



FCC PART 15B TEST REPORT

No. 24T04Z101773-007

for

TCL Communication Ltd.

Smart Phone

T442J

FCC ID:2ACCJB227

with

Hardware Version: V1.0C

Software Version: 442JLA11_FCC

Issued Date: 2024-08-19

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:

CTTL-Telecommunication Technology Labs, CAICT

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

Tel:+86(0)10-62304633-2512, Fax:+86(0)10-62304633-2504

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



REPORT HISTORY

Report Number	Revision	Description	Issue Date
24T04Z101773-007	Rev.0	1 st edition	2024-08-08
24T04Z101773-007	Rev.1	2 nd edition	2024-08-19

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

CONTENTS

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

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

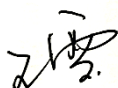
Relative Humidity: 20-75%

1.3. Project data

Testing Start Date: 2024-07-31

Testing End Date: 2024-08-07

1.4. Signature



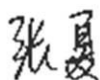
Wang Xue

(Prepared this test report)



Zhang Ying

(Reviewed this test report)



Zhang Xia

(Approved this test report)

2. Client Information

2.1. Applicant Information

Company Name: TCL Communication Ltd.
Address/Post: 5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science
Park, Shatin, NT, Hong Kong
City: Hong Kong
Postal Code: /
Country: China
Contact Person: Ting Wang
Contact Email: ting.wang.hz@tcl.com
Telephone: +86 752 2639091
Fax: 0086-755-36612000-81722

2.2. Manufacturer Information

Company Name: TCL Communication Ltd.
Address/Post: 5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science
Park, Shatin, NT, Hong Kong
City: Hong Kong
Postal Code: /
Country: China
Contact Person: Ting Wang
Contact Email: ting.wang.hz@tcl.com
Telephone: +86 752 2639091
Fax: 0086-755-36612000-81722

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

3.1. About EUT

Description	Smart Phone
Model Name	T442J
FCC ID:	2ACCJB227

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	353191950999706/	V1.0C	442JLA11_FCC
	353191950999714		
EUT2	353191950999979/	V1.0C	442JLA11_FCC
	353191950999961		
EUT3	353191950999359/	V1.0C	442JLA11_FCC
	353191950999367		

*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	Manufacturer	Remark
AE1-1	Battery1	TLp049HB	Shenzhen Aerospace Electronic Co.,Ltd.	/
AE1-2	Battery1	VK-LI-050385A N01	Ningbo Veken Battery Co., Ltd.	/
AE2-1	Charger1	UT-681A-5100UY	ShenZhen BaiJunDa Electronic Co.,Ltd	/
AE3-1	Charger2	CG10A0502000UU	Huizhou Juwei Electronics Co.,Ltd	/
AE2-2	Charger3	UT-681E-5200MY	ShenZhen BaiJunDa Electronic Co.,Ltd	Require no test
AE2-3	Charger4	UT-681B-5200MY	ShenZhen BaiJunDa Electronic Co.,Ltd	Require no test
AE2-4	Charger5	UT-680S-5200MY	ShenZhen BaiJunDa Electronic Co.,Ltd	Require no test
AE2-5	Charger6	UT-680T-5200MY	ShenZhen BaiJunDa Electronic Co.,Ltd	Require no test
AE3-2	Charger7	CG10A0502000EU	Huizhou Juwei Electronics Co.,Ltd	Require no test
AE4	USB Cable1	JWUB1686-M01R	Huizhou Juwei Electronics Co.,Ltd	/
AE5	Headset	JWEP1295-M01R	Huizhou Juwei Electronics Co.,Ltd	/

*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 + AE1-1 +AE2-1+AE4	Charger1+F Camera + GSM850idle
Set.2	EUT1 + AE1-1 +AE3-1+AE4	Charger2 + R Camera + WCDMA B5 idle
Set.3	EUT1 + AE1-1 +AE4+AE5+PC	USB+LTE B5 idle+FM
Set.4	EUT1 + EUT2 + Cable	OTG
Set.5	EUT3 + AE1-2 +AE2-1+AE4	Charing mode

Note:

Equipment Under Test (EUT) is a model of smart phone.

It supports

GSM Band	GSM 850/900 DCS1800 PCS1900
UMTS Band	FDD I(W2100)/FDD Band II(W1900) /FDD Band IV(W1700)/FDD V(W850)
LTE Band	FDD Bands 1/2/3/4/5/7/8/12/13/17/26/28/66, TDD Bands 38/40/41

It has MP3, Camera, USB memory, Bluetooth V4.2, Wi-Fi (802.11b/g/n) function.

The device contains receivers which tune and operate between 30MHz-960MHz in the following mode: GSM850, WCDMA850, LTE Band 5/12/13/17/26/28, FM Rx. 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. 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)

6. Test Equipments Utilized

NO.	Description	TYPE	SERIES NUMBER	MANUFACTURE	CAL DUE DATE	CALIBRATION INTERVAL
1	Test Receiver	ESW44	103023	R&S	2025-06-06	1 year
2	Test Receiver	ESCI 3	100344	R&S	2025-04-01	1 year
3	LISN	ENV216	101200	R&S	2025-05-16	1 year
4	EMI Antenna	VULB 9163	01223	SCHWARZBECK	2025-07-18	2 years
5	EMI Antenna	3115	00167250	ETS-Lindgren	2025-04-11	1 year
6	Universal Communication Tester	CMW500	150344	R&S	2025-01-03	1 year
7	Signal Generator	SMBV100A	260613	R&S	2025-01-18	1 year

Test software information		
Test Item	Software	Version
Radiated Emission	EMC32	V11.50.00
Conducted Emission	EMC32	V8.53.00

Semi-anechoic chamber utilized did not exceed following limits along the testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 15 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz, >60dB; 1MHz - 1000MHz, >90dB.
Electrical insulation	> 2 MΩ
Ground system resistance	< 4 Ω
Normalised site attenuation (NSA)	< ±4 dB, 10 m distance
Site voltage standing-wave ratio (S_{VSWR})	Between 0 and 6 dB, from 1GHz to 6GHz

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

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

7. Measurement Uncertainty

Where relevant, the following measurement uncertainty(worse case) levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Location 1: CTTL(huayuan North Road)

Test item	Frequency ranges	Measurement uncertainty
Radiated Emission	30MHz-1GHz	4.72dB($k=2$)
	1GHz-18GHz	4.84dB($k=2$)
Conducted Emission	150kHz-30MHz	AC Power Line: 3.08dB($k=2$)

ANNEX A: MEASUREMENT RESULTS

A.1 Radiated Emission

Reference

FCC: CFR Part 15.109(a).

A.1.1 Method of measurement

The field strength of radiated emissions from the unintentional radiator (USB/OTG 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 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 the other device for charging in OTG 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.

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.

A.1.3 Measurement Limit

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

Note: the above limit is for 3 meters test distance. 10 meters' limit is got by converting.

A.1.4 Test Condition

Frequency range (MHz)	RBW/VBW	Sweep Time (s)	Detector
30-1000	120kHz (IF Bandwidth)	5	Peak/Quasi-peak
Above 1000	1MHz/3MHz	15	Peak, Average

A.1.5 Measurement Results

A "reference path loss" is established and the A_{Rpl} is the attenuation of "reference path loss". It includes the antenna factor of receive antenna and the path loss.

The measurement results are obtained as described below:

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

Where

G_A : Antenna factor of receive antenna

G_{PL} : Path Loss

P_{Mea} : Measurement result on receiver.

Measurement results for Set.1:

Charing Mode/Average detector

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17928.260	43.60	-24.44	42.33	25.71	54.00	10.40	H
17938.120	43.50	-24.44	42.33	25.61	54.00	10.50	V
17918.400	43.40	-24.28	42.33	25.35	54.00	10.60	H
17963.960	43.30	-24.11	42.33	25.08	54.00	10.70	H
17933.020	43.30	-24.44	42.33	25.41	54.00	10.70	V
17948.660	43.30	-24.27	42.33	25.24	54.00	10.70	H

Charging Mode/Peak detector

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17959.540	54.80	-24.27	42.33	36.74	74.00	19.20	H
17994.220	54.50	-23.94	42.33	36.12	74.00	19.50	V
17969.400	54.40	-24.11	42.33	36.18	74.00	19.60	V
17915.680	54.30	-24.28	42.33	36.25	74.00	19.70	H
17977.560	54.30	-24.11	42.33	36.08	74.00	19.70	V
17892.900	54.20	-24.00	42.24	35.96	74.00	19.80	H

Measurement results for Set.2:
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)
17958.860	43.90	-24.27	42.33	25.84	54.00	10.10	V
17905.140	43.30	-24.28	42.24	25.34	54.00	10.70	H
17915.340	43.30	-24.28	42.33	25.25	54.00	10.70	H
17890.860	43.30	-24.00	42.24	25.06	54.00	10.70	H
17913.640	43.30	-24.28	42.24	25.34	54.00	10.70	V
17986.060	43.20	-23.94	42.33	24.82	54.00	10.80	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)
17933.360	54.70	-24.44	42.33	36.81	74.00	19.30	V
17916.360	54.70	-24.28	42.33	36.65	74.00	19.30	H
17989.120	54.00	-23.94	42.33	35.62	74.00	20.00	V
17734.800	54.00	-22.11	42.10	34.01	74.00	20.00	V
17991.160	53.90	-23.94	42.33	35.52	74.00	20.10	V
17975.860	53.70	-24.11	42.33	35.48	74.00	20.30	V

Measurement results for Set.3:
USB 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)
17941.860	44.50	-24.27	42.33	26.44	54.00	9.50	V
17958.860	44.40	-24.27	42.33	26.34	54.00	9.60	V
17919.760	44.20	-24.28	42.33	26.15	54.00	9.80	V
17862.640	44.20	-23.71	42.24	25.67	54.00	9.80	H
17934.380	44.10	-24.44	42.33	26.21	54.00	9.90	H
17920.440	44.10	-24.44	42.33	26.21	54.00	9.90	V

USB 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)
17899.360	54.80	-24.00	42.24	36.56	74.00	19.20	H
17962.940	54.80	-24.11	42.33	36.58	74.00	19.20	V
17892.220	54.50	-24.00	42.24	36.26	74.00	19.50	H
17391.400	54.30	-24.25	41.96	36.58	74.00	19.70	H
17939.480	54.30	-24.44	42.33	36.41	74.00	19.70	H
17911.260	54.10	-24.28	42.24	36.14	74.00	19.90	H

Measurement results for Set.4:
OTG 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)
17934.040	43.90	-24.44	42.33	26.01	54.00	10.10	V
17910.240	43.70	-24.28	42.24	25.74	54.00	10.30	V
17984.700	43.70	-23.94	42.33	25.32	54.00	10.30	H
17901.740	43.50	-24.28	42.24	25.54	54.00	10.50	H
17946.280	43.50	-24.27	42.33	25.44	54.00	10.50	V
17957.500	43.40	-24.27	42.33	25.34	54.00	10.60	H

OTG 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)
17894.600	54.60	-24.00	42.24	36.36	74.00	19.40	V
17983.680	54.30	-23.94	42.33	35.92	74.00	19.70	V
17958.180	54.20	-24.27	42.33	36.14	74.00	19.80	V
17915.680	54.10	-24.28	42.33	36.05	74.00	19.90	V
17918.400	54.00	-24.28	42.33	35.95	74.00	20.00	H
17952.740	54.00	-24.27	42.33	35.94	74.00	20.00	V

Measurement results for Set.5:
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)
17925.540	44.10	-26.85	42.33	28.62	54.00	9.90	H
17895.620	44.10	-27.07	42.24	28.94	54.00	9.90	H
17956.480	44.00	-27.02	42.33	28.69	54.00	10.00	H
17932.680	44.00	-26.85	42.33	28.52	54.00	10.00	V
17966.680	43.90	-27.19	42.33	28.76	54.00	10.10	H
17972.800	43.90	-27.19	42.33	28.76	54.00	10.10	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)
17941.520	54.80	-27.02	42.33	39.49	74.00	19.20	V
17986.060	54.40	-27.36	42.33	39.44	74.00	19.60	V
17405.680	54.30	-27.50	41.96	39.84	74.00	19.70	H
17949.000	54.30	-27.02	42.33	38.99	74.00	19.70	V
17980.280	54.30	-27.36	42.33	39.34	74.00	19.70	V
17561.060	54.10	-28.04	41.96	40.17	74.00	19.90	H

Measurement results for Set.1:

Full Spectrum

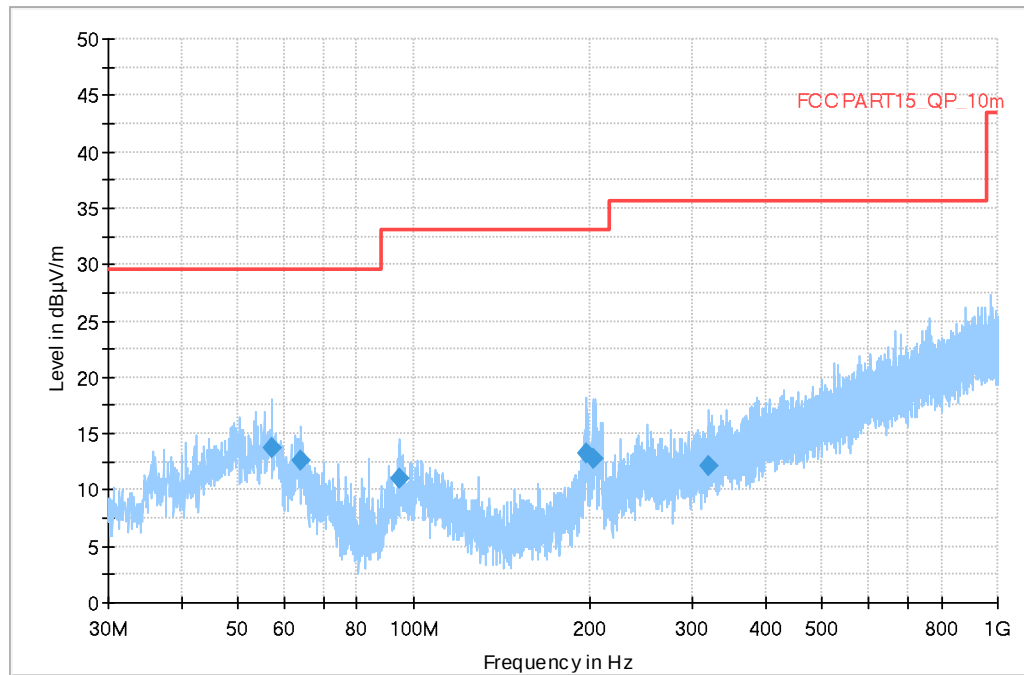


Fig A.1 Radiated Emission from 30MHz to 1GHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
57.014500	13.80	29.54	15.74	120.000	100.0	V	249.0
64.192500	12.56	29.54	16.98	120.000	100.0	V	21.0
94.844500	11.05	33.06	22.01	120.000	109.0	V	-22.0
197.567500	13.33	33.06	19.73	120.000	176.0	V	256.0
203.678500	12.70	33.06	20.36	120.000	225.0	V	248.0
320.127000	12.19	35.56	23.37	120.000	117.0	V	-45.0

Full Spectrum

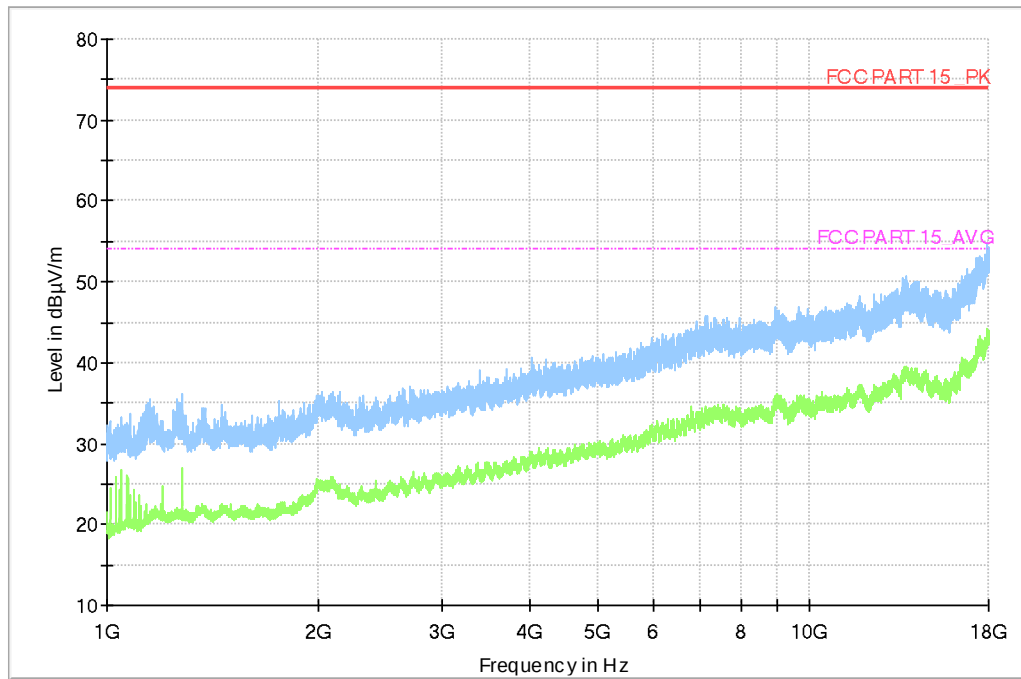


Fig A.2 Radiated Emission from 1GHz to 18GHz

Measurement results for Set.2:

Full Spectrum

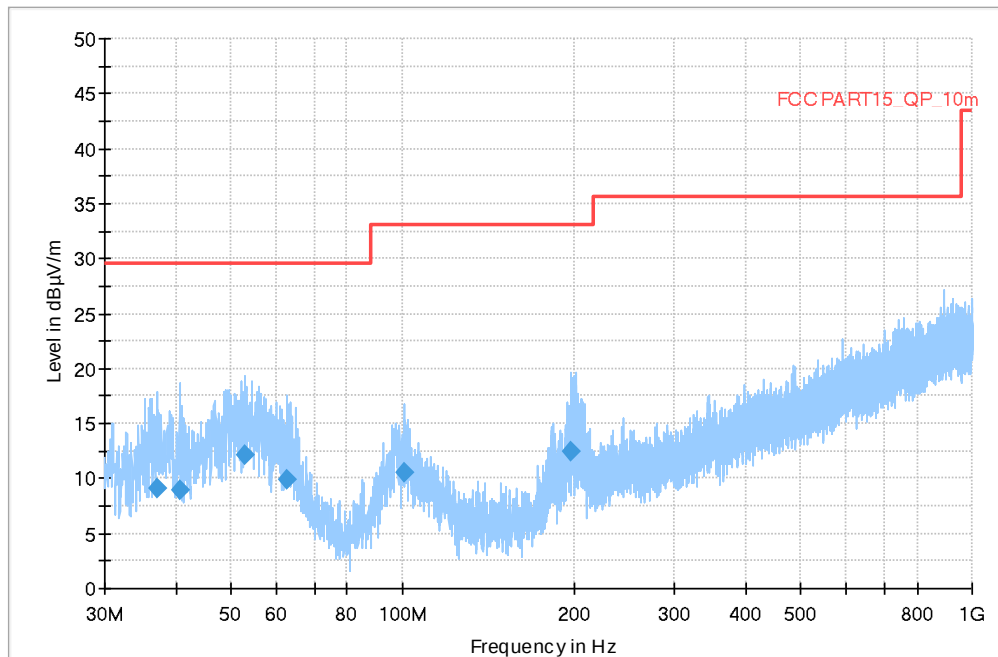


Fig A.3 Radiated Emission from 30MHz to 1GHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
37.178000	9.10	29.54	20.44	120.000	125.0	V	135.0
40.621500	8.95	29.54	20.59	120.000	225.0	V	45.0
52.795000	12.17	29.54	17.37	120.000	120.0	V	233.0
62.543500	9.92	29.54	19.62	120.000	175.0	V	47.0
100.664500	10.51	33.06	22.55	120.000	100.0	V	-45.0
198.004000	12.49	33.06	20.57	120.000	101.0	V	45.0

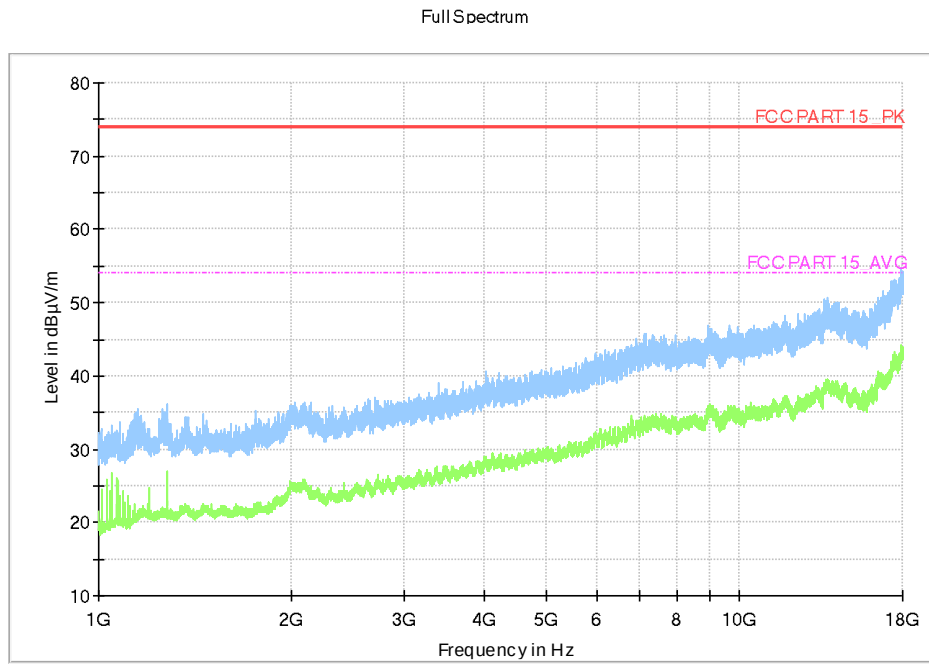


Fig A.4 Radiated Emission from 1GHz to 18GHz

Measurement results for Set.3:

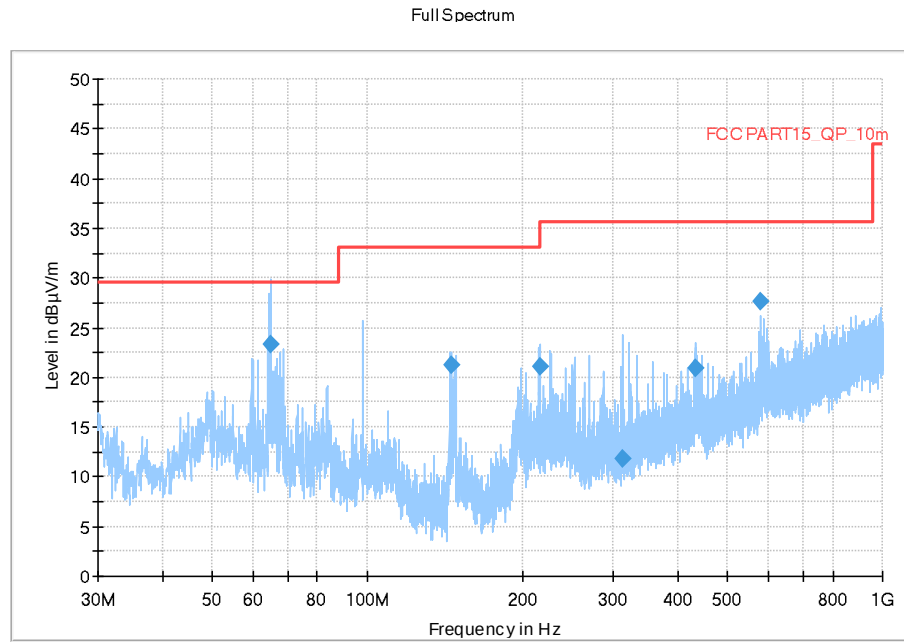


Fig A.5 Radiated Emission from 30MHz to 1GHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
64.774500	23.38	29.54	6.16	120.000	115.0	V	20.0
146.060500	21.17	33.06	11.89	120.000	100.0	V	-45.0
215.949000	21.14	33.06	11.92	120.000	123.0	V	135.0
313.579500	11.90	35.56	23.66	120.000	104.0	V	91.0
433.714000	20.94	35.56	14.62	120.000	176.0	H	86.0
579.068500	27.68	35.56	7.88	120.000	225.0	V	310.0

Full Spectrum

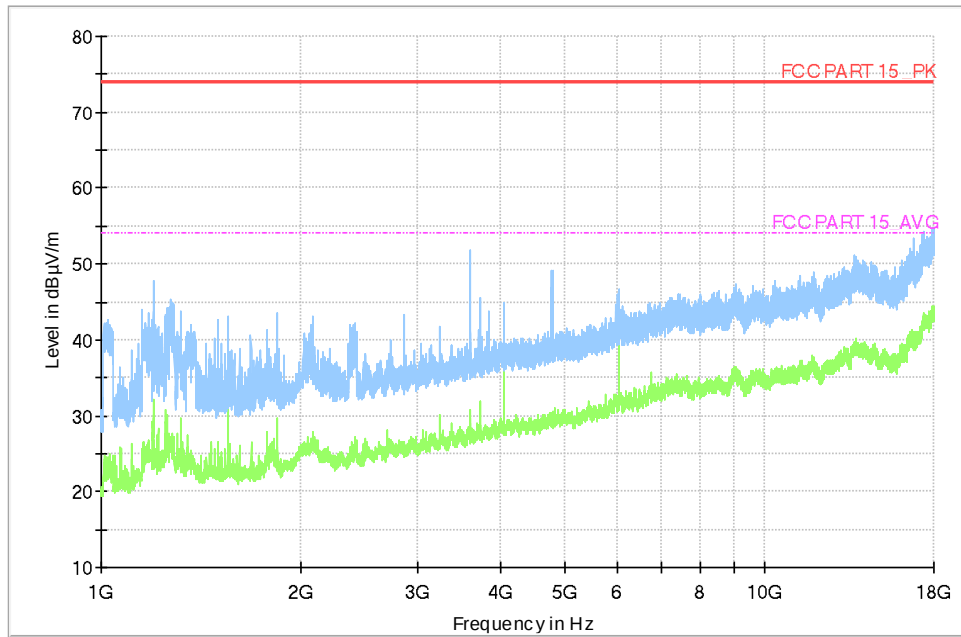


Fig A.6 Radiated Emission from 1GHz to 18GHz

Measurement results for Set.4:

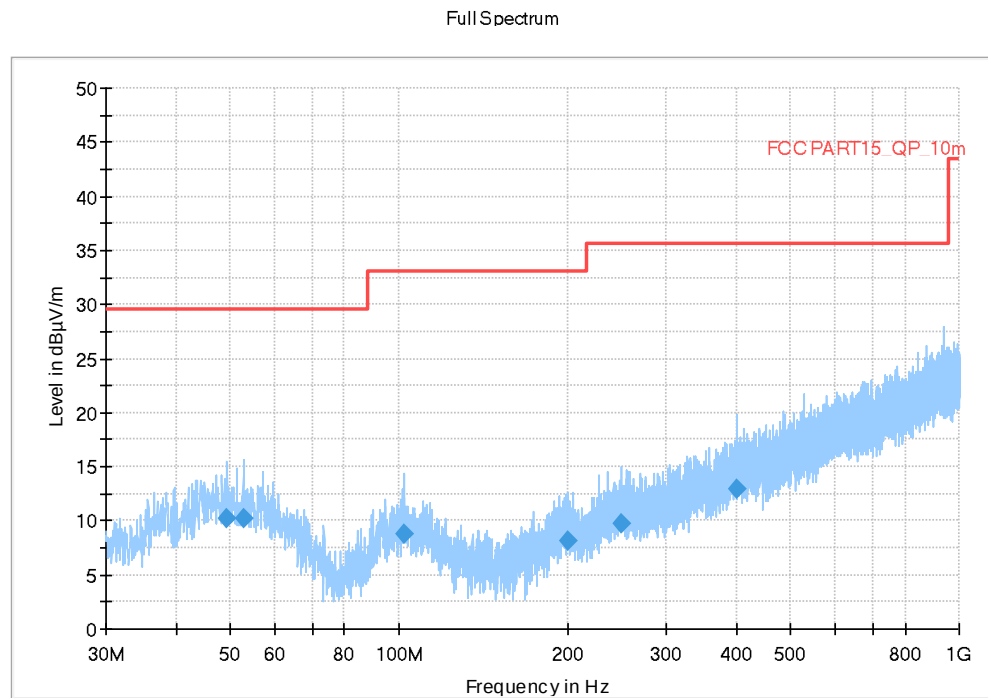


Fig A.7 Radiated Emission from 30MHz to 1GHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
49.400000	10.21	29.54	19.33	120.000	104.0	V	-45.0
52.843500	10.17	29.54	19.37	120.000	325.0	H	-43.0
102.022500	8.84	33.06	24.22	120.000	100.0	V	45.0
199.701500	8.11	33.06	24.95	120.000	276.0	H	135.0
249.074500	9.72	35.56	25.84	120.000	123.0	H	15.0
401.898000	12.89	35.56	22.67	120.000	184.0	V	135.0

Full Spectrum

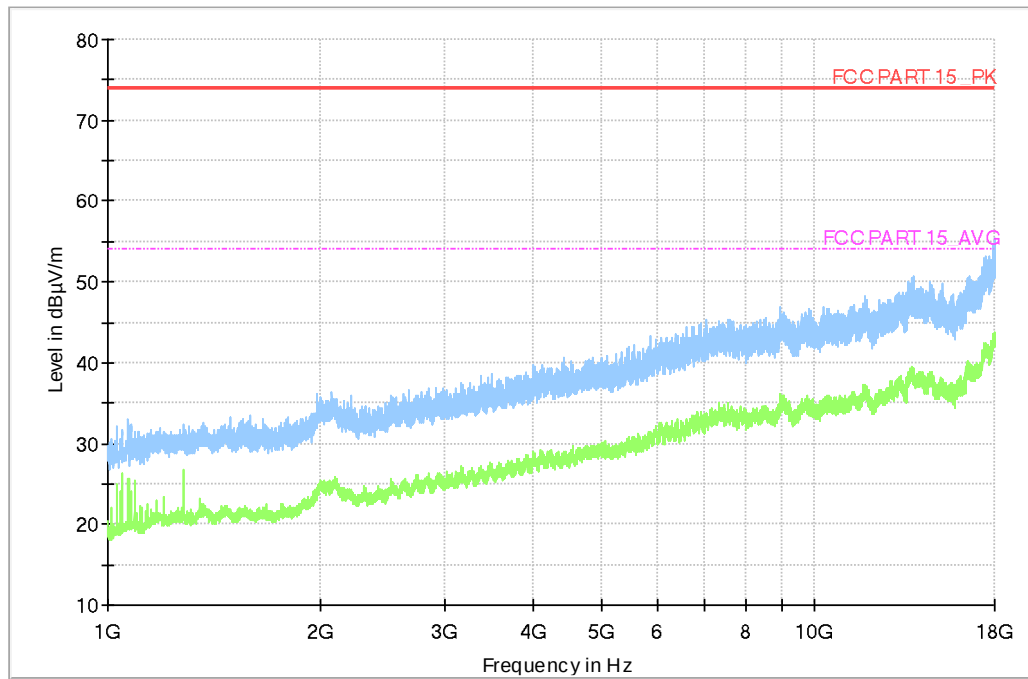


Fig A.8 Radiated Emission from 1GHz to 18GHz

Measurement results for Set.5:

Full Spectrum

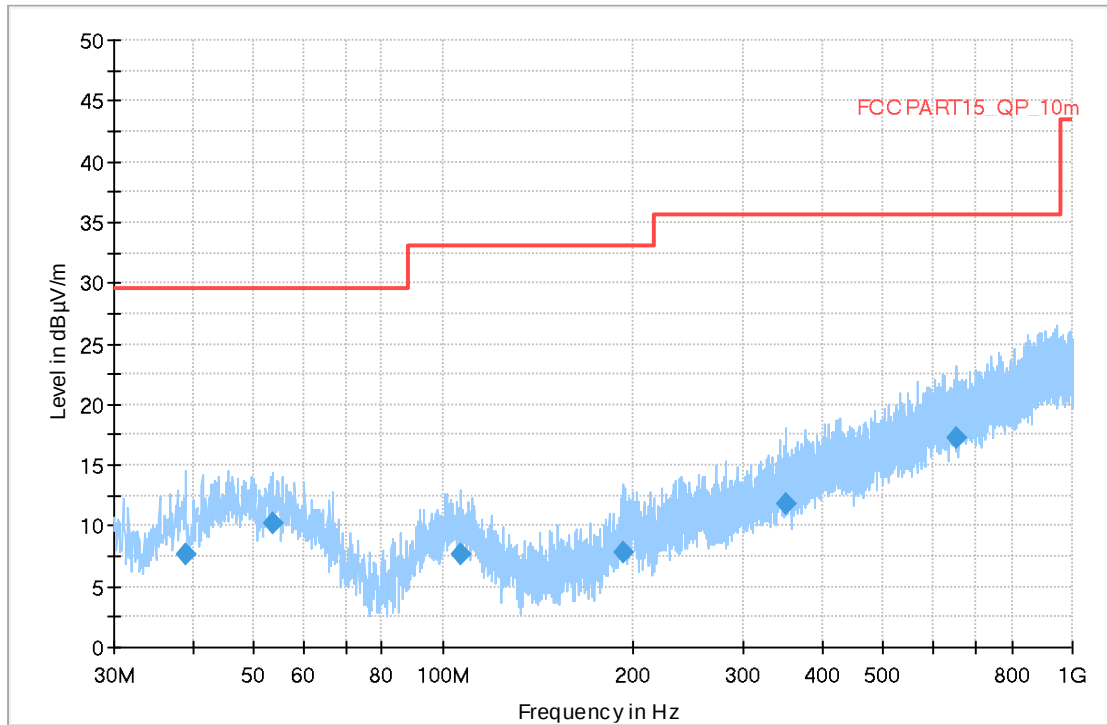


Fig A.9 Radiated Emission from 30MHz to 1GHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
38.924000	7.62	29.54	21.92	120.000	379.0	H	104.0
53.571000	10.20	29.54	19.34	120.000	325.0	V	210.0
106.872500	7.63	33.06	25.43	120.000	375.0	V	105.0
193.687500	7.90	33.06	25.16	120.000	199.0	V	125.0
350.051500	11.75	35.56	23.81	120.000	175.0	V	135.0
651.915500	17.29	35.56	18.27	120.000	379.0	H	284.0

Full Spectrum

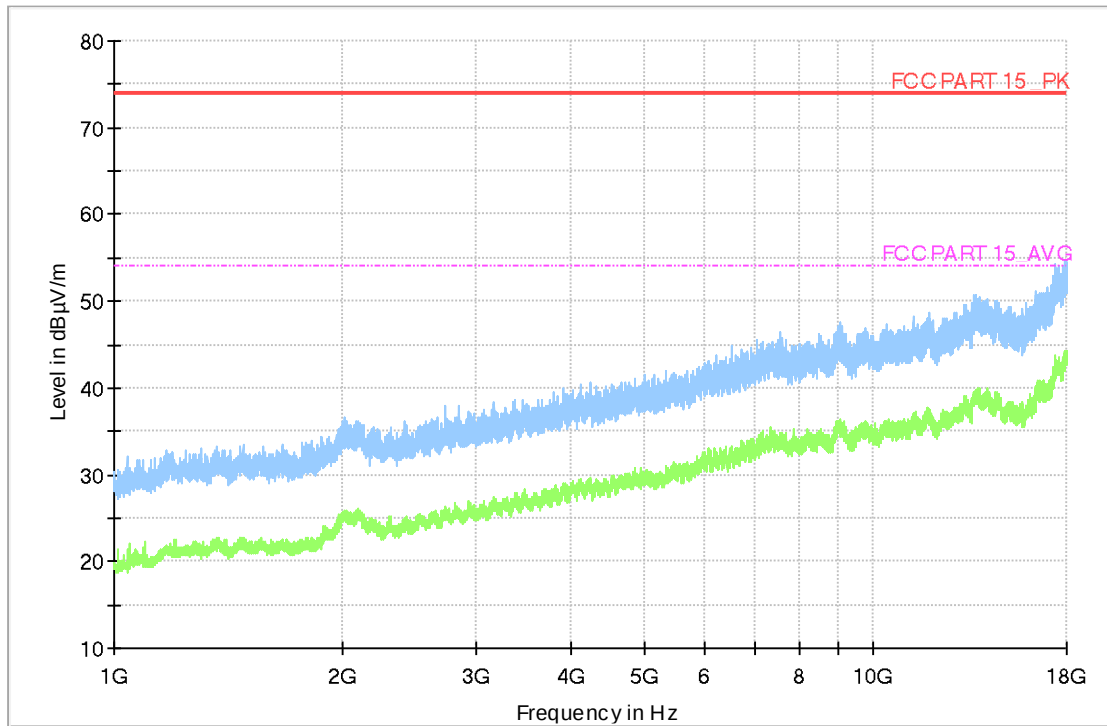


Fig A.10 Radiated Emission from 1GHz to 18GHz

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 (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50
*Decreases with the logarithm of the frequency		

A.2.4 Test Condition in charging mode

Voltage (V)	Frequency (Hz)
120	60

RBW/IF bandwidth	Sweep Time(s)
9kHz	1

A.2.5 Measurement Results

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

Charging Mode, Set.1:

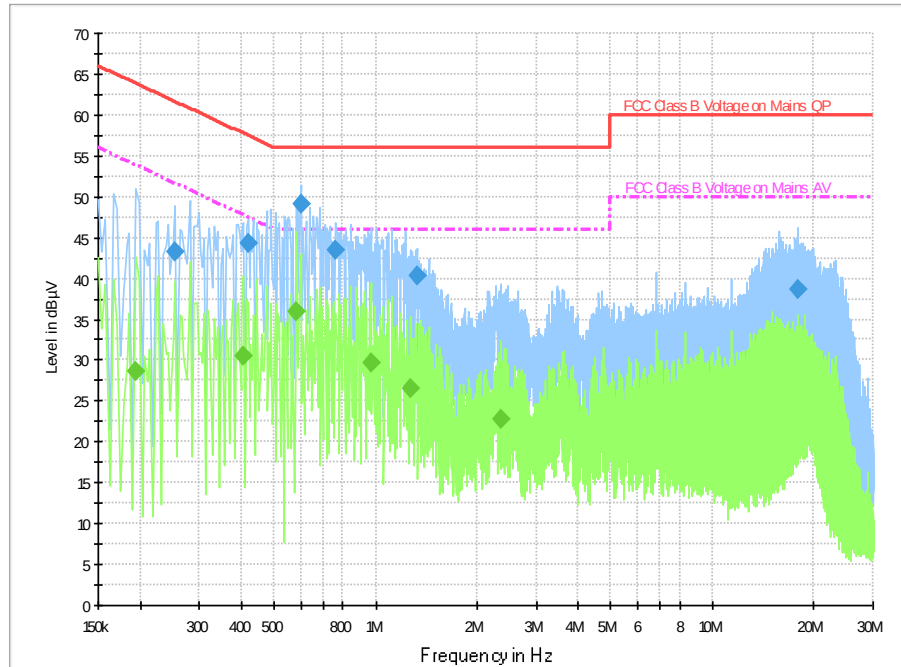


Fig A.11 Conducted Emission from 150kHz to 30MHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.254000	43.2	2000.0	9.000	On	L1	19.9	18.4	61.6	
0.418000	44.3	2000.0	9.000	On	L1	20.0	13.1	57.5	
0.598000	49.1	2000.0	9.000	On	L1	20.0	6.9	56.0	
0.762000	43.5	2000.0	9.000	On	L1	19.9	12.5	56.0	
1.326000	40.3	2000.0	9.000	On	N	19.7	15.7	56.0	
18.030000	38.7	2000.0	9.000	On	L1	20.0	21.3	60.0	

Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.194000	28.6	2000.0	9.000	On	N	19.8	25.3	53.9	
0.406000	30.4	2000.0	9.000	On	L1	20.0	17.3	47.7	
0.582000	36.0	2000.0	9.000	On	L1	20.0	10.0	46.0	
0.966000	29.7	2000.0	9.000	On	N	19.7	16.3	46.0	
1.270000	26.4	2000.0	9.000	On	N	19.7	19.6	46.0	
2.354000	22.7	2000.0	9.000	On	L1	19.8	23.3	46.0	

Charging Mode, Set.2:

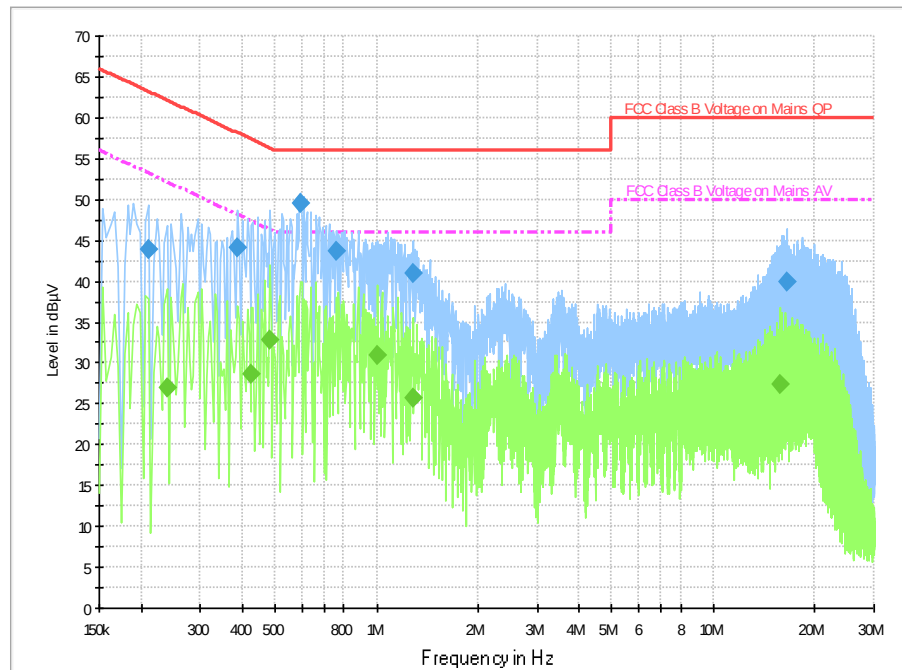


Fig A.12 Conducted Emission from 150kHz to 30MHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.210000	43.9	2000.0	9.000	On	N	19.8	19.3	63.2	
0.386000	44.1	2000.0	9.000	On	L1	19.9	14.0	58.1	
0.594000	49.5	2000.0	9.000	On	L1	20.0	6.5	56.0	
0.762000	43.7	2000.0	9.000	On	N	19.8	12.3	56.0	
1.286000	40.9	2000.0	9.000	On	N	19.7	15.1	56.0	
16.474000	39.8	2000.0	9.000	On	L1	20.0	20.2	60.0	

Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.238000	26.9	2000.0	9.000	On	N	19.8	25.3	52.2	
0.426000	28.7	2000.0	9.000	On	L1	20.0	18.7	47.3	
0.482000	32.8	2000.0	9.000	On	L1	20.0	13.5	46.3	
1.006000	31.0	2000.0	9.000	On	L1	19.9	15.0	46.0	
1.286000	25.7	2000.0	9.000	On	N	19.7	20.3	46.0	
15.766000	27.4	2000.0	9.000	On	L1	20.0	22.6	50.0	

USB Mode, Set.3:

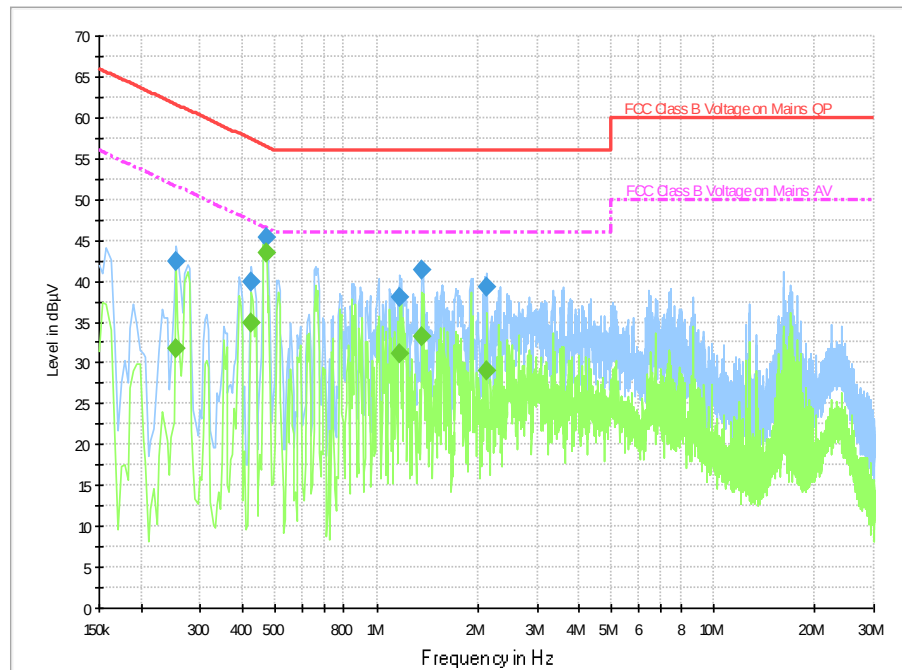


Fig A.13 Conducted Emission from 150kHz to 30MHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.254000	42.4	2000.0	9.000	On	L1	19.9	19.2	61.6	
0.426000	40.0	2000.0	9.000	On	L1	20.0	17.4	57.3	
0.470000	45.4	2000.0	9.000	On	L1	20.0	11.1	56.5	
1.174000	38.0	2000.0	9.000	On	N	19.7	18.0	56.0	
1.366000	41.4	2000.0	9.000	On	L1	19.9	14.6	56.0	
2.130000	39.3	2000.0	9.000	On	N	19.6	16.7	56.0	

Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.254000	31.8	2000.0	9.000	On	L1	19.9	19.8	51.6	
0.426000	34.9	2000.0	9.000	On	N	19.9	12.5	47.3	
0.470000	43.4	2000.0	9.000	On	L1	20.0	3.1	46.5	
1.174000	31.1	2000.0	9.000	On	N	19.7	14.9	46.0	
1.366000	33.2	2000.0	9.000	On	L1	19.9	12.8	46.0	
2.130000	29.1	2000.0	9.000	On	N	19.6	16.9	46.0	

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