

# RF TEST REPORT

For

**Dongguan Lingjie Electronics & Technology Co., Ltd**

**Product Name: wireless mouse**

**Test Model(s): V8**

**Report Reference No.** : POCE240224002RF001

**FCC ID** : 2ANBU-V8B

**Applicant's Name** : Dongguan Lingjie Electronics & Technology Co., Ltd

**Address** : Building 3, No. 23 Zhenxing North Road, Taiyuan Community, Xiegang Town, Dongguan City, Guangdong Province, 523590, P.R.C.

**Testing Laboratory** : Shenzhen POCE Technology Co., Ltd.

**Address** : 101-102 Building H5 & 1/F., Building H, Hongfa Science & Technology Park, Tangtou, Shiyan, Bao'an District, Shenzhen, Guangdong, China

**Test Specification Standard** : 47 CFR Part 15.249 & ANSI C63.10-2013

**Date of Receipt** : February 24, 2024

**Date of Test** : February 24, 2024 to March 5, 2024

**Data of Issue** : March 5, 2024

**Result** : Pass

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## Revision History Of Report

| Version | Description | REPORT No.         | Issue Date    |
|---------|-------------|--------------------|---------------|
| V1.0    | Original    | POCE240224002RF001 | March 5, 2024 |
|         |             |                    |               |
|         |             |                    |               |
|         |             |                    |               |
|         |             |                    |               |

### NOTE1:

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

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Approved by:

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# 1 TEST SUMMARY

## 1.1 Test Standards

The tests were performed according to following standards:

**47 CFR Part 15.249:** Operation within the bands 902-928 MHz, 2400-2483.5 MHz, 5725-5875 MHz, and 24.0-24.25 GHz

## 1.2 Summary of Test Result

| Item                                      | Method                          | Requirement                                              | Result |
|-------------------------------------------|---------------------------------|----------------------------------------------------------|--------|
| Antenna requirement                       | /                               | 47 CFR Part 15.203                                       | Pass   |
| Occupied Bandwidth                        | ANSI C63.10-2013, section 6.9.2 | 47 CFR 15.215(c)                                         | Pass   |
| Field strength of fundamental             | ANSI C63.10-2013 section 6.6    | 47 CFR 15.249(a)<br>47 CFR 15.249(b)(1)                  | Pass   |
| Band edge emissions (Radiated)            | ANSI C63.10-2013 section 6.6.4  | 47 CFR 15.249(d)                                         | Pass   |
| Emissions in frequency bands (below 1GHz) | ANSI C63.10-2013 section 6.5    | 47 CFR 15.249(a)<br>47 CFR 15.249(d)<br>47 CFR 15.249(e) | Pass   |
| Emissions in frequency bands (above 1GHz) | ANSI C63.10-2013 section 6.6    | 47 CFR 15.249(a)<br>47 CFR 15.249(d)<br>47 CFR 15.249(e) | Pass   |

Note: 1.N/A -this device(EUT) is not applicable to this testing item  
2. RF-conducted test results including cable loss.



## 2 GENERAL INFORMATION

### 2.1 Client Information

**Applicant's Name** : Dongguan Lingjie Electronics & Technology Co., Ltd  
**Address** : Building 3, No. 23 Zhenxing North Road, Taiyuan Community, Xiegang Town, Dongguan City, Guangdong Province, 523590, P.R.C.

**Manufacturer** : Dongguan Lingjie Electronics & Technology Co., Ltd  
**Address** : Building 3, No. 23 Zhenxing North Road, Taiyuan Community, Xiegang Town, Dongguan City, Guangdong Province, 523590, P.R.C.

### 2.2 Description of Device (EUT)

|                       |                                                                                                 |
|-----------------------|-------------------------------------------------------------------------------------------------|
| Product Name:         | wireless mouse                                                                                  |
| Model/Type reference: | V8                                                                                              |
| Trade Mark:           | MINISO,  or 富德 |
| Product Description:  | wireless mouse                                                                                  |
| Power Supply:         | DC 1.5V from battery                                                                            |
| Operation Frequency:  | 2402MHz -- 2479MHz                                                                              |
| Number of Channels:   | 16                                                                                              |
| Modulation Type:      | GFSK                                                                                            |
| Antenna Type:         | PCB ANTENNA                                                                                     |
| Antenna Gain:         | 2.34dBi                                                                                         |
| Hardware Version:     | VER1.0                                                                                          |
| Software Version:     | fcc_test_tool V2.4.0                                                                            |

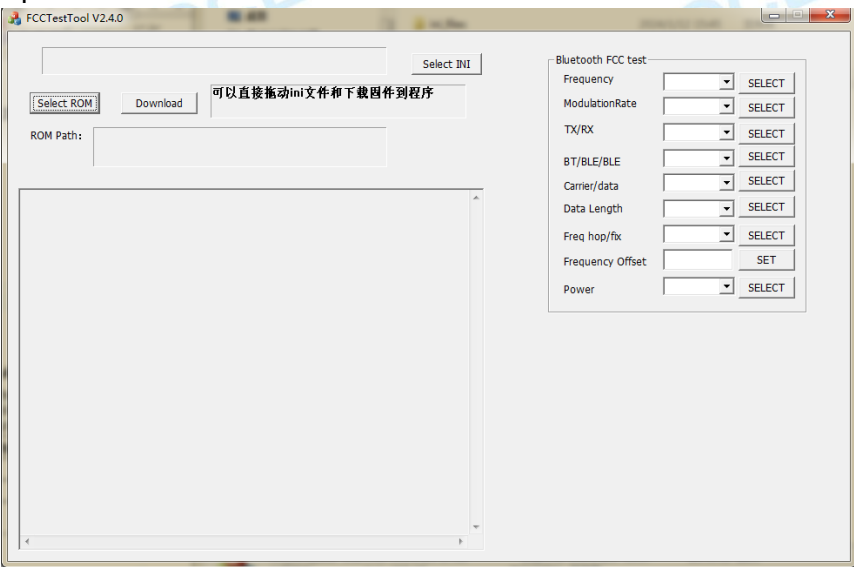
| Operation Frequency each of channel |           |         |           |         |           |         |           |
|-------------------------------------|-----------|---------|-----------|---------|-----------|---------|-----------|
| Channel                             | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
| 1                                   | 2402MHz   | 5       | 2421MHz   | 9       | 2446MHz   | 13      | 2468MHz   |
| 2                                   | 2408MHz   | 6       | 2423MHz   | 10      | 2451MHz   | 14      | 2474MHz   |
| 3                                   | 2417MHz   | 7       | 2428MHz   | 11      | 2456MHz   | 15      | 2478MHz   |
| 4                                   | 2419MHz   | 8       | 2437MHz   | 12      | 2460MHz   | 16      | 2479MHz   |

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

| Test channel    | Frequency (MHz) |
|-----------------|-----------------|
| Lowest channel  | 2402MHz         |
| Middle channel  | 2437MHz         |
| Highest channel | 2479MHz         |

## 2.3 Description of Test Modes

| No           | Title   | Description                                                                                                                                                                                                                                                     |
|--------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TM1          | TX-GFSK | Keep the EUT in continuously transmitting mode with GFSK modulation.                                                                                                                                                                                            |
| <b>Title</b> |         | <b>Description</b>                                                                                                                                                                                                                                              |
| TX mode      |         | Keep the EUT works in continuously transmitting mode with GFSK modulation.                                                                                                                                                                                      |
|              |         | <input type="checkbox"/> Special software is used.<br><input type="checkbox"/> Through engineering command into the engineering mode.<br>engineering command: <code>***#3646633#**</code><br><input checked="" type="checkbox"/> Other method: Special software |
|              |         | Special software:<br>                                                                                                                                                        |

## 2.4 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| Item | Description | Manufacturer | Model No.   | Remark         | Certification |
|------|-------------|--------------|-------------|----------------|---------------|
| 1    | PC          | Lenovo       | Air 14 Plus | Provide by lab | SDOC          |
| 2    | /           | /            | /           | /              | /             |

## 2.5 Equipments Used During The Test

| Occupied Bandwidth                  |              |                     |              |            |              |
|-------------------------------------|--------------|---------------------|--------------|------------|--------------|
| Equipment                           | Manufacturer | Model No            | Inventory No | Cal Date   | Cal Due Date |
| RF Test Software                    | TACHOY       | RTS-01              | V2.0.0.0     | /          | /            |
| High Pass filter                    | ZHINAN       | OQHPF1-M1.5-18G-224 | 6210075      | /          | /            |
| Power divider                       | MIDWEST      | PWD-2533            | SMA-79       | 2023-05-11 | 2026-05-10   |
| DC power                            | HP           | 66311B              | 38444359     | /          | /            |
| RF Sensor Unit                      | TACHOY       | TR1029-2            | 000001       | /          | /            |
| Wideband radio communication tester | R&S          | CMW500              | 113410       | 2023-06-13 | 2024-06-12   |
| Vector signal generator             | Keysight     | N5181A              | MY48180415   | 2023-11-09 | 2024-11-08   |
| Signal generator                    | Keysight     | N5182A              | MY50143455   | 2023-11-09 | 2024-11-08   |
| Spectrum Analyzer                   | Keysight     | N9020A              | MY53420323   | 2023-12-12 | 2024-12-11   |

### Field strength of fundamental

#### Band edge emissions (Radiated)

#### Emissions in frequency bands (below 1GHz)

#### Emissions in frequency bands (above 1GHz)

| Equipment              | Manufacturer   | Model No         | Inventory No           | Cal Date   | Cal Due Date |
|------------------------|----------------|------------------|------------------------|------------|--------------|
| EMI Test software      | Farad          | EZ -EMC          | V1.1.42                | /          | /            |
| Positioning Controller | /              | MF-7802          | /                      | /          | /            |
| Amplifier(18-40G)      | COM-POWER      | AH-1840          | 10100008-1             | 2022-04-05 | 2025-04-04   |
| Horn antenna           | COM-POWER      | AH-1840 (18-40G) | 10100008               | 2023-04-05 | 2025-04-04   |
| Loop antenna           | ZHINAN         | ZN30900C         | ZN30900C               | 2021-07-05 | 2024-07-04   |
| Cable(LF)#2            | Schwarzbeck    | /                | /                      | 2024-02-19 | 2025-02-18   |
| Cable(LF)#1            | Schwarzbeck    | /                | /                      | 2024-02-19 | 2025-02-18   |
| Cable(HF)#2            | Schwarzbeck    | AK9515E          | 96250                  | 2024-02-19 | 2025-02-18   |
| Cable(HF)#1            | Schwarzbeck    | SYV-50-3-1       | /                      | 2024-02-19 | 2025-02-18   |
| Power amplifier(LF)    | Schwarzbeck    | BBV9743          | 9743-151               | 2023-06-13 | 2024-06-12   |
| Power amplifier(HF)    | Schwarzbeck    | BBV9718          | 9718-282               | 2023-06-13 | 2024-06-12   |
| Spectrum Analyzer      | R&S            | FSP30            | 1321.3008K40-101729-jR | 2023-06-14 | 2024-06-13   |
| Horn Antenna           | Sunol Sciences | DRH-118          | A091114                | 2023-05-13 | 2025-05-12   |
| Broadband Antenna      | Sunol Sciences | JB6 Antenna      | A090414                | 2023-05-21 | 2025-05-20   |
| Test Receiver          | R&S            | ESCI             | 102109                 | 2023-06-13 | 2024-06-12   |

## 2.6 Statement Of The Measurement Uncertainty

| Test Item                                                                                                                                            | Measurement Uncertainty |
|------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| Conducted Disturbance (0.15~30MHz)                                                                                                                   | $\pm 3.41\text{dB}$     |
| Occupied Bandwidth                                                                                                                                   | $\pm 3.63\%$            |
| RF power density                                                                                                                                     | $\pm 0.234\%$           |
| Radio Frequency                                                                                                                                      | $2 \times 10^{-7}$      |
| RF conducted power                                                                                                                                   | $\pm 0.733\text{dB}$    |
| Duty cycle                                                                                                                                           | $\pm 3.1\%$             |
| Radiated Emission (Above 1GHz)                                                                                                                       | $\pm 5.46\text{dB}$     |
| Radiated Emission (Below 1GHz)                                                                                                                       | $\pm 5.79\text{dB}$     |
| Note: (1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$ . |                         |

## 2.7 Identification of Testing Laboratory

|               |                                                                                                                                        |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Company Name: | Shenzhen POCE Technology Co., Ltd.                                                                                                     |
| Address:      | 101-102 Building H5 & 1/F., Building H, Hongfa Science & Technology Park, Tangtou, Shiyan, Bao'an District, Shenzhen, Guangdong, China |
| Phone Number: | +86-13267178997                                                                                                                        |
| Fax Number:   | 86-755-29113252                                                                                                                        |

### Identification of the Responsible Testing Location

|                             |                                                                                                                                        |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Company Name:               | Shenzhen POCE Technology Co., Ltd.                                                                                                     |
| Address:                    | 101-102 Building H5 & 1/F., Building H, Hongfa Science & Technology Park, Tangtou, Shiyan, Bao'an District, Shenzhen, Guangdong, China |
| Phone Number:               | +86-13267178997                                                                                                                        |
| Fax Number:                 | 86-755-29113252                                                                                                                        |
| FCC Registration Number:    | 0032847402                                                                                                                             |
| Designation Number:         | CN1342                                                                                                                                 |
| Test Firm Registration No.: | 778666                                                                                                                                 |
| A2LA Certificate Number:    | 6270.01                                                                                                                                |

## 2.8 Announcement

- (1) The test report reference to the report template version v0.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing, reviewing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) This document may not be altered or revised in any way unless done so by POCE and all revisions are duly noted in the revisions section.
- (5) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
- (6) We hereby declare that the laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant. the laboratory is not responsible for the accuracy of the information provided by the client. When the information provided by the customer may affect the effectiveness of the results, the responsibility lies with the customer, and the laboratory does not assume any responsibility.

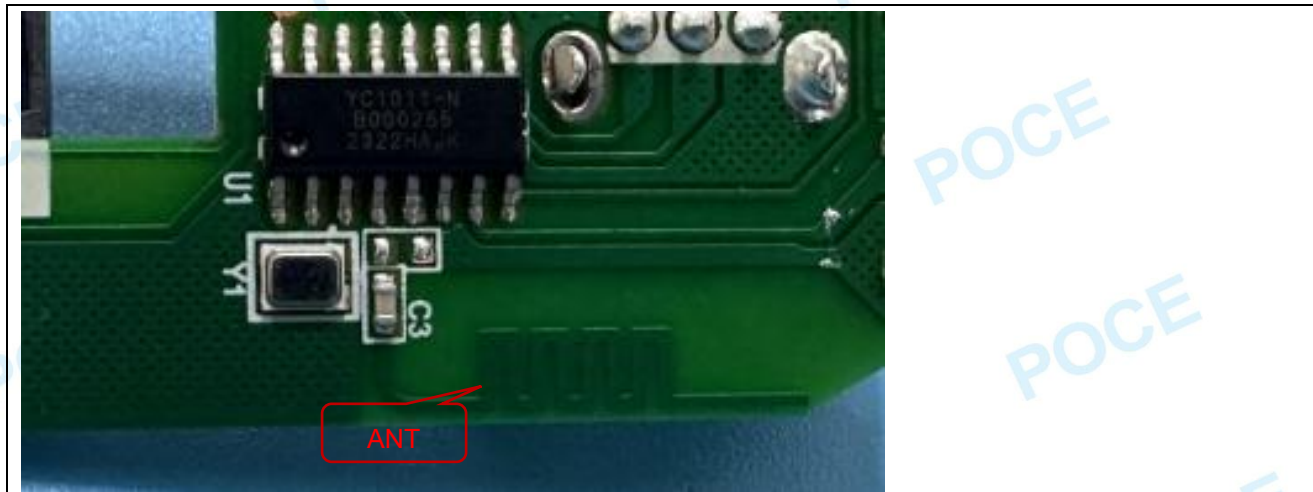


### 3 Evaluation Results (Evaluation)

#### 3.1 Antenna requirement

|                   |                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | Refer to 47 CFR Part 15.203, 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. |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

##### 3.1.1 Conclusion:



## 4 Radio Spectrum Matter Test Results (RF)

### 4.1 Occupied Bandwidth

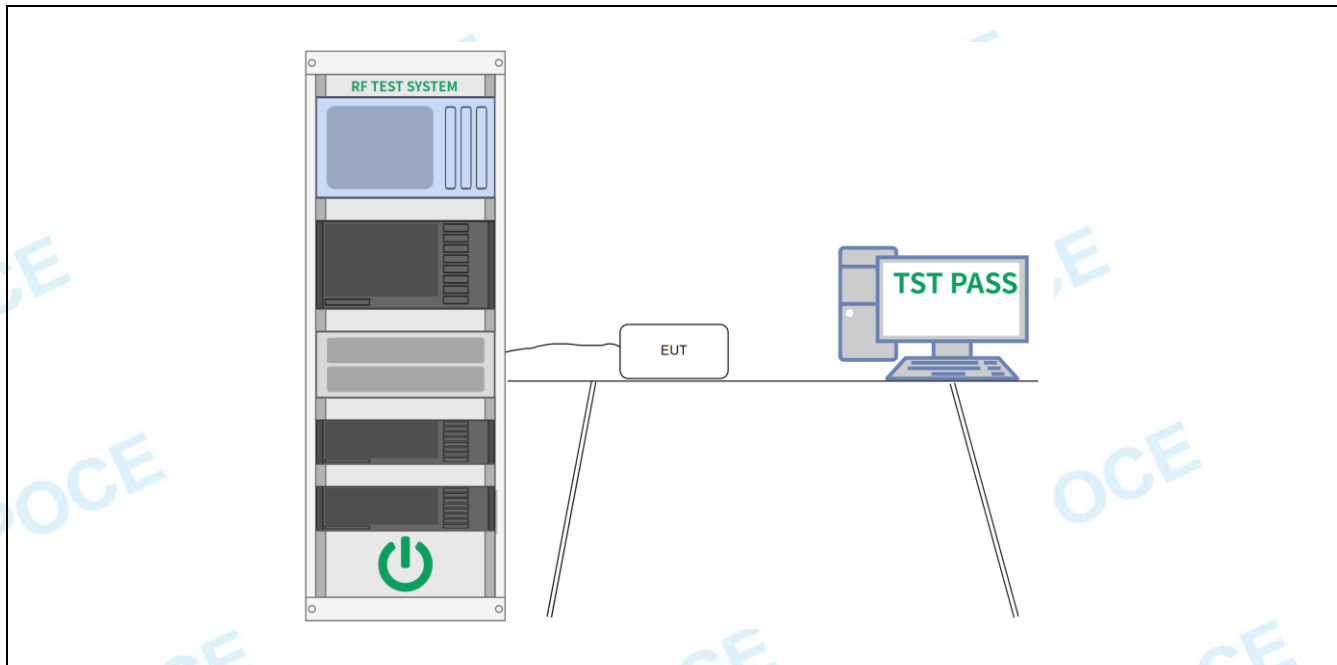
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | 47 CFR 15.215(c)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Test Limit:       | Refer to 47 CFR 15.215(c), intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Test Method:      | ANSI C63.10-2013, section 6.9.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Procedure:        | <p>a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the EMI receiver or spectrum analyzer shall be between two times and five times the OBW.</p> <p>b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be approximately three times RBW, unless otherwise specified by the applicable requirement.</p> <p>c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than <math>[10 \log (OBW/RBW)]</math> below the reference level. Specific guidance is given in 4.1.5.2.</p> <p>d) Steps a) through c) might require iteration to adjust within the specified tolerances.</p> <p>e) The dynamic range of the instrument at the selected RBW shall be more than 10 dB below the target “-xx dB down” requirement; that is, if the requirement calls for measuring the -20 dB OBW, the instrument noise floor at the selected RBW shall be at least 30 dB below the reference value.</p> <p>f) Set detection mode to peak and trace mode to max hold.</p> <p>g) Determine the reference value: Set the EUT to transmit an unmodulated carrier or modulated signal, as applicable. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).</p> <p>h) Determine the “-xx dB down amplitude” using <math>[(\text{reference value}) - xx]</math>. Alternatively, this calculation may be made by using the marker-delta function of the instrument.</p> <p>i) If the reference value is determined by an unmodulated carrier, then turn the EUT modulation ON, and either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise, the trace from step g) shall be used for step j).</p> <p>j) Place two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the “-xx dB down amplitude” determined in step h). If a marker is below this “-xx dB down amplitude” value, then it shall be as close as possible to this value. The occupied bandwidth is the frequency difference between the two markers. Alternatively, set a marker at the lowest frequency of the envelope of the spectral display, such that the marker is at or slightly below the “-xx dB down amplitude” determined in step h). Reset the marker-delta function and move the marker to the other side of the emission until the delta marker amplitude is at the same level as the reference marker amplitude. The marker-delta frequency reading at this point is the specified emission bandwidth.</p> <p>k) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).</p> |

#### 4.1.1 E.U.T. Operation:

|                        |
|------------------------|
| Operating Environment: |
|------------------------|

|                  |         |           |        |                       |         |
|------------------|---------|-----------|--------|-----------------------|---------|
| Temperature:     | 22.3 °C | Humidity: | 51.1 % | Atmospheric Pressure: | 101 kPa |
| Pretest mode:    | TM1     |           |        |                       |         |
| Final test mode: | TM1     |           |        |                       |         |

#### 4.1.2 Test Setup Diagram:



#### 4.1.3 Test Data:

Please Refer to Appendix for Details.

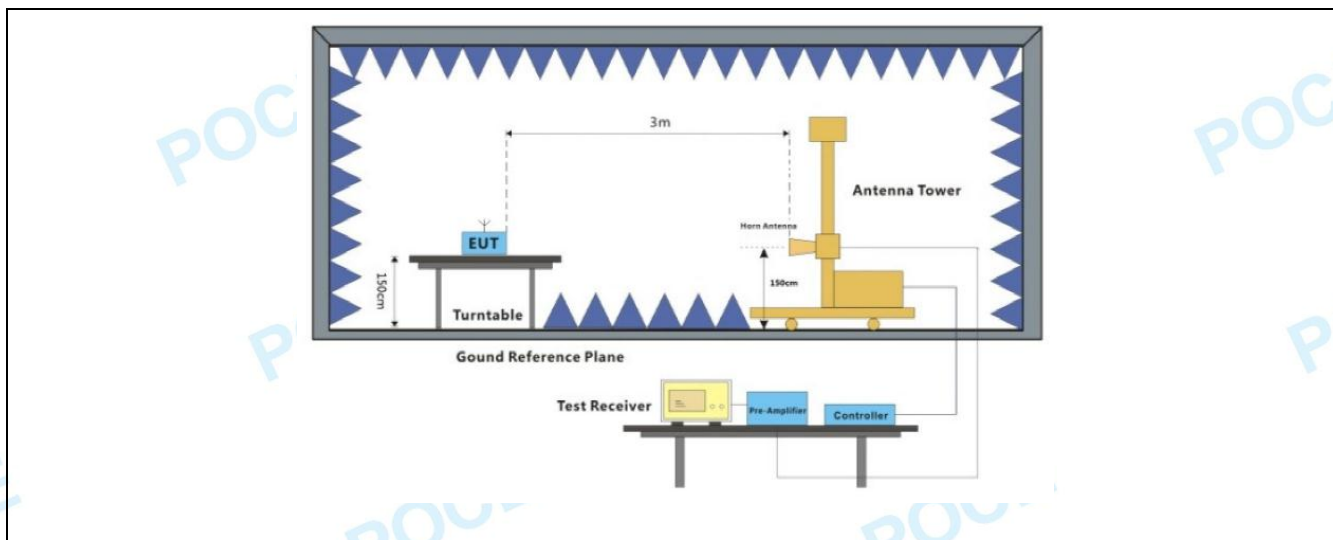
## 4.2 Field strength of fundamental

| Test Requirement:     | Except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:                                                                                                                                                                                                                                                                    |                                                |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |  |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|--------------------------------------------------|------------------------------------------------|-------------|----|-----|-----------------|----|-----|---------------|----|-----|----------------|-----|------|--|
|                       | <table border="1"> <thead> <tr> <th>Fundamental frequency</th><th>Field strength of fundamental (millivolts/meter)</th><th>Field strength of harmonics (microvolts/meter)</th></tr> </thead> <tbody> <tr> <td>902-928 MHz</td><td>50</td><td>500</td></tr> <tr> <td>2400-2483.5 MHz</td><td>50</td><td>500</td></tr> <tr> <td>5725-5875 MHz</td><td>50</td><td>500</td></tr> <tr> <td>24.0-24.25 GHz</td><td>250</td><td>2500</td></tr> </tbody> </table> | Fundamental frequency                          | Field strength of fundamental (millivolts/meter) | Field strength of harmonics (microvolts/meter) | 902-928 MHz | 50 | 500 | 2400-2483.5 MHz | 50 | 500 | 5725-5875 MHz | 50 | 500 | 24.0-24.25 GHz | 250 | 2500 |  |
| Fundamental frequency | Field strength of fundamental (millivolts/meter)                                                                                                                                                                                                                                                                                                                                                                                                          | Field strength of harmonics (microvolts/meter) |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |  |
| 902-928 MHz           | 50                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 500                                            |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |  |
| 2400-2483.5 MHz       | 50                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 500                                            |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |  |
| 5725-5875 MHz         | 50                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 500                                            |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |  |
| 24.0-24.25 GHz        | 250                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2500                                           |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |  |
|                       | The field strength of emissions in this band shall not exceed 2500 millivolts/meter.                                                                                                                                                                                                                                                                                                                                                                      |                                                |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |  |
| Test Method:          | ANSI C63.10-2013 section 6.6                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |  |
| Procedure:            | ANSI C63.10-2013 section 6.6                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |  |

### 4.2.1 E.U.T. Operation:

|                        |         |           |        |
|------------------------|---------|-----------|--------|
| Operating Environment: |         |           |        |
| Temperature:           | 22.3 °C | Humidity: | 51.1 % |
| Atmospheric Pressure:  | 101 kPa |           |        |
| Pretest mode:          | TM1     |           |        |
| Final test mode:       | TM1     |           |        |

### 4.2.2 Test Setup Diagram:





#### 4.2.3 Test Data:

| Frequency<br>(MHz) | Emission Level<br>(dBuV/m) | Limits<br>(dBuV/m) | Margin<br>(dBuV/m) | Detector<br>(PK/AV) | Polarization<br>(H/V) |
|--------------------|----------------------------|--------------------|--------------------|---------------------|-----------------------|
| 2402               | 88.48                      | 114.00             | -25.52             | PK                  | H                     |
| 2402               | 84.04                      | 94.00              | -9.96              | AV                  | H                     |
| 2402               | 87.17                      | 114.00             | -26.83             | PK                  | V                     |
| 2402               | 86.82                      | 94.00              | -7.18              | AV                  | V                     |

| Frequency<br>(MHz) | Emission Level<br>(dBuV/m) | Limits<br>(dBuV/m) | Margin<br>(dBuV/m) | Detector<br>(PK/AV) | Polarization<br>(H/V) |
|--------------------|----------------------------|--------------------|--------------------|---------------------|-----------------------|
| 2437               | 88.06                      | 114.00             | -25.94             | PK                  | H                     |
| 2437               | 85.51                      | 94.00              | -8.49              | AV                  | H                     |
| 2437               | 89.17                      | 114.00             | -24.83             | PK                  | V                     |
| 2437               | 86.50                      | 94.00              | -7.50              | AV                  | V                     |

| Frequency<br>(MHz) | Emission Level<br>(dBuV/m) | Limits<br>(dBuV/m) | Margin<br>(dBuV/m) | Detector<br>(PK/AV) | Polarization<br>(H/V) |
|--------------------|----------------------------|--------------------|--------------------|---------------------|-----------------------|
| 2479               | 88.60                      | 114.00             | -25.40             | PK                  | H                     |
| 2479               | 85.45                      | 94.00              | -8.55              | AV                  | H                     |
| 2479               | 89.06                      | 114.00             | -24.94             | PK                  | V                     |
| 2479               | 85.26                      | 94.00              | -8.74              | AV                  | V                     |

Note: Margin = Emission Level – Limit; For fundamental frequency, RBW>20dB BW, VBW>=3XRBW

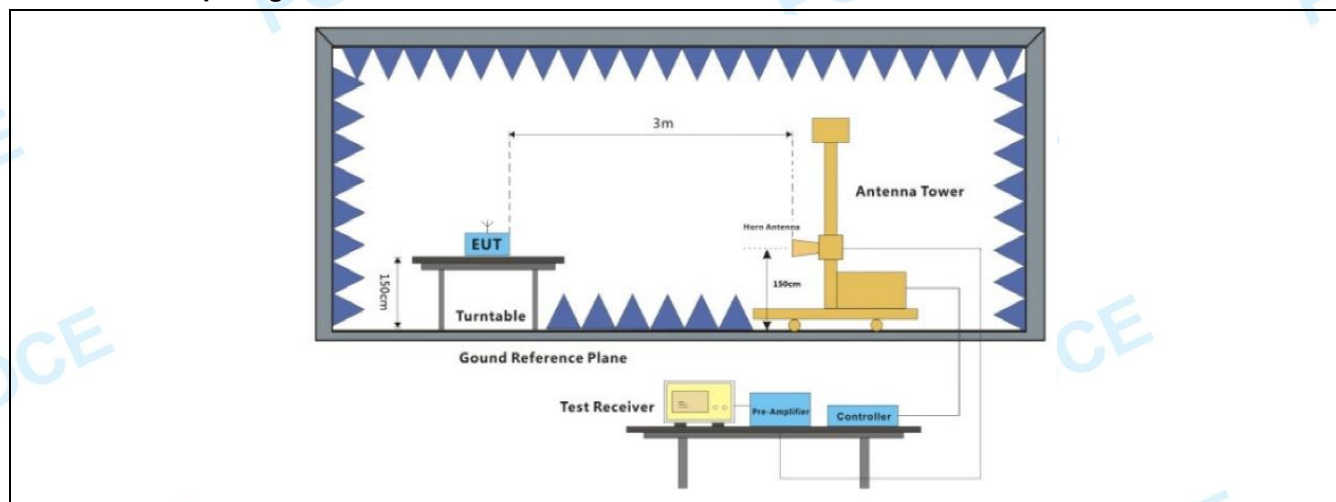
### 4.3 Band edge emissions (Radiated)

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                   |                               |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------|
| Test Requirement: | Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in § 15.209, whichever is the lesser attenuation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                   |                               |
| Test Limit:       | Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in § 15.209, whichever is the lesser attenuation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                   |                               |
|                   | Frequency (MHz)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Field strength (microvolts/meter) | Measurement distance (meters) |
|                   | 0.009-0.490                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2400/F(kHz)                       | 300                           |
|                   | 0.490-1.705                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 24000/F(kHz)                      | 30                            |
|                   | 1.705-30.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 30                                | 30                            |
|                   | 30-88                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 100 **                            | 3                             |
|                   | 88-216                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 150 **                            | 3                             |
|                   | 216-960                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 200 **                            | 3                             |
|                   | Above 960                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 500                               | 3                             |
|                   | <p>** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.</p> <p>In the emission table above, the tighter limit applies at the band edges.</p> <p>The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.</p> |                                   |                               |
| Test Method:      | ANSI C63.10-2013 section 6.6.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                   |                               |
| Procedure:        | ANSI C63.10-2013 section 6.6.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                   |                               |

#### 4.3.1 E.U.T. Operation:

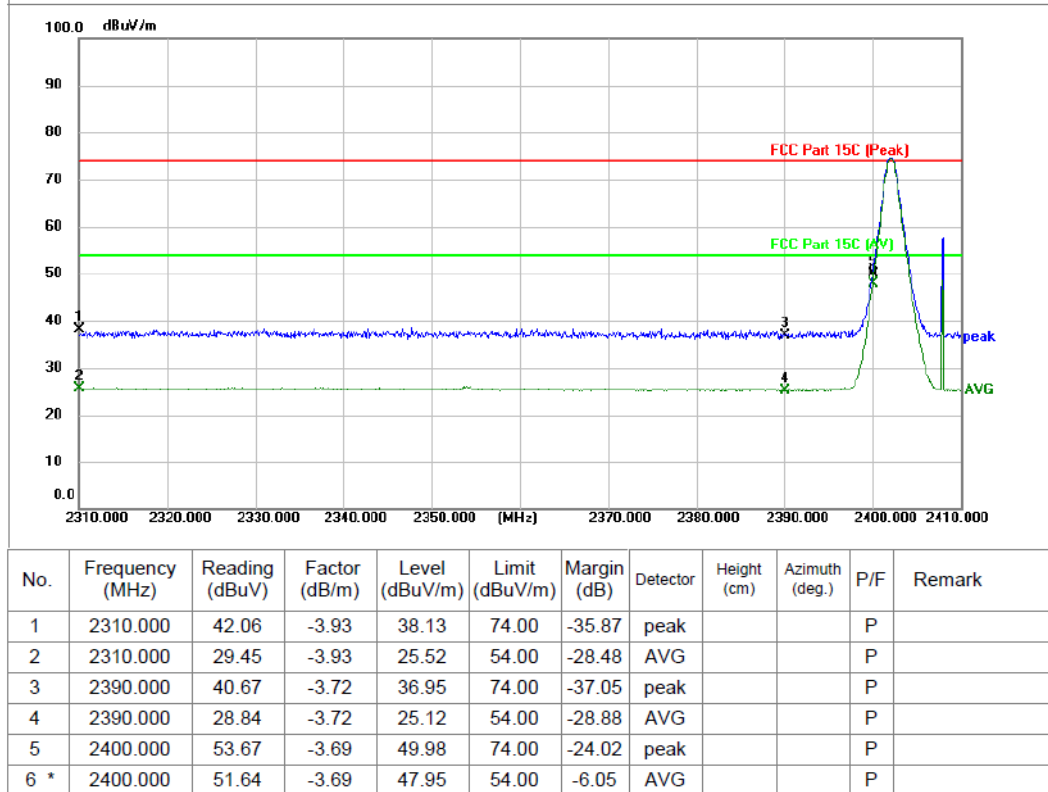
|                        |         |           |        |                       |         |
|------------------------|---------|-----------|--------|-----------------------|---------|
| Operating Environment: |         |           |        |                       |         |
| Temperature:           | 22.3 °C | Humidity: | 51.1 % | Atmospheric Pressure: | 101 kPa |
| Pretest mode:          |         | TM1       |        |                       |         |
| Final test mode:       |         | TM1       |        |                       |         |

#### 4.3.2 Test Setup Diagram:

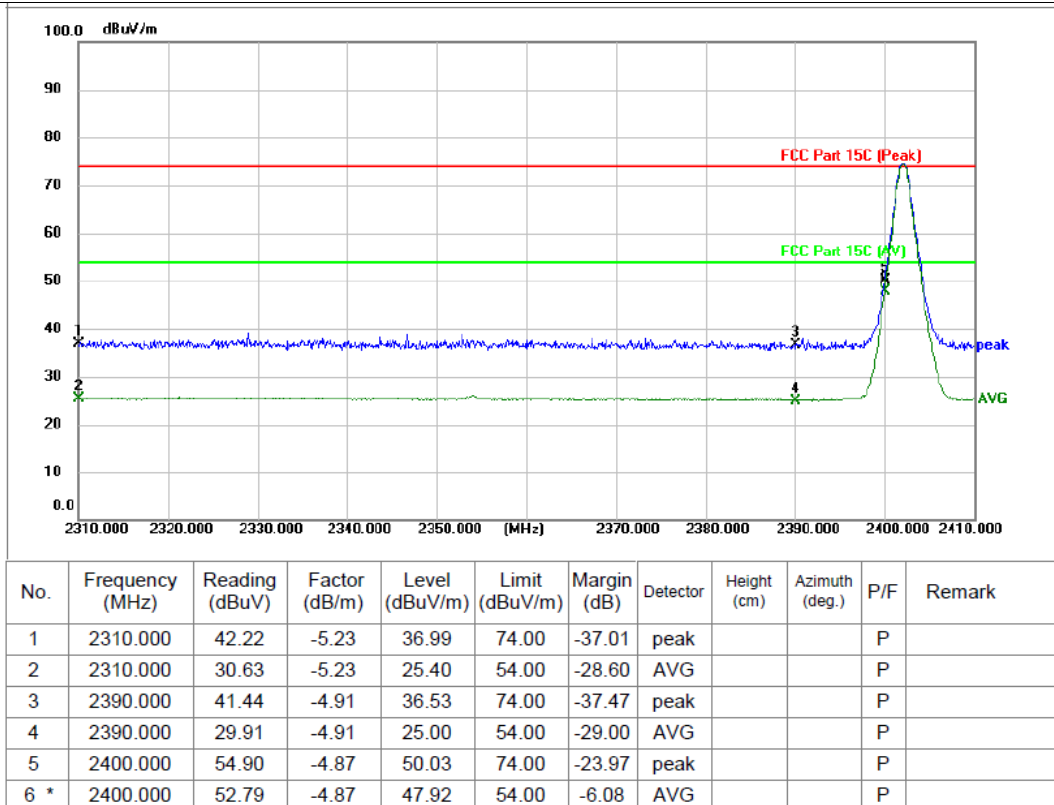


### 4.3.3 Test Data:

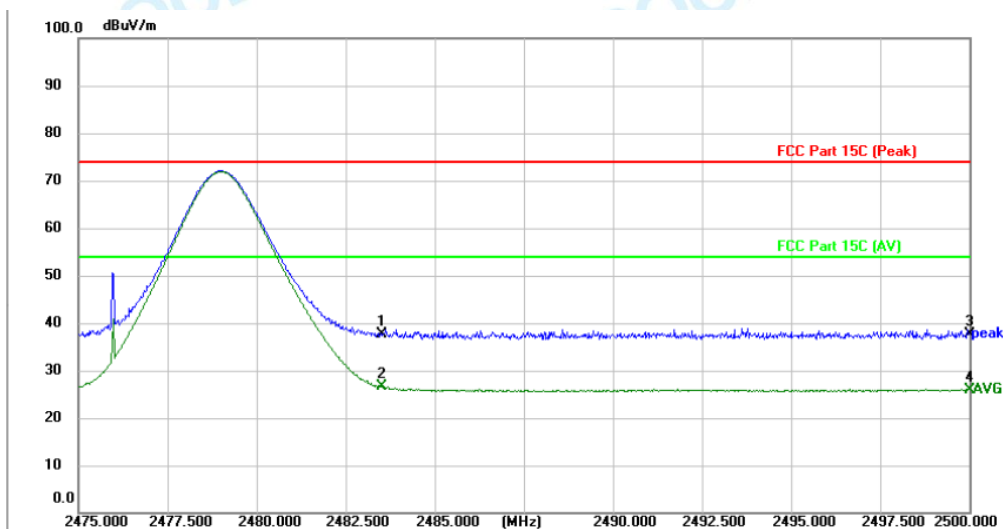
TM1 / Polarization: Horizontal / Band: 2.4G / BW: 3 / CH: L



TM1 / Polarization: Vertical / Band: 2.4G / BW: 3 / CH: L

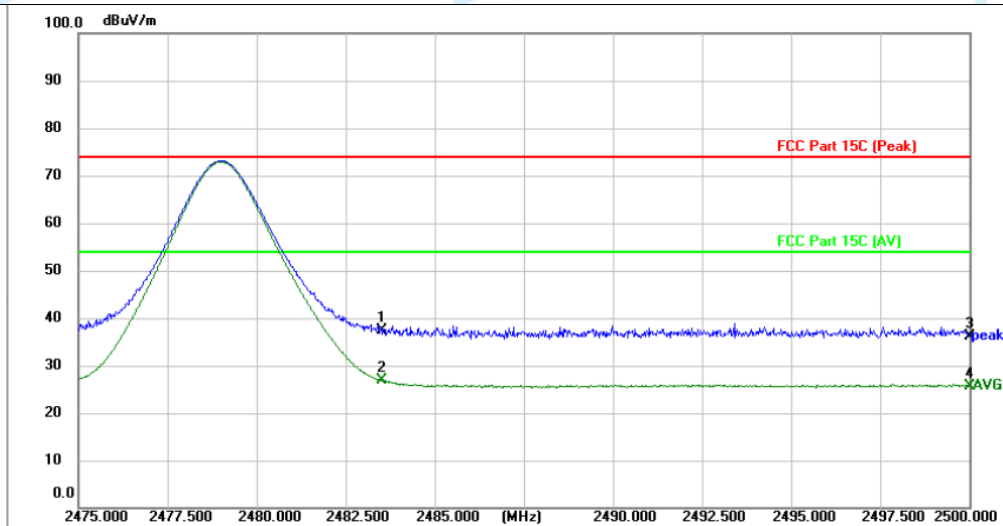


TM1 / Polarization: Horizontal / Band: 2.4G / BW: 3 / CH: H



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Azimuth (deg.) | P/F | Remark |
|-----|-----------------|----------------|---------------|----------------|----------------|-------------|----------|-------------|----------------|-----|--------|
| 1   | 2483.500        | 41.22          | -3.47         | 37.75          | 74.00          | -36.25      | peak     | 150         |                | P   |        |
| 2 * | 2483.500        | 30.02          | -3.47         | 26.55          | 54.00          | -27.45      | AVG      | 150         |                | P   |        |
| 3   | 2500.000        | 41.13          | -3.43         | 37.70          | 74.00          | -36.30      | peak     | 150         |                | P   |        |
| 4   | 2500.000        | 29.19          | -3.43         | 25.76          | 54.00          | -28.24      | AVG      | 150         |                | P   |        |

TM1 / Polarization: Vertical / Band: 2.4G / BW: 3 / CH: H



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Azimuth (deg.) | P/F | Remark |
|-----|-----------------|----------------|---------------|----------------|----------------|-------------|----------|-------------|----------------|-----|--------|
| 1   | 2483.500        | 41.83          | -4.54         | 37.29          | 74.00          | -36.71      | peak     |             |                | P   |        |
| 2 * | 2483.500        | 31.49          | -4.54         | 26.95          | 54.00          | -27.05      | AVG      |             |                | P   |        |
| 3   | 2500.000        | 40.57          | -4.48         | 36.09          | 74.00          | -37.91      | peak     |             |                | P   |        |
| 4   | 2500.000        | 30.18          | -4.48         | 25.70          | 54.00          | -28.30      | AVG      |             |                | P   |        |



#### 4.4 Emissions in frequency bands (below 1GHz)

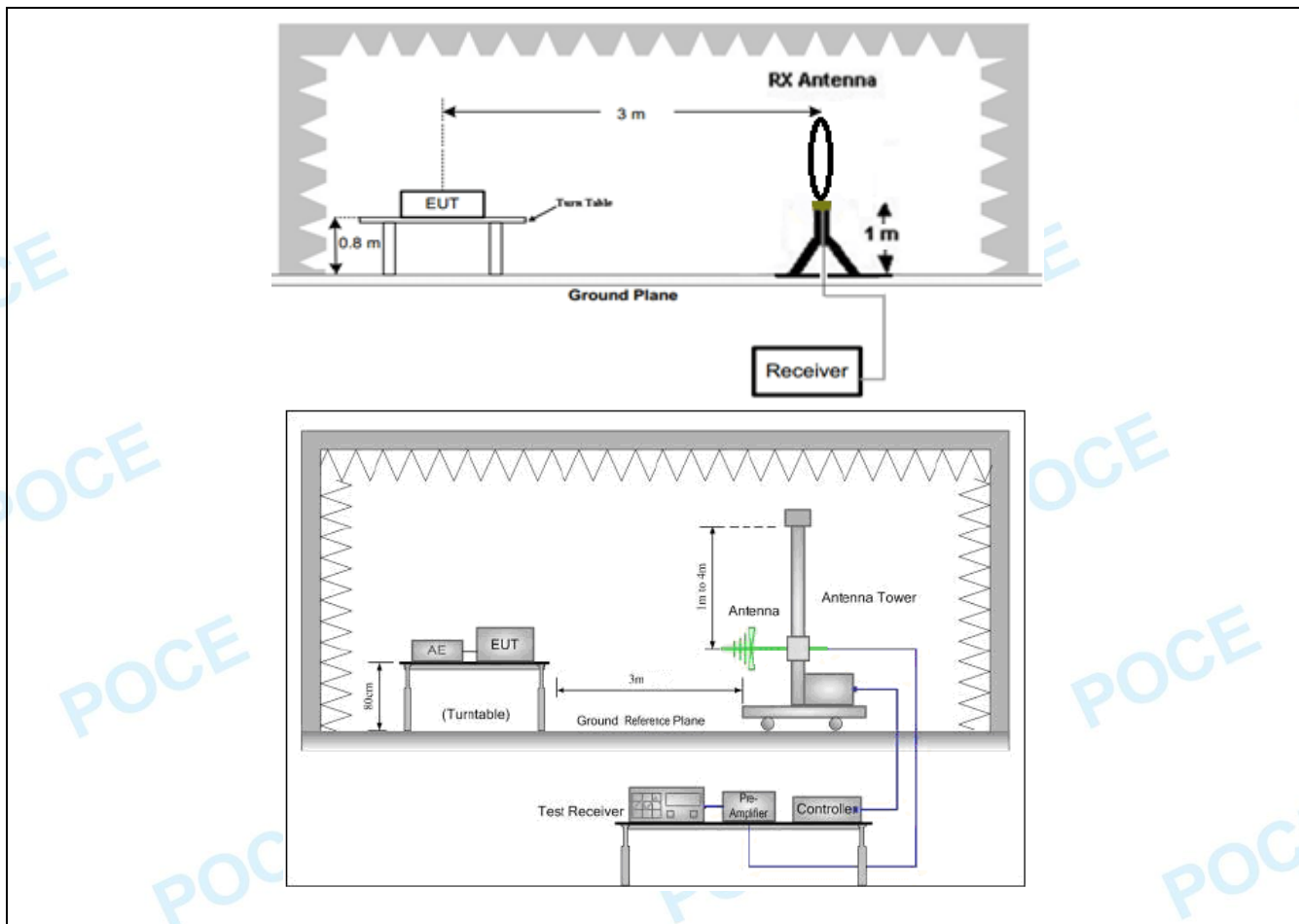
| Test Requirement:     | 47 CFR 15.249(a)<br>47 CFR 15.249(d)<br>47 CFR 15.249(e)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|-----------------------|--------------------------------------------------|------------------------------------------------|-------------|----|-----|-----------------|----|-----|---------------|----|-----|----------------|-----|------|-----------------|-----------------------------------|-------------------------------|-------------|-------------|-----|-------------|--------------|----|------------|----|----|-------|--------|---|--------|--------|---|---------|--------|---|-----------|-----|---|
| Test Limit:           | <p>Except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:</p> <table border="1"> <thead> <tr> <th>Fundamental frequency</th><th>Field strength of fundamental (millivolts/meter)</th><th>Field strength of harmonics (microvolts/meter)</th></tr> </thead> <tbody> <tr> <td>902-928 MHz</td><td>50</td><td>500</td></tr> <tr> <td>2400-2483.5 MHz</td><td>50</td><td>500</td></tr> <tr> <td>5725-5875 MHz</td><td>50</td><td>500</td></tr> <tr> <td>24.0-24.25 GHz</td><td>250</td><td>2500</td></tr> </tbody> </table> <p>Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in § 15.209, whichever is the lesser attenuation.</p> <table border="1"> <thead> <tr> <th>Frequency (MHz)</th><th>Field strength (microvolts/meter)</th><th>Measurement distance (meters)</th></tr> </thead> <tbody> <tr> <td>0.009-0.490</td><td>2400/F(kHz)</td><td>300</td></tr> <tr> <td>0.490-1.705</td><td>24000/F(kHz)</td><td>30</td></tr> <tr> <td>1.705-30.0</td><td>30</td><td>30</td></tr> <tr> <td>30-88</td><td>100 **</td><td>3</td></tr> <tr> <td>88-216</td><td>150 **</td><td>3</td></tr> <tr> <td>216-960</td><td>200 **</td><td>3</td></tr> <tr> <td>Above 960</td><td>500</td><td>3</td></tr> </tbody> </table> <p>** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.</p> <p>In the emission table above, the tighter limit applies at the band edges.</p> <p>The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.</p> <p>As shown in § 15.35(b), for frequencies above 1000 MHz, the field strength limits in paragraphs (a) and (b) of this section are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For point-to-point operation under paragraph (b) of this section, the peak field strength shall not exceed 2500 millivolts/meter at 3 meters along the antenna azimuth.</p> |                                                | Fundamental frequency | Field strength of fundamental (millivolts/meter) | Field strength of harmonics (microvolts/meter) | 902-928 MHz | 50 | 500 | 2400-2483.5 MHz | 50 | 500 | 5725-5875 MHz | 50 | 500 | 24.0-24.25 GHz | 250 | 2500 | Frequency (MHz) | Field strength (microvolts/meter) | Measurement distance (meters) | 0.009-0.490 | 2400/F(kHz) | 300 | 0.490-1.705 | 24000/F(kHz) | 30 | 1.705-30.0 | 30 | 30 | 30-88 | 100 ** | 3 | 88-216 | 150 ** | 3 | 216-960 | 200 ** | 3 | Above 960 | 500 | 3 |
| Fundamental frequency | Field strength of fundamental (millivolts/meter)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Field strength of harmonics (microvolts/meter) |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 902-928 MHz           | 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 500                                            |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 2400-2483.5 MHz       | 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 500                                            |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 5725-5875 MHz         | 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 500                                            |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 24.0-24.25 GHz        | 250                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2500                                           |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| Frequency (MHz)       | Field strength (microvolts/meter)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Measurement distance (meters)                  |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 0.009-0.490           | 2400/F(kHz)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 300                                            |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 0.490-1.705           | 24000/F(kHz)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 30                                             |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 1.705-30.0            | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 30                                             |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 30-88                 | 100 **                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 3                                              |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 88-216                | 150 **                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 3                                              |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 216-960               | 200 **                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 3                                              |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| Above 960             | 500                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 3                                              |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| Test Method:          | ANSI C63.10-2013 section 6.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| Procedure:            | ANSI C63.10-2013 section 6.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |

##### 4.4.1 E.U.T. Operation:

|                        |
|------------------------|
| Operating Environment: |
|------------------------|

|                  |         |           |        |                       |         |
|------------------|---------|-----------|--------|-----------------------|---------|
| Temperature:     | 22.3 °C | Humidity: | 51.1 % | Atmospheric Pressure: | 101 kPa |
| Pretest mode:    | TM1     |           |        |                       |         |
| Final test mode: | TM1     |           |        |                       |         |

#### 4.4.2 Test Setup Diagram:

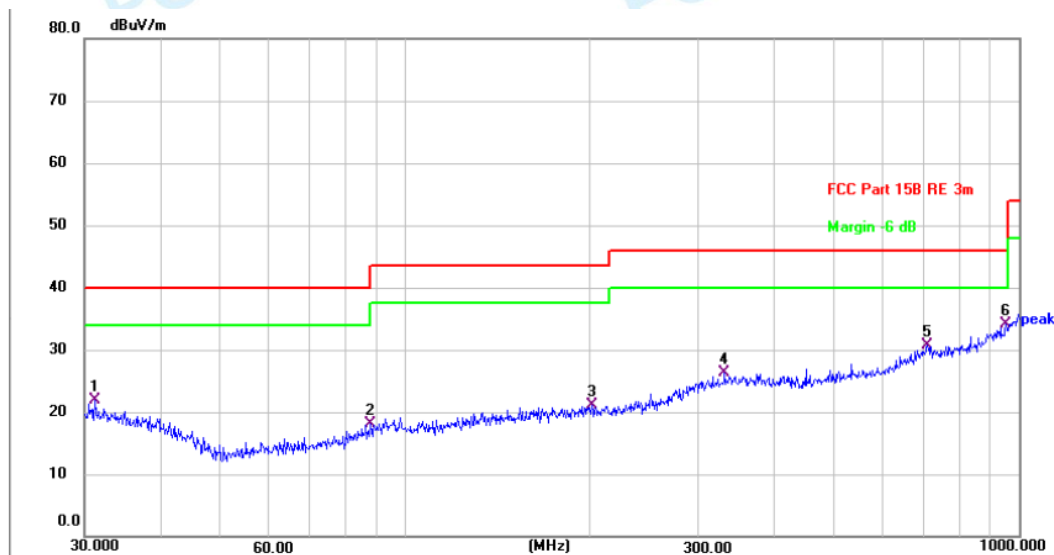


#### 4.4.3 Test Data:

Between 9KHz – 30MHz

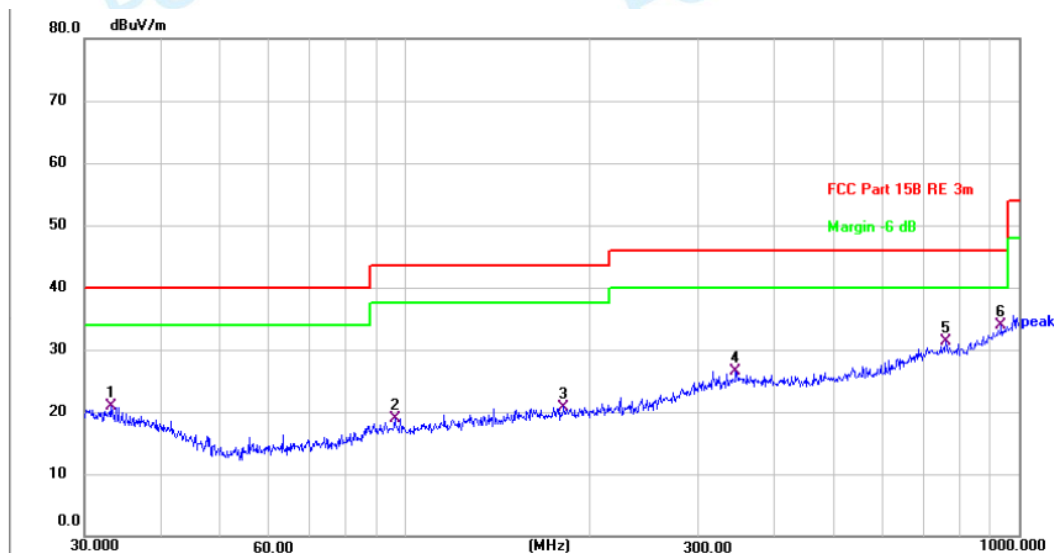
The emission from 9 kHz to 30MHz was pre-tested and found the result was 20dB lower than the limit, and according to 15.31(o) & RSS-Gen 6.13, the test result no need to reported.

TM1 / Polarization: Horizontal / Band: 2.4G / CH: H



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Azimuth (deg.) | P/F | Remark |
|-----|-----------------|----------------|---------------|----------------|----------------|-------------|----------|-------------|----------------|-----|--------|
| 1   | 31.1798         | 25.01          | -3.18         | 21.83          | 40.00          | -18.17      | QP       | 100         |                | P   |        |
| 2   | 87.7248         | 24.54          | -6.36         | 18.18          | 40.00          | -21.82      | QP       | 100         |                | P   |        |
| 3   | 201.3930        | 24.12          | -2.92         | 21.20          | 43.50          | -22.30      | QP       | 100         |                | P   |        |
| 4   | 331.3546        | 25.00          | 1.37          | 26.37          | 46.00          | -19.63      | QP       | 100         |                | P   |        |
| 5   | 709.1823        | 25.07          | 5.68          | 30.75          | 46.00          | -15.25      | QP       | 100         |                | P   |        |
| 6 * | 952.0937        | 24.91          | 9.17          | 34.08          | 46.00          | -11.92      | QP       | 100         |                | P   |        |

TM1 / Polarization: Vertical / Band: 2.4G / CH: H



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Azimuth (deg.) | P/F | Remark |
|-----|-----------------|----------------|---------------|----------------|----------------|-------------|----------|-------------|----------------|-----|--------|
| 1   | 33.0950         | 24.64          | -3.70         | 20.94          | 40.00          | -19.06      | QP       | 100         |                | P   |        |
| 2   | 96.0986         | 24.63          | -5.71         | 18.92          | 43.50          | -24.58      | QP       | 100         |                | P   |        |
| 3   | 181.2834        | 23.90          | -3.10         | 20.80          | 43.50          | -22.70      | QP       | 100         |                | P   |        |
| 4   | 345.5952        | 25.72          | 0.69          | 26.41          | 46.00          | -19.59      | QP       | 100         |                | P   |        |
| 5   | 760.7036        | 26.52          | 4.88          | 31.40          | 46.00          | -14.60      | QP       | 100         |                | P   |        |
| 6 * | 935.5463        | 25.32          | 8.68          | 34.00          | 46.00          | -12.00      | QP       | 100         |                | P   |        |

Remark: Margin= Measurement Level - Limit

Measurement Level=Test reading + correction factor

Correction Factor= Antenna Factor + Cable loss – Pre-amplifier



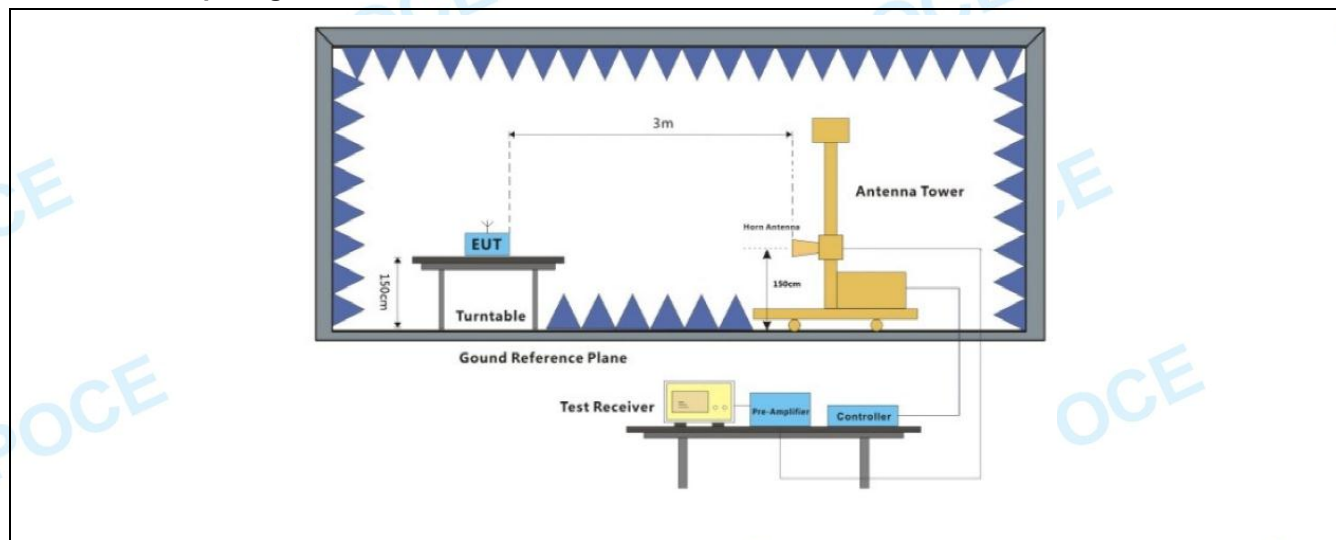
#### 4.5 Emissions in frequency bands (above 1GHz)

| Test Requirement:     | 47 CFR 15.249(a)<br>47 CFR 15.249(d)<br>47 CFR 15.249(e)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|-----------------------|--------------------------------------------------|------------------------------------------------|-------------|----|-----|-----------------|----|-----|---------------|----|-----|----------------|-----|------|-----------------|-----------------------------------|-------------------------------|-------------|-------------|-----|-------------|--------------|----|------------|----|----|-------|--------|---|--------|--------|---|---------|--------|---|-----------|-----|---|
| Test Limit:           | <p>Except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:</p> <table border="1"> <thead> <tr> <th>Fundamental frequency</th><th>Field strength of fundamental (millivolts/meter)</th><th>Field strength of harmonics (microvolts/meter)</th></tr> </thead> <tbody> <tr> <td>902-928 MHz</td><td>50</td><td>500</td></tr> <tr> <td>2400-2483.5 MHz</td><td>50</td><td>500</td></tr> <tr> <td>5725-5875 MHz</td><td>50</td><td>500</td></tr> <tr> <td>24.0-24.25 GHz</td><td>250</td><td>2500</td></tr> </tbody> </table> <p>Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in § 15.209, whichever is the lesser attenuation.</p> <table border="1"> <thead> <tr> <th>Frequency (MHz)</th><th>Field strength (microvolts/meter)</th><th>Measurement distance (meters)</th></tr> </thead> <tbody> <tr> <td>0.009-0.490</td><td>2400/F(kHz)</td><td>300</td></tr> <tr> <td>0.490-1.705</td><td>24000/F(kHz)</td><td>30</td></tr> <tr> <td>1.705-30.0</td><td>30</td><td>30</td></tr> <tr> <td>30-88</td><td>100 **</td><td>3</td></tr> <tr> <td>88-216</td><td>150 **</td><td>3</td></tr> <tr> <td>216-960</td><td>200 **</td><td>3</td></tr> <tr> <td>Above 960</td><td>500</td><td>3</td></tr> </tbody> </table> <p>** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.</p> <p>In the emission table above, the tighter limit applies at the band edges.</p> <p>The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.</p> <p>As shown in § 15.35(b), for frequencies above 1000 MHz, the field strength limits in paragraphs (a) and (b) of this section are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For point-to-point operation under paragraph (b) of this section, the peak field strength shall not exceed 2500 millivolts/meter at 3 meters along the antenna azimuth.</p> <p>NOTE: Test from 1GHz to 25GHz , no emission found above 12.75GHz , only report worse case.</p> |                                                | Fundamental frequency | Field strength of fundamental (millivolts/meter) | Field strength of harmonics (microvolts/meter) | 902-928 MHz | 50 | 500 | 2400-2483.5 MHz | 50 | 500 | 5725-5875 MHz | 50 | 500 | 24.0-24.25 GHz | 250 | 2500 | Frequency (MHz) | Field strength (microvolts/meter) | Measurement distance (meters) | 0.009-0.490 | 2400/F(kHz) | 300 | 0.490-1.705 | 24000/F(kHz) | 30 | 1.705-30.0 | 30 | 30 | 30-88 | 100 ** | 3 | 88-216 | 150 ** | 3 | 216-960 | 200 ** | 3 | Above 960 | 500 | 3 |
| Fundamental frequency | Field strength of fundamental (millivolts/meter)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Field strength of harmonics (microvolts/meter) |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 902-928 MHz           | 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 500                                            |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 2400-2483.5 MHz       | 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 500                                            |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 5725-5875 MHz         | 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 500                                            |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 24.0-24.25 GHz        | 250                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2500                                           |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| Frequency (MHz)       | Field strength (microvolts/meter)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Measurement distance (meters)                  |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 0.009-0.490           | 2400/F(kHz)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 300                                            |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 0.490-1.705           | 24000/F(kHz)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 30                                             |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 1.705-30.0            | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 30                                             |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 30-88                 | 100 **                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 3                                              |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 88-216                | 150 **                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 3                                              |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 216-960               | 200 **                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 3                                              |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| Above 960             | 500                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 3                                              |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| Test Method:          | ANSI C63.10-2013 section 6.6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| Procedure:            | ANSI C63.10-2013 section 6.6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |

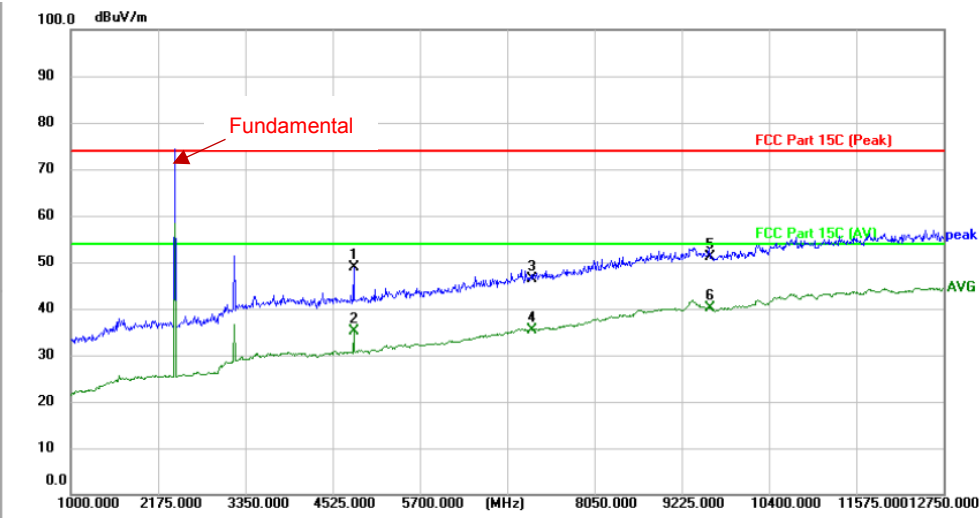
#### 4.5.1 E.U.T. Operation:

|                        |         |           |        |                       |         |
|------------------------|---------|-----------|--------|-----------------------|---------|
| Operating Environment: |         |           |        |                       |         |
| Temperature:           | 22.3 °C | Humidity: | 51.1 % | Atmospheric Pressure: | 101 kPa |
| Pretest mode:          | TM1     |           |        |                       |         |
| Final test mode:       | TM1     |           |        |                       |         |

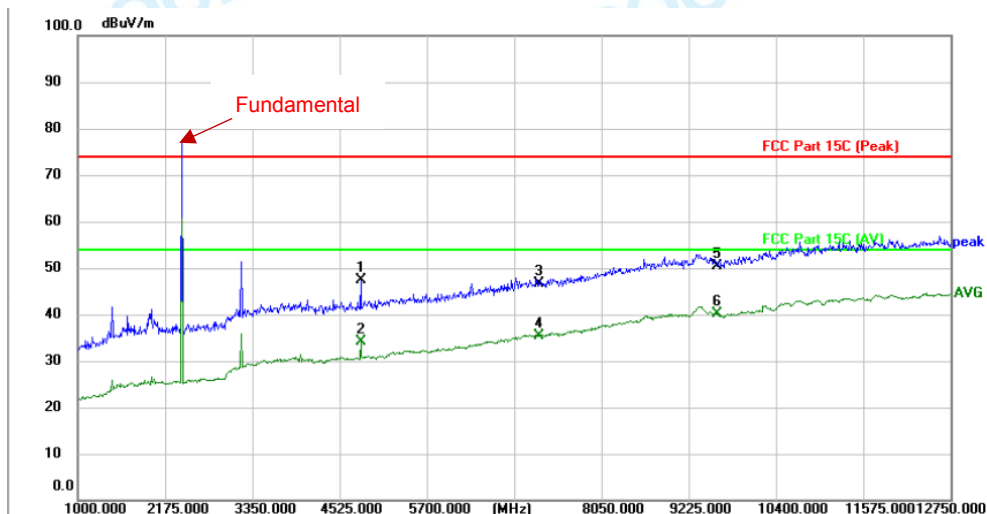
#### 4.5.2 Test Setup Diagram:



#### 4.5.3 Test Data:

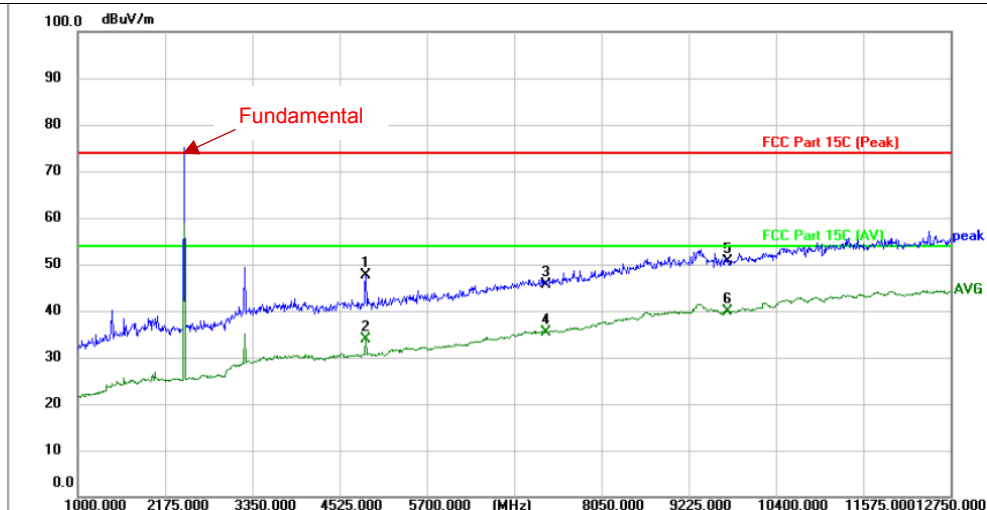
| TM1 / Polarization: Horizontal / Band: 2.4G / CH: L                                  |                 |                |               |                |                |             |          |             |                |     |        |  |
|--------------------------------------------------------------------------------------|-----------------|----------------|---------------|----------------|----------------|-------------|----------|-------------|----------------|-----|--------|--|
|  |                 |                |               |                |                |             |          |             |                |     |        |  |
| No.                                                                                  | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Azimuth (deg.) | P/F | Remark |  |
| 1                                                                                    | 4807.000        | 45.84          | 3.11          | 48.95          | 74.00          | -25.05      | peak     | 150         |                | P   |        |  |
| 2                                                                                    | 4807.000        | 31.95          | 3.11          | 35.06          | 54.00          | -18.94      | AVG      | 150         |                | P   |        |  |
| 3                                                                                    | 7206.000        | 36.37          | 10.13         | 46.50          | 74.00          | -27.50      | peak     | 150         |                | P   |        |  |
| 4                                                                                    | 7206.000        | 25.26          | 10.13         | 35.39          | 54.00          | -18.61      | AVG      | 150         |                | P   |        |  |
| 5                                                                                    | 9608.000        | 35.98          | 15.09         | 51.07          | 74.00          | -22.93      | peak     | 150         |                | P   |        |  |
| 6 *                                                                                  | 9608.000        | 24.94          | 15.09         | 40.03          | 54.00          | -13.97      | AVG      | 150         |                | P   |        |  |

## TM1 / Polarization: Vertical / Band: 2.4G / CH: L



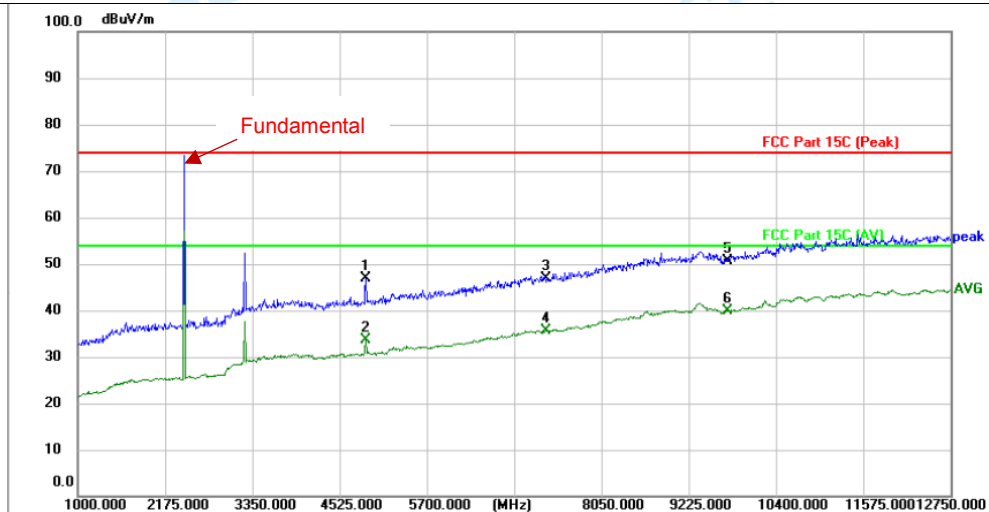
| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Azimuth (deg.) | P/F | Remark |
|-----|-----------------|----------------|---------------|----------------|----------------|-------------|----------|-------------|----------------|-----|--------|
| 1   | 4807.000        | 43.76          | 3.73          | 47.49          | 74.00          | -26.51      | peak     | 150         |                | P   |        |
| 2   | 4807.000        | 30.52          | 3.73          | 34.25          | 54.00          | -19.75      | AVG      | 150         |                | P   |        |
| 3   | 7206.000        | 36.45          | 10.09         | 46.54          | 74.00          | -27.46      | peak     | 150         |                | P   |        |
| 4   | 7206.000        | 25.41          | 10.09         | 35.50          | 54.00          | -18.50      | AVG      | 150         |                | P   |        |
| 5   | 9608.000        | 35.37          | 15.02         | 50.39          | 74.00          | -23.61      | peak     | 150         |                | P   |        |
| 6 * | 9608.000        | 25.12          | 15.02         | 40.14          | 54.00          | -13.86      | AVG      | 150         |                | P   |        |

## TM1 / Polarization: Horizontal / Band: 2.4G / CH: M



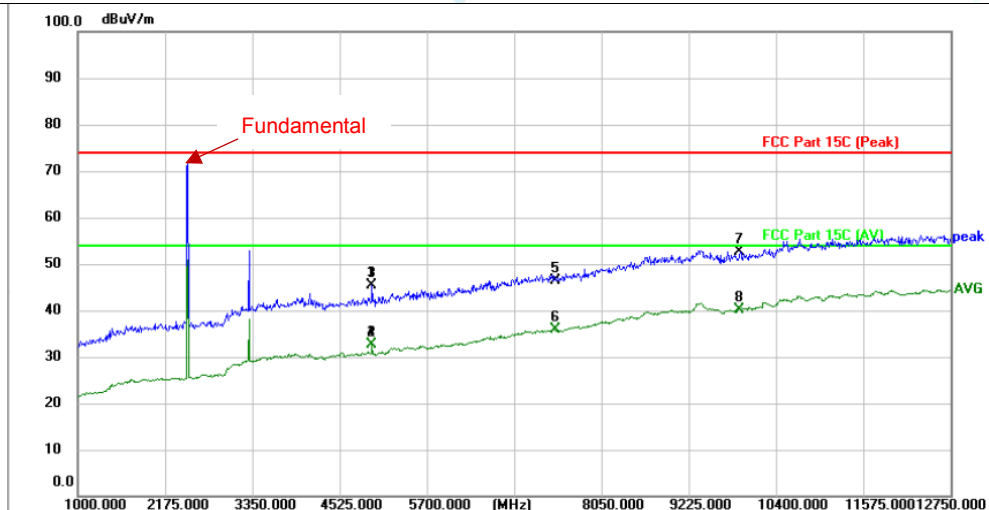
| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Azimuth (deg.) | P/F | Remark |
|-----|-----------------|----------------|---------------|----------------|----------------|-------------|----------|-------------|----------------|-----|--------|
| 1   | 4877.500        | 43.67          | 3.96          | 47.63          | 74.00          | -26.37      | peak     | 150         |                | P   |        |
| 2   | 4877.500        | 30.04          | 3.96          | 34.00          | 54.00          | -20.00      | AVG      | 150         |                | P   |        |
| 3   | 7311.000        | 35.34          | 10.34         | 45.68          | 74.00          | -28.32      | peak     | 150         |                | P   |        |
| 4   | 7311.000        | 25.13          | 10.34         | 35.47          | 54.00          | -18.53      | AVG      | 150         |                | P   |        |
| 5   | 9748.000        | 35.54          | 15.12         | 50.66          | 74.00          | -23.34      | peak     | 150         |                | P   |        |
| 6 * | 9748.000        | 24.75          | 15.12         | 39.87          | 54.00          | -14.13      | AVG      | 150         |                | P   |        |

## TM1 / Polarization: Vertical / Band: 2.4G / CH: M



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Azimuth (deg.) | P/F | Remark |
|-----|-----------------|----------------|---------------|----------------|----------------|-------------|----------|-------------|----------------|-----|--------|
| 1   | 4877.500        | 43.61          | 3.35          | 46.96          | 74.00          | -27.04      | peak     | 150         |                | P   |        |
| 2   | 4877.500        | 30.20          | 3.35          | 33.55          | 54.00          | -20.45      | AVG      | 150         |                | P   |        |
| 3   | 7311.000        | 36.67          | 10.29         | 46.96          | 74.00          | -27.04      | peak     | 150         |                | P   |        |
| 4   | 7311.000        | 25.43          | 10.29         | 35.72          | 54.00          | -18.28      | AVG      | 150         |                | P   |        |
| 5   | 9748.000        | 35.47          | 15.10         | 50.57          | 74.00          | -23.43      | peak     | 150         |                | P   |        |
| 6 * | 9748.000        | 24.82          | 15.10         | 39.92          | 54.00          | -14.08      | AVG      | 150         |                | P   |        |

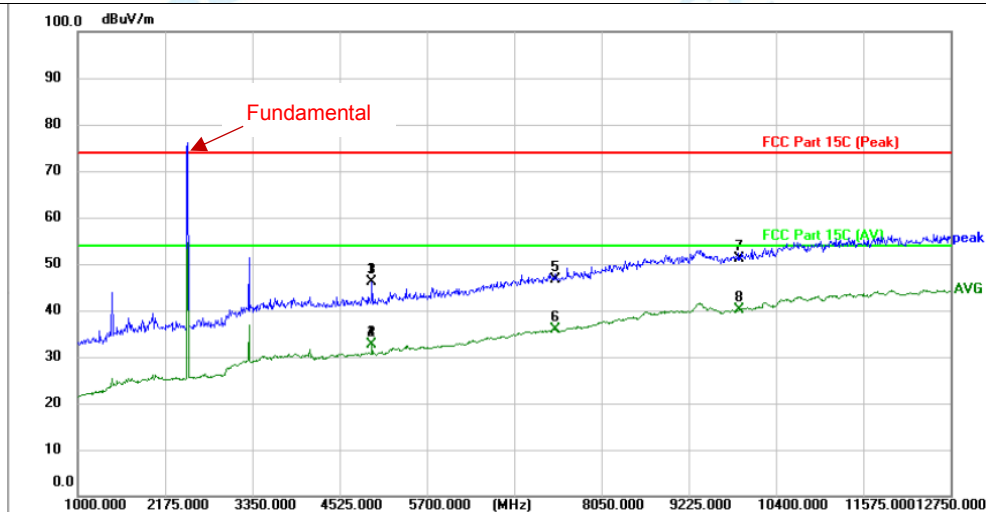
## TM1 / Polarization: Horizontal / Band: 2.4G / CH: H



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Azimuth (deg.) | P/F | Remark |
|-----|-----------------|----------------|---------------|----------------|----------------|-------------|----------|-------------|----------------|-----|--------|
| 1   | 4958.000        | 41.78          | 3.62          | 45.40          | 74.00          | -28.60      | peak     | 150         |                | P   |        |
| 2   | 4958.000        | 29.11          | 3.62          | 32.73          | 54.00          | -21.27      | AVG      | 150         |                | P   |        |
| 3   | 4959.750        | 41.77          | 3.63          | 45.40          | 74.00          | -28.60      | peak     | 150         |                | P   |        |
| 4   | 4959.750        | 29.10          | 3.63          | 32.73          | 54.00          | -21.27      | AVG      | 150         |                | P   |        |
| 5   | 7437.000        | 35.93          | 10.49         | 46.42          | 74.00          | -27.58      | peak     | 150         |                | P   |        |
| 6   | 7437.000        | 25.30          | 10.49         | 35.79          | 54.00          | -18.21      | AVG      | 150         |                | P   |        |
| 7   | 9916.000        | 37.48          | 15.09         | 52.57          | 74.00          | -21.43      | peak     | 150         |                | P   |        |
| 8 * | 9916.000        | 25.09          | 15.09         | 40.18          | 54.00          | -13.82      | AVG      | 150         |                | P   |        |



TM1 / Polarization: Vertical / Band: 2.4G / CH: H



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Azimuth (deg.) | P/F | Remark |
|-----|-----------------|----------------|---------------|----------------|----------------|-------------|----------|-------------|----------------|-----|--------|
| 1   | 4958.000        | 41.82          | 4.23          | 46.05          | 74.00          | -27.95      | peak     | 150         |                | P   |        |
| 2   | 4958.000        | 28.39          | 4.23          | 32.62          | 54.00          | -21.38      | AVG      | 150         |                | P   |        |
| 3   | 4959.750        | 41.82          | 4.23          | 46.05          | 74.00          | -27.95      | peak     | 150         |                | P   |        |
| 4   | 4959.750        | 28.39          | 4.23          | 32.62          | 54.00          | -21.38      | AVG      | 150         |                | P   |        |
| 5   | 7437.000        | 36.05          | 10.64         | 46.69          | 74.00          | -27.31      | peak     | 150         |                | P   |        |
| 6   | 7437.000        | 25.21          | 10.64         | 35.85          | 54.00          | -18.15      | AVG      | 150         |                | P   |        |
| 7   | 9916.000        | 35.94          | 15.23         | 51.17          | 74.00          | -22.83      | peak     | 150         |                | P   |        |
| 8 * | 9916.000        | 24.93          | 15.23         | 40.16          | 54.00          | -13.84      | AVG      | 150         |                | P   |        |

Remark: 1. Test from 1GHz to 25GHz , no emission found above 12.75GHz , only report worse case

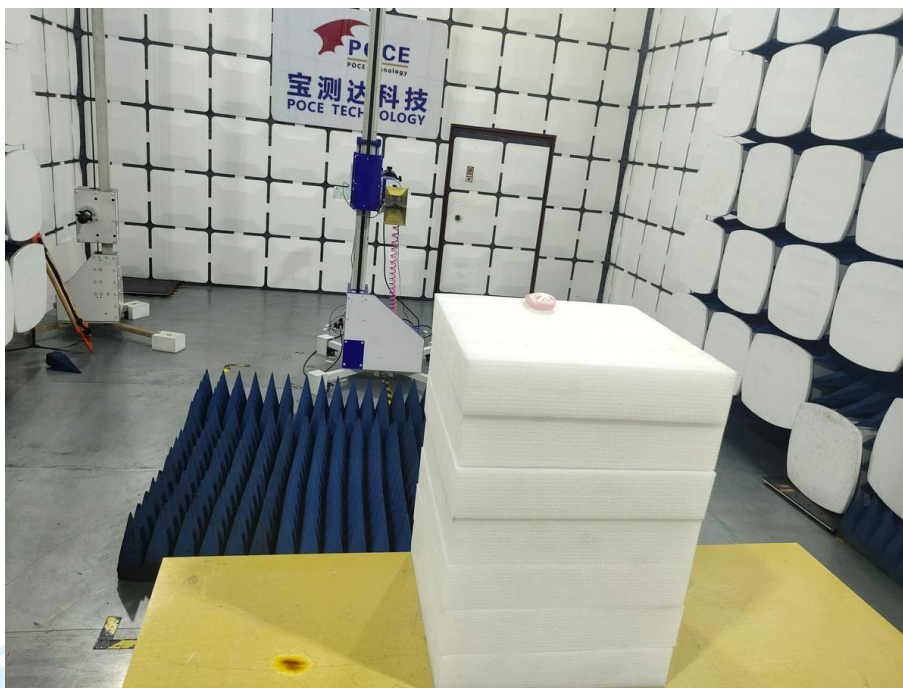
Margin= Measurement Level - Limit

Measurement Level=Test reading + correction factor

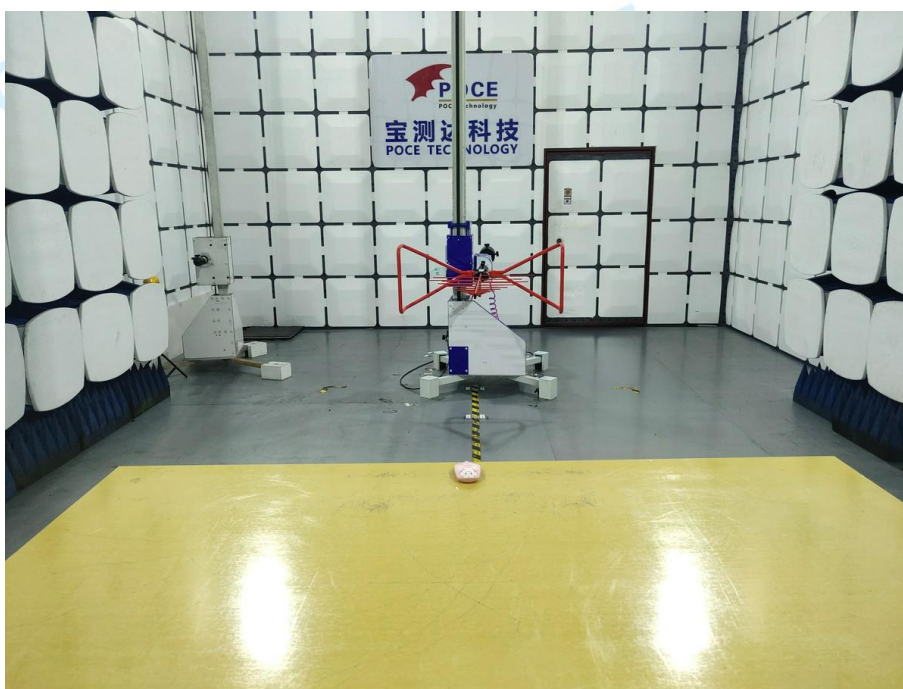
Correction Factor= Antenna Factor + Cable loss – Pre-amplifier

## 5 TEST SETUP PHOTOS

**Band edge emissions (Radiated)**  
**Emissions in frequency bands (above 1GHz)**



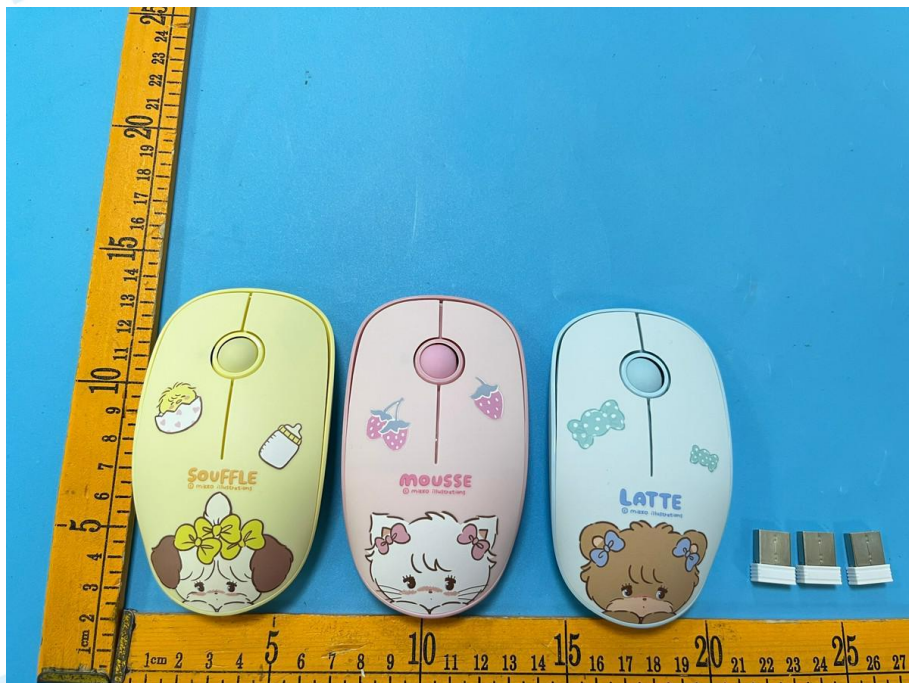
**Emissions in frequency bands (below 1GHz)**

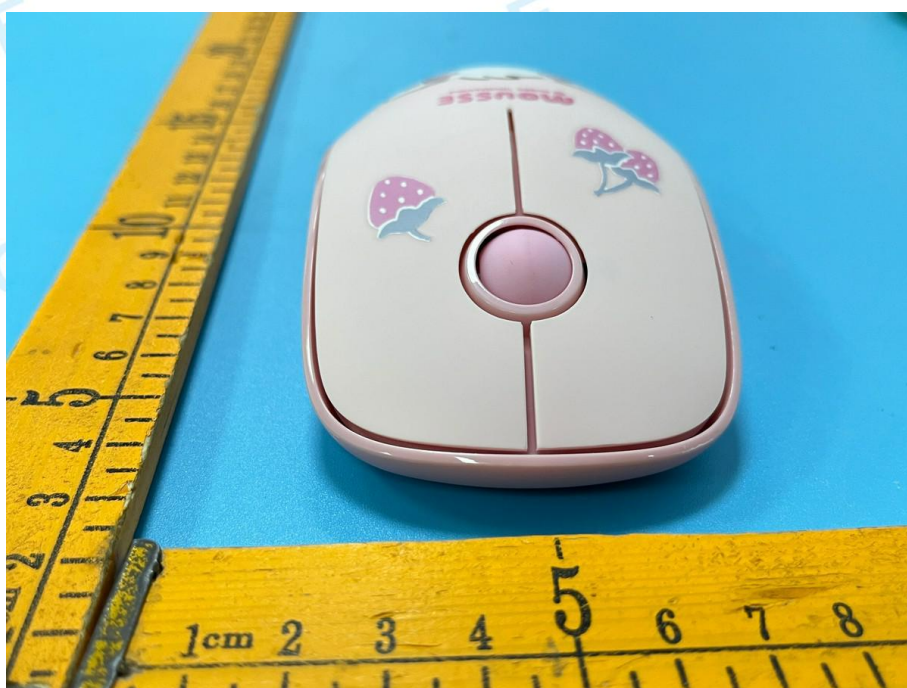




## 6 PHOTOS OF THE EUT

External







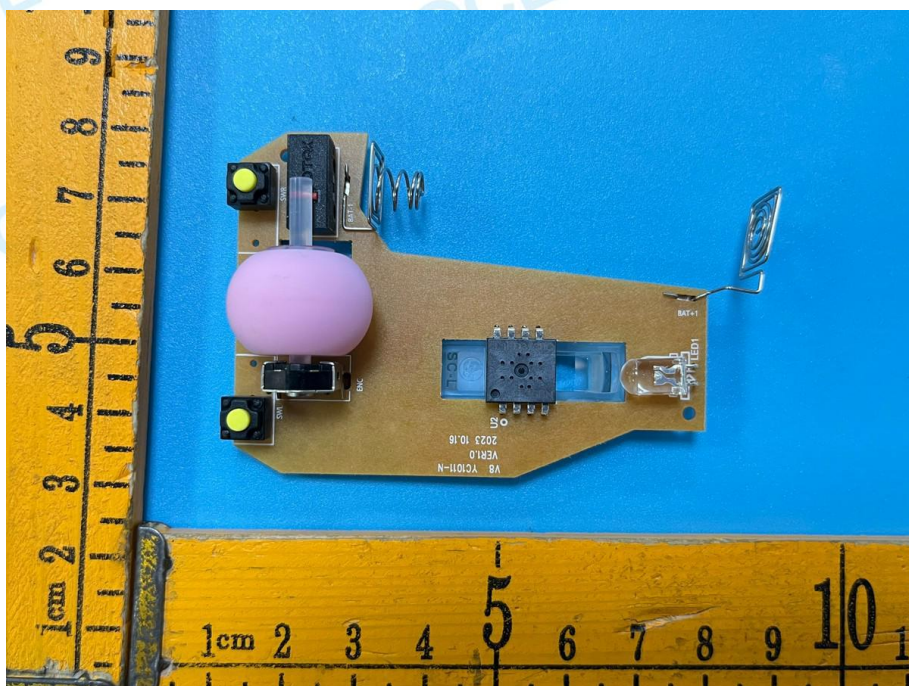
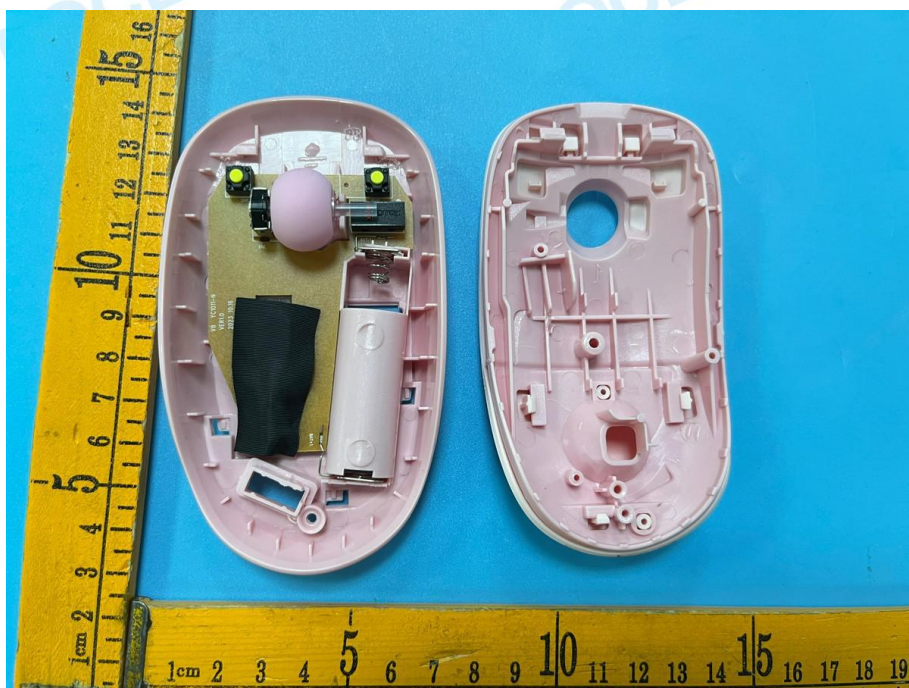




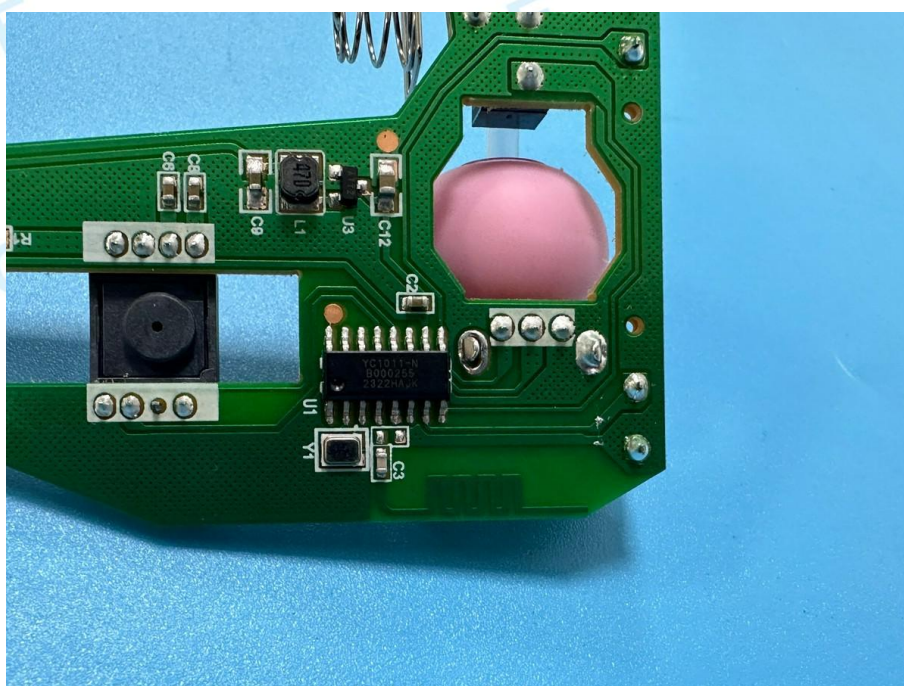
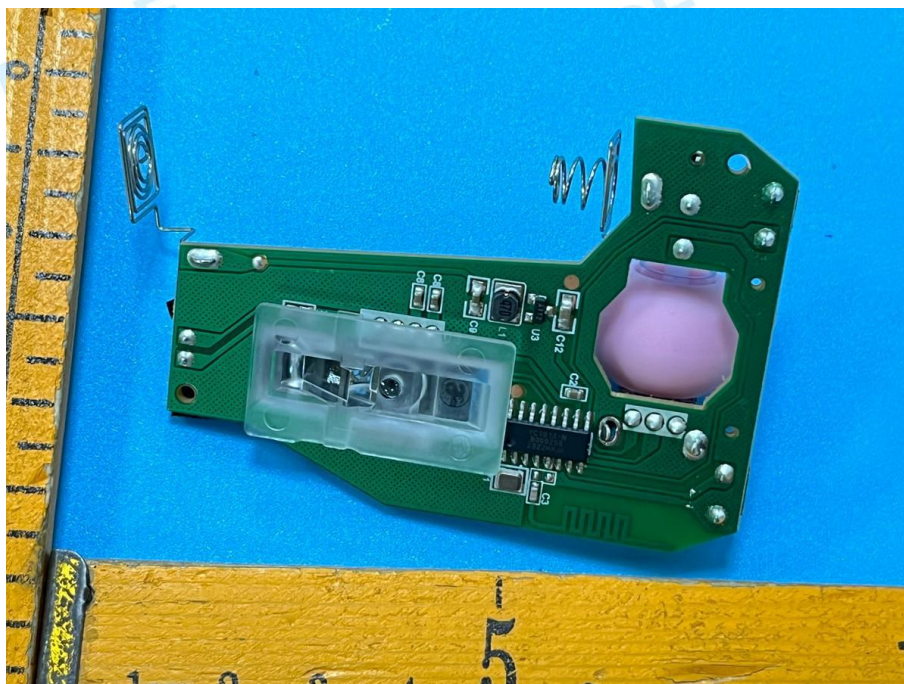
**Internal**











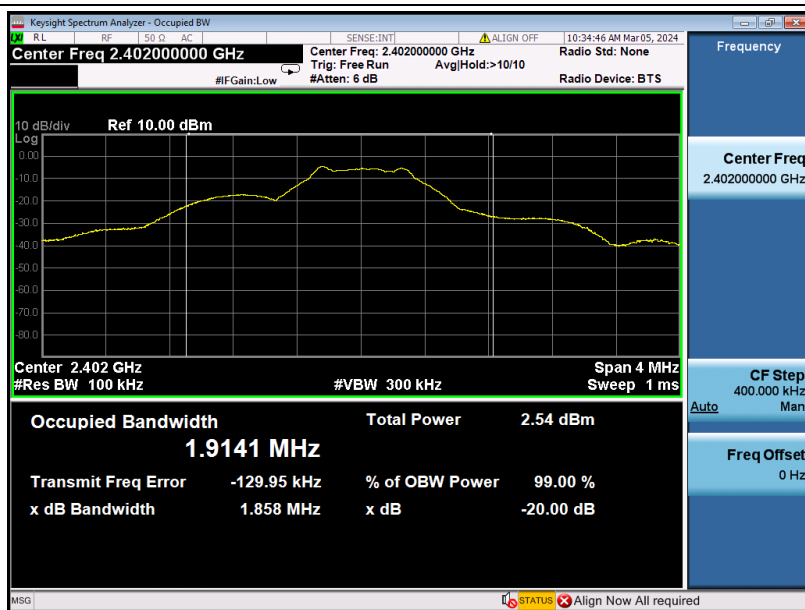


## Appendix

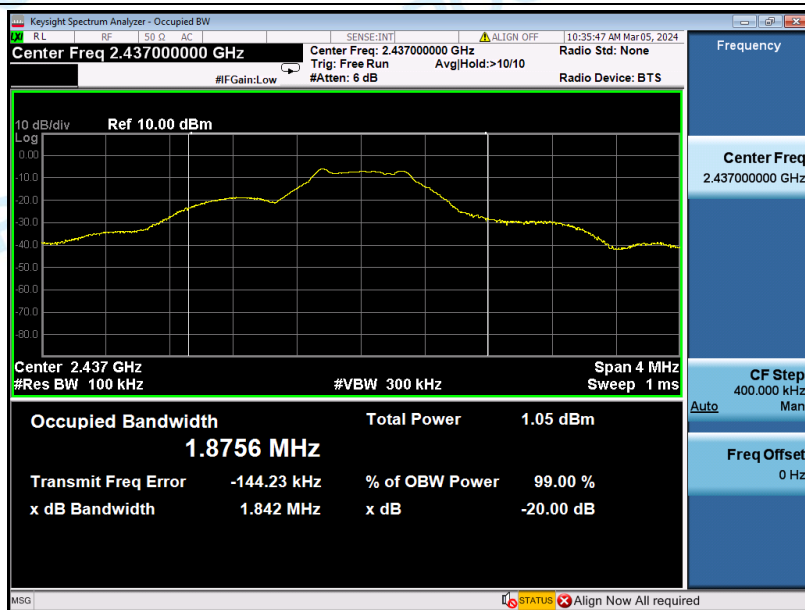
### 1. 20dB Bandwidth

| Condition | Antenna | Frequency (MHz) | -20BW(MHz) | 99% BW(MHz) |
|-----------|---------|-----------------|------------|-------------|
| NVNT      | ANT1    | 2402.00         | 1.858      | 1.914       |
| NVNT      | ANT1    | 2437.00         | 1.842      | 1.876       |
| NVNT      | ANT1    | 2479.00         | 1.879      | 1.913       |

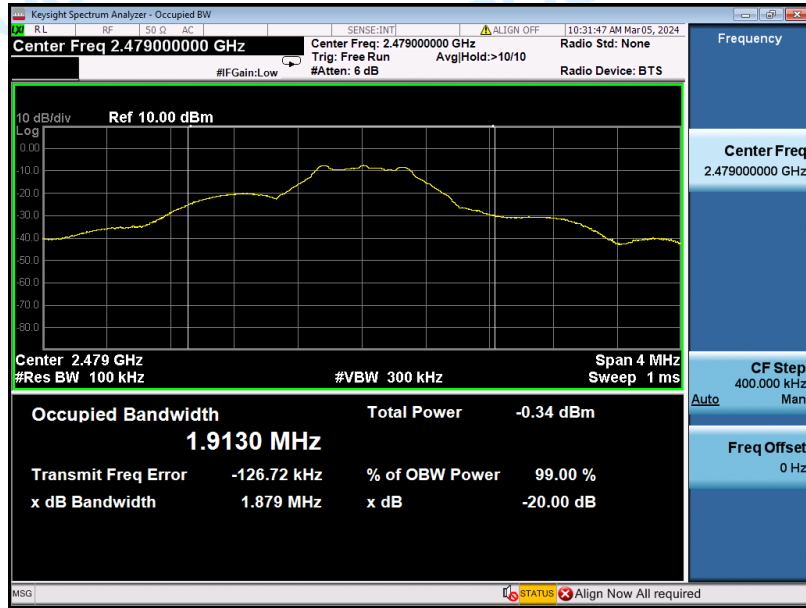
-20dB\_Bandwidth\_NVNT\_ANT1\_1Mbps\_2402



-20dB\_Bandwidth\_NVNT\_ANT1\_1Mbps\_2437



### -20dB\_Bandwidth\_NVNT\_ANT1\_1Mbps\_2479



\*\*\*\*\* End of Report \*\*\*\*\*