

**FCC/ISED - TEST REPORT**

|                                  |   |                                                                                                                                                     |                |            |
|----------------------------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------|
| Report Number                    | : | 6895025062601                                                                                                                                       | Date of Issue: | 2025-05-07 |
| Model/HVIN                       | : | A2430                                                                                                                                               |                |            |
| Product Type                     | : | Smart Watch                                                                                                                                         |                |            |
| Applicant                        | : | Anhui Huami Information Technology Co., Ltd.                                                                                                        |                |            |
| Address                          | : | 7/F, Building B2, Huami Global Innovation Center, No. 900,<br>Wangjiang West Road, High-tech Zone, 518000 Hefei City,<br>PEOPLE'S REPUBLIC OF CHINA |                |            |
| Manufacturer                     | : | Anhui Huami Information Technology Co., Ltd.                                                                                                        |                |            |
| Address                          | : | 7/F, Building B2, Huami Global Innovation Center, No. 900,<br>Wangjiang West Road, High-tech Zone, 518000 Hefei City,<br>PEOPLE'S REPUBLIC OF CHINA |                |            |
| Test Result                      | : | <input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative                                                                      |                |            |
| Total pages including Appendices | : | 56                                                                                                                                                  |                |            |

Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4.

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## 2 Details about the Test Laboratory

### Details about the Test Laboratory

#### Test Site 1

Company name: TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch  
Building 12 & 13, Zhiheng Wisdomland Business Park, Guankou Erlu,  
Nantou, Nanshan District,  
Shenzhen, Guangdong, China

Telephone: 86 755 8828 6998

Fax: 86 755 8828 5299

FCC Registration 514049

No.:

FCC Designation CN5009  
Number:

ISED CAB CN0077  
identifier

IC Registration 10320A  
No.:

### 3 Description of the Equipment Under Test

|                                            |                                                                                                                                                     |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Product:                                   | Smart Watch                                                                                                                                         |
| Model no.:                                 | A2430                                                                                                                                               |
| Hardware Version Identification No. (HVIN) | A2430                                                                                                                                               |
| Product Marketing Name (PMN)               | Smart Watch                                                                                                                                         |
| FCC ID:                                    | 2AC8UA2430                                                                                                                                          |
| IC:                                        | 21806-A2430                                                                                                                                         |
| Options and accessories:                   | N/A                                                                                                                                                 |
| Rating:                                    | 5VDC, 1.5A                                                                                                                                          |
| RF Transmission Frequency:                 | 2412MHz-2462MHz for 802.11b/g/n20 (Wi-Fi)                                                                                                           |
| No. of Operated Channel:                   | 11 for 802.11b/g/n20 (Wi-Fi)                                                                                                                        |
| Modulation:                                | 802.11b: BPSK, QPSK, CCK,<br>802.11g/802.11n20: BPSK, QPSK, 16-QAM, 64-QAM                                                                          |
| Antenna Type:                              | Metal Case                                                                                                                                          |
| Antenna Gain:                              | -4.92dBi                                                                                                                                            |
| Description of the EUT:                    | The EUT is a Smart Watch. It supports Bluetooth Low Energy/Bluetooth BDR+EDR and 2.4G Wi-Fi functions.<br><br>This report is only for 2.4GHz Wi-Fi. |

NOTE 1: The above EUT's information is declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

## 4 Summary of Test Standards

| Test Standards                                                                           |                                                                                                                                    |
|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| FCC Part 15 Subpart C<br>10-1-2023 Edition                                               | PART 15 - RADIO FREQUENCY DEVICES<br>Subpart C - Intentional Radiators                                                             |
| RSS-Gen Issue 5<br>April 2018 + Amendment 1<br>March 2019 + Amendment 2<br>February 2021 | General Requirements for Compliance of Radio Apparatus                                                                             |
| RSS-247<br>Issue 3 August 2023                                                           | Digital Transmission Systems (DTSS), Frequency Hopping<br>Systems (FHSS) and License-Exempt Local Area Network<br>(LE-LAN) Devices |

All the test methods were according to KDB 558074 D01 15.247 Meas Guidance v05r02 Measurement Guidance and ANSI C63.10-2020.

## 5 Summary of Test Results

| Technical Requirements                                      |                                             |            |                                     |                          |                          |                       |
|-------------------------------------------------------------|---------------------------------------------|------------|-------------------------------------|--------------------------|--------------------------|-----------------------|
| FCC Part 15 Subpart C/ RSS-247 Issue 3/RSS-Gen Issue 5      |                                             |            |                                     |                          |                          |                       |
| Test Condition                                              |                                             | Test Site  | Test Result                         |                          |                          | Test Environment      |
|                                                             |                                             |            | Pass                                | Fail                     | N/A                      |                       |
| §15.207 & RSS-GEN 8.8                                       | Conducted emission AC power port            | Site 1     | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | T: 23.5°C<br>H: 49.4% |
| §15.247 (b) (3) & RSS-247 5.4(d)                            | Conducted peak output power                 | Site 1     | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | T: 22.3°C<br>H: 48.3% |
| RSS-247 5.4(d)                                              | Equivalent Isotropic Radiated Power         | Site 1     | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | T: 22.3°C<br>H: 48.3% |
| §15.247(a)(2) & RSS-247 5.2(a) & RSS-GEN 6.7                | 6dB bandwidth and 99% Occupied Bandwidth    | Site 1     | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | T: 22.3°C<br>H: 48.3% |
| §15.247(e) & RSS-247 5.2(b)                                 | Power spectral density                      | Site 1     | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | T: 22.3°C<br>H: 48.3% |
| §15.247(d) & RSS-247 5.5                                    | Spurious RF conducted emissions             | Site 1     | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | T: 22.3°C<br>H: 48.3% |
| §15.247(d) & RSS-247 5.5                                    | Band edge                                   | Site 1     | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | T: 23.5°C<br>H: 47.7% |
| §15.247(d) & §15.209 & §15.205 & RSS-247 5.5 & RSS-Gen 6.13 | Spurious radiated emissions for transmitter | Site 1     | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | T: 23.5°C<br>H: 47.7% |
| §15.203 & RSS-Gen 6.8                                       | Antenna requirement                         | See note 2 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | --                    |

Note 1: N/A=Not Applicable.

Note 2: The EUT uses Metal Case antenna, which gain is -4.92dBi. In accordance to §15.203 & RSS-Gen 6.8, it is considered sufficiently to comply with the provisions of this section.

Note 3: T :Temperature, H: Humidity

## 6 General Remarks

### Remarks

This submittal(s) (test report) is intended for FCC ID: 2AC8UA2430, IC: 21806-A2430, complies with Section 15.207, 15.209, 15.247 of the FCC Part 15, Subpart C rules and RSS-247, RSS-GEN.

### SUMMARY:

All tests according to the regulations cited on page 6 were

■ - Performed

□ - Not Performed

The Equipment Under Test

■ - **Fulfills** the general approval requirements.

□ - **Does not** fulfill the general approval requirements.

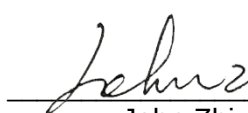
Sample Received Date: 2025-04-09

Testing Start Date: 2025-04-09

Testing End Date: 2025-04-22

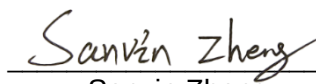
TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch

Reviewed by:

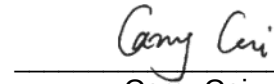
  
John Zhi  
Section Manager



Prepared by:

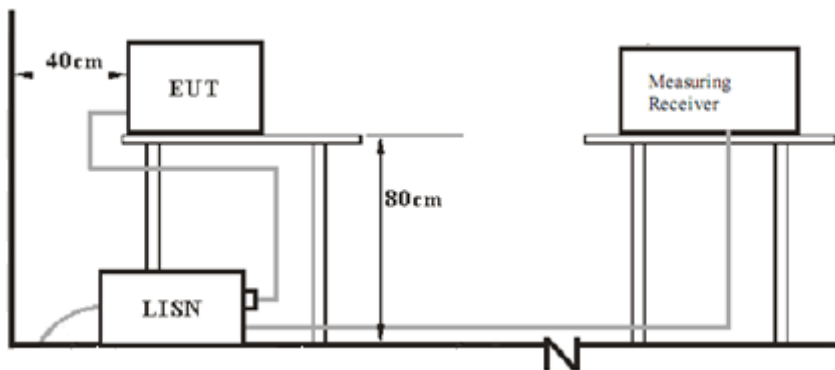
  
Sanvin Zheng  
Project Engineer

Tested by:

  
Carry Cai  
Test Engineer

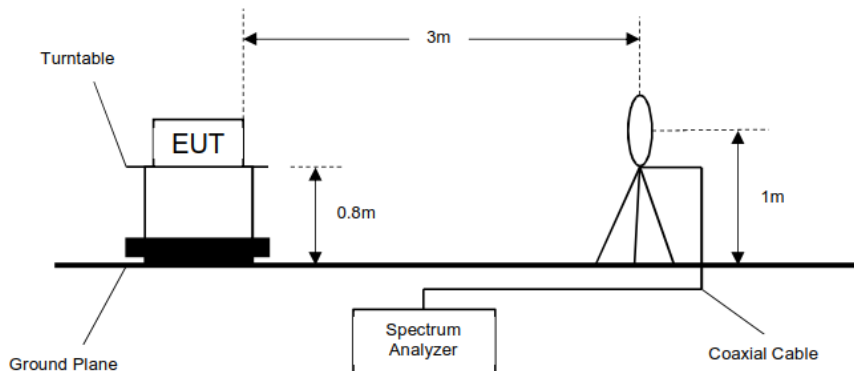
## 7 Test Setups

### 7.1 AC Power Line Conducted Emission test setups

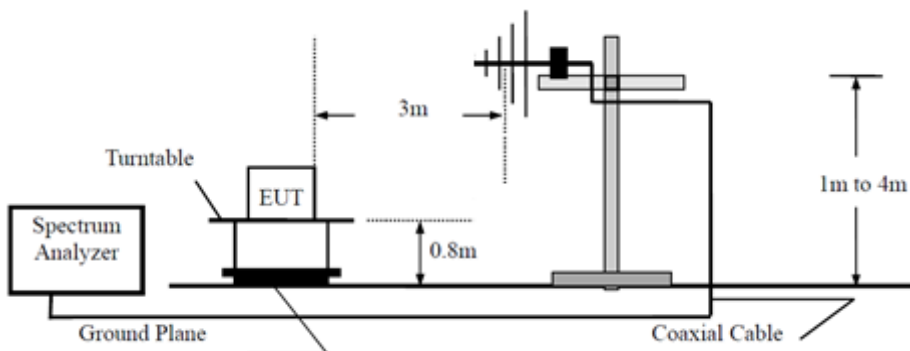


### 7.2 Radiated test setups

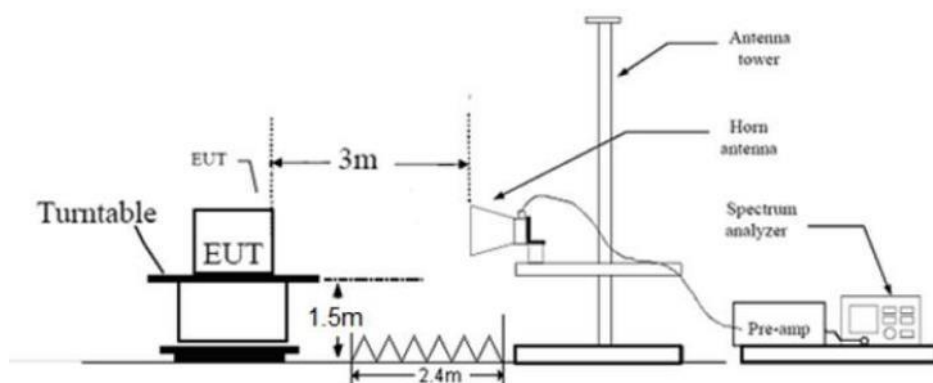
9KHz - 30MHz



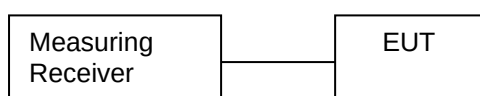
### 30MHz - 1GHz



Above 1GHz



### 7.3 Conducted RF test setups



## 8 Systems Test Configuration

Auxiliary Equipment Used during Test:

| Description   | Manufacturer | Model NO.    | S/N |
|---------------|--------------|--------------|-----|
| Notebook      | LENOVO       | X220         | --- |
| Watch Charger | HUAMI        | ---          | --- |
| Adapter       | HUAWEI       | HW-110600C02 | --- |

Cables Used During Test:

| Cable     | Length | Shielded/unshielded | With / without ferrite |
|-----------|--------|---------------------|------------------------|
| USB cable | 100cm  | Unshielded          | without ferrite        |

Test software information:

| Test Software Version | SSCOM.exe    |                  |            |
|-----------------------|--------------|------------------|------------|
| Mode                  | Channel(MHz) | Setting TX Power | Data Rate  |
| 11b                   | 2412         | Default          | 11b 1 Mbps |
|                       | 2437         | Default          |            |
|                       | 2462         | Default          |            |
| 11g                   | 2412         | Default          | 11g 6 Mbps |
|                       | 2437         | Default          |            |
|                       | 2462         | Default          |            |
| 11n HT20              | 2412         | Default          | MCS0       |
|                       | 2437         | Default          |            |
|                       | 2462         | Default          |            |

## 9 Technical Requirement

### 9.1 Conducted Emission

#### Test Method

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. Both sides of AC line were checked for maximum conducted interference.
6. The frequency range from 150 kHz to 30 MHz was searched.
7. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

#### Limit

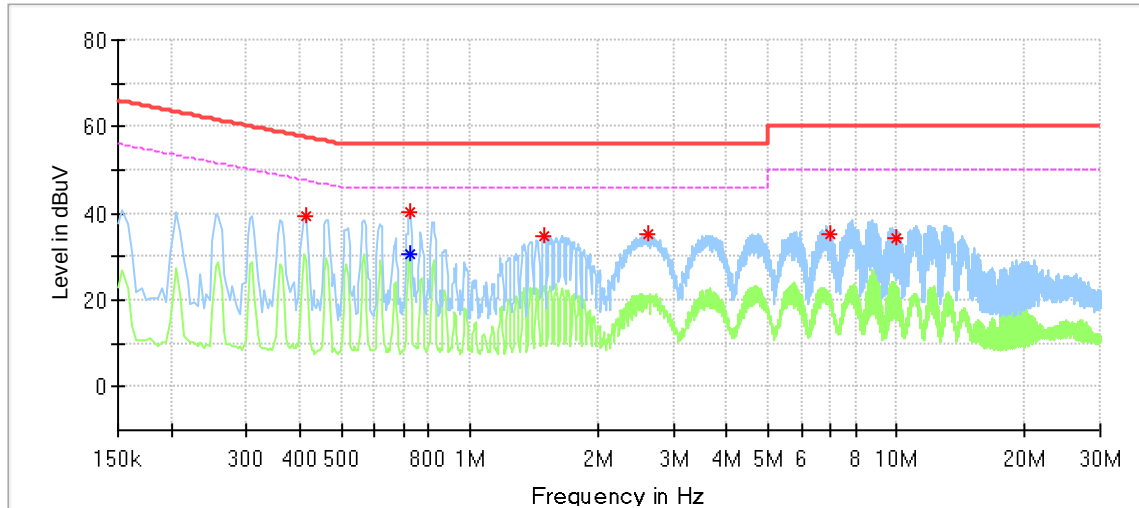
According to §15.207& RSS-Gen 8.8, Conducted Emission limit as below:

| Frequency<br>MHz | QP Limit<br>dB $\mu$ V | AV Limit<br>dB $\mu$ V |
|------------------|------------------------|------------------------|
| 0.150-0.500      | 66-56*                 | 56-46*                 |
| 0.500-5          | 56                     | 46                     |
| 5-30             | 60                     | 50                     |

\*Decreases with the logarithm of the frequency.

## Conducted Emission

Product Type : Smart Watch  
 M/N : A2430  
 Operating Condition : Transmit mode  
 Test Specification : Line  
 Comment : AC 120V/60Hz



| Frequency (MHz) | MaxPeak (dBuV) | Average (dBuV) | Limit (dBuV) | Margin (dB) | Line | Corr. (dB) |
|-----------------|----------------|----------------|--------------|-------------|------|------------|
| 0.414000        | 39.51          | ---            | 57.57        | 18.06       | L1   | 9.67       |
| 0.722000        | ---            | 30.82          | 46.00        | 15.18       | L1   | 9.68       |
| 0.726000        | 40.32          | ---            | 56.00        | 15.68       | L1   | 9.68       |
| 1.494000        | 34.99          | ---            | 56.00        | 21.01       | L1   | 9.71       |
| 2.618000        | 35.23          | ---            | 56.00        | 20.77       | L1   | 9.75       |
| 6.986000        | 35.14          | ---            | 60.00        | 24.86       | L1   | 9.87       |
| 9.970000        | 34.20          | ---            | 60.00        | 25.80       | L1   | 9.92       |

Remark:

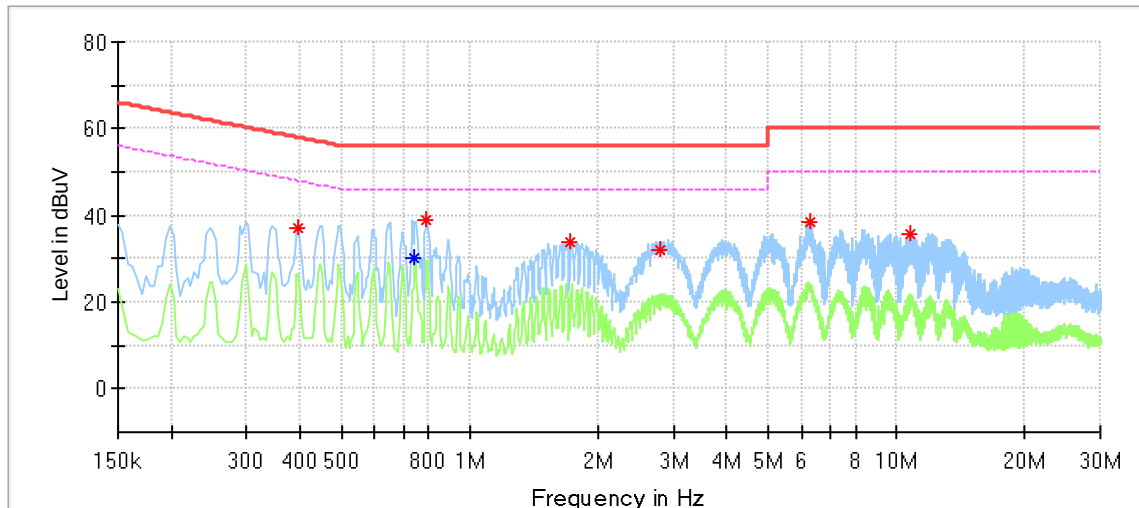
Level=Reading Level + Correction Factor

Correction Factor=Cable Loss + LISN Factor

(The Reading Level is recorded by software which is not shown in the sheet)

## Conducted Emission

Product Type : Smart Watch  
 M/N : A2430  
 Operating Condition : Transmit mode  
 Test Specification : Neutral  
 Comment : AC 120V/60Hz



| Frequency (MHz) | MaxPeak (dBuV) | Average (dBuV) | Limit (dBuV) | Margin (dB) | Line | Corr. (dB) |
|-----------------|----------------|----------------|--------------|-------------|------|------------|
| 0.398000        | 37.04          | ---            | 57.90        | 20.85       | N    | 9.66       |
| 0.742000        | ---            | 29.98          | 46.00        | 16.02       | N    | 9.67       |
| 0.794000        | 39.04          | ---            | 56.00        | 16.96       | N    | 9.67       |
| 1.726000        | 33.93          | ---            | 56.00        | 22.07       | N    | 9.69       |
| 2.806000        | 32.02          | ---            | 56.00        | 23.98       | N    | 9.72       |
| 6.262000        | 38.33          | ---            | 60.00        | 21.67       | N    | 9.83       |
| 10.714000       | 35.48          | ---            | 60.00        | 24.52       | N    | 9.92       |

Remark:

Level=Reading Level + Correction Factor

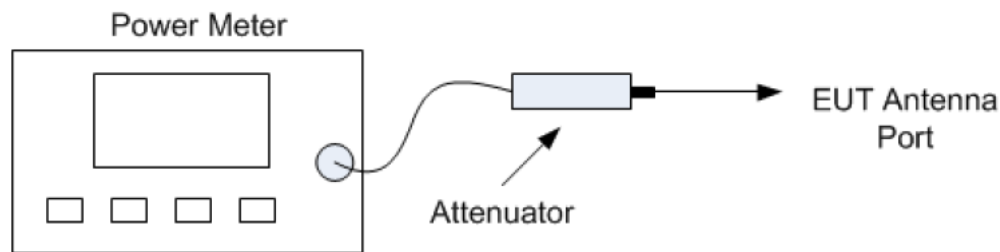
Correction Factor=Cable Loss + LISN Factor

(The Reading Level is recorded by software which is not shown in the sheet)

## 9.2 Conducted Output Power & EIRP

### Test Method

- 1) The EUT is configured to transmit continuously, or to transmit with a constant duty cycle.
- 2) At all times when the EUT is transmitting, it shall be transmitting at its maximum power control level.
- 3) The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.
- 4) Measure the peak power of the transmitter. This measurement is a peak over both the ON and OFF periods of the transmitter.



Power meter conducted test setup

### Limits

According to §15.247 (b) (3) & RSS-247 5.4(d), conducted peak output power limit as below:

| Frequency Range<br>MHz | Limit<br>W | Limit<br>dBm |
|------------------------|------------|--------------|
| 2400-2483.5            | ≤1         | ≤30          |

According to & RSS-247 5.4(d), EIRP limit as below:

| Frequency Range<br>MHz | Limit<br>W | Limit<br>dBm |
|------------------------|------------|--------------|
| 2400-2483.5            | ≤4         | ≤36          |

Test result as below table

| Mode           | TX Type | Frequency (MHz) | ANT | Gain (dBi) | Conducted Power (dBm) | EIRP (dBm) | Conducted Power Limit (dBm) | EIRP Limit (dBm) | Verdict |
|----------------|---------|-----------------|-----|------------|-----------------------|------------|-----------------------------|------------------|---------|
| 802.11b        | SISO    | 2412            | 1   | -4.92      | 16.23                 | 11.31      | ≤30                         | ≤36              | Pass    |
|                |         | 2437            | 1   | -4.92      | 16.01                 | 11.09      | ≤30                         | ≤36              | Pass    |
|                |         | 2462            | 1   | -4.92      | 15.67                 | 10.75      | ≤30                         | ≤36              | Pass    |
| 802.11g        | SISO    | 2412            | 1   | -4.92      | 15.43                 | 10.51      | ≤30                         | ≤36              | Pass    |
|                |         | 2437            | 1   | -4.92      | 15.16                 | 10.24      | ≤30                         | ≤36              | Pass    |
|                |         | 2462            | 1   | -4.92      | 15.04                 | 10.12      | ≤30                         | ≤36              | Pass    |
| 802.11n (HT20) | SISO    | 2412            | 1   | -4.92      | 15.34                 | 10.42      | ≤30                         | ≤36              | Pass    |
|                |         | 2437            | 1   | -4.92      | 15.19                 | 10.27      | ≤30                         | ≤36              | Pass    |
|                |         | 2462            | 1   | -4.92      | 14.96                 | 10.04      | ≤30                         | ≤36              | Pass    |

Note1: E.I.R.P = Measured Power + Antenna Gain



**9.3 6dB Bandwidth and 99% Occupied Bandwidth**

**Test Method for 6 dB Bandwidth**

- 1. The RF output of EUT was connected to the spectrum analyzer. The path loss was compensated to the results for each measurement.
- 2. Set to the maximum power setting, the instrument center frequency is set to the nominal EUT channel center frequency enable the EUT transmit continuously.
- 3. Use the following spectrum analyzer settings:  
RBW=1% to 5% of the occupied bandwidth but not less than 100kHz, VBW≥3RBW, Sweep = auto, Detector function = peak, Trace = max hold
- 4. Use the automatic bandwidth measurement capability of an instrument, use the X dB bandwidth mode with X set to 6 dB.
- 5. Allow the trace to stabilize, record the 6 dB Bandwidth value.

**Test Method for 99 % Bandwidth**

- 1. Connect EUT test port to spectrum analyzer.  
Use the following spectrum analyzer settings:  
RBW=1% to 5% of OBW, or a minimum of 1 MHz if this is not possible due to a large OBW, VBW≥3RBW, Sweep = auto, Detector function = peak, Trace = max hold
- 2. Use the occupied bandwidth measurement capability of test receiver.
- 3. Allow the trace to stabilize, record the occupied bandwidth value.

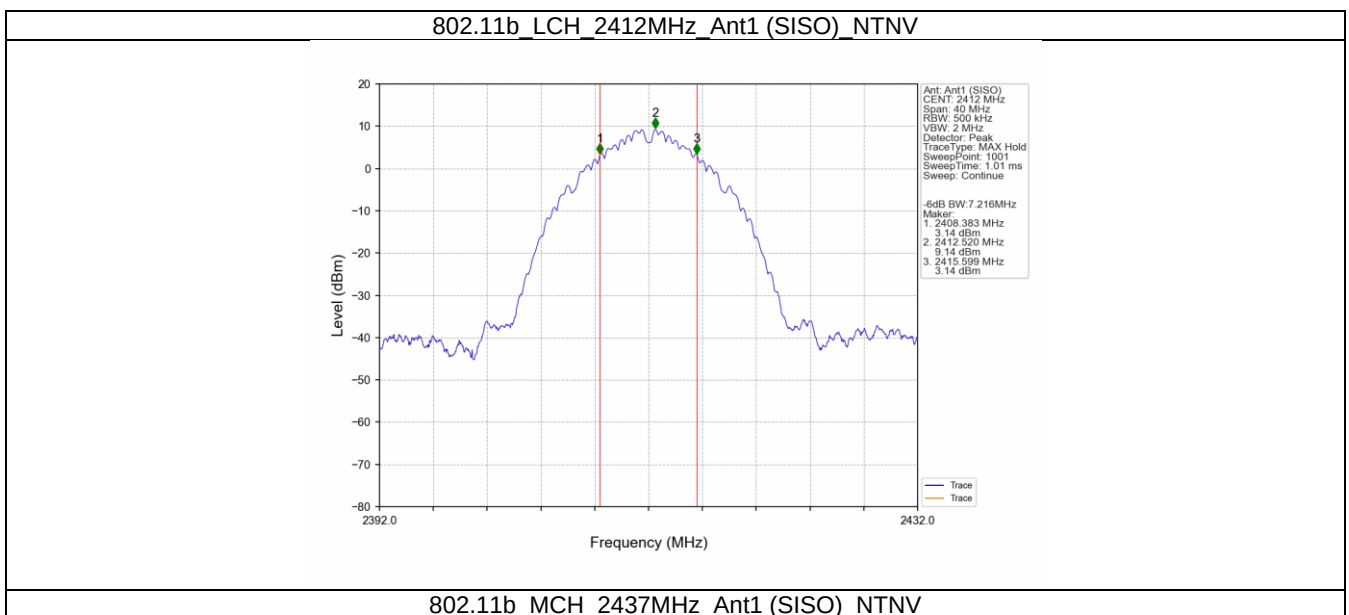
**Limit**

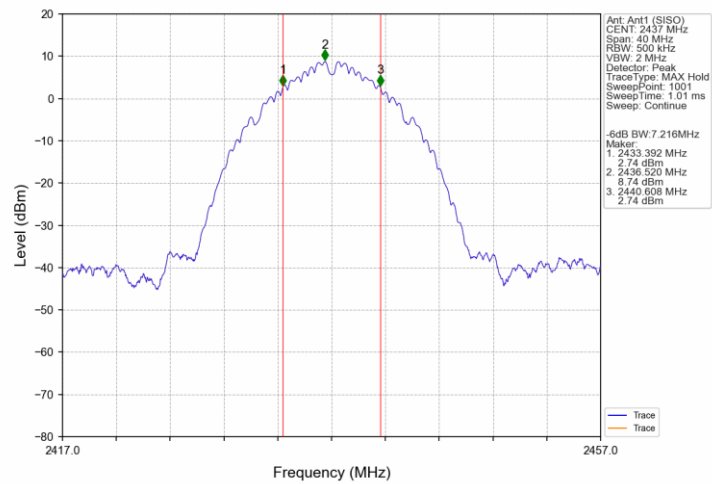
| 6dB bandwidth Limit [kHz] | 99% bandwidth Limit [kHz] |
|---------------------------|---------------------------|
| ≥500                      | --                        |

| Mode           | TX Type | Frequency (MHz) | ANT | 6dB Bandwidth (MHz) |            | Verdict |
|----------------|---------|-----------------|-----|---------------------|------------|---------|
|                |         |                 |     | Result              | Limit      |         |
| 802.11b        | SISO    | 2412            | 1   | 7.216               | $\geq 0.5$ | Pass    |
|                |         | 2437            | 1   | 7.216               | $\geq 0.5$ | Pass    |
|                |         | 2462            | 1   | 7.197               | $\geq 0.5$ | Pass    |
| 802.11g        | SISO    | 2412            | 1   | 15.486              | $\geq 0.5$ | Pass    |
|                |         | 2437            | 1   | 15.780              | $\geq 0.5$ | Pass    |
|                |         | 2462            | 1   | 15.826              | $\geq 0.5$ | Pass    |
| 802.11n (HT20) | SISO    | 2412            | 1   | 16.002              | $\geq 0.5$ | Pass    |
|                |         | 2437            | 1   | 15.617              | $\geq 0.5$ | Pass    |
|                |         | 2462            | 1   | 16.145              | $\geq 0.5$ | Pass    |

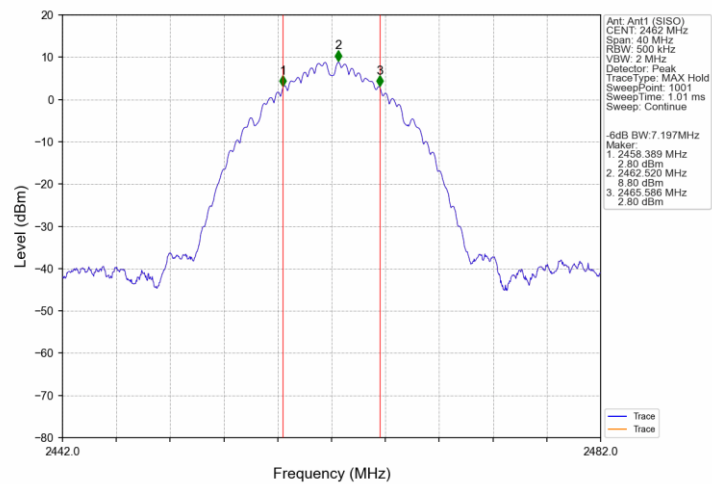
| Mode           | TX Type | Frequency (MHz) | ANT | 99% Occupied Bandwidth (MHz) |       | Verdict |
|----------------|---------|-----------------|-----|------------------------------|-------|---------|
|                |         |                 |     | Result                       | Limit |         |
| 802.11b        | SISO    | 2412            | 1   | 12.676                       | /     | Pass    |
|                |         | 2437            | 1   | 12.684                       | /     | Pass    |
|                |         | 2462            | 1   | 12.659                       | /     | Pass    |
| 802.11g        | SISO    | 2412            | 1   | 17.136                       | /     | Pass    |
|                |         | 2437            | 1   | 17.172                       | /     | Pass    |
|                |         | 2462            | 1   | 17.113                       | /     | Pass    |
| 802.11n (HT20) | SISO    | 2412            | 1   | 18.102                       | /     | Pass    |
|                |         | 2437            | 1   | 18.229                       | /     | Pass    |
|                |         | 2462            | 1   | 18.162                       | /     | Pass    |

## 6 dB Bandwidth

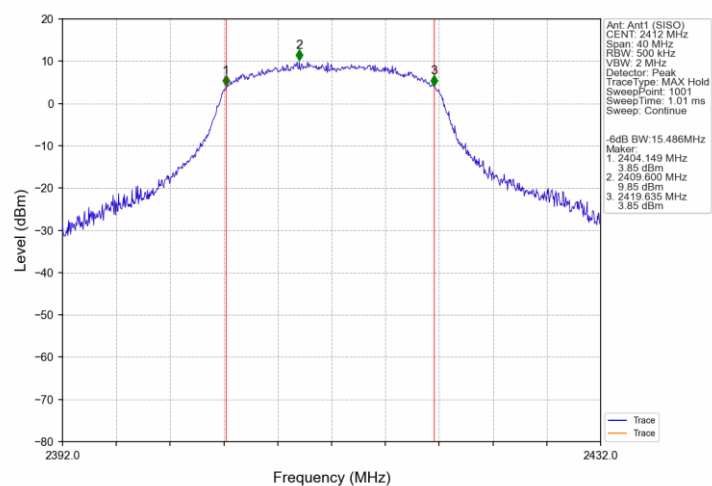




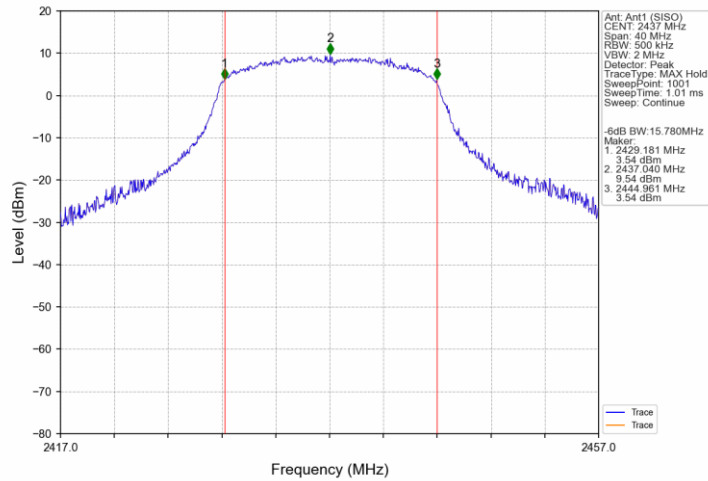
802.11b\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



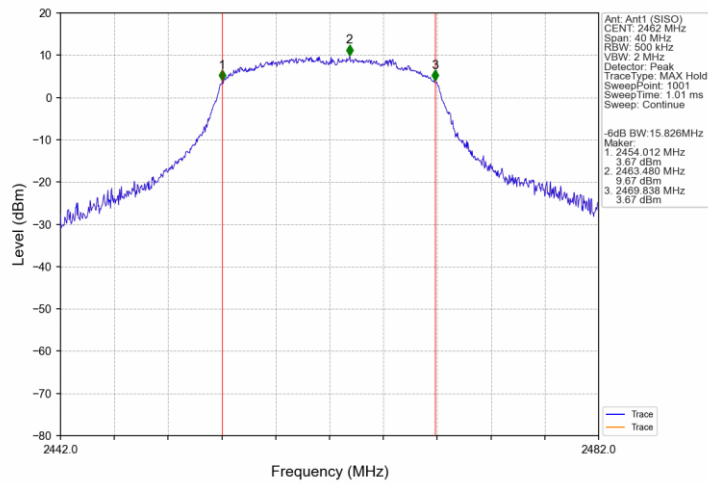
802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



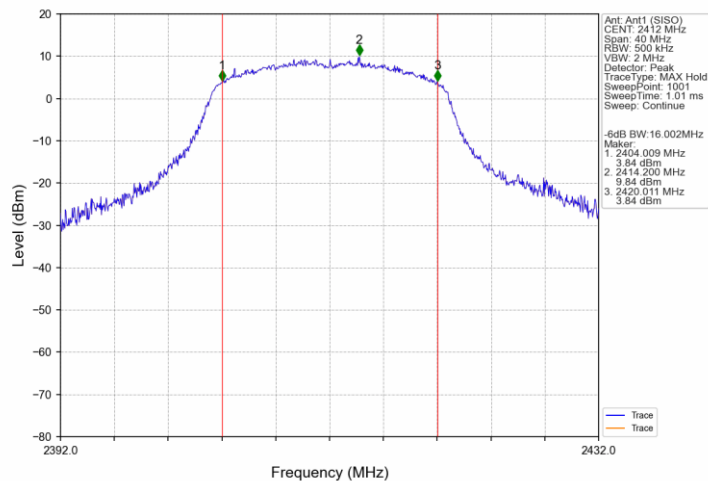
802.11g\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



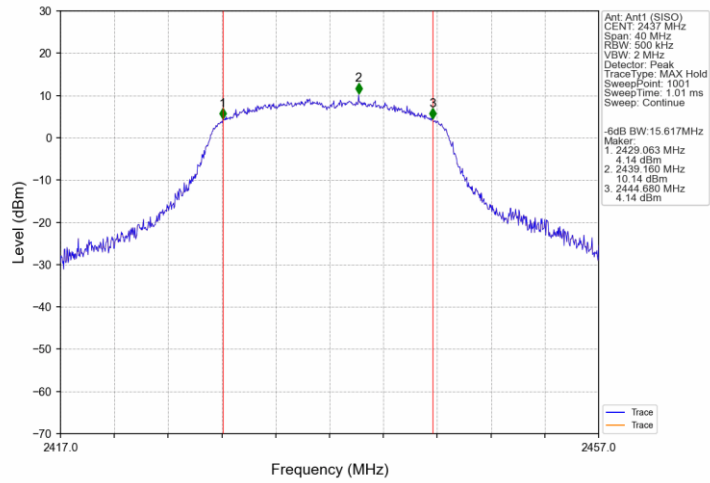
802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



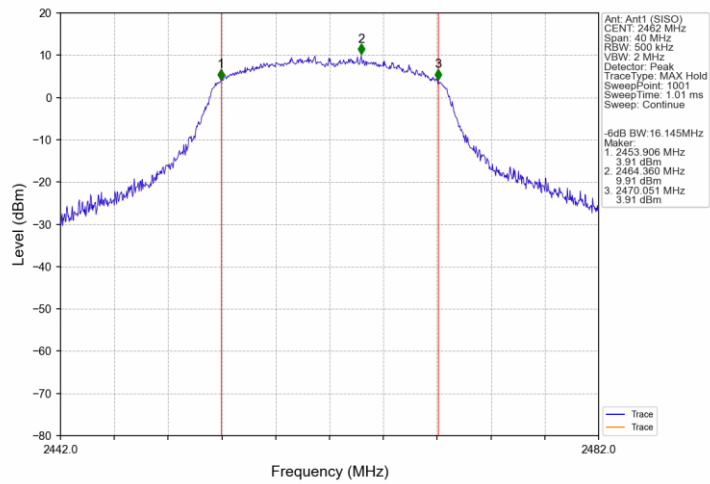
802.11n(HT20)\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



802.11n(HT20)\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV

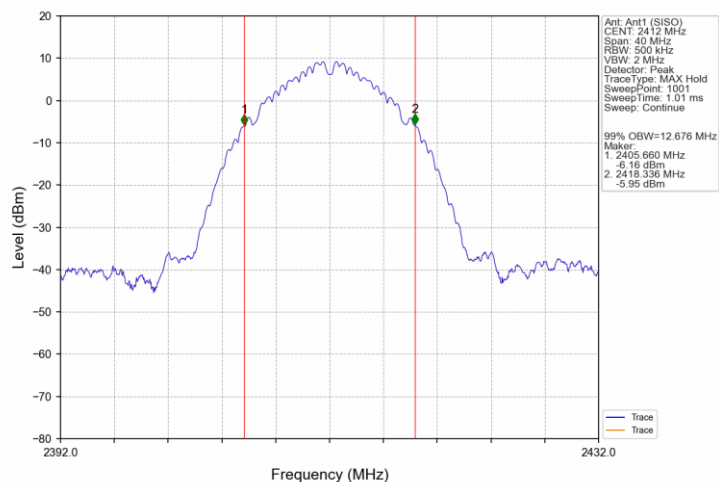


802.11n(HT20)\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV

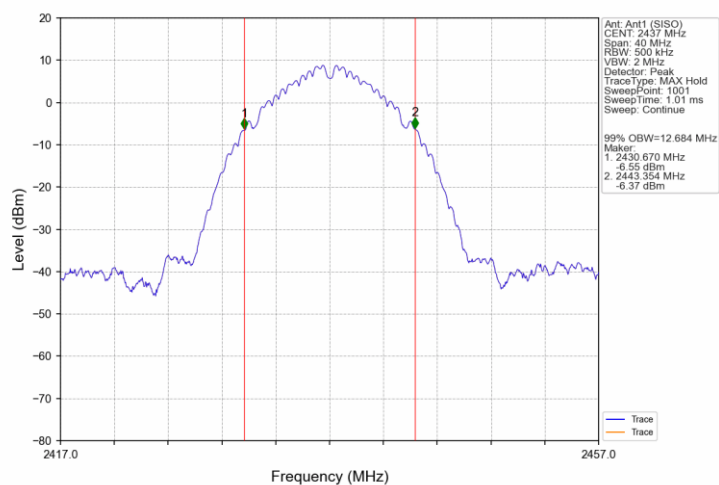


**99% Bandwidth**

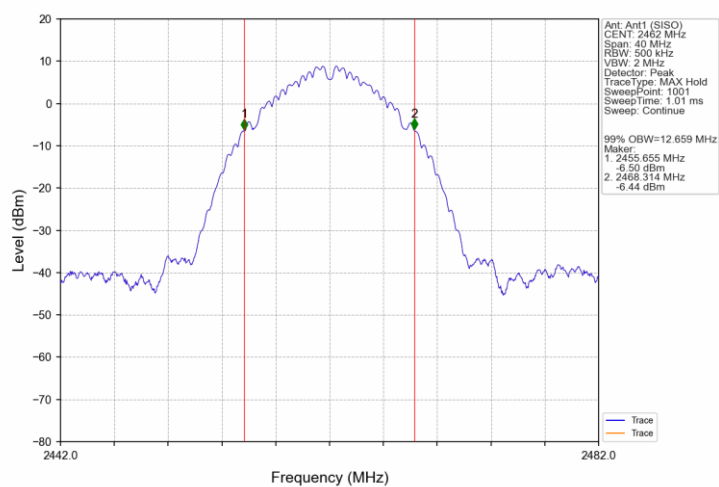
802.11b\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



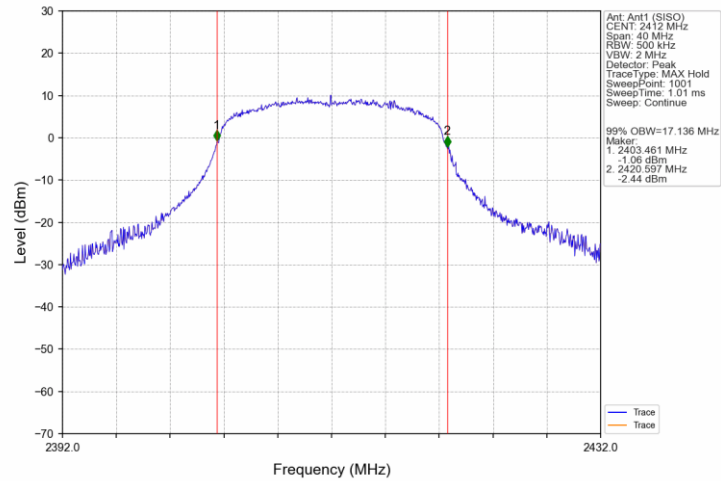
802.11b\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



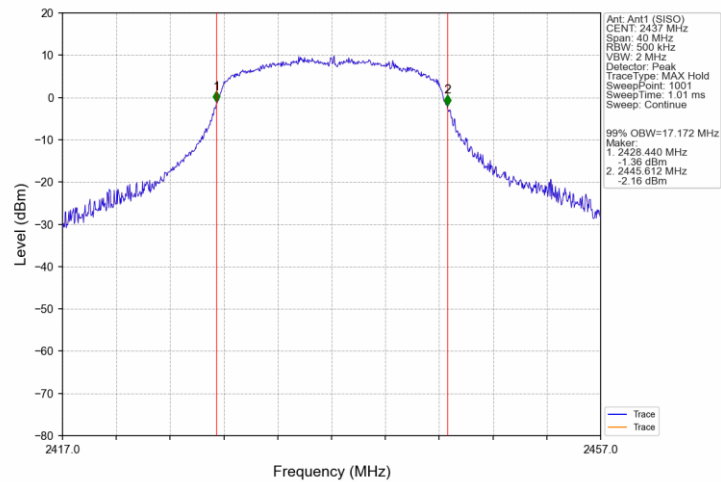
802.11b\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



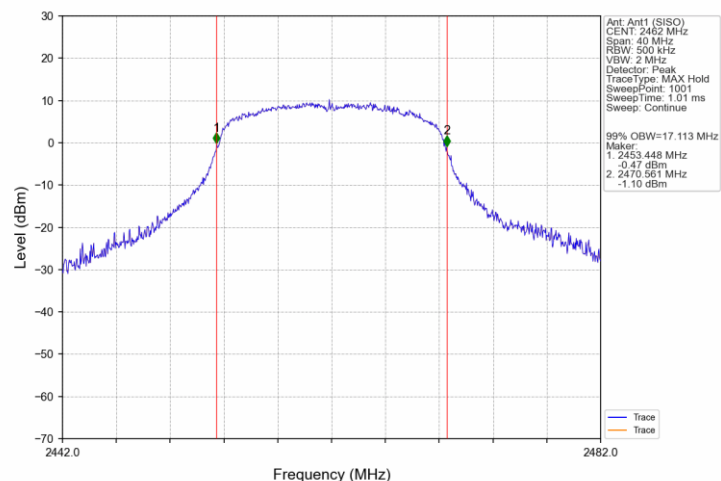
802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



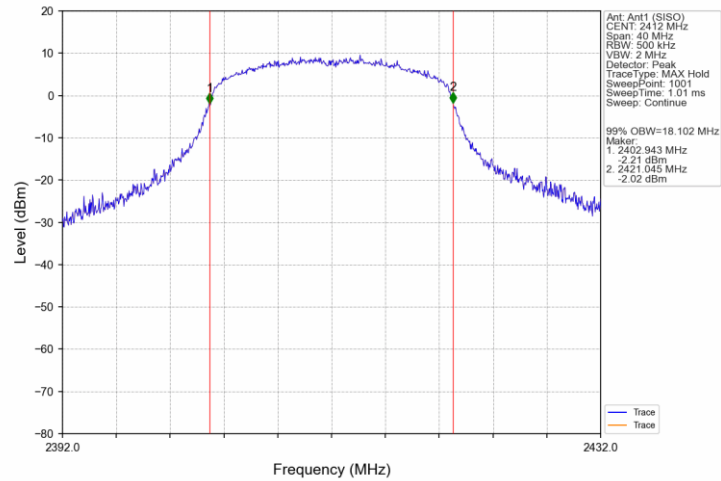
802.11g\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



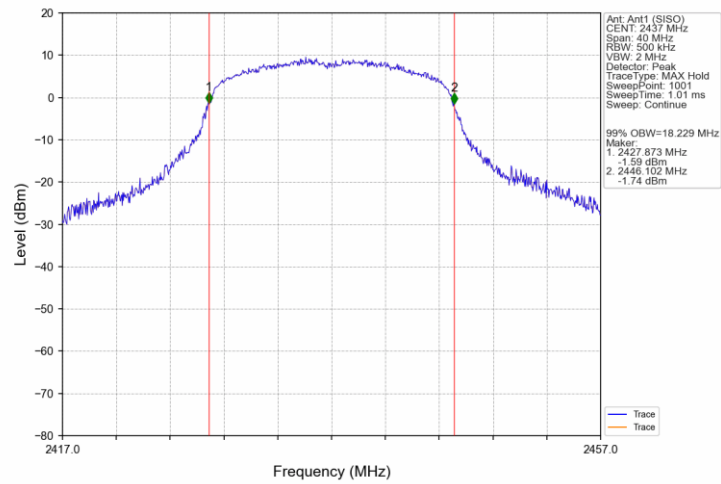
802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



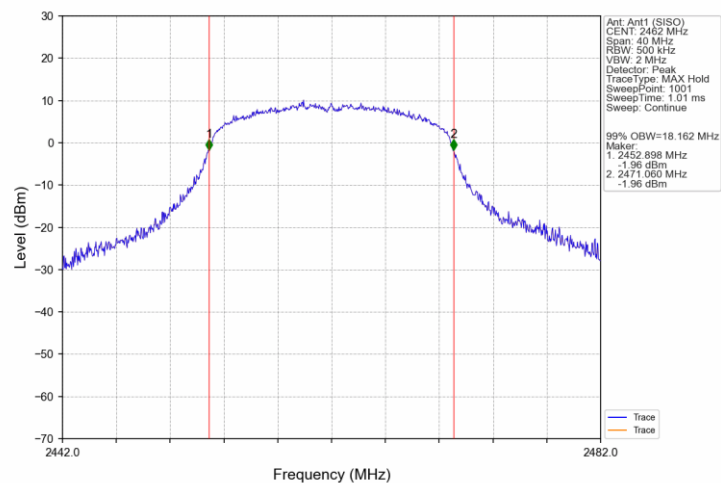
802.11n(HT20)\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



802.11n(HT20) MCH\_2437MHz\_Ant1 (SISO)\_NTNV



802.11n(HT20) HCH\_2462MHz\_Ant1 (SISO)\_NTNV



## 9.4 Power Spectral Density

### Test Method

1. The RF output of EUT was connected to the spectrum analyzer. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting, the instrument center frequency is set to the nominal EUT channel center frequency enable the EUT transmit continuously.
3. Use the following spectrum analyzer settings:
4. Set analyzer center frequency to DTS channel center frequency. RBW=3kHz, VBW≥3RBW, Span=1.5 times DTS bandwidth, Detector=Peak, Sweep=auto, Trace= max hold.
5. Allow trace to fully stabilize, use the peak marker function to determine the maximum amplitude level within the RBW.
6. Repeat above procedures until other frequencies measured were completed.

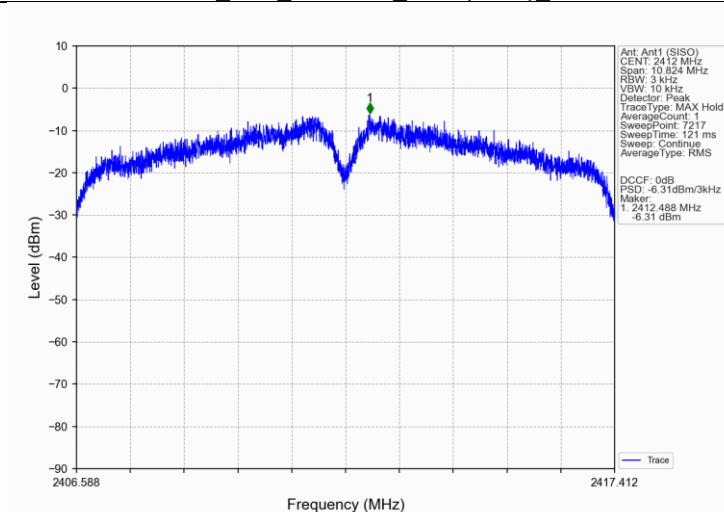
### Limit

Limit [dBm/3KHz]

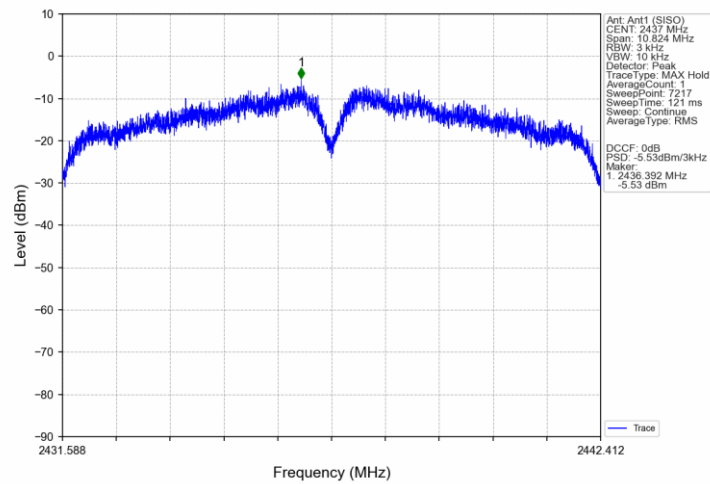
≤8

| Mode           | TX Type | Frequency (MHz) | Maximum PSD (dBm/3kHz) |       | Verdict |
|----------------|---------|-----------------|------------------------|-------|---------|
|                |         |                 | ANT1                   | Limit |         |
| 802.11b        | SISO    | 2412            | -6.31                  | ≤8    | Pass    |
|                |         | 2437            | -5.53                  | ≤8    | Pass    |
|                |         | 2462            | -5.91                  | ≤8    | Pass    |
| 802.11g        | SISO    | 2412            | -10.62                 | ≤8    | Pass    |
|                |         | 2437            | -10.60                 | ≤8    | Pass    |
|                |         | 2462            | -10.59                 | ≤8    | Pass    |
| 802.11n (HT20) | SISO    | 2412            | -10.94                 | ≤8    | Pass    |
|                |         | 2437            | -11.05                 | ≤8    | Pass    |
|                |         | 2462            | -10.66                 | ≤8    | Pass    |

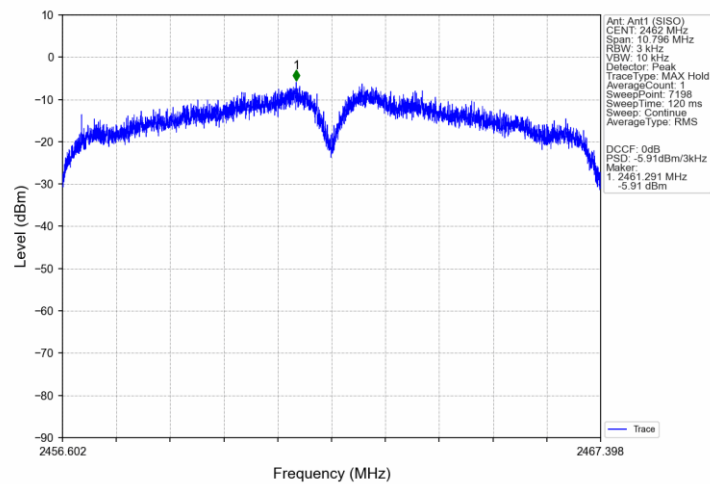
802.11b\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



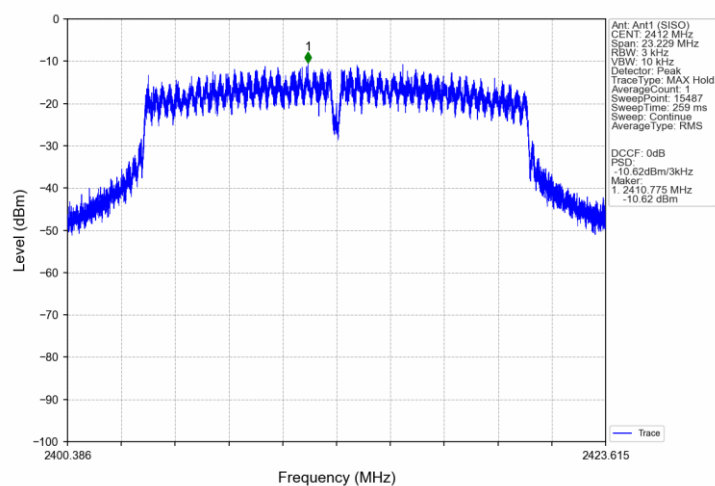
802.11b\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



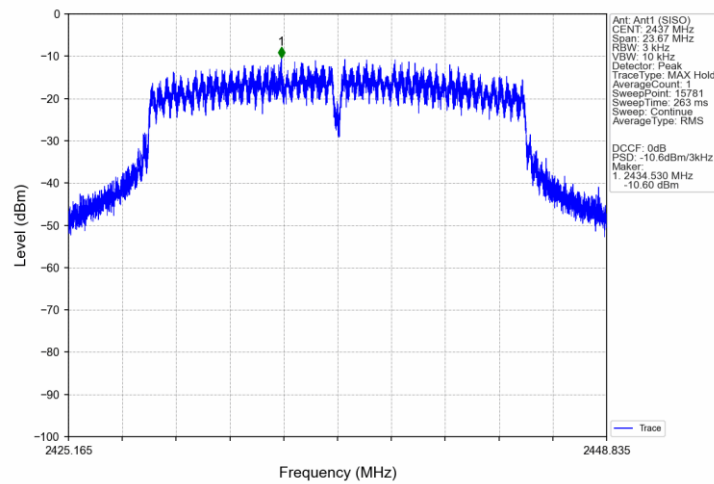
802.11b\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



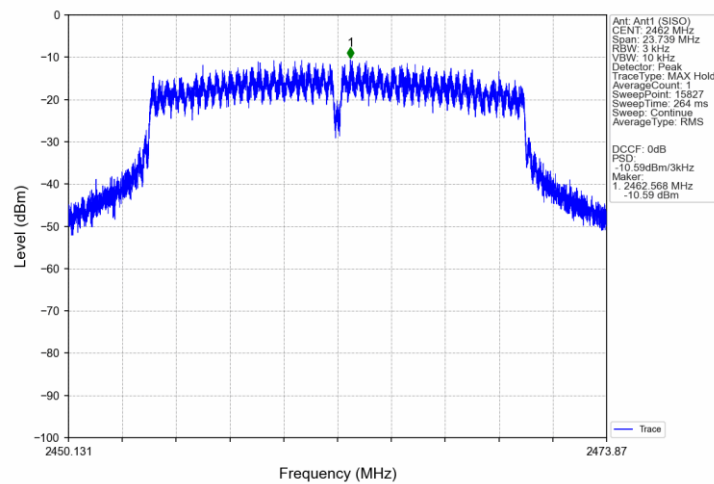
802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



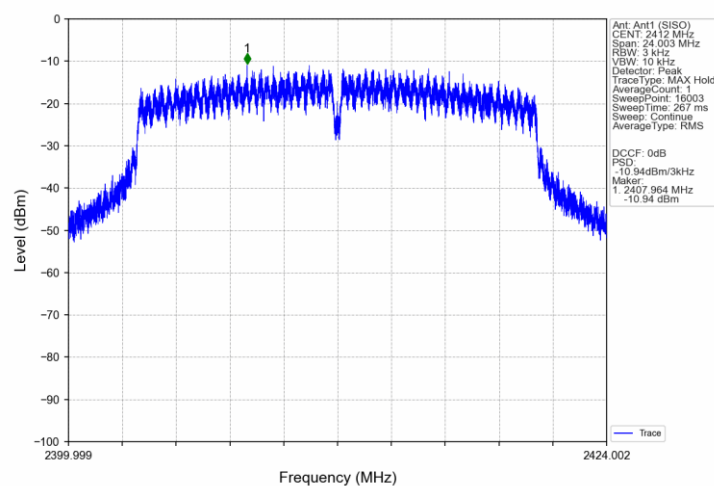
802.11g\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



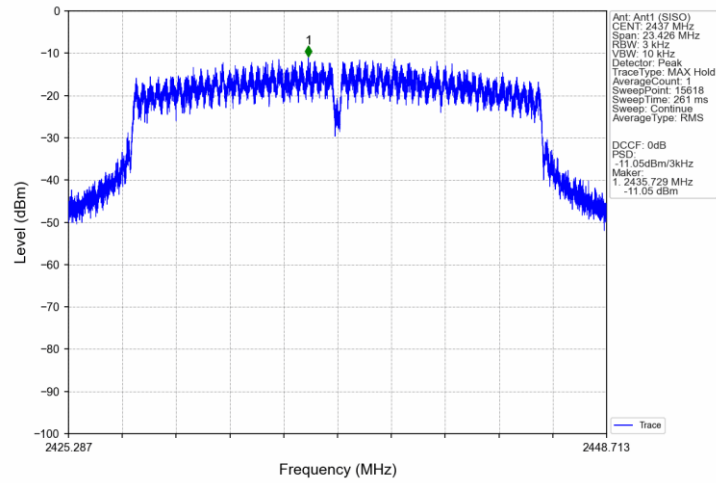
802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



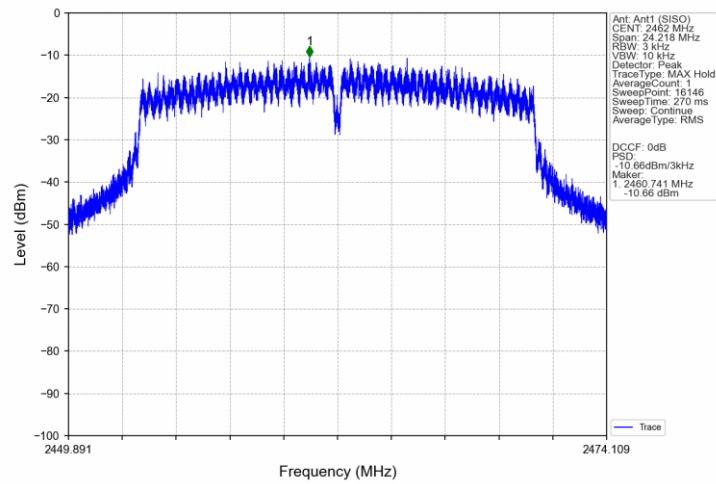
802.11n(HT20)\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



802.11n(HT20)\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



802.11n(HT20)\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



## 9.5 Spurious RF Conducted Emissions

### Test Method

1. The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting, the instrument center frequency is set to the nominal EUT channel center frequency enable the EUT transmit continuously.
3. Use the following spectrum analyzer settings:  
Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10<sup>th</sup> harmonic. Typically, several plots are required to cover this entire span.  
RBW = 100 kHz, VBW $\geq$ 3RBW, Sweep = auto, Detector function = peak, Trace = max hold
4. Allow the trace to stabilize. Set the marker on the peak of any spurious emission recorded.
5. The level displayed must comply with the limit specified in this Section. Submit these plots.
6. Repeat above procedures until all frequencies measured were complete.

### Limit

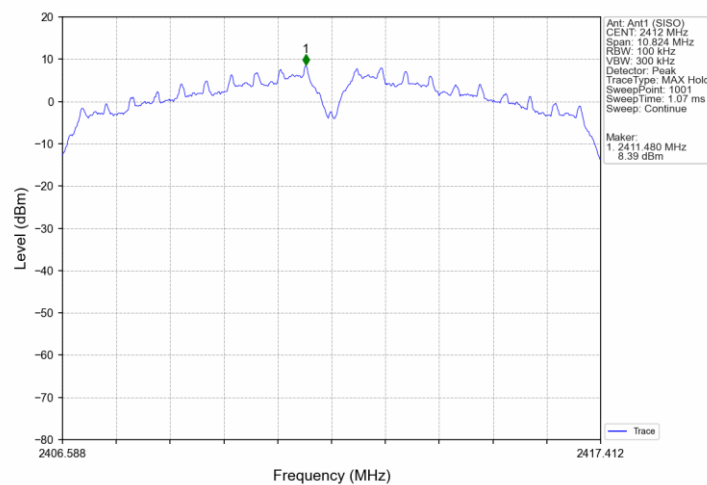
| Frequency Range<br>MHz | Limit (dBc) |
|------------------------|-------------|
| 30-25000               | -20         |

## Spurious RF conducted emissions

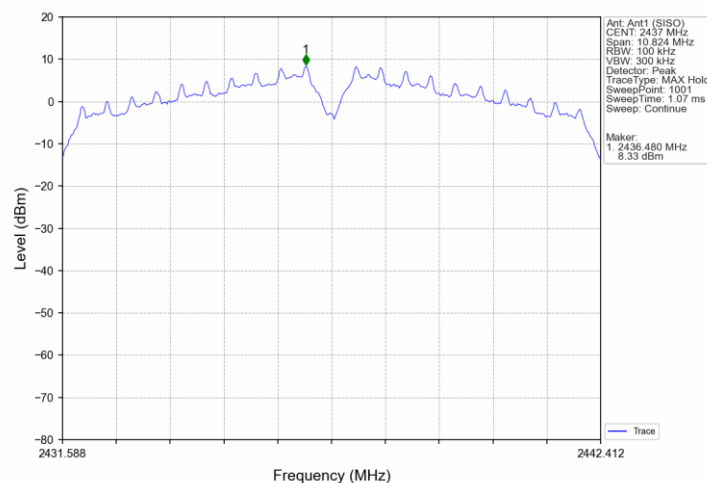
| Mode           | TX Type | Frequency (MHz) | ANT | Level of Reference (dBm) | Limit (dBm) | Verdict |
|----------------|---------|-----------------|-----|--------------------------|-------------|---------|
| 802.11b        | SISO    | 2412            | 1   | 8.39                     | -11.61      | Pass    |
|                |         | 2437            | 1   | 8.33                     | -11.67      | Pass    |
|                |         | 2462            | 1   | 8.15                     | -11.85      | Pass    |
| 802.11g        | SISO    | 2412            | 1   | 3.69                     | -16.31      | Pass    |
|                |         | 2437            | 1   | 3.65                     | -16.35      | Pass    |
|                |         | 2462            | 1   | 3.95                     | -16.05      | Pass    |
| 802.11n (HT20) | SISO    | 2412            | 1   | 3.34                     | -16.66      | Pass    |
|                |         | 2437            | 1   | 3.85                     | -16.15      | Pass    |
|                |         | 2462            | 1   | 3.94                     | -16.06      | Pass    |

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.

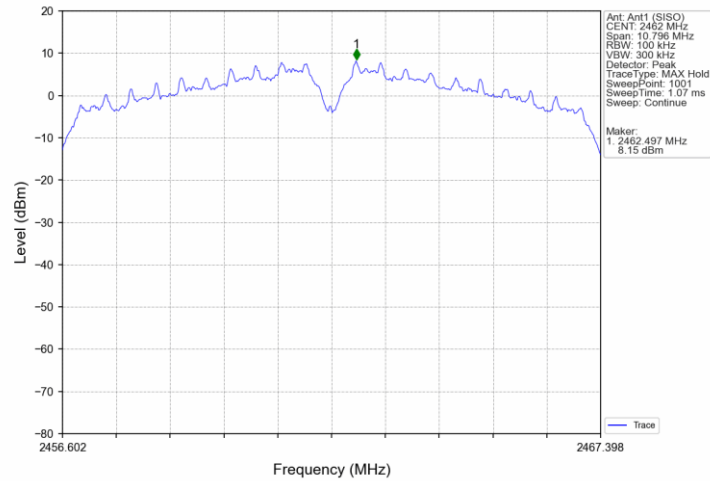
802.11b\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



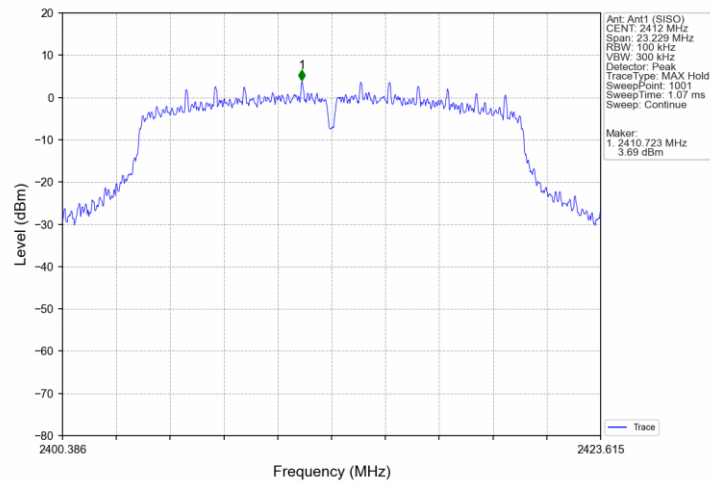
802.11b\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



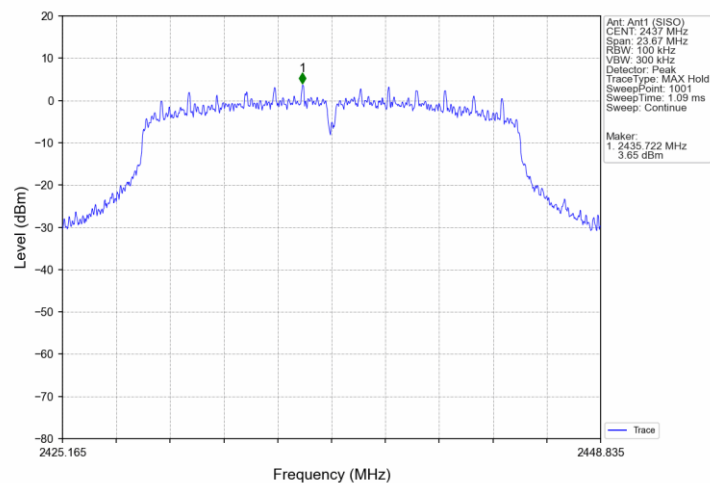
802.11b\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



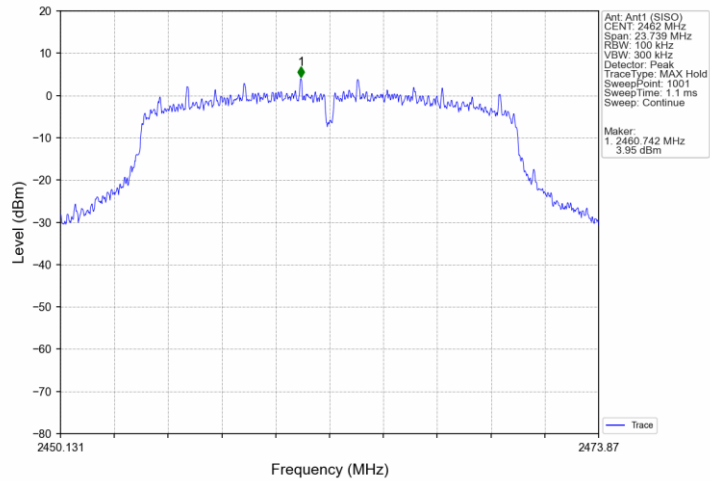
802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



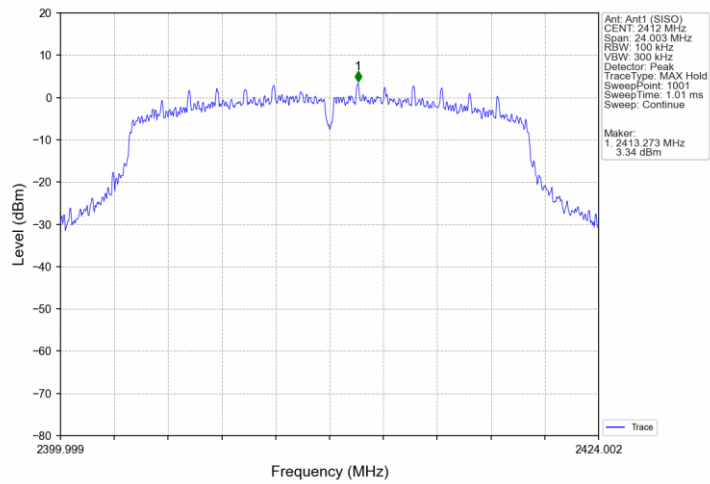
02.11g\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



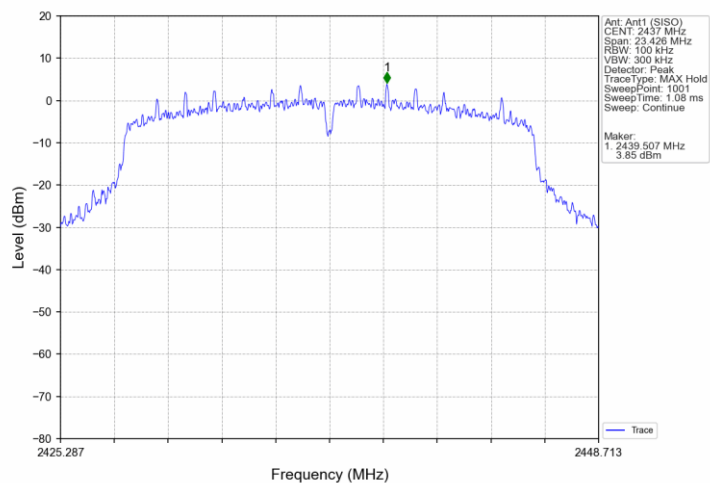
802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



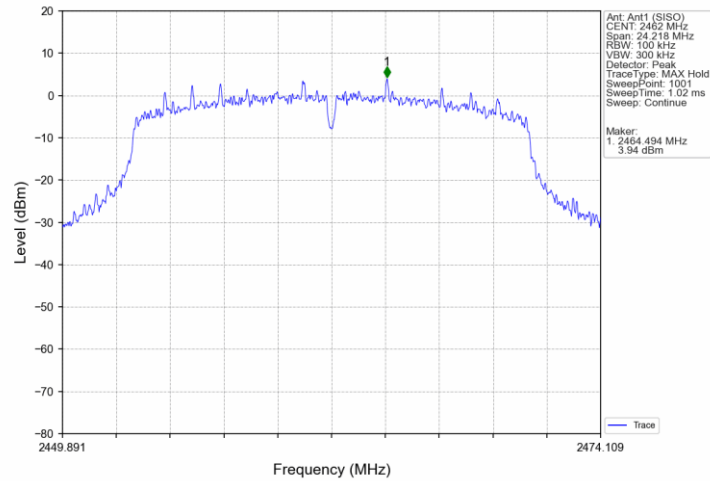
802.11n(HT20)\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



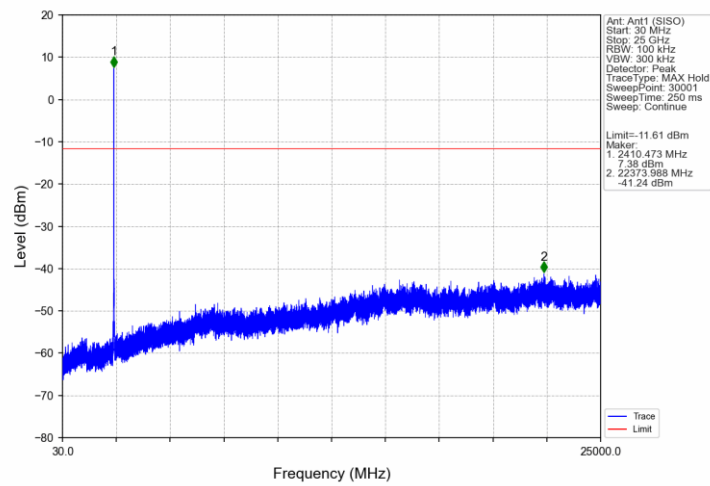
802.11n(HT20)\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



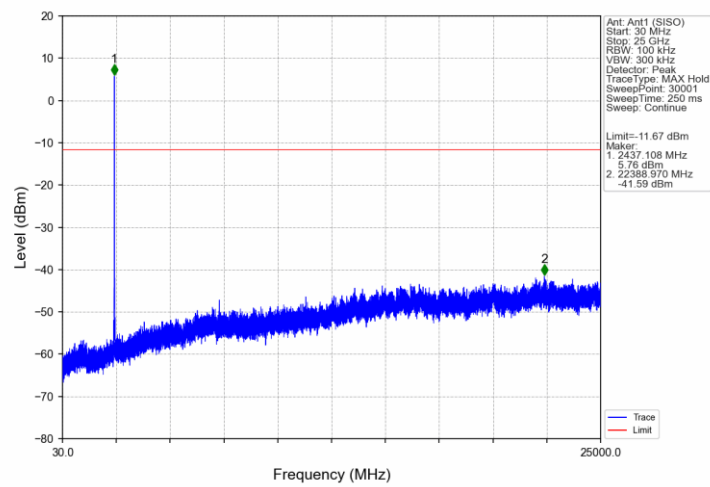
802.11n(HT20)\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



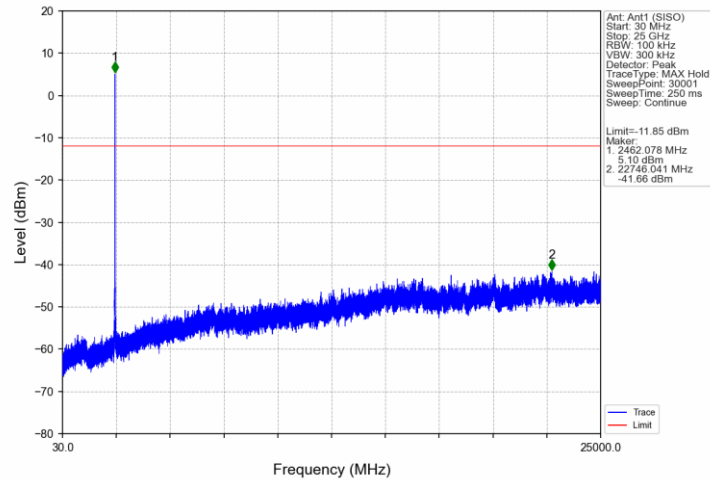
802.11b\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



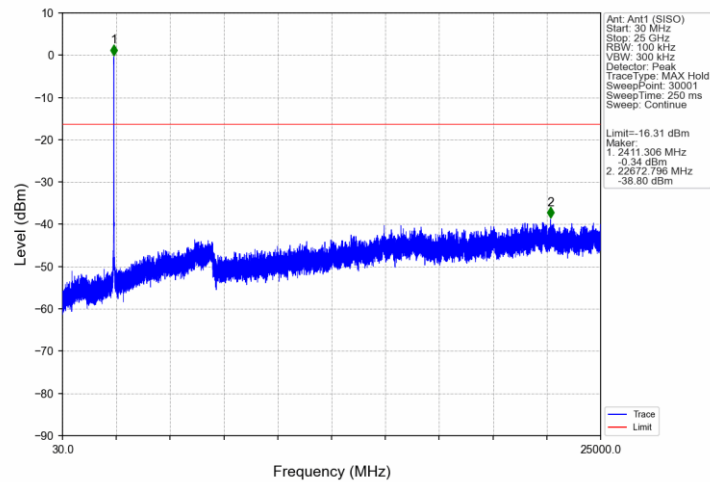
802.11b\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



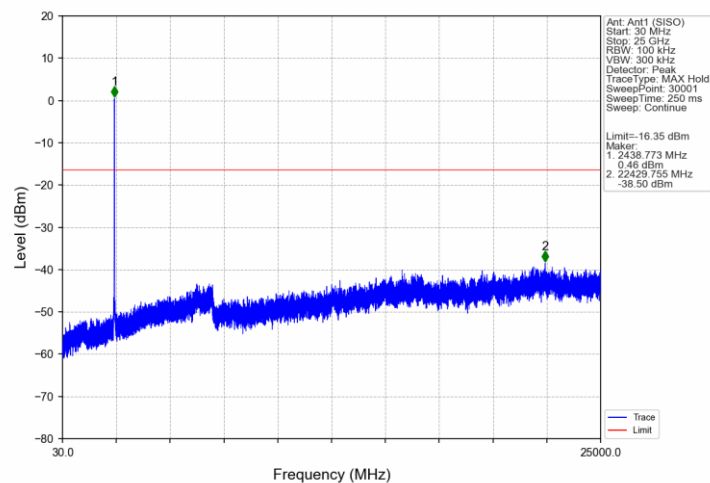
802.11b\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



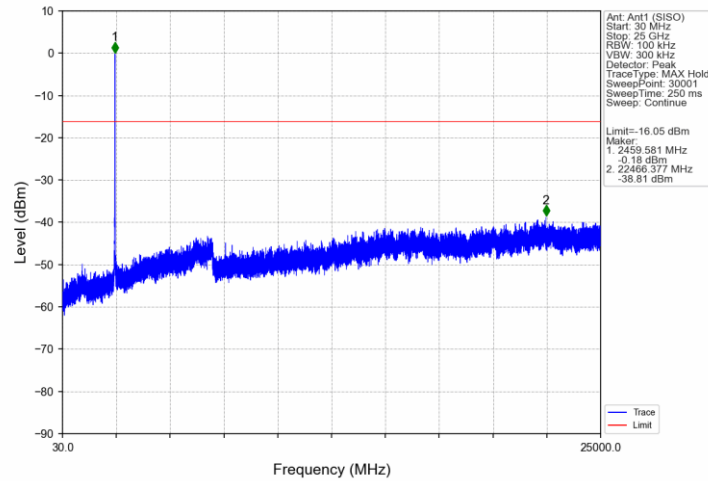
802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



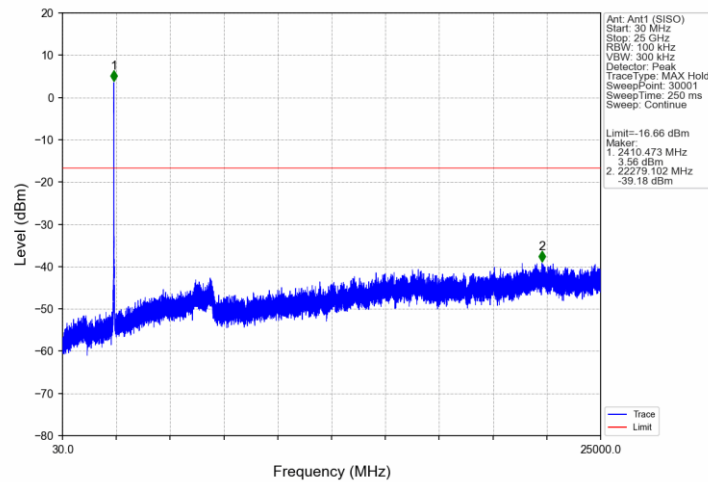
802.11g\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



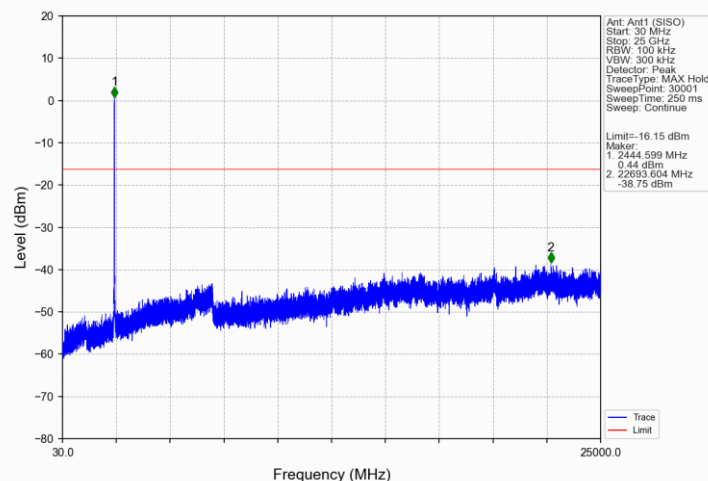
802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



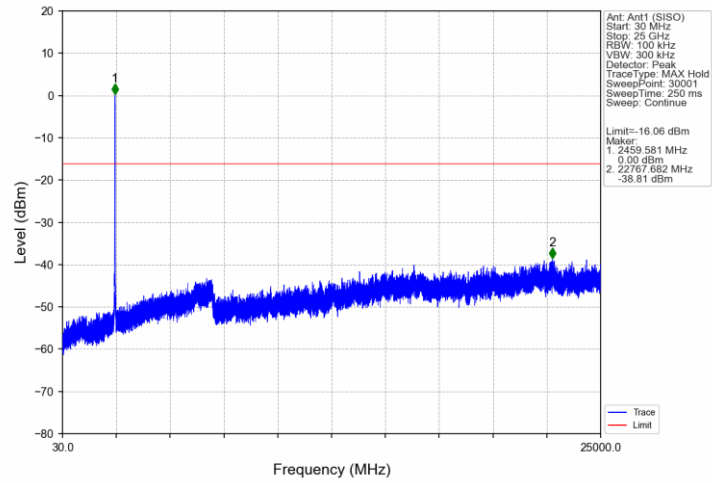
802.11n(HT20)\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



02.11n(HT20)\_MCH\_2437MHz\_Ant1 (SISO)\_NTNV



802.11n(HT20)\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



## 9.6 Band Edge Testing

### Test Method

1. The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting, the instrument center frequency is set to the nominal EUT channel center frequency enable the EUT transmit continuously.
3. Use the following spectrum analyzer settings:  
Span = wide enough to capture the peak level of the in-band emission and all spurious  
RBW = 100 kHz, VBW $\geq$ 3RBW, Sweep = auto, Detector function = peak, Trace = max hold
4. Allow the trace to stabilize, use the peak and delta measurement to record the result.
5. The level displayed must comply with the limit specified in this Section.
6. Repeat above procedures until all frequencies measured were complete and submit all the plots.

### Limit:

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under RSS-247 section 5.4(d), the attenuation required shall be 30 dB instead of 20 dB.

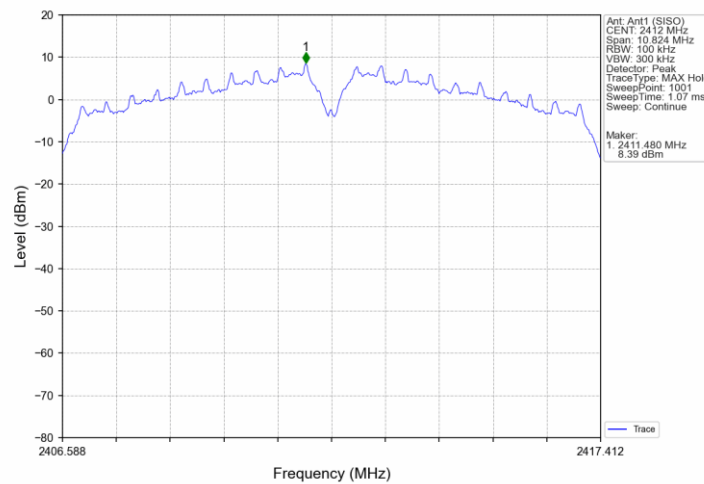
| Frequency Range<br>MHz | Limit (dBc) |
|------------------------|-------------|
| 30-25000               | -20         |

## Band edge testing

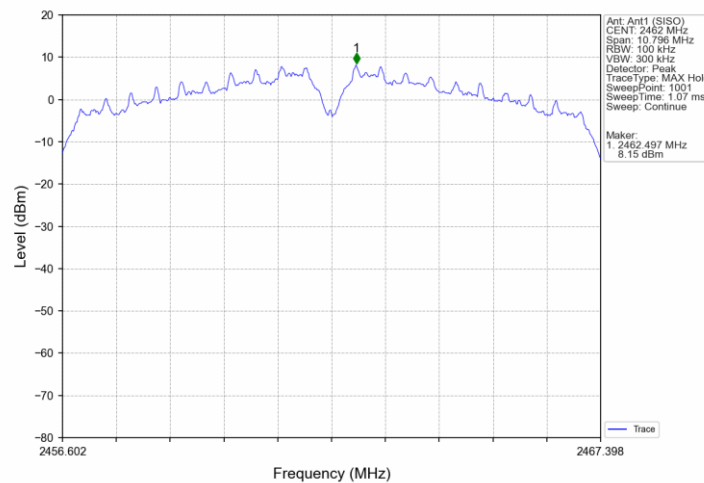
| Mode           | TX Type | Frequency (MHz) | ANT | Level of Reference (dBm) | Limit (dBm) | Verdict |
|----------------|---------|-----------------|-----|--------------------------|-------------|---------|
| 802.11b        | SISO    | 2412            | 1   | 8.39                     | -11.61      | Pass    |
|                |         | 2462            | 1   | 8.15                     | -11.85      | Pass    |
| 802.11g        | SISO    | 2412            | 1   | 3.69                     | -16.31      | Pass    |
|                |         | 2462            | 1   | 3.95                     | -16.05      | Pass    |
| 802.11n (HT20) | SISO    | 2412            | 1   | 3.34                     | -16.66      | Pass    |
|                |         | 2462            | 1   | 3.94                     | -16.06      | Pass    |

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.

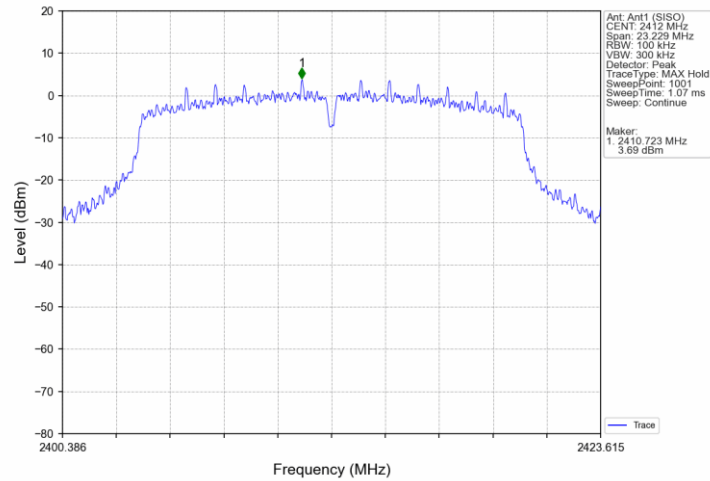
802.11b LCH 2412MHz Ant1 (SISO) NTN



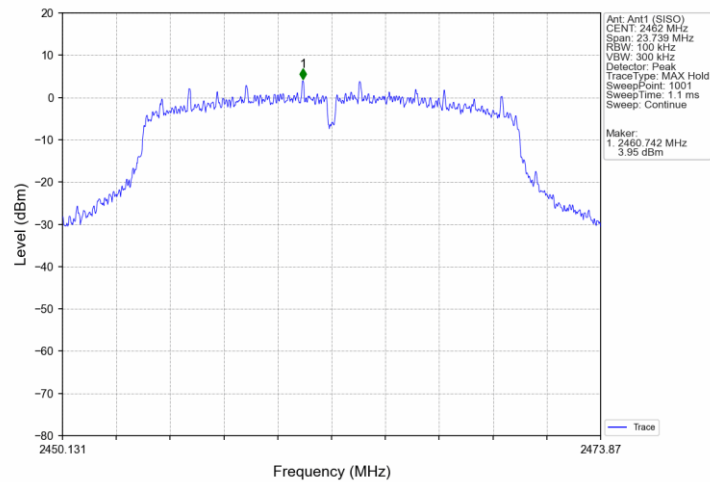
802.11b HCH 2462MHz Ant1 (SISO) NTN



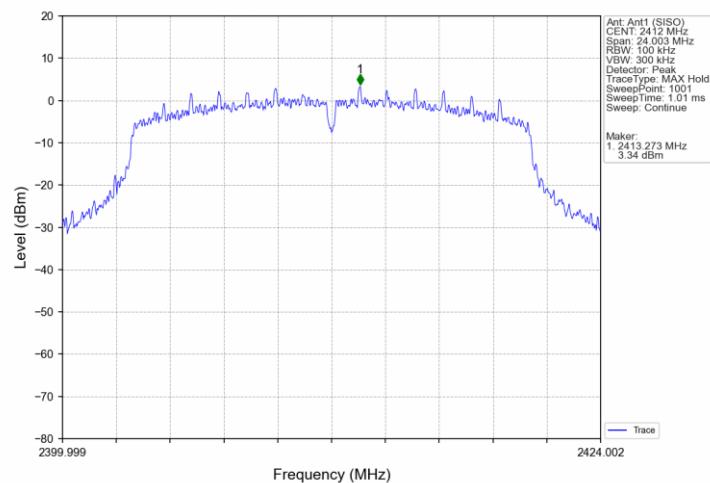
802.11g LCH 2412MHz Ant1 (SISO) NTN



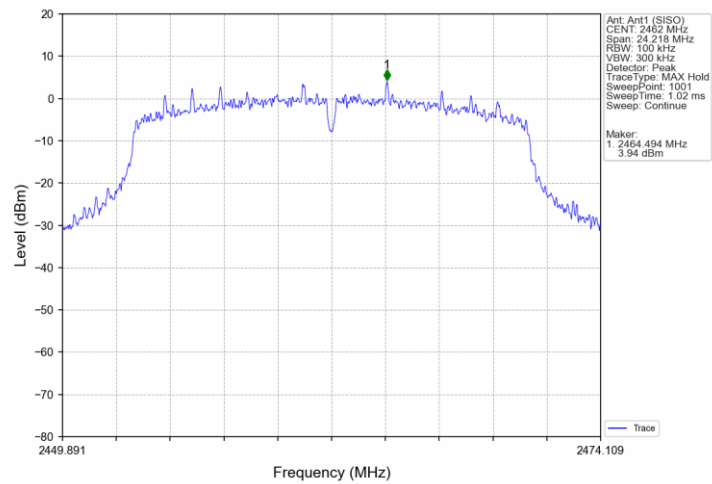
802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



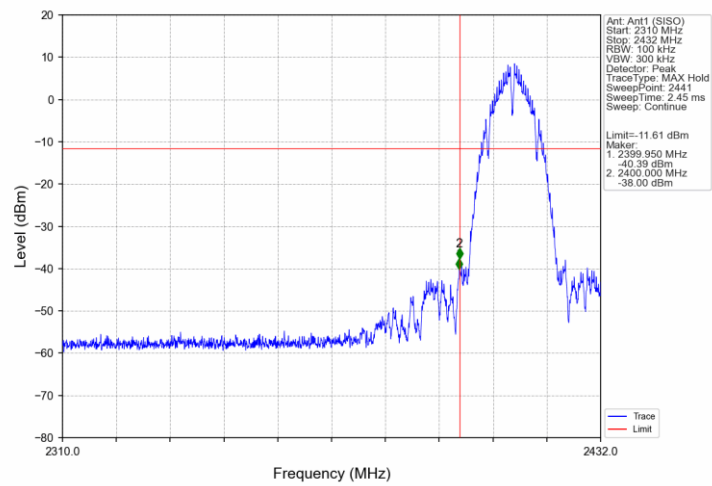
802.11n(HT20)\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



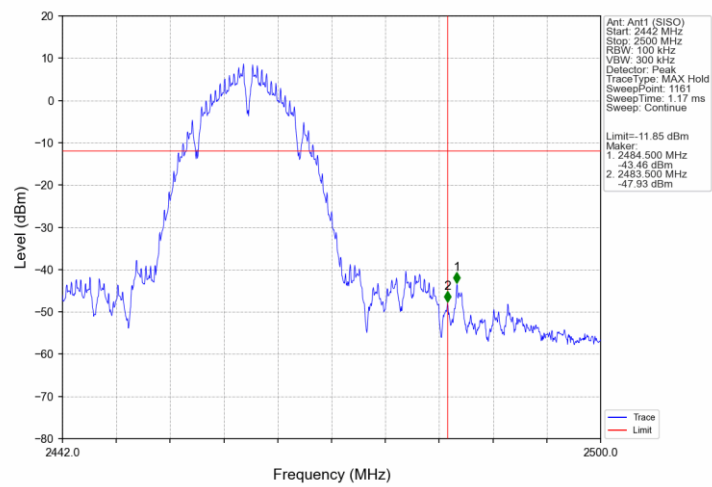
802.11n(HT20)\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



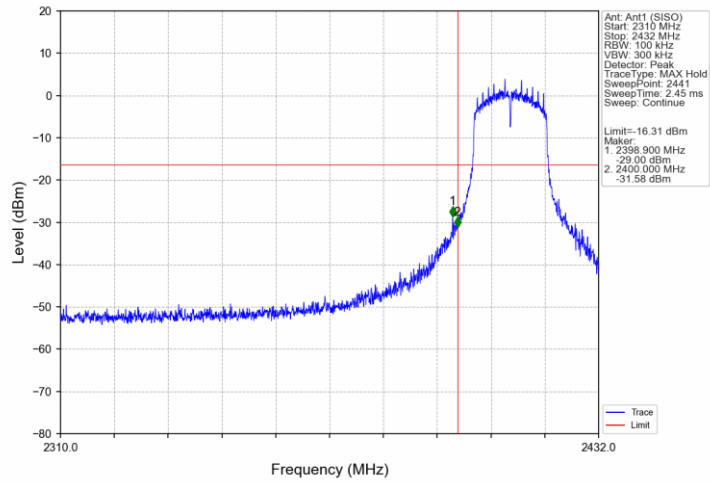
802.11b\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



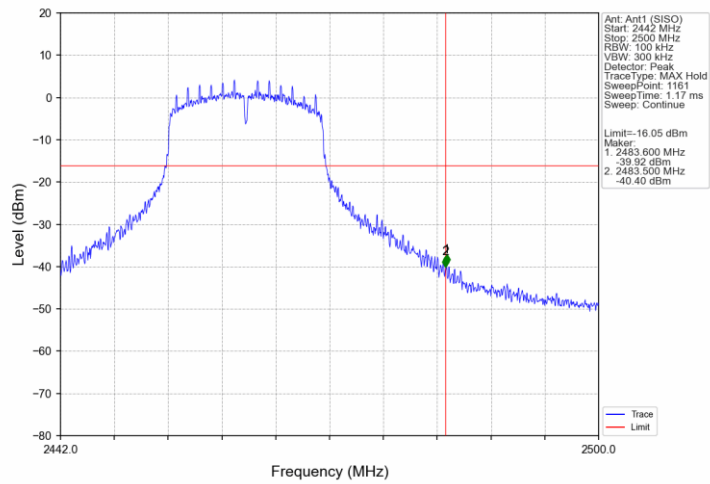
802.11b\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



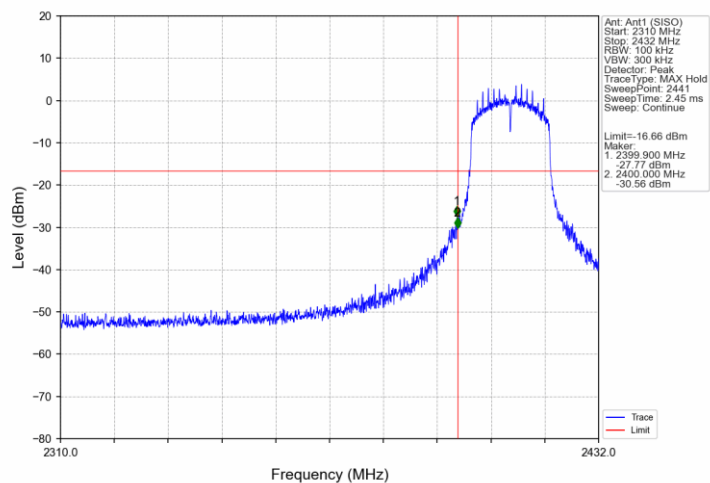
802.11g\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



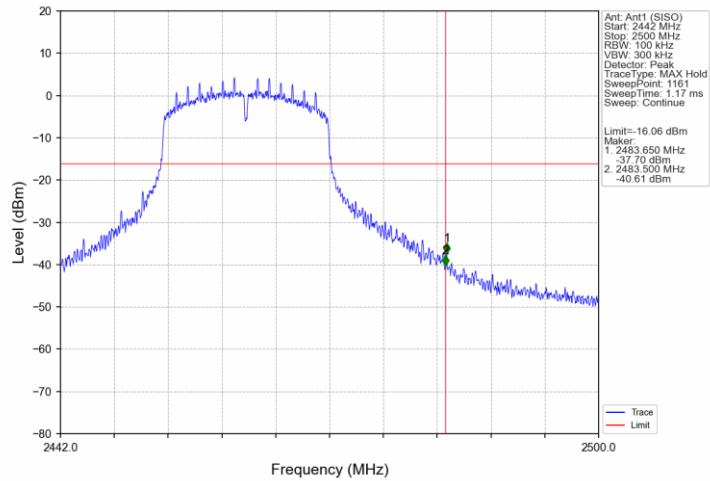
802.11g\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



802.11n(HT20)\_LCH\_2412MHz\_Ant1 (SISO)\_NTNV



802.11n(HT20)\_HCH\_2462MHz\_Ant1 (SISO)\_NTNV



## 9.7 Spurious Radiated Emissions for Transmitter

### Test Method

1. The EUT was placed on a turn table which is 1.5m above ground plane for above 1GHz and 0.8m above ground for below 1GHz at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference – receiving antenna, which was mounted on the top of a variable – height antenna tower.
3. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. Use the following spectrum analyzer settings According to C63.10
  - 1) Procedure for Unwanted Emissions Measurements Below 1000 MHz  
Span = wide enough to capture the peak level of the in-band emission and all spurious  
RBW = 100 kHz to 120kHz, VBW ≥ RBW for peak measurement, Sweep = auto, Detector function = peak, Trace = max hold.
  - 2) For Peak unwanted emissions Above 1GHz:  
Span = wide enough to capture the peak level of the in-band emission and all spurious  
RBW = 1MHz, VBW ≥ RBW for peak measurement, Sweep = auto, Detector function = peak, Trace = max hold.  
Procedures for average unwanted emissions measurements above 1GHz
    - a) RBW = 1MHz.
    - b) VBW \ [3 × RBW].
    - c) Detector = RMS (power averaging), if [span / (# of points in sweep)] \ RBW / 2.  
Satisfying this condition can require increasing the number of points in the sweep or reducing the span. If the condition is not satisfied, then the detector mode shall be set to peak.
    - d) Averaging type = power (i.e., rms) (As an alternative, the detector and averaging type may be set for linear voltage averaging. Some instruments require linear display mode to use linear voltage averaging. Log or dB averaging shall not be used.)
    - e) Sweep time = auto.
    - f) Perform a trace average of at least 100 traces if the transmission is continuous. If the transmission is not continuous, then the number of traces shall be increased by a factor of 1 / D, where D is the duty cycle. For example, with 50% duty cycle, at least 200 traces shall be averaged. (If a specific emission is demonstrated to be continuous—i.e., 100% duty cycle—then rather than turning ON and OFF with the transmit cycle, at least 100 traces shall be averaged.)
    - g) If tests are performed with the EUT transmitting at a duty cycle less than 98%, then a correction factor shall be added to the measurement results prior to comparing with the emission limit, to compute the emission level that would have been measured had the test been performed at 100% duty cycle. The correction factor is computed as follows:
      - 1) If power averaging (rms) mode was used in the preceding step e), then the correction factor is  $[10 \log (1 / D)]$ , where D is the duty cycle. For example, if the transmit duty cycle was 50%, then 3 dB shall be added to the measured emission levels.
      - 2) If linear voltage averaging mode was used in the preceding step e), then the correction factor is  $[20 \log (1 / D)]$ , where D is the duty cycle. For example, if the transmit duty cycle was 50%, then 6 dB shall be added to the measured emission levels.

3) If a specific emission is demonstrated to be continuous (100% duty cycle) rather than turning ON and OFF with the transmit cycle, then no duty cycle correction is required for that emission (AV) at frequency above 1GHz.

## Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under RSS 247 section 5.4(d), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required. In addition, radiated emissions which fall in the restricted bands, as defined in RSS-Gen section 8.9, must also comply with the radiated emission limits specified in RSS-Gen section 8.10.

| Frequency<br>MHz | Field Strength<br>$\mu\text{V/m}$ | Field Strength<br>$\text{dB}\mu\text{V/m}$ | Detector | Measurement distance<br>meters |
|------------------|-----------------------------------|--------------------------------------------|----------|--------------------------------|
| 0.009-0.490      | 2400/F(kHz)                       | 48.5-13.8                                  | AV       | 300                            |
| 0.490-1.705      | 24000/F(kHz)                      | 33.8-23.0                                  | QP       | 30                             |
| 1.705-30         | 30                                | 29.5                                       | QP       | 30                             |
| 30-88            | 100                               | 40                                         | QP       | 3                              |
| 88-216           | 150                               | 43.5                                       | QP       | 3                              |
| 216-960          | 200                               | 46                                         | QP       | 3                              |
| 960-1000         | 500                               | 54                                         | QP       | 3                              |
| Above 1000       | 500                               | 54                                         | AV       | 3                              |
| Above 1000       | 5000                              | 74                                         | PK       | 3                              |

Note 1:  $\text{Limit } 3\text{m}(\text{dB}\mu\text{V/m}) = \text{Limit } 300\text{m}(\text{dB}\mu\text{V/m}) + 40\text{Log}(300\text{m}/3\text{m})$  (Below 30MHz)

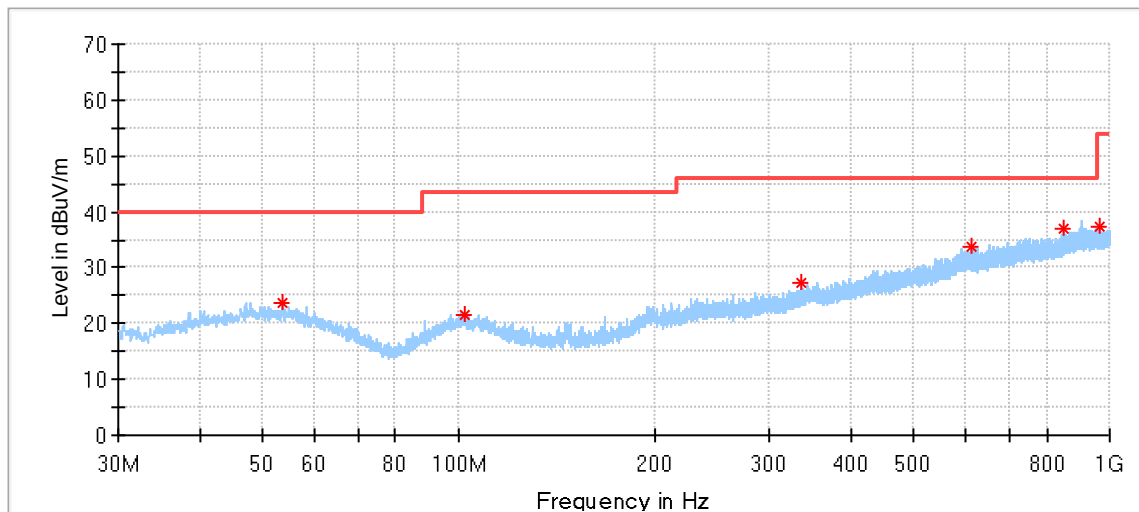
Note 2:  $\text{Limit } 3\text{m}(\text{dB}\mu\text{V/m}) = \text{Limit } 30\text{m}(\text{dB}\mu\text{V/m}) + 40\text{Log}(30\text{m}/3\text{m})$  (Below 30MHz)

## Spurious Radiated Emissions for Transmitter

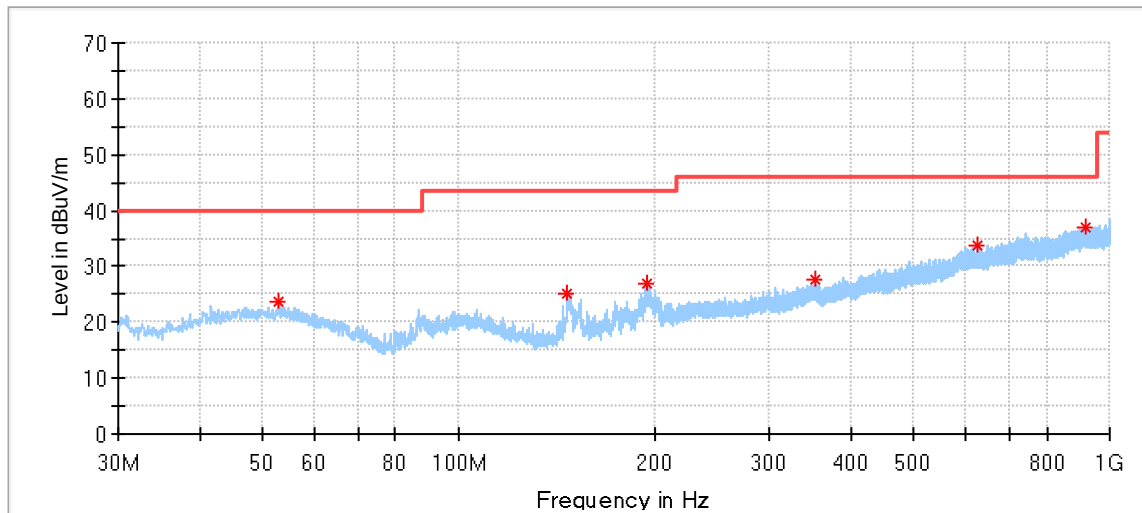
According to C63.10, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement, so AV emission value did not show in below table if the peak value complies with average limit.

Only worst case of 802.11b mode test data was listed in this report.

30MHz – 1000MHz (worst case)

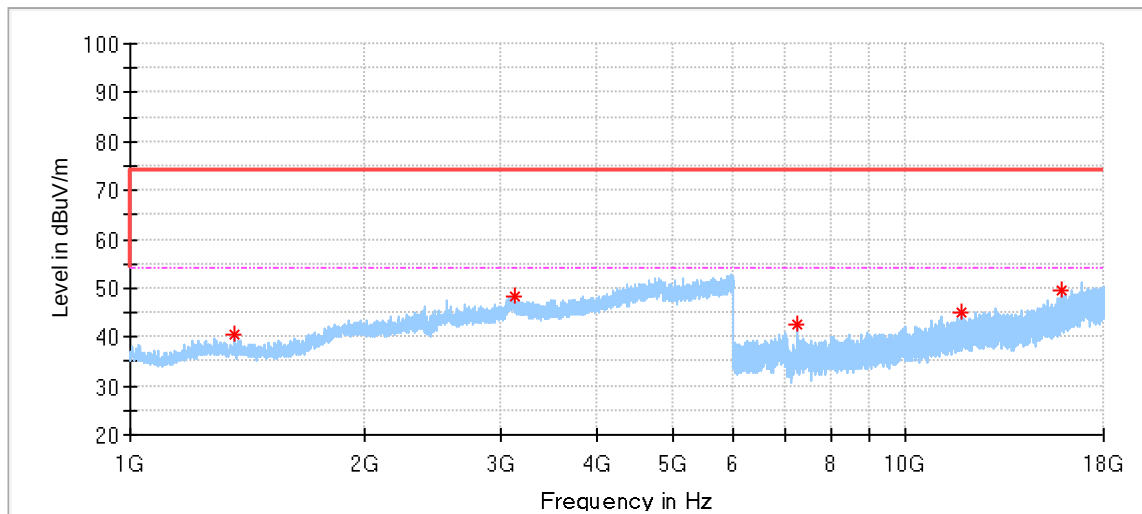


| Frequency (MHz) | MaxPeak (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 53.603333       | 23.58            | 40.00          | 16.42       | 100.0       | H   | 283.0         | 17.91        |
| 102.103333      | 21.70            | 43.50          | 21.80       | 100.0       | H   | 267.0         | 16.42        |
| 335.927222      | 27.32            | 46.00          | 18.68       | 100.0       | H   | 125.0         | 19.80        |
| 613.455000      | 33.69            | 46.00          | 12.31       | 100.0       | H   | 340.0         | 25.45        |
| 849.272778      | 36.90            | 46.00          | 9.10        | 100.0       | H   | 180.0         | 28.01        |
| 968.259444      | 37.30            | 54.00          | 16.70       | 100.0       | H   | 172.0         | 29.05        |

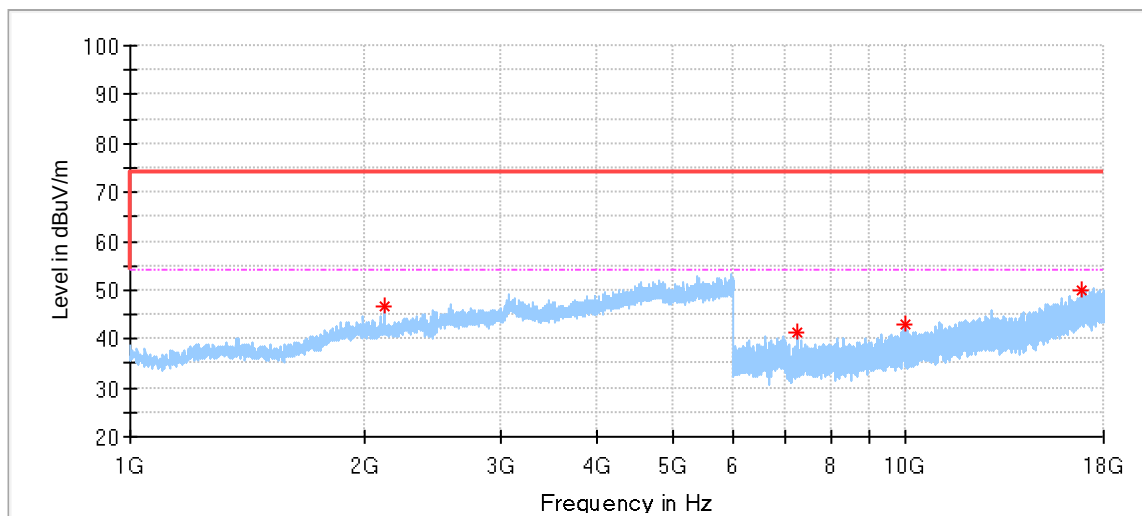


| Frequency (MHz) | MaxPeak (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 52.741111       | 23.55            | 40.00          | 16.45       | 100.0       | V   | 111.0         | 17.96        |
| 146.992778      | 24.98            | 43.50          | 18.52       | 100.0       | V   | 229.0         | 12.46        |
| 195.277222      | 26.84            | 43.50          | 16.66       | 100.0       | V   | 80.0          | 16.45        |
| 353.063889      | 27.80            | 46.00          | 18.20       | 100.0       | V   | 22.0          | 20.38        |
| 624.448333      | 33.59            | 46.00          | 12.41       | 100.0       | V   | 237.0         | 25.40        |
| 915.394444      | 36.92            | 46.00          | 9.08        | 100.0       | V   | 103.0         | 29.07        |

1GHz -18GHz:  
11b\_2412MHz\_Ant1:

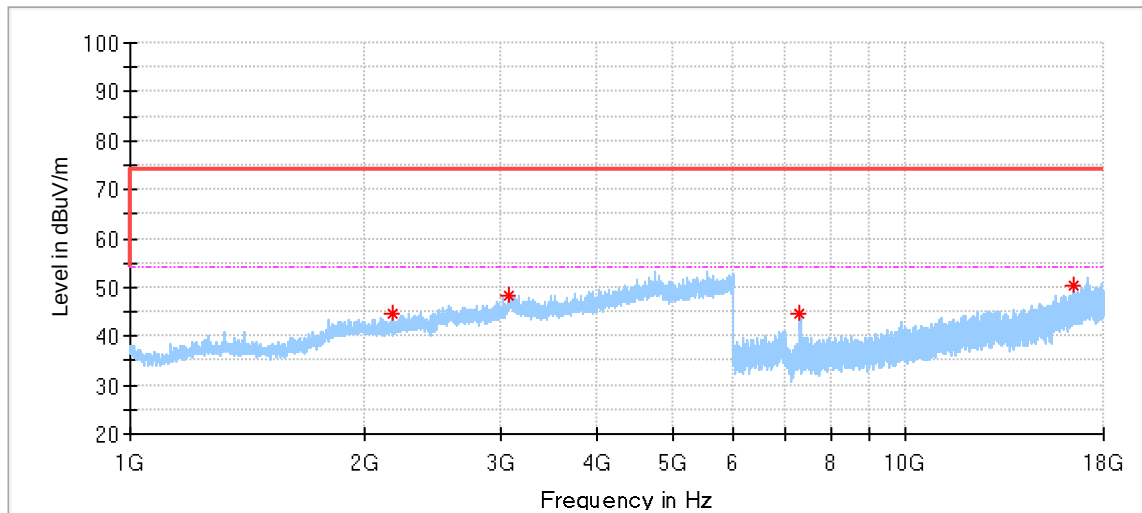


| Frequency (MHz) | MaxPeak (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 1365.000000     | 40.71            | 74.00          | 33.29       | 150.0       | H   | 134.0         | -7.12        |
| 3137.500000     | 48.46            | 74.00          | 25.54       | 150.0       | H   | 358.0         | 1.80         |
| 7235.000000     | 42.69            | 74.00          | 31.31       | 150.0       | H   | 18.0          | 9.06         |
| 11810.500000    | 45.02            | 74.00          | 28.98       | 150.0       | H   | 304.0         | 16.00        |
| 15892.000000    | 49.63            | 74.00          | 24.37       | 150.0       | H   | 304.0         | 20.88        |

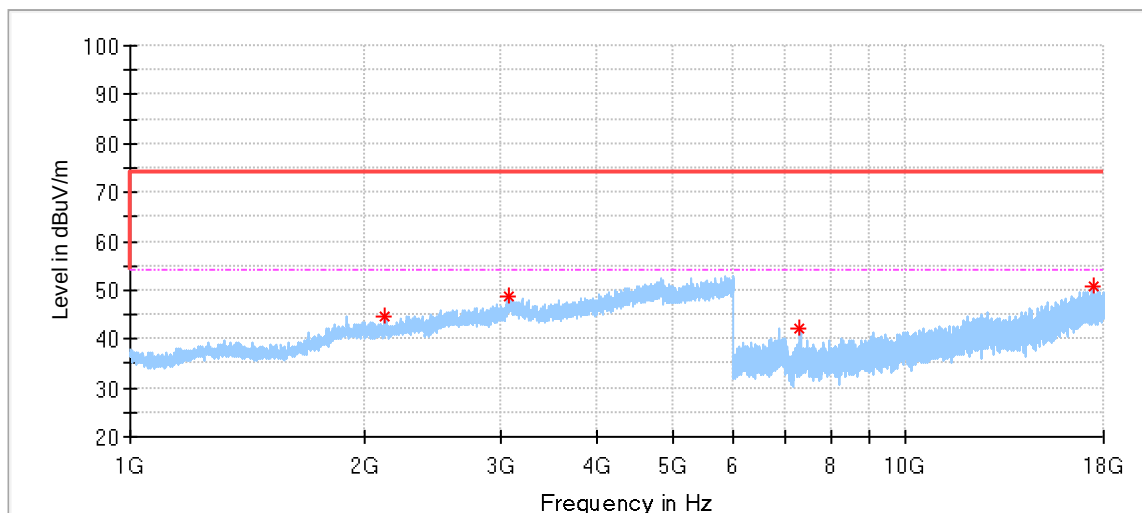


| Frequency (MHz) | MaxPeak (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 2123.000000     | 46.65            | 74.00          | 27.35       | 150.0       | V   | 80.0          | -2.77        |
| 7236.500000     | 41.54            | 74.00          | 32.46       | 150.0       | V   | 84.0          | 9.06         |
| 9992.500000     | 43.17            | 74.00          | 30.83       | 150.0       | V   | 181.0         | 13.04        |
| 16821.500000    | 50.08            | 74.00          | 23.92       | 150.0       | V   | 132.0         | 23.66        |

## 11b\_2437MHz\_Ant1:

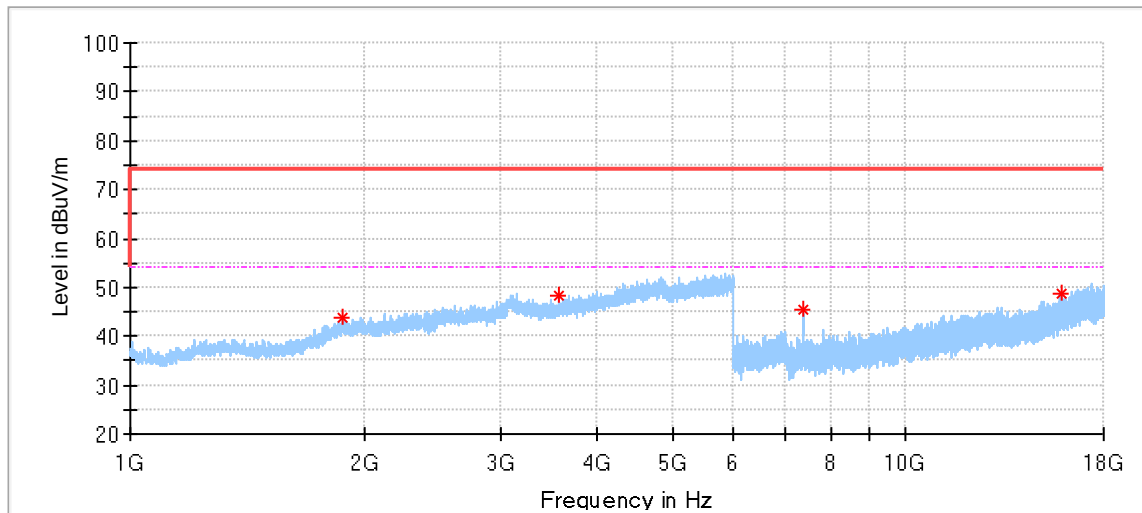


| Frequency (MHz) | MaxPeak (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 2183.500000     | 44.78            | 74.00          | 29.22       | 150.0       | H   | 92.0          | -2.60        |
| 3078.000000     | 48.31            | 74.00          | 25.69       | 150.0       | H   | 248.0         | 2.19         |
| 7309.500000     | 44.46            | 74.00          | 29.54       | 150.0       | H   | 31.0          | 9.55         |
| 16460.500000    | 50.31            | 74.00          | 23.69       | 150.0       | H   | 161.0         | 22.44        |

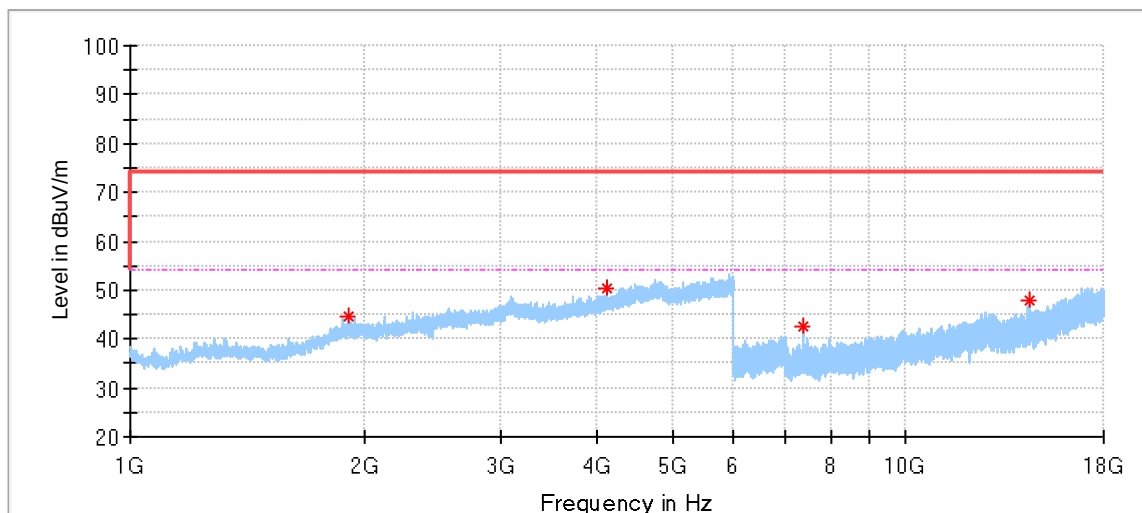


| Frequency (MHz) | MaxPeak (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 2128.500000     | 44.64            | 74.00          | 29.36       | 150.0       | V   | 310.0         | -2.78        |
| 3082.000000     | 48.84            | 74.00          | 25.16       | 150.0       | V   | 310.0         | 2.30         |
| 7309.000000     | 42.25            | 74.00          | 31.75       | 150.0       | V   | 84.0          | 9.55         |
| 17476.000000    | 50.95            | 74.00          | 23.05       | 150.0       | V   | 109.0         | 24.51        |

## 11b\_2462MHz\_Ant1:



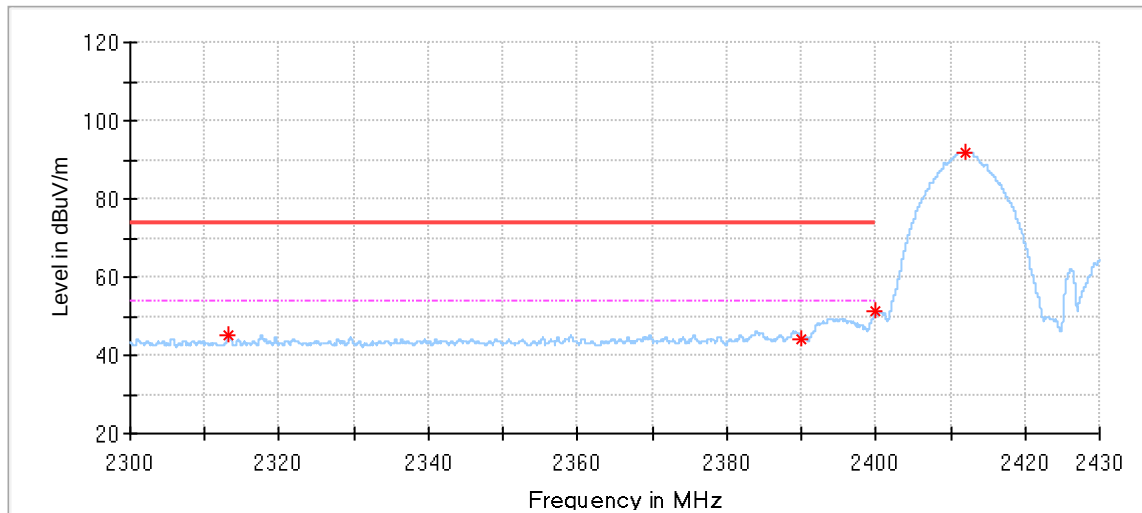
| Frequency (MHz) | MaxPeak (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 1882.000000     | 43.92            | 74.00          | 30.08       | 150.0       | H   | 104.0         | -3.20        |
| 3562.500000     | 48.42            | 74.00          | 25.58       | 150.0       | H   | 92.0          | 1.77         |
| 7386.500000     | 45.59            | 74.00          | 28.41       | 150.0       | H   | 32.0          | 9.60         |
| 15875.000000    | 48.88            | 74.00          | 25.12       | 150.0       | H   | 183.0         | 20.78        |



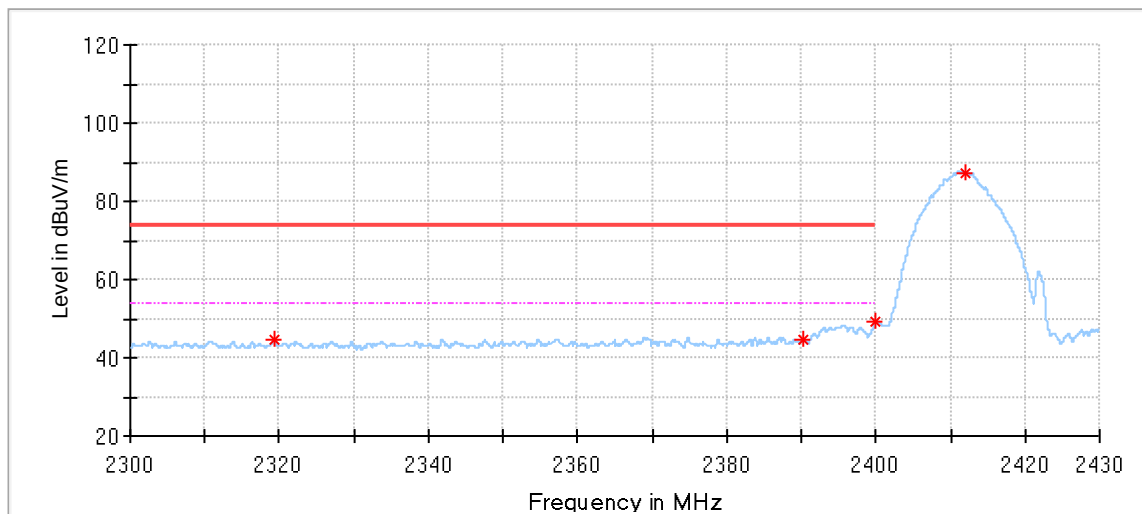
| Frequency (MHz) | MaxPeak (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 1910.000000     | 44.59            | 74.00          | 29.41       | 150.0       | V   | 131.0         | -3.15        |
| 4115.000000     | 50.20            | 74.00          | 23.80       | 150.0       | V   | 191.0         | 3.36         |
| 7386.500000     | 42.45            | 74.00          | 31.55       | 150.0       | V   | 82.0          | 9.60         |
| 14448.000000    | 48.01            | 74.00          | 25.99       | 150.0       | V   | 253.0         | 17.52        |

**Restricted band band-edge test result as below:**

11b\_2412MHz\_Ant1:

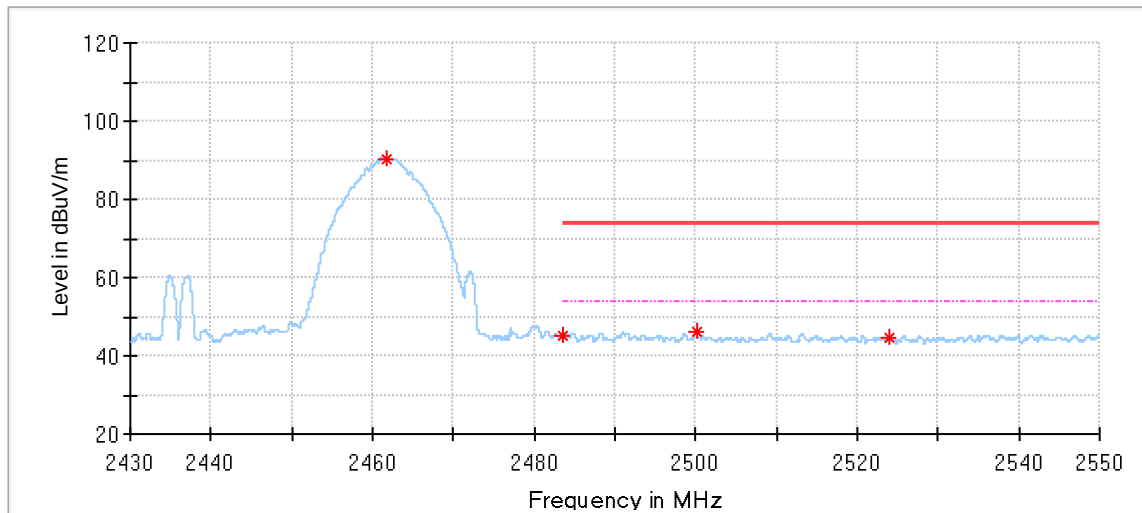


| Frequency (MHz) | MaxPeak (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 2313.117000     | 45.23            | 74.00          | 28.77       | 150.0       | H   | 0.0           | -2.21        |
| 2390.103000     | 44.12            | 74.00          | 29.88       | 150.0       | H   | 3.0           | -1.92        |
| 2400.048000     | 51.07            | ---            | ---         | 150.0       | H   | 9.0           | -1.76        |
| 2412.008000     | 91.55            | ---            | ---         | 150.0       | H   | 9.0           | -1.57        |

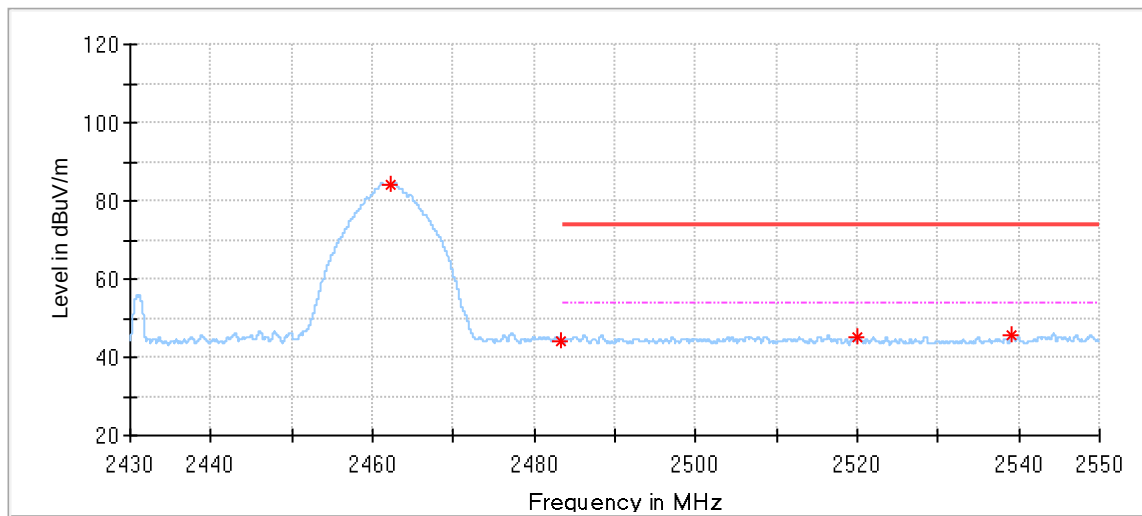


| Frequency (MHz) | MaxPeak (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 2319.292000     | 44.37            | 74.00          | 29.63       | 150.0       | V   | 351.0         | -2.26        |
| 2390.181000     | 44.37            | 74.00          | 29.63       | 150.0       | V   | 151.0         | -1.92        |
| 2400.048000     | 49.22            | ---            | ---         | 150.0       | V   | 44.0          | -1.76        |
| 2411.904000     | 87.16            | ---            | ---         | 150.0       | V   | 56.0          | -1.58        |

## 11b\_2462MHz\_Ant1:

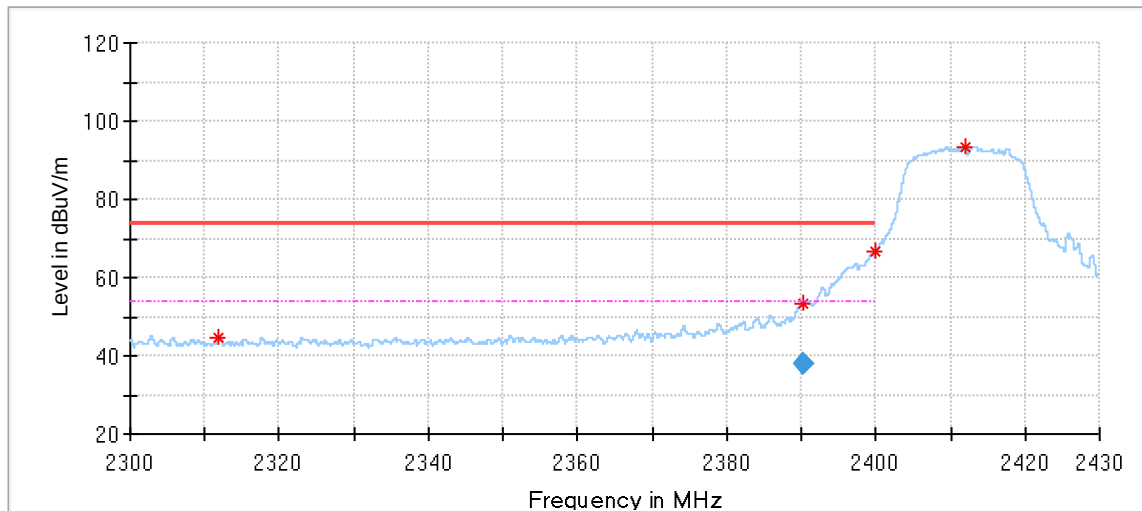


| Frequency (MHz) | MaxPeak (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 2461.704000     | 90.38            | ---            | ---         | 150.0       | H   | 9.0           | -1.46        |
| 2483.496000     | 45.38            | ---            | ---         | 150.0       | H   | 9.0           | -1.45        |
| 2500.080000     | 45.96            | 74.00          | 28.04       | 150.0       | H   | 50.0          | -1.48        |
| 2523.972000     | 44.66            | 74.00          | 29.34       | 150.0       | H   | 296.0         | -1.40        |



| Frequency (MHz) | MaxPeak (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 2462.244000     | 84.25            | ---            | ---         | 150.0       | V   | 44.0          | -1.46        |
| 2483.400000     | 44.27            | ---            | ---         | 150.0       | V   | 281.0         | -1.45        |
| 2520.084000     | 45.24            | 74.00          | 28.76       | 150.0       | V   | 197.0         | -1.43        |
| 2539.116000     | 45.58            | 74.00          | 28.42       | 150.0       | V   | 175.0         | -1.15        |

11g\_2412MHz\_Ant1:

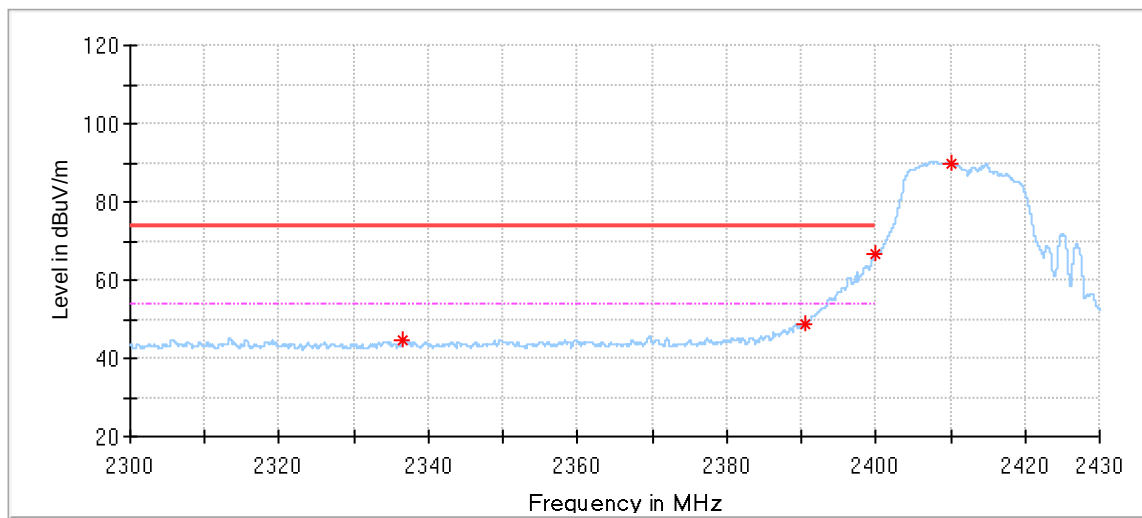


### Critical Freqs

| Frequency (MHz) | MaxPeak (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 2311.921000     | 44.83            | 74.00          | 29.17       | 150.0       | H   | 12.0          | -2.20        |
| 2390.298000     | 53.55            | 74.00          | 20.45       | 150.0       | H   | 0.0           | -1.91        |
| 2399.996000     | 66.56            | 74.00          | 7.44        | 150.0       | H   | 12.0          | -1.76        |
| 2411.904000     | 93.25            | ---            | ---         | 150.0       | H   | 4.0           | -1.58        |

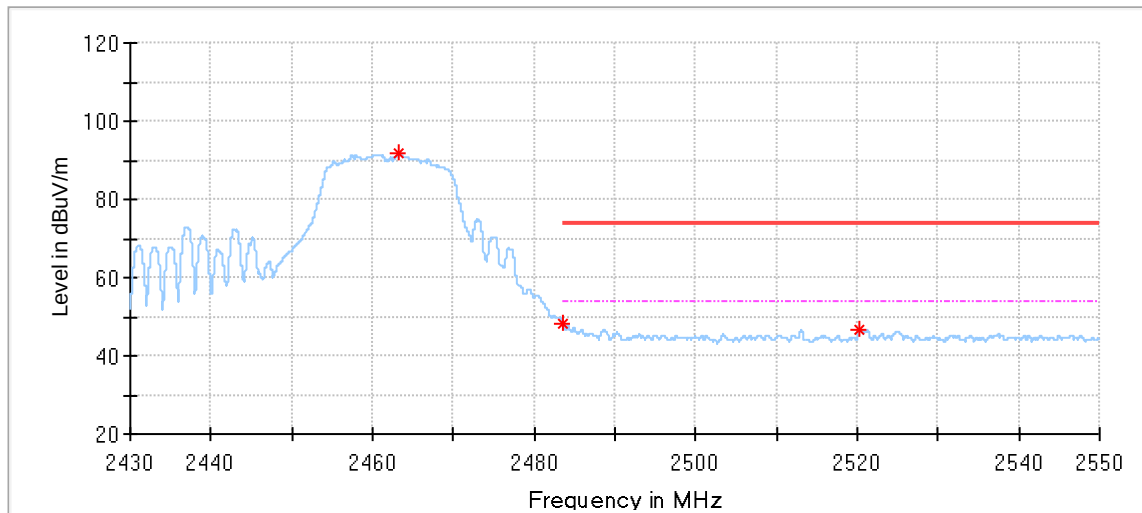
### Final Result

| Frequency (MHz) | Average (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 2390.298000     | 37.82            | 54.00          | 16.18       | 150.0       | H   | 0.0           | -1.91        |

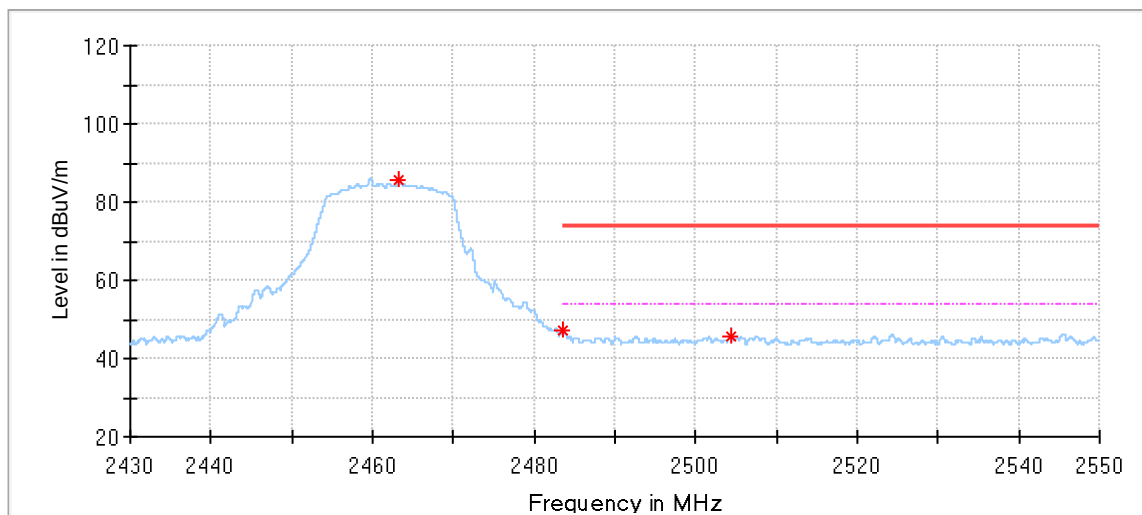


| Frequency (MHz) | MaxPeak (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 2336.595000     | 44.82            | 74.00          | 29.18       | 150.0       | V   | 0.0           | -2.37        |
| 2390.389000     | 48.56            | 74.00          | 25.44       | 150.0       | V   | 47.0          | -1.91        |
| 2399.996000     | 66.67            | 74.00          | 7.33        | 150.0       | V   | 47.0          | -1.76        |
| 2410.136000     | 89.97            | ---            | ---         | 150.0       | V   | 47.0          | -1.60        |

11g\_2462MHz\_Ant1:

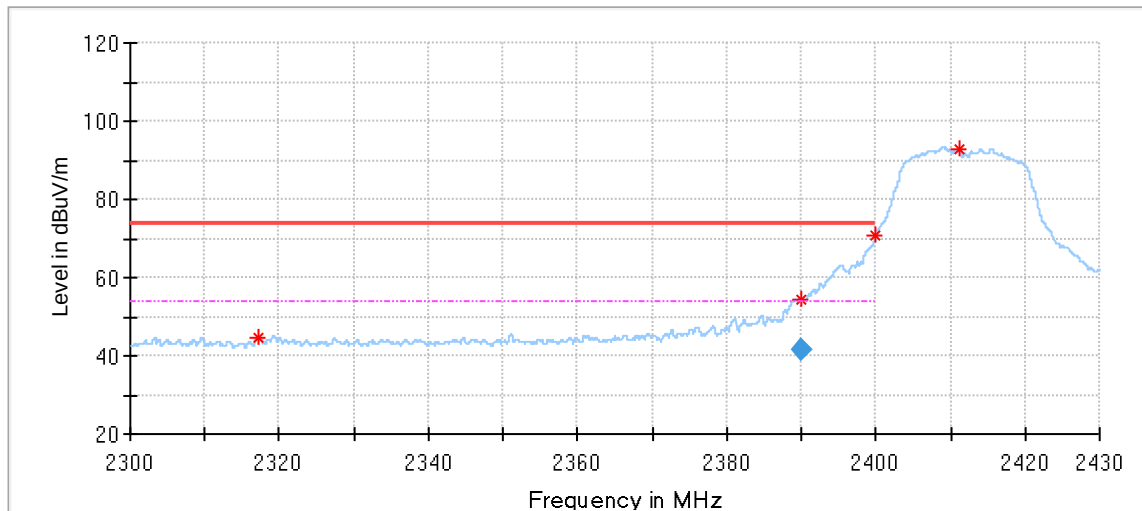


| Frequency (MHz) | MaxPeak (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 2463.288000     | 91.95            | ---            | ---         | 150.0       | H   | 4.0           | -1.46        |
| 2483.508000     | 48.44            | 74.00          | 25.56       | 150.0       | H   | 170.0         | -1.45        |
| 2520.300000     | 46.56            | 74.00          | 27.44       | 150.0       | H   | 4.0           | -1.43        |



| Frequency (MHz) | MaxPeak (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 2463.288000     | 85.73            | ---            | ---         | 150.0       | V   | 44.0          | -1.46        |
| 2483.556000     | 47.24            | 74.00          | 26.76       | 150.0       | V   | 44.0          | -1.45        |
| 2504.400000     | 45.57            | 74.00          | 28.43       | 150.0       | V   | 281.0         | -1.47        |

11n20\_2412MHz\_Ant1:

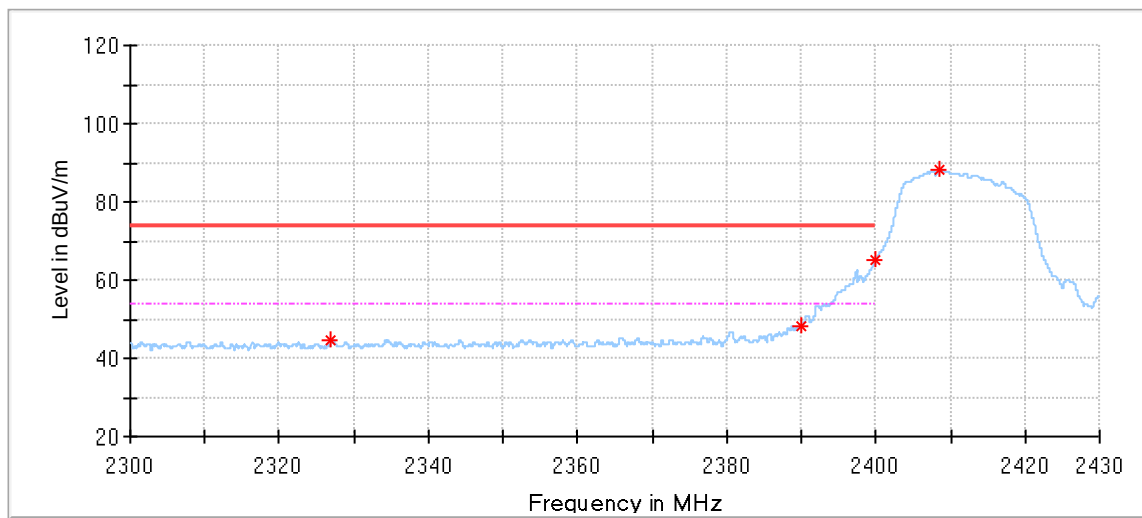


### Critical Freqs

| Frequency (MHz) | MaxPeak (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 2317.264000     | 44.86            | 74.00          | 29.14       | 150.0       | H   | 356.0         | -2.24        |
| 2389.999000     | 54.57            | 74.00          | 19.43       | 150.0       | H   | 38.0          | -1.92        |
| 2399.996000     | 70.56            | 74.00          | 3.44        | 150.0       | H   | 17.0          | -1.76        |
| 2411.254000     | 92.76            | ---            | ---         | 150.0       | H   | 17.0          | -1.59        |

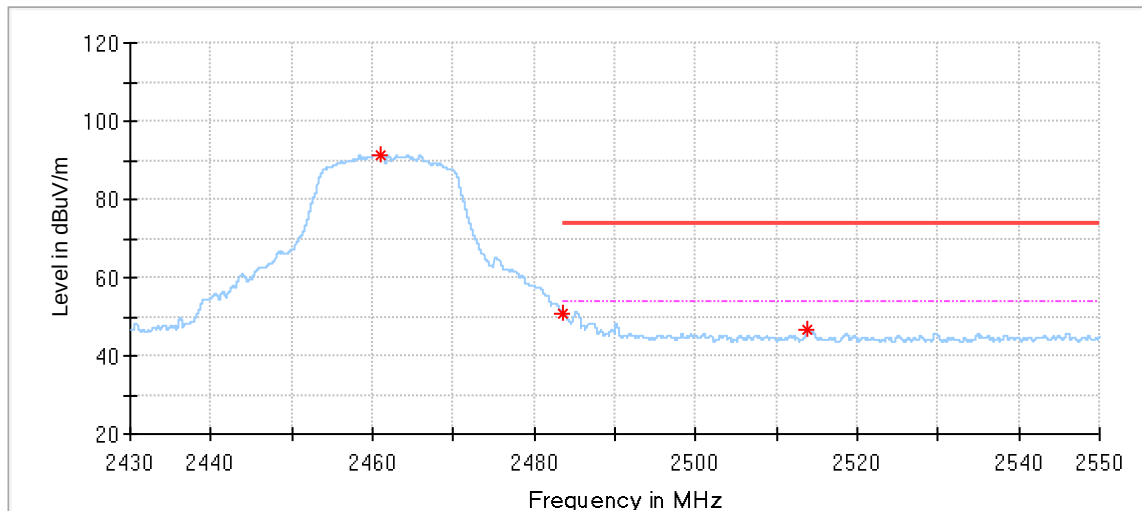
### Final Result

| Frequency (MHz) | Average (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 2389.999000     | 41.49            | 54.00          | 12.51       | 150.0       | H   | 38.0          | -1.92        |

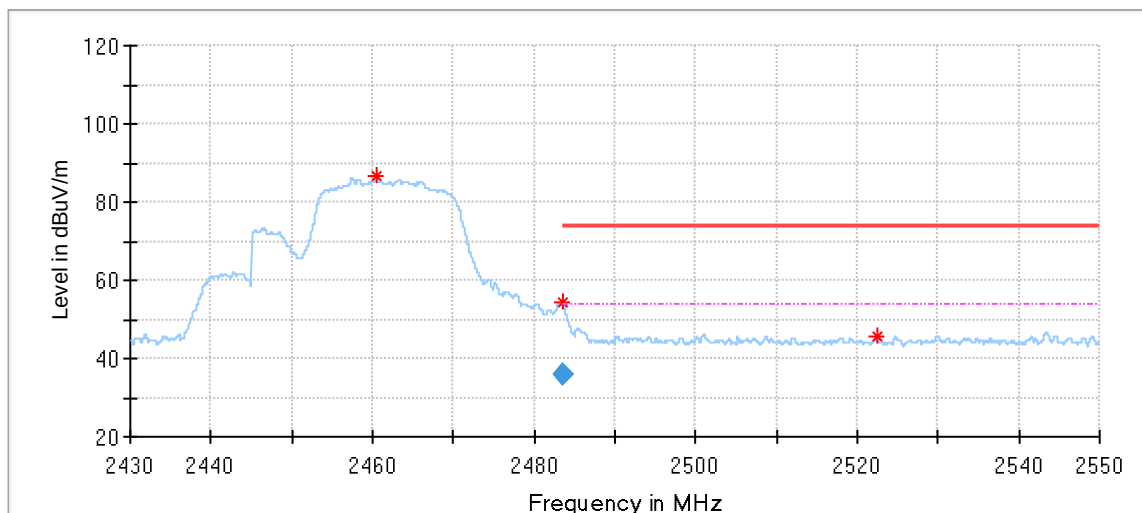


| Frequency (MHz) | MaxPeak (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 2326.988000     | 44.56            | 74.00          | 29.44       | 150.0       | V   | 337.0         | -2.32        |
| 2389.999000     | 48.08            | 74.00          | 25.92       | 150.0       | V   | 58.0          | -1.92        |
| 2399.996000     | 65.13            | 74.00          | 8.87        | 150.0       | V   | 132.0         | -1.76        |
| 2408.589000     | 88.05            | ---            | ---         | 150.0       | V   | 58.0          | -1.63        |

11n20\_2462MHz\_Ant1:



| Frequency (MHz) | MaxPeak (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 2460.924000     | 91.46            | ---            | ---         | 150.0       | H   | 9.0           | -1.47        |
| 2483.592000     | 50.57            | 74.00          | 23.43       | 150.0       | H   | 9.0           | -1.45        |
| 2513.796000     | 46.56            | 74.00          | 27.44       | 150.0       | H   | 198.0         | -1.44        |



### Critical\_Freqs

| Frequency (MHz) | MaxPeak (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 2460.468000     | 86.46            | ---            | ---         | 150.0       | V   | 97.0          | -1.47        |
| 2483.508000     | 54.12            | 74.00          | 19.88       | 150.0       | V   | 97.0          | -1.45        |
| 2522.448000     | 45.73            | 74.00          | 28.27       | 150.0       | V   | 277.0         | -1.42        |

### Final\_Result

| Frequency (MHz) | Average (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 2483.508000     | 35.95            | 54.00          | 18.05       | 150.0       | V   | 97.0          | -1.45        |

Remark:

- (1) Data of measurement within frequency range 9kHz-30MHz and 18-40GHz are the noise floor or attenuated more than 20dB below the permissible limits or the field strength is too small to be measured, so test data does not present in this report.
- (2) Corrected Amplitude = Read level + Corrector factor  
Above 1GHz: Corrector factor = Antenna Factor + Cable Loss- Amplifier Gain  
Below 1GHz: Corrector factor = Antenna Factor + Cable Loss

## 10 Test Equipment List

### Radiated Emission Test (9kHz-30MHz) (SAC-3 #1)

| DESCRIPTION              | MANUFACTURER    | MODEL NO. | EQUIPMENT ID       | SERIAL NO.      | CAL INTERVAL (YEAR) | CAL. DUE DATE |
|--------------------------|-----------------|-----------|--------------------|-----------------|---------------------|---------------|
| EMI Test Receiver        | Rohde & Schwarz | ESR 7     | 68-4-74-19-001     | 102176          | 1                   | 2025-5-13     |
| Loop Antenna             | Rohde & Schwarz | HFH2-Z2   | 68-4-80-14-006     | 100398          | 1                   | 2025-7-24     |
| Cable                    | HUBER-SUHNER    | RG214     | 68-4-90-14-001-A21 | ----            | ----                | ----          |
| 3m Semi-anechoic chamber | TDK             | SAC-3 #1  | 68-4-90-14-001     | ----            | 3                   | 2026-10-25    |
| Test software            | Rohde & Schwarz | EMC32     | 68-4-90-14-001-A10 | Version10.35.02 | N/A                 | N/A           |

### Radiated Emission Test (30MHz-1GHz) (SAC-3 #2)

| DESCRIPTION                         | MANUFACTURER    | MODEL NO.        | EQUIPMENT ID       | SERIAL NO.      | CAL INTERVAL (YEAR) | CAL. DUE DATE |
|-------------------------------------|-----------------|------------------|--------------------|-----------------|---------------------|---------------|
| EMI Test Receiver                   | Rohde & Schwarz | ESR 26           | 68-4-74-14-002     | 101269          | 1                   | 2025-5-13     |
| Trilog Super Broadband Test Antenna | Schwarzbeck     | VULB 9162        | 68-4-80-19-003     | 284             | 1                   | 2026-2-11     |
| Attenuator                          | Mini-circuits   | UNAT-6+          | 68-4-81-21-002     | 15542           | 1                   | 2025-5-11     |
| Cable                               | OUQIAO          | 18DLB5-NMNM-7000 | 68-4-90-19-006-A22 | ----            | ----                | ----          |
| 3m Semi-anechoic chamber            | TDK             | SAC-3 #2         | 68-4-90-19-006     | ----            | 3                   | 2026-10-25    |
| Test software                       | Rohde & Schwarz | EMC32            | 68-4-90-19-006-A01 | Version10.35.02 | N/A                 | N/A           |

### Radiated Emission Test (1GHz-18GHz) (SAC-3 #2)

| DESCRIPTION              | MANUFACTURER    | MODEL NO.        | EQUIPMENT ID       | SERIAL NO.      | CAL INTERVAL (YEAR) | CAL. DUE DATE |
|--------------------------|-----------------|------------------|--------------------|-----------------|---------------------|---------------|
| EMI Test Receiver        | Rohde & Schwarz | ESR 26           | 68-4-74-14-002     | 101269          | 1                   | 2025-5-13     |
| Wave Guide Antenna       | ETS             | 3117             | 68-4-80-19-001     | 00218954        | 1                   | 2026-3-10     |
| Pre-amplifier            | Rohde & Schwarz | SCU 18F          | 68-4-29-19-001     | 100745          | 1                   | 2025-5-11     |
| Pre-amplifier            | Rohde & Schwarz | SCU 18F          | 68-4-29-19-002     | 100746          | 1                   | 2025-5-11     |
| Cable                    | OUQIAO          | 18DLB5-NMNM-7000 | 68-4-90-19-006-A22 | ----            | ----                | ----          |
| 3m Semi-anechoic chamber | TDK             | SAC-3 #2         | 68-4-90-19-006     | ----            | 3                   | 2026-10-25    |
| Test software            | Rohde & Schwarz | EMC32            | 68-4-90-19-006-A01 | Version10.35.02 | N/A                 | N/A           |

**Radiated Emission Test (18GHz-40GHz) (SAC-3 #2)**

| DESCRIPTION              | MANUFACTURER    | MODEL NO.         | EQUIPMENT ID       | SERIAL NO.      | CAL INTERVAL (YEAR) | CAL. DUE DATE |
|--------------------------|-----------------|-------------------|--------------------|-----------------|---------------------|---------------|
| EMI Test Receiver        | Rohde & Schwarz | ESR 26            | 68-4-74-14-002     | 101269          | 1                   | 2025-5-13     |
| Sideband Horn Antenna    | Q-PAR           | QWH-SL-18-40-K-SG | 68-4-80-14-008     | 12827           | 1                   | 2025-7-2      |
| Pre-amplifier            | Rohde & Schwarz | SCU 40A           | 68-4-29-14-002     | 100432          | 1                   | 2025-7-17     |
| Cable                    | JUNFLON         | MWX241            | 68-4-90-19-006-A21 | ----            | ----                | ----          |
| 3m Semi-anechoic chamber | TDK             | SAC-3 #2          | 68-4-90-19-006     | ----            | 3                   | 2026-10-25    |
| Test software            | Rohde & Schwarz | EMC32             | 68-4-90-19-006-A01 | Version10.35.02 | N/A                 | N/A           |

**Conducted Emission Test (AMN)(CSR #2)**

| DESCRIPTION       | MANUFACTURER      | MODEL NO. | EQUIPMENT ID       | SERIAL NO.      | CAL INTERVAL (YEAR) | CAL. DUE DATE |
|-------------------|-------------------|-----------|--------------------|-----------------|---------------------|---------------|
| EMI Test Receiver | Rohde & Schwarz   | ESR 3     | 68-4-74-19-002     | 102590          | 1                   | 2025-5-13     |
| LISN              | Rohde & Schwarz   | ENV216    | 68-4-87-19-001     | 102472          | 1                   | 2025-5-12     |
| LISN              | Rohde & Schwarz   | ENV4200   | 68-4-87-14-001     | 100249          | 1                   | 2025-5-13     |
| Attenuator        | Shanghai Huaxiang | TS2-26-3  | 68-4-81-16-003     | 080928189       | 1                   | 2025-5-11     |
| Cable             | OUQIAO            | RG142     | 68-4-90-19-005-A20 | ----            | ----                | ----          |
| Test software     | Rohde & Schwarz   | EMC32     | 68-4-90-19-005-A01 | Version10.35.02 | N/A                 | N/A           |
| Shielding Room    | TDK               | CSR #2    | 68-4-90-19-005     | ----            | 3                   | 2025-10-15    |

**RF Test System**

| DESCRIPTION                     | MANUFACTURER    | MODEL NO.  | EQUIPMENT ID       | SERIAL NO.          | CAL INTERVAL (YEAR) | CAL. DUE DATE |
|---------------------------------|-----------------|------------|--------------------|---------------------|---------------------|---------------|
| Signal Analyzer                 | Rohde & Schwarz | FSV40      | 68-4-74-14-004     | 101030              | 1                   | 2025-5-11     |
| RF Meas. and Switch Matrix Unit | TST PASS        | TSCB3023R2 | 68-4-93-23-001     | 2811685c            | 1                   | 2025-5-11     |
| Cable                           | JUNFLON         | J12J103539 | 68-4-90-19-003-A20 | ----                | ----                | ----          |
| Cable                           | JUNFLON         | J12J103539 | 68-4-90-19-003-A21 | ----                | ----                | ----          |
| Cable                           | JUNFLON         | J12J103539 | 68-4-90-19-003-A22 | ----                | ----                | ----          |
| Test software                   | TST PASS        | TST PASS   | 68-4-93-23-001-A03 | Version 2.0         | N/A                 | N/A           |
| Test software                   | Tonscend        | JS1120-3   | 68-4-74-14-006-A13 | Version 2.6.77.0518 | N/A                 | N/A           |
| Shielding Room                  | TDK             | TS8997     | 68-4-90-19-003     | ----                | 3                   | 2025-10-15    |

## 11 System Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

| System Measurement Uncertainty                                                           |                                          |
|------------------------------------------------------------------------------------------|------------------------------------------|
| Test Items                                                                               | Extended Uncertainty                     |
| Uncertainty for Radiated Emission in 3m chamber (68-4-90-14-001)<br>9kHz-30MHz           | 4.69dB                                   |
| Uncertainty for Radiated Emission in 3m chamber (68-4-90-14-001)<br>30MHz-1000MHz        | Horizontal: 4.78dB;<br>Vertical: 5.85dB; |
| Uncertainty for Radiated Emission in new 3m chamber (68-4-90-19-006)<br>1000MHz-18000MHz | Horizontal: 5.40dB;<br>Vertical: 5.40dB; |
| Uncertainty for Radiated Emission in new 3m chamber (68-4-90-19-006) 18GHz-40GHz         | Horizontal: 5.29dB;<br>Vertical: 5.29dB; |
| Uncertainty for Conducted RF test with TS 8997                                           | RF Power Conducted: 1.31dB               |

### Measurement Uncertainty Decision Rule

Determination of conformity with the specification limits is based on the decision rule according to IEC Guide 115: 2023, clause 4.3.3 and 4.3.4.

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