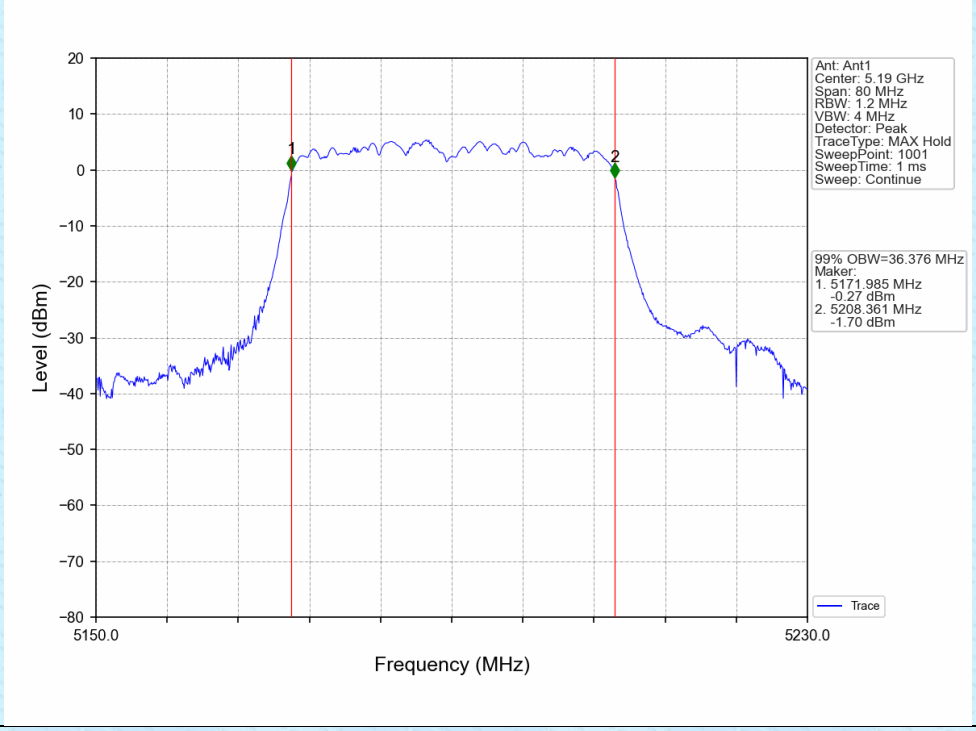
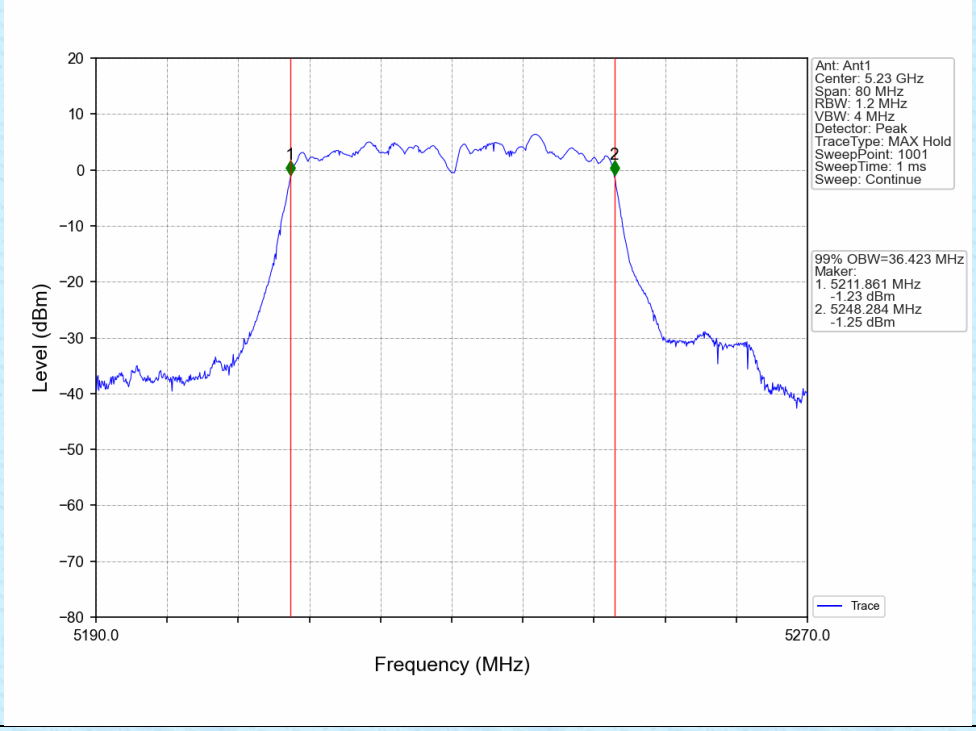
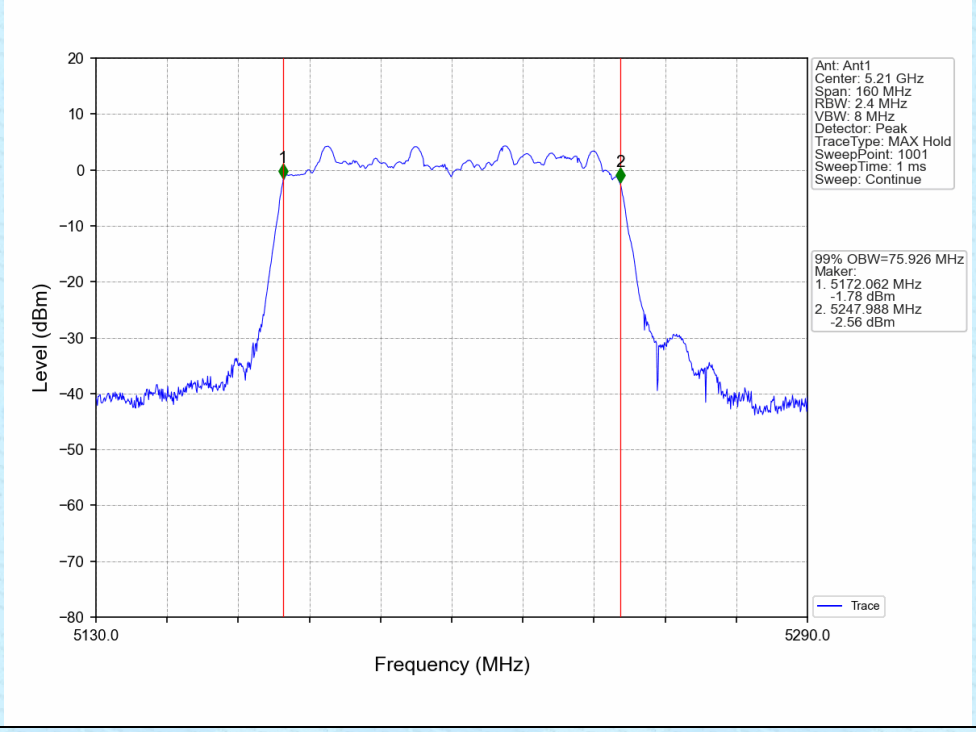
802.11ac(VHT40)_LCH_5190MHz_Ant2_NTNV



802.11ac(VHT40)_HCH_5230MHz_Ant2_NTNV



802.11ac(VHT80)_MCH_5210MHz_Ant2_NTNV



2.2 26dB BW

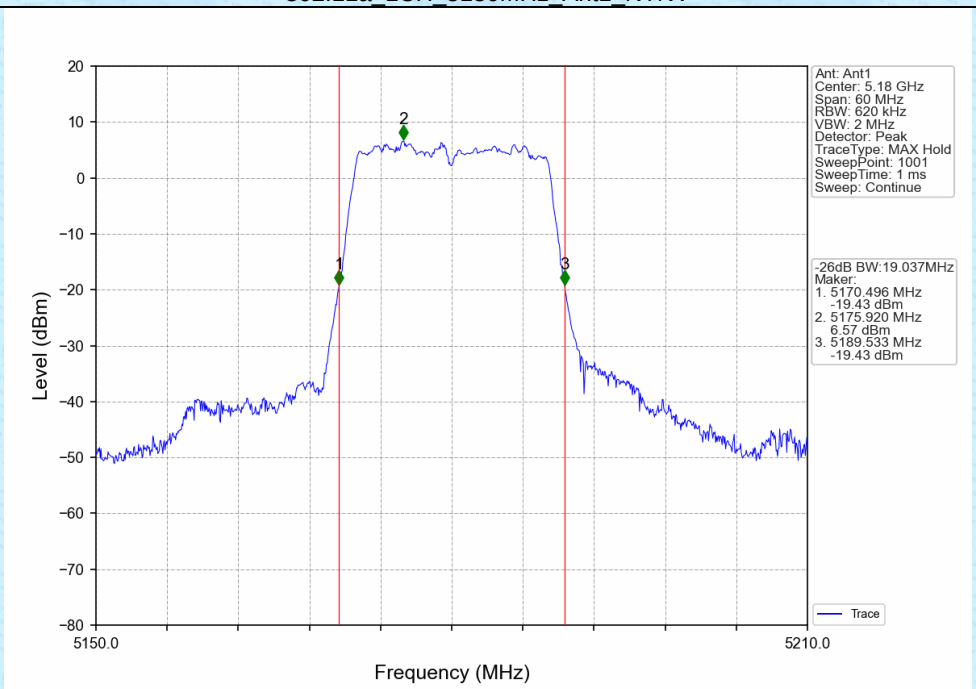
2.2.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	26dB Bandwidth (MHz) Result	Verdict
802.11a	SISO	5180	1	19.037	Pass
		5200	1	19.051	Pass
		5240	1	19.047	Pass
802.11n (HT20)	SISO	5180	1	20.060	Pass
		5200	1	20.118	Pass
		5240	1	20.078	Pass
802.11n (HT40)	SISO	5190	1	42.046	Pass
		5230	1	42.689	Pass
802.11ac (VHT20)	SISO	5180	1	19.990	Pass
		5200	1	20.062	Pass
		5240	1	19.994	Pass
802.11ac (VHT40)	SISO	5190	1	42.125	Pass
		5230	1	42.210	Pass
802.11ac (VHT80)	SISO	5210	1	83.484	Pass

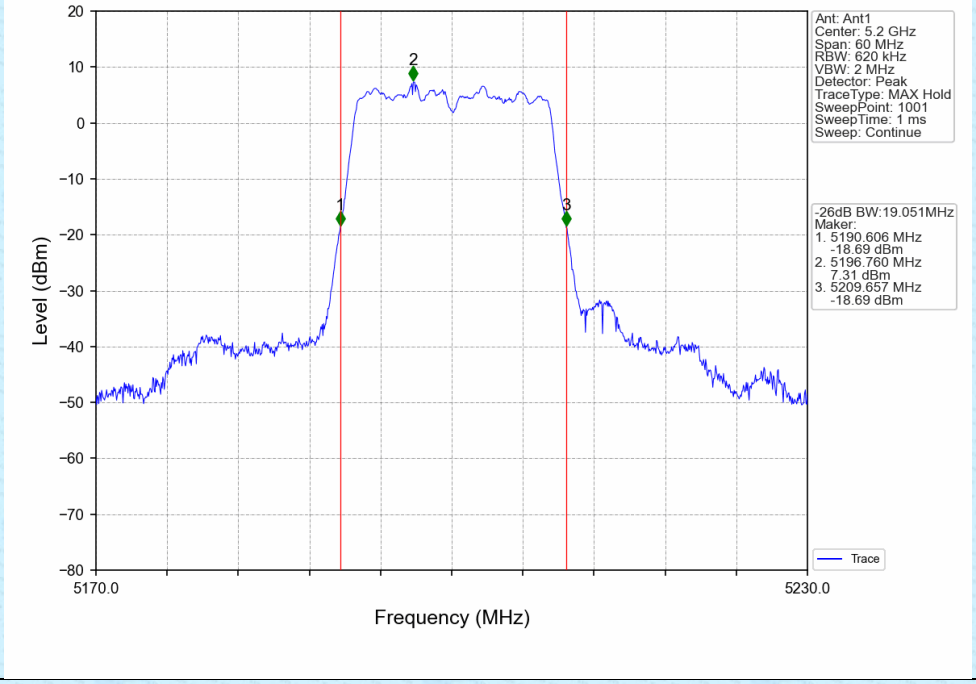
Mode	TX Type	Frequency (MHz)	ANT	26dB Bandwidth (MHz) Result	Verdict
802.11a	SISO	5180	2	19.119	Pass
		5200	2	19.121	Pass
		5240	2	19.194	Pass
802.11n (HT20)	SISO	5180	2	20.026	Pass
		5200	2	20.009	Pass
		5240	2	19.889	Pass
802.11n (HT40)	SISO	5190	2	41.748	Pass
		5230	2	41.772	Pass
802.11ac (VHT20)	SISO	5180	2	19.927	Pass
		5200	2	20.076	Pass
		5240	2	19.939	Pass
802.11ac (VHT40)	SISO	5190	2	41.619	Pass
		5230	2	41.364	Pass
802.11ac (VHT80)	SISO	5210	2	83.599	Pass

2.2.2 Test Graph

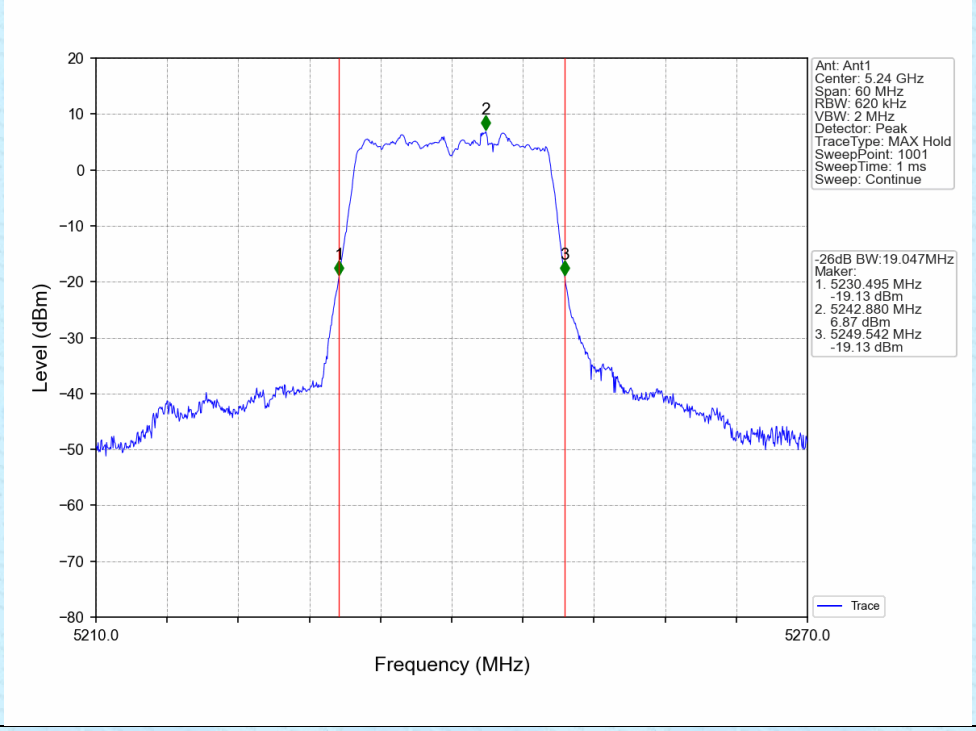
802.11a_LCH_5180MHz_Ant1_NTNV



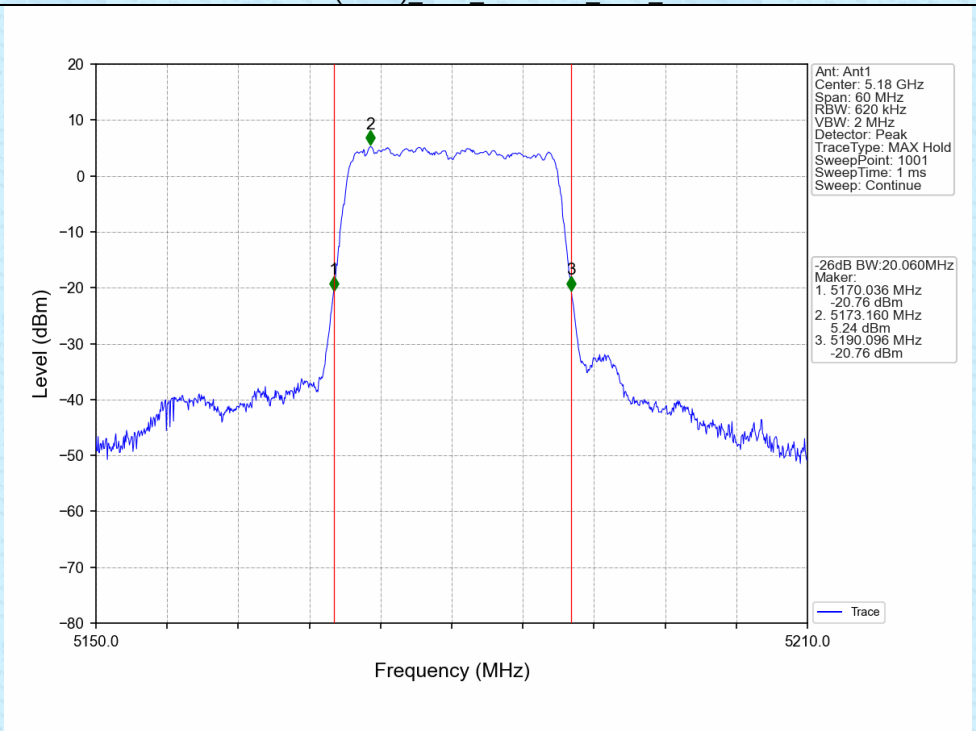
802.11a_MCH_5200MHz_Ant1_NTNV



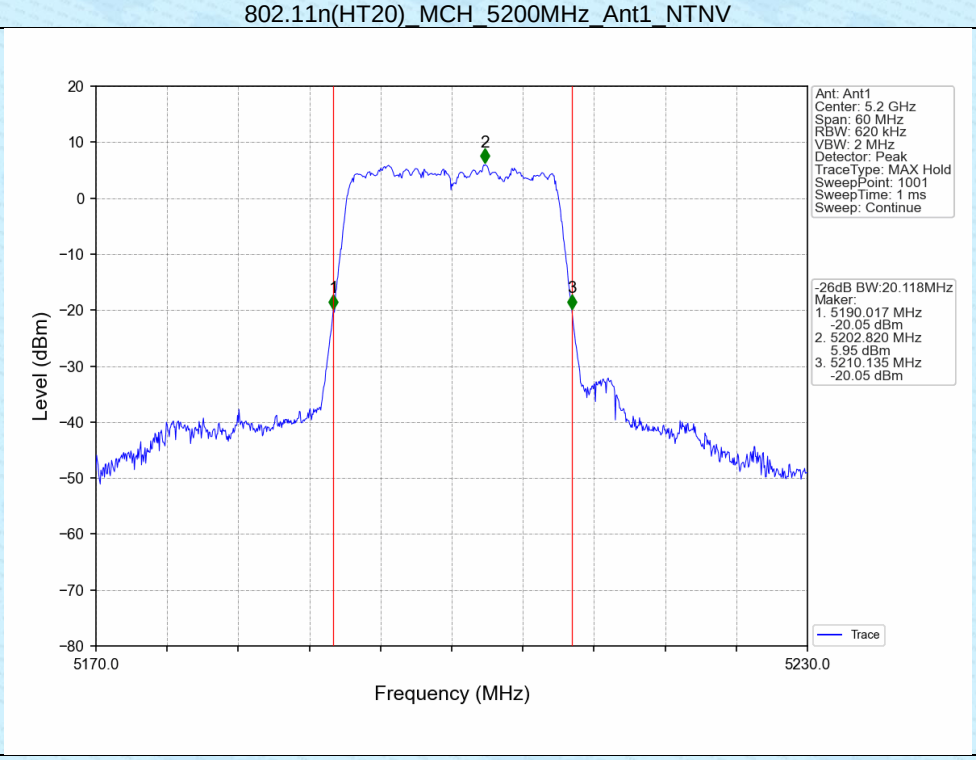
802.11a_HCH_5240MHz_Ant1_NTNV



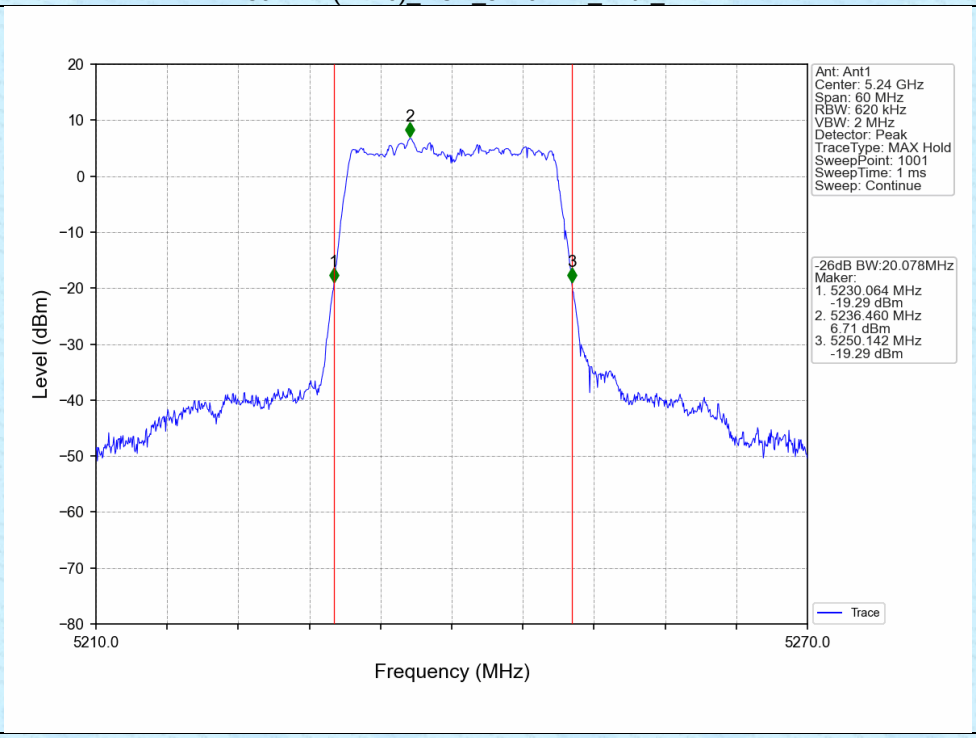
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



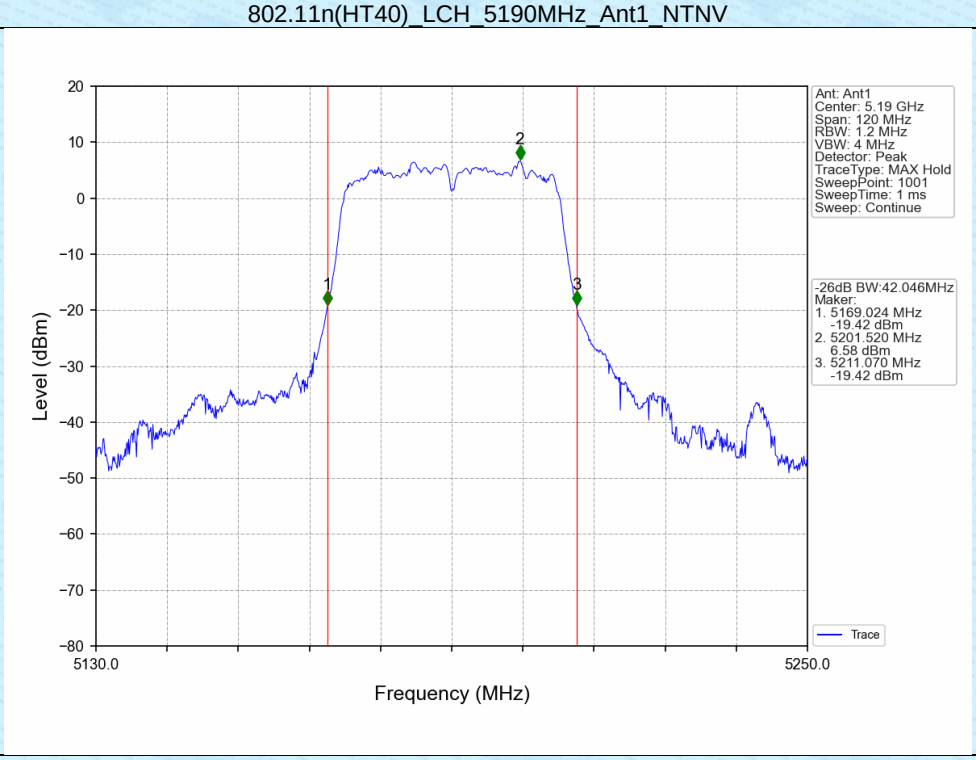
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



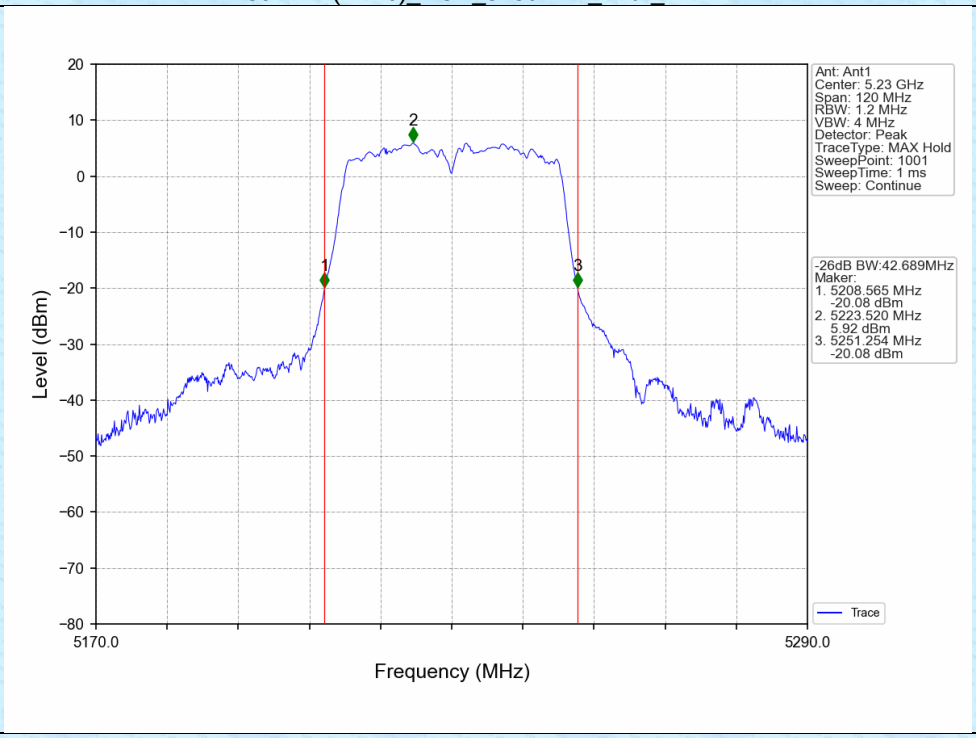
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



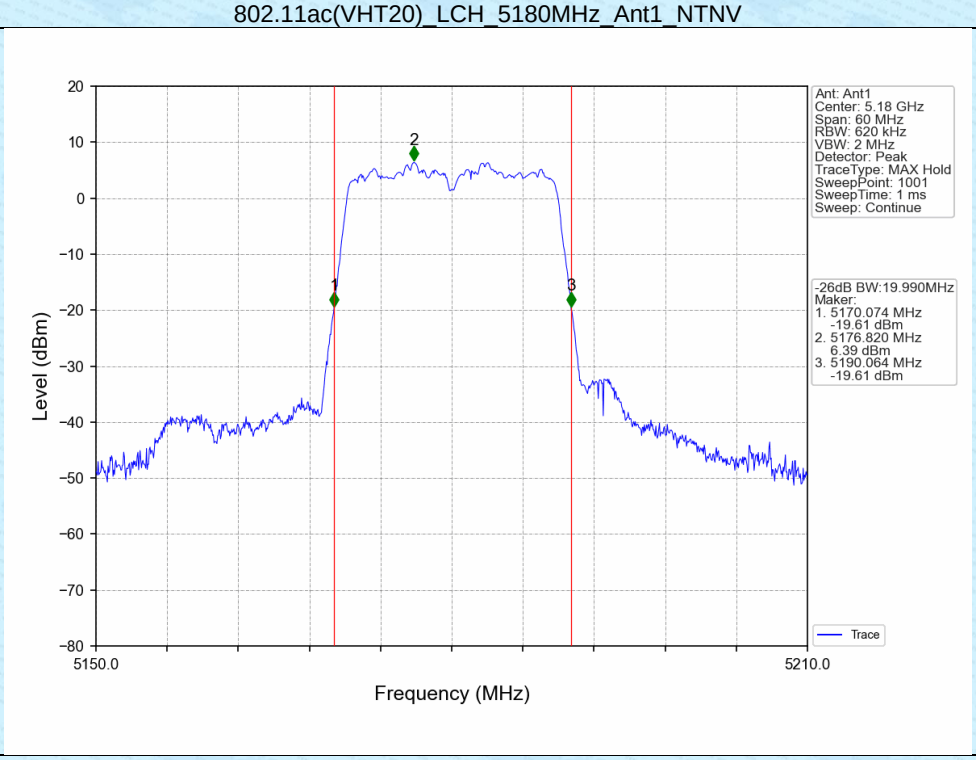
802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



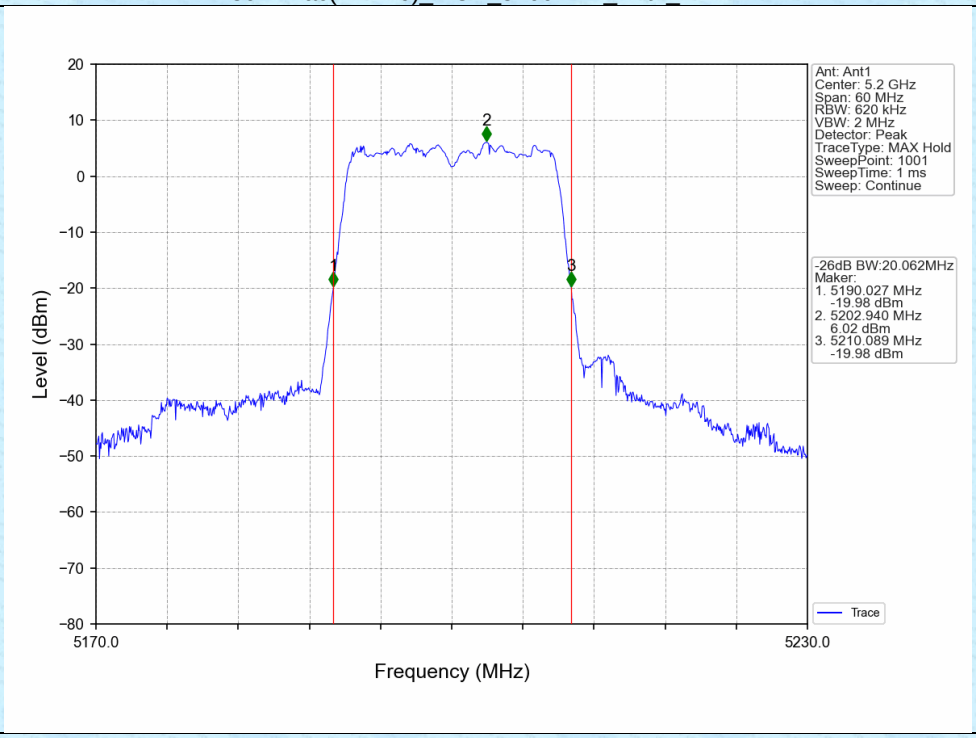
802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



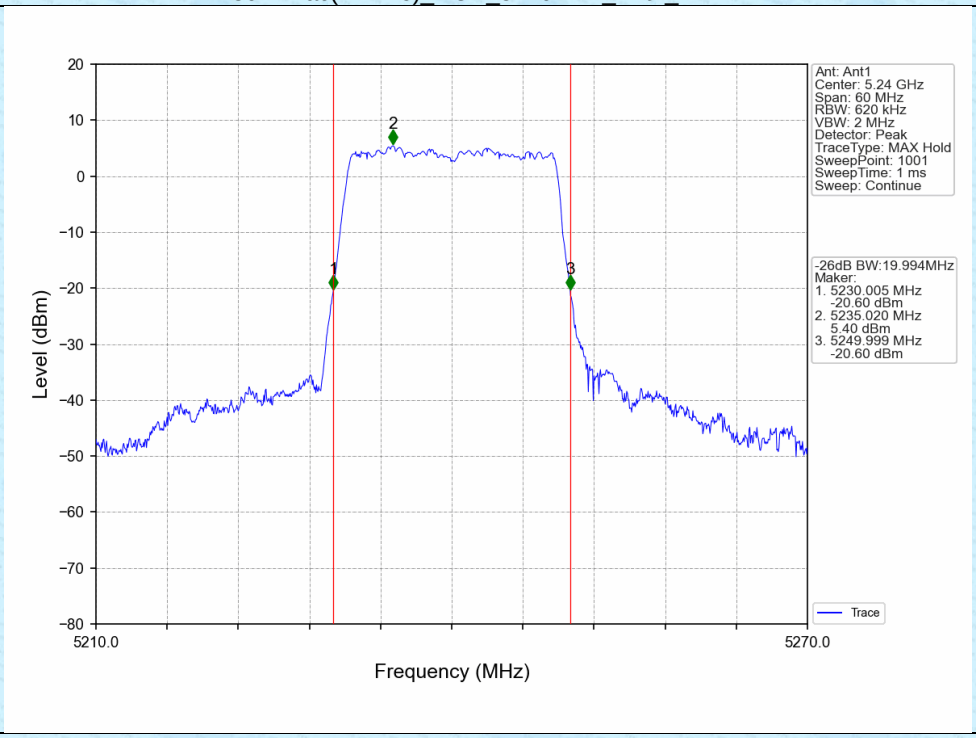
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



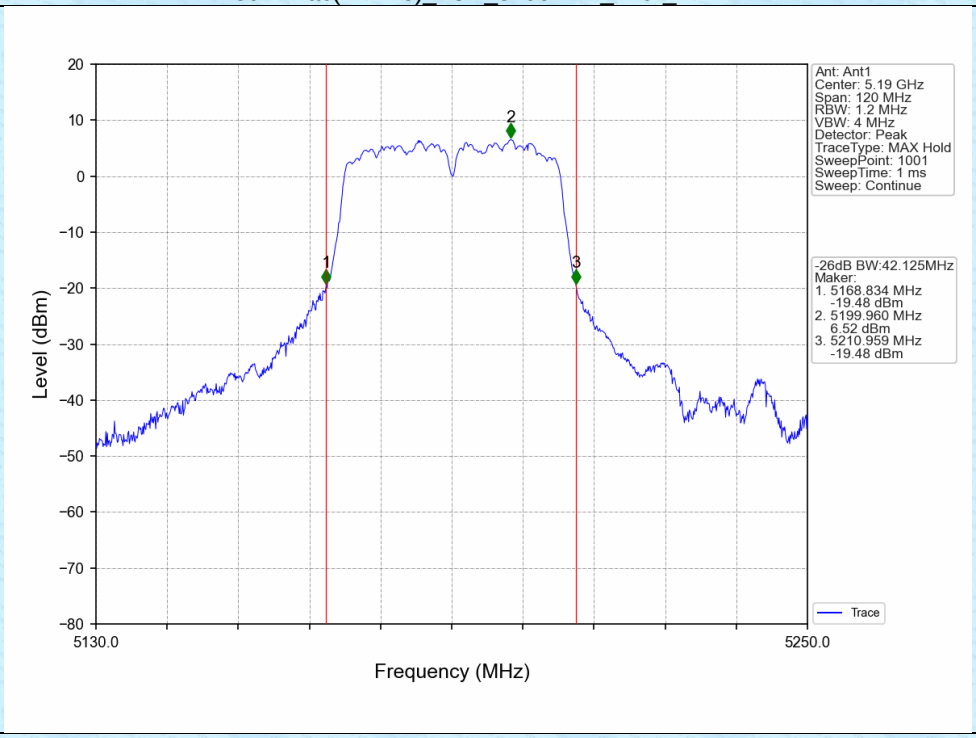
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



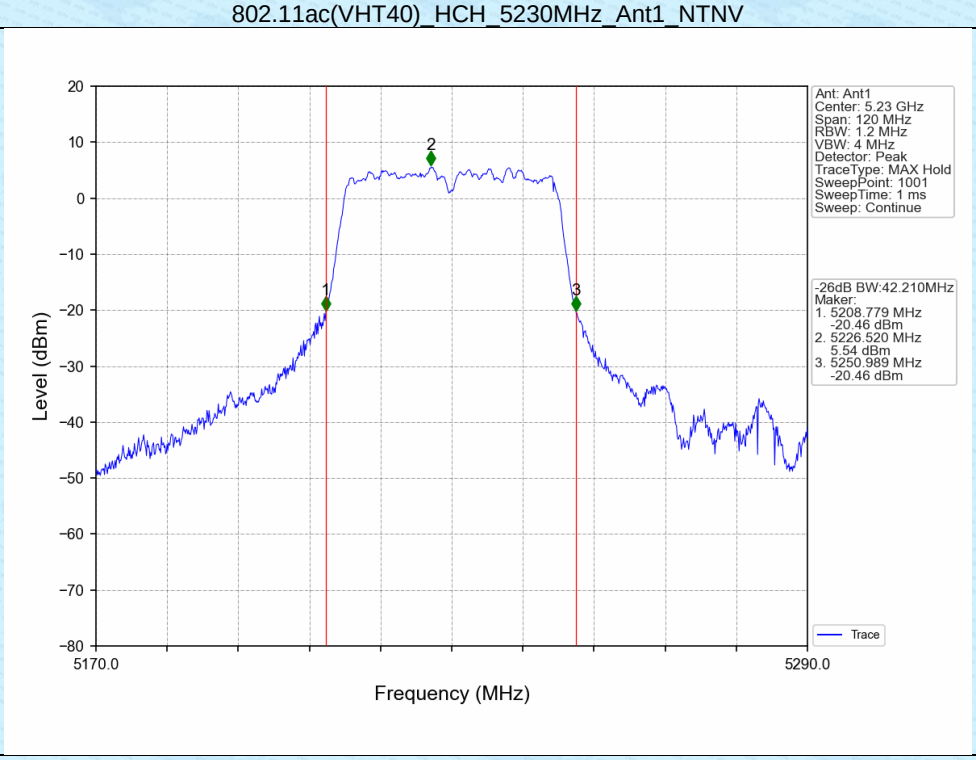
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



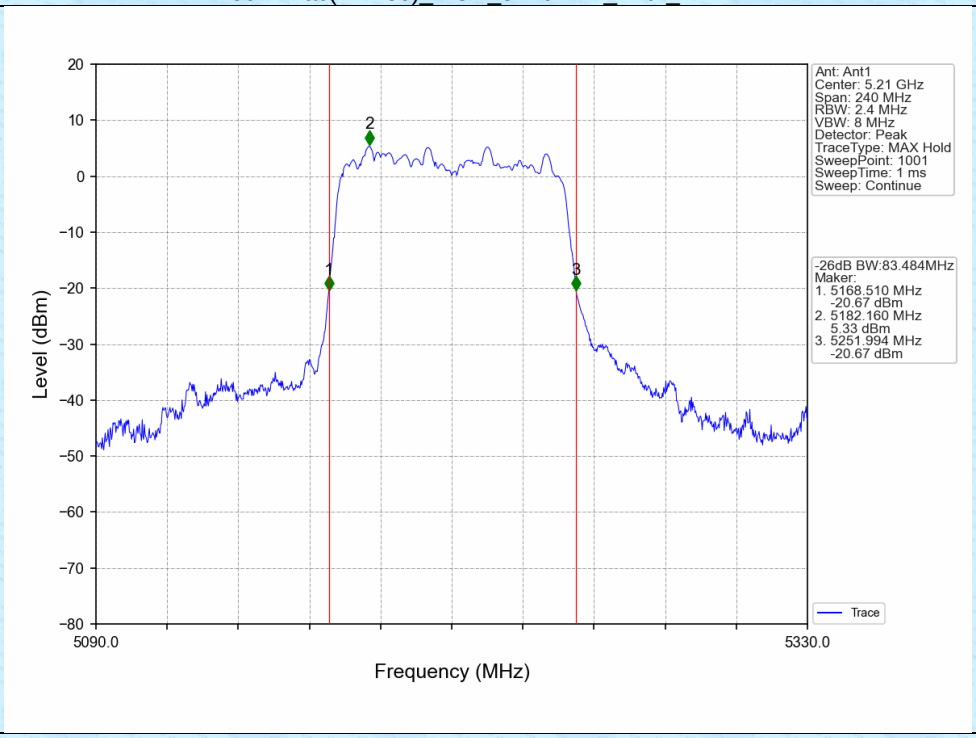
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



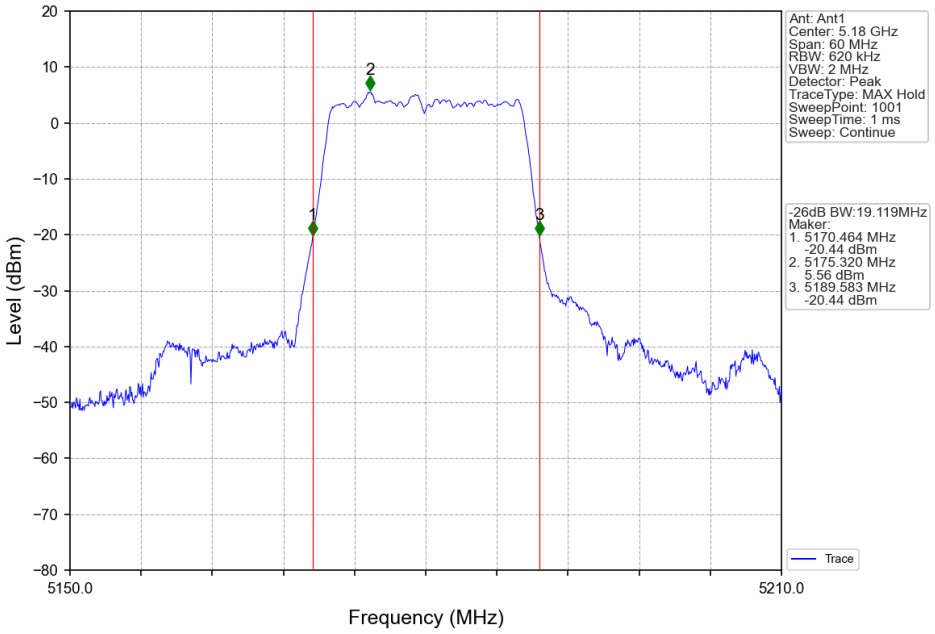
802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



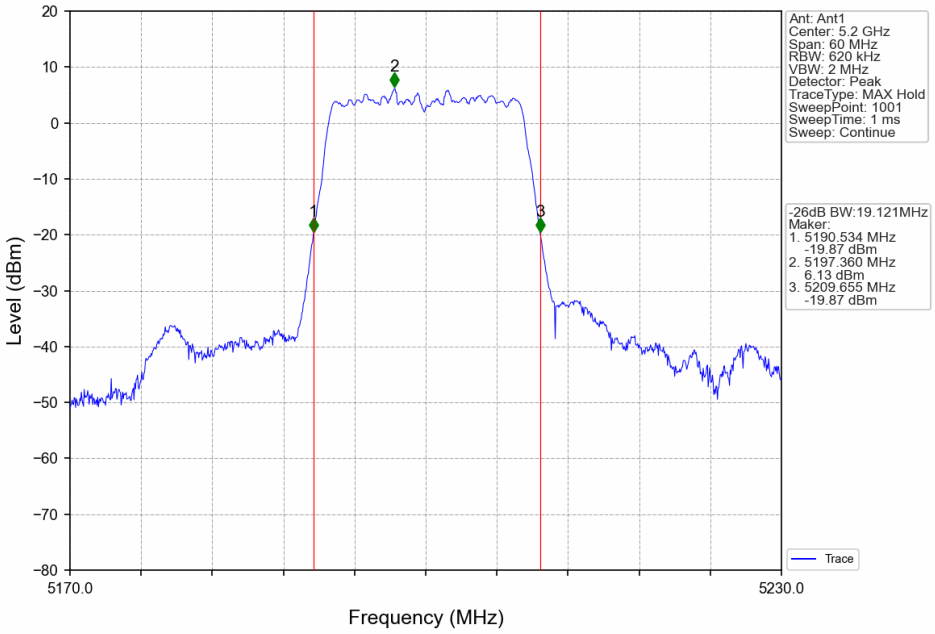
802.11ac(VHT80)_MCH_5210MHz_Ant1_NTNV



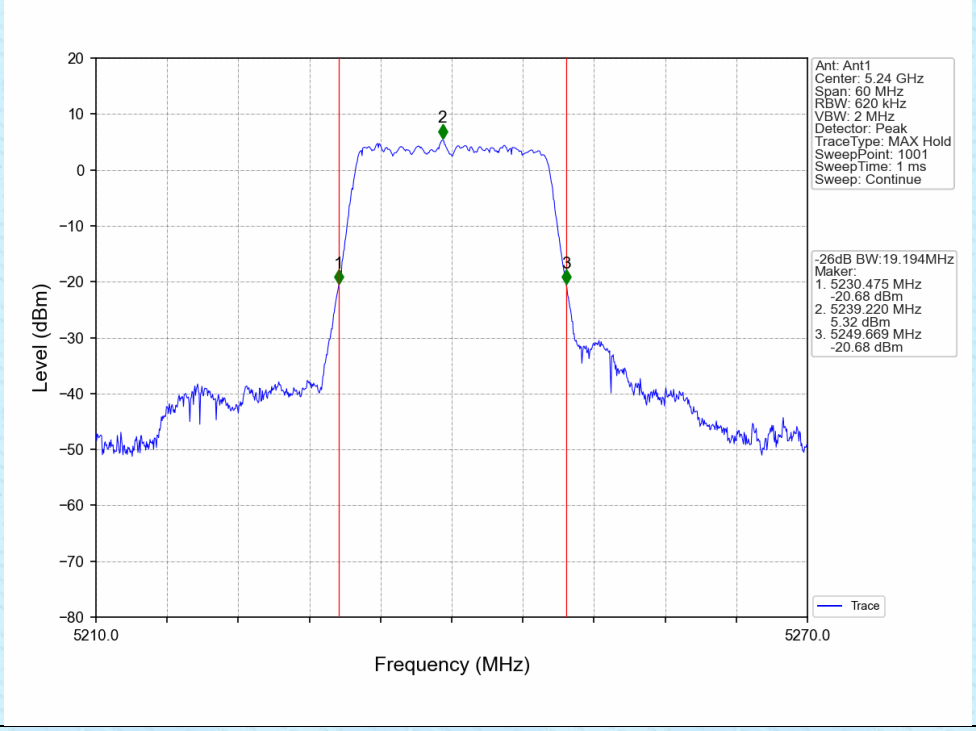
802.11a_LCH_5180MHz_Ant2_NTNV



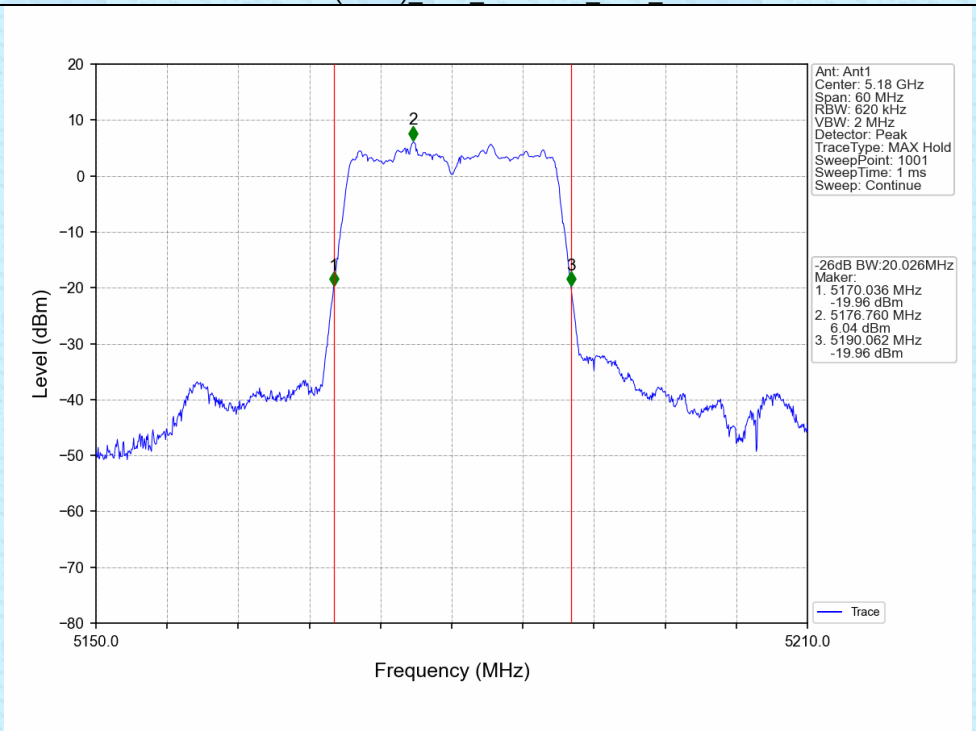
802.11a_MCH_5200MHz_Ant2_NTNV



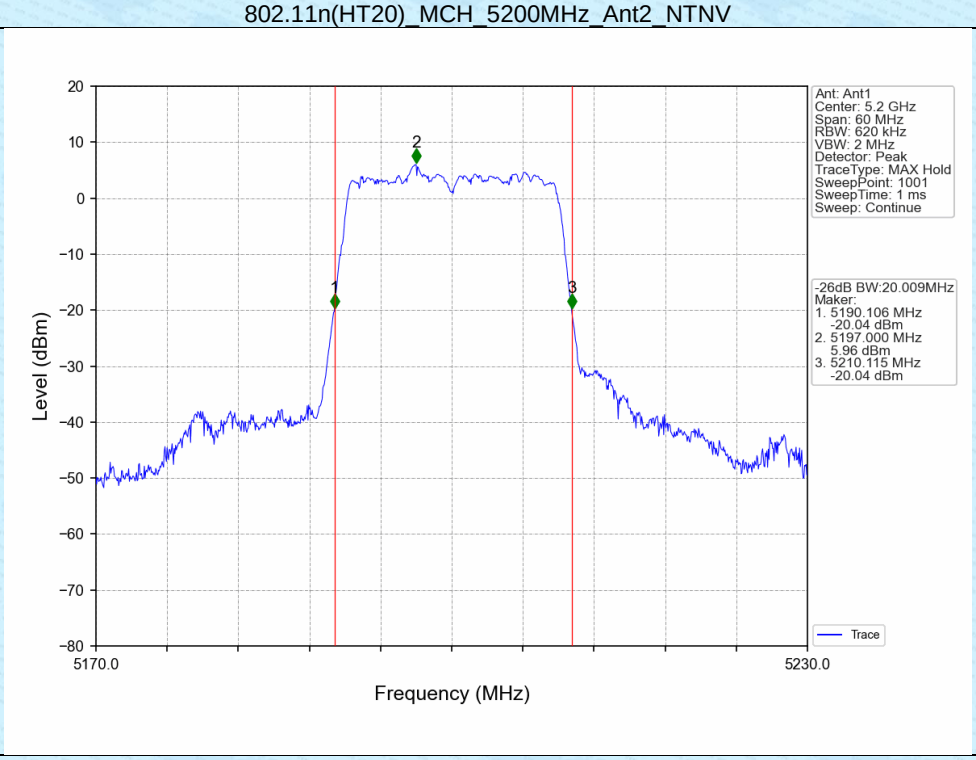
802.11a_HCH_5240MHz_Ant2_NTNV



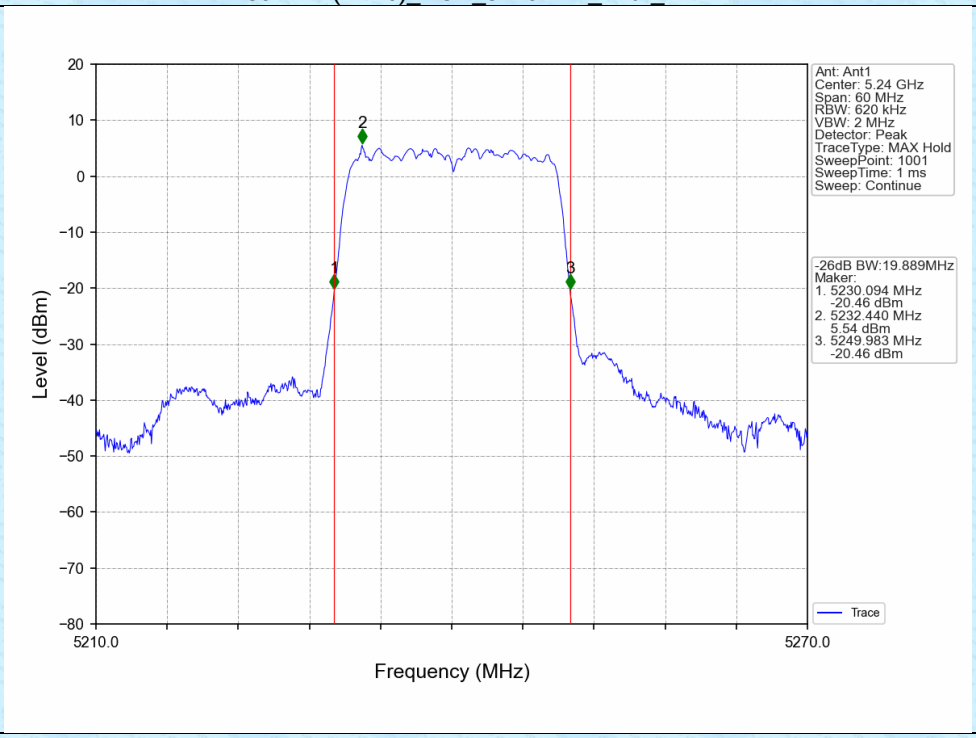
802.11n(HT20)_LCH_5180MHz_Ant2_NTNV



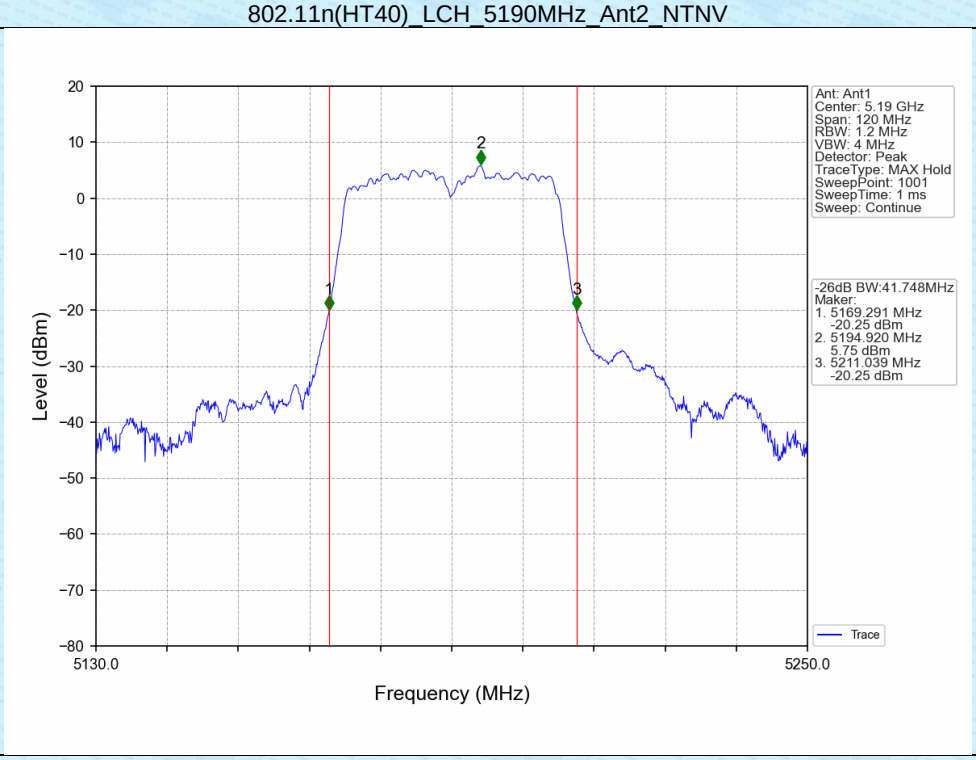
802.11n(HT20)_MCH_5200MHz_Ant2_NTNV



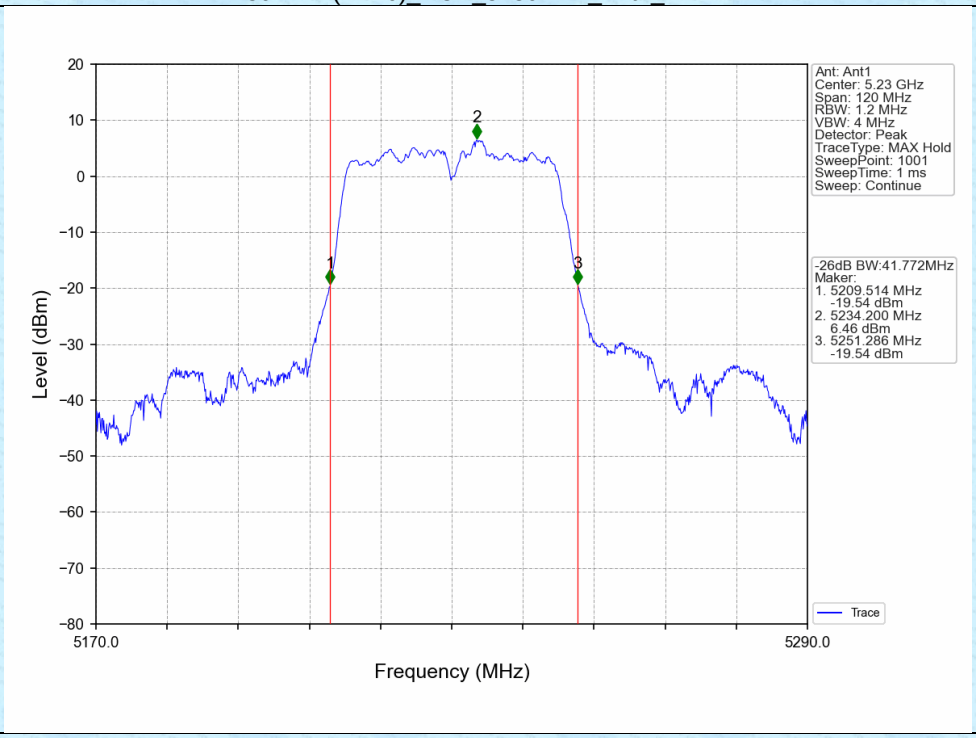
802.11n(HT20)_HCH_5240MHz_Ant2_NTNV



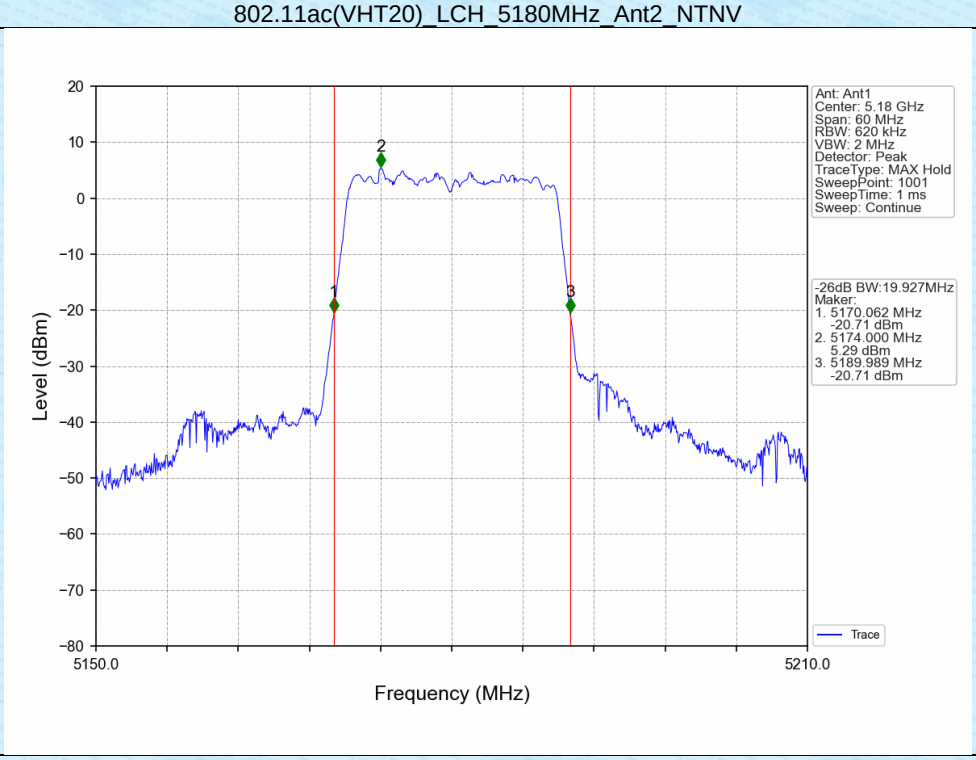
802.11n(HT40)_LCH_5190MHz_Ant2_NTNV



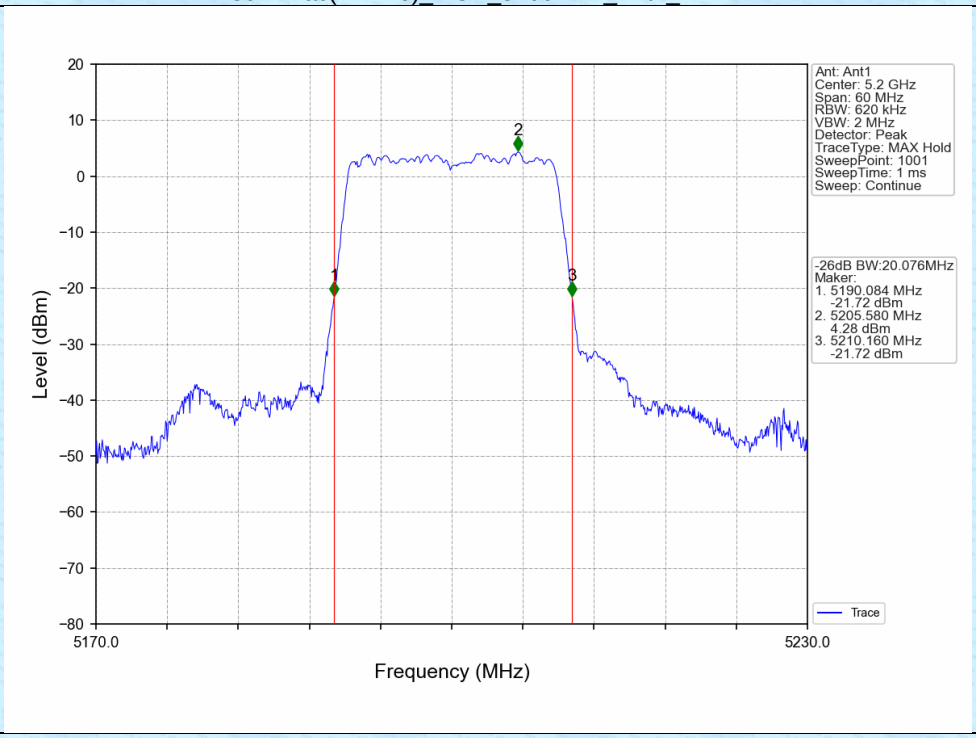
802.11n(HT40)_HCH_5230MHz_Ant2_NTNV



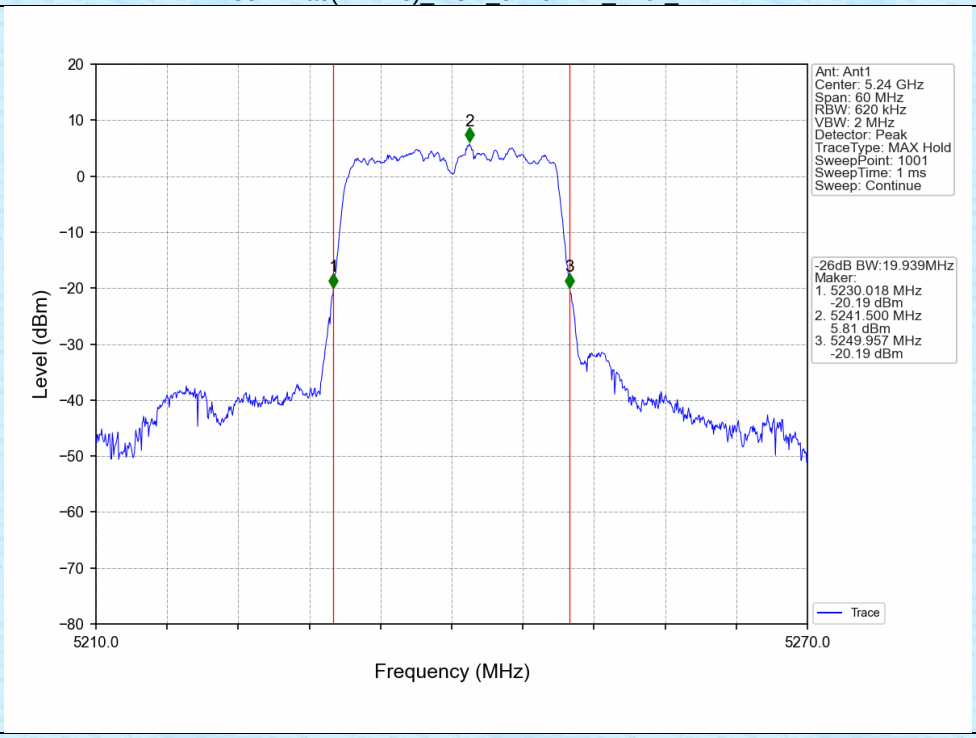
802.11ac(VHT20)_LCH_5180MHz_Ant2_NTNV



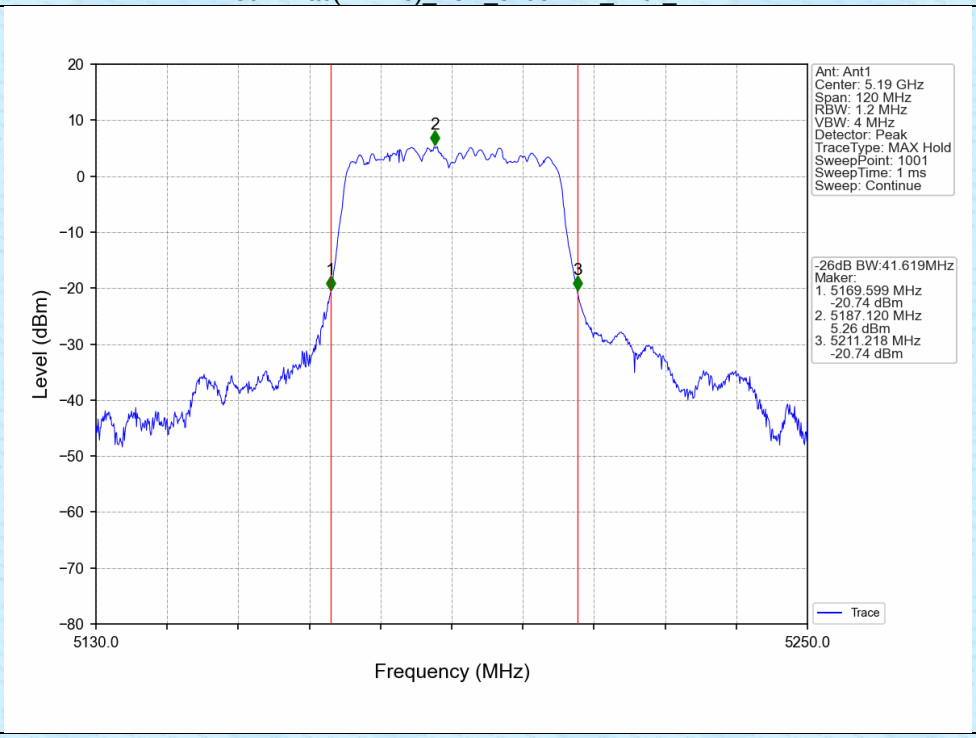
802.11ac(VHT20)_MCH_5200MHz_Ant2_NTNV



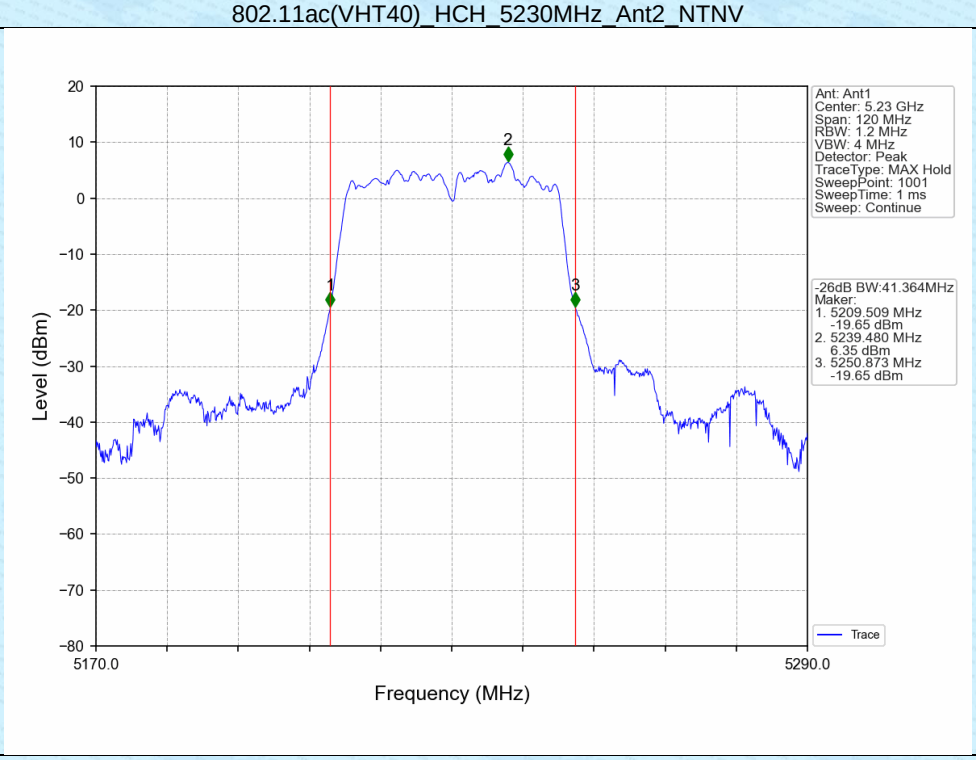
802.11ac(VHT20)_HCH_5240MHz_Ant2_NTNV



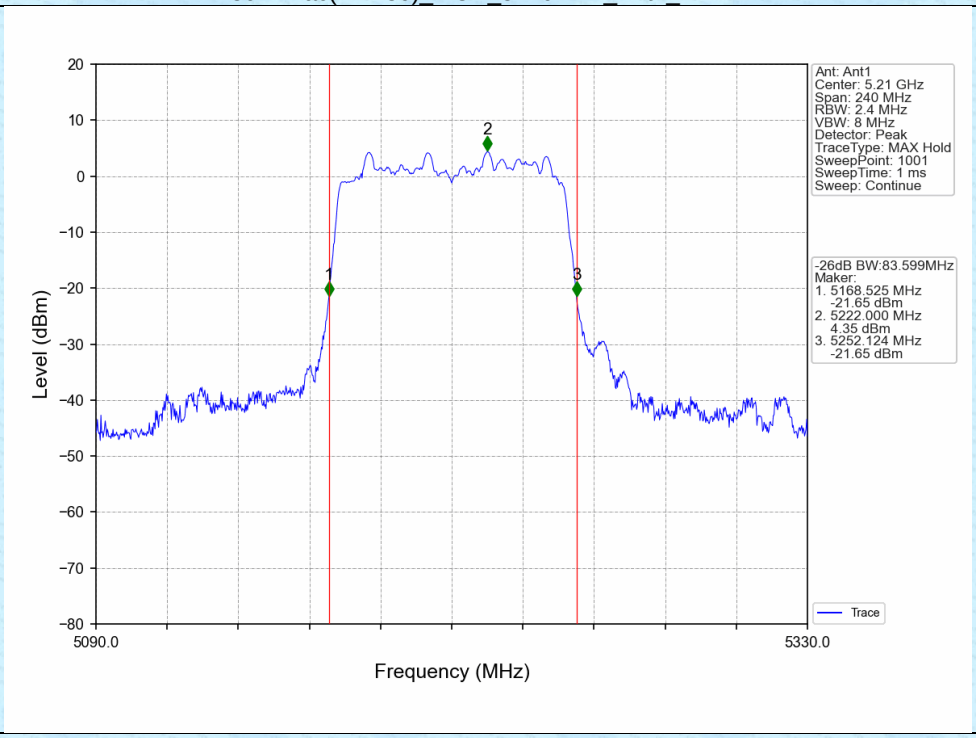
802.11ac(VHT40)_LCH_5190MHz_Ant2_NTNV



802.11ac(VHT40)_HCH_5230MHz_Ant2_NTNV



802.11ac(VHT80)_MCH_5210MHz_Ant2_NTNV



3. Maximum Conducted Output Power

3.1 Test Result

Mode	TX Type	Frequency (MHz)	Maximum Conducted Output Power (dBm)	Limit (dBm)	Verdict
802.11a	1	5180	11.60	<=23.98	Pass
	2	5180	10.33	<=23.98	Pass
	1	5200	11.34	<=23.98	Pass
	2	5200	10.43	<=23.98	Pass
	1	5240	11.15	<=23.98	Pass
	2	5240	10.27	<=23.98	Pass
802.11n (HT20)	1	5180	11.24	<=23.98	Pass
	2	5180	10.53	<=23.98	Pass
	Total	5180	13.91	<=23.98	Pass
	1	5200	11.35	<=23.98	Pass
	2	5200	10.57	<=23.98	Pass
	Total	5200	13.99	<=23.98	Pass
	1	5240	11.20	<=23.98	Pass
	2	5240	10.51	<=23.98	Pass
	Total	5240	13.88	<=23.98	Pass
802.11n (HT40)	1	5190	11.26	<=23.98	Pass
	2	5190	10.46	<=23.98	Pass
	Total	5190	13.89	<=23.98	Pass
	1	5230	11.17	<=23.98	Pass
	2	5230	10.36	<=23.98	Pass
	Total	5230	13.79	<=23.98	Pass
802.11ac (VHT20)	1	5180	11.32	<=23.98	Pass
	2	5180	10.45	<=23.98	Pass
	Total	5180	13.92	<=23.98	Pass
	1	5200	11.45	<=23.98	Pass
	2	5200	10.12	<=23.98	Pass
	Total	5200	13.85	<=23.98	Pass
	1	5240	11.19	<=23.98	Pass
	2	5240	10.40	<=23.98	Pass
	Total	5240	13.82	<=23.98	Pass
802.11ac (VHT40)	1	5190	11.34	<=23.98	Pass
	2	5190	10.15	<=23.98	Pass
	Total	5190	13.80	<=23.98	Pass
	1	5230	10.90	<=23.98	Pass
	2	5230	10.10	<=23.98	Pass
	Total	5230	13.53	<=23.98	Pass
802.11ac (VHT80)	1	5210	9.03	<=23.98	Pass
	2	5210	7.97	<=23.98	Pass
	Total	5210	11.54	<=23.98	Pass

Note1: Antenna Gain: Ant1: 1.74dBi; Ant2: 1.25dBi
Note2: transmit signals are completely correlated,
Directional gain=10 x log[$(10^{1.74}/20+ 10^{1.25}/20)^2/2$]=4.51 dBi
Note3: Test result contains duty factor(10*log(1/duty cycle))

4. Maximum Power Spectral Density

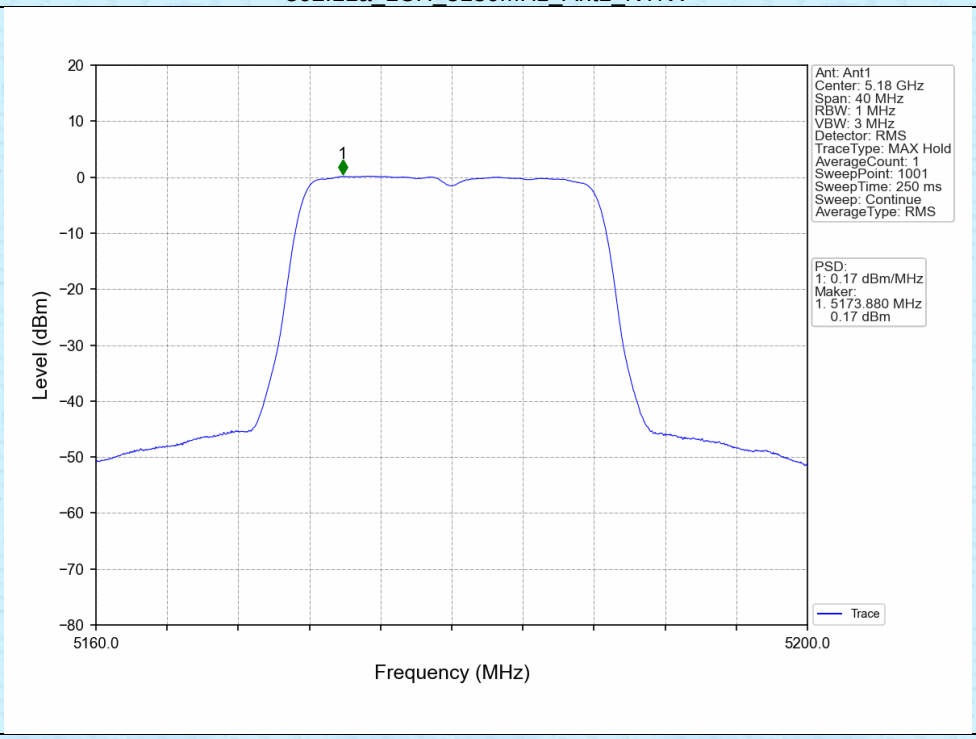
4.1 Test Result

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/MHz)	Limit(dBm/MHz)	Verdict
802.11a	1	5180	0.17	<=11	Pass
	2	5180	-0.81	<=11	Pass
	1	5200	0.07	<=11	Pass
	2	5200	-0.93	<=11	Pass
	1	5240	-0.10	<=11	Pass
	2	5240	-0.96	<=11	Pass
802.11n (HT20)	1	5180	-0.21	<=11	Pass
	2	5180	-1.03	<=11	Pass
	Total	5180	2.41	<=11	Pass
	1	5200	-0.14	<=11	Pass
	2	5200	-0.84	<=11	Pass
	Total	5200	2.53	<=11	Pass
	1	5240	-0.25	<=11	Pass
	2	5240	-0.85	<=11	Pass
	Total	5240	2.47	<=11	Pass
802.11n (HT40)	1	5190	-2.82	<=11	Pass
	2	5190	-3.78	<=11	Pass
	Total	5190	-0.26	<=11	Pass
	1	5230	-2.82	<=11	Pass
	2	5230	-3.85	<=11	Pass
	Total	5230	-0.29	<=11	Pass
802.11ac (VHT20)	1	5180	-0.10	<=11	Pass
	2	5180	-1.16	<=11	Pass
	Total	5180	2.41	<=11	Pass
	1	5200	-0.10	<=11	Pass
	2	5200	-1.39	<=11	Pass
	Total	5200	2.31	<=11	Pass
	1	5240	-0.40	<=11	Pass
	2	5240	-1.09	<=11	Pass
	Total	5240	2.28	<=11	Pass
802.11ac (VHT40)	1	5190	-2.82	<=11	Pass
	2	5190	-3.76	<=11	Pass
	Total	5190	-0.25	<=11	Pass
	1	5230	-3.08	<=11	Pass
	2	5230	-4.07	<=11	Pass
	Total	5230	-0.54	<=11	Pass
802.11ac (VHT80)	1	5210	-7.83	<=11	Pass
	2	5210	-8.81	<=11	Pass
	Total	5210	-5.28	<=11	Pass

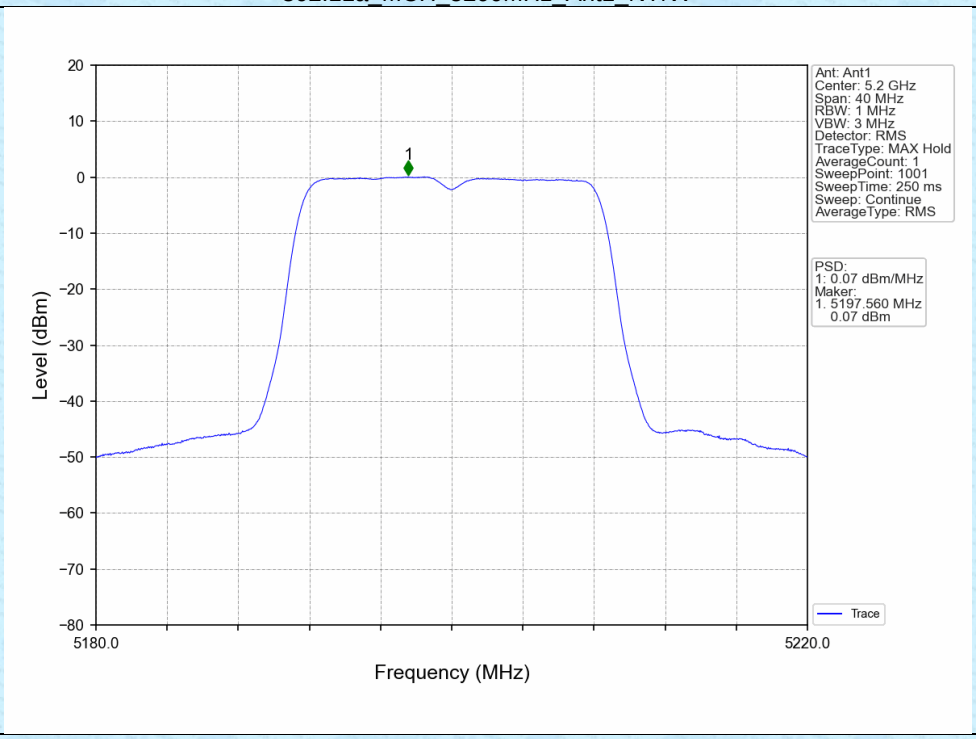
Note1: Antenna Gain: Ant1: 1.74dBi; Ant2: 1.25dBi
Note2: transmit signals are completely correlated,
Directional gain=10 x log[($10^{1.74}$/20+ $10^{1.25}$/20)2/2]=4.51 dBi
Note3: Test result contains duty factor(10*log(1/duty cycle))

4.1.2 Test Graph

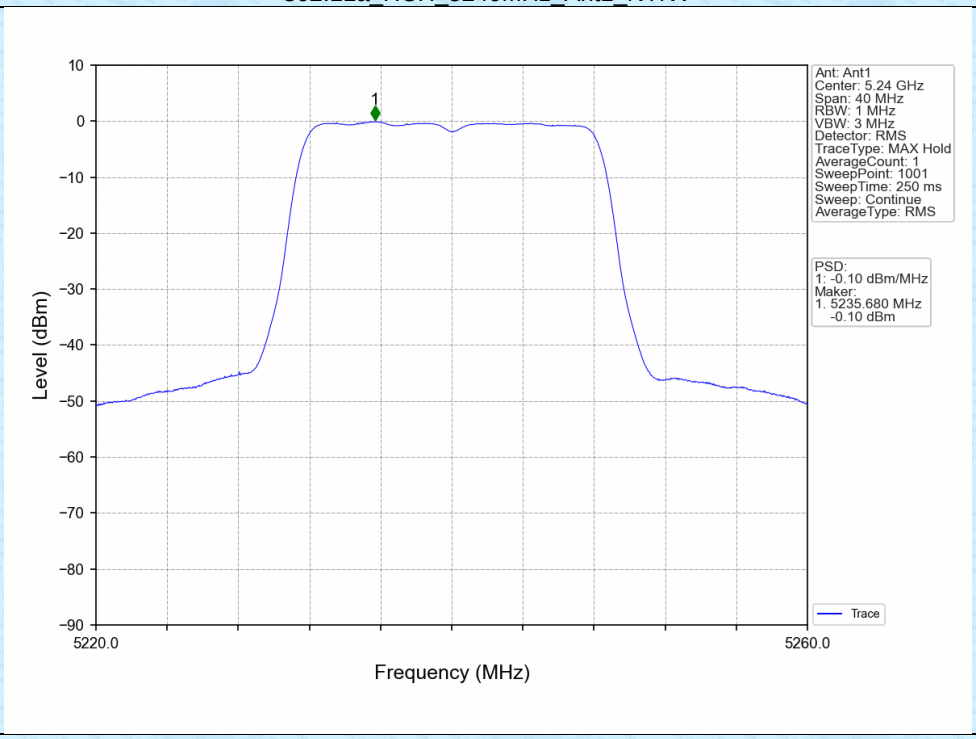
802.11a_LCH_5180MHz_Ant1_NTNV



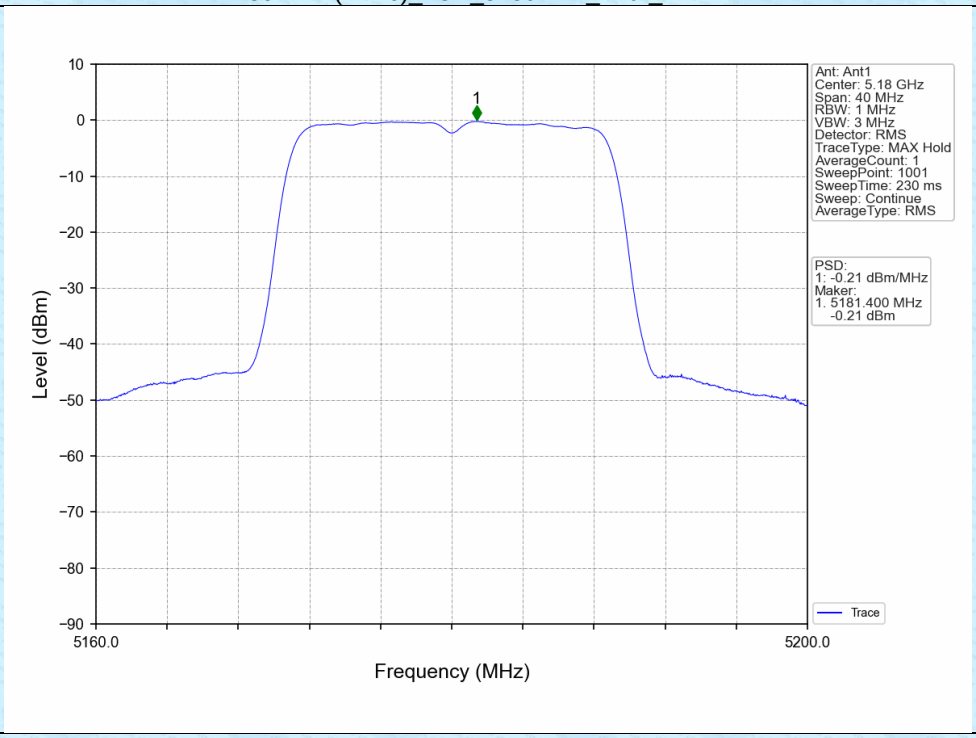
802.11a_MCH_5200MHz_Ant1_NTNV



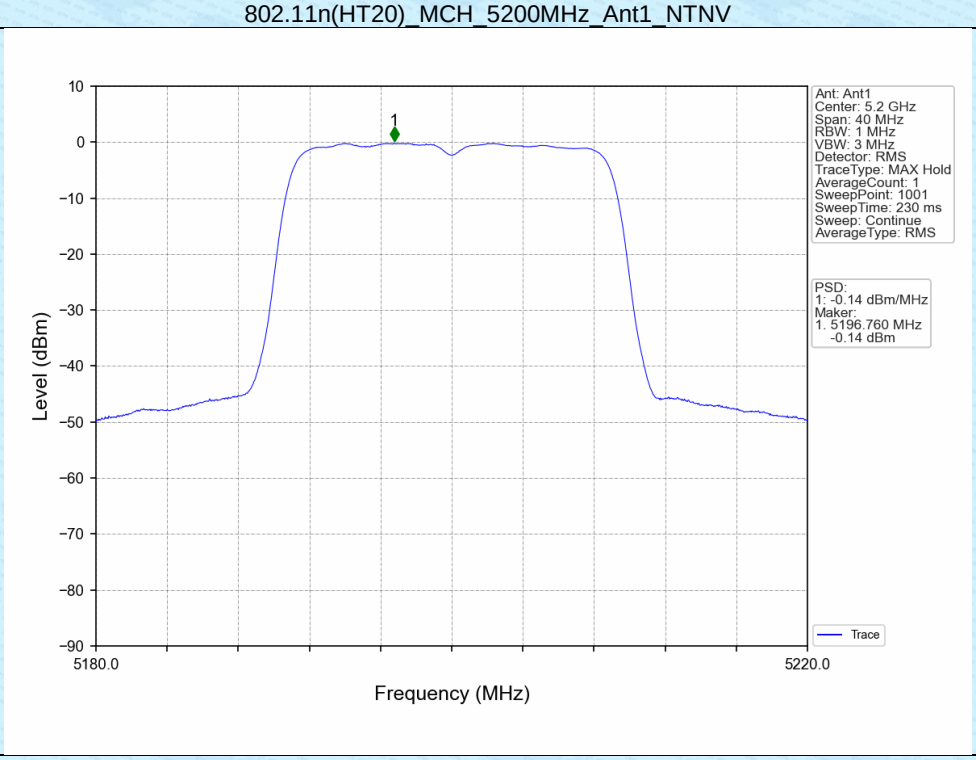
802.11a_HCH_5240MHz_Ant1_NTNV



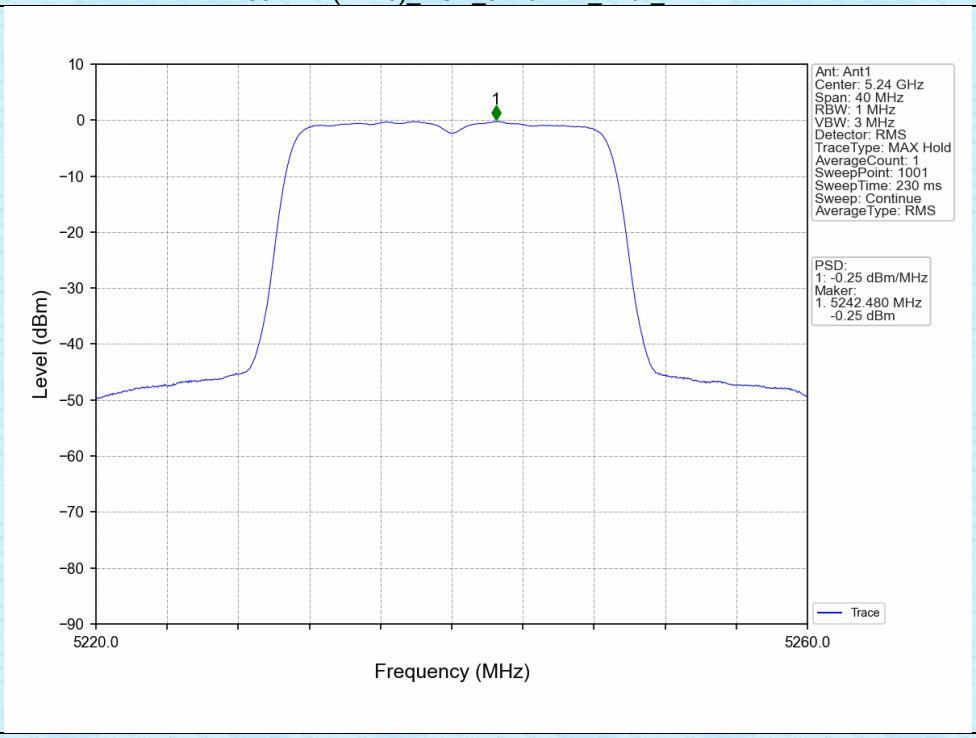
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



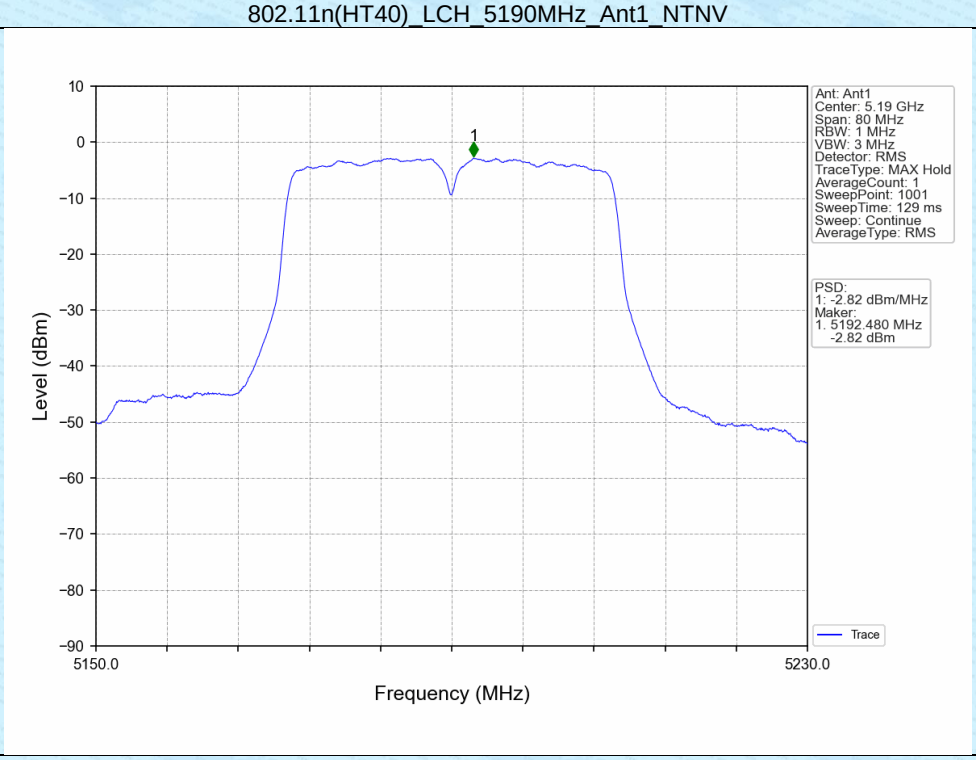
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



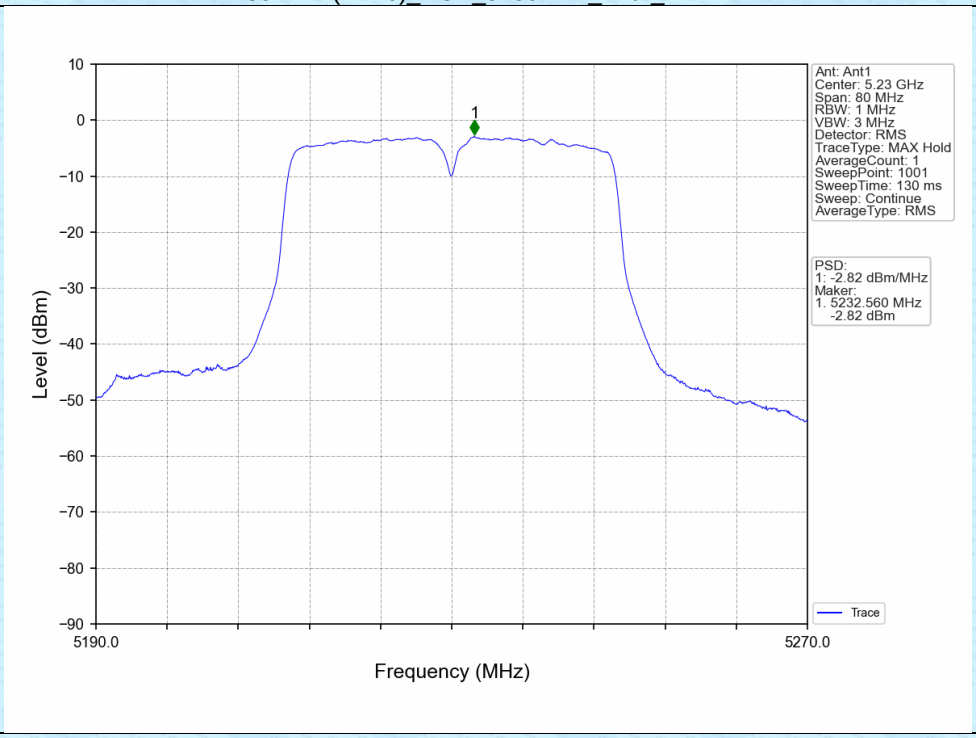
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



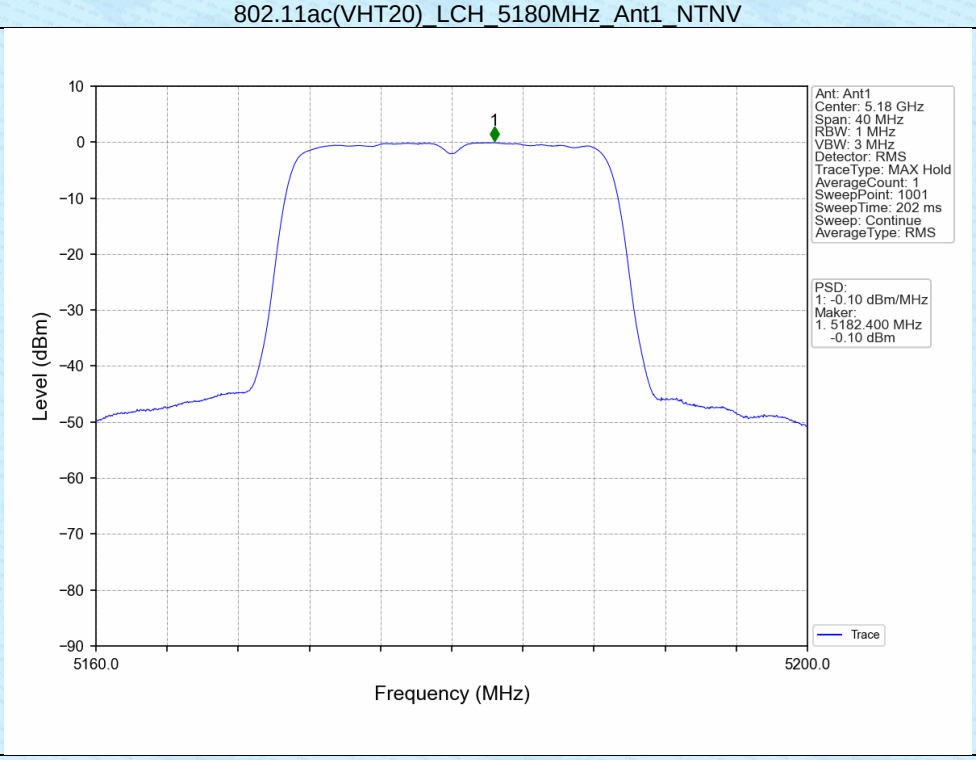
802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



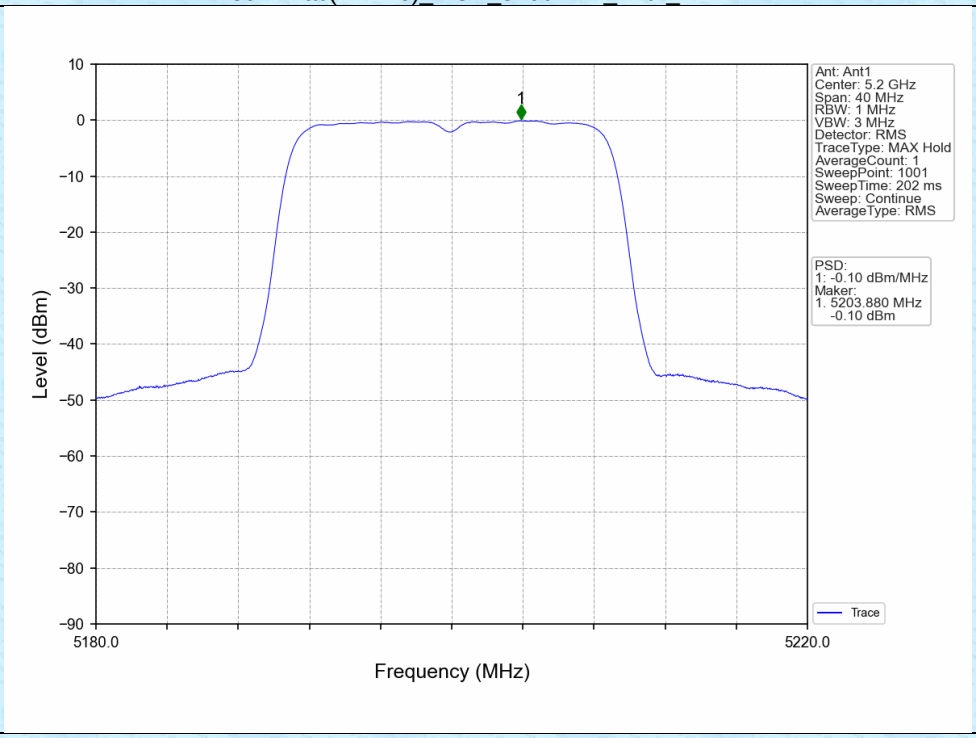
802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



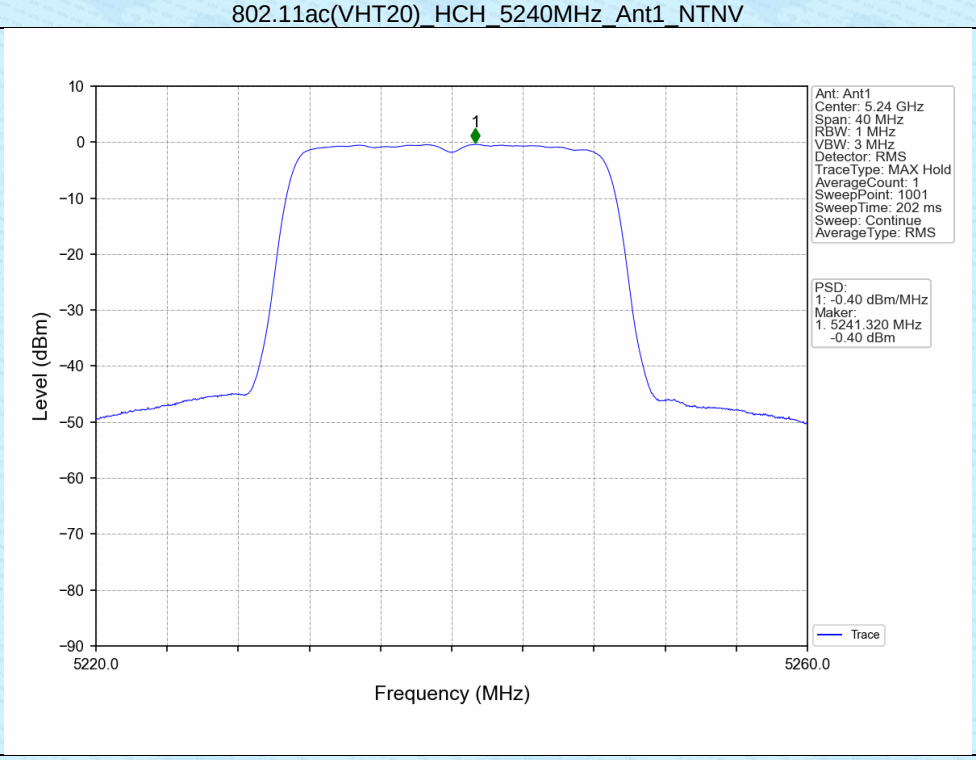
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



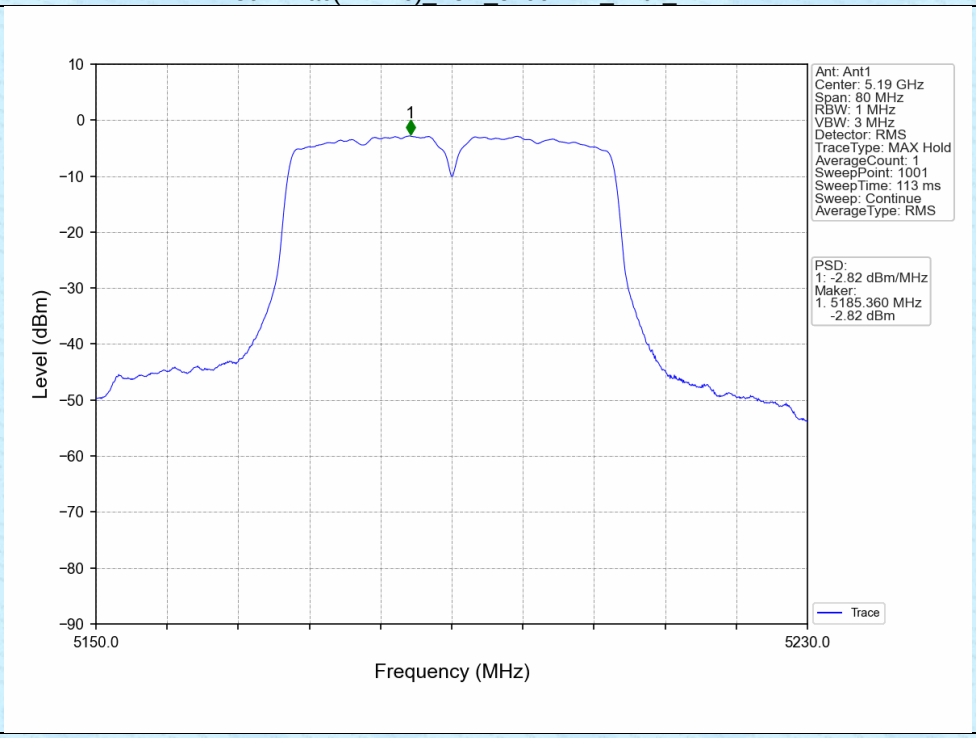
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



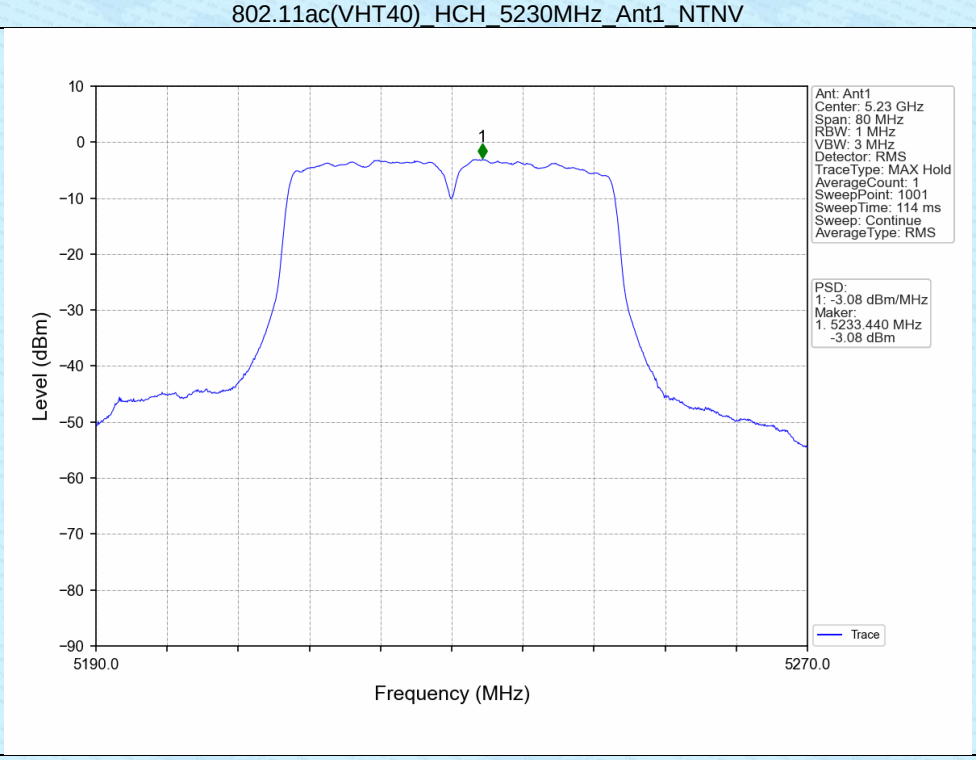
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



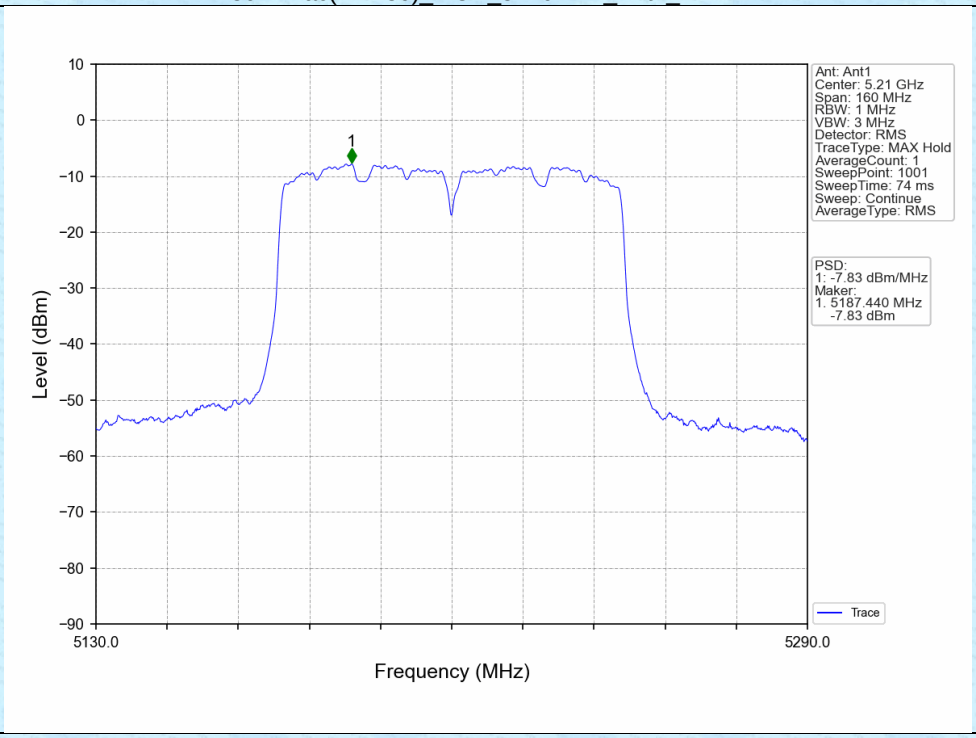
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



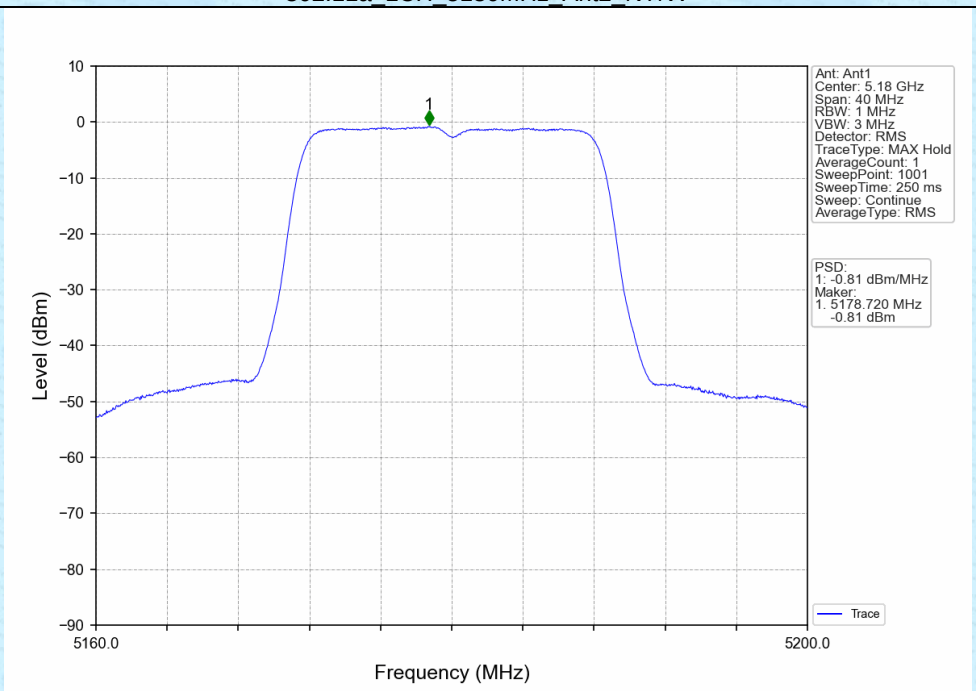
802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5210MHz_Ant1_NTNV



802.11a_LCH_5180MHz_Ant2_NTNV



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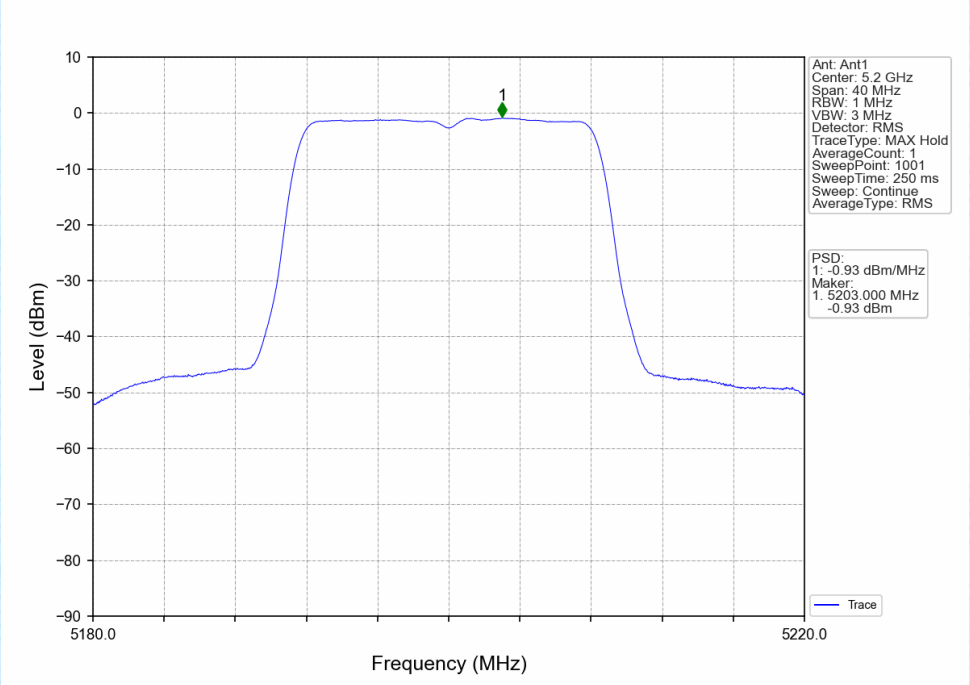
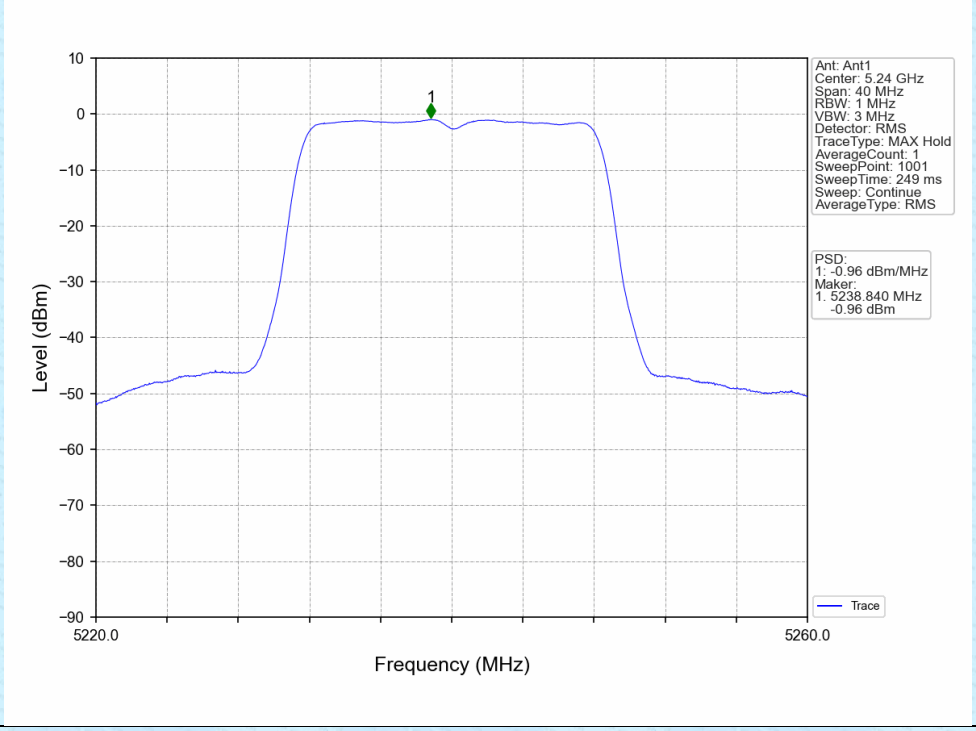
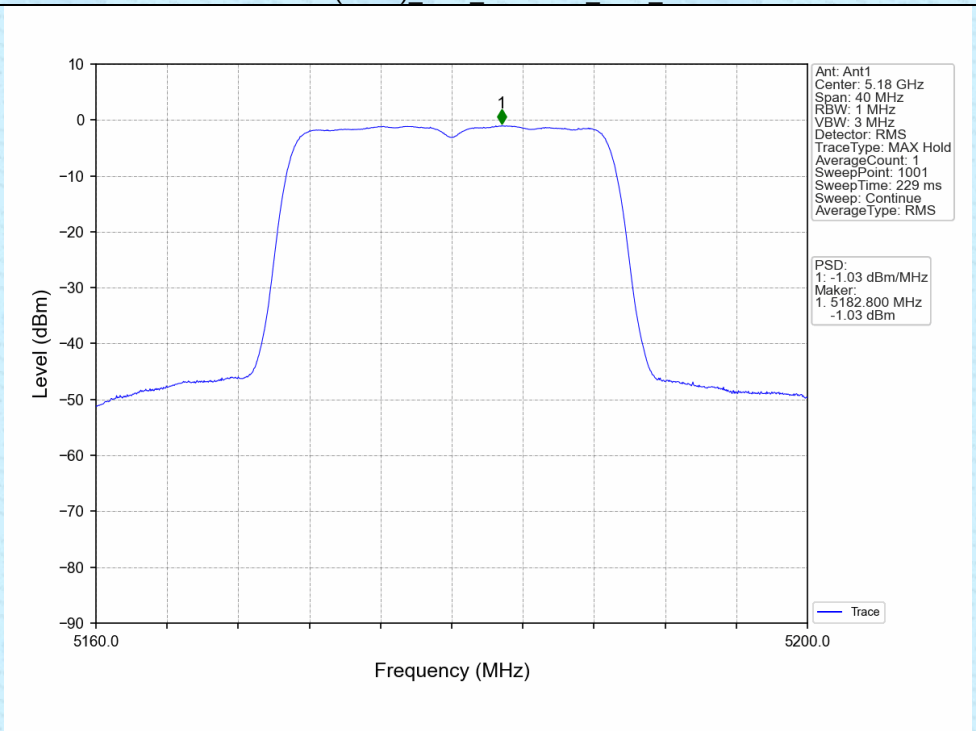


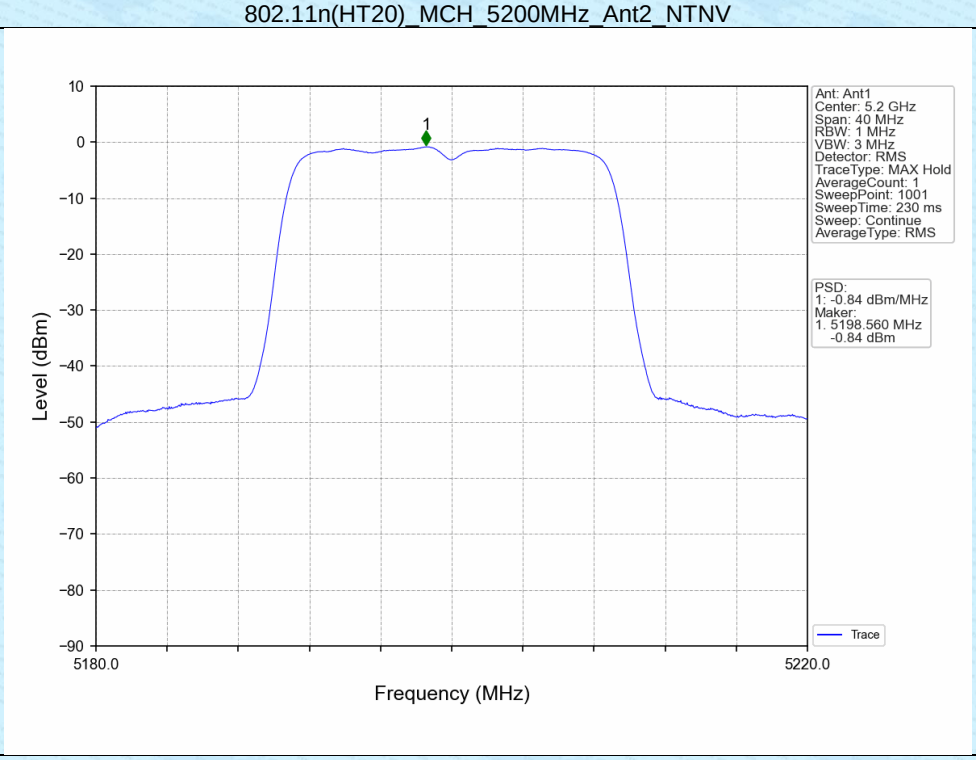
802.11a_HCH_5240MHz_Ant2_NTNV



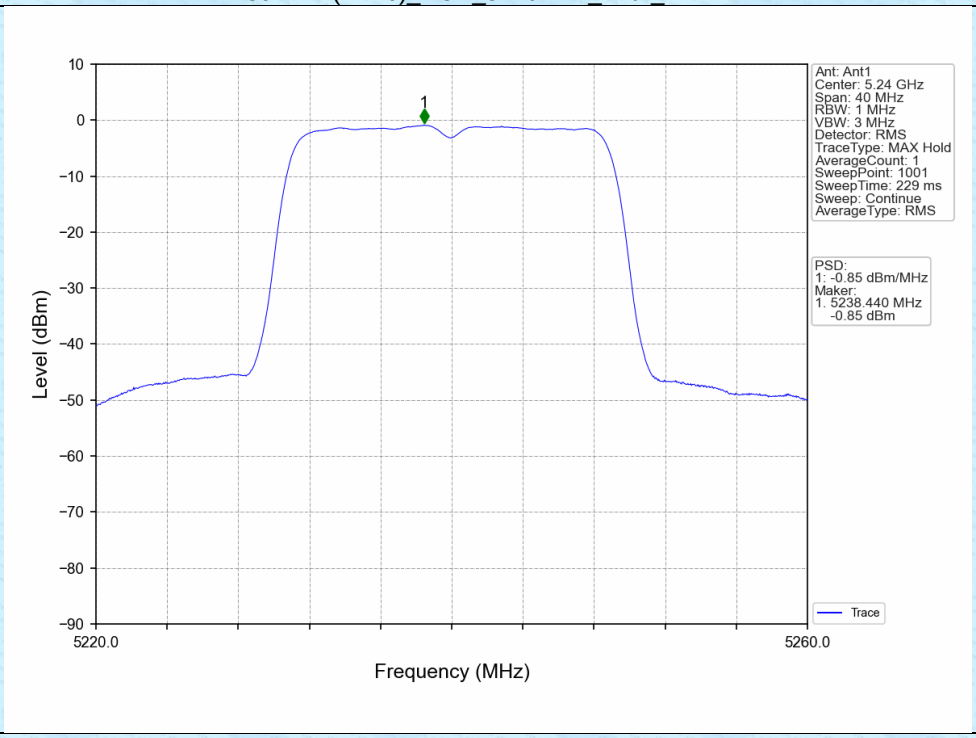
802.11n(HT20)_LCH_5180MHz_Ant2_NTNV



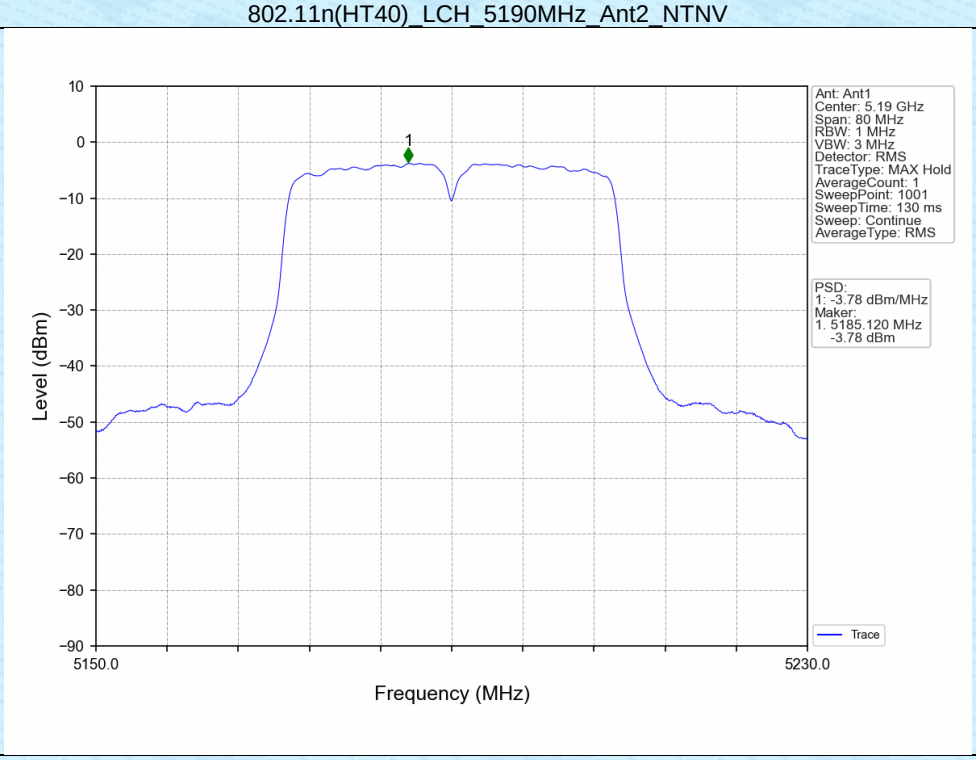
802.11n(HT20)_MCH_5200MHz_Ant2_NTNV



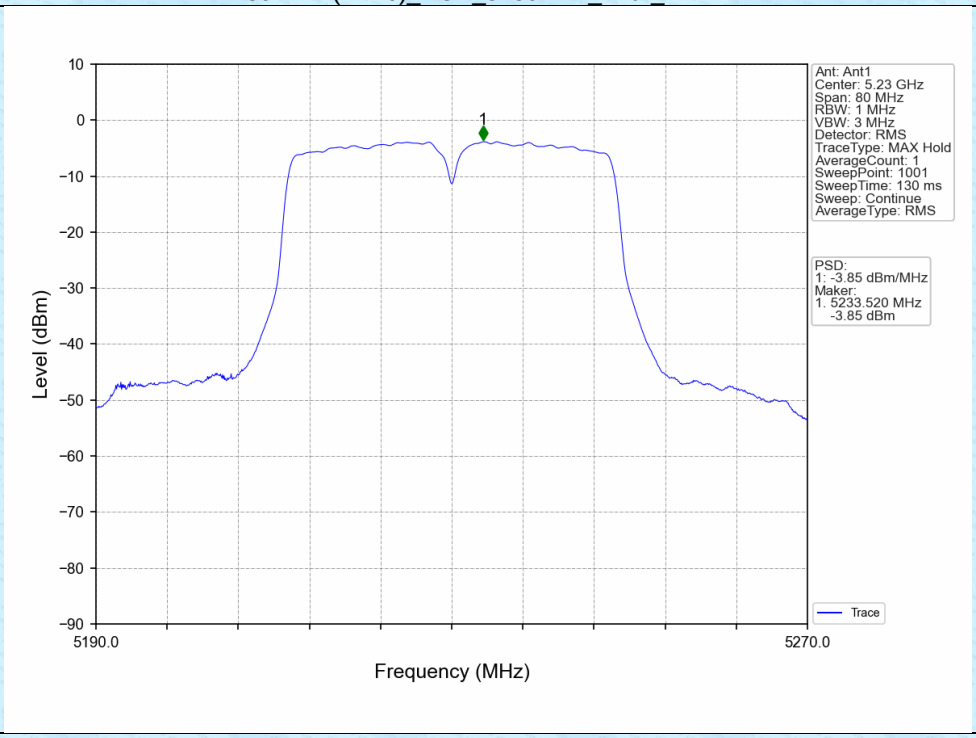
802.11n(HT20)_HCH_5240MHz_Ant2_NTNV



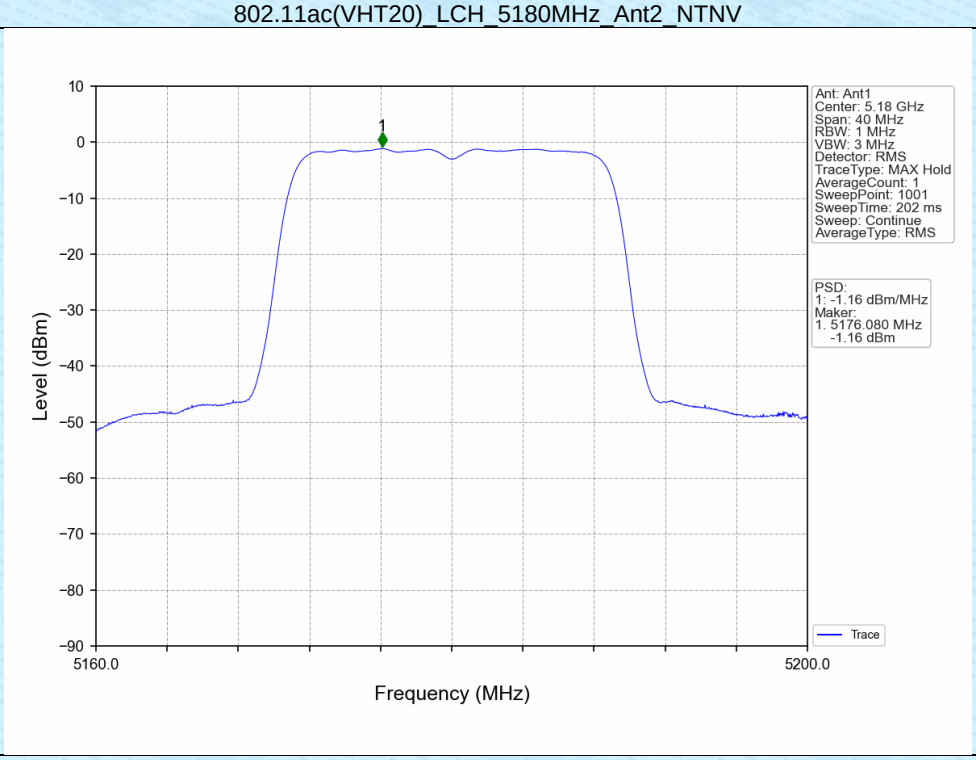
802.11n(HT40)_LCH_5190MHz_Ant2_NTNV



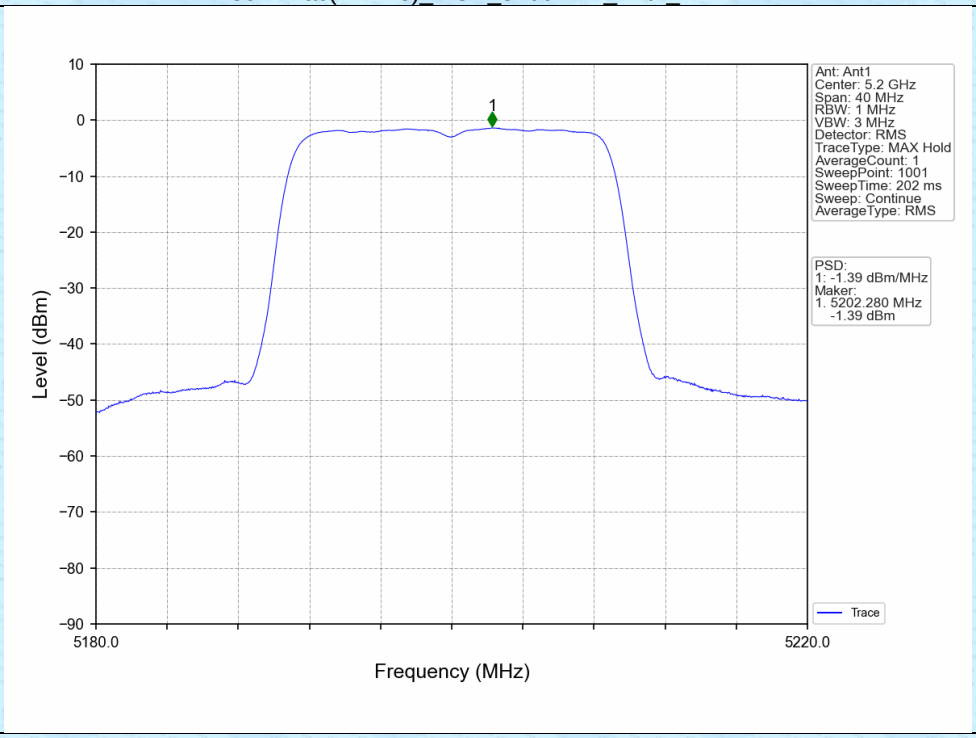
802.11n(HT40)_HCH_5230MHz_Ant2_NTNV



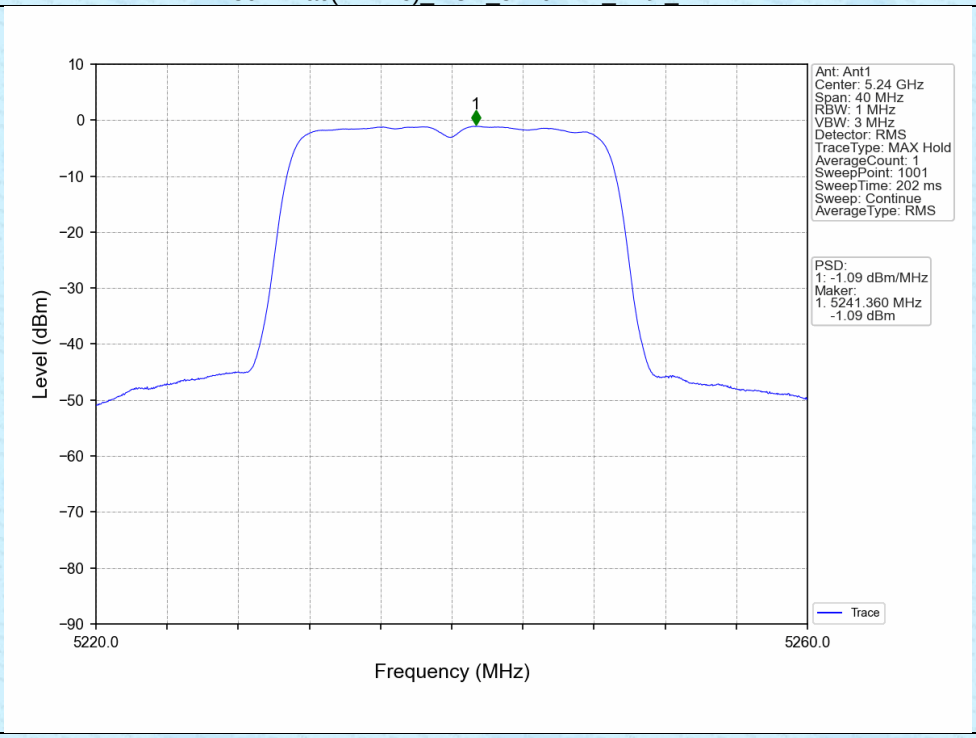
802.11ac(VHT20)_LCH_5180MHz_Ant2_NTNV



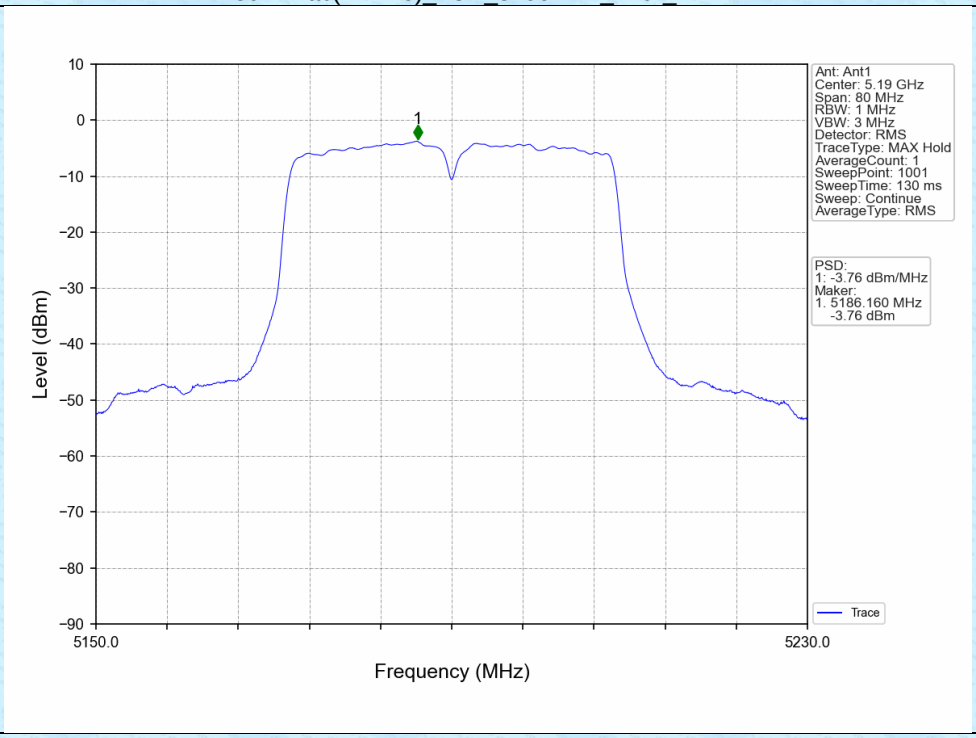
802.11ac(VHT20)_MCH_5200MHz_Ant2_NTNV



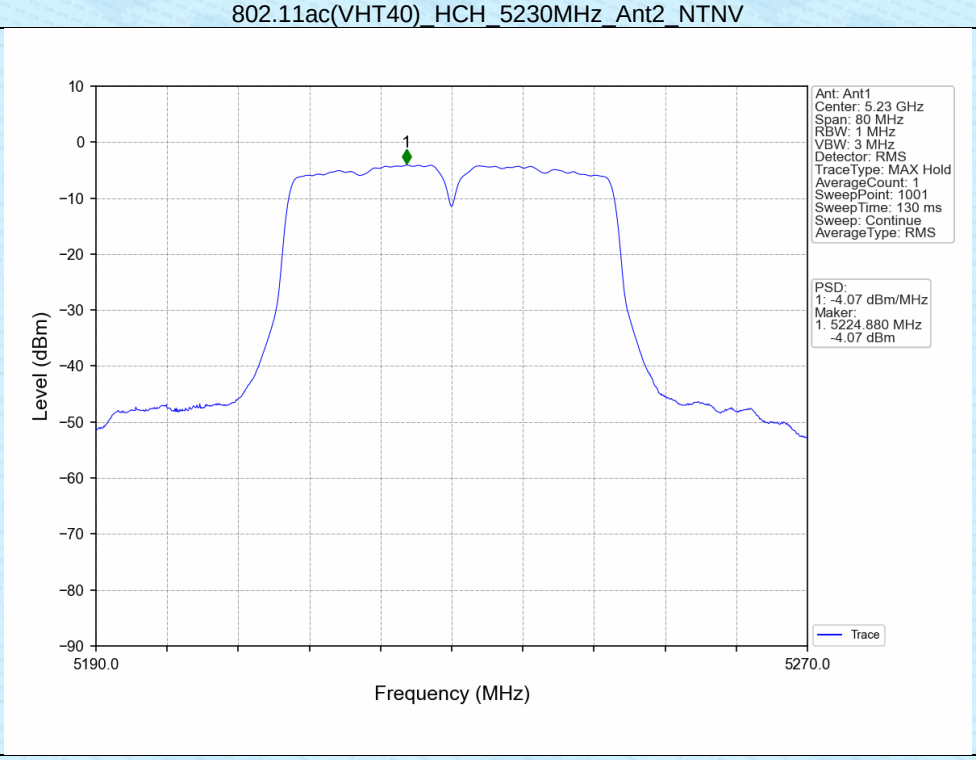
802.11ac(VHT20)_HCH_5240MHz_Ant2_NTNV



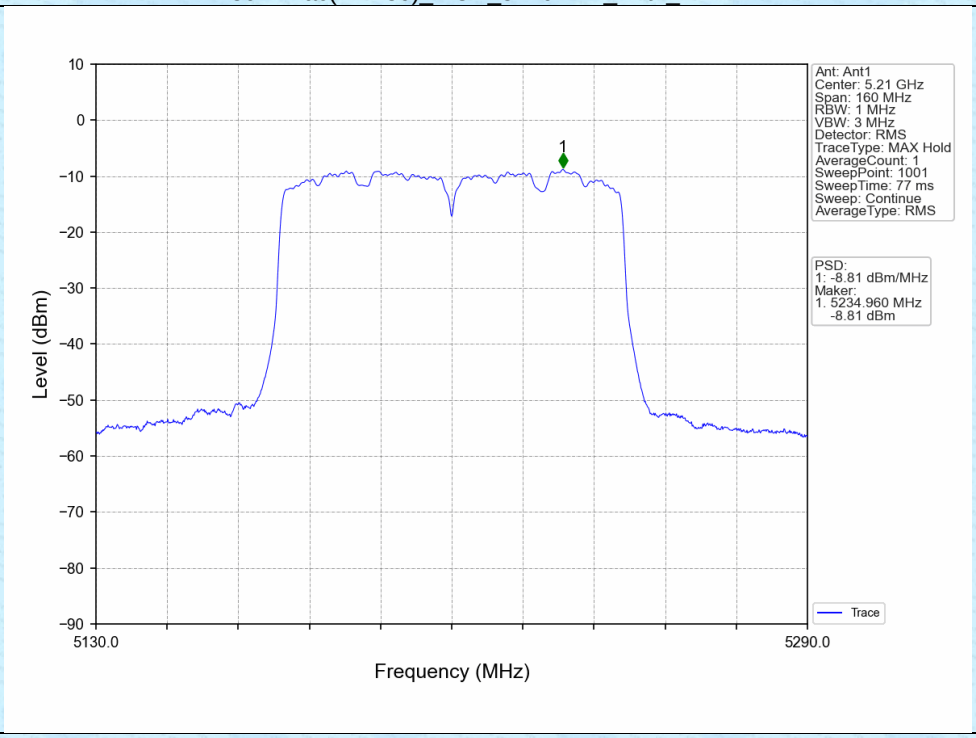
802.11ac(VHT40)_LCH_5190MHz_Ant2_NTNV



802.11ac(VHT40)_HCH_5230MHz_Ant2_NTNV



802.11ac(VHT80)_MCH_5210MHz_Ant2_NTNV



5. Frequency Stability

5.1.1 Test Result

Ant1							
Mode	TX Type	Frequency (MHz)	Temperature (°C)	Voltage (VAC)	Measured Frequency (MHz)	Limit (MHz)	Verdict
carrier	SISO	5180	20	102	5180.034	5150 to 5250	PASS
				120	5180.059	5150 to 5250	PASS
				138	5180.074	5150 to 5250	PASS
			-30	120	5180.009	5150 to 5250	PASS
			-20	120	5180.092	5150 to 5250	PASS
			-10	120	5180.058	5150 to 5250	PASS
			0	120	5180.065	5150 to 5250	PASS
			10	120	5180.012	5150 to 5250	PASS
			30	120	5180.082	5150 to 5250	PASS
			40	120	5180.039	5150 to 5250	PASS
			50	120	5180.076	5150 to 5250	PASS
		5200	20	102	5200.068	5150 to 5250	PASS
				120	5200.068	5150 to 5250	PASS
				138	5200.076	5150 to 5250	PASS
			-30	120	5200.021	5150 to 5250	PASS
			-20	120	5200.073	5150 to 5250	PASS
			-10	120	5200.048	5150 to 5250	PASS
			0	120	5200.041	5150 to 5250	PASS
			10	120	5200.013	5150 to 5250	PASS
			30	120	5200.050	5150 to 5250	PASS
			40	120	5200.076	5150 to 5250	PASS
			50	120	5200.005	5150 to 5250	PASS
		5240	20	102	5240.067	5150 to 5250	PASS
				120	5240.008	5150 to 5250	PASS
				138	5240.079	5150 to 5250	PASS
			-30	120	5240.082	5150 to 5250	PASS
			-20	120	5240.082	5150 to 5250	PASS
			-10	120	5240.026	5150 to 5250	PASS
			0	120	5240.089	5150 to 5250	PASS
			10	120	5240.083	5150 to 5250	PASS
			30	120	5240.084	5150 to 5250	PASS
			40	120	5240.015	5150 to 5250	PASS
			50	120	5240.009	5150 to 5250	PASS
	SISO	5190	20	102	5190.088	5150 to 5250	PASS
				120	5190.088	5150 to 5250	PASS
				138	5190.077	5150 to 5250	PASS
			-30	120	5190.040	5150 to 5250	PASS
			-20	120	5190.005	5150 to 5250	PASS
			-10	120	5190.082	5150 to 5250	PASS
			0	120	5190.063	5150 to 5250	PASS
			10	120	5190.078	5150 to 5250	PASS
			30	120	5190.075	5150 to 5250	PASS
			40	120	5190.080	5150 to 5250	PASS
			50	120	5190.052	5150 to 5250	PASS
		5230	20	102	5230.002	5150 to 5250	PASS
				120	5230.092	5150 to 5250	PASS
				138	5230.011	5150 to 5250	PASS

			-30	120	5230.030	5150 to 5250	PASS
			-20	120	5230.047	5150 to 5250	PASS
			-10	120	5230.012	5150 to 5250	PASS
			0	120	5230.029	5150 to 5250	PASS
			10	120	5230.033	5150 to 5250	PASS
			30	120	5230.056	5150 to 5250	PASS
			40	120	5230.009	5150 to 5250	PASS
			50	120	5230.081	5150 to 5250	PASS
	SISO	5210	20	102	5210.023	5150 to 5250	PASS
				120	5210.077	5150 to 5250	PASS
				138	5210.049	5150 to 5250	PASS
			-30	120	5210.057	5150 to 5250	PASS
			-20	120	5210.052	5150 to 5250	PASS
			-10	120	5210.044	5150 to 5250	PASS
			0	120	5210.087	5150 to 5250	PASS
			10	120	5210.061	5150 to 5250	PASS
			30	120	5210.061	5150 to 5250	PASS
			40	120	5210.023	5150 to 5250	PASS
			50	120	5210.053	5150 to 5250	PASS

------End------