TEST REPORT

No.I23N00642-EMC

for

Spectralink Corporation

Wifi/BT Phone

Model Name：Versity 9753

With

Hardware Version: DVT

Software Version: vSL25

FCC ID: IYG97XX

Issued Date: 2023-07-26

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

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I23N00642-EMC	Rev.0	1st edition	2023-07-26

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

CONTENTS

1. SUMMARY OF TEST REPORT

1.1. Test Items

Description	Wifi/BT Phone
Model Name	Versity 9753
Applicant's name	Spectralink Corporation
Manufacturer's Name	Spectralink Corporation

1.2. Test Standards

FCC Part 15, Subpart B (10-1-2021 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: 2023-05-08 Testing End Date: 2023-05-25

1.6. Signature

Liu Xiangzhou
(Prepared this test report)

Liang Yong
(Reviewed this test report)

Cao Junfei
(Approved this test report)

2. CLIENT INFORMATION

2.1. Applicant Information

Company Name:	Spectralink Corporation
Address:	2560 55th Street Boulder CO 80301 USA
Contact	Andrew Jackson
Email	andrew.jackson@spectralink.com
Tel.	+1 (303) 441-7618
Fax:	/

2.2. Manufacturer Information

Company Name:	Spectralink Corporation
Address:	2560 55th Street Boulder CO 80301 USA
Contact	Andrew Jackson
Email	andrew.jackson@spectralink.com
Tel.	+1 (303) 441-7618
Fax:	/

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

3.1. About EUT

Description	Wifi/BT Phone
Model Name	Versity 9753
FCC ID	IYG97XX
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
UT05aa	MHNE03BQKGG0047	DVT	vSL25	2023-05-08

*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	Adapter
AE3	Data Cable

AE1-1

Model	BLI0000100
Manufacturer	Ningbo Veken Bat tery Co. , Ltd.
Capacity	3020mAh
Nominal Voltage	3.85V

AE1-2

Model	351038P
Manufacturer	Chongqing VDL Electronics Co., Ltd.
Capacity	95mAh
Nominal Voltage	3.7V

AE2

Model	IN-CA-310Q
Manufacturer	Shenzhen Inno Vision Industrial Co., Ltd.

AE3

Model	
Manufacturer	

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

*AE Label: To distinguish the type and number of AE

AE: ancillary equipment

AE2/AE3 Just for testing

3.4. EUT Set-ups

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

3.5. General Description

The Equipment Under Test (EUT) is a model of Wifi/BT Phone with internal antenna.
It has MP3, Camera, USB memory, Bluetooth, Wi-Fi, Scan QR code and NFC functions.
It consists of normal options: Battery.
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	(10-1-2021 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

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

Temperature	Min. = 15 ℃, Max. = 35 ℃
Relative humidity	Min. = 20 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz> 60 dB; 1MHz-18000MHz>90 dB
Electrical insulation	> 2MΩ
Ground system resistance	< 4Ω
Normalised site attenuation (NSA)	< ±4 dB, 3 m distance, from 30 to 1000 MHz
Voltage Standing Wave Ratio （VSWR）	≤ 6 dB, from 1 to 18 GHz，3 m distance
Uniformity of field strength	Between 0 and 6 dB, from 80 to 6000 MHz

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

Temperature	Min. = 15 ℃, Max. = 35 ℃
Relative humidity	Min. =20 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz,>60dB; 1MHz-18000MHz,>90dB
Electrical insulation	>2MΩ
Ground system resistance	<4Ω

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	4.80dB(*k*=2)
	1GHz-18GHz	4.62dB(*k*=2)
	18GHz-40GHz	2.36dB(*k*=2)
Conducted Emission	150kHz-30MHz	2.68dB(*k*=2)

8. MEASURING APPARATUS UTILIZED

No.	Name	Model	Serial Number	Manufacturer	Calibration Due date	Calibration Period
1.	Test Receiver	ESR7	101676	R&S	2023.11.23	1 year
2.	Test Receiver	ESCI	100702	R&S	2024.01.11	1 year
3.	Spectrum Analyzer	FSV40	101192	R&S	2024.01.11	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	2023.09.06	1 year
7.	Anechoic Chamber	FACT3-2.0	1285	ETS-Lindgren	2023.05.29	2 years
8.	Software	EMC32	V10.50.40	R&S	/	/
9.	Horn Antenna	QSH-SL-18-26-S-20	17013	Q-par	2026.02.01	3 years
10.	Horn Antenna	QSH-SL-8-26-40-K-20	17014	Q-par	2026.01.31	3 years

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.

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.

Scan QR code: The EUT is Scanning the QR code.

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

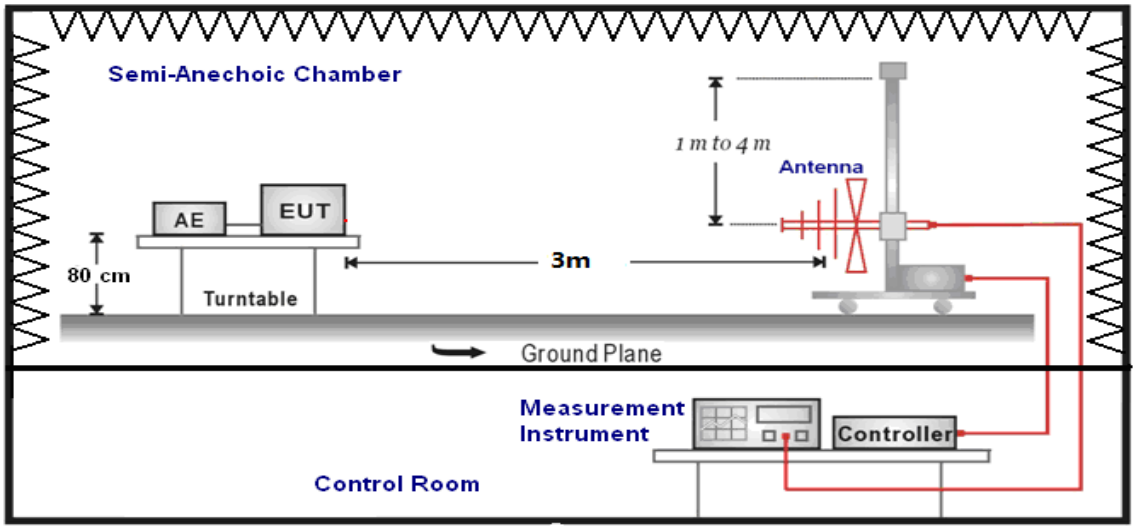
Frequency of emission (MHz)	RBW/VBW	Sweep Time(s)
30-1000	120kHz (IF bandwidth)	5
Above 1000	1MHz/3MHz	15

A.1.5 Test power supply

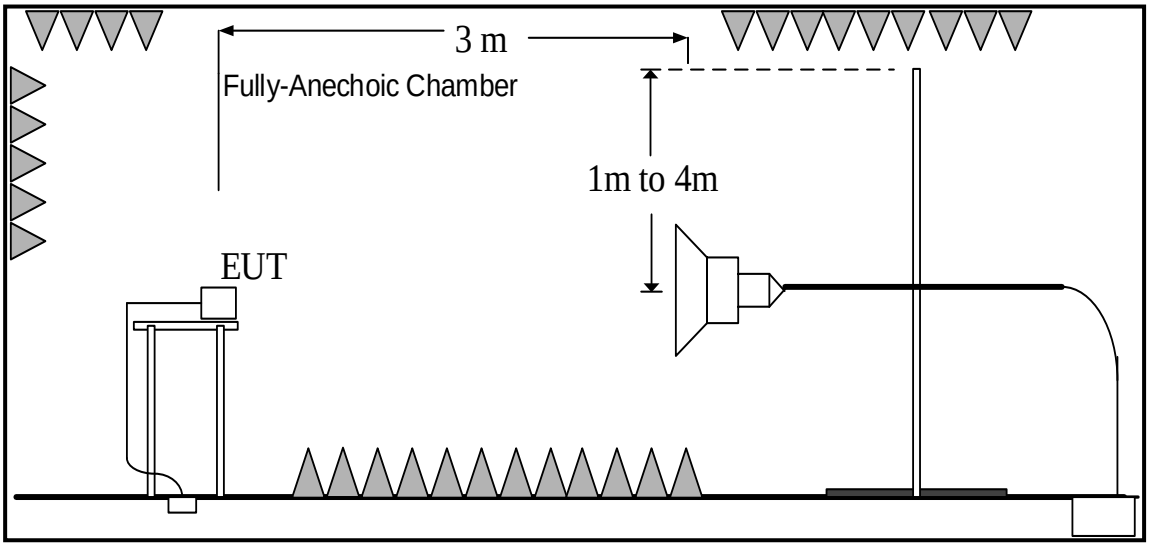
Power	Voltage（V）
AC	120

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)	Conclusion
		UT05aa/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 (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m)	Conclusion
			UT05aa/Set.1	
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) UT05aa/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) UT05aa/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.	

Scan QR code

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT05aa/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) UT05aa/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.	

Data Transfer: PC TO EUT

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT05aa/Set.2	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) UT05aa/Set.2	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.	

Data Transfer: EUT TO PC

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m)	Conclusion
		UT05aa/Set.2	
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)	Conclusion
			UT05aa/Set.2	
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.	

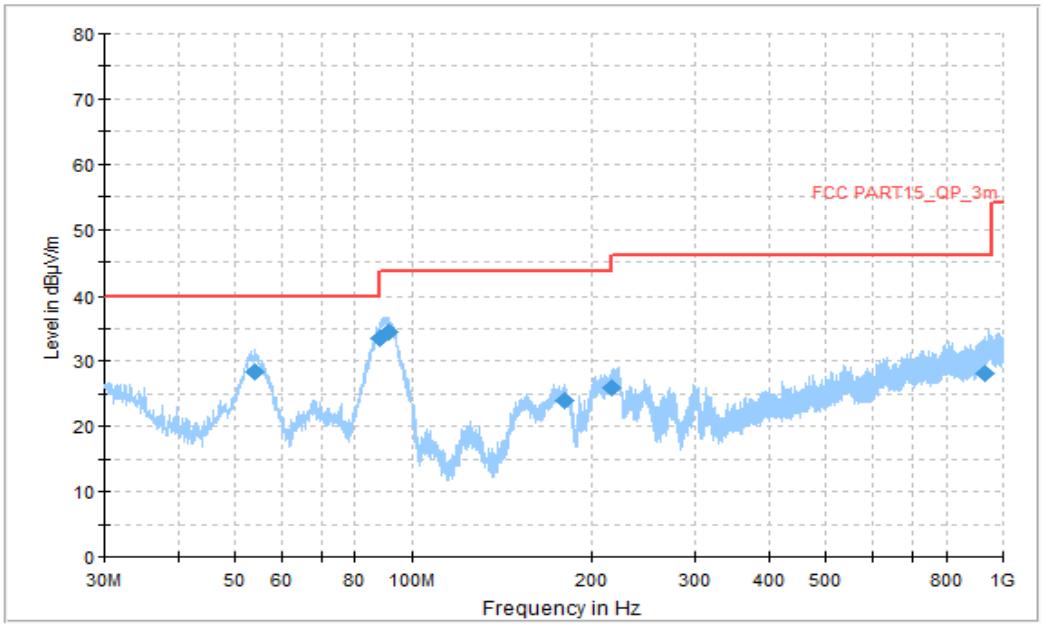


Figure A.1.1. Radiated Emission (Camera, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
53.980556	28.37	40.00	11.63	V	-21	49.37
87.768889	33.56	40.00	6.44	V	-21	54.56
91.110000	34.61	43.52	8.91	V	-20	54.61
180.242222	23.99	43.52	19.53	H	-16	39.99
216.725000	25.91	46.02	20.11	H	-16	41.91
932.100000	28.15	46.02	17.87	H	2	26.15

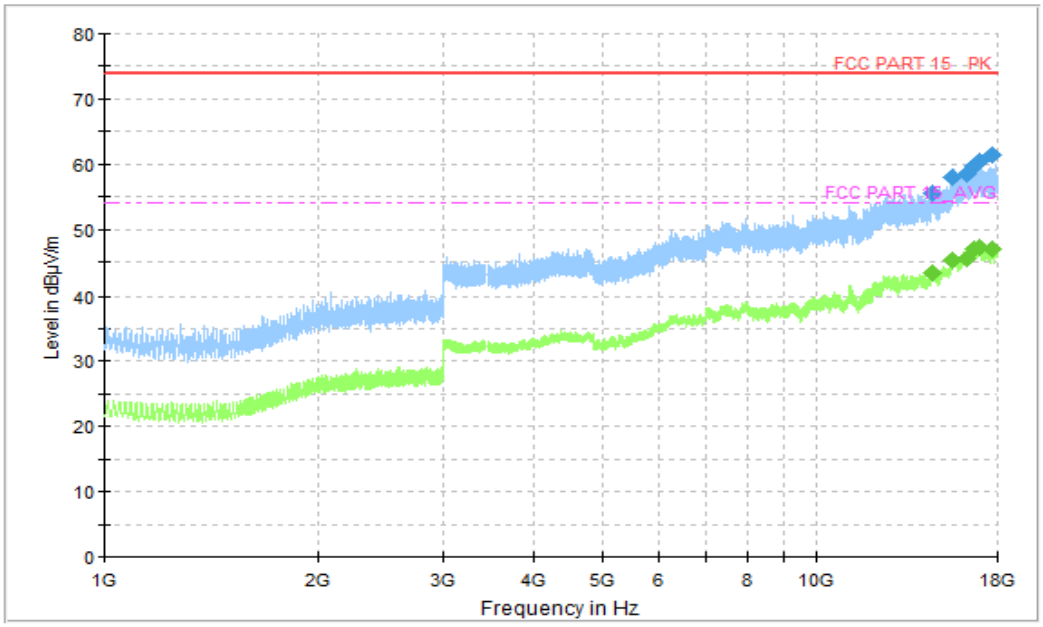


Figure A.1.2. Radiated Emission (Camera, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
14563.000000	56.56	74.00	17.44	V	18	38.56
15585.500000	58.99	74.00	15.01	H	20	38.99
16272.250000	58.53	74.00	15.47	V	21	37.53
16664.500000	58.75	74.00	15.25	H	22	36.75
17016.500000	60.40	74.00	13.60	V	23	37.4
17699.500000	61.55	74.00	12.45	H	23	38.55

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
14563.000000	43.24	54.00	10.76	V	18	25.24
15585.500000	45.25	54.00	8.75	H	20	25.25
16272.250000	45.48	54.00	8.52	V	21	24.48
16664.500000	46.95	54.00	7.05	H	22	24.95
17016.500000	47.31	54.00	6.69	V	23	24.31
17699.500000	46.95	54.00	7.05	H	23	23.95

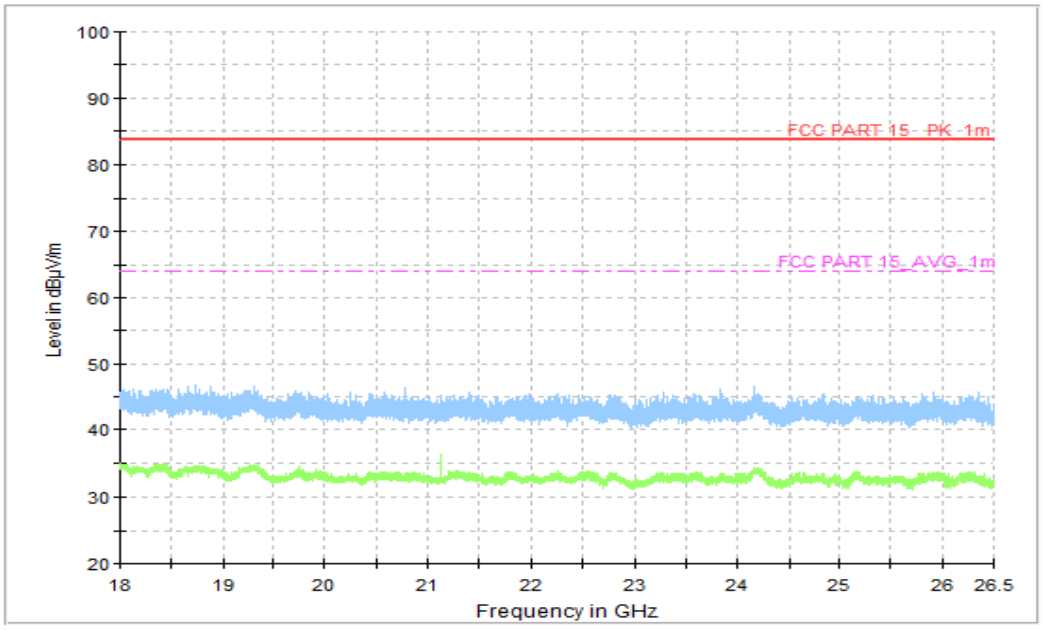


Figure A.1.3. Radiated Emission (Camera, 18GHz to 26.5GHz)

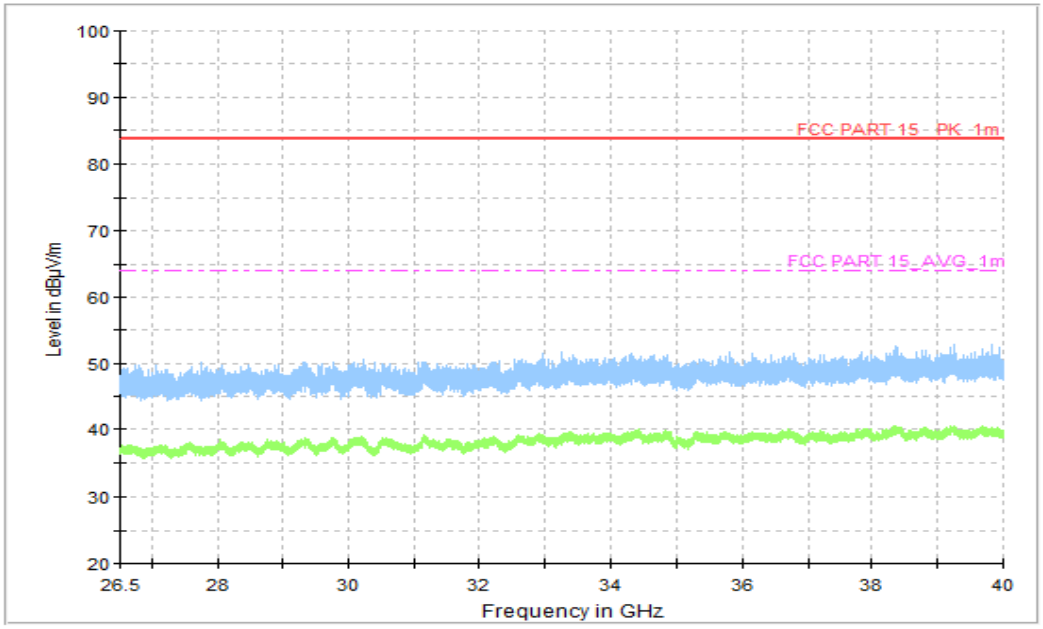


Figure A.1.4. Radiated Emission (Camera, 26.5GHz to 40GHz)

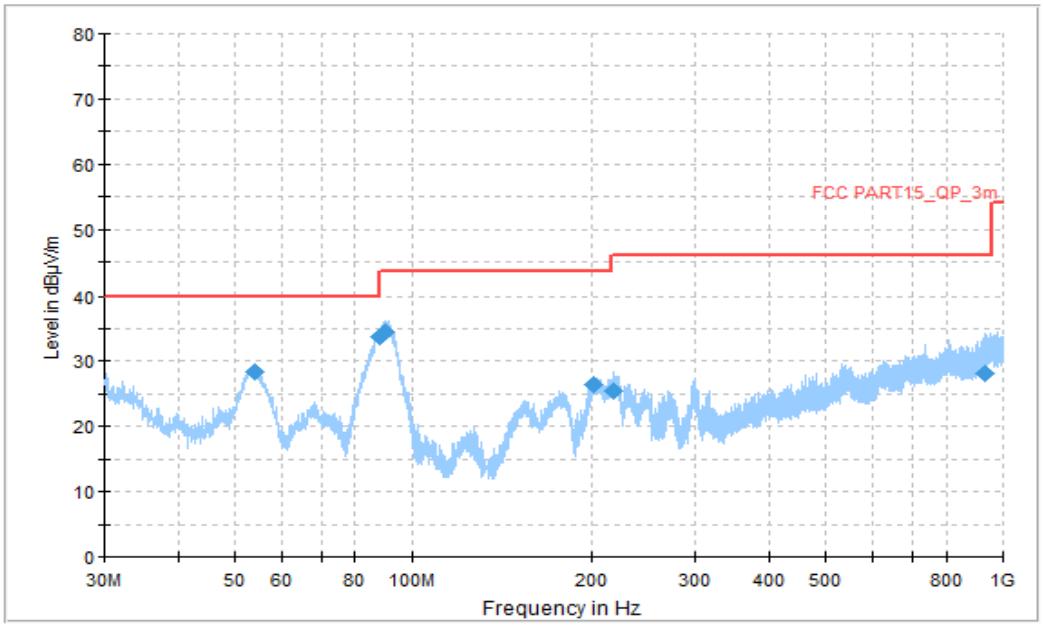


Figure A.1.5. Radiated Emission (Video Player, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
54.034444	28.28	40.00	11.72	V	-21	49.28
87.876667	33.69	40.00	6.31	V	-21	54.69
89.816667	34.44	43.52	9.08	V	-20	54.44
202.175000	26.44	43.52	17.08	H	-16	42.44
218.718889	25.39	46.02	20.63	H	-16	41.39
931.399444	28.08	46.02	17.94	H	2	26.08

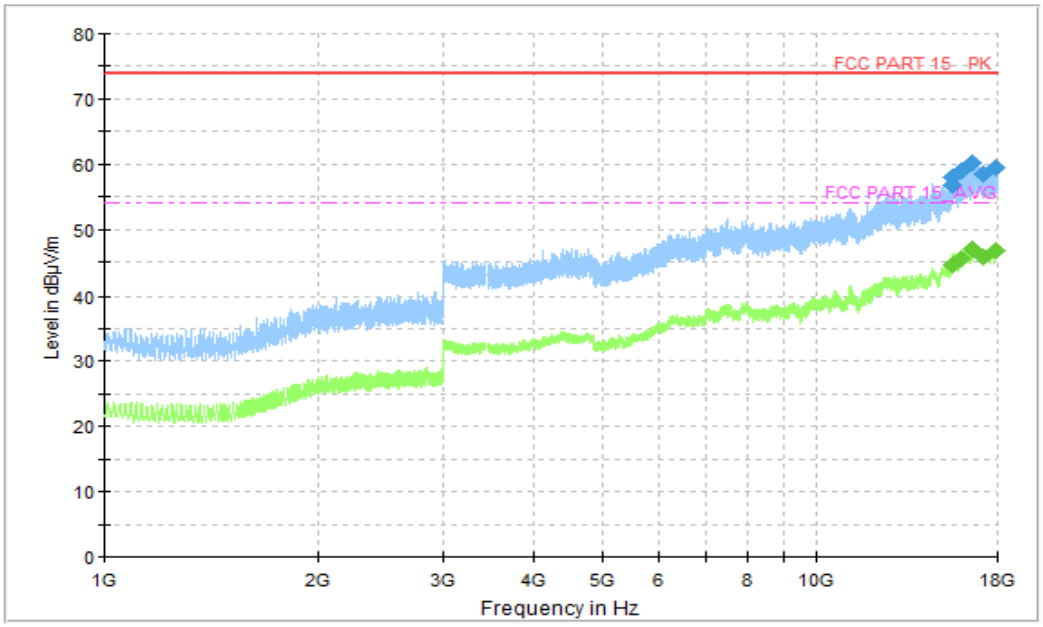


Figure A.1.6. Radiated Emission (Video Player, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
15546.500000	56.83	74.00	17.17	H	19	37.83
15553.250000	58.05	74.00	15.95	V	19	39.05
16029.500000	58.84	74.00	15.16	H	20	38.84
16587.750000	60.19	74.00	13.81	V	22	38.19
17142.250000	58.34	74.00	15.66	V	21	37.34
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	44.46	54.00	9.54	H	19	25.46
15553.250000	44.45	54.00	9.55	V	19	25.45
16029.500000	45.55	54.00	8.45	H	20	25.55
16587.750000	47.07	54.00	6.93	V	22	25.07
17142.250000	45.71	54.00	8.29	V	21	24.71
17886.500000	46.85	54.00	7.15	V	24	22.85

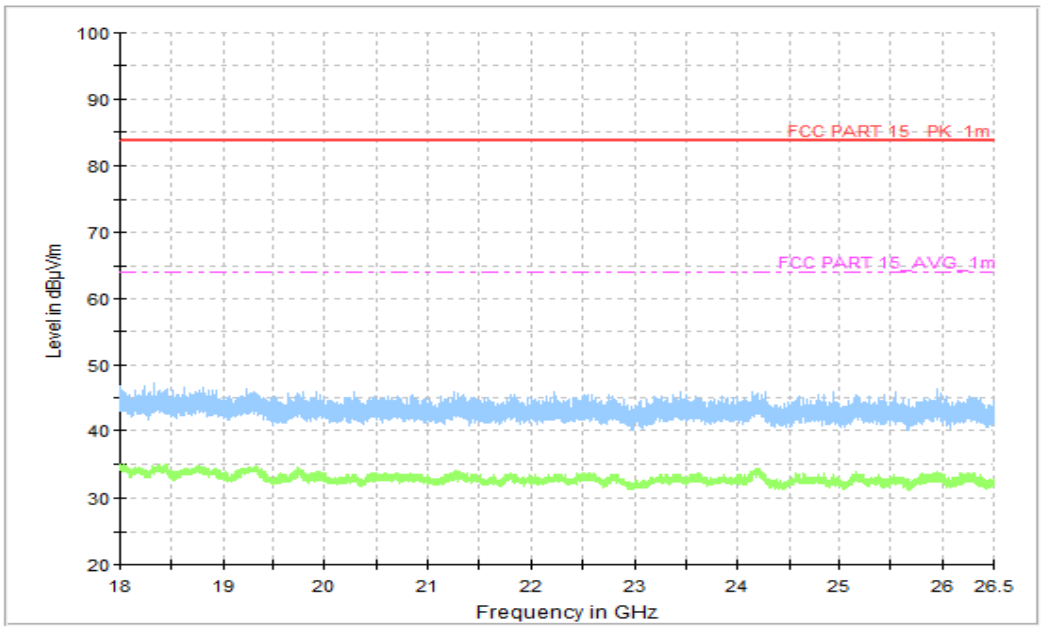


Figure A.1.7. Radiated Emission (Video Player, 18GHz to 26.5GHz)

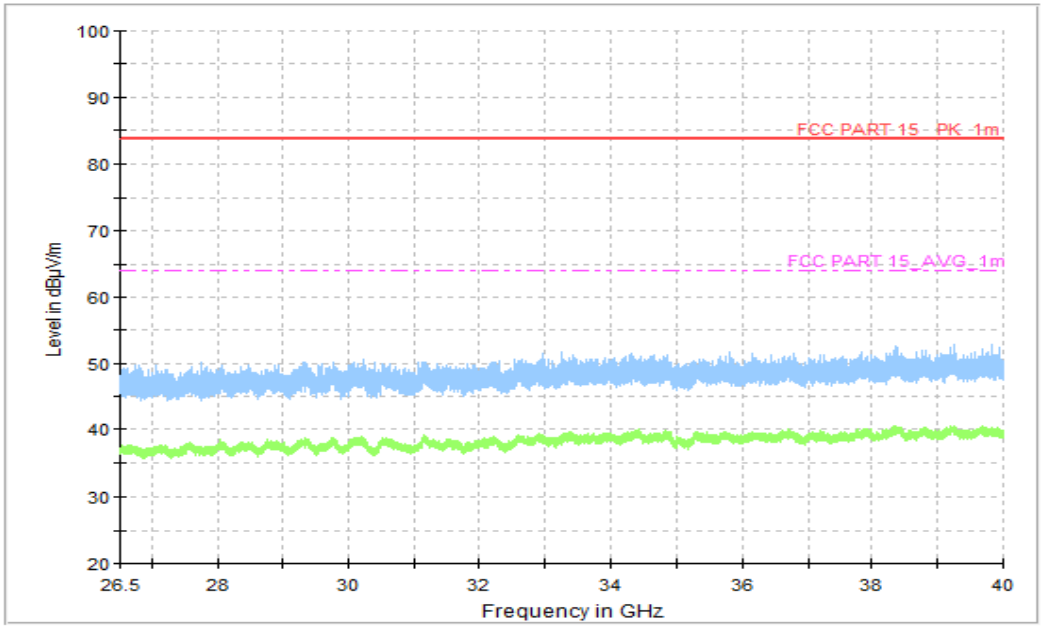


Figure A.1.8. Radiated Emission (Video Player, 26.5GHz to 40GHz)

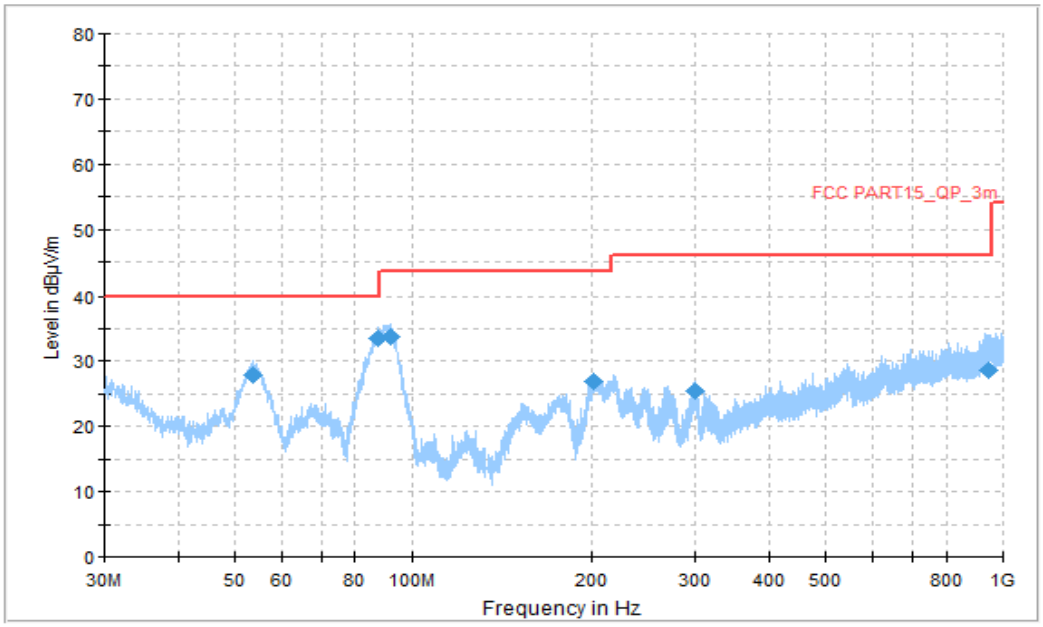


Figure A.1.9. Radiated Emission (Scan QR code, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
53.657222	27.88	40.00	12.12	V	-21	48.88
87.715000	33.55	40.00	6.45	V	-21	54.55
91.756667	33.87	43.52	9.65	V	-20	53.87
201.905556	26.95	43.52	16.57	H	-16	42.95
300.145000	25.44	46.02	20.58	H	-13	38.44
945.410556	28.63	46.02	17.39	V	3	25.63

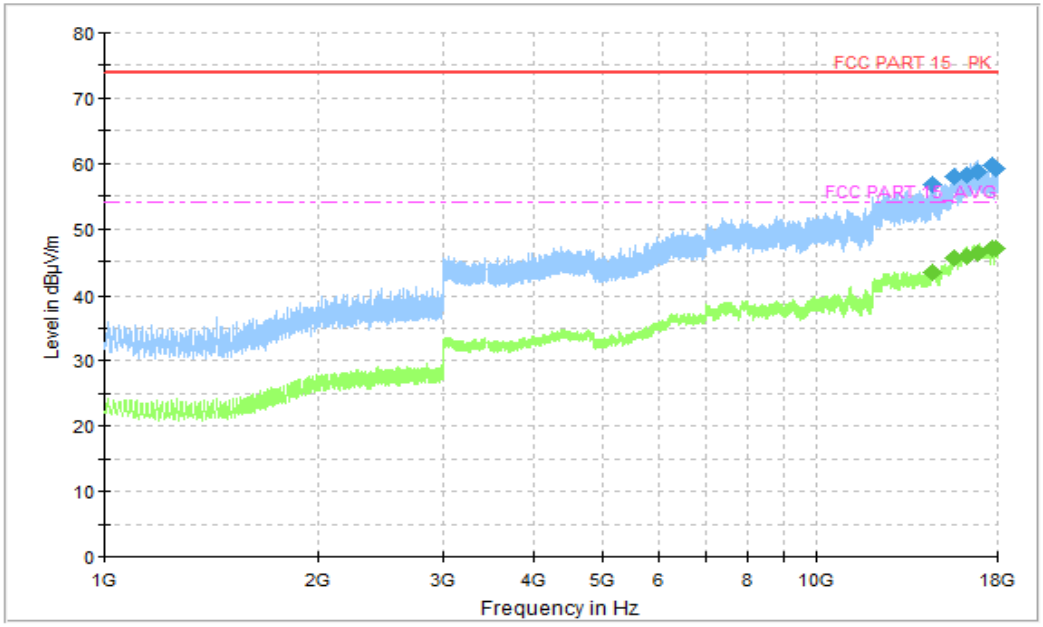


Figure A.1.10. Radiated Emission (Scan QR code, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
14558.750000	56.69	74.00	17.31	H	18	38.69
15627.500000	57.97	74.00	16.03	V	20	37.97
16273.500000	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
17885.250000	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)
14558.750000	43.24	54.00	10.76	H	18	25.24
15627.500000	45.40	54.00	8.60	V	20	25.4
16273.500000	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
17885.250000	46.96	54.00	7.04	V	24	22.96

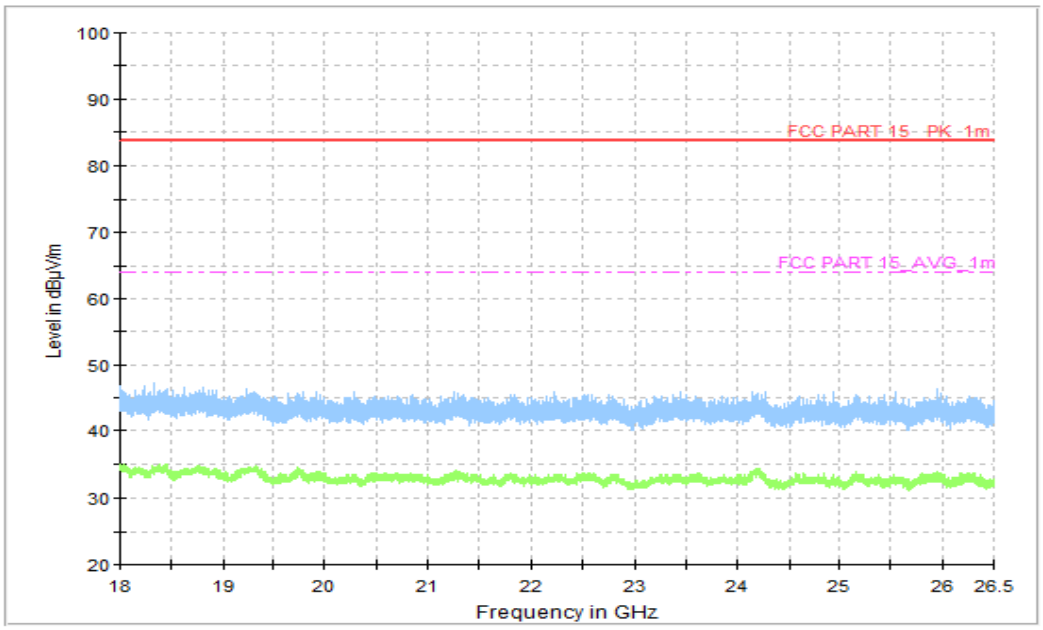


Figure A.1.11. Radiated Emission (Scan QR code, 18GHz to 26.5GHz)

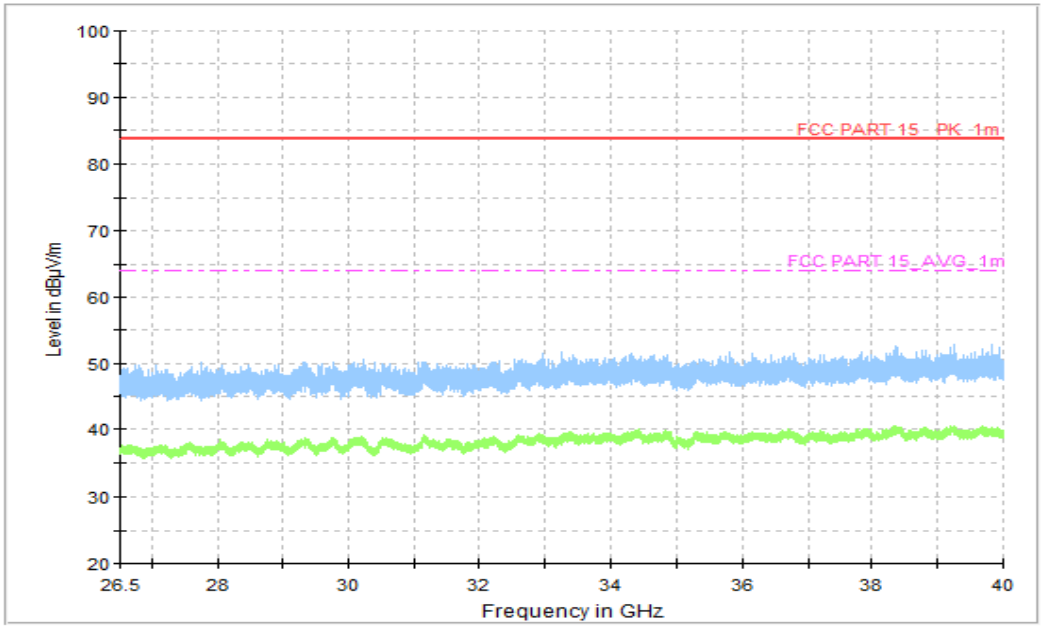


Figure A.1.12. Radiated Emission (Scan QR code, 26.5GHz to 40GHz)

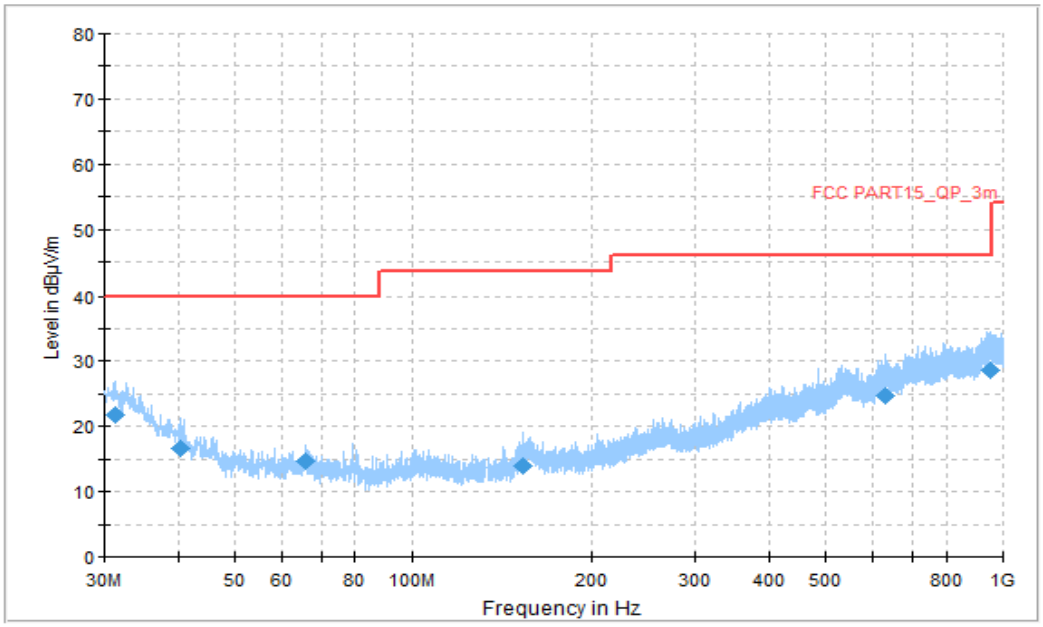


Figure A.1.13. Radiated Emission (Data Transfer: PC TO EUT, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
31.347222	21.79	40.00	18.21	H	-12	33.79
40.292778	16.68	40.00	23.32	H	-17	33.68
65.943889	14.73	40.00	25.27	H	-20	34.73
152.866667	14.00	43.52	29.52	V	-16	30.00
630.376111	24.77	46.02	21.25	V	-2	26.77
951.230556	28.71	46.02	17.31	V	3	25.71

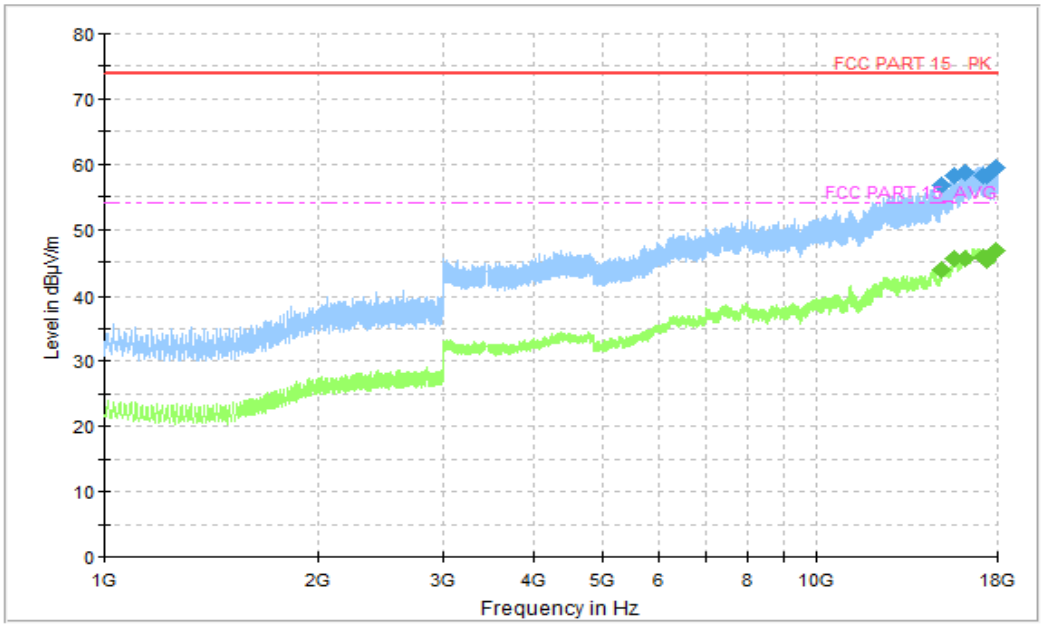


Figure A.1.14. Radiated Emission (Data Transfer: PC TO EUT, 1GHz to 18GHz)

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

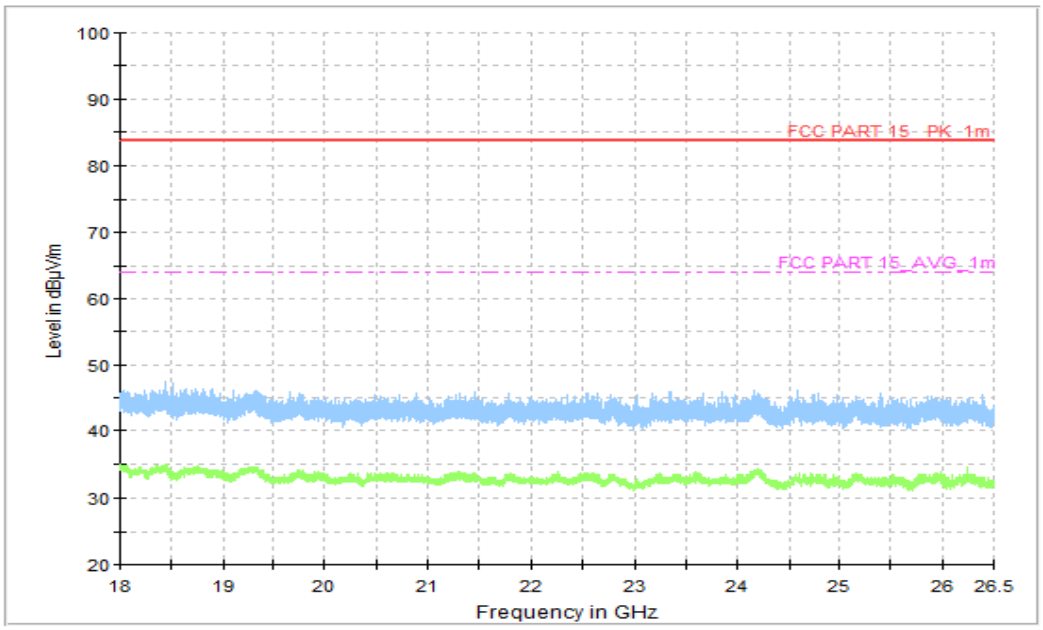


Figure A.1.15. Radiated Emission (Data Transfer: PC TO EUT, 18GHz to 26.5GHz)

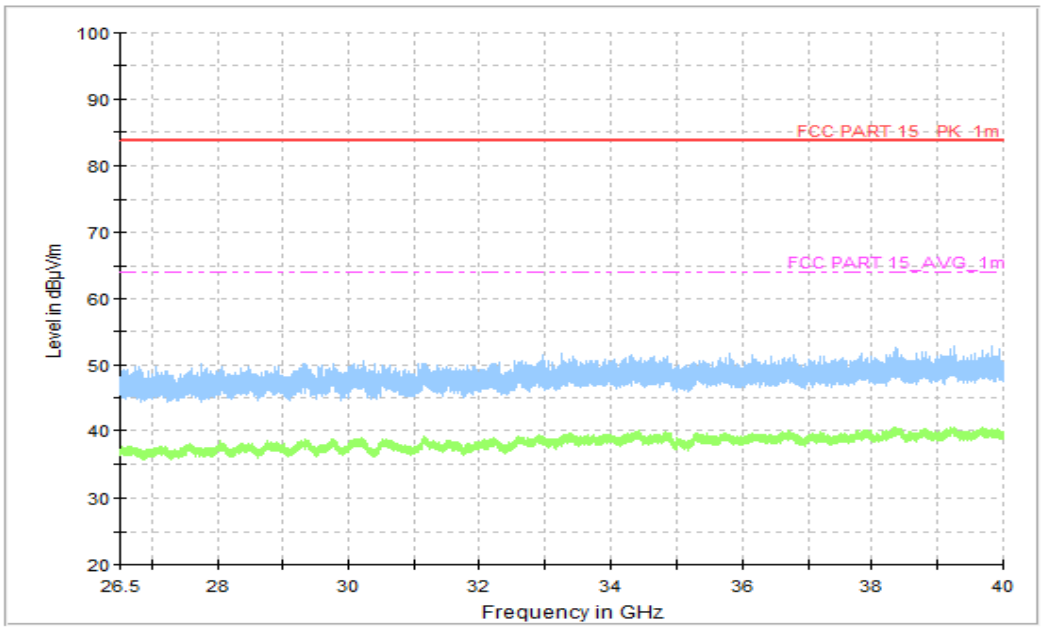


Figure A.1.16. Radiated Emission (Data Transfer: PC TO EUT, 26.5GHz to 40GHz)

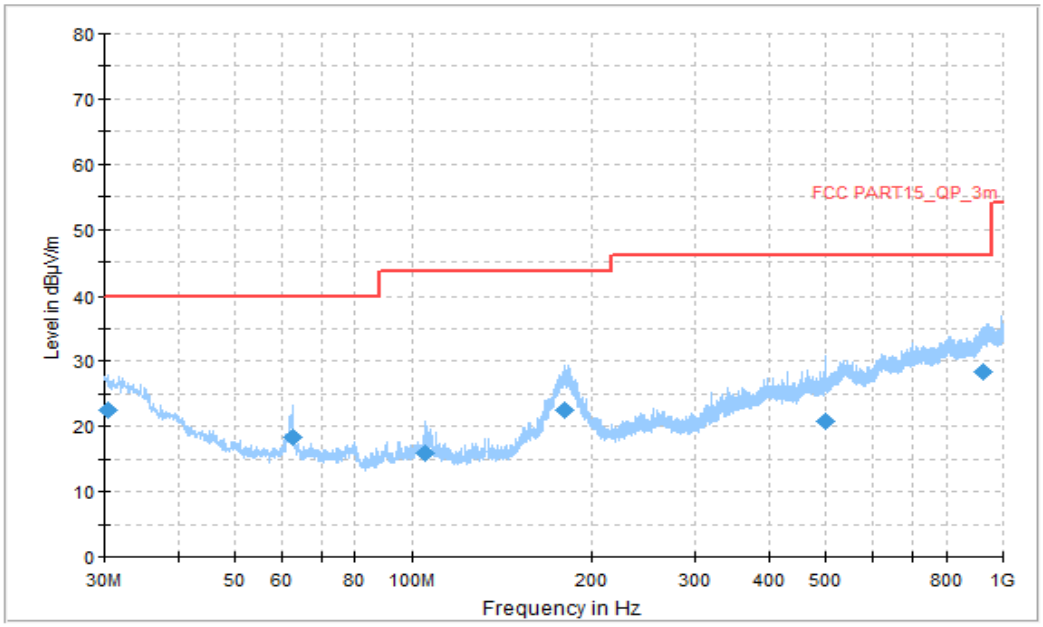


Figure A.1.17. Radiated Emission (Data Transfer: EUT TO PC, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
30.431111	22.55	40.00	17.45	V	-12	34.55
62.602778	18.44	40.00	21.56	V	-20	38.44
104.959444	16.01	43.52	27.51	H	-19	35.01
180.134444	22.42	43.52	21.10	H	-16	38.42
497.917222	20.78	46.02	25.24	H	-6	26.78
923.262222	28.33	46.02	17.69	V	2	26.33

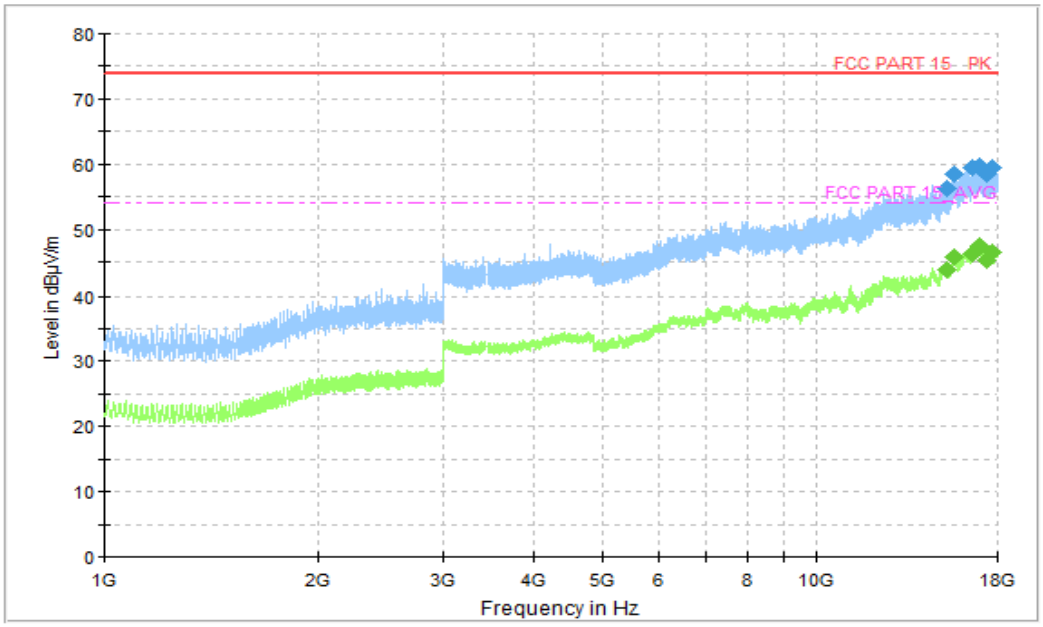


Figure A.1.18. Radiated Emission (Data Transfer: EUT TO PC, 1GHz to 18GHz)

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

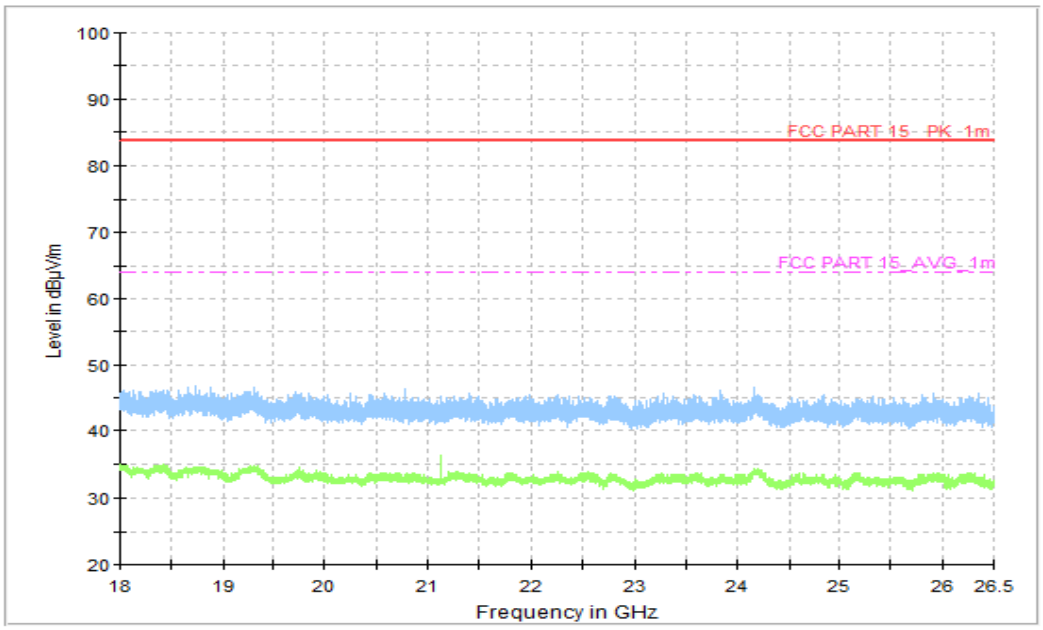


Figure A.1.19. Radiated Emission (Data Transfer: EUT TO PC, 18GHz to 26.5GHz)

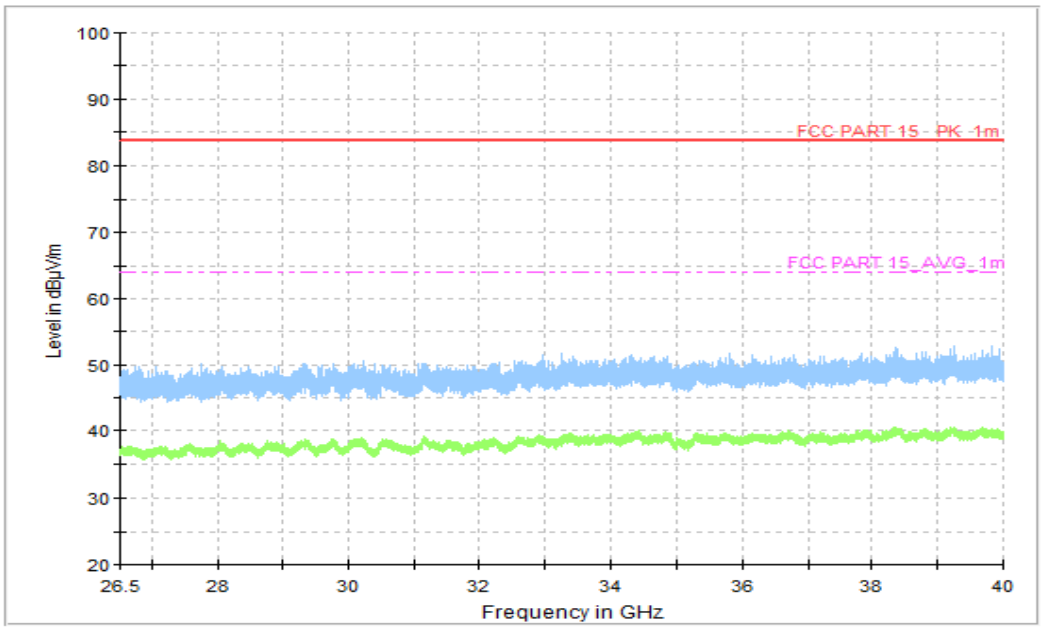


Figure A.1.20. Radiated Emission (Data Transfer: EUT TO PC, 26.5GHz to 40GHz)

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.

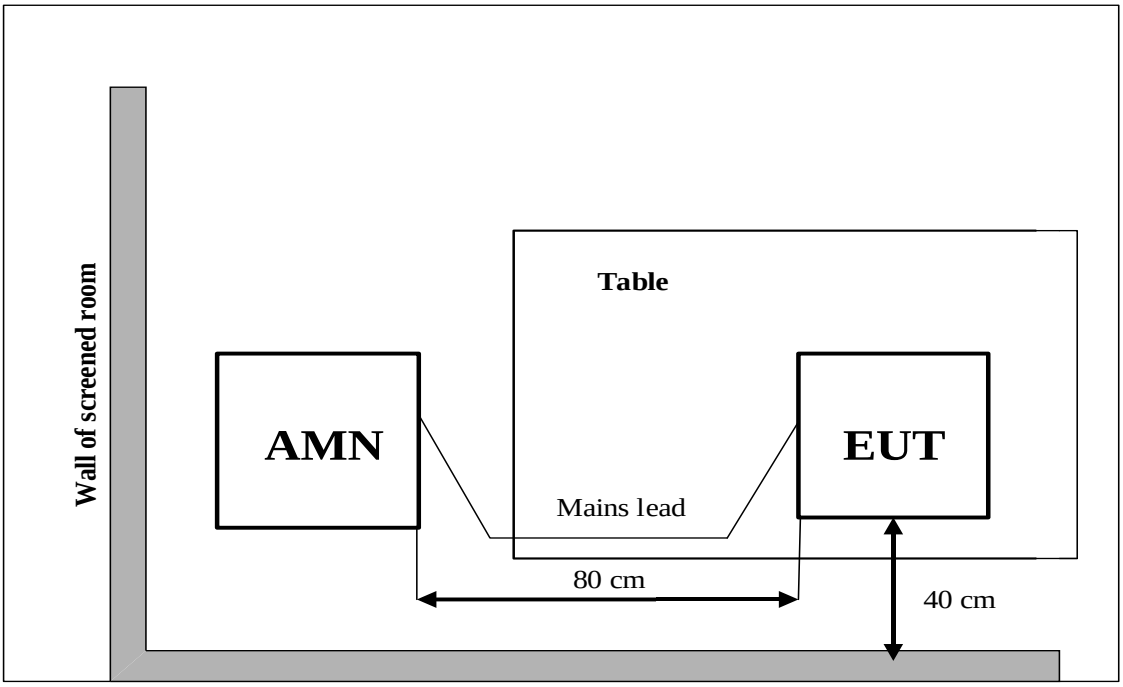
Data Transfer: The model of the PC is Lenovo ThinkPad T480, and the serial number of the PC is PF-13LW0C. The EUT is connected to a PC for transmitting data. The software is used to let the PC keep on copying data to EUT or TF Card, reading and erasing the data after copy action was finished.

Scan QR code: The EUT is Scanning the QR code.

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) UT05aa/Set.1	Conclusion
0.15 to 0.5	66 to 56	56 to 46	See Figure A.2.1.	P
0.5 to 5	56	46		
5 to 30	60	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

Video Player

AC Input Port/ Voltage: 120V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV) UT05aa/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.				

Scan QR code

AC Input Port/ Voltage: 120V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV) UT05aa/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.				

Data Transfer

AC Input Port/ Voltage: 120V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV) UT05aa/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.				

Camera

AC Input Port/ Voltage: 240V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV) UT05aa/Set.1	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.				

Video Player

AC Input Port/ Voltage: 240V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV) UT05aa/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.				

Scan QR code

AC Input Port/ Voltage: 240V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV) UT05aa/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.				

Data Transfer

AC Input Port/ Voltage: 240V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV) UT05aa/Set.6	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.				

AC Input Port/ Voltage: 120V/60Hz

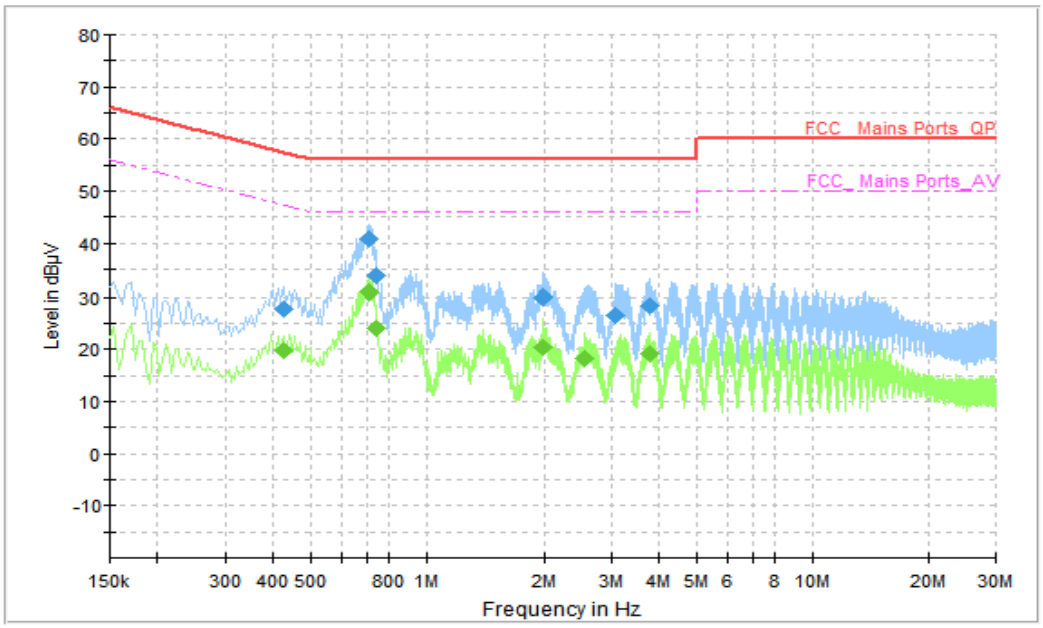


Figure A.2.1. Conducted Emission (Camera)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.426000	27.80	57.33	29.53	N	10	17.80
0.706000	40.76	56.00	15.24	N	10	30.76
0.738000	33.67	56.00	22.33	N	10	23.67
1.998000	29.80	56.00	26.20	N	10	19.80
3.066000	26.58	56.00	29.42	N	10	16.58
3.774000	28.38	56.00	27.62	L1	10	18.38

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.426000	19.87	47.33	27.46	N	10	9.87
0.706000	30.82	46.00	15.18	N	10	20.82
0.738000	24.11	46.00	21.89	N	10	14.11
1.998000	20.37	46.00	25.63	N	10	10.37
2.550000	18.28	46.00	27.72	N	10	8.28
3.762000	19.12	46.00	26.88	L1	10	9.12

AC Input Port/ Voltage: 120V/60Hz

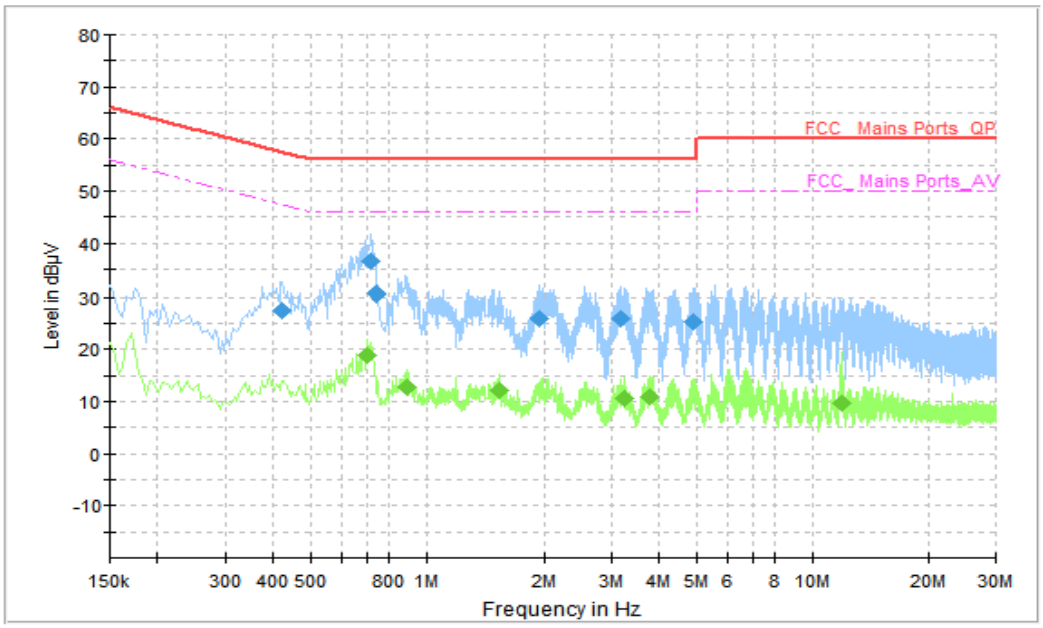


Figure A.2.2. Conducted Emission (Video Player)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.422000	27.52	57.41	29.89	N	10	17.52
0.718000	36.63	56.00	19.37	L1	10	26.63
0.738000	30.44	56.00	25.56	L1	10	20.44
1.938000	26.01	56.00	29.99	N	10	16.01
3.178000	26.01	56.00	29.99	N	10	16.01
4.886000	25.30	56.00	30.70	N	10	15.30

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.702000	18.79	46.00	27.21	N	10	8.79
0.894000	12.77	46.00	33.23	N	10	2.77
1.526000	11.97	46.00	34.03	N	10	1.97
3.246000	10.73	46.00	35.27	N	10	0.73
3.774000	11.03	46.00	34.97	L1	10	1.03
11.862000	9.71	50.00	40.29	N	10	-0.29

AC Input Port/ Voltage: 120V/60Hz

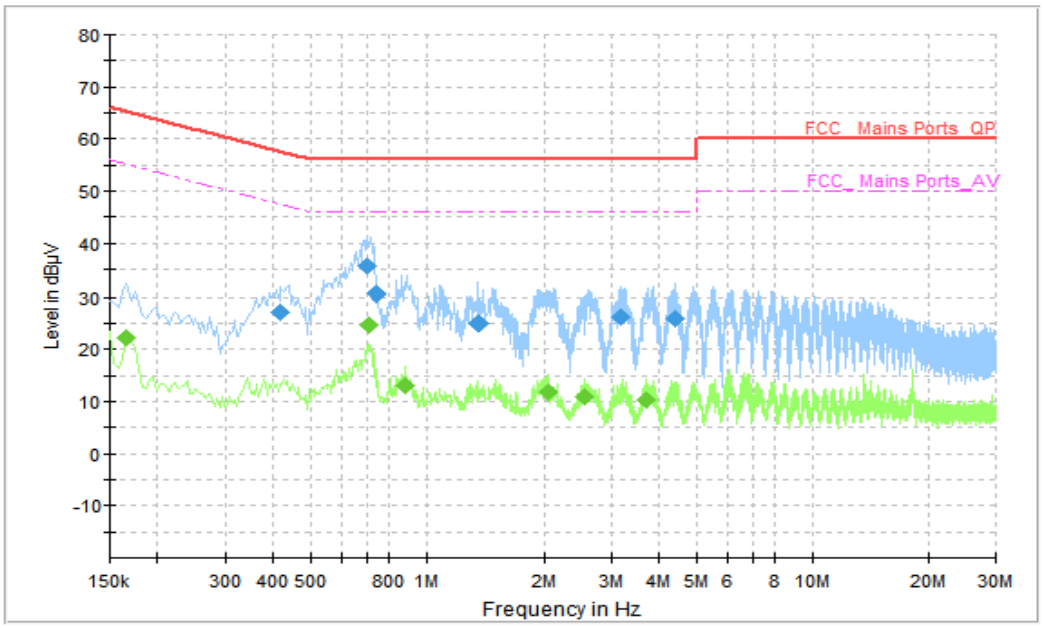


Figure A.2.3. Conducted Emission (Scan QR code)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.418000	27.09	57.49	30.39	N	10	17.09
0.698000	35.70	56.00	20.30	N	10	25.7
0.738000	30.47	56.00	25.53	L1	10	20.47
1.366000	25.08	56.00	30.92	N	10	15.08
3.158000	26.03	56.00	29.97	N	10	16.03
4.382000	25.83	56.00	30.17	N	10	15.83

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.166000	22.33	55.16	32.83	N	10	12.33
0.706000	24.57	46.00	21.43	L1	10	14.57
0.878000	13.12	46.00	32.88	N	10	3.12
2.046000	11.83	46.00	34.17	N	10	1.83
2.550000	10.85	46.00	35.15	N	10	0.85
3.678000	10.33	46.00	35.67	L1	10	0.33

AC Input Port/ Voltage: 120V/60Hz

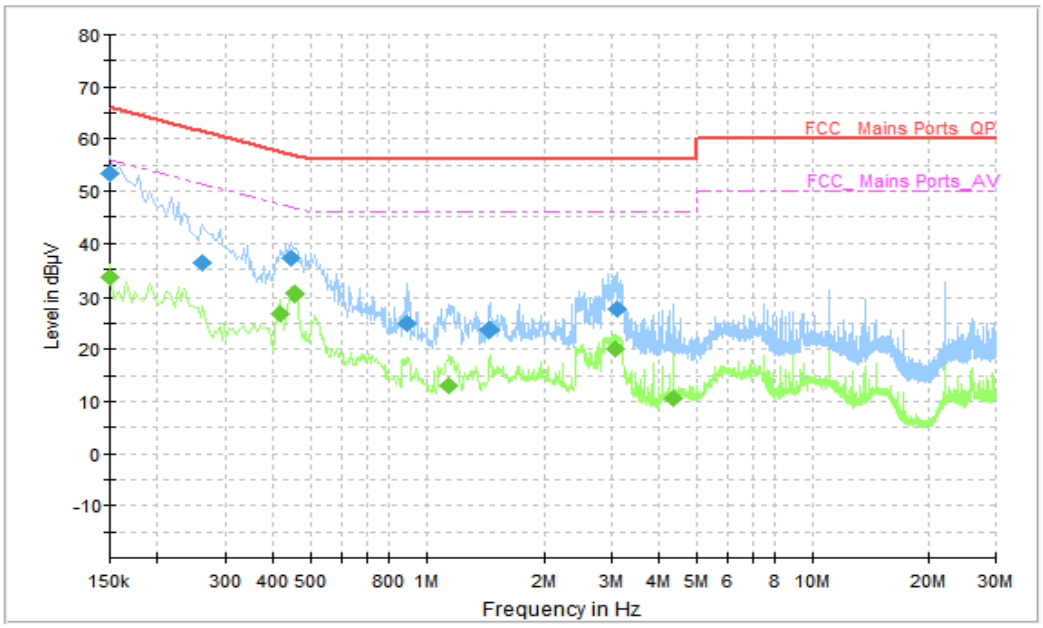


Figure A.2.4. Conducted Emission (Data Transfer)

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	26.74	47.49	20.75	N	10	16.74
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	9	1.56

AC Input Port/ Voltage: 240V/60Hz

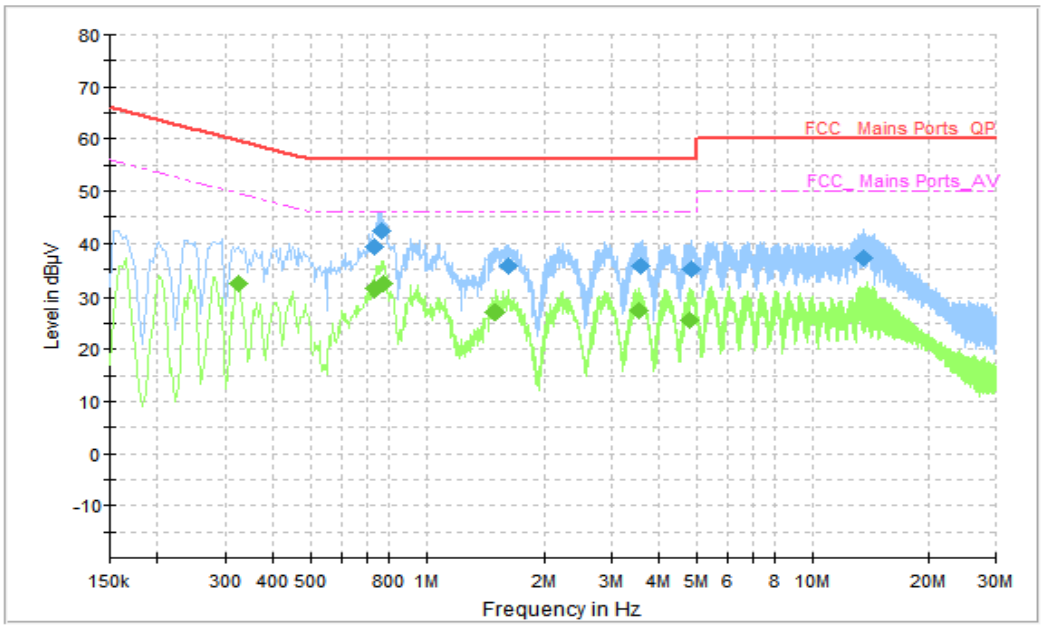


Figure A.2.5. Conducted Emission (Camera)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.730000	39.46	56.00	16.54	N	10	29.46
0.762000	42.38	56.00	13.62	N	10	32.38
1.622000	35.55	56.00	20.45	N	10	25.55
3.574000	35.59	56.00	20.41	N	10	25.59
4.830000	35.00	56.00	21.00	N	10	25
13.530000	37.28	60.00	22.72	N	10	27.28

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.326000	32.25	49.55	17.30	N	10	22.25
0.730000	31.49	46.00	14.51	N	10	21.49
0.774000	32.39	46.00	13.61	N	10	22.39
1.502000	27.22	46.00	18.78	N	10	17.22
3.522000	27.37	46.00	18.63	N	10	17.37
4.790000	25.67	46.00	20.33	N	10	15.67

AC Input Port/ Voltage: 240V/60Hz

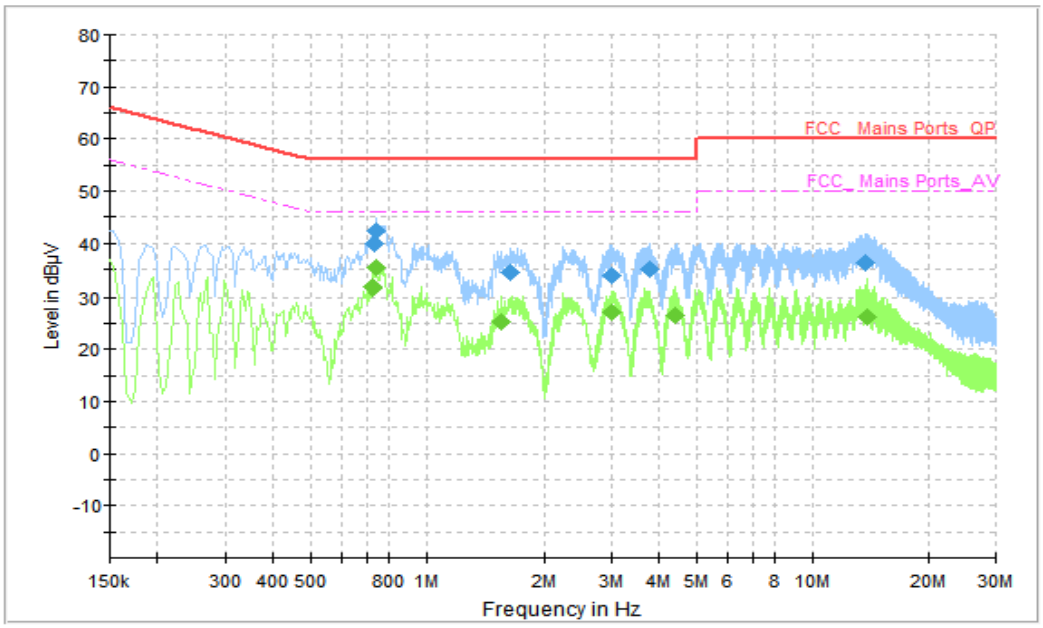


Figure A.2.6. Conducted Emission (Video Player)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.730000	40.04	56.00	15.96	N	10	30.04
0.738000	42.31	56.00	13.69	N	10	32.31
1.630000	34.51	56.00	21.49	N	10	24.51
2.990000	33.81	56.00	22.19	N	10	23.81
3.786000	35.16	56.00	20.84	N	10	25.16
13.774000	36.30	60.00	23.70	N	11	25.30

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.726000	31.67	46.00	14.33	N	10	21.67
0.738000	35.30	46.00	10.70	N	10	25.3
1.554000	25.41	46.00	20.59	N	10	15.41
3.014000	27.20	46.00	18.80	N	10	17.20
4.386000	26.55	46.00	19.45	N	10	16.55
13.882000	26.08	50.00	23.92	N	11	15.08

AC Input Port/ Voltage: 240V/60Hz

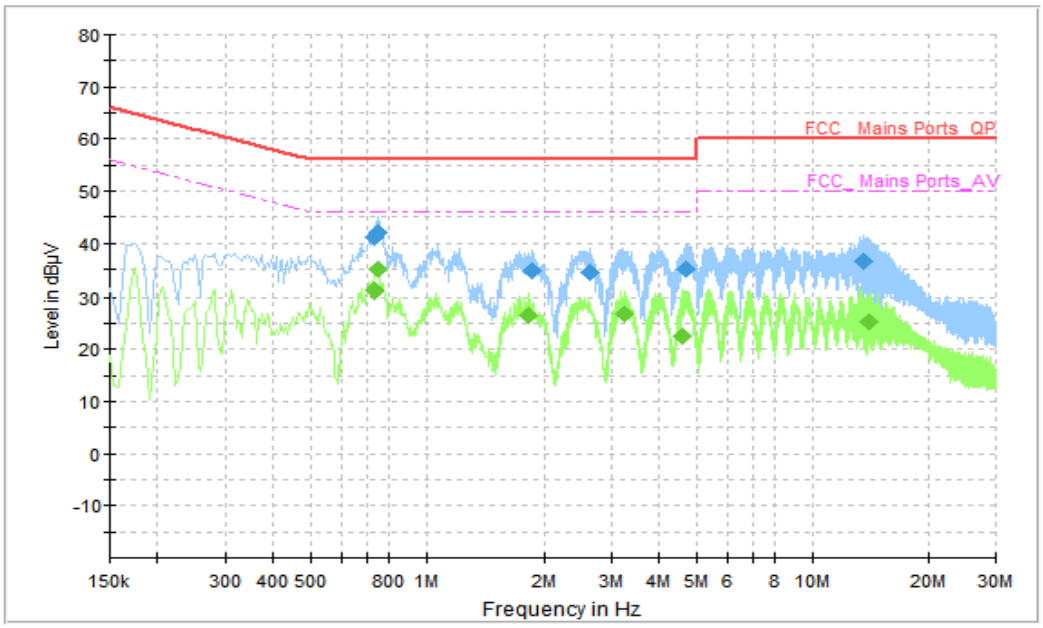


Figure A.2.7. Conducted Emission (Scan QR code)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.734000	41.27	56.00	14.73	N	10	31.27
0.750000	42.06	56.00	13.94	N	10	32.06
1.858000	34.78	56.00	21.22	N	10	24.78
2.634000	34.49	56.00	21.51	N	10	24.49
4.710000	35.06	56.00	20.94	N	10	25.06
13.554000	36.56	60.00	23.44	N	10	26.56

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.734000	31.20	46.00	14.80	L1	10	21.20
0.750000	34.94	46.00	11.06	N	10	24.94
1.814000	26.42	46.00	19.58	N	10	16.42
3.234000	26.68	46.00	19.32	N	10	16.68
4.574000	22.64	46.00	23.36	N	10	12.64
14.014000	25.40	50.00	24.60	N	11	14.40

AC Input Port/ Voltage: 240V/60Hz

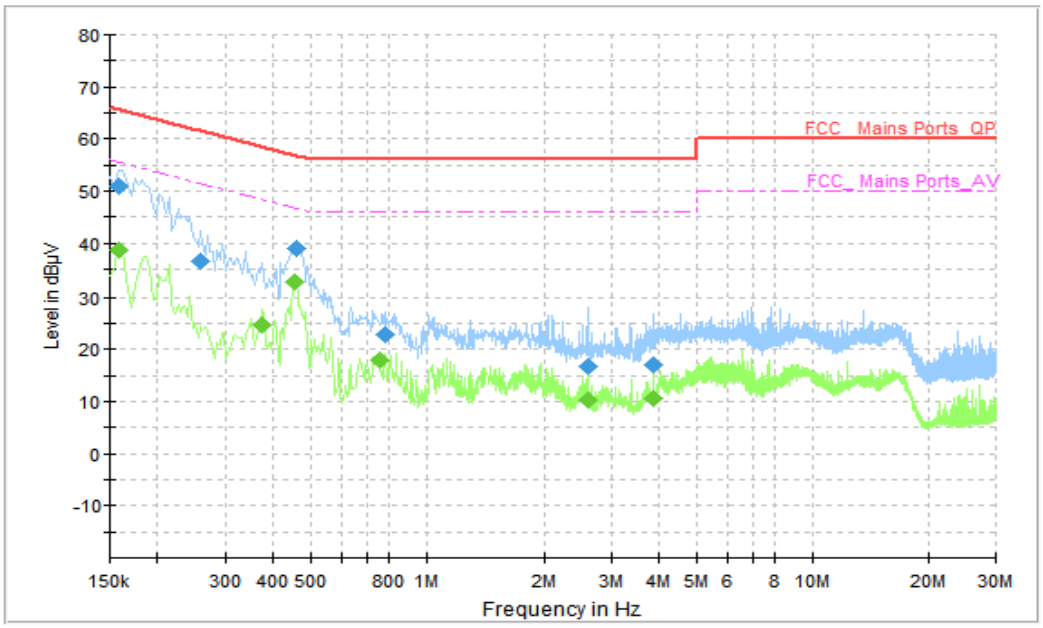


Figure A.2.8. Conducted Emission (Data Transfer)

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****