ANNEX F TEST DATA

For

Project No.:	8228EU010101W
Client:	Shenzhen Okexin Technology Co., Ltd.
Product Name:	Projector
Model No.:	L02
FCC ID:	2BFMQ-L02
Technology:	WiFi 5G
Test Engineer:	Mikey zhu
Test Date:	2024-04-18

Test Summary

Item	Result
Duty Cycle	Pass
Bandwidth	Pass
Maximum Conducted Output Power	Pass
Maximum Power Spectral Density	Pass
Unwanted Emissions In Restricted Frequency Bands	Pass
Frequency Stability	Pass

1. Duty Cycle

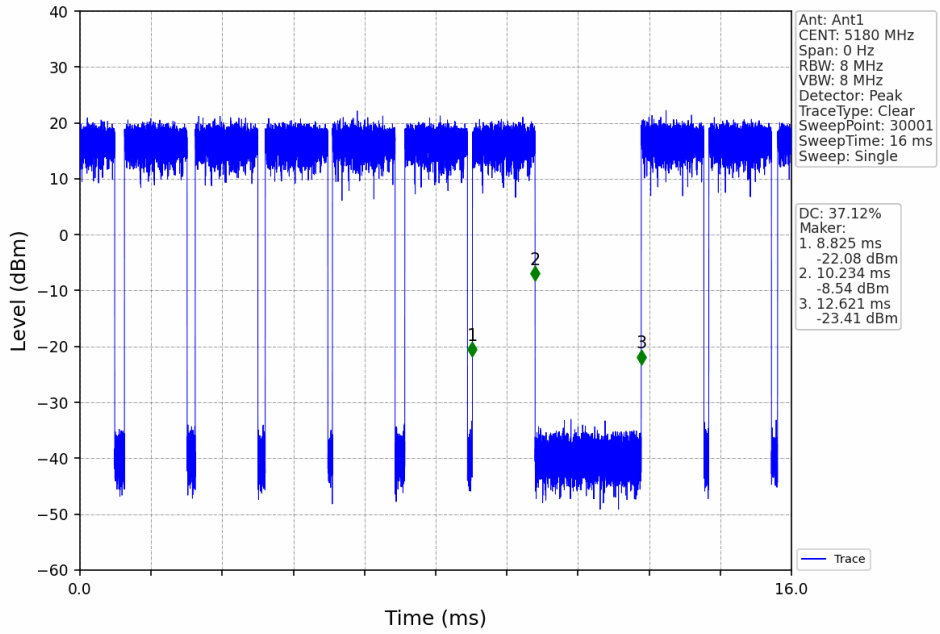
1.1 Ant1

1.1.1 Test Result

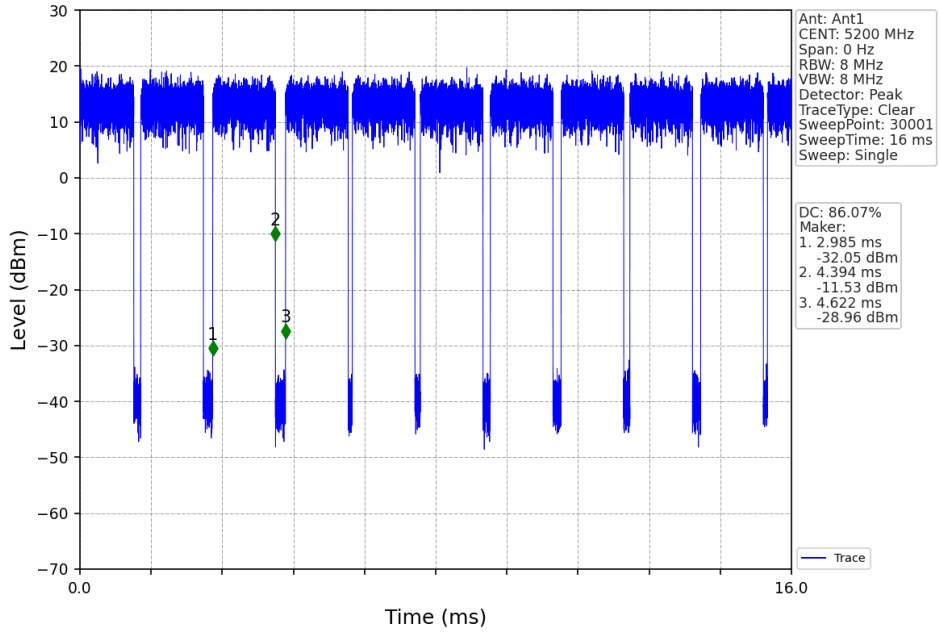
Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11a	SISO	5180	1.409	3.796	37.12	4.30	56.13
		5200	1.409	1.637	86.07	0.65	7.73
		5240	1.409	1.637	86.07	0.65	7.70
802.11n (HT20)	SISO	5180	1.317	1.536	85.74	0.67	7.66
		5200	1.317	1.545	85.24	0.69	8.16
		5240	1.316	1.545	85.18	0.70	7.54
802.11n (HT40)	SISO	5190	0.652	0.881	74.01	1.31	12.35
		5230	0.652	0.871	74.86	1.26	12.64
802.11ac (VHT20)	SISO	5180	1.325	1.568	84.50	0.73	6.27
		5200	1.325	1.558	85.04	0.70	6.31
		5240	1.325	4.611	28.74	5.42	62.05
802.11ac (VHT40)	SISO	5190	0.652	0.880	74.09	1.30	10.33
		5230	0.653	0.872	74.89	1.26	12.66

1.1.2 Test Graph

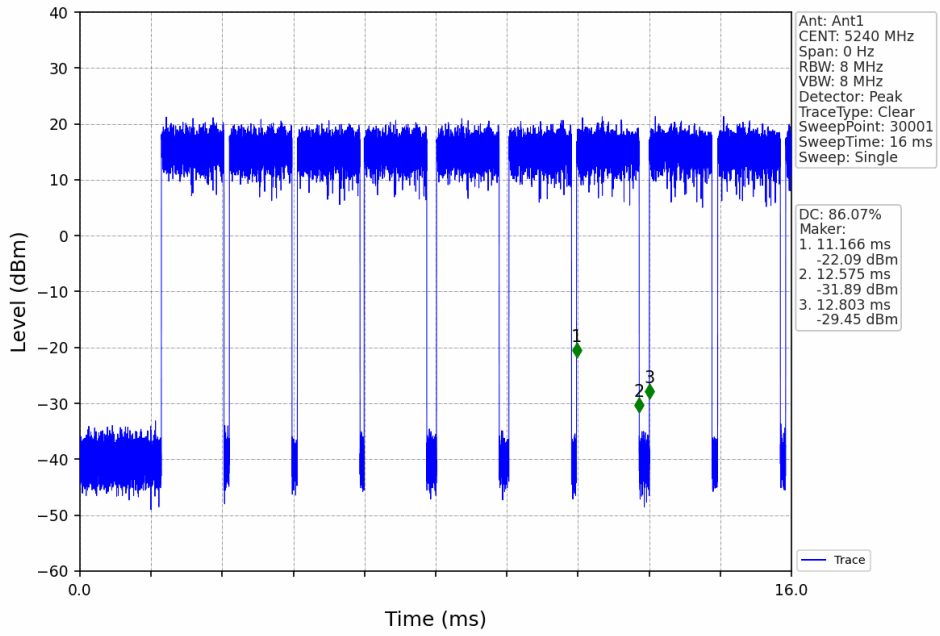
802.11a_LCH_5180MHz_Ant1_NTNV



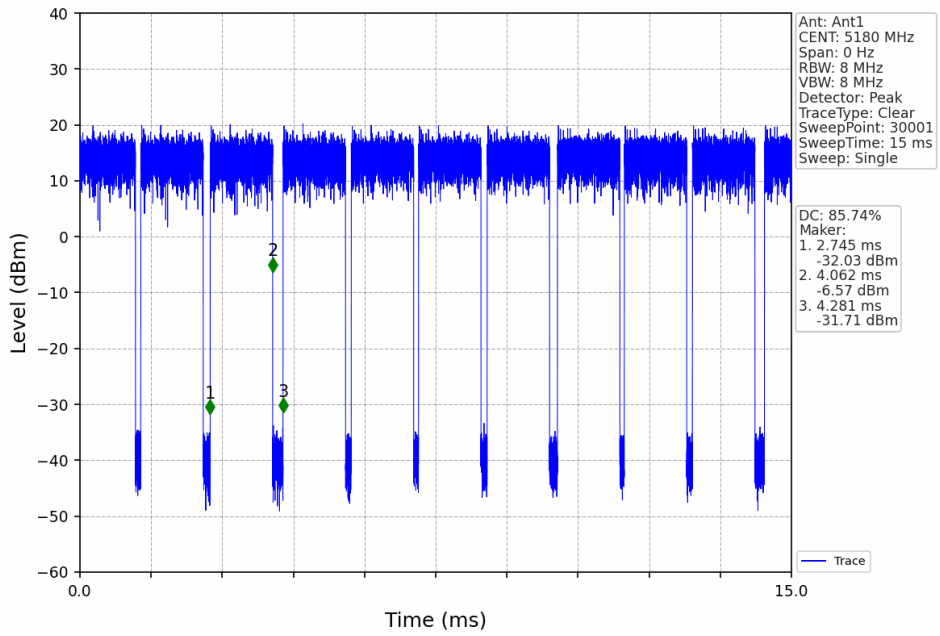
802.11a_MCH_5200MHz_Ant1_NTNV



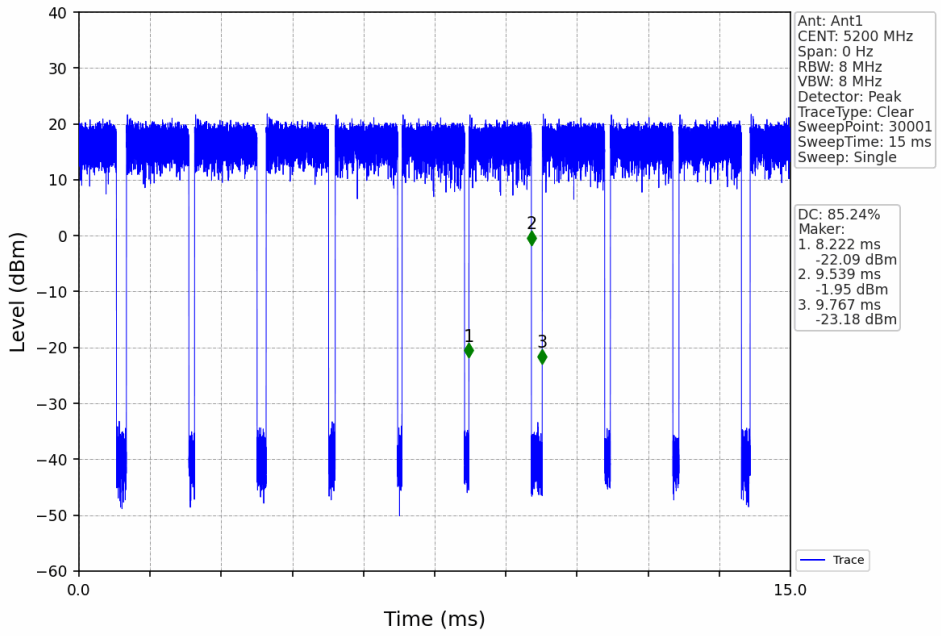
802.11a_HCH_5240MHz_Ant1_NTNV



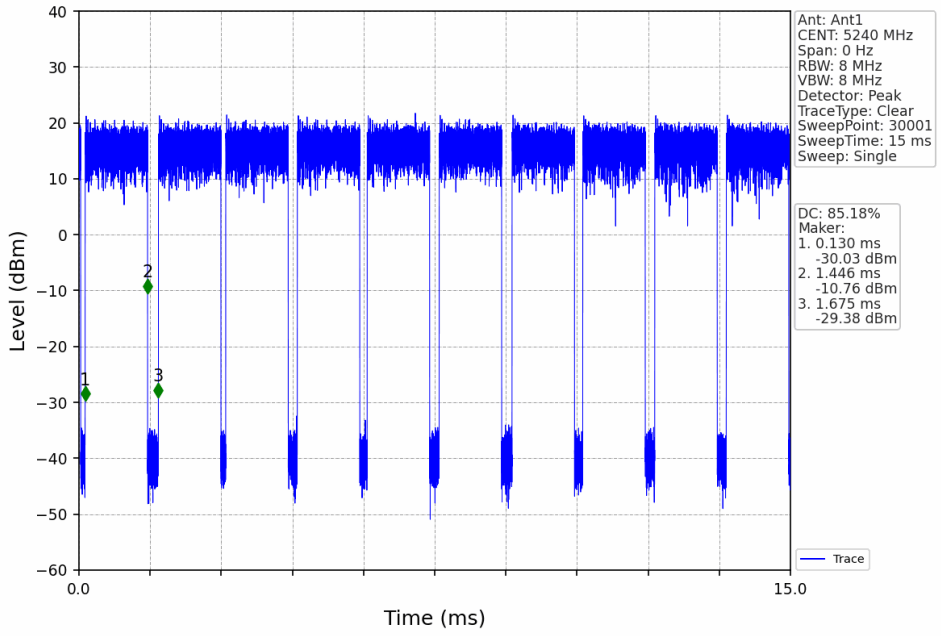
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



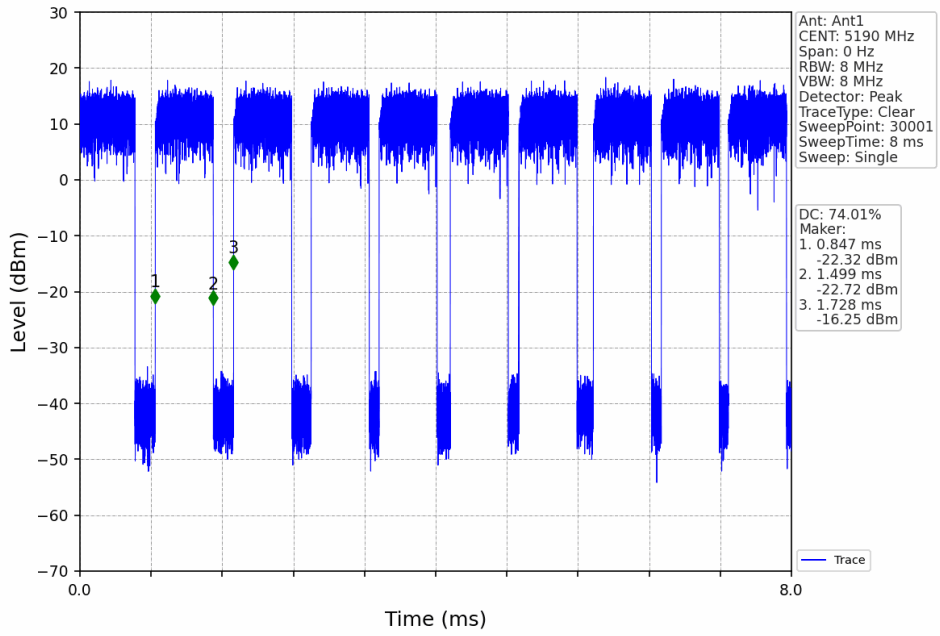
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



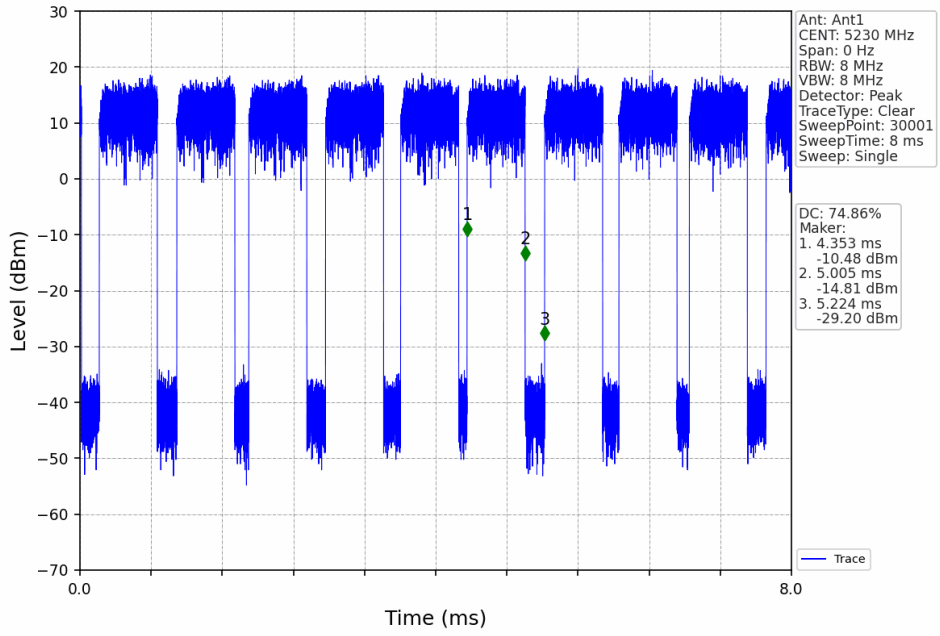
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



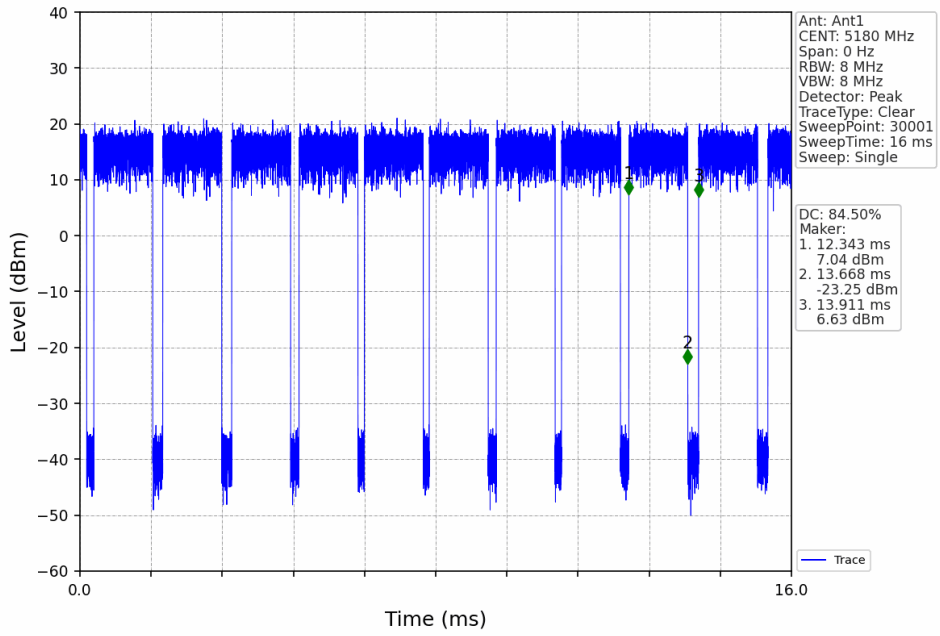
802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



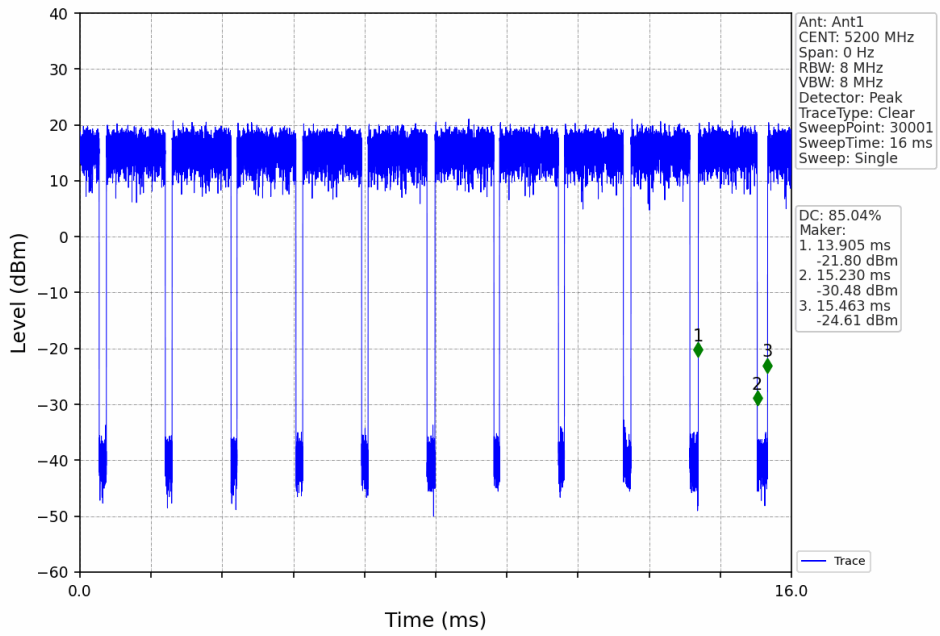
802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



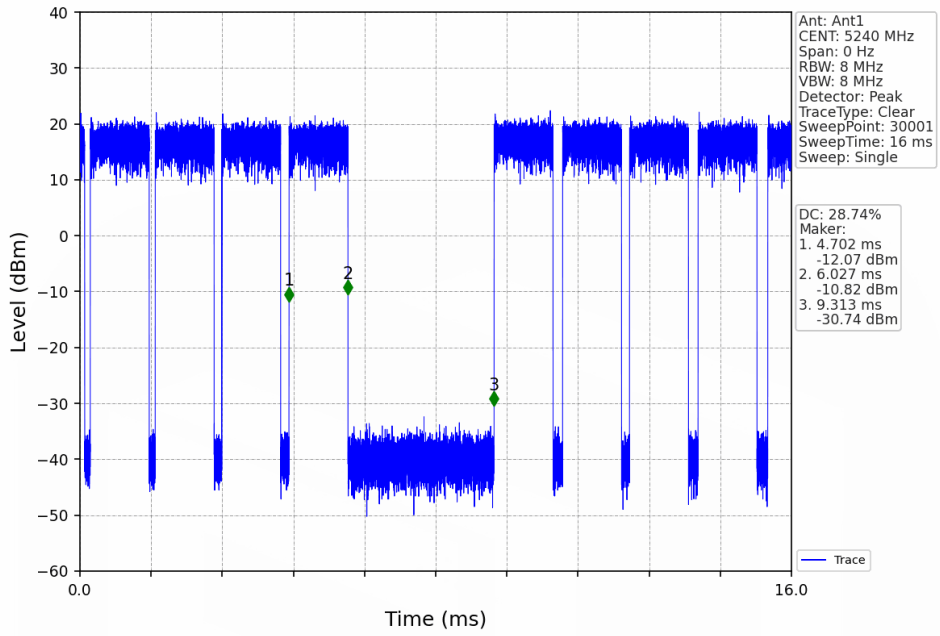
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



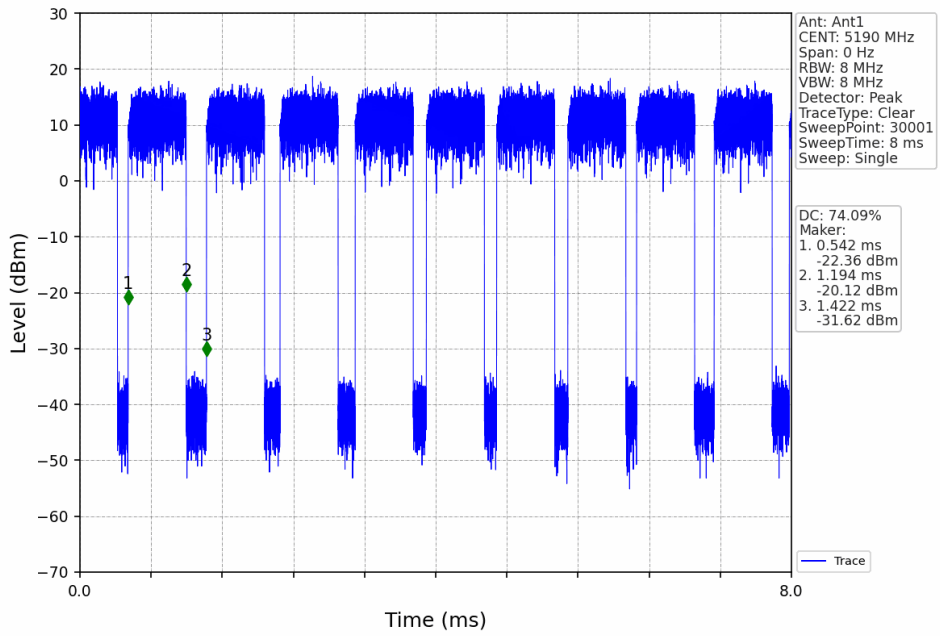
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



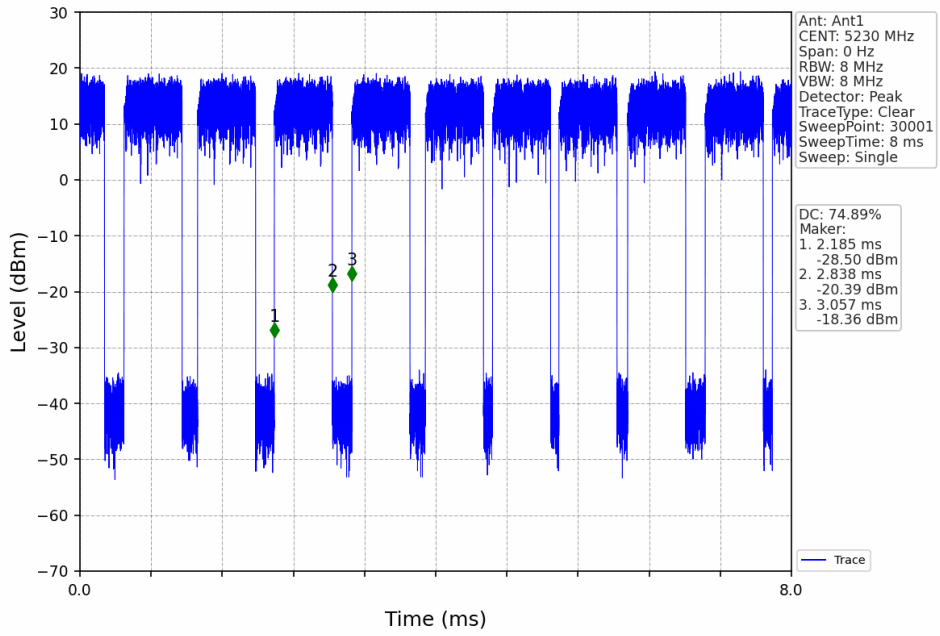
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



2. Bandwidth

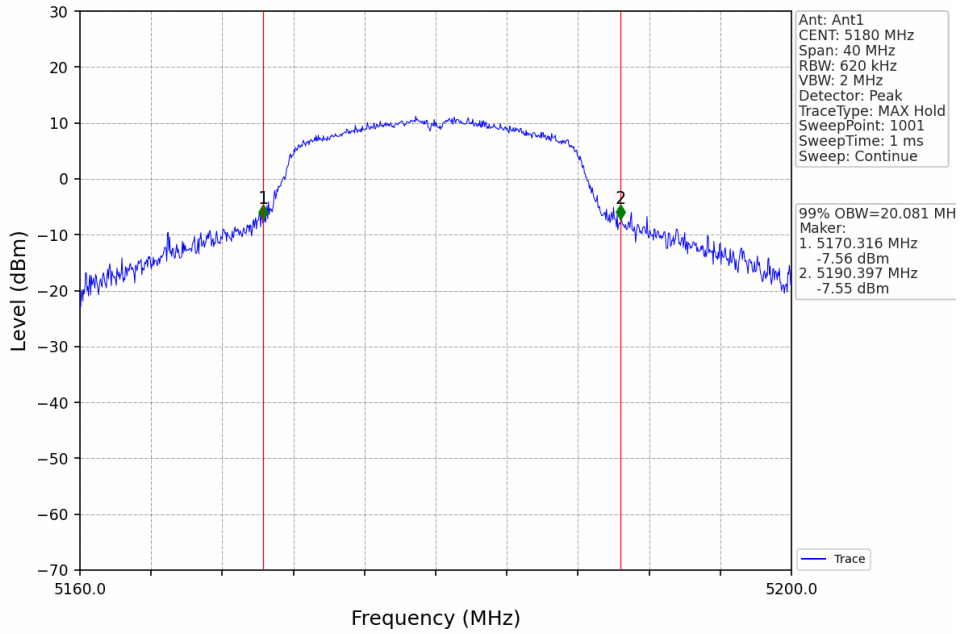
2.1 OBW

2.1.1 Test Result

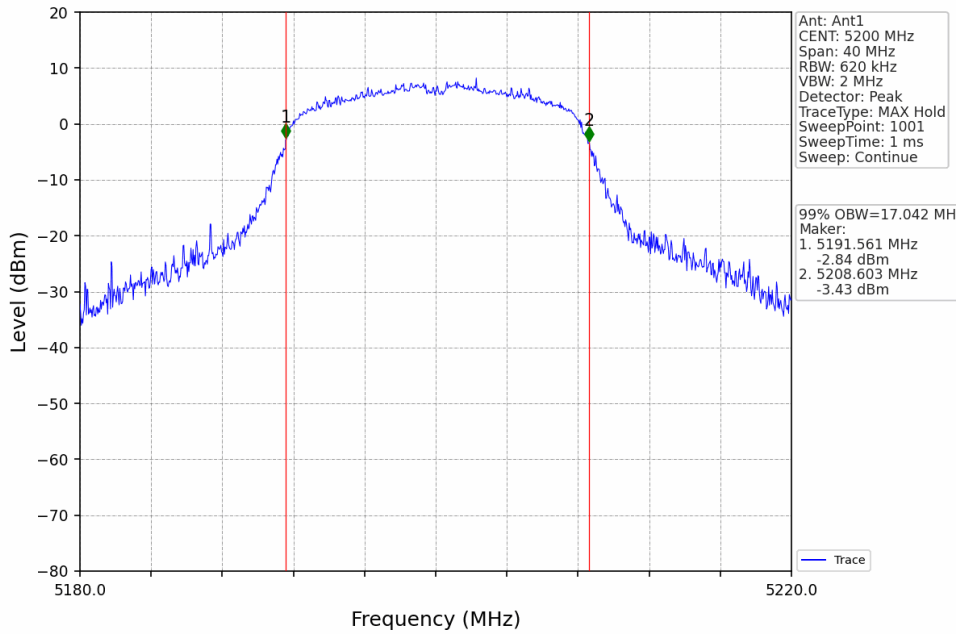
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	20.081	/	Pass
		5200	1	17.042	/	Pass
		5240	1	17.221	/	Pass
802.11n (HT20)	SISO	5180	1	18.254	/	Pass
		5200	1	19.745	/	Pass
		5240	1	18.182	/	Pass
802.11n (HT40)	SISO	5190	1	36.074	/	Pass
		5230	1	35.782	/	Pass
802.11ac (VHT20)	SISO	5180	1	18.585	/	Pass
		5200	1	18.525	/	Pass
		5240	1	18.450	/	Pass
802.11ac (VHT40)	SISO	5190	1	36.171	/	Pass
		5230	1	36.303	/	Pass

2.1.2 Test Graph

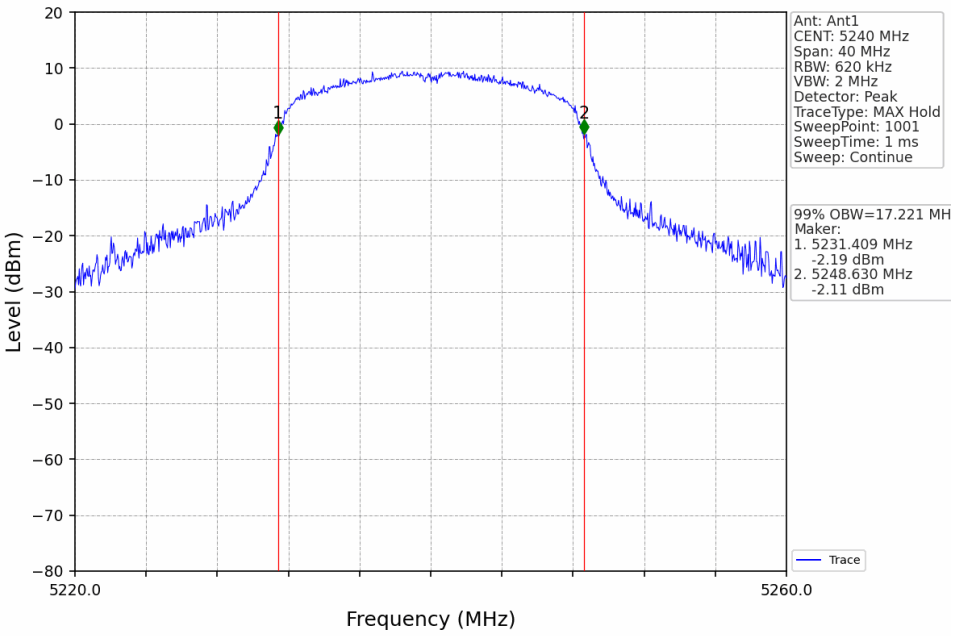
802.11a_LCH_5180MHz_Ant1_NTNV



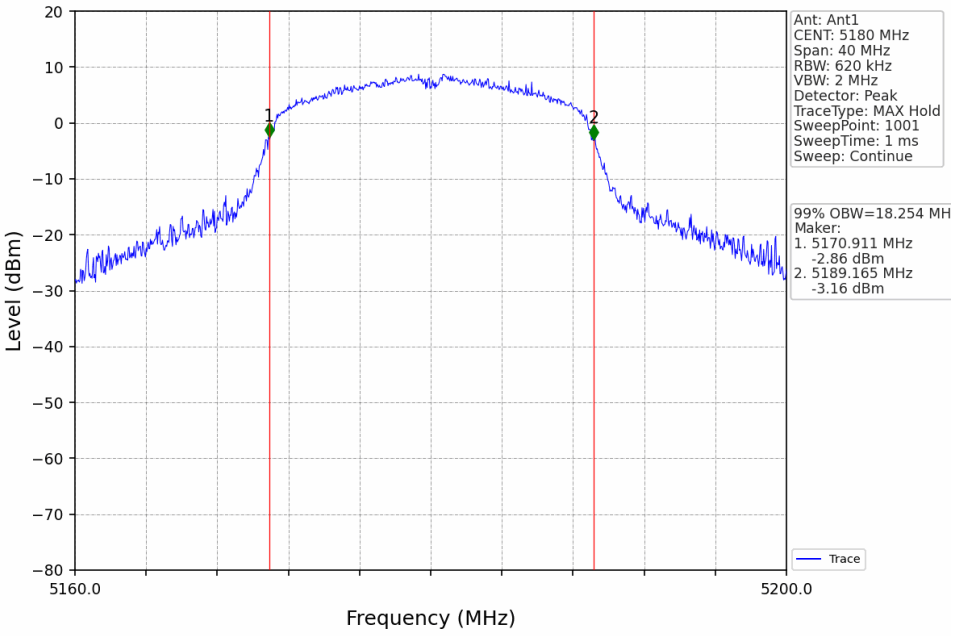
802.11a_MCH_5200MHz_Ant1_NTNV



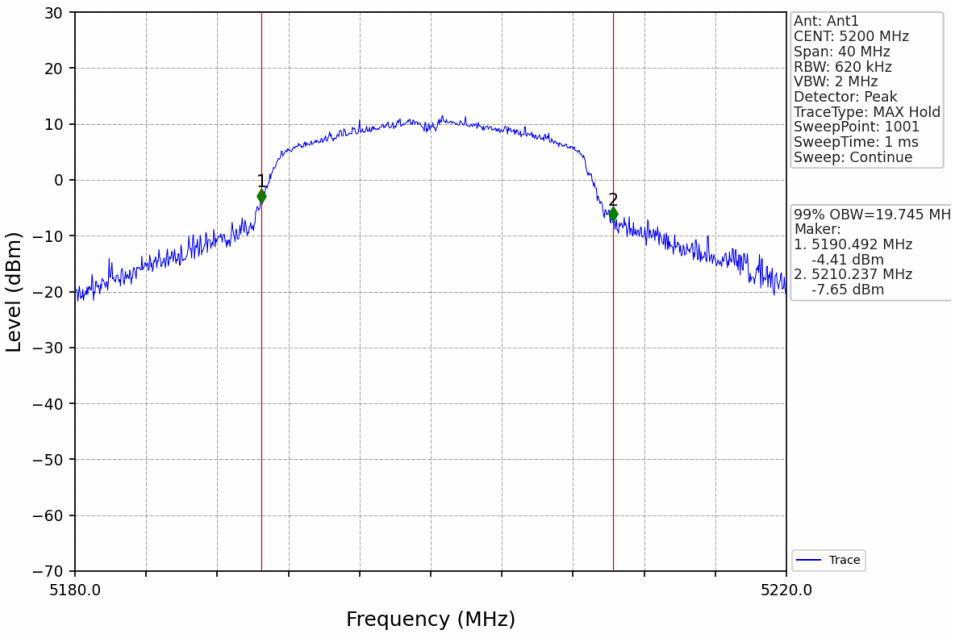
802.11a_HCH_5240MHz_Ant1_NTNV



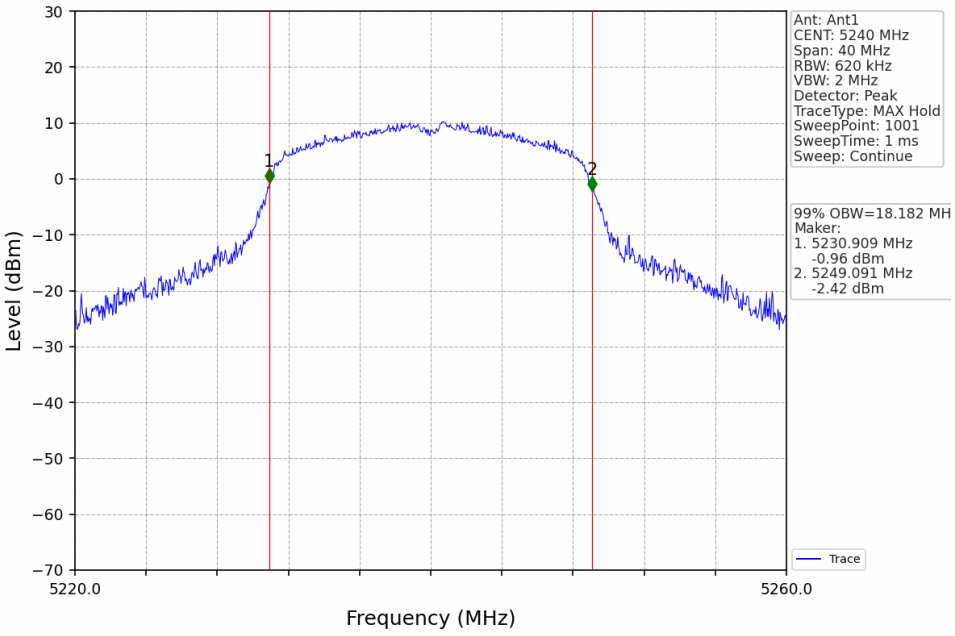
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



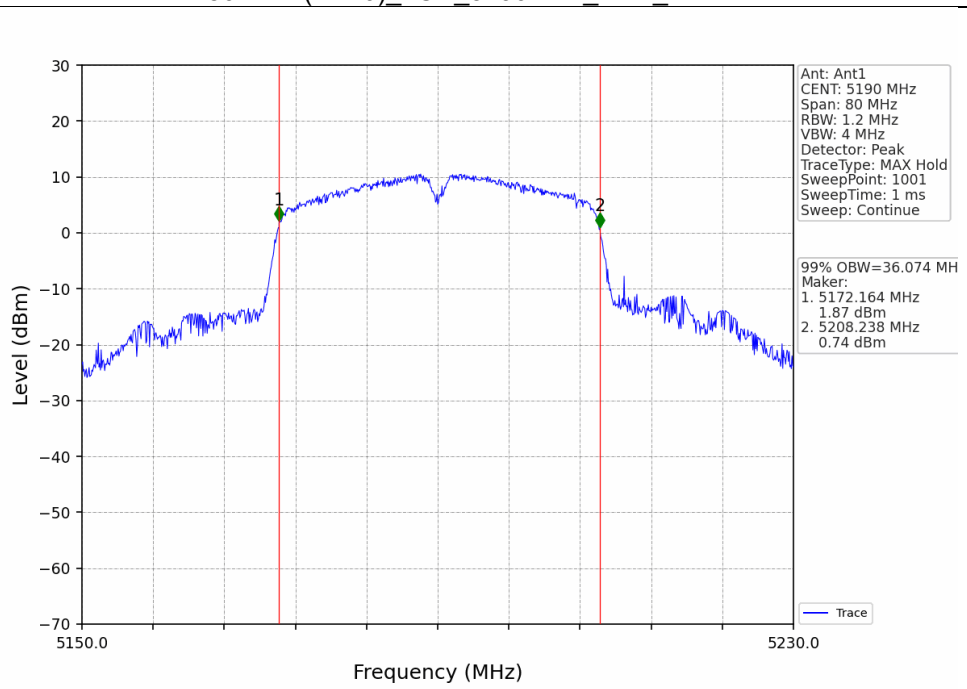
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



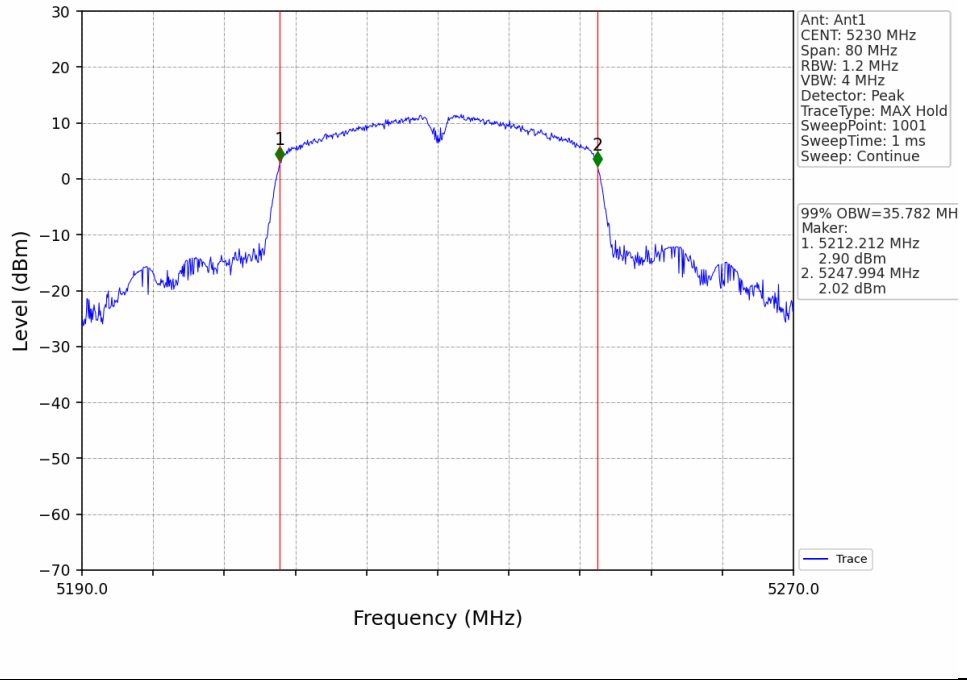
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



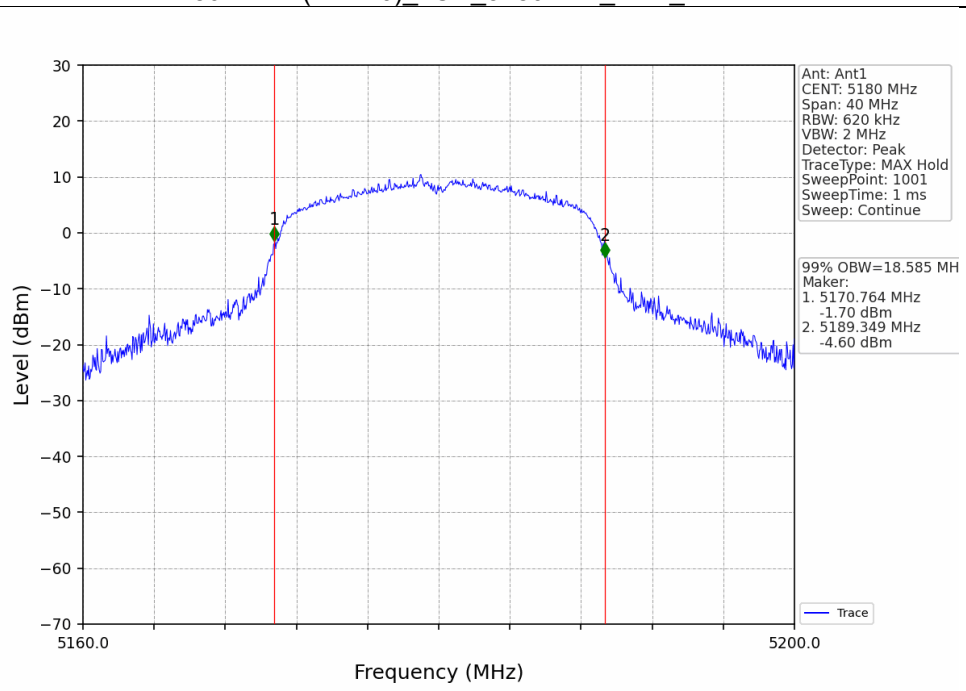
802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



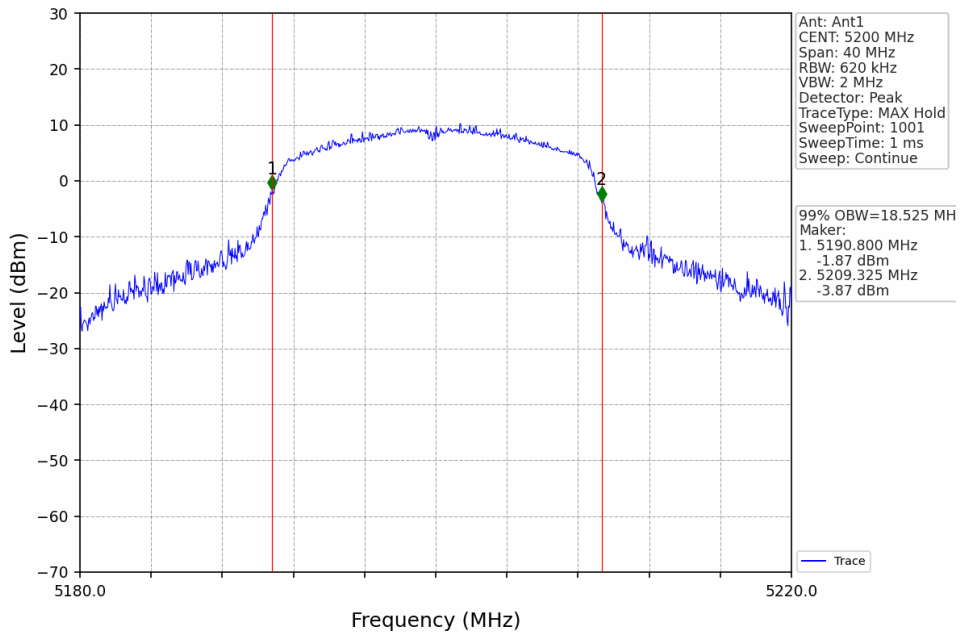
802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



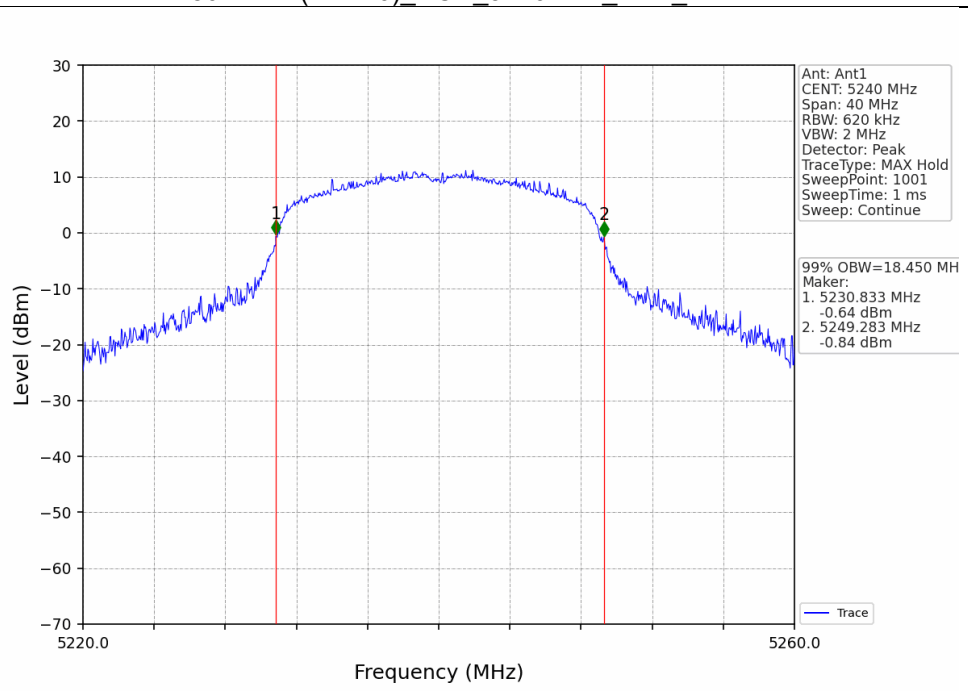
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



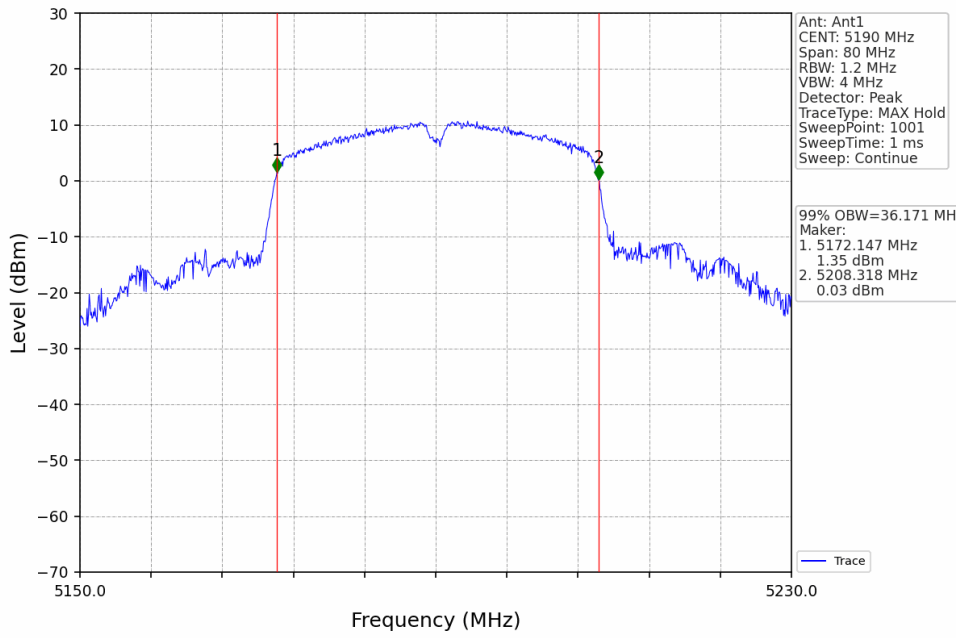
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



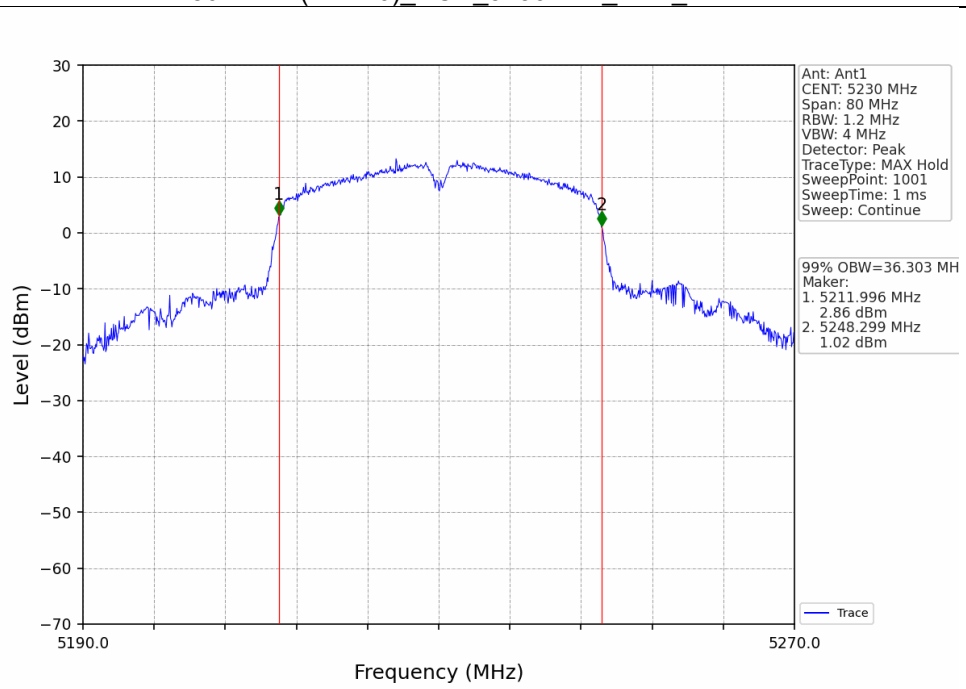
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



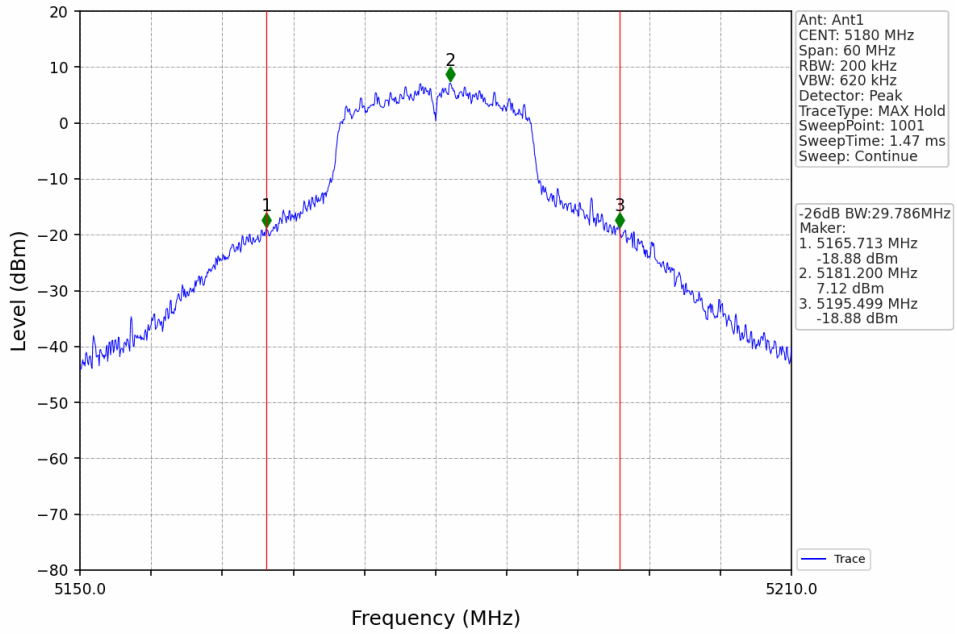
2.2 26dB BW

2.2.1 Test Result

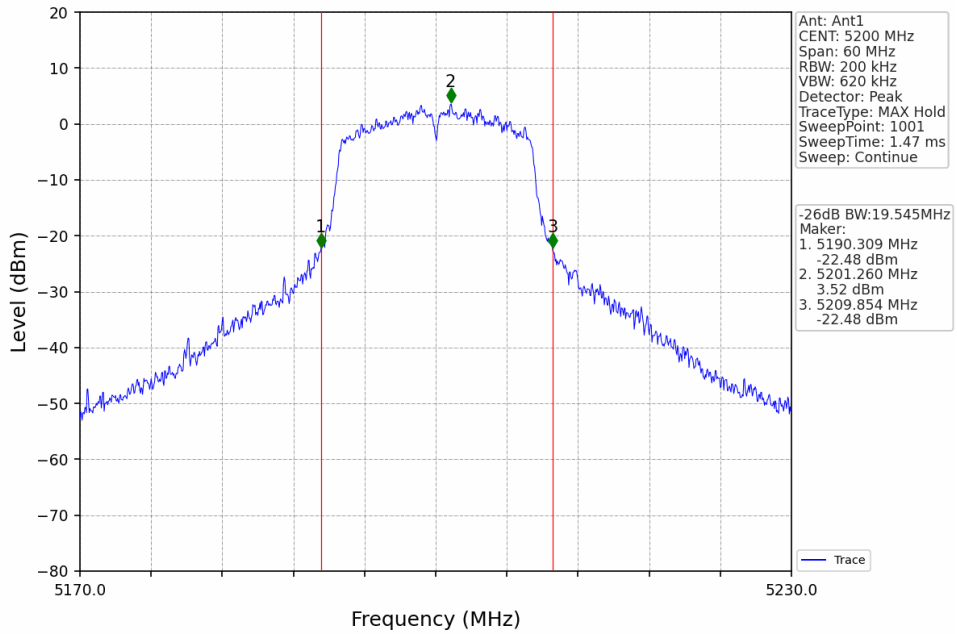
Mode	TX Type	Frequency (MHz)	ANT	26dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	29.786	/	Pass
		5200	1	19.545	/	Pass
		5240	1	20.260	/	Pass
802.11n (HT20)	SISO	5180	1	22.271	/	Pass
		5200	1	31.007	/	Pass
		5240	1	21.512	/	Pass
802.11n (HT40)	SISO	5190	1	56.277	/	Pass
		5230	1	49.866	/	Pass
802.11ac (VHT20)	SISO	5180	1	26.108	/	Pass
		5200	1	23.130	/	Pass
		5240	1	25.173	/	Pass
802.11ac (VHT40)	SISO	5190	1	50.360	/	Pass
		5230	1	58.307	/	Pass

2.2.2 Test Graph

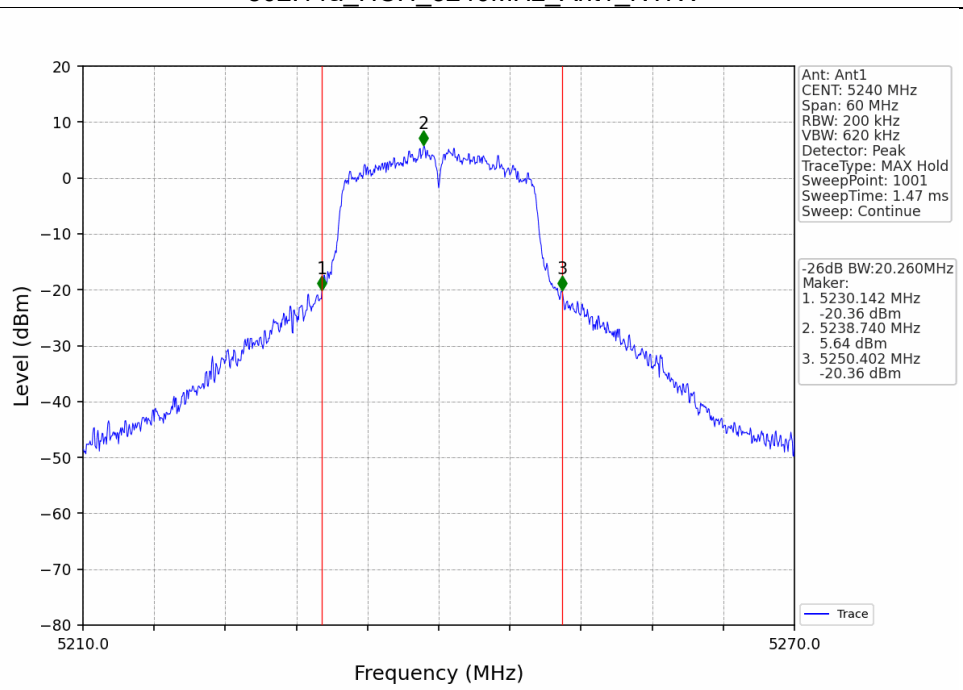
802.11a_LCH_5180MHz_Ant1_NTNV



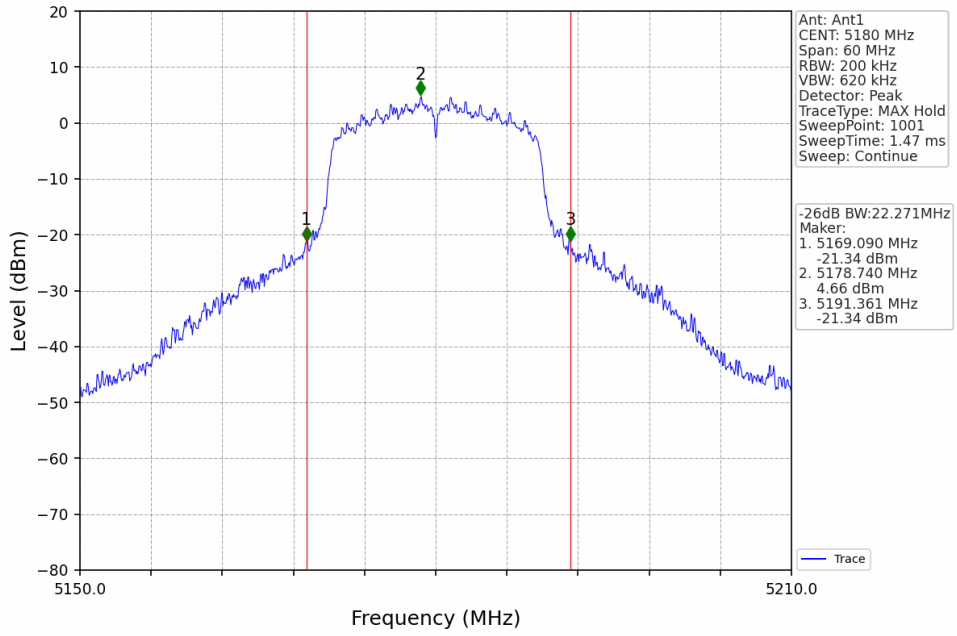
802.11a_MCH_5200MHz_Ant1_NTNV



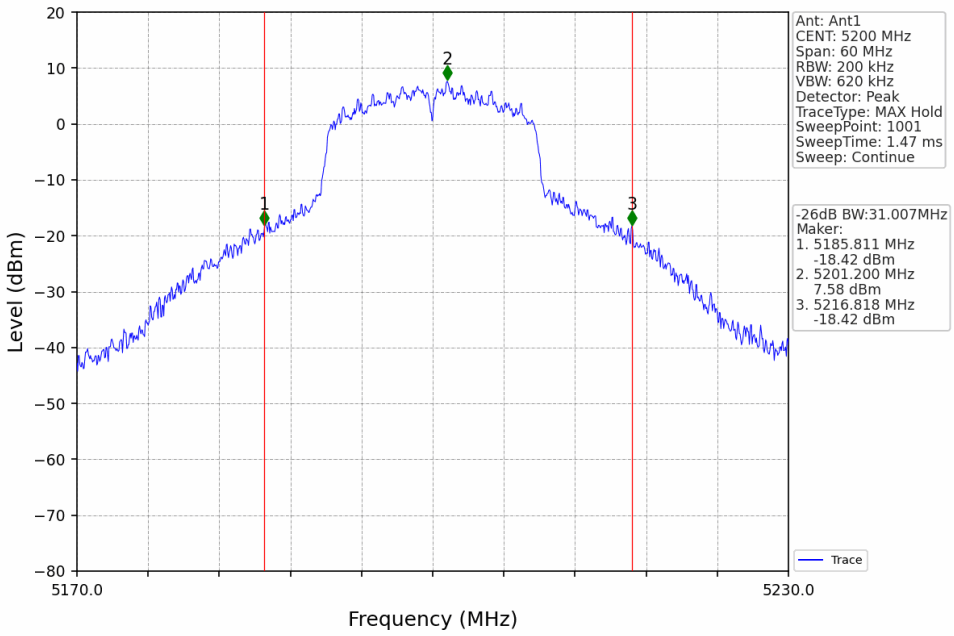
802.11a_HCH_5240MHz_Ant1_NTNV



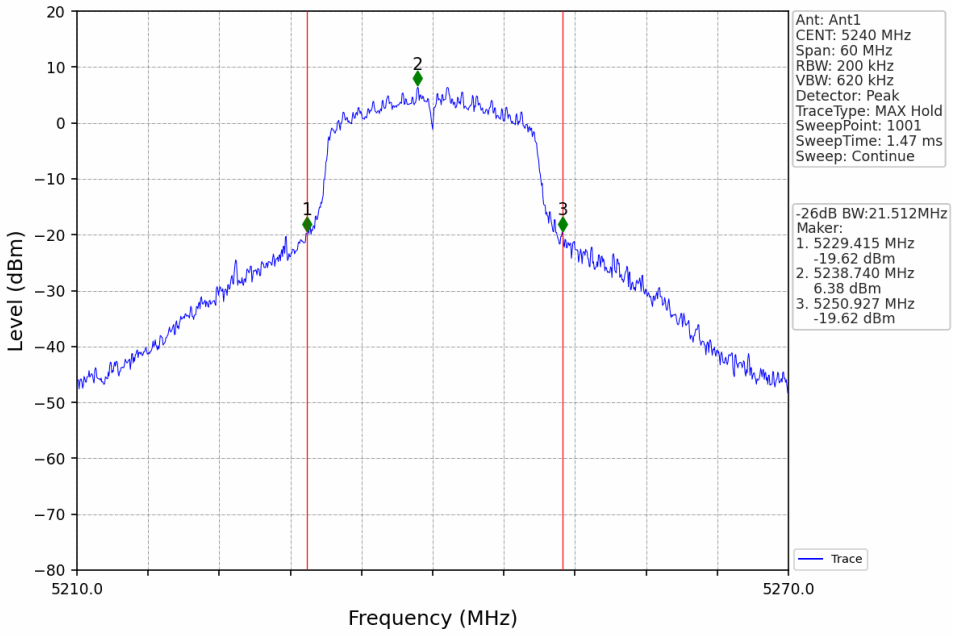
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



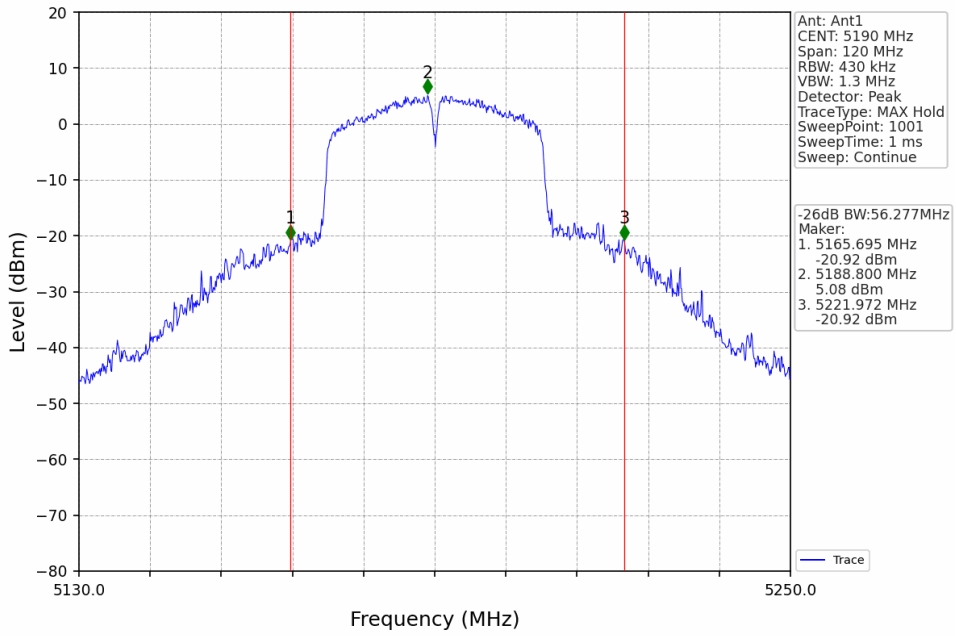
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



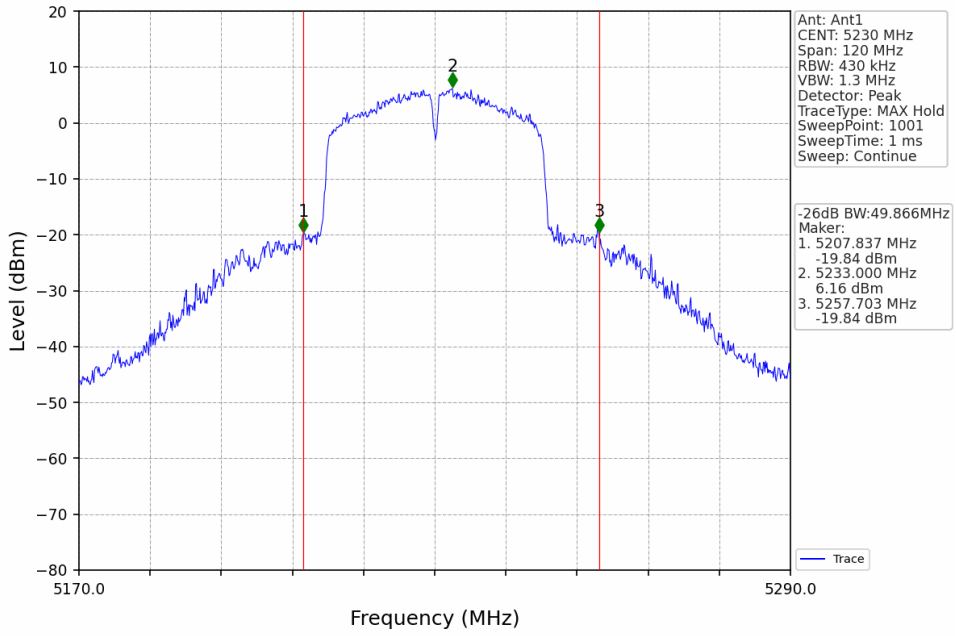
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



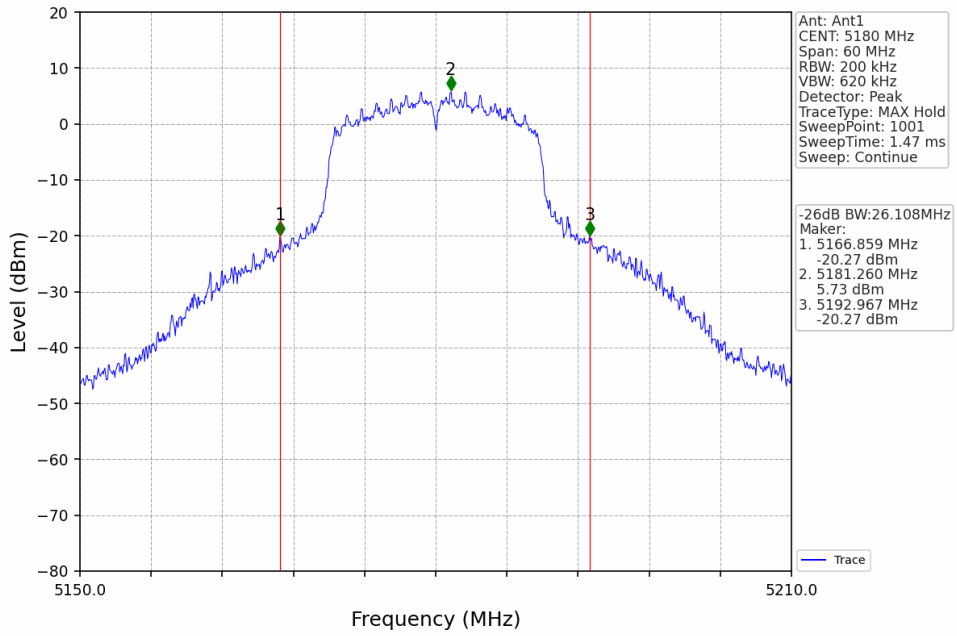
802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



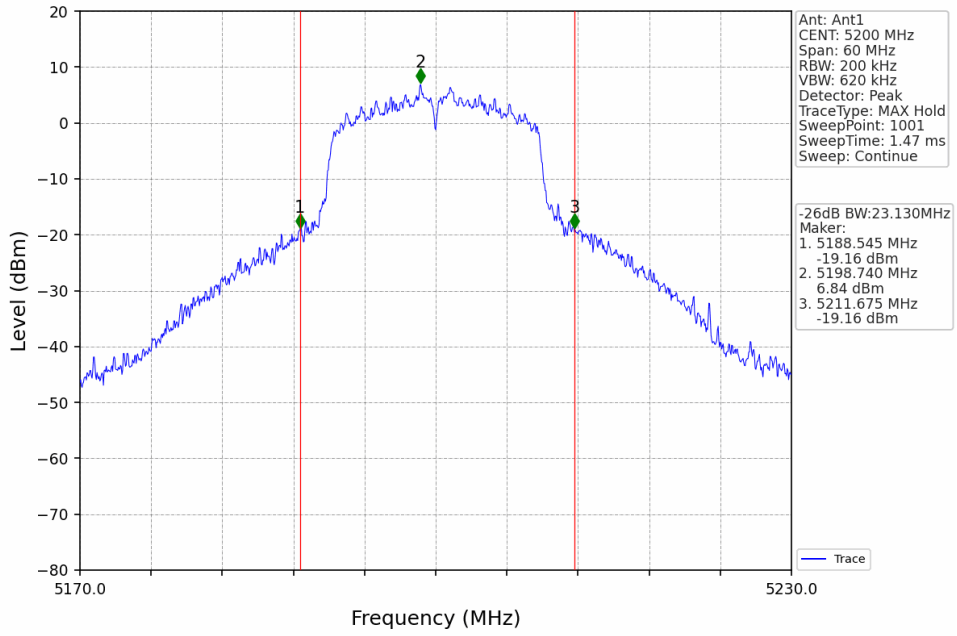
802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



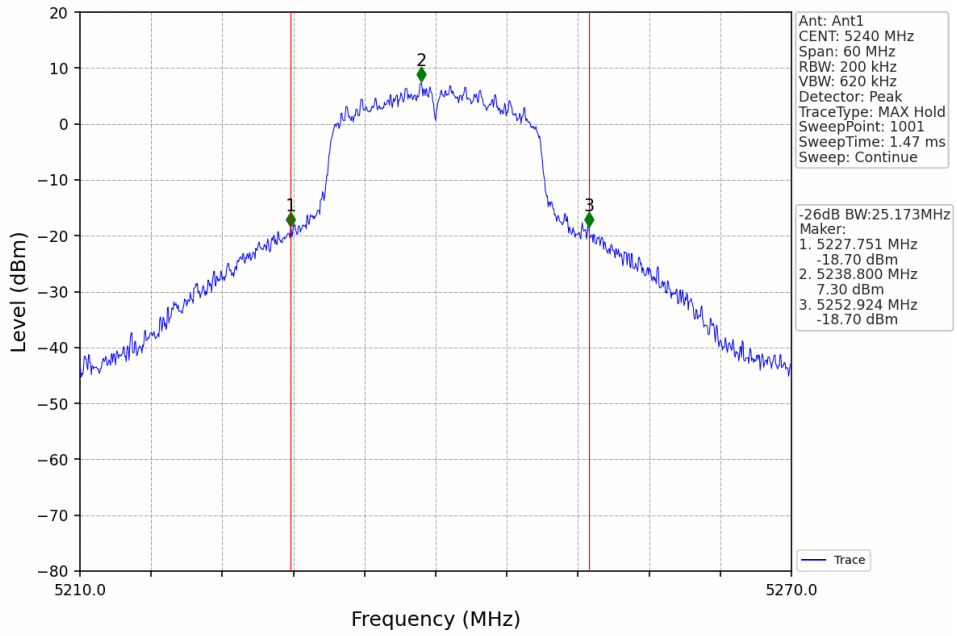
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



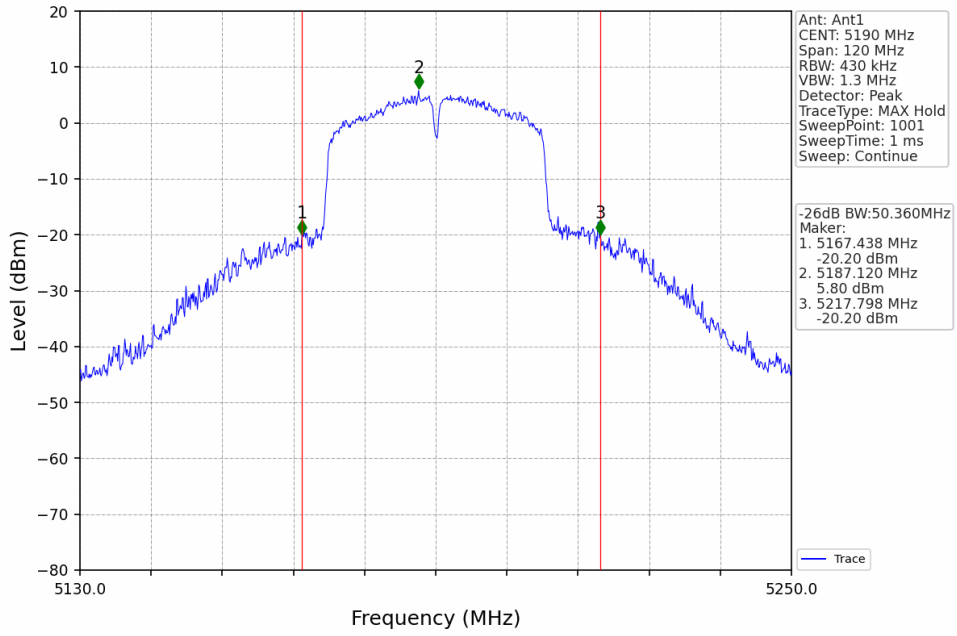
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



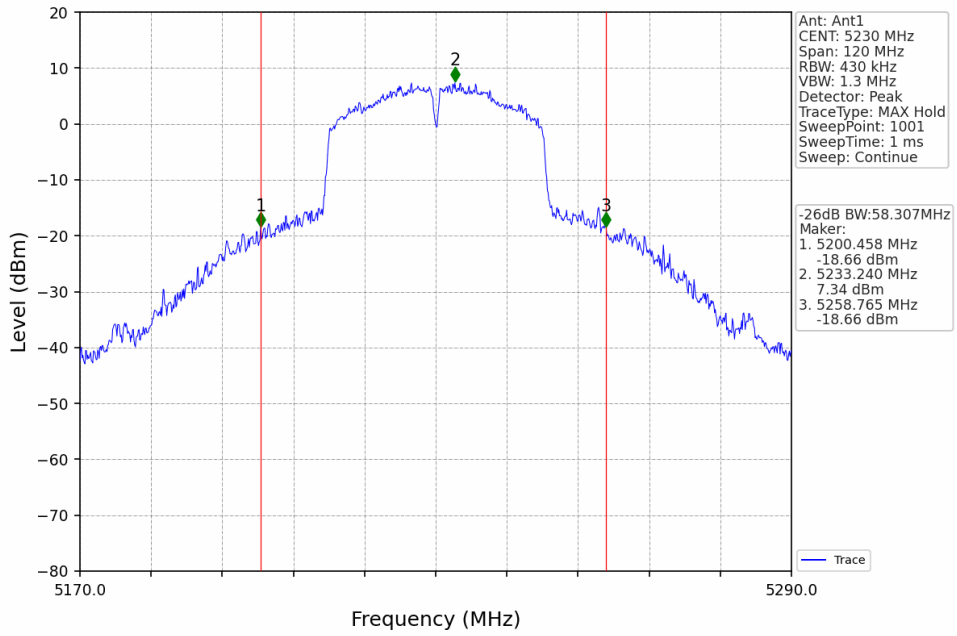
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



3. Maximum Conducted Output Power

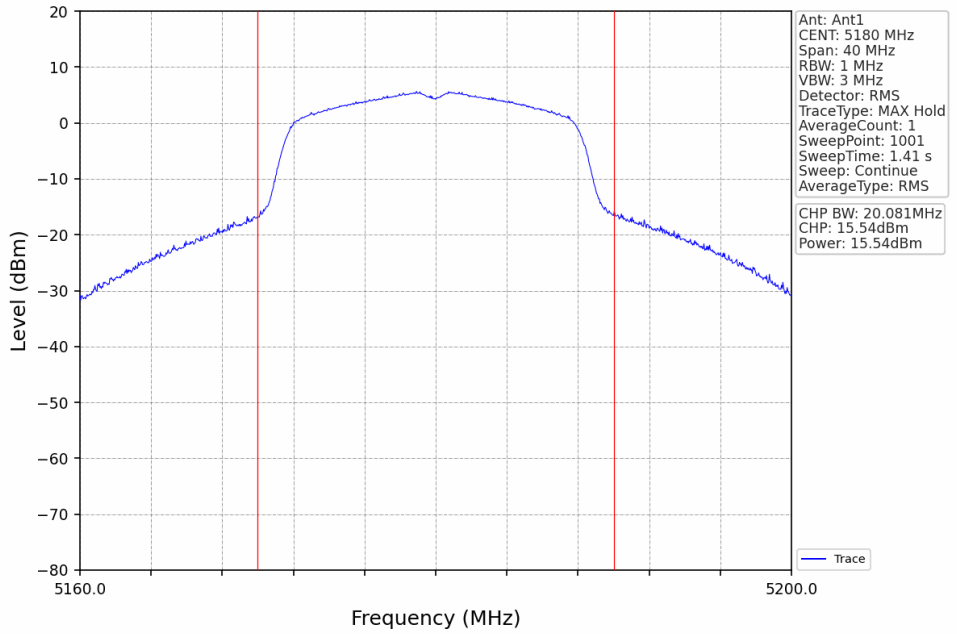
3.1 Power

3.1.1 Test Result

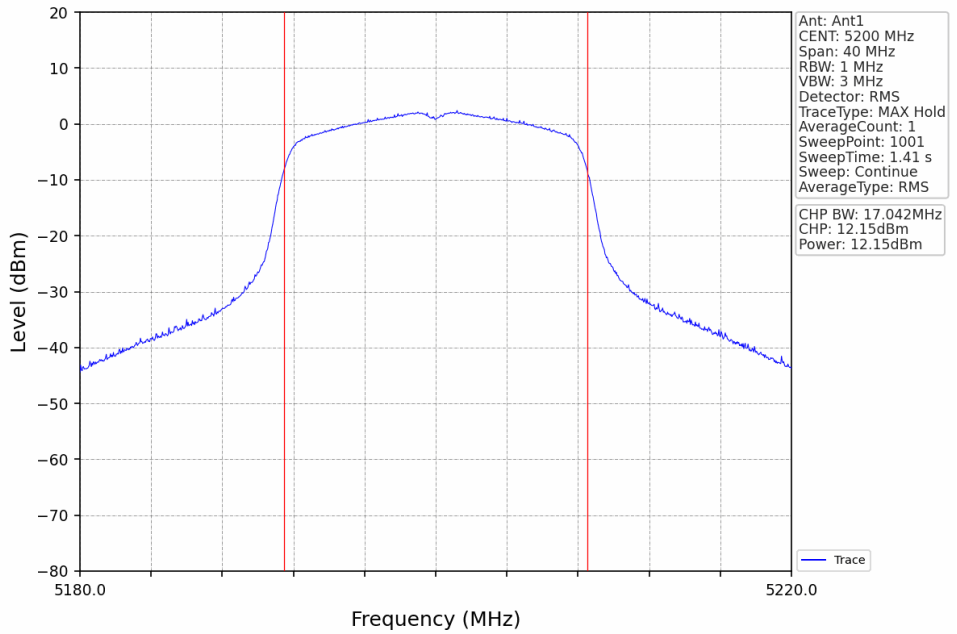
Mode	TX Type	Frequency (MHz)	Maximum Average Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11a	SISO	5180	15.54	<=23.98	Pass
		5200	12.15	<=23.98	Pass
		5240	14.25	<=23.98	Pass
802.11n (HT20)	SISO	5180	13.11	<=23.98	Pass
		5200	15.79	<=23.98	Pass
		5240	14.67	<=23.98	Pass
802.11n (HT40)	SISO	5190	14.16	<=23.98	Pass
		5230	14.79	<=23.98	Pass
802.11ac (VHT20)	SISO	5180	14.25	<=23.98	Pass
		5200	14.65	<=23.98	Pass
		5240	15.71	<=23.98	Pass
802.11ac (VHT40)	SISO	5190	14.09	<=23.98	Pass
		5230	15.96	<=23.98	Pass

3.1.2 Test Graph

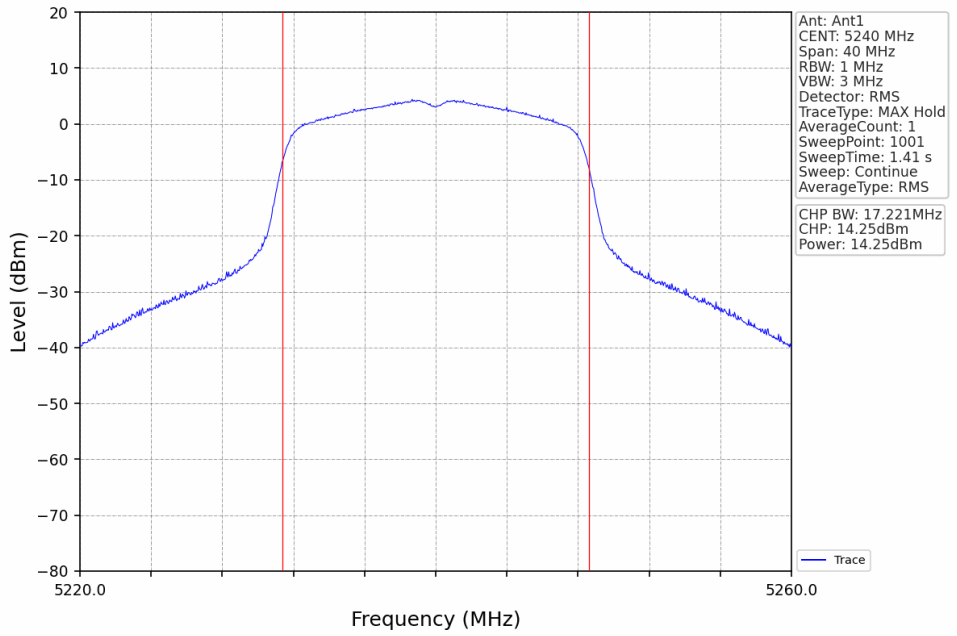
802.11a_LCH_5180MHz_Ant1_NTNV



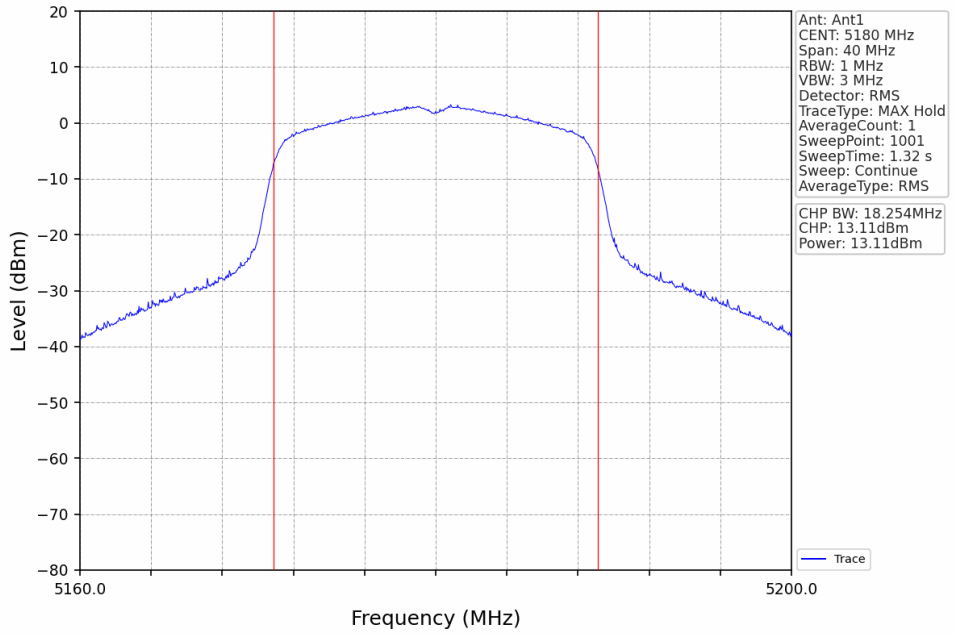
802.11a_MCH_5200MHz_Ant1_NTNV



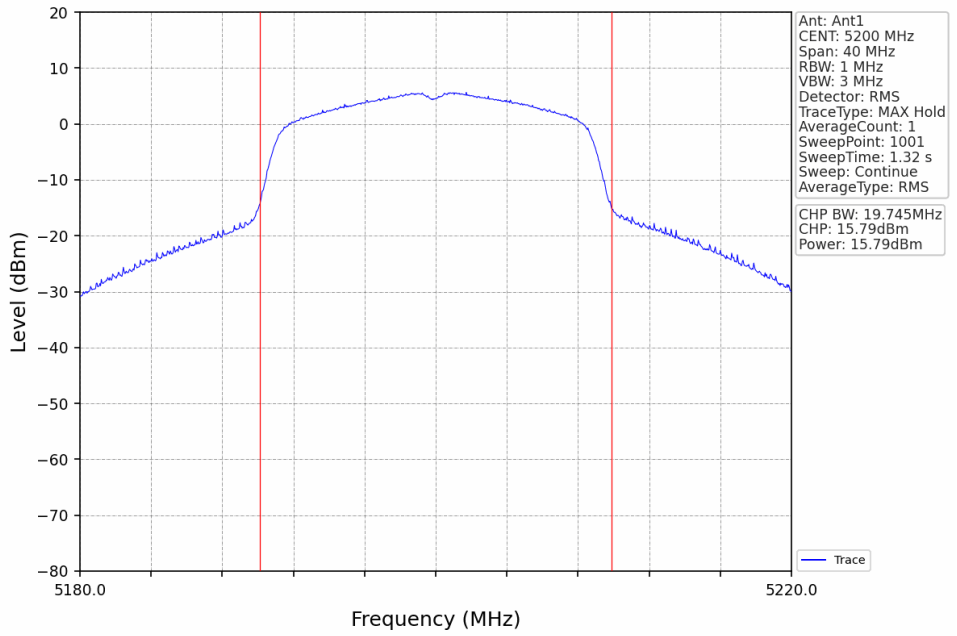
802.11a_HCH_5240MHz_Ant1_NTNV



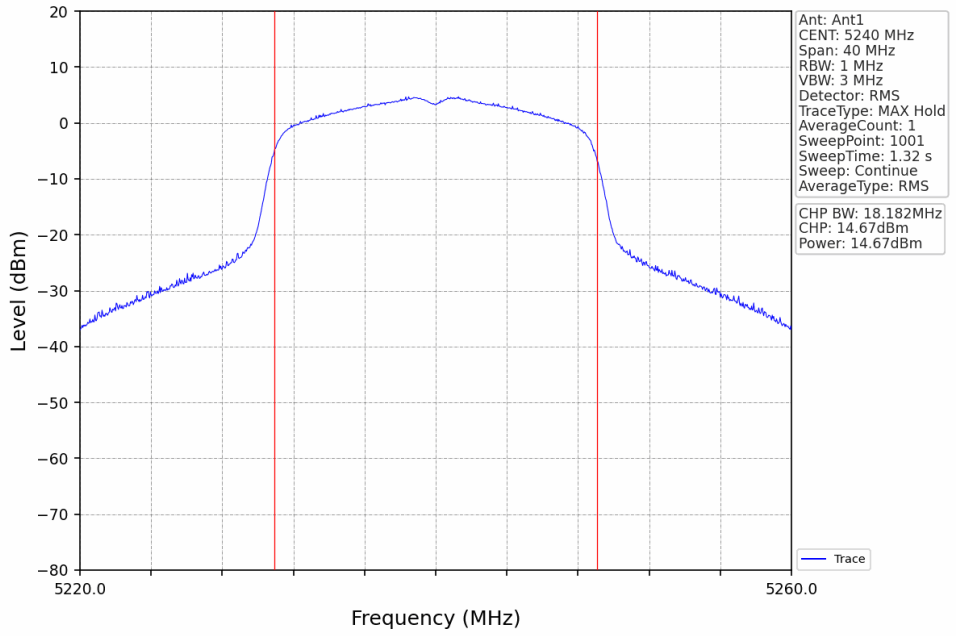
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



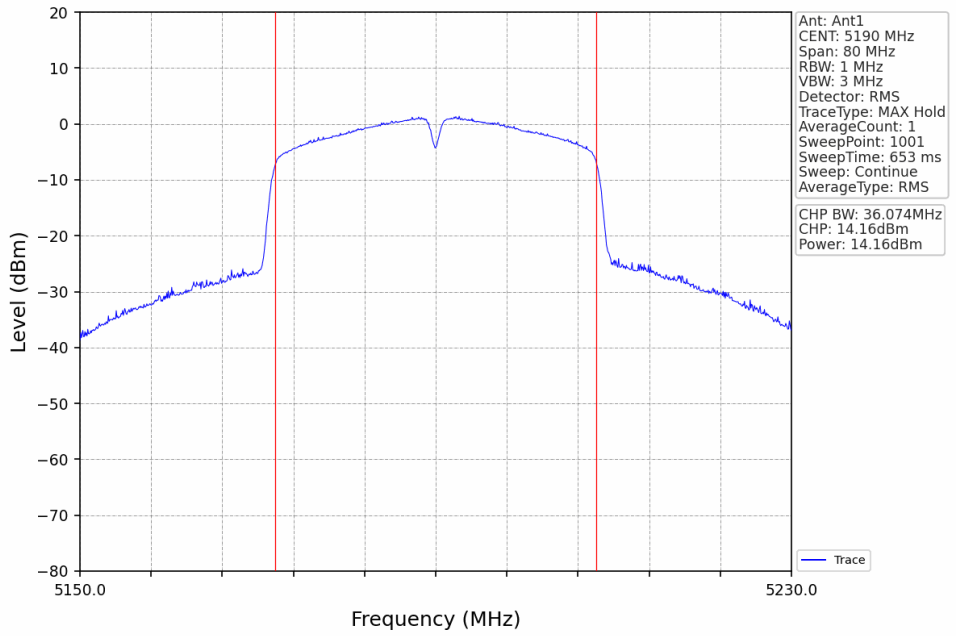
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



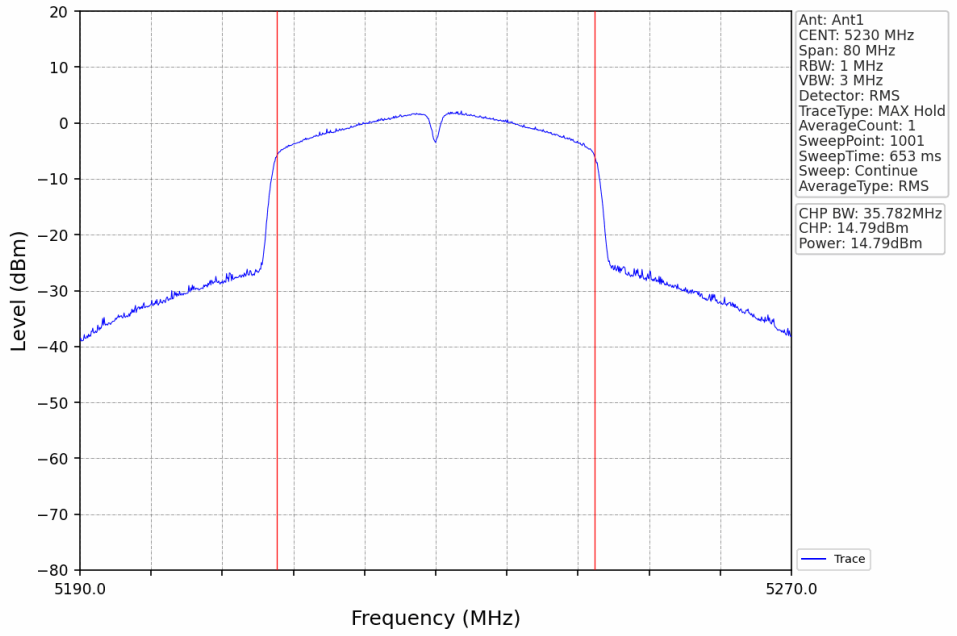
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



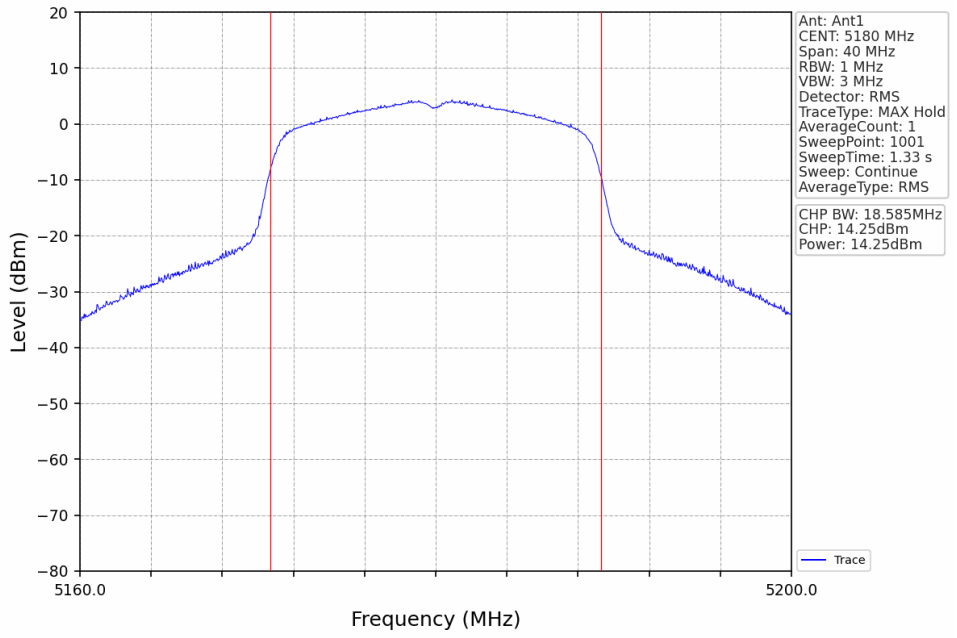
802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



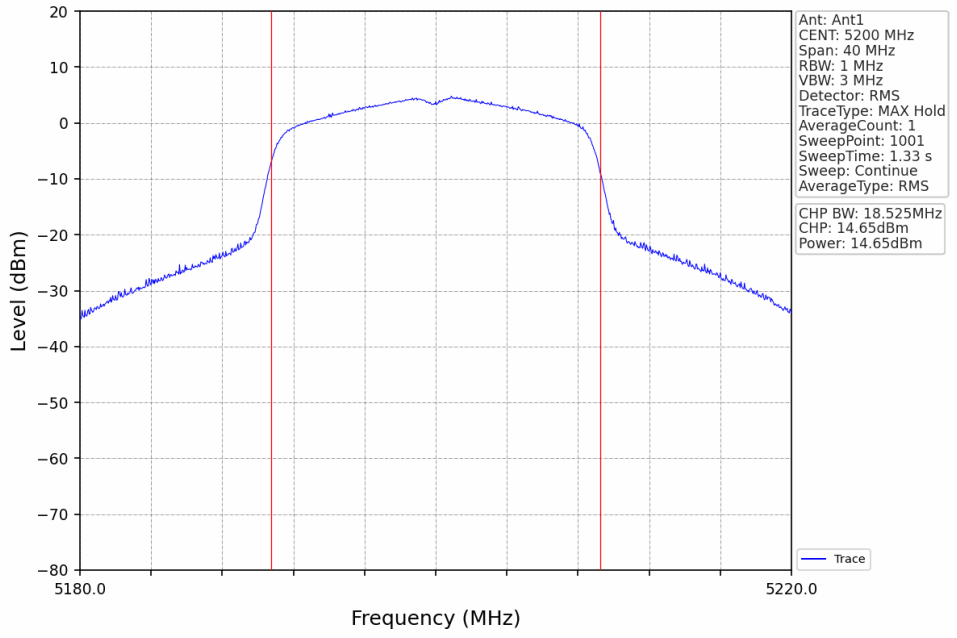
802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



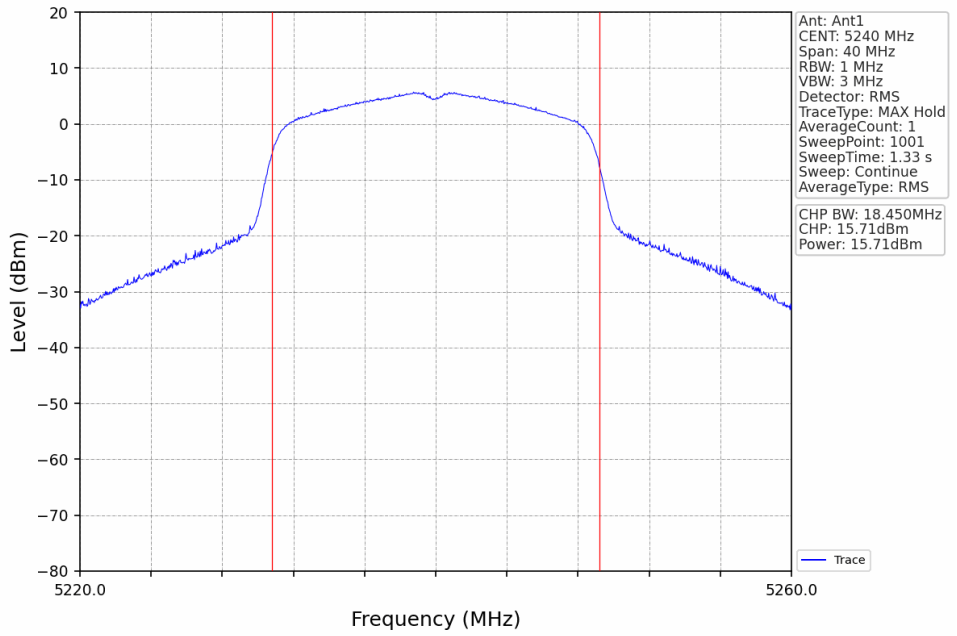
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



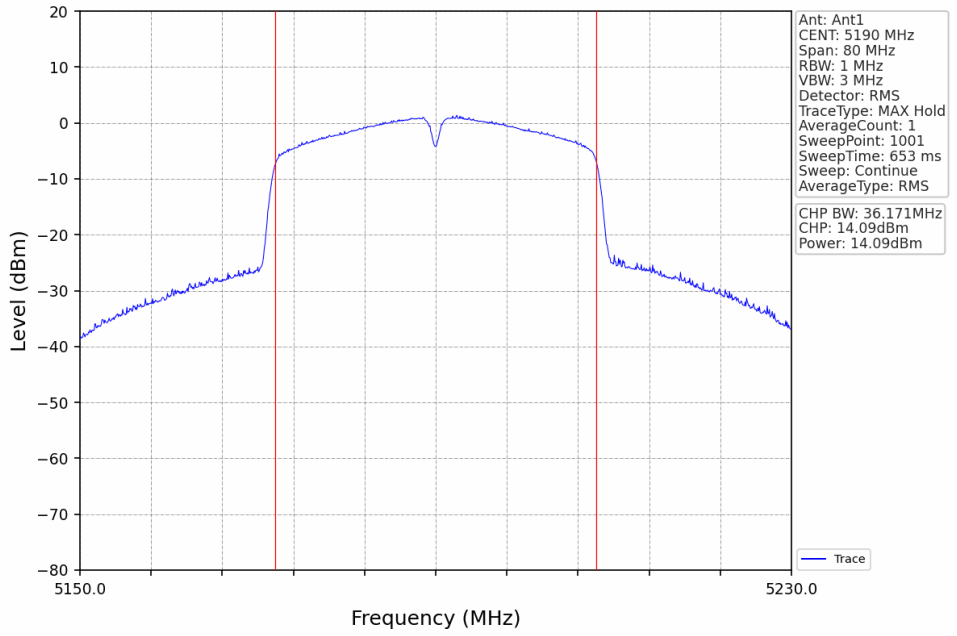
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



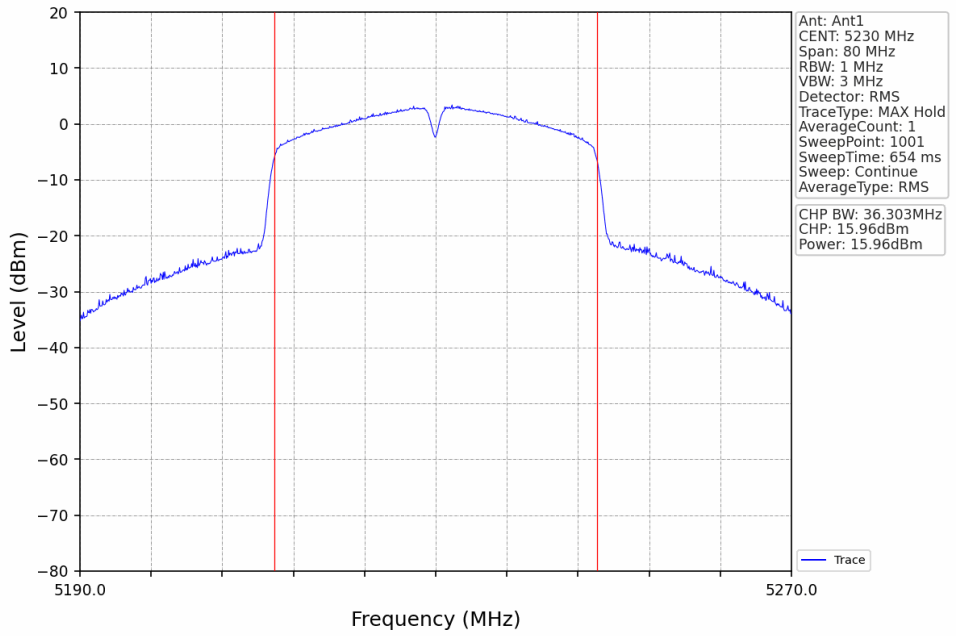
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



4. Maximum Power Spectral Density

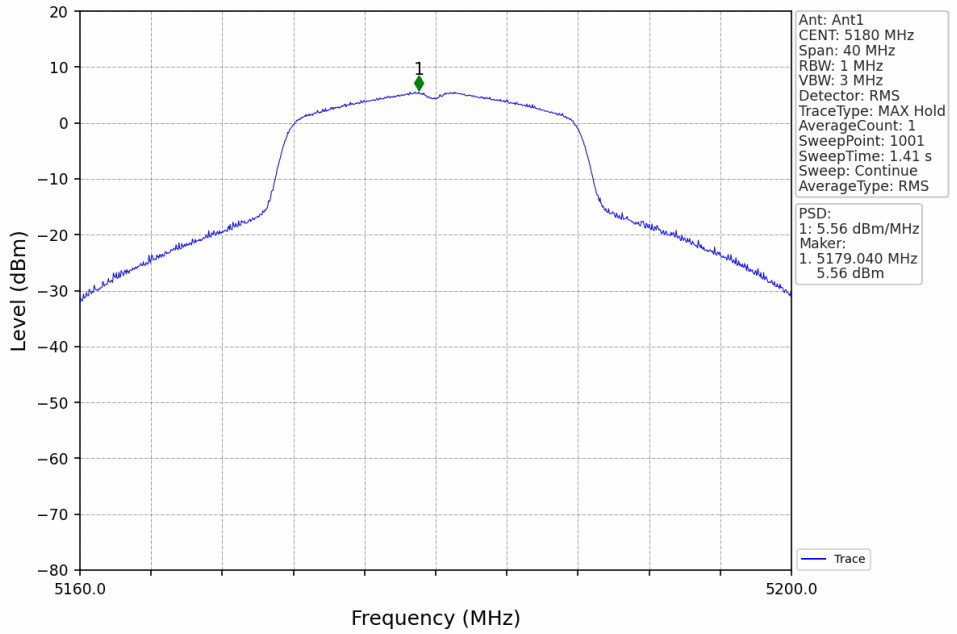
4.1 PSD

4.1.1 Test Result

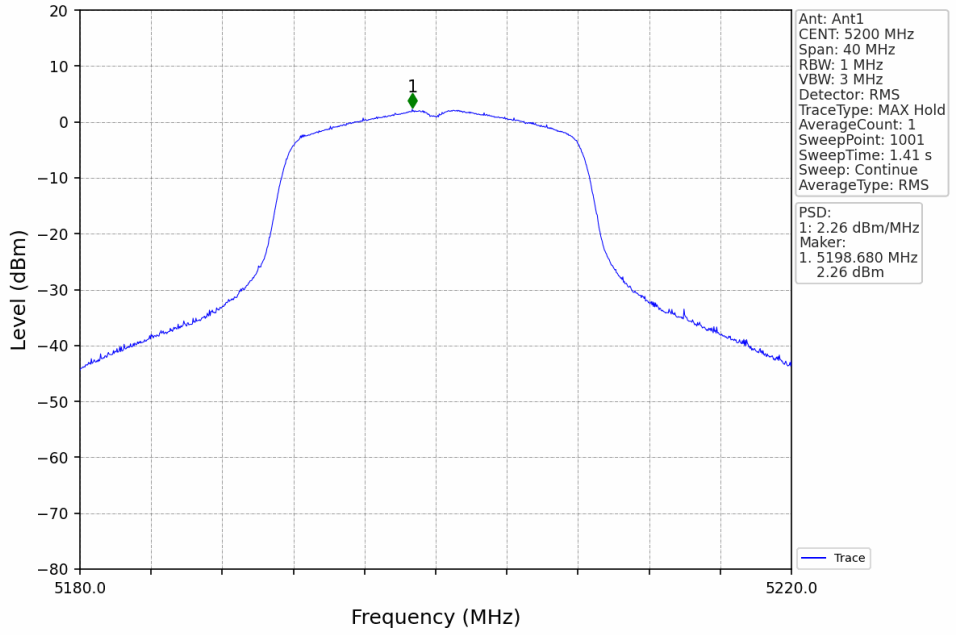
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/MHz)		Verdict
			ANT1	Limit	
802.11a	SISO	5180	5.56	<=11	Pass
		5200	2.26	<=11	Pass
		5240	4.50	<=11	Pass
802.11n (HT20)	SISO	5180	3.20	<=11	Pass
		5200	5.89	<=11	Pass
		5240	4.73	<=11	Pass
802.11n (HT40)	SISO	5190	1.34	<=11	Pass
		5230	2.06	<=11	Pass
802.11ac (VHT20)	SISO	5180	4.25	<=11	Pass
		5200	4.51	<=11	Pass
		5240	5.92	<=11	Pass
802.11ac (VHT40)	SISO	5190	1.11	<=11	Pass
		5230	3.02	<=11	Pass

4.1.2 Test Graph

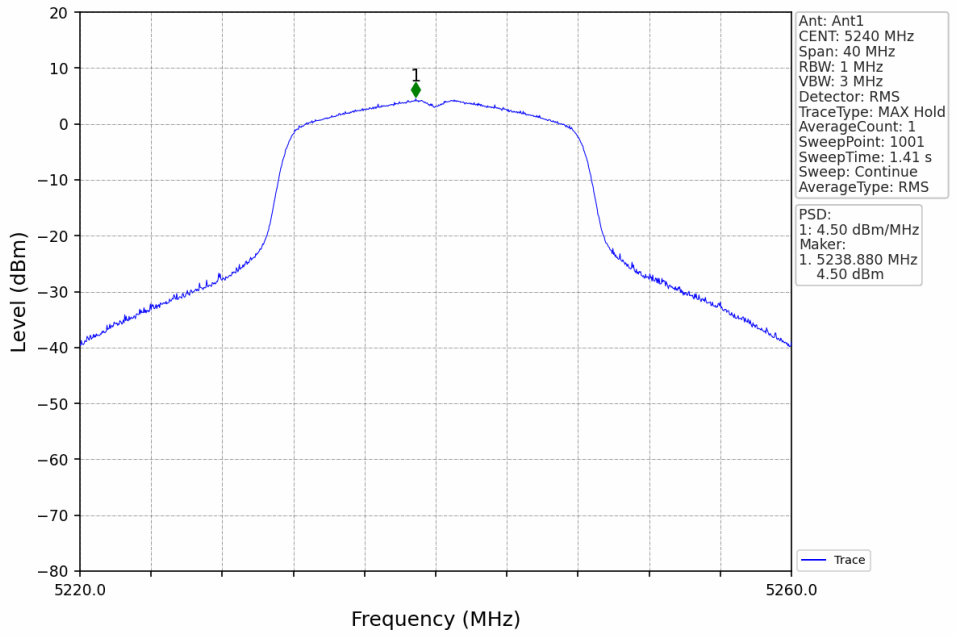
802.11a_LCH_5180MHz_Ant1_NTNV



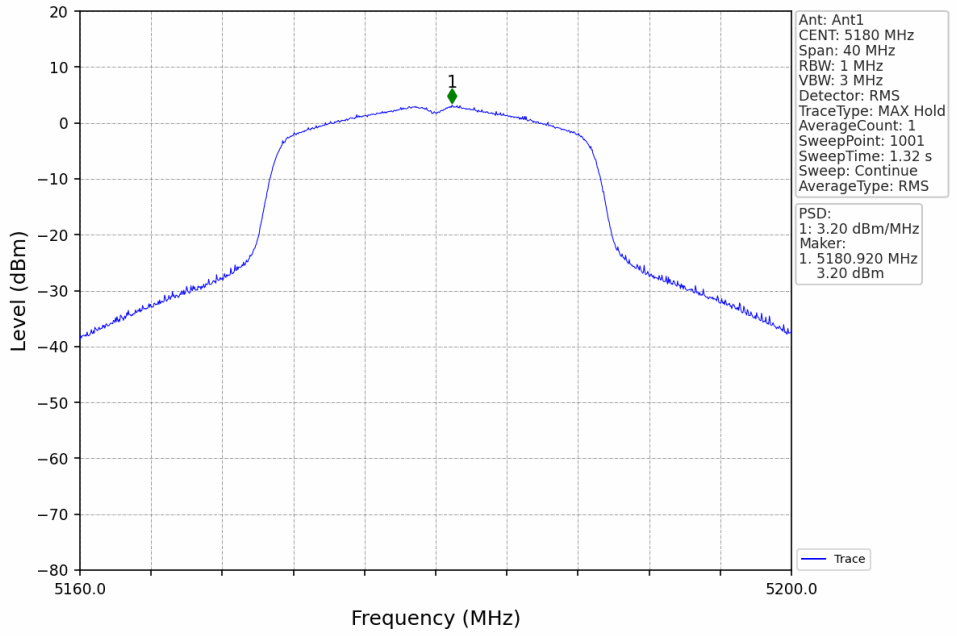
802.11a_MCH_5200MHz_Ant1_NTNV



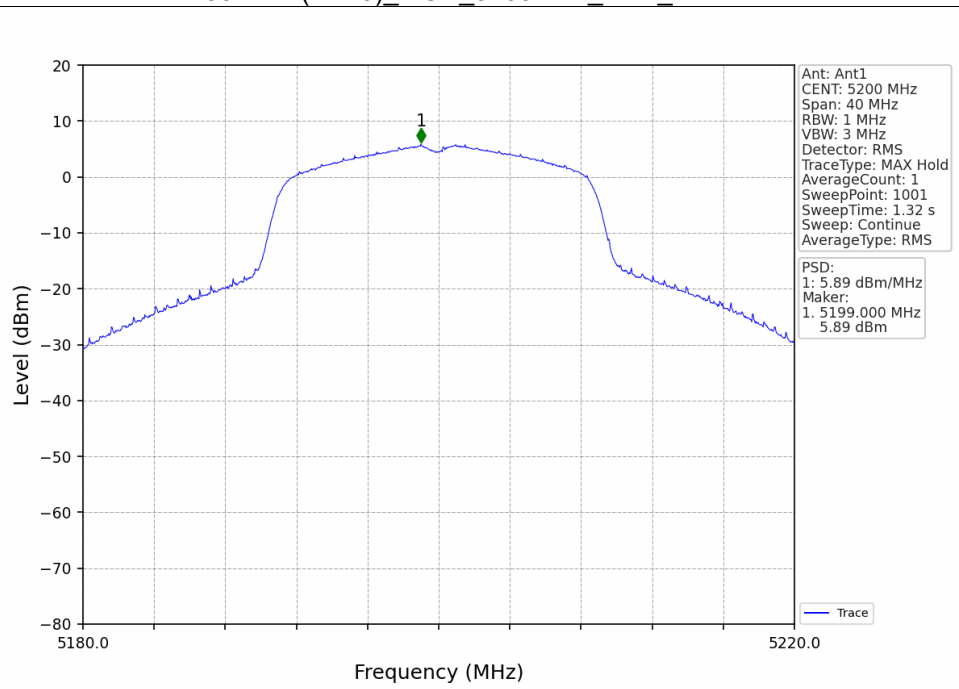
802.11a_HCH_5240MHz_Ant1_NTNV



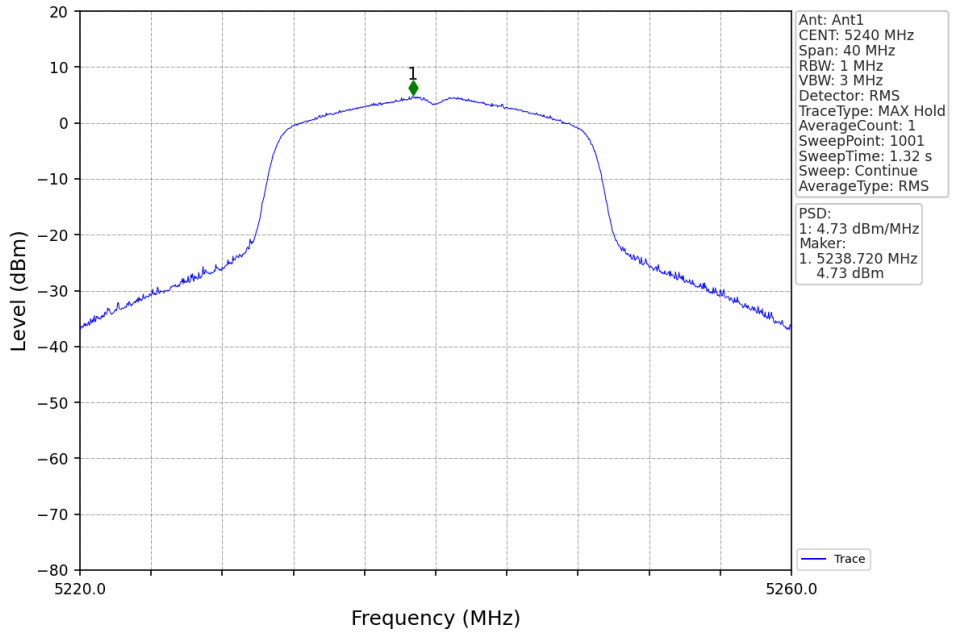
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



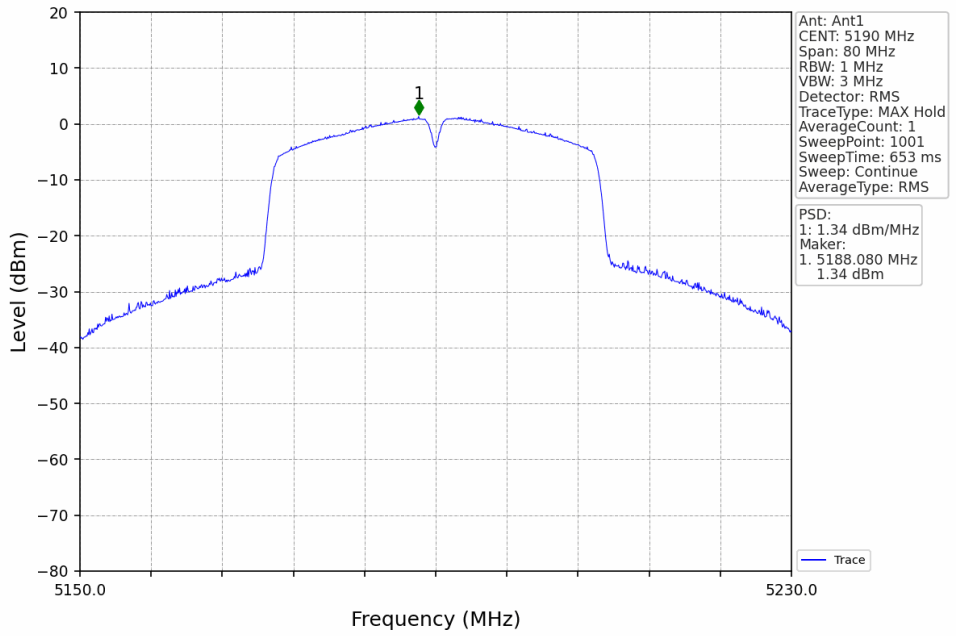
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



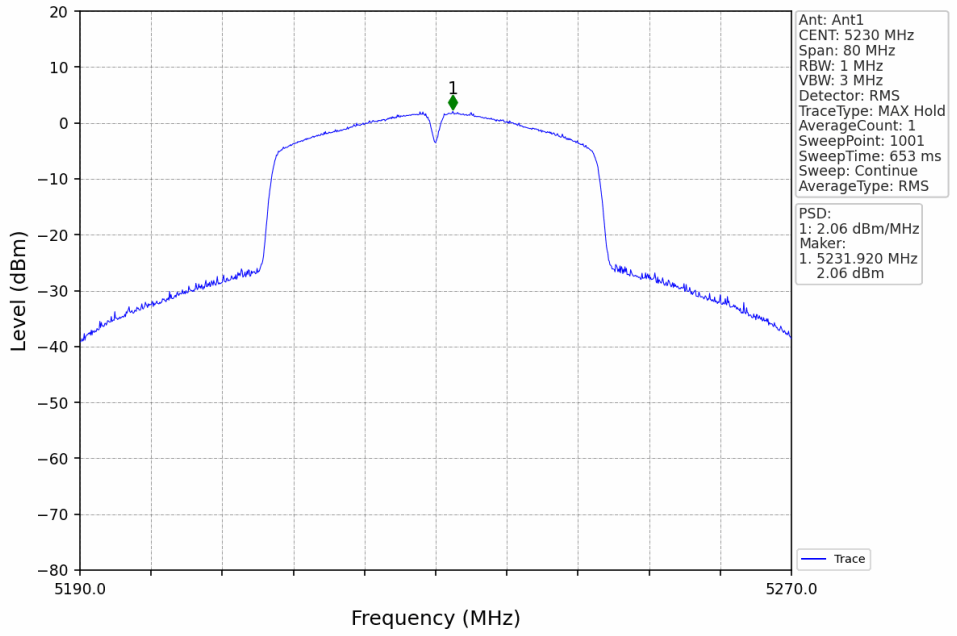
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



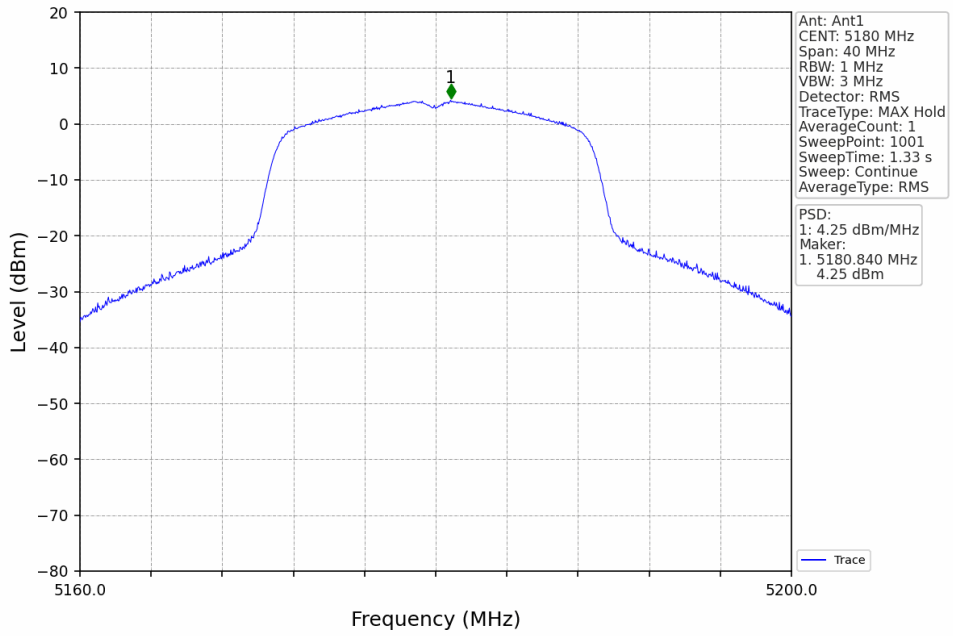
802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



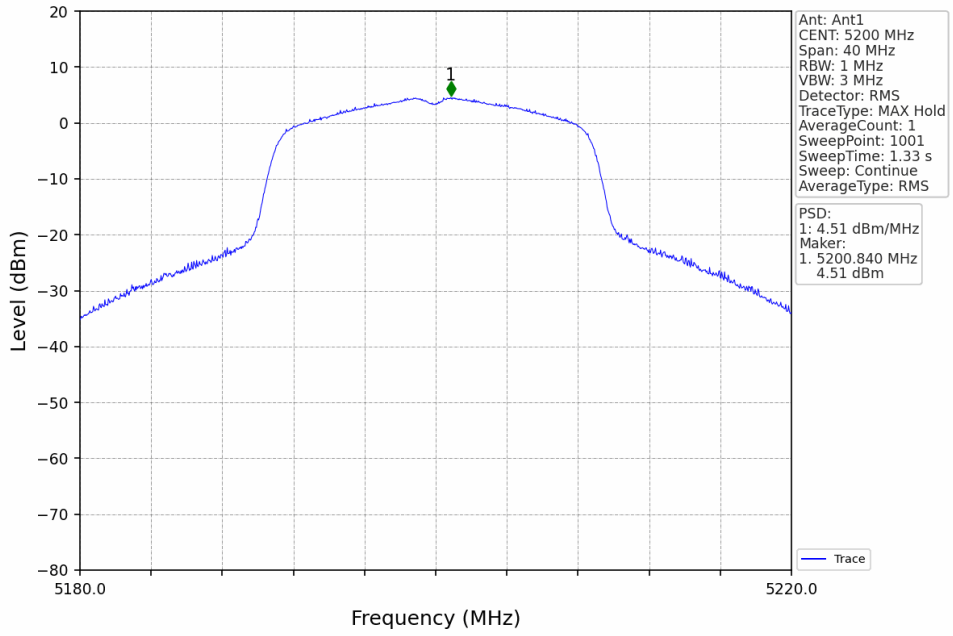
802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



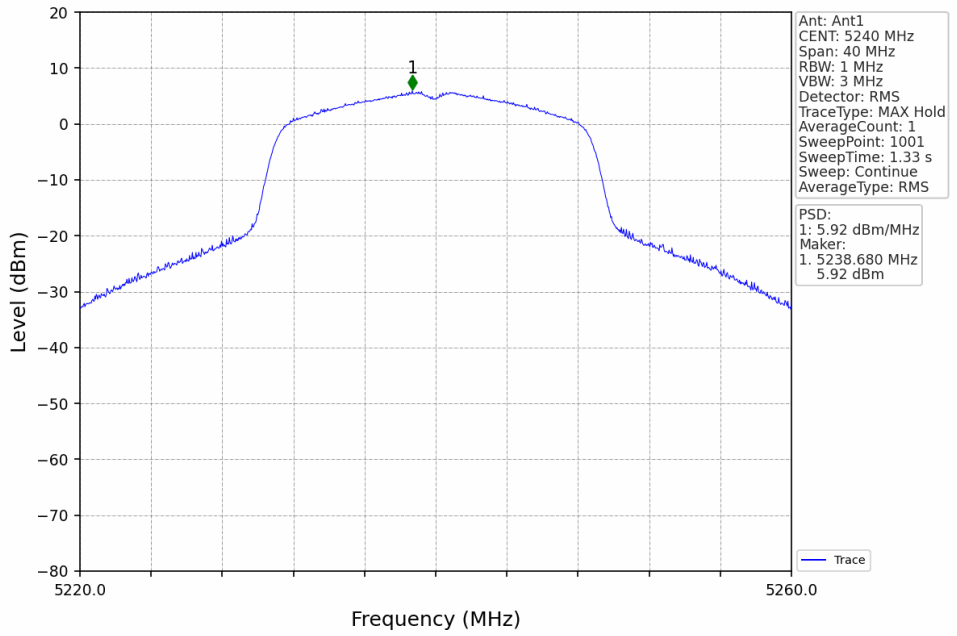
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



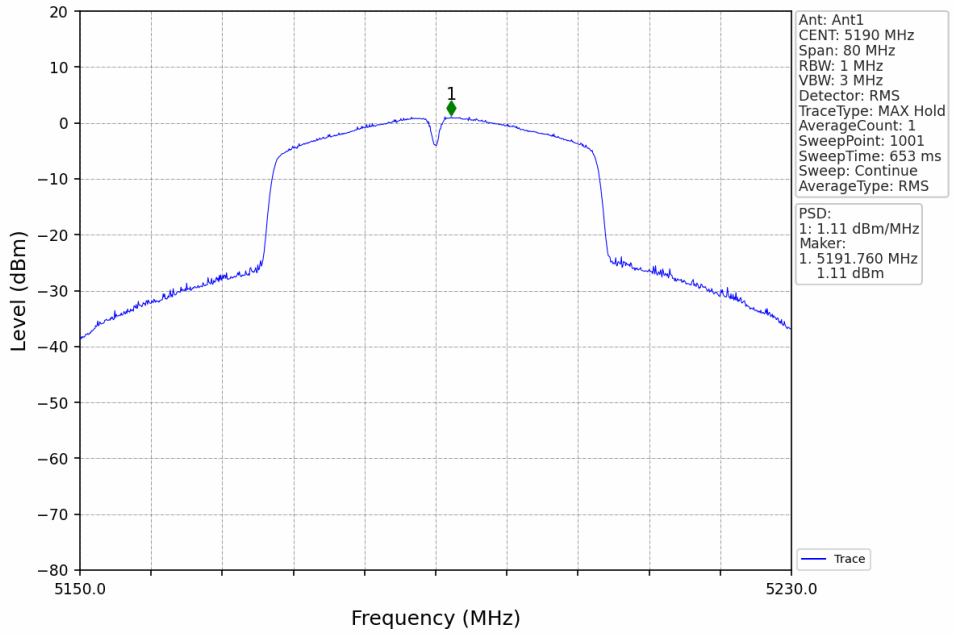
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



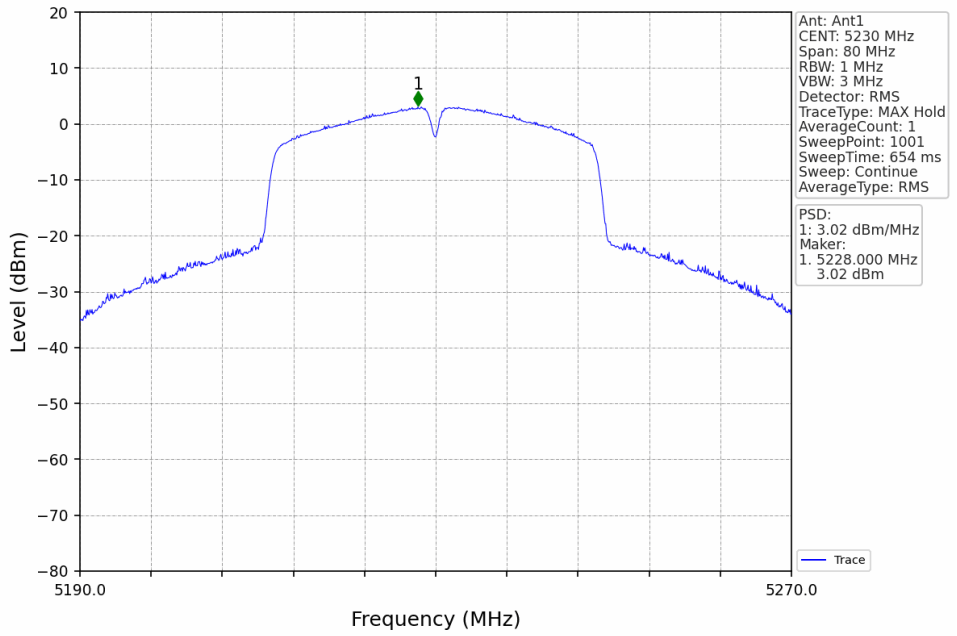
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



5. Unwanted Emissions In Restricted Frequency Bands

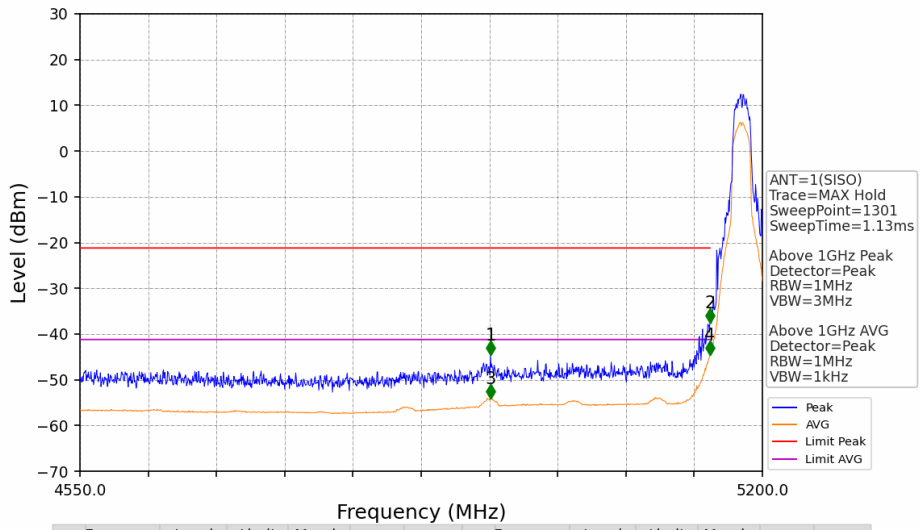
5.1 RSE

5.1.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	Level of Unwanted Emissions (dBm)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	Refer To Test Graph		Pass
		5240	1	Refer To Test Graph		Pass
802.11n (HT20)	SISO	5180	1	Refer To Test Graph		Pass
		5240	1	Refer To Test Graph		Pass
802.11n (HT40)	SISO	5190	1	Refer To Test Graph		Pass
		5230	1	Refer To Test Graph		Pass
802.11ac (VHT20)	SISO	5180	1	Refer To Test Graph		Pass
		5240	1	Refer To Test Graph		Pass
802.11ac (VHT40)	SISO	5190	1	Refer To Test Graph		Pass
		5230	1	Refer To Test Graph		Pass

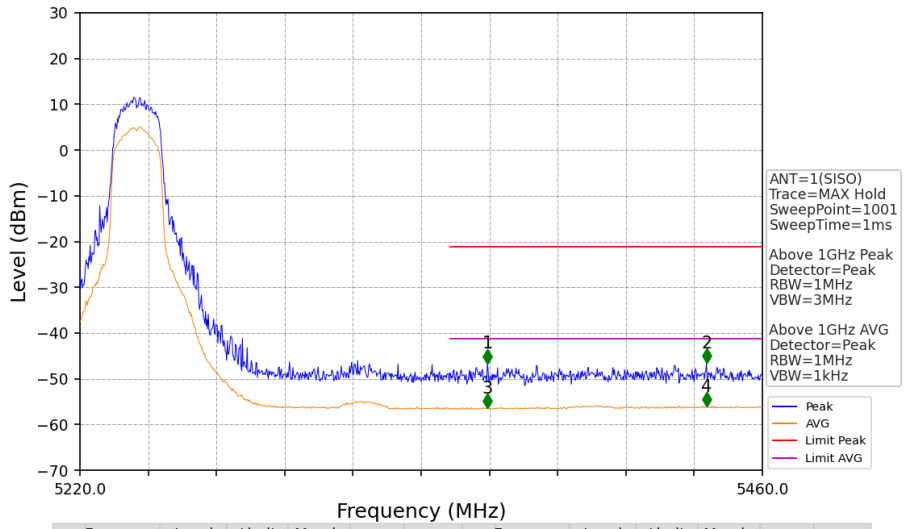
5.1.2 Test Graph

802.11a_LCH_5180MHz_Ant1_NTNV



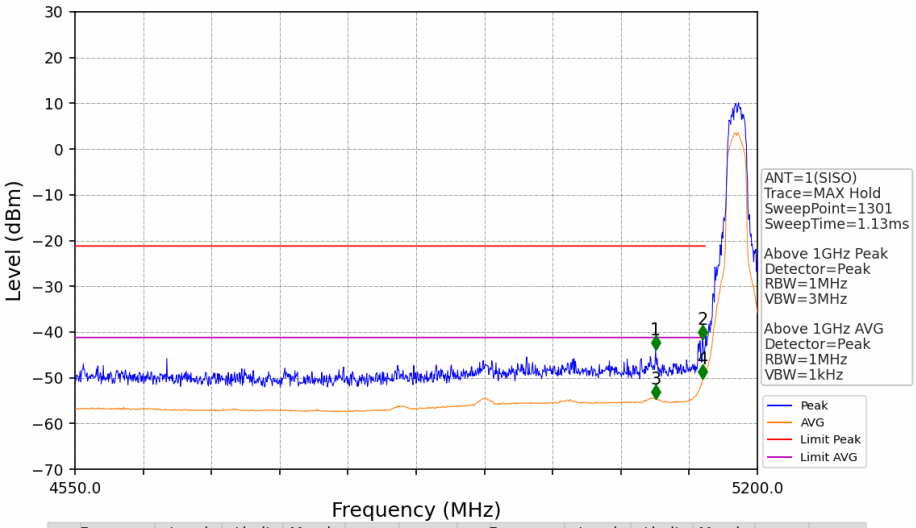
No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	4941.000	-44.62	-21.20	27.56	Pass	Peak	3	4941.000	/	-21.20	/	/	AVG
2	5150.000	-37.50	-21.20	20.44	Pass	Peak	4	5150.000	/	-21.20	/	/	AVG

802.11a_HCH_5240MHz_Ant1_NTNV



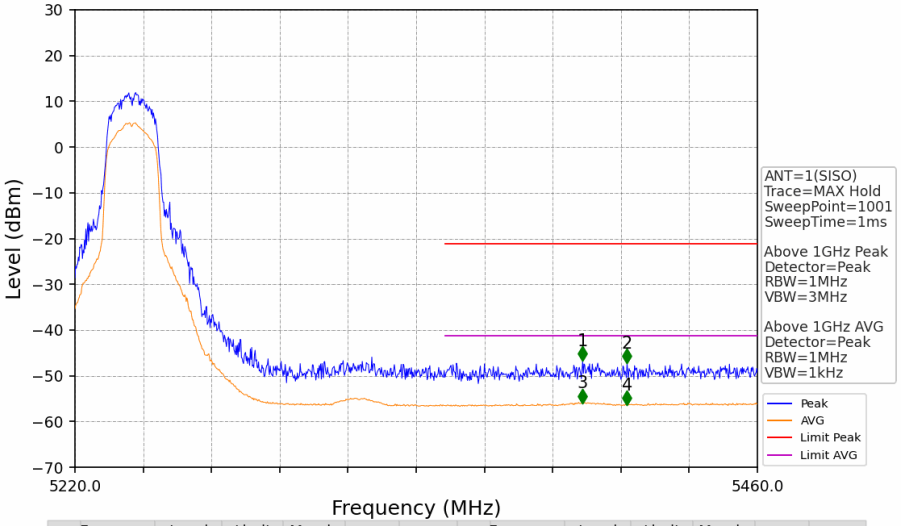
No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	5363.280	-46.66	-21.20	29.60	Pass	Peak	3	5363.280	/	-21.20	/	/	AVG
2	5440.320	-46.49	-21.20	29.43	Pass	Peak	4	5440.320	/	-21.20	/	/	AVG

802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



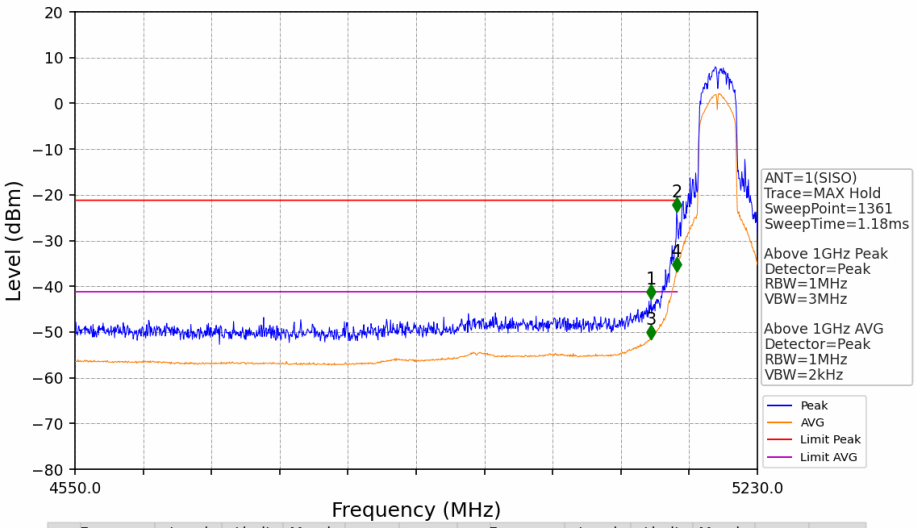
No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	5103.000	-43.94	-21.20	26.88	Pass	Peak	3	5103.000	/	-21.20	/	/	AVG
2	5148.000	-41.62	-21.20	24.56	Pass	Peak	4	5148.000	/	-21.20	/	/	AVG

802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



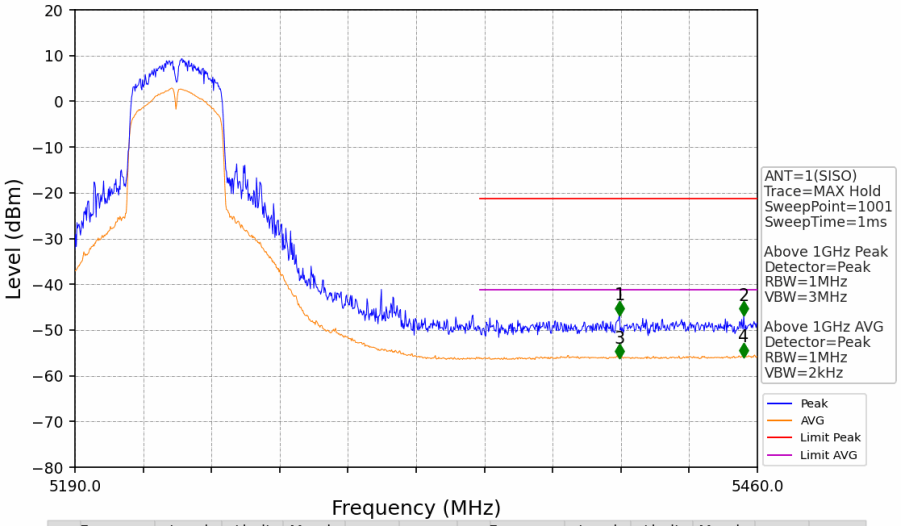
No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	5398.560	-46.80	-21.20	29.73	Pass	Peak	3	5398.560	/	-21.20	/	/	AVG
2	5414.160	-47.20	-21.20	30.14	Pass	Peak	4	5414.160	/	-21.20	/	/	AVG

802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



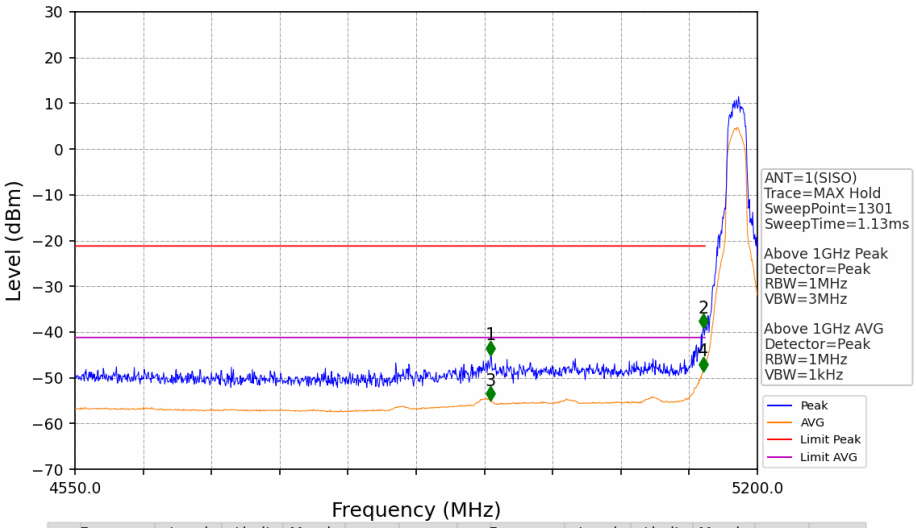
No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	5124.000	-42.84	-21.20	25.78	Pass	Peak	3	5124.000	/	-21.20	/	/	AVG
2	5149.500	-23.75	-21.20	6.69	Pass	Peak	4	5149.500	/	-21.20	/	/	AVG

802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



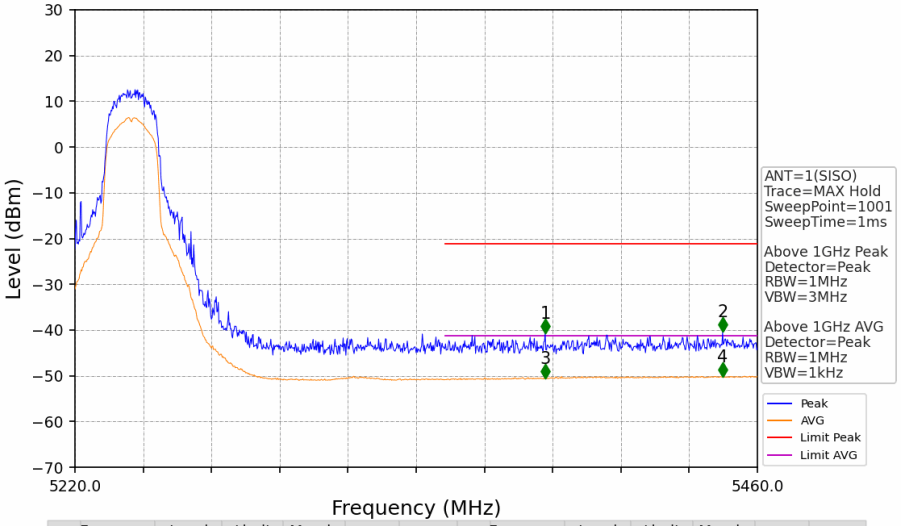
No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	5405.460	-46.78	-21.20	29.72	Pass	Peak	3	5405.460	/	-21.20	/	/	AVG
2	5454.600	-46.83	-21.20	29.77	Pass	Peak	4	5454.600	/	-21.20	/	/	AVG

802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



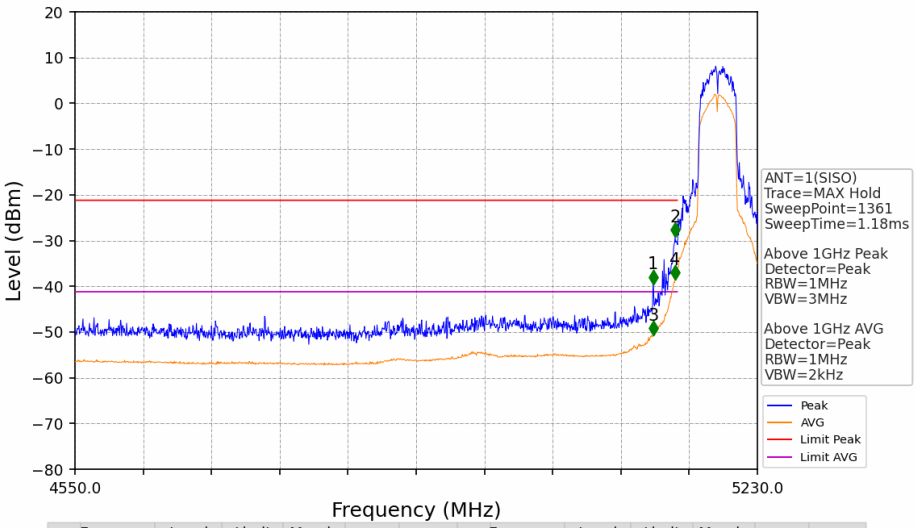
No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	4946.000	-45.06	-21.20	28.00	Pass	Peak	3	4946.000	/	-21.20	/	/	AVG
2	5148.500	-39.13	-21.20	22.07	Pass	Peak	4	5148.500	/	-21.20	/	/	AVG

802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



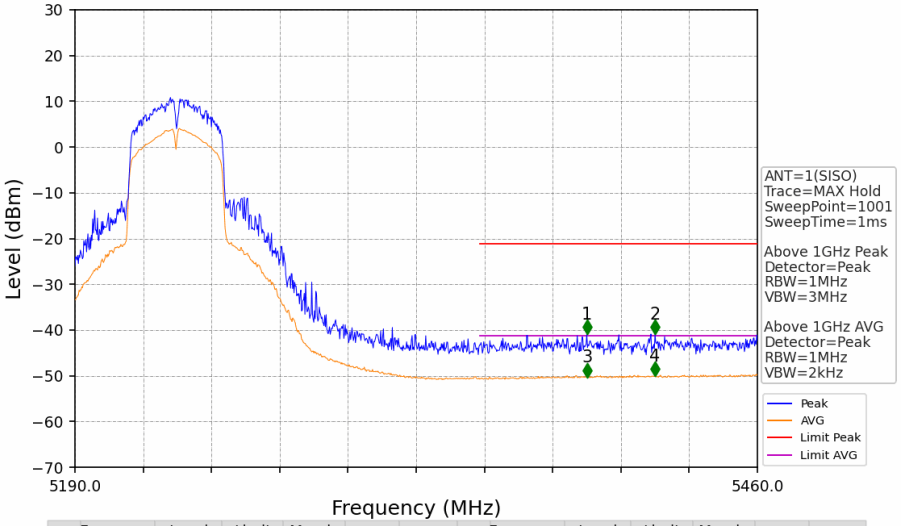
No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	5385.360	-40.72	-21.20	23.66	Pass	Peak	3	5385.360	/	-21.20	/	/	AVG
2	5447.760	-40.43	-21.20	23.37	Pass	Peak	4	5447.760	/	-21.20	/	/	AVG

802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	5126.000	-39.52	-21.20	22.46	Pass	Peak	3	5126.000	/	-21.20	/	/	AVG
2	5148.000	-29.23	-21.20	12.17	Pass	Peak	4	5148.000	/	-21.20	/	/	AVG

802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	5392.500	-40.92	-21.20	23.86	Pass	Peak	3	5392.500	/	-21.20	/	/	AVG
2	5419.500	-40.89	-21.20	23.83	Pass	Peak	4	5419.500	/	-21.20	/	/	AVG

6. Frequency Stability

6.1 Ant1

6.1.1 Test Result

Ant1							
Mode	TX Type	Frequency (MHz)	Temperature (°C)	Voltage (VAC)	Measured Frequency (MHz)	Limit (MHz)	Verdict
Carrier Wave	SISO	5180	20	102	5179.975	5150 to 5250	Pass
				120	5179.974	5150 to 5250	Pass
				138	5179.974	5150 to 5250	Pass
			-30	120	5179.973	5150 to 5250	Pass
			-20	120	5179.973	5150 to 5250	Pass
			-10	120	5179.972	5150 to 5250	Pass
			0	120	5179.972	5150 to 5250	Pass
			10	120	5179.972	5150 to 5250	Pass
			30	120	5179.971	5150 to 5250	Pass
			40	120	5179.971	5150 to 5250	Pass
			50	120	5179.971	5150 to 5250	Pass
		5200	20	102	5199.971	5150 to 5250	Pass
				120	5199.971	5150 to 5250	Pass
				138	5199.971	5150 to 5250	Pass
			-30	120	5199.970	5150 to 5250	Pass
			-20	120	5199.970	5150 to 5250	Pass
		5190	20	102	5189.970	5150 to 5250	Pass
		5200	-10	120	5199.970	5150 to 5250	Pass
		5190	20	120	5189.969	5150 to 5250	Pass
		5200	0	120	5199.970	5150 to 5250	Pass
		5190	20	138	5189.969	5150 to 5250	Pass
		5200	10	120	5199.970	5150 to 5250	Pass
		5190	-30	120	5189.970	5150 to 5250	Pass
		5200	30	120	5199.970	5150 to 5250	Pass
			40	120	5199.970	5150 to 5250	Pass
		5190	-20	120	5189.970	5150 to 5250	Pass
		5200	50	120	5199.970	5150 to 5250	Pass
		5190	-10	120	5189.969	5150 to 5250	Pass
		5240	20	102	5239.970	5150 to 5250	Pass
		5190	0	120	5189.970	5150 to 5250	Pass
		5240	20	120	5239.970	5150 to 5250	Pass
		5190	10	120	5189.969	5150 to 5250	Pass
			30	120	5189.969	5150 to 5250	Pass
		5240	20	138	5239.969	5150 to 5250	Pass
			-30	120	5239.969	5150 to 5250	Pass
		5190	40	120	5189.969	5150 to 5250	Pass
		5240	-20	120	5239.969	5150 to 5250	Pass
		5190	50	120	5189.969	5150 to 5250	Pass
		5240	-10	120	5239.969	5150 to 5250	Pass
		5230	20	102	5229.969	5150 to 5250	Pass
				120	5229.969	5150 to 5250	Pass

		5240	0	120	5239.969	5150 to 5250	Pass
			10	120	5239.969	5150 to 5250	Pass
		5230	20	138	5229.969	5150 to 5250	Pass
			-30	120	5229.969	5150 to 5250	Pass
		5240	30	120	5239.969	5150 to 5250	Pass
			40	120	5239.969	5150 to 5250	Pass
		5230	-20	120	5229.969	5150 to 5250	Pass
		5240	50	120	5239.969	5150 to 5250	Pass
		5230	-10	120	5229.969	5150 to 5250	Pass
			0	120	5229.969	5150 to 5250	Pass
			10	120	5229.969	5150 to 5250	Pass
			30	120	5229.969	5150 to 5250	Pass
			40	120	5229.969	5150 to 5250	Pass
			50	120	5229.969	5150 to 5250	Pass

-------- End of Report -------