



FCC 15B TEST REPORT

No. I21Z60109-EMC01

for

TCL Communication Ltd.

LTE/WCDMA/GSM mobile phone

Model Name: 6025A/6125A

FCC ID: 2ACCJB141

with

Hardware Version: PIO

Software Version: 9M59

Issued Date: 2021-01-21

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

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

Test Laboratory:

CTTL, Telecommunication Technology Labs, CAICT

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

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

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

REPORT HISTORY

Report Number	Revision	Description	Issue Date
I21Z60109-EMC01	Rev.0	1 st edition	2021-01-21

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.....	8
4. REFERENCE DOCUMENTS.....	9
4.1. REFERENCE DOCUMENTS FOR TESTING.....	9
5. LABORATORY ENVIRONMENT.....	10
6. SUMMARY OF TEST RESULTS.....	11
7. TEST EQUIPMENTS UTILIZED.....	12
ANNEX A: MEASUREMENT RESULTS.....	13
ANNEX B: PERSONS INVOLVED IN THIS TESTING.....	36

1. Test Laboratory

1.1. Testing Location

Location 1: 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℃

Relative Humidity: 20-75%

1.3. Project data

Testing Start Date: 2020-11-29

Testing End Date: 2021-01-18

1.4. Signature



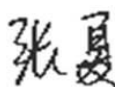
An Hui

(Prepared this test report)



Zhang Ying

(Reviewed this test report)



Zhang Xia

Deputy Director of the laboratory

(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
Contact Person: Gong Zhizhou
Contact Email: zhizhou.gong@tcl.com
Telephone: 0086-755-36611722
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
Contact Person: Gong Zhizhou
Contact Email: zhizhou.gong@tcl.com
Telephone: 0086-755-36611722
Fax: 0086-755-36612000-81722

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

3.1. About EUT

Description	LTE/WCDMA/GSM mobile phone
Model Name	6025A/6125A
FCC ID	2ACCJB141

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

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version
EUT1	/	PIO	9M56
EUT2	352652320000013	PIO	9M59

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

3.3. Internal Identification of AE used during the test

AE ID*	Description	SN	Remarks
AE1	Battery	/	/
AE2	Battery	/	/
AE3	charger	/	/
AE4	charger	/	/
AE5	USB Cable	/	/
AE6	USB Cable	/	/
AE7	Headset	/	/
AE8	Headset	/	/
AE9	Headset	/	/
AE10	Headset	/	No test
AE11	Headset	/	No test

AE1

Model	TLp038DA
Manufacturer	TIANMAO
Capacity	3860mAh
Nominal Voltage	3.85V

AE2

Model	TLp038D7
Manufacturer	VEKEN
Capacity	3860mAh
Nominal Voltage	3.85V

AE3

Model	UC13US
Manufacturer	PUAN
Length of cable	/

AE4

Model	UC13US
Manufacturer	CHENYANG
Length of cable	/

AE5

Model	CDA0000024C8
Manufacturer	PUAN
Length of cable	/

AE6

Model	CDA0000024C2
Manufacturer	JUWEI
Length of cable	/

AE7

Model	CCB0046A10C1
Manufacturer	JUWEI
Length of cable	/

AE8

Model	CCB0046A10C4
Manufacturer	MEIHAO
Length of cable	/

AE9

Model	CCB0070B10C1
Manufacturer	JUWEI
Length of cable	/

AE10

Model	CCB0046A15C4
Manufacturer	MEIHAO
Length of cable	/

AE11

Model	CCB0046A15C1
Manufacturer	JUWEI

Length of cable /

*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/AE2 + AE3+ AE5/AE6	Charger1
Set.2	EUT1+ AE1/AE2 + AE4+ AE5/AE6	Charger2
Set.3	EUT1+ AE1/AE2 + AE3+ AE5/AE6+AE7	Charger1+Headset1
Set.4	EUT1+ AE1/AE2 + AE3+ AE5/AE6+AE8	Charger1+Headset2
Set.5	EUT1+ AE1/AE2 + AE3+ AE5/AE6+AE9	Charger1+Headset3
Set.6	EUT1+ AE1/AE2 + AE5/AE6	USB
Set.7	EUT2+ AE1/AE2 + AE5/AE6	USB

Note1:

The device contains receivers which tune and operate between 30MHz-960MHz in the following bands: GSM850, WCDMA850, LTE Band 5/12/13/17/26. The measurement results showed here are worst cases of different bands.

Note2:

6025A/6125A is a variant model based on 6125F, According to the declaration of changes provided by the applicant and FCC KDB publication 484596 D01.the following test items and test modes were performed:

Test Item	Mode or Feature	EUT Set-up
Radiated Emission	USB	Set.7
Conducted Emission	USB	Set.7

Other results are inherited from the initial modell. The report number for initial model is I20Z62186-EMC01 (FCC ID: 2ACCJB141).

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 SAC-1 (23 meters × 17meters × 10meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 15 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz, >60dB; 1MHz - 1000MHz, >90dB.
Electrical insulation	> 2 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
Uniformity of field strength	Between 0 and 6 dB, from 80 to 3000 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 MΩ
Ground system resistance	< 4 Ω

6. SUMMARY OF TEST RESULTS

Abbreviations used in this clause:		
Verdict Column	P	Pass
	NA	Not applicable
	F	Fail
	BR	Re-use test data from basic model report.

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

7. Test Equipments Utilized

NO.	Description	TYPE	SERIES NUMBER	MANUFACTURE	CAL DUE DATE	CALIBRATION INTERVAL
1	LISN	ENV216	101200	Rohde & Schwarz	2021-05-19	1 Year
2	Test Receiver	ESCI 7	100344	Rohde & Schwarz	2021-02-26	1 Year
3	Test Receiver	ESU26	100235	Rohde & Schwarz	2021-03-03	1 Year
4	BiLog Antenna	VULB9163	9163-1223	Schwarzbeck	2021-03-18	1 Year
5	Dual-Ridge Waveguide Horn Antenna	3115	6914	ETS-Lindgren	2021-01-14	1 Year
6	Dual-Ridge Waveguide Horn Antenna	3115	167250	ETS-Lindgren	2021-05-14	1 Year
7	Universal Radio Communication Tester	CMW500	159408	R&S	2021-03-04	1 Year
8	Signal Generator	SMBV100A	260613	R&S	2020-12-30	1 Year
9	PC	M4000e-17	M706GWXD	Lenovo	N/A	N/A
10	Printer	P1606dn	VNC3L52122	HP	N/A	N/A

Note:

The Signal Generator which series number is 260613 was before the CAL. DUE DATE when used.

The Dual-Ridge Waveguide Horn Antenna which series number is 6914 was before the CAL. DUE DATE when used.

Test Item	Test Software and Version	Software Vendor
Radiated Continuous Emission	EMC32 V9.01.0	R&S
Conducted Emission	EMC32 V8.52.0	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 (charging mode and FM mode of MS) at distances of 10 meters(for 30MHz-1GHz) and 3 meters (for above 1GHz) 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 charging mode. During the test MS 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.

A.1.3 Measurement Limit

Frequency range (MHz)	Field strength limit (μV/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.

$$\text{Limit}(10\text{m})=\text{Limit}(3\text{m})+20[\log(3/10)]$$

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/1MHz	15	Peak, Average

A.1.5 Measurement Results

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

The measurement results are obtained as described below:

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

Where

G_A : Antenna factor of receive antenna

G_{PL} : Path Loss

P_{Mea} : Measurement result on receiver.

Measurement uncertainty (worst case): 30MHz-1GHz: 5.16dB, 1GHz-18GHz: 5.44dB, $k=2$.

Note: The measurement results showed here are worst cases of the combinations of different Battery, cables and Headset.

Note: The measurement results showed here are worst cases.

Measurement results for Set.1:

EUT1 Charger1+Camera+GNSS+GSM850 idle Mode/QP detector

Frequency (MHz)	QuasiPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)
39.815000	20.65	30.00	9.35	180.0	V	15.0
41.552000	21.10	30.00	8.90	125.0	V	79.0
43.649000	18.66	30.00	11.34	102.0	V	-1.0
55.853000	17.14	30.00	12.86	125.0	V	300.0
102.016000	8.49	33.50	25.03	325.0	H	88.0
202.420000	8.69	33.50	24.83	103.0	H	71.0

EUT1 Charger1+Camera+GNSS+GSM850 idle Mode /Average detector

Frequency (MHz)	Result (dB μ V/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea} (dB μ V)	Polarity	Limit (dB μ V/m)	Margin (dB)
17933.700	48.3	-17.7	45.6	20.400	H	54	5.7
17837.367	48.2	-18.5	45.6	21.100	H	54	5.8
17997.733	48.0	-17.7	45.6	20.100	V	54	6
17990.367	48.0	-17.7	45.6	20.100	H	54	6
17938.233	48.0	-17.7	45.6	20.100	H	54	6
17998.867	47.9	-17.7	45.6	20.000	H	54	6.1

EUT1 Charger1+Camera+GNSS+GSM850 idle Mode /Peak detector

Frequency (MHz)	Result (dB μ V/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea} (dB μ V)	Polarity	Limit (dB μ V/m)	Margin (dB)
17862.867	57.0	-18.5	45.6	29.900	H	74	17
17934.267	56.9	-17.7	45.6	29.000	H	74	17.1
17983.000	56.8	-17.7	45.6	28.900	V	74	17.2
17980.167	56.4	-17.7	45.6	28.500	H	74	17.6
17949.567	56.4	-17.7	45.6	28.500	H	74	17.6
17905.933	56.3	-18.5	45.6	29.200	H	74	17.7

Measurement results for Set.2:
EUT1 Charger2+MP4+WCDMA850 idle Mode/QP detector

Frequency (MHz)	QuasiPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)
54.518000	17.01	30.00	12.99	115.0	V	240.0
87.516000	11.71	30.00	18.29	182.0	V	-15.0
93.937000	12.48	33.50	21.04	225.0	V	11.0
157.333000	15.30	33.50	18.22	104.0	V	-18.0
202.863000	17.08	33.50	16.44	125.0	V	30.0
281.895000	11.00	36.00	25.02	225.0	V	241.0

EUT1 Charger2+MP4+WCDMA850 idle Mode/Average detector

Frequency (MHz)	Result (dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity	Limit (dB μ V/m)	Margin (dB)
17966.000	48.8	-17.7	45.6	20.900	H	54	5.2
17920.100	48.6	-17.7	45.6	20.700	H	54	5.4
17979.033	48.3	-17.7	45.6	20.400	V	54	5.7
17956.933	48.3	-17.7	45.6	20.400	H	54	5.7
17938.233	48.2	-17.7	45.6	20.300	H	54	5.8
17963.167	48.2	-17.7	45.6	20.300	H	54	5.8

EUT1 Charger2+MP4+WCDMA850 idle Mode/Peak detector

Frequency (MHz)	Result (dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity	Limit (dB μ V/m)	Margin (dB)
17937.667	58.1	-17.7	45.6	30.200	H	74	15.9
17937.100	57.1	-17.7	45.6	29.200	H	74	16.9
17808.467	57.0	-18.5	45.6	29.900	V	74	17
17949.000	56.6	-17.7	45.6	28.700	H	74	17.4
17939.933	56.4	-17.7	45.6	28.500	H	74	17.6
17852.100	56.4	-18.5	45.6	29.300	H	74	17.6

Measurement results for Set.3:
EUT1 Charger1+Camera+GNSS+FM+LTE Band 5 idle Mode/QP detector

Frequency (MHz)	QuasiPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)
35.626000	17.70	30.00	12.30	212.0	V	210.0
54.661000	11.22	30.00	18.78	105.0	V	-9.0
93.775000	10.80	33.50	22.72	225.0	V	-13.0
144.081000	13.35	33.50	20.17	101.0	V	21.0
207.067000	12.76	33.50	20.76	125.0	V	187.0
879.997000	21.36	36.00	14.66	119.0	H	79.0

EUT1 Charger1+Camera+GNSS+FM+LTE Band 5 idle Mode /Average detector

Frequency (MHz)	Result (dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity	Limit (dB μ V/m)	Margin (dB)
17937.667	47.7	-17.7	45.6	19.800	H	54	6.3
17901.400	47.6	-18.5	45.6	20.500	H	54	6.4
17843.600	47.5	-18.5	45.6	20.400	V	54	6.5
17972.800	47.5	-17.7	45.6	19.600	H	54	6.5
17508.133	47.4	-19.2	45.6	21.000	H	54	6.6
17977.333	47.4	-17.7	45.6	19.500	H	54	6.6

EUT1 Charger1+Camera+GNSS+FM+LTE Band 5 idle Mode /Peak detector

Frequency (MHz)	Result (dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity	Limit (dB μ V/m)	Margin (dB)
17977.333	56.4	-17.7	45.6	28.500	H	74	17.6
17941.067	56.3	-17.7	45.6	28.400	H	74	17.7
17942.200	56.3	-17.7	45.6	28.400	V	74	17.7
17996.600	56.3	-17.7	45.6	28.400	H	74	17.7
17945.033	56.2	-17.7	45.6	28.300	H	74	17.8
17966.000	56.2	-17.7	45.6	28.300	H	74	17.8

Measurement results for Set.4:
EUT1 Charger1+Camera+GNSS+FM+LTE Band 12 idle Mode/QP detector

Frequency (MHz)	QuasiPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)
35.455000	16.09	30.00	13.91	176.0	V	64.0
91.724000	10.14	33.50	23.38	221.0	V	-30.0
138.367000	11.34	33.50	22.18	225.0	V	-19.0
159.204000	13.52	33.50	20.00	304.0	H	97.0
204.364000	14.61	33.50	18.91	125.0	V	159.0
217.954000	15.17	36.00	20.85	108.0	V	168.0

EUT1 Charger1+Camera+GNSS+FM+LTE Band 12 idle Mode /Average detector

Frequency (MHz)	Result (dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity	Limit (dB μ V/m)	Margin (dB)
17968.833	48.5	-17.7	45.6	20.600	H	54	5.5
17965.433	47.9	-17.7	45.6	20.000	H	54	6.1
17936.533	47.7	-17.7	45.6	19.800	V	54	6.3
17942.200	47.5	-17.7	45.6	19.600	H	54	6.5
17951.267	47.5	-17.7	45.6	19.600	H	54	6.5
17952.967	47.4	-17.7	45.6	19.500	H	54	6.6

EUT1 Charger1+Camera+GNSS+FM+LTE Band 12 idle Mode /Peak detector

Frequency (MHz)	Result (dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity	Limit (dB μ V/m)	Margin (dB)
17944.467	56.3	-17.7	45.6	28.400	H	74	17.7
17947.300	56.2	-17.7	45.6	28.300	H	74	17.8
17983.567	56.2	-17.7	45.6	28.300	V	74	17.8
17962.600	56.1	-17.7	45.6	28.200	H	74	17.9
17900.267	56.0	-18.5	45.6	28.900	H	74	18
17958.633	56.0	-17.7	45.6	28.100	H	74	18

Measurement results for Set.5:
EUT1 Charger1+Camera+GNSS+FM+LTE Band 13 idle Mode/QP detector

Frequency (MHz)	QuasiPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)
35.446000	14.12	30.00	15.88	102.0	V	103.0
39.917000	14.16	30.00	15.84	125.0	V	30.0
159.361000	18.16	33.50	15.36	190.0	V	-30.0
190.258000	11.68	33.50	21.84	105.0	V	169.0
286.080000	12.06	36.00	23.96	104.0	V	30.0
785.431000	19.89	36.00	16.13	107.0	V	61.0

EUT1 Charger1+Camera+GNSS+FM+LTE Band 13 idle Mode /Average detector

Frequency (MHz)	Result (dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity	Limit (dB μ V/m)	Margin (dB)
17982.433	48.3	-17.7	45.6	20.400	H	54	5.7
17903.667	48.1	-18.5	45.6	21.000	H	54	5.9
17833.967	48.0	-18.5	45.6	20.900	V	54	6
17955.233	48.0	-17.7	45.6	20.100	H	54	6
17981.867	47.9	-17.7	45.6	20.000	H	54	6.1
17963.167	47.9	-17.7	45.6	20.000	H	54	6.1

EUT1 Charger1+Camera+GNSS+FM+LTE Band 13 idle Mode /Peak detector

Frequency (MHz)	Result (dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity	Limit (dB μ V/m)	Margin (dB)
17920.100	56.9	-17.7	45.6	29.000	H	74	17.1
17971.667	56.8	-17.7	45.6	28.900	H	74	17.2
17932.567	56.7	-17.7	45.6	28.800	V	74	17.3
17941.633	56.7	-17.7	45.6	28.800	H	74	17.3
17969.967	56.5	-17.7	45.6	28.600	H	74	17.5
17957.500	56.5	-17.7	45.6	28.600	H	74	17.5

Measurement results for Set.6:
EUT1 USB EUT TO PC + LTE Band 26 idle Mode/QP detector

Frequency (MHz)	QuasiPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)
36.707000	20.59	30.00	9.41	294.0	V	151.0
54.426000	17.96	30.00	12.04	102.0	V	61.0
83.410000	22.89	30.00	7.11	296.0	V	210.0
99.101000	21.26	33.50	12.26	100.0	V	300.0
216.009000	23.64	36.00	12.38	106.0	V	300.0
264.024000	14.92	36.00	21.10	284.0	V	120.0

EUT1 USB EUT TO PC + LTE Band 26 idle Mode /Average detector

Frequency (MHz)	Result (dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity	Limit (dB μ V/m)	Margin (dB)
17956.933	48.0	-17.7	45.6	20.100	H	54	6
17977.900	48.0	-17.7	45.6	20.100	H	54	6
17977.333	48.0	-17.7	45.6	20.100	V	54	6
17980.733	47.8	-17.7	45.6	19.900	H	54	6.2
18000.000	47.7	-45.6	44.5	48.766	H	54	6.3
17826.600	47.6	-18.5	45.6	20.500	H	54	6.4

EUT1 USB EUT TO PC + LTE Band 26 idle Mode /Peak detector

Frequency (MHz)	Result (dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity	Limit (dB μ V/m)	Margin (dB)
17942.767	57.0	-17.7	45.6	29.100	H	74	17
17954.100	56.7	-17.7	45.6	28.800	H	74	17.3
17950.700	56.7	-17.7	45.6	28.800	V	74	17.3
17955.800	56.5	-17.7	45.6	28.600	H	74	17.5
17896.300	56.4	-18.5	45.6	29.300	H	74	17.6
17955.233	56.3	-17.7	45.6	28.400	H	74	17.7

Measurement results for Set.7:
EUT2 USB EUT TO PC + LTE Band 26 idle Mode/QP detector

Frequency (MHz)	QuasiPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)
31.903000	21.76	30.00	8.24	116.0	V	112.0
101.258000	21.91	33.50	11.61	176.0	V	-28.0
119.129000	21.16	33.50	12.36	120.0	V	30.0
150.395000	15.86	33.50	17.66	225.0	V	172.0
294.676000	18.40	36.00	17.62	103.0	V	184.0
557.500000	27.09	36.00	8.93	225.0	V	-25.0

EUT2 USB EUT TO PC + LTE Band 26 idle Mode /Average detector

Frequency (MHz)	Result (dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity	Limit (dB μ V/m)	Margin (dB)
17994.333	48.3	-5.4	43.4	10.316	H	54	5.7
17981.867	48.1	-5.4	33.8	19.716	H	54	5.9
17969.400	47.9	-5.4	43.4	9.916	V	54	6.1
17890.067	47.7	-5.7	43.4	10.038	H	54	6.3
17975.633	47.6	-5.4	43.4	9.616	H	54	6.4
17986.400	47.6	-5.4	43.4	9.616	H	54	6.4

EUT2 USB EUT TO PC + LTE Band 26 idle Mode /Peak detector

Frequency (MHz)	Result (dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity	Limit (dB μ V/m)	Margin (dB)
17908.200	56.9	-5.7	43.4	19.238	H	74	17.1
17790.900	56.6	-5.7	33.8	28.538	H	74	17.4
17994.333	56.5	-5.4	43.4	18.516	V	74	17.5
17960.333	56.0	-5.4	43.4	18.016	H	74	18
17943.900	55.9	-5.4	43.4	17.916	H	74	18.1
17904.233	55.8	-5.7	43.4	18.138	H	74	18.2

EUT1 Charger1+Camera+GNSS+GSM850 idle, Set.1

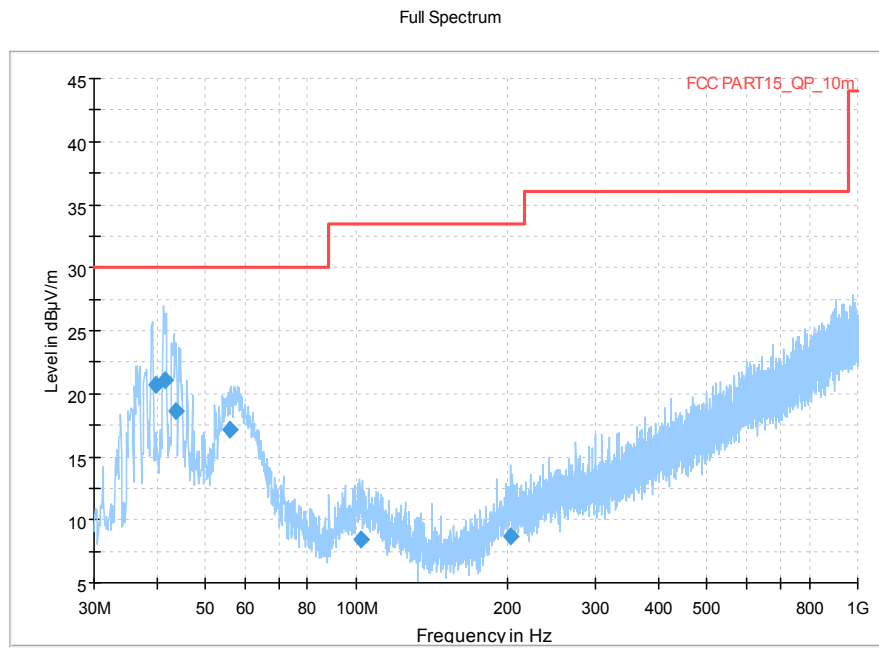


Figure A.1 Radiated Emission from 30MHz to 1GHz

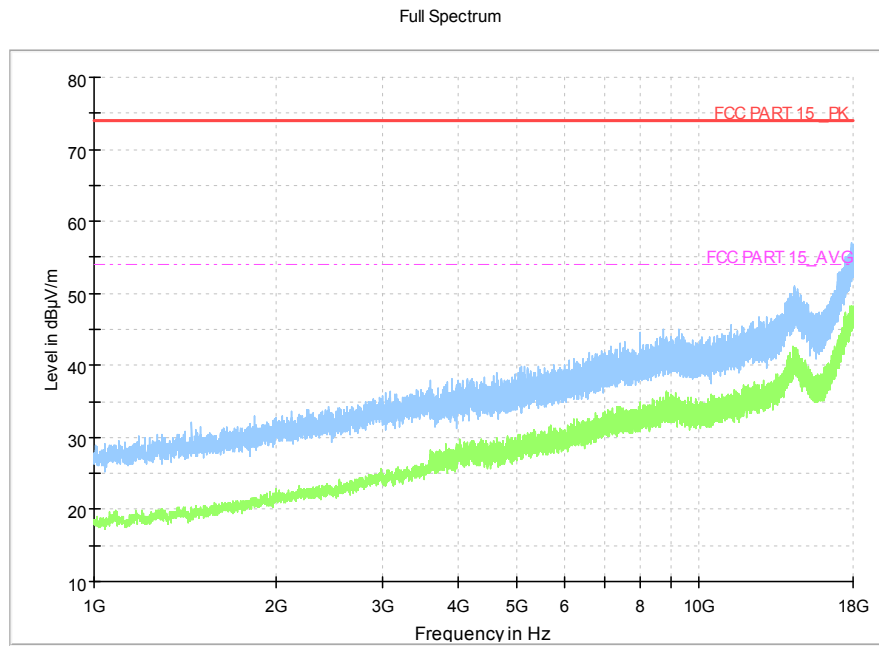


Figure A.2 Radiated Emission from 1GHz to 18GHz

EUT1 Charger2+MP4+WCDMA850 idle, Set.2

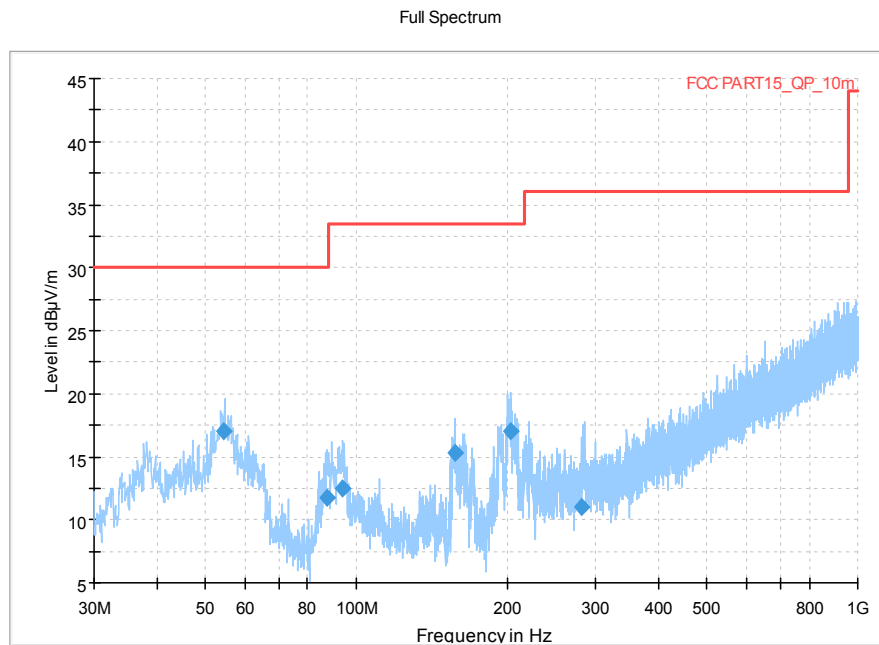


Figure A.3 Radiated Emission from 30MHz to 1GHz

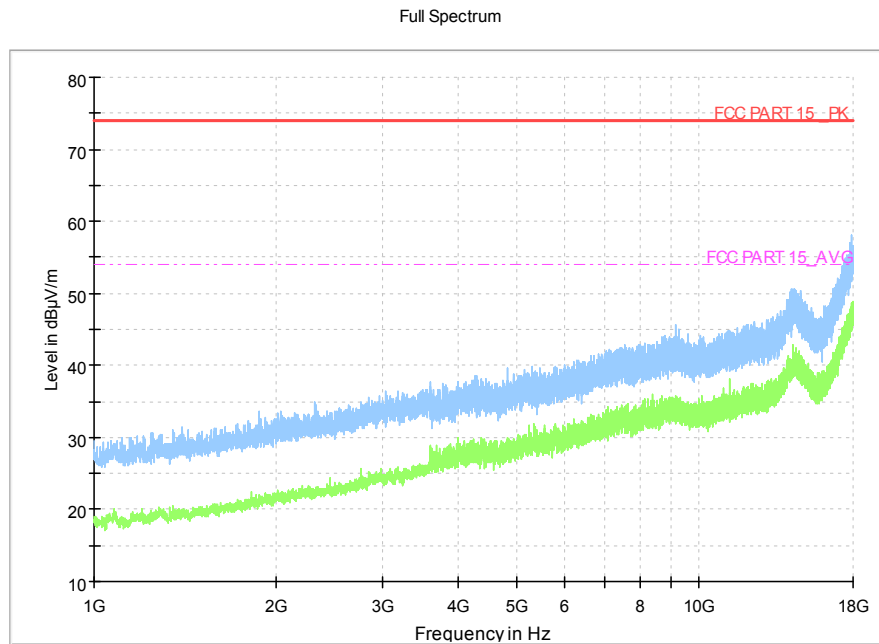


Figure A.4 Radiated Emission from 1GHz to 18GHz

EUT1 Charger1+Camera+GNSS+FM+LTE Band 5 idle, Set.3

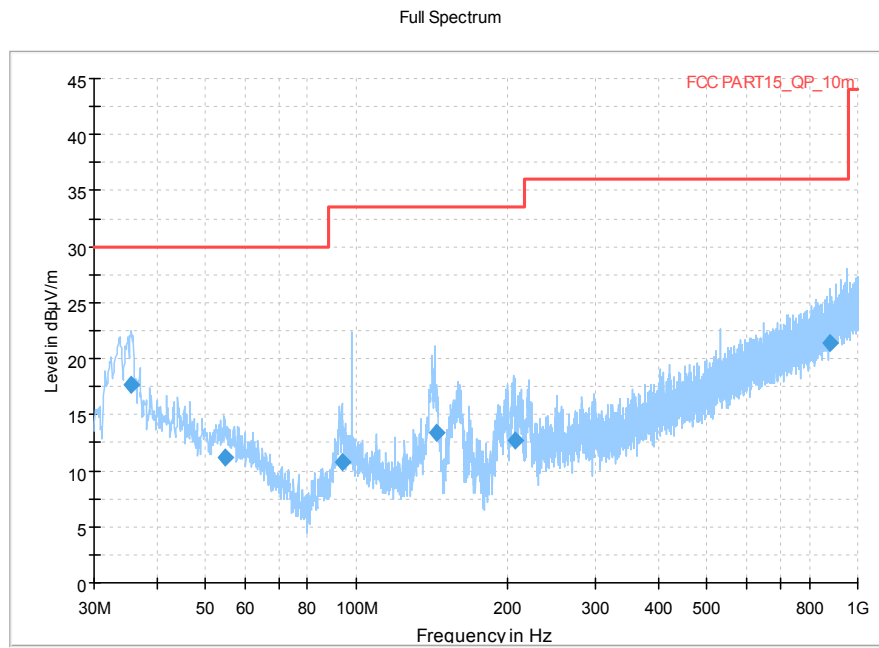


Figure A.5 Radiated Emission from 30MHz to 1GHz

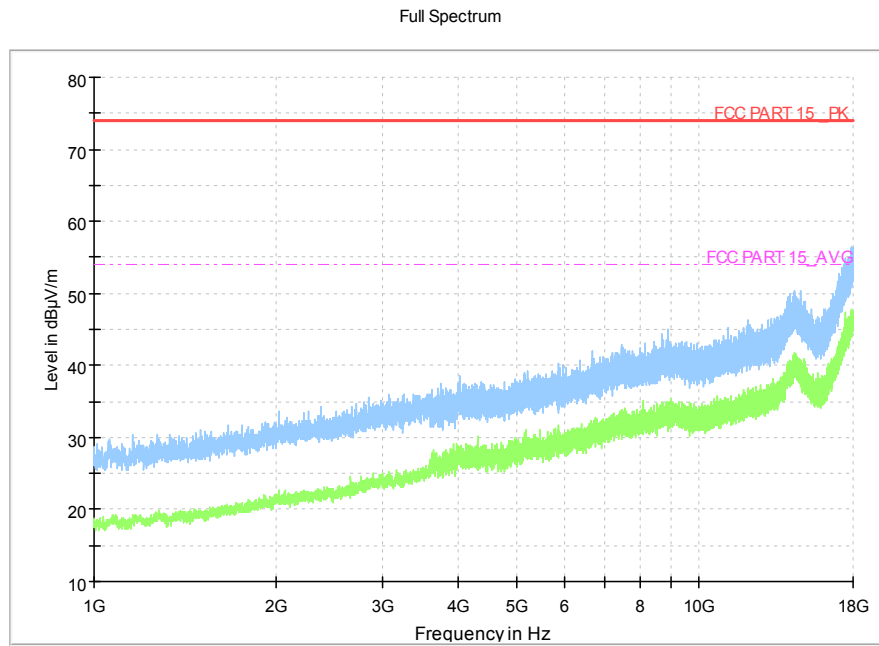


Figure A.6 Radiated Emission from 1GHz to 18GHz

EUT1 Charger1+Camera+GNSS+FM+LTE Band 12 idle, Set.4

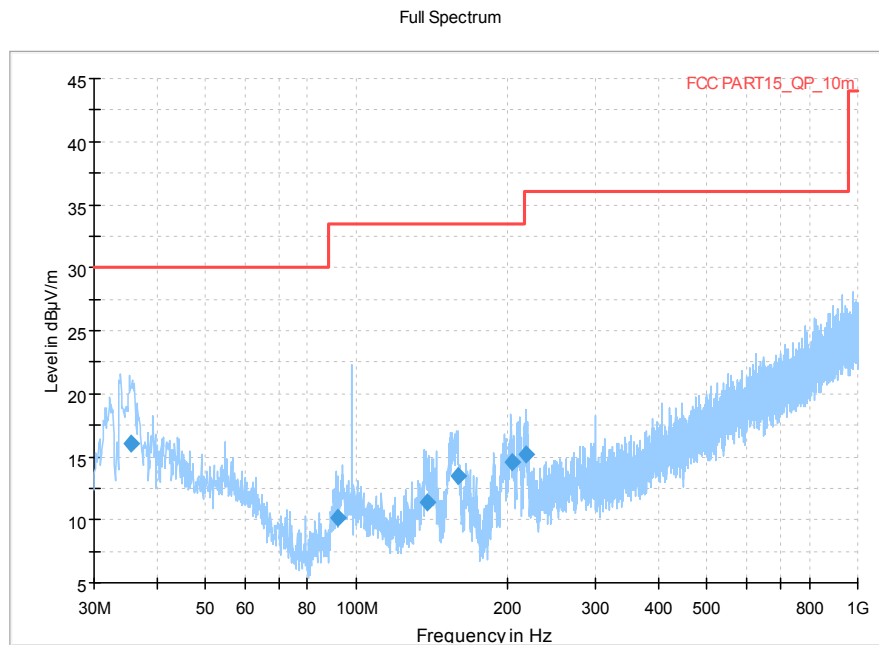


Figure A.7 Radiated Emission from 30MHz to 1GHz

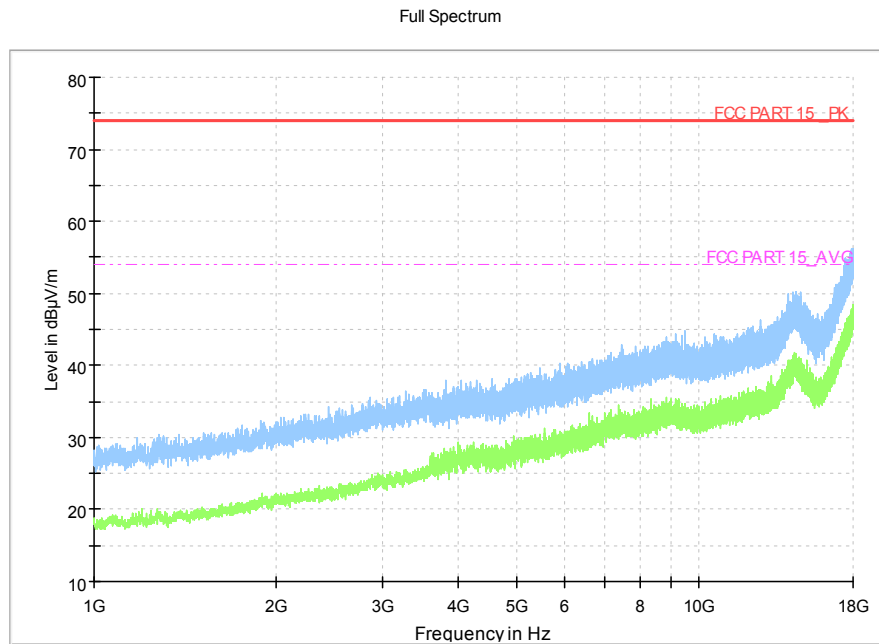


Figure A.8 Radiated Emission from 1GHz to 18GHz

EUT1 Charger1+Camera+GNSS+FM+LTE Band 13 idle, Set.5

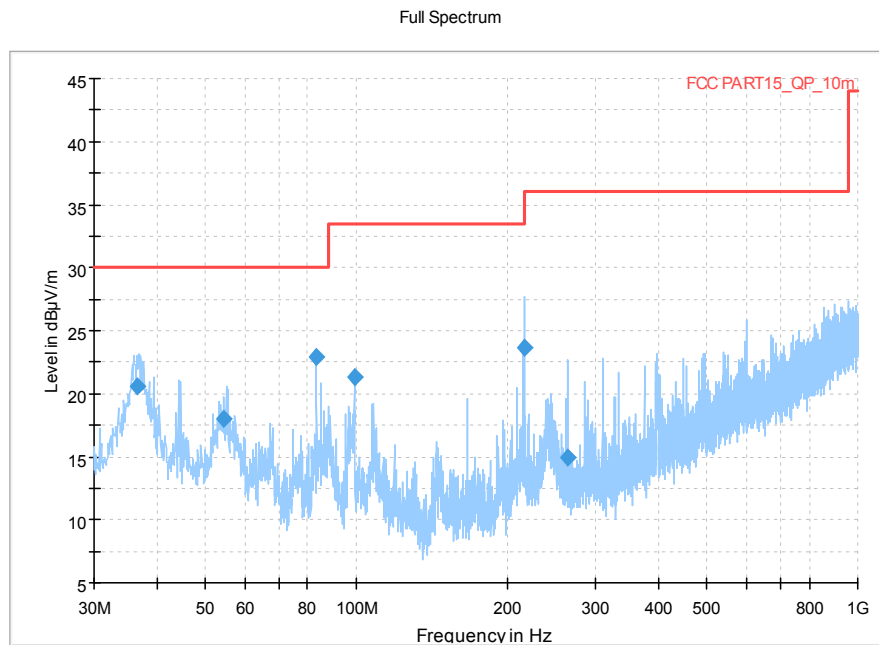


Figure A.9 Radiated Emission from 30MHz to 1GHz

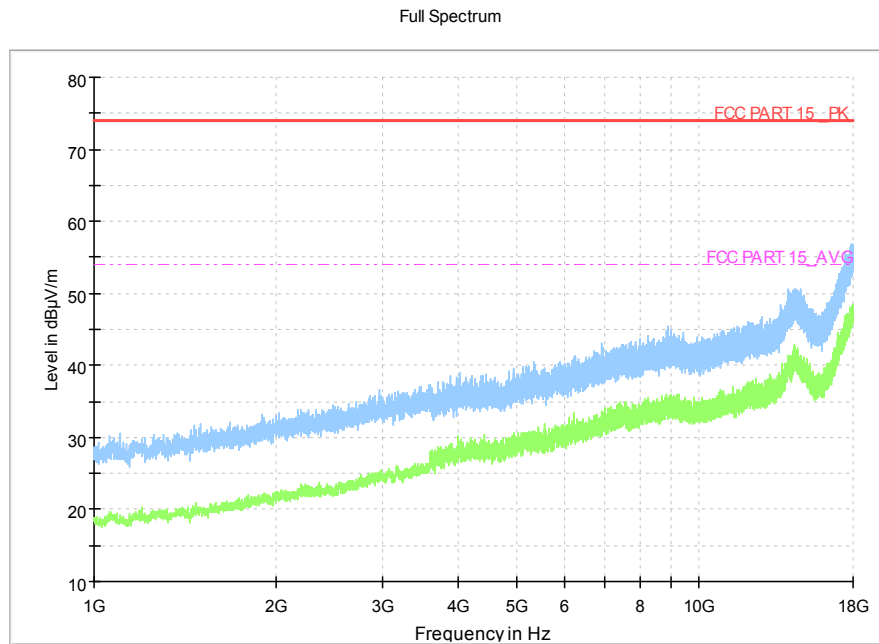


Figure A.10 Radiated Emission from 1GHz to 18GHz

EUT1 USB EUT TO PC + LTE Band 26 idle, Set.6

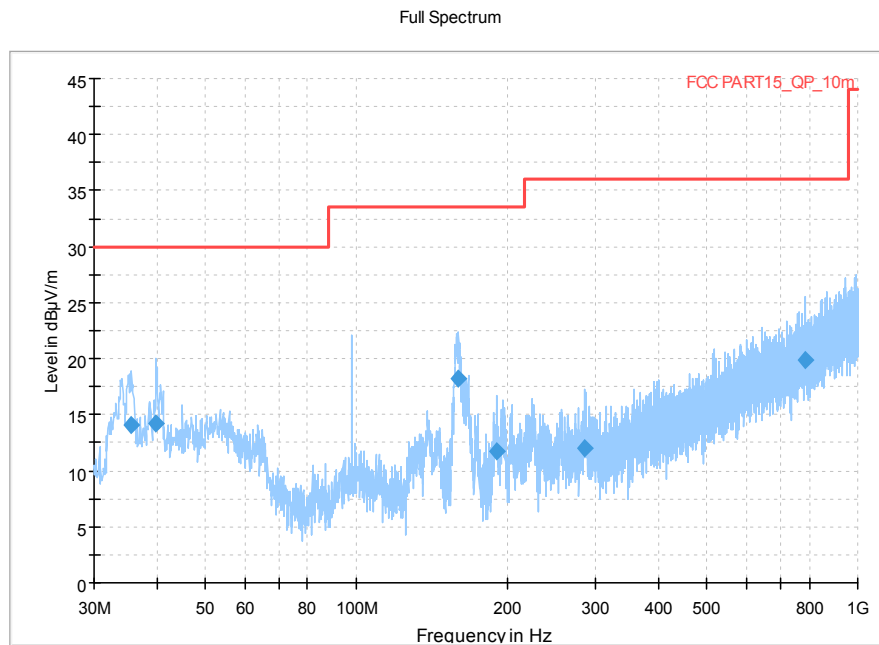


Figure A.11 Radiated Emission from 30MHz to 1GHz

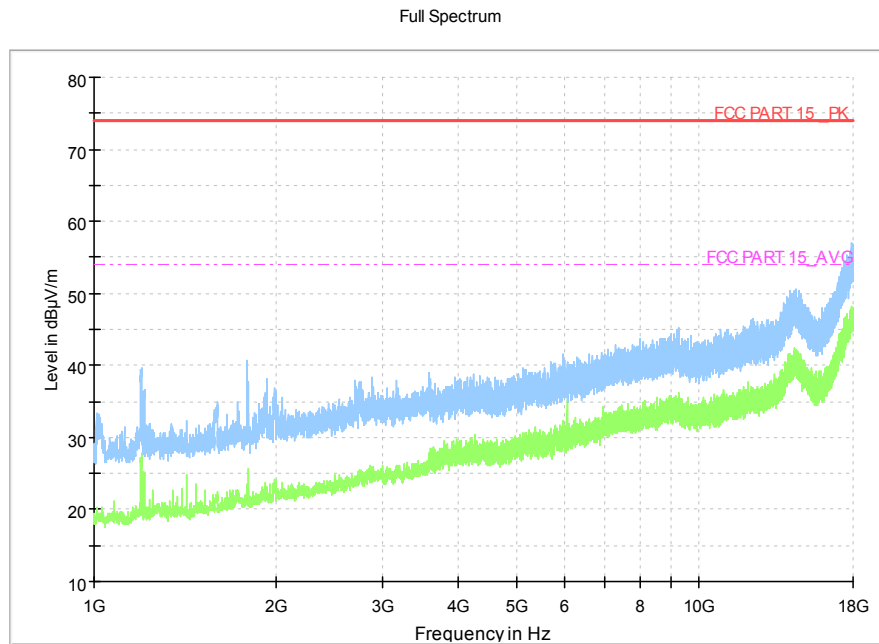


Figure A.12 Radiated Emission from 1GHz to 18GHz

EUT2 USB EUT TO PC + LTE Band 26 idle, Set.7

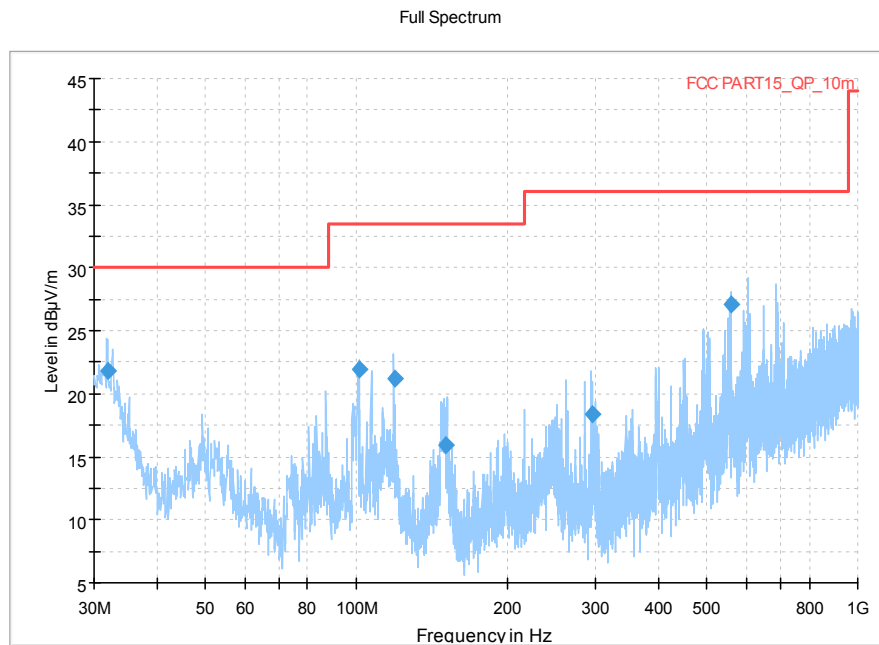


Figure A.13 Radiated Emission from 30MHz to 1GHz

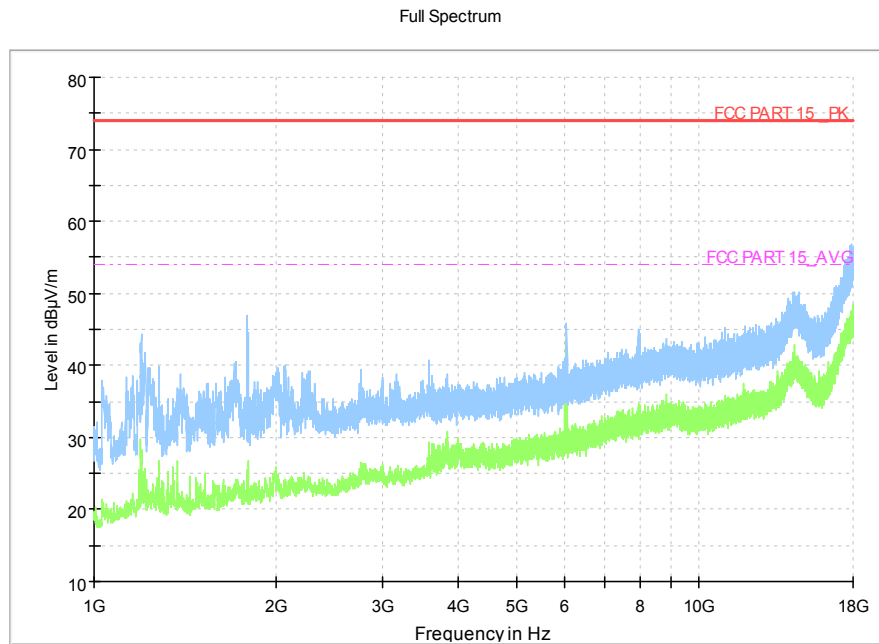


Figure A.14 Radiated Emission from 1GHz to 18GHz

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 charging mode. During the test MS is connected to a charger in the case of charging mode.

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

Note: The measurement results showed here are worst cases of the combinations of different Battery, cables and Headset.

Note: The measurement results showed here are worst cases.

EUT1 Charger1+Camera+GNSS+GSM850 idle, Set.1

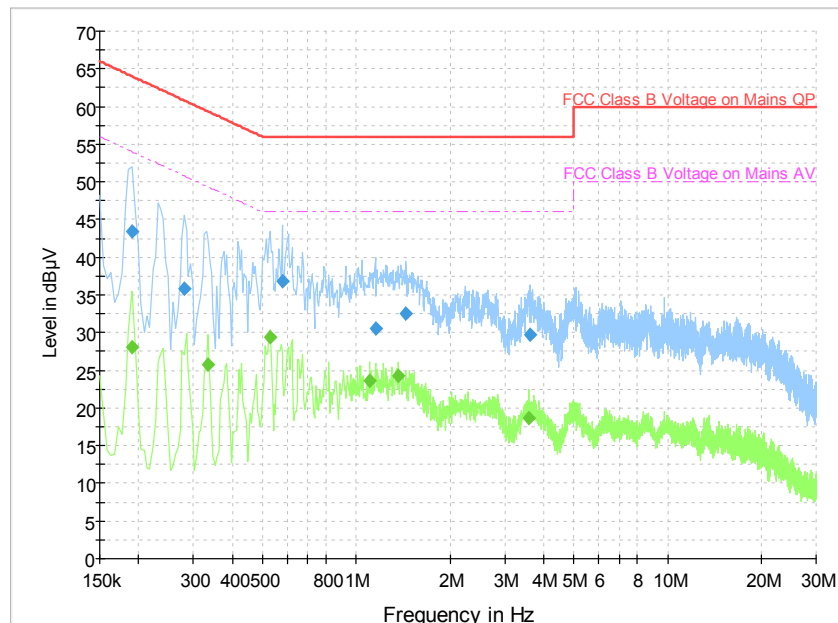


Figure A.15 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.190500	43.3	L1	19.7	20.7	64.0
0.280500	35.9	L1	19.6	24.9	60.8
0.577500	36.8	N	19.5	19.2	56.0
1.153500	30.6	N	19.6	25.4	56.0
1.446000	32.5	L1	19.6	23.5	56.0
3.601500	29.6	L1	19.7	26.4	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.190500	28.1	L1	19.7	25.9	54.0
0.334500	25.8	N	19.6	23.5	49.3
0.528000	29.5	N	19.5	16.5	46.0
1.104000	23.7	L1	19.6	22.3	46.0
1.369500	24.3	L1	19.6	21.7	46.0
3.574500	18.6	L1	19.7	27.4	46.0

EUT1 Charger2+MP4+WCDMA850 idle, Set.2

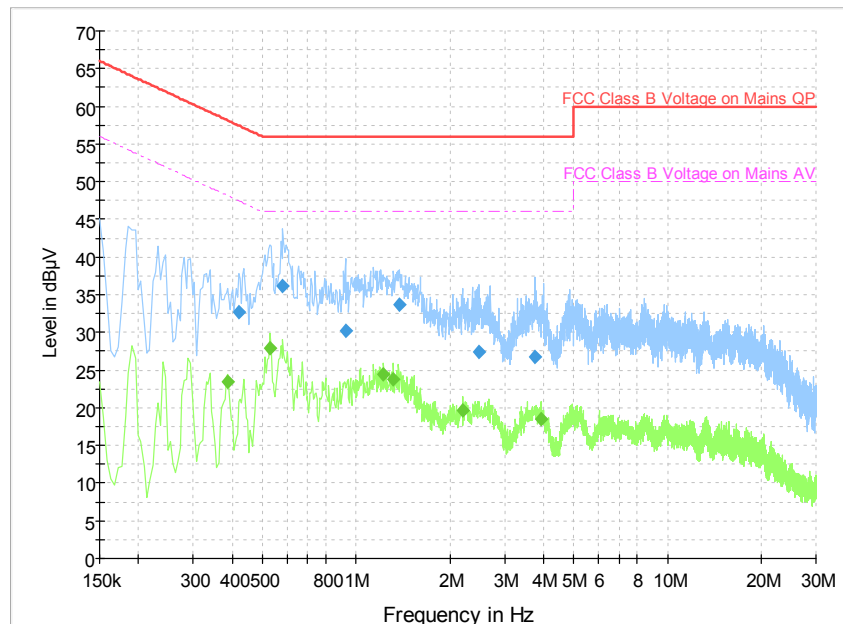


Figure A.16 Conducted Emission

Final Result 1

Frequency (MHz)	Average (dBμV)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.420000	32.7	N	19.6	24.8	57.4
0.582000	36.1	N	19.5	19.9	56.0
0.924000	30.2	N	19.6	25.8	56.0
1.383000	33.6	L1	19.6	22.4	56.0
2.485500	27.4	N	19.6	28.6	56.0
3.741000	26.7	N	19.6	29.3	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.388500	23.5	N	19.6	24.6	48.1
0.528000	27.9	N	19.5	18.1	46.0
1.225500	24.4	L1	19.6	21.6	46.0
1.320000	23.8	L1	19.6	22.2	46.0
2.202000	19.6	N	19.6	26.4	46.0
0.388500	23.5	N	19.6	24.6	48.1

EUT1 Charger1+Camera+GNSS+FM+LTE Band 5 idle, Set.3

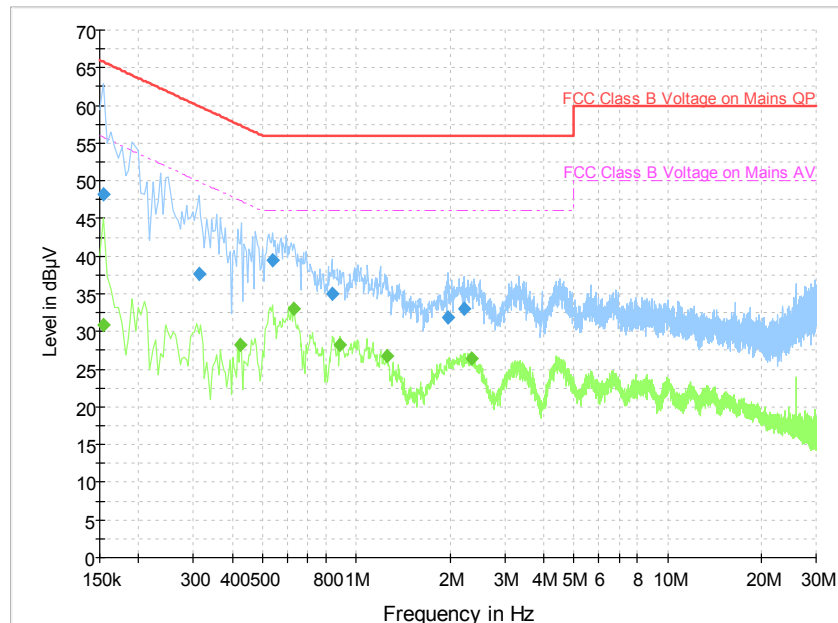


Figure A.17 Conducted Emission

Final Result 1

Frequency (MHz)	Average (dBμV)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.154500	48.1	L1	19.7	17.6	65.8
0.312000	37.7	L1	19.6	22.2	59.9
0.537000	39.4	N	19.5	16.6	56.0
0.834000	35.0	N	19.5	21.0	56.0
1.977000	31.9	N	19.5	24.1	56.0
2.211000	33.0	N	19.6	23.0	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.154500	30.9	L1	19.7	24.8	55.8
0.424500	28.3	N	19.6	19.1	47.4
0.631500	33.0	N	19.5	13.0	46.0
0.888000	28.2	N	19.5	17.8	46.0
1.261500	26.8	N	19.6	19.2	46.0
2.355000	26.4	N	19.6	19.6	46.0

EUT1 Charger1+Camera+GNSS+FM+LTE Band 12 idle, Set.4

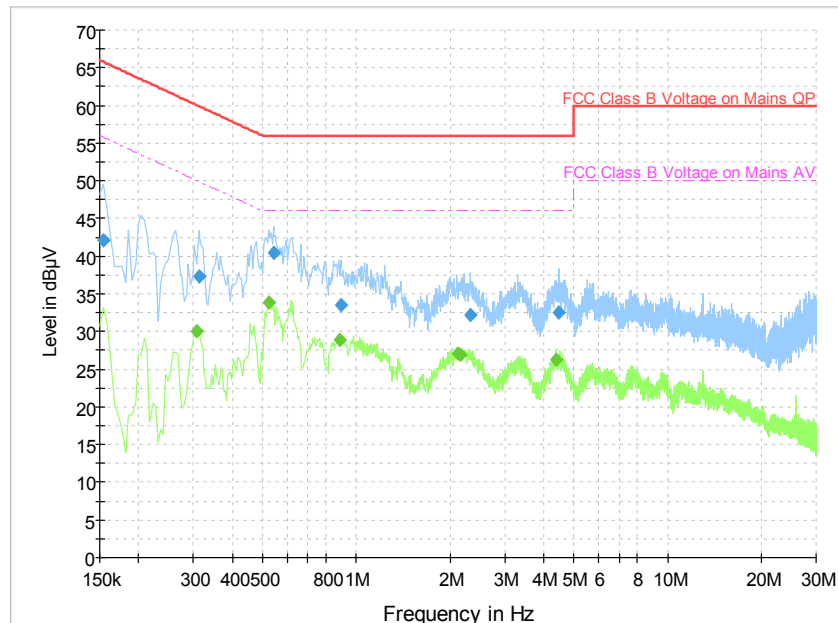


Figure A.18 Conducted Emission

Final Result 1

Frequency (MHz)	Average (dBμV)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.154500	42.2	N	19.5	23.6	65.8
0.312000	37.4	L1	19.6	22.5	59.9
0.541500	40.4	N	19.5	15.6	56.0
0.892500	33.4	L1	19.6	22.6	56.0
2.328000	32.2	N	19.6	23.8	56.0
4.456500	32.5	N	19.7	23.5	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.307500	30.1	N	19.6	19.9	50.0
0.523500	33.9	N	19.5	12.1	46.0
0.883500	28.9	N	19.5	17.1	46.0
2.112000	27.1	N	19.5	18.9	46.0
2.170500	27.0	N	19.5	19.0	46.0
4.384500	26.3	N	19.7	19.7	46.0

EUT1 Charger1+Camera+GNSS+FM+LTE Band 13 idle, Set.5

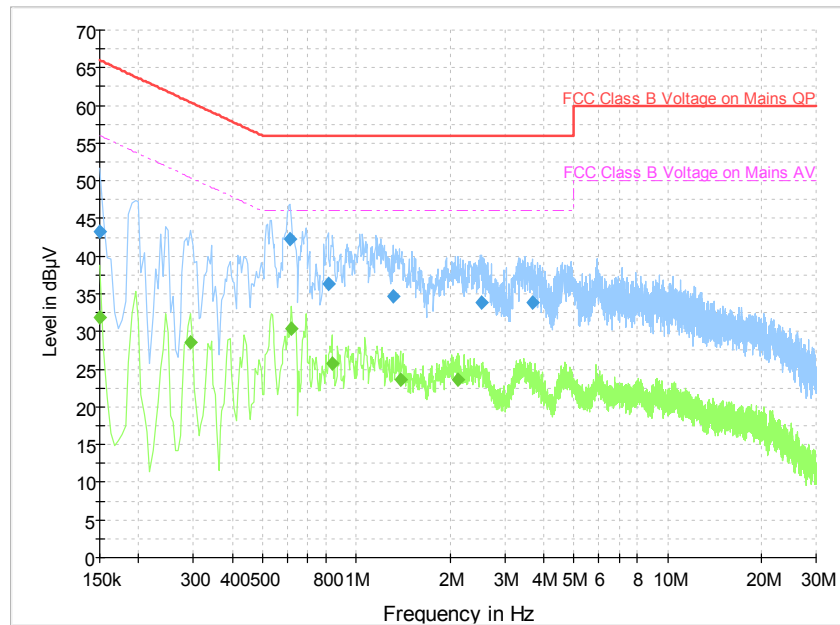


Figure A.19 Conducted Emission

Final Result 1

Frequency (MHz)	Average (dBμV)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	43.3	L1	19.6	22.7	66.0
0.613500	42.2	L1	19.6	13.8	56.0
0.811500	36.3	L1	19.6	19.7	56.0
1.315500	34.7	L1	19.6	21.3	56.0
2.521500	33.9	L1	19.6	22.1	56.0
3.669000	33.9	L1	19.7	22.1	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	31.9	L1	19.6	24.1	56.0
0.294000	28.6	L1	19.6	21.8	50.4
0.618000	30.4	L1	19.6	15.6	46.0
0.834000	25.8	L1	19.6	20.2	46.0
1.387500	23.6	L1	19.6	22.4	46.0
2.125500	23.6	L1	19.5	22.4	46.0

EUT1 USB EUT TO PC + LTE Band 26 idle, Set.6

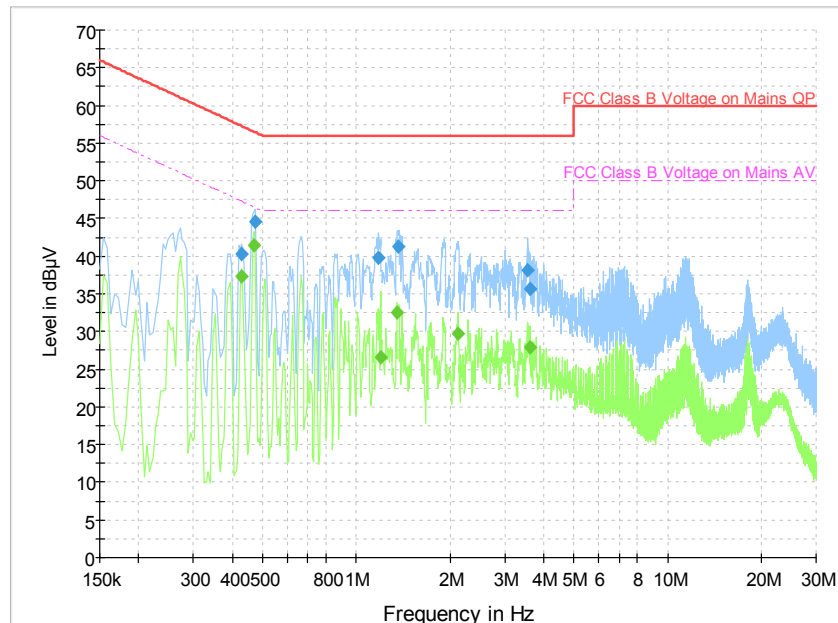


Figure A.20 Conducted Emission

Final Result 1

Frequency (MHz)	Average (dBμV)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.429000	40.4	L1	19.6	16.9	57.3
0.474000	44.6	L1	19.6	11.9	56.4
1.180500	39.7	L1	19.6	16.3	56.0
1.360500	41.2	N	19.6	14.8	56.0
3.565500	38.2	N	19.6	17.8	56.0
3.619500	35.7	L1	19.7	20.3	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.429000	37.4	L1	19.6	9.9	47.3
0.469500	41.5	N	19.6	5.0	46.5
1.198500	26.6	L1	19.6	19.4	46.0
1.356000	32.5	N	19.6	13.5	46.0
2.125500	29.7	N	19.5	16.3	46.0
3.619500	27.9	L1	19.7	18.1	46.0

EUT2 USB EUT TO PC + LTE Band 26 idle, Set.7

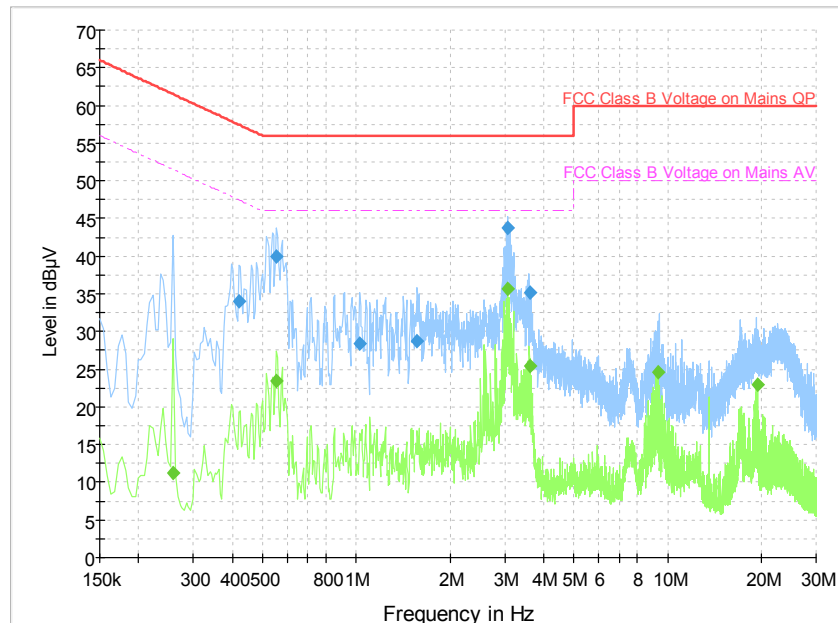


Figure A.21 Conducted Emission

Final Result 1

Frequency (MHz)	Average (dBμV)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.420000	33.9	N	19.6	23.5	57.4
0.555000	39.9	N	19.5	16.1	56.0
1.027500	28.4	L1	19.6	27.6	56.0
1.572000	28.7	N	19.6	27.3	56.0
3.070500	43.8	L1	19.6	12.2	56.0
3.619500	35.1	L1	19.7	20.9	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.258000	11.2	L1	19.6	40.2	51.5
0.555000	23.4	N	19.5	22.6	46.0
3.070500	35.6	L1	19.6	10.4	46.0
3.619500	25.5	L1	19.7	20.5	46.0
9.321000	24.6	N	19.7	25.4	50.0
19.509000	23.0	N	19.9	27.0	50.0

ANNEX B: Persons involved in this testing

Test Item	Tester
Conducted Continuous Emission	Wang Huan
Radiated Continuous Emission	Yan Hanchen

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