TEST REPORT

No.I22N02153-EMC

for

TCL Communication Ltd.

Mobile WiFi

Model Name：MW63AF

With

Hardware Version: FG11_AF_MB_V1.1

Software Version: MW63AF_V01.18b01

FCC ID: 2ACCJB188

Issued Date: 2022-11-23

Designation Number: CN1210

Note:

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

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I22N02153-EMC	Rev.0	1st edition	2022-11-23

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

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1. SUMMARY OF TEST REPORT

1.1. Test Items

Description	Mobile WiFi
Model Name	MW63AF
Applicant's name	TCL Communication Ltd.
Manufacturer's Name	TCL Communication Ltd.

1.2. Test Standards

FCC Part 15, Subpart B (10-1-2020 Edition); ANSI C63.4-2014.

1.3. Test Result

Total test 2 items, pass 2 items. Please refer to "6.2 Test Results".

1.4. Testing Location

Address: EMC Laboratory, Building G, Shenzhen International Innovation Center, No.1006 Shennan Road, Futian District, Shenzhen, Guangdong, China

1.5. Project data

Testing Start Date: 2022-11-10 Testing End Date: 2022-11-20

1.6. Signature

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2. CLIENT INFORMATION

2.1. Applicant Information

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2.2. Manufacturer Information

Company Name:	TCL Communication Ltd.
Address:	5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong
Contact	Annie.jiang
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Fax	+86 755 3661 2000-81722

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3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT (AE)

3.1. About EUT

Description	Mobile WiFi
Model Name	MW63AF
FCC ID	2ACCJB188
Condition of EUT as received	No obvious damage in appearance

Note: Components list, please refer to documents of the manufacturer; it is also included in the original test record of Shenzhen Academy of Information and Communications Technology.

3.2. Internal Identification of EUT

EUT ID*	SN or IMEI	HW Version	SW Version	Receive Date
UT07aa	355341750000688	FG11_AF_MB_V1.1	MW63AF_V01.18b01	2022-11-09

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

3.3. Internal Identification of AE

AE ID*	Description
AE1	Battery
AE2	Charger
AE3	USB Cable

AE1-1

Model	TLi021F7
Manufacturer	Veken
Capacity	2200mAh
Nominal Voltage	3.85V

AE1-2

Model	TLi021FA
Manufacturer	TMB
Capacity	2200mAh
Nominal Voltage	3.7 V

AE2-1

Model	UC11US
Manufacturer	PUAN

AE2-2

Model	UC11US
Manufacturer	Chenyang

AE3-1

Model	CDA0000167C1
Manufacturer	JUWEI

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AE3-2

Model	CDB0000082C1
Manufacturer	JUWEI

*AE ID and AE Label: is used to identify the test sample in the lab internally.
*AE Label: To distinguish the type and number of AE
AE: ancillary equipment

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3.4. EUT Set-ups

EUT set-up No.	Combination of EUT and AE	Remarks
Set.1	EUT+AE1-1+AE2-1+AE3-1	
Set.2	EUT+AE1-1+AE2-2+AE3-2	
Set.3	EUT+AE1-1+AE2-2+AE3-1	

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3.5. General Description

The Equipment Under Test (EUT) is a model of Mobile WiFi with internal antenna.
It supports WCDMA Bands 1/2/4/5/8, and LTE Bands 2/4/5/7/28/66/.
It has Wi-Fi functions.
It consists of normal options: Lithium Battery, Charger and Cable.
Since subscribers often use EUT during charging, EUT is to be tested in accordance with “Fixed use” besides in accordance with “Portable use”.
Manual and specifications of the EUT were provided to fulfill the test.
Samples (EUT+AE) undergoing test were selected by the Client. Relevant information is provided by the client.
The Mobile Phone MW63AF Applicant by TCL Communication Ltd. is a variant model based on R228t Applicant by TCL Communication Ltd. for conformance test.
According to the declaration of differences by manufactured. The table below shows the difference:

Model / Differences	R228t (Initial Model)	MW63AF (Record Model)
Band changes	GSM900/1800, UMTS Band1/3/8, LTE Band 1/3/7/8/20/28/32/38/40/41	UMTS Band1/2/4/5/8, LTE Band 2/4/5/7/28/66
PCB Layout	Initial Model	To optimize
USB cable	CDA0000177C1	CDA0000167C1 CDB0000082C1

According to the declaration of differences by manufacturer, all test results cannot be referenced to the initial model. All need to be retested.
The report number for initial model is I22N01324-EMC.

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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	(10-1-2020 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

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5. LABORATORY ENVIRONMENT

Anechoic chamber (FACT3-2.0) did not exceed following limits along the EMC testing:
9.10m×6.10m×5.60m (L×W×H)

Temperature	Min. = 15 ℃, Max. = 35 ℃
Relative humidity	Min. = 20 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz> 60 dB; 1MHz-18000MHz>90 dB
Electrical insulation	> 2MΩ
Ground system resistance	< 4Ω
Normalised site attenuation (NSA)	< ±4 dB, 3 m distance, from 30 to 1000 MHz
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 6000 MHz

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

Temperature	Min. = 15 ℃, Max. = 35 ℃
Relative humidity	Min. =20 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz,>60dB; 1MHz-10000MHz,>90dB
Electrical insulation	>2MΩ
Ground system resistance	<4Ω

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6. SUMMARY OF TEST RESULTS

6.1. Testing Environment

Normal Temperature: 15~35℃
Relative Humidity: 20~75%
Atmospheric pressure 86~106kPa

6.2. Summary of Measurement Results

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

Items	Test Name	Clause in FCC/IC rules	Section in this report	Verdict
1	Radiated Emission	15.109(a)/ Section 6.2	A.1	P
2	Conducted Emission	15.107(a)/ Section 6.1	A.2	P

6.3. Statement

6.3.1 Statements of conformity

This report takes measured values as criterion of test conclusion. The test conclusion meets the limit requirements.

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7. MEASUREMENT UNCERTAINTY

Test item	Frequency ranges	Measurement uncertainty
Radiated Emission	30MHz-1GHz	4.86dB(*k*=2)
	1GHz-18GHz	4.82dB(*k*=2)
Conducted Emission	150kHz-30MHz	2.62dB(*k*=2)

8. MEASURING APPARATUS UTILIZED

No.	Name	Model	Serial Number	Manufacturer	Calibration Due date	Calibration Period
1.	Test Receiver	ESR7	101676	R&S	2022.11.24	1 year
2.	Test Receiver	ESCI	100702	R&S	2023.01.12	1 year
3.	Spectrum Analyzer	FSV40	101192	R&S	2023.01.12	1 year
4.	BiLog Antenna	3142E	0224831	ETS-Lindgren	2024.05.27	3 years
5.	Horn Antenna	3117	00066585	ETS-Lindgren	2025.03.15	3 years
6.	LISN	ENV216	102067	R&S	2023.07.14	1 year
7.	Anechoic chamber	FACT3-2.0	1285	ETS-Lindgren	2023.05.29	2 years
8.	Software	EMC32	V10.50.40	R&S	/	/

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ANNEX A: MEASUREMENT RESULTS

A.1 Radiated Emission (§15.109(a))

Reference

FCC: Part 15.109(a)

A.1.1 Method of measurement

The field strength of radiated emissions from the unintentional radiator at a distance of 3 meters or 1 meter 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. Below 18GHz the measurement antenna was placed at a distance of 3 meters from the EUT. Above 18GHz the measurement antenna was placed at a distance of 1 meters from the EUT. (According to Part 15.31(f)(1), 1m limit is calculated by extrapolation factor of 20 dB/decade) 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: At the beginning of measurement, the battery is completely discharged. The battery and charger are installed so that the EUT works well and is in charging state.

WCDMA receiver: The EUT is connected to a charger for charging. The EUT is synchronized to System Simulator (SS), and able to respond to paging messages and incoming call. An established call has been released.

LTE receiver: The EUT is connected to a charger for charging. The EUT is synchronized to System Simulator (SS), and able to respond to paging messages and incoming call. An established call has been released.

This device contains the receivers which tune and operate between 30MHz-960MHz in the following bands: WCDMA Band5, LTE Band 5.

The EUT was tested while operating in licensed band receiver mode. All licensed band receivers that tune in the range of 30MHz-960MHz, as listed in Section 3.1, 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

Limit from Part 15.109(a)

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 original limit is defined at 10m test distance. This limit is calculated according to CISPR requirements.

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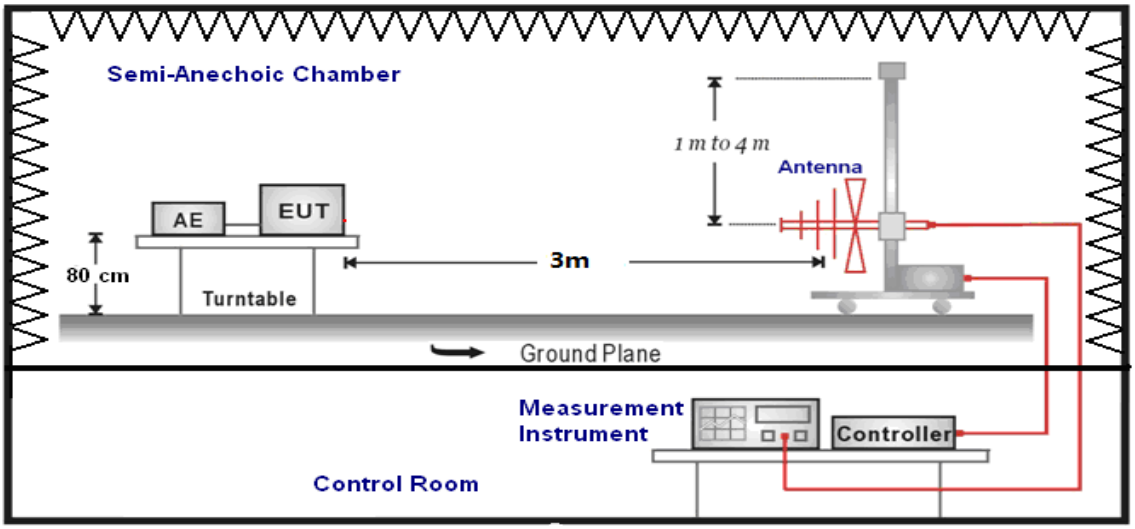
A.1.4 Test Condition

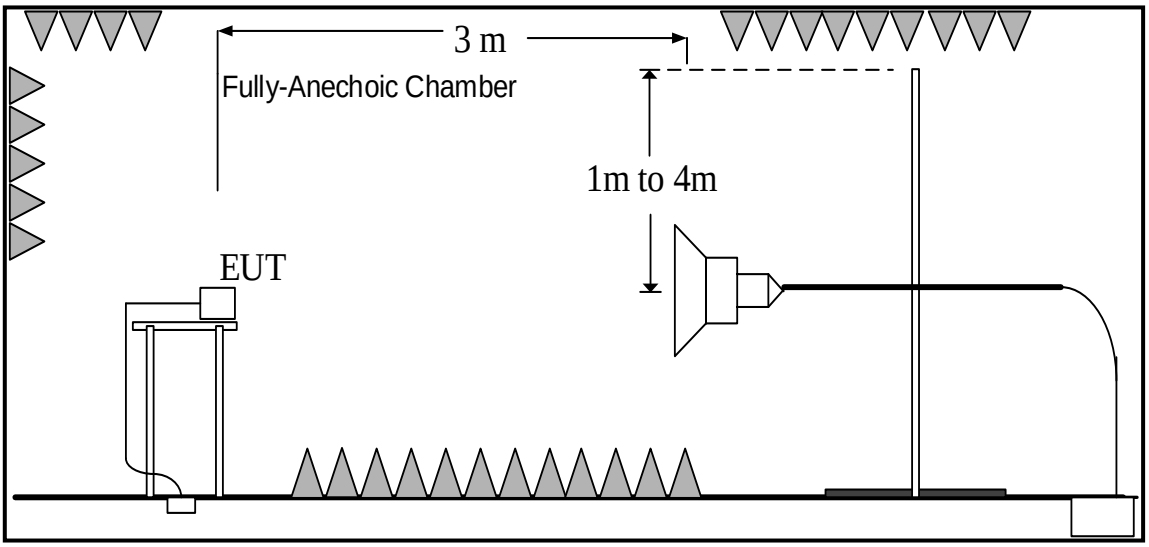
Frequency of emission (MHz)	RBW/VBW	Sweep Time(s)
30-1000	120kHz (IF bandwidth)	5
Above 1000	1MHz/3MHz	15

A.1.5 Test set-up:

30MHz-1GHz



1GHz-40GHz



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:

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

Where

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G_A: Antenna factor of receive antenna

G_{PL}:PathLoss

P_{Mea}: Measurement result on receiver.

Result:Quasi-Peak(dBμV/m) /Average(dBμV/m)/Peak(dBμV/m)

Note: the result contains vertical part and Horizontal part

Charging

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT07aa/Set.1	Conclusion
30-88	40.00	See Figure A.1.1.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT07aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.2.	P
18000 to 26500	54.00	74.00	See Figure A.1.3.	P

WCDMA receiver Band 5

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT07aa/Set.1	Conclusion
30-88	40.00	See Figure A.1.4.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT07aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.5.	P
18000 to 26500	54.00	74.00	See Figure A.1.6.	P

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LTE receiver Band 5

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT07aa/Set.1	Conclusion
30-88	40.00	See Figure A.1.7.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT07aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.8.	P
18000 to 26500	54.00	74.00	See Figure A.1.9.	P

Charging

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT07aa/Set.2	Conclusion
30-88	40.00	See Figure A.1.10.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT07aa/Set.2	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.11.	P
18000 to 26500	54.00	74.00	See Figure A.1.12.	P

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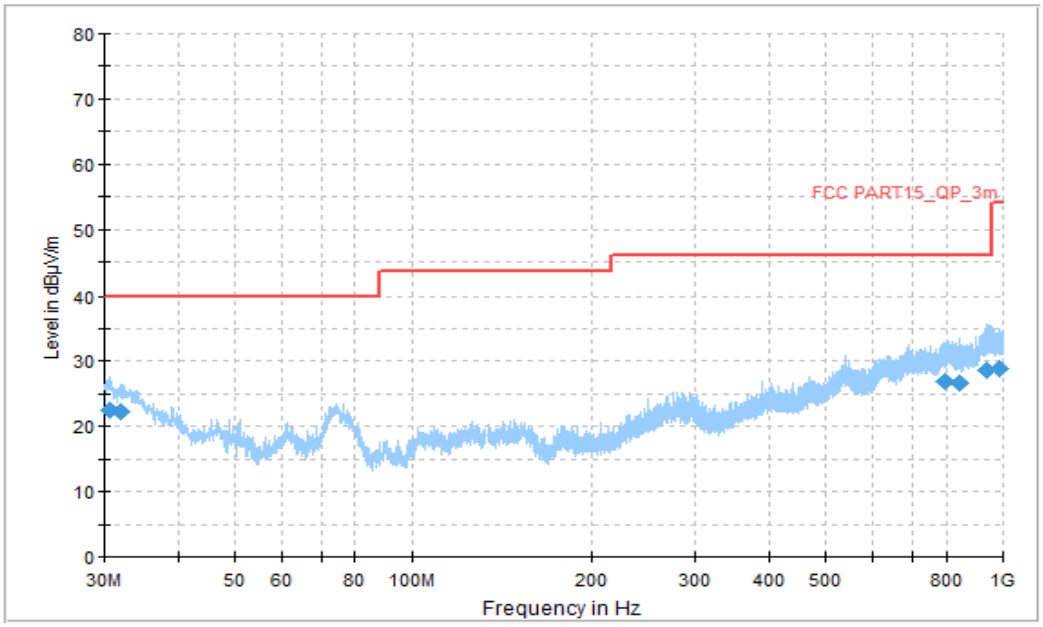

Figure A.1.1. Radiated Emission (Charging, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
30.700556	22.59	40.00	17.41	V	-12	34.59
32.047778	22.32	40.00	17.68	V	-13	35.32
794.845000	26.91	46.02	19.11	H	0	26.91
845.770000	26.62	46.02	19.40	V	0	26.62
937.327222	28.60	46.02	17.42	V	2	26.6
983.132778	28.78	53.98	25.20	V	2	26.78

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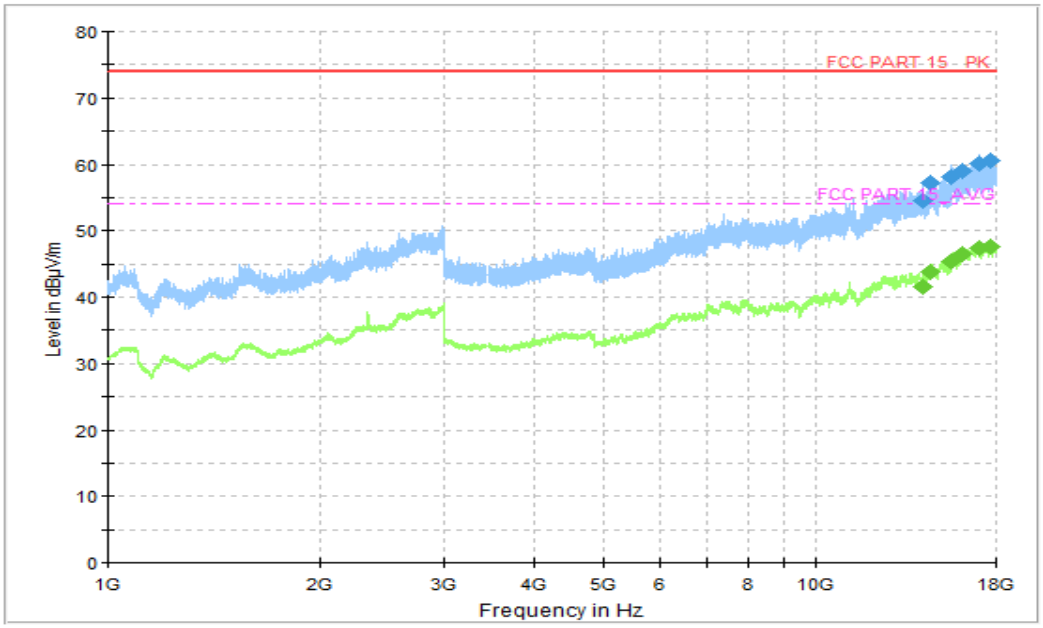

Figure A.1.2. Radiated Emission (Charging, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
14144.250000	54.43	74.00	19.57	H	18	36.43
14567.750000	57.15	74.00	16.85	H	19	38.15
15577.500000	58.12	74.00	15.88	V	20	38.12
16150.500000	59.08	74.00	14.92	V	22	37.08
17031.250000	60.14	74.00	13.86	H	23	37.14
17720.500000	60.53	74.00	13.47	H	24	36.53

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
14144.250000	41.56	54.00	12.44	H	18	23.56
14567.750000	43.81	54.00	10.19	H	19	24.81
15577.500000	45.27	54.00	8.73	V	20	25.27
16150.500000	46.41	54.00	7.59	V	22	24.41
17031.250000	47.32	54.00	6.68	H	23	24.32
17720.500000	47.53	54.00	6.47	H	24	23.53

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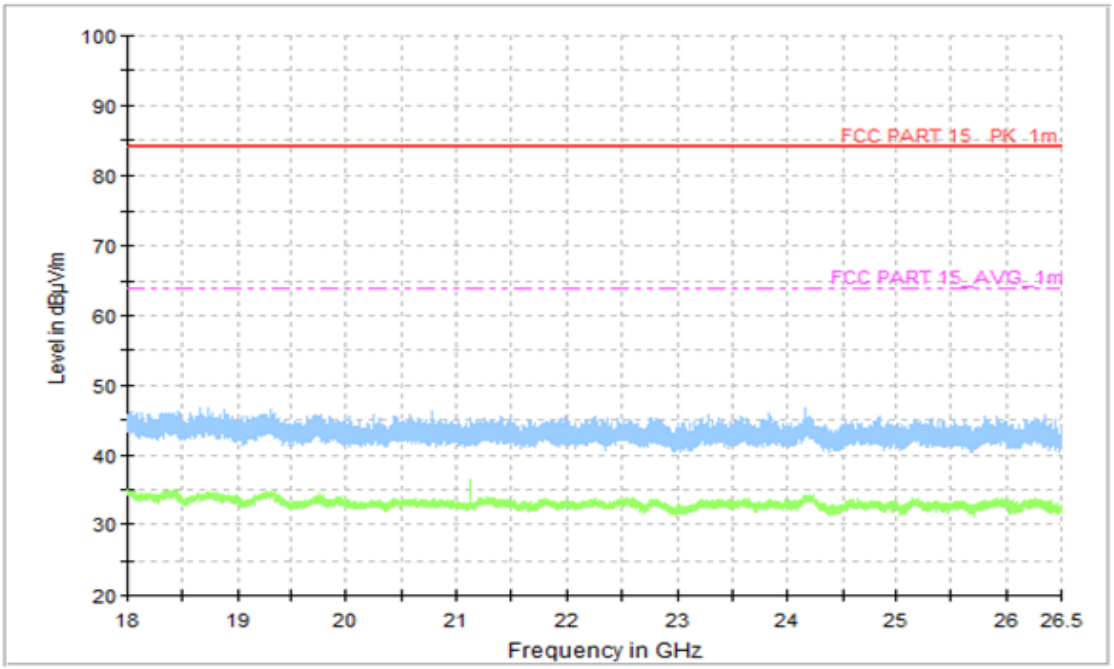

Figure A.1.3. Radiated Emission (Charging, 18GHz to 26.5GHz)

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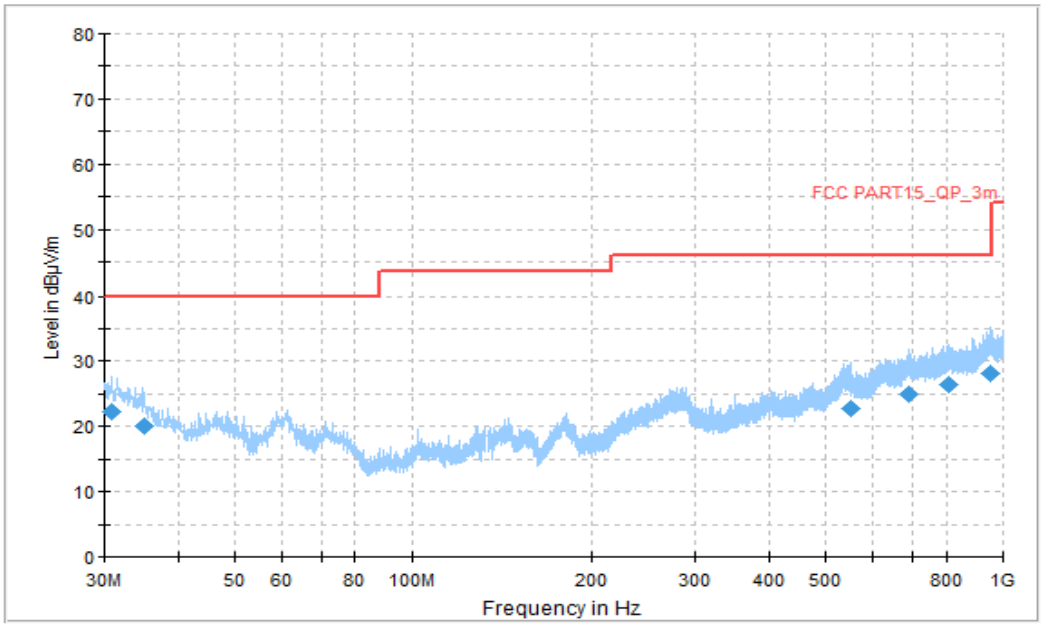

Figure A.1.4. Radiated Emission (WCDMA receiver Band 5, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
30.754444	22.36	40.00	17.64	V	-12	34.59
35.119444	20.00	40.00	20.00	V	-15	35.32
551.159444	22.70	46.02	23.32	H	-3	26.91
692.186667	24.84	46.02	21.18	H	-1	26.62
806.916111	26.47	46.02	19.55	H	1	26.6
949.829444	28.22	46.02	17.80	H	3	26.78

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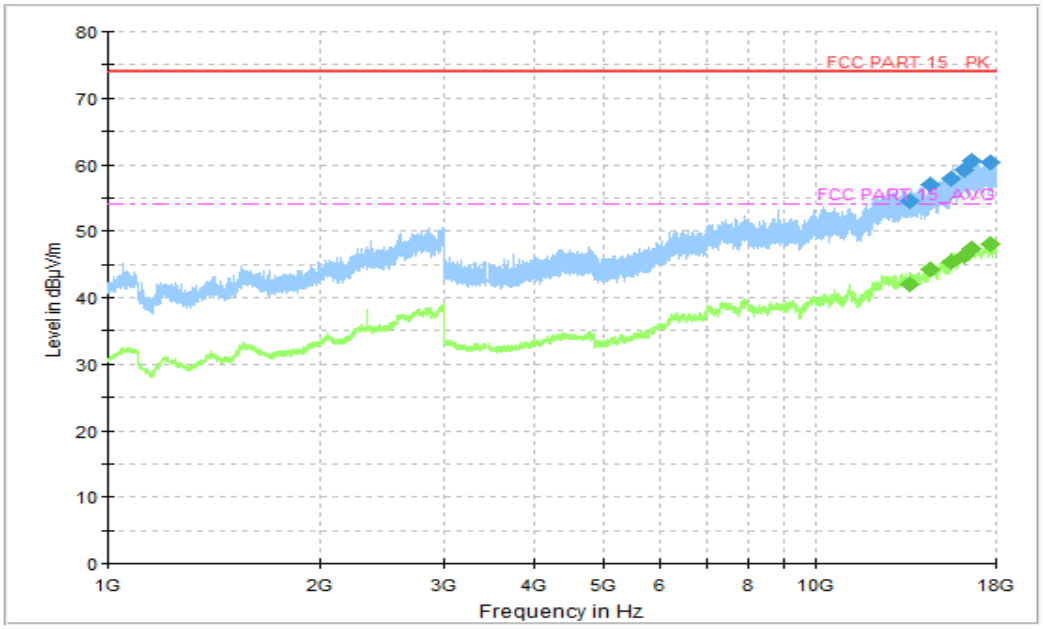

Figure A.1.5. Radiated Emission (WCDMA receiver Band 5, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
13612.000000	54.55	74.00	19.45	V	18	36.43
14550.750000	56.92	74.00	17.08	H	19	38.15
15577.750000	57.94	74.00	16.06	H	20	38.12
16261.000000	59.25	74.00	14.75	H	22	37.08
16594.000000	60.62	74.00	13.38	V	23	37.14
17692.750000	60.26	74.00	13.74	V	24	36.53

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
13612.000000	41.95	54.00	12.05	V	18	23.56
14550.750000	44.21	54.00	9.79	H	19	24.81
15577.750000	45.29	54.00	8.71	H	20	25.27
16261.000000	46.32	54.00	7.68	H	22	24.41
16594.000000	47.41	54.00	6.59	H	23	24.32
17692.750000	47.95	54.00	6.05	H	24	23.53

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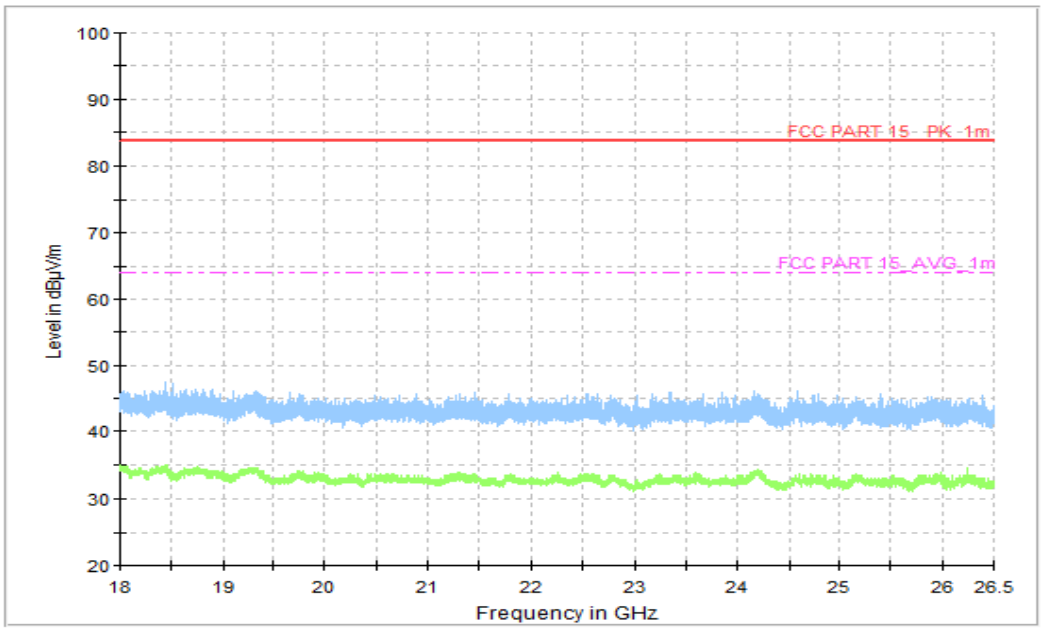

Figure A.1.6. Radiated Emission (WCDMA receiver Band 5, 18GHz to 26.5GHz)

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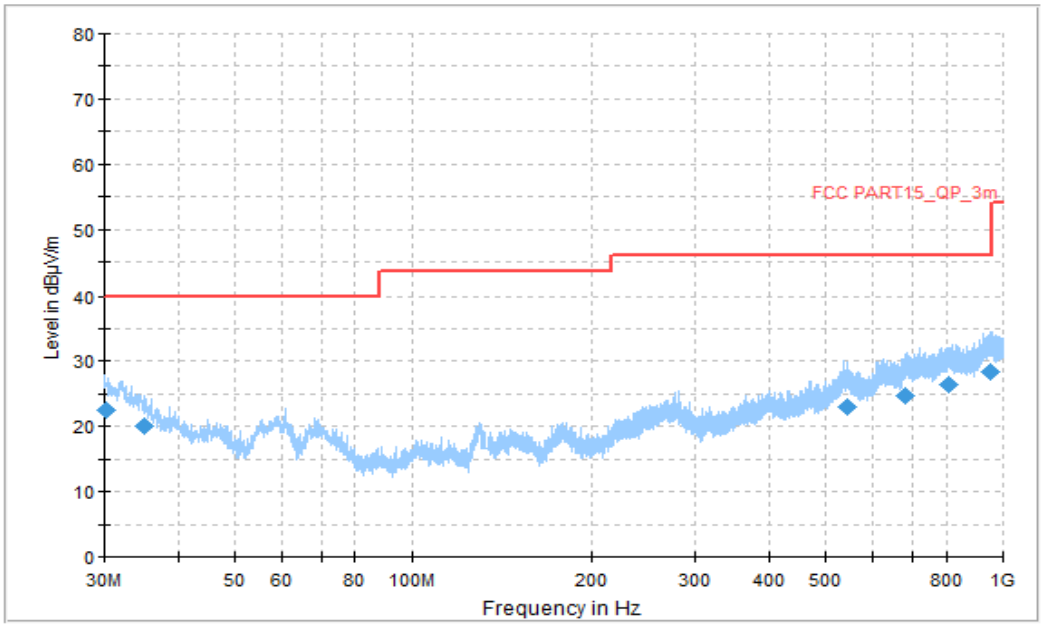

Figure A.1.7. Radiated Emission (LTE receiver Band 5, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
30.161667	22.56	40.00	17.44	V	-12	34.59
35.065556	20.13	40.00	19.87	V	-14	35.32
545.662778	23.06	46.02	22.96	H	-3	26.91
680.762222	24.75	46.02	21.27	V	-1	26.62
806.916111	26.52	46.02	19.50	H	1	26.6
953.547778	28.35	46.02	17.67	H	3	26.78

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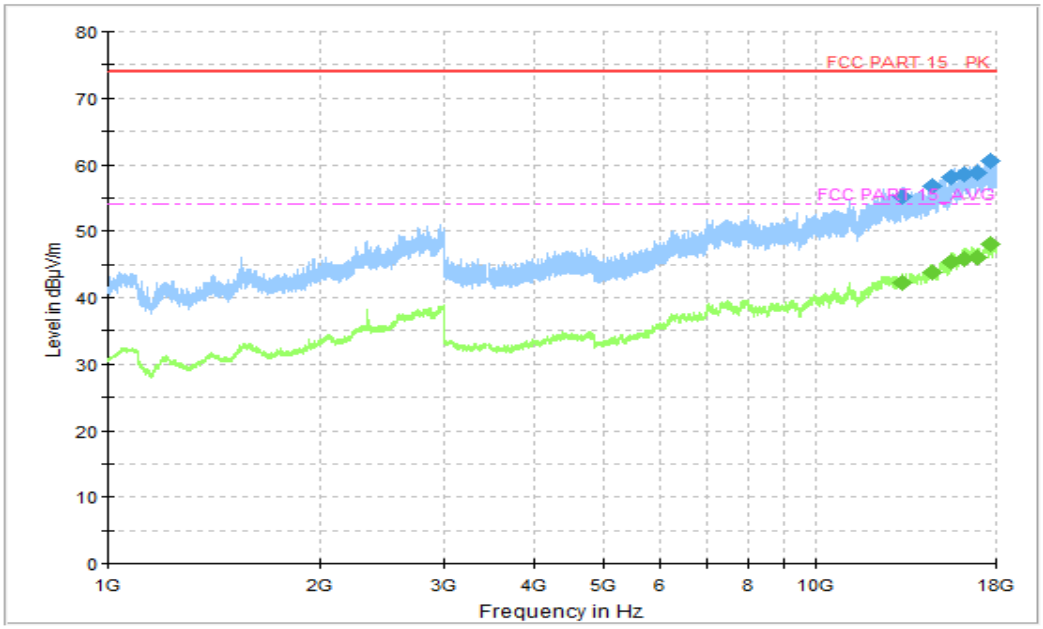

Figure A.1.8. Radiated Emission (LTE receiver Band 5, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
13259.250000	55.10	74.00	18.90	V	18	36.43
14583.750000	56.75	74.00	17.25	H	19	38.15
15575.250000	58.16	74.00	15.84	V	20	38.12
16195.250000	58.64	74.00	15.36	H	22	37.08
16918.500000	58.78	74.00	15.22	V	23	37.14
17698.500000	60.61	74.00	13.39	H	24	36.53

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
13259.250000	42.34	54.00	11.66	V	18	23.56
14583.750000	43.82	54.00	10.18	H	19	24.81
15575.250000	45.42	54.00	8.58	V	20	25.27
16195.250000	45.82	54.00	8.18	H	22	24.41
16918.500000	46.04	54.00	7.96	V	23	24.32
17698.500000	47.98	54.00	6.02	H	24	23.53

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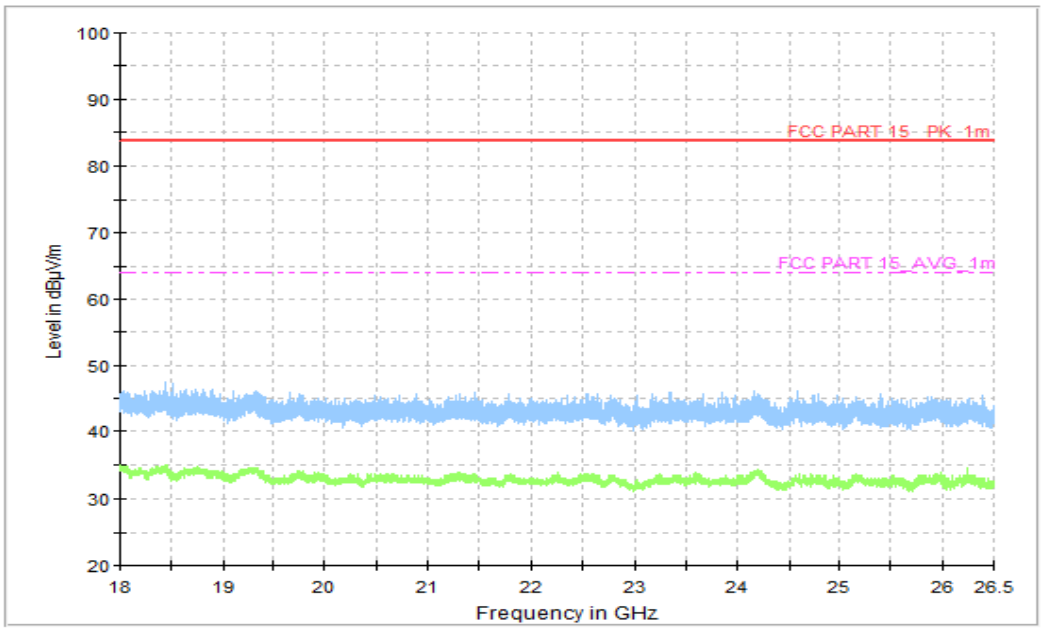

Figure A.1.9. Radiated Emission (LTE receiver Band 5, 18GHz to 26.5GHz)

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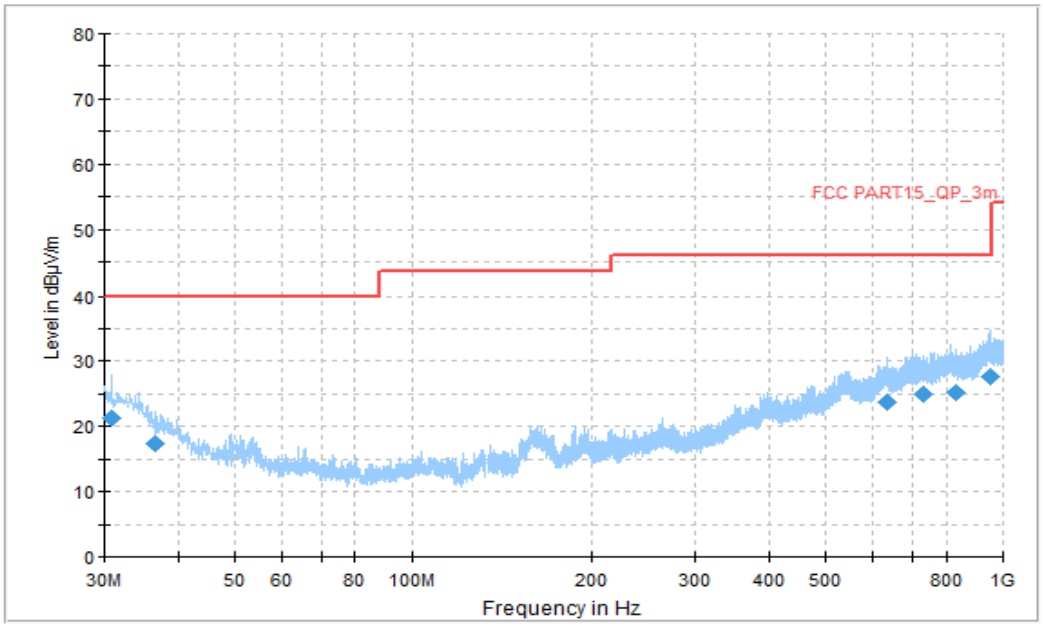

Figure A.1.10. Radiated Emission (Charging, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
30.808333	21.29	40.00	18.71	V	-13	34.29
36.682222	17.34	40.00	22.66	V	-17	34.34
633.825000	23.73	46.02	22.29	H	-3	26.73
730.717222	24.94	46.02	21.08	V	-2	26.94
831.166111	25.27	46.02	20.75	V	-1	26.27
949.883333	27.72	46.02	18.30	V	1	26.72

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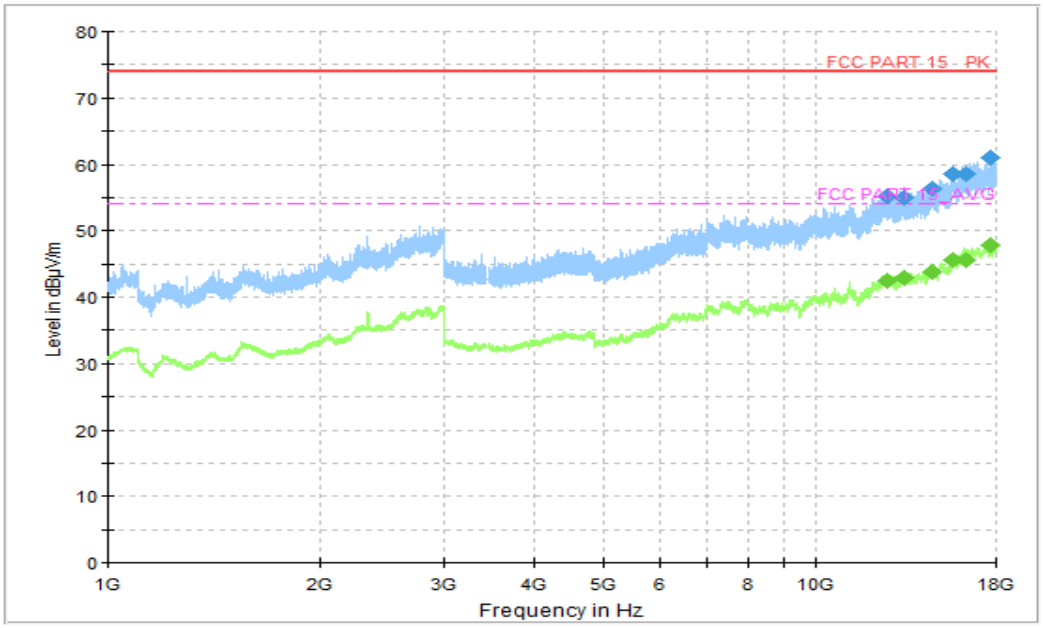

Figure A.1.11. Radiated Emission (Charging, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
12639.250000	55.09	74.00	18.91	H	18	37.09
13368.500000	55.03	74.00	18.97	H	18	37.03
14575.500000	56.39	74.00	17.61	V	19	37.39
15594.000000	58.53	74.00	15.47	V	20	38.53
16287.000000	58.50	74.00	15.50	V	21	37.5
17695.500000	61.04	74.00	12.96	V	24	37.04

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
12639.250000	42.38	54.00	11.62	H	18	24.38
13368.500000	42.95	54.00	11.05	H	18	24.95
14575.500000	43.71	54.00	10.29	V	19	24.71
15594.000000	45.58	54.00	8.42	V	20	25.58
16287.000000	45.61	54.00	8.39	V	21	24.61
17695.500000	47.89	54.00	6.11	V	24	23.89

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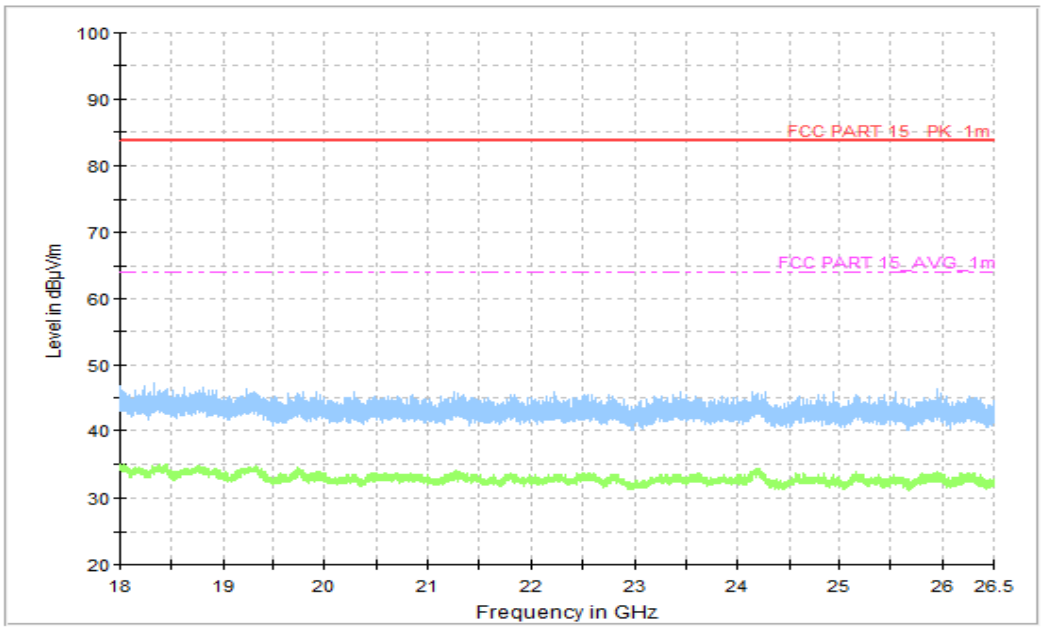

Figure A.1.12. Radiated Emission (Charging, 18GHz to 26.5GHz)

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A.2 Conducted Emission (§15.107(a))

Reference

FCC: 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 150kHz to 30MHz 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: At the beginning of measurement, the battery is completely discharged. The battery and charger are installed so that the EUT works well and is in charging state.

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		

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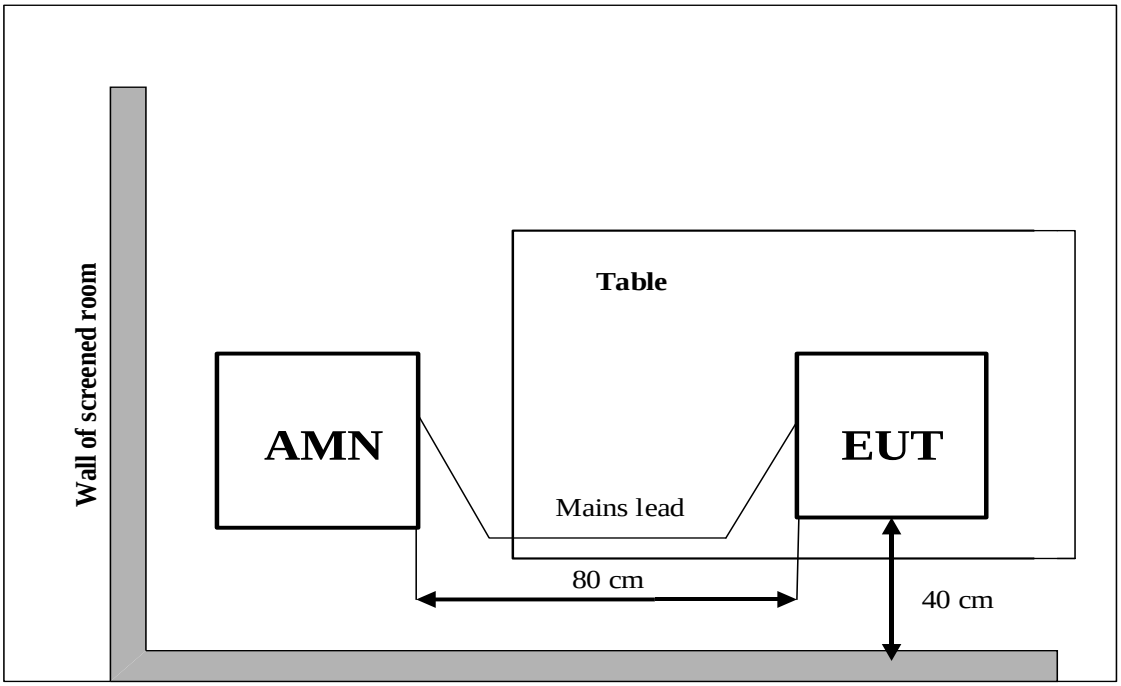
A.2.4Test set-up:



A.2.5 Test Condition in charging mode

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

RBW	Sweep Time(s)
9kHz	1

A.2.6 Measurement Results

QuasiPeak(dBμV) /Average(dBμV) =PMea+Corr

Where

Corr: PathLoss + Voltage Division Factor

PMea: Measurement result on receiver.

Charging

AC Input Port/ Voltage: 120V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV) UT07aa/Set.1	Conclusion
0.15 to 0.5	66 to 56	56 to 46	See Figure A.2.1.	P
0.5 to 5	56	46		
5 to 30	60	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

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Charging

AC Input Port/ Voltage: 120V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV)	Conclusion
			UT07aa/Set.3	
0.15 to 0.5	66 to 56	56 to 46	See Figure A.2.2.	P
0.5 to 5	56	46		
5 to 30	60	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

Charging

AC Input Port/ Voltage: 240V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV)	Conclusion
			UT07aa/Set.1	
0.15 to 0.5	66 to 56	56 to 46	See Figure A.2.3.	P
0.5 to 5	56	46		
5 to 30	60	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

Charging

AC Input Port/ Voltage: 240V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV)	Conclusion
			UT07aa/Set.3	
0.15 to 0.5	66 to 56	56 to 46	See Figure A.2.4.	P
0.5 to 5	56	46		
5 to 30	60	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

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AC Input Port/ Voltage: 120V/60Hz

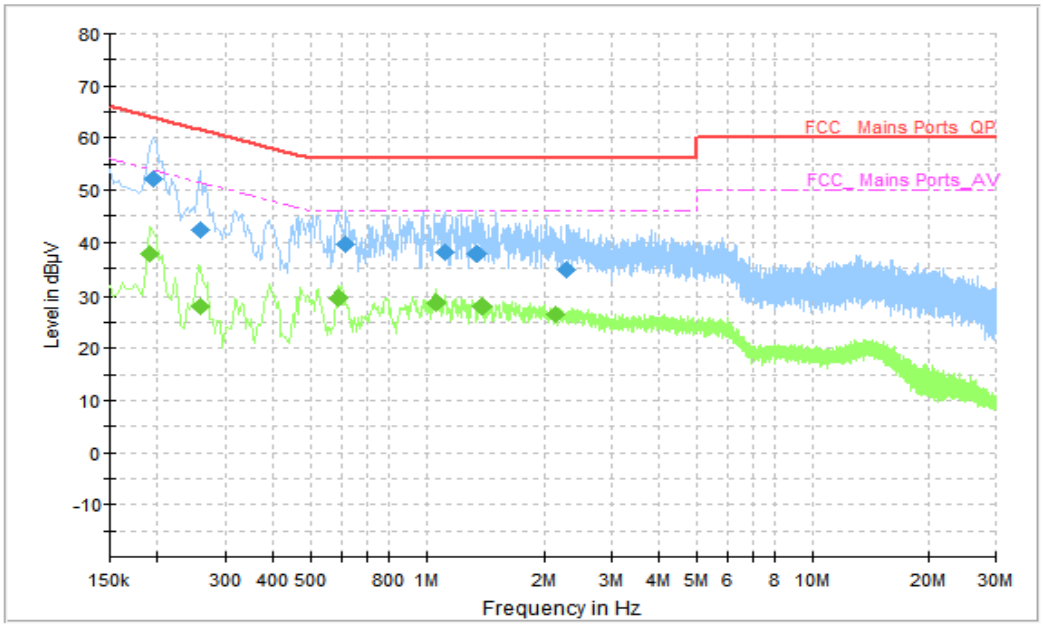

Figure A.2.1. Conducted Emission(Charging)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.194000	52.30	63.86	11.56	L1	10	42.30
0.258000	42.27	61.50	19.23	L1	10	32.27
0.618000	39.52	56.00	16.48	L1	10	29.52
1.118000	38.03	56.00	17.97	L1	10	28.03
1.350000	37.68	56.00	18.32	L1	10	27.68
2.286000	34.63	56.00	21.37	L1	10	24.63

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.190000	37.90	54.04	16.13	L1	10	27.90
0.258000	27.99	51.50	23.50	L1	10	17.99
0.586000	29.54	46.00	16.46	L1	10	19.54
1.054000	28.62	46.00	17.38	L1	10	18.62
1.386000	27.95	46.00	18.05	L1	10	17.95
2.134000	26.37	46.00	19.63	L1	10	16.37

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AC Input Port/ Voltage: 120V/60Hz

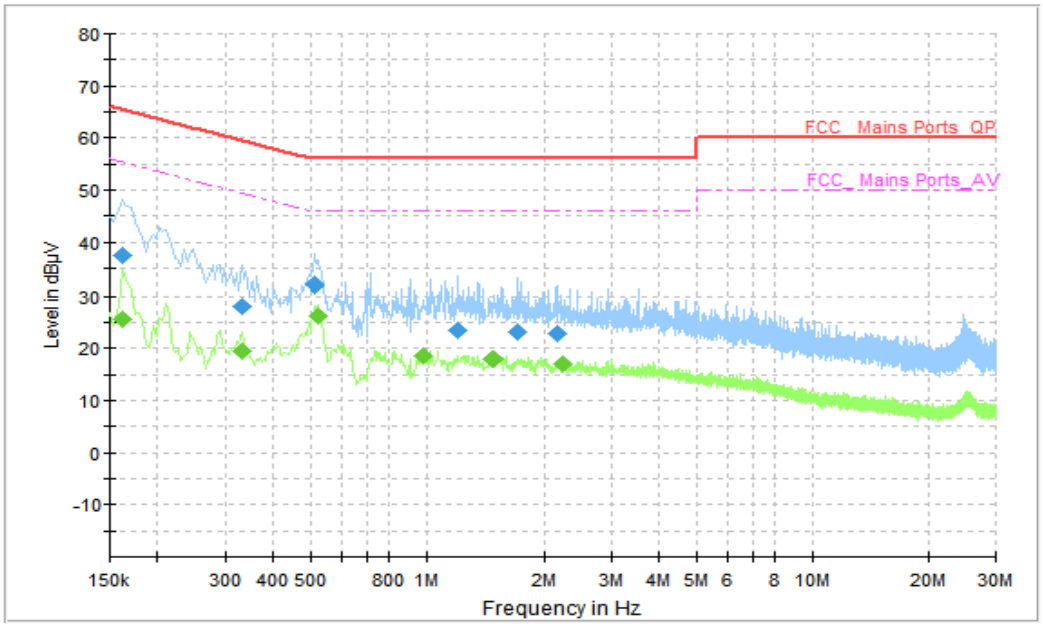

Figure A.2.2. Conducted Emission(Charging)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.162000	37.53	65.36	27.83	N	10	27.53
0.330000	27.98	59.45	31.47	N	10	17.98
0.510000	32.01	56.00	23.99	N	10	22.01
1.206000	23.33	56.00	32.67	N	10	13.33
1.714000	23.14	56.00	32.86	N	10	13.14
2.158000	22.78	56.00	33.22	N	10	12.78

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.162000	25.54	55.36	29.82	N	10	15.54
0.330000	19.49	49.45	29.96	N	10	9.49
0.522000	26.24	46.00	19.76	N	10	16.24
0.986000	18.62	46.00	27.38	N	10	8.62
1.490000	17.98	46.00	28.02	N	10	7.98
2.242000	16.96	46.00	29.04	N	10	6.96

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AC Input Port/ Voltage: 240V/60Hz

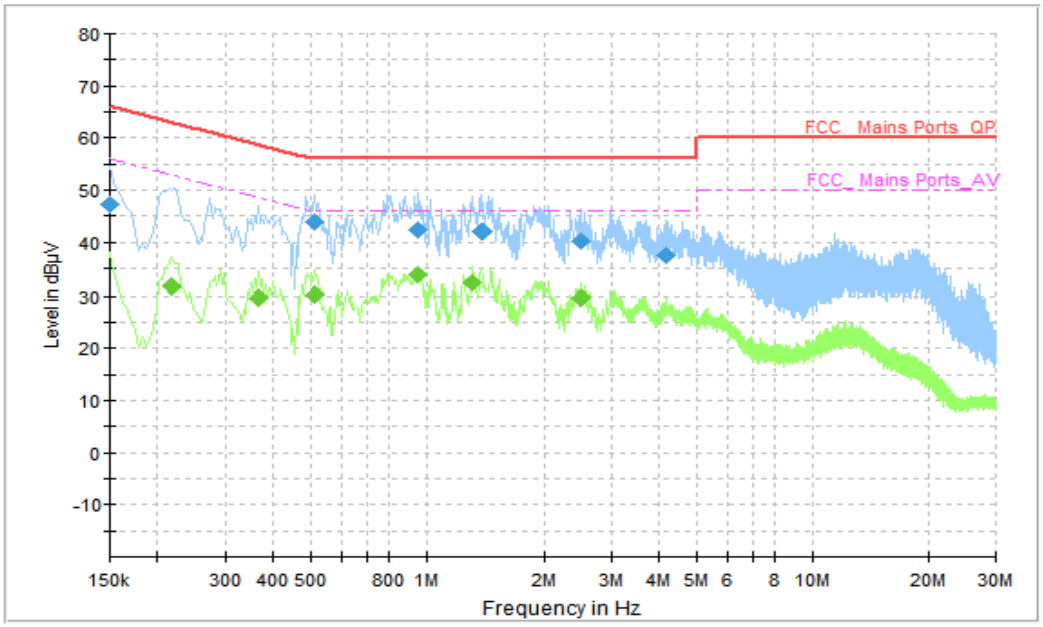

Figure A.2.3. Conducted Emission(Charging)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.150000	47.26	66.00	18.74	N	10	37.26
0.510000	43.96	56.00	12.04	N	10	33.96
0.950000	42.47	56.00	13.53	N	10	32.47
1.390000	42.08	56.00	13.92	N	10	32.08
2.494000	40.22	56.00	15.78	N	10	30.22
4.154000	37.60	56.00	18.40	N	10	27.60

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.218000	31.57	52.90	21.33	N	10	21.57
0.366000	29.58	48.59	19.01	N	10	19.58
0.514000	30.28	46.00	15.72	N	10	20.28
0.950000	33.94	46.00	12.06	N	10	23.94
1.322000	32.44	46.00	13.56	N	10	22.44
2.494000	29.56	46.00	16.44	N	10	19.56

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AC Input Port/ Voltage: 240V/60Hz

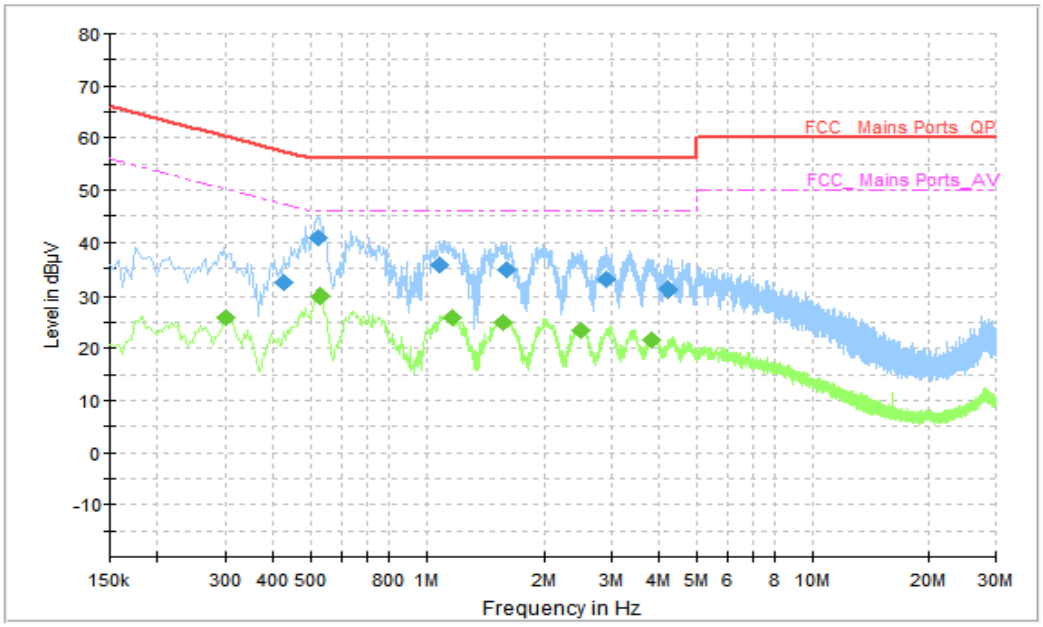

Figure A.2.4. Conducted Emission(Charging)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.426000	32.23	57.33	25.11	N	10	22.23
0.522000	40.84	56.00	15.16	N	10	30.84
1.086000	35.52	56.00	20.48	N	10	25.52
1.594000	34.66	56.00	21.34	N	10	24.66
2.914000	32.98	56.00	23.02	N	10	22.98
4.198000	31.09	56.00	24.91	N	10	21.09

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.302000	25.79	50.19	24.39	L1	10	15.79
0.526000	29.79	46.00	16.21	L1	10	19.79
1.166000	25.84	46.00	20.16	N	10	15.84
1.570000	25.08	46.00	20.92	N	10	15.08
2.494000	23.37	46.00	22.63	L1	10	13.37
3.814000	21.52	46.00	24.48	N	10	11.52

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

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