



# TESTREPORT

No.I18N01496-EMC

for

**Yulong Computer Telecommunication Scientific (Shenzhen) Co., Ltd**

**Smart phone**

**Model Name: cp3705A**

**FCC ID: R38YL3705A**

**Hardware Version: P1**

**Software Version: 3705A.MPCS.181120.1D**

**Issued Date: 2018-11-26**

**Designation Number: CN1210**

**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 SAICT.

**Test Laboratory:**

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## **REPORT HISTORY**

<b>Report Number</b>	<b>Revision</b>	<b>Description</b>	<b>Issue Date</b>
I18N01496-EMC	Rev.0	1st edition	2018-11-26

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## 1. Test Laboratory

### 1.1. Testing Location

Company Name: Shenzhen Academy of Information and Communications  
Technology  
Address: Building G, Shenzhen International Innovation Center, No.1006  
Shennan Road, Futian District, Shenzhen, Guangdong, P. R. China  
Postal Code: 518026  
Telephone: +86(0)755-33322000  
Fax: +86(0)755-33322001

### 1.2. Testing Environment

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

### 1.3. Project data

Testing Start Date: 2018-10-08  
Testing End Date: 2018-11-23

### 1.4. Signature



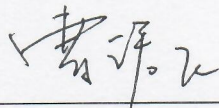
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(Reviewed this test report)



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Cao Junfei  
Director of the laboratory  
(Approved this test report)

## **2. ClientInformation**

### **2.1. Applicant Information**

Company Name: Yulong Computer Telecommunication Scientific (Shenzhen) Co., Ltd  
Coolpad Information Harbor, High-tech Industrial Park (North),  
Address: Nanshan District, Shenzhen, P.R.C.

### **2.2. Manufacturer Information**

Company Name: Yulong Computer Telecommunication Scientific (Shenzhen) Co., Ltd  
Coolpad Information Harbor, High-tech Industrial Park (North),  
Address: Nanshan District, Shenzhen, P.R.C.

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

#### 3.1. About EUT

Description	smartphone
Model Name	cp3705A
FCC ID	R38YL3705A
Condition of EUT as received	No obvious damage in appearance

The Equipment Under Test (EUT) are a model of smartphone with integrated antenna.

The EUT supports GPRS service and EGPRS service.

Remark: The above EUT's information is declared by manufacturer. Please refer to the specifications or user's manual for more detailed information.

#### 3.2. Internal Identification of EUT

EUT ID*	SN or IMEI	HW Version	SW Version
UT01aa	860667040002342	P1	3705A.MPCS.181120.1D
UT15aa	860667040005055	P1	3705A.MPCS.181120.1D

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

#### 3.3. Internal Identification of AE

AE ID*	Description	SN
AE1	Battery	/
AE2	Travel charger	/
AE3	USB cable	/
AE4	Headset	

##### AE1-1

Model	Rechargeable Li-ion Polymer Battery
Manufacturer	Zhuhai City Gushine Electronic Technology Co., Ltd.
Capacitance	3980 mAh
Nominal Voltage	3.85V

##### AE1-2

Model	Rechargeable Li-ion Polymer Battery
Manufacturer	Tianjin Lishen Technology Co.,Ltd.
Capacitance	3980 mAh
Nominal Voltage	3.85V

##### AE2

Model	Q3W18-1U-A
Manufacturer	Shenzhen Ruide

##### AE3-1

Model	Type C Cable
Manufacturer	Leagtech Electronics Co., Ltd

AE3-2

Model

Type C Cable

Manufacturer

Shenzhen Saibao.

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

Note: AE4 are only used for FM mode testing.

### 3.4. EUT set-ups

<b>EUT set-up No.</b>	<b>Combination of EUT and AE</b>	<b>Remarks</b>
Set.1	EUT1+ AE1-1+AE2+AE3-1	Charging mode
Set.2	EUT2+ AE1-2+AE2+AE3-2	Charging mode
Set.3	EUT1+AE3-1	USB mode
Set.4	EUT2+AE3-2	USB mode
Set.5	EUT1+ AE1-1+AE2+AE3-1+AE4	FM mod
Set.6	EUT2+ AE1-2+AE2+AE3-2+AE4	FM mod



## **4. Reference Documents**

### **4.1. Reference Documents for testing**

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

<b>Reference</b>	<b>Title</b>	<b>Version</b>
FCC Part 15, Subpart B	Radio frequency devices	10-1-2017 Edition
ANSI C63.4	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2014

## 5. LABORATORY ENVIRONMENT

**Semi-anechoic chamber** 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-18000MHz,>90dB
Electrical insulation	>2MΩ
Ground system resistance	<4Ω
Normalised site attenuation (NSA)	<±4 dB, 3 m distance, from 30 to 1000 MHz

**Shield room** did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. =20 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz,>60dB; 1MHz-10000MHz,>90dB
Electrical insulation	>2MΩ
Ground system resistance	<4Ω

**Fully-anechoic chamber** 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-18000MHz,>90dB
Electrical insulation	>2MΩ
Ground system resistance	<4Ω
VoltageStandingWaveRatio (VSWR)	≤ 6 dB, from 1 to 18GHz, 3 m distance
Uniformity of field strength	Between 0 and 6 dB, from 80 to 6000 MHz

## 6. SUMMARY OF TEST RESULTS

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

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

## 7. Test Facilities Utilized

NO.	NAME	TYPE	SERIES NUMBER	PRODUCER	CALDUE DATE	CAL PERIOD
1.	Test Receiver	ESR7	101676	R&S	2018.11.29	1 year
2.	TestReceiver	ESCI	100702	R&S	2019.06.20	1 year
3.	Spectrum Analyzer	FSV40	101192	R&S	2019.05.21	1 year
4.	BiLog Antenna	3142E	00224831	ETS-lindgren	2021.05.17	3 years
5.	LISN	ENV216	102067	R&S	2019.07.18	1 year
6.	Horn Antenna	3117	00066577	ETS-lindgren	2019.04.05	3 years
7.	Universal Radio Communication Tester	CMU200	114545	R&S	2019.05.17	1 year
8.	PC	ThinkPad E480	PF-0Z56NV	Lenovo	/	/
9.	Printer	P1008	VNF6C12491	HP	/	/
10.	Mouse	MOEUUOA	44NY517	Lenovo	/	/
11.	Chamber	FACT3-2.0	1285	ETS-Lindgren	2020.07.20	3 years

## **ANNEX A: MEASUREMENT RESULTS**

### **A.1 Radiated Emission (§15.109(a))**

#### **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 a distance of 3 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 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:**

**MP3 mode:** The EUT is keeping on playing mp3.

**Camera mode:** The EUT is keeping on taking photos.

**FM mode:** The EUT is keeping on FM receiver.

**Charging mode:** The MS is synchronized to SS, and able to respond to paging messages and incoming call. An established call has been released. The MS is connected to a charger.

**USB mode:** The model of the PC is Lenovo ThinkPad E480, and the serial number of the PC is PF-0Z56NV. The software is used to let the PC keep on copying data to MS, reading and erasing the data after copy action was finished.

#### **A.1.3 Measurement Limit**

Limit from CFR Part 15.109(a)

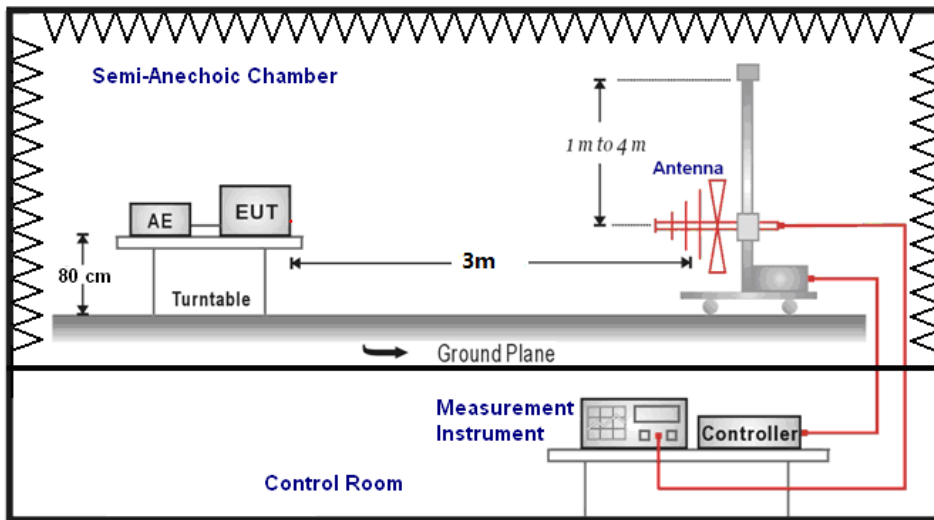
Frequency range (MHz)	Field strength limit ( $\mu\text{V}/\text{m}$ )		
	Quasi-peak	Average	Peak
30-88	100		
88-216	150		
216-960	200		
960-1000	500		
>1000		500	5000

\*Note: The original limit is defined at 10m test distance. This limit is calculated according to CISPR requirements.

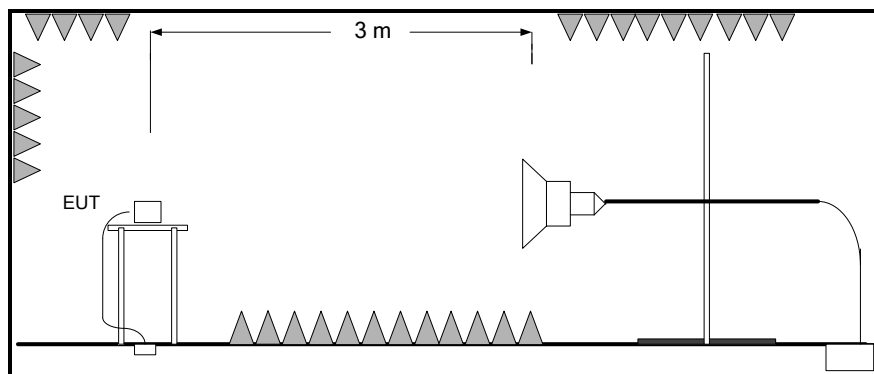
#### **A.1.4 Test Condition**

Frequency of emission (MHz)	RBW/VBW	Sweep Time(s)
30-1000	120kHz (IF bandwidth)	5
Above 1000	1MHz/3MHz	15

**A.1.5 Test set-up:  
30MHz-1GHz**



**1GHz-18GHz**



### A.1.6 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:

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

Where

$G_A$ : Antenna factor of receive antenna

$G_{PL}$ : PathLoss

$P_{\text{Mea}}$ : Measurement result on receiver.

Note: the result contains vertical part and Horizontal part

**RE Measurement uncertainty:**30M-1GHz: 4.90dB (k=2); (V)

30M-1GHz: 5.06dB (k=2); (H)

1GHz-18GHz: 5.12 dB (k=2)

#### Set.1 Camera mode / Charging mode / Peak detector

Frequency(MHz)	Result(dBuV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	$P_{\text{Mea}}$ (dBμV)
2612.500000	53.05	74.00	20.95	V	19.7	33.35
12275.500000	52.78	74.00	21.22	V	19.3	33.48
14533.000000	53.15	74.00	20.85	H	20.4	32.75
15575.500000	53.59	74.00	20.41	H	21.0	32.59
16587.500000	54.24	74.00	19.76	V	22.8	31.44
17889.000000	54.37	74.00	19.63	H	23.9	30.47

#### Set.1 Camera mode / Charging mode / Average detector

Frequency(MHz)	Result(dBuV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	$P_{\text{Mea}}$ (dBμV)
2791.500000	42.19	54.00	11.81	V	21.0	21.19
12674.000000	41.37	54.00	12.63	V	19.9	21.47
14909.000000	42.42	54.00	11.58	V	20.7	21.72
16278.500000	42.91	54.00	11.09	H	21.7	21.21
16599.000000	43.04	54.00	10.96	V	22.9	20.14
17871.500000	42.76	54.00	11.24	V	23.6	19.16

#### Set.1 MP3 mode / Charging mode / Peak detector

Frequency(MHz)	Result(dBuV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	$P_{\text{Mea}}$ (dBμV)
2853.000000	54.37	74.00	19.63	V	20.3	34.07
2997.500000	54.12	74.00	19.88	V	21.7	32.42
14476.500000	53.56	74.00	20.44	V	20.2	33.36
14919.500000	53.89	74.00	20.11	H	20.7	33.19
16143.500000	53.85	74.00	20.15	V	22.3	31.55

17905.500000	53.67	74.00	20.33	H	24.0	29.67
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**Set.1 MP3 mode / Charging mode / Average detector**

Frequency(MHz)	Result(dBuV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P <sub>Mea</sub> (dBμV)
2747.500000	41.13	54.00	12.87	V	19.7	21.43
3000.000000	42.04	54.00	11.96	V	21.9	20.14
13023.500000	41.50	54.00	12.50	V	20.1	21.40
16015.500000	42.81	54.00	11.19	V	21.5	21.31
16888.500000	42.87	54.00	11.13	V	22.4	20.47
17943.500000	42.70	54.00	11.30	H	23.5	19.20

**Set.2 Camera mode / Charging mode / Peak detector**

Frequency(MHz)	Result(dBuV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P <sub>Mea</sub> (dBμV)
12233.000000	55.88	74.00	18.12	V	19.3	36.58
13903.500000	56.62	74.00	17.38	H	19.8	36.82
14563.000000	57.16	74.00	16.84	V	20.4	36.76
15568.000000	56.99	74.00	17.01	H	21.0	35.99
16643.500000	58.83	74.00	15.17	H	22.4	36.43
17892.000000	57.27	74.00	16.73	V	23.9	33.37

**Set.2 Camera mode / Charging mode / Average detector**

Frequency(MHz)	Result(dBuV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P <sub>Mea</sub> (dBμV)
12075.000000	43.71	54.00	10.29	V	18.9	24.81
12524.000000	44.39	54.00	9.61	V	20.0	24.39
14563.500000	45.86	54.00	8.14	H	20.4	25.46
15643.000000	47.04	54.00	6.96	H	21.3	25.74
16641.500000	46.98	54.00	7.02	H	22.4	24.58
17701.500000	45.85	54.00	8.15	V	22.9	22.95

**Set.2 MP3 mode / Charging mode / Peak detector**

Frequency(MHz)	Result(dBuV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P <sub>Mea</sub> (dBμV)
12618.500000	56.84	74.00	17.16	V	20.1	36.74
13989.000000	56.16	74.00	17.84	H	19.6	36.56
15035.000000	57.90	74.00	16.10	H	20.0	37.90
16259.500000	58.36	74.00	15.64	H	21.9	36.46
16711.500000	58.52	74.00	15.48	H	21.8	36.72
17720.500000	58.09	74.00	15.91	H	22.9	35.19

**Set.2 MP3 mode / Charging mode / Average detector**

Frequency(MHz)	Result(dBuV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P <sub>Mea</sub> (dBμV)
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12898.500000	44.84	54.00	9.16	V	20.0	24.84
14003.000000	45.00	54.00	9.00	H	19.5	25.50
14556.500000	45.83	54.00	8.17	H	20.4	25.43
15575.000000	46.23	54.00	7.77	V	21.0	25.23
16649.000000	47.05	54.00	6.95	V	22.4	24.65
17700.500000	46.24	54.00	7.76	V	22.9	23.34

**Set.5 FM mode / Charging mode / Peak detector**

Frequency(MHz)	Result(dBuV/m)	Limit (dB $\mu$ V/m)	Margin(dB)	Polarity	ARpl (dB/m)	P <sub>Mea</sub> (dB $\mu$ V)
2770.000000	54.86	74.00	19.14	V	21.0	33.86
12426.500000	53.23	74.00	20.77	H	19.3	33.93
14426.000000	53.82	74.00	20.18	H	20.2	33.62
15514.000000	54.12	74.00	19.88	V	20.4	33.72
16230.500000	54.59	74.00	19.41	V	22.2	32.39
17915.000000	54.11	74.00	19.89	V	23.9	30.21

**Set.5 FM mode / Charging mode / Average detector**

Frequency(MHz)	Result(dBuV/m)	Limit (dB $\mu$ V/m)	Margin(dB)	Polarity	ARpl (dB/m)	P <sub>Mea</sub> (dB $\mu$ V)
2791.000000	42.28	54.00	11.72	V	21.1	21.18
13036.500000	41.97	54.00	12.04	V	20.1	21.87
14405.500000	41.87	54.00	12.13	H	20.2	21.67
14904.500000	42.24	54.00	11.76	V	20.8	21.44
16013.500000	42.68	54.00	11.32	V	21.5	21.18
16646.000000	42.81	54.00	11.19	V	22.4	20.41

**Set.6 FM mode / Charging mode / Peak detector**

Frequency(MHz)	Result(dBuV/m)	Limit (dB $\mu$ V/m)	Margin(dB)	Polarity	ARpl (dB/m)	P <sub>Mea</sub> (dB $\mu$ V)
12903.500000	55.97	74.00	18.03	V	20.0	35.97
13995.500000	55.92	74.00	18.08	H	19.6	36.32
14693.500000	57.48	74.00	16.52	H	20.7	36.78
15641.000000	58.53	74.00	15.47	V	21.3	37.23
16613.500000	58.30	74.00	15.70	V	22.8	35.50
17701.500000	57.50	74.00	16.50	H	22.9	34.60

**Set.6 FM mode / Charging mode / Average detector**

Frequency(MHz)	Result(dBuV/m)	Limit (dB $\mu$ V/m)	Margin(dB)	Polarity	ARpl (dB/m)	P <sub>Mea</sub> (dB $\mu$ V)
12898.000000	44.78	54.00	9.22	V	20.0	24.78
13991.000000	44.83	54.00	9.17	V	19.6	25.23
14560.500000	45.87	54.00	8.13	V	20.4	25.47
15577.500000	46.01	54.00	7.99	V	21.1	24.91

16628.000000	46.95	54.00	7.05	V	22.6	24.35
17876.500000	46.05	54.00	7.95	H	23.7	22.35

**Set.3 USB mode / Peak detector**

Frequency(MHz)	Result(dBuV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P <sub>Mea</sub> (dBμV)
2726.500000	53.06	74.00	20.94	V	19.2	33.86
2999.500000	53.57	74.00	20.43	H	21.8	31.77
13734.000000	52.93	74.00	21.07	H	19.4	33.53
14484.000000	53.25	74.00	20.75	V	20.2	33.05
16141.500000	53.78	74.00	20.22	V	22.3	31.48
16491.000000	54.12	74.00	19.88	V	21.7	32.42

**Set.3 USB mode / Average detector**

Frequency(MHz)	Result(dBuV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P <sub>Mea</sub> (dBμV)
2790.000000	42.20	54.00	11.80	H	21.1	21.10
3000.000000	42.10	54.00	11.90	H	21.9	20.20
13031.000000	41.62	54.00	12.38	V	20.1	21.52
14399.000000	42.04	54.00	11.96	V	20.1	21.94
16149.500000	42.57	54.00	11.43	V	22.3	20.27
16610.000000	43.01	54.00	10.99	H	22.8	20.21

**Set.4 USB mode / Peak detector**

Frequency(MHz)	Result(dBuV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P <sub>Mea</sub> (dBμV)
12900.000000	56.10	74.00	17.90	V	20.0	36.10
13772.500000	56.29	74.00	17.71	V	19.3	36.99
14661.000000	57.38	74.00	16.62	H	20.7	36.68
15658.500000	58.81	74.00	15.19	V	21.3	37.51
16605.500000	57.88	74.00	16.12	V	22.8	35.08
17326.000000	57.70	74.00	16.30	V	21.6	36.10

**Set.4 USB mode / Average detector**

Frequency(MHz)	Result(dBuV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P <sub>Mea</sub> (dBμV)
12521.000000	44.57	54.00	9.43	V	20.0	24.57
14020.500000	44.96	54.00	9.04	H	19.5	25.46
14563.000000	45.83	54.00	8.17	H	20.4	25.43
15576.000000	46.24	54.00	7.76	V	21.0	25.24
16594.000000	46.81	54.00	7.19	H	22.8	24.01
17889.000000	46.08	54.00	7.92	V	23.9	22.18

Camera mode / Charging mode: Set 1

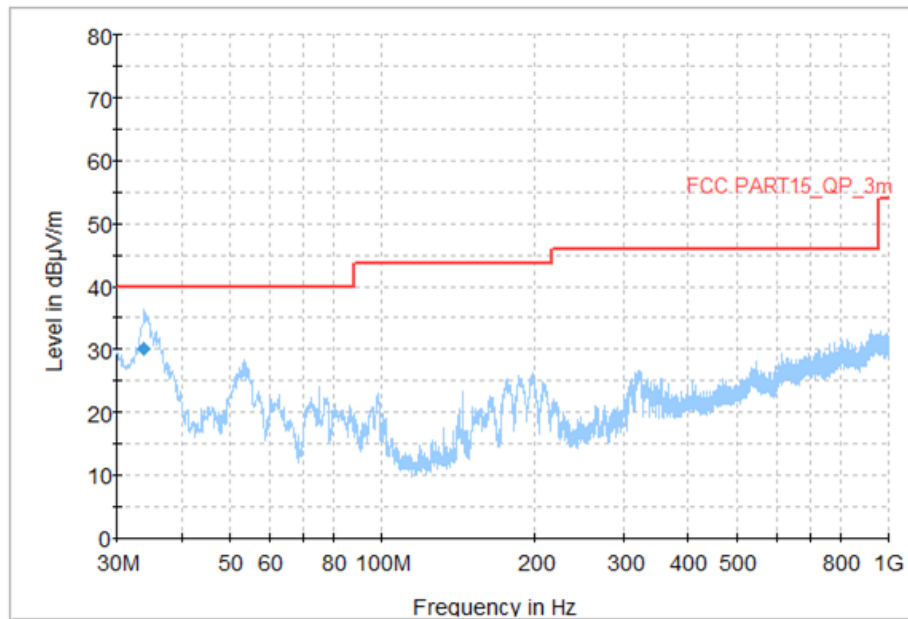


Figure A.1 Radiated Emission from 30MHz to 1GHz

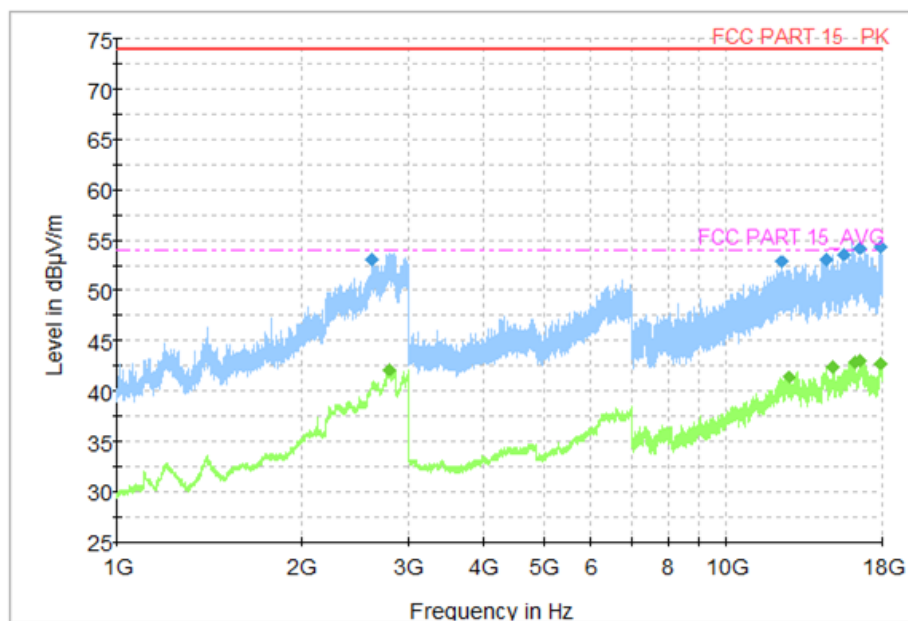


Figure A.2 Radiated Emission from 1GHz to 18GHz

MP3 mode / Charging mode: Set 1

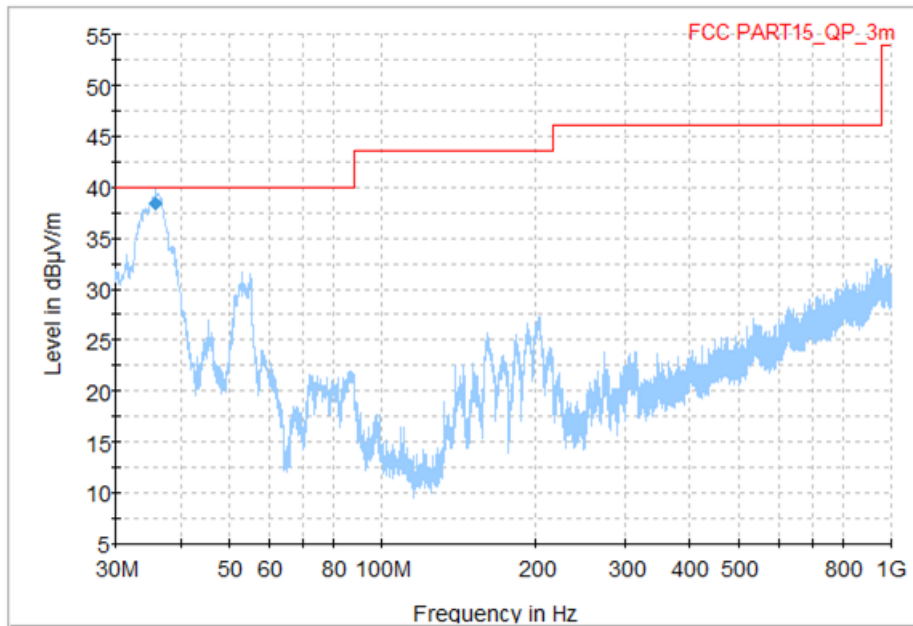


Figure A.3 Radiated Emission from 30MHz to 1GHz

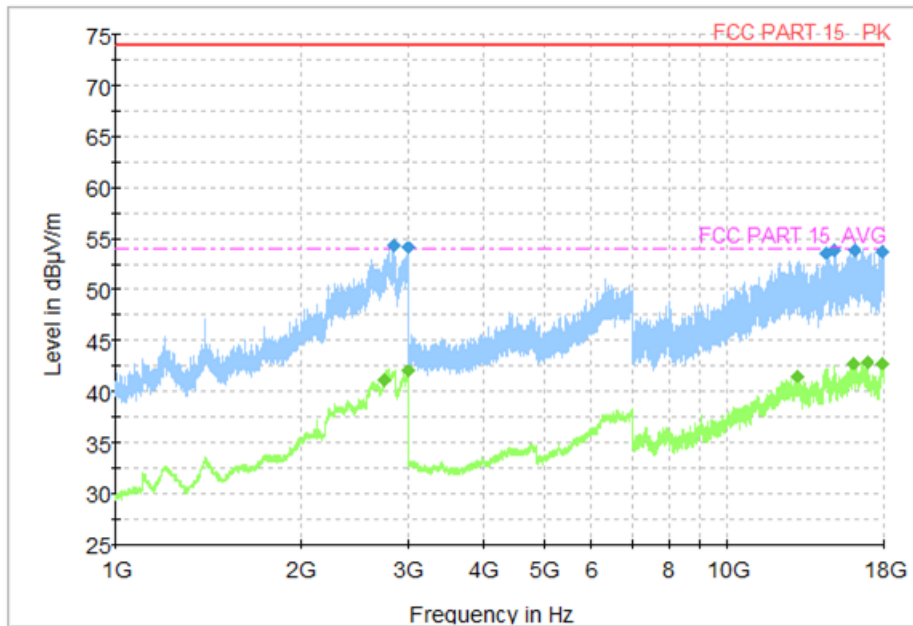


Figure A.4 Radiated Emission from 1GHz to 18GHz

Camera mode / Charging mode: Set 2

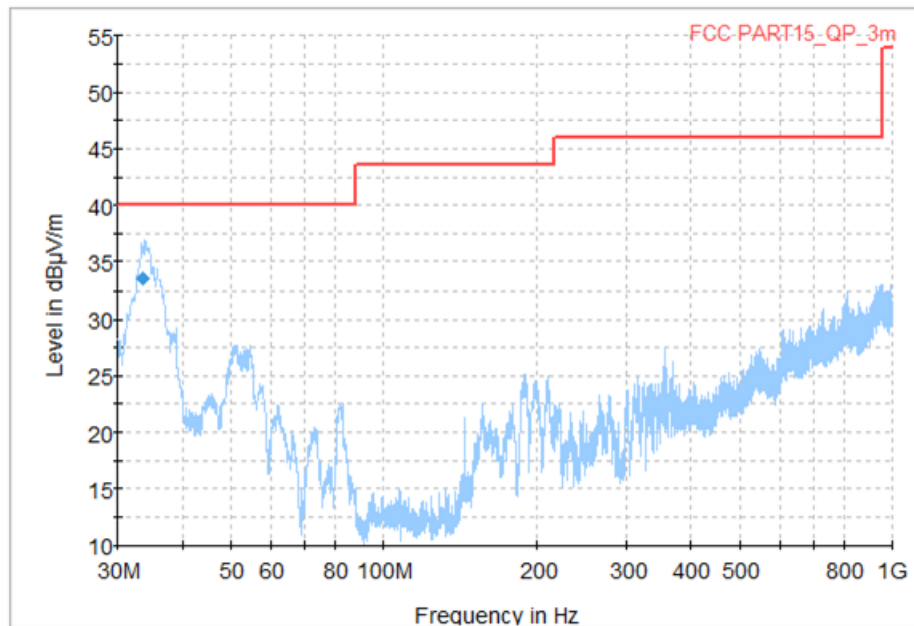


Figure A.5 Radiated Emission from 30MHz to 1GHz

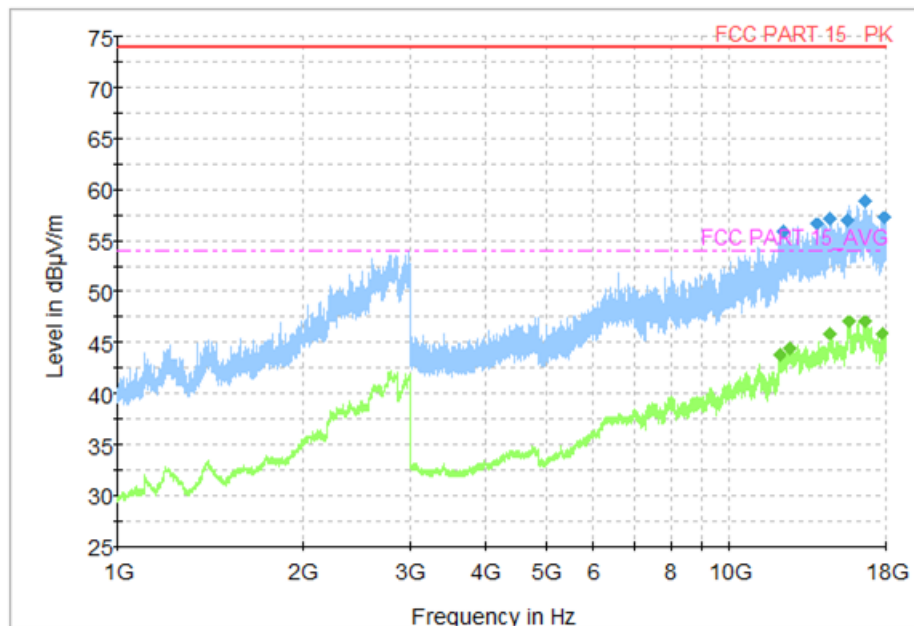


Figure A.6 Radiated Emission from 1GHz to 18GHz

MP3 mode / Charging mode: Set 2

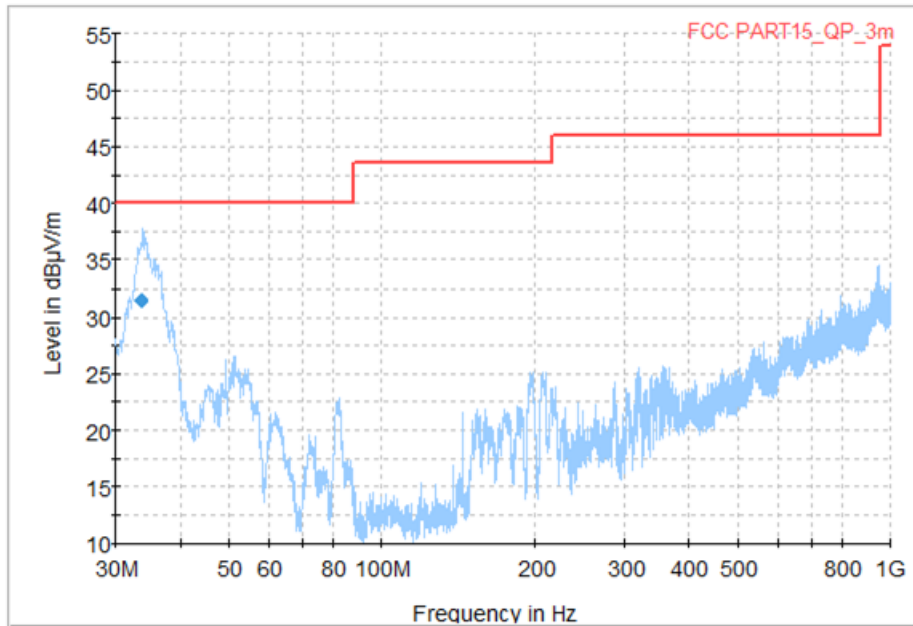


Figure A.7 Radiated Emission from 30MHz to 1GHz

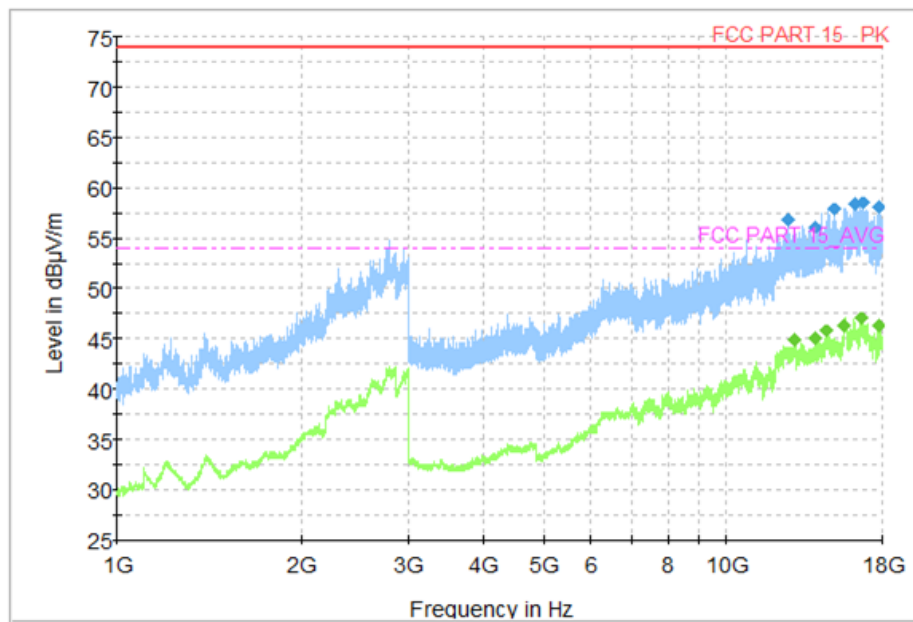


Figure A.8 Radiated Emission from 1GHz to 18GHz

FM mode / Charging mode: Set 5

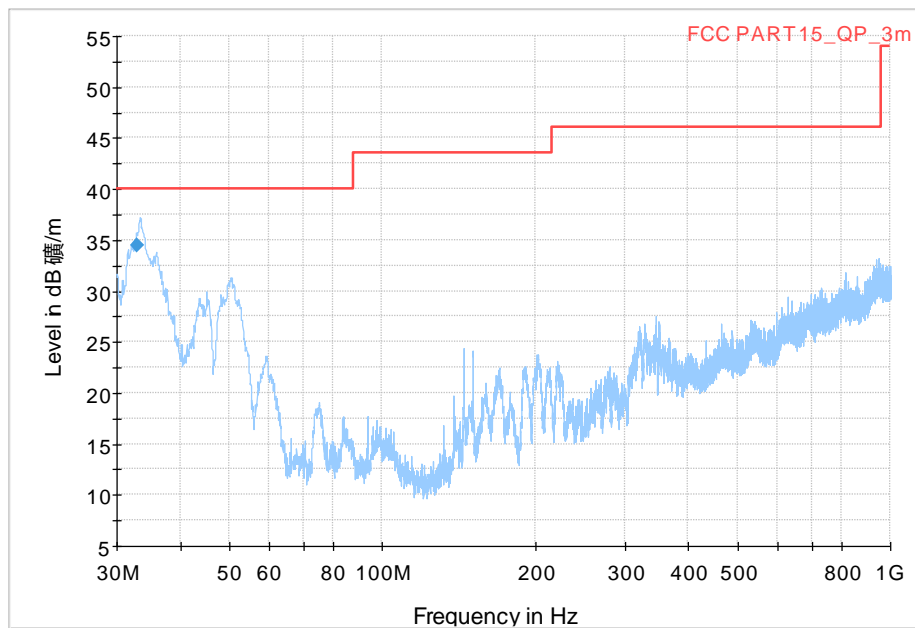


Figure A.9 Radiated Emission from 30MHz to 1GHz

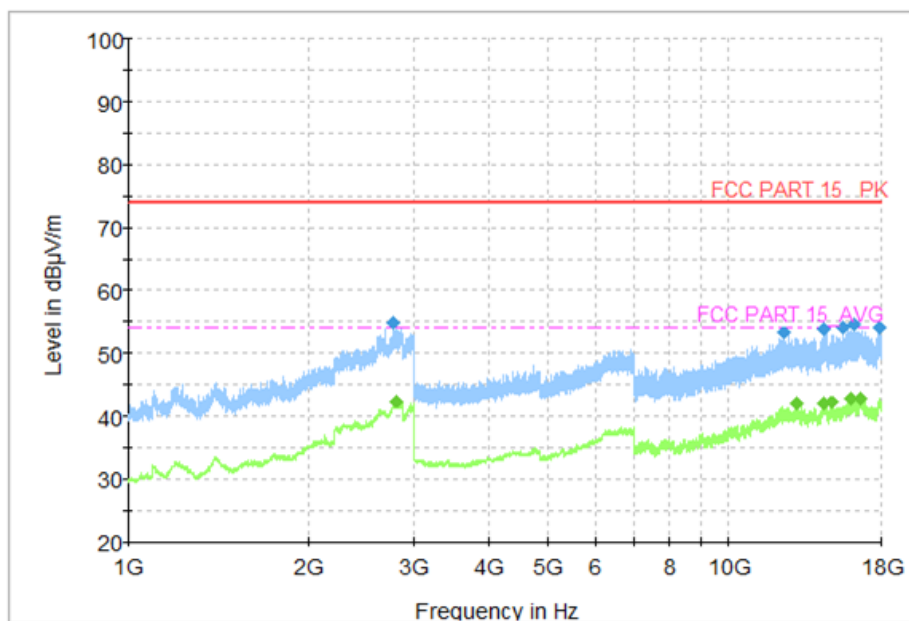


Figure A.10 Radiated Emission from 1GHz to 18GHz

FM mode / Charging mode: Set 6

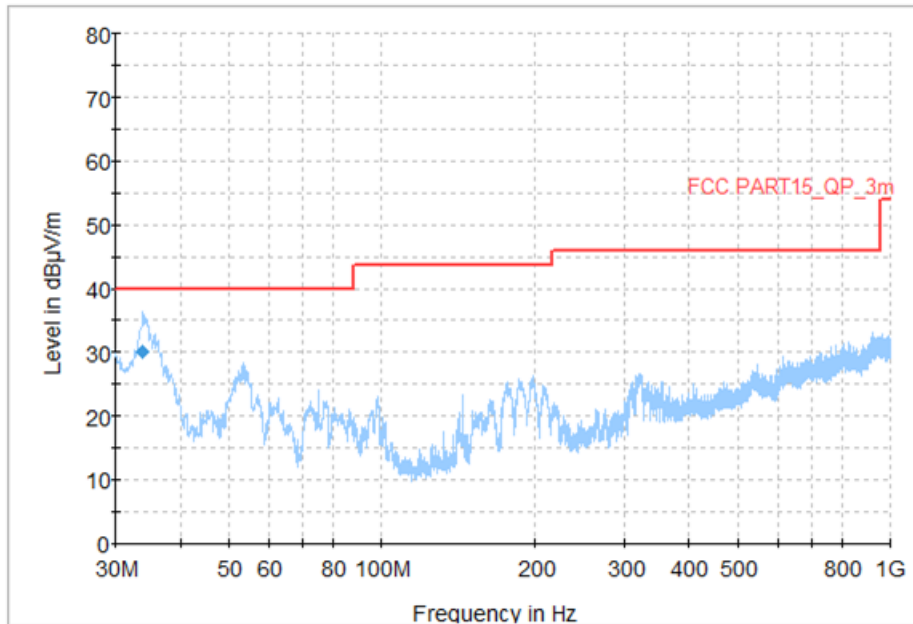


Figure A.11 Radiated Emission from 30MHz to 1GHz

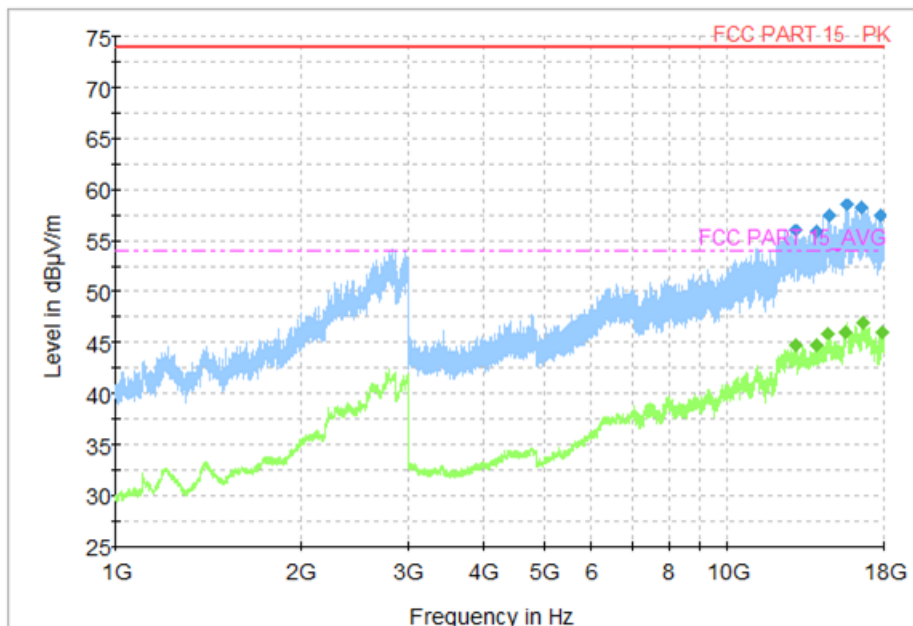


Figure A.12 Radiated Emission from 1GHz to 18GHz



USB mode: Set 3

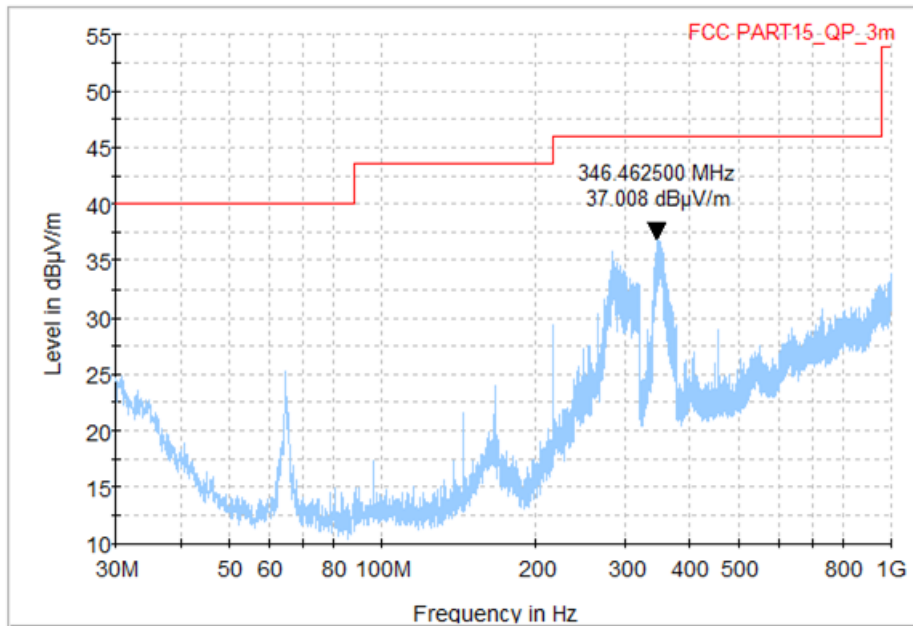


Figure A.13 Radiated Emission from 30MHz to 1GHz

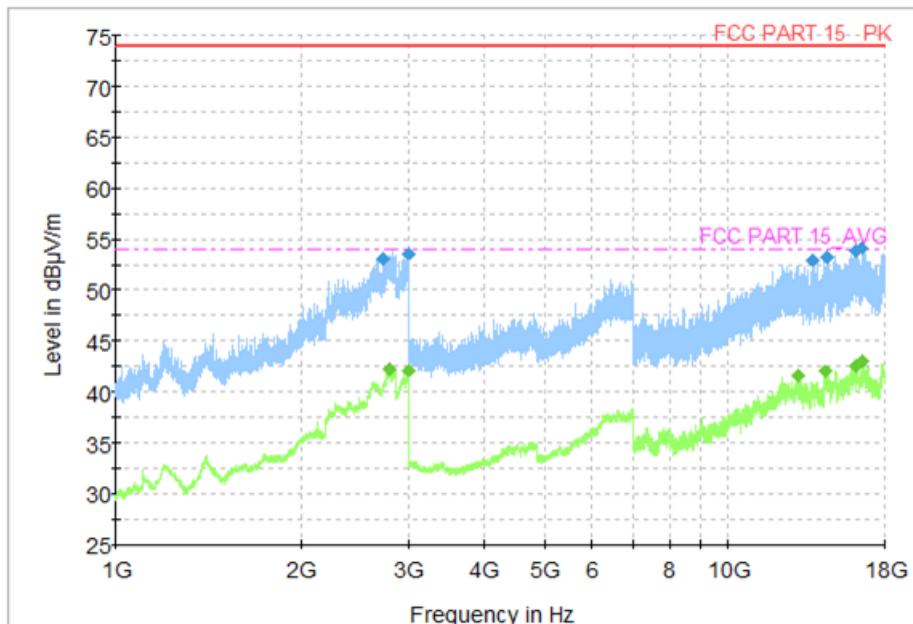


Figure A.14 Radiated Emission from 1GHz to 18GHz

USB mode: Set 4

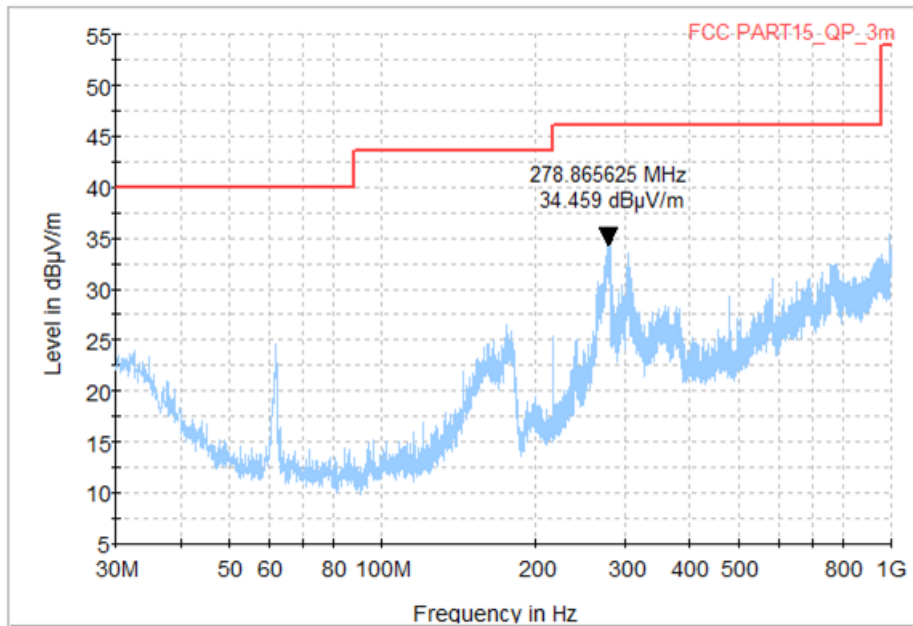


Figure A.15 Radiated Emission from 30MHz to 1GHz

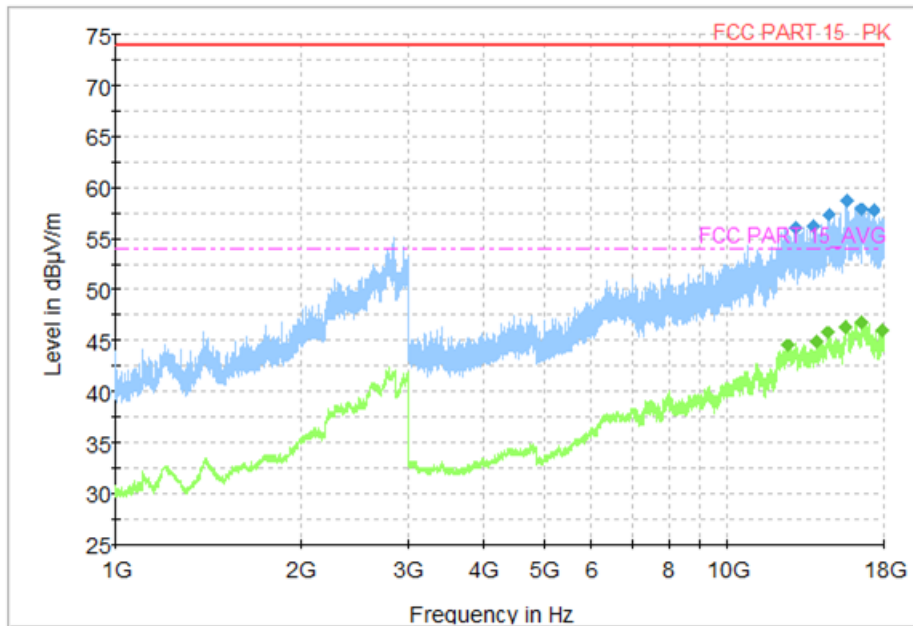


Figure A.16 Radiated Emission from 1GHz to 18GHz

## B.2 Conducted Emission (§15.107(a))

### Reference

FCC: CFR Part 15.107(a)

### B.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 150kHz to 30MHz shall not exceed the limits. Tested in accordance with the procedures of ANSI C63.4 -2014, section 7.3.

### B.2.2 EUT Operating Mode:

**MP3 mode:** The EUT is keeping on playing mp3.

**Camera mode:** The EUT is keeping on taking photos.

**FM mode:** The EUT is keeping on FM receiver.

**Charging mode:** The MS is synchronized to SS, and able to respond to paging messages and incoming call. An established call has been released. The MS is connected to a charger.

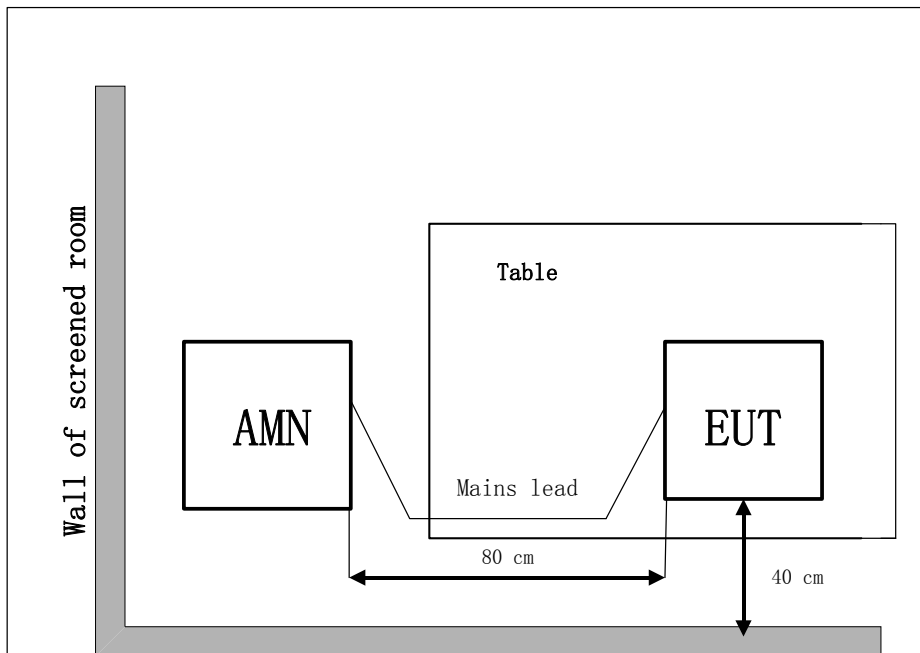
**USB mode:** The model of the PC is Lenovo ThinkPad E480, and the serial number of the PC is PF-0Z56NV. The software is used to let the PC keep on copying data to MS, reading and erasing the data after copy action was finished.

### B.2.3 Measurement Limit

Frequency of emission (MHz)	Conducted limit (dB $\mu$ V)	
	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

**B.2.4 Test set-up:**



**B.2.5 Test Condition in charging mode**

Voltage (V)	Frequency (Hz)
120	50
240	50

RBW	Sweep Time(s)
9kHz	1

**CE Measurement uncertainty:** 3.10 dB (k=2)

**B.2.6 Measurement Results**

QuasiPeak(dBμV) /Average(dBμV) =P<sub>Mea</sub>+Corr

Where

Corr: PathLoss + Voltage Division Factor

P<sub>Mea</sub>: Measurement result on receiver.

Camera mode / Charging mode: Set 1  
Voltage: 120V

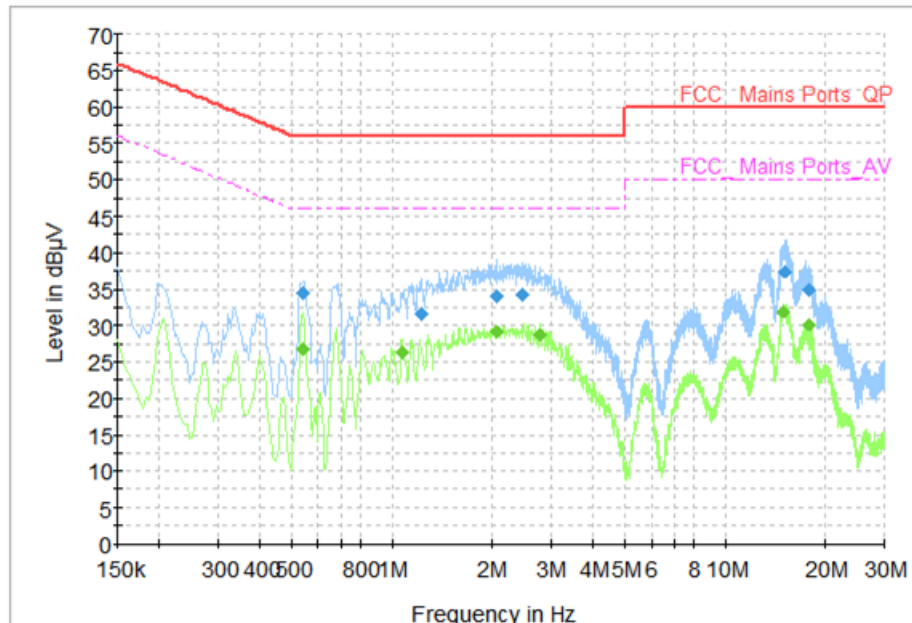


Figure B.1 Conducted Emission

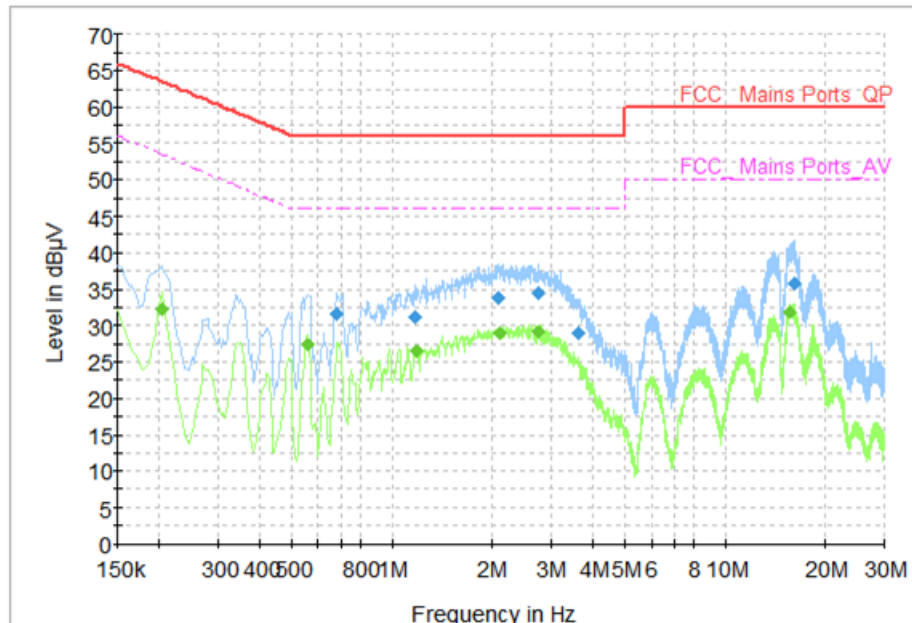
Final Measurement Detector 1

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.538000	34.33	56.00	21.67	L1	9.7	24.63
1.222000	31.59	56.00	24.41	L1	9.7	21.89
2.066000	34.12	56.00	21.88	L1	9.7	24.42
2.466000	34.24	56.00	21.76	L1	9.7	24.54
15.066000	37.46	60.00	22.54	L1	10.1	27.36
17.738000	34.84	60.00	25.16	N	10.2	24.64

Final Measurement Detector 2

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.538000	26.85	46.00	19.15	N	9.7	17.15
1.070000	26.29	46.00	19.71	L1	9.7	16.59
2.062000	29.15	46.00	16.85	L1	9.7	19.45
2.766000	28.77	46.00	17.23	N	9.7	19.07
14.902000	31.85	50.00	18.15	N	10.0	21.85
0.538000	26.85	46.00	19.15	N	10.2	16.65

**MP3 mode / Charging mode: Set 1**  
**Voltage: 120V**



**Figure B.2 Conducted Emission**

**Final Measurement Detector 1**

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.682000	31.63	56.00	24.37	N	9.7	21.93
1.174000	31.20	56.00	24.80	L1	9.7	21.50
2.078000	33.90	56.00	22.10	N	9.7	24.20
2.750000	34.34	56.00	21.66	L1	9.7	24.64
3.622000	28.89	56.00	27.11	N	9.7	19.19
16.098000	35.80	60.00	24.20	N	10.1	25.70

**Final Measurement Detector 2**

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.202000	32.34	53.53	21.19	N	9.6	22.74
0.558000	27.27	46.00	18.73	N	9.7	17.57
1.186000	26.48	46.00	19.52	L1	9.7	16.78
2.106000	28.92	46.00	17.08	N	9.7	19.22
2.746000	29.01	46.00	16.99	N	9.7	19.31
15.622000	32.00	50.00	18.00	L1	10.1	21.90

Camera mode / Charging mode: Set 2  
Voltage: 120V

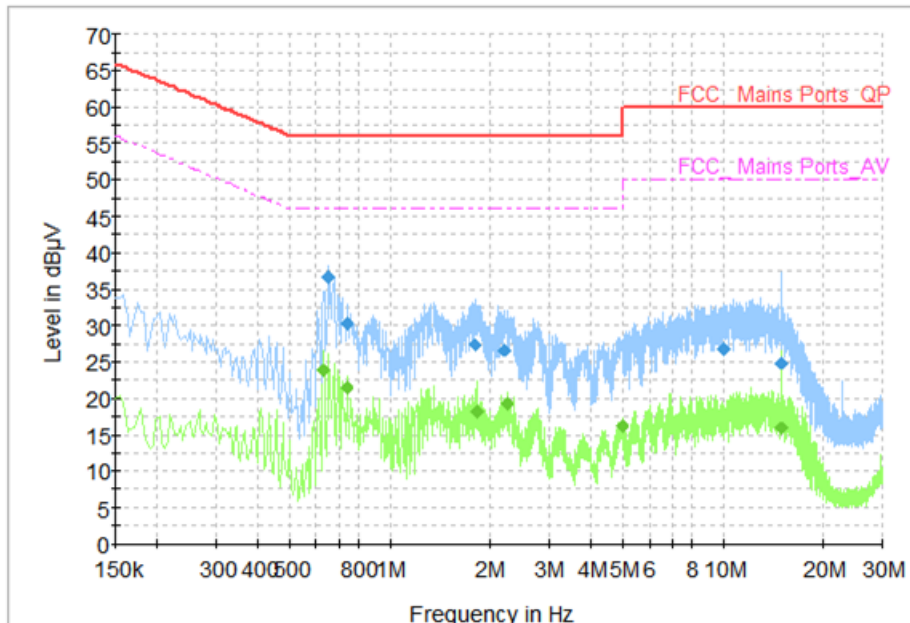


Figure B.3 Conducted Emission

**Final Measurement Detector 1**

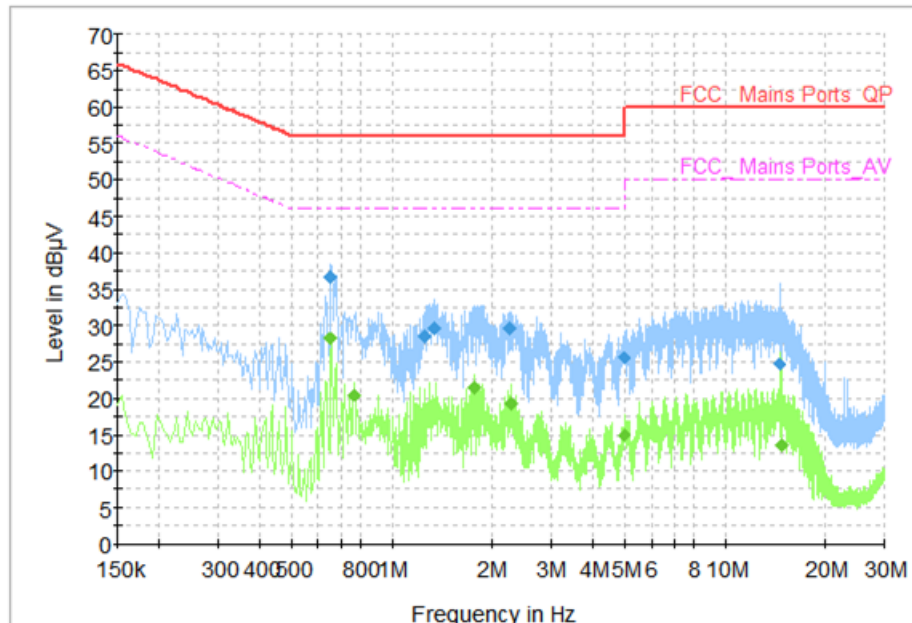
Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.654000	36.65	56.00	19.35	N	9.7	26.95
0.742000	30.34	56.00	25.66	N	9.7	20.64
1.794000	27.37	56.00	28.63	N	9.7	17.67
2.202000	26.64	56.00	29.36	N	9.7	16.94
10.002000	26.88	60.00	33.12	N	9.8	17.08
14.930000	24.80	60.00	35.20	L1	10.1	14.70

**Final Measurement Detector 2**

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.630000	23.85	46.00	22.15	N	9.7	14.15
0.742000	21.45	46.00	24.55	N	9.7	11.75
1.822000	18.17	46.00	27.83	N	9.7	8.47
2.234000	19.29	46.00	26.71	N	9.7	9.59
4.966000	16.15	46.00	29.85	N	9.7	6.45
14.930000	15.90	50.00	34.10	L1	10.1	5.80



**MP3 mode / Charging mode: Set 2**  
**Voltage: 120V**



**Figure B.4 Conducted Emission**

**Final Measurement Detector 1**

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.654000	36.72	56.00	19.28	N	9.7	27.02
1.242000	28.57	56.00	27.43	N	9.7	18.87
1.334000	29.64	56.00	26.36	N	9.7	19.94
2.266000	29.60	56.00	26.40	N	9.7	19.90
4.966000	25.63	56.00	30.37	N	9.7	15.93
14.494000	24.62	60.00	35.38	L1	10.1	14.52

**Final Measurement Detector 2**

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.654000	28.23	46.00	17.77	N	9.7	18.53
0.766000	20.49	46.00	25.51	N	9.7	10.79
1.766000	21.51	46.00	24.49	N	9.7	11.81
2.286000	19.19	46.00	26.81	N	9.7	9.49
4.962000	14.96	46.00	31.04	N	9.7	5.26
14.710000	13.59	50.00	36.41	L1	10.1	3.49

FM mode / Charging mode: Set 5  
Voltage: 120V

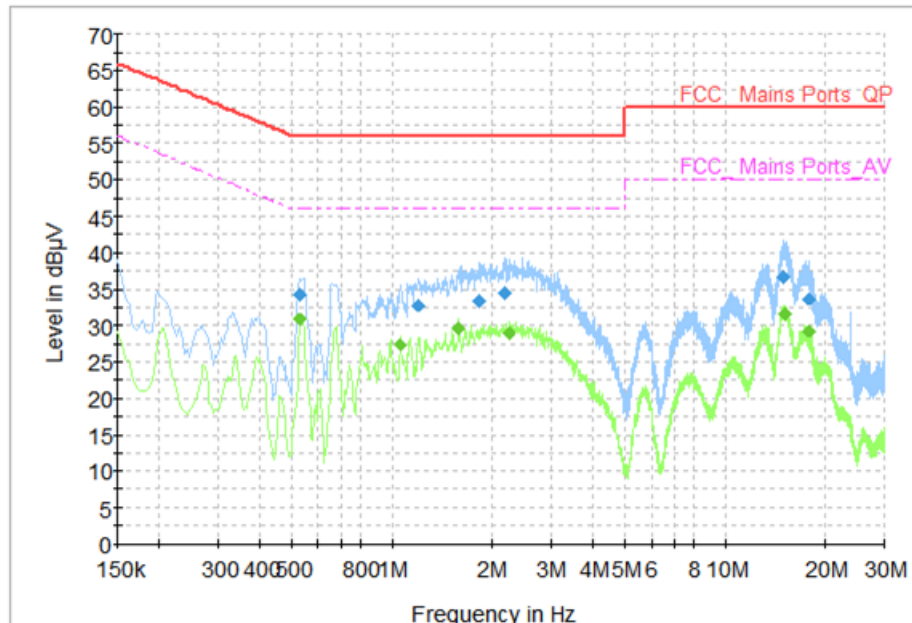


Figure B.5 Conducted Emission

Final Measurement Detector 1

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.530000	34.24	56.00	21.76	N	9.7	24.54
1.194000	32.84	56.00	23.16	N	9.7	23.14
1.830000	33.40	56.00	22.60	L1	9.7	23.70
2.178000	34.38	56.00	21.62	L1	9.7	24.68
14.954000	36.76	60.00	23.24	L1	10.1	26.66
17.742000	33.63	60.00	26.37	N	10.2	23.43

Final Measurement Detector 2

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.530000	30.86	46.00	15.14	N	9.7	21.16
1.054000	27.29	46.00	18.71	N	9.7	17.59
1.586000	29.60	46.00	16.40	N	9.7	19.90
2.238000	28.92	46.00	17.08	L1	9.7	19.22
15.070000	31.63	50.00	18.37	N	10.0	21.63
17.738000	29.29	50.00	20.71	N	10.2	19.09

FM mode / Charging mode: Set 6  
Voltage: 120V

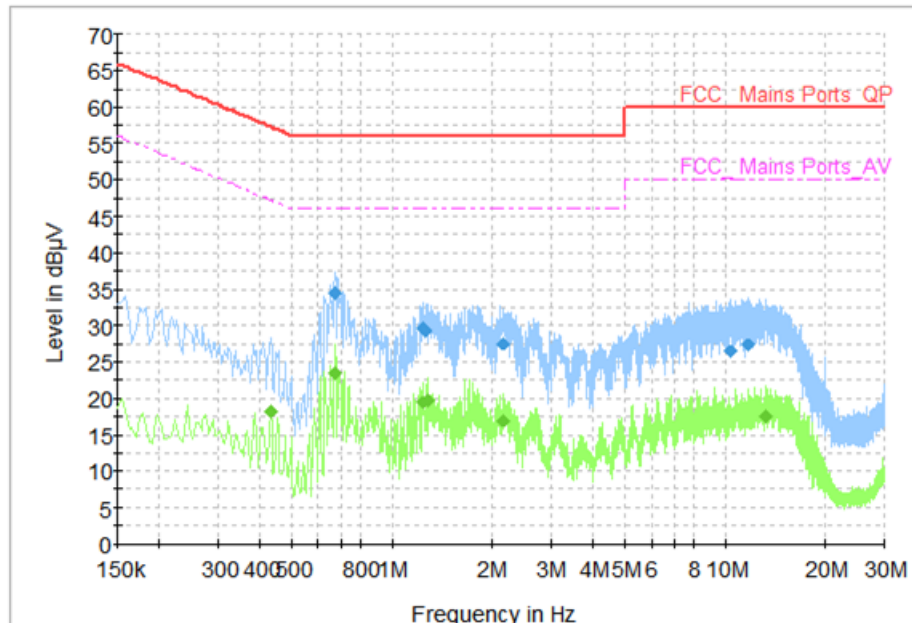


Figure B.6 Conducted Emission

**Final Measurement Detector 1**

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.670000	34.37	56.00	21.63	N	9.7	24.67
1.234000	29.60	56.00	26.40	N	9.7	19.90
1.254000	29.29	56.00	26.71	N	9.7	19.59
2.150000	27.44	56.00	28.56	N	9.7	17.74
10.326000	26.48	60.00	33.52	N	9.8	16.68
11.778000	27.37	60.00	32.63	N	9.9	17.47

**Final Measurement Detector 2**

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.430000	18.20	47.25	29.05	N	9.7	8.50
0.670000	23.39	46.00	22.61	N	9.7	13.69
1.234000	19.47	46.00	26.53	N	9.7	9.77
1.278000	19.74	46.00	26.26	N	9.7	10.04
2.150000	17.00	46.00	29.00	N	9.7	7.30
13.186000	17.52	50.00	32.48	N	9.9	7.62

USB mode: Set 3  
Voltage: 120V

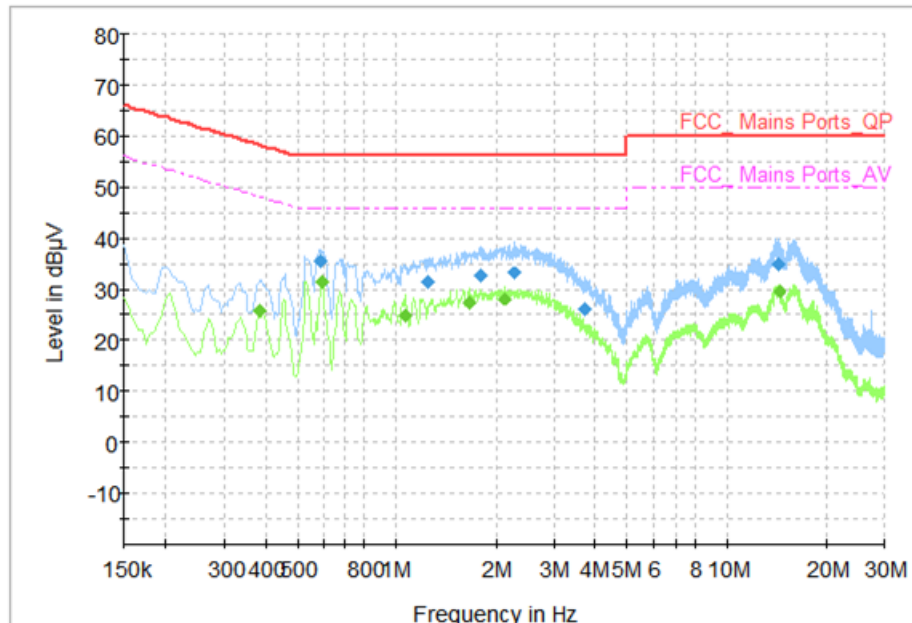


Figure B.7 Conducted Emission

**Final Measurement Detector 1**

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.586000	35.43	56.00	20.57	L1	9.7	25.73
1.246000	31.46	56.00	24.54	N	9.7	21.76
1.806000	32.58	56.00	23.42	N	9.7	22.88
2.274000	33.13	56.00	22.87	N	9.7	23.43
3.706000	26.09	56.00	29.91	N	9.7	16.39
14.246000	34.84	60.00	25.16	L1	10.1	24.74

**Final Measurement Detector 2**

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.386000	25.78	48.15	22.37	N	9.7	16.08
0.594000	31.43	46.00	14.57	L1	9.7	21.73
1.058000	24.75	46.00	21.25	N	9.7	15.05
1.658000	27.38	46.00	18.62	L1	9.7	17.68
2.130000	28.11	46.00	17.89	N	9.7	18.41
14.382000	29.52	50.00	20.48	L1	9.9	19.62

USB mode: Set 4  
Voltage: 120V

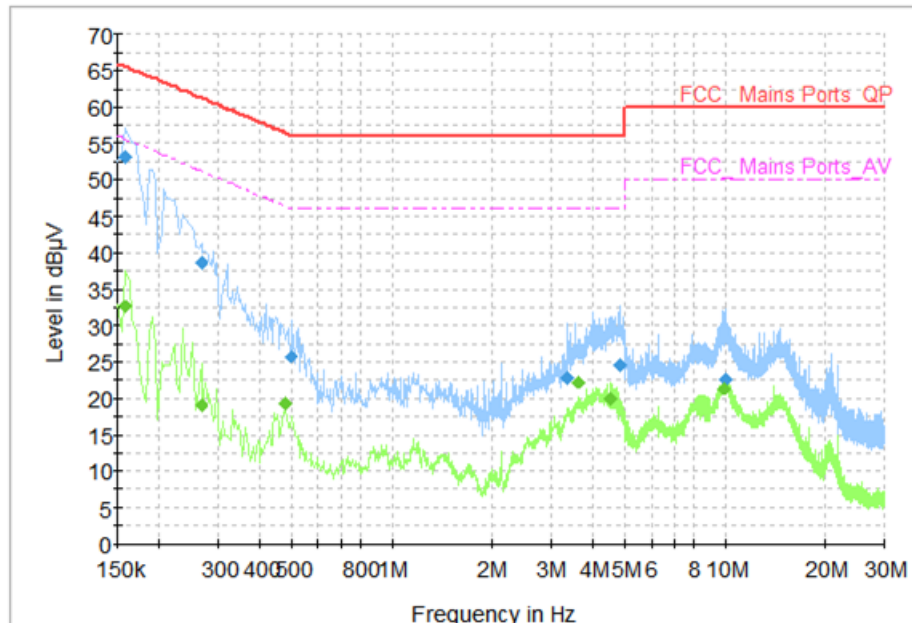


Figure B.8 Conducted Emission

**Final Measurement Detector 1**

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.158000	53.08	65.57	12.49	L1	9.7	43.38
0.266000	38.60	61.24	22.65	L1	9.7	28.9
0.498000	25.72	56.03	30.32	N	9.7	16.02
3.370000	22.67	56.00	33.33	N	9.7	12.97
4.834000	24.46	56.00	31.54	N	9.7	14.76
10.042000	22.48	60.00	37.52	N	9.8	12.68

**Final Measurement Detector 2**

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.158000	32.64	55.57	22.93	L1	9.7	22.94
0.266000	19.03	51.24	32.21	N	9.6	9.43
0.478000	19.16	46.37	27.22	N	9.7	9.46
3.594000	22.16	46.00	23.84	N	9.7	12.46
4.506000	19.93	46.00	26.07	N	9.7	10.23
9.922000	21.31	50.00	28.69	L1	9.8	11.51

Camera mode / Charging mode: Set 1  
Voltage: 240V

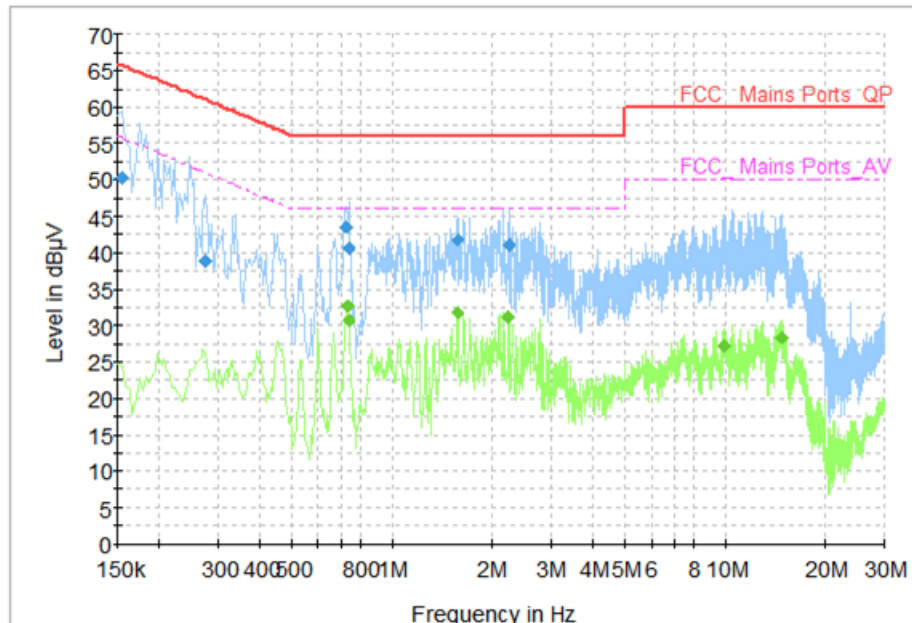


Figure B.9 Conducted Emission

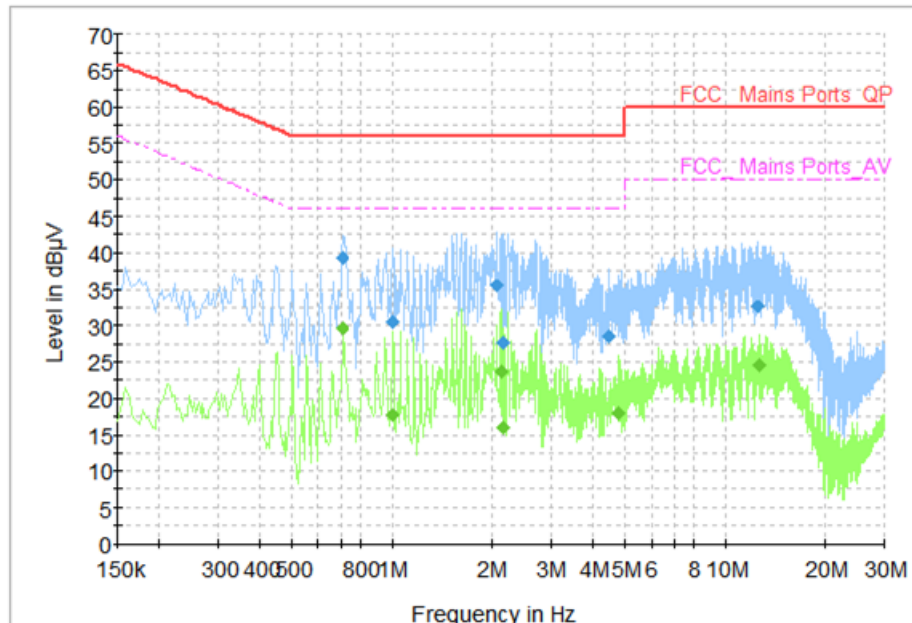
**Final Measurement Detector 1**

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.154000	50.26	65.78	15.52	N	9.6	40.66
0.274000	38.86	61.00	22.14	N	9.6	29.26
0.726000	43.63	56.00	12.37	N	9.7	33.93
0.742000	40.51	56.00	15.49	N	9.7	30.81
1.566000	41.71	56.00	14.29	N	9.7	32.01
2.234000	41.12	56.00	14.88	N	9.7	31.42

**Final Measurement Detector 2**

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.734000	32.71	46.00	13.29	N	9.7	23.01
0.738000	30.65	46.00	15.35	N	9.7	20.95
1.566000	31.69	46.00	14.31	N	9.7	21.99
2.226000	31.26	46.00	14.74	N	9.7	21.56
9.910000	27.14	50.00	22.86	N	9.8	17.34
14.710000	28.39	50.00	21.61	N	10.0	18.39

**MP3 mode / Charging mode: Set 1**  
**Voltage: 240V**



**Figure B.10 Conducted Emission**

**Final Measurement Detector 1**

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.706000	39.41	56.00	16.59	N	9.7	29.71
1.002000	30.51	56.00	25.49	N	9.7	20.81
2.062000	35.50	56.00	20.50	N	9.7	25.80
2.166000	27.70	56.00	28.30	N	9.7	18.00
4.482000	28.61	56.00	27.39	N	9.7	18.91
12.510000	32.62	60.00	27.38	N	9.9	22.72

**Final Measurement Detector 2**

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.710000	29.54	46.00	16.46	N	9.7	19.84
1.002000	17.57	46.00	28.43	N	9.7	7.87
2.114000	23.66	46.00	22.34	N	9.7	13.96
2.166000	15.99	46.00	30.01	N	9.7	6.29
4.786000	17.91	46.00	28.09	N	9.7	8.21
12.602000	24.45	50.00	25.55	N	9.9	14.55



Camera mode / Charging mode: Set 2  
Voltage: 240V

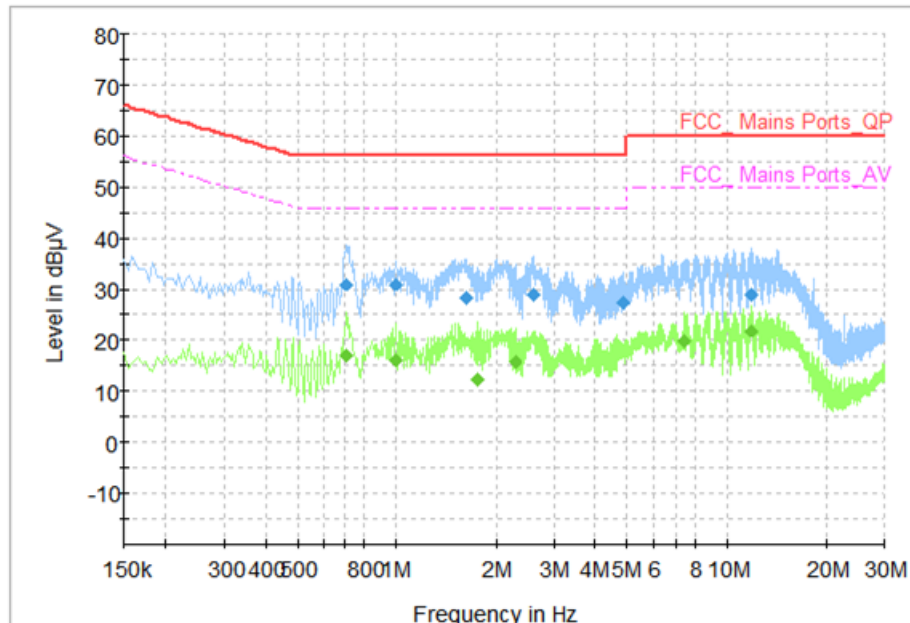


Figure B.11 Conducted Emission

**Final Measurement Detector 1**

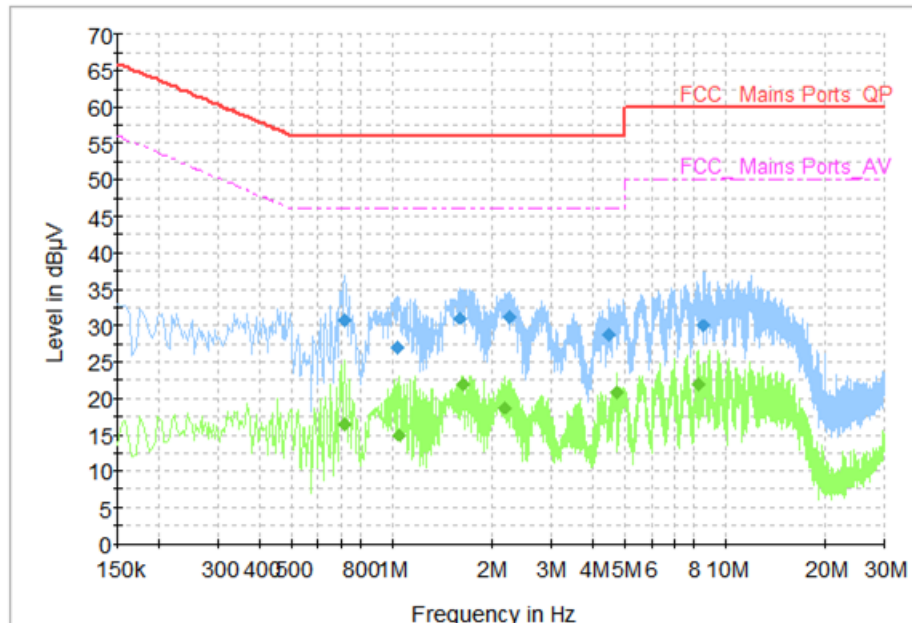
Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.706000	30.88	56.00	25.12	N	9.7	21.18
0.994000	30.93	56.00	25.07	N	9.7	21.23
1.630000	28.44	56.00	27.56	N	9.7	18.74
2.586000	28.99	56.00	27.01	N	9.7	19.29
4.834000	27.33	56.00	28.67	N	9.7	17.63
11.882000	28.85	60.00	31.15	N	9.9	18.95

**Final Measurement Detector 2**

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.706000	17.05	46.00	28.95	N	9.7	7.35
0.994000	16.11	46.00	29.89	N	9.7	6.41
1.762000	12.13	46.00	33.87	N	9.7	2.43
2.294000	15.69	46.00	30.31	N	9.7	5.99
7.446000	19.69	50.00	30.31	N	9.8	9.89
11.826000	21.77	50.00	28.23	N	9.9	11.87



**MP3 mode / Charging mode: Set 2**  
**Voltage: 240V**



**Figure B.12 Conducted Emission**

**Final Measurement Detector 1**

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.722000	30.59	56.00	25.41	N	9.7	20.89
1.038000	27.02	56.00	28.98	N	9.7	17.32
1.602000	30.95	56.00	25.05	N	9.7	21.25
2.262000	31.20	56.00	24.80	N	9.7	21.50
4.474000	28.74	56.00	27.26	N	9.7	19.04
8.578000	29.94	60.00	30.06	N	9.8	20.14

**Final Measurement Detector 2**

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.718000	16.48	46.00	29.52	N	9.7	6.78
1.042000	14.97	46.00	31.03	N	9.7	5.27
1.626000	21.89	46.00	24.11	N	9.7	12.19
2.170000	18.69	46.00	27.31	N	9.7	8.99
4.706000	20.80	46.00	25.20	N	9.7	11.10
8.294000	21.84	50.00	28.16	N	9.8	12.04

FM mode / Charging mode: Set 5  
Voltage: 240V

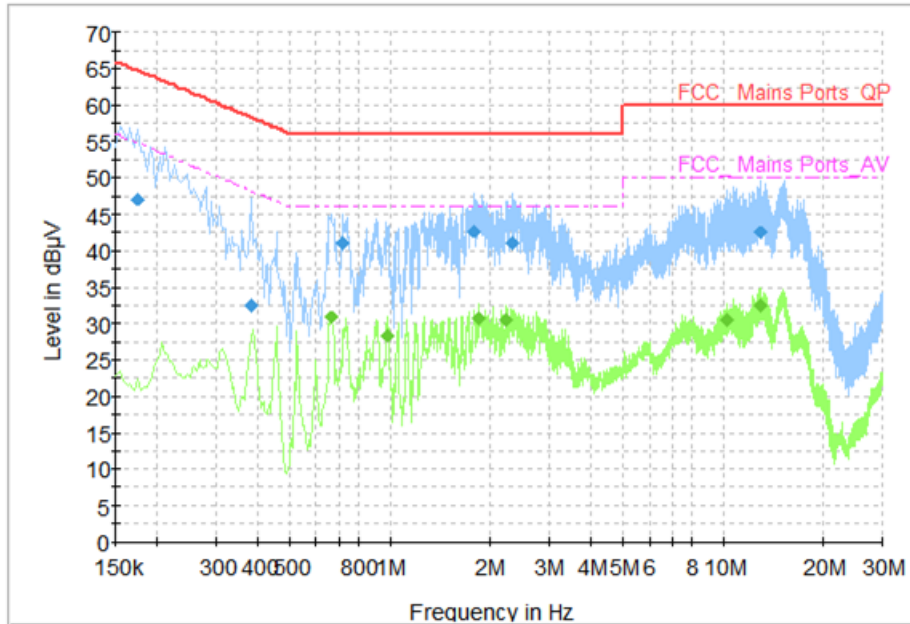


Figure B.13 Conducted Emission

**Final Measurement Detector 1**

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.174000	47.04	64.77	17.72	L1	9.7	37.34
0.382000	32.41	58.24	25.82	L1	9.7	22.71
0.722000	41.02	56.00	14.98	N	9.7	31.32
1.770000	42.70	56.00	13.30	N	9.7	33.00
2.318000	41.17	56.00	14.83	N	9.7	31.47
12.918000	42.43	60.00	17.57	N	9.9	32.53

**Final Measurement Detector 2**

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.662000	30.83	46.00	15.17	N	9.7	21.13
0.982000	28.40	46.00	17.60	N	9.7	18.70
1.846000	30.69	46.00	15.31	N	9.7	20.99
2.226000	30.56	46.00	15.44	N	9.7	20.86
10.298000	30.54	50.00	19.46	N	9.8	20.74
12.966000	32.43	50.00	17.57	N	9.9	22.53

FM mode / Charging mode: Set 6  
Voltage: 240V

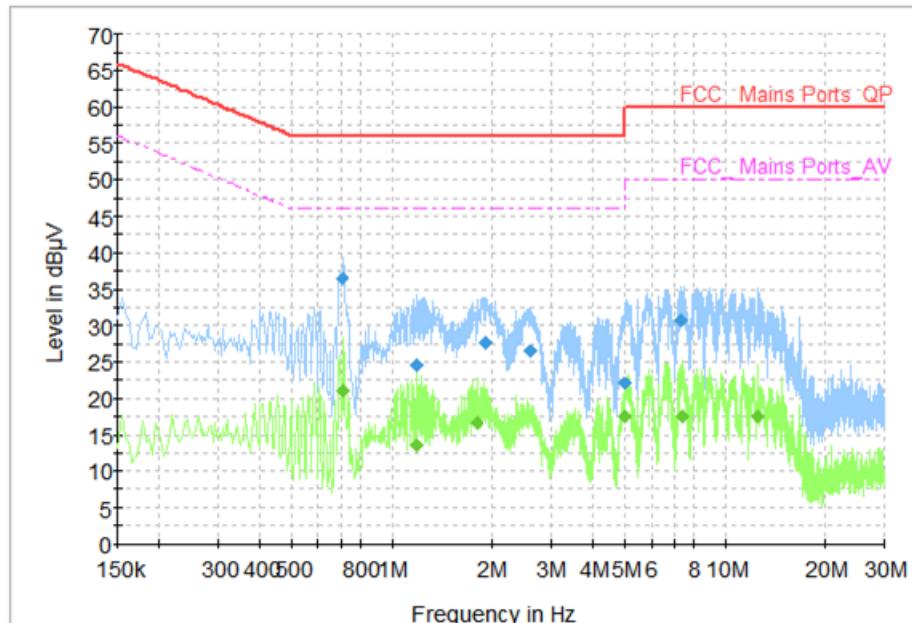


Figure B.14 Conducted Emission

**Final Measurement Detector 1**

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.710000	36.51	56.00	19.49	N	9.7	26.81
1.186000	24.56	56.00	31.44	N	9.7	14.86
1.906000	27.77	56.00	28.23	N	9.7	18.07
2.602000	26.46	56.00	29.54	N	9.7	16.76
4.994000	22.07	56.00	33.93	N	9.7	12.37
7.330000	30.61	60.00	29.39	N	9.8	20.81

**Final Measurement Detector 2**

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.714000	20.91	46.00	25.09	N	9.7	11.21
1.186000	13.57	46.00	32.43	N	9.7	3.87
1.790000	16.57	46.00	29.43	N	9.7	6.87
4.994000	17.48	46.00	28.52	N	9.7	7.78
7.370000	17.41	50.00	32.59	N	9.8	7.61
12.478000	17.41	50.00	32.59	N	9.9	7.51

USB mode: Set 3  
Voltage: 240V

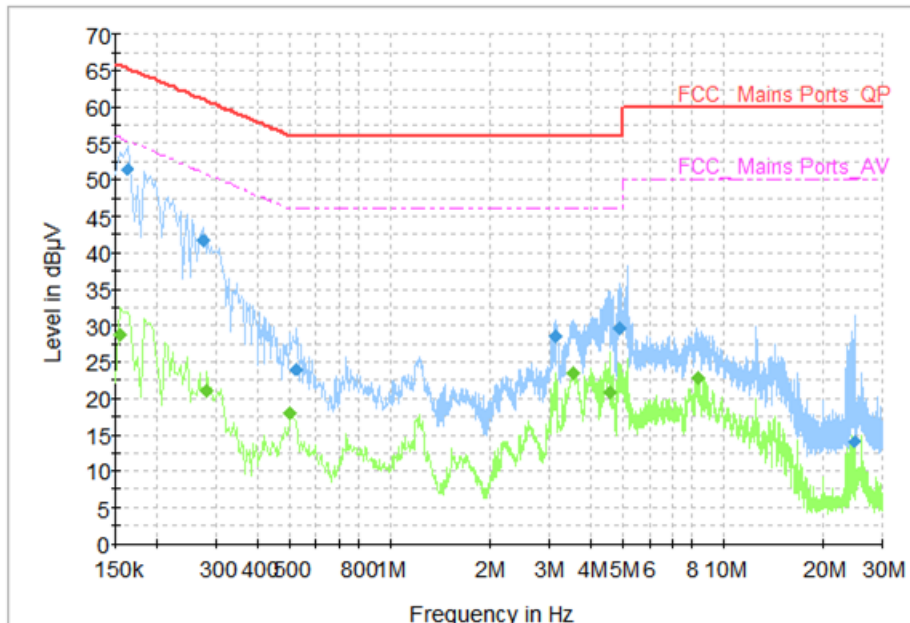


Figure B.15 Conducted Emission

**Final Measurement Detector 1**

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.162000	51.57	65.36	13.79	L1	9.7	41.87
0.274000	41.59	61.00	19.41	L1	9.7	31.89
0.522000	23.98	56.00	32.02	L1	9.7	14.28
3.138000	28.50	56.00	27.50	N	9.7	18.80
4.894000	29.63	56.00	26.37	N	9.7	19.93
24.698000	14.04	60.00	45.96	N	10.2	3.84

**Final Measurement Detector 2**

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.154000	28.74	55.78	27.04	L1	9.7	19.04
0.282000	21.06	50.76	29.70	N	9.6	11.46
0.502000	17.99	46.00	28.01	N	9.7	8.29
3.538000	23.53	46.00	22.47	N	9.7	13.83
4.594000	20.81	46.00	25.19	N	9.7	11.11
8.342000	22.67	50.00	27.33	N	9.8	12.87

USB mode: Set 4  
Voltage: 240V

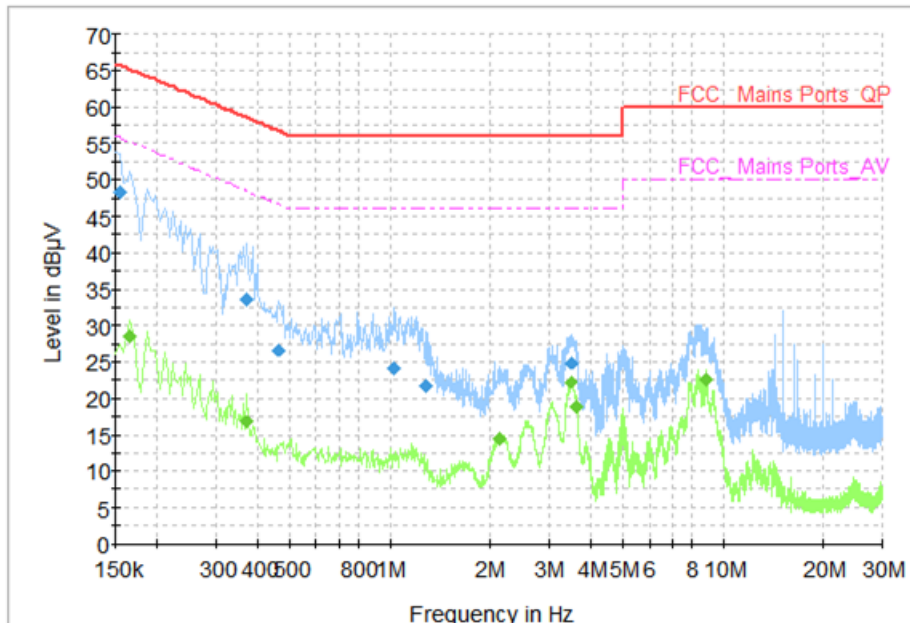


Figure B.16 Conducted Emission

**Final Measurement Detector 1**

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.154000	48.39	65.78	17.39	L1	9.7	38.69
0.370000	33.50	58.50	25.00	L1	9.7	23.8
0.462000	26.55	56.66	30.10	L1	9.7	16.85
1.030000	24.08	56.00	31.92	N	9.7	14.38
1.282000	21.64	56.00	34.36	N	9.7	11.94
3.506000	24.88	56.00	31.12	L1	9.7	15.18

**Final Measurement Detector 2**

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P <sub>Mea</sub> (dBµV)
0.166000	28.62	55.16	26.54	L1	9.7	18.92
0.370000	16.69	48.50	31.81	N	9.6	7.09
2.118000	14.42	46.00	31.58	L1	9.7	4.72
3.482000	22.30	46.00	23.70	L1	9.7	12.6
3.610000	18.87	46.00	27.13	L1	9.7	9.17
8.846000	22.55	50.00	27.45	L1	9.8	12.75

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