



TEST REPORT

No.24T04N002718-001-EMC

for

Ademco Inc.

Quicksilver wireless tablet

Model Name: PROWLTOUCH/PROWLTOUCHC/VISTAHTCHWLC

With

Hardware Version: Q1982_MB_V2

Software Version: GMTS700_Wireless_01.03.424.00025

FCC ID: CFS8DLPROWLTOUCH

Issued Date: 2024-12-11

Designation Number: CN1210

Note:

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

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
24T04N002718-001-EMC	Rev.0	1st edition	2024-12-11
24T04N002718-001-EMC	Rev.1	Update Software Version and Applicant Information	2024-12-11

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

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1. SUMMARY OF TEST REPORT

1.1. Test Items

Description	Quicksilver wireless tablet
Model Name	PROWLTOUCH/PROWLTOUCHC/VISTAHTCHWLC
Applicant's name	Ademco Inc.
Manufacturer's Name	Huaqin Telecom Techonology Co., Ltd.

1.2. Test Standards

FCC Part 15, Subpart B (10-1-2023 Edition); ANSI C63.4-2014.

1.3. Test Result

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

1.4. Testing Location

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

1.5. Project data

Testing Start Date: 2024-11-12

Testing End Date: 2024-11-21

1.6. Signature

Huang Yuqing

(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: Ademco Inc.
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11747, USA
Contact: Christian Fouth
Email: Christian.fouth@resideo.com
Tel.: 516-577-2000
Fax: /

2.2. Manufacturer Information

Company Name: Huaqin Telecom Techonology Co., Ltd.
Address: No.1 Building, No.9 Building, No. 399, Keyuan Road, Zhangjiang
Hi-tech Park, Shanghai, P.R. China
Contact: Stephanie Yin
Email: yinxuan@huaqin.com
Tel.: +86 19974076309
Fax: /



3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT

(AE)

3.1. About EUT

Description	Quicksilver wireless tablet
Model Name	PROWLTOUCH/PROWLTOUCHC/VISTAHTCHWLC
FCC ID	CFS8DLPROWLTOUCH
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
UT03aa	HB8SAS00035	Q1982_MB_ V2	GMTS700_Wireless_01. 03.424.00025	2024-11-12

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

3.3. Internal Identification of AE

AE ID*	Description
AE1	Battery
AE2	Charger
AE3	USB Cable

AE1

Model	P-504478
Manufacturer	Dongguan Amperex Technology Limited
Capacity	2830mAh
Nominal Voltage	3.85V

AE2

Model	TPA-97050150U01
Manufacturer	SHENZHEN TIANYIN ELECTRONICS CO., LT

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.



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3.4. EUT Set-ups

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

3.5. General Description

The Equipment Under Test (EUT) is a model of Quicksilver wireless tablet with internal antenna. It has Camera, Charging and USB memory functions.

It consists of normal options: Battery.

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.

PROWLTOUCH/PROWLTOUCHC/VISTAHTCHWLC is a variant model based on PROWLTOUCH/PROWLTOUCHC for conformance test.

According to client's description, the table below shows the differences:

PROWLTOUCH/PROWLTOUCHC		PROWLTOUCH/PROWLTOUCHC/VISTAHTCHWLC	
Specification	Supplier	Specification	Supplier
PTVS5V0Z1USKN	NXP	PTVS5V0Z1USK	NXP
08EMCP08-NL3DT227-A01	Kingston	08EM08-N3GMV36-GA02	Kingston
(P)(T)TVS,Bi-directional,5V,16pF,DFN1006-2L,1.0x0.6x0.5(±0.05)mm,MESD5V0SF11B,Millersemi	Millersemi	(T)TVS(Transient Voltage Suppressor),Bi-directional,5V,7pF,DFN-2L,1.0x0.6mm,WE05DF-BN,WAYON	WAYON
ATECC508A-MAHDA-S	Microchip	cancellation of the encryption chip (NA)	/
WSB5819WA-2/TR	Will	PSBD3D40V1H	Prisemi
Shielding_ Without insulation _ stamping _ electric connection	ECT	Shielding_ Without insulation _ stamping _ electric connection	Jinglitong
BB shield cover _Cover_ without insulation _ stamping _ electric connection	ECT	BB shield cover _Cover_ without insulation _ stamping _ electric connection	Jinglitong

In addition to this, the standard has been upgraded from FCC Part 15, Subpart B (10-1-2018 Edition) to FCC Part 15, Subpart B (10-1-2023 Edition).

PROWLTOUCH/PROWLTOUCHC/VISTAHTCHWLC the following tests need to be performed:

NO.	Test item	EUT ID	Operating mode
1	Conducted Emission	UT03aa	Camera/Data Transfer
2	Radiated Emission	UT03aa	Camera/Data Transfer

Other results are cited from the initial report.

The report number for initial model is I19N01349-EMC.

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	(10-1-2023 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 °C, Max. = 35 °C
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

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

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. =20 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz> 60 dB; 1MHz-18000MHz>90 dB
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/IC rules	Section in this report	Verdict
1	Radiated Emission	15.109(a)/ Section 6.2	A.1	P
2	Conducted Emission	15.107(a)/ Section 6.1	A.2	P

6.3. Statement

6.3.1 Statements of conformity

1. Since the information of samples in this report is provided by the client, the laboratory is not responsible for the authenticity of sample information.

2. 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)
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	2025.11.21	1 year
2.	Test Receiver	ESCI	100702	R&S	2025.01.10	1 year
3.	Spectrum Analyzer	FSV40	101192	R&S	2025.01.12	1 year
4.	Hybrid antenna	VULB 9163	330	Schwarzbeck	2027.04.21	3 years
5.	Horn Antenna	3117	00066577	ETS-Lindgren	2025.04.17	3 years
6.	LISN	ENV216	102067	R&S	2025.10.06	1 year
7.	Anechoic Chamber	FACT3-2.0	1285	ETS-Lindgren	2025.05.28	2 years



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9. TEST ACCESSORY UTILIZED

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

10. MEASURING SOFTWARE

No.	Name	Manufacturer	Version
1	EMC32	Rohde & Schwarz	V10.50.40

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.

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 USB flash disk reading and erasing the data after copy action was finished.

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. For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Y plane) were recorded in this report.

A.1.3 Measurement Limit

Limit from Part 15.109(a)

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

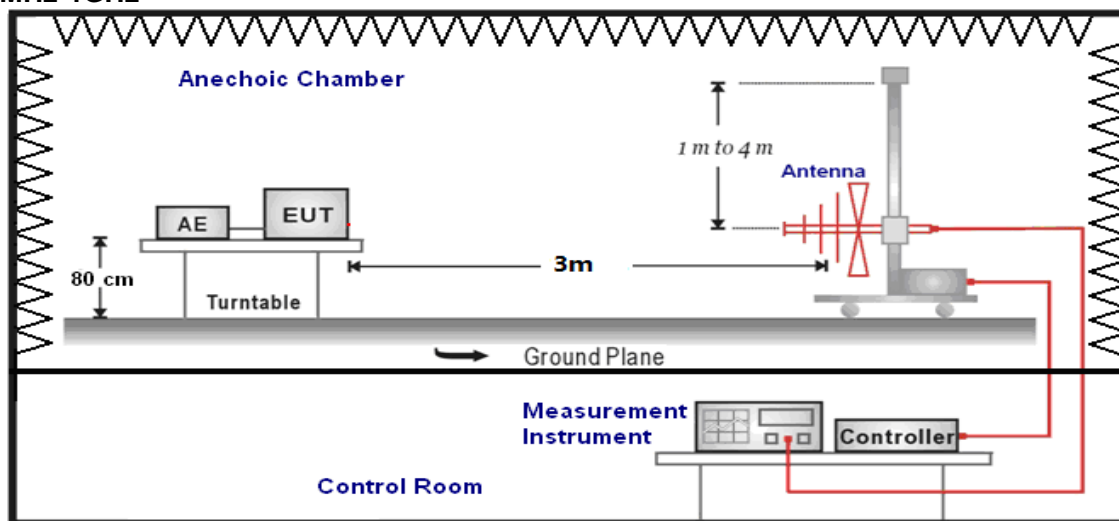
*Note: The original limit is defined at 10m test distance. This limit is calculated according to CISPR requirements.

A.1.4 Test Condition

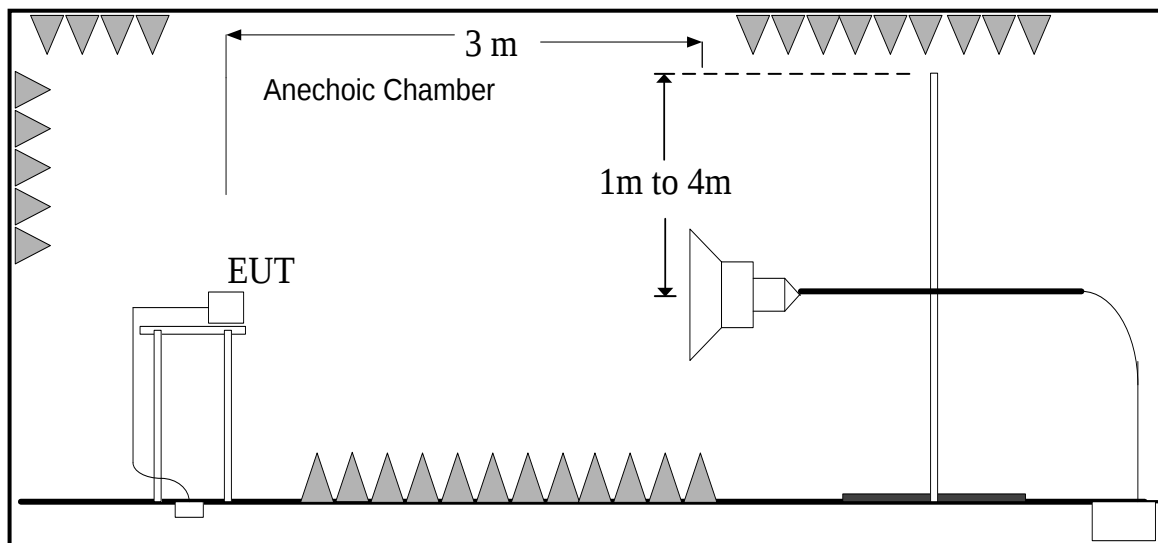
Frequency of emission (MHz)	RBW/VBW	Sweep Time(s)
30-1000	120kHz (IF bandwidth)	5
Above 1000	1MHz/3MHz	15

A.1.5 Test set-up:

30MHz-1GHz



1GHz-40GHz



A.1.6 Measurement Results

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

The measurement results are obtained as described below:

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

Where

G_A : Antenna factor of receive antenna

G_{PL} : Path Loss

P_{Mea} : Measurement result on receiver.

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

Note: the result contains vertical part and Horizontal part

Camera

Frequency range (MHz)	Quasi-Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
		UT03aa/Set.1	
30-88	40.00	See Figure A.1.1.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dB μ V/m)	Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
			UT03aa/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.	

Data Transfer: EUT TO PC

Frequency range (MHz)	Quasi-Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
		UT03aa/Set.2	
30-88	40.00	See Figure A.1.5.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dB μ V/m)	Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
			UT03aa/Set.2	
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.	

Data Transfer: PC TO EUT

Frequency range (MHz)	Quasi-Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
		UT03aa/Set.2	
30-88	40.00	See Figure A.1.9.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dB μ V/m)	Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
			UT03aa/Set.2	
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: TF TO PC

Frequency range (MHz)	Quasi-Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
		UT03aa/Set.2	
30-88	40.00	See Figure A.1.13.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dB μ V/m)	Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
			UT03aa/Set.2	
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: PC TO TF

Frequency range (MHz)	Quasi-Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
		UT03aa/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 (dB μ V/m)	Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
			UT03aa/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.	

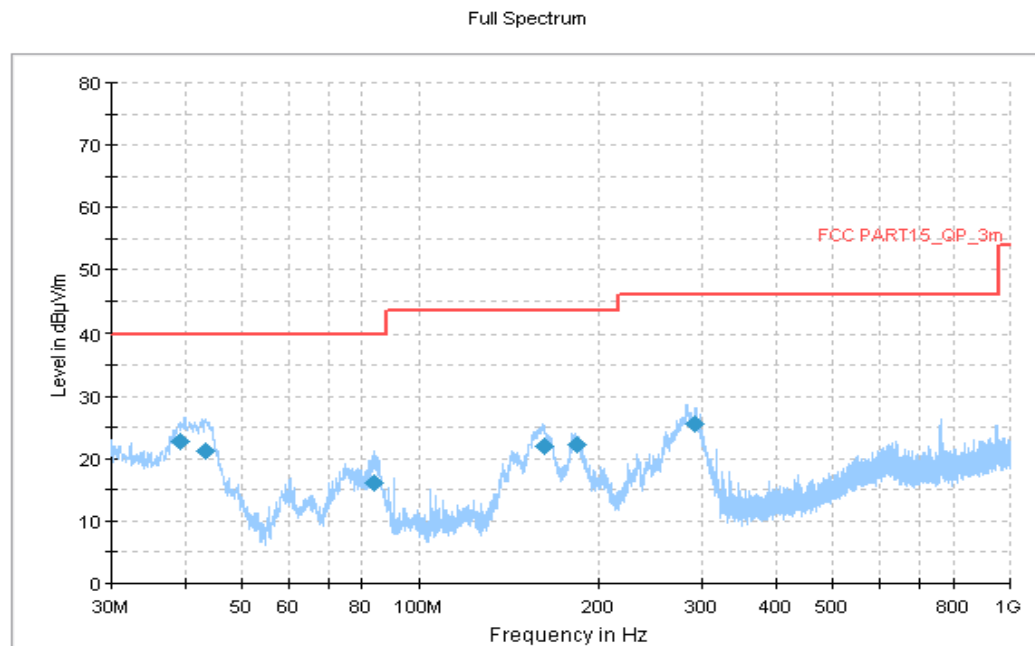


Figure A.1.1. Radiated Emission (Camera, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	ARpl (dB/m)	PMea (dBμV)
39.161111	22.66	40.00	17.34	V	-22.5	45.16
43.364444	21.16	40.00	18.84	V	-25.1	46.26
83.888889	16.12	40.00	23.88	V	-25.7	41.82
161.488889	22.04	43.52	21.48	H	-26.4	48.44
183.960556	22.15	43.52	21.37	H	-26.2	48.35
292.115556	25.48	46.02	20.54	H	-22.3	47.78

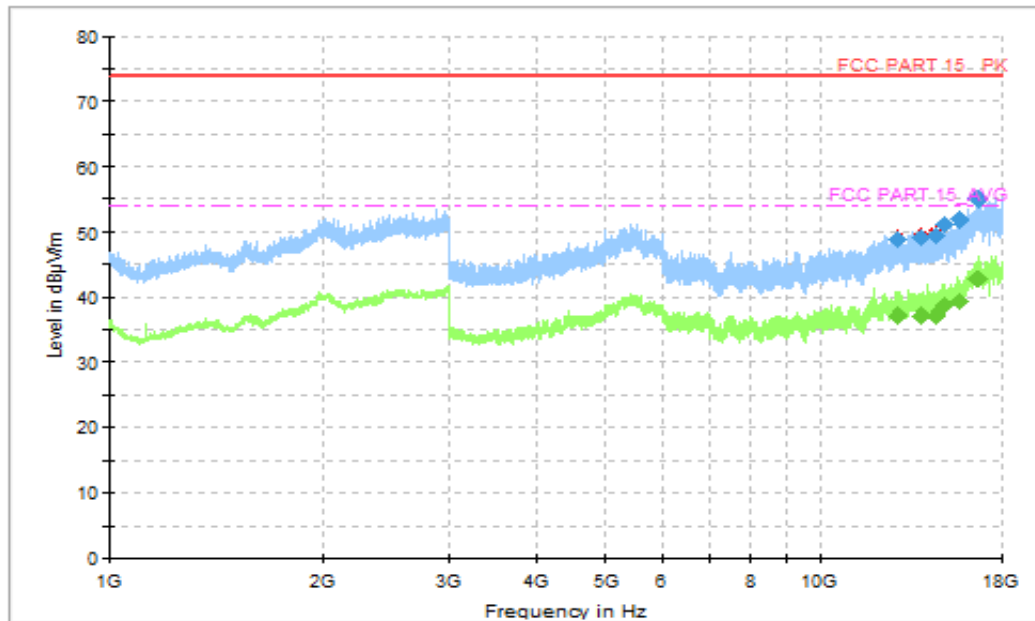


Figure A.1.2. Radiated Emission (Camera, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBμV)
12860.142857	48.86	74.00	25.14	H	12.6	36.26
13904.571429	49.27	74.00	24.73	H	13.0	36.27
14551.714286	49.38	74.00	24.62	H	13.2	36.18
14999.142857	51.04	74.00	22.96	V	14.4	36.64
15724.714286	51.98	74.00	22.02	V	14.3	37.68
16722.428571	55.11	74.00	18.89	H	18.9	36.21

Final_Results_AVG

Frequency(MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBμV)
12860.142857	37.10	54.00	16.90	H	12.6	24.50
13904.571429	37.25	54.00	16.75	H	13.0	24.25
14551.714286	37.19	54.00	16.81	H	13.2	23.99
14999.142857	38.95	54.00	15.05	V	14.4	24.55
15724.714286	39.35	54.00	14.65	V	14.3	25.05
16722.428571	42.78	54.00	11.22	H	18.9	23.88

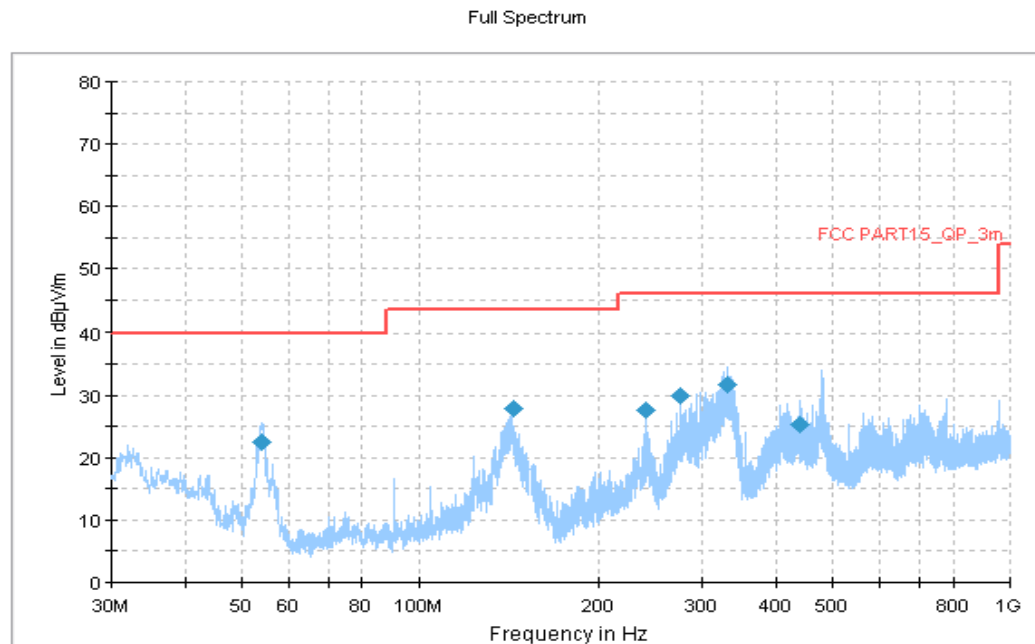


Figure A.1.3. Radiated Emission (Data Transfer: EUT TO PC, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	ARpl (dB/m)	PMea (dBμV)
54.088333	22.41	40.00	17.59	V	-31.1	53.51
143.597778	27.84	43.52	15.68	V	-25.8	53.64
240.005000	27.60	46.02	18.42	H	-24.3	51.90
275.194444	29.91	46.02	16.11	V	-22.9	52.81
331.238889	31.65	46.02	14.37	V	-20.7	52.35
439.609444	25.43	46.02	20.59	V	-18.0	43.43

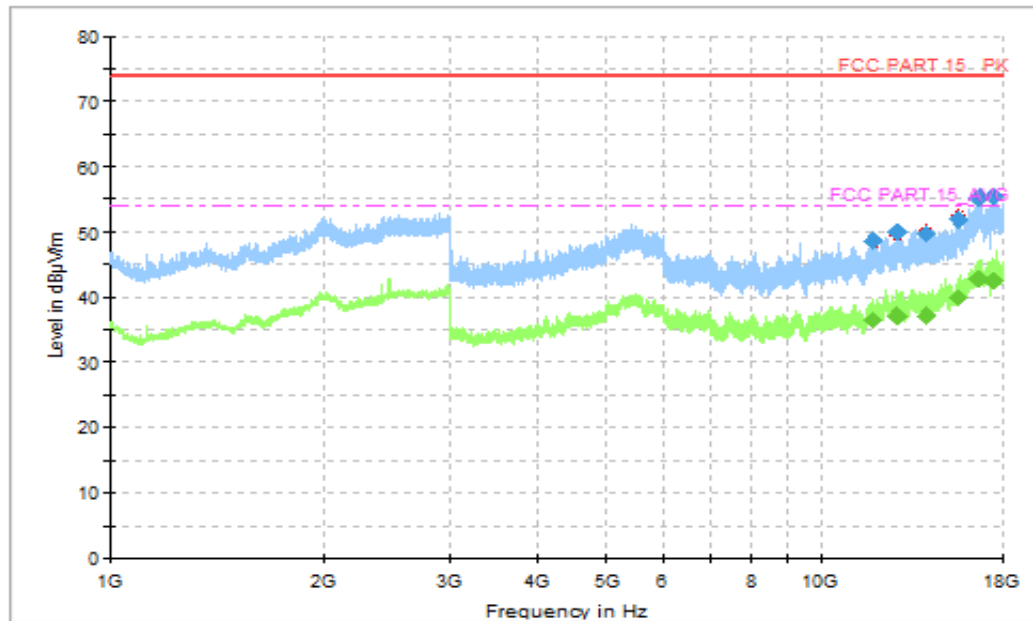


Figure A.1.4. Radiated Emission (Data Transfer: EUT TO PC, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBμV)
11856.428572	48.72	74.00	25.28	V	12.1	36.62
12793.714286	49.80	74.00	24.20	H	12.8	37
14093.571429	49.65	74.00	24.35	V	13.2	36.45
15666.000000	51.93	74.00	22.07	H	14.1	37.83
16699.285714	55.31	74.00	18.69	H	19.0	36.31
17513.142857	55.47	74.00	18.53	H	20.2	35.27

Final_Results_AVG

Frequency(MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBμV)
11856.428572	36.46	54.00	17.54	V	12.1	24.36
12793.714286	37.19	54.00	16.81	H	12.8	24.39
14093.571429	37.24	54.00	16.76	V	13.2	24.04
15666.000000	39.78	54.00	14.22	H	14.1	25.68
16699.285714	42.92	54.00	11.08	H	19.0	23.92
17513.142857	42.53	54.00	11.47	H	20.2	22.33

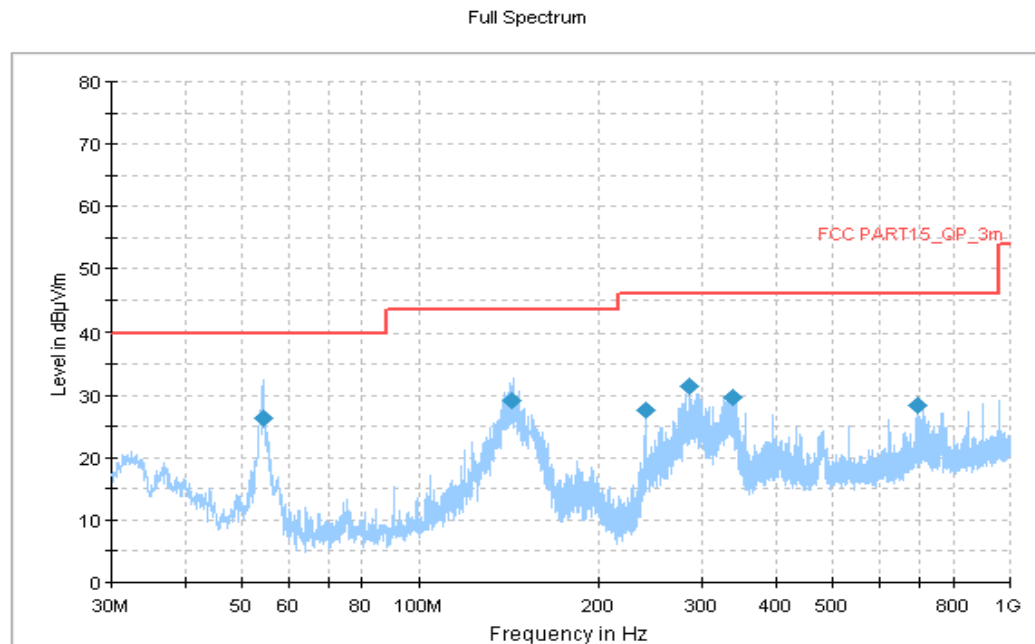


Figure A.1.5. Radiated Emission (Data Transfer: PC TO EUT, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	ARpl (dB/m)	PMea (dBμV)
54.250000	26.29	40.00	13.71	V	-31.1	57.39
142.897222	29.21	43.52	14.31	V	-25.8	55.01
240.005000	27.54	46.02	18.48	H	-24.3	51.84
285.595000	31.42	46.02	14.60	V	-22.5	53.92
337.705556	29.65	46.02	16.37	V	-20.7	50.35
695.312222	28.39	46.02	17.63	V	-13.0	41.39

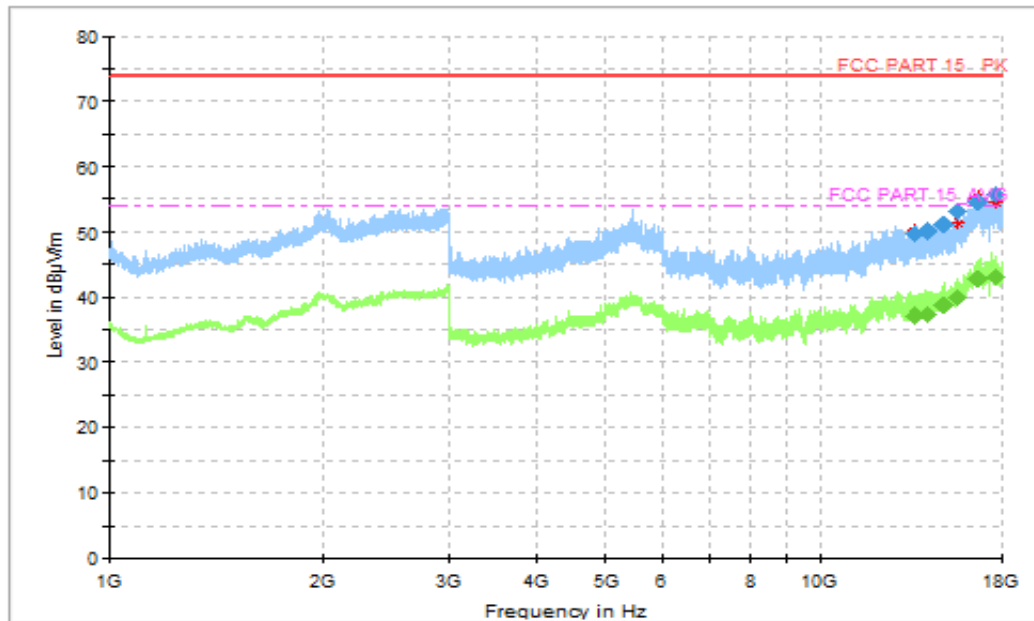


Figure A.1.6. Radiated Emission (Data Transfer: PC TO EUT, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBμV)
13545.857143	49.62	74.00	24.38	H	13.0	36.62
14140.714286	50.22	74.00	23.78	V	13.2	37.02
14939.571429	51.18	74.00	22.82	H	15.0	36.18
15627.000000	53.16	74.00	20.84	H	13.9	39.26
16719.857143	54.66	74.00	19.34	H	18.9	35.76
17711.571429	55.73	74.00	18.27	V	20.5	35.23

Final_Results_AVG

Frequency(MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBμV)
13545.857143	37.30	54.00	16.70	H	13.0	24.30
14140.714286	37.32	54.00	16.68	V	13.2	24.12
14939.571429	38.81	54.00	15.19	H	15.0	23.81
15627.000000	39.77	54.00	14.23	H	13.9	25.87
16719.857143	42.75	54.00	11.25	H	18.9	23.85
17711.571429	43.13	54.00	10.87	V	20.5	22.63

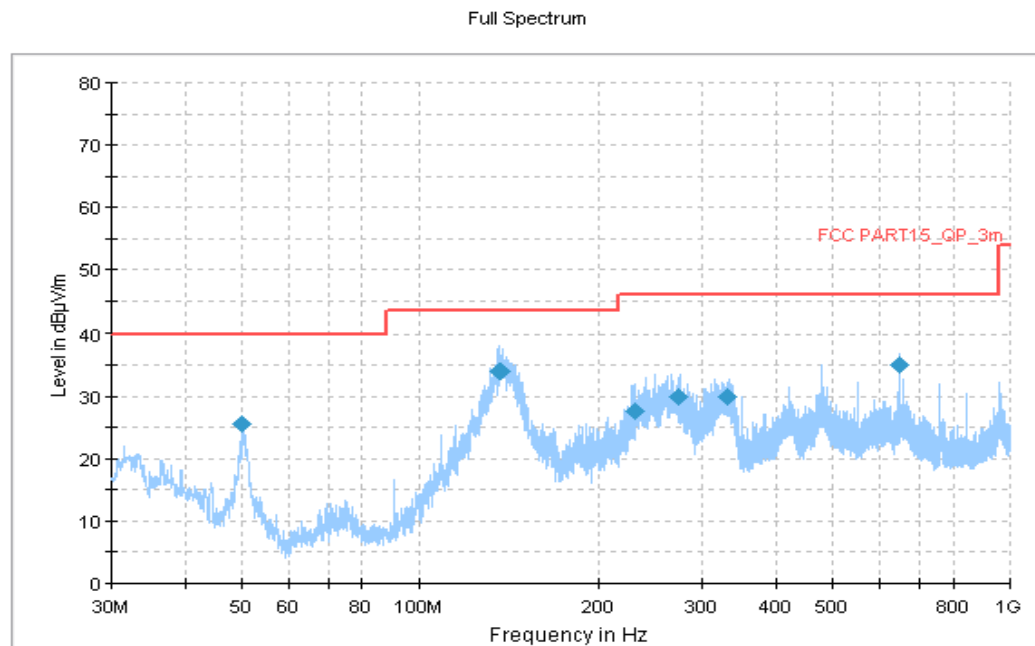


Figure A.1.7. Radiated Emission (Data Transfer: TF TO PC, 30MHz to 1GHz)
Final_Results

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	ARpl (dB/m)	PMea (dBμV)
49.938889	25.63	40.00	14.37	V	-29.5	55.13
136.161111	33.94	43.52	9.58	H	-25.1	59.04
229.981667	27.56	46.02	18.46	H	-24.9	52.46
274.493889	29.99	46.02	16.03	H	-22.9	52.89
331.238889	29.92	46.02	16.10	V	-20.7	50.62
650.045556	34.90	46.02	11.12	H	-13.8	48.70

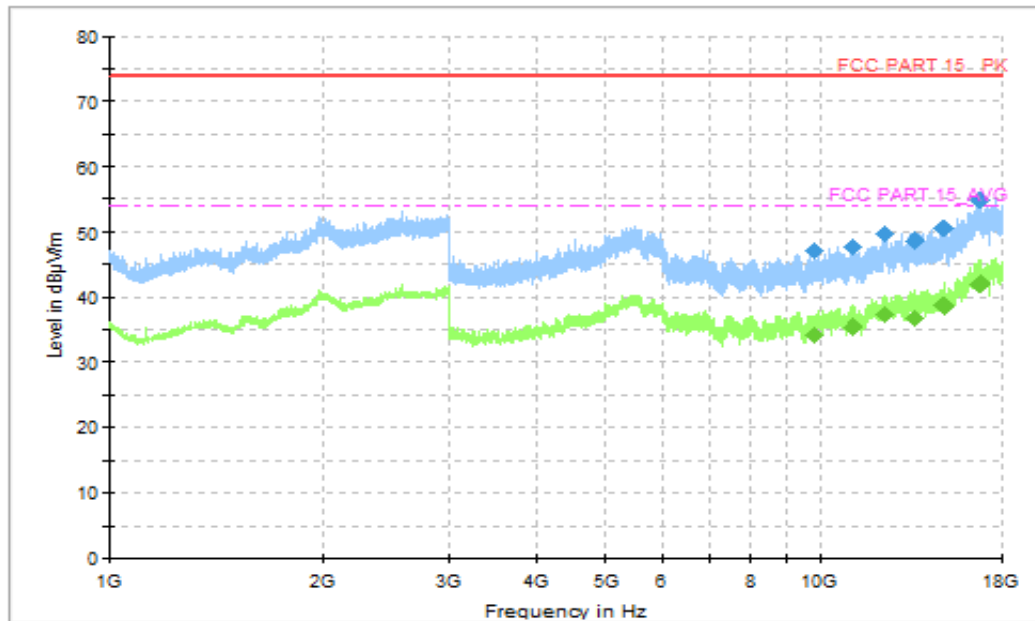


Figure A.1.8. Radiated Emission (Data Transfer: TF TO PC, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBμV)
9810.428572	47.31	74.00	26.69	H	8.8	38.51
11138.142857	47.63	74.00	26.37	H	10.6	37.03
12357.000000	49.64	74.00	24.36	V	12.8	36.84
13584.428572	48.79	74.00	25.21	H	13.0	35.79
14911.714286	50.70	74.00	23.30	H	14.9	35.8
16775.571429	54.82	74.00	19.18	V	18.6	36.22

Final_Results_AVG

Frequency(MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBμV)
9810.428572	34.36	54.00	19.64	H	8.8	25.56
11138.142857	35.38	54.00	18.62	H	10.6	24.78
12357.000000	37.34	54.00	16.66	V	12.8	24.54
13584.428572	36.74	54.00	17.26	H	13.0	23.74
14911.714286	38.60	54.00	15.40	H	14.9	23.7
16775.571429	42.09	54.00	11.91	V	18.6	23.49

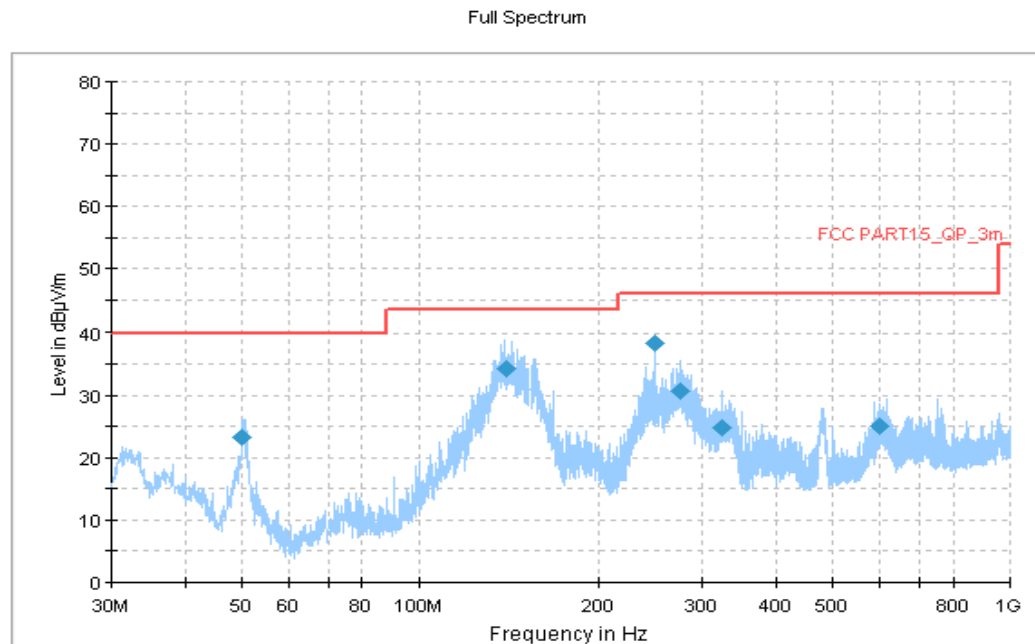


Figure A.1.9. Radiated Emission (Data Transfer: PC TO TF, 30MHz to 1GHz)

Final_Results

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	ARpl (dB/m)	PMea (dBμV)
49.992778	23.25	40.00	16.75	H	-29.6	52.85
139.448333	34.36	43.52	9.16	H	-25.5	59.86
249.974444	38.39	46.02	7.63	H	-24.0	62.39
275.086667	30.74	46.02	15.28	H	-22.9	53.64
324.233333	24.70	46.02	21.32	V	-21.1	45.8
599.982778	25.07	46.02	20.95	H	-14.7	39.77

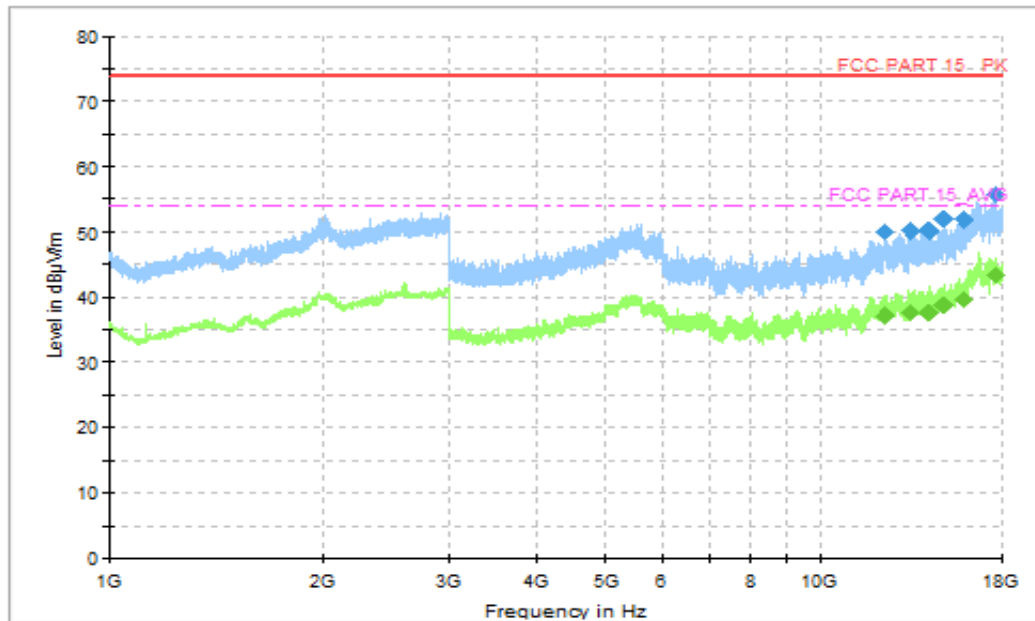


Figure A.1.10. Radiated Emission (Data Transfer: PC TO TF, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBμV)
12354.428572	49.93	74.00	24.07	V	12.8	37.13
13405.714286	50.06	74.00	23.94	H	13.0	37.06
14192.571429	50.17	74.00	23.83	H	13.3	36.87
14943.000000	52.02	74.00	21.98	H	15.0	37.02
15946.714286	51.89	74.00	22.11	H	15.2	36.69
17696.571429	55.72	74.00	18.28	V	20.6	35.12

Final_Results_AVG

Frequency(MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBμV)
12354.428572	37.28	54.00	16.72	V	12.8	24.48
13405.714286	37.66	54.00	16.34	H	13.0	24.66
14192.571429	37.67	54.00	16.33	H	13.3	24.37
14943.000000	38.80	54.00	15.20	H	15.0	23.80
15946.714286	39.63	54.00	14.37	H	15.2	24.43
17696.571429	43.30	54.00	10.70	V	20.6	22.70

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.

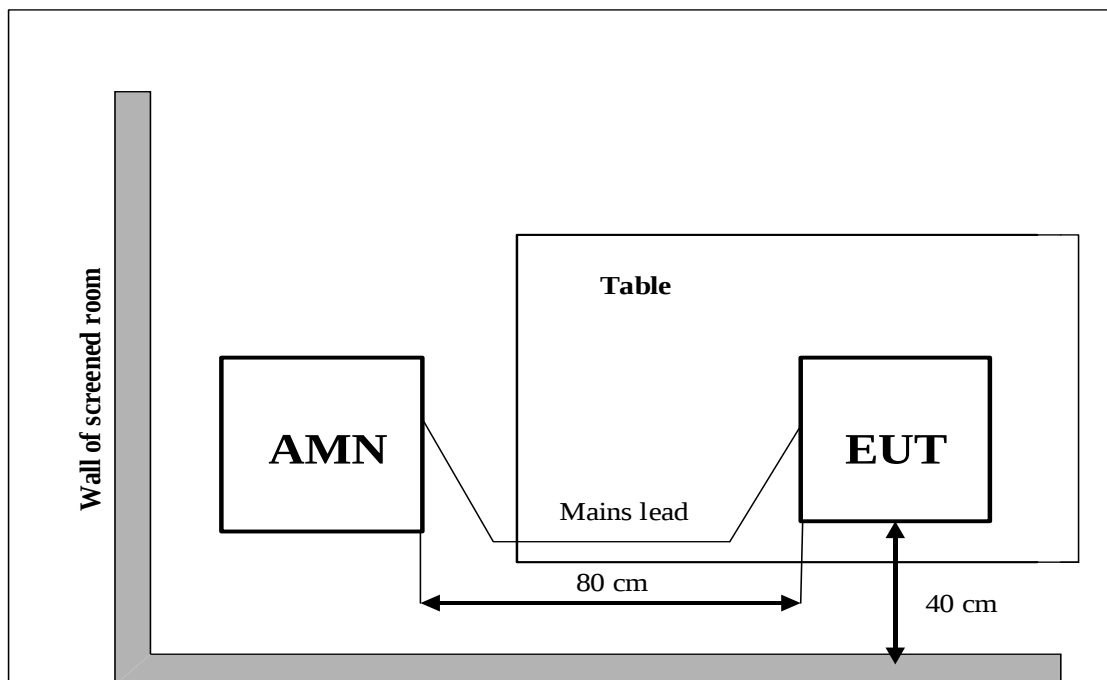
Video Player: The EUT is connected to a charger for charging and keeping on playing mp3.

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 USB flash disk reading and erasing the data after copy action was finished.

A.2.3 Measurement Limit

Frequency of emission (MHz)	Conducted limit (dBµV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50
*Decreases with the logarithm of the frequency		

A.2.4 Test set-up:



A.2.5 Test Condition in charging mode

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

RBW	Sweep Time(s)
9kHz	1

A.2.6 Measurement Results

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

Where

Corr: PathLoss + Voltage Division Factor

PMea: Measurement result on receiver.

Camera

AC Input Port/ Voltage: 120V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV)	Conclusion
			UT03aa/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.				

Camera

AC Input Port/ Voltage: 240V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV)	Conclusion
			UT03aa/Set.1	
0.15 to 0.5	66 to 56	56 to 46	See Figure A.2.2.	P
0.5 to 5	56	46		
5 to 30	60	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

Data Transfer

AC Input Port/ Voltage: 120V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV)	Conclusion
			UT03aa/Set.2	
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: 240V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV)	Conclusion
			UT03aa/Set.2	
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.				

AC Input Port/ Voltage: 120V/60Hz

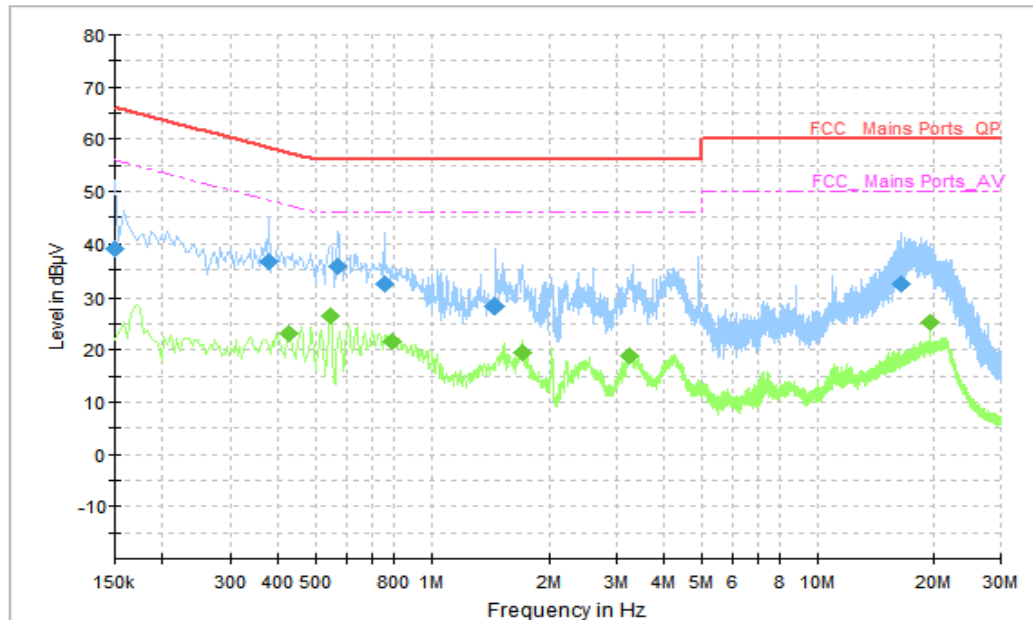


Figure A.2.1. Conducted Emission (Camera)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	PMea (dBμV)
0.150000	39.00	66.00	27.00	N	7	32.00
0.378000	36.72	58.32	21.61	N	10	26.72
0.570000	35.76	56.00	20.24	N	10	25.76
0.754000	32.41	56.00	23.59	N	10	22.41
1.458000	28.19	56.00	27.81	N	10	18.19
16.434000	32.35	60.00	27.65	L1	10	22.35

Final_Result_AVG

Frequency (MHz)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	PMea (dBμV)
0.426000	23.14	47.33	24.19	L1	10	13.14
0.546000	26.53	46.00	19.47	N	10	16.53
0.794000	21.73	46.00	24.27	N	10	11.73
1.706000	19.47	46.00	26.53	L1	10	9.47
3.242000	18.70	46.00	27.30	L1	10	8.7
19.662000	25.30	50.00	24.70	N	10	15.30

AC Input Port/ Voltage: 240V/60Hz

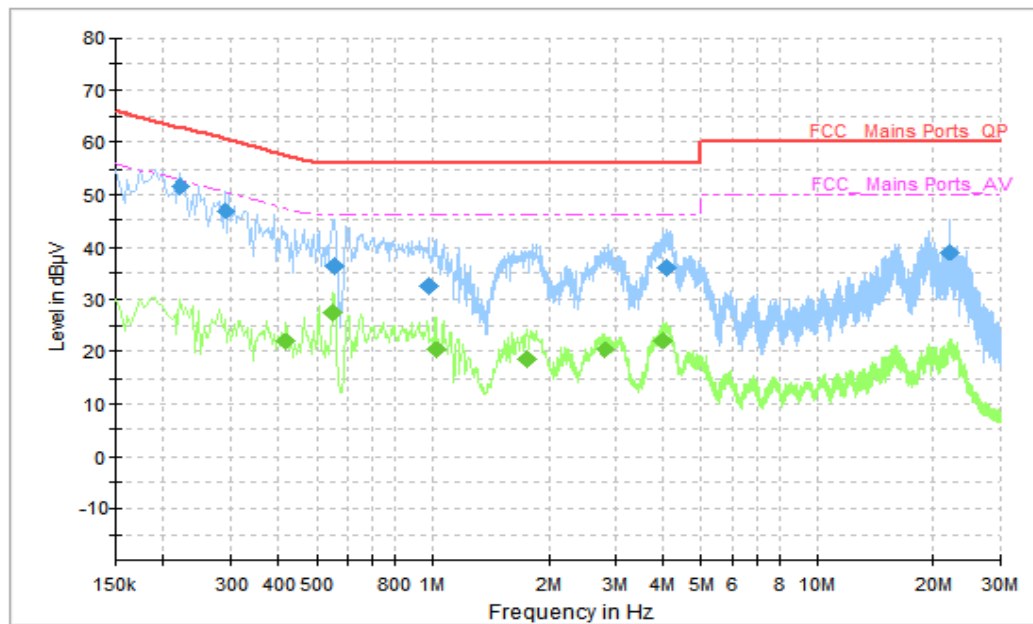


Figure A.2.2. Conducted Emission (Camera)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	PMea (dBμV)
0.222000	51.58	62.74	11.17	N	10	41.58
0.290000	47.11	60.52	13.42	N	10	37.11
0.558000	36.37	56.00	19.63	N	10	26.37
0.982000	32.63	56.00	23.37	N	10	22.63
4.082000	35.83	56.00	20.17	N	10	25.83
22.126000	38.99	60.00	21.01	L1	10	28.99

Final_Result_AVG

Frequency (MHz)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	PMea (dBμV)
0.418000	21.84	47.49	25.65	L1	10	11.84
0.554000	27.54	46.00	18.46	L1	10	17.54
1.022000	20.29	46.00	25.71	L1	10	10.29
1.762000	18.61	46.00	27.39	N	10	8.61
2.806000	20.50	46.00	25.50	N	10	10.5
3.990000	22.35	46.00	23.65	N	10	12.35

AC Input Port/ Voltage: 120V/60Hz

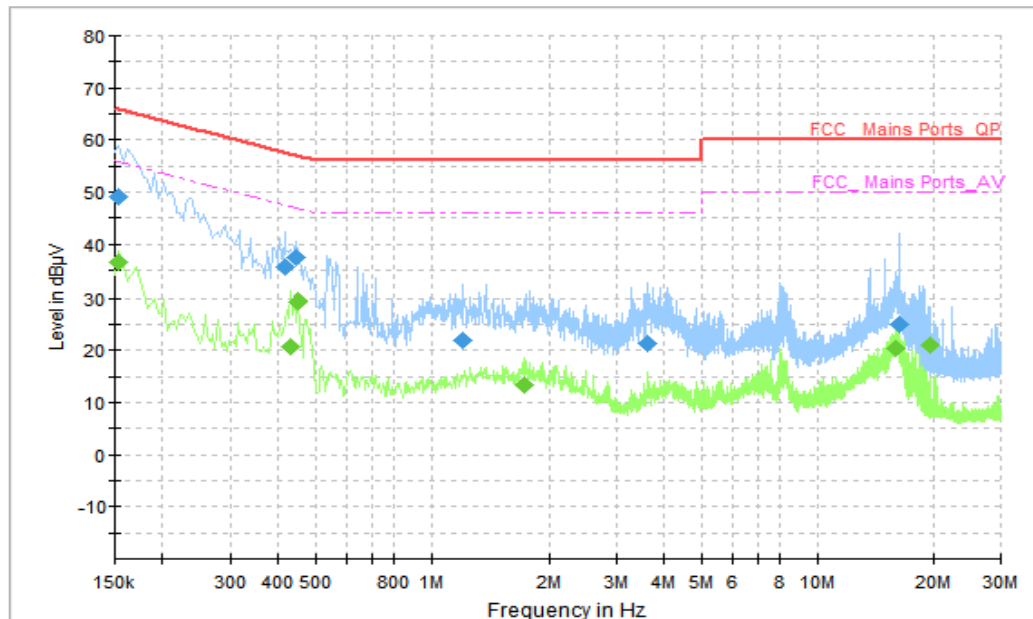


Figure A.2.3. Conducted Emission(Data Transfer)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	PMea (dBμV)
0.154000	49.19	65.78	16.59	N	7	42.19
0.414000	35.63	57.57	21.94	N	10	25.63
0.442000	37.51	57.02	19.51	L1	10	27.51
1.206000	21.80	56.00	34.20	N	10	11.80
3.594000	21.39	56.00	34.61	L1	10	11.39
16.250000	25.07	60.00	34.93	N	10	15.07

Final_Result_AVG

Frequency (MHz)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	PMea (dBμV)
0.154000	36.68	55.78	19.10	N	7	29.68
0.430000	20.61	47.25	26.65	N	10	10.61
0.450000	29.13	46.88	17.75	L1	10	19.13
1.734000	13.19	46.00	32.81	L1	10	3.19
16.018000	20.24	50.00	29.76	L1	10	10.24
19.658000	21.12	50.00	28.88	N	10	11.12

AC Input Port/ Voltage: 240V/60Hz

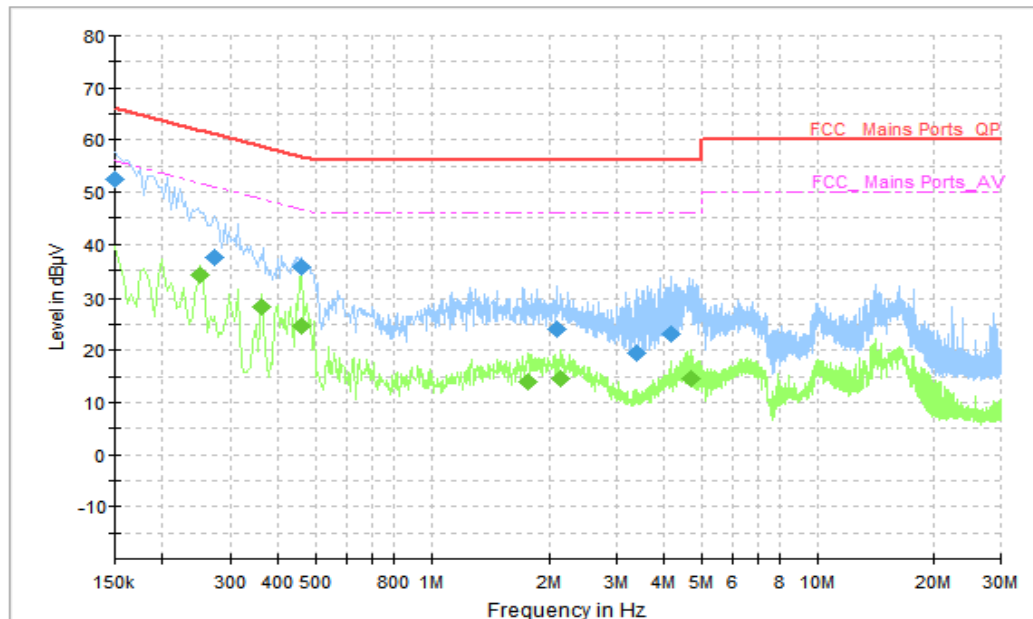


Figure A.2.4. Conducted Emission(Data Transfer)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	PMea (dBμV)
0.150000	52.35	66.00	13.65	L1	10	42.35
0.274000	37.44	61.00	23.56	L1	10	27.44
0.458000	35.59	56.73	21.14	L1	10	25.59
2.102000	24.09	56.00	31.91	N	10	14.09
3.374000	19.57	56.00	36.43	N	10	9.57
4.154000	22.97	56.00	33.03	N	10	12.97

Final_Result_AVG

Frequency (MHz)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	PMea (dBμV)
0.250000	34.26	51.76	17.50	N	10	24.26
0.362000	28.23	48.68	20.45	L1	10	18.23
0.458000	24.66	46.73	22.07	L1	10	14.66
1.766000	14.03	46.00	31.97	N	10	4.03
2.154000	14.54	46.00	31.46	N	10	4.54
4.698000	14.42	46.00	31.58	N	10	4.42

****END OF REPORT****