

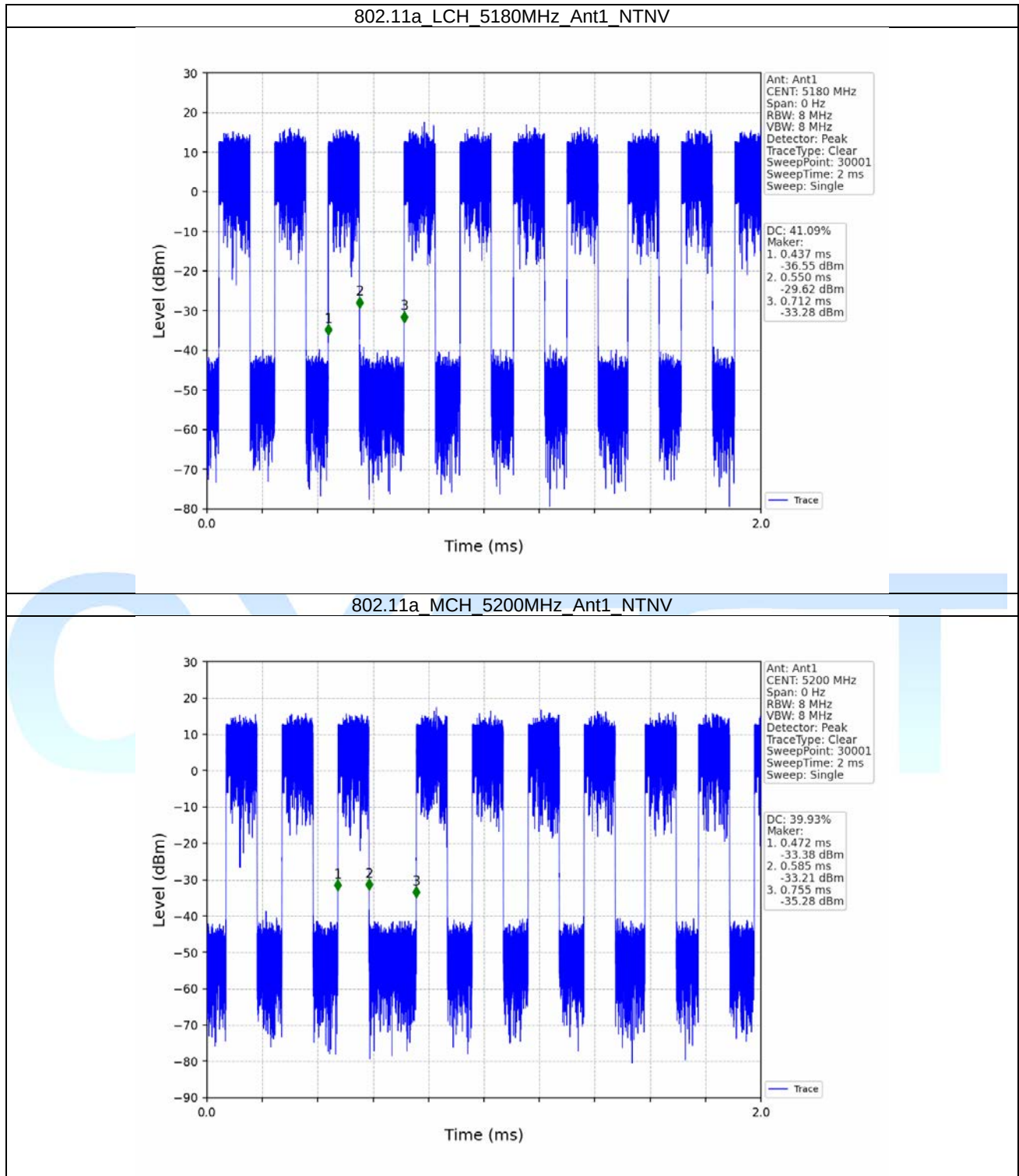
## 1. Duty Cycle

### 1.1 Ant1

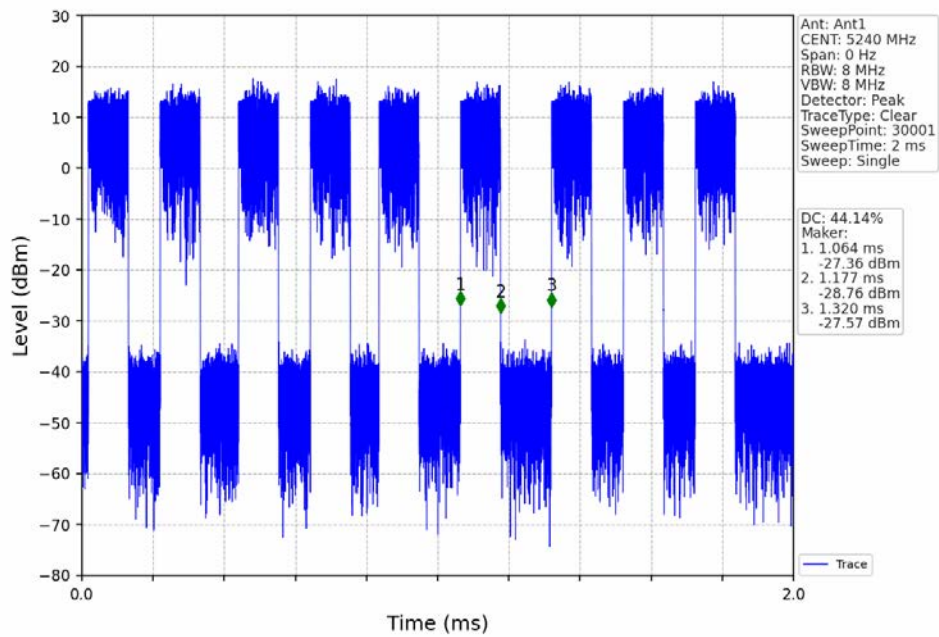
#### 1.1.1 Test Result

| 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            | 0.113     | 0.275       | 41.09          | 3.86                              | 17.33                 |
|                  |         | 5200            | 0.113     | 0.283       | 39.93          | 3.99                              | 18.65                 |
|                  |         | 5240            | 0.113     | 0.256       | 44.14          | 3.55                              | 14.30                 |
| 802.11n (HT20)   | SISO    | 5180            | 0.112     | 0.255       | 43.92          | 3.57                              | 14.31                 |
|                  |         | 5200            | 0.112     | 0.220       | 50.91          | 2.93                              | 7.16                  |
|                  |         | 5240            | 0.113     | 0.283       | 39.93          | 3.99                              | 15.97                 |
| 802.11n (HT40)   | SISO    | 5190            | 0.076     | 0.243       | 31.28          | 5.05                              | 18.22                 |
|                  |         | 5230            | 0.075     | 0.243       | 30.86          | 5.11                              | 18.36                 |
| 802.11ac (VHT20) | SISO    | 5180            | 0.121     | 0.290       | 41.72          | 3.80                              | 18.67                 |
|                  |         | 5200            | 0.120     | 0.317       | 37.85          | 4.22                              | 22.10                 |
|                  |         | 5240            | 0.122     | 0.254       | 48.03          | 3.18                              | 13.04                 |
| 802.11ac (VHT40) | SISO    | 5190            | 0.080     | 0.241       | 33.20          | 4.79                              | 16.93                 |
|                  |         | 5230            | 0.081     | 0.295       | 27.46          | 5.61                              | 23.10                 |
| 802.11ac (VHT80) | SISO    | 5210            | 0.058     | 0.246       | 23.58          | 6.28                              | 18.52                 |

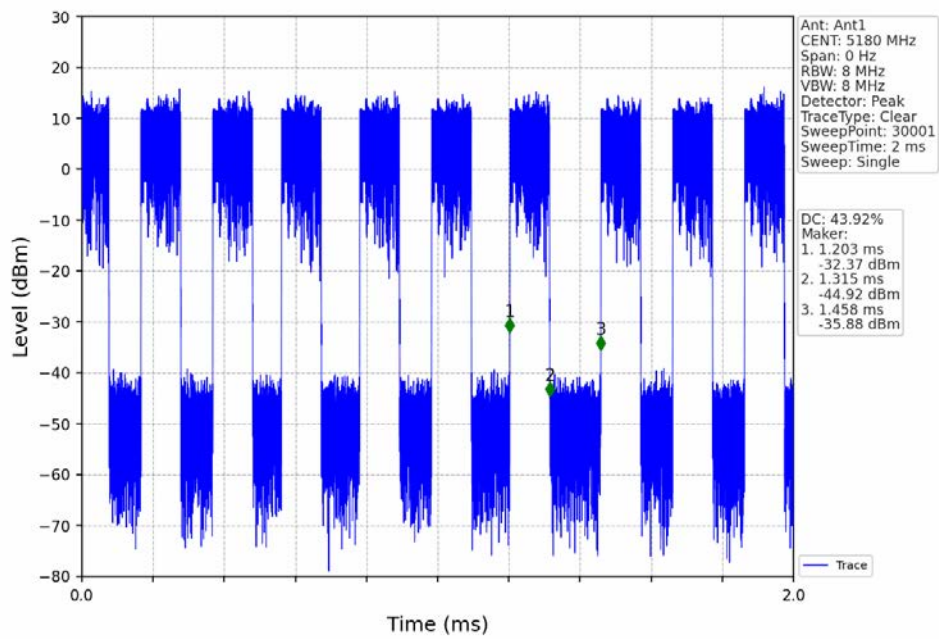
## 1.1.2 Test Graph



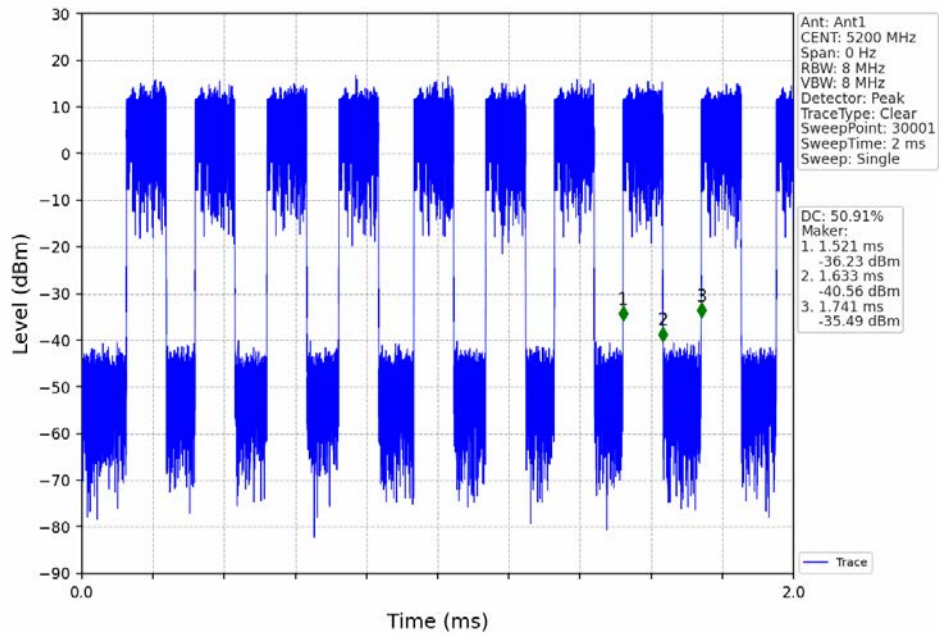
802.11a\_HCH\_5240MHz\_Ant1\_NTNV



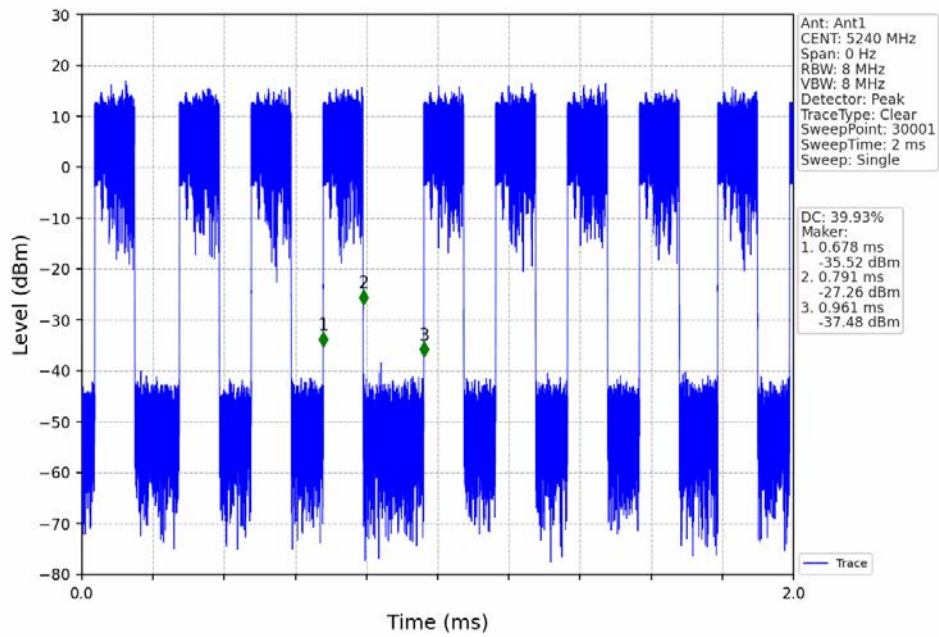
802.11n(HT20)\_LCH\_5180MHz\_Ant1\_NTNV



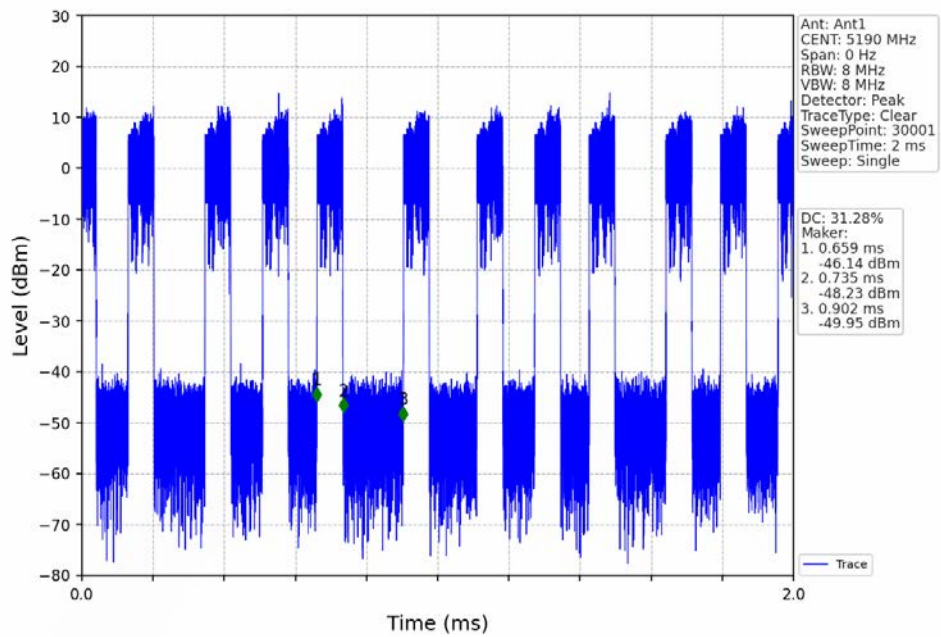
802.11n(HT20)\_MCH\_5200MHz\_Ant1\_NTNV



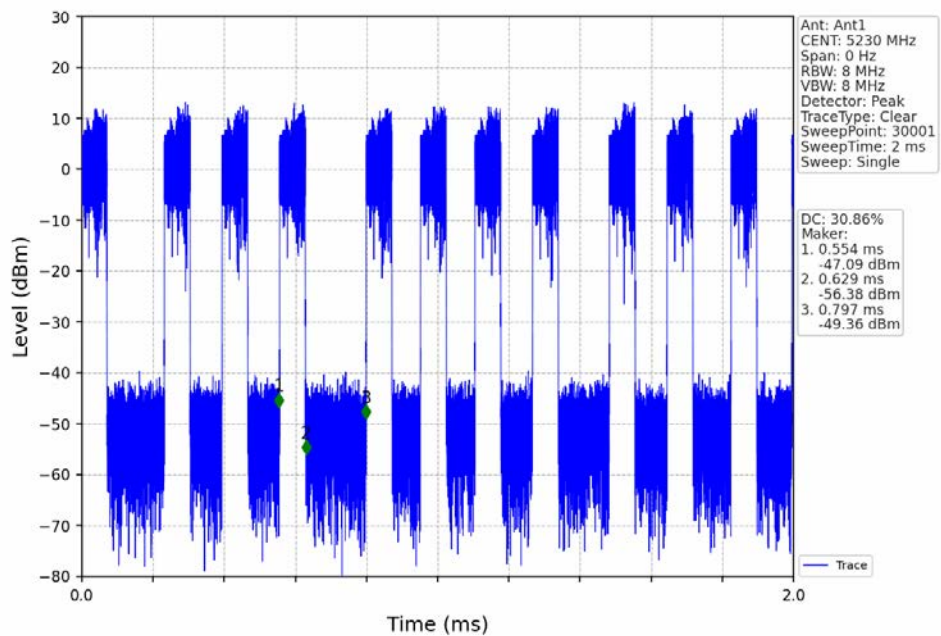
802.11n(HT20)\_HCH\_5240MHz\_Ant1\_NTNV



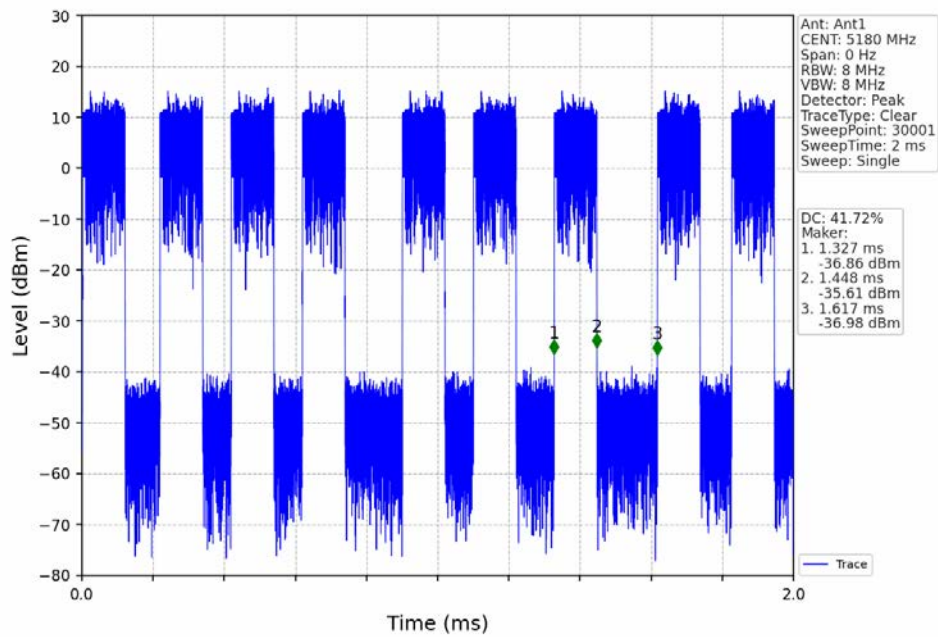
802.11n(HT40) LCH 5190MHz\_Ant1\_NTNV



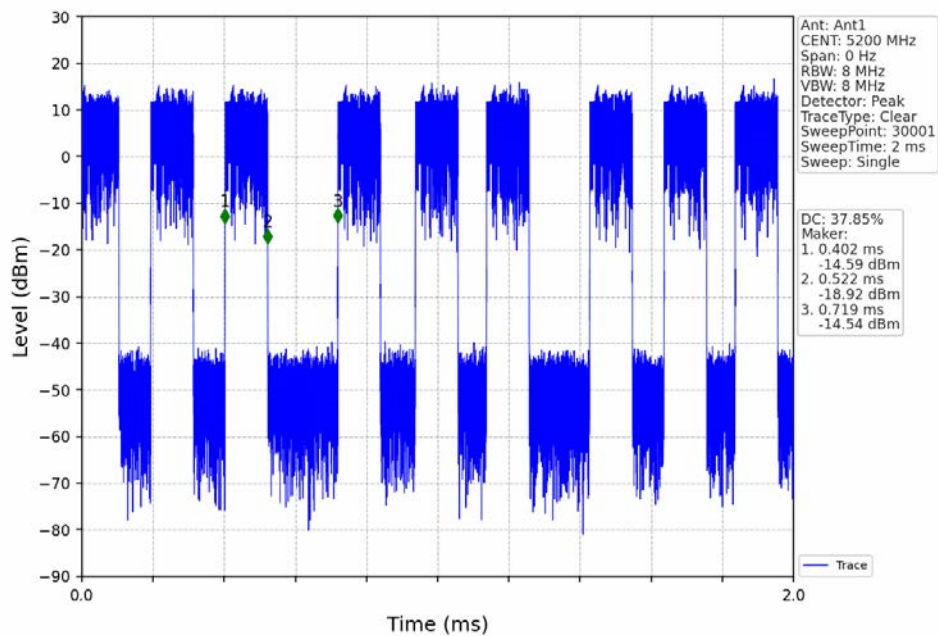
802.11n(HT40) HCH 5230MHz\_Ant1\_NTNV



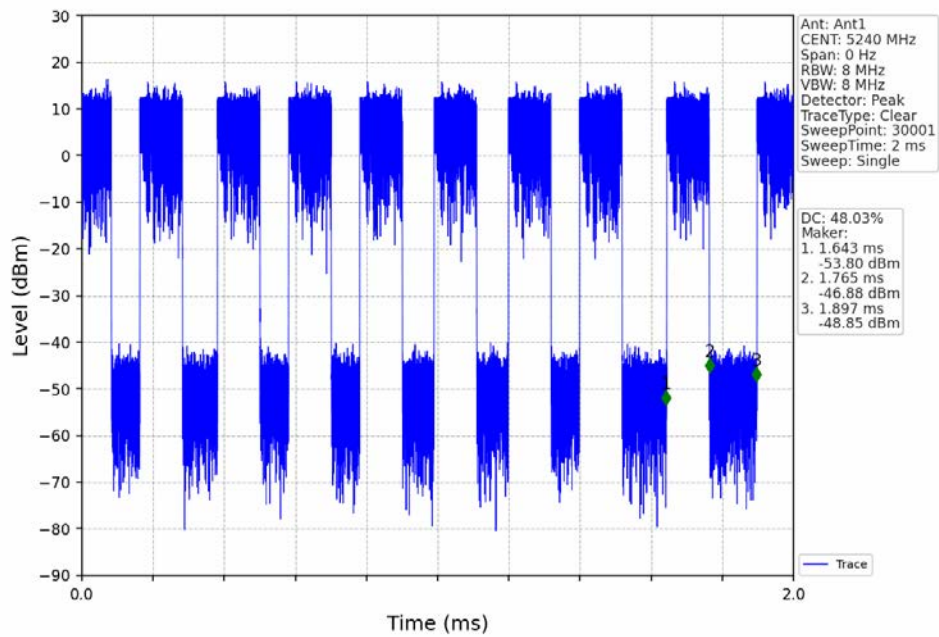
802.11ac(VHT20)\_LCH\_5180MHz\_Ant1\_NTNV



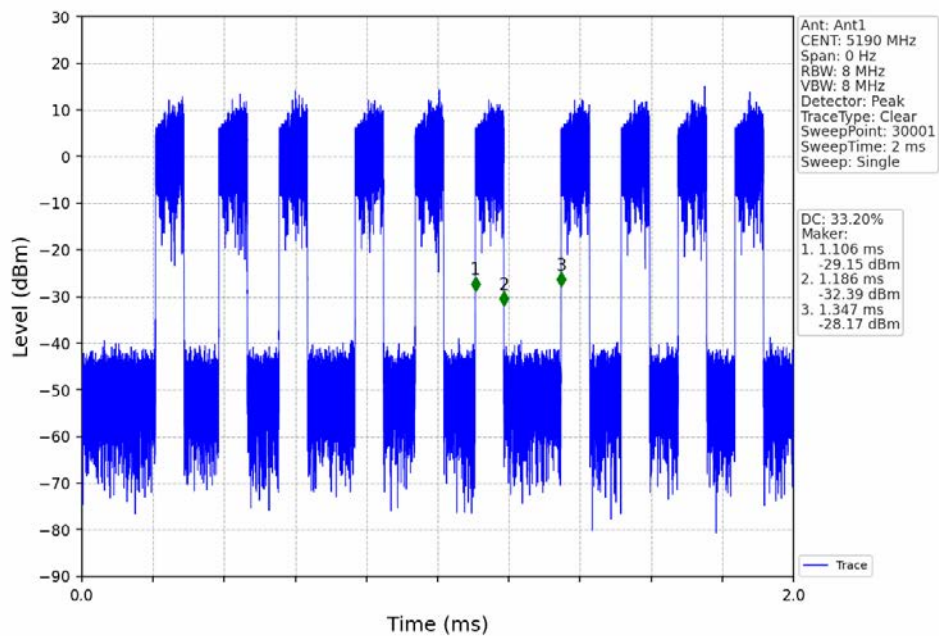
802.11ac(VHT20)\_MCH\_5200MHz\_Ant1\_NTNV



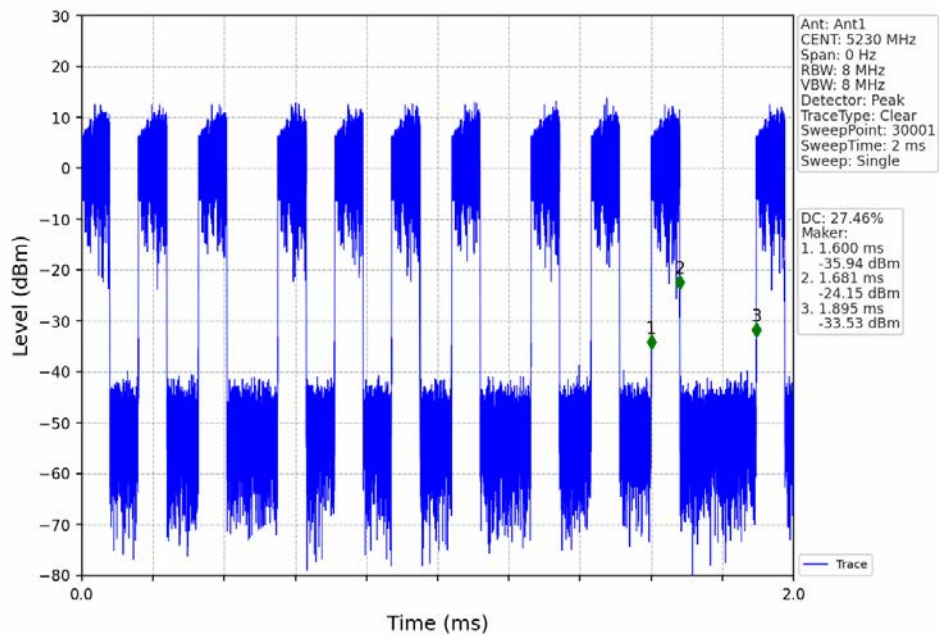
802.11ac(VHT20)\_HCH\_5240MHz\_Ant1\_NTNV



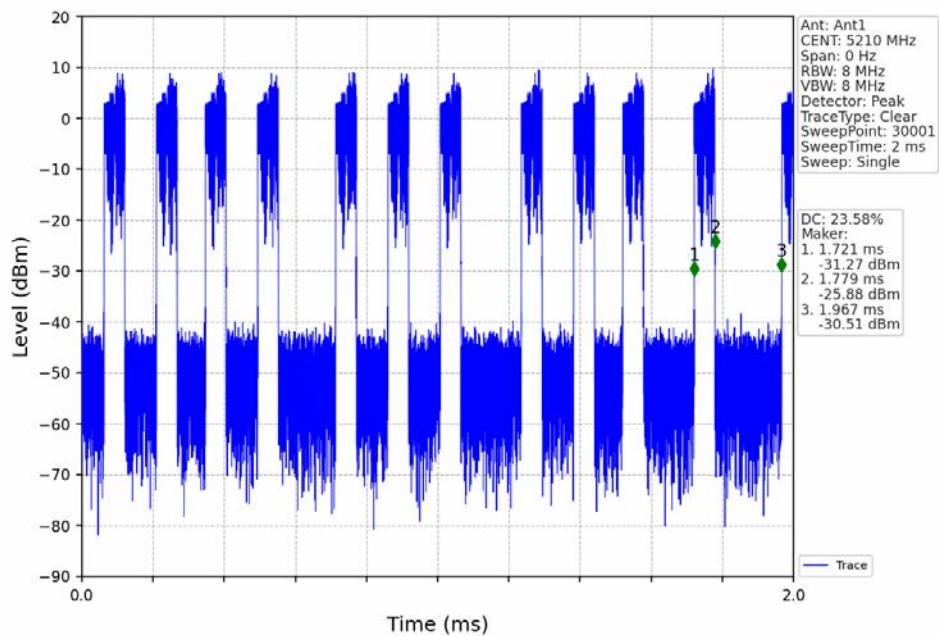
802.11ac(VHT40)\_LCH\_5190MHz\_Ant1\_NTNV



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



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



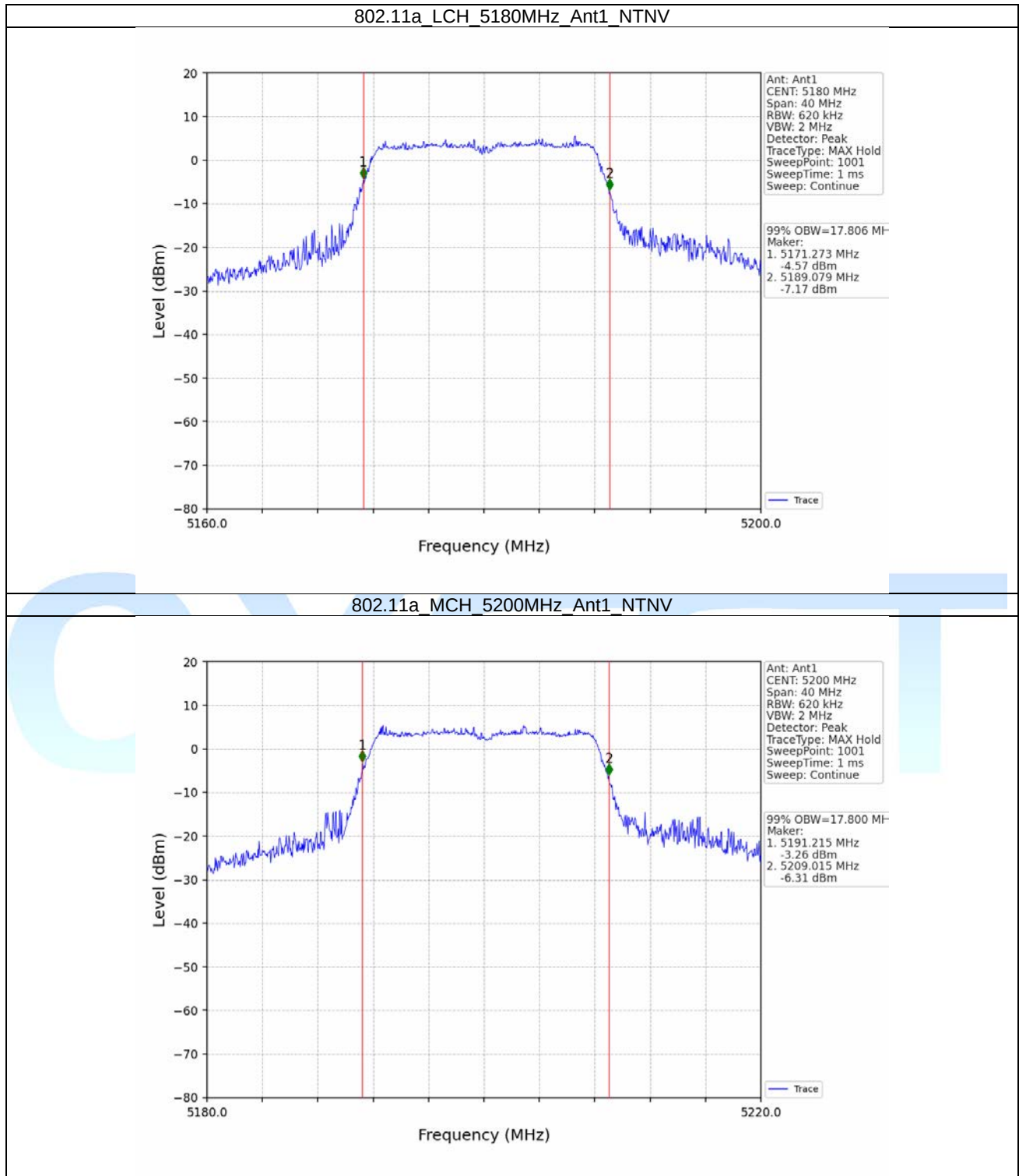
## 2. Bandwidth

### 2.1 OBW

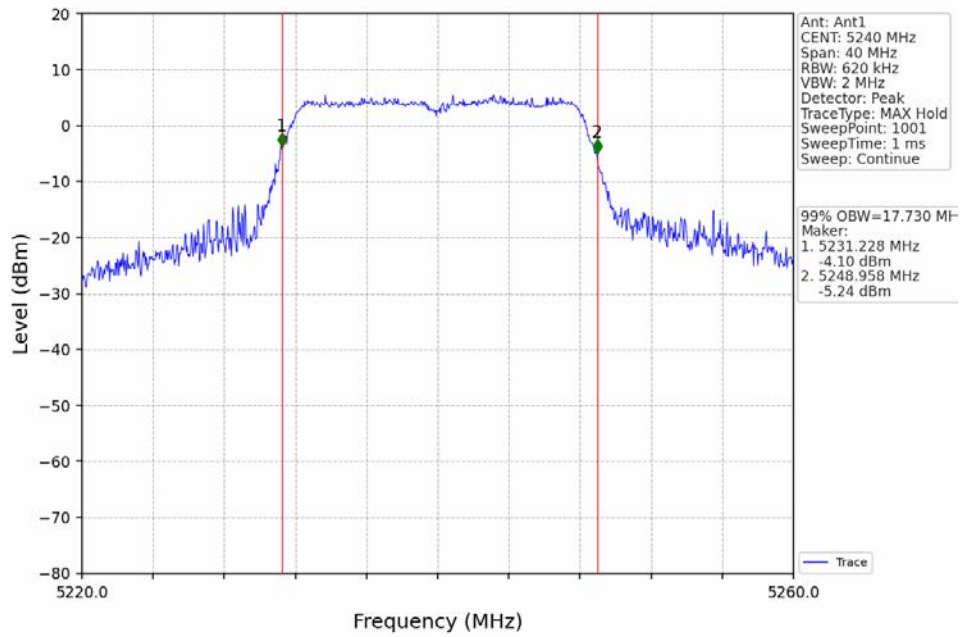
#### 2.1.1 Test Result

| Mode             | TX Type | Frequency (MHz) | ANT | 99% Occupied Bandwidth (MHz) |       | Verdict |
|------------------|---------|-----------------|-----|------------------------------|-------|---------|
|                  |         |                 |     | Result                       | Limit |         |
| 802.11a          | SISO    | 5180            | 1   | 17.806                       | /     | Pass    |
|                  |         | 5200            | 1   | 17.800                       | /     | Pass    |
|                  |         | 5240            | 1   | 17.730                       | /     | Pass    |
| 802.11n (HT20)   | SISO    | 5180            | 1   | 18.480                       | /     | Pass    |
|                  |         | 5200            | 1   | 18.497                       | /     | Pass    |
|                  |         | 5240            | 1   | 18.458                       | /     | Pass    |
| 802.11n (HT40)   | SISO    | 5190            | 1   | 36.622                       | /     | Pass    |
|                  |         | 5230            | 1   | 36.688                       | /     | Pass    |
| 802.11ac (VHT20) | SISO    | 5180            | 1   | 18.183                       | /     | Pass    |
|                  |         | 5200            | 1   | 18.125                       | /     | Pass    |
|                  |         | 5240            | 1   | 18.120                       | /     | Pass    |
| 802.11ac (VHT40) | SISO    | 5190            | 1   | 36.584                       | /     | Pass    |
|                  |         | 5230            | 1   | 36.618                       | /     | Pass    |
| 802.11ac (VHT80) | SISO    | 5210            | 1   | 76.401                       | /     | Pass    |

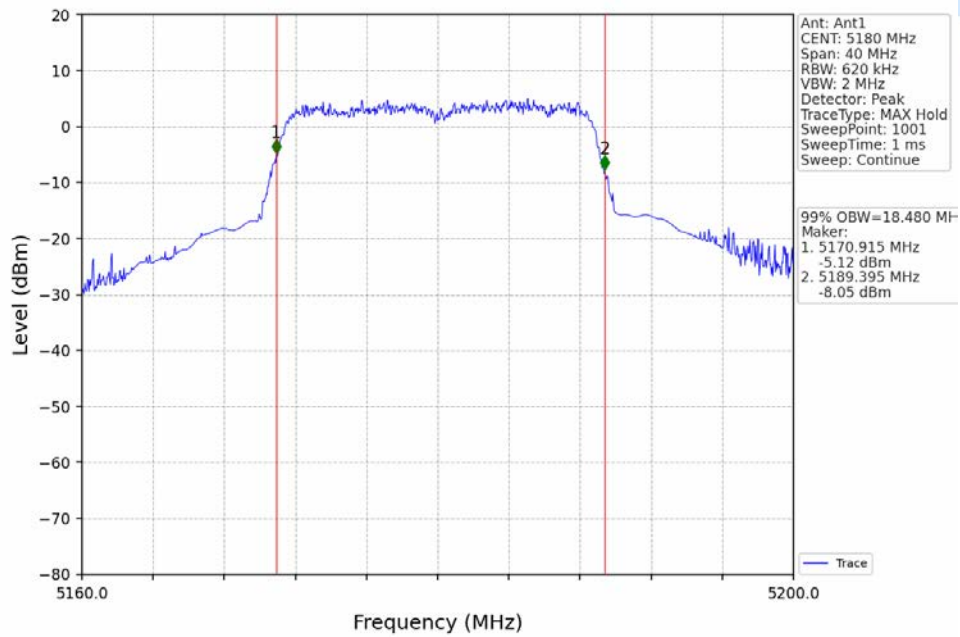
## 2.1.2 Test Graph



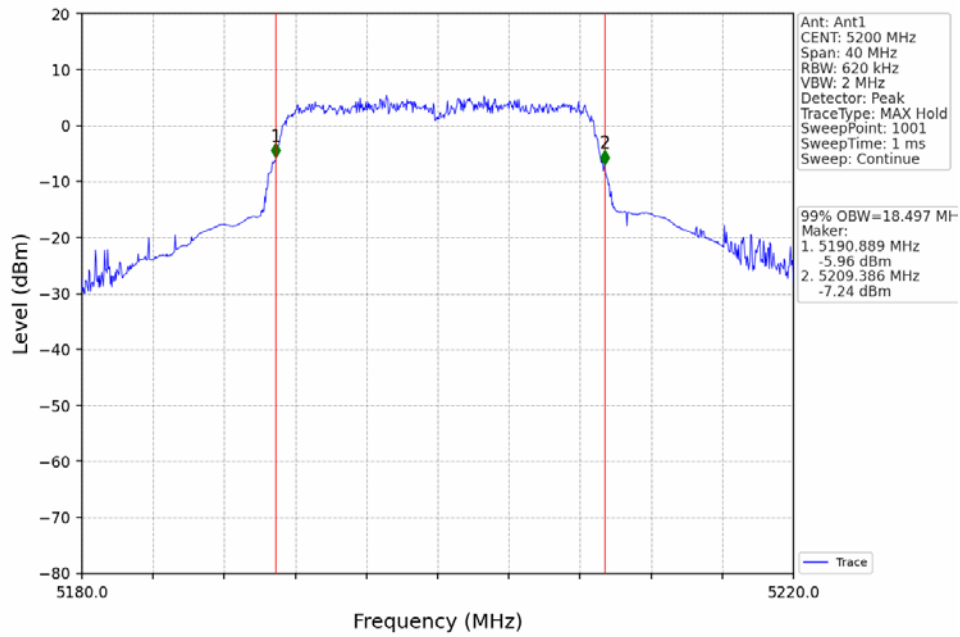
802.11a\_HCH\_5240MHz\_Ant1\_NTNV



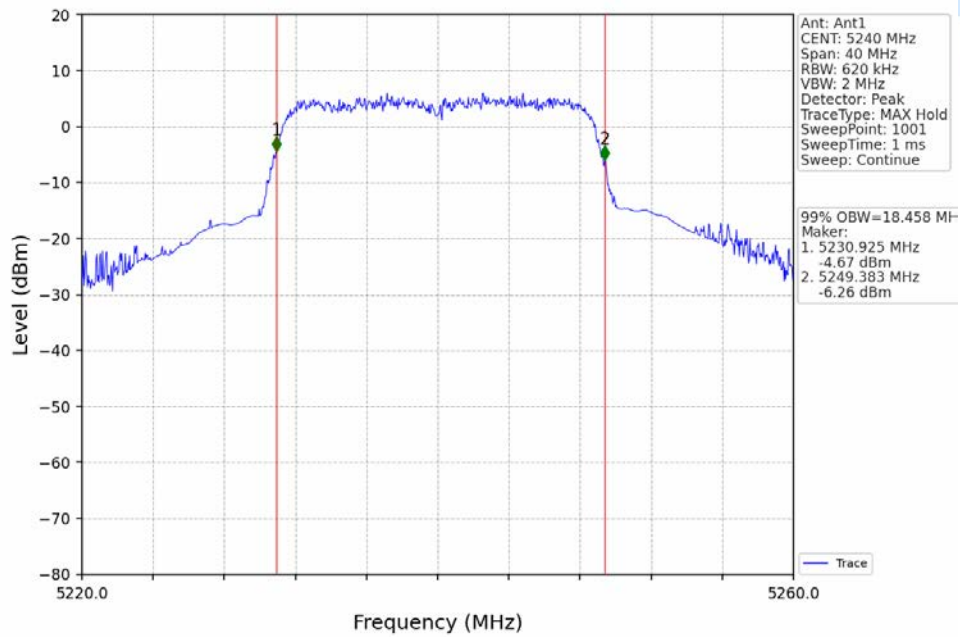
802.11n(HT20)\_LCH\_5180MHz\_Ant1\_NTNV



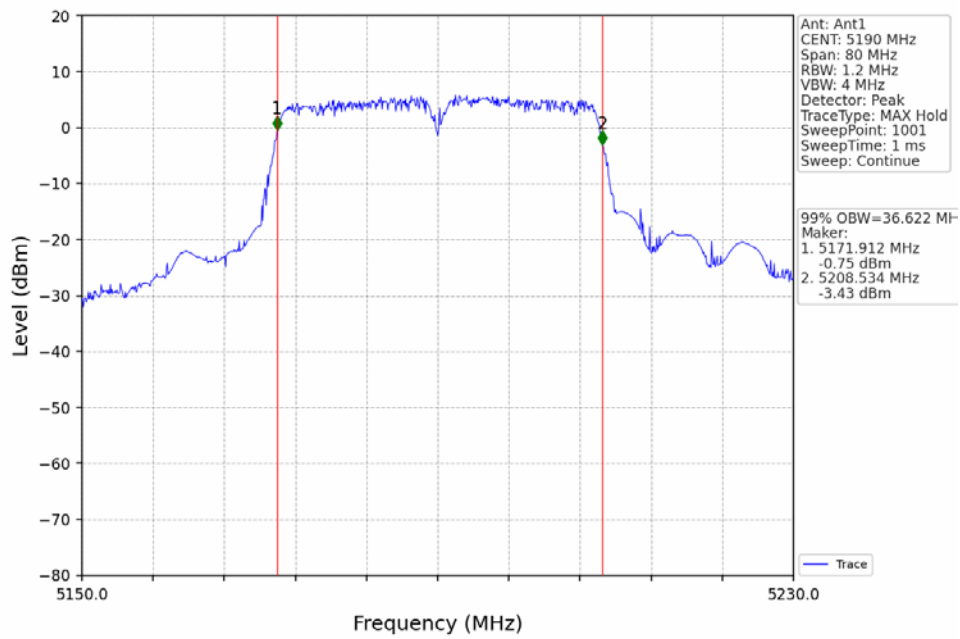
802.11n(HT20)\_MCH\_5200MHz\_Ant1\_NTNV



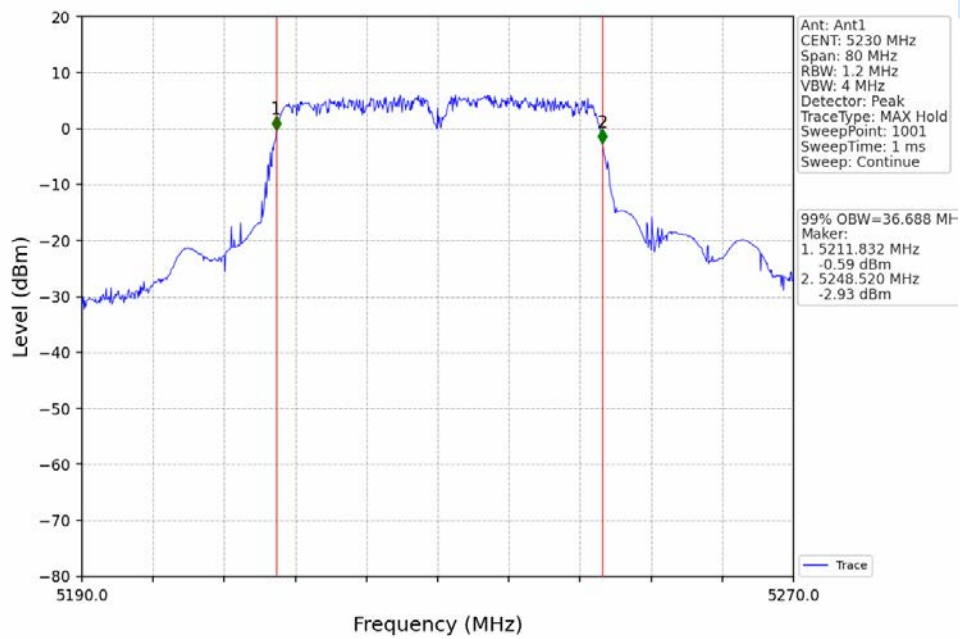
802.11n(HT20)\_HCH\_5240MHz\_Ant1\_NTNV



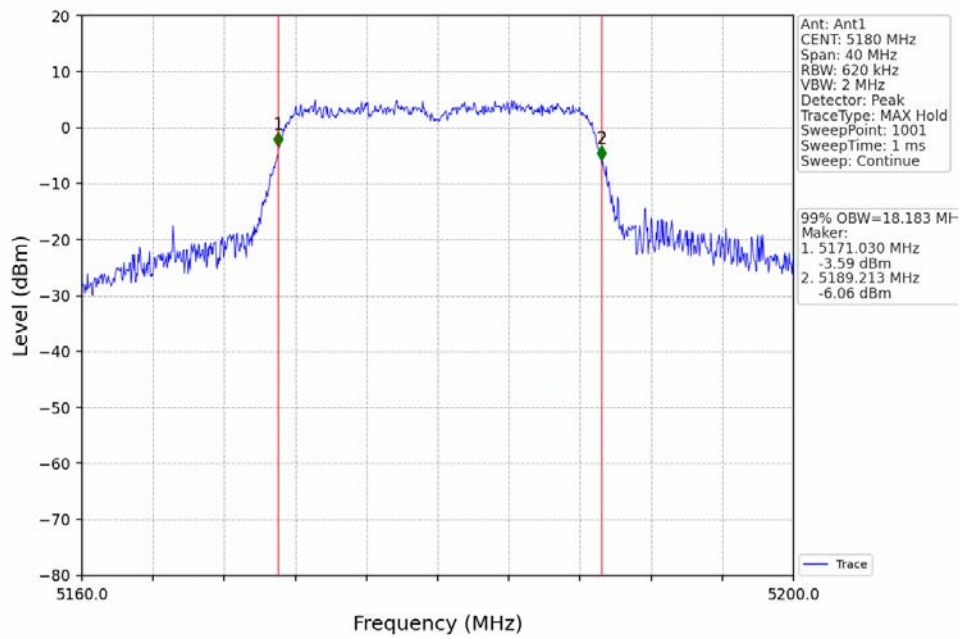
802.11n(HT40)\_LCH\_5190MHz\_Ant1\_NTNV



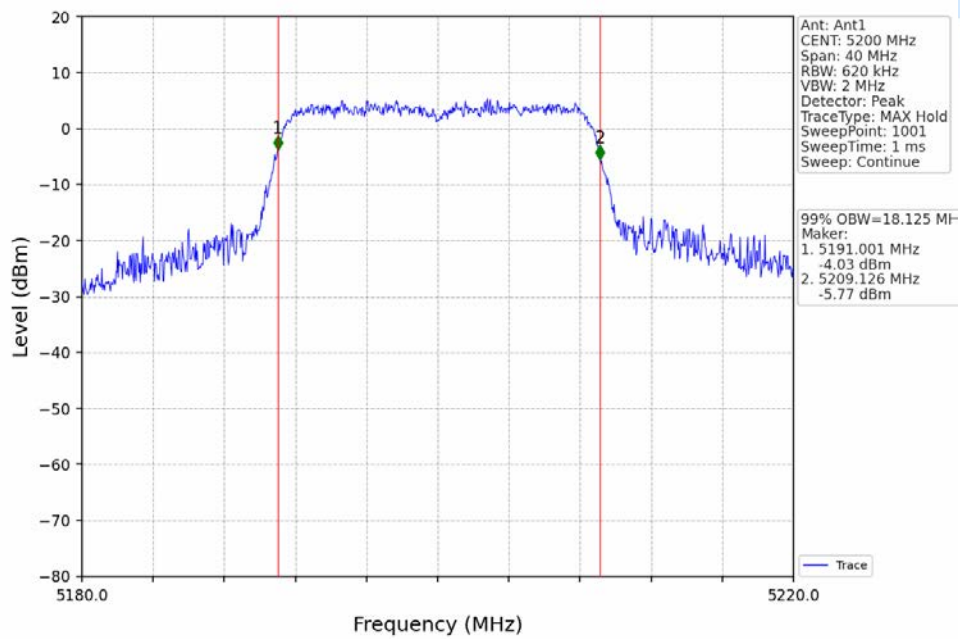
802.11n(HT40)\_HCH\_5230MHz\_Ant1\_NTNV



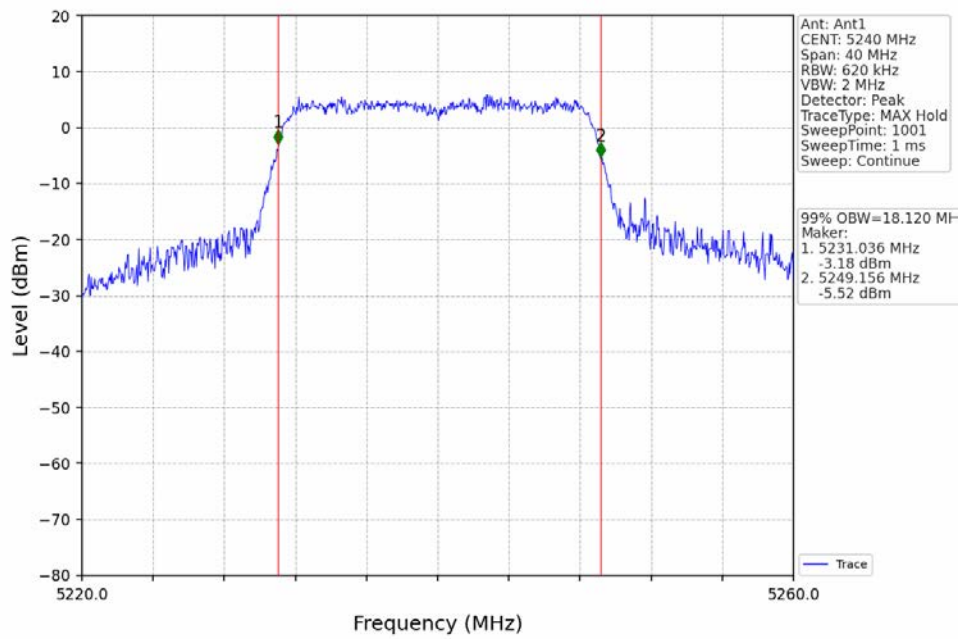
802.11ac(VHT20)\_LCH\_5180MHz\_Ant1\_NTNV



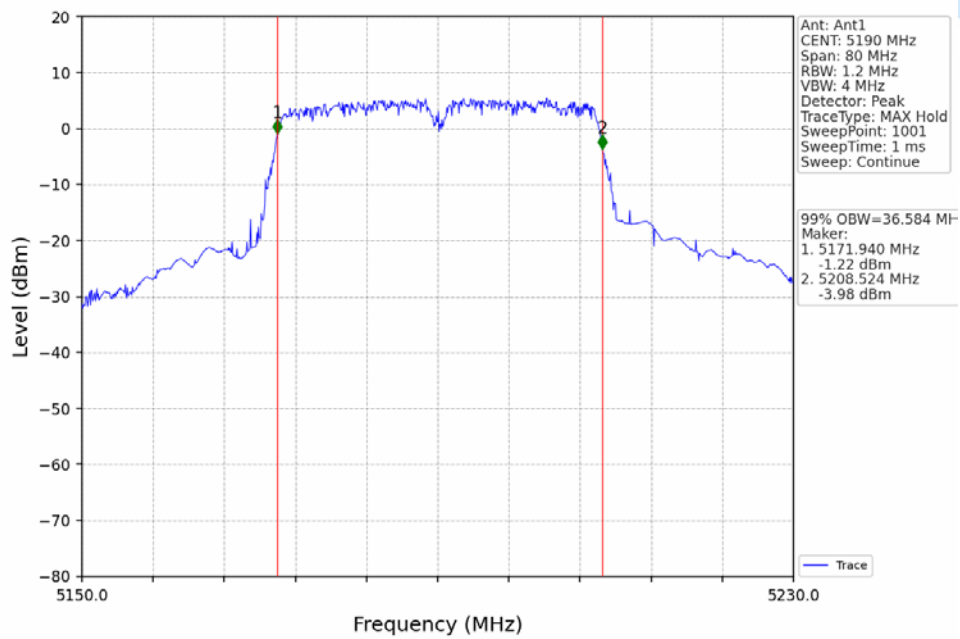
802.11ac(VHT20)\_MCH\_5200MHz\_Ant1\_NTNV



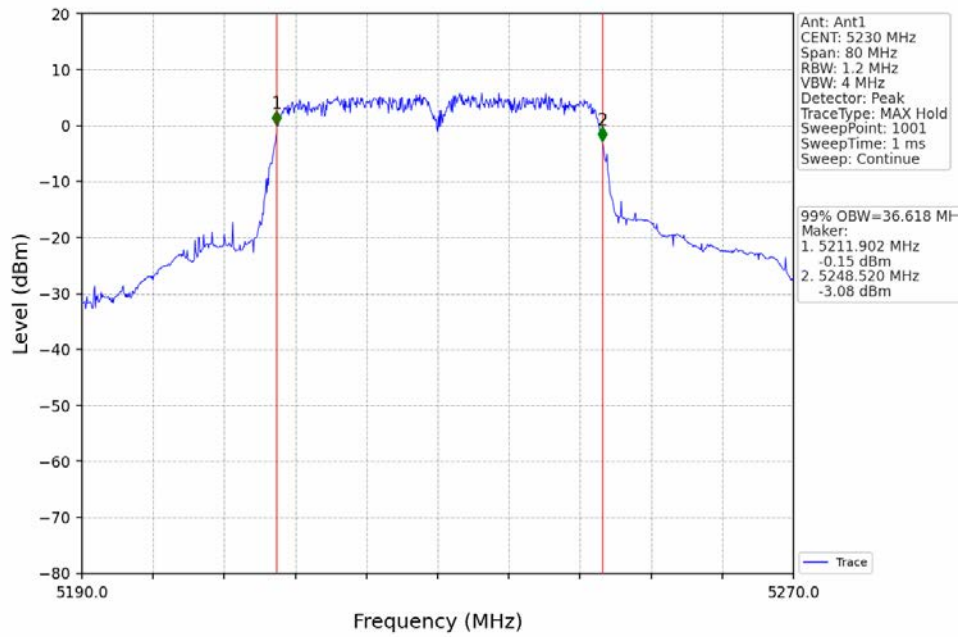
802.11ac(VHT20)\_HCH\_5240MHz\_Ant1\_NTNV



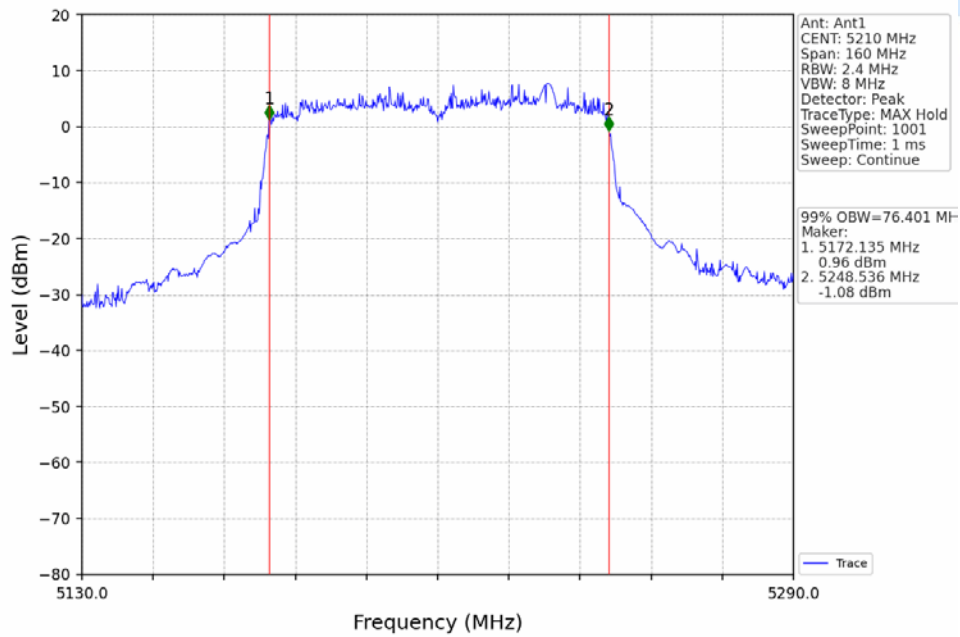
802.11ac(VHT40)\_LCH\_5190MHz\_Ant1\_NTNV



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



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

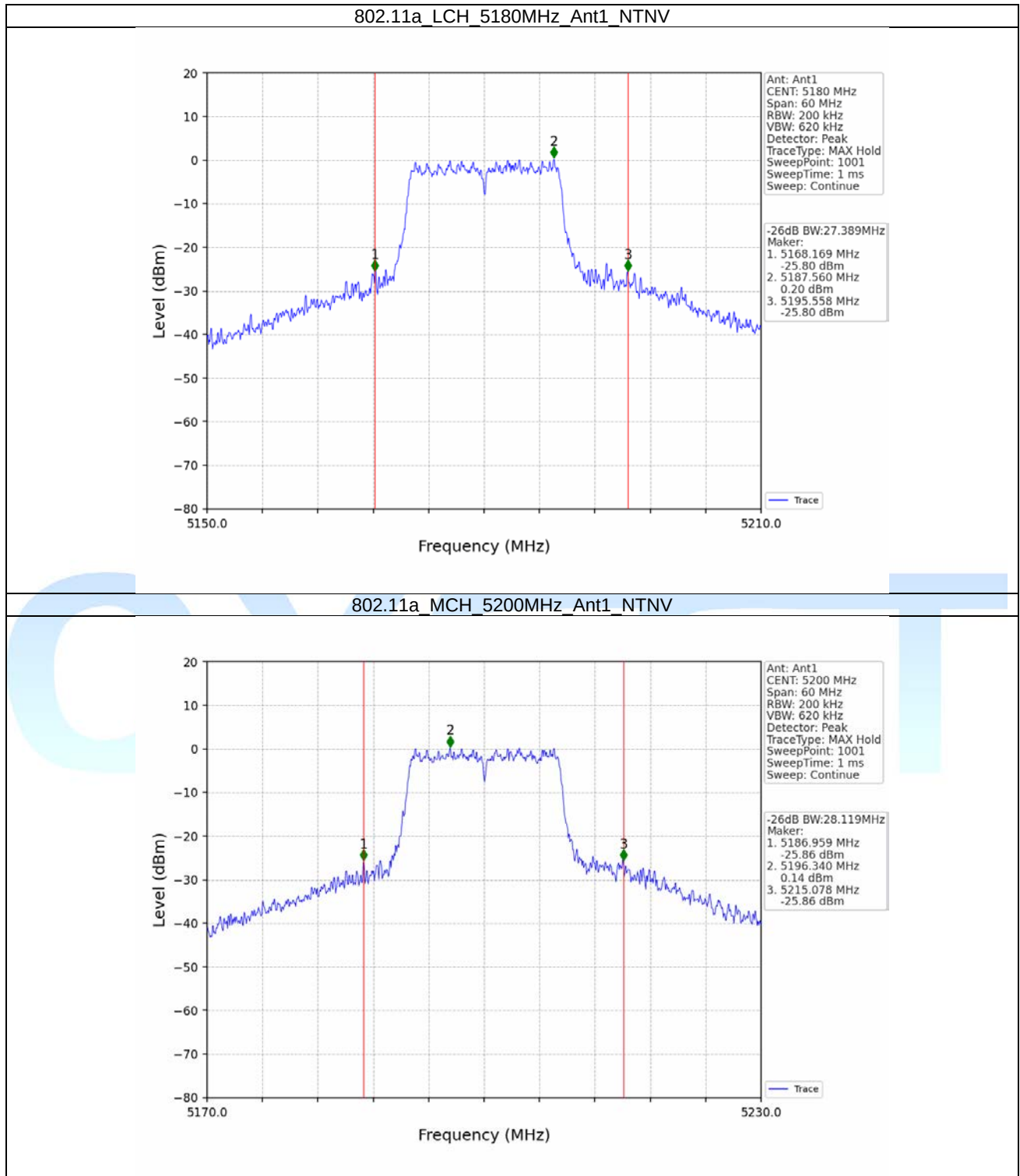


## 2.2 26dB BW

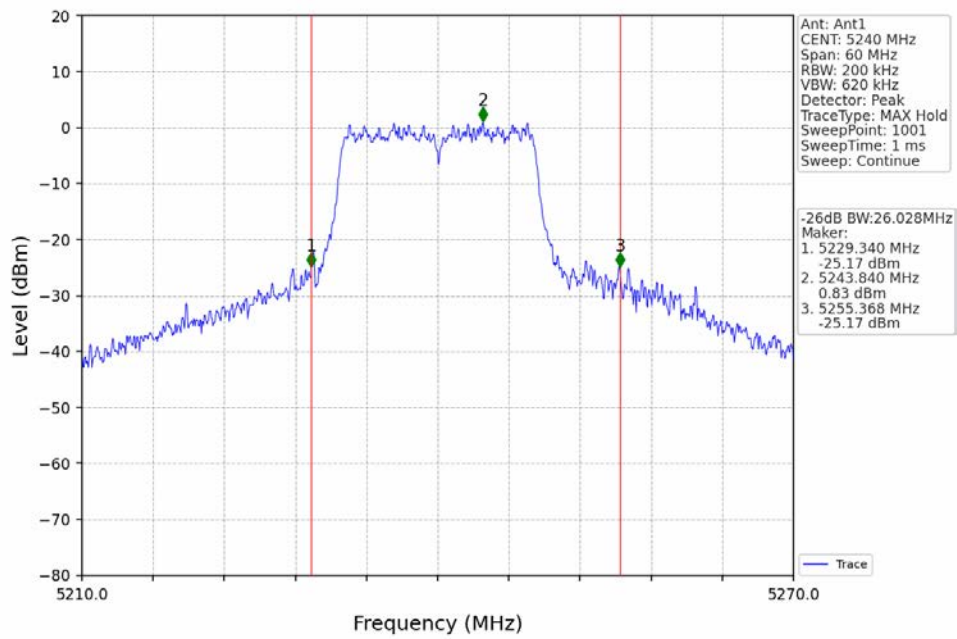
### 2.2.1 Test Result

| Mode             | TX Type | Frequency (MHz) | ANT | 26dB Bandwidth (MHz) |       | Verdict |
|------------------|---------|-----------------|-----|----------------------|-------|---------|
|                  |         |                 |     | Result               | Limit |         |
| 802.11a          | SISO    | 5180            | 1   | 27.389               | /     | Pass    |
|                  |         | 5200            | 1   | 28.119               | /     | Pass    |
|                  |         | 5240            | 1   | 26.028               | /     | Pass    |
| 802.11n (HT20)   | SISO    | 5180            | 1   | 25.315               | /     | Pass    |
|                  |         | 5200            | 1   | 26.420               | /     | Pass    |
|                  |         | 5240            | 1   | 25.513               | /     | Pass    |
| 802.11n (HT40)   | SISO    | 5190            | 1   | 44.843               | /     | Pass    |
|                  |         | 5230            | 1   | 49.207               | /     | Pass    |
| 802.11ac (VHT20) | SISO    | 5180            | 1   | 24.152               | /     | Pass    |
|                  |         | 5200            | 1   | 22.454               | /     | Pass    |
|                  |         | 5240            | 1   | 24.383               | /     | Pass    |
| 802.11ac (VHT40) | SISO    | 5190            | 1   | 43.459               | /     | Pass    |
|                  |         | 5230            | 1   | 45.976               | /     | Pass    |
| 802.11ac (VHT80) | SISO    | 5210            | 1   | 93.803               | /     | Pass    |

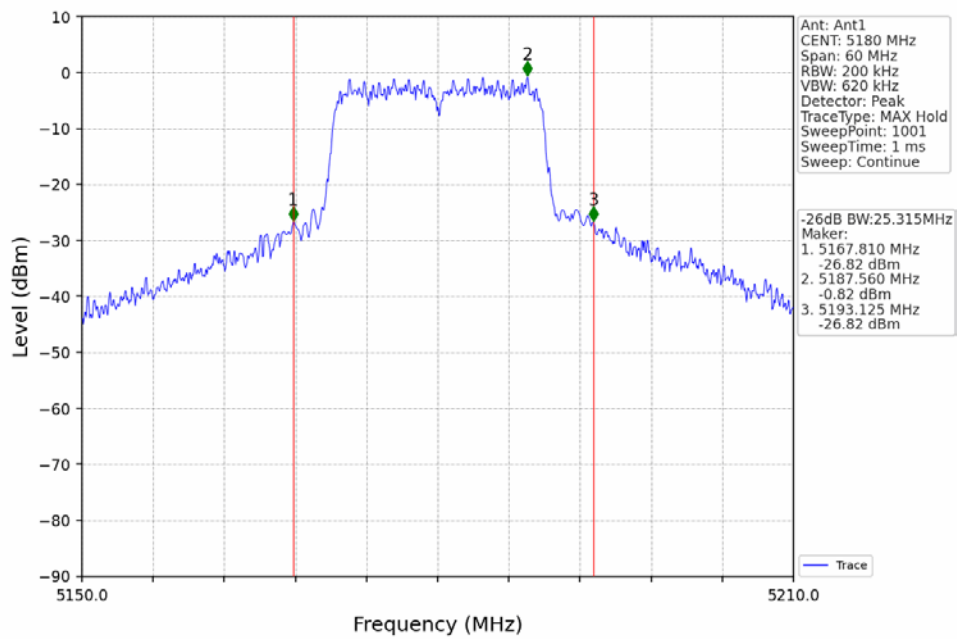
## 2.2.2 Test Graph



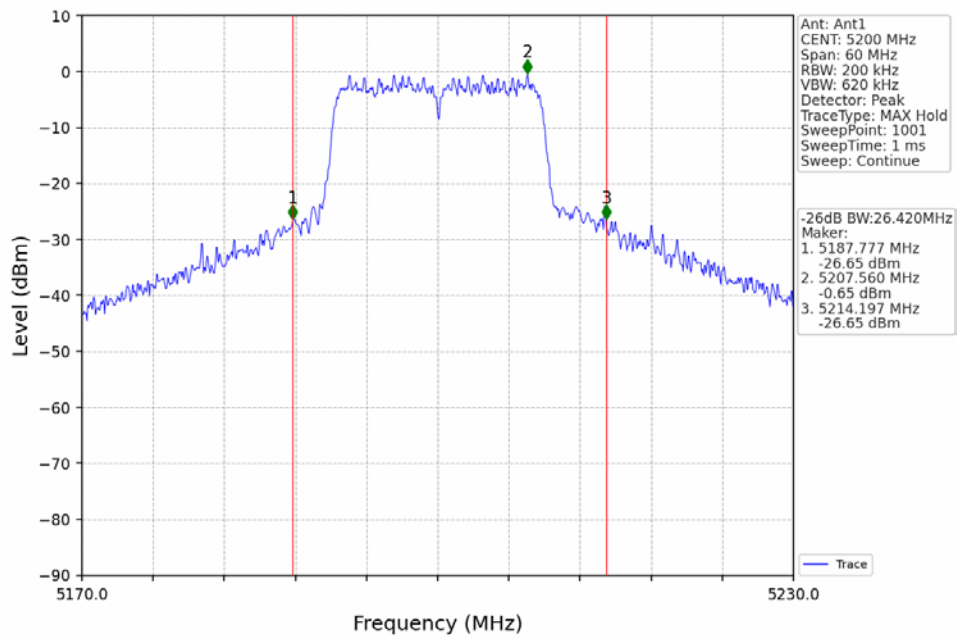
802.11a\_HCH\_5240MHz\_Ant1\_NTNV



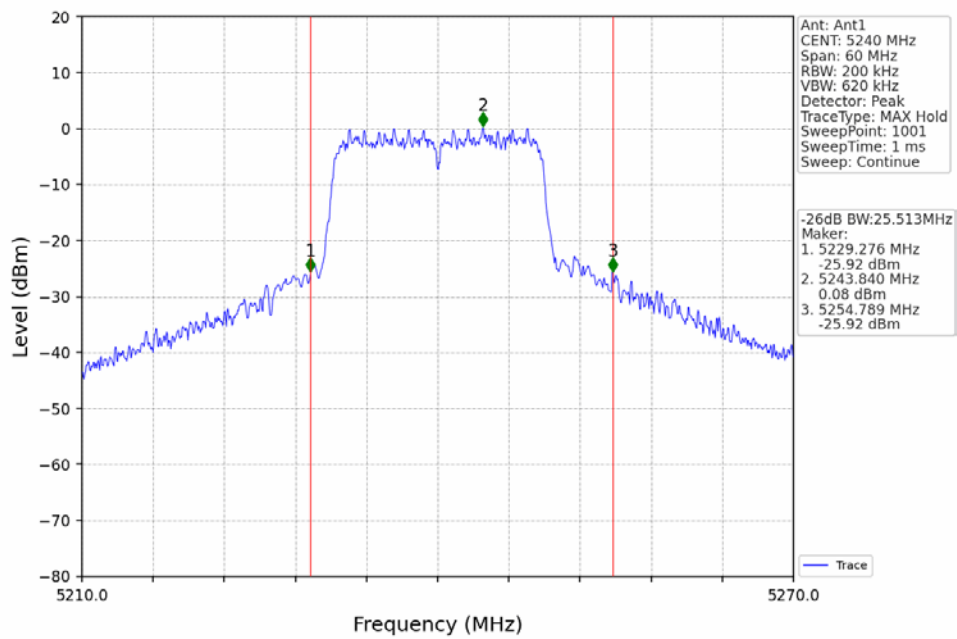
802.11n(HT20)\_LCH\_5180MHz\_Ant1\_NTNV



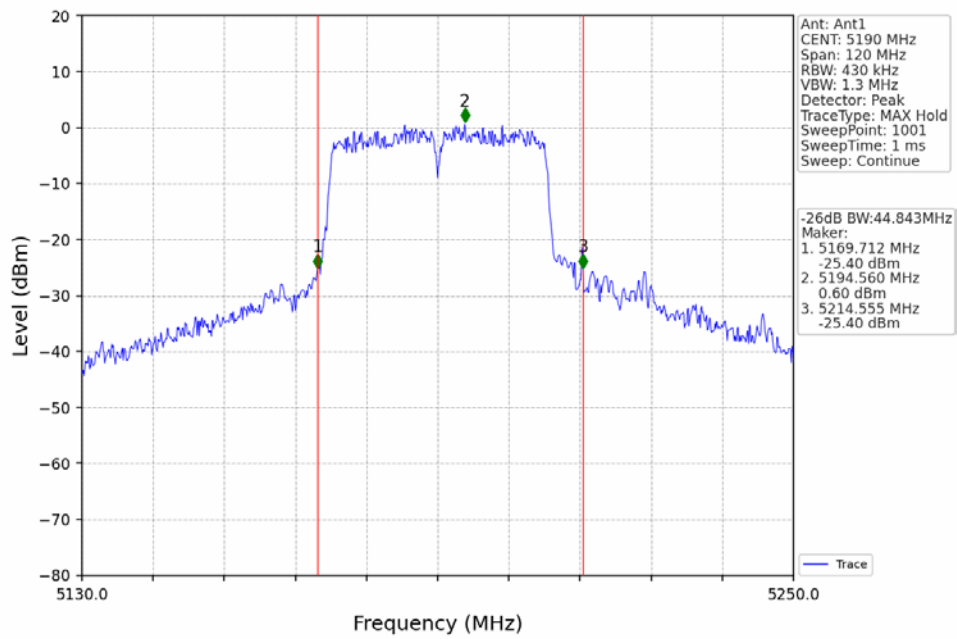
802.11n(HT20)\_MCH\_5200MHz\_Ant1\_NTNV



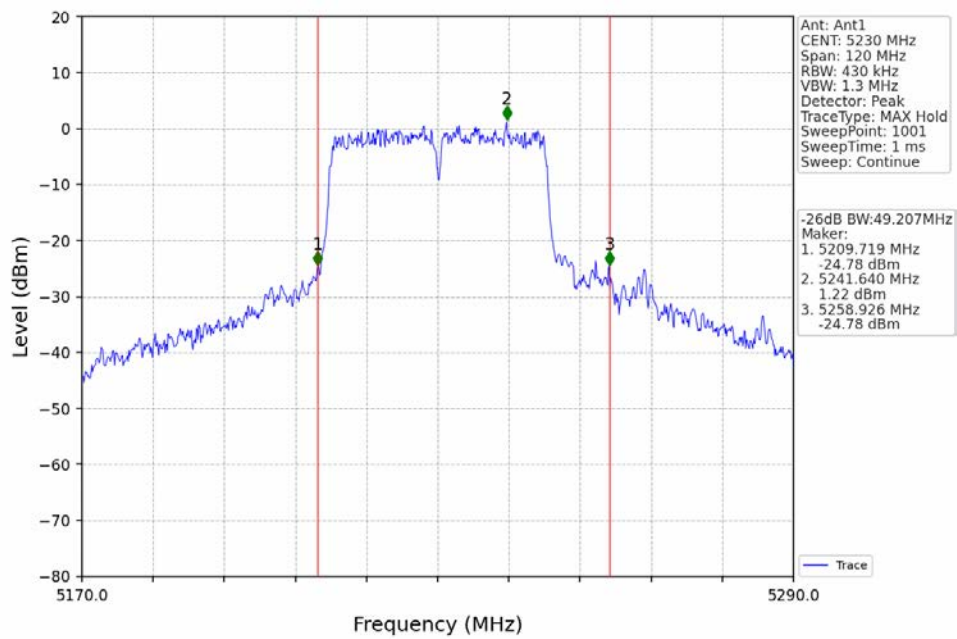
802.11n(HT20)\_HCH\_5240MHz\_Ant1\_NTNV



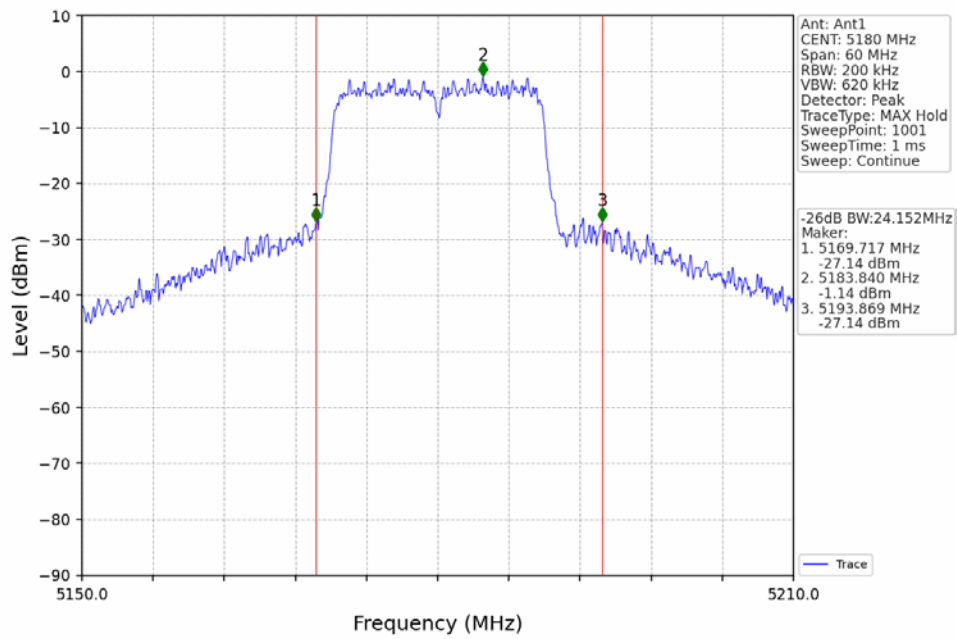
802.11n(HT40)\_LCH\_5190MHz\_Ant1\_NTNV



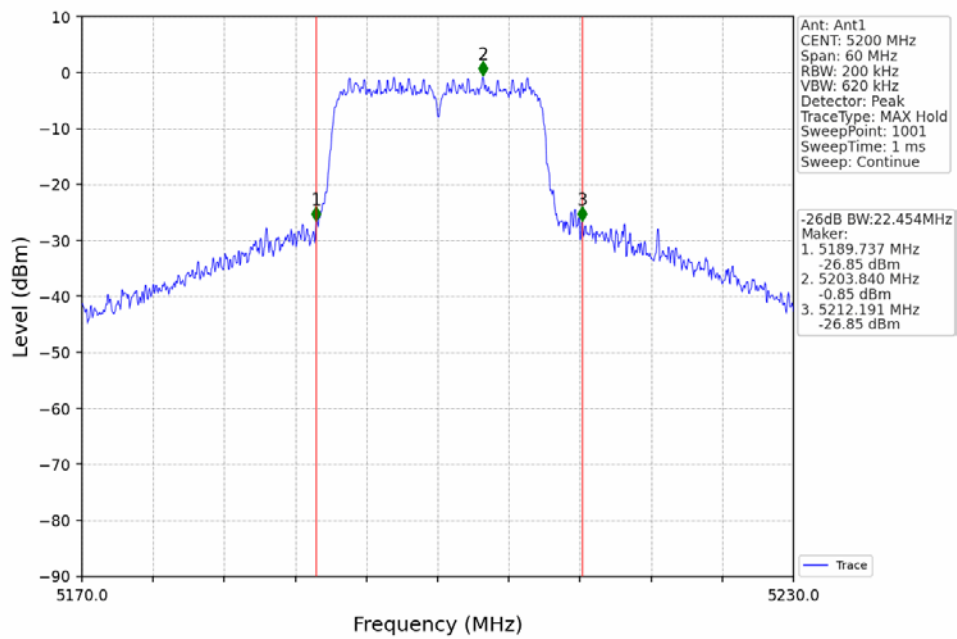
802.11n(HT40)\_HCH\_5230MHz\_Ant1\_NTNV



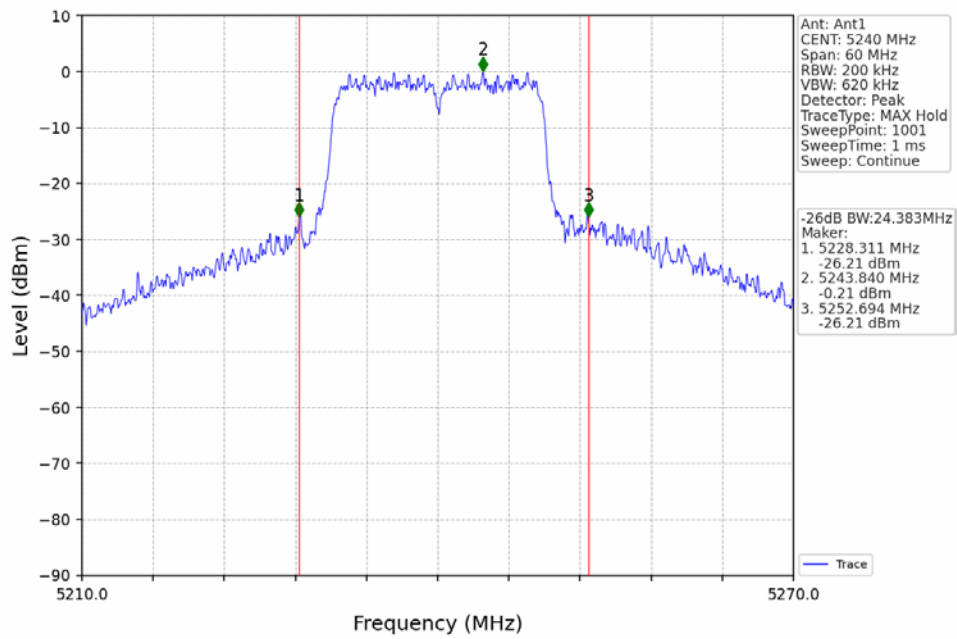
802.11ac(VHT20)\_LCH\_5180MHz\_Ant1\_NTNV



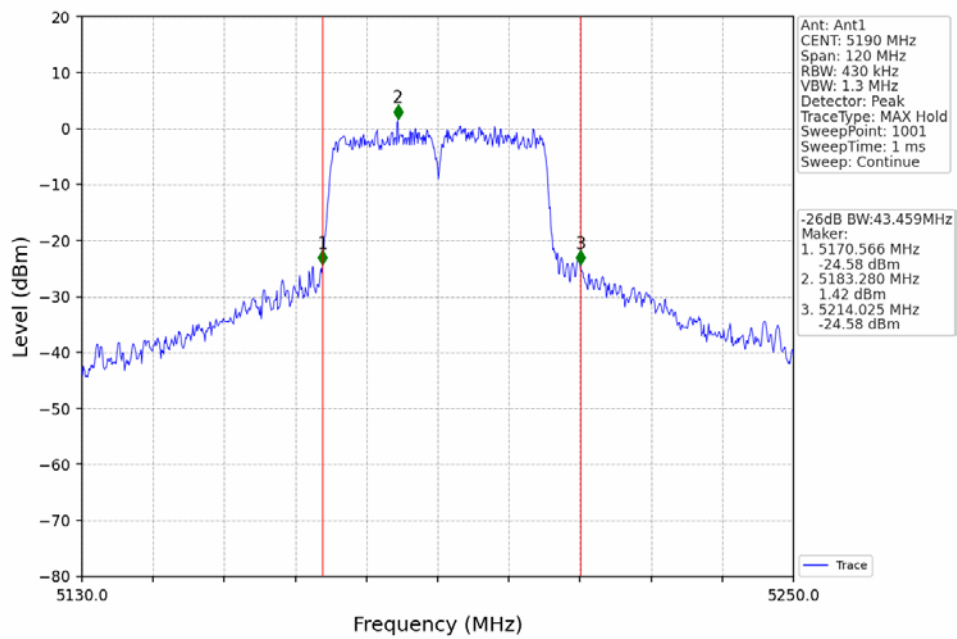
802.11ac(VHT20)\_MCH\_5200MHz\_Ant1\_NTNV



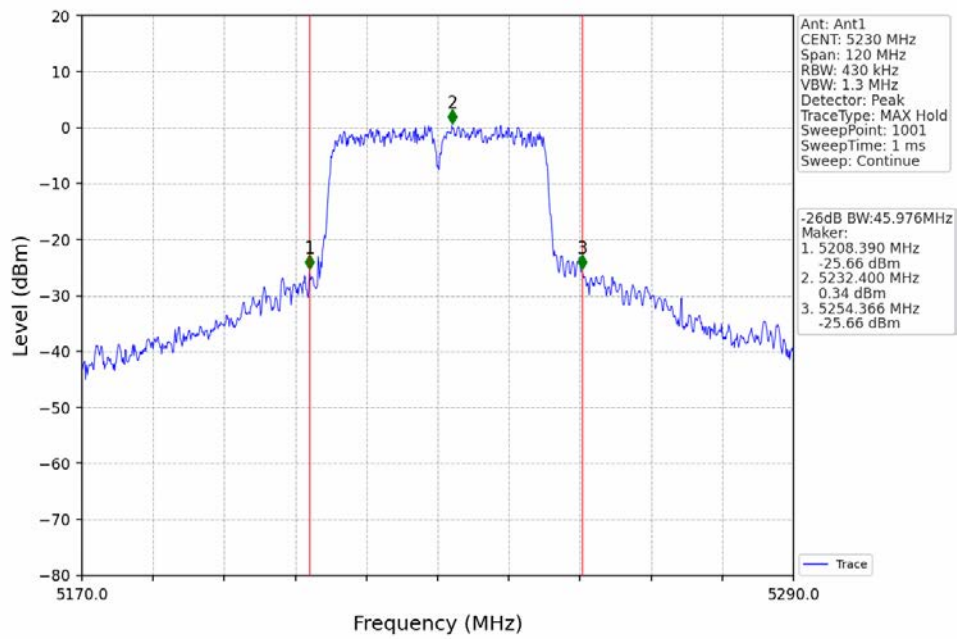
802.11ac(VHT20)\_HCH\_5240MHz\_Ant1\_NTNV



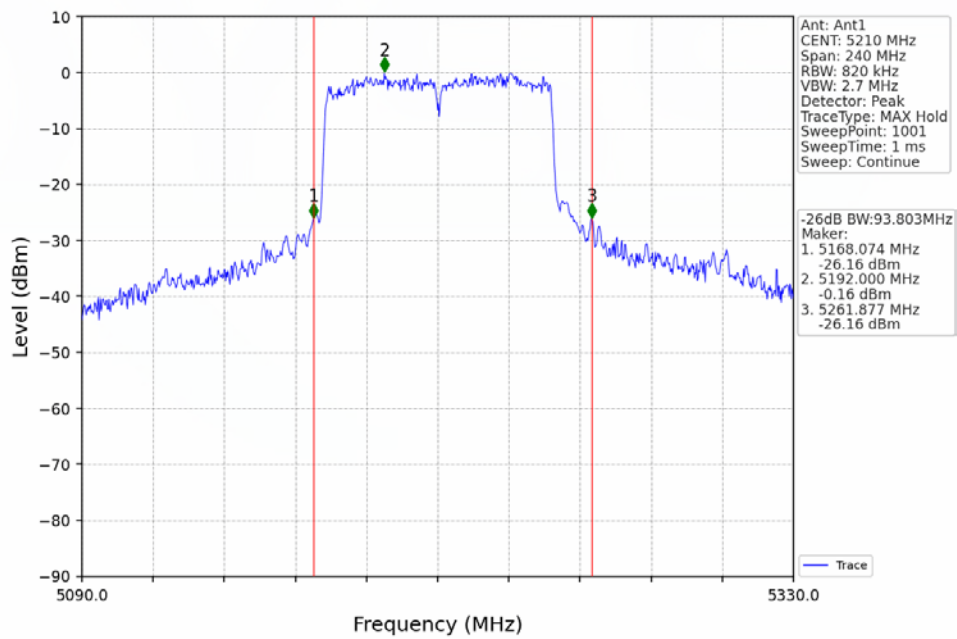
802.11ac(VHT40)\_LCH\_5190MHz\_Ant1\_NTNV



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



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



### 3. Maximum Conducted Output Power

#### 3.1 Power

##### 3.1.1 Test Result

| Mode             | TX Type | Frequency (MHz) | Maximum Average Conducted Output Power (dBm) |         | Verdict |
|------------------|---------|-----------------|----------------------------------------------|---------|---------|
|                  |         |                 | ANT1                                         | Limit   |         |
| 802.11a          | SISO    | 5180            | 10.65                                        | <=23.98 | Pass    |
|                  |         | 5200            | 10.43                                        | <=23.98 | Pass    |
|                  |         | 5240            | 11.30                                        | <=23.98 | Pass    |
| 802.11n (HT20)   | SISO    | 5180            | 9.60                                         | <=23.98 | Pass    |
|                  |         | 5200            | 9.84                                         | <=23.98 | Pass    |
|                  |         | 5240            | 10.61                                        | <=23.98 | Pass    |
| 802.11n (HT40)   | SISO    | 5190            | 10.28                                        | <=23.98 | Pass    |
|                  |         | 5230            | 10.87                                        | <=23.98 | Pass    |
| 802.11ac (VHT20) | SISO    | 5180            | 9.29                                         | <=23.98 | Pass    |
|                  |         | 5200            | 9.57                                         | <=23.98 | Pass    |
|                  |         | 5240            | 10.32                                        | <=23.98 | Pass    |
| 802.11ac (VHT40) | SISO    | 5190            | 10.13                                        | <=23.98 | Pass    |
|                  |         | 5230            | 10.45                                        | <=23.98 | Pass    |
| 802.11ac (VHT80) | SISO    | 5210            | 10.33                                        | <=23.98 | Pass    |

Note1: Antenna Gain: Ant1: 1.54dBi;

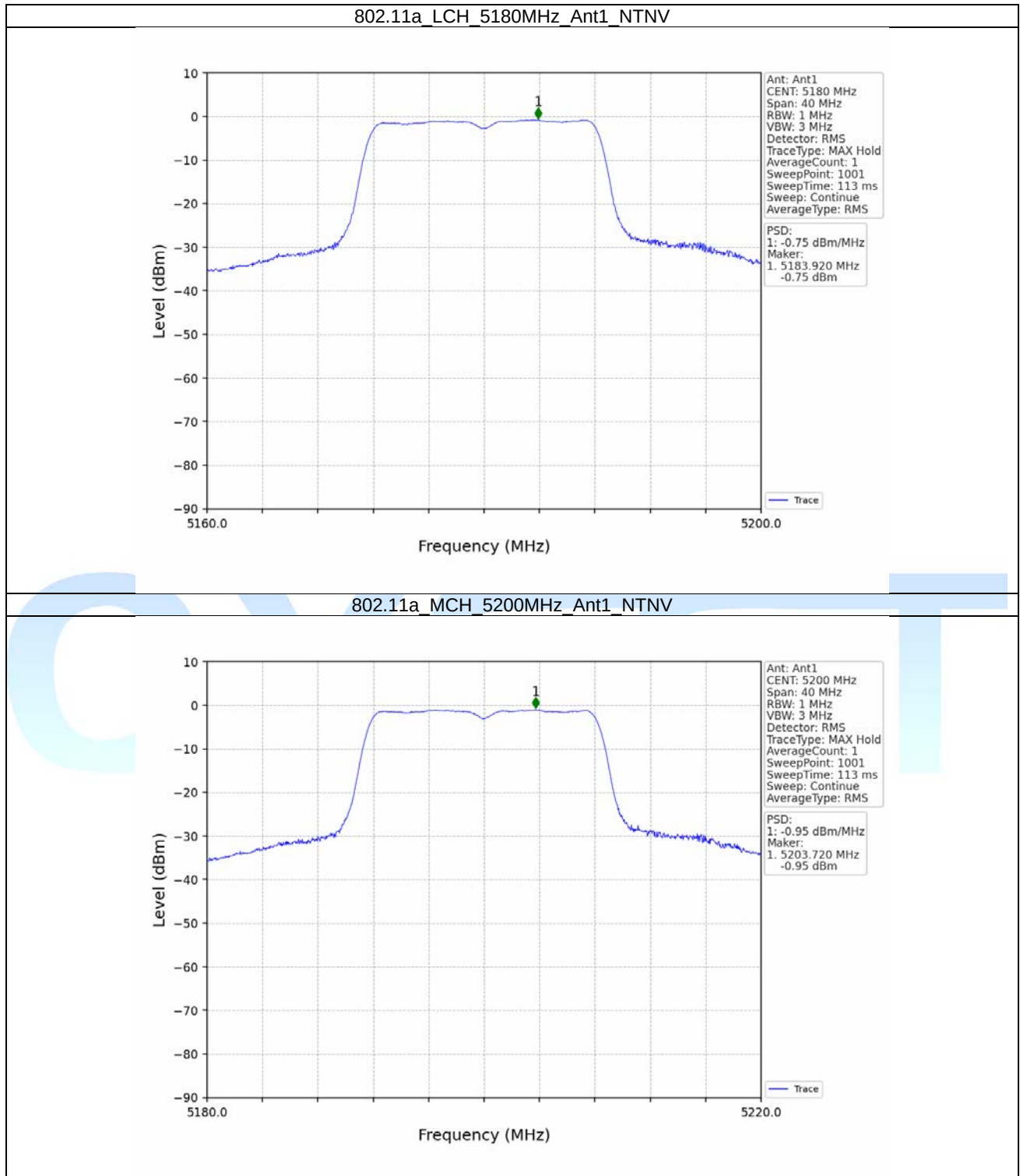
## 4. Maximum Power Spectral Density

### 4.1 PSD

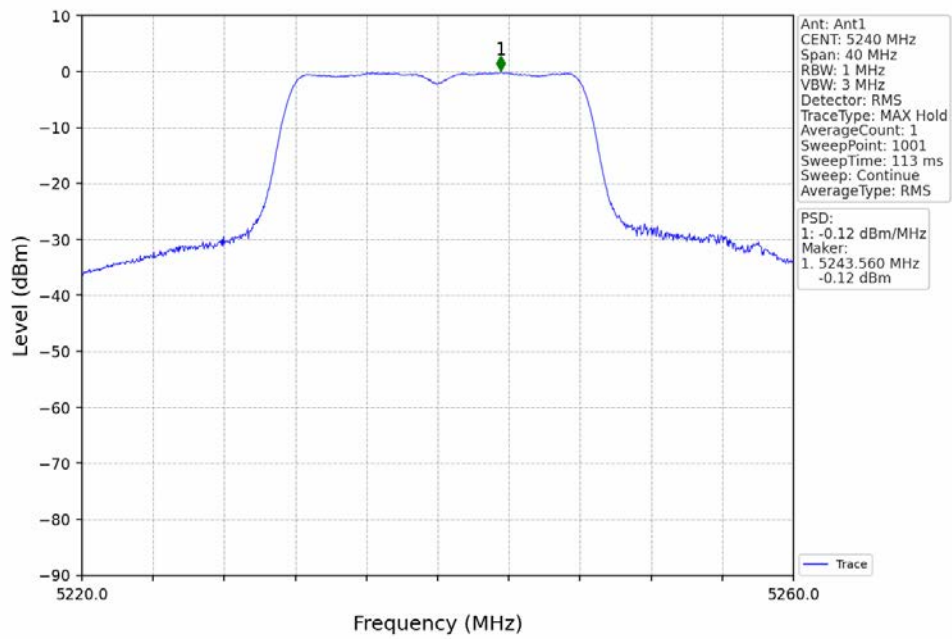
#### 4.1.1 Test Result

| Mode                                                                    | TX Type | Frequency (MHz) | Maximum PSD (dBm/MHz) |       | Verdict |
|-------------------------------------------------------------------------|---------|-----------------|-----------------------|-------|---------|
|                                                                         |         |                 | ANT1                  | Limit |         |
| 802.11a                                                                 | SISO    | 5180            | -0.75                 | <=11  | Pass    |
|                                                                         |         | 5200            | -0.95                 | <=11  | Pass    |
|                                                                         |         | 5240            | -0.12                 | <=11  | Pass    |
| 802.11n (HT20)                                                          | SISO    | 5180            | -1.76                 | <=11  | Pass    |
|                                                                         |         | 5200            | -1.72                 | <=11  | Pass    |
|                                                                         |         | 5240            | -1.01                 | <=11  | Pass    |
| 802.11n (HT40)                                                          | SISO    | 5190            | -3.87                 | <=11  | Pass    |
|                                                                         |         | 5230            | -3.31                 | <=11  | Pass    |
| 802.11ac (VHT20)                                                        | SISO    | 5180            | -2.15                 | <=11  | Pass    |
|                                                                         |         | 5200            | -1.95                 | <=11  | Pass    |
|                                                                         |         | 5240            | -1.18                 | <=11  | Pass    |
| 802.11ac (VHT40)                                                        | SISO    | 5190            | -3.94                 | <=11  | Pass    |
|                                                                         |         | 5230            | -3.73                 | <=11  | Pass    |
| 802.11ac (VHT80)                                                        | SISO    | 5210            | -6.42                 | <=11  | Pass    |
| Note1: Antenna Gain: Ant1: 1.54dBi;<br>Note2: Test result contains DCCF |         |                 |                       |       |         |

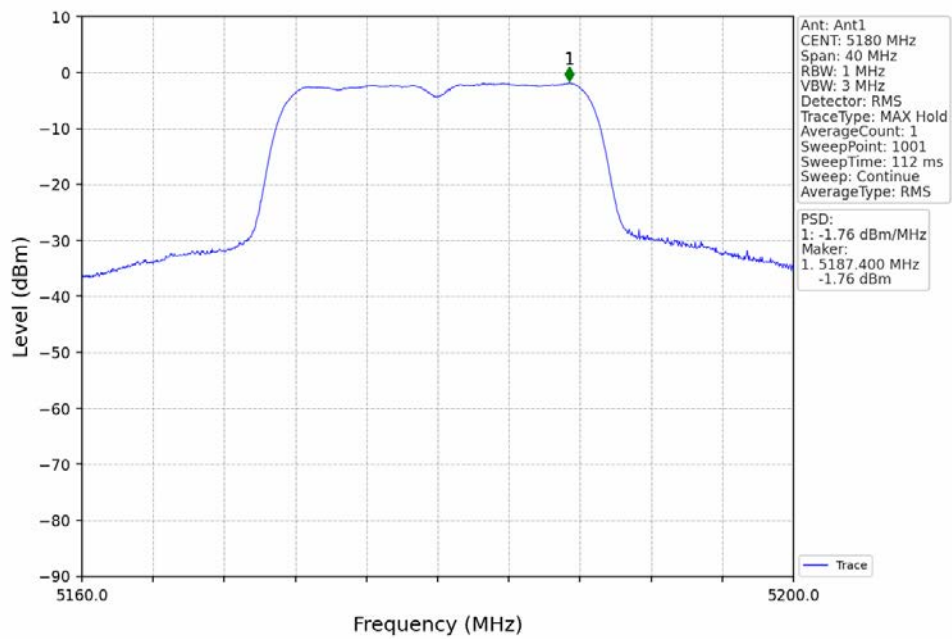
### 4.1.2 Test Graph



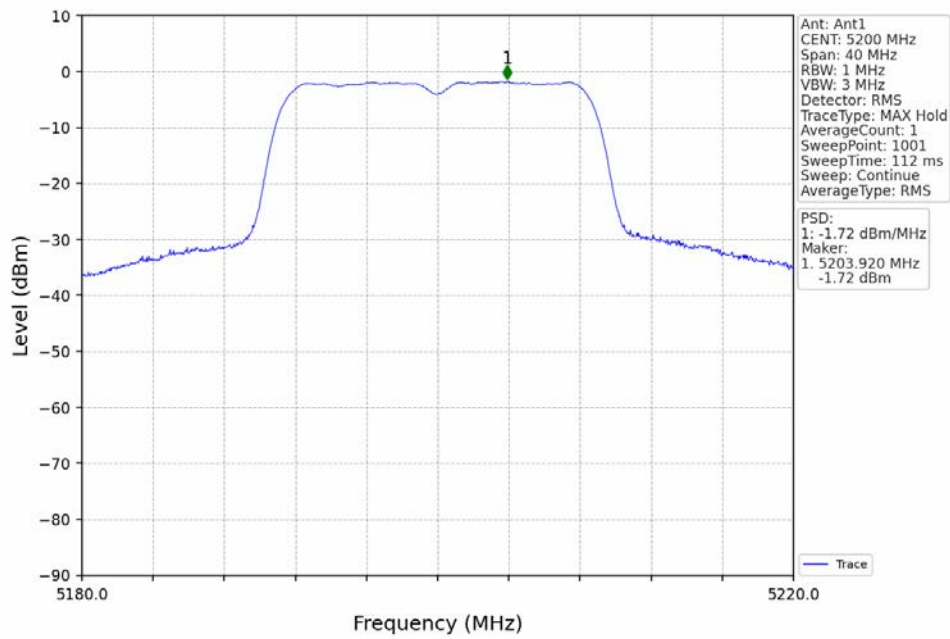
802.11a\_HCH\_5240MHz\_Ant1\_NTNV



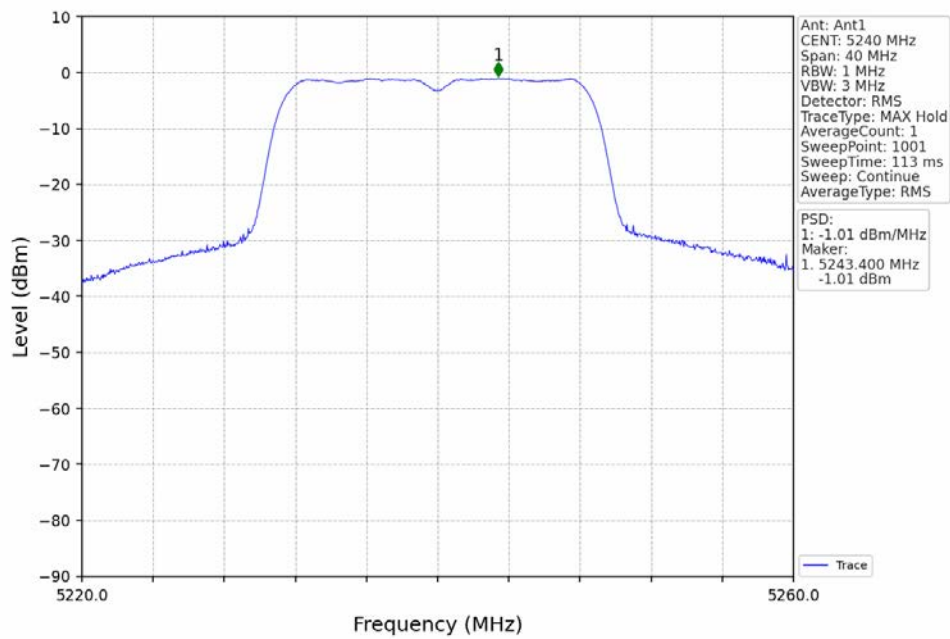
802.11n(HT20)\_LCH\_5180MHz\_Ant1\_NTNV



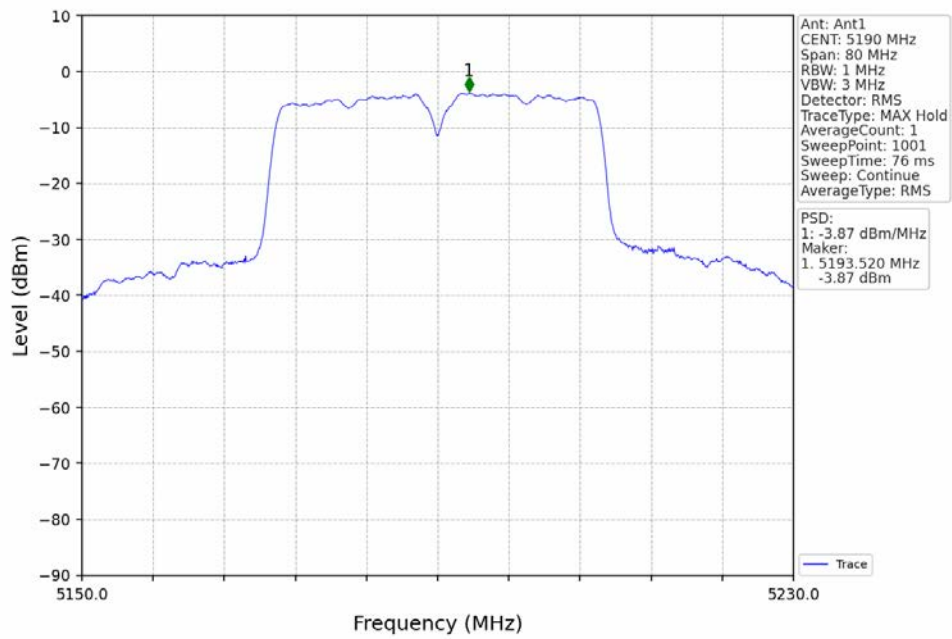
802.11n(HT20)\_MCH\_5200MHz\_Ant1\_NTNV



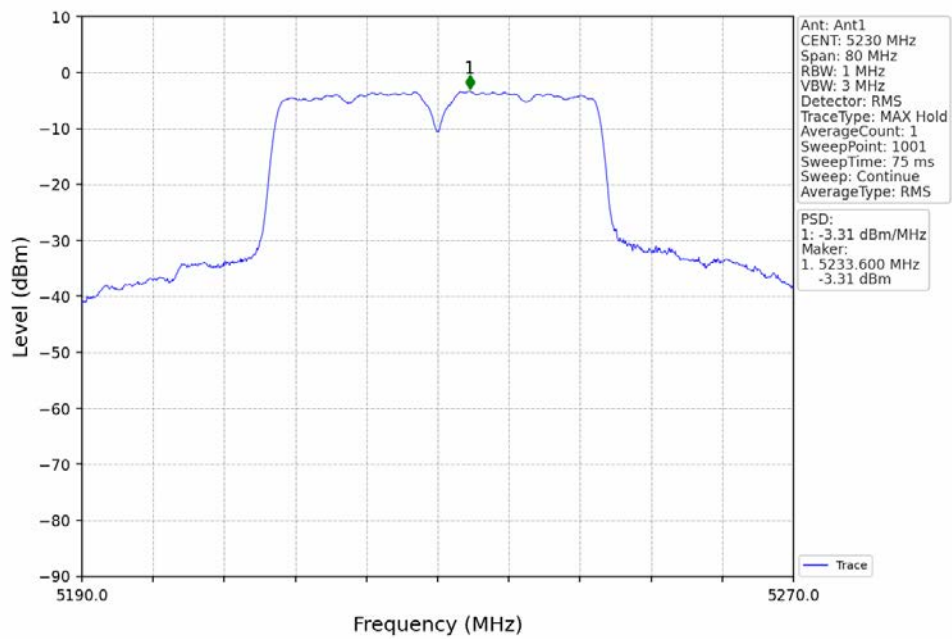
802.11n(HT20)\_HCH\_5240MHz\_Ant1\_NTNV



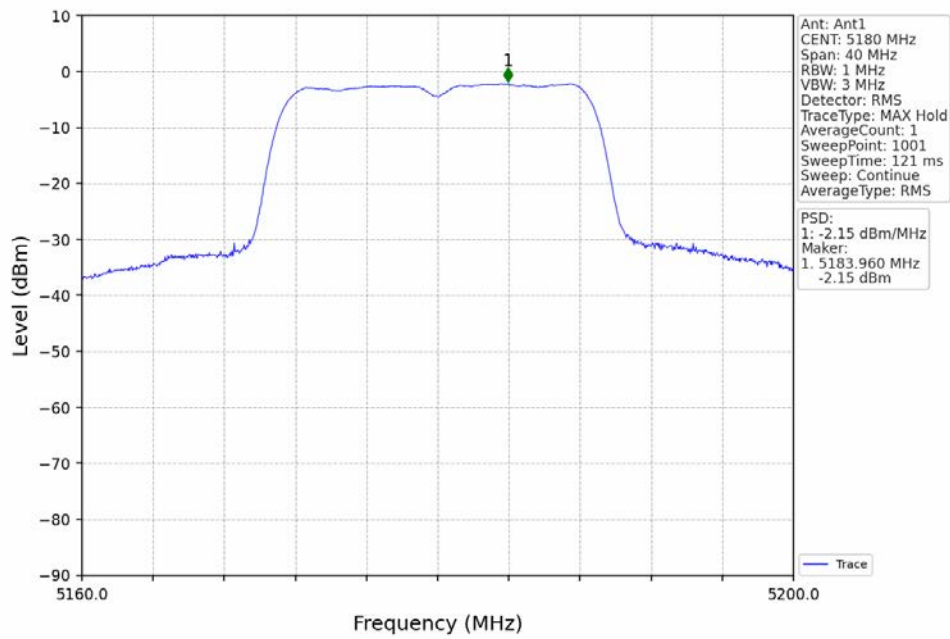
802.11n(HT40)\_LCH\_5190MHz\_Ant1\_NTNV



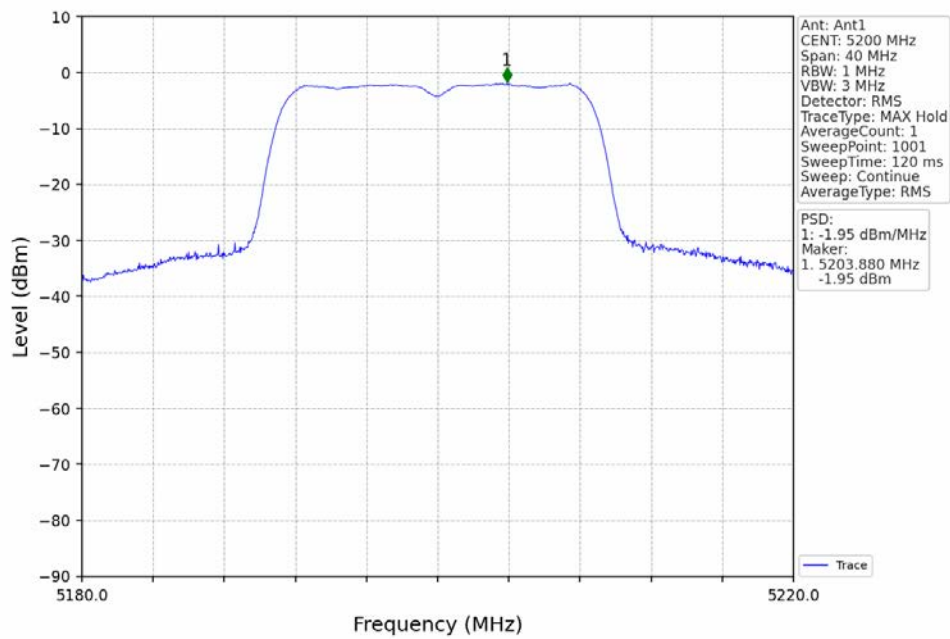
802.11n(HT40)\_HCH\_5230MHz\_Ant1\_NTNV



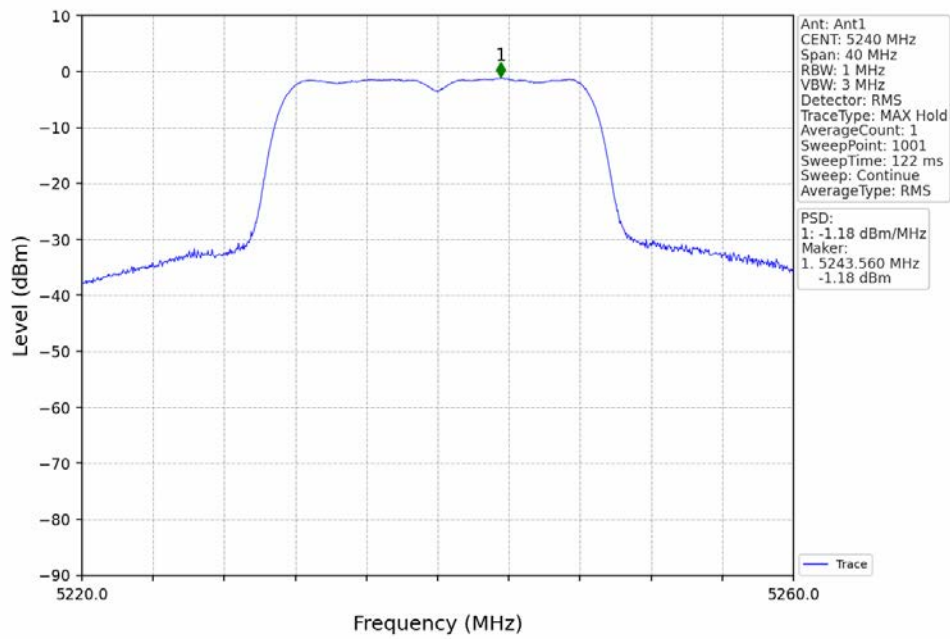
802.11ac(VHT20)\_LCH\_5180MHz\_Ant1\_NTNV



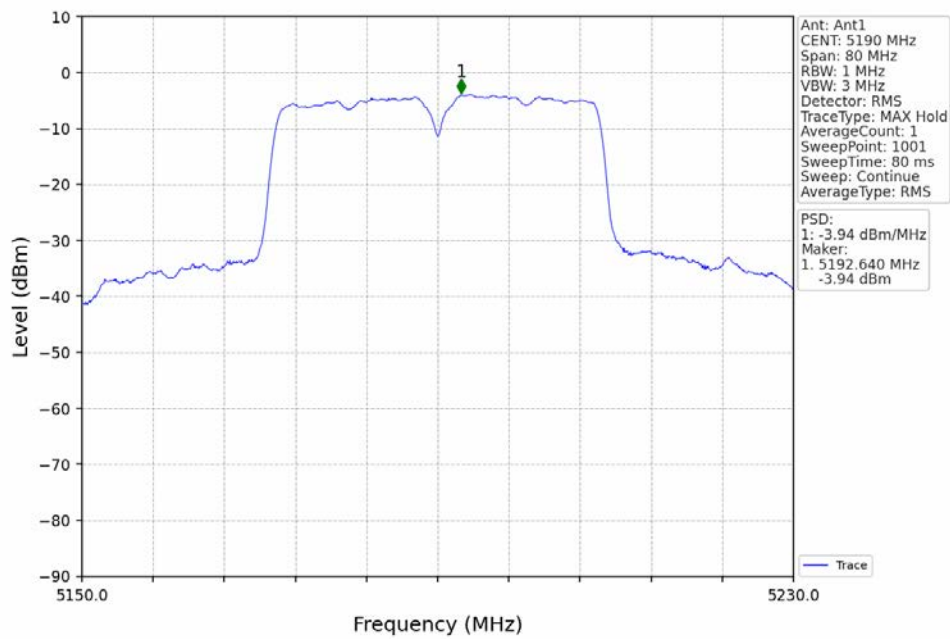
802.11ac(VHT20)\_MCH\_5200MHz\_Ant1\_NTNV



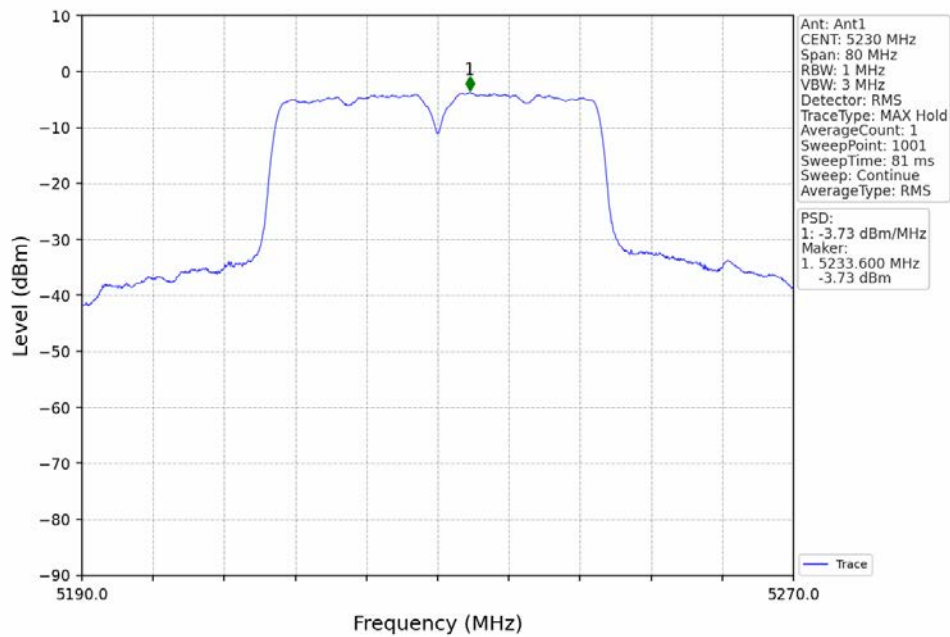
802.11ac(VHT20)\_HCH\_5240MHz\_Ant1\_NTNV



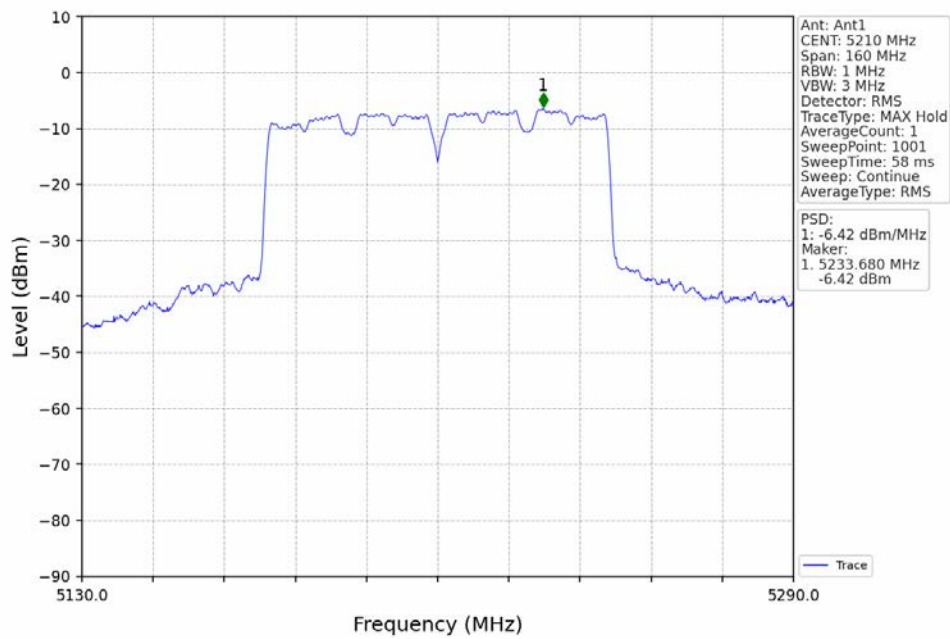
802.11ac(VHT40)\_LCH\_5190MHz\_Ant1\_NTNV



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



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



## 5. Frequency Stability

### 5.1 Ant1

#### 5.1.1 Test Result

| Ant1         |         |                 |                  |               |                          |              |         |
|--------------|---------|-----------------|------------------|---------------|--------------------------|--------------|---------|
| Mode         | TX Type | Frequency (MHz) | Temperature (°C) | Voltage (VAC) | Measured Frequency (MHz) | Limit (MHz)  | Verdict |
| Carrier Wave | SISO    | 5180            | 20               | 102           | 5179.999                 | 5150 to 5250 | Pass    |
|              |         |                 |                  | 120           | 5179.999                 | 5150 to 5250 | Pass    |
|              |         |                 |                  | 138           | 5179.999                 | 5150 to 5250 | Pass    |
|              |         |                 | -30              | 120           | 5179.999                 | 5150 to 5250 | Pass    |
|              |         |                 | -20              | 120           | 5179.999                 | 5150 to 5250 | Pass    |
|              |         |                 | -10              | 120           | 5179.999                 | 5150 to 5250 | Pass    |
|              |         |                 | 0                | 120           | 5179.999                 | 5150 to 5250 | Pass    |
|              |         |                 | 10               | 120           | 5179.999                 | 5150 to 5250 | Pass    |
|              |         |                 | 30               | 120           | 5179.999                 | 5150 to 5250 | Pass    |
|              |         |                 | 40               | 120           | 5179.999                 | 5150 to 5250 | Pass    |
|              |         |                 | 50               | 120           | 5179.999                 | 5150 to 5250 | Pass    |
|              |         | 5200            | 20               | 102           | 5199.999                 | 5150 to 5250 | Pass    |
|              |         |                 |                  | 120           | 5199.999                 | 5150 to 5250 | Pass    |
|              |         |                 |                  | 138           | 5199.999                 | 5150 to 5250 | Pass    |
|              |         |                 | -30              | 120           | 5199.999                 | 5150 to 5250 | Pass    |
|              |         |                 | -20              | 120           | 5199.999                 | 5150 to 5250 | Pass    |
|              |         |                 | -10              | 120           | 5199.999                 | 5150 to 5250 | Pass    |
|              |         |                 | 0                | 120           | 5199.999                 | 5150 to 5250 | Pass    |
|              |         |                 | 10               | 120           | 5199.999                 | 5150 to 5250 | Pass    |
|              |         |                 | 30               | 120           | 5199.999                 | 5150 to 5250 | Pass    |
|              |         |                 | 40               | 120           | 5199.999                 | 5150 to 5250 | Pass    |
|              |         |                 | 50               | 120           | 5199.999                 | 5150 to 5250 | Pass    |
|              |         | 5240            | 20               | 102           | 5239.999                 | 5150 to 5250 | Pass    |
|              |         |                 |                  | 120           | 5239.999                 | 5150 to 5250 | Pass    |
|              |         |                 |                  | 138           | 5239.999                 | 5150 to 5250 | Pass    |
|              |         |                 | -30              | 120           | 5239.999                 | 5150 to 5250 | Pass    |
|              |         |                 | -20              | 120           | 5239.999                 | 5150 to 5250 | Pass    |
|              |         |                 | -10              | 120           | 5239.999                 | 5150 to 5250 | Pass    |
|              |         |                 | 0                | 120           | 5239.999                 | 5150 to 5250 | Pass    |
|              |         |                 | 10               | 120           | 5239.999                 | 5150 to 5250 | Pass    |
|              |         |                 | 30               | 120           | 5239.999                 | 5150 to 5250 | Pass    |
|              |         |                 | 40               | 120           | 5239.999                 | 5150 to 5250 | Pass    |
|              |         |                 | 50               | 120           | 5239.999                 | 5150 to 5250 | Pass    |
|              |         | 5190            | 20               | 102           | 5189.999                 | 5150 to 5250 | Pass    |
|              |         |                 |                  | 120           | 5189.999                 | 5150 to 5250 | Pass    |
|              |         |                 |                  | 138           | 5189.999                 | 5150 to 5250 | Pass    |
|              |         |                 | -30              | 120           | 5189.999                 | 5150 to 5250 | Pass    |
|              |         |                 | -20              | 120           | 5189.999                 | 5150 to 5250 | Pass    |
|              |         |                 | -10              | 120           | 5189.999                 | 5150 to 5250 | Pass    |
|              |         |                 | 0                | 120           | 5189.999                 | 5150 to 5250 | Pass    |
|              |         |                 | 10               | 120           | 5189.999                 | 5150 to 5250 | Pass    |
|              |         |                 | 30               | 120           | 5189.999                 | 5150 to 5250 | Pass    |
|              |         |                 | 40               | 120           | 5189.999                 | 5150 to 5250 | Pass    |
|              |         |                 | 50               | 120           | 5189.999                 | 5150 to 5250 | Pass    |
|              |         | 5230            | 20               | 102           | 5229.999                 | 5150 to 5250 | Pass    |
|              |         |                 |                  | 120           | 5229.999                 | 5150 to 5250 | Pass    |
|              |         |                 |                  | 138           | 5229.999                 | 5150 to 5250 | Pass    |

|  |  |      |     |     |          |              |      |
|--|--|------|-----|-----|----------|--------------|------|
|  |  |      | -30 | 120 | 5229.999 | 5150 to 5250 | Pass |
|  |  |      | -20 | 120 | 5229.999 | 5150 to 5250 | Pass |
|  |  |      | -10 | 120 | 5229.999 | 5150 to 5250 | Pass |
|  |  |      | 0   | 120 | 5229.999 | 5150 to 5250 | Pass |
|  |  |      | 10  | 120 | 5229.999 | 5150 to 5250 | Pass |
|  |  |      | 30  | 120 | 5229.999 | 5150 to 5250 | Pass |
|  |  |      | 40  | 120 | 5229.999 | 5150 to 5250 | Pass |
|  |  |      | 50  | 120 | 5229.999 | 5150 to 5250 | Pass |
|  |  | 5210 | 20  | 102 | 5209.999 | 5150 to 5250 | Pass |
|  |  |      |     | 120 | 5209.999 | 5150 to 5250 | Pass |
|  |  |      |     | 138 | 5209.999 | 5150 to 5250 | Pass |
|  |  |      | -30 | 120 | 5209.999 | 5150 to 5250 | Pass |
|  |  |      | -20 | 120 | 5209.999 | 5150 to 5250 | Pass |
|  |  |      | -10 | 120 | 5209.999 | 5150 to 5250 | Pass |
|  |  |      | 0   | 120 | 5209.999 | 5150 to 5250 | Pass |
|  |  |      | 10  | 120 | 5209.999 | 5150 to 5250 | Pass |
|  |  |      | 30  | 120 | 5209.999 | 5150 to 5250 | Pass |
|  |  |      | 40  | 120 | 5209.999 | 5150 to 5250 | Pass |
|  |  |      | 50  | 120 | 5209.999 | 5150 to 5250 | Pass |

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