TESTREPORT

No.I21N00548-EMC

HMD Global Oy

Smart Phone

Model Name：TA-1339

With

Hardware Version:V01

Software Version:00WW_0_070

FCC ID: 2AJOTTA-1339

Issued Date: 2021-03-10

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
I21N00548-EMC	Rev.0	1st edition	2021-03-10

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

CONTENTS

1. SUMMARY OF TEST REPORT 4
1.1. TEST ITEMS 4
1.2. TEST STANDARDS 4
1.3. TEST RESULT 4
1.4. TESTING LOCATION 4
1.5. PROJECT DATA 4
1.6. SIGNATURE 4
2. CLIENTINFORMATION 5
2.1. APPLICANT INFORMATION 5
2.2. MANUFACTURER INFORMATION 5
3. EQUIPMENT UNDERTEST (EUT) AND ANCILLARY EQUIPMENT (AE) 6
3.1. ABOUT EUT 6
3.2. INTERNAL IDENTIFICATION OF EUT 6
3.3. INTERNAL IDENTIFICATION OF AE 6
3.4. EUT SET-UPS 7
3.5. GENERAL DESCRIPTION 8
4. REFERENCE DOCUMENTS 9
4.1. REFERENCE DOCUMENTS FOR TESTING 9
5. LABORATORY ENVIRONMENT 10
6. SUMMARY OF TEST RESULTS 11
6.1. TESTING ENVIRONMENT 11
6.2. SUMMARY OF MEASUREMENT RESULTS 11
6.3. STATEMENT 11
7. MEASUREMENT UNCERTAINTY 12
8. TEST FACILITIES UTILIZED 12
9. TEST ACCESSORY UTILIZED 12
ANNEX A: MEASUREMENT RESULTS 13
A.1 RADIATED EMISSION (§15.109(A)) 13
A.2 CONDUCTED EMISSION (§15.107(A)) 45

1. Summary of Test Report

1.1. Test Items

Description	Smart Phone
Model Name	TA-1339
Applicant's name	HMD Global Oy
Manufacturer's Name	HMD Global Oy

1.2. Test Standards

FCC Part 15, Subpart B10-1-2019 Edition; ANSI C63.4 2014

1.3. Test Result

Pass

Total test 2 items, pass 2 items. Please refer to "6.2 Summary of Measurement Results"

1.4. Testing Location

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

1.5. Project data

Testing Start Date: 2021-02-25 Testing End Date: 2021-03-07

1.6. Signature

LiangYong
(Prepared this test report)

Zhang Yunzhuan
(Reviewed this test report)

Cao Junfei
(Approvedthis test report)

2. ClientInformation

2.1. Applicant Information

Company Name:	HMD Global Oy
Address:	Bertel Jungin aukio 9, 02600 Espoo, Finland
Contact	Rosario Casillo
Email	rosario.casillo@hmdglobal.com
Tel.	+393 31 6272922

2.2. Manufacturer Information

Company Name:	HMD Global Oy
Address:	Bertel Jungin aukio 9, 02600 Espoo, Finland
Contact	Rosario Casillo
Email	rosario.casillo@hmdglobal.com
Tel.	+393 31 6272922

3. Equipment UnderTest (EUT) and Ancillary Equipment (AE)

3.1. About EUT

Description	Smart Phone
Model Name	TA-1339
FCC ID	2AJOTTA-1339
Antenna Type	Internal Antenna
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	357321210004569	V01	00WW_0_070	2021-02-19
UT04aa	357321210004262	V01	00WW_0_070	2021-02-19

*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

Model	BL-29CI
Manufacturer	Fenghua Battery Co.,Ltd.
Capacity	2950mAh
Nominal Voltage	3.8V

AE2

Model	A18A-050100U-US2
Manufacturer	Dongguan Aohai Technology Co.,Ltd.

AE3

Model	MO34B1000100
Manufacturer	FKY-QY Electronic Technology Co. Ltd

AE4

Model	JWEP1199-M01H (178210504)
Manufacturer	JUWEI ELECTRONICS CO.,LTD

*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
Set.1	EUT+AE1+AE2+AE3+AE4
Set.2	EUT+AE1+AE3+AE4+PC

3.5. General Description

The Equipment Under Test (EUT) is a model of Multi-band GSM/WCDMA/LTE Smart Phone with Bluetooth, WLAN with internal antenna.

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

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

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

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	10-1-2019 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)	A.1	P
2	Conducted Emission	15.107(a)	A.2	P

6.3. Statement

6.3.1 Statements of conformity

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

7. Measurement uncertainty

Test item	Frequency ranges	Measurement uncertaint
Radiated Emission	30MHz-1GHz	4.84dB(*k*=2)
	1GHz-18GHz	4.68dB(*k*=2)
Conducted Emission	150kHz-30MHz	3.00dB(*k*=2)

8. Test Facilities Utilized

NO.	NAME	TYPE	SERIES NUMBER	PRODUCER	CAL.DUE DATE	CAL PERIOD
1.	Test Receiver	ESR7	101676	R&S	2021.12.25	1 year
2.	Test Receiver	ESCI	100701	R&S	2021.08.09	1 year
3.	Spectrum Analyzer	FSV40	101192	R&S	2022.01.13	1 year
4.	BiLog Antenna	3142E	0224831	ETS-Lindgren	2021.05.17	3 years
5.	LISN	ENV216	102067	R&S	2021.07.16	1 year
6.	Horn Antenna	3117	00066577	ETS-Lindgren	2022.04.02	3 years
7.	Signal Generator	SMB100A	179725	R&S	2021.11.25	1 year
8.	Chamber	FACT3-2.0	1285	ETS-Lindgren	2021.07.19	2 years
9.	Software	EMC32	V10.50.40	R&S	/	/

Note: CAL.: Calibration

9. Test Accessory Utilized

NO.	NAME	TYPE	SERIES NUMBER	PRODUCER	CALDUE DATE	CAL PERIOD
1.	PC	ThinkPad T480	PF-13LW0C	Lenovo	/	/
2.	Printer	V1.0008	VNF6C12491	HP	/	/
3.	Mouse	MOEUUOA	44NY517	Lenovo	/	/

ANNEX A: MEASUREMENT RESULTS

A.1 Radiated Emission (§15.109(a))

Reference

FCC: CFR Part 15.109(a)

A.1.1 Method of measurement

The field strength of radiated emissions from the unintentional radiator (Data transfer mode of EUT and charging mode of EUT) at a distance of 3 meters 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. The measurement antenna was placed at a distance of 3 meters from the EUT. 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:

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.

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 MS 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 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 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 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 Band 5, LTE Band 5, LTE Band 12, LTE Band 17.

The EUT was tested while operating in licensed band Rx mode. All licensed band receivers that tune in the range of 30MHz-960MHz, 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 CFR 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

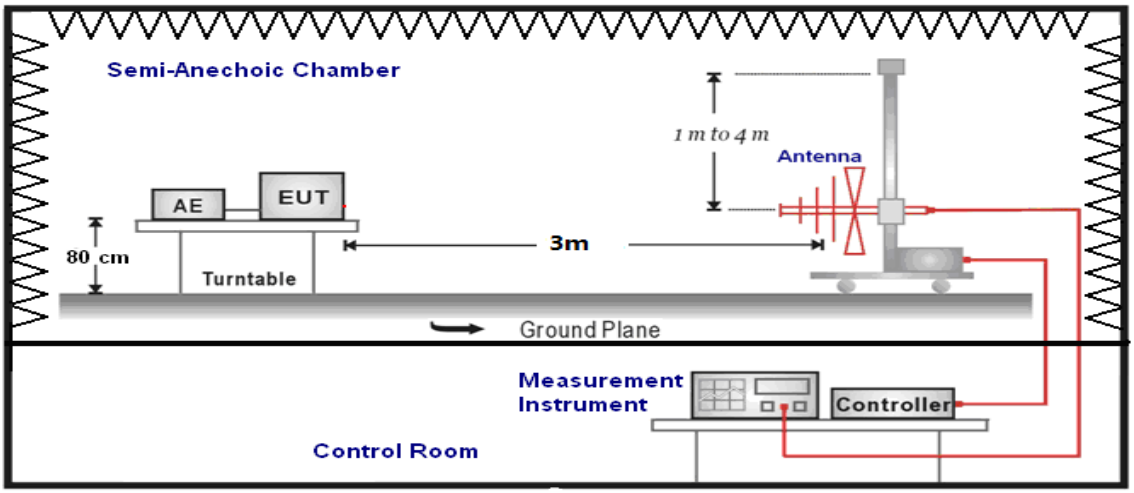
*Note: The original limit is defined at 10m test distance. This limit is calculated according to CISPR requirements.

A.1.4 Test Condition

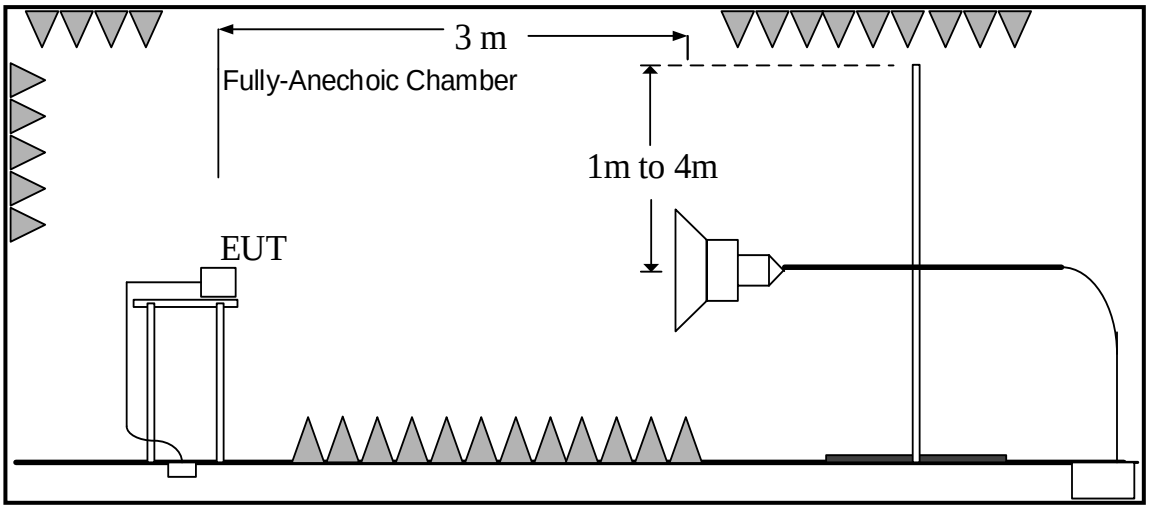
Frequency of emission (MHz)	RBW/VBW	Sweep Time(s)
30-1000	120kHz (IF bandwidth)	5
Above 1000	1MHz/3MHz	15

A.1.5 Test set-up:

30MHz-1GHz



1GHz-18GHz



A.1.6 Measurement Results

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

The measurement results are obtained as described below:

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

Where

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

GSM Receiver850MHz

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT03aa/Set.1	Conclusion
30-88	40.00	See Fugure A.1.1.	P
88-216	43.50		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT03aa/Set.1	Conclusion
1000 to 18000	54	74	See Fugure A.1.2.	P

WCDMA ReceiverBand 5

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT03aa/Set.1	Conclusion
30-88	40.00	See Fugure A.1.3.	P
88-216	43.50		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT03aa/Set.1	Conclusion
1000 to 18000	54	74	See Fugure A.1.4.	P

LTE Receiver Band 5

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT03aa/Set.1	Conclusion
30-88	40.00	See Fugure A.1.5.	P
88-216	43.50		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT03aa/Set.1	Conclusion
1000 to 18000	54	74	See Fugure A.1.6.	P

LTE ReceiverBand 12

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT03aa/Set.1	Conclusion
30-88	40.00	See Fugure A.1.7.	P
88-216	43.50		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT03aa/Set.1	Conclusion
1000 to 18000	54	74	See Fugure A.1.8.	P

LTE Receiver Band 17

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT03aa/Set.1	Conclusion
30-88	40.00	See Fugure A.1.9.	P
88-216	43.50		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT03aa/Set.1	Conclusion
1000 to 18000	54	74	See Fugure A.1.10.	P

FM receiver

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT03aa/Set.1	Conclusion
30-88	40.00	See Fugure A.1.11.	P
88-216	43.50		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT03aa/Set.1	Conclusion
1000 to 18000	54	74	See Fugure A.1.12.	P

Video Player

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT03aa/Set.1	Conclusion
30-88	40.00	See Fugure A.1.13.	P
88-216	43.50		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT03aa/Set.1	Conclusion
1000 to 18000	54	74	See Fugure A.1.14.	P

Camera

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT03aa/Set.1	Conclusion
30-88	40.00	See Fugure A.1.15.	P
88-216	43.50		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT03aa/Set.1	Conclusion
1000 to 18000	54	74	See Fugure A.1.16.	P

Data Transfer : EUT to PC

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT03aa/Set.2	Conclusion
30-88	40.00	See Fugure A.1.17.	P
88-216	43.50		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT03aa/Set.2	Conclusion
1000 to 18000	54	74	See Fugure A.1.18.	P

Data Transfer : PC to EUT

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT03aa/Set.2	Conclusion
30-88	40.00	See Fugure A.1.19.	P
88-216	43.50		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT03aa/Set.2	Conclusion
1000 to 18000	54	74	See Fugure A.1.20.	P

Data Transfer : PC to TF Card

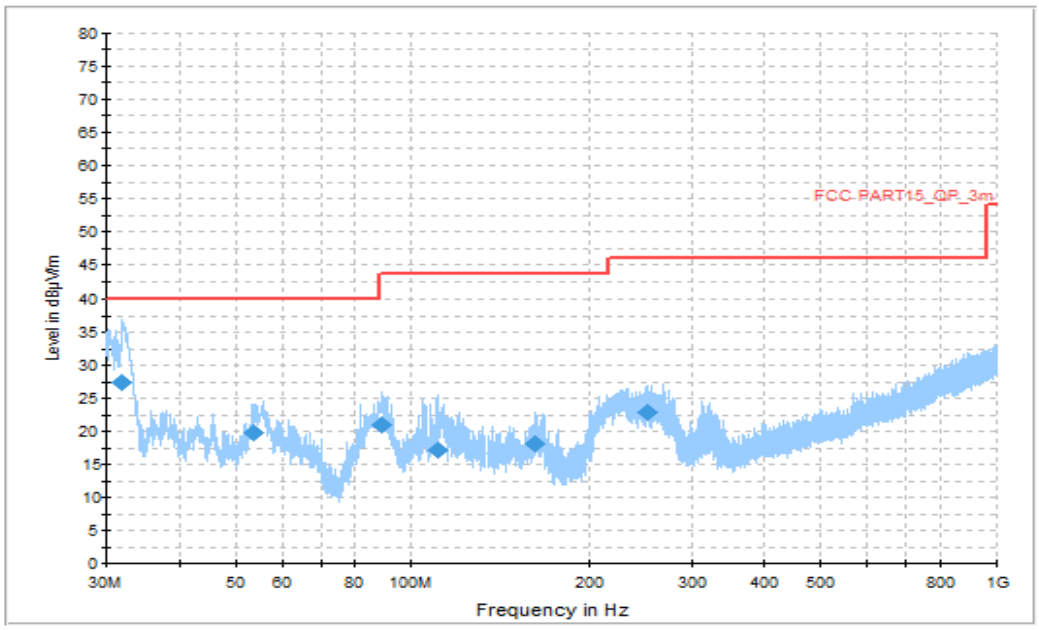
Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT03aa/Set.2	Conclusion
30-88	40.00	See Fugure A.1.21.	P
88-216	43.50		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT03aa/Set.2	Conclusion
1000 to 18000	54	74	See Fugure A.1.22.	P

Data Transfer : TF Card to PC

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT03aa/Set.2	Conclusion
30-88	40.00	See Fugure A.1.23.	P
88-216	43.50		
216-960	46.02		
960-1000	54.00		

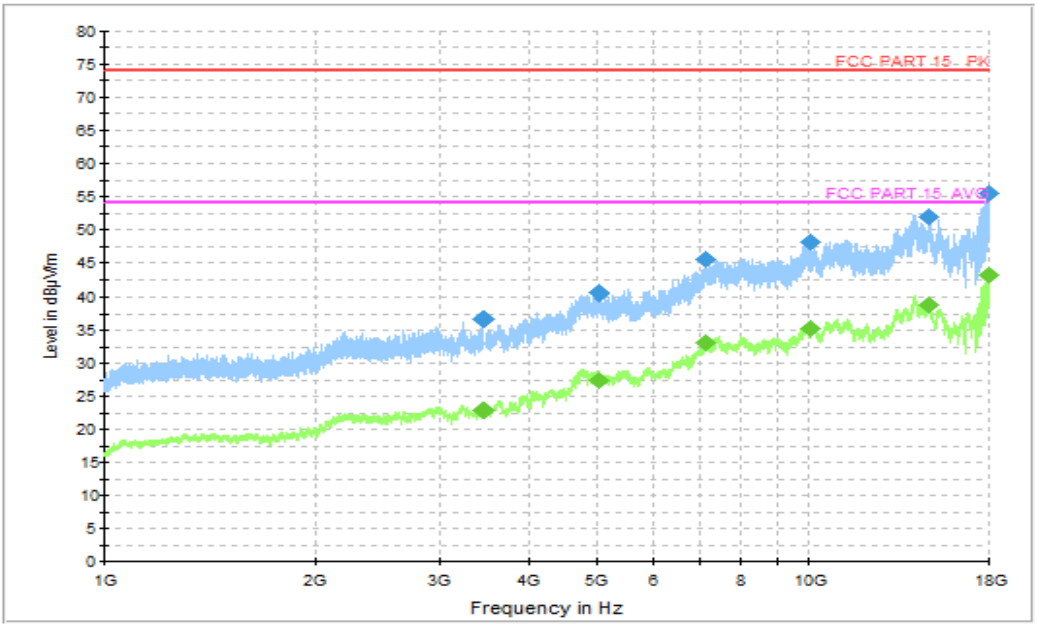
Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT03aa/Set.2	Conclusion
1000 to 18000	54	74	See Fugure A.1.24.	P



Fugure A.1.1. Radiated Emission (GSM Receiver 850MHz, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
31.988500	27.5	40.0	12.5	V	-23.5	51.00
53.813500	19.8	40.0	20.2	V	-22.5	42.3
89.267000	21.0	43.5	22.5	H	-26.8	47.8
110.704000	17.2	43.5	26.4	H	-25.1	42.3
162.017000	18.1	43.5	25.5	H	-23.0	41.1
251.984500	22.8	46.0	23.2	H	-23.7	46.5



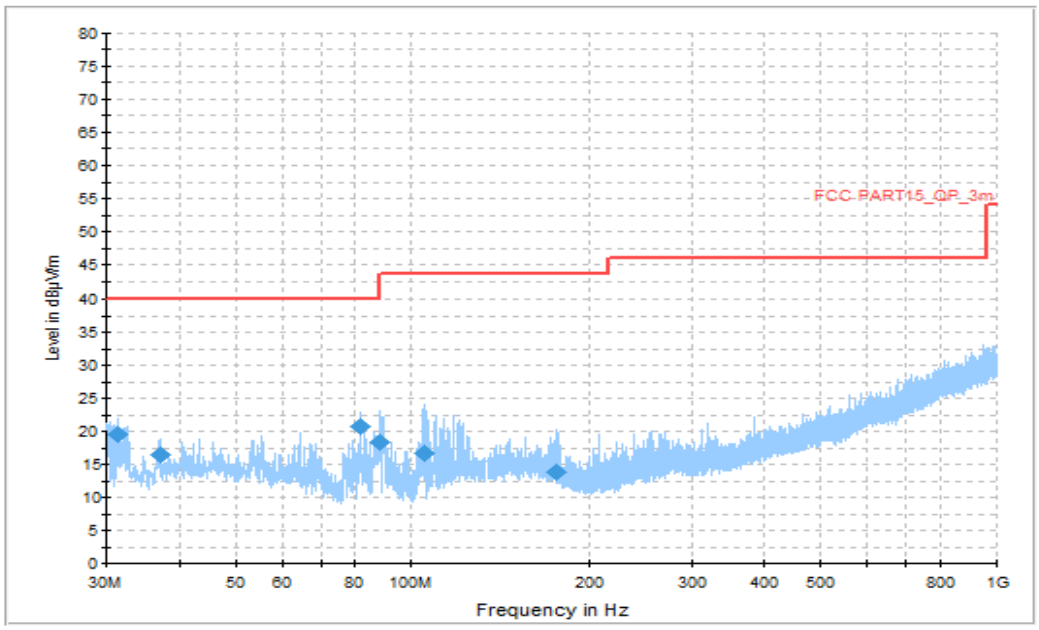
Fugure A.1.2. Radiated Emission (GSM Receiver 850MHz,1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
3450.400000	36.6	74.0	37.4	V	-13.7	50.3
5012.000000	40.4	74.0	33.6	H	-7.4	47.8
7128.000000	45.4	74.0	28.6	V	-0.8	46.2
10020.000000	48.1	74.0	25.9	V	1.7	46.4
14789.000000	51.9	74.0	22.1	H	6.6	45.3
17995.200000	55.6	74.0	18.4	H	12.9	42.7

Final_Results_AVG

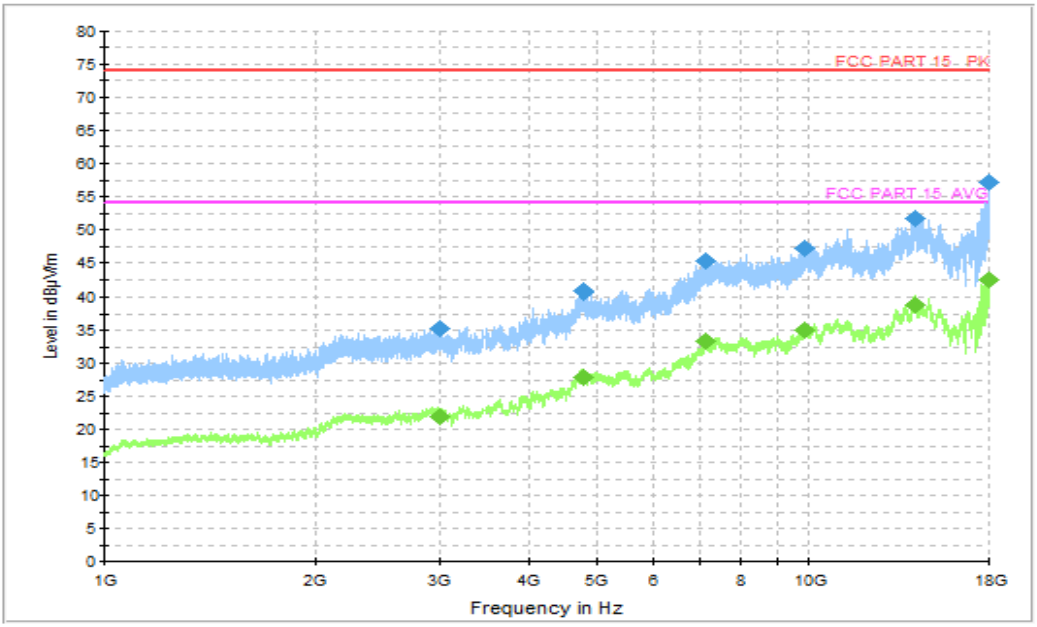
Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
3450.400000	22.8	54.0	31.2	V	-13.7	36.5
5012.000000	27.4	54.0	26.6	H	-7.4	34.8
7128.000000	33.0	54.0	21.0	V	-0.8	33.8
10020.000000	35.2	54.0	18.8	V	1.7	33.5
14789.000000	38.9	54.0	15.1	H	6.6	32.3
17995.200000	43.2	54.0	10.8	H	12.9	30.3



Fugure A.1.3. Radiated Emission (WCDMA Receiver Band 5, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	PMea (dBµV)
31.503500	19.4	40.0	20.6	V	-23.6	43.00
37.032500	16.5	40.0	23.5	V	-22.6	39.1
81.846500	20.6	40.0	19.4	V	-26.8	47.4
88.394000	18.3	43.5	25.3	H	-26.8	45.1
104.981000	16.6	43.5	27.0	H	-25.6	42.2
176.421500	13.7	43.5	29.8	H	-24.6	38.3



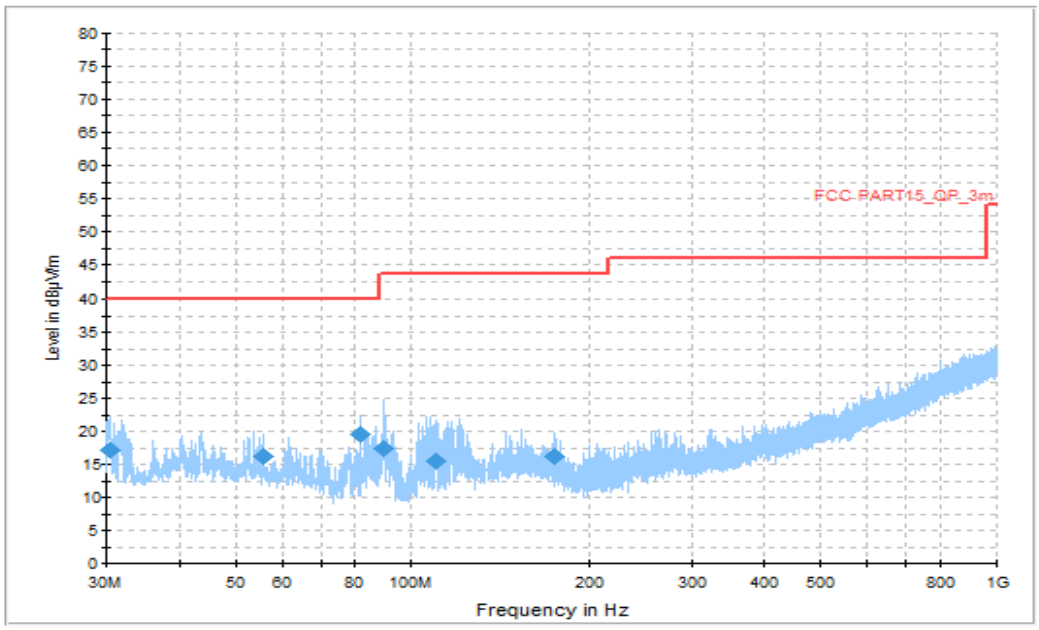
Fugure A.1.4. Radiated Emission (WCDMA Receiver Band 5,1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
3006.400000	35.2	74.0	38.8	V	-14.3	49.50
4781.600000	40.7	74.0	33.3	V	-6.8	47.5
7120.000000	45.3	74.0	28.7	H	-0.8	46.1
9861.600000	47.1	74.0	26.9	V	1.4	45.7
14173.000000	51.7	74.0	22.3	H	7.0	44.7
17998.400000	57.2	74.0	16.8	V	12.9	44.30

Final_Results_AVG

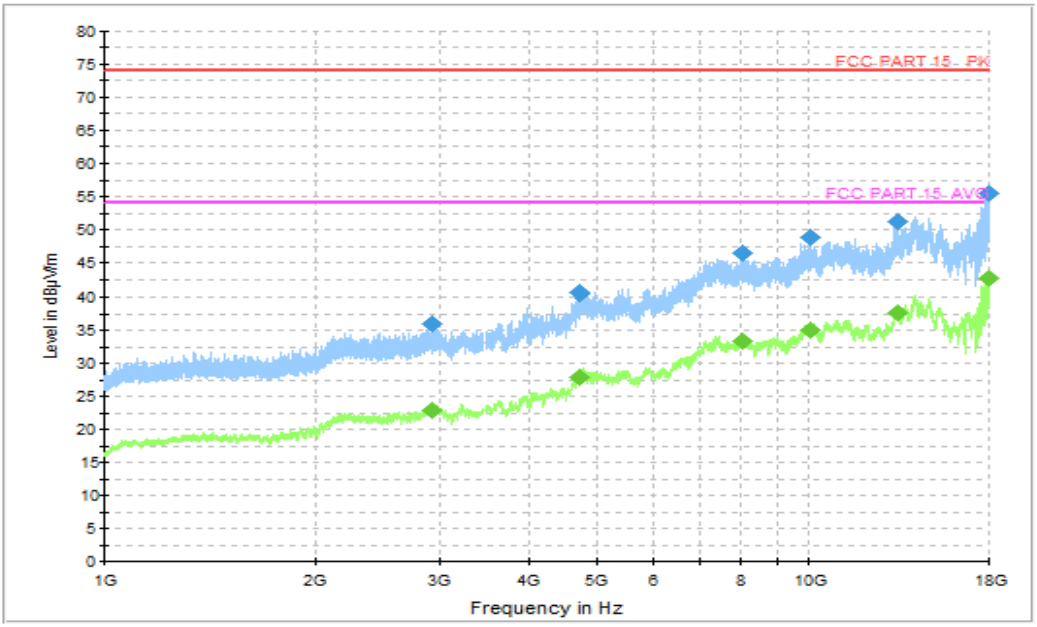
Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
3006.400000	22.0	54.0	32.0	V	-14.3	36.30
4781.600000	27.8	54.0	26.2	V	-6.8	34.6
7120.000000	33.3	54.0	20.7	H	-0.8	34.1
9861.600000	35.1	54.0	18.9	V	1.4	33.7
14173.000000	38.8	54.0	15.2	H	7.0	31.8
17998.400000	42.5	54.0	11.5	V	12.9	29.6



Fugure A.1.5. Radiated Emission (LTE Receiver Band 5, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	PMea (dBµV)
30.485000	17.2	40.0	22.8	V	-23.7	40.90
55.899000	16.3	40.0	23.7	V	-22.7	39.00
81.846500	19.5	40.0	20.5	V	-26.8	46.3
89.946000	17.5	43.5	26.0	H	-26.8	44.30
110.219000	15.5	43.5	28.0	H	-25.1	40.6
175.160500	16.1	43.5	27.4	H	-24.4	40.50



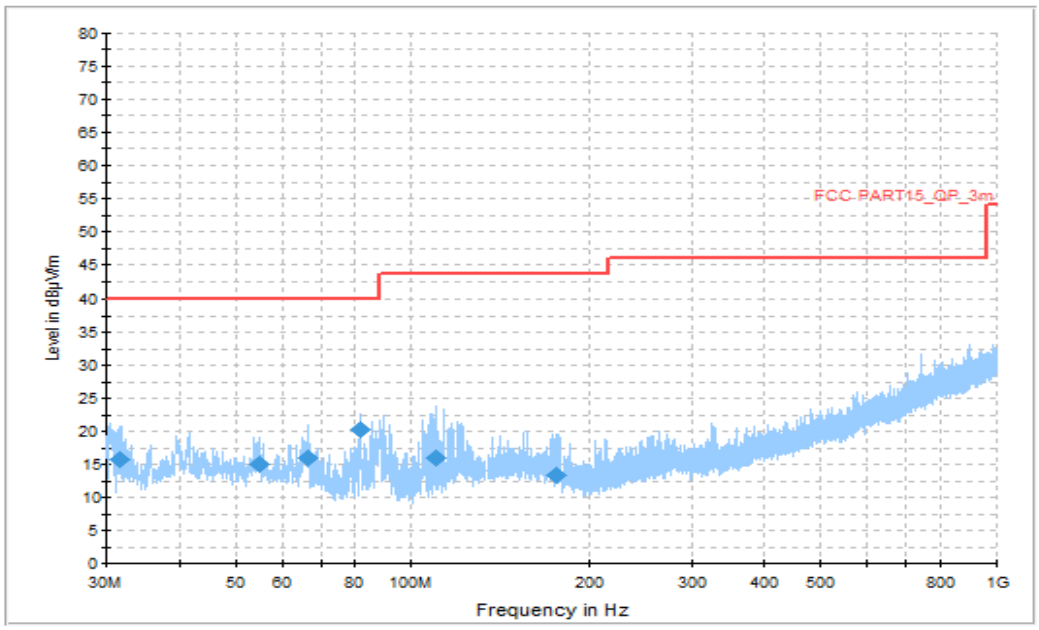
Fugure A.1.6. Radiated Emission (LTE Receiver Band 5,1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
2922.400000	35.9	74.0	38.1	V	-14.6	50.50
4704.800000	40.5	74.0	33.5	V	-7.3	47.80
8010.400000	46.3	74.0	27.7	V	-0.7	47
10013.600000	48.9	74.0	25.1	V	1.8	47.10
13327.500000	51.1	74.0	22.9	V	5.0	46.1
17952.400000	55.4	74.0	18.6	V	12.7	42.70

Final_Results_AVG

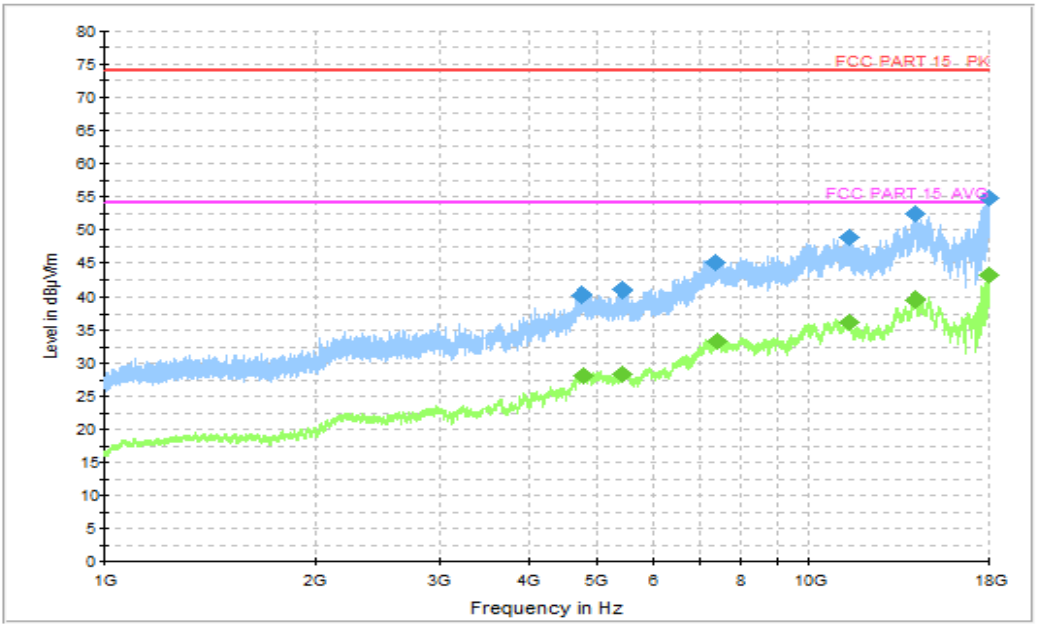
Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
2922.400000	22.8	54.0	31.2	V	-14.6	37.40
4704.800000	27.9	54.0	26.1	V	-7.3	35.20
8010.400000	33.3	54.0	20.7	V	-0.7	34
10013.600000	35.1	54.0	18.9	V	1.8	33.30
13327.500000	37.6	54.0	16.4	V	5.0	32.6
17952.400000	42.6	54.0	11.4	V	12.7	29.90



Fugure A.1.7. Radiated Emission (LTE Receiver Band 12, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	PMea (dBµV)
31.697500	15.8	40.0	24.2	V	-23.5	39.30
54.880500	15.0	40.0	25.0	V	-22.6	37.60
66.375000	16.0	40.0	24.0	V	-24.1	40.1
81.846500	20.3	40.0	19.7	V	-26.8	47.10
110.364500	15.9	43.5	27.6	H	-25.1	41
176.227500	13.4	43.5	30.2	H	-24.5	37.90



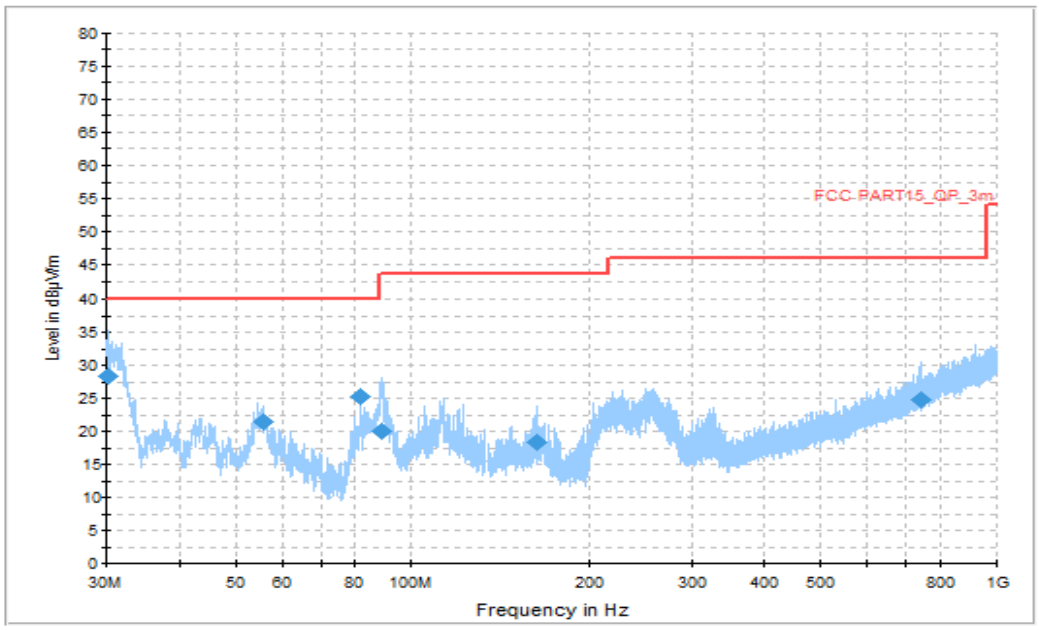
Fugure A.1.8. Radiated Emission (LTE Receiver Band 12,1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
4740.800000	40.2	74.0	33.8	H	-7.1	47.30
5405.600000	41.0	74.0	33.0	H	-6.6	47.60
7367.200000	45.0	74.0	29.0	H	-0.6	45.6
11357.000000	48.9	74.0	25.1	H	2.6	46.30
14107.000000	52.3	74.0	21.7	V	6.5	45.8
17994.400000	54.8	74.0	19.2	V	12.9	41.90

Final_Results_AVG

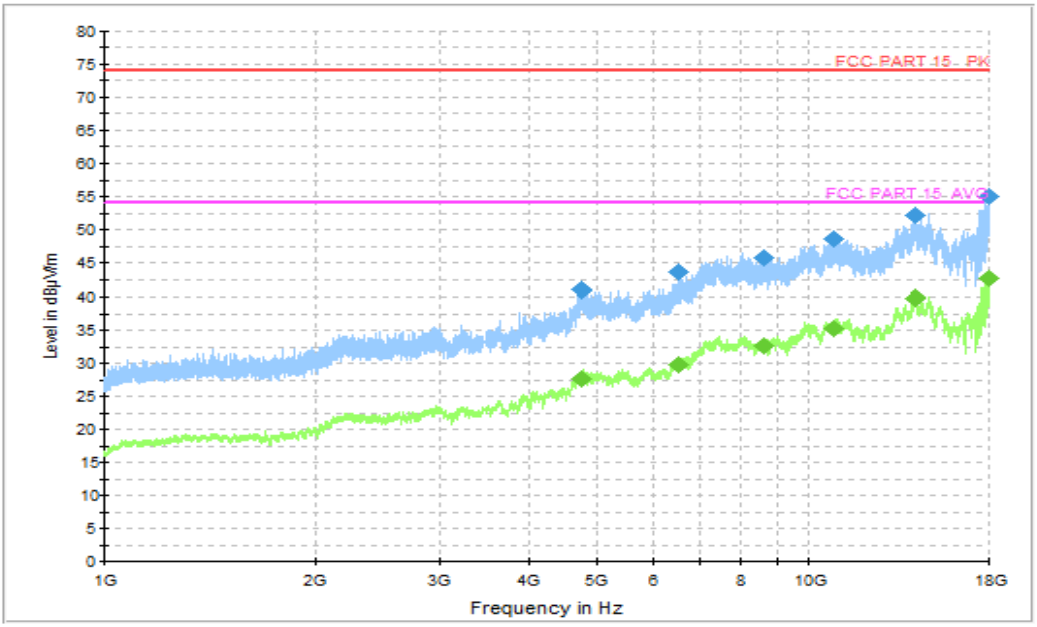
Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
4772.800000	28.1	54.0	25.9	V	-6.9	35.00
5405.600000	28.2	54.0	25.8	H	-6.6	34.80
7394.400000	33.4	54.0	20.6	H	-0.5	33.9
11357.000000	36.2	54.0	17.8	H	2.6	33.60
14107.000000	39.6	54.0	14.4	V	6.5	33.1
17994.400000	43.1	54.0	10.9	V	12.9	30.20



Fugure A.1.9. Radiated Emission (LTE Receiver Band 17, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	PMea (dBµV)
30.339500	28.2	40.0	11.8	V	-23.7	51.90
55.705000	21.5	40.0	18.5	V	-22.7	44.20
81.846500	25.2	40.0	14.8	V	-26.8	52
89.024500	19.9	43.5	23.6	V	-26.8	46.70
163.084000	18.4	43.5	25.1	V	-23.1	41.5
739.943000	24.8	46.0	21.3	V	-12.5	37.30



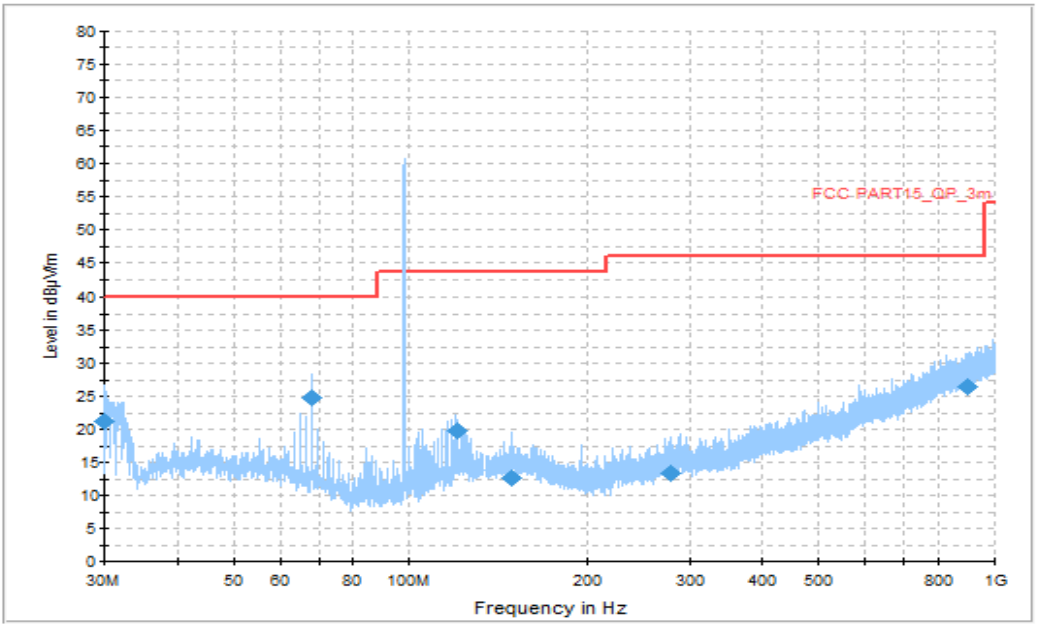
Fugure A.1.10. Radiated Emission (LTE Receiver Band 17,1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
4728.800000	40.9	74.0	33.1	V	-7.2	48.10
6504.800000	43.5	74.0	30.5	V	-4.2	47.70
8620.000000	45.8	74.0	28.2	V	-1.1	46.9
10852.000000	48.5	74.0	25.5	H	2.1	46.40
14132.500000	52.3	74.0	21.7	V	6.7	45.6
17992.400000	55.1	74.0	18.9	V	12.9	42.20

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
4728.800000	27.6	54.0	26.4	V	-7.2	34.80
6504.800000	29.9	54.0	24.1	V	-4.2	34.10
8620.000000	32.7	54.0	21.3	V	-1.1	33.8
10852.000000	35.3	54.0	18.7	H	2.1	33.20
14132.500000	39.7	54.0	14.3	V	6.7	33
17992.400000	42.6	54.0	11.4	V	12.9	29.70

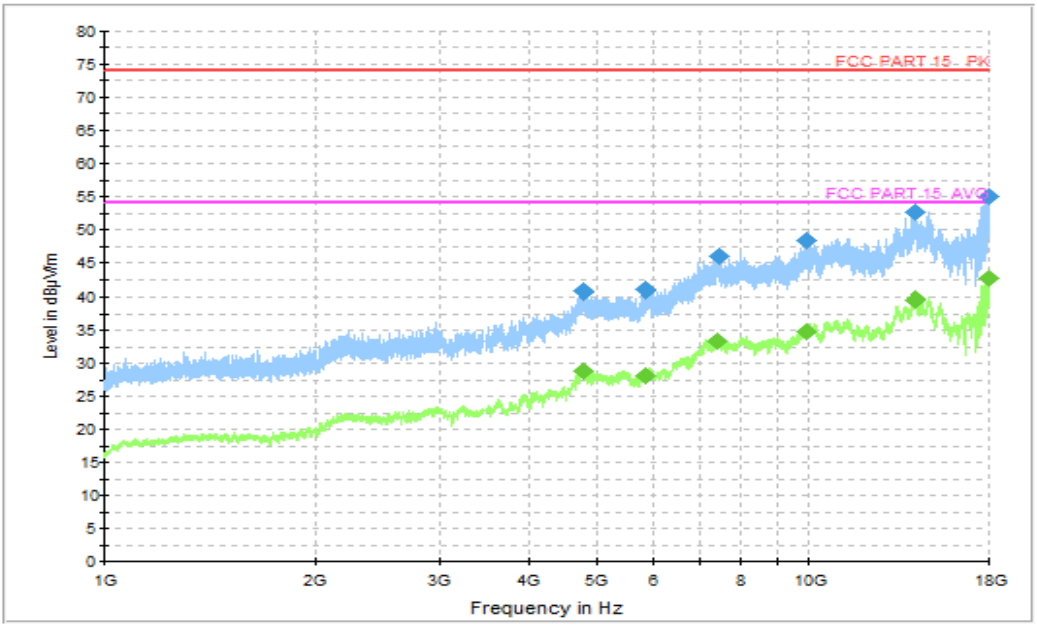


Fugure A.1.11. Radiated Emission (FM receiver, 30MHz to 1GHz)

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

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	PMea (dBµV)
30.000000	21.3	40.0	18.7	H	-23.8	45.10
68.121000	24.9	40.0	15.1	H	-24.4	49.30
121.180000	19.7	43.5	23.8	H	-24.1	43.8
148.631000	12.7	43.5	30.9	H	-22.8	35.50
277.447000	13.4	46.0	32.6	H	-22.3	35.7
896.889000	26.4	46.0	19.6	H	-9.6	36.00



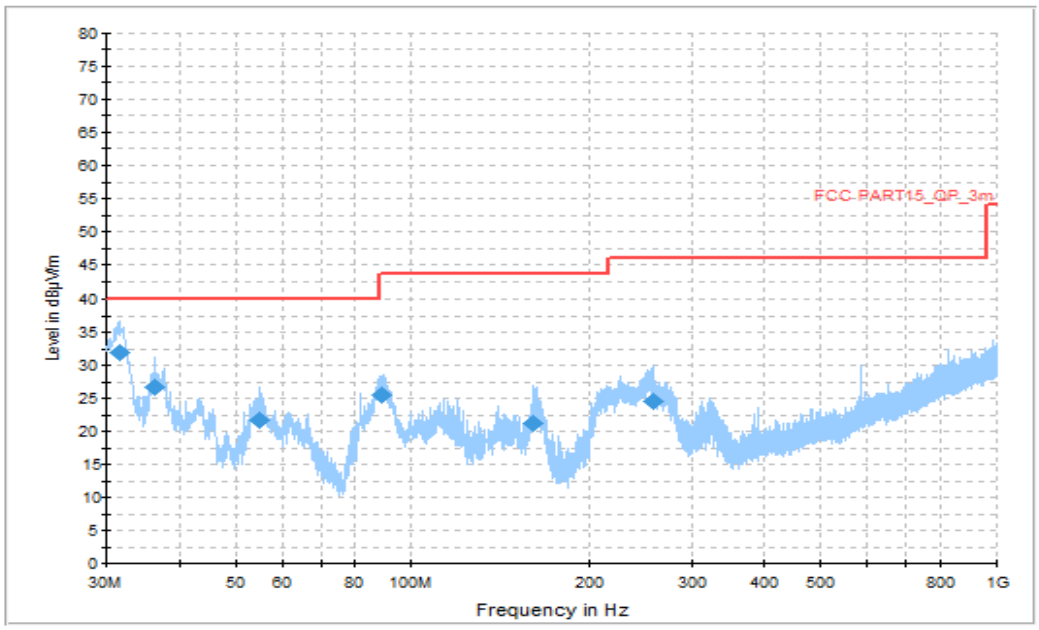
Fugure A.1.12. Radiated Emission (FM receiver,1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
4773.600000	40.8	74.0	33.2	H	-6.9	47.70
5848.800000	41.0	74.0	33.0	V	-6.2	47.2
7448.000000	46.0	74.0	28.0	H	-0.8	46.80
9938.400000	48.3	74.0	25.7	V	2.1	46.20
14129.500000	52.6	74.0	21.4	H	6.7	45.9
17968.400000	55.1	74.0	18.9	V	12.7	42.40

Final_Results_AVG

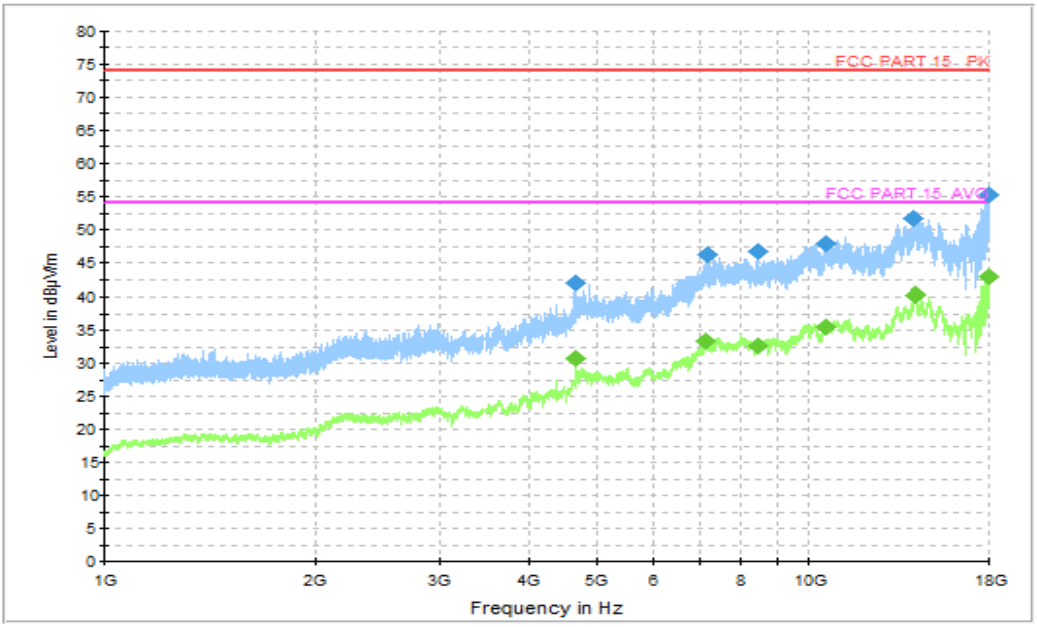
Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
4773.600000	28.8	54.0	25.2	H	-6.9	35.70
5848.800000	28.1	54.0	25.9	V	-6.2	34.3
7379.200000	33.4	54.0	20.6	H	-0.5	33.90
9938.400000	34.8	54.0	19.2	V	2.1	32.70
14129.500000	39.5	54.0	14.5	H	6.7	32.8
17968.400000	42.6	54.0	11.4	V	12.7	29.90



Fugure A.1.13. Radiated Emission (Video Player, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	PMea (dBµV)
31.552000	31.8	40.0	8.2	V	-23.6	55.40
36.353500	26.7	40.0	13.3	V	-22.8	49.5
54.832000	21.7	40.0	18.3	V	-22.6	44.30
88.733500	25.5	43.5	18.0	V	-26.8	52.30
160.998500	21.2	43.5	22.4	V	-22.9	44.1
257.416500	24.5	46.0	21.5	H	-23.7	48.20



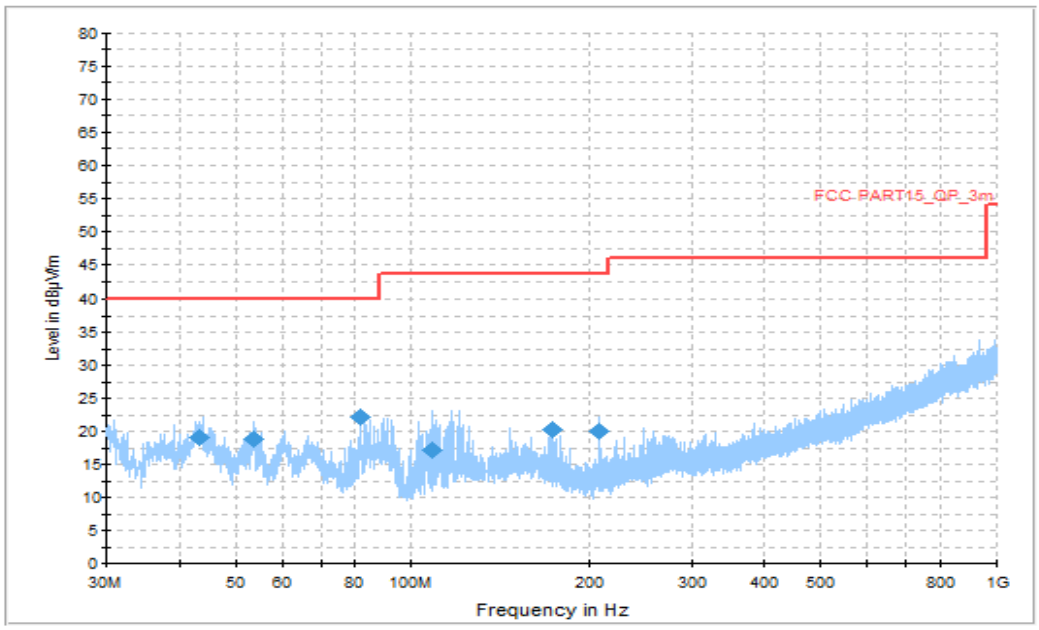
Fugure A.1.14. Radiated Emission (Video Player,1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
4664.800000	42.0	74.0	32.0	V	-7.9	49.90
7159.200000	46.2	74.0	27.8	V	-1.0	47.2
8433.600000	46.7	74.0	27.3	H	-1.7	48.40
10532.800000	47.8	74.0	26.2	V	1.8	46.00
14077.500000	51.6	74.0	22.4	H	6.3	45.3
17994.400000	55.2	74.0	18.8	H	12.9	42.30

Final_Results_AVG

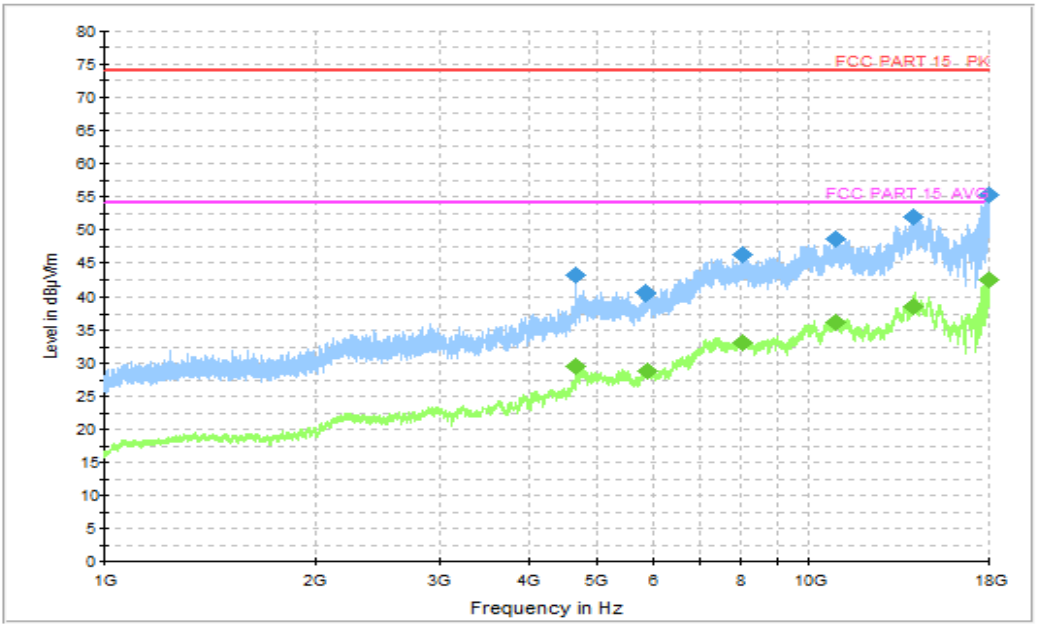
Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
4664.800000	30.8	54.0	23.2	V	-7.9	38.70
7126.400000	33.4	54.0	20.6	V	-0.8	34.2
8433.600000	32.7	54.0	21.3	H	-1.7	34.40
10532.800000	35.5	54.0	18.5	V	1.8	33.70
14107.000000	40.2	54.0	13.8	H	6.5	33.7
17994.400000	42.7	54.0	11.3	H	12.9	29.80



Fugure A.1.15. Radiated Emission (Camera, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	PMea (dBµV)
43.240500	19.1	40.0	20.9	V	-21.9	41.00
53.813500	18.8	40.0	21.2	V	-22.5	41.3
81.798000	22.1	40.0	17.9	V	-26.8	48.90
108.861000	17.1	43.5	26.4	H	-25.3	42.40
173.026500	20.1	43.5	23.4	H	-24.2	44.3
207.995000	19.9	43.5	23.6	V	-25.4	45.30



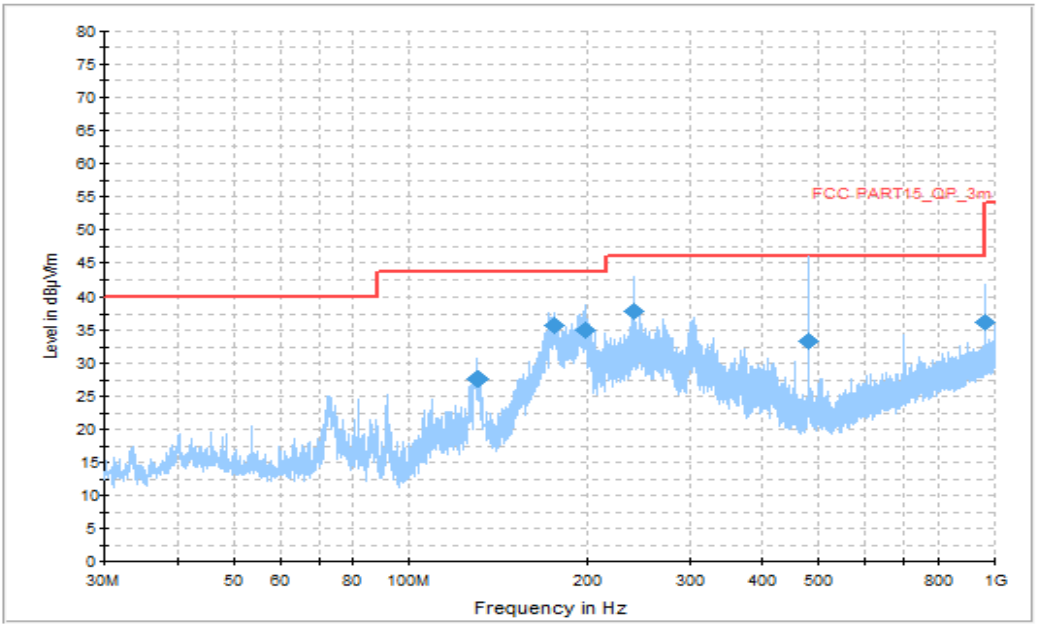
Fugure A.1.16. Radiated Emission (Camera,18GHz to 30GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
4664.800000	43.1	74.0	30.9	V	-7.9	51.00
5856.000000	40.5	74.0	33.5	V	-6.1	46.6
8012.000000	46.2	74.0	27.8	V	-0.7	46.90
10904.800000	48.5	74.0	25.5	H	2.2	46.30
14094.500000	52.0	74.0	22.0	H	6.4	45.6
17948.800000	55.3	74.0	18.7	H	12.6	42.70

Final_Results_AVG

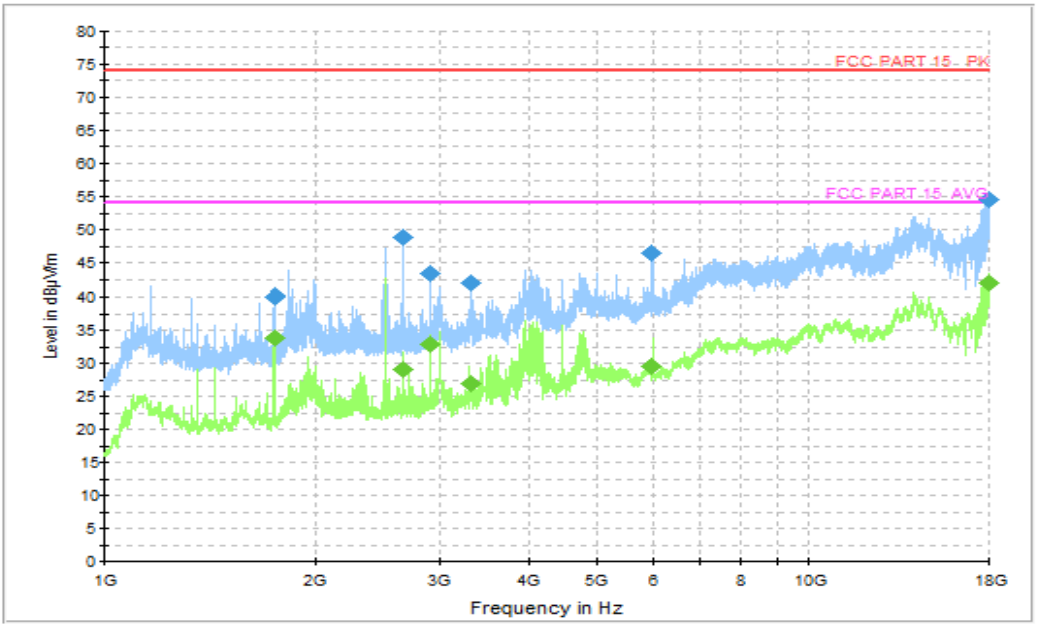
Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
4664.800000	29.5	54.0	24.5	V	-7.9	37.40
5896.800000	28.8	54.0	25.2	V	-5.9	34.7
8012.000000	33.0	54.0	21.0	V	-0.7	33.70
10904.800000	36.1	54.0	17.9	H	2.2	33.90
14052.500000	38.6	54.0	15.4	V	6.1	32.5
17948.800000	42.5	54.0	11.5	H	12.6	29.90



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

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	PMea (dBµV)
130.152500	27.6	43.5	15.9	V	-23.5	51.10
175.209000	35.7	43.5	7.8	H	-24.4	60.1
198.974000	34.9	43.5	8.6	H	-25.6	60.50
240.005000	37.9	46.0	8.2	H	-23.6	61.50
479.983000	33.3	46.0	12.7	H	-17.4	50.7
959.987500	36.2	46.0	9.8	H	-8.5	44.70



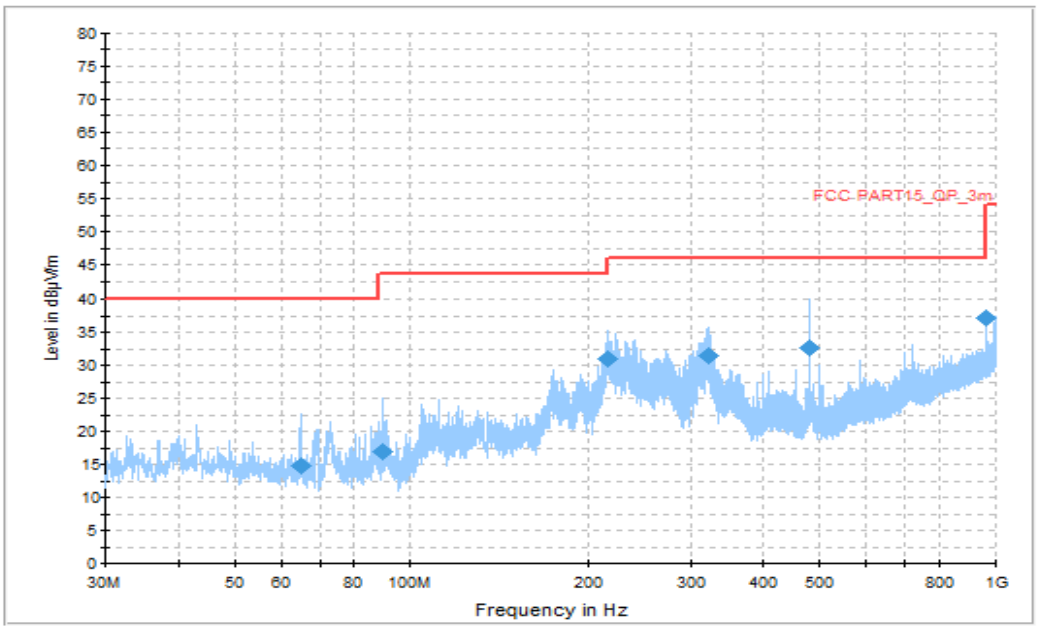
Fugure A.1.18. Radiated Emission (Data Transfer : EUT to PC,1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
1743.600000	39.9	74.0	34.1	V	-19.7	59.60
2661.000000	48.8	74.0	25.2	V	-15.4	64.2
2906.600000	43.2	74.0	30.8	V	-14.7	57.90
3330.400000	41.9	74.0	32.1	V	-14.4	56.30
5972.000000	46.5	74.0	27.5	V	-5.7	52.2
17952.800000	54.6	74.0	19.4	V	12.7	41.90

Final_Results_AVG

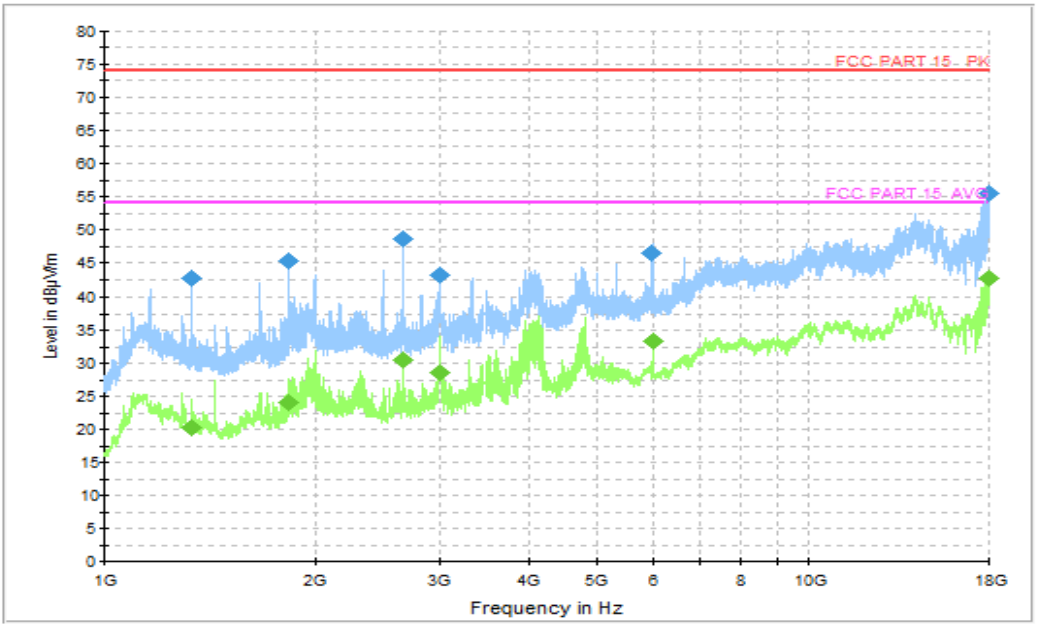
Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
1743.600000	33.9	54.0	20.1	V	-19.7	53.60
2661.000000	28.9	54.0	25.1	V	-15.4	44.3
2906.600000	32.9	54.0	21.1	V	-14.7	47.60
3317.600000	26.8	54.0	27.2	V	-14.4	41.20
5972.000000	29.6	54.0	24.4	V	-5.7	35.3
17952.800000	42.0	54.0	12.0	V	12.7	29.30



Fugure A.1.19. Radiated Emission (Data Transfer : PC to EUT,30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	PMea (dBµV)
64.920000	14.9	40.0	25.1	V	-23.8	38.70
89.606500	16.9	43.5	26.6	H	-26.8	43.7
216.240000	31.0	46.0	15.0	H	-25.1	56.10
320.903000	31.4	46.0	14.6	H	-21.8	53.20
480.031500	32.5	46.0	13.5	V	-17.4	49.9
959.987500	37.2	46.0	8.8	V	-8.5	49.9



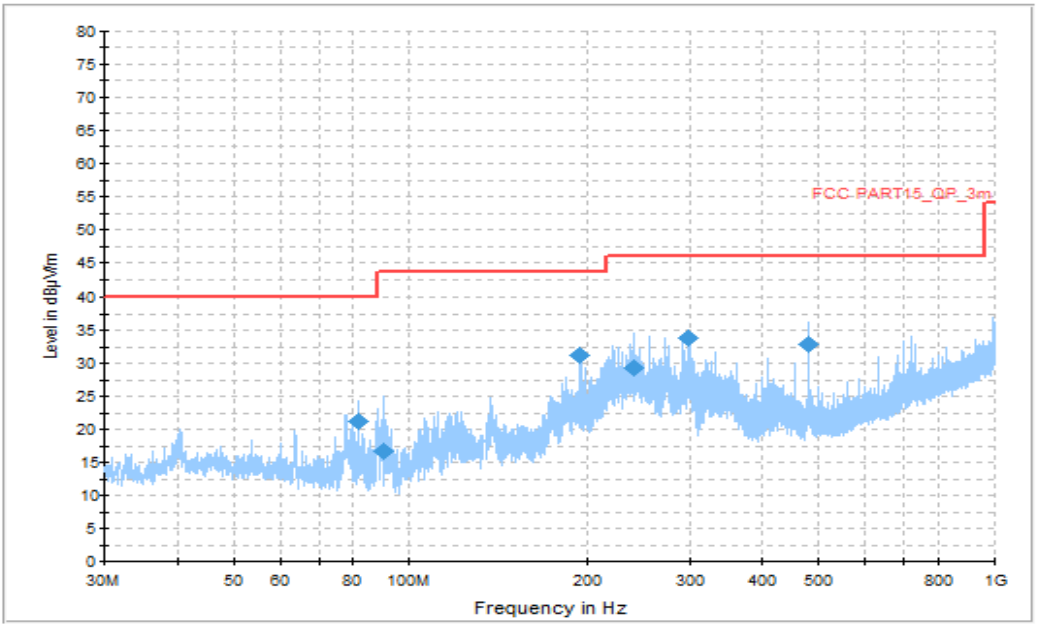
Fugure A.1.20. Radiated Emission (Data Transfer : PC to EUT,1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
1327.200000	42.6	74.0	31.4	H	-19.9	62.50
1831.400000	45.3	74.0	28.7	V	-19.2	64.5
2663.200000	48.6	74.0	25.4	V	-15.4	64.00
2993.200000	43.1	74.0	30.9	V	-14.3	57.40
5976.000000	46.5	74.0	27.5	V	-5.8	52.3
17951.600000	55.5	74.0	18.5	H	12.7	42.80

Final_Results_AVG

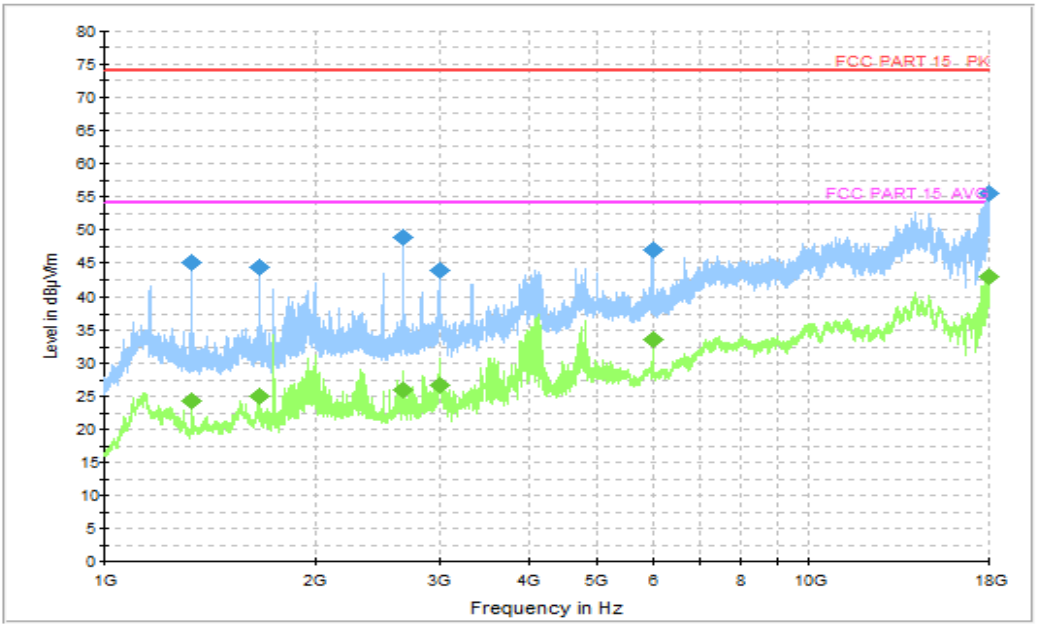
Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
1333.200000	20.1	54.0	33.9	V	-19.9	40.00
1831.400000	24.1	54.0	29.9	V	-19.2	43.3
2664.200000	30.5	54.0	23.5	V	-15.4	45.90
2993.200000	28.7	54.0	25.3	V	-14.3	43.00
6000.000000	33.3	54.0	20.7	H	-5.9	39.2
17951.600000	42.7	54.0	11.3	H	12.7	30.00



Fugure A.1.21. Radiated Emission (Data Transfer : PC to TF Card,30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	PMea (dBµV)
81.798000	21.1	40.0	18.9	V	-26.8	47.90
90.188500	16.6	43.5	26.9	H	-26.8	43.4
194.997000	31.1	43.5	12.4	H	-25.5	56.60
241.363000	29.3	46.0	16.7	H	-23.6	52.90
298.690000	33.9	46.0	12.1	H	-22.6	56.5
479.983000	32.8	46.0	13.2	V	-17.4	50.20



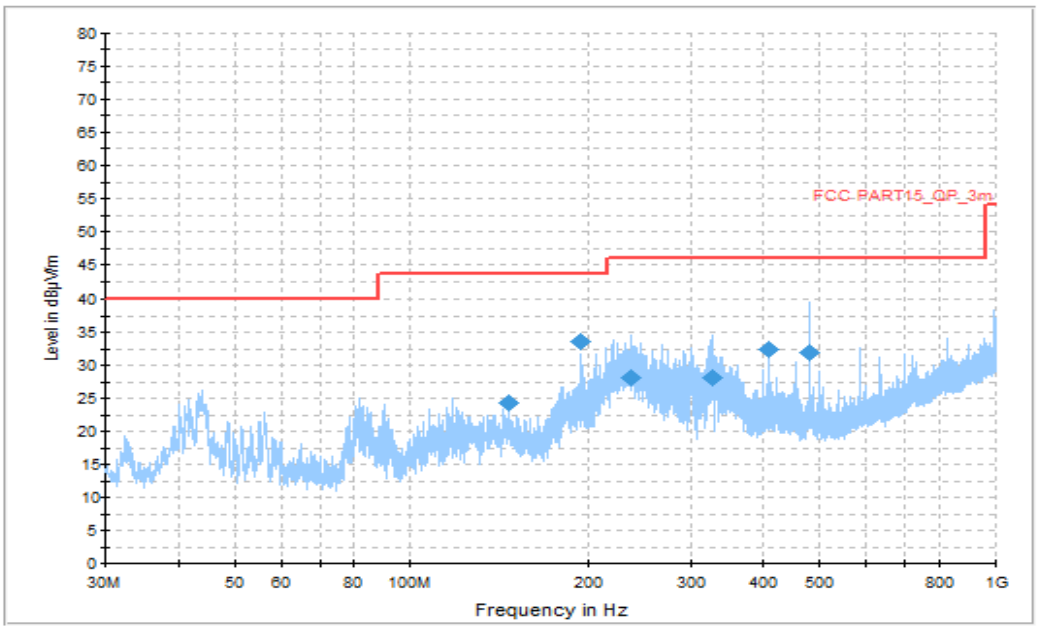
Fugure A.1.22. Radiated Emission (Data Transfer : PC to TF Card,1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
1328.800000	44.9	74.0	29.1	V	-19.9	64.80
1660.200000	44.3	74.0	29.7	V	-19.8	64.1
2659.200000	48.9	74.0	25.1	V	-15.4	64.30
3000.000000	43.7	74.0	30.3	V	-14.3	58.00
6000.000000	47.0	74.0	27.0	V	-5.9	52.9
17950.000000	55.5	74.0	18.5	H	12.7	42.80

Final_Results_AVG

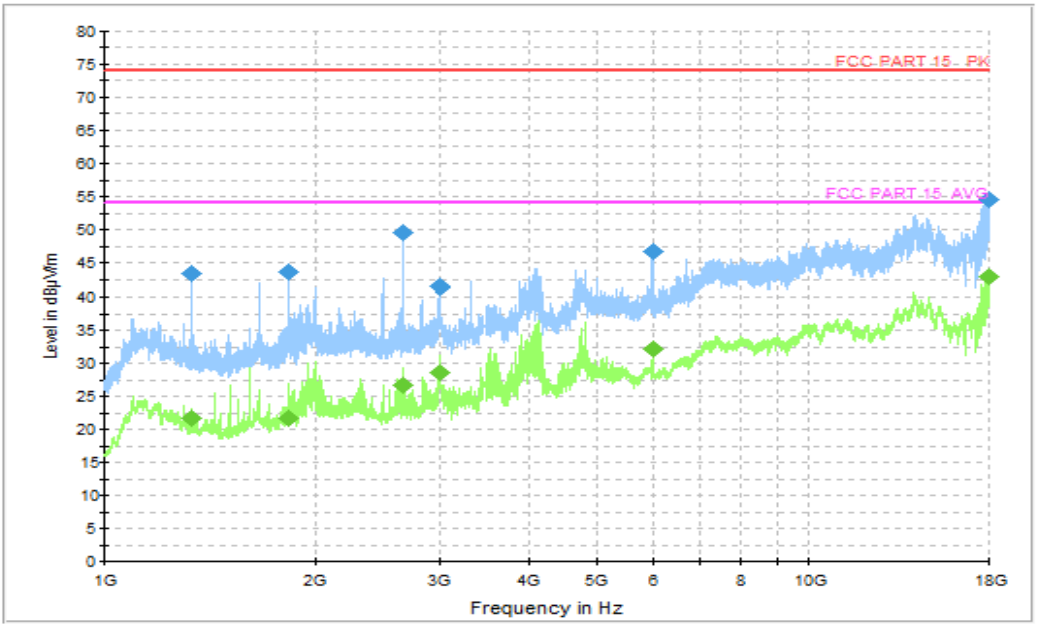
Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
1328.800000	24.2	54.0	29.8	V	-19.9	44.10
1660.200000	25.1	54.0	28.9	V	-19.8	44.9
2659.200000	26.0	54.0	28.0	V	-15.4	41.40
3000.000000	26.6	54.0	27.4	V	-14.3	40.90
6000.000000	33.5	54.0	20.5	V	-5.9	39.4
17950.000000	42.8	54.0	11.2	H	12.7	30.10



Fugure A.1.23. Radiated Emission (Data Transfer : TF Card to PC,30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	PMea (dBµV)
146.254500	24.2	43.5	19.3	H	-22.8	47.00
194.997000	33.6	43.5	9.9	H	-25.5	59.1
237.628500	28.0	46.0	18.0	H	-23.7	51.70
326.626000	28.0	46.0	18.0	H	-21.7	49.70
408.009000	32.4	46.0	13.6	H	-18.9	51.3
479.983000	31.9	46.0	14.1	V	-17.4	49.30



Fugure A.1.24. 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)	PMea (dBµV)
1331.600000	43.4	74.0	30.6	V	-19.9	63.30
1825.800000	43.6	74.0	30.4	V	-19.3	62.9
2656.800000	49.5	74.0	24.5	H	-15.4	64.90
2993.800000	41.3	74.0	32.7	V	-14.3	55.60
6000.000000	46.6	74.0	27.4	V	-5.9	52.5
17994.000000	54.6	74.0	19.4	V	12.9	41.70

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
1331.600000	21.6	54.0	32.4	V	-19.9	41.50
1825.800000	21.8	54.0	32.2	V	-19.3	41.1
2656.800000	26.6	54.0	27.4	H	-15.4	42.00
2993.800000	28.5	54.0	25.5	V	-14.3	42.80
6000.000000	32.3	54.0	21.7	V	-5.9	38.2
17994.000000	42.9	54.0	11.1	V	12.9	30.00

A.2 Conducted Emission (§15.107(a))

Reference

FCC: CFR 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:

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.

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.

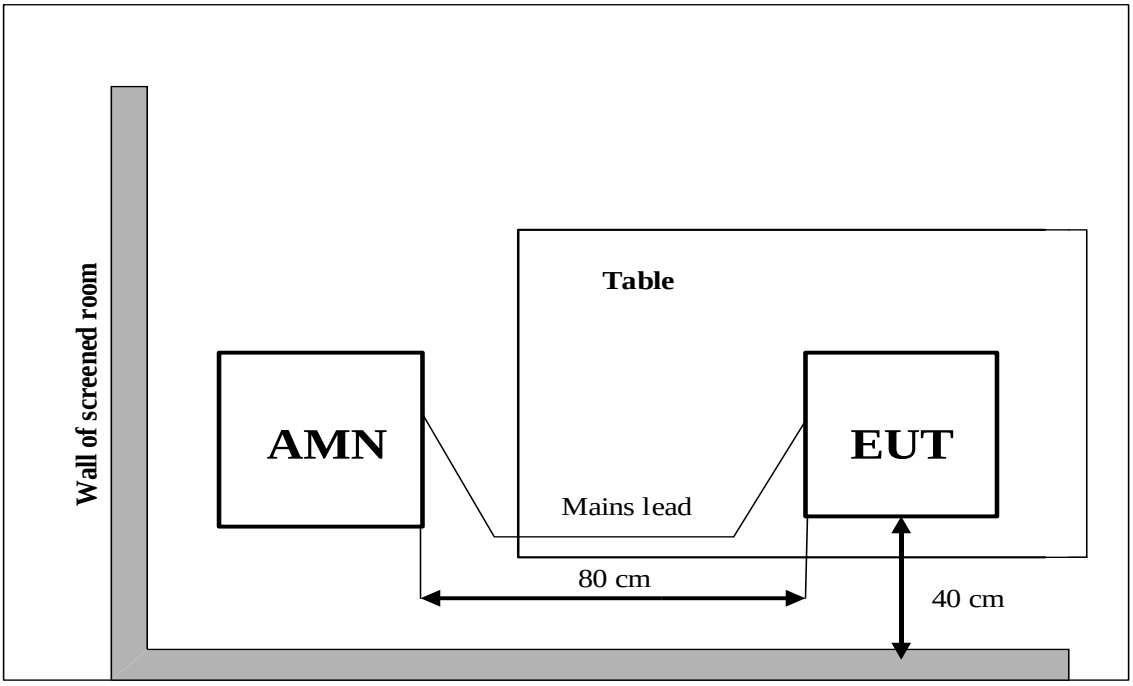
Video Player : The EUT is connected to a charger for charging and keeping on playing mp3.

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 MS 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) UT04aa/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) UT04aa/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) UT04aa/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) UT04aa/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) UT04aa/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) UT04aa/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.				

FM receiver

AC Input Port/ Voltage: 240V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV) UT04aa/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) UT04aa/Set.2	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

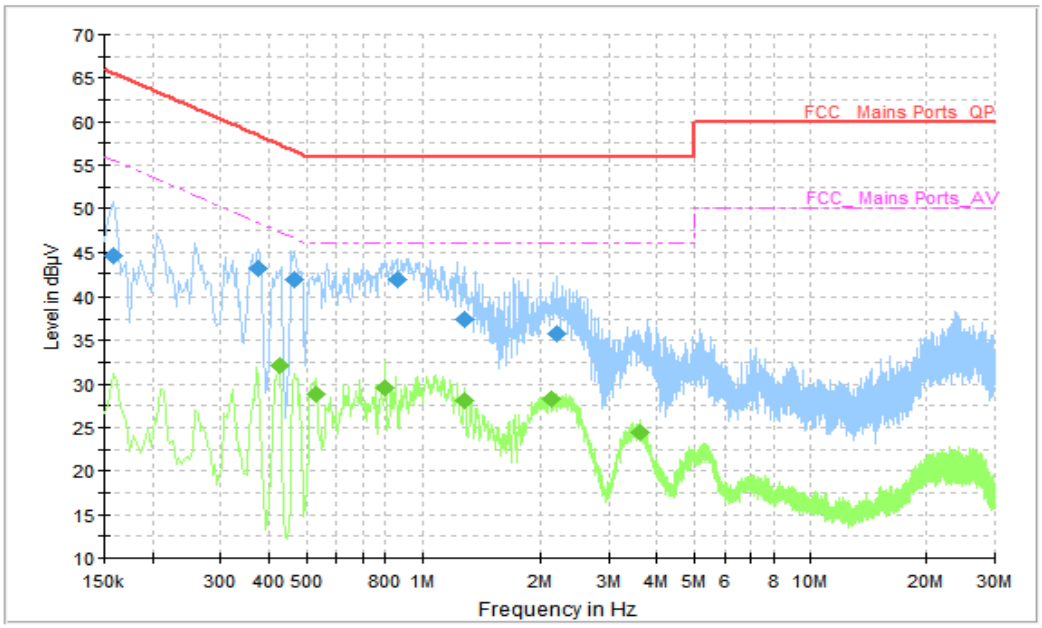


Figure A.2.1 Conducted Emission(Camera)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	PMea (dBµV)
0.158000	44.63	65.57	20.94	L1	10	34.63
0.374000	43.05	58.41	15.36	L1	10	33.05
0.466000	41.75	56.59	14.83	L1	10	31.75
0.858000	41.80	56.00	14.20	L1	10	31.80
1.278000	37.51	56.00	18.49	L1	10	27.51
2.202000	35.71	56.00	20.29	L1	10	25.71

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	PMea (dBµV)
0.426000	32.05	47.33	15.28	L1	10	22.05
0.530000	28.84	46.00	17.16	L1	10	18.84
0.802000	29.60	46.00	16.40	L1	10	19.60
1.278000	28.15	46.00	17.85	L1	10	18.15
2.130000	28.22	46.00	17.78	L1	10	18.22
3.610000	24.40	46.00	21.60	L1	10	14.40

AC Input Port/ Voltage: 120V/60Hz

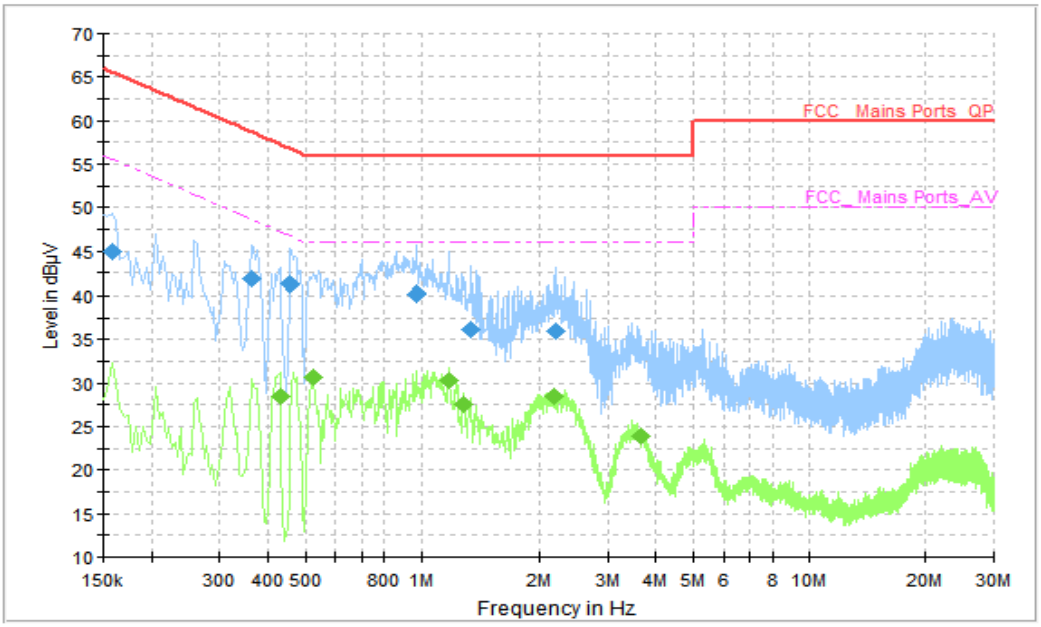


Figure A.2.2 Conducted Emission(Video Player)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	PMea (dBµV)
0.158000	44.85	65.57	20.72	L1	10	34.85
0.362000	41.90	58.68	16.78	L1	10	31.90
0.458000	41.35	56.73	15.38	L1	10	31.35
0.970000	40.21	56.00	15.79	L1	10	30.21
1.346000	36.20	56.00	19.80	L1	10	26.2
2.210000	35.91	56.00	20.09	L1	10	25.91

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	PMea (dBµV)
0.430000	28.40	47.25	18.85	L1	10	18.40
0.522000	30.66	46.00	15.34	L1	10	20.66
1.178000	30.30	46.00	15.70	L1	10	20.30
1.290000	27.63	46.00	18.37	L1	10	17.63
2.182000	28.46	46.00	17.54	L1	10	18.46
3.666000	23.96	46.00	22.04	L1	10	13.96

AC Input Port/ Voltage: 120V/60Hz

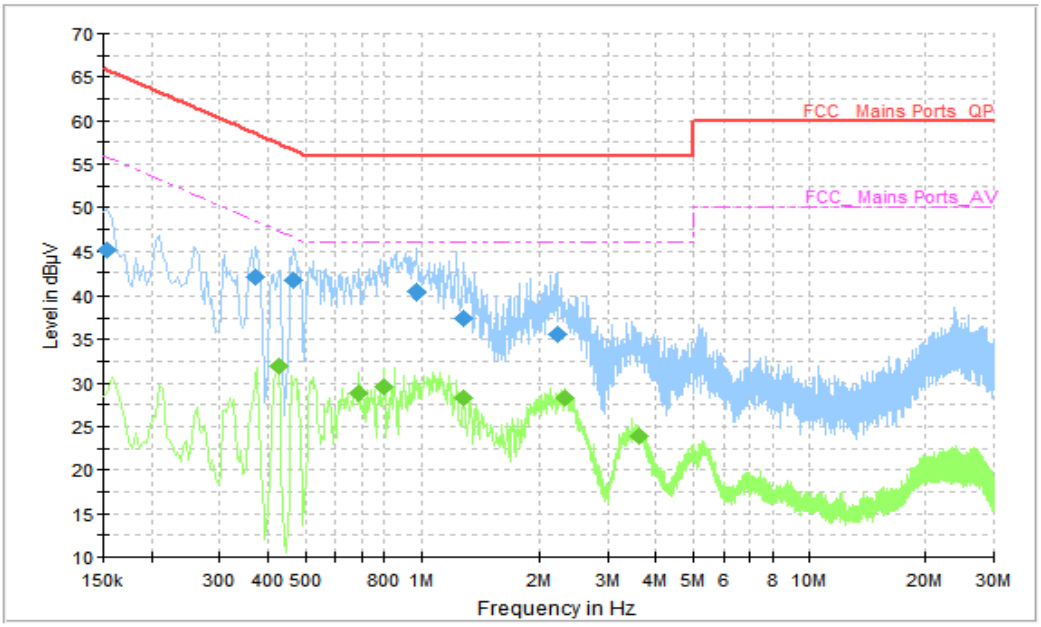


Figure A.2.3 Conducted Emission(FM receiver)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	PMea (dBµV)
0.154000	45.21	65.78	20.57	N	10	35.21
0.370000	42.10	58.50	16.41	L1	10	32.10
0.466000	41.71	56.59	14.88	L1	10	31.71
0.970000	40.34	56.00	15.66	L1	10	30.34
1.290000	37.41	56.00	18.59	L1	10	27.41
2.226000	35.62	56.00	20.38	L1	10	25.62

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	PMea (dBµV)
0.426000	31.93	47.33	15.40	L1	10	21.93
0.690000	28.91	46.00	17.09	L1	10	18.91
0.802000	29.56	46.00	16.44	L1	10	19.56
1.282000	28.25	46.00	17.75	L1	10	18.25
2.322000	28.38	46.00	17.62	L1	10	18.38
3.630000	23.93	46.00	22.07	L1	10	13.93

AC Input Port/ Voltage: 120V/60Hz

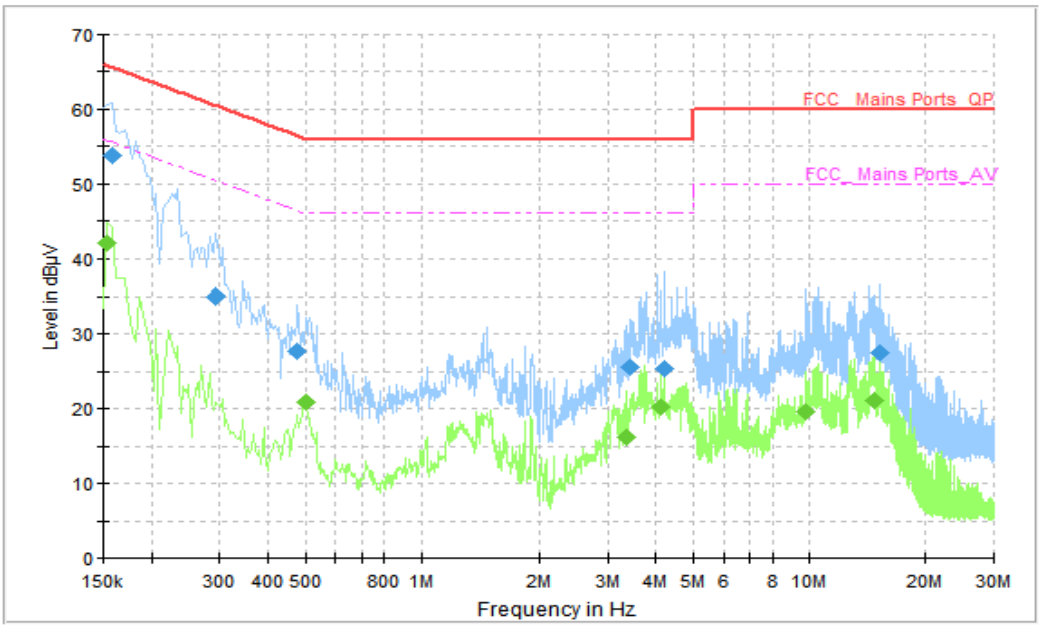


Figure A.2.4 Conducted Emission(Data Transfer)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	PMea (dBµV)
0.158000	53.73	65.57	11.84	L1	10	43.73
0.294000	34.96	60.41	25.45	N	10	24.96
0.478000	27.68	56.37	28.70	N	10	17.68
3.430000	25.51	56.00	30.49	L1	10	15.51
4.226000	25.43	56.00	30.57	N	10	15.43
15.186000	27.54	60.00	32.46	N	10	17.54

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	PMea (dBµV)
0.154000	41.96	55.78	13.82	L1	10	31.96
0.502000	20.98	46.00	25.02	N	10	10.98
3.346000	16.20	46.00	29.80	N	10	6.20
4.114000	20.24	46.00	25.76	N	10	10.24
9.814000	19.63	50.00	30.37	L1	10	9.63
14.774000	21.15	50.00	28.85	N	10	11.15

AC Input Port/ Voltage: 240V/60Hz

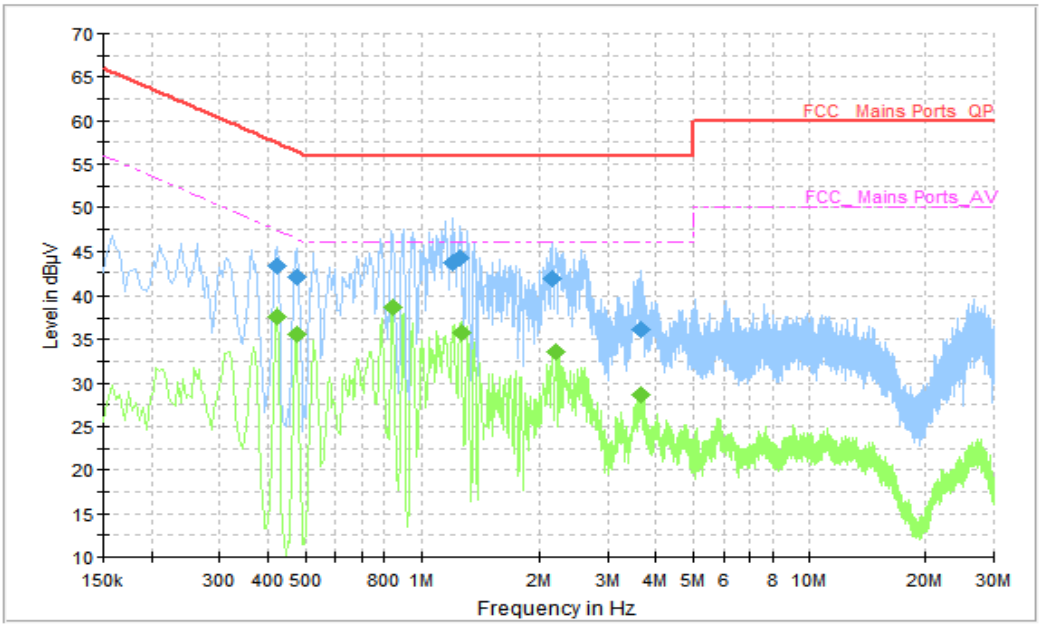


Figure A.2.5 Conducted Emission(Camera)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	PMea (dBµV)
0.422000	43.38	57.41	14.03	N	10	33.38
0.478000	42.09	56.37	14.28	N	10	32.09
1.206000	43.64	56.00	12.36	N	10	33.64
1.258000	44.24	56.00	11.76	N	10	34.24
2.146000	41.80	56.00	14.20	N	10	31.8
3.646000	36.20	56.00	19.80	N	10	26.20

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	PMea (dBµV)
0.422000	37.60	47.41	9.81	N	10	27.60
0.474000	35.55	46.44	10.89	L1	10	25.55
0.842000	38.71	46.00	7.29	N	10	28.71
1.266000	35.80	46.00	10.20	N	10	25.80
2.206000	33.52	46.00	12.48	N	10	23.52
3.658000	28.61	46.00	17.39	N	10	18.61

AC Input Port/ Voltage: 240V/60Hz

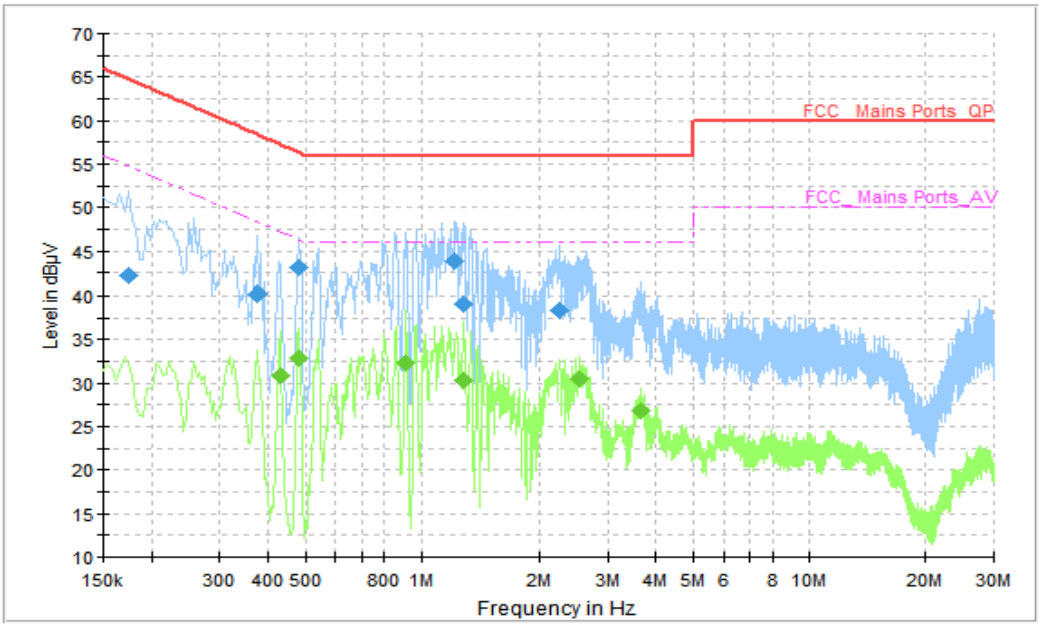


Figure A.2.6 Conducted Emission(Video Player)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	PMea (dBµV)
0.174000	42.25	64.77	22.51	N	10	32.25
0.374000	40.16	58.41	18.25	N	10	30.16
0.482000	43.03	56.31	13.27	N	10	33.03
1.218000	43.89	56.00	12.11	N	10	33.89
1.286000	39.14	56.00	16.86	N	10	29.14
2.262000	38.33	56.00	17.67	N	10	28.33

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	PMea (dBµV)
0.430000	30.90	47.25	16.35	N	10	20.90
0.482000	32.87	46.31	13.44	L1	10	22.87
0.910000	32.32	46.00	13.68	N	10	22.32
1.286000	30.37	46.00	15.63	N	10	20.37
2.546000	30.53	46.00	15.47	N	10	20.53
3.662000	26.92	46.00	19.08	N	10	16.92

AC Input Port/ Voltage: 240V/60Hz

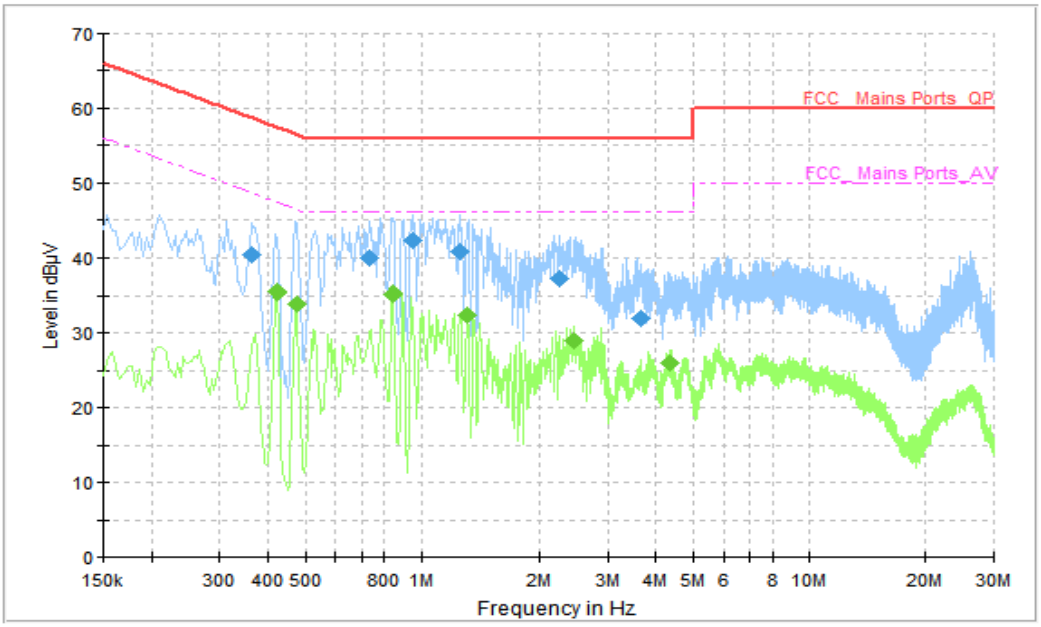


Figure A.2.7 Conducted Emission(FM receiver)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	PMea (dBµV)
0.362000	40.29	58.68	18.39	L1	10	30.29
0.730000	39.96	56.00	16.04	L1	10	29.96
0.954000	42.19	56.00	13.81	N	10	32.19
1.258000	40.67	56.00	15.33	L1	10	30.67
2.254000	37.13	56.00	18.87	L1	10	27.13
3.642000	31.97	56.00	24.03	N	10	21.97

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	PMea (dBµV)
0.422000	35.50	47.41	11.91	N	10	25.50
0.474000	33.98	46.44	12.47	N	10	23.98
0.842000	35.16	46.00	10.84	L1	10	25.16
1.310000	32.41	46.00	13.59	N	10	22.41
2.458000	29.10	46.00	16.90	N	10	19.1
4.338000	26.04	46.00	19.96	N	10	16.04

AC Input Port/ Voltage: 240V/60Hz

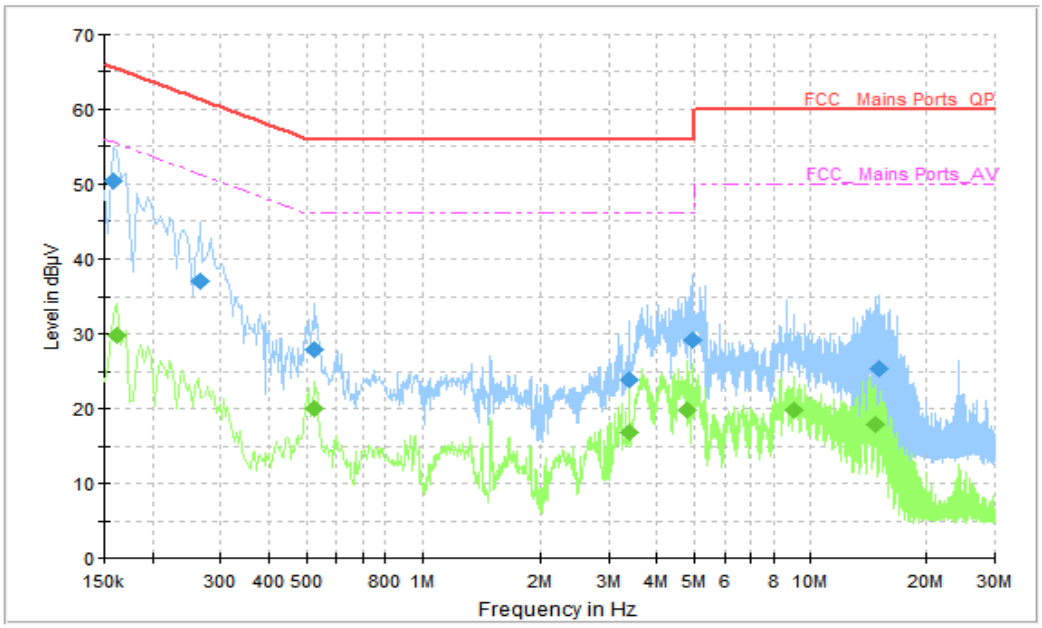


Figure A.2.8 Conducted Emission(Data Transfer)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	PMea (dBµV)
0.158000	50.26	65.57	15.31	L1	10	40.26
0.266000	36.85	61.24	24.39	L1	10	26.85
0.526000	27.98	56.00	28.02	N	10	17.98
3.390000	23.98	56.00	32.02	L1	10	13.98
4.950000	29.15	56.00	26.85	L1	10	19.15
15.046000	25.42	60.00	34.58	N	10	15.42

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	PMea (dBµV)
0.162000	29.92	55.36	25.44	L1	10	19.92
0.526000	20.00	46.00	26.00	N	10	10.00
3.390000	16.82	46.00	29.18	L1	10	6.82
4.786000	19.82	46.00	26.18	N	10	9.82
9.070000	19.85	50.00	30.15	N	10	9.85
14.722000	18.01	50.00	31.99	N	10	8.01

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