



FCC PART 15B TEST REPORT

No. I23Z60483-EMC01

for

OnePlus Technology (Shenzhen) Co., Ltd.

Mobile Phone

Model name: CPH2551

FCC ID: 2ABZ2-AA541

with

Hardware Version: 11

Software Version: OxygenOS 13.2

Issued Date: 2023-06-27

Note:

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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

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I23Z60483-EMC01	Rev.0	1 st edition	2023-06-27

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

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1. Test Laboratory

1.1. Testing Location

CTTL (huayuan North Road)

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

1.2. Testing Environment

Normal Temperature: 15-35°C

Relative Humidity: 20-75%

1.3. Project data

Testing Start Date: 2023-04-20

Testing End Date: 2023-06-19

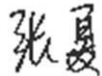
1.4. Signature



Wang Xue
(Prepared this test report)



Zhang Ying
(Reviewed this test report)



Zhang Xia
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2. Client Information

2.1. Applicant Information

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2.2. Manufacturer Information

Company Name: OnePlus Technology (Shenzhen) Co., Ltd.
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Contact Ariel Cheng
Email Ariel.Cheng@oneplus.com
Tel. (86)76986076999

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

3.1. About EUT

Description	Mobile Phone
Model Name	CPH2551
FCC ID:	2ABZ2-AA541

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
EUT1	868147060031259/	11	OxygenOS 13.2
	868147060031242		
EUT2	868147060029972/	11	OxygenOS 13.2
	868147060029964		

*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	Model	Manufacture	Remark
AE1	Battery	BLPA01	Sunwoda Electronic Co., Ltd	/
AE2	Battery	BLPA03	Sunwoda Electronic Co., Ltd	/
AE3	Charger	VCB8JAUH	Huizhou Jinhu Industrial Development Co.,Ltd	/
AE4	USB Cable	DL129	OnePlus Technology(Shenzhen) Co.,Ltd.	/
AE5	Dongle	/	/	/
AE6	Cable	/	* Provided by laboratory	/
AE7	Mobile phone	/	* Provided by laboratory	/

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

3.4. EUT set-ups

EUT set-up No.	Combination of EUT and AE	Remarks
Set.1	EUT1/2 + AE1 + AE2 + AE3 + AE4	Charger1+REAR Camera+GSM 850 idle (Folded)
Set.2	EUT1/2 + AE1 + AE2 + AE3 + AE4	Charger1+MP4+WCDMA 850 idle (Folded)
Set.3	EUT1/2 + AE1 + AE2 + AE3 + AE4	Charger1+ front camera+LTE B5 idle (Unfold)
Set.4	EUT1/2 + AE1 + AE2 + AE4	USB+ NR n71 idle (Unfold)
Set.5	EUT1/2 + AE1 + AE2 + AE5 + AE6 + AE7	DATA transmission (Unfold)

Note:

Equipment Under Test (EUT) is a model of mobile phone with integrated antenna.

It supports

GSM Band 850/900/1800/1900 MHz

UMTS Band Bands 1/2/4/5/6/8/19

LTE Band FDD Bands 1/2/3/4/5/7/8/12/13/17/18/19/20/25/26/28/30/32/66/71, TDD



Bands 38/39/40/41/46/48

NR Band n1/n2/n3/n5/n7/n8/n12/n20/n25/n28/n30/n38/n40/n41/n66/n71/n77/n78

It has MP3, Camera, USB data, Bluetooth (BT 2.1+EDR, BLE5.3), Wi-Fi 2.4G (802.11b/g/n/ac/ax, 802.11n/ac/ax supports 20MHz and 40MHz bandwidth), Wi-Fi 5G(802.11a/n/ac/ax, 802.11n supports 20MHz and 40MHz bandwidth, 802.11n/ac/ax supports 20MHz , 40MHz and 80MHz bandwidth), Wi-Fi 6E and Wi-Fi 7 , NFC , GNSS functions.

The device contains receivers which tune and operate between 30MHz-960MHz in the following bands: GSM850, WCDMA850, LTE Band 5/12/13/17/26/71, NR band n5/n12/n71. All licensed band receivers that tune in the range of 30MHz-960MHz are investigated. Only the worst-case emissions are reported.

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	2019
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 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 Ω
Ground system resistance	< 4 Ω
Normalised site attenuation (NSA)	< ± 4 dB, 3m distance
Site voltage standing-wave ratio (S_{VSWR})	Between 0 and 6 dB, from 1GHz to 6GHz
Uniformity of field strength	Between 0 and 6 dB, from 80 to 6000 MHz

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

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

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	CALIBRATION INTERVAL
1	Test Receiver	ESW44	103144	R&S	2023-10-25	1 Year
2	LISN	ENV216	101200	R&S	2023-06-29	1 year
3	Test Receiver	ESCI 7	100344	R&S	2024-02-21	1 Year
4	EMI Antenna	VULB 9163	01223	SCHWARZBECK	2023-07-25	1 year
5	EMI Antenna	3115	00167250	ETS-Lindgren	2023-06-20	1 year
6	Universal Communication Tester	CMW500	163975	R&S	2024-01-03	1 year
7	Software	EMC32	/	R&S	/	/

ANNEX A: MEASUREMENT RESULTS

A.1 Radiated Emission

Reference

FCC: CFR Part 15.109(a).

A.1.1 Method of measurement

The field strength of radiated emissions from the unintentional radiator (data transmission mode of MS and charging mode of MS) at distances 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 3/10 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 data transmission mode and charging mode. During the test MS is connected to a PC or a mobile phone via a USB cable in the case of data transmission mode and is connected to a charger in the case of charging mode.

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

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

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 ($\mu\text{V}/\text{m}$)		
	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:

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

Where

G_A : Antenna factor of receive antenna

G_{PL} : Path Loss

P_{Mea} : Measurement result on receiver.

Measurement uncertainty (worst case): $U = 4.84 \text{ dB}$, $k=2$.

Measurement results for Set.1:

Charing Mode/Average detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17902.760	40.70	-29.33	45.95	24.07	54.00	13.30	V
17952.400	40.50	-28.94	46.66	22.78	54.00	13.50	V
17933.700	40.50	-29.40	46.66	23.24	54.00	13.50	V
17997.280	40.50	-29.06	46.66	22.90	54.00	13.50	V
17433.220	40.50	-29.71	44.35	25.86	54.00	13.50	H
17908.200	40.50	-29.33	45.95	23.87	54.00	13.50	V

Charging Mode/Peak detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17224.460	50.90	-29.57	43.36	37.11	74.00	23.10	H
17296.200	50.80	-29.69	43.36	37.13	74.00	23.20	V
17459.740	50.60	-29.87	44.35	36.12	74.00	23.40	H
17927.920	50.60	-29.40	46.66	33.34	74.00	23.40	V
17901.740	50.50	-29.33	45.95	33.87	74.00	23.50	V
17722.560	50.40	-29.67	45.25	34.82	74.00	23.60	V

Measurement results for Set.2:
Charing Mode/Average detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17906.500	41.30	-29.33	45.95	24.67	54.00	12.70	V
17377.460	41.00	-29.97	43.36	27.61	54.00	13.00	V
17444.100	40.90	-29.87	44.35	26.42	54.00	13.10	V
17445.120	40.90	-29.87	44.35	26.42	54.00	13.10	H
17904.800	40.90	-29.33	45.95	24.27	54.00	13.10	V
17375.760	40.70	-29.97	43.36	27.31	54.00	13.30	H

Charging Mode/Peak detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17498.160	51.40	-29.77	44.35	36.82	74.00	22.60	V
17895.960	51.20	-29.53	45.95	34.78	74.00	22.80	H
17906.840	51.10	-29.33	45.95	34.47	74.00	22.90	H
17462.800	50.90	-30.06	44.35	36.60	74.00	23.10	V
17421.660	50.90	-29.71	44.35	36.26	74.00	23.10	V
17972.120	50.70	-29.06	46.66	33.10	74.00	23.30	H

Measurement results for Set.3:
Charging Mode/Average detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17912.280	41.30	-29.33	45.95	24.67	54.00	12.70	V
17913.300	41.30	-29.33	45.95	24.67	54.00	12.70	H
17893.240	41.00	-29.53	45.95	24.58	54.00	13.00	H
17882.700	40.90	-29.53	45.95	24.48	54.00	13.10	V
17457.700	40.80	-29.87	44.35	26.32	54.00	13.20	H
17797.020	40.80	-29.89	45.95	24.73	54.00	13.20	H

Charging Mode/Peak detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17833.400	51.00	-29.68	45.95	34.72	74.00	23.00	H
17891.880	51.00	-29.53	45.95	34.58	74.00	23.00	V
17366.240	50.90	-29.97	43.36	37.51	74.00	23.10	V
17974.840	50.90	-29.06	46.66	33.30	74.00	23.10	H
17389.360	50.70	-29.83	44.35	36.18	74.00	23.30	H
17986.400	50.70	-29.06	46.66	33.10	74.00	23.30	H

Measurement results for Set.4:
DATA Transmission Mode/Average detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17798.380	40.40	-29.89	45.95	24.33	54.00	13.60	H
17384.260	40.30	-29.83	43.36	26.77	54.00	13.70	V
17988.100	40.30	-29.06	46.66	22.70	54.00	13.70	H
17358.420	40.30	-29.97	43.36	26.91	54.00	13.70	V
17449.880	40.30	-29.87	44.35	25.82	54.00	13.70	V
17884.060	40.20	-29.53	45.95	23.78	54.00	13.80	H

DATA Transmission Mode/Peak detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17981.640	51.20	-29.06	46.66	33.60	74.00	22.80	V
17703.860	51.00	-29.73	45.25	35.49	74.00	23.00	V
17012.300	50.90	-29.77	41.49	39.18	74.00	23.10	V
17680.740	50.50	-29.98	45.25	35.23	74.00	23.50	V
17721.880	50.30	-29.67	45.25	34.72	74.00	23.70	H
17684.820	50.30	-29.98	45.25	35.03	74.00	23.70	V

Measurement results for Set.5:
Data Transmission Mode/Average detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17991.160	43.00	-29.06	46.66	25.40	54.00	11.00	V
17364.200	42.70	-29.97	43.36	29.31	54.00	11.30	V
17414.860	42.70	-29.44	44.35	27.79	54.00	11.30	H
17400.580	42.70	-29.44	44.35	27.79	54.00	11.30	H
17995.240	42.60	-29.06	46.66	25.00	54.00	11.40	H
17744.660	42.50	-29.61	45.95	26.16	54.00	11.50	H

Data Transmission Mode/Peak detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17664.080	53.80	-29.90	45.25	38.45	74.00	20.20	H
17469.260	53.50	-30.06	44.35	39.20	74.00	20.50	H
17933.360	53.30	-29.40	46.66	36.04	74.00	20.70	V
17871.140	53.20	-29.39	45.95	36.64	74.00	20.80	V
17440.700	53.20	-29.87	44.35	38.72	74.00	20.80	V
17230.580	53.20	-29.57	43.36	39.41	74.00	20.80	H

Measurement results for Set.1:

Full Spectrum

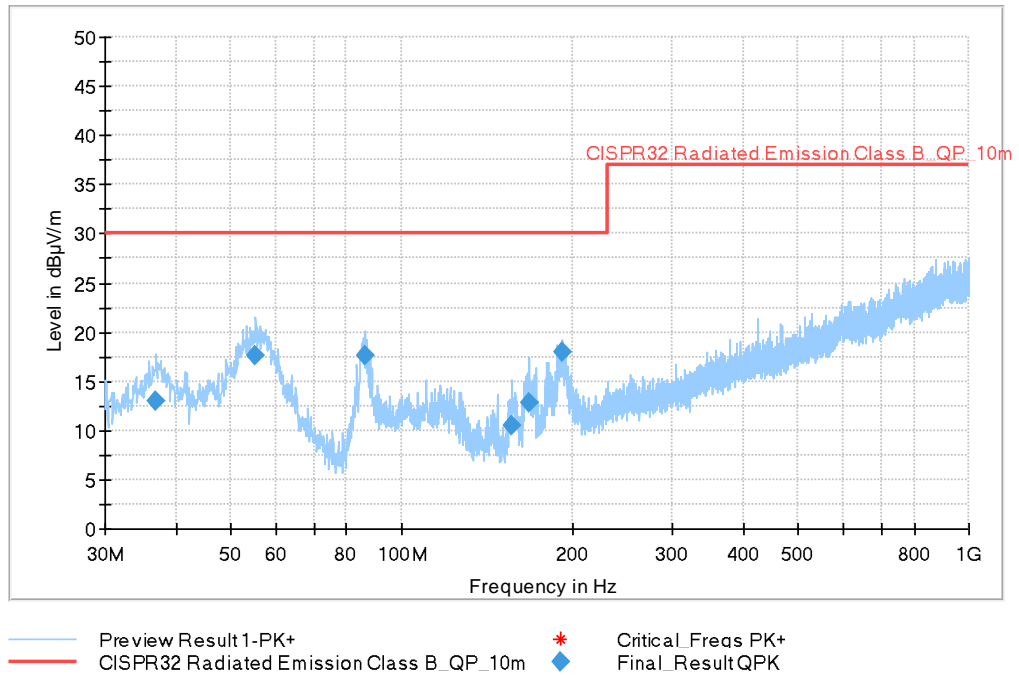


Fig A.1 Radiated Emission from 30MHz to 1GHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	PoI	Azimuth (deg)	Corr. (dB/m)
36.887000	12.95	30.00	17.05	120.000	125.0	V	135.0	-13.4
55.317000	17.59	30.00	12.41	120.000	100.0	V	278.0	-11.2
86.357000	17.63	30.00	12.37	120.000	125.0	V	279.0	-15.9
156.197000	10.41	30.00	19.59	120.000	108.0	V	-4.0	-15.2
167.837000	12.73	30.00	17.27	120.000	125.0	V	73.0	-14.6
191.505000	18.02	30.00	11.98	120.000	125.0	V	36.0	-12.4

Full Spectrum

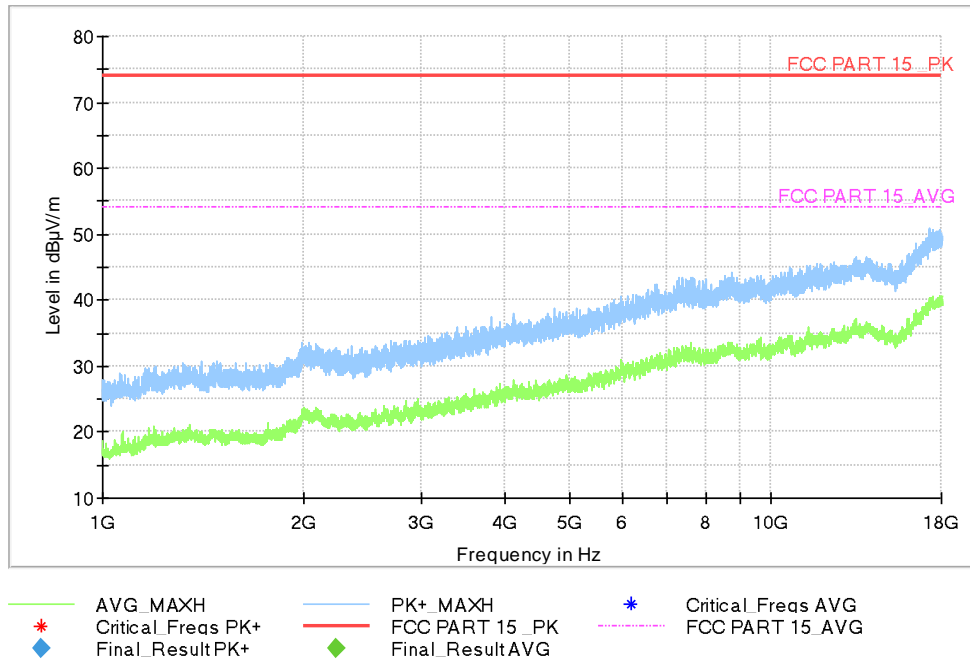


Fig A.2 Radiated Emission from 1GHz to 18GHz

Measurement results for Set.2:

Full Spectrum

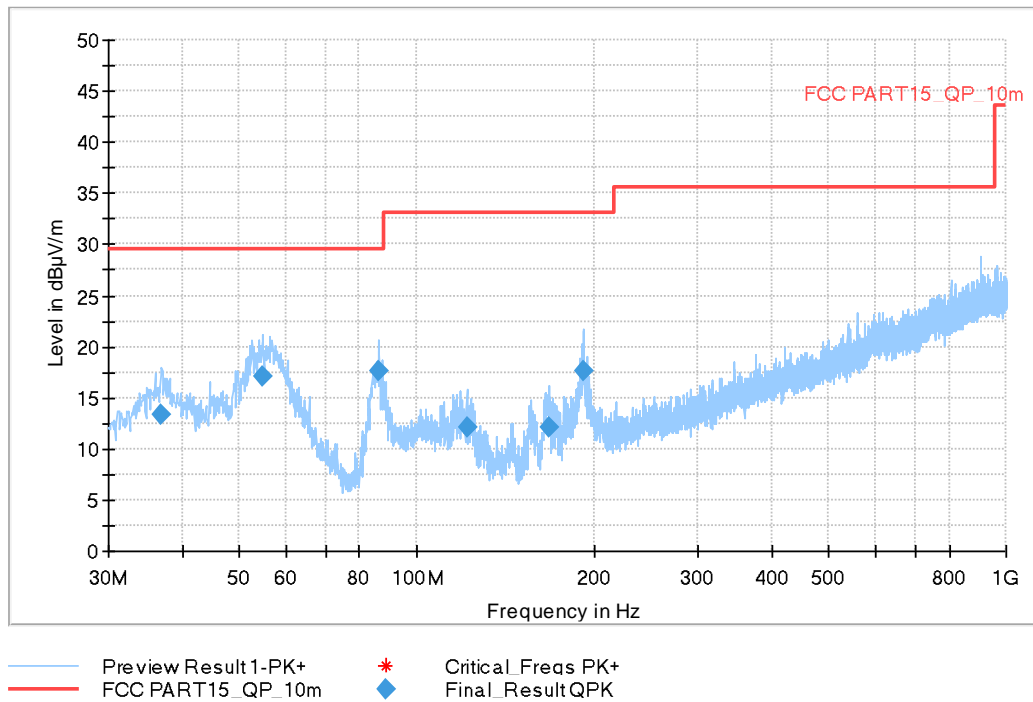


Fig A.3 Radiated Emission from 30MHz to 1GHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
36.887000	13.43	29.54	16.11	120.000	283.0	V	135.0	-13.4
54.832000	17.00	29.54	12.54	120.000	100.0	V	-31.0	-11.1
86.260000	17.57	29.54	11.97	120.000	125.0	V	265.0	-16.0
121.568000	12.14	33.06	20.92	120.000	125.0	V	-5.0	-14.5
167.546000	12.05	33.06	21.01	120.000	100.0	V	59.0	-14.6
191.505000	17.66	33.06	15.40	120.000	175.0	V	35.0	-12.4

Full Spectrum

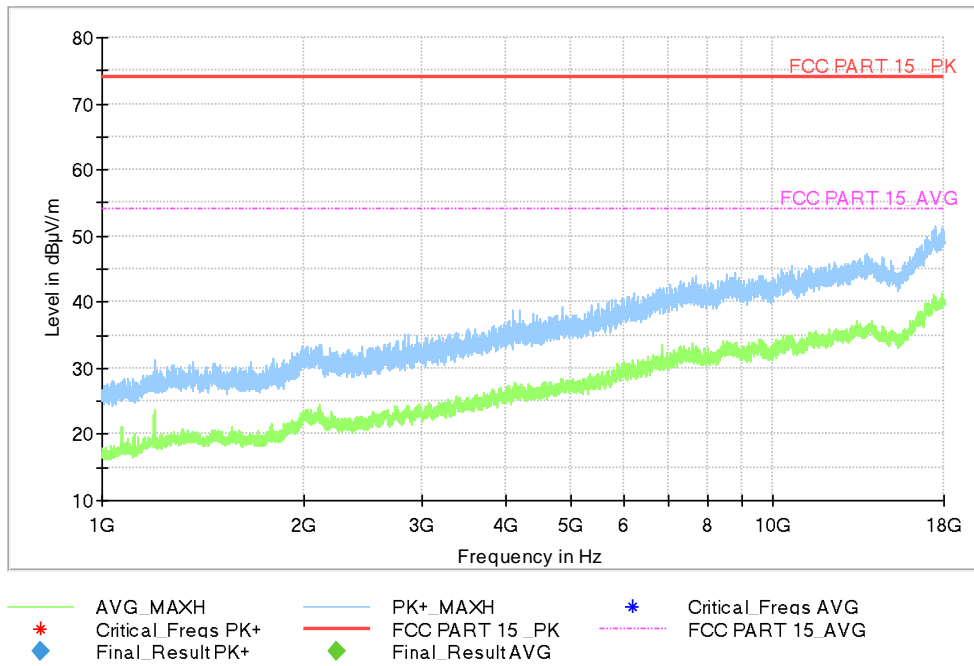


Fig A.4 Radiated Emission from 1GHz to 18GHz

Measurement results for Set.3:

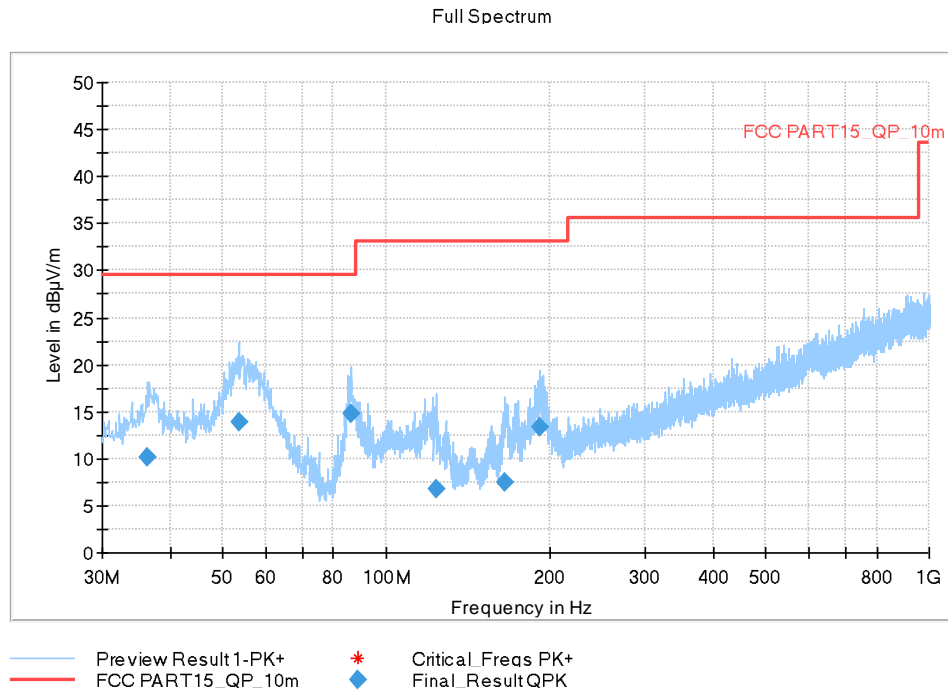


Fig A.5 Radiated Emission from 30MHz to 1GHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
36.305000	10.06	29.54	19.48	120.000	203.0	V	45.0	-13.7
53.474000	13.88	29.54	15.66	120.000	100.0	V	239.0	-11.1
86.163000	14.79	29.54	14.75	120.000	175.0	V	269.0	-16.0
123.508000	6.78	33.06	26.28	120.000	183.0	V	-45.0	-14.6
165.800000	7.54	33.06	25.52	120.000	125.0	V	-18.0	-14.7
191.505000	13.30	33.06	19.76	120.000	100.0	V	46.0	-12.4

Full Spectrum

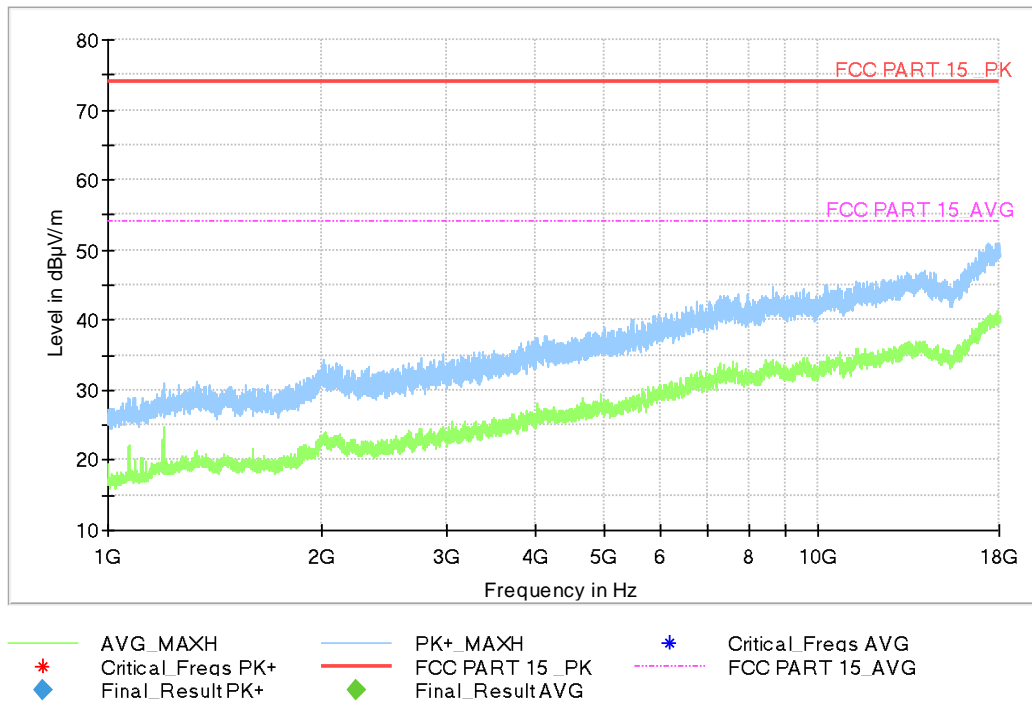
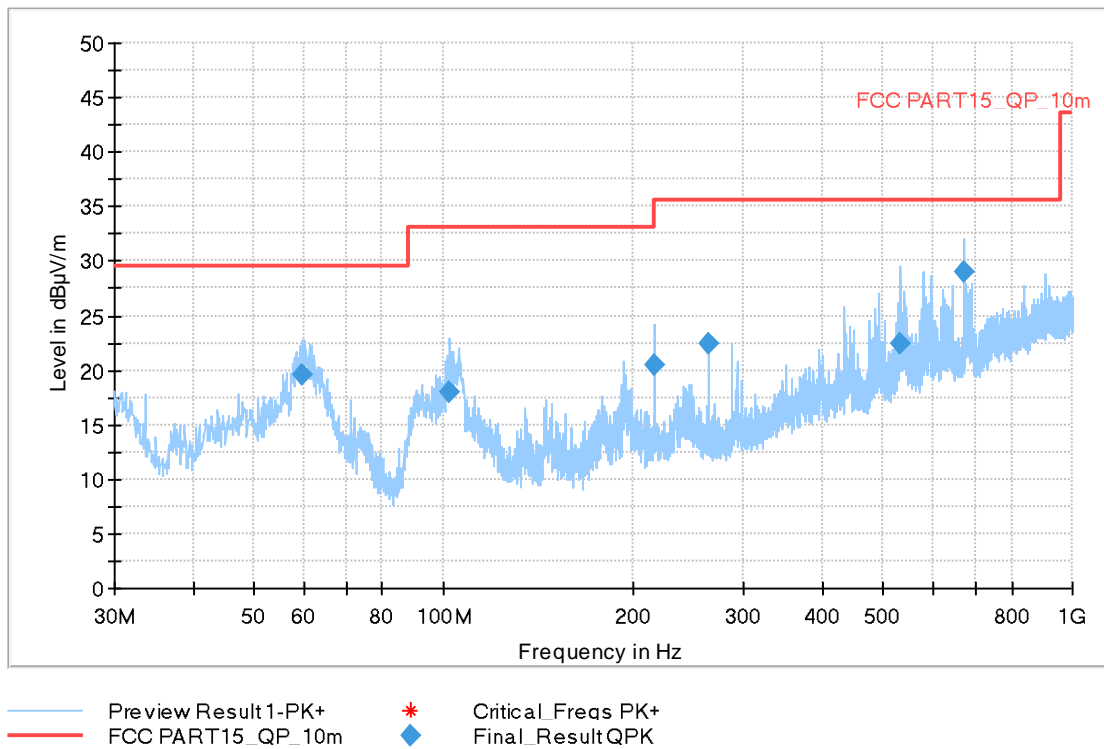


Fig A.6 Radiated Emission from 1GHz to 18GHz

Measurement results for Set.4:

Full Spectrum


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

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
59.779000	19.60	29.54	9.94	120.000	275.0	V	126.0	-11.8
102.459000	17.91	33.06	15.15	120.000	100.0	V	203.0	-12.3
215.949000	20.53	33.06	12.53	120.000	100.0	V	162.0	-11.9
263.964000	22.50	35.56	13.06	120.000	325.0	H	214.0	-9.9
532.072000	22.33	35.56	13.23	120.000	203.0	V	-31.0	-2.9
672.237000	28.97	35.56	6.59	120.000	183.0	V	-18.0	0.0

Full Spectrum

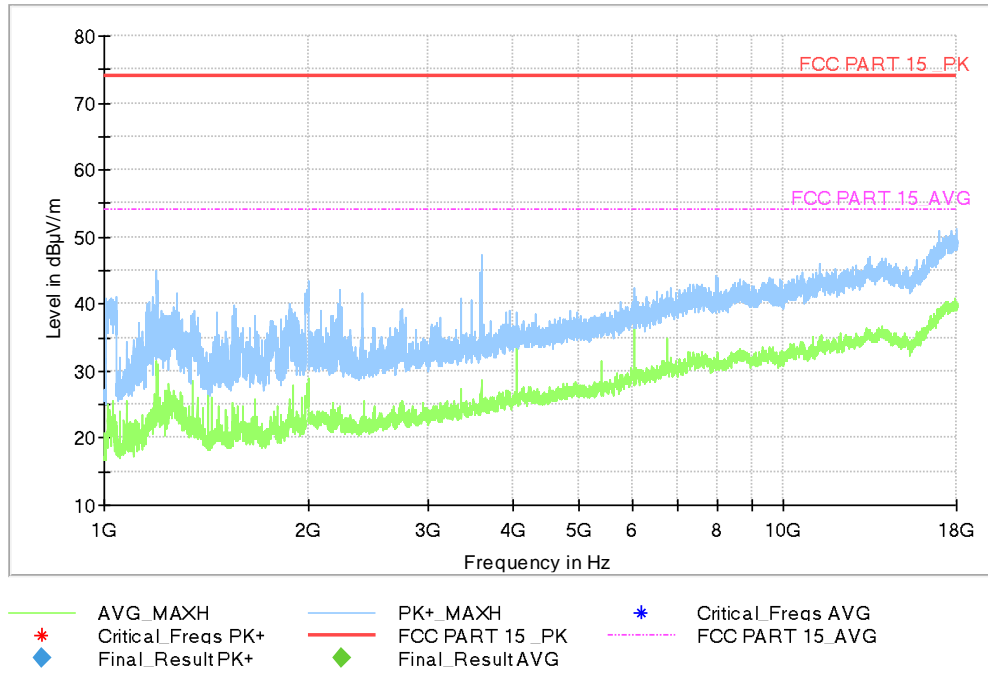


Fig A.8 Radiated Emission from 1GHz to 18GHz

Measurement results for Set.5:

Full Spectrum

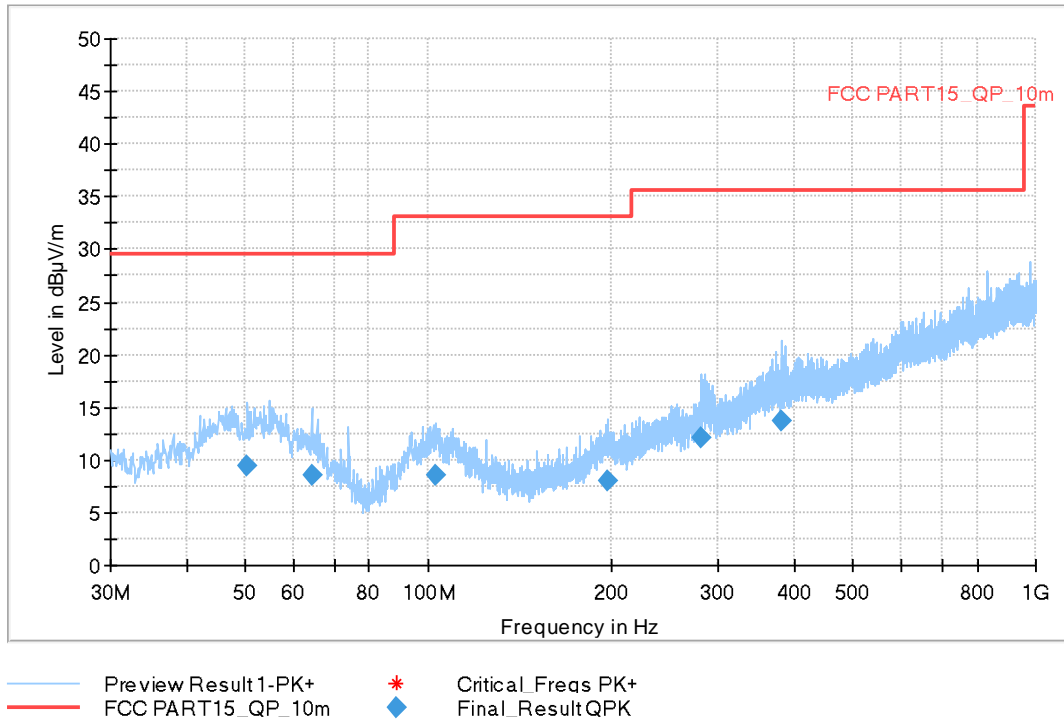


Fig A.9 Radiated Emission from 30MHz to 1GHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
50.467000	9.50	29.54	20.04	120.000	100.0	V	135.0	-10.8
64.338000	8.47	29.54	21.07	120.000	283.0	V	163.0	-13.0
102.556000	8.51	33.06	24.55	120.000	108.0	H	-32.0	-12.3
197.228000	8.03	33.06	25.03	120.000	100.0	H	59.0	-11.5
282.103000	12.18	35.56	23.38	120.000	225.0	H	60.0	-9.3
381.334000	13.66	35.56	21.90	120.000	125.0	V	225.0	-6.2

Full Spectrum

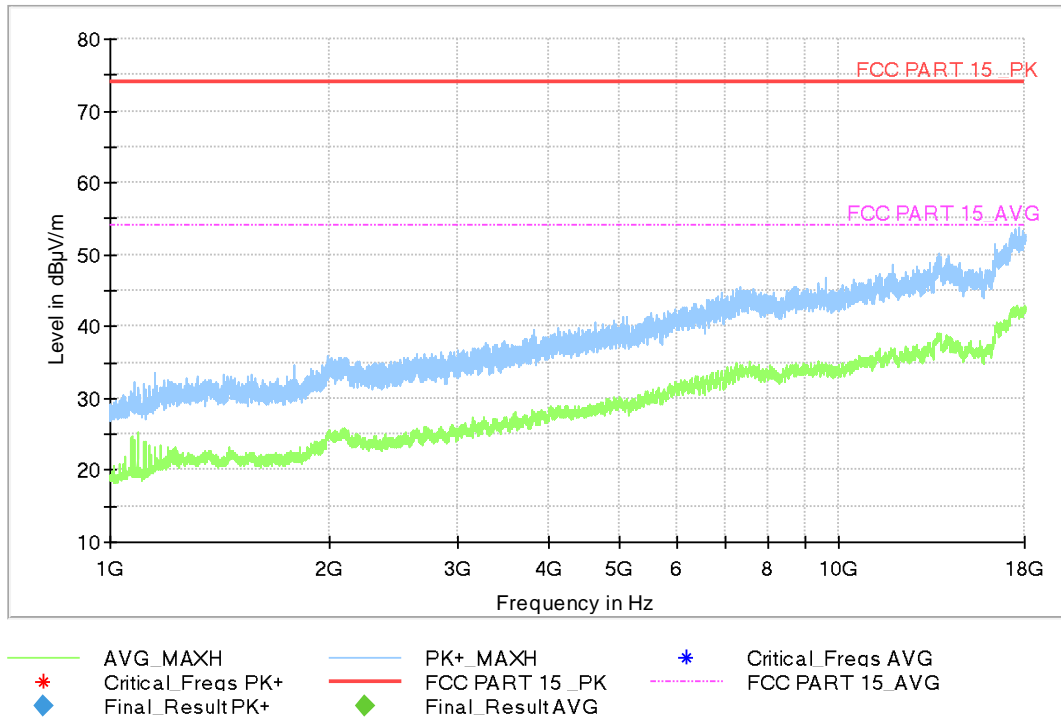


Fig A.10 Radiated Emission from 1GHz to 18GHz

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 (dB μ 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 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.1:

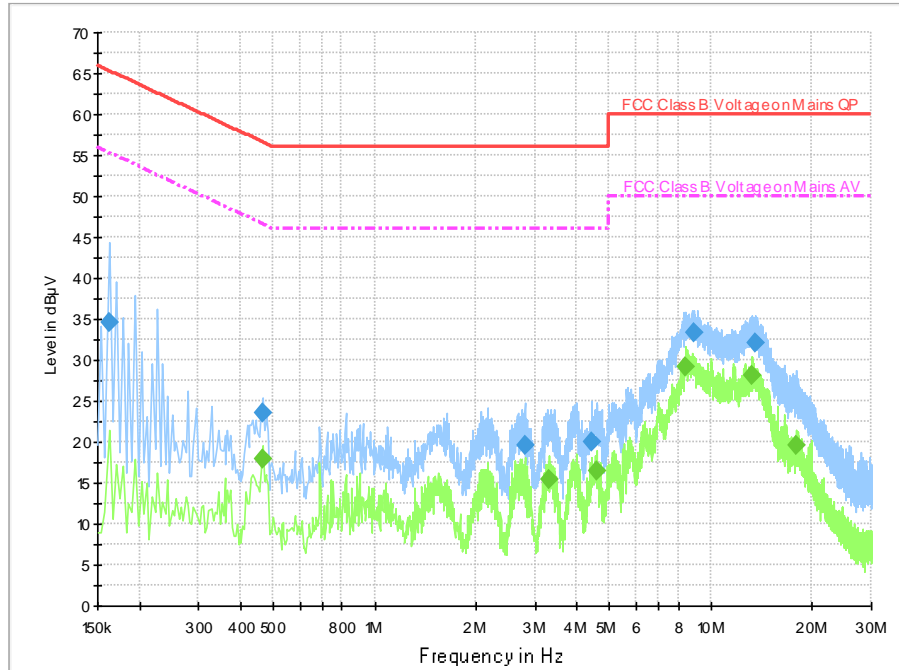


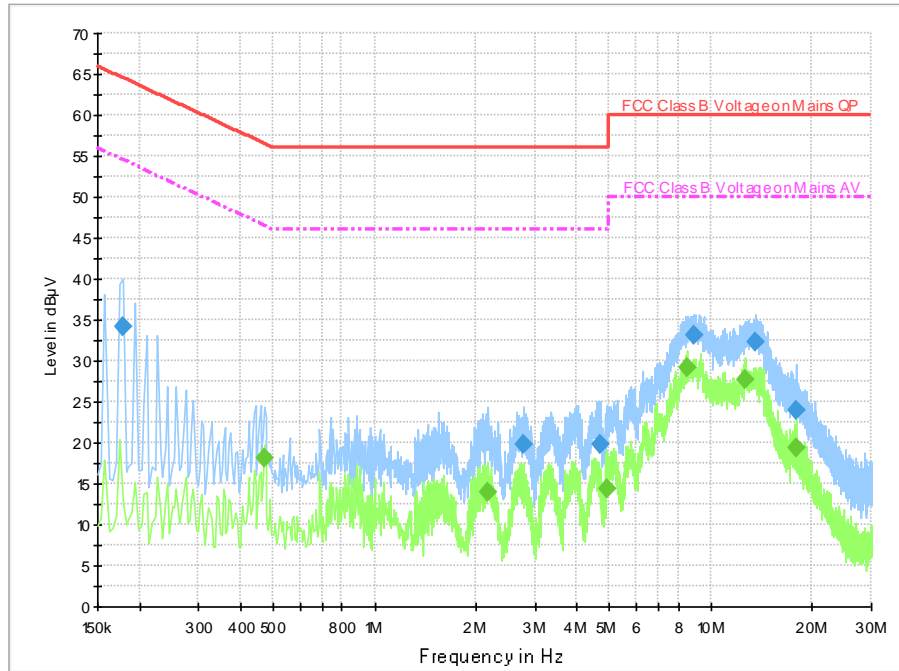
Fig A.11 Conducted Emission from 150kHz to 30MHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.162000	34.6	2000.0	9.000	On	L1	19.8	30.7	65.4	
0.466000	23.6	2000.0	9.000	On	N	19.7	33.0	56.6	
2.794000	19.6	2000.0	9.000	On	L1	19.6	36.4	56.0	
4.406000	20.0	2000.0	9.000	On	N	19.6	36.0	56.0	
8.870000	33.3	2000.0	9.000	On	N	19.6	26.7	60.0	
13.630000	32.1	2000.0	9.000	On	N	19.7	27.9	60.0	

Final Result 2

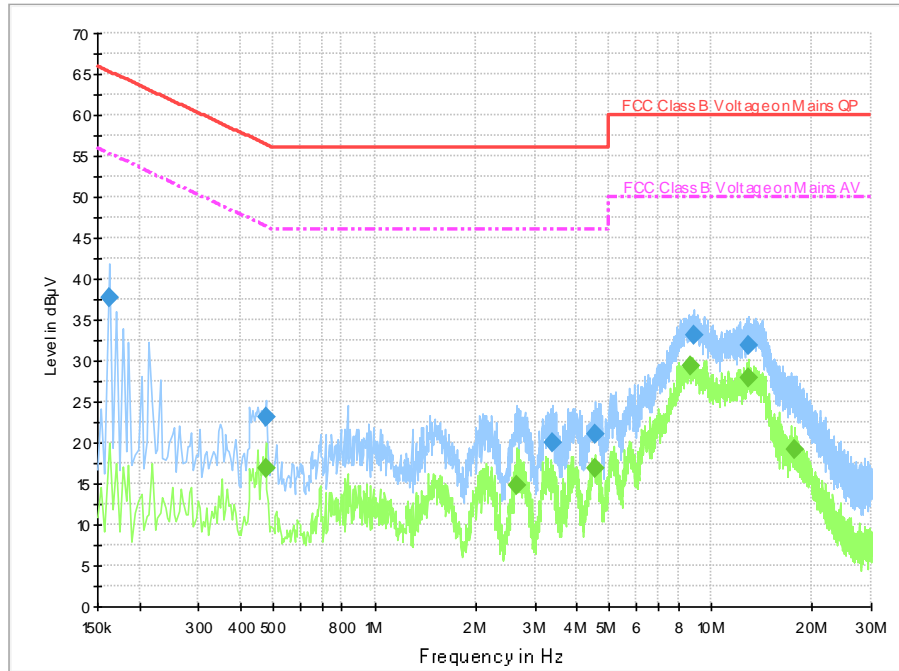
Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.466000	17.9	2000.0	9.000	On	N	19.7	28.7	46.6	
3.302000	15.4	2000.0	9.000	On	L1	19.6	30.6	46.0	
4.582000	16.5	2000.0	9.000	On	N	19.6	29.5	46.0	
8.430000	29.1	2000.0	9.000	On	N	19.6	20.9	50.0	
13.294000	28.2	2000.0	9.000	On	N	19.7	21.8	50.0	
17.866000	19.5	2000.0	9.000	On	N	19.7	30.5	50.0	

Charging Mode, Set.2:

Fig A.12 Conducted Emission from 150kHz to 30MHz
Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.178000	34.2	2000.0	9.000	On	N	19.7	30.4	64.6	
2.766000	19.8	2000.0	9.000	On	L1	19.6	36.2	56.0	
4.682000	19.7	2000.0	9.000	On	N	19.6	36.3	56.0	
8.862000	33.1	2000.0	9.000	On	N	19.6	26.9	60.0	
13.534000	32.3	2000.0	9.000	On	N	19.7	27.7	60.0	
17.966000	24.0	2000.0	9.000	On	N	19.7	36.0	60.0	

Final Result 2

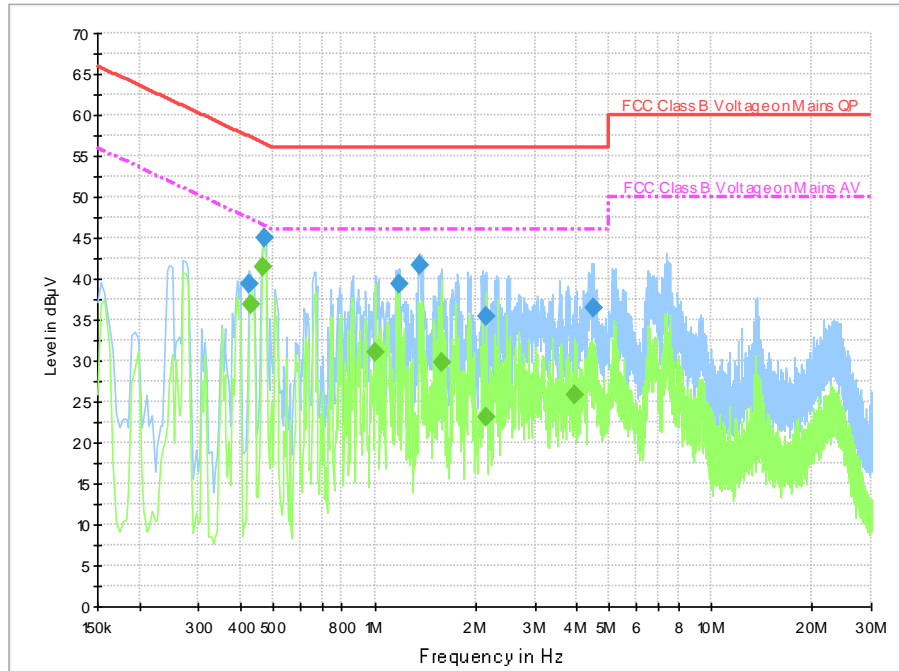
Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.470000	18.1	2000.0	9.000	On	N	19.7	28.5	46.5	
2.182000	13.9	2000.0	9.000	On	N	19.6	32.1	46.0	
4.890000	14.4	2000.0	9.000	On	N	19.6	31.6	46.0	
8.514000	29.1	2000.0	9.000	On	N	19.7	20.9	50.0	
12.598000	27.7	2000.0	9.000	On	N	19.7	22.3	50.0	
17.862000	19.4	2000.0	9.000	On	N	19.7	30.6	50.0	

Charging Mode, Set.3:

Fig A.13 Conducted Emission from 150kHz to 30MHz
Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.162000	37.8	2000.0	9.000	On	N	19.7	27.6	65.4	
0.474000	23.0	2000.0	9.000	On	N	19.7	33.4	56.4	
3.378000	20.0	2000.0	9.000	On	N	19.6	36.0	56.0	
4.534000	21.1	2000.0	9.000	On	N	19.6	34.9	56.0	
8.874000	33.2	2000.0	9.000	On	N	19.6	26.8	60.0	
12.930000	31.9	2000.0	9.000	On	N	19.7	28.1	60.0	

Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.474000	16.9	2000.0	9.000	On	N	19.7	29.5	46.4	
2.642000	14.8	2000.0	9.000	On	L1	19.6	31.2	46.0	
4.534000	16.8	2000.0	9.000	On	N	19.6	29.2	46.0	
8.718000	29.4	2000.0	9.000	On	N	19.7	20.6	50.0	
12.906000	28.0	2000.0	9.000	On	N	19.7	22.0	50.0	
17.698000	19.2	2000.0	9.000	On	N	19.7	30.8	50.0	

USB Mode, Set.4:

Fig A.14 Conducted Emission from 150kHz to 30MHz
Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.422000	39.4	2000.0	9.000	On	L1	19.7	18.0	57.4	
0.470000	44.9	2000.0	9.000	On	L1	19.7	11.6	56.5	
1.186000	39.3	2000.0	9.000	On	N	19.6	16.7	56.0	
1.354000	41.7	2000.0	9.000	On	L1	19.6	14.3	56.0	
2.146000	35.4	2000.0	9.000	On	L1	19.6	20.6	56.0	
4.474000	36.4	2000.0	9.000	On	N	19.6	19.6	56.0	

Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.430000	36.8	2000.0	9.000	On	N	19.7	10.5	47.3	
0.466000	41.6	2000.0	9.000	On	N	19.7	5.0	46.6	
1.006000	31.1	2000.0	9.000	On	L1	19.7	14.9	46.0	
1.578000	29.7	2000.0	9.000	On	L1	19.6	16.3	46.0	
2.146000	23.1	2000.0	9.000	On	L1	19.6	22.9	46.0	
3.918000	25.8	2000.0	9.000	On	N	19.6	20.2	46.0	

END OF REPORT