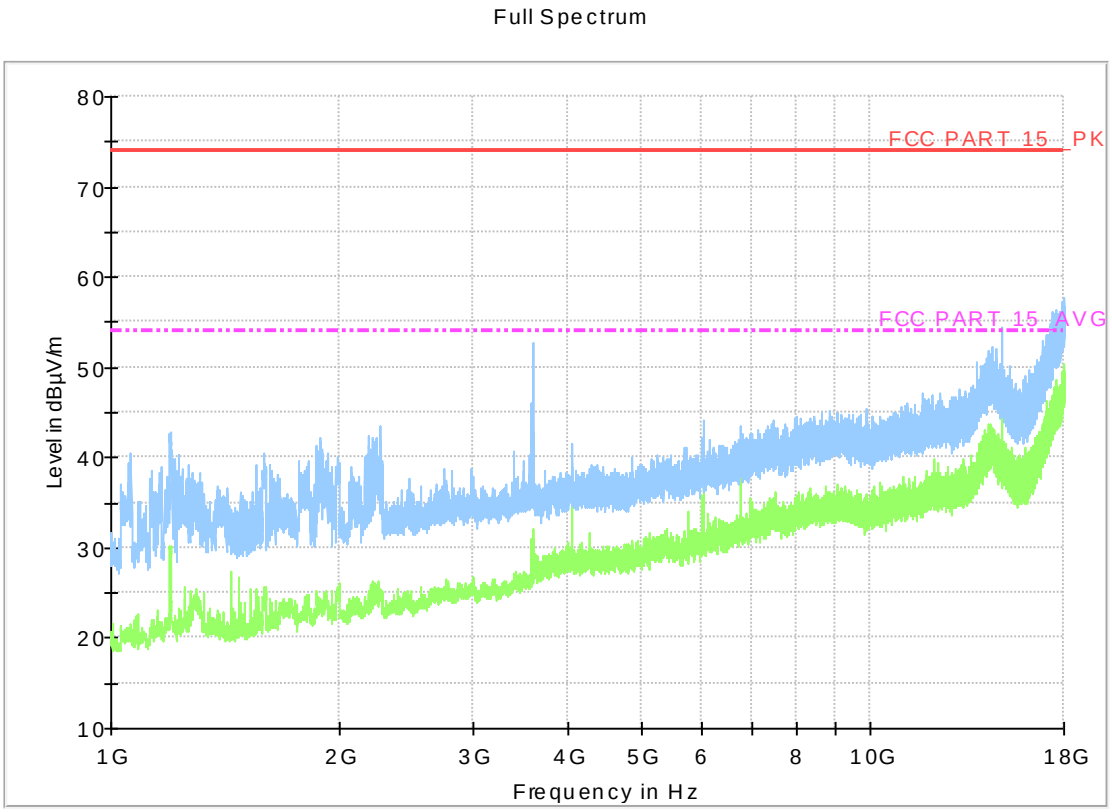


Figure A.18 Radiated Emission from 1GHz to 18GHz

A.2 Conducted Emission

Reference

FCC: CFR Part 15.107(a).

A.2.1 Method of measurement

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. Tested in accordance with the procedures of ANSI C63.4 – 2014, section 7.3.

A.2.2 EUT Operating Mode

The MS is operating in the charging mode. During the test MS is connected to a charger in the case of charging mode.

A.2.3 Measurement Limit

Frequency of emission (MHz)	Conducted limit (dBμV)	
	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		

A.2.4 Test Condition in charging mode

Voltage（V）	Frequency（Hz）
120	60

RBW/IF bandwidth	Sweep Time(s)
9kHz	1

A.2.5 Measurement Results

Measurement uncertainty: *U*=3.08dB, *k*=2.

Charging and Rear Camera Mode, Set.11

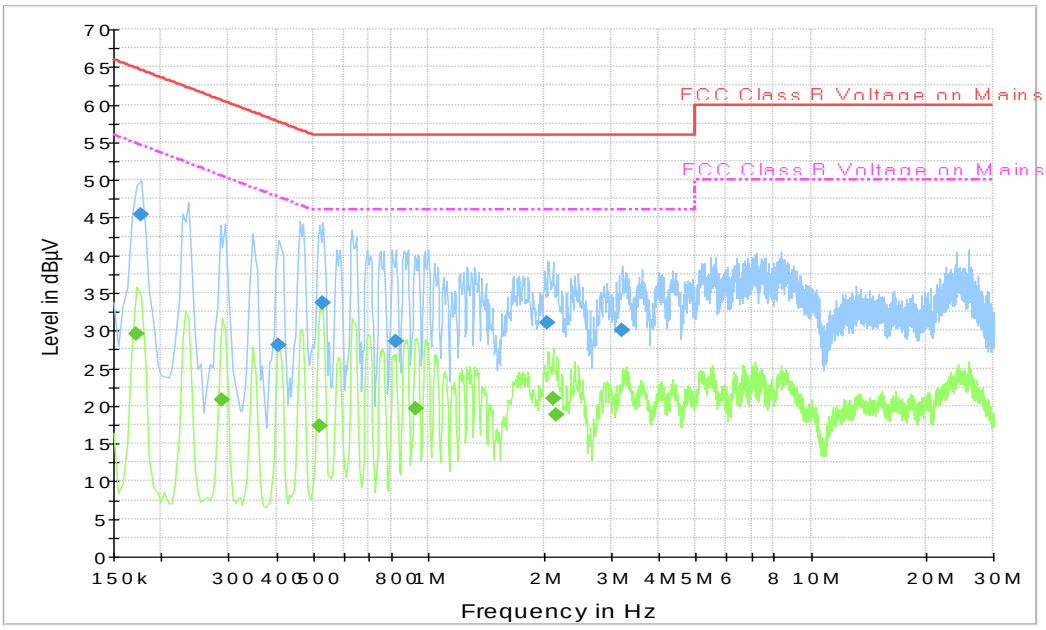


Figure A.19 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.177000	45.4	L1	20.1	19.3	64.6
0.406500	28.1	L1	20.1	29.6	57.7
0.528000	33.6	L1	20.1	22.4	56.0
0.820500	28.5	L1	20.0	27.5	56.0
2.053500	31.1	L1	20.1	24.9	56.0
3.205500	30.1	L1	20.4	25.9	56.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.172500	29.6	L1	20.1	25.2	54.8
0.289500	20.8	L1	20.0	29.7	50.5
0.519000	17.3	L1	20.1	28.7	46.0
0.928500	19.6	N	20.0	26.4	46.0
2.112000	20.9	L1	20.1	25.1	46.0
2.170500	18.9	L1	20.1	27.1	46.0

Charging and Front Camera Mode, Set.12

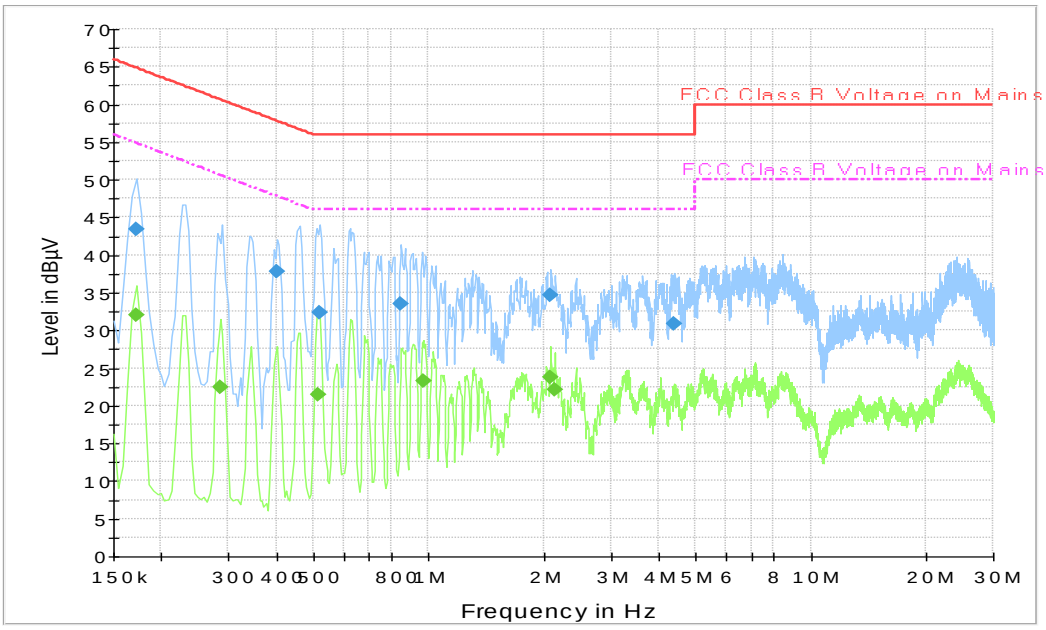


Figure A.20 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.172500	43.4	L1	20.1	21.4	64.8
0.402000	37.8	L1	20.1	20.0	57.8
0.519000	32.4	N	19.9	23.6	56.0
0.847500	33.5	N	20.0	22.5	56.0
2.089500	34.7	N	19.9	21.3	56.0
4.407000	30.8	L1	20.7	25.2	56.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.172500	32.0	N	19.9	22.8	54.8
0.285000	22.4	L1	20.0	28.2	50.7
0.514500	21.5	L1	20.1	24.5	46.0
0.969000	23.3	N	19.9	22.7	46.0
2.085000	23.8	N	19.9	22.2	46.0
2.143500	22.1	N	19.9	23.9	46.0

USB + FM Mode, Set.13

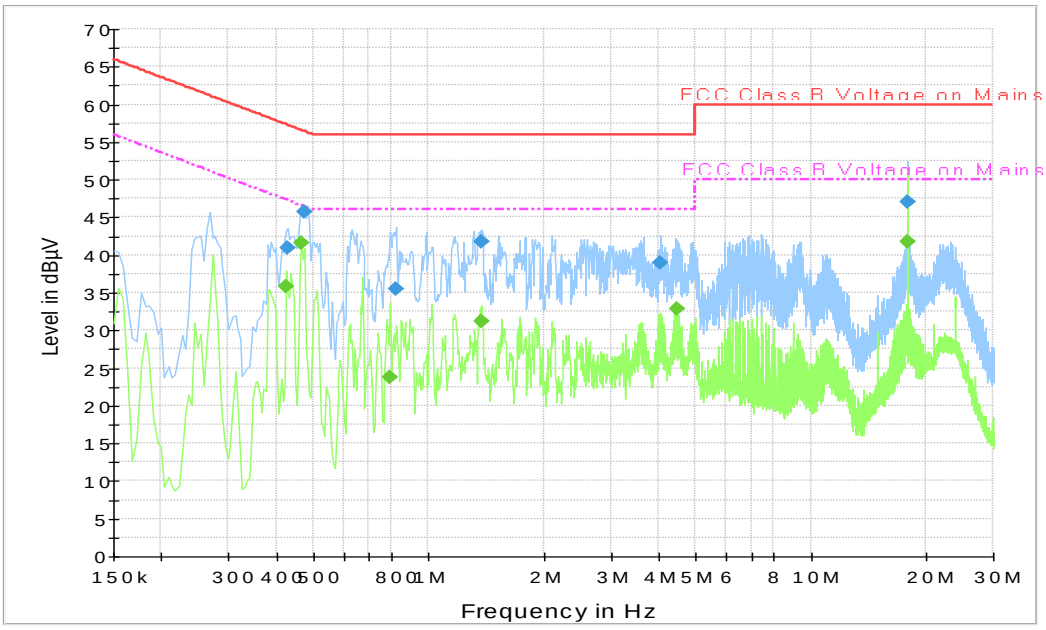


Figure A.21 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.429000	40.9	L1	20.1	16.4	57.3
0.474000	45.7	L1	20.1	10.7	56.4
0.825000	35.5	L1	20.0	20.5	56.0
1.383000	41.8	L1	19.9	14.2	56.0
4.033500	39.0	L1	20.6	17.0	56.0
17.920500	47.0	L1	24.8	13.0	60.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.424500	35.8	N	19.9	11.5	47.4
0.465000	41.6	N	19.9	5.0	46.6
0.793500	23.8	N	20.0	22.2	46.0
1.374000	31.3	N	19.9	14.7	46.0
4.474500	32.8	L1	20.7	13.2	46.0
17.920500	41.8	L1	24.8	8.2	50.0

USB + FM Mode, Set.14

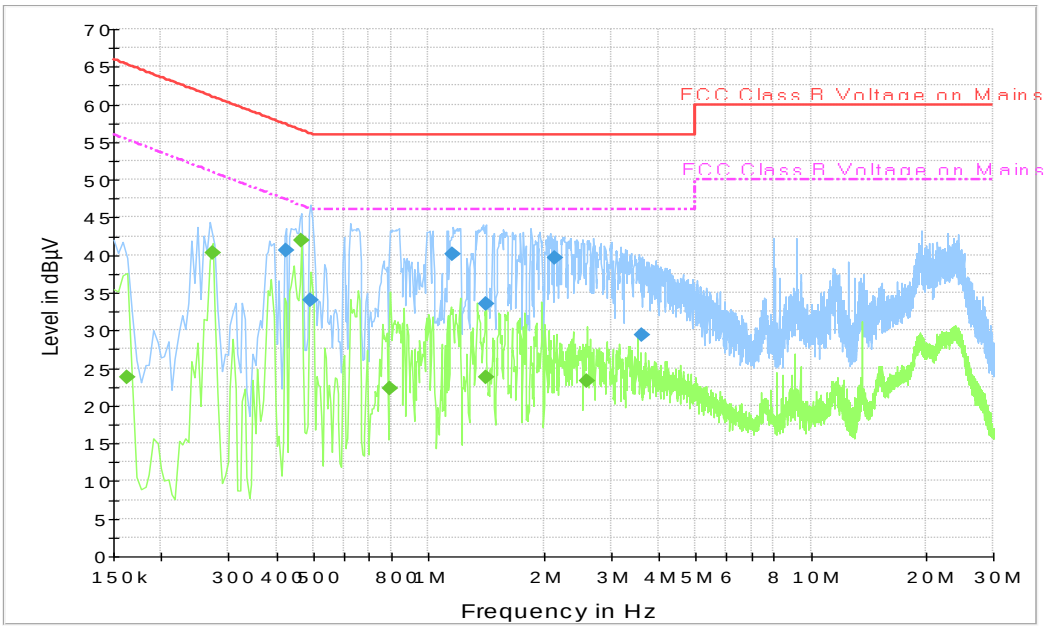


Figure A.22 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.424500	40.6	N	19.9	16.8	57.4
0.492000	34.1	N	19.9	22.1	56.1
1.158000	40.2	N	19.9	15.8	56.0
1.410000	33.5	N	19.9	22.5	56.0
2.134500	39.6	L1	20.1	16.4	56.0
3.624000	29.4	N	20.3	26.6	56.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.163500	23.7	L1	20.2	31.6	55.3
0.271500	40.3	L1	20.0	10.8	51.1
0.465000	41.9	L1	20.1	4.7	46.6
0.793500	22.4	L1	20.0	23.6	46.0
1.410000	23.8	N	19.9	22.2	46.0
2.593500	23.3	L1	20.2	22.7	46.0

ANNEX B: Persons involved in this testing

Test Item	Tester
Conducted Continuous Emission	Wang Huan; Li Pengfei
Radiated Continuous Emission	Yan Hanchen

*****END OF REPORT*****