FCC 15B TEST REPORT

No. I20Z60578-EMC01

for

Shenzhen Tinno Mobile Technology Corp.

Smart Phone

Model Name: U325AC

FCC ID: XD6U325AC

with

Hardware Version: V1.0

Software Version: U325ACV01.20.11

Issued Date: 2020-06-29

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

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Test Laboratory:

CTTL-Telecommunication Technology Labs, CAICT

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

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

REPORT HISTORY

Report Number	Revision	Description	Issue Date
I20Z60578-EMC01	Rev.0	1st edition	2020-06-29

CONTENTS

1. Test Laboratory

1.1. Introduction & Accreditation

Telecommunication Technology Labs, CAICT is an ISO/IEC 17025:2005 accredited test laboratory under NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM (NVLAP) with lab code 600118-0, and is also an FCC accredited test laboratory (CN5017), and ISED accredited test laboratory (CN0066). The detail accreditation scope can be found on NVLAP website.

1.2. Testing Location

Location 1: CTTL(huayuan North Road)

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

1.3. Testing Environment

Normal Temperature:	15-35℃
Relative Humidity:	20-75%

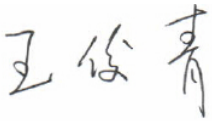
1.4. Project data

Testing Start Date:	2020-06-27
Testing End Date:	2020-06-29

1.5. Signature

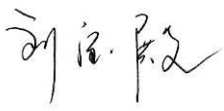
Zhang Ying

(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:	Shenzhen Tinno Mobile Technology Corp.
Address:	4/F, H-3 Building,OCT Eastern Industrial Park. NO.1 XiangShan East Road, Nan Shan District,Shenzhen, P.R.China
City:	Shenzhen
Postal Code:	/
Country:	China
Telephone:	0755-86095550
Fax:	/

2.2. Manufacturer Information

Company Name:	Shenzhen Tinno Mobile Technology Corp.
Address:	4/F, H-3 Building,OCT Eastern Industrial Park. NO.1 XiangShan East Road, Nan Shan District,Shenzhen, P.R.China
City:	Shenzhen
Postal Code:	/
Country:	China
Telephone:	0755-86095550
Fax:	/

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

3.1. About EUT

Description	Smart Phone
Model Name	U325AC
FCC ID	XD6U325AC

This device contains the receivers which tune and operate between 30MHz-960MHz in the following bands:
GSM850MHz, WCDMA850MHz, LTE bands 5/12/14

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
EUT2	866530040014390	V1.0	U325ACV01.20.11

*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
AE1	Battery	/	/
AE2	charger	/	/
AE3	charger	/	/
AE4	USB	/	/
AE5	USB	/	/

AE1

Model	PT34H406082W
Manufacturer	BYD
Capacity	3330mAh
Nominal Voltage	3.85V

AE12

Model	TN-050100U6
Manufacturer	Dong Guan City GangQi Electronic CO.,Ltd.
Length of cable	/

AE13

Model	TN-050100U6
Manufacturer	Guangdong Beicom Electronics Co.,Ltd.
Length of cable	/

AE4

Model	P103-BP6130-000/ T365-010

Manufacturer	Shenzhen Yihuaxing Electronics CO.,Ltd.
Length of cable	/

AE5

Model	P103-BP6130-010/ STN-A108A
Manufacturer	Saibao(jiangxi) Industrial Company Limited
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.3	EUT2 + AE1 + AE12 + AE14	Charger
Set.4	EUT2 + AE1 + AE13 + AE15	Charger
Set.5	EUT2 + AE1 + AE14	USB
Set.6	EUT2 + AE1 + AE15	USB

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
12	Test Receiver	ESU26	100235	Rohde & Schwarz	2021-03-05	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) 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. During the test MS is connected to a charger in the case of charging mode.

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.3:

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
17886.667	55.8	-5.7	33.8	27.7	74.0	18.2	H
18000.000	55.3	-6.5	33.8	28.0	74.0	18.7	H
17920.100	55.3	-5.4	33.8	26.9	74.0	18.7	V
17890.067	55.3	-5.7	33.8	27.2	74.0	18.7	H
17981.300	55.2	-5.4	33.8	26.8	74.0	18.8	H
17994.333	55.2	-5.4	33.8	26.8	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
17973.367	47.9	-5.4	33.8	19.5	54.0	6.1	H
17973.933	47.7	-5.4	33.8	19.3	54.0	6.3	H
17913.300	46.9	-5.7	33.8	18.8	54.0	7.1	V
17974.500	46.6	-5.4	33.8	18.2	54.0	7.4	H
17997.733	46.5	-5.4	33.8	18.1	54.0	7.5	H
17954.100	46.5	-5.4	33.8	18.1	54.0	7.5	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
17987.533	55.8	-5.4	33.8	27.4	74.0	18.2	H
17991.500	55.7	-5.4	33.8	27.3	74.0	18.3	H
17990.933	55.7	-5.4	33.8	27.3	74.0	18.3	V
17960.900	55.2	-5.4	33.8	26.8	74.0	18.8	H
17956.933	55.2	-5.4	33.8	26.8	74.0	18.8	H
17996.033	55.1	-5.4	33.8	26.7	74.0	18.9	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
17996.600	47.2	-5.4	33.8	18.8	54.0	6.8	H
17987.533	47.1	-5.4	33.8	18.7	54.0	6.9	H
17981.867	46.6	-5.4	33.8	18.2	54.0	7.4	V
17996.033	46.6	-5.4	33.8	18.2	54.0	7.4	H
17982.433	46.4	-5.4	33.8	18.0	54.0	7.6	H
17904.233	46.3	-5.7	33.8	18.2	54.0	7.7	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
17974.500	55.6	-5.4	33.8	27.2	74.0	18.4	H
17984.700	55.6	-5.4	33.8	27.2	74.0	18.4	H
17986.400	55.5	-5.4	33.8	27.1	74.0	18.5	V
17968.267	55.2	-5.4	33.8	26.8	74.0	18.8	H
17954.667	55.0	-5.4	33.8	26.6	74.0	19.0	H
17961.467	55.0	-5.4	33.8	26.6	74.0	19.0	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
17982.433	47.4	-5.4	33.8	19.0	54.0	6.6	H
17998.300	47.4	-5.4	33.8	19.0	54.0	6.6	H
17990.367	47.3	-5.4	33.8	18.9	54.0	6.7	V
17989.800	47.0	-5.4	33.8	18.6	54.0	7.0	H
17975.633	46.8	-5.4	33.8	18.4	54.0	7.2	H
17894.033	46.7	-5.7	33.8	18.6	54.0	7.3	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
17873.633	55.3	-5.7	33.8	27.2	74.0	18.7	H
17976.767	55.2	-5.4	33.8	26.8	74.0	18.8	H
17933.133	55.2	-5.4	33.8	26.8	74.0	18.8	V
17984.700	55.1	-5.4	33.8	26.7	74.0	18.9	H
17993.200	55.1	-5.4	33.8	26.7	74.0	18.9	H
17951.267	55.0	-5.4	33.8	26.6	74.0	19.0	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
17972.233	47.3	-5.4	33.8	18.9	54.0	6.7	H
17997.733	46.9	-5.4	33.8	18.5	54.0	7.1	H
17989.800	46.8	-5.4	33.8	18.4	54.0	7.2	V
17830.000	46.8	-5.7	33.8	18.7	54.0	7.2	H
17955.233	46.7	-5.4	33.8	18.3	54.0	7.3	H
17955.800	46.7	-5.4	33.8	18.3	54.0	7.3	H

Charging and LTE Band 14 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
17887.233	55.8	-5.7	33.8	27.7	74.0	18.2	H
17952.967	55.8	-5.4	33.8	27.4	74.0	18.2	H
17999.433	55.8	-5.4	33.8	27.4	74.0	18.2	V
17857.767	55.7	-5.7	33.8	27.6	74.0	18.3	H
17998.867	55.4	-5.4	33.8	27.0	74.0	18.6	H
17836.800	55.4	-5.7	33.8	27.3	74.0	18.6	H

Charging and LTE Band 14 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	47.3	-5.4	33.8	18.9	54.0	6.7	H
17999.433	47.1	-5.4	33.8	18.7	54.0	6.9	H
17996.600	46.9	-5.4	33.8	18.5	54.0	7.1	V
17984.700	46.9	-5.4	33.8	18.5	54.0	7.1	H
17970.533	46.8	-5.4	33.8	18.4	54.0	7.2	H
17867.967	46.7	-5.7	33.8	18.6	54.0	7.3	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
17983.567	56.0	-5.4	33.8	27.6	74.0	18.0	H
17913.867	55.9	-5.7	33.8	27.8	74.0	18.1	H
17929.733	55.3	-5.4	33.8	26.9	74.0	18.7	V
17979.033	55.3	-5.4	33.8	26.9	74.0	18.7	H
17972.800	55.2	-5.4	33.8	26.8	74.0	18.8	H
17966.000	55.2	-5.4	33.8	26.8	74.0	18.8	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
17998.867	47.7	-5.4	33.8	19.3	54.0	6.3	H
17988.100	46.8	-5.4	33.8	18.4	54.0	7.2	H
17895.733	46.7	-5.7	33.8	18.6	54.0	7.3	V
17933.700	46.7	-5.4	33.8	18.3	54.0	7.3	H
17971.667	46.6	-5.4	33.8	18.2	54.0	7.4	H
17990.933	46.6	-5.4	33.8	18.2	54.0	7.4	H

Measurement results for Set.4:

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
17881.567	55.8	-5.7	33.8	27.7	74.0	18.2	H
17966.000	55.7	-5.4	33.8	27.3	74.0	18.3	H
17902.533	55.6	-5.7	33.8	27.5	74.0	18.4	V
17995.467	55.5	-5.4	33.8	27.1	74.0	18.5	H
17964.867	55.2	-5.4	33.8	26.8	74.0	18.8	H
17956.367	55.2	-5.4	33.8	26.8	74.0	18.8	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
17997.733	47.3	-5.4	33.8	18.9	54.0	6.7	H
17998.867	47.2	-5.4	33.8	18.8	54.0	6.8	H
17973.367	47.2	-5.4	33.8	18.8	54.0	6.8	V
17992.067	46.9	-5.4	33.8	18.5	54.0	7.1	H
17981.867	46.9	-5.4	33.8	18.5	54.0	7.1	H
17987.533	46.9	-5.4	33.8	18.5	54.0	7.1	H

Measurement results for Set.5:

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
17880.433	55.5	-5.7	33.8	27.4	74.0	18.5	H
18000.000	55.1	-6.5	33.8	27.8	74.0	18.9	H
17997.167	55.0	-5.4	33.8	26.6	74.0	19.0	V
17968.267	55.0	-5.4	33.8	26.6	74.0	19.0	H
17968.833	54.9	-5.4	33.8	26.5	74.0	19.1	H
17994.333	54.9	-5.4	33.8	26.5	74.0	19.1	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
17981.867	47.4	-5.4	33.8	19.0	54.0	6.6	H
17979.600	47.0	-5.4	33.8	18.6	54.0	7.0	H
17881.567	47.0	-5.7	33.8	18.9	54.0	7.0	V
17981.300	46.8	-5.4	33.8	18.4	54.0	7.2	H
17985.267	46.4	-5.4	33.8	18.0	54.0	7.6	H
17970.533	46.4	-5.4	33.8	18.0	54.0	7.6	H

Measurement results for Set.6:

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
17949.000	55.7	-5.4	33.8	27.3	74.0	18.3	H
17960.900	55.6	-5.4	33.8	27.2	74.0	18.4	H
17987.533	55.4	-5.4	33.8	27.0	74.0	18.6	V
17830.567	55.4	-5.7	33.8	27.3	74.0	18.6	H
17985.833	55.3	-5.4	33.8	26.9	74.0	18.7	H
17995.467	55.2	-5.4	33.8	26.8	74.0	18.8	H

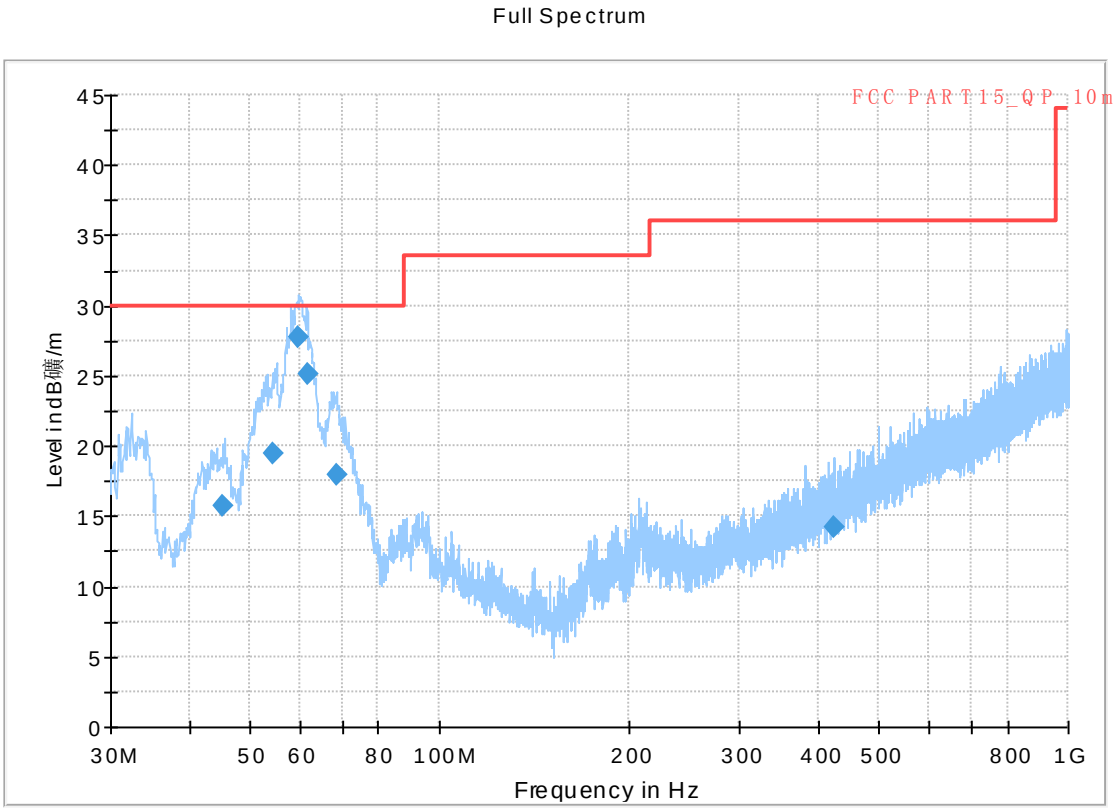
USB /Average detector

Frequency (MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity
17996.600	47.7	-5.4	33.8	19.3	54.0	6.3	H
17966.000	47.1	-5.4	33.8	18.7	54.0	6.9	H
17996.033	46.9	-5.4	33.8	18.5	54.0	7.1	V
17976.767	46.7	-5.4	33.8	18.3	54.0	7.3	H
17998.300	46.7	-5.4	33.8	18.3	54.0	7.3	H
17922.933	46.6	-5.4	33.8	18.2	54.0	7.4	H

Sample calculation: Peak detector, 17949.000MHz

Result =P_{Mea} (27.3dBμV)+ G_A (33.8dB/m)+ G_{PL}(-5.4dB) =55.7dBμV/m

Charging and GSM850MHz idle Mode, Set.3



Final_Result

Frequency (MHz)	QuasiPeak (dBuV//m)	Limit (dBuV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
45.280000	15.72	30.00	14.28	1000.0	120.000	277.0	V	61.0
54.375000	19.41	30.00	10.59	1000.0	120.000	193.0	V	1.0
59.539000	27.77	30.00	2.23	1000.0	120.000	107.0	V	30.0
61.585000	25.19	30.00	4.81	1000.0	120.000	111.0	V	2.0
68.689000	18.01	30.00	11.99	1000.0	120.000	193.0	V	210.0
424.601000	14.27	36.00	21.75	1000.0	120.000	277.0	V	164.0

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

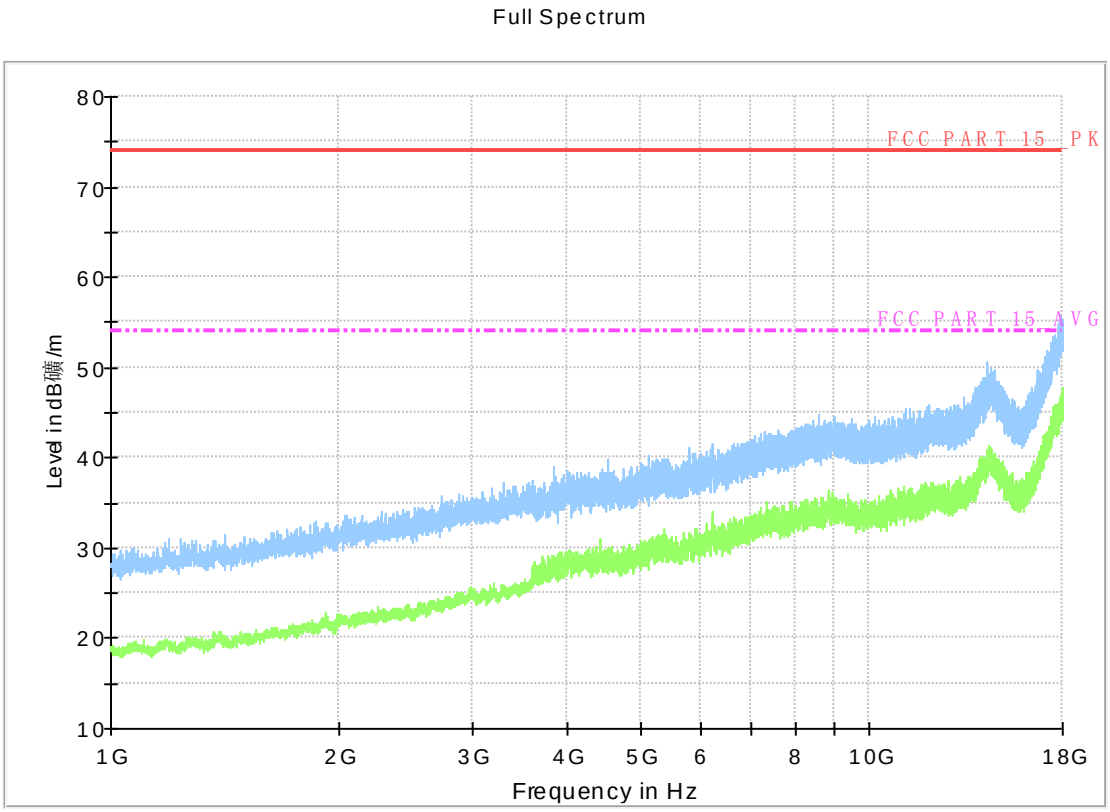
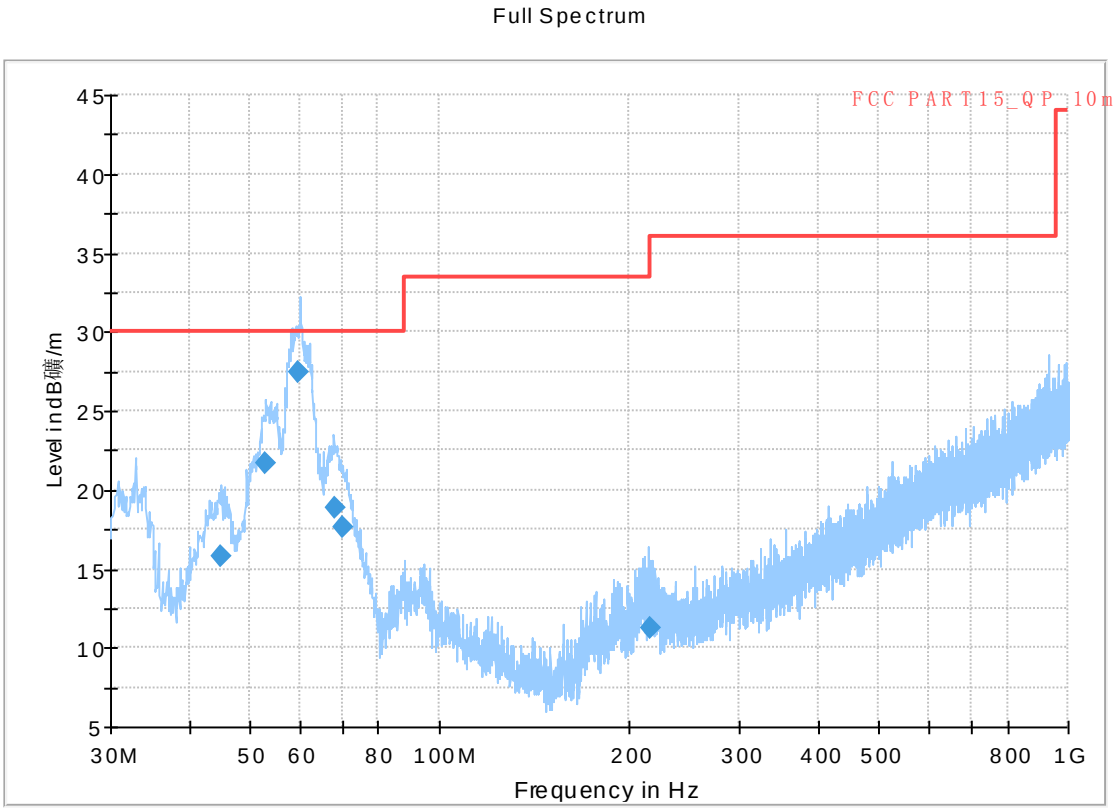


Figure A.2 Radiated Emission from 1GHz to 18GHz

Charging and WCDMA band 5 idle Mode, Set.3



Final_Result

Frequency (MHz)	QuasiPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
44.855000	15.83	30.00	14.17	1000.0	120.000	125.0	V	17.0
52.855000	21.71	30.00	8.29	1000.0	120.000	108.0	V	72.0
59.613000	27.49	30.00	2.51	1000.0	120.000	100.0	V	22.0
68.047000	18.85	30.00	11.15	1000.0	120.000	206.0	V	-30.0
70.103000	17.62	30.00	12.38	1000.0	120.000	276.0	V	169.0
217.076000	11.22	36.00	24.80	1000.0	120.000	106.0	V	81.0

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

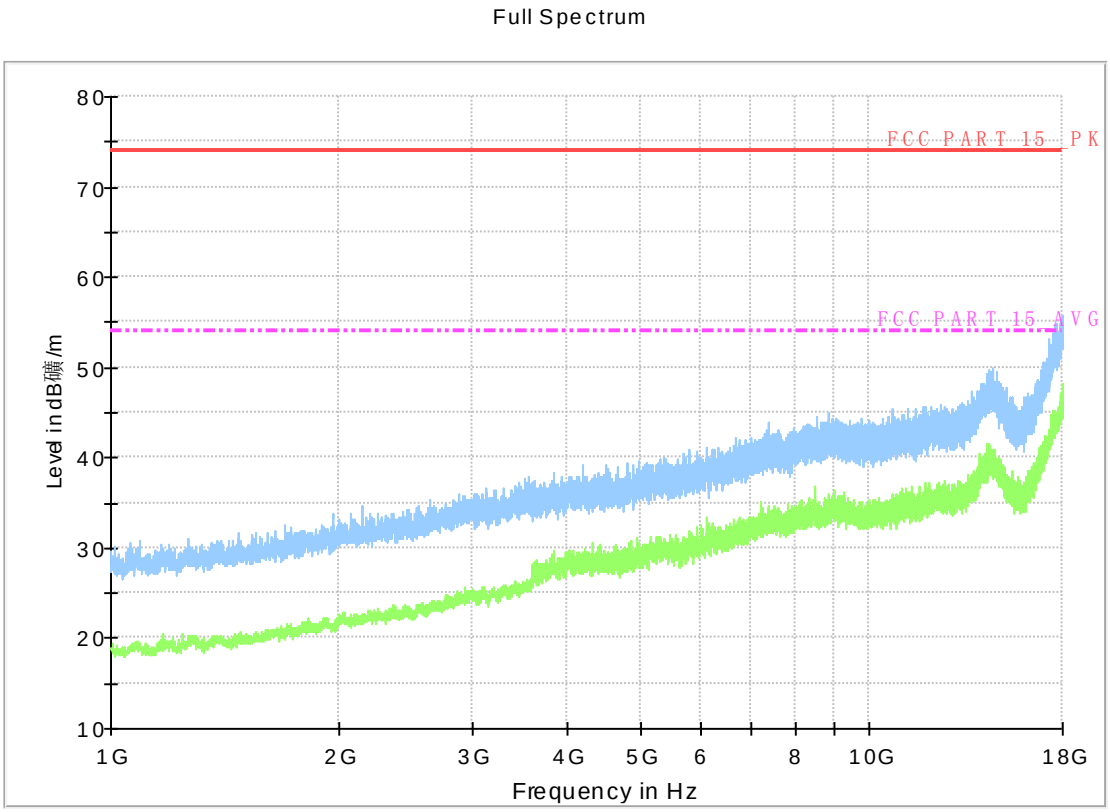
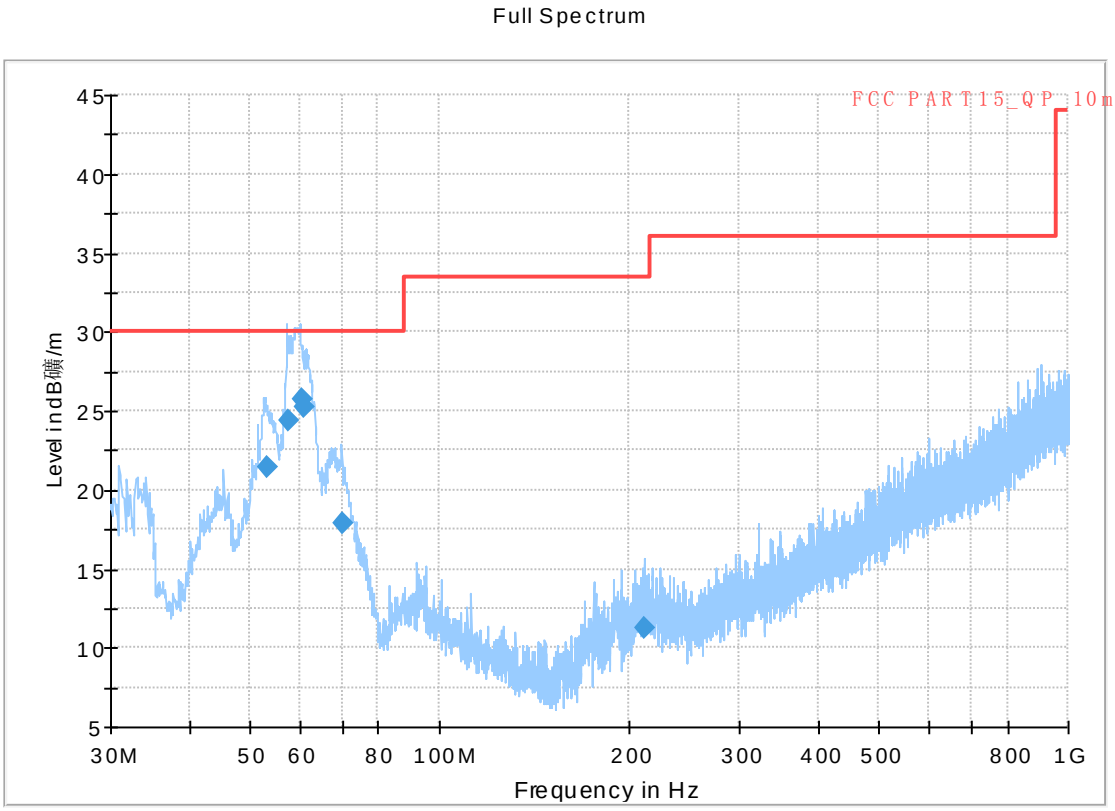


Figure A.4 Radiated Emission from 1GHz to 18GHz

Charging and LTE Band 5 idle Mode, Set.3



Final_Result

Frequency (MHz)	QuasiPeak (dBuV//m)	Limit (dBuV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
53.395000	21.44	30.00	8.56	1000.0	120.000	125.0	V	166.0
57.377000	24.42	30.00	5.58	1000.0	120.000	101.0	V	150.0
60.333000	25.78	30.00	4.22	1000.0	120.000	104.0	V	30.0
61.068000	25.21	30.00	4.79	1000.0	120.000	100.0	V	5.0
70.237000	17.94	30.00	12.06	1000.0	120.000	225.0	V	30.0
211.875000	11.31	33.50	22.21	1000.0	120.000	120.0	V	70.0

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

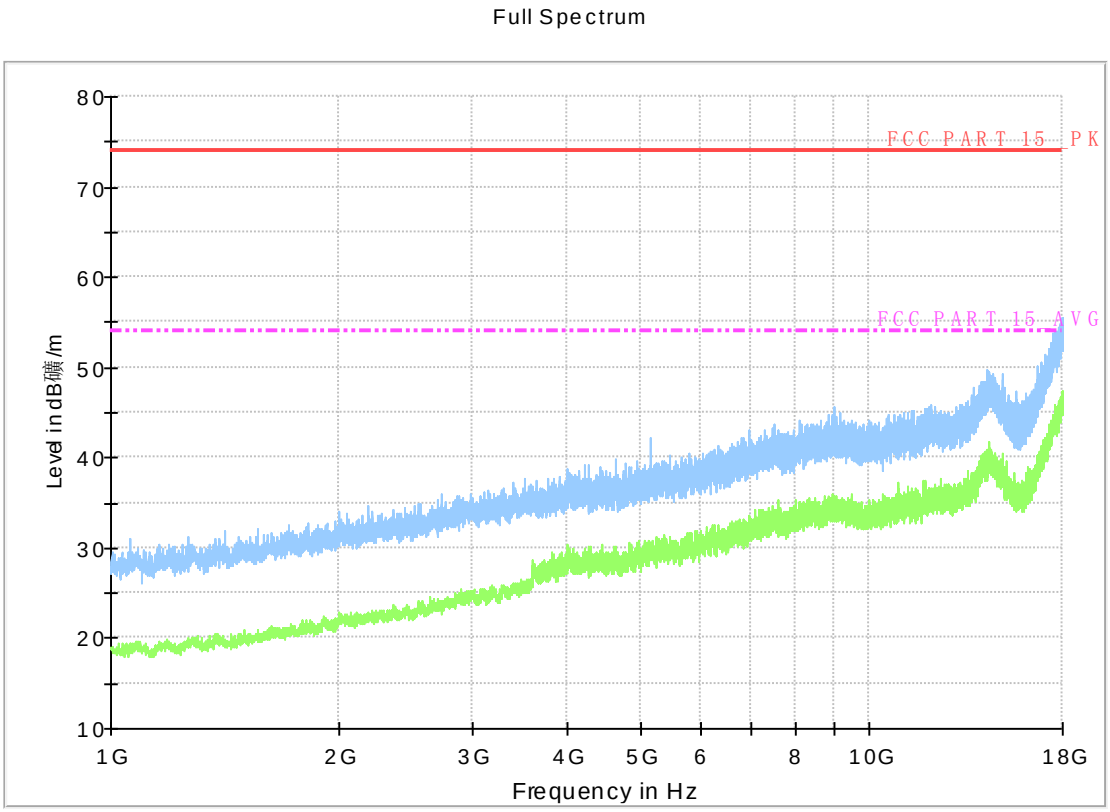
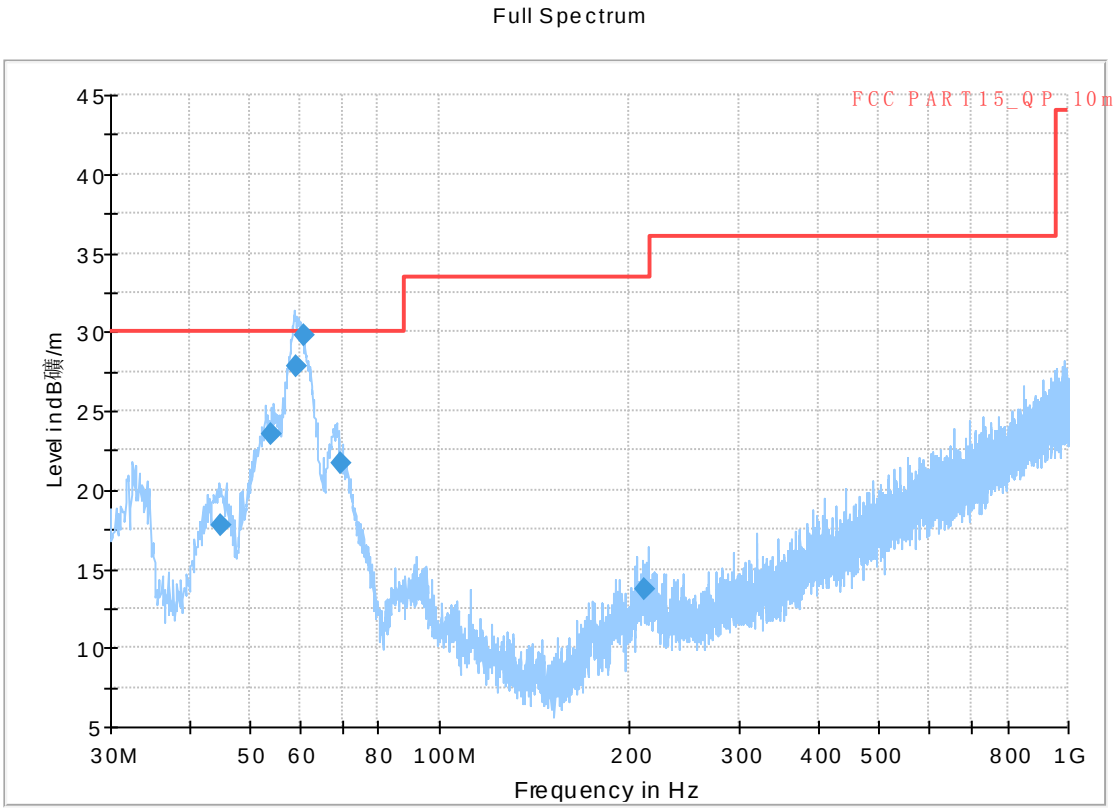


Figure A.6 Radiated Emission from 1GHz to 18GHz

Charging and LTE Band 12 idle Mode, Set.3



Final_Result

Frequency (MHz)	QuasiPeak (dBuV//m)	Limit (dBuV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
44.984000	17.73	30.00	12.27	1000.0	120.000	177.0	V	86.0
53.844000	23.47	30.00	6.53	1000.0	120.000	117.0	V	150.0
59.086000	27.82	30.00	2.18	1000.0	120.000	101.0	V	-19.0
60.915000	29.80	30.00	0.20	1000.0	120.000	103.0	V	10.0
69.784000	21.64	30.00	8.36	1000.0	120.000	284.0	V	20.0
212.646000	13.71	33.50	19.81	1000.0	120.000	125.0	V	151.0

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

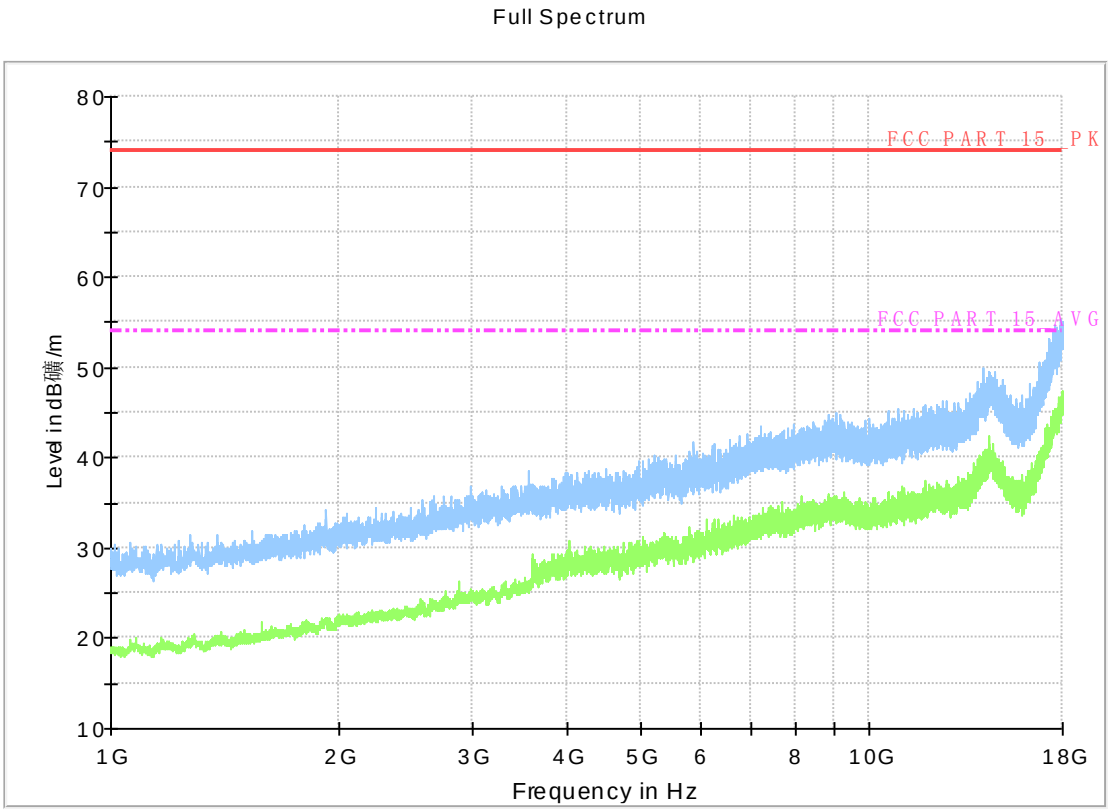
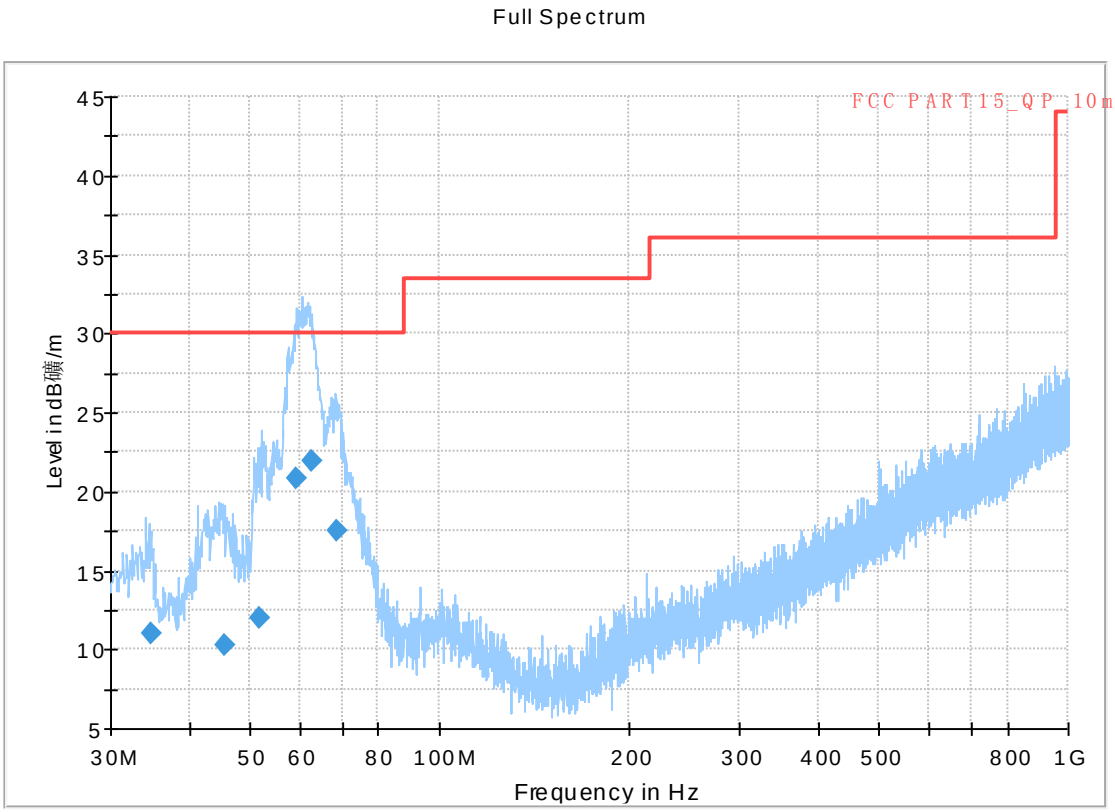


Figure A.8 Radiated Emission from 1GHz to 18GHz

Charging and LTE Band 14 idle Mode, Set.3



Final_Result

Frequency (MHz)	QuasiPeak (dBuV//m)	Limit (dBuV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
34.873000	11.03	30.00	18.97	1000.0	120.000	125.0	V	8.0
45.589000	10.28	30.00	19.72	1000.0	120.000	125.0	V	30.0
51.603000	11.96	30.00	18.04	1000.0	120.000	391.0	V	-11.0
59.266000	20.81	30.00	9.19	1000.0	120.000	107.0	V	-8.0
62.731000	21.99	30.00	8.01	1000.0	120.000	300.0	V	-14.0
68.643000	17.54	30.00	12.46	1000.0	120.000	103.0	V	-5.0

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

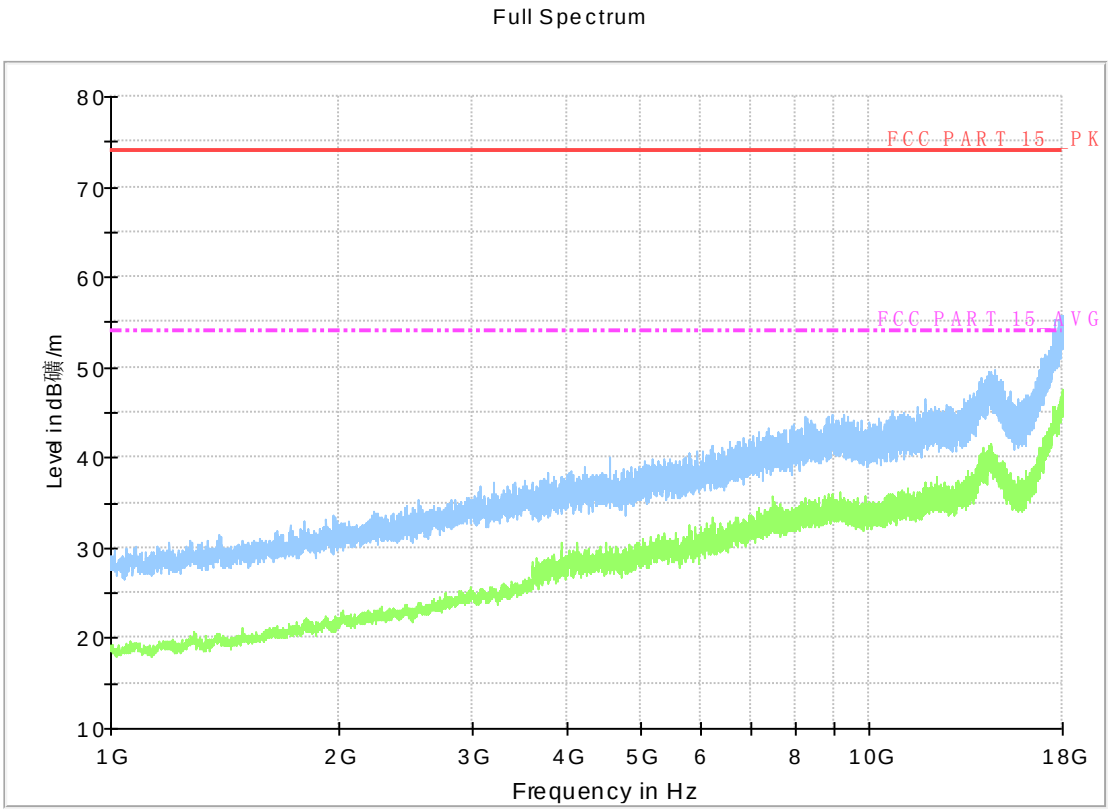
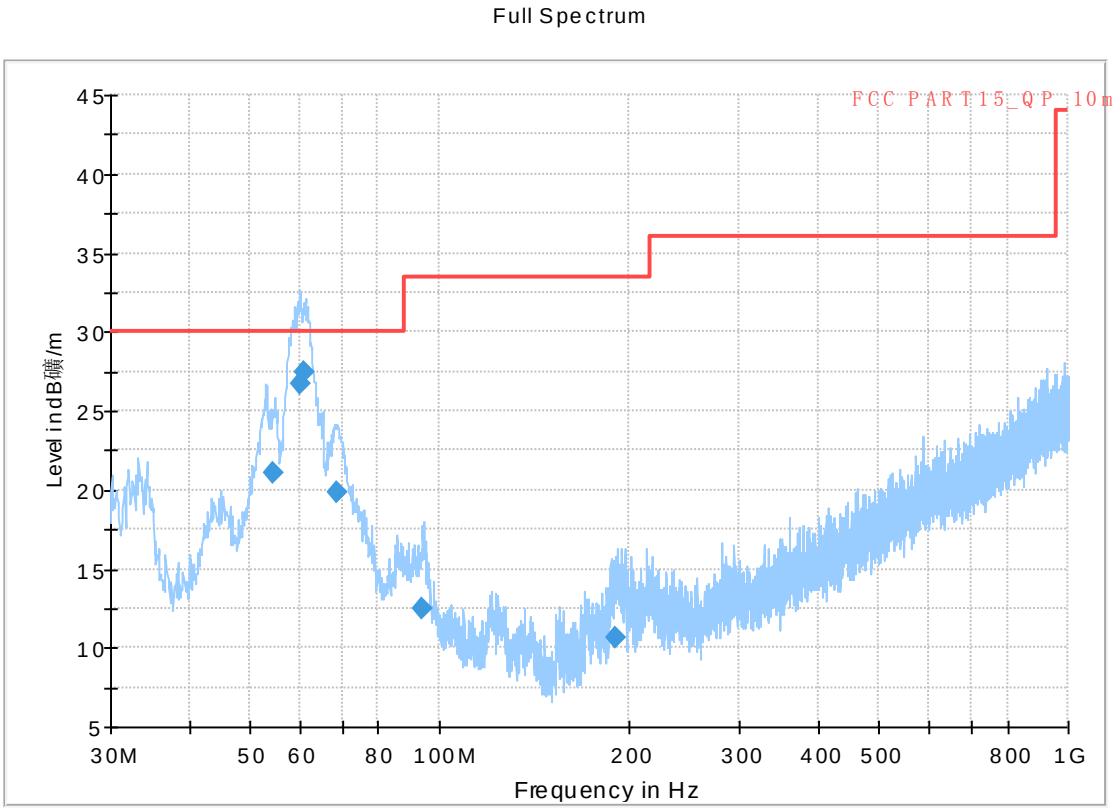


Figure A.10 Radiated Emission from 1GHz to 18GHz

Charging and Rear Camera Mode, Set.3



Final_Result

Frequency (MHz)	QuasiPeak (dBuV//m)	Limit (dBuV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
54.555000	21.11	30.00	8.89	1000.0	120.000	121.0	V	120.0
59.913000	26.76	30.00	3.24	1000.0	120.000	109.0	V	150.0
60.851000	27.49	30.00	2.51	1000.0	120.000	114.0	V	-7.0
68.504000	19.80	30.00	10.20	1000.0	120.000	279.0	V	171.0
94.085000	12.50	33.50	21.02	1000.0	120.000	201.0	V	210.0
191.168000	10.70	33.50	22.82	1000.0	120.000	109.0	V	103.0

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

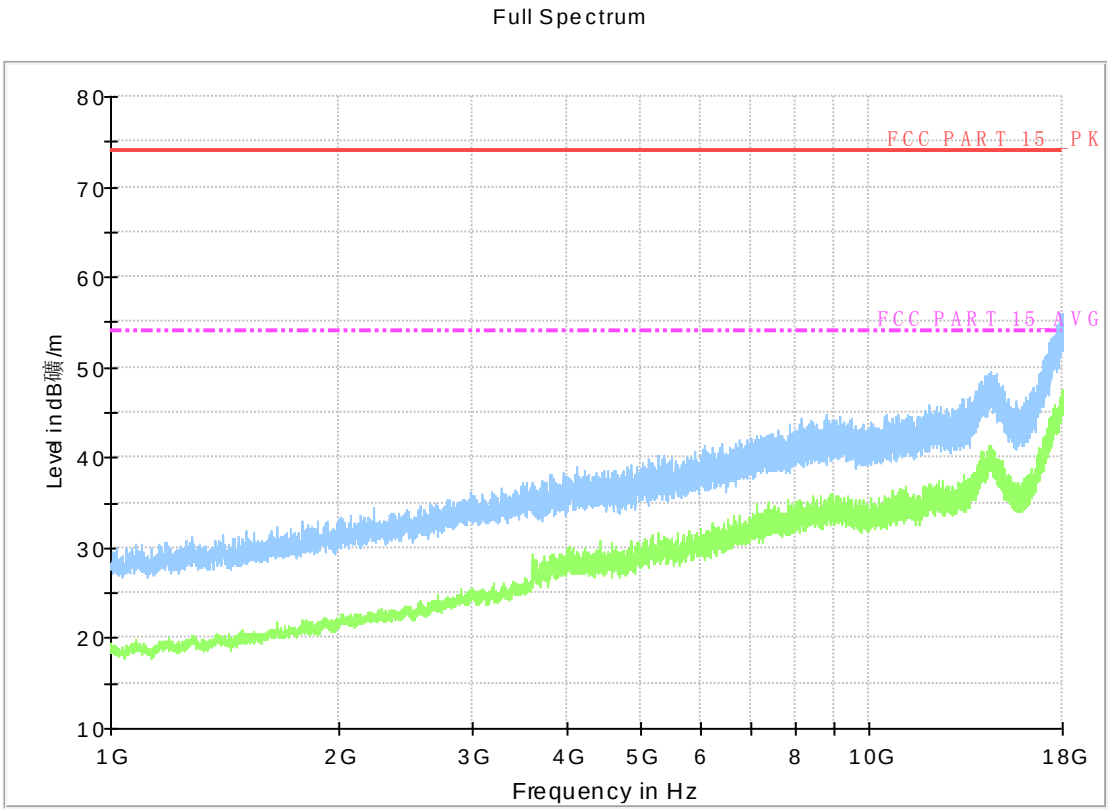
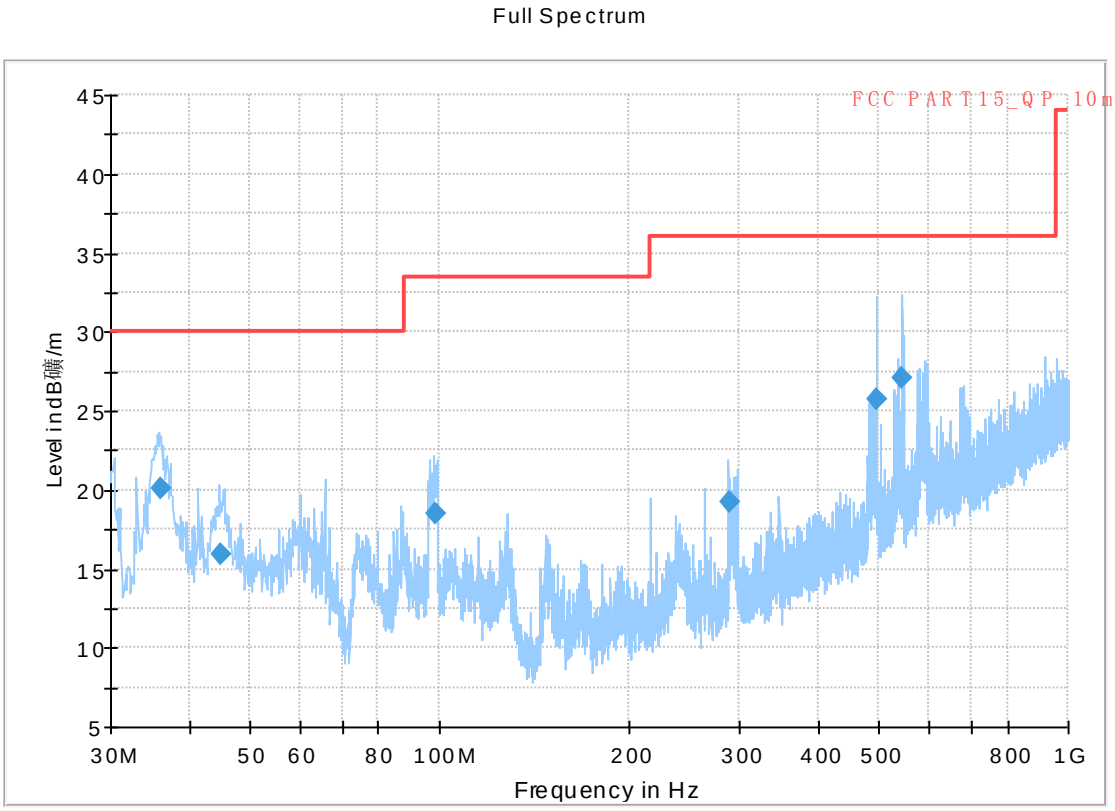


Figure A.12 Radiated Emission from 1GHz to 18GHz

Charging and Front Camera Mode, Set.4



Final_Result

Frequency (MHz)	QuasiPeak (dBuV//m)	Limit (dBuV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
35.996000	20.10	30.00	9.90	1000.0	120.000	203.0	V	-30.0
44.943000	15.96	30.00	14.04	1000.0	120.000	180.0	V	210.0
98.297000	18.47	33.50	15.05	1000.0	120.000	181.0	V	-8.0
288.588000	19.26	36.00	16.76	1000.0	120.000	102.0	V	166.0
496.043000	25.77	36.00	10.25	1000.0	120.000	279.0	V	6.0
545.070000	27.12	36.00	8.90	1000.0	120.000	225.0	V	3.0

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

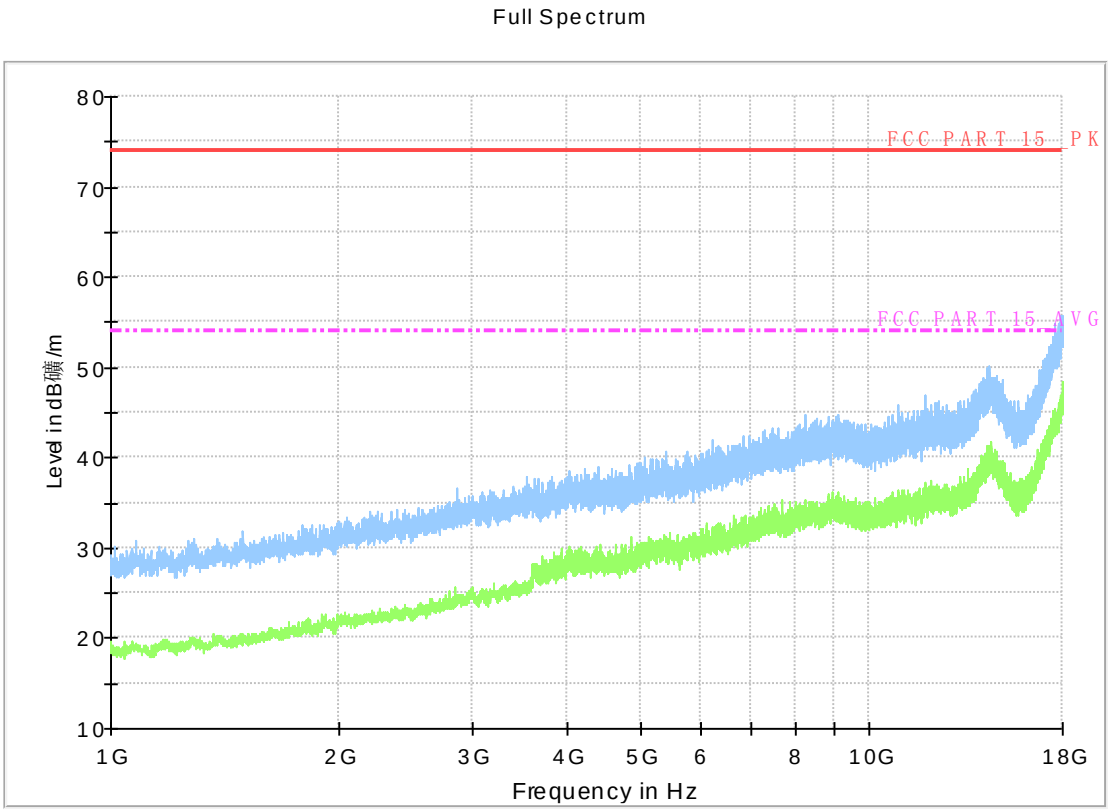
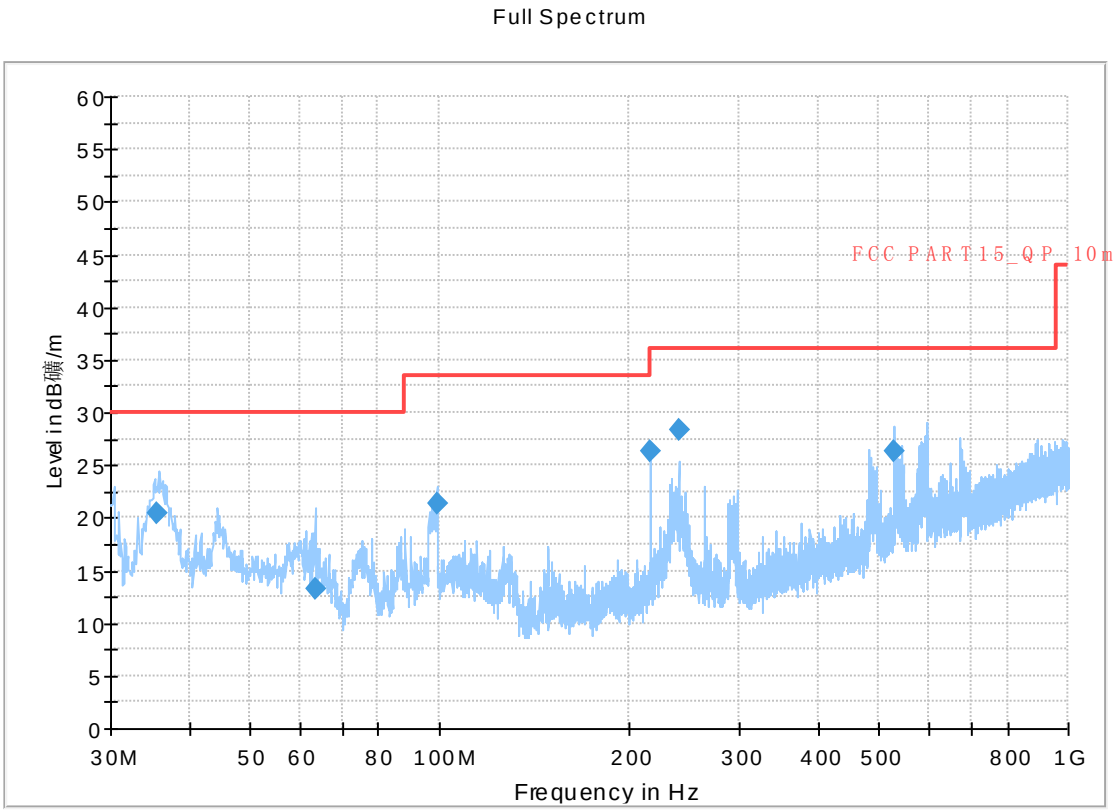


Figure A.14 Radiated Emission from 1GHz to 18GHz

USB Mode, Set.5



Final_Result

Frequency (MHz)	QuasiPeak (dBuV//m)	Limit (dBuV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
35.557000	20.51	30.00	9.49	1000.0	120.000	200.0	V	-24.0
63.428000	13.28	30.00	16.72	1000.0	120.000	377.0	V	-15.0
99.124000	21.26	33.50	12.26	1000.0	120.000	177.0	V	-17.0
216.009000	26.34	36.00	9.68	1000.0	120.000	105.0	V	26.0
240.005000	28.29	36.00	7.73	1000.0	120.000	105.0	V	-18.0
528.913000	26.25	36.00	9.77	1000.0	120.000	225.0	V	30.0

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

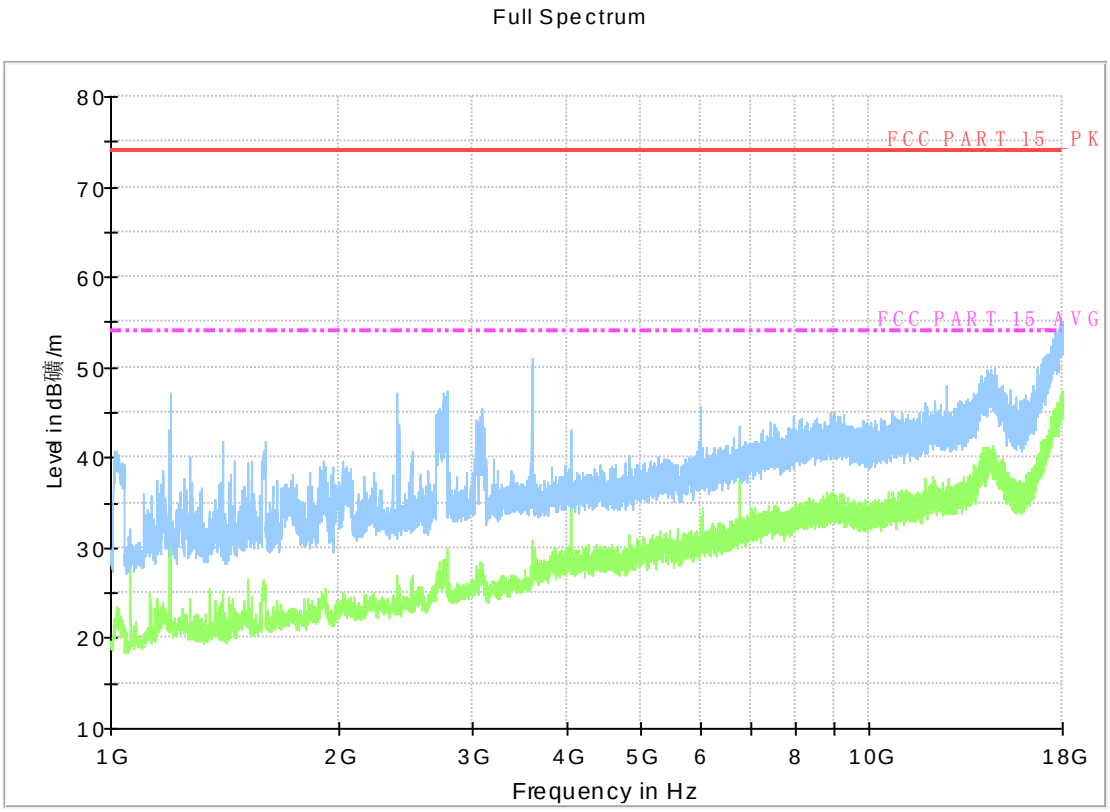
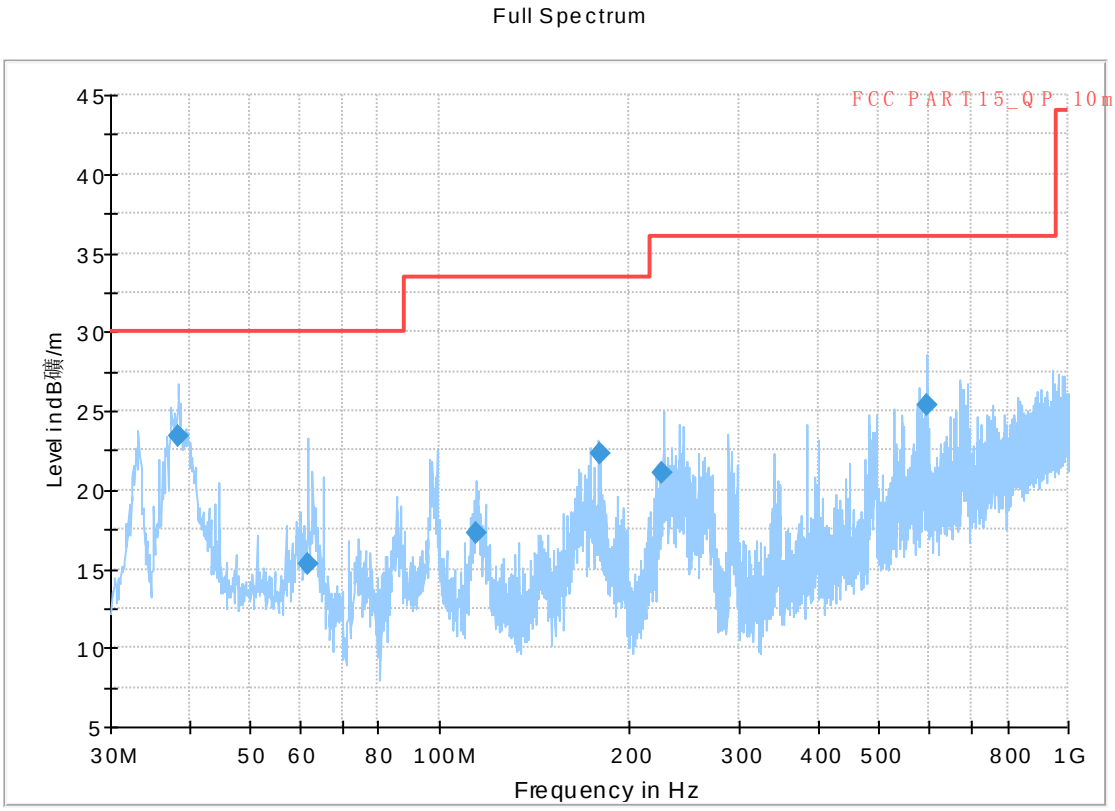


Figure A.16 Radiated Emission from 1GHz to 18GHz

USB Mode, Set.6



Final_Result

Frequency (MHz)	QuasiPeak (dBuV//m)	Limit (dBuV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
38.319000	23.40	30.00	6.60	1000.0	120.000	102.6	V	-17.0
61.816000	15.31	30.00	14.69	1000.0	120.000	102.8	V	25.0
114.713000	17.25	33.50	16.27	1000.0	120.000	122.9	V	4.0
179.920000	22.27	33.50	11.25	1000.0	120.000	208.5	V	107.0
226.661000	21.02	36.00	15.00	1000.0	120.000	125.0	V	-13.0
595.510000	25.34	36.00	10.68	1000.0	120.000	215.2	V	154.0

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

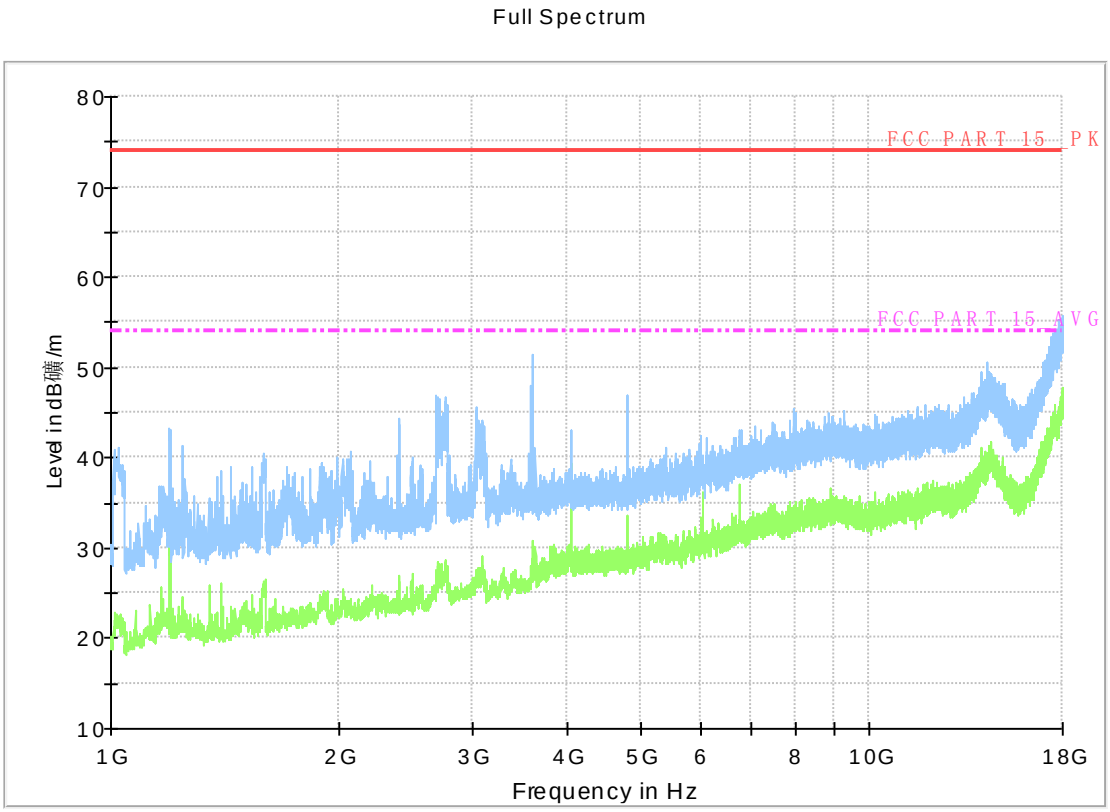


Figure A.18 Radiated Emission from 1GHz to 18GHz

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*=3.38dB, *k*=2.

Charging and Rear Camera Mode, Set.3

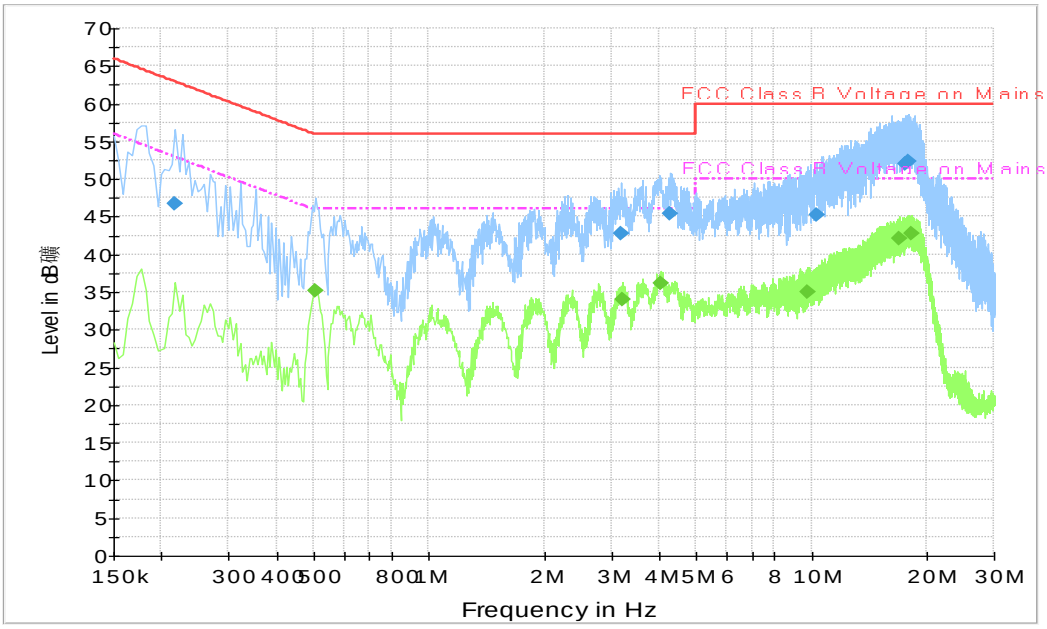


Figure A.19 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.217500	46.8	L1	20.0	16.1	62.9
3.174000	42.7	L1	20.4	13.3	56.0
4.285500	45.5	N	20.4	10.5	56.0
10.297500	45.3	N	22.9	14.7	60.0
17.587500	52.0	L1	24.8	8.0	60.0
17.956500	52.4	L1	24.8	7.6	60.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.505500	35.2	N	19.9	10.8	46.0
3.219000	34.1	L1	20.4	11.9	46.0
4.029000	36.2	L1	20.6	9.8	46.0
9.730500	35.0	N	22.8	15.0	50.0
16.957500	42.1	N	24.7	7.9	50.0
18.298500	42.7	L1	24.9	7.3	50.0

Charging and Front Camera Mode, Set.4

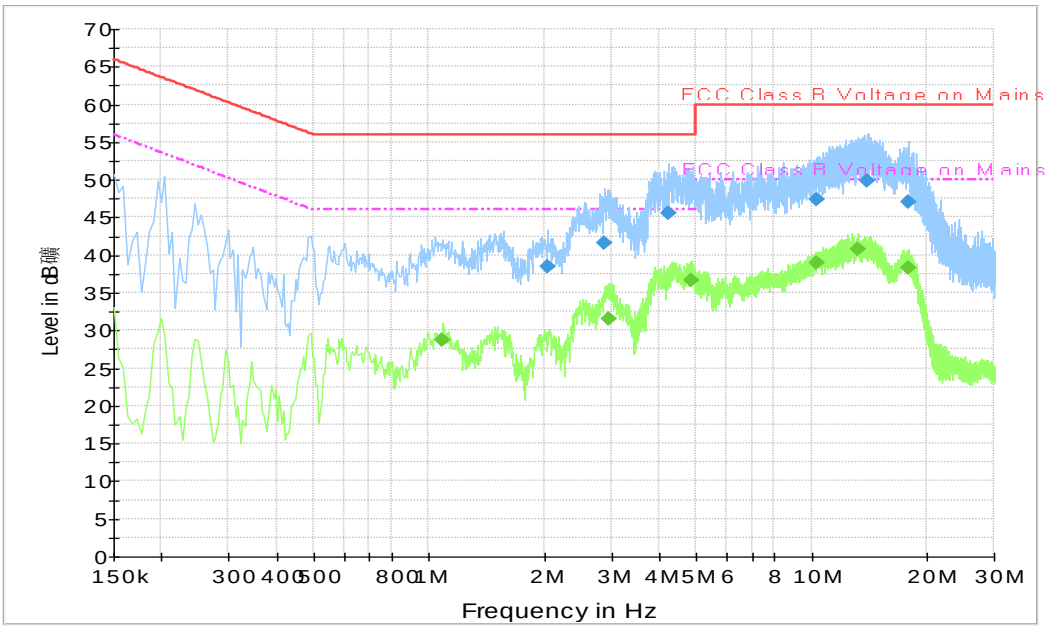


Figure A.20 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.035500	38.5	L1	20.1	17.5	56.0
2.881500	41.6	L1	20.3	14.4	56.0
4.222500	45.5	L1	20.6	10.5	56.0
10.324500	47.4	N	22.9	12.6	60.0
13.987500	49.9	N	23.5	10.1	60.0
17.848500	47.1	L1	24.8	12.9	60.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
1.086000	28.7	L1	19.8	17.3	46.0
2.962500	31.6	L1	20.3	14.4	46.0
4.870500	36.7	N	20.5	9.3	46.0
10.338000	38.9	L1	22.9	11.1	50.0
13.254000	40.8	N	23.4	9.2	50.0
17.848500	38.3	L1	24.8	11.7	50.0

USB Mode, Set.5

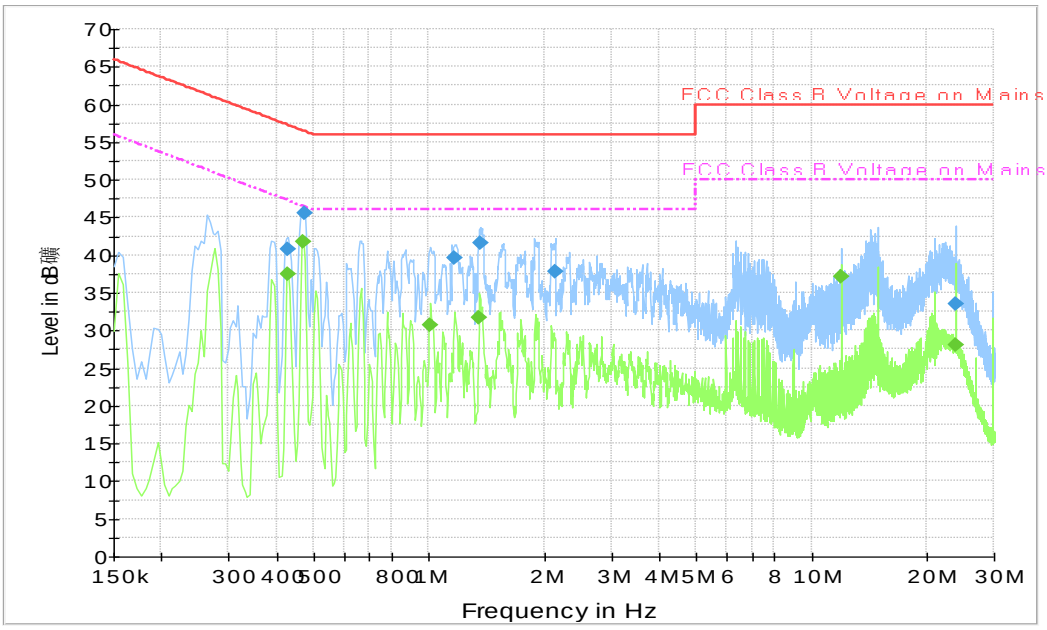


Figure A.21 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.429000	40.8	L1	20.1	16.5	57.3
0.474000	45.6	L1	20.1	10.9	56.4
1.171500	39.6	N	19.9	16.4	56.0
1.360500	41.6	N	19.9	14.4	56.0
2.139000	37.8	L1	20.1	18.2	56.0
23.874000	33.6	L1	25.5	26.4	60.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.429000	37.5	L1	20.1	9.8	47.3
0.469500	41.8	L1	20.1	4.7	46.5
1.009500	30.7	N	19.9	15.3	46.0
1.356000	31.7	N	19.9	14.3	46.0
11.935500	37.2	N	23.2	12.8	50.0
23.874000	28.0	L1	25.5	22.0	50.0

USB Mode, Set.6

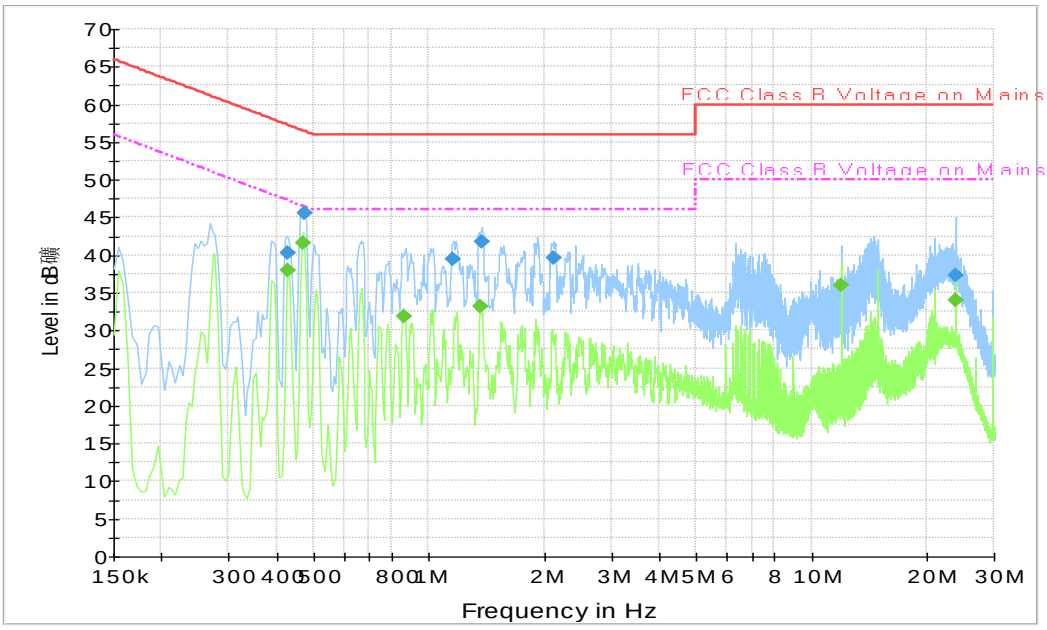


Figure A.22 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.429000	40.3	N	19.9	17.0	57.3
0.474000	45.5	L1	20.1	10.9	56.4
1.158000	39.4	N	19.9	16.6	56.0
1.378500	41.8	L1	19.9	14.2	56.0
2.125500	39.6	N	19.9	16.4	56.0
23.865000	37.3	N	25.8	22.7	60.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.429000	38.0	L1	20.1	9.3	47.3
0.469500	41.6	L1	20.1	4.9	46.5
0.861000	31.9	L1	19.9	14.1	46.0
1.360500	33.2	L1	19.9	12.8	46.0
11.931000	36.0	N	23.2	14.0	50.0
23.860500	34.1	N	25.8	15.9	50.0

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*****