

**FCC/ISED - TEST REPORT**

Report Number : **68.950.24.1258.01** Date of Issue: **2025-01-16**

Model/HVIN : **FS2345**

Product Type : **AURIA module**

Applicant : **Frontier Smart Technologies Ltd**

Address : **Harston, Harston Mill, Cambridge, CB22 7GG, UNITED KINGDOM**

Manufacturer : **Frontier Smart Technologies Ltd**

Address : **Harston, Harston Mill, Cambridge, CB22 7GG, UNITED KINGDOM**

Test Result : ☒ **Positive** ☐ **Negative**

Total pages including Appendices : **338**

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## 1. 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 City, 518052, P. R. China  
Telephone: 86 755 8828 6998  
Fax: 86 755 828 5299

FCC Registration No.: 514049

FCC Designation No.: CN5009

IC Registration No.: 10320A

ISED CAB identifier: CN0077

## 2. Description of the Equipment Under Test

|                            |                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product:                   | AURIA module                                                                                                                                                                                                                                                                                                                                                                                 |
| Model no.:                 | FS2345                                                                                                                                                                                                                                                                                                                                                                                       |
| FCC ID:                    | YYX-FS2345                                                                                                                                                                                                                                                                                                                                                                                   |
| IC:                        | 11458A-FS2345                                                                                                                                                                                                                                                                                                                                                                                |
| PMN:                       | AURIA                                                                                                                                                                                                                                                                                                                                                                                        |
| HVIN:                      | FS2345                                                                                                                                                                                                                                                                                                                                                                                       |
| Rating:                    | 5VDC                                                                                                                                                                                                                                                                                                                                                                                         |
| RF Transmission Frequency: | 5.180GHz~5.240GHz;<br>5.260GHz~5.320GHz;<br>5.500GHz~5.720GHz;<br>5.745GHz~5.825GHz<br>Note: until further notice, this device shall not be capable of transmitting in the band 5600-5650MHz for Canada. This restriction is for the protection of Terminal Doppler Weather Radar (TDWR) operating in this band.                                                                             |
| Channel No.:               | 22                                                                                                                                                                                                                                                                                                                                                                                           |
| Modulation:                | 802.11a: BPSK, QPSK, 16QAM, 64QAM<br>802.11n: BPSK, QPSK, 16QAM, 64QAM<br>802.11ac: BPSK, QPSK, 16QAM, 64QAM, 256QAM<br>802.11ax: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM                                                                                                                                                                                                                  |
| Antenna Type:              | Ant 1: Internal PIFA Antenna<br>Ant 2: External PIFA Antenna                                                                                                                                                                                                                                                                                                                                 |
| Antenna Gain:              | Ant 1:<br>2.75 dBi Max for 5150-5250MHz<br>3.02 dBi Max for 5250-5350MHz<br>2.04 dBi Max for 5470-5725MHz<br>0.22 dBi Max for 5725-5850MHz<br>Ant 2:<br>2.11 dBi Max for 5150-5250MHz<br>3.42 dBi Max for 5250-5350MHz<br>4.54 dBi Max for 5470-5725MHz<br>3.05 dBi Max for 5725-5850MHz<br>FS2345 does not support MIMO, only one of Ant 1 or Ant 2 can transmit through a switch selection |
| S/N                        | Conducted Method Module: 241500278RYA02<br>Conducted Method Platform: FS2345032403053<br>Radiated Method Module: 241500246RYA02<br>Radiated Method Platform: FS2345032403028<br>Normal Module: 240100004RYA02<br>Normal Platform: FS2345032403037                                                                                                                                            |
| Description of the EUT:    | The Equipment Under Test (EUT) is a AURIA module supports Bluetooth Low Energy / Bluetooth BR+EDR/ Wi-Fi functions                                                                                                                                                                                                                                                                           |
| Remark:                    | This report is only for 5GHz Wi-Fi.                                                                                                                                                                                                                                                                                                                                                          |

### 3. Summary of Test Standards

| Test Standards                                                                           |                                                                                                                              |
|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| FCC Part 15 Subpart E<br>10-1-2023 Edition                                               | PART 15 - RADIO FREQUENCY DEVICES<br>Subpart E - 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 Systems (FHSS) and License-Exempt Local Area Network (LE-LAN) Devices |

Test Method:

KDB 789033 D02 General UNII Test Procedures New Rules v02r01

KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02

KDB 905462 D03 Client Without DFS New Rules v01r02

KDB 662911 D01 Multiple Transmitter Output v02r01

ANSI C63.10-2020, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

#### 4. Summary of Test Results

| Test Condition                                   |                                       | Test Result                                      |                          |                          |
|--------------------------------------------------|---------------------------------------|--------------------------------------------------|--------------------------|--------------------------|
|                                                  |                                       | Pass                                             | Fail                     | N/A                      |
| §15.207 & RSS-Gen 8.8                            | Conducted Emission AC Power Port      | <input checked="" type="checkbox"/>              | <input type="checkbox"/> | <input type="checkbox"/> |
| §15.407(a) & §15.407(e) & RSS-247 6.2            | Emission bandwidth                    | <input checked="" type="checkbox"/>              | <input type="checkbox"/> | <input type="checkbox"/> |
| §15.407(a) & RSS-247 6.2                         | Maximum Conducted Output Power & EIRP | <input checked="" type="checkbox"/>              | <input type="checkbox"/> | <input type="checkbox"/> |
| §15.407(a) & RSS-247 6.2                         | Maximum Power Spectral Density        | <input checked="" type="checkbox"/>              | <input type="checkbox"/> | <input type="checkbox"/> |
| §15.407(b) & §15.209 & RSS-247 6.2 & RSS-Gen 8.9 | Unwanted Emissions                    | <input checked="" type="checkbox"/>              | <input type="checkbox"/> | <input type="checkbox"/> |
| §15.407(b) & §15.209 & RSS-247 6.2 & RSS-Gen 8.9 | Band edge compliance                  | <input checked="" type="checkbox"/>              | <input type="checkbox"/> | <input type="checkbox"/> |
| §15.407(g) & RSS-Gen 6.11                        | Frequencies Stability                 | <input checked="" type="checkbox"/>              | <input type="checkbox"/> | <input type="checkbox"/> |
| §15.407(h), RSS-247 6.3                          | Dynamic Frequency Selection (DFS).    | <input checked="" type="checkbox"/>              | <input type="checkbox"/> | <input type="checkbox"/> |
| §15.203, RSS-Gen 6.8                             | Antenna Requirement                   | <input checked="" type="checkbox"/><br>See note2 | <input type="checkbox"/> | <input type="checkbox"/> |

Note 1: N/A=Not Applicable.

Note 2: The EUT uses an Internal PIFA Antenna, which gain is 3.02 dBi Max and an External PIFA Antenna, which gain is 4.54dBi Max. In accordance to §15.203 & RSS-Gen 6.8, it is considered sufficiently to comply with the provisions of this section.

## 5. General Remarks

### Remarks

This submittal(s) (test report) is intended for FCC ID: YYX-FS2345, complies with Section 15.207, 15.209, 15.205, 15.407 of the FCC Part 15, Subpart C.

This submittal(s) (test report) is intended for IC: 11458A-FS2345, complies with RSS-247, RSS-GEN.

The Model: FS2345 supports Bluetooth Low Energy/Bluetooth BR+EDR/Wi-Fi functions, power by 5VDC.

The TX and RX range is 2402MHz-2480MHz for Bluetooth, 2412MHz – 2462MHz for 2.4GHz Wi-Fi, 5180MHz – 5320MHz, 5500MHz – 5700MHz, 5745MHz – 5825MHz for 5GHz Wi-Fi. (This device shall not be capable of transmitting in the band 5600-5650MHz for Canada. This restriction is for the protection of Terminal Doppler Weather Radar (TDWR) operating in this band.)

This report is for the 5GHz Wi-Fi part.

### 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: 2024-07-02

Testing Start Date: 2024-07-02

Testing End Date: 2024-08-05

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

Reviewed by:



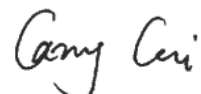
Alan Xiong  
Project Manager

Prepared by:



Henry Chen  
Project Engineer

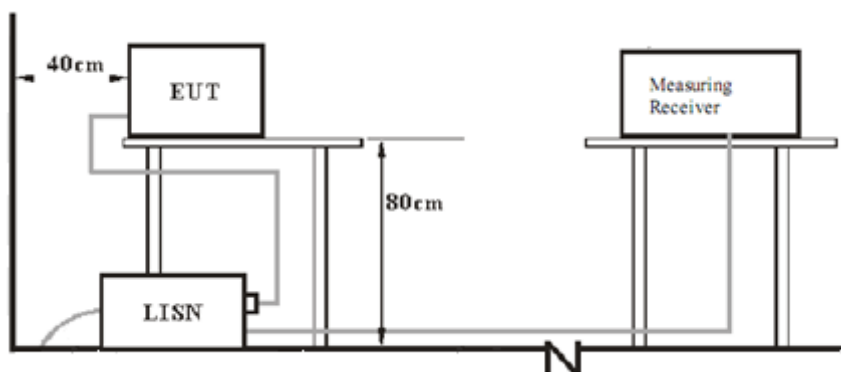
Tested by:



Carry Cai  
Test Engineer

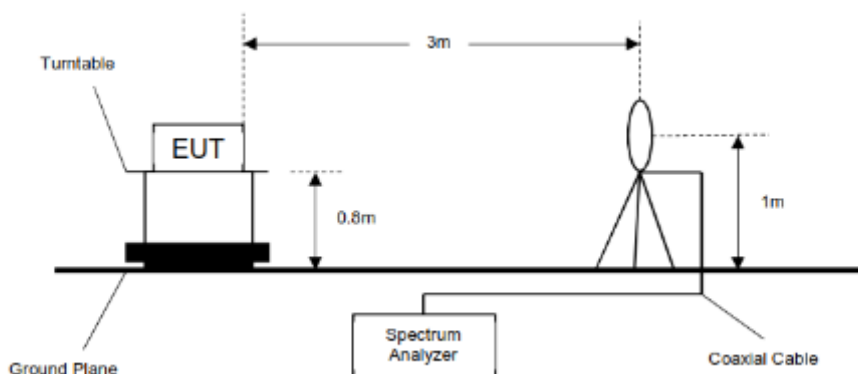
## 6. Test Setups

### 6.1 AC Power Line Conducted Emission test setups

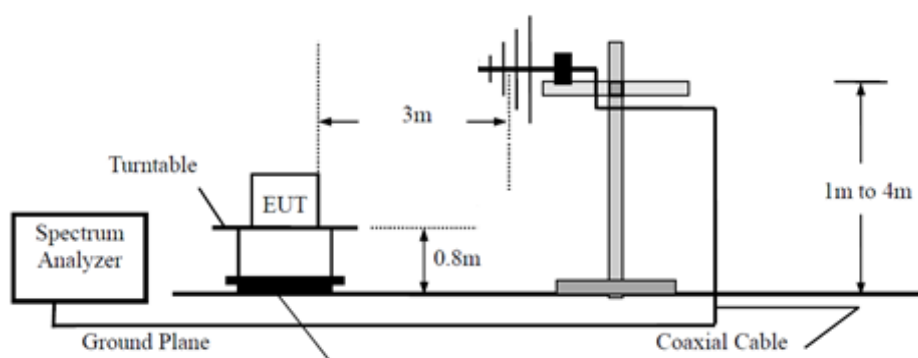


### 6.2 Radiated test setups

#### 9KHz-30MHz

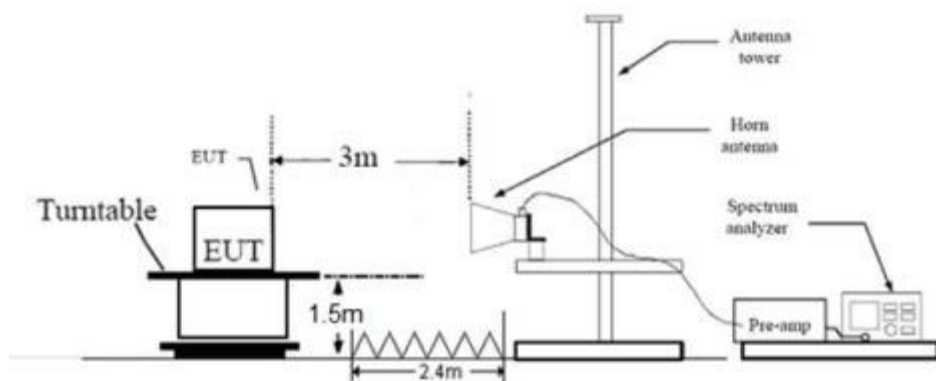


#### Below 1GHz

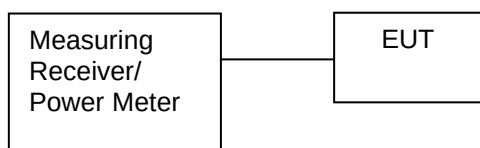




Above 1GHz



### 6.3 Conducted RF test setups



## 7. Systems Test Configuration

Auxiliary Equipment Used during Test:

| Description | Manufacturer | Model NO. | S/N          |
|-------------|--------------|-----------|--------------|
| Laptop      | Thinkpad     | X230      | 0A72162      |
| Router      | ZTE          | ZXHN F670 | ZTEGC83987BB |

The system was configured to channel:

| Test Mode                                                   | Channel (MHz)    |                 |                 |
|-------------------------------------------------------------|------------------|-----------------|-----------------|
| 802.11a,<br>802.11n HT20<br>802.11ac VHT20<br>802.11ax HE20 | 5G Wi-Fi UNII-1  |                 |                 |
|                                                             | CH36 (5180MHz)   | CH40 (5200MHz)  | CH48 (5240MHz)  |
|                                                             | 5G Wi-Fi UNII-2A |                 |                 |
|                                                             | CH52 (5260MHz)   | CH56 (5280MHz)  | CH64 (5320MHz)  |
|                                                             | 5G Wi-Fi UNII-2C |                 |                 |
|                                                             | CH100 (5500MHz)  | CH116 (5580MHz) | CH140 (5700MHz) |
|                                                             | CH144 (5720MHz)  |                 |                 |
|                                                             | 5G Wi-Fi UNII-3  |                 |                 |
|                                                             | CH149 (5745MHz)  | CH157(5785MHz)  | CH165 (5825MHz) |

The system was configured to channel and TX power setting:

| channel | OFDM(6M~54M) | HE_B20<br>(MCS0~MCS11) | HE-<br>RU26 | HE-<br>RU52 | HE-<br>RU106 |
|---------|--------------|------------------------|-------------|-------------|--------------|
| 36      | 15           | 15                     | 6           | 9           | 12           |
| 40      | 15           | 15                     | 6           | 9           | 12           |
| 44      | 15           | 15                     | 6           | 9           | 12           |
| 48      | 15           | 15                     | 6           | 9           | 12           |
| 52      | 13           | 13                     | 3           | 6           | 9            |
| 56      | 13           | 13                     | 3           | 6           | 9            |
| 60      | 13           | 13                     | 3           | 6           | 9            |
| 64      | 13           | 13                     | 3           | 6           | 9            |
| 100     | 12           | 12                     | 2           | 5           | 8            |
| 104     | 12           | 12                     | 2           | 5           | 8            |
| 108     | 12           | 12                     | 2           | 5           | 8            |
| 112     | 12           | 12                     | 2           | 5           | 8            |
| 116     | 12           | 12                     | 2           | 5           | 8            |
| 120     | 12           | 12                     | 2           | 5           | 8            |
| 124     | 12           | 12                     | 2           | 5           | 8            |
| 128     | 12           | 12                     | 2           | 5           | 8            |
| 132     | 12           | 12                     | 2           | 5           | 8            |
| 136     | 12           | 12                     | 2           | 5           | 8            |
| 140     | 12           | 12                     | 2           | 5           | 8            |
| 144     | 13           | 13                     | 3           | 6           | 9            |
| 149     | 8            | 8                      | 8           | 8           | 8            |
| 153     | 8            | 8                      | 8           | 8           | 8            |
| 157     | 8            | 8                      | 8           | 8           | 8            |
| 161     | 8            | 8                      | 8           | 8           | 8            |
| 165     | 8            | 8                      | 8           | 8           | 8            |

## 8. Technical Requirement

### 8.1 Conducted emission AC power port

#### Test Method

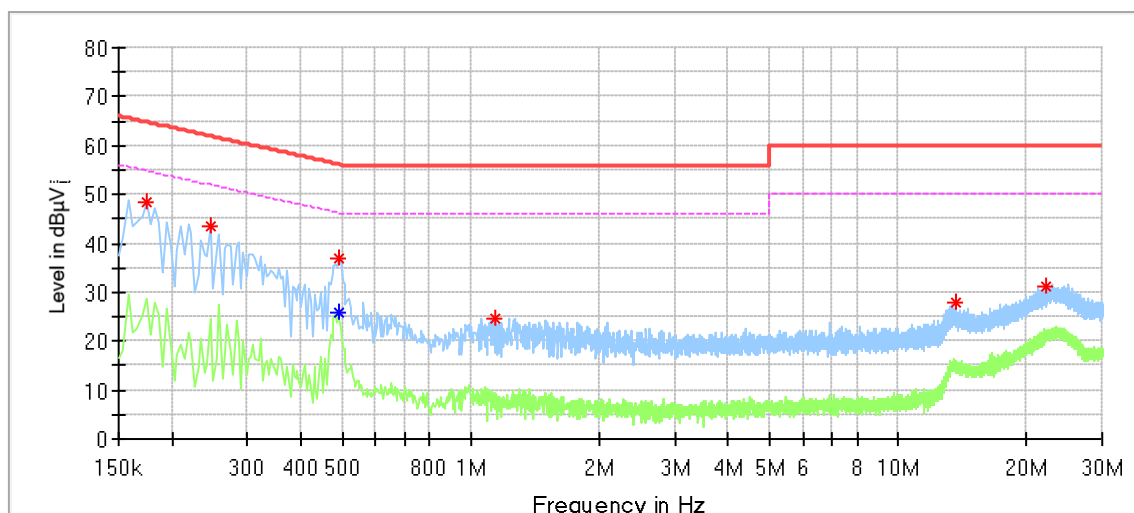
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
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

| 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                     |

Remark: “\*” Decreasing linearly with logarithm of the frequency

Product Type : AURIA module  
M/N : FS2345  
Operating Condition : Transmitting  
Test specification : Live  
Comment : 5VDC Power by Laptop (AC 120V/60Hz)



## Critical Freqs

| Frequency (MHz) | MaxPeak (dBμV) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Line | Corr. (dB) |
|-----------------|----------------|----------------|--------------|-------------|------|------------|
| 0.174000        | 48.42          | ---            | 64.77        | 16.35       | L1   | 9.54       |
| 0.246000        | 43.48          | ---            | 61.89        | 18.41       | L1   | 9.56       |
| 0.490000        | 37.12          | ---            | 56.17        | 19.05       | L1   | 9.59       |
| 0.490000        | ---            | 25.77          | 46.17        | 20.40       | L1   | 9.59       |
| 1.138000        | 24.62          | ---            | 56.00        | 31.38       | L1   | 9.60       |
| 13.690000       | 27.75          | ---            | 60.00        | 32.25       | L1   | 9.99       |
| 22.278000       | 31.30          | ---            | 60.00        | 28.70       | L1   | 10.04      |

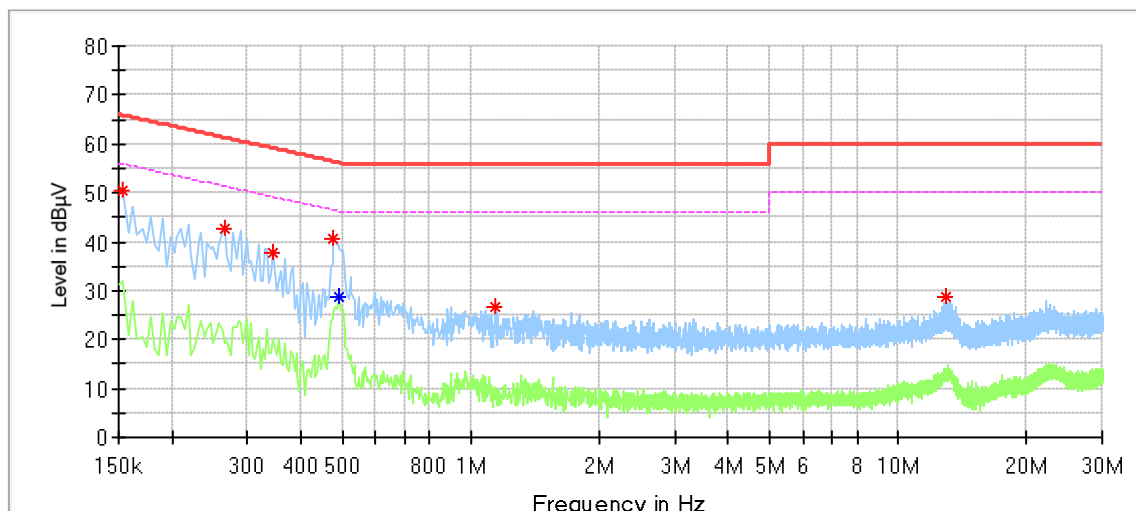
Remark:

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)

Product Type : AURIA module  
M/N : FS2345  
Operating Condition : Transmitting  
Test specification : Neutral  
Comment : 5VDC Power by Laptop (AC 120V/60Hz)



## Critical Freqs

| Frequency (MHz) | MaxPeak (dBμV) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Line | Corr. (dB) |
|-----------------|----------------|----------------|--------------|-------------|------|------------|
| 0.154000        | 50.51          | ---            | 65.78        | 15.27       | N    | 9.55       |
| 0.266000        | 42.73          | ---            | 61.24        | 18.51       | N    | 9.59       |
| 0.346000        | 37.76          | ---            | 59.06        | 21.30       | N    | 9.61       |
| 0.478000        | 40.82          | ---            | 56.37        | 15.55       | N    | 9.61       |
| 0.490000        | ---            | 28.79          | 46.17        | 17.38       | N    | 9.62       |
| 1.142000        | 26.65          | ---            | 56.00        | 29.35       | N    | 9.63       |
| 12.970000       | 28.85          | ---            | 60.00        | 31.15       | N    | 9.99       |

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)

## 8.2 Emission bandwidth

The EUT was placed on 0.8m height table, the RF output of EUT was connected to the test receiver by RF cable. The path loss was compensated to the results for each measurement.

### 1. Test Method of 26dB Bandwidth

According to KDB789033 D02

- a) Set RBW = 1 % to 5 % of the OBW
- b) Set the VBW > RBW.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

**Limit:** No limit

### 2. Test Method of 6dB Bandwidth

According to KDB789033 D02

- a) Set center frequency to the nominal EUT channel center frequency
- b) Set RBW = 100kHz
- c) Set the video bandwidth (VBW)  $\geq 3 \times$  RBW
- d) Detector = Peak.
- e) Trace mode = max hold.
- f) Sweep = Sweep = No faster than coupled (auto) time.
- g) Allow the trace to stabilize.
- h) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.
- i) Record the results in the test report.

**Limit:**  $\geq 500\text{kHz}$

### 3. Test Method of 99% Bandwidth

According to KDB789033 D02

- a) Set center frequency to the nominal EUT channel center frequency
- b) Set span = 1.5 times to 5.0 times the OBW.
- c) Set RBW = 1 % to 5 % of the OBW
- d) Set VBW  $\geq 3 \cdot$  RBW
- e) Trace mode = max hold.
- f) Sweep = auto couple.
- g) Allow the trace to stabilize.
- h) Use the 99 % power bandwidth function of the instrument.
- i) Record the results in the test report.

**Limit:** No limit

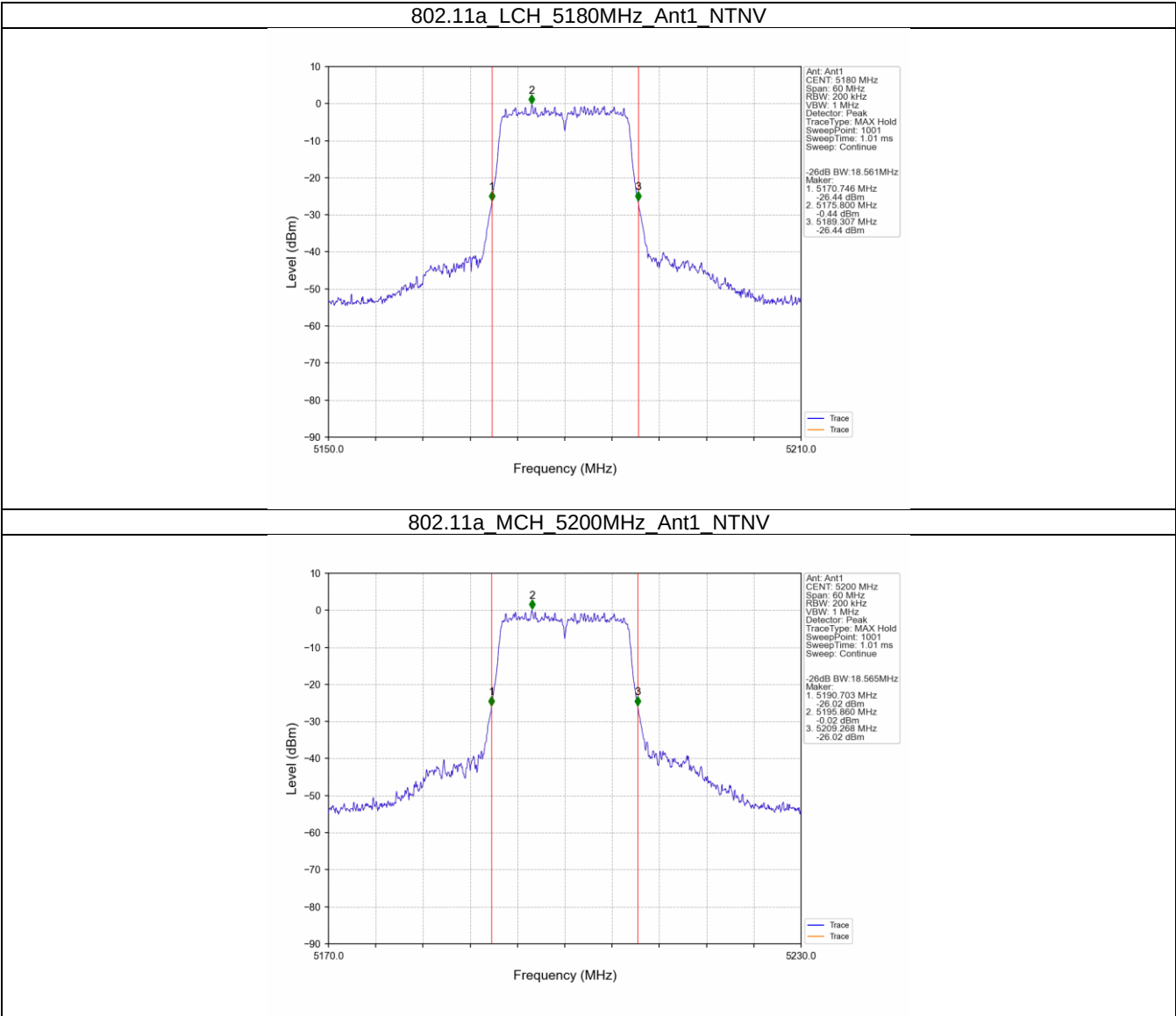
**26dB Bandwidth Test result:**

| Mode             | TX Type | Frequency (MHz) | RU    | RU Pos | ANT | 26dB Bandwidth (MHz) |       | Verdict |
|------------------|---------|-----------------|-------|--------|-----|----------------------|-------|---------|
|                  |         |                 |       |        |     | Result               | Limit |         |
| 802.11a          | SISO    | 5180            | /     | /      | 1   | 18.561               | /     | Pass    |
|                  |         | 5200            | /     | /      | 1   | 18.565               | /     | Pass    |
|                  |         | 5240            | /     | /      | 1   | 18.566               | /     | Pass    |
|                  |         | 5260            | /     | /      | 1   | 18.567               | /     | Pass    |
|                  |         | 5300            | /     | /      | 1   | 18.584               | /     | Pass    |
|                  |         | 5320            | /     | /      | 1   | 18.557               | /     | Pass    |
|                  |         | 5500            | /     | /      | 1   | 18.535               | /     | Pass    |
|                  |         | 5580            | /     | /      | 1   | 18.582               | /     | Pass    |
|                  |         | 5700            | /     | /      | 1   | 18.556               | /     | Pass    |
|                  |         | 5720            | /     | /      | 1   | 18.531               | /     | Pass    |
| 802.11n (HT20)   | SISO    | 5180            | /     | /      | 1   | 19.602               | /     | Pass    |
|                  |         | 5200            | /     | /      | 1   | 19.564               | /     | Pass    |
|                  |         | 5240            | /     | /      | 1   | 19.546               | /     | Pass    |
|                  |         | 5260            | /     | /      | 1   | 19.532               | /     | Pass    |
|                  |         | 5300            | /     | /      | 1   | 19.605               | /     | Pass    |
|                  |         | 5320            | /     | /      | 1   | 19.523               | /     | Pass    |
|                  |         | 5500            | /     | /      | 1   | 19.510               | /     | Pass    |
|                  |         | 5580            | /     | /      | 1   | 19.563               | /     | Pass    |
|                  |         | 5700            | /     | /      | 1   | 19.567               | /     | Pass    |
|                  |         | 5720            | /     | /      | 1   | 19.554               | /     | Pass    |
| 802.11ac (VHT20) | SISO    | 5180            | /     | /      | 1   | 19.633               | /     | Pass    |
|                  |         | 5200            | /     | /      | 1   | 19.602               | /     | Pass    |
|                  |         | 5240            | /     | /      | 1   | 19.541               | /     | Pass    |
|                  |         | 5260            | /     | /      | 1   | 19.576               | /     | Pass    |
|                  |         | 5300            | /     | /      | 1   | 19.619               | /     | Pass    |
|                  |         | 5320            | /     | /      | 1   | 19.565               | /     | Pass    |
|                  |         | 5500            | /     | /      | 1   | 19.549               | /     | Pass    |
|                  |         | 5580            | /     | /      | 1   | 19.567               | /     | Pass    |
|                  |         | 5700            | /     | /      | 1   | 19.549               | /     | Pass    |
|                  |         | 5720            | /     | /      | 1   | 19.570               | /     | Pass    |
| 802.11ax (HEW20) | SISO    | 5180            | RU242 | Left   | 1   | 20.642               | /     | Pass    |
|                  |         | 5180            | RU106 | Left   | 1   | 19.600               | /     | Pass    |
|                  |         | 5200            | RU242 | Left   | 1   | 20.754               | /     | Pass    |
|                  |         | 5240            | RU106 | Left   | 1   | 19.931               | /     | Pass    |
|                  |         | 5240            | RU242 | Left   | 1   | 20.723               | /     | Pass    |
|                  |         | 5260            | RU242 | Left   | 1   | 20.708               | /     | Pass    |
|                  |         | 5300            | RU26  | Left   | 1   | 18.079               | /     | Pass    |
|                  |         | 5300            | RU242 | Left   | 1   | 20.758               | /     | Pass    |
|                  |         | 5320            | RU242 | Left   | 1   | 20.705               | /     | Pass    |
|                  |         | 5500            | RU242 | Left   | 1   | 20.726               | /     | Pass    |
|                  |         | 5580            | RU242 | Left   | 1   | 20.689               | /     | Pass    |
|                  |         | 5700            | RU242 | Left   | 1   | 20.653               | /     | Pass    |
|                  |         | 5720            | RU106 | Left   | 1   | 20.809               | /     | Pass    |
|                  |         | 5720            | RU242 | Left   | 1   | 20.281               | /     | Pass    |

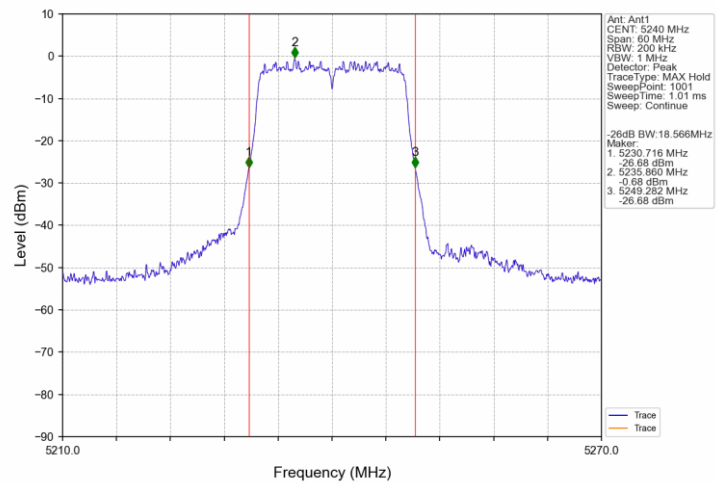
| Mode             | TX Type | Frequency (MHz) | RU    | RU Pos | ANT | 26dB Bandwidth (MHz) |       | Verdict |
|------------------|---------|-----------------|-------|--------|-----|----------------------|-------|---------|
|                  |         |                 |       |        |     | Result               | Limit |         |
| 802.11a          | SISO    | 5180            | /     | /      | 2   | 18.598               | /     | Pass    |
|                  |         | 5200            | /     | /      | 2   | 18.592               | /     | Pass    |
|                  |         | 5240            | /     | /      | 2   | 18.546               | /     | Pass    |
|                  |         | 5260            | /     | /      | 2   | 18.554               | /     | Pass    |
|                  |         | 5300            | /     | /      | 2   | 18.601               | /     | Pass    |
|                  |         | 5320            | /     | /      | 2   | 18.571               | /     | Pass    |
|                  |         | 5500            | /     | /      | 2   | 18.542               | /     | Pass    |
|                  |         | 5580            | /     | /      | 2   | 18.580               | /     | Pass    |
|                  |         | 5700            | /     | /      | 2   | 18.584               | /     | Pass    |
| 802.11n (HT20)   | SISO    | 5720            | /     | /      | 2   | 18.544               | /     | Pass    |
|                  |         | 5180            | /     | /      | 2   | 19.571               | /     | Pass    |
|                  |         | 5200            | /     | /      | 2   | 19.552               | /     | Pass    |
|                  |         | 5240            | /     | /      | 2   | 19.553               | /     | Pass    |
|                  |         | 5260            | /     | /      | 2   | 19.569               | /     | Pass    |
|                  |         | 5300            | /     | /      | 2   | 19.606               | /     | Pass    |
|                  |         | 5320            | /     | /      | 2   | 19.529               | /     | Pass    |
|                  |         | 5500            | /     | /      | 2   | 19.524               | /     | Pass    |
|                  |         | 5580            | /     | /      | 2   | 19.570               | /     | Pass    |
| 802.11ac (VHT20) | SISO    | 5700            | /     | /      | 2   | 19.569               | /     | Pass    |
|                  |         | 5720            | /     | /      | 2   | 19.539               | /     | Pass    |
|                  |         | 5180            | /     | /      | 2   | 19.595               | /     | Pass    |
|                  |         | 5200            | /     | /      | 2   | 19.559               | /     | Pass    |
|                  |         | 5240            | /     | /      | 2   | 19.541               | /     | Pass    |
|                  |         | 5260            | /     | /      | 2   | 19.575               | /     | Pass    |
|                  |         | 5300            | /     | /      | 2   | 19.626               | /     | Pass    |
|                  |         | 5320            | /     | /      | 2   | 19.577               | /     | Pass    |
|                  |         | 5500            | /     | /      | 2   | 19.538               | /     | Pass    |
| 802.11ax (HEW20) | SISO    | 5580            | /     | /      | 2   | 19.582               | /     | Pass    |
|                  |         | 5700            | /     | /      | 2   | 19.512               | /     | Pass    |
|                  |         | 5720            | /     | /      | 2   | 19.530               | /     | Pass    |
|                  |         | 5180            | RU242 | Left   | 2   | 20.716               | /     | Pass    |
|                  |         | 5200            | RU106 | Left   | 2   | 19.614               | /     | Pass    |
|                  |         | 5200            | RU242 | Left   | 2   | 20.778               | /     | Pass    |
|                  |         | 5240            | RU106 | Left   | 2   | 19.880               | /     | Pass    |
|                  |         | 5240            | RU242 | Left   | 2   | 20.656               | /     | Pass    |
|                  |         | 5260            | RU242 | Left   | 2   | 20.673               | /     | Pass    |
|                  |         | 5300            | RU242 | Left   | 2   | 20.735               | /     | Pass    |
|                  |         | 5320            | RU242 | Left   | 2   | 20.719               | /     | Pass    |
|                  |         | 5500            | RU242 | Left   | 2   | 20.768               | /     | Pass    |
|                  |         | 5580            | RU242 | Left   | 2   | 20.699               | /     | Pass    |
|                  |         | 5700            | RU242 | Left   | 2   | 20.264               | /     | Pass    |
|                  |         | 5720            | RU242 | Left   | 2   | 20.201               | /     | Pass    |



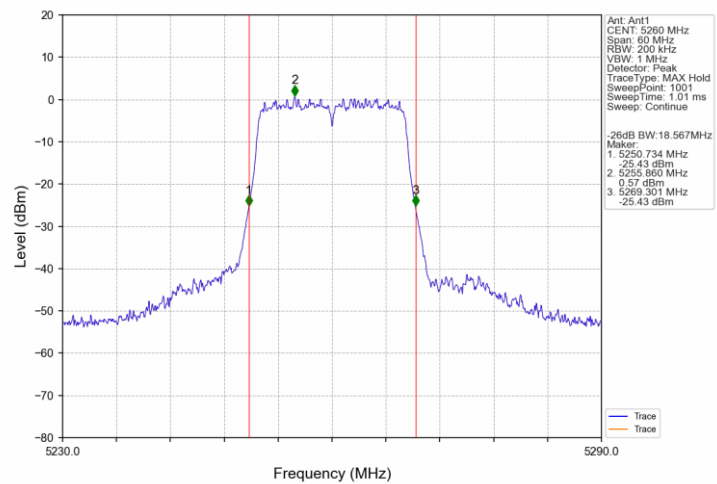
# 26dB Bandwidth Test Graphs



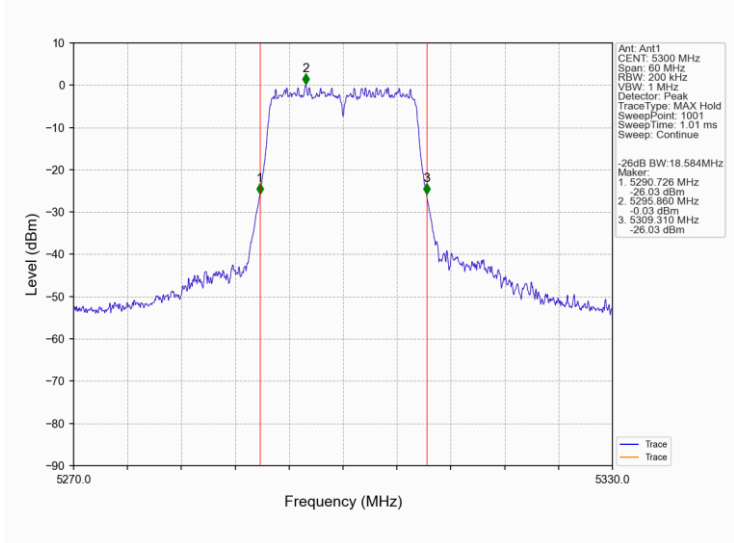
802.11a\_HCH\_5240MHz\_Ant1\_NTNV



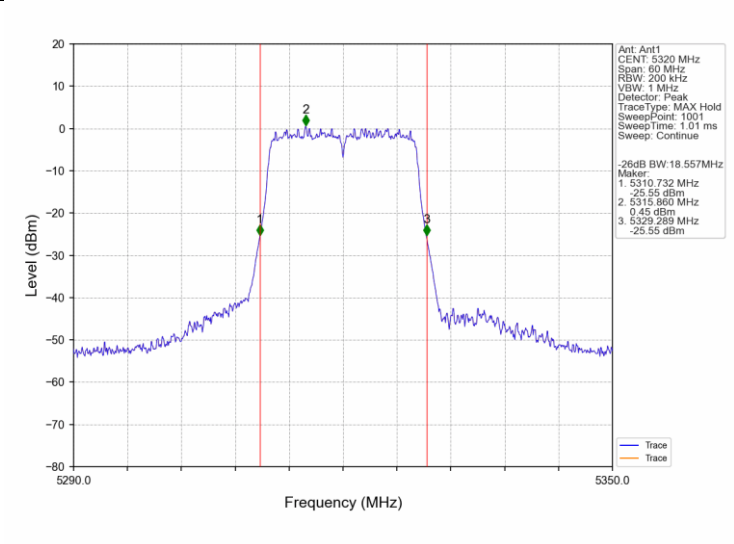
802.11a\_LCH\_5260MHz\_Ant1\_NTNV



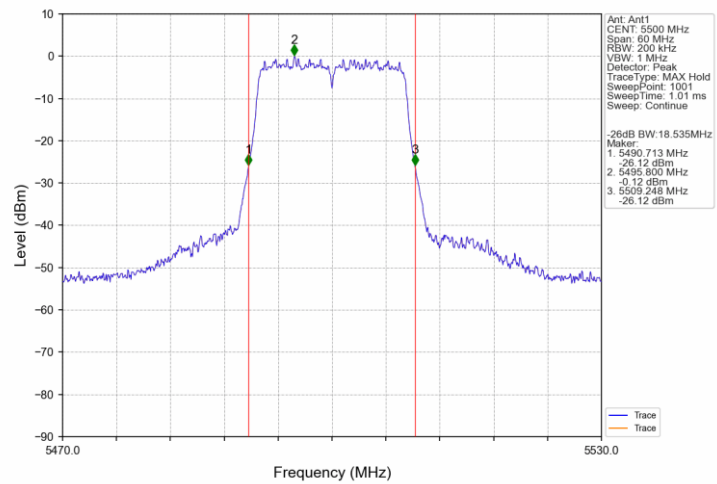
802.11a\_MCH\_5300MHz\_Ant1\_NTNV



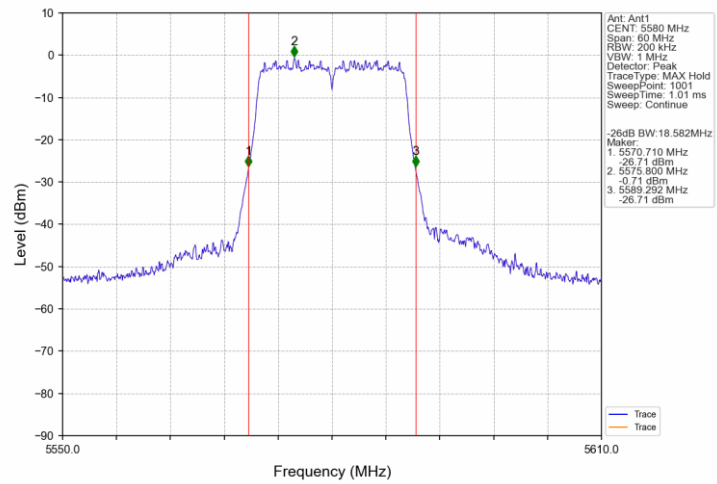
802.11a\_HCH\_5320MHz\_Ant1\_NTNV



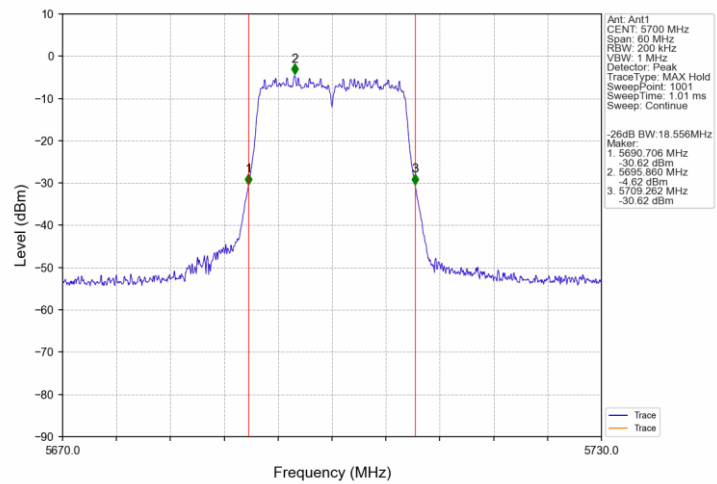
802.11a\_LCH\_5500MHz\_Ant1\_NTNV



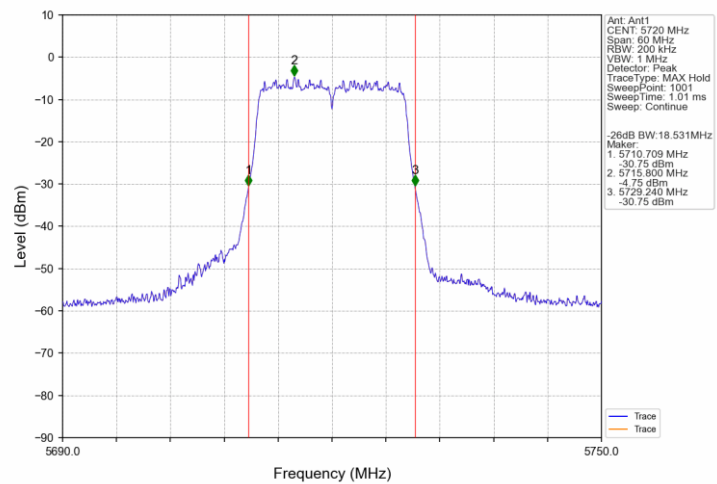
802.11a\_MCH\_5580MHz\_Ant1\_NTNV



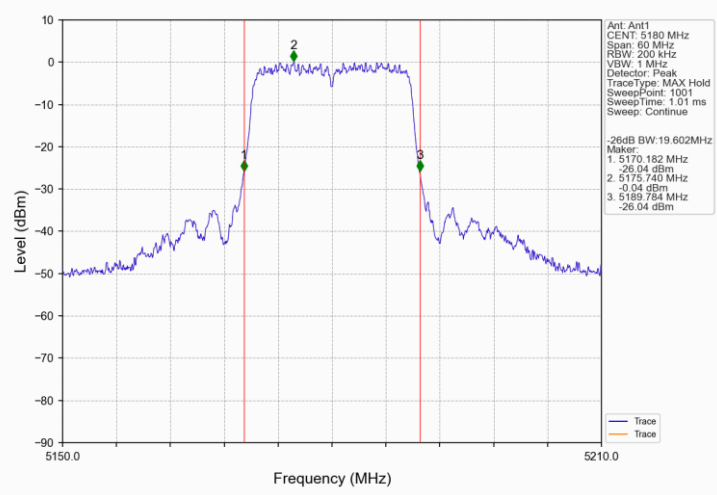
802.11a\_HCH\_5700MHz\_Ant1\_NTNV



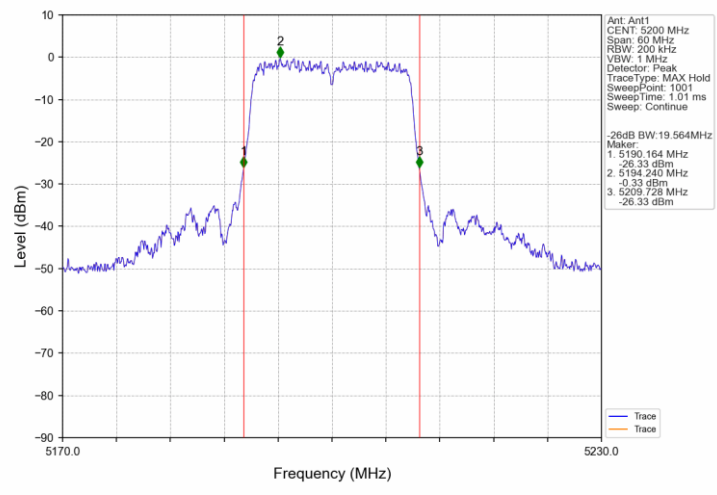
802.11a\_HCH\_5720MHz\_Ant1\_NTNV



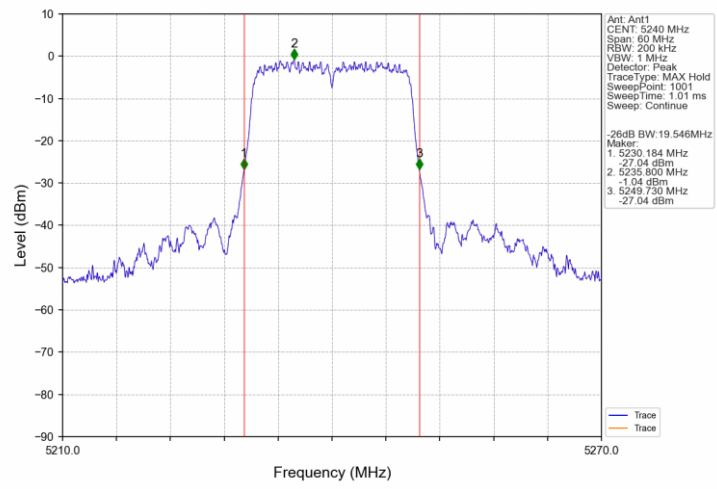
802.11n(HT20)\_LCH\_5180MHz\_Ant1\_NTNV



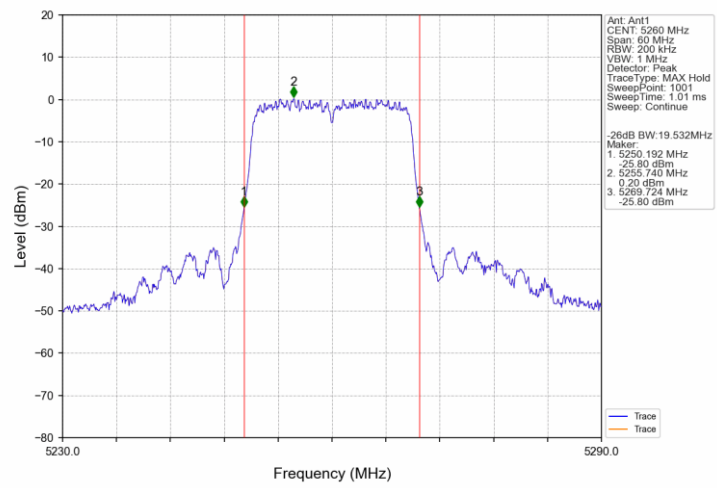
802.11n(HT20)\_MCH\_5200MHz\_Ant1\_NTNV



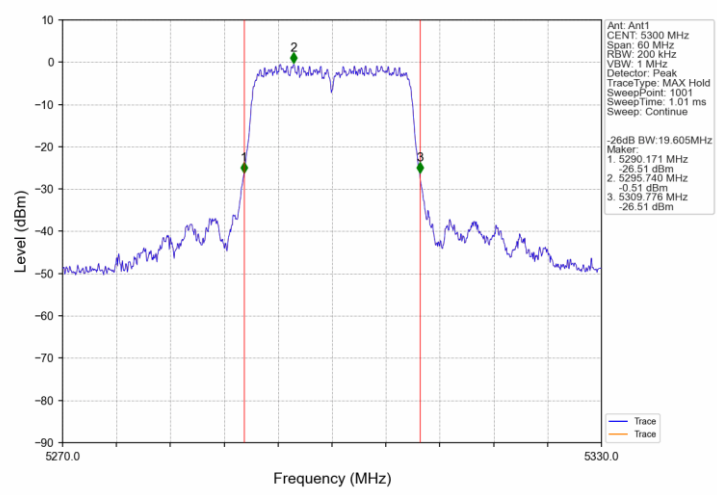
802.11n(HT20)\_HCH\_5240MHz\_Ant1\_NTNV



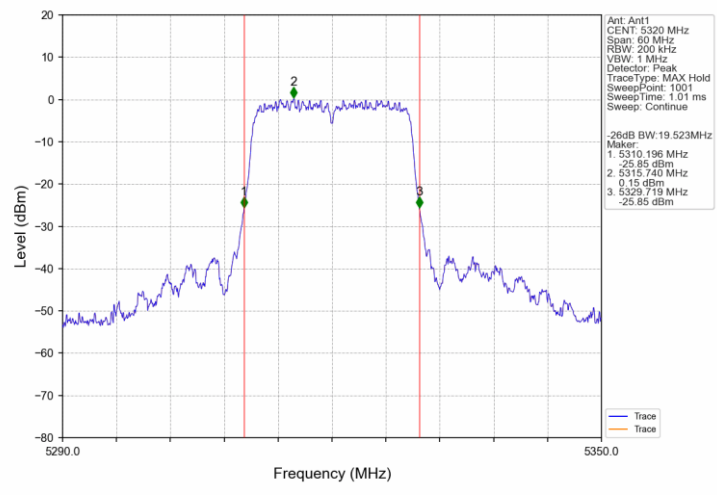
802.11n(HT20)\_LCH\_5260MHz\_Ant1\_NTNV



802.11n(HT20)\_MCH\_5300MHz\_Ant1\_NTNV

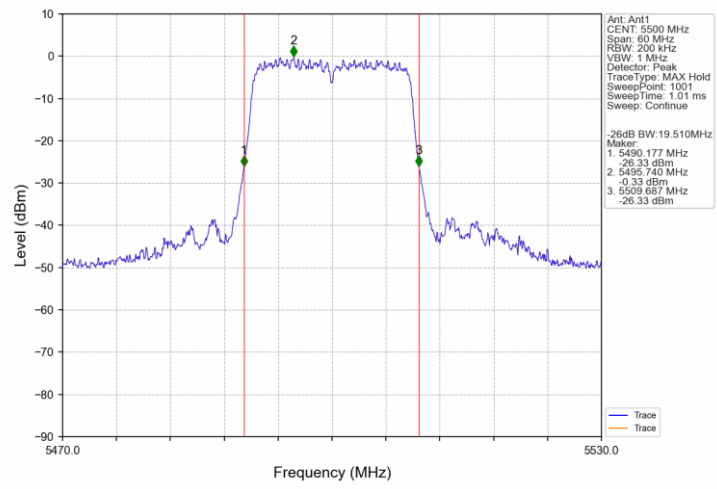


802.11n(HT20)\_HCH\_5320MHz\_Ant1\_NTNV

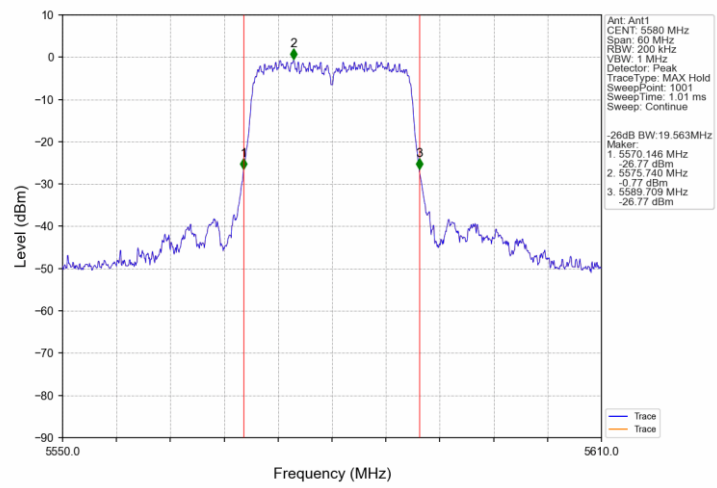




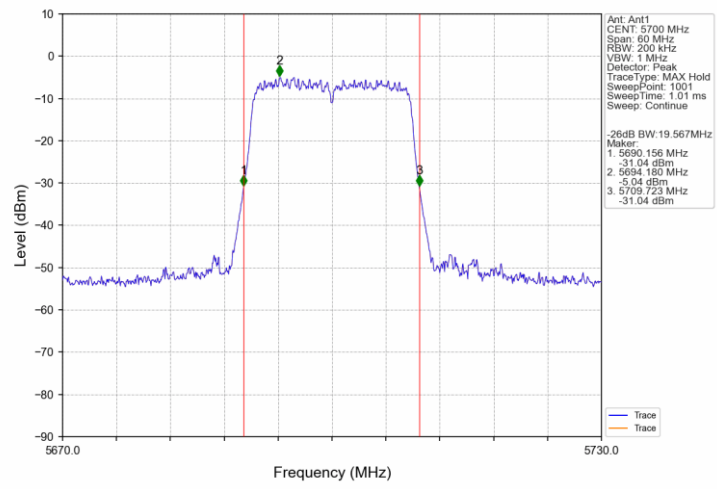
802.11n(HT20)\_LCH\_5500MHz\_Ant1\_NTNV



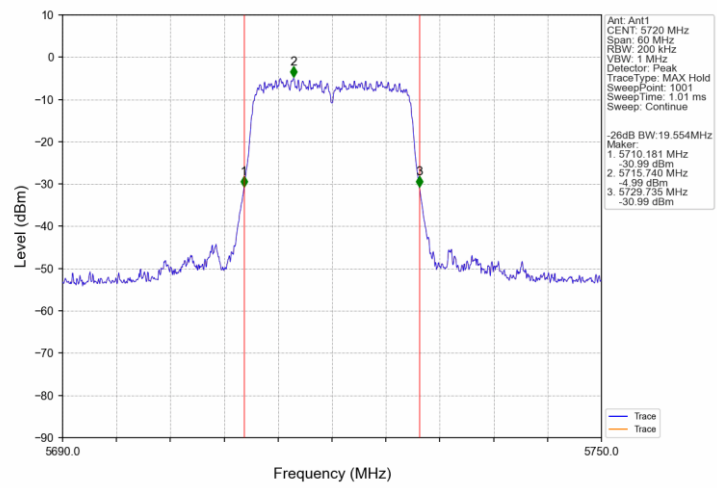
802.11n(HT20)\_MCH\_5580MHz\_Ant1\_NTNV



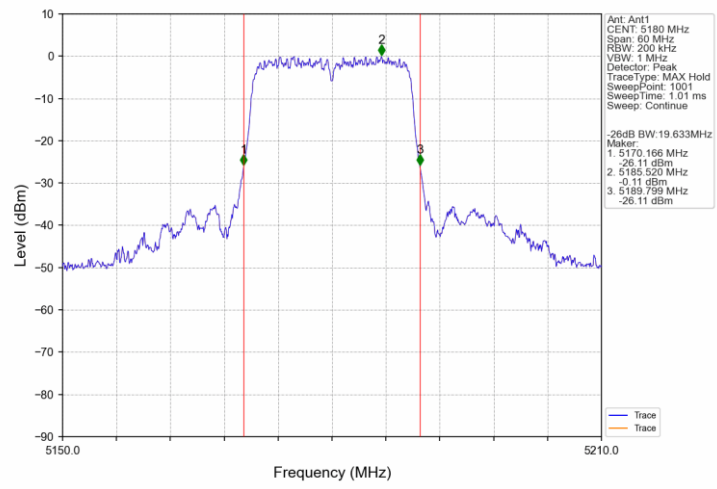
802.11n(HT20)\_HCH\_5700MHz\_Ant1\_NTNV



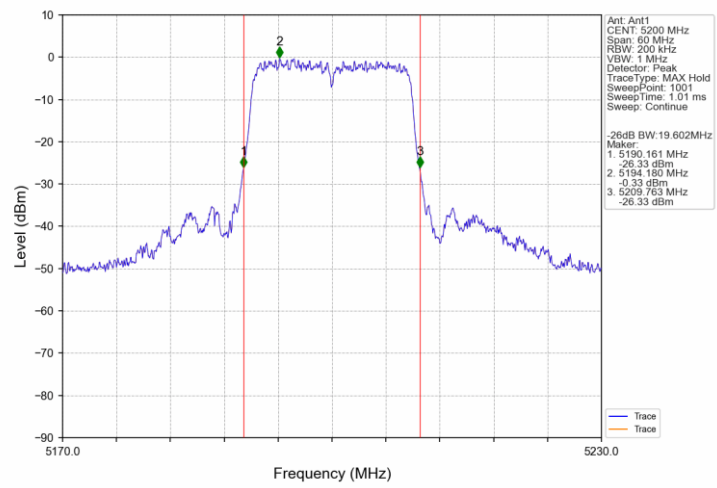
802.11n(HT20)\_HCH\_5720MHz\_Ant1\_NTNV



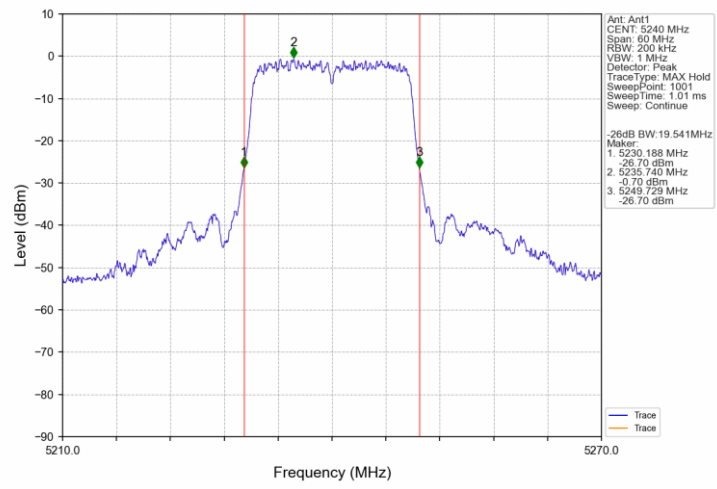
802.11ac(VHT20)\_LCH\_5180MHz\_Ant1\_NTNV



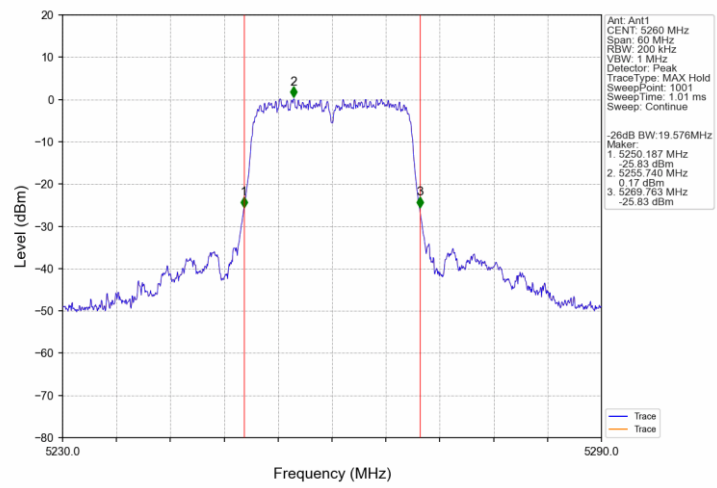
802.11ac(VHT20)\_MCH\_5200MHz\_Ant1\_NTNV



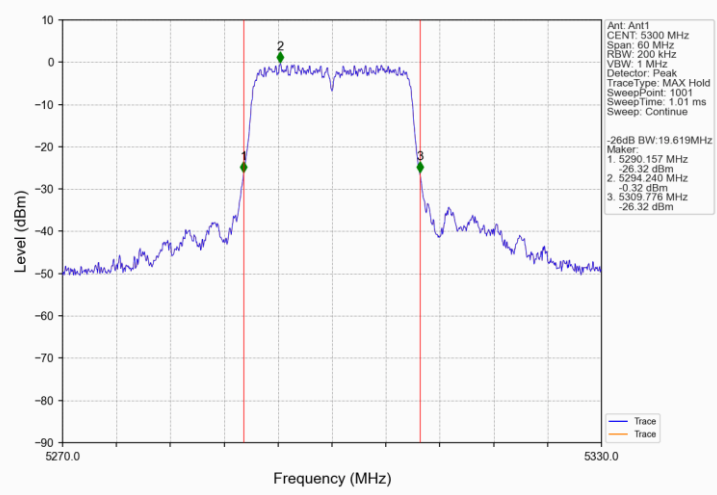
802.11ac(VHT20)\_HCH\_5240MHz\_Ant1\_NTNV



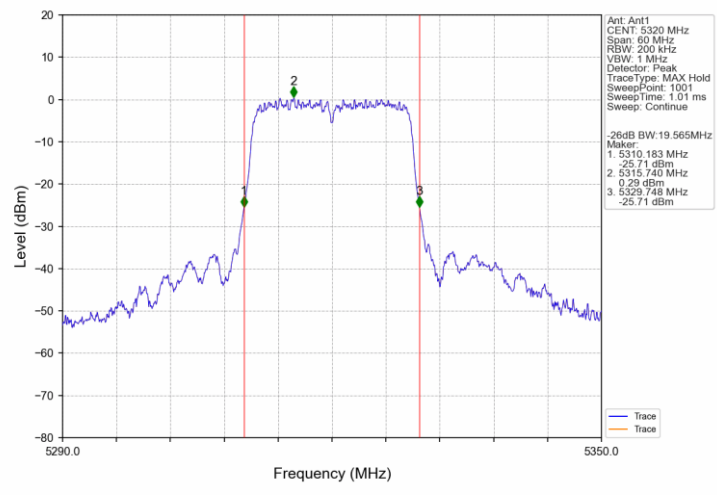
802.11ac(VHT20)\_LCH\_5260MHz\_Ant1\_NTNV



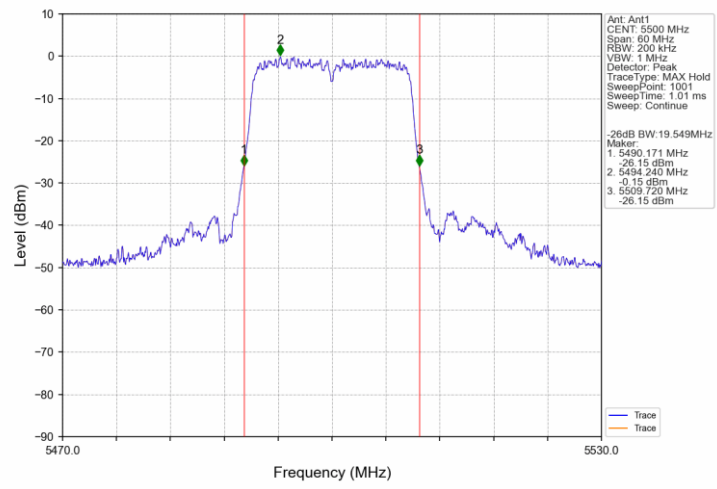
802.11ac(VHT20)\_MCH\_5300MHz\_Ant1\_NTNV



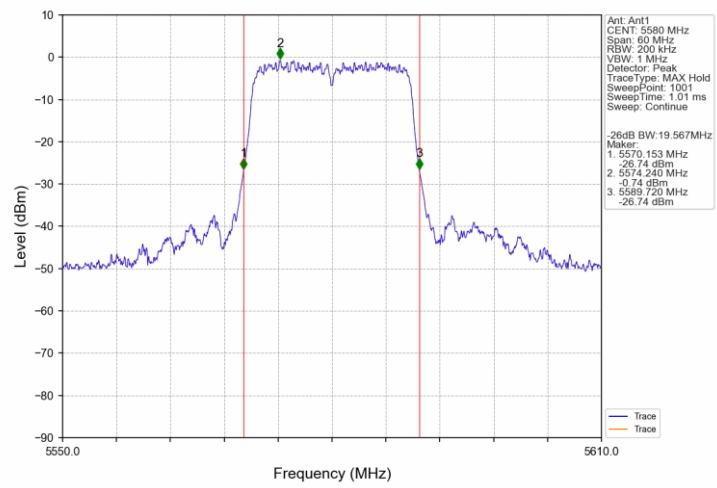
802.11ac(VHT20)\_HCH\_5320MHz\_Ant1\_NTNV



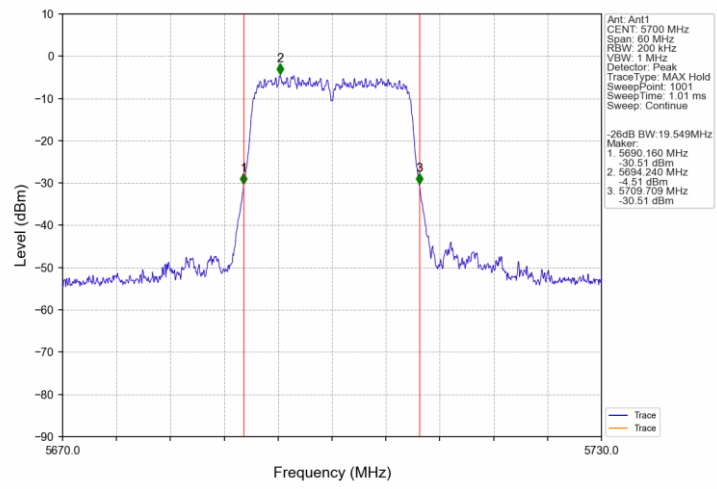
802.11ac(VHT20)\_LCH\_5500MHz\_Ant1\_NTNV



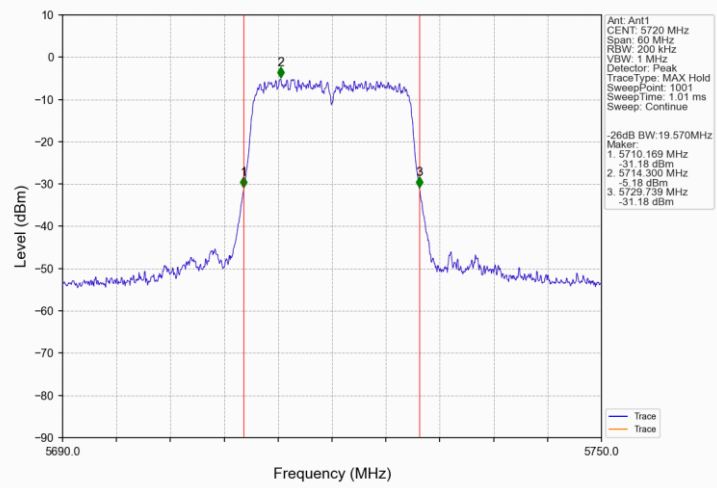
802.11ac(VHT20)\_MCH\_5580MHz\_Ant1\_NTNV



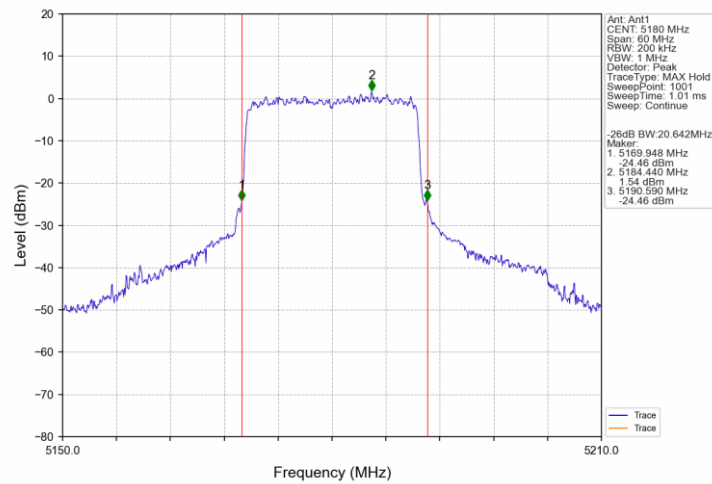
802.11ac(VHT20)\_HCH\_5700MHz\_Ant1\_NTNV



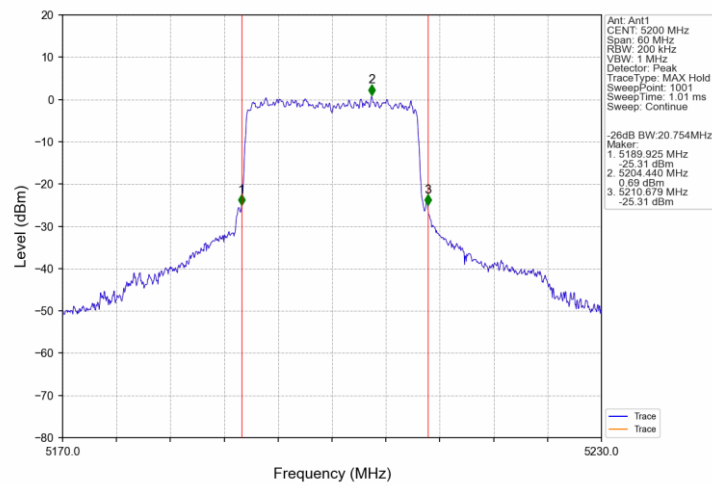
802.11ac(VHT20)\_HCH\_5720MHz\_Ant1\_NTNV



802.11ax(HEW20)\_LCH\_5180MHz\_RU242\_Left\_Ant1\_NTNV

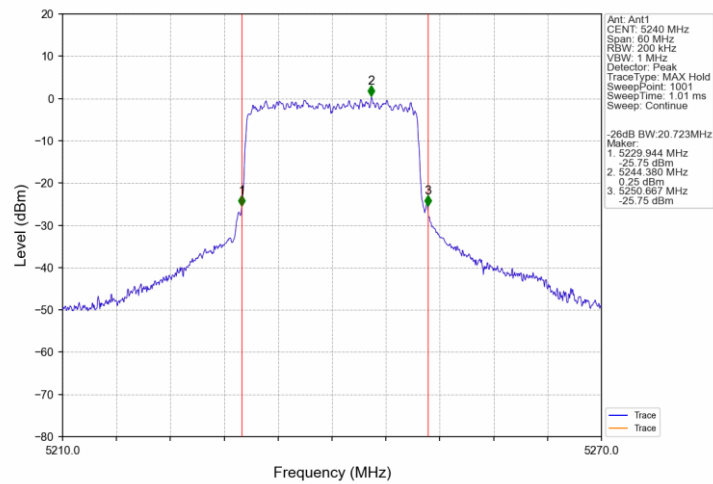


802.11ax(HEW20)\_MCH\_5200MHz\_RU242\_Left\_Ant1\_NTNV

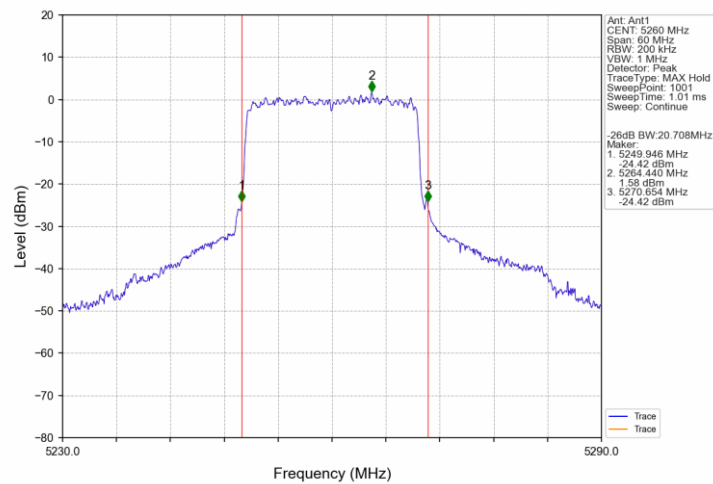




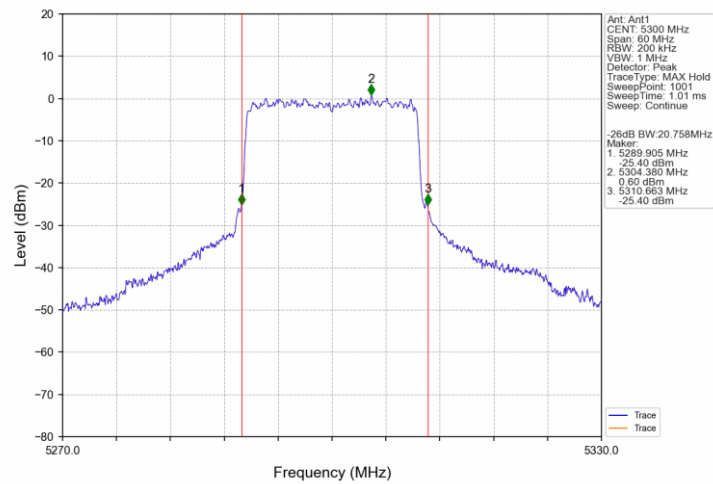
802.11ax(HEW20)\_HCH\_5240MHz\_RU242\_Left\_Ant1\_NTNV



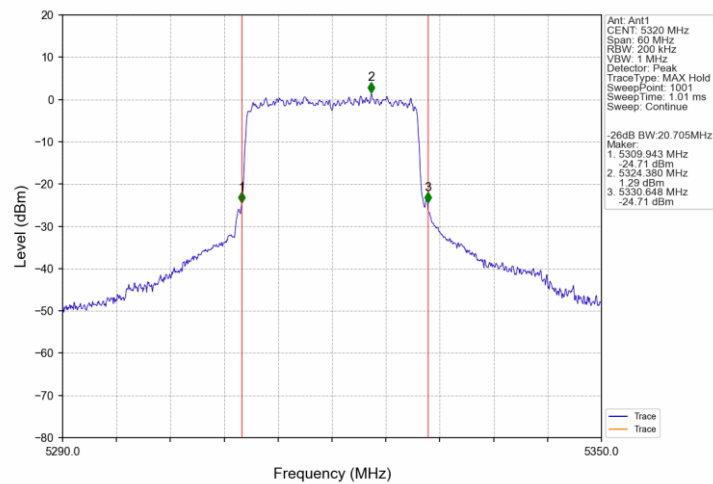
802.11ax(HEW20)\_LCH\_5260MHz\_RU242\_Left\_Ant1\_NTNV



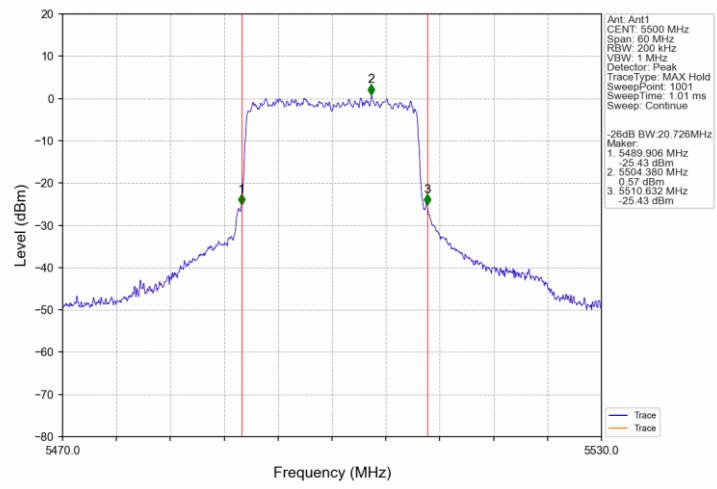
802.11ax(HEW20)\_MCH\_5300MHz\_RU242\_Left\_Ant1\_NTNV



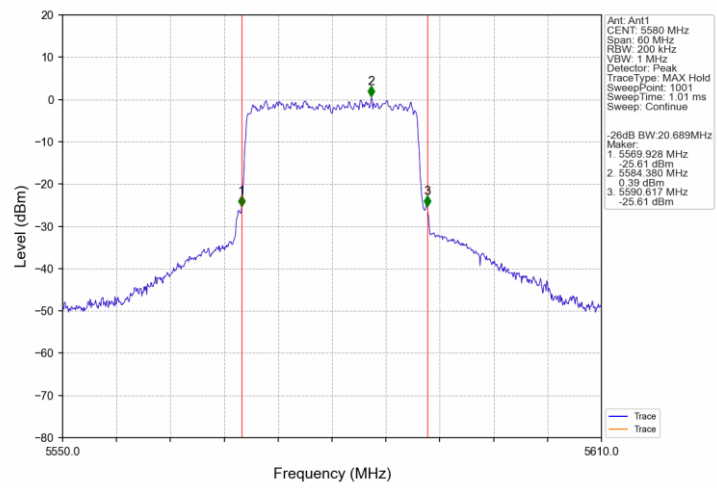
802.11ax(HEW20)\_HCH\_5320MHz\_RU242\_Left\_Ant1\_NTNV



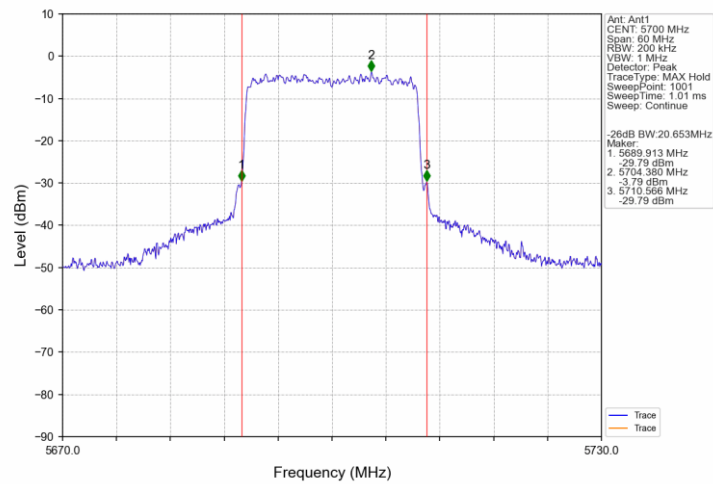
802.11ax(HEW20)\_LCH\_5500MHz\_RU242\_Left\_Ant1\_NTNV



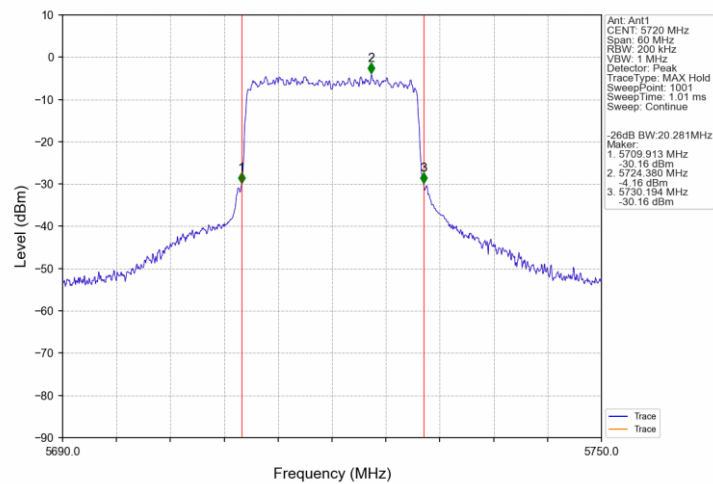
802.11ax(HEW20)\_MCH\_5580MHz\_RU242\_Left\_Ant1\_NTNV



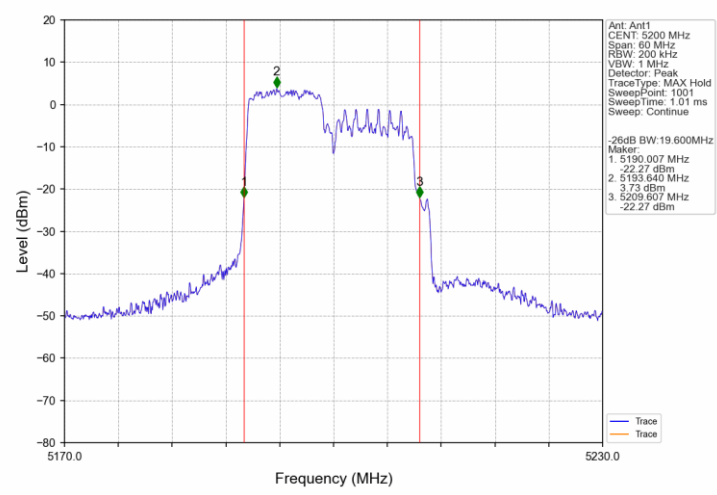
802.11ax(HEW20)\_HCH\_5700MHz\_RU242\_Left\_Ant1\_NTNV



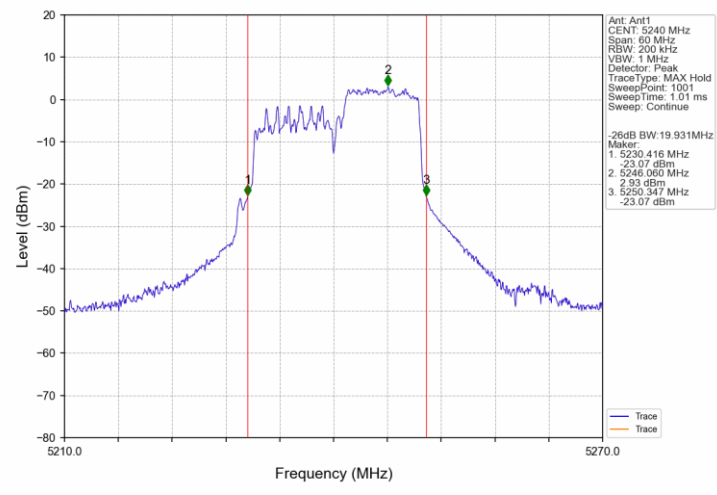
802.11ax(HEW20)\_HCH\_5720MHz\_RU242\_Left\_Ant1\_NTNV



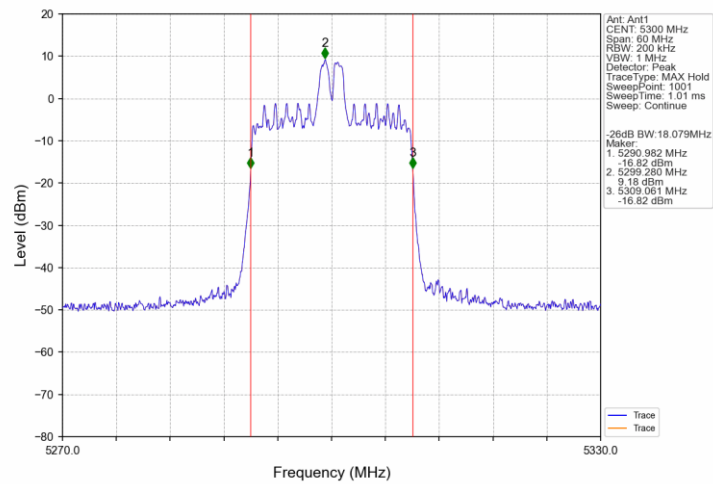
802.11ax(HEW20)\_MCH\_5200MHz\_RU106\_Left\_Ant1\_NTNV



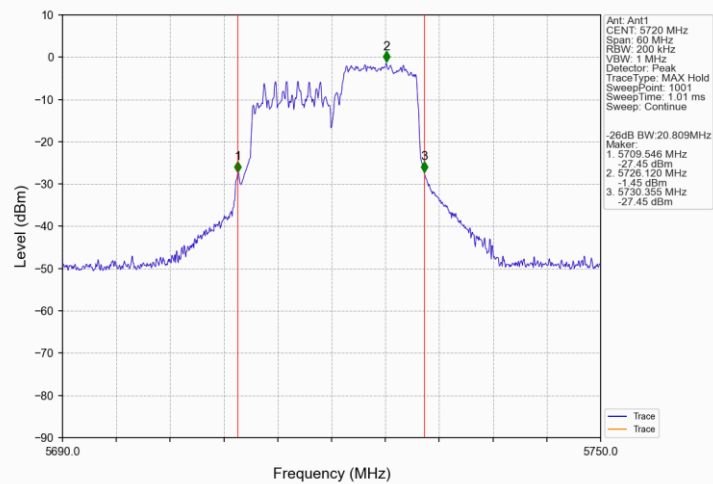
802.11ax(HEW20)\_HCH\_5240MHz\_RU106\_Left\_Ant1\_NTNV



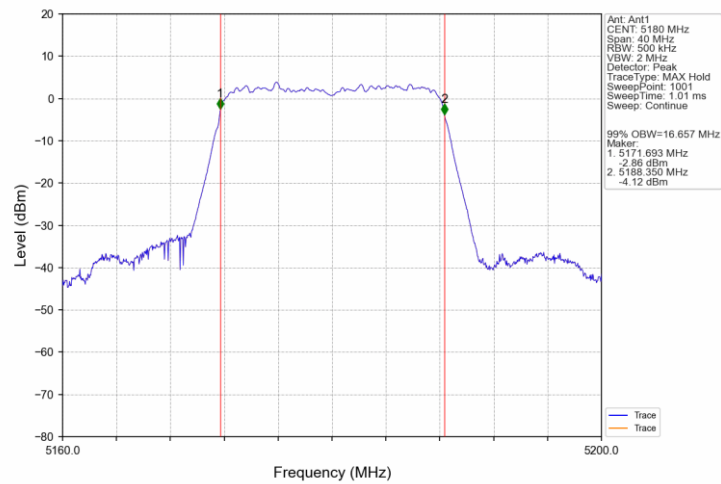
802.11ax(HEW20)\_MCH\_5300MHz\_RU26\_Left\_Ant1\_NTNV



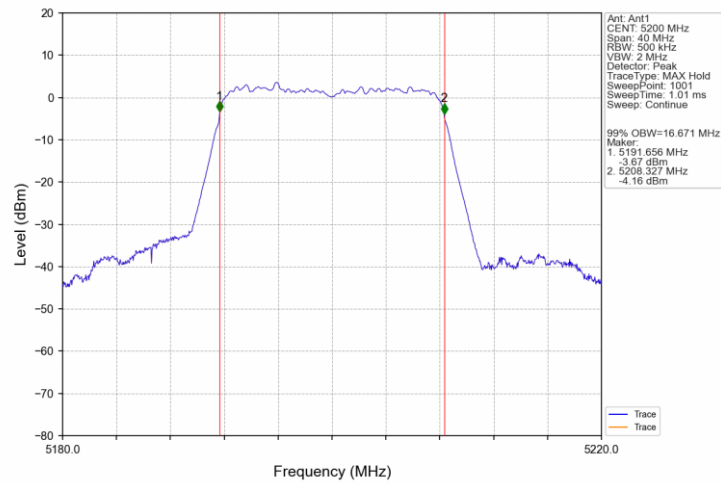
802.11ax(HEW20)\_HCH\_5720MHz\_RU106\_Left\_Ant1\_NTNV



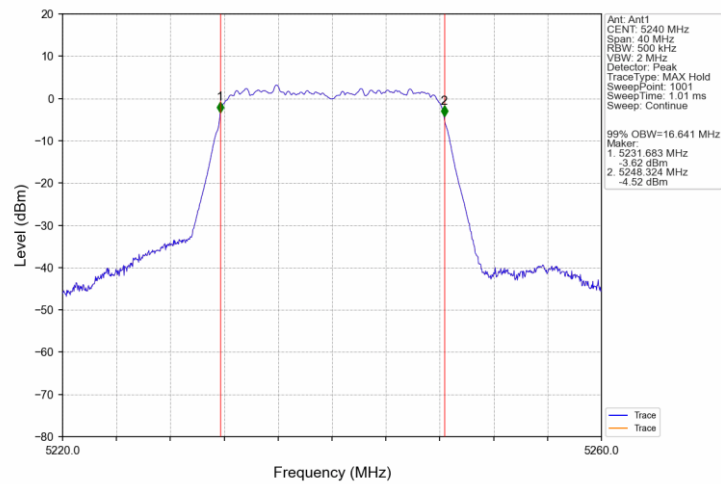
802.11a\_LCH\_5180MHz\_Ant2\_NTNV



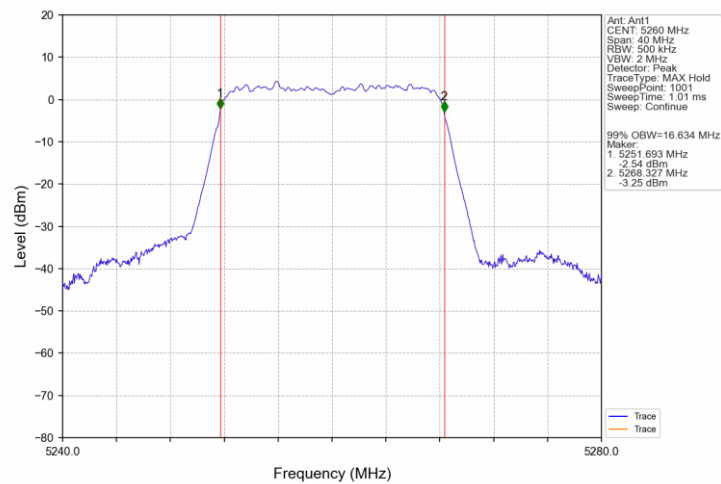
802.11a\_MCH\_5200MHz\_Ant2\_NTNV



802.11a\_HCH\_5240MHz\_Ant2\_NTNV

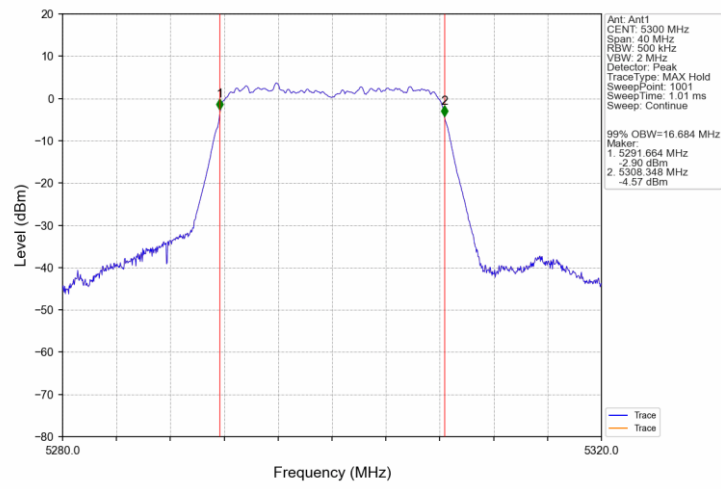


802.11a\_LCH\_5260MHz\_Ant2\_NTNV

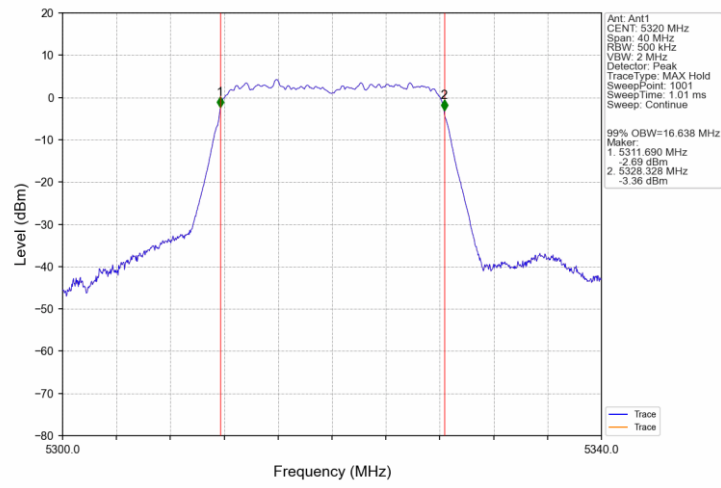




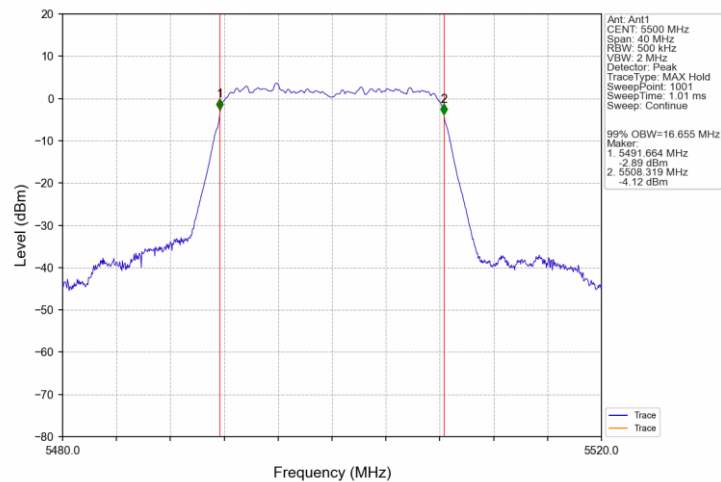
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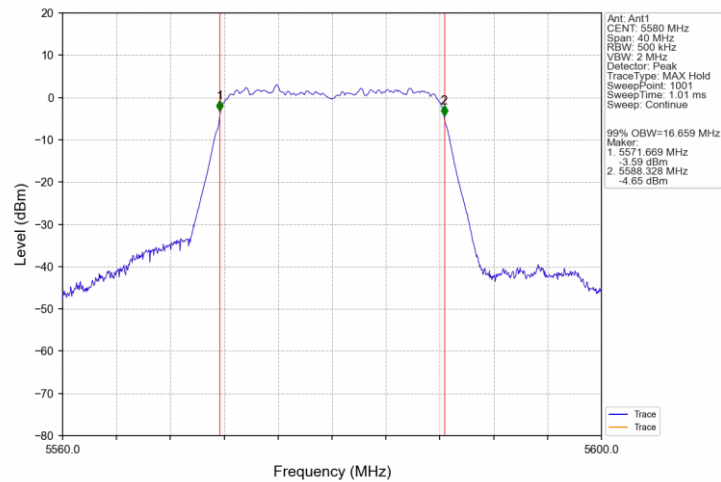
802.11a\_HCH\_5320MHz\_Ant2\_NTNV



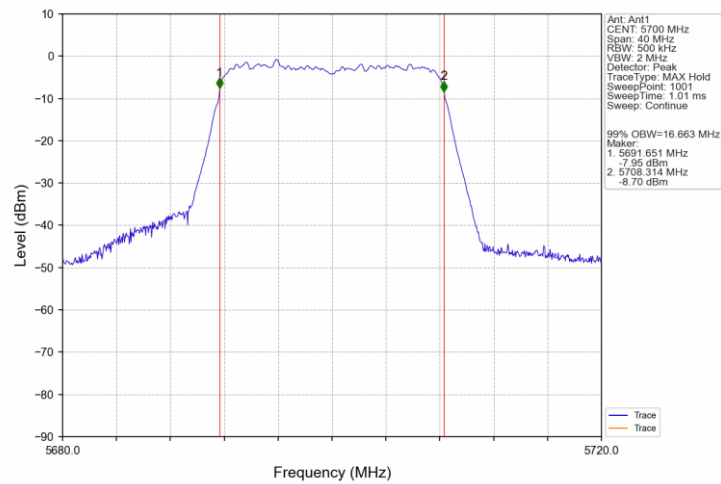
802.11a\_LCH\_5500MHz\_Ant2\_NTNV



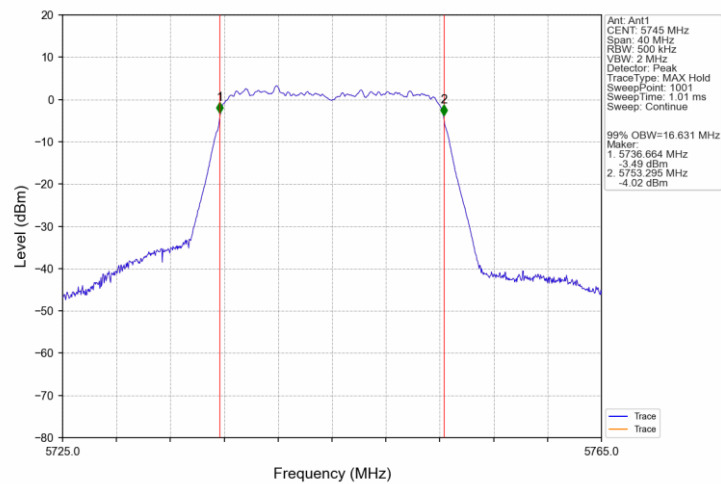
802.11a\_MCH\_5580MHz\_Ant2\_NTNV



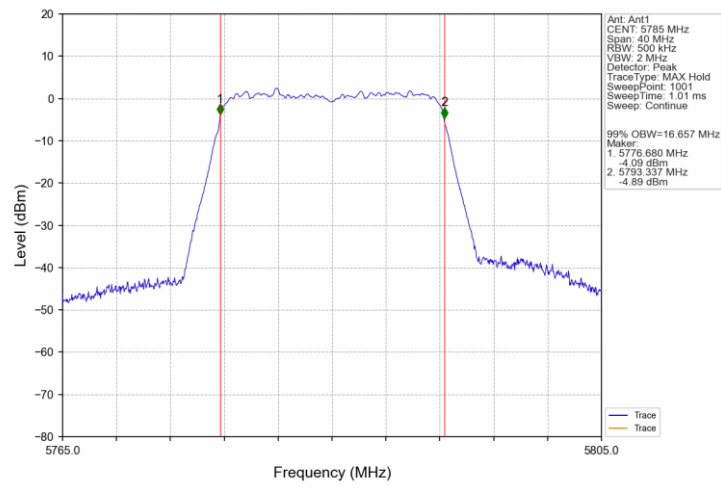
802.11a\_HCH\_5700MHz\_Ant2\_NTNV



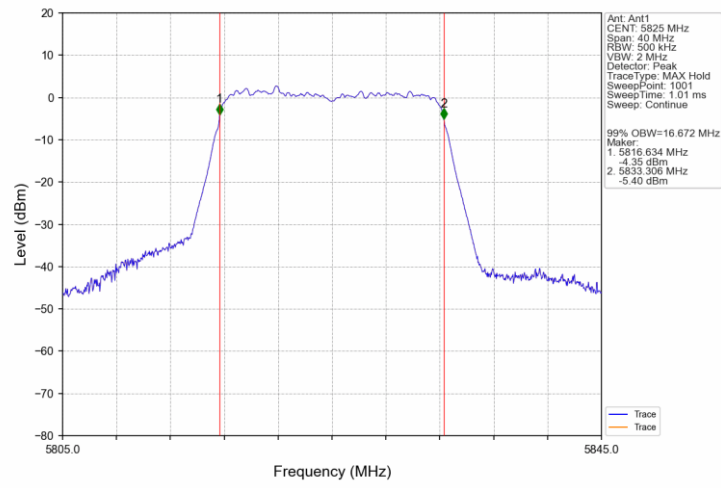
802.11a\_LCH\_5745MHz\_Ant2\_NTNV



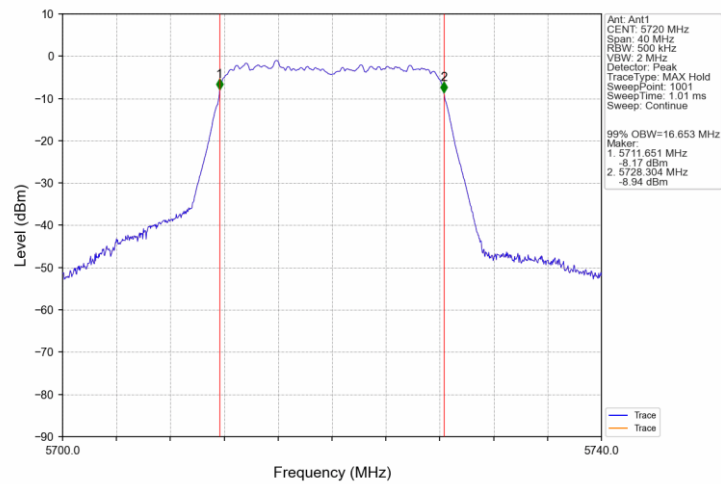
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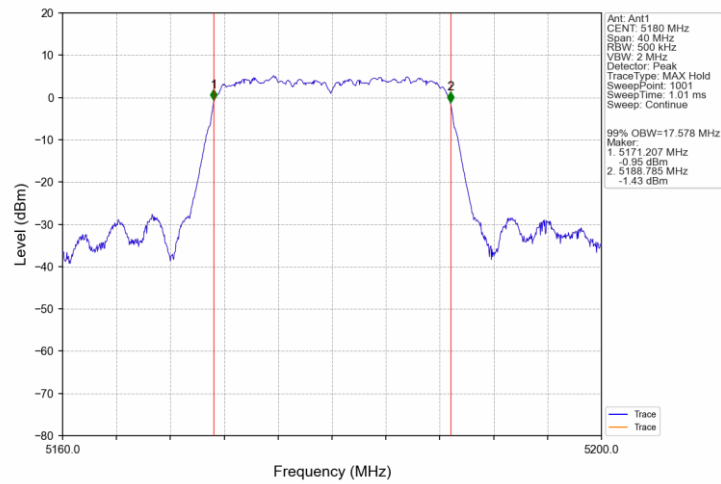
802.11a\_HCH\_5825MHz\_Ant2\_NTNV



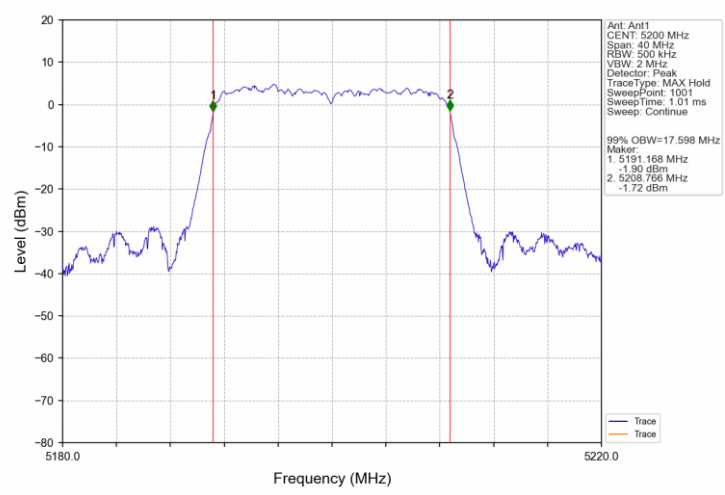
802.11a\_HCH\_5720MHz\_Ant2\_NTNV



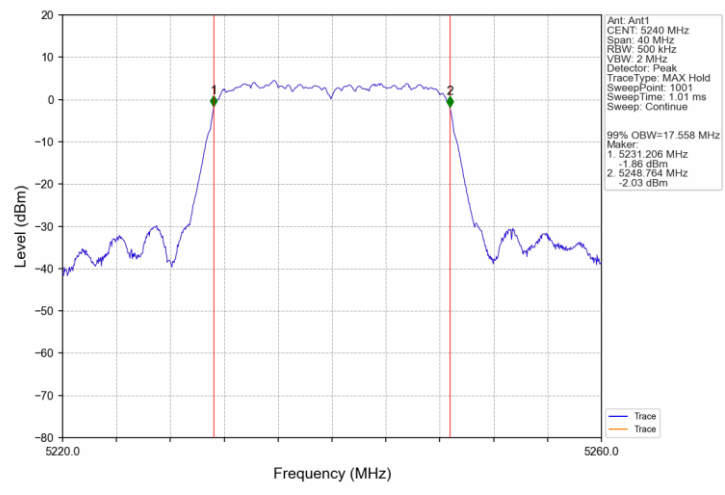
802.11n(HT20)\_LCH\_5180MHz\_Ant2\_NTNV



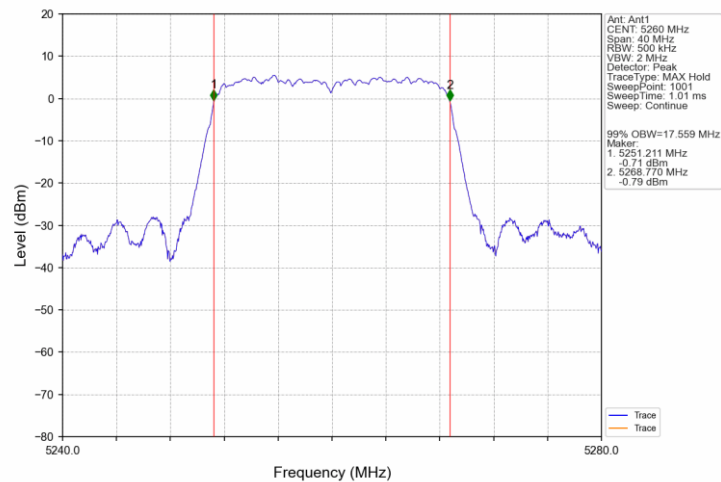
802.11n(HT20)\_MCH\_5200MHz\_Ant2\_NTNV



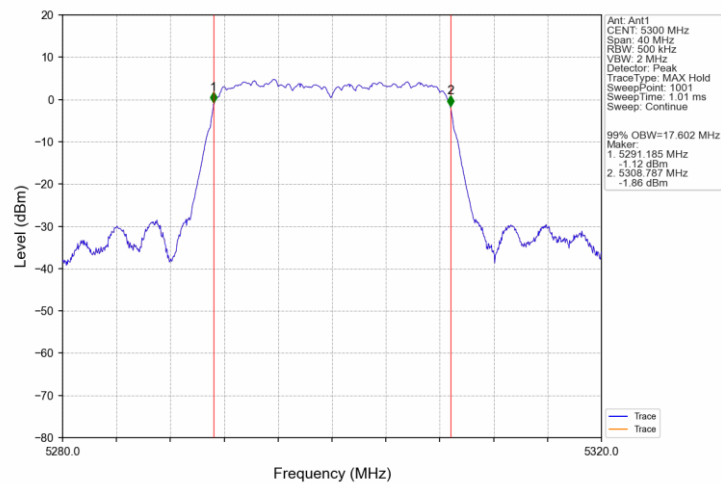
802.11n(HT20)\_HCH\_5240MHz\_Ant2\_NTNV



802.11n(HT20)\_LCH\_5260MHz\_Ant2\_NTNV

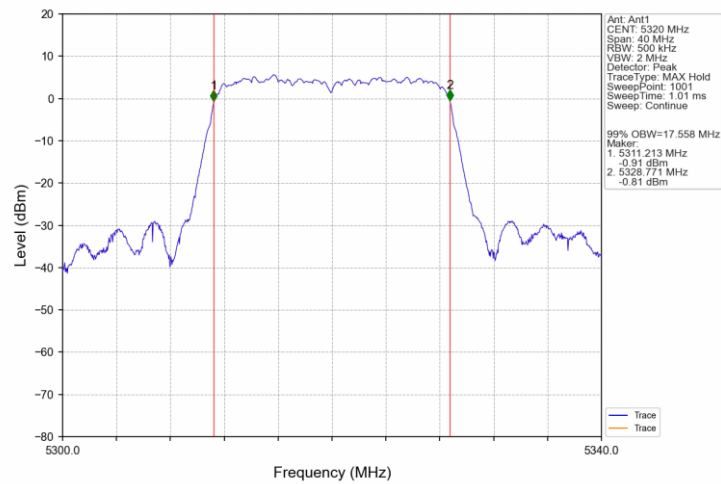


802.11n(HT20)\_MCH\_5300MHz\_Ant2\_NTNV

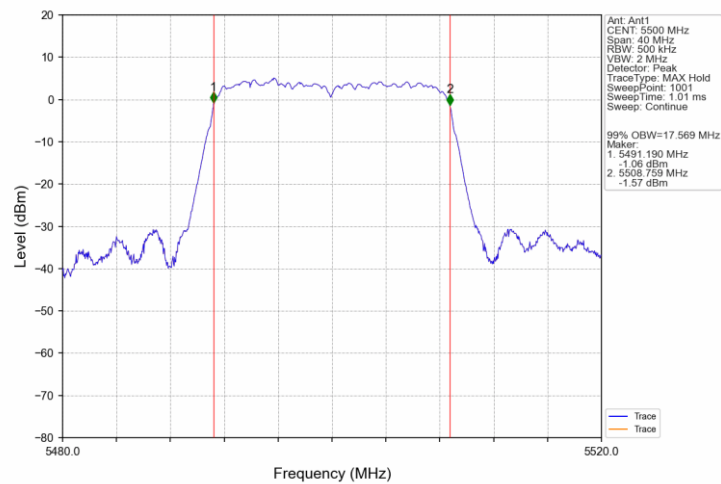




802.11n(HT20)\_HCH\_5320MHz\_Ant2\_NTNV

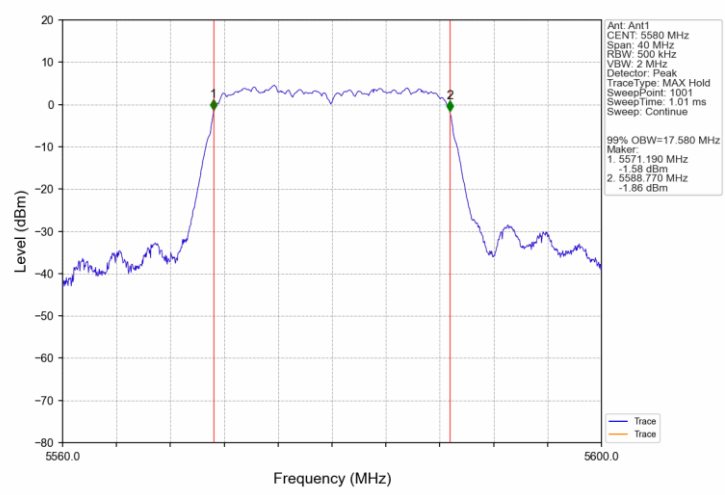


802.11n(HT20)\_LCH\_5500MHz\_Ant2\_NTNV

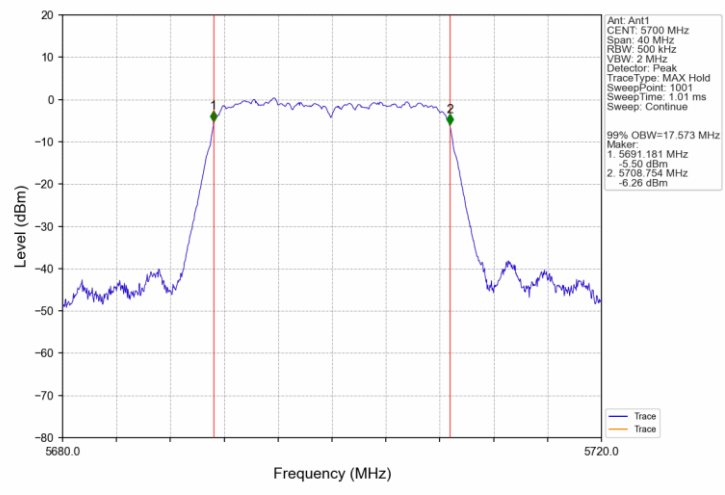




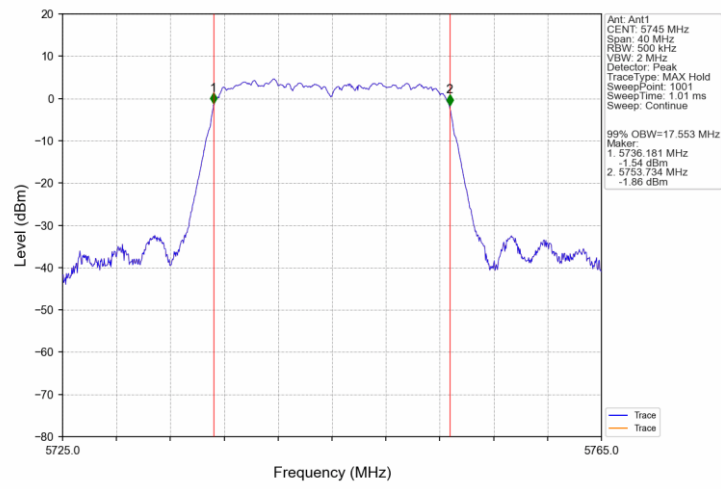
802.11n(HT20)\_MCH\_5580MHz\_Ant2\_NTNV



802.11n(HT20)\_HCH\_5700MHz\_Ant2\_NTNV



802.11n(HT20)\_LCH\_5745MHz\_Ant2\_NTNV



802.11n(HT20)\_MCH\_5785MHz\_Ant2\_NTNV

