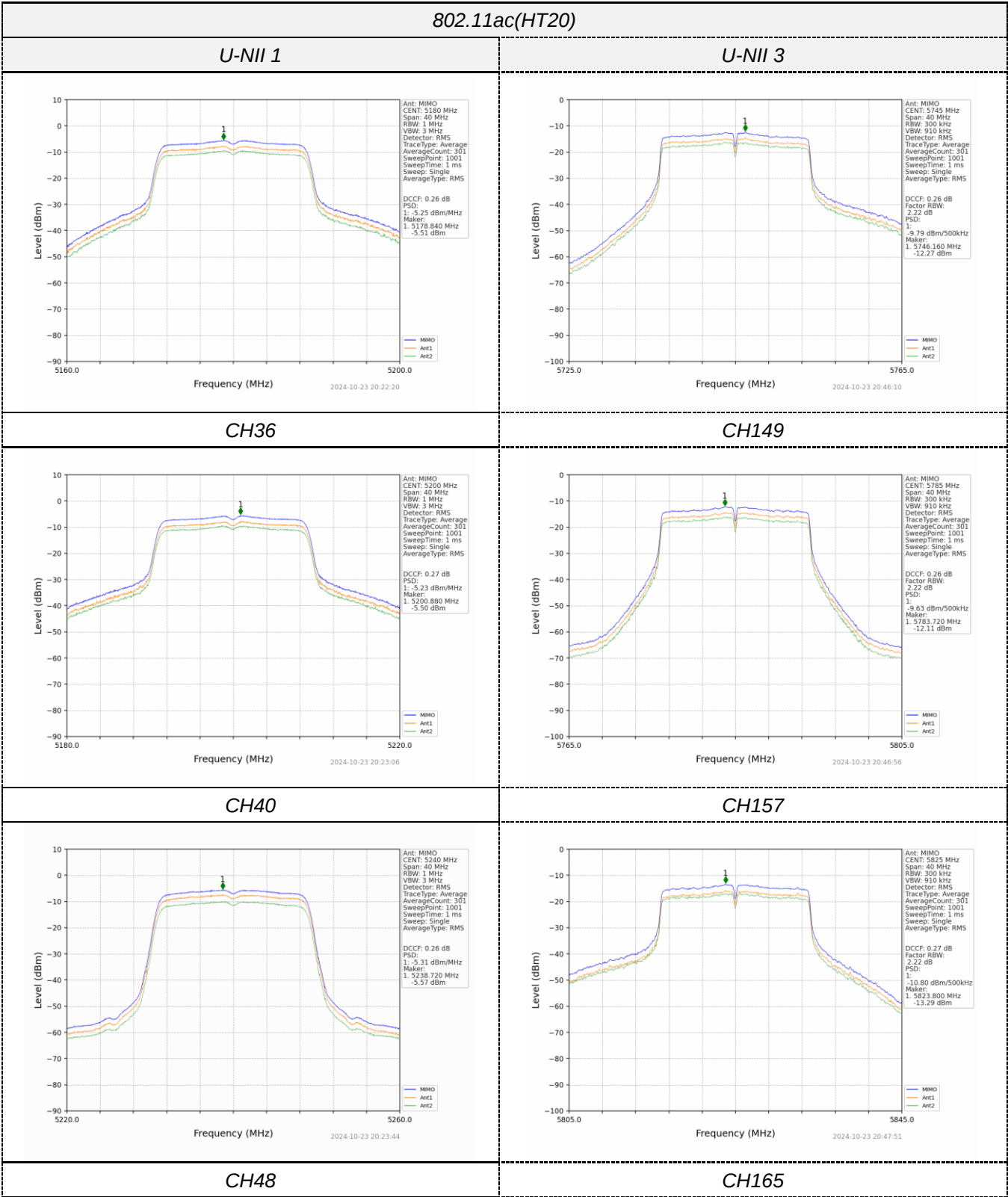




CH40

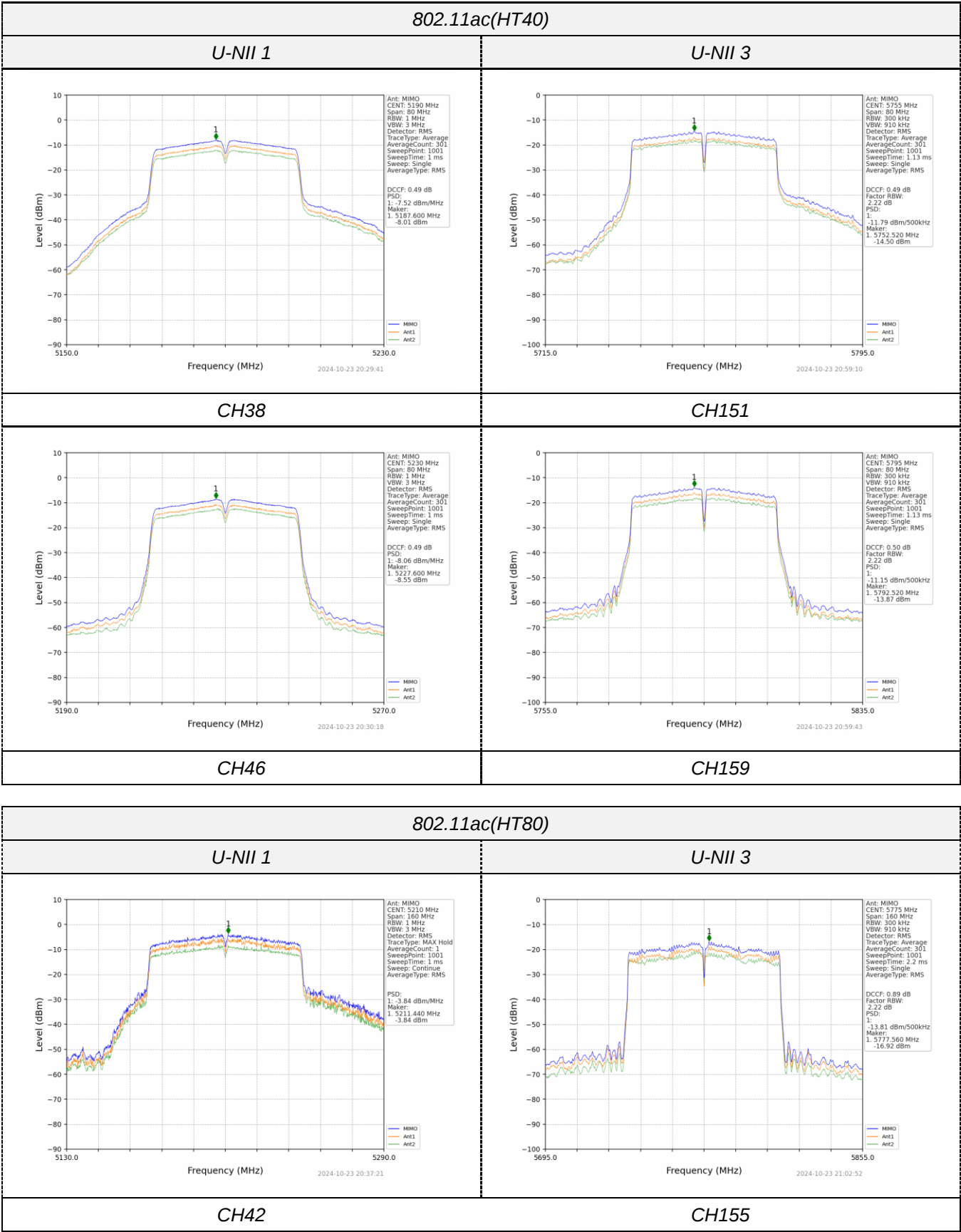
Ant: MIMO  
CENT: 5240 MHz  
Span: 40 MHz  
RBW: 1 MHz  
VBW: 3 MHz  
Detector: RMS  
TraceType: Average  
AverageCount: 301  
SweepPoint: 1001  
SweepTime: 1 ms  
Sweep: Single  
Averagetype: RMS  
DCCF: 0.26 dB  
PSD:  
1: -5.31 dBm/MHz  
Marker:  
1: 5238.720 MHz  
-5.57 dBm

CH157

Ant: MIMO  
CENT: 5825 MHz  
Span: 40 MHz  
RBW: 300 kHz  
VBW: 910 kHz  
Detector: RMS  
TraceType: Average  
AverageCount: 301  
SweepPoint: 1001  
SweepTime: 1 ms  
Sweep: Single  
Averagetype: RMS  
DCCF: 0.27 dB  
Factor RBW:  
2.22 dB  
PSD:  
1: -10.80 dBm/500kHz  
Marker:  
1: 5823.800 MHz  
-13.29 dBm

CH48

CH165



## 4.5 Emission Bandwidth (26dB Bandwidth)

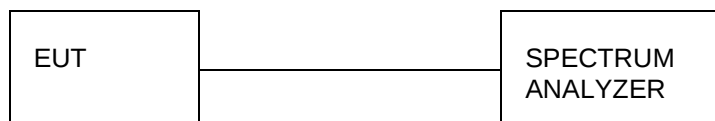
### Limit

N/A

### Test Procedure

1. Set resolution bandwidth (RBW) = approximately 1 % of the EBW.
2. Set the video bandwidth (VBW) > RBW.
3. Detector = Peak.
4. Trace mode = Max hold.
5. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW / EBW ratio is approximately 1 %.

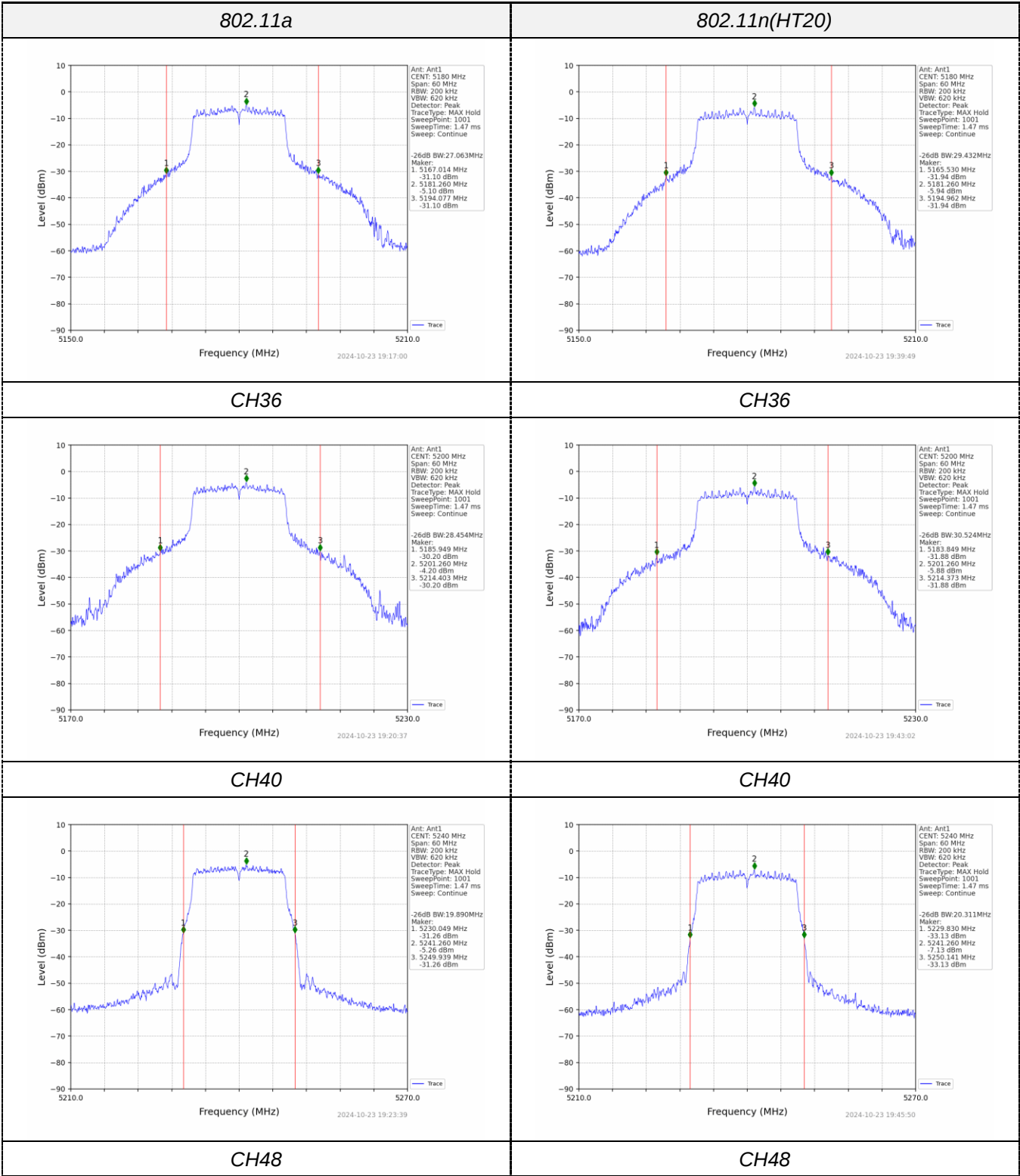
### Test Configuration

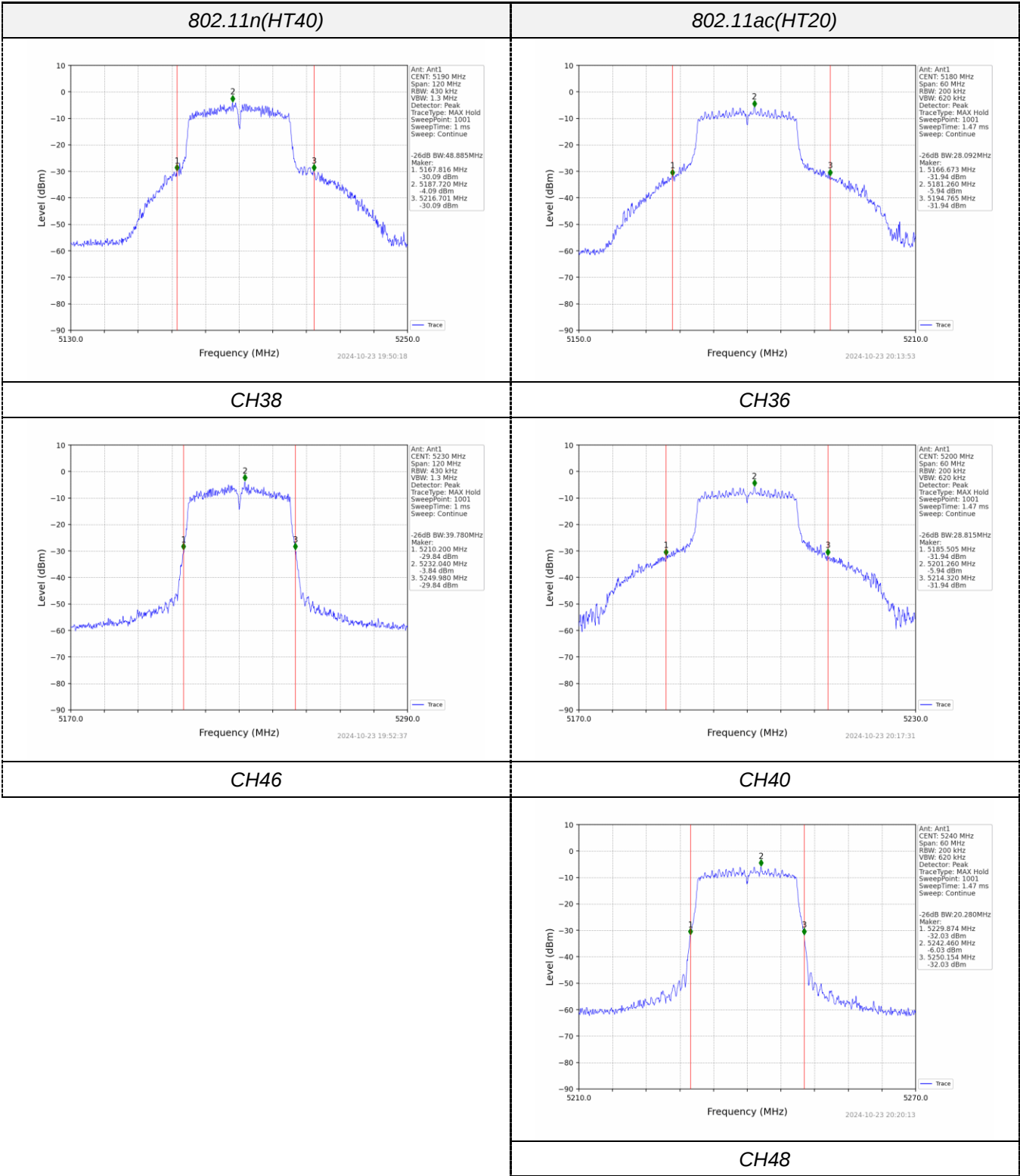


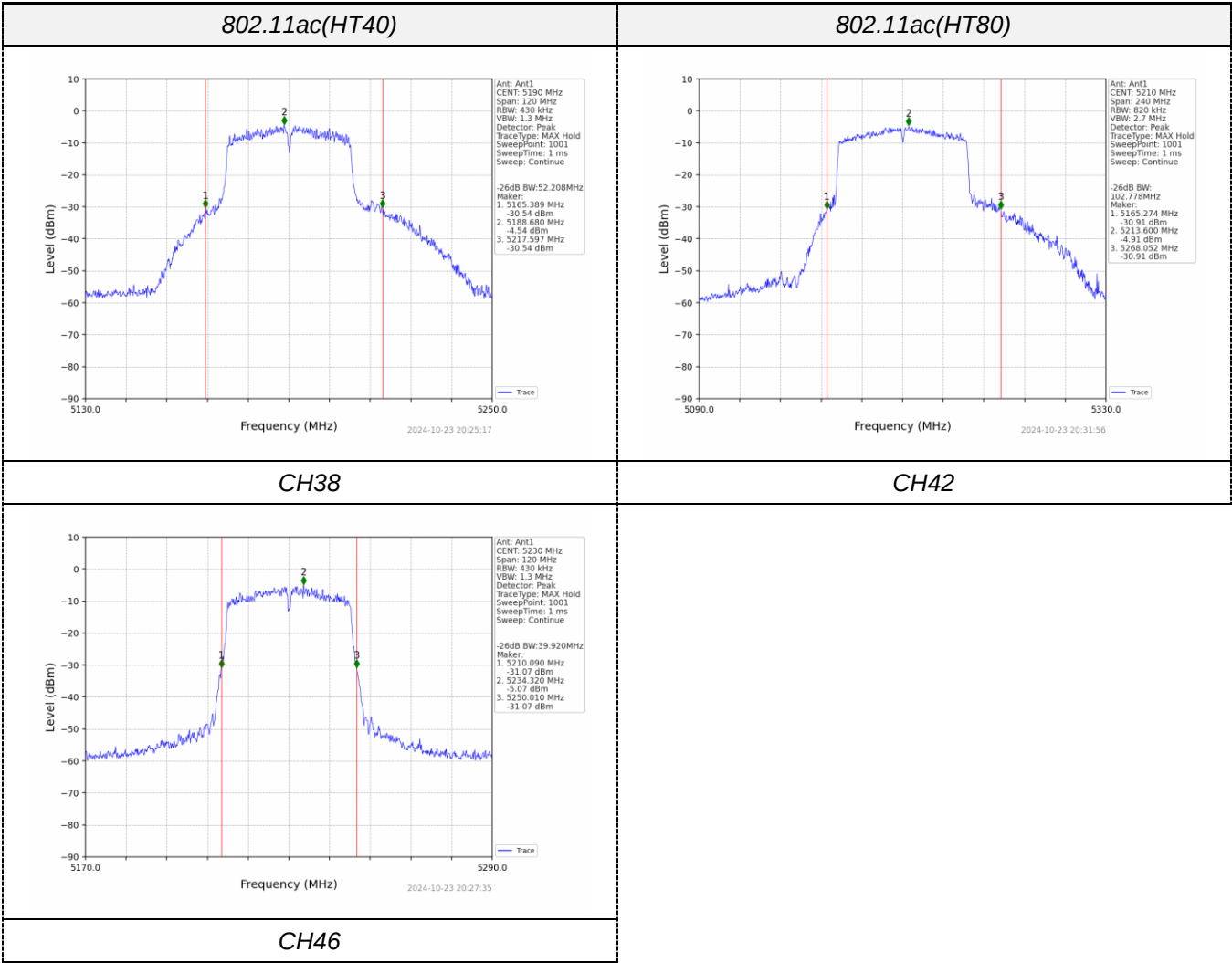
### Test Results

| Mode             | TX Type | Frequency (MHz) | ANT | 26dB Bandwidth (MHz) |       | Verdict |
|------------------|---------|-----------------|-----|----------------------|-------|---------|
|                  |         |                 |     | Result               | Limit |         |
| 802.11a          | SISO    | 5180            | 1   | 27.063               | /     | Pass    |
|                  |         | 5200            | 1   | 28.454               | /     | Pass    |
|                  |         | 5240            | 1   | 19.890               | /     | Pass    |
| 802.11n (HT20)   | MIMO    | 5180            | 1   | 29.432               | /     | Pass    |
|                  |         | 5200            | 1   | 30.524               | /     | Pass    |
|                  |         | 5240            | 1   | 20.311               | /     | Pass    |
| 802.11n (HT40)   | MIMO    | 5190            | 1   | 48.885               | /     | Pass    |
|                  |         | 5230            | 1   | 39.780               | /     | Pass    |
| 802.11ac (VHT20) | MIMO    | 5180            | 1   | 28.092               | /     | Pass    |
|                  |         | 5200            | 1   | 28.815               | /     | Pass    |
|                  |         | 5240            | 1   | 20.280               | /     | Pass    |
| 802.11ac (VHT40) | MIMO    | 5190            | 1   | 52.208               | /     | Pass    |
|                  |         | 5230            | 1   | 39.920               | /     | Pass    |
| 802.11ac (VHT80) | MIMO    | 5210            | 1   | 102.778              | /     | Pass    |

Test plot as follows:







## 4.6 Minimum Emission Bandwidth (6dB Bandwidth)

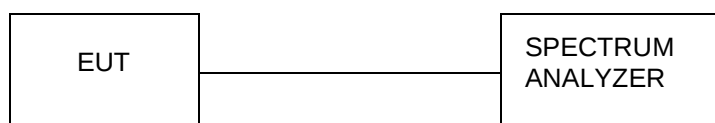
### Limit

Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

### Test Procedure

1. Set resolution bandwidth (RBW) = 100 kHz
2. Set the video bandwidth 3 x RBW.
3. Detector = Peak.
4. Trace mode = Max hold.
5. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

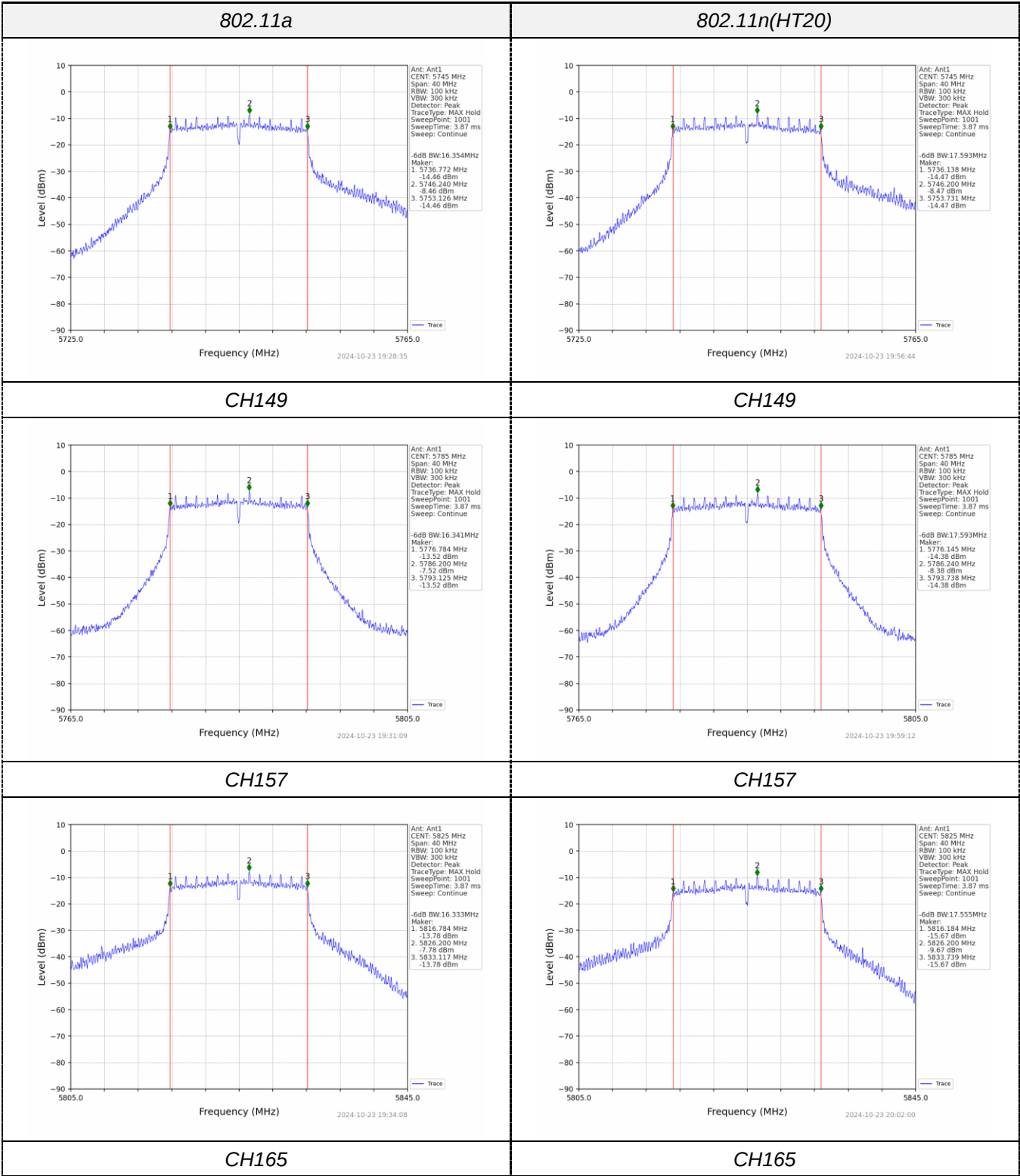
### Test Configuration

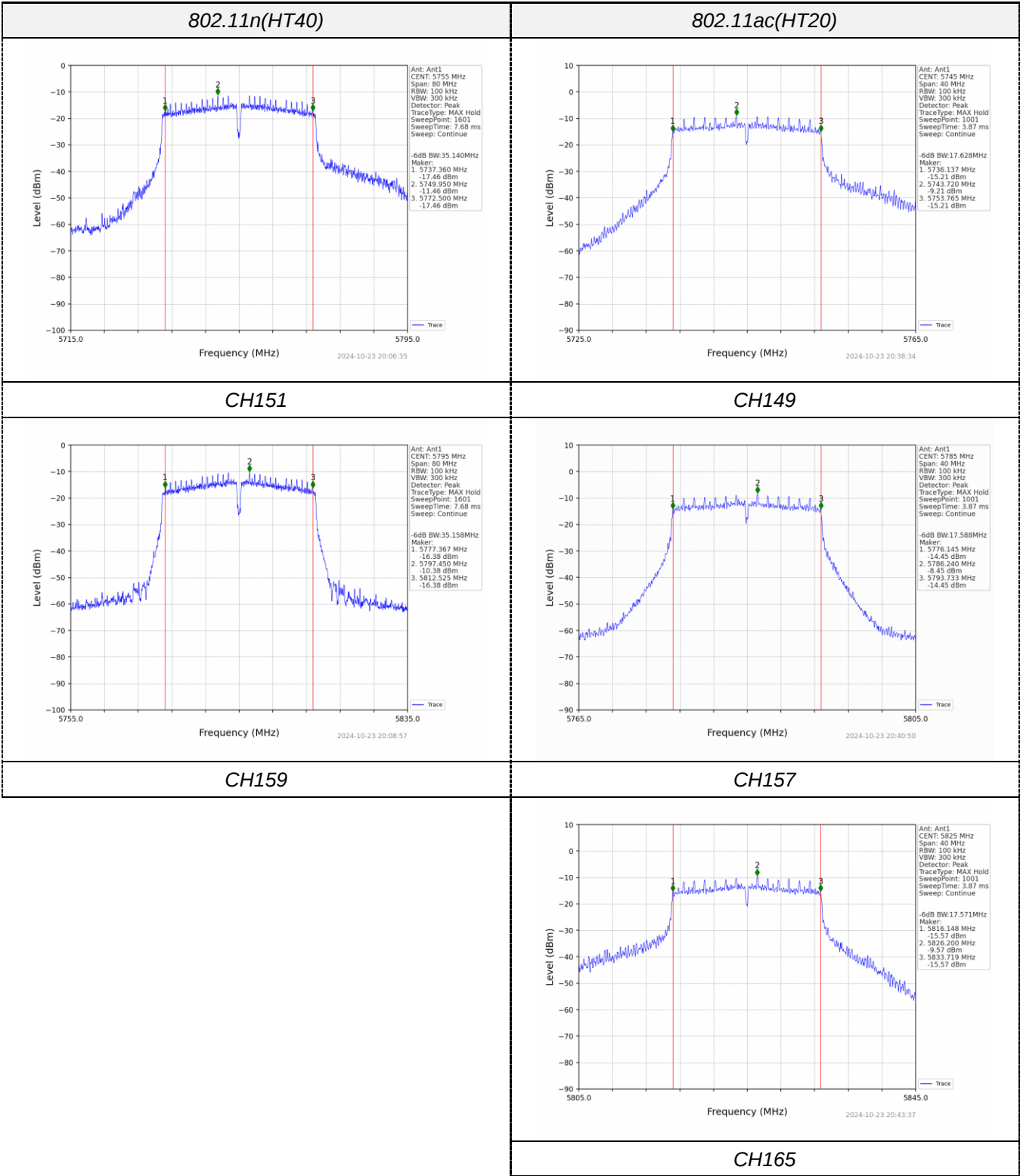


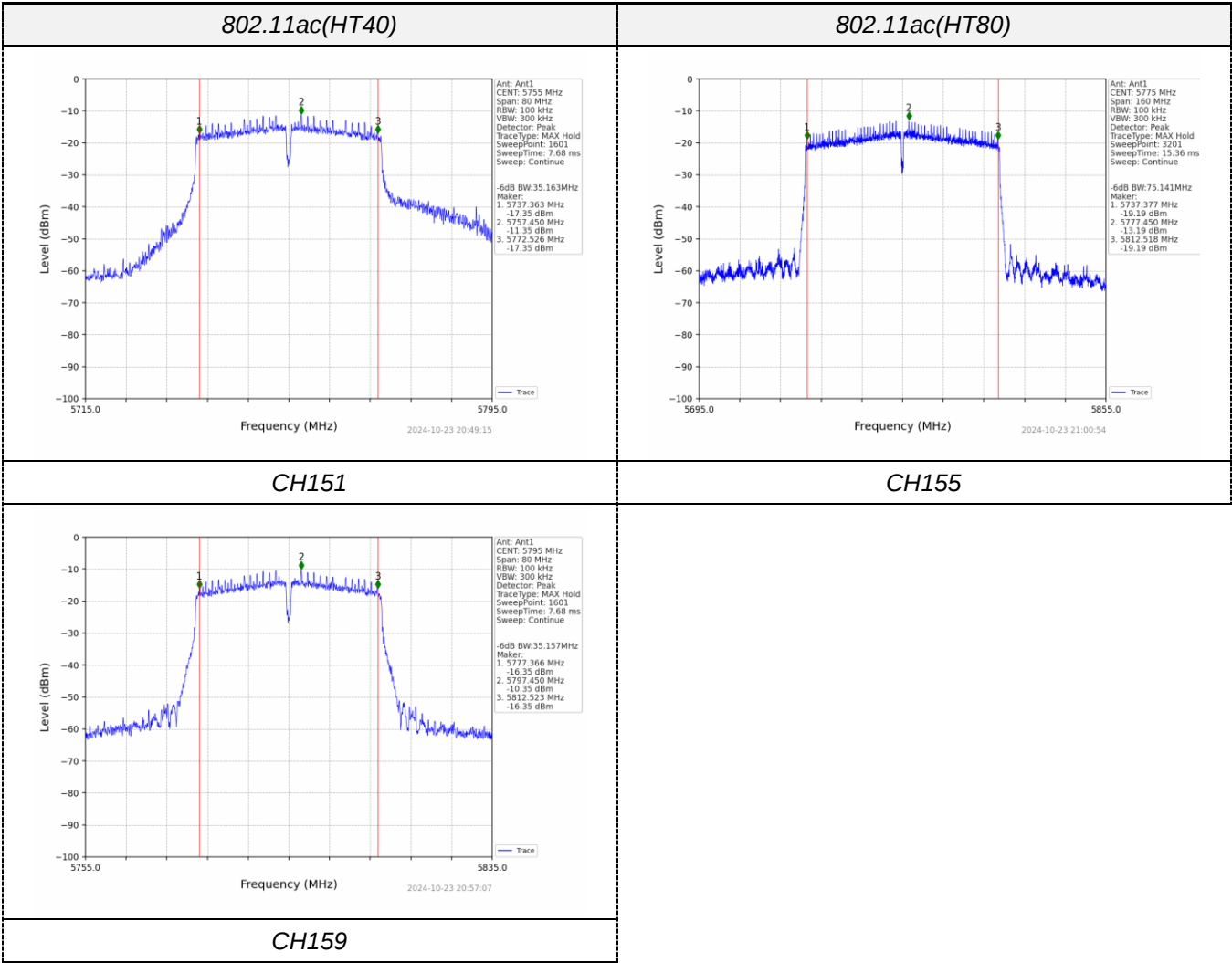
### Test Results

| Mode             | TX Type | Frequency (MHz) | ANT | 6dB Bandwidth (MHz) |       | Verdict |
|------------------|---------|-----------------|-----|---------------------|-------|---------|
|                  |         |                 |     | Result              | Limit |         |
| 802.11a          | SISO    | 5745            | 1   | 16.354              | >=0.5 | Pass    |
|                  |         | 5785            | 1   | 16.341              | >=0.5 | Pass    |
|                  |         | 5825            | 1   | 16.333              | >=0.5 | Pass    |
| 802.11n (HT20)   | MIMO    | 5745            | 1   | 17.593              | >=0.5 | Pass    |
|                  |         | 5785            | 1   | 17.593              | >=0.5 | Pass    |
|                  |         | 5825            | 1   | 17.555              | >=0.5 | Pass    |
| 802.11n (HT40)   | MIMO    | 5755            | 1   | 35.140              | >=0.5 | Pass    |
|                  |         | 5795            | 1   | 35.158              | >=0.5 | Pass    |
| 802.11ac (VHT20) | MIMO    | 5745            | 1   | 17.628              | >=0.5 | Pass    |
|                  |         | 5785            | 1   | 17.588              | >=0.5 | Pass    |
|                  |         | 5825            | 1   | 17.571              | >=0.5 | Pass    |
| 802.11ac (VHT40) | MIMO    | 5755            | 1   | 35.163              | >=0.5 | Pass    |
|                  |         | 5795            | 1   | 35.157              | >=0.5 | Pass    |
| 802.11ac (VHT80) | MIMO    | 5775            | 1   | 75.141              | >=0.5 | Pass    |

Test plot as follows:





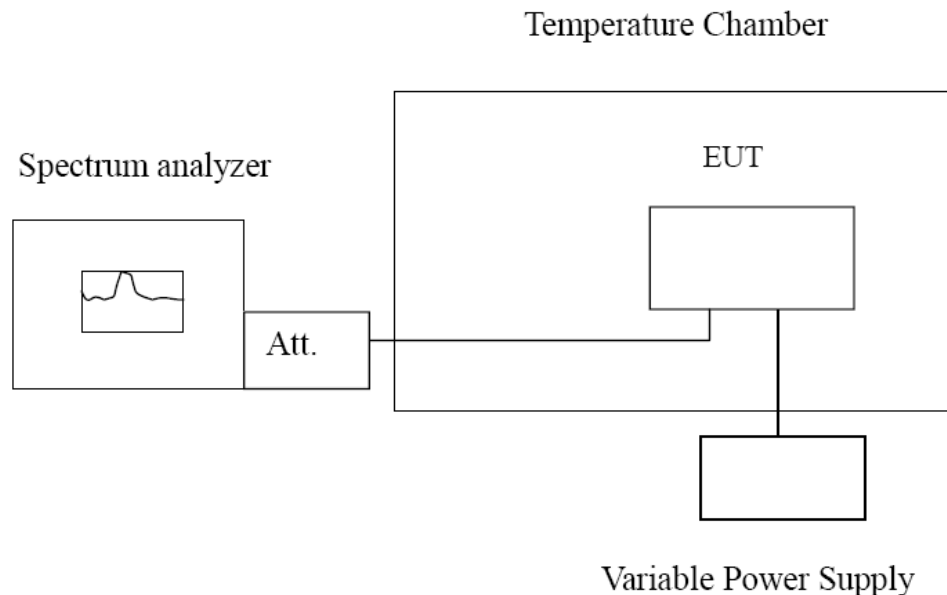


## 4.7 Frequency Stability

### LIMIT

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.

### TEST CONFIGURATION



### TEST PROCEDURE

#### **Frequency Stability under Temperature Variations:**

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

#### **Frequency Stability under Voltage Variations:**

Set chamber temperature to 20°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency. Reduce the input voltage to specify extreme voltage variation ( $\pm 15\%$ ) and endpoint, record the maximum frequency change.

### TEST RESULTS

Record worst case as below:

| Ant1    |         |                 |                  |               |                          |              |         |
|---------|---------|-----------------|------------------|---------------|--------------------------|--------------|---------|
| Mode    | TX Type | Frequency (MHz) | Temperature (°C) | Voltage (VAC) | Measured Frequency (MHz) | Limit (MHz)  | Verdict |
| 802.11a | SISO    | 5180            | 20               | 102           | 5179.980                 | 5150 to 5250 | Pass    |
|         |         |                 |                  | 120           | 5179.980                 | 5150 to 5250 | Pass    |
|         |         |                 |                  | 138           | 5179.980                 | 5150 to 5250 | Pass    |
|         |         |                 | -30              | 120           | 5179.960                 | 5150 to 5250 | Pass    |
|         |         |                 | -20              | 120           | 5180.020                 | 5150 to 5250 | Pass    |
|         |         |                 | -10              | 120           | 5179.960                 | 5150 to 5250 | Pass    |
|         |         |                 | 0                | 120           | 5180.020                 | 5150 to 5250 | Pass    |
|         |         |                 | 10               | 120           | 5180.020                 | 5150 to 5250 | Pass    |
|         |         |                 | 30               | 120           | 5179.960                 | 5150 to 5250 | Pass    |
|         |         |                 | 40               | 120           | 5180.000                 | 5150 to 5250 | Pass    |
|         |         |                 | 50               | 120           | 5179.960                 | 5150 to 5250 | Pass    |
|         |         | 5200            | 20               | 102           | 5200.040                 | 5150 to 5250 | Pass    |
|         |         |                 |                  | 120           | 5199.960                 | 5150 to 5250 | Pass    |
|         |         |                 |                  | 138           | 5200.000                 | 5150 to 5250 | Pass    |
|         |         |                 | -30              | 120           | 5199.940                 | 5150 to 5250 | Pass    |
|         |         |                 | -20              | 120           | 5199.960                 | 5150 to 5250 | Pass    |
|         |         |                 | -10              | 120           | 5199.960                 | 5150 to 5250 | Pass    |
|         |         |                 | 0                | 120           | 5199.960                 | 5150 to 5250 | Pass    |
|         |         |                 | 10               | 120           | 5200.020                 | 5150 to 5250 | Pass    |
|         |         |                 | 30               | 120           | 5199.980                 | 5150 to 5250 | Pass    |
|         |         |                 | 40               | 120           | 5200.000                 | 5150 to 5250 | Pass    |
|         |         |                 | 50               | 120           | 5200.020                 | 5150 to 5250 | Pass    |
|         |         | 5240            | 20               | 102           | 5239.980                 | 5150 to 5250 | Pass    |
|         |         |                 |                  | 120           | 5239.960                 | 5150 to 5250 | Pass    |
|         |         |                 |                  | 138           | 5240.000                 | 5150 to 5250 | Pass    |
|         |         |                 | -30              | 120           | 5239.960                 | 5150 to 5250 | Pass    |
|         |         |                 | -20              | 120           | 5239.960                 | 5150 to 5250 | Pass    |
|         |         |                 | -10              | 120           | 5239.960                 | 5150 to 5250 | Pass    |
|         |         |                 | 0                | 120           | 5240.040                 | 5150 to 5250 | Pass    |
|         |         |                 | 10               | 120           | 5240.020                 | 5150 to 5250 | Pass    |
|         |         |                 | 30               | 120           | 5240.020                 | 5150 to 5250 | Pass    |
|         |         |                 | 40               | 120           | 5240.000                 | 5150 to 5250 | Pass    |
|         |         |                 | 50               | 120           | 5240.020                 | 5150 to 5250 | Pass    |
|         |         | 5745            | 20               | 102           | 5744.960                 | 5725 to 5850 | Pass    |
|         |         |                 |                  | 120           | 5744.960                 | 5725 to 5850 | Pass    |
|         |         |                 |                  | 138           | 5744.960                 | 5725 to 5850 | Pass    |
|         |         |                 | -30              | 120           | 5744.940                 | 5725 to 5850 | Pass    |
|         |         |                 | -20              | 120           | 5744.960                 | 5725 to 5850 | Pass    |
|         |         |                 | -10              | 120           | 5744.980                 | 5725 to 5850 | Pass    |
|         |         |                 | 0                | 120           | 5744.940                 | 5725 to 5850 | Pass    |
|         |         |                 | 10               | 120           | 5744.920                 | 5725 to 5850 | Pass    |
|         |         |                 | 30               | 120           | 5745.000                 | 5725 to 5850 | Pass    |
|         |         |                 | 40               | 120           | 5745.000                 | 5725 to 5850 | Pass    |
|         |         |                 | 50               | 120           | 5744.920                 | 5725 to 5850 | Pass    |
|         |         | 5785            | 20               | 102           | 5784.940                 | 5725 to 5850 | Pass    |
|         |         |                 |                  | 120           | 5785.020                 | 5725 to 5850 | Pass    |
|         |         |                 |                  | 138           | 5784.980                 | 5725 to 5850 | Pass    |
|         |         |                 | -30              | 120           | 5785.000                 | 5725 to 5850 | Pass    |
|         |         |                 | -20              | 120           | 5785.000                 | 5725 to 5850 | Pass    |
|         |         |                 | -10              | 120           | 5784.980                 | 5725 to 5850 | Pass    |
|         |         |                 | 0                | 120           | 5785.000                 | 5725 to 5850 | Pass    |
|         |         |                 | 10               | 120           | 5785.000                 | 5725 to 5850 | Pass    |
|         |         |                 | 30               | 120           | 5785.000                 | 5725 to 5850 | Pass    |
|         |         |                 | 40               | 120           | 5784.980                 | 5725 to 5850 | Pass    |
|         |         |                 | 50               | 120           | 5784.980                 | 5725 to 5850 | Pass    |
|         |         | 5825            | 20               | 102           | 5825.000                 | 5725 to 5850 | Pass    |
|         |         |                 |                  | 120           | 5825.000                 | 5725 to 5850 | Pass    |
|         |         |                 |                  | 138           | 5825.000                 | 5725 to 5850 | Pass    |
|         |         |                 | -30              | 120           | 5824.940                 | 5725 to 5850 | Pass    |
|         |         |                 | -20              | 120           | 5824.980                 | 5725 to 5850 | Pass    |

|  |  |      |     |     |          |              |      |
|--|--|------|-----|-----|----------|--------------|------|
|  |  |      | -10 | 120 | 5825.020 | 5725 to 5850 | Pass |
|  |  |      | 0   | 120 | 5824.980 | 5725 to 5850 | Pass |
|  |  |      | 10  | 120 | 5824.960 | 5725 to 5850 | Pass |
|  |  |      | 30  | 120 | 5824.980 | 5725 to 5850 | Pass |
|  |  |      | 40  | 120 | 5825.000 | 5725 to 5850 | Pass |
|  |  |      | 50  | 120 | 5825.020 | 5725 to 5850 | Pass |
|  |  | 5180 | 20  | 102 | 5179.980 | 5150 to 5250 | Pass |
|  |  |      |     | 120 | 5179.940 | 5150 to 5250 | Pass |
|  |  |      |     | 138 | 5180.000 | 5150 to 5250 | Pass |
|  |  |      | -30 | 120 | 5179.980 | 5150 to 5250 | Pass |
|  |  |      | -20 | 120 | 5179.960 | 5150 to 5250 | Pass |
|  |  |      | -10 | 120 | 5179.980 | 5150 to 5250 | Pass |
|  |  |      | 0   | 120 | 5179.980 | 5150 to 5250 | Pass |
|  |  |      | 10  | 120 | 5179.980 | 5150 to 5250 | Pass |
|  |  |      | 30  | 120 | 5179.960 | 5150 to 5250 | Pass |
|  |  |      | 40  | 120 | 5180.060 | 5150 to 5250 | Pass |
|  |  |      | 50  | 120 | 5179.980 | 5150 to 5250 | Pass |
|  |  | 5200 | 20  | 102 | 5200.000 | 5150 to 5250 | Pass |
|  |  |      |     | 120 | 5199.980 | 5150 to 5250 | Pass |
|  |  |      |     | 138 | 5200.000 | 5150 to 5250 | Pass |
|  |  |      | -30 | 120 | 5199.960 | 5150 to 5250 | Pass |
|  |  |      | -20 | 120 | 5199.980 | 5150 to 5250 | Pass |
|  |  |      | -10 | 120 | 5199.960 | 5150 to 5250 | Pass |
|  |  |      | 0   | 120 | 5199.980 | 5150 to 5250 | Pass |
|  |  |      | 10  | 120 | 5199.940 | 5150 to 5250 | Pass |
|  |  |      | 30  | 120 | 5199.960 | 5150 to 5250 | Pass |
|  |  |      | 40  | 120 | 5199.980 | 5150 to 5250 | Pass |
|  |  |      | 50  | 120 | 5199.980 | 5150 to 5250 | Pass |
|  |  | 5240 | 20  | 102 | 5239.980 | 5150 to 5250 | Pass |
|  |  |      |     | 120 | 5240.000 | 5150 to 5250 | Pass |
|  |  |      |     | 138 | 5239.940 | 5150 to 5250 | Pass |
|  |  |      | -30 | 120 | 5240.020 | 5150 to 5250 | Pass |
|  |  |      | -20 | 120 | 5239.980 | 5150 to 5250 | Pass |
|  |  |      | -10 | 120 | 5240.040 | 5150 to 5250 | Pass |
|  |  |      | 0   | 120 | 5240.020 | 5150 to 5250 | Pass |
|  |  |      | 10  | 120 | 5239.940 | 5150 to 5250 | Pass |
|  |  |      | 30  | 120 | 5239.980 | 5150 to 5250 | Pass |
|  |  |      | 40  | 120 | 5240.000 | 5150 to 5250 | Pass |
|  |  |      | 50  | 120 | 5240.000 | 5150 to 5250 | Pass |
|  |  | 5745 | 20  | 102 | 5744.940 | 5725 to 5850 | Pass |
|  |  |      |     | 120 | 5744.920 | 5725 to 5850 | Pass |
|  |  |      |     | 138 | 5745.000 | 5725 to 5850 | Pass |
|  |  |      | -30 | 120 | 5744.980 | 5725 to 5850 | Pass |
|  |  |      | -20 | 120 | 5744.980 | 5725 to 5850 | Pass |
|  |  |      | -10 | 120 | 5744.940 | 5725 to 5850 | Pass |
|  |  |      | 0   | 120 | 5744.980 | 5725 to 5850 | Pass |
|  |  |      | 10  | 120 | 5744.980 | 5725 to 5850 | Pass |
|  |  |      | 30  | 120 | 5744.960 | 5725 to 5850 | Pass |
|  |  |      | 40  | 120 | 5744.960 | 5725 to 5850 | Pass |
|  |  |      | 50  | 120 | 5744.960 | 5725 to 5850 | Pass |
|  |  | 5785 | 20  | 102 | 5785.000 | 5725 to 5850 | Pass |
|  |  |      |     | 120 | 5784.960 | 5725 to 5850 | Pass |
|  |  |      |     | 138 | 5784.960 | 5725 to 5850 | Pass |
|  |  |      | -30 | 120 | 5784.980 | 5725 to 5850 | Pass |
|  |  |      | -20 | 120 | 5784.960 | 5725 to 5850 | Pass |
|  |  |      | -10 | 120 | 5784.980 | 5725 to 5850 | Pass |
|  |  |      | 0   | 120 | 5785.000 | 5725 to 5850 | Pass |
|  |  |      | 10  | 120 | 5785.000 | 5725 to 5850 | Pass |
|  |  |      | 30  | 120 | 5784.980 | 5725 to 5850 | Pass |
|  |  |      | 40  | 120 | 5784.960 | 5725 to 5850 | Pass |
|  |  |      | 50  | 120 | 5784.940 | 5725 to 5850 | Pass |
|  |  | 5825 | 20  | 102 | 5825.000 | 5725 to 5850 | Pass |
|  |  |      |     | 120 | 5824.980 | 5725 to 5850 | Pass |
|  |  |      |     | 138 | 5824.980 | 5725 to 5850 | Pass |
|  |  |      | -30 | 120 | 5824.980 | 5725 to 5850 | Pass |
|  |  |      | -20 | 120 | 5824.980 | 5725 to 5850 | Pass |
|  |  |      | -10 | 120 | 5825.020 | 5725 to 5850 | Pass |

|                     |      |      |     |     |          |              |      |
|---------------------|------|------|-----|-----|----------|--------------|------|
| 802.11n<br>(HT40)   | MIMO |      | 0   | 120 | 5824.960 | 5725 to 5850 | Pass |
|                     |      |      | 10  | 120 | 5824.960 | 5725 to 5850 | Pass |
|                     |      |      | 30  | 120 | 5824.980 | 5725 to 5850 | Pass |
|                     |      |      | 40  | 120 | 5824.940 | 5725 to 5850 | Pass |
|                     |      |      | 50  | 120 | 5825.020 | 5725 to 5850 | Pass |
|                     |      | 5190 | 20  | 102 | 5190.040 | 5150 to 5250 | Pass |
|                     |      |      |     | 120 | 5190.040 | 5150 to 5250 | Pass |
|                     |      |      |     | 138 | 5190.040 | 5150 to 5250 | Pass |
|                     |      |      | -30 | 120 | 5190.040 | 5150 to 5250 | Pass |
|                     |      |      | -20 | 120 | 5190.040 | 5150 to 5250 | Pass |
|                     |      |      | -10 | 120 | 5190.000 | 5150 to 5250 | Pass |
|                     |      |      | 0   | 120 | 5190.080 | 5150 to 5250 | Pass |
|                     |      |      | 10  | 120 | 5190.040 | 5150 to 5250 | Pass |
|                     |      |      | 30  | 120 | 5190.080 | 5150 to 5250 | Pass |
|                     |      |      | 40  | 120 | 5190.000 | 5150 to 5250 | Pass |
|                     |      |      | 50  | 120 | 5190.000 | 5150 to 5250 | Pass |
|                     |      | 5230 | 20  | 102 | 5230.040 | 5150 to 5250 | Pass |
|                     |      |      |     | 120 | 5230.040 | 5150 to 5250 | Pass |
|                     |      |      |     | 138 | 5230.040 | 5150 to 5250 | Pass |
|                     |      |      | -30 | 120 | 5230.000 | 5150 to 5250 | Pass |
|                     |      |      | -20 | 120 | 5229.960 | 5150 to 5250 | Pass |
|                     |      |      | -10 | 120 | 5230.040 | 5150 to 5250 | Pass |
|                     |      |      | 0   | 120 | 5230.040 | 5150 to 5250 | Pass |
|                     |      |      | 10  | 120 | 5230.000 | 5150 to 5250 | Pass |
|                     |      |      | 30  | 120 | 5230.080 | 5150 to 5250 | Pass |
|                     |      |      | 40  | 120 | 5230.080 | 5150 to 5250 | Pass |
|                     |      |      | 50  | 120 | 5230.040 | 5150 to 5250 | Pass |
|                     |      | 5755 | 20  | 102 | 5754.960 | 5725 to 5850 | Pass |
|                     |      |      |     | 120 | 5755.040 | 5725 to 5850 | Pass |
|                     |      |      |     | 138 | 5755.040 | 5725 to 5850 | Pass |
|                     |      |      | -30 | 120 | 5755.040 | 5725 to 5850 | Pass |
|                     |      |      | -20 | 120 | 5755.040 | 5725 to 5850 | Pass |
|                     |      |      | -10 | 120 | 5755.000 | 5725 to 5850 | Pass |
|                     |      |      | 0   | 120 | 5755.000 | 5725 to 5850 | Pass |
|                     |      |      | 10  | 120 | 5755.000 | 5725 to 5850 | Pass |
|                     |      |      | 30  | 120 | 5755.040 | 5725 to 5850 | Pass |
|                     |      |      | 40  | 120 | 5755.040 | 5725 to 5850 | Pass |
|                     |      |      | 50  | 120 | 5755.040 | 5725 to 5850 | Pass |
|                     |      | 5795 | 20  | 102 | 5795.040 | 5725 to 5850 | Pass |
|                     |      |      |     | 120 | 5795.000 | 5725 to 5850 | Pass |
|                     |      |      |     | 138 | 5795.040 | 5725 to 5850 | Pass |
|                     |      |      | -30 | 120 | 5795.040 | 5725 to 5850 | Pass |
|                     |      |      | -20 | 120 | 5795.040 | 5725 to 5850 | Pass |
|                     |      |      | -10 | 120 | 5795.040 | 5725 to 5850 | Pass |
|                     |      |      | 0   | 120 | 5795.000 | 5725 to 5850 | Pass |
|                     |      |      | 10  | 120 | 5795.080 | 5725 to 5850 | Pass |
|                     |      |      | 30  | 120 | 5795.000 | 5725 to 5850 | Pass |
|                     |      |      | 40  | 120 | 5795.000 | 5725 to 5850 | Pass |
|                     |      |      | 50  | 120 | 5795.040 | 5725 to 5850 | Pass |
| 802.11ac<br>(VHT20) | MIMO | 5180 | 20  | 102 | 5179.980 | 5150 to 5250 | Pass |
|                     |      |      |     | 120 | 5179.980 | 5150 to 5250 | Pass |
|                     |      |      |     | 138 | 5180.000 | 5150 to 5250 | Pass |
|                     |      |      | -30 | 120 | 5180.020 | 5150 to 5250 | Pass |
|                     |      |      | -20 | 120 | 5179.980 | 5150 to 5250 | Pass |
|                     |      |      | -10 | 120 | 5179.980 | 5150 to 5250 | Pass |
|                     |      |      | 0   | 120 | 5179.960 | 5150 to 5250 | Pass |
|                     |      |      | 10  | 120 | 5179.960 | 5150 to 5250 | Pass |
|                     |      |      | 30  | 120 | 5179.980 | 5150 to 5250 | Pass |
|                     |      |      | 40  | 120 | 5179.980 | 5150 to 5250 | Pass |
|                     |      |      | 50  | 120 | 5179.960 | 5150 to 5250 | Pass |
|                     |      | 5200 | 20  | 102 | 5199.980 | 5150 to 5250 | Pass |
|                     |      |      |     | 120 | 5200.000 | 5150 to 5250 | Pass |
|                     |      |      |     | 138 | 5200.000 | 5150 to 5250 | Pass |
|                     |      |      | -30 | 120 | 5199.980 | 5150 to 5250 | Pass |
|                     |      |      | -20 | 120 | 5199.960 | 5150 to 5250 | Pass |
|                     |      |      | -10 | 120 | 5199.940 | 5150 to 5250 | Pass |
|                     |      |      | 0   | 120 | 5199.960 | 5150 to 5250 | Pass |
|                     |      |      |     |     |          |              |      |

|                     |      |      |     |     |          |              |      |
|---------------------|------|------|-----|-----|----------|--------------|------|
|                     |      |      | 10  | 120 | 5199.960 | 5150 to 5250 | Pass |
|                     |      |      | 30  | 120 | 5200.000 | 5150 to 5250 | Pass |
|                     |      |      | 40  | 120 | 5200.020 | 5150 to 5250 | Pass |
|                     |      |      | 50  | 120 | 5200.040 | 5150 to 5250 | Pass |
|                     |      | 5240 | 20  | 102 | 5240.020 | 5150 to 5250 | Pass |
|                     |      |      |     | 120 | 5239.980 | 5150 to 5250 | Pass |
|                     |      |      |     | 138 | 5240.000 | 5150 to 5250 | Pass |
|                     |      |      | -30 | 120 | 5239.920 | 5150 to 5250 | Pass |
|                     |      |      | -20 | 120 | 5240.020 | 5150 to 5250 | Pass |
|                     |      |      | -10 | 120 | 5239.980 | 5150 to 5250 | Pass |
|                     |      |      | 0   | 120 | 5240.020 | 5150 to 5250 | Pass |
|                     |      |      | 10  | 120 | 5239.960 | 5150 to 5250 | Pass |
|                     |      |      | 30  | 120 | 5240.000 | 5150 to 5250 | Pass |
|                     |      |      | 40  | 120 | 5240.000 | 5150 to 5250 | Pass |
|                     |      |      | 50  | 120 | 5240.000 | 5150 to 5250 | Pass |
|                     |      | 5745 | 20  | 102 | 5744.980 | 5725 to 5850 | Pass |
|                     |      |      |     | 120 | 5744.980 | 5725 to 5850 | Pass |
|                     |      |      |     | 138 | 5744.960 | 5725 to 5850 | Pass |
|                     |      |      | -30 | 120 | 5744.980 | 5725 to 5850 | Pass |
|                     |      |      | -20 | 120 | 5744.960 | 5725 to 5850 | Pass |
|                     |      |      | -10 | 120 | 5744.980 | 5725 to 5850 | Pass |
|                     |      |      | 0   | 120 | 5744.940 | 5725 to 5850 | Pass |
|                     |      |      | 10  | 120 | 5744.940 | 5725 to 5850 | Pass |
|                     |      |      | 30  | 120 | 5744.940 | 5725 to 5850 | Pass |
|                     |      |      | 40  | 120 | 5744.940 | 5725 to 5850 | Pass |
|                     |      |      | 50  | 120 | 5745.000 | 5725 to 5850 | Pass |
|                     |      | 5785 | 20  | 102 | 5784.960 | 5725 to 5850 | Pass |
|                     |      |      |     | 120 | 5784.960 | 5725 to 5850 | Pass |
|                     |      |      |     | 138 | 5784.960 | 5725 to 5850 | Pass |
|                     |      |      | -30 | 120 | 5784.980 | 5725 to 5850 | Pass |
|                     |      |      | -20 | 120 | 5784.940 | 5725 to 5850 | Pass |
|                     |      |      | -10 | 120 | 5784.980 | 5725 to 5850 | Pass |
|                     |      |      | 0   | 120 | 5784.980 | 5725 to 5850 | Pass |
|                     |      |      | 10  | 120 | 5784.980 | 5725 to 5850 | Pass |
|                     |      |      | 30  | 120 | 5785.000 | 5725 to 5850 | Pass |
|                     |      |      | 40  | 120 | 5785.000 | 5725 to 5850 | Pass |
|                     |      |      | 50  | 120 | 5784.980 | 5725 to 5850 | Pass |
|                     |      | 5825 | 20  | 102 | 5824.980 | 5725 to 5850 | Pass |
|                     |      |      |     | 120 | 5824.980 | 5725 to 5850 | Pass |
|                     |      |      |     | 138 | 5824.980 | 5725 to 5850 | Pass |
|                     |      |      | -30 | 120 | 5824.980 | 5725 to 5850 | Pass |
|                     |      |      | -20 | 120 | 5825.000 | 5725 to 5850 | Pass |
|                     |      |      | -10 | 120 | 5825.020 | 5725 to 5850 | Pass |
|                     |      |      | 0   | 120 | 5824.980 | 5725 to 5850 | Pass |
|                     |      |      | 10  | 120 | 5824.960 | 5725 to 5850 | Pass |
|                     |      |      | 30  | 120 | 5824.980 | 5725 to 5850 | Pass |
|                     |      |      | 40  | 120 | 5825.020 | 5725 to 5850 | Pass |
|                     |      |      | 50  | 120 | 5825.060 | 5725 to 5850 | Pass |
| 802.11ac<br>(VHT40) | MIMO | 5190 | 20  | 102 | 5190.000 | 5150 to 5250 | Pass |
|                     |      |      |     | 120 | 5190.000 | 5150 to 5250 | Pass |
|                     |      |      |     | 138 | 5190.080 | 5150 to 5250 | Pass |
|                     |      |      | -30 | 120 | 5190.080 | 5150 to 5250 | Pass |
|                     |      |      | -20 | 120 | 5190.000 | 5150 to 5250 | Pass |
|                     |      |      | -10 | 120 | 5190.080 | 5150 to 5250 | Pass |
|                     |      |      | 0   | 120 | 5190.080 | 5150 to 5250 | Pass |
|                     |      |      | 10  | 120 | 5190.080 | 5150 to 5250 | Pass |
|                     |      |      | 30  | 120 | 5190.080 | 5150 to 5250 | Pass |
|                     |      |      | 40  | 120 | 5190.040 | 5150 to 5250 | Pass |
|                     |      |      | 50  | 120 | 5190.040 | 5150 to 5250 | Pass |
|                     |      | 5230 | 20  | 102 | 5230.000 | 5150 to 5250 | Pass |
|                     |      |      |     | 120 | 5230.040 | 5150 to 5250 | Pass |
|                     |      |      |     | 138 | 5230.040 | 5150 to 5250 | Pass |
|                     |      |      | -30 | 120 | 5230.120 | 5150 to 5250 | Pass |
|                     |      |      | -20 | 120 | 5230.000 | 5150 to 5250 | Pass |
|                     |      |      | -10 | 120 | 5230.040 | 5150 to 5250 | Pass |
|                     |      |      | 0   | 120 | 5230.040 | 5150 to 5250 | Pass |
|                     |      |      | 10  | 120 | 5230.040 | 5150 to 5250 | Pass |

|                     |      |      |     |     |          |              |      |
|---------------------|------|------|-----|-----|----------|--------------|------|
|                     |      |      | 30  | 120 | 5230.000 | 5150 to 5250 | Pass |
|                     |      |      | 40  | 120 | 5230.040 | 5150 to 5250 | Pass |
|                     |      |      | 50  | 120 | 5230.080 | 5150 to 5250 | Pass |
|                     |      | 5755 | 20  | 102 | 5755.000 | 5725 to 5850 | Pass |
|                     |      |      |     | 120 | 5755.000 | 5725 to 5850 | Pass |
|                     |      |      |     | 138 | 5755.040 | 5725 to 5850 | Pass |
|                     |      |      | -30 | 120 | 5755.040 | 5725 to 5850 | Pass |
|                     |      |      | -20 | 120 | 5755.040 | 5725 to 5850 | Pass |
|                     |      |      | -10 | 120 | 5755.080 | 5725 to 5850 | Pass |
|                     |      |      | 0   | 120 | 5755.000 | 5725 to 5850 | Pass |
|                     |      |      | 10  | 120 | 5755.040 | 5725 to 5850 | Pass |
|                     |      |      | 30  | 120 | 5755.000 | 5725 to 5850 | Pass |
|                     |      |      | 40  | 120 | 5755.040 | 5725 to 5850 | Pass |
|                     |      |      | 50  | 120 | 5755.040 | 5725 to 5850 | Pass |
|                     |      | 5795 | 20  | 102 | 5795.000 | 5725 to 5850 | Pass |
|                     |      |      |     | 120 | 5795.040 | 5725 to 5850 | Pass |
|                     |      |      |     | 138 | 5795.000 | 5725 to 5850 | Pass |
|                     |      |      | -30 | 120 | 5795.000 | 5725 to 5850 | Pass |
|                     |      |      | -20 | 120 | 5795.040 | 5725 to 5850 | Pass |
|                     |      |      | -10 | 120 | 5795.000 | 5725 to 5850 | Pass |
|                     |      |      | 0   | 120 | 5795.040 | 5725 to 5850 | Pass |
|                     |      |      | 10  | 120 | 5795.040 | 5725 to 5850 | Pass |
|                     |      |      | 30  | 120 | 5795.000 | 5725 to 5850 | Pass |
|                     |      |      | 40  | 120 | 5795.000 | 5725 to 5850 | Pass |
|                     |      |      | 50  | 120 | 5795.040 | 5725 to 5850 | Pass |
| 802.11ac<br>(VHT80) | MIMO | 5210 | 20  | 102 | 5210.075 | 5150 to 5250 | Pass |
|                     |      |      |     | 120 | 5210.000 | 5150 to 5250 | Pass |
|                     |      |      |     | 138 | 5210.075 | 5150 to 5250 | Pass |
|                     |      |      | -30 | 120 | 5210.075 | 5150 to 5250 | Pass |
|                     |      |      | -20 | 120 | 5210.075 | 5150 to 5250 | Pass |
|                     |      |      | -10 | 120 | 5210.075 | 5150 to 5250 | Pass |
|                     |      |      | 0   | 120 | 5210.075 | 5150 to 5250 | Pass |
|                     |      |      | 10  | 120 | 5210.075 | 5150 to 5250 | Pass |
|                     |      |      | 30  | 120 | 5210.075 | 5150 to 5250 | Pass |
|                     |      |      | 40  | 120 | 5210.000 | 5150 to 5250 | Pass |
|                     |      |      | 50  | 120 | 5210.000 | 5150 to 5250 | Pass |
|                     |      | 5775 | 20  | 102 | 5775.075 | 5725 to 5850 | Pass |
|                     |      |      |     | 120 | 5775.000 | 5725 to 5850 | Pass |
|                     |      |      |     | 138 | 5775.075 | 5725 to 5850 | Pass |
|                     |      |      | -30 | 120 | 5775.075 | 5725 to 5850 | Pass |
|                     |      |      | -20 | 120 | 5775.075 | 5725 to 5850 | Pass |
|                     |      |      | -10 | 120 | 5775.000 | 5725 to 5850 | Pass |
|                     |      |      | 0   | 120 | 5775.075 | 5725 to 5850 | Pass |
|                     |      |      | 10  | 120 | 5775.000 | 5725 to 5850 | Pass |
|                     |      |      | 30  | 120 | 5775.075 | 5725 to 5850 | Pass |
|                     |      |      | 40  | 120 | 5775.000 | 5725 to 5850 | Pass |
|                     |      |      | 50  | 120 | 5775.000 | 5725 to 5850 | Pass |

## **5 Test Setup Photos of the EUT**

Reference to the **appendix I** for details.

## **6 Photos of the EUT**

Reference to the **appendix II** for details.

**\*\*\*\*\* End of Report \*\*\*\*\***