# TEST REPORT

## No.I20N03221-EMC

**for**

**HMD Global Oy**

**Multi-band GSM/WCDMA/LTE phone with Bluetooth, WLAN**

**Model Name：TA-1346**

**With**

**Hardware Version: 99652_1_11**

**Software Version: 000T_0_080**

**FCC ID: 2AJOTTA-1346**

**Issued Date: 2021-01-17**

**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 |
|---|---|---|---|
| I20N03221-EMC | Rev.0 | 1st edition | 2021-01-17 |

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 ..... 8
3.5. GENERAL DESCRIPTION ..... 9
4. REFERENCE DOCUMENTS ..... 10
4.1. REFERENCE DOCUMENTS FOR TESTING ..... 10
5. LABORATORY ENVIRONMENT ..... 11
6. SUMMARY OF TEST RESULTS ..... 12
6.1. TESTING ENVIRONMENT ..... 12
6.2. SUMMARY OF MEASUREMENT RESULTS ..... 12
6.3. STATEMENT ..... 12
7. MEASUREMENT UNCERTAINTY ..... 13
8. TEST FACILITIES UTILIZED ..... 13
9. TEST ACCESSORY UTILIZED ..... 13
ANNEX A: MEASUREMENT RESULTS ..... 14
A.1 RADIATED EMISSION (§15.109(A)) ..... 14
A.2 CONDUCTED EMISSION (§15.107(A)) ..... 77

# 1. Summary of Test Report

## 1.1. Test Items

| | |
|---|---|
| Description | Multi-band GSM/WCDMA/LTE phone with Bluetooth, WLAN |
| Model Name | TA-1346 |
| Applicant's name | HMD Global Oy |
| Manufacturer's Name | HMD Global Oy |

## 1.2. Test Standards

FCC Part 15, Subpart B 10-1-2019 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: 2020-12-15 Testing End Date: 2021-01-12

## 1.6. Signature

**Ma Shoujian**
**(Prepared this test report)**

**Zhang Yunzhuan**
**(Reviewed this test report)**

**Cao Junfei**
**(Approved this test report)**

# 2. ClientInformation

## 2.1. Applicant Information

| | |
|---|---|
| Company Name: | HMD Global Oy |
| Address: | Bertel Jungin aukio 902600 Espoo，Finland |
| Contact | Rosario Casillo |
| Email | Rosario Casillo@hmdglobal.com |

## 2.2. Manufacturer Information

| | |
|---|---|
| Company Name: | HMD Global Oy |
| Address: | Bertel Jungin aukio 902600 Espoo，Finland |
| Contact | Rosario Casillo |
| Email | Rosario Casillo@hmdglobal.com |

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

## 3.1. About EUT

| | |
|---|---|
| Description | Multi-band GSM/WCDMA/LTE phone with Bluetooth, WLAN |
| Model Name | TA-1346 |
| FCC ID | 2AJOTTA-1346 |
| 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 |
|---|---|---|---|---|
| UT13aa | 358742570007408 | 99652_1_11 | 000T_0_080 | 2020-12-15 |
| UT12aa | 358742570001730 | 99652_1_11 | 000T_0_080 | 2020-12-15 |

*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 | WT340 |
| Manufacturer | Guangdong Fenghua New Energy Co.,Ltd |
| Capacity | 4900mAh |
| Nominal Voltage | 3.85V |

AE2-1

| | |
|---|---|
| Model | PA-US5V2A-036 |
| Manufacturer | Yutong Electronics(Huizhou) Co., Ltd |

AE2-2

| | |
|---|---|
| Model | CH-21U |
| Manufacturer | Shenzhen Tianyin Electronics Co., Ltd |

AE3-1

| | |
|---|---|
| Model | CB-36A |
| Manufacturer | ShenZhen BRL Technology Co., Ltd |

AE3-2

| | |
|---|---|
| Model | CB-36A |

| | |
|---|---|
| Manufacturer | Huizhou Washin Electronics co.,LTD |

AE4-1

| | |
|---|---|
| Model | HS-34 |
| Manufacturer | New Leader Industry 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+AE2-1+AE3-1+AE4 |
| Set.2 | EUT+AE1+AE2-2+AE3-2+AE4 |
| Set.3 | EUT+AE1+AE3-1+AE4+PC |
| Set.4 | EUT+AE1+AE3-2+AE4+PC |

## 3.5. General Description

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

It supports GSM 850/900/1800/1900MHz,WCDMA Bands 1/2/4/5/8, and LTE Bands 1/2/3/4/5/7/812/17/28/66.

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;<br>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;<br>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;<br>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 | CALDUE 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. | Universal Radio Communication Tester | CMU200 | 114545 | R&S | 2022.01.13 | 1 year |
| 8. | Universal Radio Communication Tester | CMW500 | 152499 | R&S | 2021.07.16 | 1 year |
| 9. | Signal Generator | SMB100A | 179725 | R&S | 2021.11.25 | 1 year |
| 10. | Chamber | FACT3-2.0 | 1285 | ETS-Lindgren | 2021.07.19 | 2 years |
| 11. | Software | EMC32 | V10.01.00 | R&S | / | / |

## 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.

**GNSS:**The EUT is connected to a charger for charging. A vector signal generator is used to provide the simulated GNSS signal, and the frequency is set to 1575.42 MHz. Before the test starts, the integrated GNSS application in EUT is started up and locked to the simulated GNSS signal.

Meanwhile, the EUT is synchronized to System Simulator (SS), and able to respond to paging messages and incoming call. An established call has been released.

**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 |

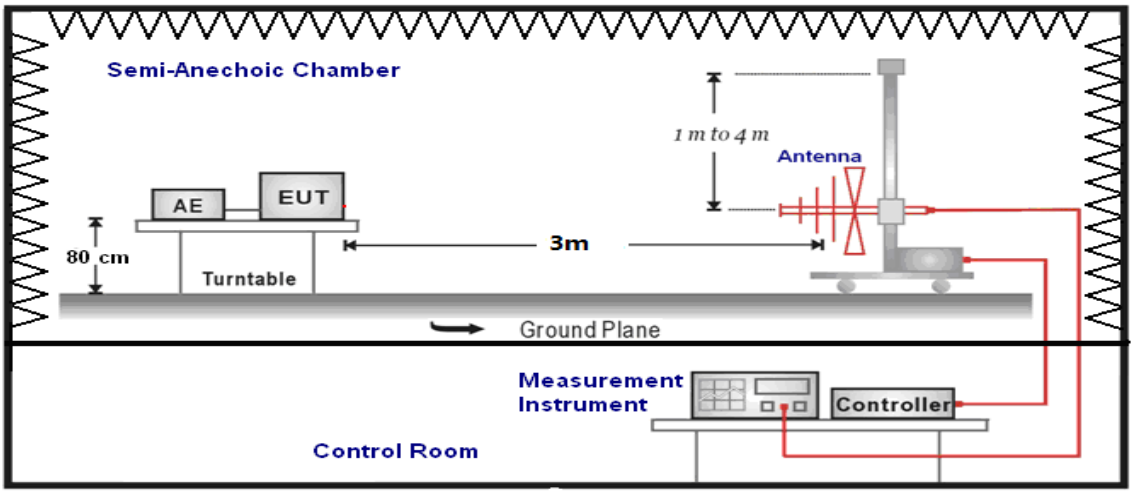
*Note: The original limit is defined at 10m test distance. This limit is calculated according to CISPR requirements.

### A.1.4 Test Condition

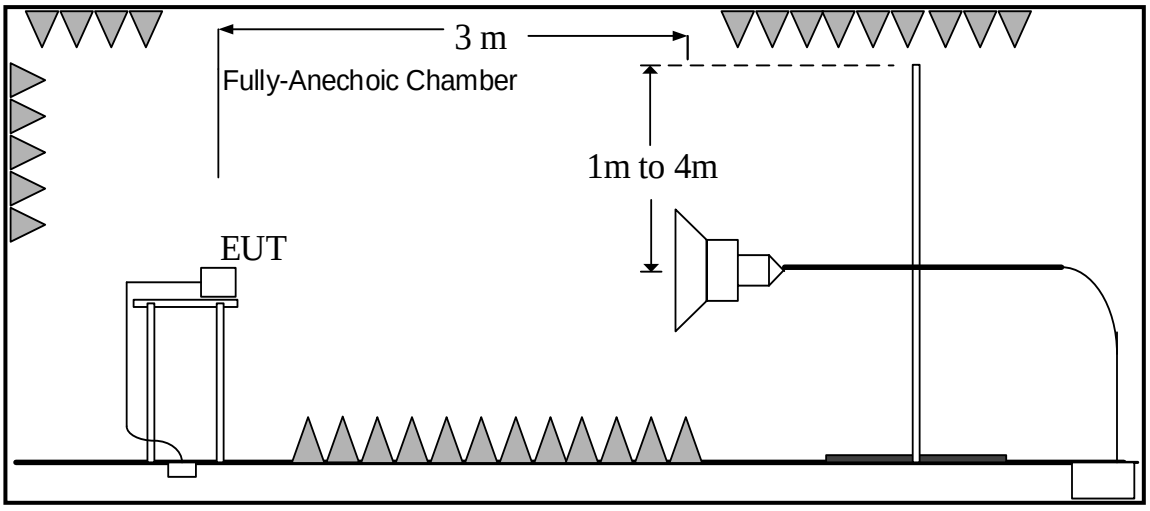
| Frequency of emission (MHz) | RBW/VBW | Sweep Time(s) |
|---|---|---|
| 30-1000 | 120kHz (IF bandwidth) | 5 |
| Above 1000 | 1MHz/3MHz | 15 |

**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 Receiver 850MHz

| Frequency range (MHz) | Quasi-Peak Limit (dBμV/m) | Result (dBμV/m) UT13aa/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) UT13aa/Set.1 | Conclusion |
|---|---|---|---|---|
| 1000 to 3000 | 54 | 74 | See Fugure A.1.2. | P |
| 3000to 18000 | 54 | 74 | See Fugure A.1.3. | P |

WCDMA Receiver Band 5

| Frequency range (MHz) | Quasi-Peak Limit (dBμV/m) | Result (dBμV/m) UT13aa/Set.1 | Conclusion |
|---|---|---|---|
| 30-88 | 40.00 | See Fugure A.1.4. | 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) UT13aa/Set.1 | Conclusion |
|---|---|---|---|---|
| 1000 to 3000 | 54 | 74 | See Fugure A.1.5. | P |
| 3000to 18000 | 54 | 74 | See Fugure A.1.6. | P |

LTE Receiver Band 5

| Frequency range (MHz) | Quasi-Peak Limit (dBμV/m) | Result (dBμV/m) UT13aa/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) UT13aa/Set.1 | Conclusion |
|---|---|---|---|---|
| 1000 to 3000 | 54 | 74 | See Fugure A.1.8. | P |
| 3000to 18000 | 54 | 74 | See Fugure A.1.9. | P |

LTE Receiver Band 12

| Frequency range (MHz) | Quasi-Peak Limit (dBμV/m) | Result (dBμV/m) UT13aa/Set.1 | Conclusion |
|---|---|---|---|
| 30-88 | 40.00 | See Fugure A.1.10. | 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) UT13aa/Set.1 | Conclusion |
|---|---|---|---|---|
| 1000 to 3000 | 54 | 74 | See Fugure A.1.11. | P |
| 3000to 18000 | 54 | 74 | See Fugure A.1.12. | P |

LTE Receiver Band 17

| Frequency range (MHz) | Quasi-Peak Limit (dBμV/m) | Result (dBμV/m) UT13aa/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) UT13aa/Set.1 | Conclusion |
|---|---|---|---|---|
| 1000 to 3000 | 54 | 74 | See Fugure A.1.14. | P |
| 3000to 18000 | 54 | 74 | See Fugure A.1.15. | P |

LTE Receiver Band 12

| Frequency range (MHz) | Quasi-Peak Limit (dBμV/m) | Result (dBμV/m) UT13aa/Set.2 | Conclusion |
|---|---|---|---|
| 30-88 | 40.00 | See Fugure A.1.16. | 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) UT13aa/Set.2 | Conclusion |
|---|---|---|---|---|
| 1000 to 3000 | 54 | 74 | See Fugure A.1.17. | P |
| 3000to 18000 | 54 | 74 | See Fugure A.1.18. | P |

FM receiver

| Frequency range (MHz) | Quasi-Peak Limit (dBμV/m) | Result (dBμV/m) UT13aa/Set.1 | 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) UT13aa/Set.1 | Conclusion |
|---|---|---|---|---|
| 1000 to 3000 | 54 | 74 | See Fugure A.1.20. | P |
| 3000to 18000 | 54 | 74 | See Fugure A.1.21. | P |

Video Player

| Frequency range (MHz) | Quasi-Peak Limit (dBμV/m) | Result (dBμV/m) UT13aa/Set.1 | Conclusion |
|---|---|---|---|
| 30-88 | 40.00 | See Fugure A.1.22. | 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) UT13aa/Set.1 | Conclusion |
|---|---|---|---|---|
| 1000 to 3000 | 54 | 74 | See Fugure A.1.23. | P |
| 3000to 18000 | 54 | 74 | See Fugure A.1.24. | P |

Camera

| Frequency range (MHz) | Quasi-Peak Limit (dBμV/m) | Result (dBμV/m) UT13aa/Set.1 | Conclusion |
|---|---|---|---|
| 30-88 | 40.00 | See Fugure A.1.25. | 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) UT13aa/Set.1 | Conclusion |
|---|---|---|---|---|
| 1000 to 3000 | 54 | 74 | See Fugure A.1.26. | P |
| 3000to 18000 | 54 | 74 | See Fugure A.1.27. | P |

GPS

| Frequency range (MHz) | Quasi-Peak Limit (dBμV/m) | Result (dBμV/m) UT13aa/Set.1 | Conclusion |
|---|---|---|---|
| 30-88 | 40.00 | See Fugure A.1.28. | 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) Set.5 | Conclusion |
|---|---|---|---|---|
| 1000 to 3000 | 54 | 74 | See Fugure A.1.29. | P |
| 3000to 18000 | 54 | 74 | See Fugure A.1.30. | P |

GLONASS

| Frequency range (MHz) | Quasi-Peak Limit (dBμV/m) | Result (dBμV/m) UT13aa/Set.1 | Conclusion |
|---|---|---|---|
| 30-88 | 40.00 | See Fugure A.1.31. | 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) Set.5 | Conclusion |
|---|---|---|---|---|
| 1000 to 3000 | 54 | 74 | See Fugure A.1.32. | P |
| 3000to 18000 | 54 | 74 | See Fugure A.1.33. | P |

GLONASS

| Frequency range (MHz) | Quasi-Peak Limit (dBμV/m) | Result (dBμV/m) UT13aa/Set.2 | Conclusion |
|---|---|---|---|
| 30-88 | 40.00 | See Fugure A.1.34. | 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) UT13aa/Set.2 | Conclusion |
|---|---|---|---|---|
| 1000 to 3000 | 54 | 74 | See Fugure A.1.35. | P |
| 3000to 18000 | 54 | 74 | See Fugure A.1.36. | P |

Data Transfer : EUT to PC

| Frequency range (MHz) | Quasi-Peak Limit (dBμV/m) | Result (dBμV/m) UT13aa/Set.3 | Conclusion |
|---|---|---|---|
| 30-88 | 40.00 | See Fugure A.1.37. | 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) UT13aa/Set.3 | Conclusion |
|---|---|---|---|---|
| 1000 to 3000 | 54 | 74 | See Fugure A.1.38. | P |
| 3000to 18000 | 54 | 74 | See Fugure A.1.39. | P |

Data Transfer : PC to EUT

| Frequency range (MHz) | Quasi-Peak Limit (dBμV/m) | Result (dBμV/m) UT13aa/Set.3 | Conclusion |
|---|---|---|---|
| 30-88 | 40.00 | See Fugure A.1.40. | 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) UT13aa/Set.3 | Conclusion |
|---|---|---|---|---|
| 1000 to 3000 | 54 | 74 | See Fugure A.1.41. | P |
| 3000to 18000 | 54 | 74 | See Fugure A.1.42. | P |

Data Transfer : PC to TF Card

| Frequency range (MHz) | Quasi-Peak Limit (dBμV/m) | Result (dBμV/m) UT13aa/Set.3 | Conclusion |
|---|---|---|---|
| 30-88 | 40.00 | See Fugure A.1.43. | 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) UT13aa/Set.3 | Conclusion |
|---|---|---|---|---|
| 1000 to 3000 | 54 | 74 | See Fugure A.1.44. | P |
| 3000to 18000 | 54 | 74 | See Fugure A.1.45. | P |

Data Transfer : TF Card to PC

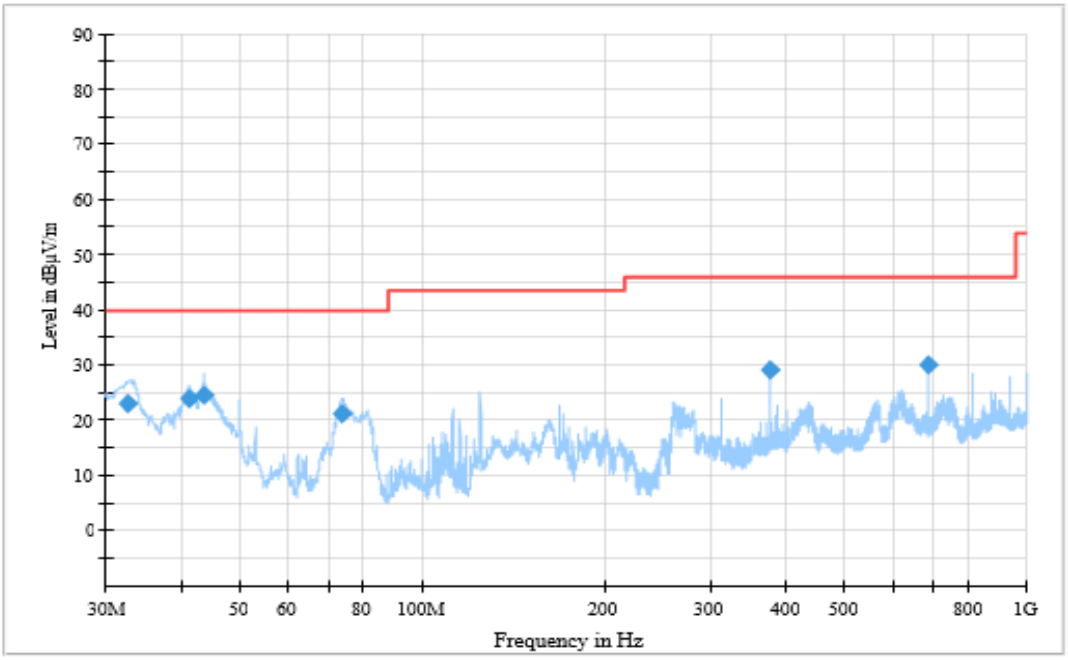
| Frequency range (MHz) | Quasi-Peak Limit (dBμV/m) | Result (dBμV/m) UT13aa/Set.3 | Conclusion |
|---|---|---|---|
| 30-88 | 40.00 | See Fugure A.1.46. | P |
| 88-216 | 43.50 | | |
| 216-960 | 46.02 | | |
| 960-1000 | 54.00 | | |

| Frequency range (MHz) | Average Limit (dBμV/m) | Peak Limit (dBμV/m) | Result (dBμV/m) UT13aa/Set.3 | Conclusion |
|---|---|---|---|---|
| 1000 to 3000 | 54 | 74 | See Fugure A.1.47. | P |
| 3000to 18000 | 54 | 74 | See Fugure A.1.48. | P |

Data Transfer : TF Card to PC

| Frequency range (MHz) | Quasi-Peak Limit (dBμV/m) | Result (dBμV/m) UT13aa/Set.4 | Conclusion |
|---|---|---|---|
| 30-88 | 40.00 | See Fugure A.1.49. | P |
| 88-216 | 43.50 | | |
| 216-960 | 46.02 | | |
| 960-1000 | 54.00 | | |

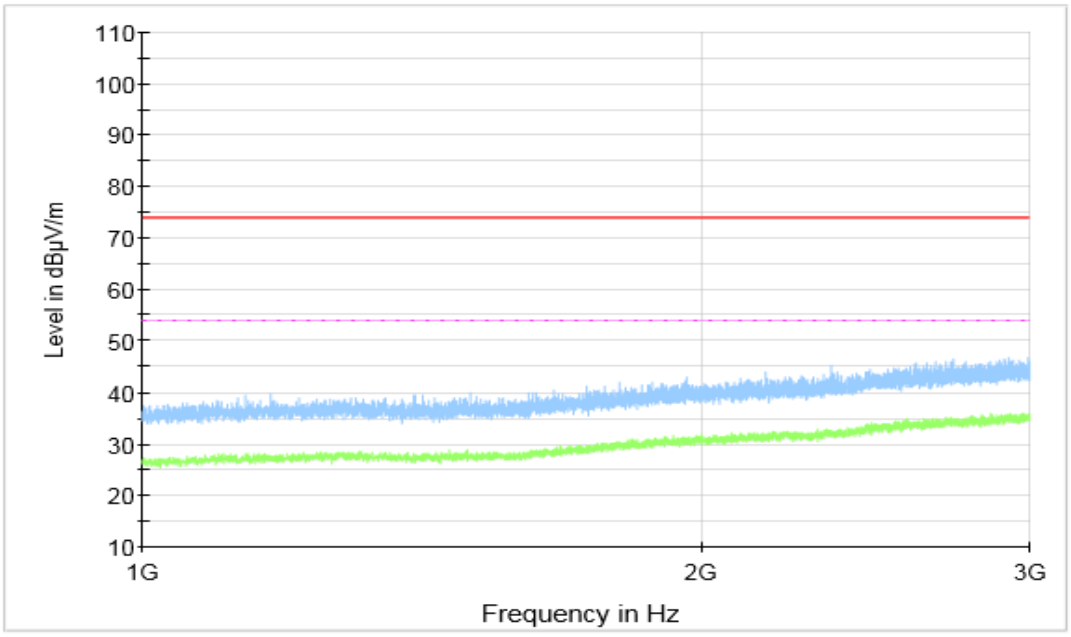
| Frequency range (MHz) | Average Limit (dBμV/m) | Peak Limit (dBμV/m) | Result (dBμV/m) UT13aa/Set.6 | Conclusion |
|---|---|---|---|---|
| 1000 to 3000 | 54 | 74 | See Fugure A.1.50. | P |
| 3000to 18000 | 54 | 74 | See Fugure A.1.51. | P |



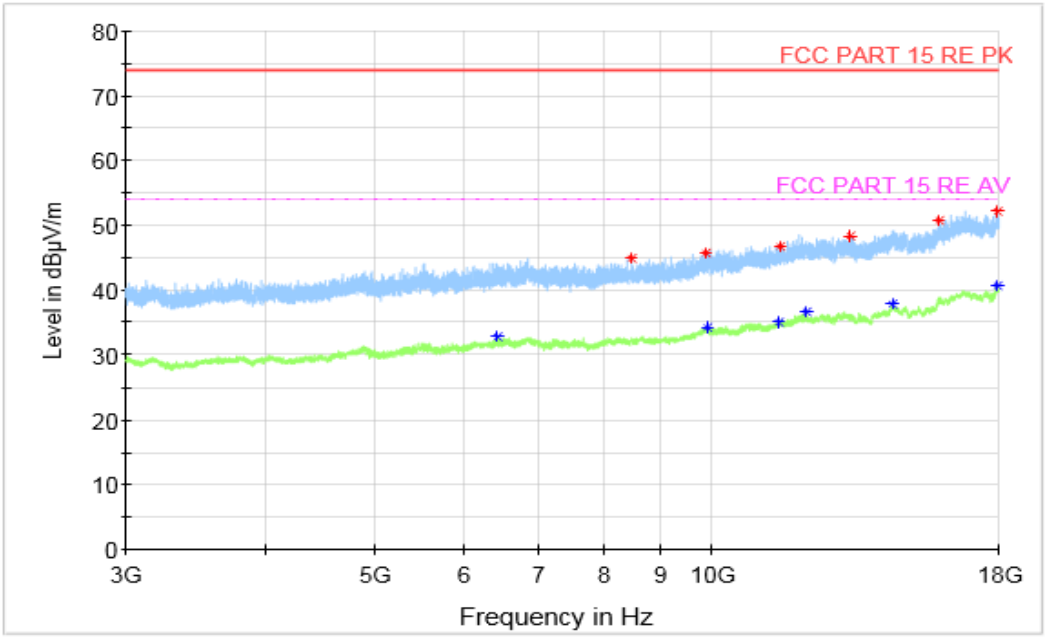

**Fugure A.1.1. Radiated Emission (GSM Receiver 850MHz, 30MHz to 1GHz)**

**Final_Result**

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Pol | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 32.610000 | 23.11 | 40.00 | 16.89 | V | -25.8 | 48.91 |
| 41.256667 | 23.98 | 40.00 | 16.02 | V | -29.8 | 53.78 |
| 43.747778 | 24.60 | 40.00 | 15.40 | V | -31.8 | 56.4 |
| 73.748333 | 21.33 | 40.00 | 18.67 | V | -33.7 | 55.03 |
| 375.016667 | 29.06 | 46.00 | 16.94 | V | -26.7 | 55.76 |
| 687.518333 | 30.19 | 46.00 | 15.81 | V | -19.7 | 49.89 |




**Fugure A.1.2. Radiated Emission (GSM Receiver 850MHz, 1GHz to 3GHz)**



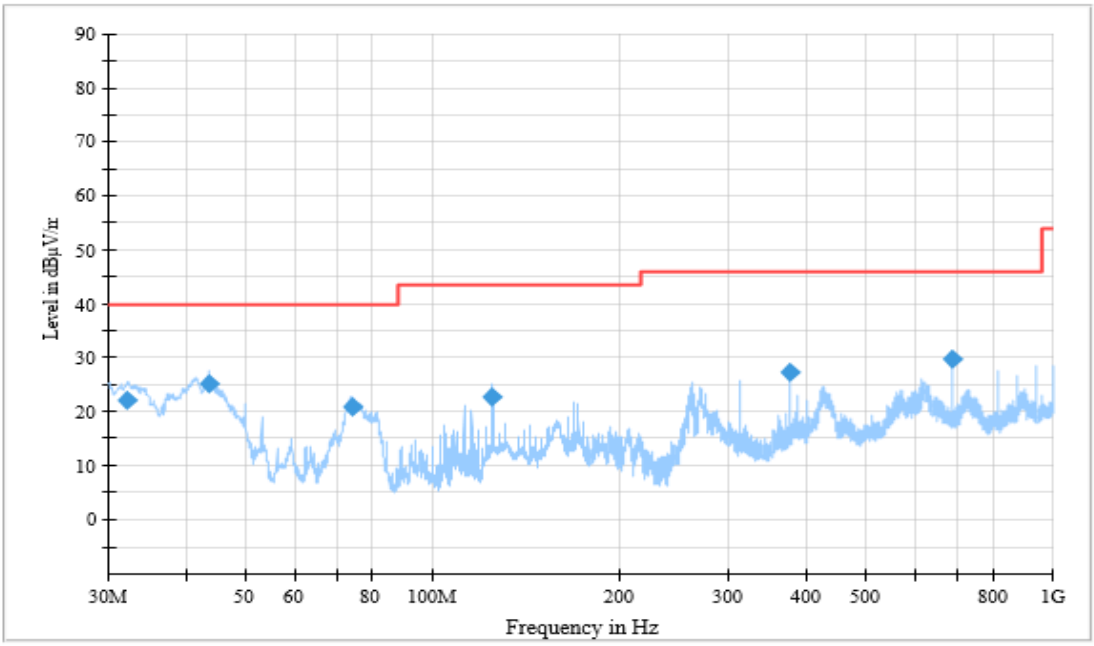

**Fugure A.1.3. Radiated Emission (GSM Receiver 850MHz, 3GHz to 18GHz)**

**Final_Results_PK**

| Frequency(MHz) | Peak (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 8459.500000 | 44.92 | 74.00 | 29.08 | H | 3.5 | 41.42 |
| 9881.000000 | 45.65 | 74.00 | 28.35 | V | 5.4 | 40.25 |
| 11490.500000 | 46.82 | 74.00 | 27.18 | V | 7.0 | 39.82 |
| 13282.500000 | 48.45 | 74.00 | 25.55 | V | 9.7 | 38.75 |
| 15900.000000 | 50.70 | 74.00 | 23.30 | V | 14.2 | 36.5 |
| 17940.500000 | 52.17 | 74.00 | 21.83 | V | 17.2 | 34.97 |

**Final_Results_AVG**

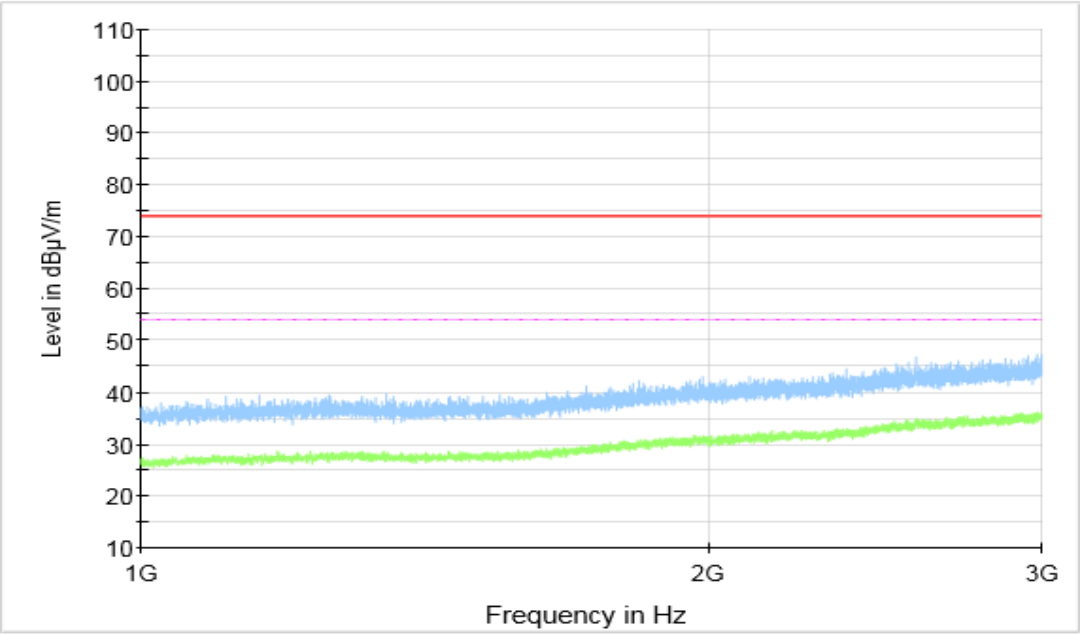
| Frequency(MHz) | Average (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 6428.500000 | 32.77 | 54.00 | 21.23 | H | 2.6 | 30.17 |
| 9883.500000 | 34.30 | 54.00 | 19.70 | H | 5.4 | 28.9 |
| 11475.000000 | 35.08 | 54.00 | 18.92 | H | 6.7 | 28.38 |
| 12131.000000 | 36.62 | 54.00 | 17.38 | H | 8.3 | 28.32 |
| 14460.000000 | 37.80 | 54.00 | 16.20 | V | 11.8 | 26 |
| 17946.500000 | 40.78 | 54.00 | 13.22 | H | 17.3 | 23.48 |



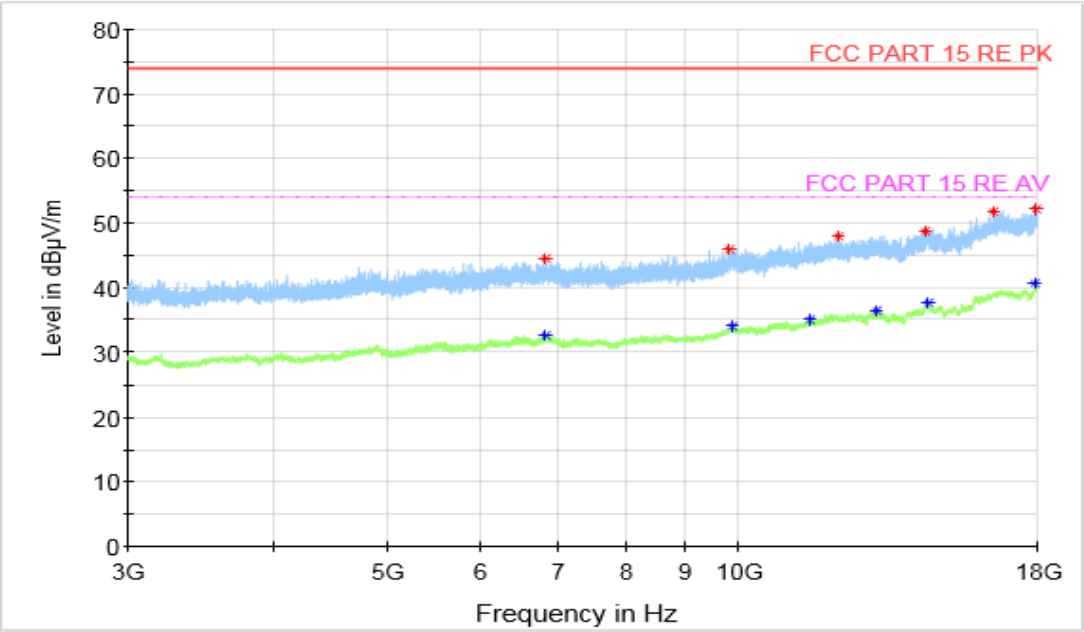

**Fugure A.1.4. Radiated Emission (WCDMA Receiver Band 5, 30MHz to 1GHz)**

**Final_Result**

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Pol | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 32.191111 | 22.11 | 40.00 | 17.89 | V | -25.7 | 47.81 |
| 43.761667 | 25.12 | 40.00 | 14.88 | V | -31.8 | 56.92 |
| 74.033333 | 20.86 | 40.00 | 19.14 | V | -33.7 | 54.56 |
| 125.012222 | 22.76 | 43.50 | 20.74 | V | -31.6 | 54.36 |
| 375.016667 | 27.41 | 46.00 | 18.59 | V | -26.7 | 54.11 |
| 687.532222 | 29.66 | 46.00 | 16.34 | V | -19.7 | 49.36 |




**Fugure A.1.5. Radiated Emission (WCDMA Receiver Band 5z, 1GHz to 3GHz)**



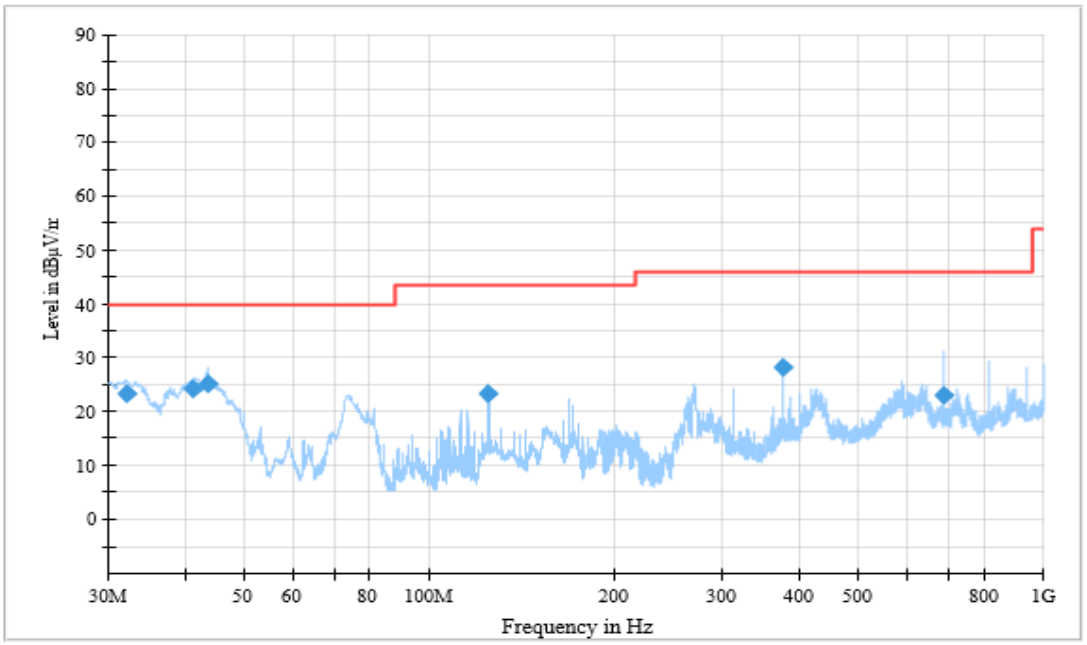

**Fugure A.1.6. Radiated Emission ( WCDMA Receiver Band 5, 3GHz to 18GHz)**

**Final_Results_PK**

| Frequency(MHz) | Peak (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 6838.500000 | 44.44 | 74.00 | 29.56 | H | 2.4 | 42.04 |
| 9819.500000 | 45.86 | 74.00 | 28.14 | V | 5.0 | 40.86 |
| 12164.000000 | 47.98 | 74.00 | 26.02 | H | 8.4 | 39.58 |
| 14436.500000 | 48.83 | 74.00 | 25.17 | V | 11.5 | 37.33 |
| 16520.000000 | 51.82 | 74.00 | 22.18 | H | 15.3 | 36.52 |
| 17950.500000 | 52.23 | 74.00 | 21.77 | H | 17.2 | 35.03 |

**Final_Results_AVG**

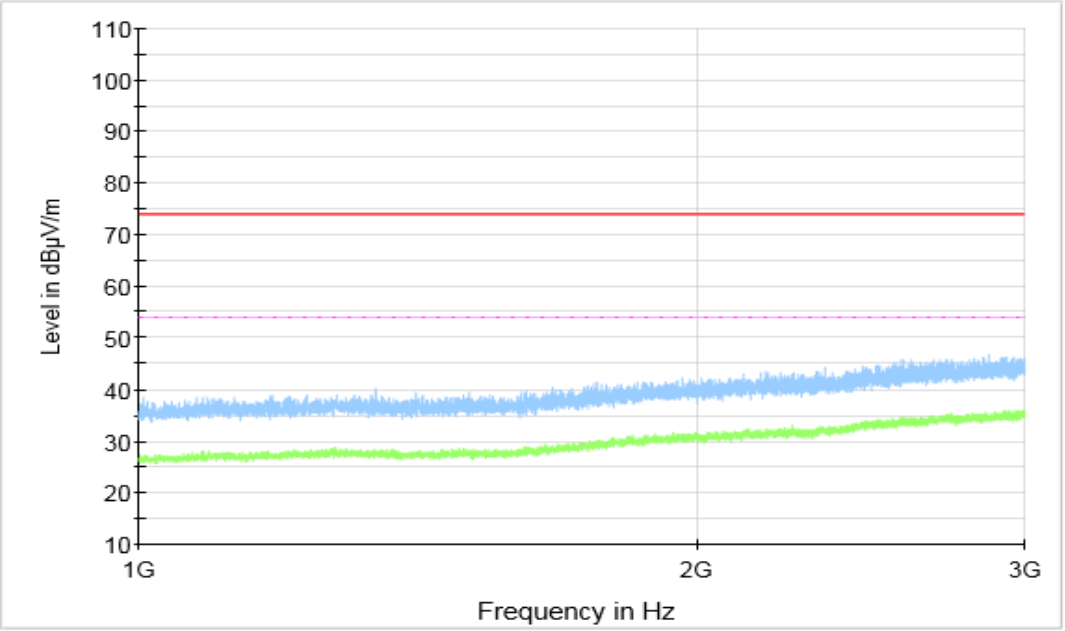
| Frequency(MHz) | Average (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 6829.000000 | 32.69 | 54.00 | 21.31 | V | 2.7 | 29.99 |
| 9878.500000 | 34.11 | 54.00 | 19.89 | H | 5.3 | 28.81 |
| 11482.000000 | 34.97 | 54.00 | 19.03 | H | 6.8 | 28.17 |
| 13097.500000 | 36.43 | 54.00 | 17.57 | V | 9.8 | 26.63 |
| 14494.500000 | 37.58 | 54.00 | 16.42 | V | 11.7 | 25.88 |
| 17909.000000 | 40.75 | 54.00 | 13.25 | V | 17.4 | 23.35 |



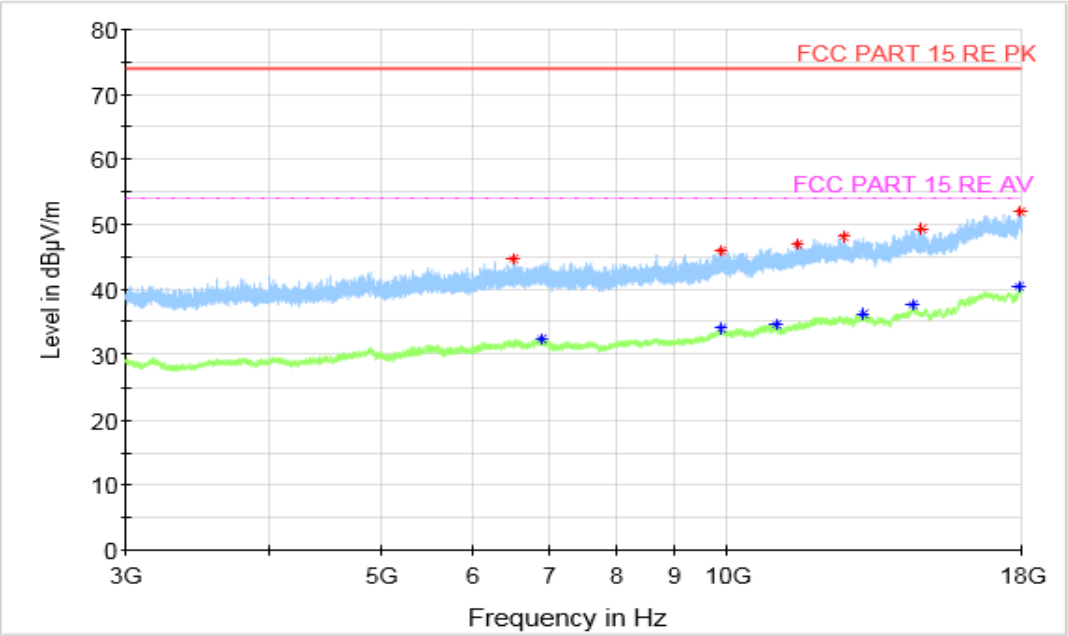

**Fugure A.1.7. Radiated Emission (LTE Receiver Band 5, 30MHz to 1GHz)**

**Final_Result**

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Pol | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 32.281667 | 23.30 | 40.00 | 16.70 | V | -25.8 | 49.10 |
| 41.366111 | 24.22 | 40.00 | 15.78 | V | -29.9 | 54.12 |
| 43.721667 | 25.17 | 40.00 | 14.83 | V | -31.8 | 56.97 |
| 125.012222 | 23.41 | 43.50 | 20.09 | V | -31.6 | 55.01 |
| 375.016667 | 28.10 | 46.00 | 17.90 | V | -26.7 | 54.8 |
| 687.518333 | 23.14 | 46.00 | 22.86 | V | -19.7 | 42.84 |




**Fugure A.1.8. Radiated Emission (LTE Receiver Band 5, 1GHz to 3GHz)**



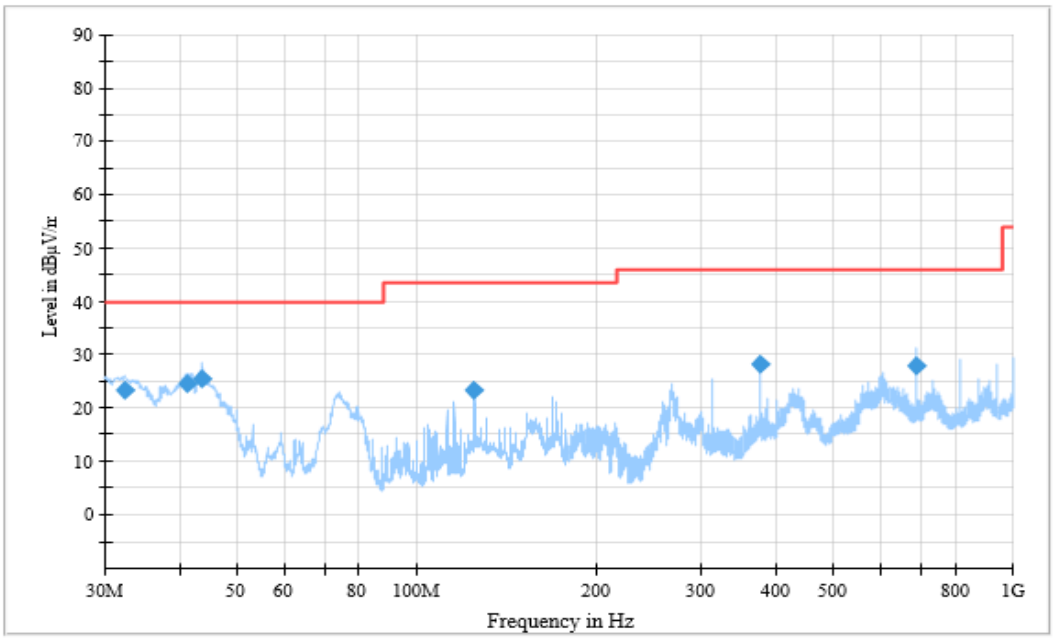

**Fugure A.1.9. Radiated Emission (LTE Receiver Band 5 , 3GHz to 18GHz)**

**Final_Results_PK**

| Frequency(MHz) | Peak (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 6513.500000 | 44.82 | 74.00 | 29.18 | H | 2.4 | 42.42 |
| 9873.000000 | 45.85 | 74.00 | 28.15 | H | 5.2 | 40.65 |
| 11494.000000 | 46.98 | 74.00 | 27.02 | H | 6.9 | 40.08 |
| 12614.000000 | 48.25 | 74.00 | 25.75 | H | 8.7 | 39.55 |
| 14739.500000 | 49.30 | 74.00 | 24.70 | V | 11.2 | 38.1 |
| 17946.000000 | 51.91 | 74.00 | 22.09 | H | 17.3 | 34.61 |

**Final_Results_AVG**

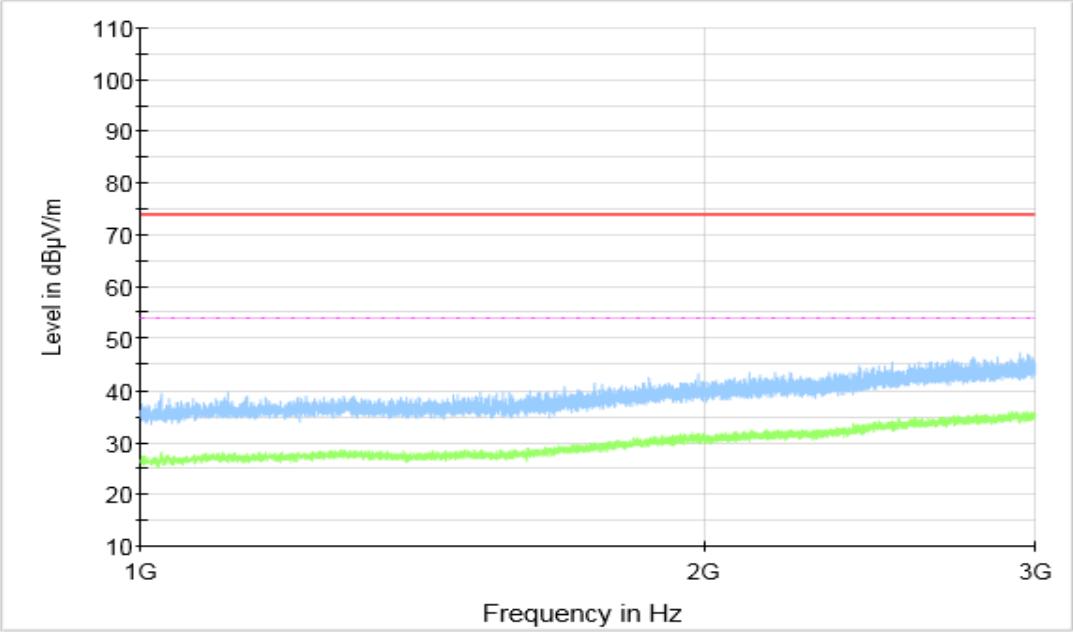
| Frequency(MHz) | Average (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 6886.500000 | 32.50 | 54.00 | 21.50 | H | 2.8 | 29.70 |
| 9852.000000 | 34.07 | 54.00 | 19.93 | H | 5.4 | 28.67 |
| 11007.000000 | 34.75 | 54.00 | 19.25 | V | 6.6 | 28.15 |
| 13126.000000 | 36.19 | 54.00 | 17.81 | V | 9.8 | 26.39 |
| 14487.500000 | 37.72 | 54.00 | 16.28 | H | 11.7 | 26.02 |
| 17913.500000 | 40.49 | 54.00 | 13.51 | V | 17.2 | 23.29 |



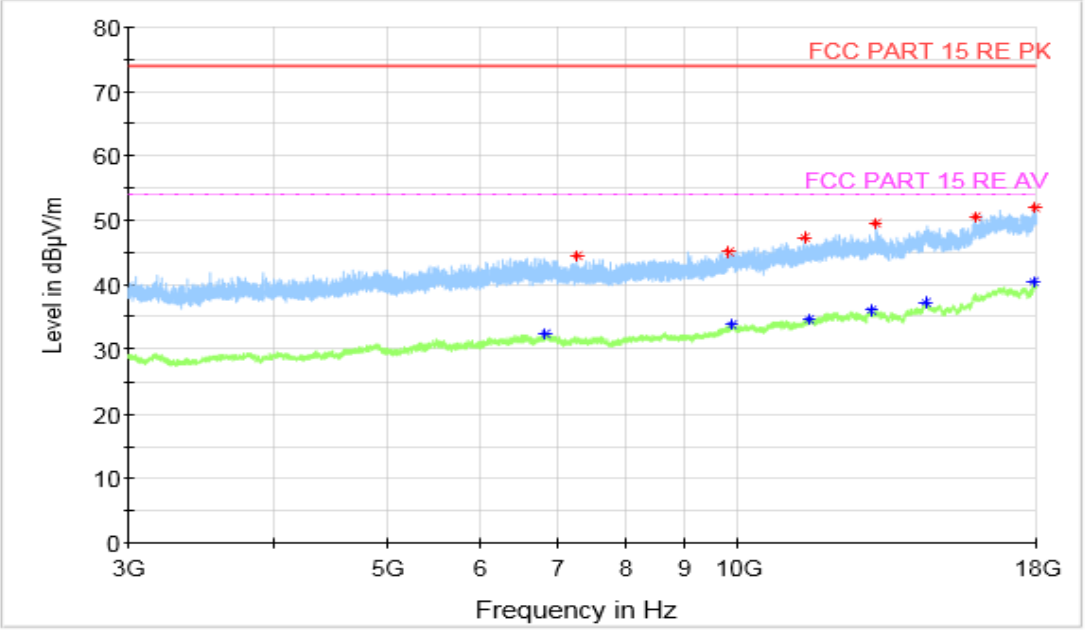

**Fugure A.1.10. Radiated Emission (LTE Receiver Band 12, 30MHz to 1GHz)**

**Final_Result**

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Pol | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 32.432778 | 23.35 | 40.00 | 16.65 | V | -25.8 | 49.15 |
| 41.147222 | 24.58 | 40.00 | 15.42 | V | -29.8 | 54.38 |
| 43.775556 | 25.47 | 40.00 | 14.53 | V | -31.8 | 57.27 |
| 124.986111 | 23.28 | 43.50 | 20.22 | V | -31.6 | 54.88 |
| 375.016667 | 28.12 | 46.00 | 17.88 | V | -26.7 | 54.82 |
| 687.518333 | 27.97 | 46.00 | 18.03 | V | -19.7 | 47.67 |




**Fugure A.1.11. Radiated Emission (LTE Receiver Band 12,, 1GHz to 3GHz)**



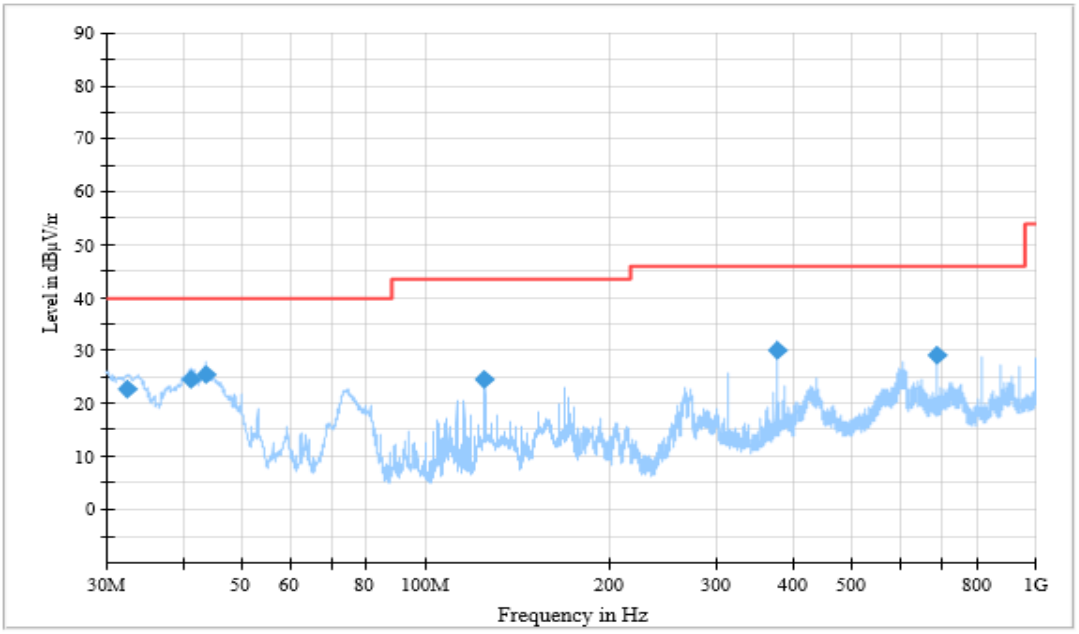

**Fugure A.1.12. Radiated Emission (LTE Receiver Band 12 , 3GHz to 18GHz)**

**Final_Results_PK**

| Frequency(MHz) | Peak (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 7275.500000 | 44.57 | 74.00 | 29.43 | V | 2.4 | 42.17 |
| 9800.500000 | 45.24 | 74.00 | 28.76 | H | 4.8 | 40.44 |
| 11392.500000 | 47.38 | 74.00 | 26.62 | H | 6.7 | 40.68 |
| 13127.000000 | 49.54 | 74.00 | 24.46 | V | 9.8 | 39.74 |
| 15991.000000 | 50.62 | 74.00 | 23.38 | H | 14.4 | 36.22 |
| 17971.000000 | 52.03 | 74.00 | 21.97 | V | 16.9 | 35.13 |

**Final_Results_AVG**

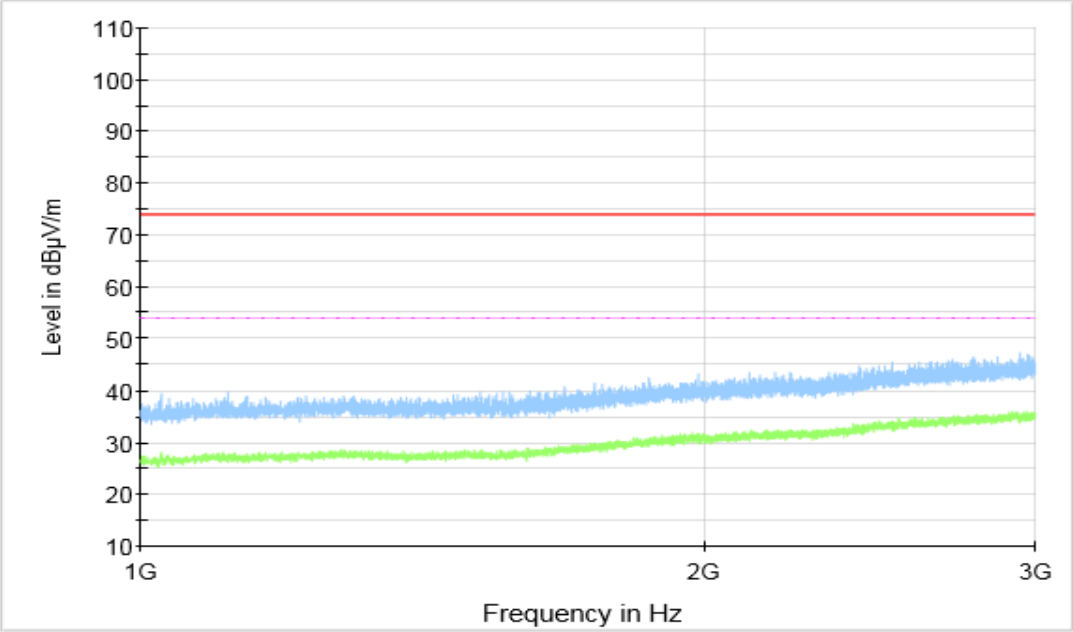
| Frequency(MHz) | Average (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 6824.000000 | 32.36 | 54.00 | 21.64 | V | 2.7 | 29.66 |
| 9878.500000 | 33.82 | 54.00 | 20.18 | H | 5.3 | 28.52 |
| 11494.500000 | 34.74 | 54.00 | 19.26 | H | 6.9 | 27.84 |
| 12978.000000 | 36.02 | 54.00 | 17.98 | H | 9.1 | 26.92 |
| 14461.500000 | 37.35 | 54.00 | 16.65 | H | 11.8 | 25.55 |
| 17910.500000 | 40.47 | 54.00 | 13.53 | V | 17.4 | 23.07 |



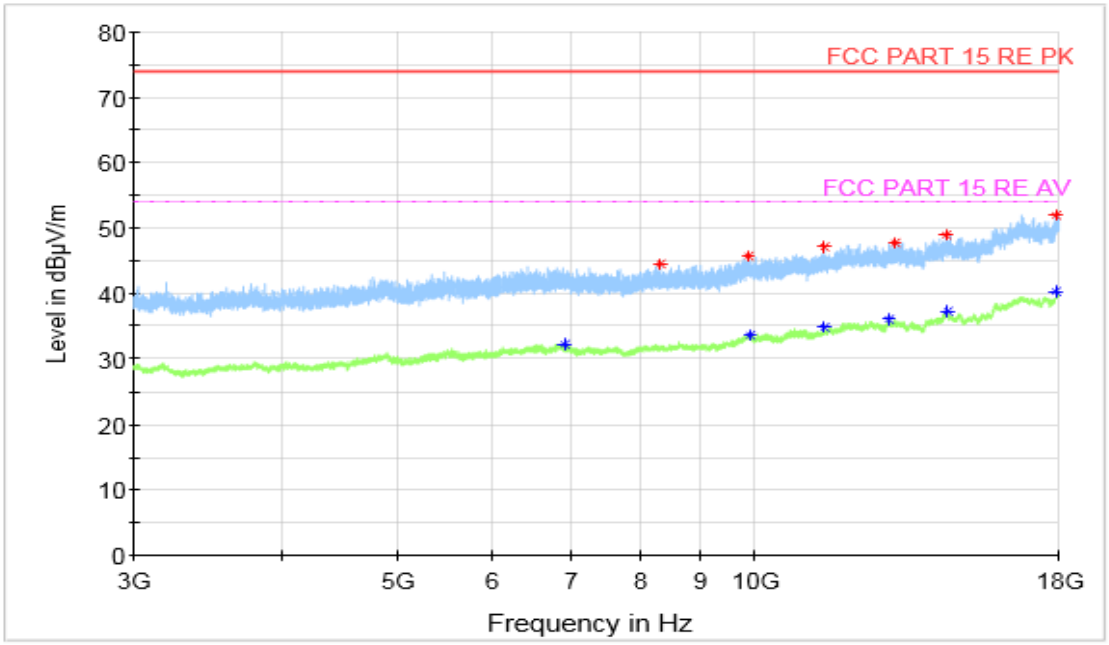

**Fugure A.1.13. Radiated Emission (LTE Receiver Band 17, 30MHz to 1GHz)**

**Final_Result**

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Pol | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 32.500556 | 22.75 | 40.00 | 17.25 | V | -25.8 | 48.55 |
| 41.310556 | 24.59 | 40.00 | 15.41 | V | -29.9 | 54.49 |
| 43.747778 | 25.44 | 40.00 | 14.56 | V | -31.8 | 57.24 |
| 125.012222 | 24.54 | 43.50 | 18.96 | V | -31.6 | 56.14 |
| 375.002778 | 29.98 | 46.00 | 16.02 | V | -26.7 | 56.68 |
| 687.518333 | 29.05 | 46.00 | 16.95 | V | -19.7 | 48.75 |




**Fugure A.1.14. Radiated Emission (LTE Receiver Band 17, 1GHz to 3GHz)**



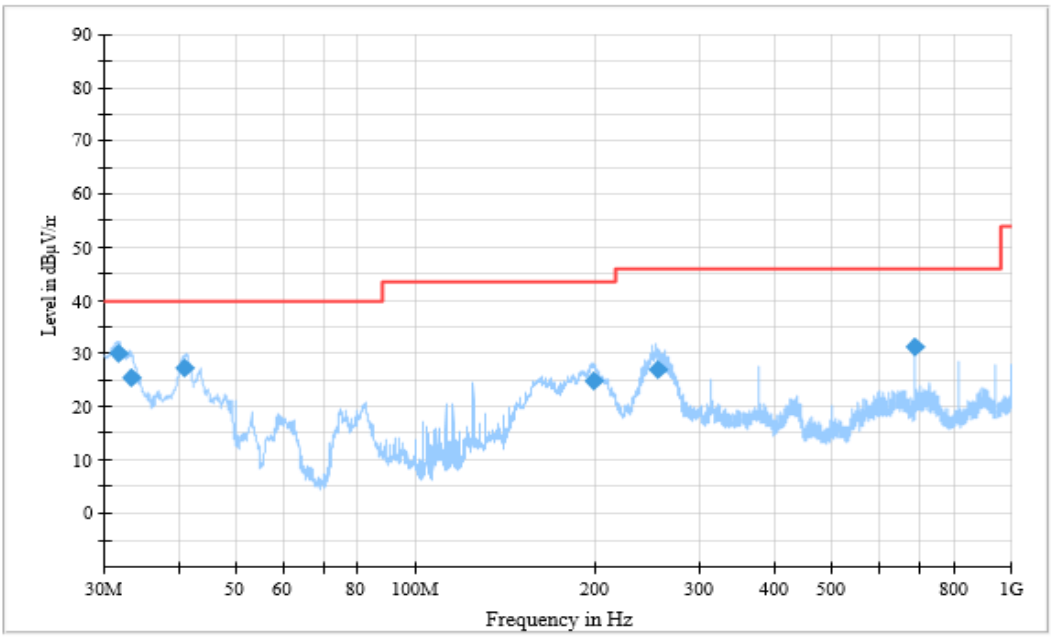

**Fugure A.1.15. Radiated Emission (LTE Receiver Band 17 , 3GHz to 18GHz)**

**Final_Results_PK**

| Frequency(MHz) | Peak (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 8318.500000 | 44.58 | 74.00 | 29.42 | H | 3.5 | 41.08 |
| 9879.500000 | 45.66 | 74.00 | 28.34 | V | 5.3 | 40.36 |
| 11430.500000 | 47.13 | 74.00 | 26.87 | V | 6.8 | 40.33 |
| 13122.500000 | 47.72 | 74.00 | 26.28 | H | 9.7 | 38.02 |
| 14460.500000 | 49.00 | 74.00 | 25.00 | H | 11.8 | 37.2 |
| 17911.500000 | 51.99 | 74.00 | 22.01 | H | 17.3 | 34.69 |

**Final_Results_AVG**

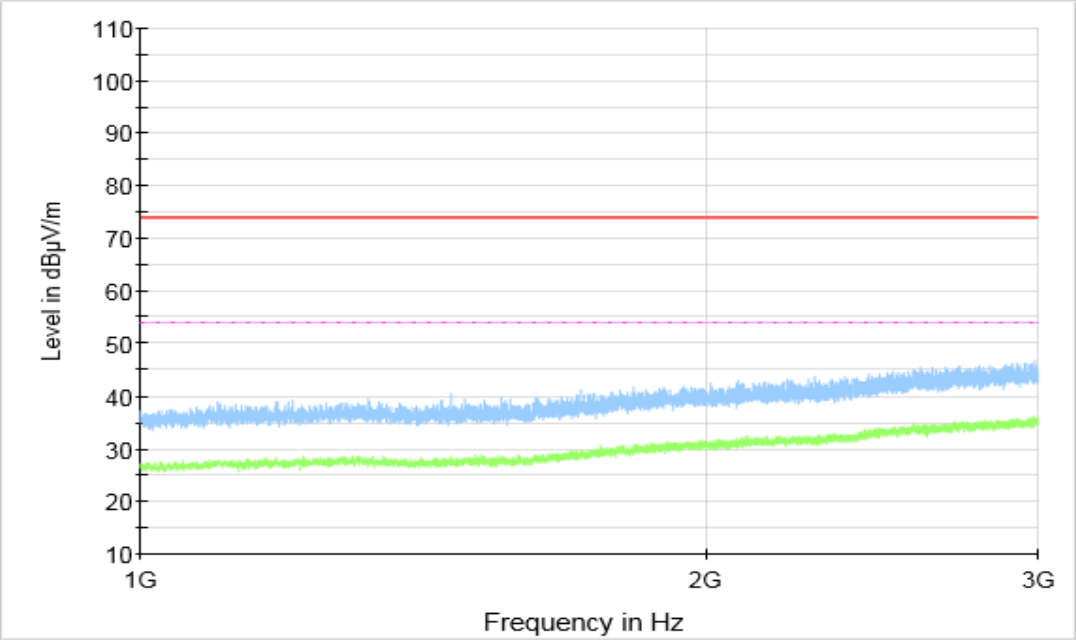
| Frequency(MHz) | Average (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 6916.500000 | 32.30 | 54.00 | 21.70 | V | 2.8 | 29.50 |
| 9883.000000 | 33.58 | 54.00 | 20.42 | H | 5.4 | 28.18 |
| 11433.500000 | 34.80 | 54.00 | 19.20 | H | 6.8 | 28 |
| 12972.000000 | 36.14 | 54.00 | 17.86 | H | 9.3 | 26.84 |
| 14492.500000 | 37.30 | 54.00 | 16.70 | H | 11.7 | 25.6 |
| 17910.500000 | 40.36 | 54.00 | 13.64 | H | 17.4 | 22.96 |



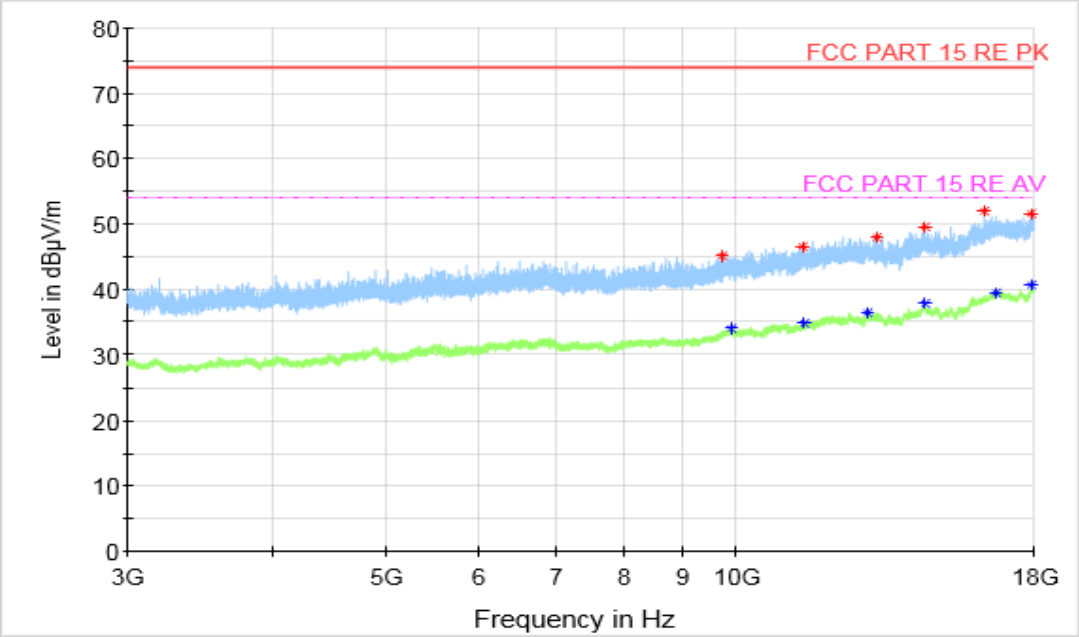

**Fugure A.1.16. Radiated Emission ( LTE Receiver Band 12, 30MHz to 1GHz)**

**Final_Result**

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Pol | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 31.772222 | 30.09 | 40.00 | 9.91 | V | -25.6 | 55.69 |
| 33.333333 | 25.52 | 40.00 | 14.48 | V | -26.0 | 51.52 |
| 41.028889 | 27.36 | 40.00 | 12.64 | V | -29.7 | 57.06 |
| 198.756667 | 24.85 | 43.50 | 18.65 | V | -33.1 | 57.95 |
| 253.966667 | 26.94 | 46.00 | 19.06 | H | -30.8 | 57.74 |
| 687.518333 | 31.14 | 46.00 | 14.86 | V | -19.7 | 50.84 |




**Fugure A.1.17. Radiated Emission (LTE Receiver Band 12, 1GHz to 3GHz)**



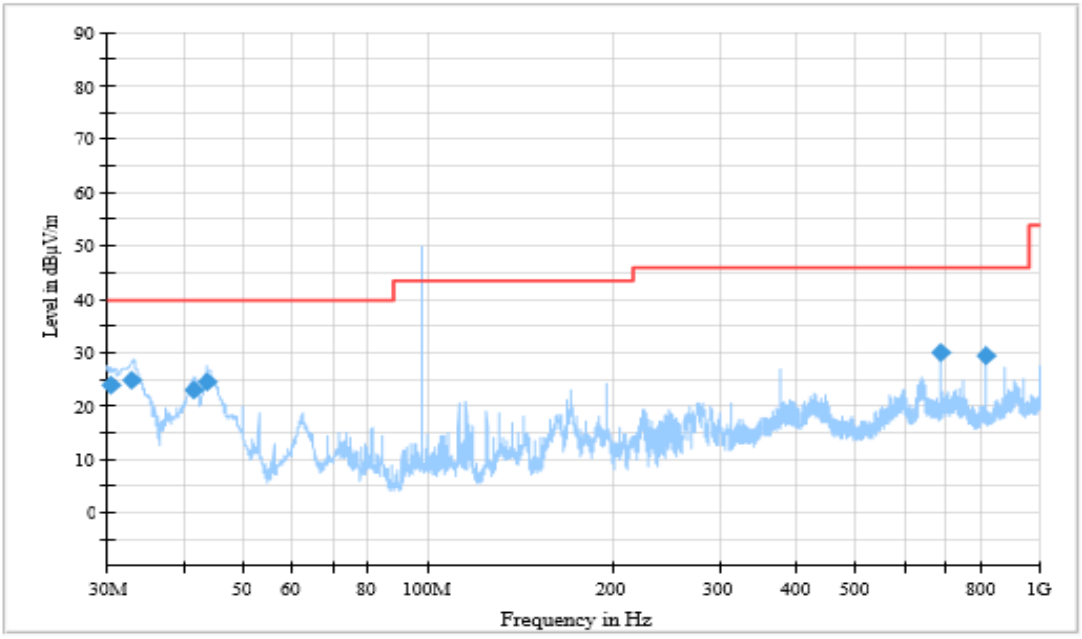

**Fugure A.1.18. Radiated Emission ( LTE Receiver Band 12 , 3GHz to 18GHz)**

**Final_Results_PK**

| Frequency(MHz) | Peak (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 9709.500000 | 45.08 | 74.00 | 28.92 | V | 4.7 | 40.38 |
| 11397.000000 | 46.50 | 74.00 | 27.50 | H | 6.8 | 39.70 |
| 13172.000000 | 48.05 | 74.00 | 25.95 | H | 9.5 | 38.55 |
| 14522.500000 | 49.63 | 74.00 | 24.37 | H | 11.7 | 37.93 |
| 16316.500000 | 51.89 | 74.00 | 22.11 | H | 14.8 | 37.09 |
| 17912.500000 | 51.55 | 74.00 | 22.45 | V | 17.3 | 34.25 |

**Final_Results_AVG**

| Frequency(MHz) | Average (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 9894.000000 | 34.02 | 54.00 | 19.98 | V | 5.3 | 28.72 |
| 11425.500000 | 34.86 | 54.00 | 19.14 | V | 6.7 | 28.16 |
| 12969.000000 | 36.53 | 54.00 | 17.47 | H | 9.4 | 27.13 |
| 14496.000000 | 37.82 | 54.00 | 16.18 | H | 11.7 | 26.12 |
| 16698.000000 | 39.55 | 54.00 | 14.45 | V | 15.4 | 24.15 |
| 17911.000000 | 40.65 | 54.00 | 13.35 | V | 17.3 | 23.35 |

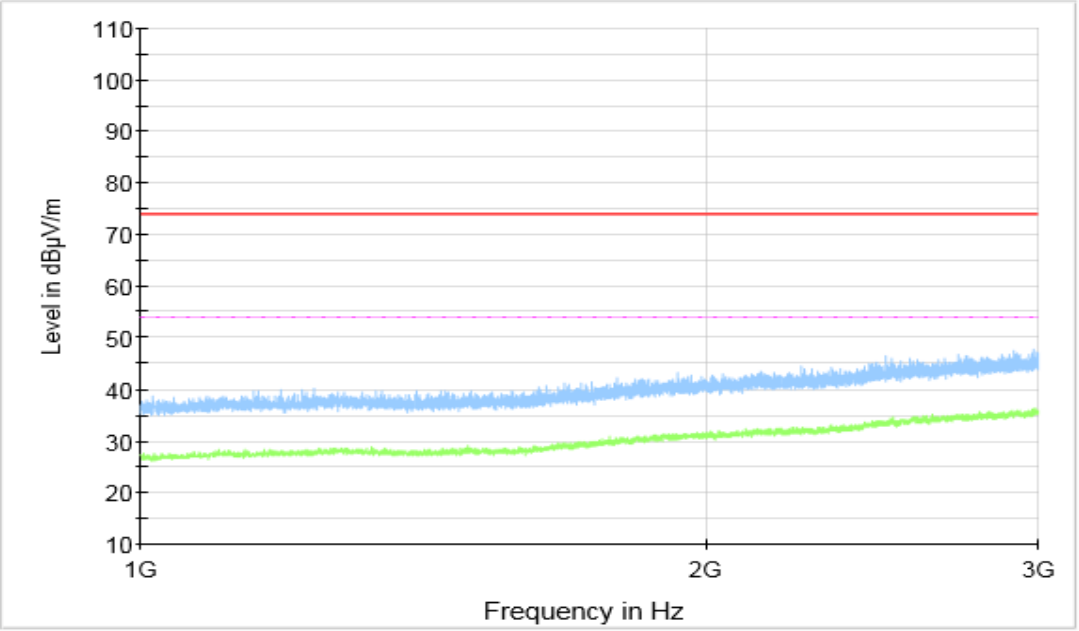



**Fugure A.1.19. Radiated Emission (FM receiver, 30MHz to 1GHz)**

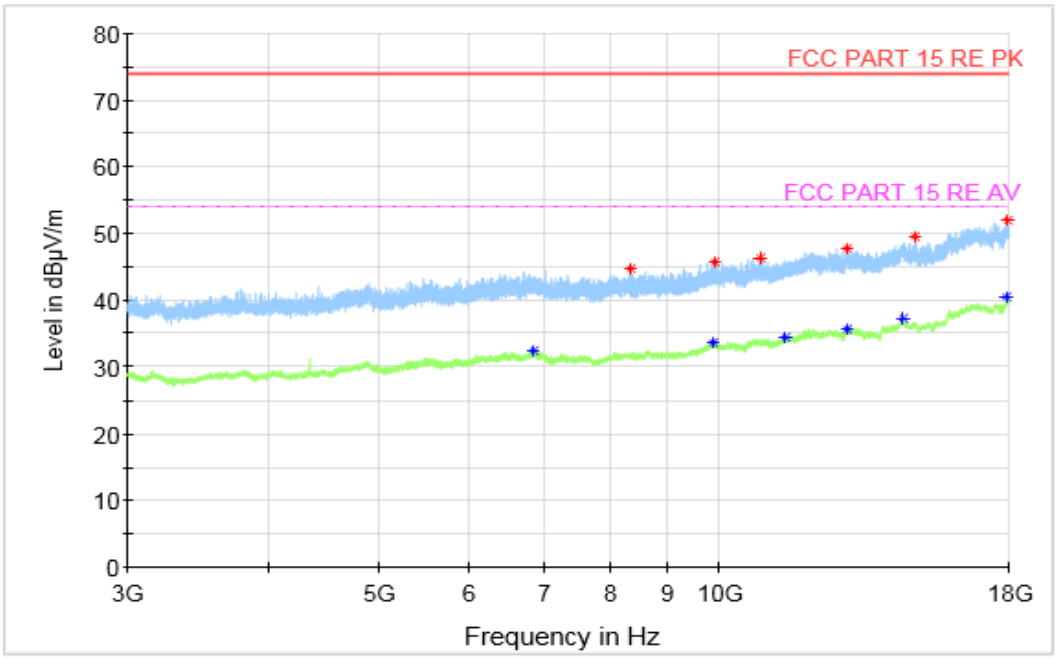
Note: the spike over the limit is coming from the traffic carrier.

**Final_Result**

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Pol | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 30.454444 | 23.82 | 40.00 | 16.18 | V | -24.6 | 48.42 |
| 32.973333 | 24.78 | 40.00 | 15.22 | V | -25.8 | 50.58 |
| 41.684444 | 23.06 | 40.00 | 16.94 | V | -30.1 | 53.16 |
| 43.751111 | 24.62 | 40.00 | 15.38 | V | -31.8 | 56.42 |
| 687.518333 | 30.19 | 46.00 | 15.81 | V | -19.7 | 49.89 |
| 812.540556 | 29.44 | 46.00 | 16.56 | V | -18.5 | 47.94 |




**Fugure A.1.20. Radiated Emission (FM receiver, 1GHz to 3GHz)**



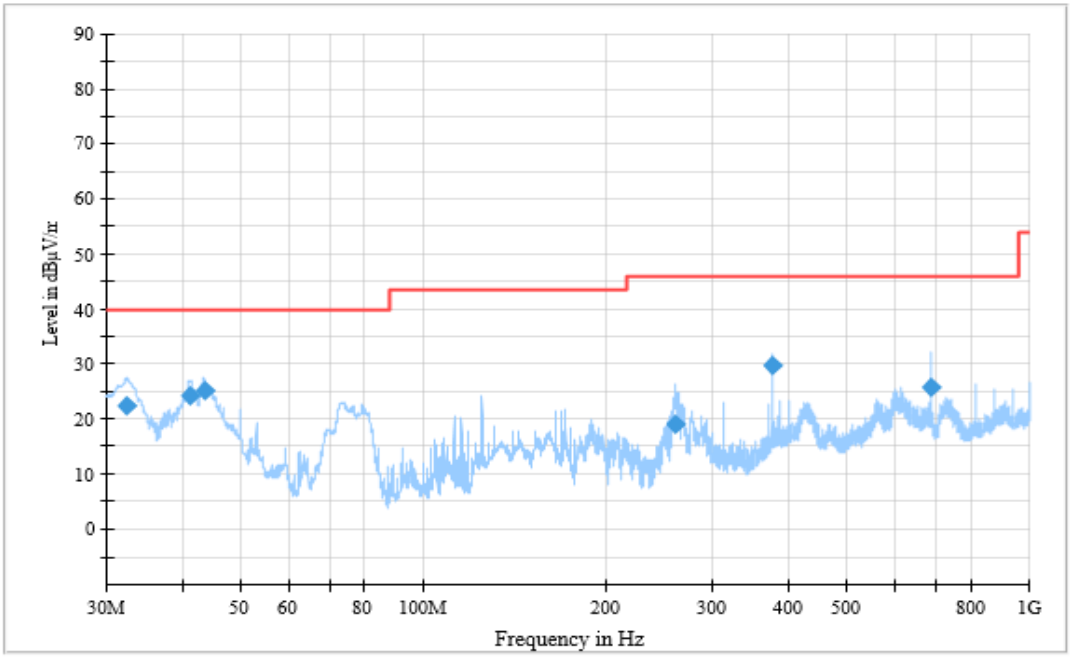

**Fugure A.1.21. Radiated Emission ( FM receiver , 3GHz to 18GHz)**

**Final_Results_PK**

| Frequency(MHz) | Peak (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 8356.500000 | 44.77 | 74.00 | 29.23 | H | 3.3 | 41.47 |
| 9902.000000 | 45.71 | 74.00 | 28.29 | H | 5.3 | 40.41 |
| 10857.000000 | 46.39 | 74.00 | 27.61 | H | 6.3 | 40.09 |
| 12939.500000 | 47.78 | 74.00 | 26.22 | H | 9.4 | 38.38 |
| 14880.500000 | 49.49 | 74.00 | 24.51 | H | 11.7 | 37.79 |
| 17942.500000 | 51.96 | 74.00 | 22.04 | H | 17.2 | 34.76 |

**Final_Results_AVG**

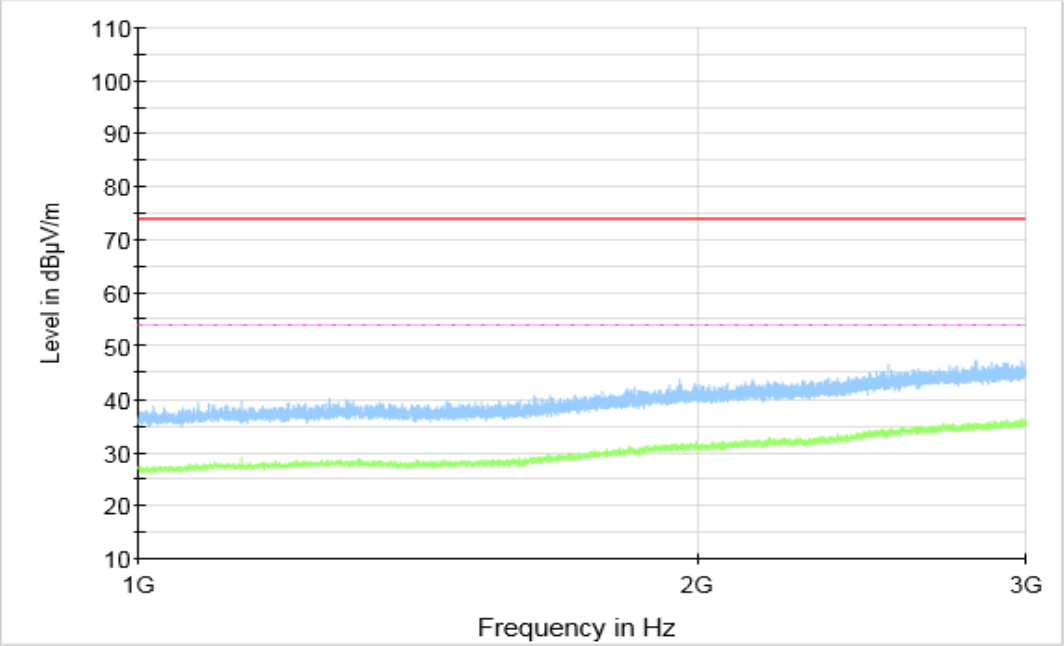
| Frequency(MHz) | Average (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 6854.000000 | 32.48 | 54.00 | 21.52 | H | 2.8 | 29.68 |
| 9852.000000 | 33.72 | 54.00 | 20.28 | V | 5.4 | 28.32 |
| 11428.000000 | 34.44 | 54.00 | 19.56 | V | 6.7 | 27.74 |
| 12966.500000 | 35.77 | 54.00 | 18.23 | V | 9.4 | 26.37 |
| 14507.500000 | 37.25 | 54.00 | 16.75 | H | 11.7 | 25.55 |
| 17906.000000 | 40.46 | 54.00 | 13.54 | V | 17.2 | 23.26 |



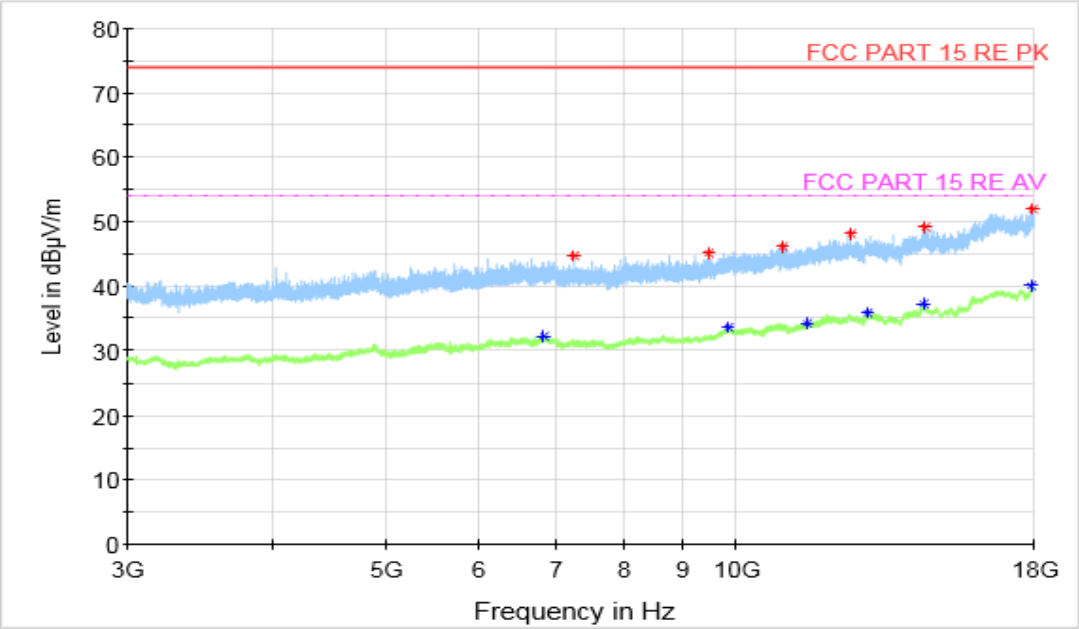

**Fugure A.1.22. Radiated Emission (Video Player , 30MHz to 1GHz)**

**Final_Result**

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Pol | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 32.509444 | 22.56 | 40.00 | 17.44 | V | -25.8 | 48.36 |
| 41.336667 | 24.21 | 40.00 | 15.79 | V | -29.9 | 54.11 |
| 43.787778 | 25.15 | 40.00 | 14.85 | V | -31.8 | 56.95 |
| 260.150000 | 19.01 | 46.00 | 26.99 | H | -30.8 | 49.81 |
| 375.016667 | 29.89 | 46.00 | 16.11 | V | -26.7 | 56.59 |
| 687.518333 | 25.73 | 46.00 | 20.27 | V | -19.7 | 45.43 |




**Fugure A.1.23. Radiated Emission (Video Player, 1GHz to 3GHz)**



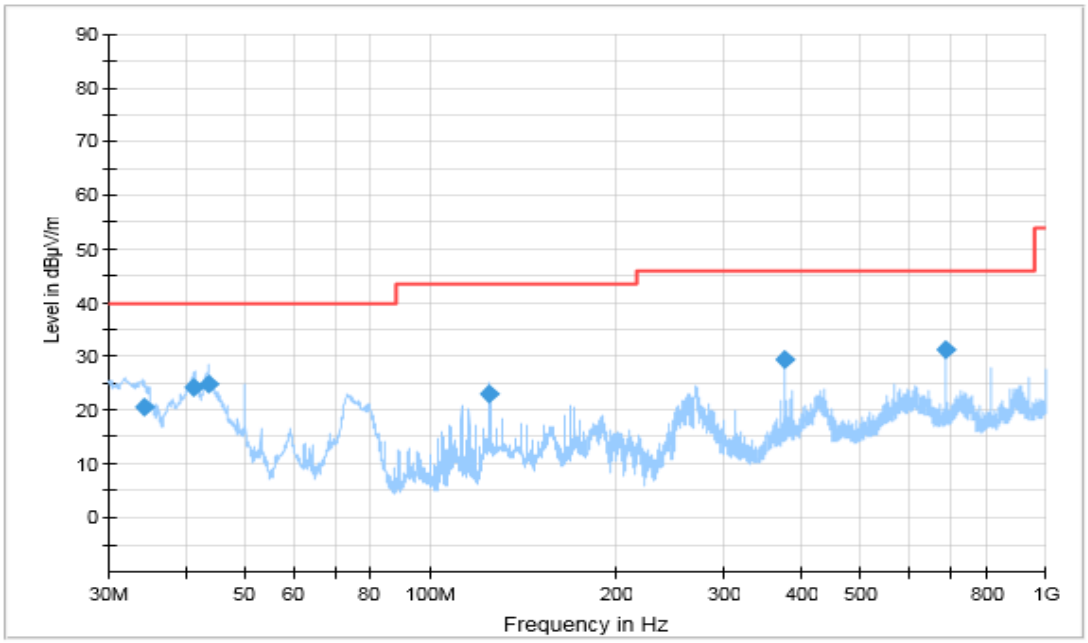

**Fugure A.1.24. Radiated Emission ( Video Player , 3GHz to 18GHz)**

**Final_Results_PK**

| Frequency(MHz) | Peak (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 7249.500000 | 44.76 | 74.00 | 29.24 | H | 2.5 | 42.26 |
| 9467.500000 | 45.08 | 74.00 | 28.92 | V | 4.0 | 41.08 |
| 10971.000000 | 46.23 | 74.00 | 27.77 | H | 6.5 | 39.73 |
| 12525.500000 | 48.16 | 74.00 | 25.84 | H | 8.7 | 39.46 |
| 14505.500000 | 49.23 | 74.00 | 24.77 | V | 11.7 | 37.53 |
| 17947.500000 | 51.96 | 74.00 | 22.04 | H | 17.3 | 34.66 |

**Final_Results_AVG**

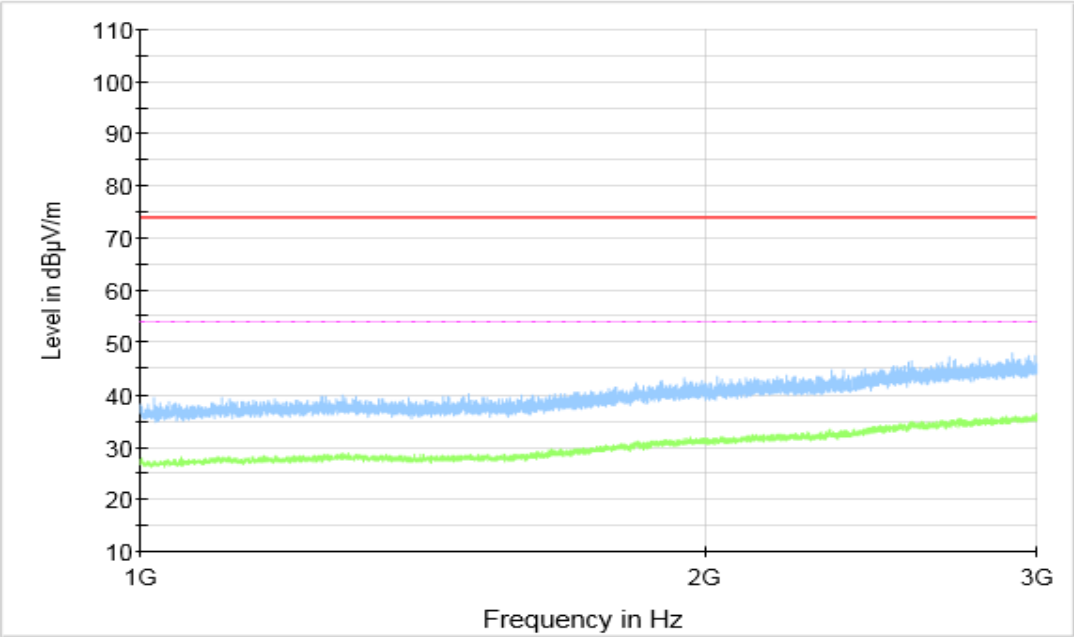
| Frequency(MHz) | Average (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 6822.500000 | 32.25 | 54.00 | 21.75 | H | 2.7 | 29.55 |
| 9849.000000 | 33.66 | 54.00 | 20.34 | V | 5.3 | 28.36 |
| 11491.500000 | 34.34 | 54.00 | 19.66 | V | 7.0 | 27.34 |
| 12945.000000 | 35.96 | 54.00 | 18.04 | V | 9.4 | 26.56 |
| 14453.500000 | 37.25 | 54.00 | 16.75 | H | 11.6 | 25.65 |
| 17910.000000 | 40.07 | 54.00 | 13.93 | H | 17.4 | 22.67 |



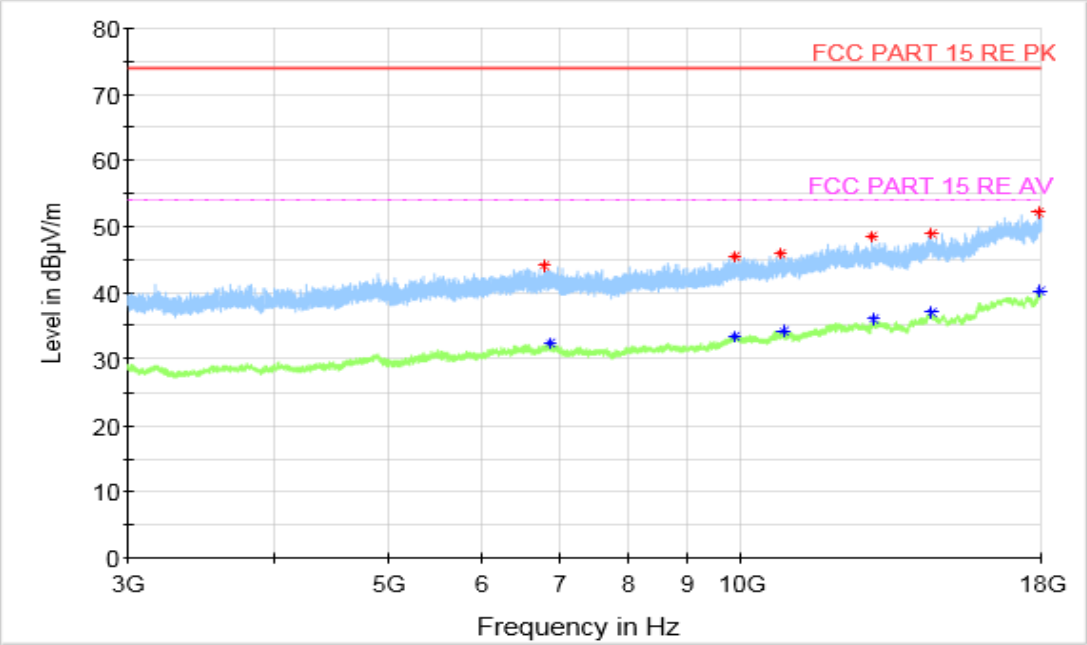

**Fugure A.1.25. Radiated Emission (Camera , 30MHz to 1GHz)**

**Final_Result**

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Pol | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 34.261667 | 20.50 | 40.00 | 19.50 | V | -26.6 | 47.10 |
| 41.310556 | 24.10 | 40.00 | 15.90 | V | -29.9 | 54 |
| 43.747778 | 24.88 | 40.00 | 15.12 | V | -31.8 | 56.68 |
| 125.012222 | 22.88 | 43.50 | 20.62 | V | -31.6 | 54.48 |
| 374.990556 | 29.51 | 46.00 | 16.49 | V | -26.7 | 56.21 |
| 687.518333 | 31.40 | 46.00 | 14.60 | V | -19.7 | 51.10 |




**Fugure A.1.26. Radiated Emission ( Camera ,3GHz to 18GHz)**



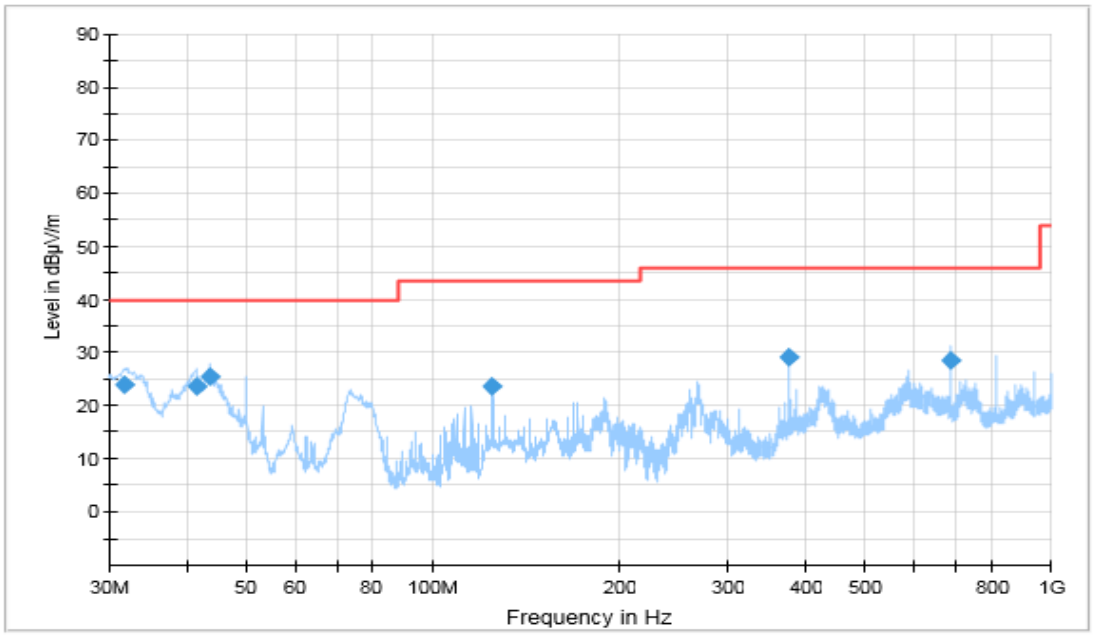

**Fugure A.1.27. Radiated Emission ( Camera ,3GHz to 18GHz)**

**Final_Results_PK**

| Frequency(MHz) | Peak (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 6791.500000 | 44.06 | 74.00 | 29.94 | V | 2.7 | 41.36 |
| 9879.000000 | 45.58 | 74.00 | 28.42 | H | 5.3 | 40.28 |
| 10788.500000 | 45.85 | 74.00 | 28.15 | H | 6.5 | 39.35 |
| 12925.500000 | 48.51 | 74.00 | 25.49 | V | 9.1 | 39.41 |
| 14493.000000 | 48.96 | 74.00 | 25.04 | H | 11.7 | 37.26 |
| 17916.500000 | 52.25 | 74.00 | 21.75 | V | 17.1 | 35.15 |

**Final_Results_AVG**

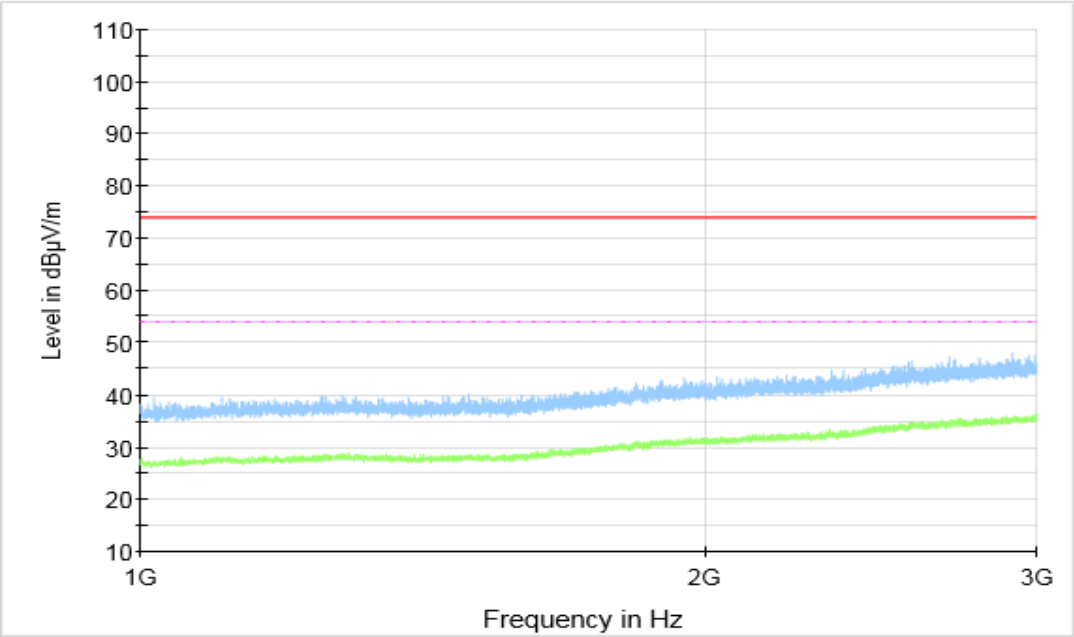
| Frequency(MHz) | Average (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 6860.000000 | 32.37 | 54.00 | 21.63 | H | 2.8 | 29.57 |
| 9880.500000 | 33.54 | 54.00 | 20.46 | V | 5.4 | 28.14 |
| 10854.500000 | 34.33 | 54.00 | 19.67 | H | 6.5 | 27.83 |
| 12941.500000 | 36.04 | 54.00 | 17.96 | V | 9.5 | 26.54 |
| 14501.500000 | 37.08 | 54.00 | 16.92 | V | 11.7 | 25.38 |
| 17942.500000 | 40.26 | 54.00 | 13.74 | H | 17.2 | 23.06 |



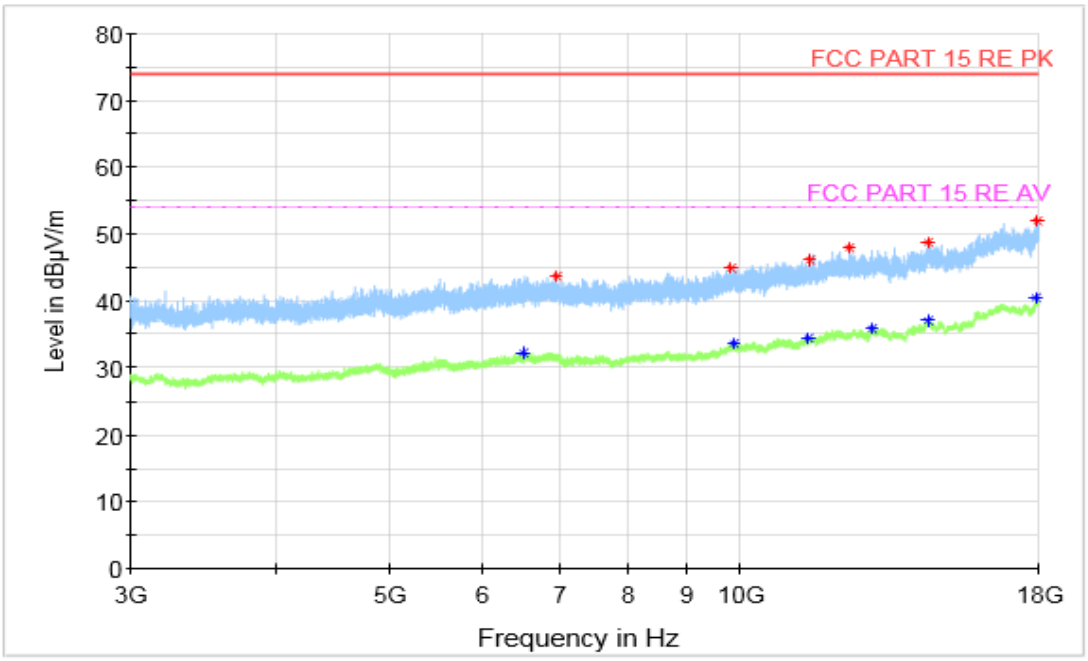

**Fugure A.1.28. Radiated Emission (GPS, 30MHz to 1GHz)**

**Final_Result**

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Pol | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 31.841667 | 23.99 | 40.00 | 16.01 | V | -25.6 | 49.59 |
| 41.524444 | 23.65 | 40.00 | 16.35 | V | -30.0 | 53.65 |
| 43.747778 | 25.36 | 40.00 | 14.64 | V | -31.8 | 57.16 |
| 125.012222 | 23.60 | 43.50 | 19.90 | V | -31.6 | 55.20 |
| 375.030556 | 29.16 | 46.00 | 16.84 | V | -26.7 | 55.86 |
| 687.518333 | 28.49 | 46.00 | 17.51 | V | -19.7 | 48.19 |




**Fugure A.1.29. Radiated Emission (GPS,3GHz to 18GHz)**



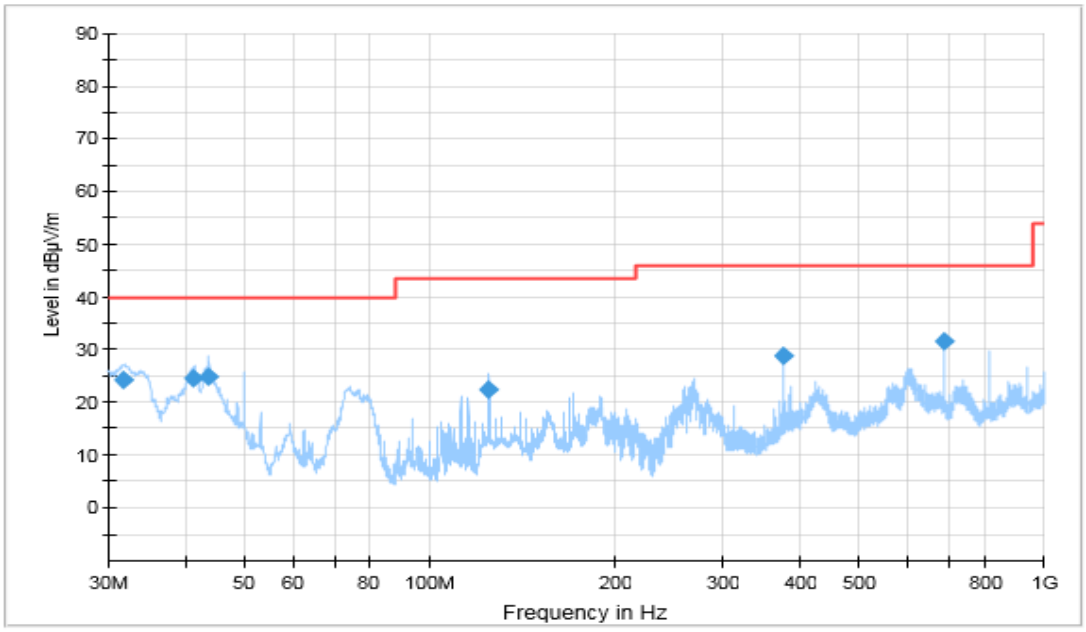

**Fugure A.1.30. Radiated Emission (GPS, 3GHz to 18GHz)**

**Final_Results_PK**

| Frequency(MHz) | Peak (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 6953.500000 | 43.76 | 74.00 | 30.24 | H | 2.7 | 41.06 |
| 9801.000000 | 44.99 | 74.00 | 29.01 | H | 4.8 | 40.19 |
| 11456.500000 | 46.21 | 74.00 | 27.79 | H | 6.9 | 39.31 |
| 12399.000000 | 47.87 | 74.00 | 26.13 | V | 8.5 | 39.37 |
| 14487.500000 | 48.80 | 74.00 | 25.20 | V | 11.7 | 37.1 |
| 17957.500000 | 51.91 | 74.00 | 22.09 | V | 17.0 | 34.91 |

**Final_Results_AVG**

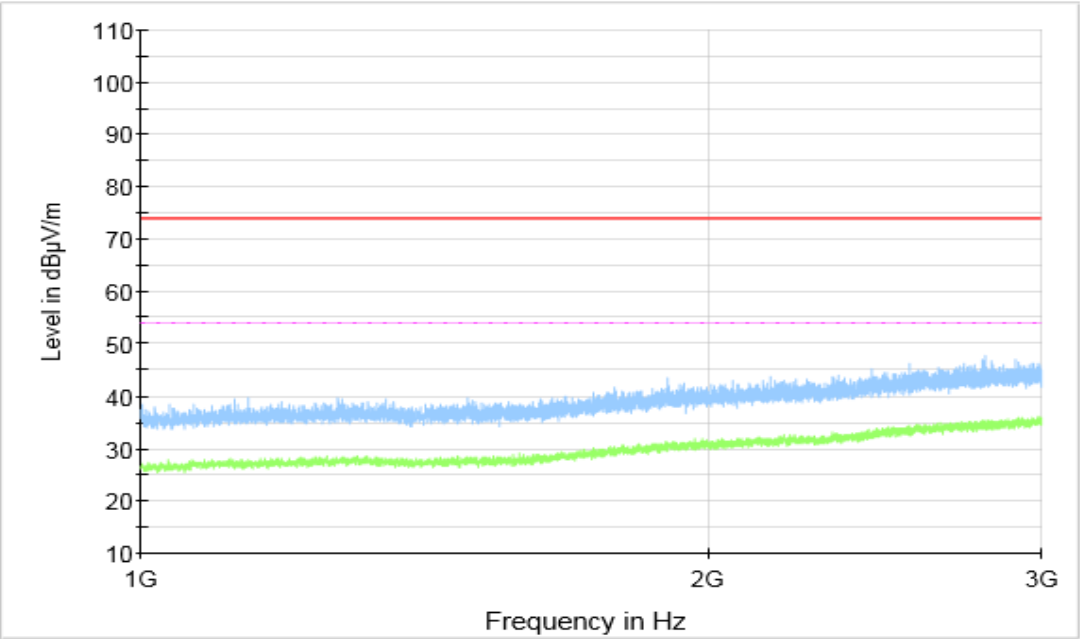
| Frequency(MHz) | Average (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 6516.000000 | 32.28 | 54.00 | 21.72 | V | 2.6 | 29.68 |
| 9857.500000 | 33.70 | 54.00 | 20.30 | H | 5.3 | 28.4 |
| 11435.000000 | 34.42 | 54.00 | 19.58 | H | 6.8 | 27.62 |
| 12943.000000 | 35.95 | 54.00 | 18.05 | H | 9.4 | 26.55 |
| 14489.000000 | 37.13 | 54.00 | 16.87 | V | 11.7 | 25.43 |
| 17909.000000 | 40.49 | 54.00 | 13.51 | V | 17.4 | 23.09 |



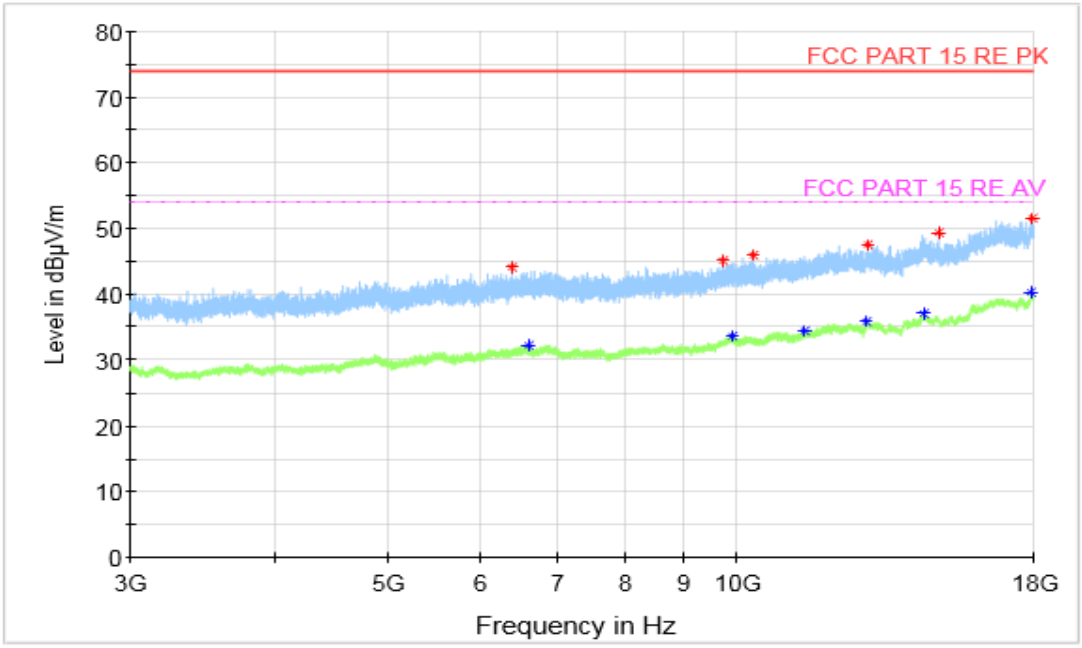

**Fugure A.1.31. Radiated Emission (GLONASS, 30MHz to 1GHz)**

**Final_Result**

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Pol | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 31.840000 | 24.13 | 40.00 | 15.87 | V | -25.6 | 49.73 |
| 41.284444 | 24.52 | 40.00 | 15.48 | V | -29.9 | 54.42 |
| 43.747778 | 25.00 | 40.00 | 15.00 | V | -31.8 | 56.80 |
| 125.012222 | 22.53 | 43.50 | 20.97 | V | -31.6 | 54.13 |
| 375.016667 | 28.83 | 46.00 | 17.17 | V | -26.7 | 55.53 |
| 687.518333 | 31.47 | 46.00 | 14.53 | V | -19.7 | 51.17 |




**Fugure A.1.32. Radiated Emission (GLONASS,3GHz to 18GHz)**



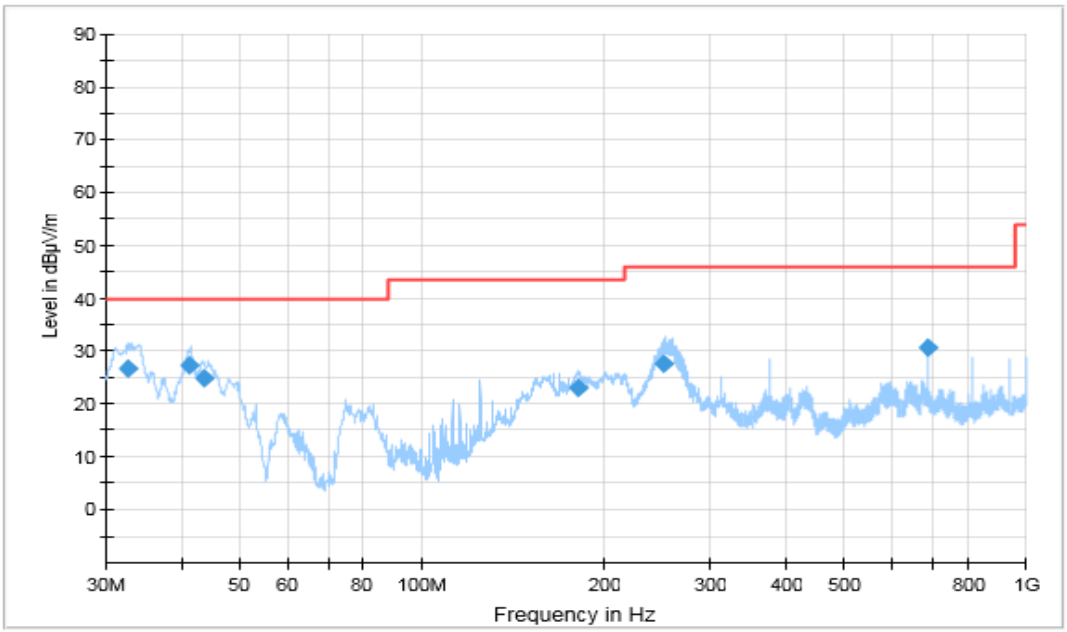

**Fugure A.1.33. Radiated Emission (GLONASS, 3GHz to 18GHz)**

**Final_Results_PK**

| Frequency(MHz) | Peak (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 6400.500000 | 44.11 | 74.00 | 29.89 | H | 2.5 | 41.61 |
| 9712.000000 | 45.19 | 74.00 | 28.81 | H | 4.7 | 40.49 |
| 10305.000000 | 45.88 | 74.00 | 28.12 | V | 5.6 | 40.28 |
| 12968.000000 | 47.66 | 74.00 | 26.34 | V | 9.4 | 38.26 |
| 14909.000000 | 49.41 | 74.00 | 24.59 | V | 11.7 | 37.71 |
| 17963.500000 | 51.66 | 74.00 | 22.34 | V | 16.8 | 34.86 |

**Final_Results_AVG**

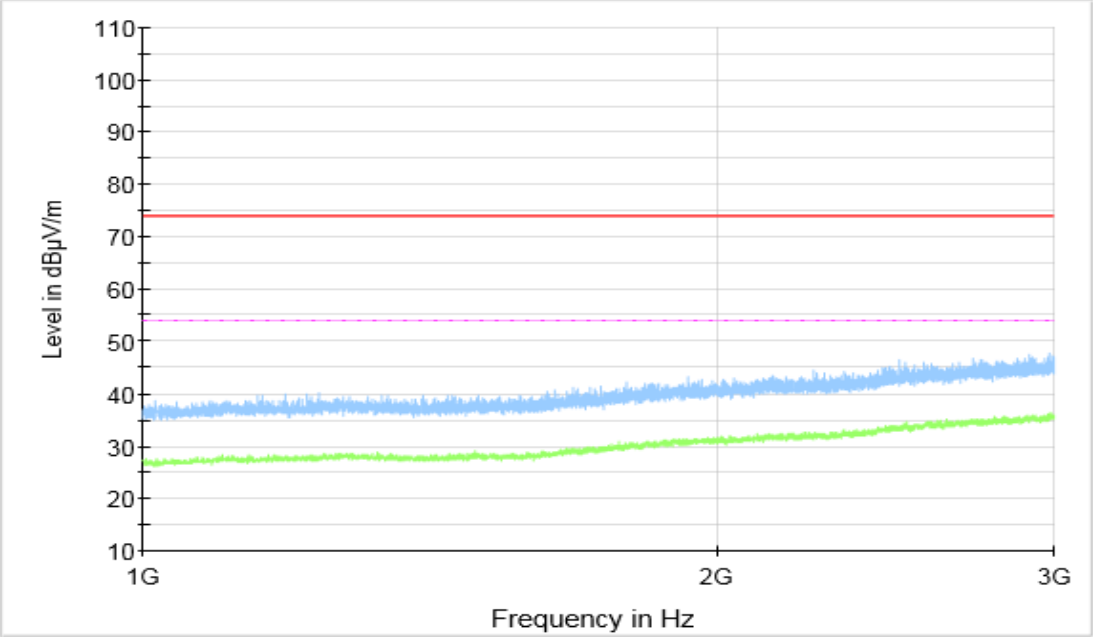
| Frequency(MHz) | Average (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 6606.500000 | 32.33 | 54.00 | 21.67 | V | 2.5 | 29.83 |
| 9884.500000 | 33.65 | 54.00 | 20.35 | V | 5.3 | 28.35 |
| 11425.500000 | 34.40 | 54.00 | 19.60 | H | 6.7 | 27.70 |
| 12911.500000 | 35.84 | 54.00 | 18.16 | V | 9.4 | 26.44 |
| 14465.000000 | 37.13 | 54.00 | 16.87 | H | 11.7 | 25.43 |
| 17906.500000 | 40.25 | 54.00 | 13.75 | V | 17.3 | 22.95 |



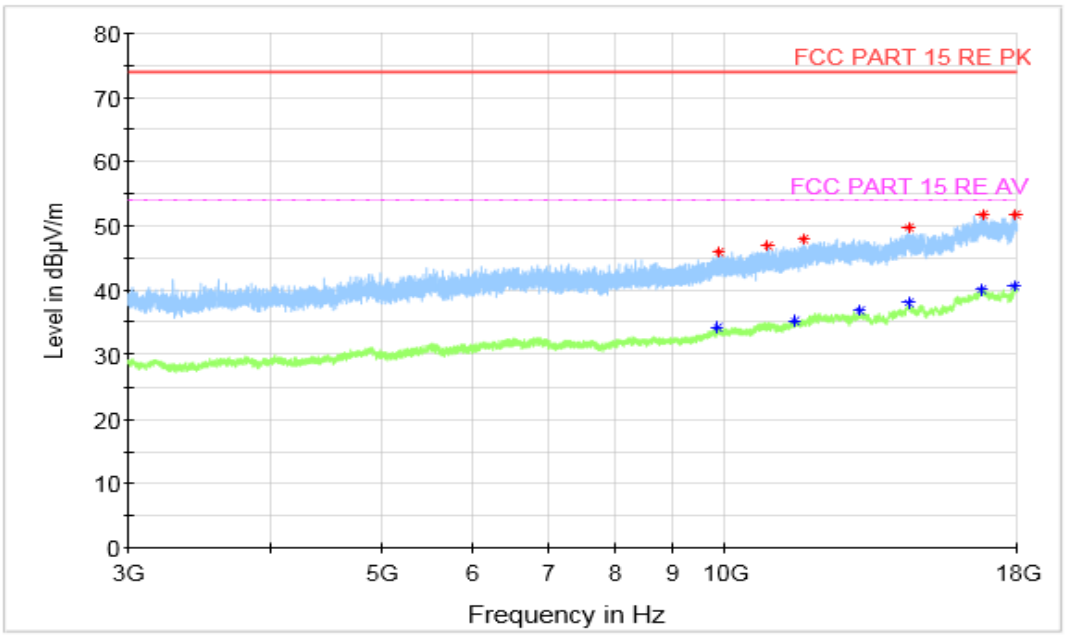

**Fugure A.1.34. Radiated Emission (GLONASS, 30MHz to 1GHz)**

**Final_Result**

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Pol | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 32.663889 | 26.79 | 40.00 | 13.21 | V | -25.8 | 52.59 |
| 41.258333 | 27.38 | 40.00 | 12.62 | V | -29.8 | 57.18 |
| 43.718333 | 24.74 | 40.00 | 15.26 | V | -31.8 | 56.54 |
| 181.908333 | 23.01 | 43.50 | 20.49 | H | -33.6 | 56.61 |
| 252.082222 | 27.54 | 47.00 | 19.46 | H | -30.9 | 58.44 |
| 687.532222 | 30.78 | 47.00 | 16.22 | V | -19.7 | 50.48 |




**Fugure A.1.35. Radiated Emission (GLONASS,3GHz to 18GHz)**



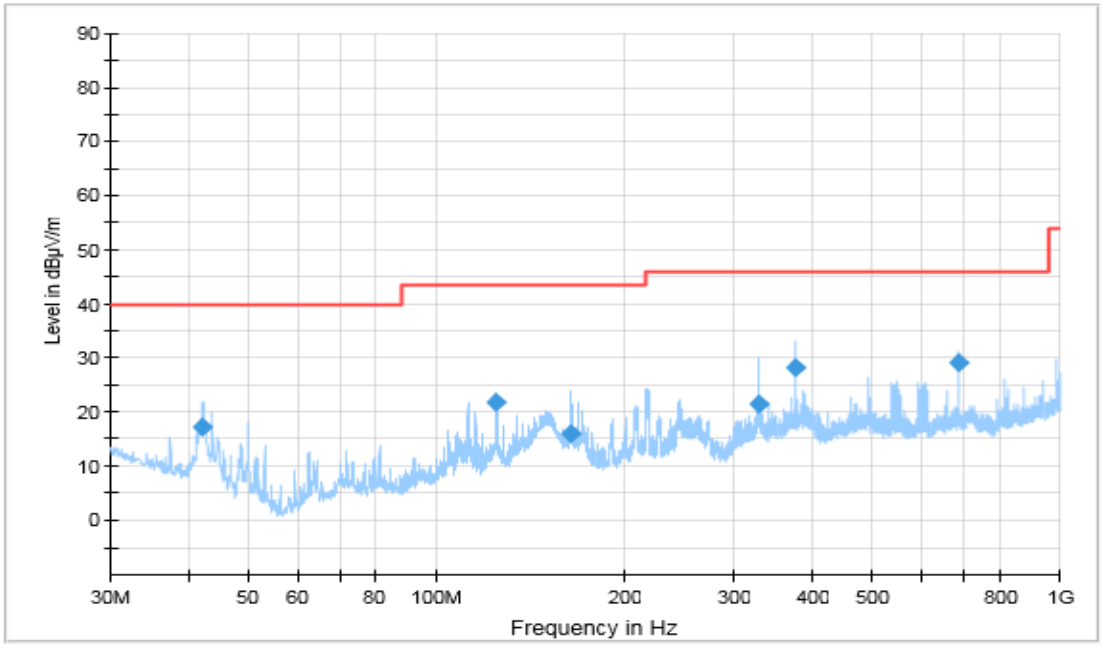

**Fugure A.1.36. Radiated Emission (GLONASS, 3GHz to 18GHz)**

**Final_Results_PK**

| Frequency(MHz) | Peak (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 9858.500000 | 46.03 | 74.00 | 27.97 | H | 5.3 | 40.73 |
| 10878.000000 | 46.88 | 74.00 | 27.12 | H | 6.2 | 40.68 |
| 11692.500000 | 48.06 | 74.00 | 25.94 | H | 7.3 | 40.76 |
| 14482.000000 | 49.70 | 74.00 | 24.30 | V | 11.7 | 38.00 |
| 16821.000000 | 51.78 | 74.00 | 22.22 | H | 15.9 | 35.88 |
| 17945.000000 | 51.81 | 74.00 | 22.19 | H | 17.3 | 34.51 |

**Final_Results_AVG**

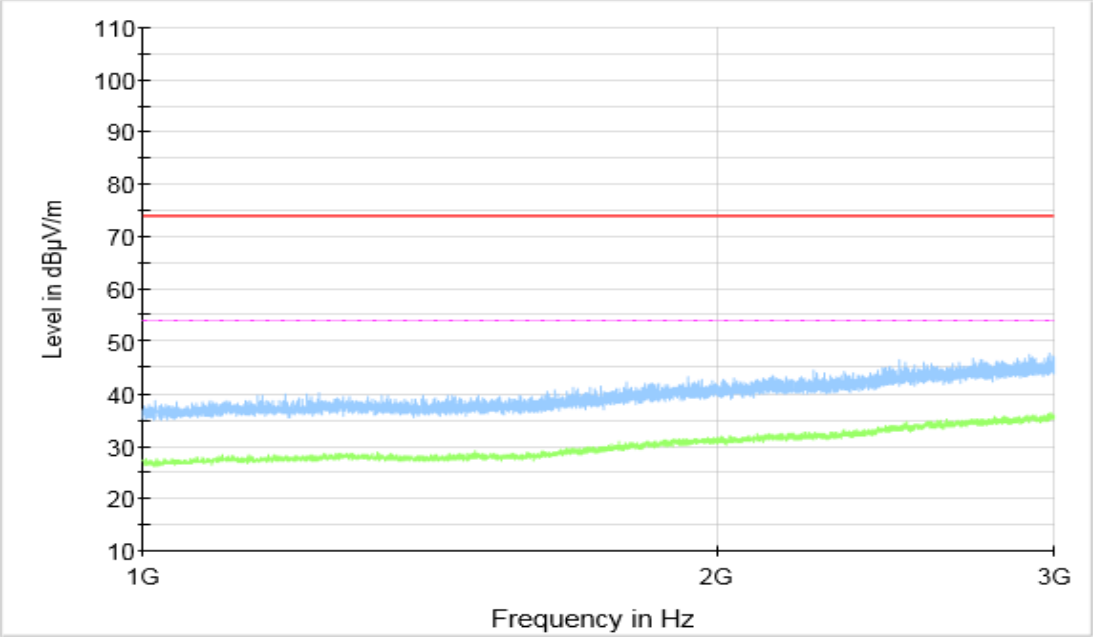
| Frequency(MHz) | Average (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 9843.000000 | 34.24 | 54.00 | 19.76 | V | 5.1 | 29.14 |
| 11487.500000 | 35.33 | 54.00 | 18.67 | V | 6.9 | 28.43 |
| 13094.000000 | 36.81 | 54.00 | 17.19 | V | 9.6 | 27.21 |
| 14465.500000 | 38.00 | 54.00 | 16.00 | V | 11.7 | 26.30 |
| 16749.000000 | 40.08 | 54.00 | 13.92 | V | 15.6 | 24.48 |
| 17909.000000 | 40.80 | 54.00 | 13.20 | H | 17.4 | 23.40 |



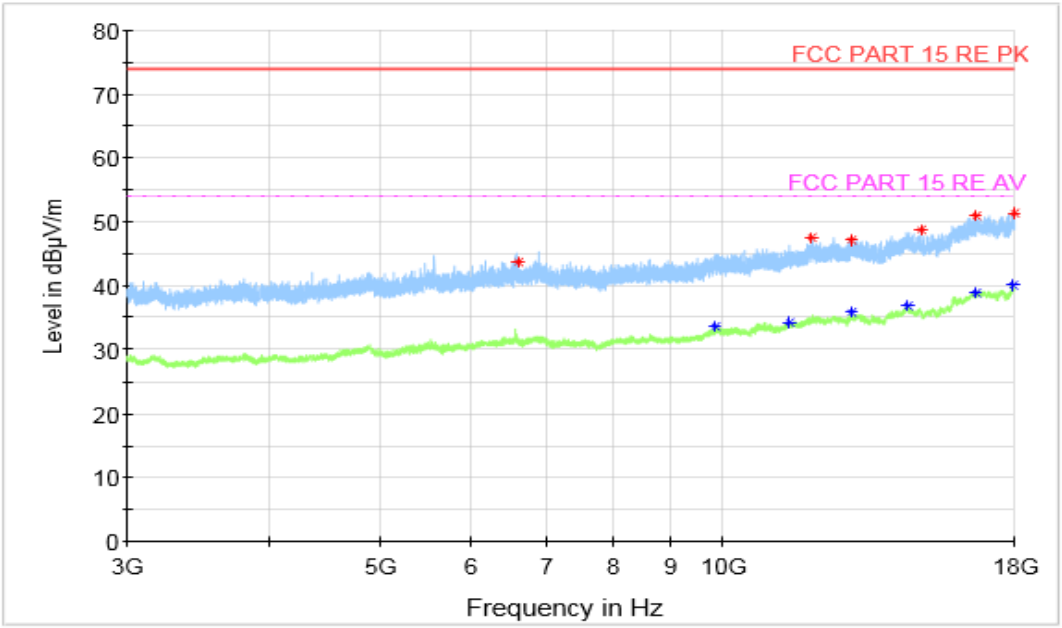

**Fugure A.1.37. Radiated Emission (Data Transfer : EUT to PC, 30MHz to 1GHz)**

**Final_Result**

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Pol | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 42.120556 | 17.21 | 40.00 | 22.79 | V | -30.5 | 47.71 |
| 125.012222 | 21.86 | 43.50 | 21.64 | H | -31.6 | 53.46 |
| 164.069444 | 15.96 | 43.50 | 27.54 | H | -32.8 | 48.76 |
| 328.460000 | 21.39 | 46.00 | 24.61 | H | -28.3 | 49.69 |
| 375.016667 | 28.31 | 46.00 | 17.69 | H | -26.7 | 55.01 |
| 687.518333 | 29.28 | 46.00 | 16.72 | H | -19.7 | 48.98 |




**Fugure A.1.38. Radiated Emission (Data Transfer : EUT to PC,3GHz to 18GHz)**



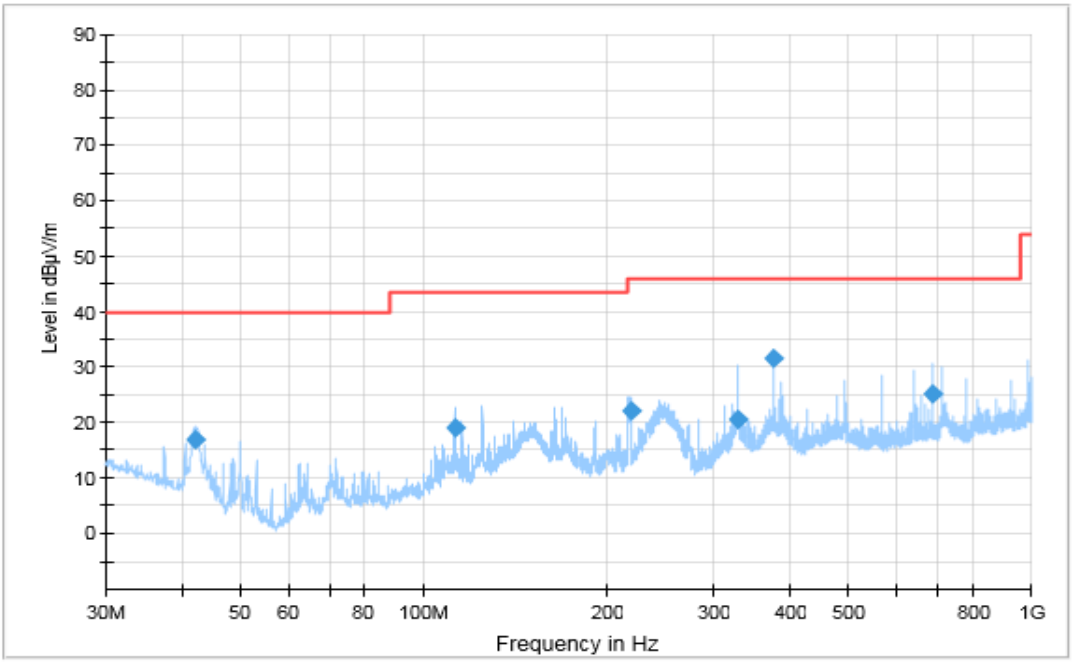

**Fugure A.1.39. Radiated Emission (Data Transfer : EUT to PC, 3GHz to 18GHz)**

**Final_Results_PK**

| Frequency(MHz) | Peak (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 6612.500000 | 43.77 | 74.00 | 30.23 | H | 2.7 | 41.07 |
| 11933.000000 | 47.50 | 74.00 | 26.50 | H | 7.7 | 39.8 |
| 12935.500000 | 47.24 | 74.00 | 26.76 | V | 9.3 | 37.94 |
| 14894.500000 | 48.85 | 74.00 | 25.15 | H | 11.7 | 37.15 |
| 16662.000000 | 51.00 | 74.00 | 23.00 | H | 15.3 | 35.7 |
| 17990.500000 | 51.32 | 74.00 | 22.68 | V | 16.9 | 34.42 |

**Final_Results_AVG**

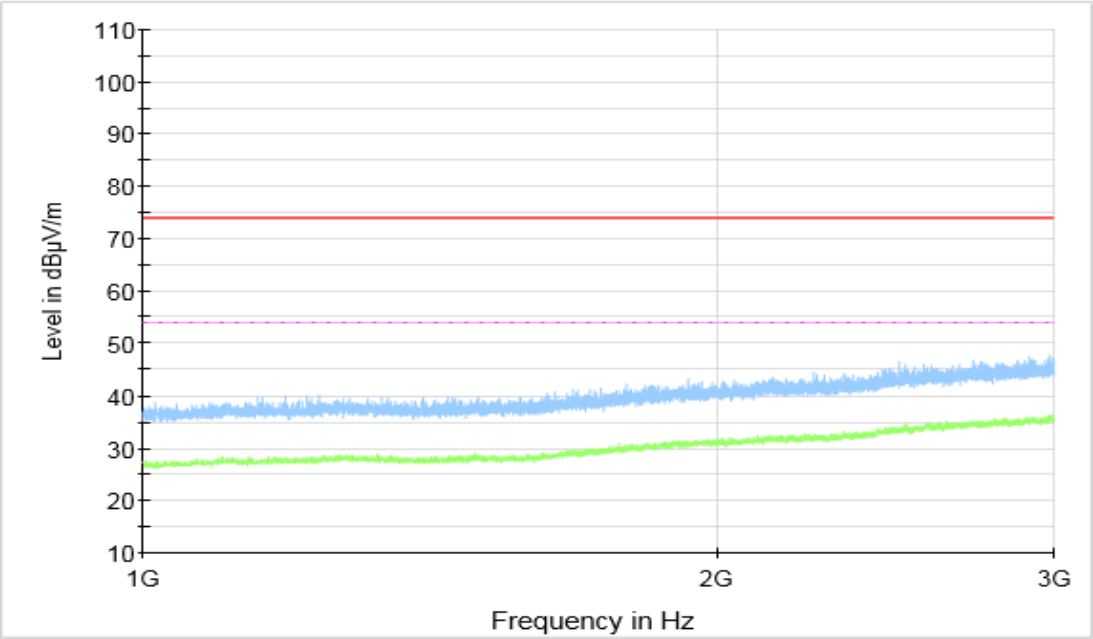
| Frequency(MHz) | Average (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 9851.000000 | 33.62 | 54.00 | 20.38 | V | 5.4 | 28.22 |
| 11418.500000 | 34.23 | 54.00 | 19.77 | H | 6.6 | 27.63 |
| 12964.500000 | 35.81 | 54.00 | 18.19 | H | 9.3 | 26.51 |
| 14492.000000 | 36.97 | 54.00 | 17.03 | H | 11.7 | 25.27 |
| 16675.500000 | 38.97 | 54.00 | 15.03 | V | 15.3 | 23.67 |
| 17945.000000 | 40.20 | 54.00 | 13.80 | V | 17.3 | 22.90 |



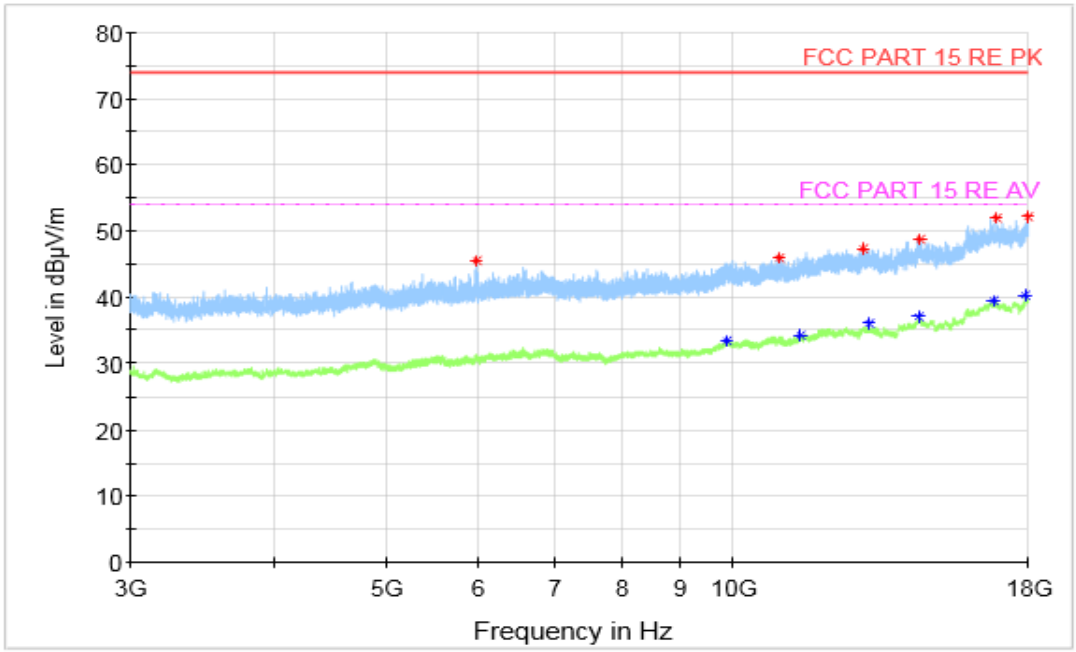

**Fugure A.1.40. Radiated Emission (Data Transfer : PC to EUT, 30MHz to 1GHz)**

**Final_Result**

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Pol | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 42.157222 | 16.76 | 40.00 | 23.24 | V | -30.5 | 47.26 |
| 112.510000 | 18.93 | 43.50 | 24.57 | V | -31.8 | 50.73 |
| 219.143889 | 22.15 | 46.00 | 23.85 | H | -32.4 | 54.55 |
| 328.162778 | 20.65 | 46.00 | 25.35 | H | -28.3 | 48.95 |
| 375.016667 | 31.60 | 46.00 | 14.40 | V | -26.7 | 58.3 |
| 687.518333 | 25.16 | 46.00 | 20.84 | V | -19.7 | 58.3 |




**Fugure A.1.41. Radiated Emission (Data Transfer : PC to EUT: EUT to PC,3GHz to 18GHz)**



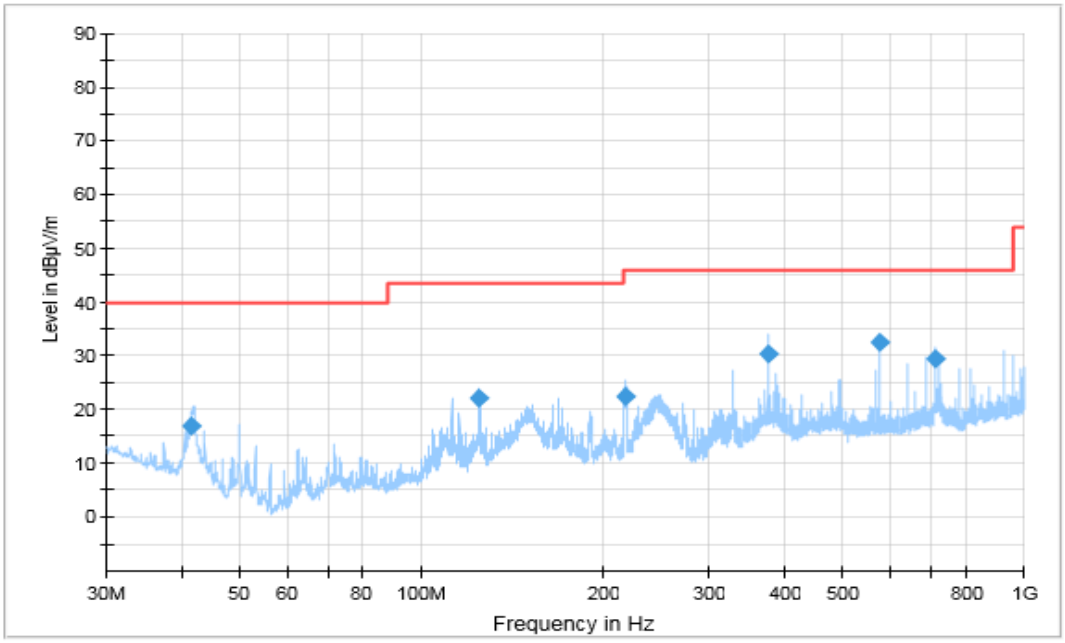

**Fugure A.1.42. Radiated Emission (Data Transfer : PC to EUT, 3GHz to 18GHz)**

**Final_Results_PK**

| Frequency(MHz) | Peak (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 5982.500000 | 45.50 | 74.00 | 28.50 | V | 1.5 | 44.00 |
| 10943.000000 | 45.98 | 74.00 | 28.02 | H | 6.5 | 39.48 |
| 12942.500000 | 47.45 | 74.00 | 26.55 | V | 9.5 | 37.95 |
| 14505.000000 | 48.78 | 74.00 | 25.22 | V | 11.7 | 37.08 |
| 16894.000000 | 51.89 | 74.00 | 22.11 | H | 16.0 | 35.89 |
| 17983.000000 | 52.21 | 74.00 | 21.79 | V | 16.9 | 35.31 |

**Final_Results_AVG**

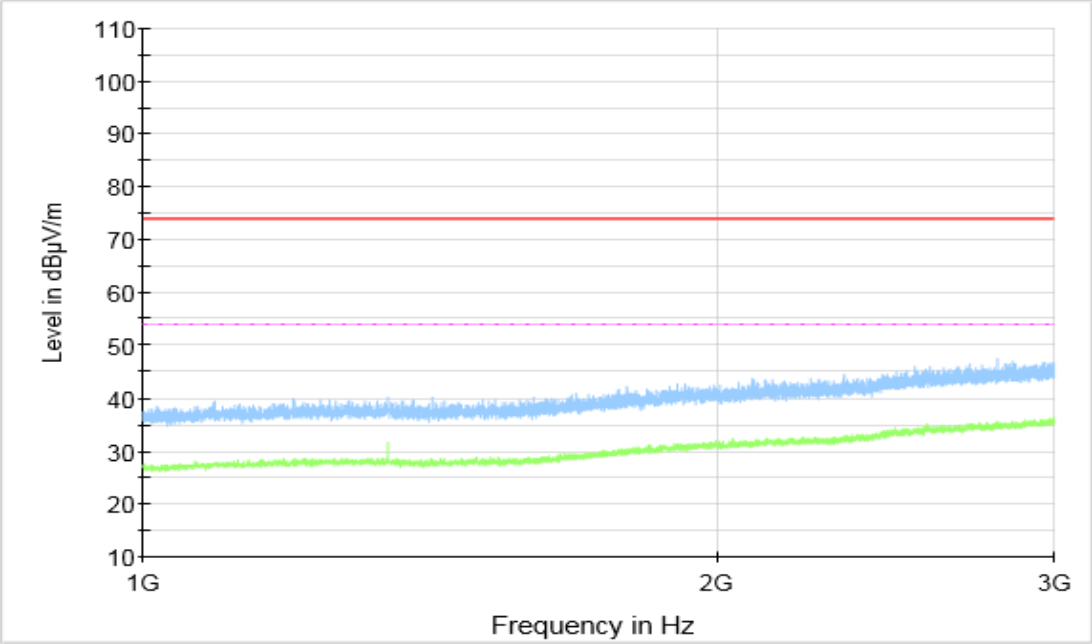
| Frequency(MHz) | Average (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | PMea (dBµV) |
|---|---|---|---|---|---|---|
| 9876.500000 | 33.44 | 54.00 | 20.56 | H | 5.3 | 28.14 |
| 11423.000000 | 34.21 | 54.00 | 19.79 | H | 6.7 | 27.51 |
| 13097.000000 | 36.04 | 54.00 | 17.96 | H | 9.8 | 26.24 |
| 14463.500000 | 37.01 | 54.00 | 16.99 | H | 11.7 | 25.31 |
| 16796.000000 | 39.42 | 54.00 | 14.58 | H | 15.7 | 23.72 |
| 17913.000000 | 40.22 | 54.00 | 13.78 | H | 17.3 | 22.92 |



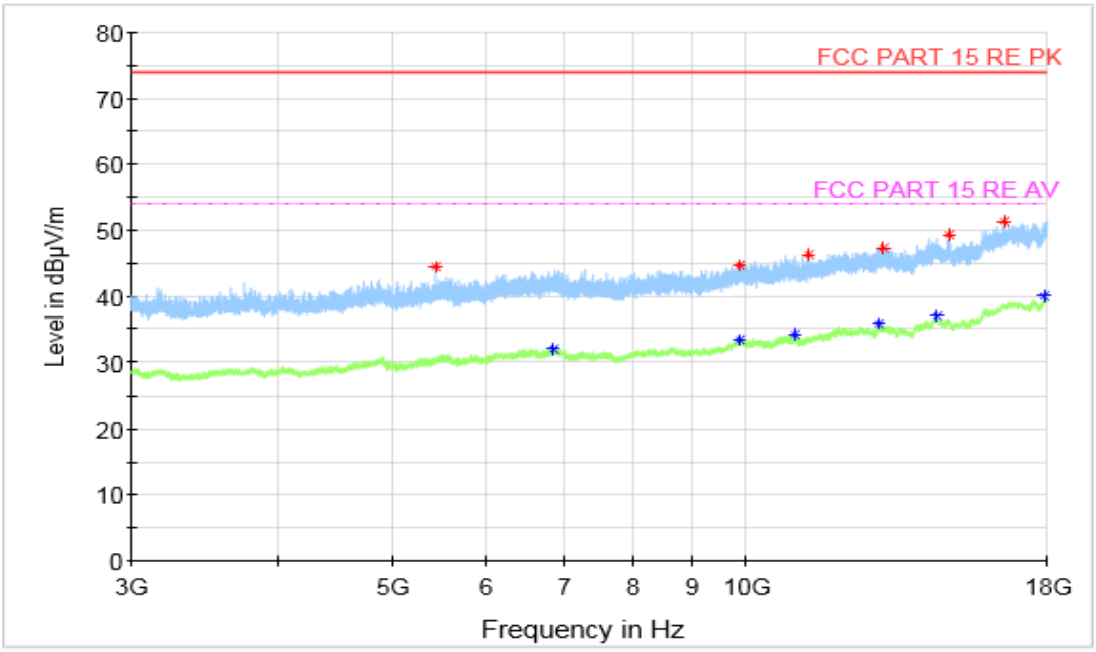

**Fugure A.1.43. Radiated Emission (Data Transfer : PC to TF Card, 30MHz to 1GHz)**

**Final_Result**

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Pol | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 41.649444 | 16.79 | 40.00 | 23.21 | V | -30.1 | 46.89 |
| 125.012222 | 22.12 | 43.50 | 21.38 | V | -31.6 | 53.72 |
| 217.391667 | 22.55 | 46.00 | 23.45 | H | -32.3 | 54.85 |
| 375.016667 | 30.28 | 46.00 | 15.72 | V | -26.7 | 56.98 |
| 575.982222 | 32.56 | 46.00 | 13.44 | V | -22.0 | 54.56 |
| 710.003889 | 29.58 | 46.00 | 16.42 | H | -19.7 | 49.28 |




**Fugure A.1.44. Radiated Emission (Data Transfer : PC to TF Card,3GHz to 18GHz)**



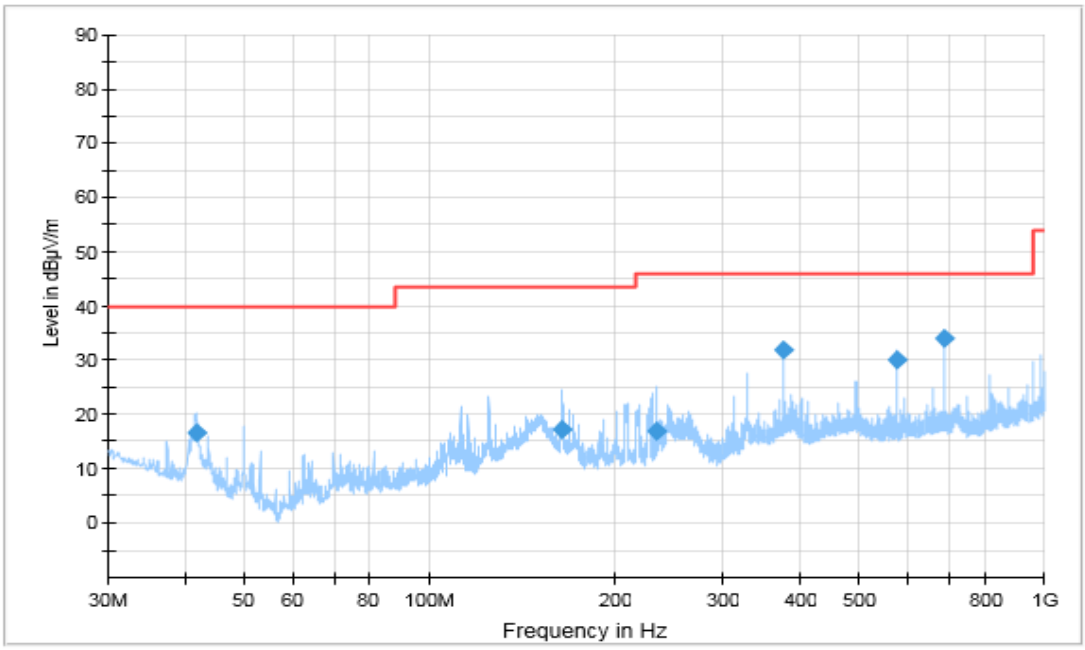

**Fugure A.1.45. Radiated Emission (Set.8, Data Transfer : PC to TF Card, 3GHz to 18GHz)**

**Final_Results_PK**

| Frequency(MHz) | Peak (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 5440.000000 | 44.60 | 74.00 | 29.40 | H | 1.2 | 43.40 |
| 9866.500000 | 44.81 | 74.00 | 29.19 | H | 5.2 | 39.61 |
| 11271.500000 | 46.39 | 74.00 | 27.61 | H | 6.1 | 40.29 |
| 13075.000000 | 47.42 | 74.00 | 26.58 | V | 9.5 | 37.92 |
| 14860.500000 | 49.34 | 74.00 | 24.66 | H | 11.6 | 37.74 |
| 16540.500000 | 51.36 | 74.00 | 22.64 | V | 15.2 | 36.16 |

**Final_Results_AVG**

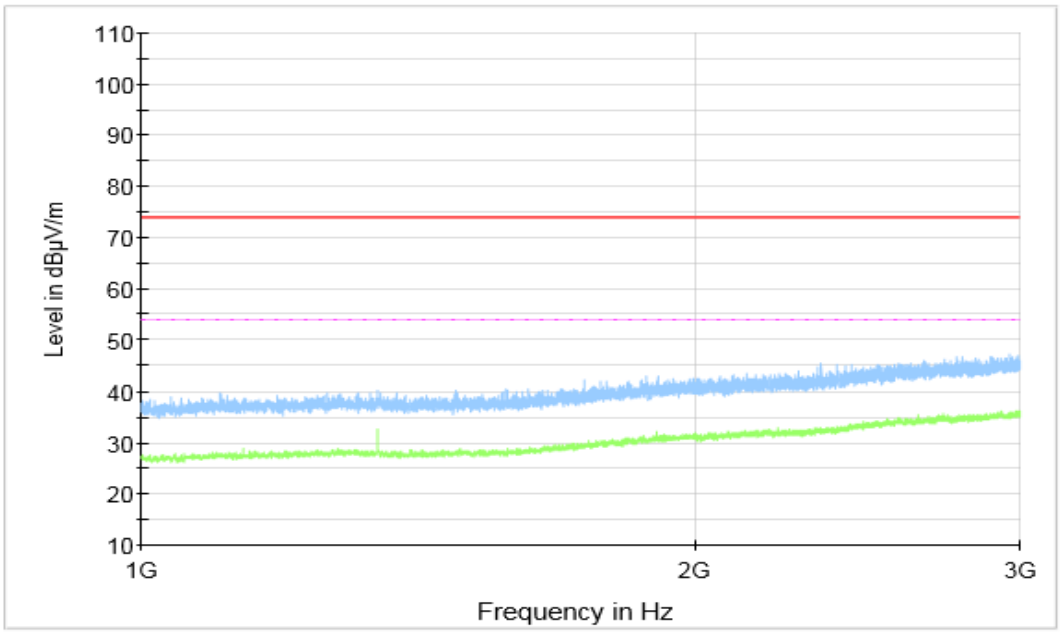
| Frequency(MHz) | Average (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 6852.500000 | 32.10 | 54.00 | 21.90 | V | 2.7 | 29.40 |
| 9878.000000 | 33.47 | 54.00 | 20.53 | V | 5.3 | 28.17 |
| 10975.500000 | 34.27 | 54.00 | 19.73 | V | 6.6 | 27.67 |
| 12971.500000 | 35.78 | 54.00 | 18.22 | H | 9.3 | 26.48 |
| 14504.000000 | 37.08 | 54.00 | 16.92 | H | 11.7 | 25.38 |
| 17909.500000 | 40.12 | 54.00 | 13.88 | H | 17.4 | 22.72 |



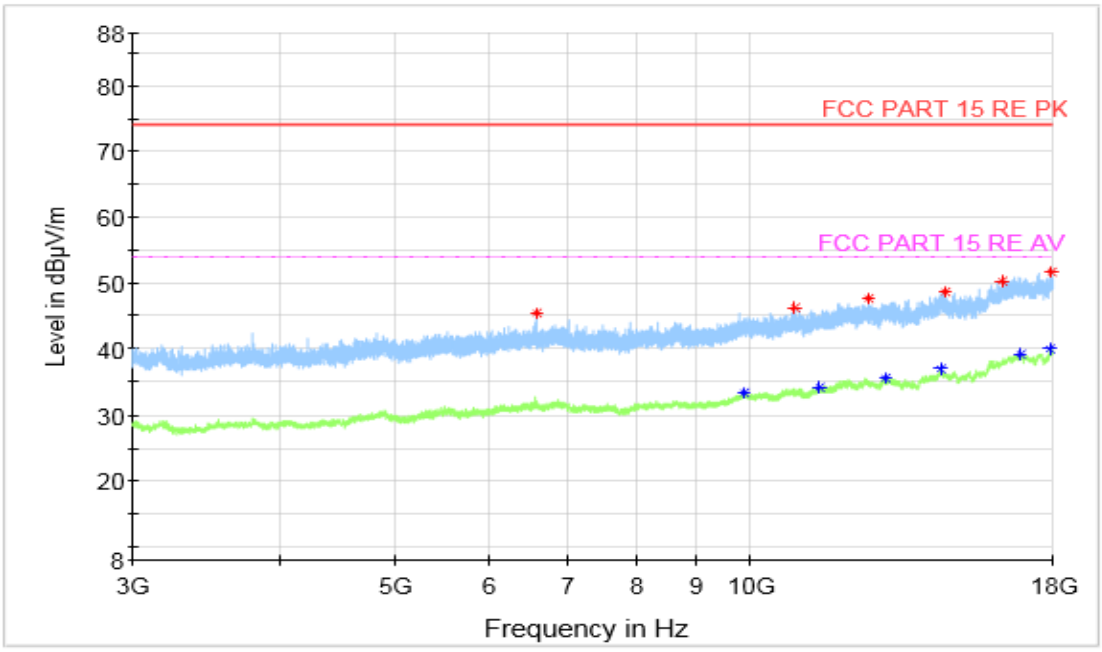

**Fugure A.1.46. Radiated Emission (Data Transfer : TF Card to PC, 30MHz to 1GHz)**

**Final_Result**

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Pol | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 41.807778 | 16.59 | 40.00 | 23.41 | V | -30.2 | 46.79 |
| 164.726667 | 17.09 | 43.50 | 26.41 | V | -32.6 | 49.69 |
| 233.638333 | 17.05 | 46.00 | 28.95 | V | -31.9 | 48.95 |
| 375.016667 | 32.00 | 46.00 | 14.00 | V | -26.7 | 58.70 |
| 575.982222 | 30.19 | 46.00 | 15.81 | V | -22.0 | 52.19 |
| 687.518333 | 33.90 | 46.00 | 12.10 | V | -19.7 | 53.60 |




**Fugure A.1.47. Radiated Emission (Data Transfer : TF Card to PC,3GHz to 18GHz)**



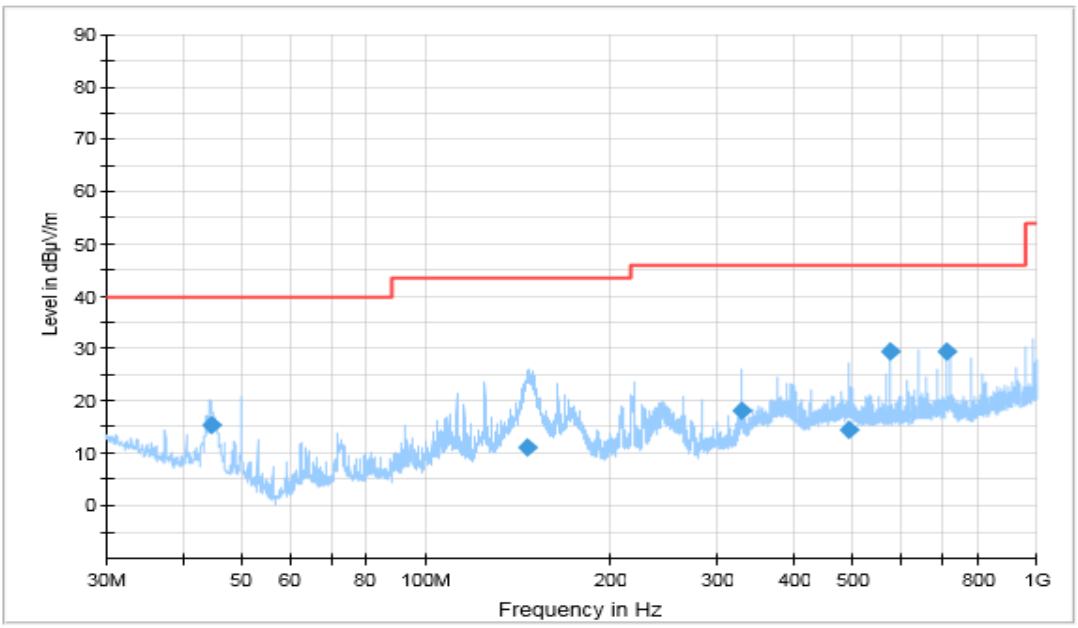

**Fugure A.1.48. Radiated Emission (Data Transfer : TF Card to PC, 3GHz to 18GHz)**

**Final_Results_PK**

| Frequency(MHz) | Peak (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 6579.000000 | 45.57 | 74.00 | 28.43 | V | 2.7 | 42.87 |
| 10895.500000 | 46.27 | 74.00 | 27.73 | V | 6.0 | 40.27 |
| 12583.000000 | 47.60 | 74.00 | 26.40 | H | 8.6 | 39.00 |
| 14586.500000 | 48.61 | 74.00 | 25.39 | H | 11.7 | 36.91 |
| 16324.000000 | 50.26 | 74.00 | 23.74 | H | 14.8 | 35.46 |
| 17920.500000 | 51.75 | 74.00 | 22.25 | H | 16.9 | 34.85 |

**Final_Results_AVG**

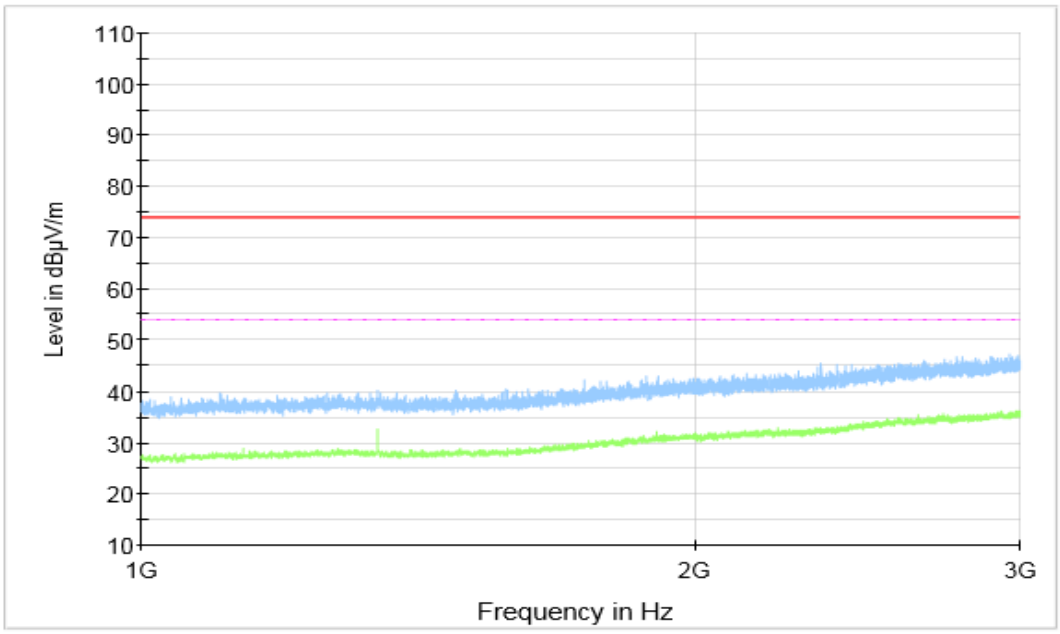
| Frequency(MHz) | Average (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 9877.000000 | 33.49 | 54.00 | 20.51 | H | 5.3 | 28.19 |
| 11418.500000 | 34.23 | 54.00 | 19.77 | H | 6.6 | 27.63 |
| 12974.500000 | 35.65 | 54.00 | 18.35 | V | 9.2 | 26.45 |
| 14463.500000 | 36.99 | 54.00 | 17.01 | H | 11.7 | 25.29 |
| 16881.500000 | 39.21 | 54.00 | 14.79 | V | 16.1 | 23.11 |
| 17905.000000 | 40.11 | 54.00 | 13.89 | V | 17.2 | 22.91 |



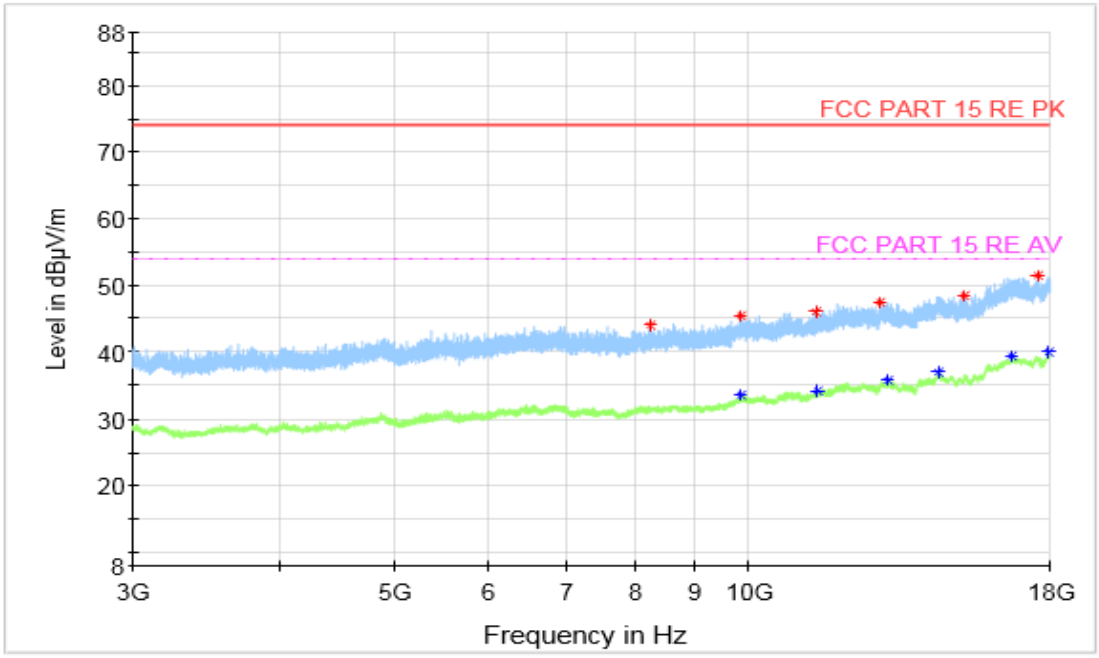

**Fugure A.1.49. Radiated Emission (Data Transfer : TF Card to PC, 30MHz to 1GHz)**

**Final_Result**

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Pol | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 44.702222 | 15.52 | 40.00 | 24.48 | V | -32.3 | 47.82 |
| 147.014444 | 11.03 | 43.50 | 32.47 | V | -33.6 | 44.63 |
| 329.494444 | 18.00 | 46.00 | 28.00 | H | -28.3 | 46.30 |
| 492.305000 | 14.62 | 46.00 | 31.38 | V | -23.5 | 38.12 |
| 575.982222 | 29.37 | 46.00 | 16.63 | H | -22.0 | 51.37 |
| 710.003889 | 29.42 | 46.00 | 16.58 | H | -19.7 | 49.12 |




**Fugure A.1.50. Radiated Emission (Data Transfer : TF Card to PC,3GHz to 18GHz)**




**Fugure A.1.51. Radiated Emission (Data Transfer : TF Card to PC, 3GHz to 18GHz)**

**Final_Results_PK**

| Frequency(MHz) | Peak (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 8241.000000 | 44.14 | 74.00 | 29.86 | H | 3.5 | 40.64 |
| 9825.500000 | 45.43 | 74.00 | 28.57 | H | 5.1 | 40.33 |
| 11398.500000 | 45.99 | 74.00 | 28.01 | V | 6.8 | 39.19 |
| 12900.500000 | 47.52 | 74.00 | 26.48 | H | 9.1 | 38.42 |
| 15232.500000 | 48.46 | 74.00 | 25.54 | V | 11.8 | 36.66 |
| 17582.000000 | 51.49 | 74.00 | 22.51 | V | 15.9 | 35.59 |

Final_Results_AVG

| Frequency(MHz) | Average (dBµV/m) | Limit (dBµV/m) | Margin(dB) | Polarity | ARpl (dB/m) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 9849.500000 | 33.54 | 54.00 | 20.46 | H | 5.3 | 28.24 |
| 11434.000000 | 34.25 | 54.00 | 19.75 | V | 6.8 | 27.45 |
| 13095.500000 | 35.72 | 54.00 | 18.28 | V | 9.7 | 26.02 |
| 14460.000000 | 36.92 | 54.00 | 17.08 | V | 11.8 | 25.12 |
| 16711.000000 | 39.36 | 54.00 | 14.64 | H | 15.4 | 23.96 |
| 17958.000000 | 40.12 | 54.00 | 13.88 | V | 16.9 | 23.22 |

**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.

**Bluetooth:**The EUT is connected to a charger for charging. The EUT is connected to a PC for transmitting data by Bluetooth function. The model of the PC is Lenovo ThinkPad T480, and the serial number of the PC is PF-13LW0C.

**Wi-Fi:**The EUT is connected to a charger for charging. The EUT is Working as Wi-Fi terminal and connected with System Simulator (SS). After the EUT has been allocated an IP address, establish a communication link between the EUT and System Simulator (SS).

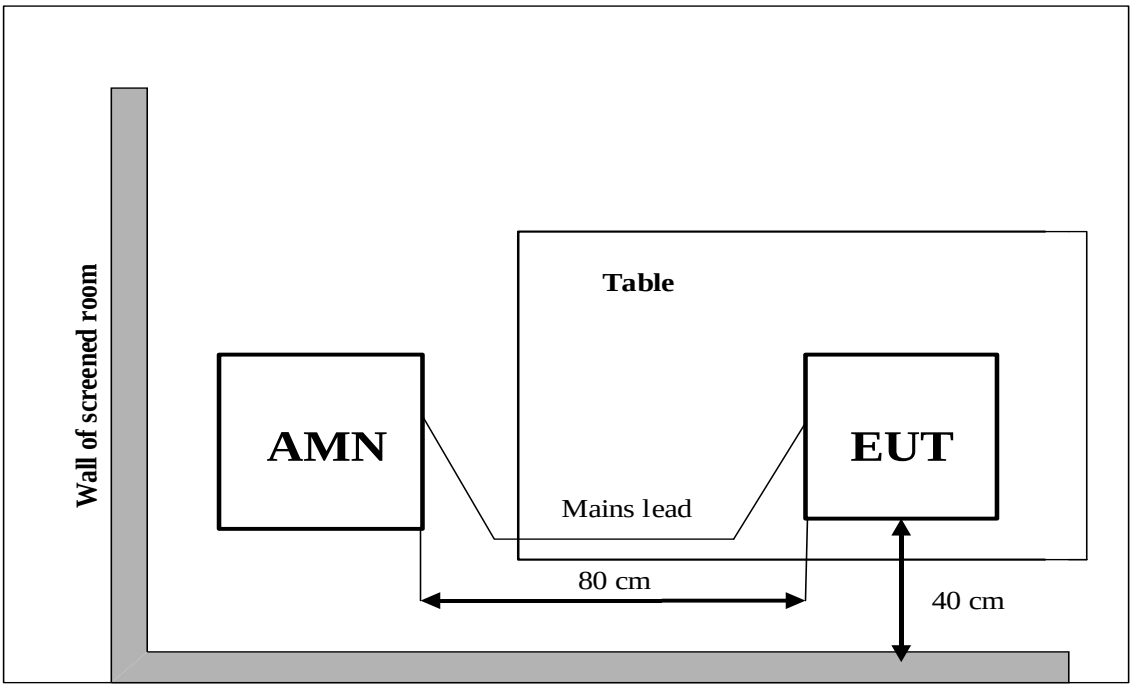
**GNSS:**The EUT is connected to a charger for charging. A vector signal generator is used to provide the simulated GNSS signal, and the frequency is set to 1575.42 MHz. Before the test starts, the integrated GNSS application in EUT is started up and locked to the simulated GNSS signal.

Meanwhile, the EUT is synchronized to System Simulator (SS), and able to respond to paging messages and incoming call. An established call has been released.

**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) UT12aa/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) UT12aa/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. | | | | |

GLONASS

AC Input Port/ Voltage: 120V/60Hz

| Frequency range (MHz) | Quasi-peak Limit (dBμV) | Average Limit (dBμV) | Result (dBμV) UT12aa/Set.2 | 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. | | | | |

FM receiver

AC Input Port/ Voltage: 120V/60Hz

| Frequency range (MHz) | Quasi-peak Limit (dBμV) | Average Limit (dBμV) | Result (dBμV) UT12aa/Set.1 | 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. | | | | |

GPS

AC Input Port/ Voltage: 120V/60Hz

| Frequency range (MHz) | Quasi-peak Limit (dBμV) | Average Limit (dBμV) | Result (dBμV) UT12aa/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. | | | | |

GLONASS

AC Input Port/ Voltage: 120V/60Hz

| Frequency range (MHz) | Quasi-peak Limit (dBμV) | Average Limit (dBμV) | Result (dBμV) | Conclusion |
|---|---|---|---|---|
| | | | UT12aa/Set.1 | |
| 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. | | | | |

Data Transfer

AC Input Port/ Voltage: 120V/60Hz

| Frequency range (MHz) | Quasi-peak Limit (dBμV) | Average Limit (dBμV) | Result (dBμV) | Conclusion |
|---|---|---|---|---|
| | | | UT12aa/Set.3 | |
| 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: 120V/60Hz

| Frequency range (MHz) | Quasi-peak Limit (dBμV) | Average Limit (dBμV) | Result (dBμV) UT12aa/Set.4 | 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. | | | | |

Camera

AC Input Port/ Voltage: 240V/60Hz

| Frequency range (MHz) | Quasi-peak Limit (dBμV) | Average Limit (dBμV) | Result (dBμV) UT12aa/Set.1 | Conclusion |
|---|---|---|---|---|
| 0.15 to 0.5 | 66 to 56 | 56 to 46 | See Figure A.2.9 | P |
| 0.5 to 5 | 56 | 46 | | |
| 5 to 30 | 60 | 50 | | |
| NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz. | | | | |

Video Player

AC Input Port/ Voltage: 240V/60Hz

| Frequency range (MHz) | Quasi-peak Limit (dBμV) | Average Limit (dBμV) | Result (dBμV) UT12aa/Set.1 | Conclusion |
|---|---|---|---|---|
| 0.15 to 0.5 | 66 to 56 | 56 to 46 | See Figure A.2.10 | P |
| 0.5 to 5 | 56 | 46 | | |
| 5 to 30 | 60 | 50 | | |
| NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz. | | | | |

GLONASS

AC Input Port/ Voltage: 240V/60Hz

| Frequency range (MHz) | Quasi-peak Limit (dBμV) | Average Limit (dBμV) | Result (dBμV) UT12aa/Set.2 | Conclusion |
|---|---|---|---|---|
| 0.15 to 0.5 | 66 to 56 | 56 to 46 | See Figure A.2.11 | 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) UT12aa/Set.1 | Conclusion |
|---|---|---|---|---|
| 0.15 to 0.5 | 66 to 56 | 56 to 46 | See Figure A.2.12 | 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. | | | | |

GPS

AC Input Port/ Voltage: 240V/60Hz

| Frequency range (MHz) | Quasi-peak Limit (dBμV) | Average Limit (dBμV) | Result (dBμV) UT12aa/Set.1 | Conclusion |
|---|---|---|---|---|
| 0.15 to 0.5 | 66 to 56 | 56 to 46 | See Figure A.2.13 | 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. | | | | |

GLONASS

AC Input Port/ Voltage: 240V/60Hz

| Frequency range (MHz) | Quasi-peak Limit (dBμV) | Average Limit (dBμV) | Result (dBμV) UT12aa/Set.1 | Conclusion |
|---|---|---|---|---|
| 0.15 to 0.5 | 66 to 56 | 56 to 46 | See Figure A.2.14 | 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) UT12aa/Set.3 | Conclusion |
|---|---|---|---|---|
| 0.15 to 0.5 | 66 to 56 | 56 to 46 | See Figure A.2.15 | 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 |
|---|---|---|---|---|
| | | | UT12aa/Set.4 | |
| 0.15 to 0.5 | 66 to 56 | 56 to 46 | See Figure A.2.16 | P |
| 0.5 to 5 | 56 | 46 | | |
| 5 to 30 | 60 | 50 | | |
| NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz. | | | | |

**AC Input Port/ Voltage: 120V/60Hz**

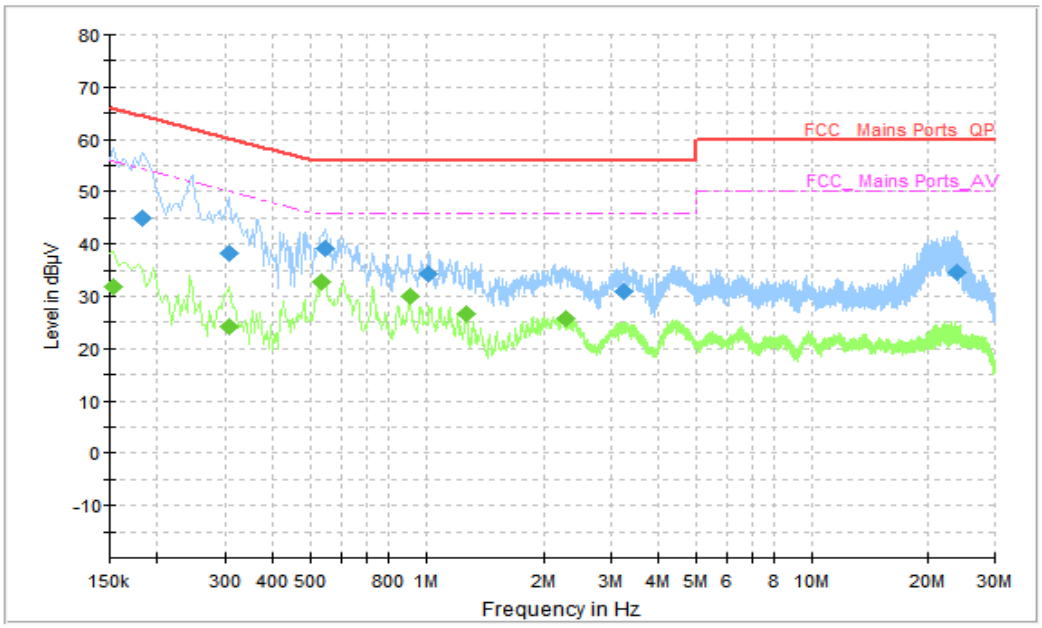



**Figure A.2.1 Conducted Emission(Camera )**

**Final_Result_QPK**

| Frequency (MHz) | QuasiPeak (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.182000 | 44.92 | 64.39 | 19.47 | N | 10 | 34.92 |
| 0.306000 | 38.08 | 60.08 | 22.00 | N | 10 | 28.08 |
| 0.546000 | 39.18 | 56.00 | 16.82 | L1 | 10 | 29.18 |
| 1.018000 | 34.15 | 56.00 | 21.85 | L1 | 10 | 24.15 |
| 3.238000 | 30.85 | 56.00 | 25.15 | L1 | 10 | 20.85 |
| 23.782000 | 34.47 | 60.00 | 25.53 | N | 10 | 24.47 |

**Final_Result_AVG**

| Frequency (MHz) | Average (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.154000 | 31.70 | 55.78 | 24.08 | N | 10 | 21.70 |
| 0.306000 | 24.07 | 50.08 | 26.01 | N | 10 | 14.07 |
| 0.534000 | 32.84 | 46.00 | 13.16 | L1 | 10 | 22.84 |
| 0.906000 | 29.90 | 46.00 | 16.10 | L1 | 10 | 19.90 |
| 1.270000 | 26.62 | 46.00 | 19.38 | L1 | 10 | 16.62 |
| 2.298000 | 25.82 | 46.00 | 20.18 | L1 | 10 | 15.82 |

**AC Input Port/ Voltage: 120V/60Hz**

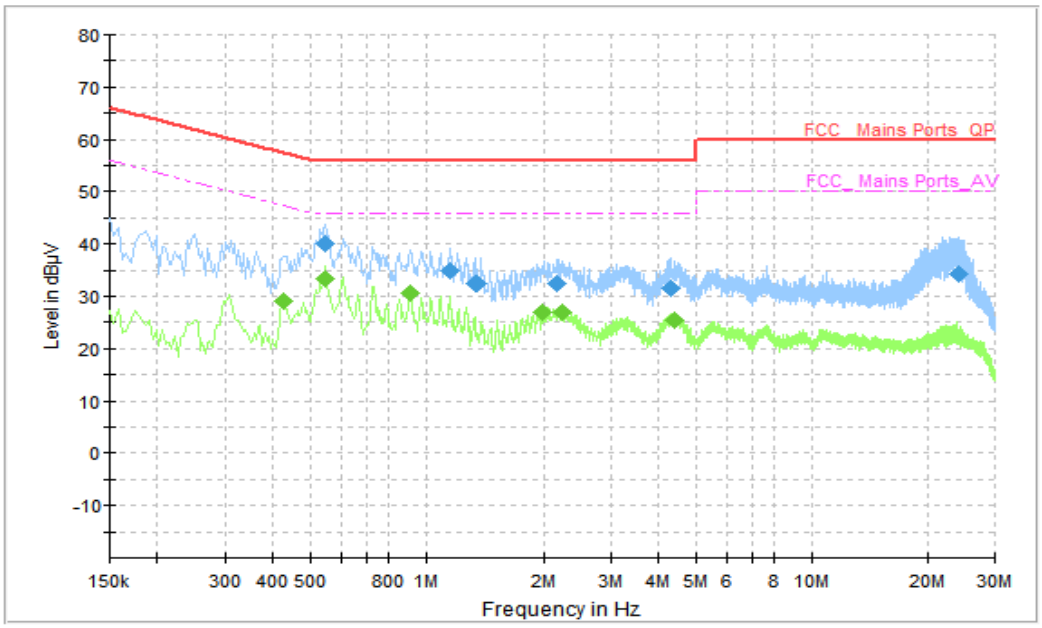



**Figure A.2.2 Conducted Emission( Video Player )**

**Final_Result_QPK**

| Frequency (MHz) | QuasiPeak (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.546000 | 40.17 | 56.00 | 15.83 | L1 | 10 | 30.17 |
| 1.158000 | 34.91 | 56.00 | 21.09 | L1 | 10 | 24.91 |
| 1.338000 | 32.49 | 56.00 | 23.51 | L1 | 10 | 22.49 |
| 2.178000 | 32.37 | 56.00 | 23.63 | L1 | 10 | 22.37 |
| 4.274000 | 31.58 | 56.00 | 24.42 | L1 | 10 | 21.58 |
| 24.242000 | 34.23 | 60.00 | 25.77 | N | 10 | 24.23 |

**Final_Result_AVG**

| Frequency (MHz) | Average (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.426000 | 29.04 | 47.33 | 18.29 | L1 | 10 | 19.04 |
| 0.546000 | 33.44 | 46.00 | 12.56 | L1 | 10 | 23.44 |
| 0.914000 | 30.66 | 46.00 | 15.34 | L1 | 10 | 20.66 |
| 1.998000 | 26.97 | 46.00 | 19.03 | L1 | 10 | 16.97 |
| 2.250000 | 26.99 | 46.00 | 19.01 | L1 | 10 | 16.99 |
| 4.394000 | 25.37 | 46.00 | 20.63 | L1 | 10 | 15.37 |

**AC Input Port/ Voltage: 120V/60Hz**

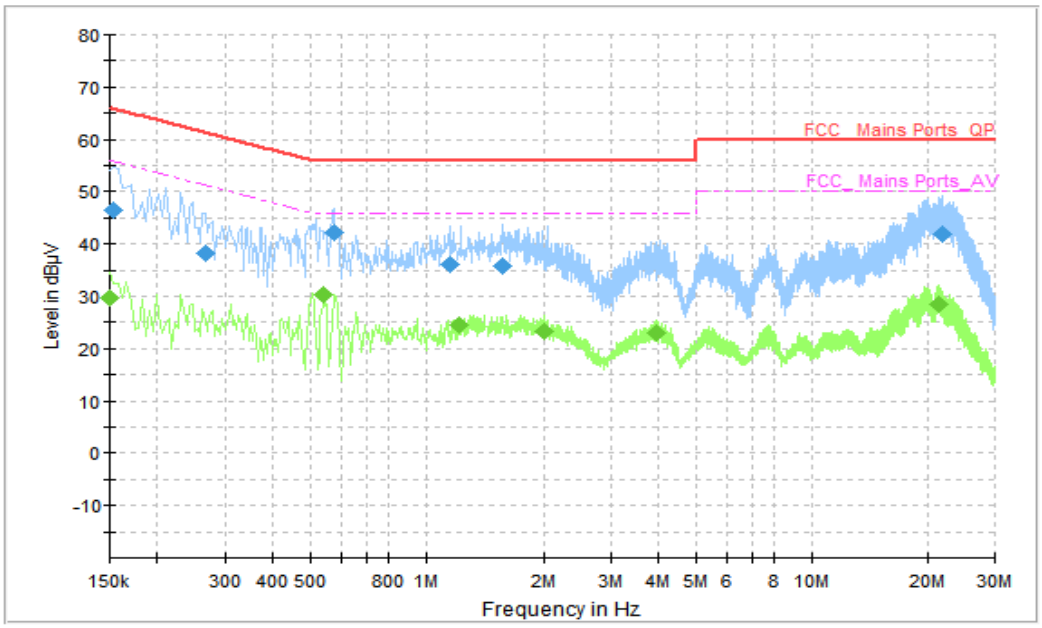



**Figure A.2.3 Conducted Emission(GLONASS )**

**Final_Result_QPK**

| Frequency (MHz) | QuasiPeak (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.154000 | 46.43 | 65.78 | 19.35 | N | 10 | 36.43 |
| 0.266000 | 38.30 | 61.24 | 22.94 | N | 10 | 28.30 |
| 0.574000 | 42.13 | 56.00 | 13.87 | N | 10 | 32.13 |
| 1.150000 | 36.02 | 56.00 | 19.98 | N | 10 | 26.02 |
| 1.566000 | 35.66 | 56.00 | 20.34 | N | 10 | 25.66 |
| 21.826000 | 41.85 | 60.00 | 18.15 | N | 10 | 31.85 |

**Final_Result_AVG**

| Frequency (MHz) | Average (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.150000 | 29.71 | 56.00 | 26.29 | N | 10 | 19.71 |
| 0.542000 | 30.44 | 46.00 | 15.56 | L1 | 10 | 20.44 |
| 1.218000 | 24.41 | 46.00 | 21.59 | L1 | 10 | 14.41 |
| 2.018000 | 23.33 | 46.00 | 22.67 | N | 10 | 13.33 |
| 3.918000 | 22.95 | 46.00 | 23.05 | N | 10 | 12.95 |
| 21.478000 | 28.40 | 50.00 | 21.60 | N | 10 | 18.40 |

**AC Input Port/ Voltage: 120V/60Hz**

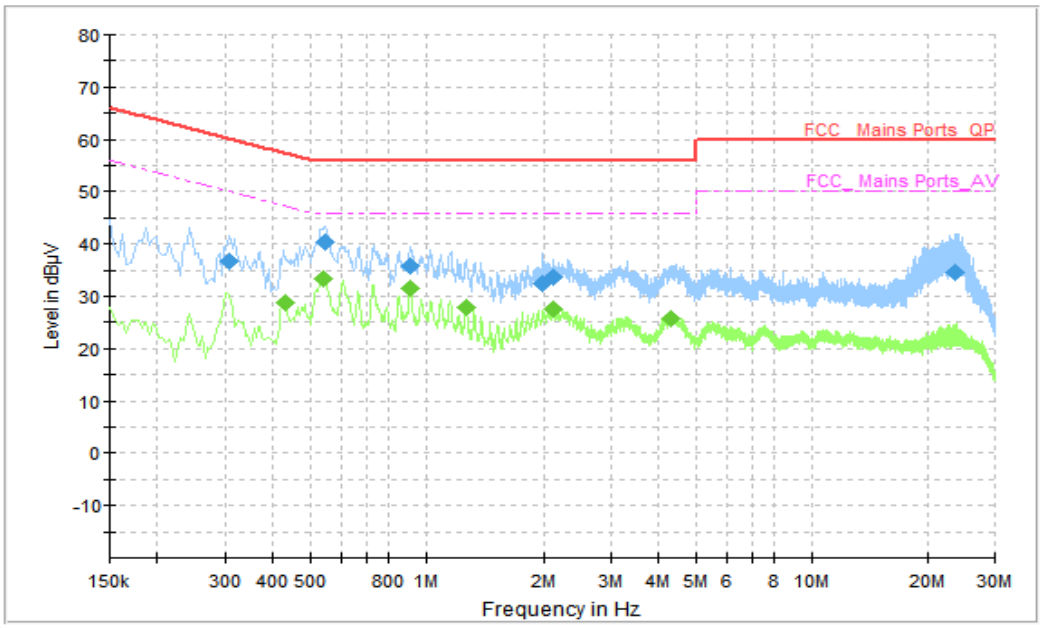



**Figure A.2.4 Conducted Emission( FM receiver)**

**Final_Result_QPK**

| Frequency (MHz) | QuasiPeak (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.306000 | 36.69 | 60.08 | 23.39 | N | 10 | 26.69 |
| 0.546000 | 40.27 | 56.00 | 15.73 | L1 | 10 | 30.27 |
| 0.906000 | 35.80 | 56.00 | 20.20 | L1 | 10 | 25.80 |
| 1.994000 | 32.36 | 56.00 | 23.64 | L1 | 10 | 22.36 |
| 2.126000 | 33.56 | 56.00 | 22.44 | L1 | 10 | 23.56 |
| 23.530000 | 34.68 | 60.00 | 25.32 | N | 10 | 24.68 |

**Final_Result_AVG**

| Frequency (MHz) | Average (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.430000 | 28.72 | 47.25 | 18.53 | L1 | 10 | 18.72 |
| 0.542000 | 33.41 | 46.00 | 12.59 | L1 | 10 | 23.41 |
| 0.910000 | 31.56 | 46.00 | 14.44 | L1 | 10 | 21.56 |
| 1.274000 | 27.87 | 46.00 | 18.13 | L1 | 10 | 17.87 |
| 2.126000 | 27.66 | 46.00 | 18.34 | L1 | 10 | 17.66 |
| 4.314000 | 25.66 | 46.00 | 20.34 | L1 | 10 | 15.66 |

**AC Input Port/ Voltage: 120V/60Hz**

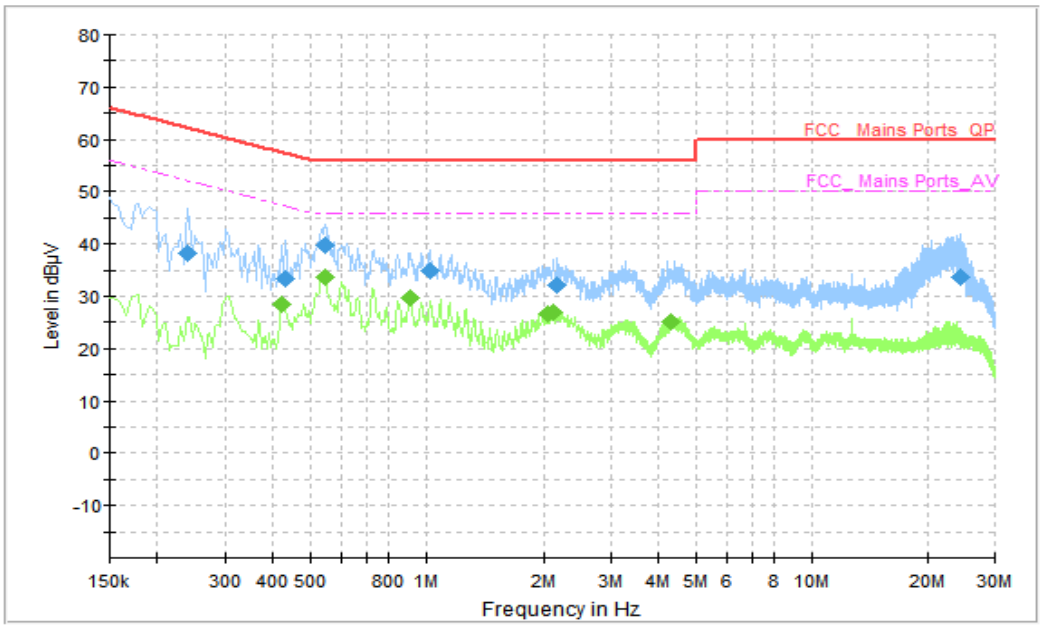



**Figure A.2.5 Conducted Emission(GPS)**

**Final_Result_QPK**

| Frequency (MHz) | QuasiPeak (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.238000 | 38.17 | 62.17 | 24.00 | N | 10 | 28.17 |
| 0.430000 | 33.44 | 57.25 | 23.81 | N | 10 | 23.44 |
| 0.546000 | 39.90 | 56.00 | 16.10 | L1 | 10 | 29.90 |
| 1.022000 | 34.89 | 56.00 | 21.11 | L1 | 10 | 24.89 |
| 2.178000 | 32.27 | 56.00 | 23.73 | L1 | 10 | 22.27 |
| 24.286000 | 33.67 | 60.00 | 26.33 | N | 10 | 23.67 |

**Final_Result_AVG**

| Frequency (MHz) | Average (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.422000 | 28.34 | 47.41 | 19.07 | L1 | 10 | 18.34 |
| 0.546000 | 33.79 | 46.00 | 12.21 | L1 | 10 | 23.79 |
| 0.914000 | 29.62 | 46.00 | 16.38 | L1 | 10 | 19.62 |
| 2.062000 | 26.79 | 46.00 | 19.21 | L1 | 10 | 16.79 |
| 2.122000 | 27.06 | 46.00 | 18.94 | L1 | 10 | 17.06 |
| 4.310000 | 25.06 | 46.00 | 20.94 | L1 | 10 | 15.06 |

**AC Input Port/ Voltage: 120V/60Hz**

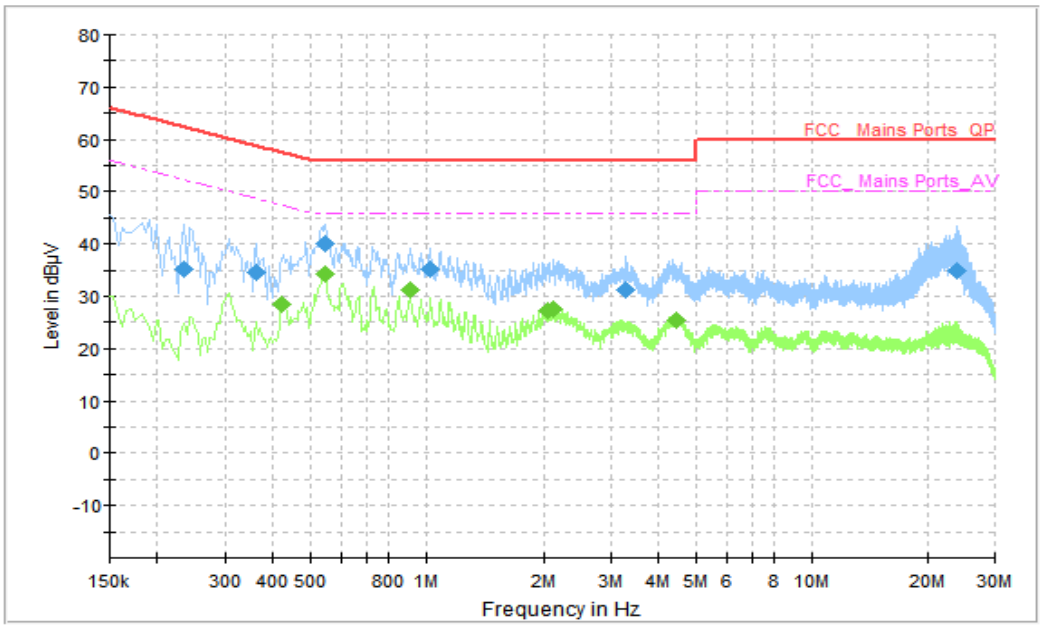



**Figure A.2.6 Conducted Emission(GLONASS)**

**Final_Result_QPK**

| Frequency (MHz) | QuasiPeak (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.234000 | 35.15 | 62.31 | 27.16 | N | 10 | 25.15 |
| 0.362000 | 34.63 | 58.68 | 24.05 | L1 | 10 | 24.63 |
| 0.546000 | 40.01 | 56.00 | 15.99 | L1 | 10 | 30.01 |
| 1.026000 | 35.22 | 56.00 | 20.78 | L1 | 10 | 25.22 |
| 3.290000 | 31.17 | 56.00 | 24.83 | L1 | 10 | 21.17 |
| 23.934000 | 35.00 | 60.00 | 25.00 | N | 10 | 25.00 |

**Final_Result_AVG**

| Frequency (MHz) | Average (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.422000 | 28.39 | 47.41 | 19.02 | L1 | 10 | 18.39 |
| 0.546000 | 34.25 | 46.00 | 11.75 | L1 | 10 | 24.25 |
| 0.910000 | 31.08 | 46.00 | 14.92 | L1 | 10 | 21.08 |
| 2.062000 | 27.19 | 46.00 | 18.81 | L1 | 10 | 17.19 |
| 2.122000 | 27.51 | 46.00 | 18.49 | L1 | 10 | 17.51 |
| 4.446000 | 25.30 | 46.00 | 20.70 | L1 | 10 | 15.30 |

**AC Input Port/ Voltage: 120V/60Hz**

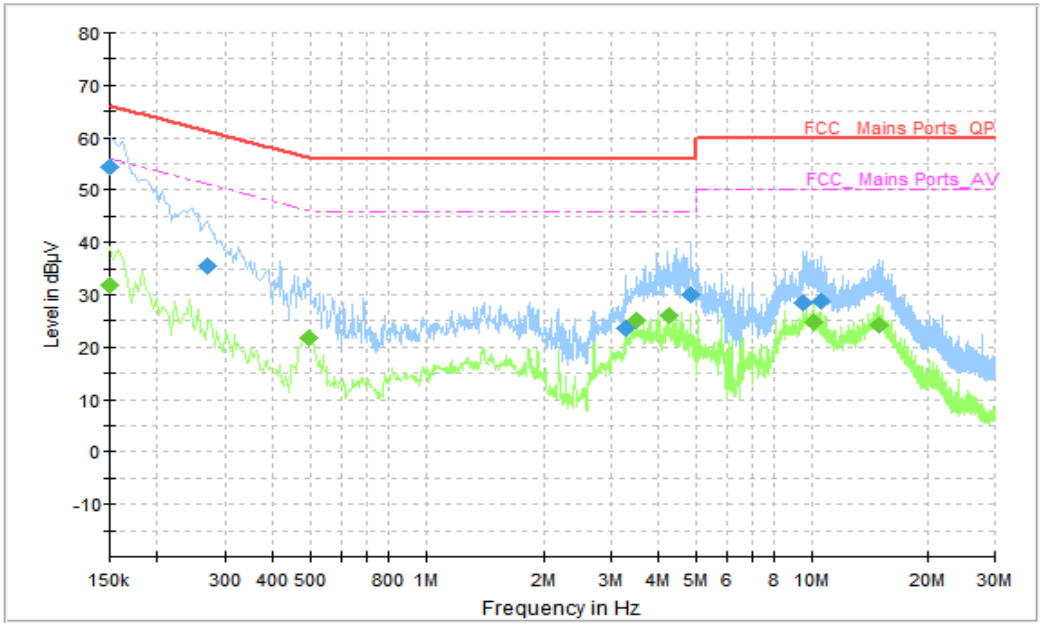



**Figure A.2.7 Conducted Emission(Data Transfer )**

**Final_Result_QPK**

| Frequency (MHz) | QuasiPeak (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.150000 | 54.48 | 66.00 | 11.52 | L1 | 10 | 44.48 |
| 0.270000 | 35.35 | 61.12 | 25.77 | L1 | 10 | 25.35 |
| 3.262000 | 23.51 | 56.00 | 32.49 | L1 | 10 | 13.51 |
| 4.850000 | 30.02 | 56.00 | 25.98 | L1 | 10 | 20.02 |
| 9.478000 | 28.42 | 60.00 | 31.58 | N | 10 | 18.42 |
| 10.530000 | 28.92 | 60.00 | 31.08 | L1 | 10 | 18.92 |

**Final_Result_AVG**

| Frequency (MHz) | Average (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.150000 | 31.72 | 56.00 | 24.28 | L1 | 10 | 21.72 |
| 0.494000 | 21.69 | 46.10 | 24.41 | N | 10 | 11.69 |
| 3.486000 | 25.06 | 46.00 | 20.94 | L1 | 10 | 15.06 |
| 4.258000 | 26.13 | 46.00 | 19.87 | L1 | 10 | 16.13 |
| 10.114000 | 24.71 | 50.00 | 25.29 | L1 | 10 | 14.71 |
| 14.898000 | 24.29 | 50.00 | 25.71 | N | 10 | 14.29 |

**AC Input Port/ Voltage: 120V/60Hz**

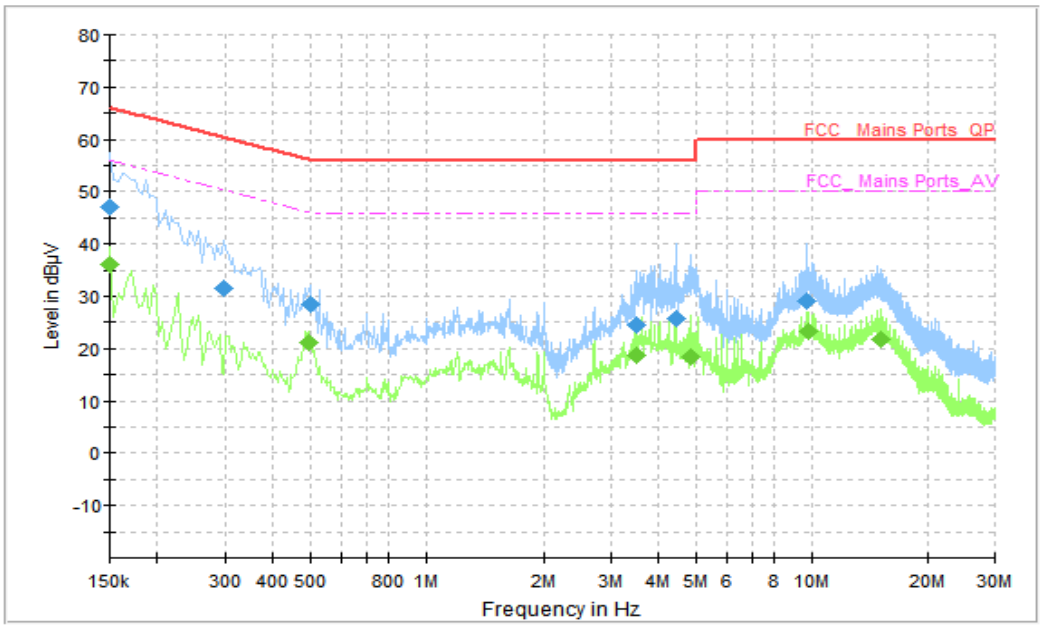



**Figure A.2.8 Conducted Emission(Data Transfer )**

**Final_Result_QPK**

| Frequency (MHz) | QuasiPeak (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.150000 | 47.12 | 66.00 | 18.88 | L1 | 10 | 37.12 |
| 0.298000 | 31.42 | 60.30 | 28.88 | N | 10 | 21.42 |
| 0.498000 | 28.55 | 56.03 | 27.48 | N | 10 | 18.55 |
| 3.502000 | 24.50 | 56.00 | 31.50 | L1 | 10 | 14.50 |
| 4.422000 | 25.82 | 56.00 | 30.18 | N | 10 | 15.82 |
| 9.678000 | 28.95 | 60.00 | 31.05 | L1 | 10 | 18.95 |

**Final_Result_AVG**

| Frequency (MHz) | Average (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.150000 | 36.15 | 56.00 | 19.85 | L1 | 10 | 26.15 |
| 0.494000 | 21.14 | 46.10 | 24.96 | N | 10 | 11.14 |
| 3.494000 | 18.64 | 46.00 | 27.36 | L1 | 10 | 8.64 |
| 4.826000 | 18.28 | 46.00 | 27.72 | N | 10 | 8.28 |
| 9.806000 | 23.38 | 50.00 | 26.62 | L1 | 10 | 13.38 |
| 15.170000 | 21.70 | 50.00 | 28.30 | N | 10 | 11.70 |

**AC Input Port/ Voltage: 240V/60Hz**

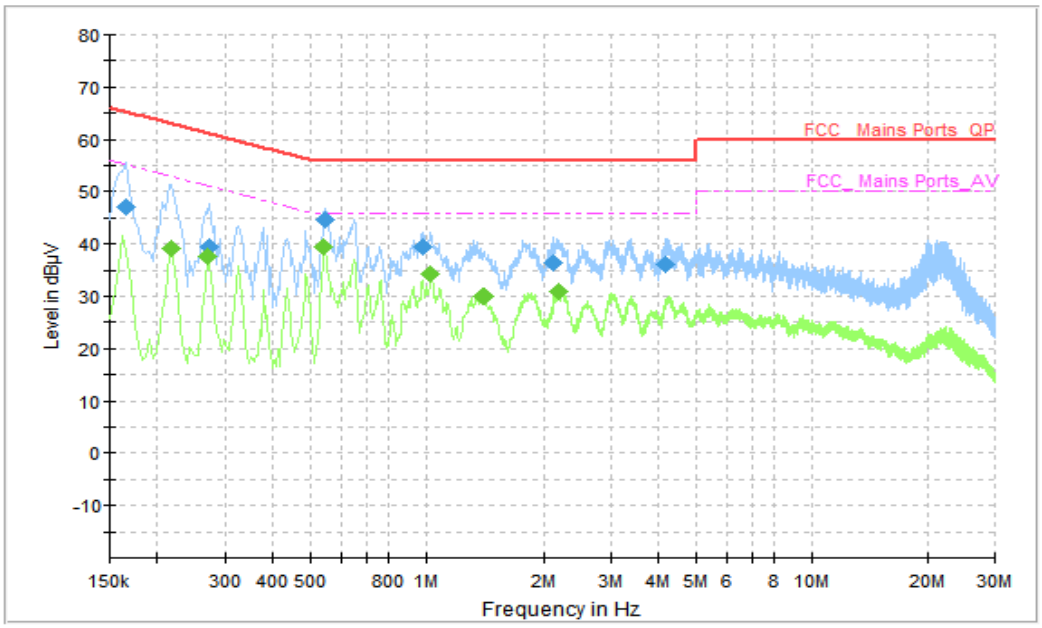



**Figure A.2.9 Conducted Emission( Camera )**

**Final_Result_QPK**

| Frequency (MHz) | QuasiPeak (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.166000 | 46.97 | 65.16 | 18.18 | N | 10 | 36.97 |
| 0.274000 | 39.32 | 61.00 | 21.67 | N | 10 | 29.32 |
| 0.546000 | 44.77 | 56.00 | 11.23 | L1 | 10 | 34.77 |
| 0.978000 | 39.38 | 56.00 | 16.62 | L1 | 10 | 29.38 |
| 2.130000 | 36.48 | 56.00 | 19.52 | L1 | 10 | 26.48 |
| 4.150000 | 35.99 | 56.00 | 20.01 | L1 | 10 | 25.99 |

**Final_Result_AVG**

| Frequency (MHz) | Average (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.218000 | 39.20 | 52.90 | 13.70 | L1 | 10 | 29.20 |
| 0.270000 | 37.67 | 51.12 | 13.45 | L1 | 10 | 27.67 |
| 0.542000 | 39.35 | 46.00 | 6.65 | L1 | 10 | 29.35 |
| 1.030000 | 34.14 | 46.00 | 11.86 | L1 | 10 | 24.14 |
| 1.406000 | 30.00 | 46.00 | 16.00 | L1 | 10 | 20 |
| 2.194000 | 30.94 | 46.00 | 15.06 | L1 | 10 | 20.94 |

**AC Input Port/ Voltage: 240V/60Hz**

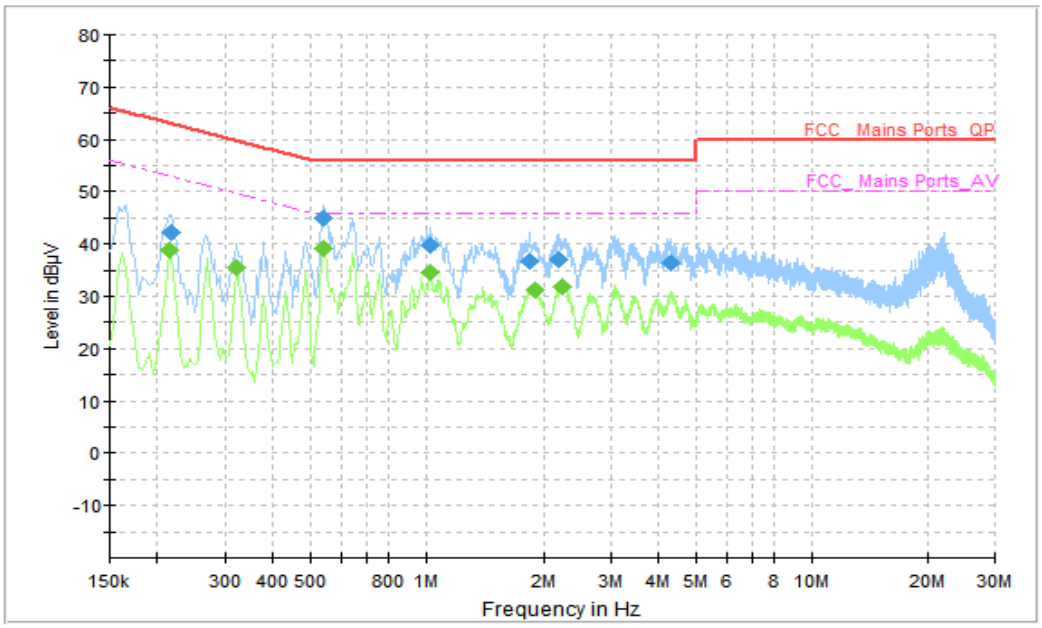



**Figure A.2.10 Conducted Emission( Video Player )**

**Final_Result_QPK**

| Frequency (MHz) | QuasiPeak (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.218000 | 42.22 | 62.90 | 20.67 | N | 10 | 32.22 |
| 0.542000 | 44.79 | 56.00 | 11.21 | L1 | 10 | 34.79 |
| 1.030000 | 39.64 | 56.00 | 16.36 | L1 | 10 | 29.64 |
| 1.842000 | 36.85 | 56.00 | 19.15 | L1 | 10 | 26.85 |
| 2.190000 | 37.11 | 56.00 | 18.89 | L1 | 10 | 27.11 |
| 4.282000 | 36.41 | 56.00 | 19.59 | L1 | 10 | 26.41 |

**Final_Result_AVG**

| Frequency (MHz) | Average (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.214000 | 38.91 | 53.05 | 14.13 | L1 | 10 | 28.91 |
| 0.322000 | 35.52 | 49.66 | 14.13 | L1 | 10 | 25.52 |
| 0.542000 | 39.24 | 46.00 | 6.76 | L1 | 10 | 29.24 |
| 1.026000 | 34.55 | 46.00 | 11.46 | L1 | 10 | 24.55 |
| 1.906000 | 31.27 | 46.00 | 14.73 | L1 | 10 | 21.27 |
| 2.238000 | 31.79 | 46.00 | 14.21 | L1 | 10 | 21.79 |

**AC Input Port/ Voltage: 240V/60Hz**

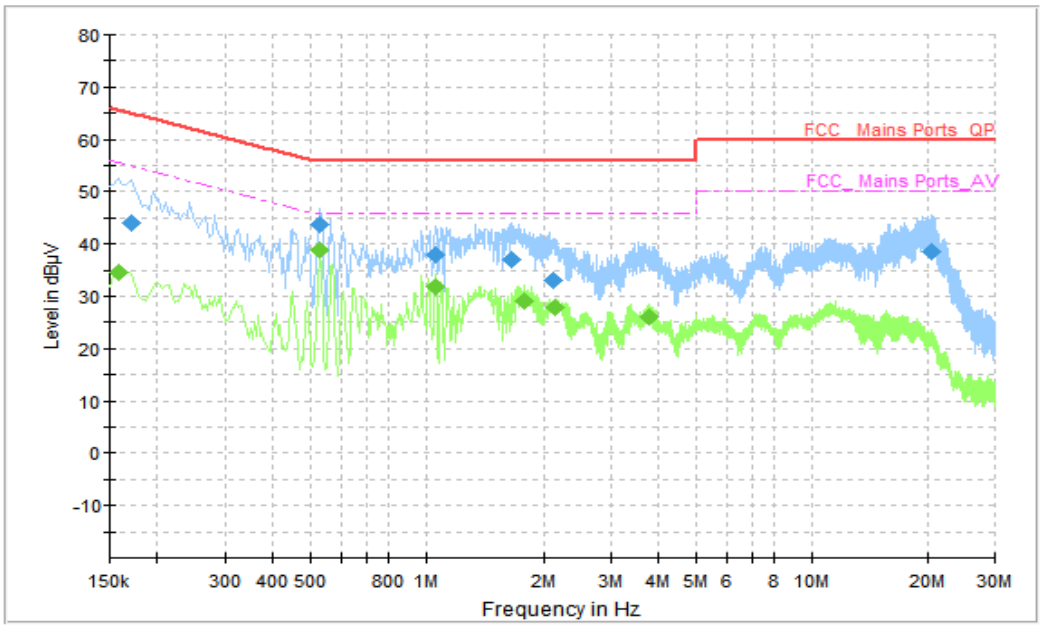



**Figure A.2.11 Conducted Emission(GLONASS)**

**Final_Result_QPK**

| Frequency (MHz) | QuasiPeak (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.170000 | 41.16 | 64.96 | 23.80 | N | 10 | 31.16 |
| 0.530000 | 43.85 | 56.00 | 12.15 | L1 | 10 | 33.85 |
| 1.062000 | 37.92 | 56.00 | 18.08 | N | 10 | 27.92 |
| 1.654000 | 36.89 | 56.00 | 19.11 | N | 10 | 26.89 |
| 2.122000 | 32.90 | 56.00 | 23.10 | L1 | 10 | 22.9 |
| 20.478000 | 38.53 | 60.00 | 21.47 | L1 | 10 | 28.53 |

**Final_Result_AVG**

| Frequency (MHz) | Average (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.158000 | 27.62 | 55.57 | 27.95 | N | 10 | 17.62 |
| 0.530000 | 38.84 | 46.00 | 7.16 | N | 10 | 28.84 |
| 1.054000 | 31.76 | 46.00 | 14.24 | N | 10 | 21.76 |
| 1.778000 | 29.23 | 46.00 | 16.77 | N | 10 | 19.23 |
| 2.146000 | 27.74 | 46.00 | 18.26 | N | 10 | 17.74 |
| 3.758000 | 26.09 | 46.00 | 19.91 | N | 10 | 16.09 |

**AC Input Port/ Voltage: 240V/60Hz**

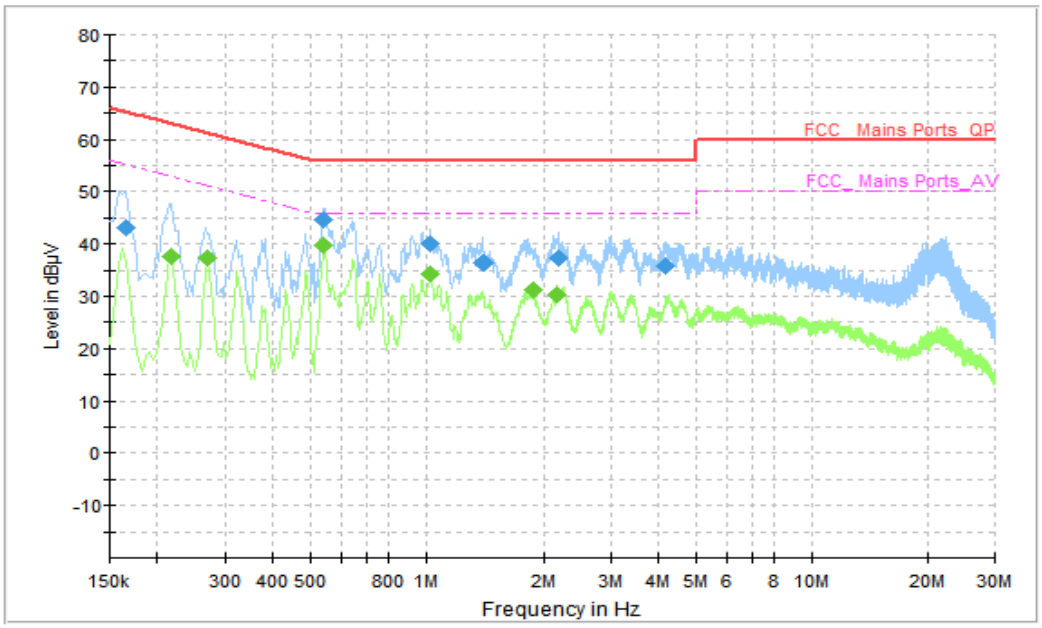



**Figure A.2.12 Conducted Emission( FM receiver)**

**Final_Result_QPK**

| Frequency (MHz) | QuasiPeak (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.166000 | 43.12 | 65.16 | 22.04 | N | 10 | 33.12 |
| 0.542000 | 44.57 | 56.00 | 11.43 | L1 | 10 | 34.57 |
| 1.026000 | 39.97 | 56.00 | 16.03 | L1 | 10 | 29.97 |
| 1.398000 | 36.49 | 56.00 | 19.51 | L1 | 10 | 26.49 |
| 2.190000 | 37.22 | 56.00 | 18.78 | L1 | 10 | 27.22 |
| 4.178000 | 35.68 | 56.00 | 20.32 | L1 | 10 | 25.68 |

**Final_Result_AVG**

| Frequency (MHz) | Average (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.218000 | 37.63 | 52.90 | 15.27 | L1 | 10 | 27.63 |
| 0.270000 | 37.30 | 51.12 | 13.82 | L1 | 10 | 27.30 |
| 0.542000 | 39.75 | 46.00 | 6.25 | L1 | 10 | 29.75 |
| 1.026000 | 34.26 | 46.00 | 11.74 | L1 | 10 | 24.26 |
| 1.874000 | 31.09 | 46.00 | 14.91 | L1 | 10 | 21.09 |
| 2.178000 | 30.35 | 46.00 | 15.65 | L1 | 10 | 20.35 |

**AC Input Port/ Voltage: 240V/60Hz**

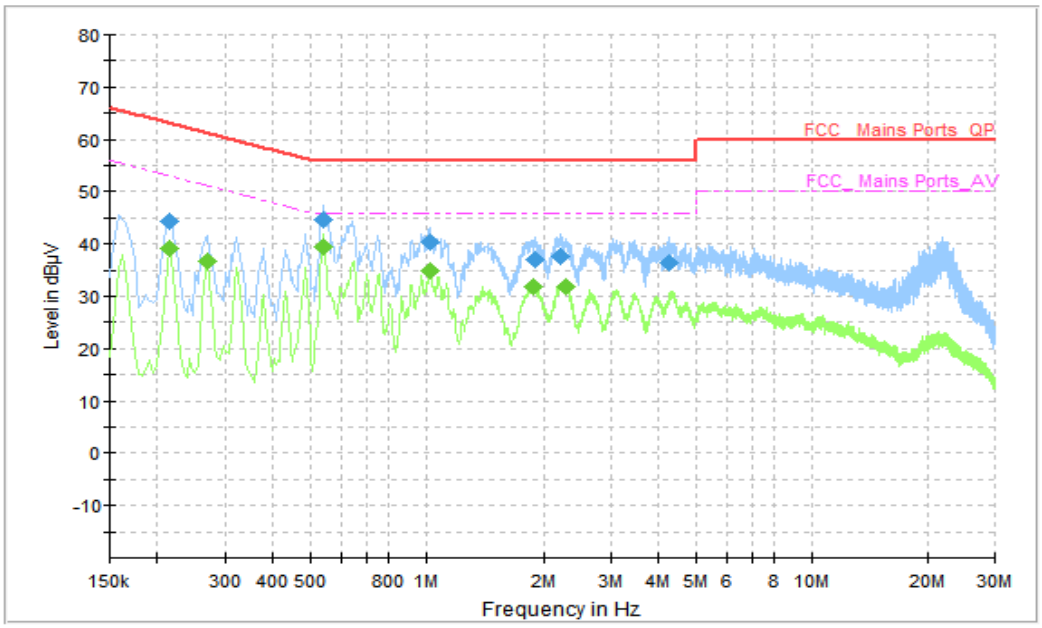



**Figure A.2.13 Conducted Emission(GPS)**

**Final_Result_QPK**

| Frequency (MHz) | QuasiPeak (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.214000 | 44.45 | 63.05 | 18.60 | N | 10 | 34.45 |
| 0.542000 | 44.62 | 56.00 | 11.38 | N | 10 | 34.62 |
| 1.022000 | 40.43 | 56.00 | 15.57 | N | 10 | 30.43 |
| 1.894000 | 37.15 | 56.00 | 18.85 | N | 10 | 27.15 |
| 2.222000 | 37.52 | 56.00 | 18.48 | N | 10 | 27.52 |
| 4.270000 | 36.52 | 56.00 | 19.48 | N | 10 | 26.52 |

**Final_Result_AVG**

| Frequency (MHz) | Average (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.214000 | 39.27 | 53.05 | 13.78 | L1 | 10 | 29.27 |
| 0.270000 | 36.74 | 51.12 | 14.38 | L1 | 10 | 26.74 |
| 0.538000 | 39.48 | 46.00 | 6.52 | L1 | 10 | 29.48 |
| 1.026000 | 34.92 | 46.00 | 11.08 | L1 | 10 | 24.92 |
| 1.890000 | 31.80 | 46.00 | 14.20 | L1 | 10 | 21.8 |
| 2.286000 | 31.79 | 46.00 | 14.21 | L1 | 10 | 21.79 |

**AC Input Port/ Voltage: 240V/60Hz**

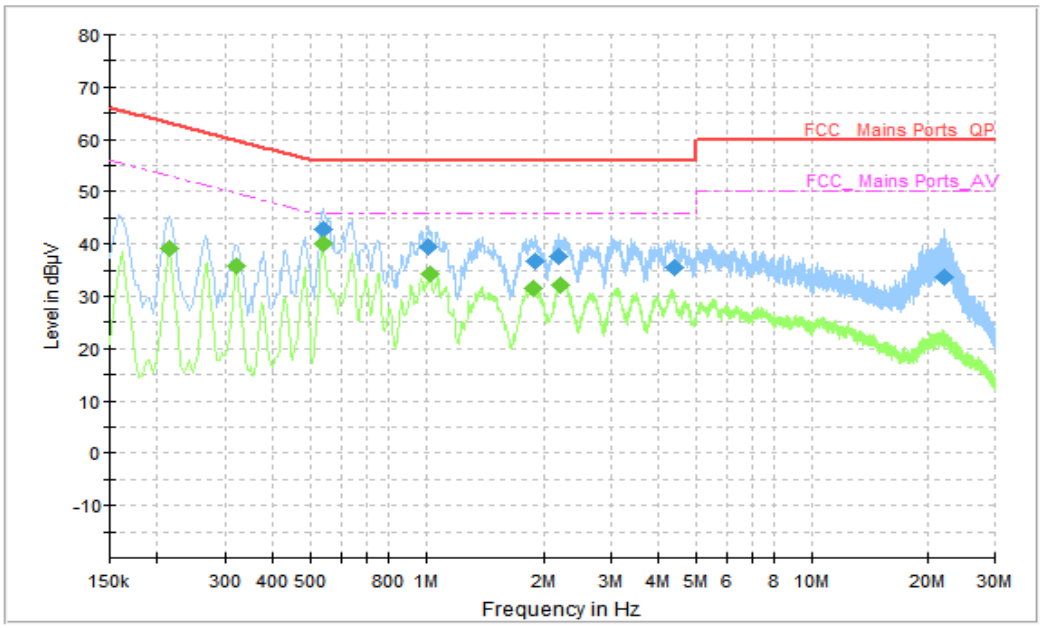



**Figure A.2.14 Conducted Emission(GLONASS)**

**Final_Result_QPK**

| Frequency (MHz) | QuasiPeak (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.538000 | 42.77 | 56.00 | 13.23 | L1 | 10 | 32.77 |
| 1.010000 | 39.54 | 56.00 | 16.46 | L1 | 10 | 29.54 |
| 1.910000 | 36.70 | 56.00 | 19.30 | L1 | 10 | 26.70 |
| 2.202000 | 37.53 | 56.00 | 18.47 | L1 | 10 | 27.53 |
| 4.394000 | 35.62 | 56.00 | 20.38 | L1 | 10 | 25.62 |
| 22.174000 | 33.73 | 60.00 | 26.27 | N | 10 | 23.73 |

**Final_Result_AVG**

| Frequency (MHz) | Average (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.214000 | 39.23 | 53.05 | 13.82 | L1 | 10 | 29.23 |
| 0.322000 | 35.71 | 49.66 | 13.94 | L1 | 10 | 25.71 |
| 0.538000 | 39.99 | 46.00 | 6.01 | L1 | 10 | 29.99 |
| 1.022000 | 34.36 | 46.00 | 11.64 | L1 | 10 | 24.36 |
| 1.878000 | 31.63 | 46.00 | 14.37 | L1 | 10 | 21.63 |
| 2.222000 | 32.02 | 46.00 | 13.98 | L1 | 10 | 22.02 |

**AC Input Port/ Voltage: 240V/60Hz**

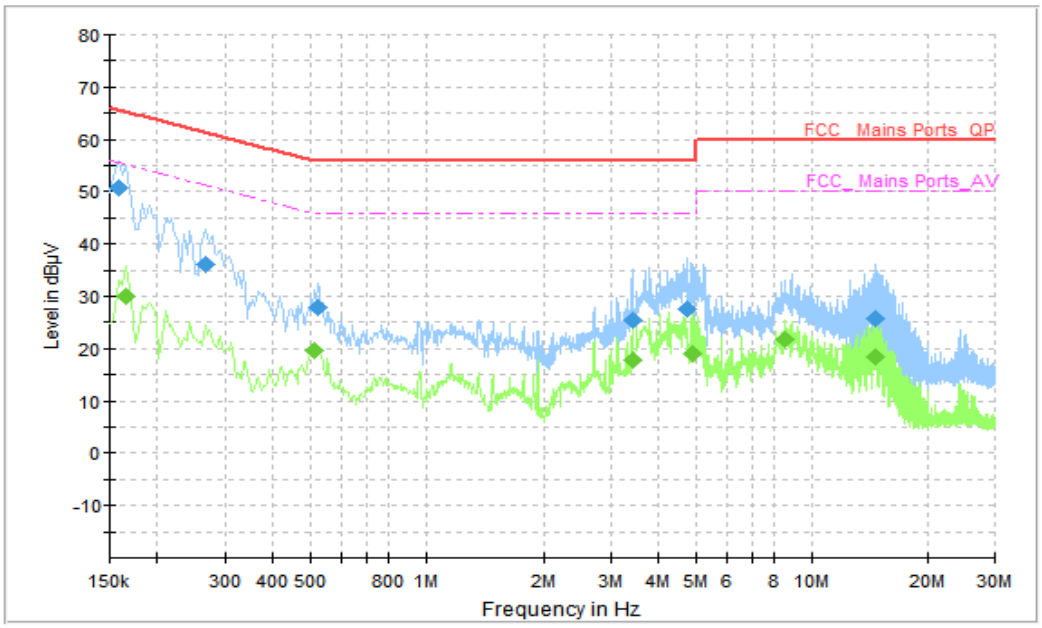



**Figure A.2.15 Conducted Emission(Data Transfer )**

**Final_Result_QPK**

| Frequency (MHz) | QuasiPeak (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.158000 | 50.78 | 65.57 | 14.79 | N | 10 | 40.78 |
| 0.266000 | 35.99 | 61.24 | 25.25 | L1 | 10 | 25.99 |
| 0.522000 | 27.93 | 56.00 | 28.07 | N | 10 | 17.93 |
| 3.410000 | 25.36 | 56.00 | 30.64 | L1 | 10 | 15.36 |
| 4.726000 | 27.63 | 56.00 | 28.37 | L1 | 10 | 17.63 |
| 14.662000 | 25.86 | 60.00 | 34.14 | N | 10 | 15.86 |

**Final_Result_AVG**

| Frequency (MHz) | Average (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.166000 | 29.95 | 55.16 | 25.20 | N | 10 | 19.95 |
| 0.514000 | 19.77 | 46.00 | 26.23 | N | 10 | 9.77 |
| 3.410000 | 17.87 | 46.00 | 28.13 | L1 | 10 | 7.87 |
| 4.914000 | 18.88 | 46.00 | 27.12 | L1 | 10 | 8.88 |
| 8.478000 | 21.74 | 50.00 | 28.26 | L1 | 10 | 11.74 |
| 14.666000 | 18.33 | 50.00 | 31.67 | N | 10 | 8.33 |

**AC Input Port/ Voltage: 240V/60Hz**

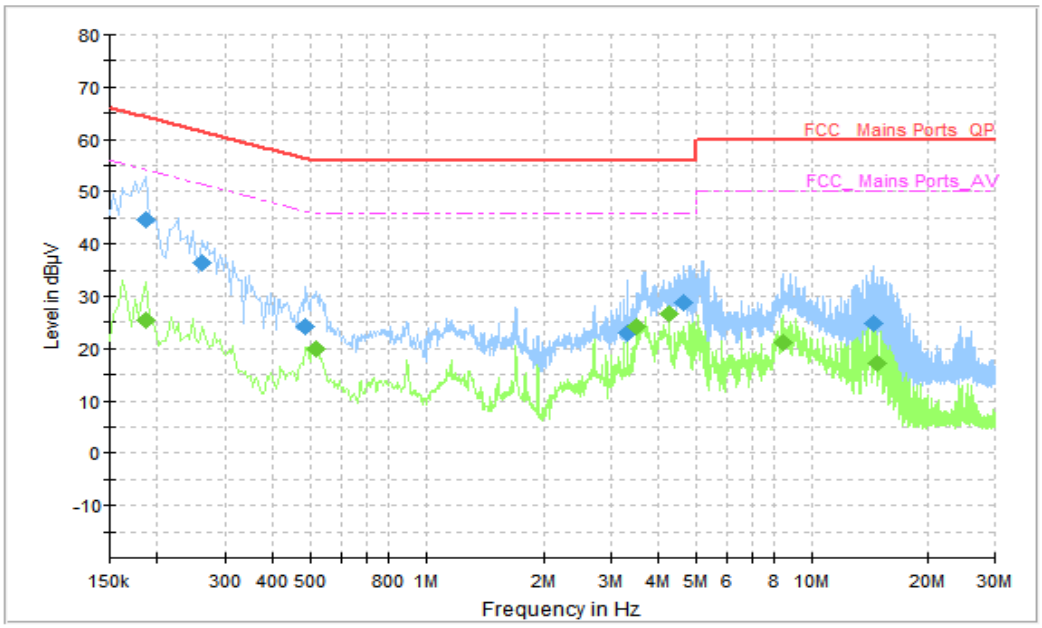



**Figure A.2.16 Conducted Emission(Data Transfer )**

**Final_Result_QPK**

| Frequency (MHz) | QuasiPeak (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.186000 | 44.74 | 64.21 | 19.48 | L1 | 10 | 34.74 |
| 0.262000 | 36.40 | 61.37 | 24.96 | N | 10 | 26.40 |
| 0.482000 | 24.12 | 56.31 | 32.19 | N | 10 | 14.12 |
| 3.318000 | 22.85 | 56.00 | 33.15 | L1 | 10 | 12.85 |
| 4.646000 | 28.79 | 56.00 | 27.21 | L1 | 10 | 18.79 |
| 14.426000 | 24.86 | 60.00 | 35.14 | L1 | 10 | 14.86 |

**Final_Result_AVG**

| Frequency (MHz) | Average (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) | $P_{Mea}$ (dBµV) |
|---|---|---|---|---|---|---|
| 0.186000 | 25.51 | 54.21 | 28.70 | L1 | 10 | 15.51 |
| 0.518000 | 20.03 | 46.00 | 25.97 | N | 10 | 10.03 |
| 3.482000 | 24.10 | 46.00 | 21.90 | L1 | 10 | 14.10 |
| 4.258000 | 26.54 | 46.00 | 19.46 | N | 10 | 16.54 |
| 8.394000 | 21.03 | 50.00 | 28.97 | L1 | 10 | 11.03 |
| 14.762000 | 17.05 | 50.00 | 32.95 | N | 10 | 7.05 |

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