



TESTREPORT

No.I22N00821-EMC

HMD Global Oy

Smart Phone

Model Name: TA-1339

With

Hardware Version:V01B

Software Version: 000T_1_111

FCC ID: 2AJOTTA-1339

Issued Date: 2022-04-15

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
I22N00821-EMC	Rev.0	1st edition	2022-04-15

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

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1. Summary of Test Report

1.1. Test Items

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

1.2. Test Standards

FCC Part 15, Subpart B (10-1-2020 Edition); ANSI C63.4-2014.

1.3. Test Result

Pass

Total test 1 items, pass 1 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: 2022-04-11

Testing End Date: 2022-04-14

1.6. Signature

Liang Yong
(Prepared this test report)

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(Reviewed this test report)

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2. ClientInformation

2.1. Applicant Information

Company Name: HMD Global Oy
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Tel. +393 31 6272922

2.2. Manufacturer Information

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



3. Equipment Under Test (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
UT04aa	357321212704745	V01B	000T_1_111	2022-03-29

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

3.3. Internal Identification of AE

AE ID*	Description
AE1	Battery
AE2	Charger
AE3	USB Cable
AE4	Headset
AE1-1	
Model	BL-29CI
Manufacturer	Fenghua Battery Co.,Ltd.
Capacity	2950mAh
Nominal Voltage	3.8V
AE1-2	
Model	BL-29CI
Manufacturer	Shenzhen Aerospace Electronic 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.

Set.1

Combination of EUT and AE

EUT+AE1+AE2+AE3+AE4



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, USB Cable and Headset

Samples (EUT+AE) undergoing test were selected by the Client. Relevant information is provided by the Client.

This report serves as a record of TA-1339 manufactured by HMD Global Oy. According to the declaration of differences by manufacturer. The tables below show the details:

Model Differences	TA-1339 (Initial Model)	TA-1339 (Record Model)
Chip	SC9863A	SC9863A1
Software Version	000T_0_513	000T_1_111
Battery (AE1-2)	/	added a Battery (AE1-2) Model: BL-29CI

According to the declaration of differences by manufacturer, the following tests need to be performed.

NO.	Test item	EUT ID	Operating mode
1	Radiated Emission	UT04aa	Camera/ FM Receiver/ Video Player /GSM Receiver/ WCDMA Receiver/LTE Receiver

Other results of are cited from the initial model TA-1339.

The report number for initial model is I21N04037-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	(10-1-2020 Edition)
ANSI C63.4	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2014

5. LABORATORY ENVIRONMENT

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

9.10m×6.10m×5.60m (L×W×H)

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

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

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

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

9.10m×6.10m×5.60m (L×W×H)

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



6. SUMMARY OF TEST RESULTS

6.1. Testing Environment

Normal Temperature: 15~35°C
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

6.3. Statement

6.3.1 Statements of conformity

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

7. Measurement uncertainty

Test item	Frequency ranges	Measurement uncertainty
Radiated Emission	30MHz-1GHz	4.86dB(k=2)
	1GHz-18GHz	4.82dB(k=2)
Conducted Emission	150kHz-30MHz	2.62dB(k=2)

8. Test Facilities Utilized

No.	Name	Model	Serial Number	Manufacturer	Calibration Due date	Calibration Period
1.	Test Receiver	ESR7	101676	R&S	2022.11.24	1 year
2.	Test Receiver	ESCI	100702	R&S	2023.01.12	1 year
3.	Spectrum Analyzer	FSV40	101192	R&S	2023.01.12	1 year
4.	BiLog Antenna	3142E	0224831	ETS-Lindgren	2024.05.27	3 years
5.	Horn Antenna	3117	00066577	ETS-Lindgren	2025.03.15	3 years
6.	LISN	ENV216	102067	R&S	2022.07.15	1 year
7.	Chamber	FACT3-2.0	1285	ETS-Lindgren	2023.05.29	2 years
8.	Software	EMC32	V10.50.40	R&S	/	/

Note: CAL.: Calibration

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:

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

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

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

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

GSM receiver: The EUT is connected to a charger for charging. The EUT is synchronized to System Simulator (SS), and able to respond to paging messages and incoming call. An established call has been released.

WCDMA receiver: The EUT is connected to a charger for charging. The EUT is synchronized to System Simulator (SS), and able to respond to paging messages and incoming call. An established call has been released.

LTE receiver: The EUT is connected to a charger for charging. The EUT is synchronized to System Simulator (SS), and able to respond to paging messages and incoming call. An established call has been released.

This device contains the receivers which tune and operate between 30MHz-960MHz in the following bands:

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

The EUT was tested while operating in licensed band receiver mode. All licensed band receivers that tune in the range of 30MHz-960MHz, as listed in Section 3.1, are investigated. Only the worst case emissions are reported.

All equipment is placed on the test table top and arranged in a typical configuration in accordance with ANSI C63.4-2014 and manipulated to obtain worst case emissions.

A.1.3 Measurement Limit

Limit from CFR Part 15.109(a)

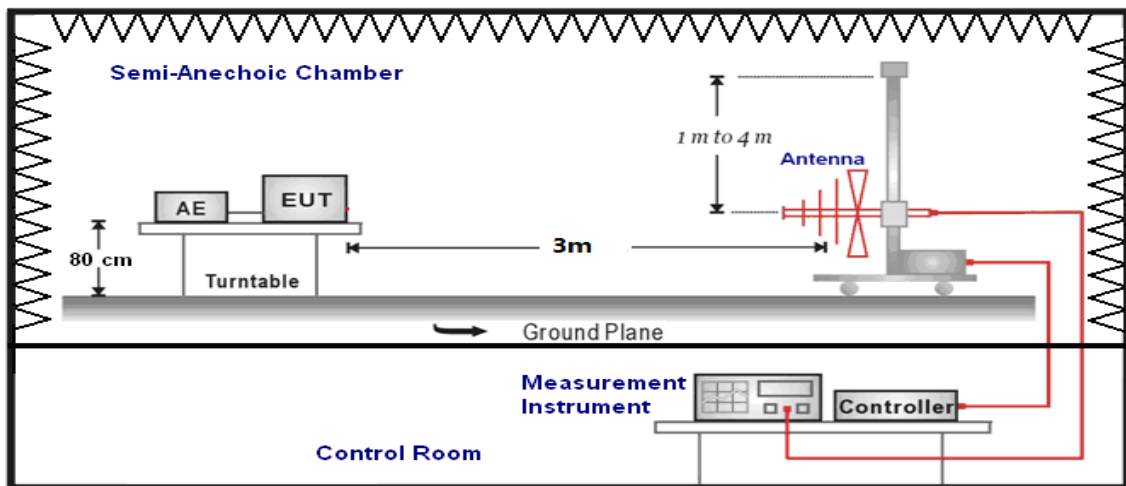
Frequency range (MHz)	Field strength limit ($\mu\text{V/m}$)		
	Quasi-peak	Average	Peak
30-88	100		
88-216	150		
216-960	200		
960-1000	500		
>1000		500	5000

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

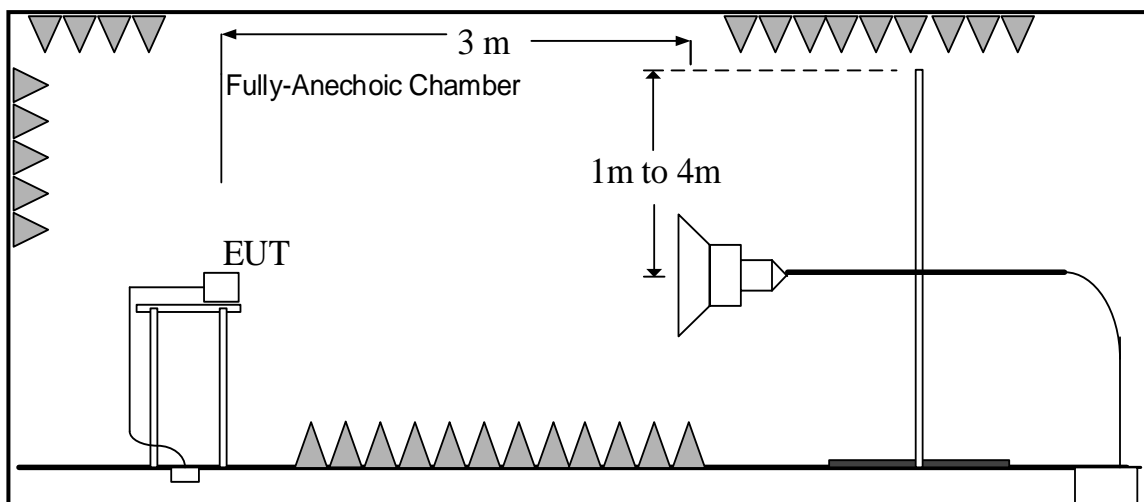
A.1.4 Test Condition

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-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:

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

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
		UT04aa/Set.1	
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 (dB μ V/m)	Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
			UT04aa/Set.1	
1000 to 18000	54	74	See Fugure A.1.2.	P

Video Player

Frequency range (MHz)	Quasi-Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
		UT04aa/Set.1	
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 (dB μ V/m)	Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
			UT04aa/Set.1	
1000 to 18000	54	74	See Fugure A.1.4.	P

FM receiver

Frequency range (MHz)	Quasi-Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
		UT04aa/Set.1	
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 (dB μ V/m)	Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
			UT04aa/Set.1	
1000 to 18000	54	74	See Fugure A.1.6.	P

GSM receiver 850MHz

Frequency range (MHz)	Quasi-Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
		UT04aa/Set.1	
30-88	40.00	See Figure A.1.7.	P
88-216	43.50		
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
			UT04aa/Set.1	
1000 to 18000	54	74	See Figure A.1.8.	P

WCDMA receiver Band 5

Frequency range (MHz)	Quasi-Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
		UT04aa/Set.1	
30-88	40.00	See Figure A.1.9.	P
88-216	43.50		
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
			UT04aa/Set.1	
1000 to 18000	54	74	See Figure A.1.10.	P

LTE receiver Band 5

Frequency range (MHz)	Quasi-Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
		UT04aa/Set.1	
30-88	40.00	See Figure A.1.11.	P
88-216	43.50		
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
			UT04aa/Set.1	
1000 to 18000	54	74	See Figure A.1.12.	P

LTE receiver Band 12

Frequency range (MHz)	Quasi-Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
		UT04aa/Set.1	
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 (dB μ V/m)	Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
			UT04aa/Set.1	
1000 to 18000	54	74	See Fugure A.1.14.	P

LTE receiver Band 17

Frequency range (MHz)	Quasi-Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
		UT04aa/Set.1	
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 (dB μ V/m)	Peak Limit (dB μ V/m)	Result (dB μ V/m)	Conclusion
			UT04aa/Set.1	
1000 to 18000	54	74	See Fugure A.1.16.	P

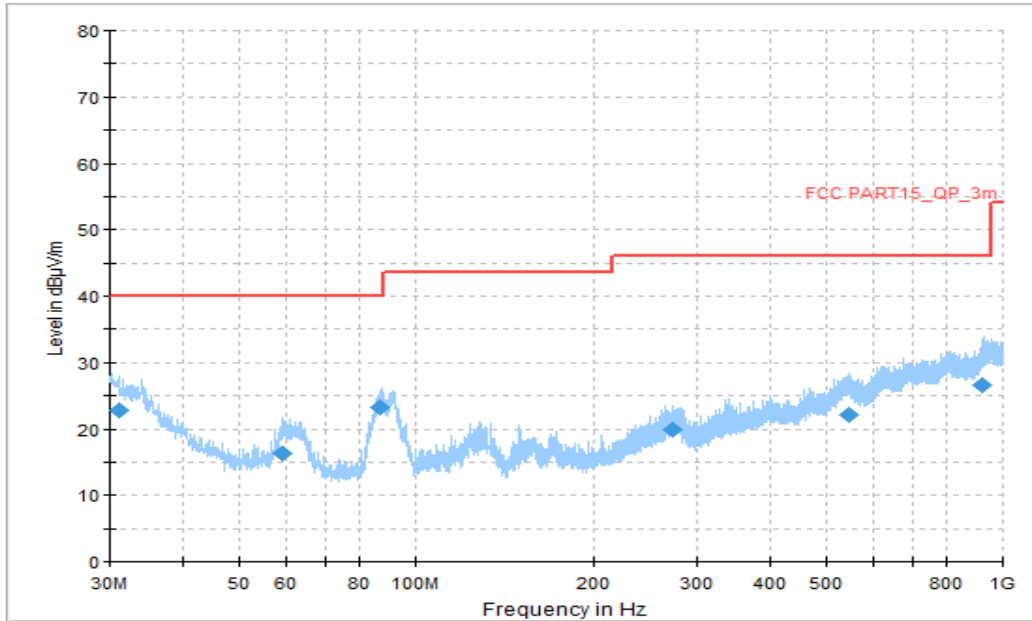


Figure A.1.1. Radiated Emission (Camera, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	PMea (dBµV)
31.185556	22.80	40.00	17.20	V	-13	35.80
59.207778	16.37	40.00	23.63	V	-22	38.37
86.583333	23.17	40.00	16.83	H	-22	45.17
273.631667	19.79	46.02	26.23	H	-14	33.79
544.046111	22.12	46.02	23.90	H	-4	26.12
924.609444	26.61	46.02	19.41	V	1	25.61

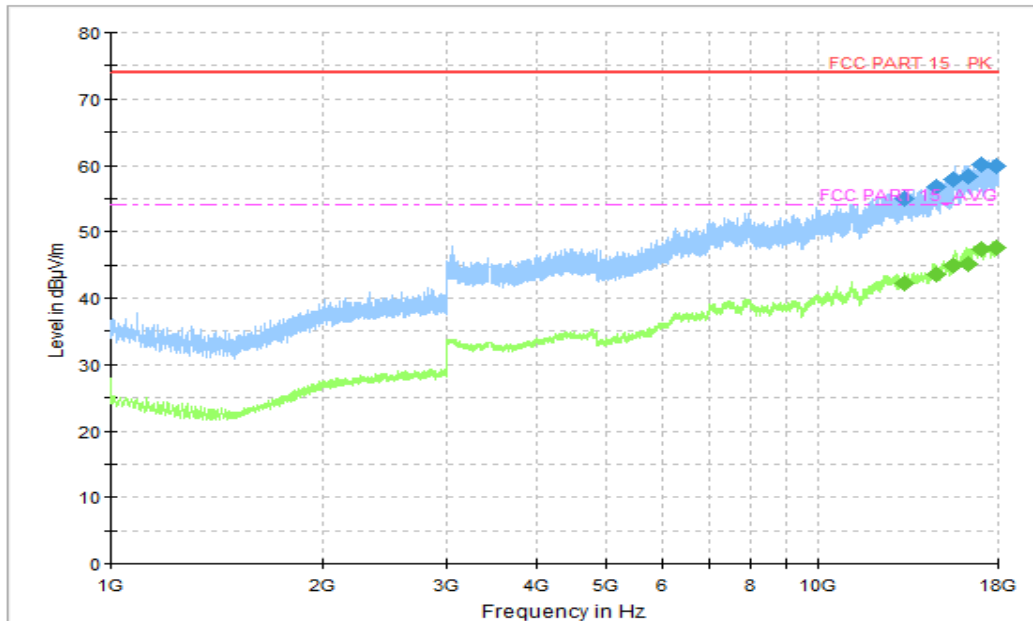


Figure A.1.2. Radiated Emission (Camera,1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
13258.500000	54.96	74.00	19.04	V	18	36.96
14665.250000	56.67	74.00	17.33	H	19	37.67
15561.000000	57.85	74.00	16.15	H	20	37.85
16314.250000	58.34	74.00	15.66	H	21	37.34
17025.250000	60.19	74.00	13.81	V	23	37.19
17864.500000	59.97	74.00	14.03	V	25	34.97

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
13258.500000	42.29	54.00	11.71	V	18	24.29
14665.250000	43.50	54.00	10.50	H	19	24.5
15561.000000	44.85	54.00	9.15	V	20	24.85
16314.250000	45.22	54.00	8.78	H	21	24.22
17025.250000	47.46	54.00	6.54	H	23	24.46
17864.500000	47.49	54.00	6.51	H	25	22.49

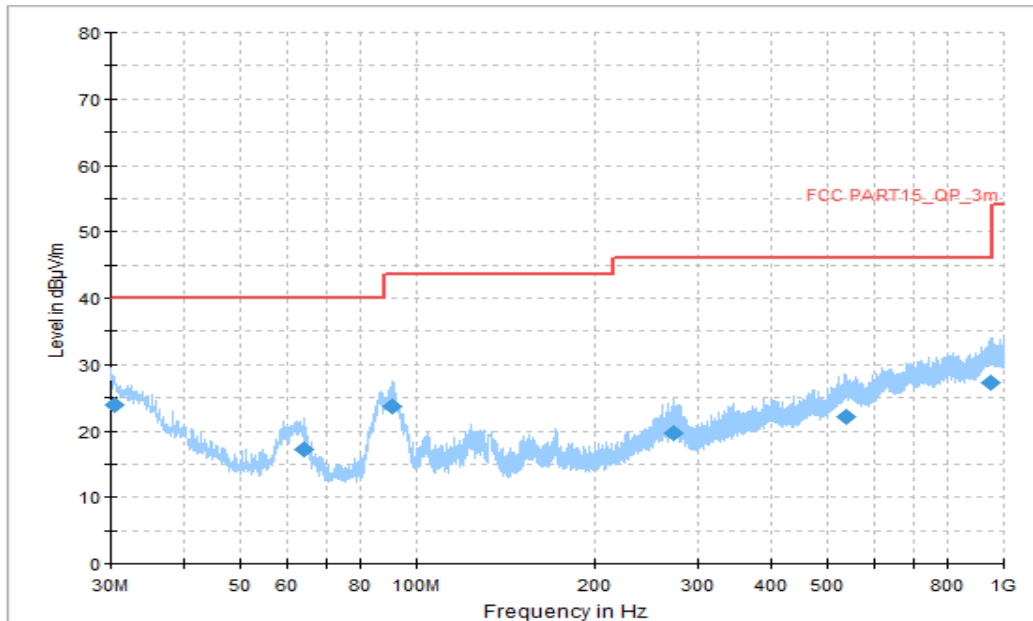


Figure A.1.3. Radiated Emission (Video Player, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	PMea (dBµV)
30.485000	23.89	40.00	16.11	V	-13	36.89
63.950000	17.12	40.00	22.88	H	-21	38.12
90.840556	23.71	43.52	19.81	H	-21	44.71
272.446111	19.61	46.02	26.41	H	-14	33.61
537.902778	22.18	46.02	23.84	V	-4	26.18
950.637778	27.34	46.02	18.68	H	1	26.34

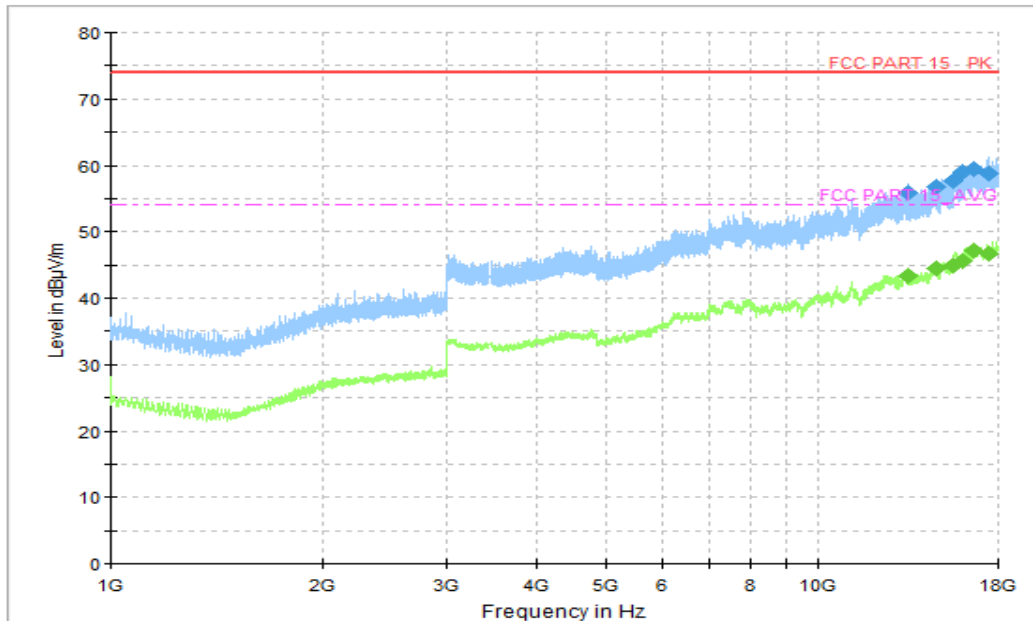


Figure A.1.4. Radiated Emission (Video Player,1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
13378.750000	55.82	74.00	18.18	V	18	37.82
14692.250000	56.73	74.00	17.27	H	19	37.73
15566.250000	57.61	74.00	16.39	H	20	37.61
16010.500000	59.07	74.00	14.93	H	21	38.07
16613.500000	59.48	74.00	14.52	V	23	36.48
17424.750000	58.69	74.00	15.31	V	24	34.69

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
13378.750000	43.34	54.00	10.66	V	18	25.34
14692.250000	44.39	54.00	9.61	H	19	25.39
15566.250000	44.99	54.00	9.01	V	20	24.99
16010.500000	45.65	54.00	8.35	H	21	24.65
16613.500000	47.09	54.00	6.91	H	23	24.09
17424.750000	46.61	54.00	7.39	H	24	22.61

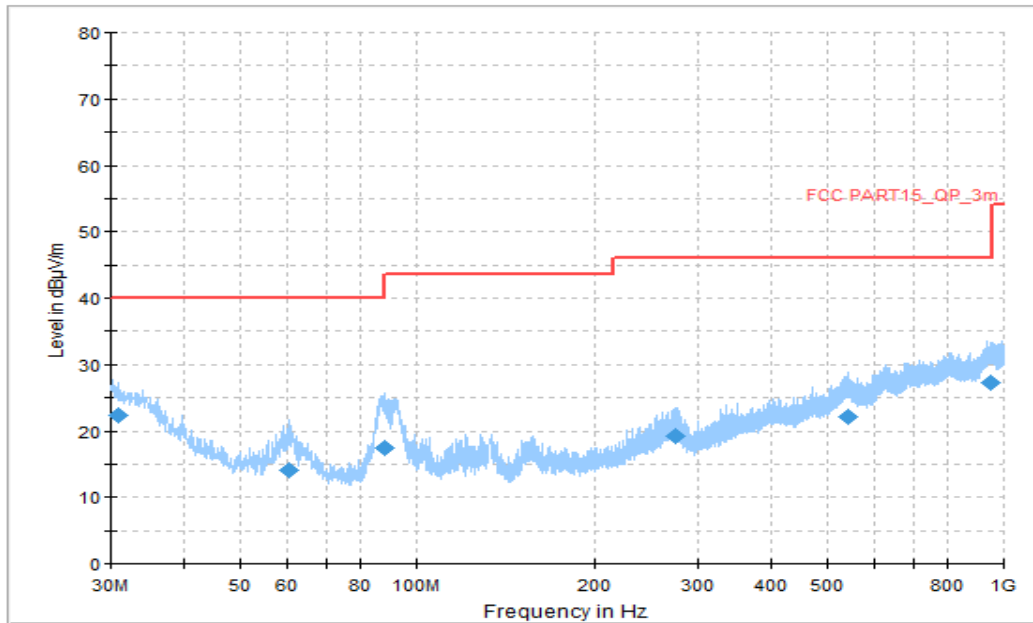


Figure A.1.5. Radiated Emission (FM receiver, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	PMea (dBµV)
30.808333	22.45	40.00	17.55	V	-13	35.45
60.285556	14.07	40.00	25.93	H	-22	36.07
88.415556	17.50	43.52	26.02	H	-22	39.50
274.116667	19.12	46.02	26.90	H	-14	33.12
541.782778	22.15	46.02	23.87	H	-4	26.15
951.284444	27.28	46.02	18.74	V	1	26.28

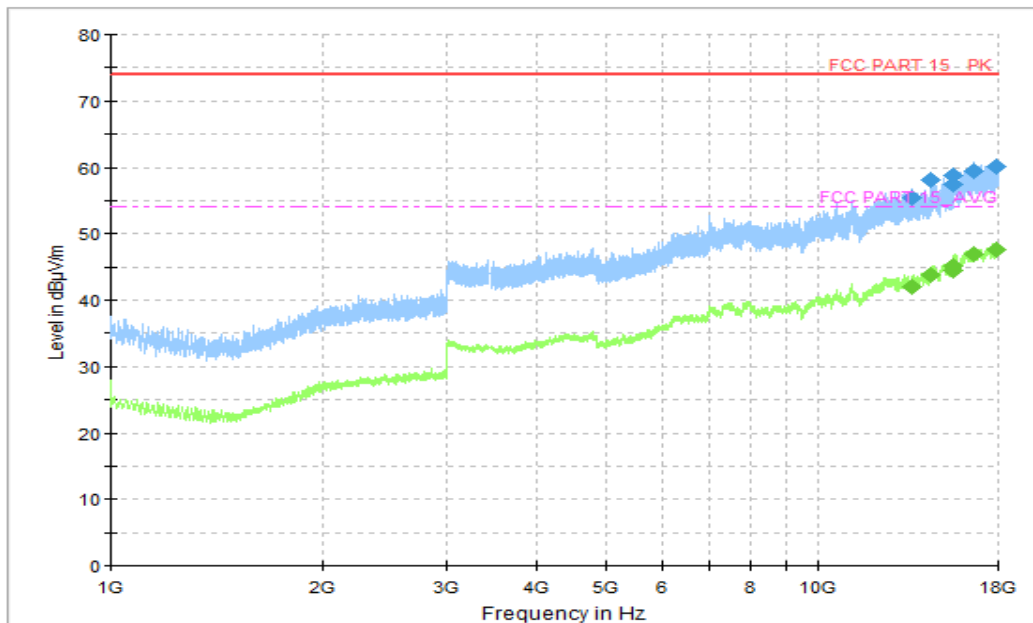


Figure A.1.6. Radiated Emission (FM receiver,1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
13610.250000	55.36	74.00	18.64	V	18	37.36
14436.250000	58.00	74.00	16.00	H	19	39
15549.000000	57.54	74.00	16.46	H	20	37.54
15583.000000	58.74	74.00	15.26	H	20	38.74
16664.500000	59.35	74.00	14.65	V	22	37.35
17912.500000	60.15	74.00	13.85	V	25	35.15

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
13610.250000	42.01	54.00	11.99	V	18	24.01
14436.250000	43.78	54.00	10.22	H	19	24.78
15549.000000	44.42	54.00	9.58	H	20	24.42
15583.000000	45.15	54.00	8.85	H	20	25.15
16664.500000	46.94	54.00	7.06	V	22	24.94
17912.500000	47.54	54.00	6.46	V	25	22.54

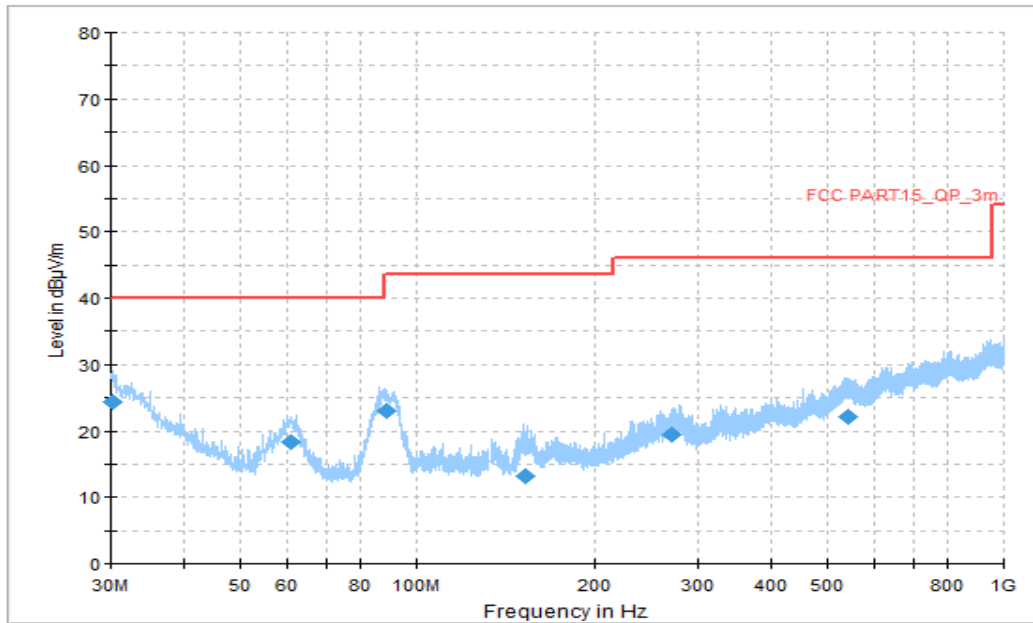


Figure A.1.7. Radiated Emission (GSM receiver 850MHz, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	PMea (dBµV)
30.323333	24.40	40.00	15.60	H	-13	37.40
60.878333	18.43	40.00	21.57	H	-22	40.43
88.631111	23.00	43.52	20.52	V	-22	45.00
152.758889	13.12	43.52	30.40	V	-17	30.12
271.637778	19.48	46.02	26.54	H	-14	33.48
542.429444	22.10	46.02	23.92	V	-4	26.10

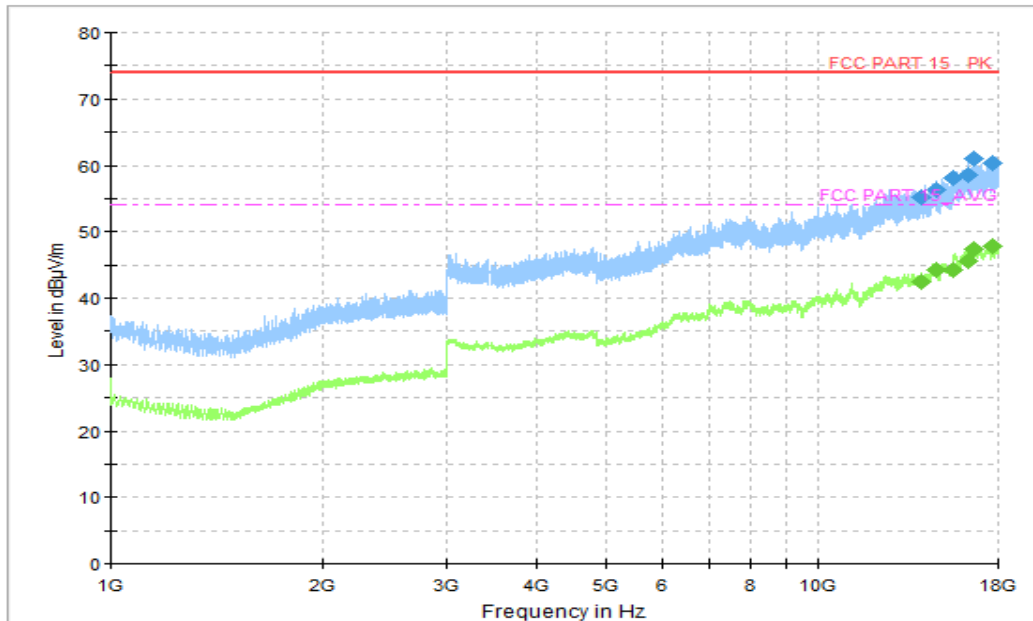


Figure A.1.8. Radiated Emission (GSM receiver 850MHz,1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
14043.750000	55.15	74.00	18.85	V	18	37.15
14690.500000	56.41	74.00	17.59	H	19	37.41
15528.750000	58.03	74.00	15.97	H	20	38.03
16285.750000	58.64	74.00	15.36	H	21	37.64
16586.750000	60.98	74.00	13.02	V	23	37.98
17696.000000	60.25	74.00	13.75	V	24	36.25

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
14043.750000	42.43	54.00	11.57	V	18	24.43
14690.500000	44.31	54.00	9.69	H	19	25.31
15528.750000	44.27	54.00	9.73	H	20	24.27
16285.750000	45.64	54.00	8.36	H	21	24.64
16586.750000	47.36	54.00	6.64	V	23	24.36
17696.000000	47.90	54.00	6.10	V	24	23.90

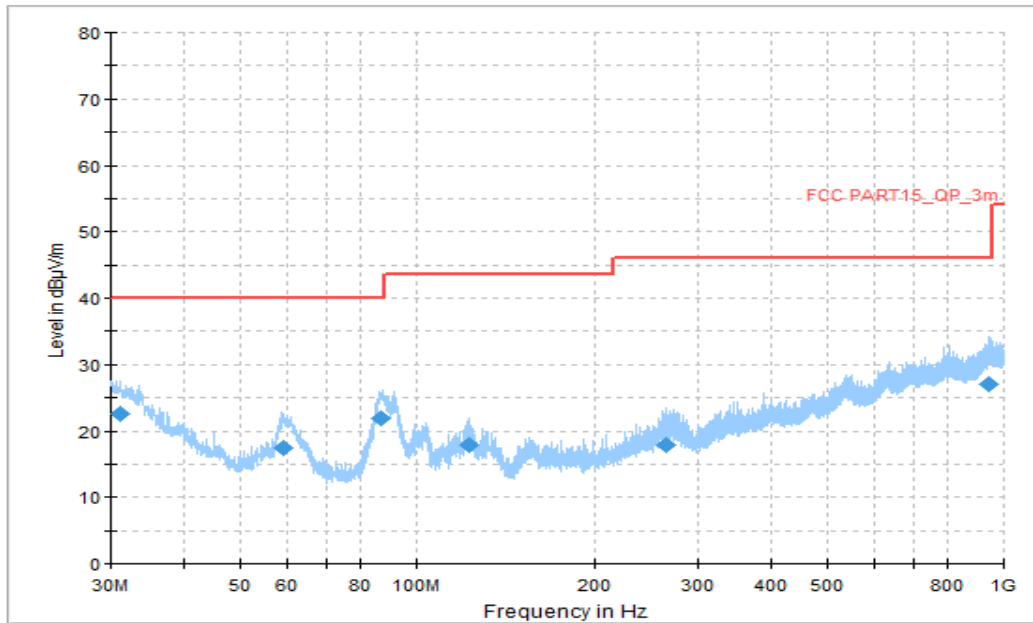


Figure A.1.9. Radiated Emission (WCDMA receiver Band 5, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	PMea (dBµV)
31.077778	22.63	40.00	17.37	V	-13	35.63
58.992222	17.33	40.00	22.67	H	-22	39.33
87.014444	21.98	40.00	18.02	H	-22	43.98
123.012222	17.95	43.52	25.57	V	-14	31.95
265.656111	17.91	46.02	28.11	H	-4	21.91
941.638333	26.96	46.02	19.06	H	1	25.96

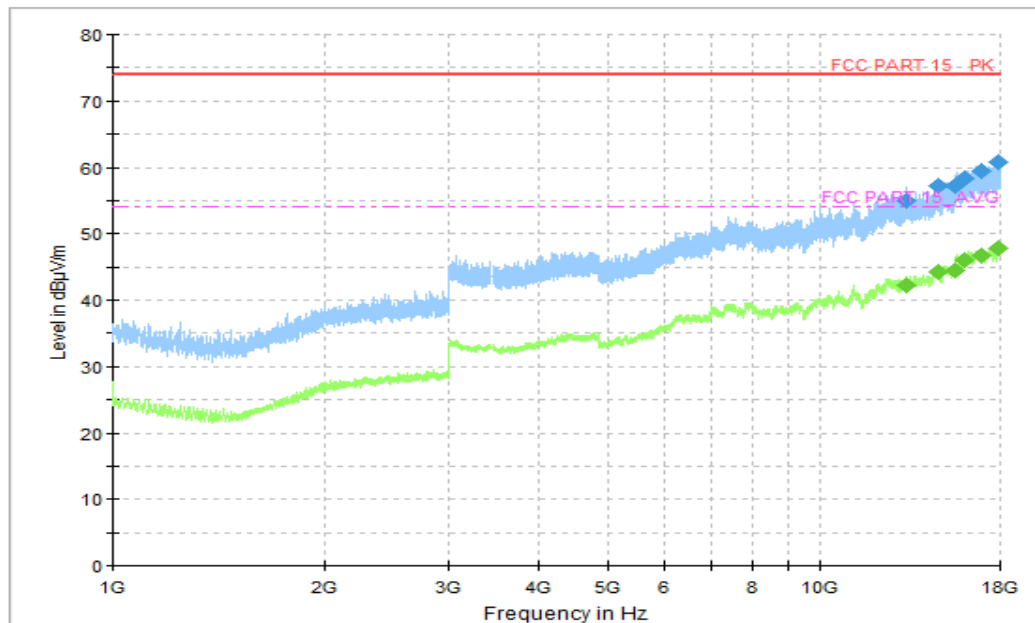


Figure A.1.10. Radiated Emission (WCDMA receiver Band 5,1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
13256.500000	55.03	74.00	18.97	V	18	37.03
14696.500000	57.19	74.00	16.81	H	19	38.19
15548.250000	57.21	74.00	16.79	H	20	37.21
16015.750000	58.37	74.00	15.63	H	21	37.37
16972.250000	59.38	74.00	14.62	V	23	36.38
17900.250000	60.78	74.00	13.22	V	25	35.78

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
13256.500000	42.20	54.00	11.80	V	18	24.20
14696.500000	44.30	54.00	9.70	H	19	25.3
15548.250000	44.37	54.00	9.63	H	20	24.37
16015.750000	46.00	54.00	8.00	H	21	25.00
16972.250000	46.65	54.00	7.35	V	23	23.65
17900.250000	47.88	54.00	6.12	V	25	22.88

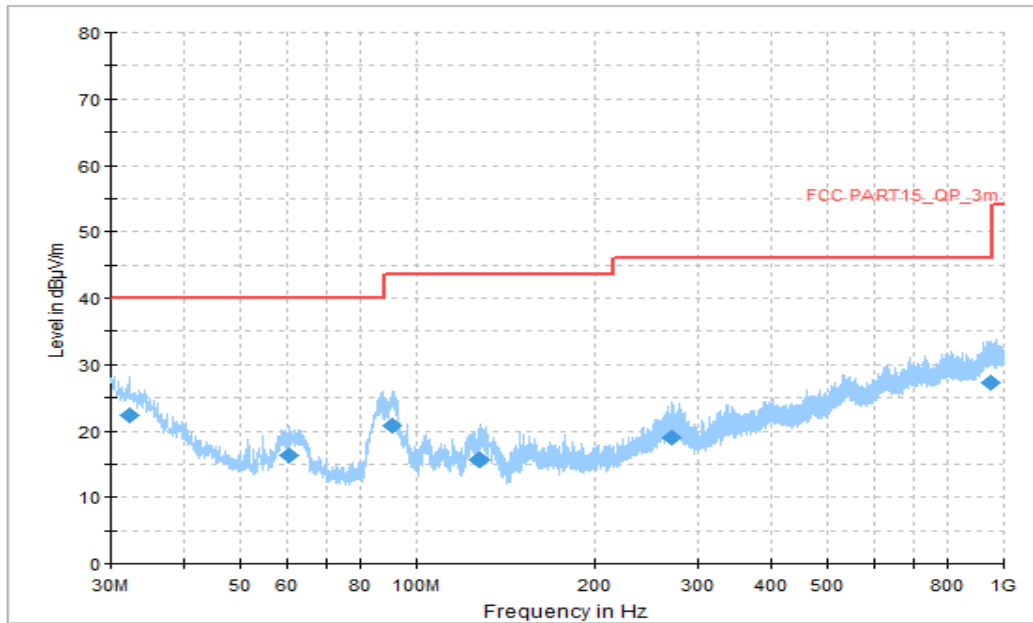


Figure A.1.11. Radiated Emission (LTE receiver Band 5, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	PMea (dBµV)
32.263333	22.38	40.00	17.62	V	-13	35.38
60.447222	16.32	40.00	23.68	V	-22	38.32
90.840556	20.73	43.52	22.79	H	-22	42.73
127.862222	15.73	43.52	27.79	H	-14	29.73
270.021111	19.07	46.02	26.95	H	-4	23.07
952.577778	27.35	46.02	18.67	V	1	26.35

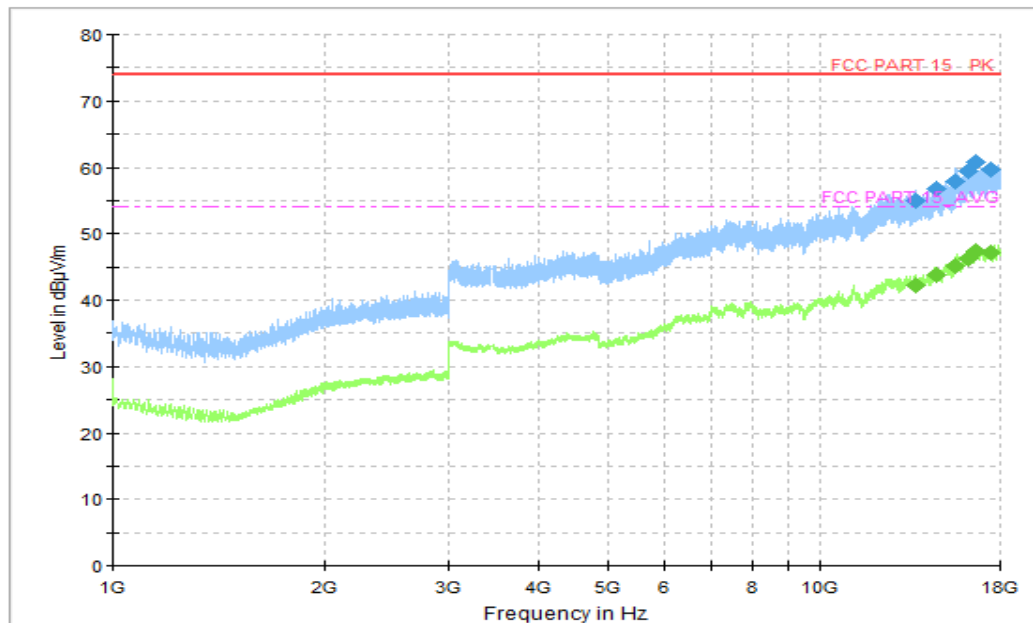


Figure A.1.12. Radiated Emission (LTE receiver Band 5,1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
13674.750000	54.88	74.00	19.12	V	18	36.88
14579.500000	56.85	74.00	17.15	H	19	37.85
15564.000000	57.82	74.00	16.18	V	20	37.82
16258.750000	59.52	74.00	14.48	H	22	37.52
16625.250000	60.73	74.00	13.27	H	23	37.73
17483.000000	59.60	74.00	14.40	V	24	35.60

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
13674.750000	42.22	54.00	11.78	V	18	24.22
14579.500000	43.78	54.00	10.22	H	19	24.78
15564.000000	45.13	54.00	8.87	H	20	25.13
16258.750000	46.31	54.00	7.69	H	22	24.31
16625.250000	47.35	54.00	6.65	V	23	24.35
17483.000000	47.15	54.00	6.85	V	24	23.15

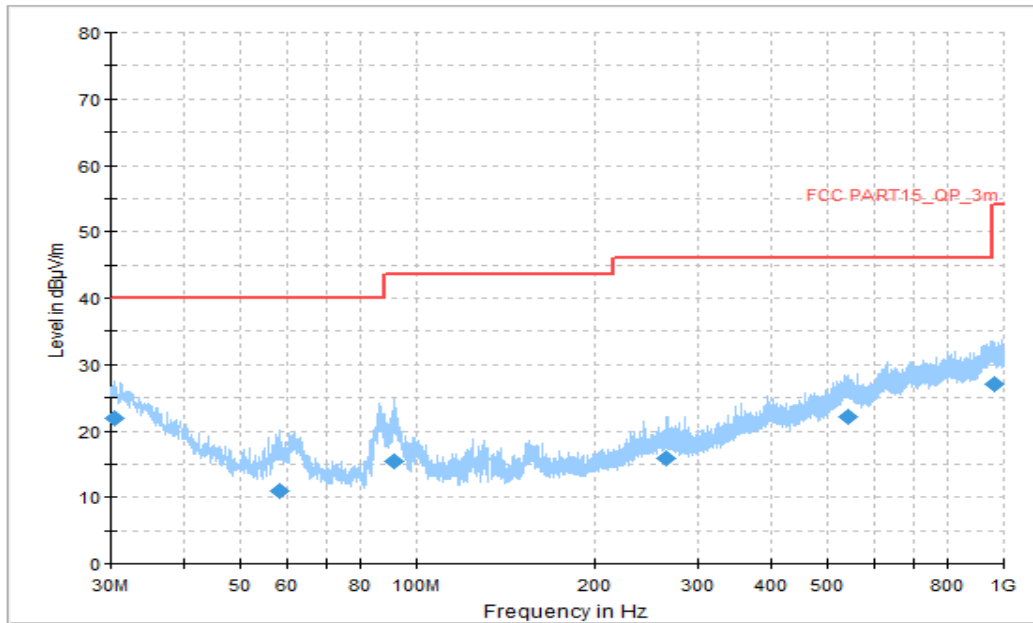


Figure A.1.13. Radiated Emission (LTE receiver Band 12, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	PMea (dBµV)
30.377222	21.79	40.00	18.21	V	-13	34.79
58.507222	10.93	40.00	29.07	H	-22	32.93
91.271667	15.47	43.52	28.05	H	-22	37.47
263.877778	15.80	46.02	30.22	H	-14	29.80
539.950556	22.08	46.02	23.94	H	-4	26.08
961.361667	26.97	53.98	27.01	H	1	25.97

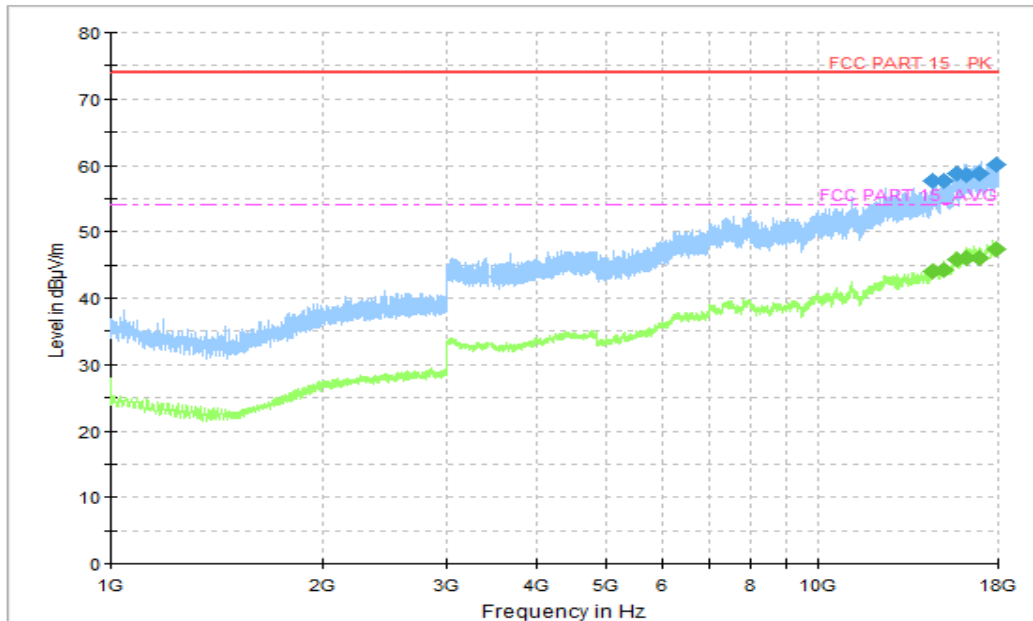


Figure A.1.14. Radiated Emission (LTE receiver Band 12,1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
14546.000000	57.60	74.00	16.40	V	19	38.60
15037.250000	57.61	74.00	16.39	H	19	38.61
15727.750000	58.87	74.00	15.13	H	21	37.87
16242.250000	58.52	74.00	15.48	H	22	36.52
16905.750000	58.79	74.00	15.21	V	22	36.79
17908.000000	60.18	74.00	13.82	V	25	35.18

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
14546.000000	44.13	54.00	9.87	V	19	25.13
15037.250000	44.22	54.00	9.78	H	19	25.22
15727.750000	45.73	54.00	8.27	H	21	24.73
16242.250000	46.02	54.00	7.98	H	22	24.02
16905.750000	46.01	54.00	7.99	V	22	24.01
17908.000000	47.48	54.00	6.52	V	25	22.48

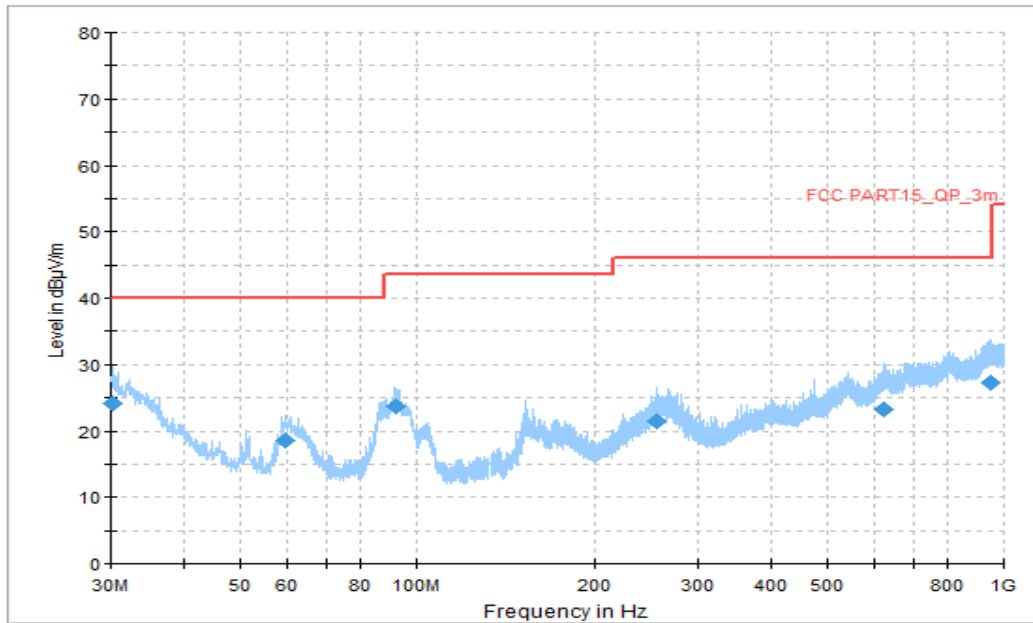


Figure A.1.15. Radiated Emission (LTE receiver Band 17, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	PMea (dBµV)
30.323333	24.23	40.00	15.77	V	-13	37.23
59.800556	18.48	40.00	21.52	H	-22	40.48
91.918333	23.73	43.52	19.79	H	-21	44.73
255.632778	21.39	46.02	24.63	H	-14	35.39
622.616111	23.28	46.02	22.74	H	-3	26.28
951.823333	27.37	46.02	18.65	V	1	26.37

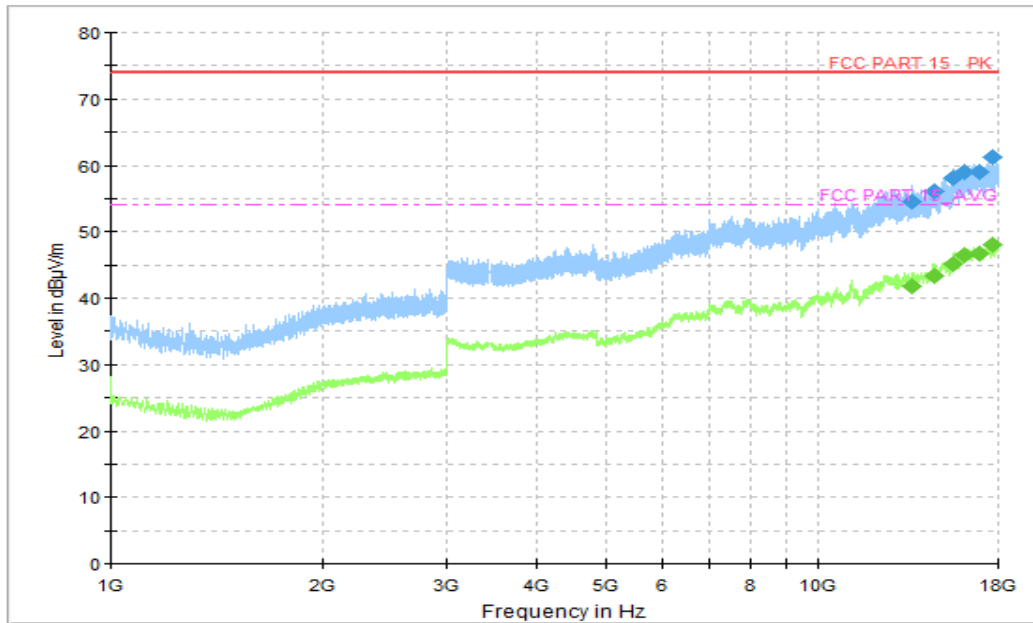


Figure A.1.16. Radiated Emission (LTE receiver Band 17,1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
13608.000000	54.45	74.00	19.55	V	18	36.45
14604.500000	56.17	74.00	17.83	H	19	37.17
15571.000000	58.02	74.00	15.98	H	20	38.02
16157.750000	58.99	74.00	15.01	H	22	36.99
16966.500000	59.01	74.00	14.99	V	23	36.01
17689.750000	61.18	74.00	12.82	V	24	37.18

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	PMea (dBµV)
13608.000000	41.87	54.00	12.13	H	18	23.87
14604.500000	43.46	54.00	10.54	H	19	24.46
15571.000000	45.25	54.00	8.75	V	20	25.25
16157.750000	46.48	54.00	7.52	H	22	24.48
16966.500000	46.60	54.00	7.40	V	23	23.6
17689.750000	47.96	54.00	6.04	V	24	23.96

END OF REPORT