



TEST REPORT

No. I22Z61006-EMC01

for

BLU Products, Inc.

Mobile Phone

Model Name: B200VL

FCC ID: YHLBLUB200VL

with

Hardware Version: V1.0

Software Version: BLU_B200VL_V11.0.01.05.01.01

Issued Date: 2022-08-12

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.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

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
I22Z61006-EMC01	Rev.0	1 st edition	2022-07-22
I22Z61006-EMC01	Rev.1	Deleted the description of U115AA and U115AC in P6 Modified the “LTE band 14” to “LTE band 13” Adding the single generator “Broadcast Test Center” for FM function in P11.	2022-08-12

Note: the latest revision of the test report supersedes all previous version.

CONTENTS

1. TEST LABORATORY	4
1.1. INTRODUCTION & ACCREDITATION	4
1.2. TESTING LOCATION	4
1.3. TESTING ENVIRONMENT	4
1.4. PROJECT DATA	4
1.5. SIGNATURE	4
2. CLIENT INFORMATION	5
2.1. APPLICANT INFORMATION	5
2.2. MANUFACTURER INFORMATION	5
3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT (AE)	6
3.1. ABOUT EUT	6
3.2. INTERNAL IDENTIFICATION OF EUT USED DURING THE TEST	6
3.3. INTERNAL IDENTIFICATION OF AE USED DURING THE TEST	6
3.4. EUT SET-UPS	7
4. REFERENCE DOCUMENTS	8
4.1. REFERENCE DOCUMENTS FOR TESTING	8
5. LABORATORY ENVIRONMENT	9
6. SUMMARY OF TEST RESULTS	10
7. TEST EQUIPMENTS UTILIZED	11
ANNEX A: MEASUREMENT RESULTS	12
ANNEX B: PERSONS INVOLVED IN THIS TESTING	25

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

CTTL (huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing,
P. R. China100191

1.3. Testing Environment

Normal Temperature: 15-35° C
Relative Humidity: 20-75%

1.4. Project data

Testing Start Date: 2022-07-12
Testing End Date: 2022-07-14

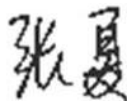
1.5. Signature



Zhang Ying
(Prepared this test report)



An Hui
(Reviewed this test report)



Zhang Xia
Deputy Director of the laboratory
(Approved this test report)



2. Client Information

2.1. Applicant Information

Company Name: BLU Products,Inc.
Address: 10814 NW 33rd St # 100 Doral, FL 33172,USA
Contact: Zeng wei
Telephone: 305.715.7171
Fax: 305.436.8819
Email: zwei@ctasiasz.com

2.2. Manufacturer Information

Company Name: BLU Products,Inc.
Address: 10814 NW 33rd St # 100 Doral, FL 33172,USA
Contact: Zeng wei
Telephone: 305.715.7171
Fax: 305.436.8819
Email: zwei@ctasiasz.com

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

3.1. About EUT

Description	Mobile Phone
Model Name	B200VL
FCC ID	YHLBLUB200VL
Extreme vol. Limits	3.5VDC to 4.35VDC (nominal: 3.80VDC)

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

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version
UT51a	357173130005915	V1.0	BLU_B200VL_V11.0.01.05.01.01

*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	LT25H426271B	/
AE2	Charger	TN-050120U9	/
AE3	Charger	TN-050120U8	/
AE4	USB Cable	336275	/
AE5	USB Cable	T365-011B-1	/
AE6	Headset	/	/

AE1

Model	LT25H426271B
Manufacturer	GUANGDONG FENGHUA NEW ENERGY CO.,LTD.
Capacity	1450mAh
Voltage	3.80V

AE2

Model	TN-050120U9
Manufacturer	Chongqing Lianmao Electronics Co., Ltd.

AE3

Model	TN-050120U8
Manufacturer	Guangdong Beicom Electronics Co., Ltd.

AE4

Model	336275
Manufacturer	SUNTOPS ELECTRONICS CO.,LTD

AE5

Model	T365-011B-1
Manufacturer	Shenzhen Yihuaxing Electronics Co. Ltd.

AE6

Model	/
Manufacturer	/

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

Note: The USB cables are shielded.

3.4. EUT set-ups

	EUT set-up No.	Combination of EUT and AE	Remarks
Set.3		UT51a + AE1 + AE2 + AE4	Charger 1
Set.4		UT51a + AE1 + AE3 + AE5	Charger 2
Set.5		UT51a + AE1 + AE4 + AE6	USB + FM

3.5. Test summary

EUT set-up No.	Test mode	Test result	
		Radiated Emission	Conducted Emission
Set.3	WCDMA 850 idle	Pass	Pass
Set.4	LTE band 5 idle	Pass	/
Set.3	LTE band 12 idle	Pass	/
Set.4	LTE band 13 idle	Pass	/
Set.5	USB + FM	Pass	Pass

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	2021
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 M
Ground system resistance	< 4
Normalised site attenuation (NSA)	< ± 4 dB, 3m/10m distance, from 30 to 1000 MHz
Site voltage standing-wave ratio (S_{VSWR})	Between 0 and 6 dB, from 1GHz to 18GHz

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 M
Ground system resistance	< 4

6. SUMMARY OF TEST RESULTS

Abbreviations used in this clause:		
Verdict Column	P	Pass
	NA	Not applicable
	F	Fail

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

7. Test Equipments Utilized

NO.	Description	TYPE	SERIES NUMBER	MANUFACTURE	CAL DUE DATE	CALIBRATI ON INTERVAL
1	LISN	ENV216	101200	R&S	2023-05-30	1 Year
2	Test Receiver	ESCI 3	100344	R&S	2023-02-21	1 year
3	Test Receiver	ESW44	103023	R&S	2022-10-28	1 year
4	EMI Antenna	VULB 9163	302	Schwarzbeck	2022-12-28	1 Year
5	EMI Antenna	3115	6914	ETS-Lindgren	2023-01-20	1 year
6	Universal Radio Communication Tester	CMW500	116588	R&S	2022-12-20	1 Year
7	Broadcast Test Center	BTC	101024	R&S	2023-01-24	1 Year
8	PC	OPTIPLEX 380	2X1YV2X	DELL	N/A	N/A
9	Printer	P1606dn	VNC3L52122	HP	N/A	N/A
10	Keyboard	L100	CN0RH6596589 07ATOI40	DELL	N/A	N/A
11	Mouse	M-UAE119	LZ935220ZRC	Lenovo	N/A	N/A

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 (USB mode of MS and charging mode of MS) at distances of 3/10 meters 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 USB mode and charging mode. During the test MS is connected to a PC via a USB cable in the case of USB mode and is connected to a charger in the case of charging mode.

The EUT was tested while operating in licensed band Rx mode with FM/Camera/MP3. All licensed band receivers that tune in the range of 30MHz-960MHz, as listed in section 3.4, are investigated. Only the worst case emissions are reported.

The model of the PC is M4000E-17, and the serial number of the PC is M706GWXD. The software is used to let the PC keep on copying data to MS, reading and erasing the data after copy action was finished.

Note: I/O information: Printer – USB, Mouse – PS/2, Keyboard – USB.

A.1.3 Measurement Limit

Frequency range (MHz)	Field strength limit ($\mu\text{V/m}$)		
	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.

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:

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

Where

G_A : Antenna factor of receive antenna

G_{PL} : Path Loss

P_{Mea} : Measurement result on receiver.

Measurement uncertainty:

Frequency range	Measurement uncertainty
30MHz-1GHz	5.18dB, k=2
1GHz-18GHz	5.54dB, k=2

Measurement results for Set.4, LTE band 5 idle(worst case):
Charging Mode/QP detector

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)
44.938000	12.70	29.54	16.84	283.0	H	299.0
65.696000	15.33	29.54	14.21	175.0	V	152.0
73.068000	18.22	29.54	11.32	202.0	V	90.0
100.034000	10.29	33.06	22.77	100.0	V	-43.0
245.534000	12.08	35.56	23.48	183.0	V	46.0
300.145000	12.73	35.56	22.83	223.0	V	45.0

Measurement results for Set.4, LTE band 13 idle(worst case):
Charging Mode/Average detector

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17808.920	46.2	-29.6	46.0	29.9	54.0	7.8	V
17791.580	45.7	-29.9	46.0	29.6	54.0	8.3	H
17799.060	45.6	-29.9	46.0	29.5	54.0	8.4	H
17897.660	45.6	-29.5	46.0	29.2	54.0	8.4	H
17932.000	45.5	-29.4	46.7	28.2	54.0	8.5	H
17980.280	45.5	-29.1	46.7	27.9	54.0	8.5	V

Measurement results for Set.3, WCDMA 850MHz idle(worst case):
Charging Mode/Peak detector

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17897.320	56.3	-29.5	46.0	39.9	74.0	17.7	V
17990.480	55.8	-29.1	46.7	38.2	74.0	18.2	H
17908.540	55.6	-29.3	46.0	39.0	74.0	18.4	V
17816.740	55.5	-29.6	46.0	39.2	74.0	18.5	V
17989.800	55.5	-29.1	46.7	37.9	74.0	18.5	V
17903.440	55.4	-29.3	46.0	38.8	74.0	18.6	H

Measurement results for Set.5, FM + USB,:
Charging Mode/QP detector

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)
61.428000	15.53	29.54	14.01	V	137.0	-11.9
73.068000	19.38	29.54	10.16	V	225.0	-15.8
96.251000	18.93	33.06	14.13	V	45.0	-12.6
116.427000	20.42	33.06	12.64	V	165.0	-13.5
137.088000	15.80	33.06	17.26	H	-30.0	-15.5
245.534000	15.24	35.56	20.32	H	135.0	-10.3

Charging Mode/Average detector

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17999.660	45.9	-29.1	46.7	28.3	54.0	8.1	V
17926.220	45.6	-29.4	46.7	28.3	54.0	8.4	V
17883.040	45.6	-29.5	46.0	29.2	54.0	8.4	H
17987.080	45.6	-29.1	46.7	28.0	54.0	8.4	H
17811.300	45.5	-29.6	46.0	29.2	54.0	8.5	H
17745.680	45.5	-29.6	46.0	29.2	54.0	8.5	H

Charging Mode/Peak detector

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17799.060	56.3	-29.9	46.0	40.2	74.0	17.7	H
17923.160	55.7	-29.4	46.7	38.4	74.0	18.3	V
17973.140	55.7	-29.1	46.7	38.1	74.0	18.3	H
17796.340	55.6	-29.9	46.0	39.5	74.0	18.4	H
17656.260	55.5	-29.6	45.2	39.9	74.0	18.5	V
17921.800	55.4	-29.4	46.7	38.1	74.0	18.6	V

Measurement results for Set.3, WCDMA 850 idle:

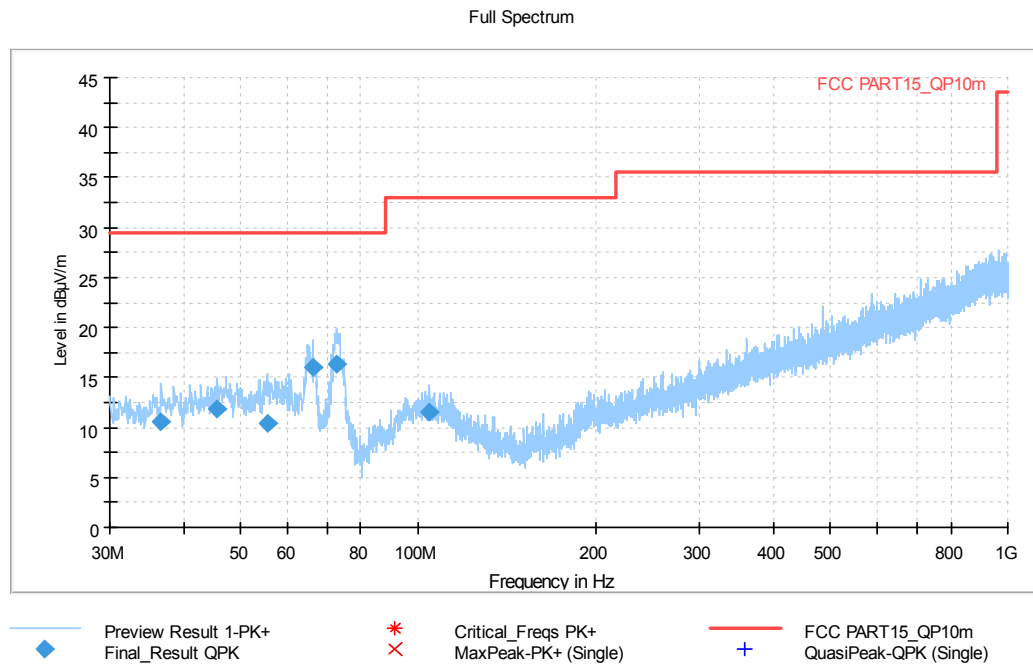


Fig A.1 Radiated Emission from 30MHz to 1GHz

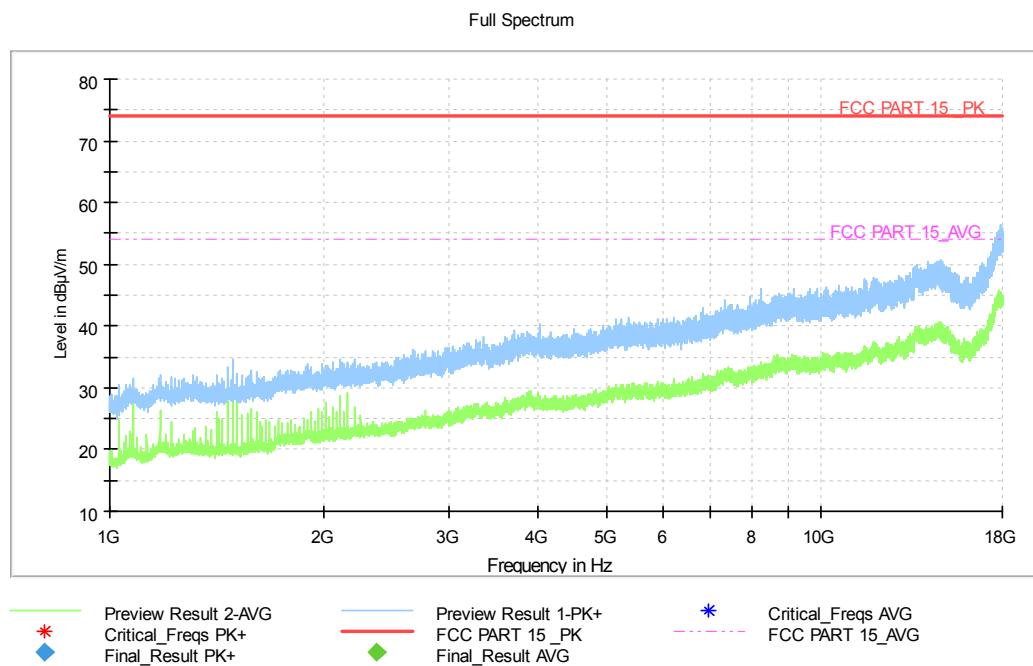


Fig A.2 Radiated Emission from 1GHz to 18GHz

Measurement results for Set.4, LTE band 5 idle:

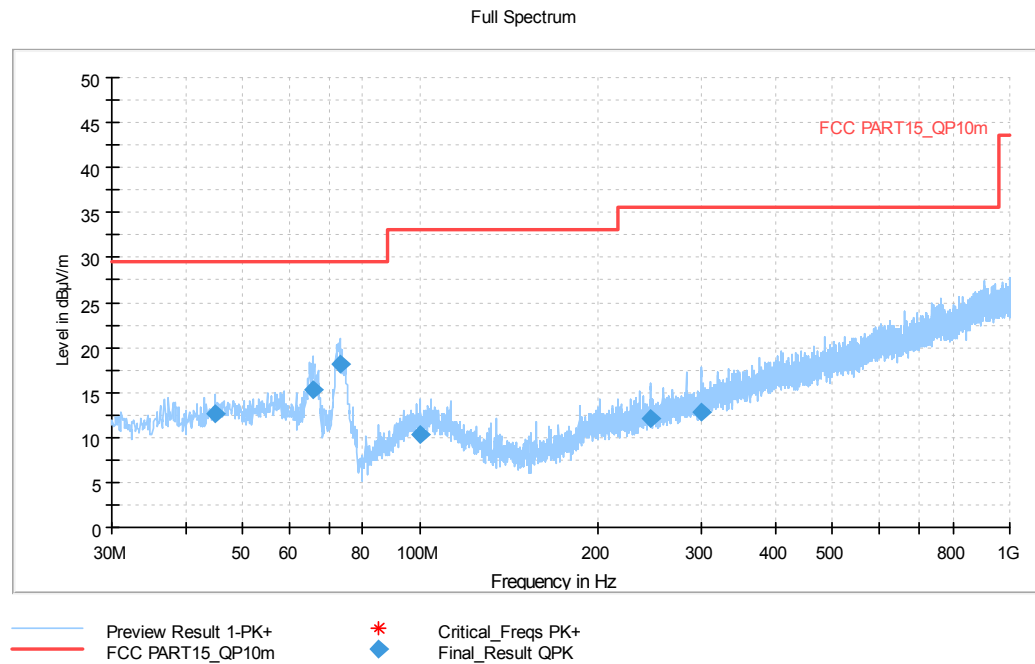


Fig A.3 Radiated Emission from 30MHz to 1GHz

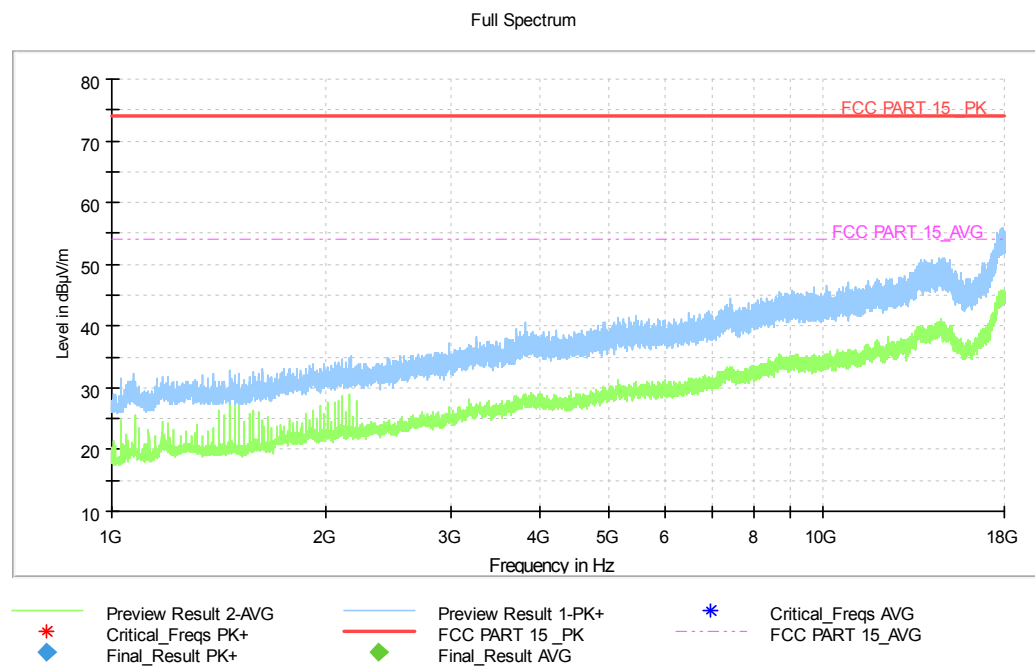


Fig A.4 Radiated Emission from 1GHz to 18GHz

Measurement results for Set.3, LTE band 12 idle:

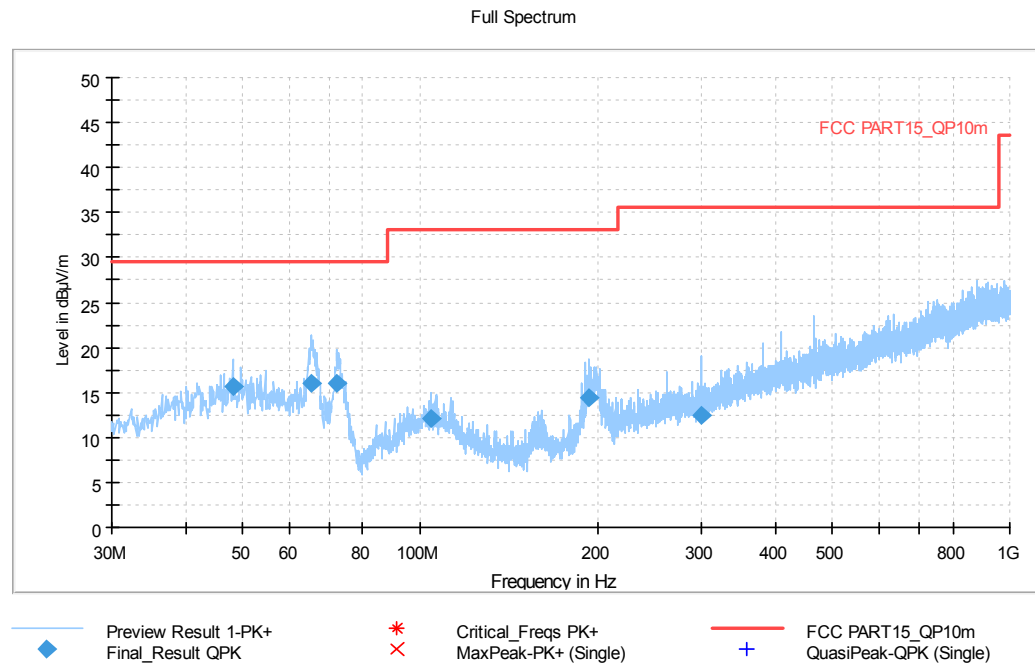


Fig A.5 Radiated Emission from 30MHz to 1GHz

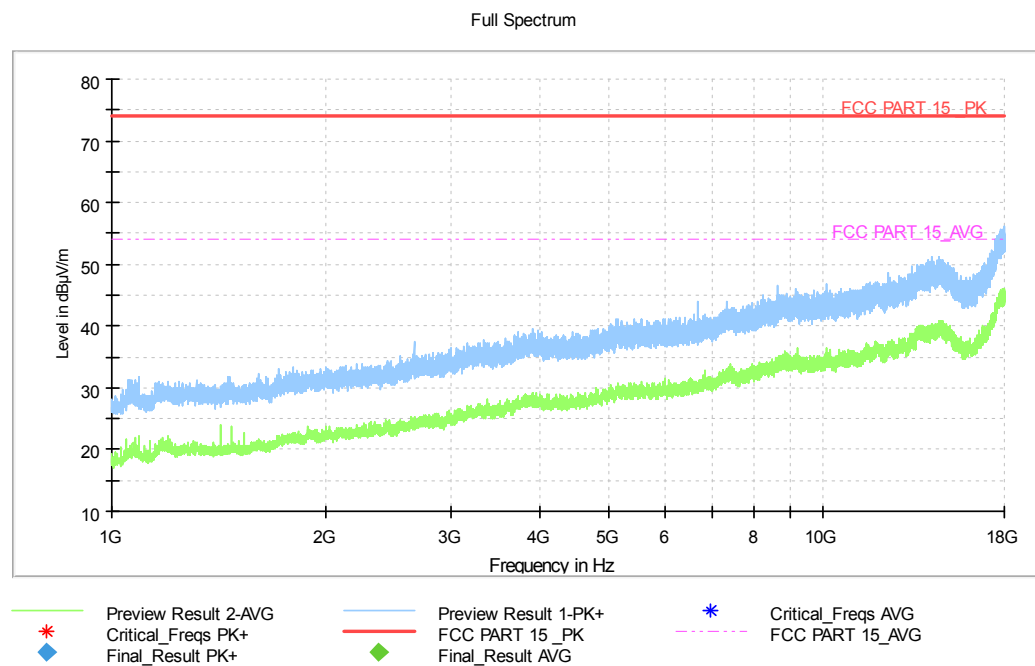


Fig A.6 Radiated Emission from 1GHz to 18GHz

Measurement results for Set.4, LTE band 13 idle:

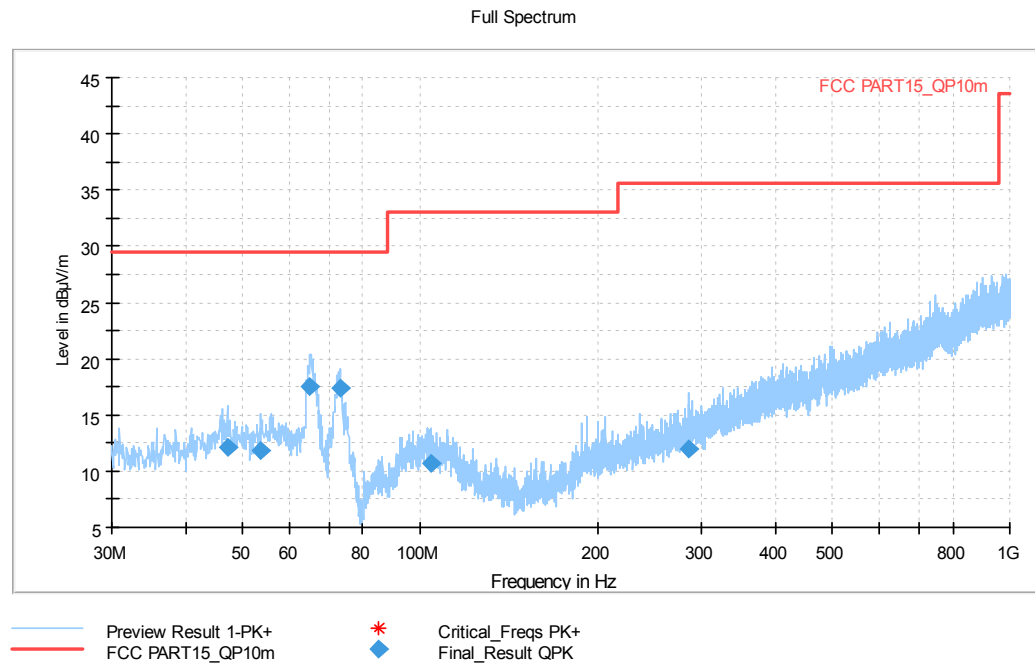


Fig A.7 Radiated Emission from 30MHz to 1GHz

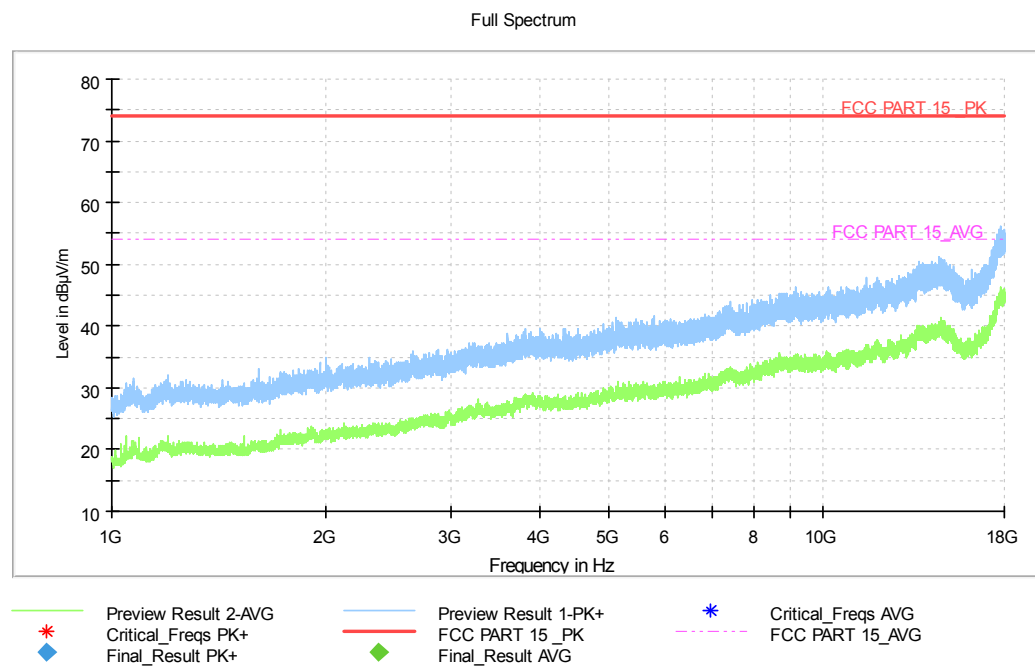


Fig A.8 Radiated Emission from 1GHz to 18GHz

Measurement results for Set.5, USB transfer + FM:

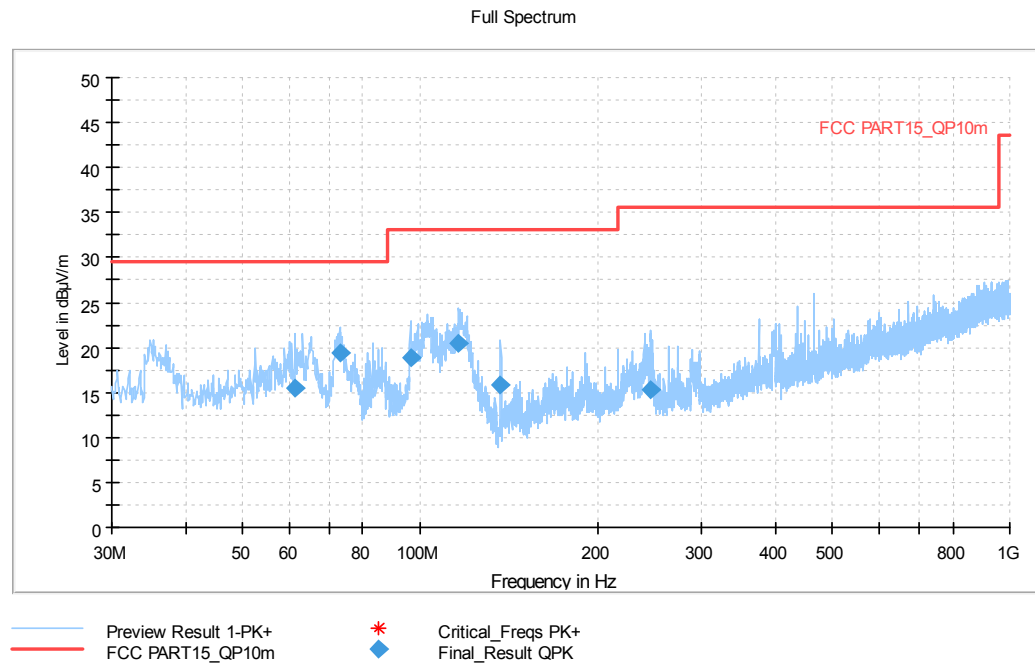


Fig A.9 Radiated Emission from 30MHz to 1GHz

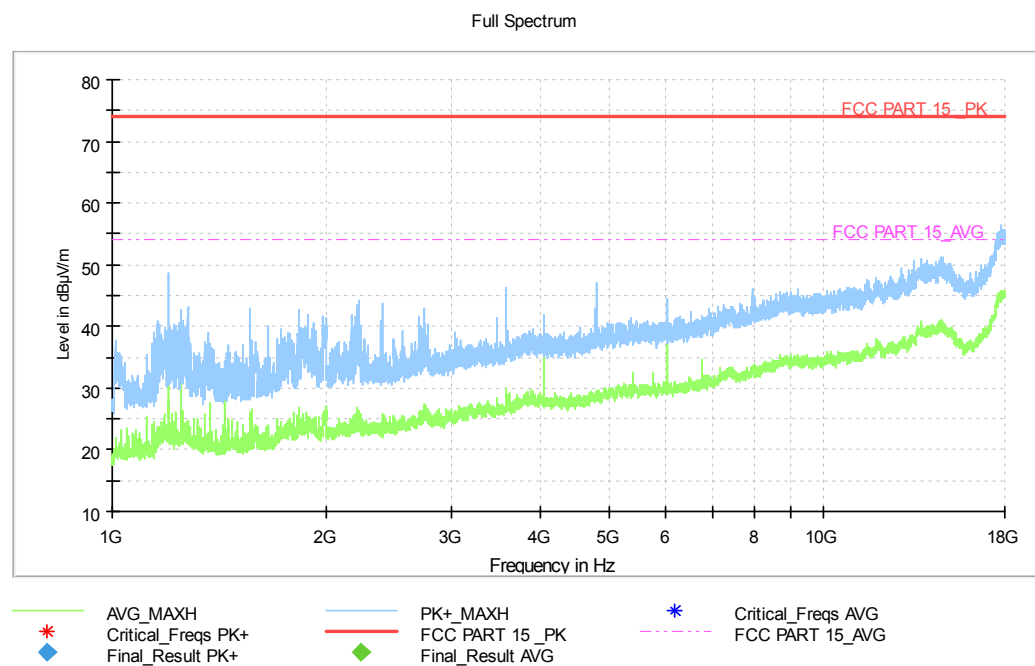


Fig A.10 Radiated Emission from 1GHz to 18GHz

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 USB mode and charging mode. During the test MS is connected to a PC via a USB cable in the case of USB mode and is connected to a charger in the case of charging mode. The model of the PC is DELL M4000E-17, and the serial number of the PC is M706GWXD. The software is used to let the PC keep on copying data to MS, reading and erasing the data after copy action was finished.

Note: I/O information: Printer – USB, Mouse – PS/2, Keyboard – USB.

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: $U= 3.08 \text{ dB}$, $k=2$.

Charging Mode, Set.3, WCDMA 850MHz idle:

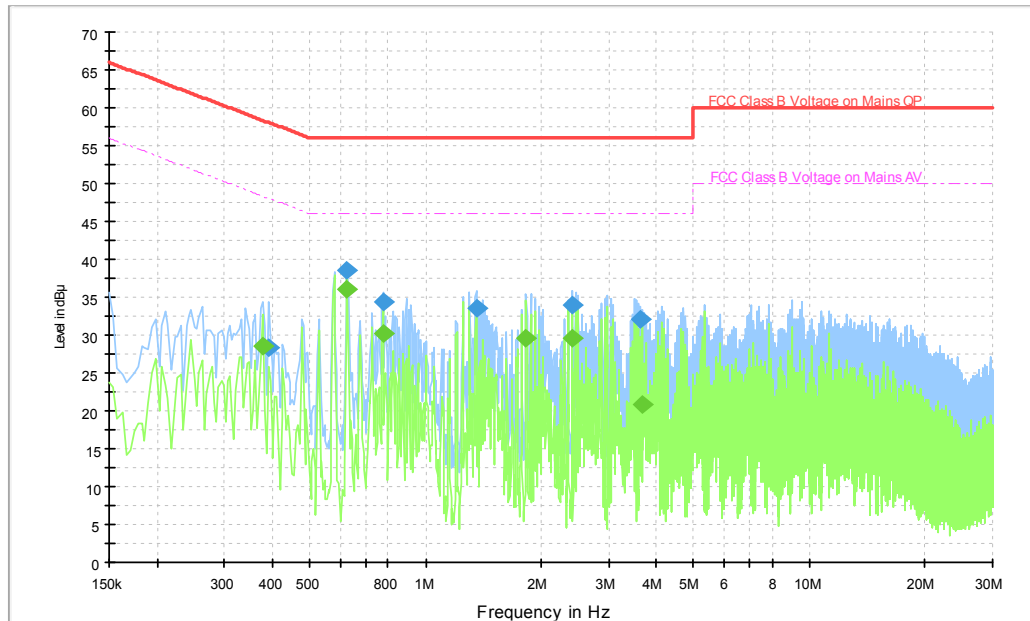


Fig A.11 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.390000	28.3	L1	19.8	29.7	58.1
0.626000	38.5	L1	19.6	17.5	56.0
0.774000	34.3	L1	19.7	21.7	56.0
1.354000	33.5	L1	19.7	22.5	56.0
2.406000	33.9	L1	19.6	22.1	56.0
3.610000	32.1	L1	19.6	23.9	56.0

Final Result 2

Frequency (MHz)	CAverage (dBuV)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.378000	28.5	L1	19.8	19.8	48.3
0.626000	36.1	L1	19.6	9.9	46.0
0.774000	30.1	L1	19.7	15.9	46.0
1.830000	29.5	L1	19.6	16.5	46.0
2.406000	29.5	L1	19.6	16.5	46.0
3.662000	20.7	L1	19.6	25.3	46.0

Charging Mode, Set.4, LTE band5 idle:

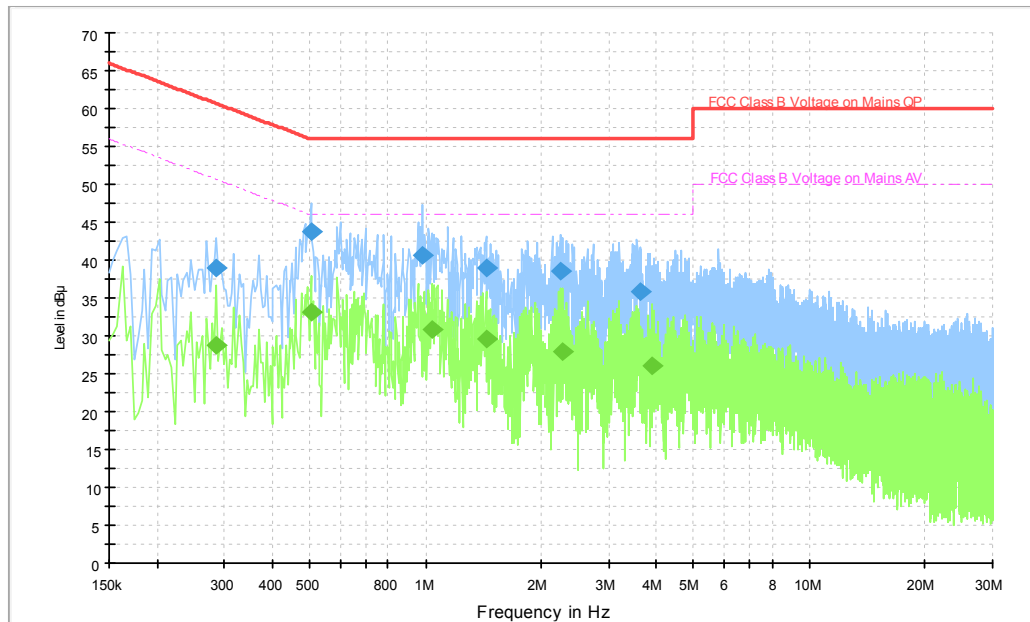


Fig A.12 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.286000	39.0	N	19.8	21.6	60.6
0.502000	43.8	N	19.8	12.2	56.0
0.982000	40.6	N	19.6	15.4	56.0
1.438000	39.1	L1	19.7	16.9	56.0
2.250000	38.5	N	19.7	17.5	56.0
3.626000	35.9	N	19.6	20.1	56.0

Final Result 2

Frequency (MHz)	CAverage (dBuV)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.286000	28.8	N	19.8	21.8	50.6
0.502000	33.1	N	19.8	12.9	46.0
1.038000	30.9	L1	19.8	15.1	46.0
1.438000	29.5	L1	19.7	16.5	46.0
2.278000	27.9	N	19.7	18.1	46.0
3.910000	26.0	L1	19.6	20.0	46.0

Charging Mode, Set.5, USB:

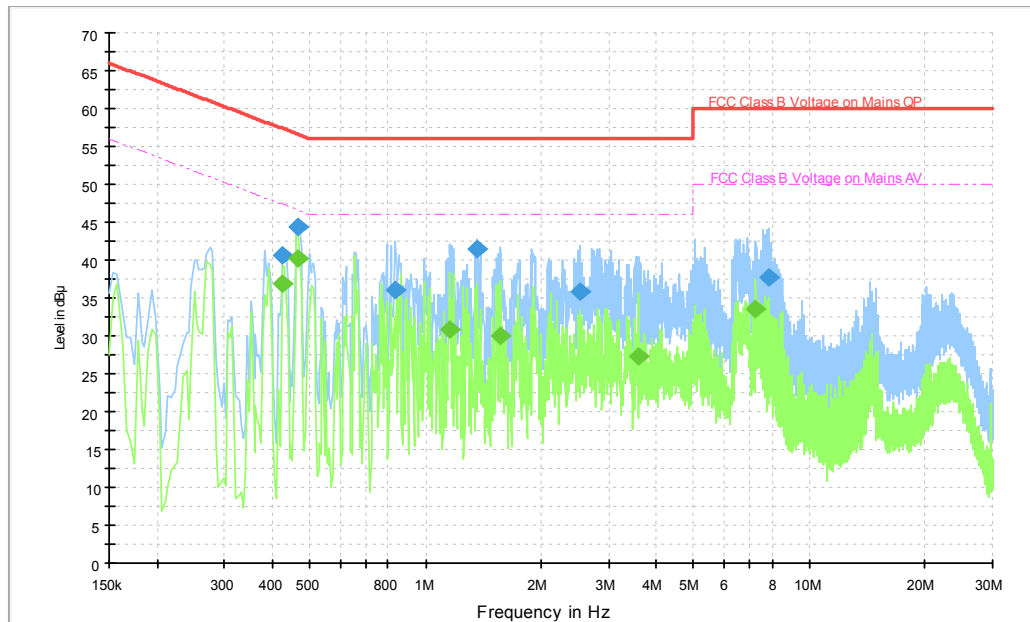


Fig A.13 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.426000	40.7	L1	19.7	16.6	57.3
0.466000	44.3	N	19.8	12.3	56.6
0.830000	36.1	L1	19.7	19.9	56.0
1.362000	41.4	L1	19.7	14.6	56.0
2.534000	35.8	N	19.6	20.2	56.0
7.806000	37.8	L1	19.8	22.2	60.0

Final Result 2

Frequency (MHz)	CAverage (dBuV)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.426000	36.9	L1	19.7	10.4	47.3
0.466000	40.3	N	19.8	6.3	46.6
1.158000	30.8	L1	19.8	15.2	46.0
1.574000	29.9	N	19.6	16.1	46.0
3.590000	27.4	N	19.6	18.6	46.0
7.266000	33.6	N	19.6	16.4	50.0

ANNEX B: PERSONS INVOLVED IN THIS TESTING

Test Item	Test Software and Version	Software Vendor	Test operator
Conducted Emission	EMC32 V8.52.0	R&S	Chen Tianwei
Radiated Emission	EMC32 V10.60.20	R&S	Yan Hanchen

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