Test report No:
2410570R-RF-US-P06V01

# FCC TEST REPORT

| | |
|---|---|
| Product Name | POS Station |
| Trademark | peppr |
| Model and /or type reference | MTPOS-S4G Pro |
| FCC ID | 2AYT5-S4GPRO |
| Applicant´s name / address | Hefei BOE Vision-electronic Technology Co.,Ltd.<br>NO.2177 Dongfang RD, Xinzhan General Pilot Zone, HeFei, Anhui, 230012, P.R.China |
| Test method requested, standard | 47 CFR FCC Part 15 (Section 15.247)<br>ANSI C63.10: 2013 |
| Verdict Summary | IN COMPLIANCE |
| Documented by (name / position & signature) | Tim Cao/Project Engineer<br>Tim Cao |
| Approved by (name / position & signature) | Jack Zhang/ Manager<br>Jack Zhang |
| Date of issue | 2024-02-21 |
| Report Version | V1.1 |
| Report template No | Template_FCC Part 15C-RF-V1.0 |

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## COMPETENCES AND GUARANTEES

DEKRA is a testing laboratory competent to carry out the tests described in this report.
In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

**IMPORTANT:** No parts of this report may be reproduced or quoted out of context, in any form or by any means, except in full, without the previous written permission of DEKRA.

## GENERAL CONDITIONS

| | |
|---|---|
| Test Location | No. 99, Hongye Road, Suzhou Industrial Park Suzhou, 215006, P.R. China |
| Date(receive sample) | Jan. 18, 2024 |
| Date (start test) | Feb. 01, 2024 |
| Date (finish test) | Feb. 06, 2024 |

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or Competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA.

## ENVIRONMENTAL CONDITIONS

The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment. The climatic conditions during the tests were within the following limits:

| | |
|---|---|
| Ambient temperature | 15 °C – 35 °C |
| Relative Humidity air | 30% - 60% |

If explicitly required in the basic standard or applied product / product family standard the climatic values are recorded and documented separately in this test report.

## POSSIBLE TEST CASE VERDICTS

| | |
|---|---|
| Test case does not apply to test object | N/A |
| Test object does meet requirement | P (Pass) / PASS |
| Test object does not meet requirement | F (Fail) / FAIL |
| Not measured | N/M |

## ABBREVIATIONS

For the purposes of the present document, the following abbreviations apply:

EUT : Equipment Under Test
QP : Quasi-Peak
CAV : CISPR Average
AV : Average
CDN : Coupling Decoupling Network
SAC : Semi-Anechoic Chamber
OATS : Open Area Test Site
BW : Bandwidth
AM : Amplitude Modulation
PM : Pulse Modulation
HCP : Horizontal Coupling Plane
VCP : Vertical Coupling Plane
$U_N$ : Nominal voltage
*T*x : Transmitter
*R*x : Receiver
N/A : Not Applicable
N/M : Not Measured

## DOCUMENT HISTORY

| Report No. | Version | Description | Issued Date |
|---|---|---|---|
| 2410570R-RF-US-P06V01 | V1.0 | Initial issue of report. | 2024-02-19 |
| 2410570R-RF-US-P06V01 | V1.1 | Modify the Antenna Gain in Section 1.2; (Test Report No.: 2410570R-RF-US-P06V01 V1.1 will replace Test Report No.: 2410570R-RF-US-P06V01 V1.0, and Test Report 2410570R-RF-US-P06V01 V1.0 has been discontinued.) | 2024-02-21 |
| | | | |
| | | | |
| | | | |
| | | | |

## REMARKS AND COMMENTS

1. The equipment under test (EUT) does meet the essential requirements of the stated standard(s)/test(s).
2. These test results on the device are for the purpose of demonstrating Compliance with 47 CFR FCC Part 15 (Section 15.247),ANSI C63.10: 2013.
3. The measurement result is considered in conformance with the requirement if it is within the prescribed limit, It is not necessary to account the uncertainty associated with the measurement result.
4. The test results presented in this report relate only to the object tested.
5. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification (Suzhou) Co., Ltd.
6. This report will not be used for social proof function in China market.
7. DEKRA declines any responsibility with the following test data provided by customer that may affect the validity of result:
   - Chapter 1.1 General Description of the Item(s).
   - Chapter 1.2 Antenna Information;
   - Chapter 1.3 Data Rate.
   - Chapter 1.4 Channel List.

## USED EQUIPMENT

Conducted Test / TR8

| Instrument | Manufacturer | Model No. | Serial No. | Cal.Date | Next Cal. Date | Firmware Version | Software Version |
|---|---|---|---|---|---|---|---|
| Wireless Connectivity Tester | R&S | CMW 270 | 102593 | 2023.05.20 | 2024.05.19 | V 4.0.60 | N/A |
| Coaxial Cable | N/A | N/A | 2477 | 2023.06.08 | 2024.06.07 | N/A | N/A |
| Coaxial Cable | N/A | N/A | 2478 | 2023.06.08 | 2024.06.07 | N/A | N/A |
| High and low temperature and fast temperature change test box | ASTUOD | ASTD-FBT-225K | N/A | 2023.05.20 | 2024.05.19 | N/A | N/A |
| Temperature/Humidity Meter | RTS | RTS-8S | RF08 | 2023.08.25 | 2024.08.24 | N/A | N/A |
| Test system | | | | | | | |
| MAX Signal Analyzer | Keysight | N9010A | MY48030494 | 2023.11.08 | 2024.11.07 | A.14.03 | N/A |
| RF Control Unit | Tonscend | JS0806-1 | 168060022 | 2023.08.28 | 2024.08.27 | N/A | N/A |
| MXG-B RF Vector Signal Generator | Keysight | N5182B | MY61252529 | 2023.05.20 | 2024.05.19 | B.01.96 | N/A |
| Frequency extender for EXG or MXG | Keysight | N5182BX07 | MY59362500 | 2023.05.20 | 2024.05.19 | N/A | N/A |
| EXG-B MW Analog Signal Generator | Keysight | N5173B | MY61252566 | 2023.08.26 | 2024.08.25 | B.01.95 | N/A |
| Test Software | Tonscend | TS1120 | JS1120-3 | N/A | N/A | N/A | V3.0.22 |

Test-Set (AC2)

| Instrument | Manufacturer | Model No. | Serial No. | Cal.Date | Next Cal. Date | Firmware Version | Software Version |
|---|---|---|---|---|---|---|---|
| EMI Test Receiver | R&S | ESCI | 100573 | 2023.09.17 | 2024.09.16 | 4.42 SP3 | N/A |
| Loop Antenna | R&S | HFH2-Z2E | 101149 | 2023.04.25 | 2024.04.24 | N/A | N/A |
| Bilog Antenna | Teseq GmbH | CBL6112D | 27611 | 2023.02.20 | 2024.02.19 | N/A | N/A |
| Temperature/Humidity Meter | RTS | RTS-8S | AC2-TH | 2023.05.19 | 2024.05.18 | N/A | N/A |
| Coaxial Cable | Huber+Suhner | SUCOFLEX 106 | AC2-C | 2023.05.21 | 2024.05.20 | N/A | N/A |
| Dekra test software | Dekra | N/A | N/A | N/A | N/A | N/A | 3 |

Test-Set (AC5)

| Instrument | Manufacturer | Model No. | Serial No. | Cal.Date | Next Cal. Date | Firmware Version | Software Version |
|---|---|---|---|---|---|---|---|
| EXA Spectrum Analyzer | Keysight | N9020B | MY60112218 | 2023.11.08 | 2024.11.07 | A.31.05 | N/A |
| Pre-Amplifier | SKET | LNPA_0118G-45 | SK2021090101 | 2023.05.14 | 2024.05.13 | N/A | N/A |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Preamplifier | CHENGYI | EMC184045SE | 980263 | 2023.07.09 | 2024.07.08 | N/A | N/A |
| DRG Horn Antenna | ETS-Lindgren | 3117 | 00167055 | 2023.09.16 | 2024.09.15 | N/A | N/A |
| Broad-Band Horn Antenna | Schwarzbeck | BBHA9170 | 294 | 2023.05.31 | 2024.05.30 | N/A | N/A |
| Filter Switch Box | MVE | MSW-F196 | C070001S | 2023.05.21 | 2024.05.20 | N/A | N/A |
| Temperature/Humidity Meter | RTS | RTS-8S | AC5-TH | 2023.05.19 | 2024.05.18 | N/A | N/A |
| Coaxial Cable | ROSENBERGER | LA1-C011-2000/3000 | AC5-40G-2 | 2023.05.21 | 2024.05.20 | N/A | N/A |
| Dekra test software | Dekra | N/A | N/A | N/A | N/A | N/A | 3 |

## UNCERTAINTY

Uncertainties have been calculated according to the DEKRA internal document. The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95% .

| Test item | Uncertainty |
|---|---|
| Peak Power Output | ± 1.27 dB |
| Radiated Emission(30MHz~1GHz) | Horizontal: 30MHz~200MHz: 3.50 dB<br>300MHz~1GHz: 3.60 dB<br>Vertical: 30MHz~200MHz: 3.60 dB<br>300MHz~1GHz: 3.50 dB |
| Radiated Emission(1GHz~26.5GHz) | Horizontal: 1GHz~18GHz: 5.00 dB<br>Vertical: 1GHz~18GHz: 4.80 dB |
| RF antenna conducted test | ± 1.27dB |
| Radiated Emission Band Edge | ± 3.9 dB |
| DTS Bandwidth | ±150Hz |
| Occupied Bandwidth | ±1kHz |
| Power Density | ±1.27dB |

# 1 GENERAL INFORMATION

## 1.1 General Description of the Item(s)

| | |
|---|---|
| Product Name..... : | POS Station |
| Model No. ..... : | MTPOS-S4G Pro |
| Trademark ..... : | peppr |
| FCC ID ..... : | 2AYT5-S4GPRO |
| Hardware Version ..... : | EM_T7030_V1.2 |
| Software Version..... : | 1.01.20240130 |
| Manufacturer..... : | Beehub Inc |
| Manufacturer address ..... : | 108 W. 13th Street, Suite 100, Wilmington, DE 19801 in the County of New Castle, Delaware |
| Factory ..... : | Hefei BOE Vision-electronic Technology Co.,Ltd. |
| Factory address ..... : | NO.2177 Dongfang RD, Xinzhan General Pilot Zone, HeFei, Anhui, 230012, P.R.China |

| | |
|---|---|
| Wireless specification..... : | 802.11b/g/n |
| Operating frequency range(s)..... : | 802.11b/g/n(20MHz): 2412~2462MHz<br>802.11n(40MHz): 2422~2452MHz |
| Type of Modulation & Data Rate.... : | Refer to Clause 1.3 |
| Number of channels ..... : | 802.11b/g/n(20MHz): 11<br>802.11b/g/n(40MHz): 07 |

| | | |
|---|---|---|
| Rated power supply .....: | Voltage and Frequency | |
| | ☐ | AC: 220 - 240 V, 50/60 Hz |
| | ☒ | AC: 100 - 240 V, 50/60 Hz |
| | ☐ | DC: 24 Vdc |
| | ☐ | Battery: 3V |
| Brand of adapter .....: | STONE | |
| Adapter model .....: | Model: STA65-240150-C14<br>Input: 100-240V-50/60Hz, 1.5A Max<br>Output: 24.0V 1.5A | |
| Mounting position.....: | ☒ | Table top equipment |
| | ☐ | Wall/Ceiling mounted equipment |
| | ☐ | Floor standing equipment |
| | ☐ | Hand-held/Protable equipment |
| | ☐ | Other: |

## 1.2 Antenna Information

| | | | | |
|---|---|---|---|---|
| Antenna model / type number ..... : | SLK-BOE-3212H3-R-110I-B | | | |
| Antenna serial number ..... : | 61005-00774 | | | |
| Antenna Delivery ..... : | ☒ | 1TX + 1RX | | |
| | ☒ | 2TX + 2RX | | |
| | ☐ | Others:…… | | |
| Antenna technology ..... : | ☒ | SISO | | |
| | ☒ | MIMO | ☒ | CDD |
| | | | ☐ | Beam-forming |
| Antenna Type ..... : | ☐ | External | ☐ | Dipole |
| | | | ☐ | Sectorized |
| | ☒ | Internal | ☐ | Ceramic Chip |
| | | | ☒ | PIFA |
| | | | ☐ | PCB |
| | | | ☐ | Others…….. |
| Antenna Gain..... : | 2.37 dBi | | | |

## 1.3 Date Rate

**IEEE 802.11b**

| Modulation | Data Rate(Mb/s) |
|---|---|
| DSSS | 1 |
| DSSS | 2 |
| CCK | 5.5 |
| CCK | 11 |

**IEEE 802.11g**

| Modulation | R | Data Rate(Mb/s) |
|---|---|---|
| BPSK | 1/2 | 6 |
| BPSK | 3/4 | 9 |
| QPSK | 1/2 | 12 |
| QPSK | 3/4 | 18 |
| 16-QAM | 1/2 | 24 |
| 16-QAM | 3/4 | 36 |
| 64-QAM | 2/3 | 48 |
| 64-QAM | 3/4 | 54 |

**IEEE 802.11n**

| Spatial streames | MCS Index | Modulation | R | Data Rate(Mb/s) | | | |
|---|---|---|---|---|---|---|---|
| | | | | 800ns GI | | 400ns GI | |
| | | | | 20MHz | 40MHz | 20MHz | 40MHz |
| 1 | 0 | BPSK | 1/2 | 6.5 | 13.5 | 7.2 | 15.0 |
| 1 | 1 | QPSK | 1/2 | 13.0 | 27.0 | 14.4 | 30.0 |
| 1 | 2 | QPSK | 3/4 | 19.5 | 40.5 | 21.7 | 45.0 |
| 1 | 3 | 16-QAM | 1/2 | 26.0 | 54.0 | 28.9 | 60.0 |
| 1 | 4 | 16-QAM | 3/4 | 39.0 | 81.0 | 43.3 | 90.0 |
| 1 | 5 | 64-QAM | 2/3 | 52.0 | 108.0 | 57.8 | 120.0 |
| 1 | 6 | 64-QAM | 3/4 | 58.5 | 121.5 | 65.0 | 135.0 |
| 1 | 7 | 64-QAM | 5/6 | 65.0 | 135.0 | 72.2 | 150.0 |
| 2 | 8 | BPSK | 1/2 | 13 | 27 | 14.4 | 30 |
| 2 | 9 | QPSK | 1/2 | 26 | 54 | 28.8 | 60 |
| 2 | 10 | QPSK | 3/4 | 39 | 81 | 43.4 | 90 |
| 2 | 11 | 16-QAM | 1/2 | 52 | 108 | 57.8 | 120 |
| 2 | 12 | 16-QAM | 3/4 | 78 | 162 | 86.6 | 180 |
| 2 | 13 | 64-QAM | 2/3 | 104 | 216 | 115.6 | 240 |
| 2 | 14 | 64-QAM | 3/4 | 117 | 243 | 130 | 270 |
| 2 | 15 | 64-QAM | 5/6 | 130 | 270 | 144.4 | 300 |

| Symbol | Explanation |
|---|---|
| R | Code rate |
| GI | guard interval |

Note: We have evaluated low/mid/high data rate, the blue font is the highest power data rate.

## 1.4 Channel List

**IEEE 802.11b/g & IEEE 802.11n(20MHz)**

| Working Frequency of Each Channel | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
| 001 | 2412 MHz | 002 | 2417 MHz | 003 | 2422 MHz | 004 | 2427 MHz |
| 005 | 2432 MHz | 006 | 2437 MHz | 007 | 2442 MHz | 008 | 2447 MHz |
| 009 | 2452 MHz | 010 | 2457 MHz | 011 | 2462 MHz | N/A | N/A |

**IEEE 802.11n(40MHz)**

| Working Frequency of Each Channel | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
| 003 | 2422 MHz | 004 | 2427 MHz | 005 | 2432 MHz | 006 | 2437 MHz |
| 007 | 2442 MHz | 008 | 2447 MHz | 009 | 2452 MHz | N/A | N/A |

Note: The general description of the Item(s), antenna information, data rate and channel list in clause 1 are provided and confirmed by the client.

# 2 DESCRIPTION OF TEST SETUP

## 2.1 Operating mode(s) used for tests

During the tests the following operating mode(s) has(have) been used.

| | |
|---|---|
| Test Mode For Bluetooth | Mode 1: Transmit by 802.11b |
| | Mode 2: Transmit by 802.11g |
| | Mode 3: Transmit by 802.11n(20MHz) |
| | Mode 4: Transmit by 802.11n(40MHz) |

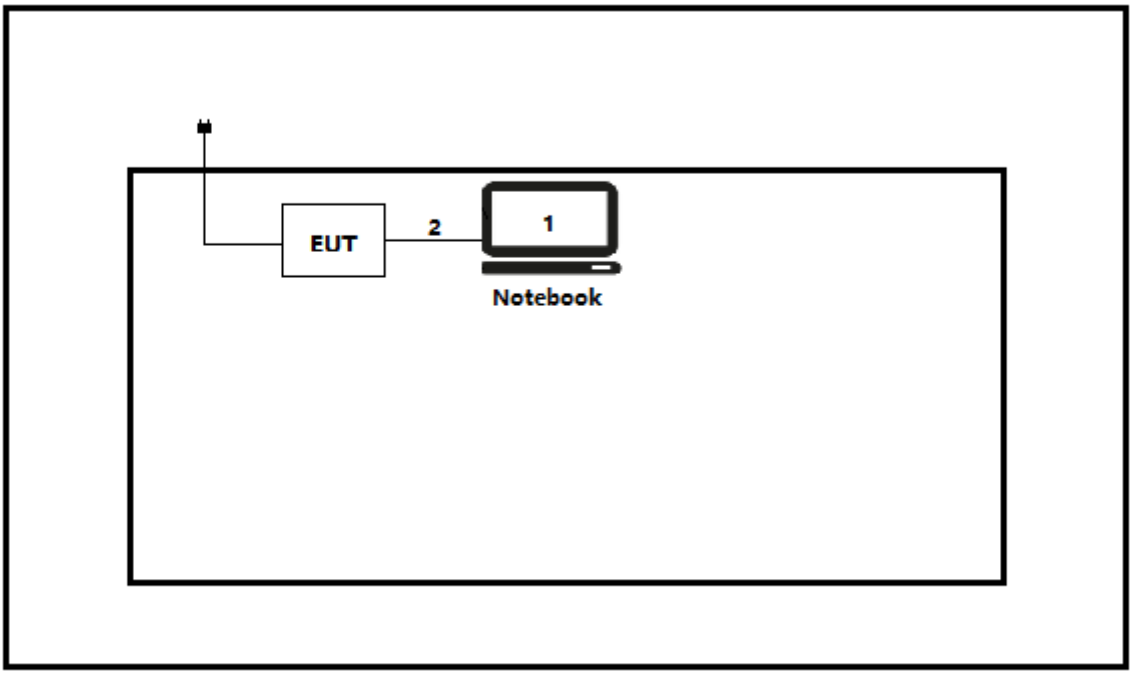
## 2.2 Auxiliary equipment / Test software for the EUT

| Auxiliary equipment | Type / Version | Manufacturer | Supplied by |
|---|---|---|---|
| (1) Notebook | Think pad x220 | Lenovo | Adapter |
| (2) USB Control Cable | N/A | N/A | N/A |
| (3) USB Control Cable | N/A | N/A | N/A |
| software | Type / Version | | |
| MTK_Android_Flash Tool | V1.0 | | |

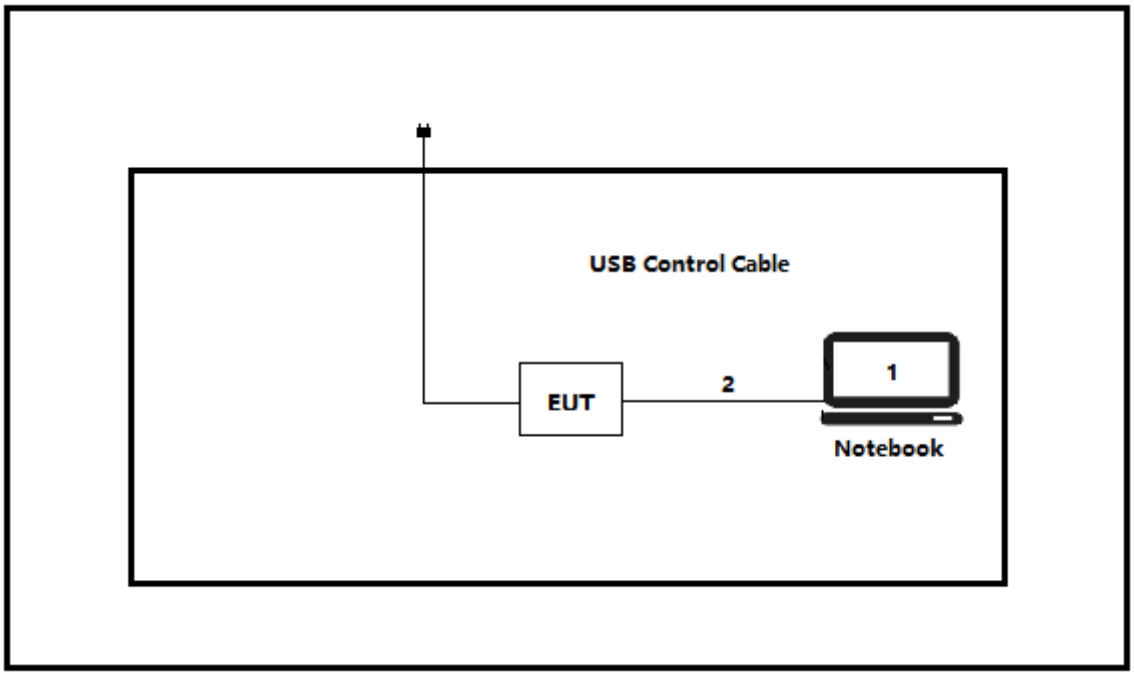
| Accessories Information | Cable | | |
|---|---|---|---|
| | Length used during test [m] | Attached during test | Shielded |
| (2)USB Control Cable | 1 | ☒ | ☒ |
| (3)USB Control Cable | 8 | ☒ | ☒ |

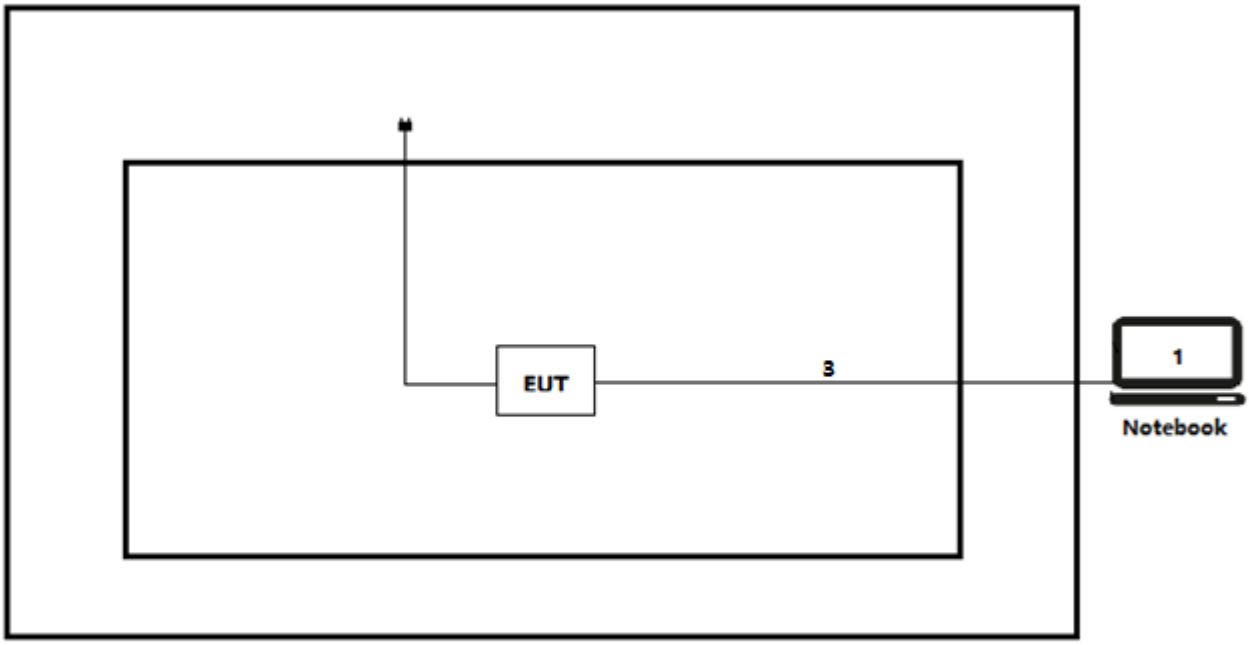
## 2.3 Test Configuration / Block diagram used for tests

Test setup Diagram- AC Line Conducted Emission Test




Test setup Diagram- Conducted test



| Test setup Diagram- Ratiated test |
| --- |
|  |

## 2.4 Testing process

| | |
|---|---|
| 1 | Setup the EUT shown in Section 2.3. |
| 2 | Execute the [MTK_Android_Flash Tool] on the notebook. |
| 3 | Configure the test mode, the test channel, and the data rate. |
| 4 | Verify that the EUT works properly. |

# 3 VERDICT SUMMARY SECTION

This chapter presents an overview of standards and results. Refer to the next chapters for details of measured test results and applied test levels.

## 3.1 Standards

| Standard | Year | Description |
|---|---|---|
| CFR 47, FCC Part 15 C | 2023 | Operation within the bands 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz. |
| ANSI C63.10 | 2013 | American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices |
| | | |
| | | |

## 3.2 Deviation(s) from the Standard(s) / Test Specification(s)

The following deviation(s) was / were made from the published requirements of the listed standards: N/A.

*(Please define the deviations from the standard(s) if applicable)*

## 3.3 Overview of results

| Requirement – Test Item of FCC | Standard(s) | Verdict | Remark |
|---|---|---|---|
| DTS Bandwidth | FCC 15.247(a)(2) | PASS | Test data please refer to **Appendix A** |
| Maximum Conducted Output Power | 15.247 (b)(3) | PASS | Test data please refer to **Appendix B** |
| Maximum Power Spectral Density | FCC 15.247(e) | PASS | Test data please refer to **Appendix C** |
| Band Edge Measurements | FCC 15.247(d)<br>FCC 15.205<br>FCC 15.209 | PASS | Test data please refer to **Appendix D** |
| Conducted Spurious Emission | FCC 15.247(d), FCC 15.209 | PASS | Test data please refer to **Appendix E** |
| Duty Cycle | ANSI C63.10:2013 | PASS | Test data please refer to **Appendix F** |
| Emissions In Restricted Bands | FCC 15.205<br>FCC 15.209 | PASS | Test data please refer to **Appendix G** |
| AC Power Line Conducted Emission | FCC 15.207 | PASS | Test data please refer to **Appendix H** |
| Antenna Requirement | FCC 15.203 | PASS | --- |

## 3.4 Power setting in test

| Mode | Channel | Frequency (MHz) | Power setting | | |
|---|---|---|---|---|---|
| | | | SISO | | MIMO |
| | | | Ant 1 | Ant 2 | Ant 1+2 |
| 802.11b | 01 | 2412 | 19 | 19 | N/A |
| | 06 | 2437 | 19 | 19 | N/A |
| | 11 | 2462 | 19 | 19 | N/A |
| 802.11g | 01 | 2412 | 18 | 17 | N/A |
| | 06 | 2437 | 18 | 17 | N/A |
| | 11 | 2462 | 18 | 17 | N/A |
| 802.11n(20MHz) | 01 | 2412 | 20 | 19 | 20 |
| | 06 | 2437 | 18 | 18 | 18 |
| | 11 | 2462 | 18 | 18 | 18 |
| 802.11n(40MHz) | 03 | 2422 | 19 | 19 | 19 |
| | 06 | 2437 | 19 | 18 | 19 |
| | 09 | 2452 | 19 | 18 | 19 |

## 3.5 Test Matrix

| Test item | Model: MTPOS-S4G Pro | |
|---|---|---|
| | #1 | #2 |
| DTS Bandwidth | ☒ | ☐ |
| Maximum Conducted Output Power | ☒ | ☐ |
| Maximum Power Spectral Density | ☒ | ☐ |
| Band Edge Measurements | ☐ | ☒ |
| Conducted Spurious Emission | ☒ | ☐ |
| Duty Cycle | ☒ | ☐ |
| Emissions In Restricted Bands | ☐ | ☒ |
| AC Power Line Conducted Emission | ☐ | ☒ |

## 3.6 Test Facility

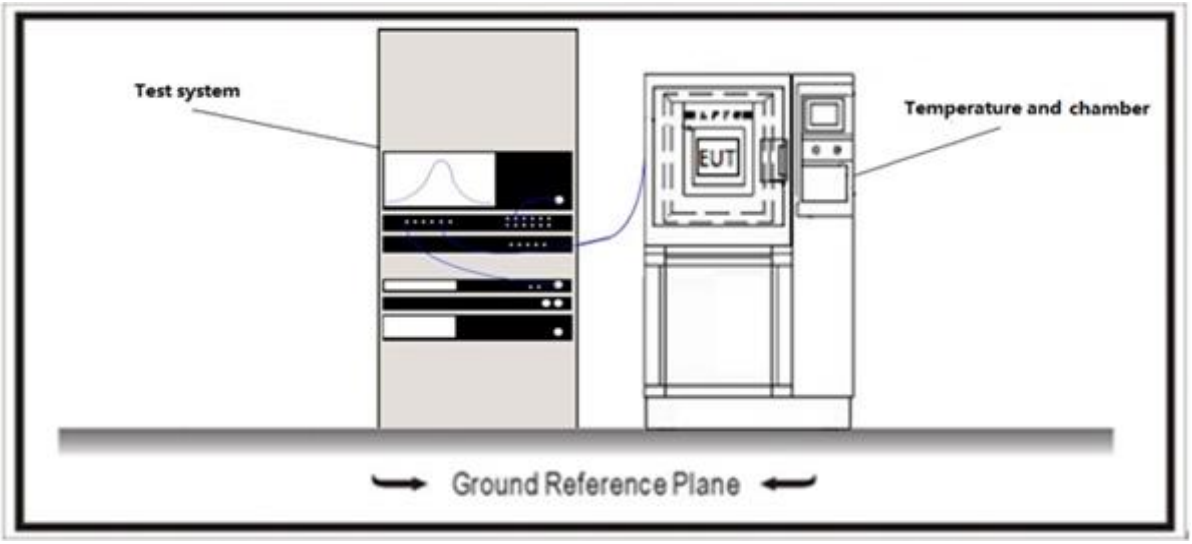
| | | |
|---|---|---|
| **USA** | **:** | **FCC Designation Number: CN1199** |

# 4 TEST ITEMS OF LIMIT/SETUP/PROCEDURE

| 4.1 DTS Bandwidth | VERDICT: PASS |
|---|---|

| 4.1.1 Limit | |
|---|---|
| **Standard** | FCC Part 15 Subpart C Paragraph 15.247 (a)(2) |
| Systems using digital modulation techniques operate in the2400-2483.5 MHz .The minimum 6 dB bandwidth shall be at least 500 kHz | |

**4.1.2 Test Setup**



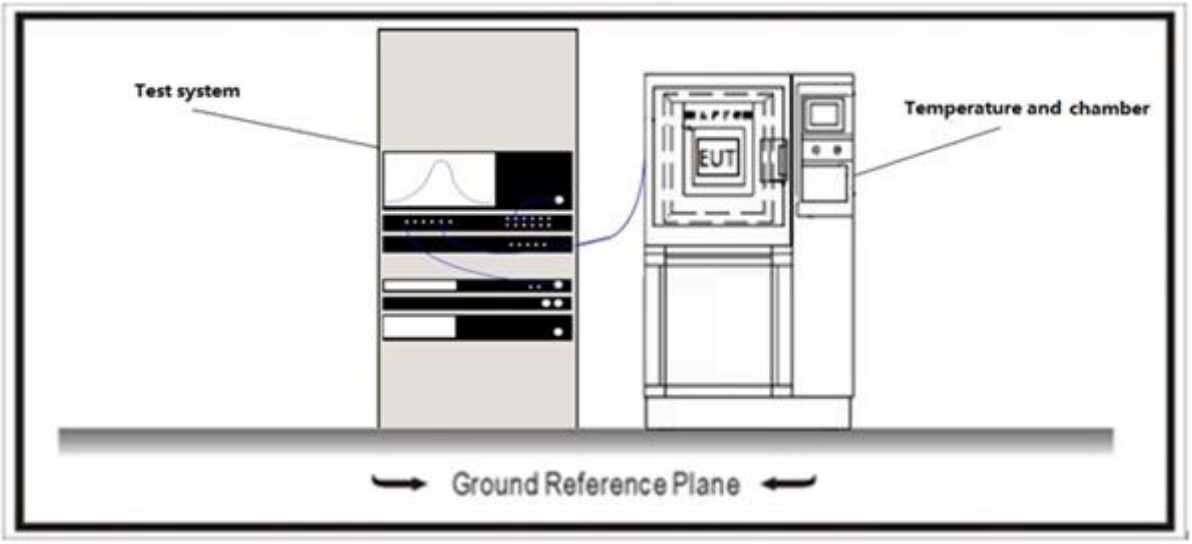

**4.1.3 Test Procedure**

| | Reference Rule | | Chapter | Description |
|---|---|---|---|---|
| ☒ | ANSI C63.10 | | 11.8 | DTS bandwidth |
| | ☐ | ANSI C63.10 | 11.8.1 | Option 1 |
| | ☒ | ANSI C63.10 | 11.8.2 | Option 2 |

| 4.2 Maximum Conducted Output Power | VERDICT: PASS |
|---|---|

| 4.3.1 Limit | | | |
|---|---|---|---|
| **Standard** | | FCC Part 15 Subpart C Paragraph 15.247 (b)(3) | |
| ☒ | GTX ＜6dBi | | Pout≤30dBm |
| ☐ | GTX ＞6dBi | | |
| | ☐ | Non-Fix point-point | Pout≤30-( GTX -6) |
| | ☐ | Fix point-point | Pout≤30-[(GTX-6)]/3 |
| | ☐ | Point-to-multipoint | Pout≤30-(GTX-6) |
| | ☐ | Overlap Beams | Pout≤30-[(GTX-6)]/3 |
| | ☐ | Aggregate power transmitted simultaneously on all beams | Pout≤30-[(GTX-6)]/3 |
| | ☐ | single directional beam | Pout≤30-[(GTX-6)]/3+8dB |
| Note 1 : GTX directional gain of transmitting antennas.<br>Note 2 : Pout is maximum peak conducted output power . | | | |

**4.3.2 Test Setup**

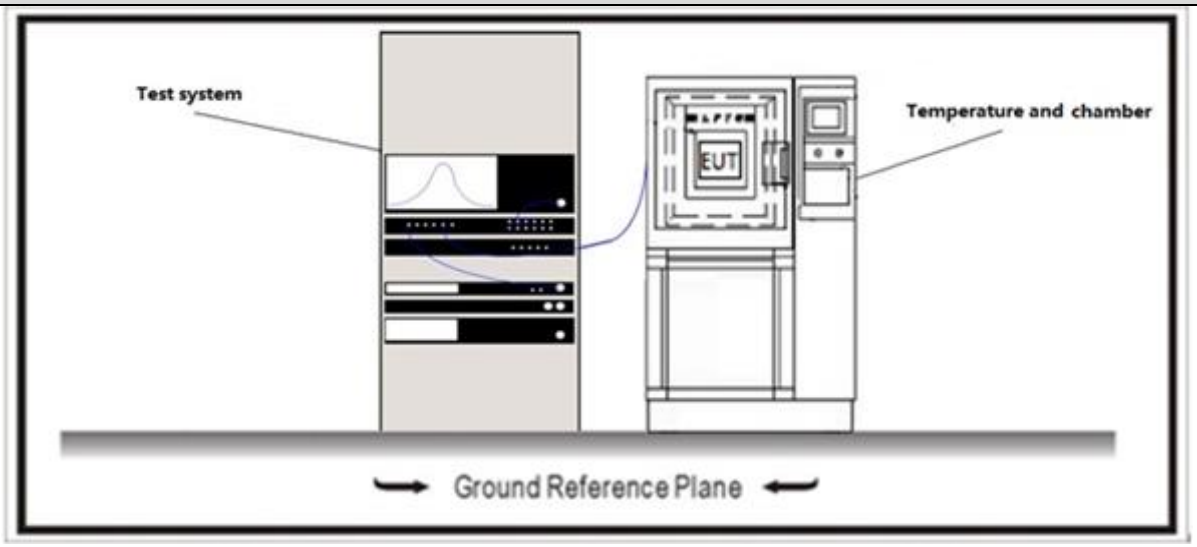


| 4.3.3 Test Procedure | | | | | | |
|---|---|---|---|---|---|---|
| | References Rule | | | | Chapter | Description |
| ☒ | ANSI C63.10 | | | | 11.9 | Fundamental emission output power |
| | ☐ | ANSI C63.10 | | | 11.9.1 | Maximum peak conducted output power |
| | | ☐ | ANSI C63.10 | | 11.9.1.1 | RBW ≥ DTS bandwidth |
| | | ☐ | ANSI C63.10 | | 11.9.1.2 | Integrated band power method |
| | | ☐ | ANSI C63.10 | | 11.9.1.3 | PKPM1 Peak power meter method |
| | ☒ | ANSI C63.10 | | | 11.9.2 | Maximum conducted (average) output power |
| | | ☐ | ANSI C63.10 | | 11.9.2.2 | Measurement using a spectrum analyzer (SA) |
| | | | ☐ | ANSI C63.10 | 11.9.2.2.2 | Method AVGSA-1(Duty cycle ≥98%) |
| | | | ☐ | ANSI C63.10 | 11.9.2.2.3 | Method AVGSA-1A(Duty cycle ≥98%) |
| | | | ☐ | ANSI C63.10 | 11.9.2.2.4 | Method AVGSA-2(Duty cycle ≤98%) |
| | | | ☐ | ANSI C63.10 | 11.9.2.2.5 | Method AVGSA-2A(Duty cycle ≤98%) |
| | | | ☐ | ANSI C63.10 | 11.9.2.2.4 | Method AVGSA-3 |
| | | | ☐ | ANSI C63.10 | 11.9.2.2.5 | Method AVGSA-3A |
| | | ☒ | ANSI C63.10 | | 11.9.2.3 | Measurement using a power meter (PM) |
| | | | ☒ | ANSI C63.10 | 11.9.2.3.1 | Method AVGPM |
| | | | ☐ | ANSI C63.10 | 11.9.2.3.2 | Method AVGPM-G |

| 4.3 Maximum Power Spectral Density | VERDICT: PASS |
|---|---|

| 4.4.1 Limit | |
|---|---|
| **Standard** | FCC Part 15 Subpart C Paragraph 15.247 (b)(3) |
| Power Spectral Density≤8dBm/3kHz | |

**4.4.2 Test Setup**




**4.4.3 Test Procedure**

| | References Rule | | Chapter | Description |
|---|---|---|---|---|
| ☒ | ANSI C63.10 | | 11.10 | Maximum power spectral density level in the fundamental emission |
| | ☒ | ANSI C63.10 | 11.10.2 | Method PKPSD (peak PSD) |
| | ☐ | ANSI C63.10 | 11.10.3 | Method AVGPSD-1(Duty cycle≥98%) |
| | ☐ | ANSI C63.10 | 11.10.4 | Method AVGPSD-1A(Duty cycle≥98%) |
| | ☐ | ANSI C63.10 | 11.10.5 | Method AVGPSD-2(Duty cycle＜98%) |
| | ☐ | ANSI C63.10 | 11.10.6 | Method AVGPSD-2A(Duty cycle＜98%) |
| | ☐ | ANSI C63.10 | 11.10.7 | Method AVGPSD-3 |
| | ☐ | ANSI C63.10 | 11.10.8 | Method AVGPSD-3A |

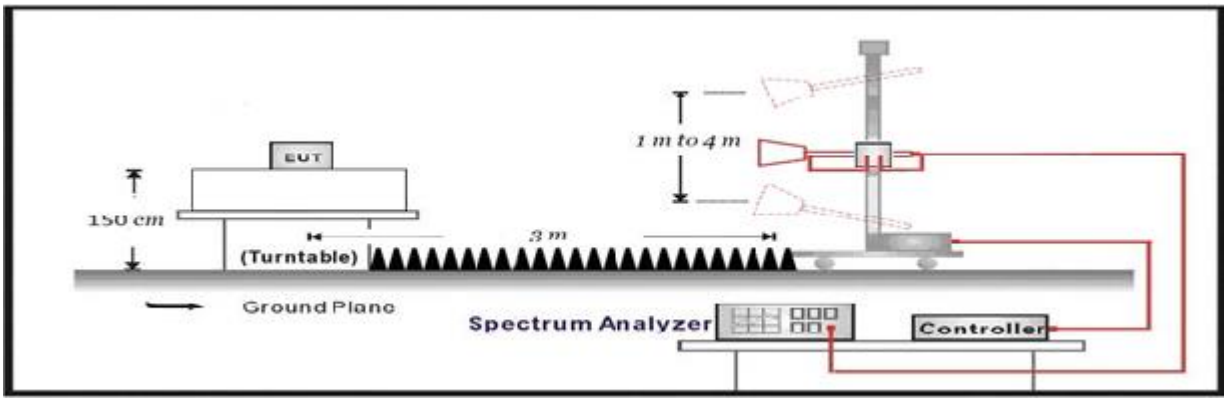
| 4.4 Band Edge Measurements | VERDICT: PASS |
|---|---|

### 4.5.1 Limit

| Standard | FCC Part 15 Subpart C Paragraph 15.247(d) , 15.209 | | | |
|---|---|---|---|---|
| Frequency bands (MHz) | Detector | Limit (dBµV/m) | RBW (MHz) | Distance (m) |
| 2310-2390<br>2483.5-2500 | PK | 74 | 1 | 3 |
| | AV | 54 | 1 | 3 |
| Note: The field strength of emissions appearing within these frequency bands shall not exceed the limits. | | | | |

### 4.5.2 Test Setup

Above 1GHz Test Setup:




### 4.5.3 Test Procedure

| | References Rule | | Chapter | Description |
|---|---|---|---|---|
| ☒ | ANSI C63.10 | | 6.10 | Band-edge testing |
| | ☒ | ANSI C63.10 | 6.10.5 | Restricted-band band-edge measurements |
| | ☐ | ANSI C63.10 | 6.10.6 | Marker-delta method |
| ☒ | ANSI C63.10 | | 11.12 | Emissions in restricted frequency bands |
| | ☒ | ANSI C63.10 | 11.12.1 | Radiated emission measurements |
| | ☒ | ANSI C63.10 | 11.12.2.7 | Radiated spurious emission test |
| ☐ | ANSI C63.10 | | 6.4 | Radiated emissions from unlicensed wireless devices below 30 MHz |
| ☐ | ANSI C63.10 | | 6.5 | Radiated emissions from unlicensed wireless devices in the frequency rangeof 30 MHz to 1000 MHz |
| ☒ | ANSI C63.10 | | 6.6 | Radiated emissions from unlicensed wireless devices above 1 GHz |

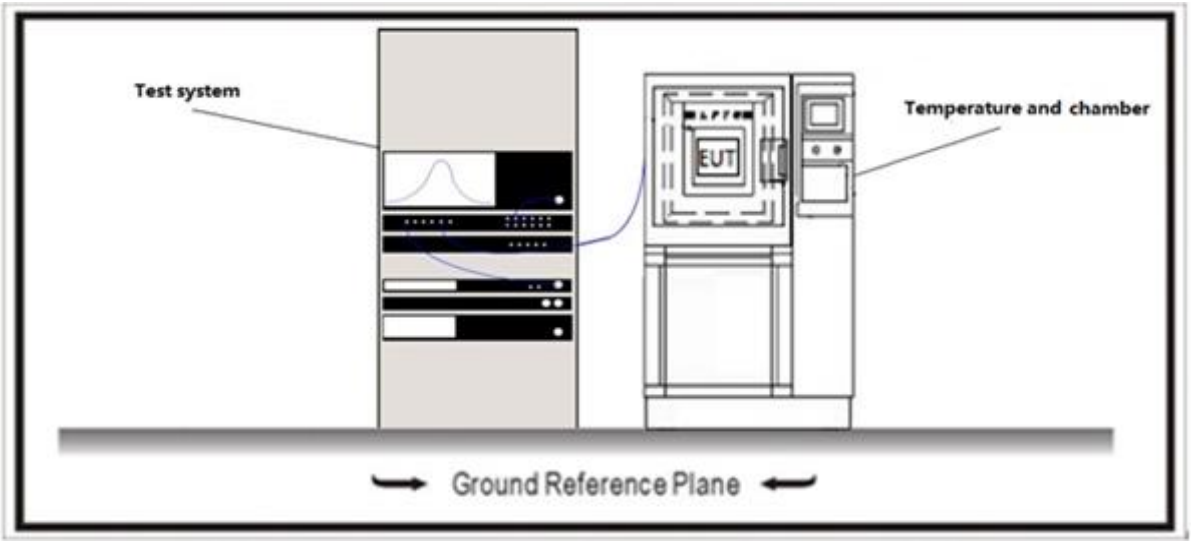
| 4.5 Conducted Spurious Emission | VERDICT: PASS |
|---|---|

| 4.6.1 Limit | |
|---|---|
| **Standard** | FCC Part 15 Subpart C Paragraph 15.247(d) |
| RF Output power (Detection methods) | Limit(dB) |
| RF Output power(Average detector) | 30dBc(Note1) |
| RF Output power(PK detector) | 20dBc(Note2) |

Note 1: If maximum conducted (average) output power was used to demonstrate compliance as described in 9.2, then the peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 30 dBc).

Note 2: If the maximum peak conducted output power procedure was used, then the peak output power measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 20 dBc).

**4.6.2 Test Setup**



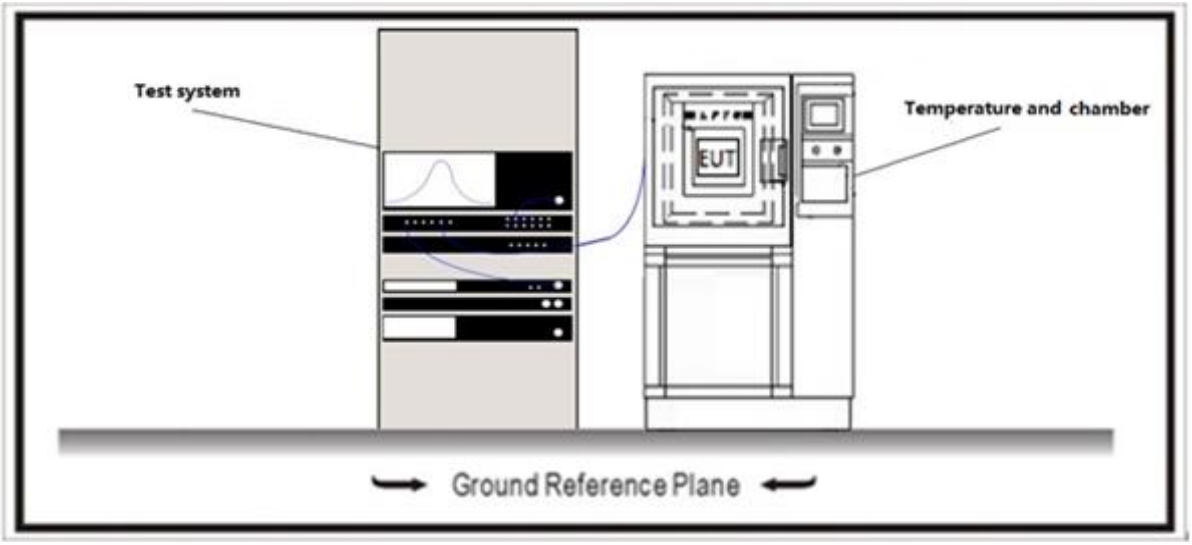

**4.6.3 Test Procedure**

| References Rule | | | Chapter | Description |
|---|---|---|---|---|
| ☒ | ANSI C63.10 | | 11.11 | Emissions in non-restricted frequency bands |
| | ☒ | ANSI C63.10 | 11.11.1 | General |
| | ☒ | ANSI C63.10 | 11.11.2 | Reference level measurement |
| | ☒ | ANSI C63.10 | 11.11.3 | Emission level measurement |

| 4.6 Duty cycle | VERDICT: PASS |
|---|---|

| 4.7.1 Limit |
|---|
| N/A |

**4.7.2 Test Setup**




**4.7.3 Test Procedure**

| References Rule | | Chapter | Description |
|---|---|---|---|
| ☒ | ANSI C63.10 | 11.6 | Duty cycle (D), transmission duration (T), and maximum power control level |

## 4.7 Emissions in Restricted Bands — VERDICT: PASS

### 4.8.1 Limit

| **Standard** | FCC Part 15 Subpart C Paragraph 15.205 | | |
|---|---|---|---|
| Restricted Bands of operation | | | |
| Frequency (MHz) | Frequency (MHz) | Frequency (MHz) | Frequency (GHz) |
| 0.090 – 0.110 | 16.42 – 16.423 | 399.9 – 410 | 4.5 – 5.15 |
| 0.495 – 0.505 | 16.69475 –16.69525 | 608 – 614 | 5.35 – 5.46 |
| 2.1735 – 2.1905 | 16.80425 – 16.80475 | 960 – 1240 | 7.25 – 7.75 |
| 4.125 – 4.128 | 25.5 – 25.67 | 1300 – 1427 | 8.025 – 8.5 |
| 4.17725 – 4.17775 | 37.5 – 38.25 | 1435 – 1626.5 | 9.0 – 9.2 |
| 4.20725 – 4.20775 | 73 – 74.6 | 1645.5 – 1646.5 | 9.3 – 9.5 |
| 6.215 – 6.218 | 74.8 – 75.2 | 1660 – 1710 | 10.6 – 12.7 |
| 6.26775 – 6.26825 | 108 – 121.94 | 1718.8 – 1722.2 | 13.25 – 13.4 |
| 6.31175 – 6.31225 | 123 – 138 | 2200 – 2300 | 14.47 – 14.5 |
| 8.291 – 8.294 | 149.9 – 150.05 | 2310 – 2390 | 15.35 – 16.2 |
| 8.362 – 8.366 | 156.52475 – 156.52525 | 2483.5 – 2500 | 17.7 – 21.4 |
| 8.37625 – 8.38675 | 156.7 – 156.9 | 2690 – 2900 | 22.01 – 23.12 |
| 8.81425 – 8.81475 | 162.0125 – 167.17 | 3260 – 3267 | 23.6 – 24.0 |
| 12.29 – 12.293 | 167.72 – 173.2 | 3332 – 3339 | 31.2 – 31.8 |
| 12.51975–12.52025 | 240 – 285 | 3345.8 – 3358 | 36.43 – 36.5 |
| 12.57675–12.57725 | 322 – 335.4 | 3600 – 4400 | |
| 13.36 – 13.41 | | | |

| Restricted Band Emissions Limit | | | |
|---|---|---|---|
| FCC Part 15 Subpart C Paragraph 15.209 | | | |
| Frequency (MHz) | Field strength (μV/m) | Field strength (dBμV/m) | Measurement distance (m) |
| 0.009 - 0.49 | 2400/F(kHz) | 48.5 – 13.8 | 300(Note 1) |
| 0.49 - 1.705 | 24000/F(kHz) | 33.8 - 23 | 30(Note 1) |
| 1.705 - 30 | 30 | 29.5 | 30(Note 1) |
| 30 - 88 | 100 | 40 | 3(Note 2) |
| 88 - 216 | 150 | 43.5 | 3(Note 2) |
| 216 - 960 | 200 | 46 | 3(Note 2) |
| Above 960 | 500 | 54 | 3(Note 2) |

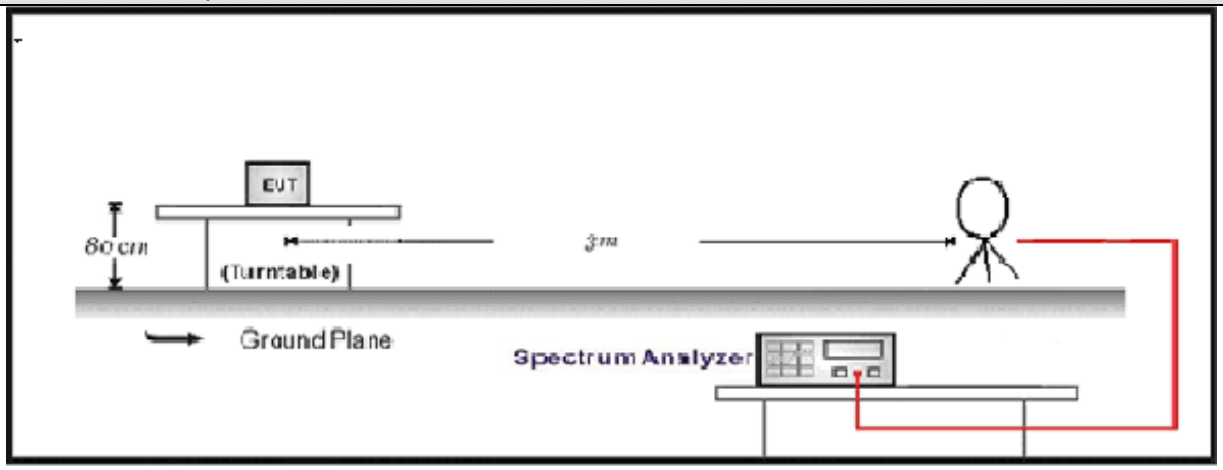
Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade).

Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be

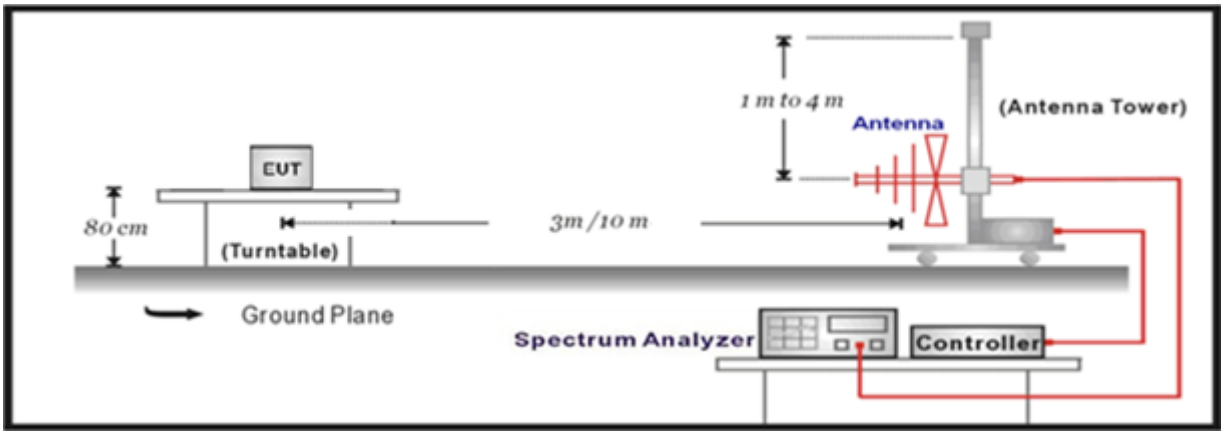
measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

## 4.8.2 Test Setup

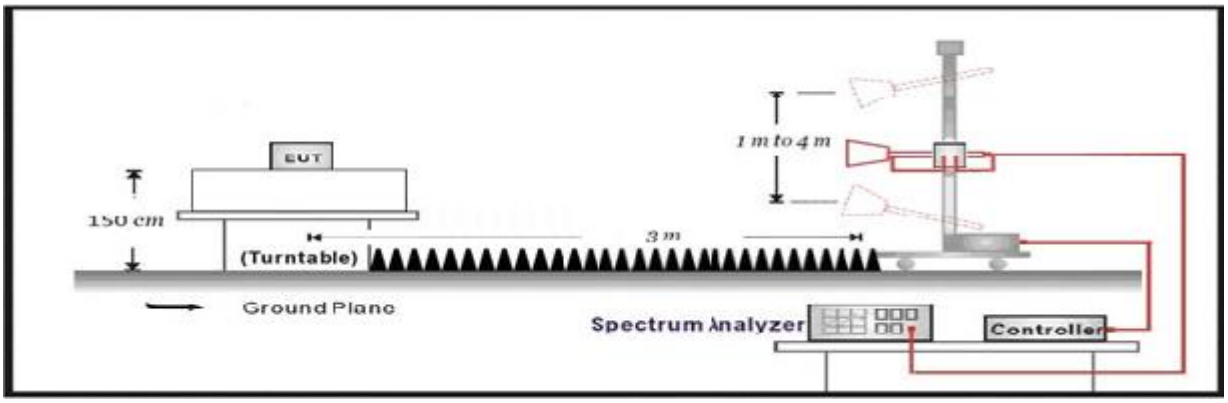
Below 30MHz Test Setup:




30MHz-1GHz Test Setup:




Above 1GHz Test Setup:



| **4.8.3 Test Procedure** | | | | | |
|---|---|---|---|---|---|
| | References Rule | | | Chapter | Description |
| ☒ | ANSI C63.10 | | | 11.12 | Emissions in restricted frequency bands |
| | ☒ | ANSI C63.10 | | 11.12.1 | Radiated emission measurements |
| | ☒ | ANSI C63.10 | | 11.12.2.7 | Radiated spurious emission test |
| | | ☒ | ANSI C63.10 | 6.4 | Radiated emissions from unlicensed wireless devices below 30 MHz |
| | | ☒ | ANSI C63.10 | 6.5 | Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz |
| | | ☒ | ANSI C63.10 | 6.6 | Radiated emissions from unlicensed wireless devices above 1 GHz |

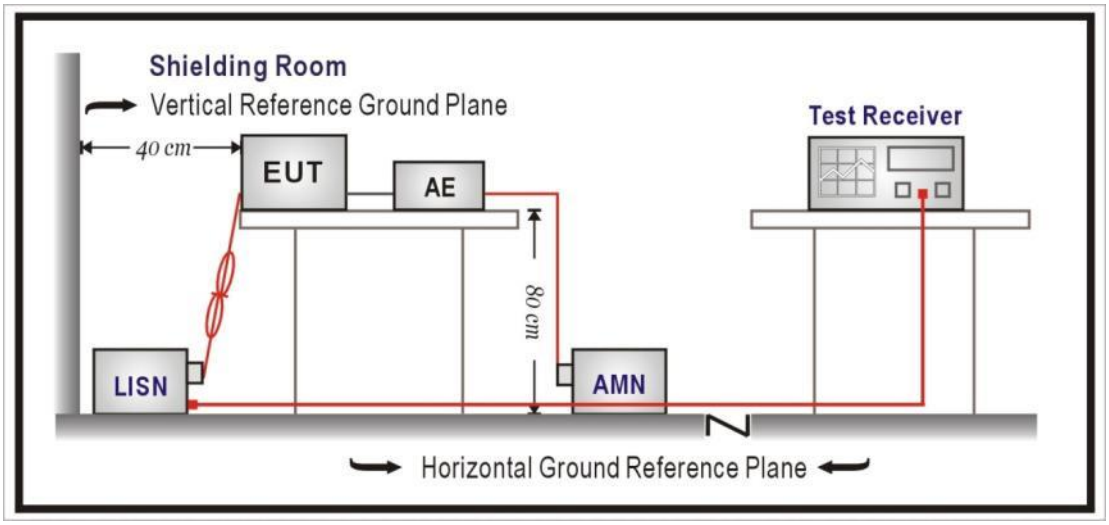
| 4.8 AC Power Line Conducted Emission | VERDICT: PASS |
|---|---|

### 4.9.1 Limit

| **Standard** | FCC Part 15 Subpart C Paragraph 15.207 | |
|---|---|---|
| Frequency range [MHz] | Limit: QP [dB(μV)[1)]] | Limit: AV [dB(μV) [1)]] |
| 0,15 - 0,50 | 66 – 56 [2)] | 56 - 46 [2)] |
| 0,50 - 5,0 | 56 | 46 |
| 5,0 - 30 | 60 | 50 |

[1)] At the transition frequency, the lower limit applies.
[2)] The limit decreases linearly with the logarithm of the frequency.
NOTE 1: The exclusion band for transmitters shall be considered for transmitters operating at frequencies below 30 MHz.
NOTE 2: Where the AC output port is directly connected (or via a circuit breaker) to the AC power input port of the EUT the AC power output port need not to be tested.

### 4.9.2 Test Setup




### 4.9.3 Test Procedure

| | References Rule | Chapter | Item |
|---|---|---|---|
| ☒ | ANSI C63.10-2013 | 6.2 | Standard test method for ac power-line conducted emissions from unlicensed wireless devices |

| 4.9 Antenna Requirement | VERDICT: PASS |
|---|---|

| 4.10.1 Limit: | |
|---|---|
| **Standard** | FCC Part 15 Subpart C Paragraph 15.203;<br>RSS-Gen Issue 5 Paragraph 6.8. |
| An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded. | |

| 4.10.2 Antenna Connector Construction: | |
|---|---|
| ☒ | The use of a permanently attached antenna |
| ☐ | The antenna use of a unique coupling to the intentional radiator |
| ☐ | The use of a nonstandard antenna jack or electrical connector |
| Please refer to the attached document “Internal Photograph” to show the antenna connector. | |

# 5 TEST SETUP PHOTO AND EUT PHOTO

Remark: The test setup photo and EUT Photo please see appendix.

# 6 TEST RESULT-APPENDIX A: DTS BANDWIDTH

| TestMode | Antenna | Frequency[MHz] | DTS BW [MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|---|---|---|---|---|---|---|---|
| Mode1 | Ant1 | 2412 | 8.160 | 2407.840 | 2416.000 | 0.5 | PASS |
| | | 2437 | 8.320 | 2432.840 | 2441.160 | 0.5 | PASS |
| | | 2462 | 8.160 | 2457.840 | 2466.000 | 0.5 | PASS |
| Mode2 | Ant1 | 2412 | 15.120 | 2404.440 | 2419.560 | 0.5 | PASS |
| | | 2437 | 15.080 | 2429.480 | 2444.560 | 0.5 | PASS |
| | | 2462 | 15.760 | 2453.880 | 2469.640 | 0.5 | PASS |
| Mode3 | Ant1 | 2412 | 15.120 | 2404.440 | 2419.560 | 0.5 | PASS |
| | | 2437 | 16.280 | 2428.920 | 2445.200 | 0.5 | PASS |
| | | 2462 | 16.040 | 2454.440 | 2470.480 | 0.5 | PASS |
| Mode4 | Ant1 | 2422 | 35.040 | 2404.480 | 2439.520 | 0.5 | PASS |
| | | 2437 | 35.120 | 2419.480 | 2454.600 | 0.5 | PASS |
| | | 2452 | 35.120 | 2434.480 | 2469.600 | 0.5 | PASS |

Note: We have evaluated each operating mode and SISO/MIMO mode, SISO mode Antenna1 is worse ,shown in the report is the worst SISO Antenna1 data.

## Test Graphs

11B-Ant1-2412-PASS

11B-Ant1-2437-PASS

11B-Ant1-2462-PASS

11G-Ant1-2412-PASS

11G-Ant1-2437-PASS

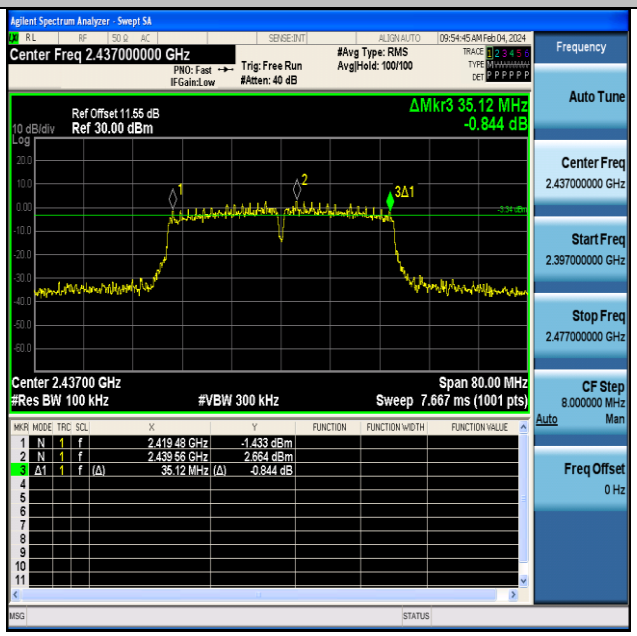
11G-Ant1-2462-PASS

11N20SISO-Ant1-2412-PASS

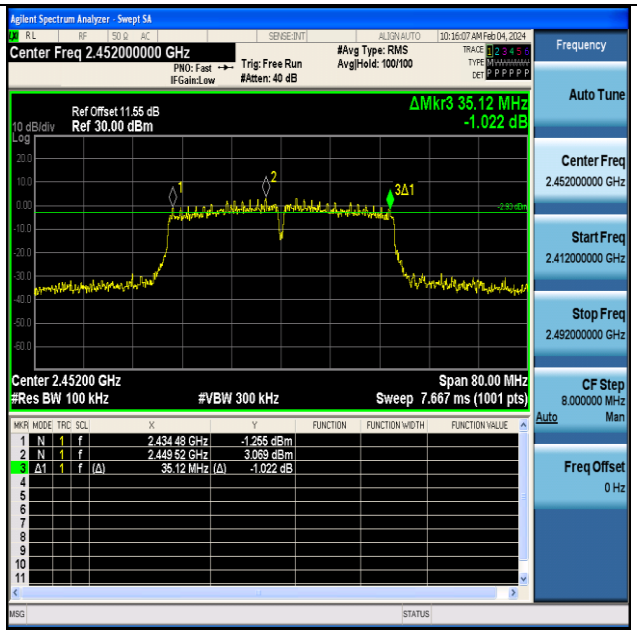
11N20SISO-Ant1-2437-PASS

11N20SISO-Ant1-2462-PASS

11N40SISO-Ant1-2422-PASS




11N40SISO-Ant1-2437-PASS




11N40SISO-Ant1-2452-PASS

# 7 TEST RESULT-APPENDIX B: MAXIMUM CONDUCTED OUTPUT POWER

### SISO: Antenna1

| TestMode | Antenna | Frequency[MHz] | Avg. Power[dBm] | Conducted Limit[dBm] | Verdict |
|---|---|---|---|---|---|
| Mode1 | Ant1 | 2412 | 17.44 | ≤30.00 | PASS |
| | | 2437 | 17.30 | ≤30.00 | PASS |
| | | 2462 | 17.76 | ≤30.00 | PASS |
| Mode2 | Ant1 | 2412 | 15.54 | ≤30.00 | PASS |
| | | 2437 | 15.81 | ≤30.00 | PASS |
| | | 2462 | 16.02 | ≤30.00 | PASS |
| Mode3 | Ant1 | 2412 | 17.00 | ≤30.00 | PASS |
| | | 2437 | 15.42 | ≤30.00 | PASS |
| | | 2462 | 15.62 | ≤30.00 | PASS |
| Mode4 | Ant1 | 2422 | 15.42 | ≤30.00 | PASS |
| | | 2437 | 15.84 | ≤30.00 | PASS |
| | | 2452 | 16.11 | ≤30.00 | PASS |

### SISO: Antenna2

| TestMode | Antenna | Frequency[MHz] | Avg. Power[dBm] | Conducted Limit[dBm] | Verdict |
|---|---|---|---|---|---|
| Mode1 | Ant2 | 2412 | 17.88 | ≤30.00 | PASS |
| | | 2437 | 17.90 | ≤30.00 | PASS |
| | | 2462 | 18.19 | ≤30.00 | PASS |
| Mode2 | Ant2 | 2412 | 15.37 | ≤30.00 | PASS |
| | | 2437 | 15.32 | ≤30.00 | PASS |
| | | 2462 | 15.58 | ≤30.00 | PASS |
| Mode3 | Ant2 | 2412 | 16.88 | ≤30.00 | PASS |
| | | 2437 | 15.77 | ≤30.00 | PASS |
| | | 2462 | 16.12 | ≤30.00 | PASS |
| Mode4 | Ant2 | 2422 | 16.08 | ≤30.00 | PASS |
| | | 2437 | 15.27 | ≤30.00 | PASS |
| | | 2452 | 15.50 | ≤30.00 | PASS |

### MIMO: Antenna1+2

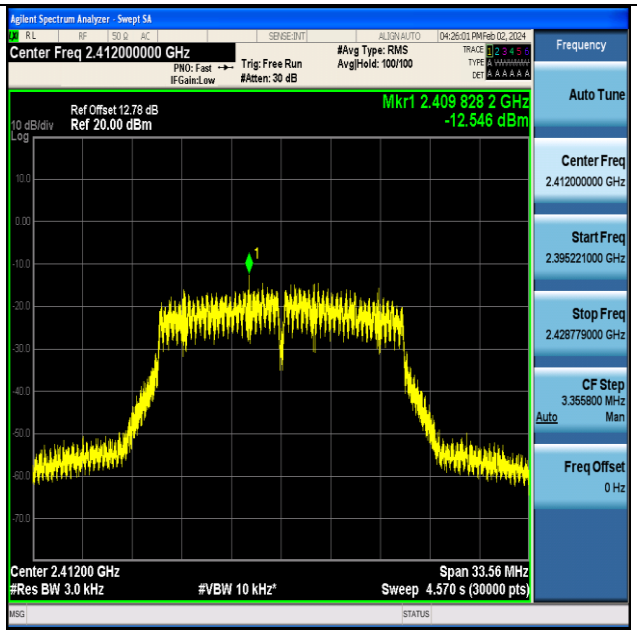
| TestMode | Antenna | Frequency[MHz] | Total Avg. Power[dBm] | Conducted Limit[dBm] | Verdict |
|---|---|---|---|---|---|
| Mode3 | Ant1+2 | 2412 | 20.56 | ≤30.00 | PASS |
| | | 2437 | 18.69 | ≤30.00 | PASS |
| | | 2462 | 19.06 | ≤30.00 | PASS |
| Mode4 | Ant1+2 | 2422 | 19.06 | ≤30.00 | PASS |
| | | 2437 | 19.41 | ≤30.00 | PASS |
| | | 2452 | 19.56 | ≤30.00 | PASS |

# 8 TEST RESULT-APPENDIX C: MAXIMUM POWER SPECTRAL DENSITY

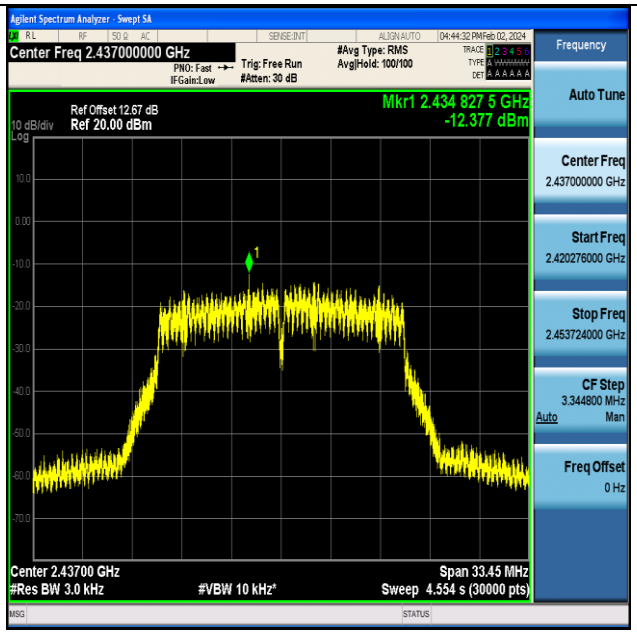
| TestMode | Antenna | Frequency[MHz] | Result [dBm/3-100kHz] | Limit [dBm/3kHz] | Verdict |
|---|---|---|---|---|---|
| Mode1 | Ant1 | 2412 | -12.55 | ≤8.00 | PASS |
| | | 2437 | -12.38 | ≤8.00 | PASS |
| | | 2462 | -12.36 | ≤8.00 | PASS |
| Mode2 | Ant1 | 2412 | -7.06 | ≤8.00 | PASS |
| | | 2437 | -7.30 | ≤8.00 | PASS |
| | | 2462 | -6.93 | ≤8.00 | PASS |
| Mode3 | Ant1 | 2412 | -11.65 | ≤8.00 | PASS |
| | | 2437 | -13.42 | ≤8.00 | PASS |
| | | 2462 | -13.22 | ≤8.00 | PASS |
| Mode4 | Ant1 | 2422 | -14.41 | ≤8.00 | PASS |
| | | 2437 | -14.00 | ≤8.00 | PASS |
| | | 2452 | -13.25 | ≤8.00 | PASS |

Note: We have evaluated each operating mode and SISO/MIMO mode, SISO mode Antenna1 is worse ,shown in the report is the worst SISO Antenna1 data.

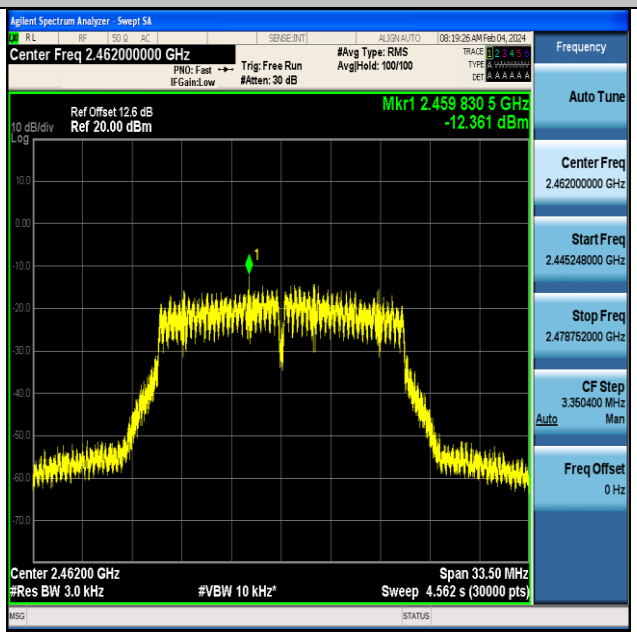
## Test Graphs



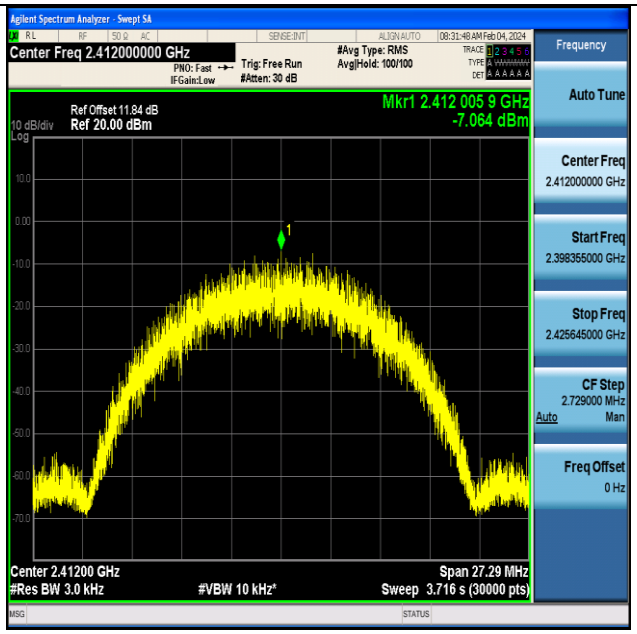

11G-Ant1-2412-PASS



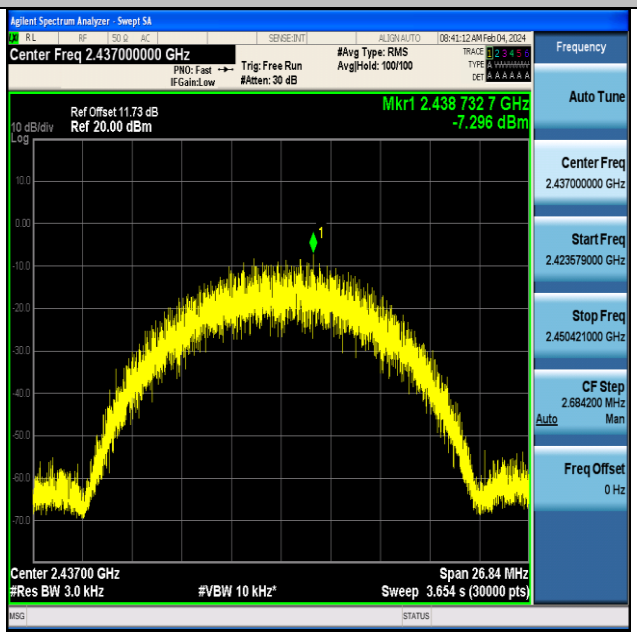

11G-Ant1-2437-PASS



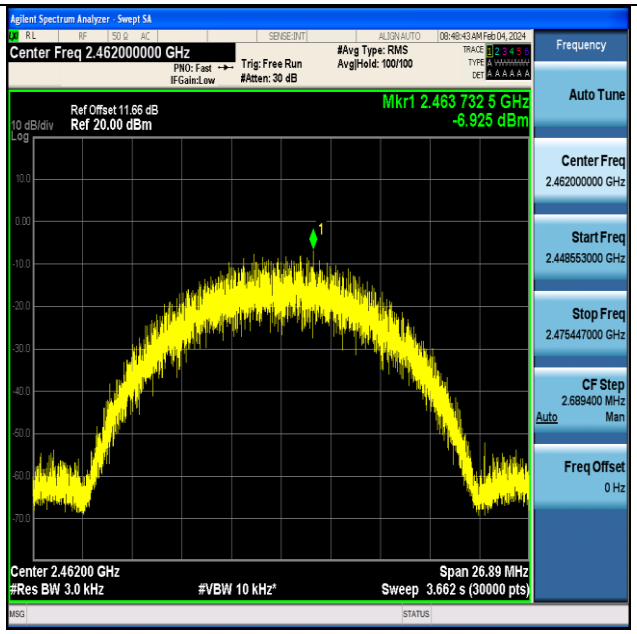

11G-Ant1-2462-PASS



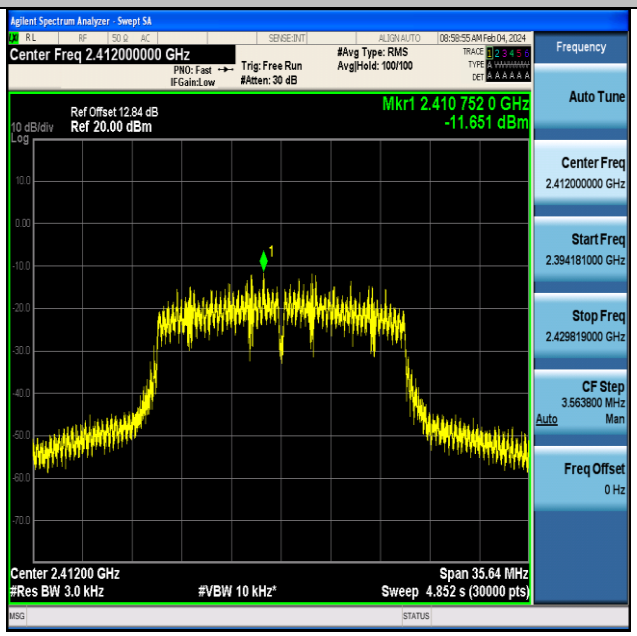

11B-Ant1-2412-PASS



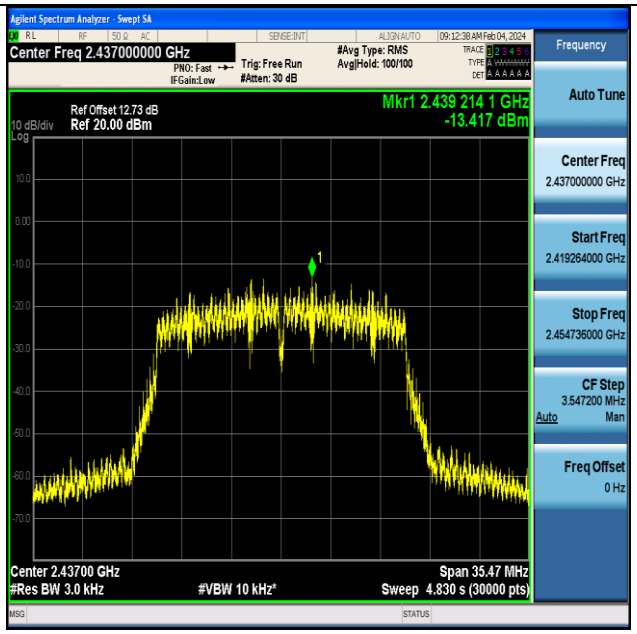

11B-Ant1-2437-PASS



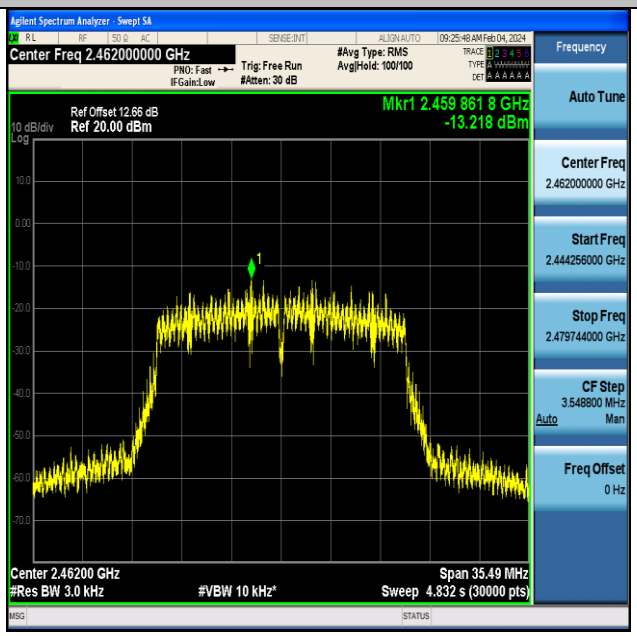

11B-Ant1-2462-PASS



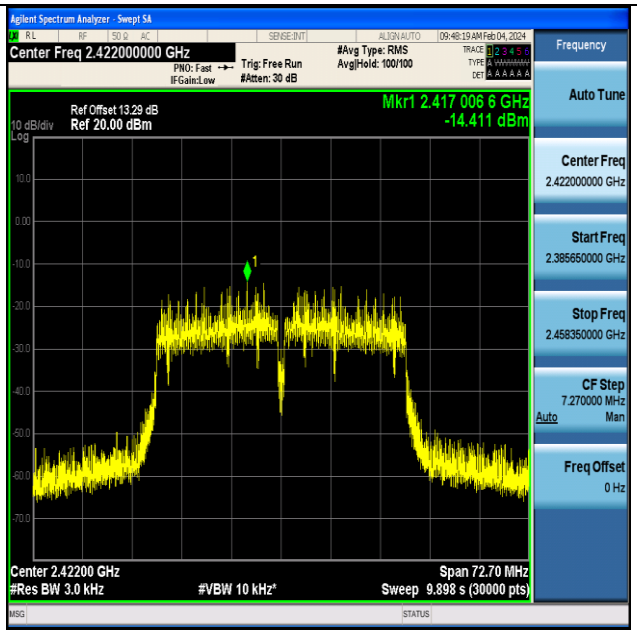

11N20SISO-Ant1-2412-PASS



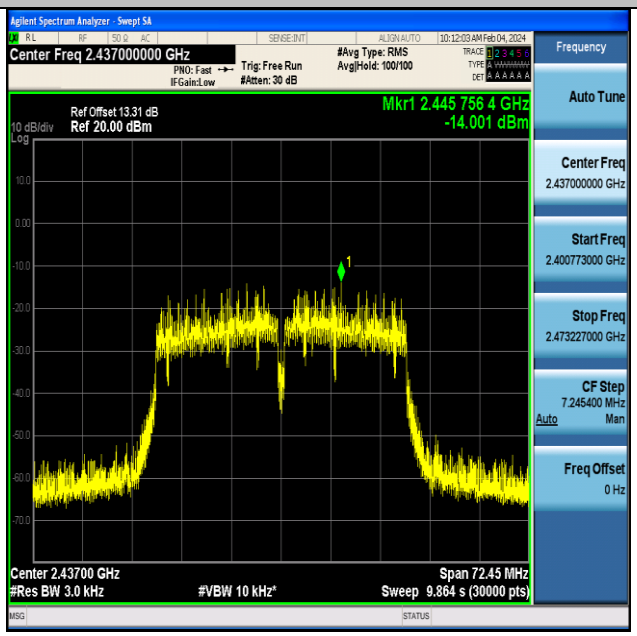

11N20SISO-Ant1-2437-PASS



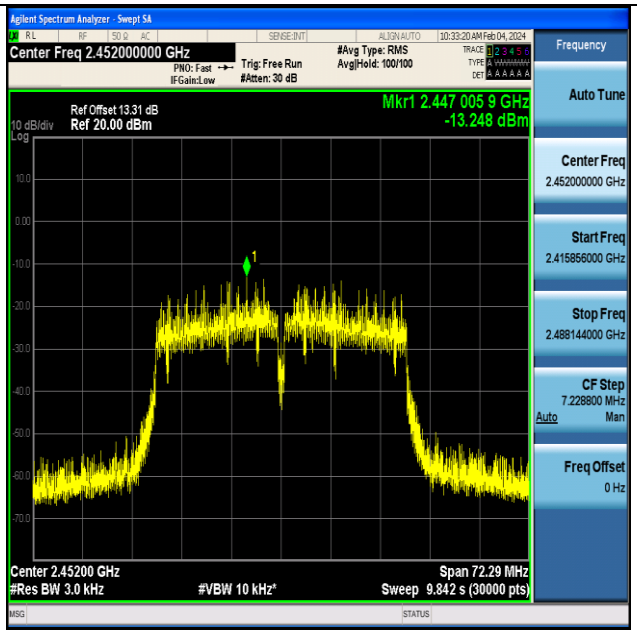

11N20SISO-Ant1-2462-PASS




11N40SISO-Ant1-2422-PASS



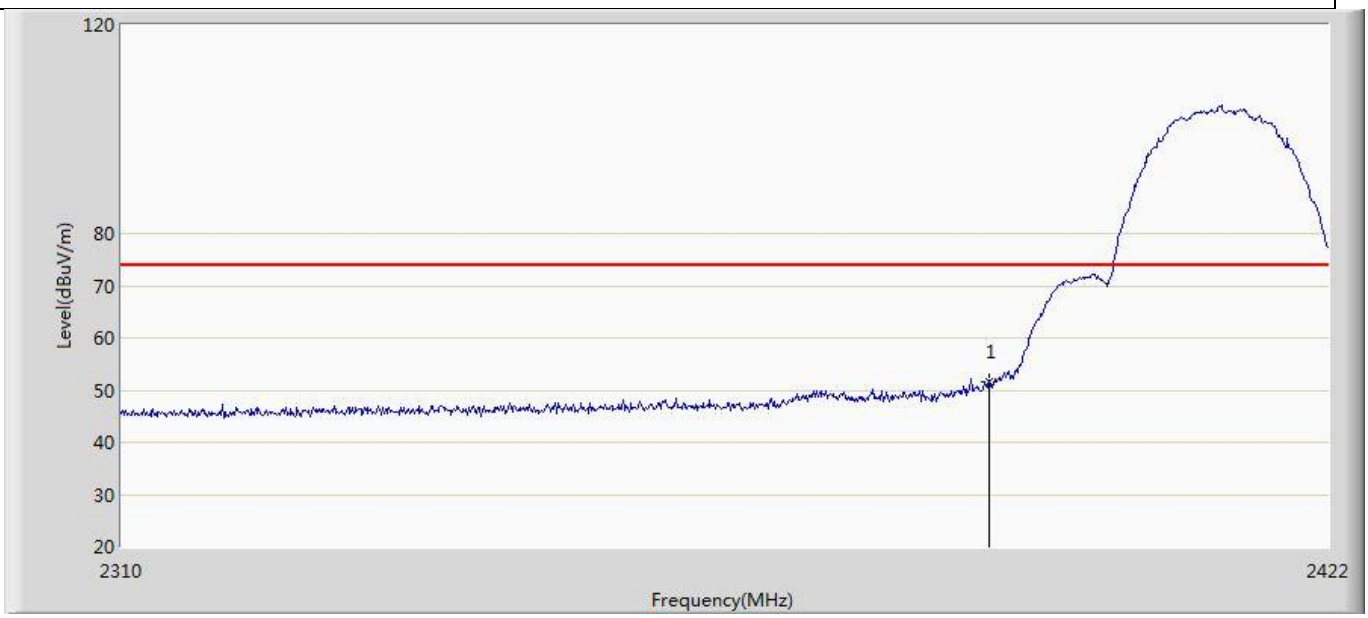

11N40SISO-Ant1-2437-PASS




11N40SISO-Ant1-2452-PASS

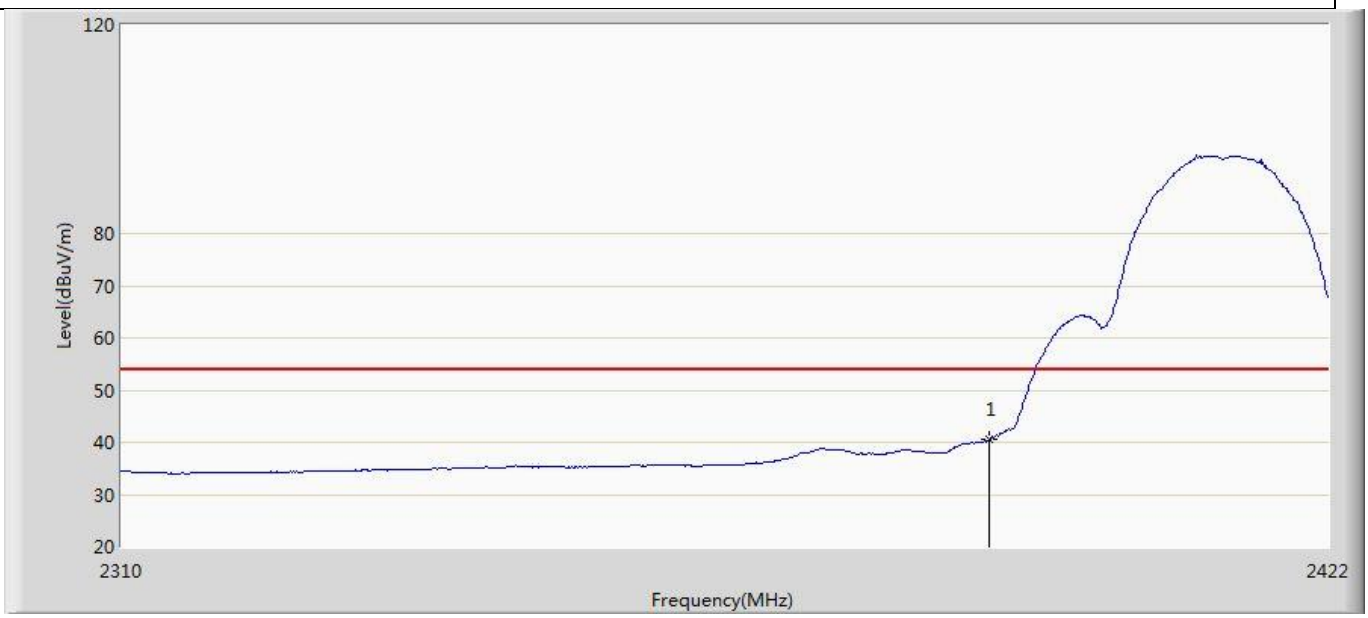
# 9 TEST RESULT-APPENDIX D: BAND EDGE MEASUREMENTS

| | |
|---|---|
| Profile: 2410570R | Page No.: 1 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:02 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 1：Transmit at 2412MHz by 802.11b with Ant1 | |



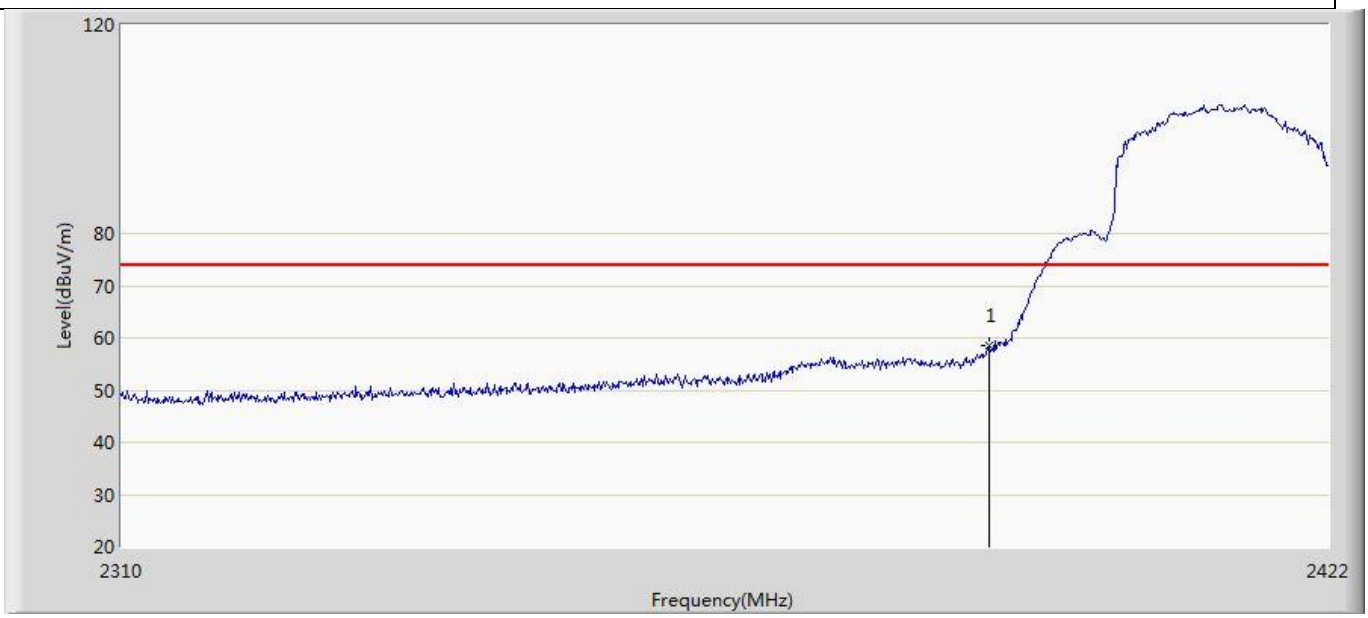

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2390.000 | 51.692 | 17.541 | -22.308 | 74.000 | 34.151 | PK |

| | |
|---|---|
| Profile: 2410570R | Page No.: 2 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:04 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 1：Transmit at 2412MHz by 802.11b with Ant1 | |



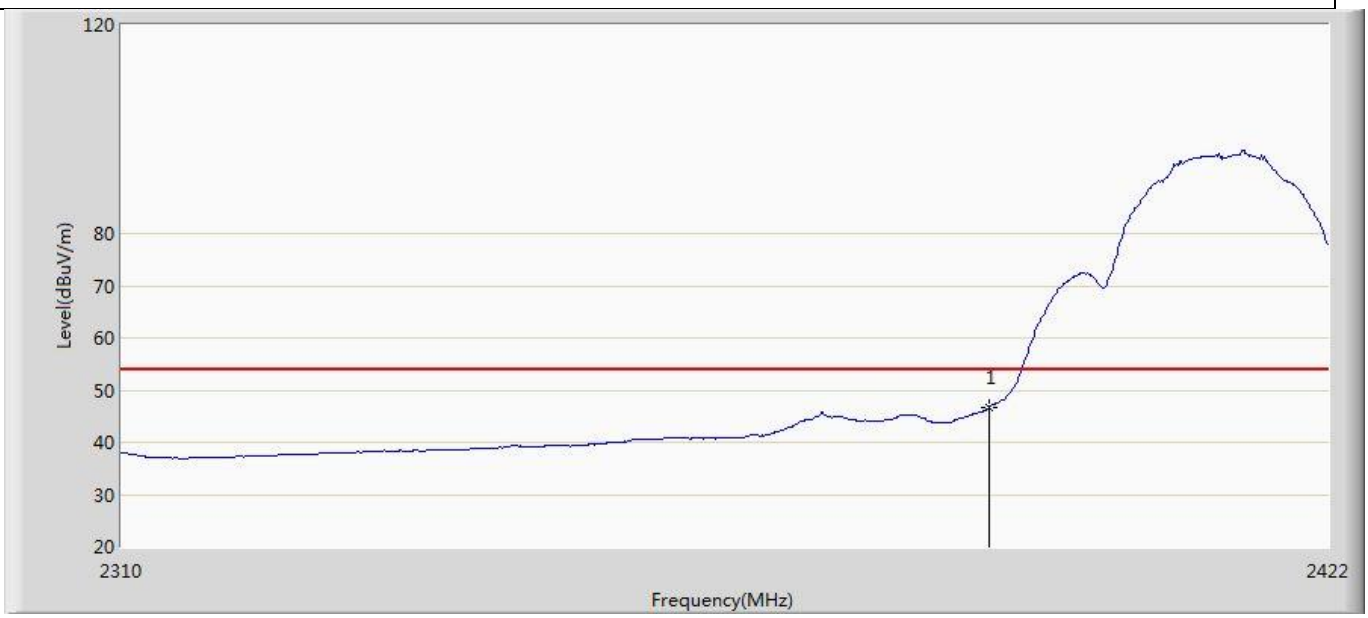

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2390.000 | 40.514 | 6.363 | -13.486 | 54.000 | 34.151 | AV |

| | |
|---|---|
| Profile: 2410570R | Page No.: 3 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:06 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 1：Transmit at 2412MHz by 802.11b with Ant1 | |



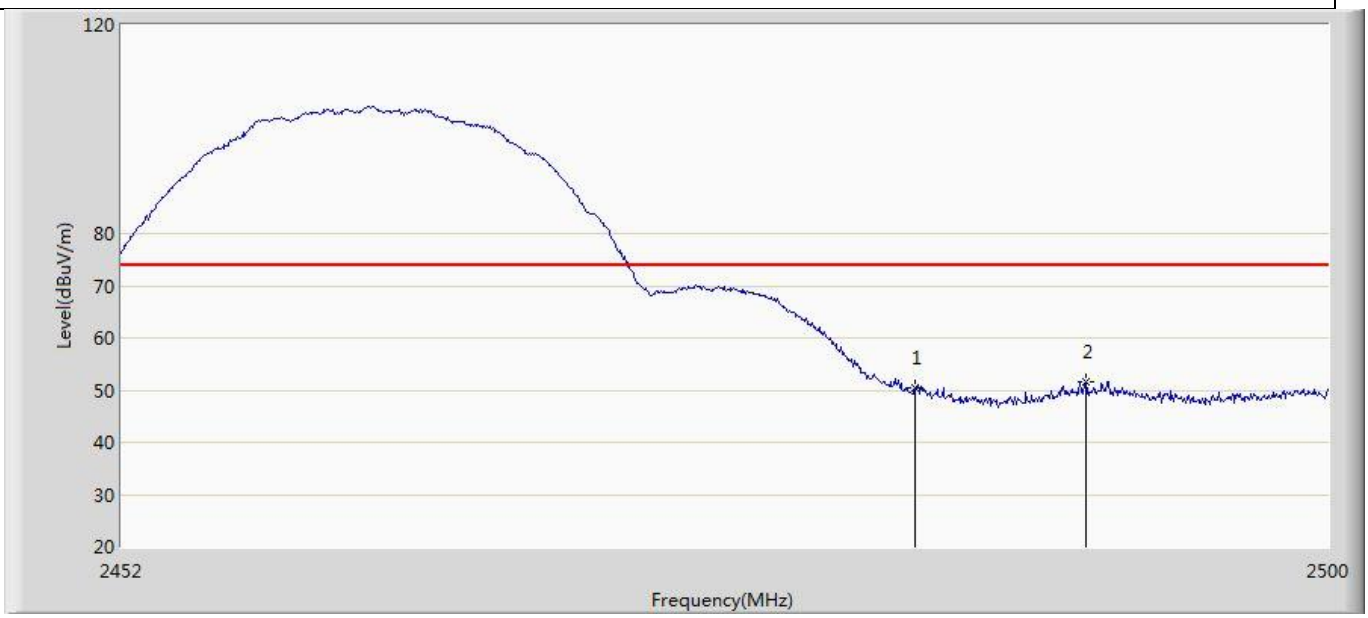

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2390.000 | 58.506 | 24.355 | -15.494 | 74.000 | 34.151 | PK |

| | |
|---|---|
| Profile: 2410570R | Page No.: 4 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:07 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 1：Transmit at 2412MHz by 802.11b with Ant1 | |



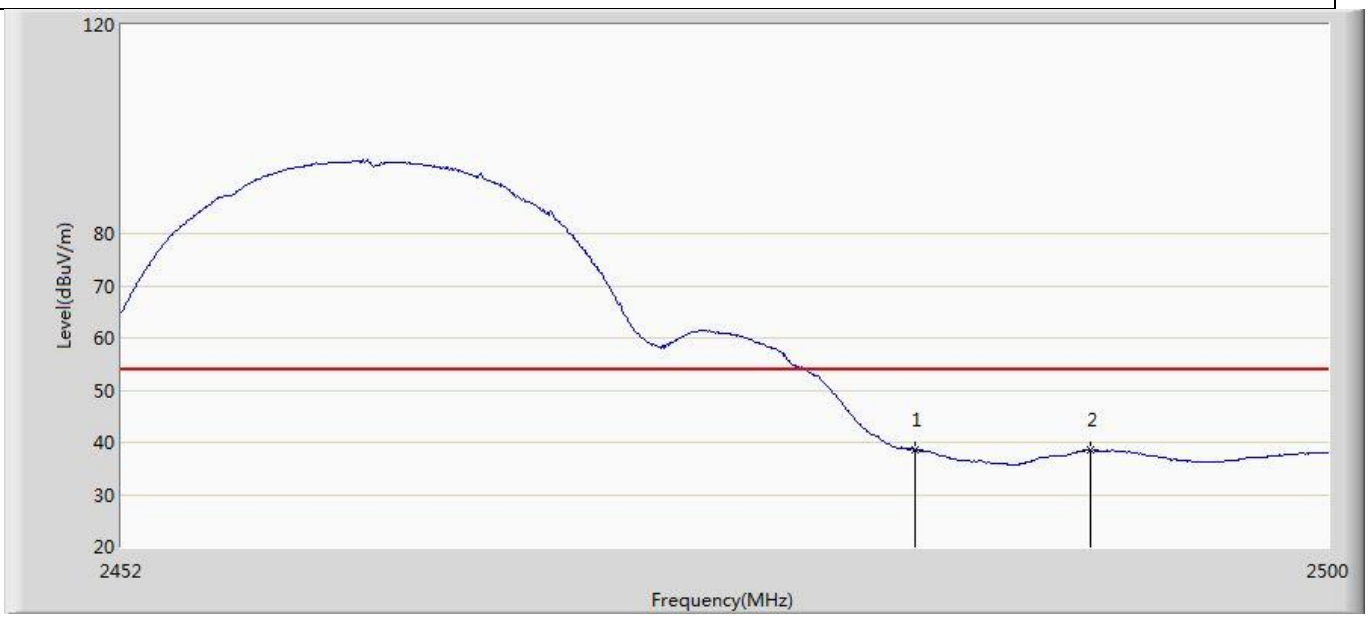

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2390.000 | 46.659 | 12.508 | -7.341 | 754.000 | 34.151 | AV |

| | |
|---|---|
| Profile: 2410570R | Page No.: 5 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:09 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 1：Transmit at 2462MHz by 802.11b with Ant1 | |



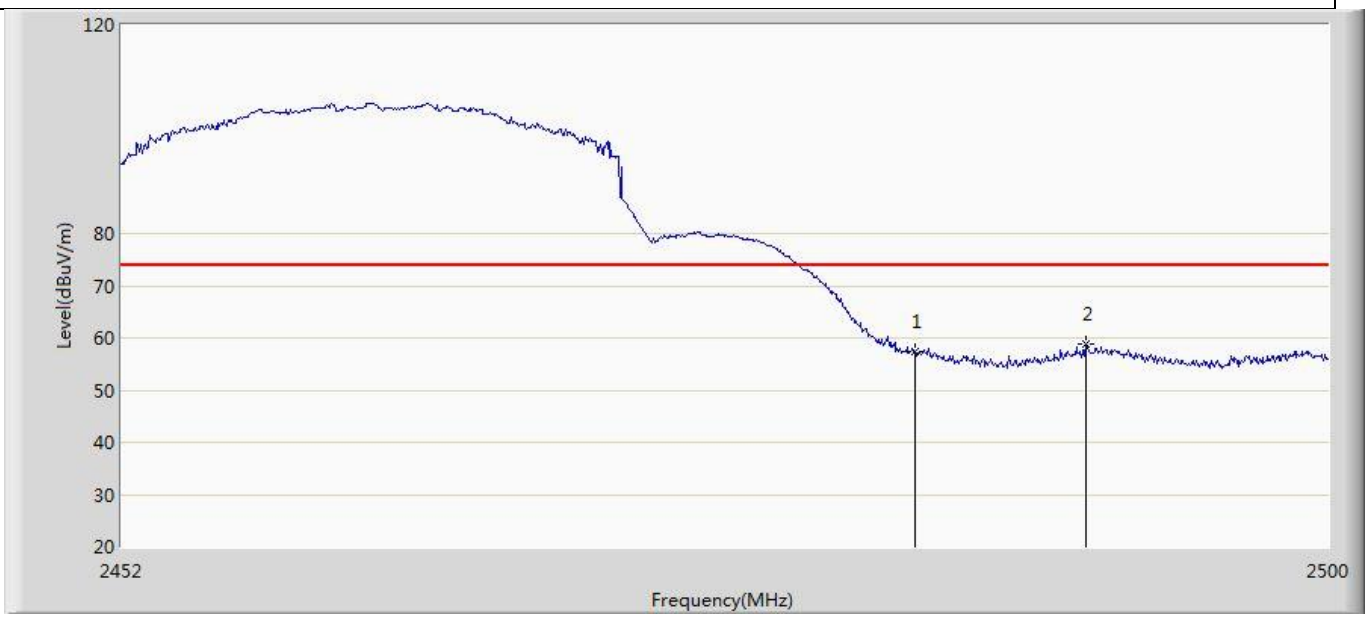

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2483.500 | 50.298 | 15.842 | -23.702 | 74.000 | 34.456 | PK |
| 2 | * | 2490.304 | 51.689 | 17.158 | -22.311 | 74.000 | 34.531 | PK |

| | |
|---|---|
| Profile: 2410570R | Page No.: 6 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:10 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 1：Transmit at 2462MHz by 802.11b with Ant1 | |



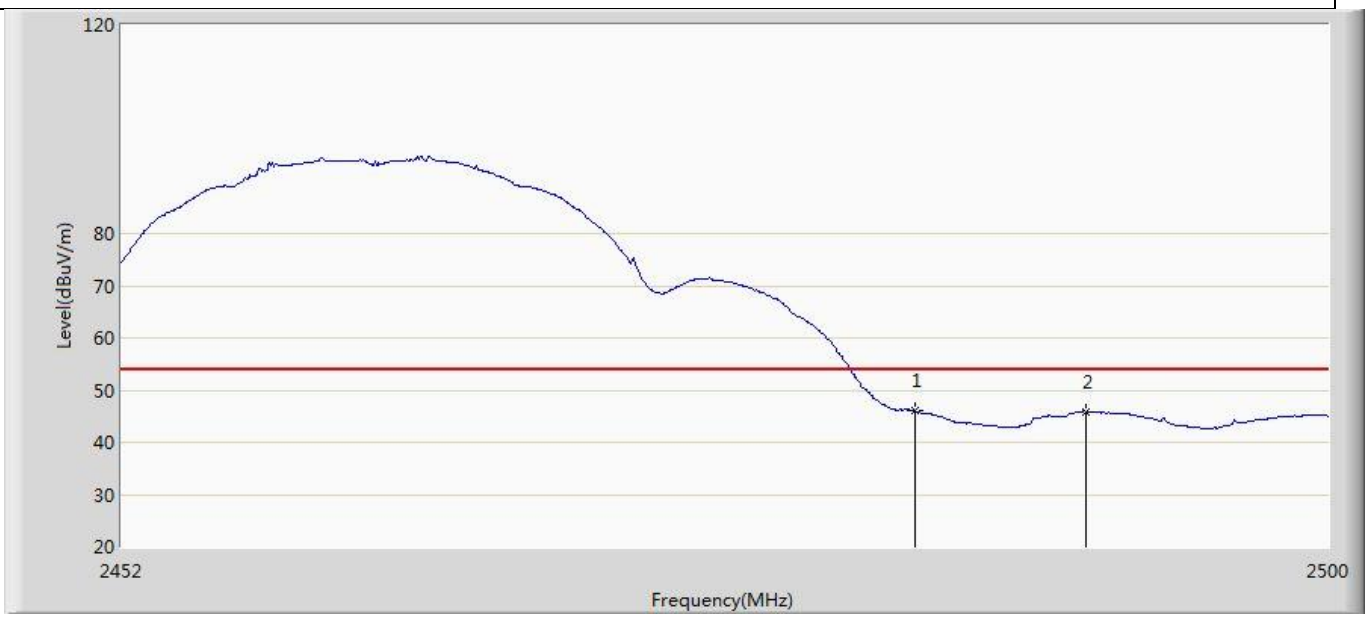

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2483.500 | 38.605 | 4.149 | -15.395 | 54.000 | 34.456 | AV |
| 2 | | 2490.496 | 38.507 | 3.974 | -15.493 | 54.000 | 34.533 | AV |

| | |
|---|---|
| Profile: 2410570R | Page No.: 7 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:11 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 1：Transmit at 2462MHz by 802.11b with Ant1 | |



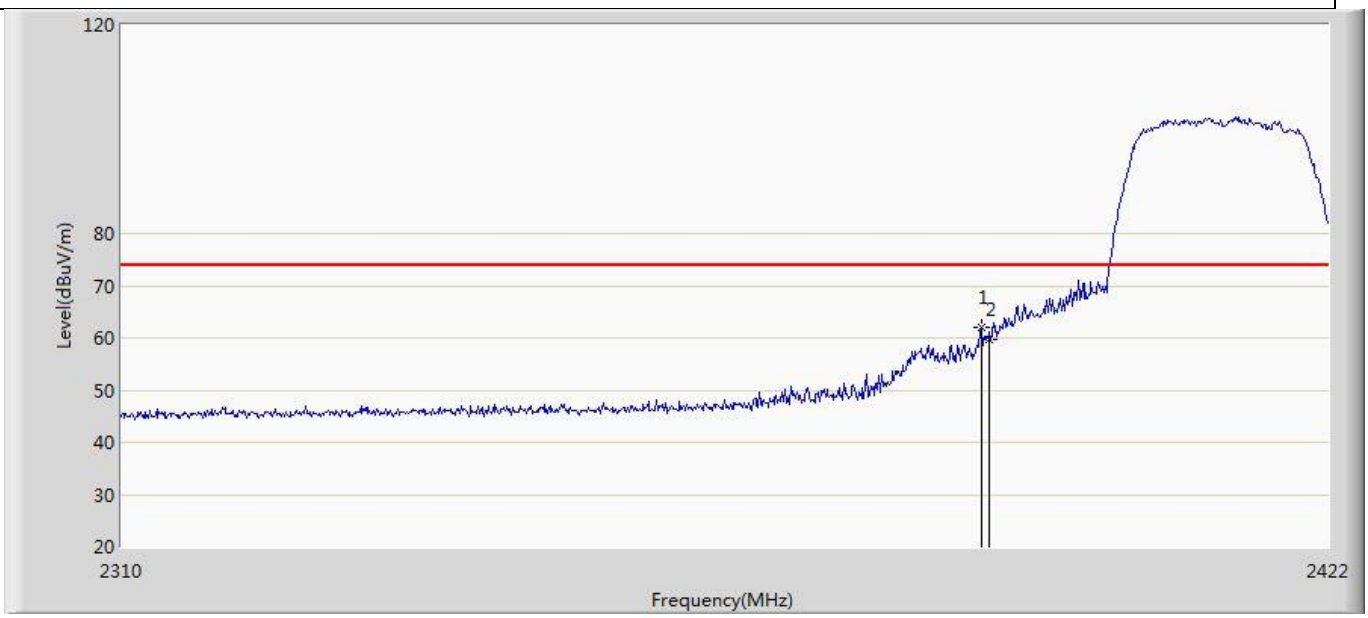

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2483.500 | 57.298 | 22.842 | -16.702 | 74.000 | 34.456 | PK |
| 2 | * | 2490.304 | 58.896 | 24.365 | -15.104 | 74.000 | 34.531 | PK |

| | |
|---|---|
| Profile: 2410570R | Page No.: 8 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:15 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 1：Transmit at 2462MHz by 802.11b with Ant1 | |



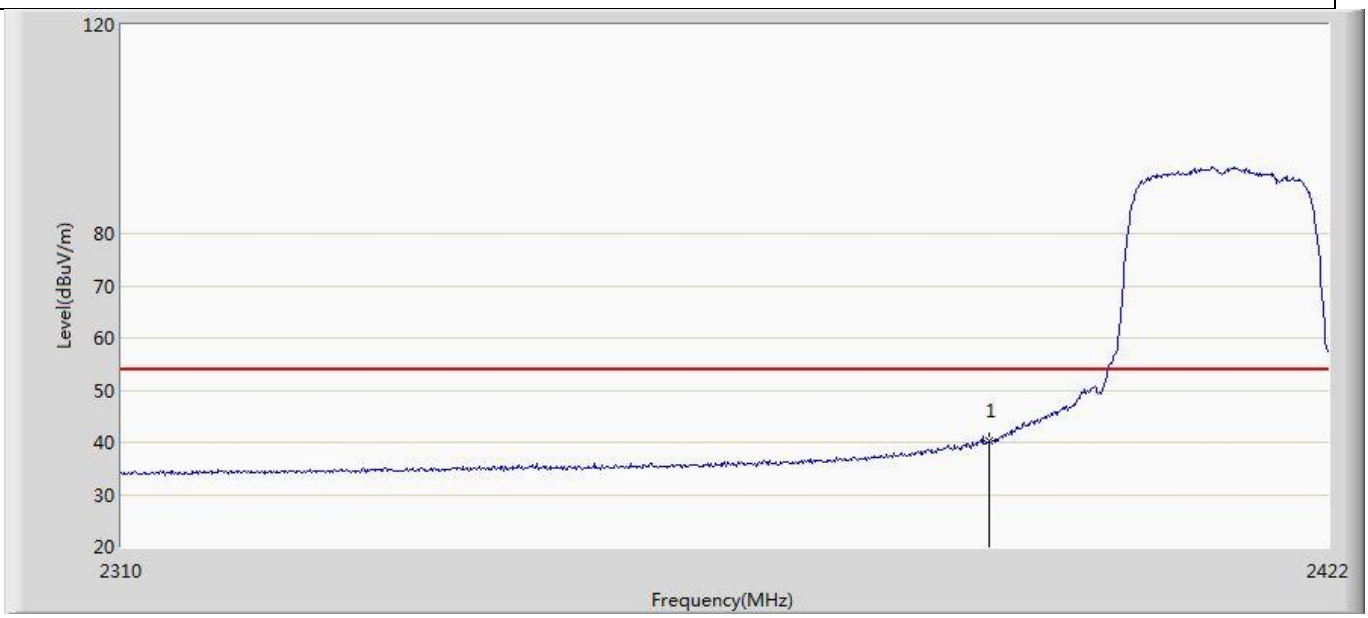

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2483.500 | 45.970 | 11.514 | -8.030 | 54.000 | 34.456 | AV |
| 2 | | 2490.304 | 45.932 | 11.401 | -8.068 | 54.000 | 34.531 | AV |

| | |
|---|---|
| Profile: 2410570R | Page No.: 9 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:16 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 2：Transmit at 2412MHz by 802.11g with Ant1 | |



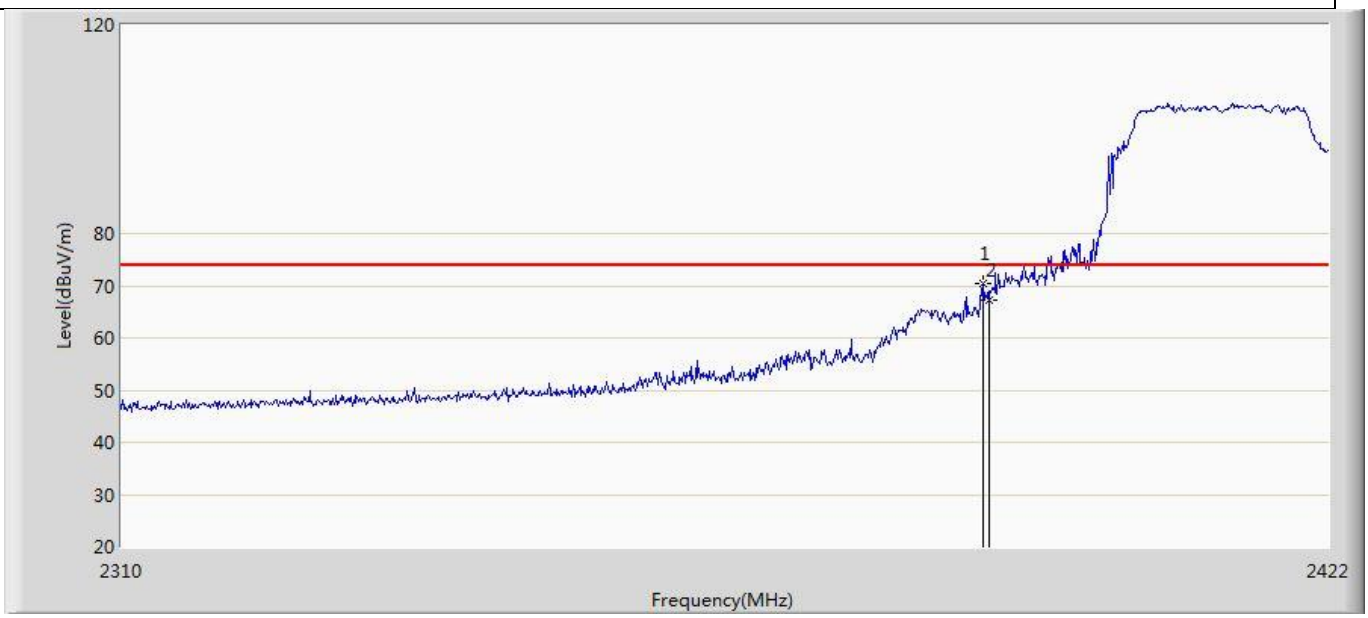

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2389.296 | 61.925 | 27.777 | -12.075 | 74.000 | 34.148 | PK |
| 2 | | 2390.000 | 59.716 | 25.565 | -14.284 | 74.000 | 34.151 | PK |

| | |
|---|---|
| Profile: 2410570R | Page No.: 10 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:18 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 2：Transmit at 2412MHz by 802.11g with Ant1 | |



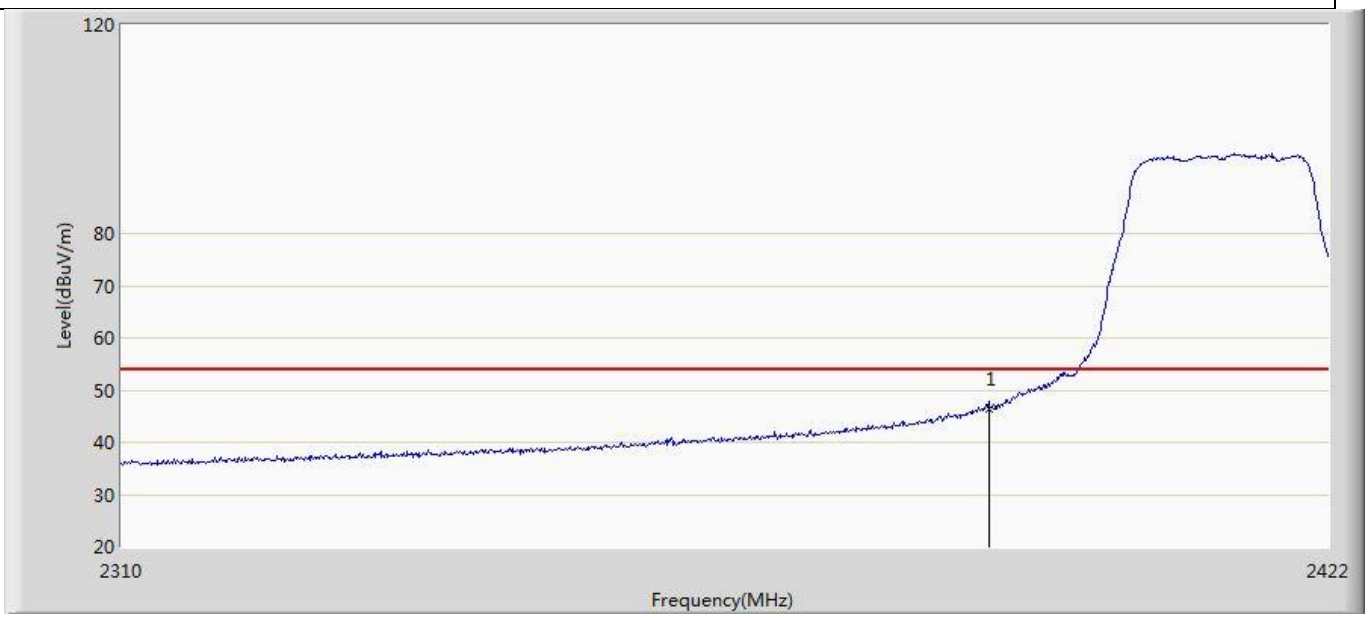

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2390.000 | 40.403 | 6.252 | -13.597 | 54.000 | 34.151 | AV |

| | |
|---|---|
| Profile: 2410570R | Page No.: 11 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:20 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 2：Transmit at 2412MHz by 802.11g with Ant1 | |



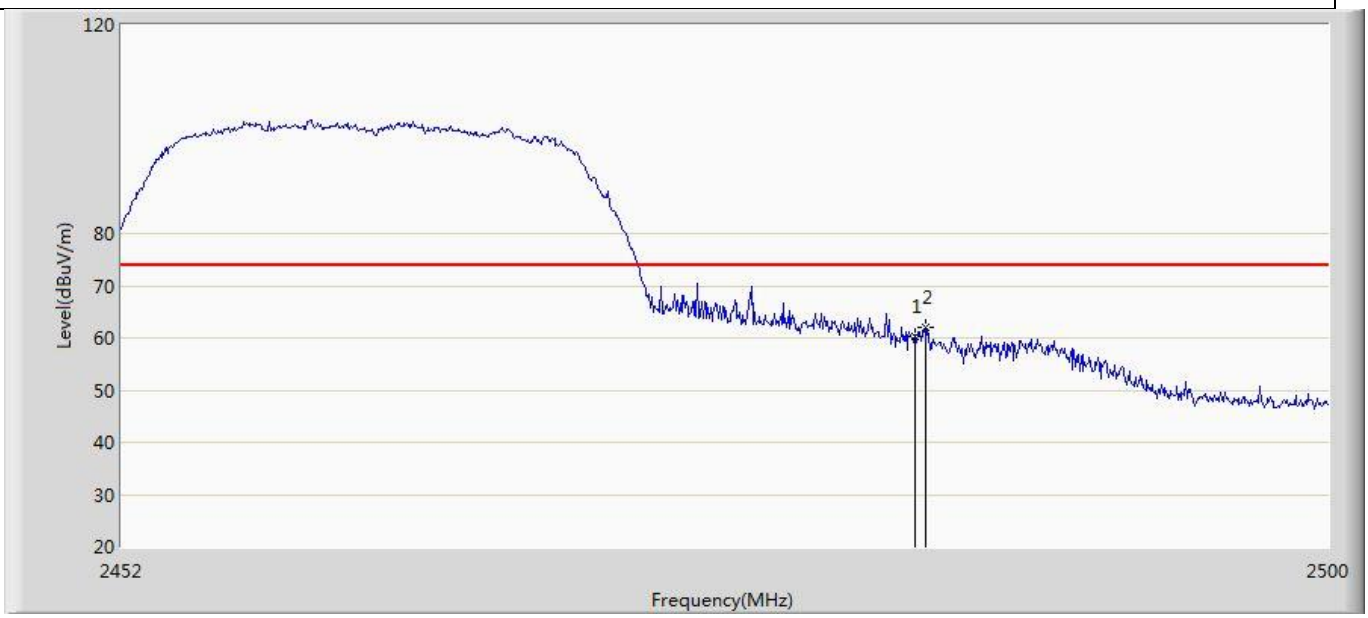

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2389.520 | 70.371 | 36.222 | -3.629 | 74.000 | 34.148 | PK |
| 2 | | 2390.000 | 67.142 | 32.991 | -6.858 | 74.000 | 34.151 | PK |

| | |
|---|---|
| Profile: 2410570R | Page No.: 12 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:22 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 2：Transmit at 2412MHz by 802.11g with Ant1 | |



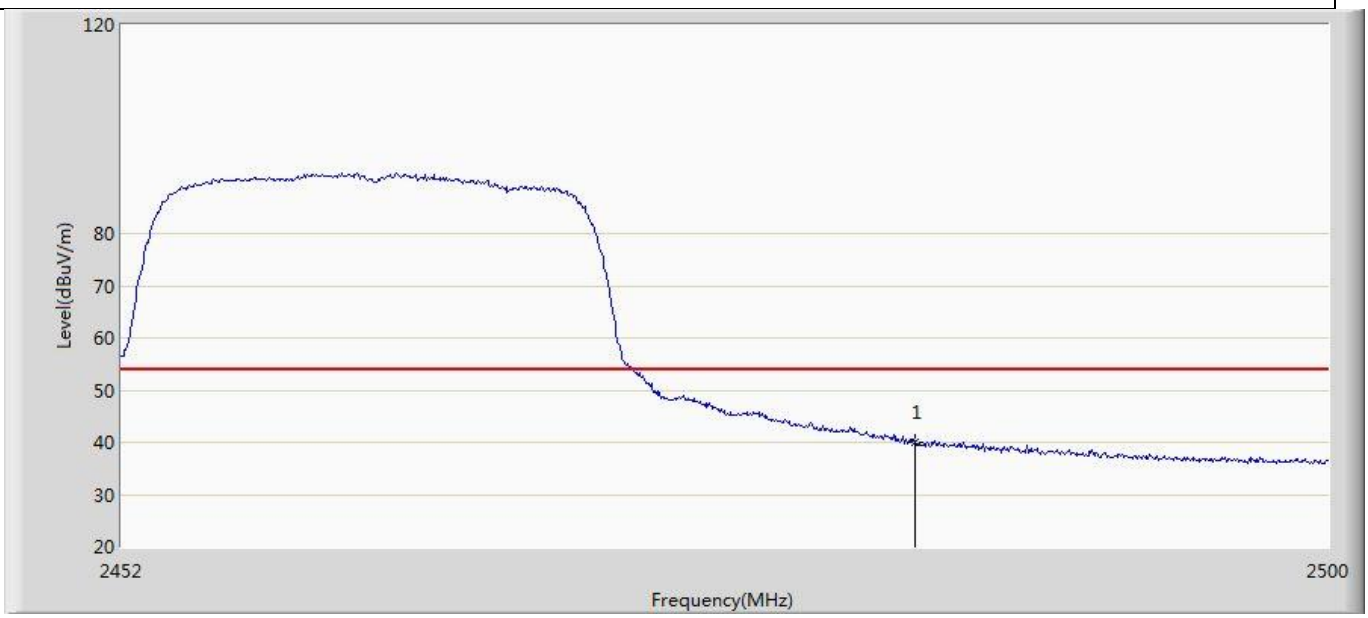

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2390.000 | 46.438 | 12.287 | -7.562 | 54.000 | 34.151 | AV |

| | |
|---|---|
| Profile: 2410570R | Page No.: 13 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:24 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 2：Transmit at 2462MHz by 802.11g with Ant1 | |



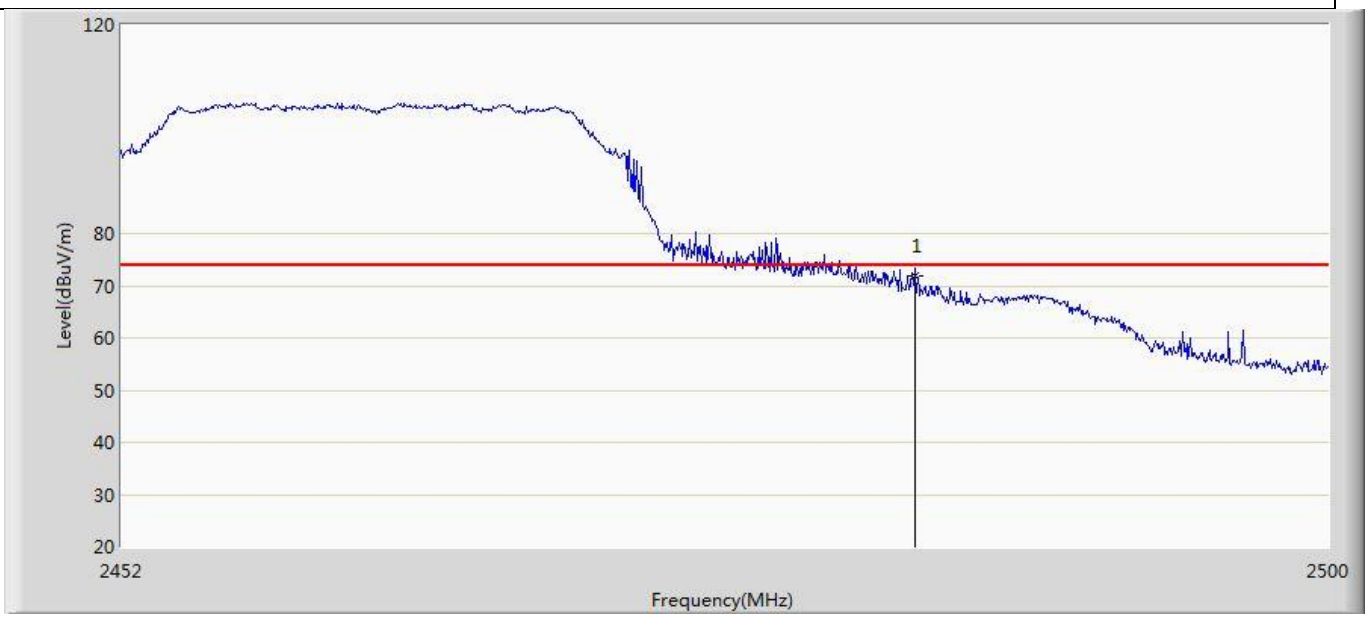

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2483.500 | 60.221 | 25.765 | -13.779 | 74.000 | 34.456 | PK |
| 2 | * | 2483.872 | 61.916 | 27.456 | -12.084 | 74.000 | 34.459 | PK |

| | |
|---|---|
| Profile: 2410570R | Page No.: 14 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:26 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 2：Transmit at 2462MHz by 802.11g with Ant1 | |



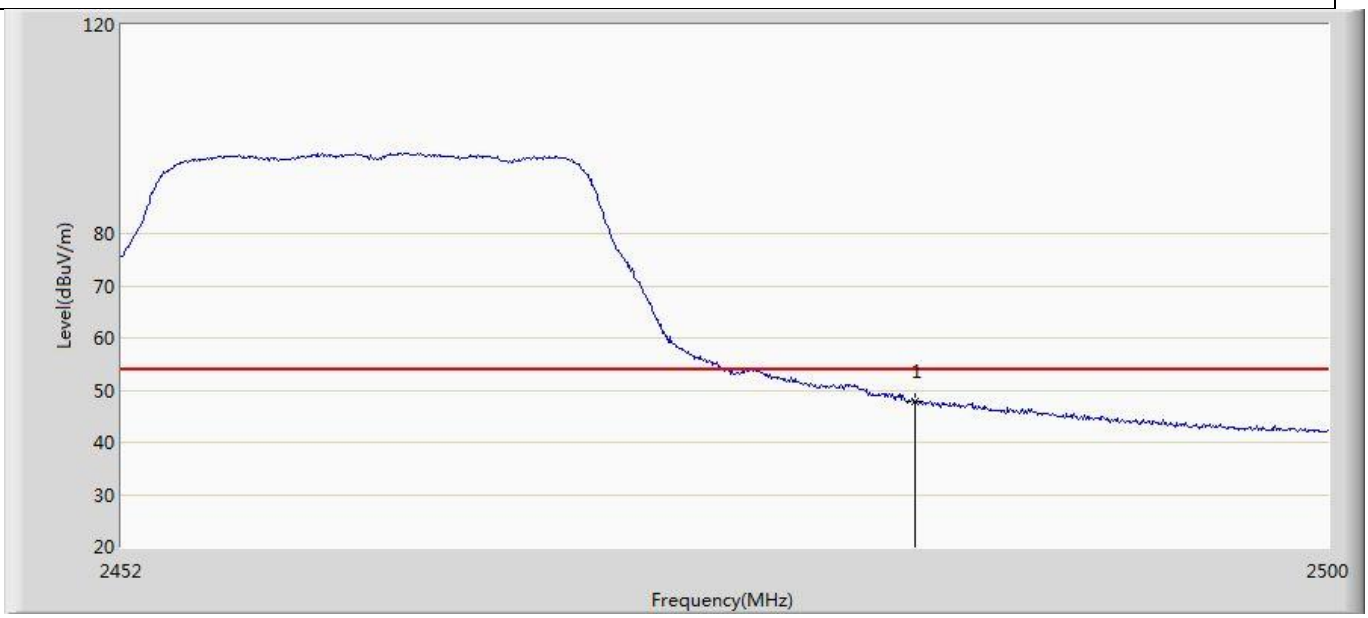

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2483.500 | 39.986 | 5.530 | -14.014 | 54.000 | 34.456 | AV |

| | |
|---|---|
| Profile: 2410570R | Page No.: 15 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:27 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 2：Transmit at 2462MHz by 802.11g with Ant1 | |



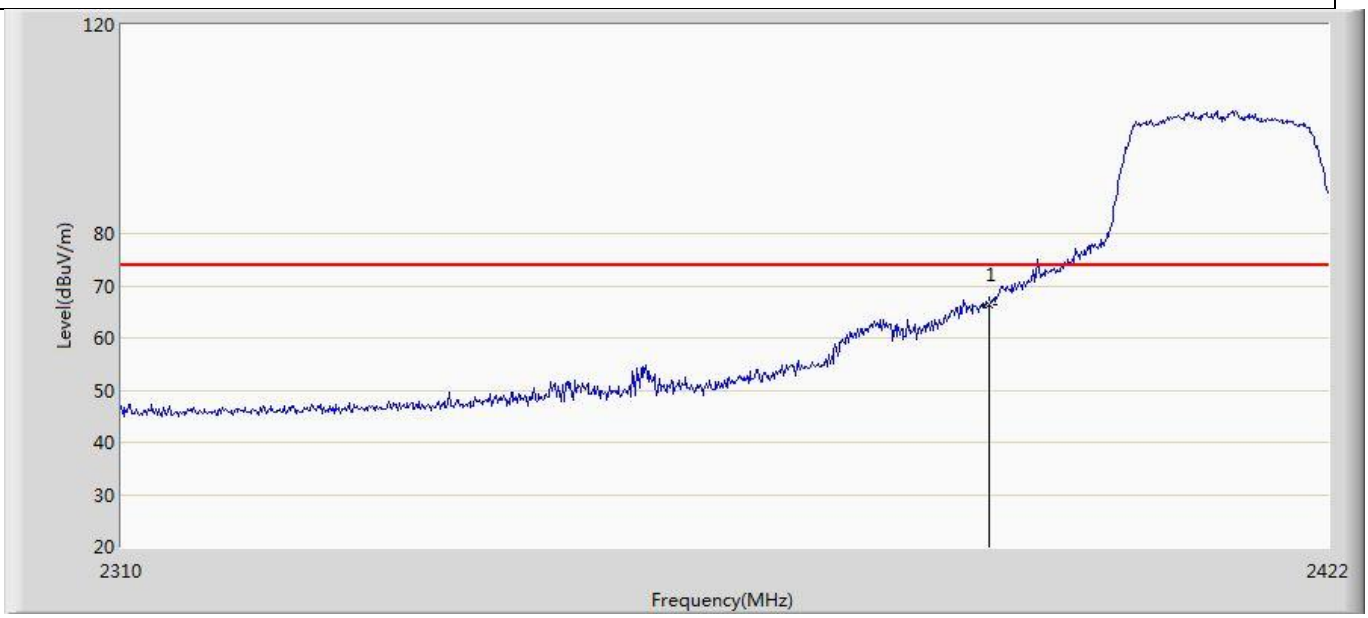

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2483.500 | 71.787 | 37.331 | -2.213 | 74.000 | 34.456 | PK |

| | |
|---|---|
| Profile: 2410570R | Page No.: 16 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:29 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 2：Transmit at 2462MHz by 802.11g with Ant1 | |



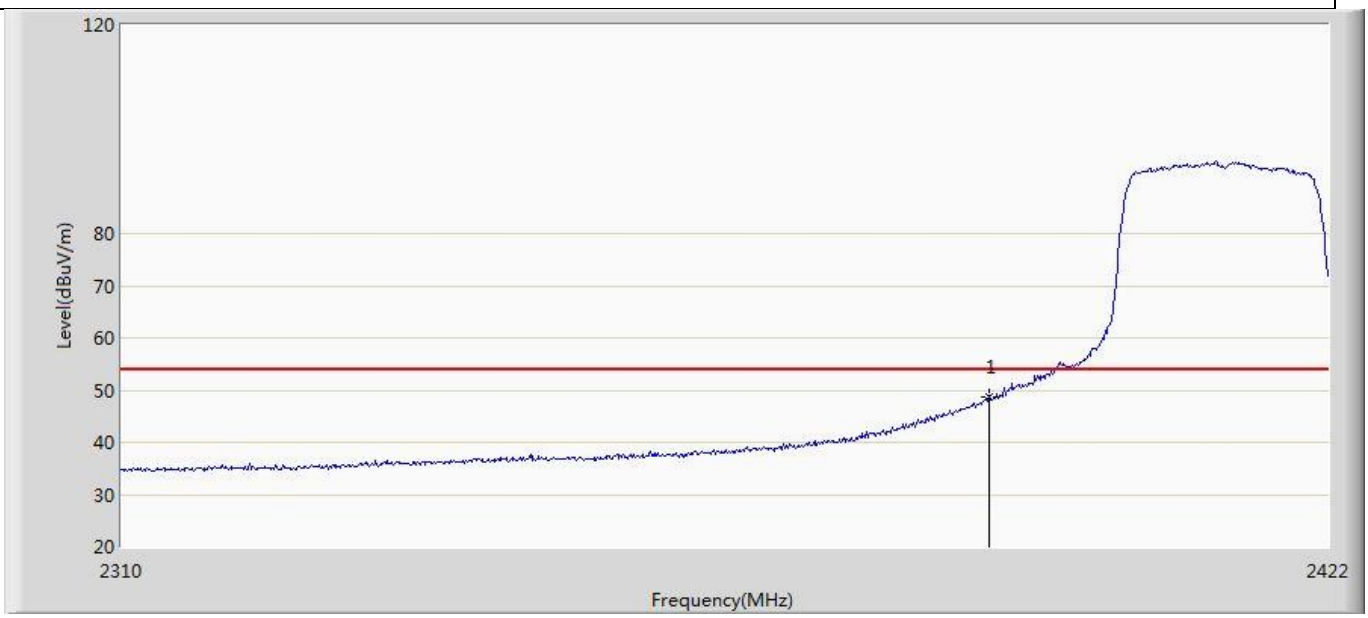

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2483.500 | 47.791 | 13.335 | -6.209 | 54.000 | 34.456 | AV |

| | |
|---|---|
| Profile: 2410570R | Page No.: 17 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:31 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 3：Transmit at 2412MHz by 802.11n(20MHz) with Ant1 | |



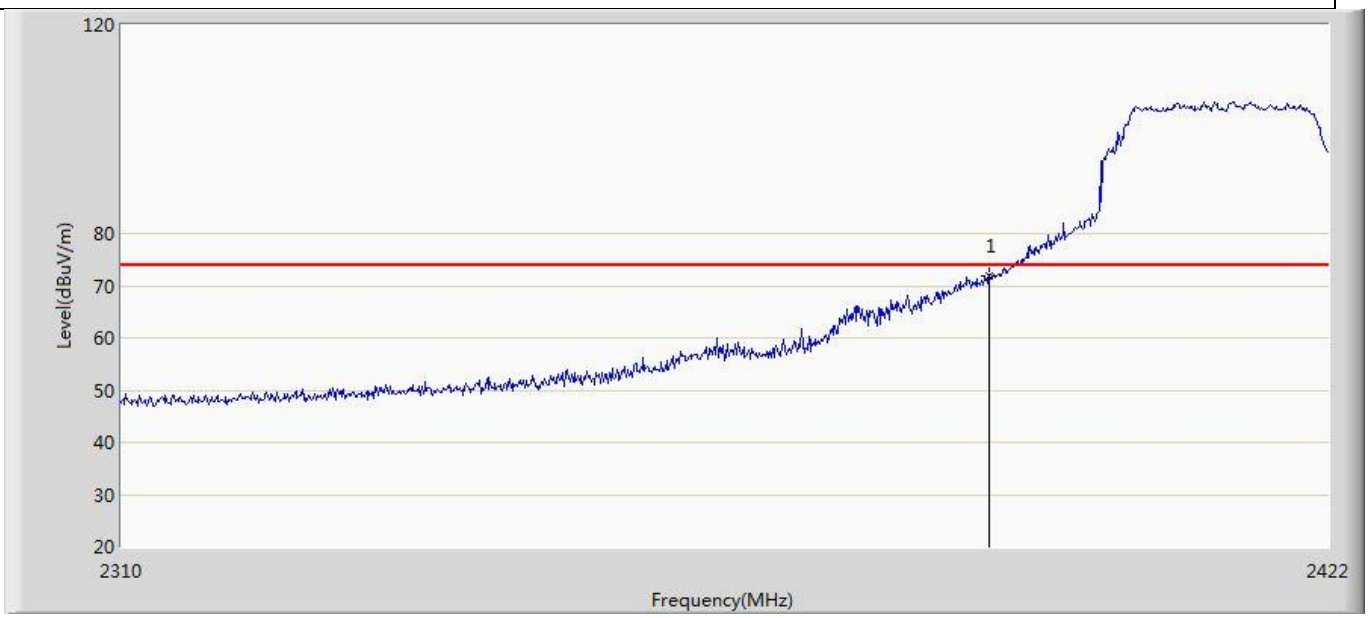

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2390.000 | 66.380 | 32.229 | -7.620 | 74.000 | 34.151 | PK |

| | |
|---|---|
| Profile: 2410570R | Page No.: 18 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:33 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 3：Transmit at 2412MHz by 802.11n(20MHz) with Ant1 | |



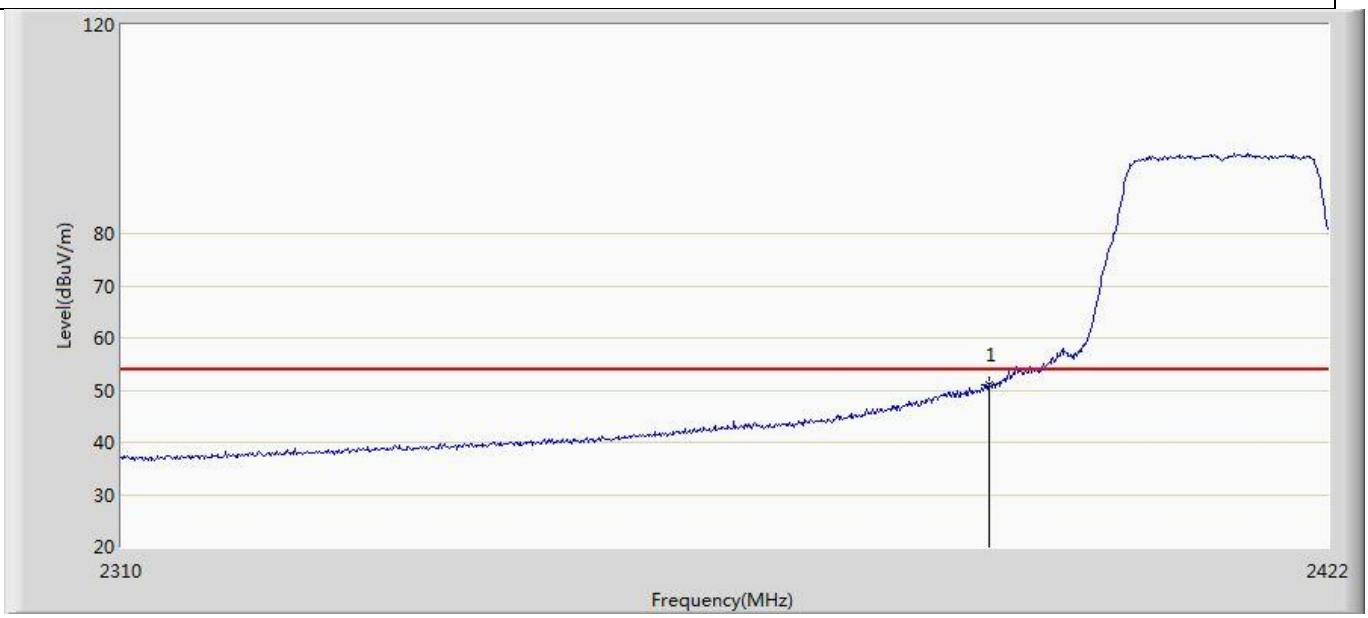

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2390.000 | 48.757 | 14.606 | -5.243 | 54.000 | 34.151 | AV |

| | |
|---|---|
| Profile: 2410570R | Page No.: 19 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:35 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 3：Transmit at 2412MHz by 802.11n(20MHz) with Ant1 | |



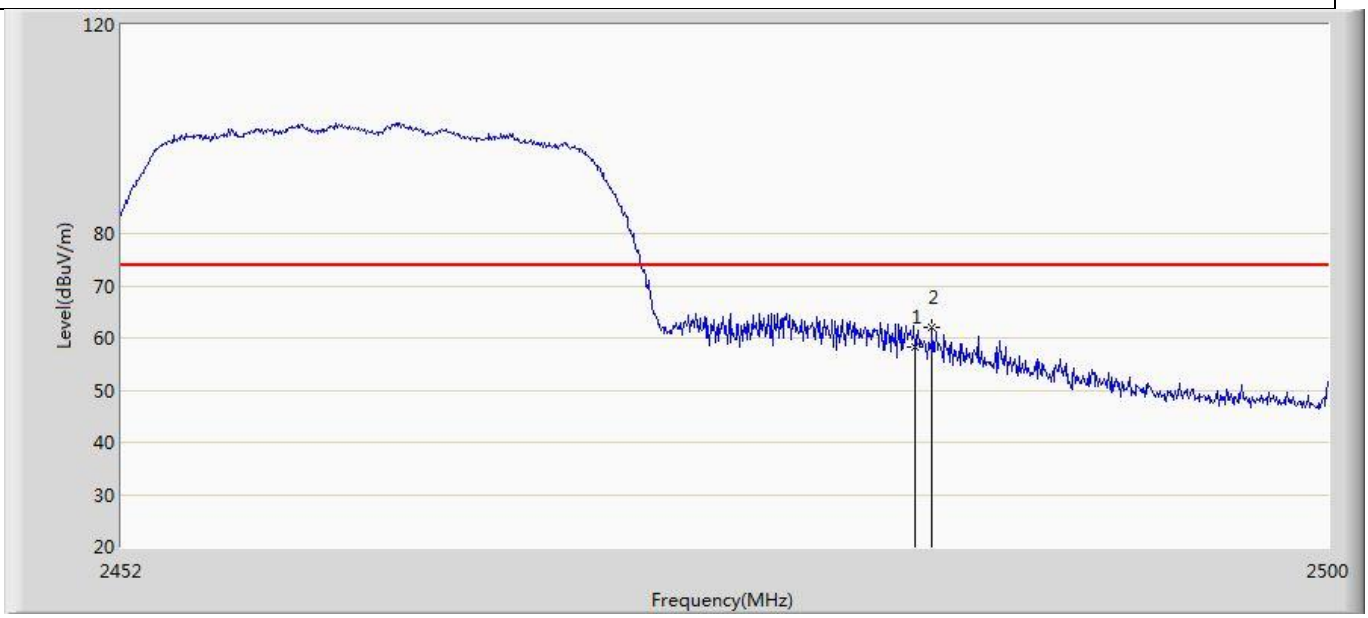

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2390.000 | 71.945 | 37.794 | -2.055 | 74.000 | 34.151 | PK |

| | |
|---|---|
| Profile: 2410570R | Page No.: 20 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:38 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 3：Transmit at 2412MHz by 802.11n(20MHz) with Ant1 | |



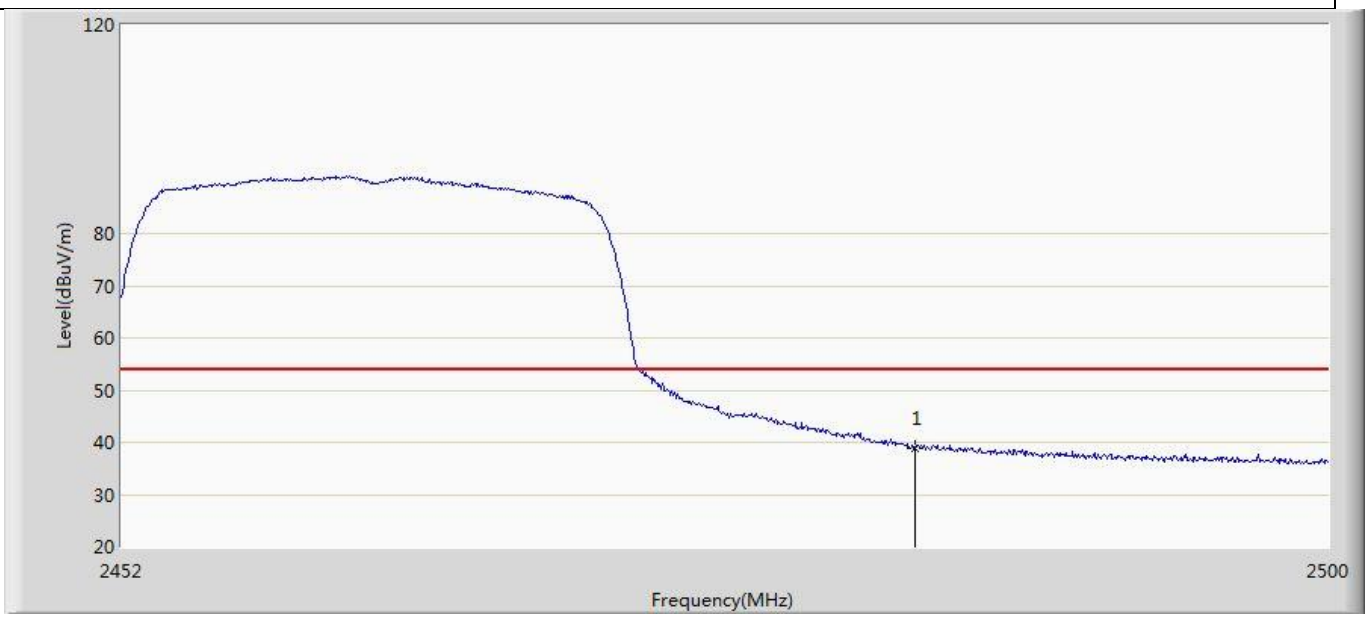

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2390.000 | 51.142 | 16.991 | -2.858 | 54.000 | 34.151 | AV |

| | |
|---|---|
| Profile: 2410570R | Page No.: 21 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:40 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 3：Transmit at 2462MHz by 802.11n(20MHz) with Ant1 | |



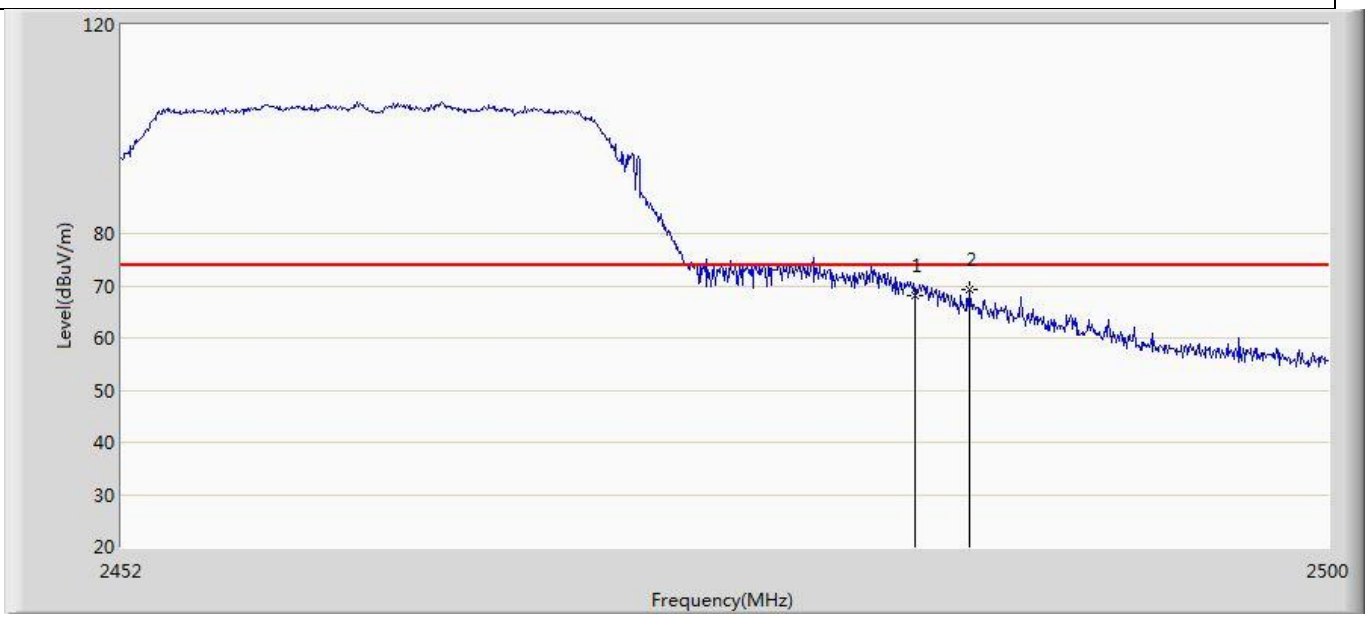

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2483.500 | 58.152 | 23.696 | -15.848 | 74.000 | 34.456 | PK |
| 2 | * | 2484.160 | 62.094 | 27.631 | -11.906 | 74.000 | 34.463 | PK |

| | |
|---|---|
| Profile: 2410570R | Page No.: 22 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:41 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 3：Transmit at 2462MHz by 802.11n(20MHz) with Ant1 | |



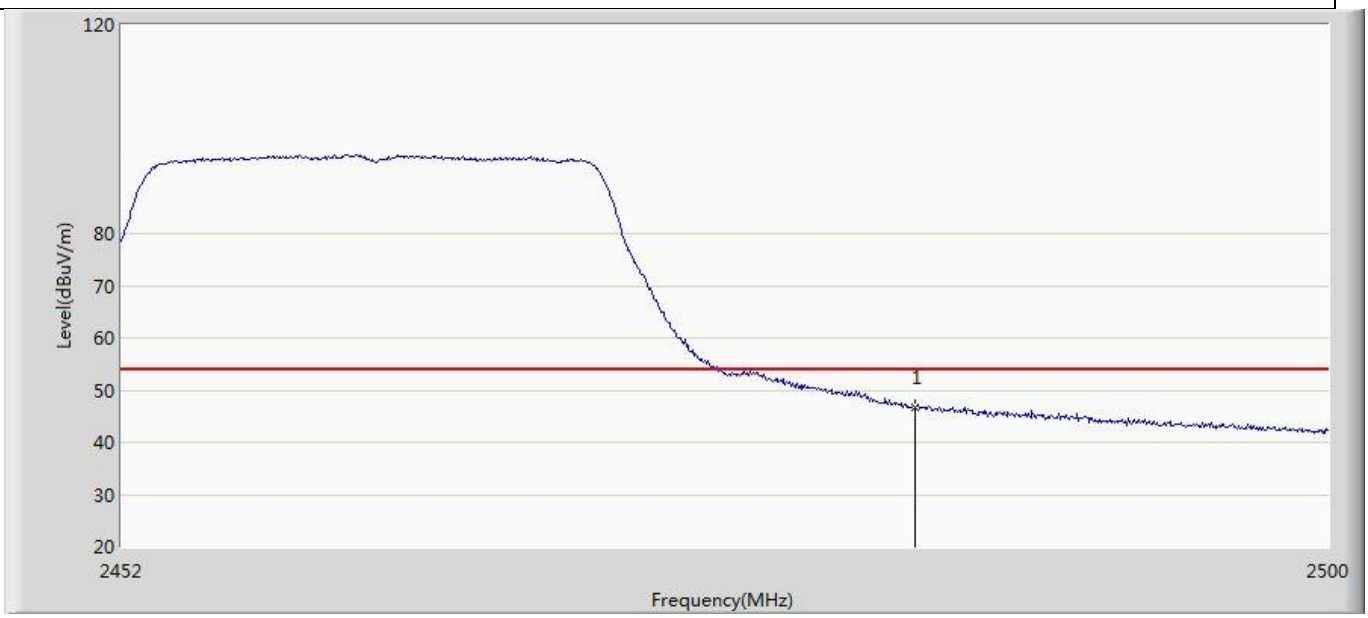

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2483.500 | 38.937 | 4.481 | -15.063 | 54.000 | 34.456 | AV |

| | |
|---|---|
| Profile: 2410570R | Page No.: 23 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:43 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 3：Transmit at 2462MHz by 802.11n(20MHz) with Ant1 | |



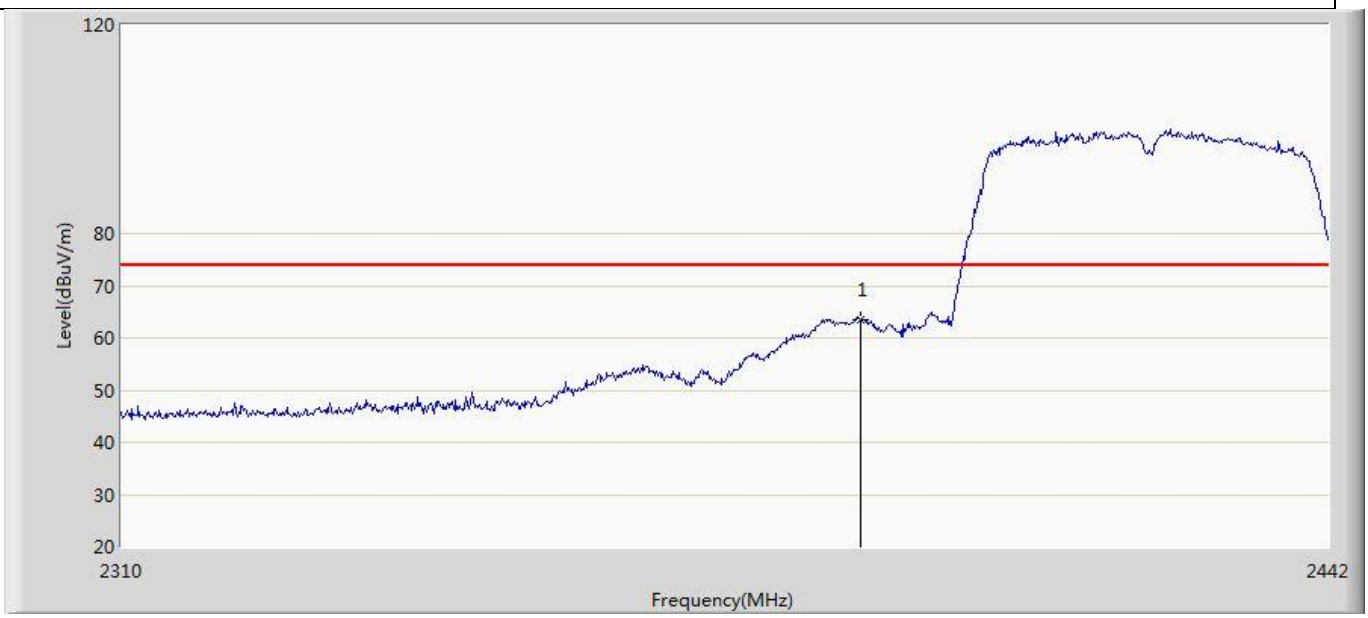

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2483.500 | 68.012 | 33.556 | -5.988 | 74.000 | 34.456 | PK |
| 2 | * | 2485.648 | 69.334 | 34.854 | -4.666 | 74.000 | 34.480 | PK |

| | |
|---|---|
| Profile: 2410570R | Page No.: 24 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:44 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 3：Transmit at 2462MHz by 802.11n(20MHz) with Ant1 | |



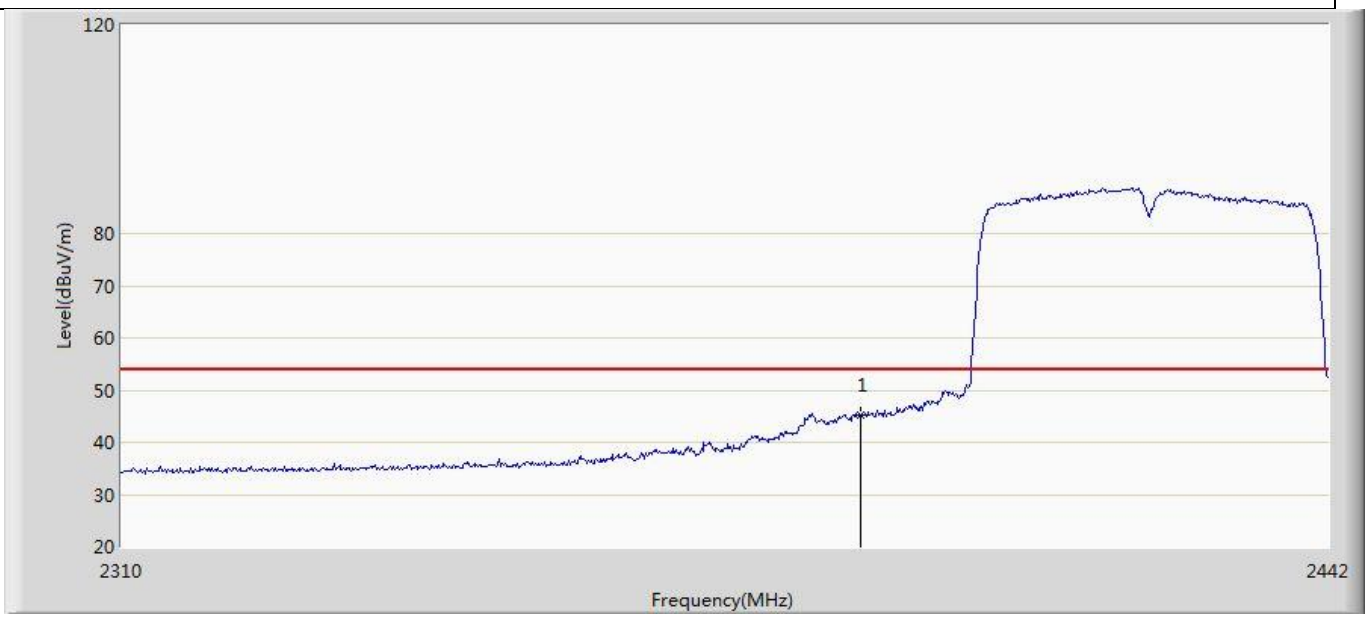

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2483.500 | 46.698 | 12.242 | -7.302 | 54.000 | 34.456 | AV |

| | |
|---|---|
| Profile: 2410570R | Page No.: 25 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:46 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 4：Transmit at 2422MHz by 802.11n(40MHz) with Ant1 | |




| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2390.000 | 63.383 | 29.232 | -10.617 | 74.000 | 34.151 | PK |

| | |
|---|---|
| Profile: 2410570R | Page No.: 26 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:47 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 4：Transmit at 2422MHz by 802.11n(40MHz) with Ant1 | |

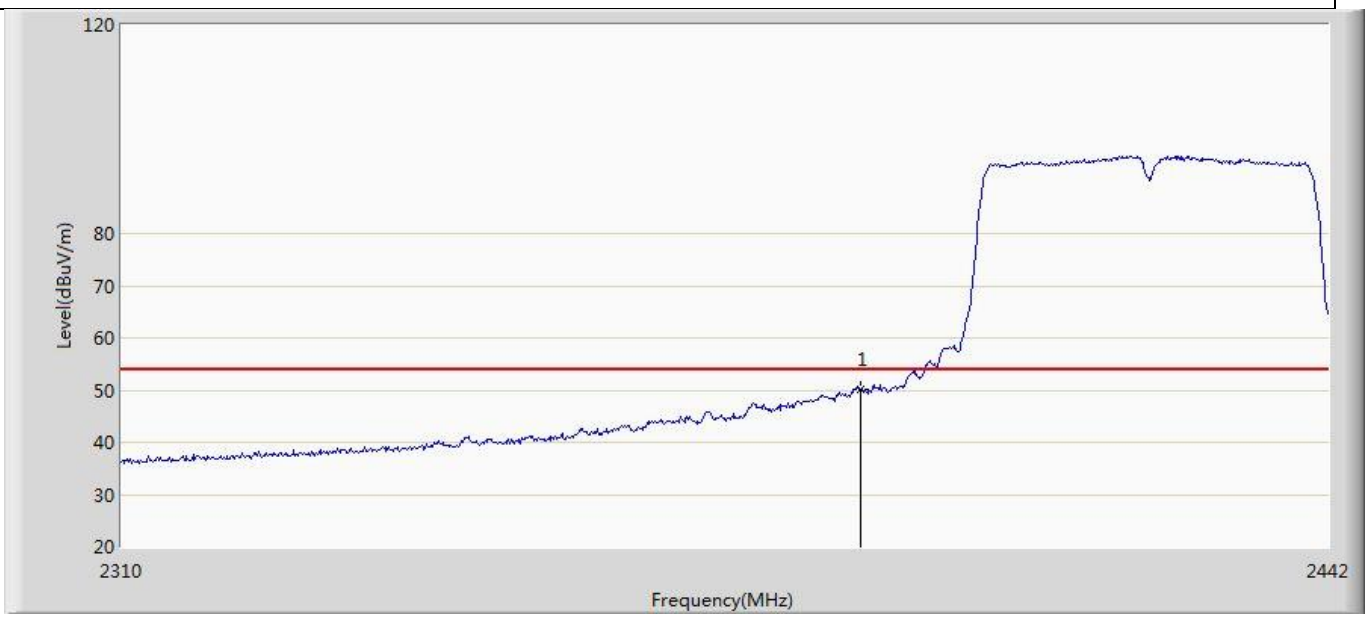



| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2390.000 | 45.152 | 11.001 | -8.848 | 54.000 | 34.151 | AV |

| | |
|---|---|
| Profile: 2410570R | Page No.: 27 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:49 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 4：Transmit at 2422MHz by 802.11n(40MHz) with Ant1 | |

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2390.000 | 70.054 | 35.903 | -3.946 | 74.000 | 34.151 | PK |

| | |
|---|---|
| Profile: 2410570R | Page No.: 28 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:51 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 4：Transmit at 2422MHz by 802.11n(40MHz) with Ant1 | |

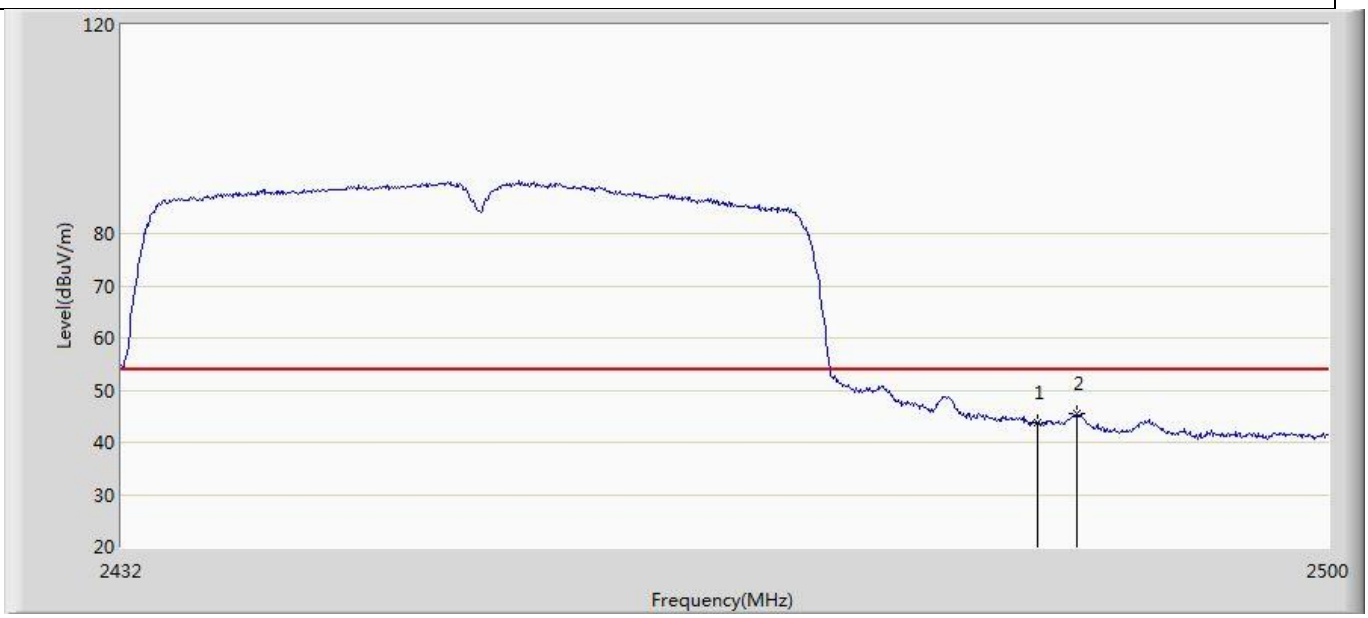



| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2390.000 | 50.113 | 15.962 | -3.887 | 54.000 | 34.151 | AV |

| | |
|---|---|
| Profile: 2410570R | Page No.: 29 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:53 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 4：Transmit at 2452MHz by 802.11n(40MHz) with Ant1 | |

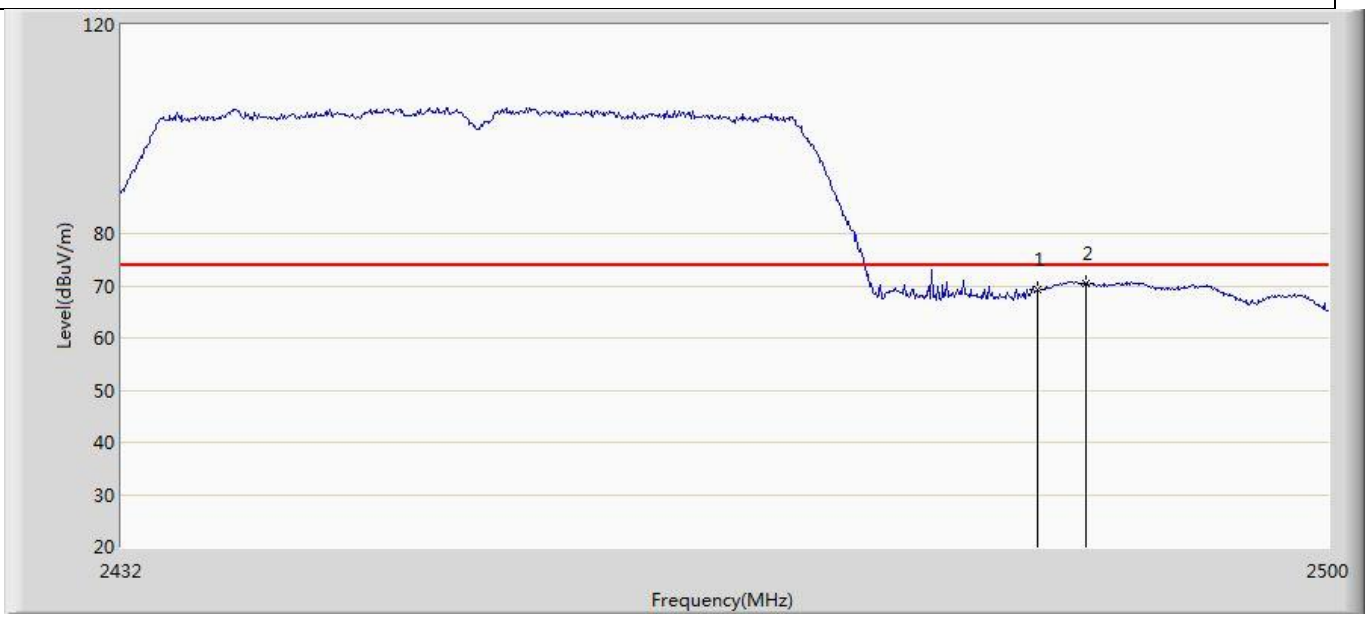
| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2483.500 | 59.645 | 25.189 | -14.355 | 74.000 | 34.456 | PK |
| 2 | * | 2486.604 | 61.554 | 27.064 | -12.446 | 74.000 | 34.490 | PK |

| | |
|---|---|
| Profile: 2410570R | Page No.: 30 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:55 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 4：Transmit at 2452MHz by 802.11n(40MHz) with Ant1 | |



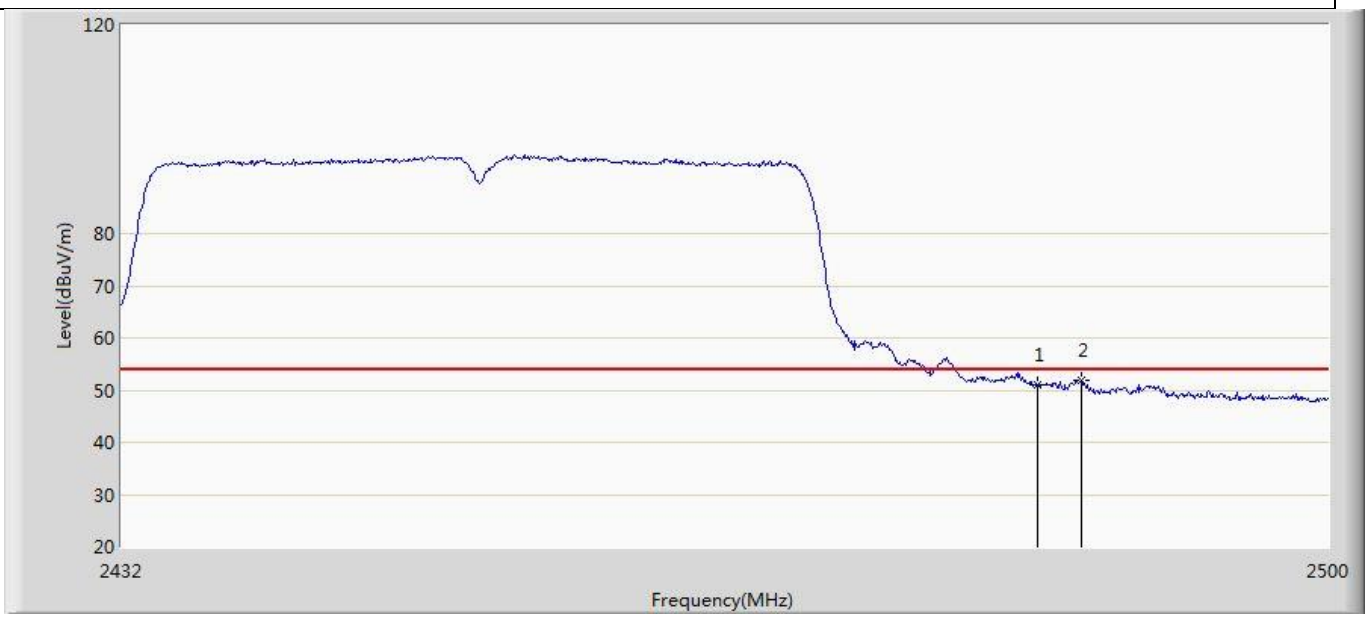

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2483.500 | 43.711 | 9.255 | -10.289 | 54.000 | 34.456 | AV |
| 2 | * | 2485.720 | 45.381 | 10.901 | -8.619 | 54.000 | 34.480 | AV |

| | |
|---|---|
| Profile: 2410570R | Page No.: 31 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:57 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 4：Transmit at 2452MHz by 802.11n(40MHz) with Ant1 | |




| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2483.500 | 69.296 | 34.840 | -4.704 | 74.000 | 34.456 | PK |
| 2 | * | 2486.196 | 70.522 | 36.036 | -3.478 | 74.000 | 34.486 | PK |

| | |
|---|---|
| Profile: 2410570R | Page No.: 32 |
| Engineer: Pengchengyang | |
| Site: AC5 | Time: 2024/02/01 - 13:59 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical |
| EUT: POS Station | Power: AC 120V/60Hz |
| Note: Mode 4：Transmit at 2452MHz by 802.11n(40MHz) with Ant1 | |




| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2483.500 | 50.870 | 16.414 | -3.130 | 54.000 | 34.456 | AV |
| 2 | * | 2485.992 | 51.884 | 17.401 | -2.116 | 54.000 | 34.483 | AV |

Note:
1. " * ", means this data is the worst emission level.
2. Measured Level = Reading Level + Factor.
3. We have evaluated each operating mode and SISO/MIMO mode, SISO mode Antenna1 is worse ,shown in the report is the worst SISO Antenna1 data.

# 10 TEST RESULT-APPENDIX E: CONDUCTED SPURIOUS EMISSION

| TestMode | Antenna | Frequency[MHz] | FreqRange [Mhz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|---|---|---|---|---|---|---|---|
| 11B | Ant1 | 2412 | 30~1000 | 13.96 | -47.77 | ≤-16.04 | PASS |
| 11B | Ant1 | 2412 | 1000~3000 | 13.96 | -46.2 | ≤-16.04 | PASS |
| 11B | Ant1 | 2412 | 3000~5000 | 13.96 | -50.12 | ≤-16.04 | PASS |
| 11B | Ant1 | 2412 | 5000~7000 | 13.96 | -51.4 | ≤-16.04 | PASS |
| 11B | Ant1 | 2412 | 7000~9000 | 13.96 | -38.98 | ≤-16.04 | PASS |
| 11B | Ant1 | 2412 | 9000~11000 | 13.96 | -51.6 | ≤-16.04 | PASS |
| 11B | Ant1 | 2412 | 11000~13000 | 13.96 | -50.32 | ≤-16.04 | PASS |
| 11B | Ant1 | 2412 | 13000~15000 | 13.96 | -46.12 | ≤-16.04 | PASS |
| 11B | Ant1 | 2412 | 15000~17000 | 13.96 | -45.09 | ≤-16.04 | PASS |
| 11B | Ant1 | 2412 | 17000~19000 | 13.96 | -45.14 | ≤-16.04 | PASS |
| 11B | Ant1 | 2412 | 19000~21000 | 13.96 | -43.46 | ≤-16.04 | PASS |
| 11B | Ant1 | 2412 | 21000~23000 | 13.96 | -42.66 | ≤-16.04 | PASS |
| 11B | Ant1 | 2412 | 23000~25000 | 13.96 | -41.11 | ≤-16.04 | PASS |
| 11B | Ant1 | 2437 | 30~1000 | 13.75 | -51.14 | ≤-16.25 | PASS |
| 11B | Ant1 | 2437 | 1000~3000 | 13.75 | -49.3 | ≤-16.25 | PASS |
| 11B | Ant1 | 2437 | 3000~5000 | 13.75 | -47.75 | ≤-16.25 | PASS |
| 11B | Ant1 | 2437 | 5000~7000 | 13.75 | -51.01 | ≤-16.25 | PASS |
| 11B | Ant1 | 2437 | 7000~9000 | 13.75 | -42.76 | ≤-16.25 | PASS |
| 11B | Ant1 | 2437 | 9000~11000 | 13.75 | -50.98 | ≤-16.25 | PASS |
| 11B | Ant1 | 2437 | 11000~13000 | 13.75 | -51.09 | ≤-16.25 | PASS |
| 11B | Ant1 | 2437 | 13000~15000 | 13.75 | -45.86 | ≤-16.25 | PASS |
| 11B | Ant1 | 2437 | 15000~17000 | 13.75 | -45.17 | ≤-16.25 | PASS |
| 11B | Ant1 | 2437 | 17000~19000 | 13.75 | -44.69 | ≤-16.25 | PASS |
| 11B | Ant1 | 2437 | 19000~21000 | 13.75 | -43.67 | ≤-16.25 | PASS |
| 11B | Ant1 | 2437 | 21000~23000 | 13.75 | -42.89 | ≤-16.25 | PASS |
| 11B | Ant1 | 2437 | 23000~25000 | 13.75 | -41.35 | ≤-16.25 | PASS |
| 11B | Ant1 | 2462 | 30~1000 | 12.48 | -49.68 | ≤-17.52 | PASS |
| 11B | Ant1 | 2462 | 1000~3000 | 12.48 | -48.27 | ≤-17.52 | PASS |
| 11B | Ant1 | 2462 | 3000~5000 | 12.48 | -49.58 | ≤-17.52 | PASS |
| 11B | Ant1 | 2462 | 5000~7000 | 12.48 | -50.8 | ≤-17.52 | PASS |
| 11B | Ant1 | 2462 | 7000~9000 | 12.48 | -39.25 | ≤-17.52 | PASS |
| 11B | Ant1 | 2462 | 9000~11000 | 12.48 | -50.85 | ≤-17.52 | PASS |
| 11B | Ant1 | 2462 | 11000~13000 | 12.48 | -51.52 | ≤-17.52 | PASS |
| 11B | Ant1 | 2462 | 13000~15000 | 12.48 | -46.7 | ≤-17.52 | PASS |
| 11B | Ant1 | 2462 | 15000~17000 | 12.48 | -44.99 | ≤-17.52 | PASS |
| 11B | Ant1 | 2462 | 17000~19000 | 12.48 | -45.02 | ≤-17.52 | PASS |
| 11B | Ant1 | 2462 | 19000~21000 | 12.48 | -43.6 | ≤-17.52 | PASS |
| 11B | Ant1 | 2462 | 21000~23000 | 12.48 | -43.19 | ≤-17.52 | PASS |
| 11B | Ant1 | 2462 | 23000~25000 | 12.48 | -41.9 | ≤-17.52 | PASS |
| 11G | Ant1 | 2412 | 30~1000 | 5.53 | -47.16 | ≤-24.47 | PASS |
| 11G | Ant1 | 2412 | 1000~3000 | 5.53 | -48.62 | ≤-24.47 | PASS |
| 11G | Ant1 | 2412 | 3000~5000 | 5.53 | -50.5 | ≤-24.47 | PASS |
| 11G | Ant1 | 2412 | 5000~7000 | 5.53 | -51.14 | ≤-24.47 | PASS |
| 11G | Ant1 | 2412 | 7000~9000 | 5.53 | -47.4 | ≤-24.47 | PASS |
| 11G | Ant1 | 2412 | 9000~11000 | 5.53 | -50.88 | ≤-24.47 | PASS |
| 11G | Ant1 | 2412 | 11000~13000 | 5.53 | -51.8 | ≤-24.47 | PASS |

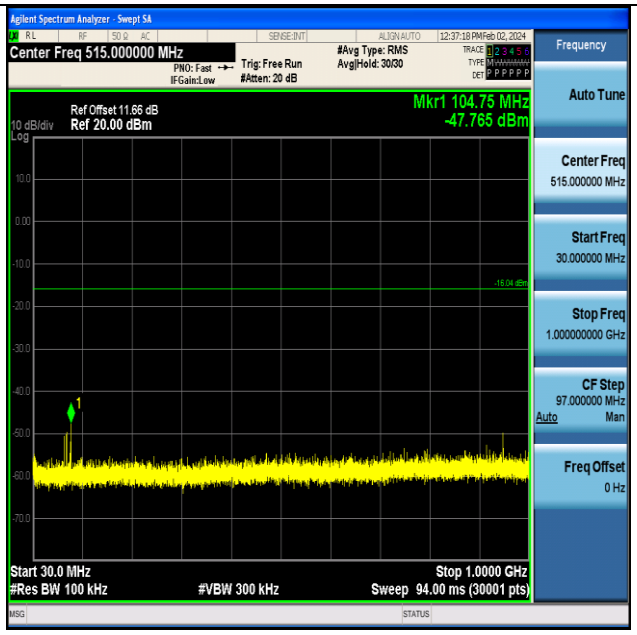
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 11G | Ant1 | 2412 | 13000~15000 | 5.53 | -46.62 | ≤-24.47 | PASS |
| 11G | Ant1 | 2412 | 15000~17000 | 5.53 | -44.44 | ≤-24.47 | PASS |
| 11G | Ant1 | 2412 | 17000~19000 | 5.53 | -44.76 | ≤-24.47 | PASS |
| 11G | Ant1 | 2412 | 19000~21000 | 5.53 | -43.52 | ≤-24.47 | PASS |
| 11G | Ant1 | 2412 | 21000~23000 | 5.53 | -42.78 | ≤-24.47 | PASS |
| 11G | Ant1 | 2412 | 23000~25000 | 5.53 | -41.63 | ≤-24.47 | PASS |
| 11G | Ant1 | 2437 | 30~1000 | 5.73 | -48.39 | ≤-24.27 | PASS |
| 11G | Ant1 | 2437 | 1000~3000 | 5.73 | -48.46 | ≤-24.27 | PASS |
| 11G | Ant1 | 2437 | 3000~5000 | 5.73 | -50.33 | ≤-24.27 | PASS |
| 11G | Ant1 | 2437 | 5000~7000 | 5.73 | -51.19 | ≤-24.27 | PASS |
| 11G | Ant1 | 2437 | 7000~9000 | 5.73 | -49.09 | ≤-24.27 | PASS |
| 11G | Ant1 | 2437 | 9000~11000 | 5.73 | -51.65 | ≤-24.27 | PASS |
| 11G | Ant1 | 2437 | 11000~13000 | 5.73 | -51.61 | ≤-24.27 | PASS |
| 11G | Ant1 | 2437 | 13000~15000 | 5.73 | -47.14 | ≤-24.27 | PASS |
| 11G | Ant1 | 2437 | 15000~17000 | 5.73 | -45.16 | ≤-24.27 | PASS |
| 11G | Ant1 | 2437 | 17000~19000 | 5.73 | -44.75 | ≤-24.27 | PASS |
| 11G | Ant1 | 2437 | 19000~21000 | 5.73 | -43.46 | ≤-24.27 | PASS |
| 11G | Ant1 | 2437 | 21000~23000 | 5.73 | -42.52 | ≤-24.27 | PASS |
| 11G | Ant1 | 2437 | 23000~25000 | 5.73 | -41.51 | ≤-24.27 | PASS |
| 11G | Ant1 | 2462 | 30~1000 | 5.76 | -49.04 | ≤-24.24 | PASS |
| 11G | Ant1 | 2462 | 1000~3000 | 5.76 | -48.86 | ≤-24.24 | PASS |
| 11G | Ant1 | 2462 | 3000~5000 | 5.76 | -50.41 | ≤-24.24 | PASS |
| 11G | Ant1 | 2462 | 5000~7000 | 5.76 | -50.62 | ≤-24.24 | PASS |
| 11G | Ant1 | 2462 | 7000~9000 | 5.76 | -47.84 | ≤-24.24 | PASS |
| 11G | Ant1 | 2462 | 9000~11000 | 5.76 | -52.17 | ≤-24.24 | PASS |
| 11G | Ant1 | 2462 | 11000~13000 | 5.76 | -51.24 | ≤-24.24 | PASS |
| 11G | Ant1 | 2462 | 13000~15000 | 5.76 | -47.9 | ≤-24.24 | PASS |
| 11G | Ant1 | 2462 | 15000~17000 | 5.76 | -46.2 | ≤-24.24 | PASS |
| 11G | Ant1 | 2462 | 17000~19000 | 5.76 | -45.95 | ≤-24.24 | PASS |
| 11G | Ant1 | 2462 | 19000~21000 | 5.76 | -43.68 | ≤-24.24 | PASS |
| 11G | Ant1 | 2462 | 21000~23000 | 5.76 | -44.26 | ≤-24.24 | PASS |
| 11G | Ant1 | 2462 | 23000~25000 | 5.76 | -42.05 | ≤-24.24 | PASS |
| 11N20SISO | Ant1 | 2412 | 30~1000 | 7.18 | -49.34 | ≤-22.82 | PASS |
| 11N20SISO | Ant1 | 2412 | 1000~3000 | 7.18 | -47.51 | ≤-22.82 | PASS |
| 11N20SISO | Ant1 | 2412 | 3000~5000 | 7.18 | -50.49 | ≤-22.82 | PASS |
| 11N20SISO | Ant1 | 2412 | 5000~7000 | 7.18 | -51.13 | ≤-22.82 | PASS |
| 11N20SISO | Ant1 | 2412 | 7000~9000 | 7.18 | -46.5 | ≤-22.82 | PASS |
| 11N20SISO | Ant1 | 2412 | 9000~11000 | 7.18 | -51.48 | ≤-22.82 | PASS |
| 11N20SISO | Ant1 | 2412 | 11000~13000 | 7.18 | -50.62 | ≤-22.82 | PASS |
| 11N20SISO | Ant1 | 2412 | 13000~15000 | 7.18 | -47.18 | ≤-22.82 | PASS |
| 11N20SISO | Ant1 | 2412 | 15000~17000 | 7.18 | -46.04 | ≤-22.82 | PASS |
| 11N20SISO | Ant1 | 2412 | 17000~19000 | 7.18 | -44.8 | ≤-22.82 | PASS |
| 11N20SISO | Ant1 | 2412 | 19000~21000 | 7.18 | -43.68 | ≤-22.82 | PASS |
| 11N20SISO | Ant1 | 2412 | 21000~23000 | 7.18 | -43.14 | ≤-22.82 | PASS |
| 11N20SISO | Ant1 | 2412 | 23000~25000 | 7.18 | -41.37 | ≤-22.82 | PASS |
| 11N20SISO | Ant1 | 2437 | 30~1000 | 4.63 | -47.47 | ≤-25.37 | PASS |
| 11N20SISO | Ant1 | 2437 | 1000~3000 | 4.63 | -48.27 | ≤-25.37 | PASS |
| 11N20SISO | Ant1 | 2437 | 3000~5000 | 4.63 | -50.29 | ≤-25.37 | PASS |
| 11N20SISO | Ant1 | 2437 | 5000~7000 | 4.63 | -50.98 | ≤-25.37 | PASS |
| 11N20SISO | Ant1 | 2437 | 7000~9000 | 4.63 | -49.34 | ≤-25.37 | PASS |
| 11N20SISO | Ant1 | 2437 | 9000~11000 | 4.63 | -51.88 | ≤-25.37 | PASS |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 11N20SISO | Ant1 | 2437 | 11000~13000 | 4.63 | -50.89 | ≤-25.37 | PASS |
| 11N20SISO | Ant1 | 2437 | 13000~15000 | 4.63 | -47.62 | ≤-25.37 | PASS |
| 11N20SISO | Ant1 | 2437 | 15000~17000 | 4.63 | -44.6 | ≤-25.37 | PASS |
| 11N20SISO | Ant1 | 2437 | 17000~19000 | 4.63 | -45.28 | ≤-25.37 | PASS |
| 11N20SISO | Ant1 | 2437 | 19000~21000 | 4.63 | -44.28 | ≤-25.37 | PASS |
| 11N20SISO | Ant1 | 2437 | 21000~23000 | 4.63 | -43.52 | ≤-25.37 | PASS |
| 11N20SISO | Ant1 | 2437 | 23000~25000 | 4.63 | -41.79 | ≤-25.37 | PASS |
| 11N20SISO | Ant1 | 2462 | 30~1000 | 5.46 | -48.95 | ≤-24.54 | PASS |
| 11N20SISO | Ant1 | 2462 | 1000~3000 | 5.46 | -48.2 | ≤-24.54 | PASS |
| 11N20SISO | Ant1 | 2462 | 3000~5000 | 5.46 | -50.59 | ≤-24.54 | PASS |
| 11N20SISO | Ant1 | 2462 | 5000~7000 | 5.46 | -51.51 | ≤-24.54 | PASS |
| 11N20SISO | Ant1 | 2462 | 7000~9000 | 5.46 | -48.61 | ≤-24.54 | PASS |
| 11N20SISO | Ant1 | 2462 | 9000~11000 | 5.46 | -50.57 | ≤-24.54 | PASS |
| 11N20SISO | Ant1 | 2462 | 11000~13000 | 5.46 | -50.83 | ≤-24.54 | PASS |
| 11N20SISO | Ant1 | 2462 | 13000~15000 | 5.46 | -47.33 | ≤-24.54 | PASS |
| 11N20SISO | Ant1 | 2462 | 15000~17000 | 5.46 | -45.12 | ≤-24.54 | PASS |
| 11N20SISO | Ant1 | 2462 | 17000~19000 | 5.46 | -45.01 | ≤-24.54 | PASS |
| 11N20SISO | Ant1 | 2462 | 19000~21000 | 5.46 | -43.95 | ≤-24.54 | PASS |
| 11N20SISO | Ant1 | 2462 | 21000~23000 | 5.46 | -42.45 | ≤-24.54 | PASS |
| 11N20SISO | Ant1 | 2462 | 23000~25000 | 5.46 | -41.19 | ≤-24.54 | PASS |
| 11N40SISO | Ant1 | 2422 | 30~1000 | 2.23 | -49.4 | ≤-27.77 | PASS |
| 11N40SISO | Ant1 | 2422 | 1000~3000 | 2.23 | -49.79 | ≤-27.77 | PASS |
| 11N40SISO | Ant1 | 2422 | 3000~5000 | 2.23 | -49.64 | ≤-27.77 | PASS |
| 11N40SISO | Ant1 | 2422 | 5000~7000 | 2.23 | -51.11 | ≤-27.77 | PASS |
| 11N40SISO | Ant1 | 2422 | 7000~9000 | 2.23 | -49.55 | ≤-27.77 | PASS |
| 11N40SISO | Ant1 | 2422 | 9000~11000 | 2.23 | -51.09 | ≤-27.77 | PASS |
| 11N40SISO | Ant1 | 2422 | 11000~13000 | 2.23 | -50.47 | ≤-27.77 | PASS |
| 11N40SISO | Ant1 | 2422 | 13000~15000 | 2.23 | -46.7 | ≤-27.77 | PASS |
| 11N40SISO | Ant1 | 2422 | 15000~17000 | 2.23 | -45.94 | ≤-27.77 | PASS |
| 11N40SISO | Ant1 | 2422 | 17000~19000 | 2.23 | -45.26 | ≤-27.77 | PASS |
| 11N40SISO | Ant1 | 2422 | 19000~21000 | 2.23 | -43.43 | ≤-27.77 | PASS |
| 11N40SISO | Ant1 | 2422 | 21000~23000 | 2.23 | -44.04 | ≤-27.77 | PASS |
| 11N40SISO | Ant1 | 2422 | 23000~25000 | 2.23 | -41.73 | ≤-27.77 | PASS |
| 11N40SISO | Ant1 | 2437 | 30~1000 | 2.68 | -47.14 | ≤-27.32 | PASS |
| 11N40SISO | Ant1 | 2437 | 1000~3000 | 2.68 | -49.56 | ≤-27.32 | PASS |
| 11N40SISO | Ant1 | 2437 | 3000~5000 | 2.68 | -50.8 | ≤-27.32 | PASS |
| 11N40SISO | Ant1 | 2437 | 5000~7000 | 2.68 | -50.03 | ≤-27.32 | PASS |
| 11N40SISO | Ant1 | 2437 | 7000~9000 | 2.68 | -50.42 | ≤-27.32 | PASS |
| 11N40SISO | Ant1 | 2437 | 9000~11000 | 2.68 | -51.21 | ≤-27.32 | PASS |
| 11N40SISO | Ant1 | 2437 | 11000~13000 | 2.68 | -50.3 | ≤-27.32 | PASS |
| 11N40SISO | Ant1 | 2437 | 13000~15000 | 2.68 | -46.64 | ≤-27.32 | PASS |
| 11N40SISO | Ant1 | 2437 | 15000~17000 | 2.68 | -46.04 | ≤-27.32 | PASS |
| 11N40SISO | Ant1 | 2437 | 17000~19000 | 2.68 | -45.11 | ≤-27.32 | PASS |
| 11N40SISO | Ant1 | 2437 | 19000~21000 | 2.68 | -44.11 | ≤-27.32 | PASS |
| 11N40SISO | Ant1 | 2437 | 21000~23000 | 2.68 | -43.72 | ≤-27.32 | PASS |
| 11N40SISO | Ant1 | 2437 | 23000~25000 | 2.68 | -41.31 | ≤-27.32 | PASS |
| 11N40SISO | Ant1 | 2452 | 30~1000 | 3.04 | -49.23 | ≤-26.96 | PASS |
| 11N40SISO | Ant1 | 2452 | 1000~3000 | 3.04 | -48.81 | ≤-26.96 | PASS |
| 11N40SISO | Ant1 | 2452 | 3000~5000 | 3.04 | -50.61 | ≤-26.96 | PASS |
| 11N40SISO | Ant1 | 2452 | 5000~7000 | 3.04 | -51.4 | ≤-26.96 | PASS |
| 11N40SISO | Ant1 | 2452 | 7000~9000 | 3.04 | -49.27 | ≤-26.96 | PASS |

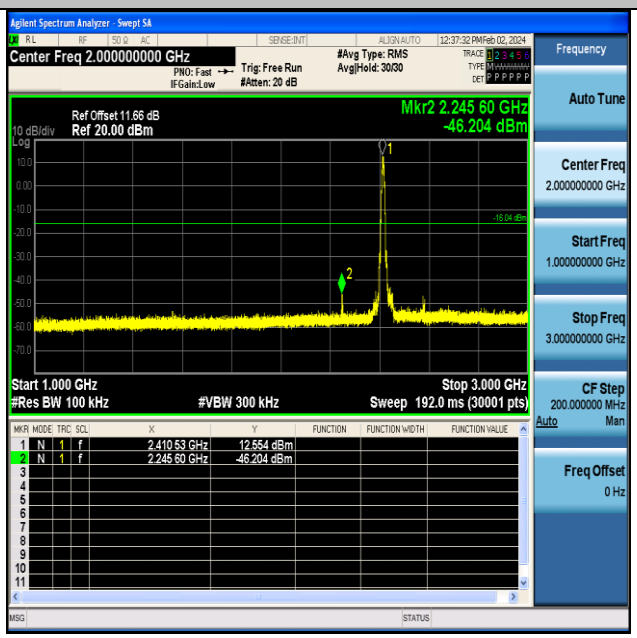
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 11N40SISO | Ant1 | 2452 | 9000~11000 | 3.04 | -51.8 | ≤-26.96 | PASS |
| 11N40SISO | Ant1 | 2452 | 11000~13000 | 3.04 | -51.05 | ≤-26.96 | PASS |
| 11N40SISO | Ant1 | 2452 | 13000~15000 | 3.04 | -47.65 | ≤-26.96 | PASS |
| 11N40SISO | Ant1 | 2452 | 15000~17000 | 3.04 | -45.56 | ≤-26.96 | PASS |
| 11N40SISO | Ant1 | 2452 | 17000~19000 | 3.04 | -44.94 | ≤-26.96 | PASS |
| 11N40SISO | Ant1 | 2452 | 19000~21000 | 3.04 | -43.81 | ≤-26.96 | PASS |
| 11N40SISO | Ant1 | 2452 | 21000~23000 | 3.04 | -43.54 | ≤-26.96 | PASS |
| 11N40SISO | Ant1 | 2452 | 23000~25000 | 3.04 | -40.84 | ≤-26.96 | PASS |

Note: We have evaluated each operating mode and SISO/MIMO mode, SISO mode Antenna1 is worse ,shown in the report is the worst SISO Antenna1 data.

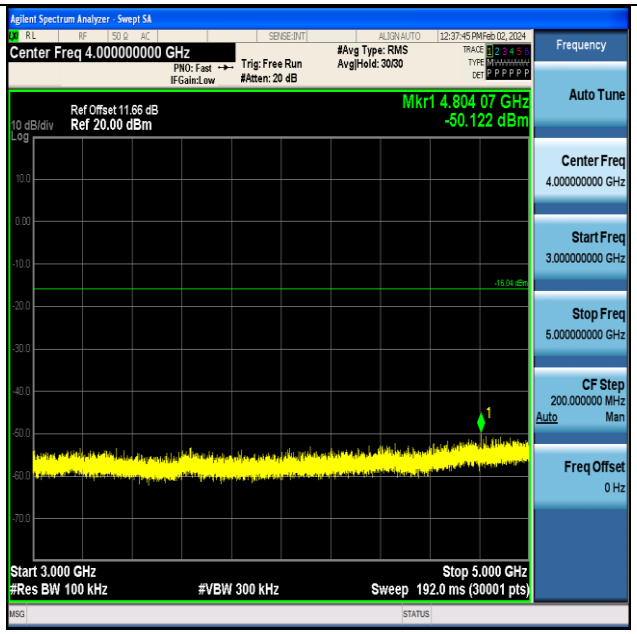
## Test Graphs



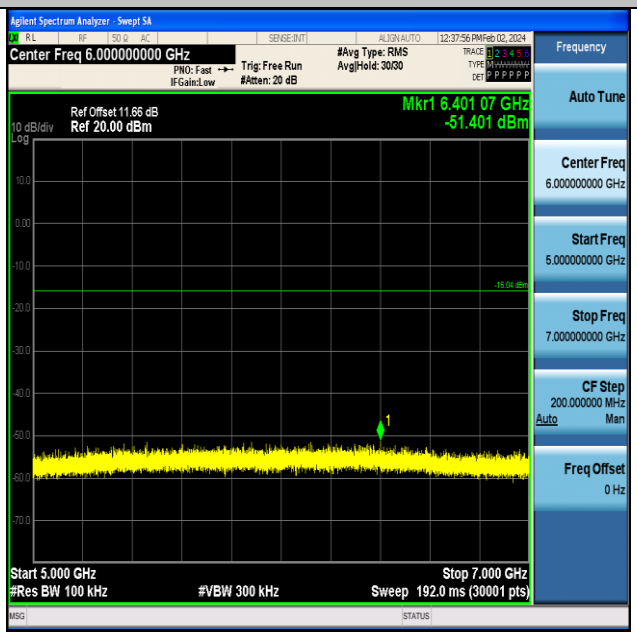

11B-Ant1-2412-30~1000-PASS



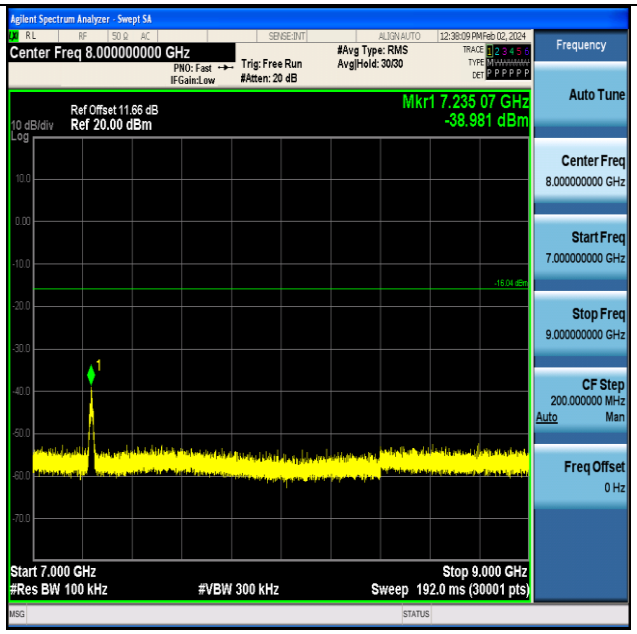

11B-Ant1-2412-1000~3000-PASS



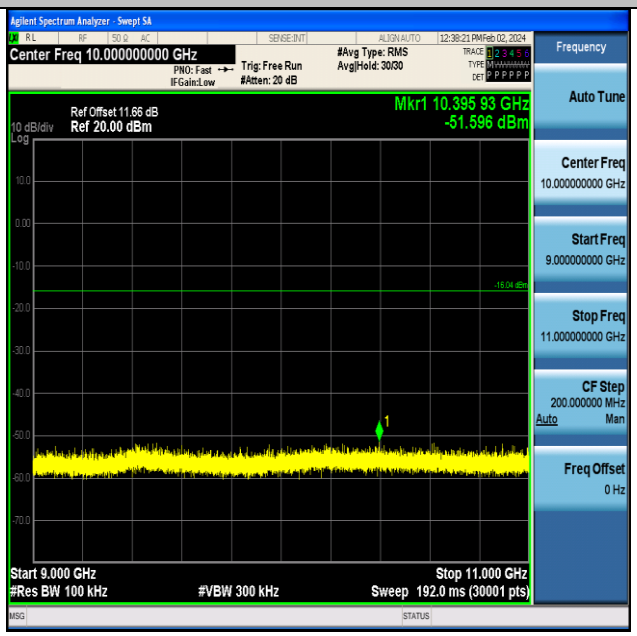

11B-Ant1-2412-3000~5000-PASS



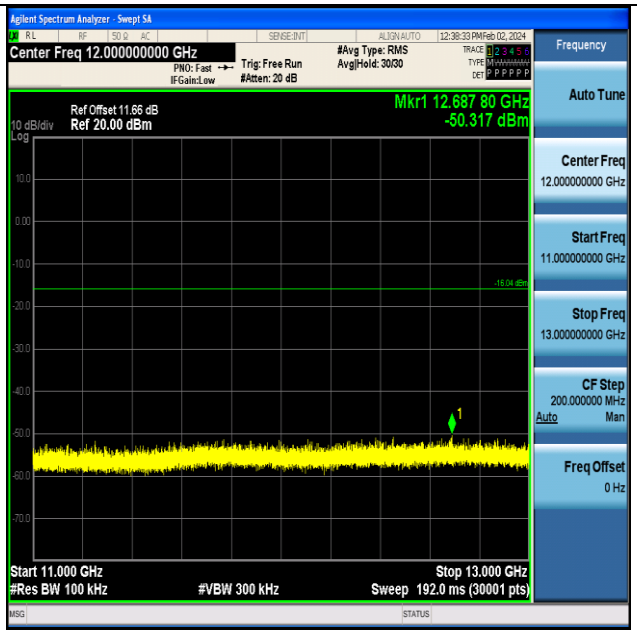

11B-Ant1-2412-5000~7000-PASS



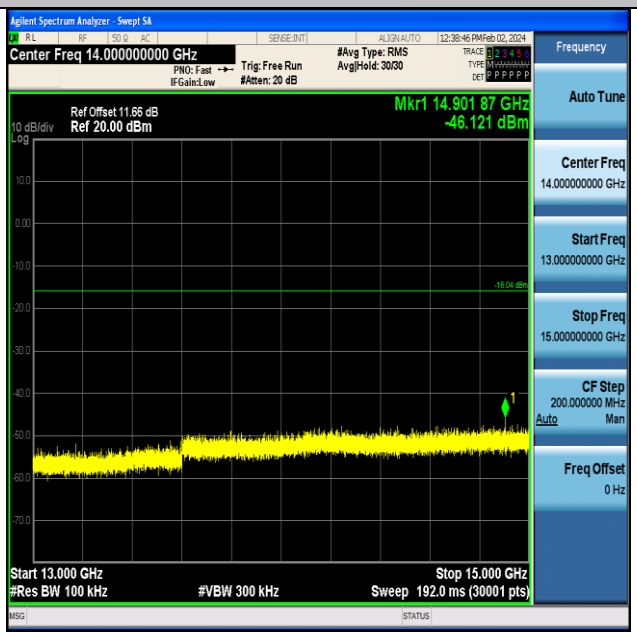

11B-Ant1-2412-7000~9000-PASS



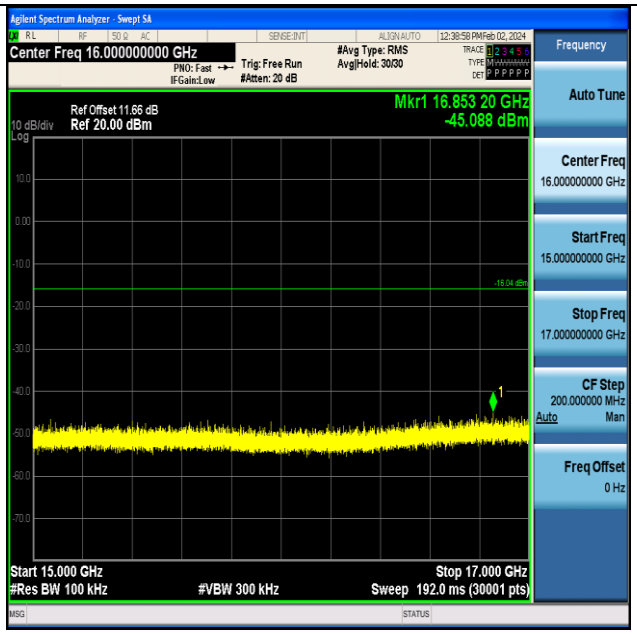

11B-Ant1-2412-9000~11000-PASS



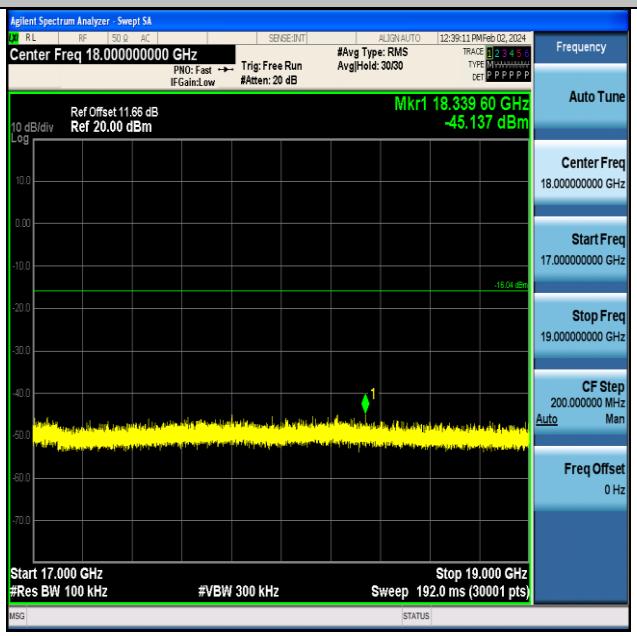

11B-Ant1-2412-11000~13000-PASS



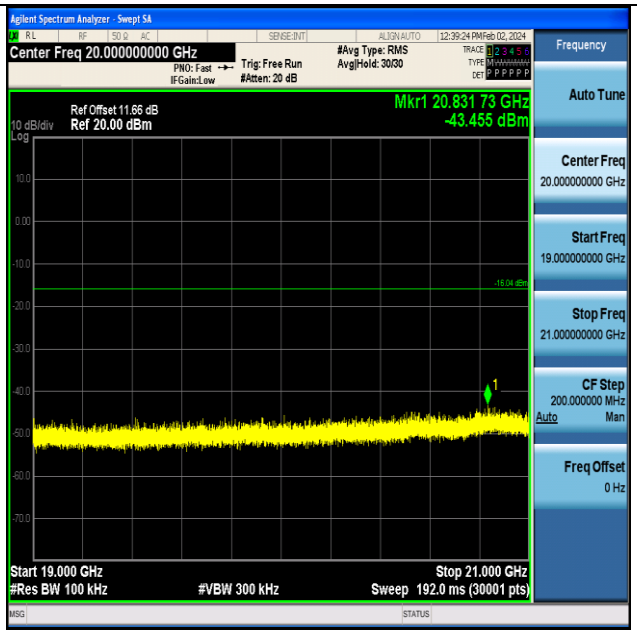

11B-Ant1-2412-13000~15000-PASS



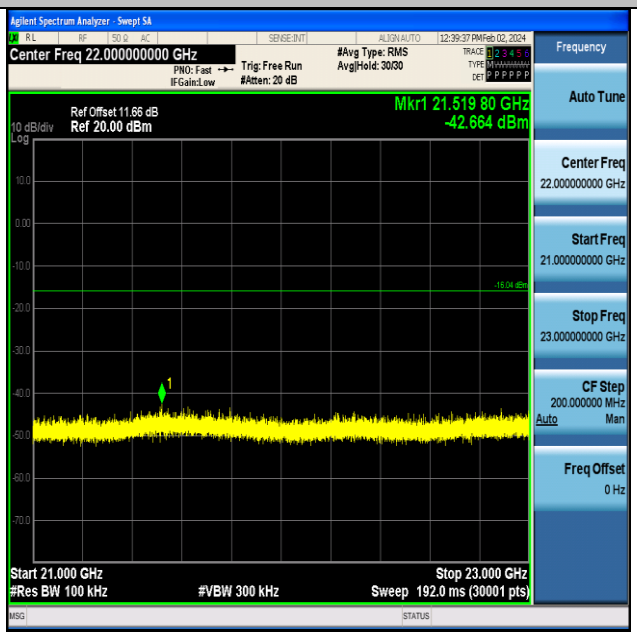

11B-Ant1-2412-15000~17000-PASS



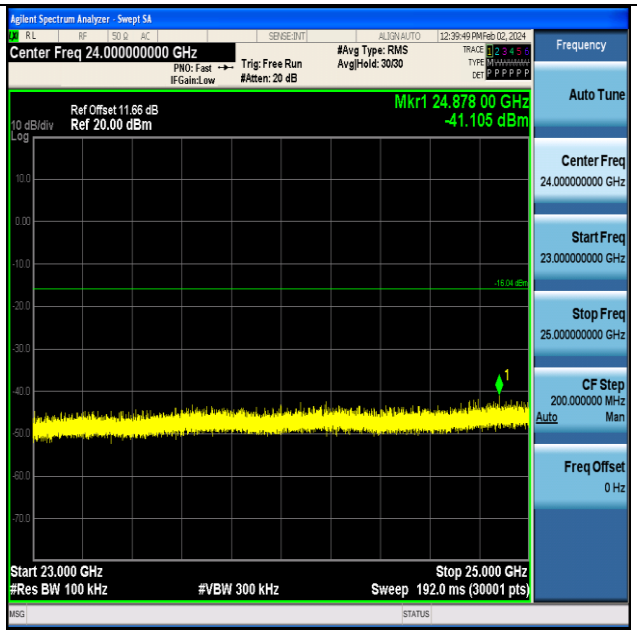

11B-Ant1-2412-17000~19000-PASS



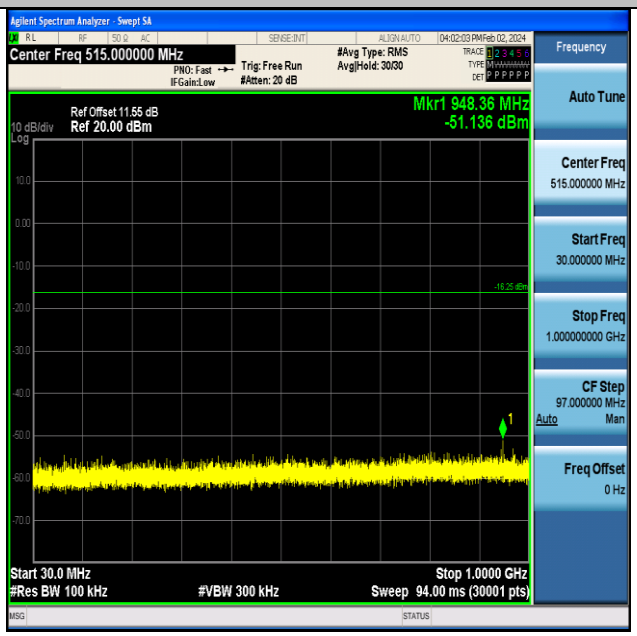

11B-Ant1-2412-19000~21000-PASS



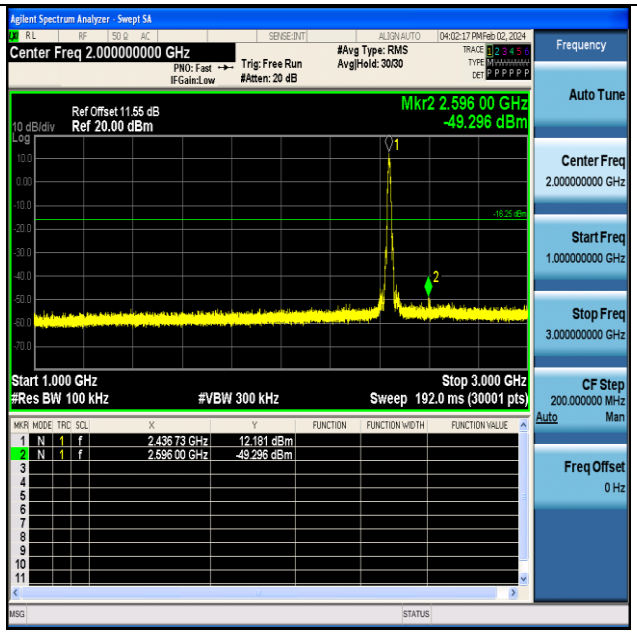

11B-Ant1-2412-21000~23000-PASS



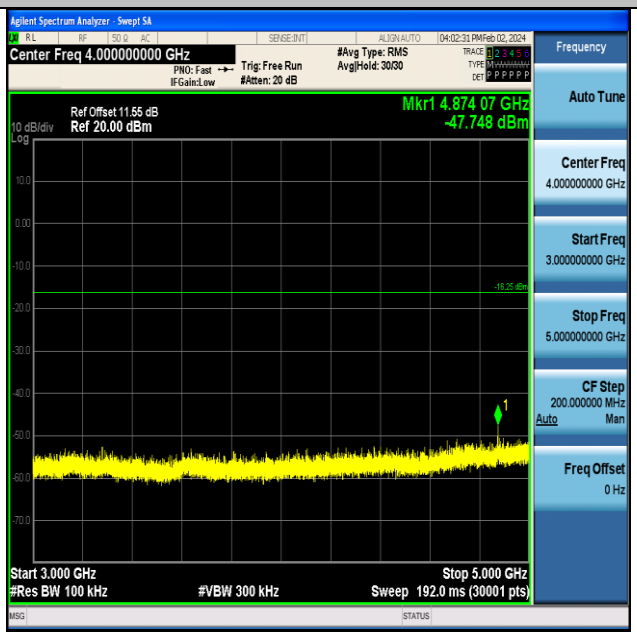

11B-Ant1-2412-23000~25000-PASS



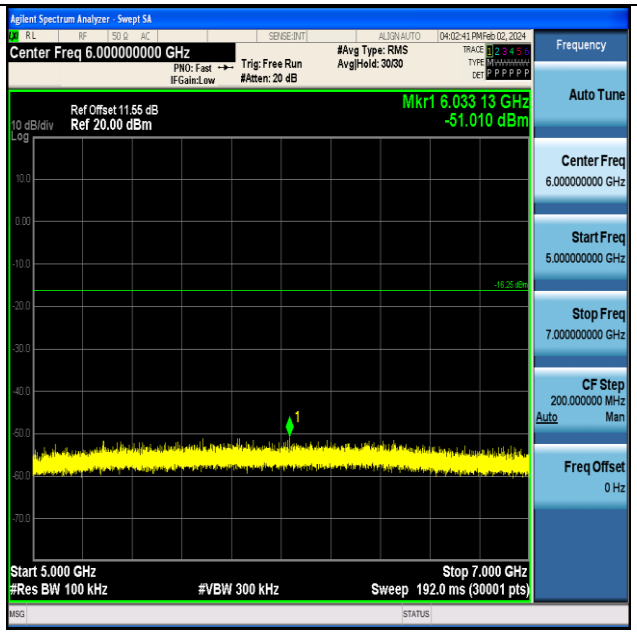

11B-Ant1-2437-30~1000-PASS



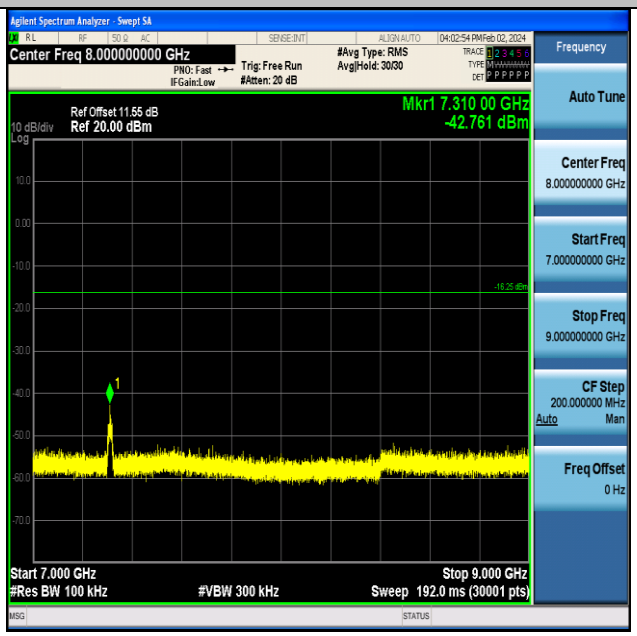

11B-Ant1-2437-1000~3000-PASS



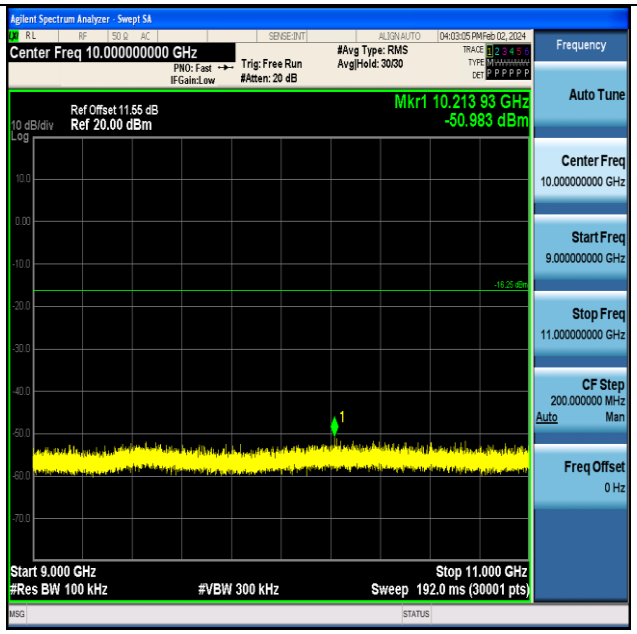

11B-Ant1-2437-3000~5000-PASS



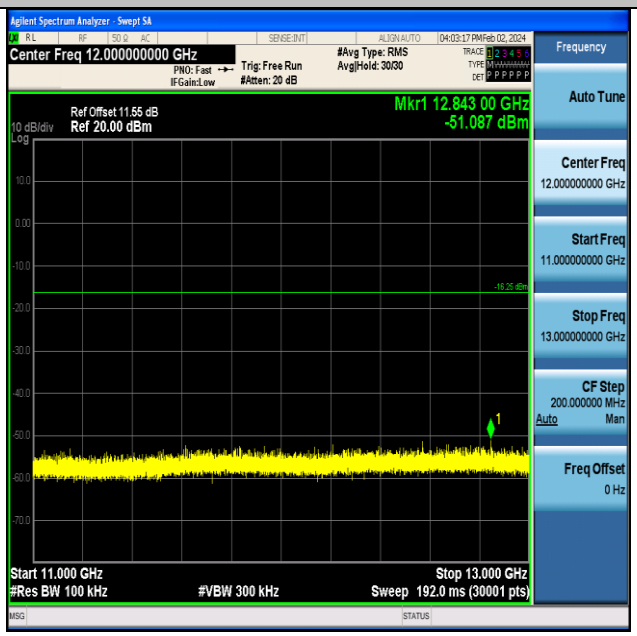

11B-Ant1-2437-5000~7000-PASS



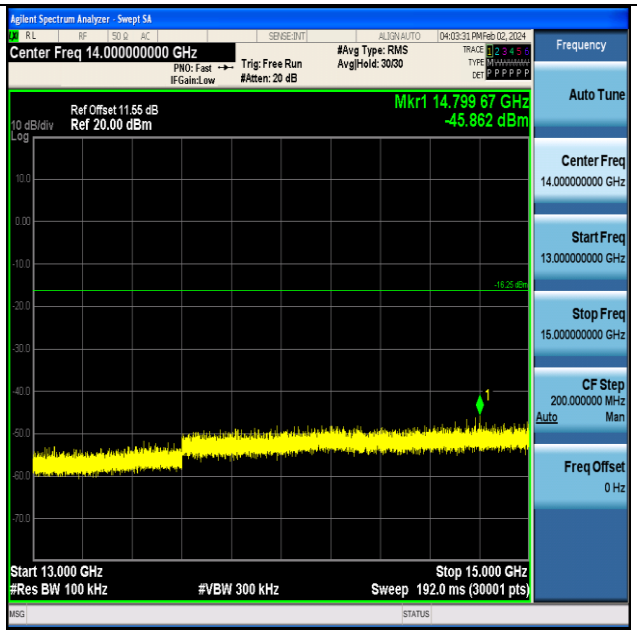

11B-Ant1-2437-7000~9000-PASS



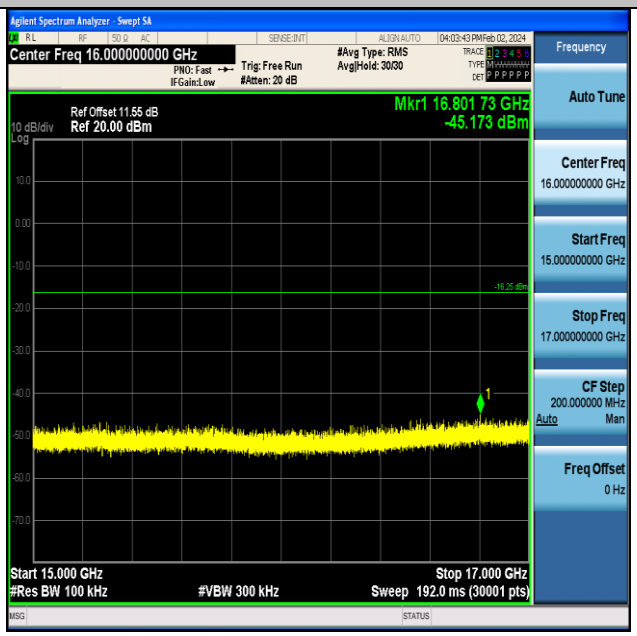

11B-Ant1-2437-9000~11000-PASS




11B-Ant1-2437-11000~13000-PASS




11B-Ant1-2437-13000~15000-PASS




11B-Ant1-2437-15000~17000-PASS