



TEST REPORT

No.I22N00716-EMC

for

HMD Global Oy

Smart Phone

Model Name: TA-1413

With

Hardware Version: V01

Software Version: 00WW_0_017

FCC ID: 2AJOTTA-1413

Issued Date: 2022-04-20

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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No.I22N00716-EMC

REPORT HISTORY

Report Number	Revision	Description	Issue Date
I22N00716-EMC	Rev.0	1st edition	2022-04-20

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	Smart Phone
Model Name	TA-1413
Applicant's name	HMD Global Oy
Manufacturer's Name	HMD Global Oy

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

1.5. Project data

Testing Start Date: 2022-03-28

Testing End Date: 2022-04-13

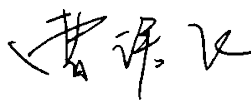
1.6. Signature



Liang Yong
(Prepared this test report)



Zhang Yunzhuan
(Reviewed this test report)



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(Approved this test report)



2. CLIENT INFORMATION

2.1. Applicant Information

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Email: reza.serafat@hmdglobal.com
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2.2. Manufacturer Information

Company Name: HMD Global Oy
Address: Bertel Jungin aukio 9, 02600 Espoo, Finland
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Tel: +393 31 6272922

3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT

(AE)

3.1. About EUT

Description	Smart Phone
Model Name	TA-1413
FCC ID	2AJOTTA-1413
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
UT09aa	355400570002629	V01	00WW_0_017	2022-03-28

*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
AE4	Headset

AE1-1

Model	GH6581
Manufacturer	Shenzhen Aerospace Electronic CO.,Ltd.
Capacity	4850mAh
Nominal Voltage	3.85v

AE2-1

Model	AD-010E
Manufacturer	Shenzhen Baijunda Electronics Co. LTD

AE2-2

Model	AD-010U
Manufacturer	Shenzhen Baijunda Electronics Co. LTD

AE2-3

Model	AD-010A
Manufacturer	Shenzhen Baijunda Electronics Co. LTD

AE2-4

Model	AD-010X
Manufacturer	Shenzhen Baijunda Electronics Co. LTD

AE3-1

Model	MO56B2000100
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Manufacturer Qianyang FKY Electronic Technology Co., Ltd.
AE4

Model JWEP1199-M01H

Manufacturer JUWEI ELECTRONICS CO.,LTD

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

AE: ancillary equipment

AE2: The circuit boards of model AD-010E (AE2-1), AD-010U (AE2-2), AD-010A (AE2-3), and AD-010X (AE2-4), are the same.

3.4. EUT Set-ups

EUT set-up No.	Combination of EUT and AE	Remarks
Set.1	EUT+AE1-1+AE2-1+AE3-1+AE4	
Set.2	EUT+AE1-1+AE3-1+PC	

3.5. General Description

The Equipment Under Test (EUT) is a model of Smart Phone.

It supports GSM 850/900/1800/1900MHz, WCDMA Bands 1/2/4/5/8 and
LTE Bands 1/2/3/4/5/7/8/12/13/17/28/66.

It has Video Player, Camera, FM Receiver, USB memory, Bluetooth, Wi-Fi and GNSS functions.

It consists of normal options: Battery, Charger USB Cable and headset.

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.

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

5. LABORATORY ENVIRONMENT

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

9.10m×6.10m×5.60m (L×W×H)

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

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

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

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

9.10m×6.10m×5.60m (L×W×H)

Temperature	Min. = 15 °C, Max. = 35°C
Relative humidity	Min. = 20 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz,>60dB; 1MHz-18000MHz,>90dB
Electrical insulation	>2MΩ
Ground system resistance	<4Ω
Voltage Standing Wave Ratio (VSWR)	≤ 6 dB, from 1 to 18GHz, 3 m distance
Uniformity of field strength	Between 0 and 6 dB, from 80 to 6000 MHz

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	Section in this report	Verdict
1	Radiated Emission	15.109(a)	A.1	P
2	Conducted Emission	15.107(a)	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.

7. MEASUREMENT UNCERTAINTY

Test item	Frequency ranges	Measurement uncertainty
Radiated Emission	30MHz-1GHz	4.86dB(k=2)
	1GHz-18GHz	4.82dB(k=2)
	18GHz-40GHz	2.90dB(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	00066577	ETS-Lindgren	2025.03.15	3 years
6.	LISN	ENV216	102067	R&S	2022.07.15	1 year
7.	Chamber	FACT3-2.0	1285	ETS-Lindgren	2023.05.29	2 years
8.	Software	EMC32	V10.50.40	R&S	/	/
9.	Universal Radio Communication Tester	CMU200	114545	R&S	2023.01.12	1 year
10.	Horn Antenna	QSH-SL-18-2 6-S-20	17013	Q-par	2023.01.06	3 years
11.	Horn Antenna	QSH-SL-8-26- 40-K-20	17014	Q-par	2023.01.06	3 years



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9. TEST ACCESSORY UTILIZED

No.	Name	Model	Serial Number	Manufacturer	Calibration Due date	Calibration Period
1.	PC	ThinkPad T480	PF-13LW0C	Lenovo	/	/
2.	Printer	P1008	VNF6C12491	HP	/	/
3.	Mouse	MOEUUOA	44NY517	Lenovo	/	/

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:

Camera: At the beginning of measurement, the battery is completely discharged. The battery and charger are installed so that the EUT works well and keeping on taking photos.

Video Player: The EUT is connected to a charger for charging and keeping on playing mp3.

FM receiver: The EUT is connected to a charger for charging. The EUT is synchronized to a FM signal generator. The EUT is keeping on demodulating the FM signal and outputting the audio signal through the headset.

Data Transfer: The model of the PC is Lenovo ThinkPad T480, and the serial number of the PC is PF-13LW0C. The EUT is connected to a PC for transmitting data. The software is used to let the PC keep on copying data to EUT or TF Card, reading and erasing the data after copy action was finished.

GSM 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.

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:

GSM850MHz, WCDMA Band5, LTE Band 5, LTE Band 12, LTE Band 13 and LTE Band 17

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

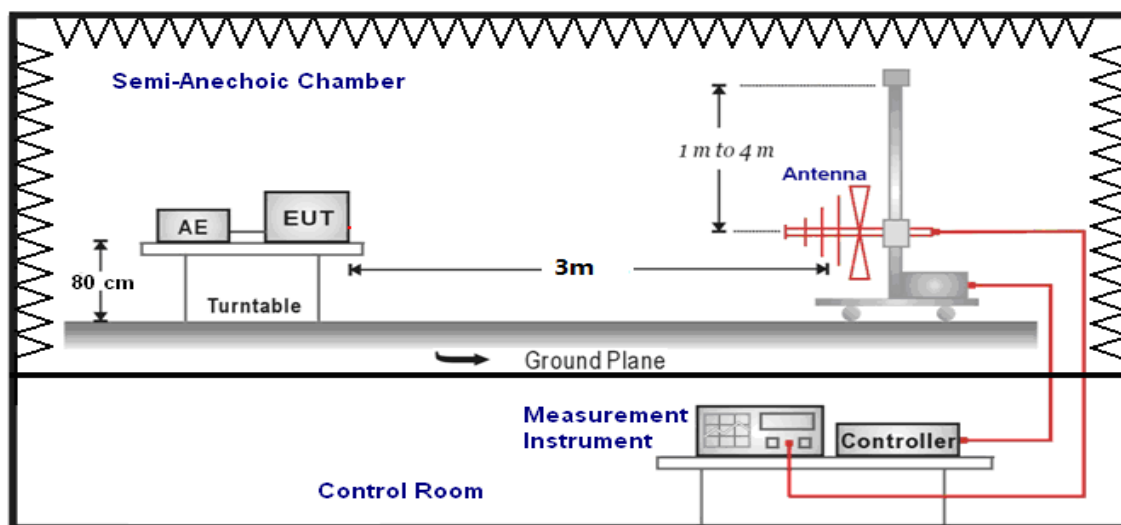
*Note: The original limit is defined at 10m test distance. This limit is calculated according to CISPR requirements.

A.1.4 Test Condition

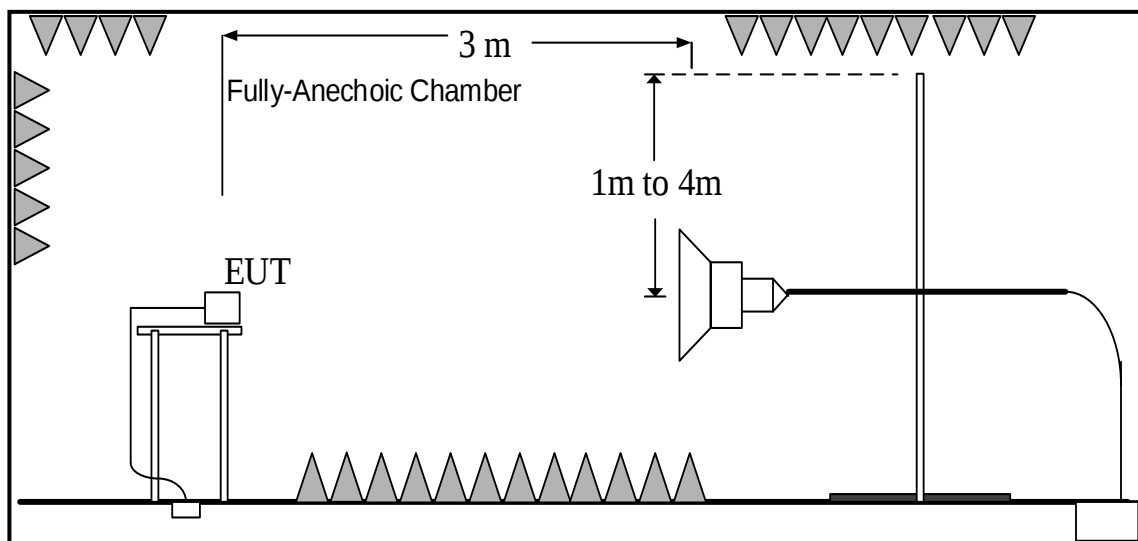
Frequency of emission (MHz)	RBW/VBW	Sweep Time(s)
30-1000	120kHz (IF bandwidth)	5
Above 1000	1MHz/3MHz	15

A.1.5 Test set-up:

30MHz-1GHz



1GHz-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:

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

Where

G_A : Antenna factor of receive antenna

G_{PL} : Path Loss

P_{Mea} : Measurement result on receiver.

Result: Quasi-Peak (dB μ V/m) / Average (dB μ V/m) / Peak (dB μ V/m)

Note: the result contains vertical part and Horizontal part

Camera

Frequency range (MHz)	Quasi-Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
		UT09aa/Set.1	
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 (dB μ V/m)	Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
			UT09aa/Set.1	
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.	
26500 to 40000	54.00	74.00	See Figure A.1.4.	

Video Player

Frequency range (MHz)	Quasi-Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
		UT09aa/Set.1	
30-88	40.00	See Figure A.1.5.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dB μ V/m)	Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
			UT09aa/Set.1	
1000 to 18000	54.00	74.00	See Figure A.1.6.	P
18000 to 26500	54.00	74.00	See Figure A.1.7.	
26500 to 40000	54.00	74.00	See Figure A.1.8.	

FM receiver

Frequency range (MHz)	Quasi-Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
		UT09aa/Set.5	
30-88	40.00	See Figure A.1.9.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dB μ V/m)	Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
			UT09aa/Set.1	
1000 to 18000	54.00	74.00	See Figure A.1.10.	P
18000 to 26500	54.00	74.00	See Figure A.1.11.	
26500 to 40000	54.00	74.00	See Figure A.1.12.	

GSM receiver 850MHz

Frequency range (MHz)	Quasi-Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
		UT09aa/Set.1	
30-88	40.00	See Figure A.1.13.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dB μ V/m)	Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
			UT09aa/Set.1	
1000 to 18000	54.00	74.00	See Figure A.1.14.	P
18000 to 26500	54.00	74.00	See Figure A.1.15.	
26500 to 40000	54.00	74.00	See Figure A.1.16.	

WCDMA receiver Band 5

Frequency range (MHz)	Quasi-Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
		UT09aa/Set.1	
30-88	40.00	See Figure A.1.17.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dB μ V/m)	Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
			UT09aa/Set.1	
1000 to 18000	54.00	74.00	See Figure A.1.18.	P
18000 to 26500	54.00	74.00	See Figure A.1.19.	
26500 to 40000	54.00	74.00	See Figure A.1.20.	

LTE receiver Band 5

Frequency range (MHz)	Quasi-Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
		UT09aa/Set.1	
30-88	40.00	See Figure A.1.21.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dB μ V/m)	Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
			UT09aa/Set.1	
1000 to 18000	54.00	74.00	See Figure A.1.22.	P
18000 to 26500	54.00	74.00	See Figure A.1.23.	
26500 to 40000	54.00	74.00	See Figure A.1.24.	

LTE receiver Band 12

Frequency range (MHz)	Quasi-Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
		UT09aa/Set.1	
30-88	40.00	See Figure A.1.25.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dB μ V/m)	Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
			UT09aa/Set.1	
1000 to 18000	54.00	74.00	See Figure A.1.26.	P
18000 to 26500	54.00	74.00	See Figure A.1.27.	
26500 to 40000	54.00	74.00	See Figure A.1.28.	

LTE receiver Band 13

Frequency range (MHz)	Quasi-Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
		UT09aa/Set.1	
30-88	40.00	See Figure A.1.29.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dB μ V/m)	Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
			UT09aa/Set.1	
1000 to 18000	54.00	74.00	See Figure A.1.30.	P
18000 to 26500	54.00	74.00	See Figure A.1.31.	
26500 to 40000	54.00	74.00	See Figure A.1.32.	

LTE receiver Band 17

Frequency range (MHz)	Quasi-Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
		UT09aa/Set.1	
30-88	40.00	See Figure A.1.33.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dB μ V/m)	Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
			UT09aa/Set.1	
1000 to 18000	54.00	74.00	See Figure A.1.34.	P
18000 to 26500	54.00	74.00	See Figure A.1.35.	
26500 to 40000	54.00	74.00	See Figure A.1.36.	

Data Transfer

Frequency range (MHz)	Quasi-Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
		UT09aa/Set.4	
30-88	40.00	See Figure A.1.37.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dB μ V/m)	Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
			UT09aa/Set.1	
1000 to 18000	54.00	74.00	See Figure A.1.38.	P
18000 to 26500	54.00	74.00	See Figure A.1.39.	
26500 to 40000	54.00	74.00	See Figure A.1.40.	

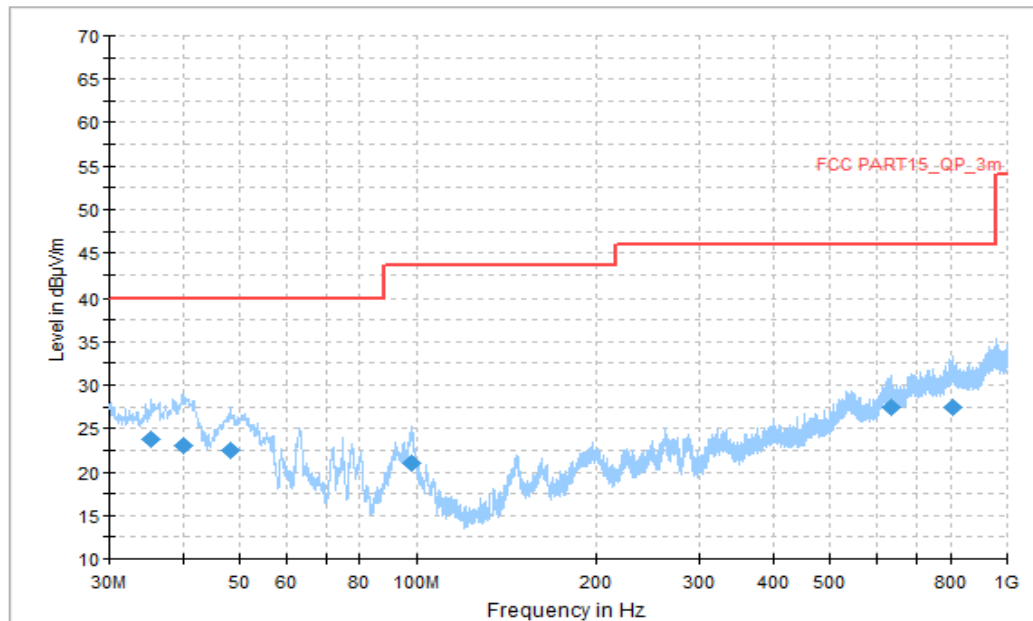


Figure A.1.1. Radiated Emission (Camera , 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	ARpl (dB/m)	PMea (dBμV)
35.388889	23.79	40.00	16.21	V	-16	39.79
40.023333	23.08	40.00	16.92	V	-18	41.08
48.322222	22.46	40.00	17.54	V	-22	44.46
98.061667	20.96	43.52	22.56	V	-20	40.96
633.878889	27.34	46.02	18.68	H	-3	30.34
810.796111	27.48	46.02	18.54	H	-1	28.48

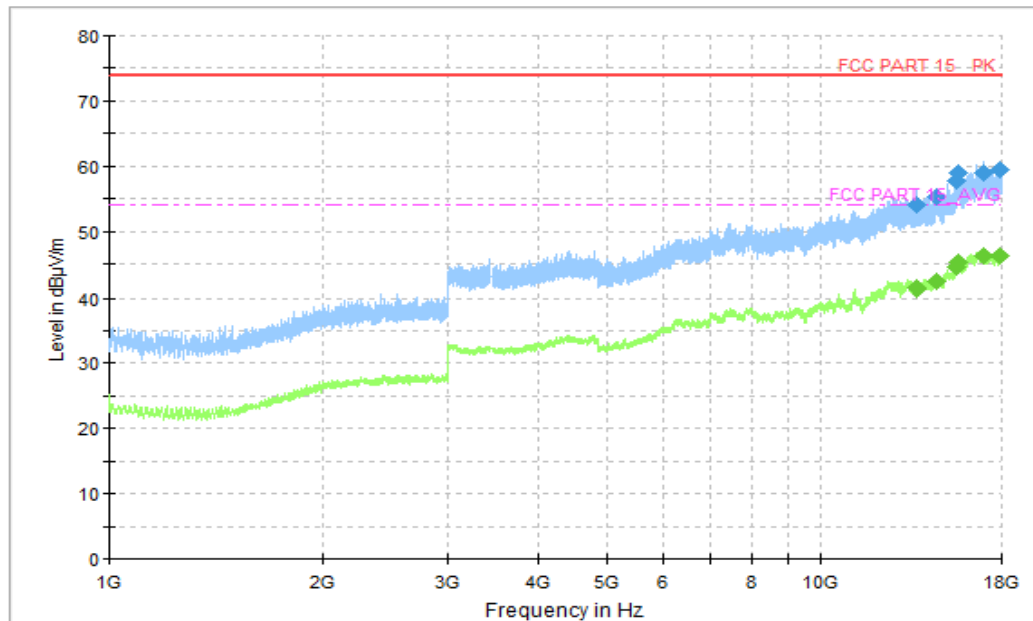


Figure A.1.2. Radiated Emission (Camera , 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBμV)
13649.000000	54.05	74.00	19.95	H	17	37.05
14597.000000	55.24	74.00	18.76	V	18	37.24
15577.000000	57.63	74.00	16.37	H	20	37.63
15647.500000	58.98	74.00	15.02	V	20	38.98
16965.250000	58.98	74.00	15.02	V	23	35.98
17880.250000	59.55	74.00	14.45	H	24	35.55

Final_Results_AVG

Frequency(MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBμV)
13649.000000	41.29	54.00	12.71	H	17	24.29
14597.000000	42.36	54.00	11.64	V	18	24.36
15577.000000	44.55	54.00	9.45	H	20	24.55
15647.500000	45.25	54.00	8.75	V	20	25.25
16965.250000	46.23	54.00	7.77	V	23	23.23
17880.250000	46.35	54.00	7.65	H	24	22.35

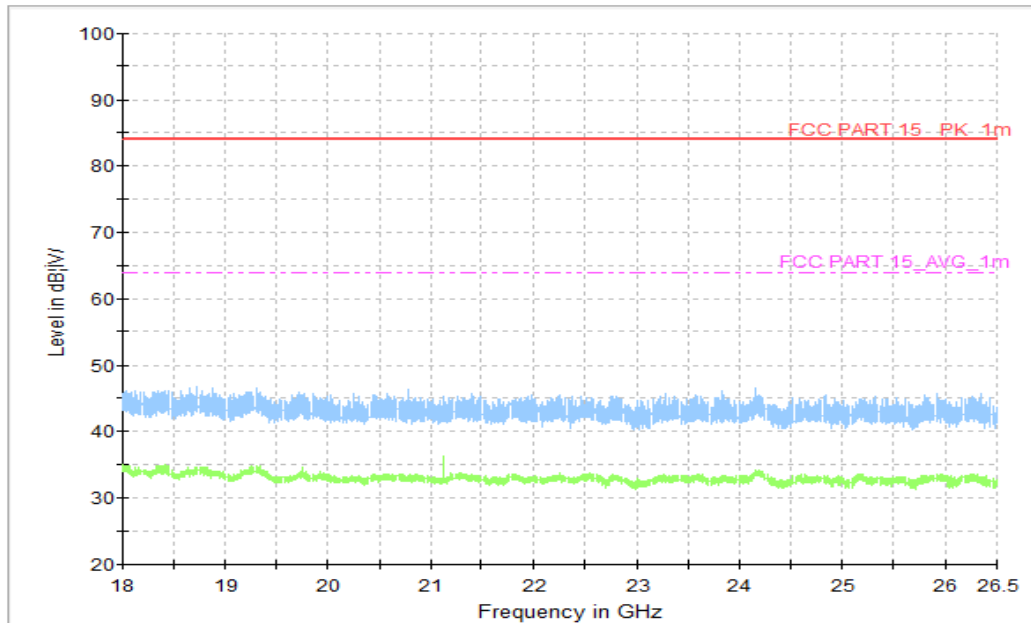


Figure A.1.3. Radiated Emission (Camera , 18GHz to 26.5GHz)

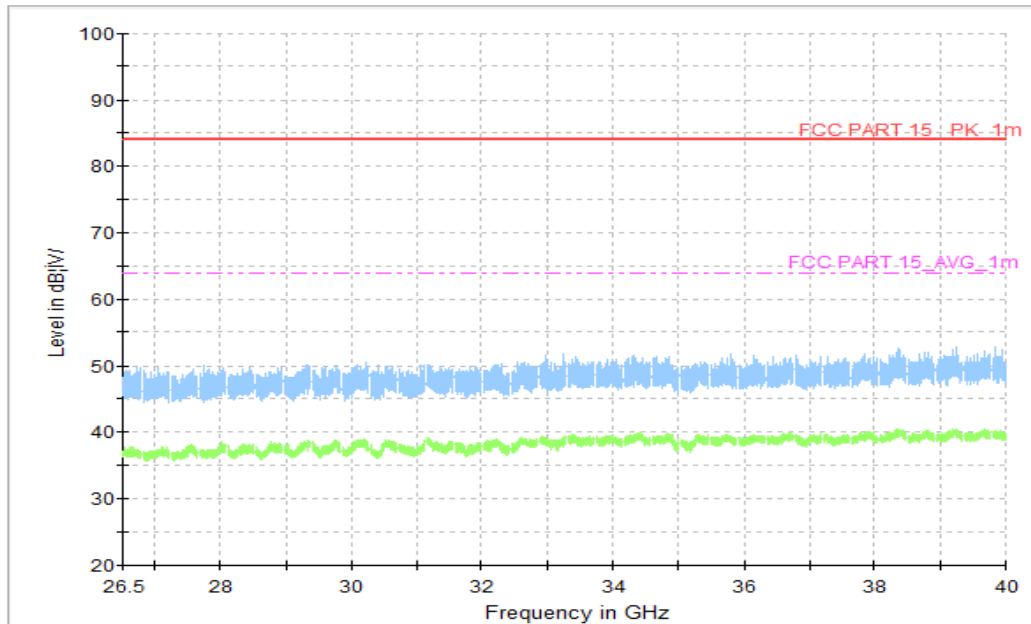


Figure A.1.4. Radiated Emission (Camera , 26.5GHz to 40GHz)

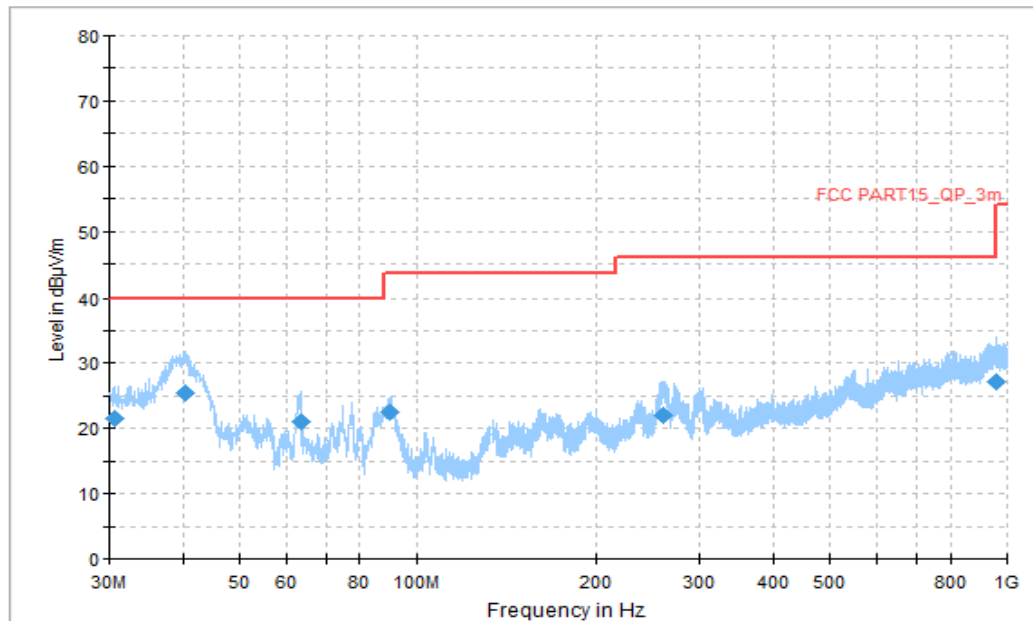


Figure A.1.5. Radiated Emission (Video Player , 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	ARpl (dB/m)	PMea (dBμV)
30.538889	21.50	40.00	18.50	H	-13	34.50
40.346667	25.46	40.00	14.54	V	-19	44.46
63.465000	21.04	40.00	18.96	V	-21	42.04
89.708889	22.54	43.52	20.98	V	-22	44.54
261.075556	21.90	46.02	24.12	H	-14	35.9
956.565556	27.15	46.02	18.87	H	1	26.15

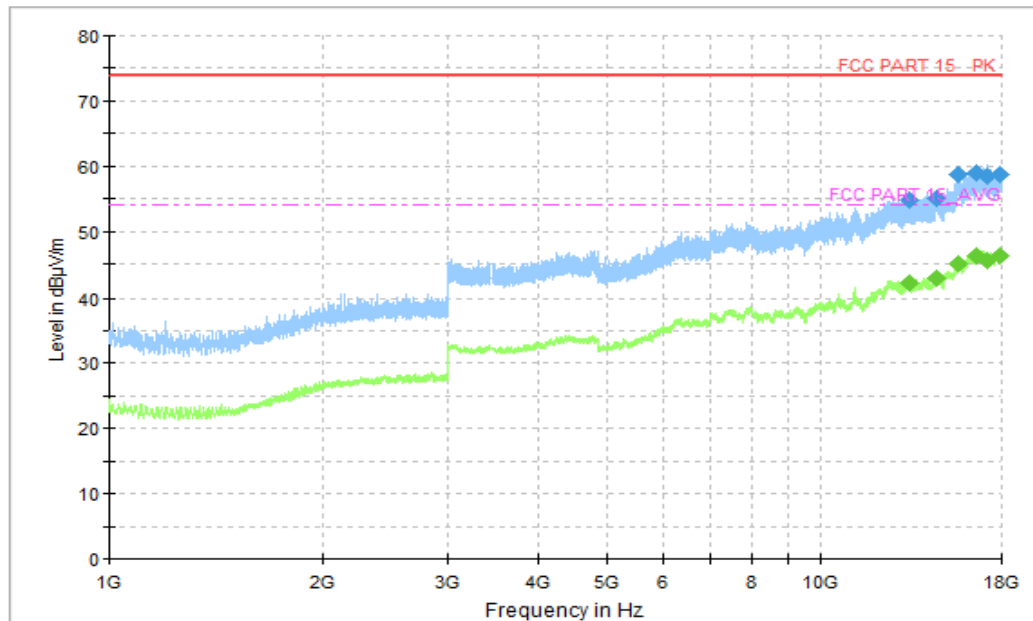


Figure A.1.6. Radiated Emission (Video Player , 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBμV)
13376.000000	54.74	74.00	19.26	H	17	37.74
14533.500000	55.05	74.00	18.95	H	18	37.05
15617.750000	58.67	74.00	15.33	H	20	38.67
16605.250000	58.96	74.00	15.04	V	22	36.96
17163.500000	58.49	74.00	15.51	H	21	37.49
17909.250000	58.78	74.00	15.22	H	24	34.78

Final_Results_AVG

Frequency(MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBμV)
13376.000000	42.01	54.00	11.99	H	17	25.01
14533.500000	42.79	54.00	11.21	H	18	24.79
15617.750000	44.95	54.00	9.05	H	20	24.95
16605.250000	46.36	54.00	7.64	V	22	24.36
17163.500000	45.58	54.00	8.42	H	21	24.58
17909.250000	46.30	54.00	7.70	H	24	22.30

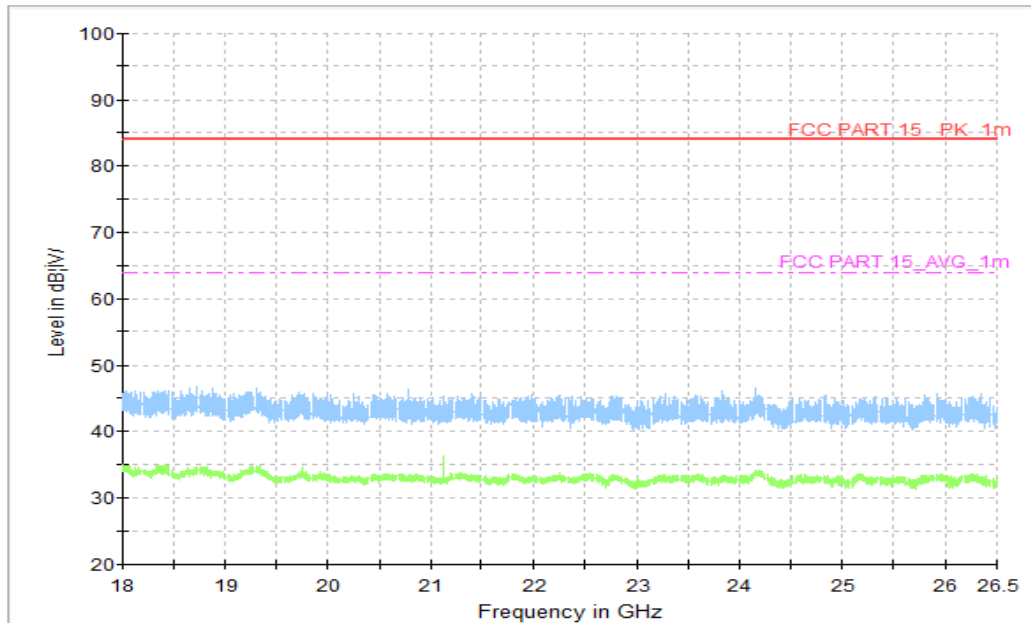


Figure A.1.7. Radiated Emission (Video Player , 18GHz to 26.5GHz)

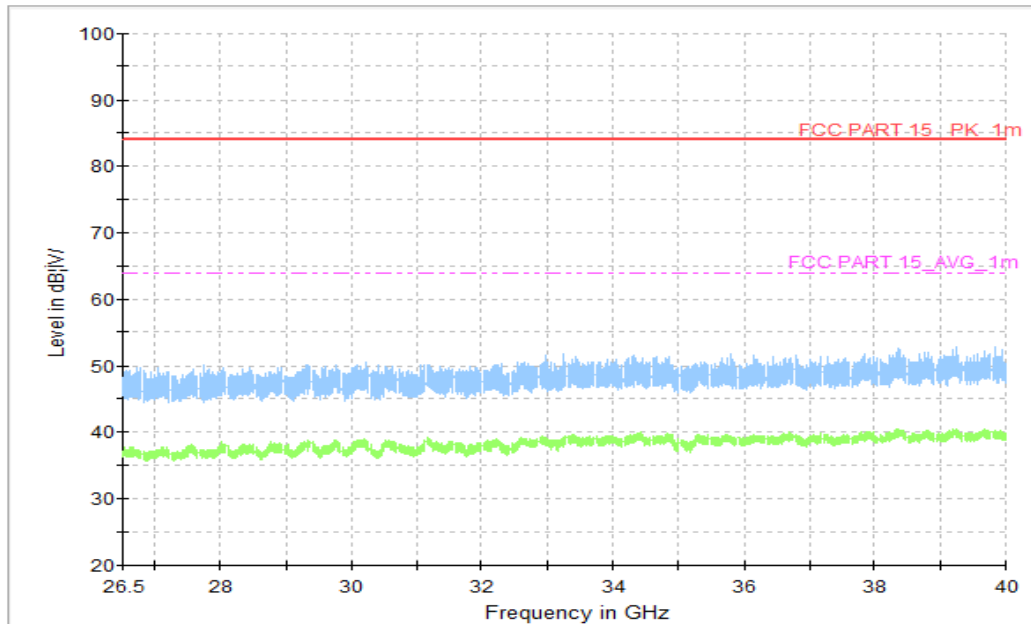


Figure A.1.8. Radiated Emission (Video Player , 26.5GHz to 40GHz)

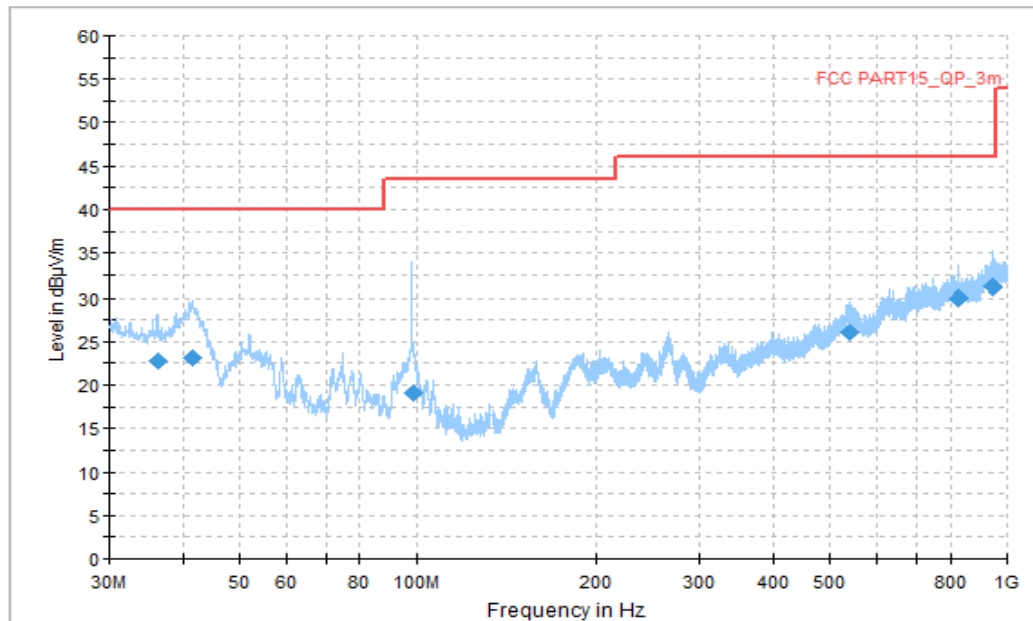


Figure A.1.9. Radiated Emission (FM receiver , 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	ARpl (dB/m)	PMea (dBμV)
36.197222	22.74	40.00	17.26	V	-16	38.74
41.640000	23.06	40.00	16.94	V	-19	42.06
98.277222	19.14	43.52	24.38	V	-20	39.14
541.351667	26.04	46.02	19.98	H	-4	30.04
823.998889	29.83	46.02	16.19	V	-1	30.83
947.835556	31.21	46.02	14.81	V	1	30.21

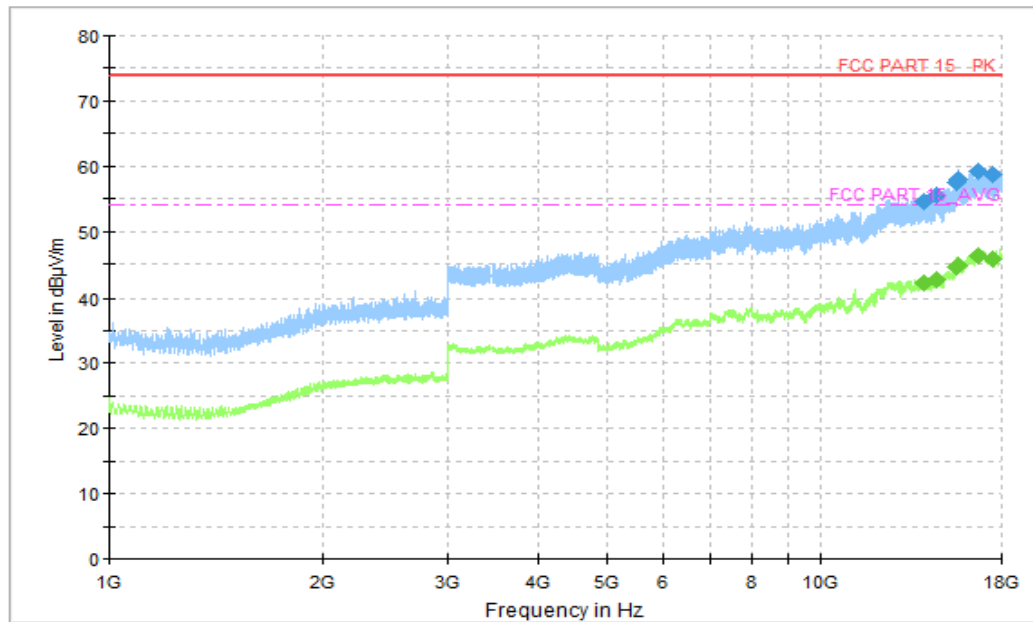


Figure A.1.10. Radiated Emission (FM receiver, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBμV)
13973.250000	54.63	74.00	19.37	V	17	37.63
14562.500000	55.50	74.00	18.50	H	18	37.5
15569.500000	57.57	74.00	16.43	H	20	37.57
15619.250000	58.08	74.00	15.92	H	20	38.08
16655.500000	59.12	74.00	14.88	V	22	37.12
17488.750000	58.72	74.00	15.28	H	22	36.72

Final_Results_AVG

Frequency(MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBμV)
13973.250000	41.98	54.00	12.02	V	17	24.98
14562.500000	42.66	54.00	11.34	H	18	24.66
15569.500000	44.44	54.00	9.56	H	20	24.44
15619.250000	44.67	54.00	9.33	H	20	24.67
16655.500000	46.22	54.00	7.78	V	22	24.22
17488.750000	45.78	54.00	8.22	H	22	23.78

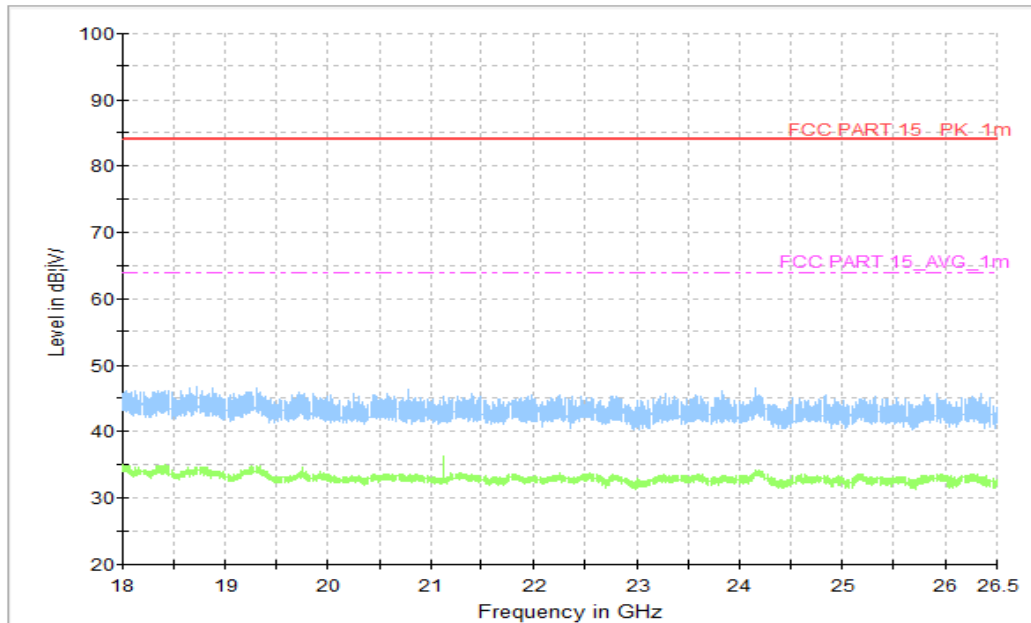


Figure A.1.11. Radiated Emission (FM receiver , 18GHz to 26.5GHz)

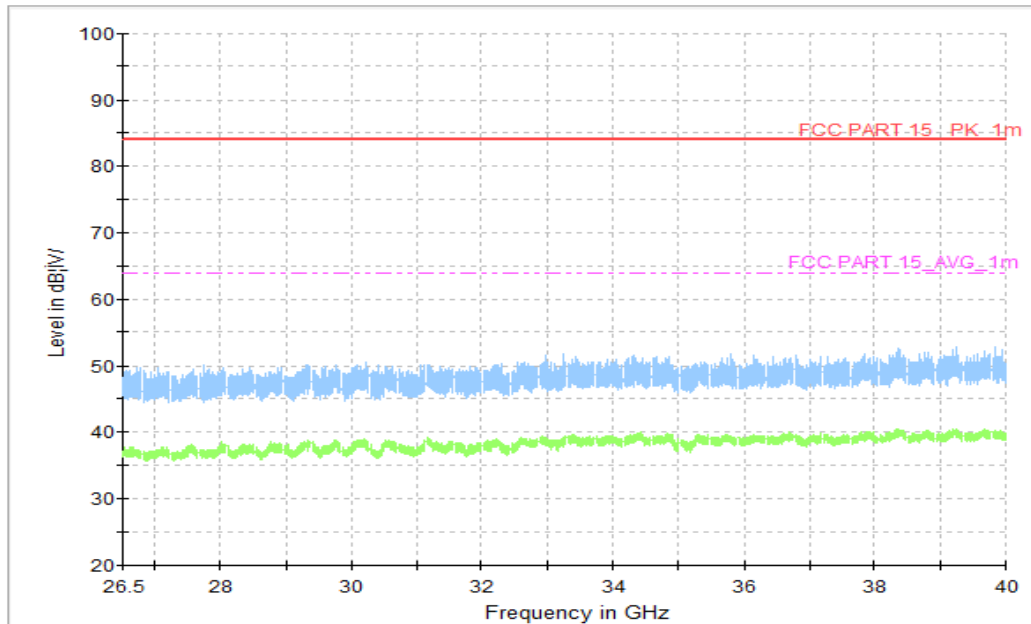


Figure A.1.12. Radiated Emission (FM receiver , 26.5GHz to 40GHz)

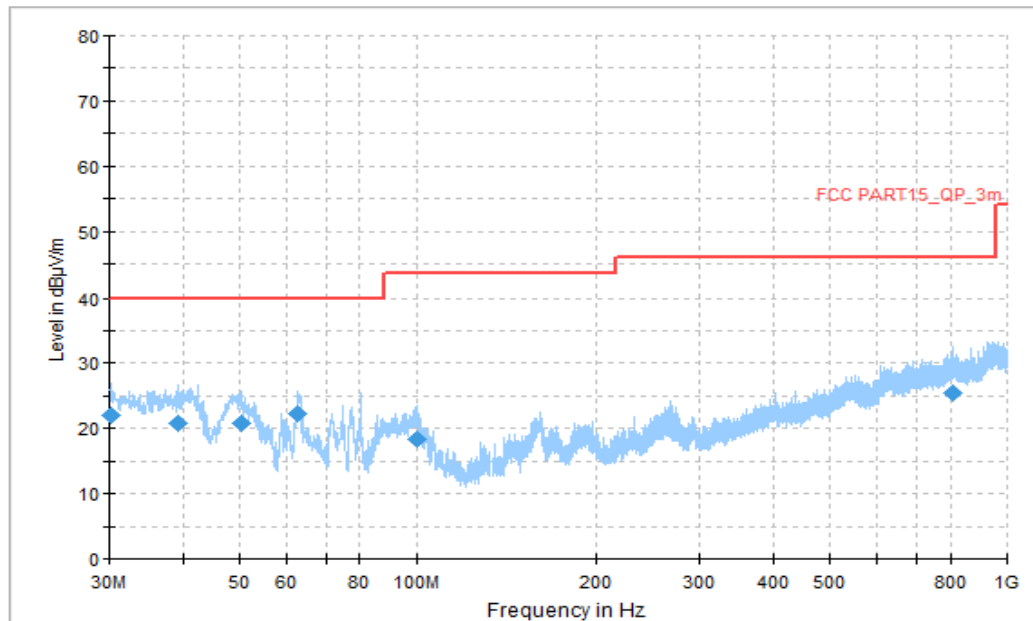


Figure A.1.13. Radiated Emission (GSM receiver 850MHz, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	ARpl (dB/m)	P _{Mea} (dBμV)
30.215556	21.92	40.00	18.08	H	-13	46.78
39.268889	20.68	40.00	19.32	V	-18	52.21
50.262222	20.84	40.00	19.16	V	-22	57.15
62.872222	22.35	40.00	17.65	V	-21	53.95
100.217222	18.44	43.52	25.08	V	-20	54.67
811.173333	25.54	46.02	20.48	V	-1	33.97

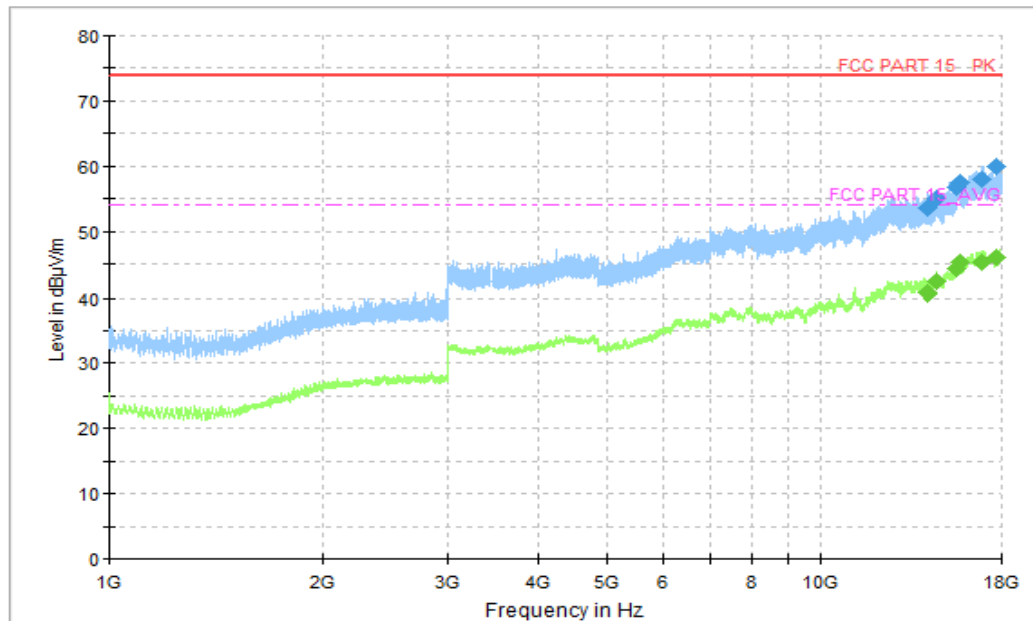


Figure A.1.14. Radiated Emission (GSM receiver 850MHz , 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P _{Mea} (dBμV)
14141.500000	53.55	74.00	20.45	H	17	51.30
14589.000000	54.98	74.00	19.02	V	18	50.00
15571.250000	56.85	74.00	17.15	V	20	48.20
15690.500000	57.52	74.00	16.48	H	20	46.90
16888.250000	58.02	74.00	15.98	V	22	46.40
17730.500000	59.96	74.00	14.04	V	23	43.70

Final_Results_AVG

Frequency(MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P _{Mea} (dBμV)
14141.500000	40.72	54.00	13.28	H	17	38.30
14589.000000	42.28	54.00	11.72	V	18	37.60
15571.250000	44.32	54.00	9.68	V	20	34.90
15690.500000	45.21	54.00	8.79	H	20	33.10
16888.250000	45.35	54.00	8.65	V	22	32.60
17730.500000	45.96	54.00	8.04	V	23	30.90

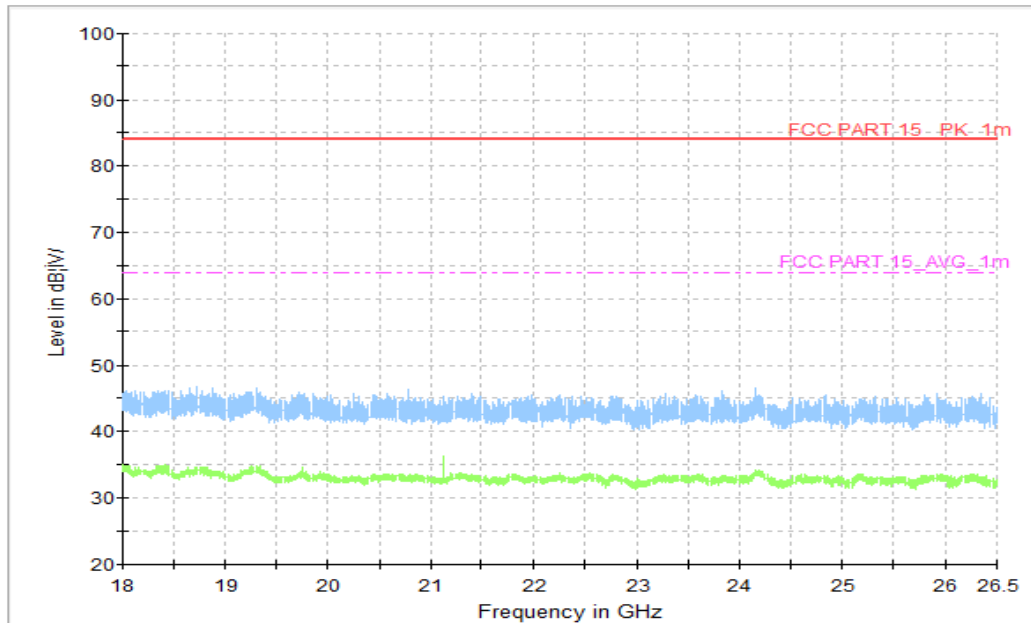


Figure A.1.15. Radiated Emission (GSM receiver 850MHz, 18GHz to 26.5GHz)

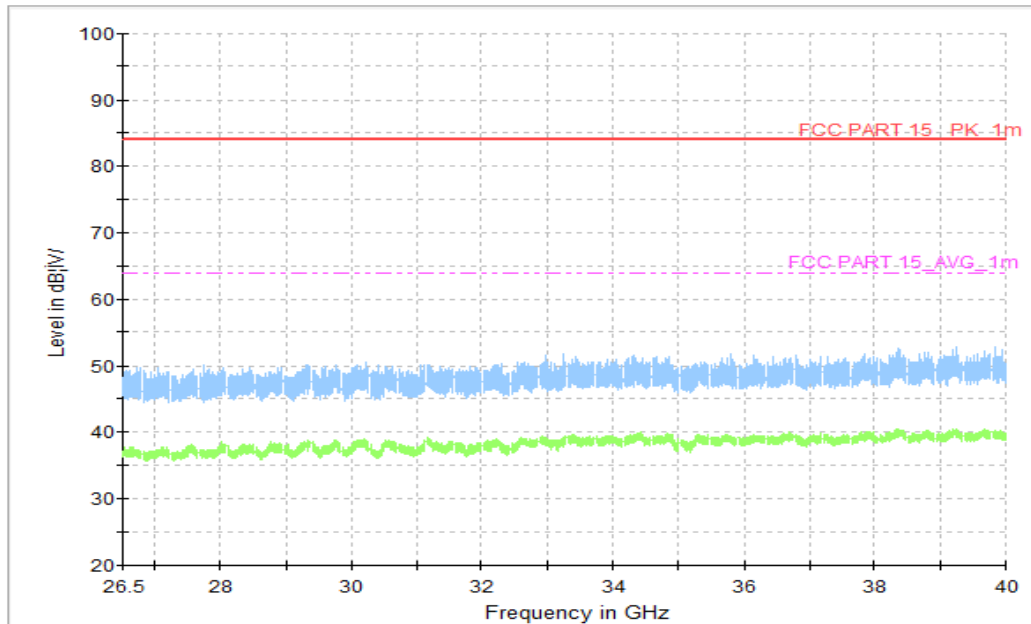


Figure A.1.16. Radiated Emission (GSM receiver 850MHz , 26.5GHz to 40GHz)

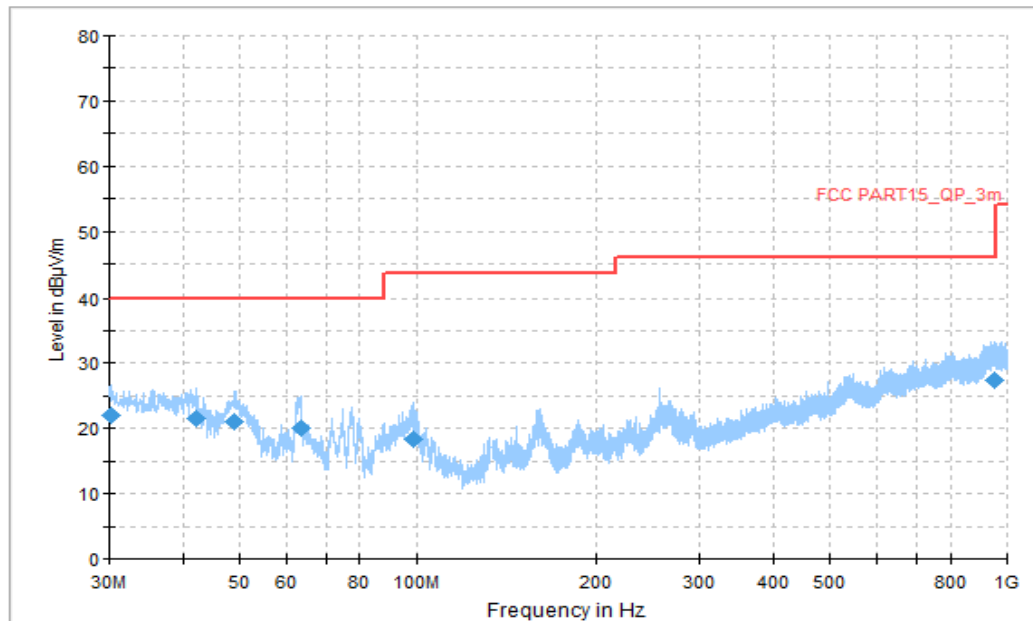


Figure A.1.17. Radiated Emission (WCDMA receiver Band 5, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	ARpl (dB/m)	P _{Mea} (dBμV)
30.161667	22.03	40.00	17.97	V	-13	35.03
42.178889	21.57	40.00	18.43	V	-19	40.57
48.968889	20.93	40.00	19.07	V	-22	42.93
63.411111	20.14	40.00	19.86	V	-21	41.14
98.385000	18.45	43.52	25.07	V	-20	38.45
951.985000	27.30	46.02	18.72	H	1	26.30

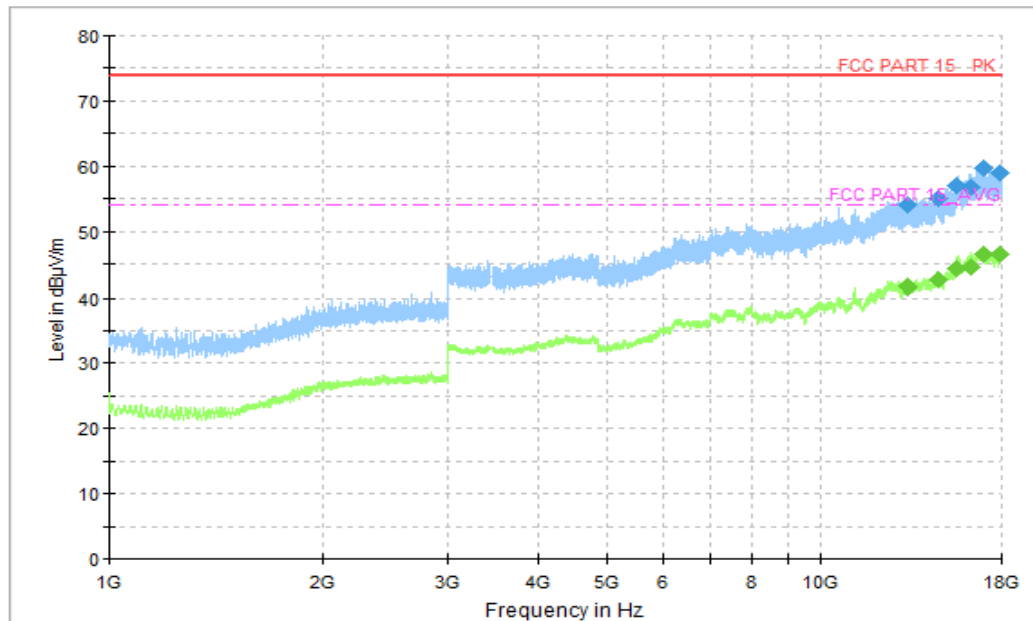


Figure A.1.18. Radiated Emission (WCDMA receiver Band 5, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P _{Mea} (dBμV)
13281.500000	53.95	74.00	20.05	H	17	36.95
14683.000000	55.07	74.00	18.93	H	18	37.07
15568.250000	57.07	74.00	16.93	V	20	37.07
16298.250000	56.88	74.00	17.12	H	21	35.88
17011.250000	59.80	74.00	14.20	V	23	36.8
17898.750000	59.08	74.00	14.92	V	24	35.08

Final_Results_AVG

Frequency(MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P _{Mea} (dBμV)
13281.500000	41.65	54.00	12.35	H	17	24.65
14683.000000	42.52	54.00	11.48	H	18	24.52
15568.250000	44.29	54.00	9.71	V	20	24.29
16298.250000	44.60	54.00	9.40	H	21	23.60
17011.250000	46.60	54.00	7.40	V	23	23.6
17898.750000	46.57	54.00	7.43	V	24	22.57

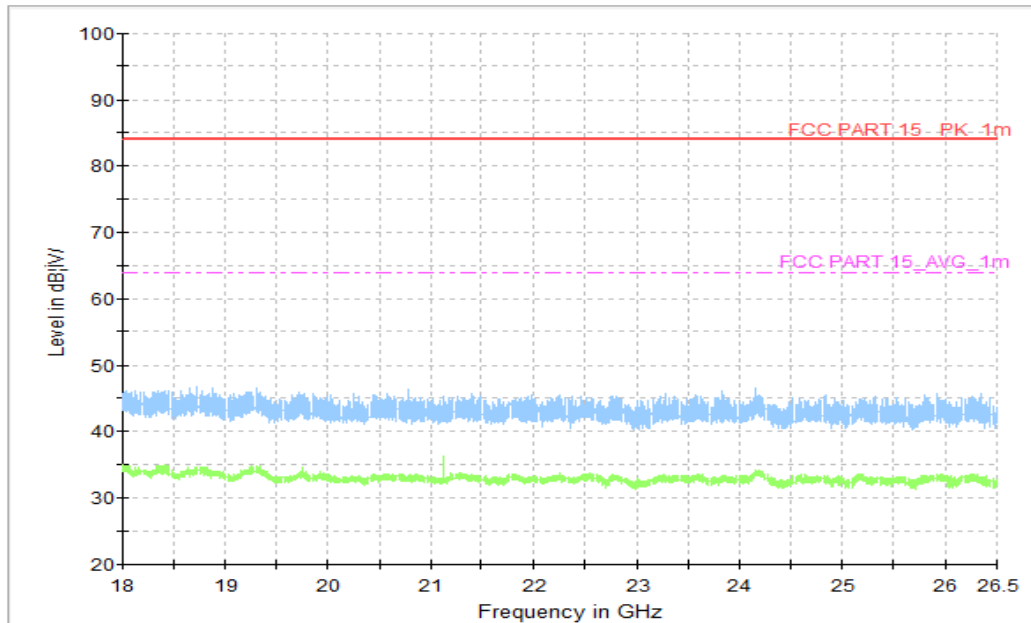


Figure A.1.19. Radiated Emission (WCDMA receiver Band 5 , 18GHz to 26.5GHz)

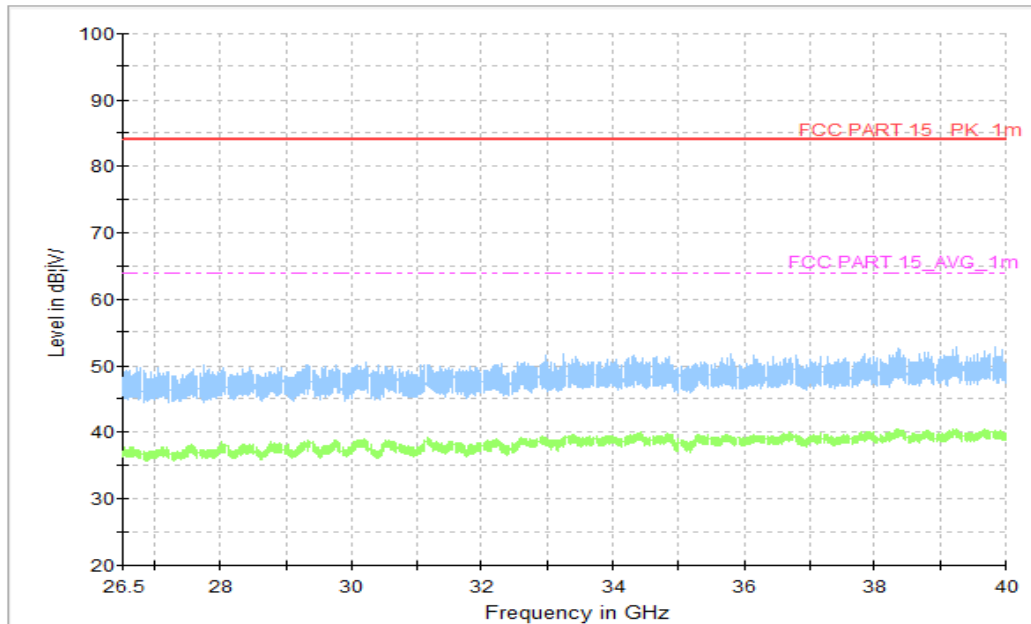


Figure A.1.20. Radiated Emission (WCDMA receiver Band 5 , 26.5GHz to 40GHz)

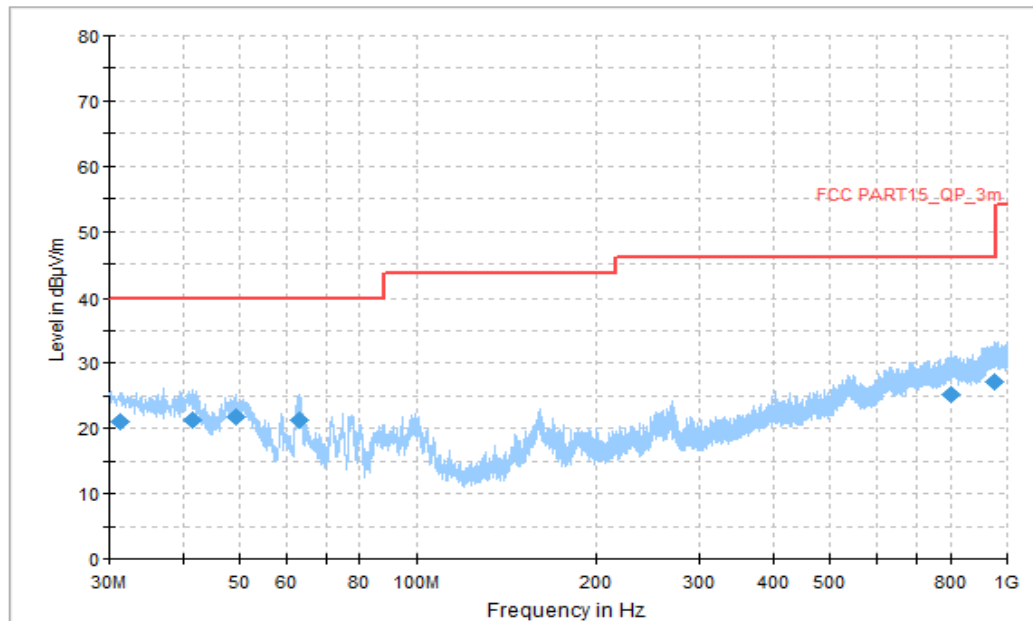


Figure A.1.21. Radiated Emission (LTE receiver Band 5, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	ARpl (dB/m)	P _{Mea} (dBμV)
31.293333	21.07	40.00	18.93	V	-13	34.07
41.693889	21.21	40.00	18.79	V	-19	40.21
49.400000	21.87	40.00	18.13	V	-22	43.87
62.926111	21.20	40.00	18.80	V	-21	42.20
801.257778	25.15	46.02	20.87	V	-1	26.15
949.452222	27.19	46.02	18.83	V	1	26.19

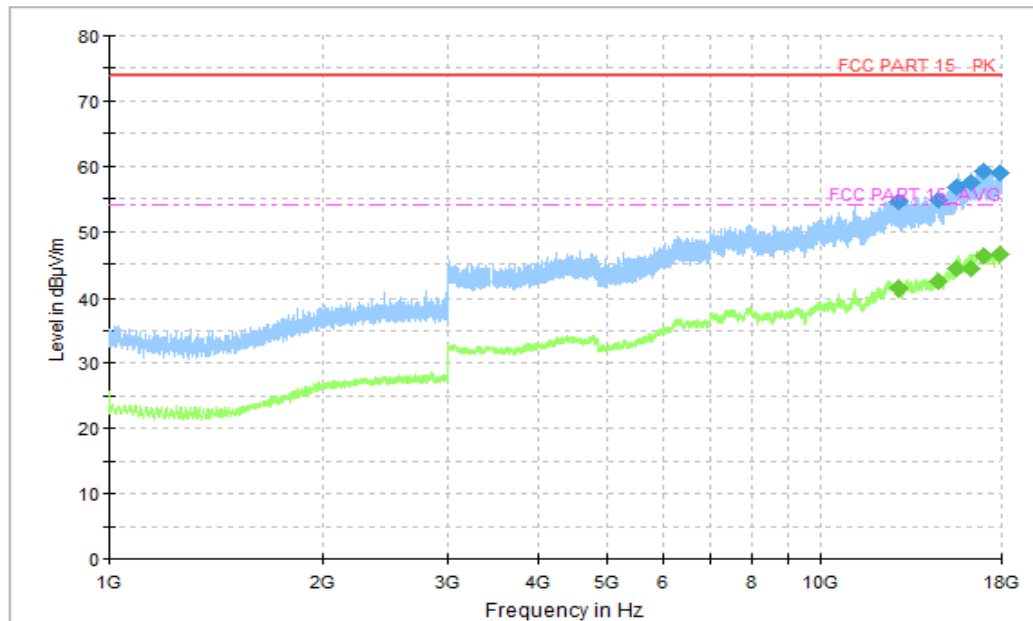


Figure A.1.22. Radiated Emission (LTE receiver Band 5, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P _{Mea} (dBμV)
12891.500000	54.45	74.00	19.55	H	17	37.45
14655.500000	54.92	74.00	19.08	H	18	36.92
15556.500000	56.88	74.00	17.12	V	19	37.88
16305.500000	57.46	74.00	16.54	V	21	36.46
16975.500000	59.29	74.00	14.71	V	23	36.29
17891.750000	59.02	74.00	14.98	H	24	35.02

Final_Results_AVG

Frequency(MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P _{Mea} (dBμV)
12891.500000	41.43	54.00	12.57	H	17	24.43
14655.500000	42.22	54.00	11.78	H	18	24.22
15556.500000	44.34	54.00	9.66	V	19	25.34
16305.500000	44.23	54.00	9.77	V	21	23.23
16975.500000	46.30	54.00	7.70	V	23	23.3
17891.750000	46.51	54.00	7.49	H	24	22.51

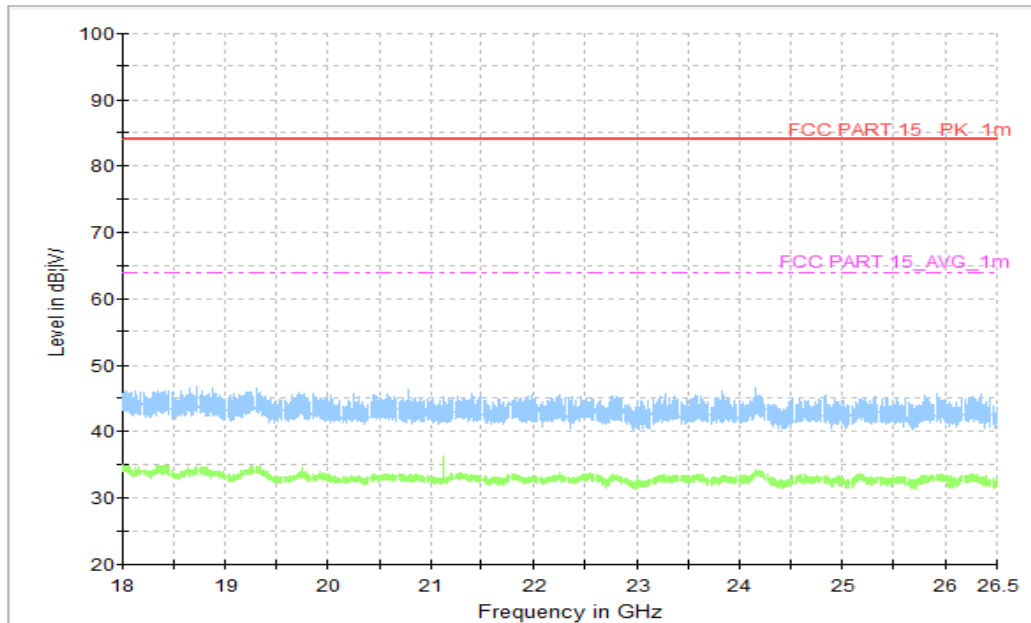


Figure A.1.23. Radiated Emission ((LTE receiver Band 5 , 18GHz to 26.5GHz)

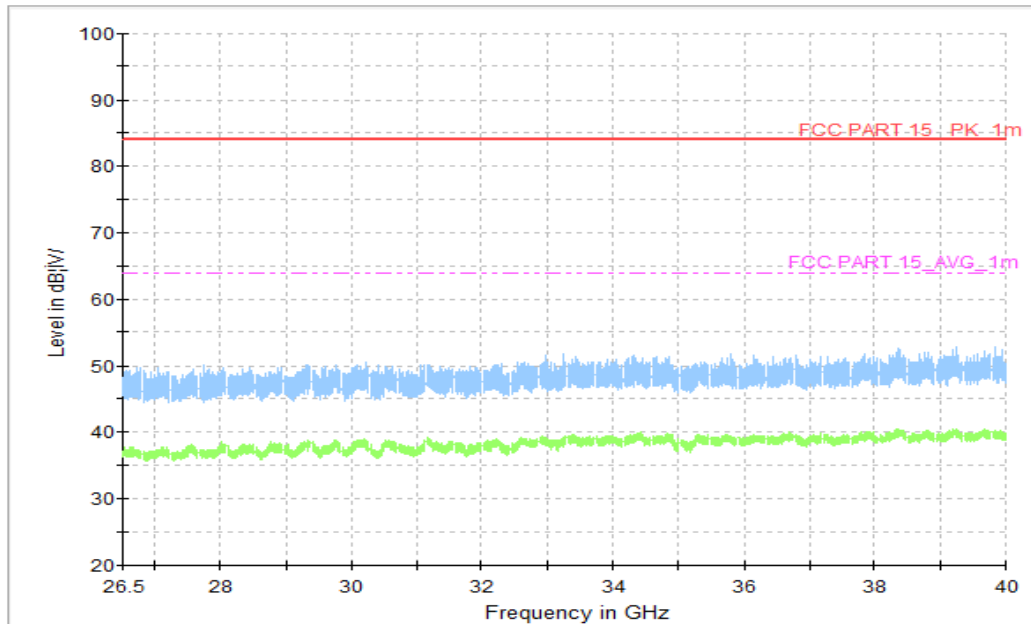


Figure A.1.24. Radiated Emission ((LTE receiver Band 5 , 26.5GHz to 40GHz)

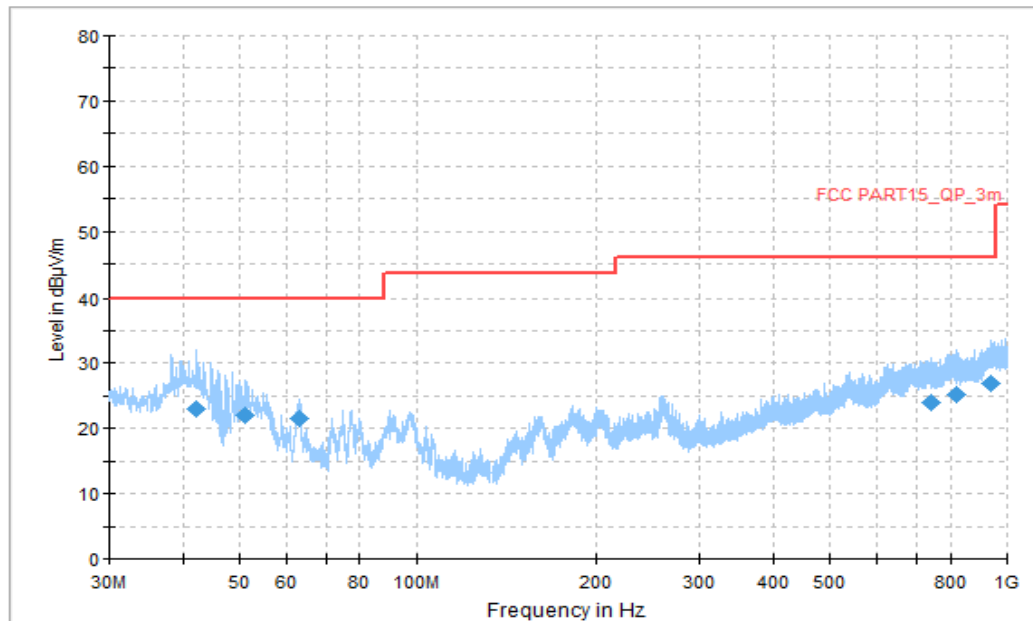


Figure A.1.25. Radiated Emission (LTE receiver Band 12, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	ARpl (dB/m)	P _{Mea} (dBμV)
42.178889	23.02	40.00	16.98	V	-19	42.02
51.124444	22.09	40.00	17.91	V	-22	44.09
63.303333	21.46	40.00	18.54	V	-21	42.46
743.381111	24.09	46.02	21.93	V	-2	26.09
818.933333	25.32	46.02	20.70	H	-1	26.32
938.243333	26.86	46.02	19.16	V	1	25.86

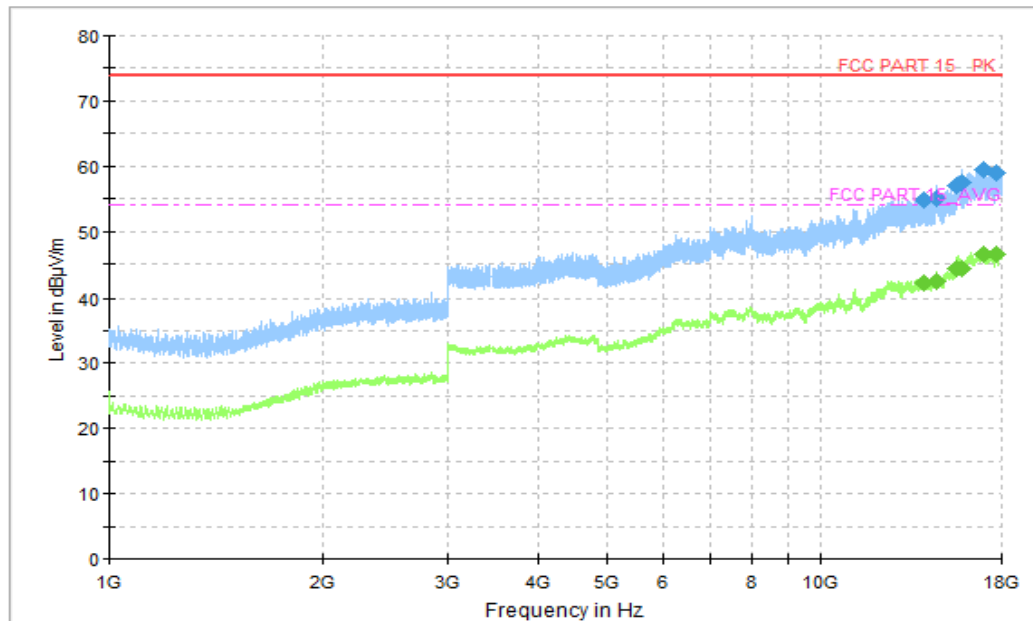


Figure A.1.26. Radiated Emission (LTE receiver Band 12, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P _{Mea} (dBμV)
13961.500000	54.73	74.00	19.27	V	17	37.73
14583.000000	55.11	74.00	18.89	V	18	37.11
15564.500000	57.04	74.00	16.96	V	20	37.04
15797.500000	57.53	74.00	16.47	H	19	38.53
16982.000000	59.51	74.00	14.49	V	23	36.51
17692.250000	58.85	74.00	15.15	H	23	35.85

Final_Results_AVG

Frequency(MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P _{Mea} (dBμV)
13961.500000	42.05	54.00	11.95	V	17	25.05
14583.000000	42.36	54.00	11.64	V	18	24.36
15564.500000	44.17	54.00	9.83	V	20	24.17
15797.500000	44.36	54.00	9.64	H	19	25.36
16982.000000	46.40	54.00	7.60	V	23	23.4
17692.250000	46.56	54.00	7.44	H	23	23.56

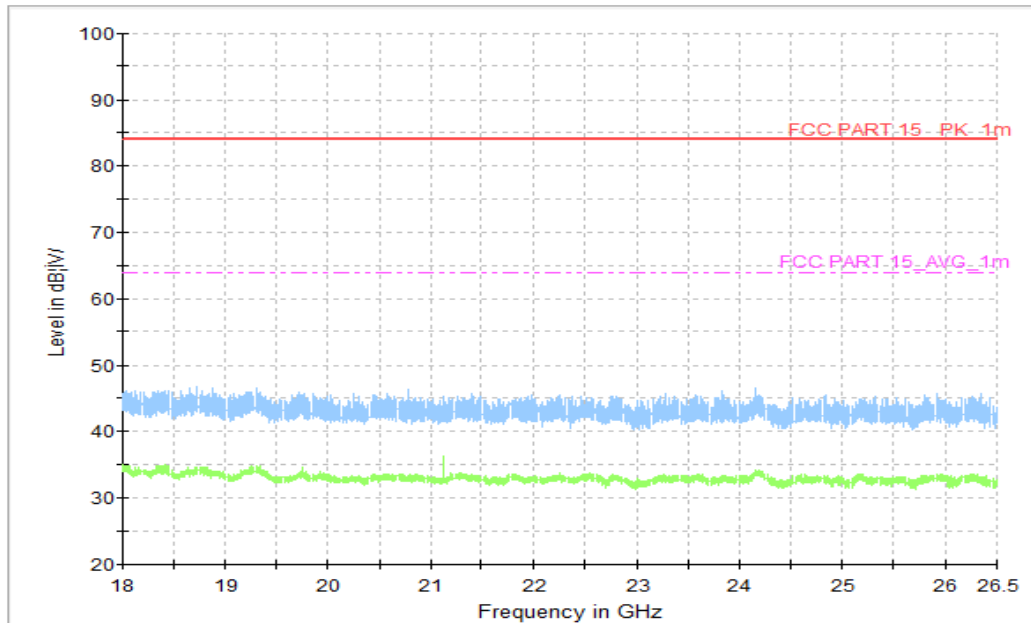


Figure A.1.27. Radiated Emission ((LTE receiver Band 12 , 18GHz to 26.5GHz)

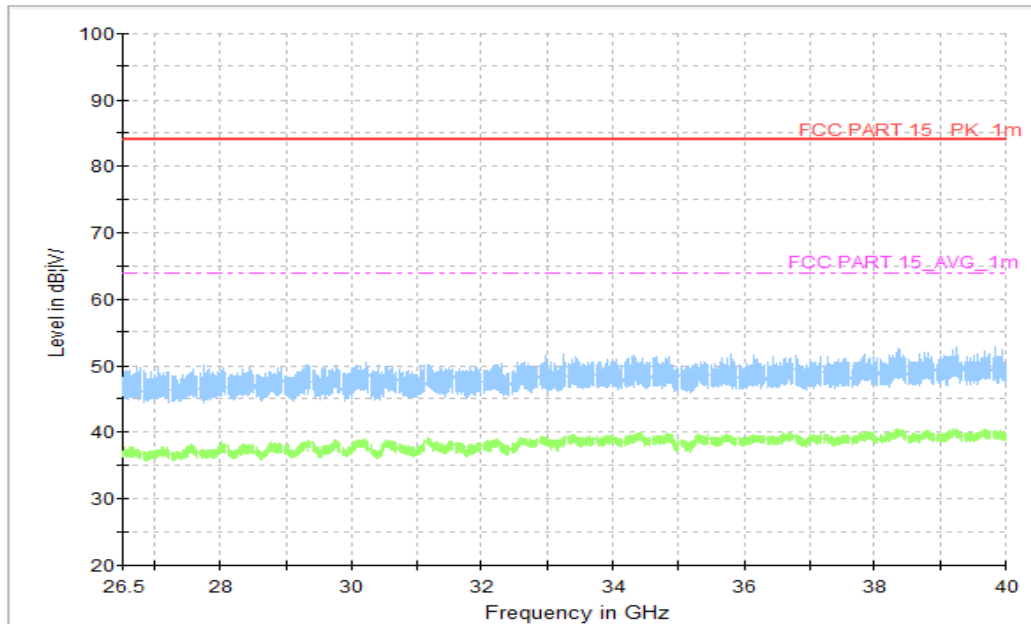


Figure A.1.28. Radiated Emission ((LTE receiver Band 12 , 26.5GHz to 40GHz)

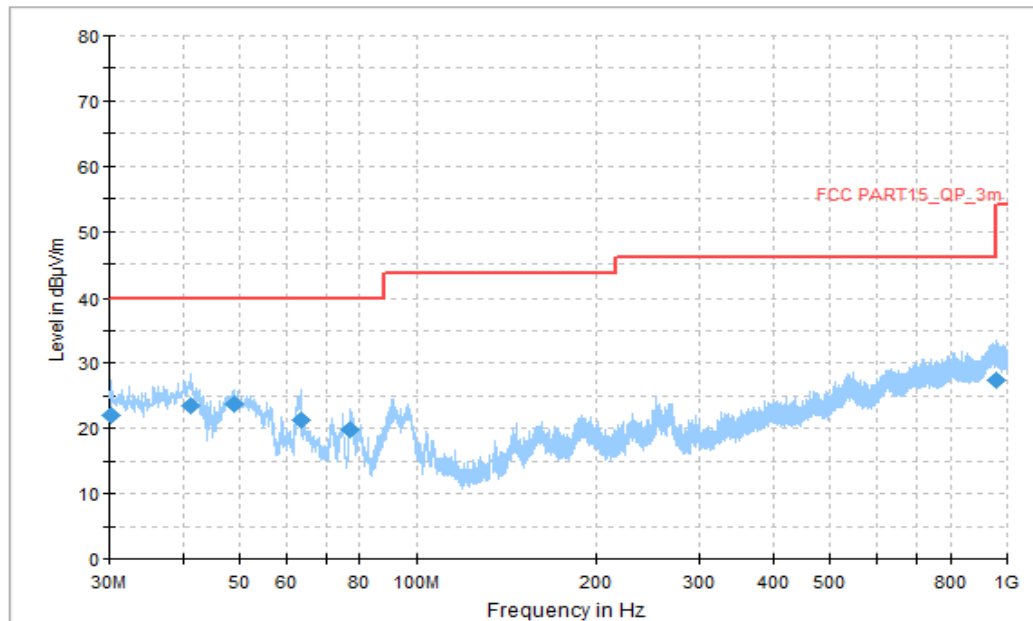


Figure A.1.29. Radiated Emission (LTE receiver Band 13, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	ARpl (dB/m)	P _{Mea} (dBμV)
30.161667	21.97	40.00	18.03	H	-13	34.97
41.208889	23.41	40.00	16.59	V	-19	42.41
48.807222	23.64	40.00	16.36	V	-22	45.64
63.357222	21.36	40.00	18.64	V	-21	42.36
77.206667	19.88	40.00	20.12	V	-22	41.88
955.487778	27.28	46.02	18.74	H	1	26.28

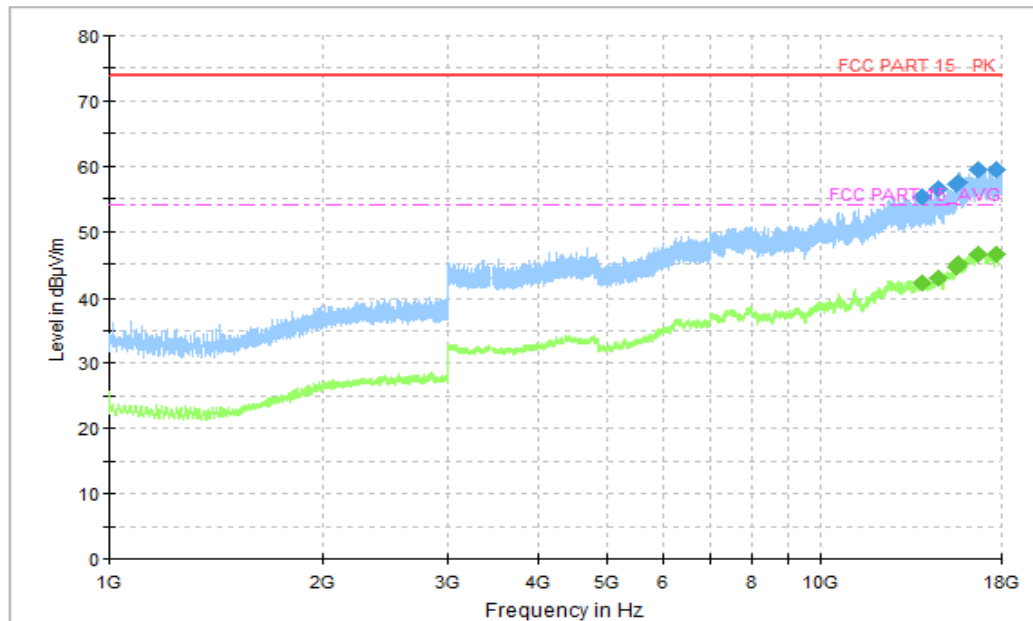


Figure A.1.30. Radiated Emission (LTE receiver Band 13, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P _{Mea} (dBμV)
13870.250000	55.36	74.00	18.64	V	17	38.36
14696.500000	56.62	74.00	17.38	H	18	38.62
15575.250000	57.25	74.00	16.75	H	20	37.25
15591.500000	57.59	74.00	16.41	V	20	37.59
16667.250000	59.38	74.00	14.62	V	22	37.38
17692.250000	59.49	74.00	14.51	V	23	36.49

Final_Results_AVG

Frequency(MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P _{Mea} (dBμV)
13870.250000	42.20	54.00	11.80	V	17	25.20
14696.500000	42.90	54.00	11.10	H	18	24.9
15575.250000	44.57	54.00	9.43	H	20	24.57
15591.500000	44.90	54.00	9.10	V	20	24.90
16667.250000	46.60	54.00	7.40	V	22	24.6
17692.250000	46.53	54.00	7.47	V	23	23.53

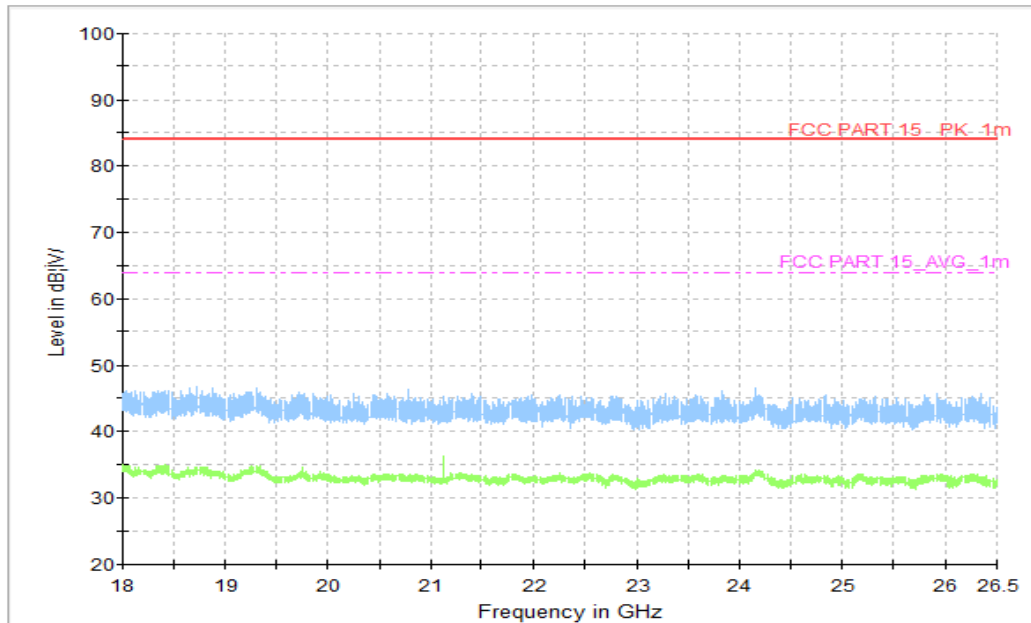


Figure A.1.31. Radiated Emission ((LTE receiver Band 13 , 18GHz to 26.5GHz)

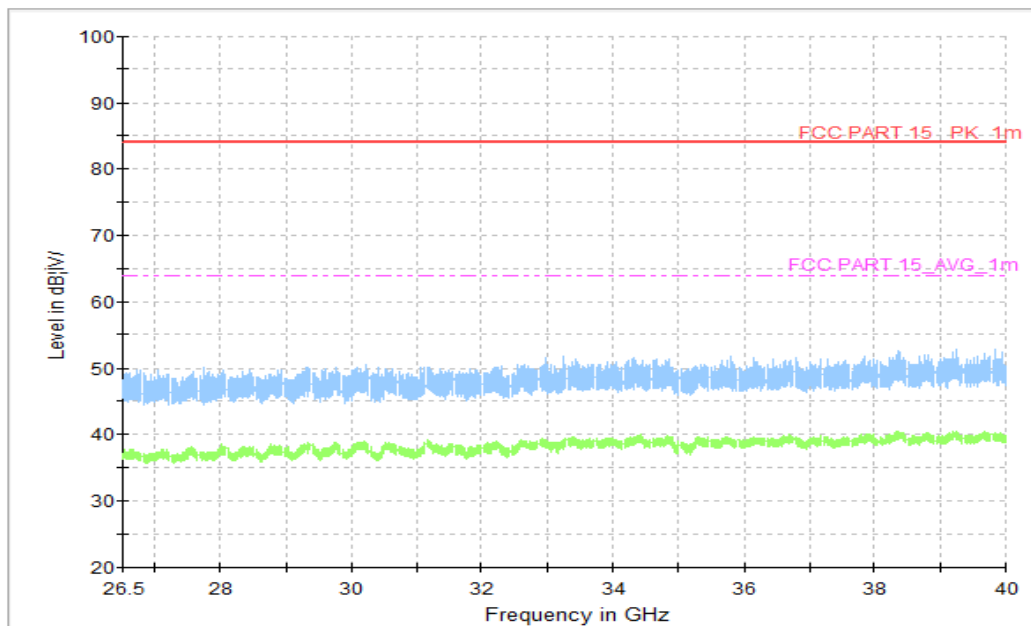


Figure A.1.32. Radiated Emission ((LTE receiver Band 13 , 26.5GHz to 40GHz)

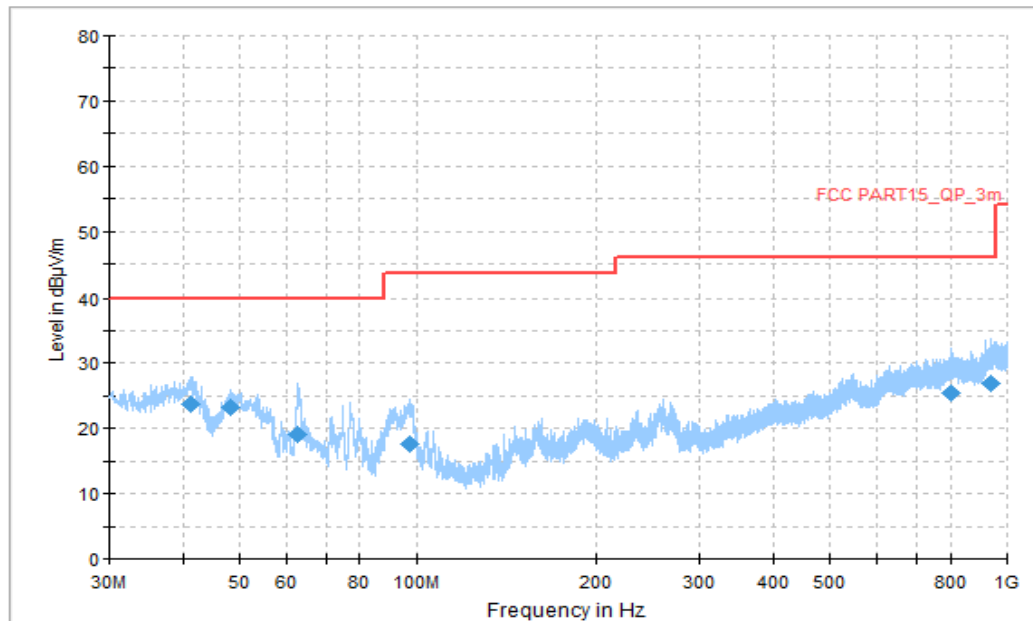


Figure A.1.33. Radiated Emission (LTE receiver Band 17, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	ARpl (dB/m)	P _{Mea} (dBμV)
41.316667	23.84	40.00	16.16	V	-19	42.84
48.214444	23.34	40.00	16.66	V	-21	44.34
62.764444	19.01	40.00	20.99	V	-21	40.01
97.091667	17.69	43.52	25.83	V	-20	37.69
803.682778	25.33	46.02	20.69	V	-1	26.33
939.482778	26.97	46.02	19.05	V	1	25.97

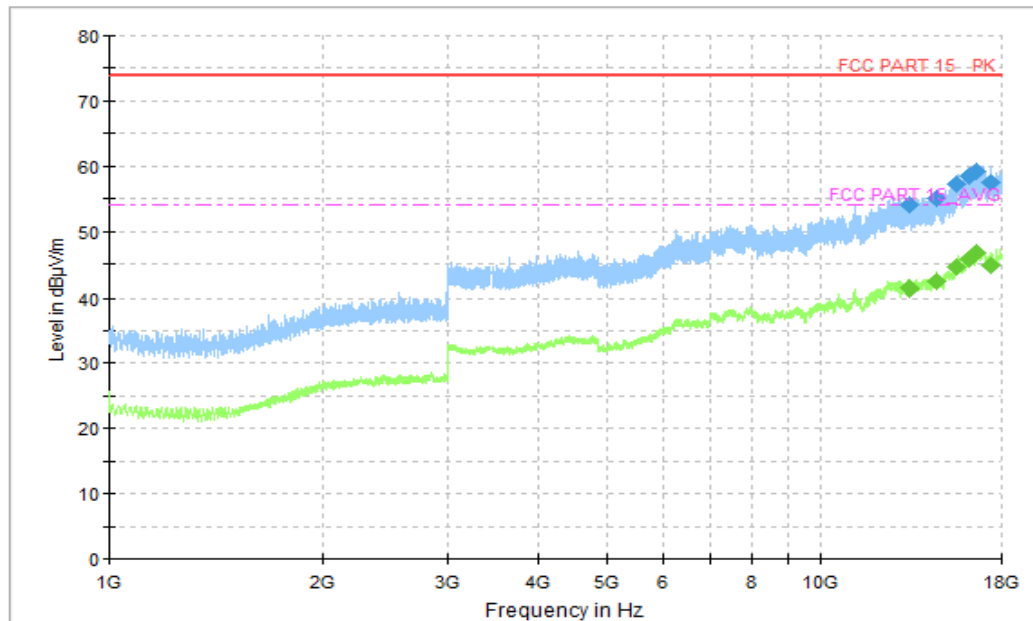


Figure A.1.34. Radiated Emission (LTE receiver Band 17, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P _{Mea} (dBμV)
13360.250000	53.99	74.00	20.01	V	17	36.99
14583.250000	55.06	74.00	18.94	H	18	37.06
15572.250000	57.37	74.00	16.63	H	20	37.37
16159.750000	58.46	74.00	15.54	V	21	37.46
16600.250000	59.25	74.00	14.75	H	22	37.25
17336.750000	57.43	74.00	16.57	H	22	35.43

Final_Results_AVG

Frequency(MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P _{Mea} (dBμV)
13360.250000	41.37	54.00	12.63	V	17	24.37
14583.250000	42.33	54.00	11.67	H	18	24.33
15572.250000	44.41	54.00	9.59	H	20	24.41
16159.750000	45.72	54.00	8.28	V	21	24.72
16600.250000	46.77	54.00	7.23	H	22	24.77
17336.750000	44.72	54.00	9.28	H	22	22.72

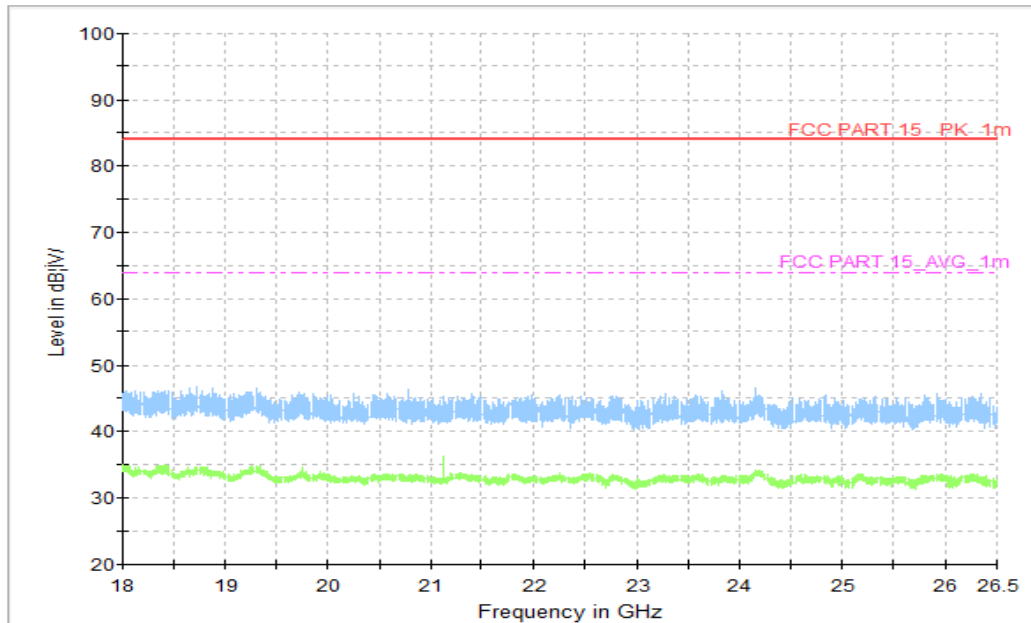


Figure A.1.35. Radiated Emission ((LTE receiver Band 17 , 18GHz to 26.5GHz)

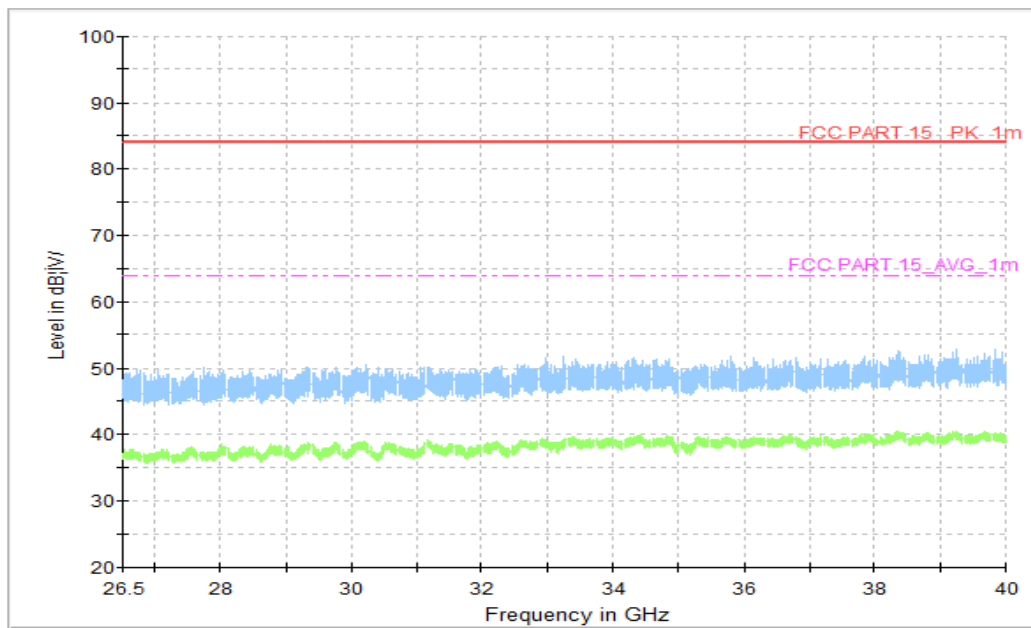


Figure A.1.36. Radiated Emission (LTE receiver Band 17 , 26.5GHz to 40GHz)

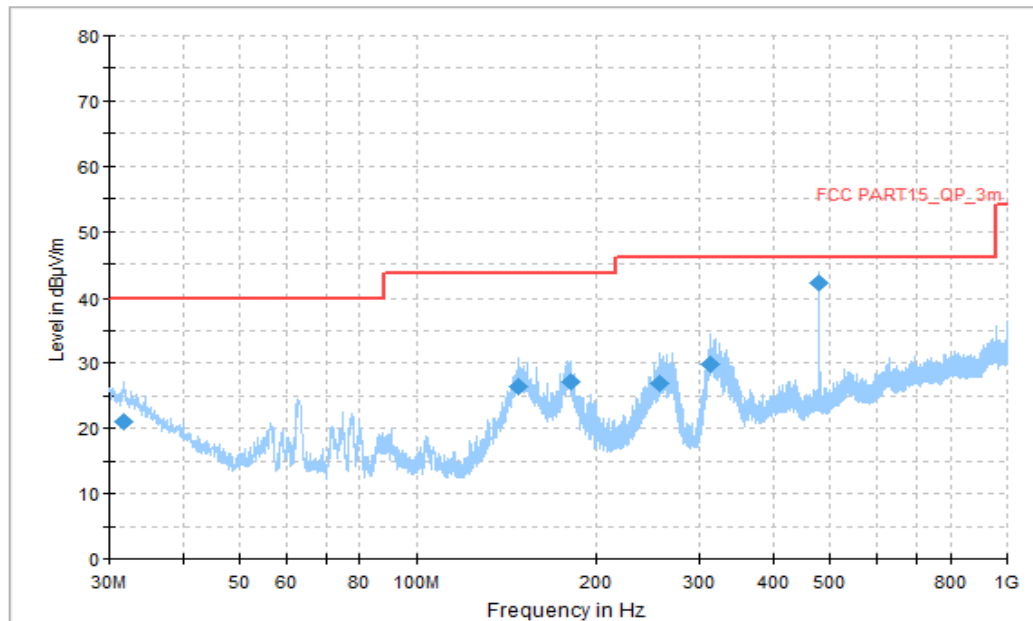


Figure A.1.37. Radiated Emission (Data Transfer: TF TO PC, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	ARpl (dB/m)	P _{Mea} (dBμV)
31.832222	21.04	40.00	18.96	H	-14	35.04
147.585556	26.36	43.52	17.16	H	-19	45.36
180.781111	27.09	43.52	16.43	H	-18	45.09
257.087778	26.82	46.02	19.20	H	-14	40.82
313.886667	29.78	46.02	16.24	H	-13	42.78
480.026111	42.00	46.02	4.02	V	-7	49.00

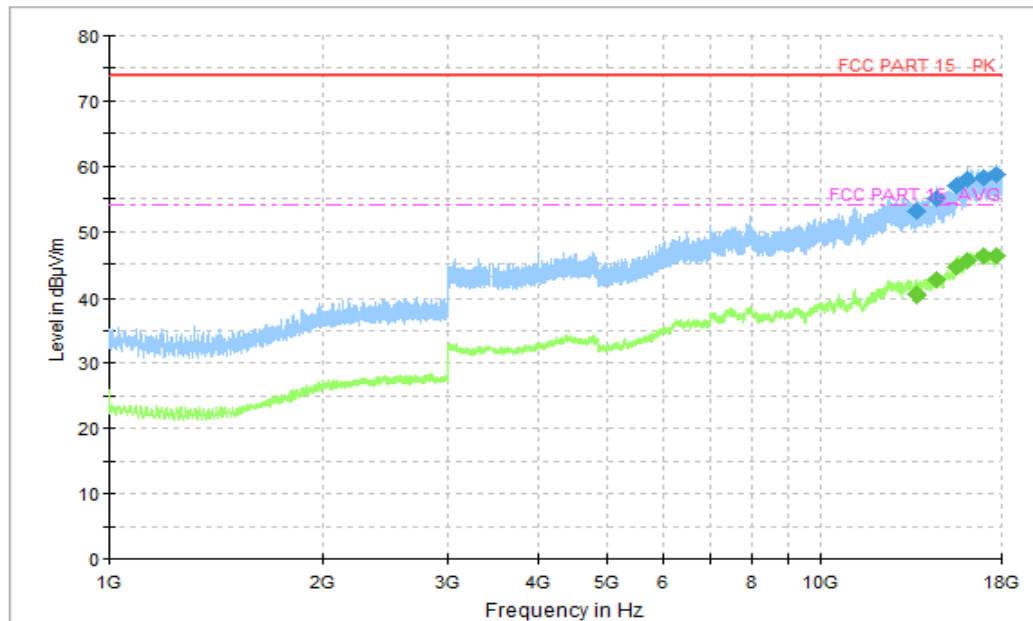


Figure A.1.38. Radiated Emission (Data Transfer: TF TO PC, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P _{Mea} (dBμV)
13632.000000	53.02	74.00	20.98	V	17	36.02
14566.000000	55.09	74.00	18.91	H	18	37.09
15573.500000	56.91	74.00	17.09	V	20	36.91
16134.500000	57.88	74.00	16.12	H	21	36.88
16964.000000	58.30	74.00	15.70	V	23	35.3
17718.250000	58.73	74.00	15.27	H	23	35.73

Final_Results_AVG

Frequency(MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P _{Mea} (dBμV)
13632.000000	40.37	54.00	13.63	V	17	23.37
14566.000000	42.52	54.00	11.48	H	18	24.52
15573.500000	44.52	54.00	9.48	V	20	24.52
16134.500000	45.51	54.00	8.49	H	21	24.51
16964.000000	46.15	54.00	7.85	V	23	23.15
17718.250000	46.33	54.00	7.67	H	23	23.33

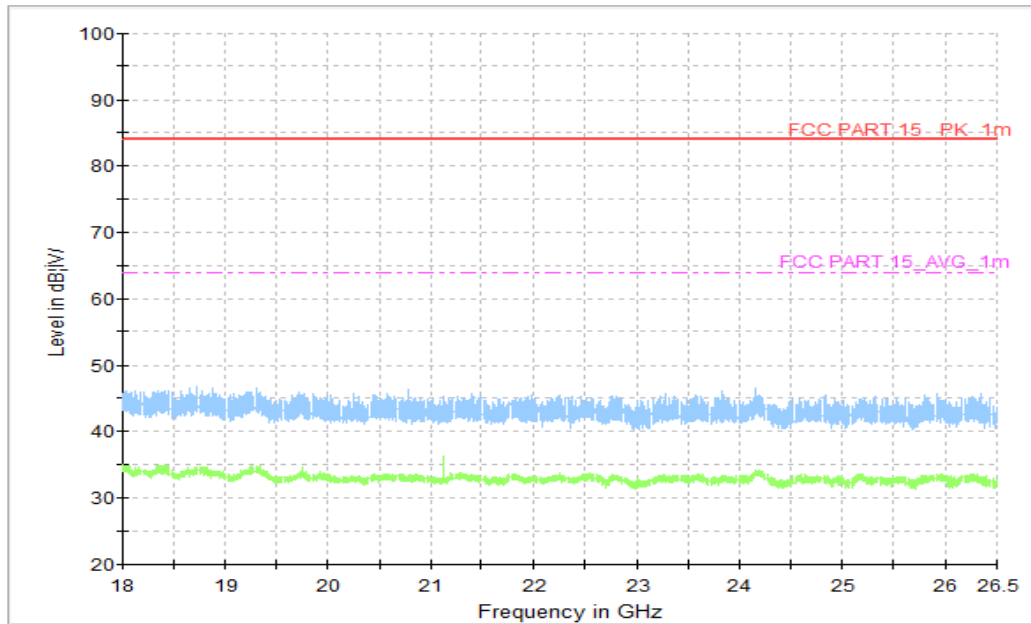


Figure A.1.39. Radiated Emission (Data Transfer: TF TO PC, 18GHz to 26.5GHz)

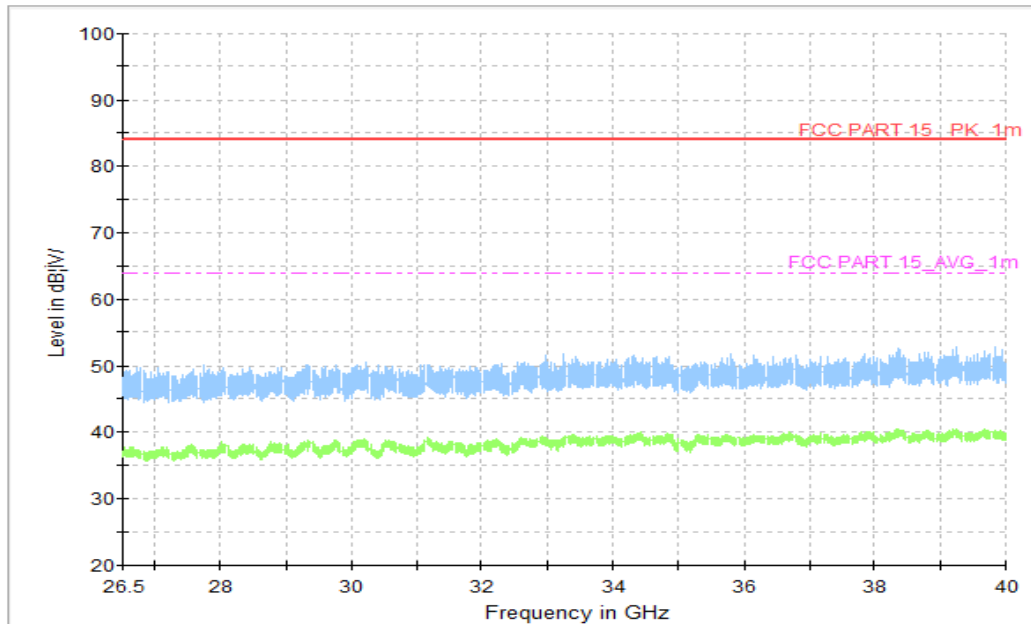


Figure A.1.40. Radiated Emission (Data Transfer: TF TO PC , 26.5GHz to 40GHz)

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:

Camera: At the beginning of measurement, the battery is completely discharged. The battery and charger are installed so that the EUT works well and keeping on taking photos.

Video Player: The EUT is connected to a charger for charging and keeping on playing mp3.

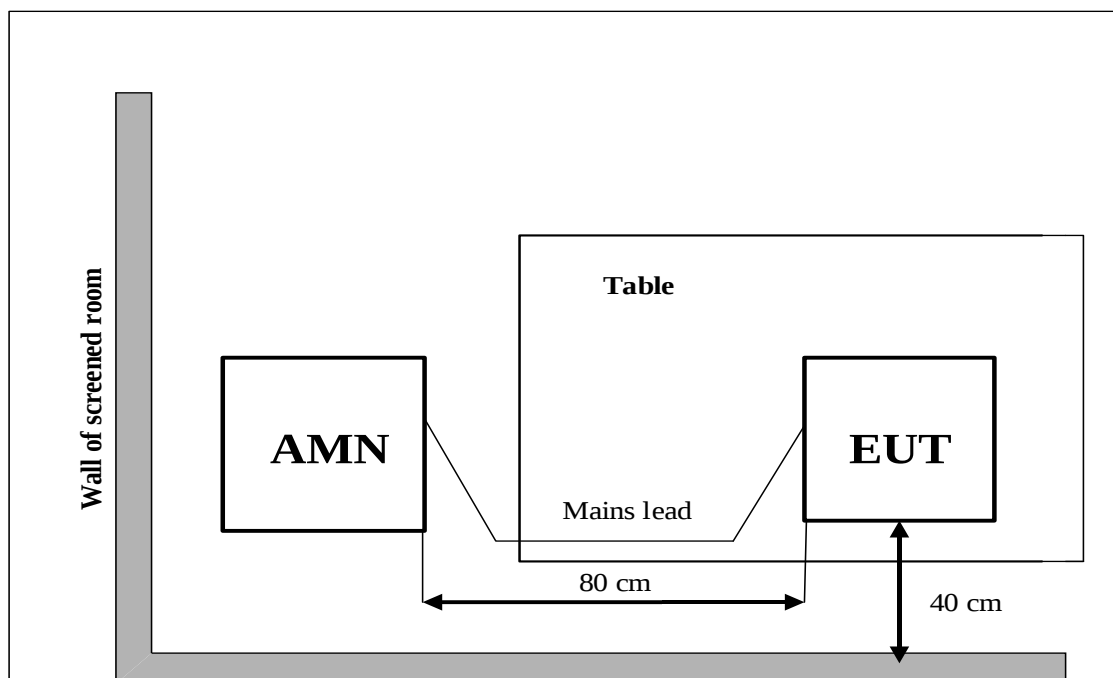
FM receiver: The EUT is connected to a charger for charging. The EUT is synchronized to a FM signal generator. The EUT is keeping on demodulating the FM signal and outputting the audio signal through the headset.

Data Transfer: The model of the PC is Lenovo ThinkPad T480, and the serial number of the PC is PF-13LW0C. The EUT is connected to a PC for transmitting data. The software is used to let the PC keep on copying data to EUT or TF Card, reading and erasing the data after copy action was finished.

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 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.

Camera

AC Input Port/ Voltage: 120V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV)	Conclusion
			UT09aa/Set.1	
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.				

Video Player

AC Input Port/ Voltage: 120V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV)	Conclusion
			UT09aa/Set.1	
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.				

FM receiver

AC Input Port/ Voltage: 120V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV)	Conclusion
			UT09aa/Set.3	
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.				

Data Transfer

AC Input Port/ Voltage: 120V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV)	Conclusion
			UT09aa/Set.4	
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.				

Camera

AC Input Port/ Voltage: 240V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV)	Conclusion
			UT09aa/Set.1	
0.15 to 0.5	66 to 56	56 to 46	See Figure A.2.5.	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.				

Video Player

AC Input Port/ Voltage: 240V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV)	Conclusion
			UT09aa/Set.1	
0.15 to 0.5	66 to 56	56 to 46	See Figure A.2.6.	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.				

FM receiver

AC Input Port/ Voltage: 240V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV)	Conclusion
			UT09aa/Set.3	
0.15 to 0.5	66 to 56	56 to 46	See Figure A.2.7.	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.				

Data Transfer

AC Input Port/ Voltage: 240V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV)	Conclusion
			UT09aa/Set.4	
0.15 to 0.5	66 to 56	56 to 46	See Figure A.2.8.	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.				

AC Input Port/ Voltage: 120V/60Hz

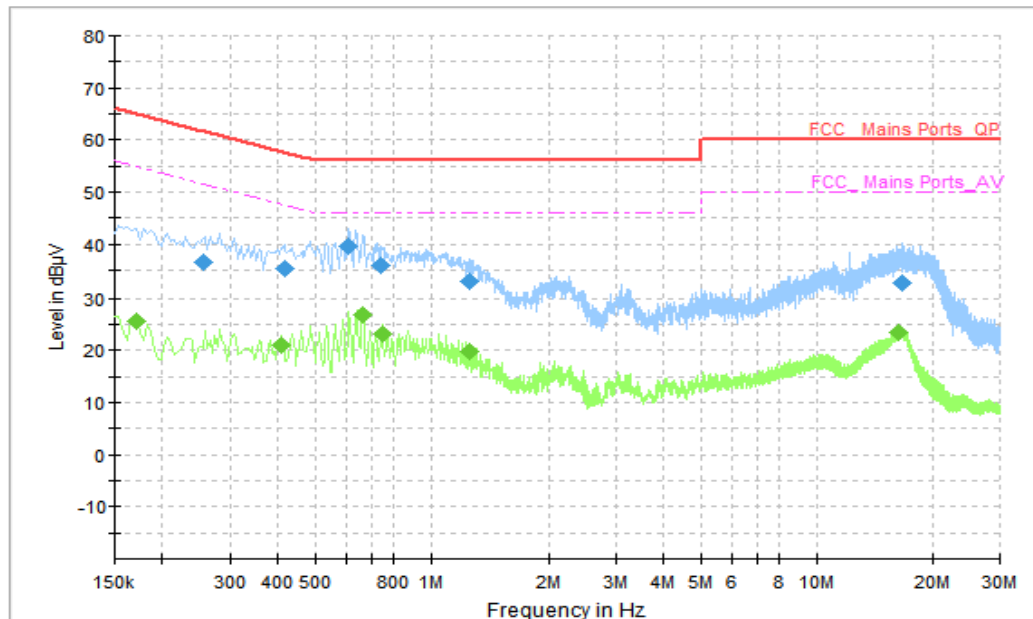


Figure A.2.1. Conducted Emission(Camera)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	P _{Mea} (dBμV)
0.254000	36.68	61.63	24.95	L1	10	26.68
0.414000	35.33	57.57	22.24	L1	10	25.33
0.610000	39.69	56.00	16.31	L1	10	29.69
0.738000	35.88	56.00	20.12	N	10	25.88
1.262000	32.87	56.00	23.13	N	10	22.87
16.610000	32.60	60.00	27.40	N	10	22.60

Final_Result_AVG

Frequency (MHz)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	P _{Mea} (dBμV)
0.170000	25.61	54.96	29.35	N	10	15.61
0.406000	20.90	47.73	26.83	L1	10	10.9
0.662000	26.87	46.00	19.13	L1	10	16.87
0.746000	23.12	46.00	22.88	N	10	13.12
1.258000	19.66	46.00	26.34	N	10	9.66
16.418000	23.31	50.00	26.69	N	10	13.31

AC Input Port/ Voltage: 120V/60Hz

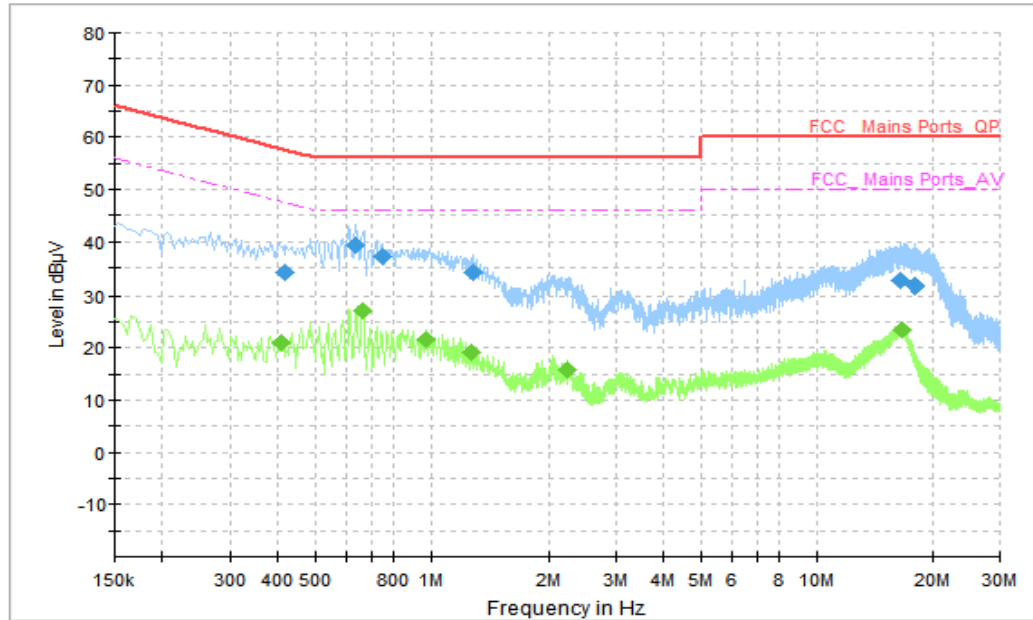


Figure A.2.2. Conducted Emission(Video Player)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	P _{Mea} (dBμV)
0.418000	34.14	57.49	23.35	N	10	24.14
0.634000	39.29	56.00	16.71	N	10	29.29
0.746000	37.09	56.00	18.91	N	10	27.09
1.282000	34.14	56.00	21.86	N	10	24.14
16.530000	32.58	60.00	27.42	L1	10	22.58
18.082000	31.81	60.00	28.19	L1	10	21.81

Final_Result_AVG

Frequency (MHz)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	P _{Mea} (dBμV)
0.406000	20.98	47.73	26.75	L1	10	10.98
0.662000	27.18	46.00	18.82	L1	10	17.18
0.970000	21.59	46.00	24.41	L1	10	11.59
1.278000	19.28	46.00	26.72	L1	10	9.28
2.234000	15.78	46.00	30.22	N	10	5.78
16.610000	23.36	50.00	26.64	N	10	13.36

AC Input Port/ Voltage: 120V/60Hz

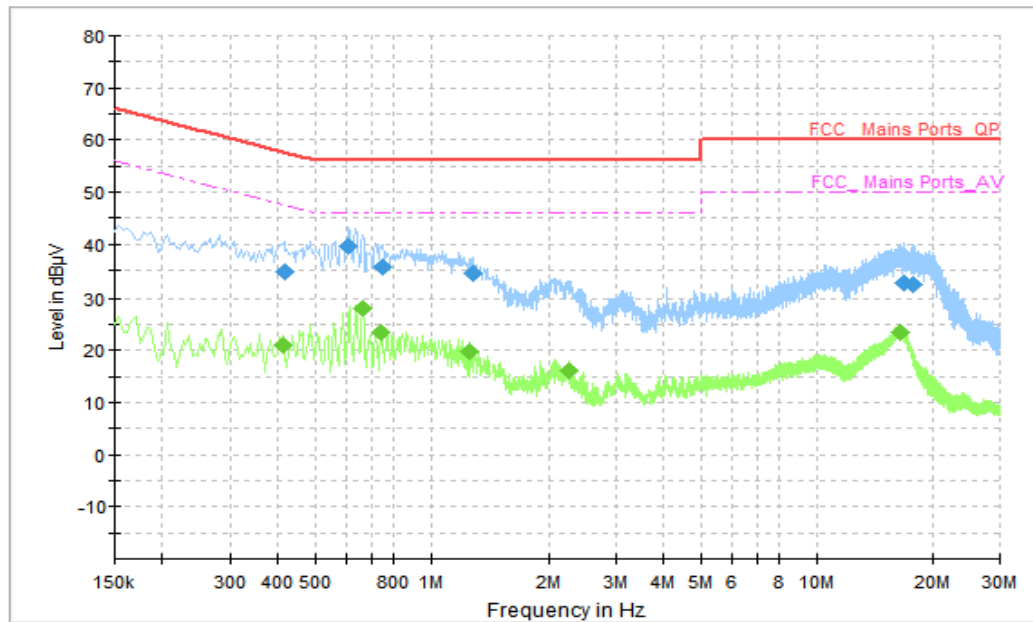


Figure A.2.3. Conducted Emission(FM receiver)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	P _{Mea} (dBμV)
0.414000	34.86	57.57	22.71	L1	10	24.86
0.610000	39.66	56.00	16.34	L1	10	29.66
0.750000	35.51	56.00	20.49	N	10	25.51
1.282000	34.34	56.00	21.66	N	10	24.34
16.818000	32.53	60.00	27.47	N	10	22.53
17.738000	32.23	60.00	27.77	N	10	22.23

Final_Result_AVG

Frequency (MHz)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	P _{Mea} (dBμV)
0.410000	20.98	47.65	26.66	L1	10	10.98
0.666000	28.04	46.00	17.96	L1	10	18.04
0.742000	23.53	46.00	22.47	N	10	13.53
1.254000	19.88	46.00	26.12	N	10	9.88
2.254000	16.05	46.00	29.95	N	10	6.05
16.590000	23.29	50.00	26.71	N	10	13.29

AC Input Port/ Voltage: 120V/60Hz

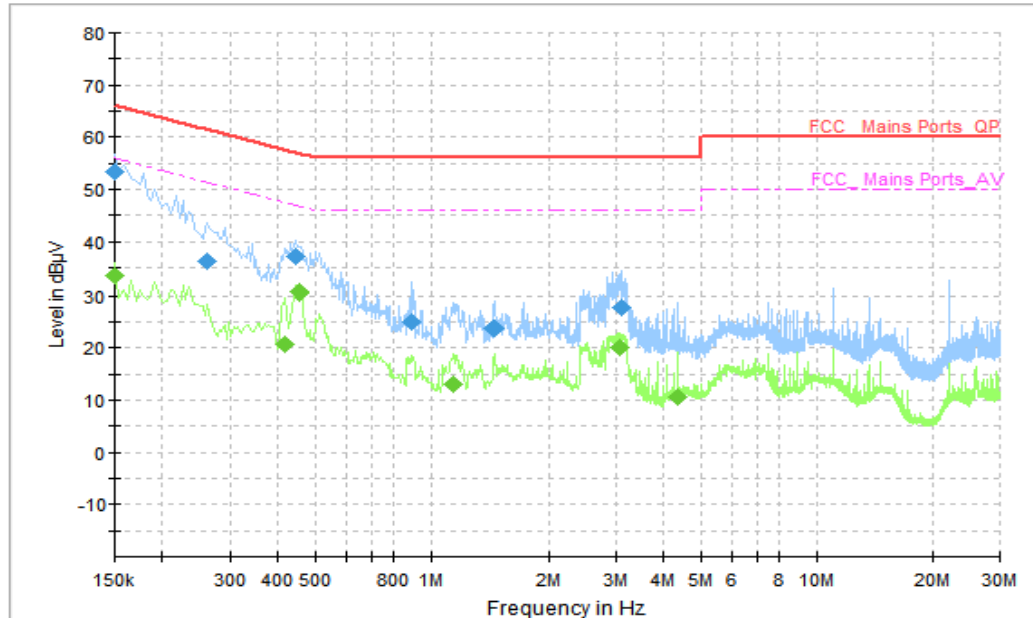


Figure A.2.4. Conducted Emission(Data Transfer)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	P _{Mea} (dBμV)
0.150000	53.51	66.00	12.49	N	10	43.51
0.262000	36.35	61.37	25.01	N	10	26.35
0.446000	37.26	56.95	19.69	L1	10	27.26
0.886000	25.01	56.00	30.99	N	10	15.01
1.446000	23.73	56.00	32.27	N	10	13.73
3.102000	27.70	56.00	28.30	N	10	17.70

Final_Result_AVG

Frequency (MHz)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	P _{Mea} (dBμV)
0.150000	33.61	56.00	22.39	L1	10	23.61
0.418000	20.74	47.49	26.75	N	10	10.74
0.454000	30.60	46.80	16.20	L1	10	20.60
1.142000	13.05	46.00	32.95	N	10	3.05
3.062000	20.17	46.00	25.83	N	10	10.17
4.338000	10.56	46.00	35.44	N	10	0.56

AC Input Port/ Voltage: 240V/60Hz

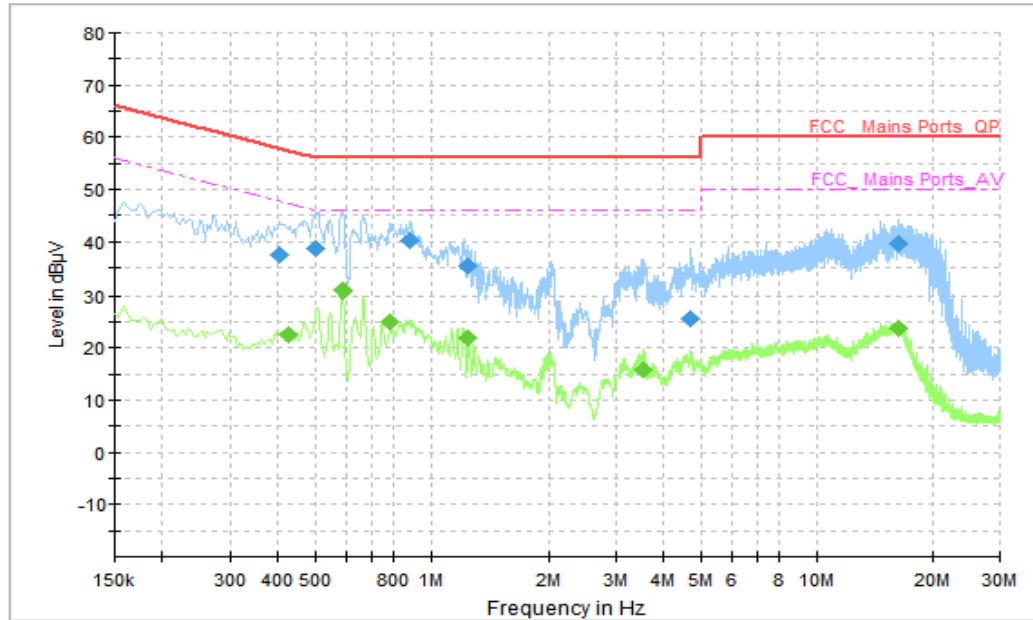


Figure A.2.5. Conducted Emission(Camera)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	P _{Mea} (dBμV)
0.402000	37.54	57.81	20.28	N	10	27.54
0.502000	38.67	56.00	17.33	N	10	28.67
0.878000	40.38	56.00	15.62	N	10	30.38
1.250000	35.29	56.00	20.71	N	10	25.29
4.690000	25.68	56.00	30.32	L1	10	15.68
16.378000	39.58	60.00	20.42	L1	10	29.58

Final_Result_AVG

Frequency (MHz)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	P _{Mea} (dBμV)
0.426000	22.65	47.33	24.68	N	10	12.65
0.586000	30.89	46.00	15.11	N	10	20.89
0.782000	24.81	46.00	21.19	N	10	14.81
1.250000	22.02	46.00	23.98	N	10	12.02
3.530000	15.76	46.00	20.24	L1	10	5.76
16.374000	23.75	50.00	26.25	L1	10	13.75

AC Input Port/ Voltage: 240V/60Hz

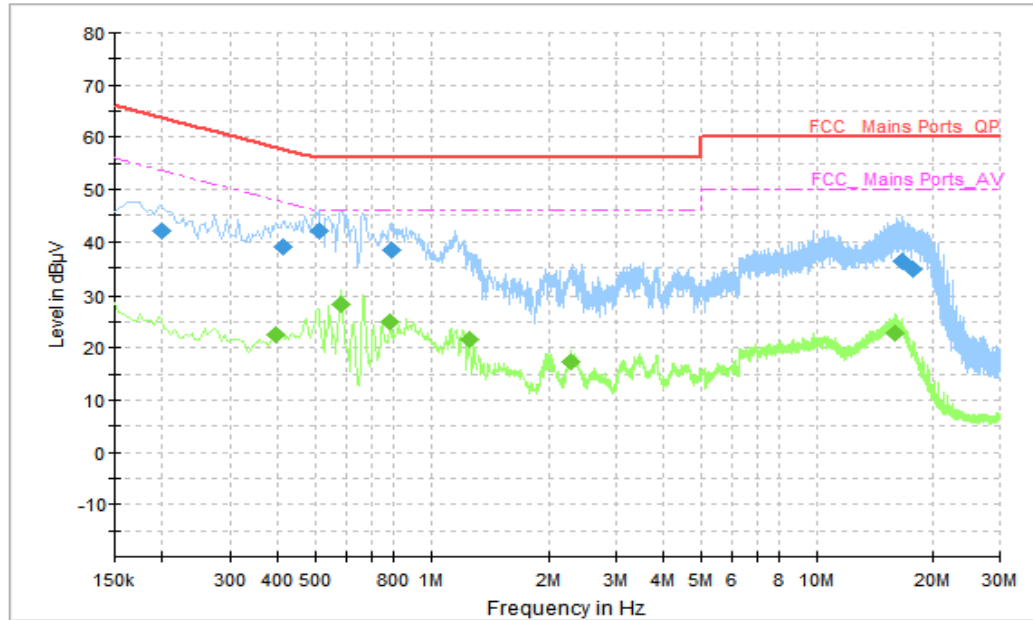


Figure A.2.6. Conducted Emission(Video Player)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	P _{Mea} (dBμV)
0.198000	42.05	63.69	21.65	N	10	32.05
0.410000	39.11	57.65	18.54	N	10	29.11
0.510000	42.23	56.00	13.77	N	10	32.23
0.790000	38.53	56.00	17.47	N	10	28.53
16.698000	36.30	60.00	23.70	N	10	26.3
17.906000	34.81	60.00	25.19	L1	10	24.81

Final_Result_AVG

Frequency (MHz)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	P _{Mea} (dBμV)
0.394000	22.52	47.98	25.46	N	10	12.52
0.582000	28.31	46.00	17.69	L1	10	18.31
0.782000	24.97	46.00	21.03	N	10	14.97
1.254000	21.62	46.00	24.38	L1	10	11.62
2.294000	17.24	46.00	28.76	N	10	7.24
16.058000	22.83	50.00	27.17	N	10	12.83

AC Input Port/ Voltage:240 V/60Hz

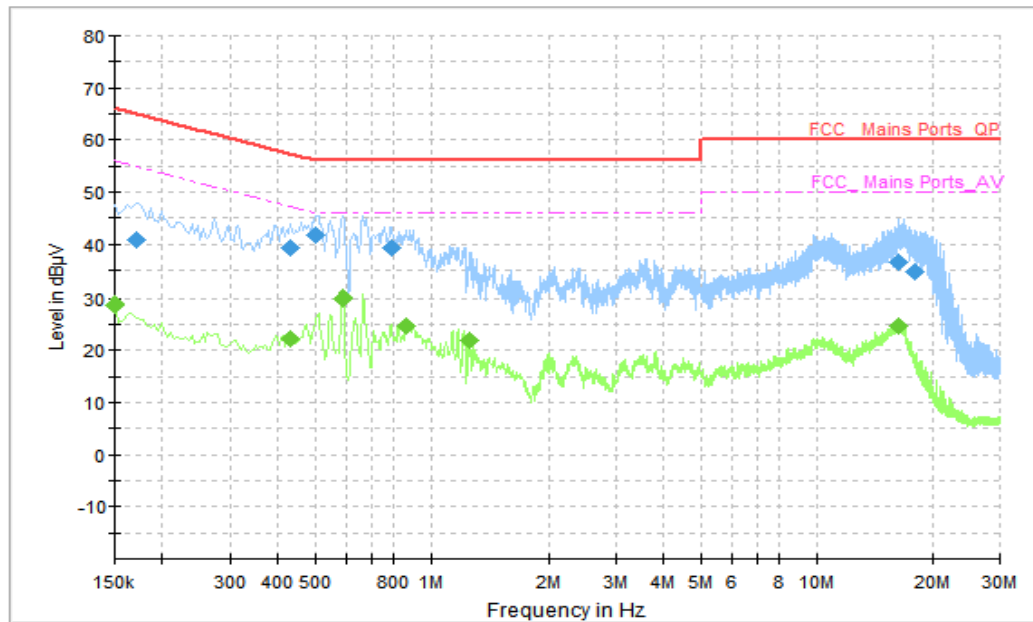


Figure A.2.7. Conducted Emission(FM receiver)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	P _{Mea} (dBμV)
0.170000	40.94	64.96	24.02	L1	10	30.94
0.430000	39.27	57.25	17.98	L1	10	29.27
0.498000	41.73	56.03	14.30	L1	10	31.73
0.786000	39.21	56.00	16.79	L1	10	29.21
16.402000	36.47	60.00	23.53	N	10	26.47
18.094000	34.81	60.00	25.19	N	10	24.81

Final_Result_AVG

Frequency (MHz)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	P _{Mea} (dBμV)
0.150000	28.72	56.00	27.28	L1	10	18.72
0.430000	22.17	47.25	25.08	L1	10	12.17
0.590000	29.93	46.00	16.07	L1	10	19.93
0.862000	24.77	46.00	21.23	L1	10	14.77
1.254000	21.88	46.00	24.12	L1	10	11.88
16.386000	24.57	50.00	25.43	N	10	14.57

AC Input Port/ Voltage: 240V/60Hz

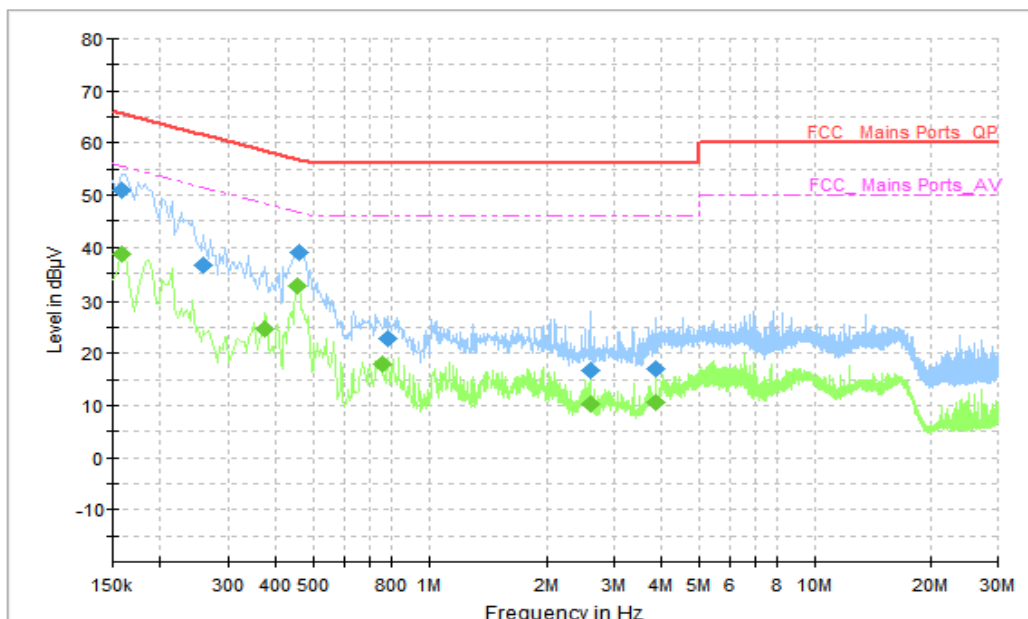


Figure A.2.8. Conducted Emission(Data Transfer)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	P _{Mea} (dBμV)
0.158000	50.86	65.57	14.71	N	10	40.86
0.258000	36.72	61.50	24.77	N	10	26.72
0.458000	39.01	56.73	17.72	N	10	29.01
0.778000	22.82	56.00	33.18	L1	10	12.82
2.602000	16.70	56.00	39.30	L1	10	6.7
3.866000	17.01	56.00	38.99	N	10	7.01

Final_Result_AVG

Frequency (MHz)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	P _{Mea} (dBμV)
0.158000	38.82	55.57	16.75	N	10	28.82
0.374000	24.67	48.41	23.74	L1	10	14.67
0.454000	32.45	46.80	14.35	L1	10	22.45
0.754000	18.06	46.00	27.95	L1	10	8.06
2.598000	10.39	46.00	35.61	L1	10	0.39
3.866000	10.63	46.00	35.37	N	10	0.63

END OF REPORT