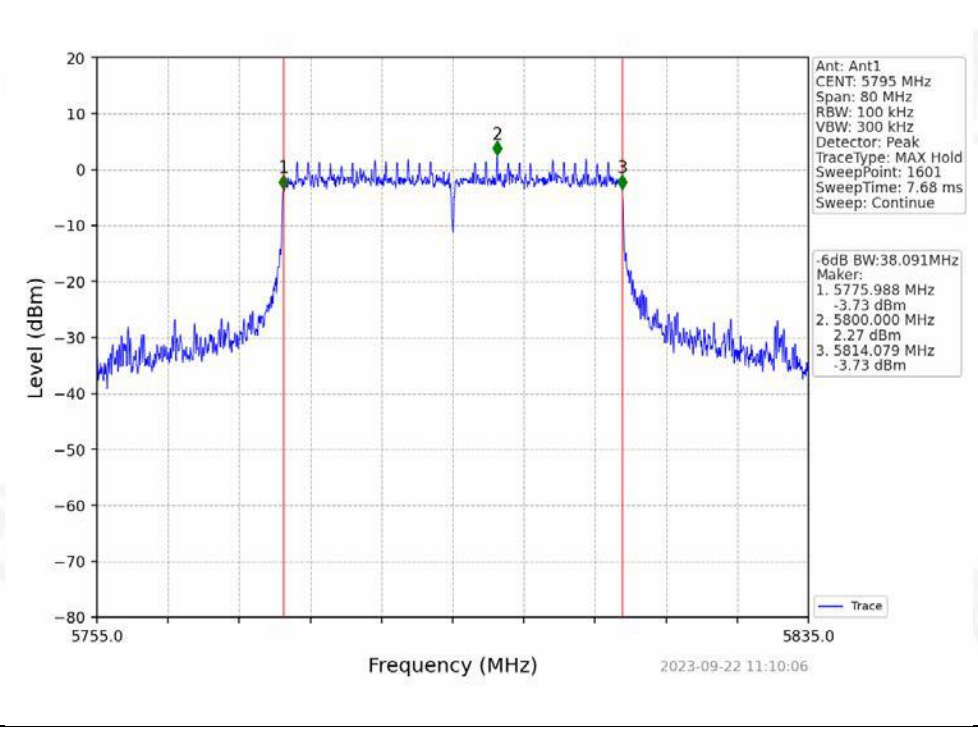
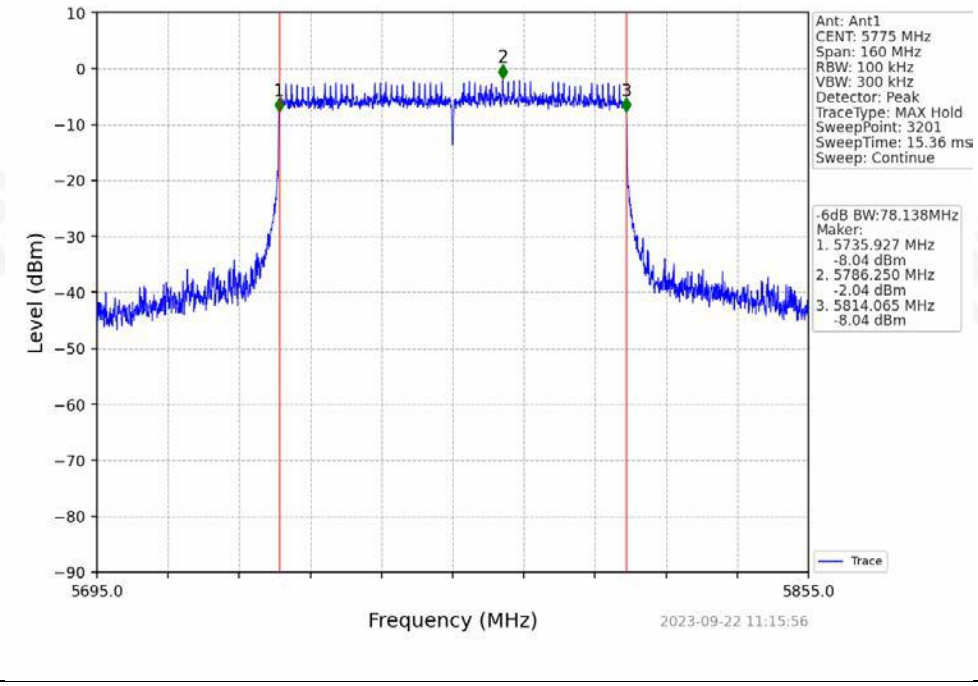
802.11ax(HEW40)_HCH_5795MHz_RU484_Left_NTNV

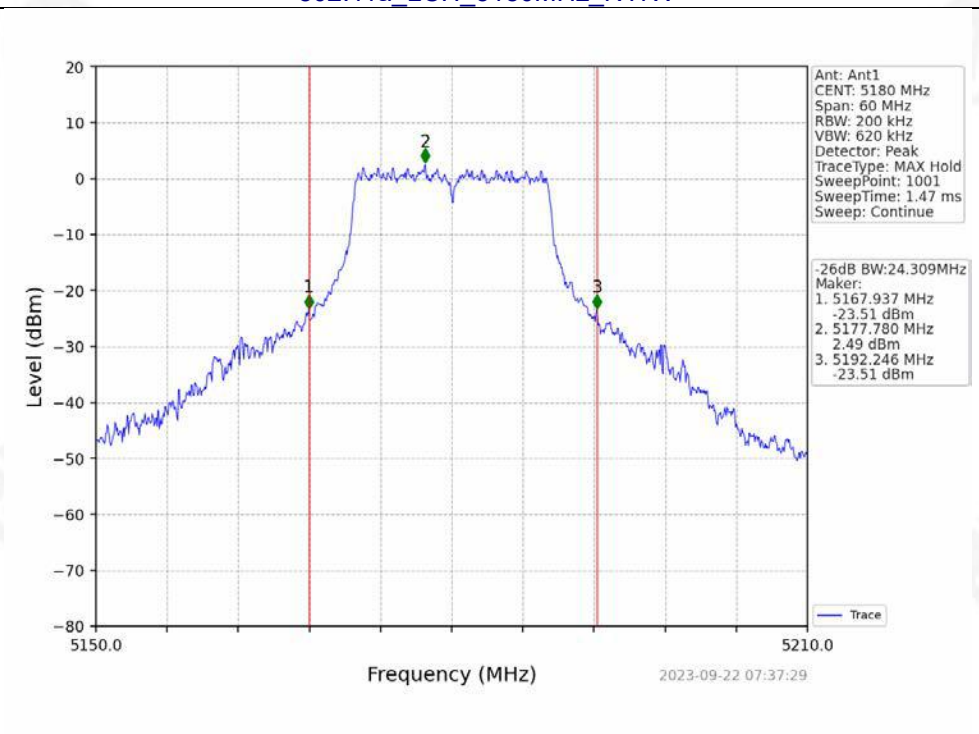


802.11ax(HEW80)_MCH_5775MHz_RU996_Left_NTNV

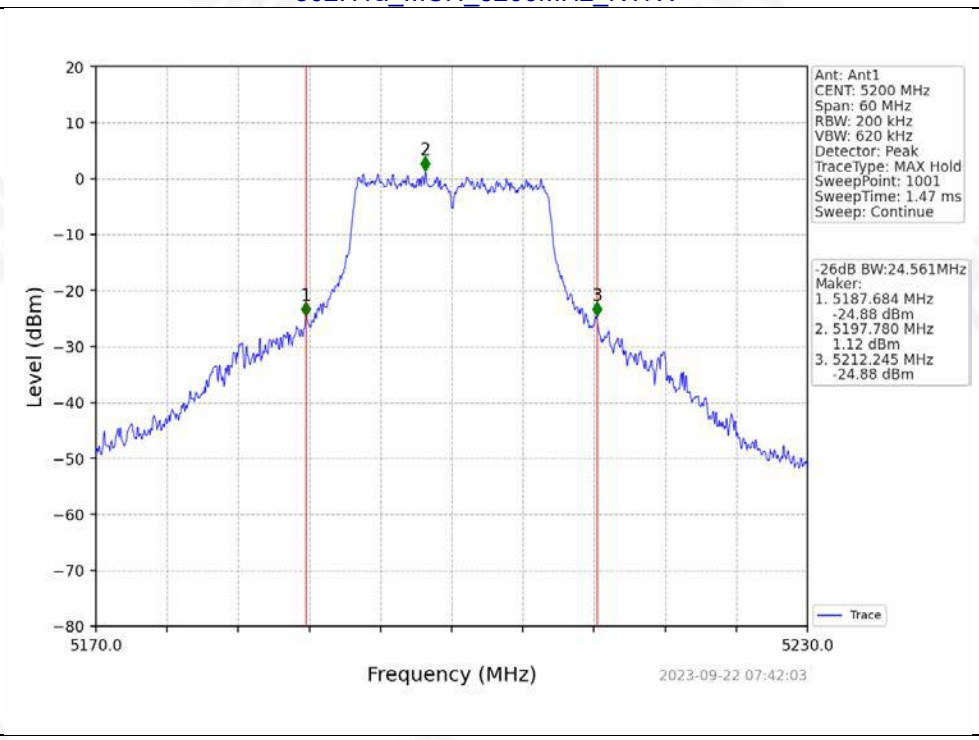


26dB Channel Bandwidth (MHz)

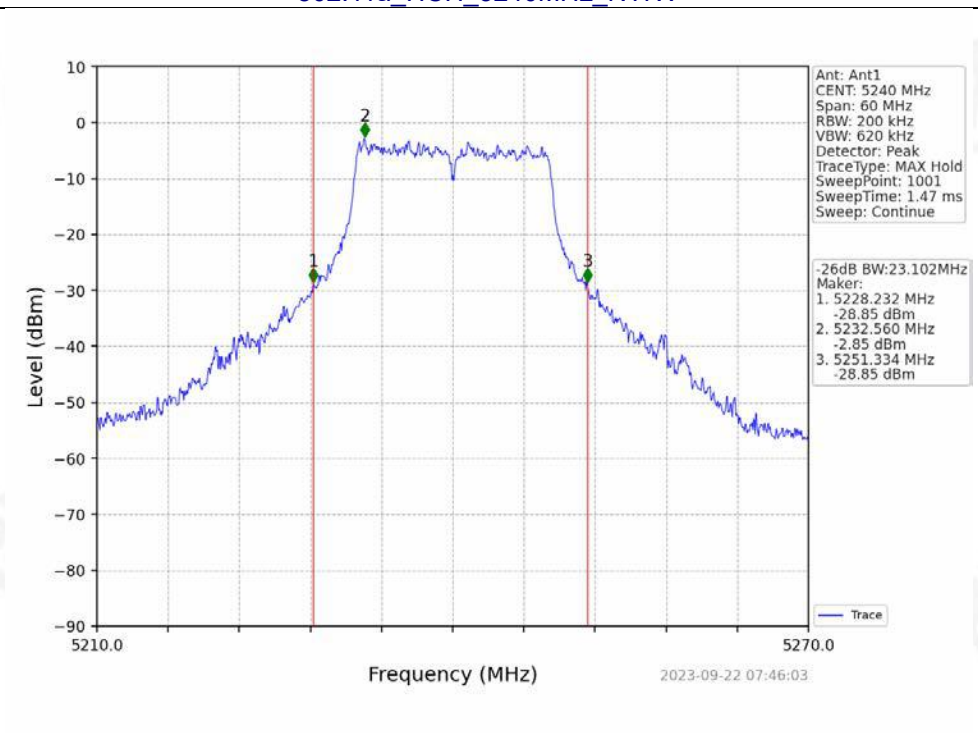
802.11a_LCH_5180MHz_NTNV



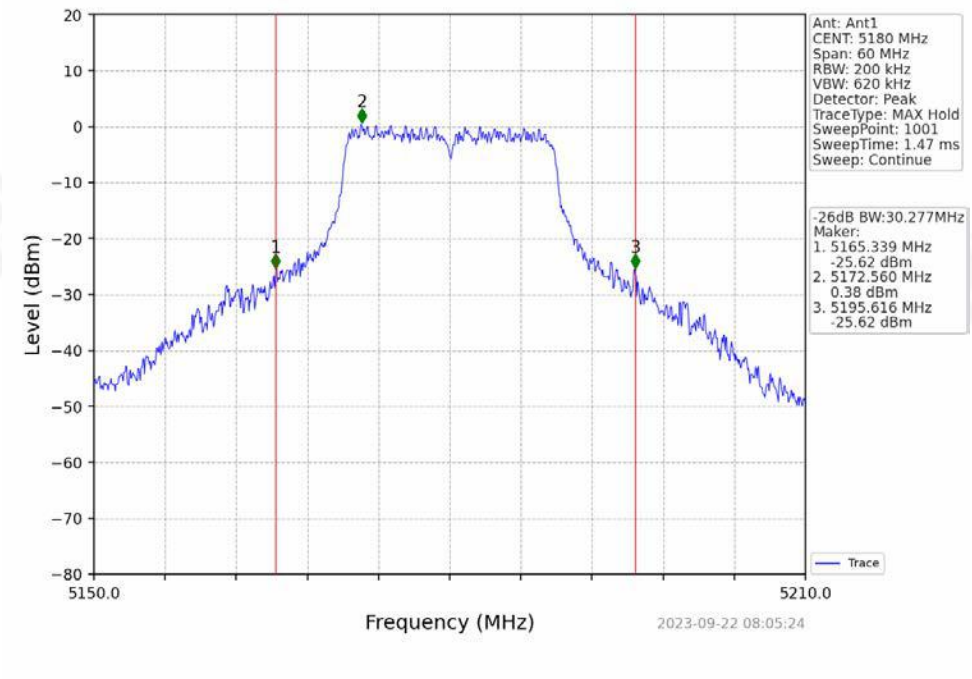
802.11a_MCH_5200MHz_NTNV



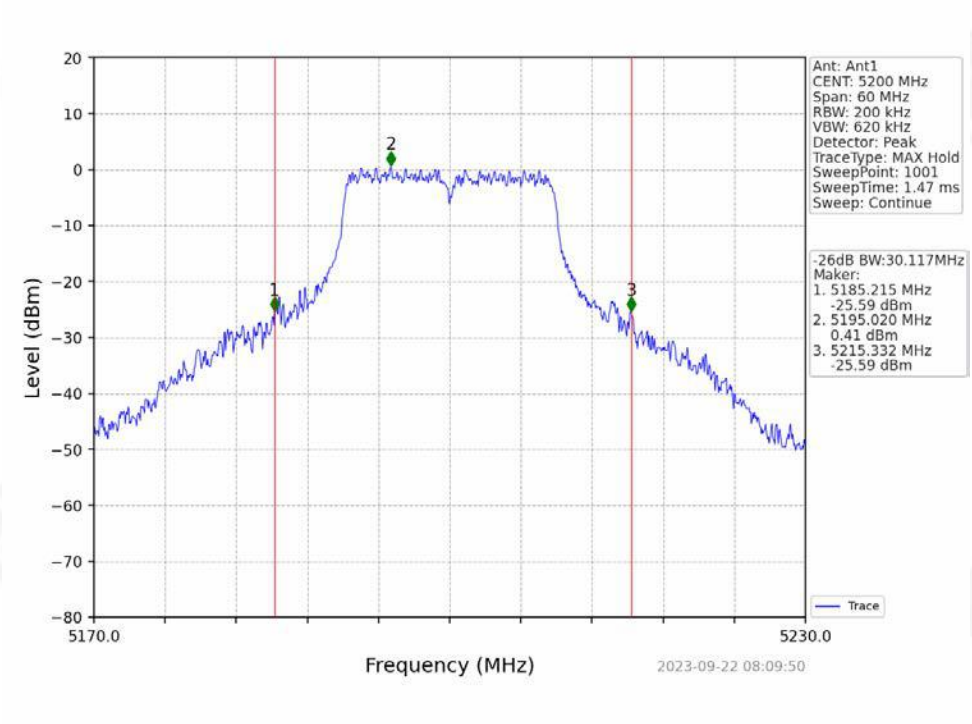
802.11a_HCH_5240MHz_NTNV



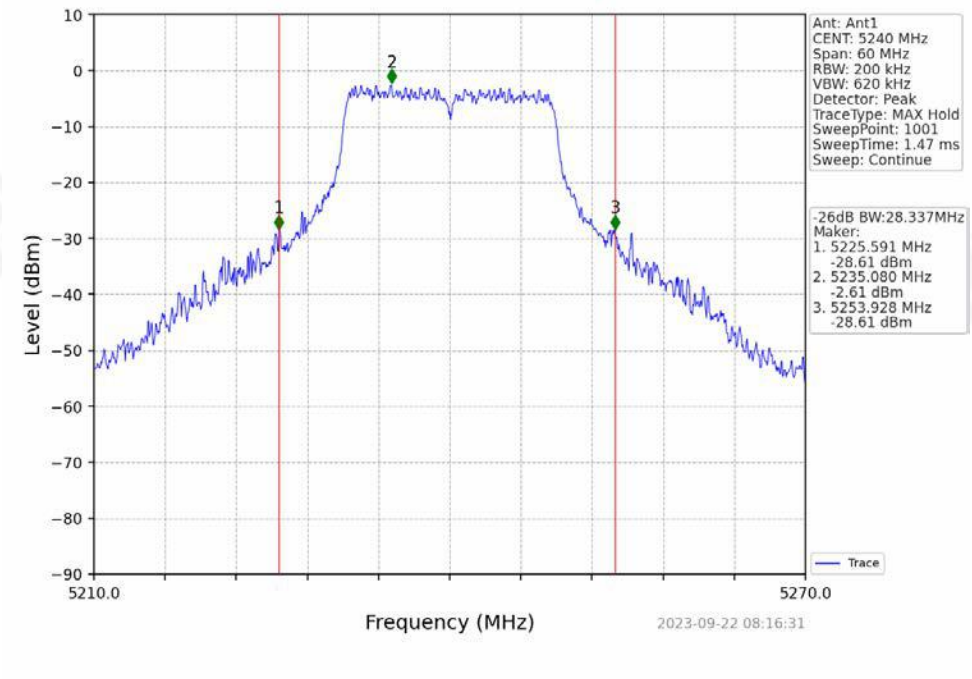
802.11n(HT20)_LCH_5180MHz_NTNV



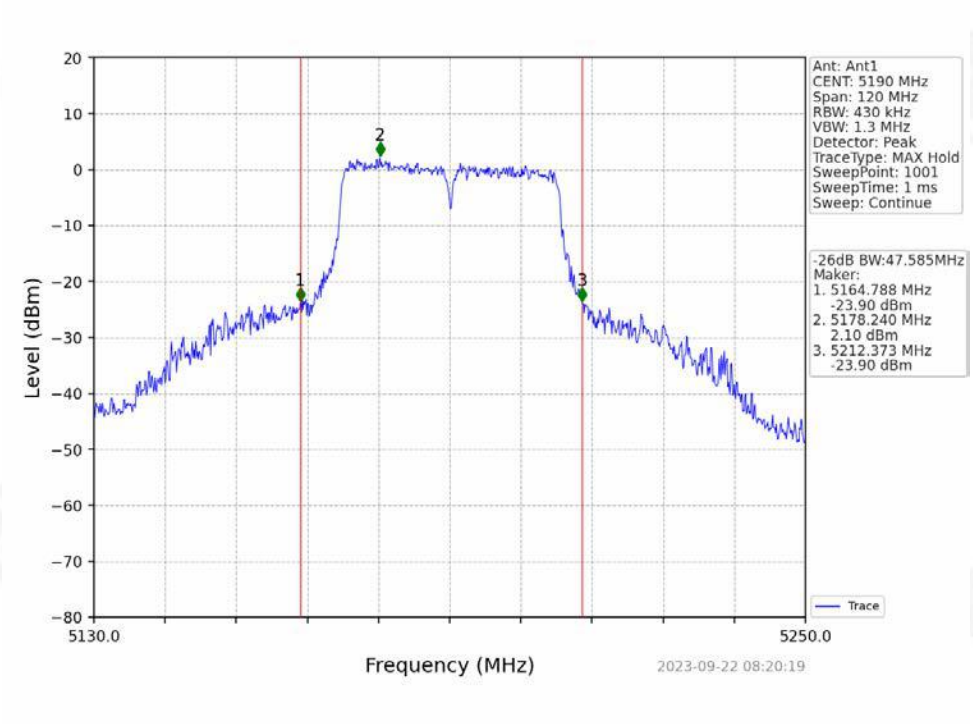
802.11n(HT20)_MCH_5200MHz_NTNV



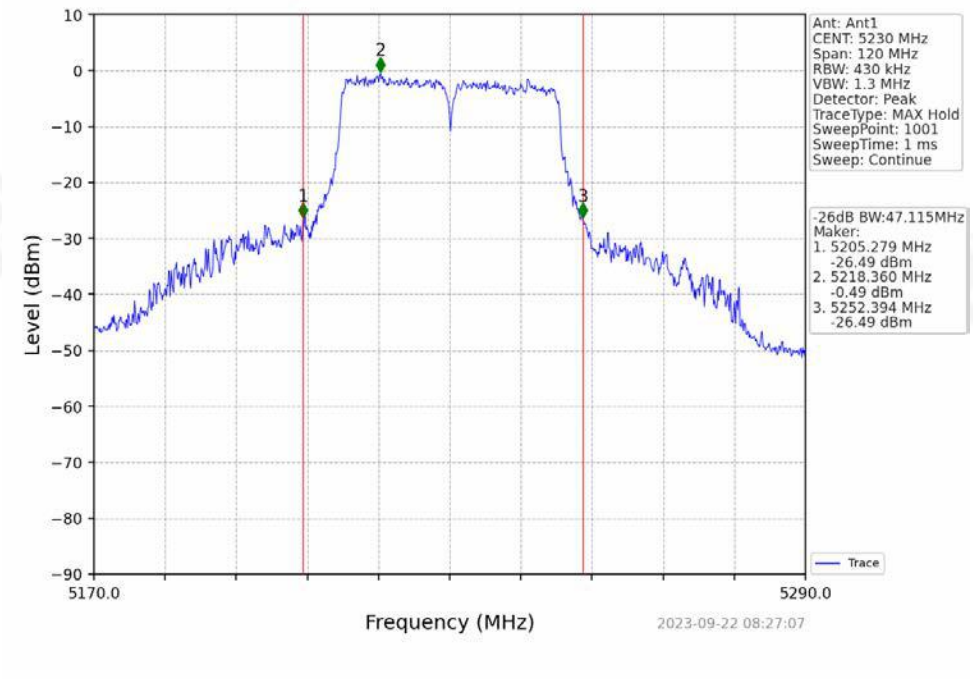
802.11n(HT20)_HCH_5240MHz_NTNV



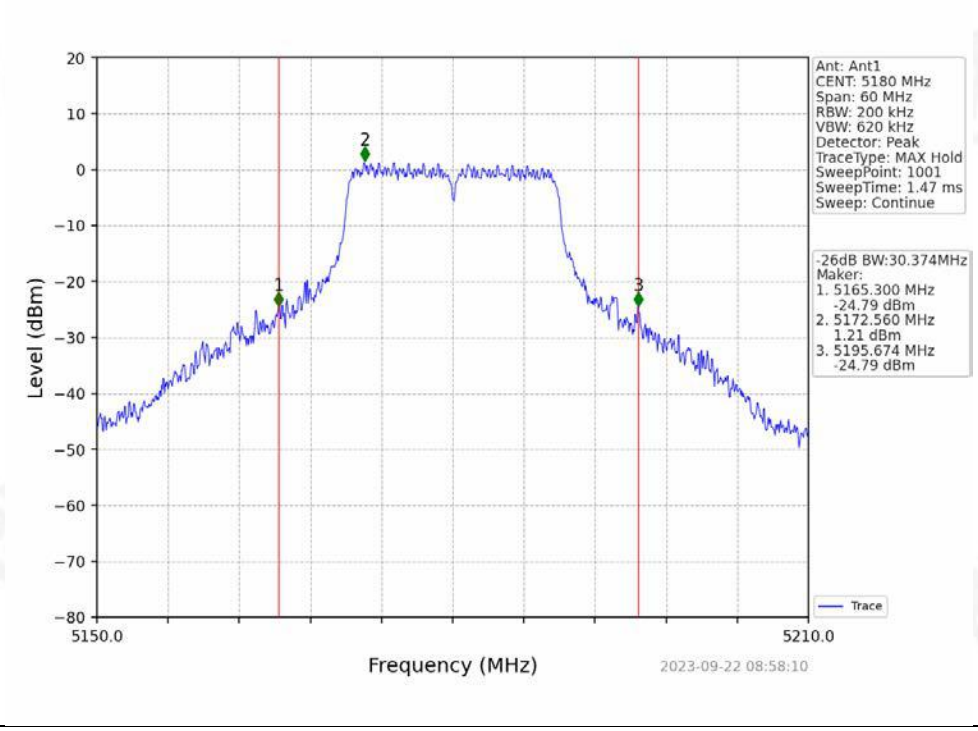
802.11n(HT40)_LCH_5190MHz_NTNV



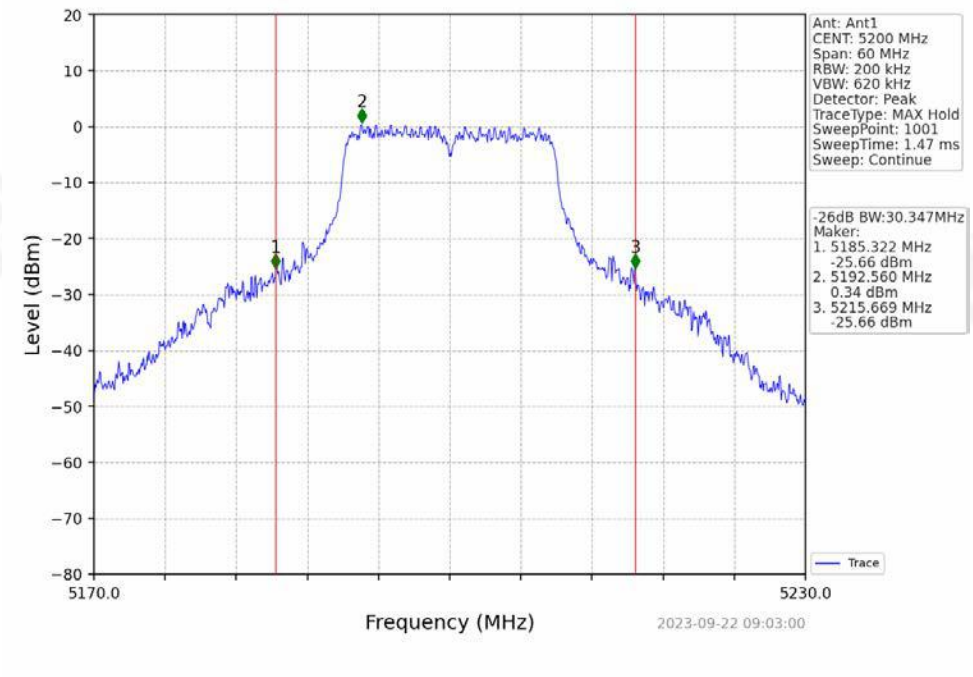
802.11n(HT40)_HCH_5230MHz_NTNV



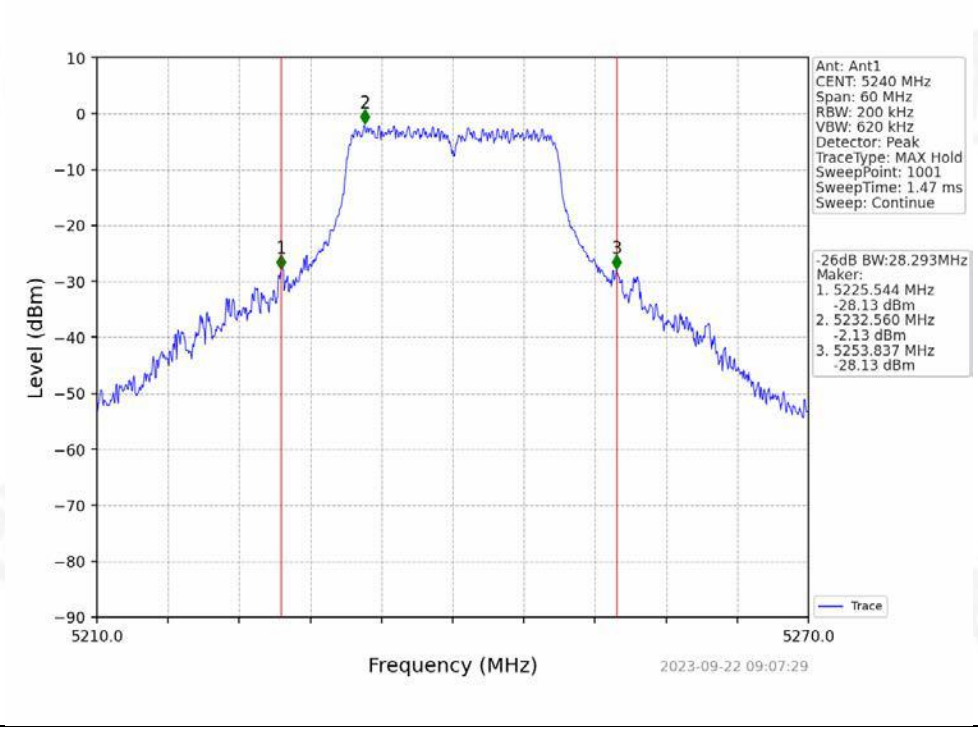
802.11ac(VHT20)_LCH_5180MHz_NTNV



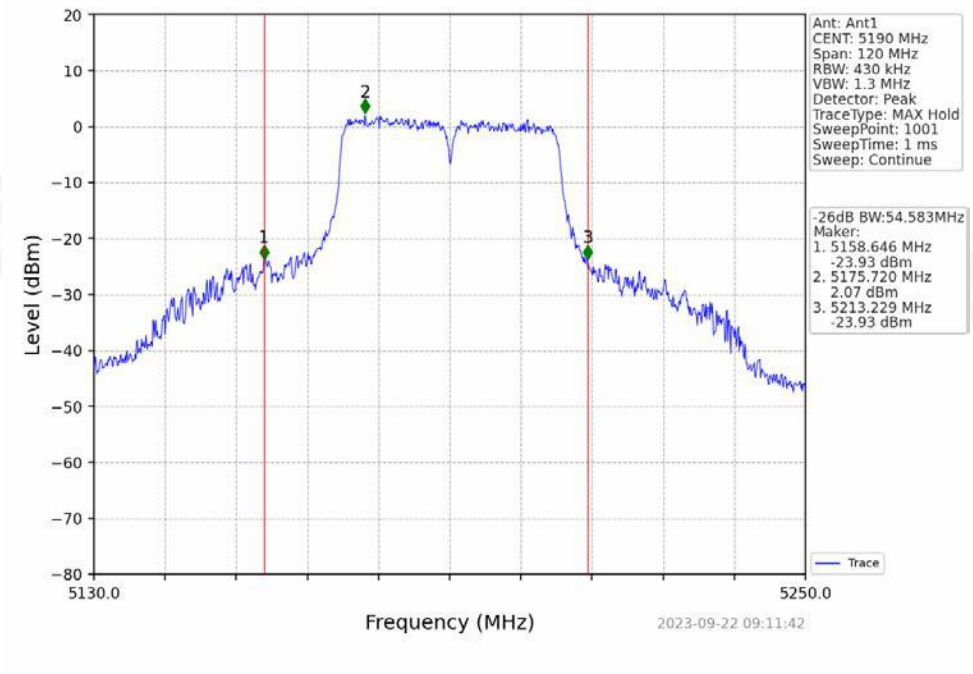
802.11ac(VHT20)_MCH_5200MHz_NTNV



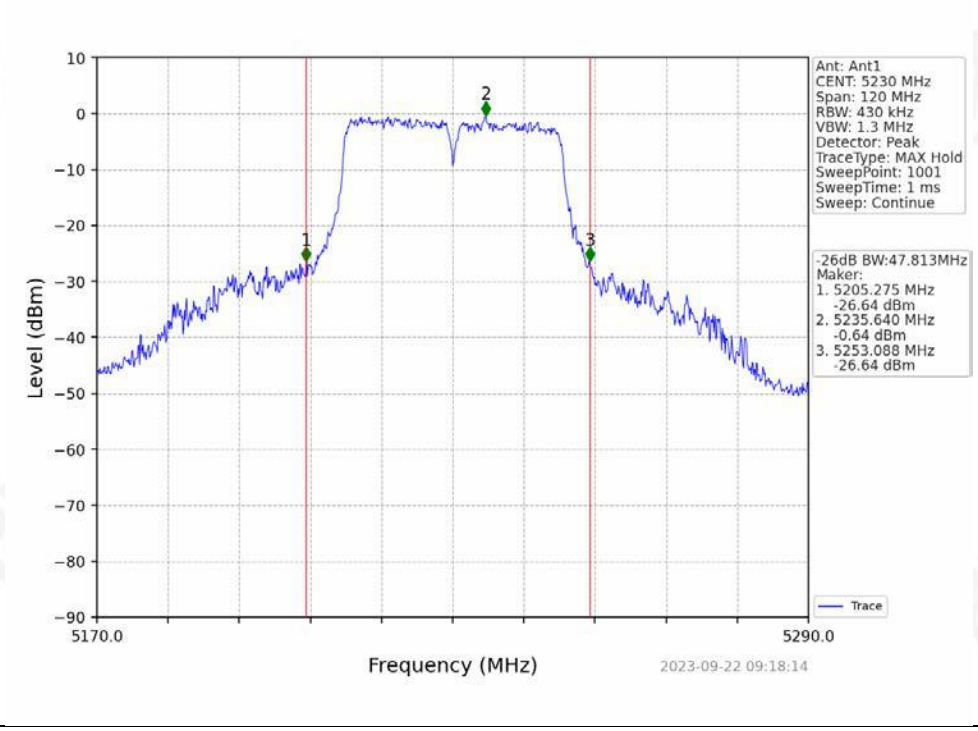
802.11ac(VHT20)_HCH_5240MHz_NTNV



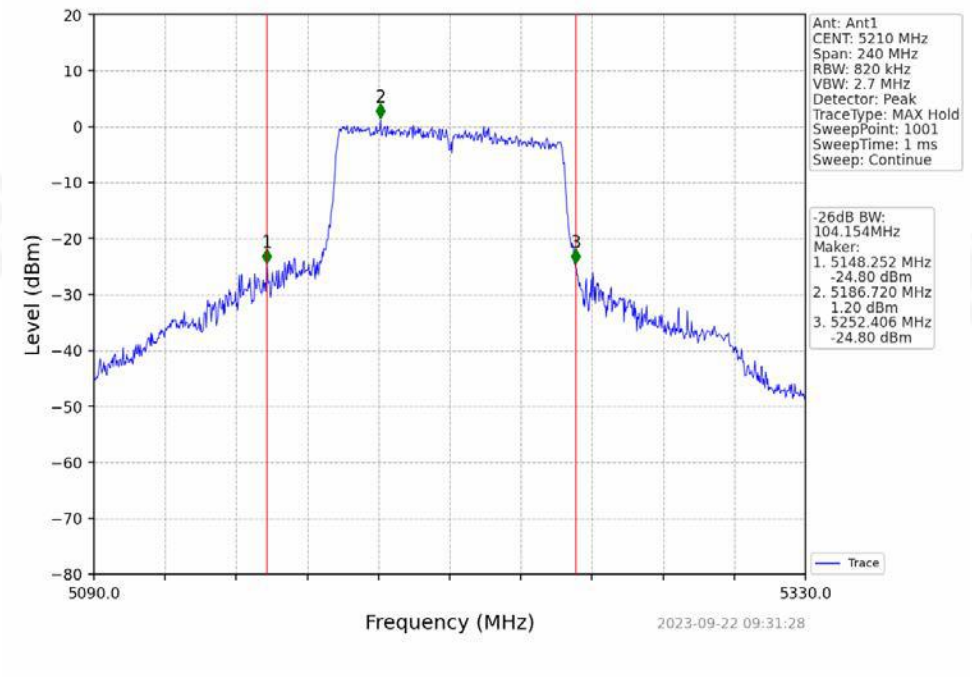
802.11ac(VHT40)_LCH_5190MHz_NTNV



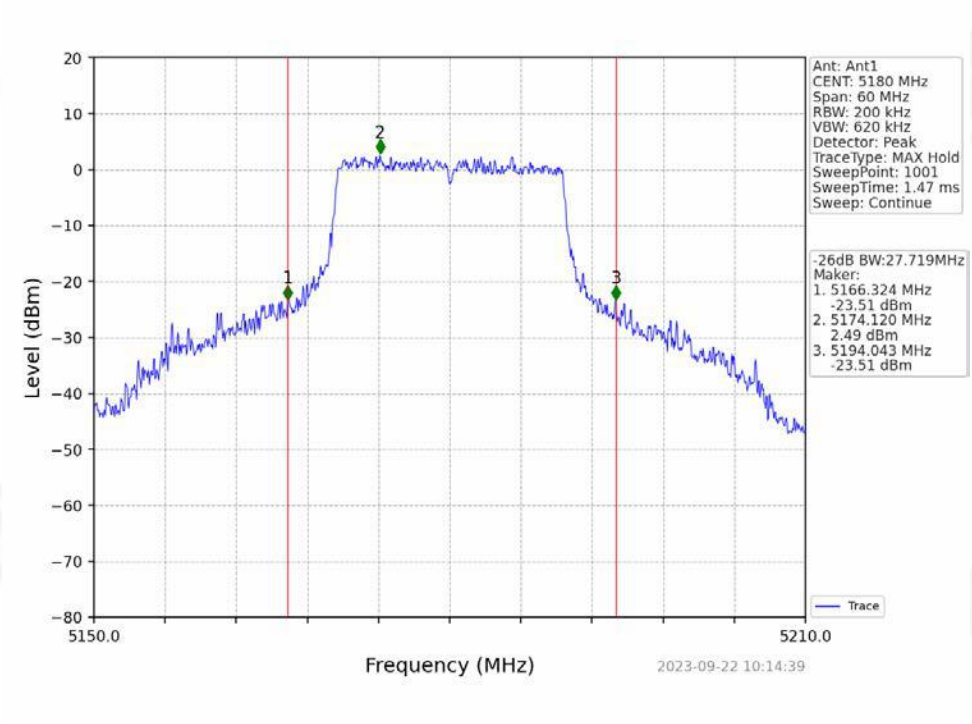
802.11ac(VHT40)_HCH_5230MHz_NTNV



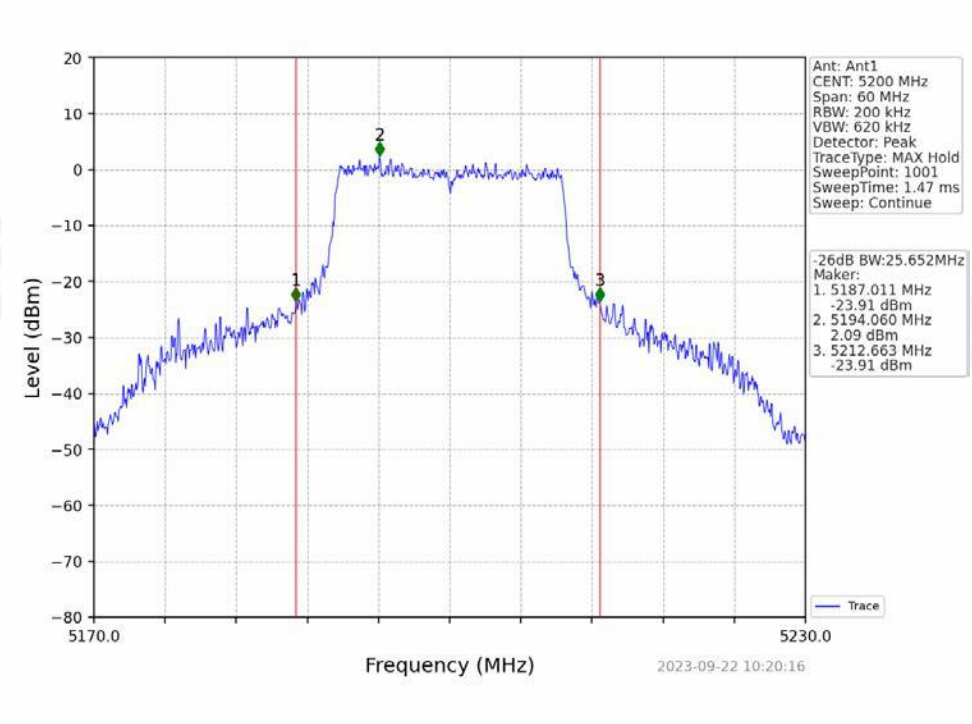
802.11ac(VHT80)_MCH_5210MHz_NTNV



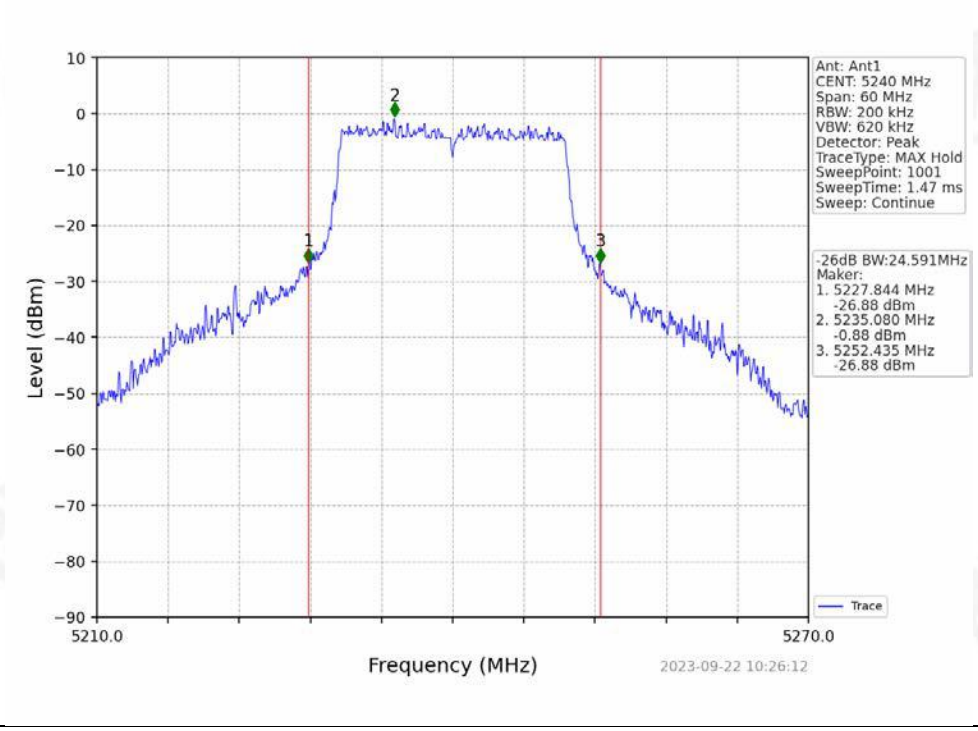
802.11ax(HEW20)_LCH_5180MHz_RU242_Left_NTNV



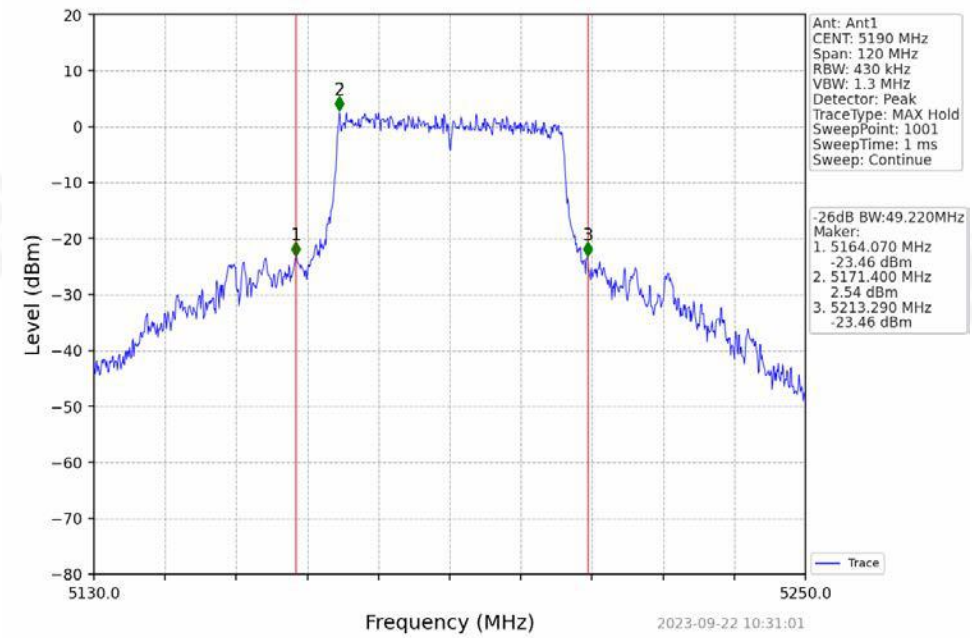
802.11ax(HEW20)_MCH_5200MHz_RU242_Left_NTNV



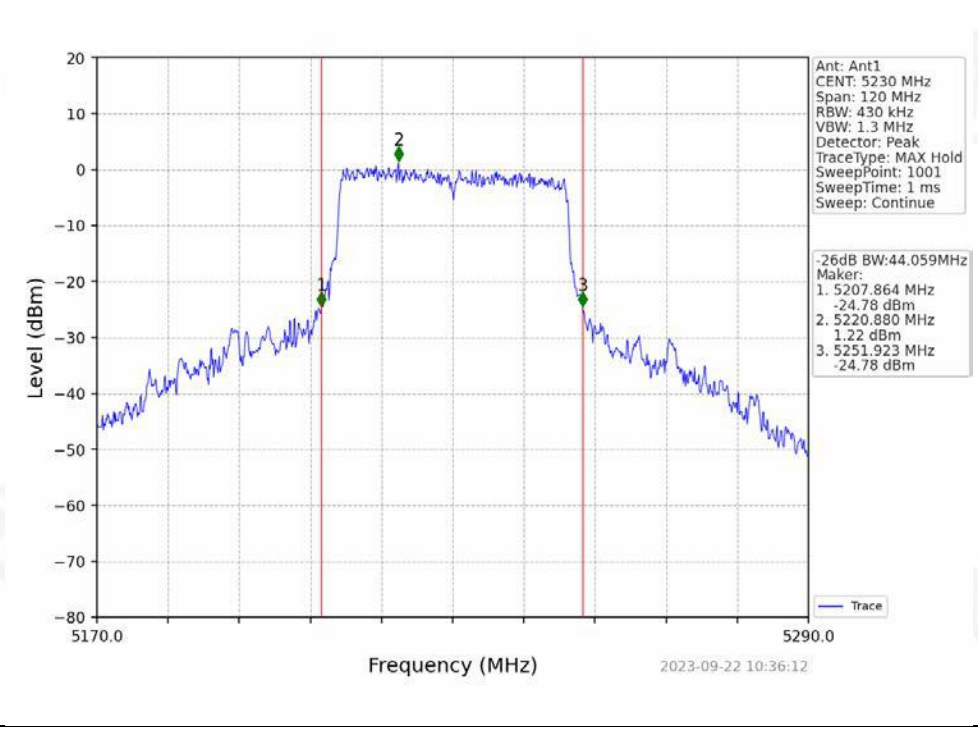
802.11ax(HEW20)_HCH_5240MHz_RU242_Left_NTNV



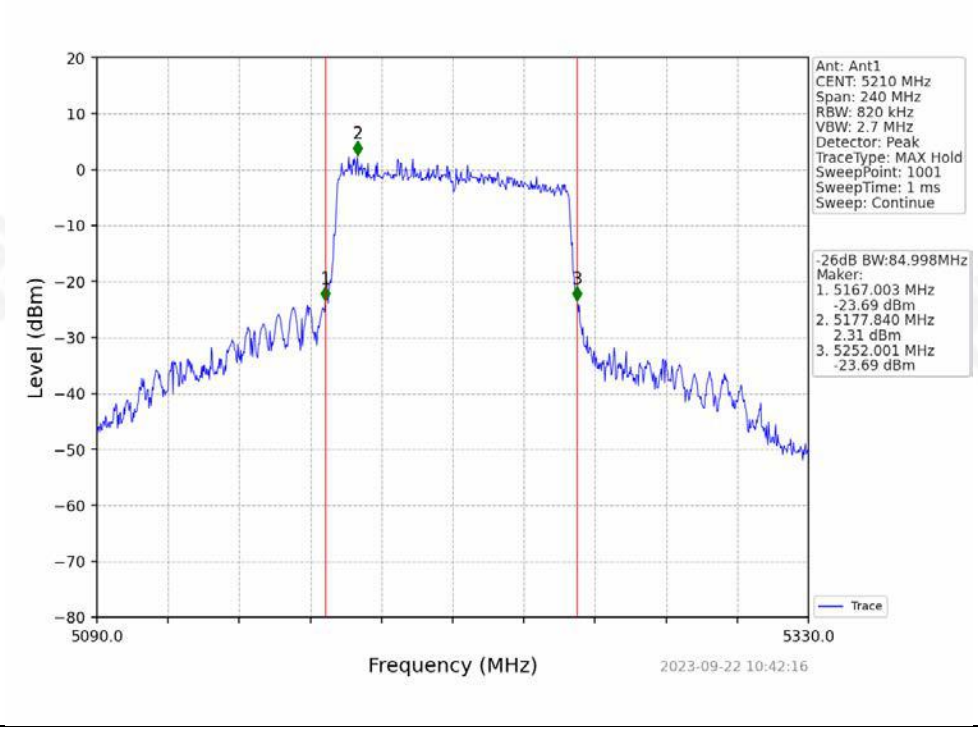
802.11ax(HEW40)_LCH_5190MHz_RU484_Left_NTNV



802.11ax(HEW40)_HCH_5230MHz_RU484_Left_NTNV



802.11ax(HEW80)_MCH_5210MHz_RU996_Left_NTNV



7.MAXIMUM CONDUCTED OUTPUT POWER

7.1 PPLIED PROCEDURES / LIMIT

According to FCC §15.407
The maximum conduced output power should not exceed:

Frequency Band(MHz)	Limit
5150~5250	250mW
5725~5850	1W

7.2 TEST PROCEDURE

The EUT was directly connected to the Power meter

1. Device Configuration
If possible, configure or modify the operation of the EUT so that it transmits continuously at its maximum power control level (see section II.B.).
a) The intent is to test at 100 percent duty cycle; however a small reduction in duty cycle (to no lower than 98 percent) is permitted if required by the EUT for amplitude control purposes. Manufacturers are expected to provide software to the test lab to permit such continuous operation.
b) If continuous transmission (or at least 98 percent duty cycle) cannot be achieved due to hardware limitations (e.g., overheating), the EUT shall be operated at its maximum power control level with the transmit duration as long as possible and the duty cycle as high as possible.

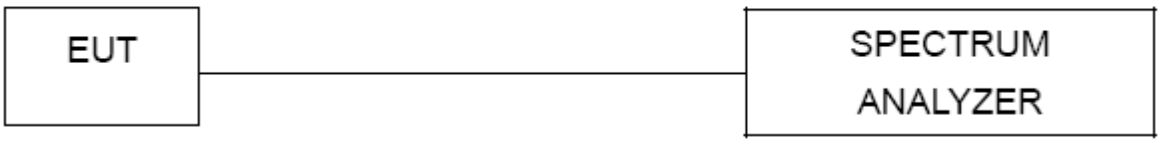
2. Measurement using a Spectrum Analyzer or EMI Receiver (SA)
Measurement of maximum conducted output power using a spectrum analyzer requires integrating the spectrum across a frequency span that encompasses, at a minimum, either the EBW or the 99-percent occupied bandwidth of the signal.1 However, the EBW must be used to determine bandwidth dependent limits on maximum conducted output power in accordance with § 15.407(a).
a) The test method shall be selected as follows: (i) Method SA-1 or SA-1 Alternative (averaging with the EUT transmitting at full power throughout each sweep) shall be applied if either of the following conditions can be satisfied:
• The EUT transmits continuously (or with a duty cycle ≥ 98 percent).
• Sweep triggering or gating can be implemented in a way that the device transmits at the maximum power control level throughout the duration of each of the instrument sweeps to be averaged. This condition can generally be achieved by triggering the instrument's sweep if the duration of the sweep (with the analyzer configured as in Method SA-1, below) is equal to or shorter than the duration T of each transmission from the EUT and if those transmissions exhibit full power throughout their durations.
(ii) Method SA-2 or SA-2 Alternative (averaging across on and off times of the EUT transmissions, followed by duty cycle correction) shall be applied if the conditions of (i) cannot be achieved and the transmissions exhibit a constant duty cycle during the measurement duration. Duty cycle will be considered to be constant if variations are less than ± 2 percent.
(iii) Method SA-3 (RMS detection with max hold) or SA-3 Alternative (reduced VBW with max hold) shall be applied if the conditions of (i) and (ii) cannot be achieved.
b) Method SA-1 (trace averaging with the EUT transmitting at full power throughout each sweep): (i) Set span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal.
(ii) Set RBW = 1 MHz.
(iii) Set VBW ≥ 3 MHz.
(iv) Number of points in sweep ≥ 2 Span / RBW. (This ensures that bin-to-bin spacing is ≤ RBW/2, so that narrowband signals are not lost between frequency bins.)
(v) Sweep time = auto.
(vi) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
(vii) If transmit duty cycle < 98 percent, use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle ≥ 98 percent, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to "free run".
(viii) Trace average at least 100 traces in power averaging (i.e., RMS) mode.

(ix) Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument's band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum

7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP



7.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

7.6 TEST RESULTS

Temperature :	26 ℃	Relative Humidity :	54%
Pressure :	1012 hPa	Test Voltage :	DC 3.8V
Test Mode :	TX		

Antenna 3:

Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum Average Conducted Output Power (dBm)		Verdict
					ANT3	Limit	
802.11a	SISO	5180	/	/	17.08	<=23.98	Pass
		5200	/	/	15.30	<=23.98	Pass
		5240	/	/	14.99	<=23.98	Pass
		5745	/	/	16.59	<=30	Pass
		5785	/	/	16.82	<=30	Pass
		5825	/	/	17.02	<=30	Pass
802.11n (HT20)	SISO	5180	/	/	15.63	<=23.98	Pass
		5200	/	/	15.18	<=23.98	Pass
		5240	/	/	14.65	<=23.98	Pass
		5745	/	/	16.50	<=30	Pass
		5785	/	/	16.73	<=30	Pass
		5825	/	/	16.80	<=30	Pass
802.11n (HT40)	SISO	5190	/	/	13.52	<=23.98	Pass
		5230	/	/	13.09	<=23.98	Pass
		5755	/	/	15.18	<=30	Pass
		5795	/	/	15.70	<=30	Pass
802.11ac (VHT20)	SISO	5180	/	/	17.05	<=23.98	Pass
		5200	/	/	15.36	<=23.98	Pass
		5240	/	/	14.62	<=23.98	Pass
		5745	/	/	16.67	<=30	Pass
		5785	/	/	16.81	<=30	Pass
		5825	/	/	16.78	<=30	Pass
802.11ac (VHT40)	SISO	5190	/	/	13.63	<=23.98	Pass
		5230	/	/	13.19	<=23.98	Pass
		5755	/	/	15.30	<=30	Pass
		5795	/	/	16.18	<=30	Pass
802.11ac (VHT80)	SISO	5210	/	/	12.84	<=23.98	Pass
		5775	/	/	14.71	<=30	Pass
802.11ax (HEW20)	SISO	5180	RU242	Left	17.01	<=23.98	Pass
		5200	RU242	Left	16.57	<=23.98	Pass
		5240	RU242	Left	16.25	<=23.98	Pass
		5745	RU242	Left	16.74	<=30	Pass
		5785	RU242	Left	16.81	<=30	Pass
		5825	RU242	Left	16.84	<=30	Pass

802.11ax (HEW40)	SISO	5190	RU484	Left	16.11	<=23.98	Pass
		5230	RU484	Left	15.97	<=23.98	Pass
		5755	RU484	Left	16.41	<=30	Pass
		5795	RU484	Left	16.80	<=30	Pass
802.11ax (HEW80)	SISO	5210	RU996	Left	15.86	<=23.98	Pass
		5775	RU996	Left	15.92	<=30	Pass

Antenna 4:

Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum Average Conducted Output Power (dBm)		Verdict
					ANT4	Limit	
802.11a	SISO	5180	/	/	14.33	<=23.98	Pass
		5200	/	/	13.89	<=23.98	Pass
		5240	/	/	13.30	<=23.98	Pass
		5745	/	/	15.50	<=30	Pass
		5785	/	/	16.09	<=30	Pass
		5825	/	/	15.53	<=30	Pass
802.11n (HT20)	SISO	5180	/	/	16.09	<=23.98	Pass
		5200	/	/	15.60	<=23.98	Pass
		5240	/	/	15.21	<=23.98	Pass
		5745	/	/	17.43	<=30	Pass
		5785	/	/	17.45	<=30	Pass
		5825	/	/	17.48	<=30	Pass
802.11n (HT40)	SISO	5190	/	/	13.54	<=23.98	Pass
		5230	/	/	13.27	<=23.98	Pass
		5755	/	/	15.03	<=30	Pass
		5795	/	/	15.42	<=30	Pass
802.11ac (VHT20)	SISO	5180	/	/	16.20	<=23.98	Pass
		5200	/	/	15.50	<=23.98	Pass
		5240	/	/	15.29	<=23.98	Pass
		5745	/	/	17.41	<=30	Pass
		5785	/	/	17.21	<=30	Pass
		5825	/	/	17.43	<=30	Pass
802.11ac (VHT40)	SISO	5190	/	/	13.95	<=23.98	Pass
		5230	/	/	13.71	<=23.98	Pass
		5755	/	/	16.25	<=30	Pass
		5795	/	/	16.61	<=30	Pass
802.11ac (VHT80)	SISO	5210	/	/	13.29	<=23.98	Pass
		5775	/	/	15.94	<=30	Pass
802.11ax (HEW20)	SISO	5180	RU242	Left	16.42	<=23.98	Pass
		5200	RU242	Left	15.61	<=23.98	Pass
		5240	RU242	Left	15.25	<=23.98	Pass
		5745	RU242	Left	17.55	<=30	Pass
		5785	RU242	Left	17.47	<=30	Pass
		5825	RU242	Left	17.42	<=30	Pass
802.11ax	SISO	5190	RU484	Left	15.30	<=23.98	Pass

(HEW40)		5230	RU484	Left	15.52	<=23.98	Pass
		5755	RU484	Left	16.92	<=30	Pass
		5795	RU484	Left	17.32	<=30	Pass
802.11ax (HEW80)	SISO	5210	RU996	Left	15.12	<=23.98	Pass
		5775	RU996	Left	16.46	<=30	Pass

WiFi module (AMPAK AP6275PR3) ANT 3+ANT 4 MIMO

U-NII-1:

Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum Average Conducted Output Power (dBm)		Verdict
					Total	Limit	
802.11a	MIMO	5180	/	/	18.93	<=23.98	Pass
		5200	/	/	17.66	<=23.98	Pass
		5240	/	/	17.24	<=23.98	Pass
802.11n (HT20)	MIMO	5180	/	/	18.88	<=23.98	Pass
		5200	/	/	18.41	<=23.98	Pass
		5240	/	/	17.95	<=23.98	Pass
802.11n (HT40)	MIMO	5190	/	/	16.54	<=23.98	Pass
		5230	/	/	16.19	<=23.98	Pass
802.11ac (VHT20)	MIMO	5180	/	/	19.66	<=23.98	Pass
		5200	/	/	18.44	<=23.98	Pass
		5240	/	/	17.98	<=23.98	Pass
802.11ac (VHT40)	MIMO	5190	/	/	16.80	<=23.98	Pass
		5230	/	/	16.47	<=23.98	Pass
802.11ac (VHT80)	MIMO	5210	/	/	16.08	<=23.98	Pass
802.11ax (HEW20)	MIMO	5180	RU242	Left	19.74	<=23.98	Pass
		5200	RU242	Left	19.13	<=23.98	Pass
		5240	RU242	Left	18.79	<=23.98	Pass
802.11ax (HEW40)	MIMO	5190	RU484	Left	18.73	<=23.98	Pass
		5230	RU484	Left	18.76	<=23.98	Pass
802.11ax (HEW80)	MIMO	5210	RU996	Left	18.52	<=23.98	Pass
For U-NII-1: Antenna 3 gain: 2.5dBi, Antenna 4 gain: 2.4dBi, Correlated antenna gain=5.46dBi.							

WiFi module (AMPAK AP6275PR3) ANT 3+ANT 4 MIMO

U-NII-3:

Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum Average Conducted Output Power (dBm)		Verdict
					Total	Limit	
802.11a	MIMO	5745	/	/	19.09	<=28.82	Pass
		5785	/	/	19.48	<=28.82	Pass
		5825	/	/	19.35	<=28.82	Pass
802.11n (HT20)	MIMO	5745	/	/	20.00	<=28.82	Pass
		5785	/	/	20.12	<=28.82	Pass
		5825	/	/	20.16	<=28.82	Pass
802.11n (HT40)	MIMO	5755	/	/	18.12	<=28.82	Pass
		5795	/	/	18.57	<=28.82	Pass
802.11ac (VHT20)	MIMO	5745	/	/	20.07	<=28.82	Pass
		5785	/	/	20.02	<=28.82	Pass
		5825	/	/	20.13	<=28.82	Pass
802.11ac (VHT40)	MIMO	5755	/	/	18.81	<=28.82	Pass
		5795	/	/	19.41	<=28.82	Pass
802.11ac (VHT80)	MIMO	5775	/	/	18.38	<=28.82	Pass
802.11ax (HEW20)	MIMO	5745	RU242	Left	20.17	<=28.82	Pass
		5785	RU242	Left	20.16	<=28.82	Pass
		5825	RU242	Left	20.15	<=28.82	Pass
802.11ax (HEW40)	MIMO	5755	RU484	Left	19.68	<=28.82	Pass
		5795	RU484	Left	20.08	<=28.82	Pass
802.11ax (HEW80)	MIMO	5775	RU996	Left	19.21	<=28.82	Pass
Note: For U-NII-3: Antenna 3 gain: 3.5dBi, Antenna 4 gain: 4.8dBi, Correlated antenna gain=7.18dBi. Limit= 30-(7.18-6)=30-1.18=28.82							

Antenna 1:

Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum Average Conducted Output Power (dBm)		Verdict
					ANT1	Limit	
802.11a	SISO	5180	/	/	15.73	<=23.98	Pass
		5200	/	/	15.44	<=23.98	Pass
		5240	/	/	16.46	<=23.98	Pass
		5745	/	/	15.98	<=30	Pass
		5785	/	/	15.55	<=30	Pass
		5825	/	/	15.54	<=30	Pass
802.11n (HT20)	SISO	5180	/	/	15.49	<=23.98	Pass
		5200	/	/	15.35	<=23.98	Pass
		5240	/	/	16.33	<=23.98	Pass
		5745	/	/	16.04	<=30	Pass
		5785	/	/	15.81	<=30	Pass
		5825	/	/	15.97	<=30	Pass
802.11n (HT40)	SISO	5190	/	/	15.55	<=23.98	Pass
		5230	/	/	16.41	<=23.98	Pass
		5755	/	/	16.10	<=30	Pass
		5795	/	/	15.91	<=30	Pass
802.11ac (VHT20)	SISO	5180	/	/	15.64	<=23.98	Pass
		5200	/	/	15.66	<=23.98	Pass
		5240	/	/	16.49	<=23.98	Pass
		5745	/	/	16.01	<=30	Pass
		5785	/	/	15.86	<=30	Pass
		5825	/	/	15.82	<=30	Pass
802.11ac (VHT40)	SISO	5190	/	/	15.65	<=23.98	Pass
		5230	/	/	16.47	<=23.98	Pass
		5755	/	/	16.03	<=30	Pass
		5795	/	/	16.02	<=30	Pass
802.11ac (VHT80)	SISO	5210	/	/	15.31	<=23.98	Pass
		5775	/	/	15.43	<=30	Pass
802.11ax (HEW20)	SISO	5180	RU242	Left	15.65	<=23.98	Pass
		5200	RU242	Left	15.43	<=23.98	Pass
		5240	RU242	Left	16.49	<=23.98	Pass
		5745	RU242	Left	16.16	<=30	Pass
		5785	RU242	Left	15.89	<=30	Pass

		5825	RU242	Left	15.88	<=30	Pass
802.11ax (HEW40)	SISO	5190	RU484	Left	15.75	<=23.98	Pass
		5230	RU484	Left	16.62	<=23.98	Pass
		5755	RU484	Left	16.25	<=30	Pass
		5795	RU484	Left	16.15	<=30	Pass
802.11ax (HEW80)	SISO	5210	RU996	Left	15.57	<=23.98	Pass
		5775	RU996	Left	15.56	<=30	Pass

Antenna 2:

Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum Average Conducted Output Power (dBm)		Verdict
					ANT2	Limit	
802.11a	SISO	5180	/	/	12.24	<=23.98	Pass
		5200	/	/	10.89	<=23.98	Pass
		5240	/	/	6.28	<=23.98	Pass
		5745	/	/	15.58	<=30	Pass
		5785	/	/	15.78	<=30	Pass
		5825	/	/	15.76	<=30	Pass
802.11n (HT20)	SISO	5180	/	/	10.47	<=23.98	Pass
		5200	/	/	10.61	<=23.98	Pass
		5240	/	/	7.85	<=23.98	Pass
		5745	/	/	15.77	<=30	Pass
		5785	/	/	15.86	<=30	Pass
		5825	/	/	15.96	<=30	Pass
802.11n (HT40)	SISO	5190	/	/	11.31	<=23.98	Pass
		5230	/	/	8.58	<=23.98	Pass
		5755	/	/	15.90	<=30	Pass
		5795	/	/	16.17	<=30	Pass
802.11ac (VHT20)	SISO	5180	/	/	11.62	<=23.98	Pass
		5200	/	/	10.45	<=23.98	Pass
		5240	/	/	8.08	<=23.98	Pass
		5745	/	/	15.78	<=30	Pass
		5785	/	/	15.99	<=30	Pass
		5825	/	/	16.06	<=30	Pass
802.11ac (VHT40)	SISO	5190	/	/	11.13	<=23.98	Pass
		5230	/	/	8.85	<=23.98	Pass
		5755	/	/	16.01	<=30	Pass
		5795	/	/	16.22	<=30	Pass
802.11ac (VHT80)	SISO	5210	/	/	9.78	<=23.98	Pass
		5775	/	/	15.12	<=30	Pass
802.11ax (HEW20)	SISO	5180	RU242	Left	11.45	<=23.98	Pass
		5200	RU242	Left	10.52	<=23.98	Pass
		5240	RU242	Left	7.57	<=23.98	Pass
		5745	RU242	Left	15.88	<=30	Pass
		5785	RU242	Left	16.09	<=30	Pass
		5825	RU242	Left	16.13	<=30	Pass

802.11ax (HEW40)	SISO	5190	RU484	Left	11.13	<=23.98	Pass
		5230	RU484	Left	8.56	<=23.98	Pass
		5755	RU484	Left	16.08	<=30	Pass
		5795	RU484	Left	16.52	<=30	Pass
802.11ax (HEW80)	SISO	5210	RU996	Left	9.47	<=23.98	Pass
		5775	RU996	Left	15.40	<=30	Pass

WiFi module (Samsung S621) ANT1+ ANT2 MIMO

U-NII-1:

Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum Average Conducted Output Power (dBm)		Verdict
					Total	Limit	
802.11a	MIMO	5180	/	/	17.34	<=23.98	Pass
		5200	/	/	16.75	<=23.98	Pass
		5240	/	/	16.86	<=23.98	Pass
802.11n (HT20)	MIMO	5180	/	/	16.68	<=23.98	Pass
		5200	/	/	16.61	<=23.98	Pass
		5240	/	/	16.91	<=23.98	Pass
802.11n (HT40)	MIMO	5190	/	/	16.94	<=23.98	Pass
		5230	/	/	17.07	<=23.98	Pass
802.11ac (VHT20)	MIMO	5180	/	/	17.09	<=23.98	Pass
		5200	/	/	16.80	<=23.98	Pass
		5240	/	/	17.08	<=23.98	Pass
802.11ac (VHT40)	MIMO	5190	/	/	16.96	<=23.98	Pass
		5230	/	/	17.16	<=23.98	Pass
802.11ac (VHT80)	MIMO	5210	/	/	16.38	<=23.98	Pass
802.11ax (HEW20)	MIMO	5180	RU242	Left	17.05	<=23.98	Pass
		5200	RU242	Left	16.65	<=23.98	Pass
		5240	RU242	Left	17.01	<=23.98	Pass
802.11ax (HEW40)	MIMO	5190	RU484	Left	17.04	<=23.98	Pass
		5230	RU484	Left	17.25	<=23.98	Pass
802.11ax (HEW80)	MIMO	5210	RU996	Left	16.52	<=23.98	Pass
Note: For U-NII-1: Antenna 1 gain: 3.3dBi, Antenna 2 gain: 2.6dBi, Correlated antenna gain=5.97dBi.							

WiFi module (Samsung S621) ANT1+ ANT2 MIMO

U-NII-3:

Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum Average Conducted Output Power (dBm)		Verdict
					Total	Limit	
802.11a	MIMO	5745	/	/	18.79	<=28.64	Pass
		5785	/	/	18.68	<=28.64	Pass
		5825	/	/	18.66	<=28.64	Pass
802.11n (HT20)	MIMO	5745	/	/	18.92	<=28.64	Pass
		5785	/	/	18.85	<=28.64	Pass
		5825	/	/	18.98	<=28.64	Pass
802.11n (HT40)	MIMO	5755	/	/	19.01	<=28.64	Pass
		5795	/	/	19.05	<=28.64	Pass
802.11ac (VHT20)	MIMO	5745	/	/	18.91	<=28.64	Pass
		5785	/	/	18.94	<=28.64	Pass
		5825	/	/	18.95	<=28.64	Pass
802.11ac (VHT40)	MIMO	5755	/	/	19.03	<=28.64	Pass
		5795	/	/	19.13	<=28.64	Pass
802.11ac (VHT80)	MIMO	5775	/	/	18.29	<=28.64	Pass
802.11ax (HEW20)	MIMO	5745	RU242	Left	19.03	<=28.64	Pass
		5785	RU242	Left	19.00	<=28.64	Pass
		5825	RU242	Left	19.02	<=28.64	Pass
802.11ax (HEW40)	MIMO	5755	RU484	Left	19.18	<=28.64	Pass
		5795	RU484	Left	19.35	<=28.64	Pass
802.11ax (HEW80)	MIMO	5775	RU996	Left	18.49	<=28.64	Pass
Note: For U-NII-3: Antenna 1 gain: 3.4dBi, Antenna 2 gain: 5.2dBi, Correlated antenna gain=7.36dBi. Limit= 30-(7.36-6)=30-1.36=28.64							

WiFi module 1 (Samsung S621) +WiFi Module 2 (AMPAK AP6275PR3) MIMO

U-NII-1:

Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum Average Conducted Output Power (dBm)		Verdict
					Total	Limit	
802.11a	MIMO	5180	/	/	21.22	<=23.98	Pass
		5200	/	/	20.24	<=23.98	Pass
		5240	/	/	20.06	<=23.98	Pass
802.11n (HT20)	MIMO	5180	/	/	20.93	<=23.98	Pass
		5200	/	/	20.61	<=23.98	Pass
		5240	/	/	20.47	<=23.98	Pass
802.11n (HT40)	MIMO	5190	/	/	19.75	<=23.98	Pass
		5230	/	/	19.66	<=23.98	Pass
802.11ac (VHT20)	MIMO	5180	/	/	21.57	<=23.98	Pass
		5200	/	/	20.71	<=23.98	Pass
		5240	/	/	20.56	<=23.98	Pass
802.11ac (VHT40)	MIMO	5190	/	/	19.89	<=23.98	Pass
		5230	/	/	19.84	<=23.98	Pass
802.11ac (VHT80)	MIMO	5210	/	/	19.24	<=23.98	Pass
802.11ax (HEW20)	MIMO	5180	RU242	Left	21.61	<=23.98	Pass
		5200	RU242	Left	21.07	<=23.98	Pass
		5240	RU242	Left	21.00	<=23.98	Pass
802.11ax (HEW40)	MIMO	5190	RU484	Left	20.98	<=23.98	Pass
		5230	RU484	Left	21.08	<=23.98	Pass
802.11ax (HEW80)	MIMO	5210	RU996	Left	20.64	<=23.98	Pass
Note: For U-NII-1: WiFi module 1 gain: 5.97dBi, WiFi module 2 gain:5.46dBi, Uncorrelated antenna gain=5.72dBi.							

WiFi module 1 (Samsung S621) +WiFi Module 2 (AMPAK AP6275PR3) MIMO

U-NII-3:

Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum Average Conducted Output Power (dBm)		Verdict
					Total	Limit	
802.11a	MIMO	5745	/	/	21.95	<=28.73	Pass
		5785	/	/	22.11	<=28.73	Pass
		5825	/	/	22.03	<=28.73	Pass
802.11n (HT20)	MIMO	5745	/	/	22.50	<=28.73	Pass
		5785	/	/	22.54	<=28.73	Pass
		5825	/	/	22.62	<=28.73	Pass
802.11n (HT40)	MIMO	5755	/	/	21.60	<=28.73	Pass
		5795	/	/	21.83	<=28.73	Pass
802.11ac (VHT20)	MIMO	5745	/	/	22.54	<=28.73	Pass
		5785	/	/	22.52	<=28.73	Pass
		5825	/	/	22.59	<=28.73	Pass
802.11ac (VHT40)	MIMO	5755	/	/	21.93	<=28.73	Pass
		5795	/	/	22.28	<=28.73	Pass
802.11ac (VHT80)	MIMO	5775	/	/	21.35	<=28.73	Pass
802.11ax (HEW20)	MIMO	5745	RU242	Left	22.65	<=28.73	Pass
		5785	RU242	Left	22.63	<=28.73	Pass
		5825	RU242	Left	22.63	<=28.73	Pass
802.11ax (HEW40)	MIMO	5755	RU484	Left	22.45	<=28.73	Pass
		5795	RU484	Left	22.74	<=28.73	Pass
802.11ax (HEW80)	MIMO	5775	RU996	Left	21.88	<=28.73	Pass

Note: For U-NII-3: WiFi module 1 gain: 7.36dBi, WiFi module 2 gain: 7.18dBi,Uncorrelated antenna gain=7.27dBi.

Limit= 30-(7.27-6)=30-1.27=28.73

Antenna 3:

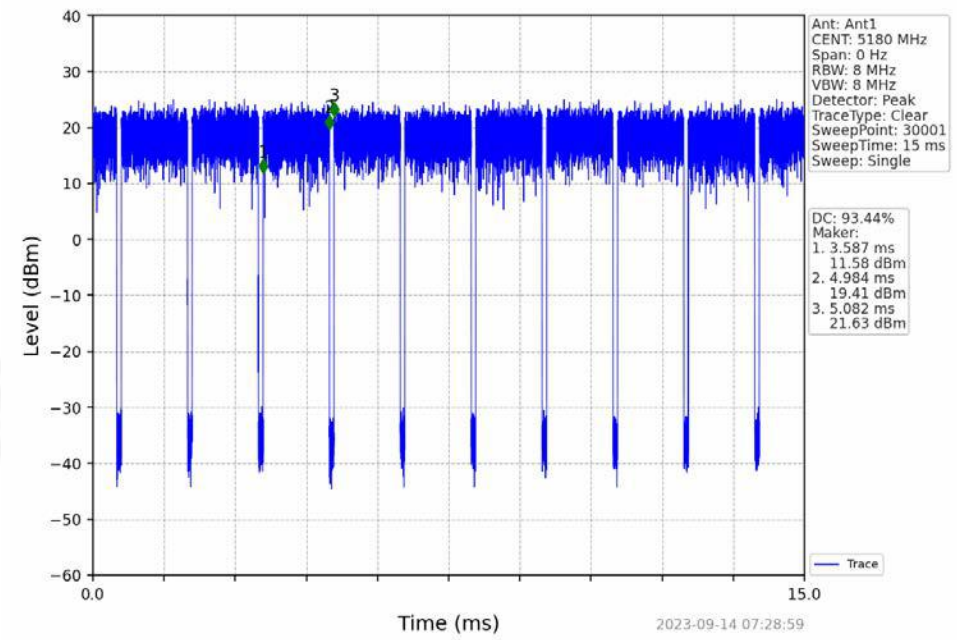
Duty Cycle:

Ant3									
Mode	TX Type	Frequency (MHz)	RU	RU Pos	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11a	SISO	5180	/	/	1.396	1.494	93.44	0.29	0.03
		5200	/	/	1.396	1.495	93.38	0.30	0.03
		5240	/	/	1.395	1.494	93.37	0.30	0.00
		5745	/	/	1.396	1.495	93.38	0.30	0.03
		5785	/	/	1.396	1.495	93.38	0.30	0.03
		5825	/	/	1.396	1.495	93.38	0.30	0.00
802.11n (HT20)	SISO	5180	/	/	1.308	1.407	92.96	0.32	0.03
		5200	/	/	1.308	1.407	92.96	0.32	0.03
		5240	/	/	1.309	1.407	93.03	0.31	0.03
		5745	/	/	1.311	1.407	93.18	0.31	0.03
		5785	/	/	1.308	1.407	92.96	0.32	0.03
		5825	/	/	1.307	1.406	92.96	0.32	0.03
802.11n (HT40)	SISO	5190	/	/	0.648	0.747	86.75	0.62	0.04
		5230	/	/	0.654	0.747	87.55	0.58	0.11
		5755	/	/	0.654	0.747	87.55	0.58	0.04
		5795	/	/	0.648	0.747	86.75	0.62	0.07
802.11ax (HEW20)	SISO	5180	RU242	Left	1.021	1.120	91.16	0.40	0.03
802.11ac (VHT20)	SISO	5180	/	/	1.316	1.415	93.00	0.32	0.03
		5200	/	/	1.316	1.415	93.00	0.32	0.03
802.11ax (HEW20)	SISO	5200	RU242	Left	1.024	1.118	91.59	0.38	0.11
802.11ac (VHT20)	SISO	5240	/	/	1.316	1.415	93.00	0.32	0.03
802.11ax (HEW20)	SISO	5240	RU242	Left	1.021	1.120	91.16	0.40	0.03
		5745	RU242	Left	1.021	1.120	91.16	0.40	0.03
802.11ac (VHT20)	SISO	5745	/	/	1.316	1.415	93.00	0.32	0.03
802.11ax (HEW20)	SISO	5785	RU242	Left	1.023	1.119	91.42	0.39	0.03
802.11ac (VHT20)	SISO	5785	/	/	1.316	1.415	93.00	0.32	0.03

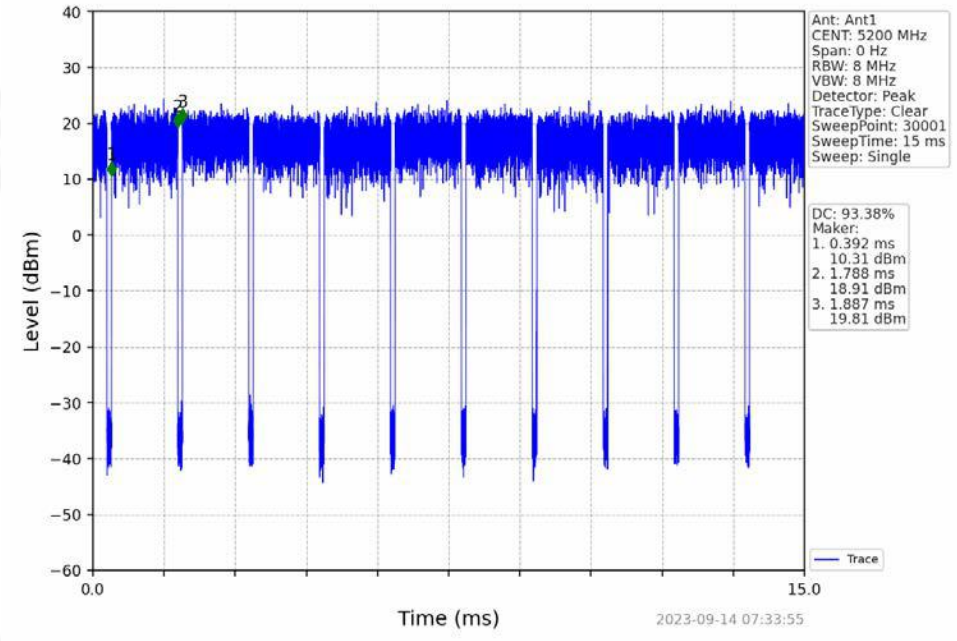
802.11ax (HEW20)	SISO	5825	RU242	Left	1.021	1.120	91.16	0.40	0.03
802.11ac (VHT20)	SISO	5825	/	/	1.319	1.415	93.22	0.31	0.03
802.11ax (HEW40)	SISO	5190	RU484	Left	0.543	0.640	84.84	0.71	0.03
802.11ac (VHT40)	SISO	5190	/	/	0.656	0.755	86.89	0.61	0.04
		5230	/	/	0.656	0.755	86.89	0.61	0.04
802.11ax (HEW40)	SISO	5230	RU484	Left	0.544	0.640	85.00	0.71	0.03
		5755	RU484	Left	0.544	0.640	85.00	0.71	0.03
802.11ac (VHT40)	SISO	5755	/	/	0.662	0.755	87.68	0.57	0.07
		5795	/	/	0.477	0.576	82.81	0.82	4.10
802.11ax (HEW40)	SISO	5795	RU484	Left	0.544	0.640	85.00	0.71	0.03
802.11ax (HEW80)	SISO	5210	RU996	Left	0.291	0.390	74.62	1.27	0.03
802.11ac (VHT80)	SISO	5210	/	/	0.326	0.424	76.89	1.14	0.09
		5775	/	/	0.328	0.423	77.54	1.10	0.06
802.11ax (HEW80)	SISO	5775	RU996	Left	0.293	0.390	75.13	1.24	0.07

1.1.2 Test Graph

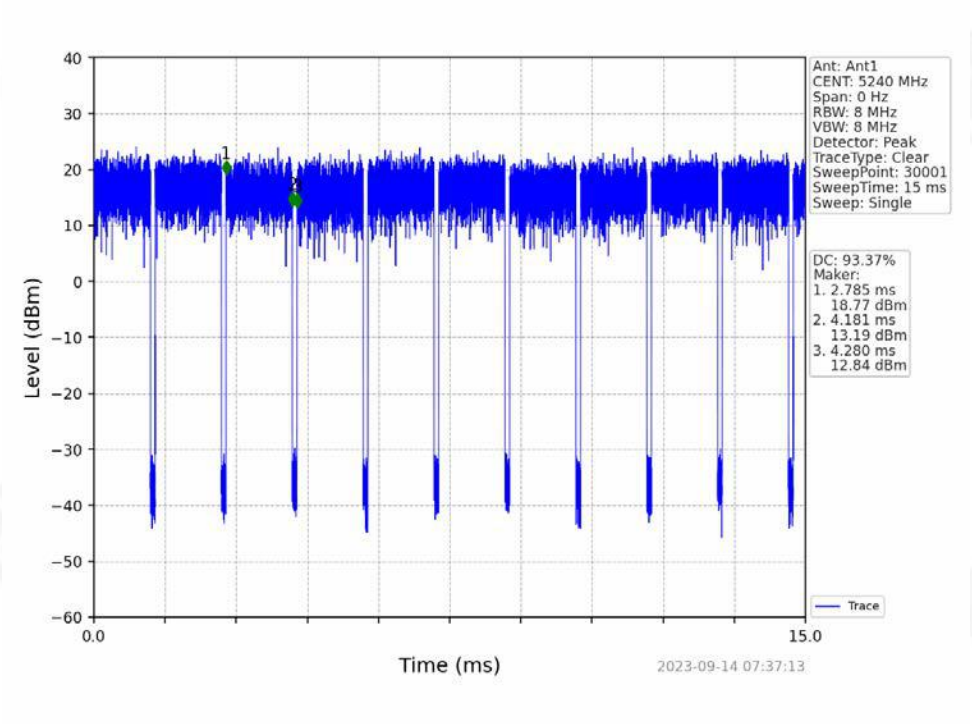
802.11a_LCH_5180MHz_NTNV



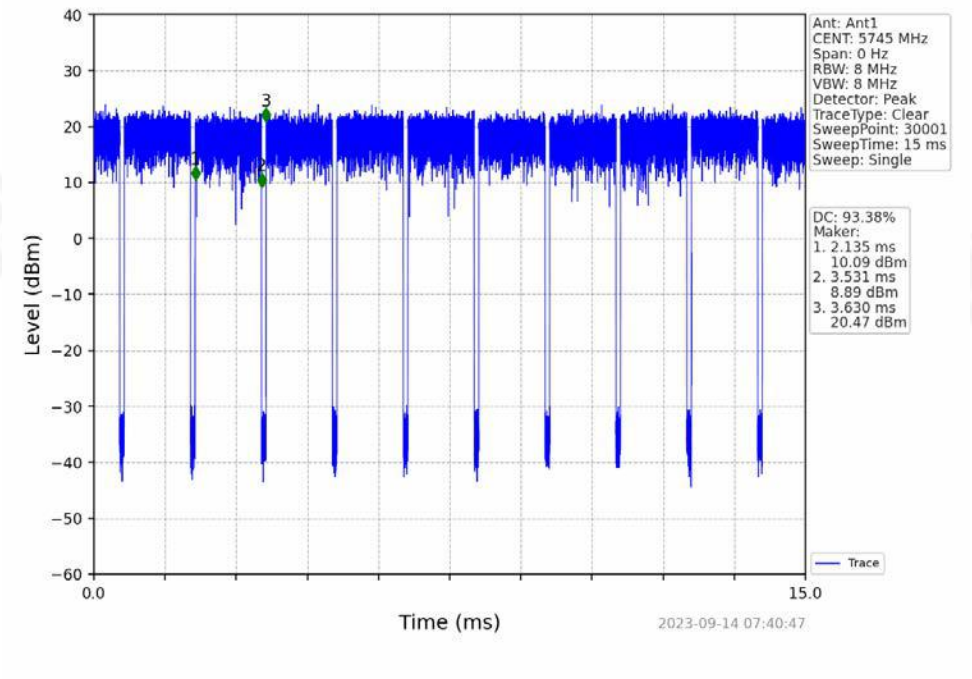
802.11a_MCH_5200MHz_NTNV



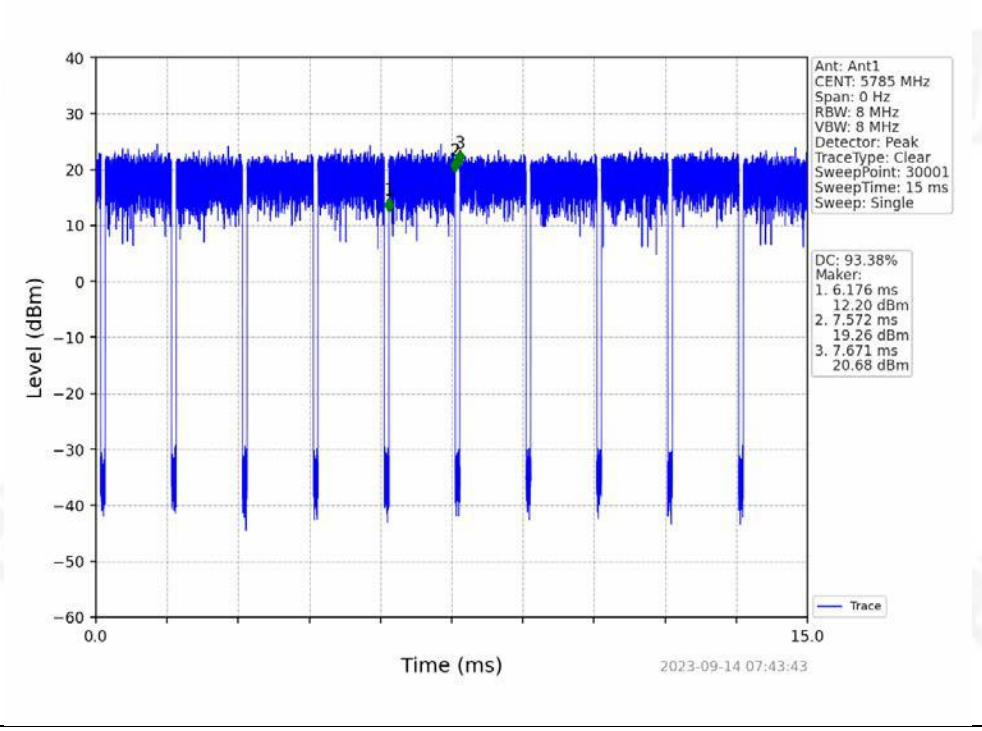
802.11a_HCH_5240MHz_NTNV



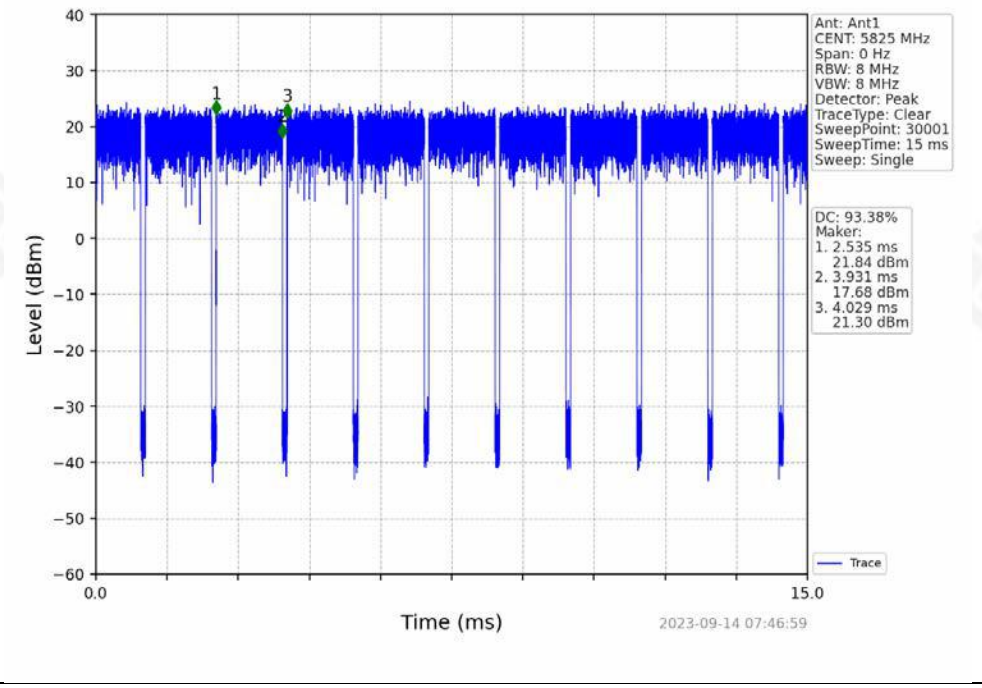
802.11a_LCH_5745MHz_NTNV



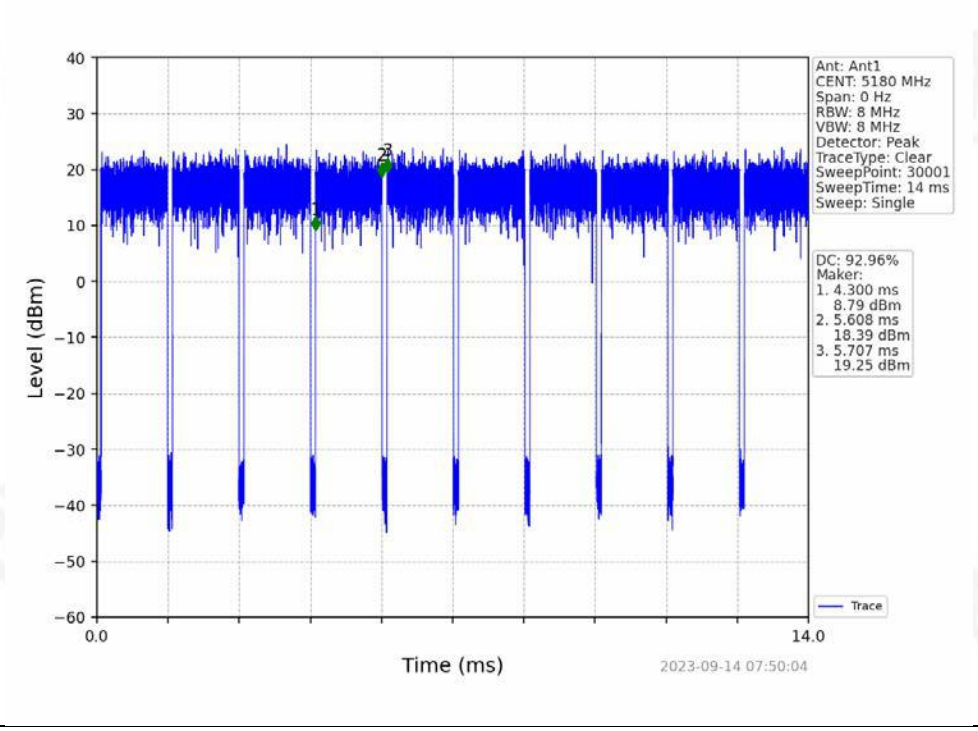
802.11a_MCH_5785MHz_NTNV



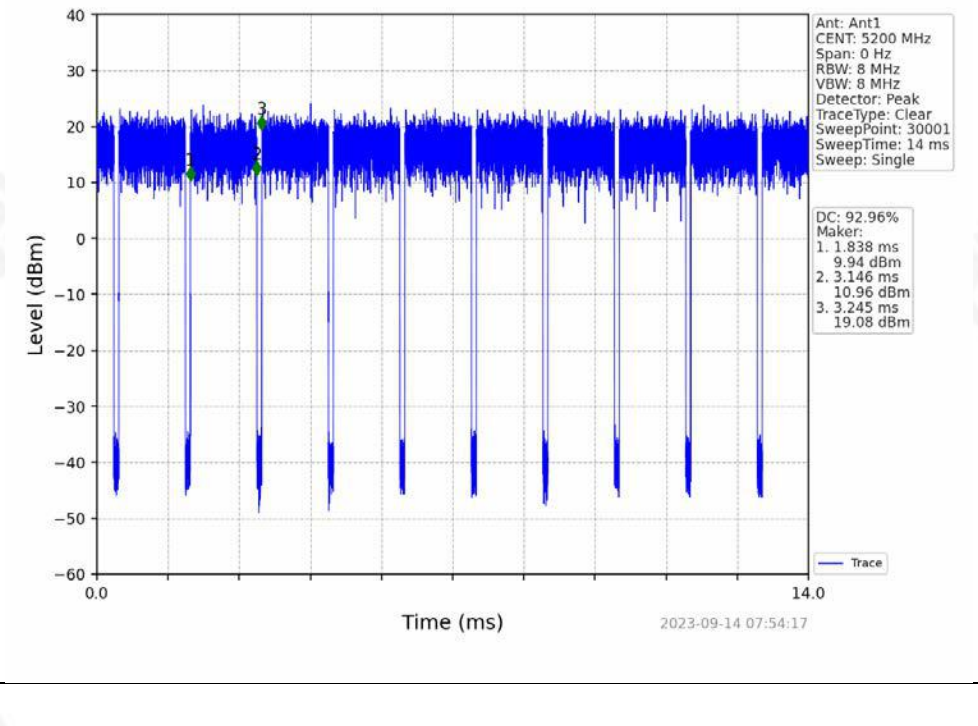
802.11a_HCH_5825MHz_NTNV



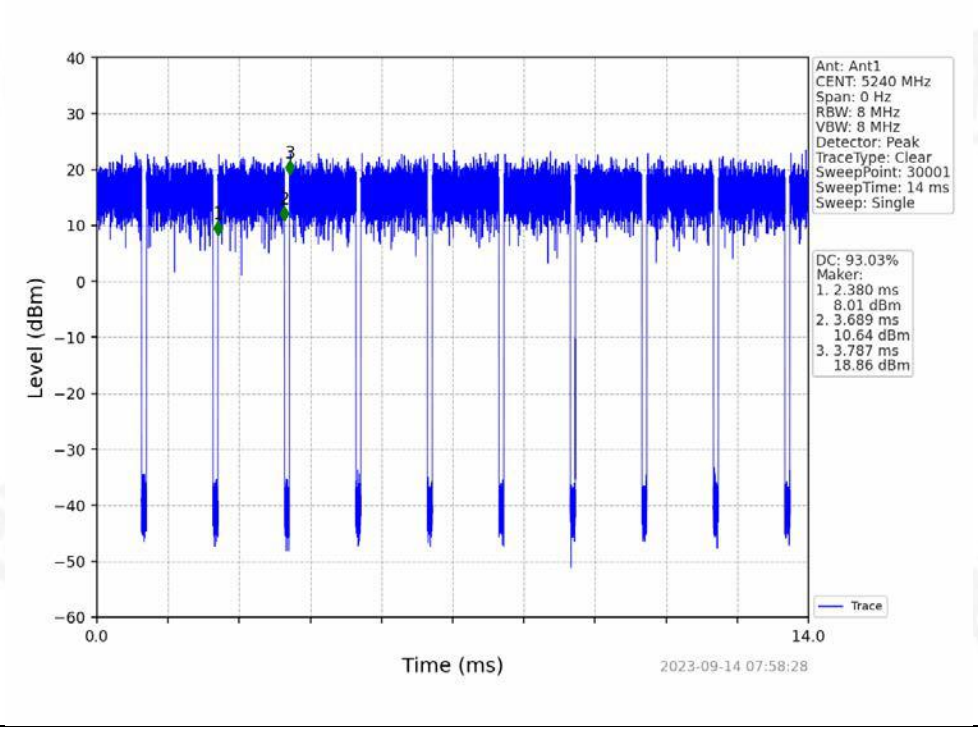
802.11n(HT20)_LCH_5180MHz_NTNV



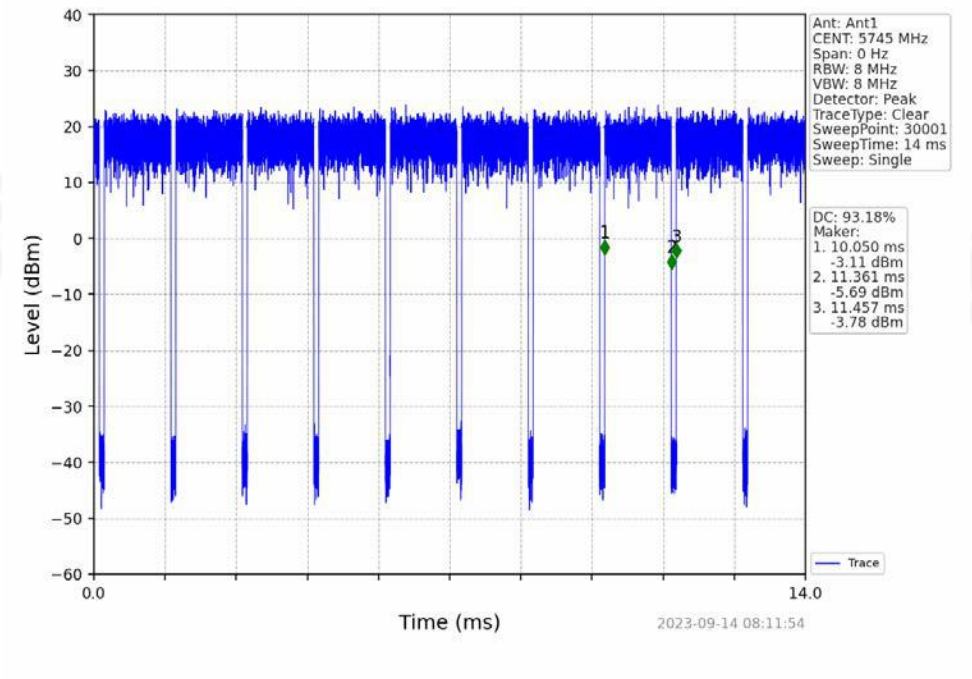
802.11n(HT20)_MCH_5200MHz_NTNV



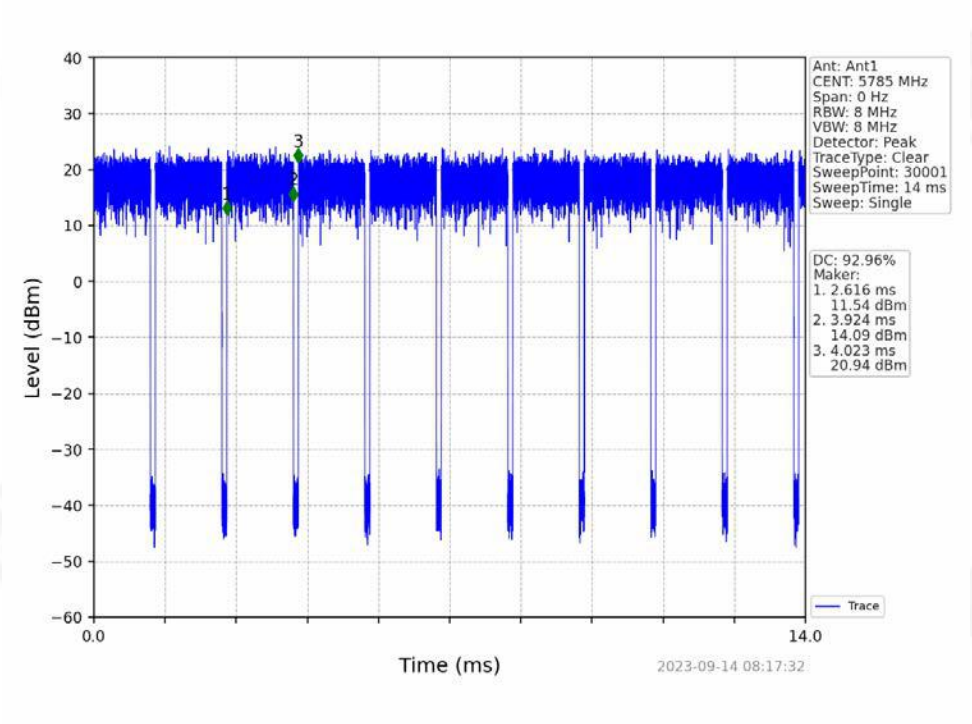
802.11n(HT20)_HCH_5240MHz_NTNV



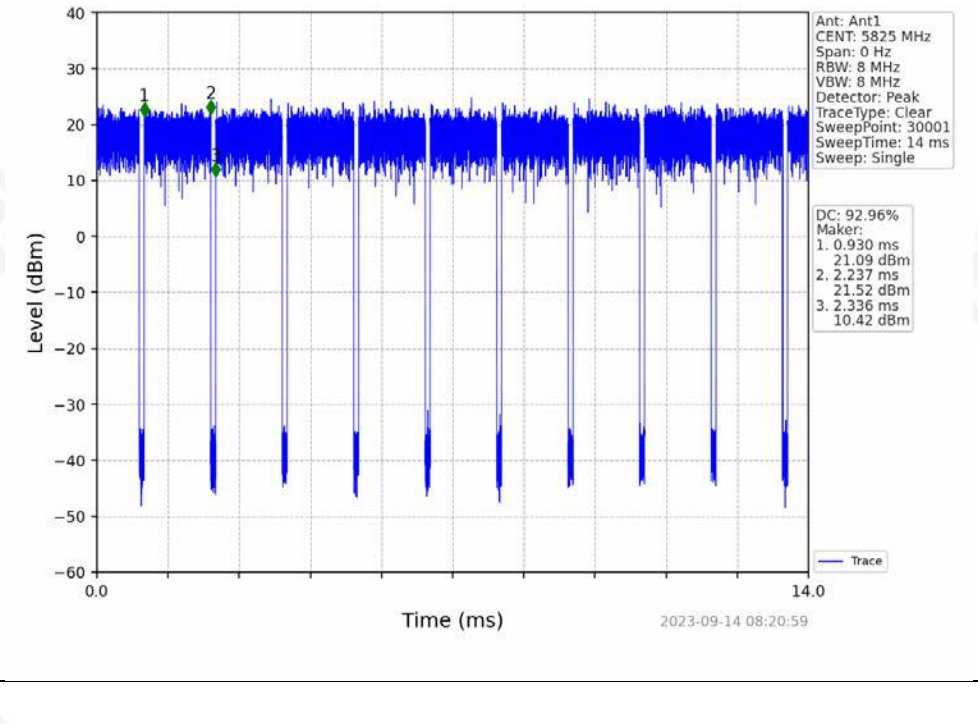
802.11n(HT20)_LCH_5745MHz_NTNV



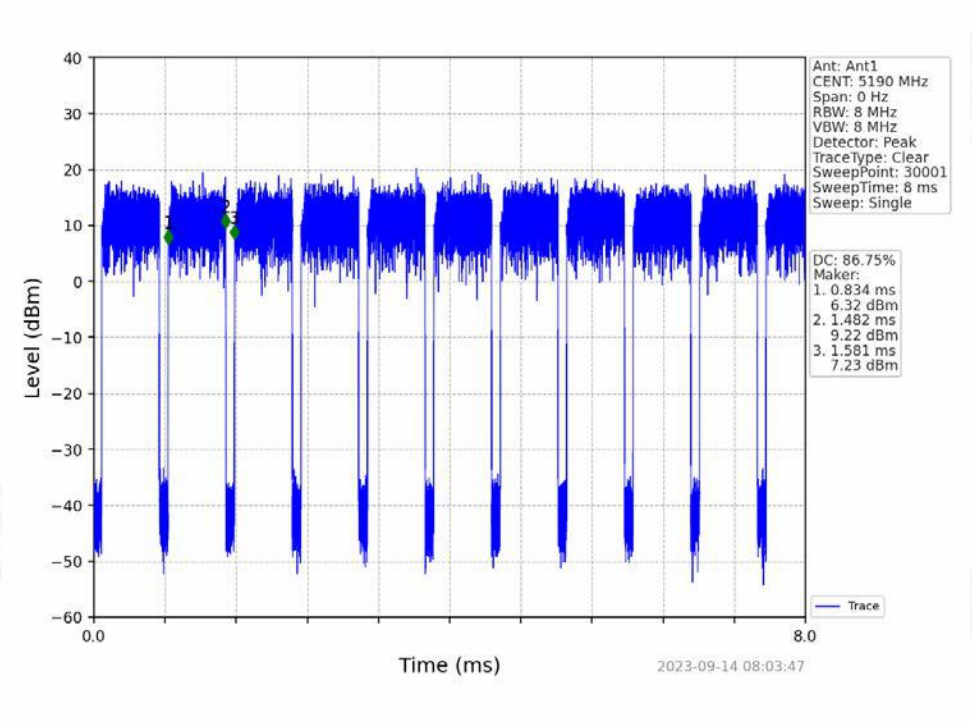
802.11n(HT20)_MCH_5785MHz_NTNV



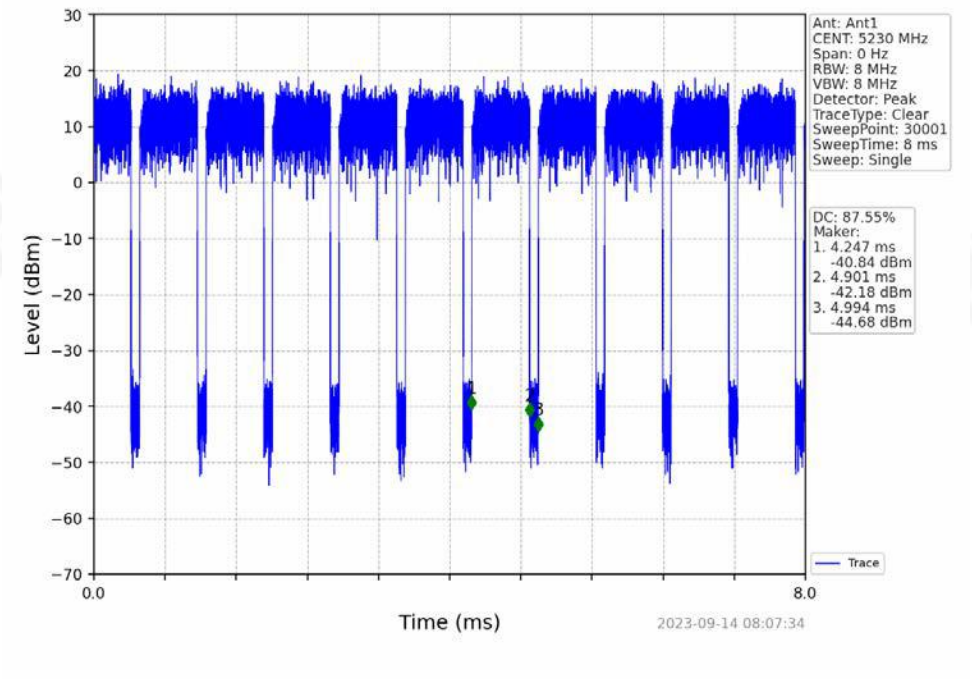
802.11n(HT20)_HCH_5825MHz_NTNV



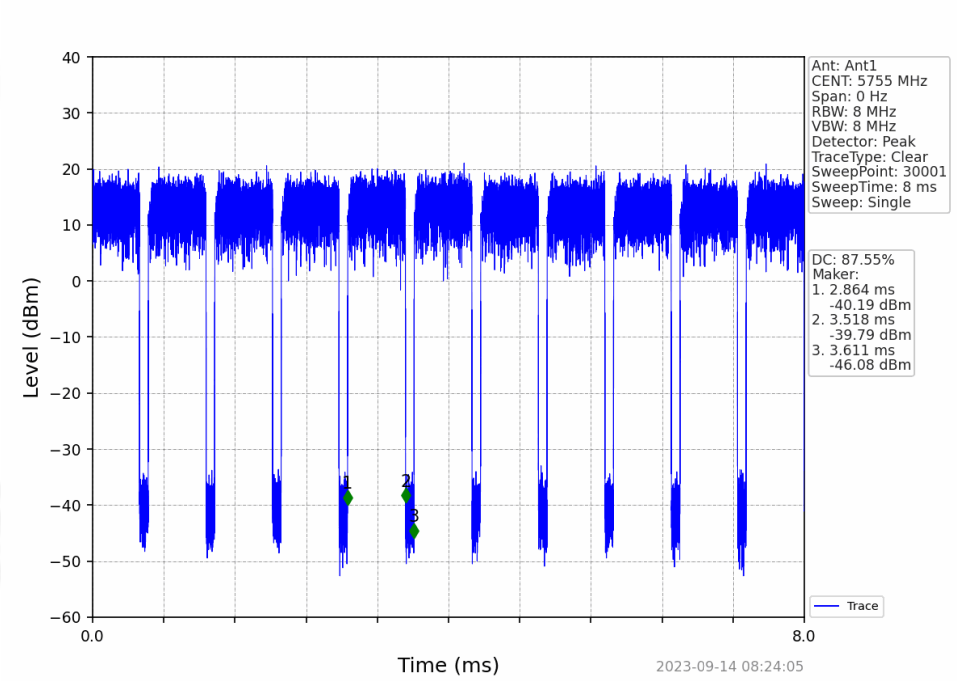
802.11n(HT40)_LCH_5190MHz_NTNV



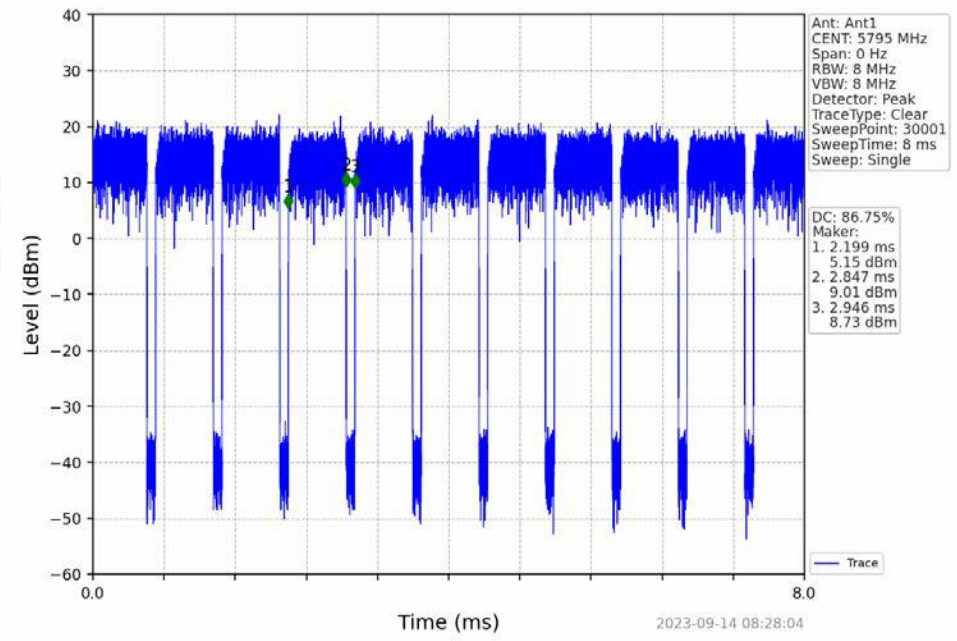
802.11n(HT40)_HCH_5230MHz_NTNV



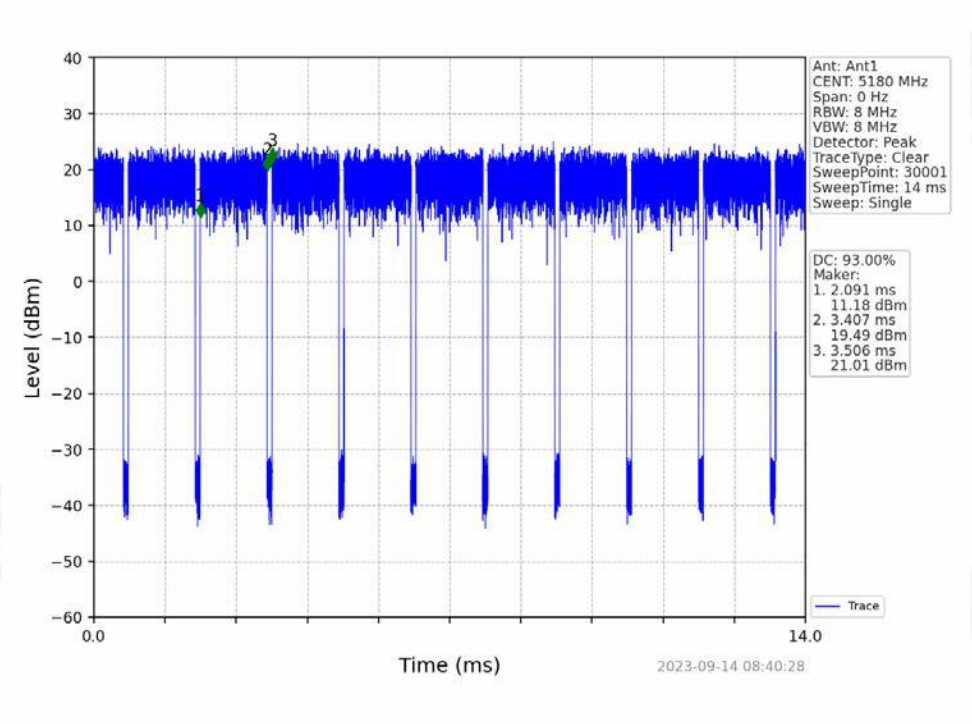
802.11n(HT40)_LCH_5755MHz_NTNV



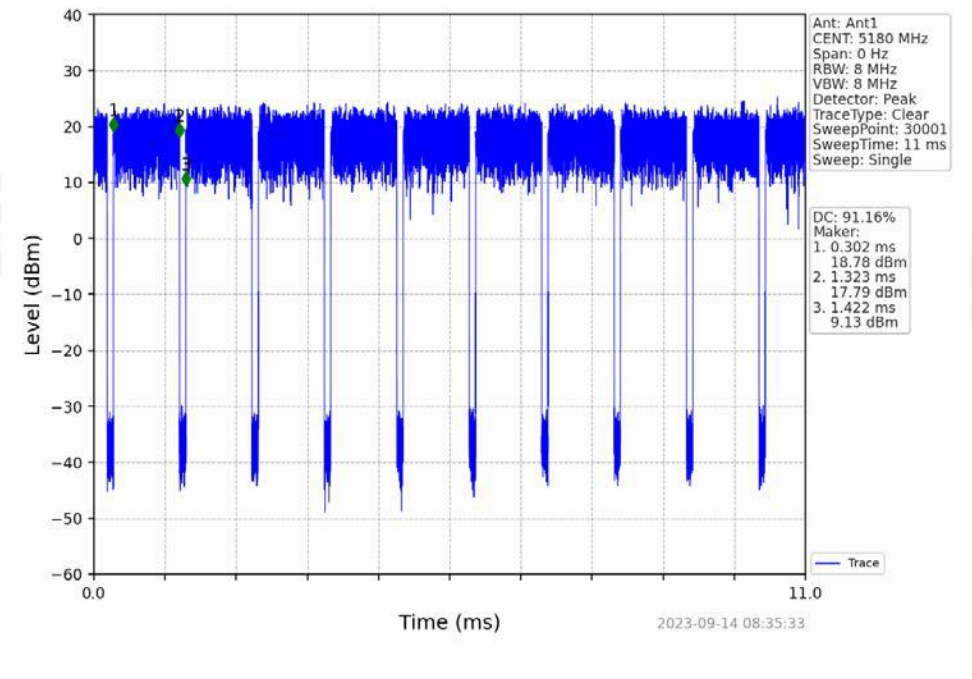
802.11n(HT40)_HCH_5795MHz_NTNV



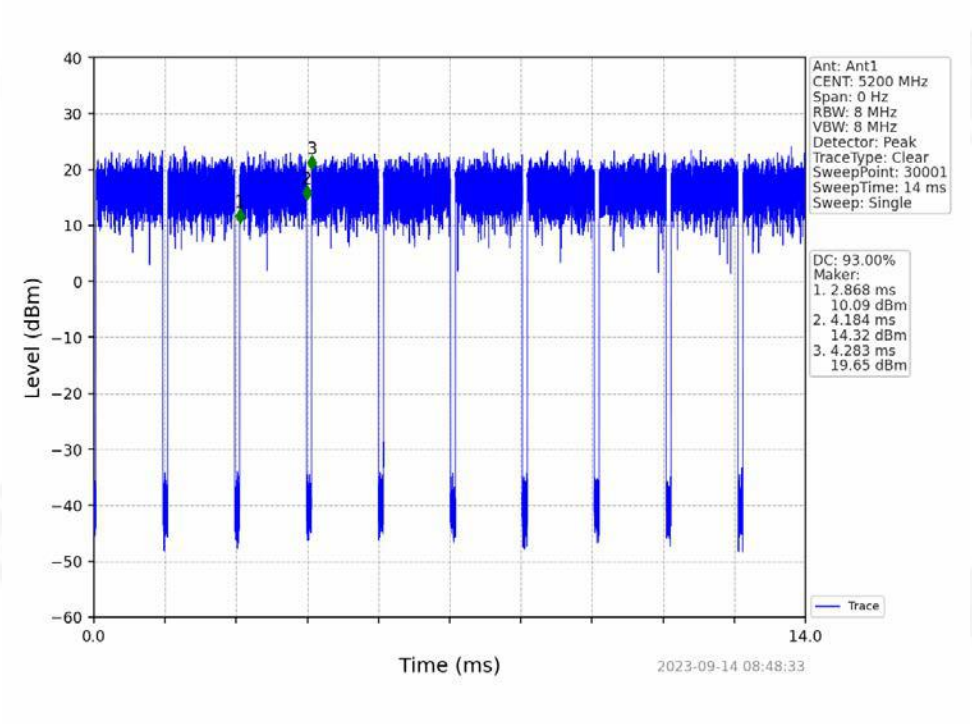
802.11ac(VHT20)_LCH_5180MHz_NTNV



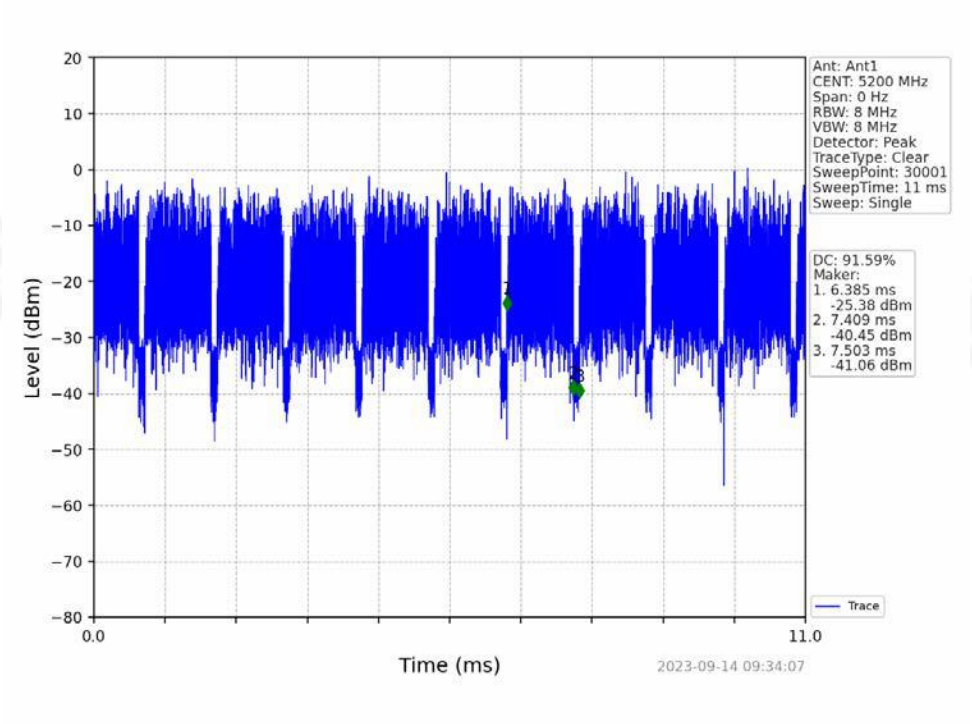
802.11ax(HEW20)_LCH_5180MHz_RU242_Left_NTNV



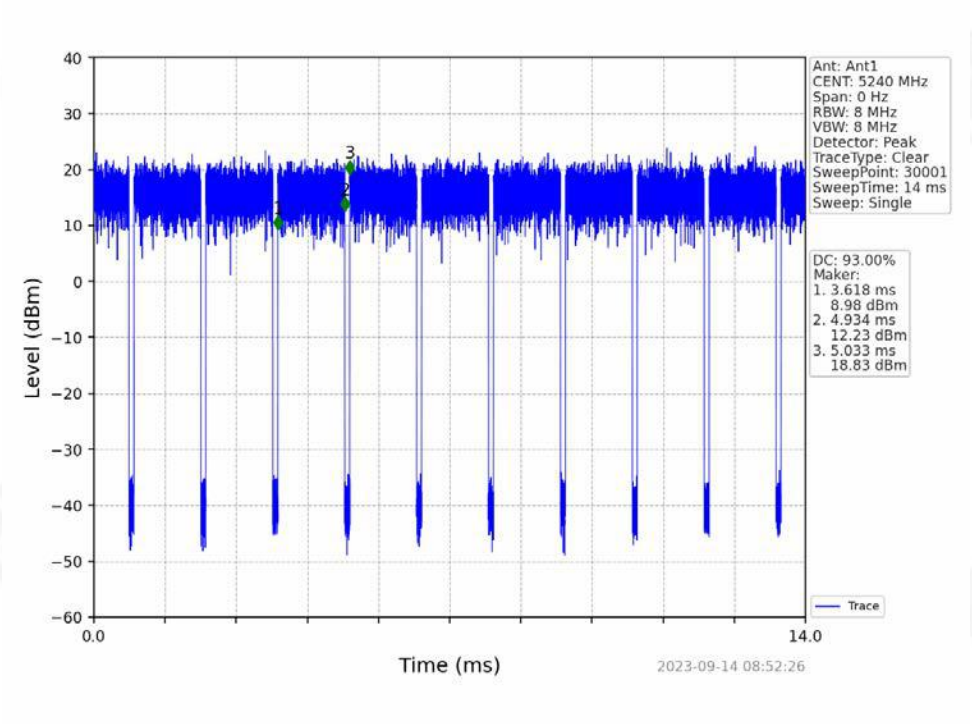
802.11ac(VHT20)_MCH_5200MHz_NTNV



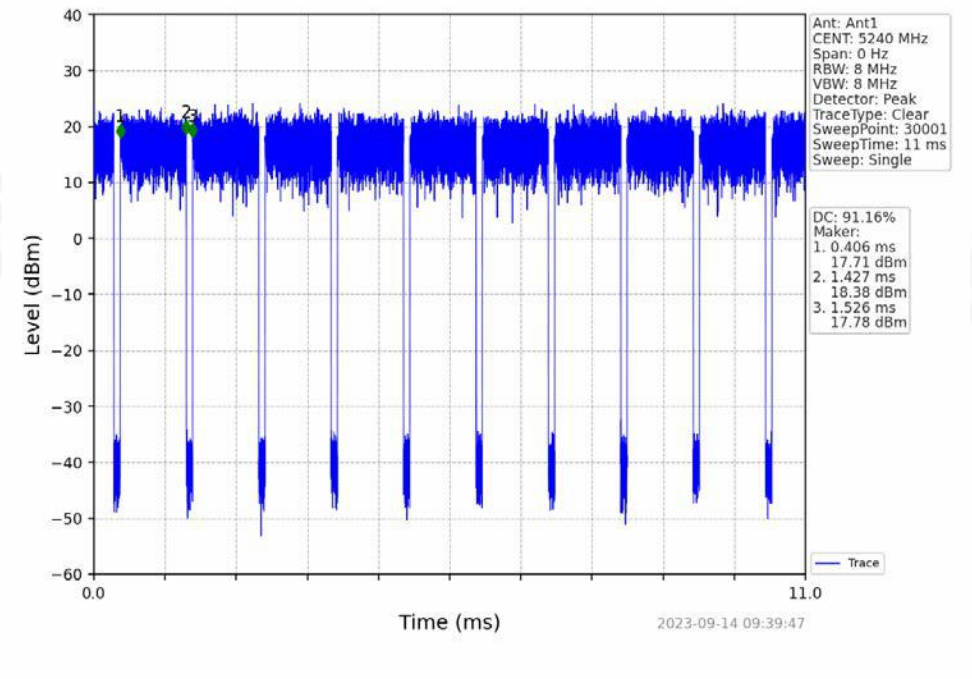
802.11ax(HEW20)_MCH_5200MHz_RU242_Left_NTNV



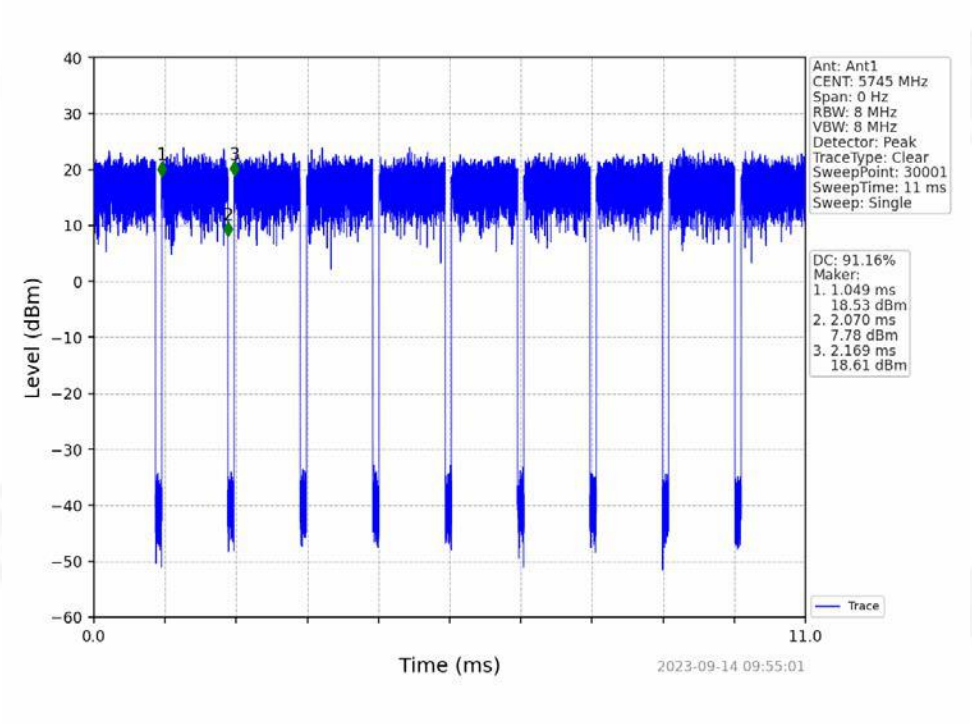
802.11ac(VHT20)_HCH_5240MHz_NTNV



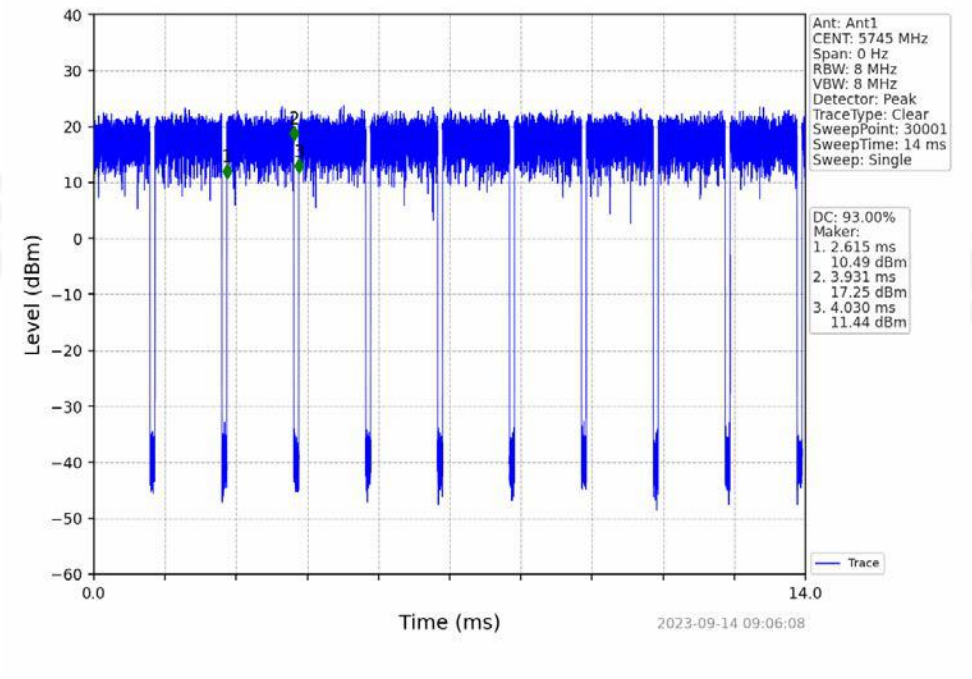
802.11ax(HEW20)_HCH_5240MHz_RU242_Left_NTNV



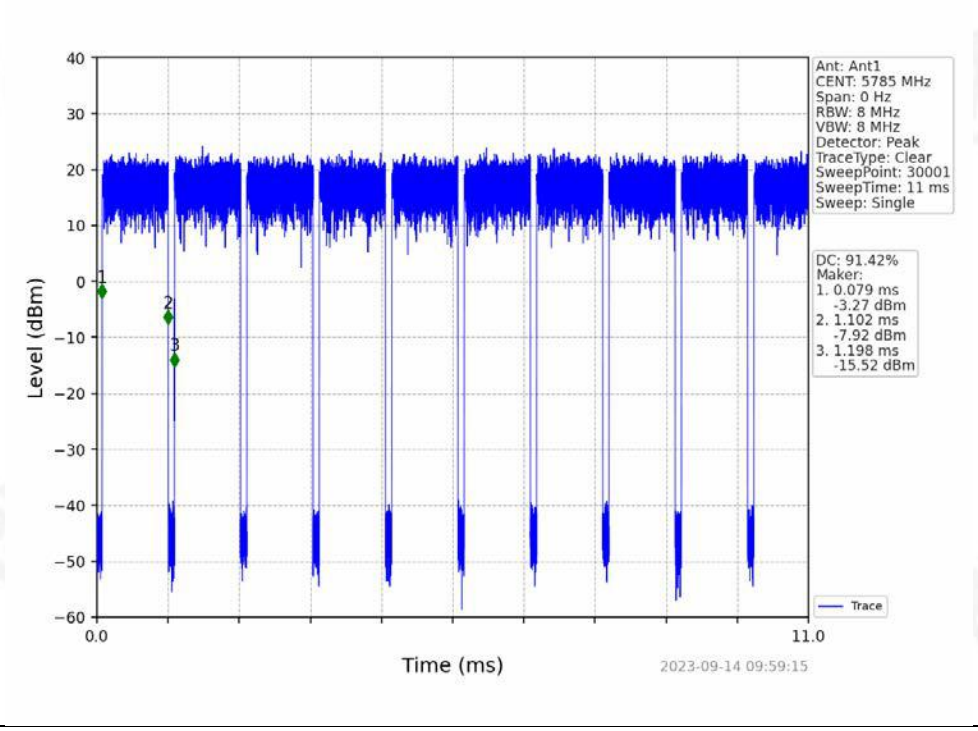
802.11ax(HEW20)_LCH_5745MHz_RU242_Left_NTNV



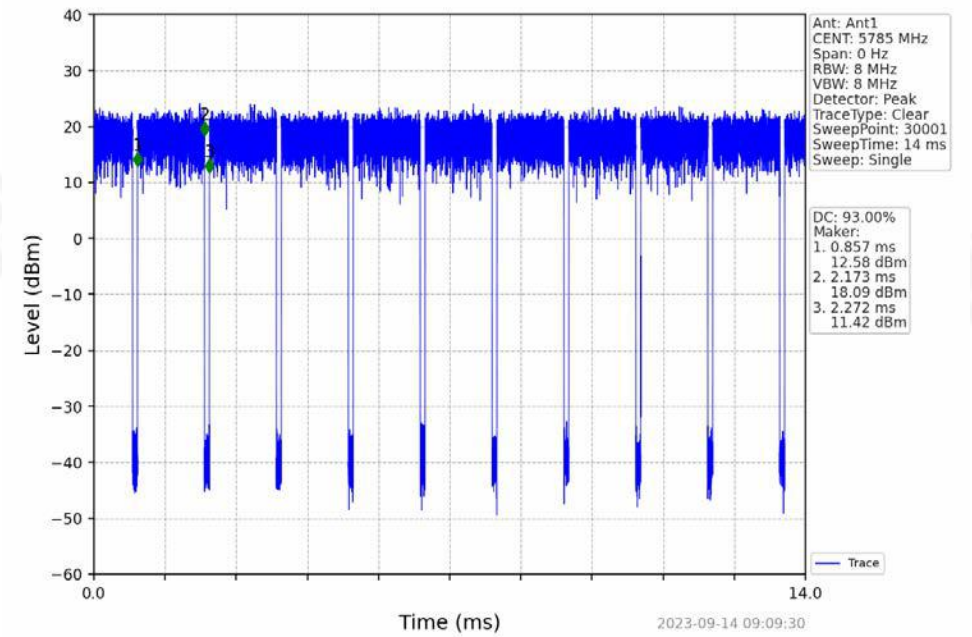
802.11ac(VHT20)_LCH_5745MHz_NTNV



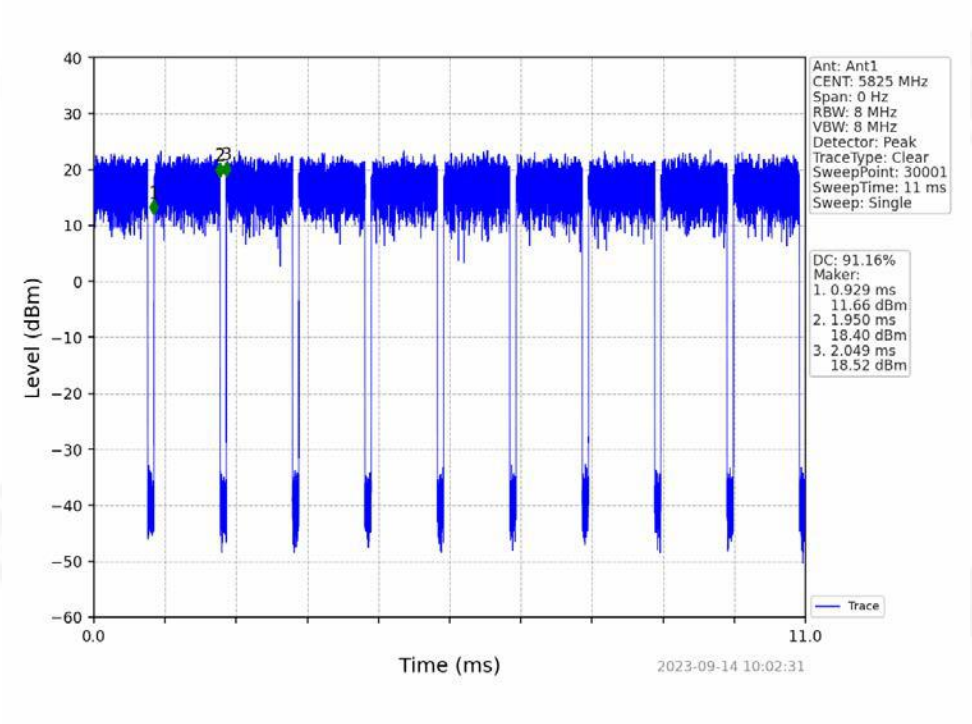
802.11ax(HEW20)_MCH_5785MHz_RU242_Left_NTNV



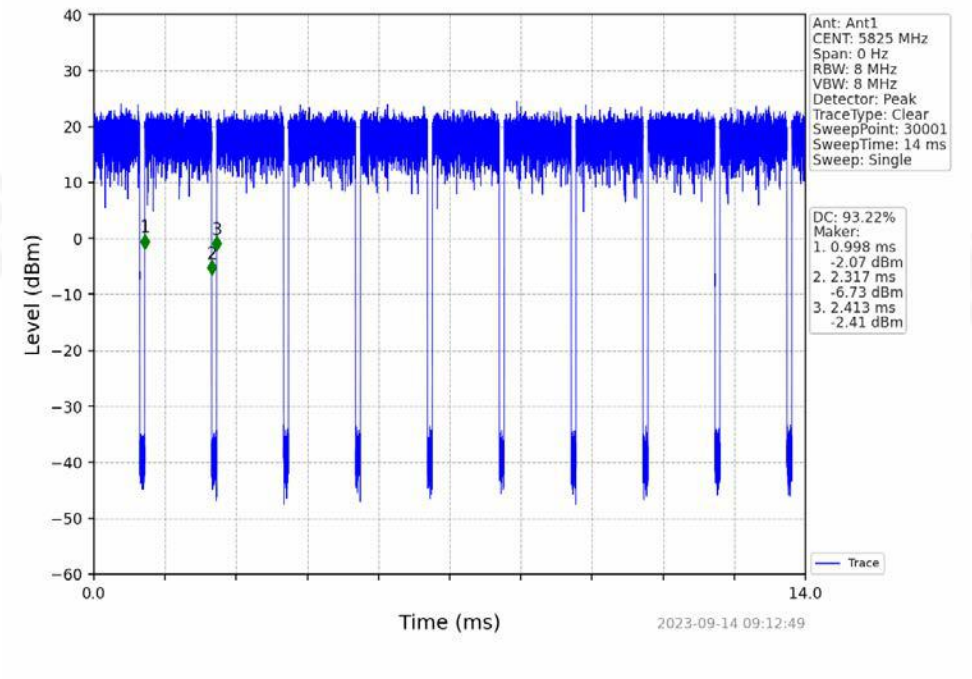
802.11ac(VHT20)_MCH_5785MHz_NTNV



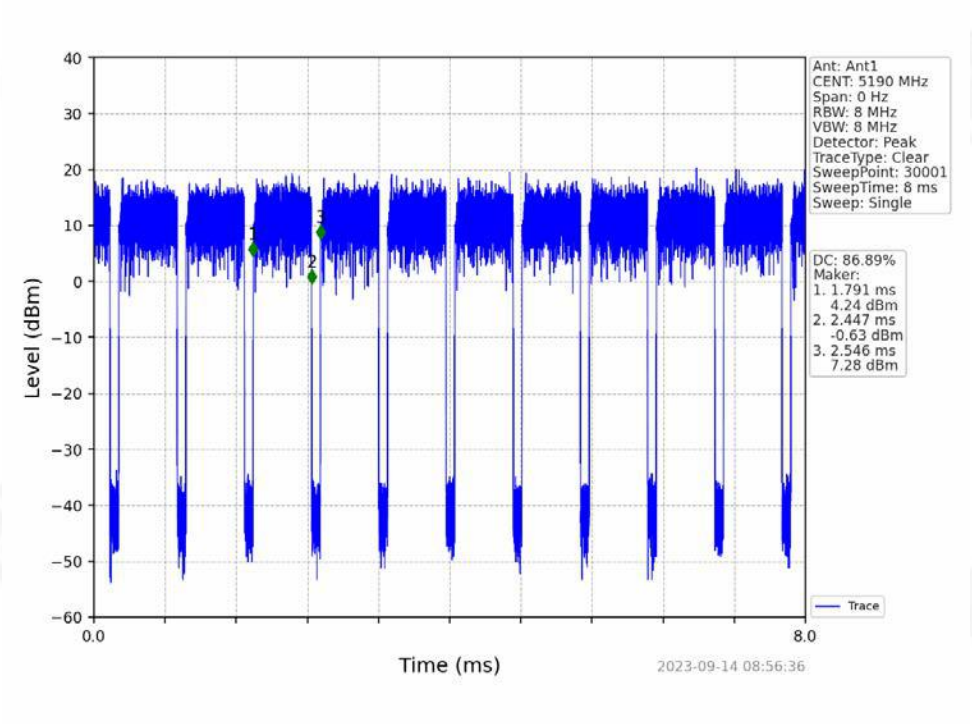
802.11ax(HEW20)_HCH_5825MHz_RU242_Left_NTNV



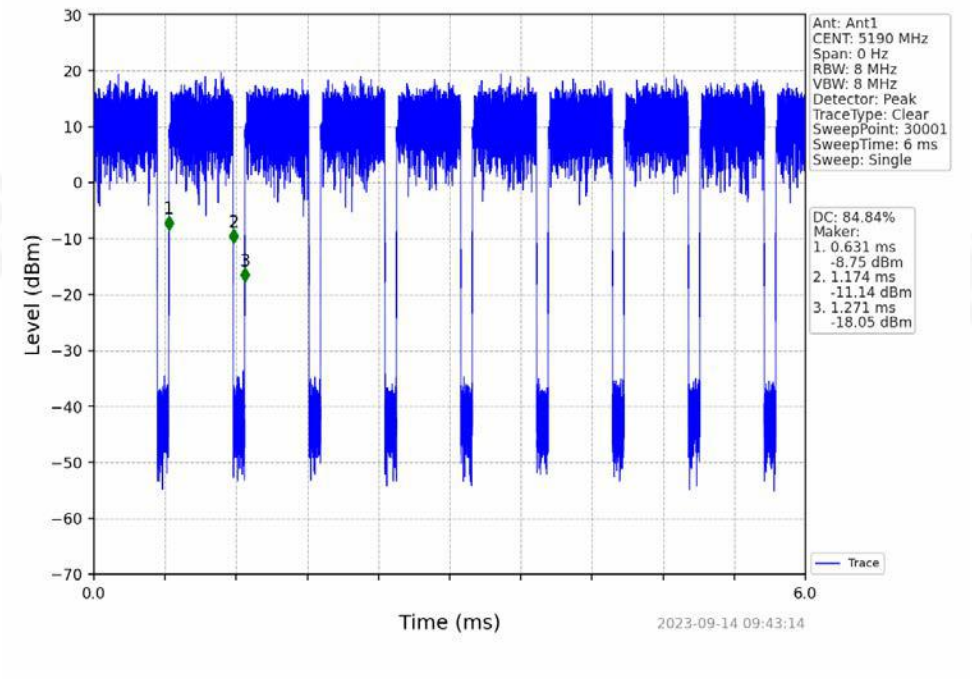
802.11ac(VHT20)_HCH_5825MHz_NTNV



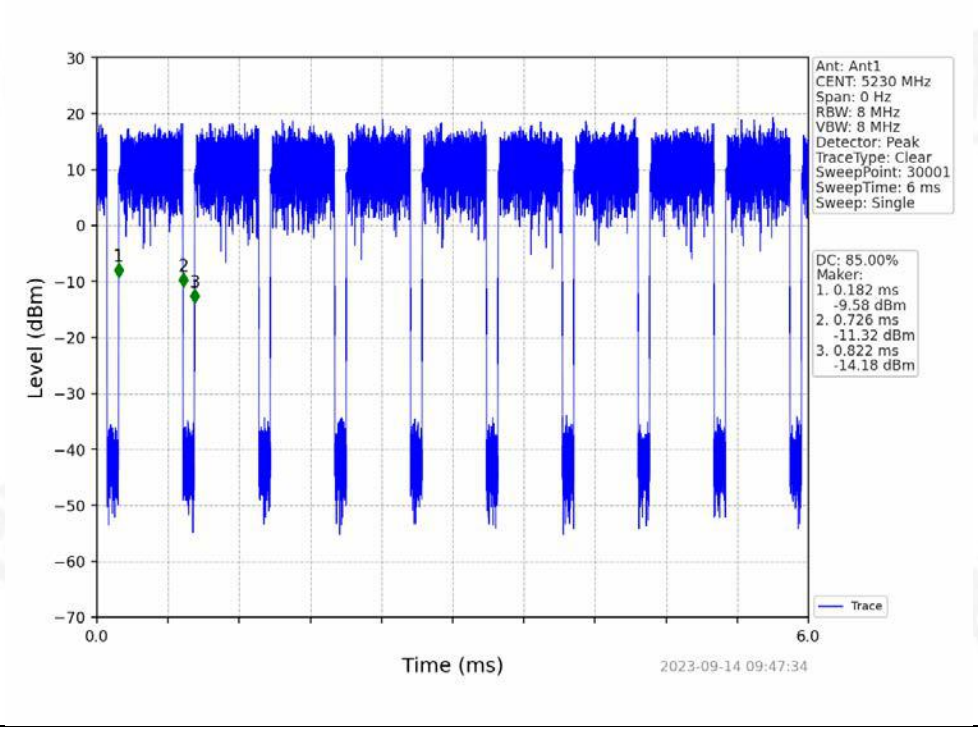
802.11ac(VHT40)_LCH_5190MHz_NTNV



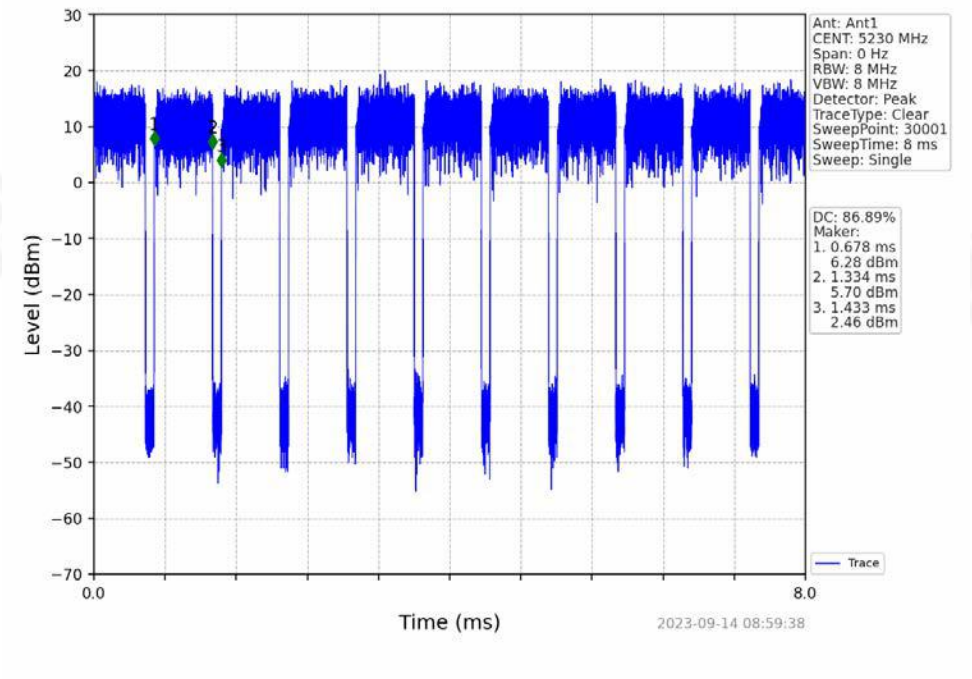
802.11ax(HEW40)_LCH_5190MHz_RU484_Left_NTNV



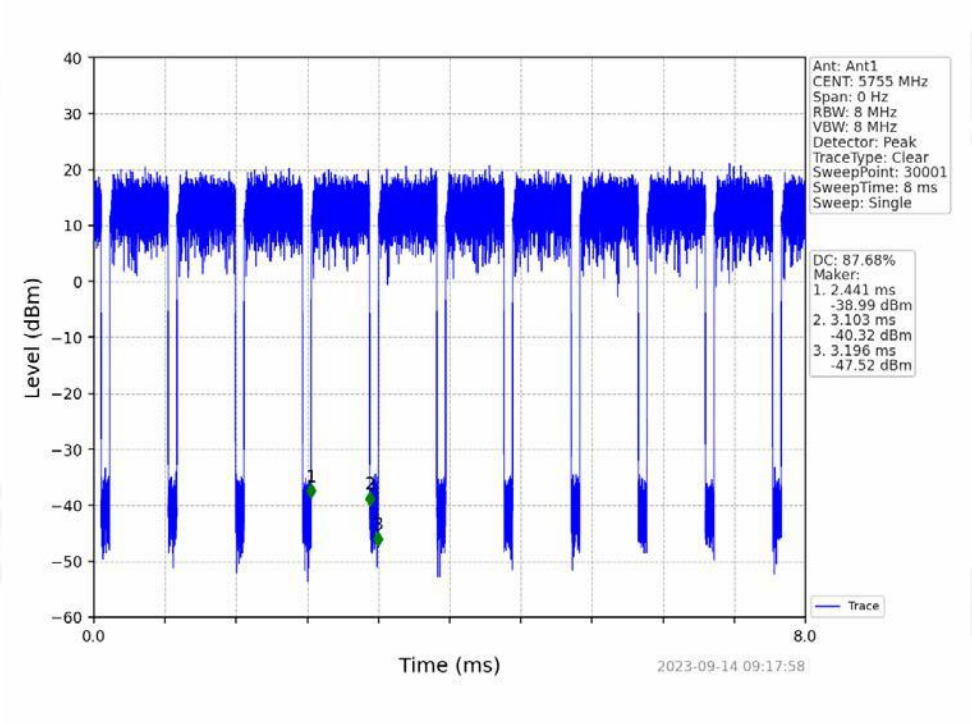
802.11ax(HEW40)_HCH_5230MHz_RU484_Left_NTNV



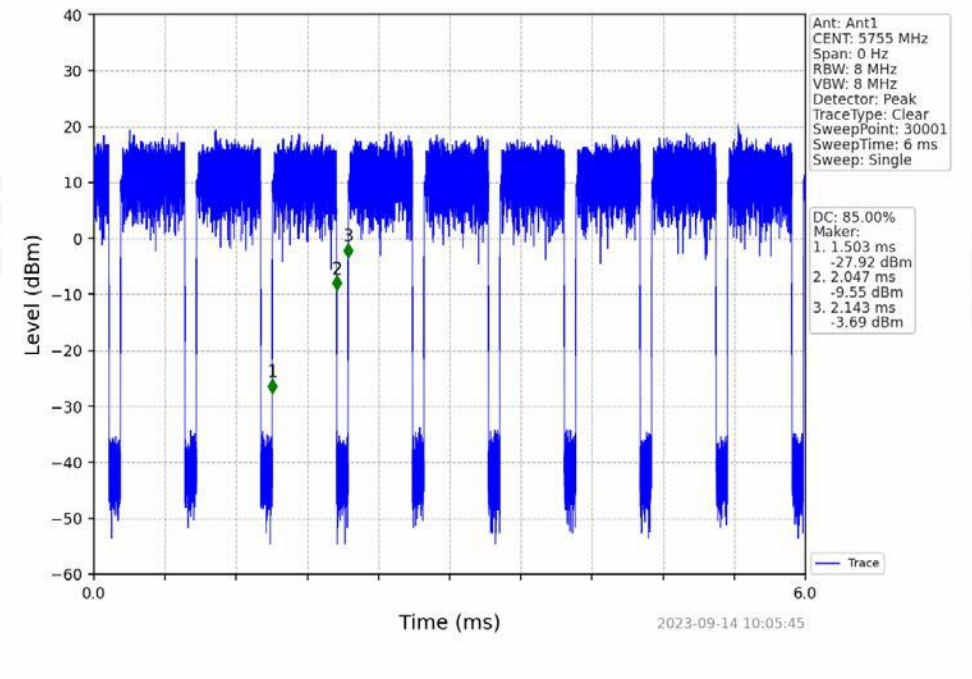
802.11ac(VHT40)_HCH_5230MHz_NTNV



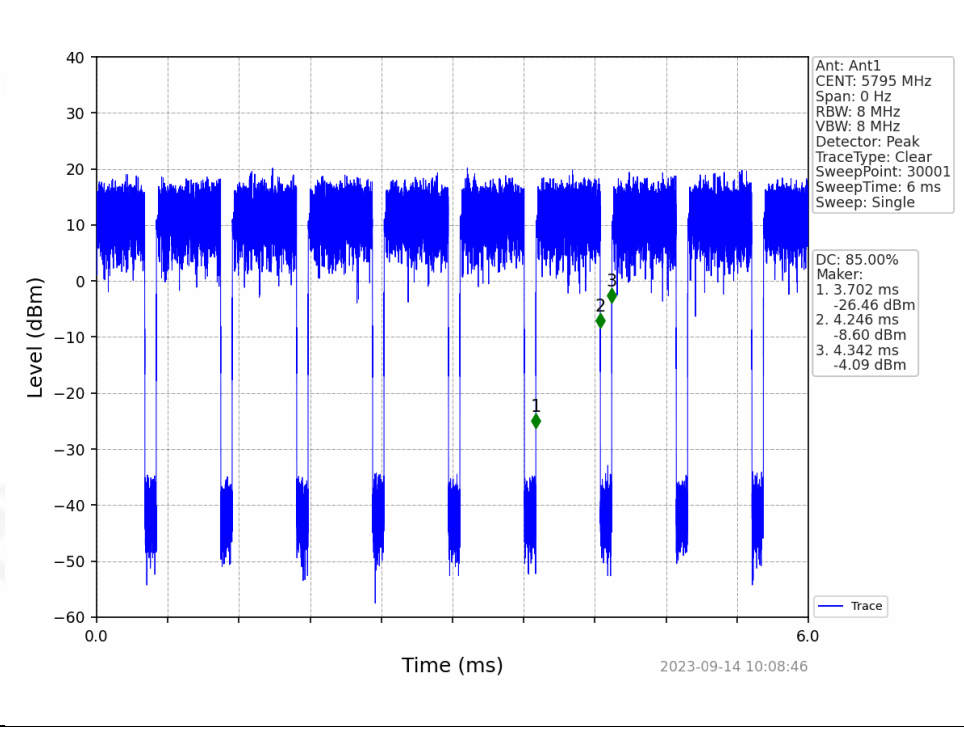
802.11ac(VHT40)_LCH_5755MHz_NTNV



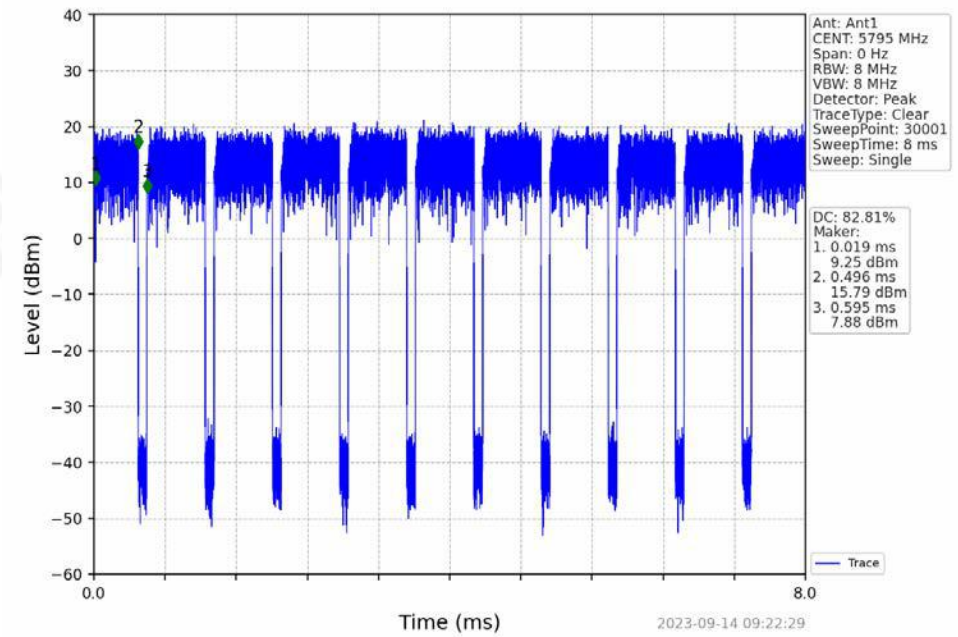
802.11ax(HEW40)_LCH_5755MHz_RU484_Left_NTNV



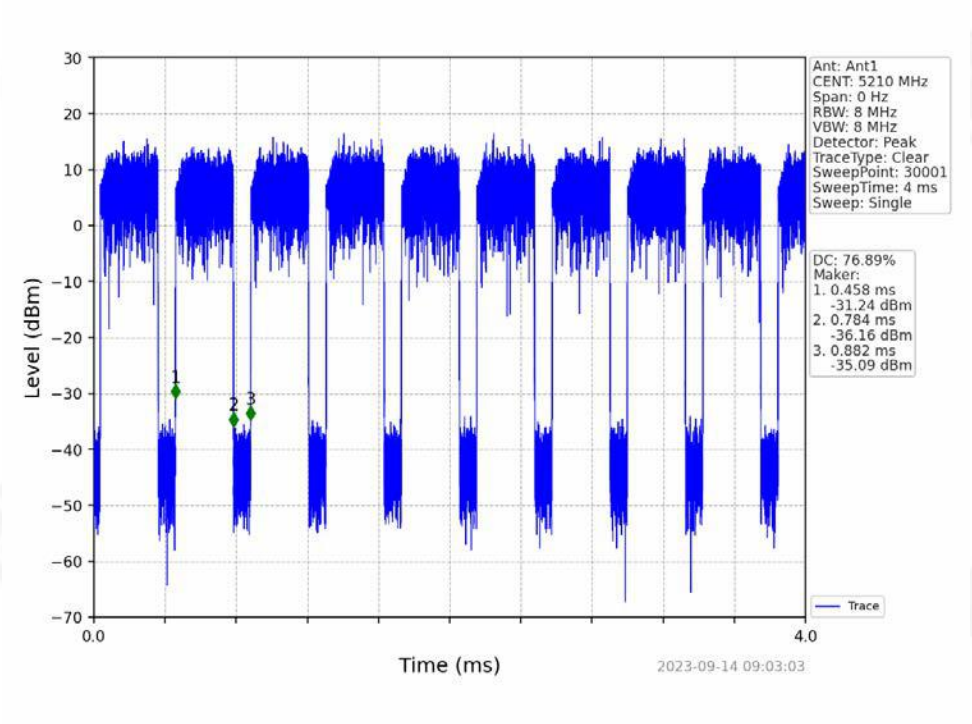
802.11ax(HEW40)_HCH_5795MHz_RU484_Left_NTNV



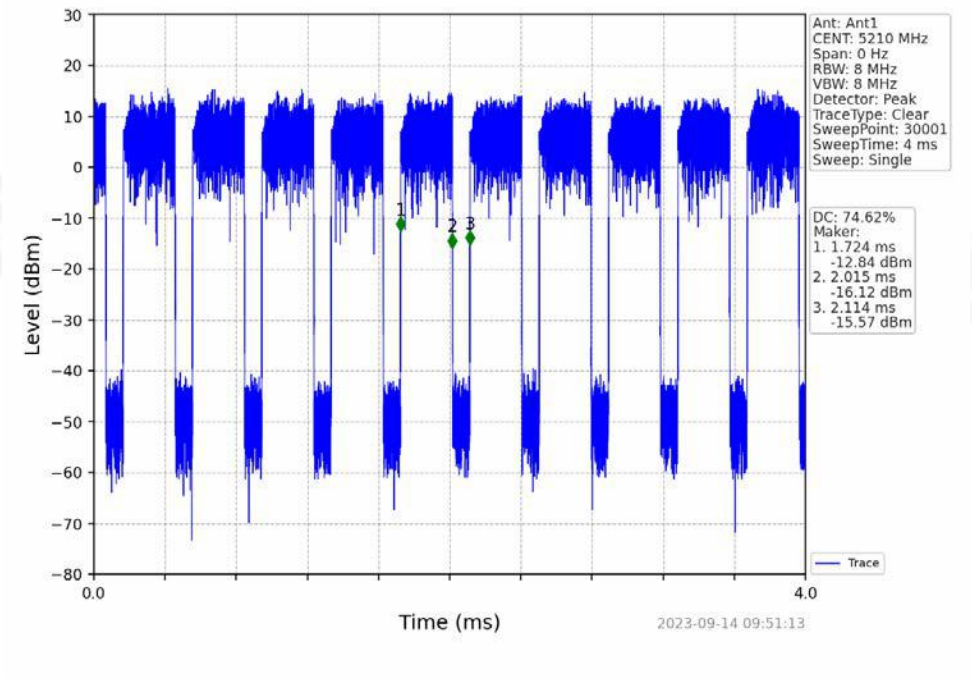
802.11ac(VHT40)_HCH_5795MHz_NTNV



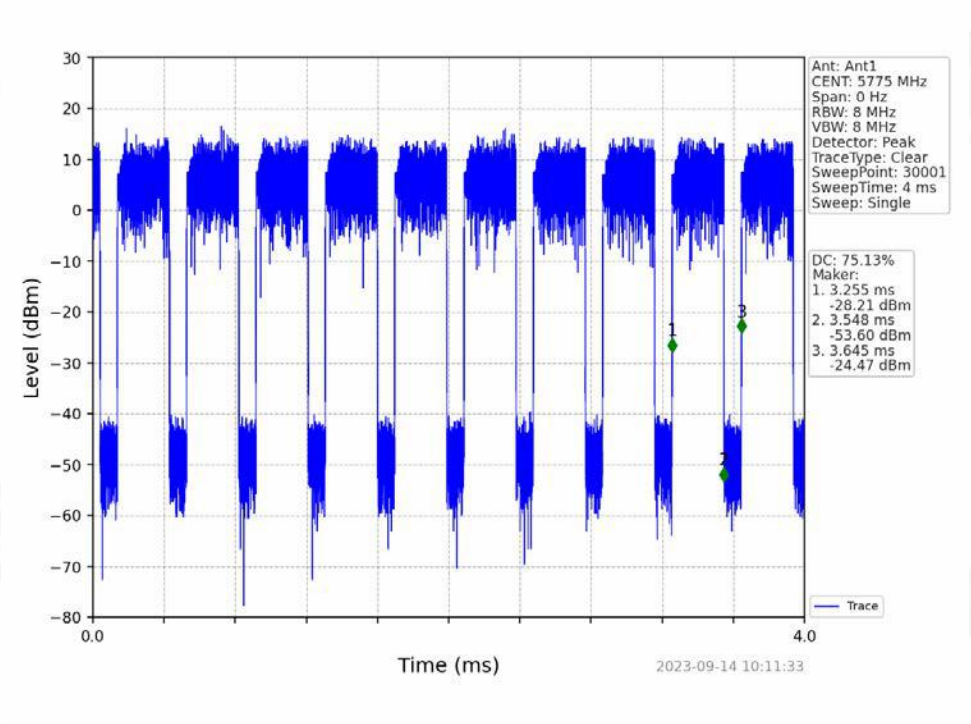
802.11ac(VHT80)_MCH_5210MHz_NTNV



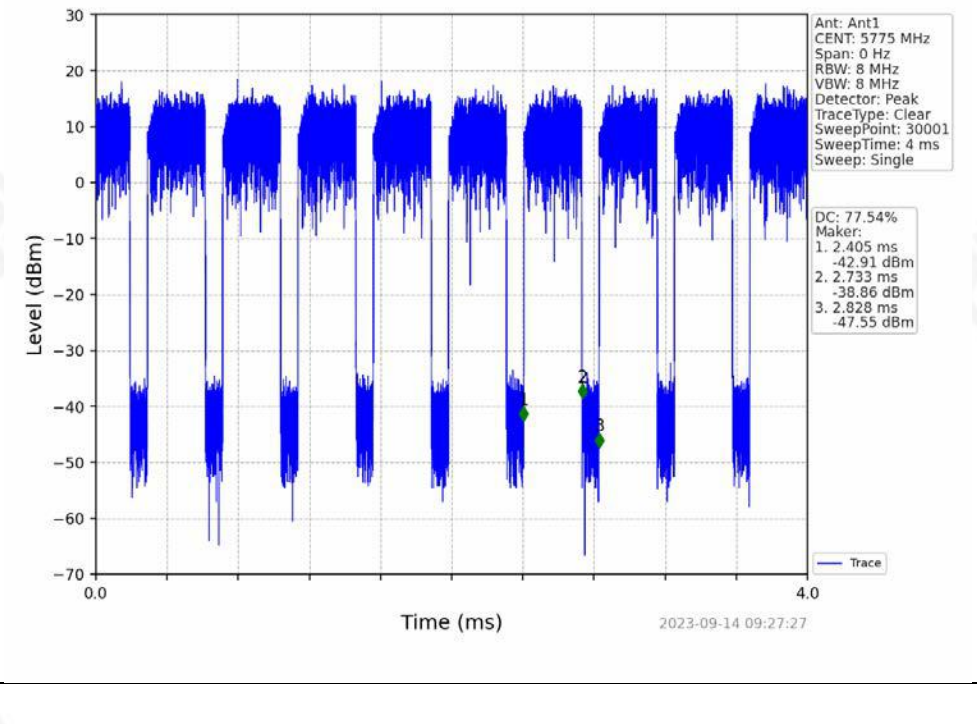
802.11ax(HEW80)_MCH_5210MHz_RU996_Left_NTNV



802.11ax(HEW80)_MCH_5775MHz_RU996_Left_NTNV



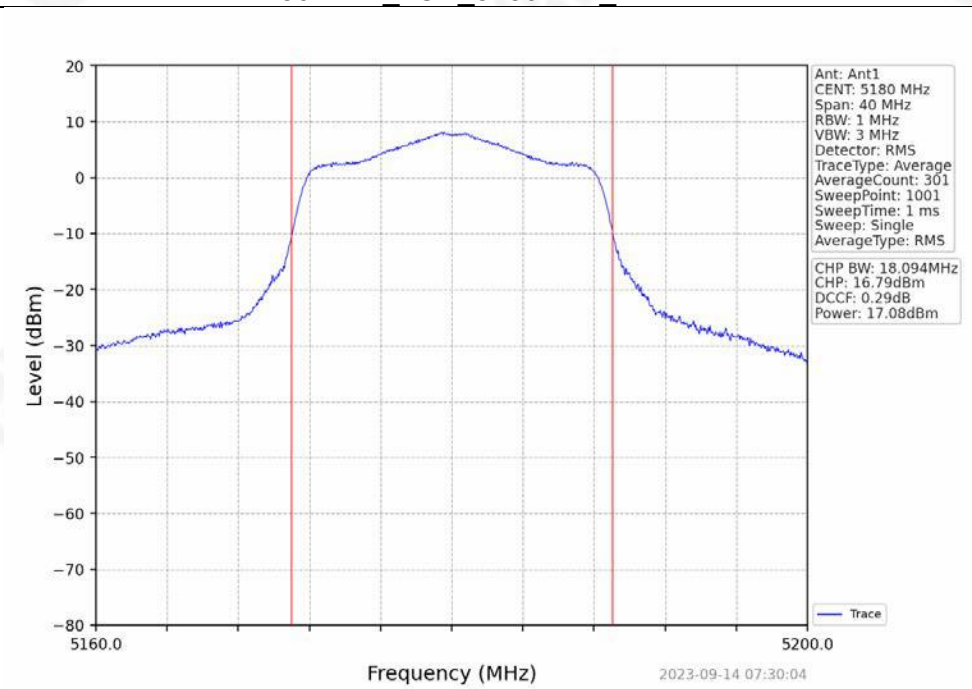
802.11ac(VHT80)_MCH_5775MHz_NTNV



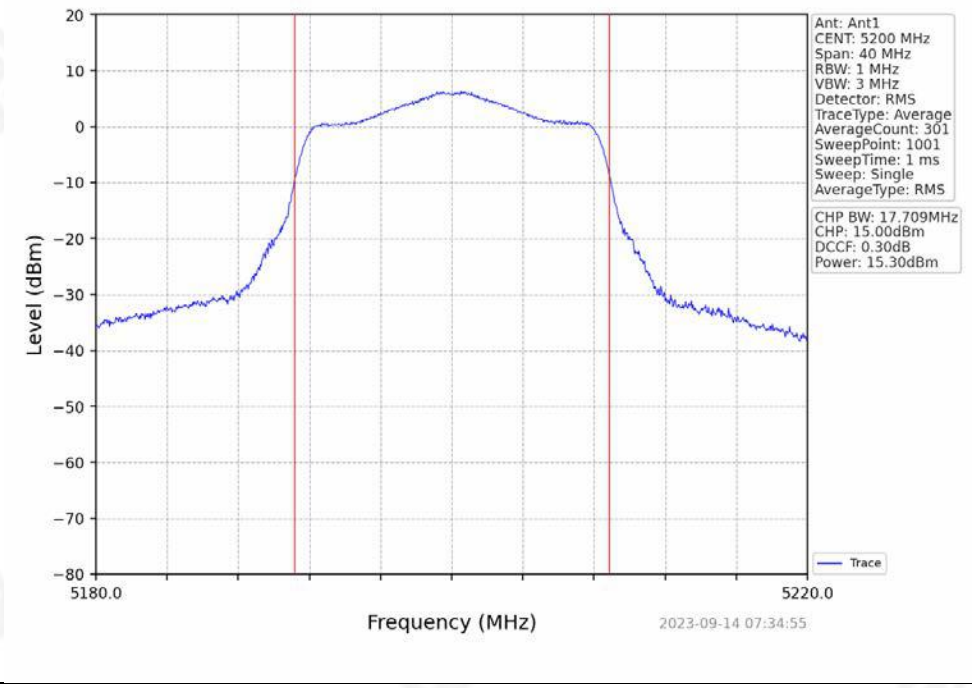
Antenna 3:

Output Power:

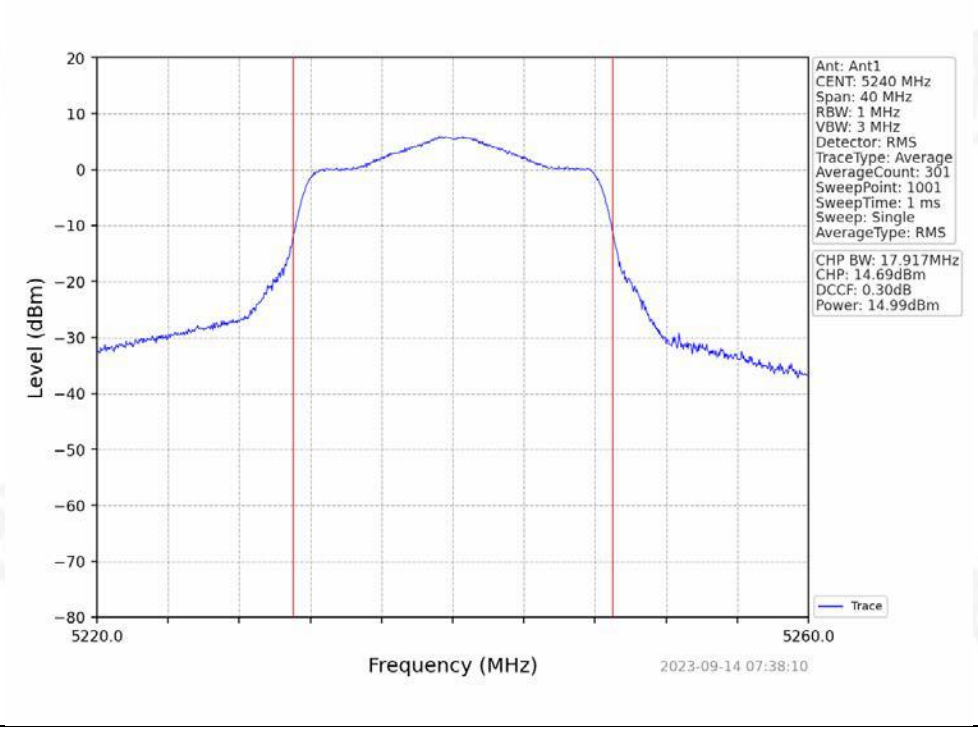
802.11a_LCH_5180MHz_NTNV



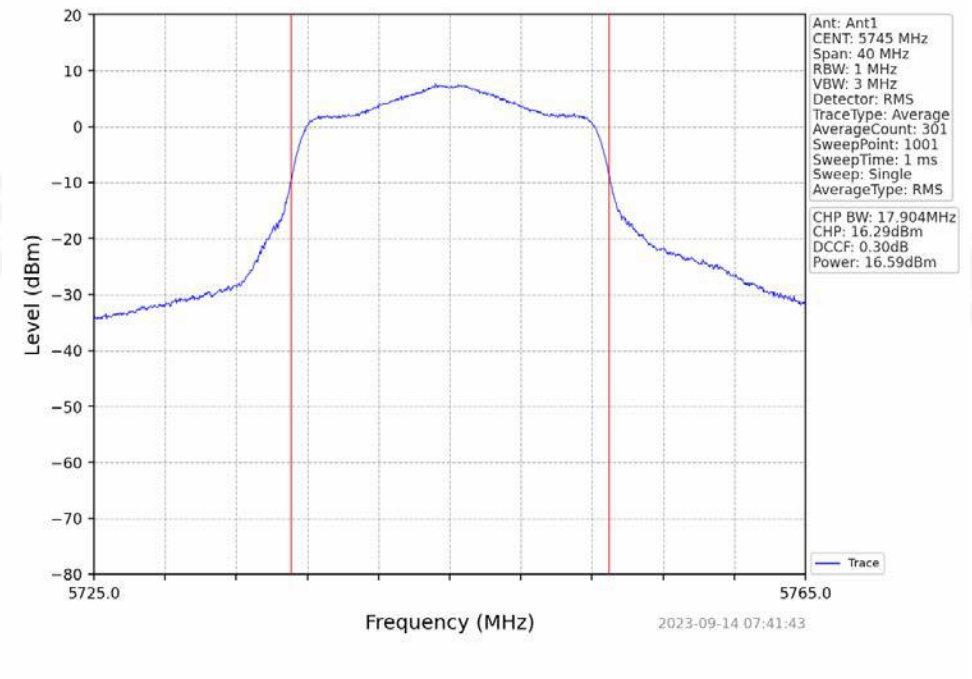
802.11a_MCH_5200MHz_NTNV



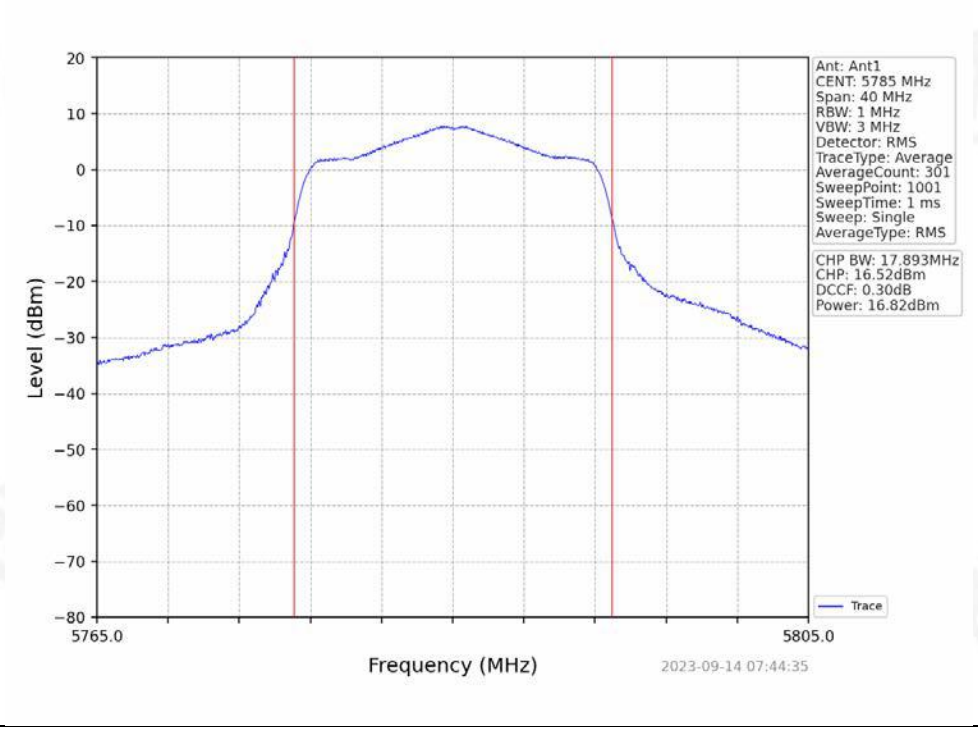
802.11a_HCH_5240MHz_NTNV



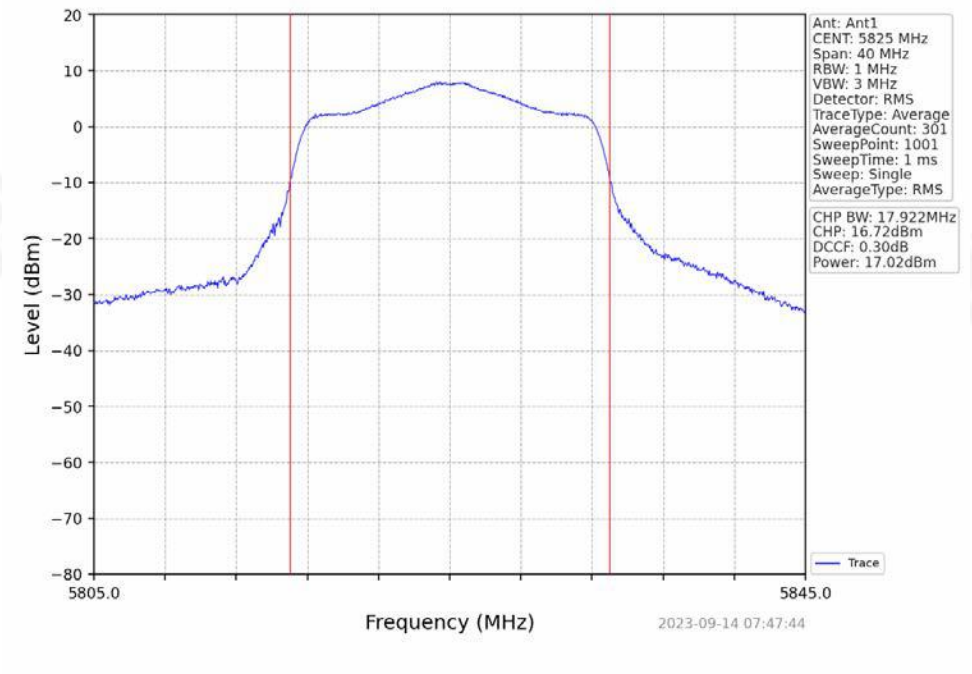
802.11a_LCH_5745MHz_NTNV



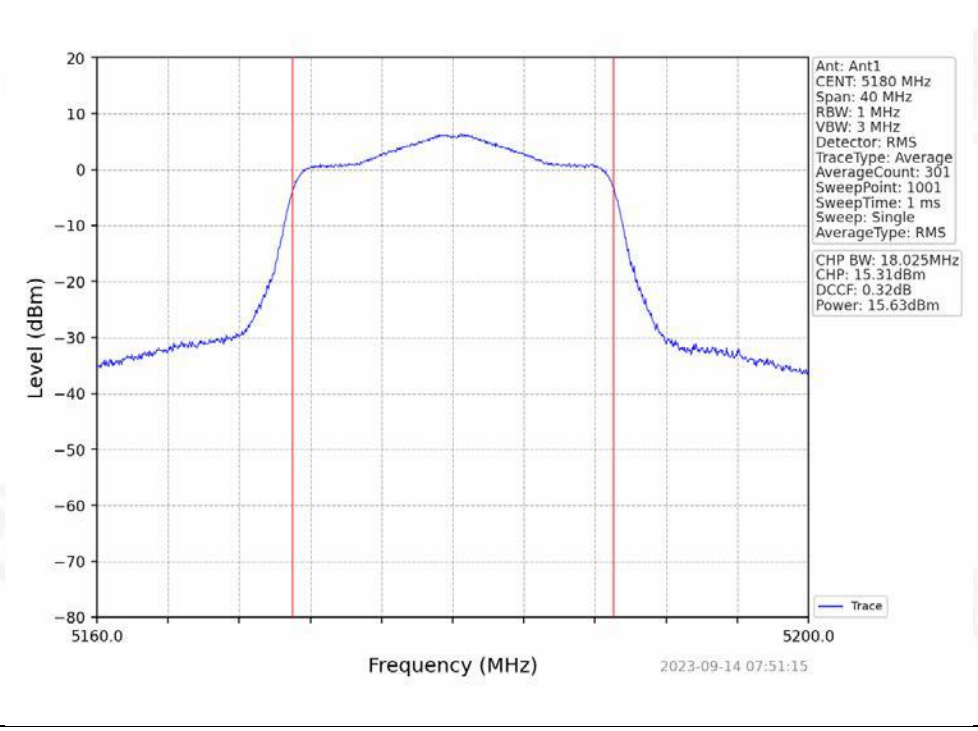
802.11a_MCH_5785MHz_NTNV



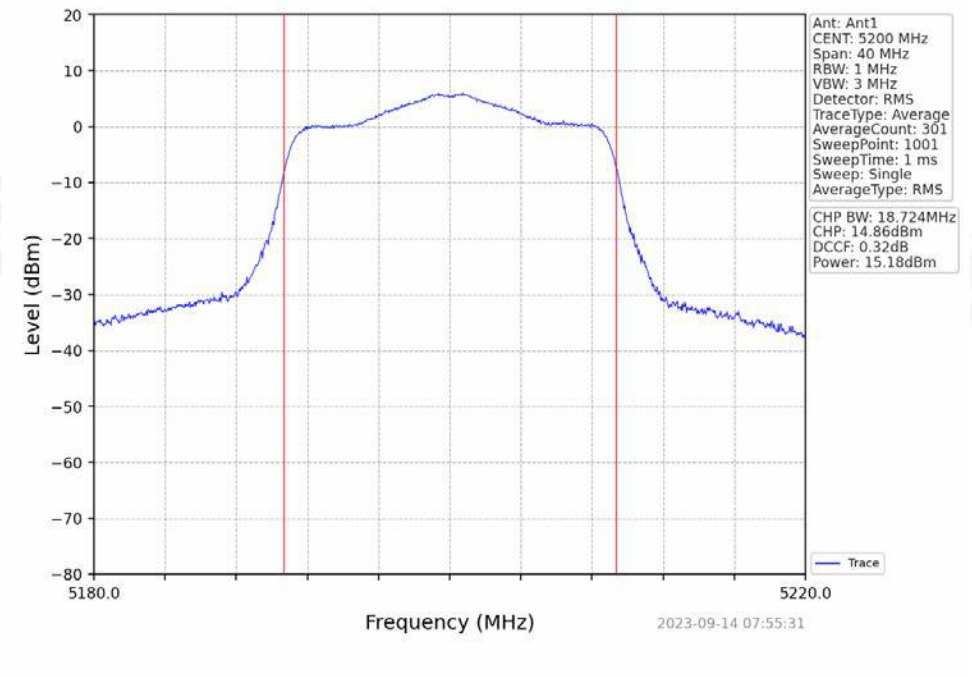
802.11a_HCH_5825MHz_NTNV



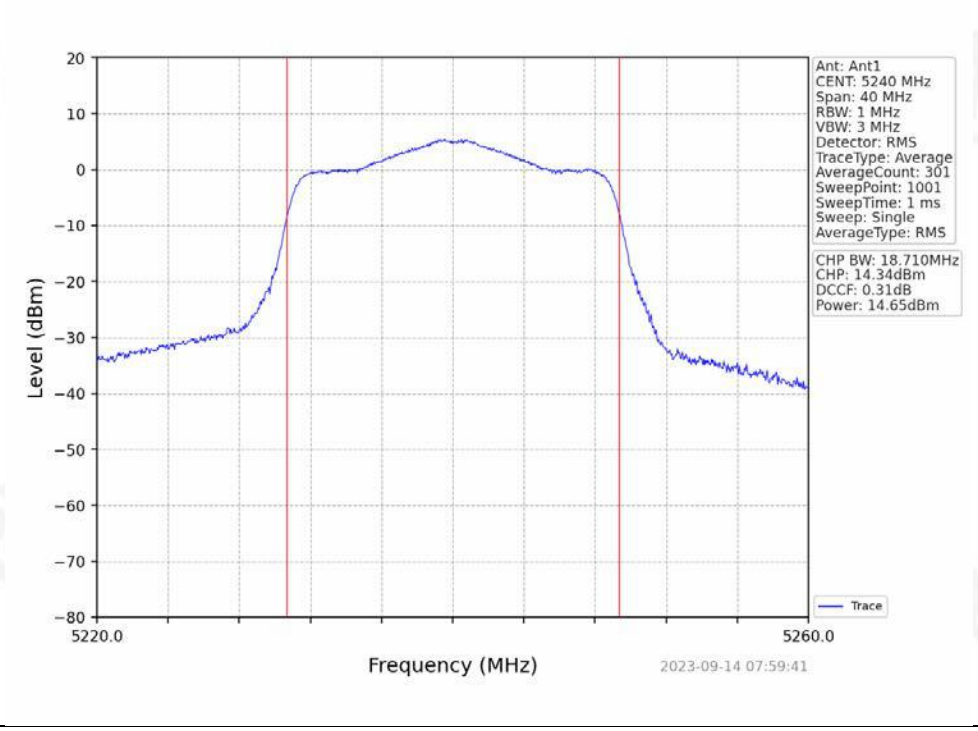
802.11n(HT20)_LCH_5180MHz_NTNV



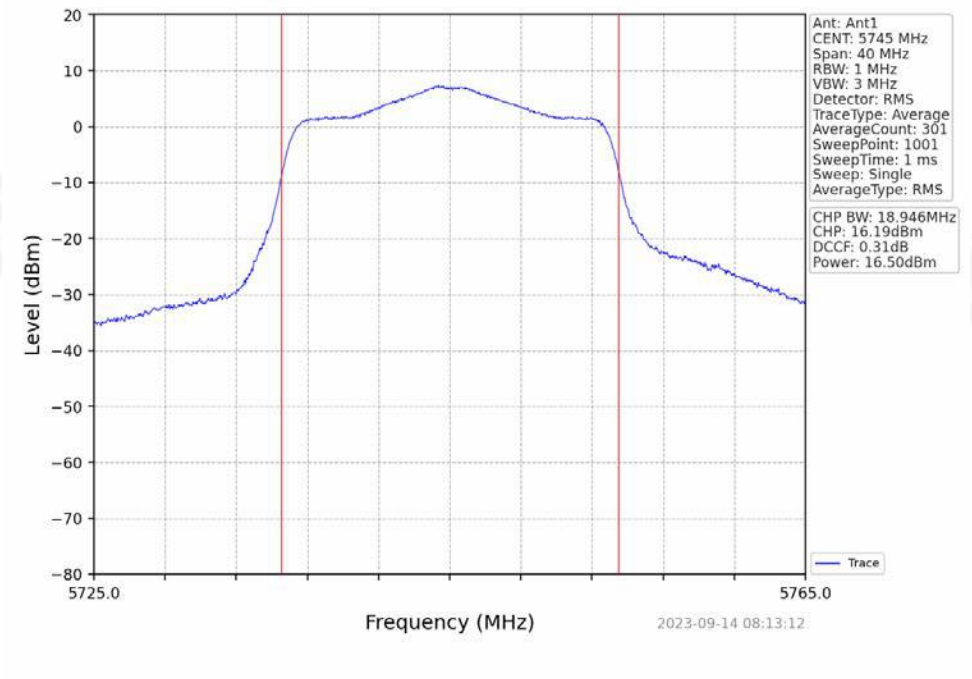
802.11n(HT20)_MCH_5200MHz_NTNV



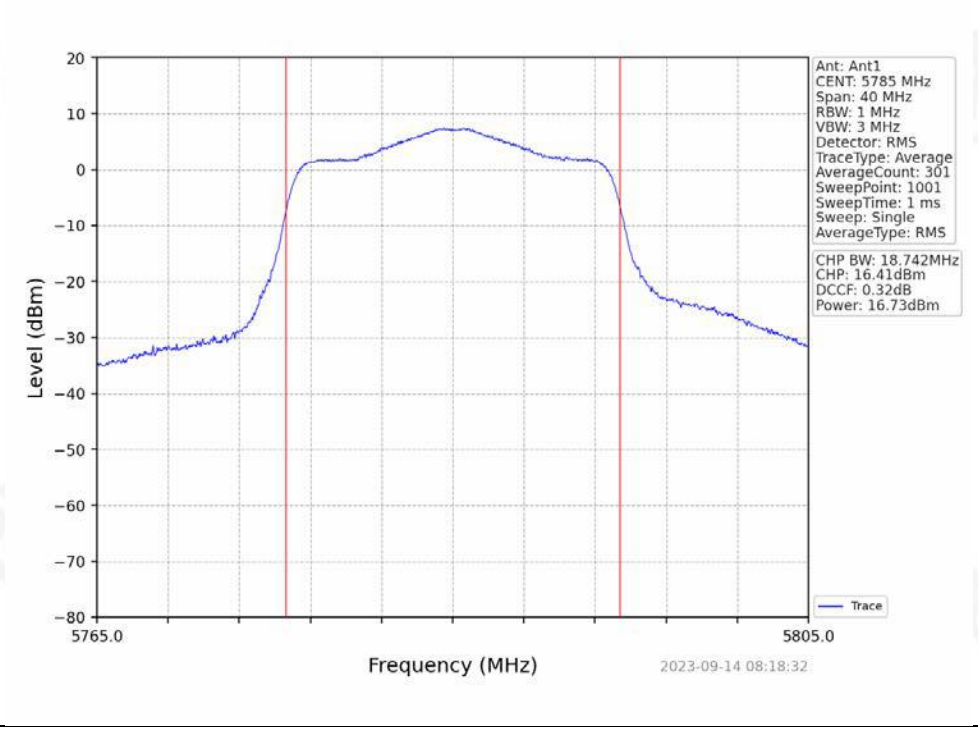
802.11n(HT20)_HCH_5240MHz_NTNV



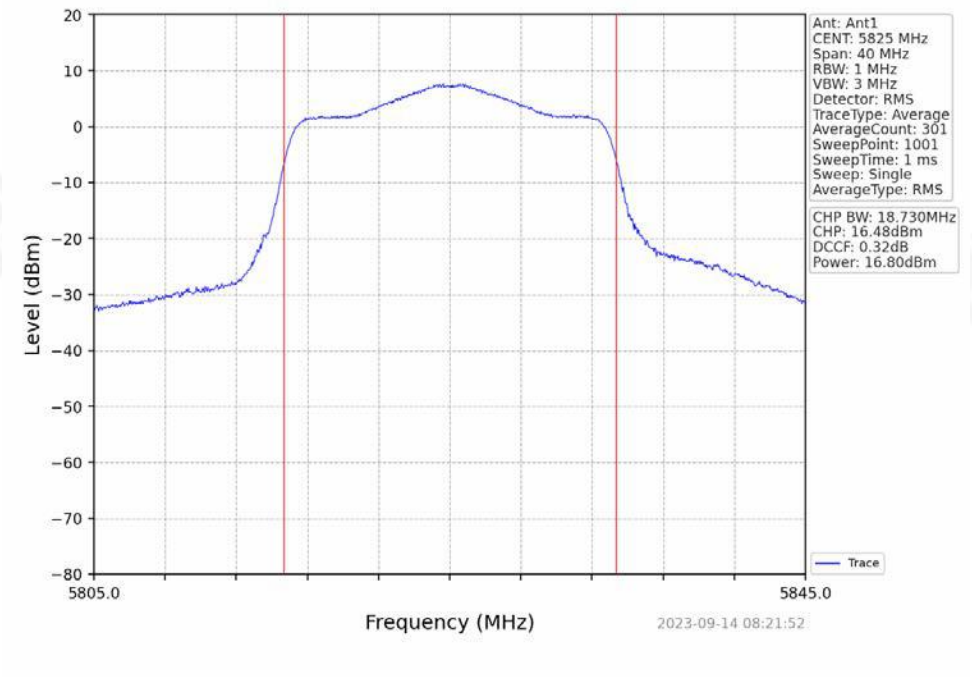
802.11n(HT20)_LCH_5745MHz_NTNV



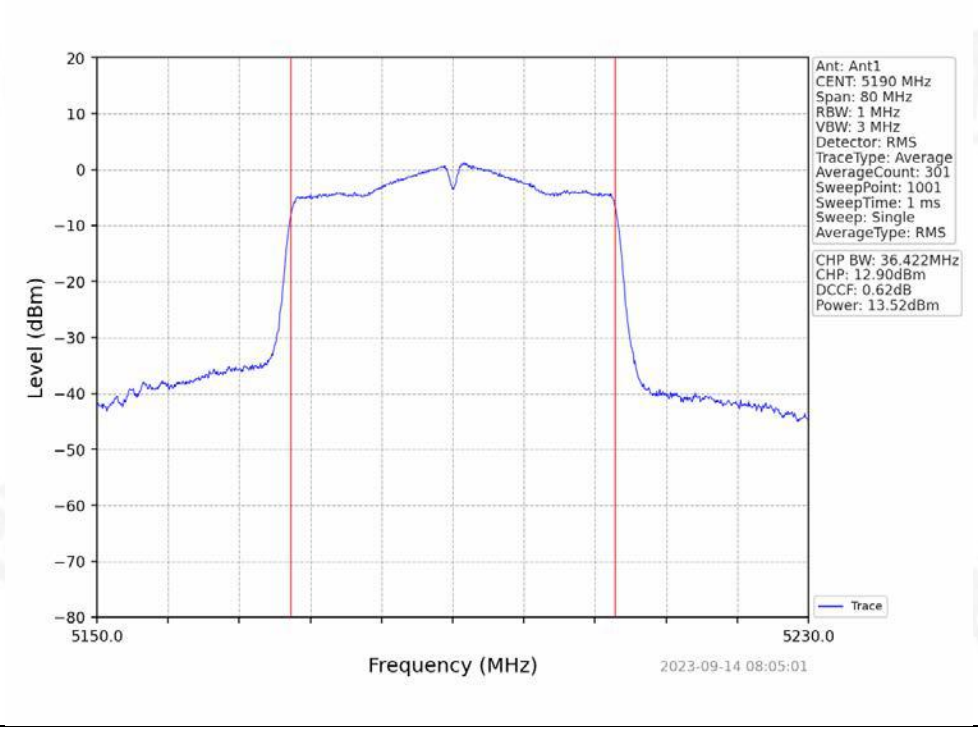
802.11n(HT20)_MCH_5785MHz_NTNV



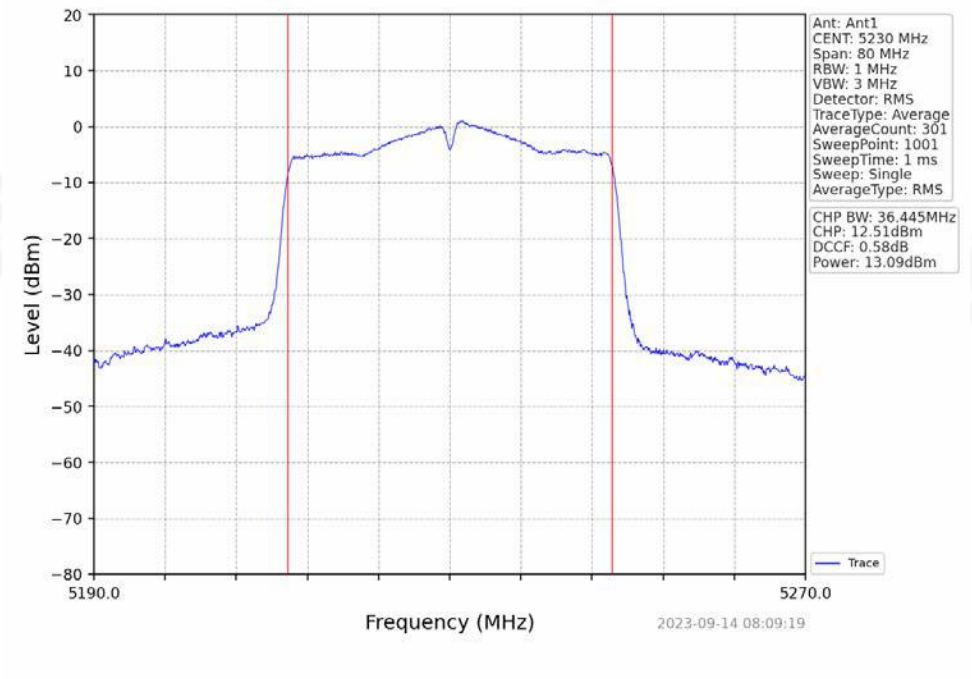
802.11n(HT20)_HCH_5825MHz_NTNV



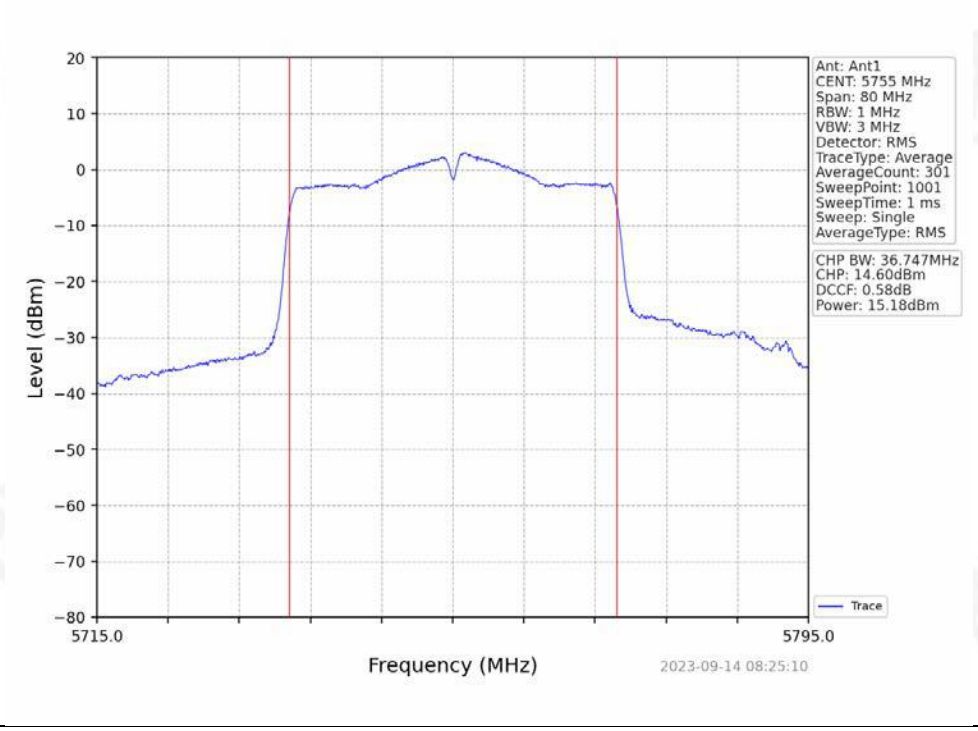
802.11n(HT40)_LCH_5190MHz_NTNV



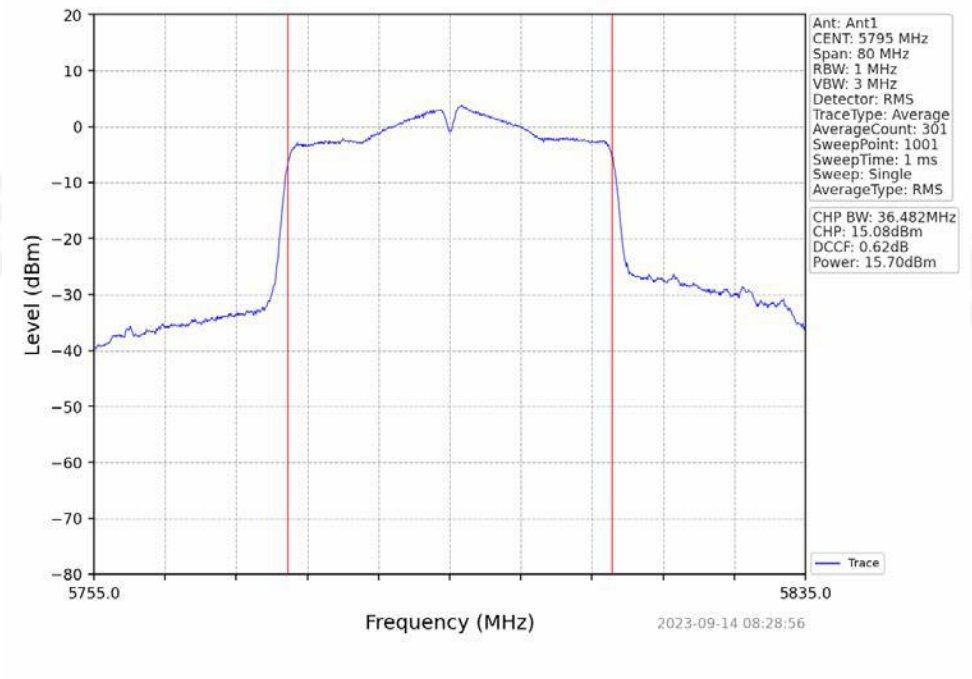
802.11n(HT40)_HCH_5230MHz_NTNV



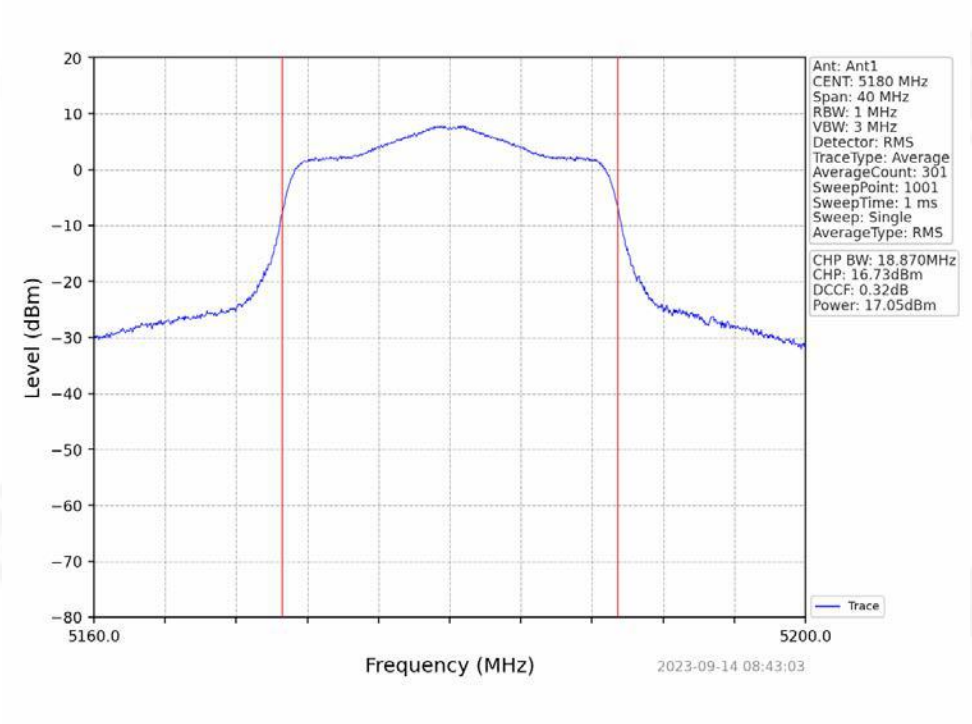
802.11n(HT40)_LCH_5755MHz_NTNV



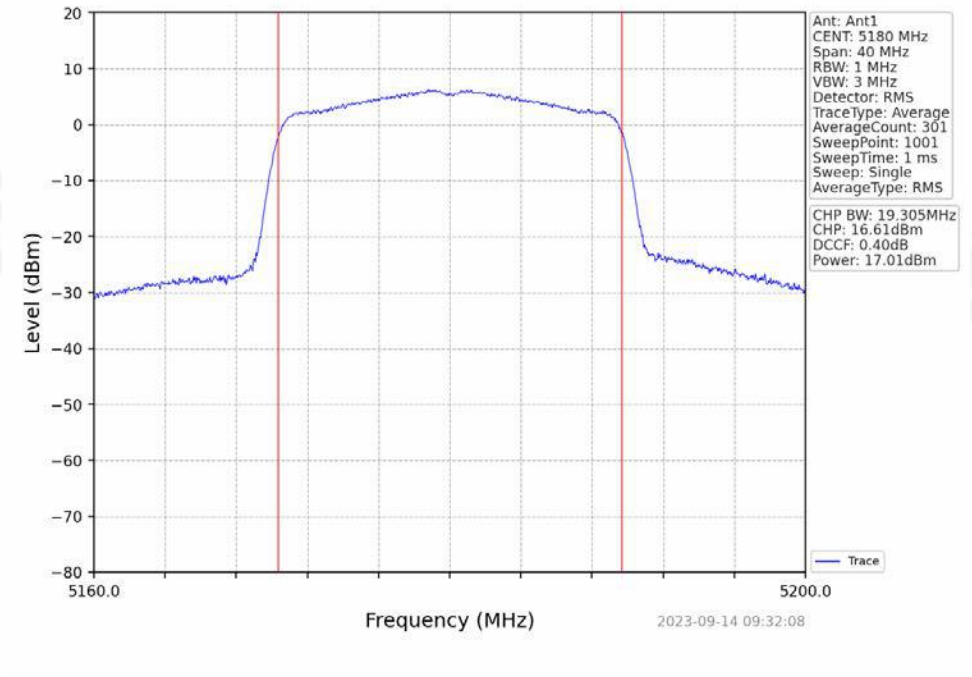
802.11n(HT40)_HCH_5795MHz_NTNV



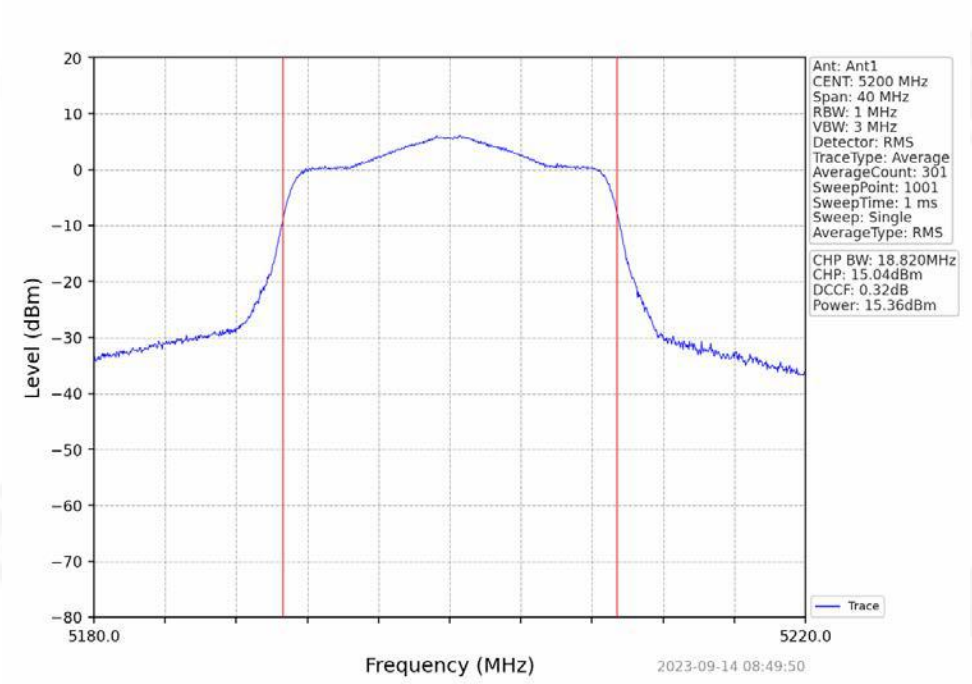
802.11ac(VHT20)_LCH_5180MHz_NTNV



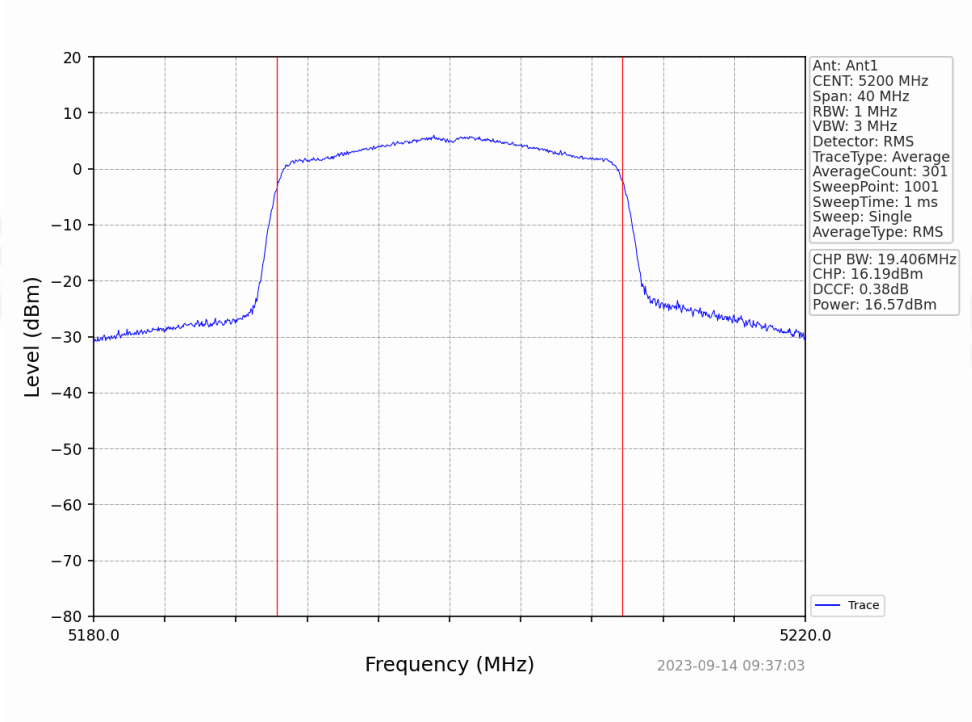
802.11ax(HEW20)_LCH_5180MHz_RU242_Left_NTNV



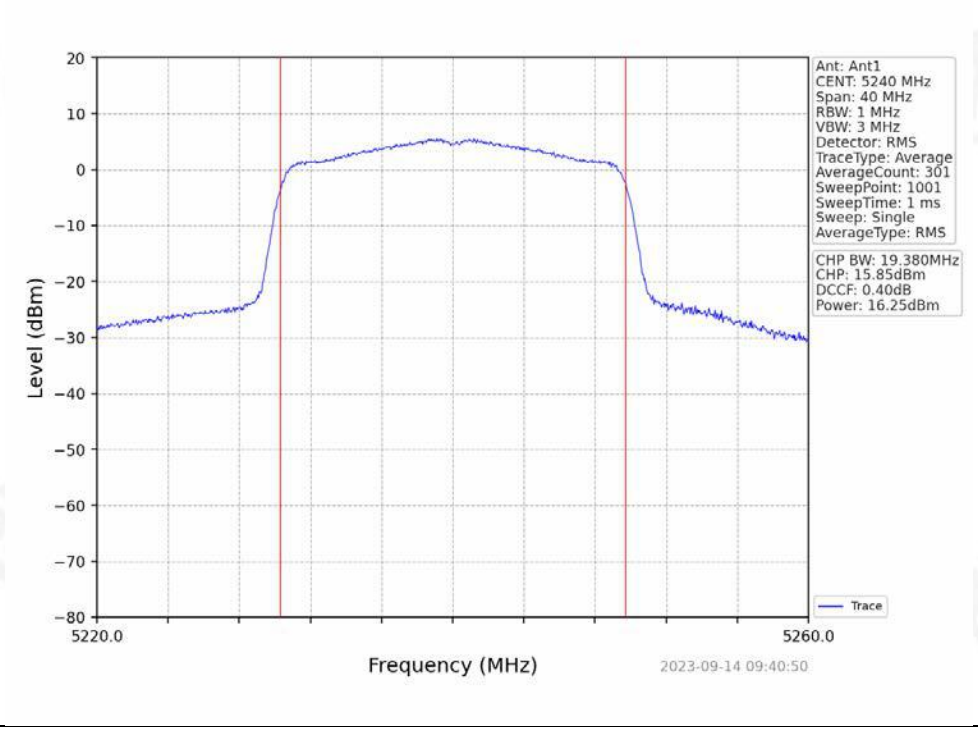
802.11ac(VHT20)_MCH_5200MHz_NTNV



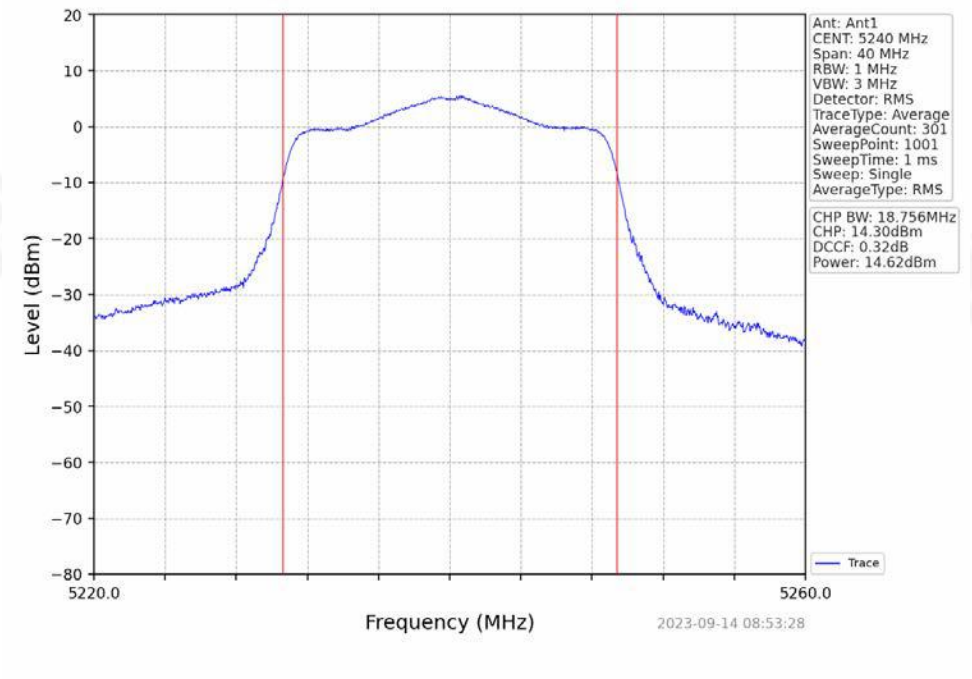
802.11ax(HEW20)_MCH_5200MHz_RU242_Left_NTNV



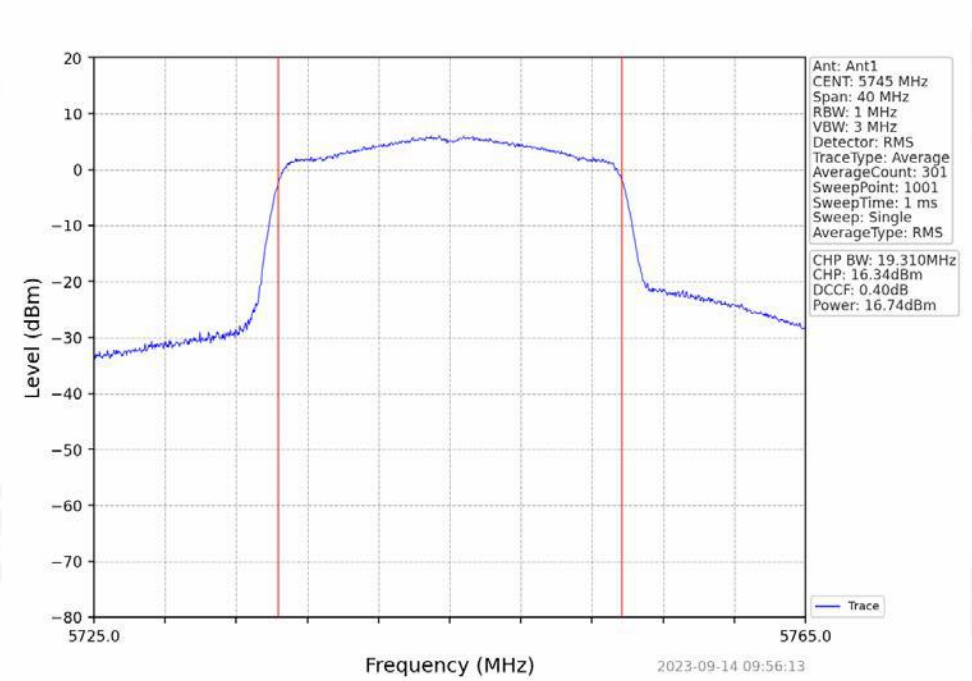
802.11ax(HEW20)_HCH_5240MHz_RU242_Left_NTNV



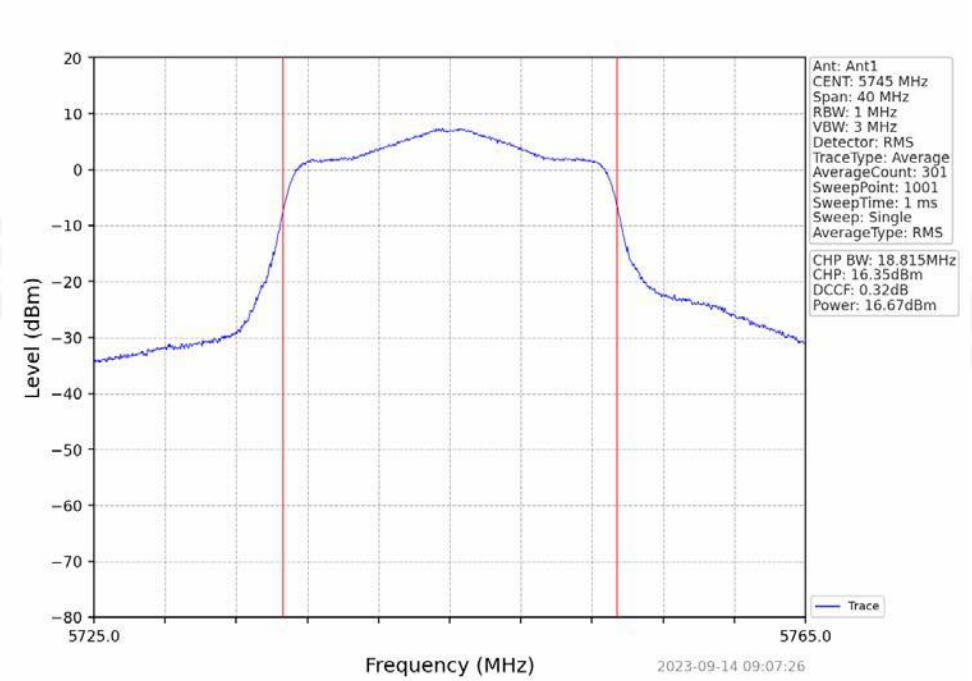
802.11ac(VHT20)_HCH_5240MHz_NTNV



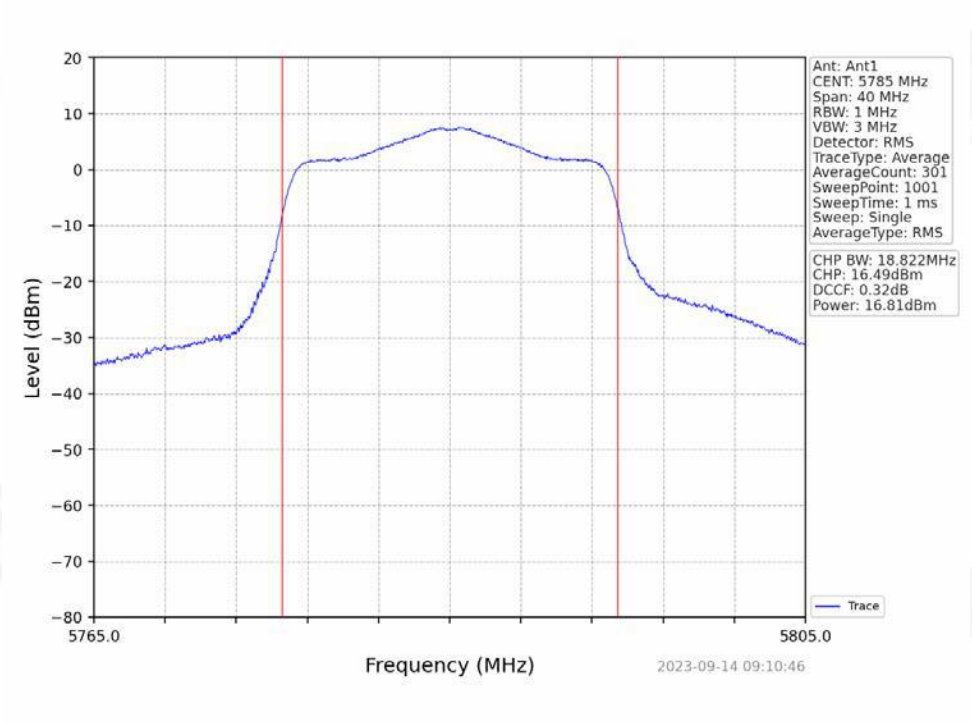
802.11ax(HEW20)_LCH_5745MHz_RU242_Left_NTNV



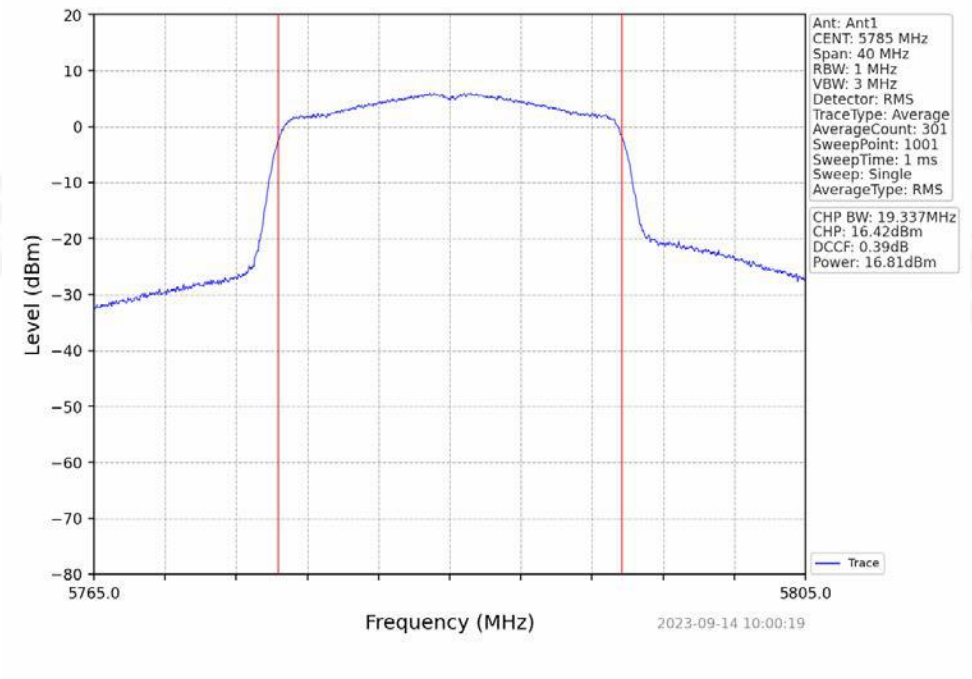
802.11ac(VHT20)_LCH_5745MHz_NTNV



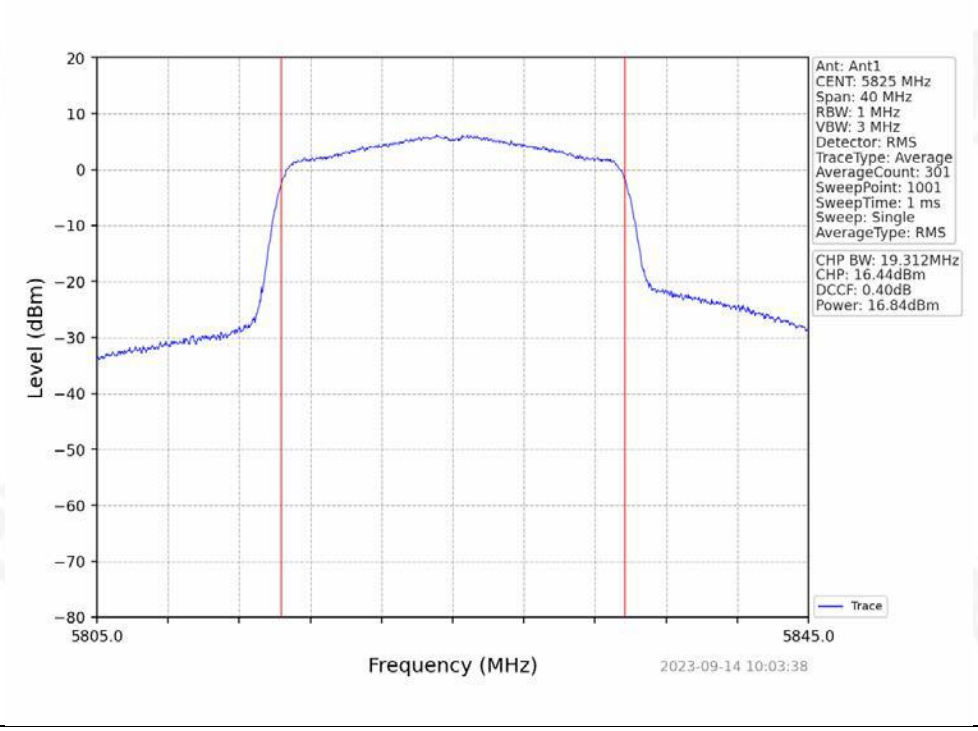
802.11ac(VHT20)_MCH_5785MHz_NTNV



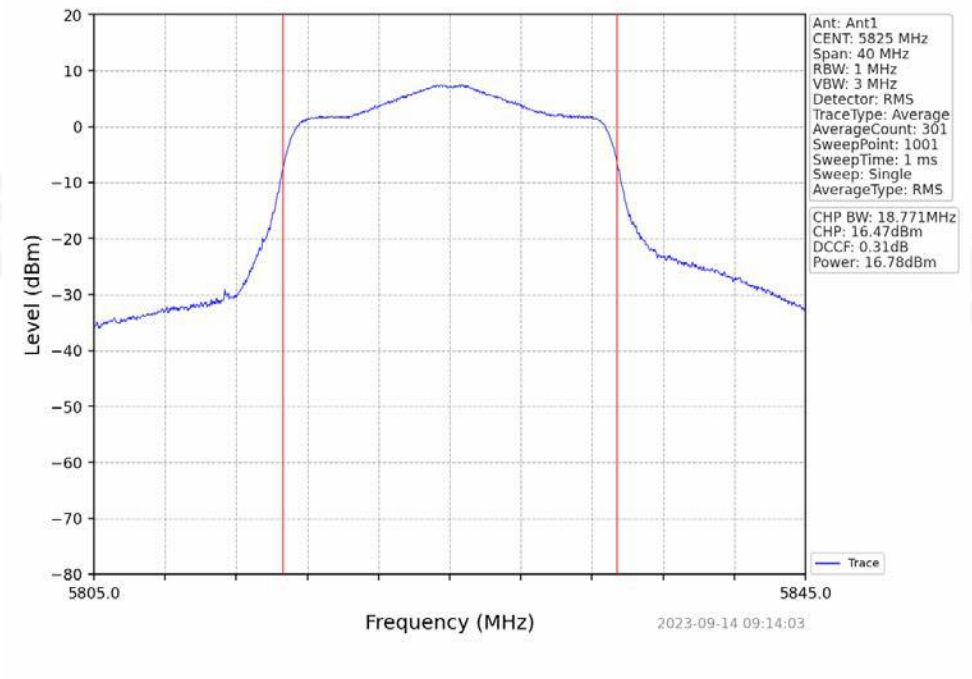
802.11ax(HEW20)_MCH_5785MHz_RU242_Left_NTNV



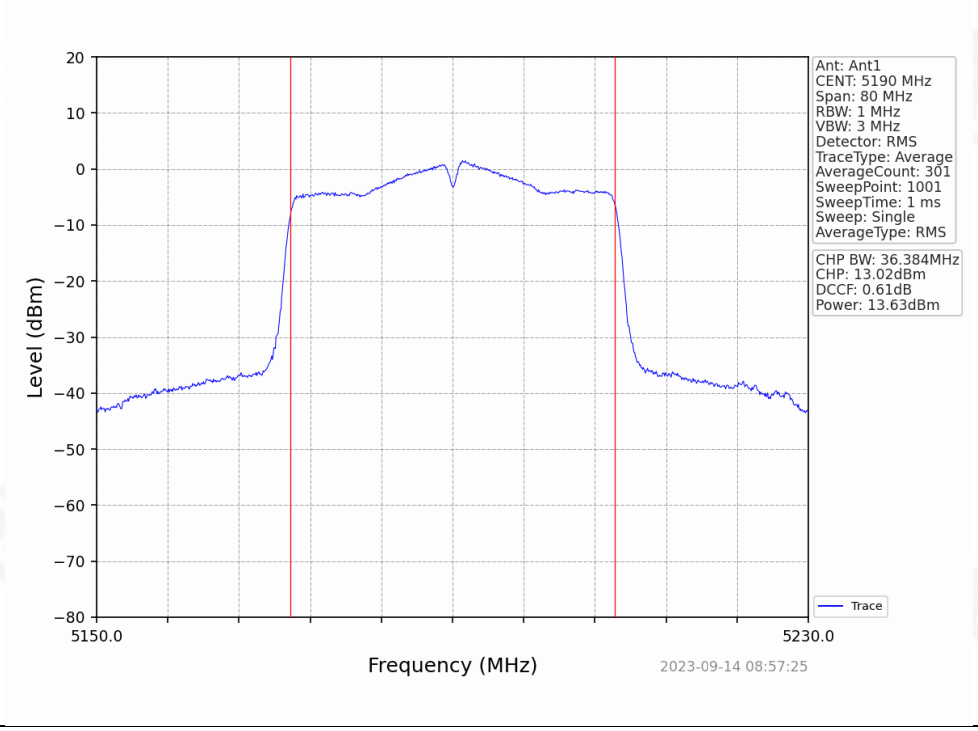
802.11ax(HEW20)_HCH_5825MHz_RU242_Left_NTNV



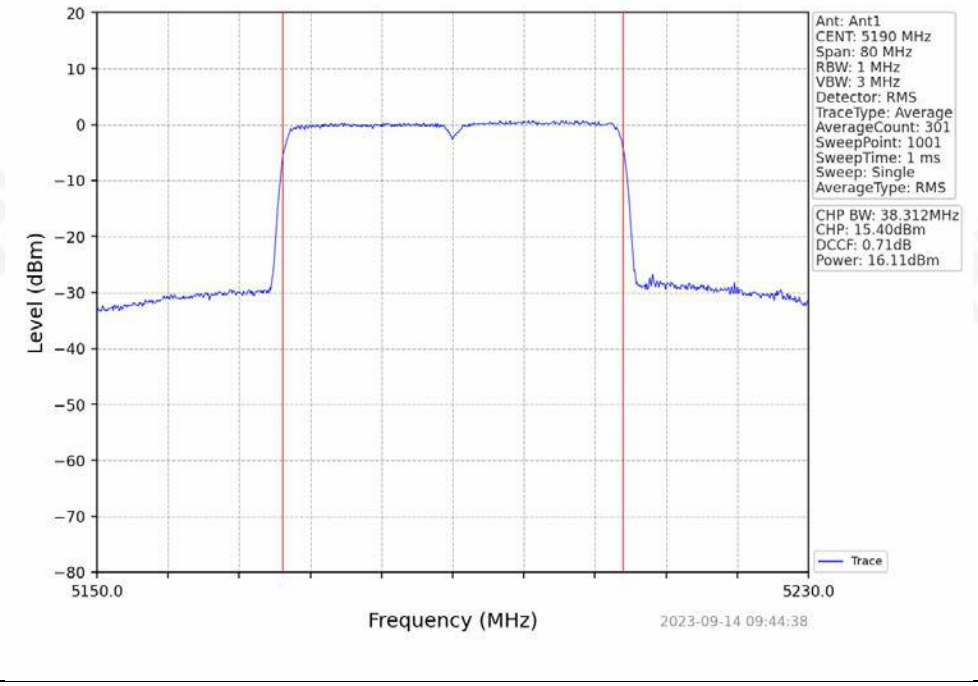
802.11ac(VHT20)_HCH_5825MHz_NTNV



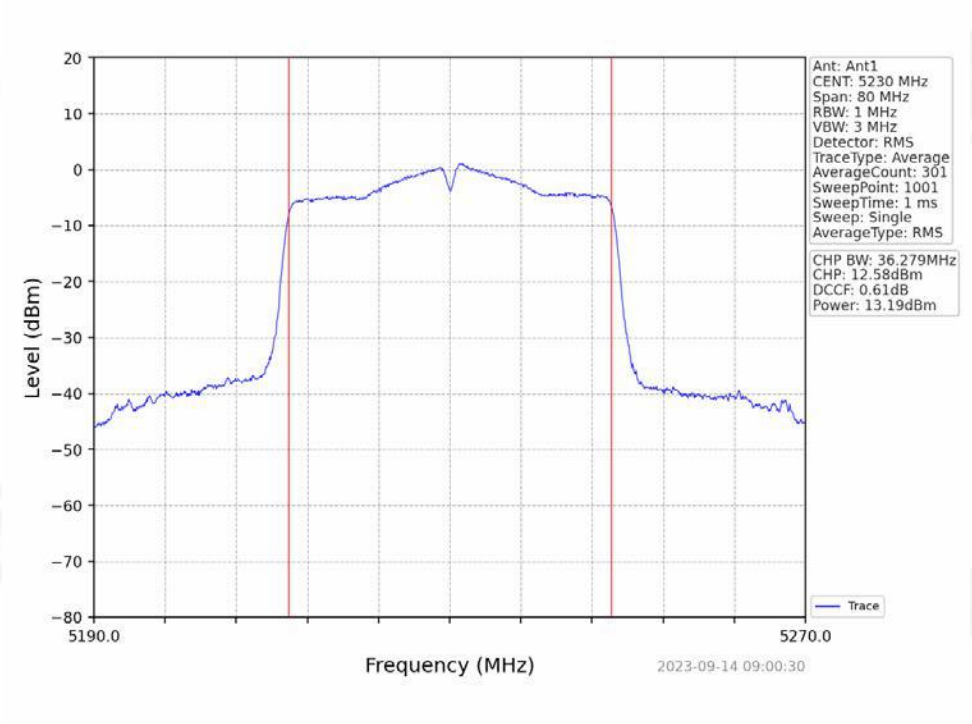
802.11ac(VHT40)_LCH_5190MHz_NTNV



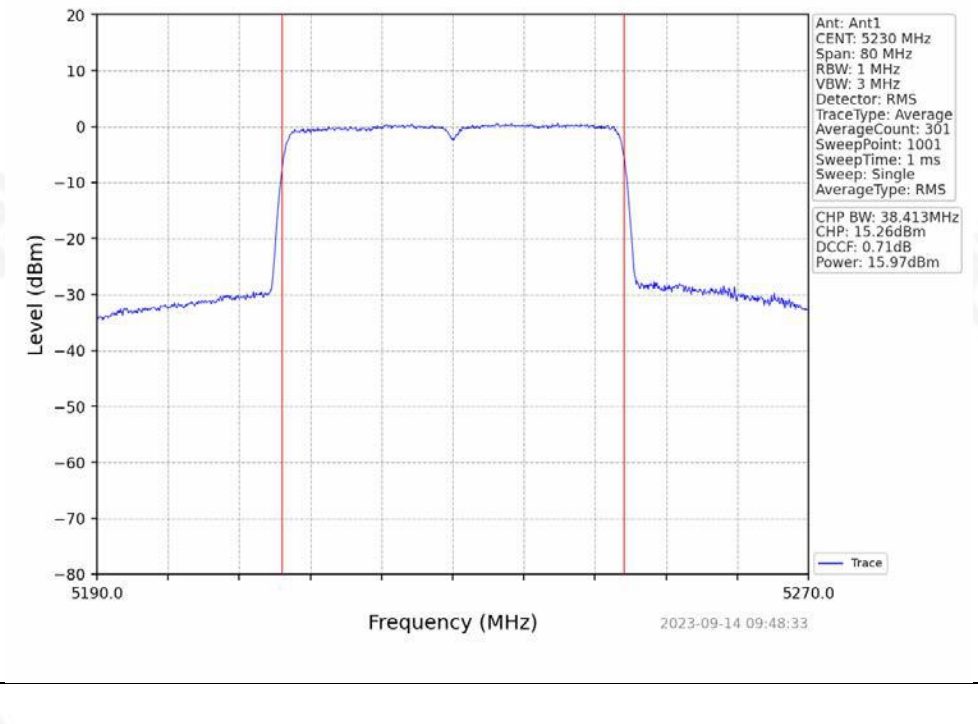
802.11ax(HEW40)_LCH_5190MHz_RU484_Left_NTNV



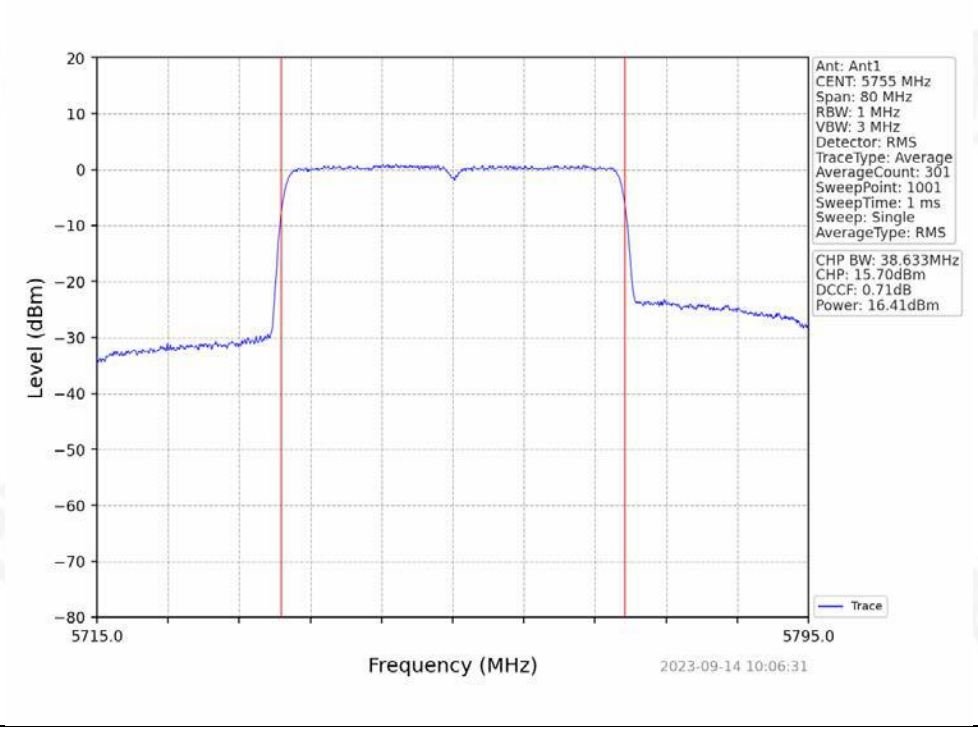
802.11ac(VHT40)_HCH_5230MHz_NTNV



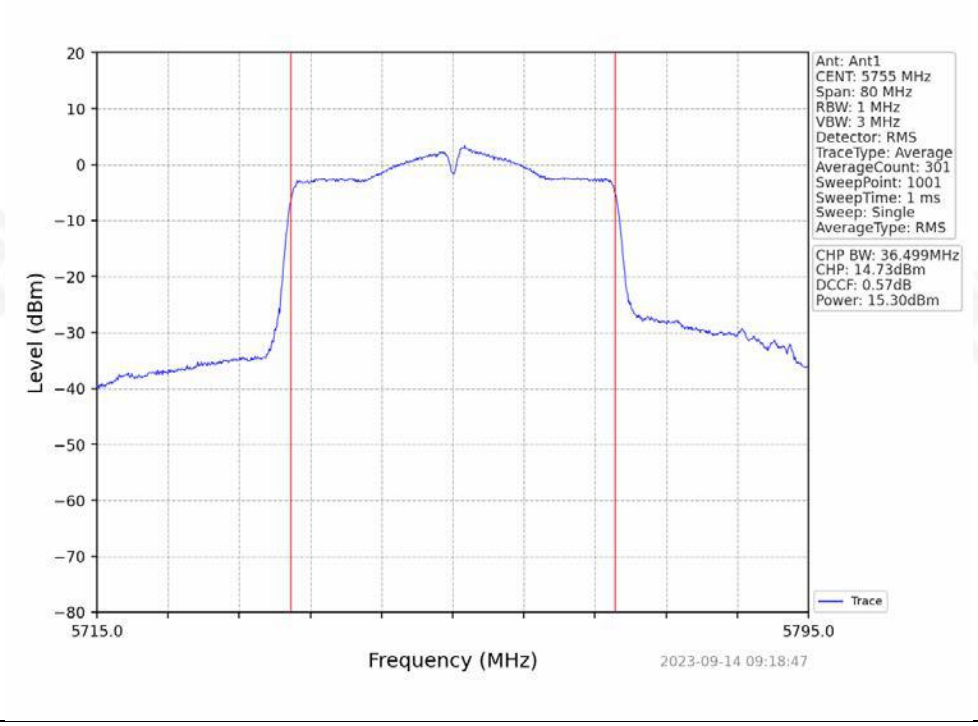
802.11ax(HEW40)_HCH_5230MHz_RU484_Left_NTNV



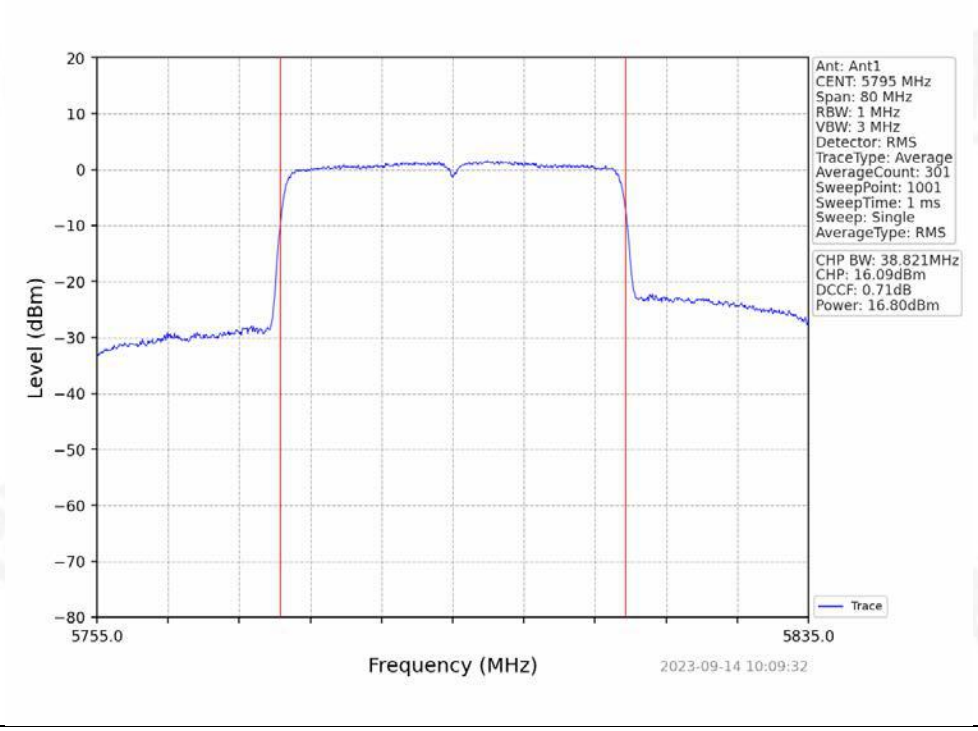
802.11ax(HEW40)_LCH_5755MHz_RU484_Left_NTNV



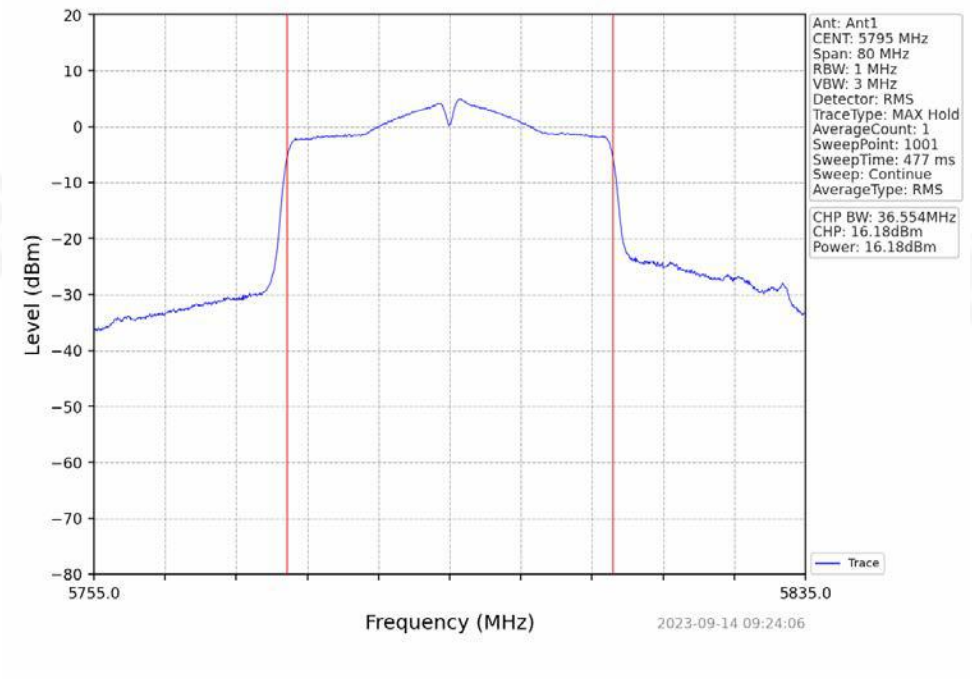
802.11ac(VHT40)_LCH_5755MHz_NTNV



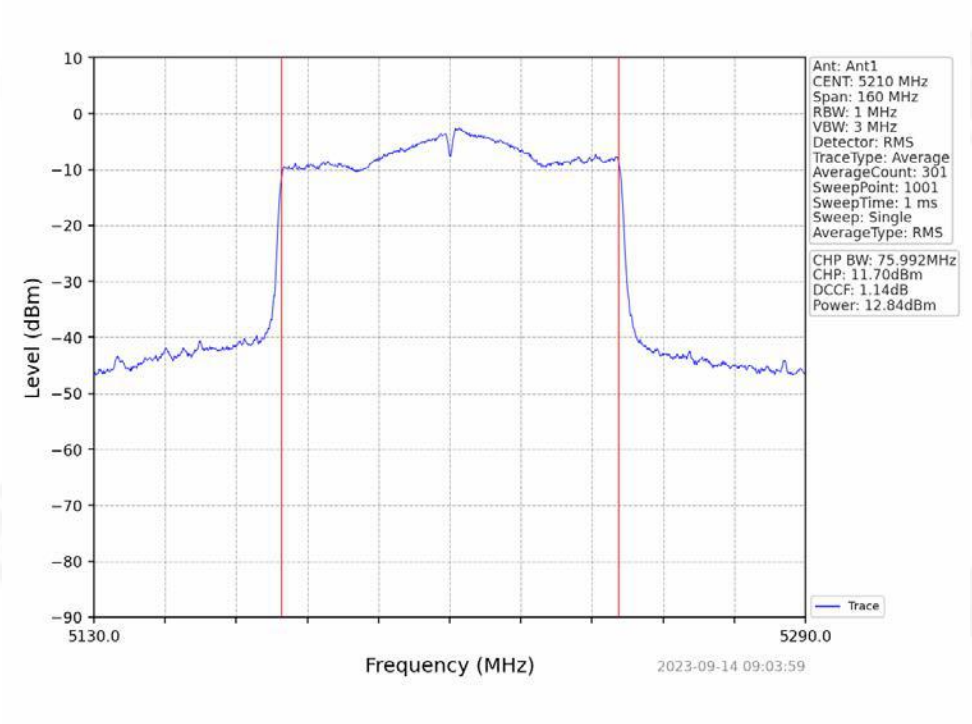
802.11ax(HEW40)_HCH_5795MHz_RU484_Left_NTNV



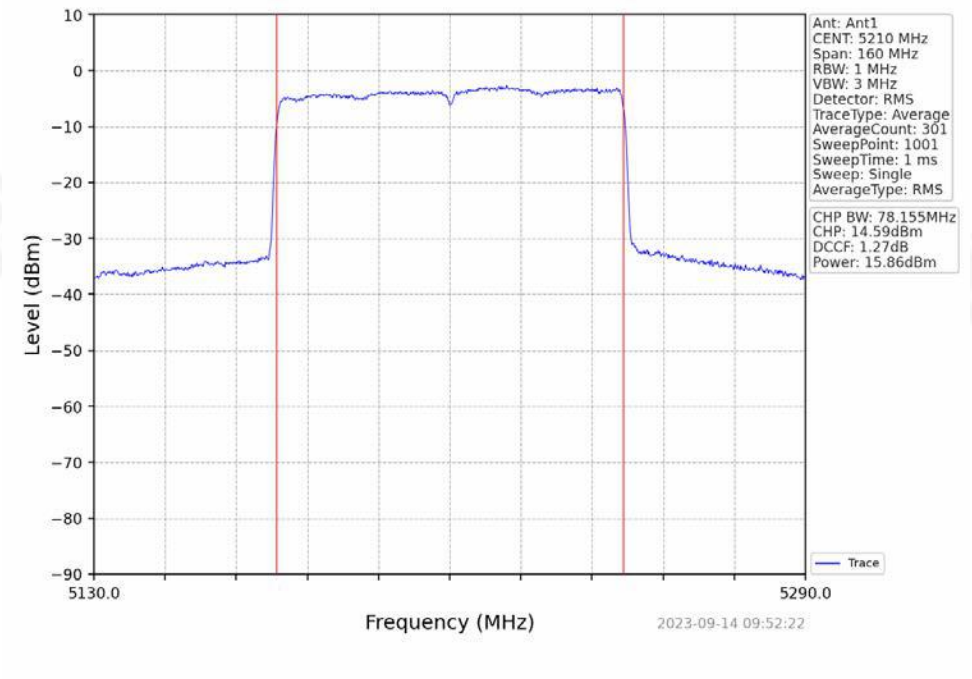
802.11ac(VHT40)_HCH_5795MHz_NTNV



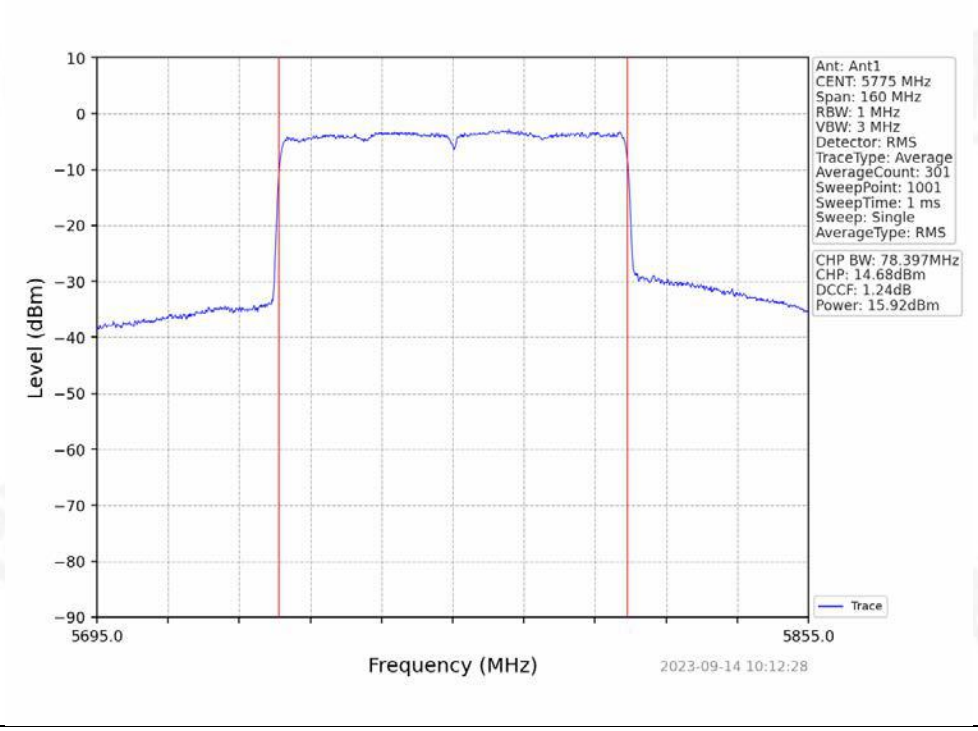
802.11ac(VHT80)_MCH_5210MHz_NTNV



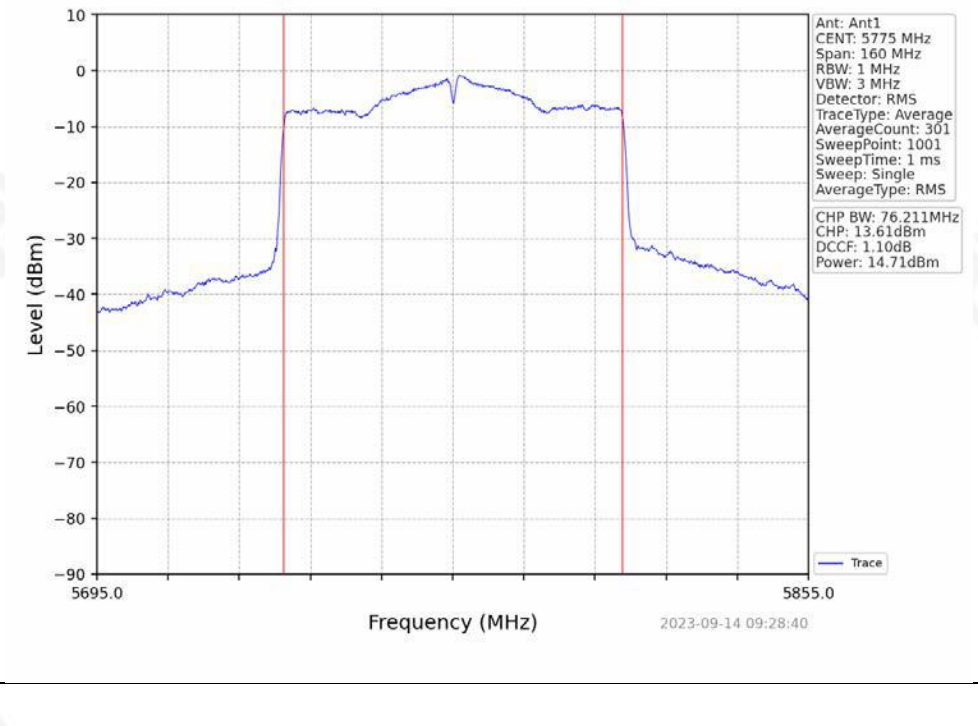
802.11ax(HEW80)_MCH_5210MHz_RU996_Left_NTNV



802.11ax(HEW80)_MCH_5775MHz_RU996_Left_NTNV



802.11ac(VHT80)_MCH_5775MHz_NTNV



Antenna 4:

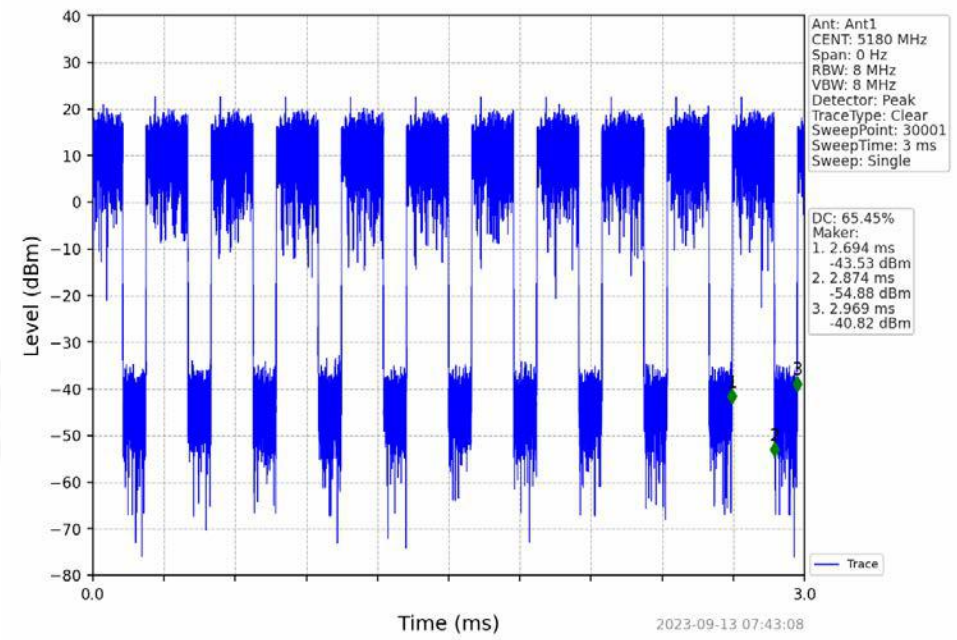
Duty Cycle:

Ant4									
Mode	TX Type	Frequency (MHz)	RU	RU Pos	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11a	SISO	5180	/	/	0.180	0.275	65.45	1.84	0.07
		5200	/	/	0.178	0.275	64.73	1.89	0.11
		5240	/	/	0.181	0.275	65.82	1.82	0.15
		5745	/	/	0.179	0.275	65.09	1.86	0.08
		5785	/	/	0.178	0.275	64.73	1.89	0.06
		5825	/	/	0.178	0.275	64.73	1.89	0.08
802.11n (HT20)	SISO	5180	/	/	1.308	1.407	92.96	0.32	0.00
		5200	/	/	1.308	1.407	92.96	0.32	0.03
		5240	/	/	1.308	1.407	92.96	0.32	0.03
		5745	/	/	1.308	1.407	92.96	0.32	0.03
		5785	/	/	1.308	1.407	92.96	0.32	0.03
		5825	/	/	1.308	1.407	92.96	0.32	0.03
802.11n (HT40)	SISO	5190	/	/	0.100	0.199	50.25	2.99	0.05
		5230	/	/	0.101	0.200	50.50	2.97	0.07
		5755	/	/	0.104	0.199	52.26	2.82	0.22
		5795	/	/	0.104	0.199	52.26	2.82	0.14
802.11ac (VHT20)	SISO	5180	/	/	1.316	1.415	93.00	0.32	0.03
		5200	/	/	1.316	1.415	93.00	0.32	0.03
		5240	/	/	1.316	1.415	93.00	0.32	0.03
		5745	/	/	1.316	1.415	93.00	0.32	0.03
		5785	/	/	1.318	1.415	93.14	0.31	0.03
		5825	/	/	1.316	1.414	93.07	0.31	0.03
802.11ac (VHT40)	SISO	5190	/	/	0.656	0.755	86.89	0.61	0.07
		5230	/	/	0.656	0.755	86.89	0.61	0.04
		5755	/	/	0.656	0.755	86.89	0.61	0.04
		5795	/	/	0.656	0.755	86.89	0.61	0.04
802.11ac (VHT80)	SISO	5210	/	/	0.328	0.424	77.36	1.11	0.09
		5775	/	/	0.324	0.423	76.60	1.16	0.06
802.11ax (HEW20)	SISO	5180	RU242	Left	1.021	1.120	91.16	0.40	0.03
		5200	RU242	Left	1.024	1.120	91.43	0.39	0.03
		5240	RU242	Left	1.024	1.120	91.43	0.39	0.03
		5745	RU242	Left	1.021	1.120	91.16	0.40	0.03

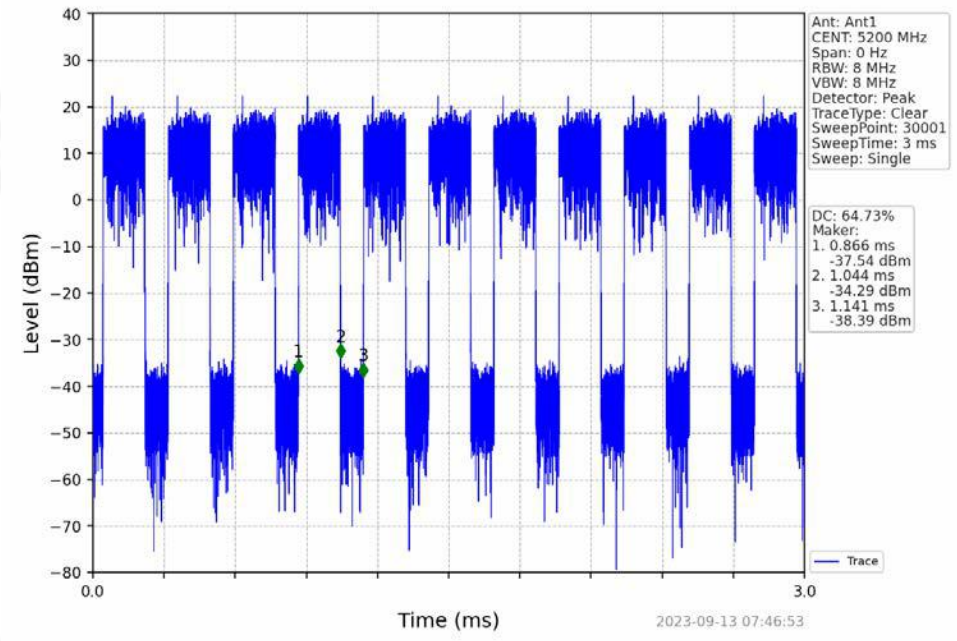
		5785	RU242	Left	1.021	1.120	91.16	0.40	0.03
		5825	RU242	Left	1.021	1.120	91.16	0.40	0.03
802.11ax (HEW40)	SISO	5190	RU484	Left	0.544	0.640	85.00	0.71	0.03
		5230	RU484	Left	0.543	0.640	84.84	0.71	0.03
		5755	RU484	Left	0.543	0.640	84.84	0.71	0.03
		5795	RU484	Left	0.544	0.640	85.00	0.71	0.03
802.11ax (HEW80)	SISO	5210	RU996	Left	0.292	0.390	74.87	1.26	0.09
		5775	RU996	Left	0.293	0.390	75.13	1.24	0.09

1.1.2 Test Graph

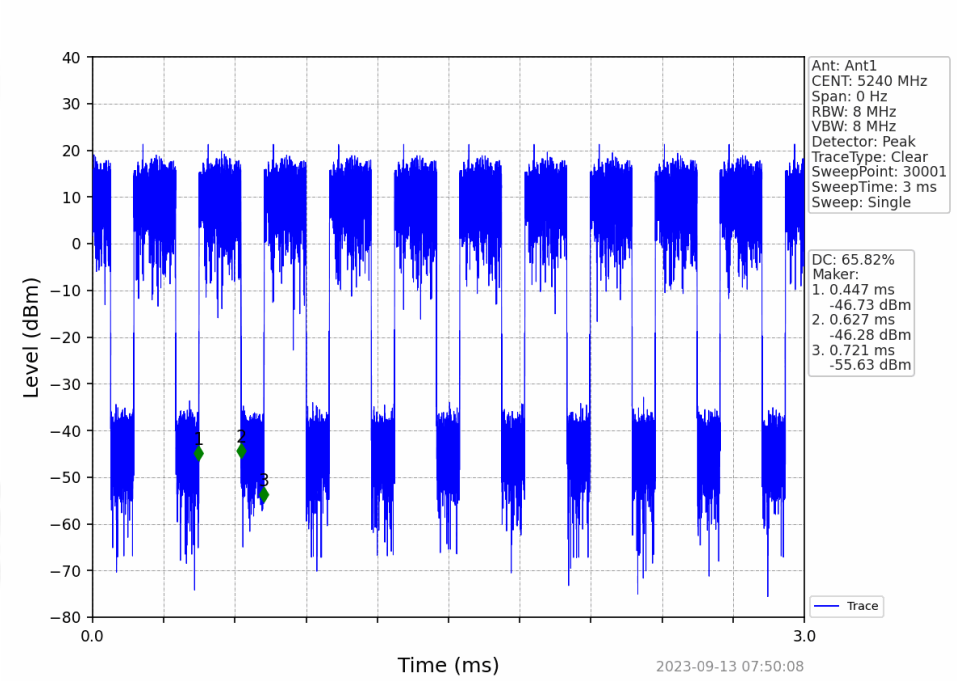
802.11a_LCH_5180MHz_NTNV



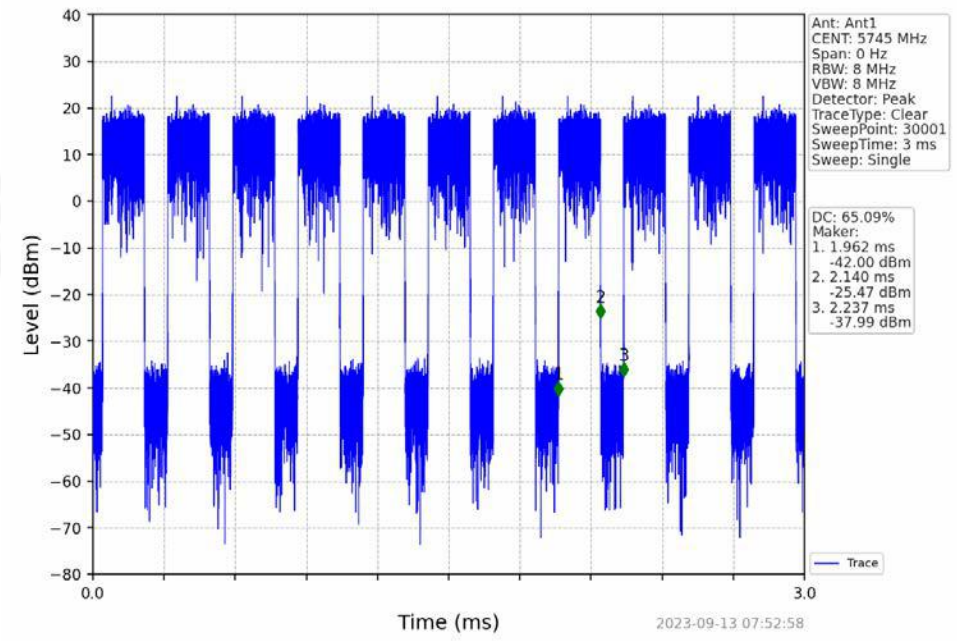
802.11a_MCH_5200MHz_NTNV



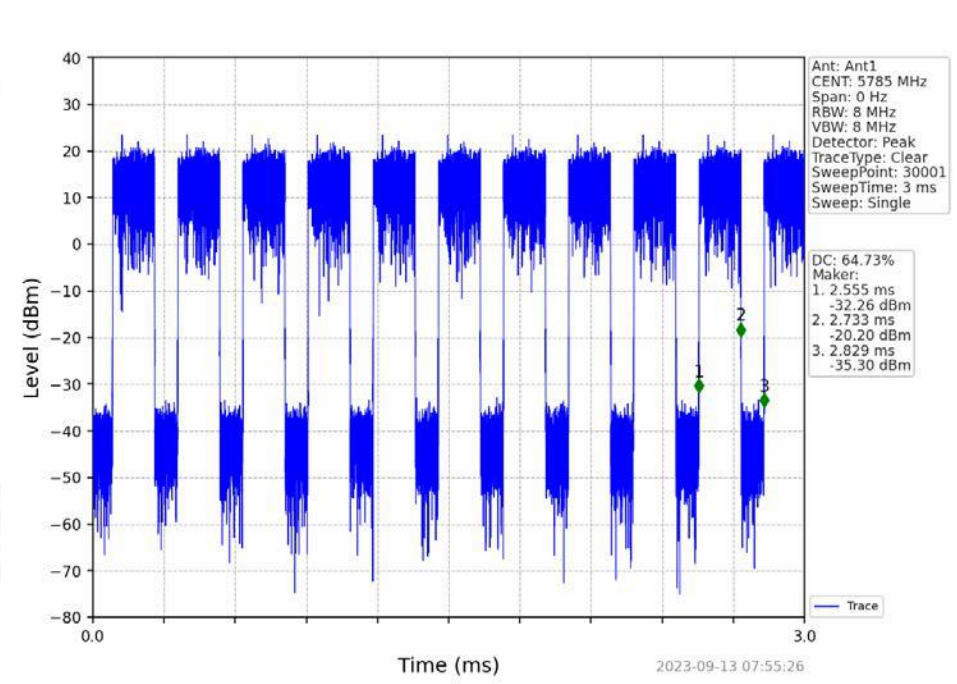
802.11a_HCH_5240MHz_NTNV



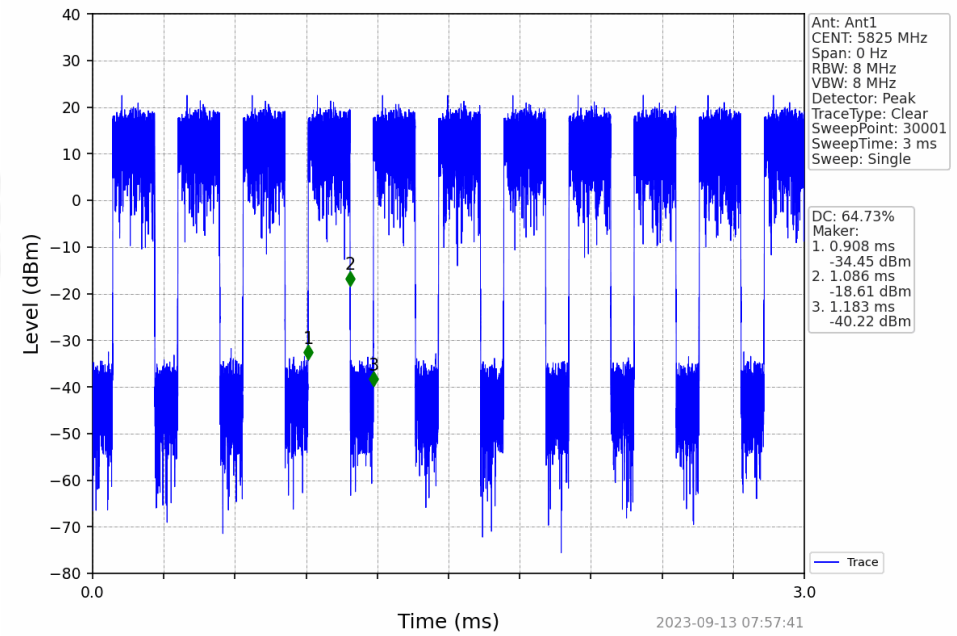
802.11a_LCH_5745MHz_NTNV



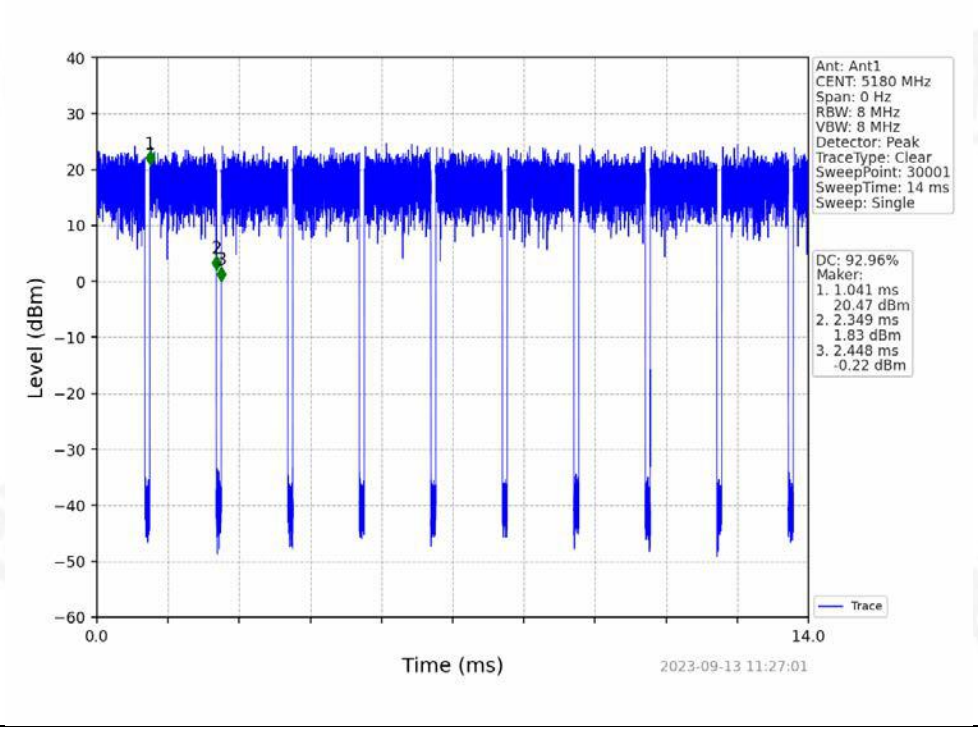
802.11a_MCH_5785MHz_NTNV



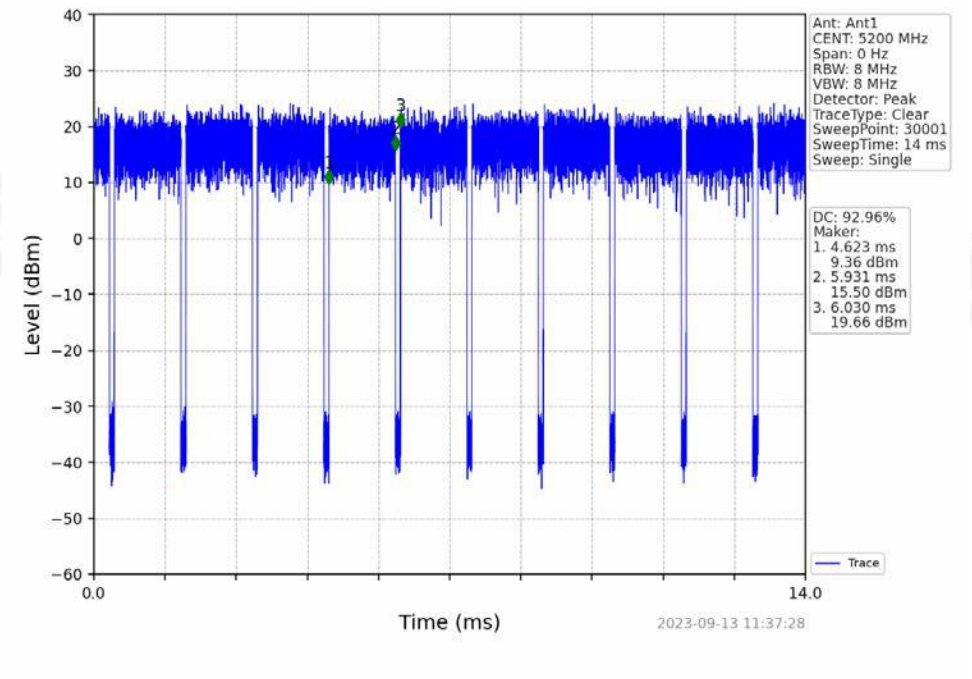
802.11a_HCH_5825MHz_NTNV



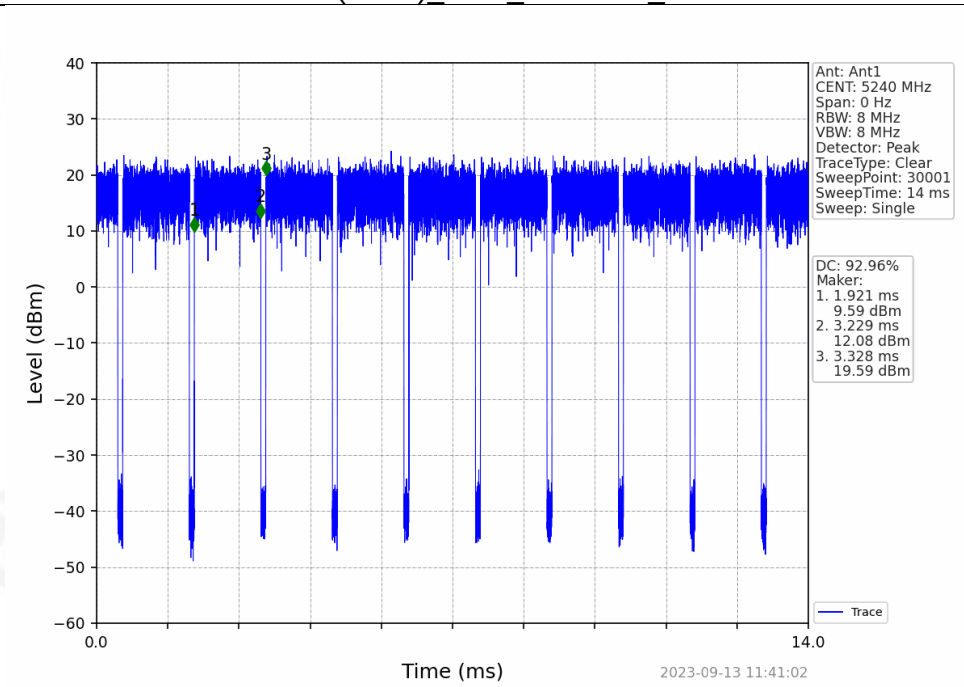
802.11n(HT20)_LCH_5180MHz_NTNV



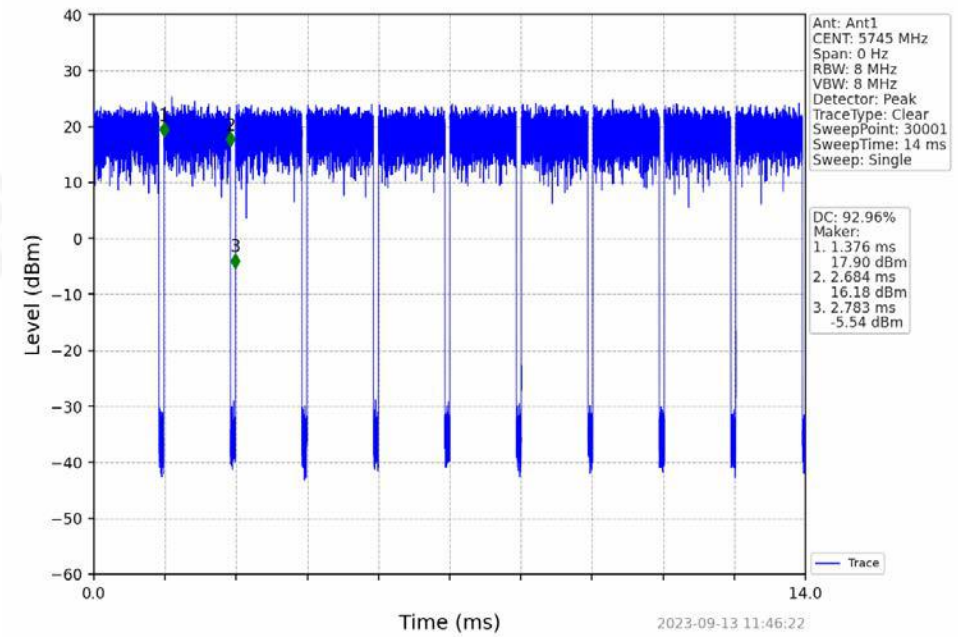
802.11n(HT20)_MCH_5200MHz_NTNV



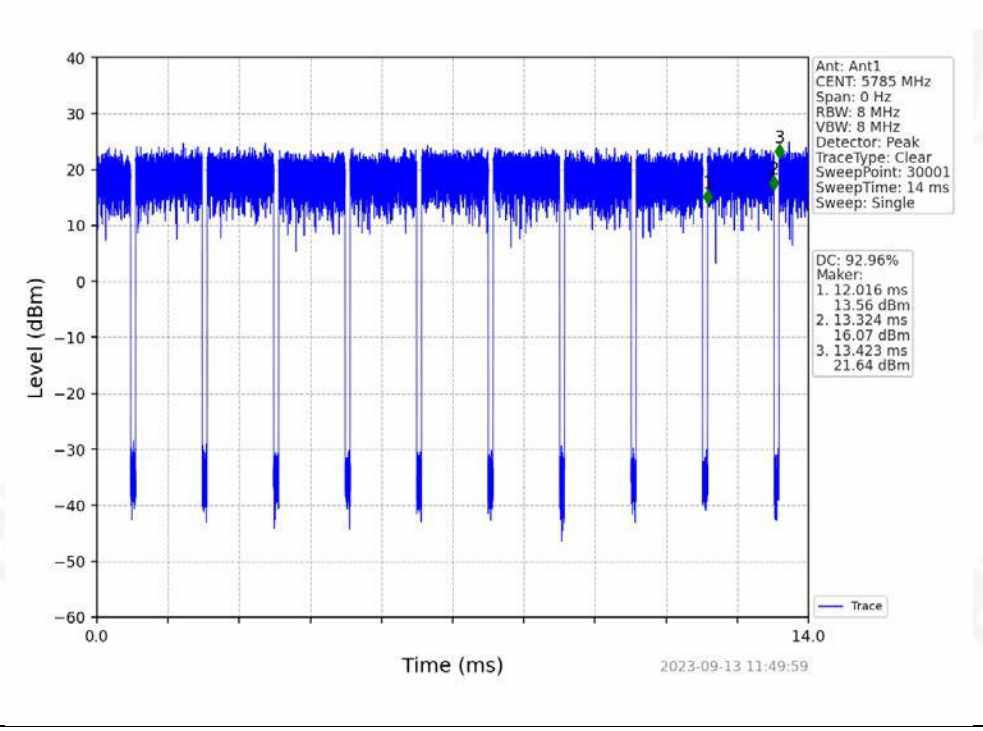
802.11n(HT20)_HCH_5240MHz_NTNV



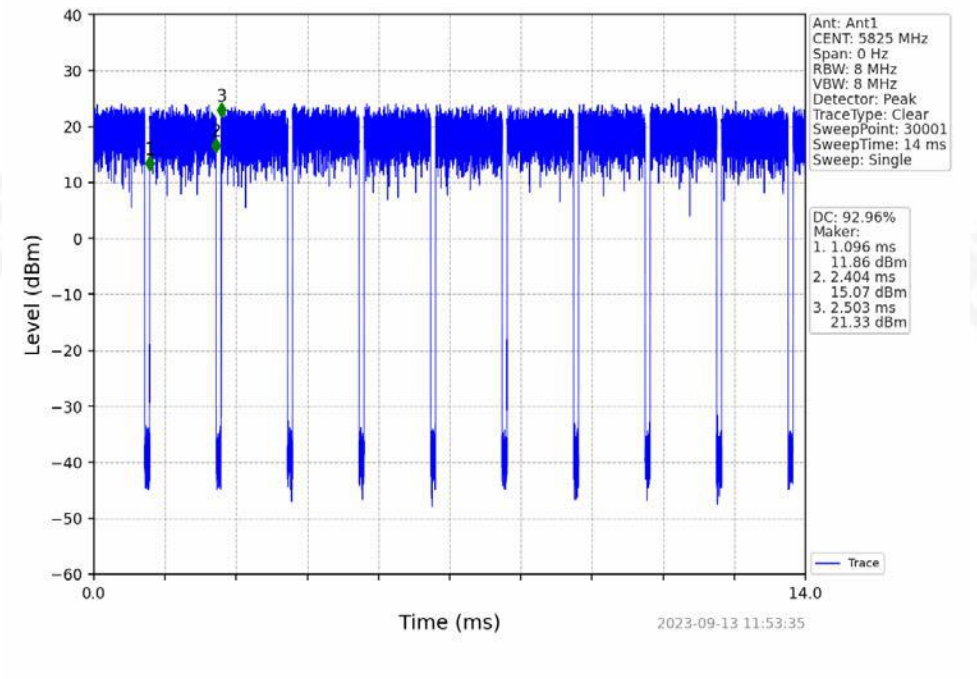
802.11n(HT20)_LCH_5745MHz_NTNV



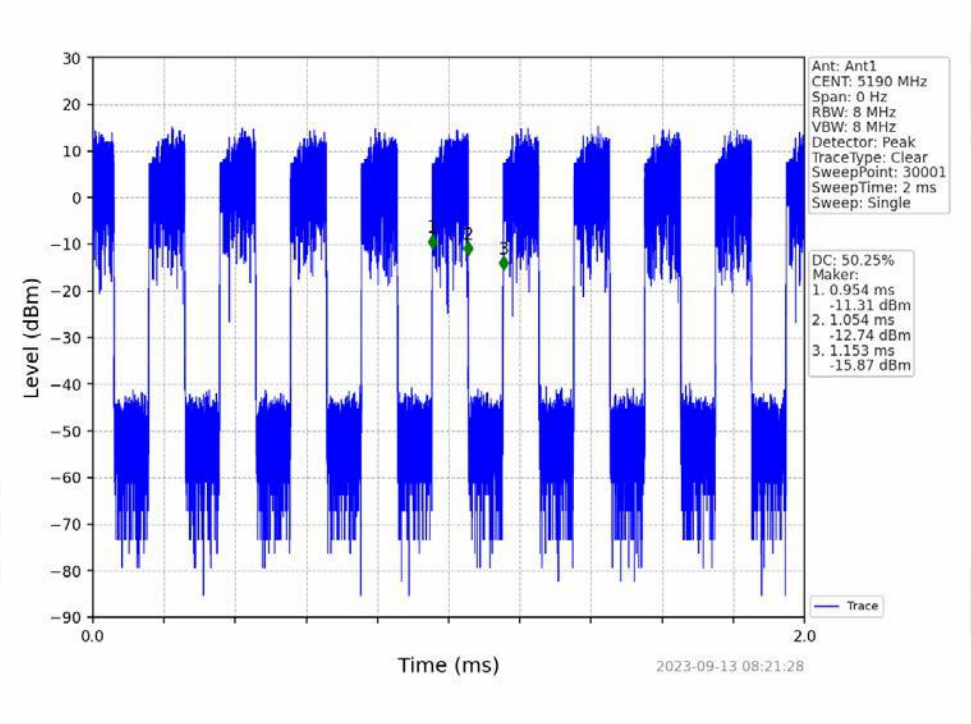
802.11n(HT20)_MCH_5785MHz_NTNV



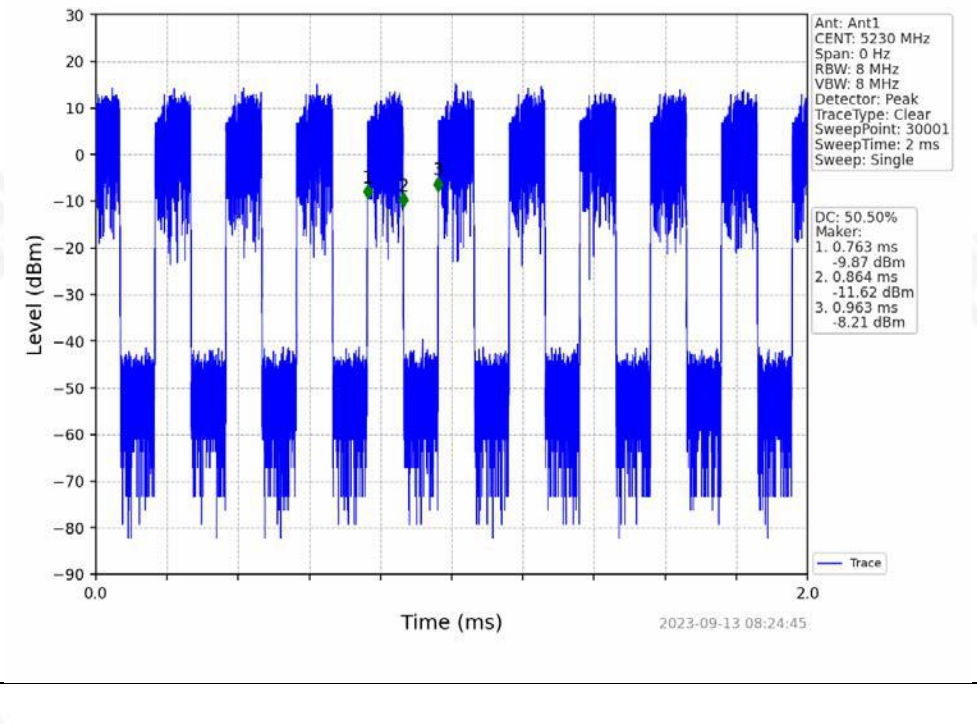
802.11n(HT20)_HCH_5825MHz_NTNV



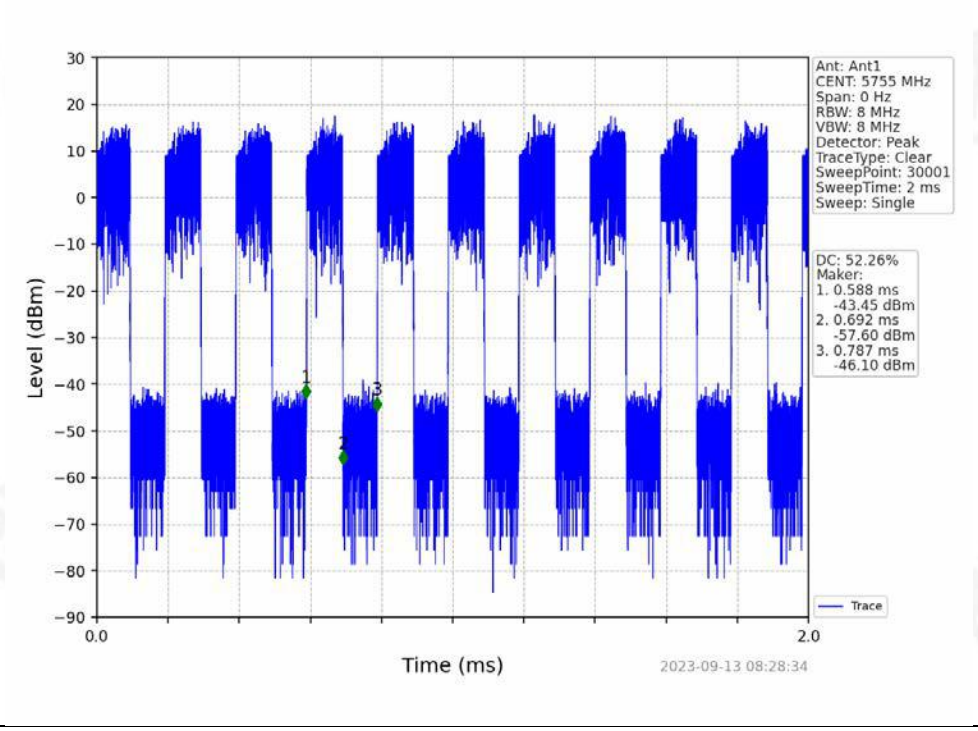
802.11n(HT40)_LCH_5190MHz_NTNV



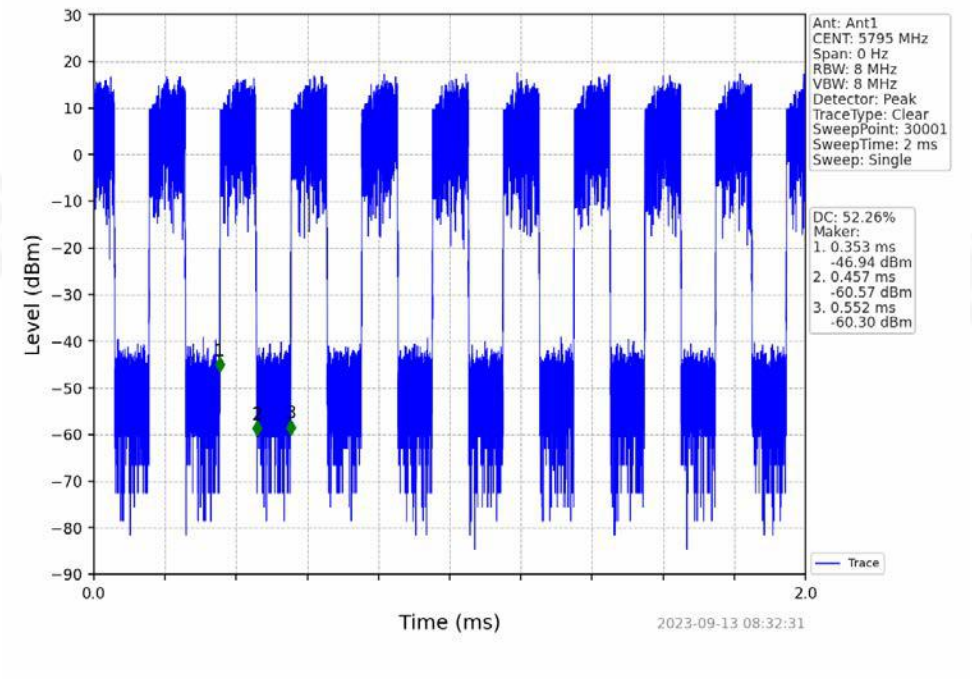
802.11n(HT40)_HCH_5230MHz_NTNV



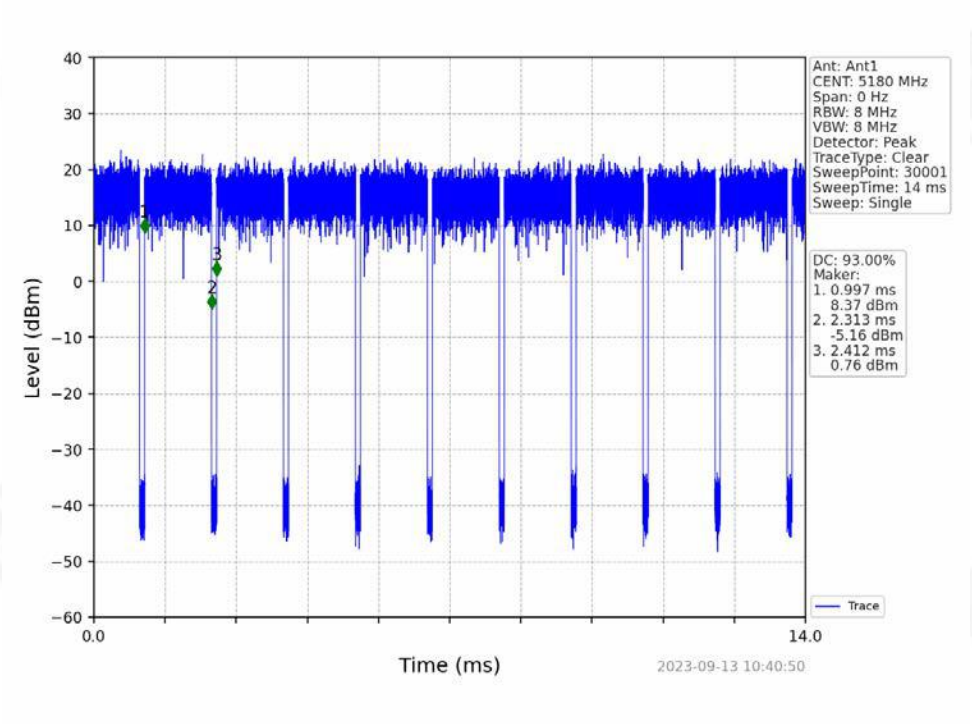
802.11n(HT40)_LCH_5755MHz_NTNV



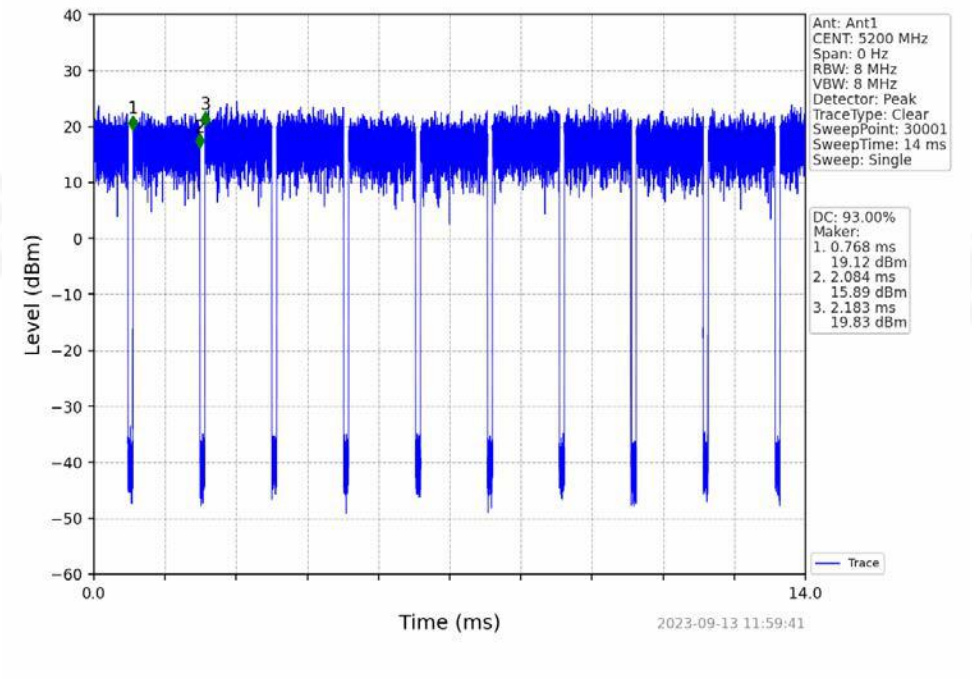
802.11n(HT40)_HCH_5795MHz_NTNV



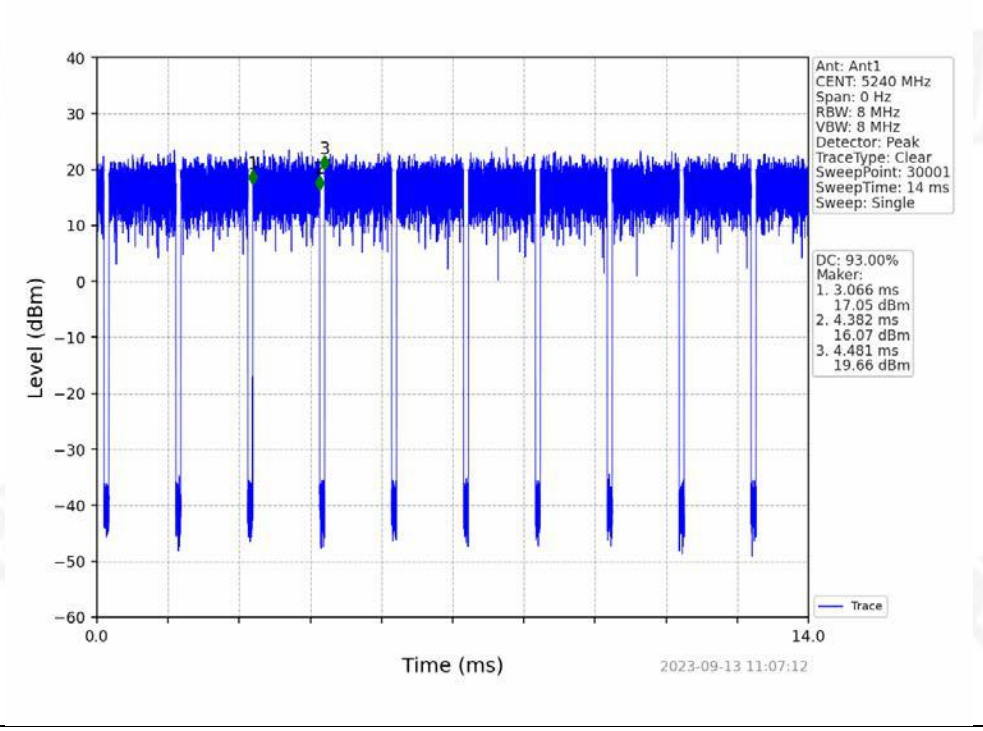
802.11ac(VHT20)_LCH_5180MHz_NTNV



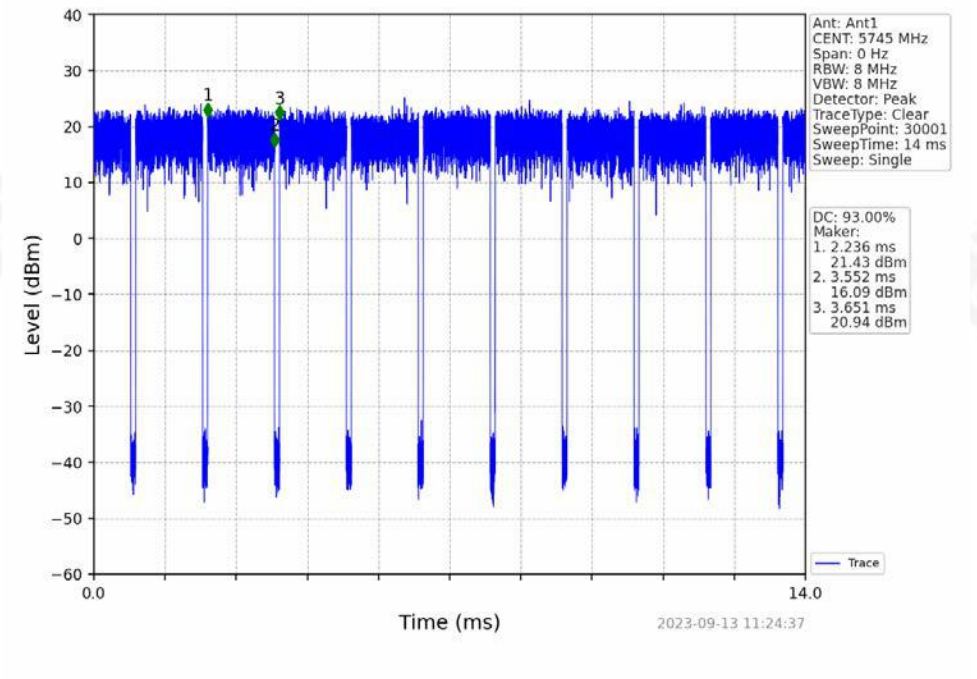
802.11ac(VHT20)_MCH_5200MHz_NTNV



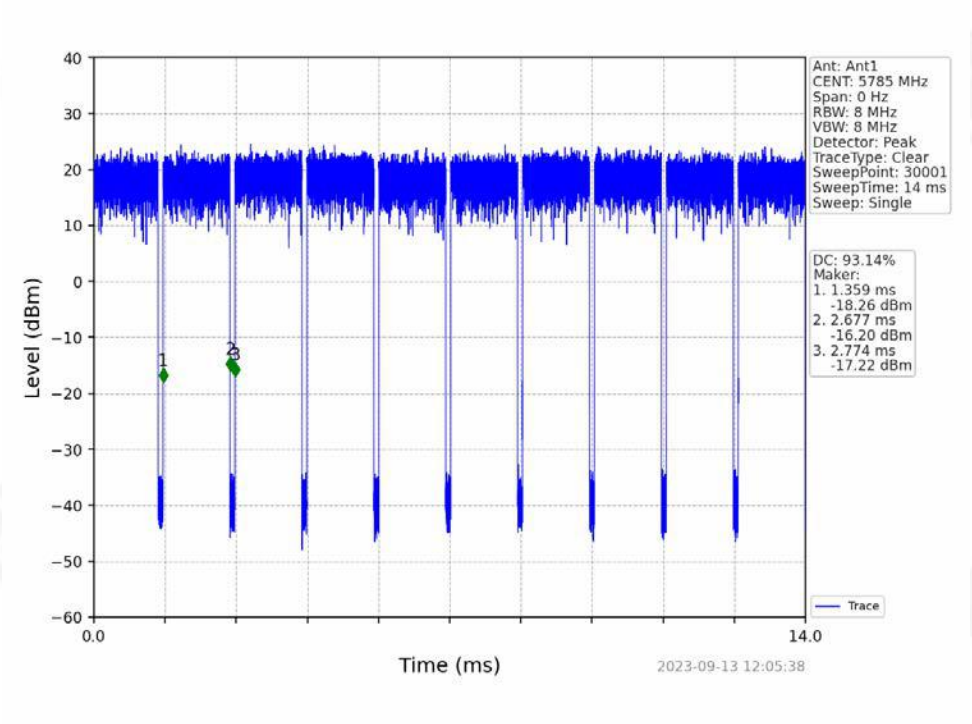
802.11ac(VHT20)_HCH_5240MHz_NTNV



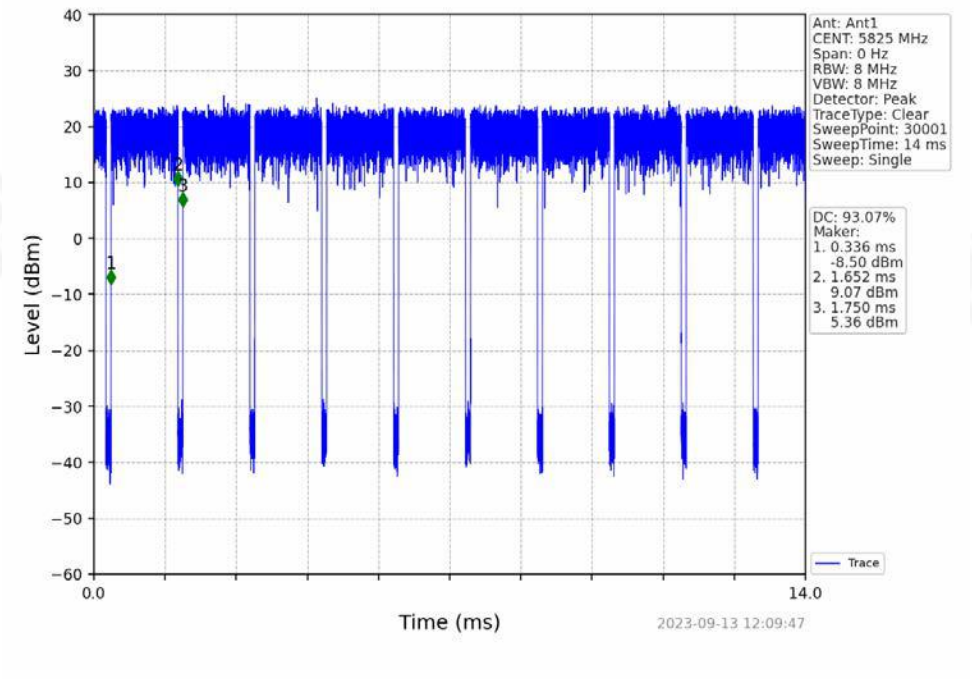
802.11ac(VHT20)_LCH_5745MHz_NTNV



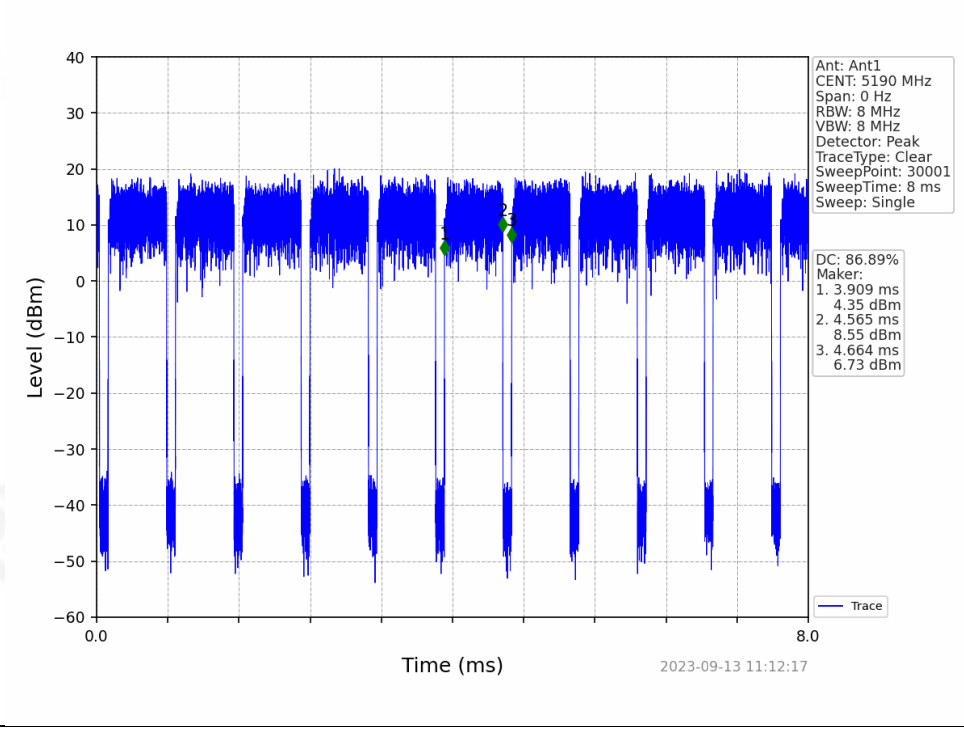
802.11ac(VHT20)_MCH_5785MHz_NTNV



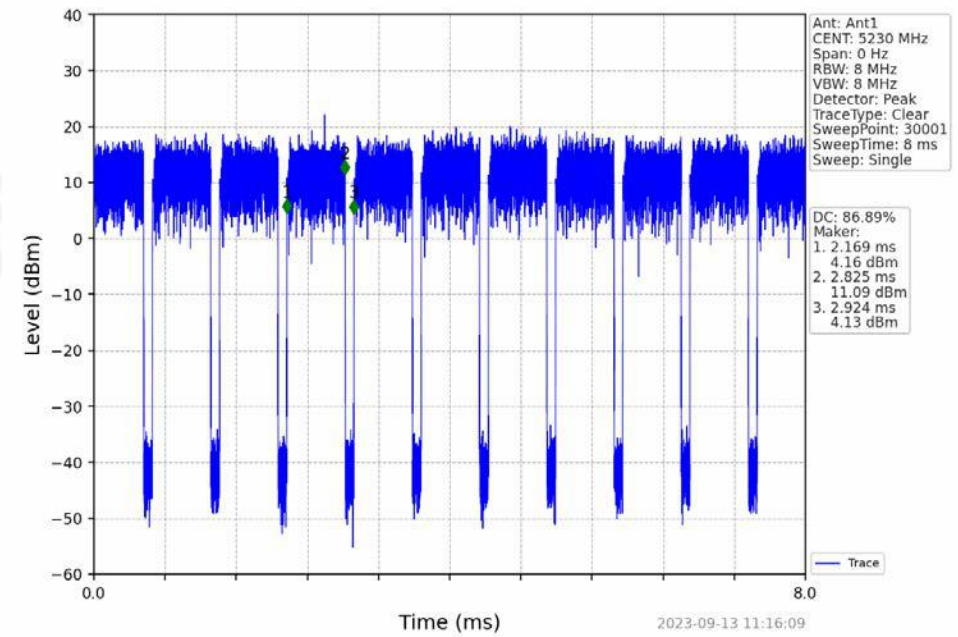
802.11ac(VHT20)_HCH_5825MHz_NTNV



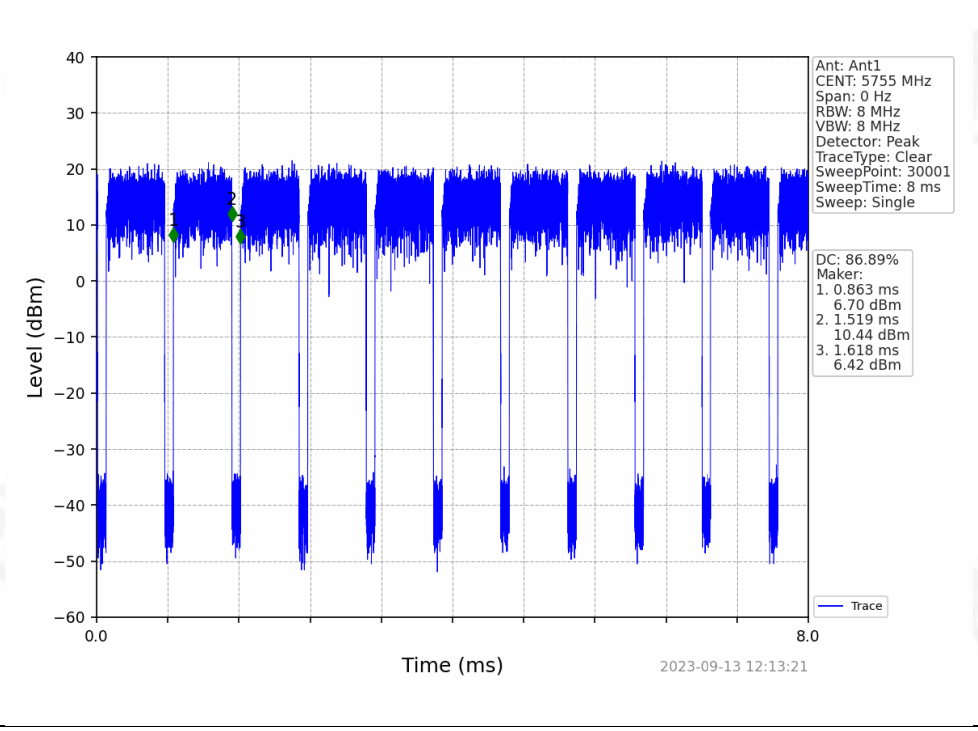
802.11ac(VHT40)_LCH_5190MHz_NTNV



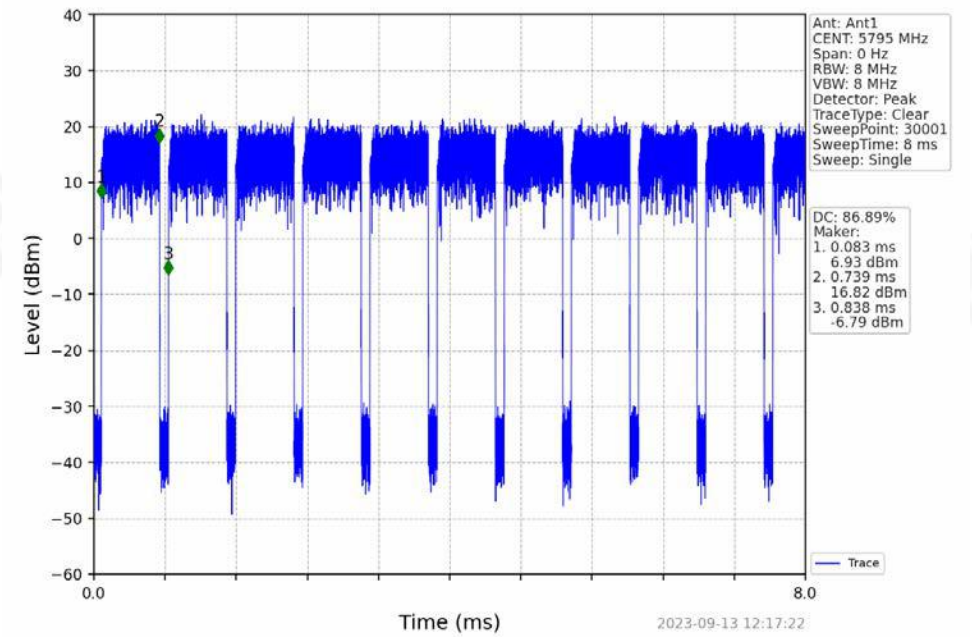
802.11ac(VHT40)_HCH_5230MHz_NTNV



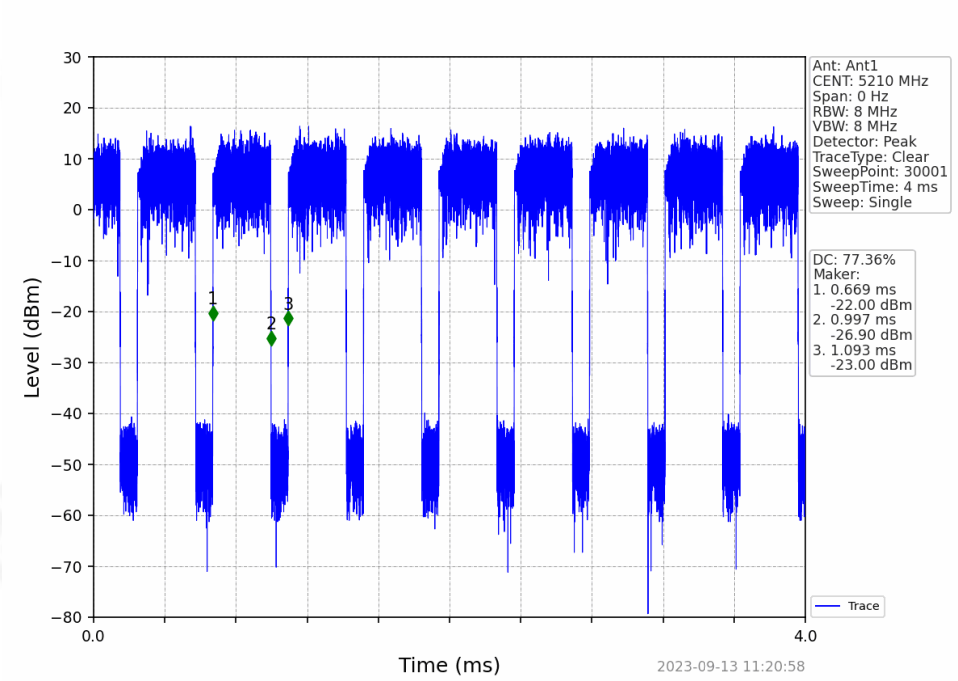
802.11ac(VHT40)_LCH_5755MHz_NTNV



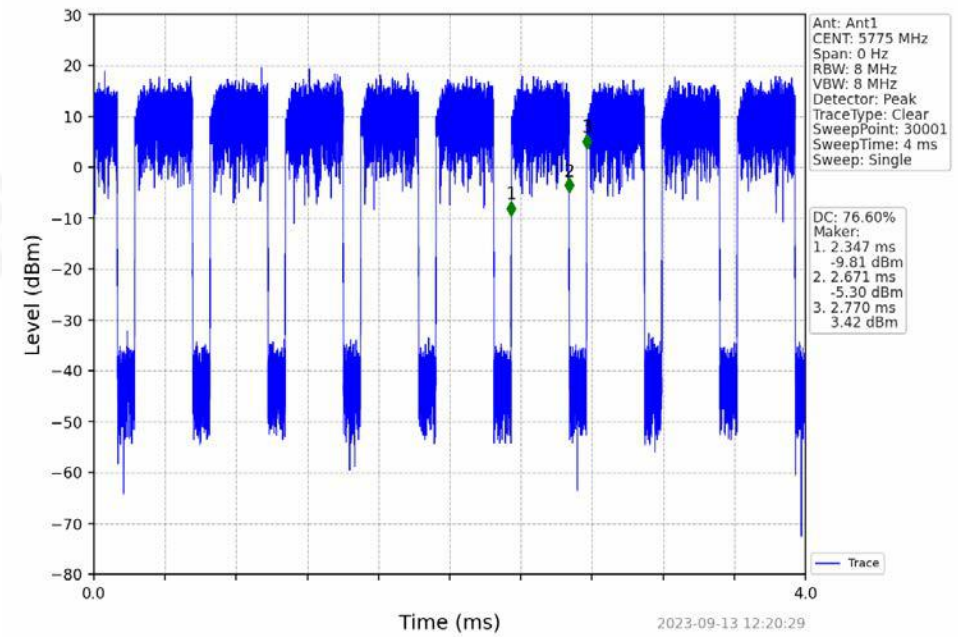
802.11ac(VHT40)_HCH_5795MHz_NTNV



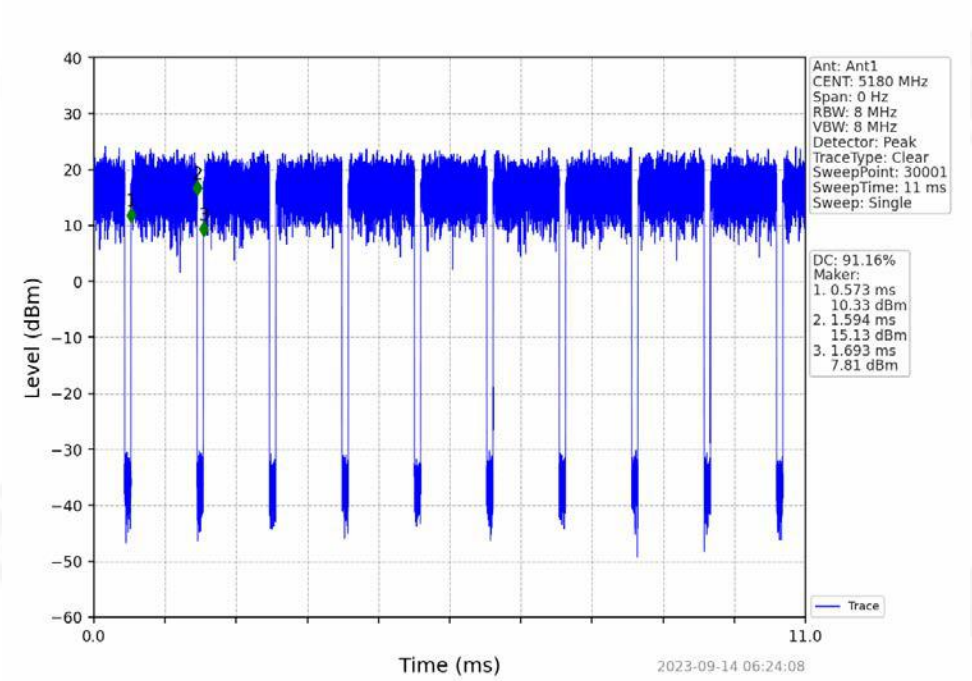
802.11ac(VHT80)_MCH_5210MHz_NTNV



802.11ac(VHT80)_MCH_5775MHz_NTNV



802.11ax(HEW20)_LCH_5180MHz_RU242_Left_NTNV



802.11ax(HEW20)_MCH_5200MHz_RU242_Left_NTNV