



# TEST REPORT

No.B17N00484-EMC

for

**Huawei Technologies Co.,Ltd.**

**LTE/WCDMA/GSM digital mobile phone**

**Model Name: H1711, H1711z**

**FCC ID: QISH1711**

with

**Hardware Version: HL3TRTM**

**Software Version: H1711C07B032**

**Issued Date: 2017-07-12**

**Test Laboratory:**

*FCC 2.948 Listed: No.342690*

**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.

**Test Laboratory:**

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## **REPORT HISTORY**

<b>Report Number</b>	<b>Revision</b>	<b>Description</b>	<b>Issue Date</b>
B17N00484-EMC	Rev.0	1st edition	2017-07-12



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## 1. Test Laboratory

### 1.1. Testing Location

Address: TCL International E city No. 1001 Zhongshanyuan Road, Nanshan District, Shenzhen, Guangdong, China  
Postal Code: 518048  
Telephone: +86(755)33322000  
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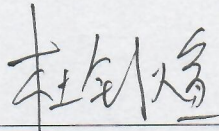
### 1.2. Testing Environment

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

### 1.3. Project data

Testing Start Date: 2017-04-24  
Testing End Date: 2017-05-22

### 1.4. Signature



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Du Zhaoxuan

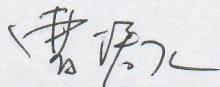
(Prepared this test report)



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Zhang Yunzhan

(Reviewed this test report)



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Cao Junfei

Director of the laboratory  
(Approved this test report)



## **2. Client Information**

### **2.1. Applicant Information**

Company Name: Huawei Technologies Co., Ltd  
Address: Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen 518129, P.R. China

### **2.2. Manufacturer Information**

Company Name: Huawei Technologies Co., Ltd  
Address: Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen 518129, P.R. China

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

#### **3.1. About EUT**

Description	LTE/WCDMA/GSM digital mobile phone
Model Name	H1711, H1711z
FCC ID	QISH1711

The Equipment Under Test (EUT) are a model of LTE/WCDMA/GSM digital mobile phone 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**

<b>EUT ID*</b>	<b>SN or IMEI</b>
EUT1	864885030020811
EUT2	864886030002387

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

#### **3.3. Internal Identification of AE**

<b>AE ID*</b>	<b>Description</b>	<b>SN</b>
AE1	Battery	/
AE2	Travel charger	/
AE3	USB cable	/
AE1-1		
Model	HB406689ECW	
Manufacturer	HUIZHOU DESAY BATTERY CO LTD	
Minimal Capacity	3900mAh	
Typical Capacity	4000mAh	
Nominal Voltage	3.82V	
AE1-2		
Model	HB406689ECW	
Manufacturer	SCUD (FUJIAN) Electronics Co., Ltd.	
Minimal Capacity	3900mAh	
Typical Capacity	4000mAh	
Nominal Voltage	3.82V	
AE2-1		
Model	HW-050200U01	
Manufacturer	HUIZHOU BYD ELECTRONIC CO.,LTD	
SN	B78690H1P83340	
AE2-2		
Model	HW-050200U01	



Manufacturer	DONG GUAN PHITEK ELECTORNICS COL.,LTD.
SN	P78616H1L03017
AE2-3	
Model	HW-050200U01
Manufacturer	SHENZHEN HUNTKEY ELECTRIC CO.,LTD.
SN	H786K1H3307679
AE3-1	
Model	CUBB01M-HC304-DH
Manufacturer	FOXCONN INTERCONNECT TECHNOLOGY LIMITED.
AE3-2	
Model	L99U2017-CS-H
Manufacturer	Luxshare Precision industry Co., Ltd
AE3-3	
Model	CD-U0405-1143
Manufacturer	CONNREX (SHEN ZHEN) INDUSTRIAL, LTD
AE3-4	
Model	H09-000577
Manufacturer	SHEN ZHEN PANG NGAI INDUSTRIAL CO., LTD

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

### 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+AE2-1+ AE3-1	Charging mode
Set.2	EUT1+ AE1-1+AE2-2+ AE3-2	Charging mode
Set.3	EUT1+ AE1-1+AE2-3+ AE3-3	Charging mode
Set.4	EUT1+ AE1-1+AE2-1+ AE3-4	Charging mode
Set.5	EUT2+ AE1-2+AE2-1+ AE3-1	Charging mode
Set.6	EUT2+ AE1-2+AE2-2+ AE3-2	Charging mode
Set.7	EUT2+ AE1-2+AE2-3+ AE3-3	Charging mode
Set.8	EUT1+ AE1-1+ AE3-1	USB mode
Set.9	EUT1+ AE1-1+ AE3-2	USB mode
Set.10	EUT2+ AE1-2+ AE3-3	USB mode
Set.11	EUT2+ AE1-2+ AE3-4	USB mode



## 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	10-1-2016 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. = 30 °C
Relative humidity	Min. = 35 %, Max. = 60 %
Shielding effectiveness	0.014MHz-1MHz,>60dB; 1MHz-18000MHz,>90dB
Electrical insulation	> 2MΩ
Ground system resistance	< 4 Ω
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. =35 %, Max. = 60 %
Shielding effectiveness	0.014MHz-1MHz,>60dB; 1MHz-10000MHz,>90dB
Electrical insulation	> 2MΩ
Ground system resistance	< 4 Ω

**Fully-anechoic chamber** did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 35 %, Max. = 60 %
Shielding effectiveness	0.014MHz-1MHz,>60dB; 1MHz-18000MHz,>90dB
Electrical insulation	> 2MΩ
Ground system resistance	< 4 Ω
Voltage Standing Wave Ratio (VSWR)	≤ 6 dB, from 1 to 18 GHz, 3 m distance
Uniformity of field strength	Between 0 and 6 dB, from 80 to 3000 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	ESCI	100701	R&S	2017.08.09	1 year
2.	Test Receiver	ESR7	101675	R&S	2017.07.21	1 year
3.	Spectrum Analyzer	FSP 40	100378	R&S	2017.12.15	1 year
4.	BiLog Antenna	VULB9163	9163 329	Schwarzbeck	2017.02.27	3 years
5.	LISN	ESH2-Z5	100196	R&S	2018.01.05	1 year
6.	Horn Antenna	3117	00066585	ETS-Lindgren	2019.03.05	3 years
7.	Universal Radio Communication Tester	CMU200	114544	R&S	2017.09.09	1 year
8.	PC	2OET-A00DC D	PF-OIYDAK	Lenovo	/	/
9.	Printer	P1008	VNF6C12491	HP	/	/
10.	Mouse	MO28UOL	44B39412	Lenovo	/	/
11.	Chamber	FACT5-2.0	4166	ETS-Lindgren	2018.05.13	3 years

Project	Name	Version
Radiated Emission	EMC32	Version 10.01.00
Conducted Emission	EMC32	Version 8.53.0

## **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:**

**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 2OET-A00DCD, and the serial number of the PC is PF-OIYDAK. 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)

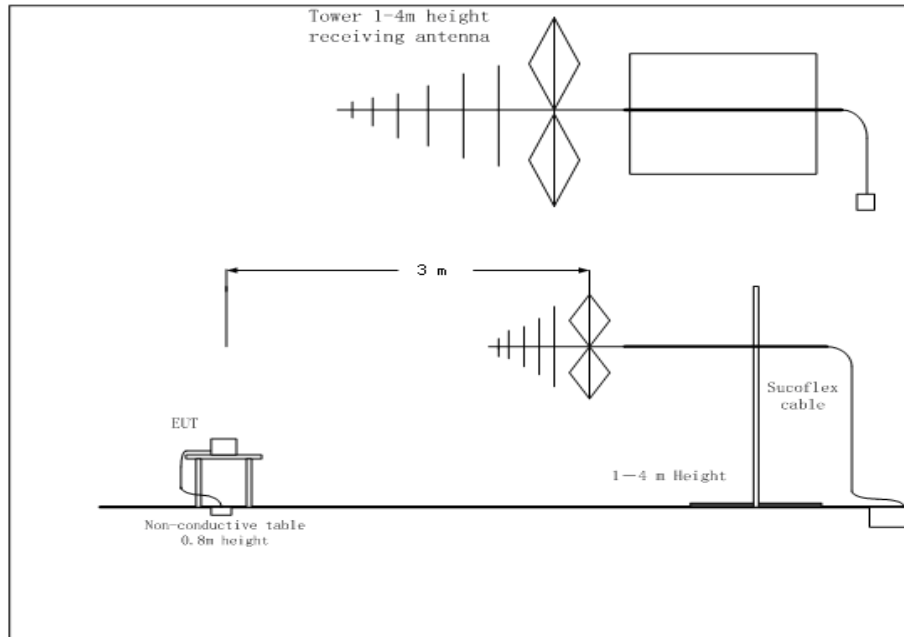
Frequency range (MHz)	Field strength limit ( $\mu\text{V}/\text{m}$ )		
	Quasi-peak	Average	Peak
30-88	100		
88-216	150		
216-960	200		
960-1000	500		
>1000		500	5000

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

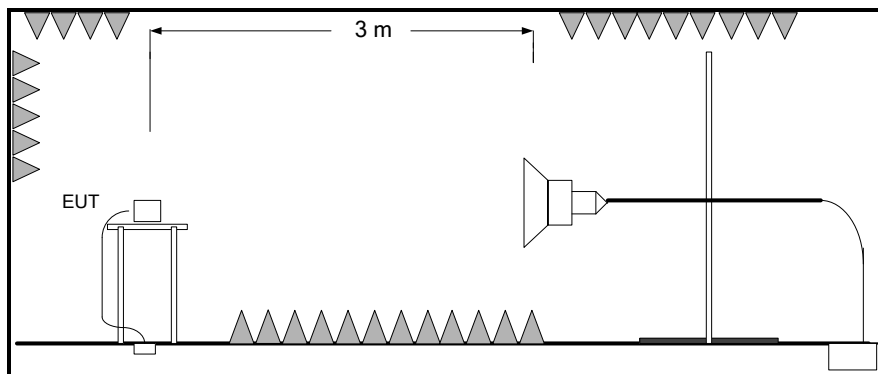
#### **A.1.4 Test Condition**

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:

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

Where

$G_A$ : Antenna factor of receive antenna

$G_{\text{PL}}$ : Path Loss

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

Note: the result contains vertical part and Horizontal part

**RE Measurement uncertainty:** 30M-1GHz: 5.12dB (k=2);  
1GHz-18GHz: 4.48 dB (k=2)

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

Frequency(MHz)	Result(dBuV/m)	Limit (dB $\mu$ V/m)	Margin(dB)	Polarity	ARpl (dB)
14339.500000	55.65	74.00	18.35	V	11.4
14584.500000	57.25	74.00	16.75	H	11.9
15747.000000	58.07	74.00	15.93	H	12.8
16315.500000	58.97	74.00	15.03	H	13.3
16840.000000	59.12	74.00	14.88	V	13.9
17463.500000	58.58	74.00	15.42	H	14.0

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

Frequency(MHz)	Result(dBuV/m)	Limit (dB $\mu$ V/m)	Margin(dB)	Polarity	ARpl (dB)
14390.000000	44.41	54.00	9.59	V	11.5
14930.500000	44.92	54.00	9.08	V	12.0
15778.500000	46.88	54.00	7.12	H	12.8
16220.500000	47.30	54.00	6.70	H	13.1
16815.500000	48.26	54.00	5.74	H	13.9
17384.500000	47.36	54.00	6.64	H	14.0

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

Frequency(MHz)	Result(dBuV/m)	Limit (dB $\mu$ V/m)	Margin(dB)	Polarity	ARpl (dB)
13965.000000	56.58	74.00	17.42	V	10.8
14707.000000	57.01	74.00	16.99	V	11.9
15732.000000	58.78	74.00	15.22	V	12.7
16264.000000	58.98	74.00	15.02	H	13.2
16744.500000	59.86	74.00	14.14	V	13.9
17325.500000	59.84	74.00	14.16	H	14.0

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

Frequency(MHz)	Result(dBuV/m)	Limit (dB $\mu$ V/m)	Margin(dB)	Polarity	ARpl (dB)
14189.500000	44.56	54.00	9.44	H	11.3
15174.500000	45.57	54.00	8.43	H	12.1
15691.500000	47.36	54.00	6.64	H	12.7
16222.000000	47.73	54.00	6.27	V	13.1
16763.000000	48.44	54.00	5.56	V	13.9
17365.500000	47.90	54.00	6.10	V	14.0

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

Frequency(MHz)	Result(dBuV/m)	Limit (dB $\mu$ V/m)	Margin(dB)	Polarity	ARpl (dB)
14519.500000	56.32	74.00	17.68	H	11.8
15163.000000	57.61	74.00	16.39	H	12.1
15754.500000	59.53	74.00	14.47	V	12.8
16239.000000	59.56	74.00	14.44	H	13.2
16752.000000	59.77	74.00	14.23	V	13.9
17349.500000	59.20	74.00	14.80	H	14.0

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

Frequency(MHz)	Result(dBuV/m)	Limit (dB $\mu$ V/m)	Margin(dB)	Polarity	ARpl (dB)
14553.000000	44.95	54.00	9.05	H	11.9
15180.000000	45.84	54.00	8.16	H	12.2
15679.500000	47.33	54.00	6.67	H	12.6
16198.000000	47.76	54.00	6.24	V	13.1
16731.500000	48.35	54.00	5.65	H	13.8
17299.000000	47.89	54.00	6.11	H	13.9

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

Frequency(MHz)	Result(dBuV/m)	Limit (dB $\mu$ V/m)	Margin(dB)	Polarity	ARpl (dB)
14162.000000	56.43	74.00	17.57	V	11.2
15152.500000	57.29	74.00	16.71	H	12.1
15627.000000	58.70	74.00	15.30	H	12.5
16253.000000	58.88	74.00	15.12	V	13.2
16799.000000	59.60	74.00	14.40	V	13.9
17364.500000	59.45	74.00	14.55	V	14.0

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

Frequency(MHz)	Result(dBuV/m)	Limit (dB $\mu$ V/m)	Margin(dB)	Polarity	ARpl (dB)
14542.500000	44.67	54.00	9.33	V	11.9
15142.000000	45.84	54.00	8.16	V	12.1
15737.000000	47.15	54.00	6.85	H	12.8
16201.500000	47.69	54.00	6.31	H	13.1
16783.500000	48.26	54.00	5.74	H	13.9
17291.000000	47.86	54.00	6.14	V	13.9

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

Frequency(MHz)	Result(dBuV/m)	Limit (dB $\mu$ V/m)	Margin(dB)	Polarity	ARpl (dB)
14517.500000	56.22	74.00	17.78	V	11.8
14639.000000	57.08	74.00	16.92	H	11.9
15733.500000	58.95	74.00	15.05	H	12.7
16242.500000	58.74	74.00	15.26	H	13.2
16796.500000	60.06	74.00	13.94	H	13.9
17280.000000	60.06	74.00	13.94	V	13.9

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

Frequency(MHz)	Result(dBuV/m)	Limit (dB $\mu$ V/m)	Margin(dB)	Polarity	ARpl (dB)
14522.000000	44.61	54.00	9.39	H	11.8
15179.500000	45.69	54.00	8.31	V	12.2
15685.500000	47.35	54.00	6.65	V	12.6
16204.500000	47.70	54.00	6.30	H	13.1
16786.000000	48.17	54.00	5.83	H	13.9
17273.500000	47.86	54.00	6.14	H	13.9



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

Frequency(MHz)	Result(dBuV/m)	Limit (dB $\mu$ V/m)	Margin(dB)	Polarity	ARpl (dB)
14438.000000	56.23	74.00	17.77	H	11.6
14682.000000	56.94	74.00	17.06	V	12.0
15833.000000	59.19	74.00	14.81	H	12.8
16214.000000	58.97	74.00	15.03	H	13.1
16735.500000	59.46	74.00	14.54	V	13.8
17280.500000	59.58	74.00	14.42	V	13.9

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

Frequency(MHz)	Result(dBuV/m)	Limit (dB $\mu$ V/m)	Margin(dB)	Polarity	ARpl (dB)
14543.000000	44.67	54.00	9.33	H	11.9
15137.000000	45.72	54.00	8.28	H	12.1
15704.000000	47.22	54.00	6.78	V	12.7
16223.000000	47.68	54.00	6.32	V	13.1
16773.000000	48.32	54.00	5.68	H	13.9
17286.000000	47.87	54.00	6.13	V	13.9

**Set.7 Charging mode / Peak detector**

Frequency(MHz)	Result(dBuV/m)	Limit (dB $\mu$ V/m)	Margin(dB)	Polarity	ARpl (dB)
14075.000000	56.51	74.00	17.49	V	11.0
14603.500000	56.79	74.00	17.21	V	11.9
15750.000000	59.16	74.00	14.84	V	12.8
16208.000000	59.71	74.00	14.29	V	13.1
16817.000000	59.80	74.00	14.20	V	13.9
17396.000000	60.57	74.00	13.43	V	14.0

**Set.7 Charging mode / Average detector**

Frequency(MHz)	Result(dBuV/m)	Limit (dB $\mu$ V/m)	Margin(dB)	Polarity	ARpl (dB)
14165.000000	44.69	54.00	9.31	H	11.2
15162.000000	45.78	54.00	8.22	H	12.1
15690.000000	47.45	54.00	6.55	H	12.7
16217.000000	47.71	54.00	6.29	H	13.1
16796.500000	48.48	54.00	5.52	V	13.9
17329.500000	47.83	54.00	6.17	V	14.0

**Set.8 USB mode / Peak detector**

Frequency(MHz)	Result(dBuV/m)	Limit (dB $\mu$ V/m)	Margin(dB)	Polarity	ARpl (dB)
14540.000000	56.23	74.00	17.77	V	11.9
15160.000000	57.45	74.00	16.55	V	12.1
15750.500000	58.64	74.00	15.36	V	12.8
16196.500000	58.77	74.00	15.23	V	13.1
16839.000000	59.90	74.00	14.10	V	13.9
17343.500000	60.72	74.00	13.28	V	14.0

**Set.8 USB mode / Average detector**

Frequency(MHz)	Result(dBuV/m)	Limit (dB $\mu$ V/m)	Margin(dB)	Polarity	ARpl (dB)
14158.500000	44.62	54.00	9.38	V	11.2
15148.000000	45.74	54.00	8.26	V	12.1
15677.000000	47.10	54.00	6.90	H	12.6
16207.500000	47.58	54.00	6.42	H	13.1
16752.500000	48.17	54.00	5.83	H	13.9
17319.000000	47.60	54.00	6.40	H	13.9

**Set.9 USB mode / Peak detector**

Frequency(MHz)	Result(dBuV/m)	Limit (dB $\mu$ V/m)	Margin(dB)	Polarity	ARpl (dB)
14293.500000	56.01	74.00	17.99	H	11.4
14558.000000	57.86	74.00	16.14	V	11.9
15671.500000	58.56	74.00	15.44	H	12.6
16257.500000	59.23	74.00	14.77	V	13.2
16710.000000	59.02	74.00	14.98	H	13.8
17318.000000	60.24	74.00	13.76	V	13.9

**Set.9 USB mode / Average detector**

Frequency(MHz)	Result(dBuV/m)	Limit (dB $\mu$ V/m)	Margin(dB)	Polarity	ARpl (dB)
14522.000000	44.58	54.00	9.42	H	11.8
15164.500000	45.67	54.00	8.33	H	12.1
15686.500000	47.07	54.00	6.93	V	12.6
16220.500000	47.54	54.00	6.46	V	13.1
16726.000000	48.14	54.00	5.86	H	13.8
17275.000000	47.76	54.00	6.24	H	13.9

**Set.10 USB mode / Peak detector**

Frequency(MHz)	Result(dBuV/m)	Limit (dB $\mu$ V/m)	Margin(dB)	Polarity	ARpl (dB)
14528.500000	56.13	74.00	17.87	V	11.8
15172.000000	57.24	74.00	16.76	V	12.1
15740.000000	58.96	74.00	15.04	H	12.8
16189.500000	59.00	74.00	15.00	V	13.1
16765.000000	59.80	74.00	14.20	V	13.9
17313.000000	59.14	74.00	14.86	V	13.9

**Set.10 USB mode / Average detector**

Frequency(MHz)	Result(dBuV/m)	Limit (dB $\mu$ V/m)	Margin(dB)	Polarity	ARpl (dB)
14543.000000	44.59	54.00	9.41	V	11.9
15163.000000	45.75	54.00	8.25	V	12.1
15704.000000	47.27	54.00	6.73	V	12.7
16202.500000	47.64	54.00	6.36	H	13.1
16744.000000	48.08	54.00	5.92	H	13.9
17288.000000	47.67	54.00	6.33	H	13.9

**Set.11 USB mode / Peak detector**

Frequency(MHz)	Result(dBuV/m)	Limit (dB $\mu$ V/m)	Margin(dB)	Polarity	ARpl (dB)
13988.000000	56.22	74.00	17.78	V	10.8
15181.000000	57.02	74.00	16.98	H	12.2
15678.000000	58.25	74.00	15.75	V	12.6
16191.000000	59.33	74.00	14.67	H	13.1
16841.000000	59.57	74.00	14.43	H	13.9
17498.000000	60.04	74.00	13.96	H	14.0

**Set.11 USB mode / Average detector**

Frequency(MHz)	Result(dBuV/m)	Limit (dB $\mu$ V/m)	Margin(dB)	Polarity	ARpl (dB)
14542.000000	44.68	54.00	9.32	V	11.9
15185.500000	45.81	54.00	8.19	H	12.2
15680.000000	47.22	54.00	6.78	H	12.6
16208.500000	47.56	54.00	6.44	V	13.1
16742.500000	48.11	54.00	5.89	H	13.9
17282.500000	47.83	54.00	6.17	H	13.9

Note: The measurement result of Set.1, Set.2, Set.3, Set.4, Set.5, Set.6,Set.7, Set.8, Set.9,Set.10 and Set.11 showed here are worst cases of combinations of different batteries and USB cables.

Charging mode: Set 1

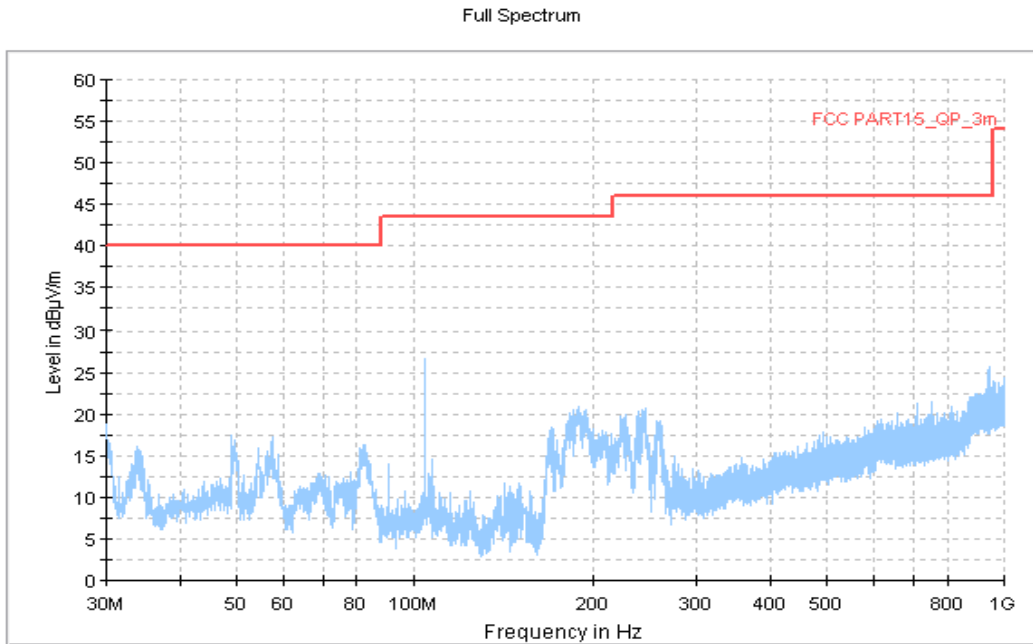


Figure A.1 Radiated Emission from 30MHz to 1GHz

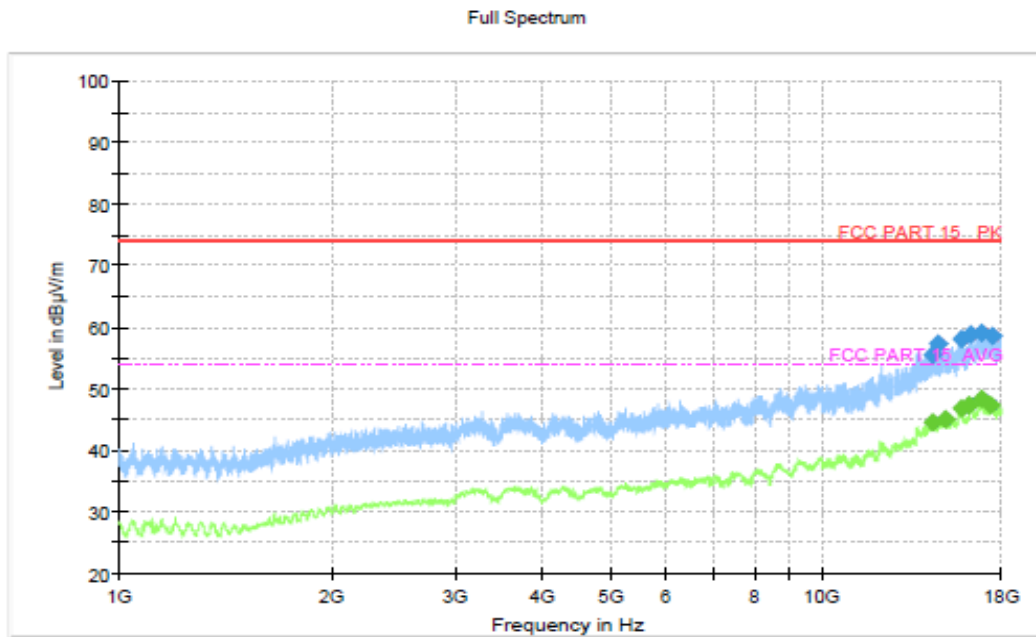


Figure A.2 Radiated Emission from 1GHz to 18GHz

Charging mode: Set 2

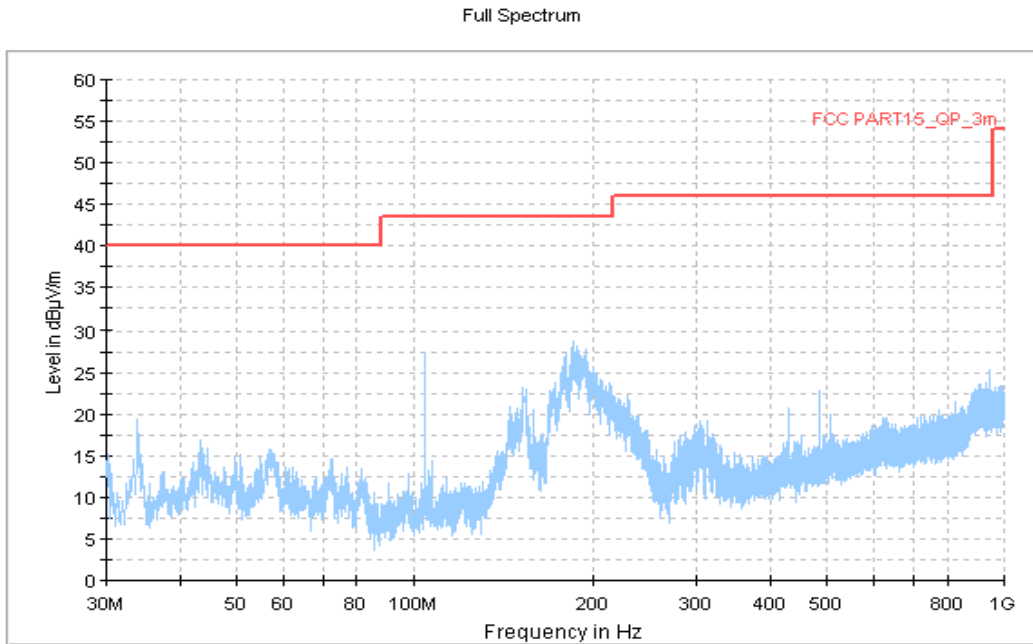


Figure A.3 Radiated Emission from 30MHz to 1GHz

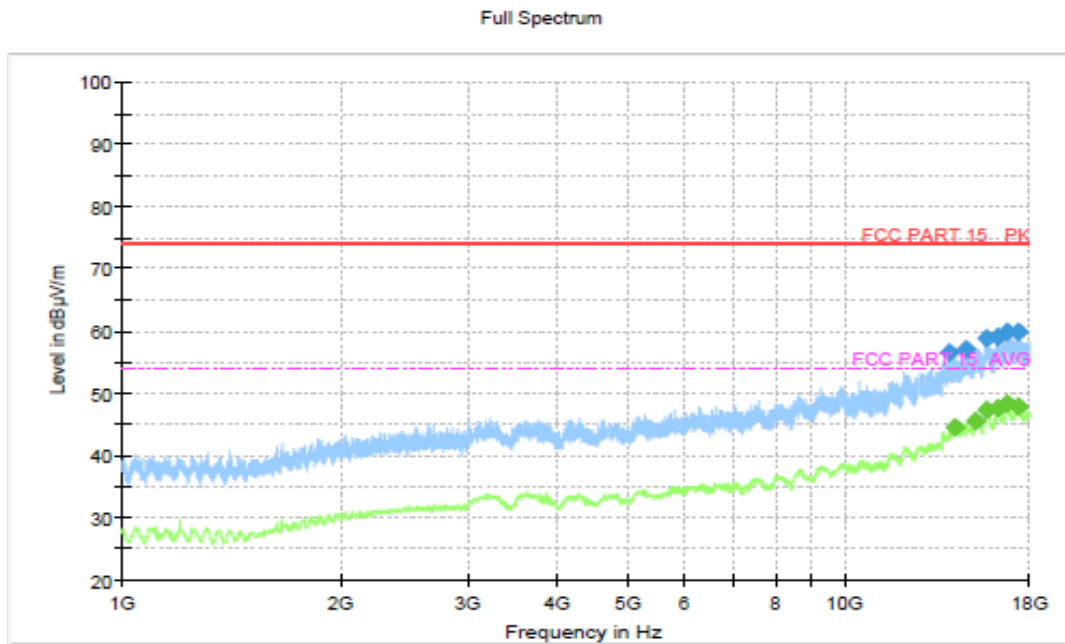


Figure A.4 Radiated Emission from 1GHz to 18GHz

Charging mode: Set 3

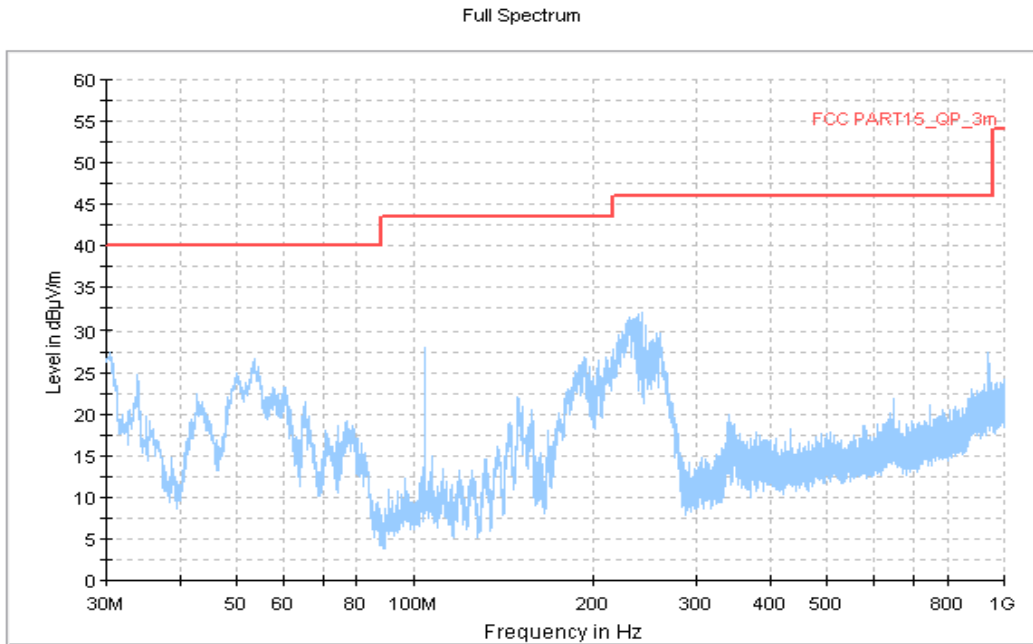


Figure A.5 Radiated Emission from 30MHz to 1GHz

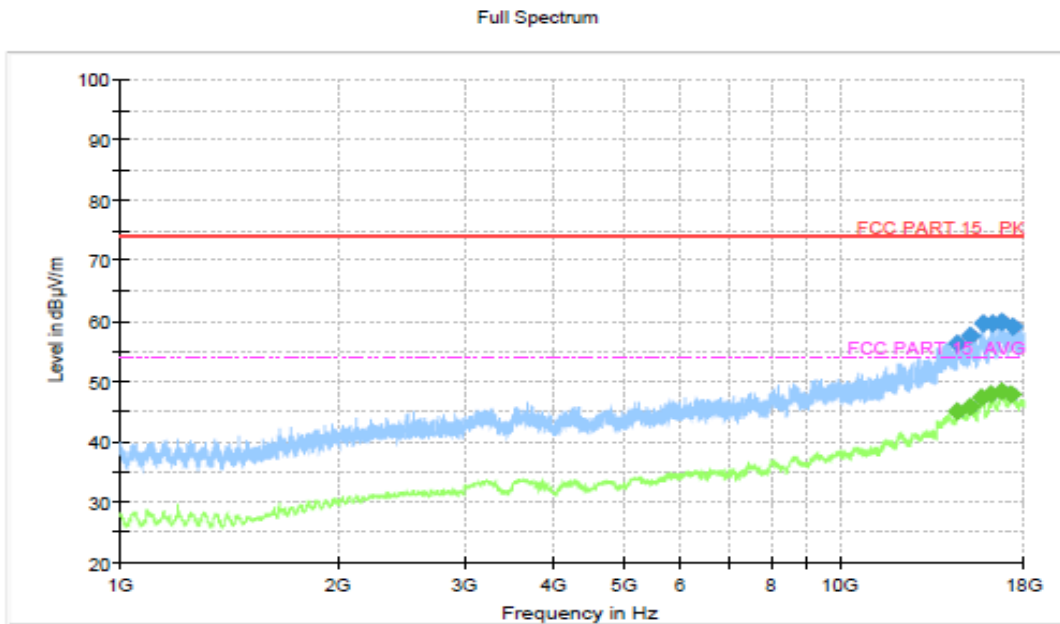


Figure A.6 Radiated Emission from 1GHz to 18GHz

Charging mode: Set.4

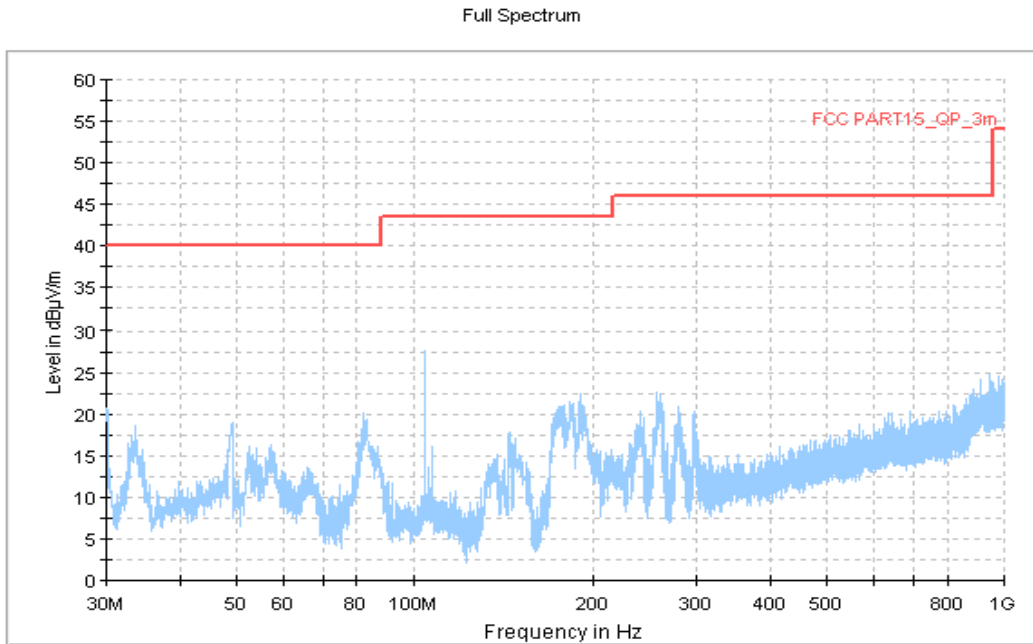


Figure A.7 Radiated Emission from 30MHz to 1GHz

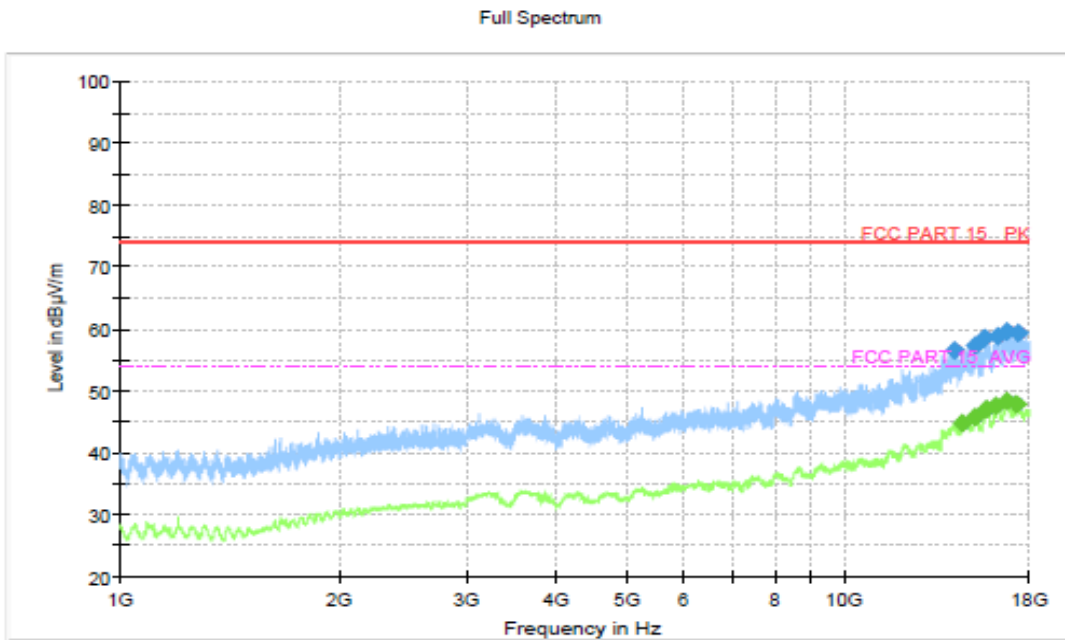


Figure A.8 Radiated Emission from 1GHz to 18GHz



Charging mode: Set 5

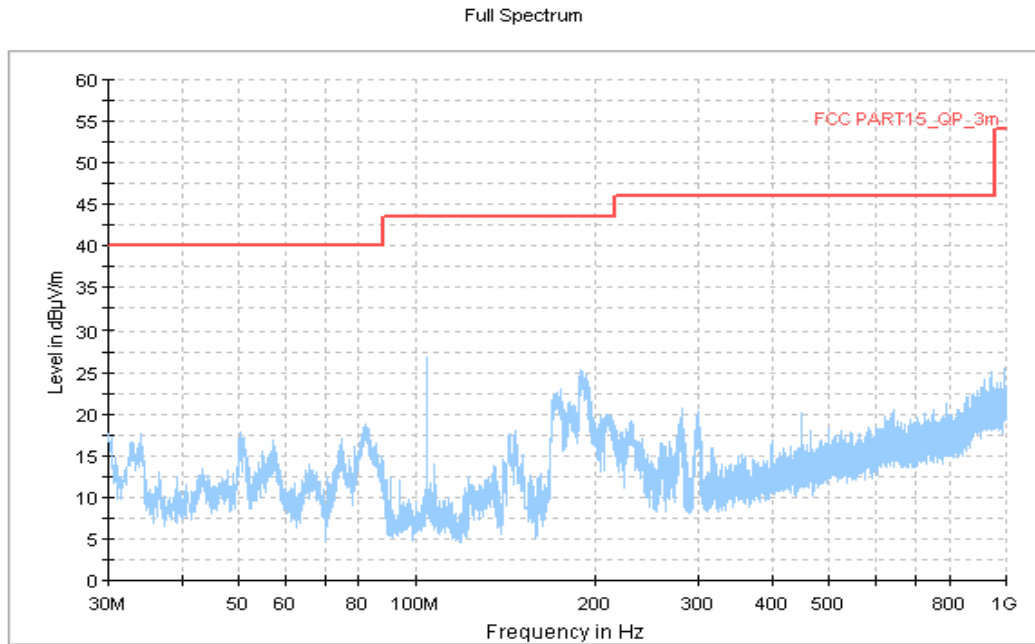


Figure A.9 Radiated Emission from 30MHz to 1GHz

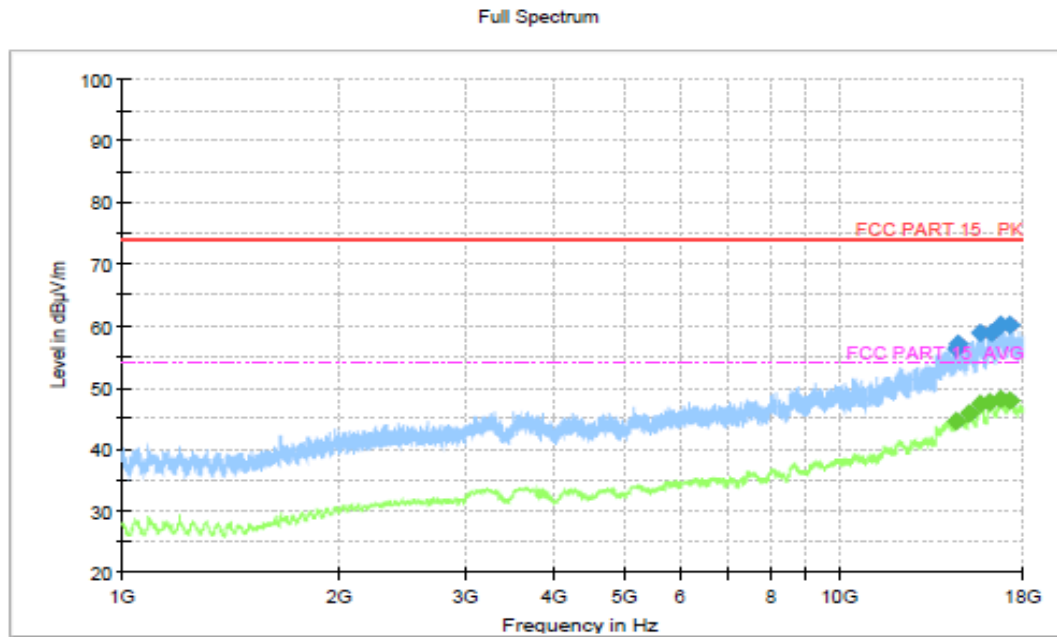


Figure A.10 Radiated Emission from 1GHz to 18GHz

Charging mode: Set 6

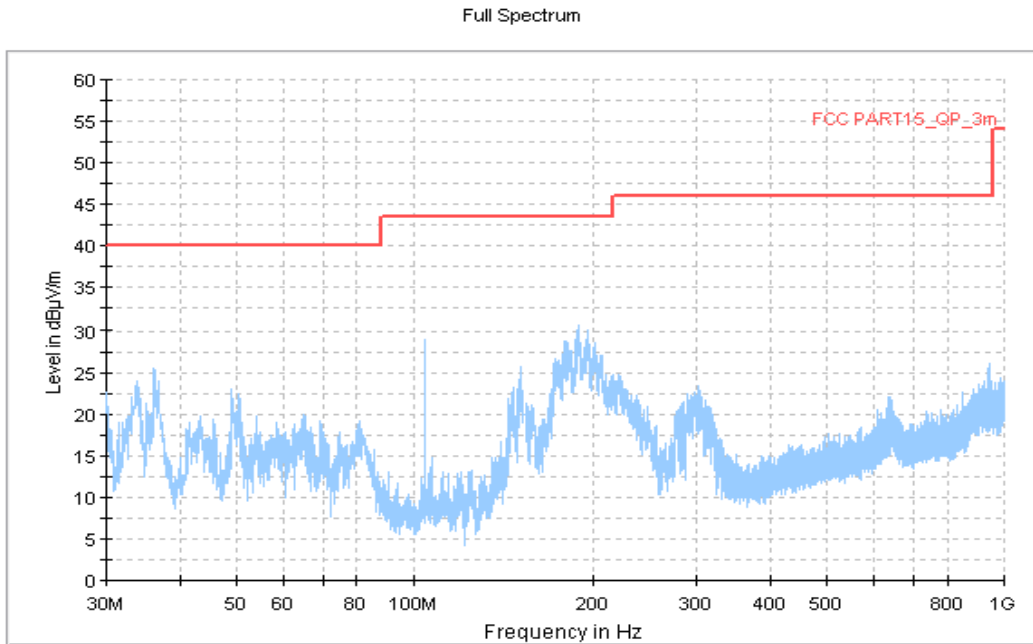


Figure A.11 Radiated Emission from 30MHz to 1GHz

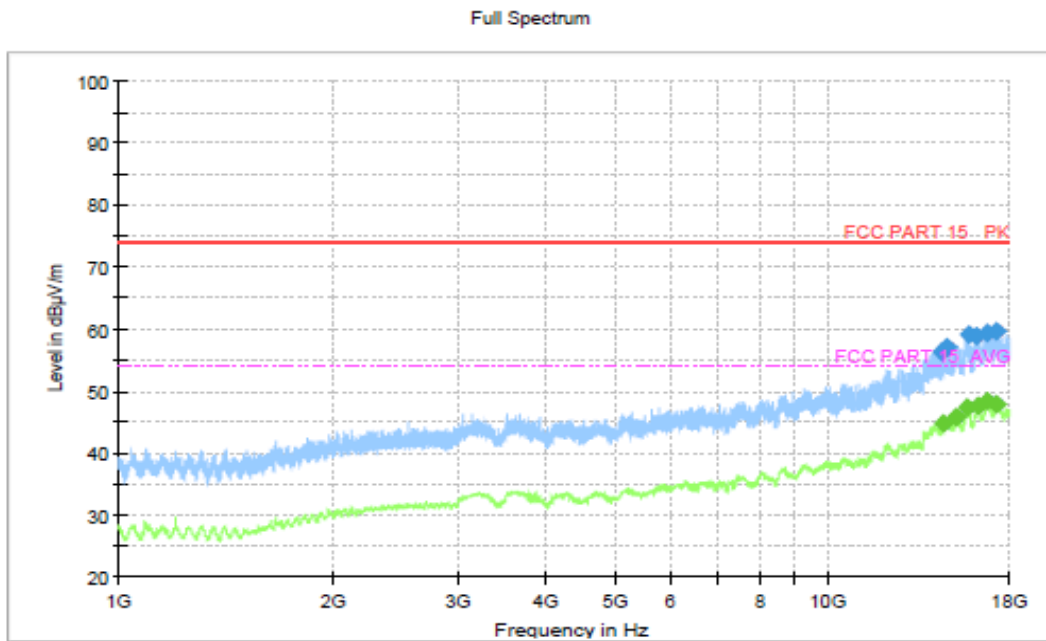


Figure A.12 Radiated Emission from 1GHz to 18GHz

Charging mode: Set 7

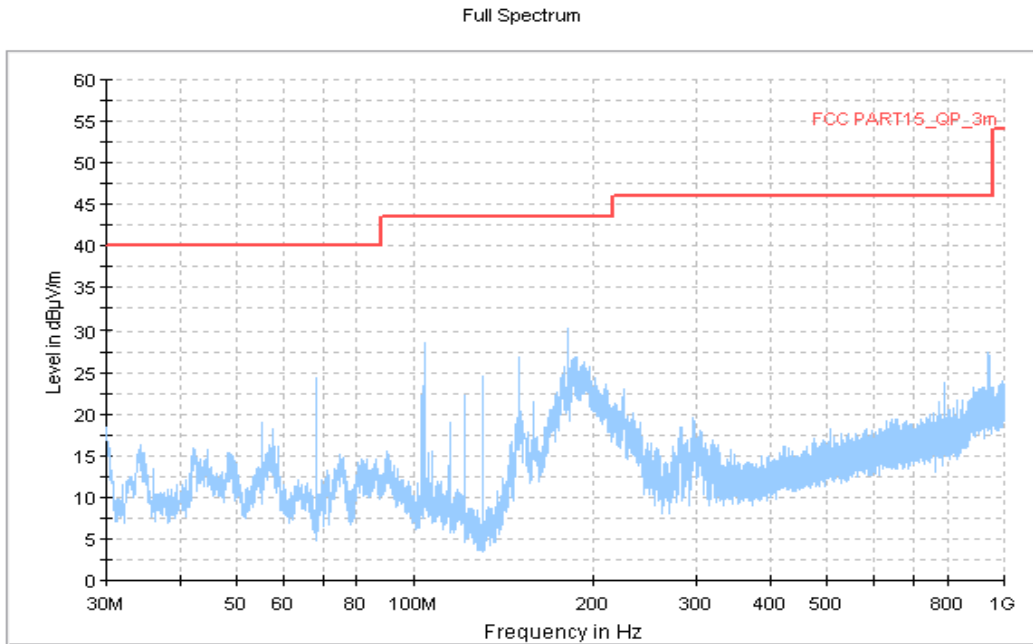


Figure A.13 Radiated Emission from 30MHz to 1GHz

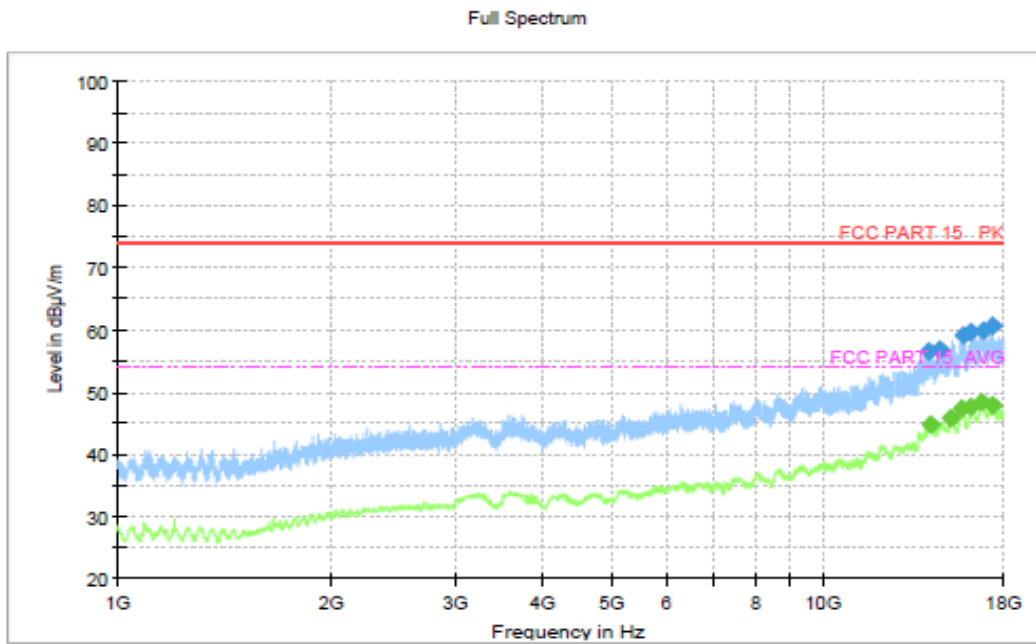


Figure A.14 Radiated Emission from 1GHz to 18GHz

USB mode: Set 8

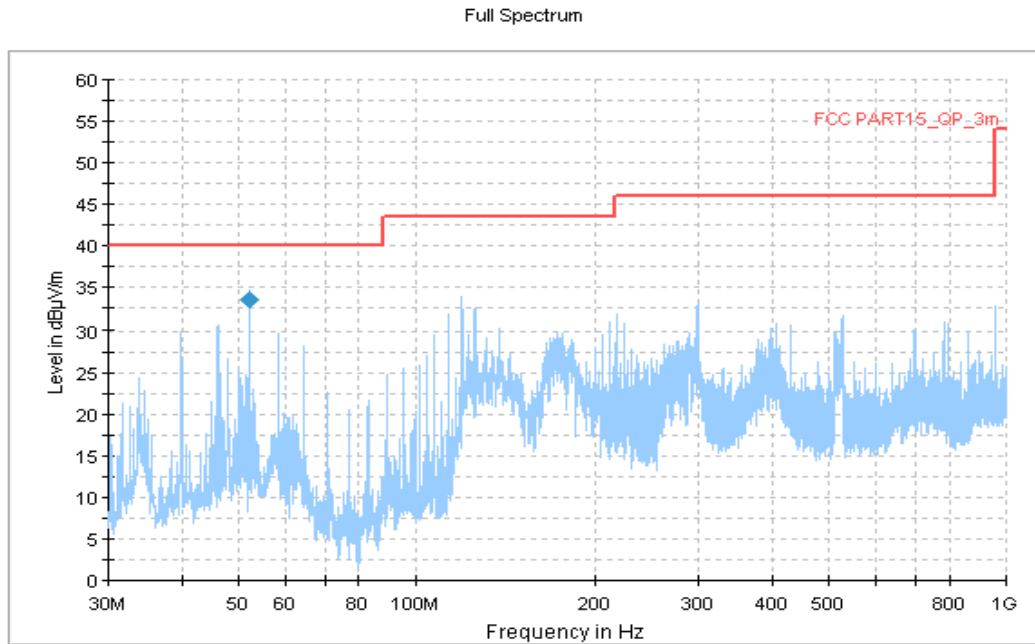


Figure A.15 Radiated Emission from 30MHz to 1GHz

Final\_Result

Frequency(MHz)	QuasiPeak(dBμV/m)	Limit(dBμV/m)	Margin(dB)	Pol	Corr.(dB)
52.197000	33.49	40.00	6.51	V	-33.2

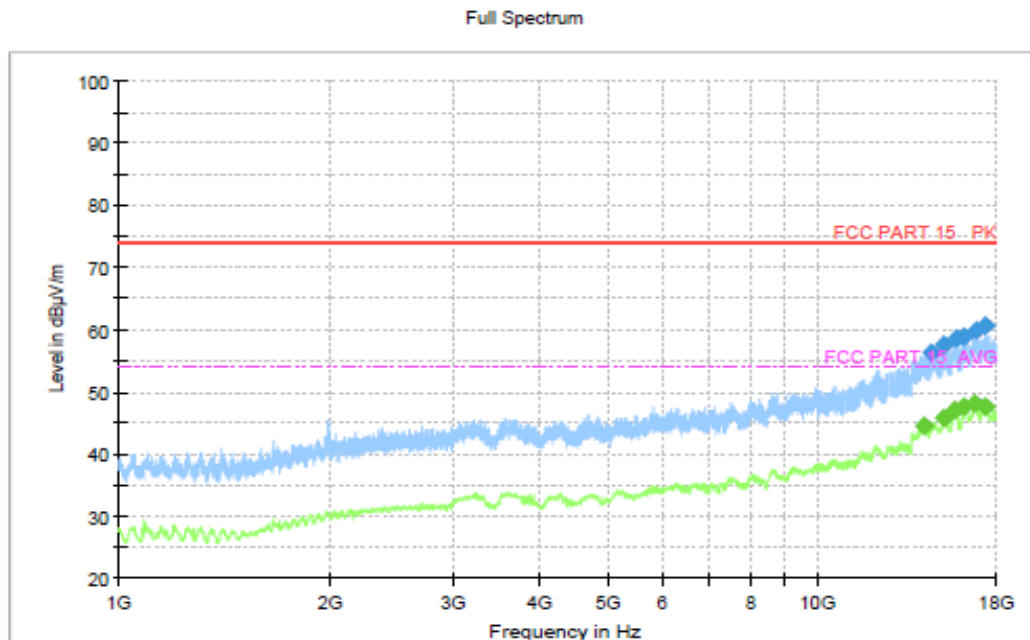


Figure A.16 Radiated Emission from 1GHz to 18GHz

USB mode: Set 9

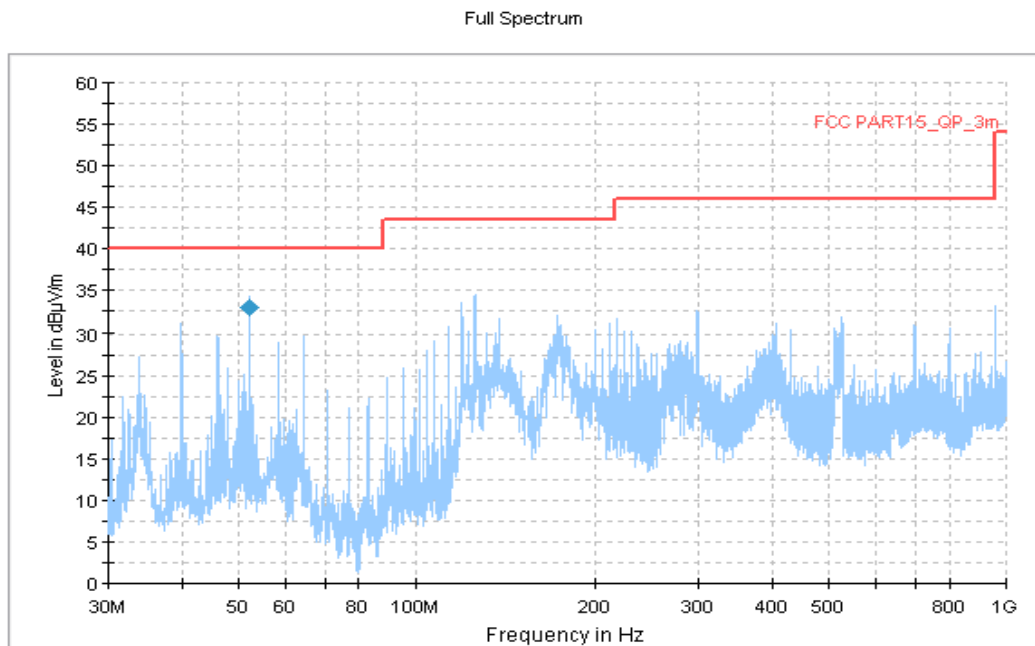


Figure A.17 Radiated Emission from 30MHz to 1GHz

Final\_Result

Frequency(MHz)	QuasiPeak(dBµV/m)	Limit(dBµV/m)	Margin(dB)	Pol	Corr.(dB)
52.197000	33.06	40.00	6.94	V	-33.2

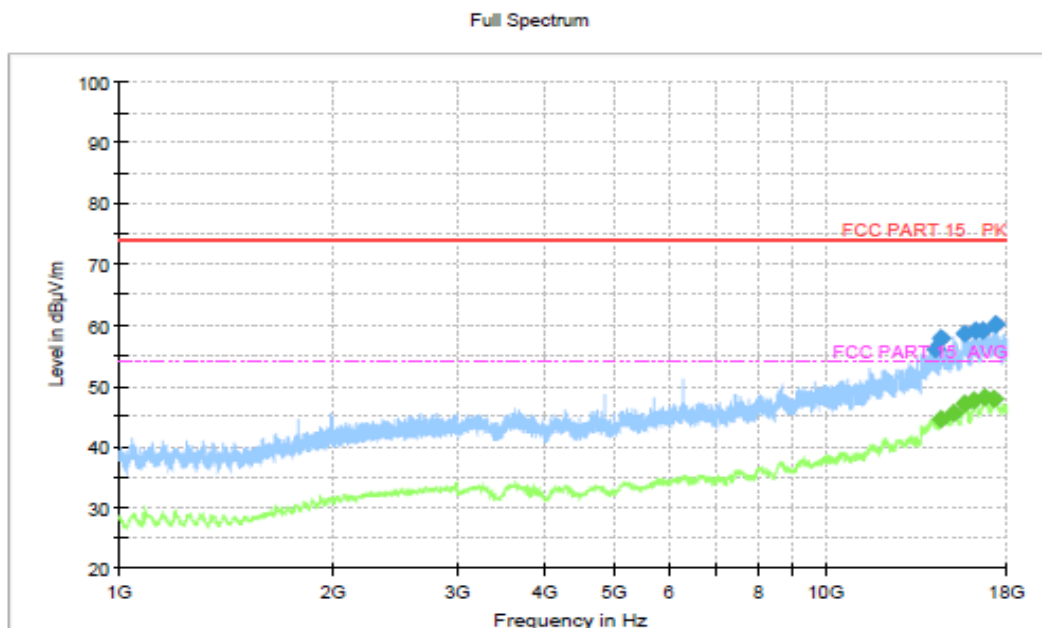


Figure A.18 Radiated Emission from 1GHz to 18GHz

USB mode: Set 10

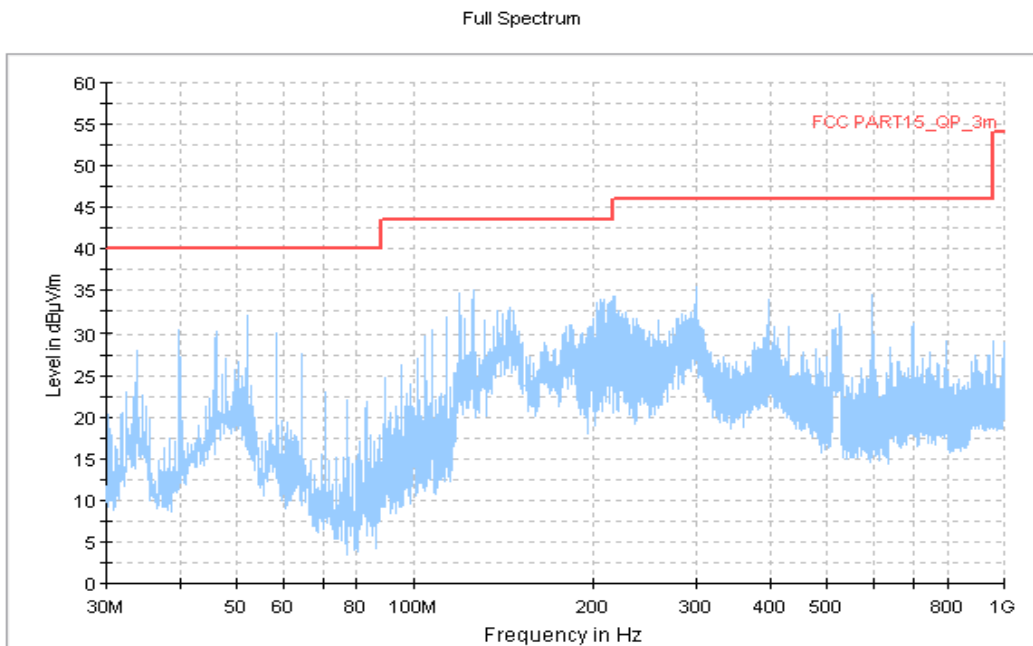


Figure A.19 Radiated Emission from 30MHz to 1GHz

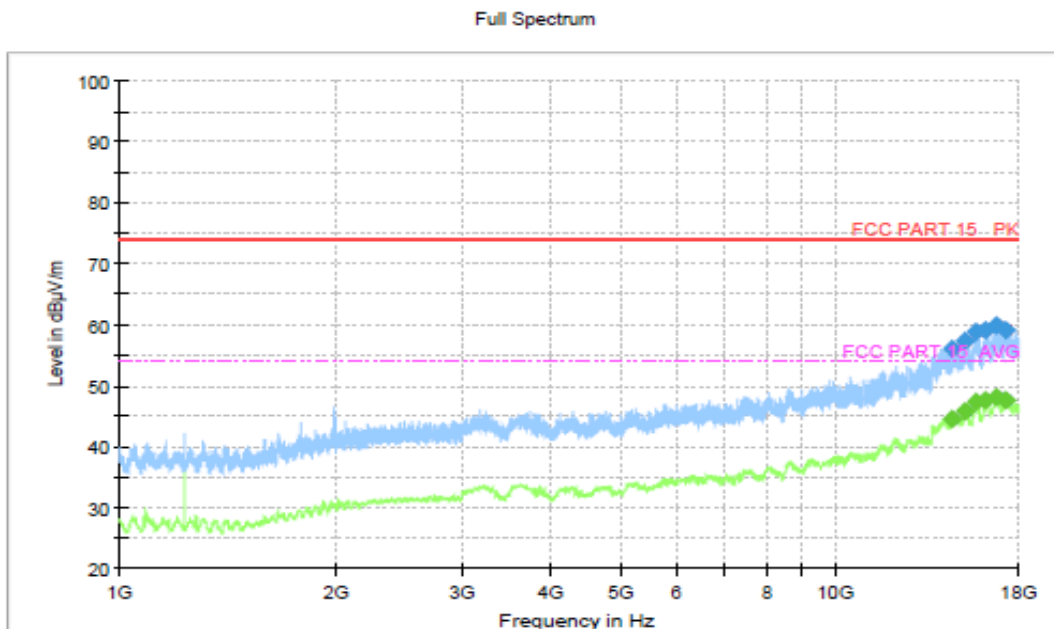


Figure A.20 Radiated Emission from 1GHz to 18GHz

USB mode: Set 11

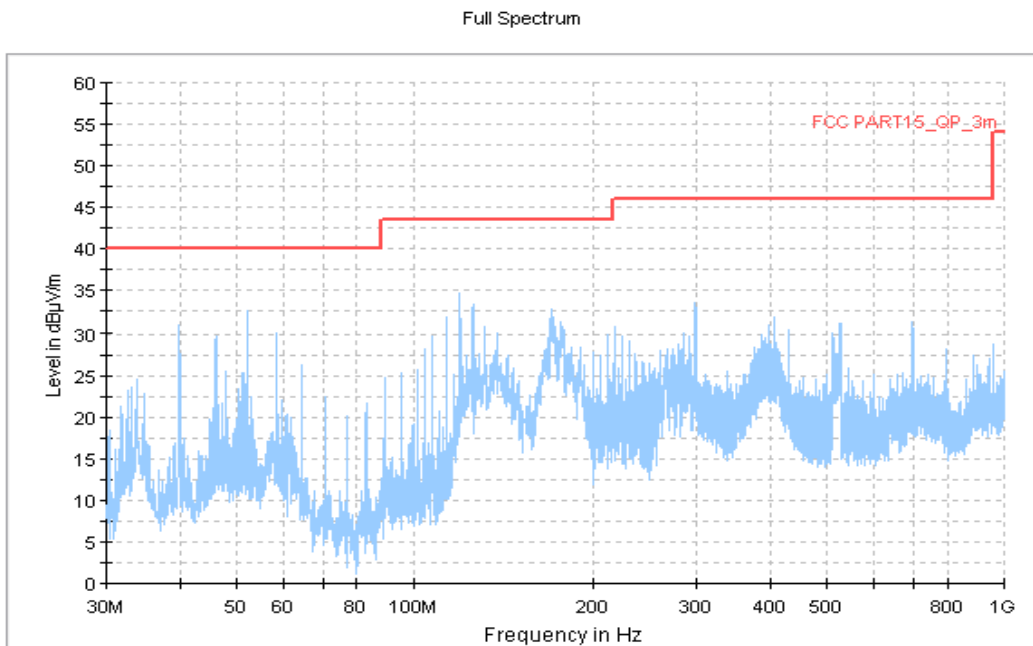


Figure A.21 Radiated Emission from 30MHz to 1GHz

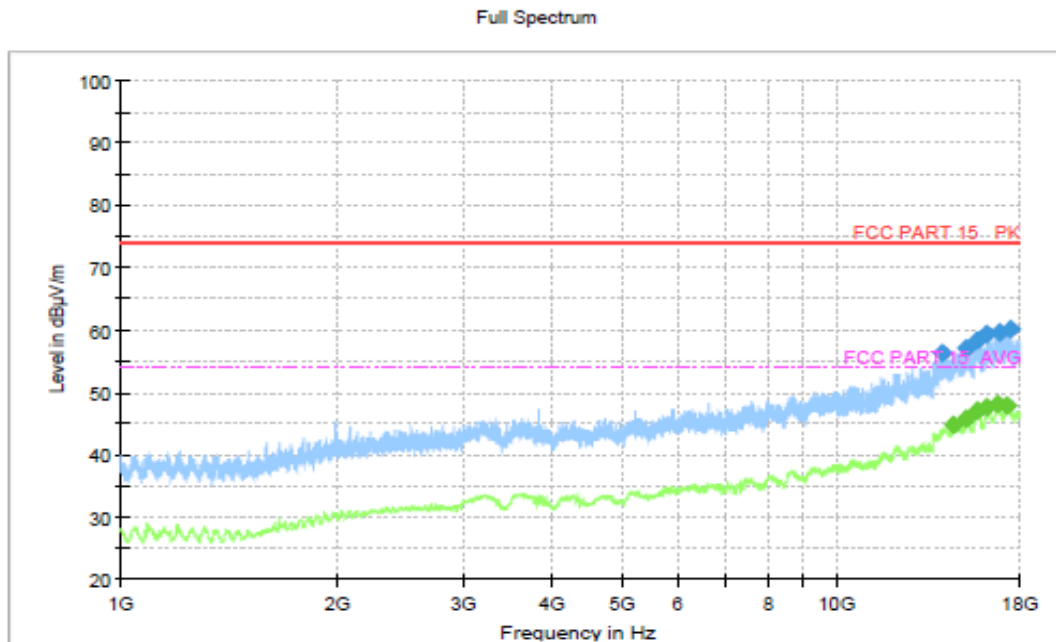


Figure A.22 Radiated Emission from 1GHz to 18GHz



Charging mode: Set 1

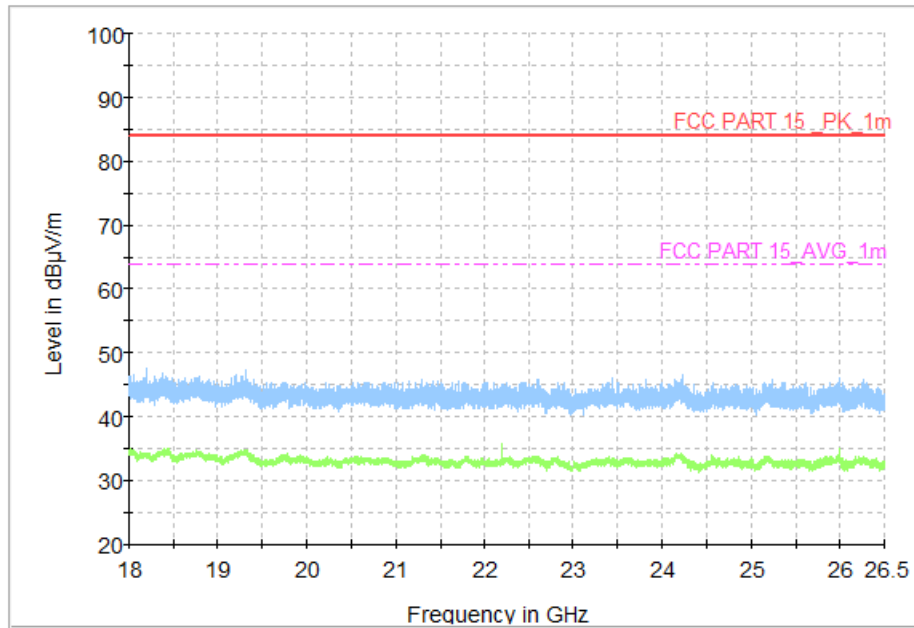


Figure A.23 Radiated Emission from 18GHz to 26.5GHz

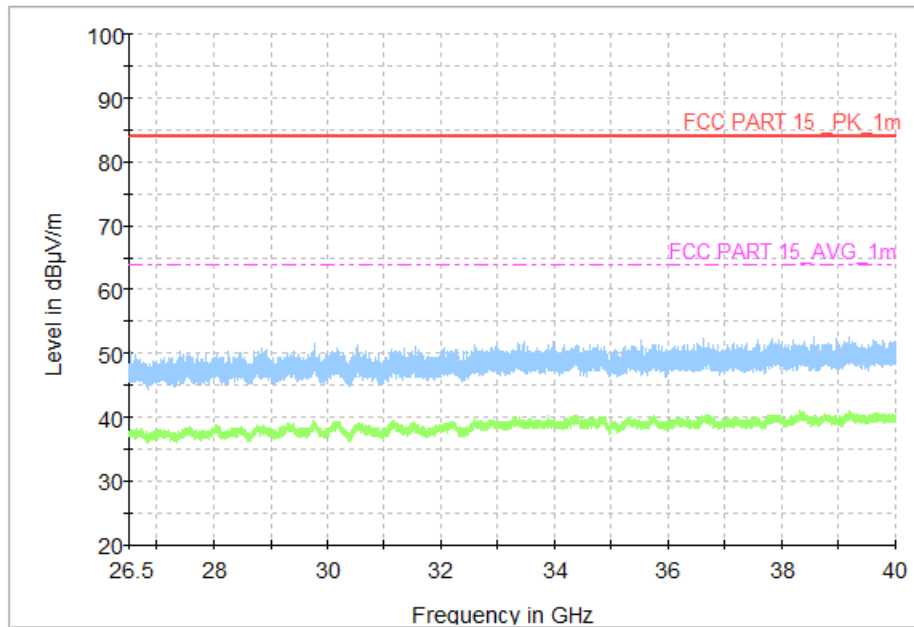


Figure A.24 Radiated Emission from 26.5GHz to 40GHz

**A.2 Conducted Emission (§15.107(a))****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:**

**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.

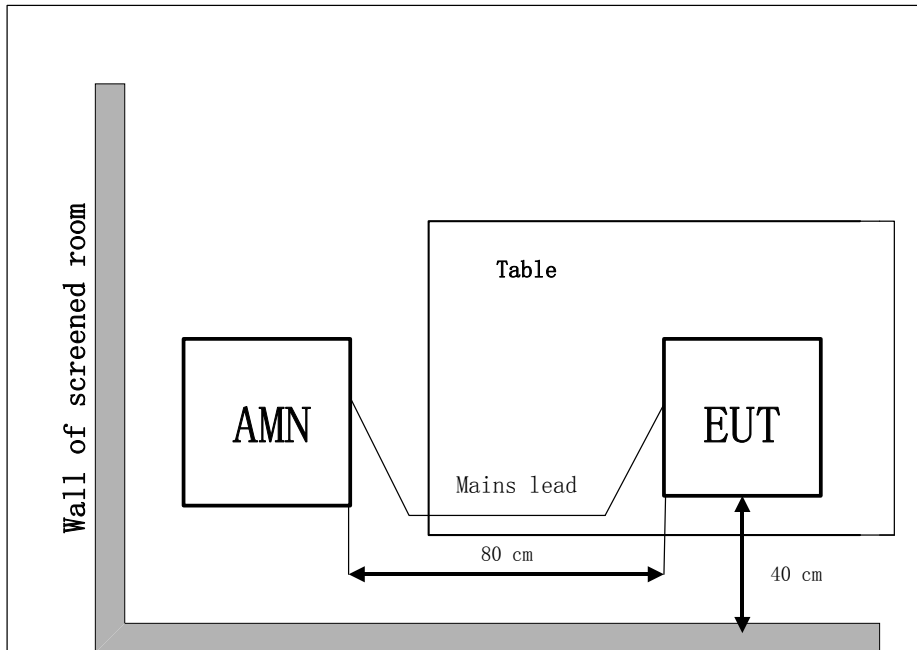
**USB mode:** The model of the PC is Lenovo 2OET-A00DCD, and the serial number of the PC is PF-OIYDAK. The software is used to let the PC keep on copying data to MS, reading and erasing the data after copy action was finished.

**A.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

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



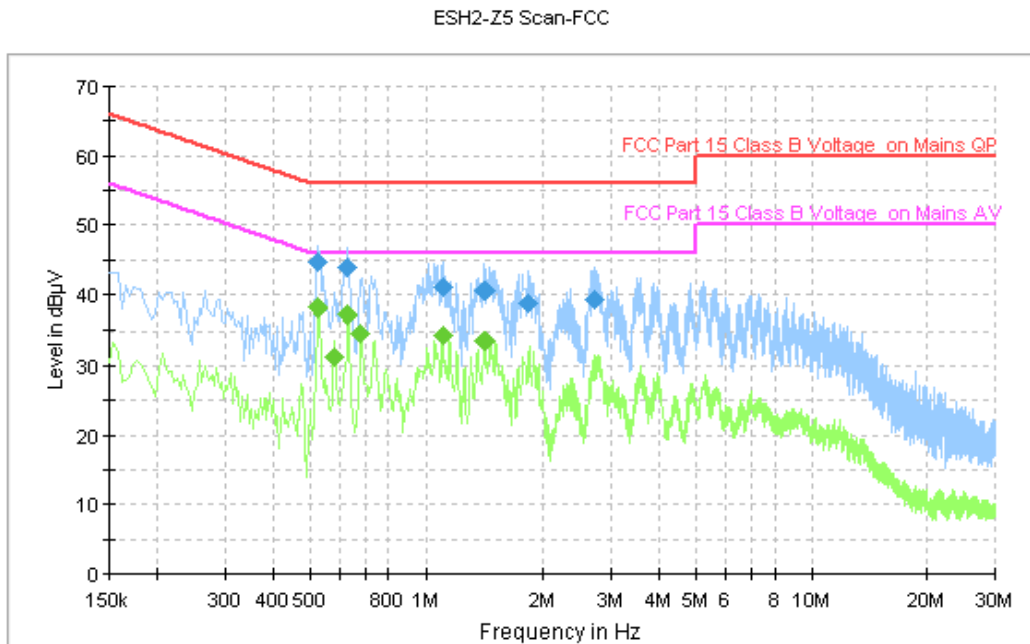
**A.2.5 Test Condition in charging mode**

Voltage (V)	Frequency (Hz)
120	60
240	60

RBW	Sweep Time(s)
9kHz	1

**CE Measurement uncertainty:** 3.06 dB (k=2)

**A.2.6 Measurement Results**  
**Charging mode:Set.1**  
**Voltage:120V**



**Figure A.25 Conducted Emission**

**Final Measurement Detector 1**

Frequency (MHz)	QuasiPeak (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.526000	44.6	GND	N	9.7	11.4	56.0
0.626000	44.0	GND	N	9.6	12.0	56.0
1.106000	41.1	GND	N	9.6	14.9	56.0
1.418000	40.6	GND	N	9.5	15.4	56.0
1.830000	38.7	GND	N	9.5	17.3	56.0
2.734000	39.4	GND	N	9.6	16.6	56.0

**Final Measurement Detector 2**

Frequency (MHz)	Average (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.526000	38.1	GND	N	9.7	7.9	46.0
0.578000	31.2	GND	N	9.6	14.8	46.0
0.626000	37.3	GND	N	9.6	8.7	46.0
0.678000	34.6	GND	N	9.5	11.4	46.0
1.106000	34.3	GND	N	9.6	11.7	46.0
1.418000	33.5	GND	N	9.5	12.5	46.0

Charging mode:Set.2  
Voltage:120V

ESH2-Z5 Scan-FCC

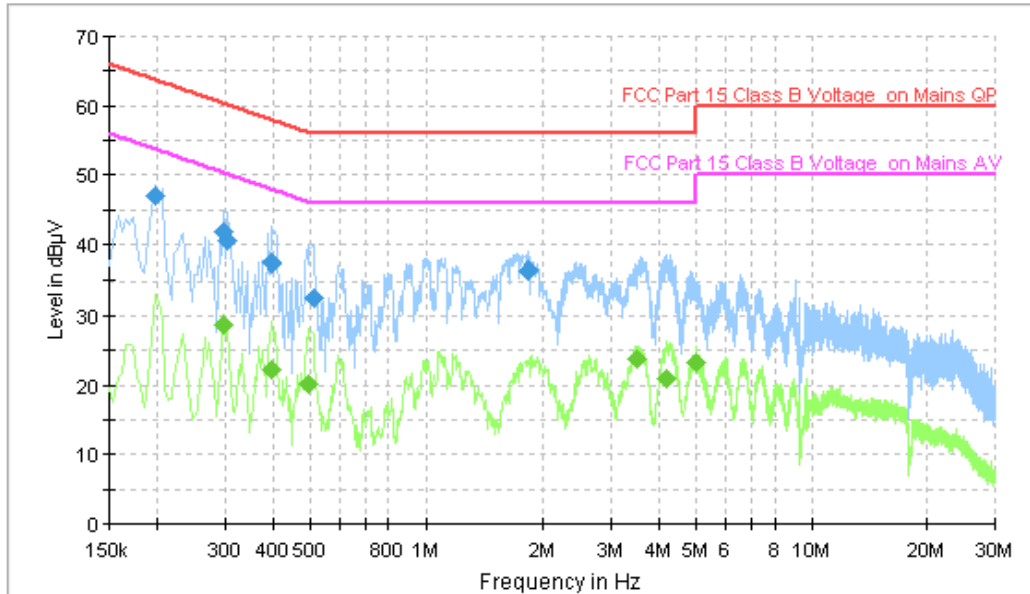


Figure A.26 Conducted Emission

**Final Measurement Detector 1**

Frequency (MHz)	QuasiPeak (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.198000	46.9	GND	N	9.6	16.8	63.7
0.298000	41.8	GND	N	9.6	18.5	60.3
0.306000	40.7	GND	N	9.6	19.4	60.1
0.398000	37.3	GND	N	9.6	20.6	57.9
0.510000	32.4	GND	N	9.7	23.6	56.0
1.822000	36.3	GND	N	9.5	19.7	56.0

**Final Measurement Detector 2**

Frequency (MHz)	Average (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.298000	28.6	GND	N	9.6	21.7	50.3
0.398000	22.3	GND	N	9.6	25.6	47.9
0.498000	20.2	GND	N	9.7	25.8	46.0
3.510000	23.8	GND	N	9.6	22.2	46.0
4.174000	21.0	GND	N	9.6	25.0	46.0
4.994000	23.3	GND	N	9.6	22.7	46.0

Charging mode:Set.3  
Voltage:120V

ESH2-Z5 Scan-FCC

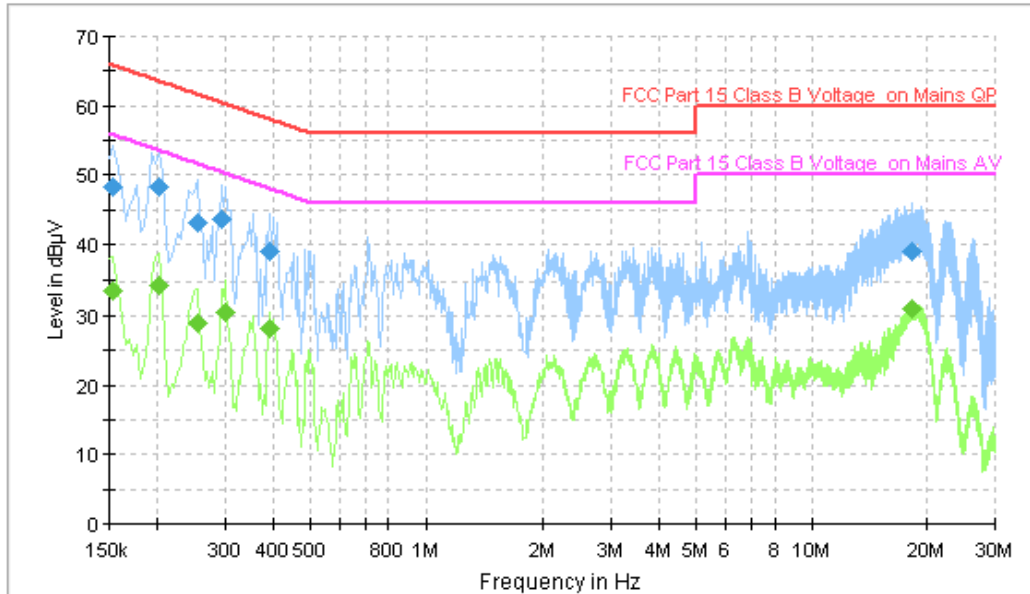


Figure A.27 Conducted Emission

**Final Measurement Detector 1**

Frequency (MHz)	QuasiPeak (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.154000	48.3	GND	N	9.6	17.5	65.8
0.202000	48.4	GND	N	9.6	15.1	63.5
0.254000	43.1	GND	N	9.6	18.5	61.6
0.294000	43.6	GND	N	9.6	16.8	60.4
0.394000	39.1	GND	N	9.6	18.9	58.0
18.158000	39.1	GND	N	9.9	20.9	60.0

**Final Measurement Detector 2**

Frequency (MHz)	Average (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.154000	33.7	GND	N	9.6	22.1	55.8
0.202000	34.4	GND	N	9.6	19.2	53.5
0.254000	28.8	GND	N	9.6	22.8	51.6
0.302000	30.5	GND	N	9.6	19.7	50.2
0.394000	28.1	GND	N	9.6	19.9	48.0
18.242000	31.0	GND	N	9.9	19.0	50.0

Charging mode:Set.4  
Voltage:120V

ESH2-Z5 Scan-FCC

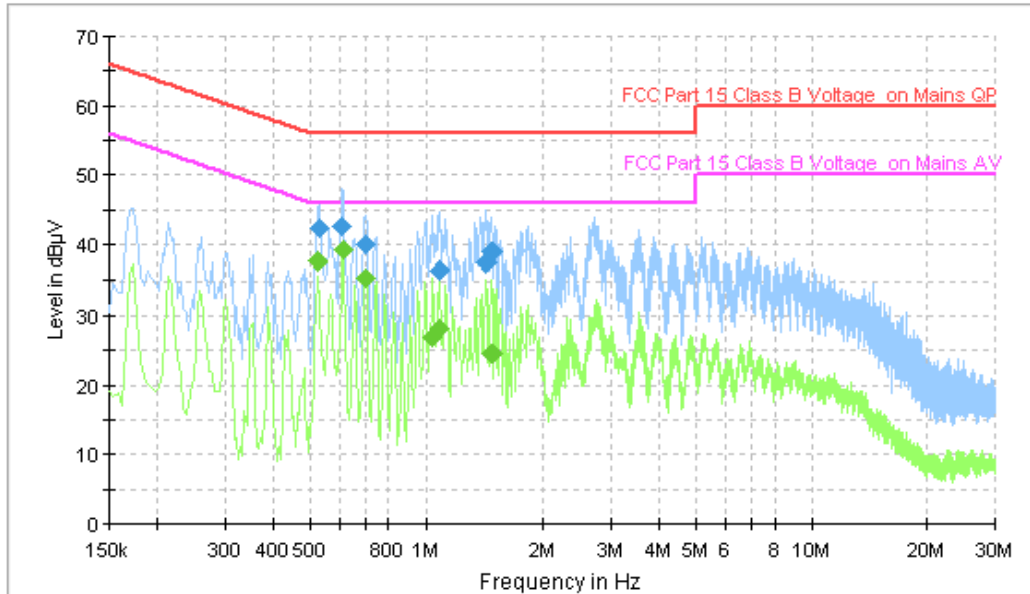


Figure A.28 Conducted Emission

**Final Measurement Detector 1**

Frequency (MHz)	QuasiPeak (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.530000	42.3	GND	N	9.7	13.7	56.0
0.606000	42.7	GND	N	9.6	13.3	56.0
0.698000	40.0	GND	N	9.5	16.0	56.0
1.082000	36.4	GND	N	9.6	19.6	56.0
1.438000	37.4	GND	N	9.5	18.6	56.0
1.478000	38.9	GND	N	9.6	17.1	56.0

**Final Measurement Detector 2**

Frequency (MHz)	Average (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.526000	37.7	GND	N	9.7	8.3	46.0
0.610000	39.4	GND	N	9.6	6.6	46.0
0.698000	35.4	GND	N	9.5	10.6	46.0
1.042000	27.0	GND	N	9.5	19.0	46.0
1.082000	28.2	GND	N	9.6	17.8	46.0
1.486000	24.6	GND	N	9.6	21.4	46.0



Charging mode:Set.5  
Voltage:120V

ESH2-Z5 Scan-FCC

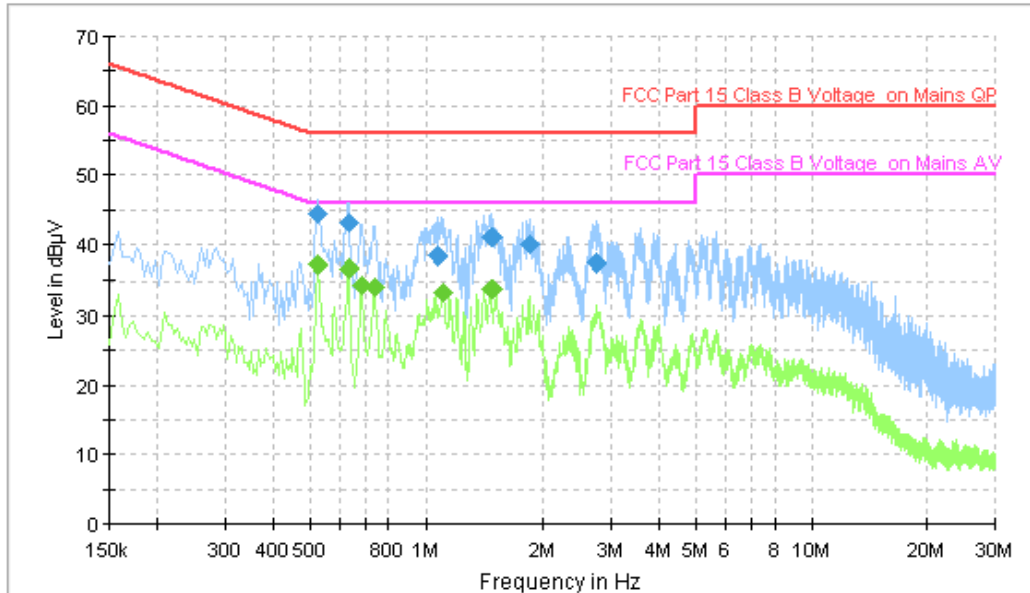


Figure A.29 Conducted Emission

**Final Measurement Detector 1**

Frequency (MHz)	QuasiPeak (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.526000	44.4	GND	N	9.7	11.6	56.0
0.630000	43.1	GND	N	9.6	12.9	56.0
1.074000	38.5	GND	N	9.6	17.5	56.0
1.474000	41.1	GND	N	9.6	14.9	56.0
1.838000	40.0	GND	N	9.5	16.0	56.0
2.766000	37.5	GND	N	9.6	18.5	56.0

**Final Measurement Detector 2**

Frequency (MHz)	Average (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.526000	37.1	GND	N	9.7	8.9	46.0
0.630000	36.6	GND	N	9.6	9.4	46.0
0.682000	34.3	GND	N	9.5	11.7	46.0
0.734000	34.1	GND	N	9.5	11.9	46.0
1.110000	33.4	GND	N	9.6	12.6	46.0
1.474000	33.9	GND	N	9.6	12.1	46.0

Charging mode:Set.6  
Voltage:120V

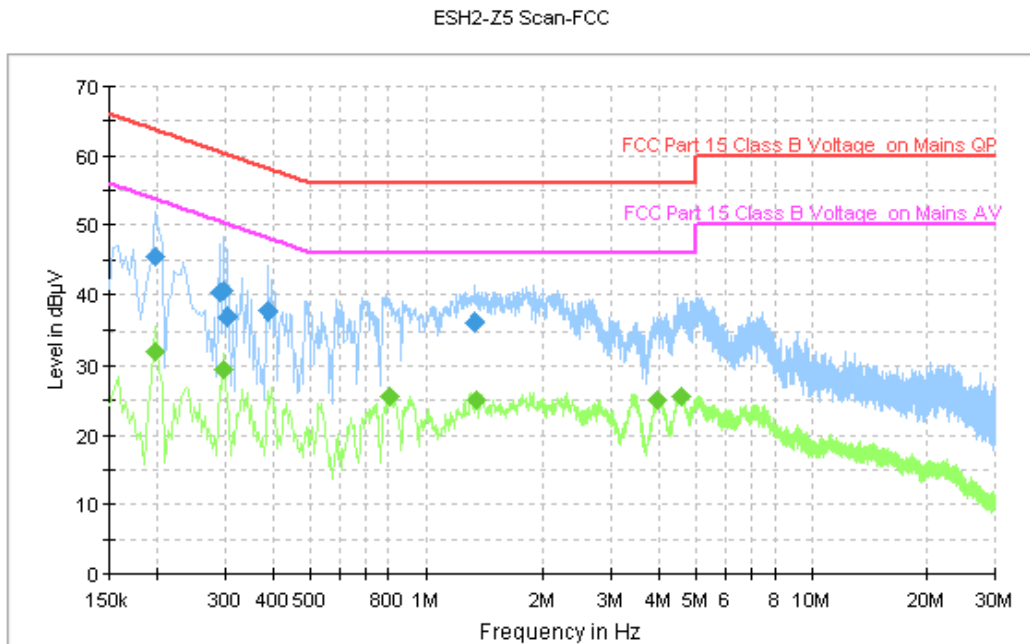


Figure A.30 Conducted Emission

**Final Measurement Detector 1**

Frequency (MHz)	QuasiPeak (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.198000	45.4	GND	N	9.6	18.3	63.7
0.290000	40.2	GND	N	9.6	20.3	60.5
0.298000	40.6	GND	N	9.6	19.7	60.3
0.306000	37.0	GND	N	9.6	23.1	60.1
0.390000	37.7	GND	N	9.6	20.3	58.1
1.338000	36.1	GND	N	9.6	19.9	56.0

**Final Measurement Detector 2**

Frequency (MHz)	Average (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.198000	32.1	GND	N	9.6	21.6	53.7
0.298000	29.3	GND	N	9.6	21.0	50.3
0.810000	25.6	GND	N	9.6	20.4	46.0
1.358000	25.1	GND	N	9.6	20.9	46.0
3.962000	25.1	GND	N	9.6	20.9	46.0
4.554000	25.6	GND	N	9.6	20.4	46.0

Charging mode:Set.7  
Voltage:120V

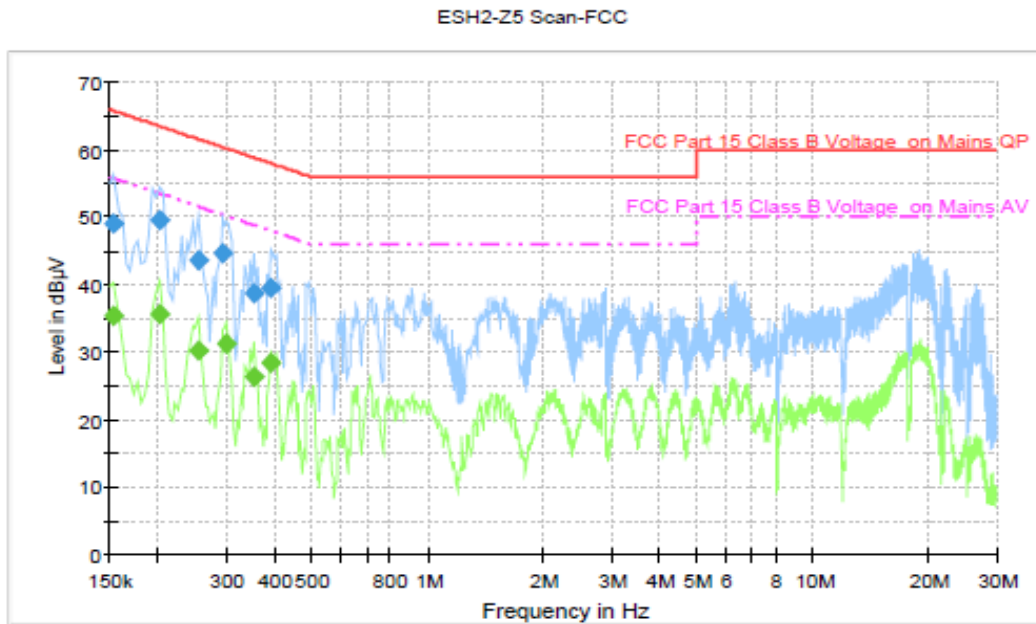


Figure A.31 Conducted Emission

**Final Measurement Detector 1**

Frequency (MHz)	QuasiPeak (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.154000	49.1	GND	N	9.6	16.7	65.8
0.202000	49.5	GND	N	9.6	14.0	63.5
0.254000	43.7	GND	N	9.6	17.9	61.6
0.294000	44.7	GND	N	9.6	15.7	60.4
0.354000	38.7	GND	N	9.6	20.1	58.9
0.394000	39.6	GND	N	9.6	18.4	58.0

**Final Measurement Detector 2**

Frequency (MHz)	Average (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.154000	35.5	GND	N	9.6	20.3	55.8
0.202000	35.6	GND	N	9.6	17.9	53.5
0.254000	30.2	GND	N	9.6	21.4	51.6
0.302000	31.4	GND	N	9.6	18.8	50.2
0.354000	26.4	GND	N	9.6	22.5	48.9
0.394000	28.4	GND	N	9.6	19.6	48.0

USB mode:Set.8  
Voltage:120V

ESH2-Z5 Scan-FCC

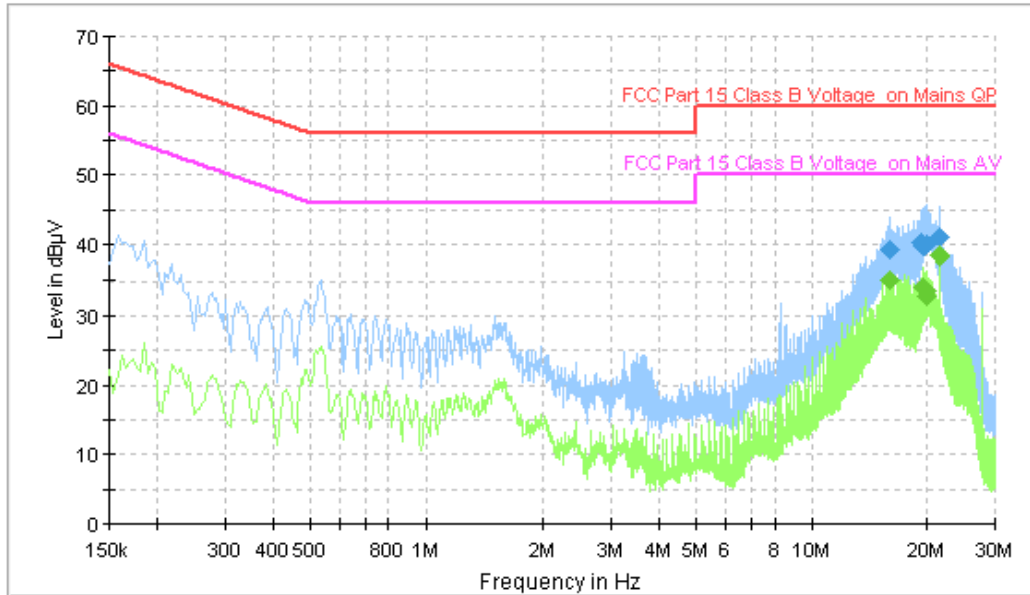


Figure A.32 Conducted Emission

**Final Measurement Detector 1**

Frequency (MHz)	QuasiPeak (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
16.002000	39.4	GND	N	9.9	20.6	60.0
19.338000	40.2	GND	N	10.0	19.8	60.0
19.498000	39.7	GND	N	10.0	20.3	60.0
19.614000	39.8	GND	N	10.0	20.2	60.0
19.830000	40.1	GND	N	10.0	19.9	60.0
21.502000	41.0	GND	N	10.0	19.0	60.0

**Final Measurement Detector 2**

Frequency (MHz)	Average (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
16.002000	35.0	GND	N	9.9	15.0	50.0
19.566000	34.1	GND	N	10.0	15.9	50.0
19.826000	32.9	GND	N	10.0	17.1	50.0
19.910000	33.6	GND	N	10.0	16.4	50.0
20.018000	33.6	GND	N	10.0	16.4	50.0
21.502000	38.5	GND	N	10.0	11.5	50.0

USB mode:Set.9  
Voltage:120V

ESH2-Z5 Scan-FCC

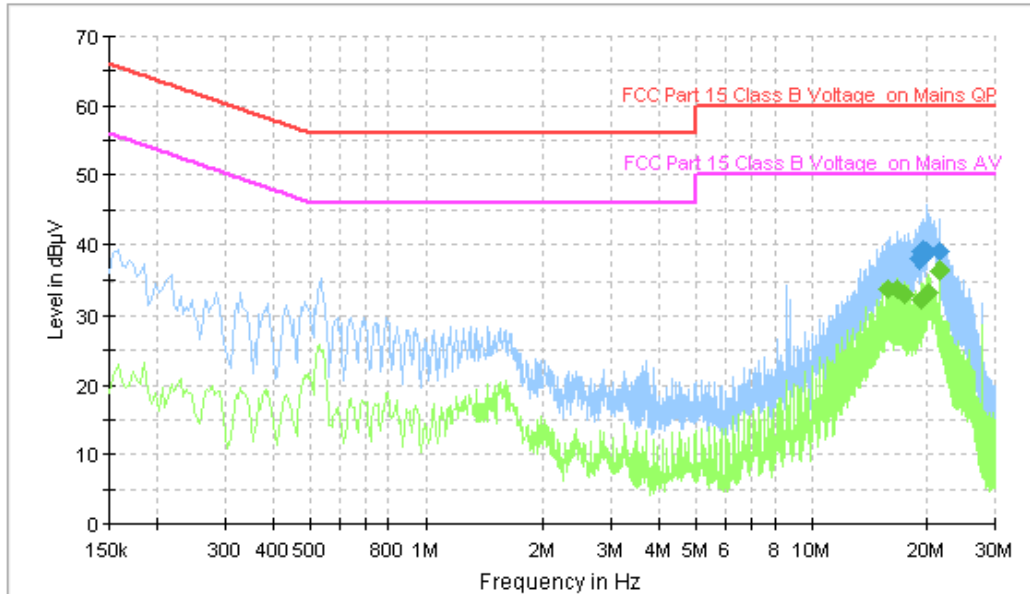


Figure A.33 Conducted Emission

**Final Measurement Detector 1**

Frequency (MHz)	QuasiPeak (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
19.074000	38.0	GND	N	10.0	22.0	60.0
19.338000	39.0	GND	N	10.0	21.0	60.0
19.566000	39.4	GND	N	10.0	20.6	60.0
19.818000	38.9	GND	N	10.0	21.1	60.0
20.026000	39.1	GND	N	10.0	20.9	60.0
21.502000	39.0	GND	N	10.0	21.0	60.0

**Final Measurement Detector 2**

Frequency (MHz)	Average (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
15.774000	33.7	GND	N	9.9	16.3	50.0
16.606000	33.7	GND	N	9.9	16.3	50.0
17.442000	33.0	GND	N	9.9	17.0	50.0
19.338000	32.3	GND	N	10.0	17.7	50.0
20.134000	33.4	GND	N	10.0	16.6	50.0
21.502000	36.4	GND	N	10.0	13.6	50.0

USB mode:Set.10  
Voltage:120V

ESH2-Z5 Scan-FCC

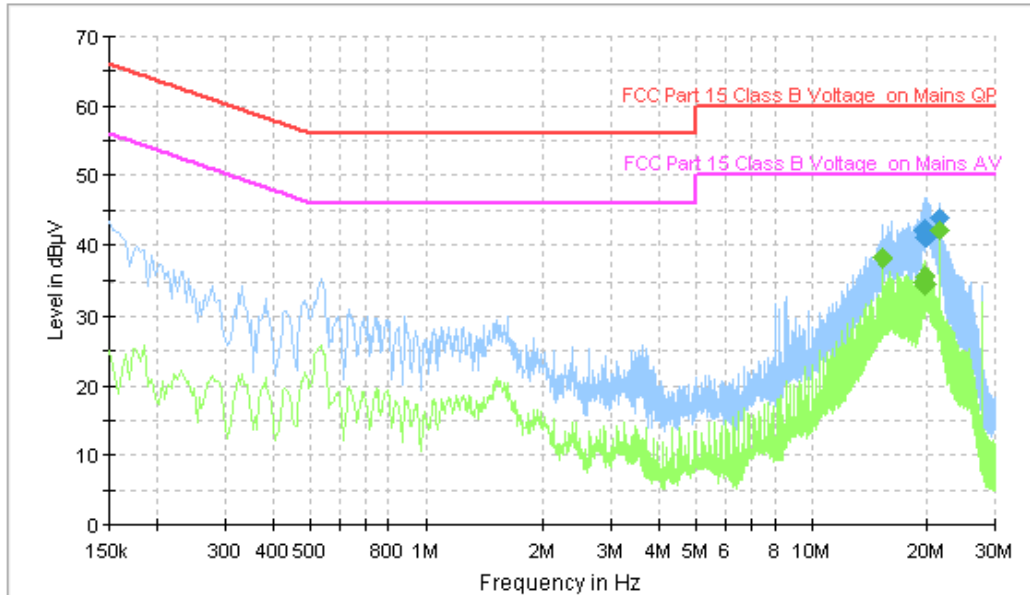


Figure A.34 Conducted Emission

**Final Measurement Detector 1**

Frequency (MHz)	QuasiPeak (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
19.566000	42.1	GND	N	10.0	17.9	60.0
19.718000	41.1	GND	N	10.0	18.9	60.0
19.794000	42.3	GND	N	10.0	17.7	60.0
19.850000	41.0	GND	N	10.0	19.0	60.0
19.910000	41.3	GND	N	10.0	18.7	60.0
21.502000	43.8	GND	N	10.0	16.2	60.0

**Final Measurement Detector 2**

Frequency (MHz)	Average (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
15.358000	38.1	GND	N	9.9	11.9	50.0
19.450000	35.0	GND	N	10.0	15.0	50.0
19.718000	34.3	GND	N	10.0	15.7	50.0
19.794000	35.8	GND	N	10.0	14.2	50.0
19.910000	34.7	GND	N	10.0	15.3	50.0
21.502000	42.1	GND	N	10.0	7.9	50.0

USB mode:Set.11  
Voltage:120V

ESH2-Z5 Scan-FCC

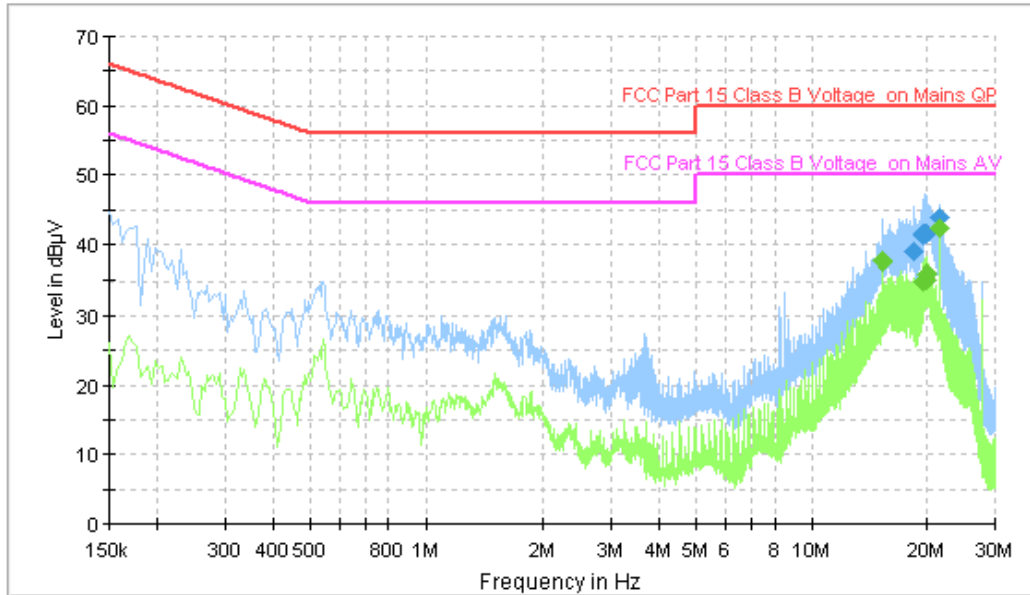


Figure A.35 Conducted Emission

**Final Measurement Detector 1**

Frequency (MHz)	QuasiPeak (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
18.354000	39.0	GND	N	9.9	21.0	60.0
19.454000	41.4	GND	N	10.0	18.6	60.0
19.530000	41.7	GND	N	10.0	18.3	60.0
19.706000	41.5	GND	N	10.0	18.5	60.0
19.878000	41.6	GND	N	10.0	18.4	60.0
21.502000	43.9	GND	N	10.0	16.1	60.0

**Final Measurement Detector 2**

Frequency (MHz)	Average (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
15.362000	37.8	GND	N	9.9	12.2	50.0
19.562000	35.0	GND	N	10.0	15.0	50.0
19.754000	35.2	GND	N	10.0	14.8	50.0
19.830000	35.0	GND	N	10.0	15.0	50.0
20.022000	35.8	GND	N	10.0	14.2	50.0
21.502000	42.2	GND	N	10.0	7.8	50.0

Charging mode:Set.1  
Voltage:240V

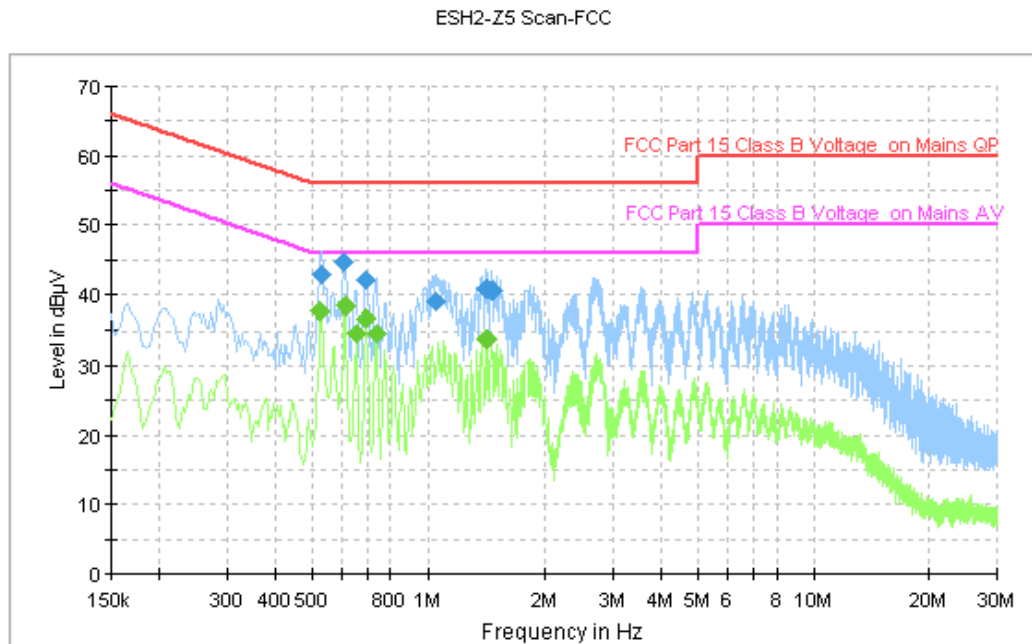


Figure A.36 Conducted Emission

**Final Measurement Detector 1**

Frequency (MHz)	QuasiPeak (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.530000	42.8	GND	N	9.7	13.2	56.0
0.606000	44.7	GND	N	9.6	11.3	56.0
0.690000	42.1	GND	N	9.5	13.9	56.0
1.054000	39.1	GND	N	9.6	16.9	56.0
1.422000	40.9	GND	N	9.5	15.1	56.0
1.466000	40.6	GND	N	9.5	15.4	56.0

**Final Measurement Detector 2**

Frequency (MHz)	Average (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.526000	37.6	GND	N	9.7	8.4	46.0
0.610000	38.6	GND	N	9.6	7.4	46.0
0.650000	34.5	GND	N	9.6	11.5	46.0
0.690000	36.8	GND	N	9.5	9.2	46.0
0.734000	34.5	GND	N	9.5	11.5	46.0
1.422000	33.8	GND	N	9.5	12.2	46.0



Charging mode:Set.2  
Voltage:240V

ESH2-Z5 Scan-FCC

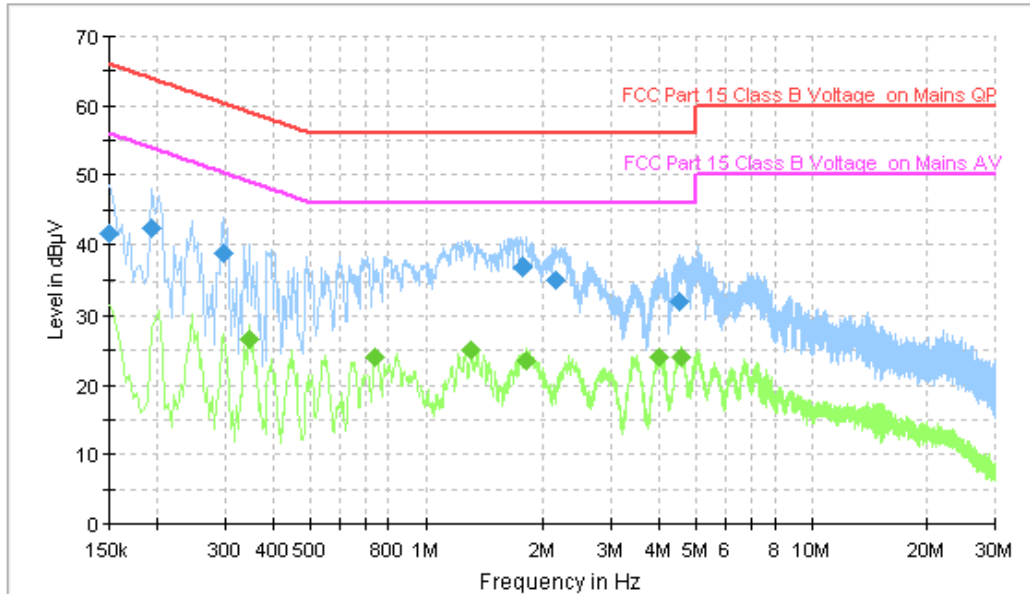


Figure A.37 Conducted Emission

**Final Measurement Detector 1**

Frequency (MHz)	QuasiPeak (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.150000	41.6	GND	N	9.6	24.4	66.0
0.194000	42.3	GND	N	9.6	21.6	63.9
0.298000	38.8	GND	N	9.6	21.5	60.3
1.774000	36.9	GND	N	9.6	19.1	56.0
2.154000	35.1	GND	N	9.6	20.9	56.0
4.550000	32.1	GND	N	9.6	23.9	56.0

**Final Measurement Detector 2**

Frequency (MHz)	Average (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.346000	26.7	GND	N	9.6	22.3	49.1
0.738000	24.0	GND	N	9.5	22.0	46.0
1.318000	25.0	GND	N	9.6	21.0	46.0
1.802000	23.5	GND	N	9.5	22.5	46.0
4.018000	24.1	GND	N	9.6	21.9	46.0
4.570000	23.9	GND	N	9.6	22.1	46.0

Charging mode:Set.3  
Voltage:240V

ESH2-Z5 Scan-FCC

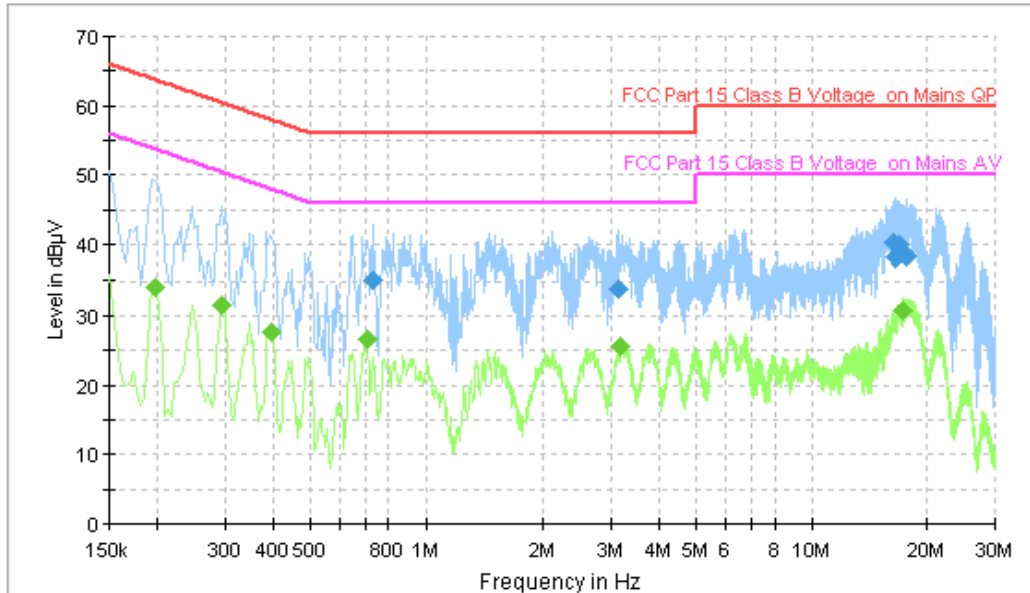


Figure A.38 Conducted Emission

**Final Measurement Detector 1**

Frequency (MHz)	QuasiPeak (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.730000	35.2	GND	N	9.5	20.8	56.0
3.126000	33.7	GND	N	9.6	22.3	56.0
16.366000	40.3	GND	N	9.9	19.7	60.0
16.582000	38.1	GND	N	9.9	21.9	60.0
16.918000	40.2	GND	N	9.9	19.8	60.0
17.626000	38.4	GND	N	9.9	21.6	60.0

**Final Measurement Detector 2**

Frequency (MHz)	Average (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.198000	34.0	GND	N	9.6	19.7	53.7
0.294000	31.5	GND	N	9.6	18.9	50.4
0.398000	27.6	GND	N	9.6	20.3	47.9
0.702000	26.5	GND	N	9.5	19.5	46.0
3.174000	25.7	GND	N	9.6	20.3	46.0
17.286000	30.7	GND	N	9.9	19.3	50.0

Charging mode:Set.4  
Voltage:240V

ESH2-Z5 Scan-FCC

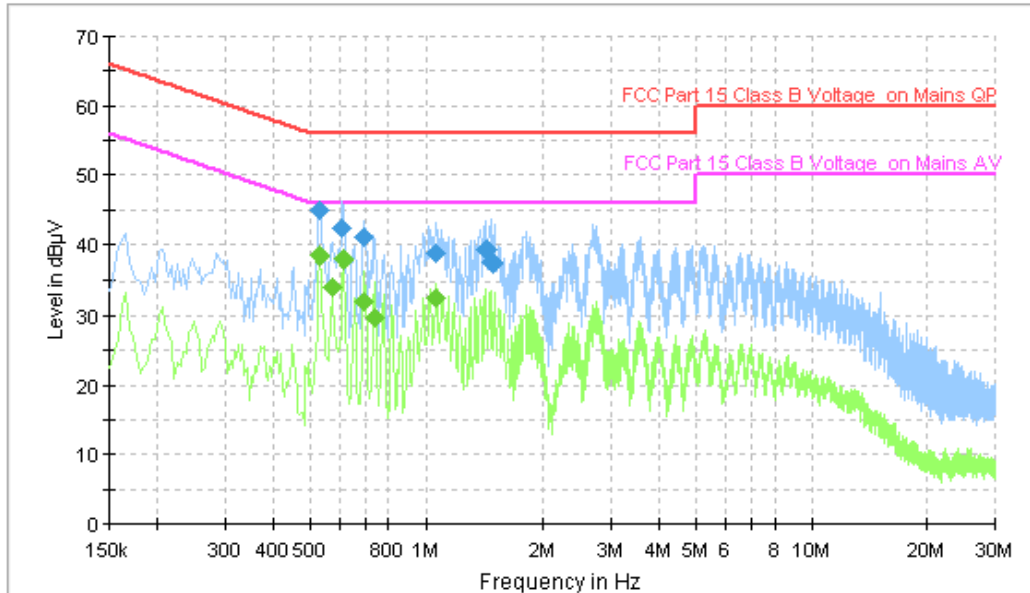


Figure A.39 Conducted Emission

**Final Measurement Detector 1**

Frequency (MHz)	QuasiPeak (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.530000	45.0	GND	N	9.7	11.0	56.0
0.606000	42.4	GND	N	9.6	13.6	56.0
0.690000	41.1	GND	N	9.5	14.9	56.0
1.066000	38.8	GND	N	9.6	17.2	56.0
1.430000	39.2	GND	N	9.5	16.8	56.0
1.474000	37.4	GND	N	9.6	18.6	56.0

**Final Measurement Detector 2**

Frequency (MHz)	Average (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.530000	38.5	GND	N	9.7	7.5	46.0
0.570000	34.1	GND	N	9.7	11.9	46.0
0.610000	37.9	GND	N	9.6	8.1	46.0
0.694000	32.2	GND	N	9.5	13.8	46.0
0.734000	29.8	GND	N	9.5	16.2	46.0
1.066000	32.5	GND	N	9.6	13.5	46.0

Charging mode:Set.5  
Voltage:240V

ESH2-Z5 Scan-FCC

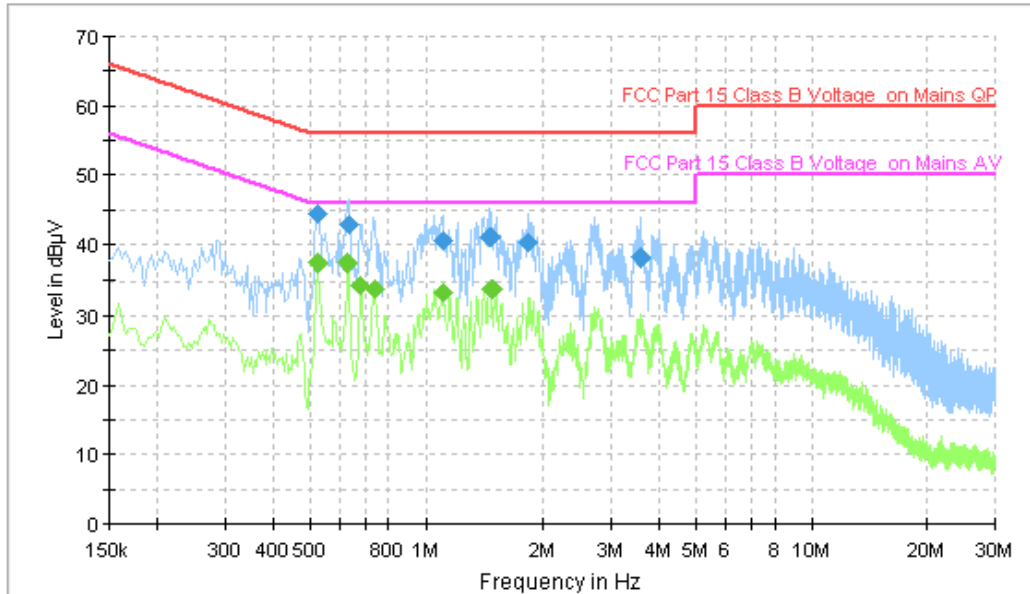


Figure A.40 Conducted Emission

**Final Measurement Detector 1**

Frequency (MHz)	QuasiPeak (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.522000	44.5	GND	N	9.7	11.5	56.0
0.630000	42.8	GND	N	9.6	13.2	56.0
1.106000	40.5	GND	N	9.6	15.5	56.0
1.470000	41.0	GND	N	9.5	15.0	56.0
1.834000	40.3	GND	N	9.5	15.7	56.0
3.570000	38.2	GND	N	9.6	17.8	56.0

**Final Measurement Detector 2**

Frequency (MHz)	Average (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.522000	37.5	GND	N	9.7	8.5	46.0
0.626000	37.5	GND	N	9.6	8.5	46.0
0.678000	34.5	GND	N	9.5	11.5	46.0
0.734000	33.8	GND	N	9.5	12.2	46.0
1.110000	33.3	GND	N	9.6	12.7	46.0
1.474000	33.7	GND	N	9.6	12.3	46.0

Charging mode:Set.6  
Voltage:240V

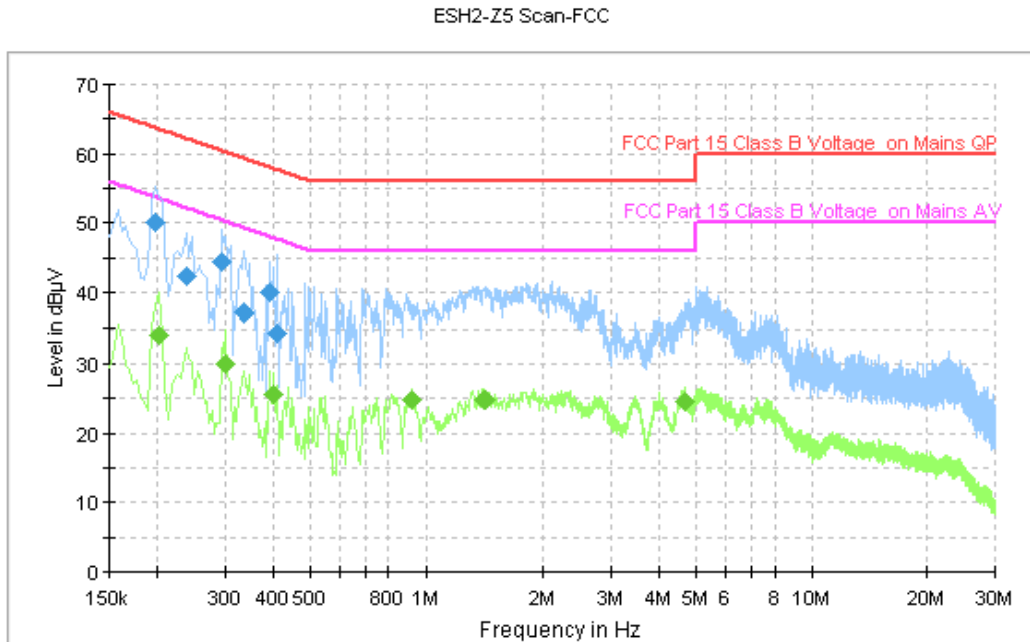


Figure A.41 Conducted Emission

**Final Measurement Detector 1**

Frequency (MHz)	QuasiPeak (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.198000	50.0	GND	N	9.6	13.7	63.7
0.238000	42.2	GND	N	9.6	19.9	62.2
0.294000	44.5	GND	N	9.6	15.9	60.4
0.338000	37.3	GND	N	9.6	22.0	59.3
0.394000	39.9	GND	N	9.6	18.1	58.0
0.410000	34.2	GND	N	9.7	23.4	57.6

**Final Measurement Detector 2**

Frequency (MHz)	Average (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.202000	34.2	GND	N	9.6	19.3	53.5
0.302000	29.9	GND	N	9.6	20.3	50.2
0.402000	25.5	GND	N	9.6	22.4	47.8
0.918000	24.8	GND	N	9.6	21.2	46.0
1.414000	24.9	GND	N	9.5	21.1	46.0
4.694000	24.5	GND	N	9.6	21.5	46.0

Charging mode:Set.7  
Voltage:240V

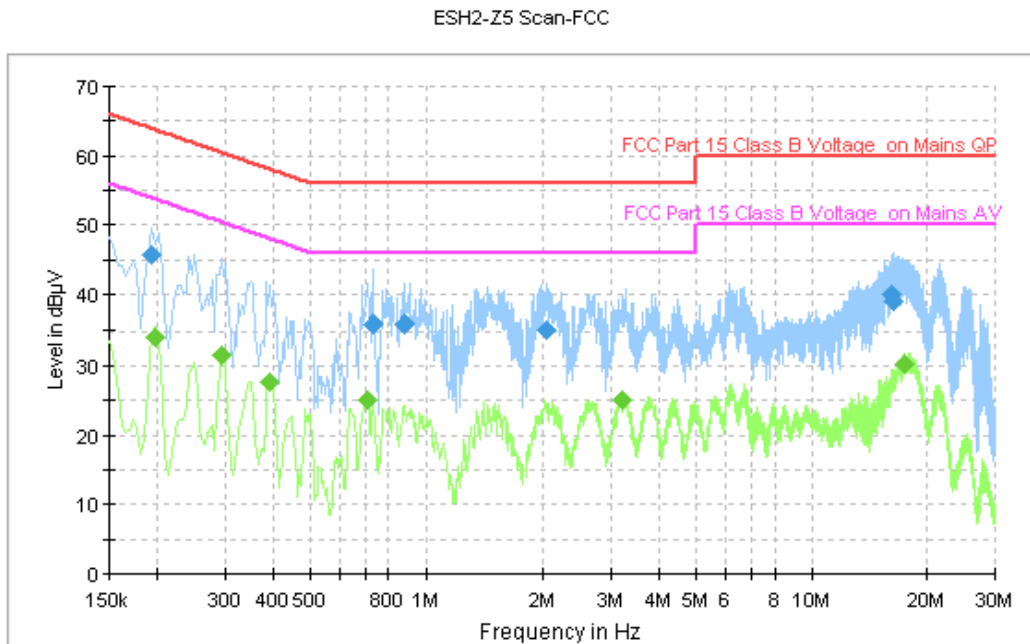


Figure A.42 Conducted Emission

**Final Measurement Detector 1**

Frequency (MHz)	QuasiPeak (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.194000	45.7	GND	N	9.6	18.2	63.9
0.726000	36.0	GND	N	9.5	20.0	56.0
0.878000	35.9	GND	N	9.6	20.1	56.0
2.042000	35.2	GND	N	9.6	20.8	56.0
16.178000	40.0	GND	N	9.9	20.0	60.0
16.362000	39.0	GND	N	9.9	21.0	60.0

**Final Measurement Detector 2**

Frequency (MHz)	Average (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.198000	34.0	GND	N	9.6	19.7	53.7
0.294000	31.4	GND	N	9.6	19.0	50.4
0.394000	27.6	GND	N	9.6	20.3	48.0
0.706000	25.1	GND	N	9.5	20.9	46.0
3.226000	25.2	GND	N	9.6	20.8	46.0
17.398000	30.2	GND	N	9.9	19.8	50.0

USB mode:Set.8  
Voltage:240V

ESH2-Z5 Scan-FCC

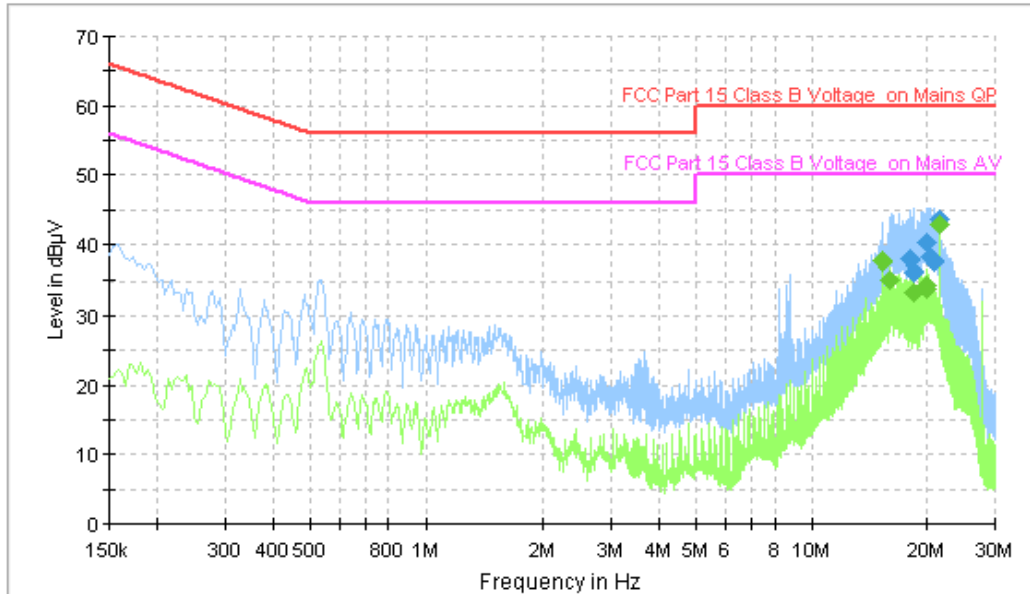


Figure A.43 Conducted Emission

**Final Measurement Detector 1**

Frequency (MHz)	QuasiPeak (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
18.126000	38.0	GND	N	9.9	22.0	60.0
18.462000	36.1	GND	N	9.9	23.9	60.0
19.906000	40.4	GND	N	10.0	19.6	60.0
20.434000	38.3	GND	N	10.0	21.7	60.0
20.742000	37.7	GND	N	10.0	22.3	60.0
21.506000	43.7	GND	N	10.0	16.3	60.0

**Final Measurement Detector 2**

Frequency (MHz)	Average (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
15.362000	37.8	GND	N	9.9	12.2	50.0
16.002000	35.0	GND	N	9.9	15.0	50.0
18.506000	33.3	GND	N	9.9	16.7	50.0
19.906000	34.4	GND	N	10.0	15.6	50.0
20.022000	33.7	GND	N	10.0	16.3	50.0
21.502000	43.0	GND	N	10.0	7.0	50.0

USB mode:Set.9  
Voltage:240V

ESH2-Z5 Scan-FCC

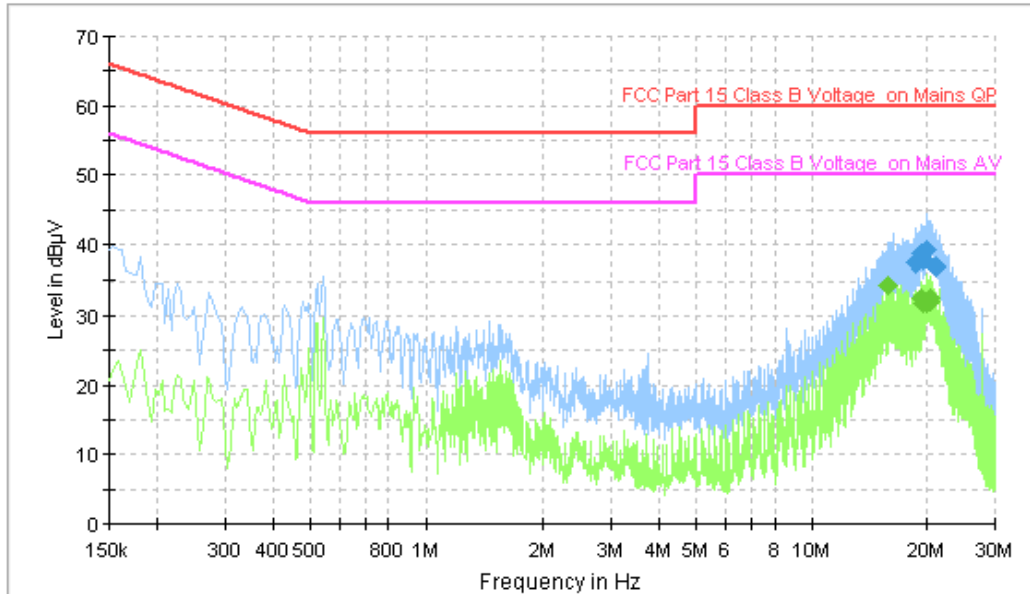


Figure A.44 Conducted Emission

**Final Measurement Detector 1**

Frequency (MHz)	QuasiPeak (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
18.734000	37.6	GND	N	9.9	22.4	60.0
19.338000	38.9	GND	N	10.0	21.1	60.0
19.570000	38.0	GND	N	10.0	22.0	60.0
19.830000	39.4	GND	N	10.0	20.6	60.0
20.018000	39.2	GND	N	10.0	20.8	60.0
21.118000	36.8	GND	N	10.0	23.2	60.0

**Final Measurement Detector 2**

Frequency (MHz)	Average (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
15.774000	34.4	GND	N	9.9	15.6	50.0
19.338000	32.4	GND	N	10.0	17.6	50.0
19.414000	31.8	GND	N	10.0	18.2	50.0
19.958000	31.7	GND	N	10.0	18.3	50.0
20.310000	32.6	GND	N	10.0	17.4	50.0
20.410000	32.1	GND	N	10.0	17.9	50.0



USB mode:Set.10  
Voltage:240V

ESH2-Z5 Scan-FCC

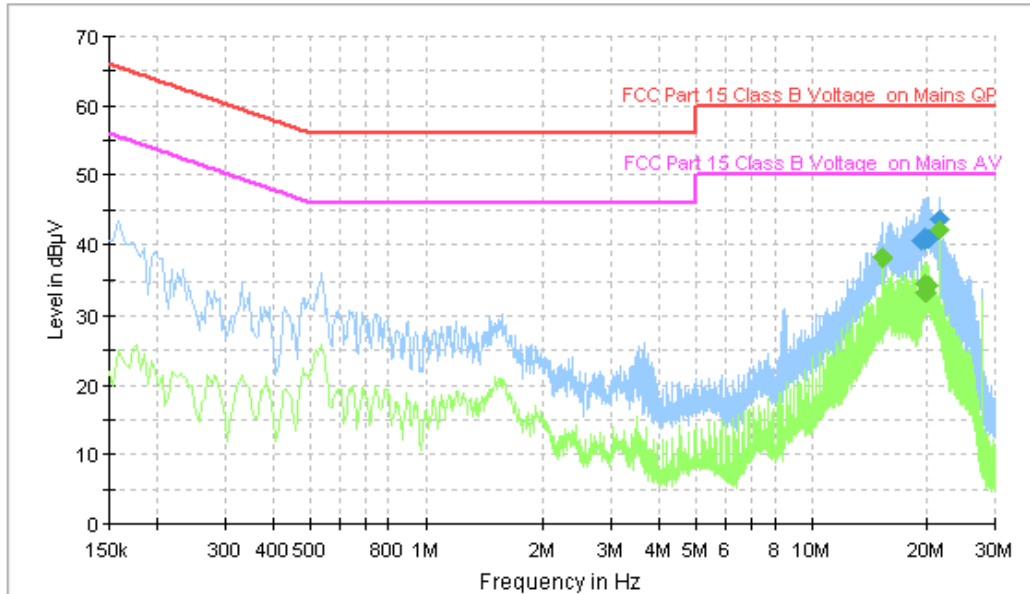


Figure A.45 Conducted Emission

**Final Measurement Detector 1**

Frequency (MHz)	QuasiPeak (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
19.302000	40.7	GND	N	10.0	19.3	60.0
19.562000	40.8	GND	N	10.0	19.2	60.0
19.682000	41.2	GND	N	10.0	18.8	60.0
19.706000	40.5	GND	N	10.0	19.5	60.0
20.058000	40.8	GND	N	10.0	19.2	60.0
21.502000	43.7	GND	N	10.0	16.3	60.0

**Final Measurement Detector 2**

Frequency (MHz)	Average (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
15.358000	38.2	GND	N	9.9	11.8	50.0
19.682000	34.6	GND	N	10.0	15.4	50.0
19.706000	33.3	GND	N	10.0	16.7	50.0
19.874000	33.2	GND	N	10.0	16.8	50.0
20.058000	34.2	GND	N	10.0	15.8	50.0
21.502000	42.1	GND	N	10.0	7.9	50.0

USB mode:Set.11  
Voltage:240V

ESH2-Z5 Scan-FCC

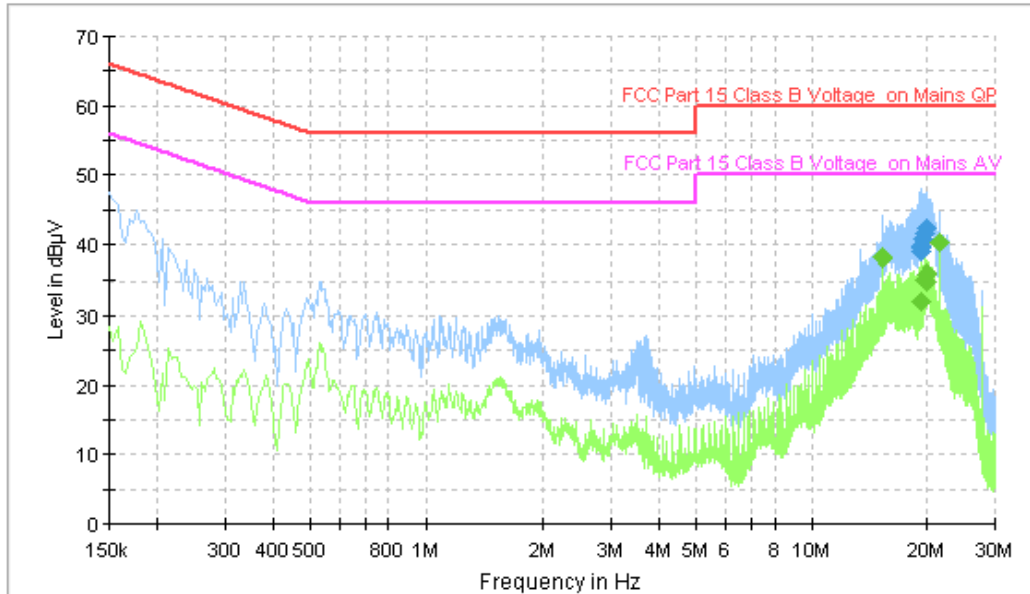


Figure A.46 Conducted Emission

**Final Measurement Detector 1**

Frequency (MHz)	QuasiPeak (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
19.174000	39.1	GND	N	10.0	20.9	60.0
19.294000	39.5	GND	N	10.0	20.5	60.0
19.326000	39.8	GND	N	10.0	20.2	60.0
19.510000	40.7	GND	N	10.0	19.3	60.0
19.654000	41.6	GND	N	10.0	18.4	60.0
19.862000	42.2	GND	N	10.0	17.8	60.0

**Final Measurement Detector 2**

Frequency (MHz)	Average (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
15.358000	38.3	GND	N	9.9	11.7	50.0
19.326000	32.1	GND	N	10.0	17.9	50.0
19.754000	35.1	GND	N	10.0	14.9	50.0
19.846000	34.9	GND	N	10.0	15.1	50.0
20.022000	36.0	GND	N	10.0	14.0	50.0
21.506000	40.4	GND	N	10.0	9.6	50.0

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