



Shenzhen CTL Testing Technology Co., Ltd.

Tel: +86-755-89486194 E-mail: ctl@ctl-lab.com

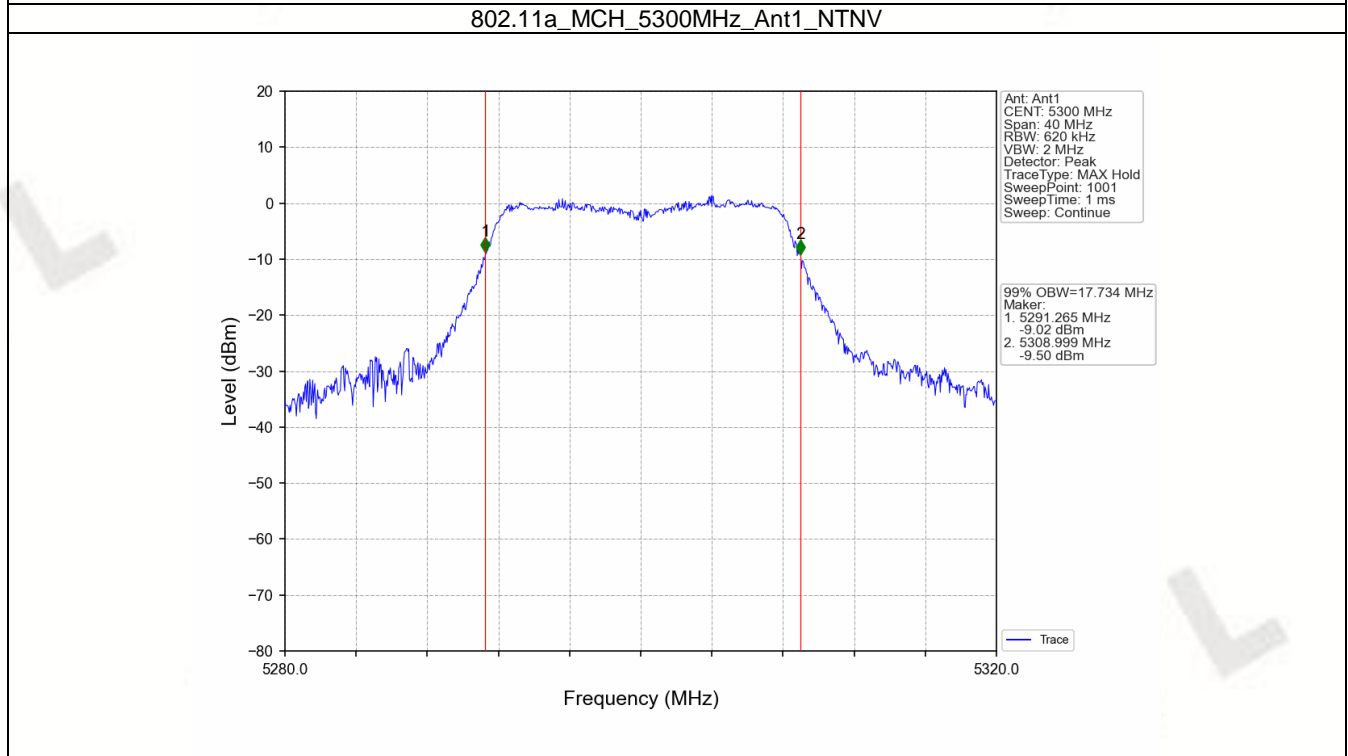
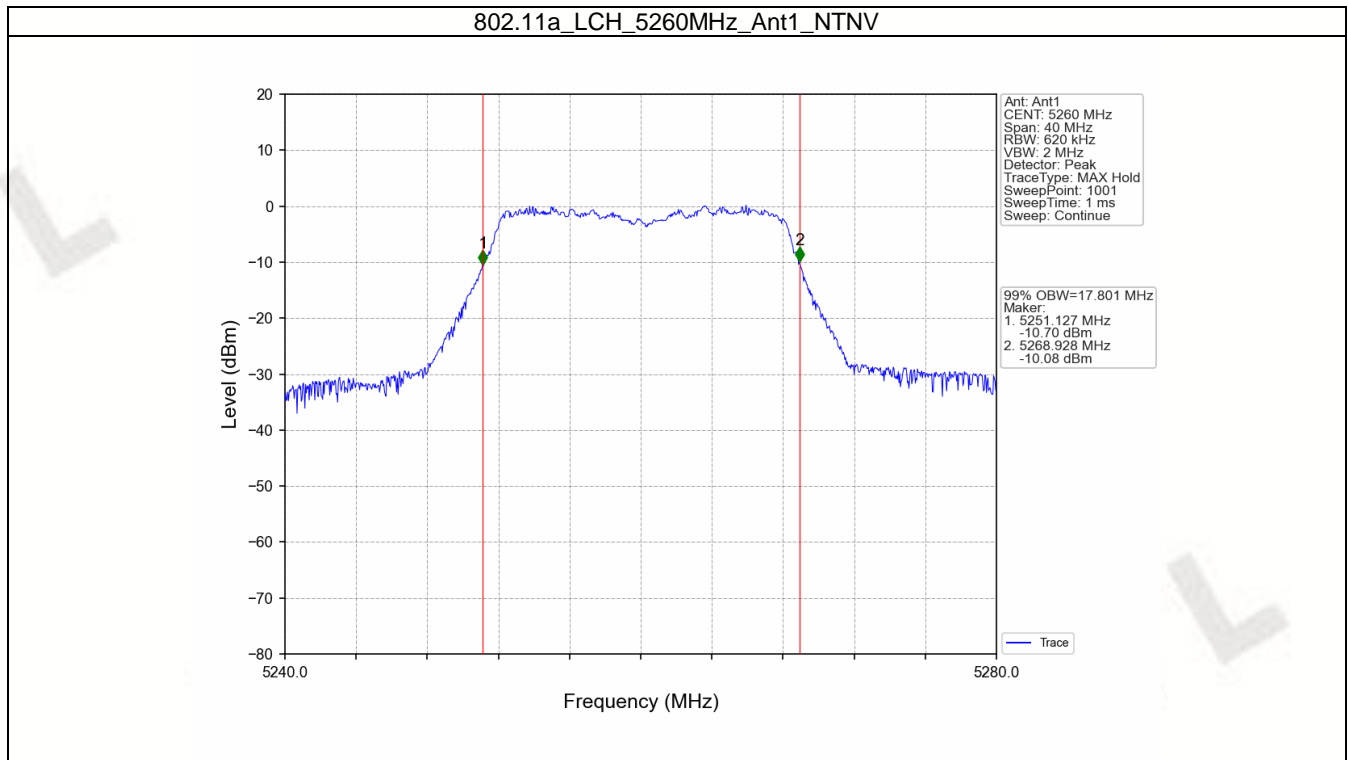
1. Bandwidth

1.1 OBW

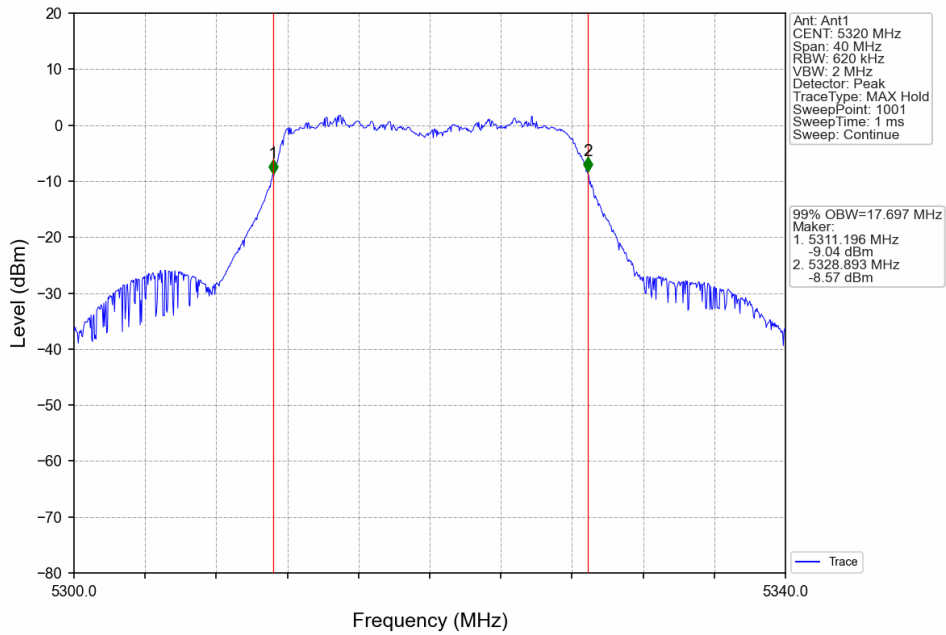
1.1.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5260	1	17.801	/	Pass
		5300	1	17.734	/	Pass
		5320	1	17.697	/	Pass
802.11n (HT20)	SISO	5260	1	18.554	/	Pass
		5300	1	18.515	/	Pass
		5320	1	18.409	/	Pass
802.11n (HT40)	SISO	5270	1	37.124	/	Pass
		5310	1	36.825	/	Pass
802.11ac (VHT20)	SISO	5260	1	18.690	/	Pass
		5300	1	18.658	/	Pass
		5320	1	18.424	/	Pass
802.11ac (VHT40)	SISO	5270	1	37.133	/	Pass
		5310	1	36.818	/	Pass
802.11ac (VHT80)	SISO	5290	1	77.127	/	Pass

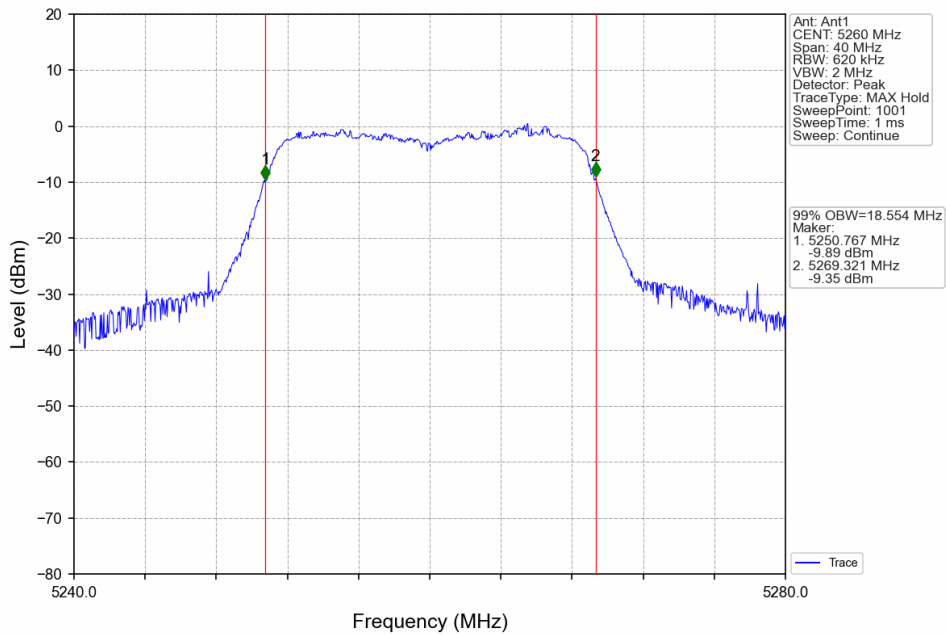
1.1.2 Test Graph

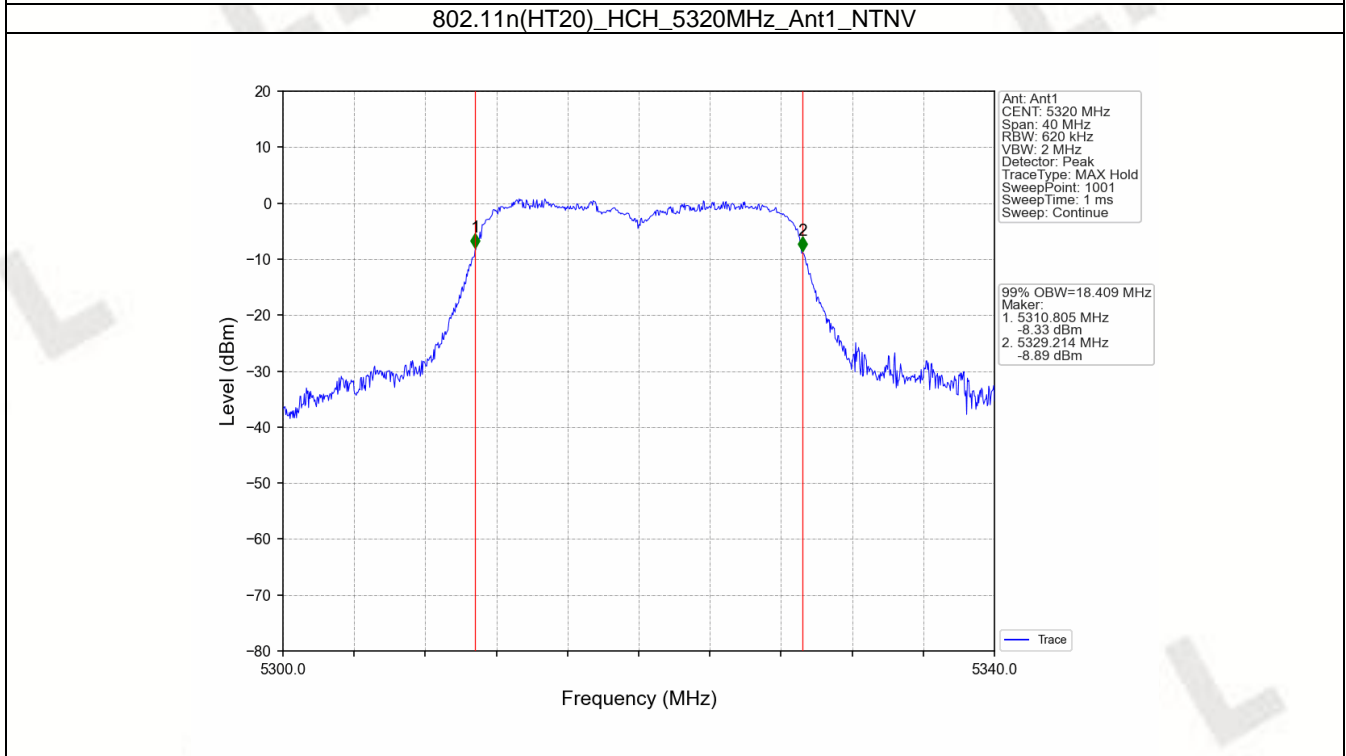
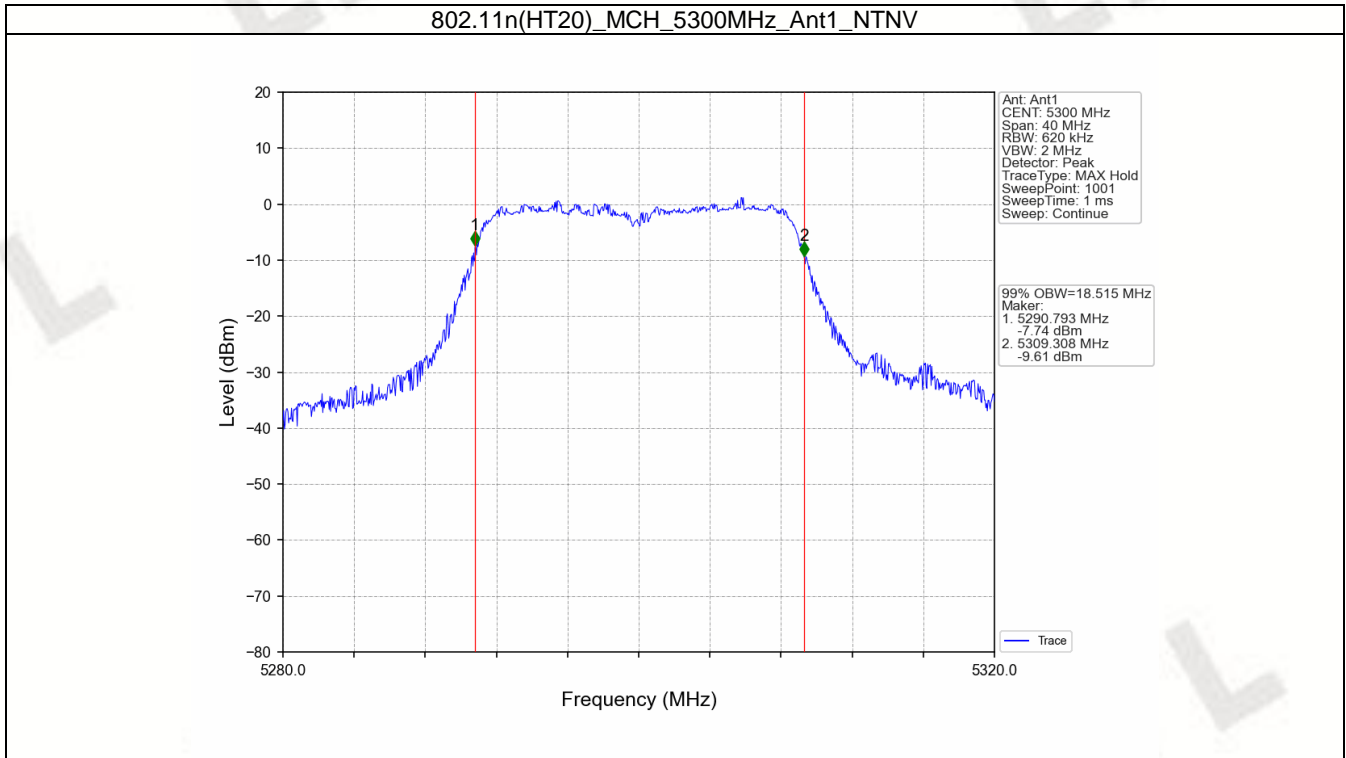


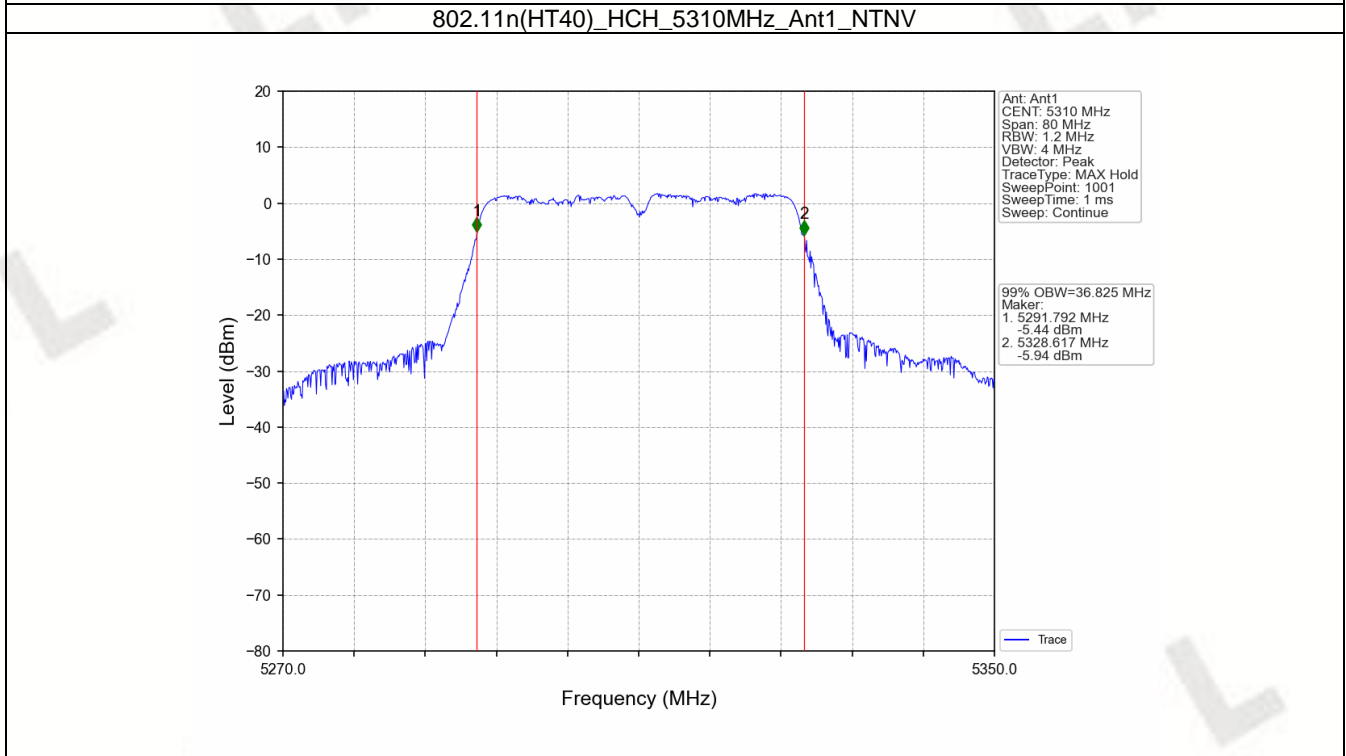
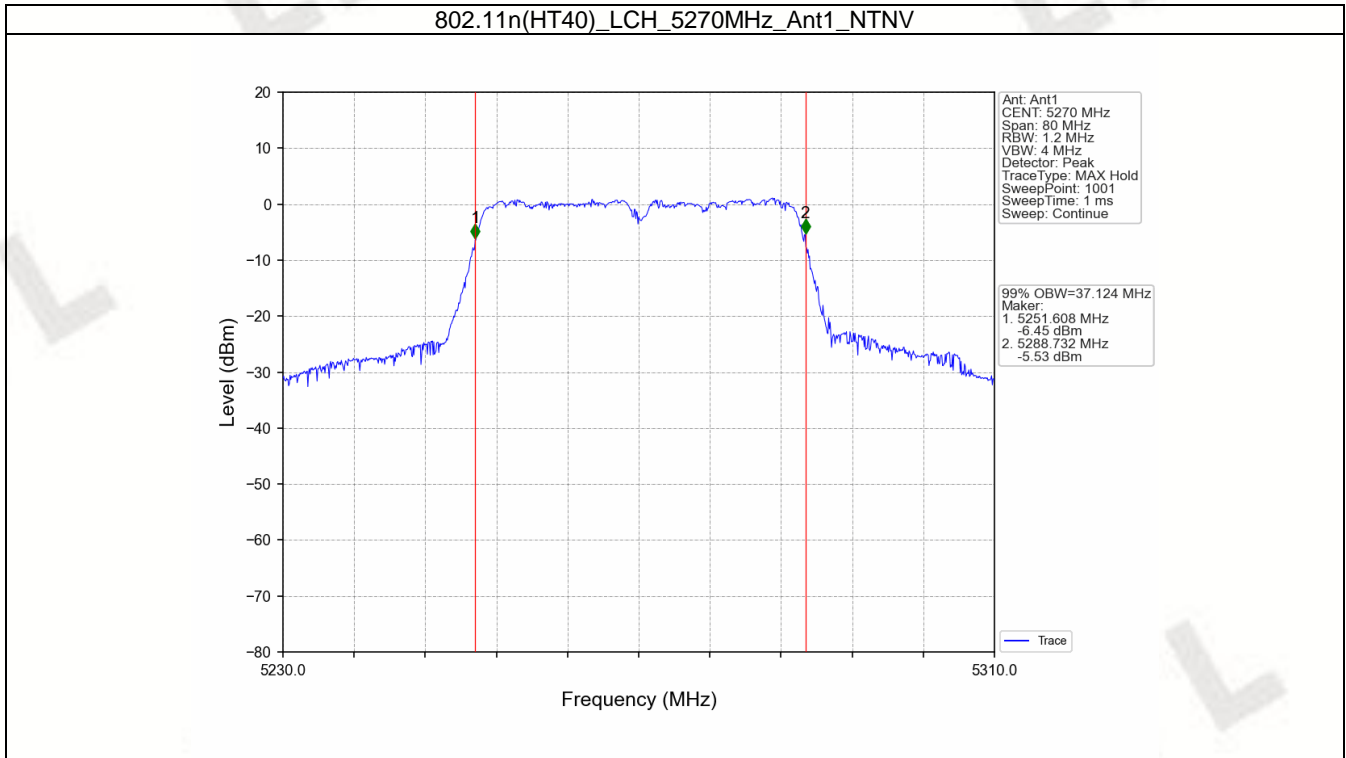
802.11a_HCH_5320MHz_Ant1_NTNV

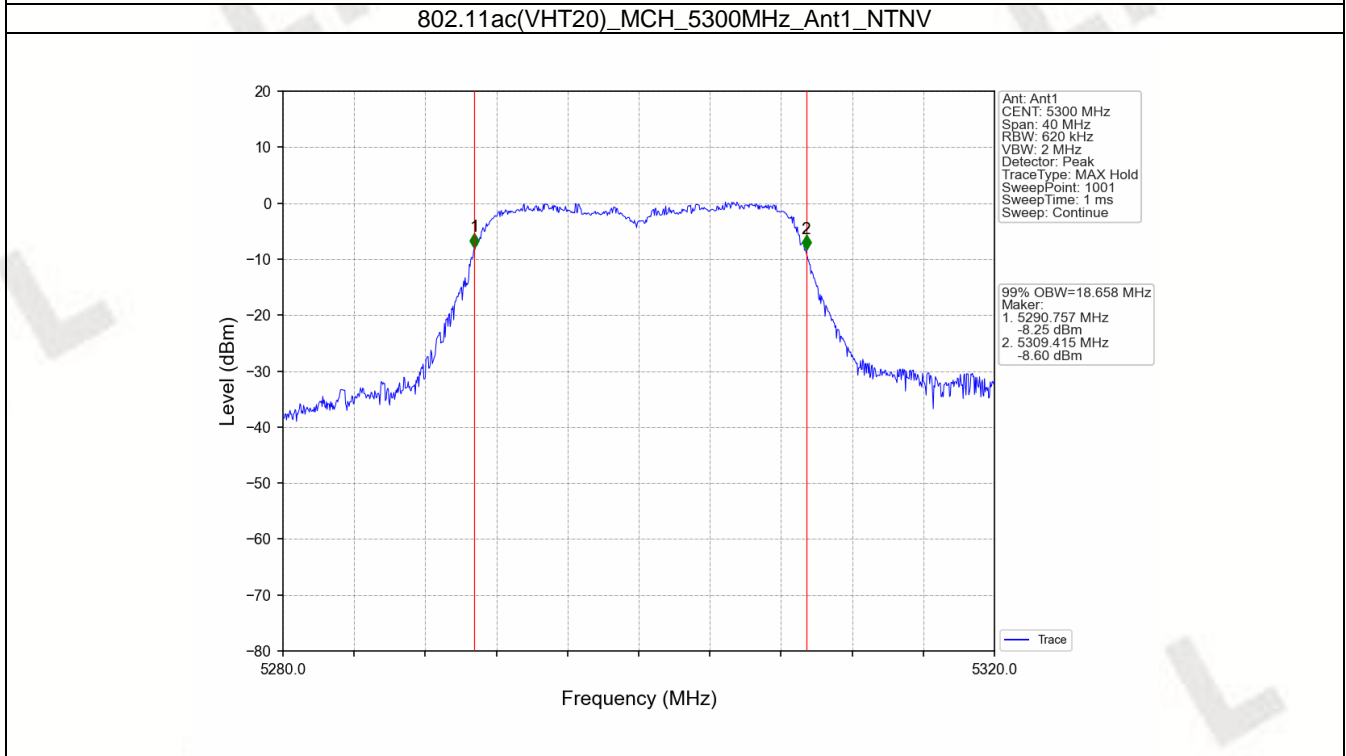
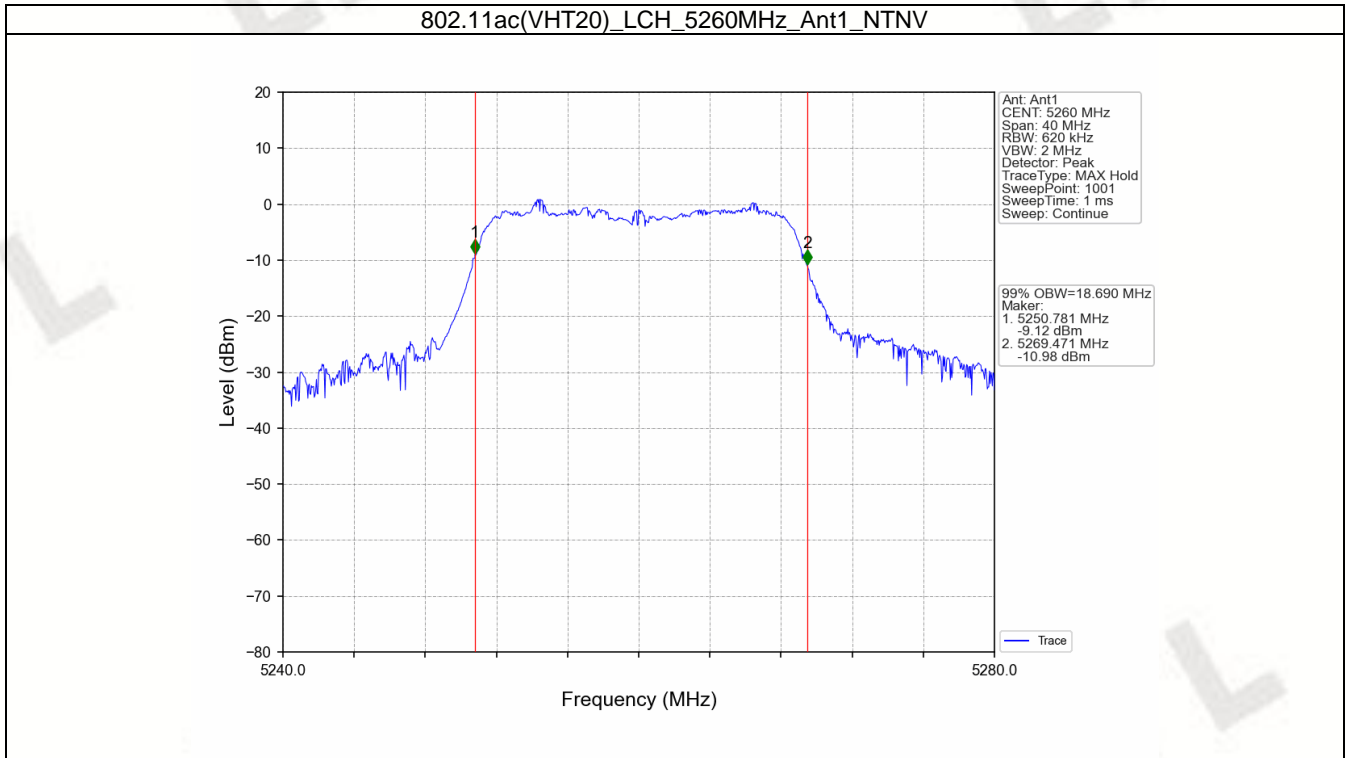


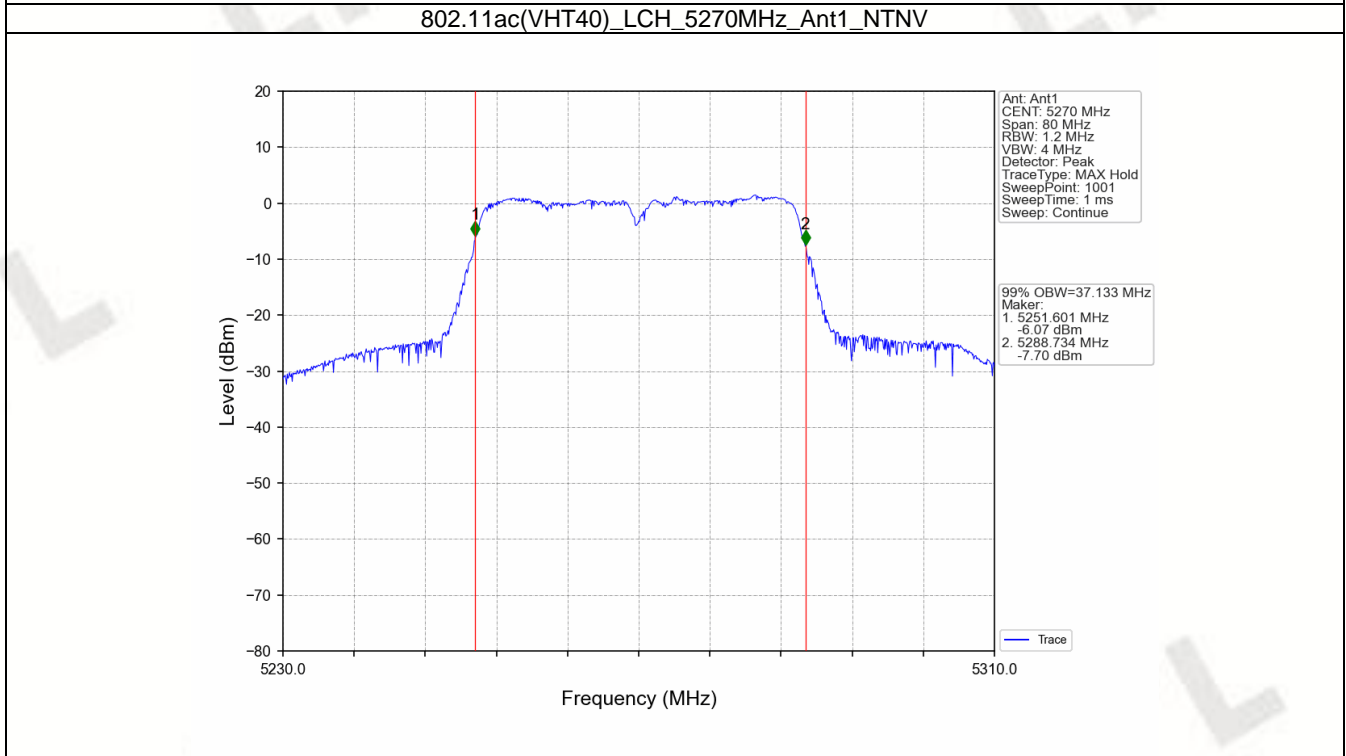
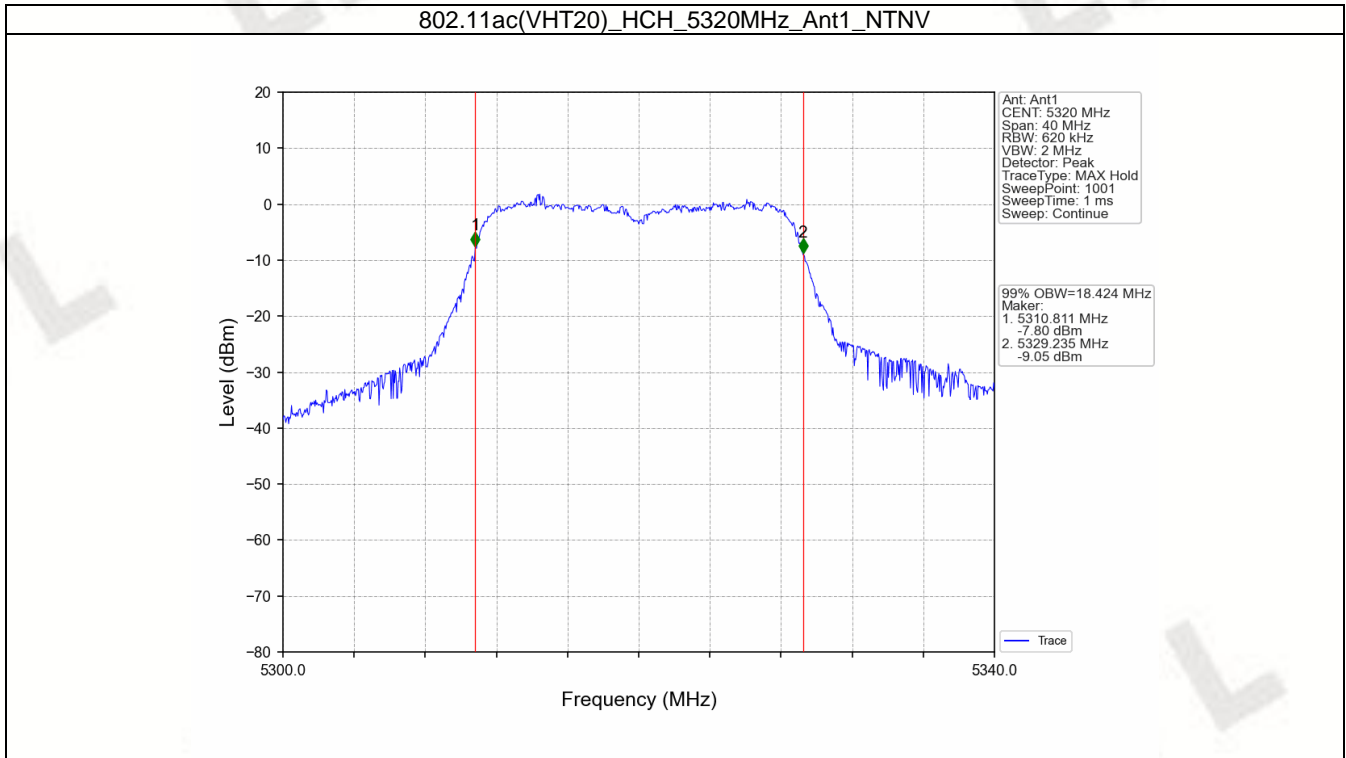
802.11n(HT20)_LCH_5260MHz_Ant1_NTNV



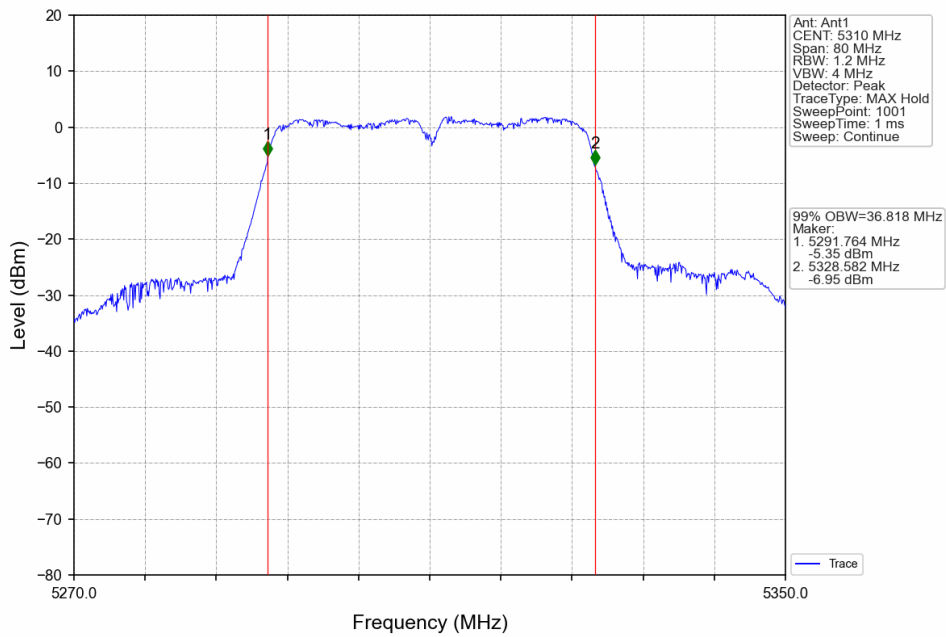




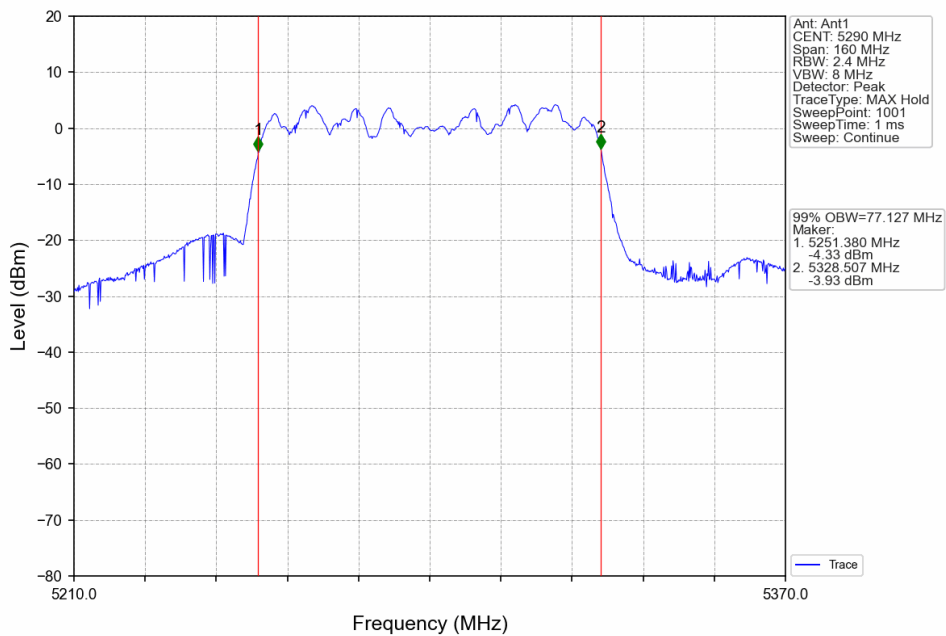




802.11ac(VHT40)_HCH_5310MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5290MHz_Ant1_NTNV

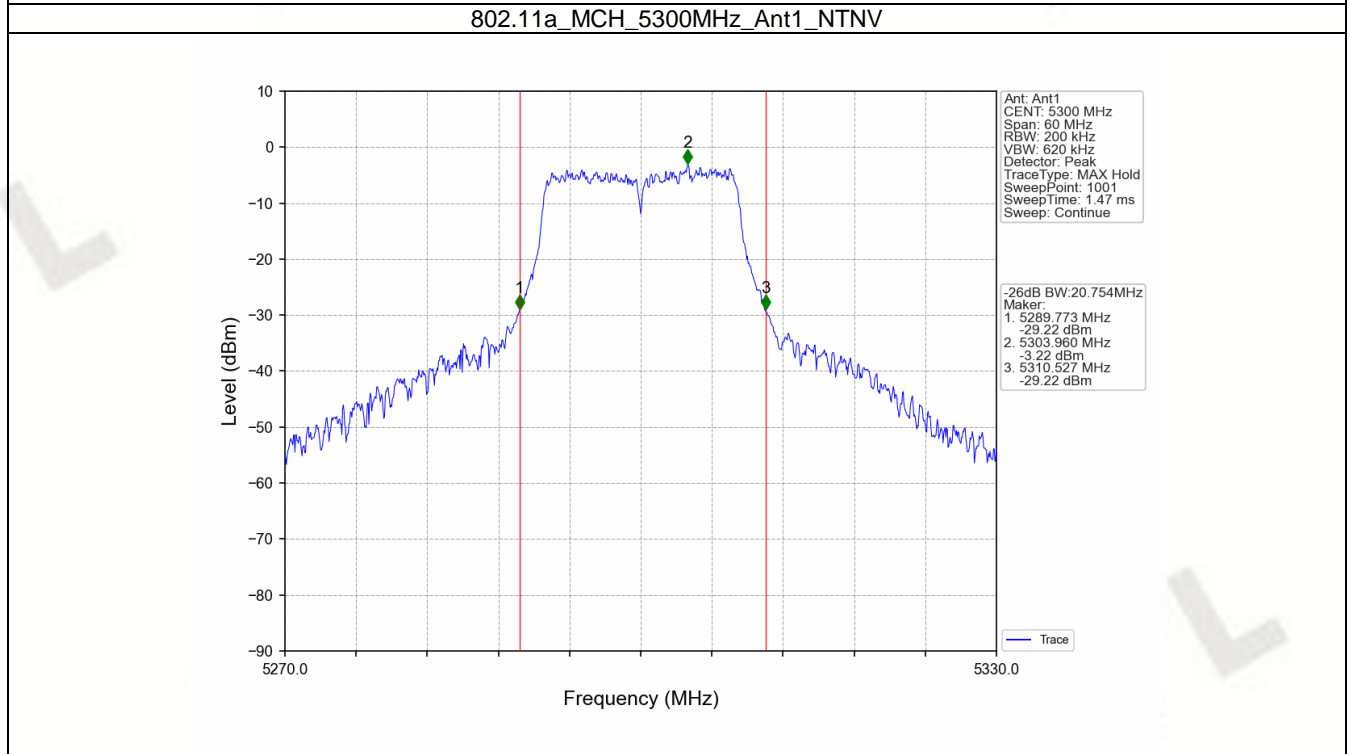
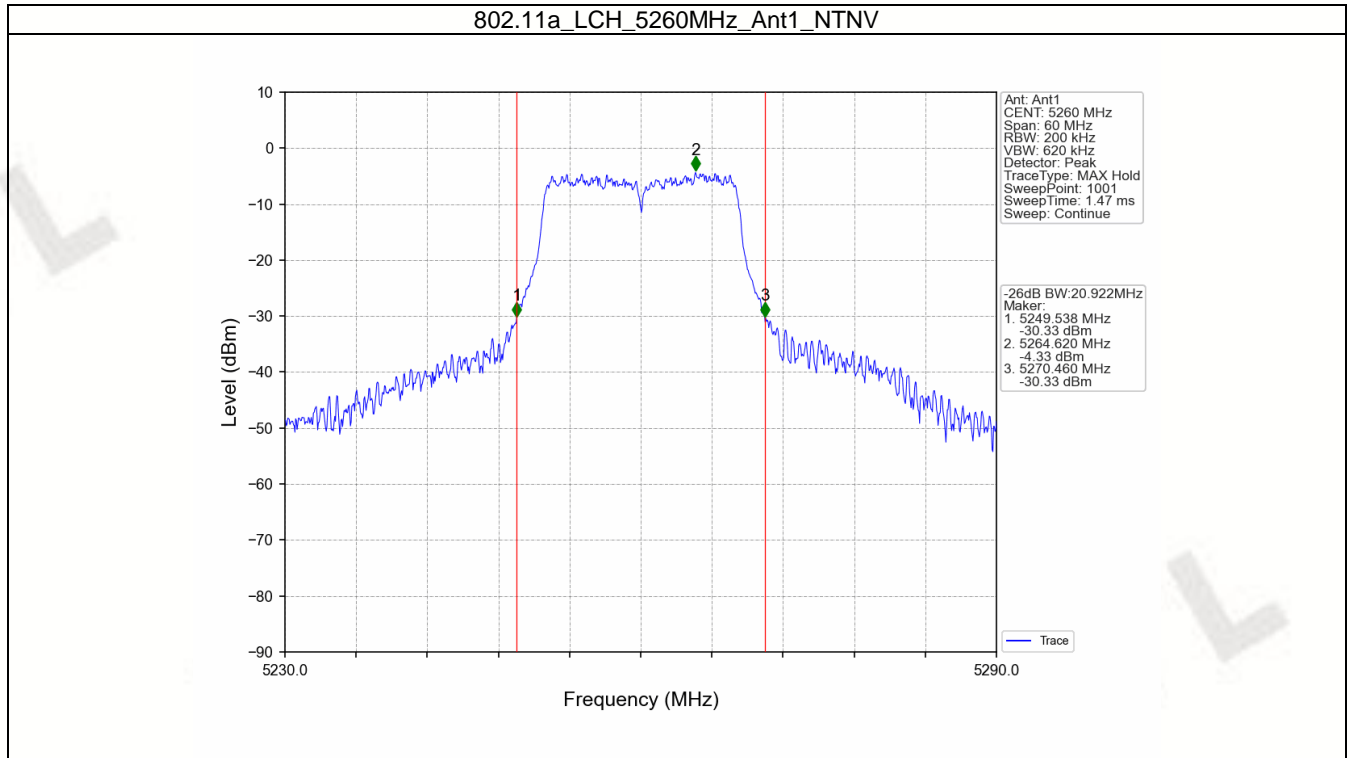


1.2 26dB BW

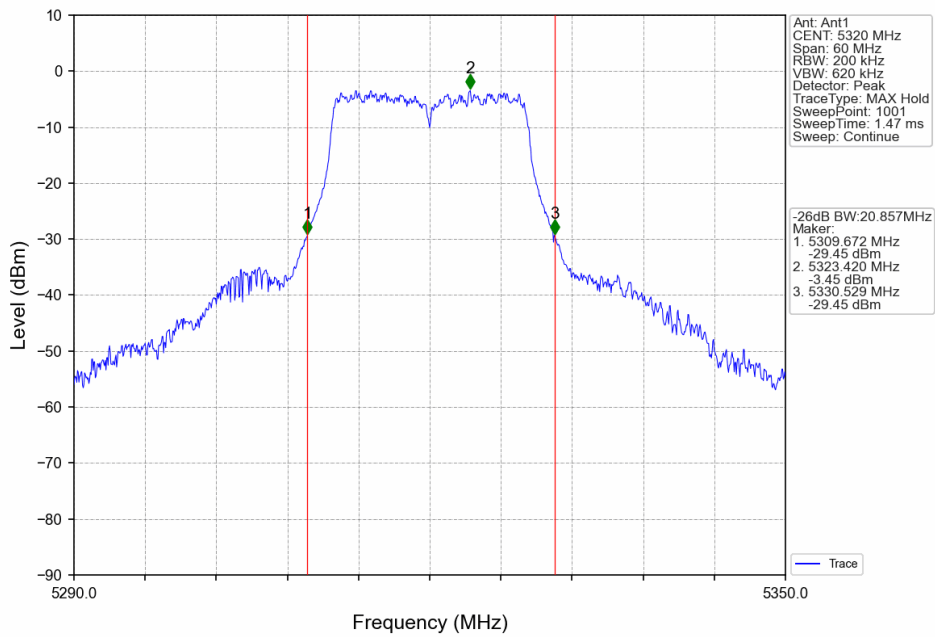
1.2.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	26dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5260	1	20.922	/	Pass
		5300	1	20.754	/	Pass
		5320	1	20.857	/	Pass
802.11n (HT20)	SISO	5260	1	21.185	/	Pass
		5300	1	21.261	/	Pass
		5320	1	21.153	/	Pass
802.11n (HT40)	SISO	5270	1	42.226	/	Pass
		5310	1	41.969	/	Pass
802.11ac (VHT20)	SISO	5260	1	23.557	/	Pass
		5300	1	21.461	/	Pass
		5320	1	21.366	/	Pass
802.11ac (VHT40)	SISO	5270	1	42.284	/	Pass
		5310	1	41.901	/	Pass
802.11ac (VHT80)	SISO	5290	1	88.299	/	Pass

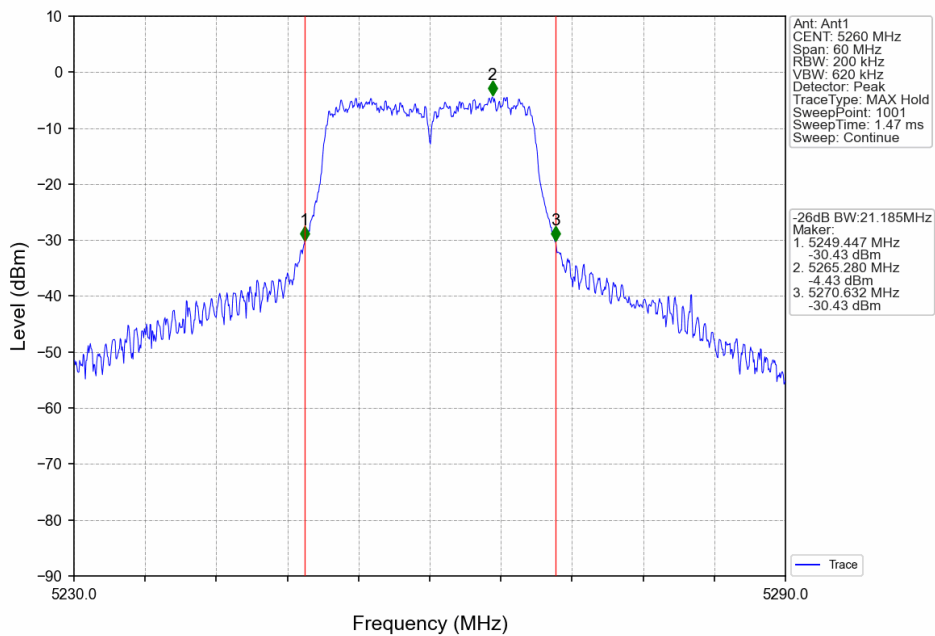
1.2.2 Test Graph

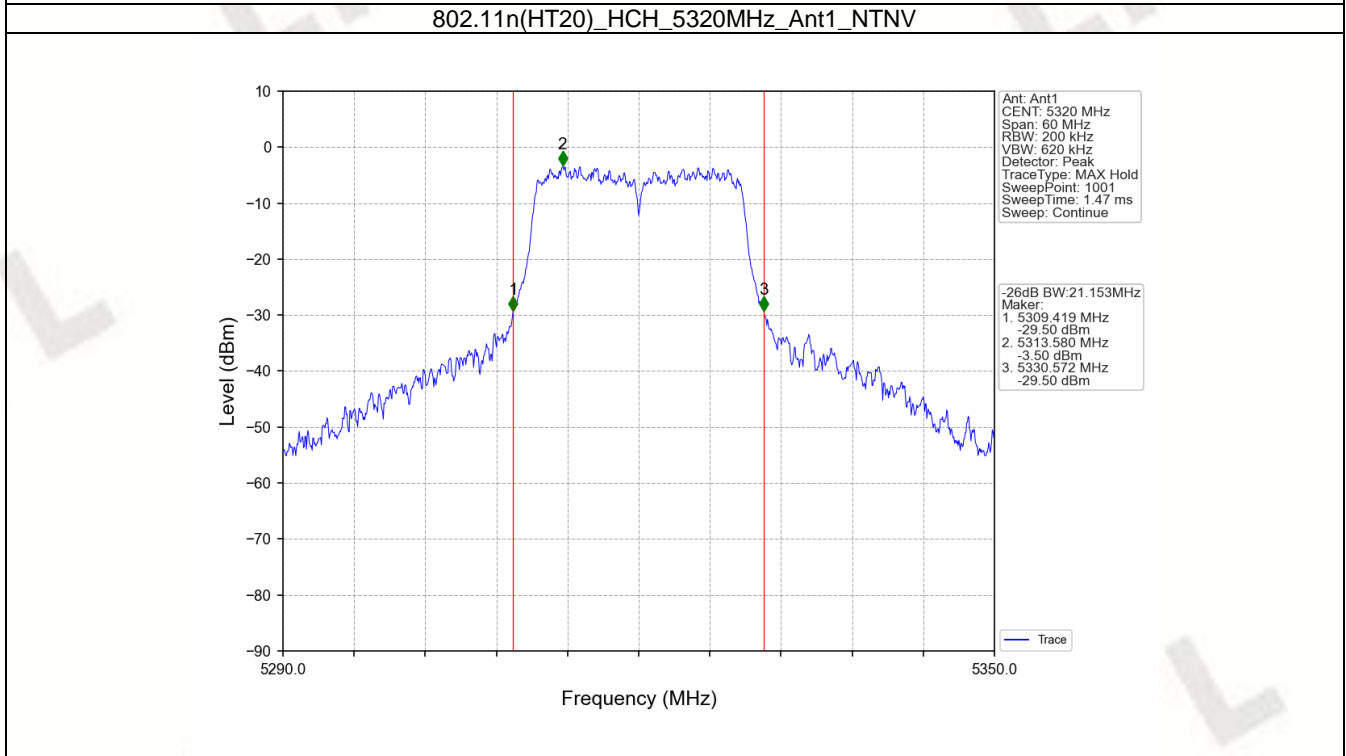
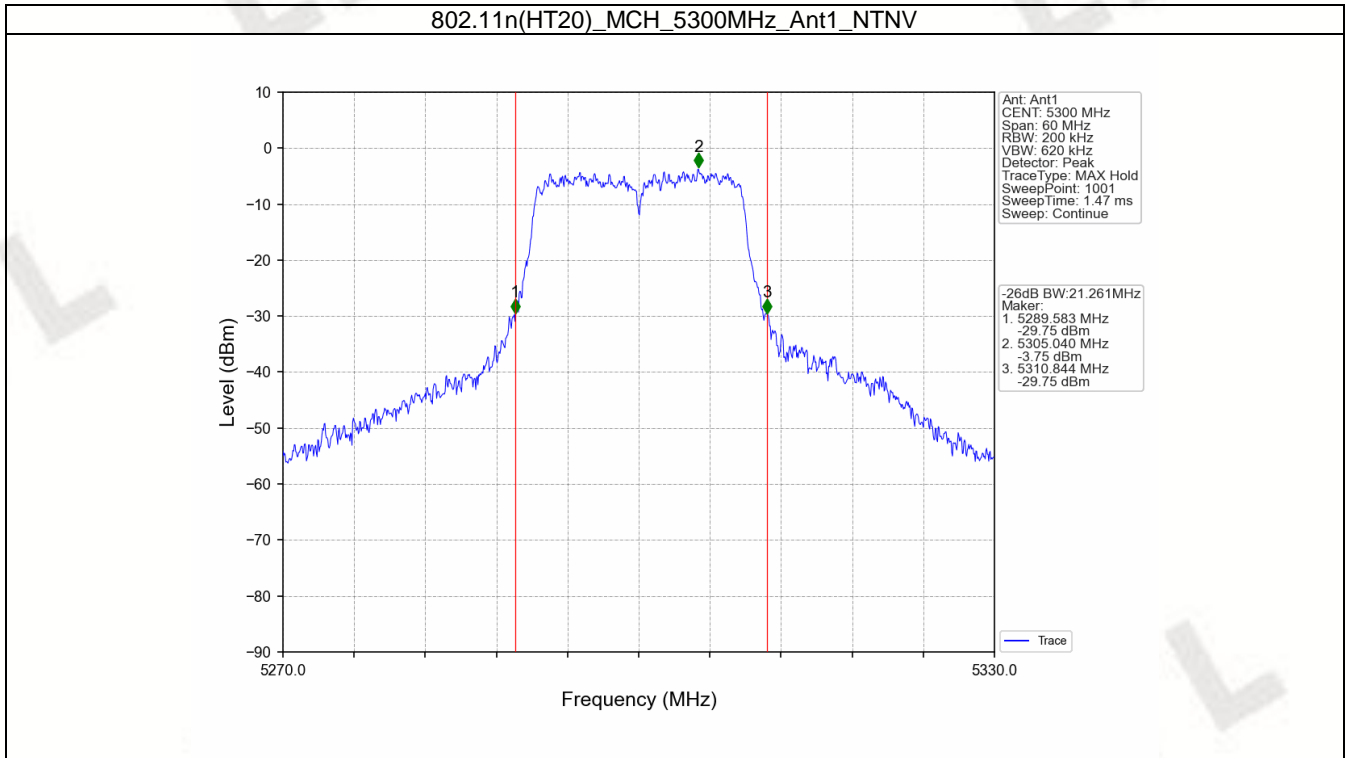


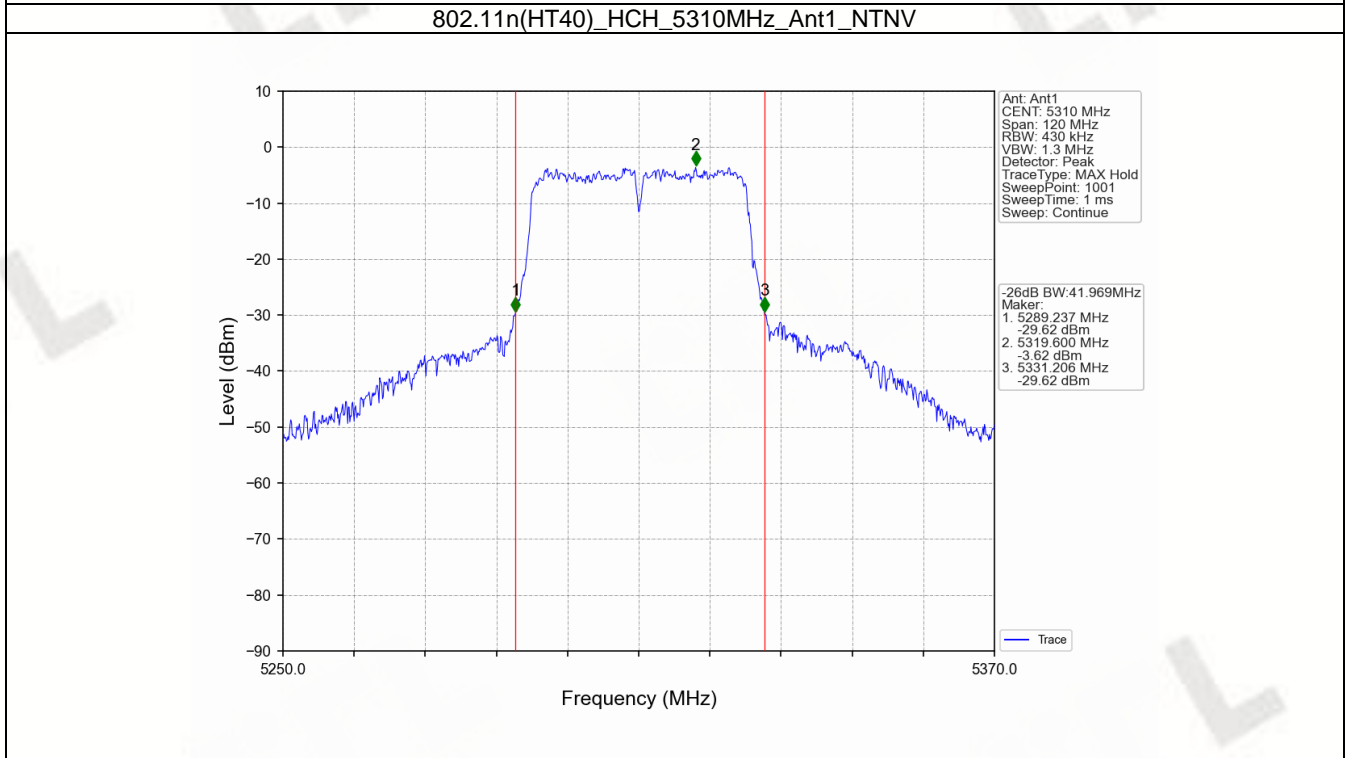
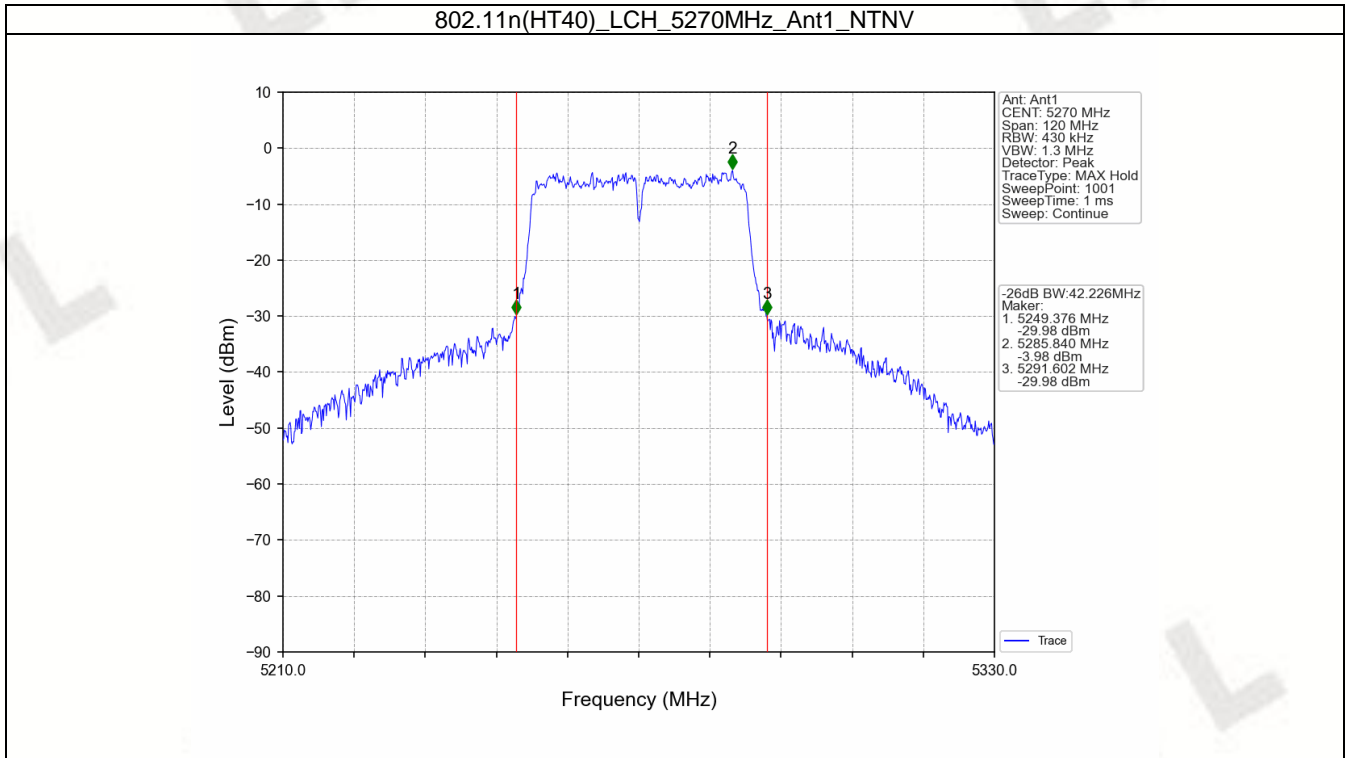
802.11a_HCH_5320MHz_Ant1_NTNV

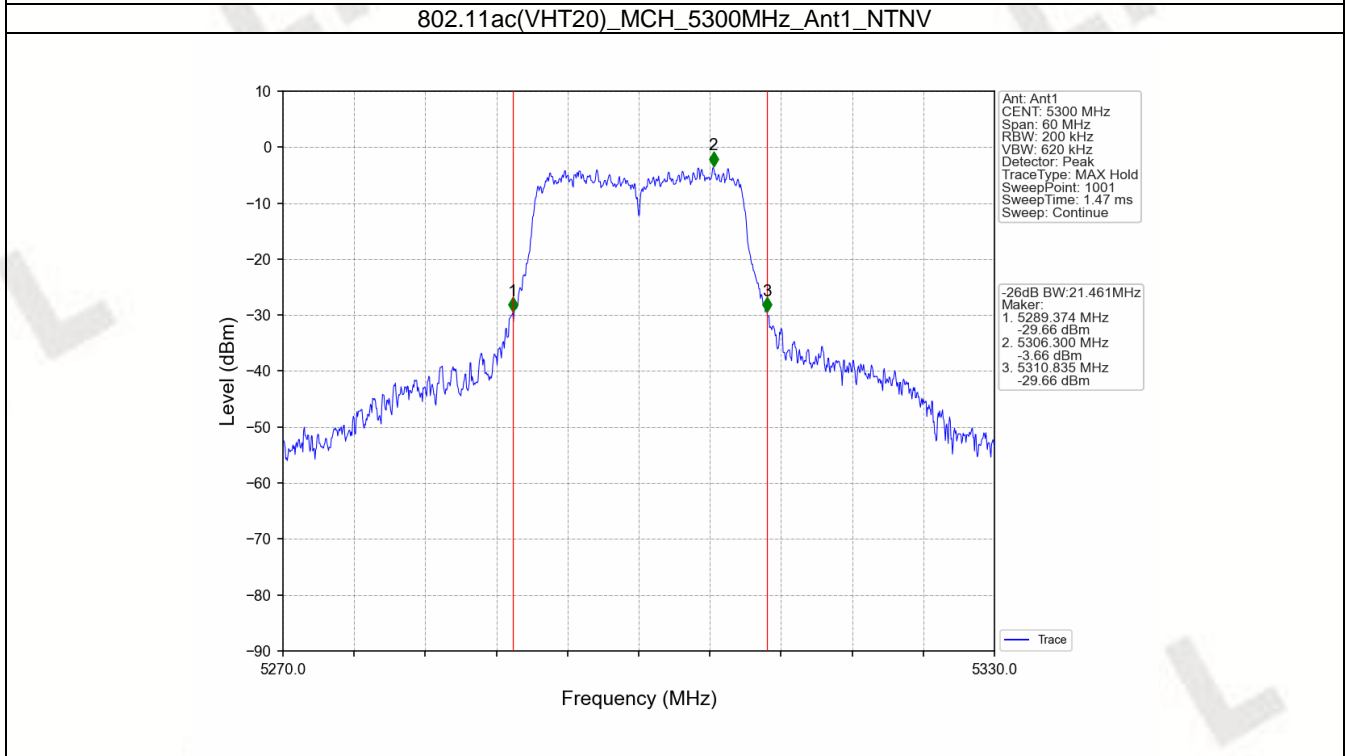
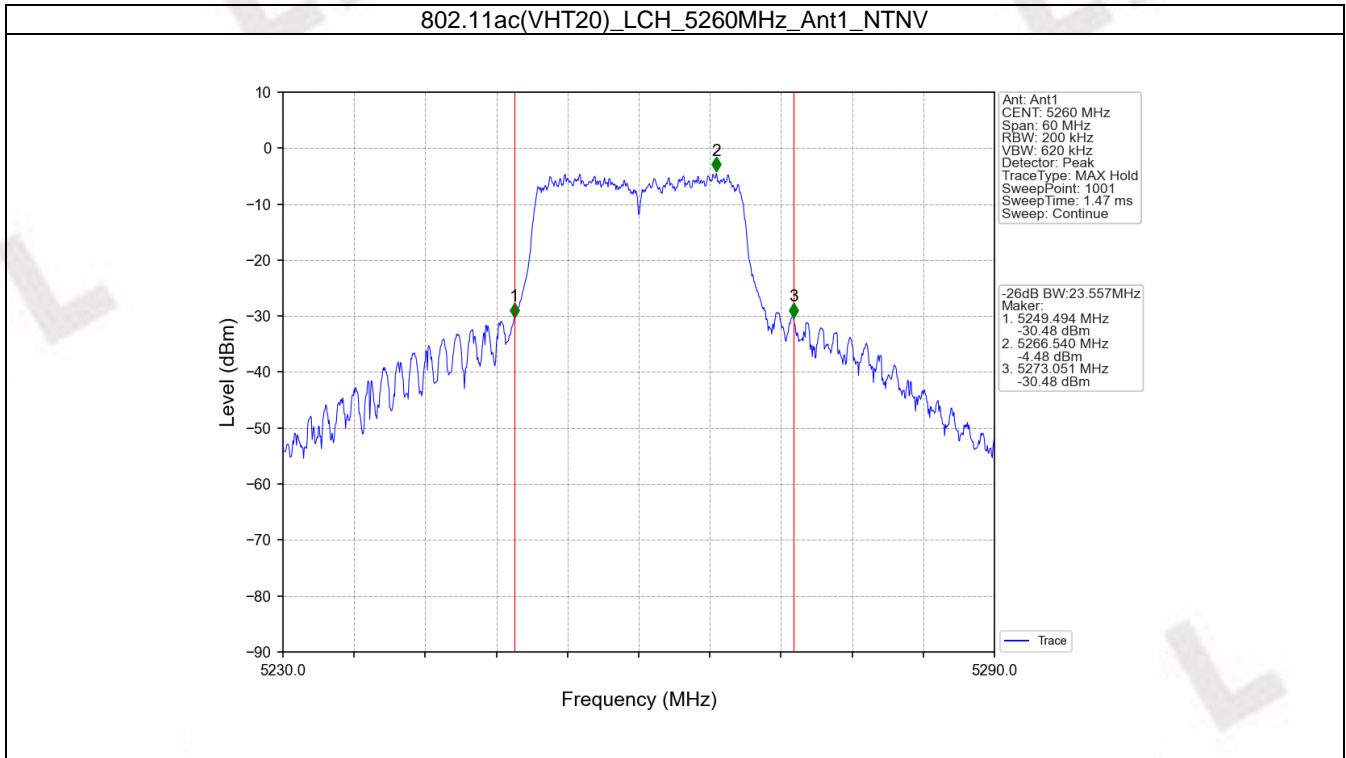


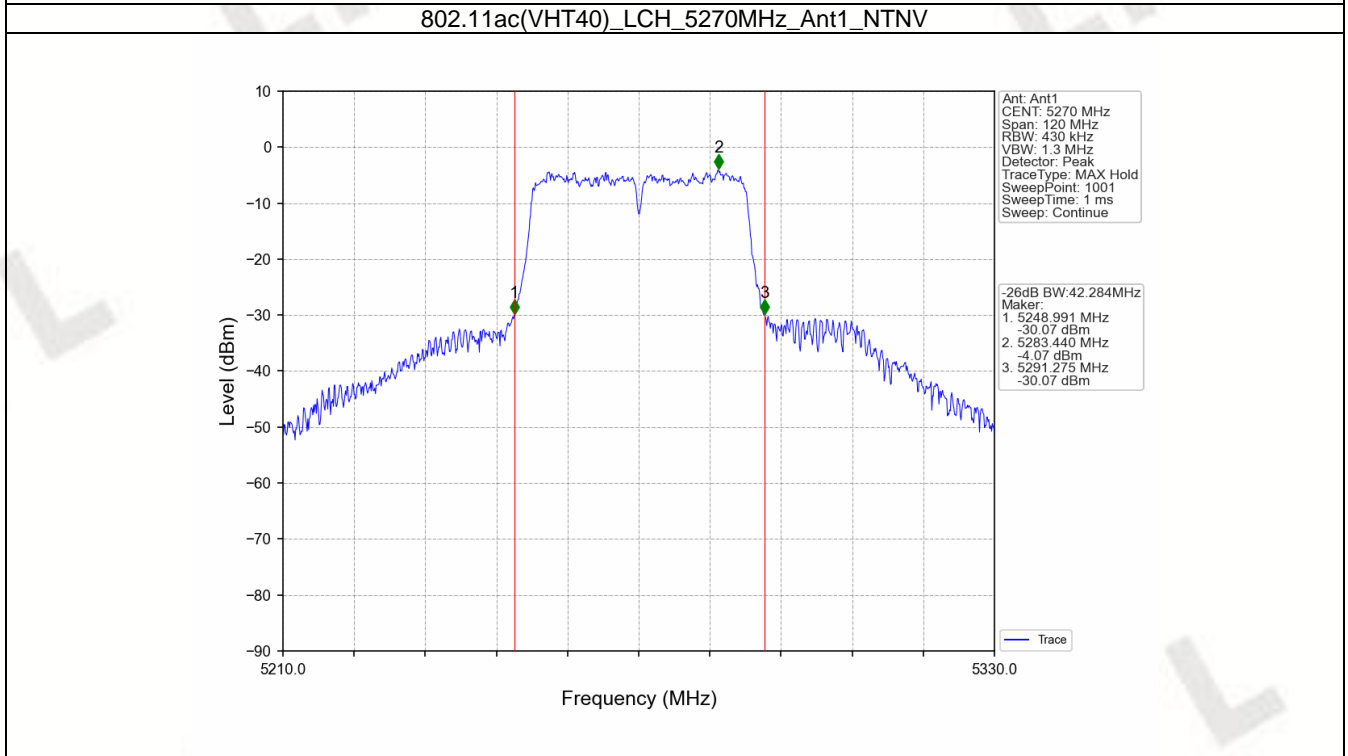
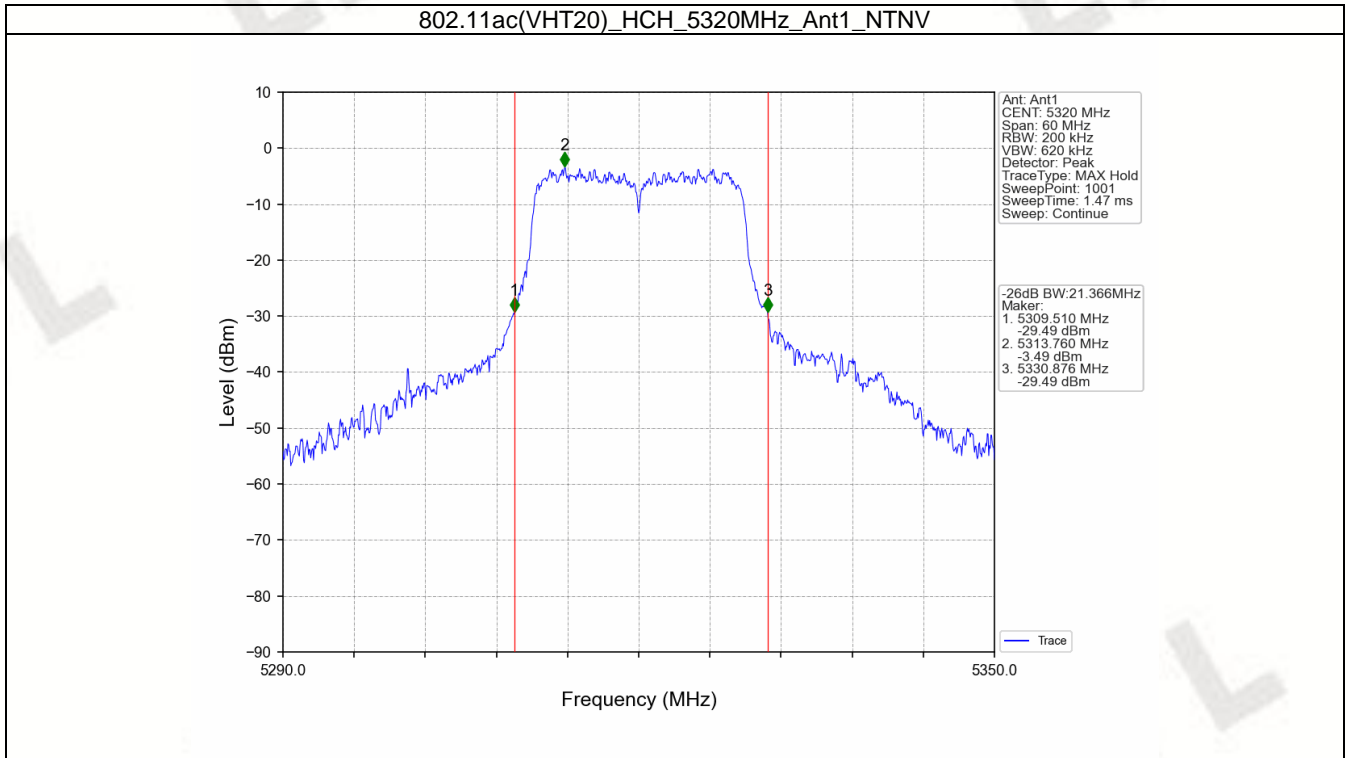
802.11n(HT20)_LCH_5260MHz_Ant1_NTNV

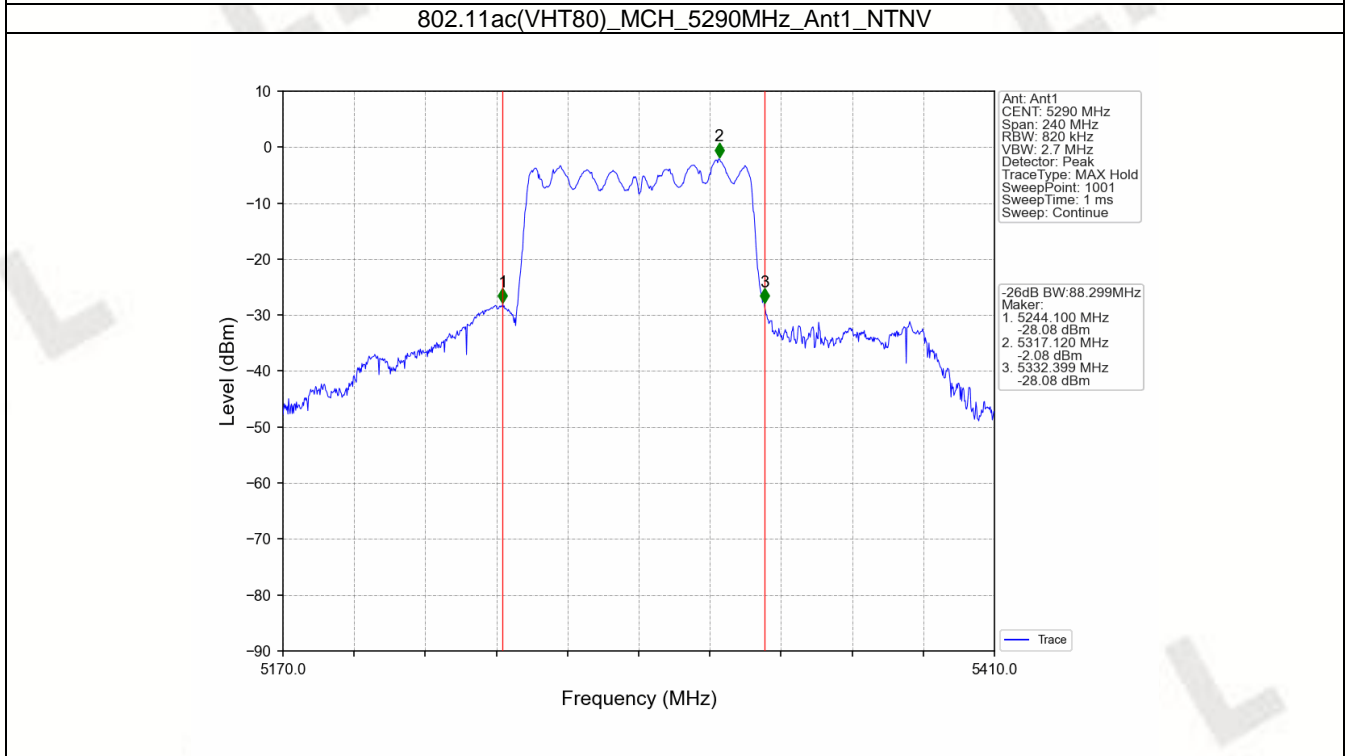
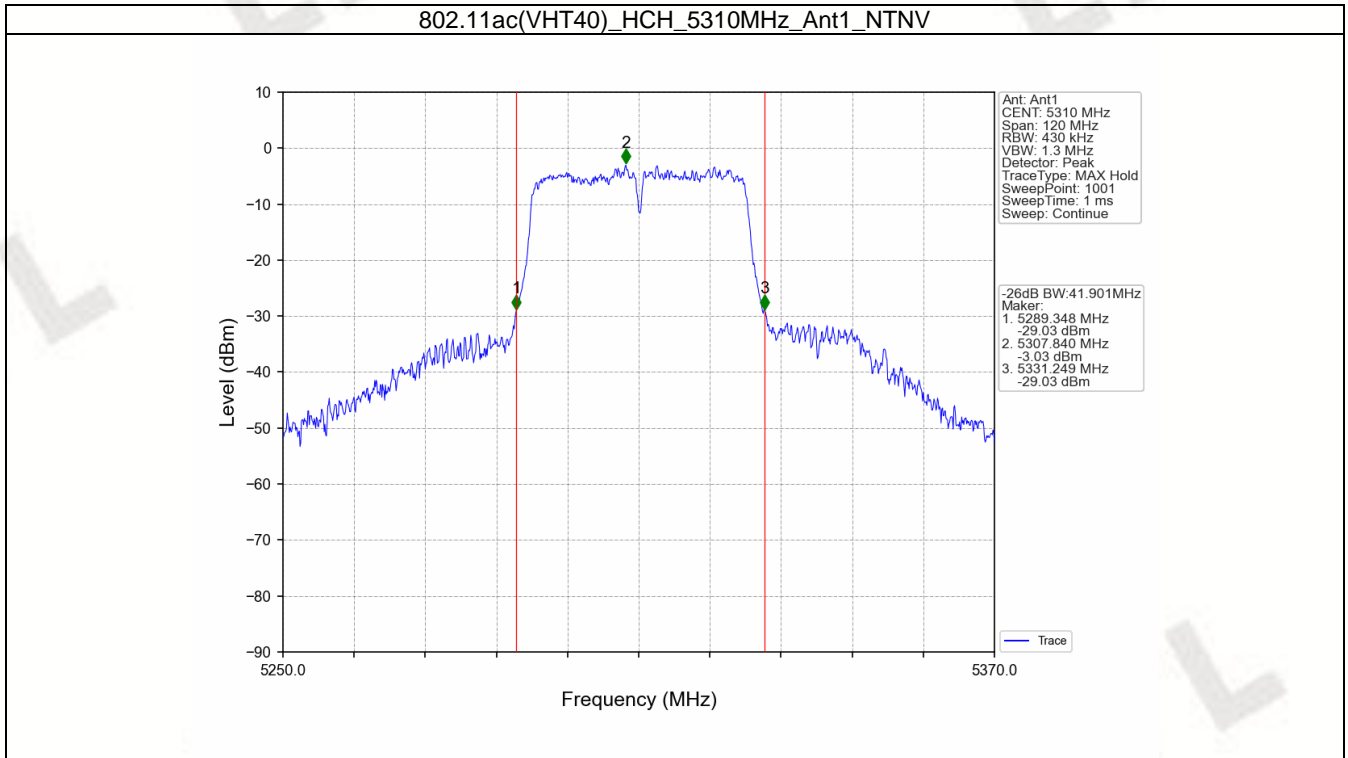












2. Maximum Conducted Output Power

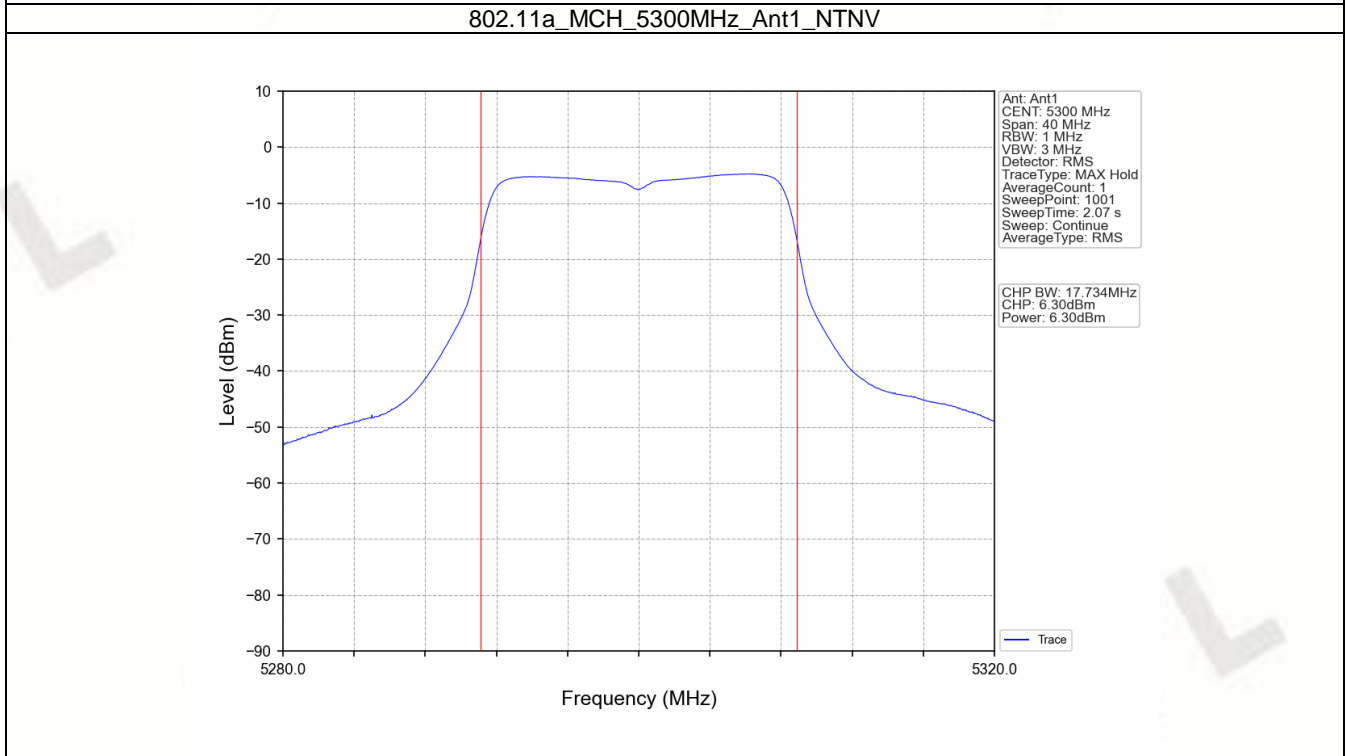
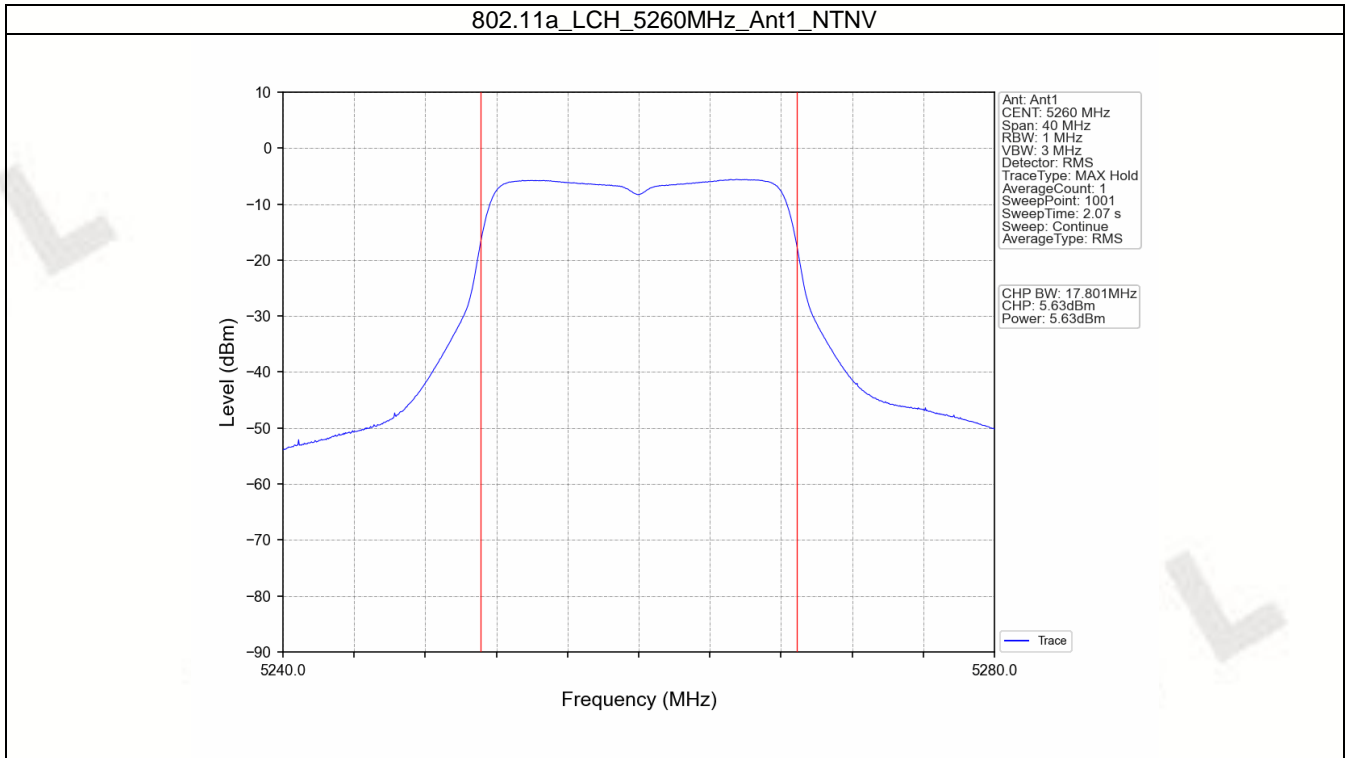
2.1 Power

2.1.1 Test Result

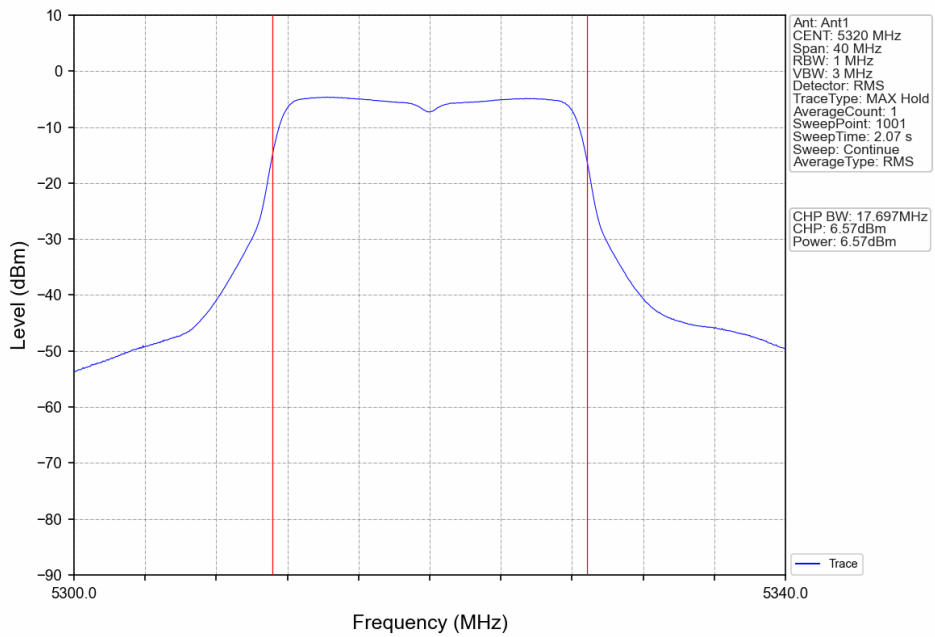
Mode	TX Type	Frequency (MHz)	Maximum Average Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11a	SISO	5260	5.63	<=22.77	Pass
		5300	6.30	<=22.77	Pass
		5320	6.57	<=22.77	Pass
802.11n (HT20)	SISO	5260	5.55	<=22.77	Pass
		5300	6.22	<=22.77	Pass
		5320	6.47	<=22.77	Pass
802.11n (HT40)	SISO	5270	6.07	<=22.77	Pass
		5310	6.74	<=22.77	Pass
802.11ac (VHT20)	SISO	5260	5.57	<=22.77	Pass
		5300	6.20	<=22.77	Pass
		5320	6.47	<=22.77	Pass
802.11ac (VHT40)	SISO	5270	6.12	<=22.77	Pass
		5310	6.74	<=22.77	Pass
802.11ac (VHT80)	SISO	5290	6.75	<=22.77	Pass

Note1: Antenna Gain: Ant1: 7.21dBi;

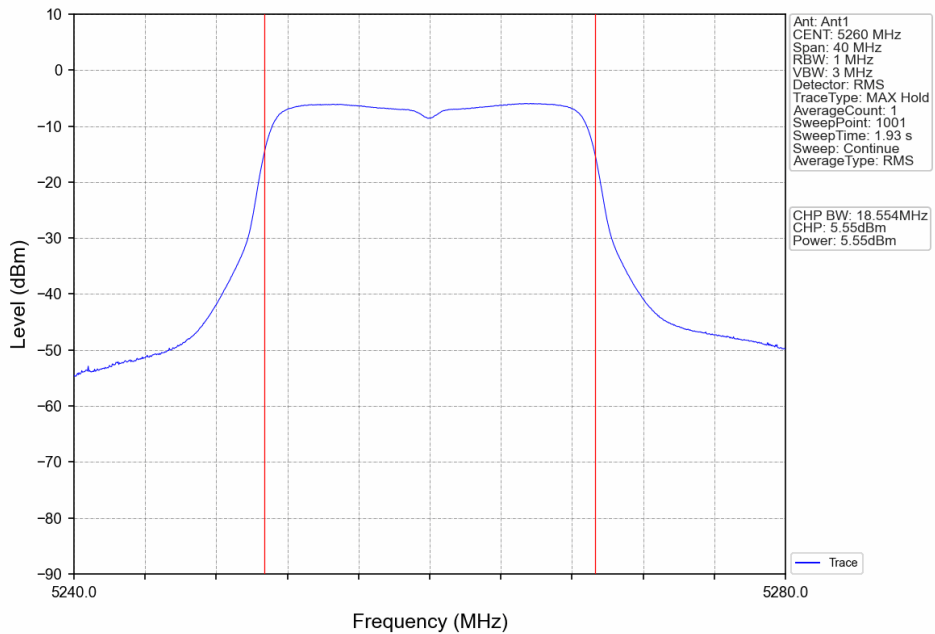
2.1.2 Test Graph



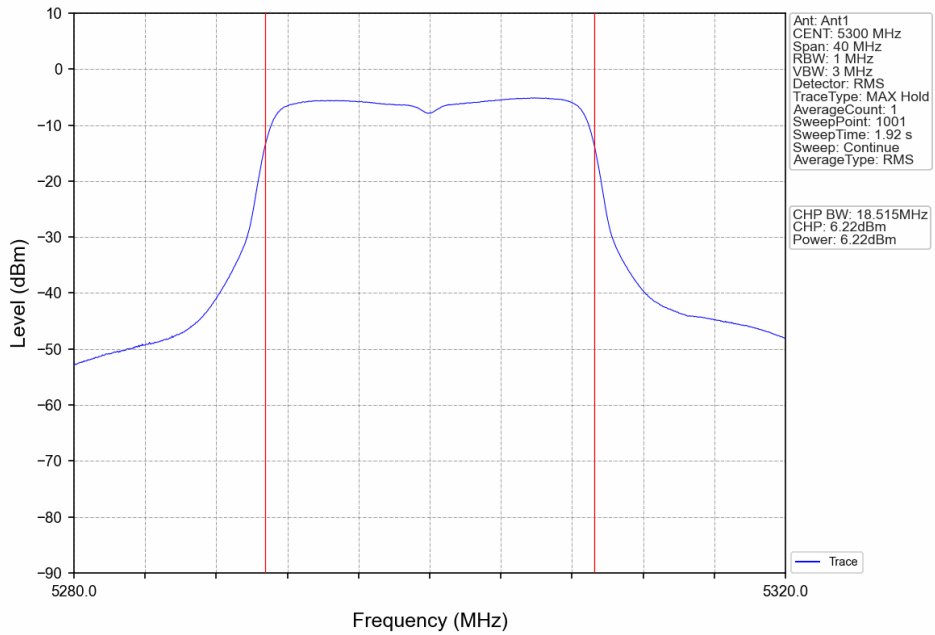
802.11a_HCH_5320MHz_Ant1_NTNV



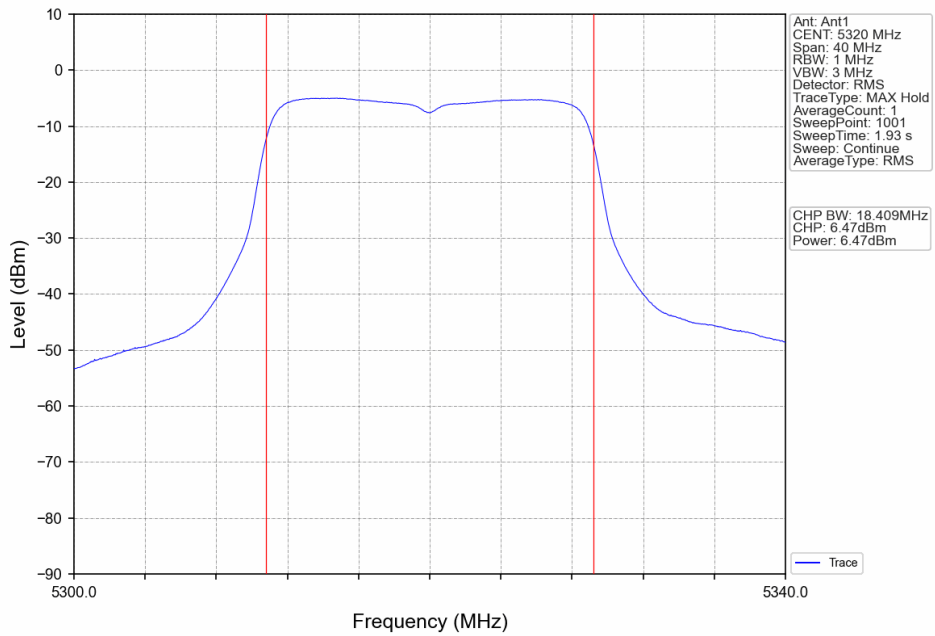
802.11n(HT20)_LCH_5260MHz_Ant1_NTNV



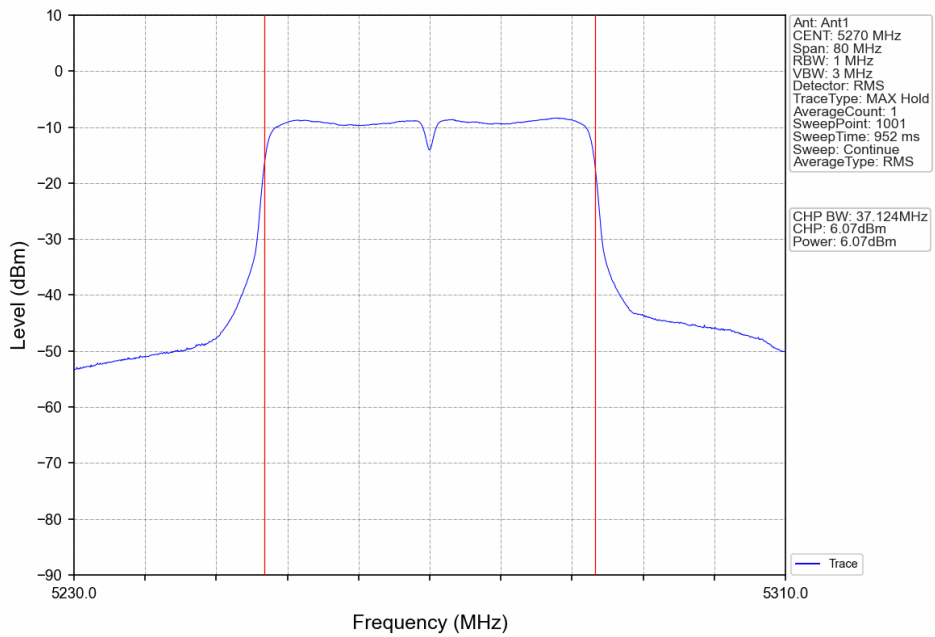
802.11n(HT20)_MCH_5300MHz_Ant1_NTNV



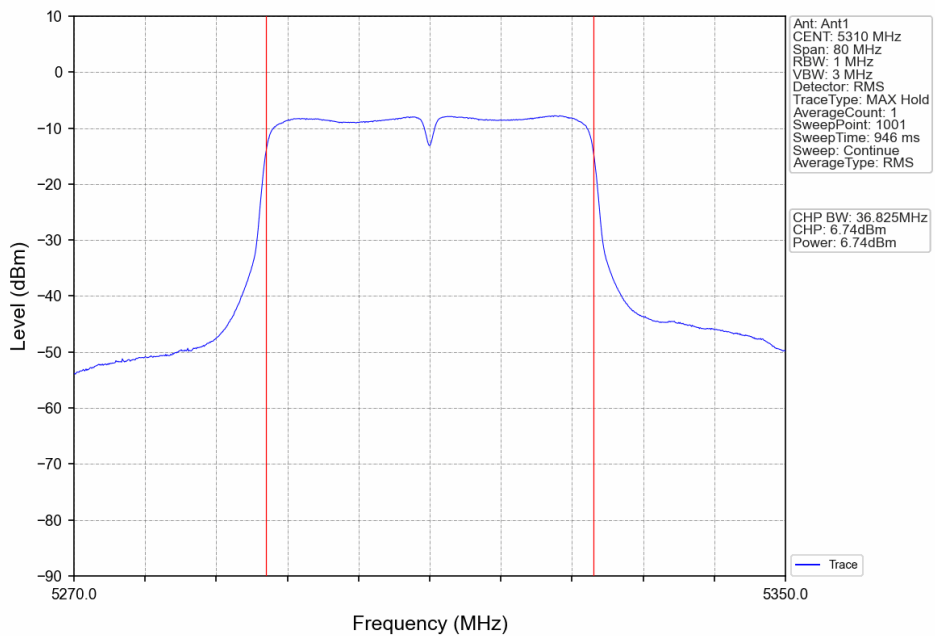
802.11n(HT20)_HCH_5320MHz_Ant1_NTNV



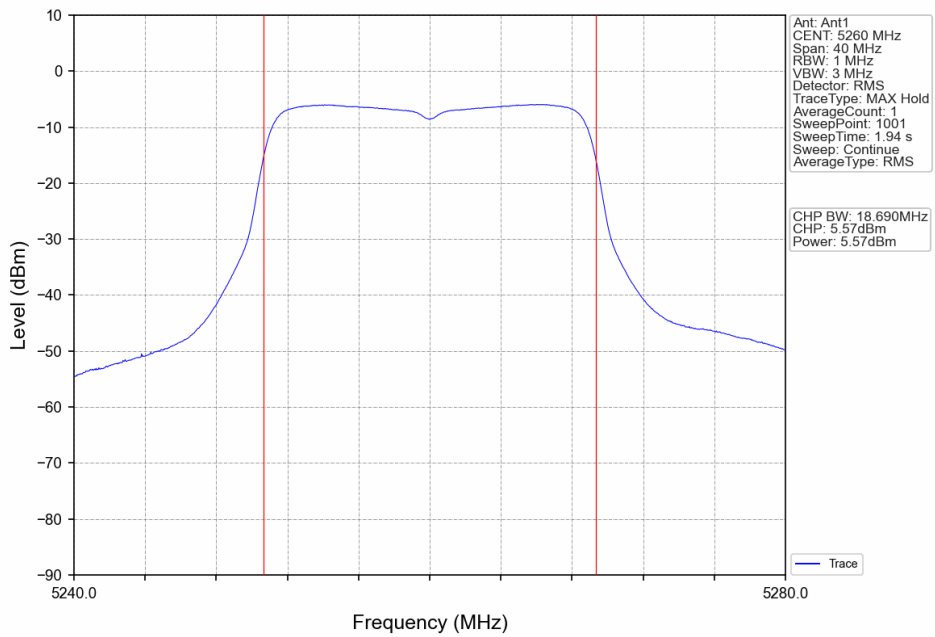
802.11n(HT40)_LCH_5270MHz_Ant1_NTNV



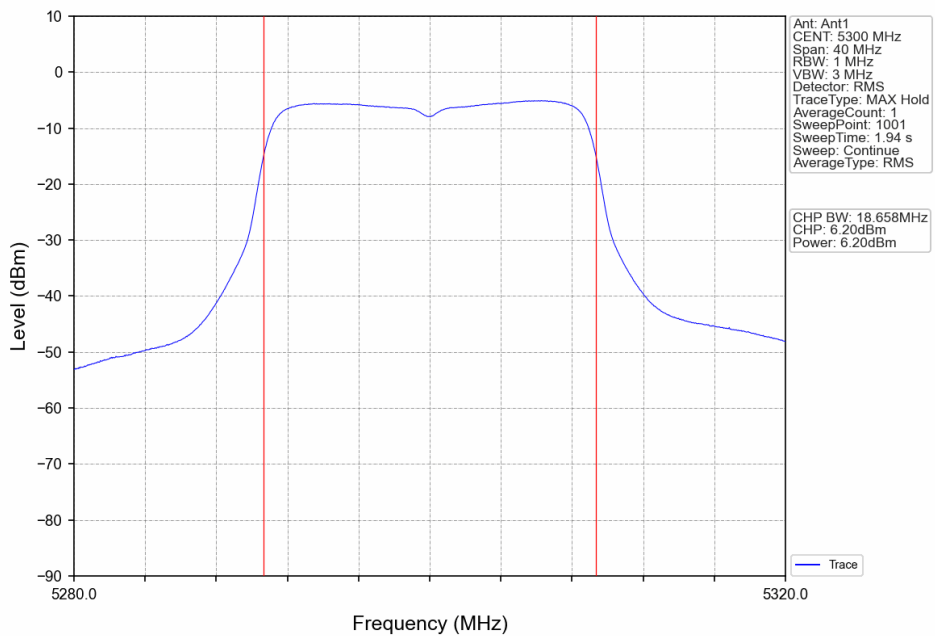
802.11n(HT40)_HCH_5310MHz_Ant1_NTNV



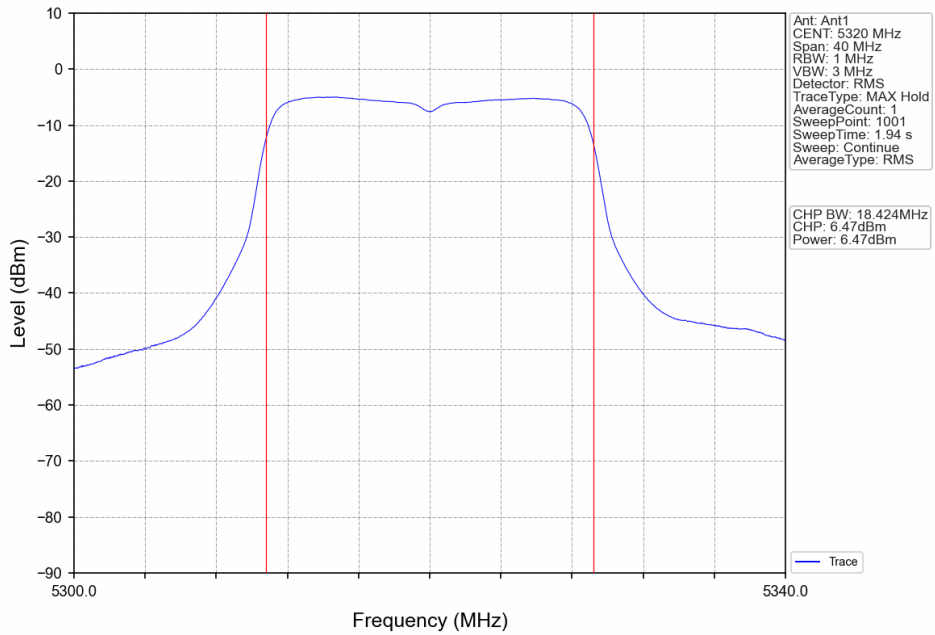
802.11ac(VHT20)_LCH_5260MHz_Ant1_NTNV



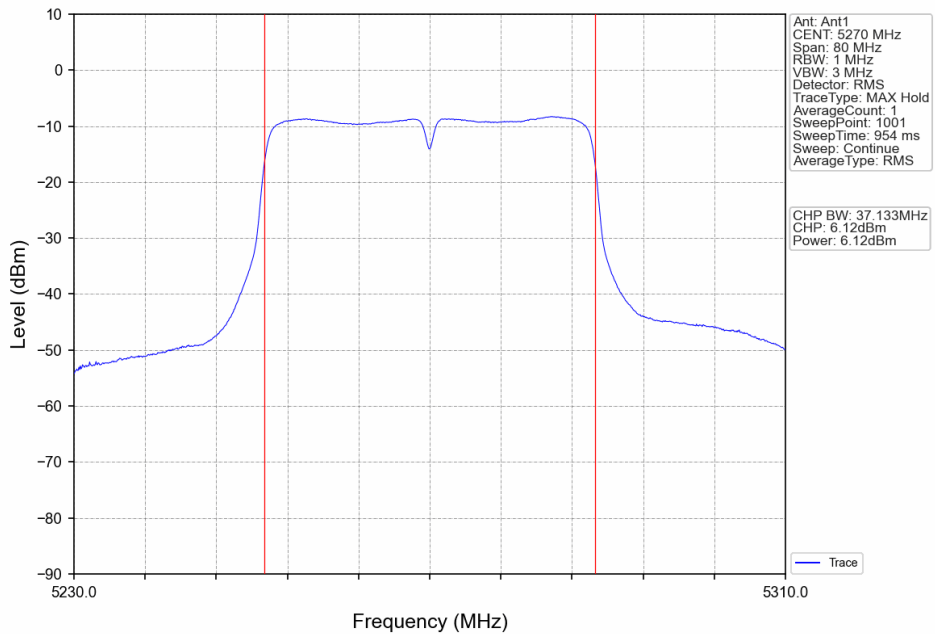
802.11ac(VHT20)_MCH_5300MHz_Ant1_NTNV



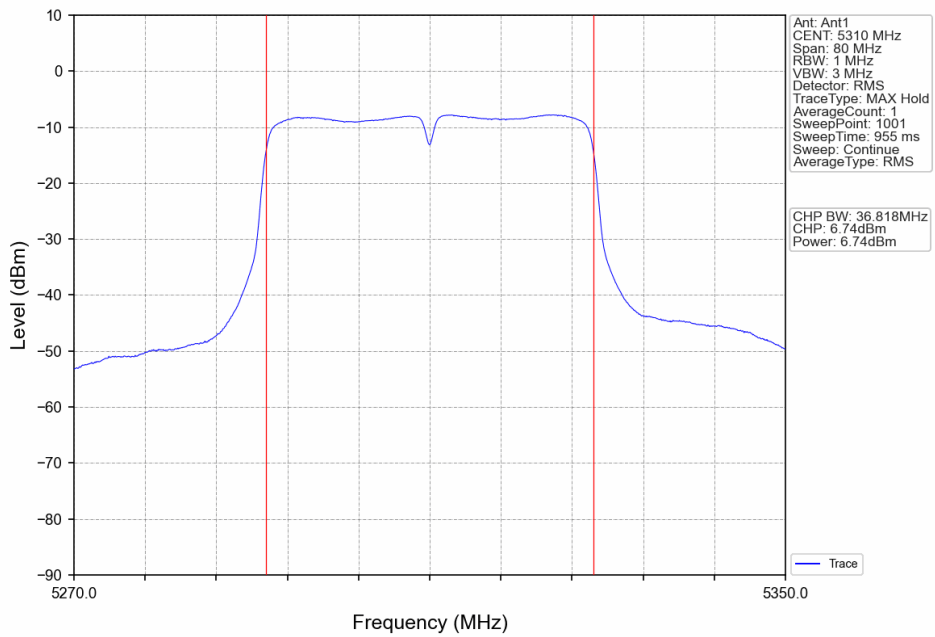
802.11ac(VHT20)_HCH_5320MHz_Ant1_NTNV



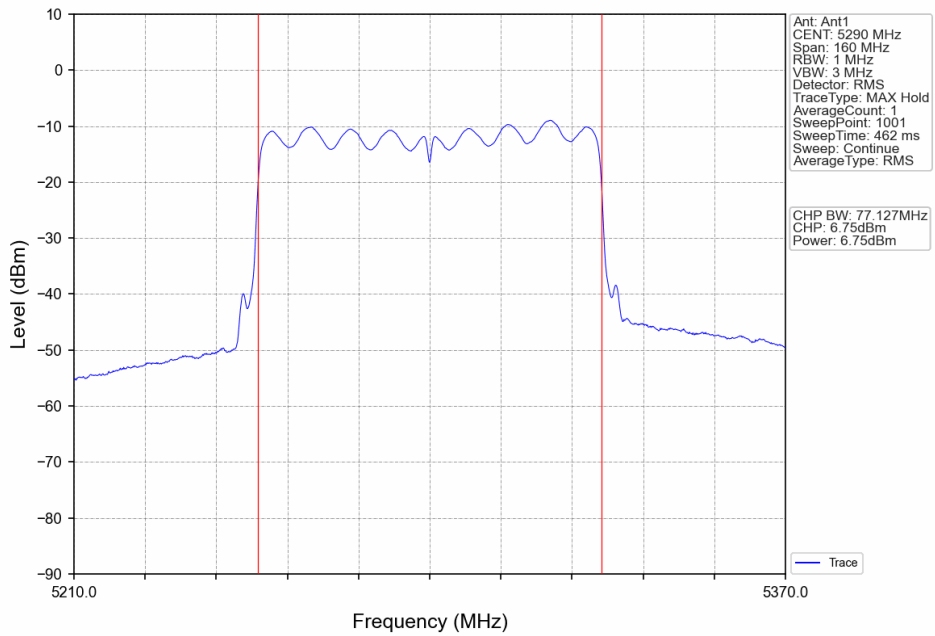
802.11ac(VHT40)_LCH_5270MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5310MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5290MHz_Ant1_NTNV



3. Maximum Power Spectral Density

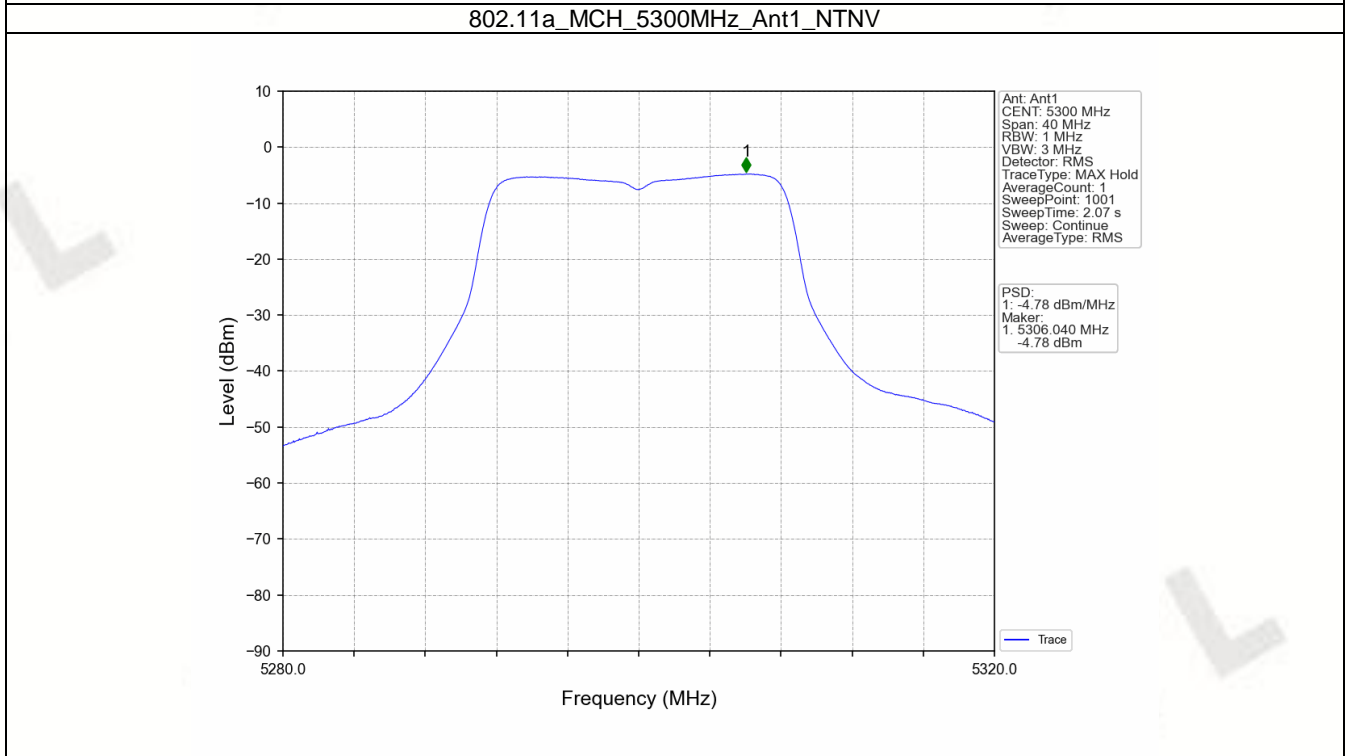
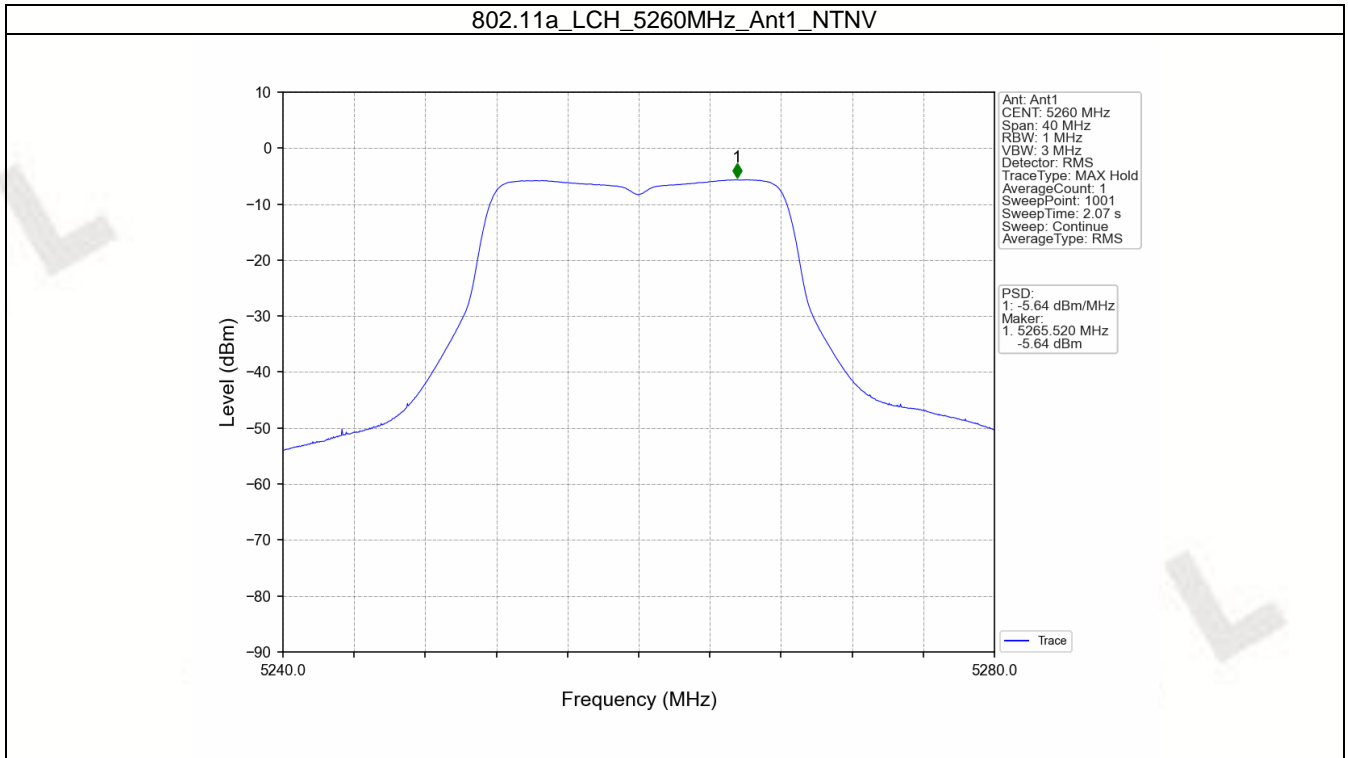
3.1 PSD

3.1.1 Test Result

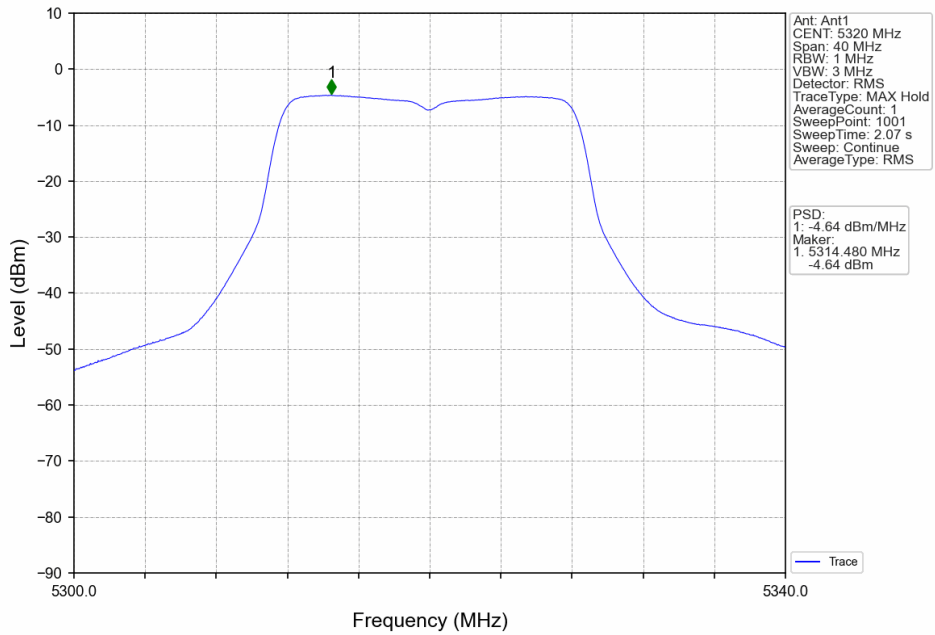
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/MHz)		Verdict
			ANT1	Limit	
802.11a	SISO	5260	-5.64	<=9.79	Pass
		5300	-4.78	<=9.79	Pass
		5320	-4.64	<=9.79	Pass
802.11n (HT20)	SISO	5260	-5.96	<=9.79	Pass
		5300	-5.14	<=9.79	Pass
		5320	-5.00	<=9.79	Pass
802.11n (HT40)	SISO	5270	-8.38	<=9.79	Pass
		5310	-7.78	<=9.79	Pass
802.11ac (VHT20)	SISO	5260	-5.98	<=9.79	Pass
		5300	-5.11	<=9.79	Pass
		5320	-4.97	<=9.79	Pass
802.11ac (VHT40)	SISO	5270	-8.32	<=9.79	Pass
		5310	-7.82	<=9.79	Pass
802.11ac (VHT80)	SISO	5290	-8.96	<=9.79	Pass

Note1: Antenna Gain: Ant1: 7.21dBi;

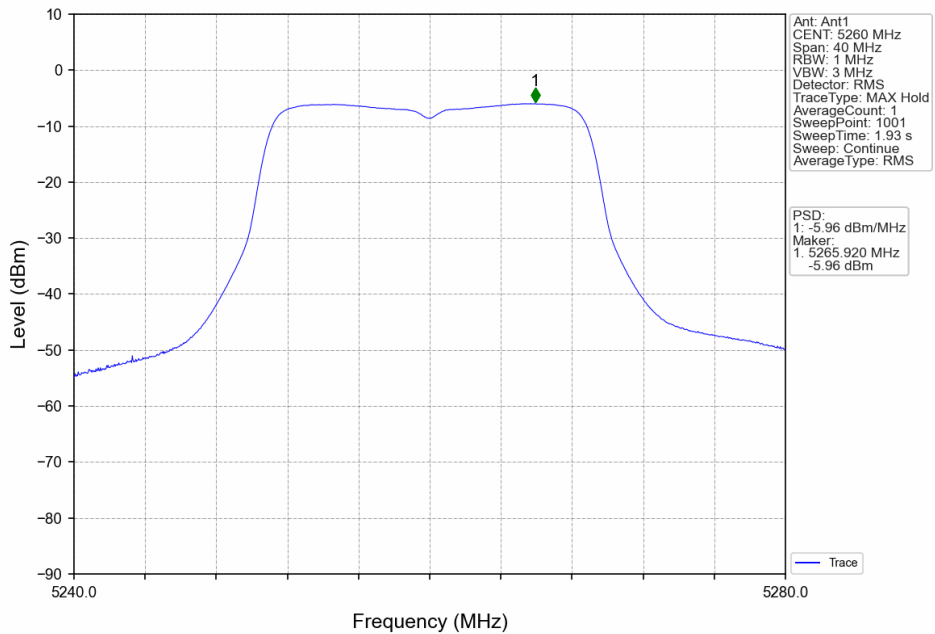
3.1.2 Test Graph



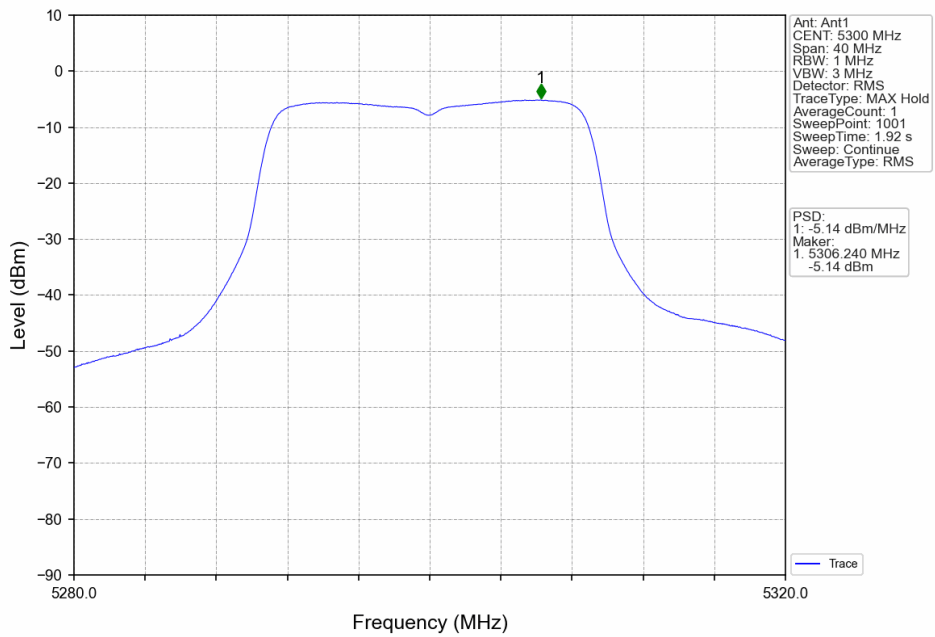
802.11a_HCH_5320MHz_Ant1_NTNV



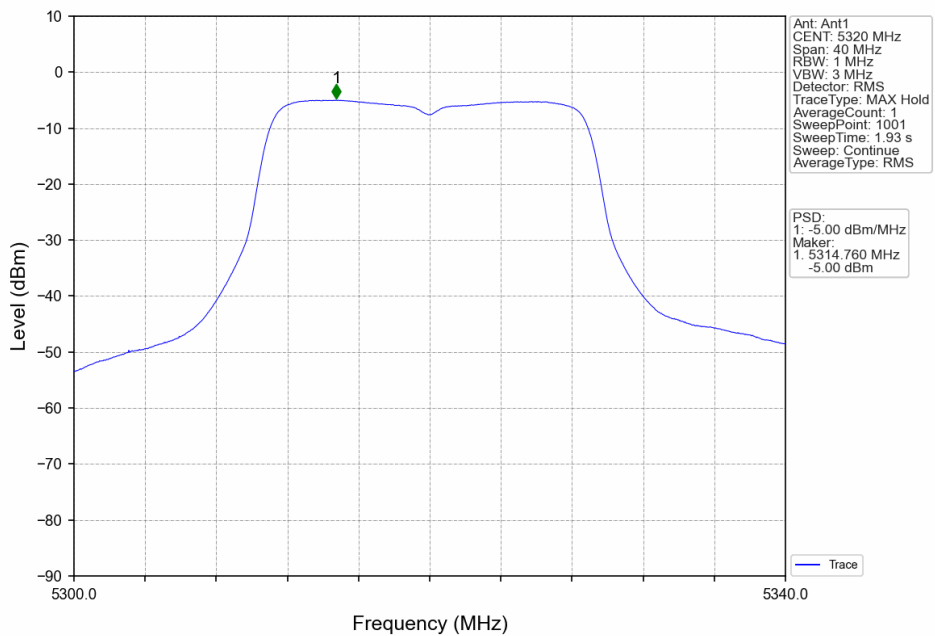
802.11n(HT20)_LCH_5260MHz_Ant1_NTNV



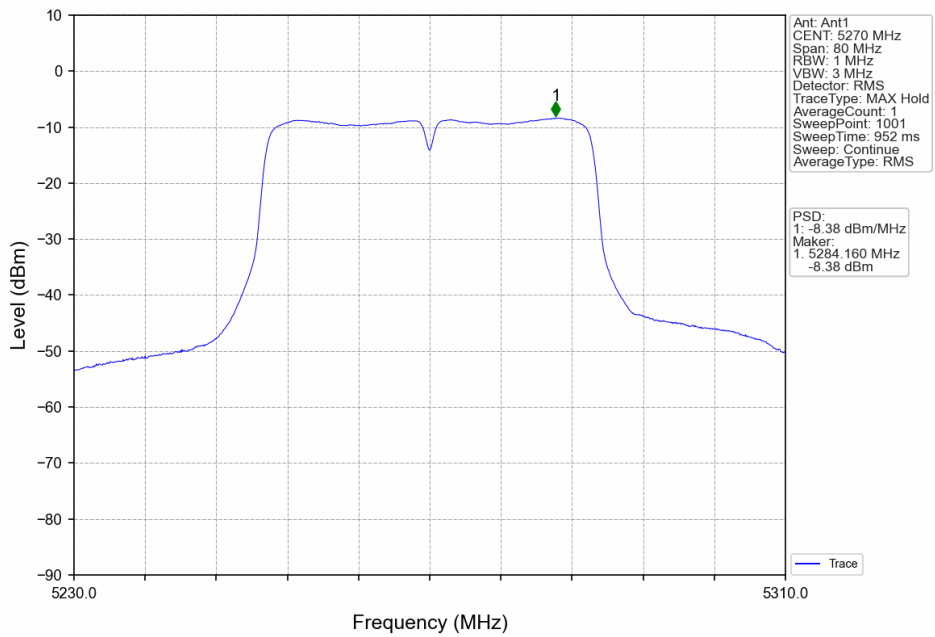
802.11n(HT20)_MCH_5300MHz_Ant1_NTNV



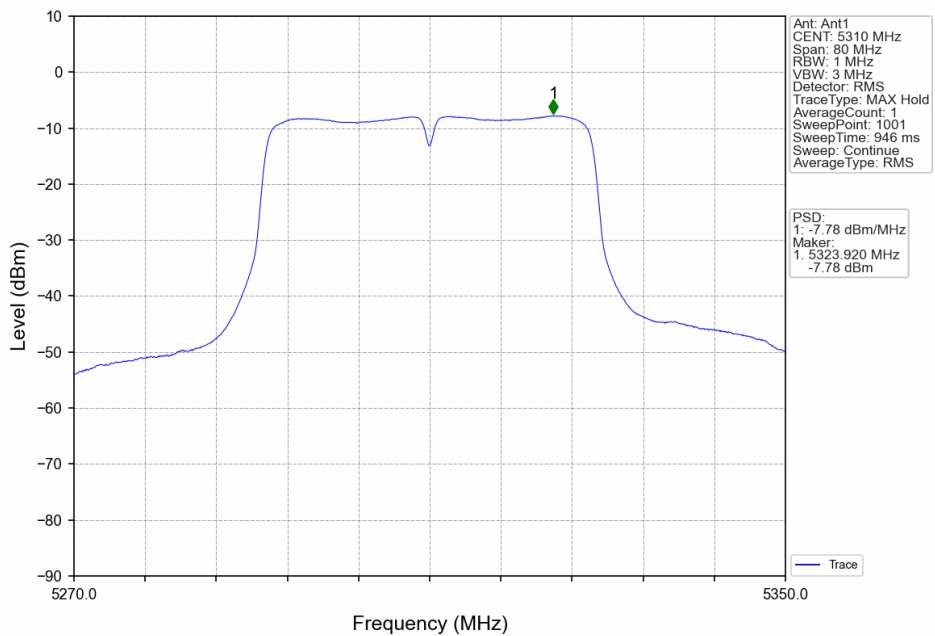
802.11n(HT20)_HCH_5320MHz_Ant1_NTNV



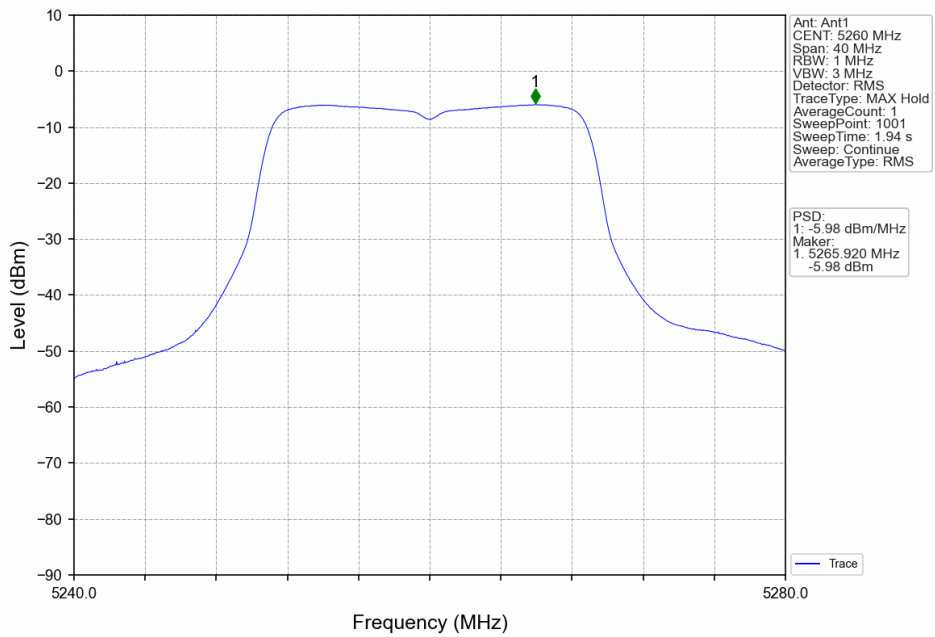
802.11n(HT40)_LCH_5270MHz_Ant1_NTNV



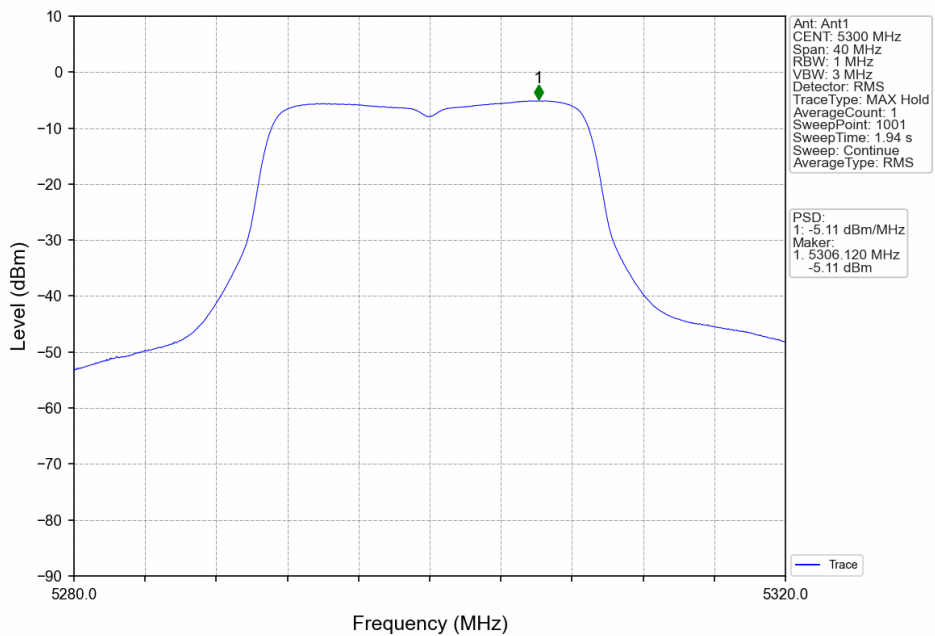
802.11n(HT40)_HCH_5310MHz_Ant1_NTNV



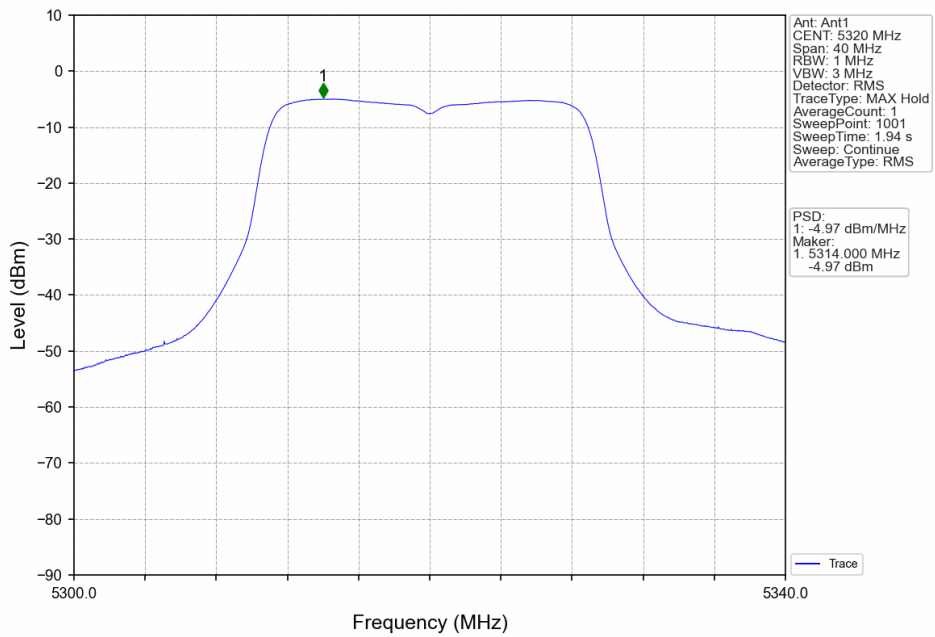
802.11ac(VHT20)_LCH_5260MHz_Ant1_NTNV



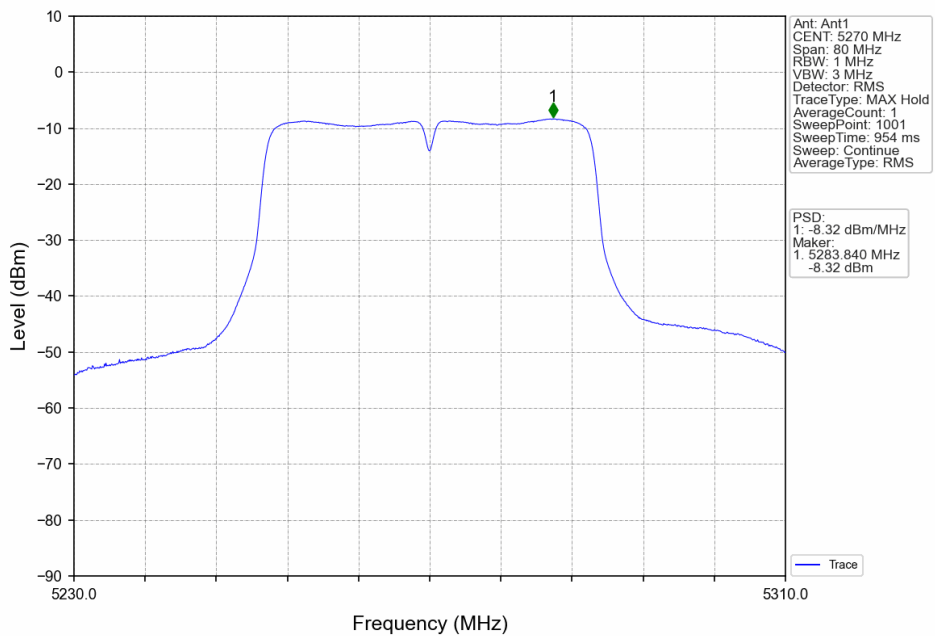
802.11ac(VHT20)_MCH_5300MHz_Ant1_NTNV



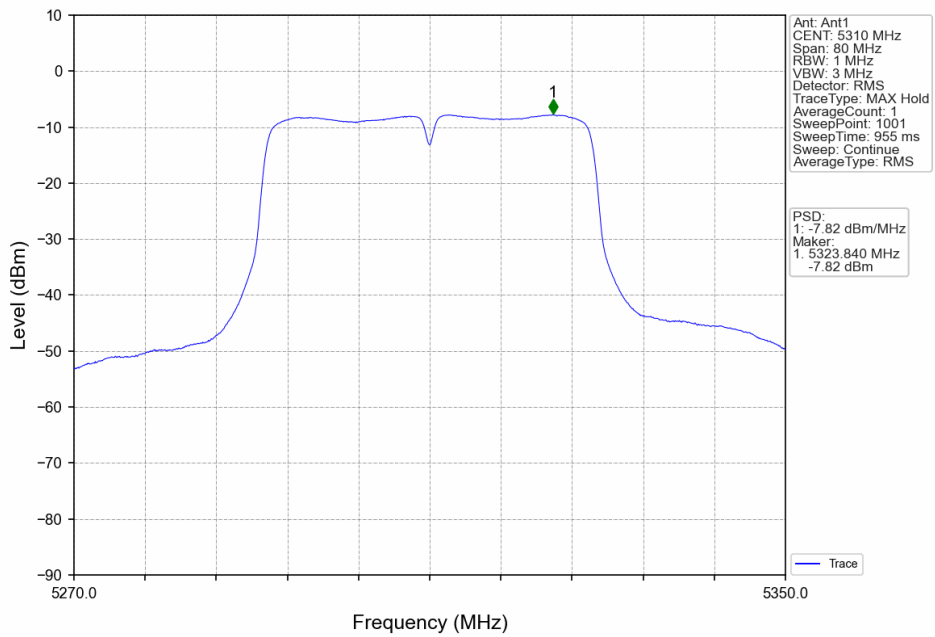
802.11ac(VHT20)_HCH_5320MHz_Ant1_NTNV



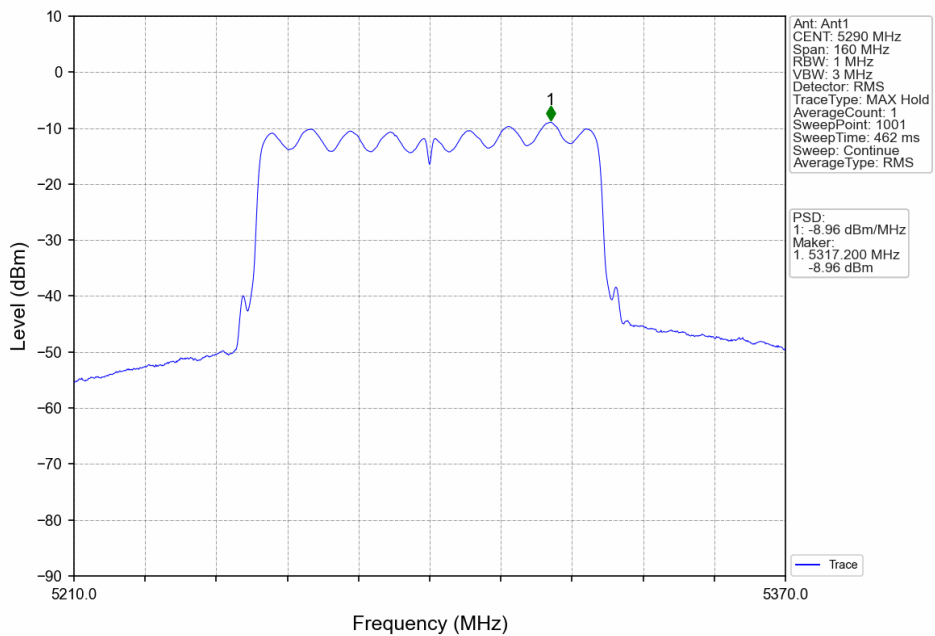
802.11ac(VHT40)_LCH_5270MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5310MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5290MHz_Ant1_NTNV



4. Frequency Stability

4.1 Ant1

4.1.1 Test Result

Ant1							
Mode	TX Type	Frequency (MHz)	Temperature (°C)	Voltage (VAC)	Measured Frequency (MHz)	Limit (MHz)	Verdict
Carrier Wave	SISO	5260	20	102	5259.987	5250 to 5350	Pass
				120	5259.988	5250 to 5350	Pass
				138	5259.989	5250 to 5350	Pass
			-30	120	5259.990	5250 to 5350	Pass
			-20	120	5259.991	5250 to 5350	Pass
			-10	120	5259.992	5250 to 5350	Pass
			0	120	5259.992	5250 to 5350	Pass
			10	120	5259.992	5250 to 5350	Pass
			30	120	5259.993	5250 to 5350	Pass
			40	120	5259.993	5250 to 5350	Pass
		50	120	5259.993	5250 to 5350	Pass	
		5300	20	102	5299.989	5250 to 5350	Pass
				120	5299.990	5250 to 5350	Pass
				138	5299.991	5250 to 5350	Pass
			-30	120	5299.992	5250 to 5350	Pass
			-20	120	5299.993	5250 to 5350	Pass
			-10	120	5299.993	5250 to 5350	Pass
			0	120	5299.994	5250 to 5350	Pass
			10	120	5299.994	5250 to 5350	Pass
			30	120	5299.995	5250 to 5350	Pass
			40	120	5299.995	5250 to 5350	Pass
		50	120	5299.995	5250 to 5350	Pass	
		5320	20	102	5319.991	5250 to 5350	Pass
				120	5319.992	5250 to 5350	Pass
				138	5319.993	5250 to 5350	Pass
			-30	120	5319.994	5250 to 5350	Pass
			-20	120	5319.994	5250 to 5350	Pass
			-10	120	5319.995	5250 to 5350	Pass
			0	120	5319.995	5250 to 5350	Pass
			10	120	5319.995	5250 to 5350	Pass
			30	120	5319.995	5250 to 5350	Pass
			40	120	5319.996	5250 to 5350	Pass
		50	120	5319.996	5250 to 5350	Pass	
		5270	20	102	5269.990	5250 to 5350	Pass
				120	5269.992	5250 to 5350	Pass
				138	5269.993	5250 to 5350	Pass
			-30	120	5269.993	5250 to 5350	Pass
			-20	120	5269.994	5250 to 5350	Pass
			-10	120	5269.995	5250 to 5350	Pass
			0	120	5269.995	5250 to 5350	Pass
			10	120	5269.995	5250 to 5350	Pass
			30	120	5269.995	5250 to 5350	Pass
			40	120	5269.996	5250 to 5350	Pass
		50	120	5269.996	5250 to 5350	Pass	
		5310	20	102	5309.990	5250 to 5350	Pass
120	5309.992			5250 to 5350	Pass		
138	5309.993			5250 to 5350	Pass		
-30	120		5309.994	5250 to 5350	Pass		
-20	120		5309.994	5250 to 5350	Pass		

			-10	120	5309.995	5250 to 5350	Pass
			0	120	5309.995	5250 to 5350	Pass
			10	120	5309.996	5250 to 5350	Pass
			30	120	5309.996	5250 to 5350	Pass
			40	120	5309.996	5250 to 5350	Pass
		50	120	5309.996	5250 to 5350	Pass	
		5290	20	102	5289.991	5250 to 5350	Pass
				120	5289.992	5250 to 5350	Pass
				138	5289.994	5250 to 5350	Pass
			-30	120	5289.994	5250 to 5350	Pass
			-20	120	5289.994	5250 to 5350	Pass
			-10	120	5289.995	5250 to 5350	Pass
			0	120	5289.995	5250 to 5350	Pass
			10	120	5289.996	5250 to 5350	Pass
			30	120	5289.996	5250 to 5350	Pass
			40	120	5289.996	5250 to 5350	Pass
			50	120	5289.996	5250 to 5350	Pass