

Test Data for 5G_BAND2A

Product Name: MaaXBoard RT

Test Model: AES-MC-SBC-IMXRT1176-G

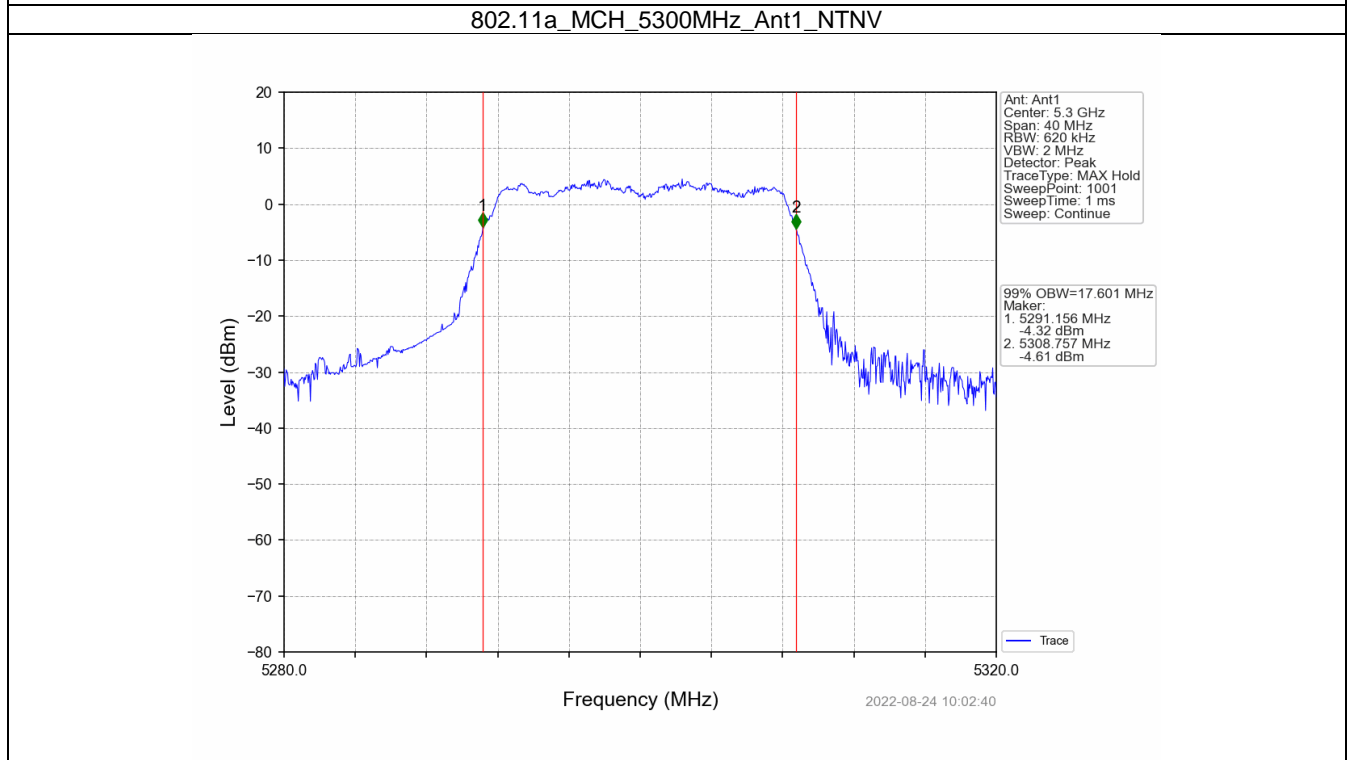
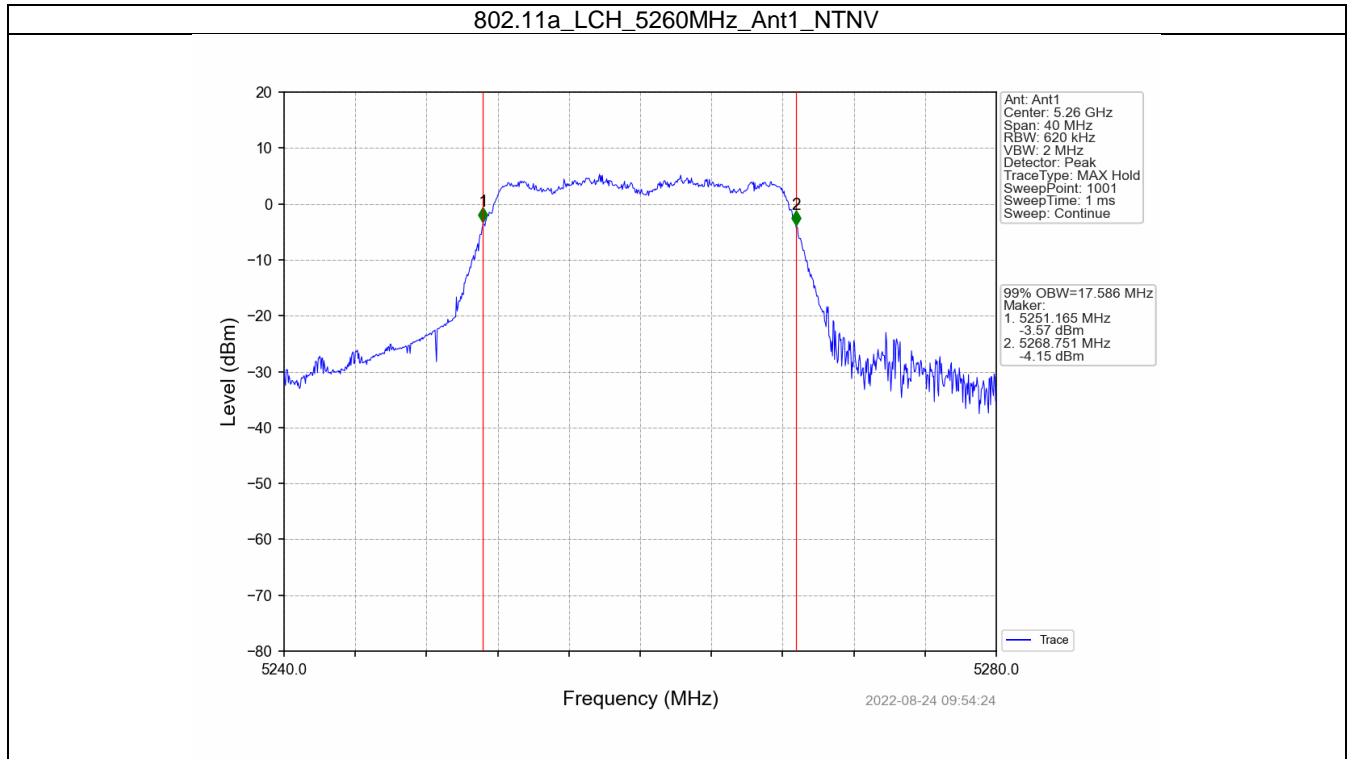
1. Bandwidth

1.1 OBW

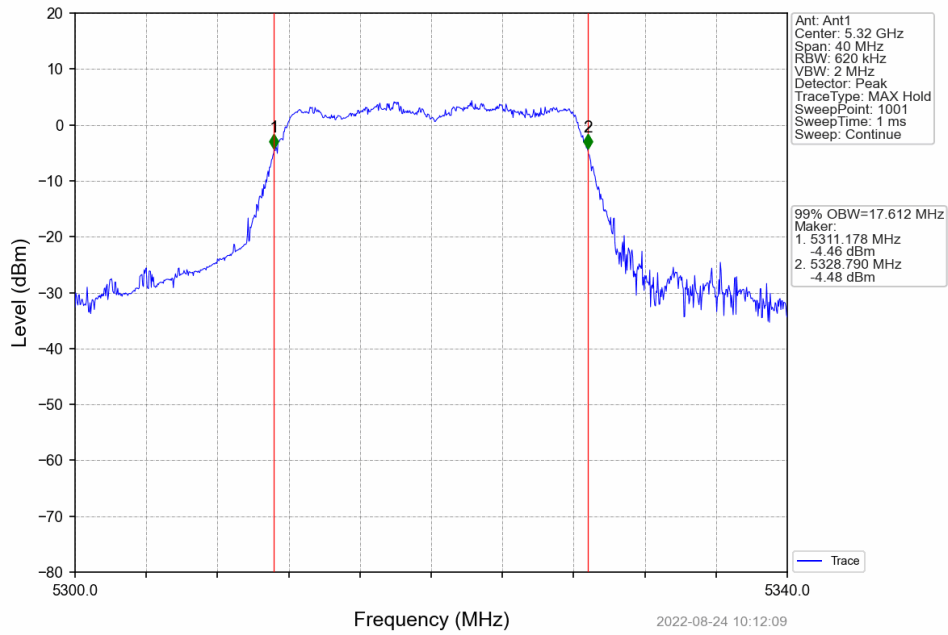
1.1.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)	Verdict
				Result	
802.11a	SISO	5260	1	17.586	Pass
		5300	1	17.601	Pass
		5320	1	17.612	Pass
802.11n (HT20)	SISO	5260	1	18.186	Pass
		5300	1	18.188	Pass
		5320	1	18.182	Pass
802.11n (HT40)	SISO	5270	1	36.864	Pass
		5310	1	36.910	Pass
802.11ac (VHT20)	SISO	5260	1	18.213	Pass
		5300	1	18.194	Pass
		5320	1	18.228	Pass
802.11ac (VHT40)	SISO	5270	1	36.851	Pass
		5310	1	36.972	Pass
802.11ac (VHT80)	SISO	5290	1	76.832	Pass

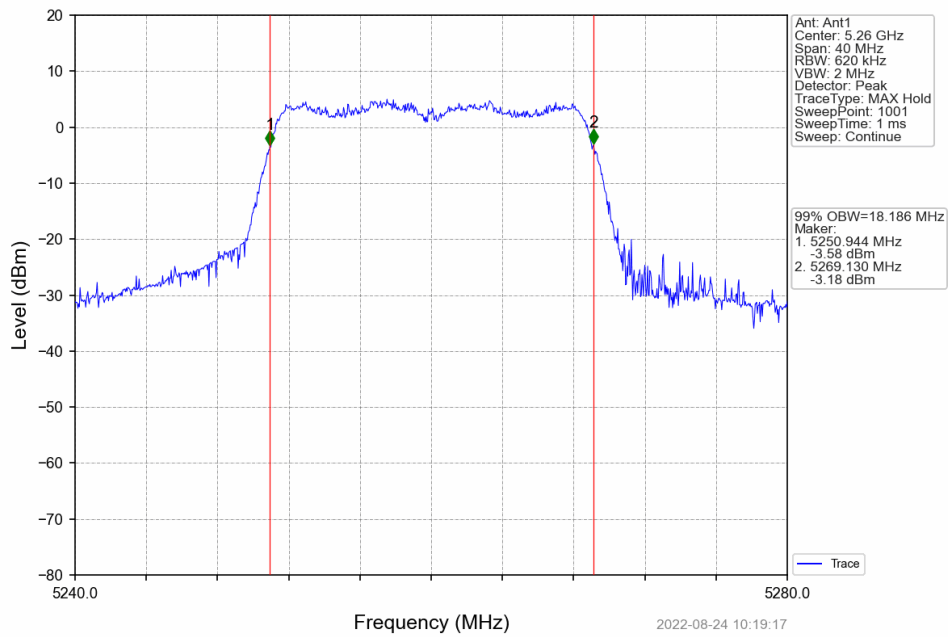
1.1.2 Test Graph



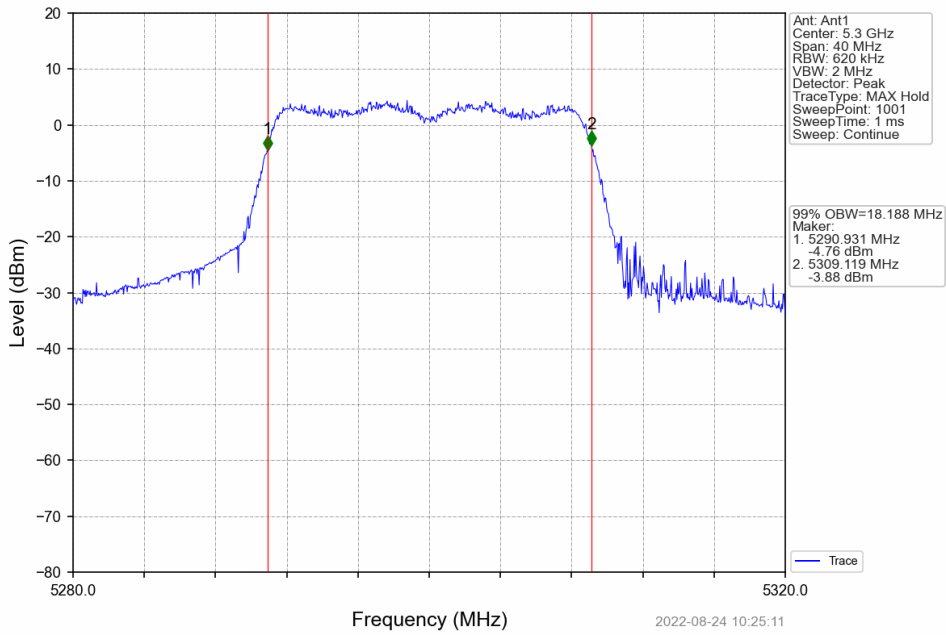
802.11a_HCH_5320MHz_Ant1_NTNV



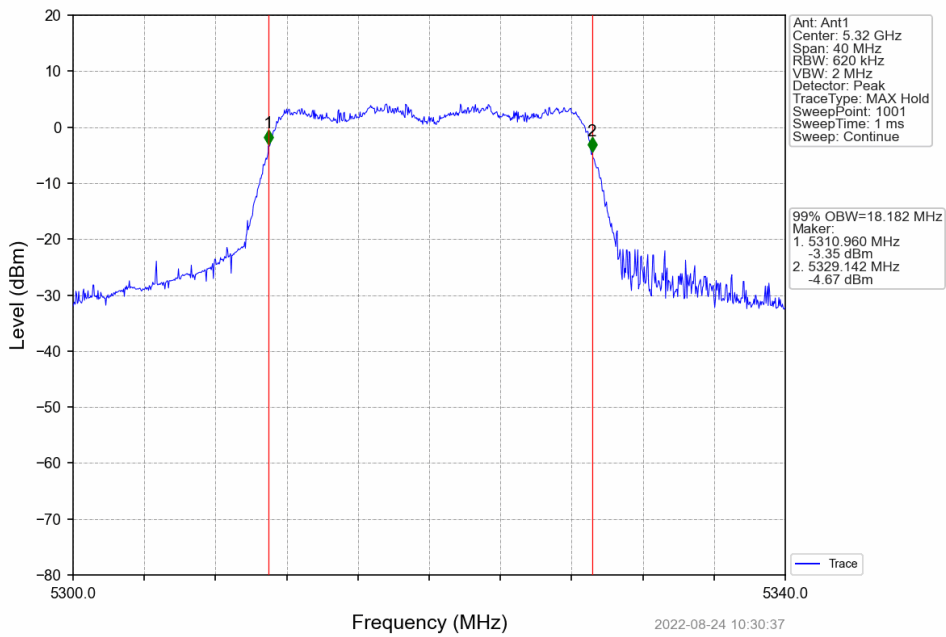
802.11n(HT20)_LCH_5260MHz_Ant1_NTNV



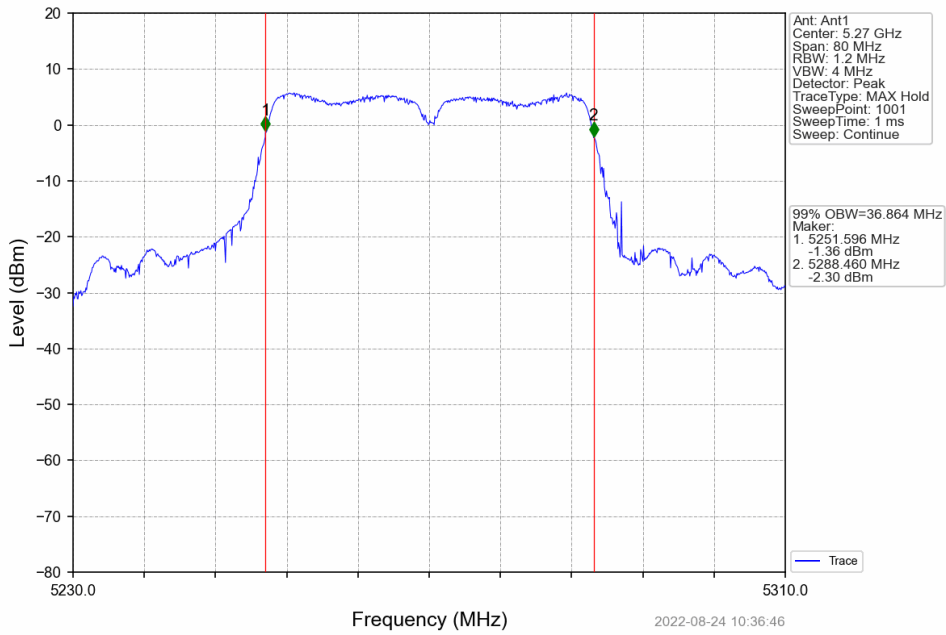
802.11n(HT20)_MCH_5300MHz_Ant1_NTNV



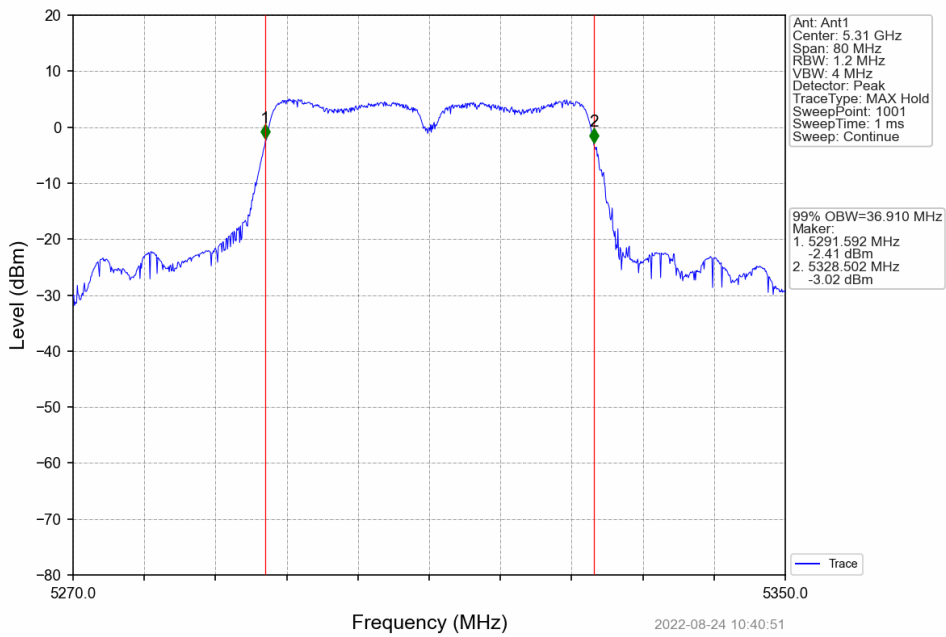
802.11n(HT20)_HCH_5320MHz_Ant1_NTNV



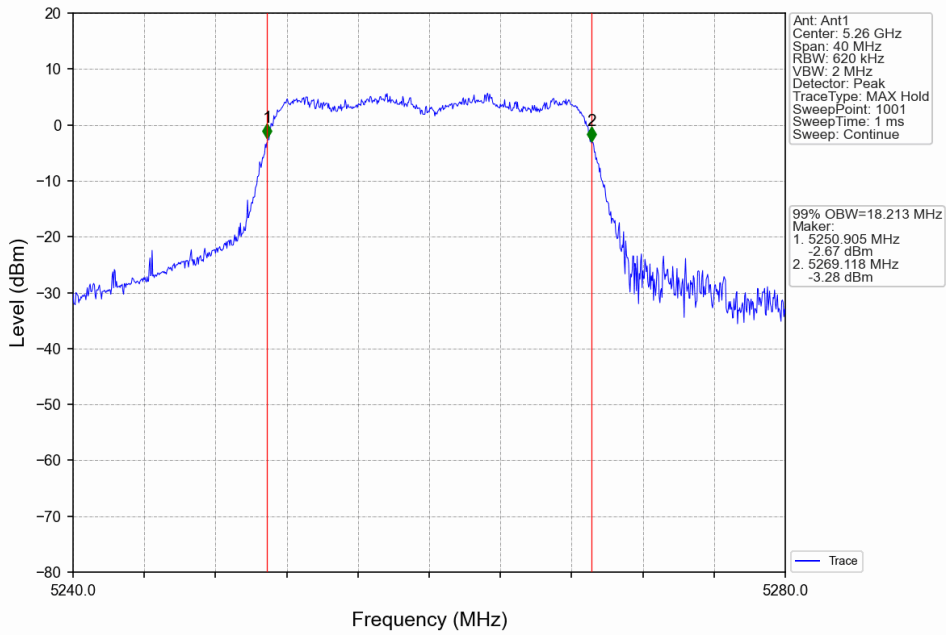
802.11n(HT40)_LCH_5270MHz_Ant1_NTNV



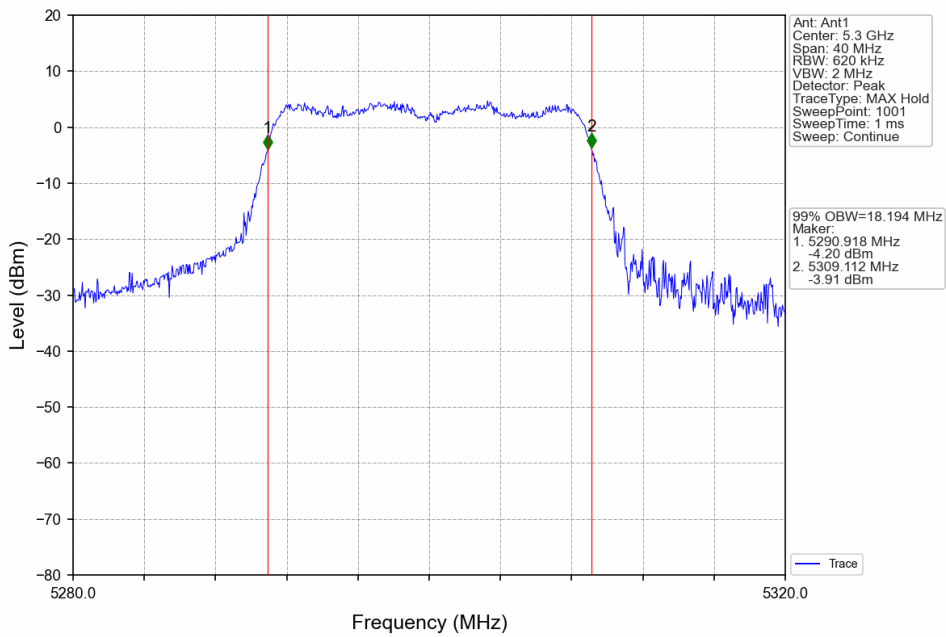
802.11n(HT40)_HCH_5310MHz_Ant1_NTNV



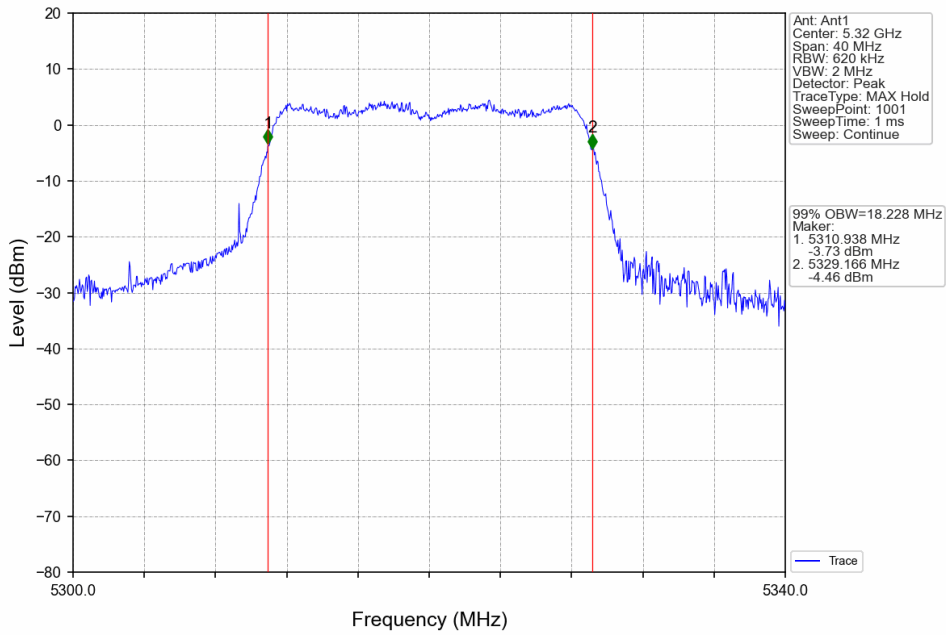
802.11ac(VHT20)_LCH_5260MHz_Ant1_NTNV



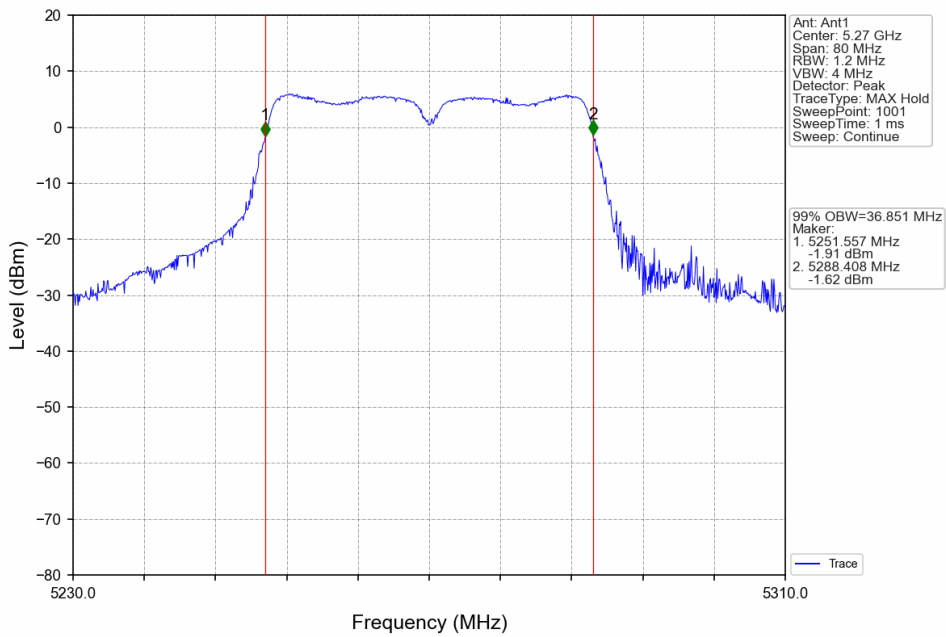
802.11ac(VHT20)_MCH_5300MHz_Ant1_NTNV



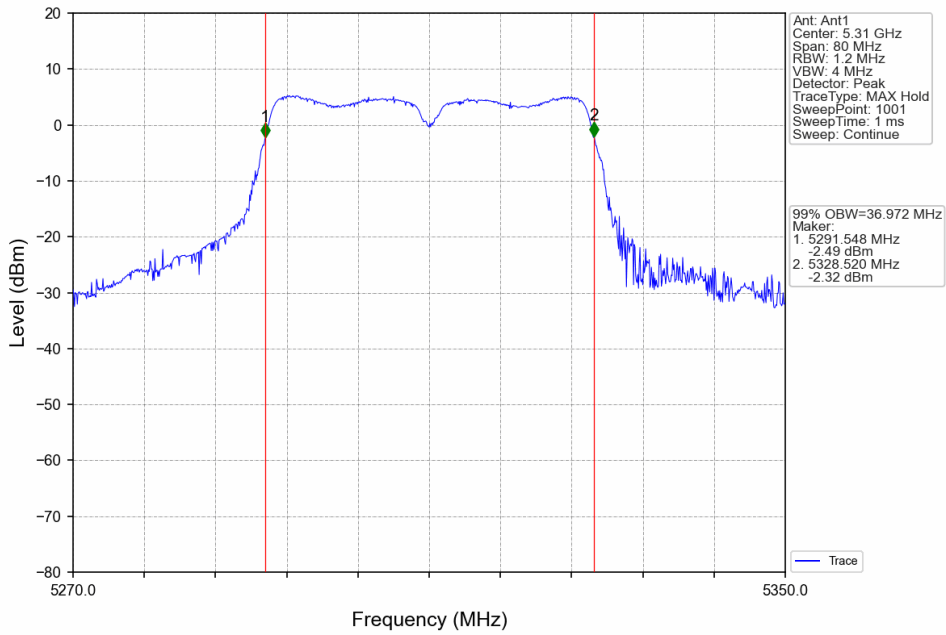
802.11ac(VHT20)_HCH_5320MHz_Ant1_NTNV



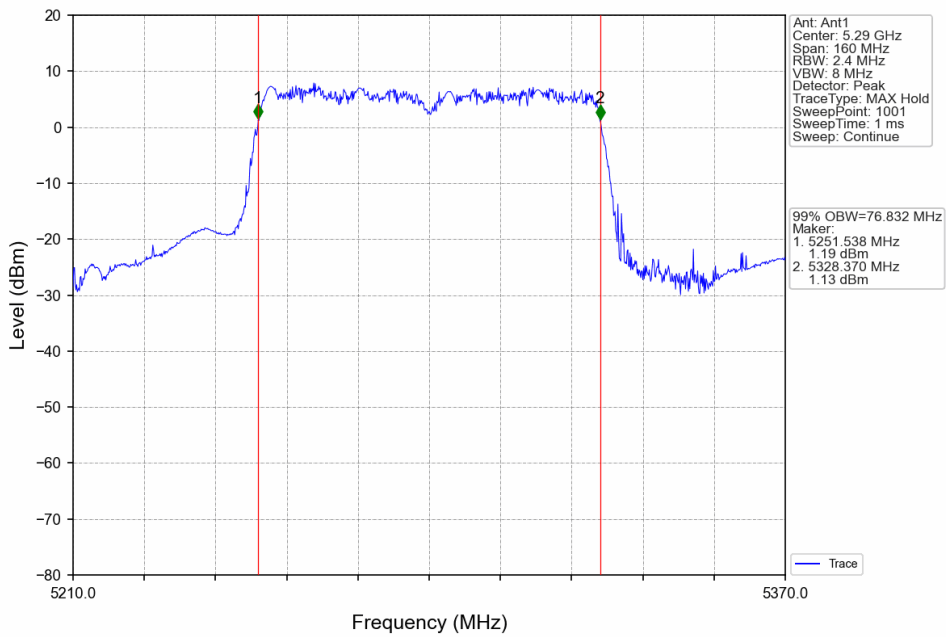
802.11ac(VHT40)_LCH_5270MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5310MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5290MHz_Ant1_NTNV

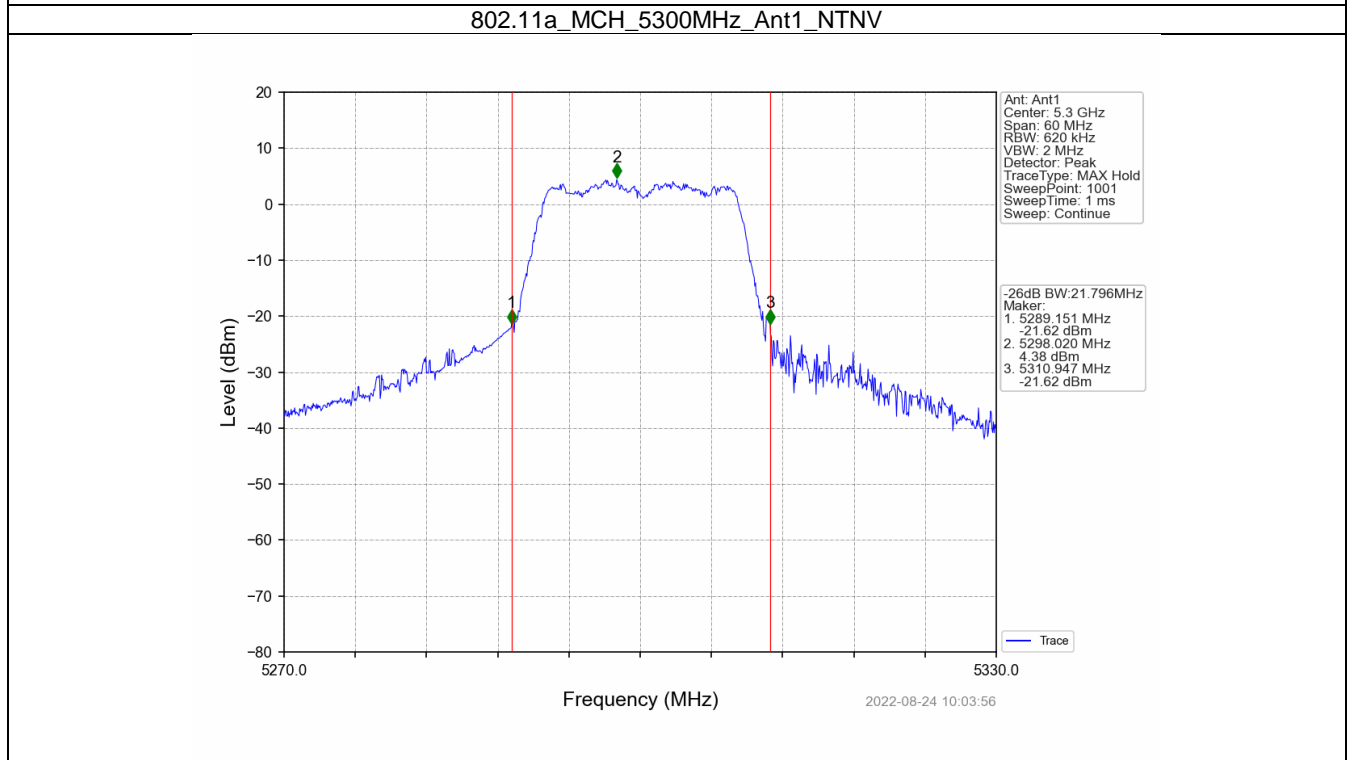
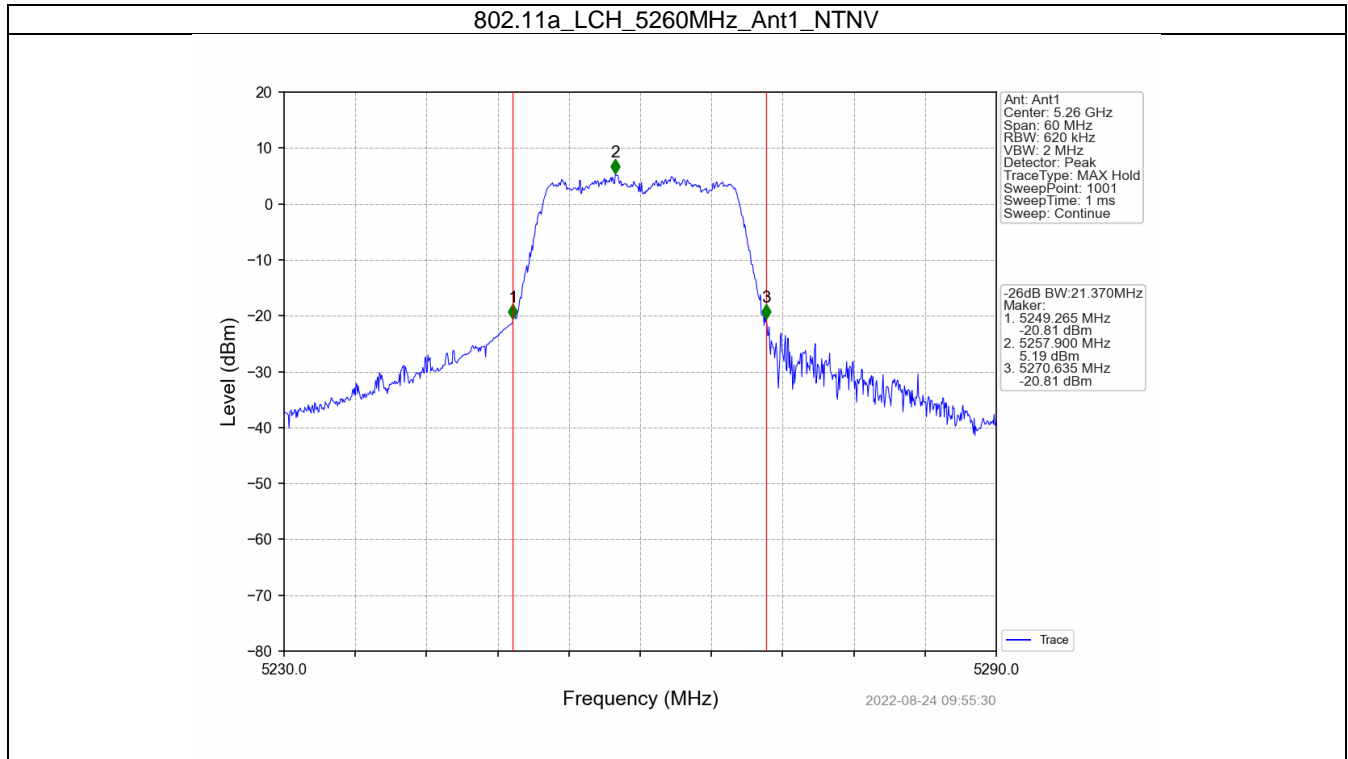


1.2 26dB BW

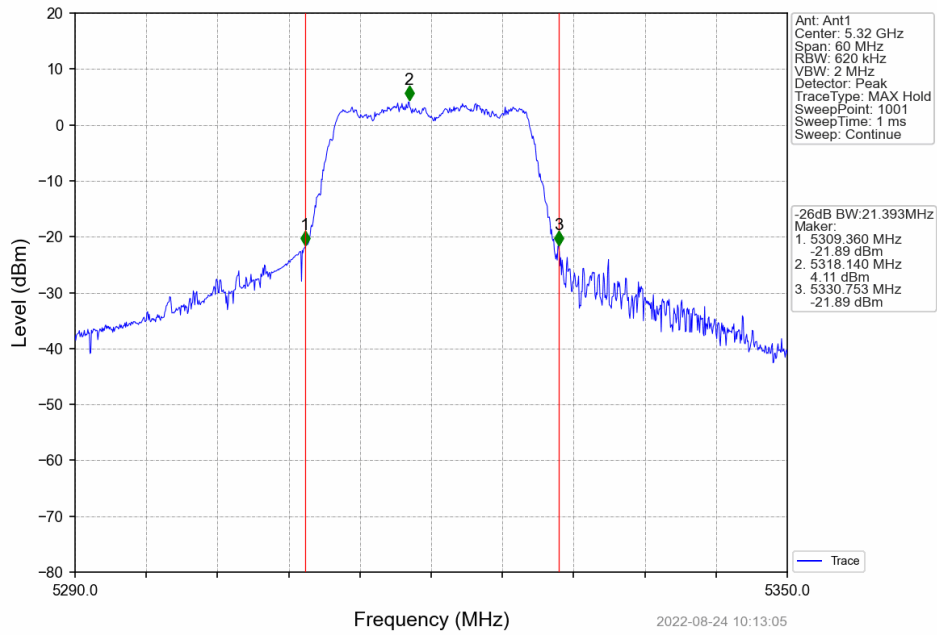
1.2.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	26dB Bandwidth (MHz)	Verdict
				Result	
802.11a	SISO	5260	1	21.370	Pass
		5300	1	21.796	Pass
		5320	1	21.393	Pass
802.11n (HT20)	SISO	5260	1	21.733	Pass
		5300	1	21.347	Pass
		5320	1	22.665	Pass
802.11n (HT40)	SISO	5270	1	44.864	Pass
		5310	1	45.498	Pass
802.11ac (VHT20)	SISO	5260	1	22.540	Pass
		5300	1	21.976	Pass
		5320	1	22.423	Pass
802.11ac (VHT40)	SISO	5270	1	45.606	Pass
		5310	1	46.660	Pass
802.11ac (VHT80)	SISO	5290	1	93.864	Pass

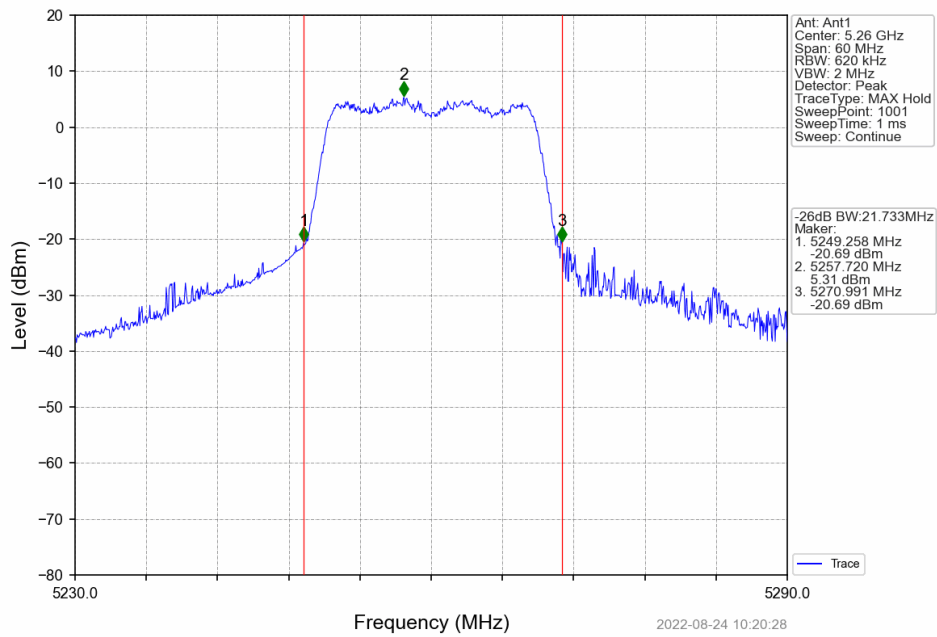
1.2.2 Test Graph



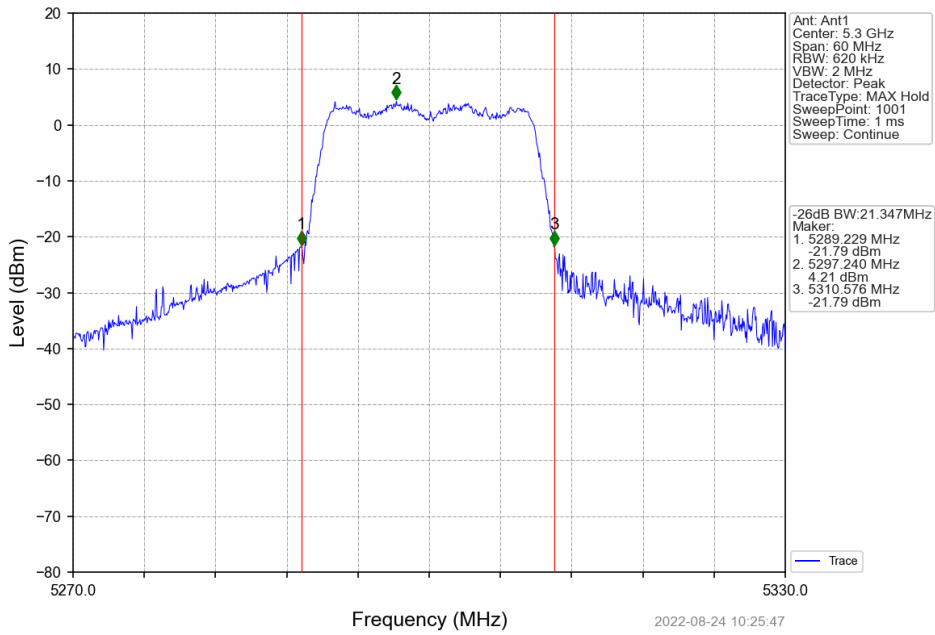
802.11a_HCH_5320MHz_Ant1_NTNV



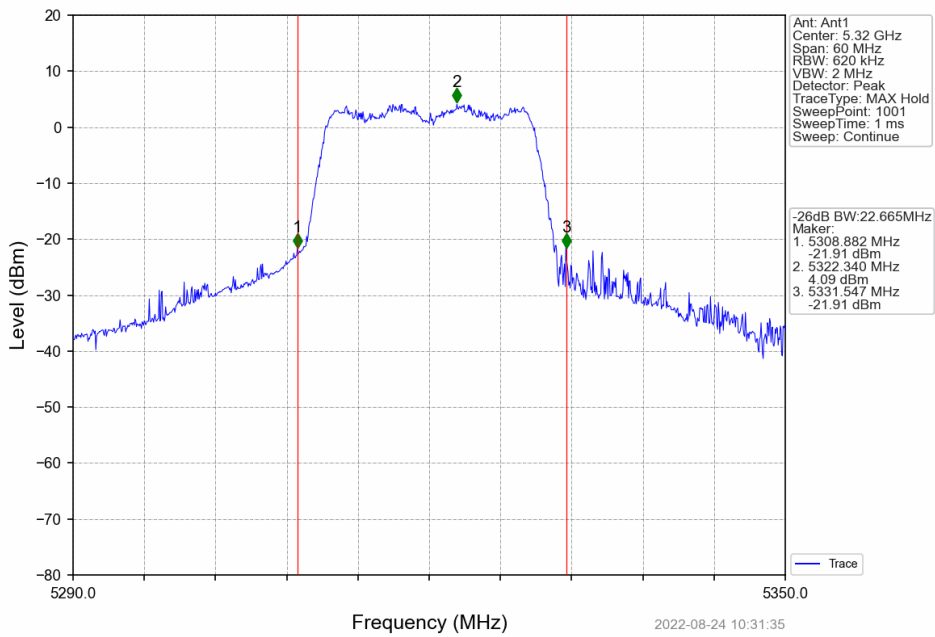
802.11n(HT20)_LCH_5260MHz_Ant1_NTNV



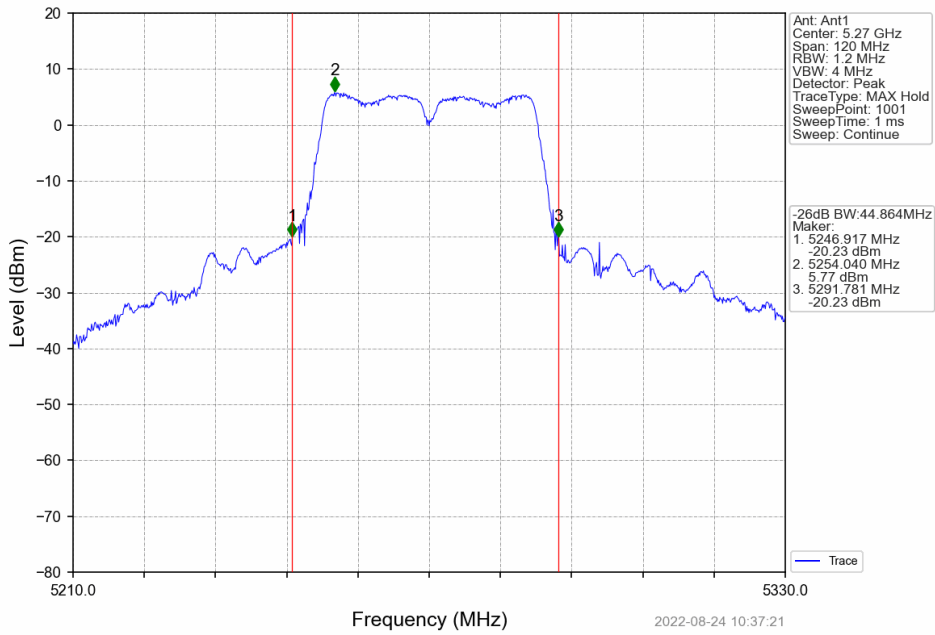
802.11n(HT20)_MCH_5300MHz_Ant1_NTNV



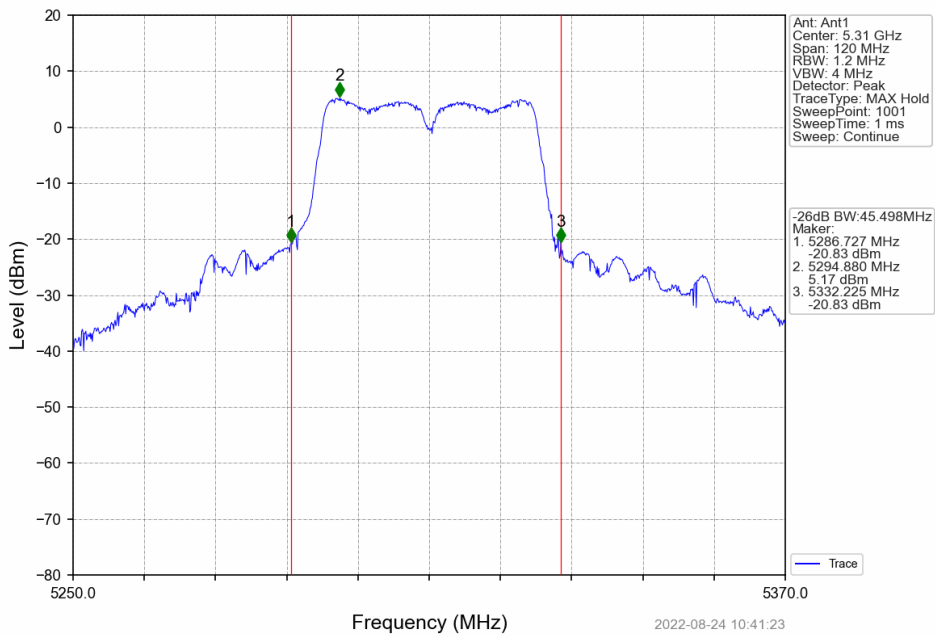
802.11n(HT20)_HCH_5320MHz_Ant1_NTNV



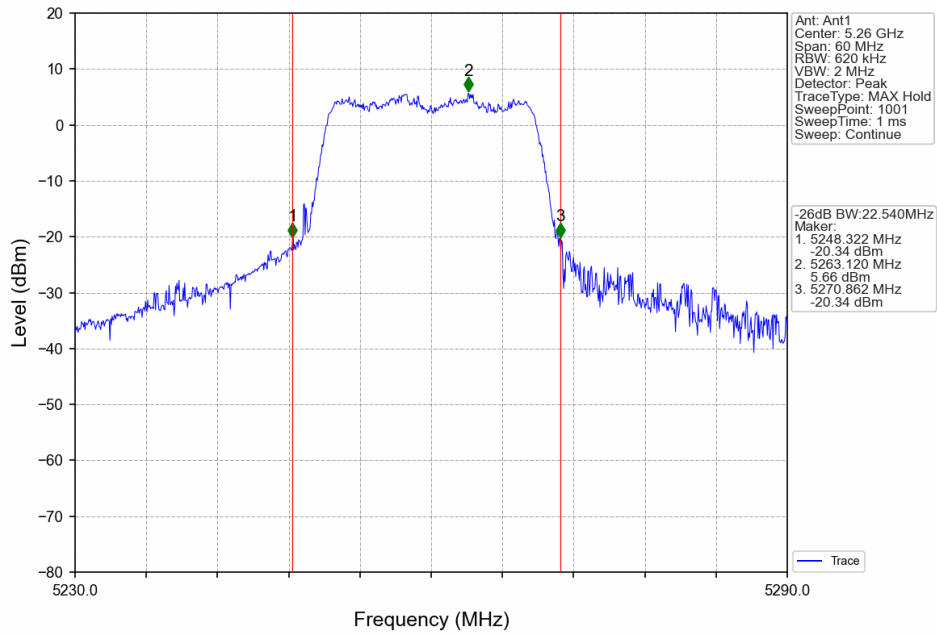
802.11n(HT40)_LCH_5270MHz_Ant1_NTNV



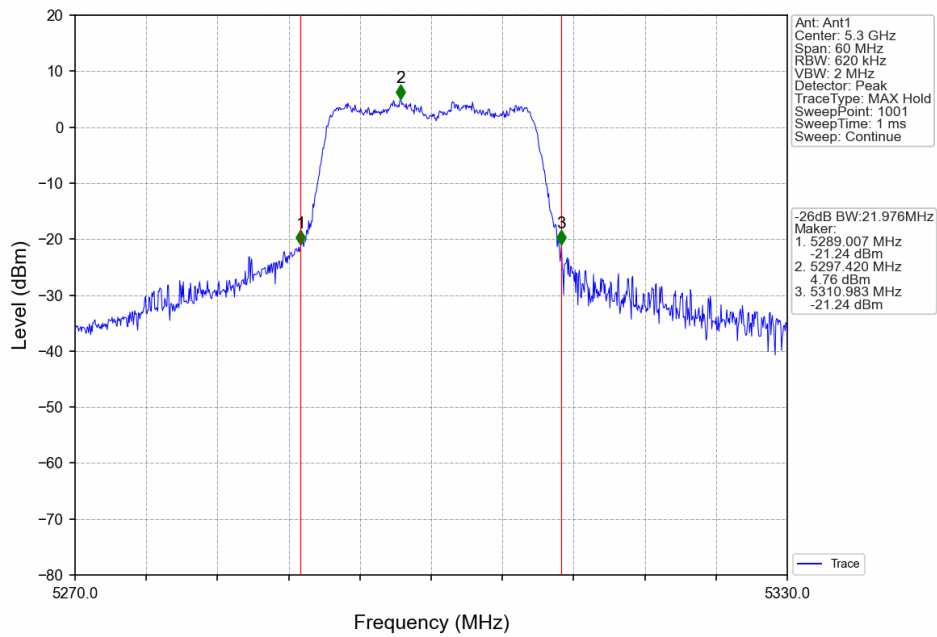
802.11n(HT40)_HCH_5310MHz_Ant1_NTNV



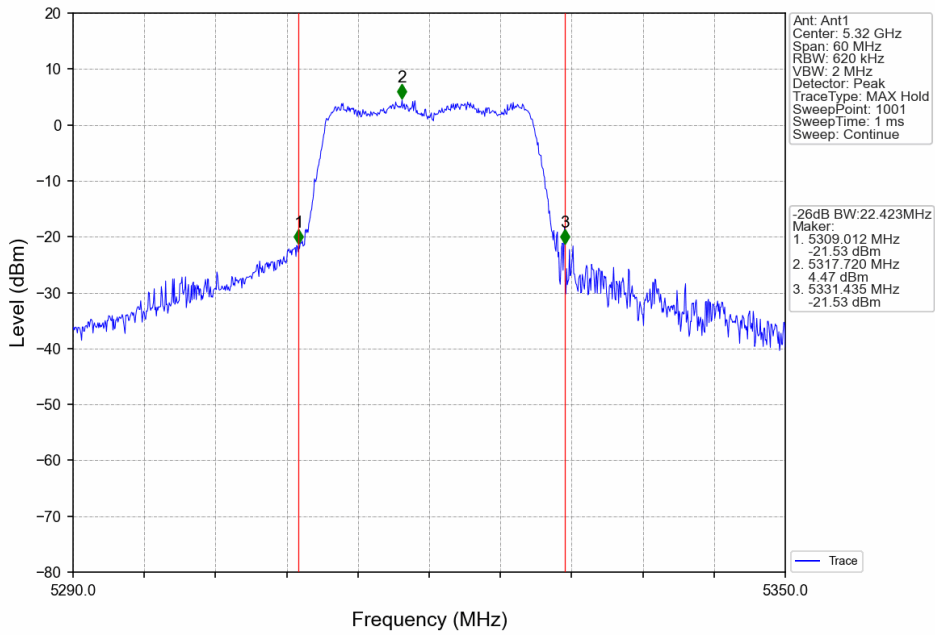
802.11ac(VHT20)_LCH_5260MHz_Ant1_NTNV



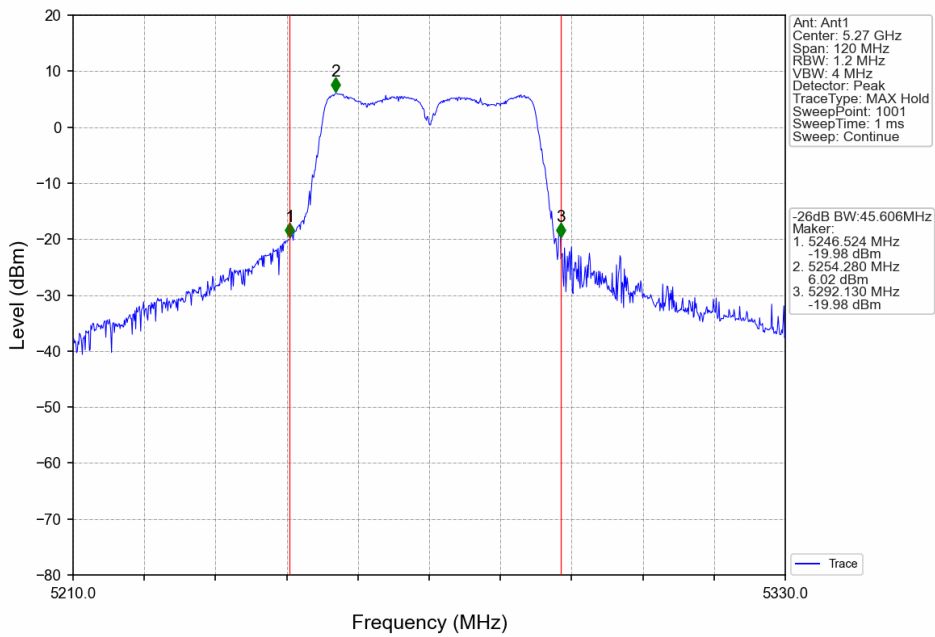
802.11ac(VHT20)_MCH_5300MHz_Ant1_NTNV



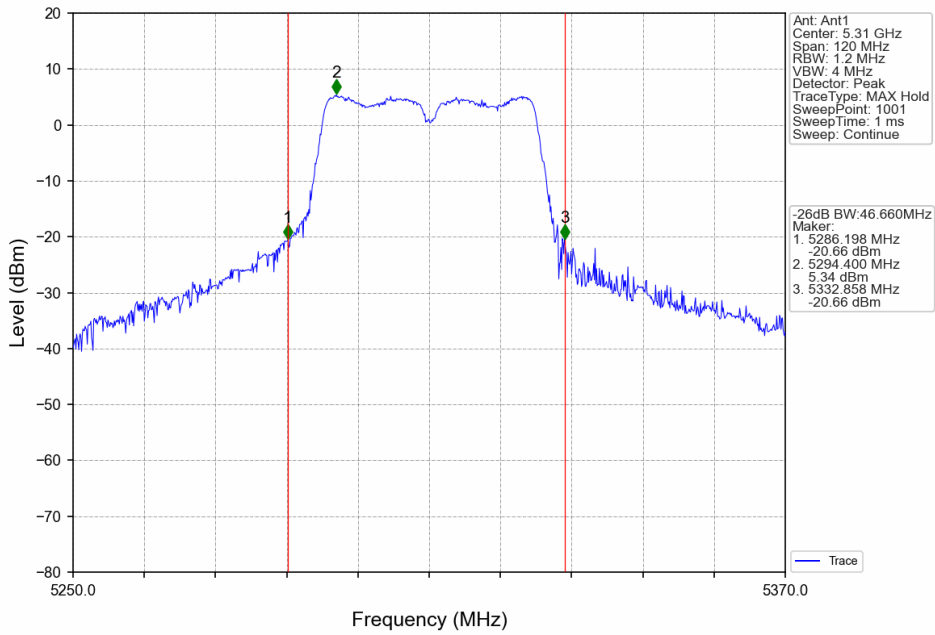
802.11ac(VHT20)_HCH_5320MHz_Ant1_NTNV



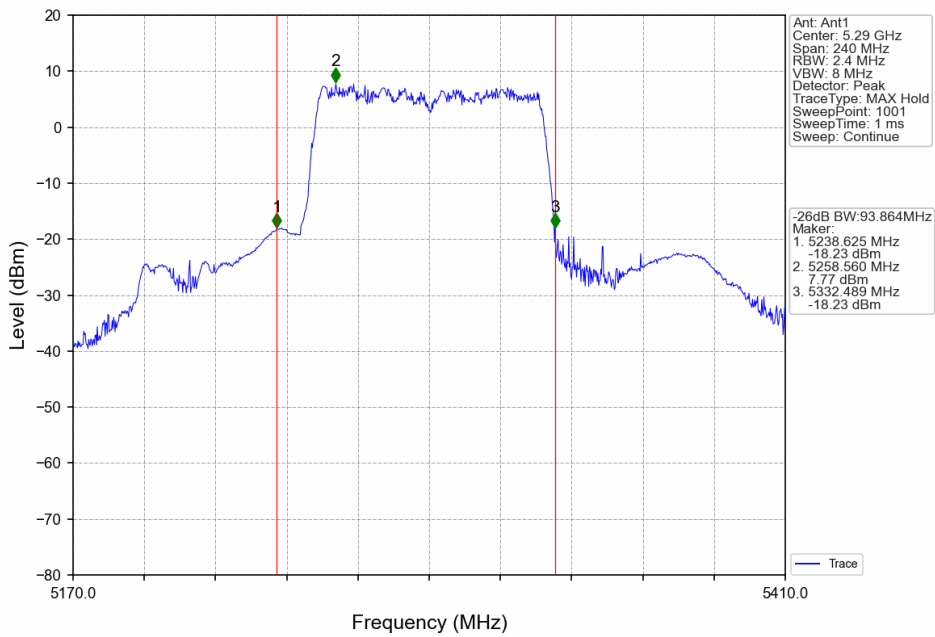
802.11ac(VHT40)_LCH_5270MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5310MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5290MHz_Ant1_NTNV



2. Maximum Conducted Output Power

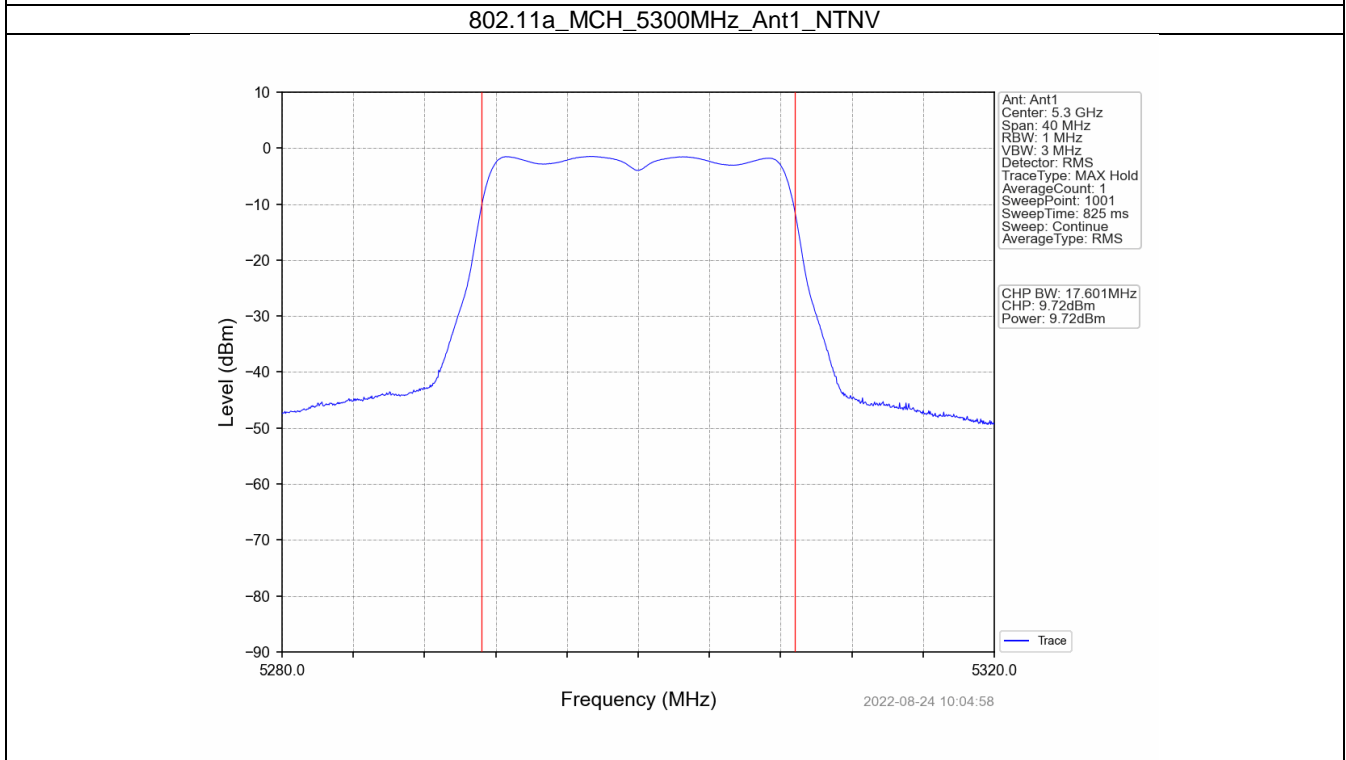
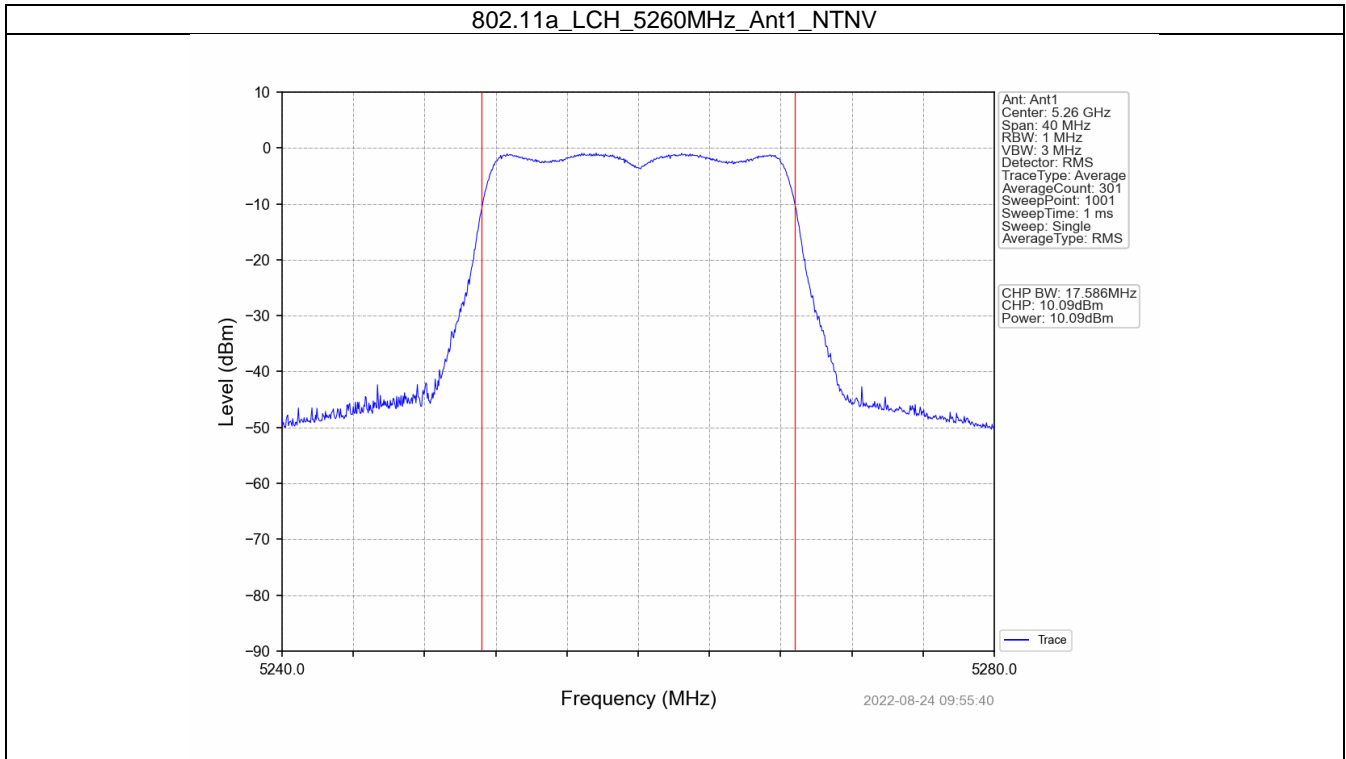
2.1 Power

2.1.1 Test Result

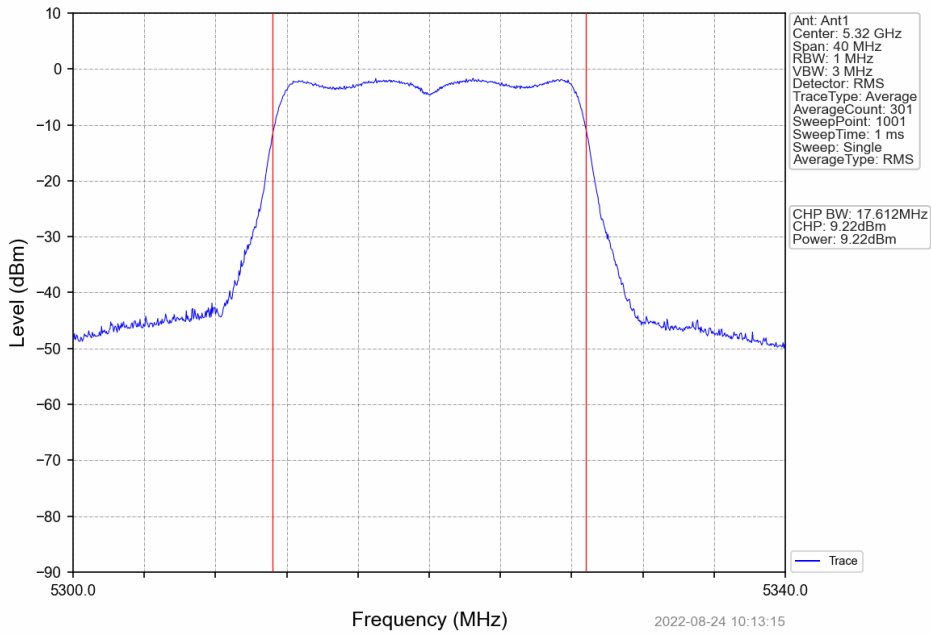
Mode	TX Type	Frequency (MHz)	Maximum Average Conducted Output Power (dBm)					Verdict
			AVG Conducted Power (dBm)	Limit	Duty Cycle Factor(dB)	EIRP	Limit	
802.11a	SISO	5260	10.09	<=23.98	0.00	14.34	<=30	Pass
		5300	9.72	<=23.98	0.00	13.97	<=30	Pass
		5320	9.22	<=23.98	0.00	13.47	<=30	Pass
802.11n (HT20)	SISO	5260	10.28	<=23.98	0.00	14.53	<=30	Pass
		5300	9.57	<=23.98	0.00	13.82	<=30	Pass
		5320	9.35	<=23.98	0.00	13.60	<=30	Pass
802.11n (HT40)	SISO	5270	10.32	<=23.98	0.00	14.57	<=30	Pass
		5310	9.65	<=23.98	0.00	13.90	<=30	Pass
802.11ac (VHT20)	SISO	5260	10.48	<=23.98	0.00	14.73	<=30	Pass
		5300	9.83	<=23.98	0.00	14.08	<=30	Pass
		5320	9.59	<=23.98	0.00	13.84	<=30	Pass
802.11ac (VHT40)	SISO	5270	10.55	<=23.98	0.00	14.80	<=30	Pass
		5310	9.84	<=23.98	0.00	14.09	<=30	Pass
802.11ac (VHT80)	SISO	5290	10.35	<=23.98	0.00	14.60	<=30	Pass

Note1: Antenna Gain: Ant1: 4.25dBi;
 Note2: The Duty Cycle Factor and RBW Factor is compensated in the graph.

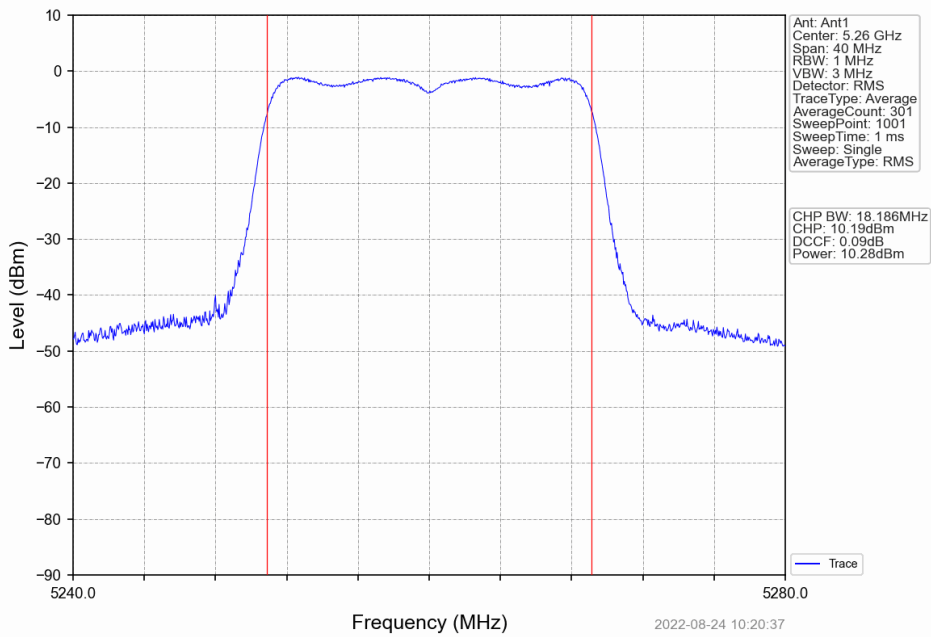
2.1.2 Test Graph



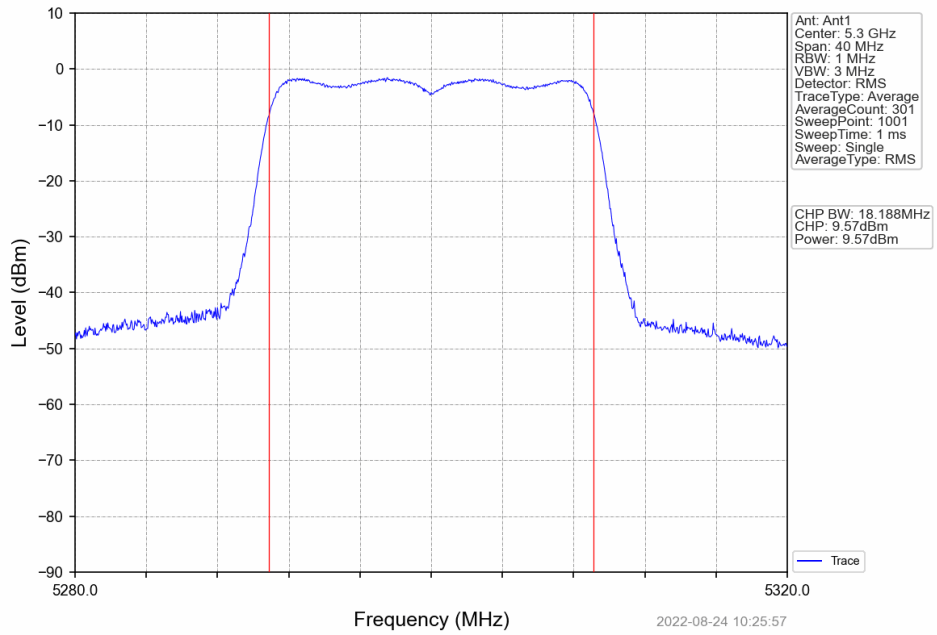
802.11a_HCH_5320MHz_Ant1_NTNV



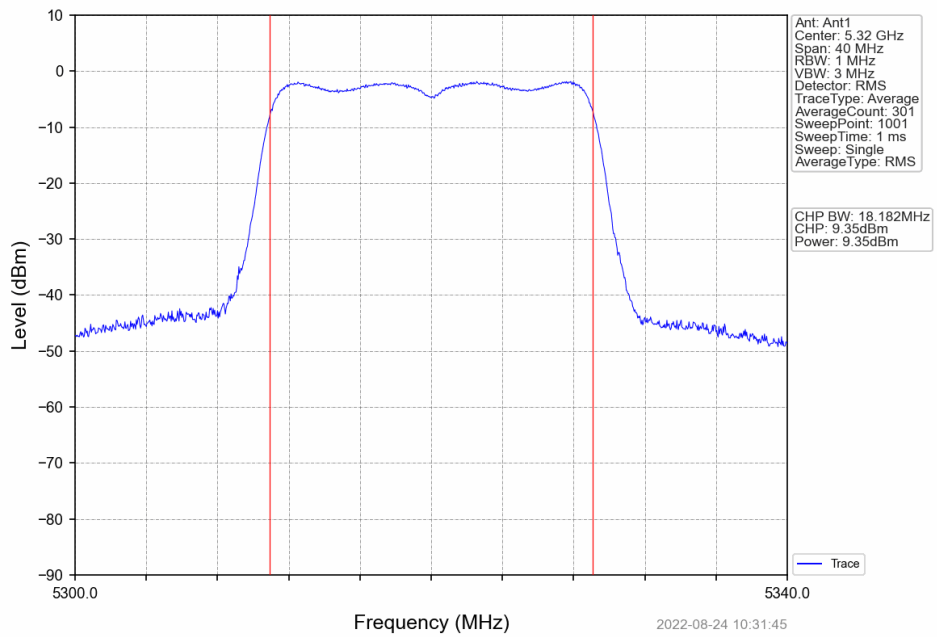
802.11n(HT20)_LCH_5260MHz_Ant1_NTNV



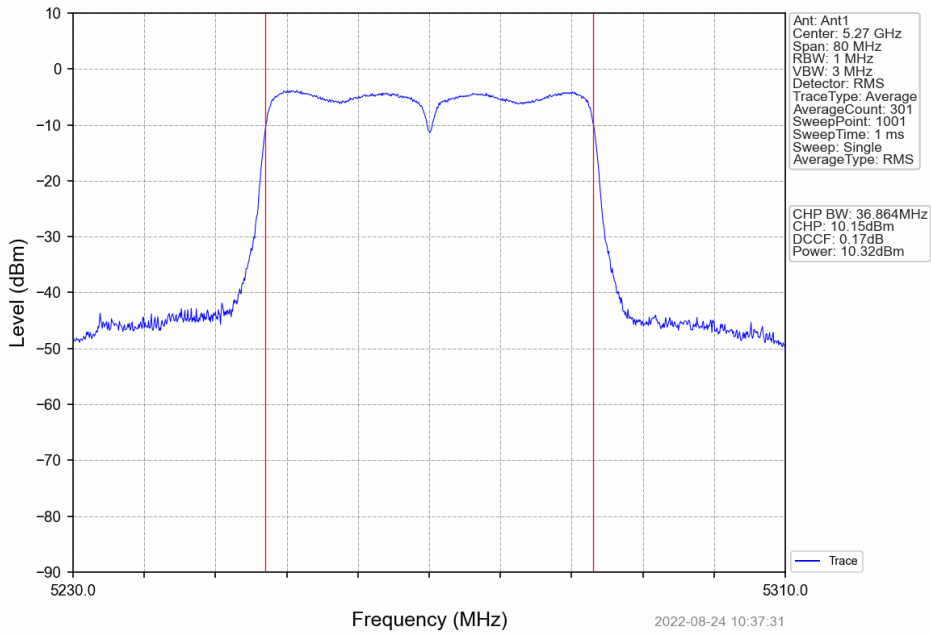
802.11n(HT20)_MCH_5300MHz_Ant1_NTNV



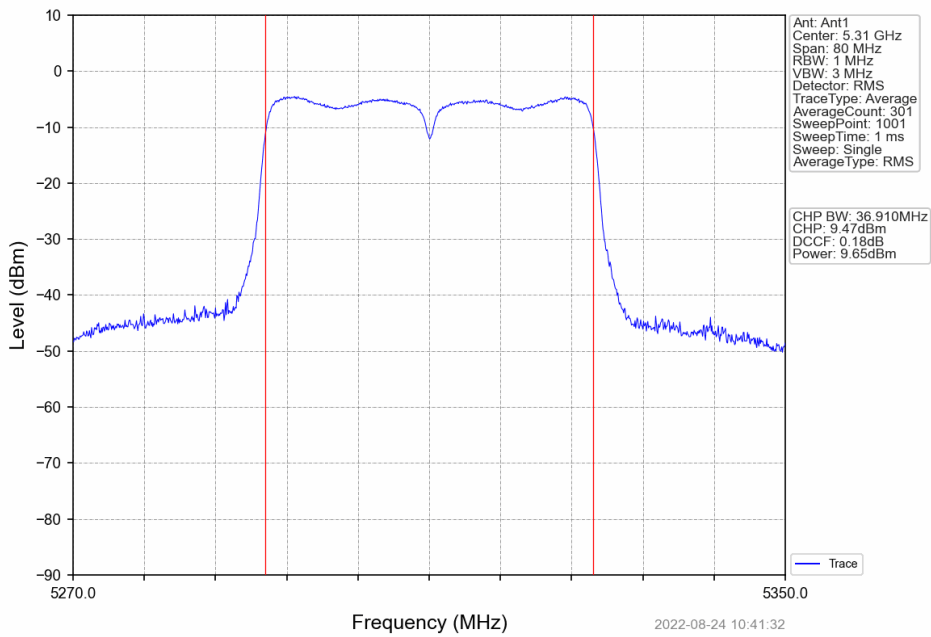
802.11n(HT20)_HCH_5320MHz_Ant1_NTNV



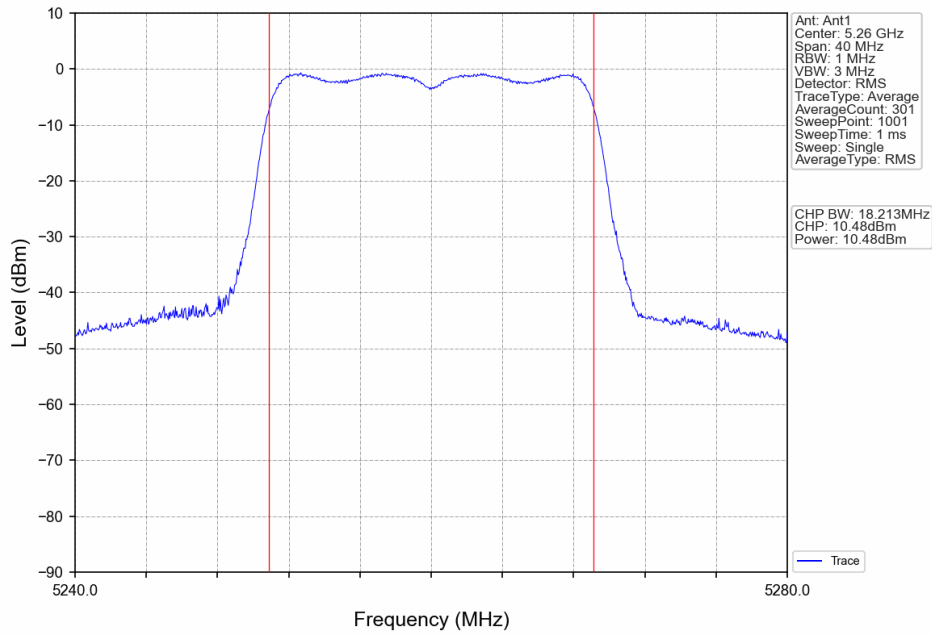
802.11n(HT40)_LCH_5270MHz_Ant1_NTNV



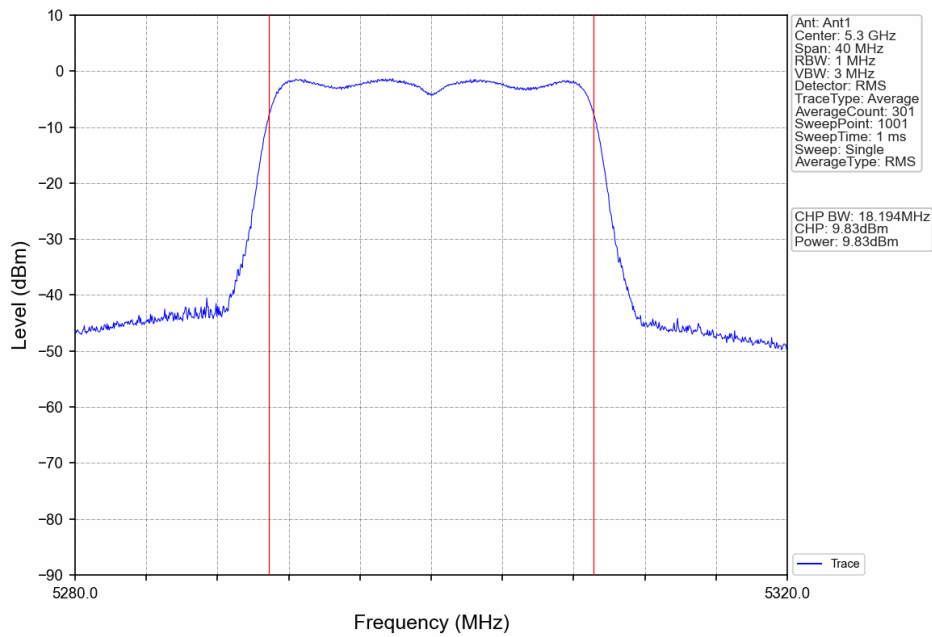
802.11n(HT40)_HCH_5310MHz_Ant1_NTNV



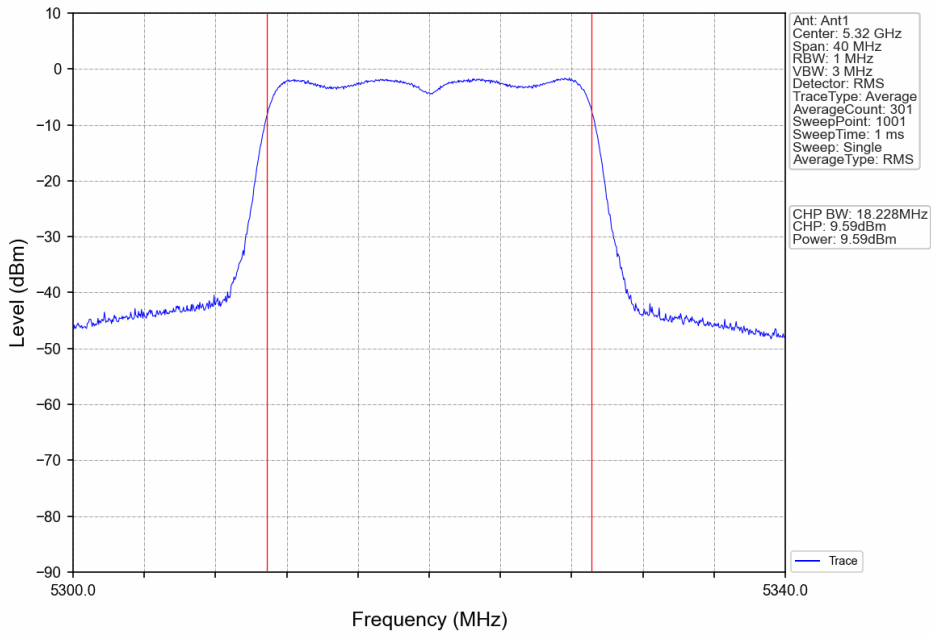
802.11ac(VHT20)_LCH_5260MHz_Ant1_NTNV



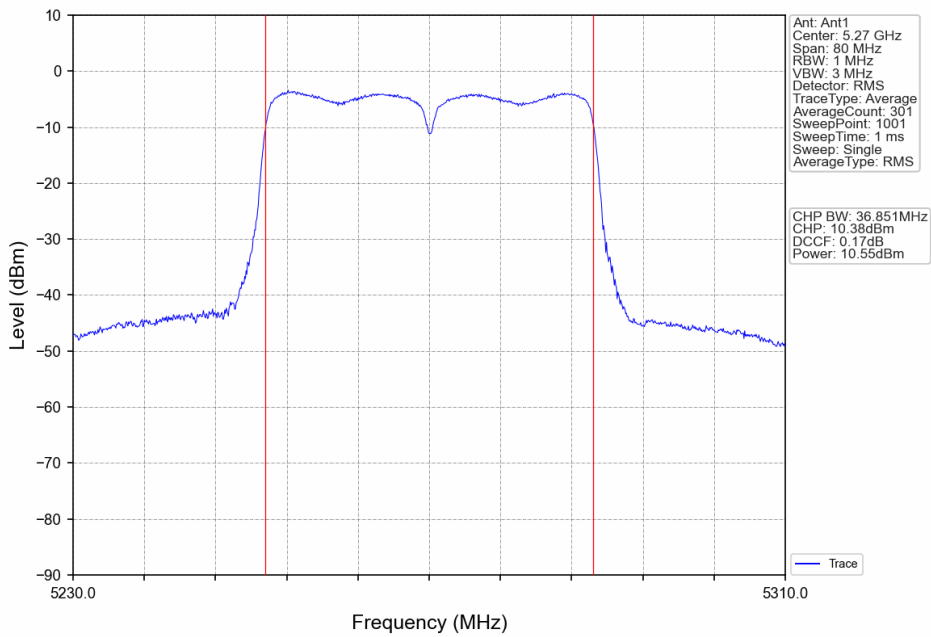
802.11ac(VHT20)_MCH_5300MHz_Ant1_NTNV



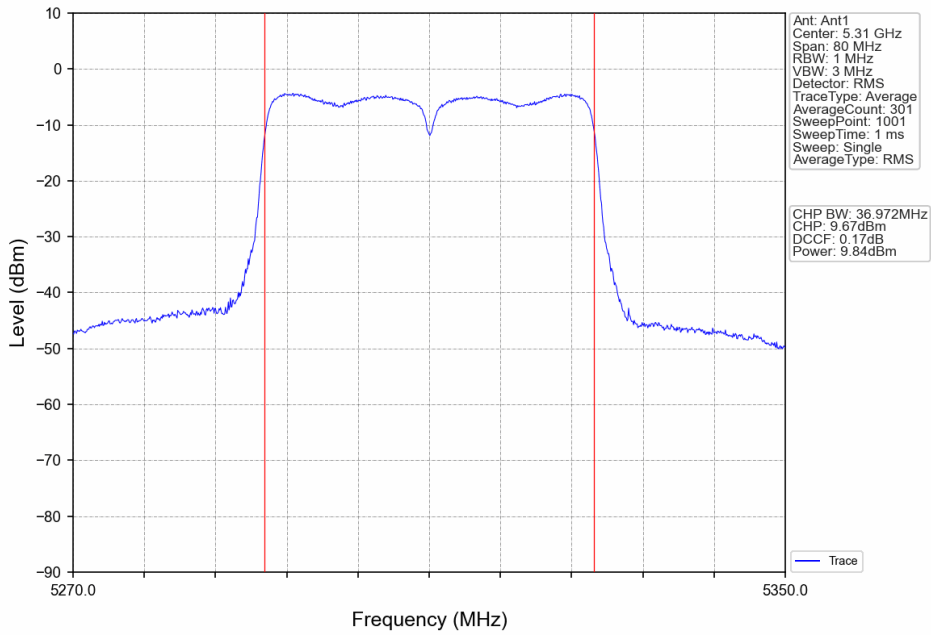
802.11ac(VHT20)_HCH_5320MHz_Ant1_NTNV



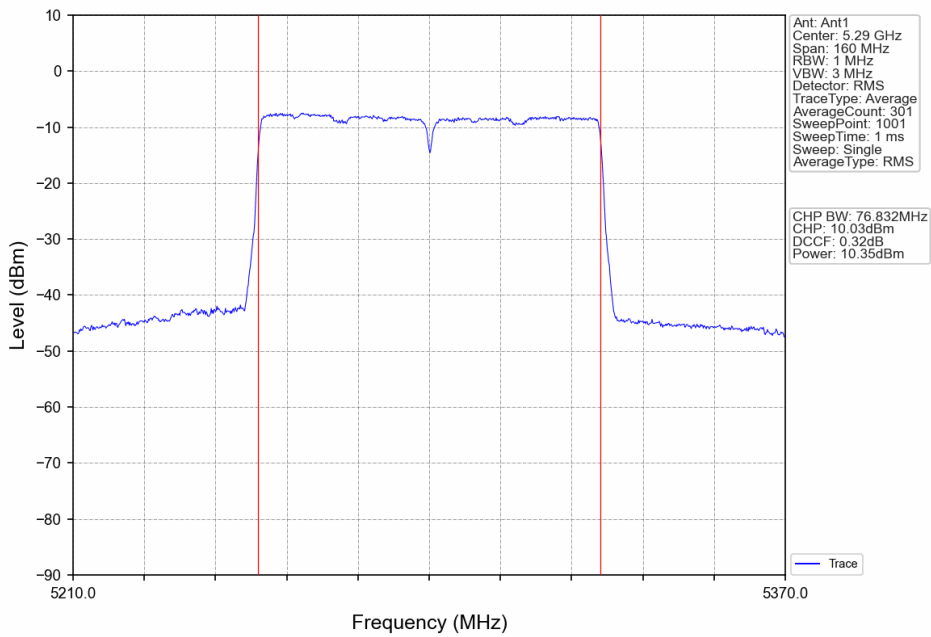
802.11ac(VHT40)_LCH_5270MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5310MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5290MHz_Ant1_NTNV



3. Maximum Power Spectral Density

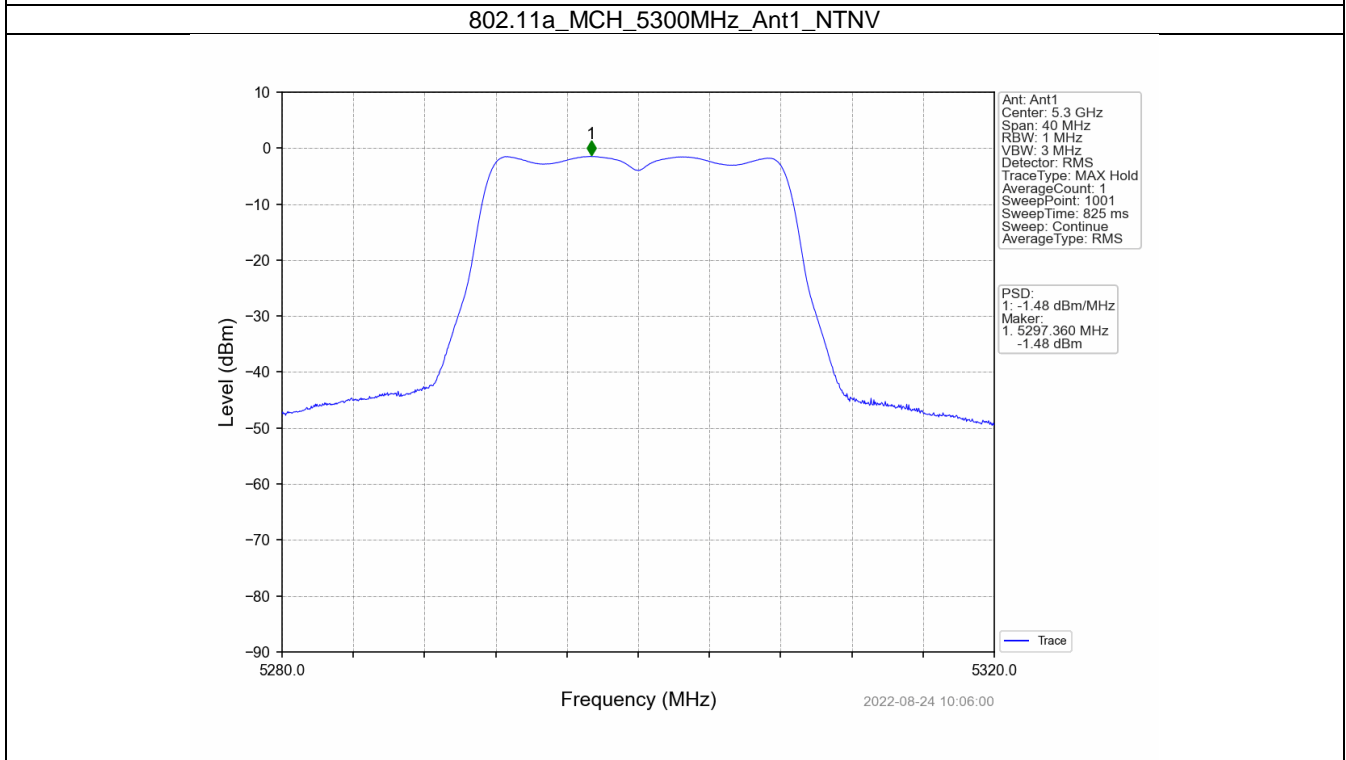
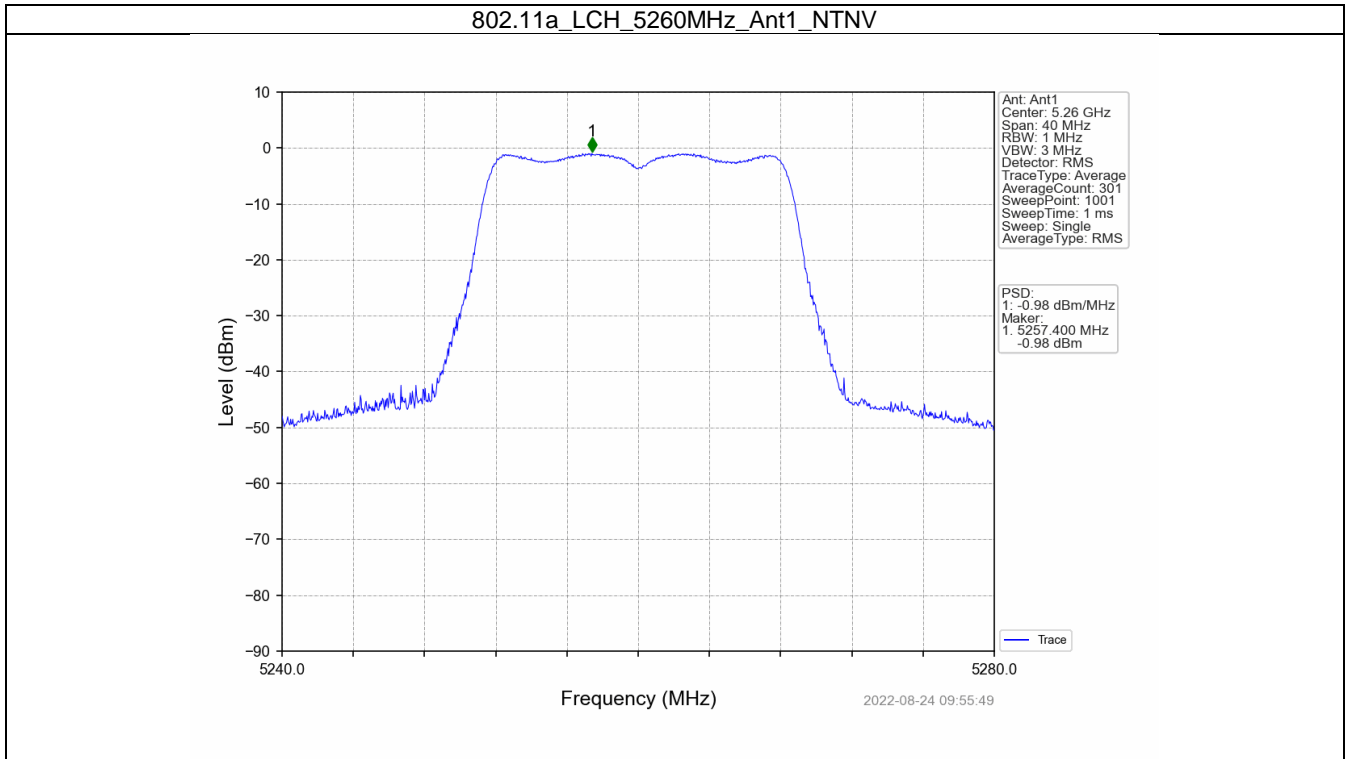
3.1 PSD

3.1.1 Test Result

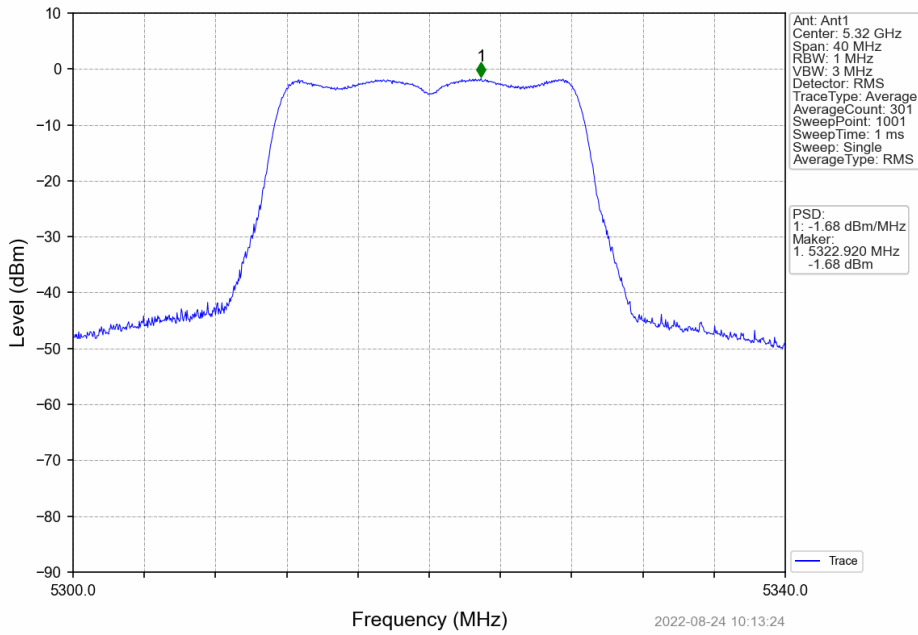
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/MHz)				Verdict
			Report Power Density [dBm/3KHz]	Duty Cycle Factor(dB)	Report Power Density [dBm/3KHz]	Limit	
802.11a	SISO	5260	-0.98	0.00	-0.98	<=11	Pass
		5300	-1.48	0.00	-1.48	<=11	Pass
		5320	-1.68	0.00	-1.68	<=11	Pass
802.11n (HT20)	SISO	5260	-0.92	0.00	-0.92	<=11	Pass
		5300	-1.59	0.00	-1.59	<=11	Pass
		5320	-1.72	0.00	-1.72	<=11	Pass
802.11n (HT40)	SISO	5270	-3.66	0.00	-3.66	<=11	Pass
		5310	-4.35	0.00	-4.35	<=11	Pass
802.11ac (VHT20)	SISO	5260	-0.77	0.00	-0.77	<=11	Pass
		5300	-1.34	0.00	-1.34	<=11	Pass
		5320	-1.44	0.00	-1.44	<=11	Pass
802.11ac (VHT40)	SISO	5270	-3.40	0.00	-3.40	<=11	Pass
		5310	-4.12	0.00	-4.12	<=11	Pass
802.11ac (VHT80)	SISO	5290	-7.01	0.00	-7.01	<=11	Pass

Note1: Antenna Gain: Ant1: 4.25dBi;
 Note2: The Duty Cycle Factor and RBW Factor is compensated in the graph.

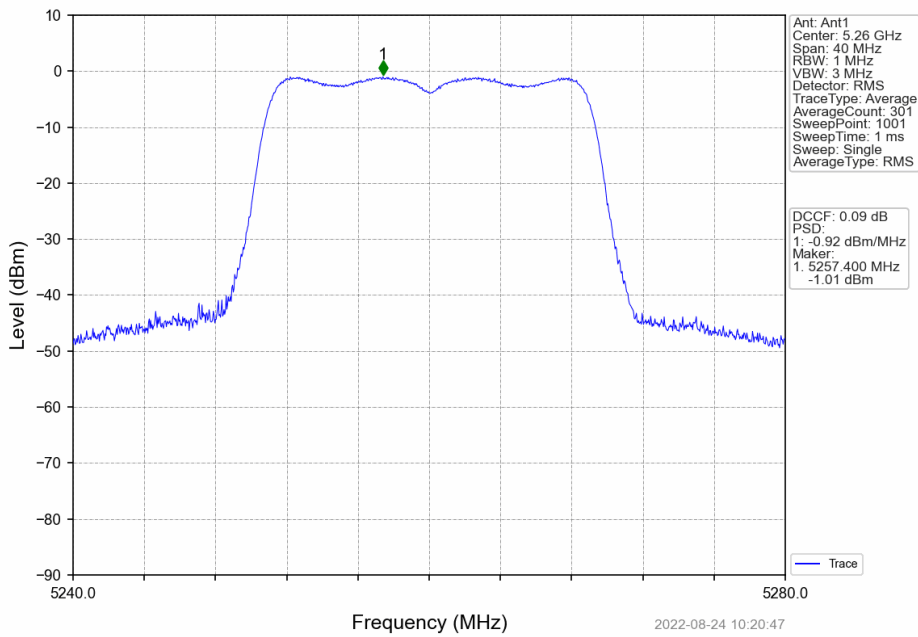
3.1.2 Test Graph



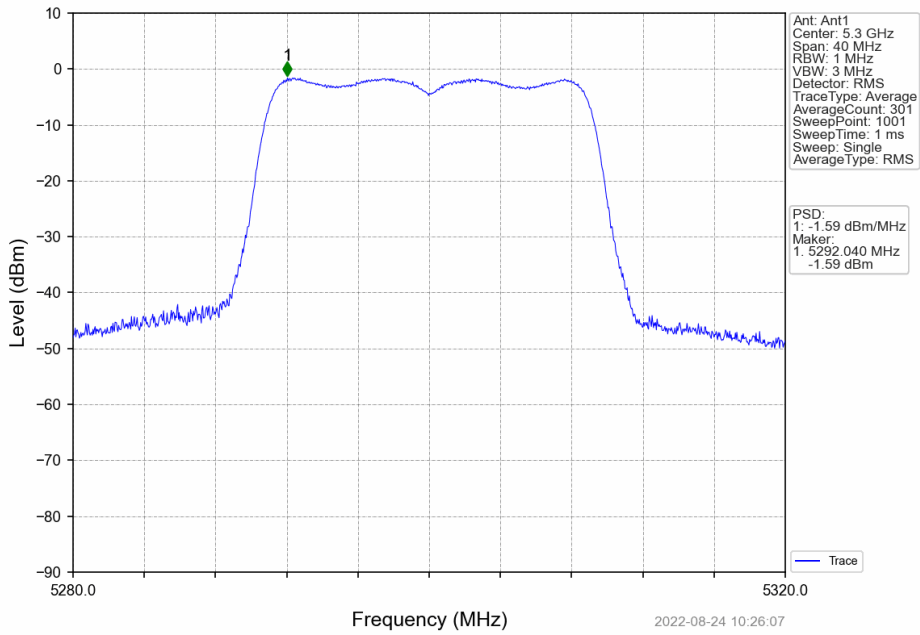
802.11a_HCH_5320MHz_Ant1_NTNV



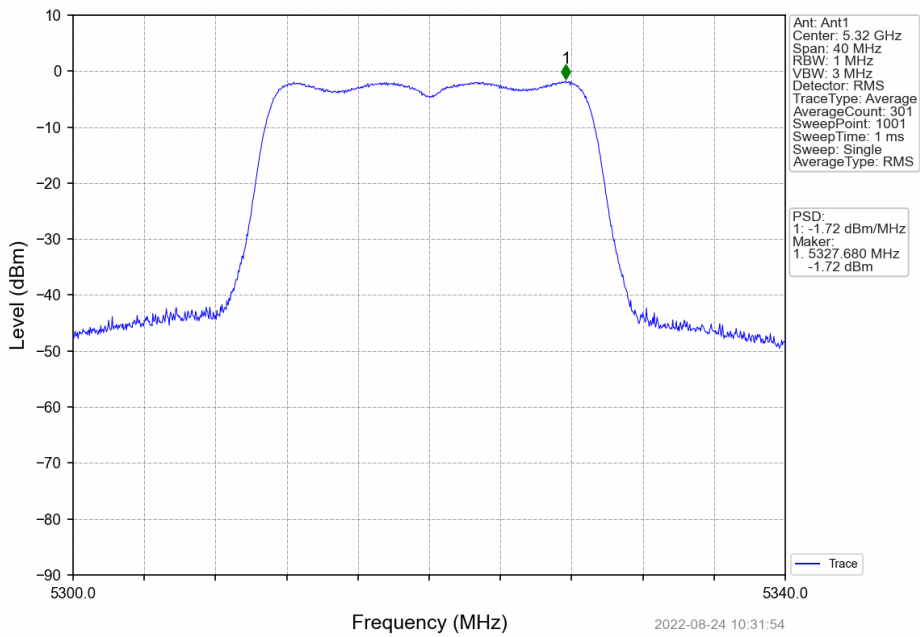
802.11n(HT20)_LCH_5260MHz_Ant1_NTNV



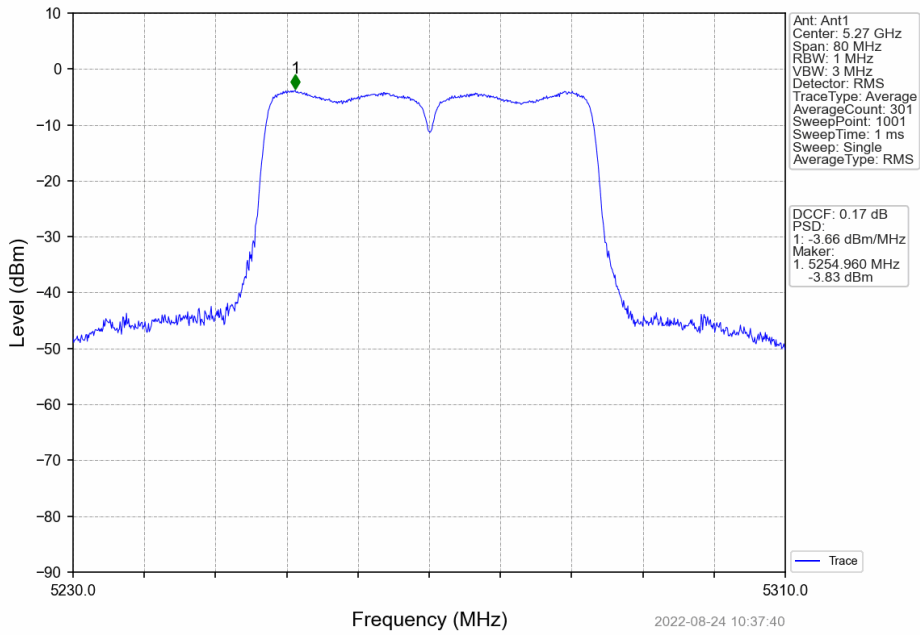
802.11n(HT20)_MCH_5300MHz_Ant1_NTNV



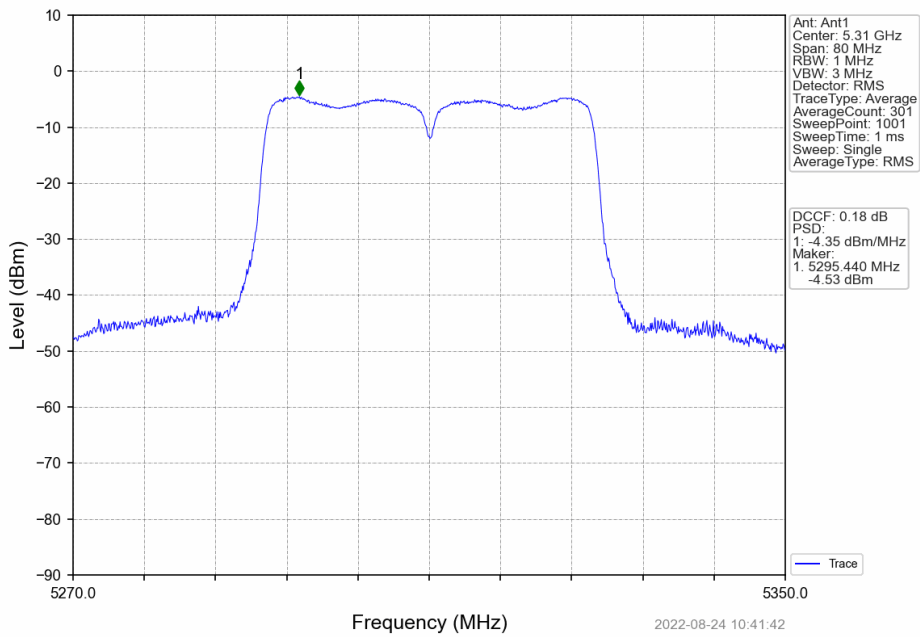
802.11n(HT20)_HCH_5320MHz_Ant1_NTNV



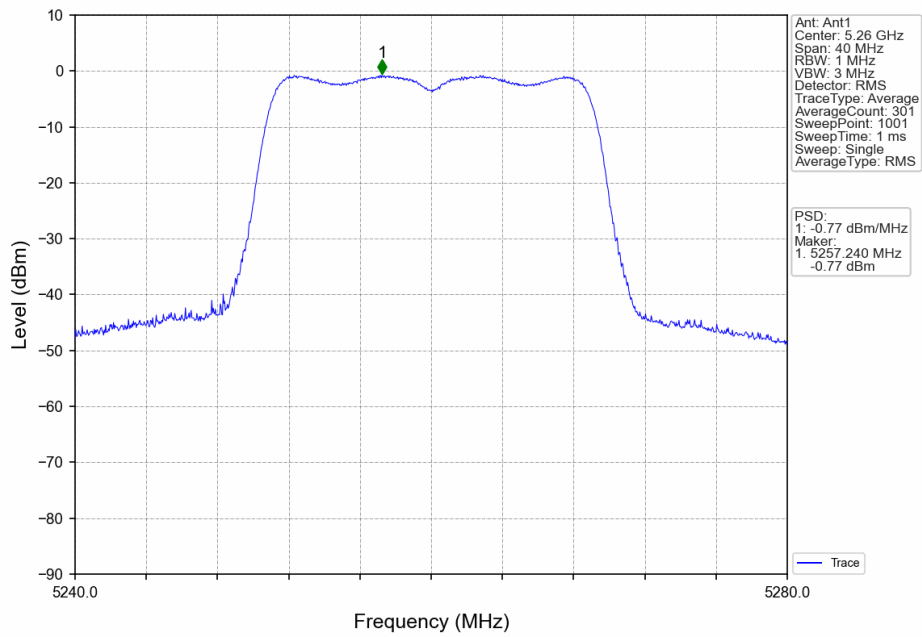
802.11n(HT40)_LCH_5270MHz_Ant1_NTNV



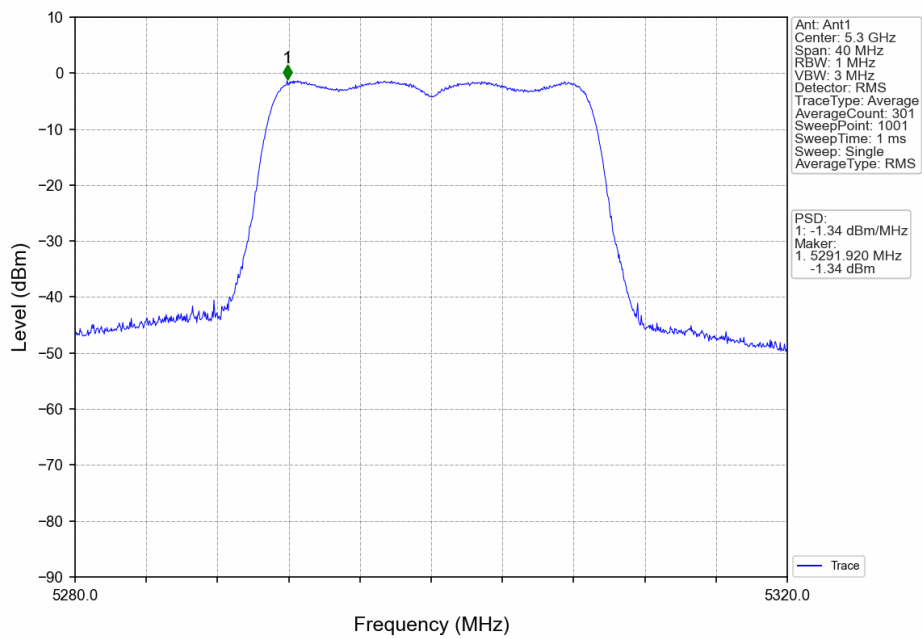
802.11n(HT40)_HCH_5310MHz_Ant1_NTNV



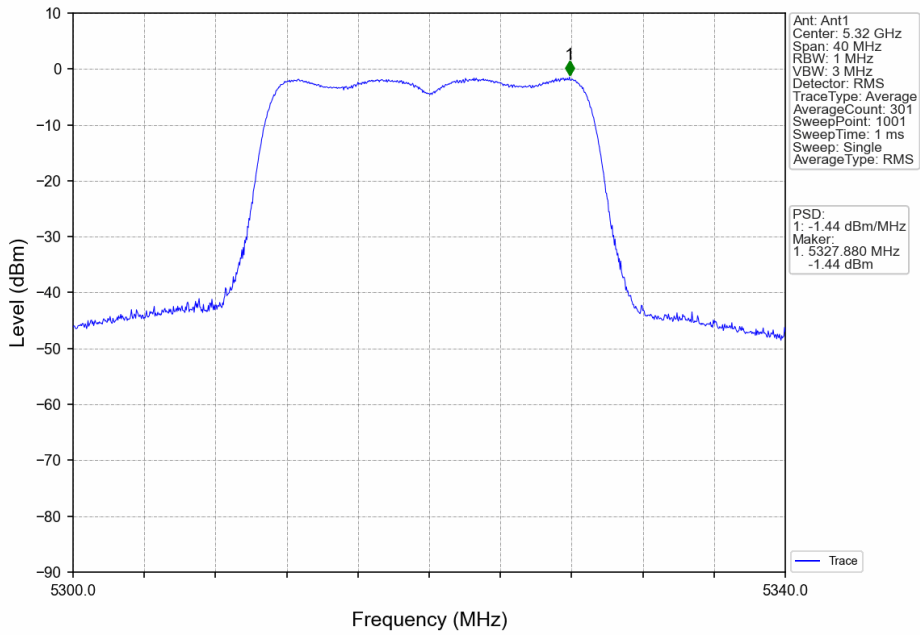
802.11ac(VHT20)_LCH_5260MHz_Ant1_NTNV



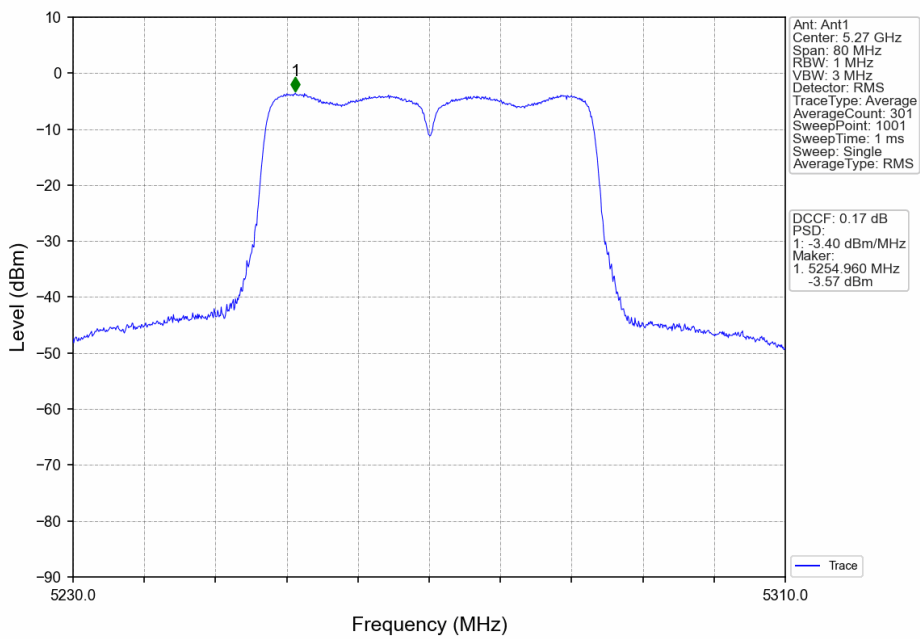
802.11ac(VHT20)_MCH_5300MHz_Ant1_NTNV



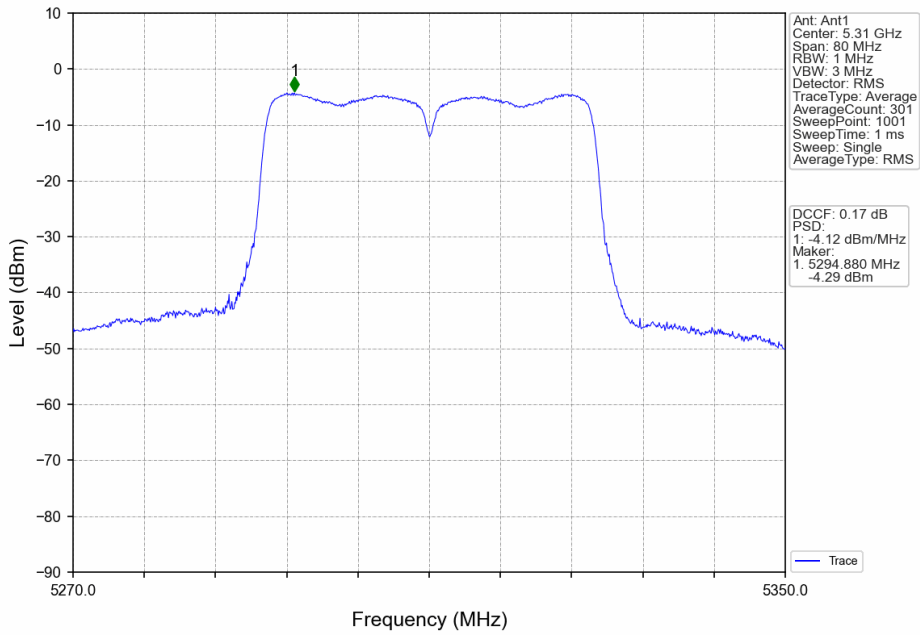
802.11ac(VHT20)_HCH_5320MHz_Ant1_NTNV



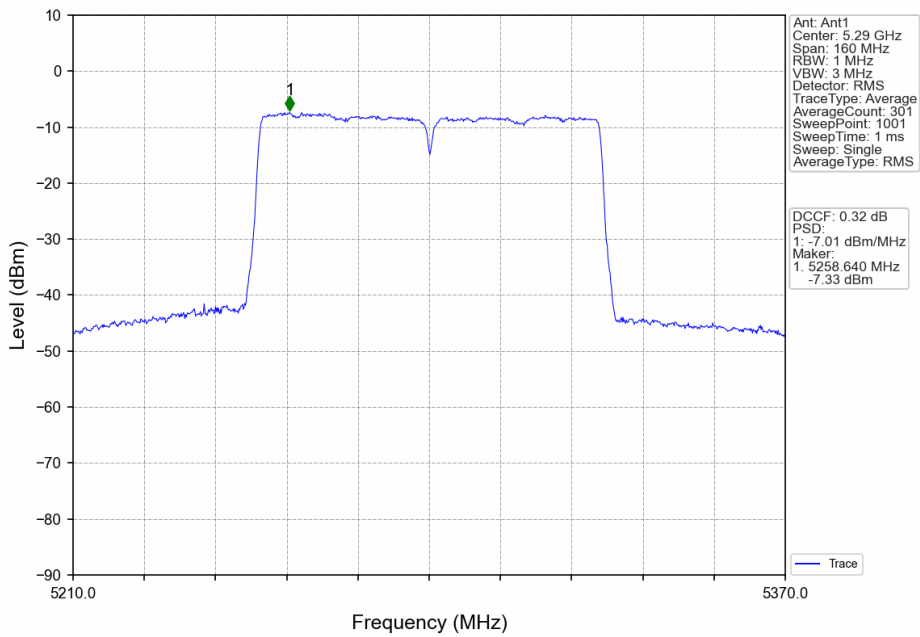
802.11ac(VHT40)_LCH_5270MHz_Ant1_NTNV



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 (VDC)	Measured Frequency (MHz)	Limit (MHz)	Verdict
802.11a	SISO	5260	20	4.25	5260.000	5250 to 5350	Pass
				5	5259.980	5250 to 5350	Pass
				5.75	5260.020	5250 to 5350	Pass
			-30	5	5260.020	5250 to 5350	Pass
			-20	5	5260.000	5250 to 5350	Pass
			-10	5	5260.000	5250 to 5350	Pass
			0	5	5260.020	5250 to 5350	Pass
			10	5	5260.020	5250 to 5350	Pass
			30	5	5260.000	5250 to 5350	Pass
		40	5	5260.020	5250 to 5350	Pass	
		85	5	5260.040	5250 to 5350	Pass	
		5300	20	4.25	5300.060	5250 to 5350	Pass
				5	5300.020	5250 to 5350	Pass
				5.75	5299.980	5250 to 5350	Pass
			-30	5	5300.020	5250 to 5350	Pass
			-20	5	5300.000	5250 to 5350	Pass
			-10	5	5300.000	5250 to 5350	Pass
			0	5	5300.020	5250 to 5350	Pass
			10	5	5300.020	5250 to 5350	Pass
			30	5	5300.000	5250 to 5350	Pass
		40	5	5300.040	5250 to 5350	Pass	
		85	5	5300.040	5250 to 5350	Pass	
		5320	20	4.25	5320.020	5250 to 5350	Pass
				5	5320.020	5250 to 5350	Pass
				5.75	5320.040	5250 to 5350	Pass
			-30	5	5320.040	5250 to 5350	Pass
			-20	5	5320.000	5250 to 5350	Pass
-10	5		5320.020	5250 to 5350	Pass		
0	5		5319.980	5250 to 5350	Pass		
10	5		5320.060	5250 to 5350	Pass		
30	5		5319.980	5250 to 5350	Pass		
40	5	5319.980	5250 to 5350	Pass			
85	5	5320.000	5250 to 5350	Pass			
802.11n (HT20)	SISO	5260	20	4.25	5260.020	5250 to 5350	Pass
				5	5260.020	5250 to 5350	Pass
				5.75	5260.020	5250 to 5350	Pass
			-30	5	5260.040	5250 to 5350	Pass
			-20	5	5260.020	5250 to 5350	Pass
			-10	5	5260.060	5250 to 5350	Pass
			0	5	5260.060	5250 to 5350	Pass
			10	5	5260.040	5250 to 5350	Pass
			30	5	5260.020	5250 to 5350	Pass
		40	5	5260.040	5250 to 5350	Pass	
		85	5	5260.060	5250 to 5350	Pass	
		5300	20	4.25	5300.040	5250 to 5350	Pass
				5	5300.040	5250 to 5350	Pass
				5.75	5300.020	5250 to 5350	Pass
			-30	5	5300.040	5250 to 5350	Pass
-20	5		5300.040	5250 to 5350	Pass		

			-10	5	5300.040	5250 to 5350	Pass
			0	5	5300.040	5250 to 5350	Pass
			10	5	5300.040	5250 to 5350	Pass
			30	5	5300.020	5250 to 5350	Pass
			40	5	5300.000	5250 to 5350	Pass
		85	5	5300.040	5250 to 5350	Pass	
		5320	20	4.25	5320.060	5250 to 5350	Pass
				5	5320.060	5250 to 5350	Pass
				5.75	5320.060	5250 to 5350	Pass
			-30	5	5320.020	5250 to 5350	Pass
			-20	5	5320.040	5250 to 5350	Pass
			-10	5	5320.040	5250 to 5350	Pass
			0	5	5320.000	5250 to 5350	Pass
			10	5	5320.060	5250 to 5350	Pass
			30	5	5320.040	5250 to 5350	Pass
40	5		5320.040	5250 to 5350	Pass		
85	5	5320.040	5250 to 5350	Pass			
802.11n (HT40)	SISO	5270	20	4.25	5270.040	5250 to 5350	Pass
				5	5270.080	5250 to 5350	Pass
				5.75	5270.080	5250 to 5350	Pass
			-30	5	5270.080	5250 to 5350	Pass
			-20	5	5270.080	5250 to 5350	Pass
			-10	5	5270.080	5250 to 5350	Pass
			0	5	5270.080	5250 to 5350	Pass
			10	5	5270.080	5250 to 5350	Pass
			30	5	5270.120	5250 to 5350	Pass
		40	5	5270.040	5250 to 5350	Pass	
		85	5	5270.080	5250 to 5350	Pass	
		5310	20	4.25	5310.080	5250 to 5350	Pass
				5	5310.080	5250 to 5350	Pass
				5.75	5310.120	5250 to 5350	Pass
			-30	5	5310.080	5250 to 5350	Pass
-20	5		5310.040	5250 to 5350	Pass		
-10	5		5310.080	5250 to 5350	Pass		
0	5	5310.040	5250 to 5350	Pass			
10	5	5310.000	5250 to 5350	Pass			
30	5	5310.080	5250 to 5350	Pass			
40	5	5310.080	5250 to 5350	Pass			
85	5	5310.040	5250 to 5350	Pass			
802.11ac (VHT20)	SISO	5260	20	4.25	5260.040	5250 to 5350	Pass
				5	5260.020	5250 to 5350	Pass
				5.75	5260.020	5250 to 5350	Pass
			-30	5	5260.020	5250 to 5350	Pass
			-20	5	5260.040	5250 to 5350	Pass
			-10	5	5260.020	5250 to 5350	Pass
			0	5	5260.020	5250 to 5350	Pass
			10	5	5260.040	5250 to 5350	Pass
			30	5	5260.000	5250 to 5350	Pass
		40	5	5260.020	5250 to 5350	Pass	
		85	5	5260.040	5250 to 5350	Pass	
		5300	20	4.25	5300.000	5250 to 5350	Pass
				5	5300.040	5250 to 5350	Pass
				5.75	5300.060	5250 to 5350	Pass
			-30	5	5300.020	5250 to 5350	Pass
-20	5		5300.000	5250 to 5350	Pass		
-10	5		5300.000	5250 to 5350	Pass		
0	5	5300.040	5250 to 5350	Pass			
10	5	5300.060	5250 to 5350	Pass			
30	5	5300.020	5250 to 5350	Pass			

			40	5	5300.040	5250 to 5350	Pass
			85	5	5300.040	5250 to 5350	Pass
		5320	20	4.25	5320.060	5250 to 5350	Pass
				5	5320.060	5250 to 5350	Pass
				5.75	5320.060	5250 to 5350	Pass
			-30	5	5320.060	5250 to 5350	Pass
			-20	5	5320.060	5250 to 5350	Pass
			-10	5	5320.040	5250 to 5350	Pass
			0	5	5320.040	5250 to 5350	Pass
			10	5	5320.060	5250 to 5350	Pass
			30	5	5320.040	5250 to 5350	Pass
			40	5	5320.080	5250 to 5350	Pass
		85	5	5320.080	5250 to 5350	Pass	
		802.11ac (VHT40)	SISO	5270	20	4.25	5270.040
5	5270.080					5250 to 5350	Pass
5.75	5270.040					5250 to 5350	Pass
-30	5				5270.040	5250 to 5350	Pass
-20	5				5270.000	5250 to 5350	Pass
-10	5				5270.040	5250 to 5350	Pass
0	5				5270.040	5250 to 5350	Pass
10	5				5270.040	5250 to 5350	Pass
30	5				5270.160	5250 to 5350	Pass
40	5				5270.040	5250 to 5350	Pass
85	5			5270.000	5250 to 5350	Pass	
5310	20			4.25	5310.040	5250 to 5350	Pass
				5	5310.080	5250 to 5350	Pass
				5.75	5310.080	5250 to 5350	Pass
	-30			5	5310.120	5250 to 5350	Pass
	-20			5	5310.040	5250 to 5350	Pass
	-10			5	5310.040	5250 to 5350	Pass
	0			5	5310.040	5250 to 5350	Pass
	10			5	5310.080	5250 to 5350	Pass
	30			5	5310.040	5250 to 5350	Pass
	40			5	5310.120	5250 to 5350	Pass
	85			5	5310.080	5250 to 5350	Pass
	802.11ac (VHT80)	SISO	5290	20	4.25	5290.075	5250 to 5350
5					5290.075	5250 to 5350	Pass
5.75					5290.075	5250 to 5350	Pass
-30				5	5290.000	5250 to 5350	Pass
-20				5	5290.000	5250 to 5350	Pass
-10				5	5290.075	5250 to 5350	Pass
0				5	5290.075	5250 to 5350	Pass
10				5	5290.000	5250 to 5350	Pass
30				5	5290.075	5250 to 5350	Pass
40				5	5290.075	5250 to 5350	Pass
85				5	5290.075	5250 to 5350	Pass