# Appendix Test Data for RLAN(5G). (Conducted Measurement)

**Product Name: Cyber Light**

**Trade Mark: Cyberdrone**

**Test Model: Cyber Light**

**FCC ID: 2BN3D-CYBERLIGHT**

## Environmental Conditions

| | |
|---|---|
| Temperature: | 22.5 |
| Relative Humidity: | 56% |
| ATM Pressure: | 100.0 kPa |
| Test Engineer: | Tony lu |
| Supervised by: | Max zhang |
| NOTE | N/A |

## 1. Duty Cycle

### 1.1 Test Result

#### 1.1.1 Ant1

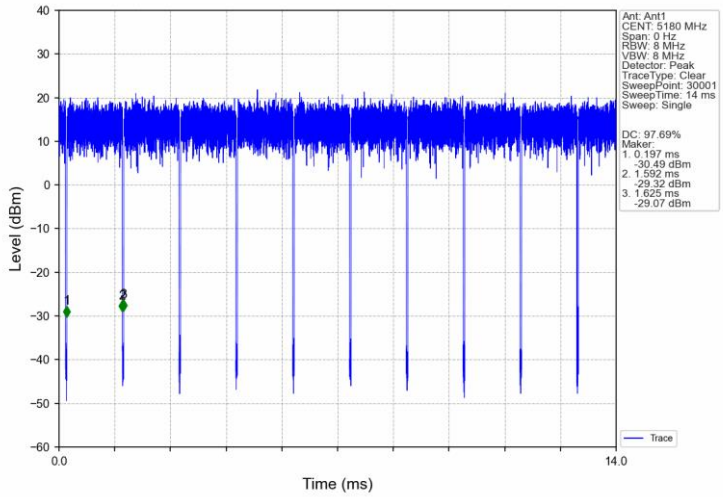
| Ant1 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Mode | TX Type | Frequency (MHz) | T_on (ms) | Period (ms) | Duty Cycle (%) | Duty Cycle Correction Factor (dB) | Max. DC Variation (%) |
| 802.11a | SISO | 5180 | 1.395 | 1.428 | 97.69 | 0.10 | 0.03 |
| | | 5200 | 1.394 | 1.428 | 97.62 | 0.10 | 0.03 |
| | | 5240 | 1.395 | 1.429 | 97.62 | 0.10 | 0.06 |
| | | 5260 | 1.393 | 1.428 | 97.55 | 0.11 | 0.07 |
| | | 5300 | 1.394 | 1.427 | 97.69 | 0.10 | 0.03 |
| | | 5320 | 1.393 | 1.428 | 97.55 | 0.11 | 0.13 |
| | | 5500 | 1.394 | 1.428 | 97.62 | 0.10 | 0.03 |
| | | 5580 | 1.394 | 1.427 | 97.69 | 0.10 | 0.03 |
| | | 5700 | 1.392 | 1.428 | 97.48 | 0.11 | 0.03 |
| | | 5745 | 1.394 | 1.428 | 97.62 | 0.10 | 0.03 |
| | | 5785 | 1.393 | 1.428 | 97.55 | 0.11 | 0.03 |
| | | 5825 | 1.393 | 1.428 | 97.55 | 0.11 | 0.07 |
| 802.11n (HT20) | SISO | 5180 | 1.302 | 1.336 | 97.46 | 0.11 | 0.07 |
| | | 5200 | 1.301 | 1.336 | 97.38 | 0.12 | 0.07 |
| | | 5240 | 1.302 | 1.336 | 97.46 | 0.11 | 0.04 |
| | | 5260 | 1.300 | 1.336 | 97.31 | 0.12 | 0.07 |
| | | 5300 | 1.301 | 1.336 | 97.38 | 0.12 | 0.03 |
| | | 5320 | 1.302 | 1.336 | 97.46 | 0.11 | 0.07 |
| | | 5500 | 1.301 | 1.336 | 97.38 | 0.12 | 0.03 |
| | | 5580 | 1.301 | 1.335 | 97.45 | 0.11 | 0.07 |
| | | 5700 | 1.300 | 1.335 | 97.38 | 0.12 | 0.04 |
| | | 5745 | 1.302 | 1.336 | 97.46 | 0.11 | 0.07 |
| | | 5785 | 1.301 | 1.336 | 97.38 | 0.12 | 0.07 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | 5825 | 1.301 | 1.336 | 97.38 | 0.12 | 0.03 |
| 802.11n (HT40) | SISO | 5190 | 0.648 | 0.683 | 94.88 | 0.23 | 0.03 |
| | | 5230 | 0.648 | 0.683 | 94.88 | 0.23 | 0.07 |
| | | 5270 | 0.649 | 0.683 | 95.02 | 0.22 | 0.07 |
| | | 5310 | 0.648 | 0.683 | 94.88 | 0.23 | 0.07 |
| | | 5510 | 0.648 | 0.683 | 94.88 | 0.23 | 0.03 |
| | | 5550 | 0.649 | 0.683 | 95.02 | 0.22 | 0.03 |
| | | 5670 | 0.649 | 0.683 | 95.02 | 0.22 | 0.04 |
| | | 5755 | 0.648 | 0.683 | 94.88 | 0.23 | 0.04 |
| | | 5795 | 0.649 | 0.683 | 95.02 | 0.22 | 0.03 |
| 802.11ac (VHT20) | SISO | 5180 | 1.314 | 1.348 | 97.48 | 0.11 | 0.03 |
| | | 5200 | 1.312 | 1.348 | 97.33 | 0.12 | 0.04 |
| | | 5240 | 1.314 | 1.348 | 97.48 | 0.11 | 0.07 |
| | | 5260 | 1.315 | 1.348 | 97.55 | 0.11 | 0.03 |
| | | 5300 | 1.312 | 1.347 | 97.40 | 0.11 | 0.07 |
| | | 5320 | 1.315 | 1.348 | 97.55 | 0.11 | 0.03 |
| | | 5500 | 1.312 | 1.348 | 97.33 | 0.12 | 0.03 |
| | | 5580 | 1.313 | 1.348 | 97.40 | 0.11 | 0.10 |
| | | 5700 | 1.315 | 1.349 | 97.48 | 0.11 | 0.07 |
| | | 5745 | 1.302 | 1.336 | 97.46 | 0.11 | 0.07 |
| | | 5785 | 1.300 | 1.336 | 97.31 | 0.12 | 0.03 |
| | | 5825 | 1.301 | 1.336 | 97.38 | 0.12 | 0.07 |
| 802.11ac (VHT40) | SISO | 5190 | 0.653 | 0.687 | 95.05 | 0.22 | 0.03 |
| | | 5230 | 0.652 | 0.687 | 94.91 | 0.23 | 0.03 |
| | | 5270 | 0.652 | 0.687 | 94.91 | 0.23 | 0.07 |
| | | 5310 | 0.654 | 0.688 | 95.06 | 0.22 | 0.07 |
| | | 5510 | 0.652 | 0.687 | 94.91 | 0.23 | 0.07 |
| | | 5550 | 0.653 | 0.687 | 95.05 | 0.22 | 0.03 |
| | | 5670 | 0.654 | 0.687 | 95.20 | 0.21 | 0.03 |
| | | 5755 | 0.648 | 0.683 | 94.88 | 0.23 | 0.03 |
| | | 5795 | 0.649 | 0.683 | 95.02 | 0.22 | 0.07 |
| 802.11ac (VHT80) | SISO | 5210 | 0.325 | 0.359 | 90.53 | 0.43 | 0.07 |
| | | 5290 | 0.324 | 0.358 | 90.50 | 0.43 | 0.04 |
| | | 5530 | 0.325 | 0.359 | 90.53 | 0.43 | 0.04 |
| | | 5610 | 0.324 | 0.358 | 90.50 | 0.43 | 0.04 |
| | | 5775 | 1.059 | 1.088 | 97.33 | 0.12 | 0.07 |

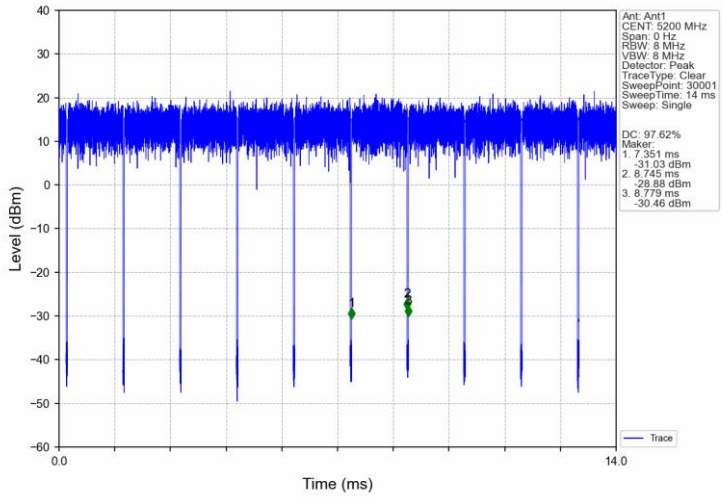
## 1.2 Test Graph

### 1.2.1 Ant1

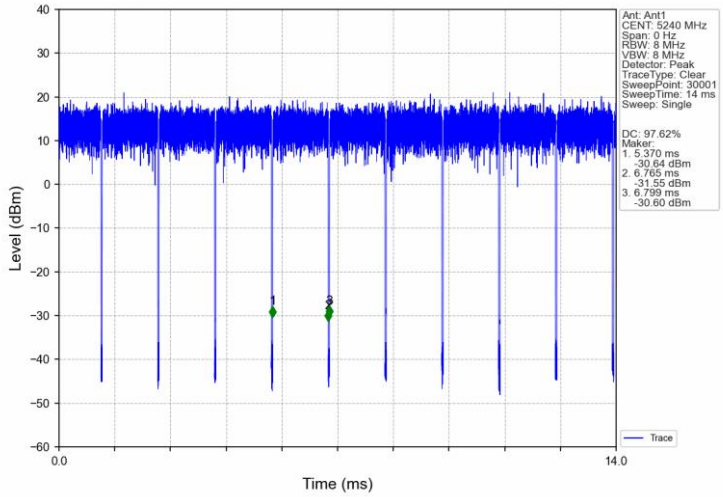
802.11a_LCH_5180MHz_Ant1_NTNV



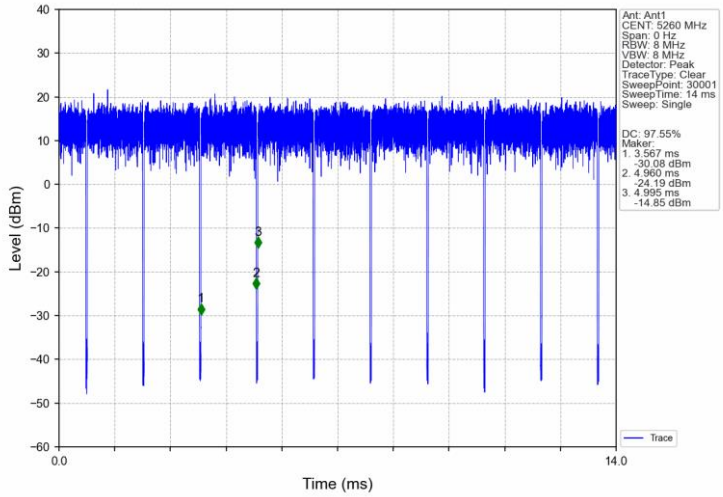

802.11a_MCH_5200MHz_Ant1_NTNV



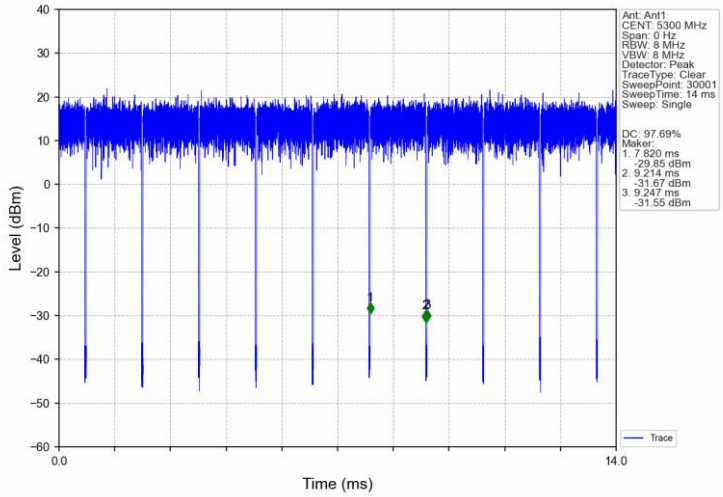
802.11a_HCH_5240MHz_Ant1_NTNV



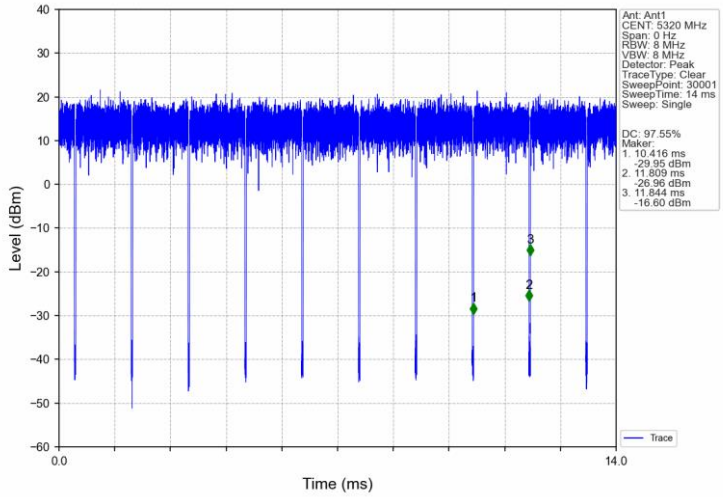

802.11a_LCH_5260MHz_Ant1_NTNV



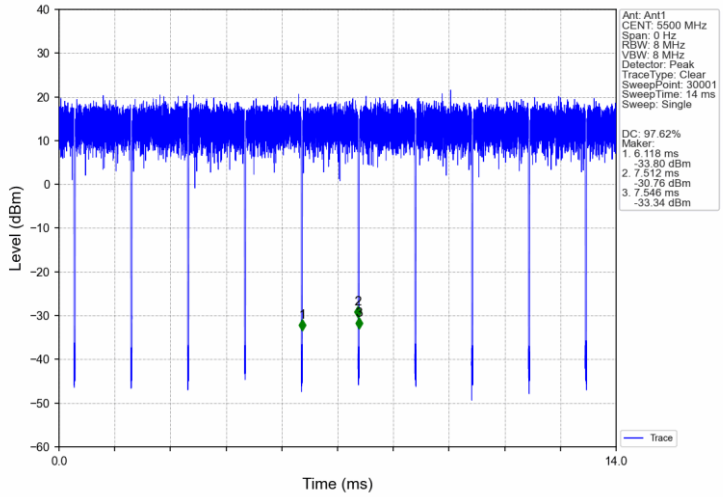
802.11a_MCH_5300MHz_Ant1_NTNV



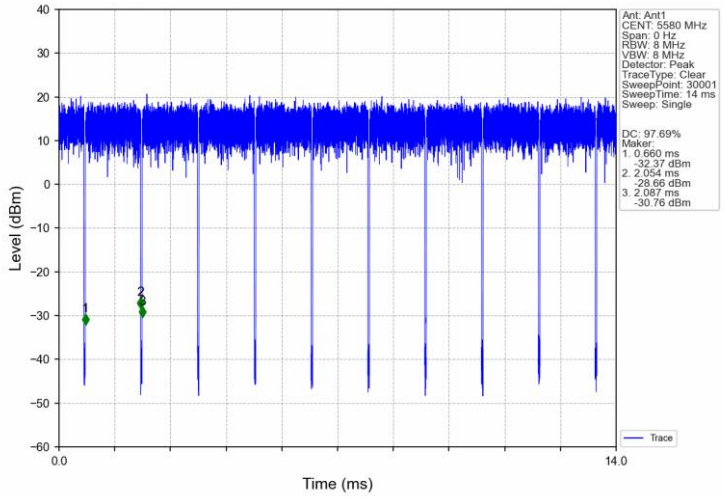

802.11a_HCH_5320MHz_Ant1_NTNV



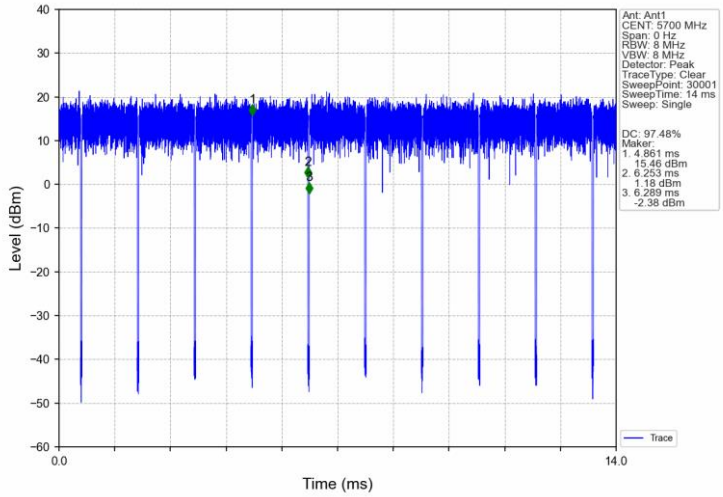
802.11a_LCH_5500MHz_Ant1_NTNV



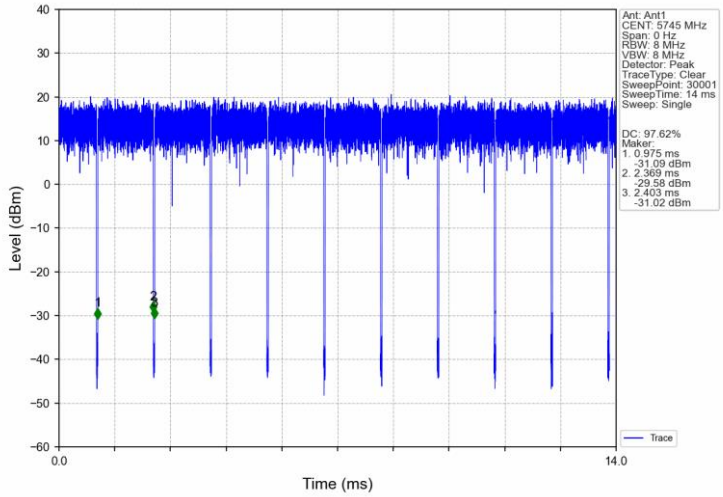

802.11a_MCH_5580MHz_Ant1_NTNV



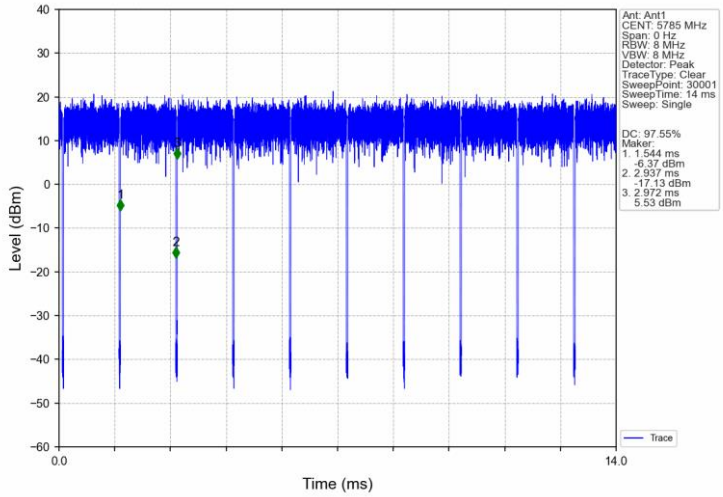
802.11a_HCH_5700MHz_Ant1_NTNV



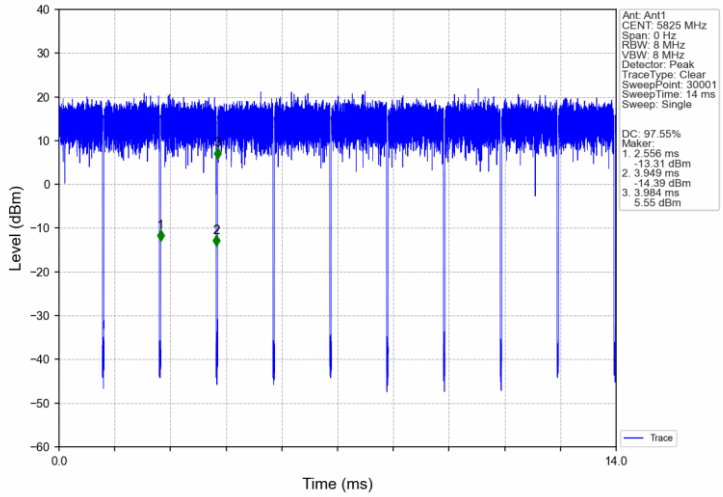

802.11a_LCH_5745MHz_Ant1_NTNV



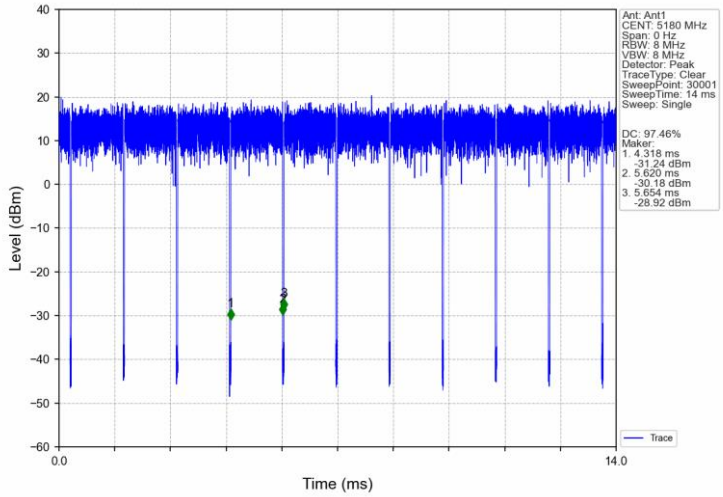
802.11a_MCH_5785MHz_Ant1_NTNV



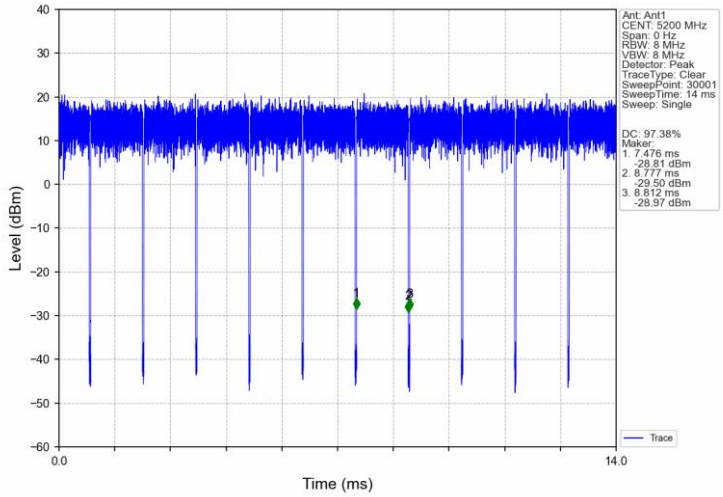

802.11a_HCH_5825MHz_Ant1_NTNV



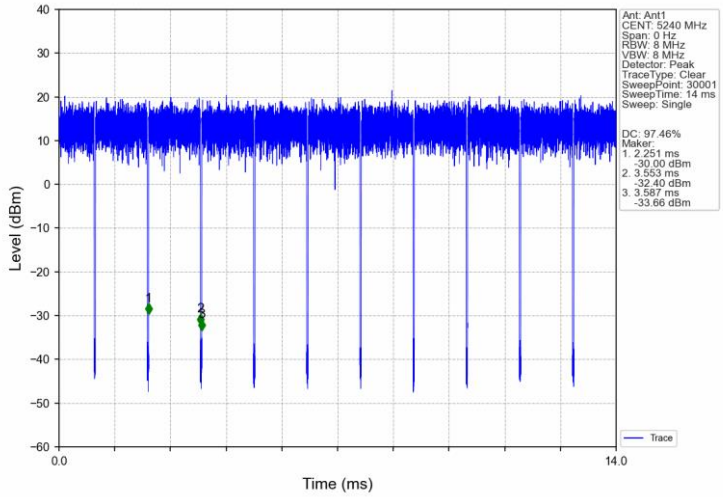
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



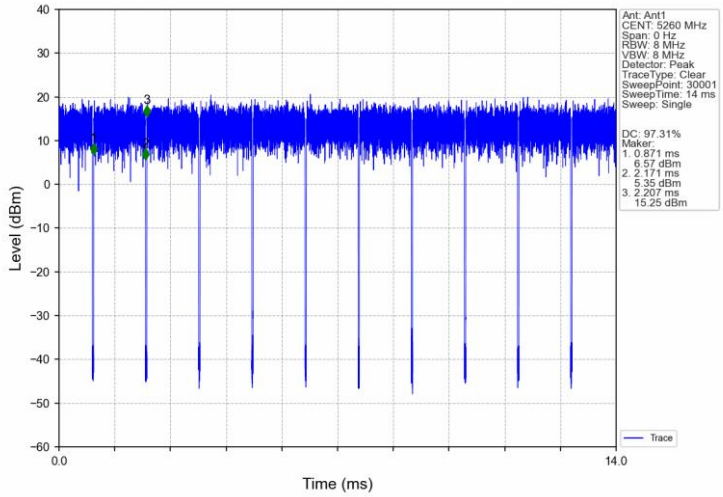

802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



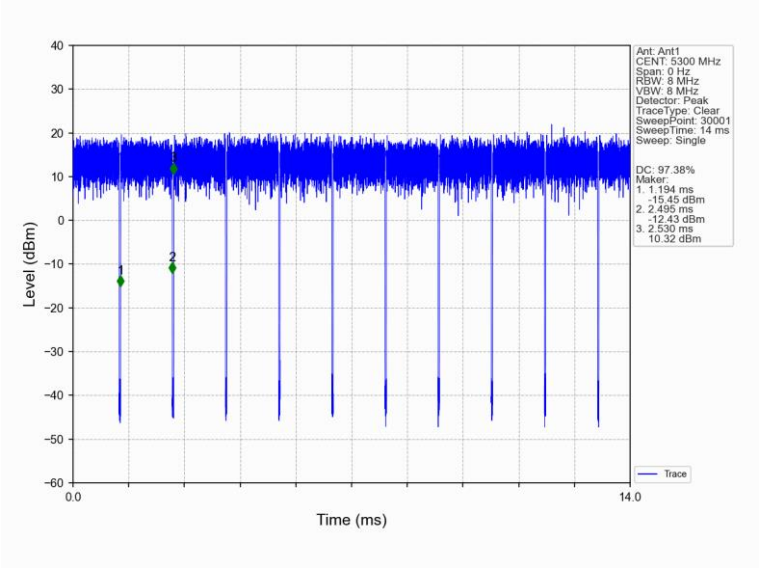
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



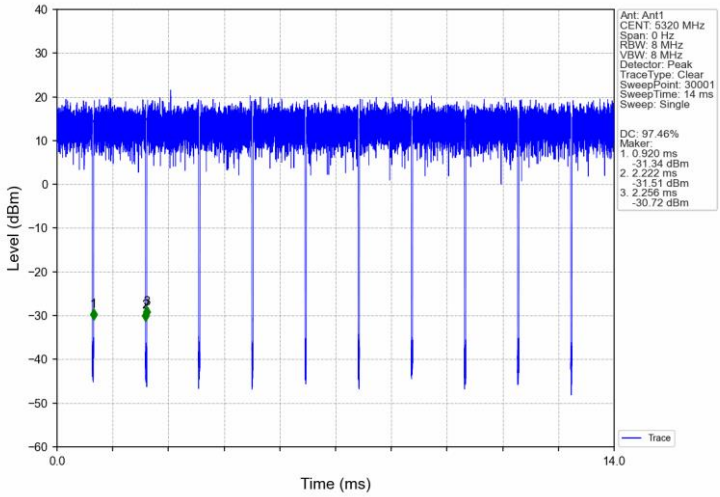

802.11n(HT20)_LCH_5260MHz_Ant1_NTNV



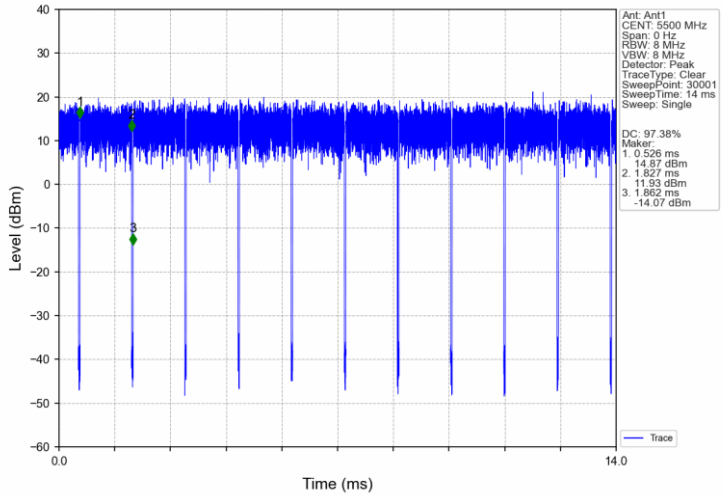
802.11n(HT20)_MCH_5300MHz_Ant1_NTNV



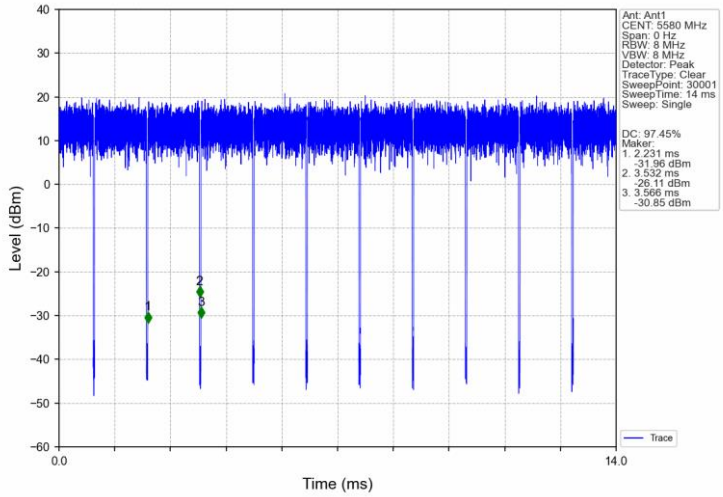

802.11n(HT20)_HCH_5320MHz_Ant1_NTNV



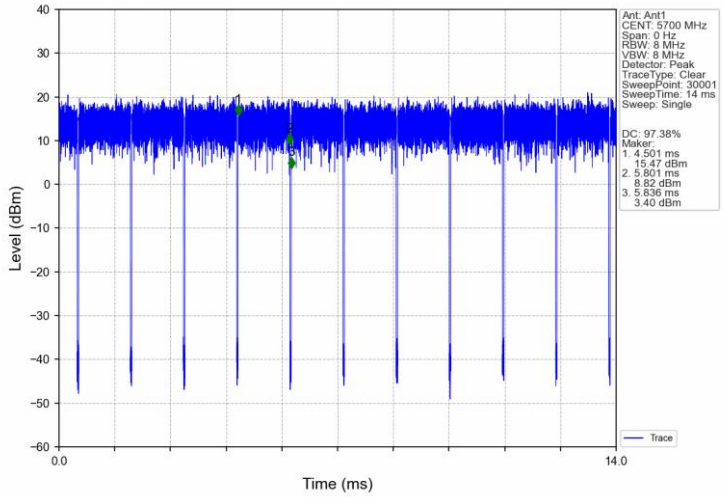
802.11n(HT20)_LCH_5500MHz_Ant1_NTNV



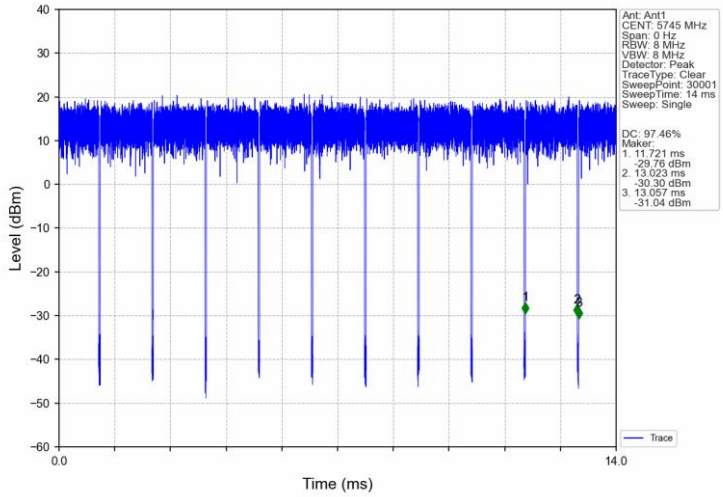

802.11n(HT20)_MCH_5580MHz_Ant1_NTNV



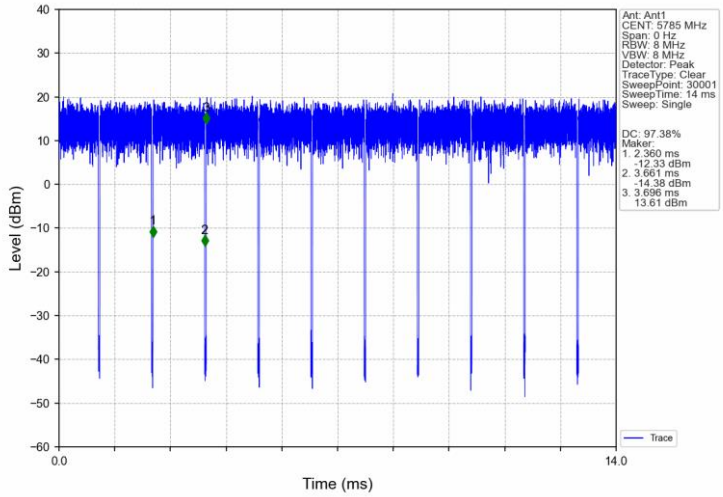
802.11n(HT20)_HCH_5700MHz_Ant1_NTNV



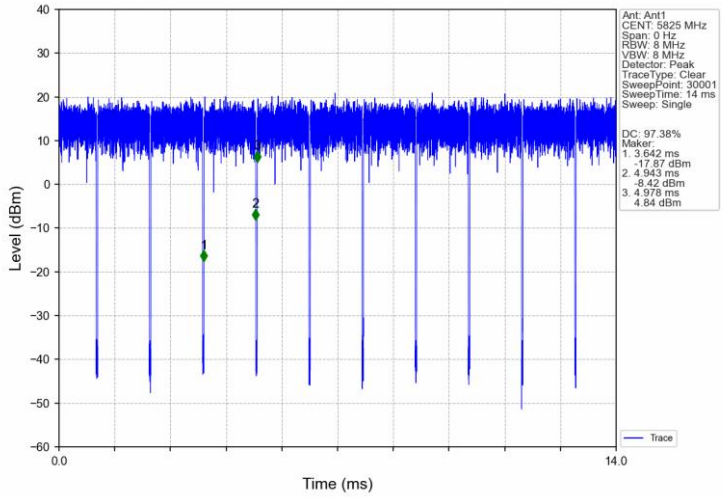

802.11n(HT20)_LCH_5745MHz_Ant1_NTNV



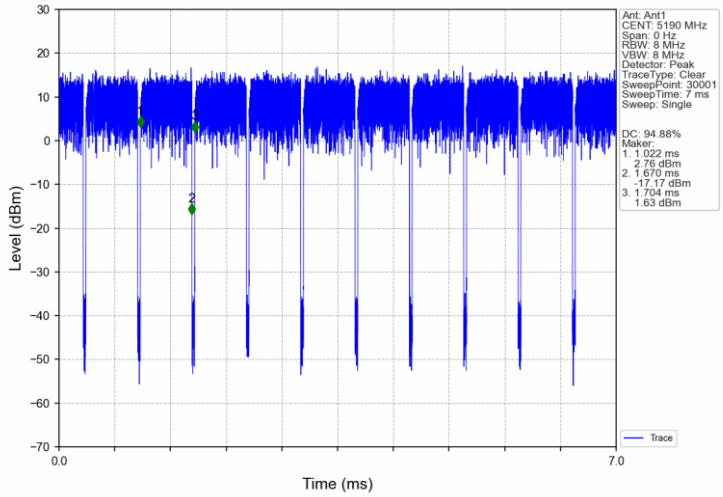
802.11n(HT20)_MCH_5785MHz_Ant1_NTNV



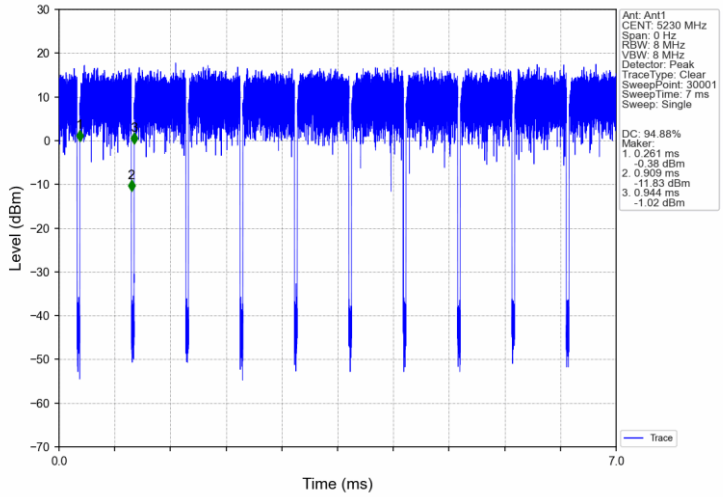

802.11n(HT20)_HCH_5825MHz_Ant1_NTNV



802.11n(HT40)_LCH_5190MHz_Ant1_NTNV




802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



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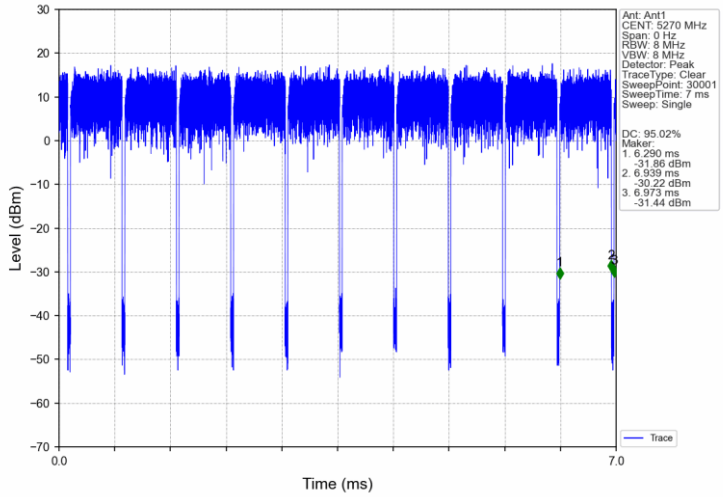
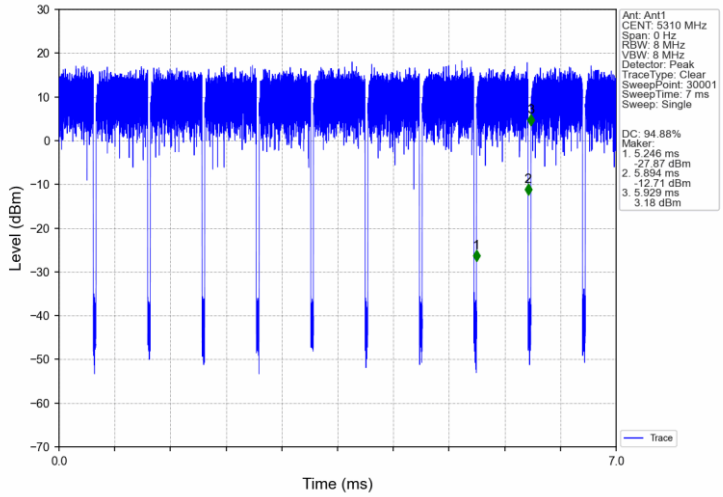
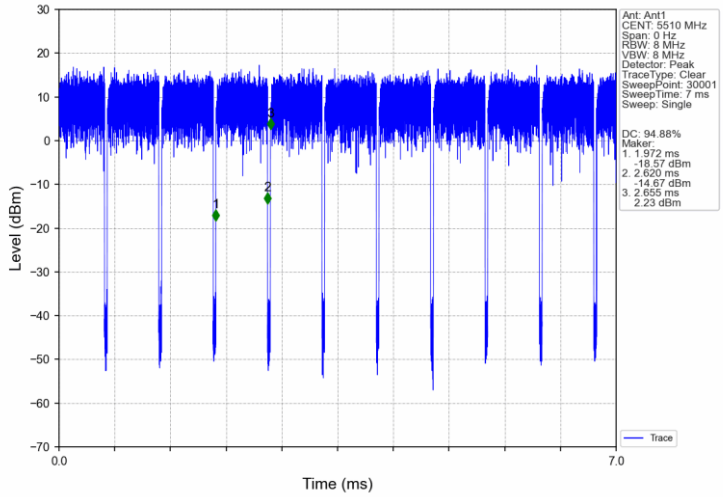


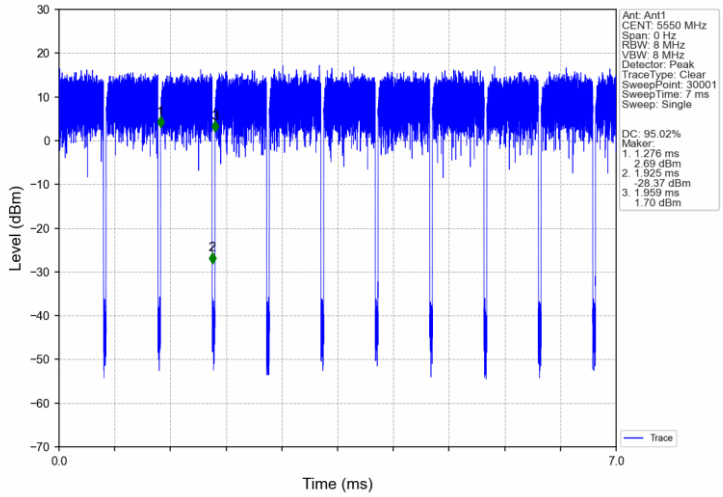

802.11n(HT40)_HCH_5310MHz_Ant1_NTNV



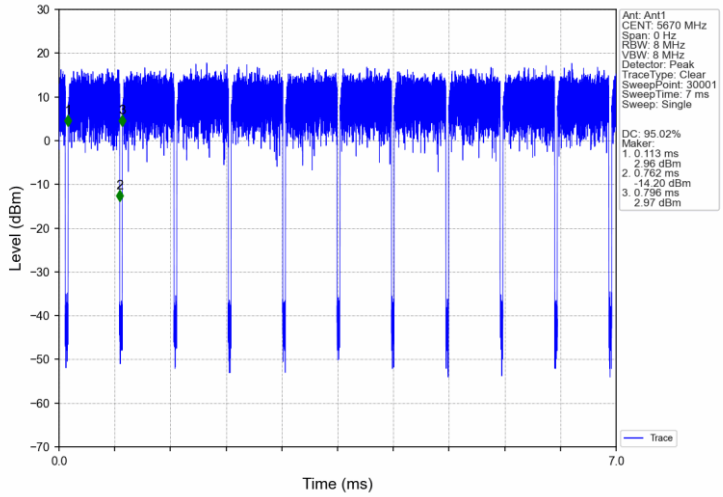
802.11n(HT40)_LCH_5510MHz_Ant1_NTNV



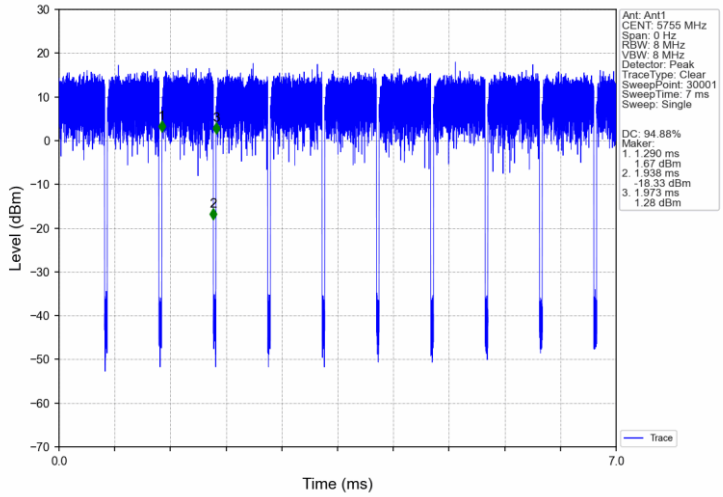

802.11n(HT40)_MCH_5550MHz_Ant1_NTNV



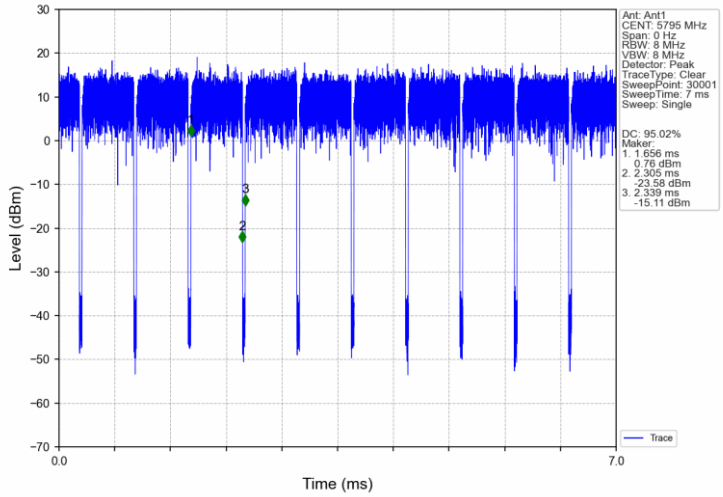
802.11n(HT40)_HCH_5670MHz_Ant1_NTNV



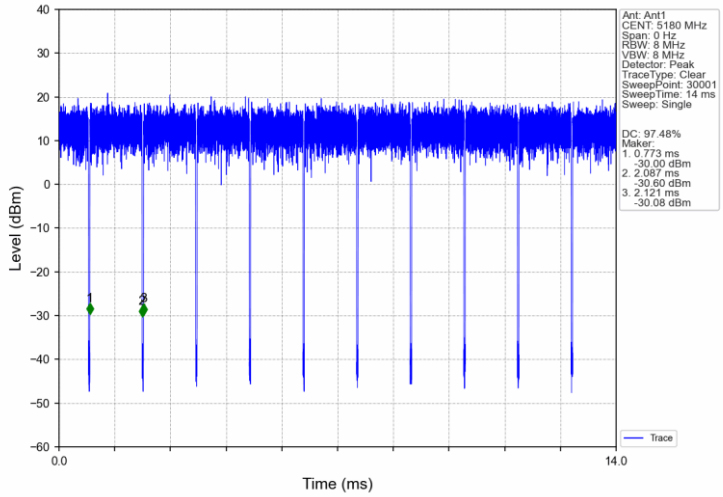

802.11n(HT40)_LCH_5755MHz_Ant1_NTNV



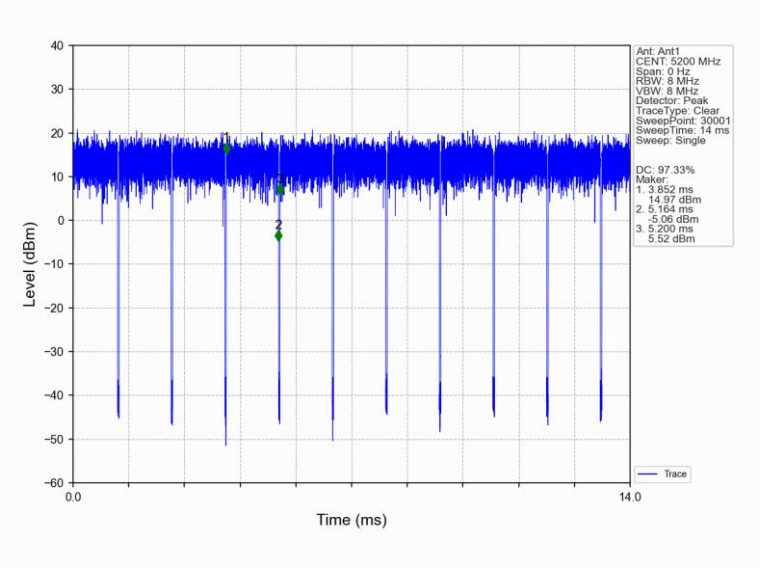
802.11n(HT40)_HCH_5795MHz_Ant1_NTNV



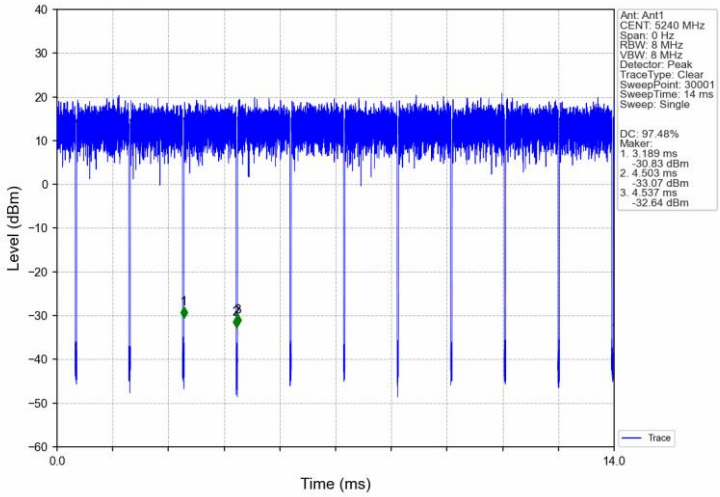

802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



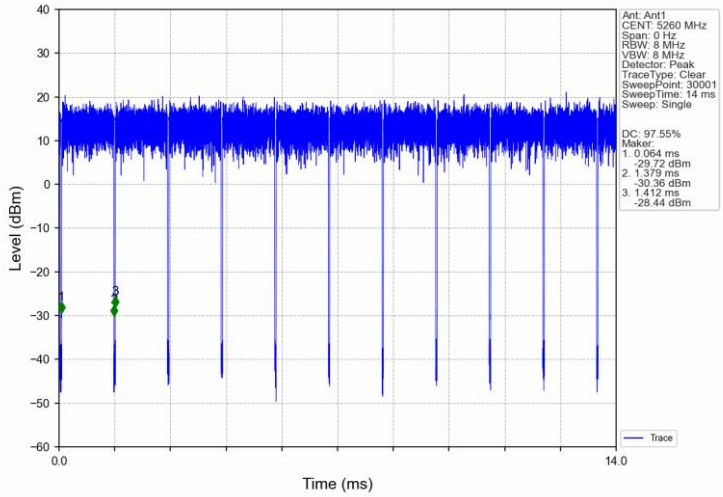
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



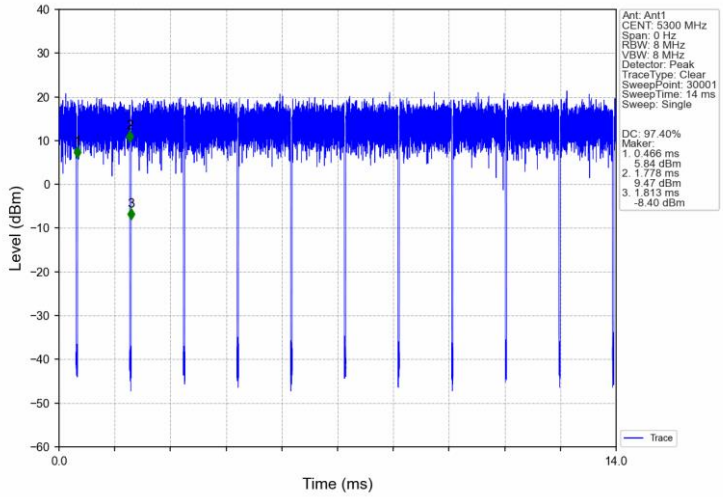

802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



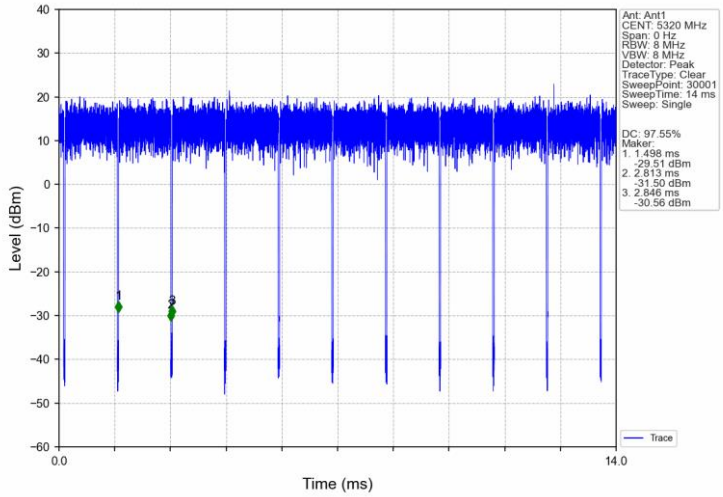
802.11ac(VHT20)_LCH_5260MHz_Ant1_NTNV



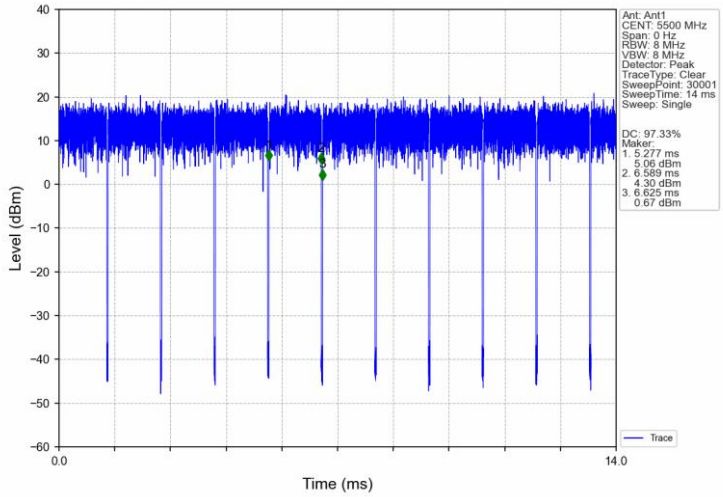

802.11ac(VHT20)_MCH_5300MHz_Ant1_NTNV



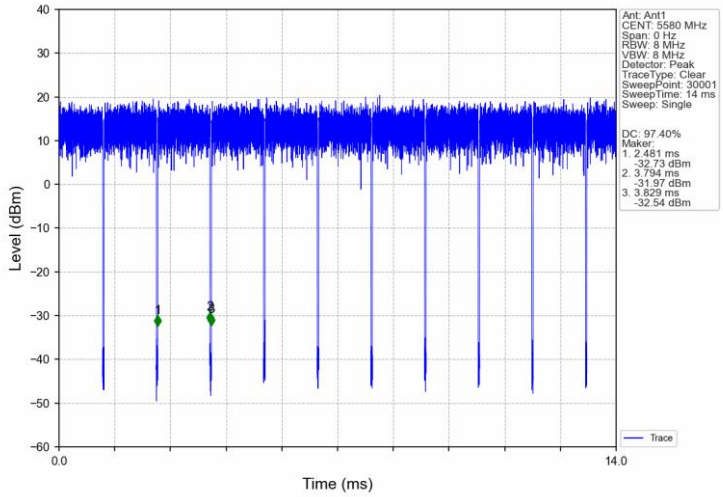
802.11ac(VHT20)_HCH_5320MHz_Ant1_NTNV



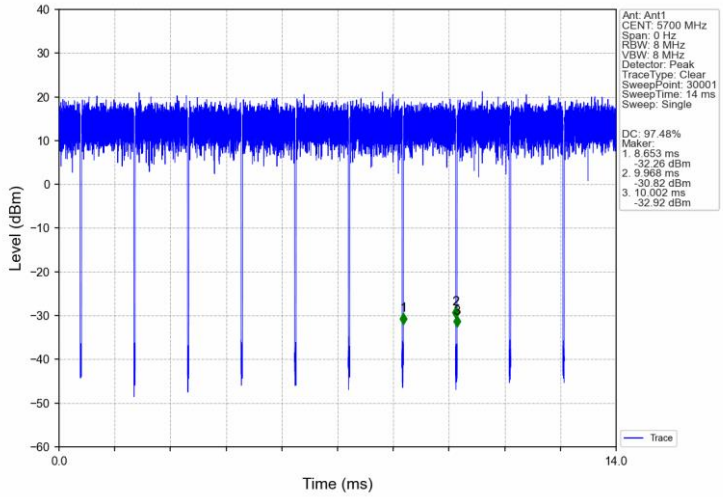

802.11ac(VHT20)_LCH_5500MHz_Ant1_NTNV



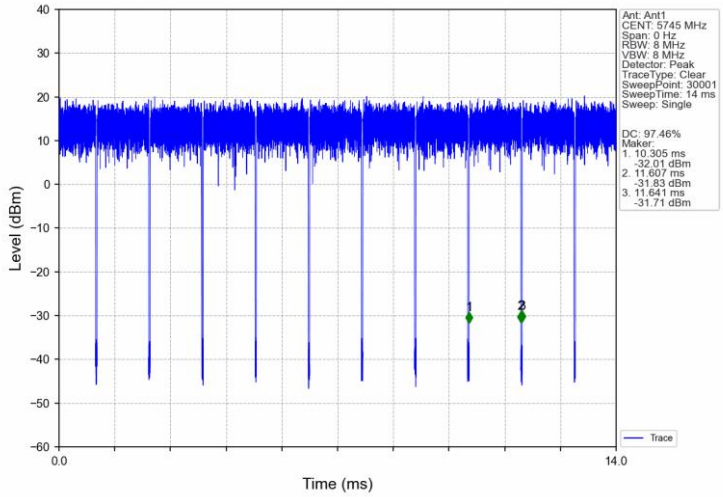
802.11ac(VHT20)_MCH_5580MHz_Ant1_NTNV



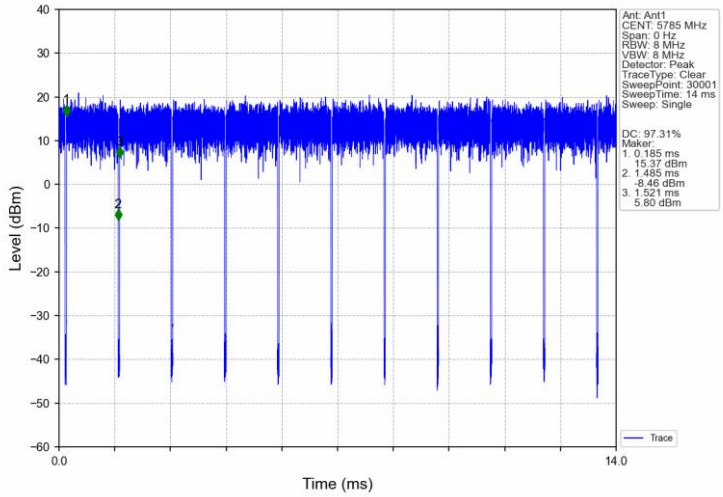

802.11ac(VHT20)_HCH_5700MHz_Ant1_NTNV



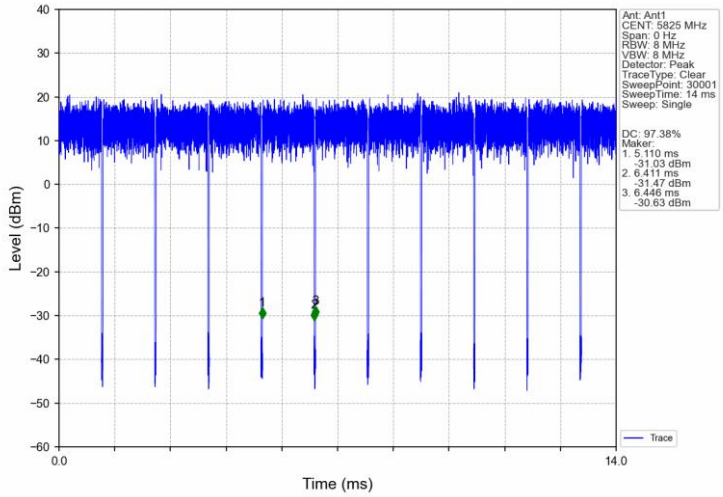
802.11ac(VHT20)_LCH_5745MHz_Ant1_NTNV



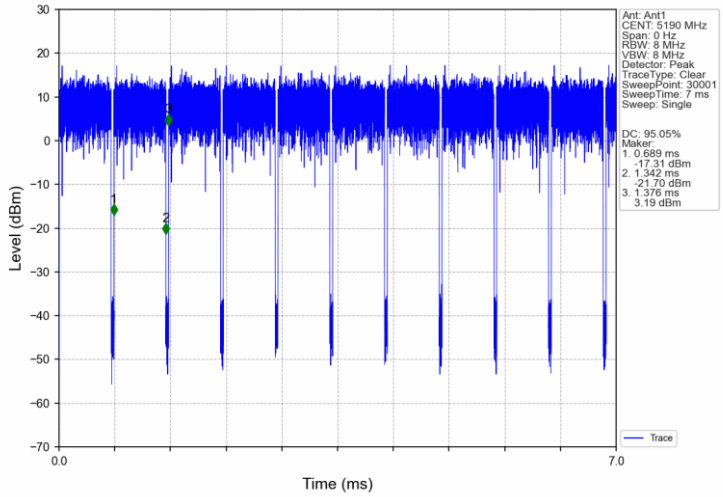

802.11ac(VHT20)_MCH_5785MHz_Ant1_NTNV



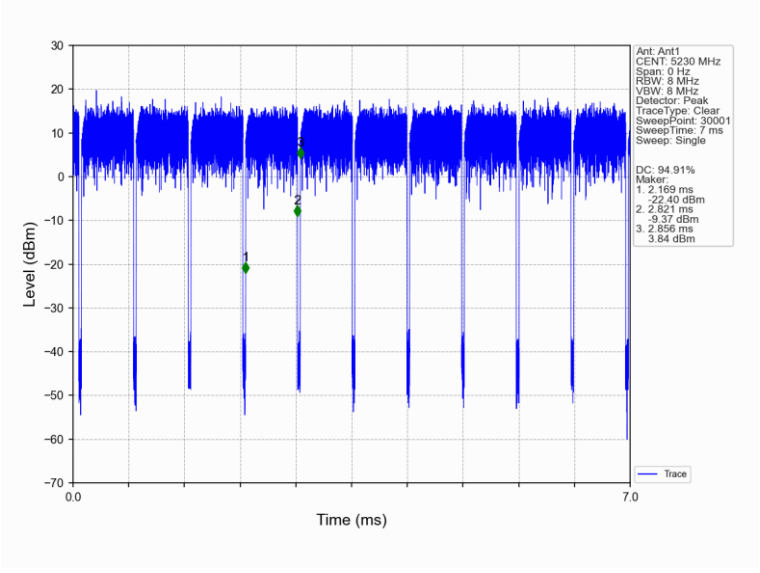
802.11ac(VHT20)_HCH_5825MHz_Ant1_NTNV



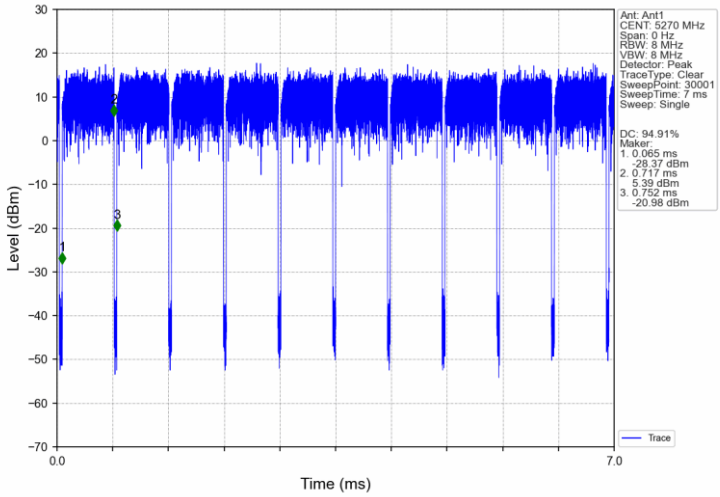

802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



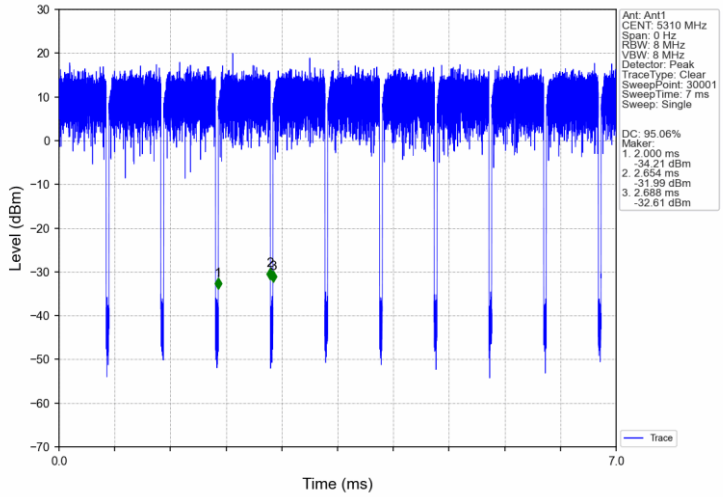
802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



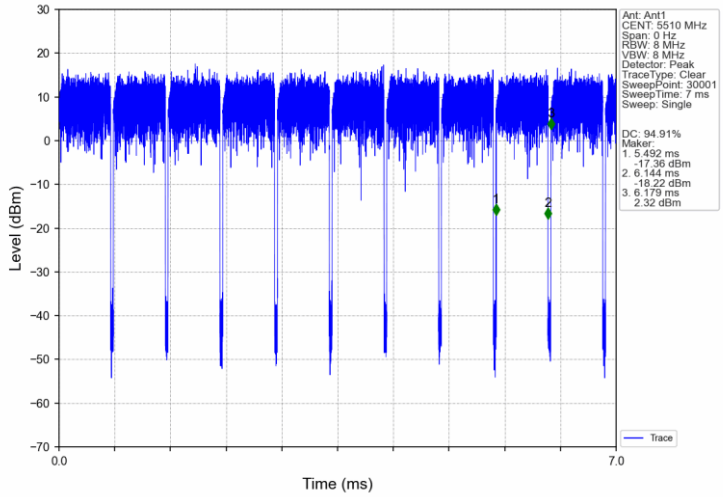

802.11ac(VHT40)_LCH_5270MHz_Ant1_NTNV



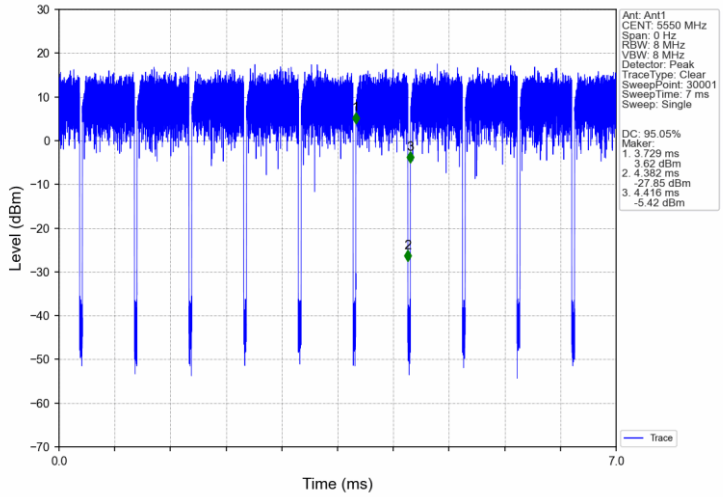
802.11ac(VHT40)_HCH_5310MHz_Ant1_NTNV



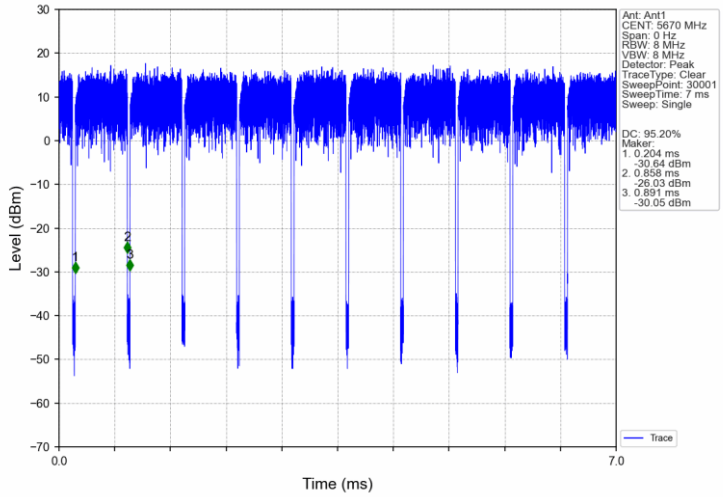

802.11ac(VHT40)_LCH_5510MHz_Ant1_NTNV



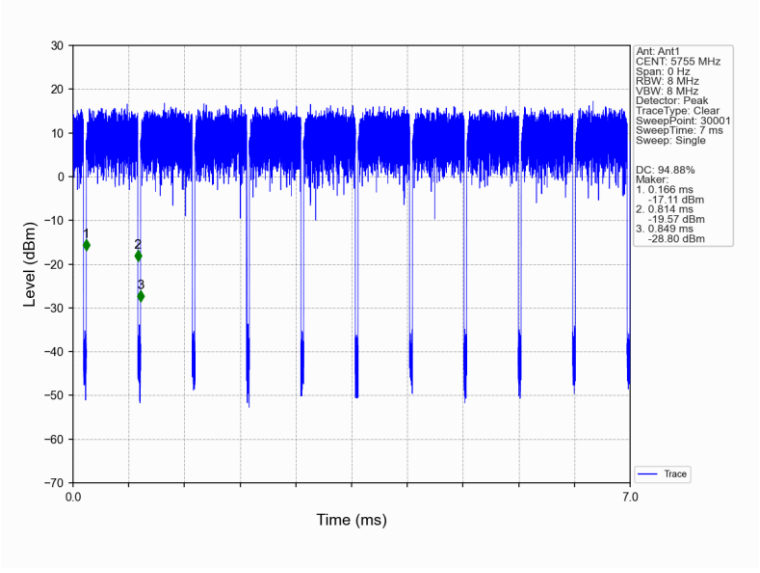
802.11ac(VHT40)_MCH_5550MHz_Ant1_NTNV



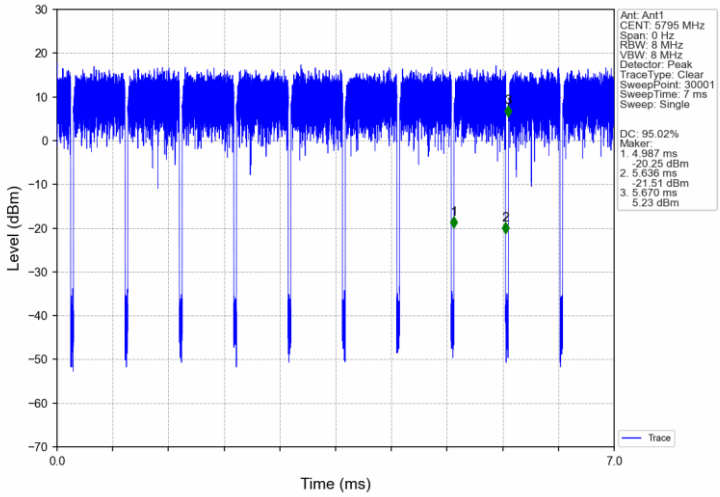

802.11ac(VHT40)_HCH_5670MHz_Ant1_NTNV



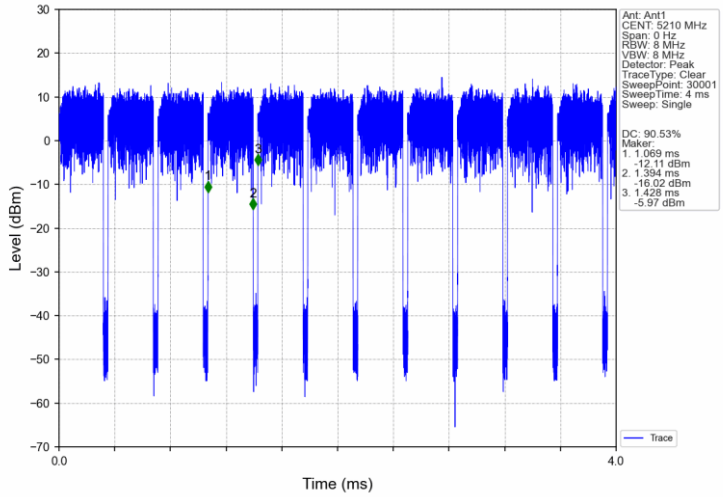
802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV



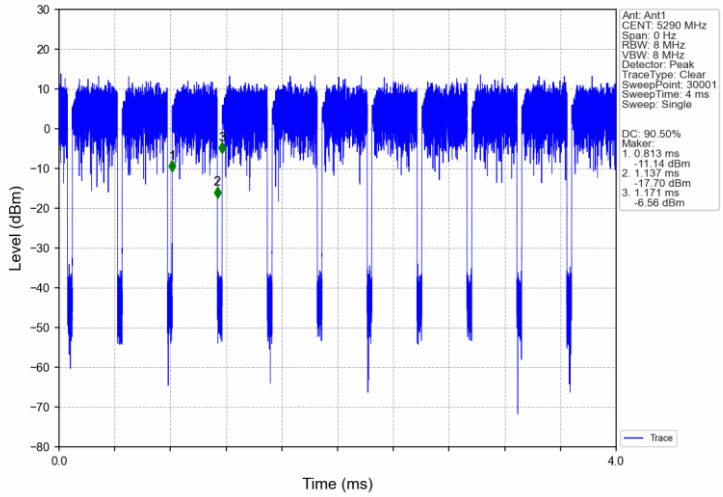

802.11ac(VHT40)_HCH_5795MHz_Ant1_NTNV



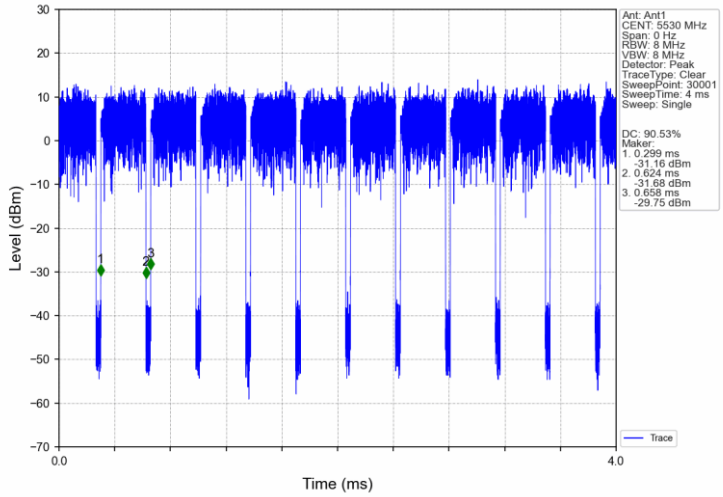
802.11ac(VHT80)_MCH_5210MHz_Ant1_NTNV



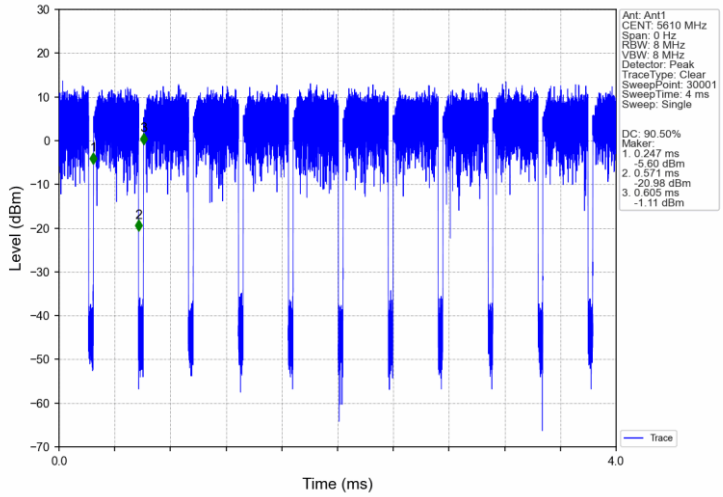

802.11ac(VHT80)_MCH_5290MHz_Ant1_NTNV



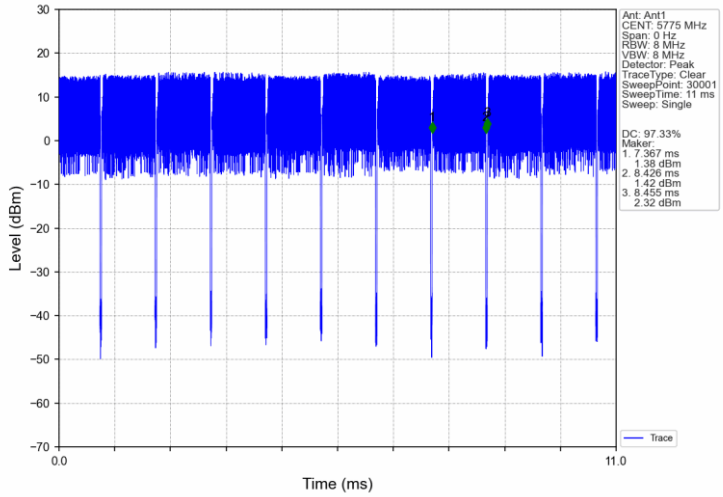
802.11ac(VHT80)_LCH_5530MHz_Ant1_NTNV




802.11ac(VHT80)_HCH_5610MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5775MHz_Ant1_NTNV



# 2. Bandwidth

## 2.1 Test Result

### 2.1.1 OBW

| Mode | TX Type | Frequency (MHz) | ANT | 99% Occupied Bandwidth (MHz) | | Verdict |
|---|---|---|---|---|---|---|
| | | | | Result | Limit | |
| 802.11a | SISO | 5180 | 1 | 17.450 | / | Pass |
| | | 5200 | 1 | 17.413 | / | Pass |
| | | 5240 | 1 | 17.408 | / | Pass |
| | | 5260 | 1 | 17.447 | / | Pass |
| | | 5300 | 1 | 17.464 | / | Pass |
| | | 5320 | 1 | 17.439 | / | Pass |
| | | 5500 | 1 | 17.631 | / | Pass |
| | | 5580 | 1 | 17.570 | / | Pass |
| | | 5700 | 1 | 17.544 | / | Pass |
| | | 5745 | 1 | 17.487 | / | Pass |
| | | 5785 | 1 | 17.506 | / | Pass |
| | | 5825 | 1 | 17.489 | / | Pass |
| 802.11n (HT20) | SISO | 5180 | 1 | 18.400 | / | Pass |
| | | 5200 | 1 | 18.394 | / | Pass |
| | | 5240 | 1 | 18.427 | / | Pass |
| | | 5260 | 1 | 18.388 | / | Pass |
| | | 5300 | 1 | 18.475 | / | Pass |
| | | 5320 | 1 | 18.451 | / | Pass |
| | | 5500 | 1 | 18.668 | / | Pass |
| | | 5580 | 1 | 18.563 | / | Pass |
| | | 5700 | 1 | 18.534 | / | Pass |
| | | 5745 | 1 | 18.461 | / | Pass |
| | | 5785 | 1 | 18.488 | / | Pass |
| | | 5825 | 1 | 18.486 | / | Pass |
| 802.11n (HT40) | SISO | 5190 | 1 | 36.787 | / | Pass |
| | | 5230 | 1 | 36.837 | / | Pass |
| | | 5270 | 1 | 36.819 | / | Pass |
| | | 5310 | 1 | 36.597 | / | Pass |
| | | 5510 | 1 | 37.171 | / | Pass |
| | | 5550 | 1 | 37.066 | / | Pass |
| | | 5670 | 1 | 36.990 | / | Pass |
| | | 5755 | 1 | 37.100 | / | Pass |
| | | 5795 | 1 | 36.940 | / | Pass |
| 802.11ac (VHT20) | SISO | 5180 | 1 | 18.279 | / | Pass |
| | | 5200 | 1 | 18.247 | / | Pass |
| | | 5240 | 1 | 18.276 | / | Pass |
| | | 5260 | 1 | 18.233 | / | Pass |
| | | 5300 | 1 | 18.230 | / | Pass |
| | | 5320 | 1 | 18.224 | / | Pass |
| | | 5500 | 1 | 18.381 | / | Pass |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 5580 | 1 | 18.419 | / | Pass |
| | | 5700 | 1 | 18.362 | / | Pass |
| | | 5745 | 1 | 18.476 | / | Pass |
| | | 5785 | 1 | 18.497 | / | Pass |
| | | 5825 | 1 | 18.474 | / | Pass |
| 802.11ac (VHT40) | SISO | 5190 | 1 | 36.198 | / | Pass |
| | | 5230 | 1 | 36.283 | / | Pass |
| | | 5270 | 1 | 36.371 | / | Pass |
| | | 5310 | 1 | 36.408 | / | Pass |
| | | 5510 | 1 | 36.634 | / | Pass |
| | | 5550 | 1 | 36.504 | / | Pass |
| | | 5670 | 1 | 36.513 | / | Pass |
| | | 5755 | 1 | 37.125 | / | Pass |
| | | 5795 | 1 | 36.977 | / | Pass |
| 802.11ac (VHT80) | SISO | 5210 | 1 | 75.521 | / | Pass |
| | | 5290 | 1 | 75.436 | / | Pass |
| | | 5530 | 1 | 75.893 | / | Pass |
| | | 5610 | 1 | 75.898 | / | Pass |
| | | 5775 | 1 | 78.286 | / | Pass |

## 2.1.2 6dB BW

| Mode | TX Type | Frequency (MHz) | ANT | 6dB Bandwidth (MHz) | | Verdict |
|---|---|---|---|---|---|---|
| | | | | Result | Limit | |
| 802.11a | SISO | 5745 | 1 | 15.155 | >=0.5 | Pass |
| | | 5785 | 1 | 15.156 | >=0.5 | Pass |
| | | 5825 | 1 | 15.152 | >=0.5 | Pass |
| 802.11n (HT20) | SISO | 5745 | 1 | 15.136 | >=0.5 | Pass |
| | | 5785 | 1 | 15.172 | >=0.5 | Pass |
| | | 5825 | 1 | 15.161 | >=0.5 | Pass |
| 802.11n (HT40) | SISO | 5755 | 1 | 35.156 | >=0.5 | Pass |
| | | 5795 | 1 | 35.150 | >=0.5 | Pass |
| 802.11ac (VHT20) | SISO | 5745 | 1 | 15.146 | >=0.5 | Pass |
| | | 5785 | 1 | 15.156 | >=0.5 | Pass |
| | | 5825 | 1 | 15.147 | >=0.5 | Pass |
| 802.11ac (VHT40) | SISO | 5755 | 1 | 35.154 | >=0.5 | Pass |
| | | 5795 | 1 | 35.146 | >=0.5 | Pass |
| 802.11ac (VHT80) | SISO | 5775 | 1 | 75.172 | >=0.5 | Pass |

## 2.1.3 26dB BW

| Mode | TX Type | Frequency (MHz) | ANT | 26dB Bandwidth (MHz) | | Verdict |
|---|---|---|---|---|---|---|
| | | | | Result | Limit | |
| 802.11a | SISO | 5180 | 1 | 19.962 | / | Pass |
| | | 5200 | 1 | 19.840 | / | Pass |
| | | 5240 | 1 | 20.161 | / | Pass |
| | | 5260 | 1 | 19.952 | / | Pass |
| | | 5300 | 1 | 19.853 | / | Pass |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 5320 | 1 | 19.926 | / | Pass |
| | | 5500 | 1 | 21.775 | / | Pass |
| | | 5580 | 1 | 19.976 | / | Pass |
| | | 5700 | 1 | 19.906 | / | Pass |
| 802.11n (HT20) | SISO | 5180 | 1 | 20.292 | / | Pass |
| | | 5200 | 1 | 20.134 | / | Pass |
| | | 5240 | 1 | 20.301 | / | Pass |
| | | 5260 | 1 | 20.219 | / | Pass |
| | | 5300 | 1 | 20.369 | / | Pass |
| | | 5320 | 1 | 20.336 | / | Pass |
| | | 5500 | 1 | 20.841 | / | Pass |
| | | 5580 | 1 | 20.391 | / | Pass |
| | | 5700 | 1 | 20.258 | / | Pass |
| 802.11n (HT40) | SISO | 5190 | 1 | 40.787 | / | Pass |
| | | 5230 | 1 | 40.383 | / | Pass |
| | | 5270 | 1 | 40.322 | / | Pass |
| | | 5310 | 1 | 40.420 | / | Pass |
| | | 5510 | 1 | 42.696 | / | Pass |
| | | 5550 | 1 | 40.558 | / | Pass |
| | | 5670 | 1 | 41.214 | / | Pass |
| 802.11ac (VHT20) | SISO | 5180 | 1 | 20.204 | / | Pass |
| | | 5200 | 1 | 20.364 | / | Pass |
| | | 5240 | 1 | 20.284 | / | Pass |
| | | 5260 | 1 | 20.350 | / | Pass |
| | | 5300 | 1 | 20.213 | / | Pass |
| | | 5320 | 1 | 20.223 | / | Pass |
| | | 5500 | 1 | 20.408 | / | Pass |
| | | 5580 | 1 | 20.258 | / | Pass |
| | | 5700 | 1 | 20.203 | / | Pass |
| 802.11ac (VHT40) | SISO | 5190 | 1 | 40.762 | / | Pass |
| | | 5230 | 1 | 40.262 | / | Pass |
| | | 5270 | 1 | 40.164 | / | Pass |
| | | 5310 | 1 | 40.435 | / | Pass |
| | | 5510 | 1 | 43.779 | / | Pass |
| | | 5550 | 1 | 40.555 | / | Pass |
| | | 5670 | 1 | 40.589 | / | Pass |
| 802.11ac (VHT80) | SISO | 5210 | 1 | 80.788 | / | Pass |
| | | 5290 | 1 | 80.932 | / | Pass |
| | | 5530 | 1 | 81.090 | / | Pass |
| | | 5610 | 1 | 82.871 | / | Pass |