

## **Appendix RF test data for WIFI5G**

# 5.2/5.3/5.6G WIFI

## 1. Duty Cycle Worst case

### 1.1 Test Result

#### 1.1.1 Ant1

| Ant1             |         |                 |           |             |                |                                   |                       |
|------------------|---------|-----------------|-----------|-------------|----------------|-----------------------------------|-----------------------|
| Mode             | Tx Type | Frequency (MHz) | T_on (ms) | Period (ms) | Duty Cycle (%) | Duty Cycle Correction Factor (dB) | Max. DC Variation (%) |
| 802.11a          | SISO    | 5180            | 1.362     | 1.863       | 73.11          | 1.36                              | 0.02                  |
|                  |         | 5200            | 1.362     | 1.863       | 73.11          | 1.36                              | 0.02                  |
|                  |         | 5240            | 1.362     | 1.863       | 73.11          | 1.36                              | 0.03                  |
|                  |         | 5260            | 1.362     | 1.863       | 73.11          | 1.36                              | 0.03                  |
|                  |         | 5300            | 1.362     | 1.863       | 73.11          | 1.36                              | 0.03                  |
|                  |         | 5320            | 1.361     | 1.862       | 73.09          | 1.36                              | 0.03                  |
|                  |         | 5500            | 1.361     | 1.862       | 73.09          | 1.36                              | 0.03                  |
|                  |         | 5580            | 1.362     | 1.863       | 73.11          | 1.36                              | 0.03                  |
|                  |         | 5700            | 1.362     | 1.863       | 73.11          | 1.36                              | 0.03                  |
| 802.11n (HT20)   | MIMO    | 5180            | 1.273     | 1.774       | 71.76          | 1.44                              | 0.03                  |
|                  |         | 5200            | 1.274     | 1.775       | 71.77          | 1.44                              | 0.02                  |
|                  |         | 5240            | 1.274     | 1.775       | 71.77          | 1.44                              | 0.02                  |
|                  |         | 5260            | 1.273     | 1.774       | 71.76          | 1.44                              | 0.03                  |
|                  |         | 5300            | 1.274     | 1.775       | 71.77          | 1.44                              | 0.02                  |
|                  |         | 5320            | 1.274     | 1.775       | 71.77          | 1.44                              | 0.02                  |
|                  |         | 5500            | 1.273     | 1.774       | 71.76          | 1.44                              | 0.03                  |
|                  |         | 5580            | 1.274     | 1.775       | 71.77          | 1.44                              | 0.02                  |
|                  |         | 5700            | 1.273     | 1.774       | 71.76          | 1.44                              | 0.03                  |
| 802.11n (HT40)   | MIMO    | 5190            | 0.633     | 1.134       | 55.82          | 2.53                              | 0.03                  |
|                  |         | 5230            | 0.634     | 1.135       | 55.86          | 2.53                              | 0.01                  |
|                  |         | 5270            | 0.633     | 1.134       | 55.82          | 2.53                              | 0.05                  |
|                  |         | 5310            | 0.634     | 1.134       | 55.91          | 2.53                              | 0.01                  |
|                  |         | 5510            | 0.633     | 1.135       | 55.77          | 2.54                              | 0.03                  |
|                  |         | 5550            | 0.634     | 1.134       | 55.91          | 2.53                              | 0.03                  |
|                  |         | 5670            | 0.633     | 1.134       | 55.82          | 2.53                              | 0.03                  |
| 802.11ac (VHT20) | MIMO    | 5180            | 1.277     | 1.778       | 71.82          | 1.44                              | 0.03                  |
|                  |         | 5200            | 1.277     | 1.778       | 71.82          | 1.44                              | 0.03                  |
|                  |         | 5240            | 1.278     | 1.779       | 71.84          | 1.44                              | 0.03                  |
|                  |         | 5260            | 1.278     | 1.779       | 71.84          | 1.44                              | 0.03                  |
|                  |         | 5300            | 1.277     | 1.778       | 71.82          | 1.44                              | 0.03                  |
|                  |         | 5320            | 1.277     | 1.778       | 71.82          | 1.44                              | 0.03                  |
|                  |         | 5500            | 1.277     | 1.778       | 71.82          | 1.44                              | 0.03                  |
|                  |         | 5580            | 1.277     | 1.778       | 71.82          | 1.44                              | 0.03                  |
|                  |         | 5700            | 1.273     | 1.774       | 71.76          | 1.44                              | 0.03                  |
| 802.11ac (VHT40) | MIMO    | 5190            | 0.634     | 1.134       | 55.91          | 2.53                              | 0.01                  |
|                  |         | 5230            | 0.634     | 1.134       | 55.91          | 2.53                              | 0.03                  |
|                  |         | 5270            | 0.633     | 1.134       | 55.82          | 2.53                              | 0.03                  |
|                  |         | 5310            | 0.638     | 1.139       | 56.01          | 2.52                              | 0.05                  |
|                  |         | 5510            | 0.638     | 1.139       | 56.01          | 2.52                              | 0.03                  |
|                  |         | 5550            | 0.638     | 1.138       | 56.06          | 2.51                              | 0.01                  |
|                  |         | 5670            | 0.638     | 1.139       | 56.01          | 2.52                              | 0.02                  |
| 802.11ac (VHT80) | MIMO    | 5210            | 0.318     | 0.818       | 38.88          | 4.10                              | 0.03                  |
|                  |         | 5290            | 0.318     | 0.819       | 38.83          | 4.11                              | 0.03                  |
|                  |         | 5530            | 0.317     | 0.818       | 38.75          | 4.12                              | 0.03                  |

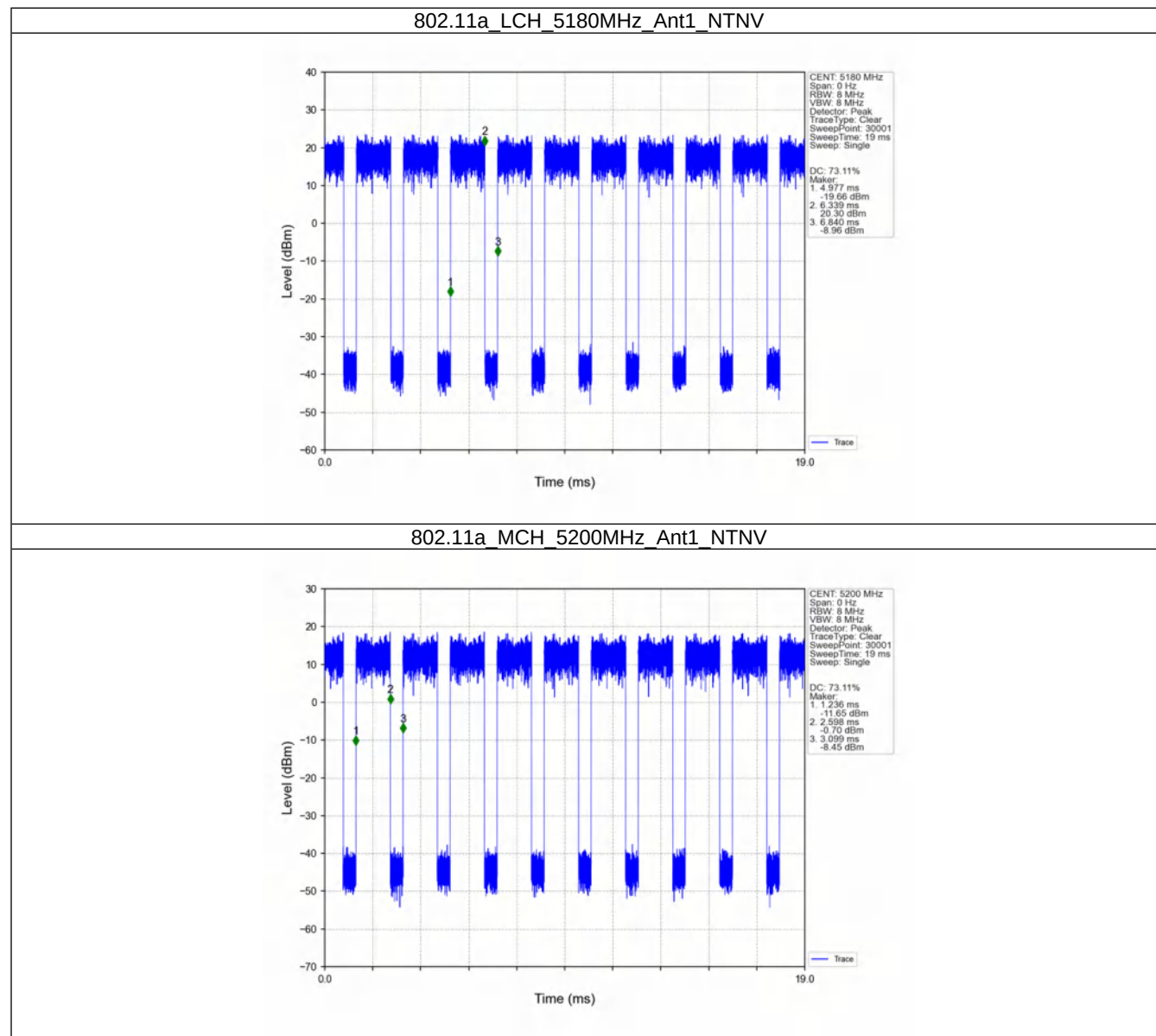


|  |  |      |       |       |       |      |      |
|--|--|------|-------|-------|-------|------|------|
|  |  | 5610 | 0.318 | 0.819 | 38.83 | 4.11 | 0.03 |
|--|--|------|-------|-------|-------|------|------|

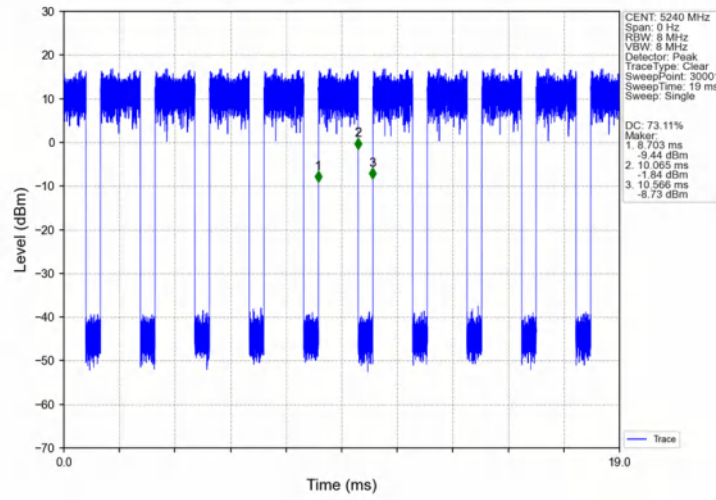
Note : Both antennas have been tested, but only the worst ant1 data is shown

## 1.2 Test Graph

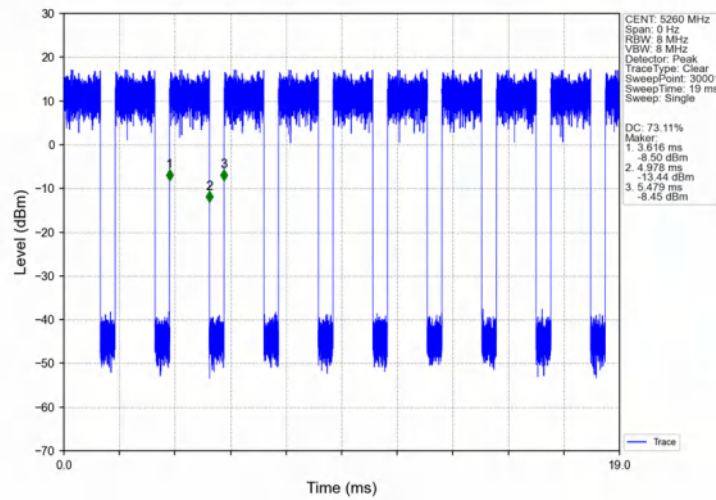
### 1.2.1 Ant1



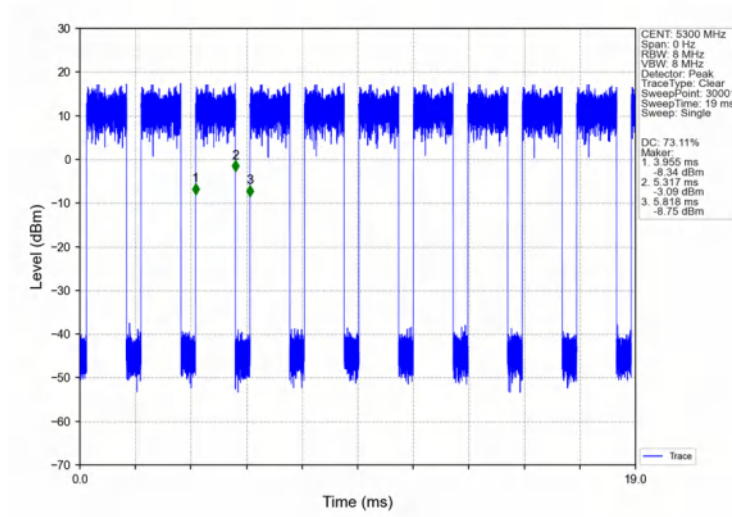
802.11a\_HCH\_5240MHz\_Ant1\_NTNV



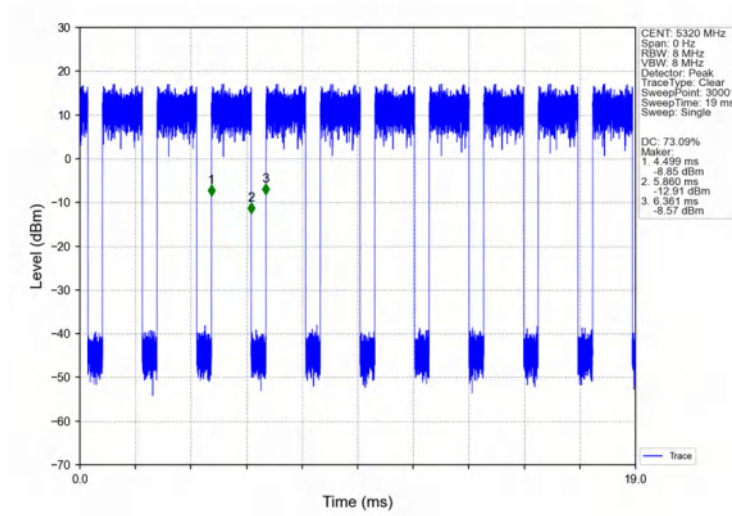
802.11a\_LCH\_5260MHz\_Ant1\_NTNV



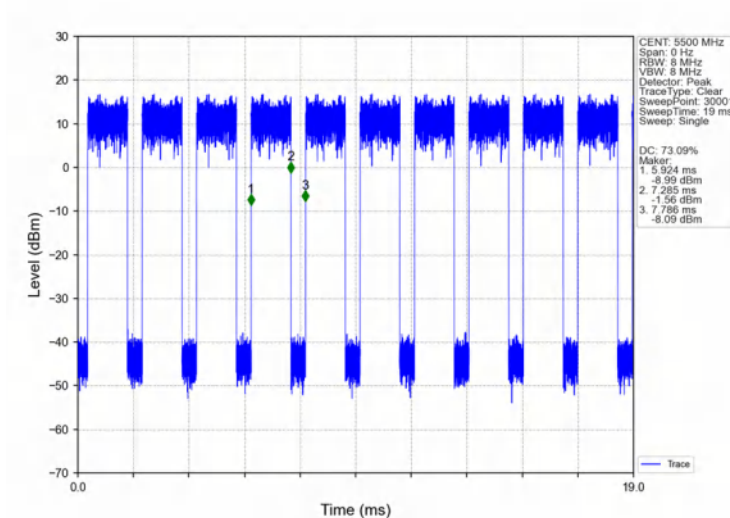
802.11a\_MCH\_5300MHz\_Ant1\_NTNV



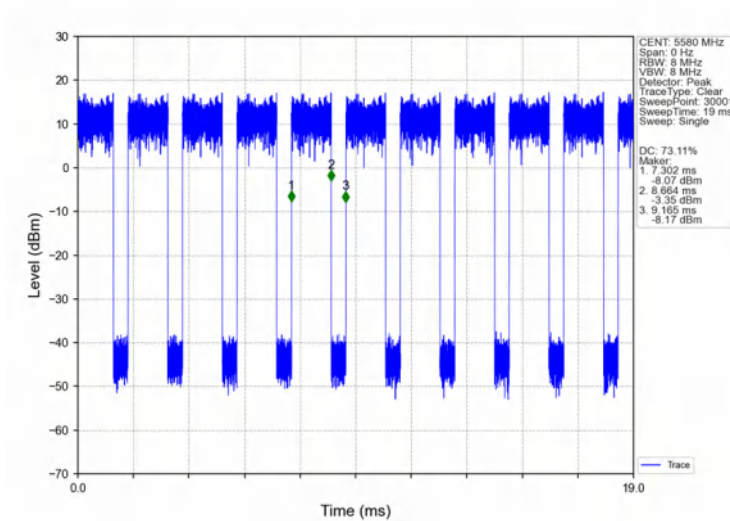
802.11a\_HCH\_5320MHz\_Ant1\_NTNV



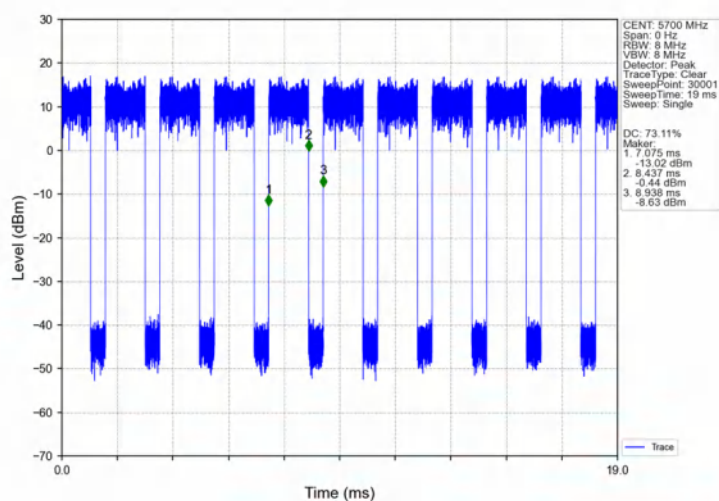
802.11a\_LCH\_5500MHz\_Ant1\_NTNV



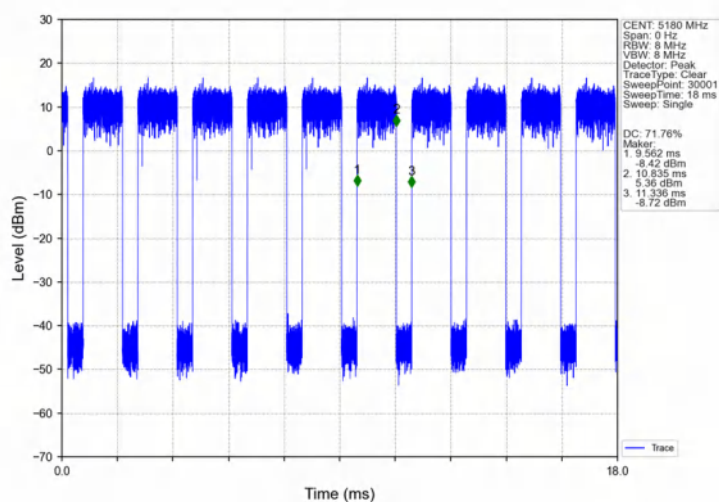
802.11a\_MCH\_5580MHz\_Ant1\_NTNV



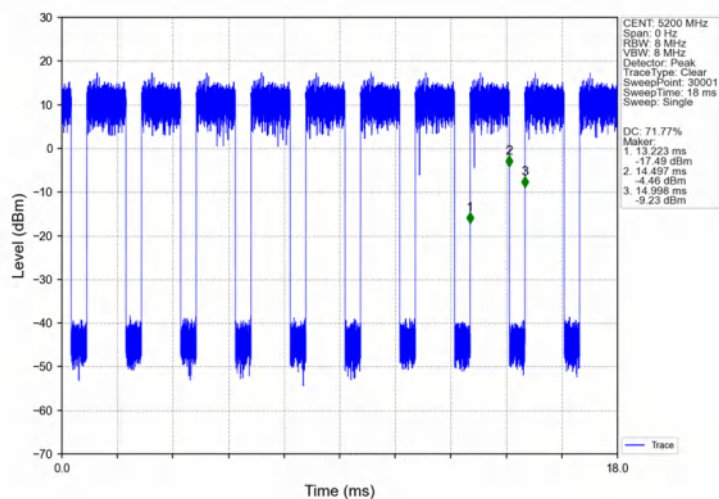
802.11a\_HCH\_5700MHz\_Ant1\_NTNV



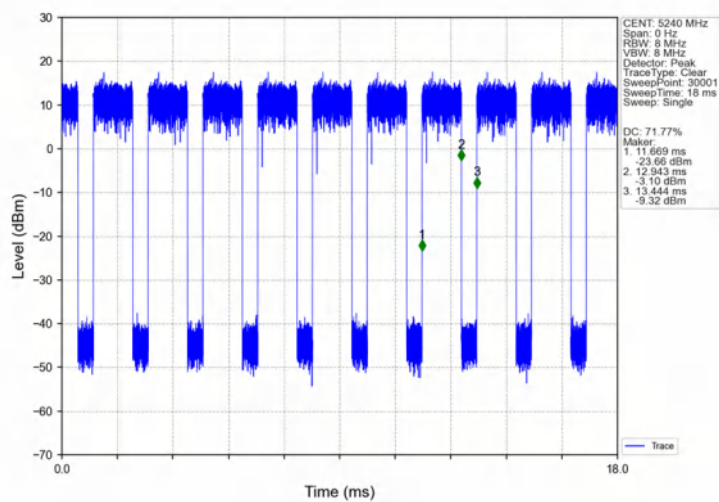
802.11n(HT20)\_LCH\_5180MHz\_Ant1\_NTNV



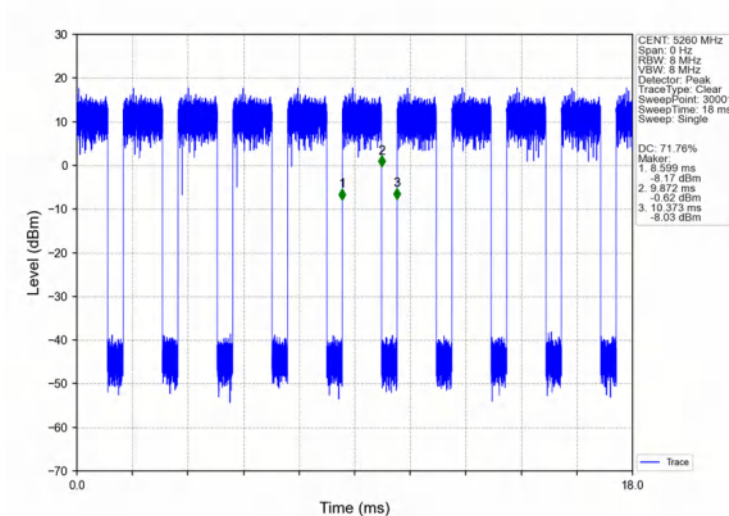
802.11n(HT20)\_MCH\_5200MHz\_Ant1\_NTNV



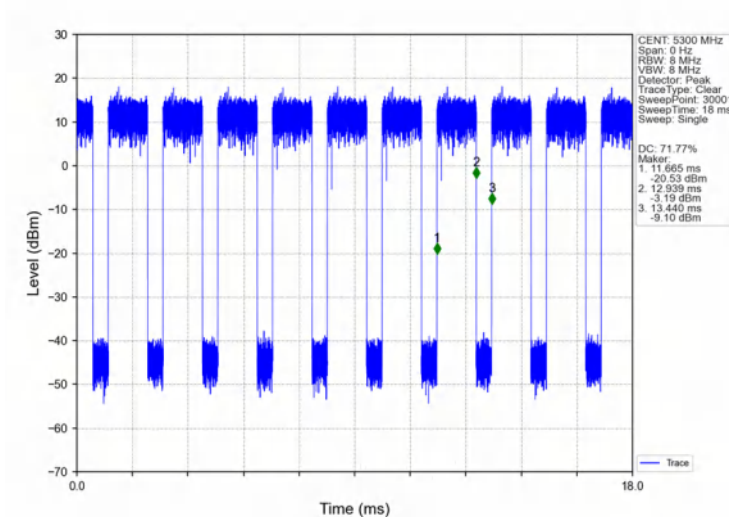
802.11n(HT20)\_HCH\_5240MHz\_Ant1\_NTNV



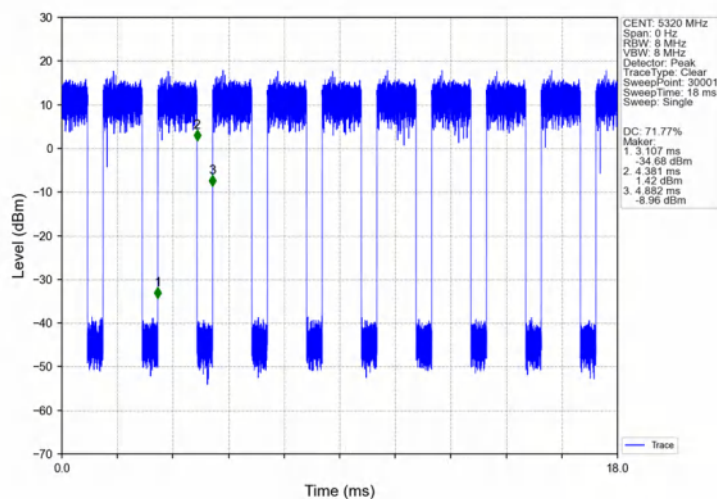
802.11n(HT20)\_LCH\_5260MHz\_Ant1\_NTNV



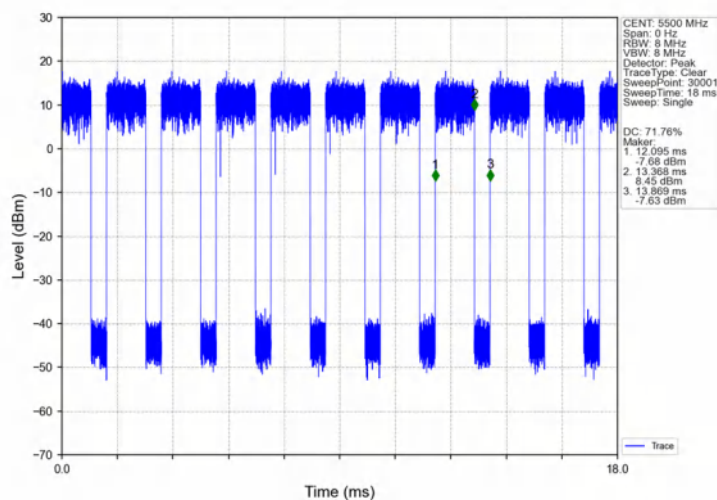
802.11n(HT20)\_MCH\_5300MHz\_Ant1\_NTNV



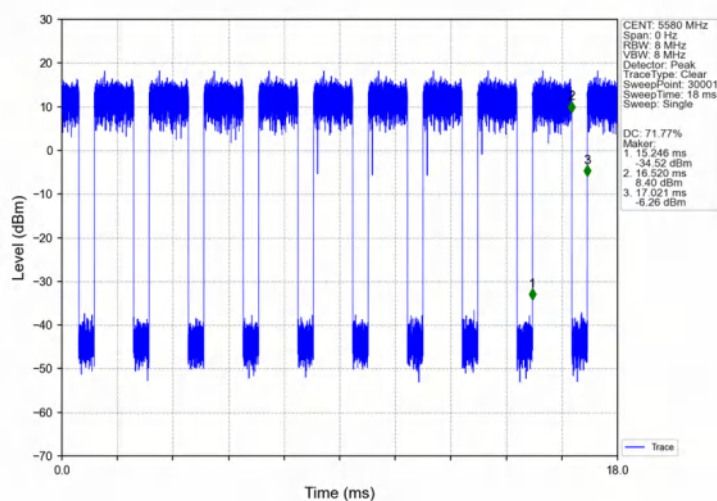
802.11n(HT20)\_HCH\_5320MHz\_Ant1\_NTNV



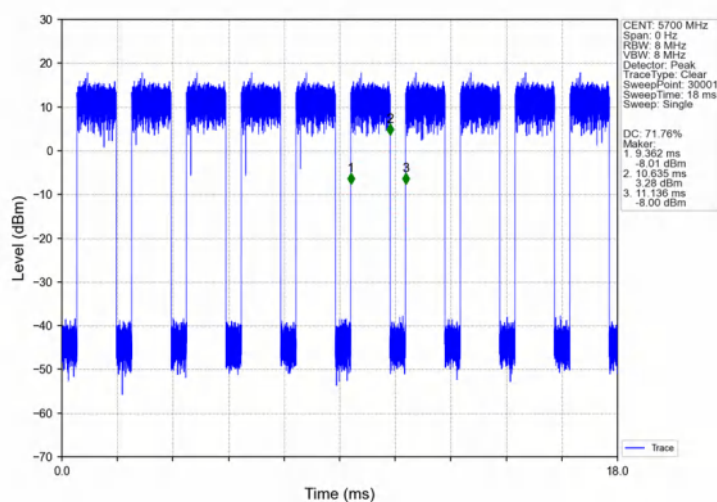
802.11n(HT20)\_LCH\_5500MHz\_Ant1\_NTNV



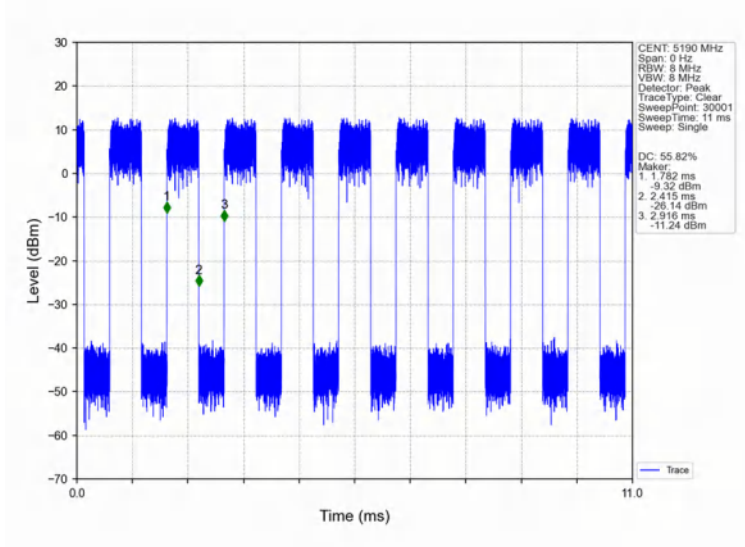
802.11n(HT20)\_MCH\_5580MHz\_Ant1\_NTNV



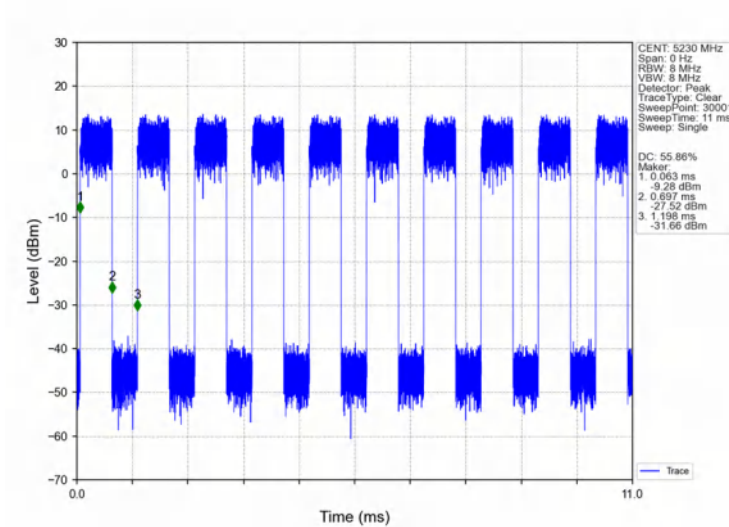
802.11n(HT20)\_HCH\_5700MHz\_Ant1\_NTNV



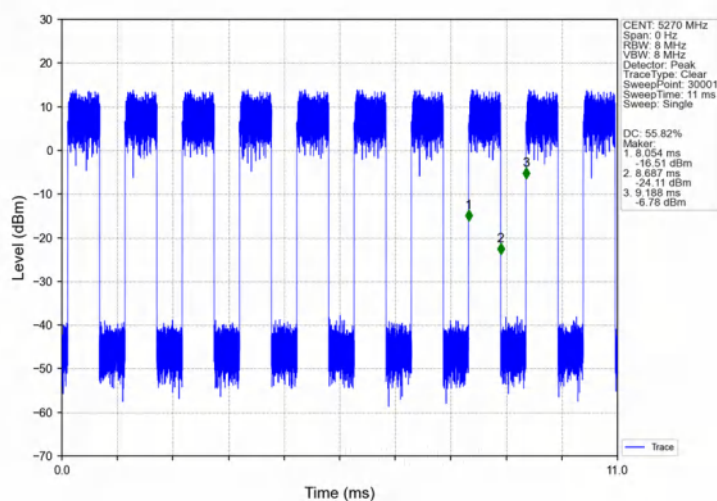
802.11n(HT40)\_LCH\_5190MHz\_Ant1\_NTNV



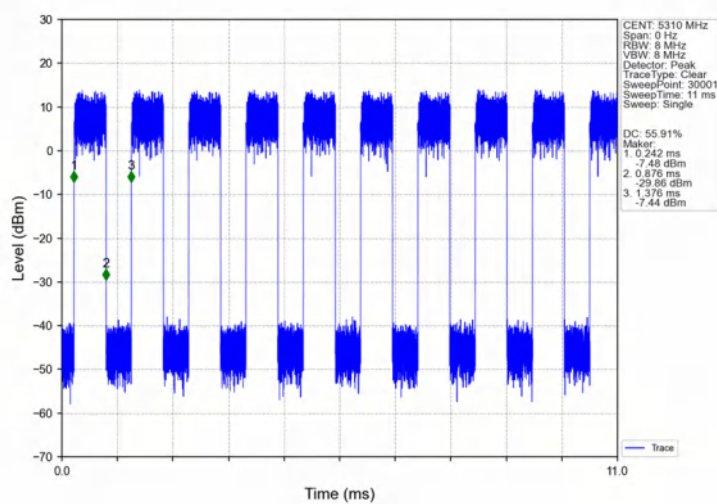
802.11n(HT40)\_HCH\_5230MHz\_Ant1\_NTNV



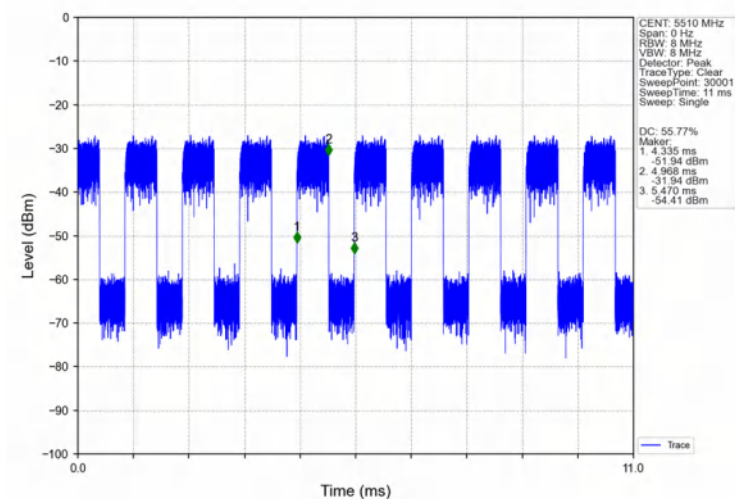
802.11n(HT40)\_LCH\_5270MHz\_Ant1\_NTNV



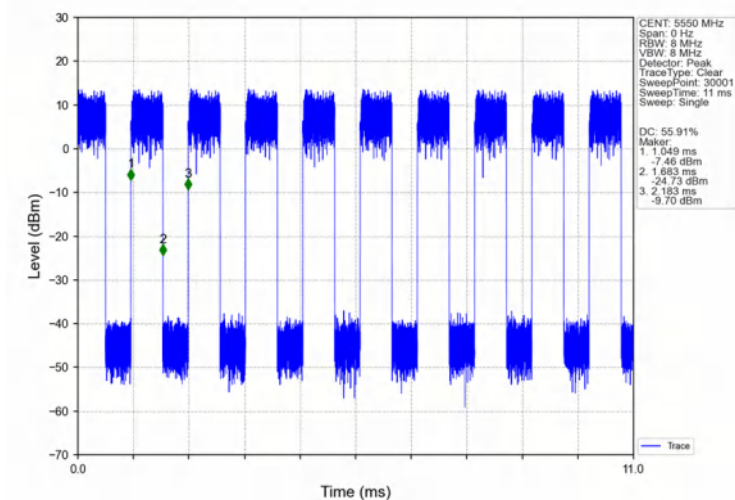
802.11n(HT40)\_HCH\_5310MHz\_Ant1\_NTNV



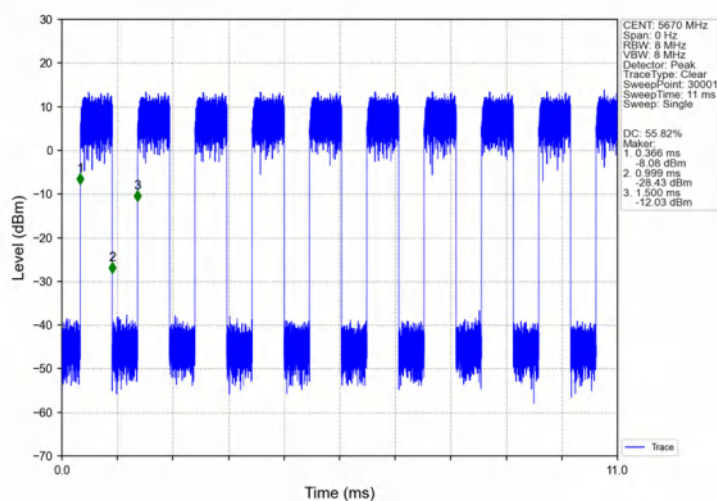
802.11n(HT40)\_LCH\_5510MHz\_Ant1\_NTNV



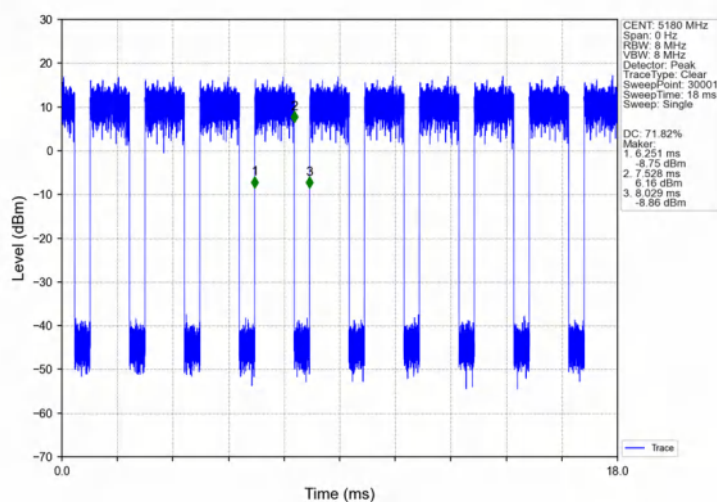
802.11n(HT40)\_MCH\_5550MHz\_Ant1\_NTNV



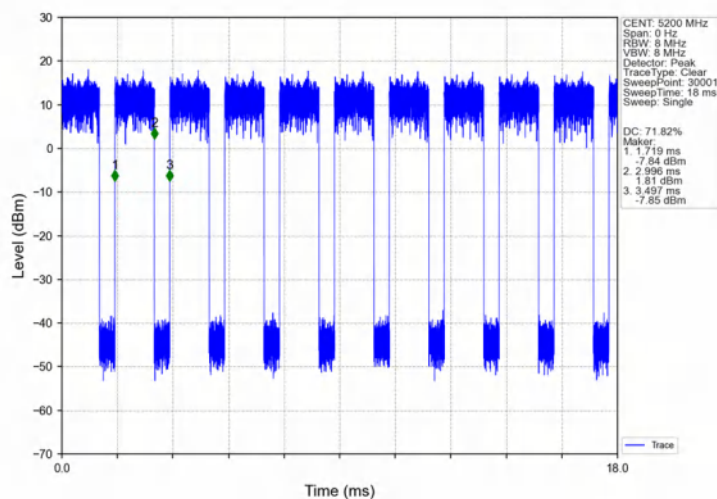
## 802.11n(HT40)\_HCH\_5670MHz\_Ant1\_NTNV



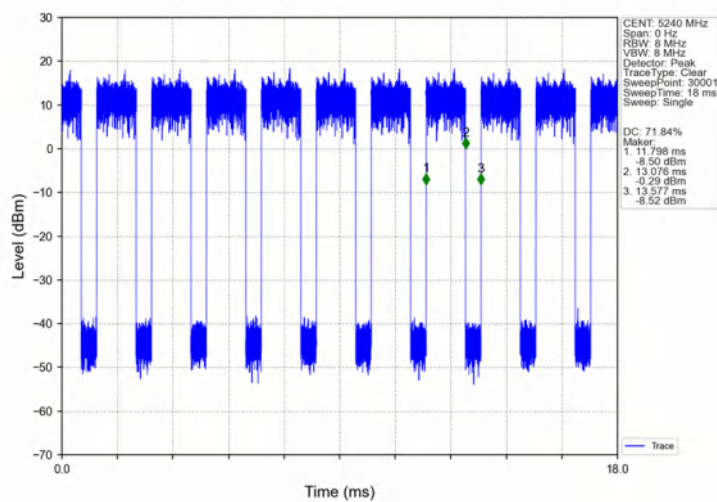
## 802.11ac(VHT20)\_LCH\_5180MHz\_Ant1\_NTNV



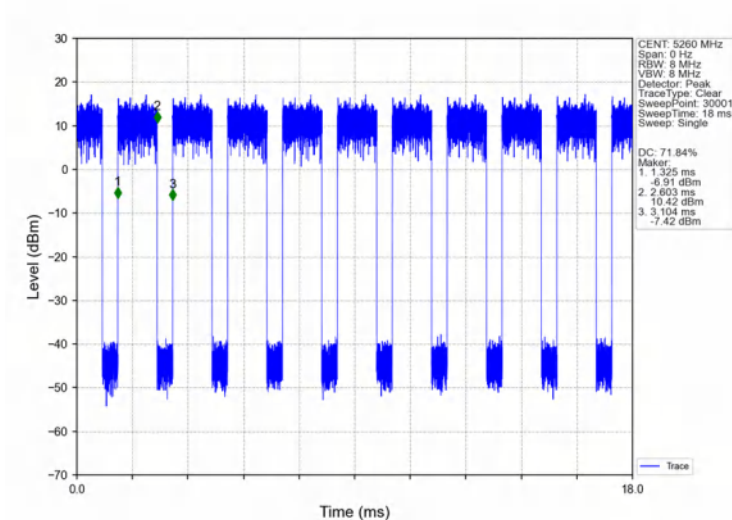
## 802.11ac(VHT20)\_MCH\_5200MHz\_Ant1\_NTNV



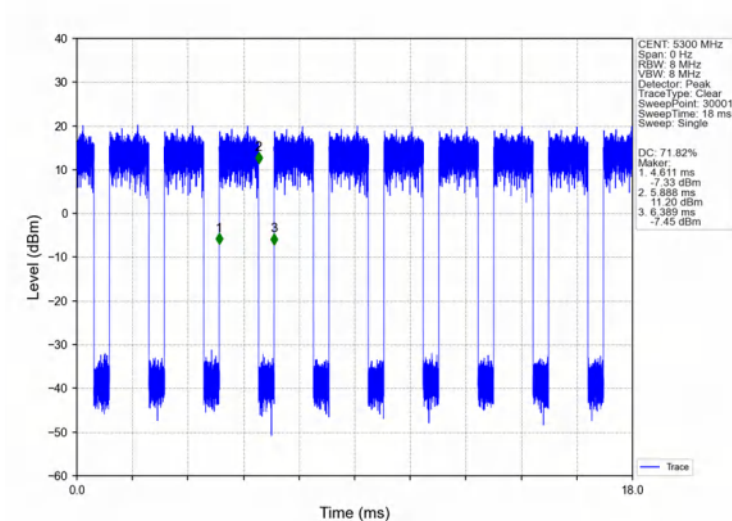
## 802.11ac(VHT20)\_HCH\_5240MHz\_Ant1\_NTNV



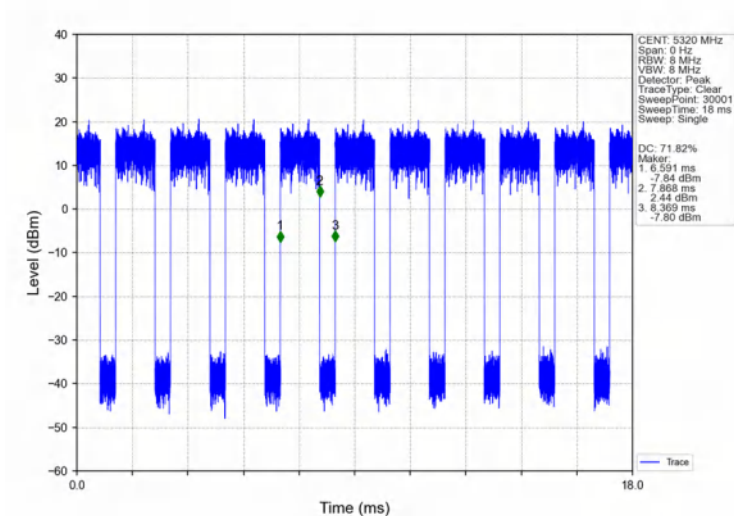
802.11ac(VHT20)\_LCH\_5260MHz\_Ant1\_NTNV



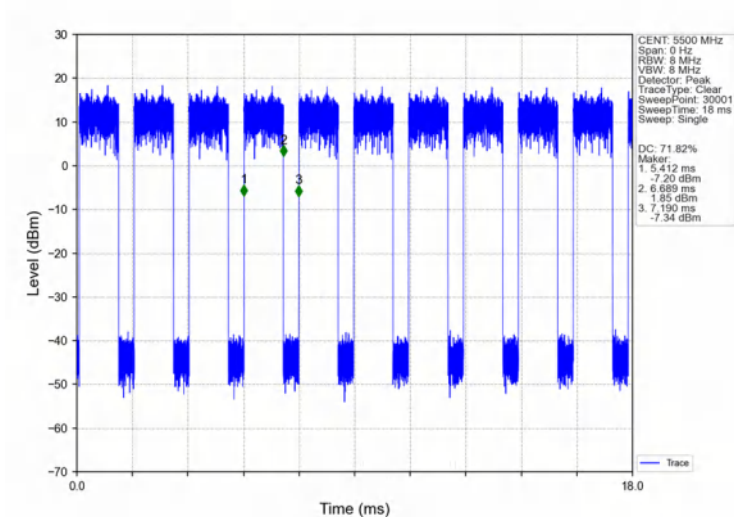
802.11ac(VHT20)\_MCH\_5300MHz\_Ant1\_NTNV



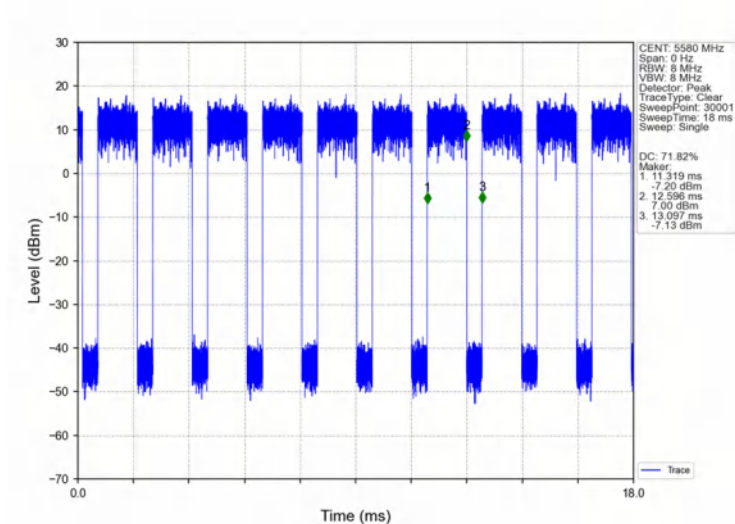
802.11ac(VHT20)\_HCH\_5320MHz\_Ant1\_NTNV



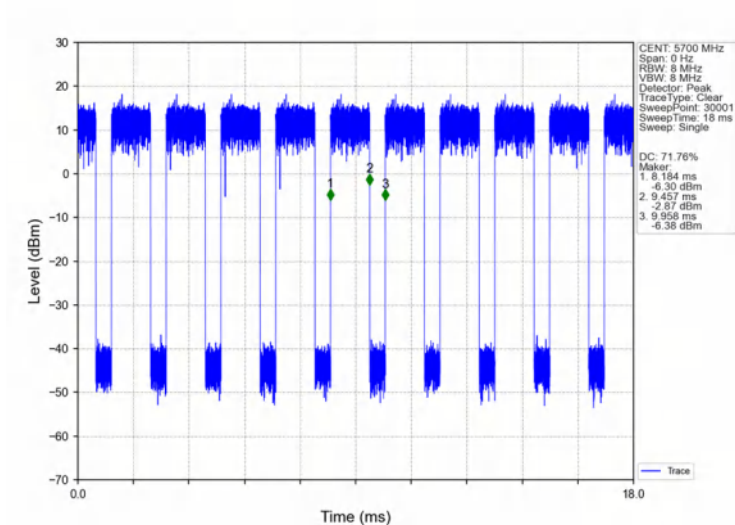
802.11ac(VHT20)\_LCH\_5500MHz\_Ant1\_NTNV



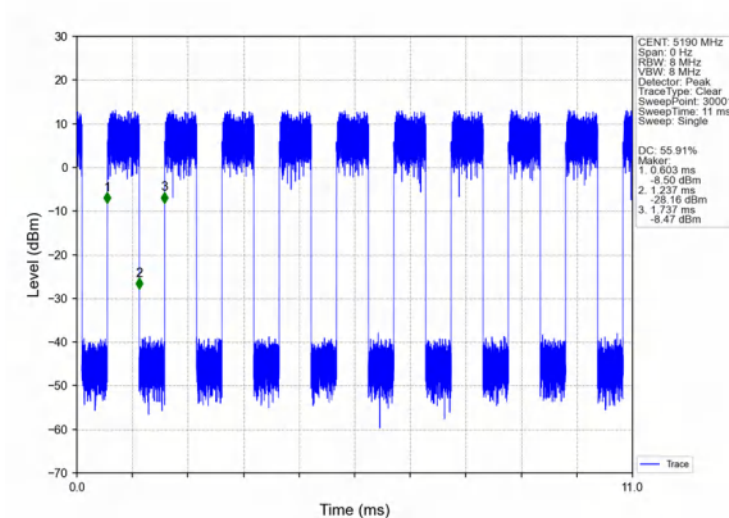
802.11ac(VHT20)\_MCH\_5580MHz\_Ant1\_NTNV



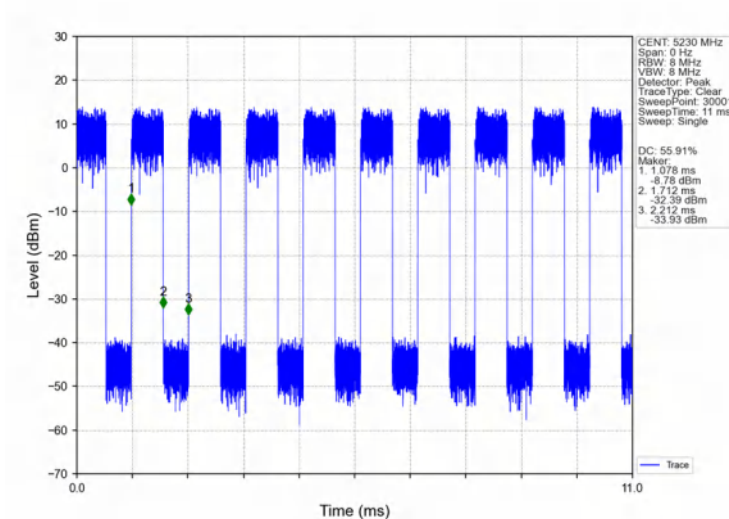
802.11ac(VHT20)\_HCH\_5700MHz\_Ant1\_NTNV



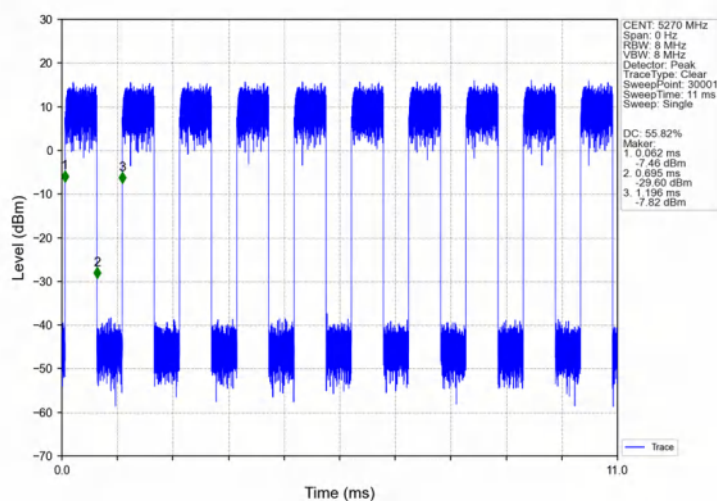
802.11ac(VHT40)\_LCH\_5190MHz\_Ant1\_NTNV



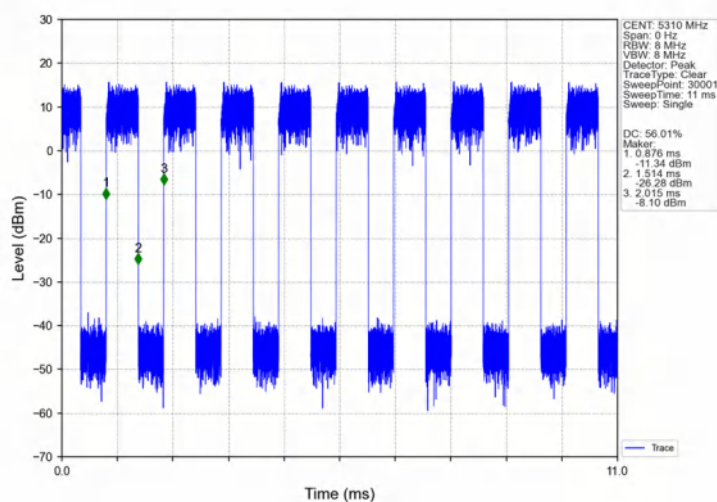
802.11ac(VHT40)\_HCH\_5230MHz\_Ant1\_NTNV



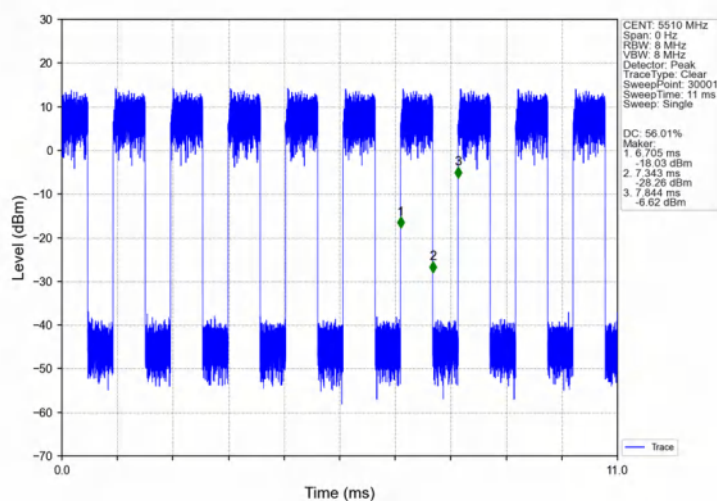
## 802.11ac(VHT40)\_LCH\_5270MHz\_Ant1\_NTNV



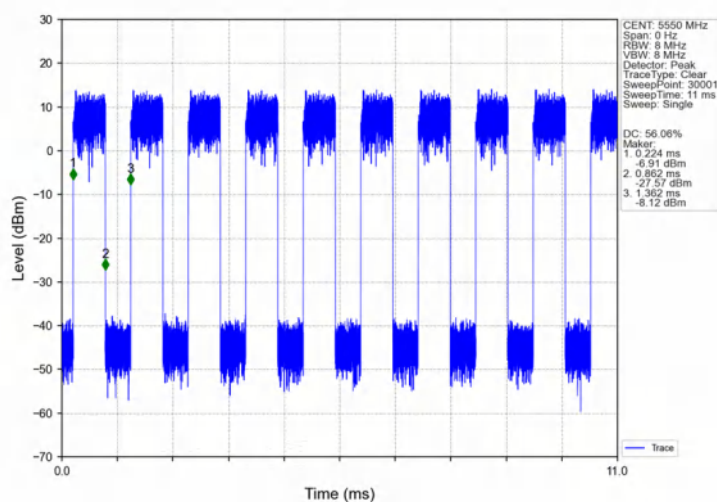
## 802.11ac(VHT40)\_HCH\_5310MHz\_Ant1\_NTNV



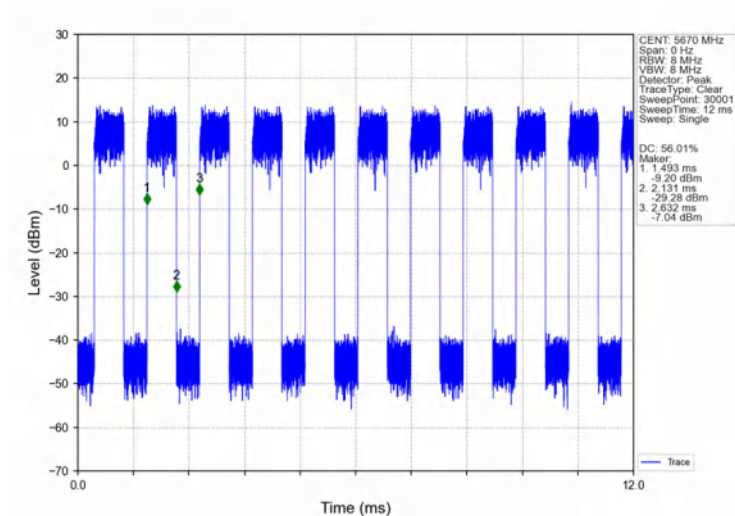
802.11ac(VHT40)\_LCH\_5510MHz\_Ant1\_NTNV



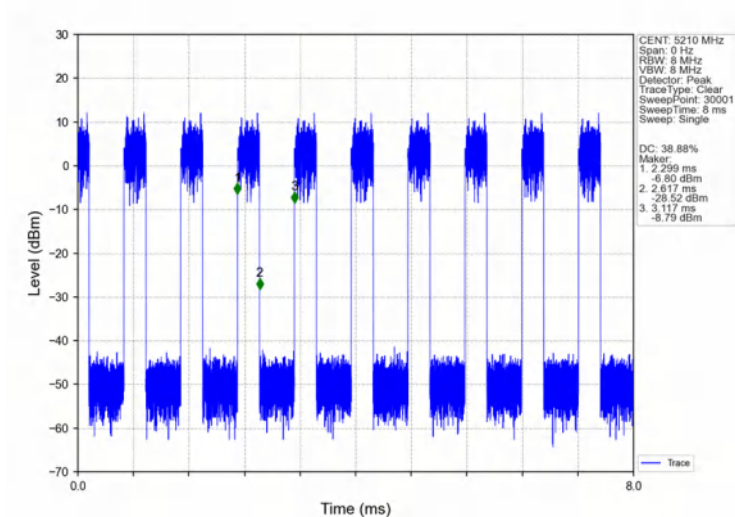
802.11ac(VHT40)\_MCH\_5550MHz\_Ant1\_NTNV



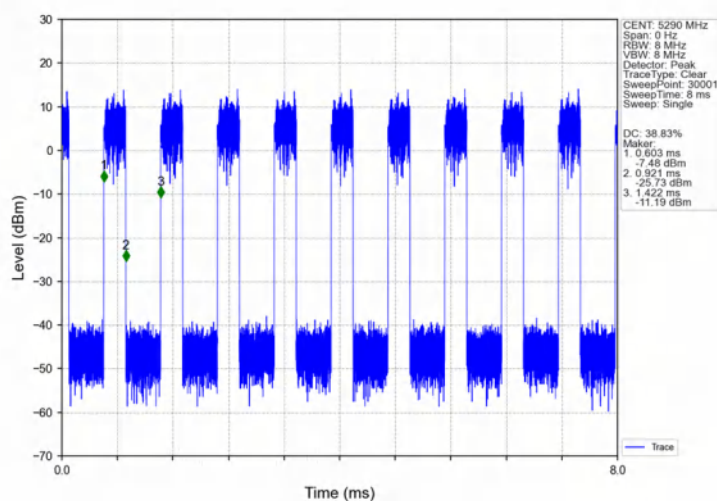
802.11ac(VHT40)\_HCH\_5670MHz\_Ant1\_NTNV



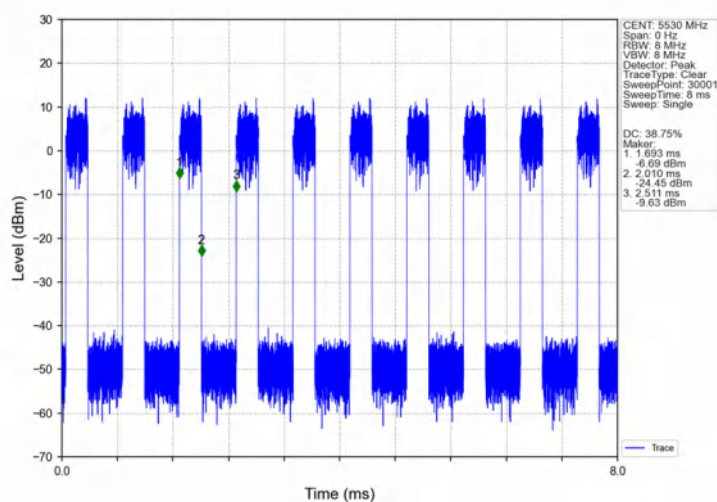
802.11ac(VHT80)\_MCH\_5210MHz\_Ant1\_NTNV



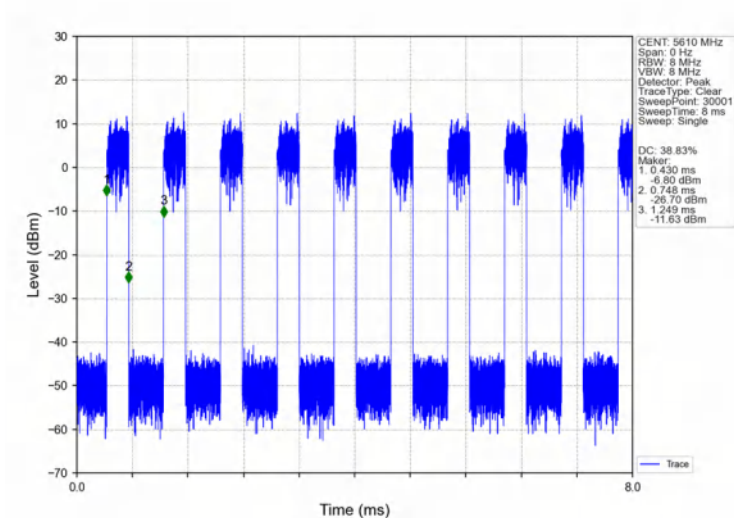
802.11ac(VHT80)\_MCH\_5290MHz\_Ant1\_NTNV



802.11ac(VHT80)\_LCH\_5530MHz\_Ant1\_NTNV



802.11ac(VHT80)\_HCH\_5610MHz\_Ant1\_NTNV



## 2. Bandwidth

### 2.1 Test Result

#### 2.1.1 OBW

| Mode             | TX Type | Frequency (MHz) | ANT | 99% Occupied Bandwidth (MHz) |       | Verdict |
|------------------|---------|-----------------|-----|------------------------------|-------|---------|
|                  |         |                 |     | Result                       | Limit |         |
| 802.11a          | SISO    | 5180            | 1   | 16.721                       | /     | Pass    |
|                  |         | 5200            | 1   | 16.612                       | /     | Pass    |
|                  |         | 5240            | 1   | 16.623                       | /     | Pass    |
|                  |         | 5260            | 1   | 16.639                       | /     | Pass    |
|                  |         | 5300            | 1   | 16.597                       | /     | Pass    |
|                  |         | 5320            | 1   | 16.580                       | /     | Pass    |
|                  |         | 5500            | 1   | 16.578                       | /     | Pass    |
|                  |         | 5580            | 1   | 16.628                       | /     | Pass    |
| 802.11n (HT20)   | MIMO    | 5700            | 1   | 16.609                       | /     | Pass    |
|                  |         | 5180            | 1   | 17.735                       | /     | Pass    |
|                  |         | 5200            | 1   | 17.748                       | /     | Pass    |
|                  |         | 5240            | 1   | 17.763                       | /     | Pass    |
|                  |         | 5260            | 1   | 17.768                       | /     | Pass    |
|                  |         | 5300            | 1   | 17.757                       | /     | Pass    |
|                  |         | 5320            | 1   | 17.740                       | /     | Pass    |
|                  |         | 5500            | 1   | 17.728                       | /     | Pass    |
| 802.11n (HT40)   | MIMO    | 5580            | 1   | 17.741                       | /     | Pass    |
|                  |         | 5700            | 1   | 17.740                       | /     | Pass    |
|                  |         | 5190            | 1   | 36.299                       | /     | Pass    |
|                  |         | 5230            | 1   | 36.391                       | /     | Pass    |
|                  |         | 5270            | 1   | 36.296                       | /     | Pass    |
|                  |         | 5310            | 1   | 36.309                       | /     | Pass    |
|                  |         | 5510            | 1   | 36.605                       | /     | Pass    |
|                  |         | 5550            | 1   | 36.319                       | /     | Pass    |
| 802.11ac (VHT20) | MIMO    | 5670            | 1   | 36.385                       | /     | Pass    |
|                  |         | 5180            | 1   | 17.735                       | /     | Pass    |
|                  |         | 5200            | 1   | 17.705                       | /     | Pass    |
|                  |         | 5240            | 1   | 17.762                       | /     | Pass    |
|                  |         | 5260            | 1   | 17.722                       | /     | Pass    |
|                  |         | 5300            | 1   | 17.721                       | /     | Pass    |
|                  |         | 5320            | 1   | 17.742                       | /     | Pass    |
|                  |         | 5500            | 1   | 17.720                       | /     | Pass    |
| 802.11ac (VHT40) | MIMO    | 5580            | 1   | 17.720                       | /     | Pass    |
|                  |         | 5700            | 1   | 17.758                       | /     | Pass    |
|                  |         | 5190            | 1   | 36.446                       | /     | Pass    |
|                  |         | 5230            | 1   | 36.345                       | /     | Pass    |
|                  |         | 5270            | 1   | 36.403                       | /     | Pass    |
|                  |         | 5310            | 1   | 36.355                       | /     | Pass    |
|                  |         | 5510            | 1   | 36.263                       | /     | Pass    |
| 802.11ac (VHT80) | MIMO    | 5550            | 1   | 36.298                       | /     | Pass    |
|                  |         | 5670            | 1   | 36.311                       | /     | Pass    |
|                  |         | 5210            | 1   | 74.263                       | /     | Pass    |
|                  |         | 5290            | 1   | 74.528                       | /     | Pass    |
|                  |         | 5530            | 1   | 74.706                       | /     | Pass    |
|                  |         | 5610            | 1   | 74.639                       | /     | Pass    |

Ant1 and ant2 were tested, only worst antenna 1 test data were present in the report.

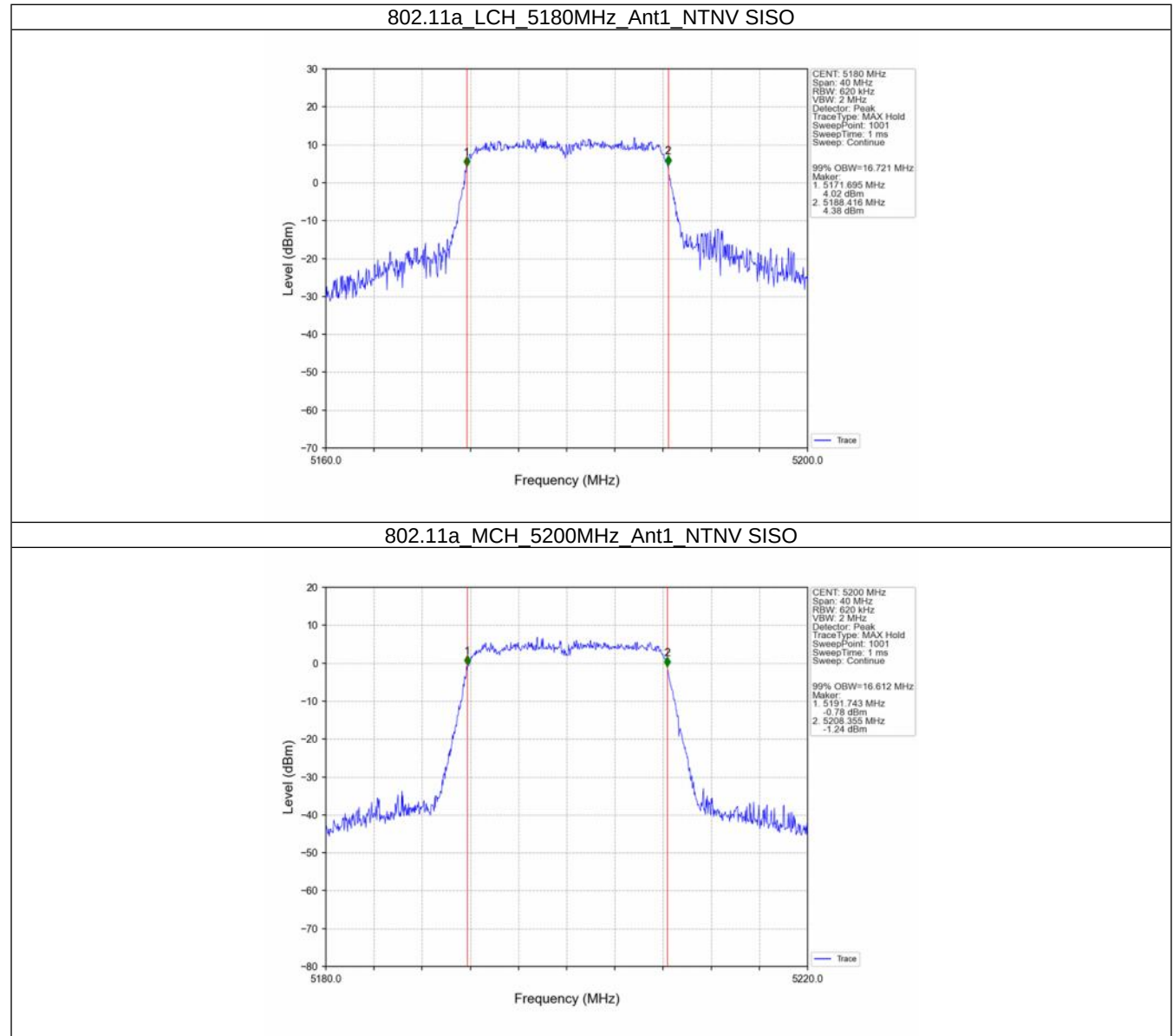
### 2.1.2 26dB BW Worst case

| Mode             | TX Type | Frequency (MHz) | ANT | 26dB Bandwidth (MHz) |       | Verdict |
|------------------|---------|-----------------|-----|----------------------|-------|---------|
|                  |         |                 |     | Result               | Limit |         |
| 802.11a          | SISO    | 5180            | 1   | 18.709               | /     | Pass    |
|                  |         | 5200            | 1   | 18.538               | /     | Pass    |
|                  |         | 5240            | 1   | 18.770               | /     | Pass    |
|                  |         | 5260            | 1   | 18.696               | /     | Pass    |
|                  |         | 5300            | 1   | 18.733               | /     | Pass    |
|                  |         | 5320            | 1   | 18.600               | /     | Pass    |
|                  |         | 5500            | 1   | 18.689               | /     | Pass    |
|                  |         | 5580            | 1   | 18.724               | /     | Pass    |
|                  |         | 5700            | 1   | 18.581               | /     | Pass    |
| 802.11n (HT20)   | MIMO    | 5180            | 1   | 19.670               | /     | Pass    |
|                  |         | 5200            | 1   | 19.787               | /     | Pass    |
|                  |         | 5240            | 1   | 19.719               | /     | Pass    |
|                  |         | 5260            | 1   | 19.770               | /     | Pass    |
|                  |         | 5300            | 1   | 19.742               | /     | Pass    |
|                  |         | 5320            | 1   | 19.860               | /     | Pass    |
|                  |         | 5500            | 1   | 19.736               | /     | Pass    |
|                  |         | 5580            | 1   | 19.814               | /     | Pass    |
|                  |         | 5700            | 1   | 19.918               | /     | Pass    |
| 802.11n (HT40)   | MIMO    | 5190            | 1   | 41.680               | /     | Pass    |
|                  |         | 5230            | 1   | 41.252               | /     | Pass    |
|                  |         | 5270            | 1   | 41.458               | /     | Pass    |
|                  |         | 5310            | 1   | 41.824               | /     | Pass    |
|                  |         | 5510            | 1   | 41.664               | /     | Pass    |
|                  |         | 5550            | 1   | 41.626               | /     | Pass    |
| 802.11ac (VHT20) | MIMO    | 5670            | 1   | 41.681               | /     | Pass    |
|                  |         | 5180            | 1   | 19.764               | /     | Pass    |
|                  |         | 5200            | 1   | 19.737               | /     | Pass    |
|                  |         | 5240            | 1   | 19.770               | /     | Pass    |
|                  |         | 5260            | 1   | 19.601               | /     | Pass    |
|                  |         | 5300            | 1   | 19.859               | /     | Pass    |
|                  |         | 5320            | 1   | 19.869               | /     | Pass    |
|                  |         | 5500            | 1   | 19.759               | /     | Pass    |
| 802.11ac (VHT40) | MIMO    | 5580            | 1   | 19.801               | /     | Pass    |
|                  |         | 5700            | 1   | 19.699               | /     | Pass    |
|                  |         | 5190            | 1   | 41.351               | /     | Pass    |
|                  |         | 5230            | 1   | 41.749               | /     | Pass    |
|                  |         | 5270            | 1   | 41.582               | /     | Pass    |
|                  |         | 5310            | 1   | 42.014               | /     | Pass    |
|                  |         | 5510            | 1   | 41.275               | /     | Pass    |
| 802.11ac (VHT80) | MIMO    | 5550            | 1   | 42.417               | /     | Pass    |
|                  |         | 5670            | 1   | 41.931               | /     | Pass    |
|                  |         | 5210            | 1   | 81.292               | /     | Pass    |
|                  |         | 5290            | 1   | 81.784               | /     | Pass    |
|                  |         | 5530            | 1   | 81.046               | /     | Pass    |
|                  |         | 5610            | 1   | 81.638               | /     | Pass    |

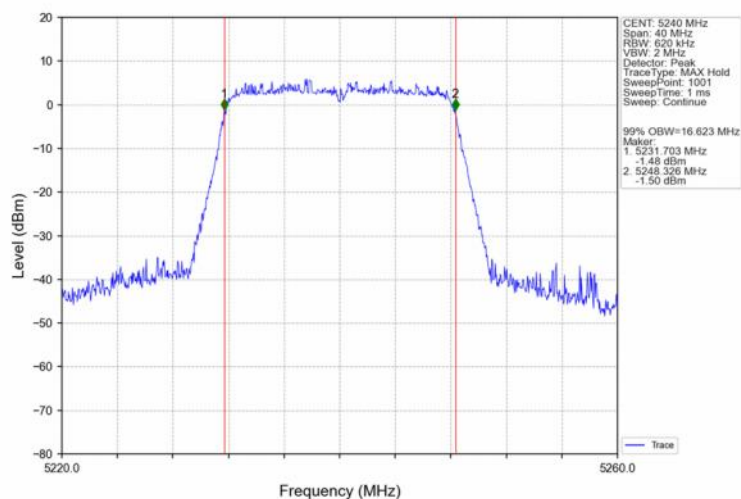
Ant1 and ant2 were tested, only worst antenna 1 test data were present in the report.

## 2.2 Test Graph

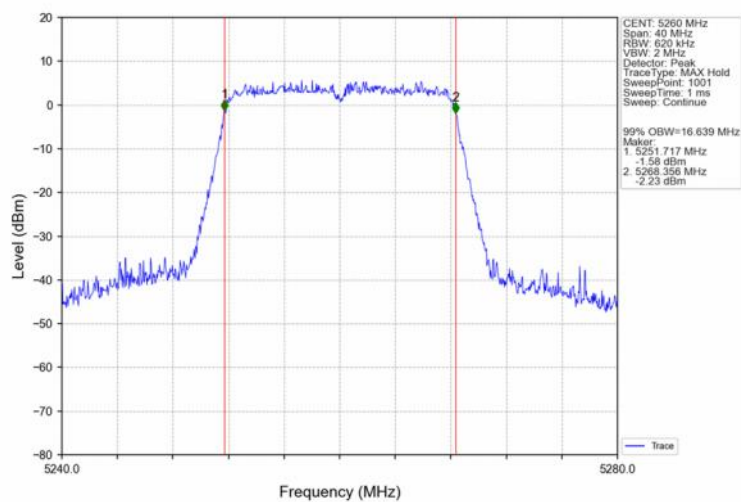
### 2.2.1 OBW



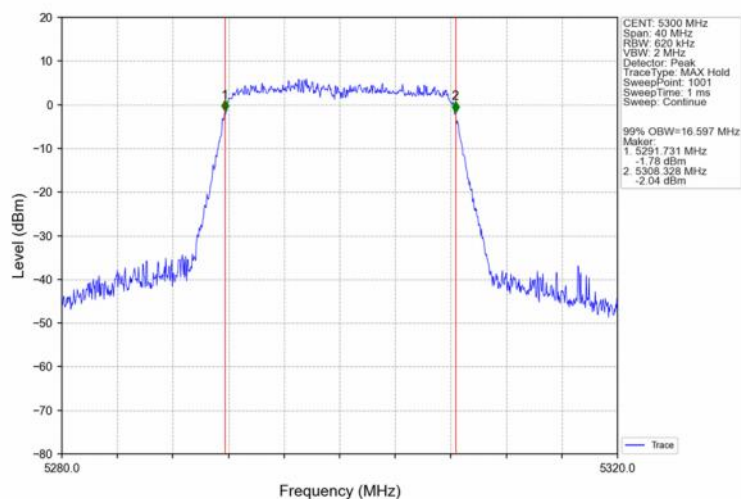
802.11a\_HCH\_5240MHz\_Ant1\_NTNV\_SISO



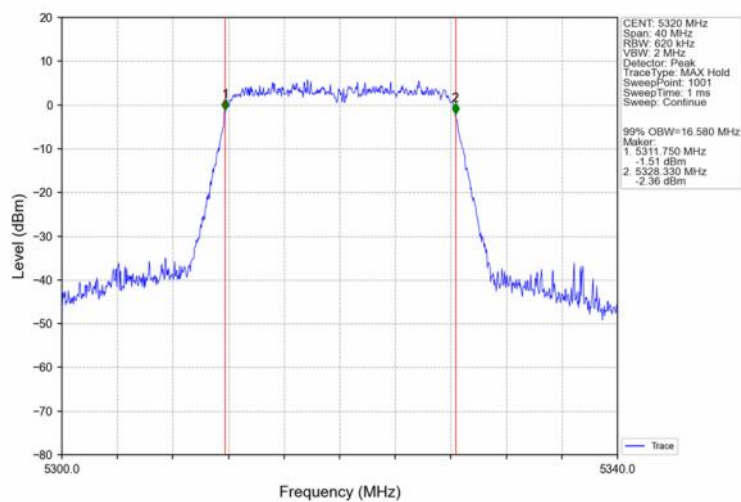
802.11a\_LCH\_5260MHz\_Ant1\_NTNV\_SISO



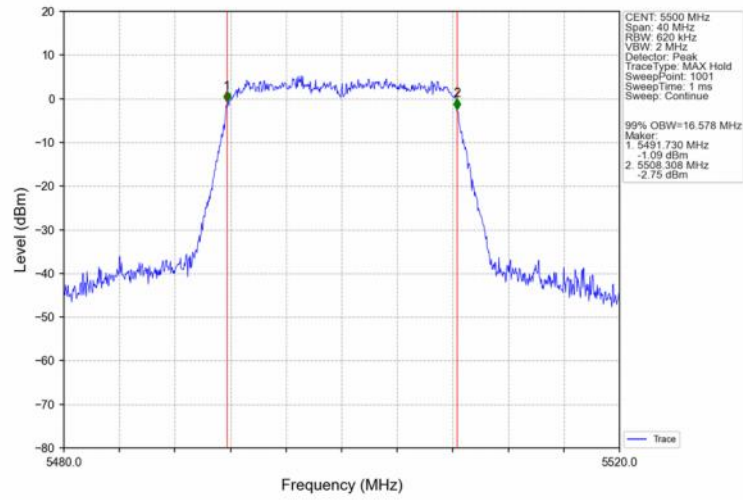
802.11a\_MCH\_5300MHz\_Ant1\_NTNV\_SISO



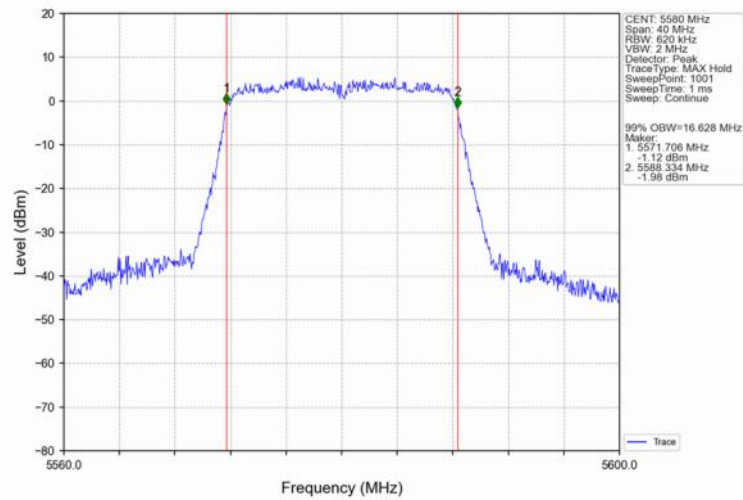
802.11a\_HCH\_5320MHz\_Ant1\_NTNV\_SISO



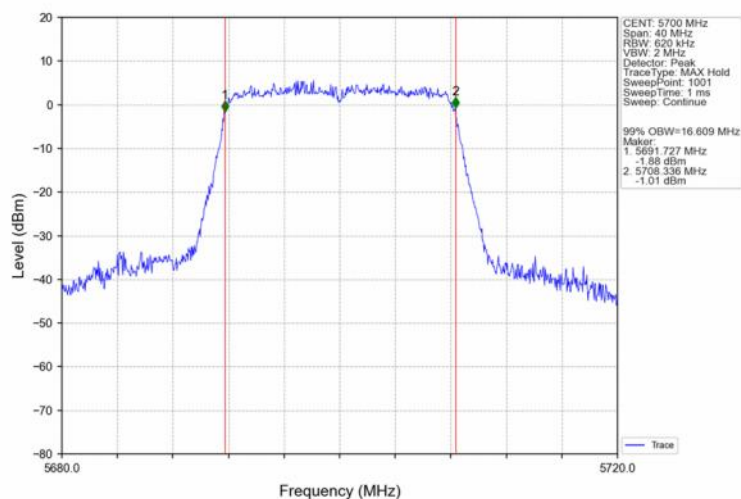
802.11a\_LCH\_5500MHz\_Ant1\_NTNV\_SISO



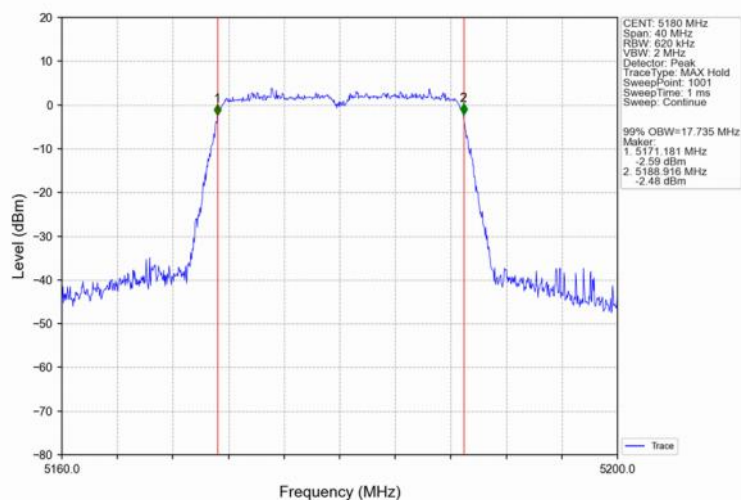
802.11a\_MCH\_5580MHz\_Ant1\_NTNV\_SISO



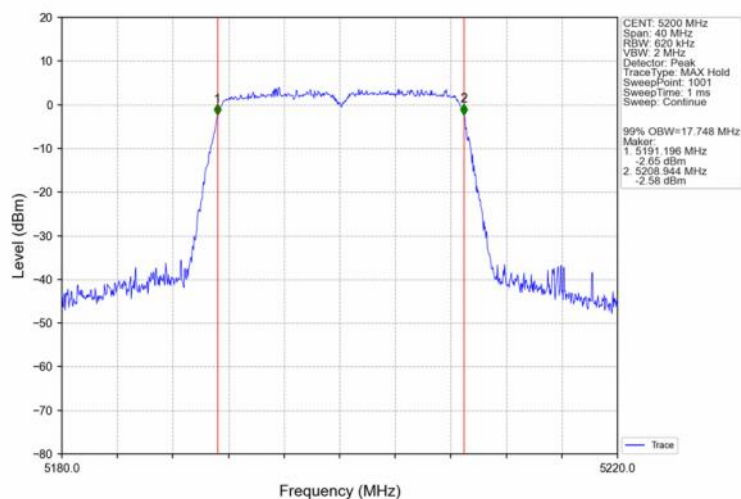
802.11a\_HCH\_5700MHz\_Ant1\_NTNV\_SISO



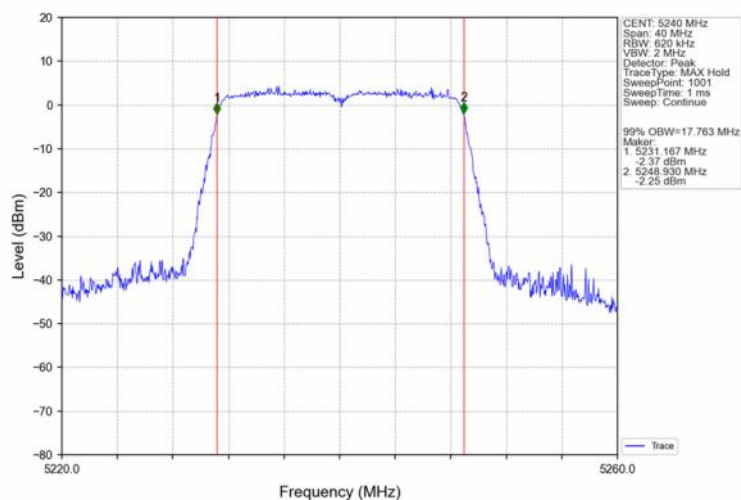
802.11n(HT20)\_LCH\_5180MHz\_Ant1\_NTNV\_MIMO



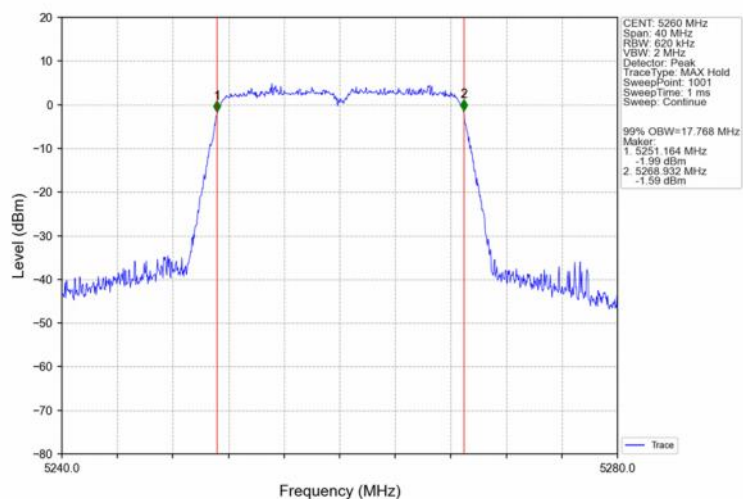
802.11n(HT20)\_MCH\_5200MHz\_Ant1\_NTNV MIMO



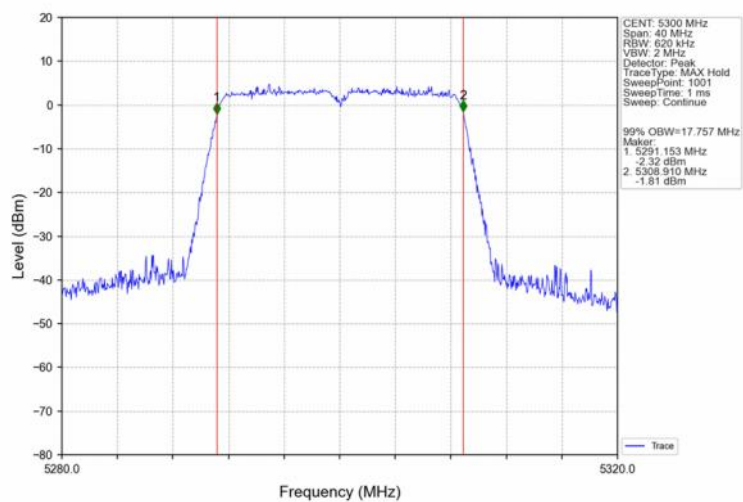
802.11n(HT20)\_HCH\_5240MHz\_Ant1\_NTNV MIMO



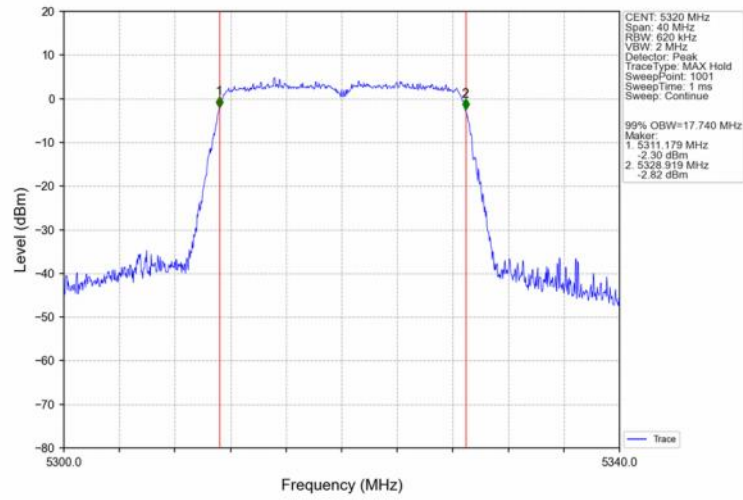
802.11n(HT20)\_LCH\_5260MHz\_Ant1\_NTNV MIMO



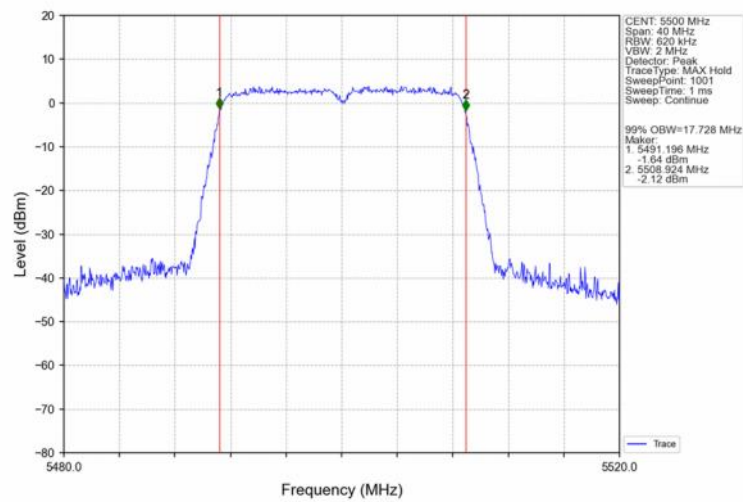
802.11n(HT20)\_MCH\_5300MHz\_Ant1\_NTNV MIMO



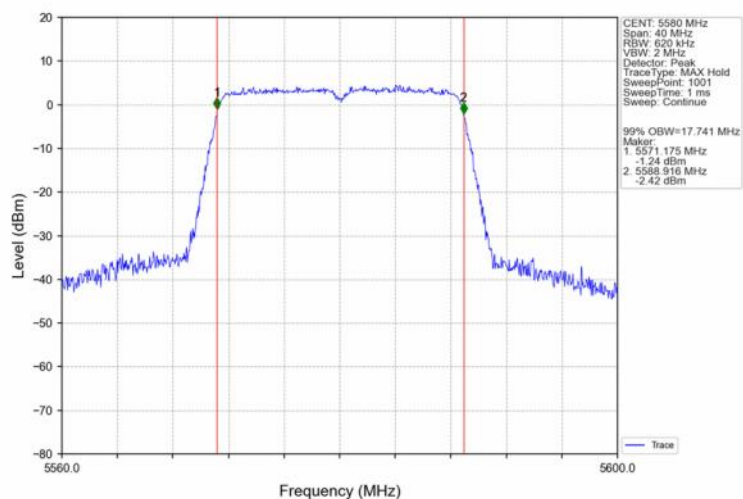
802.11n(HT20)\_HCH\_5320MHz\_Ant1\_NTNV MIMO



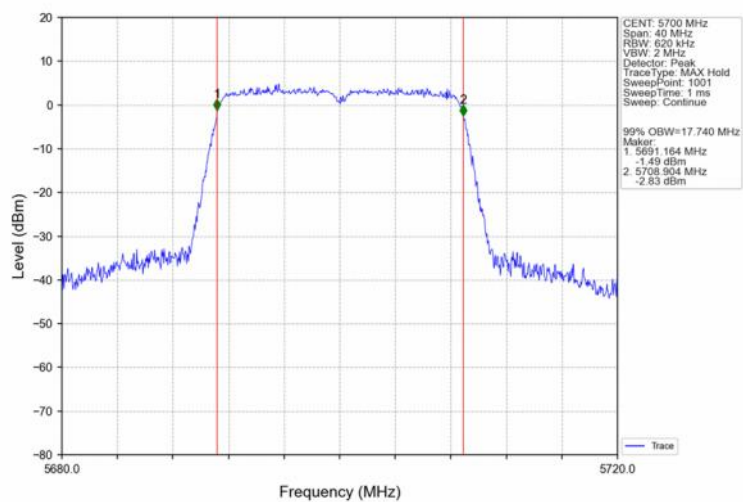
802.11n(HT20)\_LCH\_5500MHz\_Ant1\_NTNV MIMO



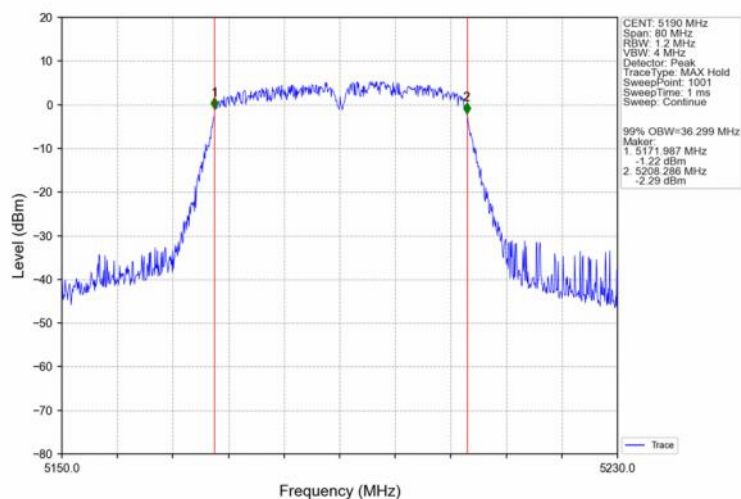
802.11n(HT20)\_MCH\_5580MHz\_Ant1\_NTNV MIMO



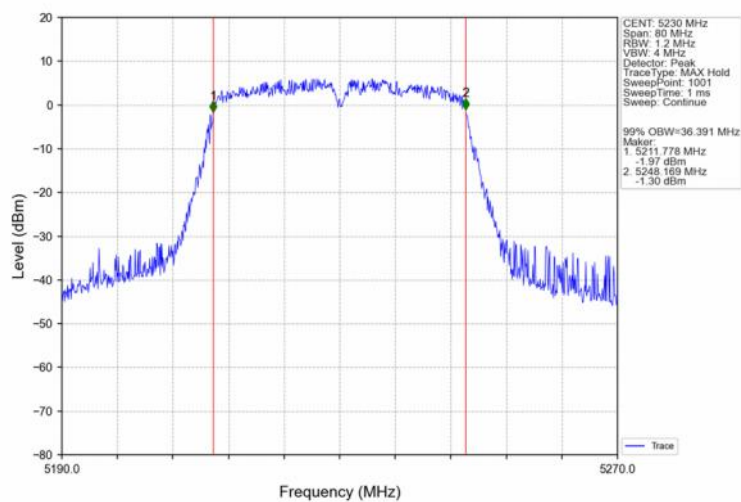
802.11n(HT20)\_HCH\_5700MHz\_Ant1\_NTNV MIMO



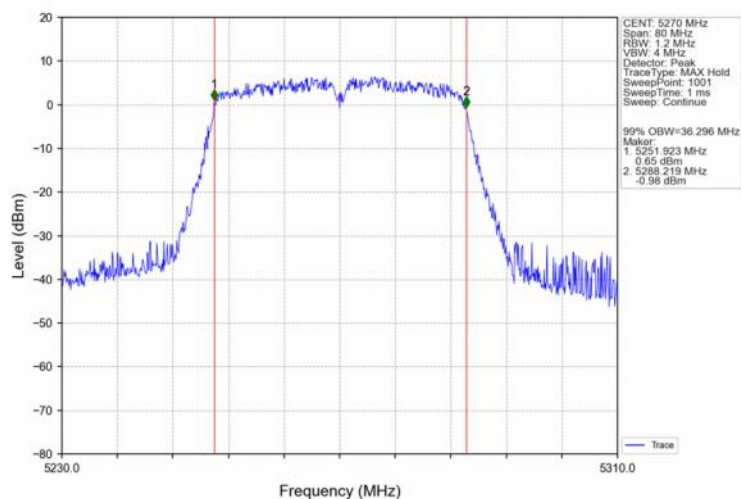
802.11n(HT40)\_LCH\_5190MHz\_Ant1\_NTNV MIMO



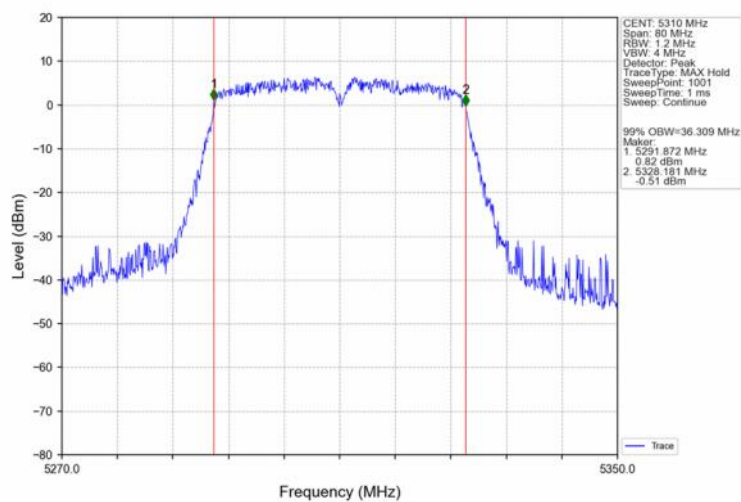
802.11n(HT40)\_HCH\_5230MHz\_Ant1\_NTNV MIMO



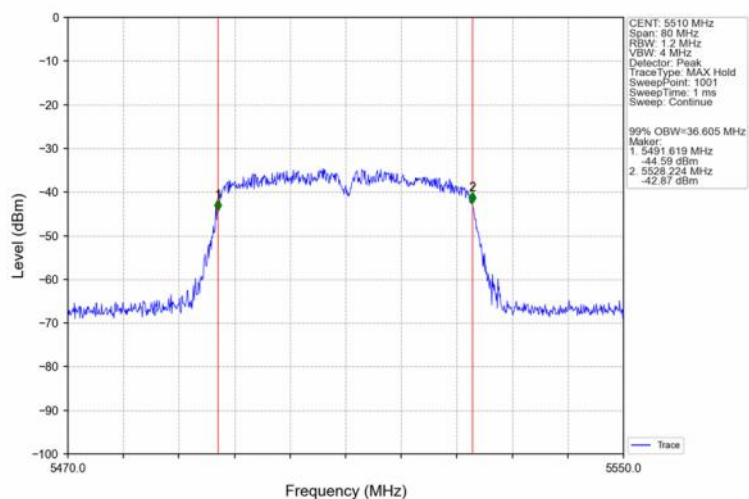
802.11n(HT40)\_LCH\_5270MHz\_Ant1\_NTNV MIMO



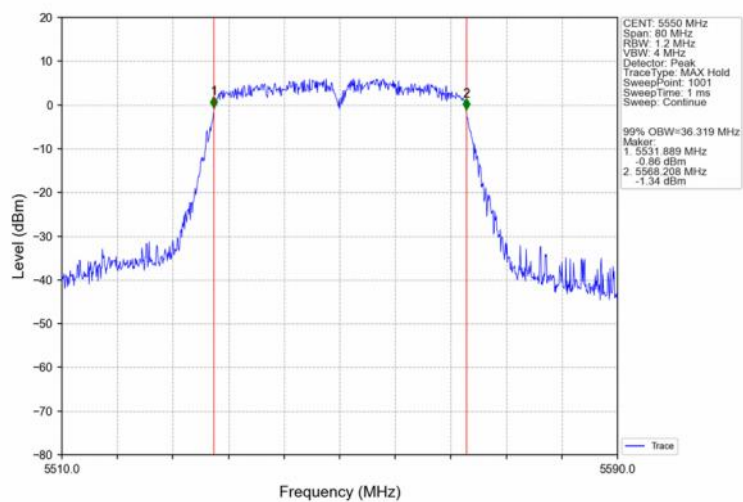
802.11n(HT40)\_HCH\_5310MHz\_Ant1\_NTNV MIMO



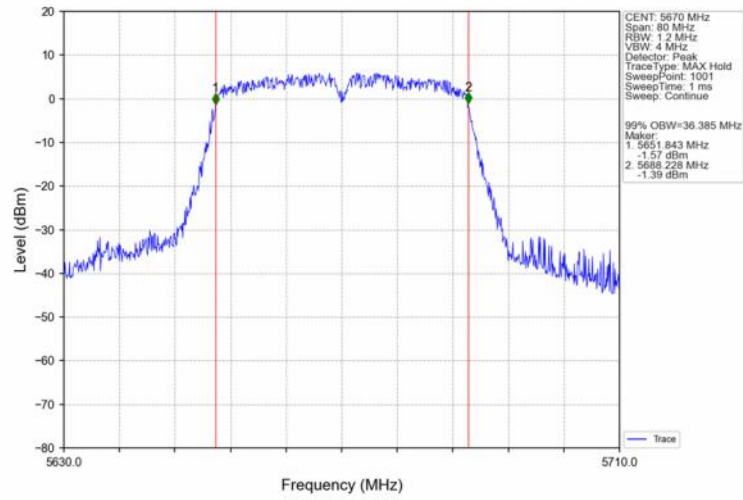
802.11n(HT40)\_LCH\_5510MHz\_Ant1\_NTNV MIMO



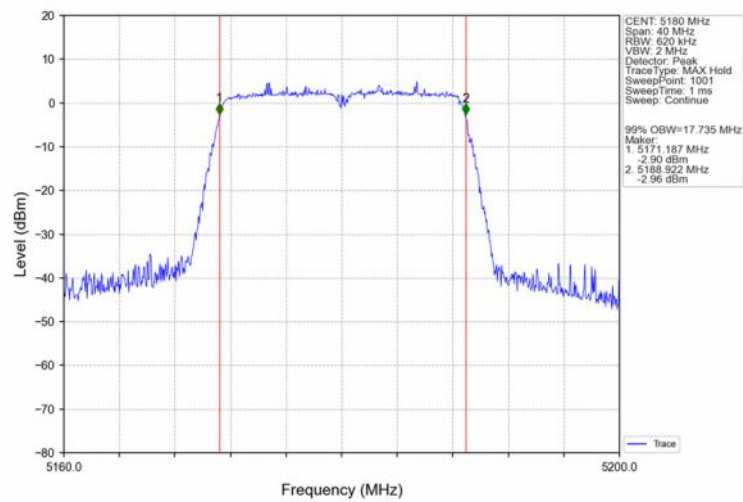
802.11n(HT40)\_MCH\_5550MHz\_Ant1\_NTNV MIMO



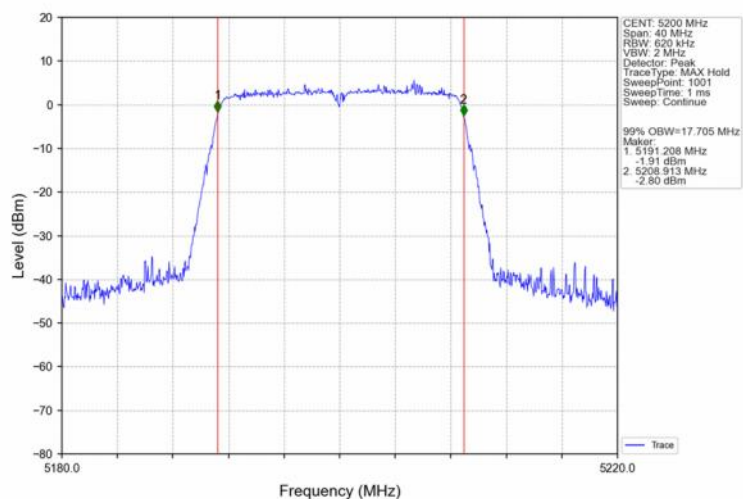
802.11n(HT40)\_HCH\_5670MHz\_Ant1\_NTNV MIMO



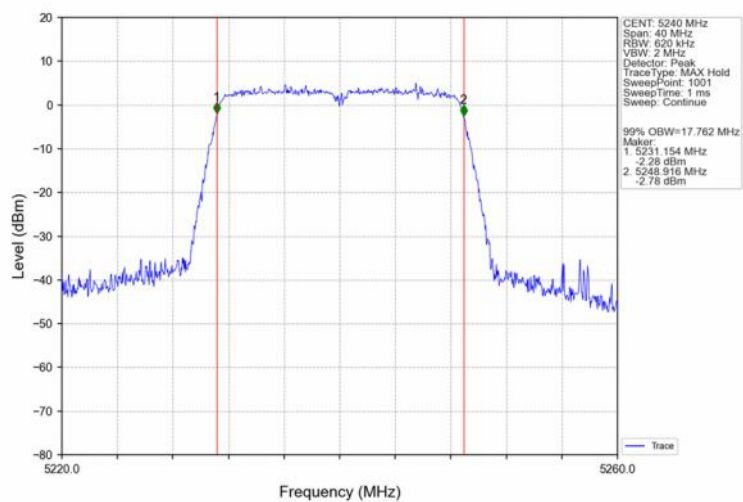
802.11ac(VHT20)\_LCH\_5180MHz\_Ant1\_NTNV MIMO



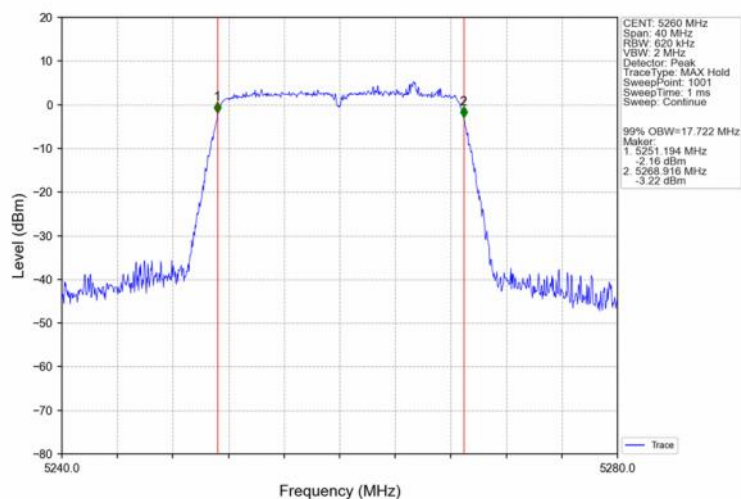
802.11ac(VHT20)\_MCH\_5200MHz\_Ant1\_NTNV MIMO



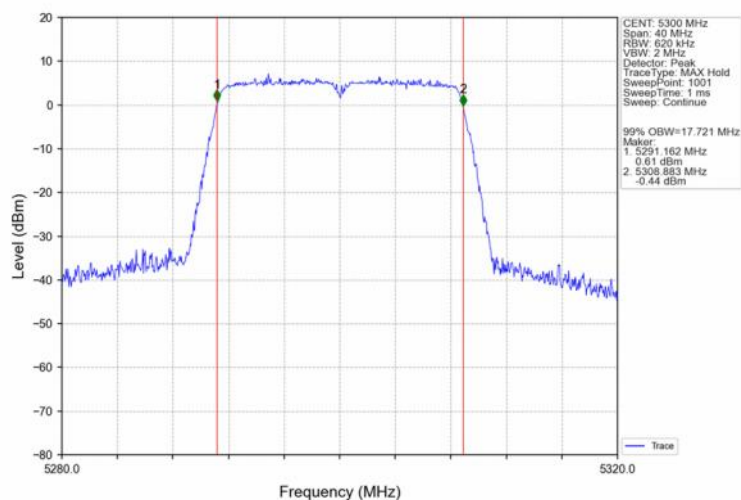
802.11ac(VHT20)\_HCH\_5240MHz\_Ant1\_NTNV MIMO



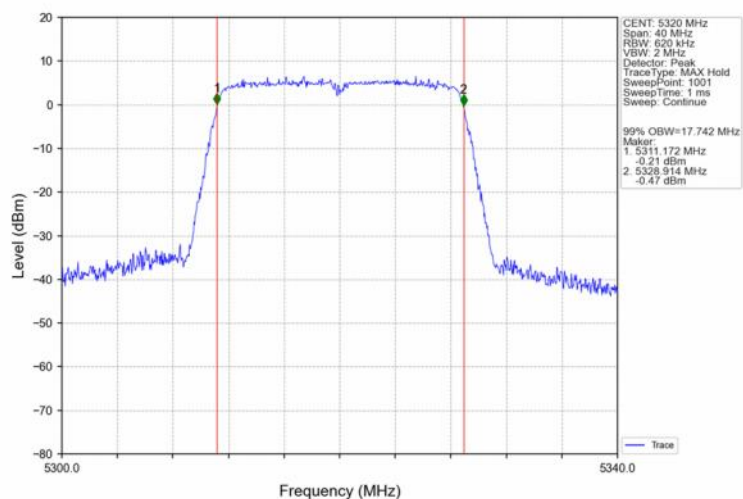
802.11ac(VHT20)\_LCH\_5260MHz\_Ant1\_NTNV MIMO



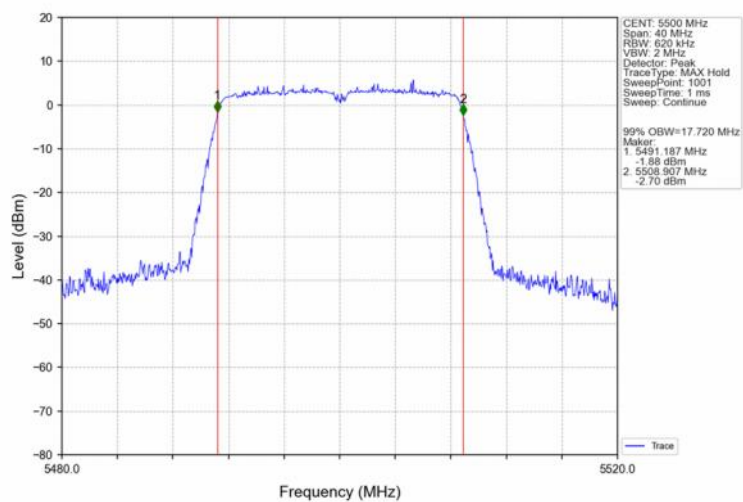
802.11ac(VHT20)\_MCH\_5300MHz\_Ant1\_NTNV MIMO



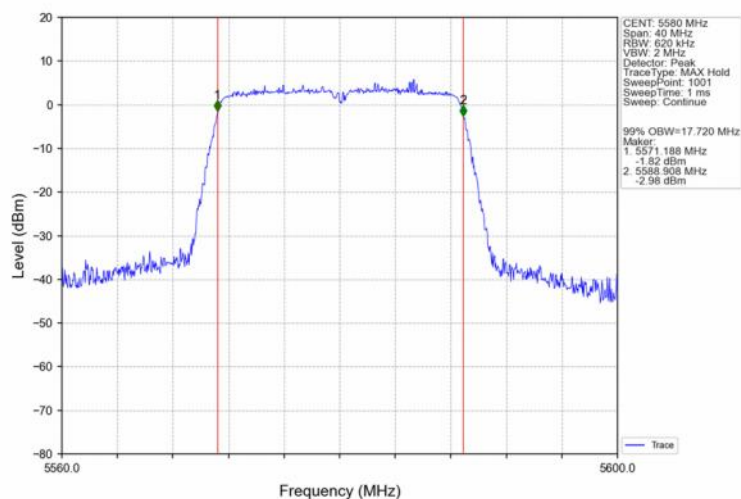
802.11ac(VHT20)\_HCH\_5320MHz\_Ant1\_NTNV MIMO



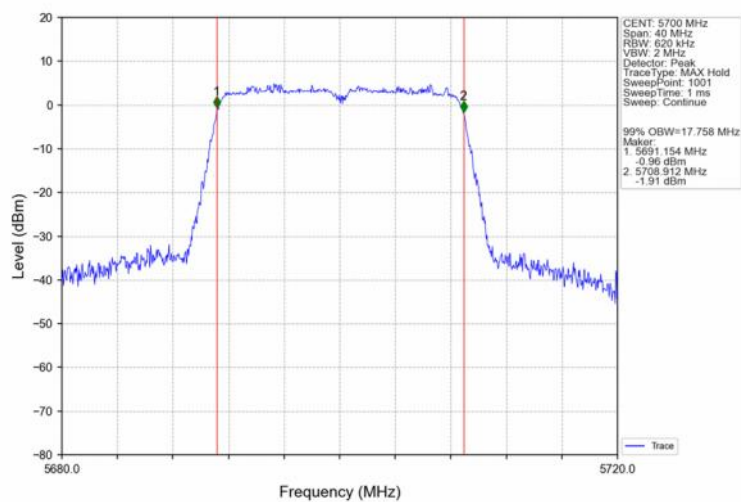
802.11ac(VHT20)\_LCH\_5500MHz\_Ant1\_NTNV MIMO



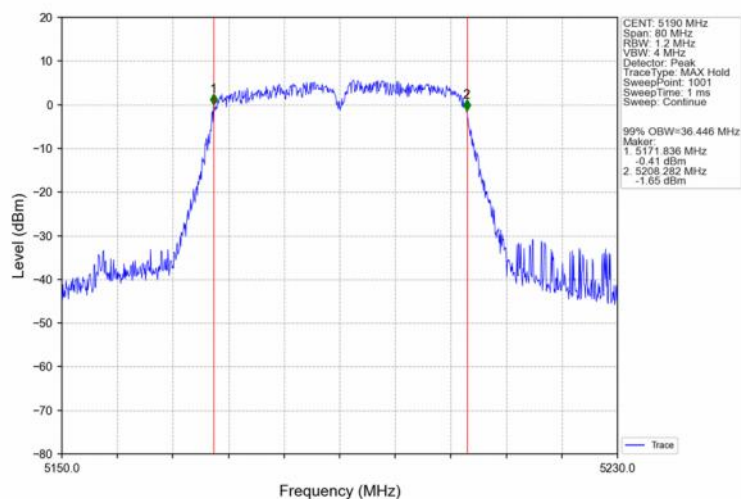
802.11ac(VHT20)\_MCH\_5580MHz\_Ant1\_NTNV MIMO



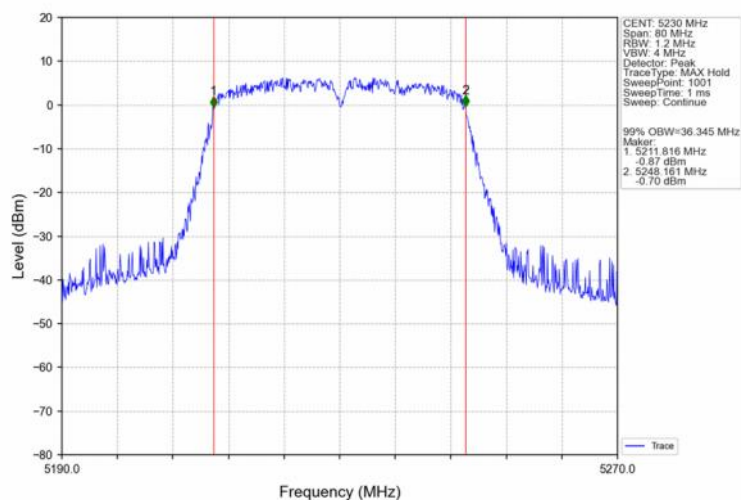
802.11ac(VHT20)\_HCH\_5700MHz\_Ant1\_NTNV MIMO



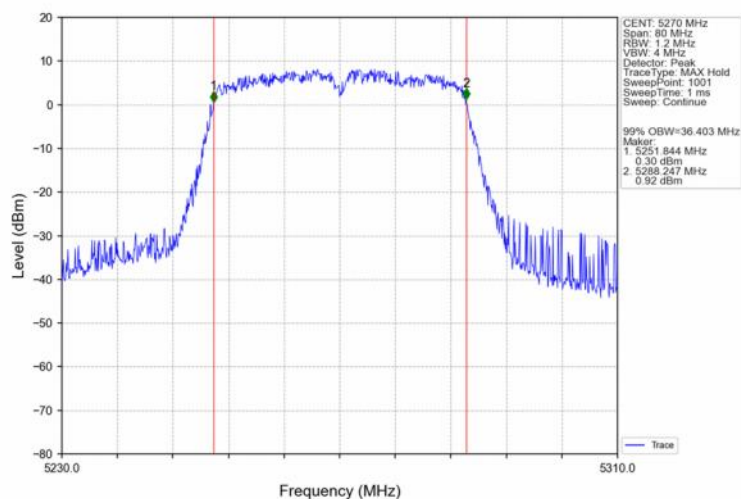
802.11ac(VHT40)\_LCH\_5190MHz\_Ant1\_NTNV MIMO



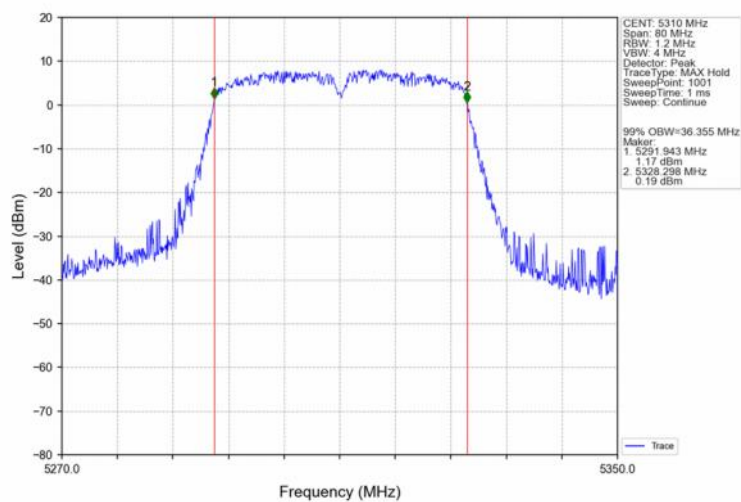
802.11ac(VHT40)\_HCH\_5230MHz\_Ant1\_NTNV MIMO



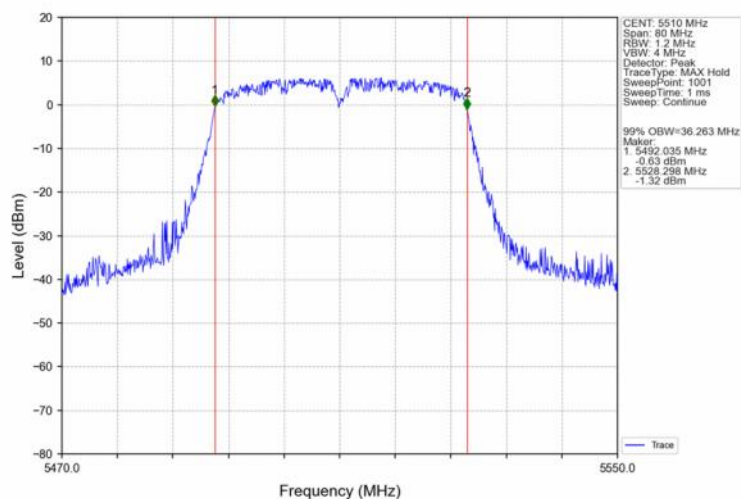
802.11ac(VHT40)\_LCH\_5270MHz\_Ant1\_NTNV MIMO



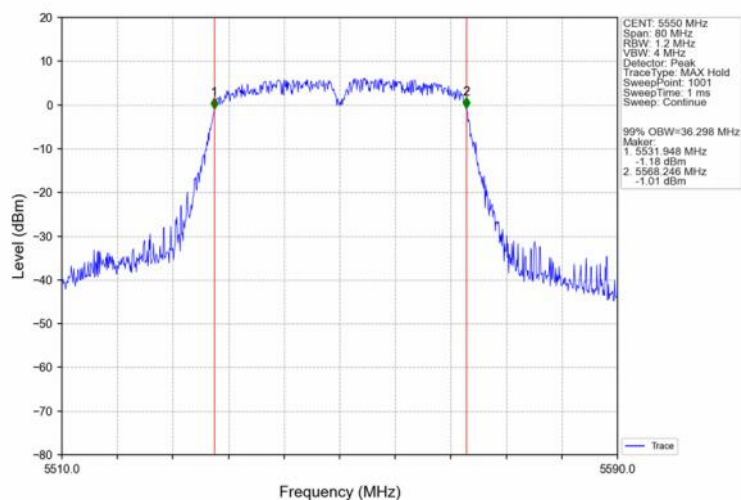
802.11ac(VHT40)\_HCH\_5310MHz\_Ant1\_NTNV MIMO



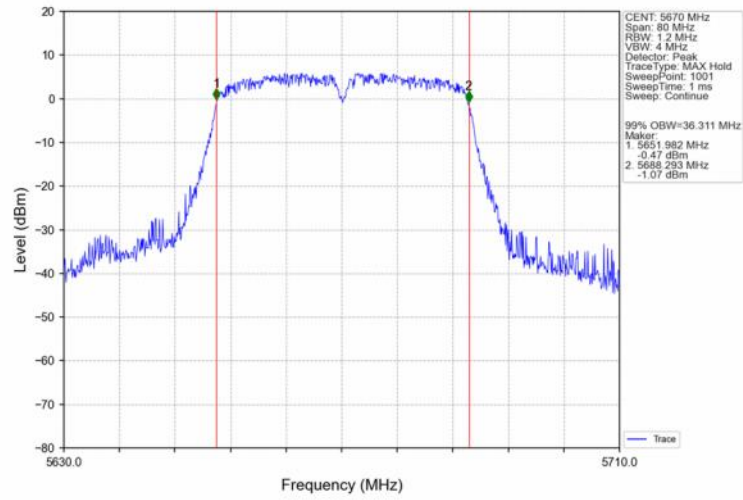
802.11ac(VHT40)\_LCH\_5510MHz\_Ant1\_NTNV MIMO



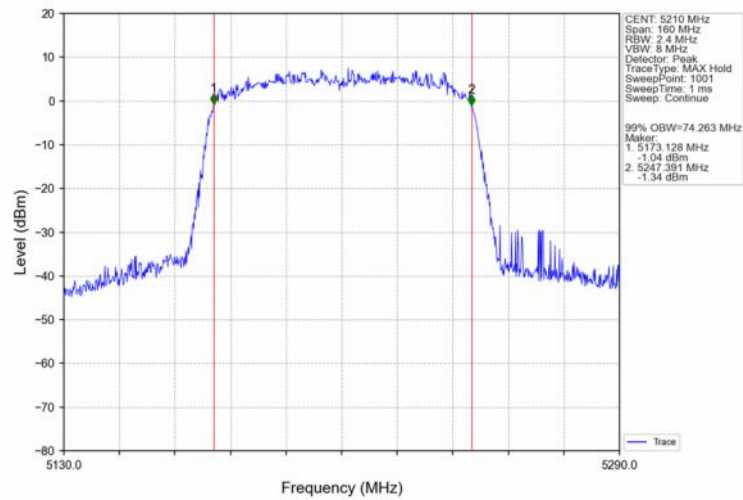
802.11ac(VHT40)\_MCH\_5550MHz\_Ant1\_NTNV MIMO



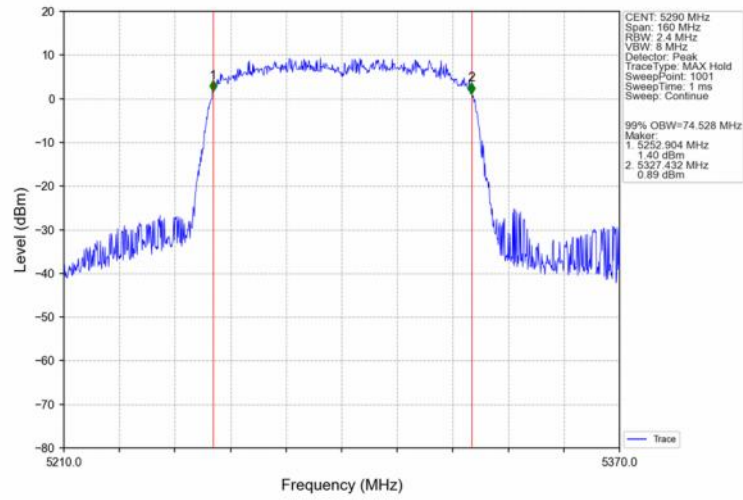
## 802.11ac(VHT40)\_HCH\_5670MHz\_Ant1\_NTNV MIMO



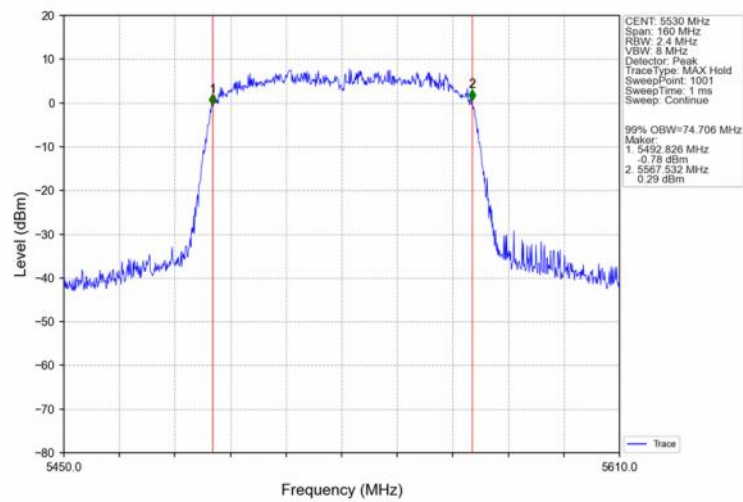
## 802.11ac(VHT80)\_MCH\_5210MHz\_Ant1\_NTNV MIMO



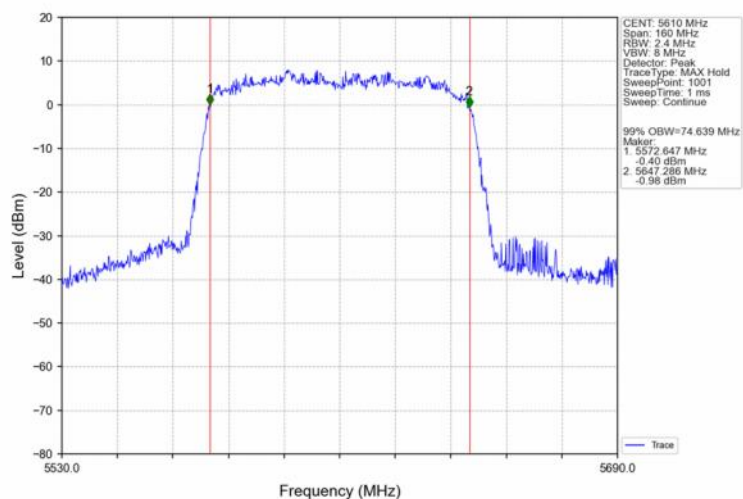
802.11ac(VHT80)\_MCH\_5290MHz\_Ant1\_NTNV MIMO



802.11ac(VHT80)\_LCH\_5530MHz\_Ant1\_NTNV MIMO

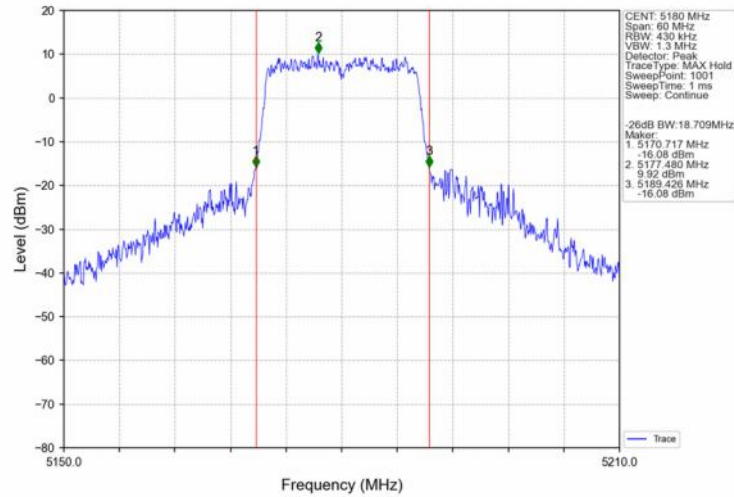


## 802.11ac(VHT80)\_HCH\_5610MHz\_Ant1\_NTNV MIMO

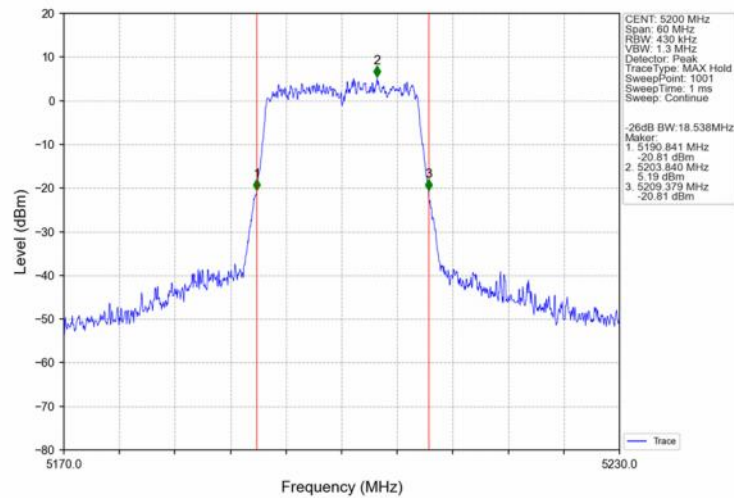


## 2.2.2 26dB BW

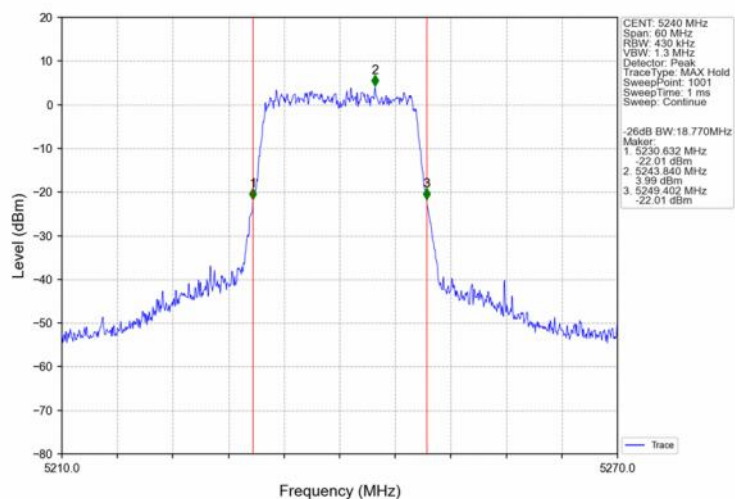
802.11a\_LCH\_5180MHz\_Ant1\_NTNV\_SISO



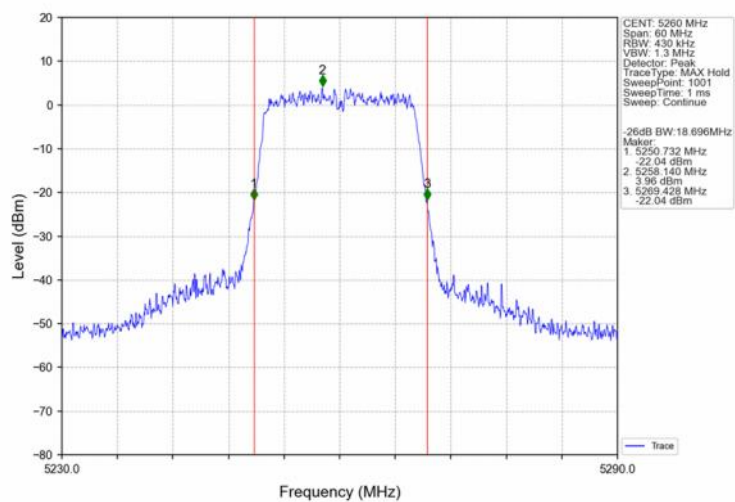
802.11a\_MCH\_5200MHz\_Ant1\_NTNV\_SISO



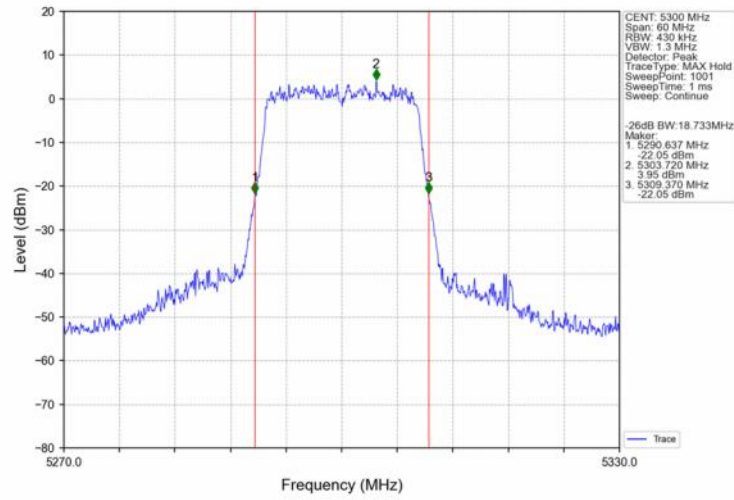
802.11a\_HCH\_5240MHz\_Ant1\_NTNV\_SISO



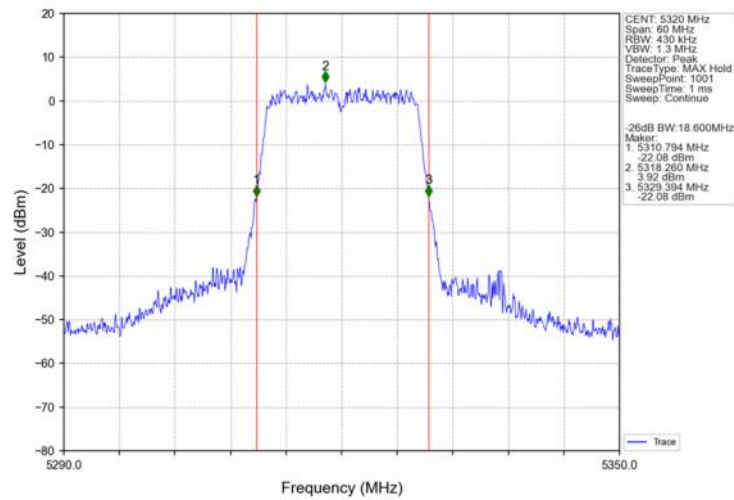
802.11a\_LCH\_5260MHz\_Ant1\_NTNV\_SISO



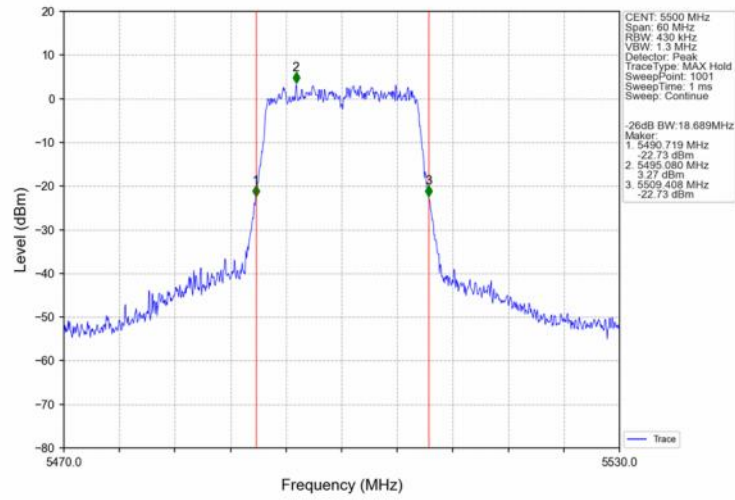
## 802.11a\_MCH\_5300MHz\_Ant1\_NTNV\_SISO



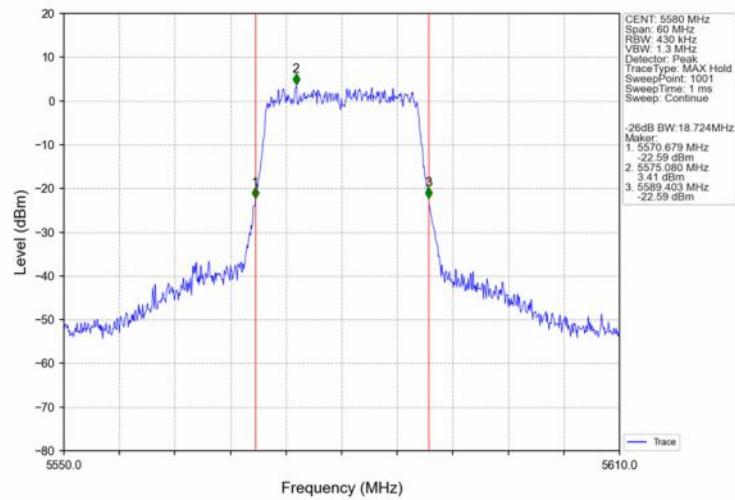
## 802.11a\_HCH\_5320MHz\_Ant1\_NTNV\_SISO



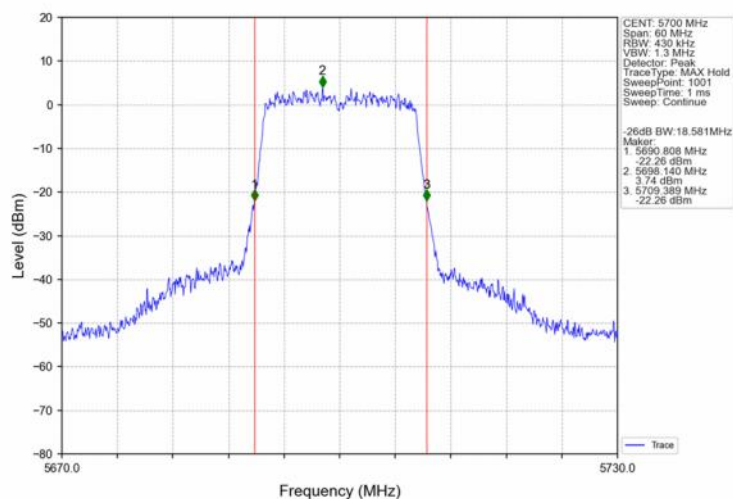
802.11a\_LCH\_5500MHz\_Ant1\_NTNV\_SISO



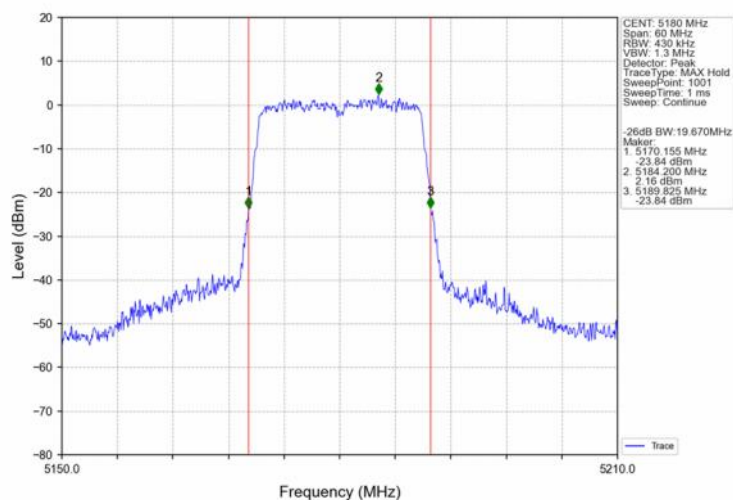
802.11a\_MCH\_5580MHz\_Ant1\_NTNV\_SISO



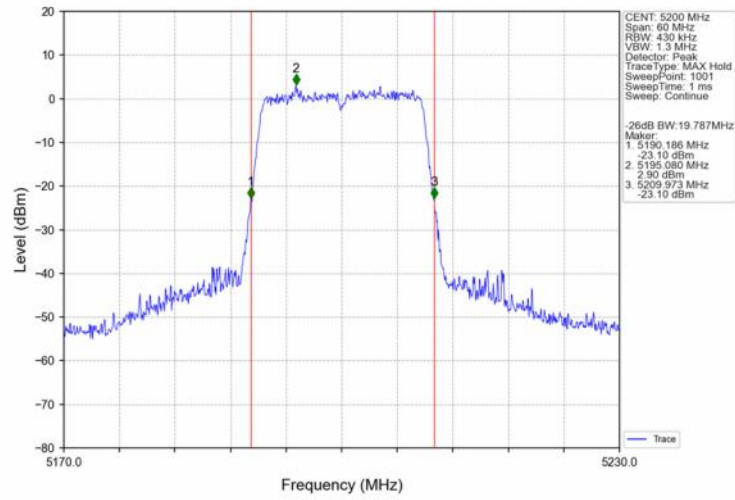
## 802.11a\_HCH\_5700MHz\_Ant1\_NTNV\_SISO



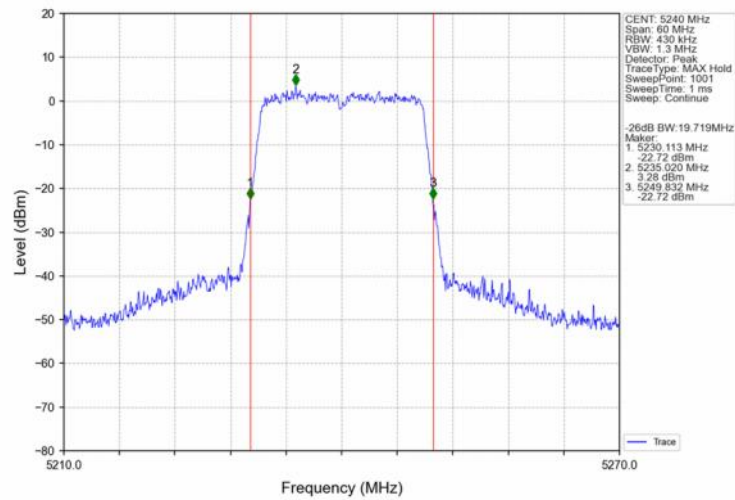
## 802.11n(HT20)\_LCH\_5180MHz\_Ant1\_NTNV\_MIMO



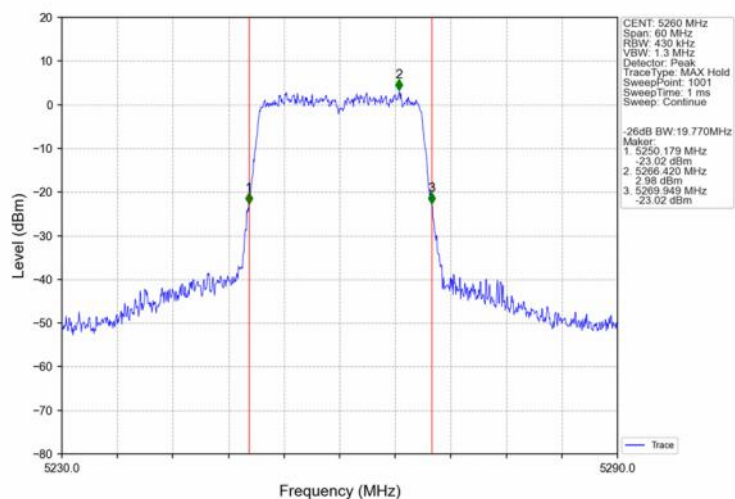
802.11n(HT20)\_MCH\_5200MHz\_Ant1\_NTNV MIMO



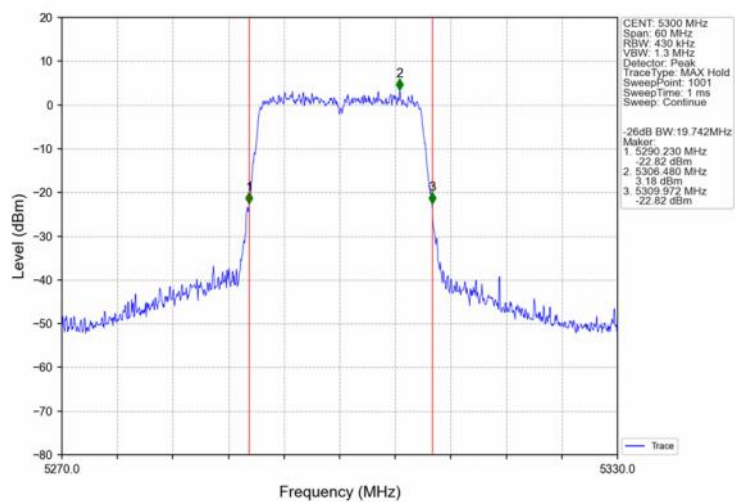
802.11n(HT20)\_HCH\_5240MHz\_Ant1\_NTNV MIMO



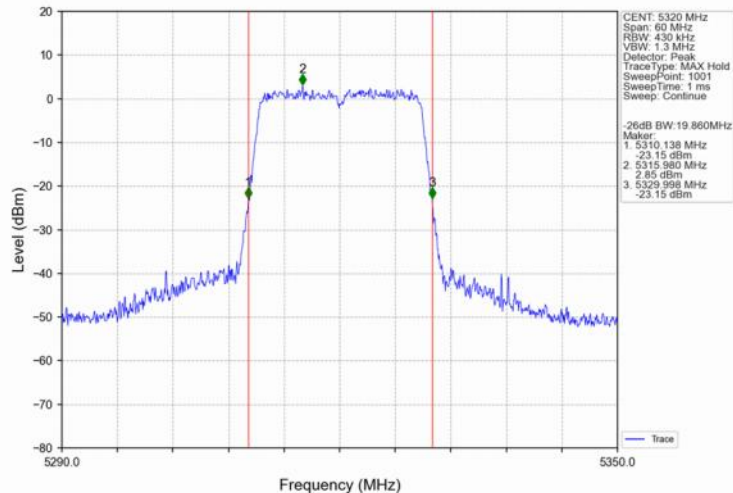
802.11n(HT20)\_LCH\_5260MHz\_Ant1\_NTNV MIMO



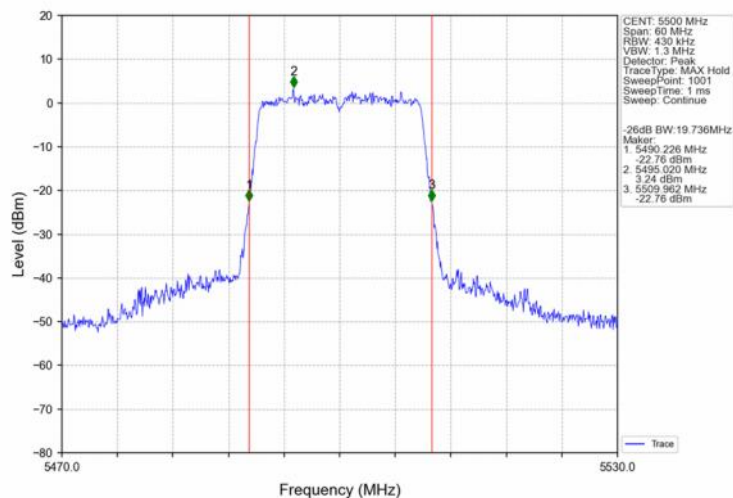
802.11n(HT20)\_MCH\_5300MHz\_Ant1\_NTNV MIMO



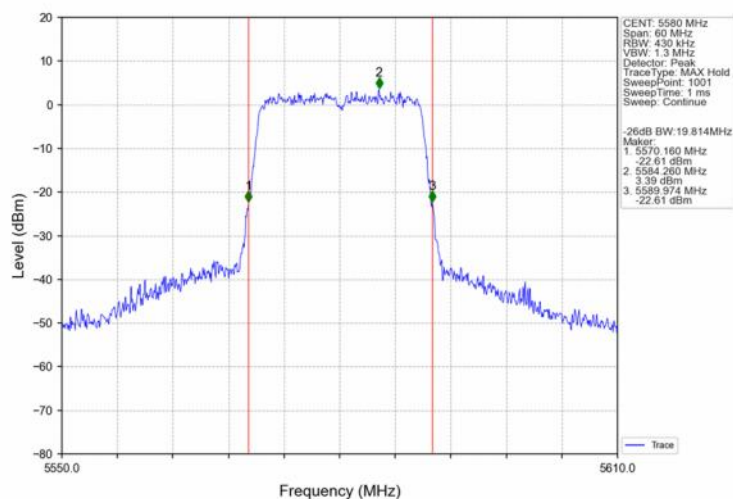
802.11n(HT20)\_HCH\_5320MHz\_Ant1\_NTNV MIMO



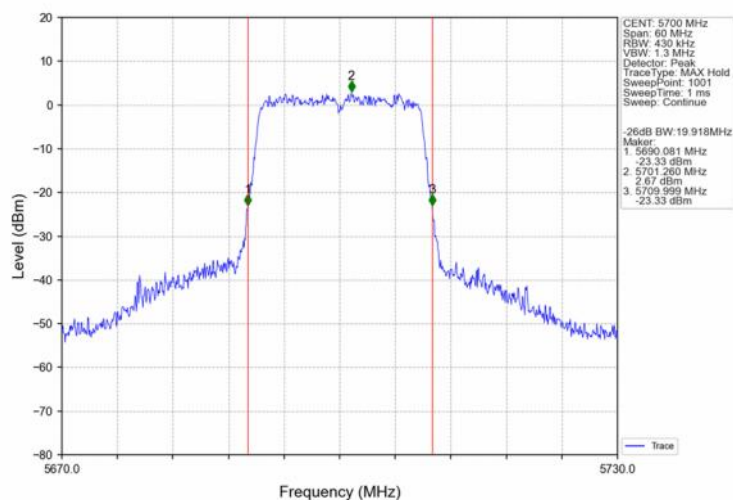
802.11n(HT20)\_LCH\_5500MHz\_Ant1\_NTNV MIMO



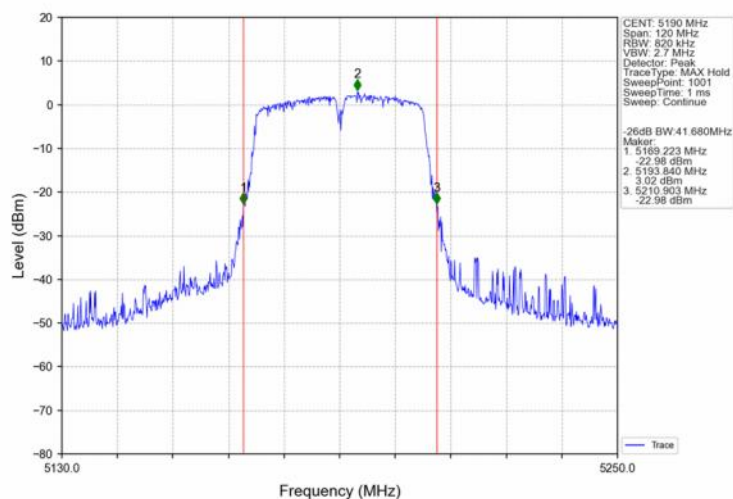
802.11n(HT20)\_MCH\_5580MHz\_Ant1\_NTNV MIMO



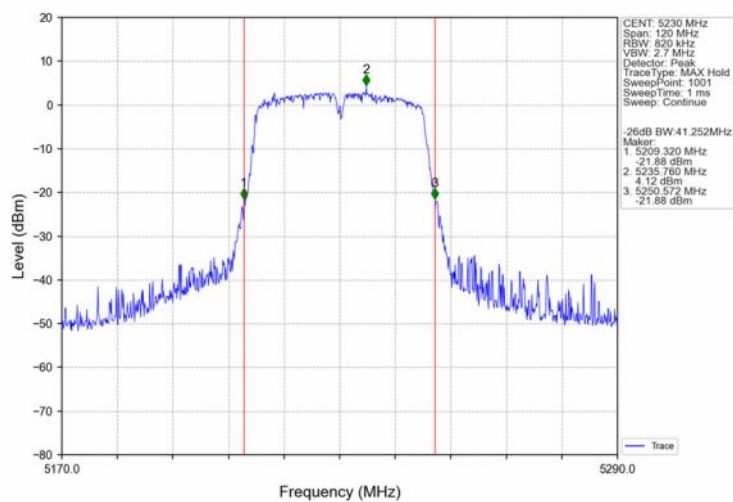
802.11n(HT20)\_HCH\_5700MHz\_Ant1\_NTNV MIMO



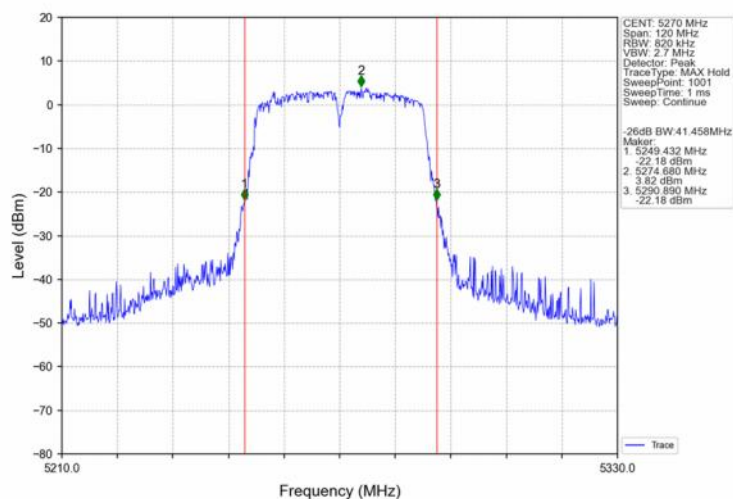
802.11n(HT40)\_LCH\_5190MHz\_Ant1\_NTNV MIMO



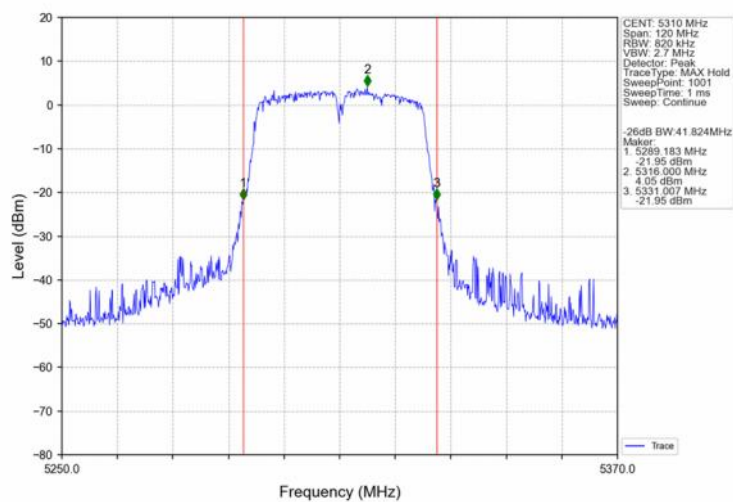
802.11n(HT40)\_HCH\_5230MHz\_Ant1\_NTNV MIMO



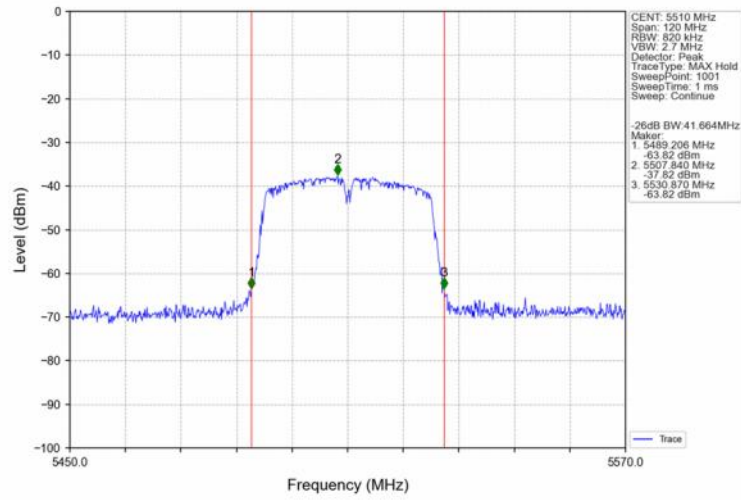
802.11n(HT40)\_LCH\_5270MHz\_Ant1\_NTNV MIMO



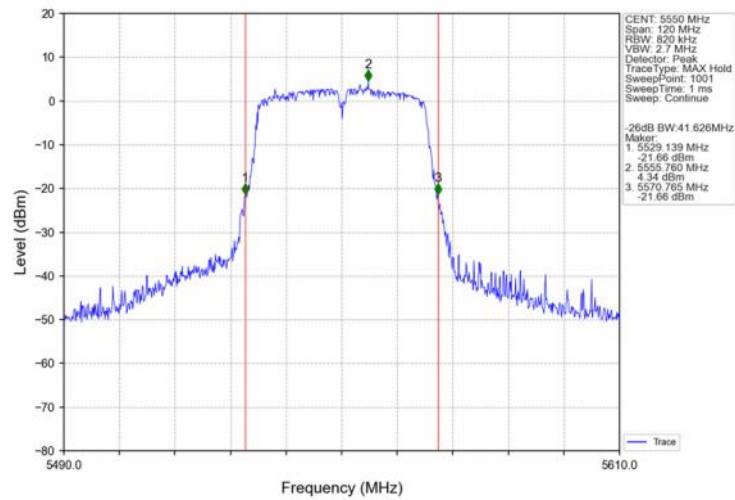
802.11n(HT40)\_HCH\_5310MHz\_Ant1\_NTNV MIMO



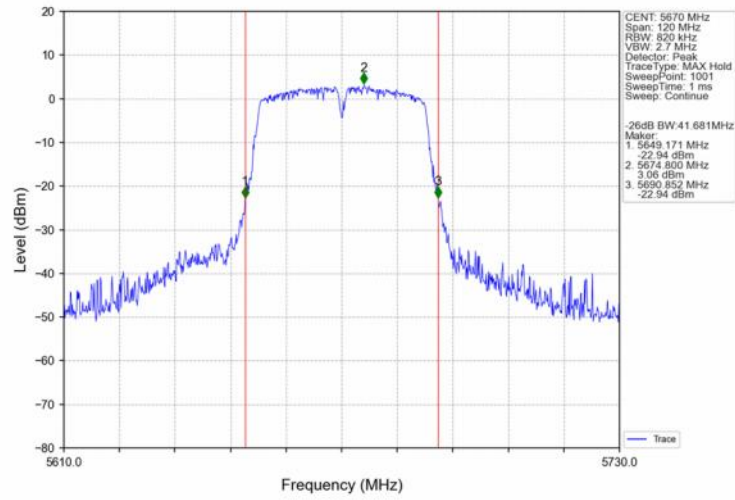
802.11n(HT40)\_LCH\_5510MHz\_Ant1\_NTNV MIMO



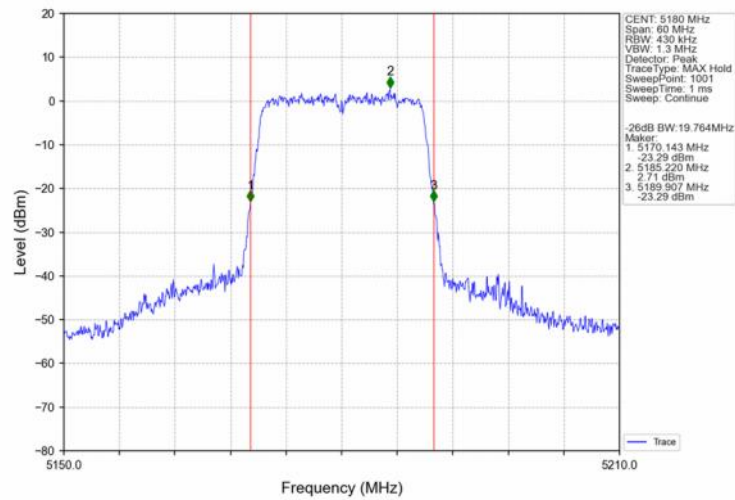
802.11n(HT40)\_MCH\_5550MHz\_Ant1\_NTNV MIMO



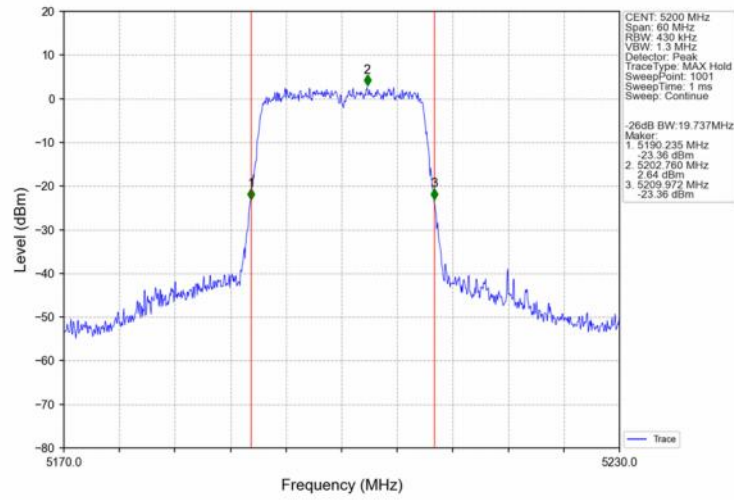
## 802.11n(HT40)\_HCH\_5670MHz\_Ant1\_NTNV MIMO



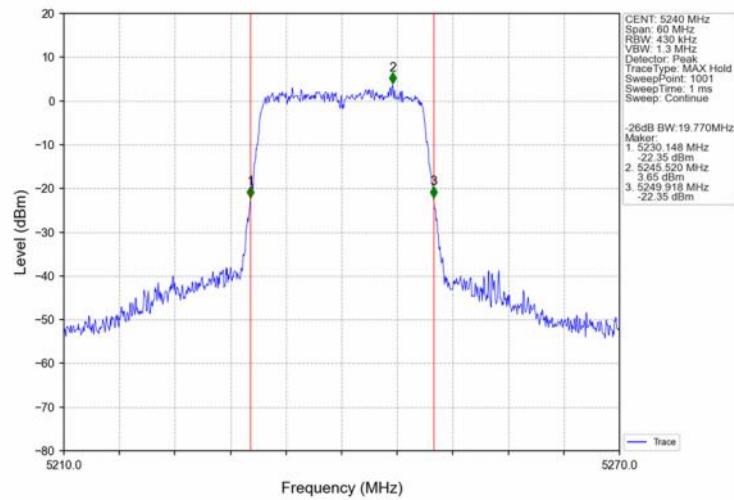
## 802.11ac(VHT20)\_LCH\_5180MHz\_Ant1\_NTNV MIMO



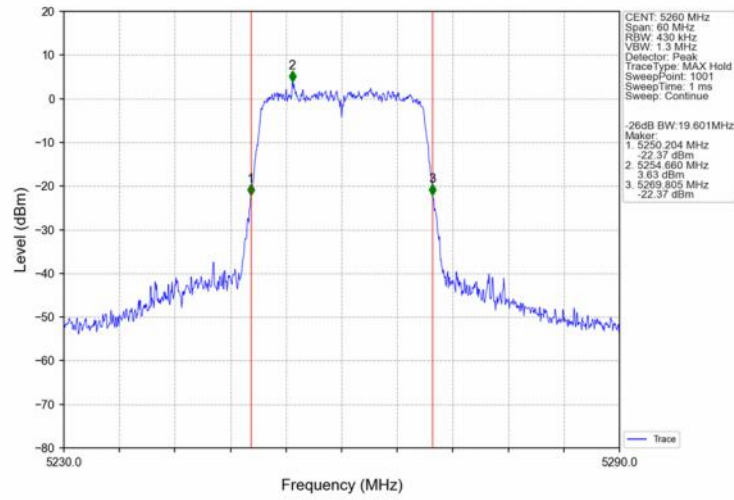
## 802.11ac(VHT20)\_MCH\_5200MHz\_Ant1\_NTNV MIMO



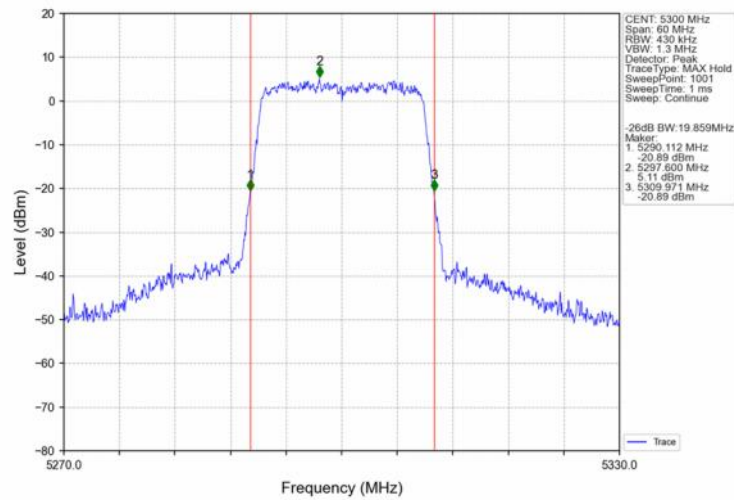
## 802.11ac(VHT20)\_HCH\_5240MHz\_Ant1\_NTNV MIMO



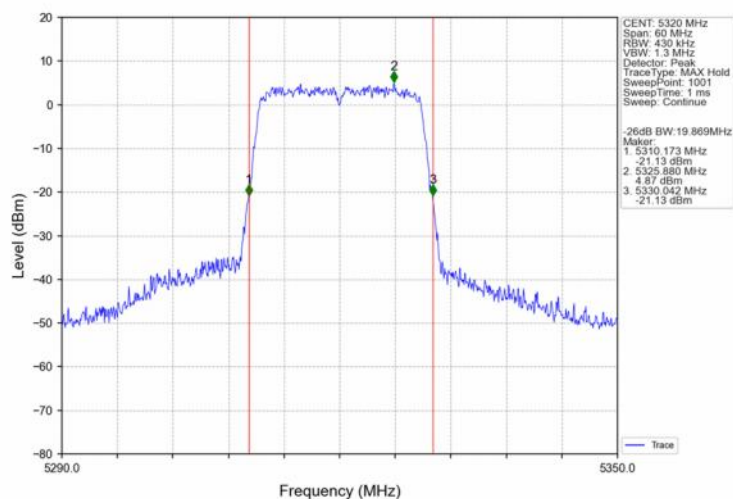
## 802.11ac(VHT20)\_LCH\_5260MHz\_Ant1\_NTNV MIMO



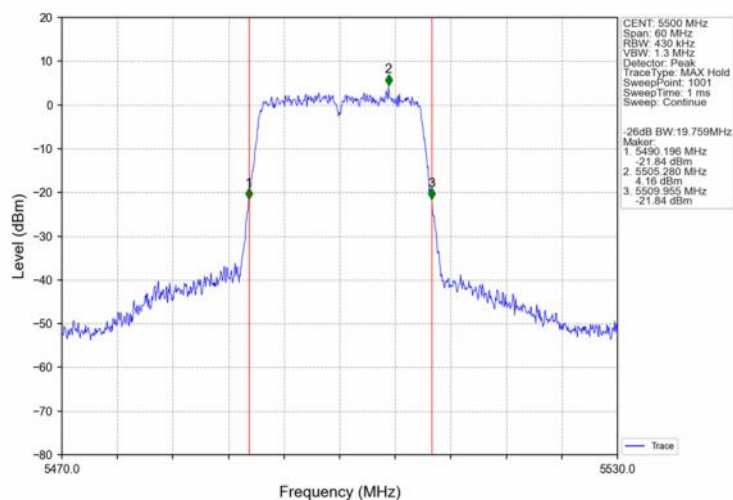
## 802.11ac(VHT20)\_MCH\_5300MHz\_Ant1\_NTNV MIMO



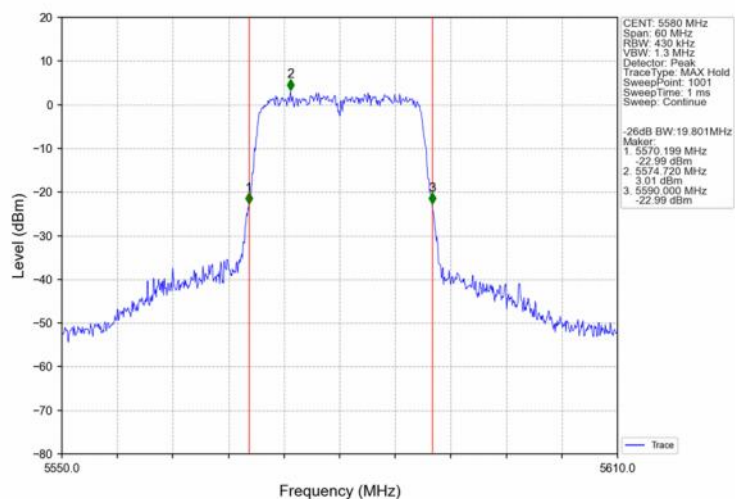
802.11ac(VHT20)\_HCH\_5320MHz\_Ant1\_NTNV MIMO



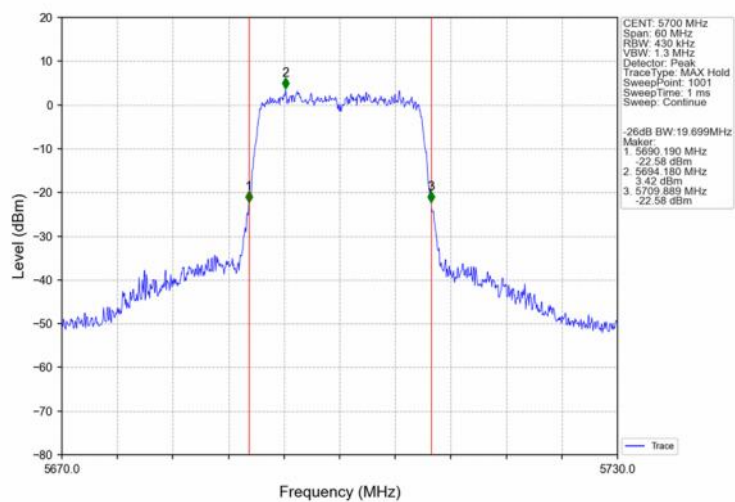
802.11ac(VHT20)\_LCH\_5500MHz\_Ant1\_NTNV MIMO



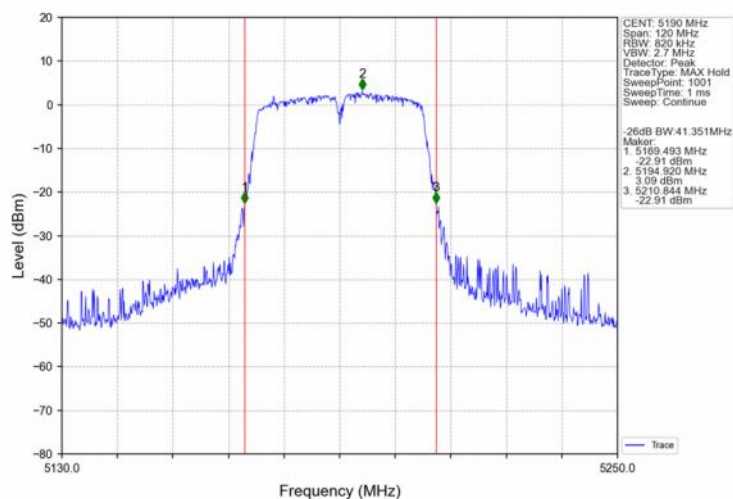
802.11ac(VHT20)\_MCH\_5580MHz\_Ant1\_NTNV MIMO



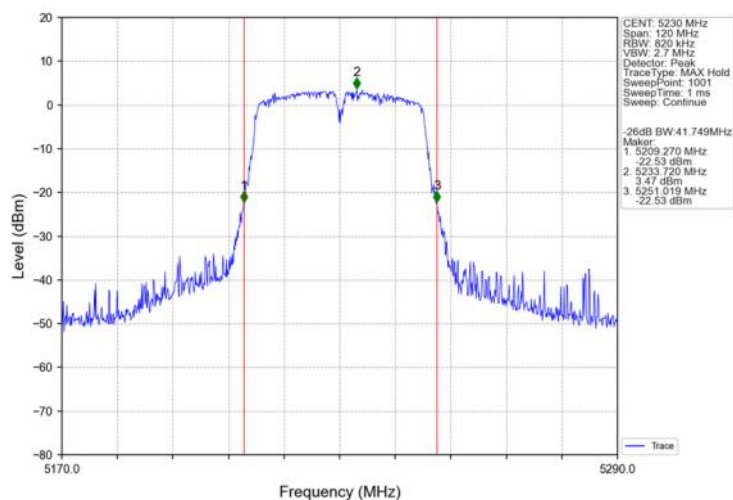
802.11ac(VHT20)\_HCH\_5700MHz\_Ant1\_NTNV MIMO



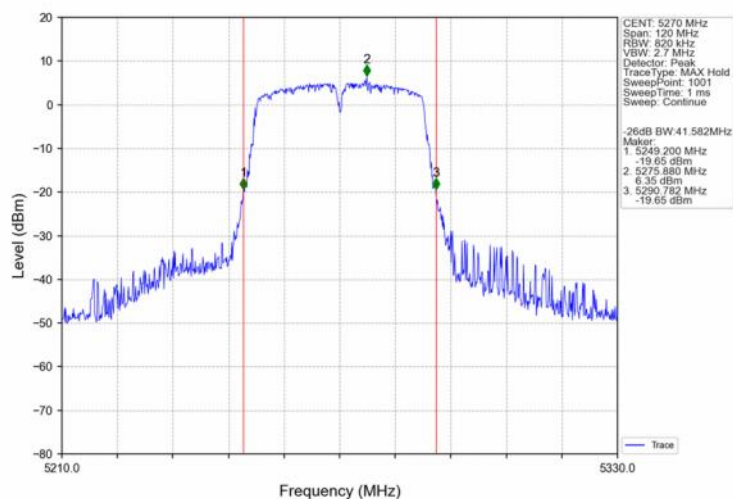
## 802.11ac(VHT40)\_LCH\_5190MHz\_Ant1\_NTNV MIMO



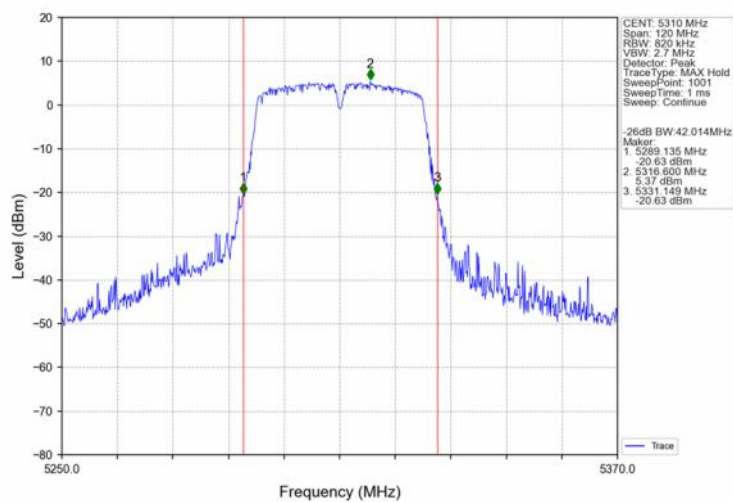
## 802.11ac(VHT40)\_HCH\_5230MHz\_Ant1\_NTNV MIMO



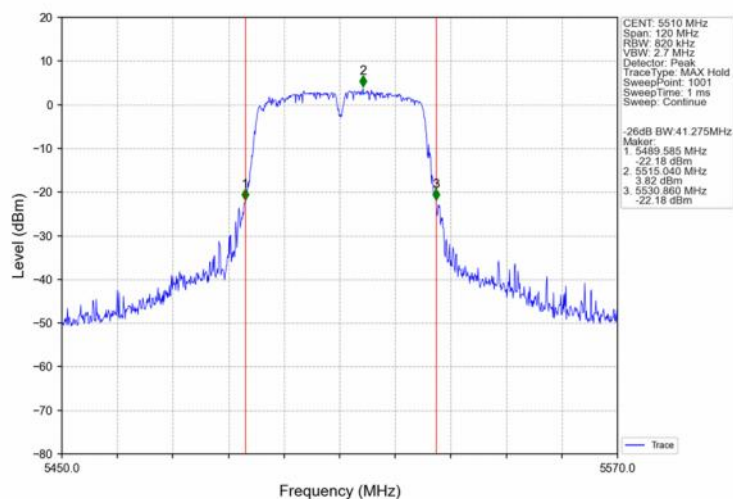
802.11ac(VHT40)\_LCH\_5270MHz\_Ant1\_NTNV MIMO



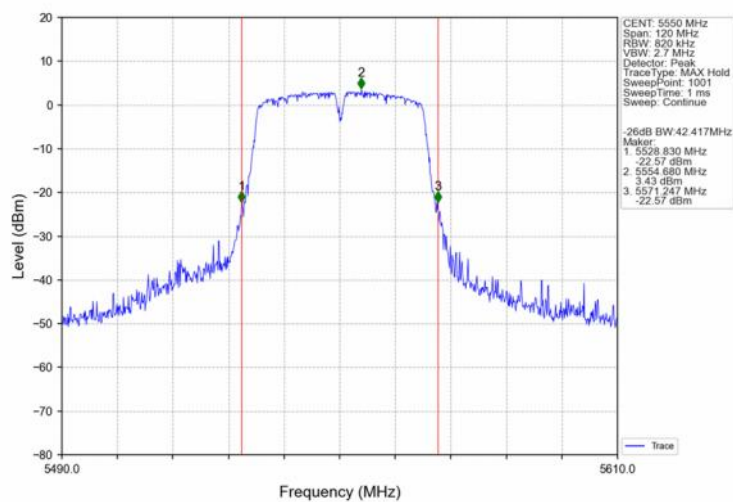
802.11ac(VHT40)\_HCH\_5310MHz\_Ant1\_NTNV MIMO



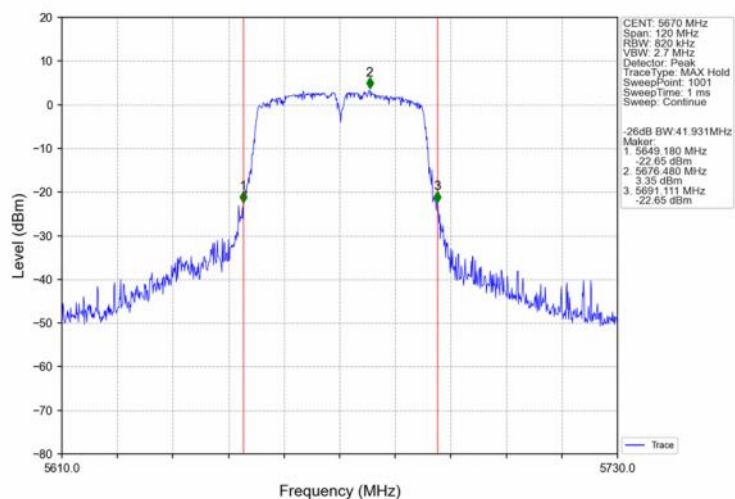
802.11ac(VHT40)\_LCH\_5510MHz\_Ant1\_NTNV MIMO



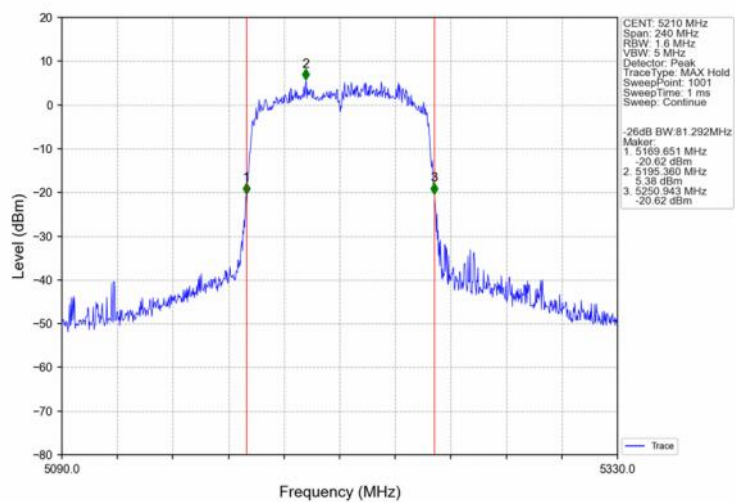
802.11ac(VHT40)\_MCH\_5550MHz\_Ant1\_NTNV MIMO



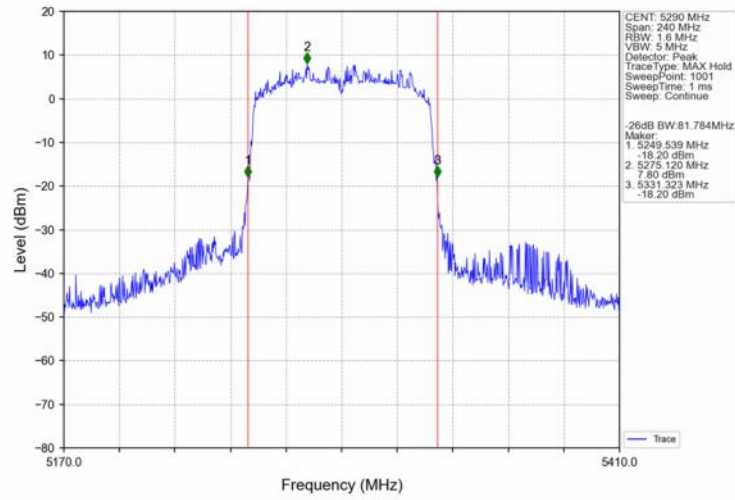
## 802.11ac(VHT40)\_HCH\_5670MHz\_Ant1\_NTNV MIMO



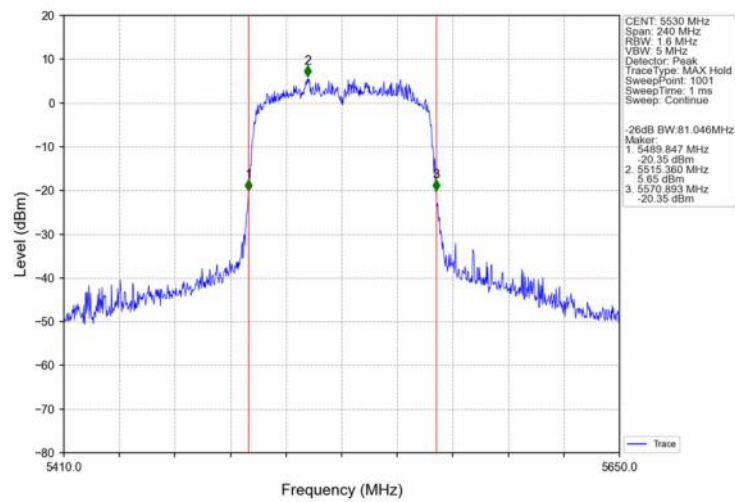
## 802.11ac(VHT80)\_MCH\_5210MHz\_Ant1\_NTNV MIMO



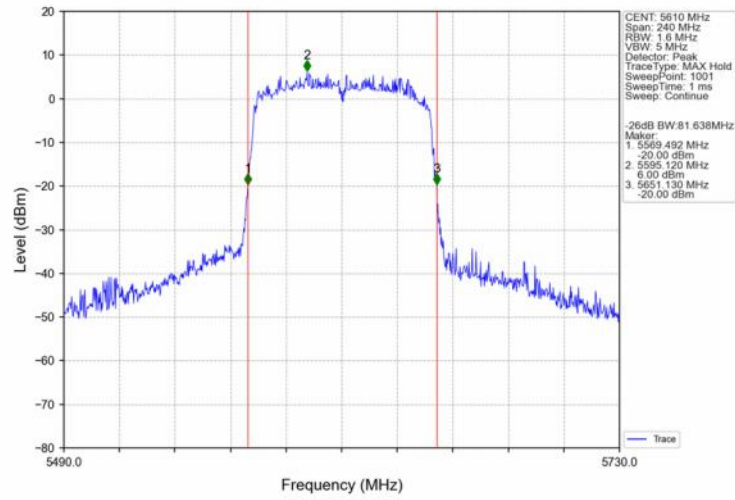
802.11ac(VHT80)\_MCH\_5290MHz\_Ant1\_NTNV MIMO



802.11ac(VHT80)\_LCH\_5530MHz\_Ant1\_NTNV MIMO



## 802.11ac(VHT80)\_HCH\_5610MHz\_Ant1\_NTNV MIMO



### 3. Maximum Conducted Output Power

#### 3.1 Test Result

##### 3.1.1 Power

| Mode             | TX Type | Frequency (MHz) | Maximum Average Conducted Output Power (dBm) |       |       |         | Verdict |
|------------------|---------|-----------------|----------------------------------------------|-------|-------|---------|---------|
|                  |         |                 | ANT1                                         | ANT2  | MIMO  | Limit   |         |
| 802.11a          | SISO    | 5180            | 11.41                                        | 10.36 | /     | <=23.98 | Pass    |
|                  |         | 5200            | 11.21                                        | 10.46 | /     | <=23.98 | Pass    |
|                  |         | 5240            | 10.25                                        | 10.84 | /     | <=23.98 | Pass    |
|                  |         | 5260            | 10.19                                        | 9.92  | /     | <=23.98 | Pass    |
|                  |         | 5300            | 10.44                                        | 10.01 | /     | <=23.98 | Pass    |
|                  |         | 5320            | 9.91                                         | 10.71 | /     | <=23.98 | Pass    |
|                  |         | 5500            | 10.09                                        | 11.49 | /     | <=23.98 | Pass    |
|                  |         | 5580            | 9.89                                         | 9.93  | /     | <=23.98 | Pass    |
| 802.11n (HT20)   | MIMO    | 5700            | 10.35                                        | 12.31 | /     | <=23.98 | Pass    |
|                  |         | 5180            | 9.60                                         | 10.55 | 13.11 | <=22.66 | Pass    |
|                  |         | 5200            | 10.07                                        | 10.88 | 13.50 | <=22.66 | Pass    |
|                  |         | 5240            | 10.30                                        | 10.96 | 13.65 | <=22.66 | Pass    |
|                  |         | 5260            | 10.62                                        | 10.00 | 13.33 | <=22.66 | Pass    |
|                  |         | 5300            | 10.51                                        | 10.13 | 13.33 | <=22.66 | Pass    |
|                  |         | 5320            | 10.55                                        | 10.57 | 13.57 | <=22.66 | Pass    |
|                  |         | 5500            | 10.57                                        | 12.12 | 14.42 | <=22.66 | Pass    |
| 802.11n (HT40)   | MIMO    | 5580            | 11.05                                        | 10.08 | 13.60 | <=22.66 | Pass    |
|                  |         | 5700            | 10.66                                        | 12.29 | 14.56 | <=22.66 | Pass    |
|                  |         | 5190            | 9.91                                         | 11.19 | 13.61 | <=22.66 | Pass    |
|                  |         | 5230            | 10.85                                        | 11.63 | 14.27 | <=22.66 | Pass    |
|                  |         | 5270            | 10.98                                        | 10.47 | 13.74 | <=22.66 | Pass    |
|                  |         | 5310            | 11.04                                        | 11.15 | 14.11 | <=22.66 | Pass    |
|                  |         | 5510            | 11.01                                        | 11.46 | 14.25 | <=22.66 | Pass    |
| 802.11ac (VHT20) | MIMO    | 5550            | 10.93                                        | 10.33 | 13.65 | <=22.66 | Pass    |
|                  |         | 5670            | 10.41                                        | 11.87 | 14.21 | <=22.66 | Pass    |
|                  |         | 5180            | 9.97                                         | 10.46 | 13.23 | <=22.66 | Pass    |
|                  |         | 5200            | 10.45                                        | 10.74 | 13.61 | <=22.66 | Pass    |
|                  |         | 5240            | 10.79                                        | 10.72 | 13.77 | <=22.66 | Pass    |
|                  |         | 5260            | 10.17                                        | 9.22  | 12.73 | <=22.66 | Pass    |
|                  |         | 5300            | 12.89                                        | 9.22  | 14.44 | <=22.66 | Pass    |
|                  |         | 5320            | 12.73                                        | 9.59  | 14.45 | <=22.66 | Pass    |
| 802.11ac (VHT40) | MIMO    | 5500            | 10.85                                        | 11.02 | 13.95 | <=22.66 | Pass    |
|                  |         | 5580            | 10.96                                        | 9.43  | 13.27 | <=22.66 | Pass    |
|                  |         | 5700            | 10.98                                        | 11.93 | 14.49 | <=22.66 | Pass    |
|                  |         | 5190            | 10.45                                        | 10.70 | 13.59 | <=22.66 | Pass    |
|                  |         | 5230            | 10.94                                        | 11.17 | 14.07 | <=22.66 | Pass    |
|                  |         | 5270            | 13.04                                        | 9.34  | 14.58 | <=22.66 | Pass    |
|                  |         | 5310            | 11.39                                        | 10.73 | 14.08 | <=22.66 | Pass    |
| 802.11ac (VHT80) | MIMO    | 5510            | 11.13                                        | 9.43  | 13.37 | <=22.66 | Pass    |
|                  |         | 5550            | 10.89                                        | 8.92  | 13.03 | <=22.66 | Pass    |
|                  |         | 5670            | 10.79                                        | 10.51 | 13.66 | <=22.66 | Pass    |
|                  |         | 5210            | 10.98                                        | 11.57 | 14.30 | <=22.66 | Pass    |
|                  |         | 5290            | 11.69                                        | 8.20  | 13.30 | <=22.66 | Pass    |
|                  |         | 5530            | 11.42                                        | 9.23  | 13.47 | <=22.66 | Pass    |
|                  |         | 5610            | 11.63                                        | 8.77  | 13.44 | <=22.66 | Pass    |

Note1: Antenna Gain:

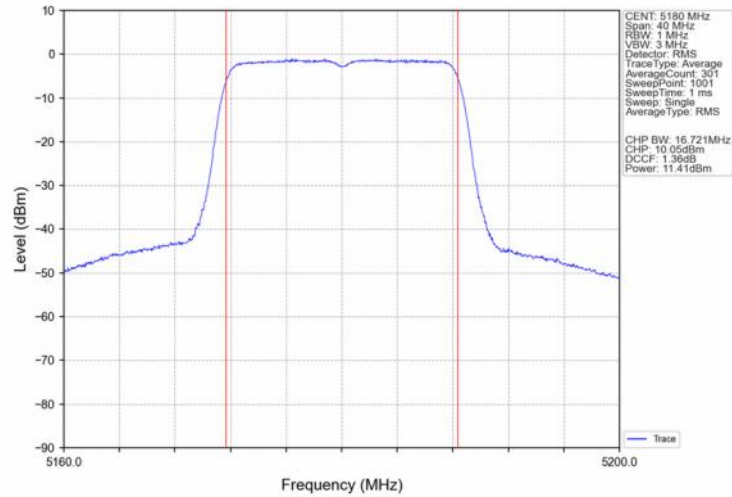
Ant1: 4.46dBi; Ant2: 4.16dBi;

Note2: transmit signals are correlated, Directional Gain:7.32 is more than 6dBi

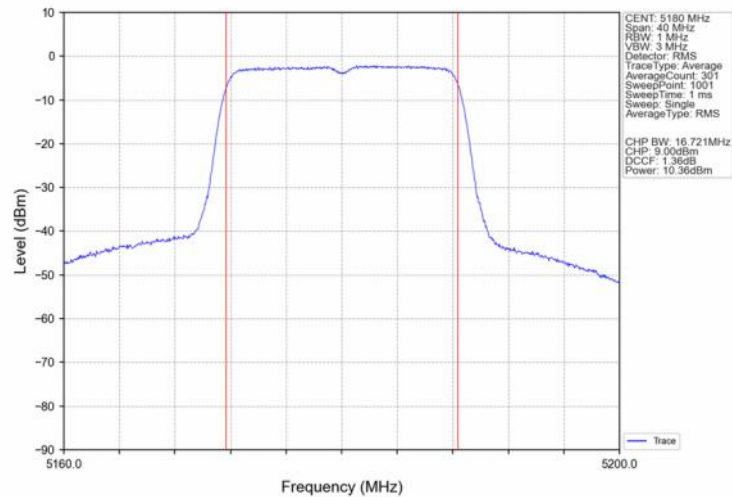
## 3.2 Test Graph

### 3.2.1 Power

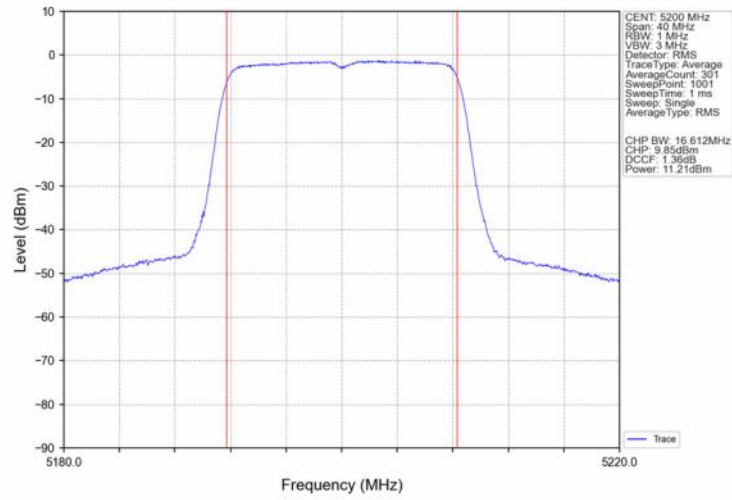
802.11a\_LCH\_5180MHz\_Ant1\_NTNV



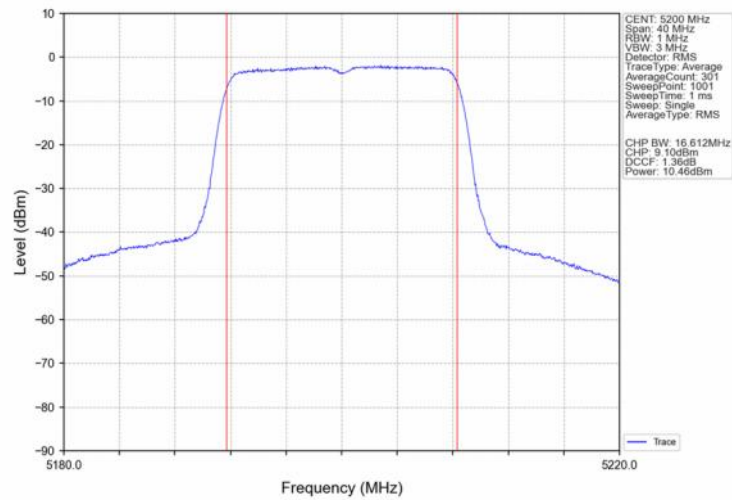
802.11a\_LCH\_5180MHz\_Ant2\_NTNV



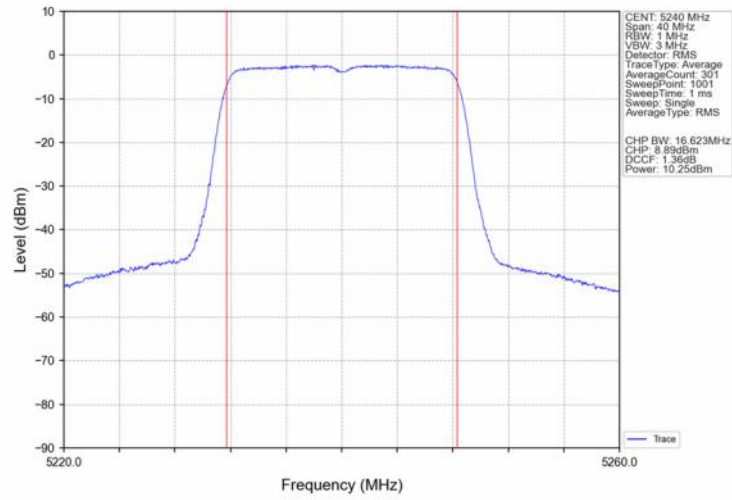
802.11a\_MCH\_5200MHz\_Ant1\_NTNV



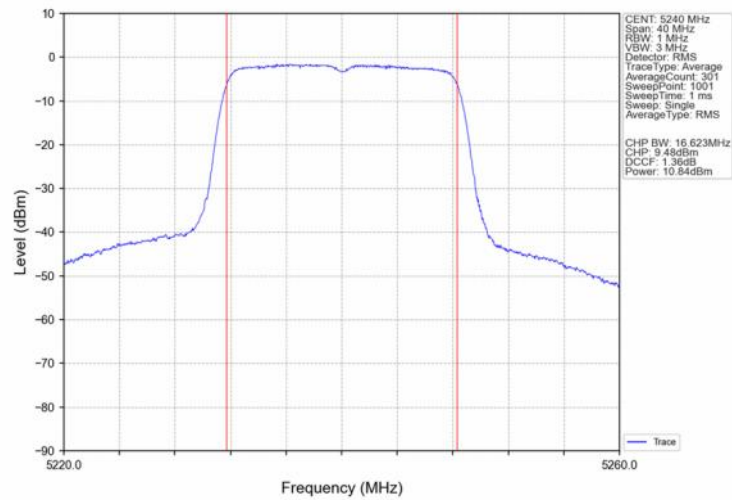
802.11a\_MCH\_5200MHz\_Ant2\_NTNV



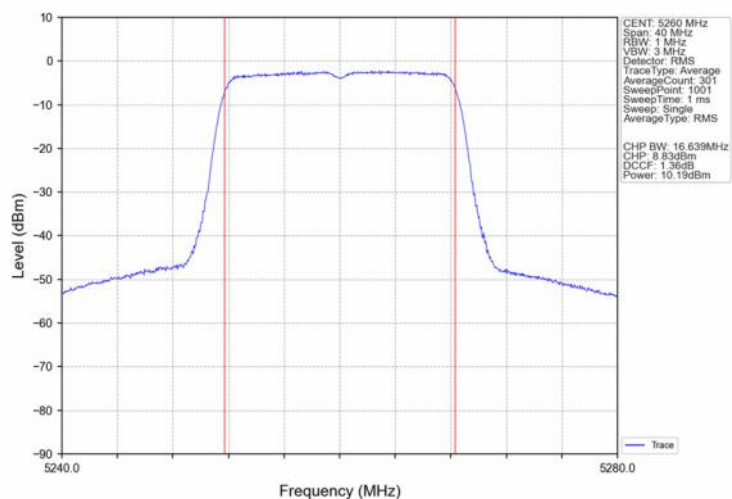
802.11a\_HCH\_5240MHz\_Ant1\_NTNV



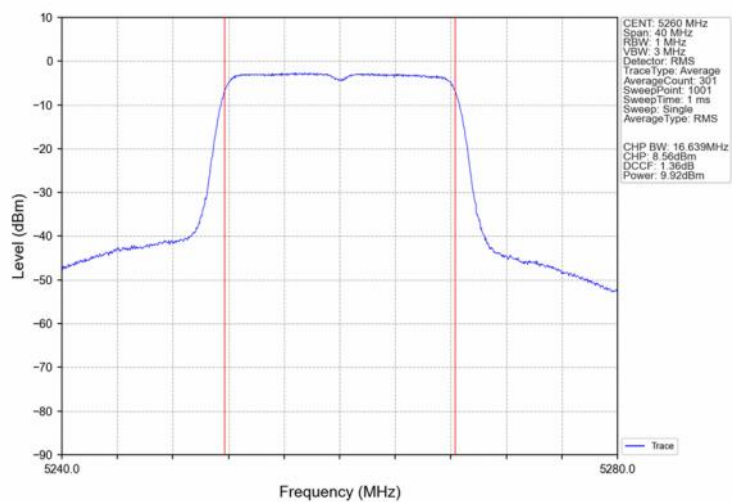
802.11a\_HCH\_5240MHz\_Ant2\_NTNV



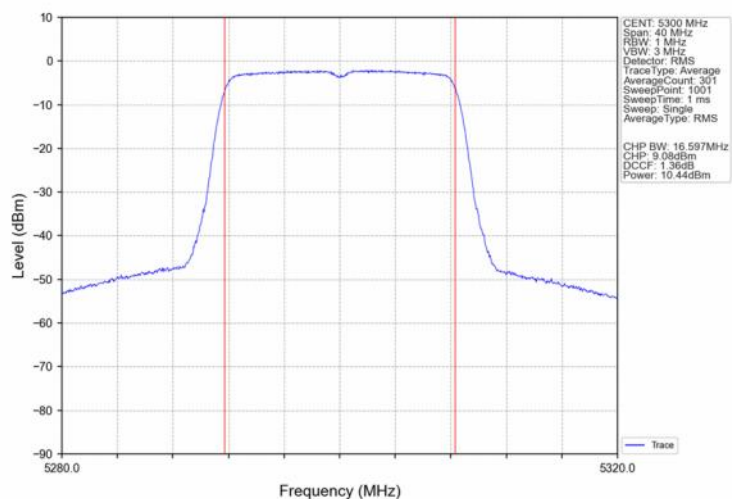
802.11a\_LCH\_5260MHz\_Ant1\_NTNV



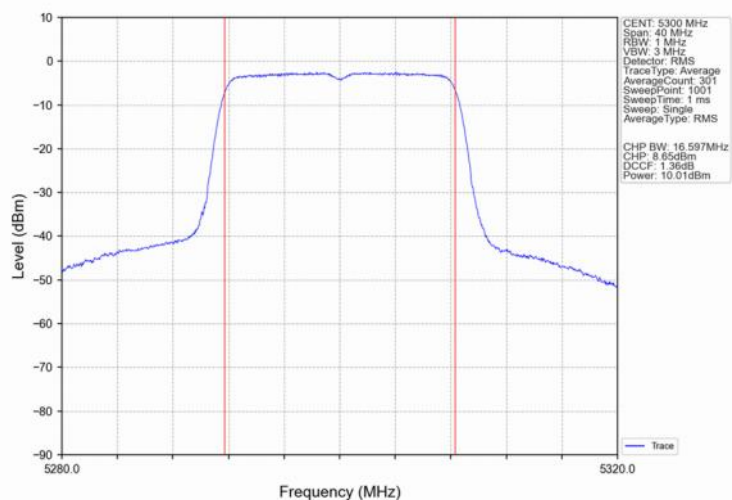
802.11a\_LCH\_5260MHz\_Ant2\_NTNV



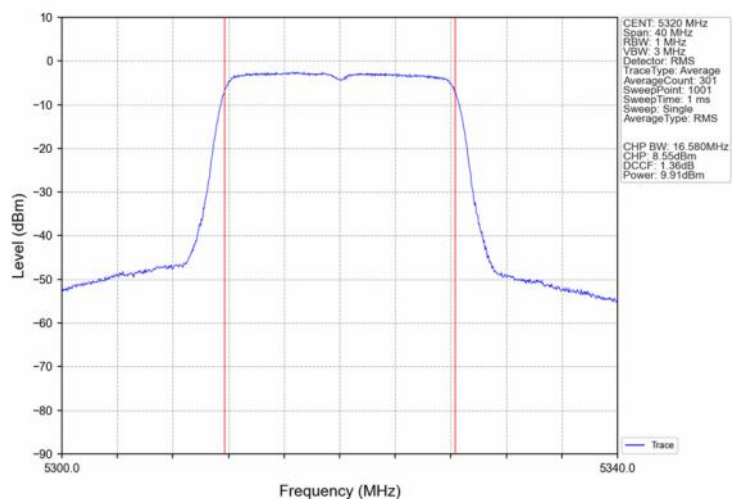
802.11a\_MCH\_5300MHz\_Ant1\_NTNV



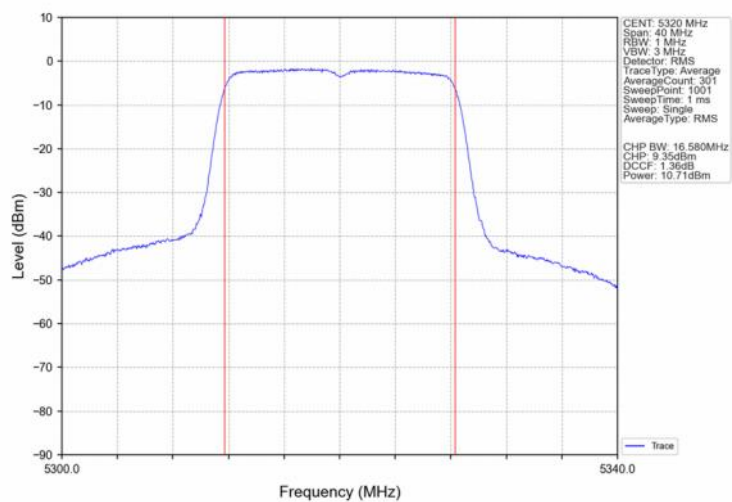
802.11a\_MCH\_5300MHz\_Ant2\_NTNV



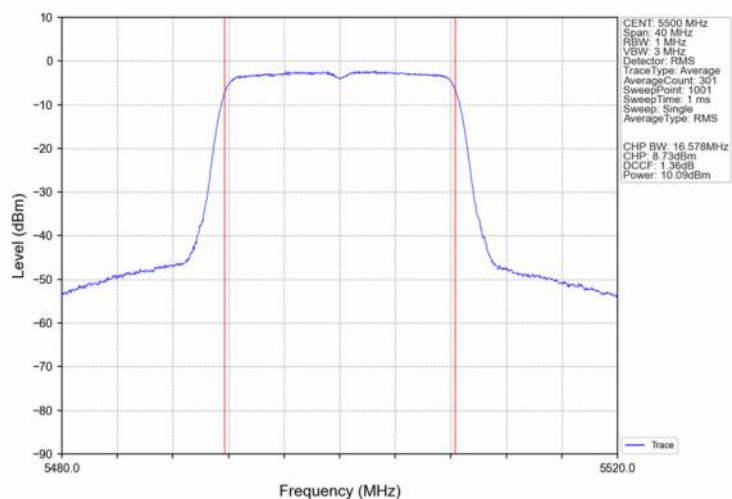
802.11a\_HCH\_5320MHz\_Ant1\_NTNV



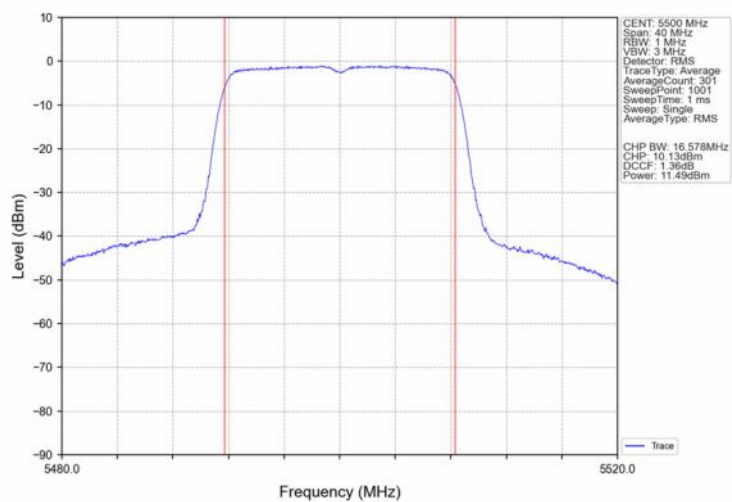
802.11a\_HCH\_5320MHz\_Ant2\_NTNV



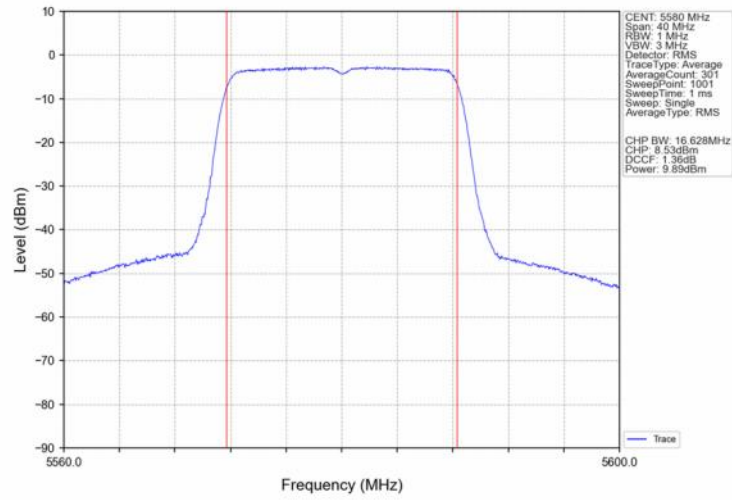
802.11a\_LCH\_5500MHz\_Ant1\_NTNV



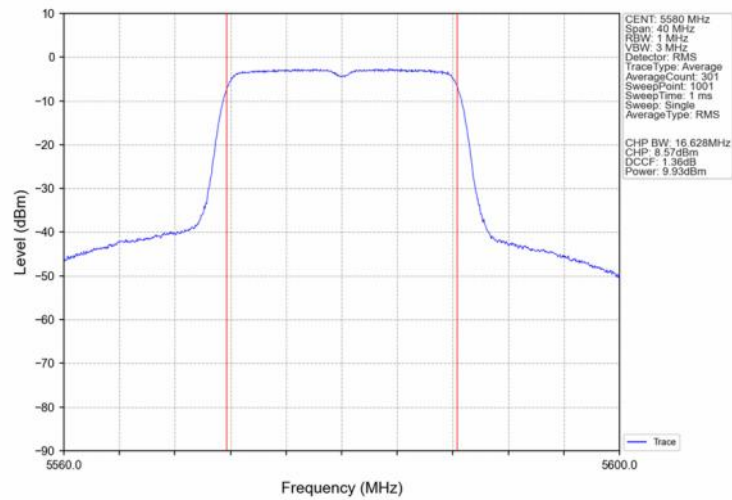
802.11a\_LCH\_5500MHz\_Ant2\_NTNV



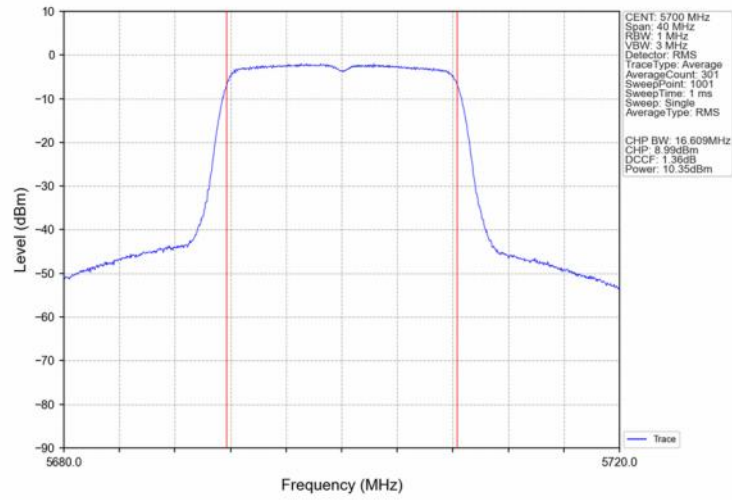
802.11a\_MCH\_5580MHz\_Ant1\_NTNV



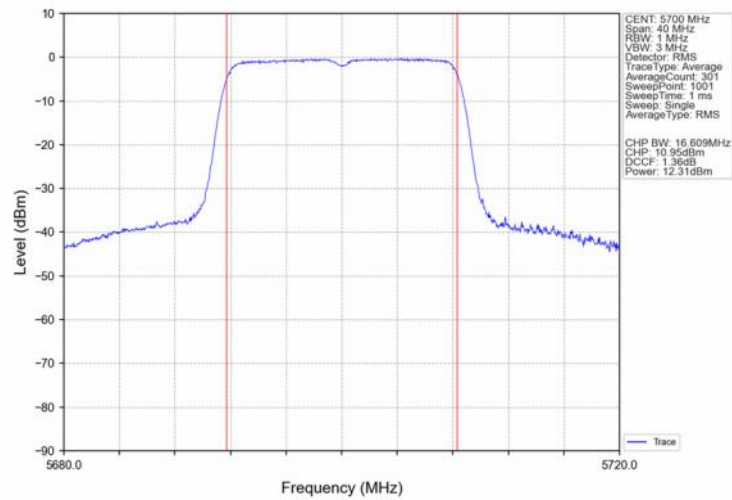
802.11a\_MCH\_5580MHz\_Ant2\_NTNV



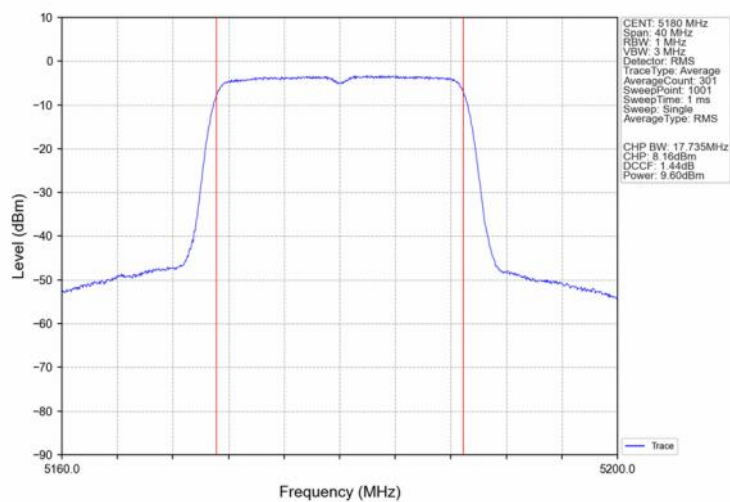
802.11a\_HCH\_5700MHz\_Ant1\_NTNV



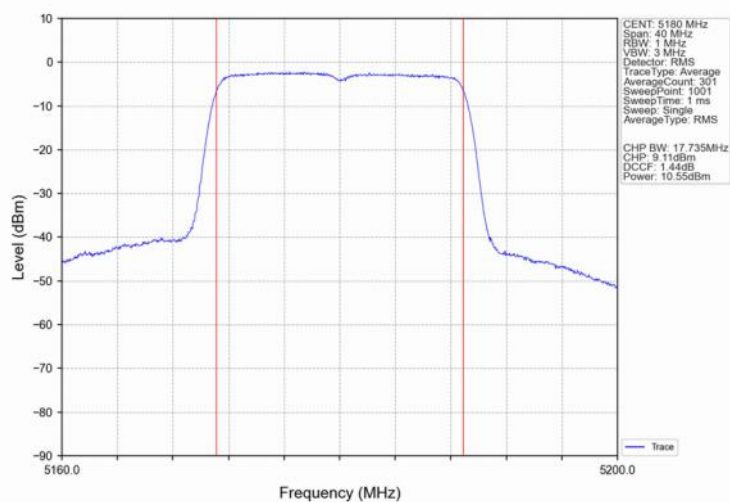
802.11a\_HCH\_5700MHz\_Ant2\_NTNV



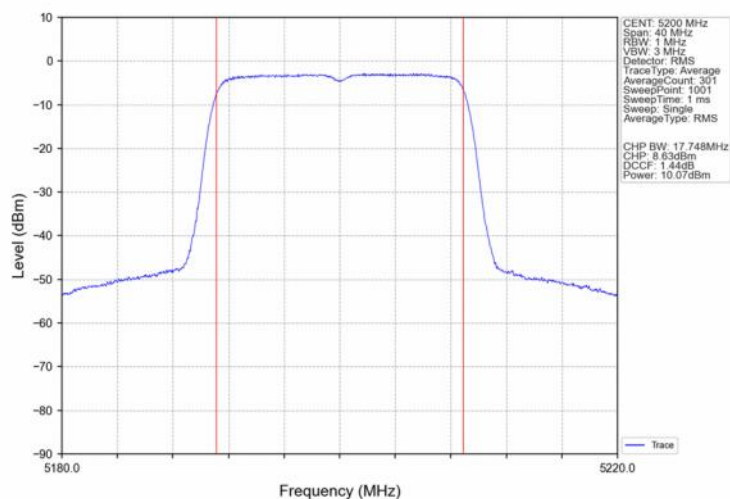
802.11n(HT20)\_LCH\_5180MHz\_Ant1\_NTNV



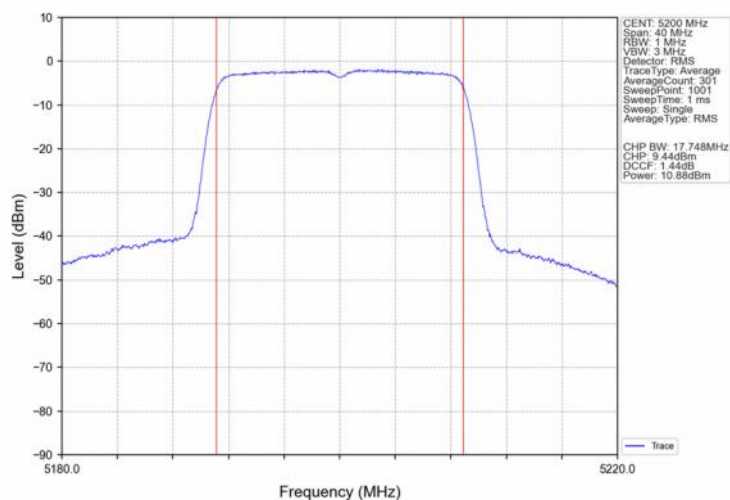
802.11n(HT20)\_LCH\_5180MHz\_Ant2\_NTNV



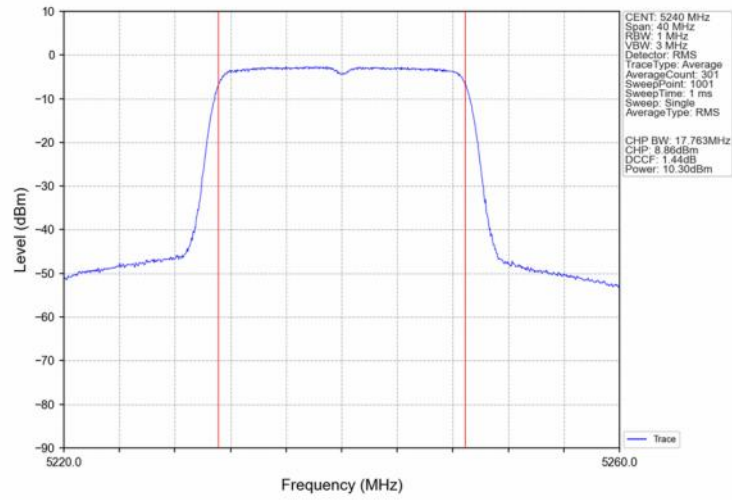
802.11n(HT20)\_MCH\_5200MHz\_Ant1\_NTNV



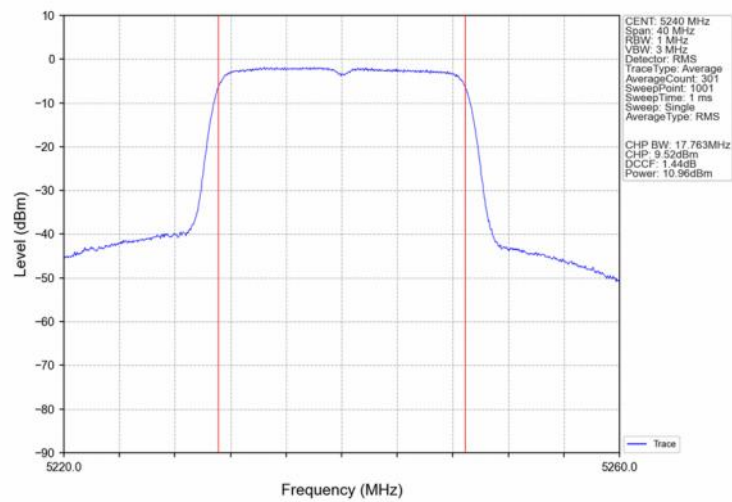
802.11n(HT20)\_MCH\_5200MHz\_Ant2\_NTNV



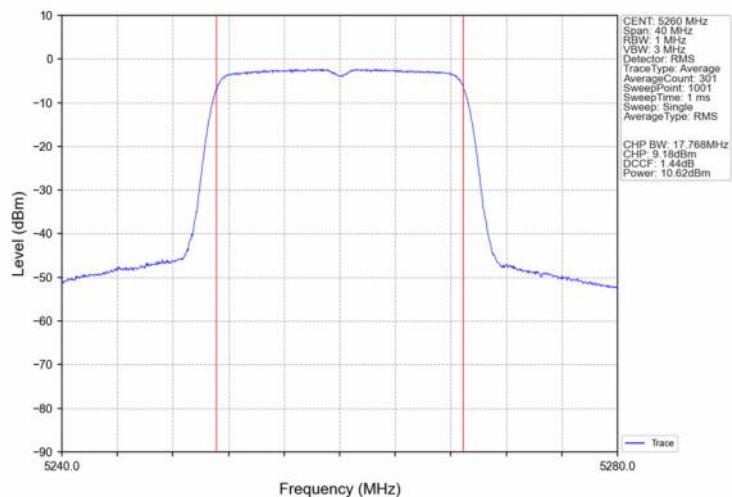
802.11n(HT20)\_HCH\_5240MHz\_Ant1\_NTNV



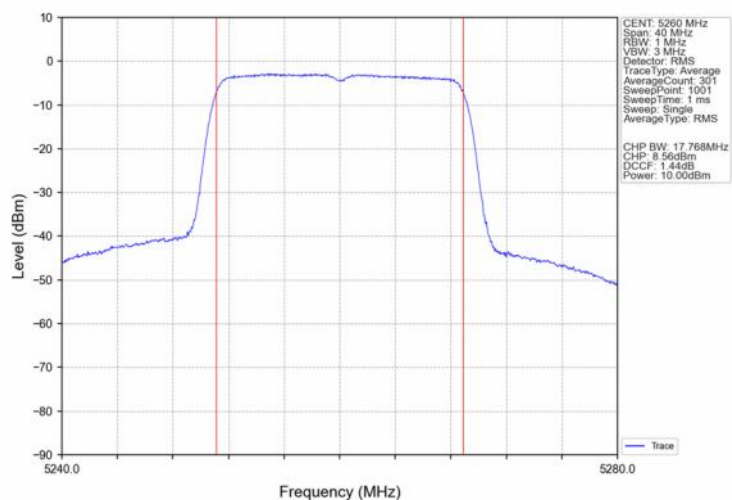
802.11n(HT20)\_HCH\_5240MHz\_Ant2\_NTNV



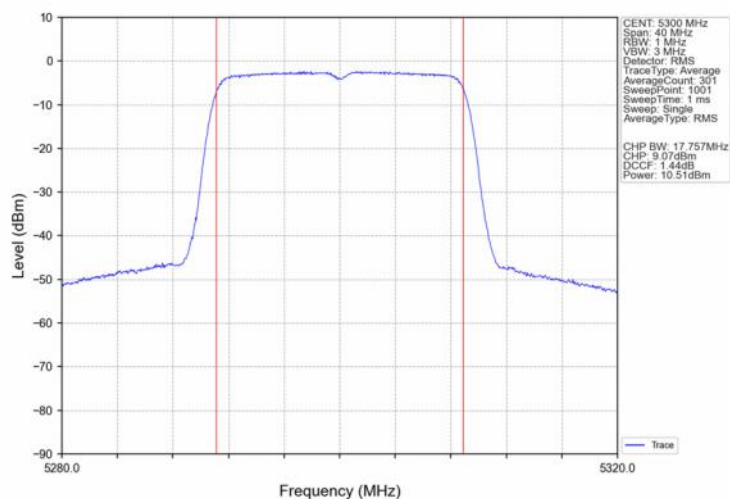
802.11n(HT20)\_LCH\_5260MHz\_Ant1\_NTNV



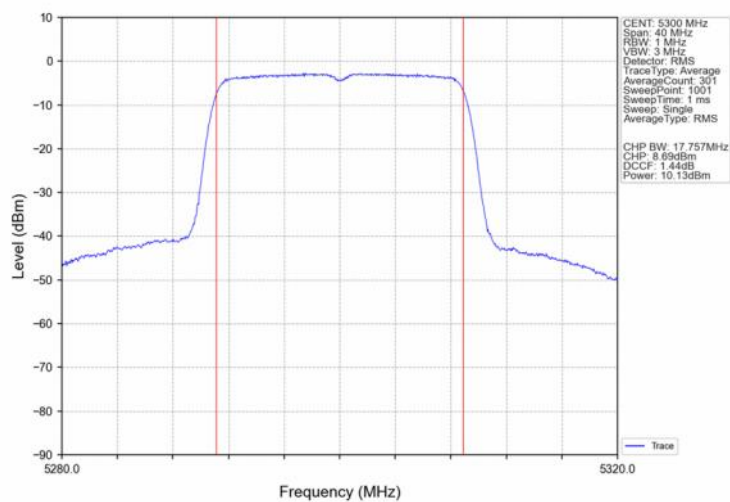
802.11n(HT20)\_LCH\_5260MHz\_Ant2\_NTNV



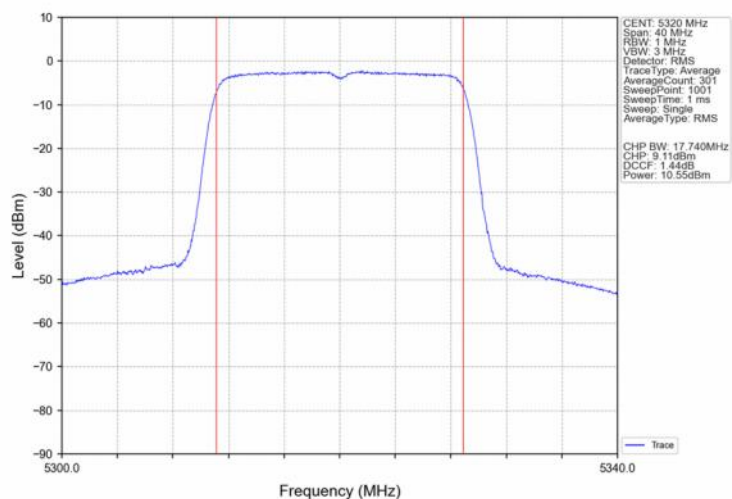
802.11n(HT20)\_MCH\_5300MHz\_Ant1\_NTNV



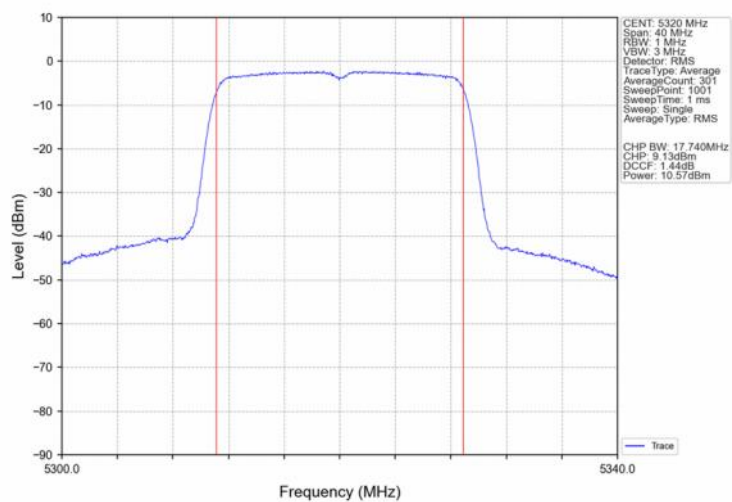
802.11n(HT20)\_MCH\_5300MHz\_Ant2\_NTNV



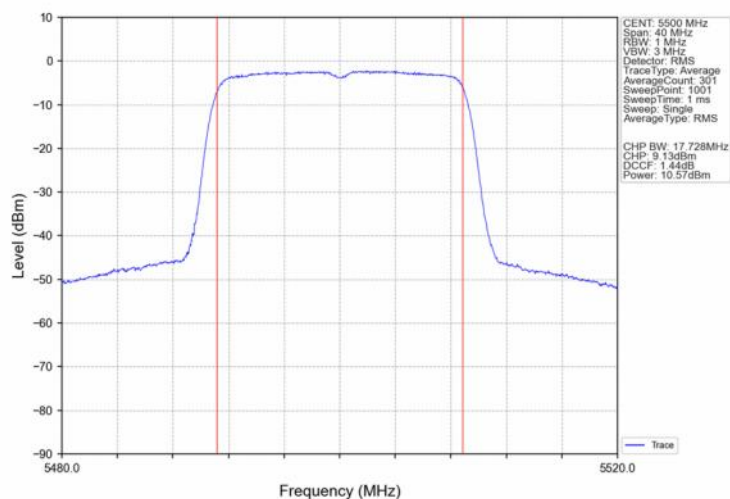
802.11n(HT20)\_HCH\_5320MHz\_Ant1\_NTNV



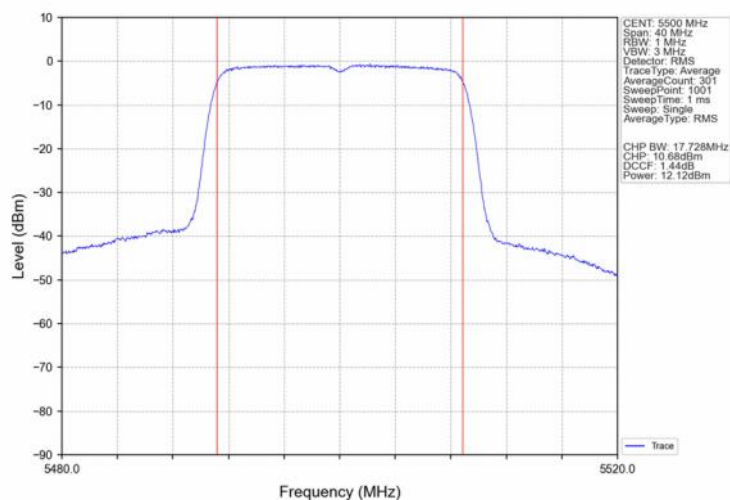
802.11n(HT20)\_HCH\_5320MHz\_Ant2\_NTNV



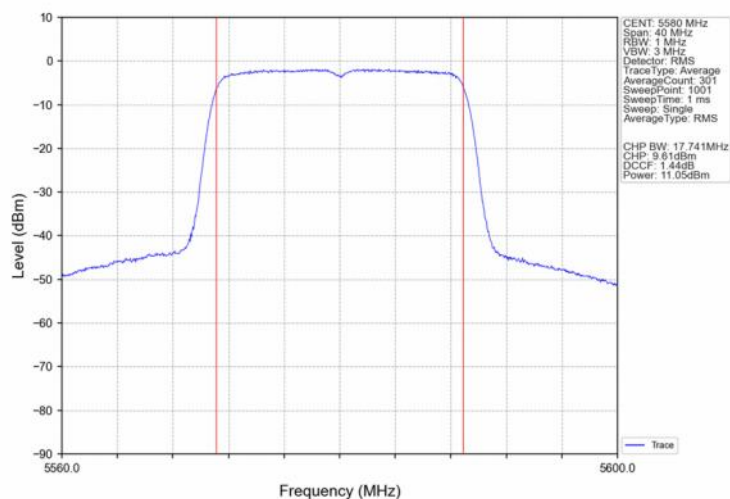
802.11n(HT20)\_LCH\_5500MHz\_Ant1\_NTNV



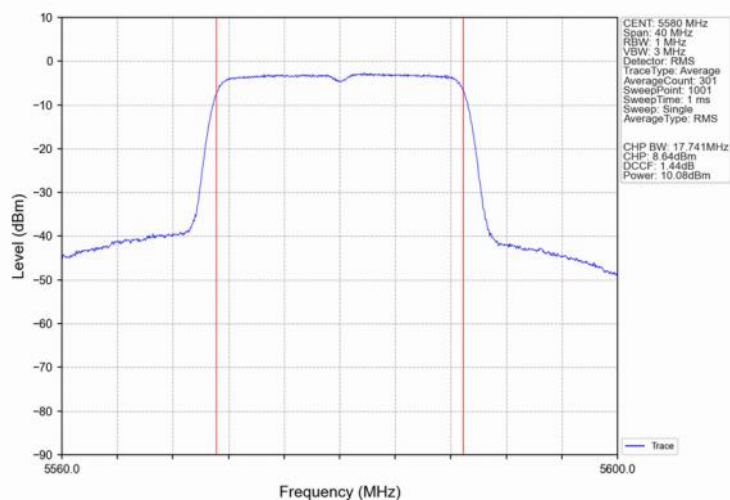
802.11n(HT20)\_LCH\_5500MHz\_Ant2\_NTNV



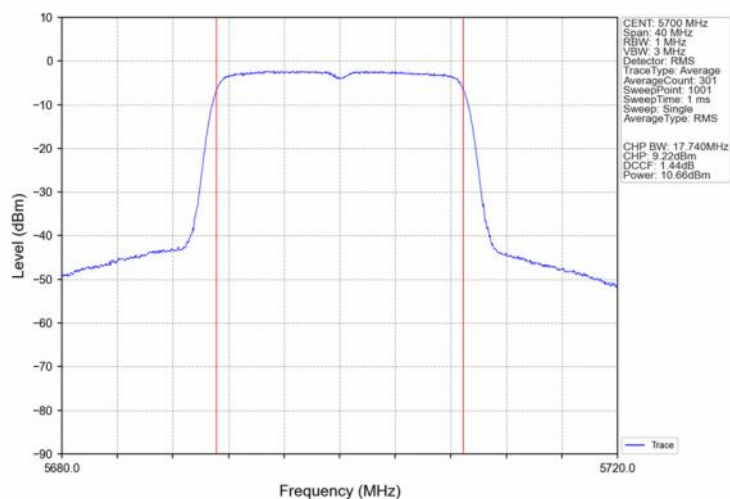
802.11n(HT20)\_MCH\_5580MHz\_Ant1\_NTNV



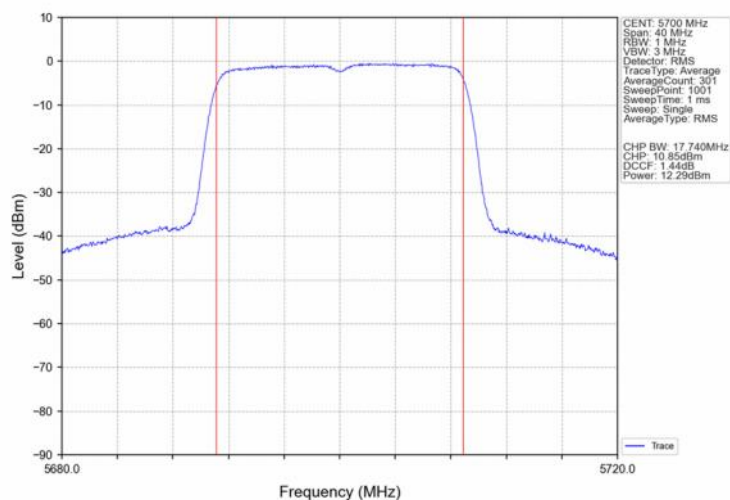
802.11n(HT20)\_MCH\_5580MHz\_Ant2\_NTNV



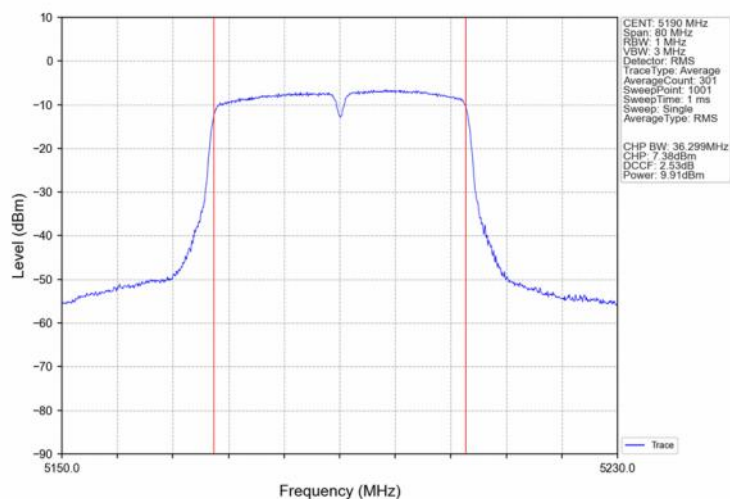
802.11n(HT20)\_HCH\_5700MHz\_Ant1\_NTNV



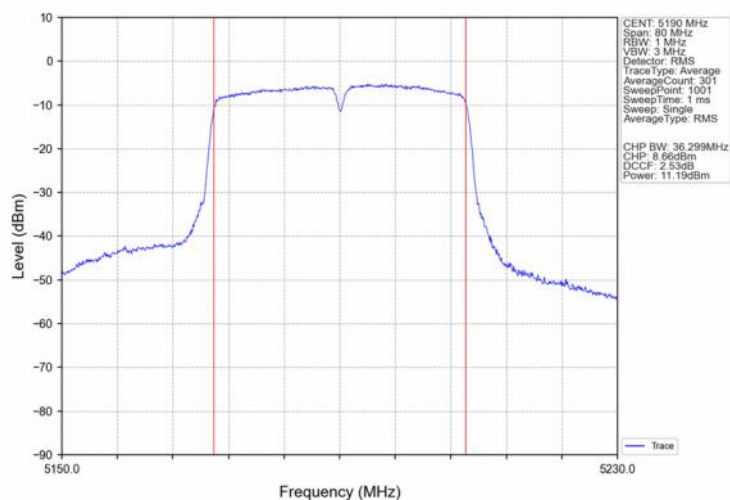
802.11n(HT20)\_HCH\_5700MHz\_Ant2\_NTNV



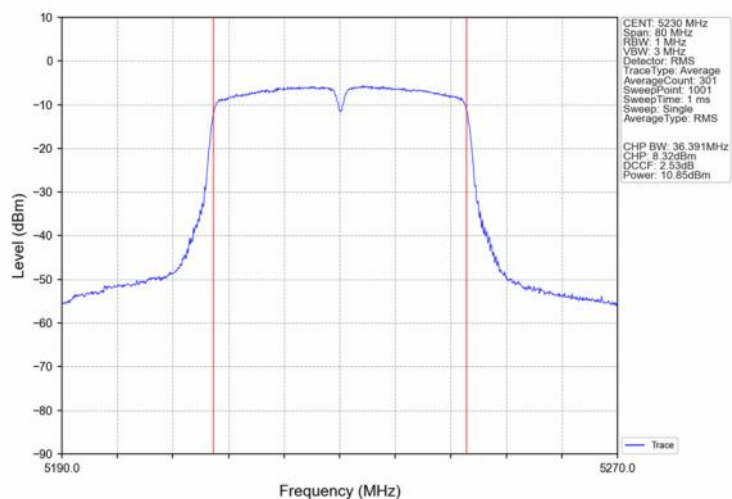
802.11n(HT40)\_LCH\_5190MHz\_Ant1\_NTNV



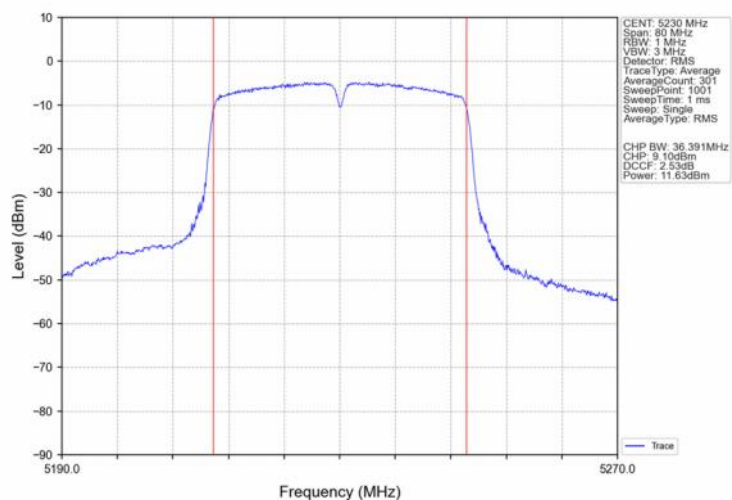
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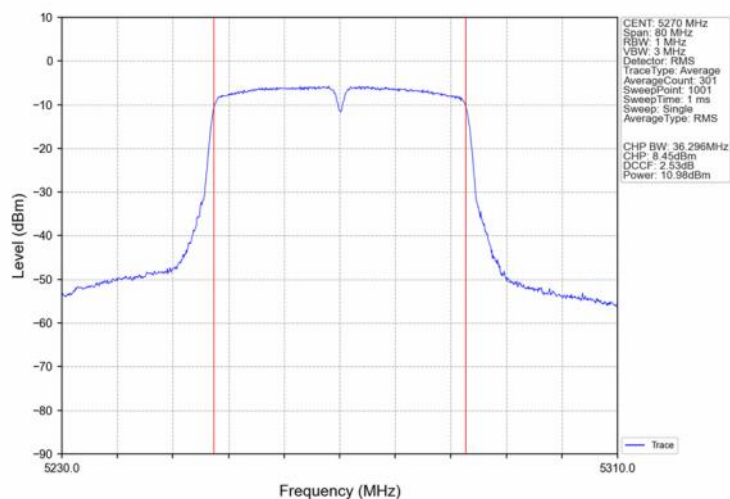
802.11n(HT40)\_HCH\_5230MHz\_Ant1\_NTNV



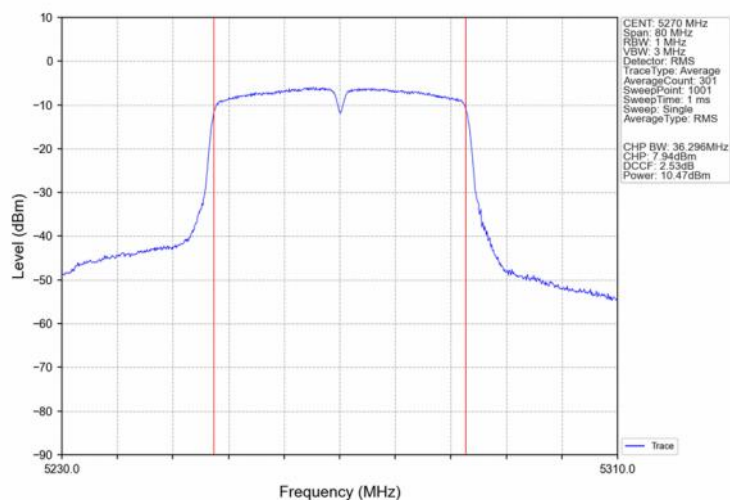
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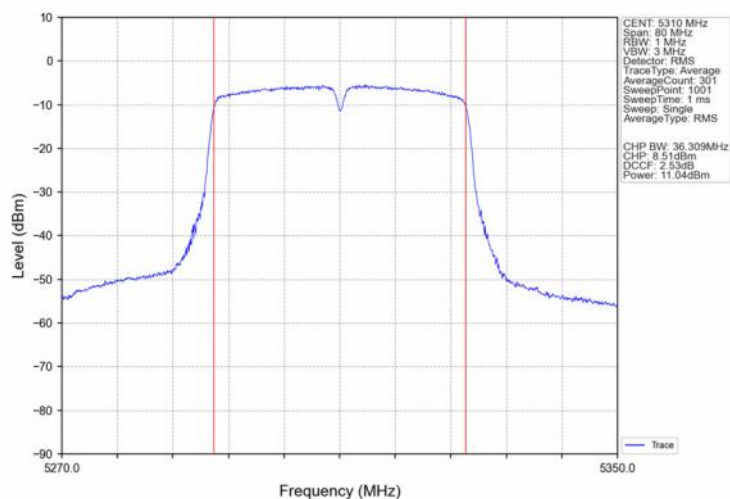
802.11n(HT40)\_LCH\_5270MHz\_Ant1\_NTNV



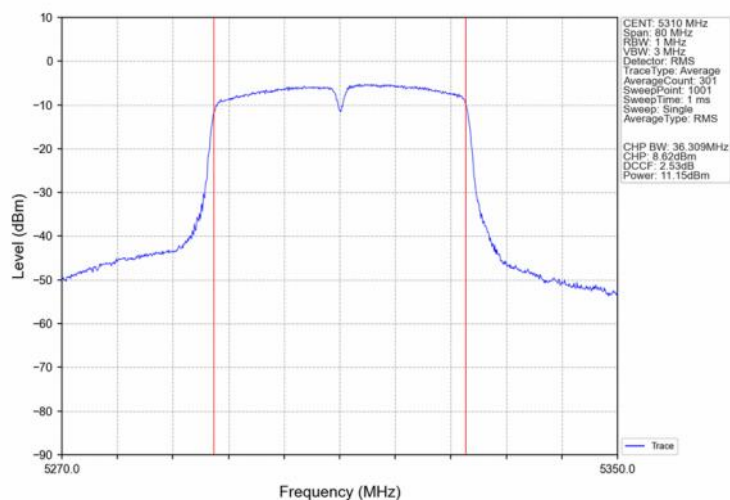
802.11n(HT40)\_LCH\_5270MHz\_Ant2\_NTNV



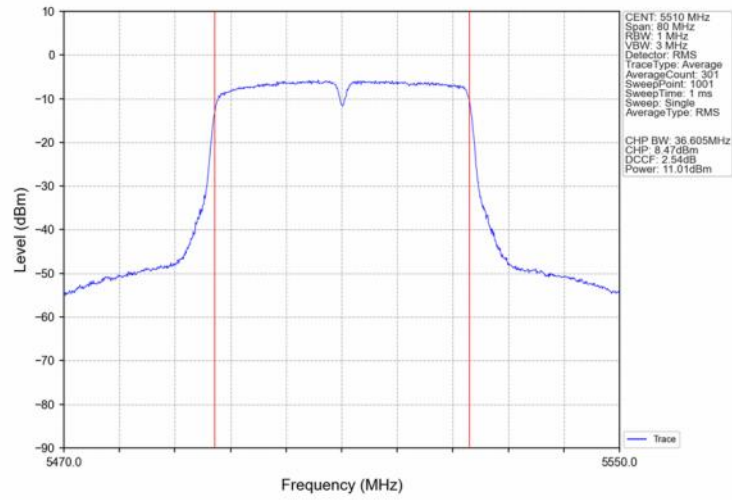
802.11n(HT40)\_HCH\_5310MHz\_Ant1\_NTNV



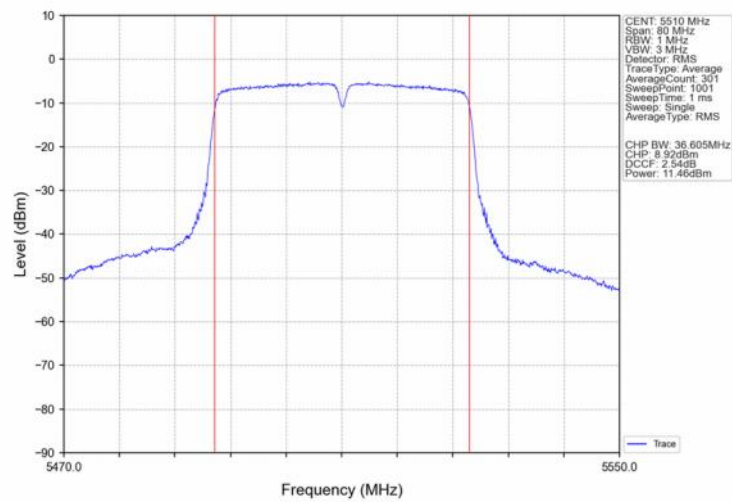
802.11n(HT40)\_HCH\_5310MHz\_Ant2\_NTNV



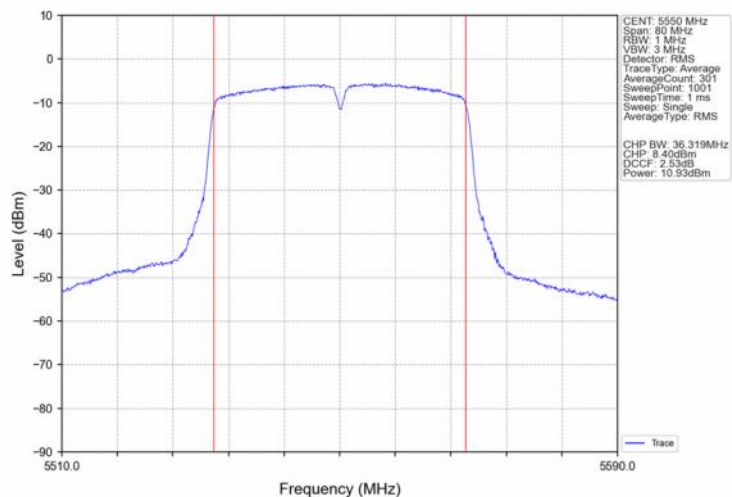
802.11n(HT40)\_LCH\_5510MHz\_Ant1\_NTNV



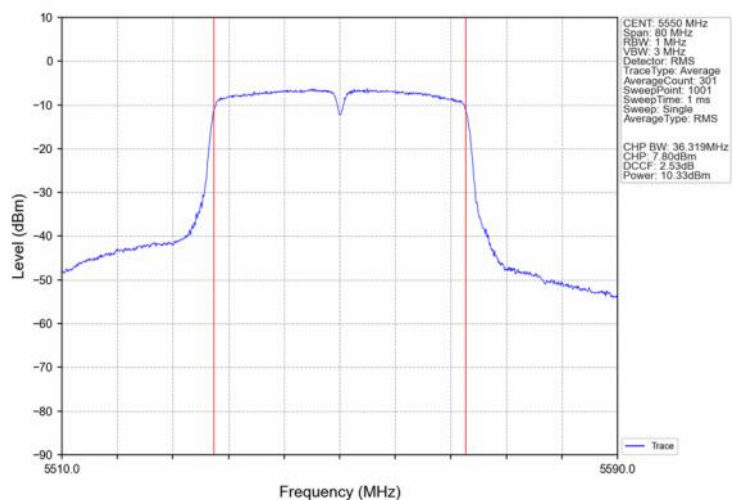
802.11n(HT40)\_LCH\_5510MHz\_Ant2\_NTNV



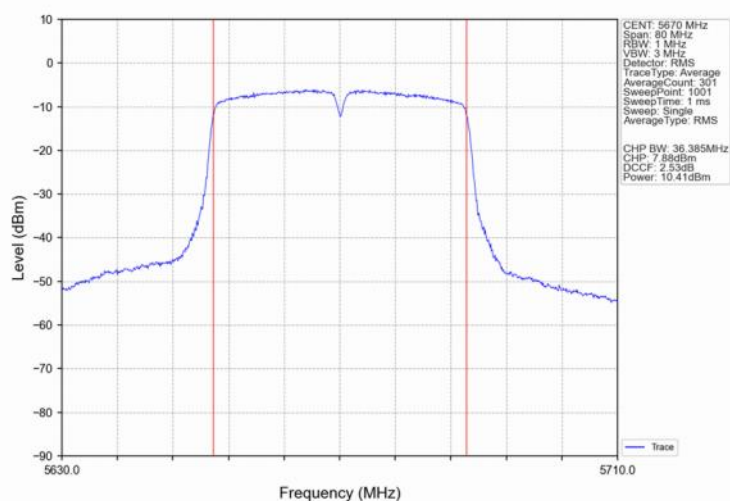
802.11n(HT40)\_MCH\_5550MHz\_Ant1\_NTNV



802.11n(HT40)\_MCH\_5550MHz\_Ant2\_NTNV



802.11n(HT40)\_HCH\_5670MHz\_Ant1\_NTNV



802.11n(HT40)\_HCH\_5670MHz\_Ant2\_NTNV

