TEST REPORT

No.I22N01585-EMC

for

TCL Communication Ltd.

Mobile Phone

Model Name：T506A

With

Hardware Version: V01

Software Version:vVJ52

FCC ID:2ACCJB186

Issued Date: 2022-09-06

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.

Test Laboratory:

SAICT, Shenzhen Academy of Information and Communications Technology

Building G, Shenzhen International Innovation Center, No.1006 Shennan Road, Futian District, Shenzhen, Guangdong, P. R. China. 518000.

Tel:+86(0)755-33322000, Fax:+86(0)755-33322001

Email: yewu@caict.ac.cn. www.saict.ac.cn

REPORT HISTORY

Report Number	Revision	Description	Issue Date
I22N01585-EMC	Rev.0	1st edition	2022-09-06

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

CONTENTS

1. SUMMARY OF TEST REPORT

1.1. Test Items

Description	Mobile Phone
Model Name	T506A
Code Name	T506A
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: Building G, Shenzhen International Innovation Center, No.1006 Shennan Road, Futian District, Shenzhen, Guangdong, China

1.5. Project data

Testing Start Date: 2022-08-18 Testing End Date: 2022-08-31

1.6. Signature

Liang Yong
(Prepared this test report)

Zhang Yunzhuan
(Reviewed this test report)

Cao Junfei
(Approved this test report)

2. CLIENT INFORMATION

2.1. Applicant 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	Nianxiang.jiang
Email	nianxiang.jiang@tcl.com
Tel.	+86 755 36611621
Fax	+86 755 3661 2000-81722

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	Nianxiang.jiang
Email	nianxiang.jiang@tcl.com
Tel.	+86 755 36611621
Fax	+86 755 3661 2000-81722

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

3.1. About EUT

Description	Mobile Phone
Model Name	T506A
Code Name	T506A
FCC ID	2ACCJB186
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
UT18aa	353380540006466	V01	vVJ52	2022-08-17
UT20aa	353380540006441	V01	vVJ52	2022-08-17

*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	TLp048A8
Manufacturer	Dongguan Ganfeng Electronics co.,LTD
Capacity	5000mAh
Nominal Voltage	3.85 V

AE1-2

Model	TLp048A7
Manufacturer	VEKEN
Capacity	5000mAh
Nominal Voltage	3.85 V

AE2-1

Model	UT-681A-5200ZCY
Manufacturer	Shenzhen Baijunda Electronic Co.，Ltd

AE2-2

Model	UC13US
Manufacturer	Puan

AE3

Model	JWUB1520-M01R
Manufacturer	JWELL

AE4

Model	JWEP0903-T01R
Manufacturer	JWELL

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

3.4. EUT Set-ups

EUT set-up No.	Combination of EUT and AE	Remarks
Set.1	EUT+AE1-1+AE2-2+AE3+AE4	
Set.2	EUT+AE1-1+AE2-1+AE3+AE4	
Set.3	EUT+AE1-1+AE3+AE4+PC	

3.5. General Description

The Equipment Under Test (EUT) is a model of Mobile Phone with internal antenna.
It supports GSM 850/900/1800/1900MHz, WCDMA Bands 1/2/4/5/8, LTE Bands 1/2/3/4/5/6/7/8/12/13/17/26/28/38/40/66.
It has MP3, Camera, FM Receiver, USB memory, Bluetooth, Wi-Fi and GNSS functions.
It consists of normal options: Battery, Charger, USB Cable and Headset.
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.

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 ℃, Max. = 35℃
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 ℃, Max. = 35 ℃
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 ℃, Max. = 35 ℃
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 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

Note: As FCC Part 15, Subpart B, conducted Emission is not required for equipment which is powered by DC source.

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)

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	2025.04.17	3 years
6.	LISN	ENV216	102067	R&S	2023.07.14	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.	Universal Radio Communication Tester	CMW500	152499	R&S	2023.07.14	1 year
11.	Horn Antenna	QSH-SL-18-26-S-20	17013	Q-par	2023.01.06	3 years
12.	Horn Antenna	QSH-SL-8-26-40-K-20	17014	Q-par	2023.01.06	3 years
13.	Signal Generator	SMB100A	179725	R&S	2022.11.24	1 year

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.

FM receiver: The EUT is connected to a charger for charging and open FM function. 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.

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

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, LTE Band 17 and LTE Band 26.

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.

A.1.4 Test Condition

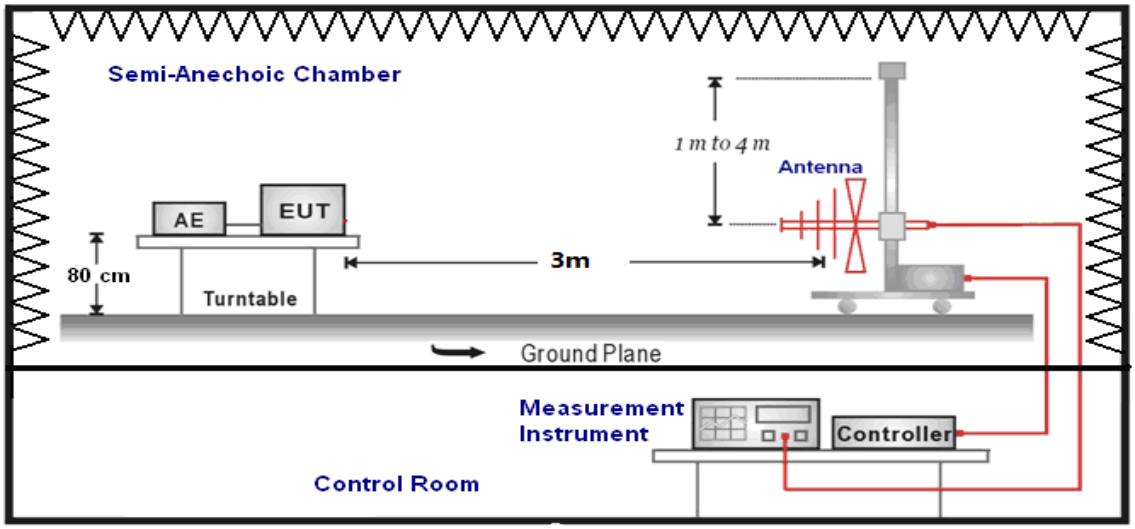
Frequency of emission (MHz)	RBW/VBW	Sweep Time(s)
30-1000	120kHz (IF bandwidth)	5
Above 1000	1MHz/3MHz	15

A.1.5 Test power supply

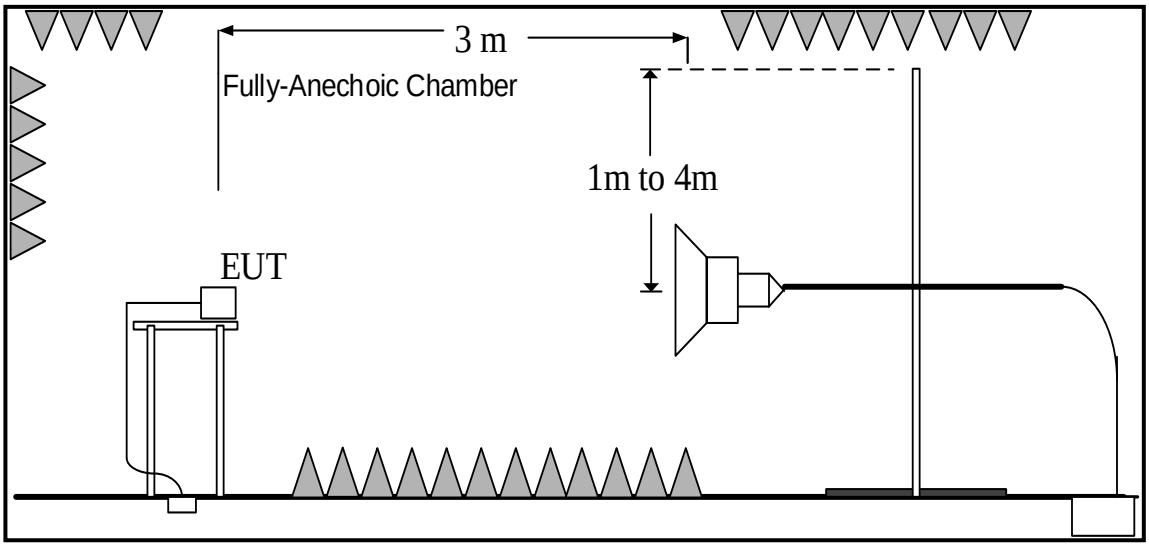
Power	Voltage（V）
DC	13.6

A.1.6 Test set-up:

30MHz-1GHz



1GHz-40GHz



A.1.7 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

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

Camera

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT20aa/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) UT20aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.2.	P
18000 to 26500	63.54	83.54	See Figure A.1.3.	
26500 to 40000	63.54	83.54	See Figure A.1.4.	

Video Player

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT20aa/Set.1	Conclusion
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 (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT20aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.6.	P
18000 to 26500	63.54	83.54	See Figure A.1.7.	
26500 to 40000	63.54	83.54	See Figure A.1.8.	

FM receiver

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT20aa/Set.1	Conclusion
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 (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT20aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.10.	P
18000 to 26500	63.54	83.54	See Figure A.1.11.	
26500 to 40000	63.54	83.54	See Figure A.1.12.	

GSM receiver 850MHz

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT20aa/Set.1	Conclusion
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 (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT20aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.14.	P
18000 to 26500	63.54	83.54	See Figure A.1.15.	
26500 to 40000	63.54	83.54	See Figure A.1.16.	

WCDMA receiver Band 5

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT20aa/Set.1	Conclusion
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 (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT20aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.18.	P
18000 to 26500	63.54	83.54	See Figure A.1.19.	
26500 to 40000	63.54	83.54	See Figure A.1.20.	

LTE receiver Band 5

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT20aa/Set.1	Conclusion
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 (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT20aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.22.	P
18000 to 26500	63.54	83.54	See Figure A.1.23.	
26500 to 40000	63.54	83.54	See Figure A.1.24.	

LTE receiver Band 12

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT20aa/Set.1	Conclusion
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 (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT20aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.26.	P
18000 to 26500	63.54	83.54	See Figure A.1.27.	
26500 to 40000	63.54	83.54	See Figure A.1.28.	

LTE receiver Band 13

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT20aa/Set.1	Conclusion
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 (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT20aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.30.	P
18000 to 26500	63.54	83.54	See Figure A.1.31.	
26500 to 40000	63.54	83.54	See Figure A.1.32.	

LTE receiver Band 17

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT20aa/Set.1	Conclusion
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 (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT20aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.34.	P
18000 to 26500	63.54	83.54	See Figure A.1.35.	
26500 to 40000	63.54	83.54	See Figure A.1.36.	

LTE receiver Band 26

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT20aa/Set.1	Conclusion
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 (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT20aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.38.	P
18000 to 26500	63.54	83.54	See Figure A.1.39.	
26500 to 40000	63.54	83.54	See Figure A.1.40.	

Video Player

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT20aa/Set.2	Conclusion
30-88	40.00	See Figure A.1.41.	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) UT20aa/Set.2	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.42.	P
18000 to 26500	63.54	83.54	See Figure A.1.43.	
26500 to 40000	63.54	83.54	See Figure A.1.44.	

Data Transfer: PC TO EUT

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT20aa/Set.3	Conclusion
30-88	40.00	See Figure A.1.45.	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) UT20aa/Set.3	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.46.	P
18000 to 26500	63.54	83.54	See Figure A.1.47.	
26500 to 40000	63.54	83.54	See Figure A.1.48.	

Data Transfer: EUT TO PC

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT20aa/Set.3	Conclusion
30-88	40.00	See Figure A.1.49.	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) UT20aa/Set.3	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.50.	P
18000 to 26500	63.54	83.54	See Figure A.1.51.	
26500 to 40000	63.54	83.54	See Figure A.1.52.	

Data Transfer: PC TO TF Card

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m)	Conclusion
		UT20aa/Set.3	
30-88	40.00	See Figure A.1.53.	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)	Conclusion
			UT20aa/Set.3	
1000 to 18000	54.00	74.00	See Figure A.1.54.	P
18000 to 26500	63.54	83.54	See Figure A.1.55.	
26500 to 40000	63.54	83.54	See Figure A.1.56.	

Data Transfer: TF Card TO PC

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m)	Conclusion
		UT20aa/Set.3	
30-88	40.00	See Figure A.1.57.	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)	Conclusion
			UT20aa/Set.3	
1000 to 18000	54.00	74.00	See Figure A.1.58.	P
18000 to 26500	63.54	83.54	See Figure A.1.59.	
26500 to 40000	63.54	83.54	See Figure A.1.60.	

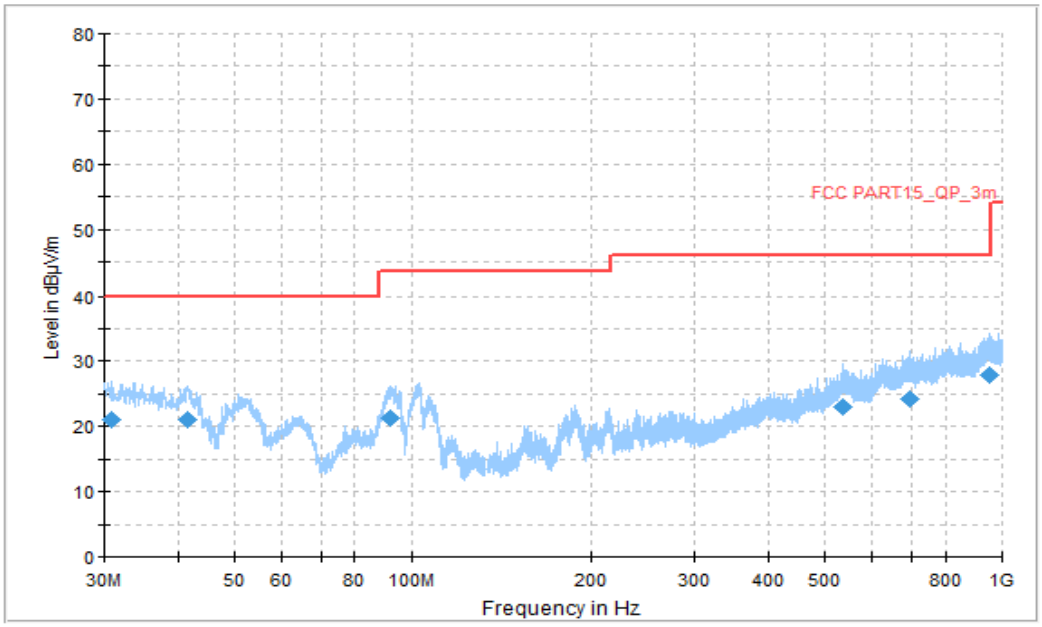


Figure A.1.1. Radiated Emission (Camera , 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
30.916111	21.11	40.00	18.89	H	-13	34.11
41.424444	20.97	40.00	19.03	V	-19	39.97
92.080000	21.35	43.52	22.17	V	-21	42.35
536.286111	22.96	46.02	23.06	H	-4	26.96
698.922778	24.34	46.02	21.68	H	-2	26.34
948.482222	27.86	46.02	18.16	V	1	26.86

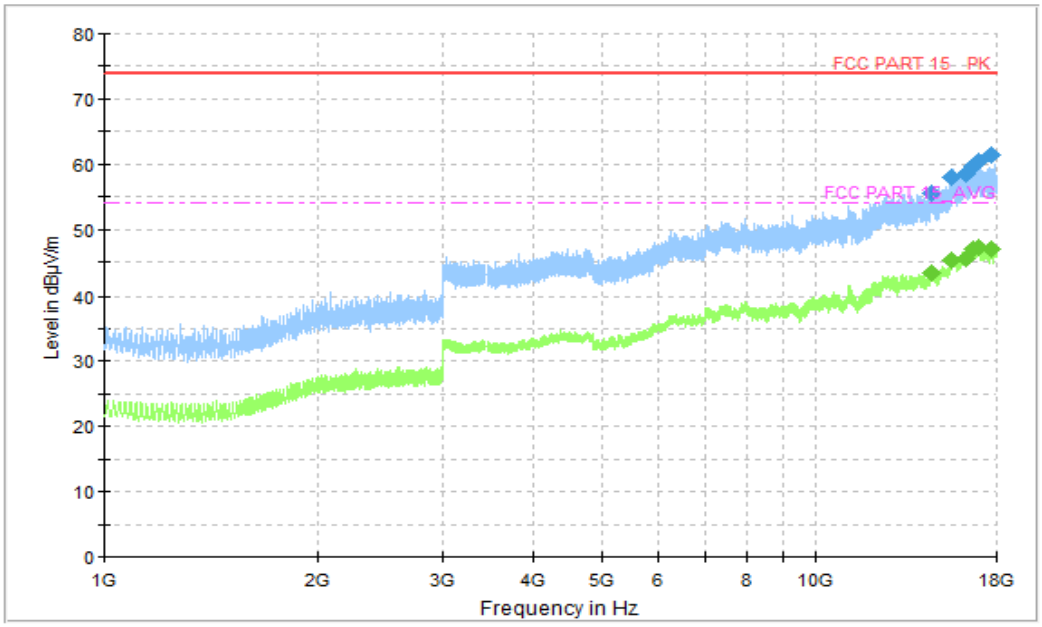


Figure A.1.2. Radiated Emission (Camera , 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
14562.000000	55.56	74.00	18.44	V	18	37.56
15585.500000	57.89	74.00	16.11	H	20	37.89
16272.750000	58.53	74.00	15.47	V	21	37.53
16664.250000	59.75	74.00	14.25	H	22	37.75
17016.250000	60.40	74.00	13.60	V	23	37.4
17699.250000	61.51	74.00	12.49	H	23	38.51

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
14562.000000	43.24	54.00	10.76	V	18	25.24
15585.500000	45.21	54.00	8.79	H	20	25.21
16272.750000	45.58	54.00	8.42	V	21	24.58
16664.250000	46.99	54.00	7.01	H	22	24.99
17016.250000	47.31	54.00	6.69	V	23	24.31
17699.250000	46.96	54.00	7.04	H	23	23.96

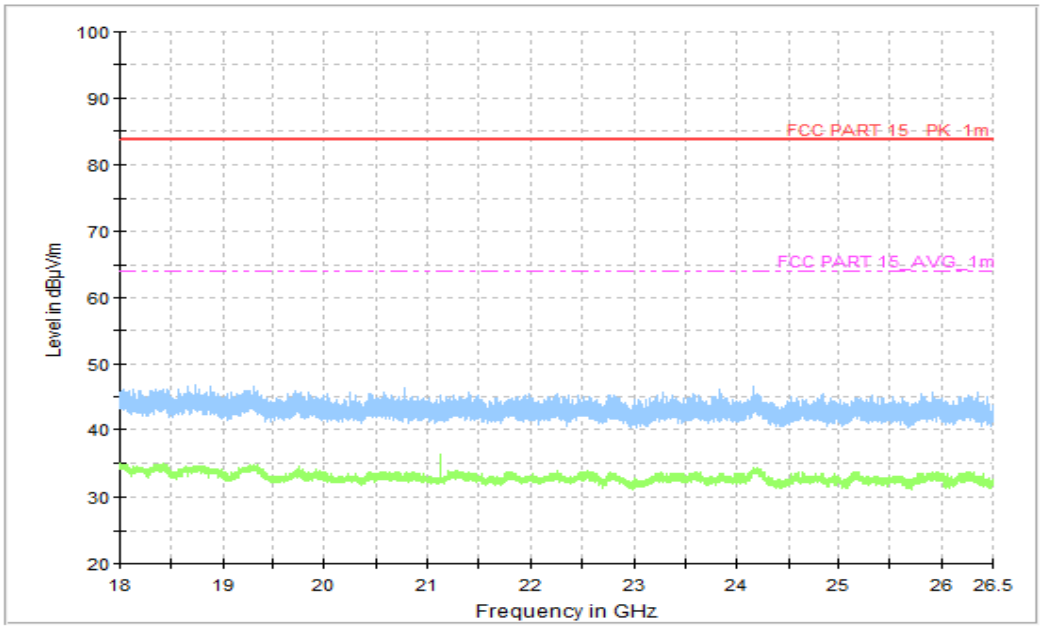


Figure A.1.3. Radiated Emission (Camera , 18GHz to 26.5GHz)

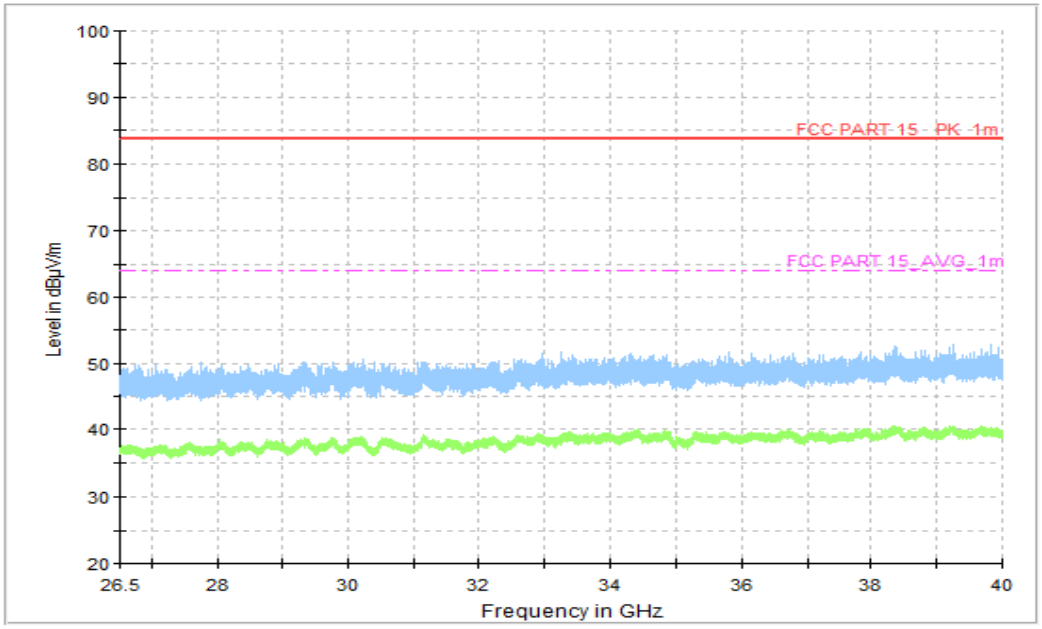


Figure A.1.4. Radiated Emission (Camera , 26.5GHz to 40GHz)

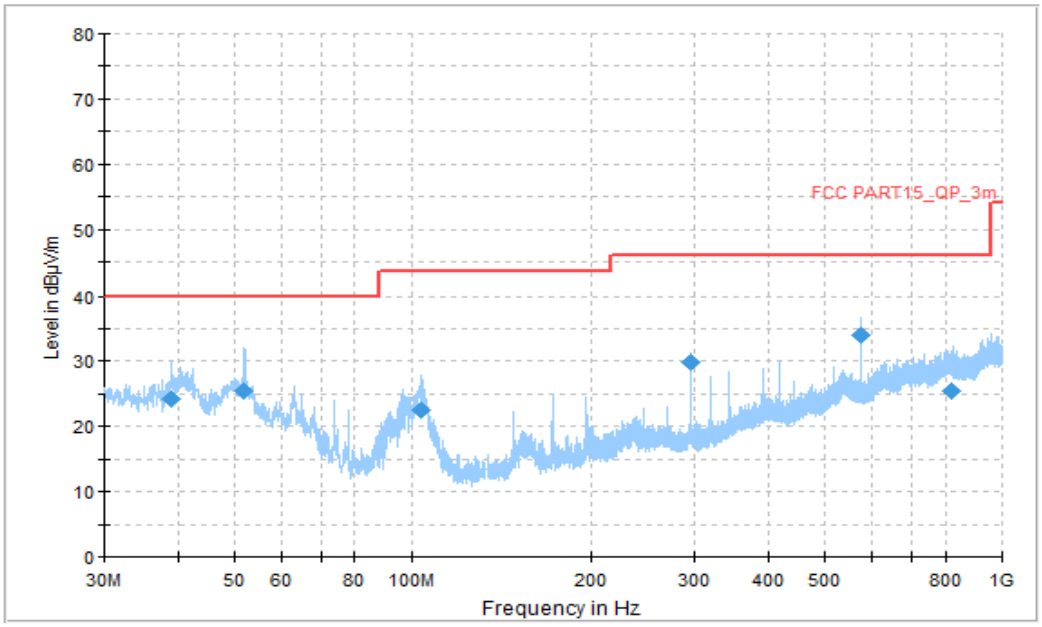


Figure A.1.5. Radiated Emission (Video Player , 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
38.999444	24.13	40.00	15.87	V	-18	42.13
51.932778	25.40	40.00	14.60	V	-22	47.4
103.612222	22.55	43.52	20.97	V	-20	42.55
294.971667	29.78	46.02	16.24	H	-14	43.78
576.002222	34.04	46.02	11.98	V	-5	39.04
821.304444	25.35	46.02	20.67	V	-1	26.35

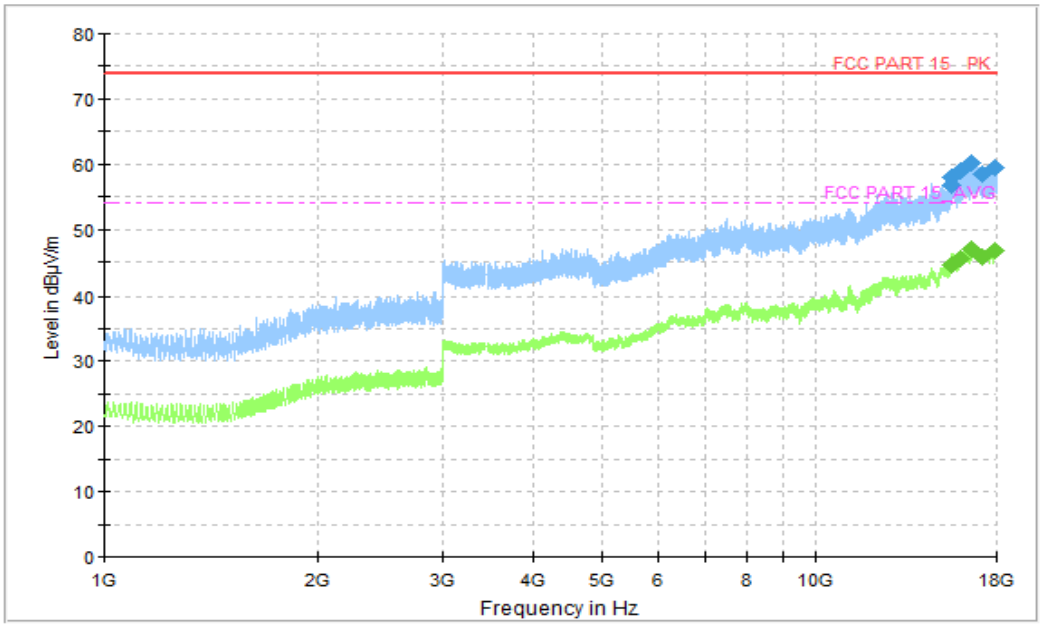


Figure A.1.6. Radiated Emission (Video Player , 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
15546.500000	56.87	74.00	17.13	H	19	37.87
15553.000000	58.03	74.00	15.97	V	19	39.03
16029.250000	58.86	74.00	15.14	H	20	38.86
16587.000000	60.09	74.00	13.91	V	22	38.09
17142.000000	58.35	74.00	15.65	V	21	37.35
17886.500000	59.50	74.00	14.50	V	24	35.50

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
15546.500000	44.45	54.00	9.55	H	19	25.45
15553.000000	44.45	54.00	9.55	V	19	25.45
16029.250000	45.59	54.00	8.41	H	20	25.59
16587.000000	47.05	54.00	6.95	V	22	25.05
17142.000000	45.75	54.00	8.25	V	21	24.75
17886.500000	46.85	54.00	7.15	V	24	22.85

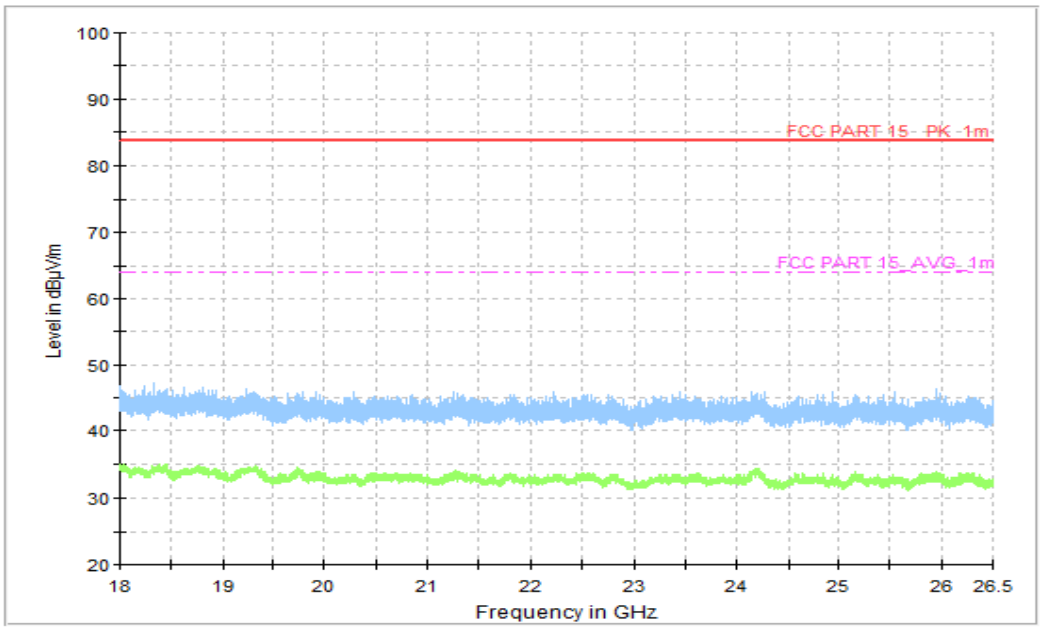


Figure A.1.7. Radiated Emission (Video Player , 18GHz to 26.5GHz)

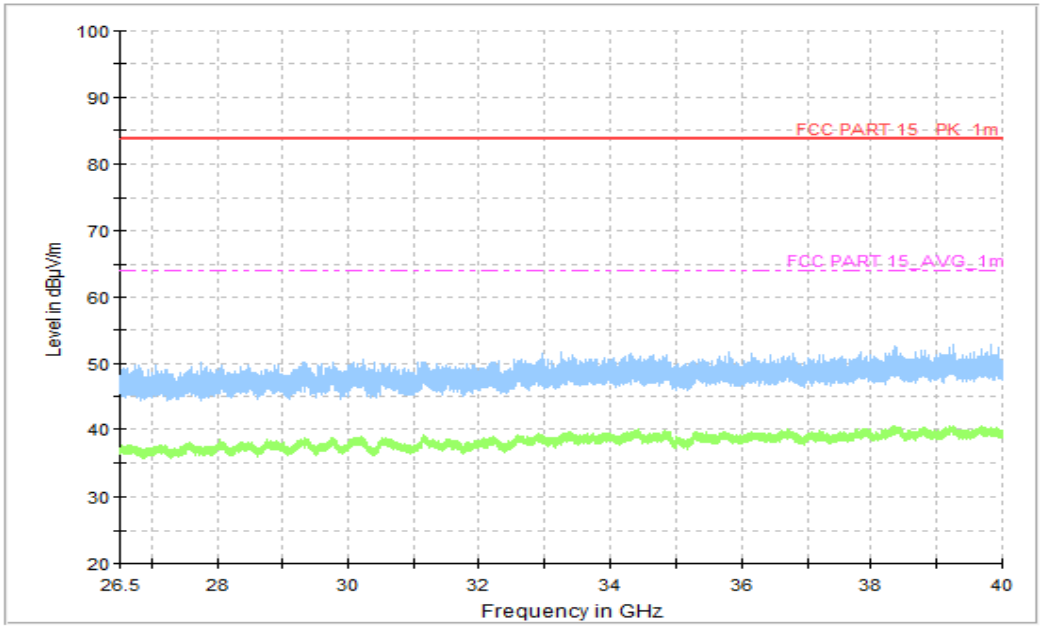
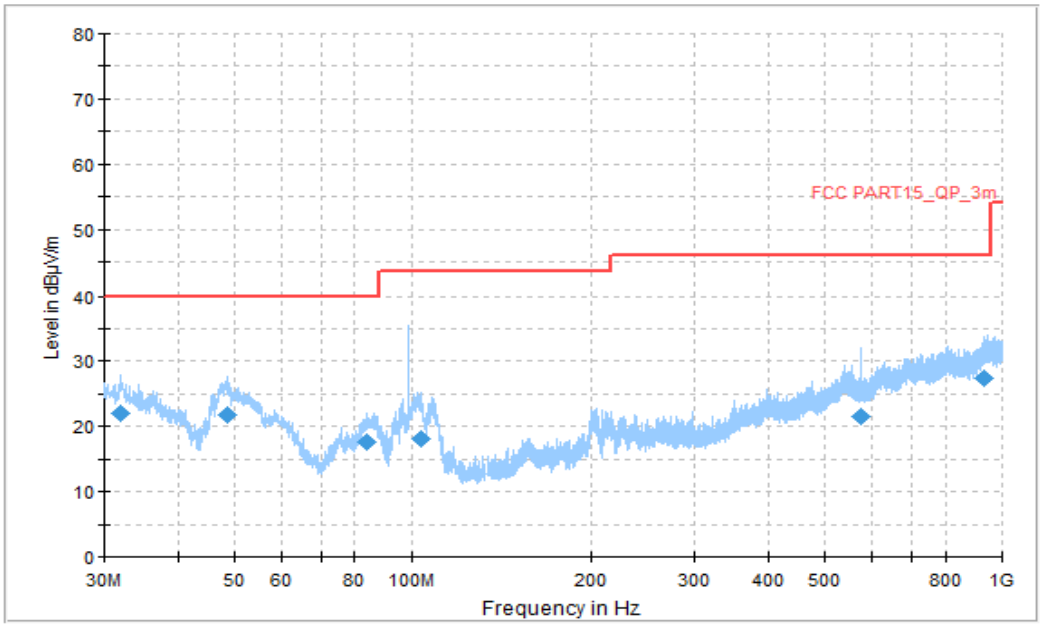


Figure A.1.8. Radiated Emission (Video Player , 26.5GHz to 40GHz)



Note: the spike over the limit is coming from the Signal Generator traffic carrier.

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)	P_{Mea} (dBµV)
31.886111	22.11	40.00	17.89	V	-14	36.11
48.591667	21.83	40.00	18.17	V	-22	43.83
83.565556	17.71	40.00	22.29	V	-22	39.71
103.612222	18.18	43.52	25.34	V	-20	38.18
576.002222	21.48	46.02	24.54	V	-5	26.48
933.285556	27.38	46.02	18.64	H	1	26.38

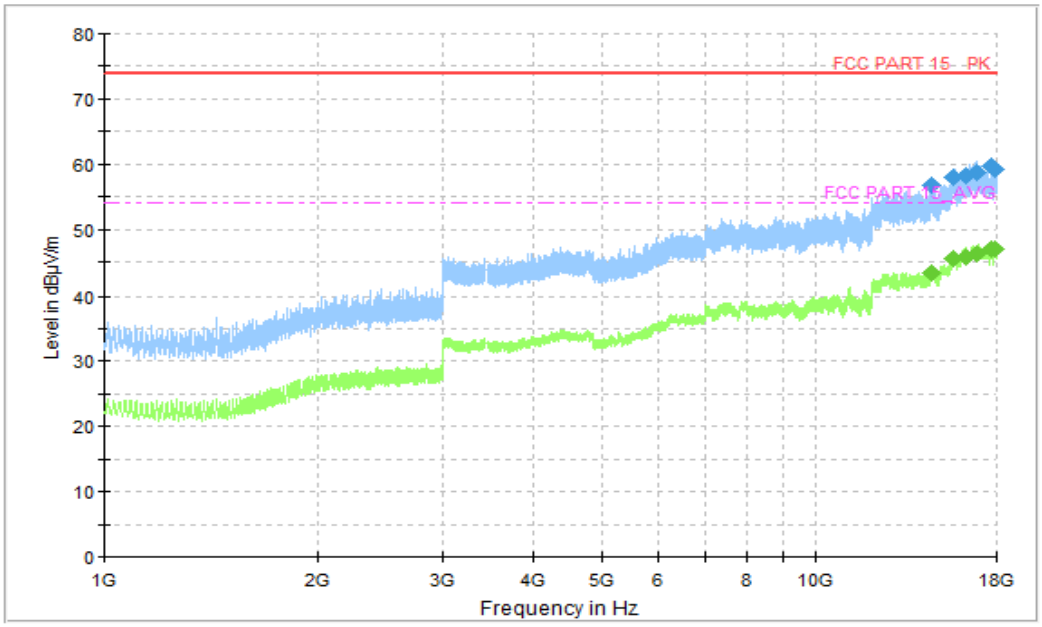


Figure A.1.10. Radiated Emission (FM receiver , 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
14558.500000	56.69	74.00	17.31	H	18	38.69
15627.750000	57.97	74.00	16.03	V	20	37.97
16273.250000	58.32	74.00	15.68	H	21	37.32
16922.250000	58.77	74.00	15.23	H	22	36.77
17697.500000	59.65	74.00	14.35	V	23	36.65
17885.500000	59.22	74.00	14.78	V	24	35.22

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
14558.500000	43.24	54.00	10.76	H	18	25.24
15627.750000	45.40	54.00	8.60	V	20	25.4
16273.250000	45.68	54.00	8.32	H	21	24.68
16922.250000	46.31	54.00	7.69	H	22	24.31
17697.500000	46.96	54.00	7.04	V	23	23.96
17885.500000	46.96	54.00	7.04	V	24	22.96

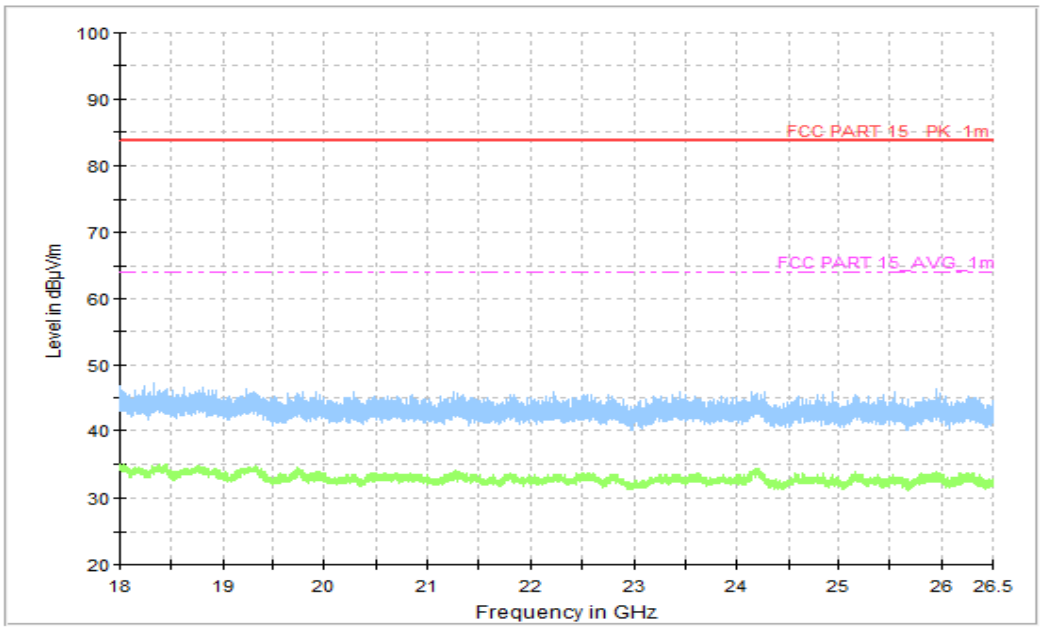


Figure A.1.11. Radiated Emission (FM receiver , 18GHz to 26.5GHz)

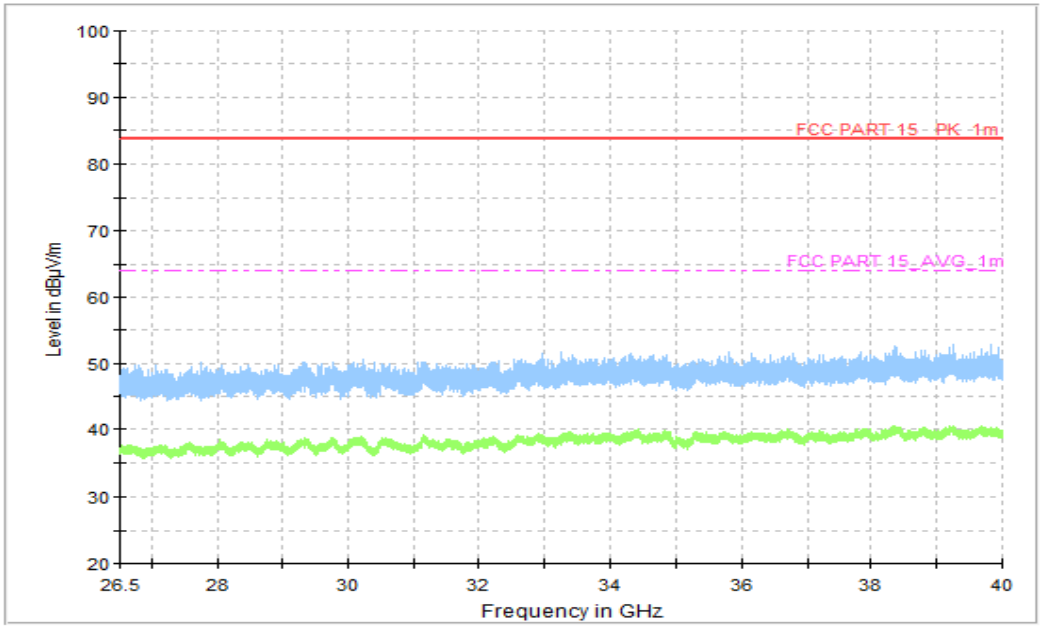


Figure A.1.12. Radiated Emission (FM receiver , 26.5GHz to 40GHz)

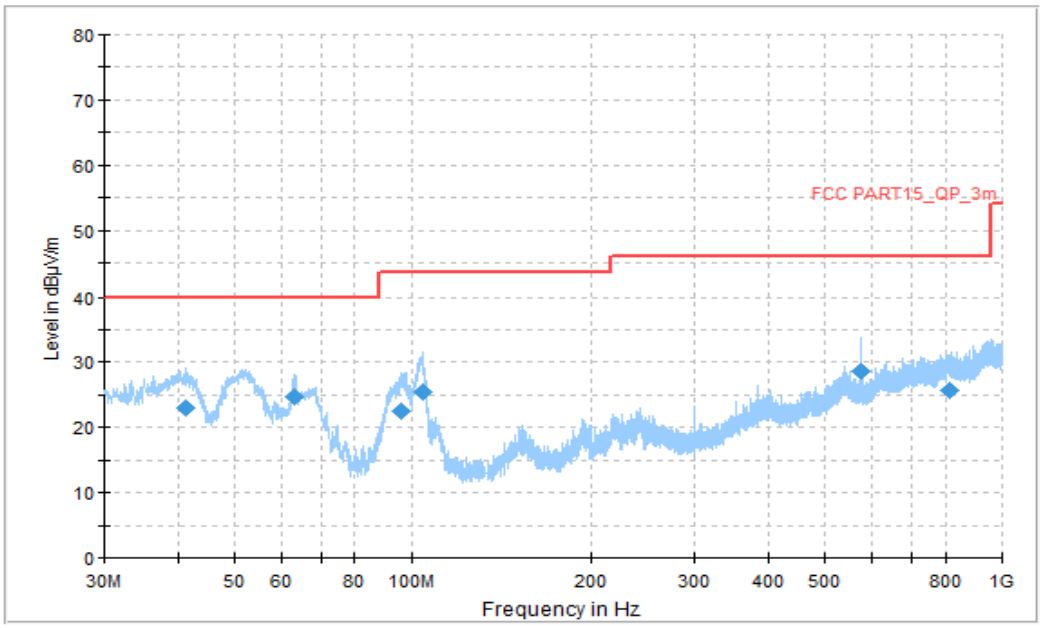


Figure A.1.13. Radiated Emission (GSM receiver 850MHz, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
41.370556	22.98	40.00	17.02	V	-19	41.98
62.926111	24.66	40.00	15.34	V	-21	45.66
95.960000	22.57	43.52	20.95	V	-21	43.57
104.043333	25.47	43.52	18.05	V	-20	45.47
576.002222	28.69	46.02	17.33	V	-5	33.69
811.873889	25.64	46.02	20.38	H	-1	26.64

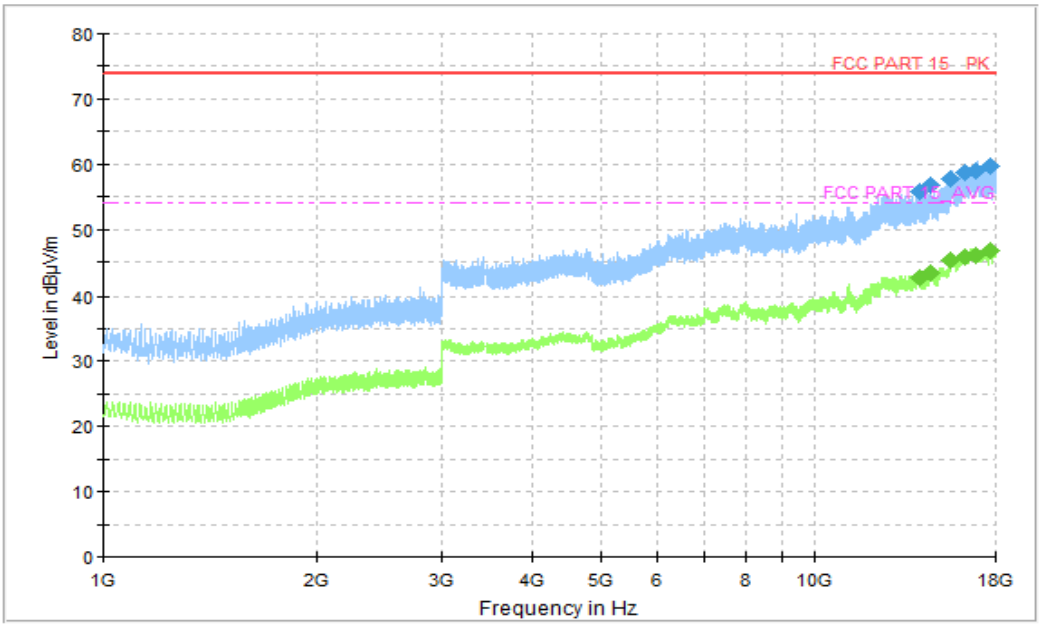


Figure A.1.14. Radiated Emission (GSM receiver 850MHz , 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
14024.500000	55.76	74.00	18.24	H	17	38.76
14562.750000	56.72	74.00	17.28	V	18	38.72
15567.250000	57.73	74.00	16.27	H	20	37.73
16256.750000	58.69	74.00	15.31	H	21	37.69
16922.000000	59.03	74.00	14.97	V	22	37.03
17686.500000	59.58	74.00	14.42	H	23	36.58

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
14024.500000	42.54	54.00	11.46	H	17	25.54
14562.750000	43.20	54.00	10.80	V	18	25.2
15567.250000	45.17	54.00	8.83	H	20	25.17
16256.750000	45.83	54.00	8.17	H	21	24.83
16922.000000	46.00	54.00	8.00	V	22	24
17686.500000	46.69	54.00	7.31	H	23	23.69

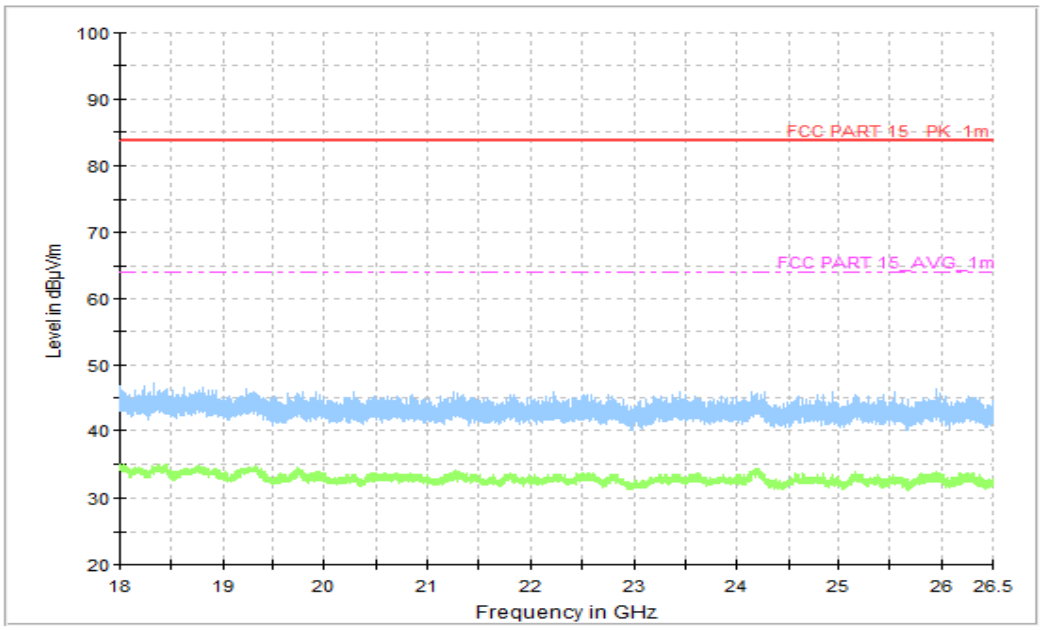


Figure A.1.15. Radiated Emission (GSM receiver 850MHz, 18GHz to 26.5GHz)

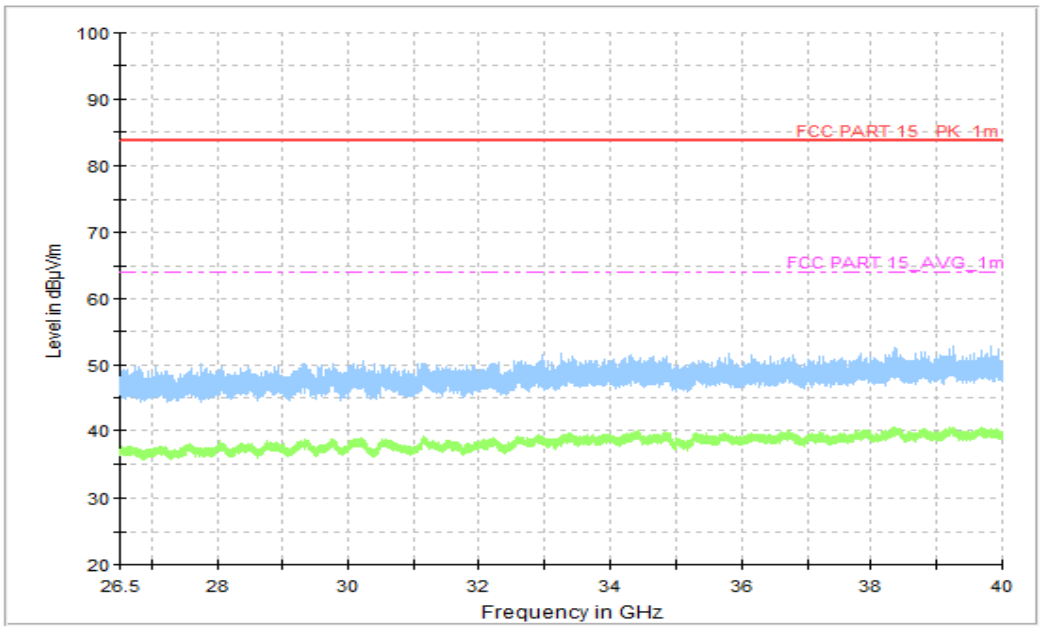


Figure A.1.16. Radiated Emission (GSM receiver 850MHz , 26.5GHz to 40GHz)

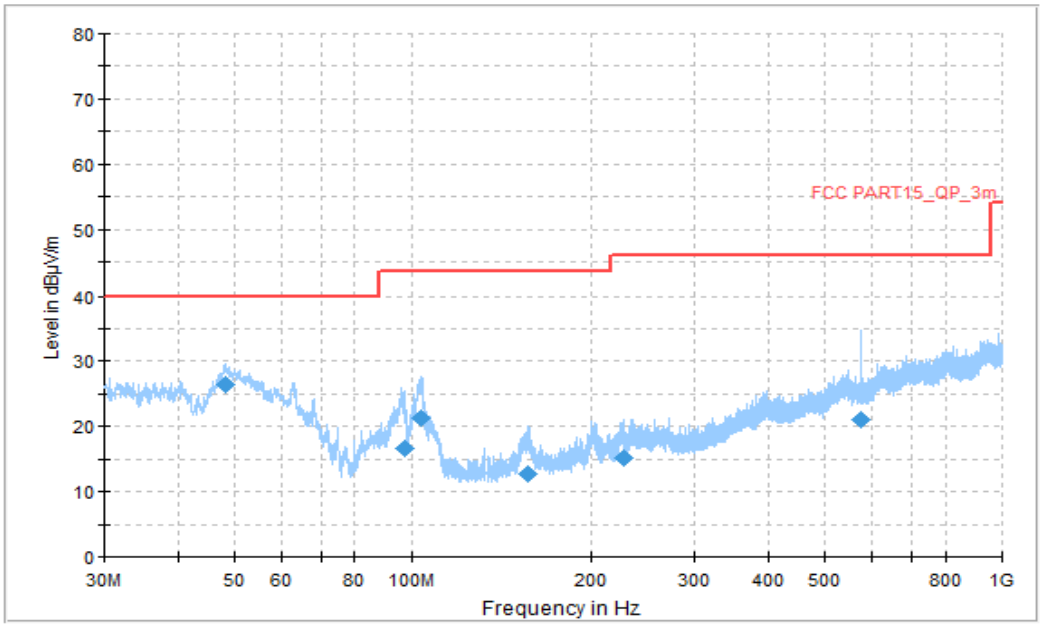


Figure A.1.17. Radiated Emission (WCDMA receiver Band 5, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
48.052778	26.32	40.00	13.68	V	-21	47.32
97.037778	16.66	43.52	26.86	V	-20	36.66
103.612222	21.32	43.52	22.20	V	-20	41.32
156.046111	12.78	43.52	30.74	V	-17	29.78
227.017778	15.23	46.02	30.79	H	-16	31.23
576.002222	21.04	46.02	24.98	V	-5	26.04

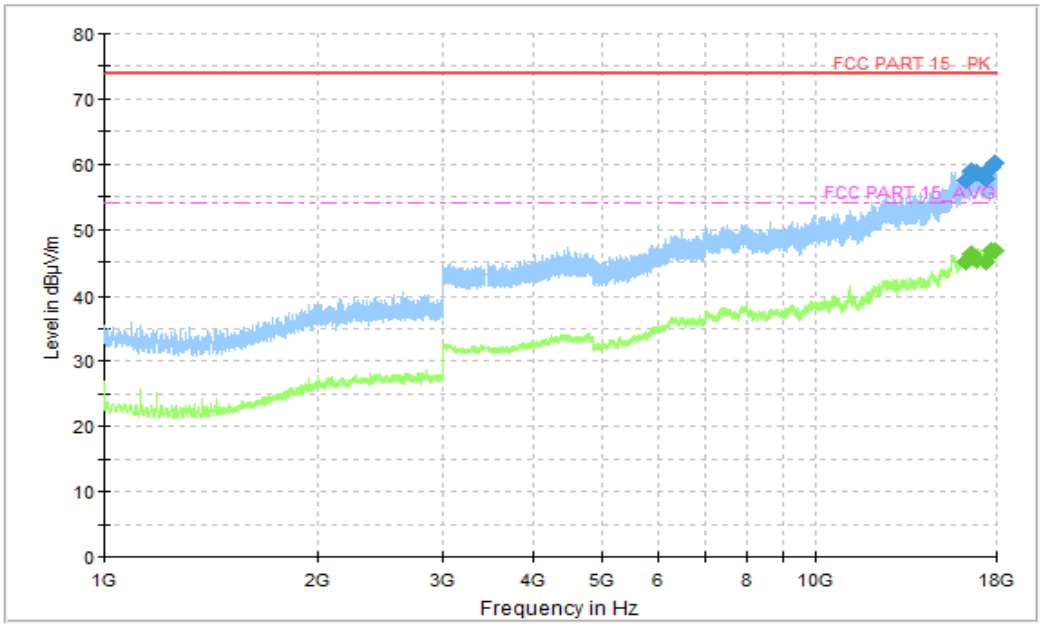


Figure A.1.18. Radiated Emission (WCDMA receiver Band 5, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
16284.250000	57.59	74.00	16.41	H	21	36.59
16575.000000	58.86	74.00	15.14	V	22	36.86
16843.750000	58.76	74.00	15.24	H	22	36.76
17391.250000	57.68	74.00	16.32	H	22	35.68
17704.250000	59.37	74.00	14.63	V	23	36.37
17886.000000	60.25	74.00	13.75	V	24	36.25

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
16284.250000	45.09	54.00	8.91	H	21	24.09
16575.000000	46.23	54.00	7.77	V	22	24.23
16843.750000	45.37	54.00	8.63	H	22	23.37
17391.250000	45.07	54.00	8.93	H	22	23.07
17704.250000	46.70	54.00	7.30	V	23	23.7
17886.000000	46.70	54.00	7.30	V	24	22.70

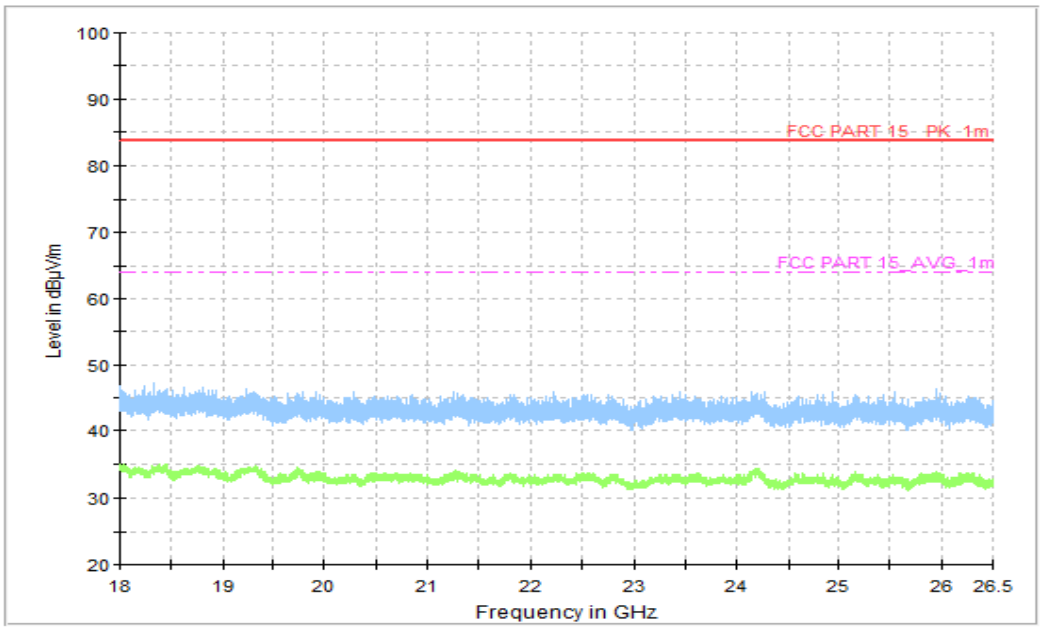


Figure A.1.19. Radiated Emission (WCDMA receiver Band 5, 18GHz to 26.5GHz)

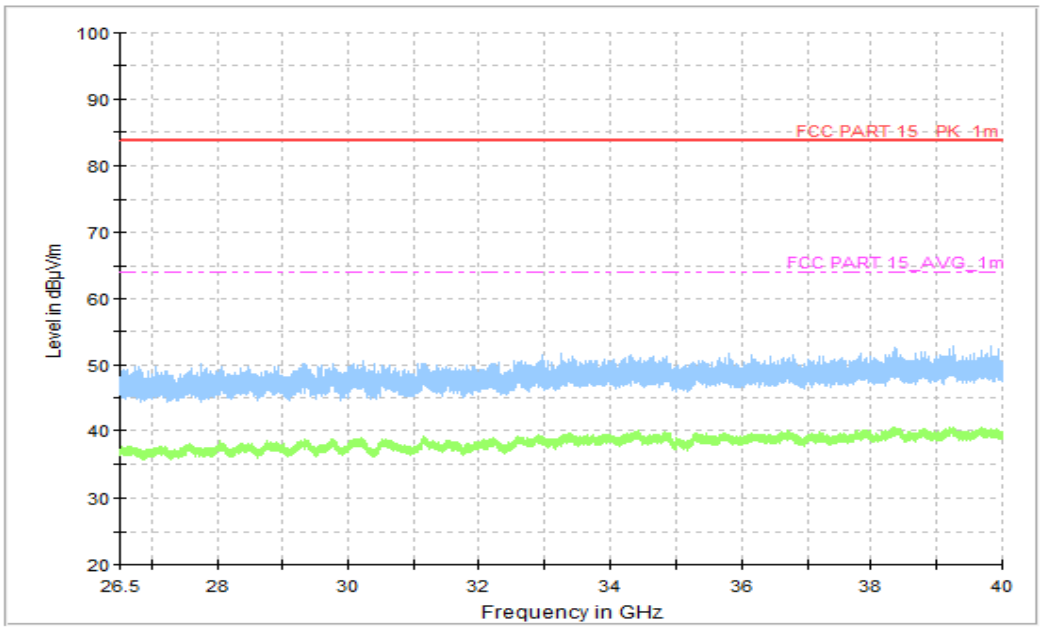


Figure A.1.20. Radiated Emission (WCDMA receiver Band 5, 26.5GHz to 40GHz)

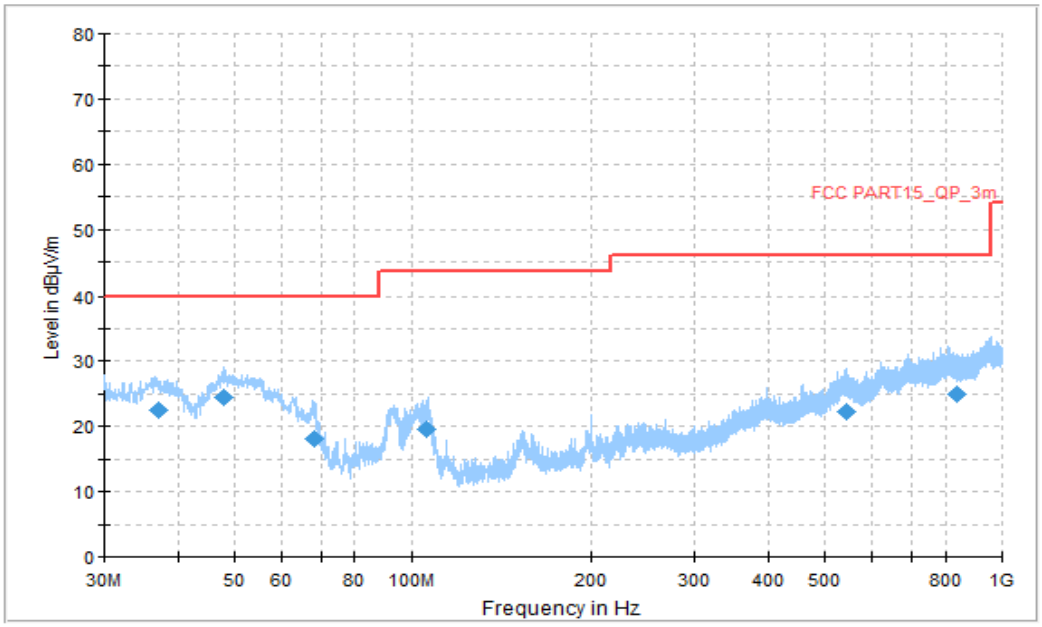


Figure A.1.21. Radiated Emission (LTE receiver Band 5, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
37.005556	22.61	40.00	17.39	V	-17	39.61
47.891111	24.54	40.00	15.46	V	-21	45.54
68.261111	18.19	40.00	21.81	V	-21	39.19
105.498333	19.55	43.52	23.97	V	-20	39.55
544.100000	22.32	46.02	23.70	V	-4	26.32
835.207778	24.99	46.02	21.03	V	-1	25.99

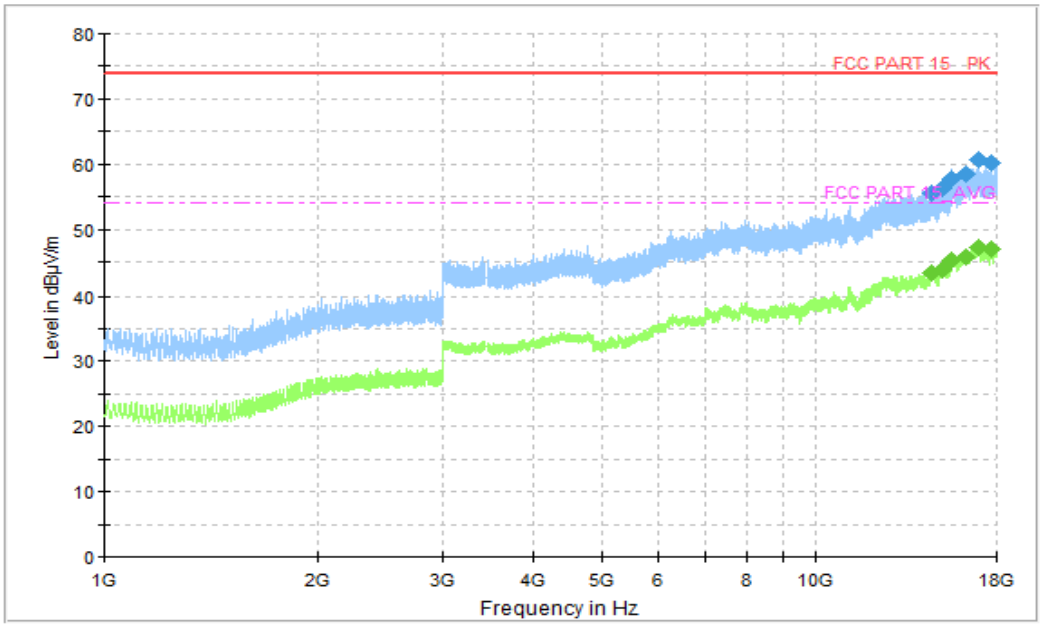


Figure A.1.22. Radiated Emission (LTE receiver Band 5, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
14544.000000	55.57	74.00	18.43	V	18	37.57
15099.000000	56.35	74.00	17.65	H	18	38.35
15586.500000	57.69	74.00	16.31	H	20	37.69
16252.750000	58.35	74.00	15.65	V	21	37.35
17001.750000	60.63	74.00	13.37	H	23	37.63
17699.750000	60.10	74.00	13.90	V	23	37.10

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
14544.000000	43.22	54.00	10.78	V	18	25.22
15099.000000	43.79	54.00	10.21	H	18	25.79
15586.500000	45.38	54.00	8.62	H	20	25.38
16252.750000	45.67	54.00	8.33	V	21	24.67
17001.750000	47.29	54.00	6.71	H	23	24.29
17699.750000	46.94	54.00	7.06	V	23	23.94

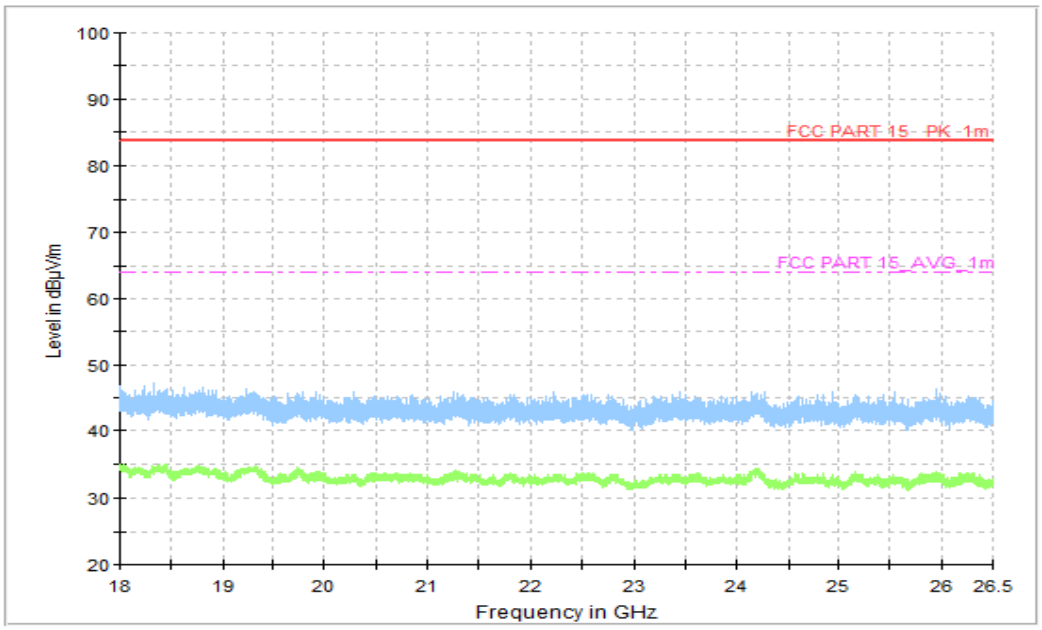


Figure A.1.23. Radiated Emission (LTE receiver Band 5, 18GHz to 26.5GHz)

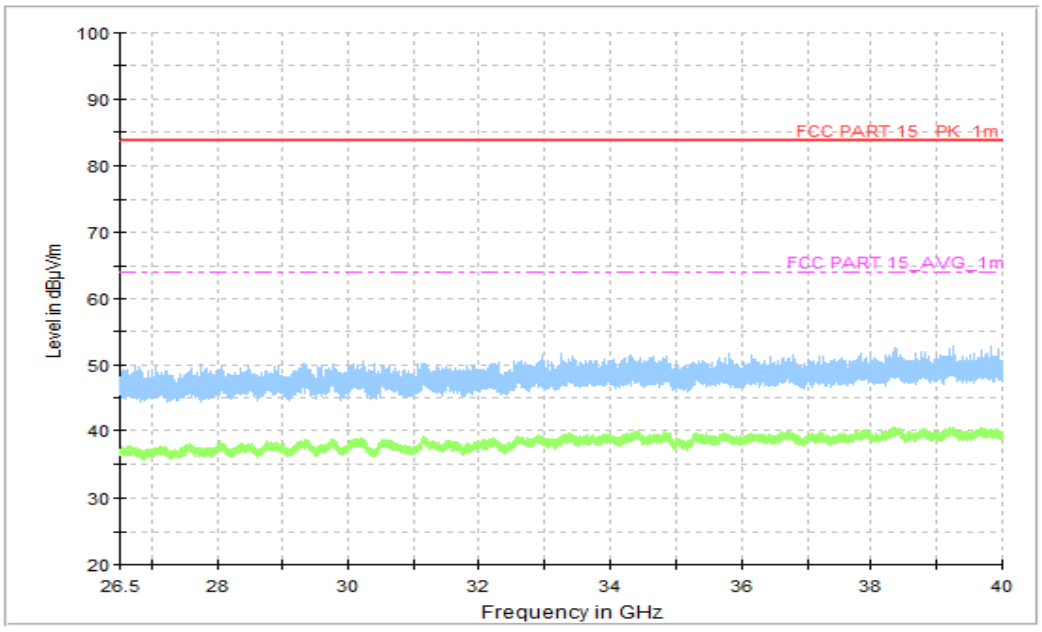


Figure A.1.24. Radiated Emission (LTE receiver Band 5, 26.5GHz to 40GHz)

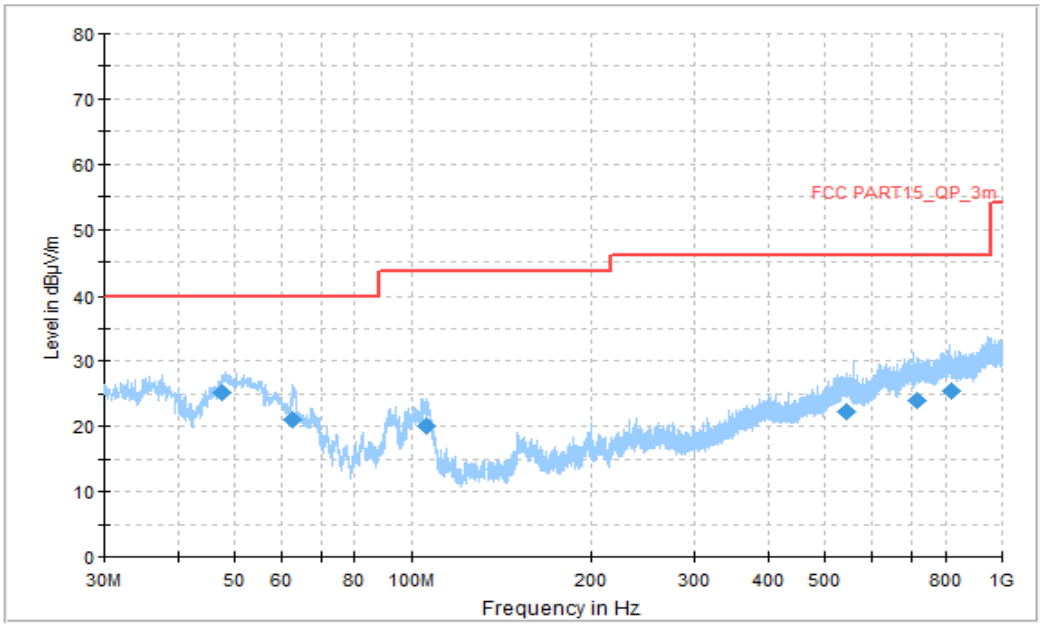


Figure A.1.25. Radiated Emission (LTE receiver Band 12, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
47.621667	25.08	40.00	14.92	V	-21	46.08
62.818333	21.07	40.00	18.93	V	-21	42.07
105.983333	20.03	43.52	23.49	V	-20	40.03
542.806667	22.30	46.02	23.72	V	-4	26.30
715.574444	23.91	46.02	22.11	V	-2	25.91
818.879444	25.47	46.02	20.55	H	-1	26.47

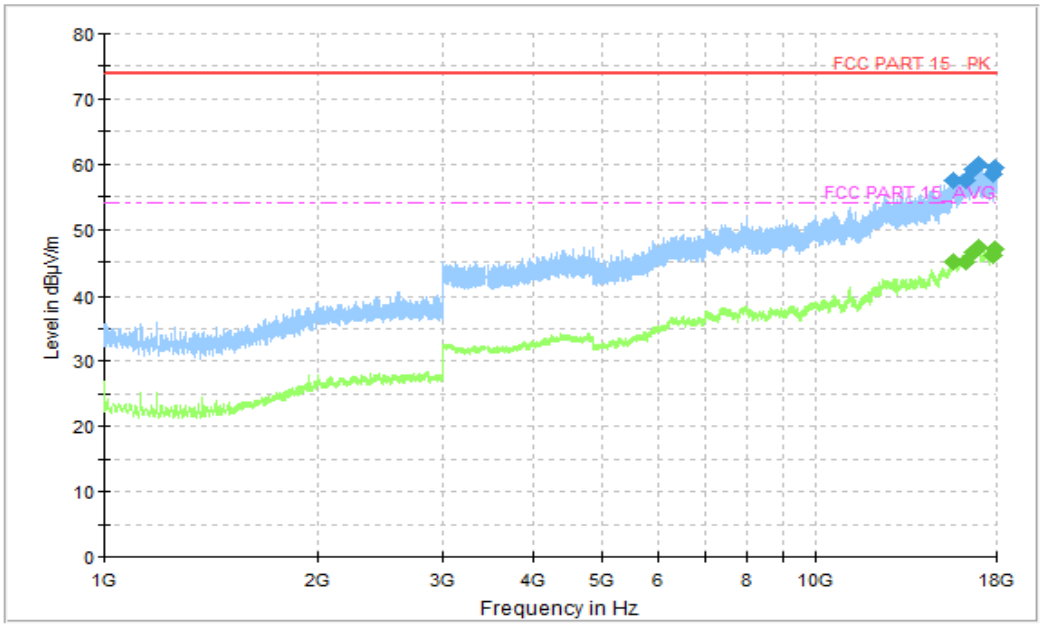


Figure A.1.26. Radiated Emission (LTE receiver Band 12, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
15590.750000	57.44	74.00	16.56	V	20	37.44
16276.000000	57.54	74.00	16.46	V	21	36.54
16658.250000	59.14	74.00	14.86	V	22	37.14
17015.750000	59.97	74.00	14.03	V	23	36.97
17747.250000	58.45	74.00	15.55	H	23	35.45
17900.250000	59.48	74.00	14.52	H	24	35.48

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
15590.750000	45.10	54.00	8.90	V	20	25.10
16276.000000	45.08	54.00	8.92	V	21	24.08
16658.250000	46.48	54.00	7.52	V	22	24.48
17015.750000	47.11	54.00	6.89	V	23	24.11
17747.250000	45.91	54.00	8.09	H	23	22.91
17900.250000	46.90	54.00	7.10	H	24	22.90

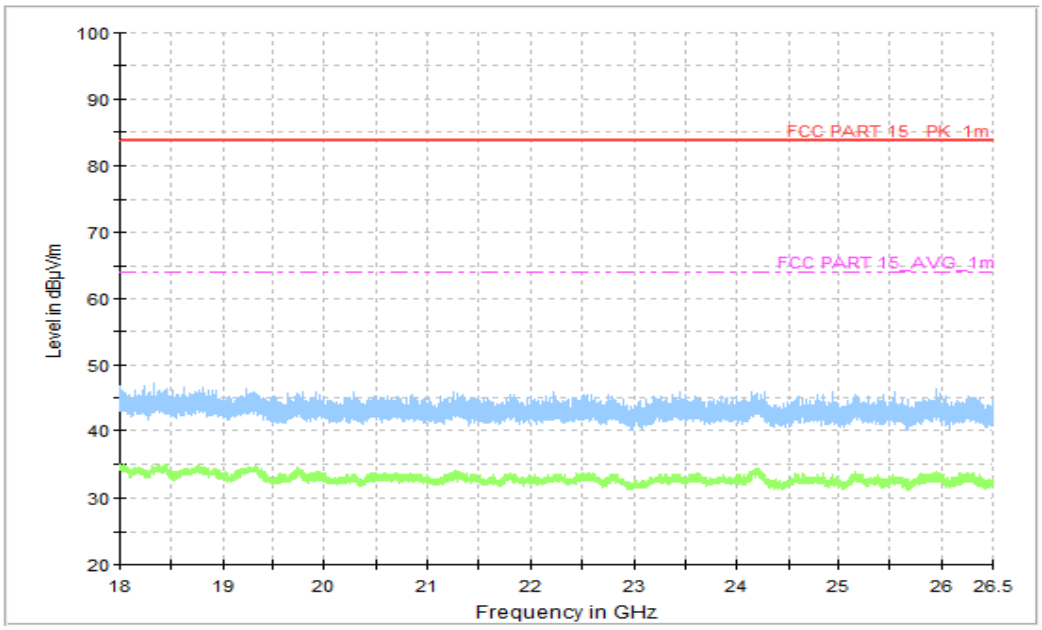


Figure A.1.27. Radiated Emission (LTE receiver Band 12, 18GHz to 26.5GHz)

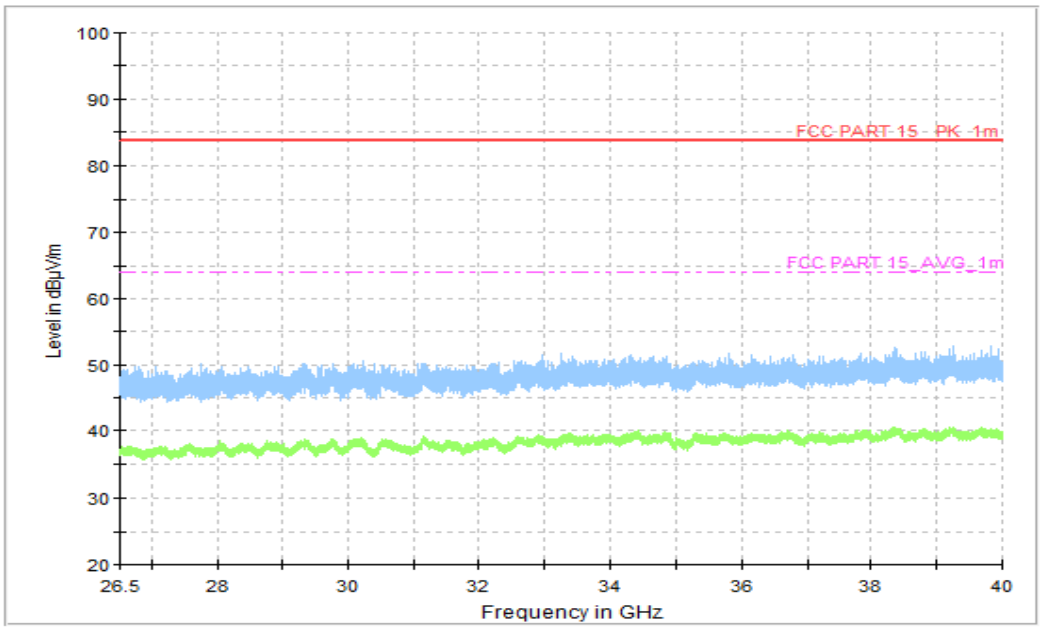


Figure A.1.28. Radiated Emission (LTE receiver Band 12, 26.5GHz to 40GHz)

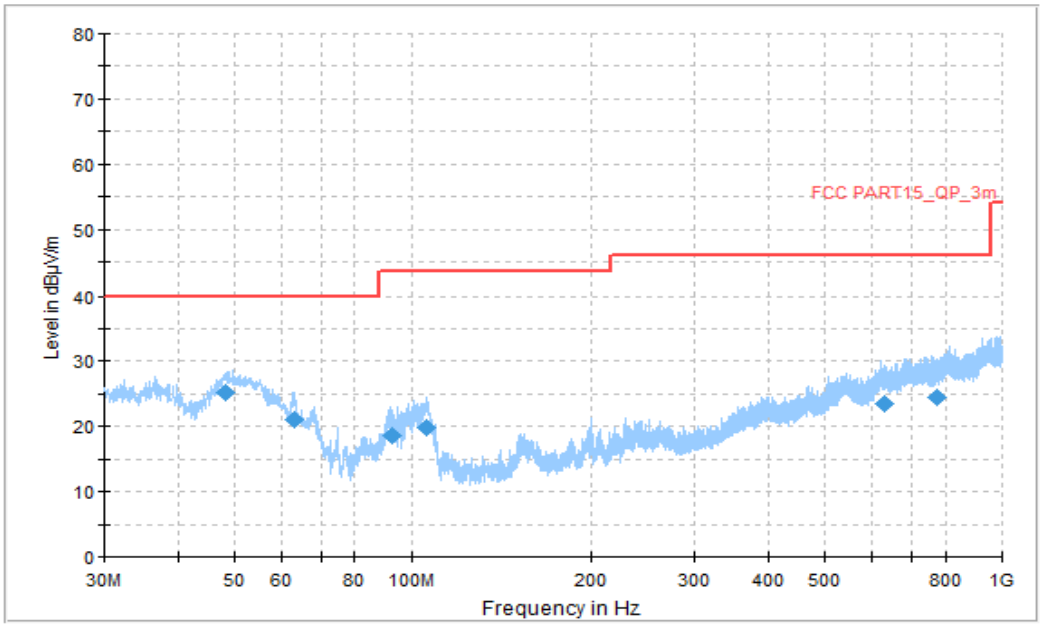


Figure A.1.29. Radiated Emission (LTE receiver Band 13, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
48.268333	25.31	40.00	14.69	V	-22	47.31
63.303333	20.97	40.00	19.03	V	-21	41.97
92.565000	18.63	43.52	24.89	V	-21	39.63
105.983333	19.80	43.52	23.72	V	-20	39.80
629.082778	23.54	46.02	22.48	H	-3	26.54
775.067778	24.52	46.02	21.50	H	-2	26.52

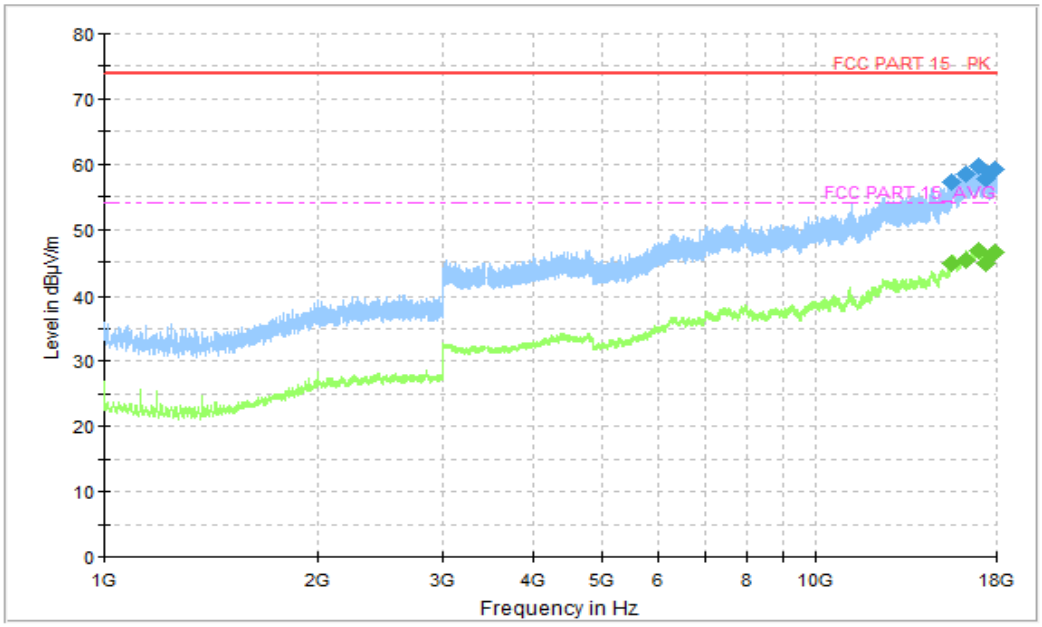


Figure A.1.30. Radiated Emission (LTE receiver Band 13, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
15577.750000	57.15	74.00	16.85	H	20	37.15
16244.000000	58.40	74.00	15.60	V	21	37.4
16985.500000	59.64	74.00	14.36	V	23	36.64
17340.000000	57.63	74.00	16.37	H	22	35.63
17659.500000	58.78	74.00	15.22	H	23	35.78
17875.250000	59.21	74.00	14.79	H	24	35.21

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
15577.750000	44.67	54.00	9.33	H	20	24.67
16244.000000	45.23	54.00	8.77	V	21	24.23
16985.500000	46.76	54.00	7.24	V	23	23.76
17340.000000	44.88	54.00	9.12	H	22	22.88
17659.500000	45.96	54.00	8.04	H	23	22.96
17875.250000	46.59	54.00	7.41	H	24	22.59

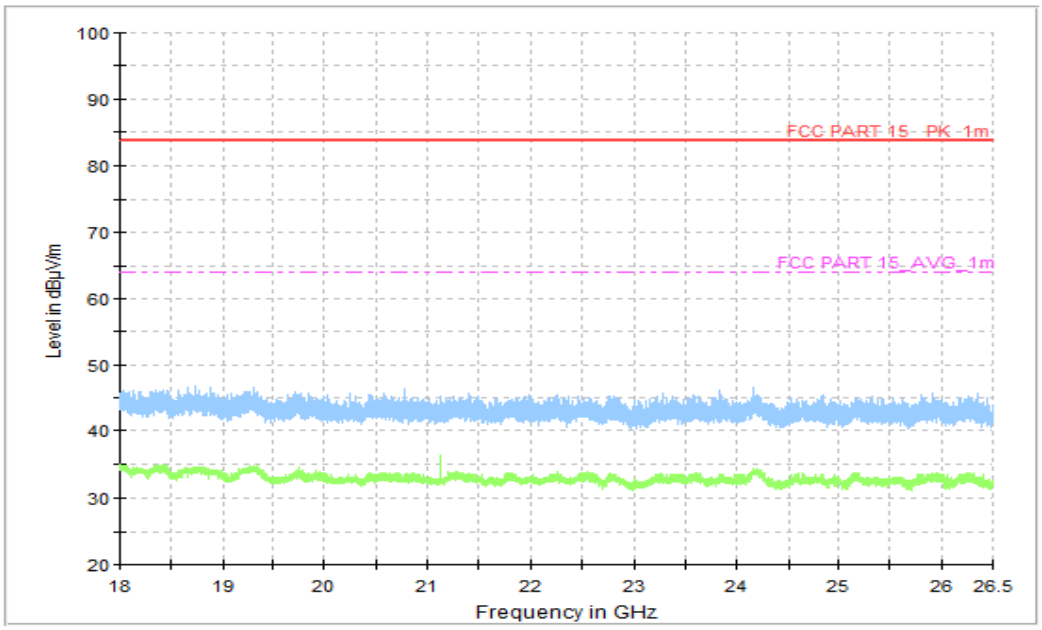


Figure A.1.31. Radiated Emission (LTE receiver Band 13, 18GHz to 26.5GHz)

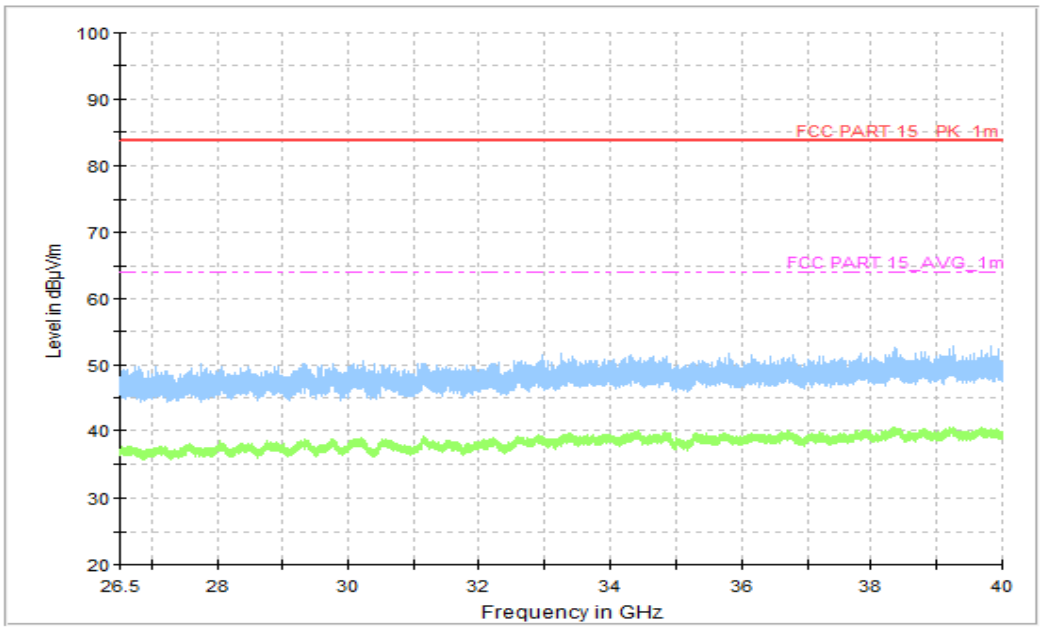


Figure A.1.32. Radiated Emission (LTE receiver Band 13, 26.5GHz to 40GHz)

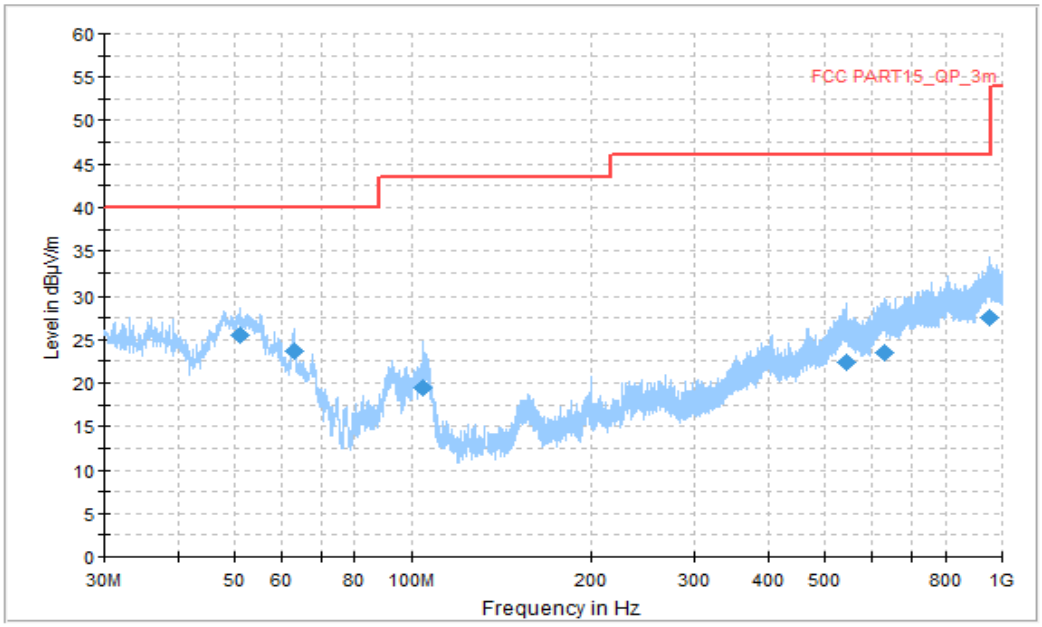


Figure A.1.33. Radiated Emission (LTE receiver Band 17, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
51.016667	25.56	40.00	14.44	V	-22	47.56
62.980000	23.70	40.00	16.30	V	-21	44.7
104.097222	19.39	43.52	24.13	V	-20	39.39
542.375556	22.32	46.02	23.70	H	-4	26.32
629.729444	23.57	46.02	22.45	V	-3	26.57
952.470000	27.46	46.02	18.56	H	1	26.46

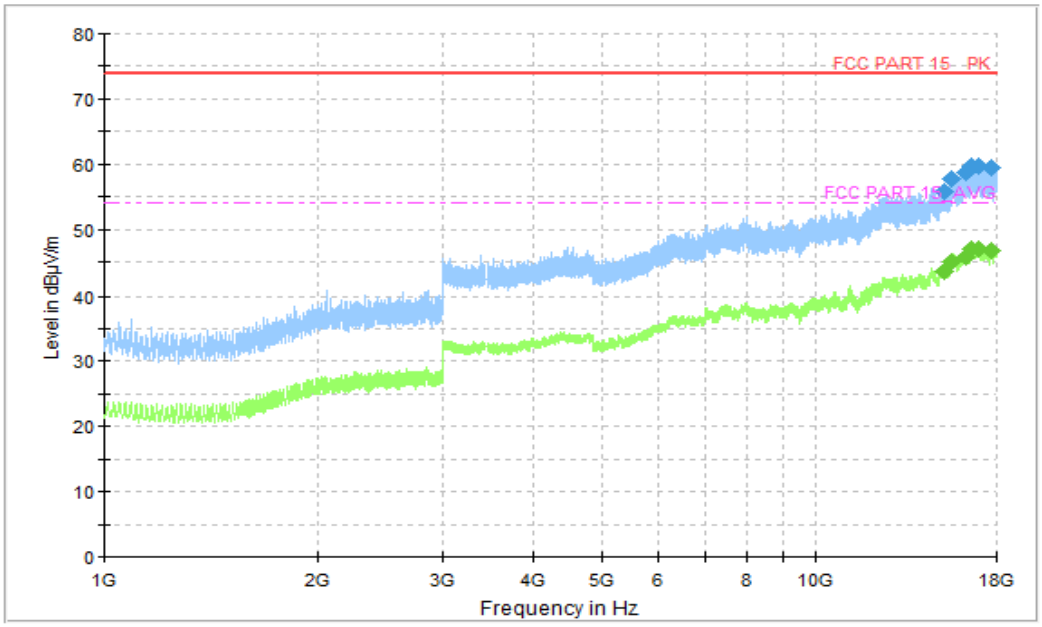


Figure A.1.34. Radiated Emission (LTE receiver Band 17, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
15159.750000	55.84	74.00	18.16	V	18	37.84
15581.500000	57.78	74.00	16.22	H	20	37.78
16252.750000	58.69	74.00	15.31	H	21	37.69
16596.500000	59.78	74.00	14.22	H	22	37.78
17012.750000	59.59	74.00	14.41	H	23	36.59
17695.500000	59.37	74.00	14.63	H	23	36.37

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
15159.750000	43.61	54.00	10.39	V	18	25.61
15581.500000	45.07	54.00	8.93	H	20	25.07
16252.750000	45.65	54.00	8.35	H	21	24.65
16596.500000	46.88	54.00	7.12	H	22	24.88
17012.750000	47.02	54.00	6.98	H	23	24.02
17695.500000	46.81	54.00	7.19	H	23	23.81

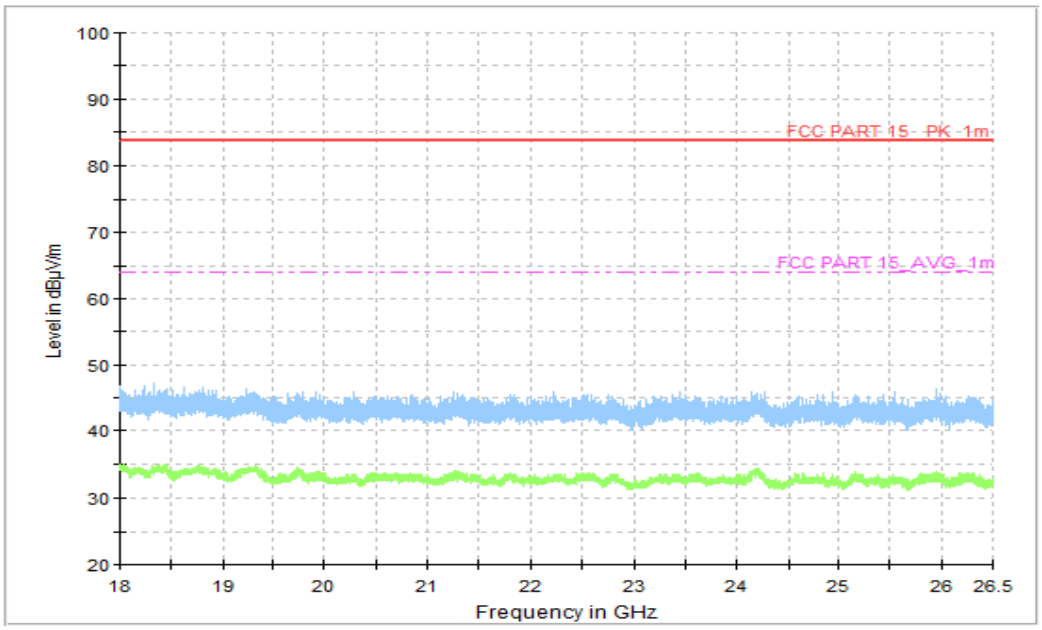


Figure A.1.35. Radiated Emission (LTE receiver Band 17, 18GHz to 26.5GHz)

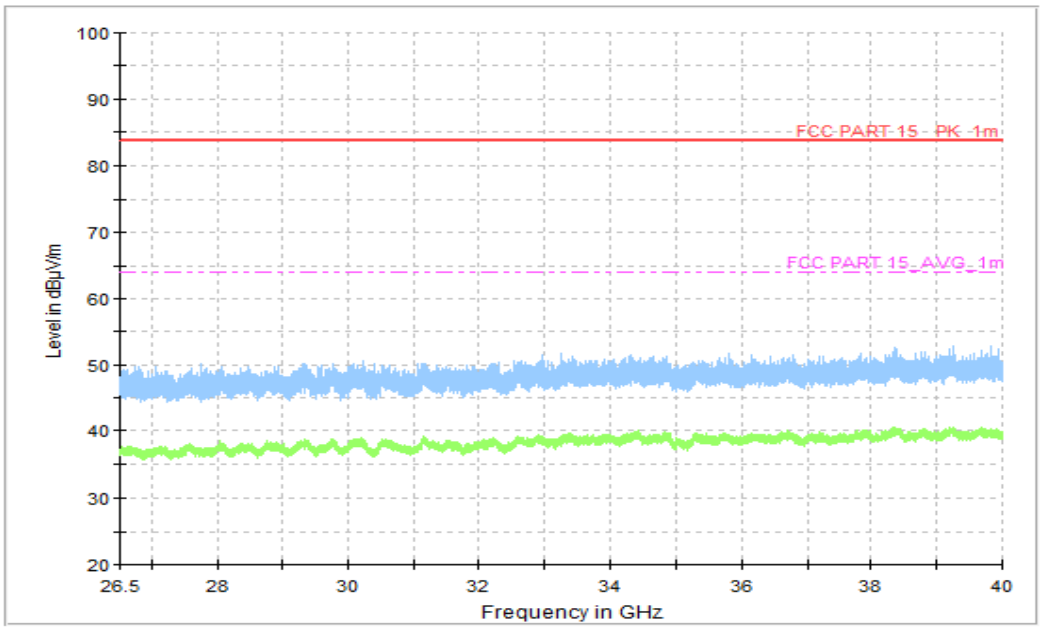


Figure A.1.36. Radiated Emission (LTE receiver Band 17, 26.5GHz to 40GHz)

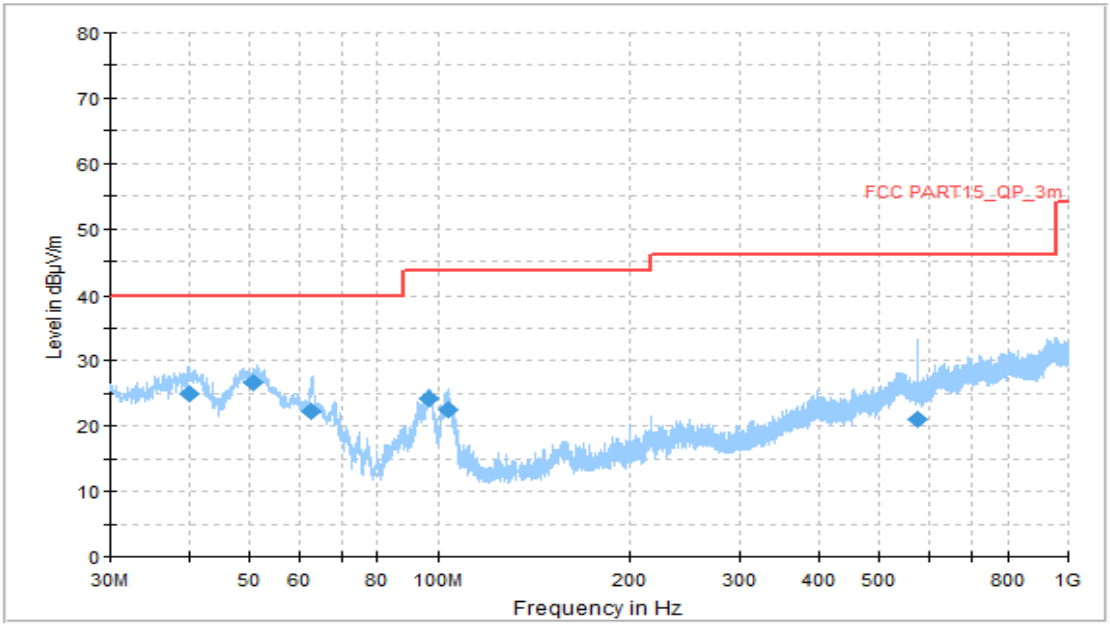


Figure A.1.37. Radiated Emission (LTE receiver Band 26, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
40.131111	24.88	40.00	15.12	V	-18	42.88
50.801111	26.60	40.00	13.40	V	-22	48.6
62.818333	22.32	40.00	17.68	V	-21	43.32
96.660556	24.18	43.52	19.34	V	-20	44.18
103.612222	22.51	43.52	21.01	V	-20	42.51
576.002222	21.08	46.02	24.94	V	-5	26.08

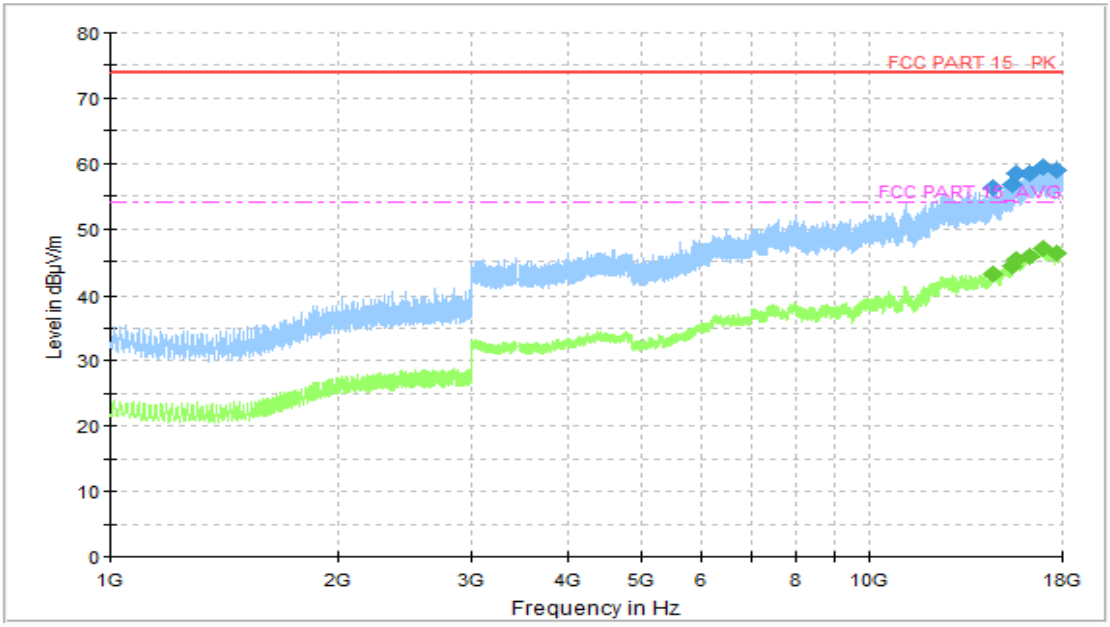


Figure A.1.38. Radiated Emission (LTE receiver Band 26, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
14559.250000	56.25	74.00	17.75	V	18	38.25
15467.750000	56.84	74.00	17.16	H	19	37.84
15635.500000	58.41	74.00	15.59	H	20	38.41
16257.750000	58.49	74.00	15.51	H	21	37.49
16980.500000	59.44	74.00	14.56	H	23	36.44
17664.750000	58.99	74.00	15.01	H	23	35.99

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
14559.250000	43.02	54.00	10.98	V	18	25.02
15467.750000	44.20	54.00	9.80	H	19	25.2
15635.500000	45.35	54.00	8.65	H	20	25.35
16257.750000	45.78	54.00	8.23	H	21	24.78
16980.500000	46.99	54.00	7.01	H	23	23.99
17664.750000	46.32	54.00	7.68	H	23	23.32

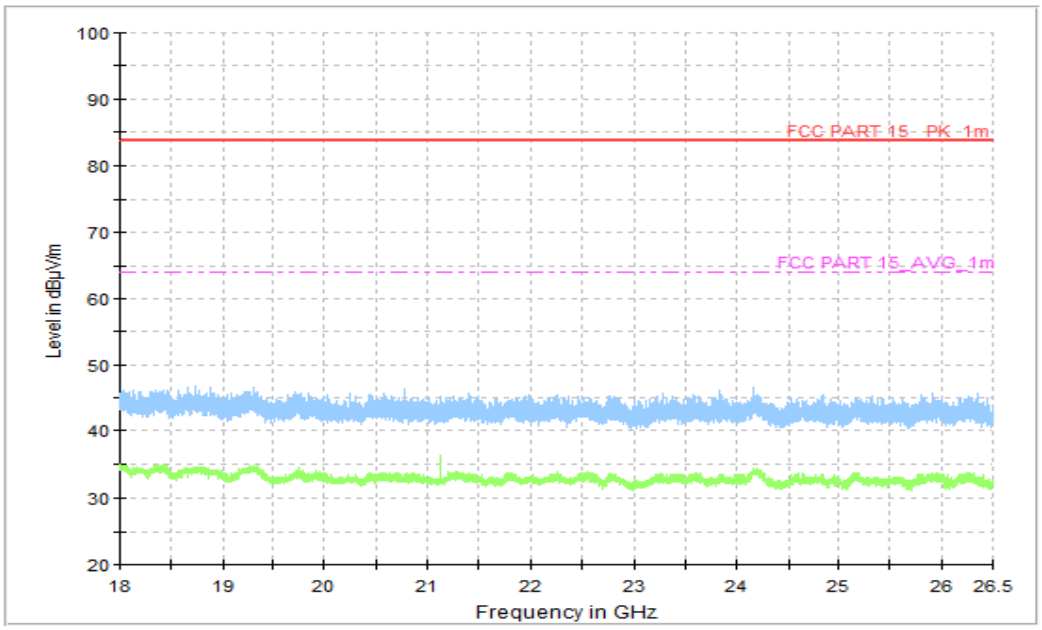


Figure A.1.39. Radiated Emission (LTE receiver Band 26, 18GHz to 26.5GHz)

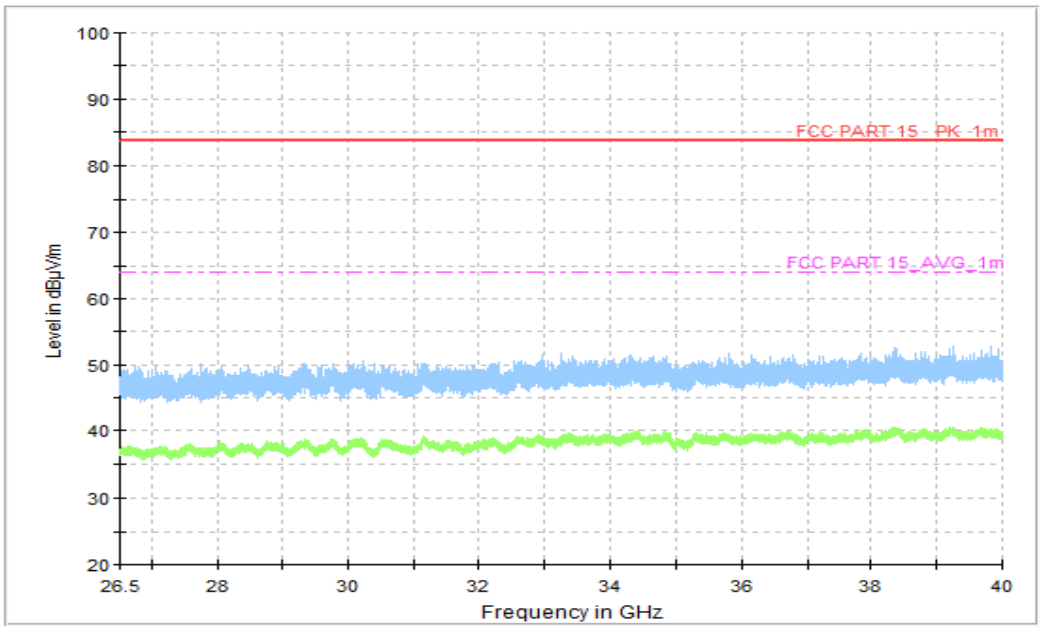


Figure A.1.40. Radiated Emission (LTE receiver Band 26, 26.5GHz to 40GHz)

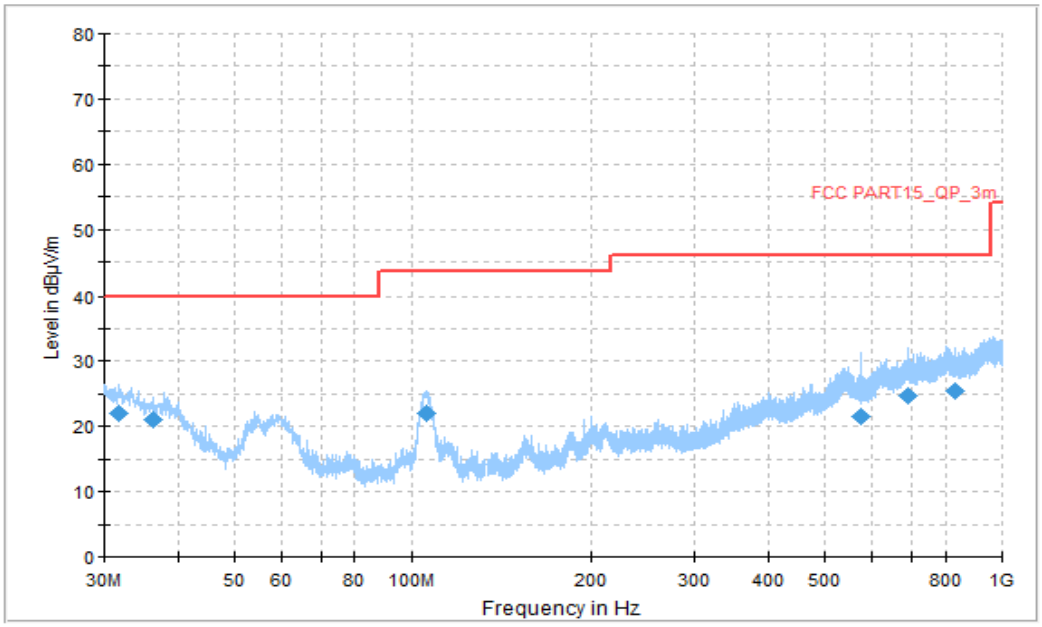


Figure A.1.41. Radiated Emission (Video Player, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
31.670556	22.10	40.00	17.90	V	-14	36.10
36.358889	20.99	40.00	19.01	V	-16	36.99
105.713889	22.10	43.52	21.42	V	-20	42.10
576.002222	21.51	46.02	24.51	V	-5	26.51
691.755556	24.64	46.02	21.38	V	-2	26.64
831.489444	25.54	46.02	20.48	V	-1	26.54

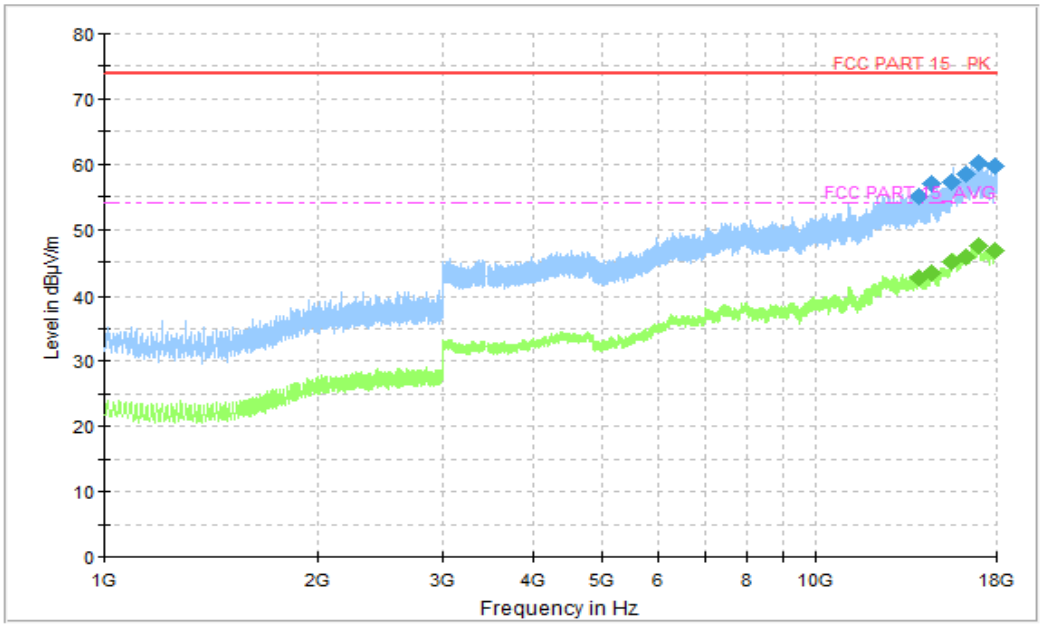


Figure A.1.42. Radiated Emission (Video Player, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
13968.250000	55.13	74.00	18.87	H	17	38.13
14563.000000	56.95	74.00	17.05	V	18	38.95
15565.500000	57.36	74.00	16.64	H	20	37.36
16257.500000	58.49	74.00	15.51	V	21	37.49
16998.250000	60.17	74.00	13.83	H	23	37.17
17905.750000	59.77	74.00	14.23	V	24	35.77

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
13968.250000	42.54	54.00	11.46	H	17	25.54
14563.000000	43.23	54.00	10.77	V	18	25.23
15565.500000	44.96	54.00	9.04	H	20	24.96
16257.500000	45.76	54.00	8.24	V	21	24.76
16998.250000	47.40	54.00	6.60	H	23	24.4
17905.750000	46.81	54.00	7.19	V	24	22.81

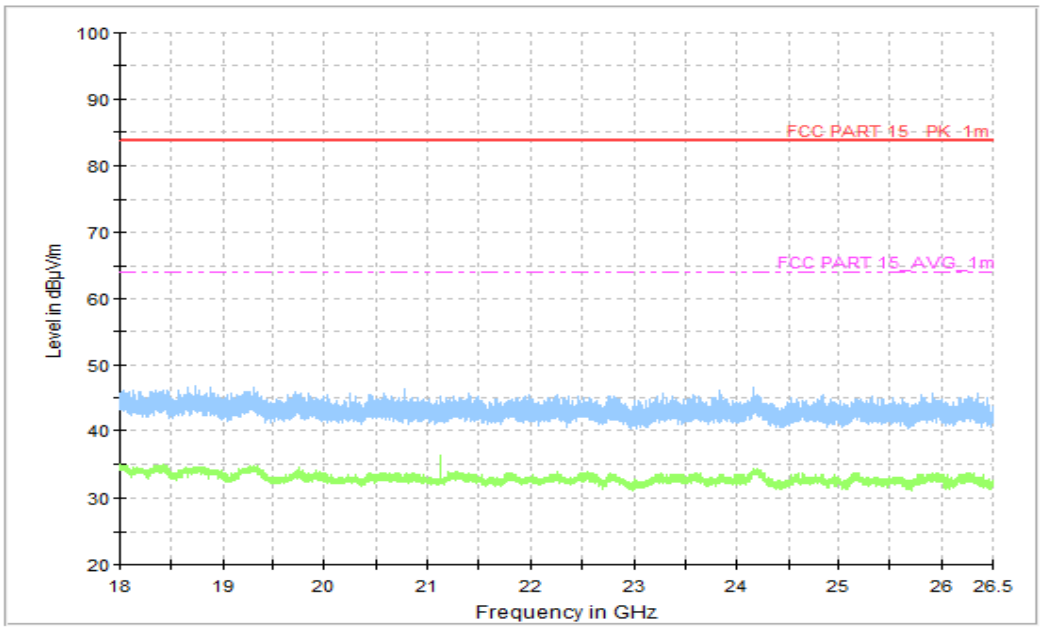


Figure A.1.43. Radiated Emission (Video Player, 18GHz to 26.5GHz)

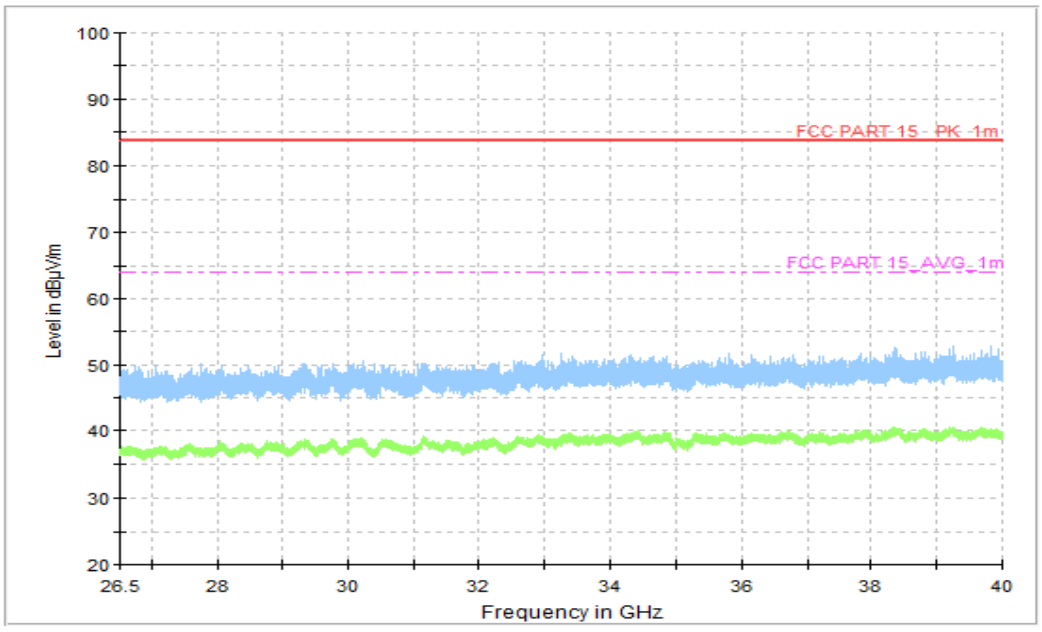


Figure A.1.44. Radiated Emission (Video Player, 26.5GHz to 40GHz)

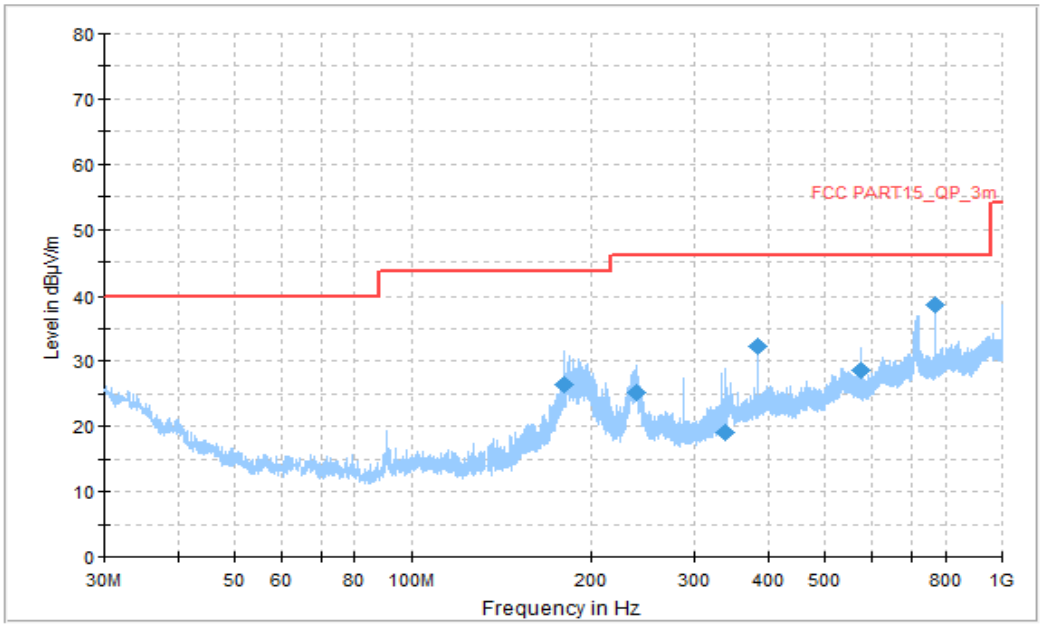


Figure A.1.45. Radiated Emission (Data Transfer: PC TO EUT, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
180.350000	26.49	43.52	17.03	H	-18	44.49
239.573889	25.17	46.02	20.85	H	-15	40.17
337.436111	19.18	46.02	26.84	H	-12	31.18
383.996111	32.31	46.02	13.71	V	-10	42.31
576.002222	28.63	46.02	17.39	V	-5	33.63
768.008333	38.75	46.02	7.27	H	-2	40.75

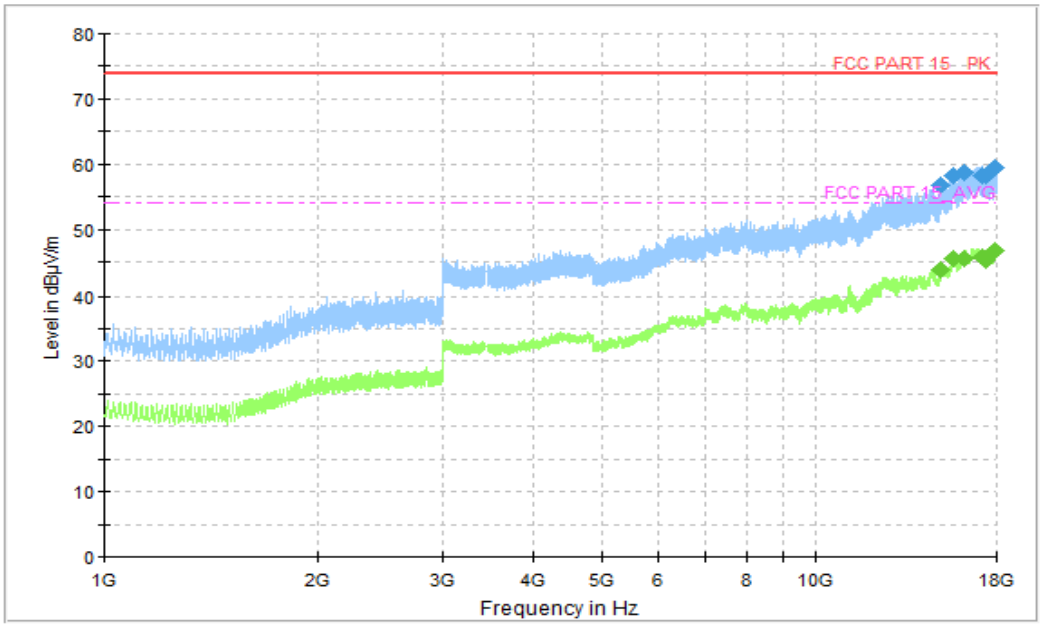


Figure A.1.46. Radiated Emission (Data Transfer: PC TO EUT, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
15044.750000	56.75	74.00	17.25	H	18	38.75
15600.000000	58.11	74.00	15.89	V	20	38.11
16240.250000	58.82	74.00	15.18	V	21	37.82
17167.250000	58.14	74.00	15.86	V	21	37.14
17350.000000	58.11	74.00	15.89	V	22	36.11
17910.500000	59.49	74.00	14.51	H	24	35.49

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
15044.750000	43.77	54.00	10.23	H	18	25.77
15600.000000	45.43	54.00	8.58	V	20	25.43
16240.250000	45.50	54.00	8.50	V	21	24.50
17167.250000	45.75	54.00	8.25	V	21	24.75
17350.000000	45.22	54.00	8.78	V	22	23.22
17910.500000	46.64	54.00	7.36	H	24	22.64

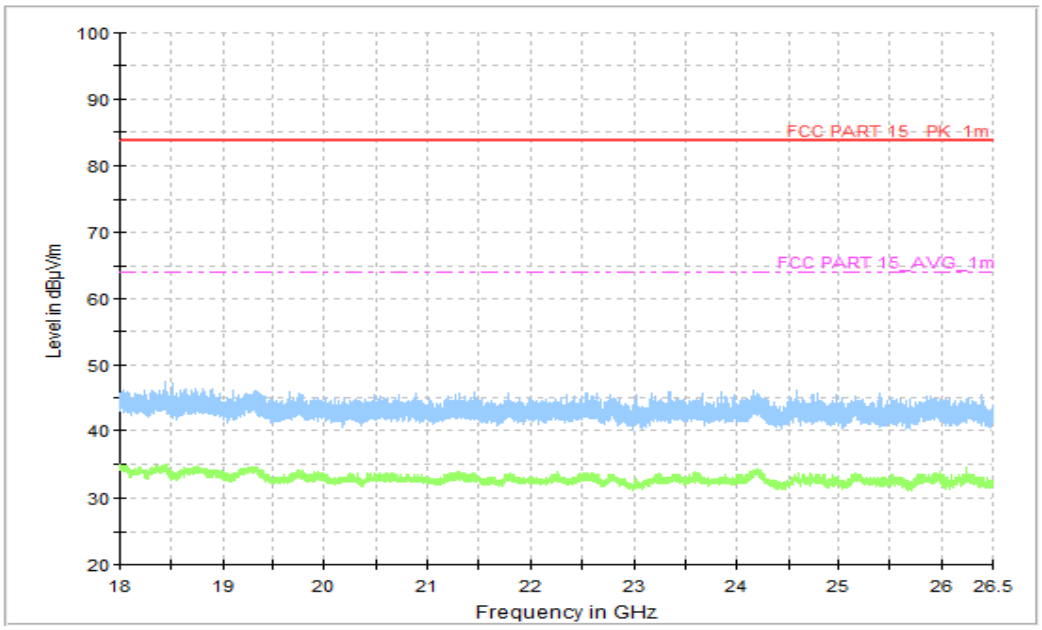


Figure A.1.47. Radiated Emission (Data Transfer: PC TO EUT, 18GHz to 26.5GHz)

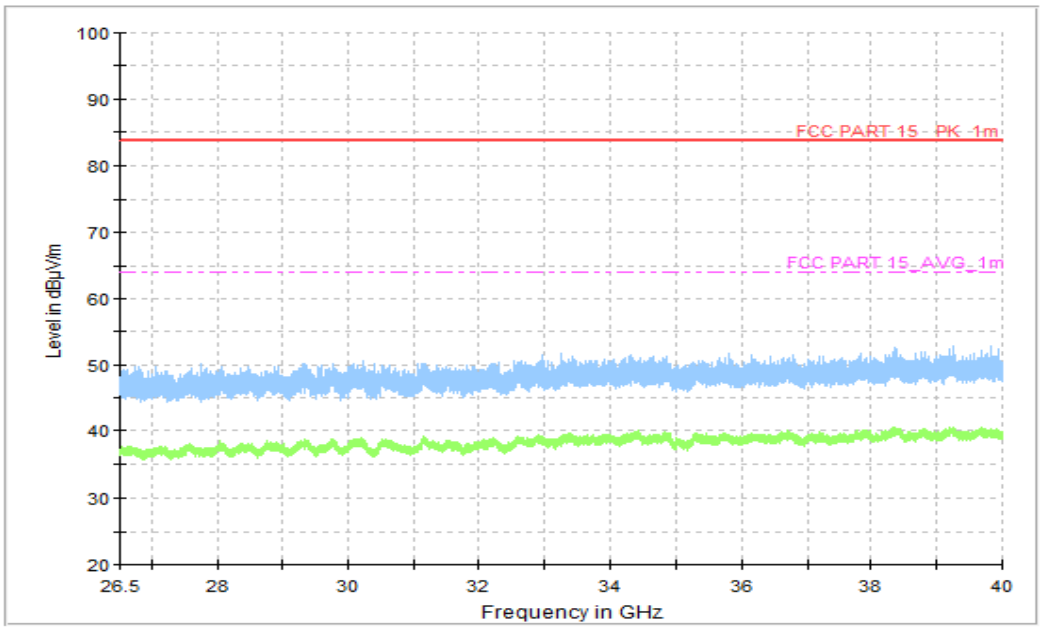


Figure A.1.48. Radiated Emission (Data Transfer: PC TO EUT, 26.5GHz to 40GHz)

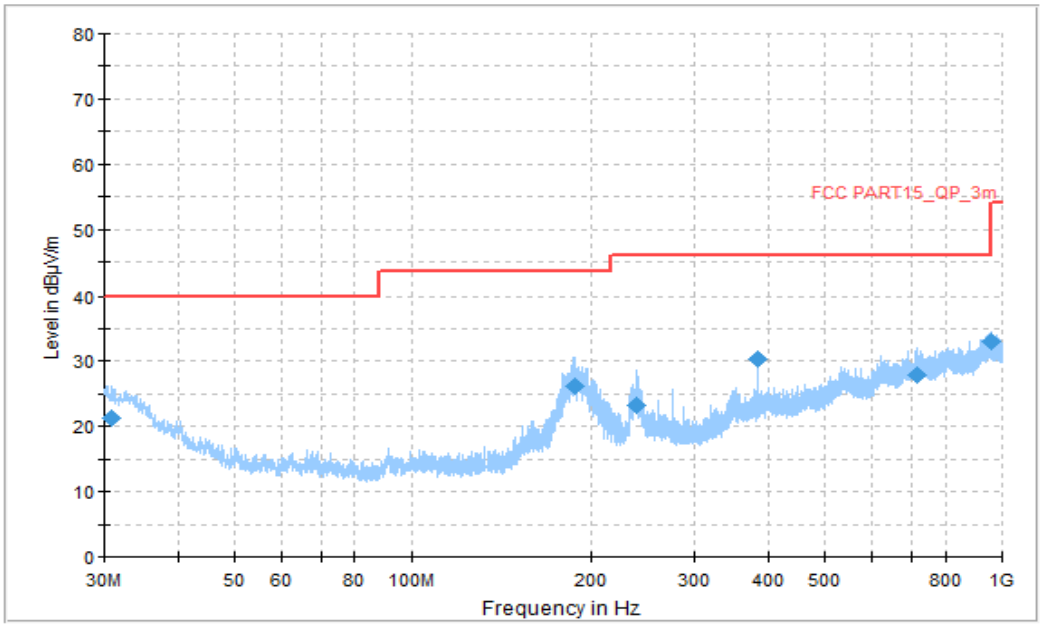


Figure A.1.49. Radiated Emission (Data Transfer: EUT TO PC, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
30.808333	21.17	40.00	18.83	H	-13	34.17
187.894444	26.26	43.52	17.26	H	-18	44.26
239.035000	23.34	46.02	22.68	H	-15	38.34
383.996111	30.30	46.02	15.72	H	-10	40.30
716.490556	27.97	46.02	18.05	H	-2	29.97
959.960556	33.04	46.02	12.98	H	1	32.04

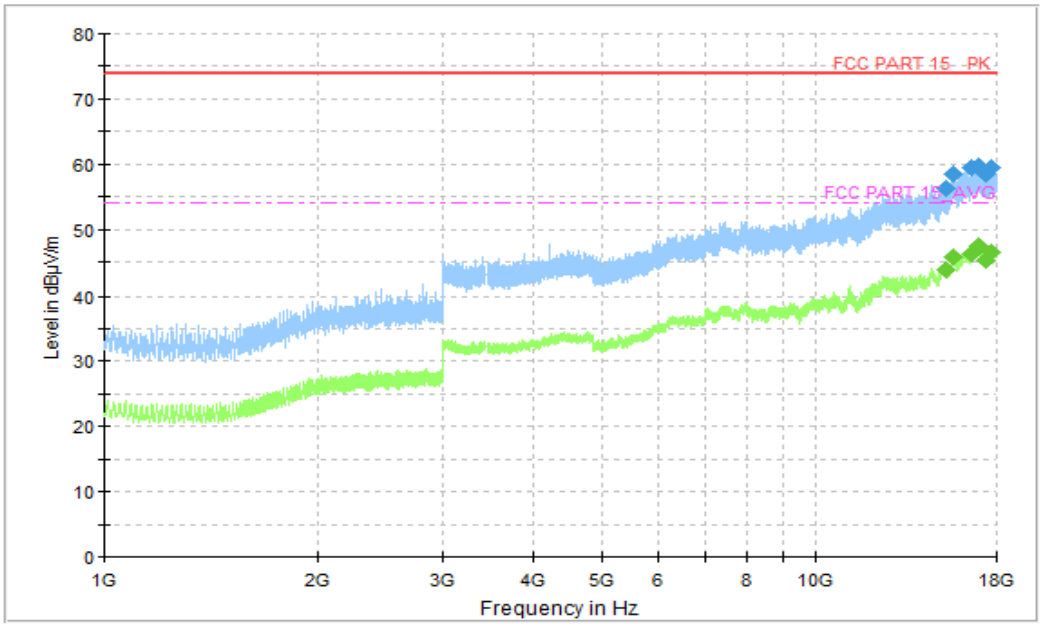


Figure A.1.50. Radiated Emission (Data Transfer: EUT TO PC, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
15263.500000	56.17	74.00	17.83	H	19	37.17
15661.750000	58.51	74.00	15.49	V	20	38.51
16575.500000	59.56	74.00	14.44	V	22	37.56
17017.500000	59.72	74.00	14.28	V	23	36.72
17331.500000	58.48	74.00	15.52	V	22	36.48
17717.500000	59.38	74.00	14.62	V	23	36.38

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
15263.500000	43.67	54.00	10.33	H	19	24.67
15661.750000	45.83	54.00	8.17	V	20	25.83
16575.500000	46.22	54.00	7.78	V	22	24.22
17017.500000	47.34	54.00	6.66	V	23	24.34
17331.500000	45.22	54.00	8.78	V	22	23.22
17717.500000	46.49	54.00	7.51	V	23	23.49

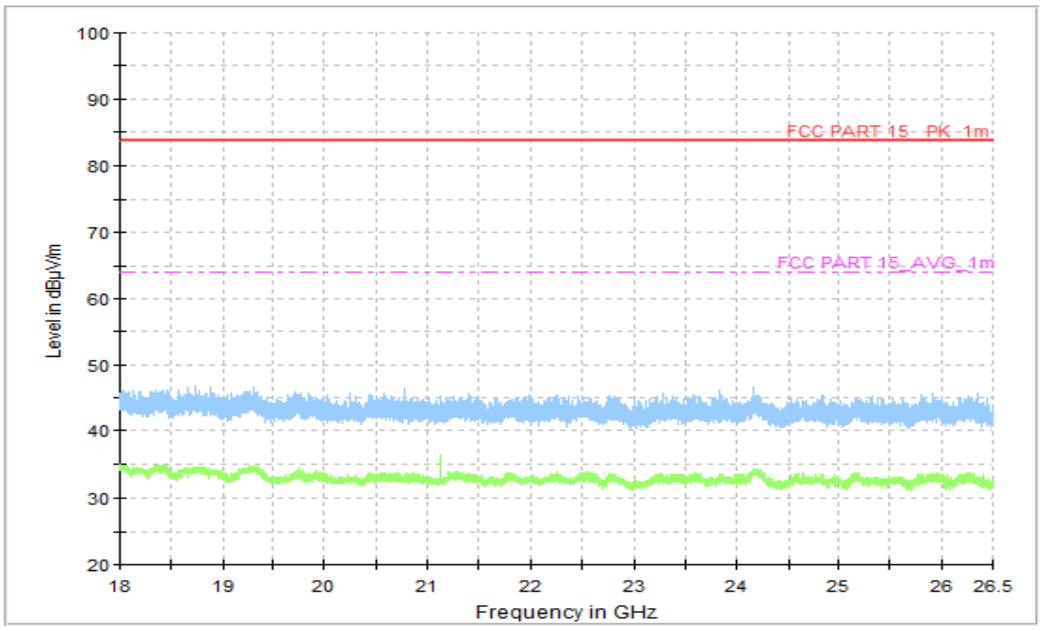


Figure A.1.51. Radiated Emission (Data Transfer: EUT TO PC, 18GHz to 26.5GHz)

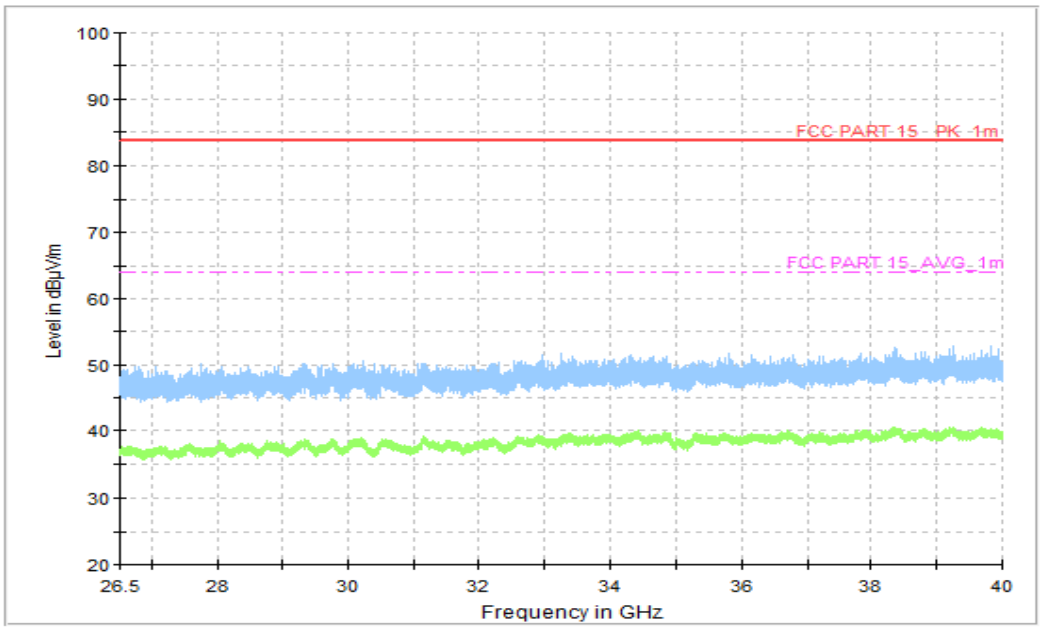


Figure A.1.52. Radiated Emission (Data Transfer: EUT TO PC, 26.5GHz to 40GHz)

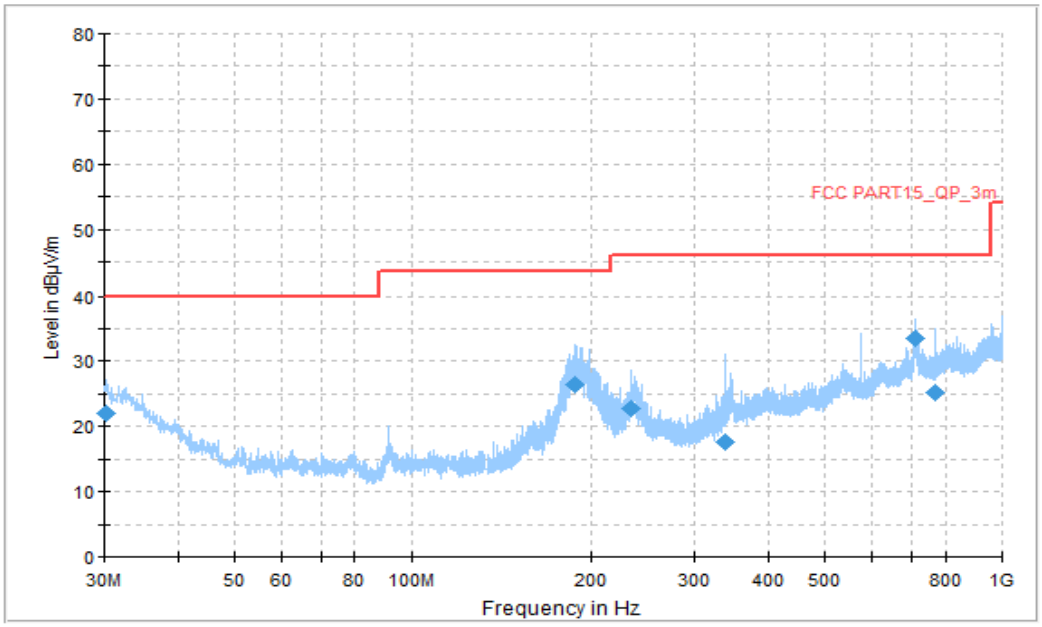


Figure A.1.53. Radiated Emission (Data Transfer: PC TO TF Card, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
30.107778	22.08	40.00	17.92	V	-13	35.08
188.433333	26.41	43.52	17.11	H	-18	44.41
234.454444	22.81	46.02	23.21	H	-16	38.81
337.490000	17.54	46.02	28.48	H	-12	29.54
714.011667	33.59	46.02	12.43	V	-3	36.59
768.062222	25.16	46.02	20.86	V	-2	27.16

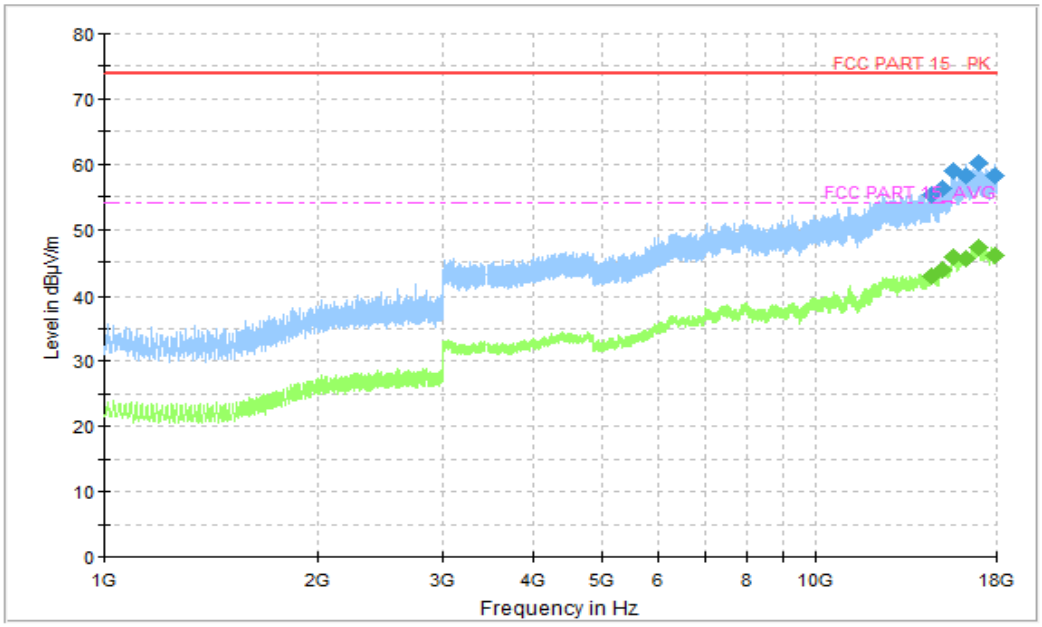


Figure A.1.54. Radiated Emission (Data Transfer: PC TO TF Card, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
14536.250000	55.27	74.00	18.73	V	18	37.27
15100.250000	56.27	74.00	17.73	V	18	38.27
15659.500000	58.93	74.00	15.07	H	20	38.93
16263.750000	58.20	74.00	15.80	H	21	37.20
17016.250000	60.22	74.00	13.78	H	23	37.22
17946.250000	58.32	74.00	15.68	H	24	34.32

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
14536.250000	42.81	54.00	11.19	V	18	24.81
15100.250000	43.81	54.00	10.19	V	18	25.81
15659.500000	45.64	54.00	8.36	H	20	25.64
16263.750000	45.42	54.00	8.58	H	21	24.42
17016.250000	47.23	54.00	6.77	H	23	24.23
17946.250000	45.95	54.00	8.05	H	24	21.95

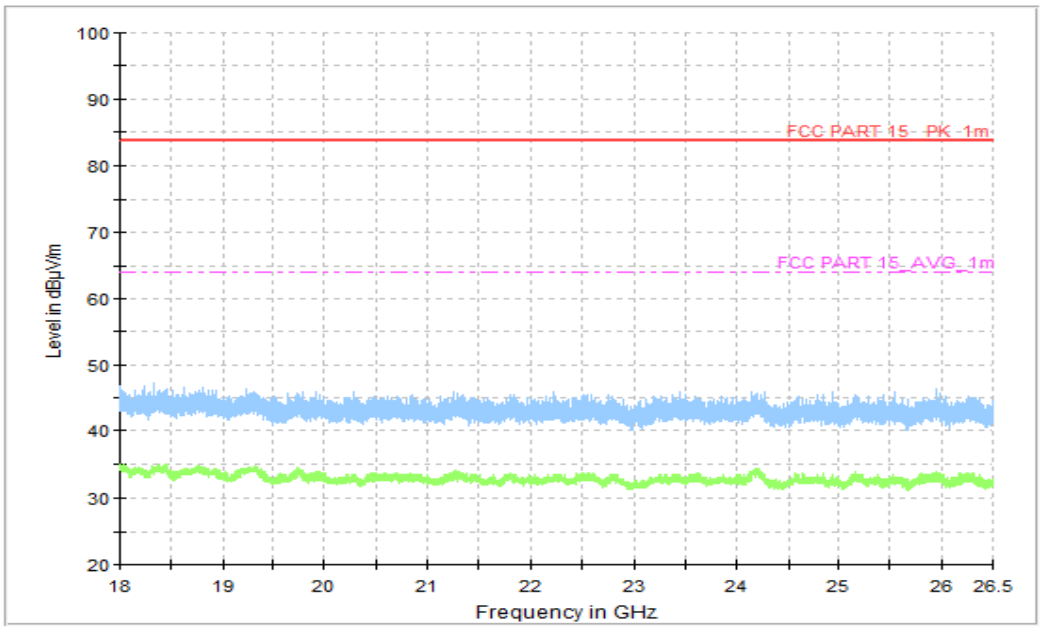


Figure A.1.55. Radiated Emission (Data Transfer: PC TO TF Card, 18GHz to 26.5GHz)

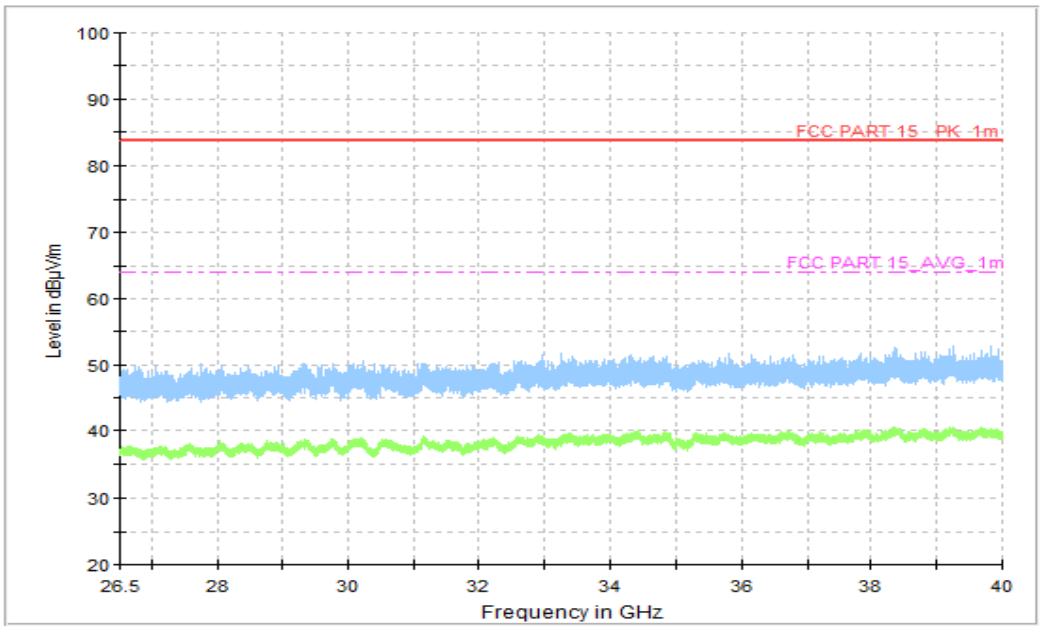


Figure A.1.56. Radiated Emission (Data Transfer: PC TO TF Card, 26.5GHz to 40GHz)

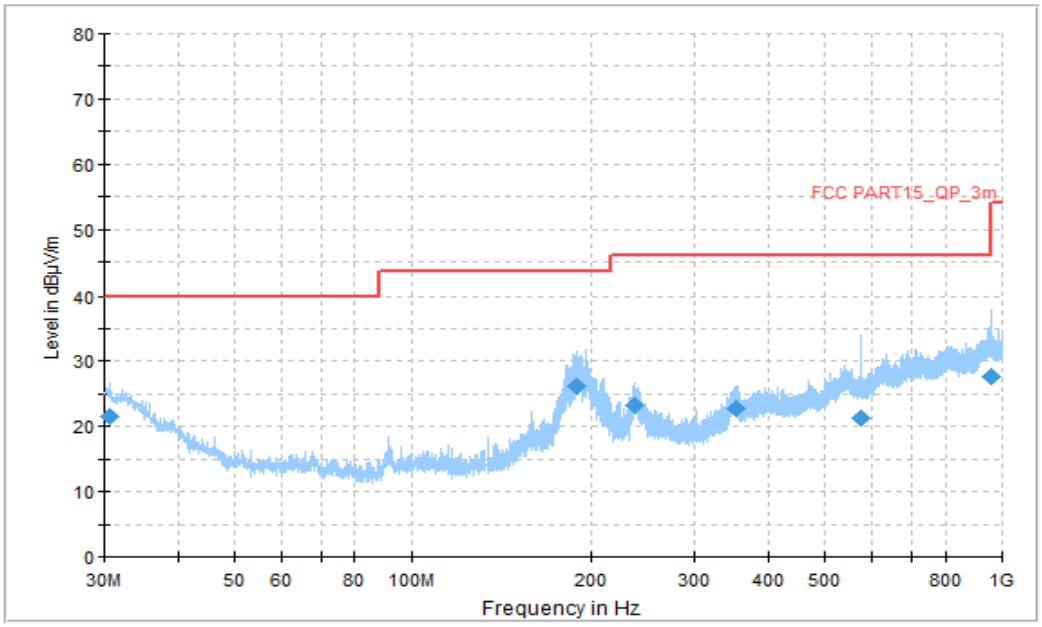


Figure A.1.57. Radiated Emission (Data Transfer: TF Card TO PC, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
30.538889	21.46	40.00	18.54	H	-13	34.46
188.756667	26.27	43.52	17.25	H	-18	44.27
236.771667	23.28	46.02	22.74	H	-15	38.28
353.010000	22.64	46.02	23.38	H	-11	33.64
576.002222	21.35	46.02	24.67	V	-5	26.35
960.068333	27.59	53.98	26.39	H	1	26.59

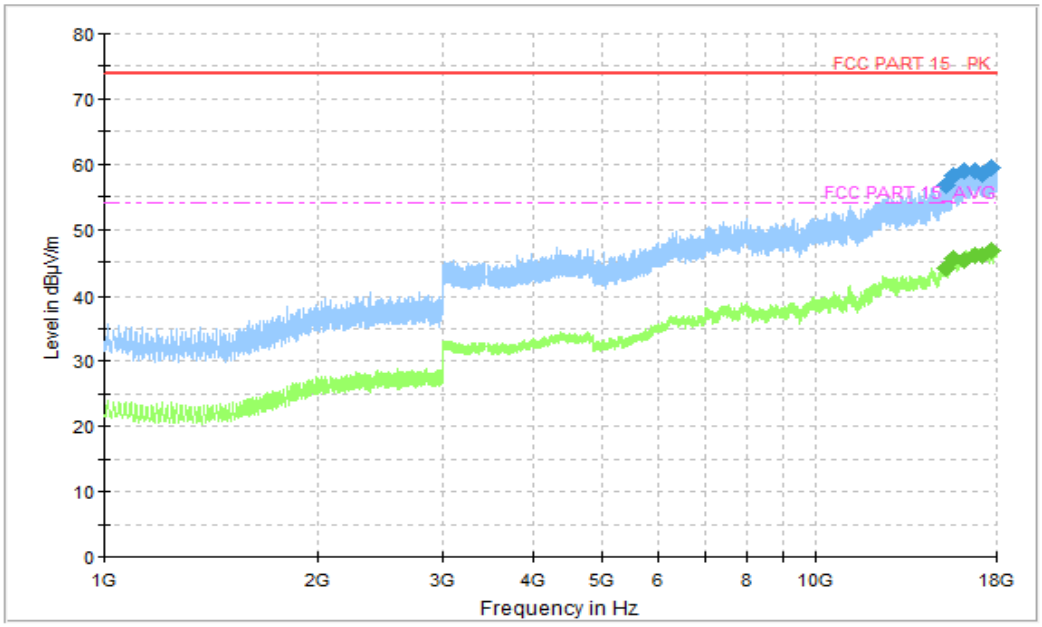


Figure A.1.58. Radiated Emission (Data Transfer: TF Card TO PC, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
15307.500000	56.77	74.00	17.23	H	19	37.77
15637.750000	58.32	74.00	15.68	V	20	38.32
16173.250000	58.98	74.00	15.02	V	21	37.98
16744.000000	58.84	74.00	15.16	V	21	37.84
17223.250000	58.49	74.00	15.51	V	22	36.49
17681.000000	59.53	74.00	14.47	V	23	36.53

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
15307.500000	43.99	54.00	10.01	H	19	24.99
15637.750000	45.56	54.00	8.44	V	20	25.56
16173.250000	45.33	54.00	8.67	V	21	24.33
16744.000000	46.09	54.00	7.91	V	21	25.09
17223.250000	45.90	54.00	8.10	V	22	23.9
17681.000000	46.63	54.00	7.37	V	23	23.63

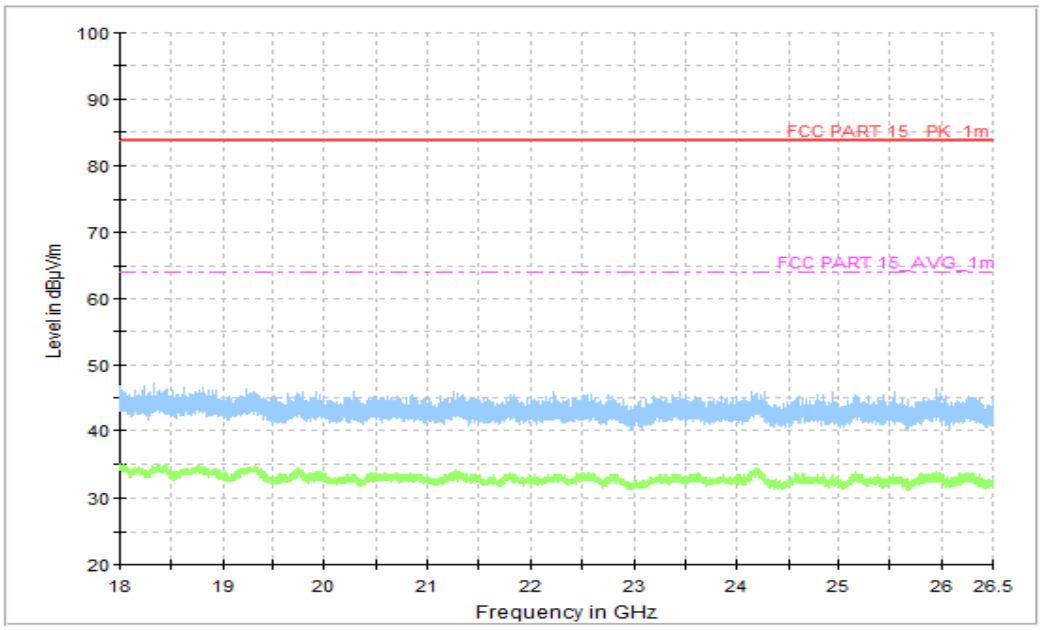


Figure A.1.59. Radiated Emission (Data Transfer: TF Card TO PC, 18GHz to 26.5GHz)

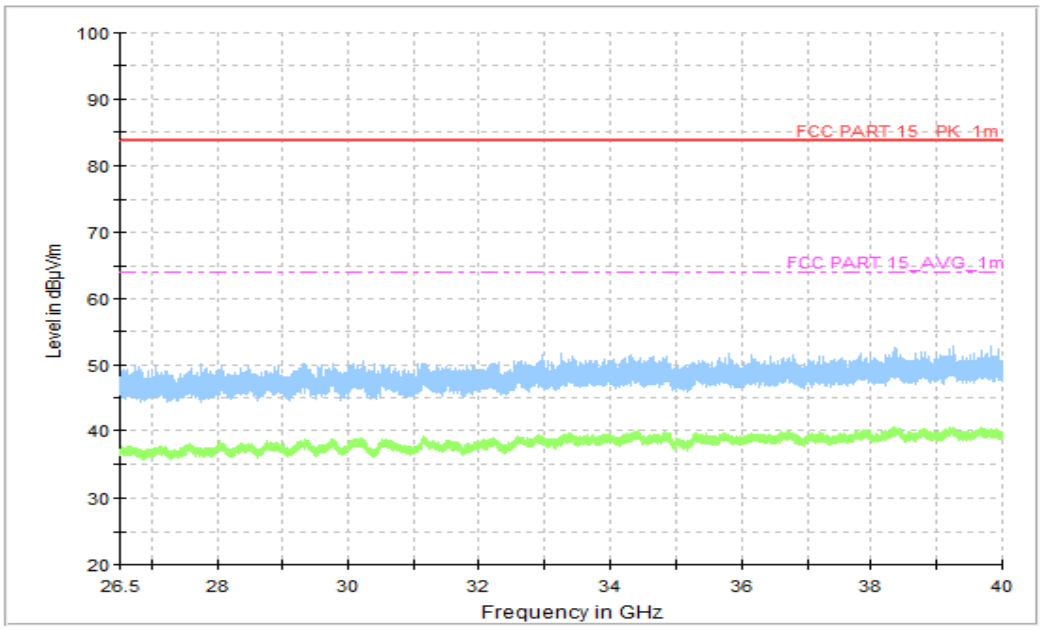


Figure A.1.60. Radiated Emission (Data Transfer: TF Card TO PC, 26.5GHz to 40GHz)

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.

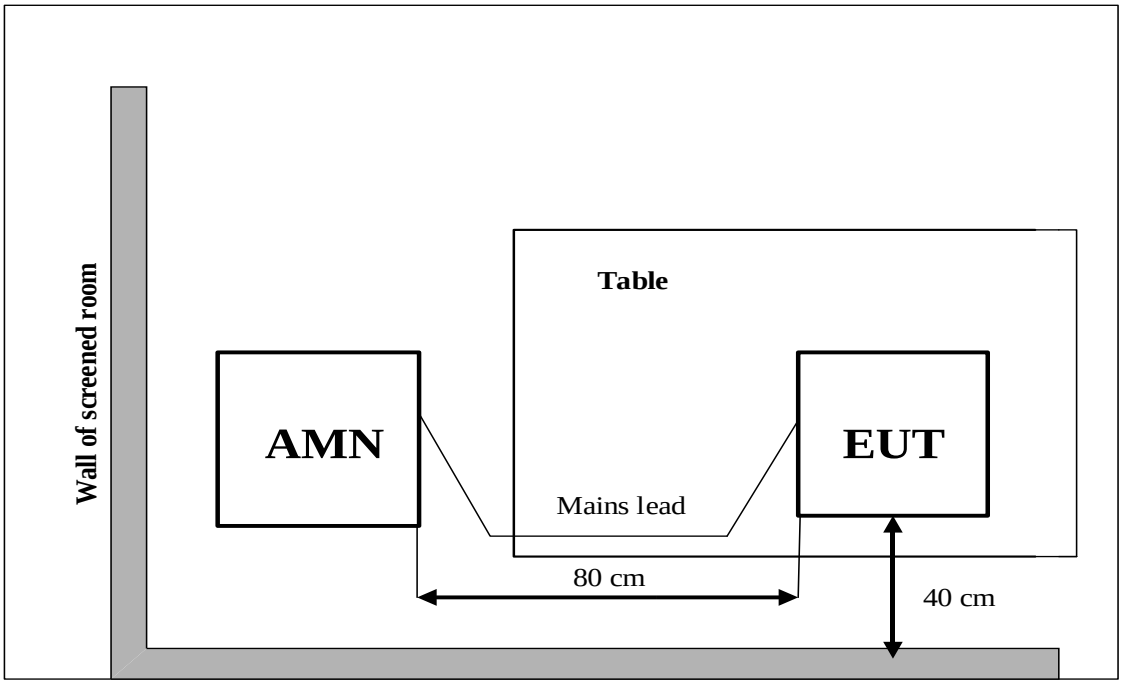
FM receiver: The EUT is connected to a charger for charging. The EUT is synchronized to a FM signal generator. The EUT is keeping on demodulating the FM signal and outputting the audio signal through the headset.

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.2.4Test 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.

Camera

AC Input Port/ Voltage: 120V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV)	Conclusion
			UT18aa/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) UT18aa/Set.1	Conclusion
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) UT18aa/Set.1	Conclusion
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.				

Camera

AC Input Port/ Voltage: 120V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV) UT18aa/Set.2	Conclusion
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.				

Data Transfer

AC Input Port/ Voltage: 120V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV) UT18aa/Set.3	Conclusion
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.				

Camera

AC Input Port/ Voltage: 240V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV) UT18aa/Set.1	Conclusion
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.				

Video Player

AC Input Port/ Voltage: 240V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV) UT18aa/Set.1	Conclusion
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.				

FM receiver

AC Input Port/ Voltage: 240V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV) UT18aa/Set.1	Conclusion
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.				

Video Player

AC Input Port/ Voltage: 240V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV) UT18aa/Set.2	Conclusion
0.15 to 0.5	66 to 56	56 to 46	See Figure A.2.9.	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
			UT18aa/Set.3	
0.15 to 0.5	66 to 56	56 to 46	See Figure A.2.10.	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

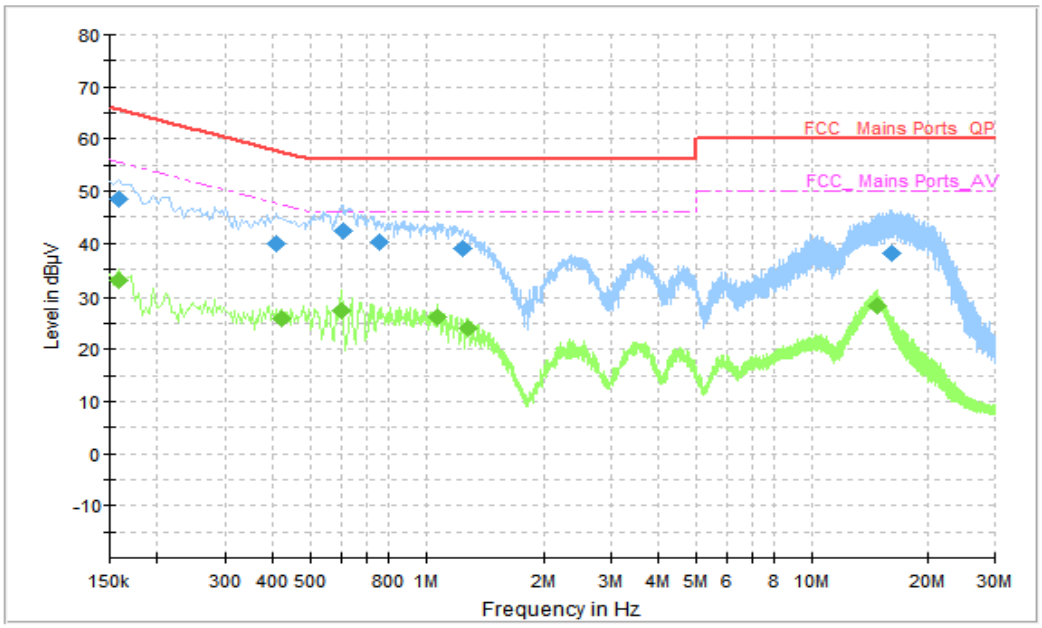


Figure A.2.1. Conducted Emission(Camera)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.158000	48.64	65.57	16.93	N	10	38.64
0.406000	39.94	57.73	17.79	N	10	29.94
0.606000	42.44	56.00	13.56	N	10	32.44
0.758000	40.18	56.00	15.82	L1	10	30.18
1.250000	39.05	56.00	16.95	L1	10	29.05
16.130000	38.14	60.00	21.86	N	11	27.14

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.158000	32.83	55.57	22.73	N	10	22.83
0.422000	25.97	47.41	21.44	L1	10	15.97
0.602000	27.55	46.00	18.45	N	10	17.55
1.074000	26.21	46.00	19.79	L1	10	16.21
1.286000	24.00	46.00	22.00	L1	10	14
14.834000	28.34	50.00	21.66	N	11	17.34

AC Input Port/ Voltage: 120V/60Hz

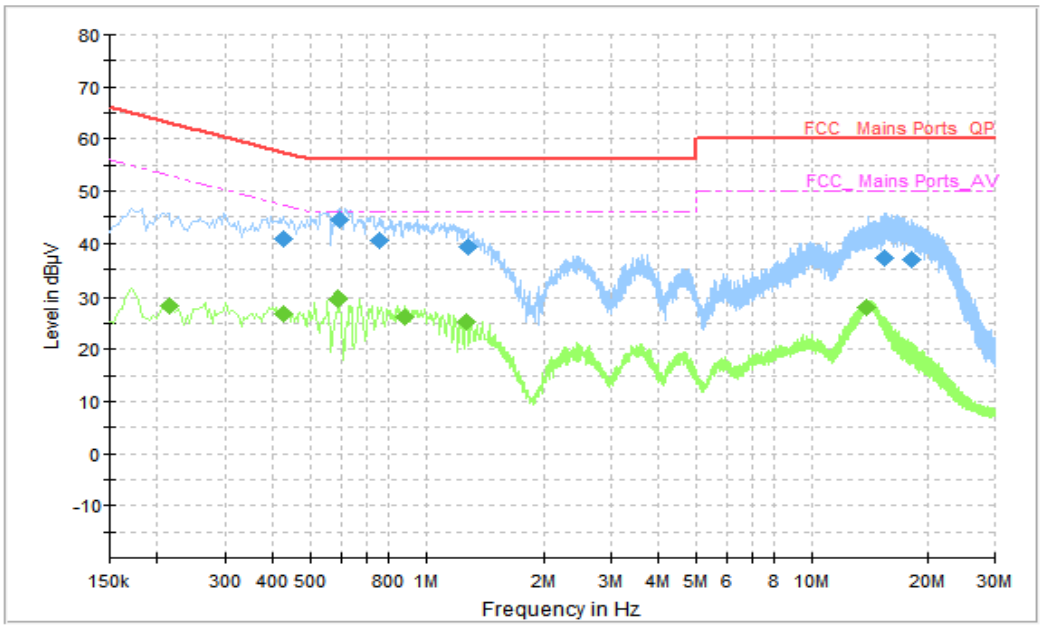


Figure A.2.2. Conducted Emission(Video Player)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.426000	40.97	57.33	16.36	L1	10	30.97
0.594000	44.56	56.00	11.44	N	10	34.56
0.754000	40.70	56.00	15.30	L1	10	30.70
1.282000	39.47	56.00	16.53	L1	10	29.47
15.426000	37.04	60.00	22.96	N	11	26.04
18.142000	36.94	60.00	23.06	N	10	26.94

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.214000	28.35	53.05	24.70	N	10	18.35
0.426000	26.85	47.33	20.48	N	10	16.85
0.590000	29.50	46.00	16.50	N	10	19.50
0.882000	26.27	46.00	19.73	N	10	16.27
1.274000	25.15	46.00	20.85	L1	10	15.15
13.906000	27.97	50.00	22.03	N	11	16.97

AC Input Port/ Voltage: 120V/60Hz

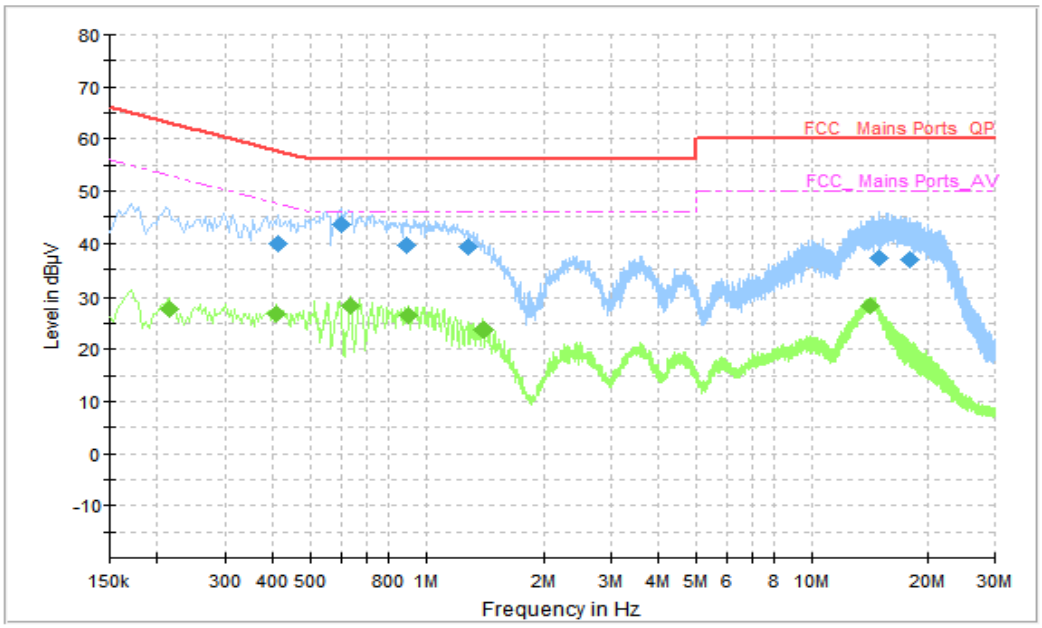


Figure A.2.3. Conducted Emission(FM receiver)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.410000	39.90	57.65	17.75	L1	10	29.90
0.602000	43.71	56.00	12.29	N	10	33.71
0.886000	39.53	56.00	16.47	L1	10	29.53
1.286000	39.33	56.00	16.67	L1	10	29.33
14.998000	37.07	60.00	22.93	N	11	26.07
18.078000	36.85	60.00	23.15	N	10	26.85

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.214000	27.71	53.05	25.33	L1	10	17.71
0.406000	26.91	47.73	20.82	N	10	16.91
0.638000	28.33	46.00	17.67	L1	10	18.33
0.902000	26.56	46.00	19.44	L1	10	16.56
1.406000	23.66	46.00	22.34	L1	10	13.66
14.162000	28.43	50.00	21.57	N	11	17.43

AC Input Port/ Voltage: 120V/60Hz

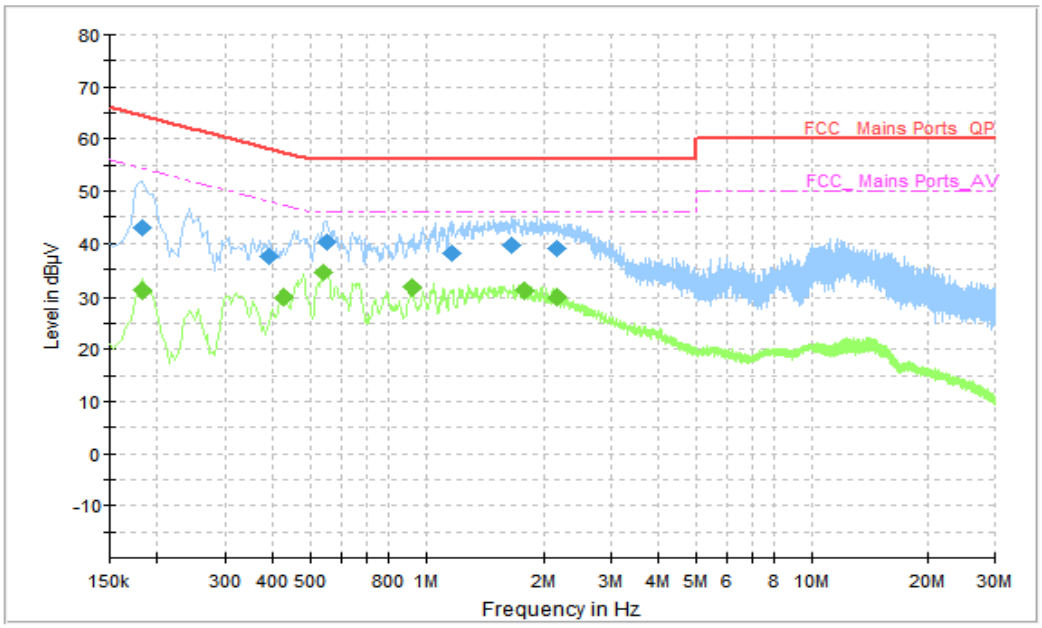


Figure A.2.4. Conducted Emission(Camera)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.182000	42.97	64.39	21.42	N	10	32.97
0.390000	37.49	58.06	20.57	N	10	27.49
0.550000	40.10	56.00	15.90	N	10	30.10
1.162000	38.23	56.00	17.77	N	10	28.23
1.646000	39.51	56.00	16.49	L1	10	29.51
2.178000	38.92	56.00	17.08	L1	10	28.92

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.182000	31.17	54.39	23.22	N	10	21.17
0.426000	29.83	47.33	17.50	N	10	19.83
0.538000	34.43	46.00	11.57	N	10	24.43
0.922000	31.80	46.00	14.20	N	10	21.80
1.790000	31.17	46.00	14.83	N	10	21.17
2.174000	29.76	46.00	16.24	N	10	19.76

AC Input Port/ Voltage: 120V/60Hz

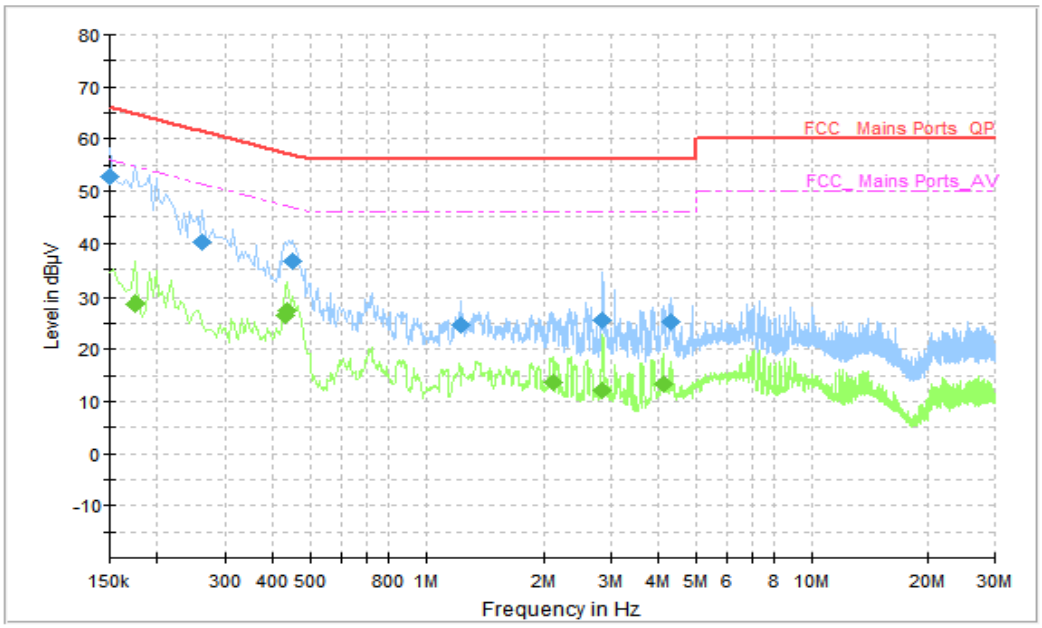


Figure A.2.5. Conducted Emission(Data Transfer)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.150000	52.87	66.00	13.13	L1	10	42.87
0.262000	40.24	61.37	21.13	N	10	30.24
0.450000	36.66	56.88	20.21	N	10	26.66
1.238000	24.54	56.00	31.46	L1	10	14.54
2.854000	25.64	56.00	30.36	L1	10	15.64
4.310000	25.18	56.00	30.82	N	9	16.18

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.174000	28.58	54.77	26.19	N	10	18.58
0.430000	26.53	47.25	20.72	N	10	16.53
0.434000	27.52	47.18	19.66	N	10	17.52
2.114000	13.74	46.00	32.26	L1	10	3.74
2.854000	12.23	46.00	33.77	L1	11	1.23
4.094000	13.29	46.00	32.71	L1	11	2.29

AC Input Port/ Voltage: 240V/60Hz

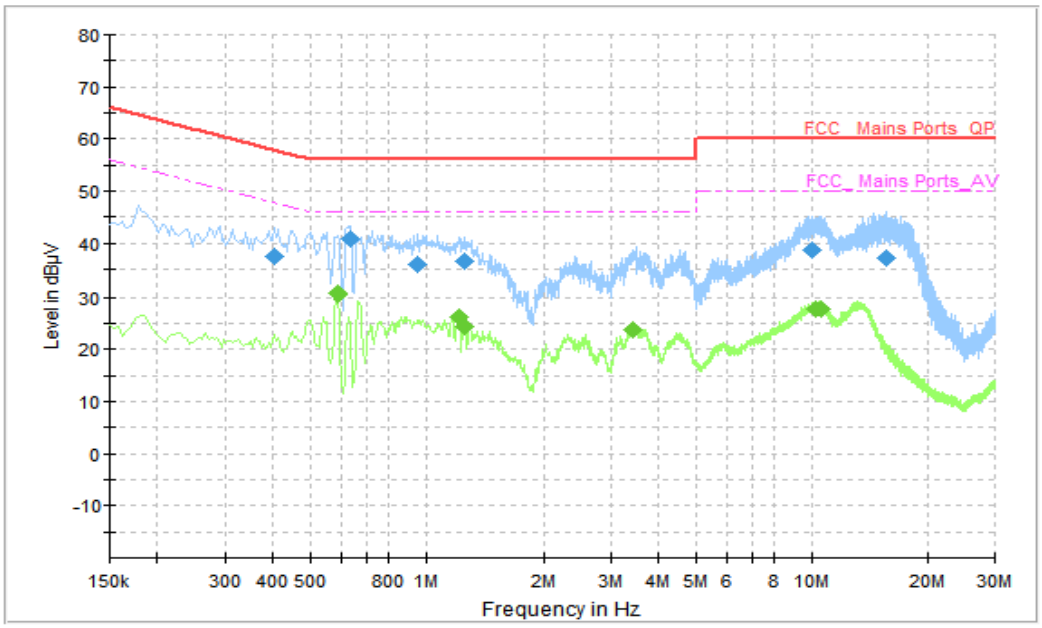


Figure A.2.6. Conducted Emission(Camera)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.402000	37.47	57.81	20.34	N	10	27.47
0.634000	40.71	56.00	15.29	N	10	30.71
0.954000	35.86	56.00	20.14	N	10	25.86
1.262000	36.59	56.00	19.41	N	10	26.59
10.054000	38.77	60.00	21.23	N	10	28.77
15.694000	37.07	60.00	22.93	L1	10	27.07

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.586000	30.39	46.00	15.61	N	10	20.39
1.214000	26.11	46.00	19.89	N	10	16.11
1.262000	24.26	46.00	21.74	N	10	14.26
3.414000	23.75	46.00	22.25	N	10	13.75
10.226000	27.72	50.00	22.28	N	10	17.72
10.590000	27.66	50.00	22.34	N	10	17.66

AC Input Port/ Voltage: 240V/60Hz

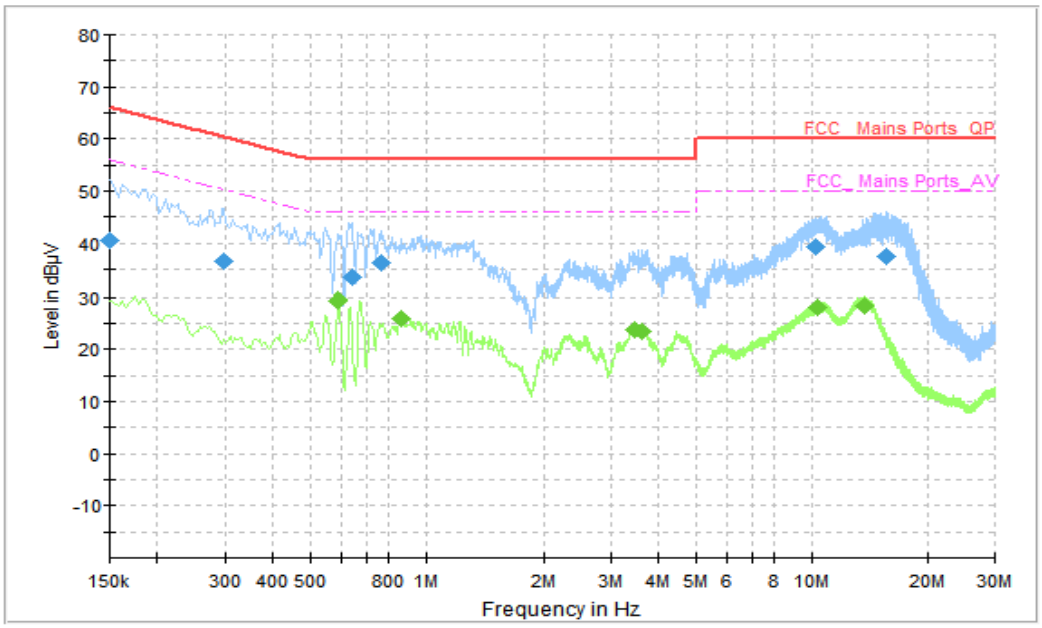


Figure A.2.7. Conducted Emission(Video Player)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.150000	40.57	66.00	25.43	N	10	30.57
0.298000	36.72	60.30	23.58	N	10	26.72
0.642000	33.51	56.00	22.49	N	10	23.51
0.762000	36.18	56.00	19.82	N	10	26.18
10.194000	39.46	60.00	20.54	N	10	29.46
15.562000	37.57	60.00	22.43	L1	10	27.57

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.590000	29.32	46.00	16.68	N	10	19.32
0.866000	25.73	46.00	20.27	N	10	15.73
3.454000	23.72	46.00	22.28	N	10	13.72
3.630000	23.29	46.00	22.71	N	10	13.29
10.302000	28.09	50.00	21.91	N	10	18.09
13.742000	28.31	50.00	21.69	N	10	18.31

AC Input Port/ Voltage: 240V/60Hz

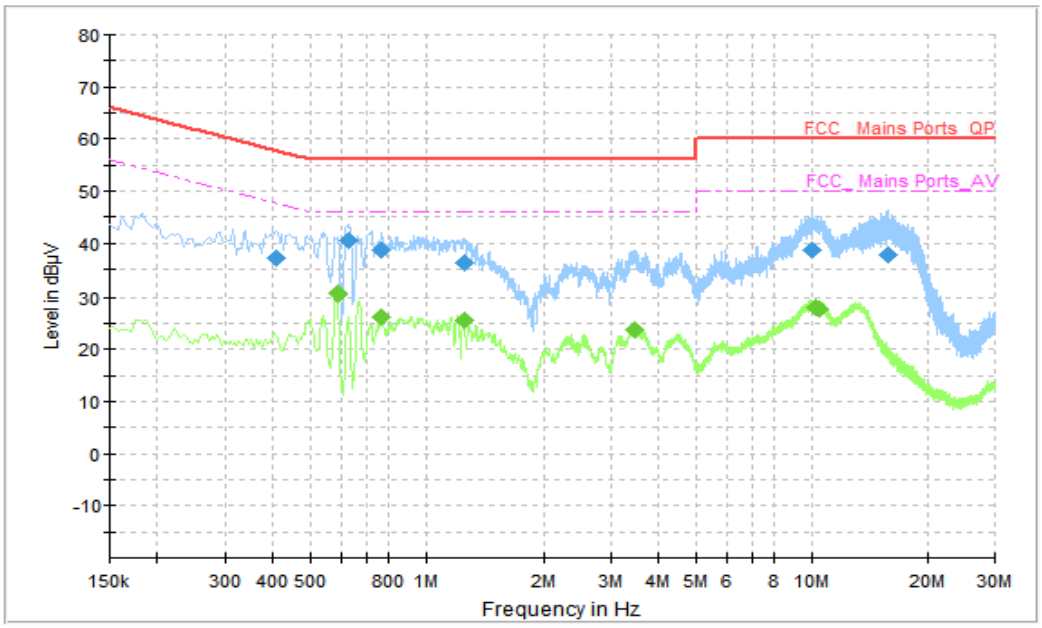


Figure A.2.8. Conducted Emission(FM receiver)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.406000	37.07	57.73	20.66	N	10	27.07
0.626000	40.47	56.00	15.53	N	10	30.47
0.766000	38.60	56.00	17.40	N	10	28.60
1.254000	36.27	56.00	19.73	N	10	26.27
9.970000	38.78	60.00	21.22	N	10	28.78
15.770000	37.90	60.00	22.10	L1	10	27.90

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.586000	30.32	46.00	15.68	N	10	20.32
0.762000	26.33	46.00	19.67	N	10	16.33
1.254000	25.66	46.00	20.34	N	10	15.66
3.450000	23.75	46.00	22.25	N	10	13.75
10.274000	27.88	50.00	22.12	N	10	17.88
10.522000	27.76	50.00	22.24	N	10	17.76

AC Input Port/ Voltage: 240V/60Hz

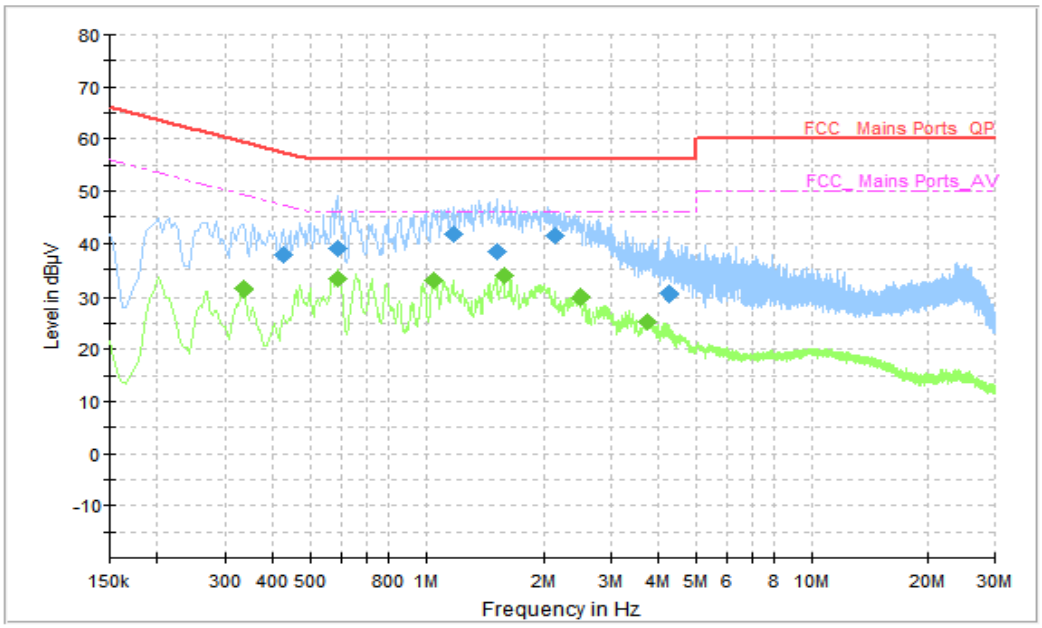


Figure A.2.9. Conducted Emission(Video Player)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.426000	37.67	57.33	19.66	L1	10	27.67
0.586000	39.16	56.00	16.84	L1	10	29.16
1.178000	41.81	56.00	14.19	N	10	31.81
1.518000	38.52	56.00	17.48	N	10	28.52
2.134000	41.43	56.00	14.57	L1	10	31.43
4.250000	30.57	56.00	25.43	L1	10	20.57

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.334000	31.44	49.35	17.91	N	10	21.44
0.590000	33.13	46.00	12.87	N	10	23.13
1.042000	32.80	46.00	13.20	N	10	22.80
1.574000	33.90	46.00	12.10	N	10	23.90
2.486000	29.73	46.00	16.27	N	10	19.73
3.730000	25.38	46.00	20.62	N	10	15.38

AC Input Port/ Voltage: 240V/60Hz

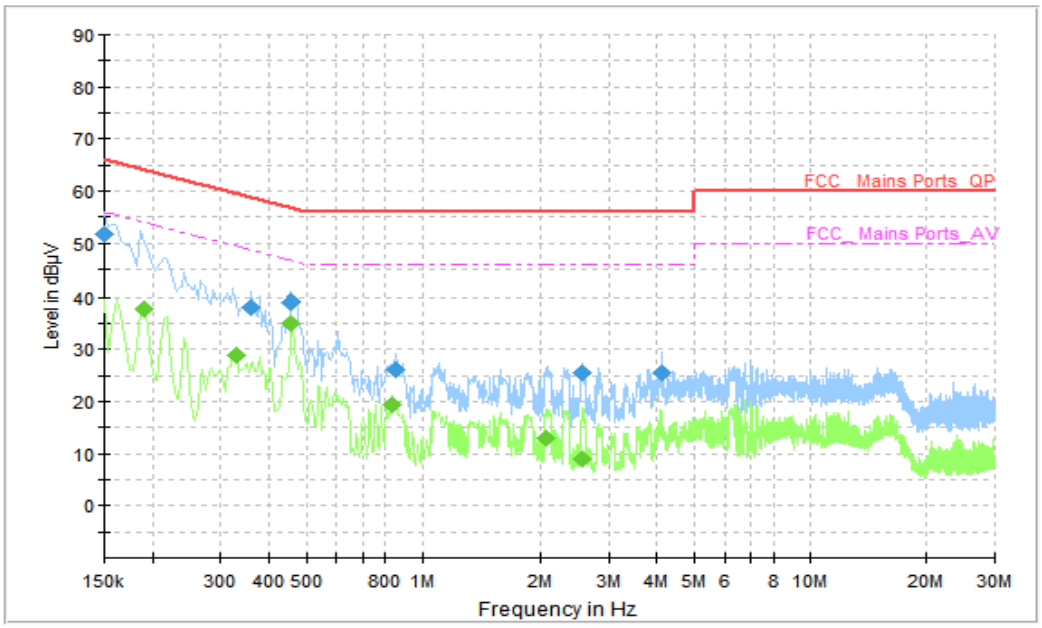


Figure A.2.10. Conducted Emission(Data Transfer)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.150000	51.89	66.00	14.11	N	10	41.89
0.358000	37.99	58.78	20.79	N	10	27.99
0.458000	38.83	56.73	17.90	L1	10	28.83
0.850000	26.02	56.00	29.98	L1	10	16.02
2.570000	25.34	56.00	30.66	L1	10	15.34
4.102000	25.62	56.00	30.38	N	10	15.62

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.190000	37.56	54.04	16.48	L1	10	27.56
0.330000	21.73	49.45	27.72	L1	10	11.73
0.458000	34.93	46.73	11.80	L1	10	24.93
0.834000	19.28	46.00	26.72	N	10	9.28
2.066000	12.81	46.00	33.19	L1	10	2.81
2.574000	8.87	46.00	37.13	L1	10	-1.13

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