



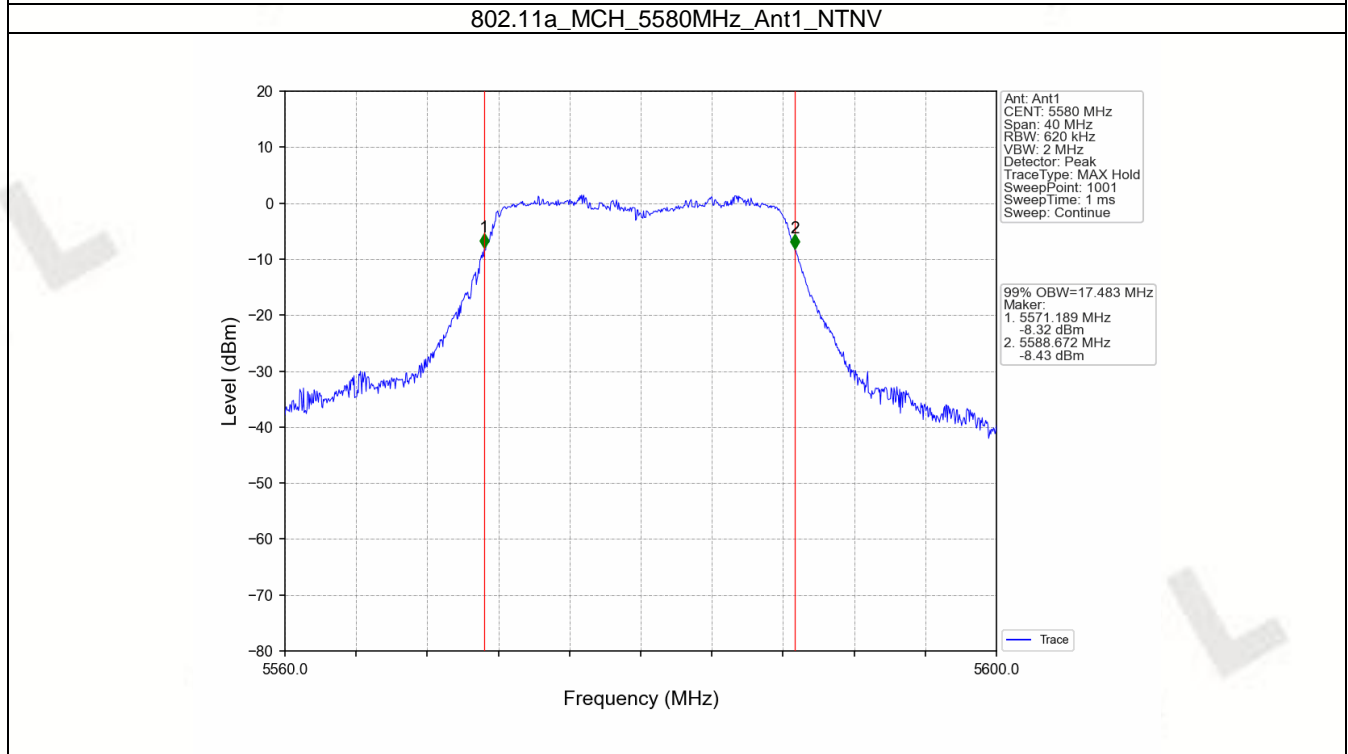
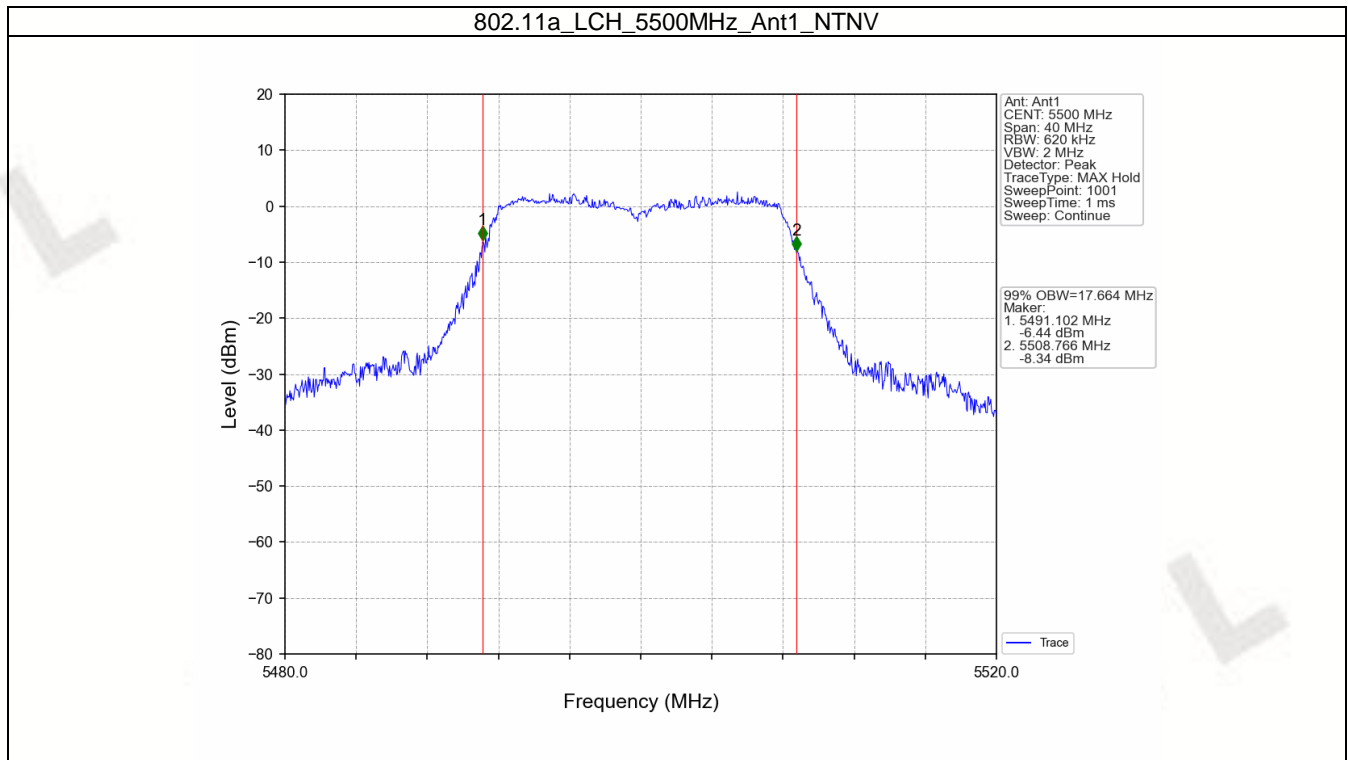
## 1. Bandwidth

### 1.1 OBW

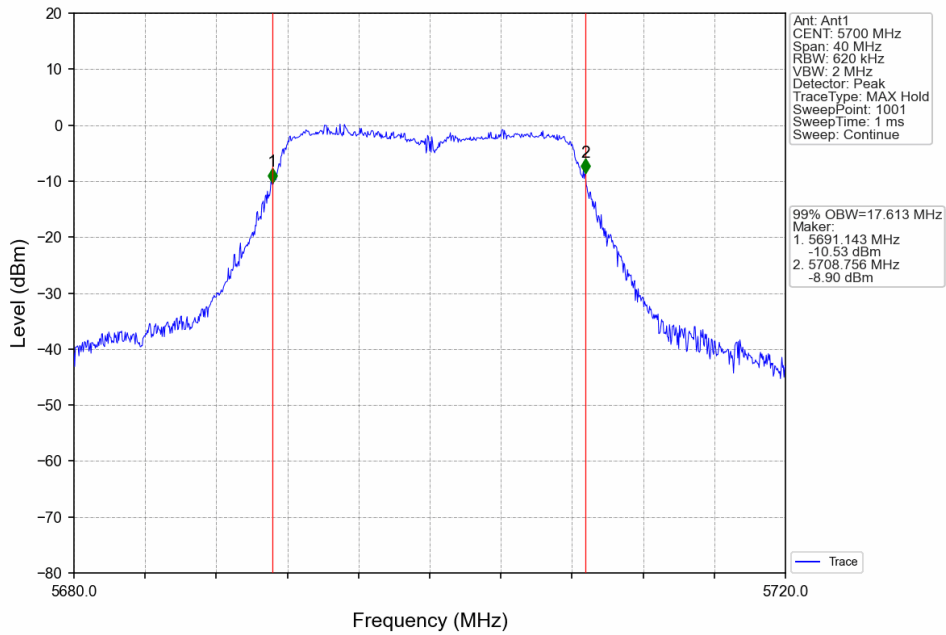
#### 1.1.1 Test Result

| Mode             | TX Type | Frequency (MHz) | ANT | 99% Occupied Bandwidth (MHz) |       | Verdict |
|------------------|---------|-----------------|-----|------------------------------|-------|---------|
|                  |         |                 |     | Result                       | Limit |         |
| 802.11a          | SISO    | 5500            | 1   | 17.664                       | /     | Pass    |
|                  |         | 5580            | 1   | 17.483                       | /     | Pass    |
|                  |         | 5700            | 1   | 17.613                       | /     | Pass    |
| 802.11n (HT20)   | SISO    | 5500            | 1   | 18.566                       | /     | Pass    |
|                  |         | 5580            | 1   | 18.404                       | /     | Pass    |
|                  |         | 5700            | 1   | 18.415                       | /     | Pass    |
| 802.11n (HT40)   | SISO    | 5510            | 1   | 36.923                       | /     | Pass    |
|                  |         | 5550            | 1   | 36.842                       | /     | Pass    |
|                  |         | 5670            | 1   | 36.853                       | /     | Pass    |
| 802.11ac (VHT20) | SISO    | 5500            | 1   | 18.410                       | /     | Pass    |
|                  |         | 5580            | 1   | 18.356                       | /     | Pass    |
|                  |         | 5700            | 1   | 18.355                       | /     | Pass    |
| 802.11ac (VHT40) | SISO    | 5510            | 1   | 37.158                       | /     | Pass    |
|                  |         | 5550            | 1   | 37.196                       | /     | Pass    |
|                  |         | 5670            | 1   | 36.883                       | /     | Pass    |
| 802.11ac (VHT80) | SISO    | 5530            | 1   | 76.452                       | /     | Pass    |
|                  |         | 5610            | 1   | 76.511                       | /     | Pass    |

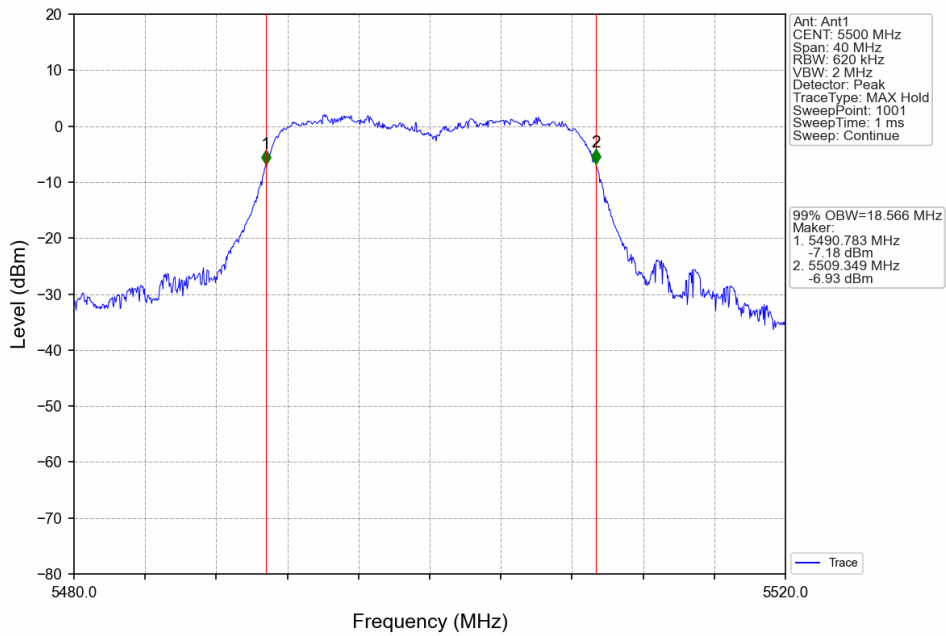
1.1.2 Test Graph

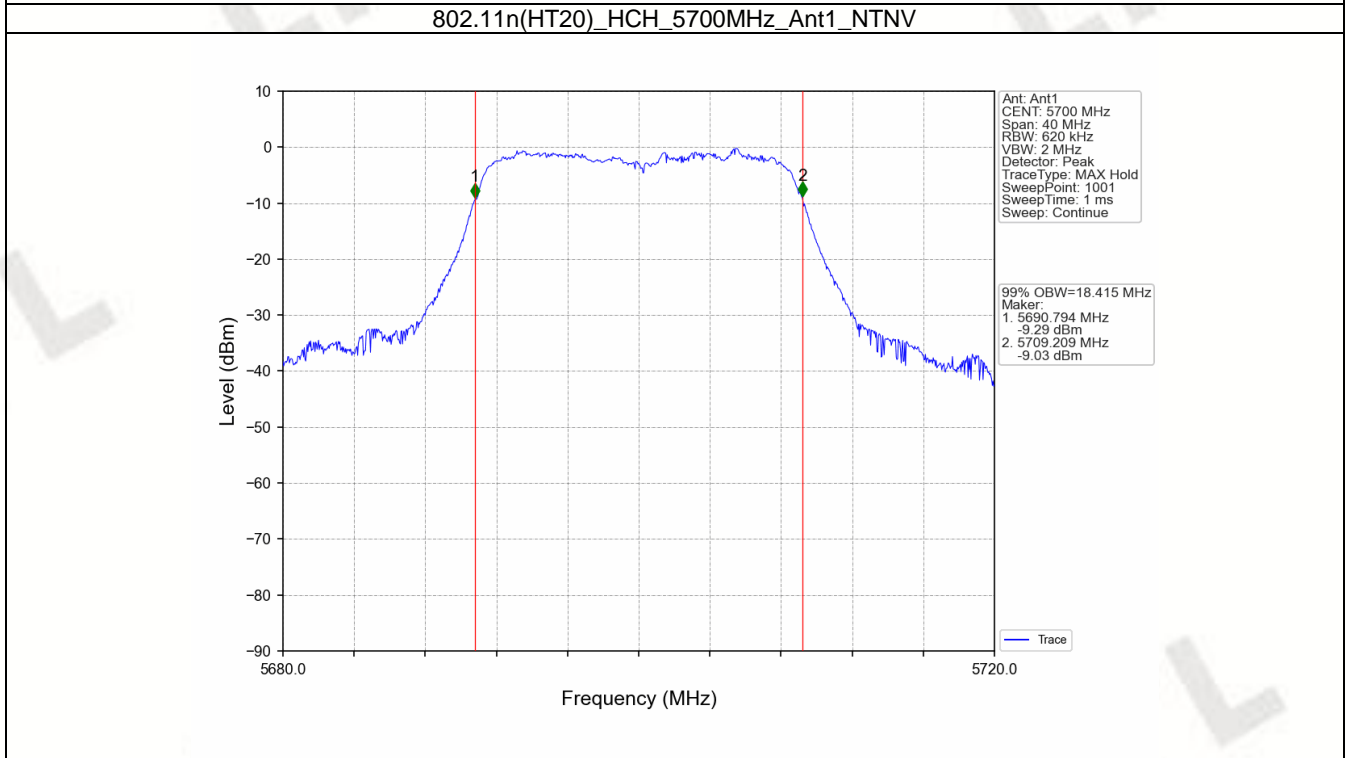
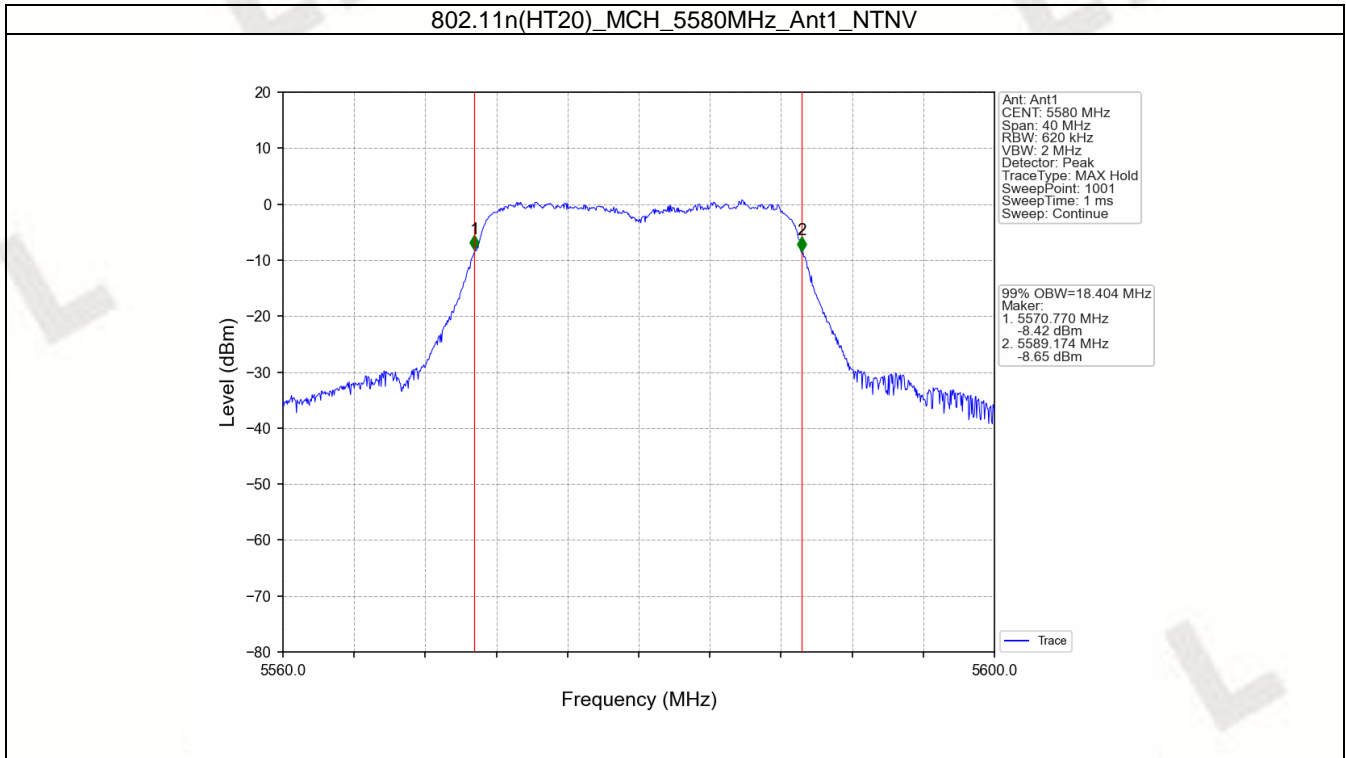


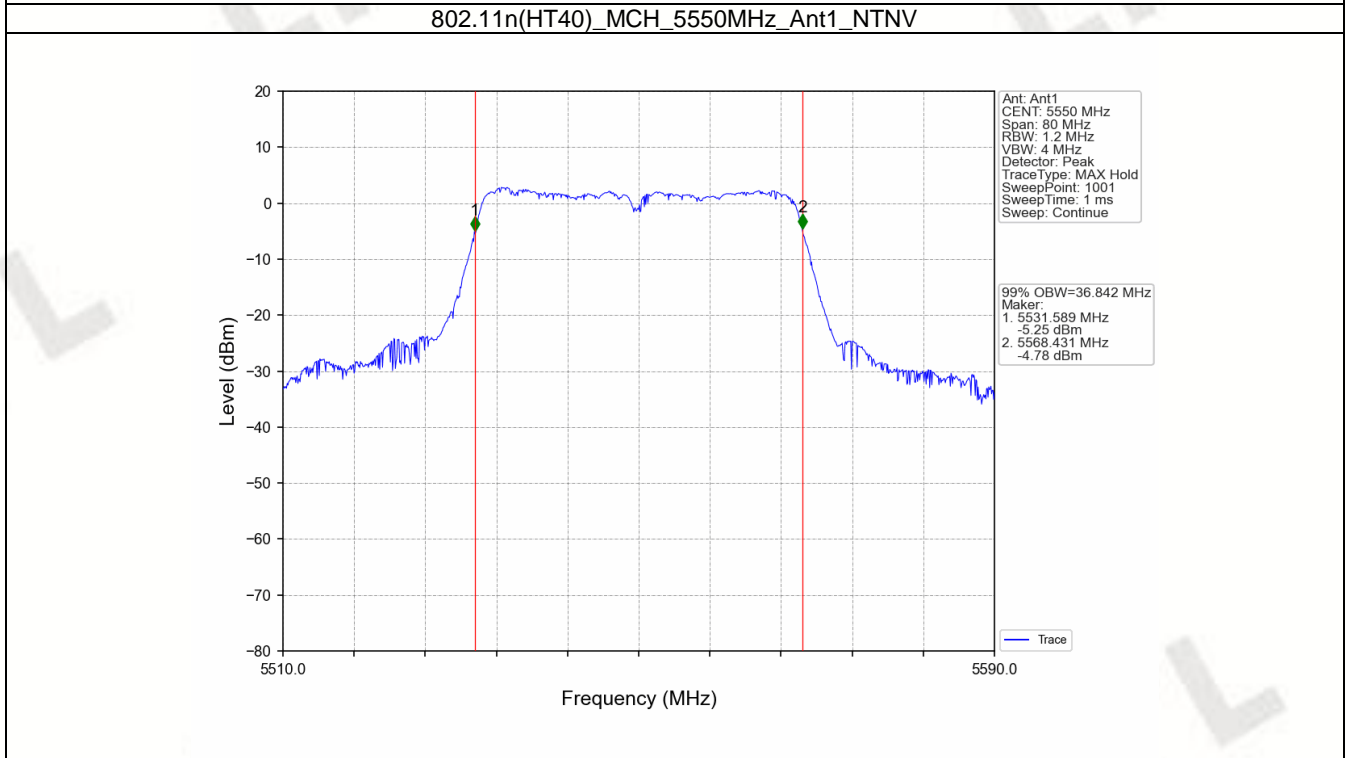
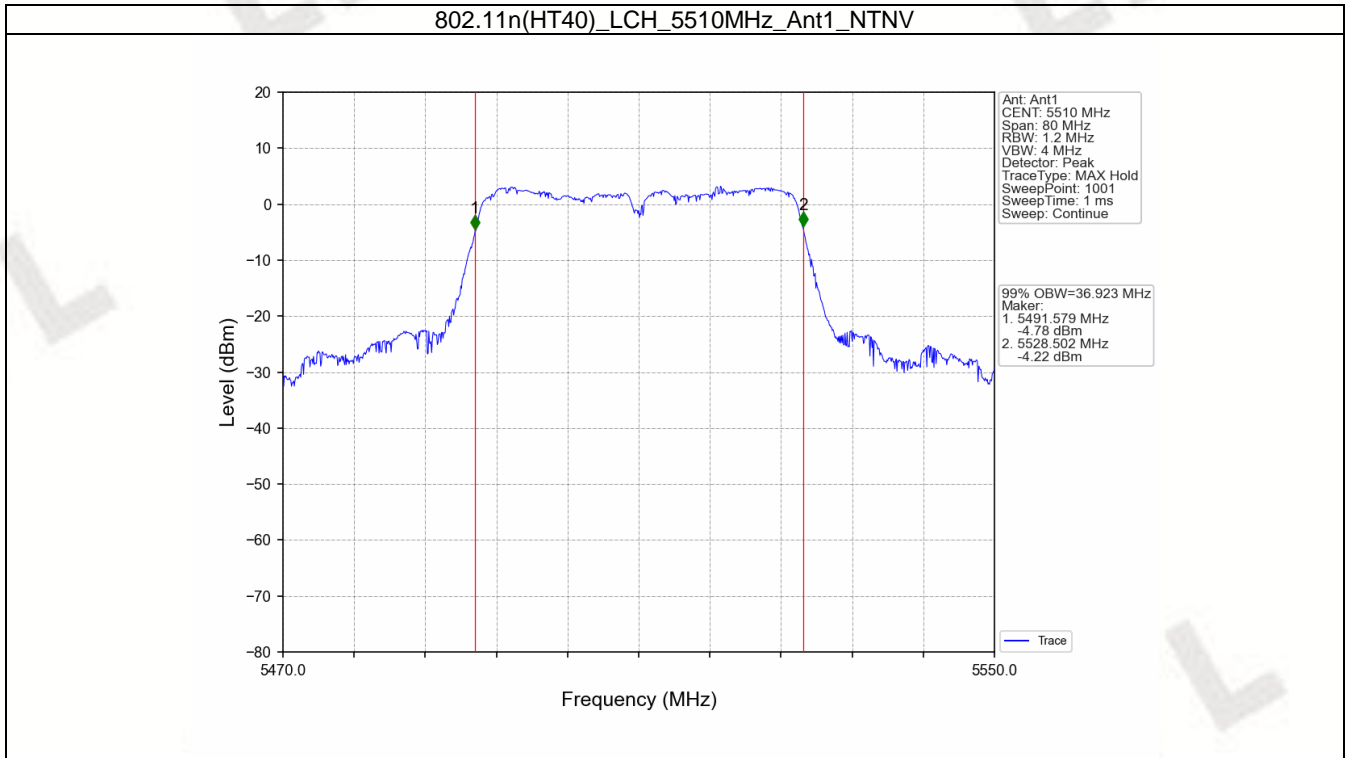
802.11a\_HCH\_5700MHz\_Ant1\_NTNV



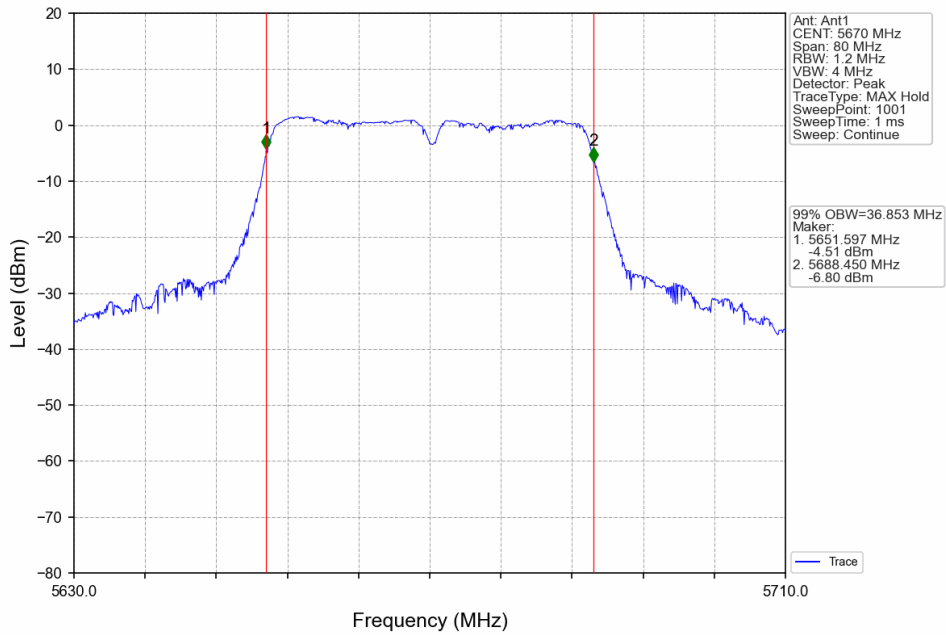
802.11n(HT20)\_LCH\_5500MHz\_Ant1\_NTNV



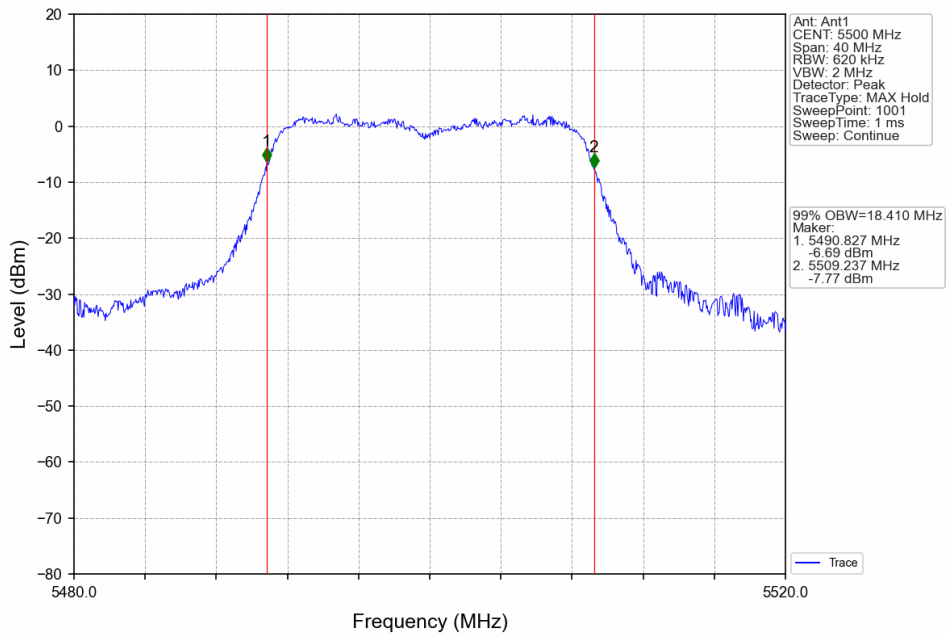


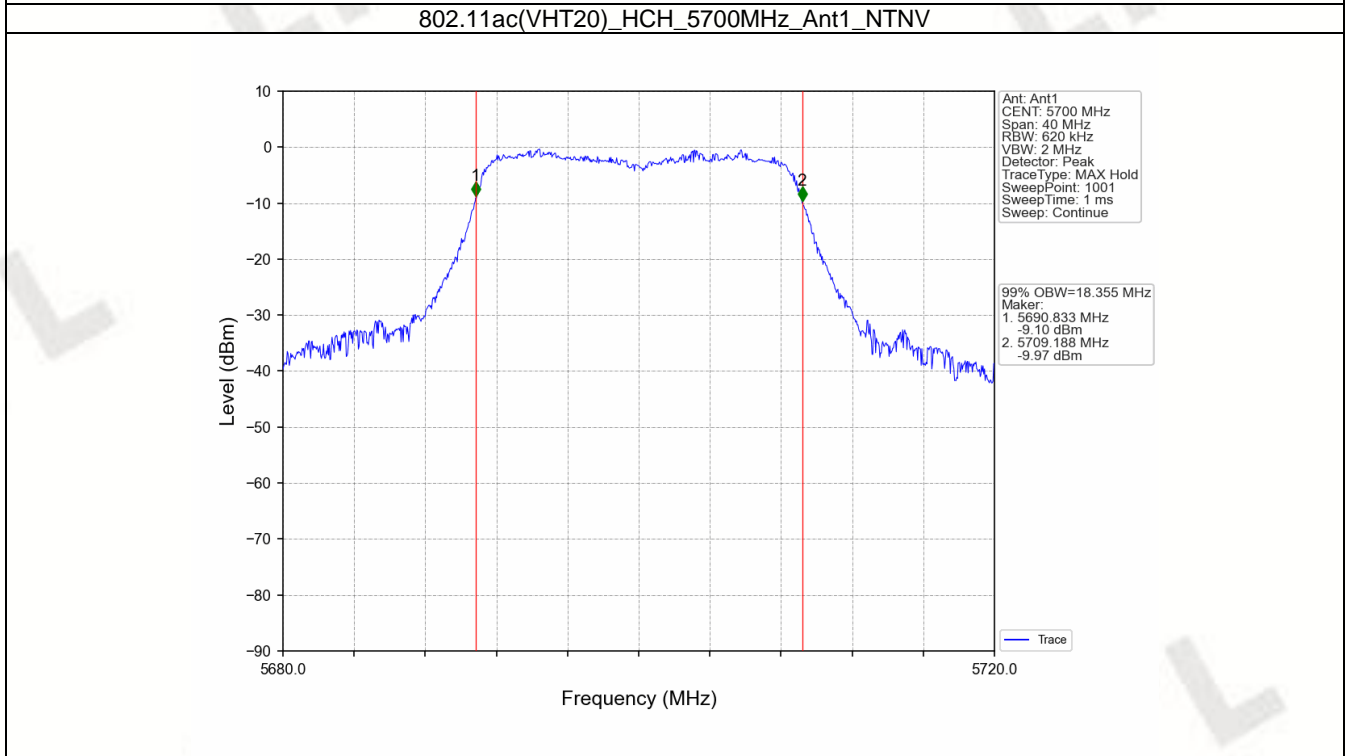
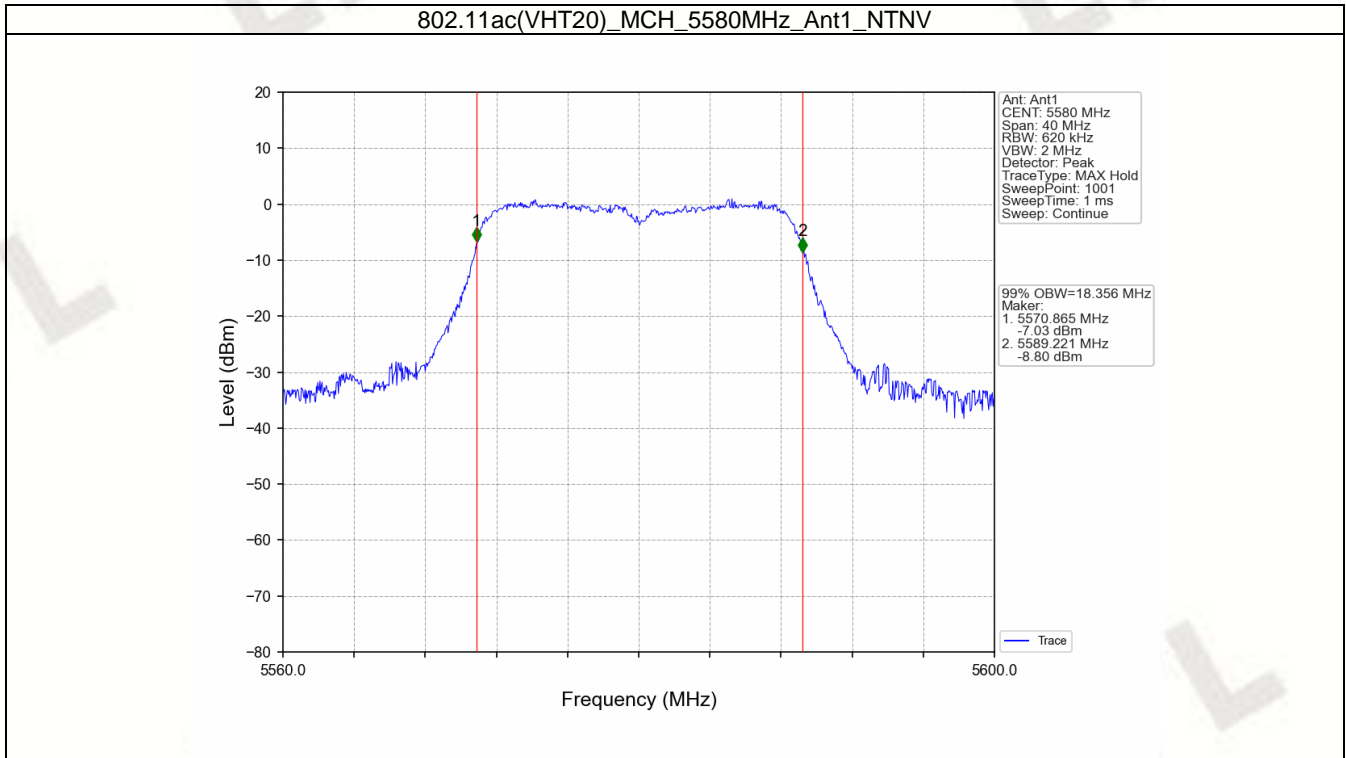


802.11n(HT40)\_HCH\_5670MHz\_Ant1\_NTNV

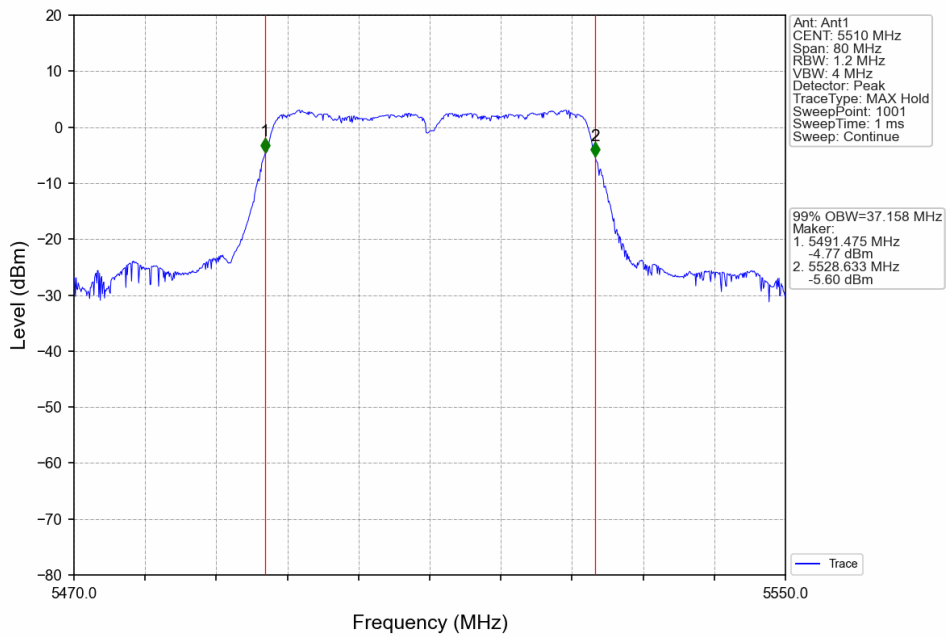


802.11ac(VHT20)\_LCH\_5500MHz\_Ant1\_NTNV

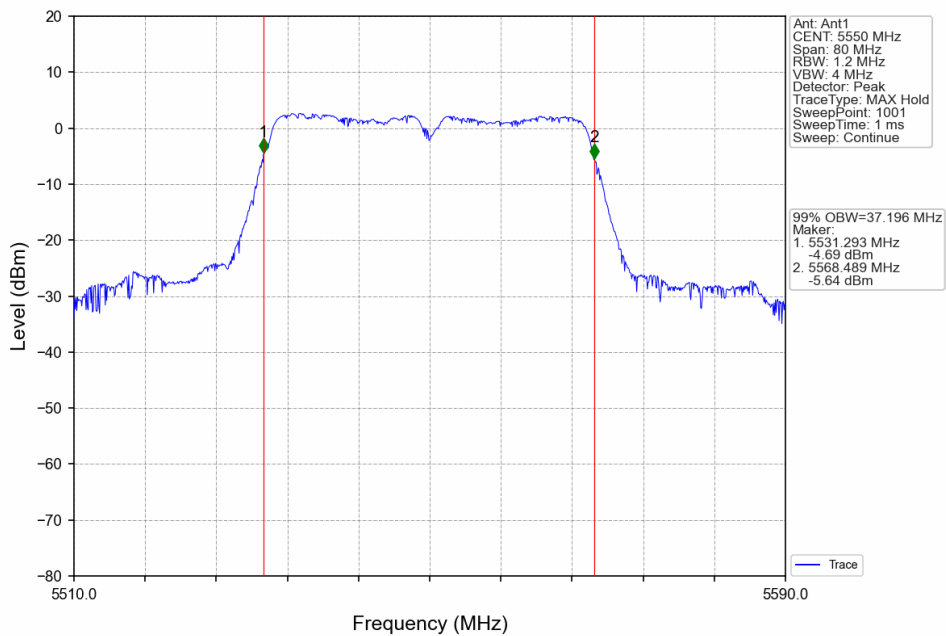




802.11ac(VHT40)\_LCH\_5510MHz\_Ant1\_NTNV

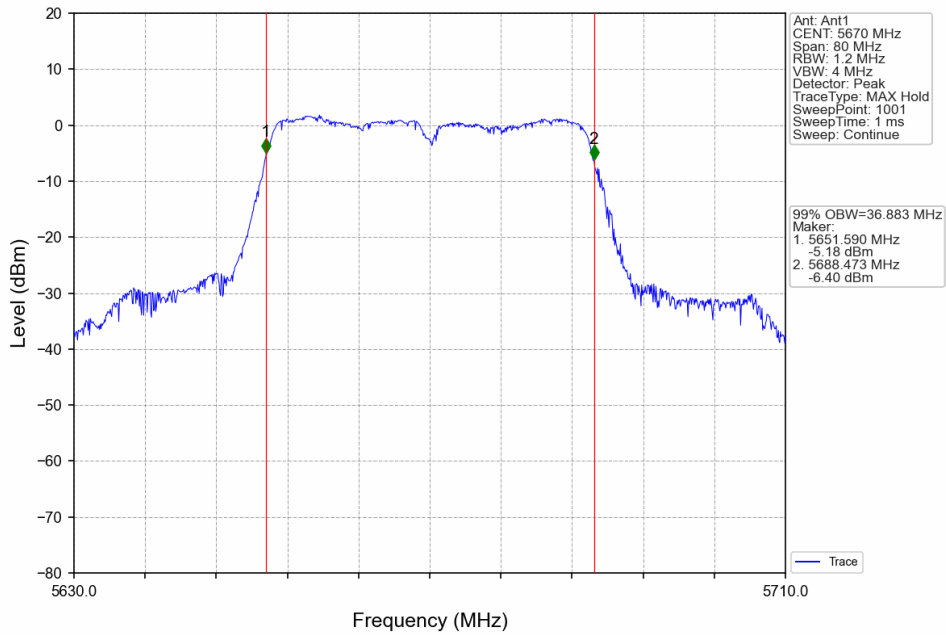


802.11ac(VHT40)\_MCH\_5550MHz\_Ant1\_NTNV

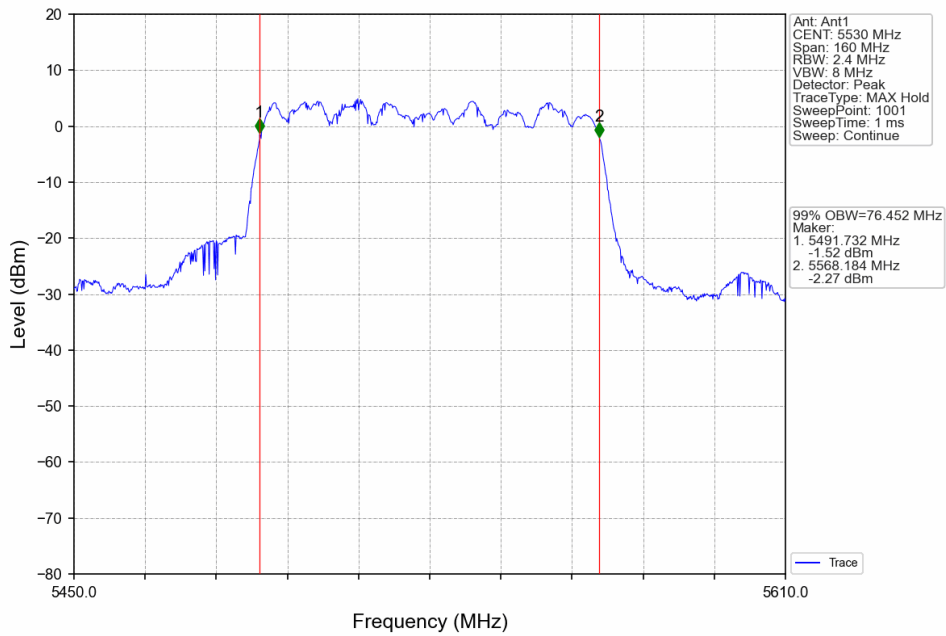


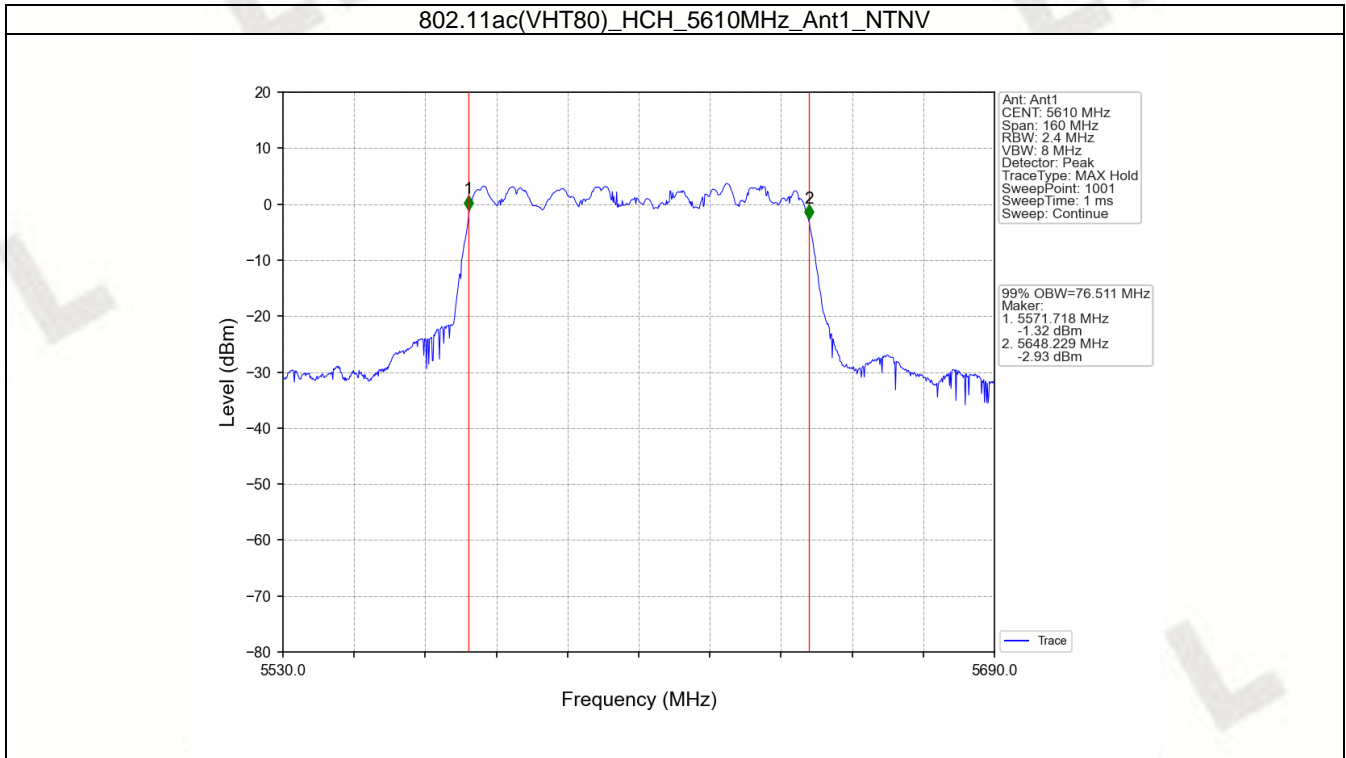


802.11ac(VHT40)\_HCH\_5670MHz\_Ant1\_NTNV



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



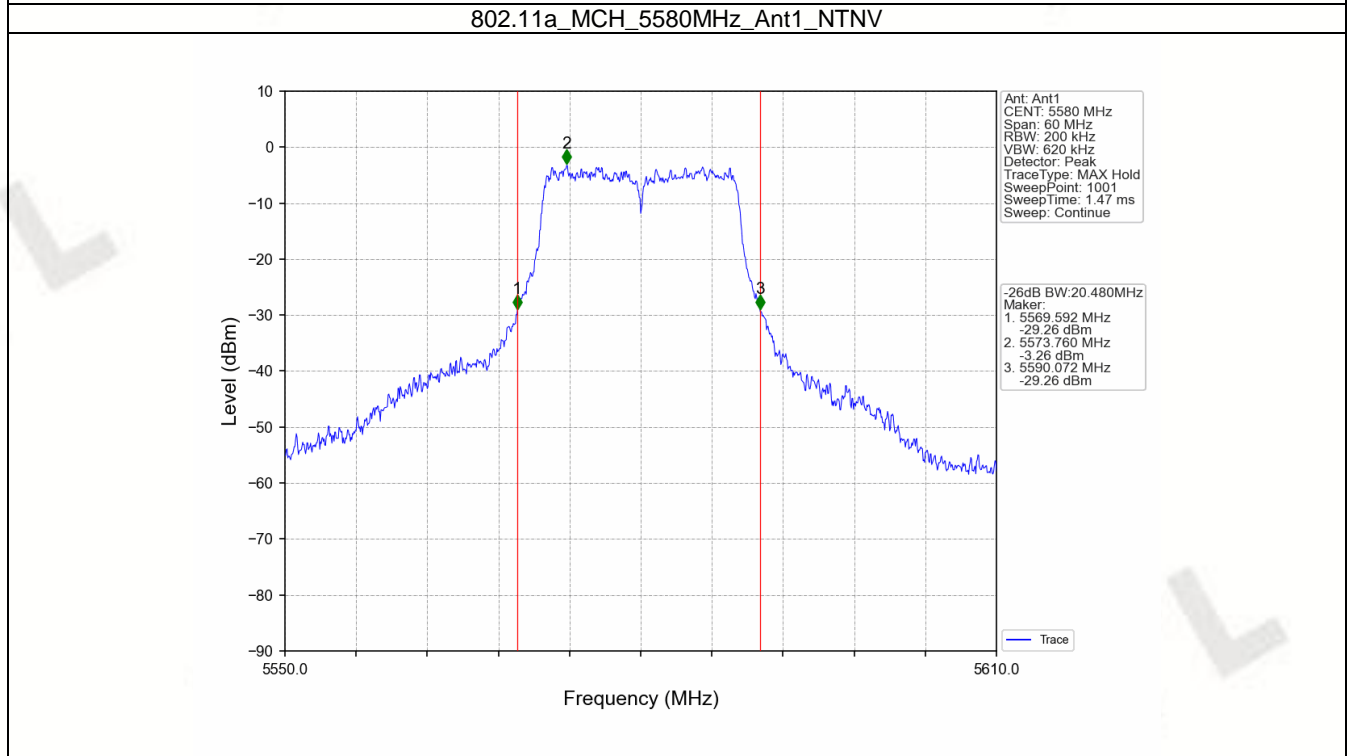
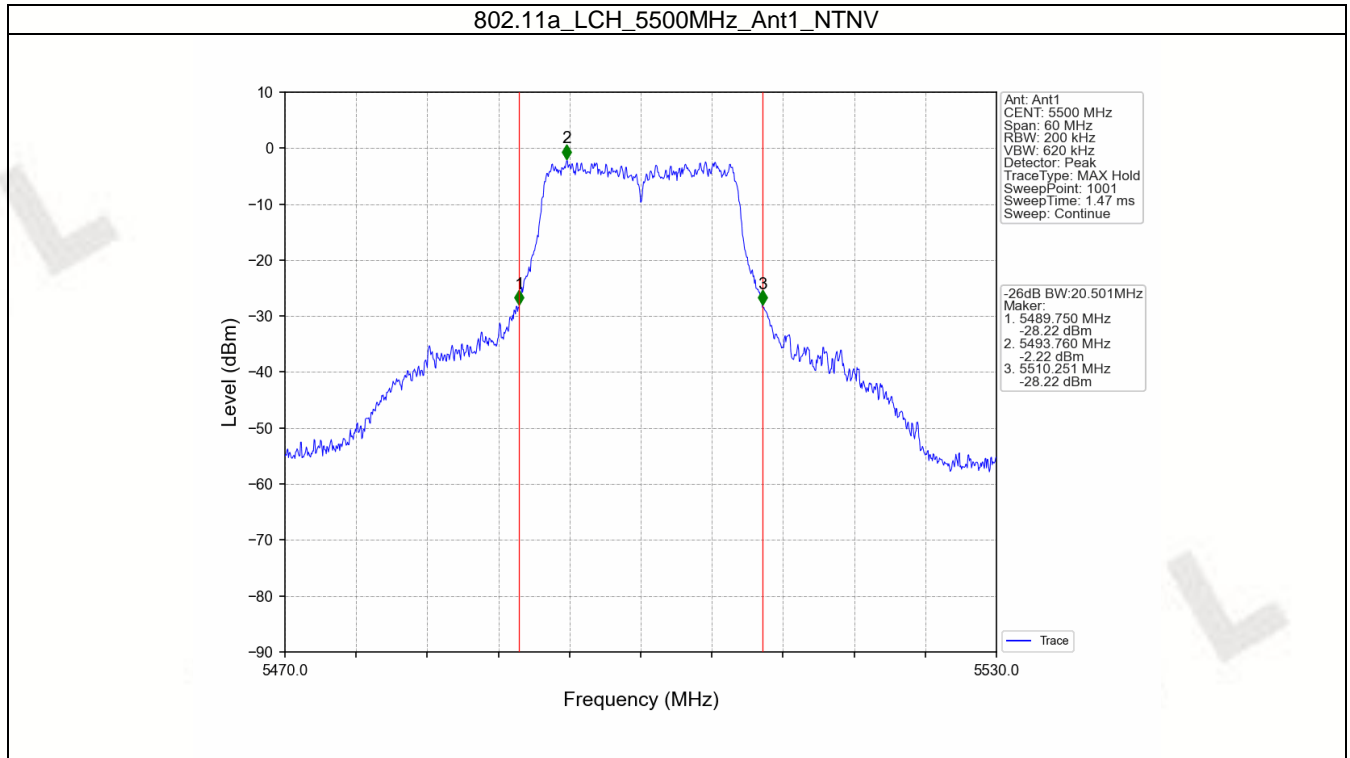


## 1.2 26dB BW

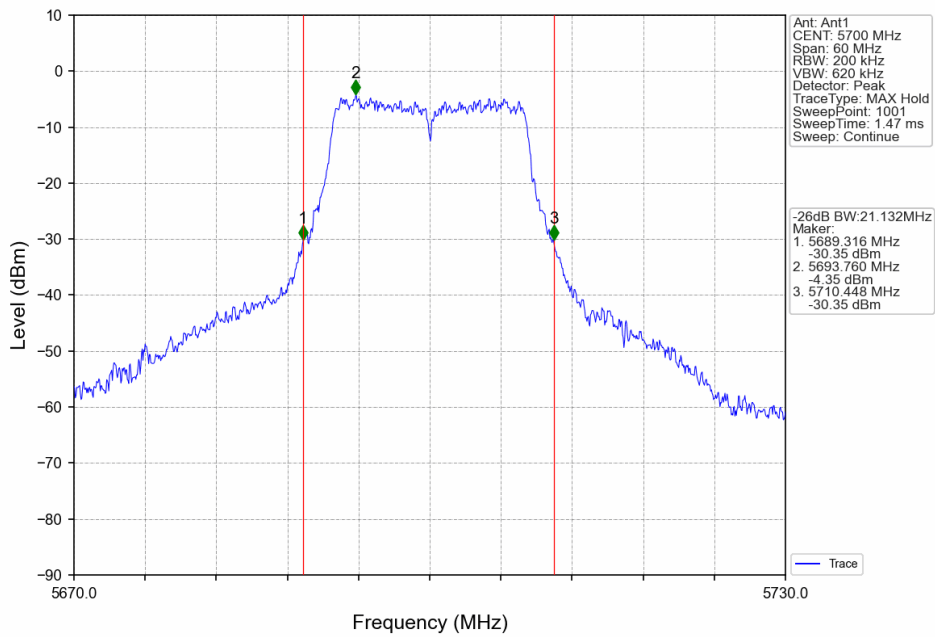
## 1.2.1 Test Result

| Mode             | TX Type | Frequency (MHz) | ANT | 26dB Bandwidth (MHz) |       | Verdict |
|------------------|---------|-----------------|-----|----------------------|-------|---------|
|                  |         |                 |     | Result               | Limit |         |
| 802.11a          | SISO    | 5500            | 1   | 20.501               | /     | Pass    |
|                  |         | 5580            | 1   | 20.480               | /     | Pass    |
|                  |         | 5700            | 1   | 21.132               | /     | Pass    |
| 802.11n (HT20)   | SISO    | 5500            | 1   | 21.017               | /     | Pass    |
|                  |         | 5580            | 1   | 20.971               | /     | Pass    |
|                  |         | 5700            | 1   | 21.102               | /     | Pass    |
| 802.11n (HT40)   | SISO    | 5510            | 1   | 41.388               | /     | Pass    |
|                  |         | 5550            | 1   | 41.629               | /     | Pass    |
|                  |         | 5670            | 1   | 41.637               | /     | Pass    |
| 802.11ac (VHT20) | SISO    | 5500            | 1   | 21.265               | /     | Pass    |
|                  |         | 5580            | 1   | 20.913               | /     | Pass    |
|                  |         | 5700            | 1   | 20.769               | /     | Pass    |
| 802.11ac (VHT40) | SISO    | 5510            | 1   | 42.938               | /     | Pass    |
|                  |         | 5550            | 1   | 42.138               | /     | Pass    |
|                  |         | 5670            | 1   | 41.373               | /     | Pass    |
| 802.11ac (VHT80) | SISO    | 5530            | 1   | 85.487               | /     | Pass    |
|                  |         | 5610            | 1   | 82.005               | /     | Pass    |

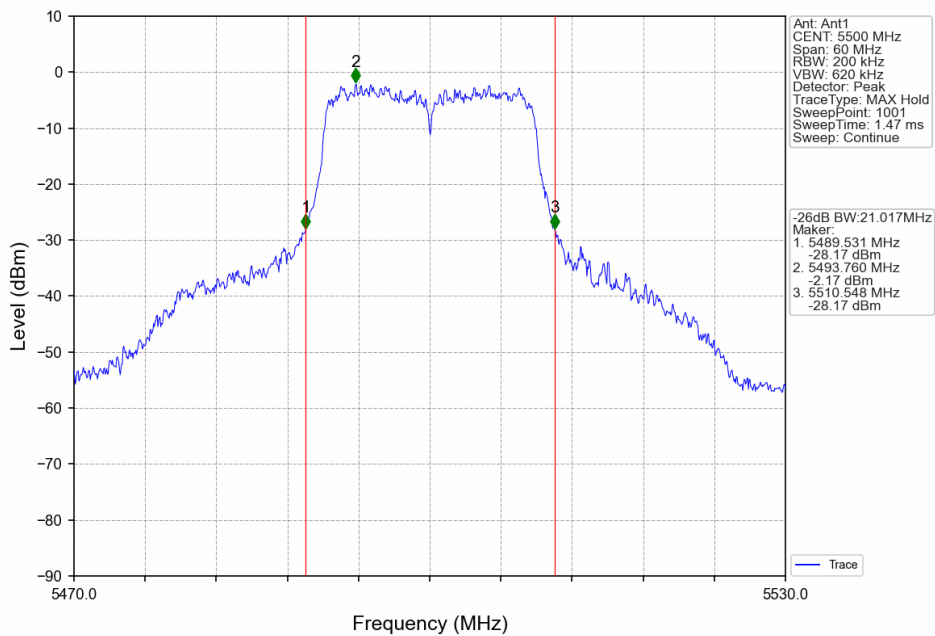
1.2.2 Test Graph

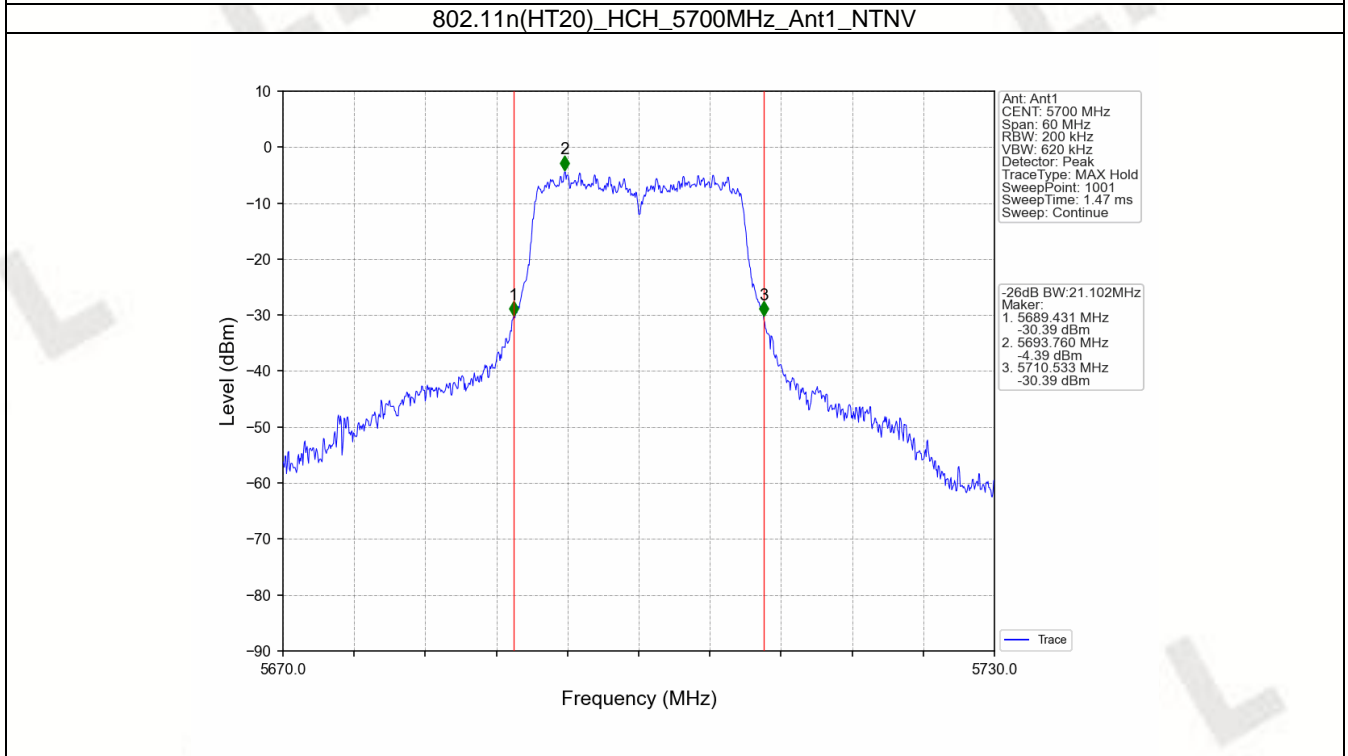
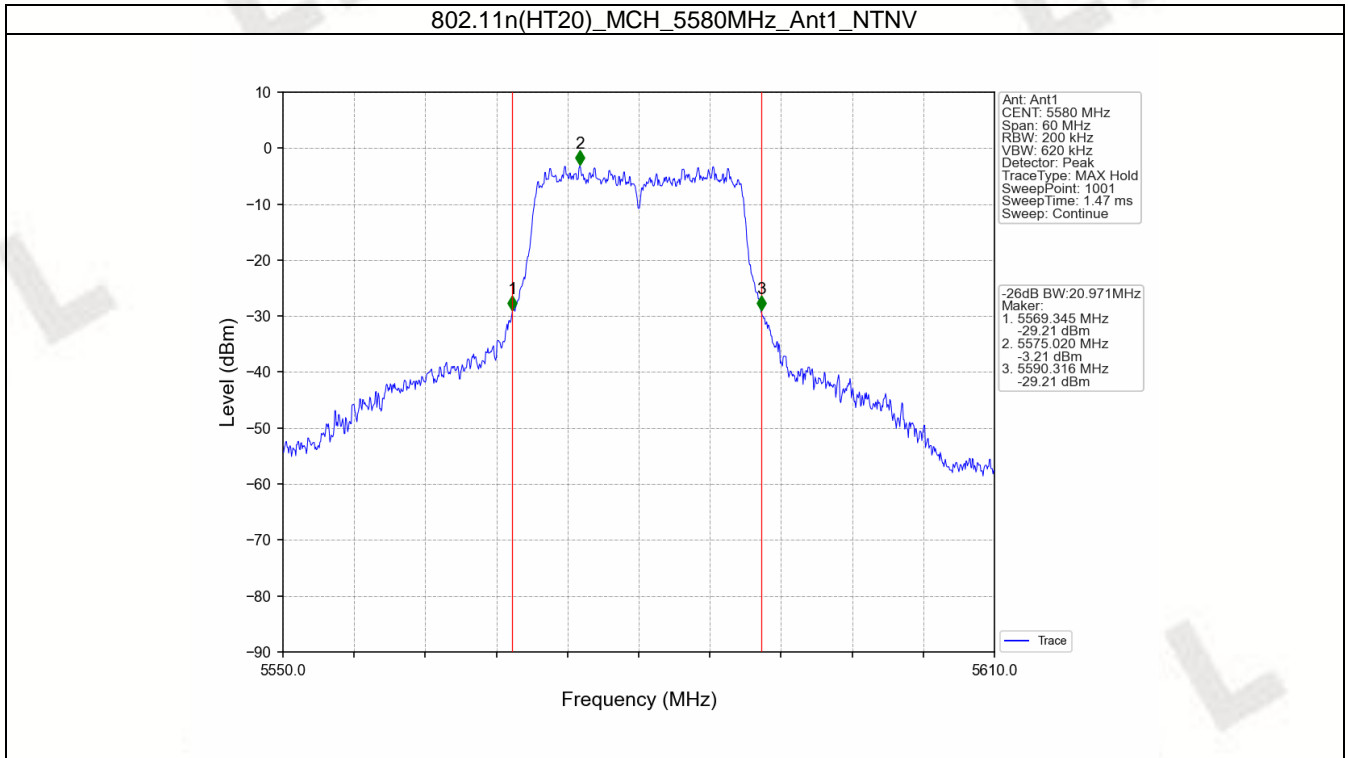


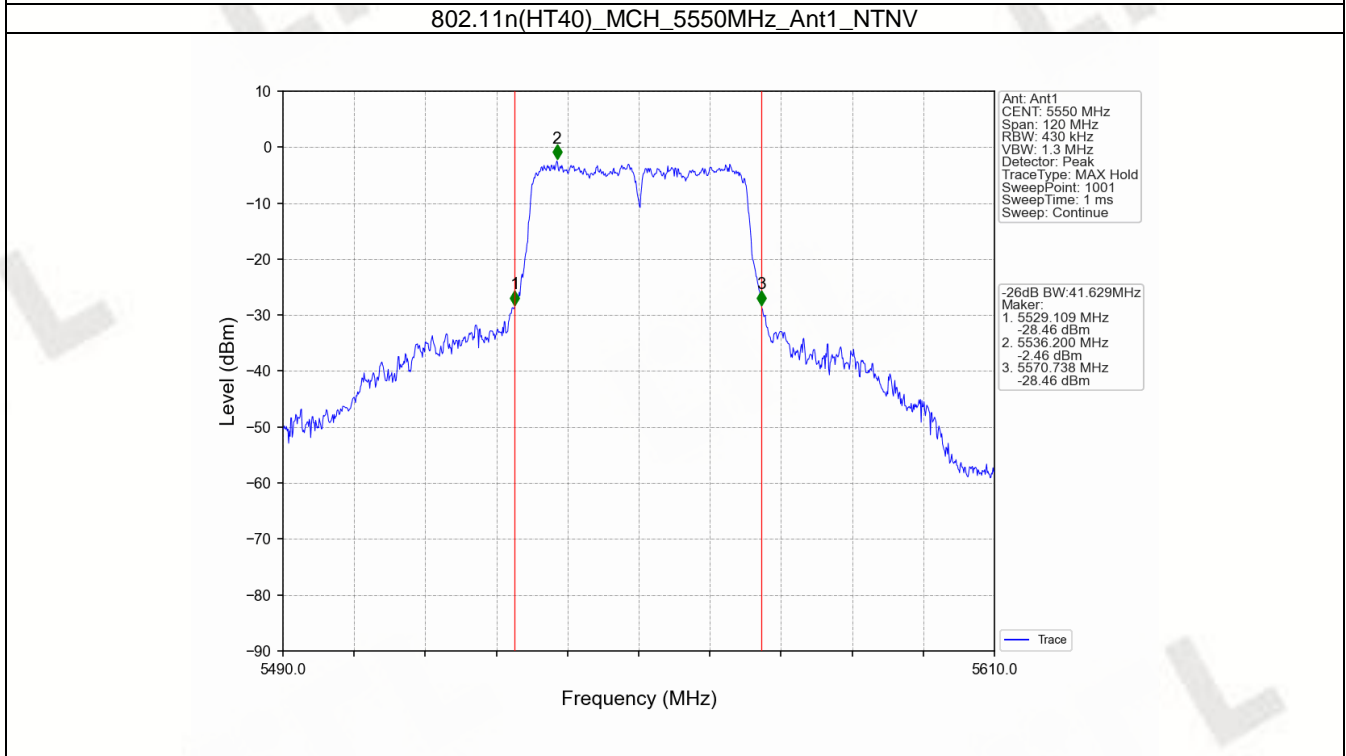
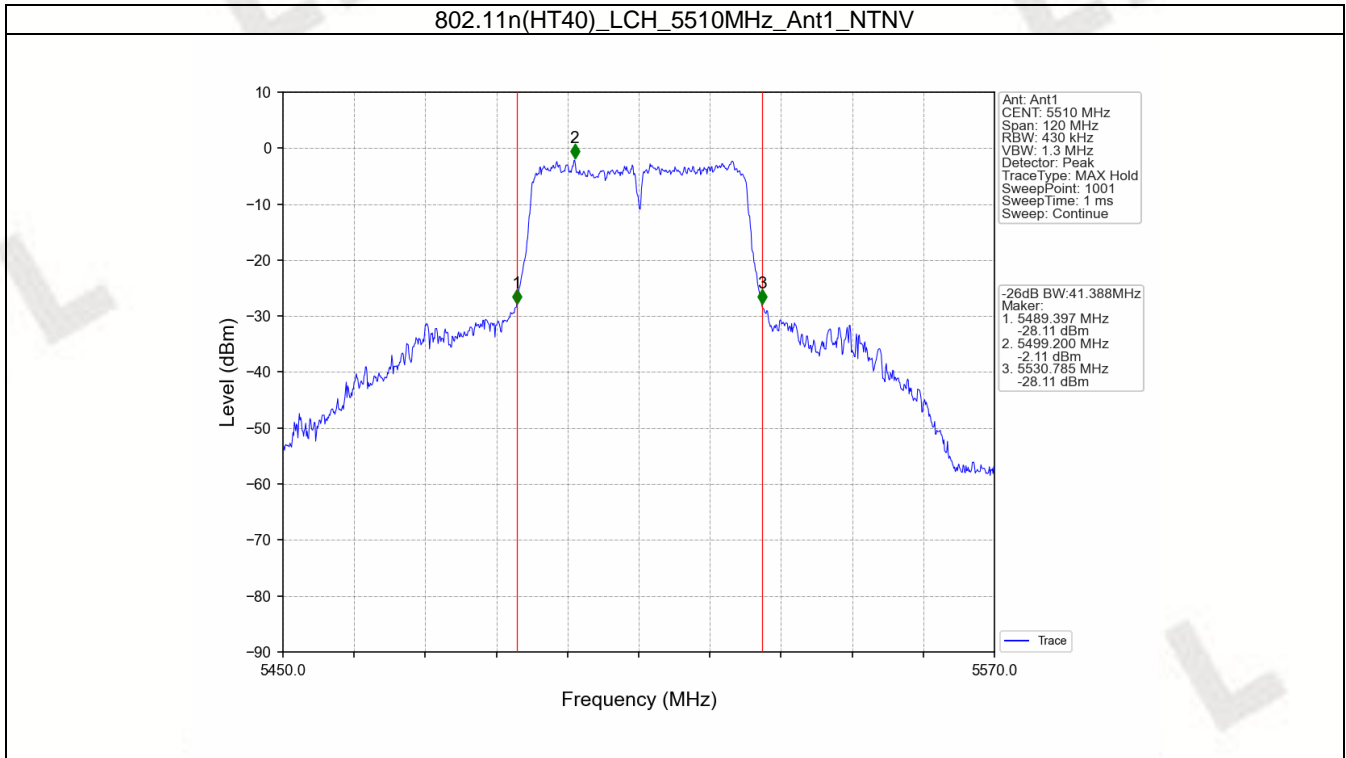
802.11a\_HCH\_5700MHz\_Ant1\_NTNV



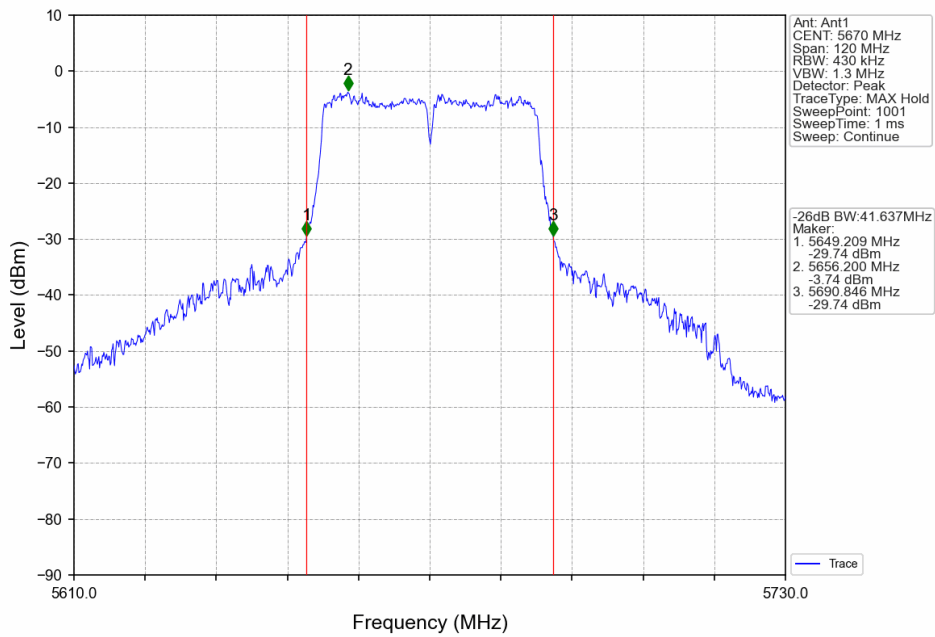
802.11n(HT20)\_LCH\_5500MHz\_Ant1\_NTNV



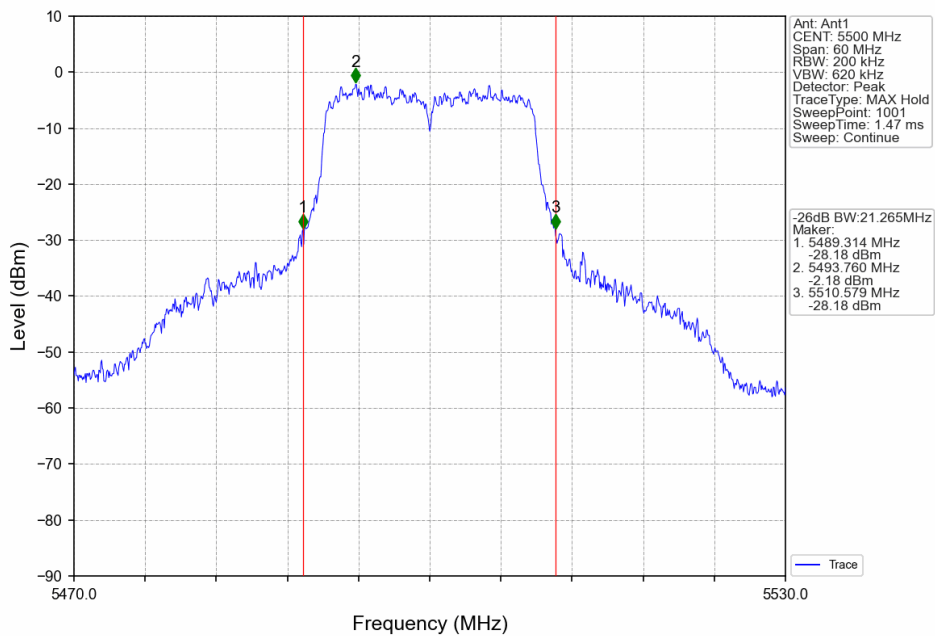




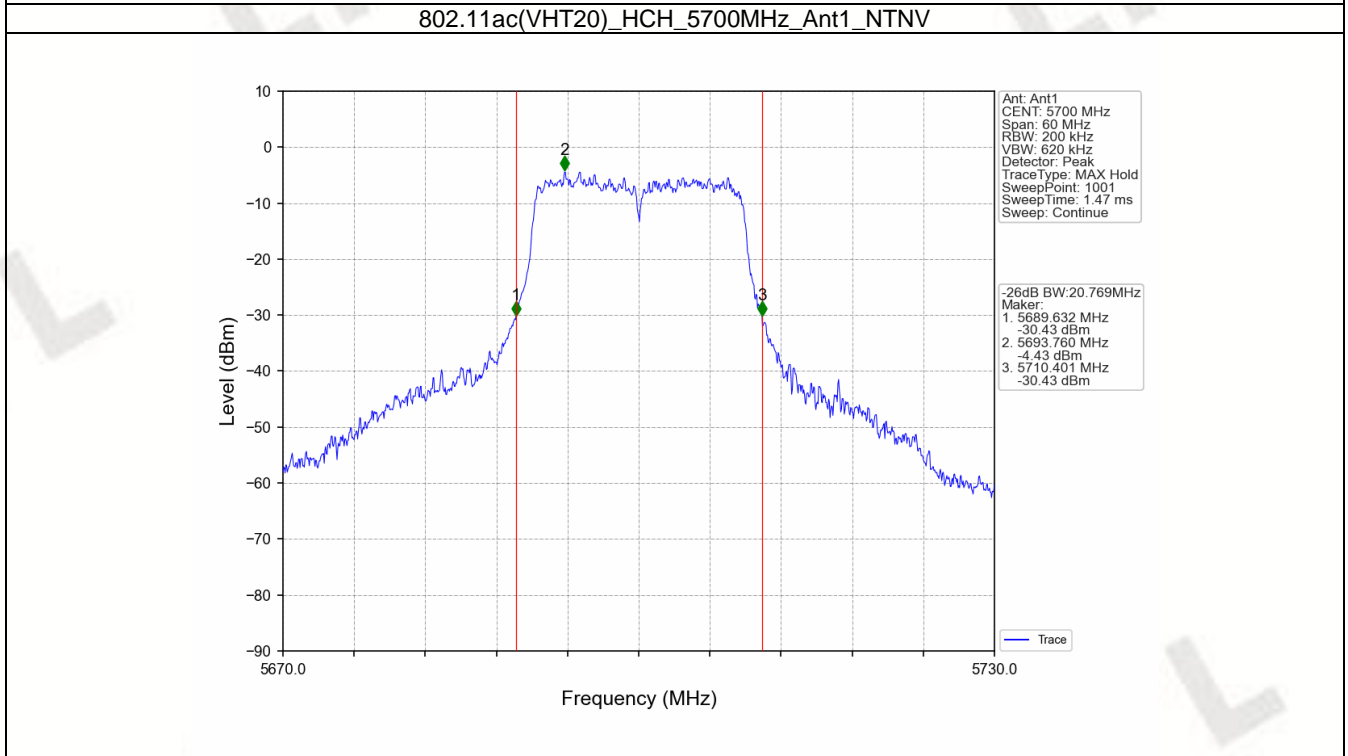
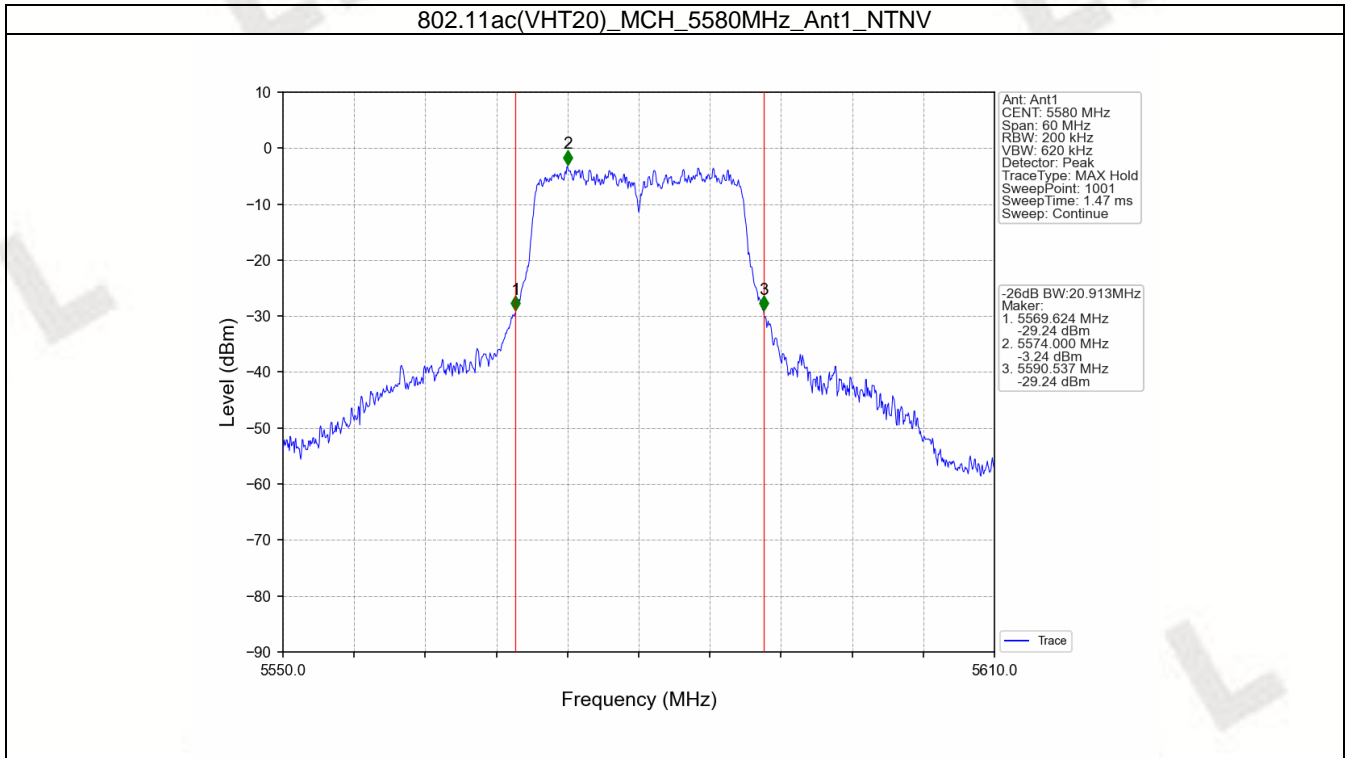
802.11n(HT40)\_HCH\_5670MHz\_Ant1\_NTNV

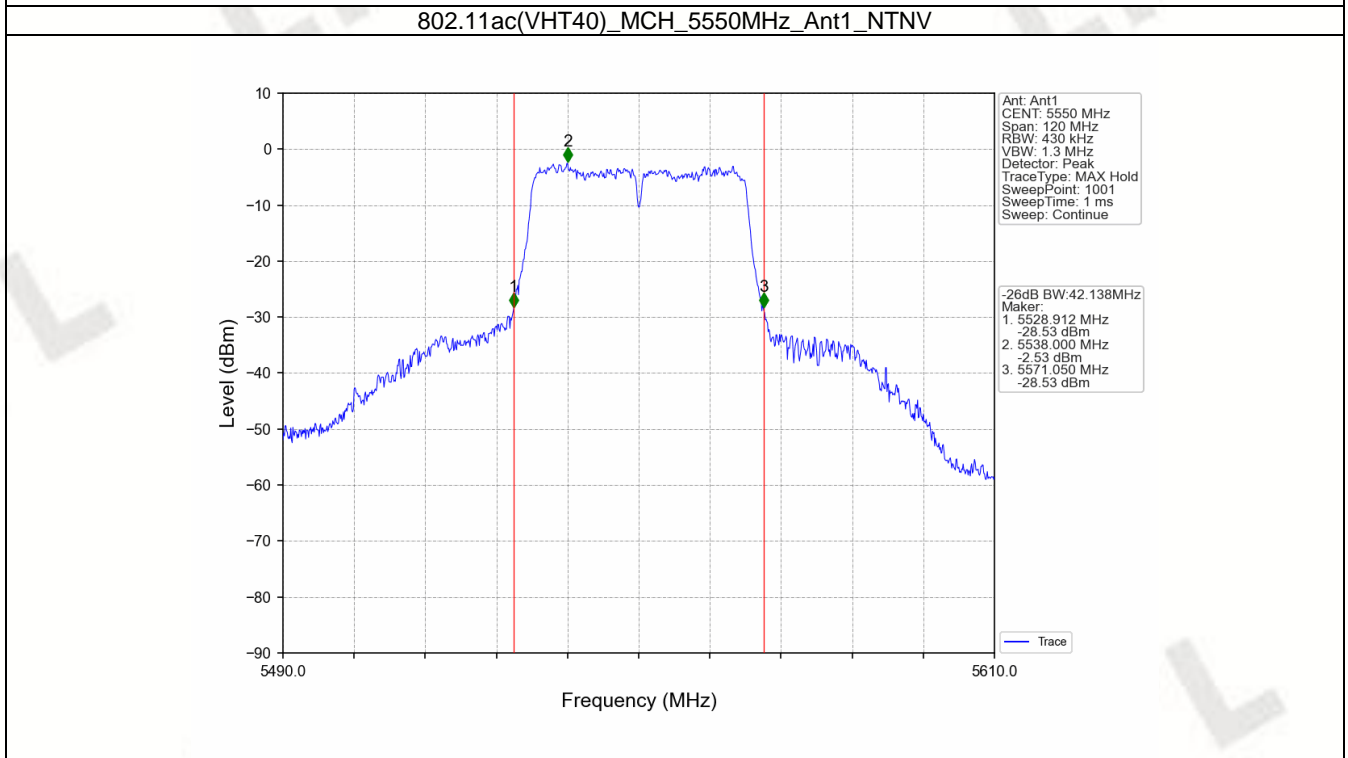
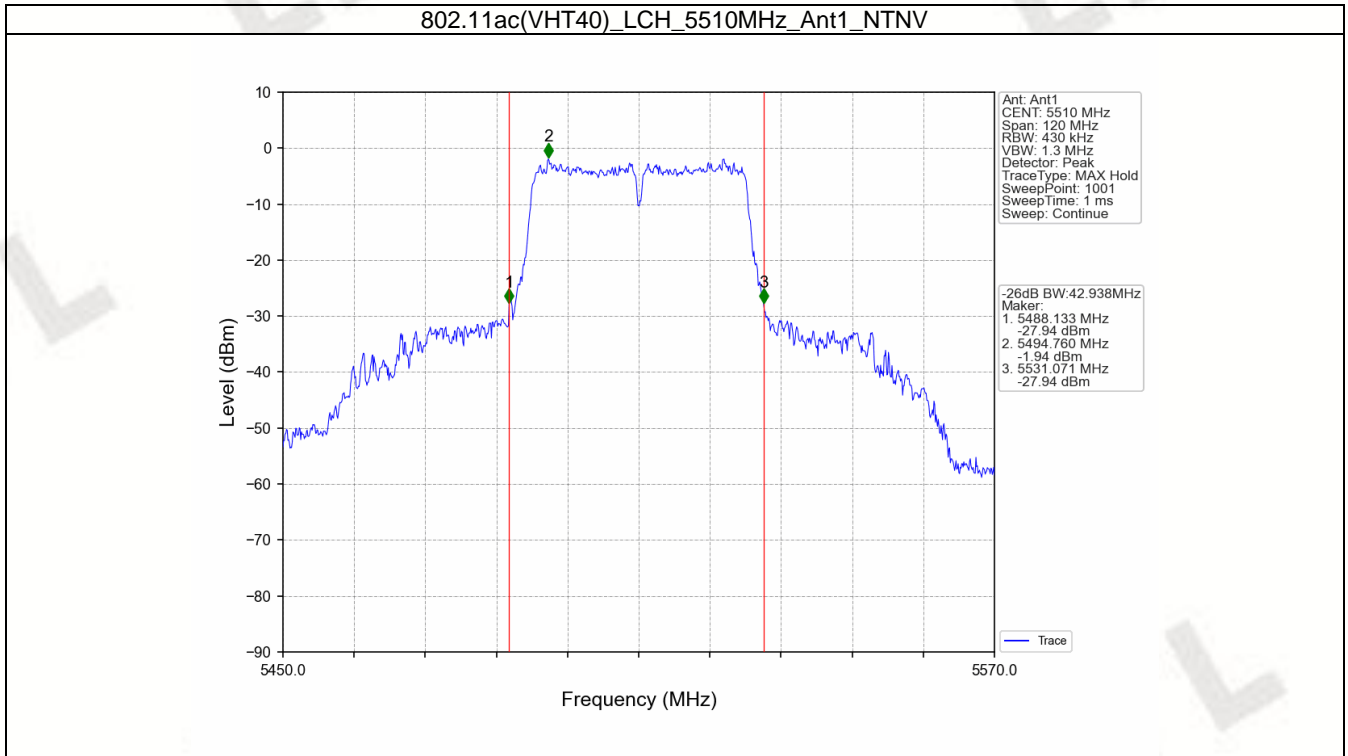


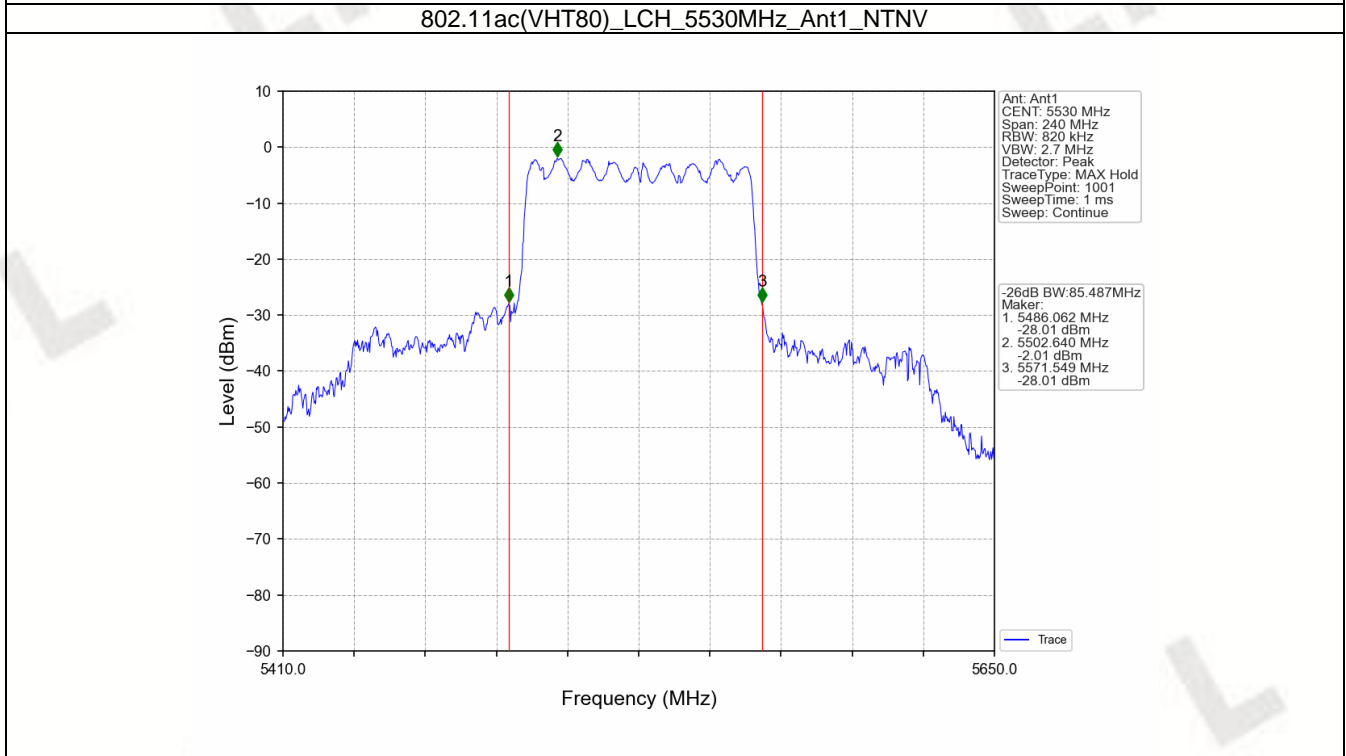
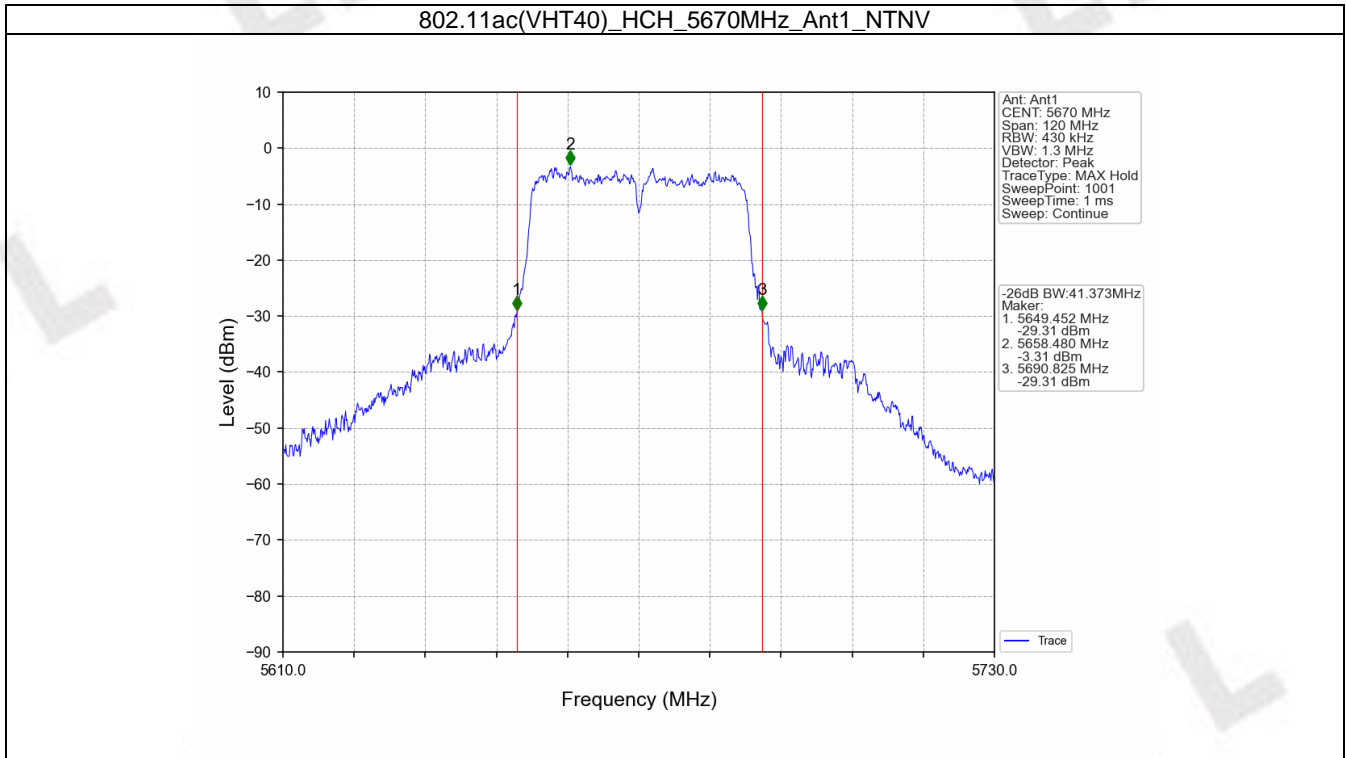
802.11ac(VHT20)\_LCH\_5500MHz\_Ant1\_NTNV

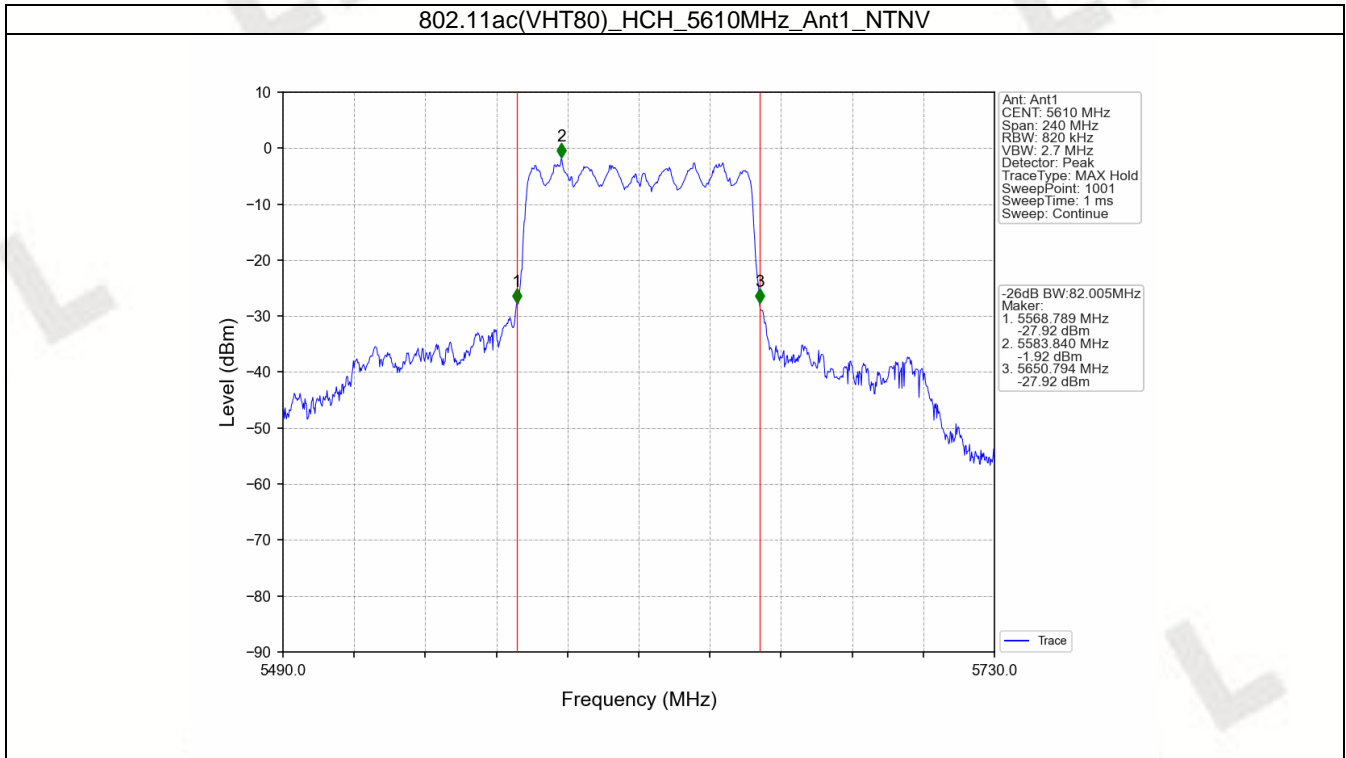












## 2. Maximum Conducted Output Power

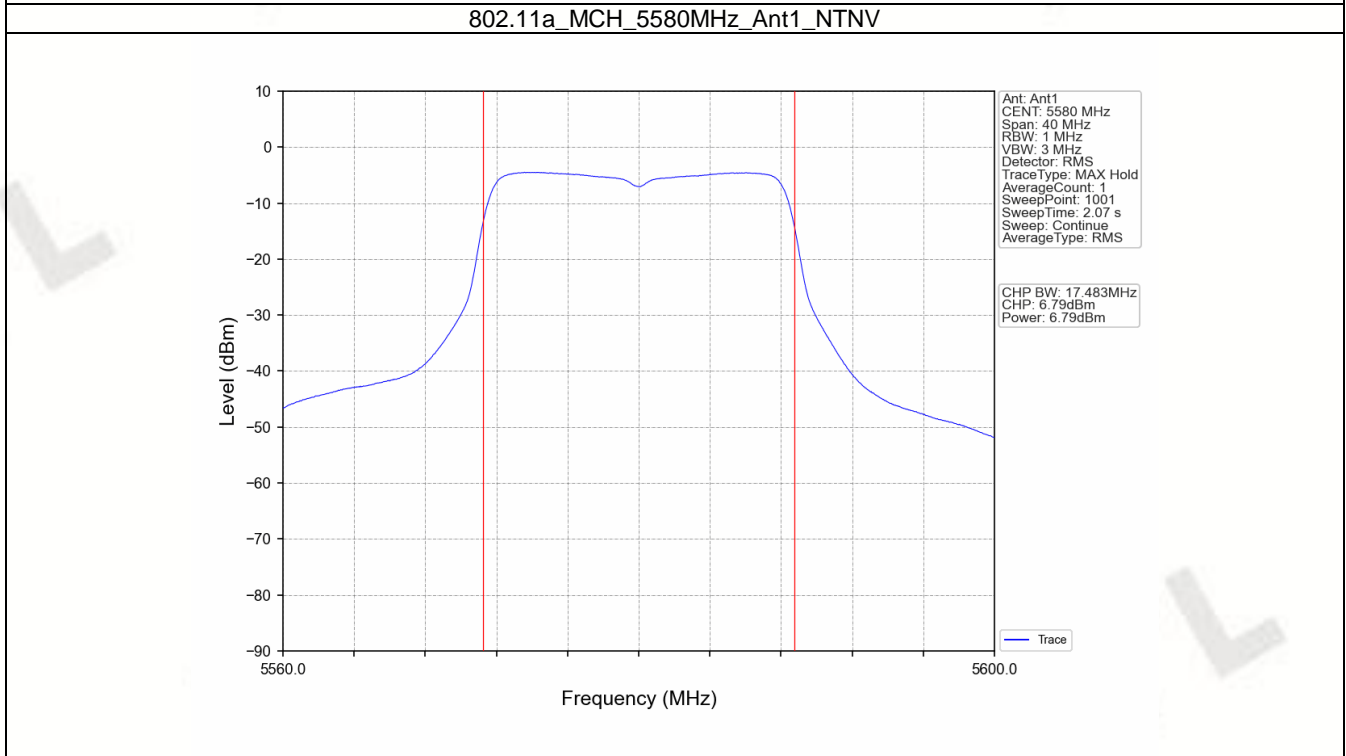
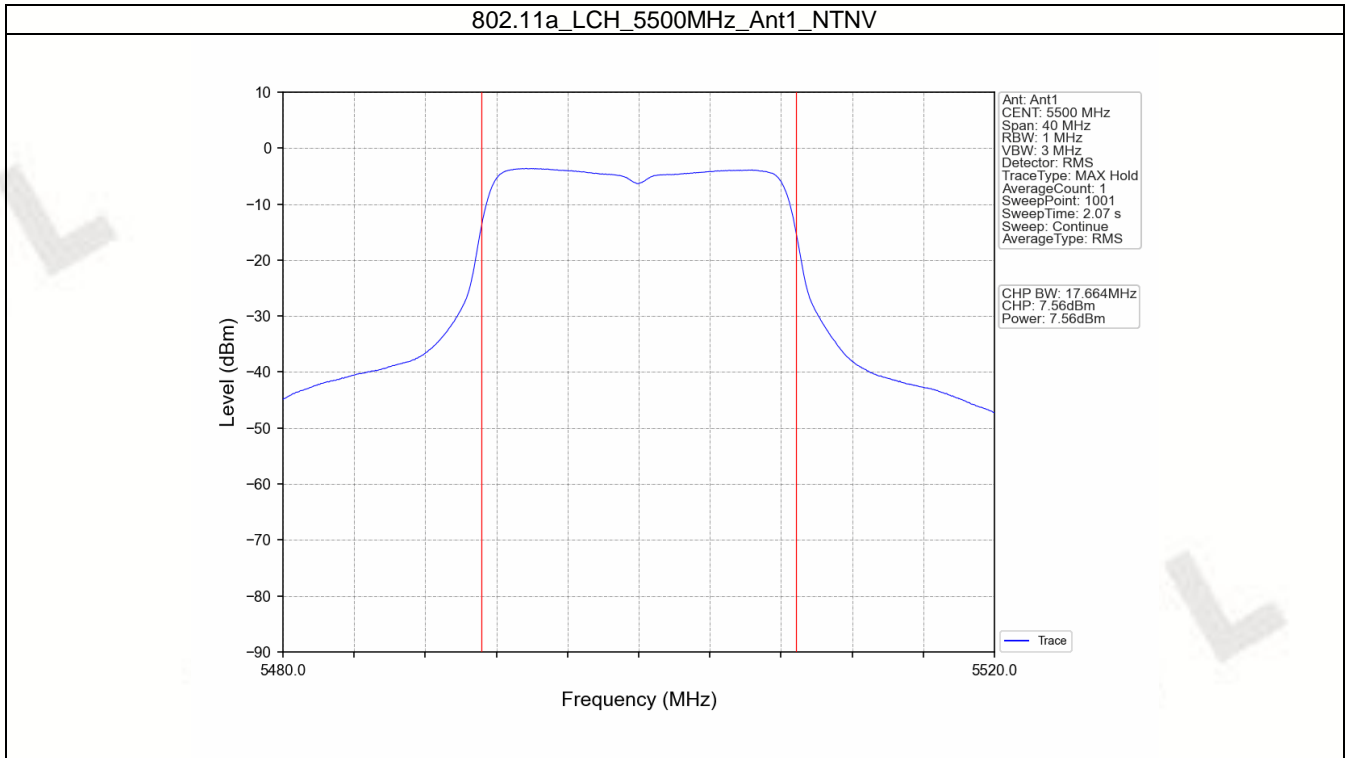
### 2.1 Power

#### 2.1.1 Test Result

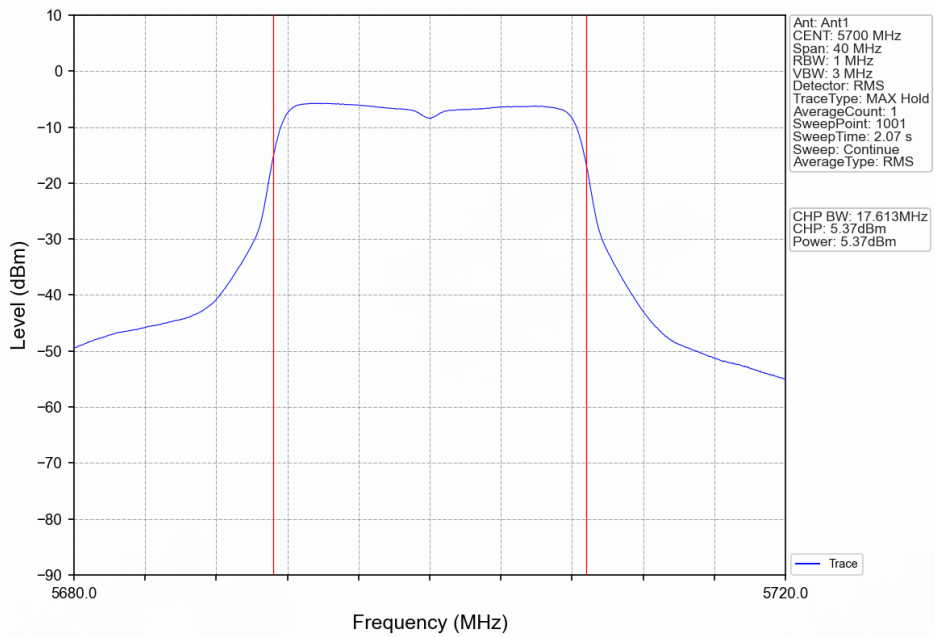
| Mode             | TX Type | Frequency (MHz) | Maximum Average Conducted Output Power (dBm) |         | Verdict |
|------------------|---------|-----------------|--|---------|---------|
|                  |         |                 | ANT1   | Limit   |         |
| 802.11a          | SISO    | 5500            | 7.56   | <=22.77 | Pass    |
|                  |         | 5580            | 6.79   | <=22.77 | Pass    |
|                  |         | 5700            | 5.37   | <=22.77 | Pass    |
| 802.11n (HT20)   | SISO    | 5500            | 7.51   | <=22.77 | Pass    |
|                  |         | 5580            | 6.72   | <=22.77 | Pass    |
|                  |         | 5700            | 5.30   | <=22.77 | Pass    |
| 802.11n (HT40)   | SISO    | 5510            | 7.87   | <=22.77 | Pass    |
|                  |         | 5550            | 7.52   | <=22.77 | Pass    |
|                  |         | 5670            | 6.29   | <=22.77 | Pass    |
| 802.11ac (VHT20) | SISO    | 5500            | 7.50   | <=22.77 | Pass    |
|                  |         | 5580            | 6.72   | <=22.77 | Pass    |
|                  |         | 5700            | 5.28   | <=22.77 | Pass    |
| 802.11ac (VHT40) | SISO    | 5510            | 7.91   | <=22.77 | Pass    |
|                  |         | 5550            | 7.55   | <=22.77 | Pass    |
|                  |         | 5670            | 6.33   | <=22.77 | Pass    |
| 802.11ac (VHT80) | SISO    | 5530            | 7.91   | <=22.77 | Pass    |
|                  |         | 5610            | 7.13   | <=22.77 | Pass    |

Note1: Antenna Gain: Ant1: 7.21dBi;

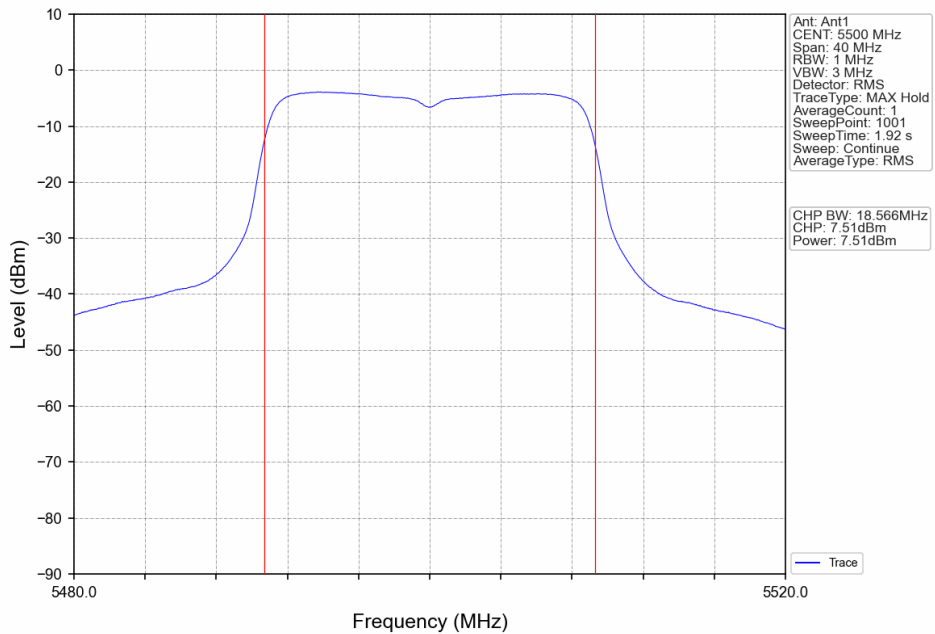
2.1.2 Test Graph



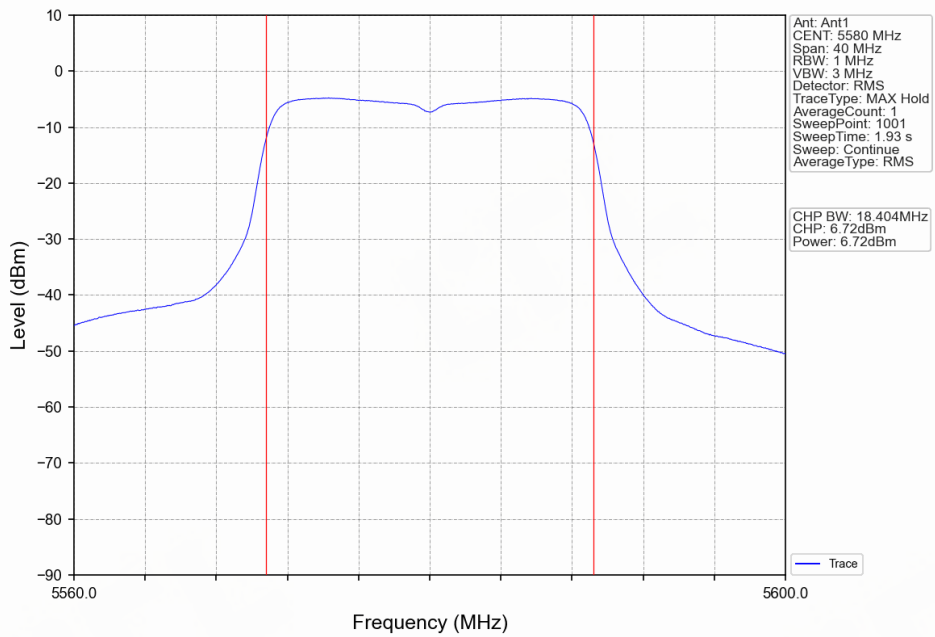
802.11a\_HCH\_5700MHz\_Ant1\_NTNV



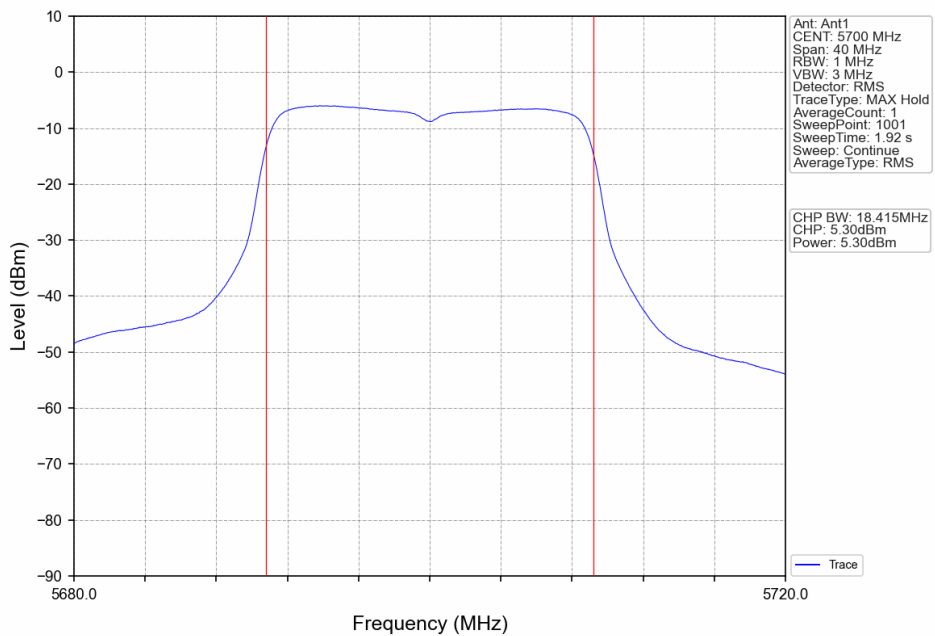
802.11n(HT20)\_LCH\_5500MHz\_Ant1\_NTNV



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

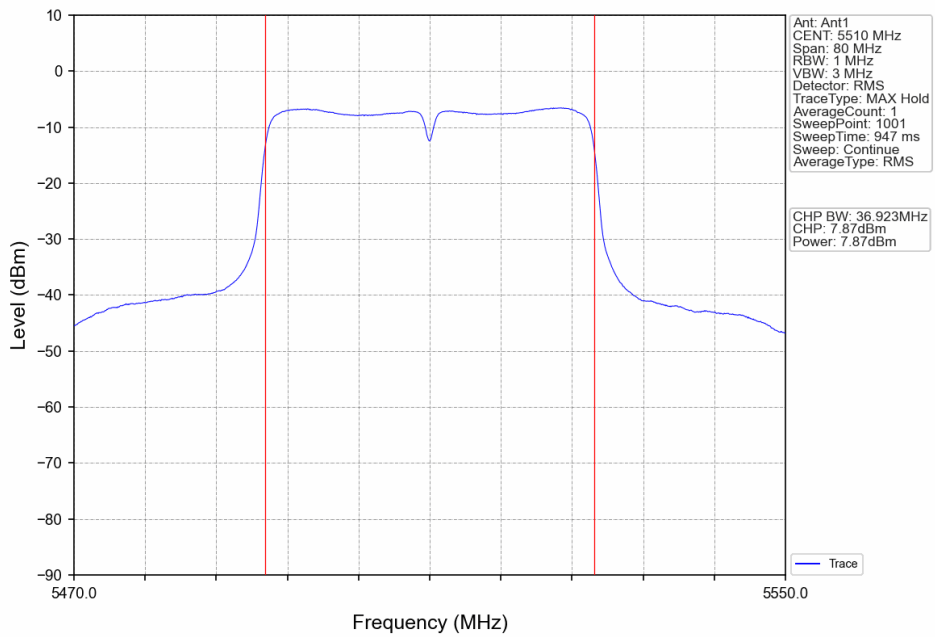


802.11n(HT20)\_HCH\_5700MHz\_Ant1\_NTNV

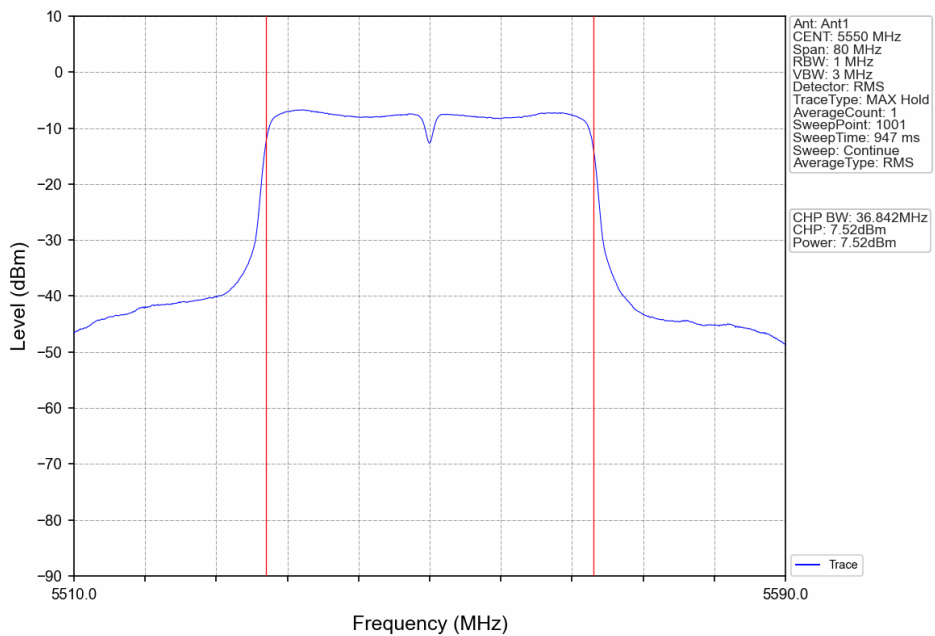




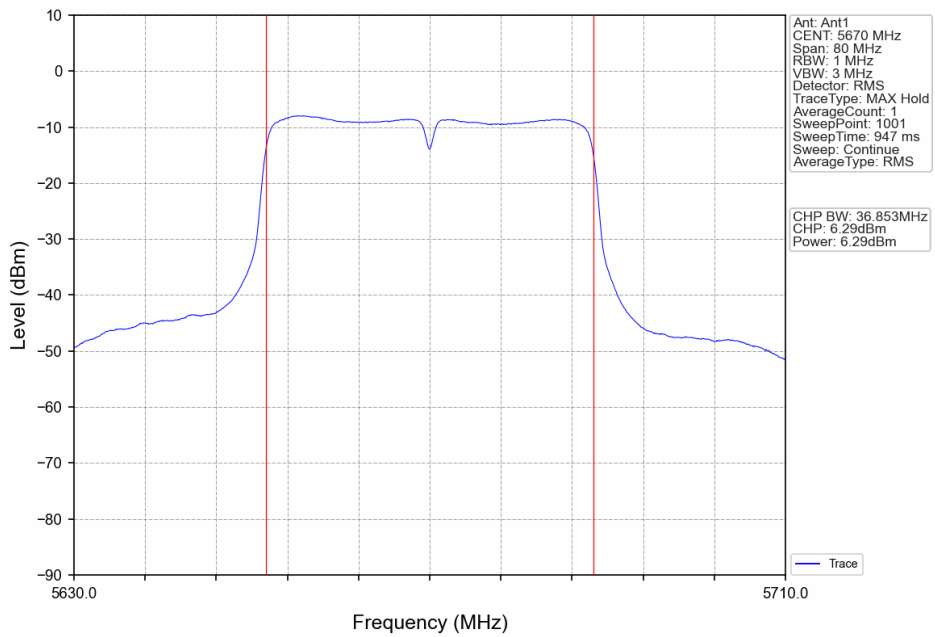
802.11n(HT40)\_LCH\_5510MHz\_Ant1\_NTNV



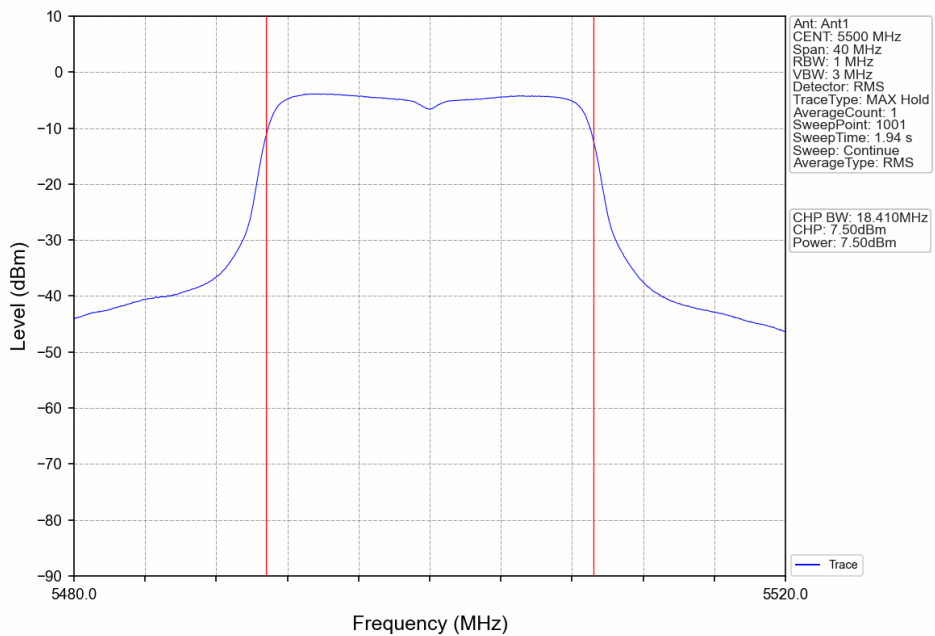
802.11n(HT40)\_MCH\_5550MHz\_Ant1\_NTNV



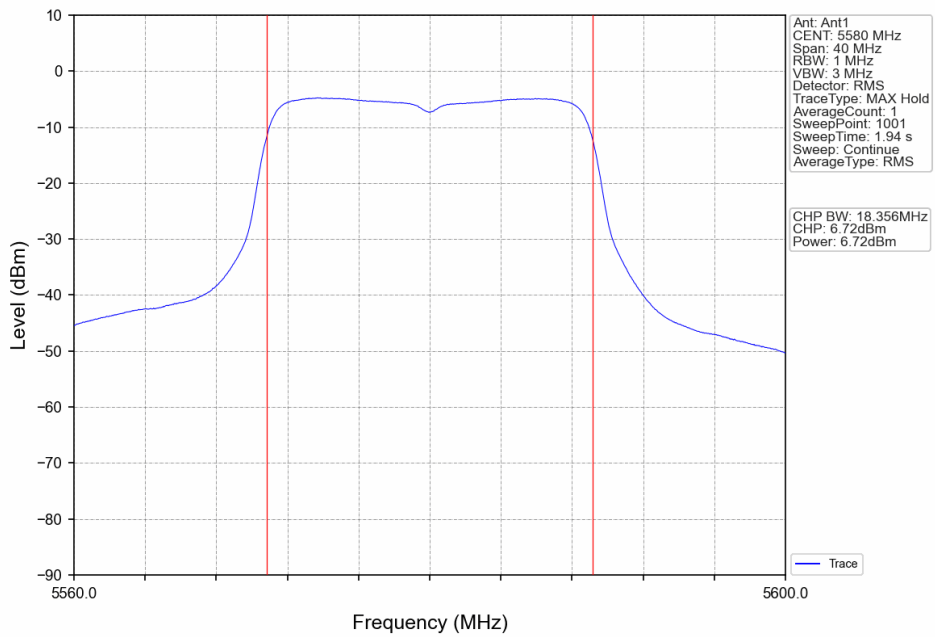
802.11n(HT40)\_HCH\_5670MHz\_Ant1\_NTNV



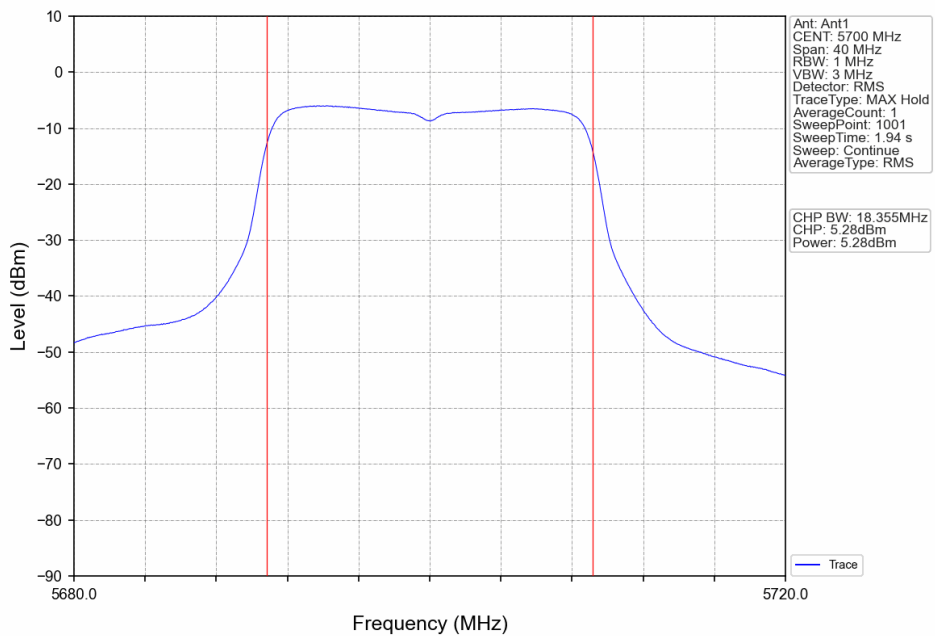
802.11ac(VHT20)\_LCH\_5500MHz\_Ant1\_NTNV



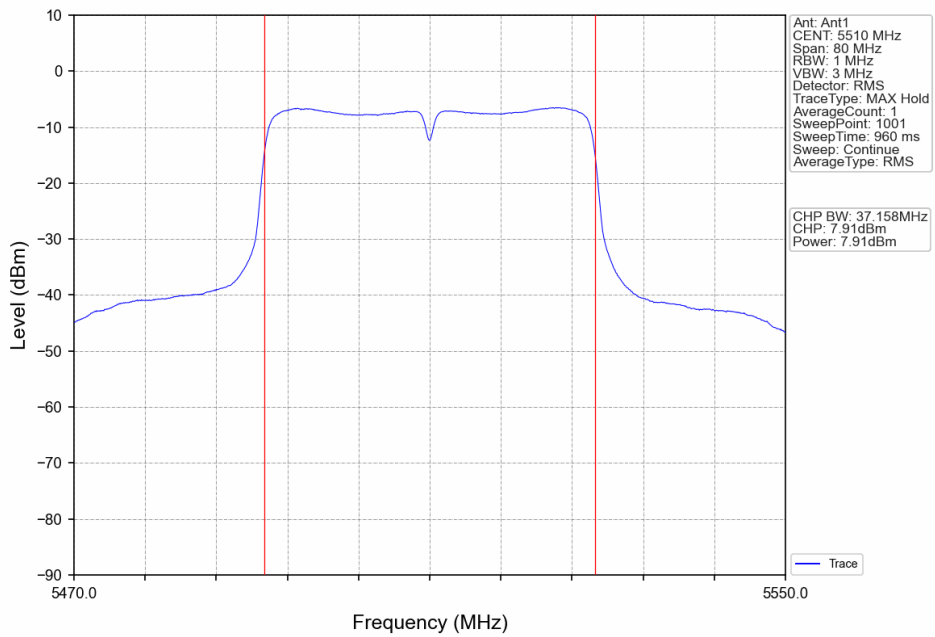
802.11ac(VHT20)\_MCH\_5580MHz\_Ant1\_NTNV



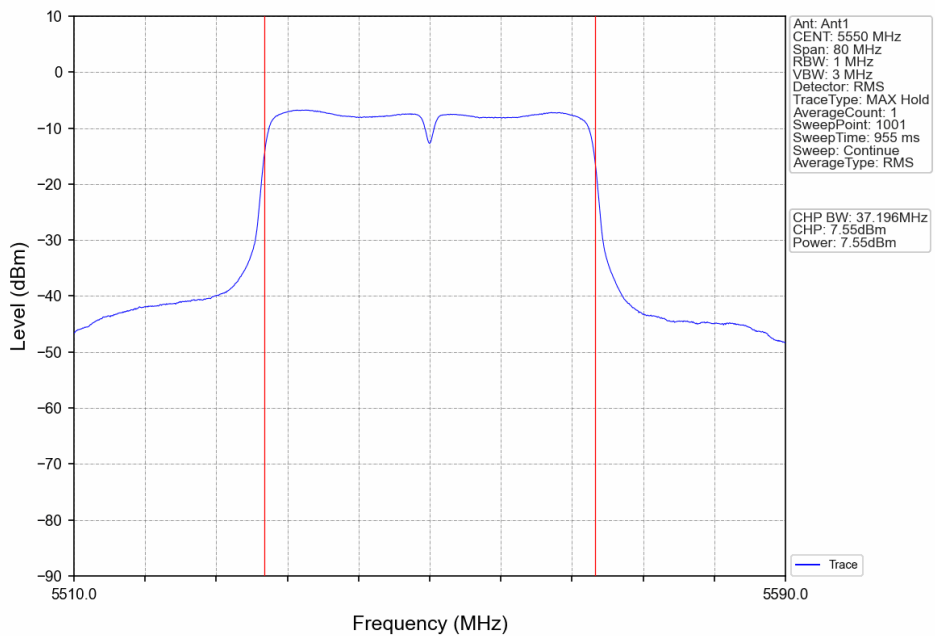
802.11ac(VHT20)\_HCH\_5700MHz\_Ant1\_NTNV



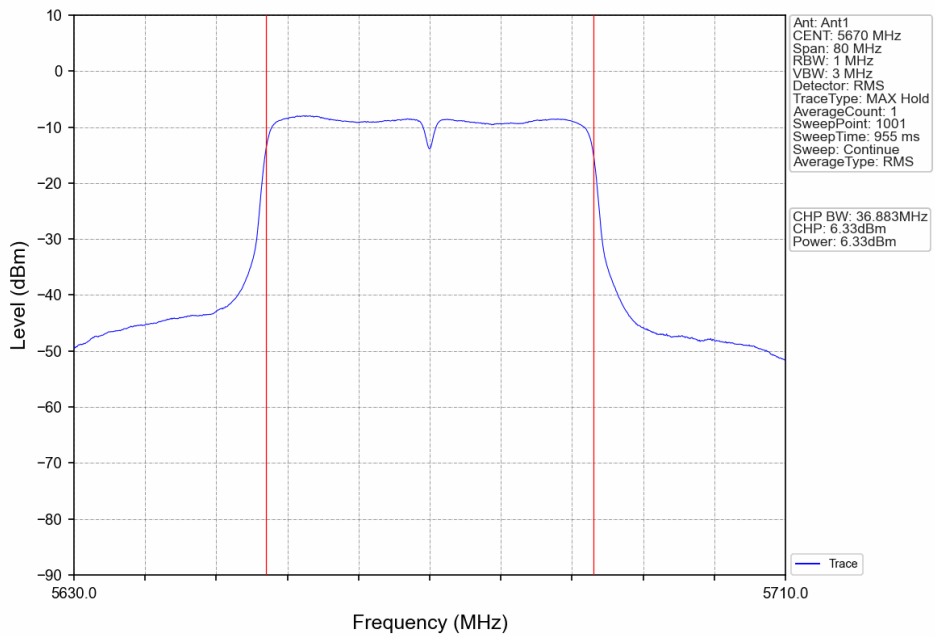
802.11ac(VHT40)\_LCH\_5510MHz\_Ant1\_NTNV



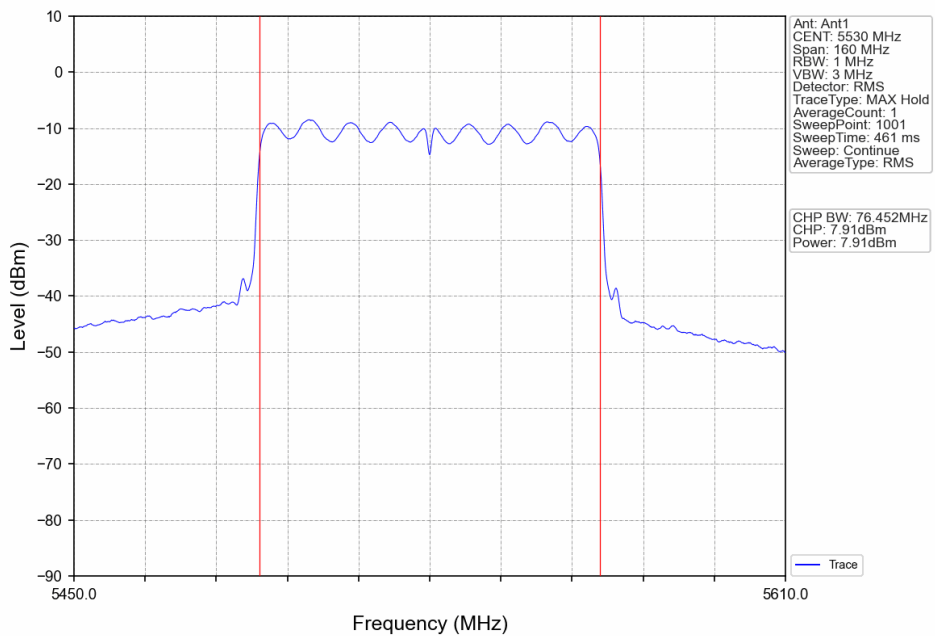
802.11ac(VHT40)\_MCH\_5550MHz\_Ant1\_NTNV

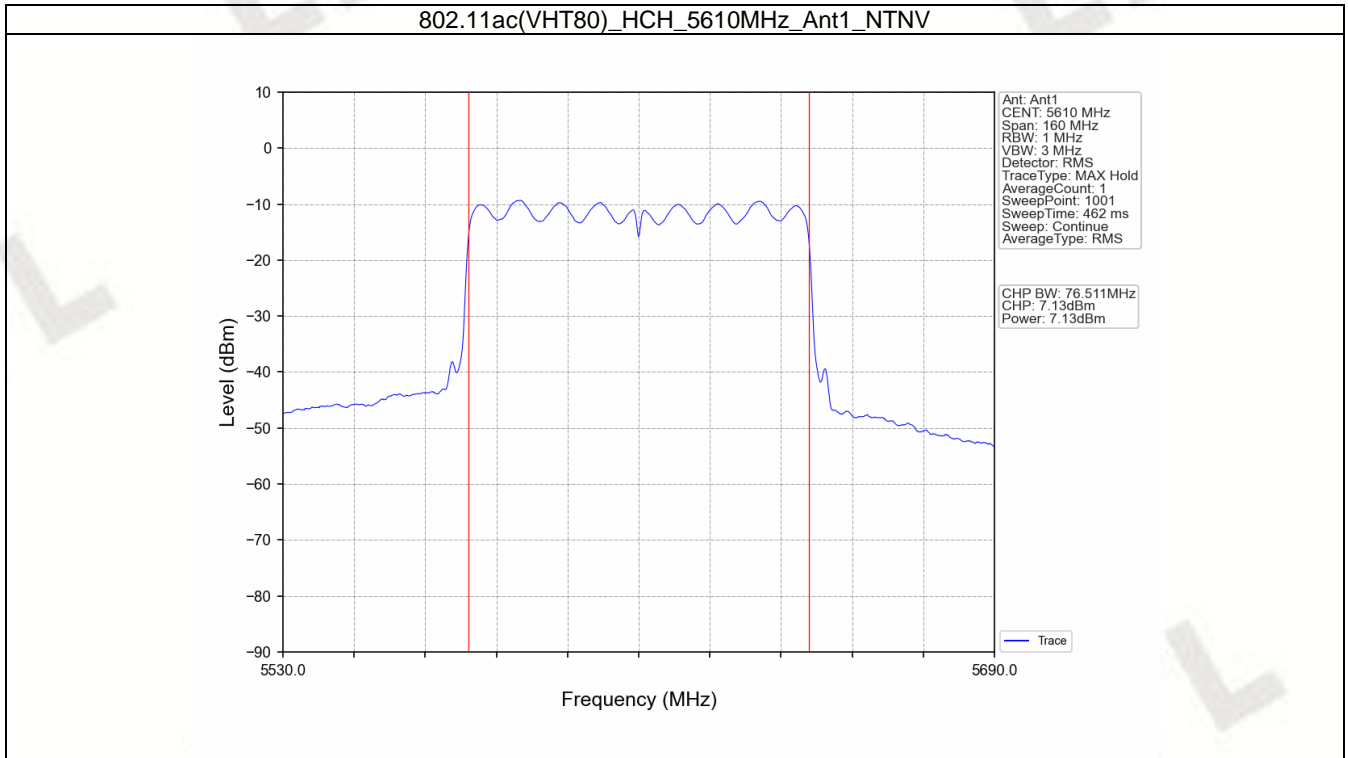


802.11ac(VHT40)\_HCH\_5670MHz\_Ant1\_NTNV



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





### 3. Maximum Power Spectral Density

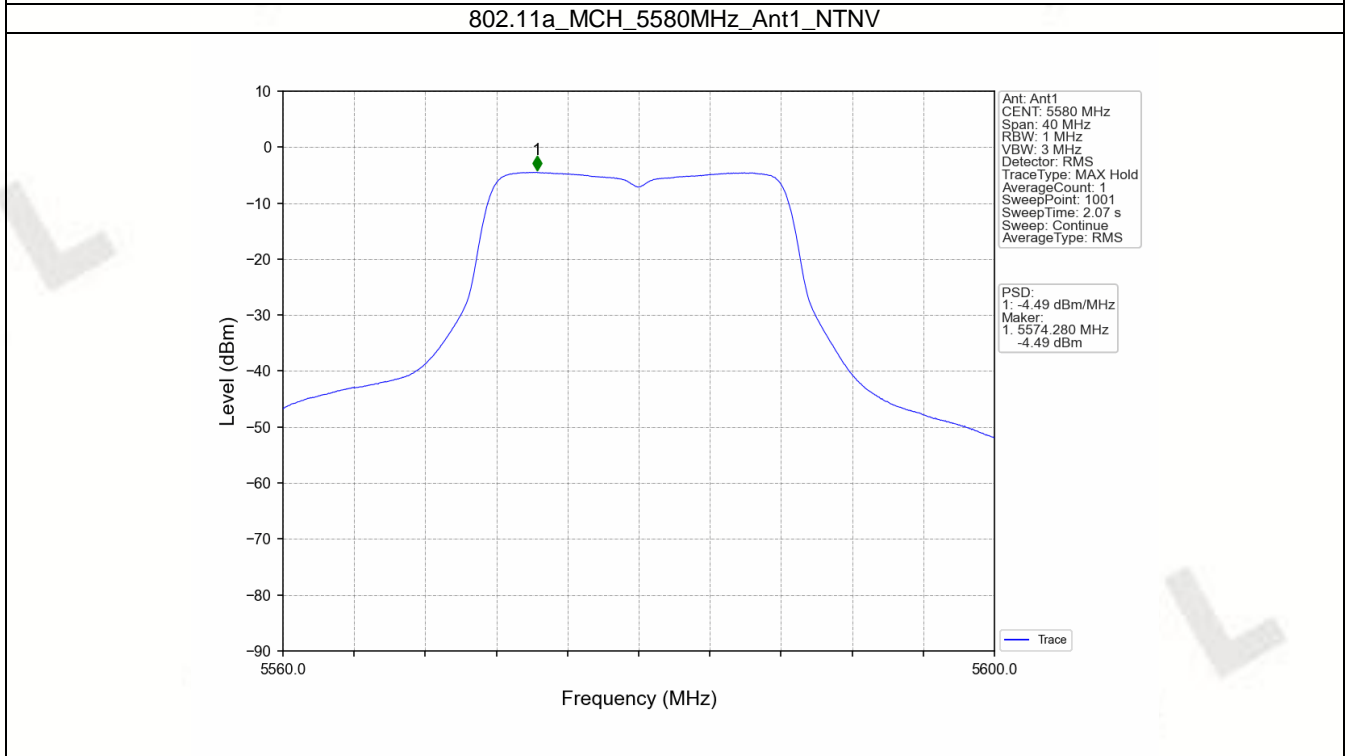
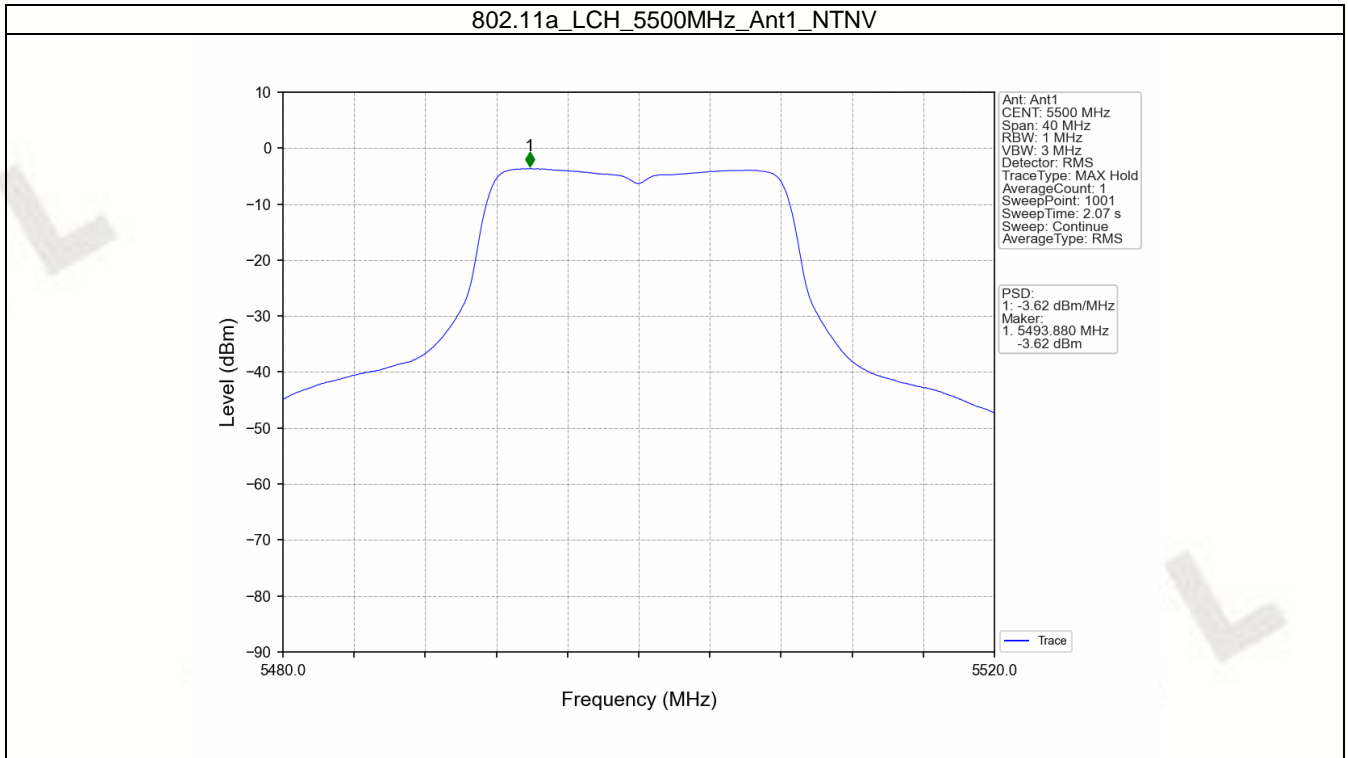
#### 3.1 PSD

##### 3.1.1 Test Result

| Mode             | TX Type | Frequency (MHz) | Maximum PSD (dBm/MHz) |        | Verdict |
|------------------|---------|-----------------|-----------------------|--------|---------|
|                  |         |                 | ANT1                  | Limit  |         |
| 802.11a          | SISO    | 5500            | -3.62                 | <=9.79 | Pass    |
|                  |         | 5580            | -4.49                 | <=9.79 | Pass    |
|                  |         | 5700            | -5.75                 | <=9.79 | Pass    |
| 802.11n (HT20)   | SISO    | 5500            | -3.92                 | <=9.79 | Pass    |
|                  |         | 5580            | -4.80                 | <=9.79 | Pass    |
|                  |         | 5700            | -6.03                 | <=9.79 | Pass    |
| 802.11n (HT40)   | SISO    | 5510            | -6.58                 | <=9.79 | Pass    |
|                  |         | 5550            | -6.74                 | <=9.79 | Pass    |
|                  |         | 5670            | -7.97                 | <=9.79 | Pass    |
| 802.11ac (VHT20) | SISO    | 5500            | -3.88                 | <=9.79 | Pass    |
|                  |         | 5580            | -4.81                 | <=9.79 | Pass    |
|                  |         | 5700            | -6.01                 | <=9.79 | Pass    |
| 802.11ac (VHT40) | SISO    | 5510            | -6.54                 | <=9.79 | Pass    |
|                  |         | 5550            | -6.76                 | <=9.79 | Pass    |
|                  |         | 5670            | -7.99                 | <=9.79 | Pass    |
| 802.11ac (VHT80) | SISO    | 5530            | -8.55                 | <=9.79 | Pass    |
|                  |         | 5610            | -9.33                 | <=9.79 | Pass    |

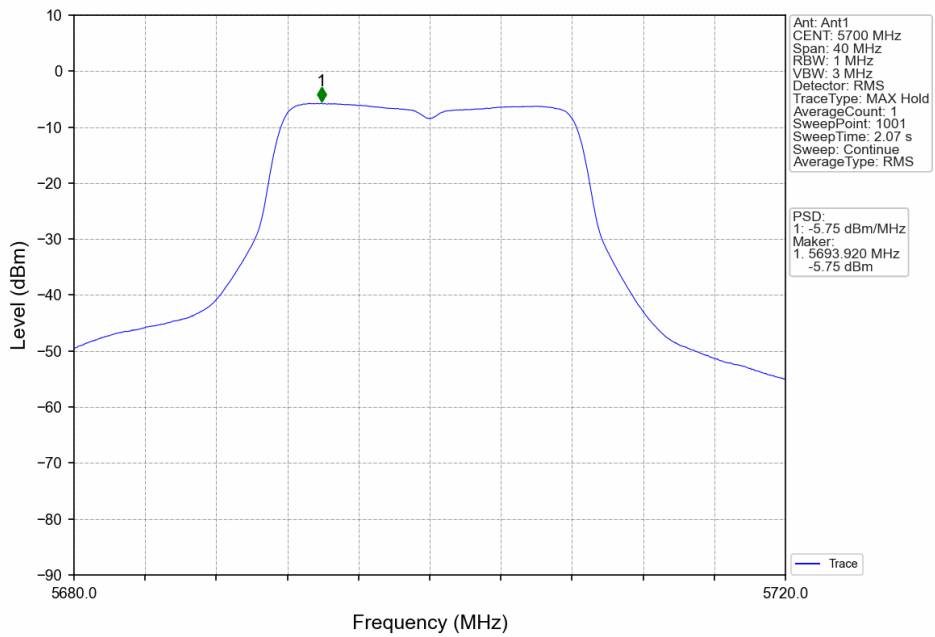
Note1: Antenna Gain: Ant1: 7.21dBi;

3.1.2 Test Graph

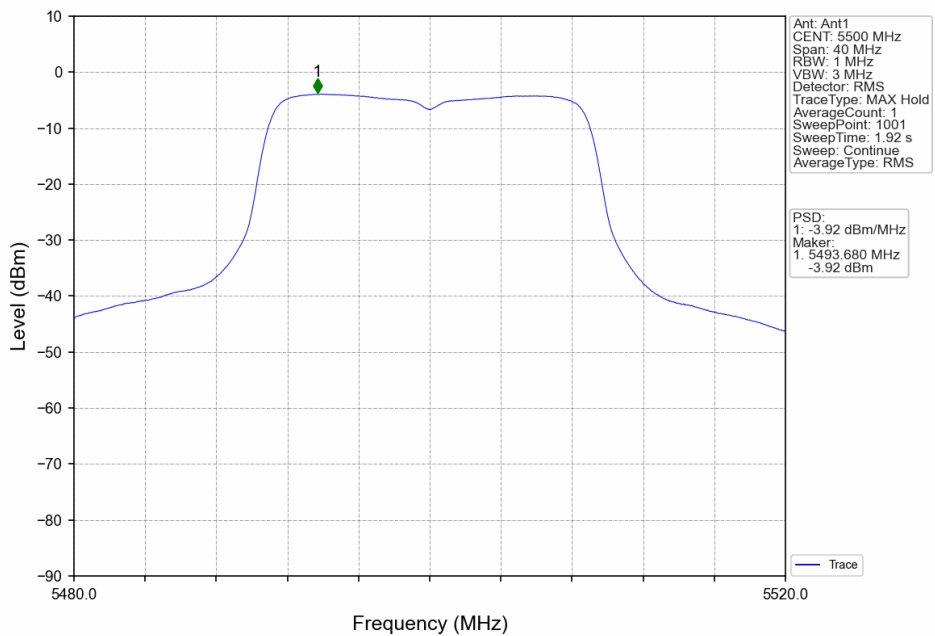




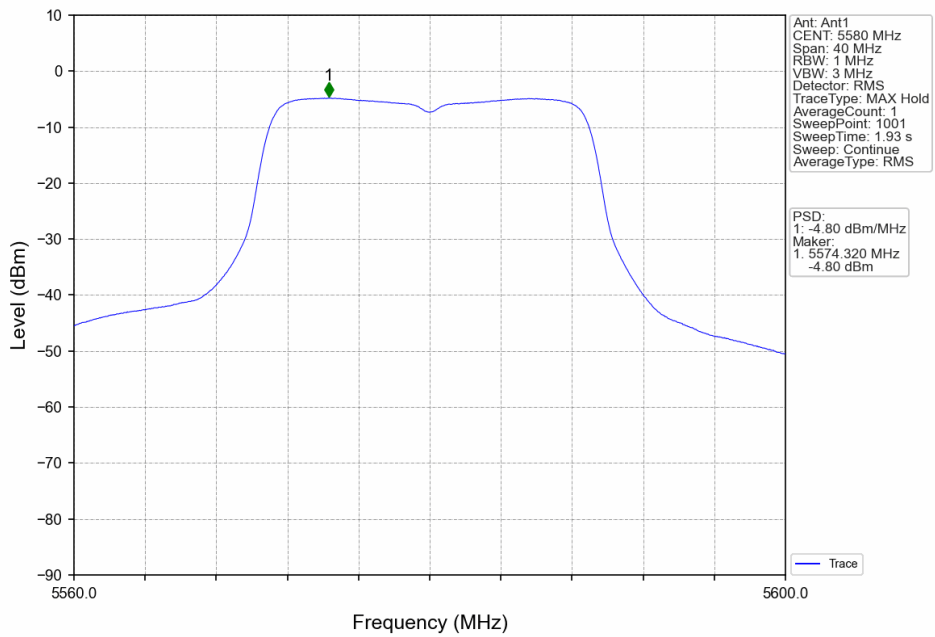
802.11a\_HCH\_5700MHz\_Ant1\_NTNV



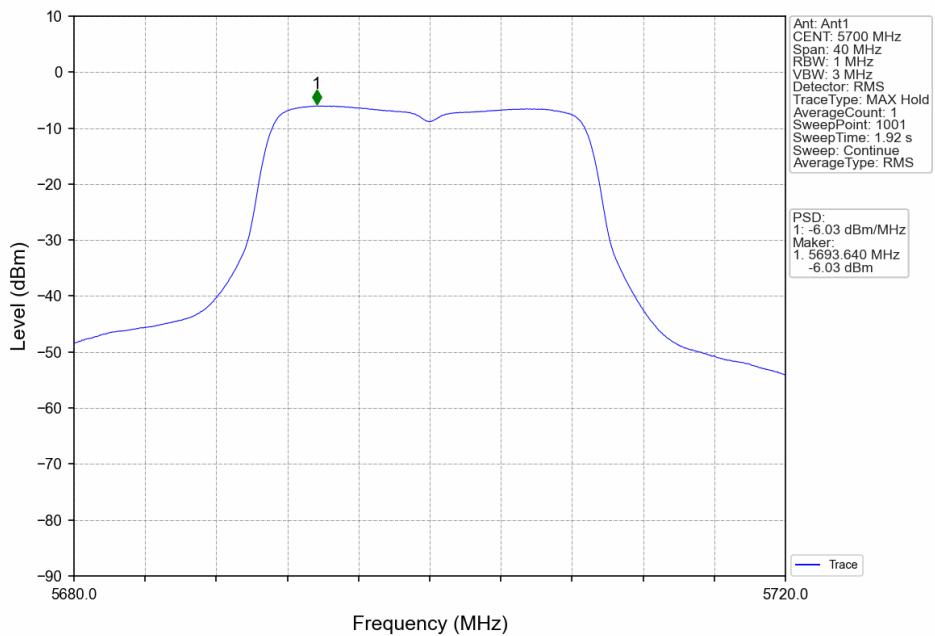
802.11n(HT20)\_LCH\_5500MHz\_Ant1\_NTNV



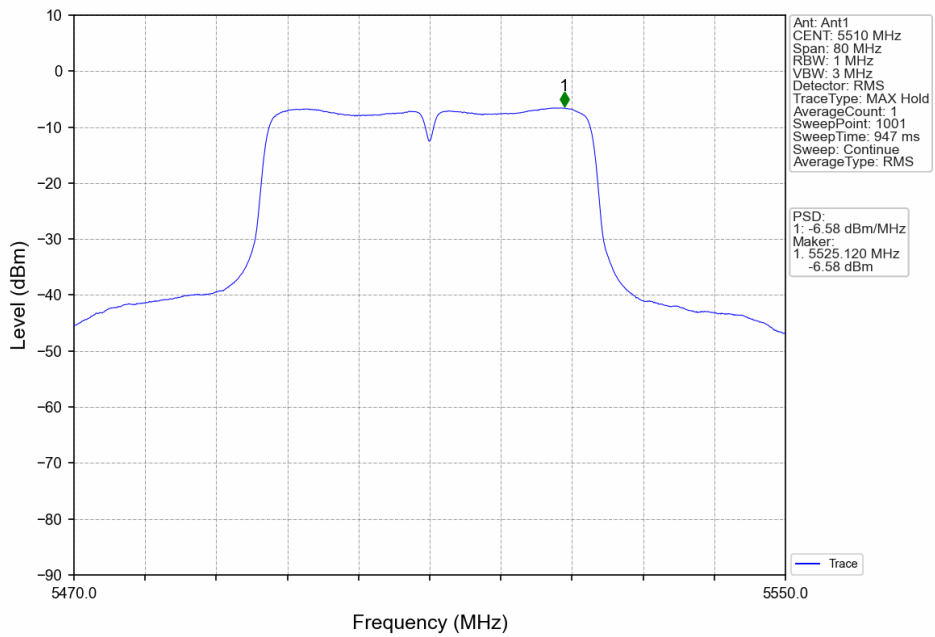
802.11n(HT20)\_MCH\_5580MHz\_Ant1\_NTNV



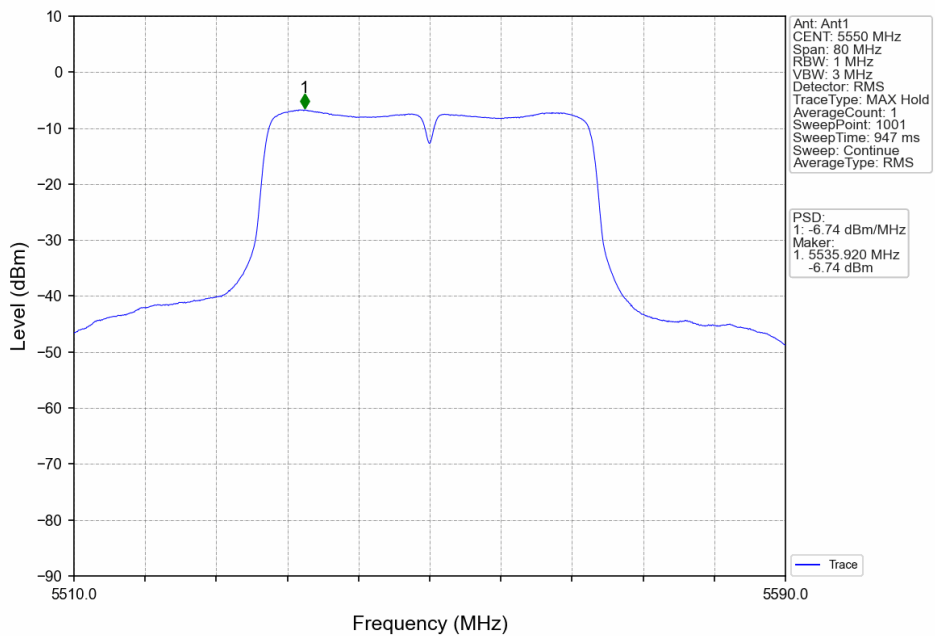
802.11n(HT20)\_HCH\_5700MHz\_Ant1\_NTNV



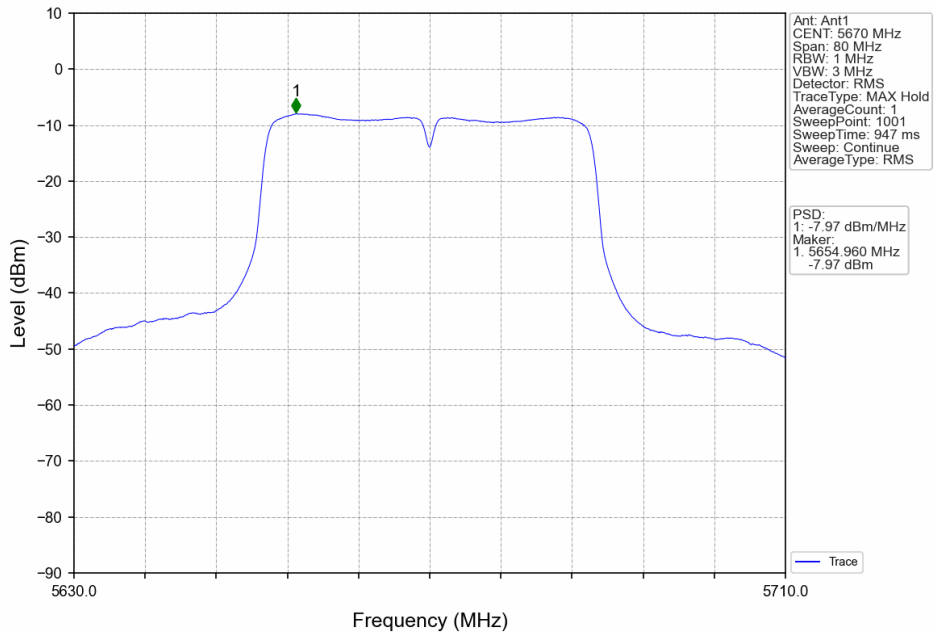
802.11n(HT40)\_LCH\_5510MHz\_Ant1\_NTNV



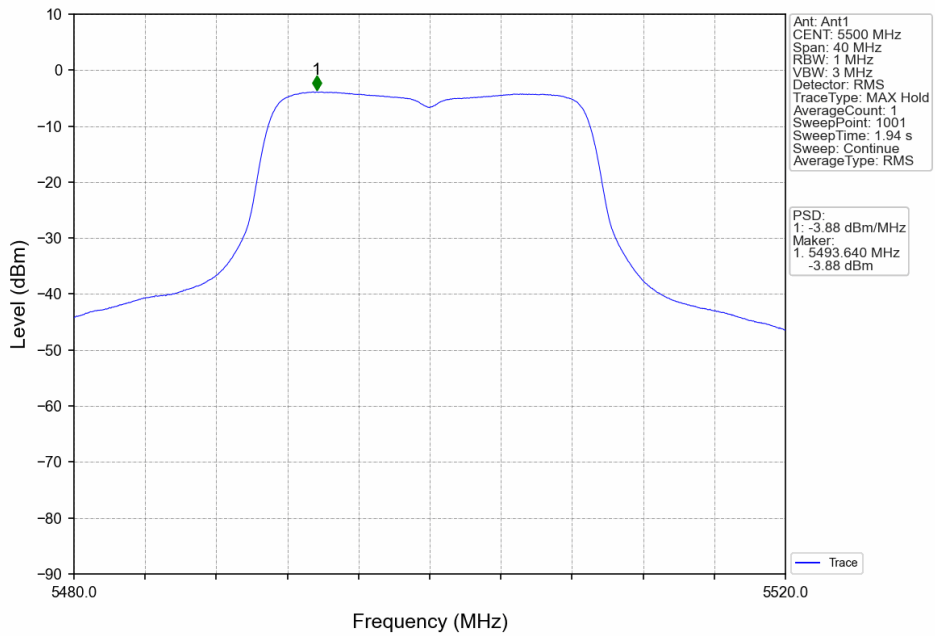
802.11n(HT40)\_MCH\_5550MHz\_Ant1\_NTNV



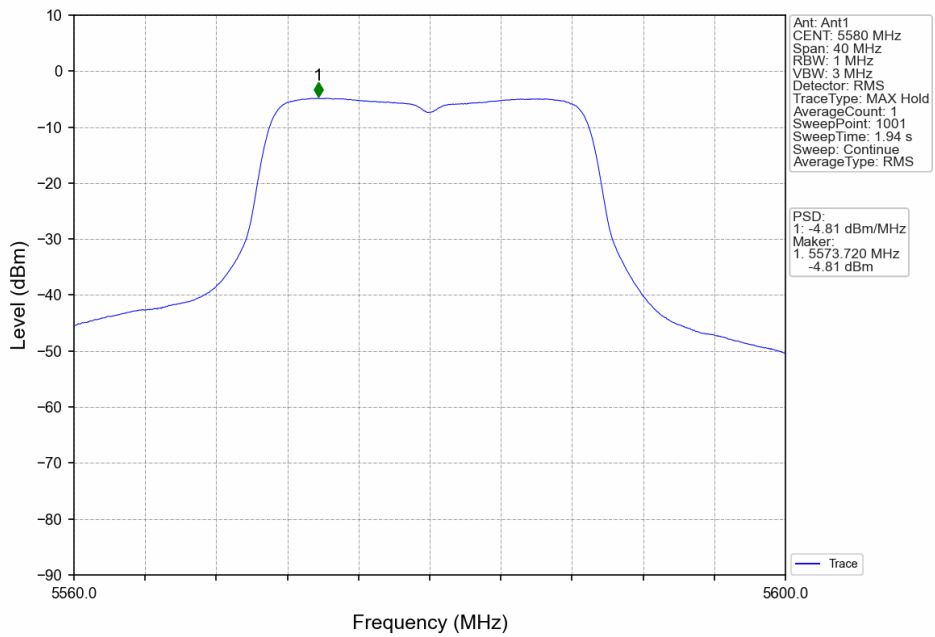
802.11n(HT40)\_HCH\_5670MHz\_Ant1\_NTNV



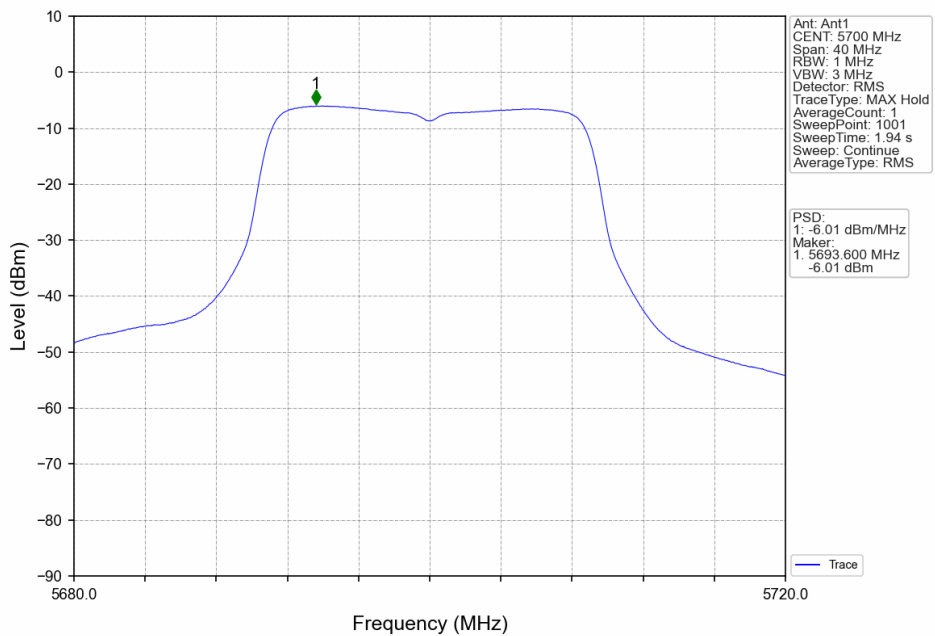
802.11ac(VHT20)\_LCH\_5500MHz\_Ant1\_NTNV



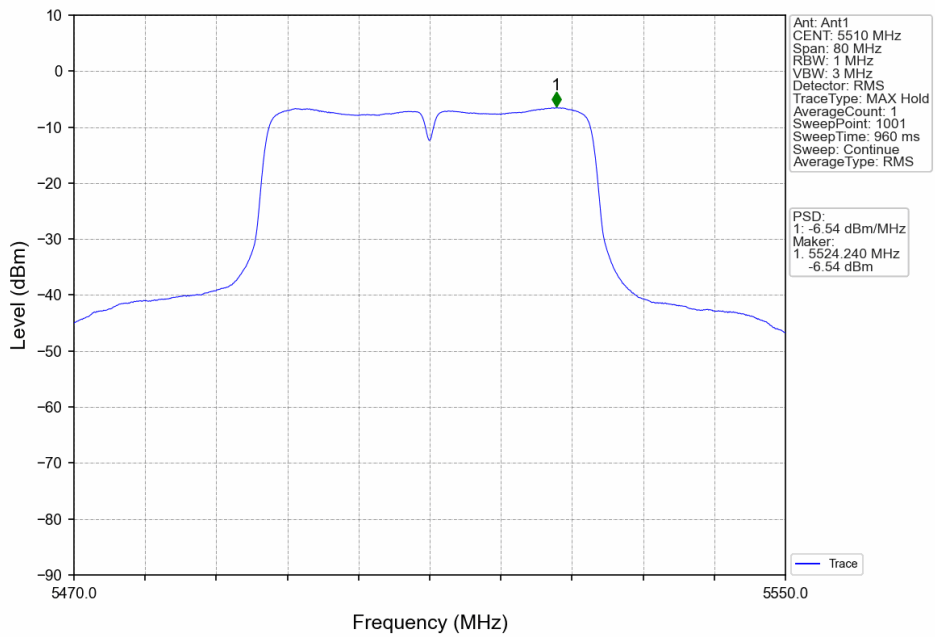
802.11ac(VHT20)\_MCH\_5580MHz\_Ant1\_NTNV



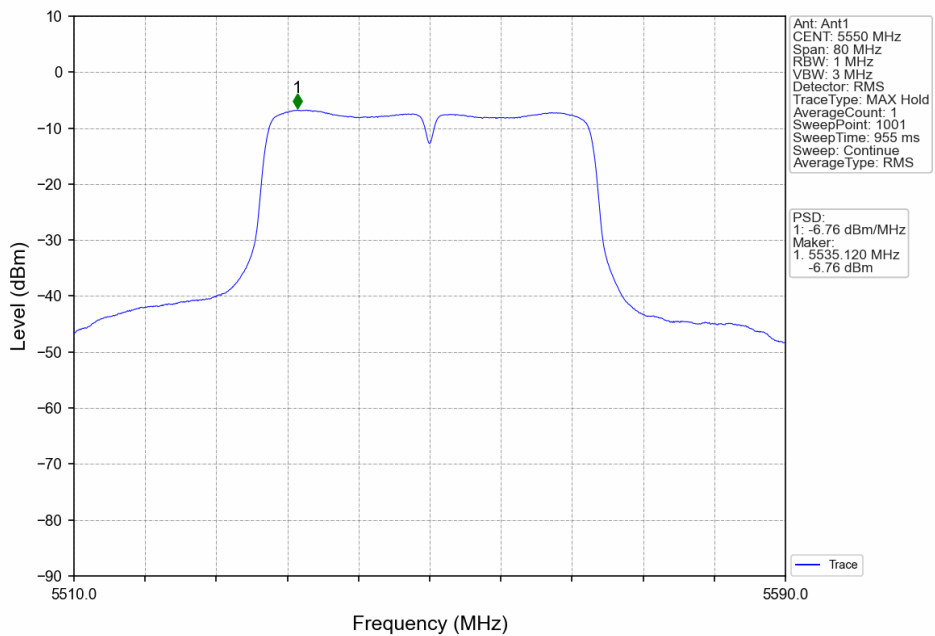
802.11ac(VHT20)\_HCH\_5700MHz\_Ant1\_NTNV



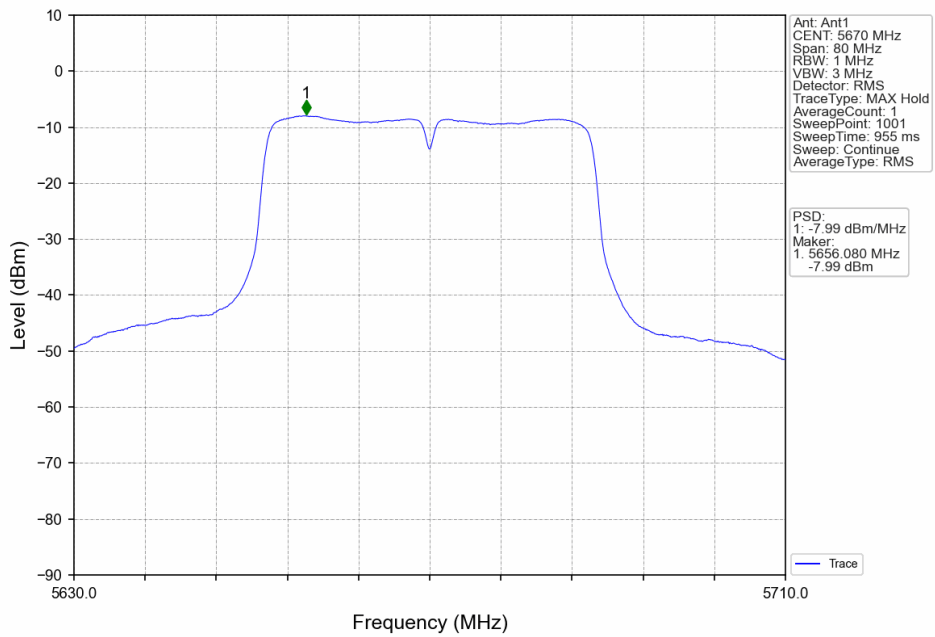
802.11ac(VHT40)\_LCH\_5510MHz\_Ant1\_NTNV



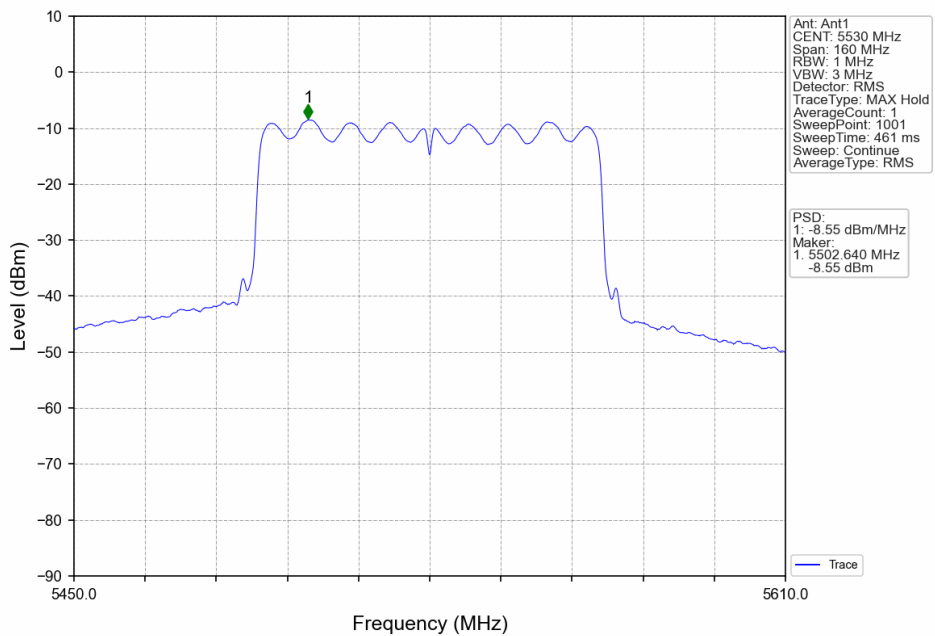
802.11ac(VHT40)\_MCH\_5550MHz\_Ant1\_NTNV

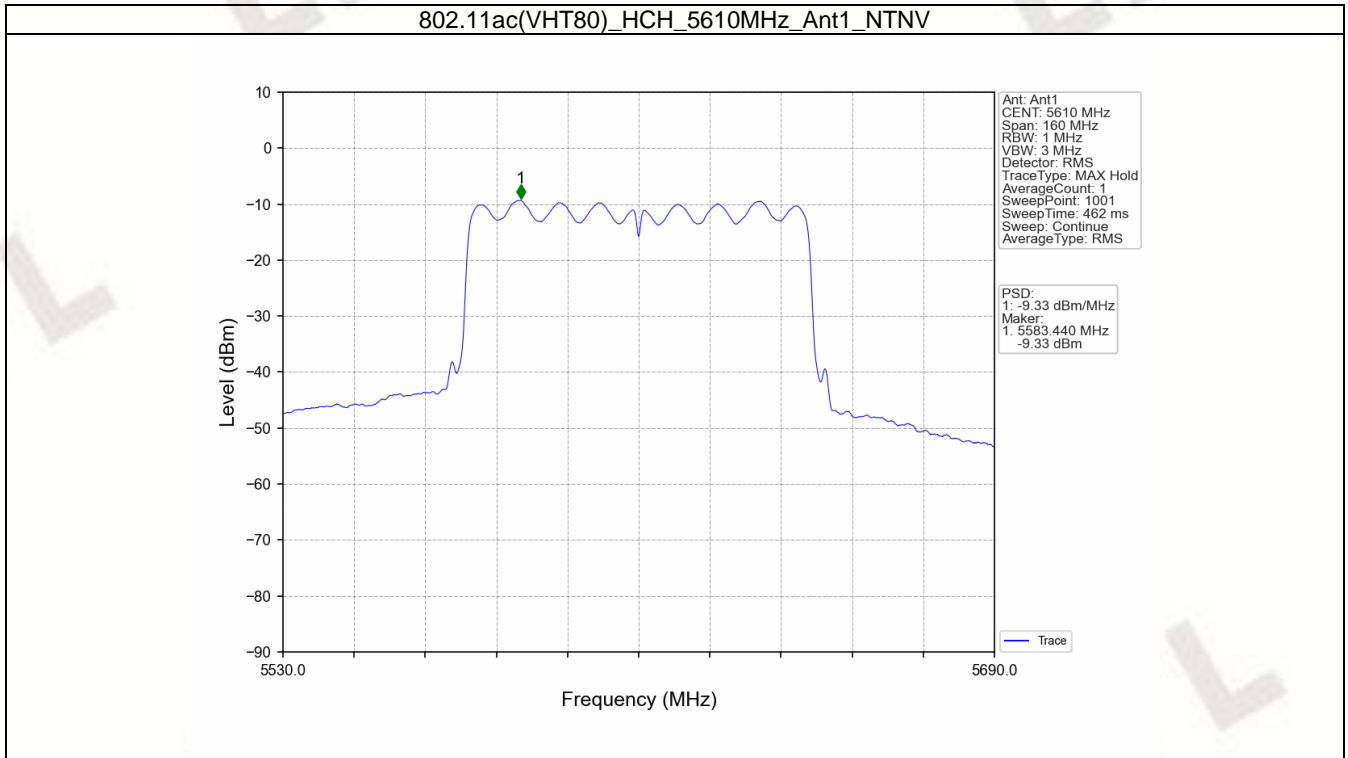


802.11ac(VHT40)\_HCH\_5670MHz\_Ant1\_NTNV



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







### 4. Frequency Stability

#### 4.1 Ant1

##### 4.1.1 Test Result

| Mode         | TX Type  | Frequency (MHz) | Temperature (°C) | Ant1          |                          |              | Verdict      |
|--------------|----------|-----------------|------------------|---------------|--------------------------|--------------|--------------|
|              |          |                 |                  | Voltage (VAC) | Measured Frequency (MHz) | Limit (MHz)  |              |
| Carrier Wave | SISO     | 5500            | 20               | 102           | 5499.995                 | 5470 to 5725 | Pass         |
|              |          |                 |                  | 120           | 5499.997                 | 5470 to 5725 | Pass         |
|              |          |                 |                  | 138           | 5499.999                 | 5470 to 5725 | Pass         |
|              |          |                 | -30              | 120           | 5500.001                 | 5470 to 5725 | Pass         |
|              |          |                 |                  | -20           | 120                      | 5500.001     | 5470 to 5725 |
|              |          |                 | -10              | 120           | 5500.002                 | 5470 to 5725 | Pass         |
|              |          |                 |                  | 0             | 120                      | 5500.003     | 5470 to 5725 |
|              |          |                 | 10               | 120           | 5500.003                 | 5470 to 5725 | Pass         |
|              |          |                 |                  | 30            | 120                      | 5500.004     | 5470 to 5725 |
|              |          |                 | 40               | 120           | 5500.004                 | 5470 to 5725 | Pass         |
|              |          | 50              |                  | 120           | 5500.005                 | 5470 to 5725 | Pass         |
|              |          | 5580            | 20               | 102           | 5579.996                 | 5470 to 5725 | Pass         |
|              |          |                 |                  | 120           | 5579.999                 | 5470 to 5725 | Pass         |
|              |          |                 |                  | 138           | 5580.001                 | 5470 to 5725 | Pass         |
|              |          |                 | -30              | 120           | 5580.002                 | 5470 to 5725 | Pass         |
|              |          |                 |                  | -20           | 120                      | 5580.003     | 5470 to 5725 |
|              |          |                 | -10              | 120           | 5580.004                 | 5470 to 5725 | Pass         |
|              |          |                 |                  | 0             | 120                      | 5580.004     | 5470 to 5725 |
|              |          |                 | 10               | 120           | 5580.005                 | 5470 to 5725 | Pass         |
|              |          |                 |                  | 30            | 120                      | 5580.005     | 5470 to 5725 |
|              |          |                 | 40               | 120           | 5580.006                 | 5470 to 5725 | Pass         |
|              |          | 50              |                  | 120           | 5580.006                 | 5470 to 5725 | Pass         |
|              |          | 5700            | 20               | 102           | 5699.997                 | 5470 to 5725 | Pass         |
|              |          |                 |                  | 120           | 5700.000                 | 5470 to 5725 | Pass         |
|              |          |                 |                  | 138           | 5700.003                 | 5470 to 5725 | Pass         |
|              |          |                 | -30              | 120           | 5700.004                 | 5470 to 5725 | Pass         |
|              |          |                 |                  | -20           | 120                      | 5700.005     | 5470 to 5725 |
|              |          |                 | -10              | 120           | 5700.006                 | 5470 to 5725 | Pass         |
|              |          |                 |                  | 0             | 120                      | 5700.006     | 5470 to 5725 |
|              |          |                 | 10               | 120           | 5700.007                 | 5470 to 5725 | Pass         |
|              |          |                 |                  | 30            | 120                      | 5700.008     | 5470 to 5725 |
|              |          |                 | 40               | 120           | 5700.008                 | 5470 to 5725 | Pass         |
|              |          | 50              |                  | 120           | 5700.009                 | 5470 to 5725 | Pass         |
|              |          | 5510            | 20               | 102           | 5509.999                 | 5470 to 5725 | Pass         |
|              |          |                 |                  | 120           | 5510.002                 | 5470 to 5725 | Pass         |
|              |          |                 |                  | 138           | 5510.004                 | 5470 to 5725 | Pass         |
|              |          |                 | -30              | 120           | 5510.005                 | 5470 to 5725 | Pass         |
|              |          |                 |                  | -20           | 120                      | 5510.006     | 5470 to 5725 |
|              |          |                 | -10              | 120           | 5510.006                 | 5470 to 5725 | Pass         |
|              |          |                 |                  | 0             | 120                      | 5510.007     | 5470 to 5725 |
|              |          |                 | 10               | 120           | 5510.008                 | 5470 to 5725 | Pass         |
|              |          |                 |                  | 30            | 120                      | 5510.008     | 5470 to 5725 |
|              |          |                 | 40               | 120           | 5510.008                 | 5470 to 5725 | Pass         |
|              |          | 50              |                  | 120           | 5510.009                 | 5470 to 5725 | Pass         |
|              |          | 5550            | 20               | 102           | 5549.997                 | 5470 to 5725 | Pass         |
| 120          | 5549.999 |                 |                  | 5470 to 5725  | Pass                     |              |              |

|  |  |      |     |          |              |              |      |
|--|--|------|-----|----------|--------------|--------------|------|
|  |  |      | 138 | 5550.001 | 5470 to 5725 | Pass         |      |
|  |  |      | -30 | 5550.003 | 5470 to 5725 | Pass         |      |
|  |  |      | -20 | 5550.003 | 5470 to 5725 | Pass         |      |
|  |  |      | -10 | 5550.004 | 5470 to 5725 | Pass         |      |
|  |  |      | 0   | 5550.005 | 5470 to 5725 | Pass         |      |
|  |  |      | 10  | 5550.006 | 5470 to 5725 | Pass         |      |
|  |  |      | 30  | 5550.007 | 5470 to 5725 | Pass         |      |
|  |  |      | 40  | 5550.008 | 5470 to 5725 | Pass         |      |
|  |  |      | 50  | 5550.008 | 5470 to 5725 | Pass         |      |
|  |  | 5670 | 20  | 102      | 5670.203     | 5470 to 5725 |      |
|  |  |      |     | 120      | 5670.416     | 5470 to 5725 | Pass |
|  |  |      |     | 138      | 5669.524     | 5470 to 5725 | Pass |
|  |  |      |     | -30      | 5670.115     | 5470 to 5725 | Pass |
|  |  |      |     | -20      | 5669.524     | 5470 to 5725 | Pass |
|  |  |      |     | -10      | 5670.163     | 5470 to 5725 | Pass |
|  |  |      |     | 0        | 5670.273     | 5470 to 5725 | Pass |
|  |  |      |     | 10       | 5669.977     | 5470 to 5725 | Pass |
|  |  |      |     | 30       | 5669.709     | 5470 to 5725 | Pass |
|  |  |      |     | 40       | 5670.330     | 5470 to 5725 | Pass |
|  |  |      | 50  | 5669.588 | 5470 to 5725 | Pass         |      |
|  |  | 5530 | 20  | 102      | 5529.998     | 5470 to 5725 |      |
|  |  |      |     | 120      | 5530.001     | 5470 to 5725 | Pass |
|  |  |      |     | 138      | 5530.003     | 5470 to 5725 | Pass |
|  |  |      |     | -30      | 5530.004     | 5470 to 5725 | Pass |
|  |  |      |     | -20      | 5530.006     | 5470 to 5725 | Pass |
|  |  |      |     | -10      | 5530.007     | 5470 to 5725 | Pass |
|  |  |      |     | 0        | 5530.008     | 5470 to 5725 | Pass |
|  |  |      |     | 10       | 5530.008     | 5470 to 5725 | Pass |
|  |  |      |     | 30       | 5530.009     | 5470 to 5725 | Pass |
|  |  |      |     | 40       | 5530.009     | 5470 to 5725 | Pass |
|  |  |      | 50  | 5530.009 | 5470 to 5725 | Pass         |      |
|  |  | 5610 | 20  | 102      | 5610.002     | 5470 to 5725 |      |
|  |  |      |     | 120      | 5610.003     | 5470 to 5725 | Pass |
|  |  |      |     | 138      | 5610.005     | 5470 to 5725 | Pass |
|  |  |      |     | -30      | 5610.006     | 5470 to 5725 | Pass |
|  |  |      |     | -20      | 5610.007     | 5470 to 5725 | Pass |
|  |  |      |     | -10      | 5610.008     | 5470 to 5725 | Pass |
|  |  |      |     | 0        | 5610.009     | 5470 to 5725 | Pass |
|  |  |      |     | 10       | 5610.009     | 5470 to 5725 | Pass |
|  |  |      |     | 30       | 5610.010     | 5470 to 5725 | Pass |
|  |  |      |     | 40       | 5610.010     | 5470 to 5725 | Pass |
|  |  |      | 50  | 5610.010 | 5470 to 5725 | Pass         |      |