Test Data for 5G_BAND2C

Product Name: MaaXBoard RT

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

1. Bandwidth

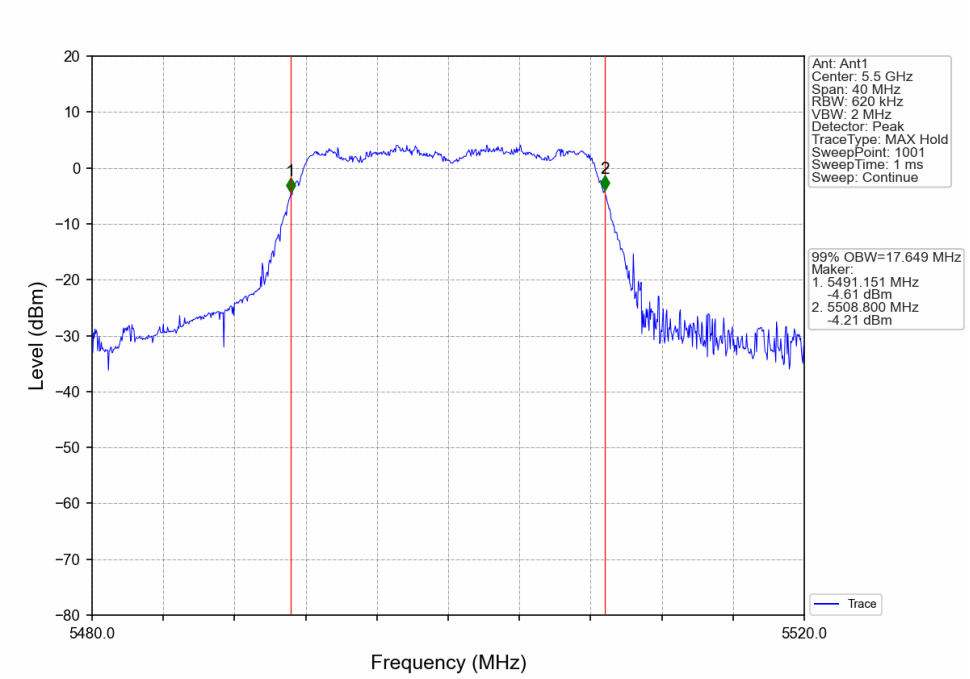
1.1 OBW

1.1.1 Test Result

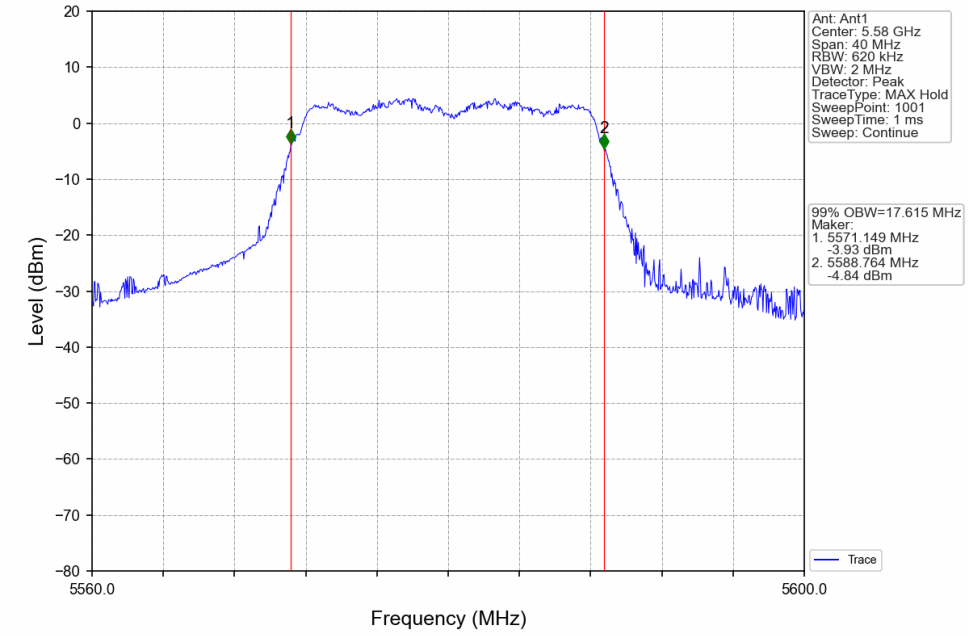
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz) Result	Verdict
802.11a	SISO	5500	1	17.649	Pass
		5580	1	17.615	Pass
		5700	1	17.539	Pass
802.11n (HT20)	SISO	5500	1	18.157	Pass
		5580	1	18.200	Pass
		5700	1	18.205	Pass
802.11n (HT40)	SISO	5510	1	36.864	Pass
		5550	1	36.852	Pass
		5670	1	36.866	Pass
802.11ac (VHT20)	SISO	5500	1	18.211	Pass
		5580	1	18.221	Pass
		5700	1	18.164	Pass
802.11ac (VHT40)	SISO	5510	1	36.817	Pass
		5550	1	36.834	Pass
		5670	1	36.845	Pass
802.11ac (VHT80)	SISO	5530	1	76.830	Pass

1.1.2 Test Graph

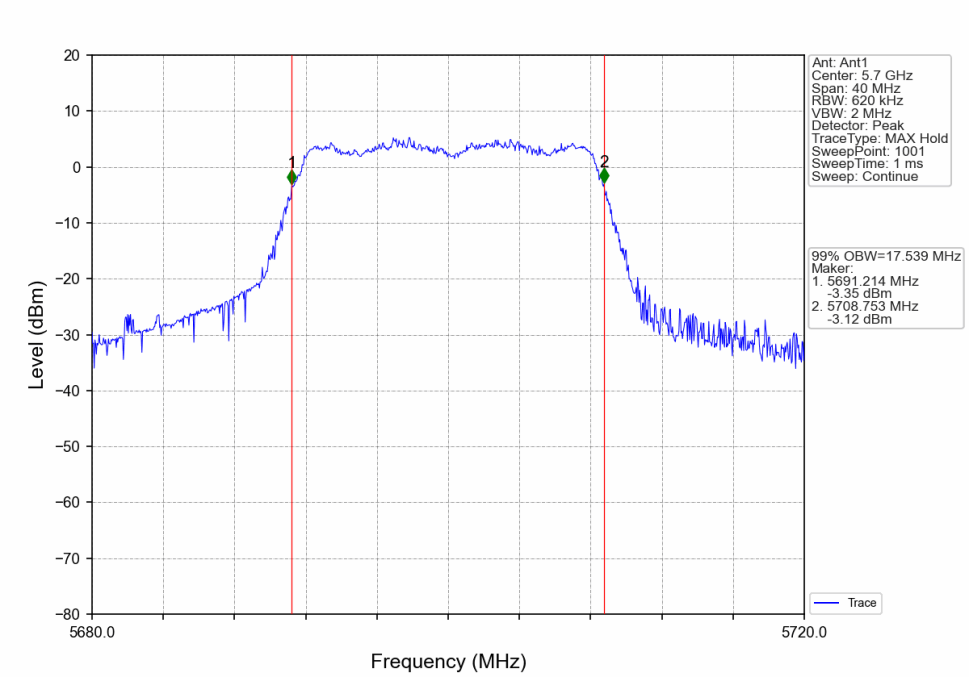
802.11a_LCH_5500MHz_Ant1_NTNV



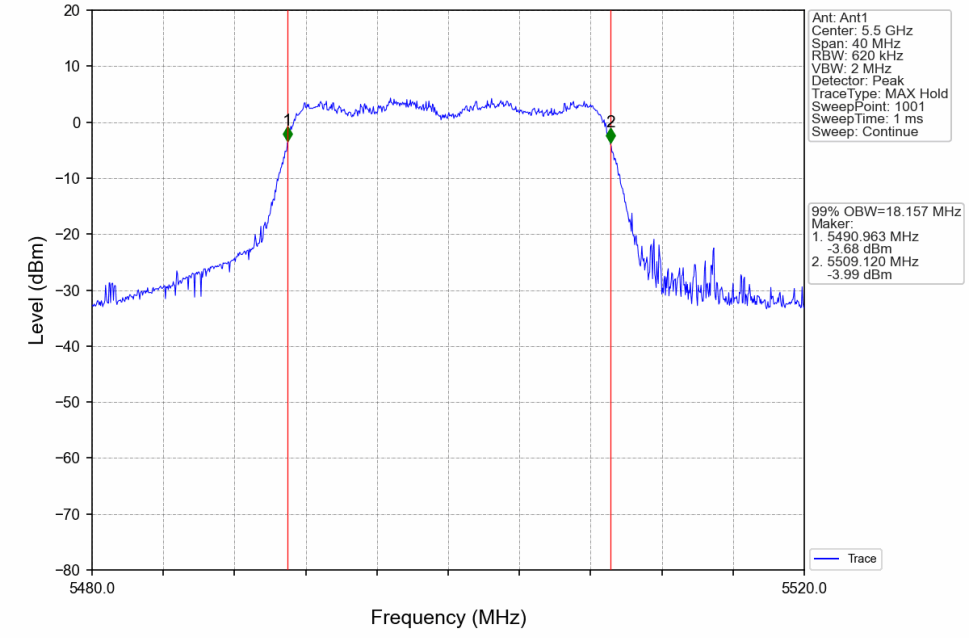
802.11a_MCH_5580MHz_Ant1_NTNV



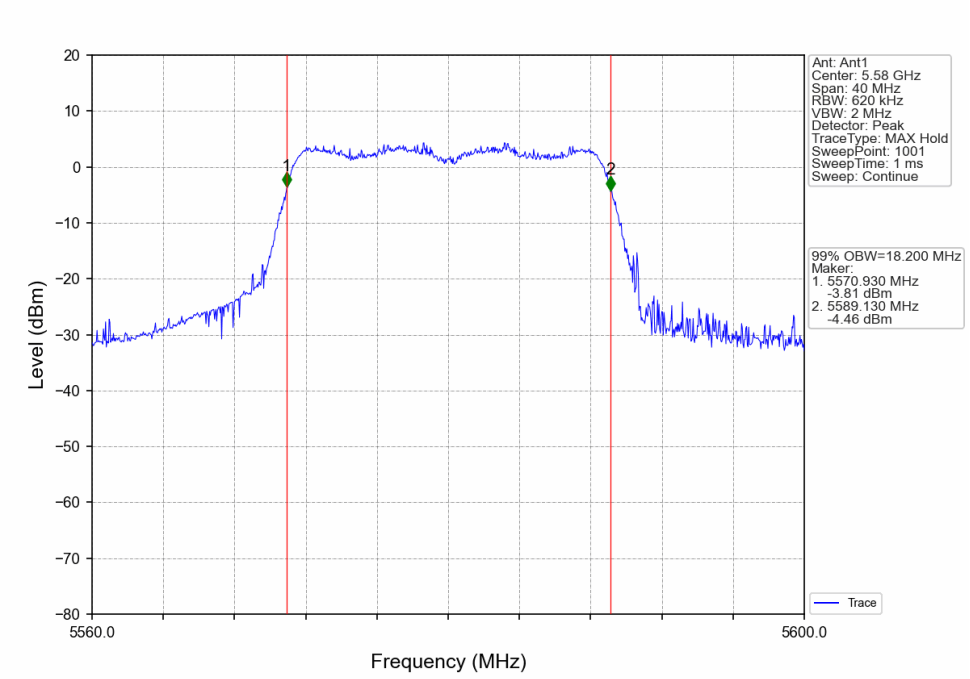
802.11a_HCH_5700MHz_Ant1_NTNV



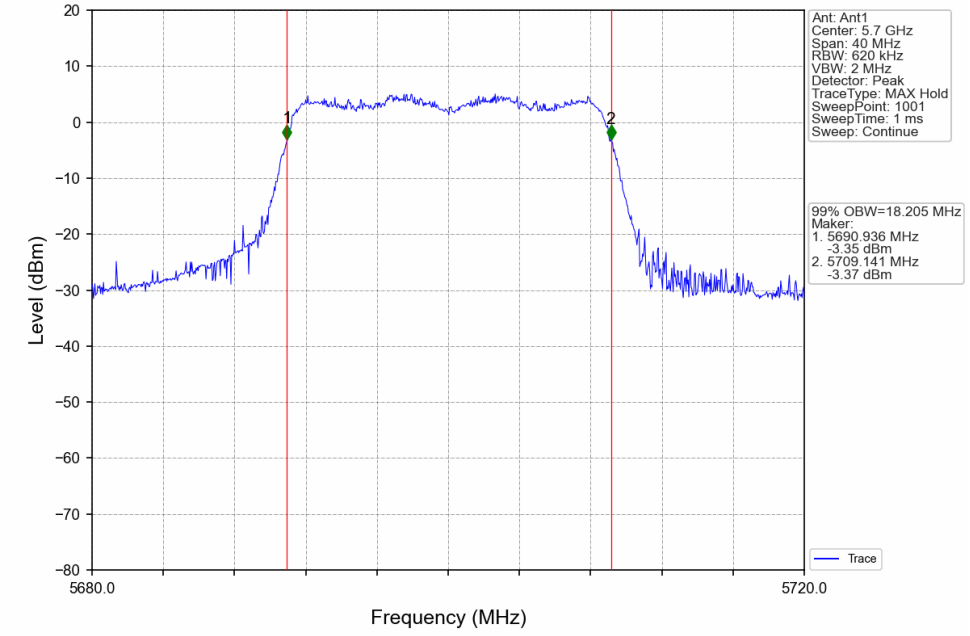
802.11n(HT20)_LCH_5500MHz_Ant1_NTNV



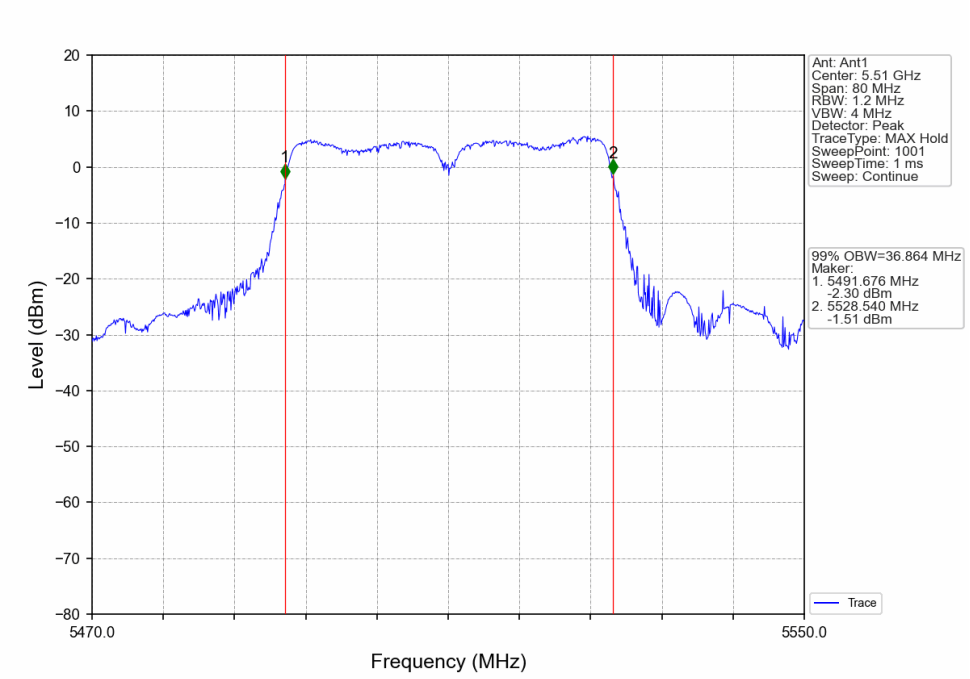
802.11n(HT20)_MCH_5580MHz_Ant1_NTNV



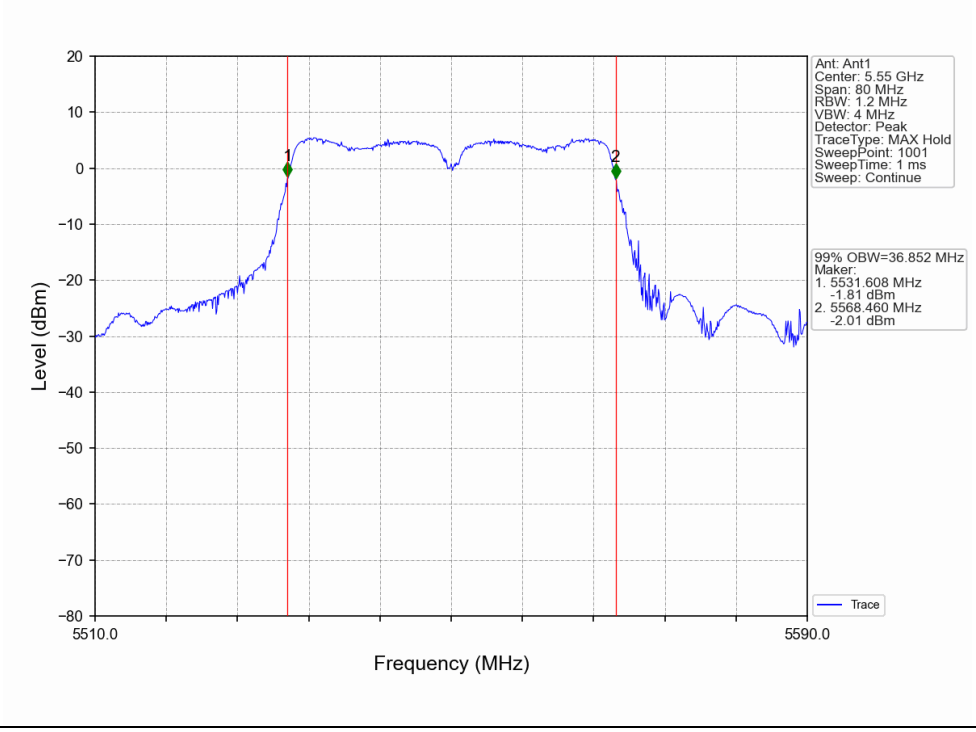
802.11n(HT20)_HCH_5700MHz_Ant1_NTNV



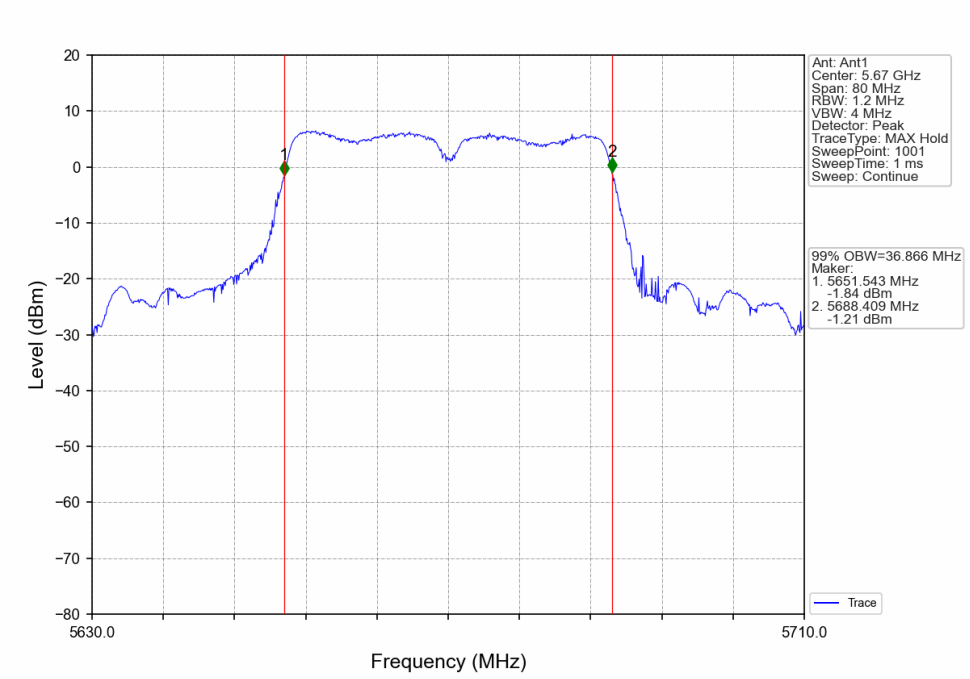
802.11n(HT40)_LCH_5510MHz_Ant1_NTNV



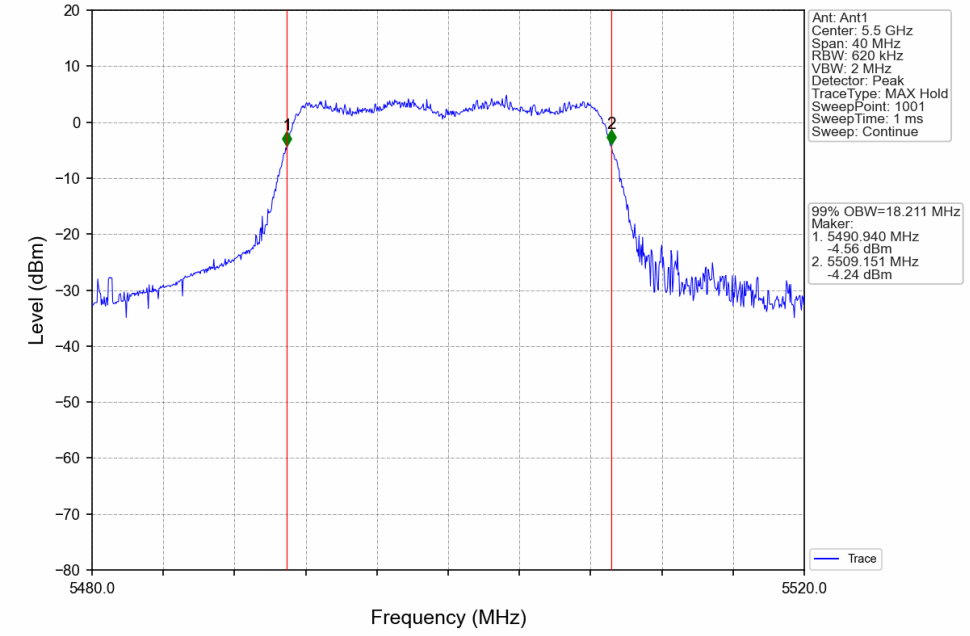
802.11n(HT40)_MCH_5550MHz_Ant1_NTNV



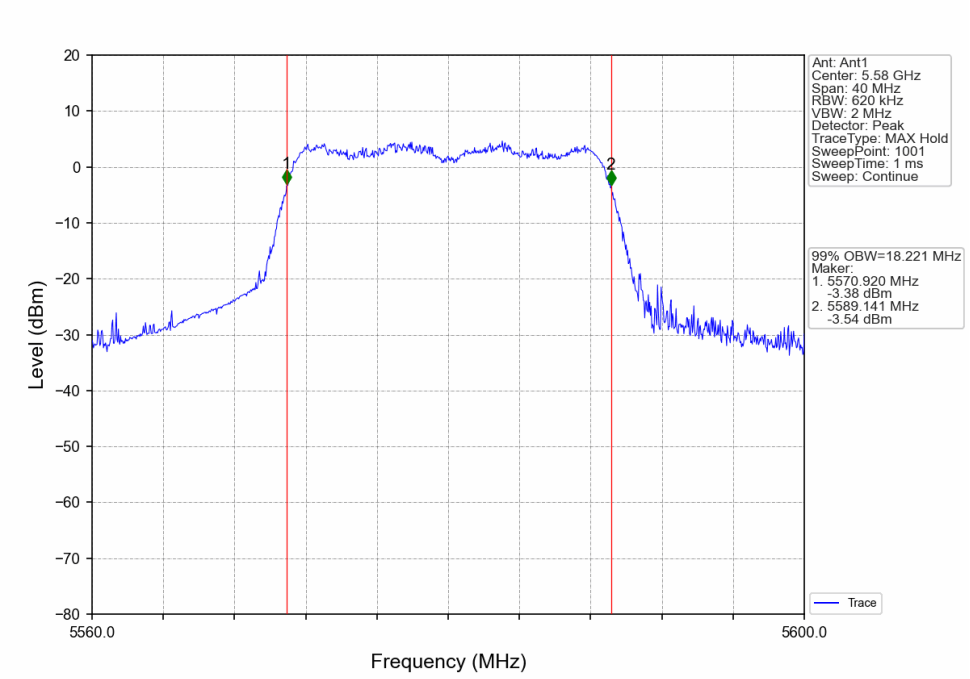
802.11n(HT40)_HCH_5670MHz_Ant1_NTNV



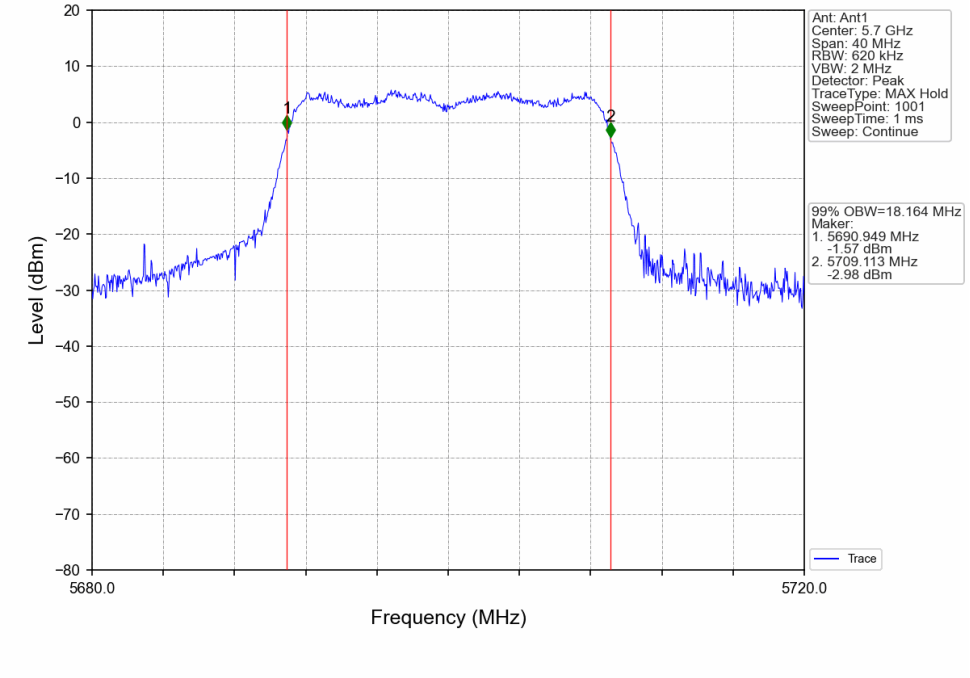
802.11ac(VHT20)_LCH_5500MHz_Ant1_NTNV



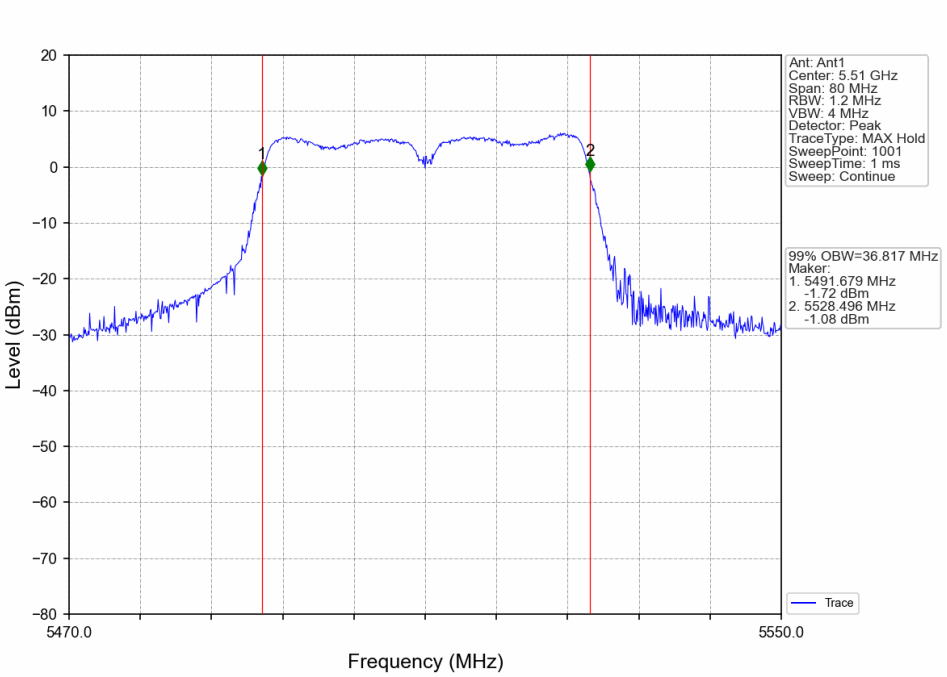
802.11ac(VHT20)_MCH_5580MHz_Ant1_NTNV



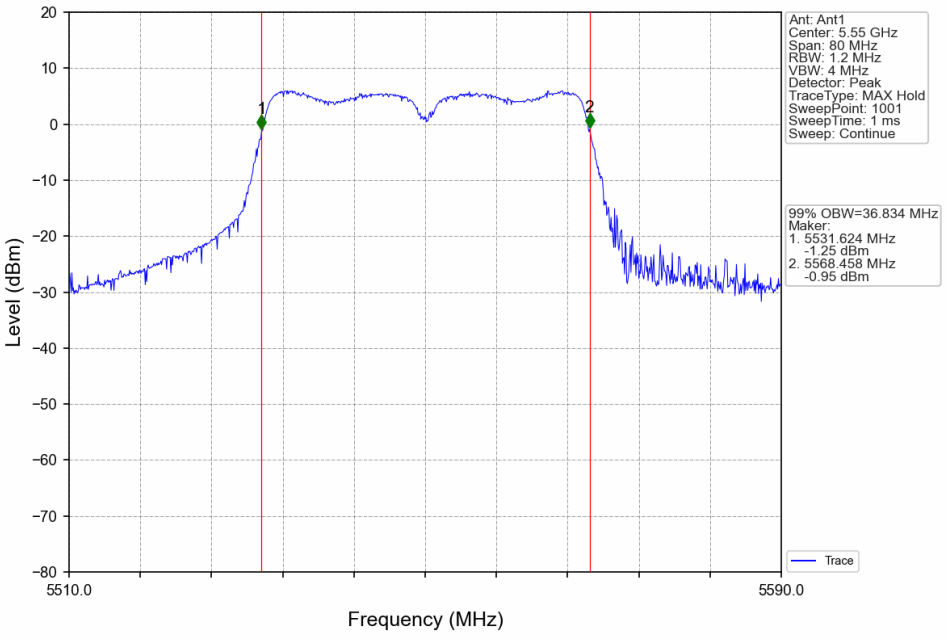
802.11ac(VHT20)_HCH_5700MHz_Ant1_NTNV



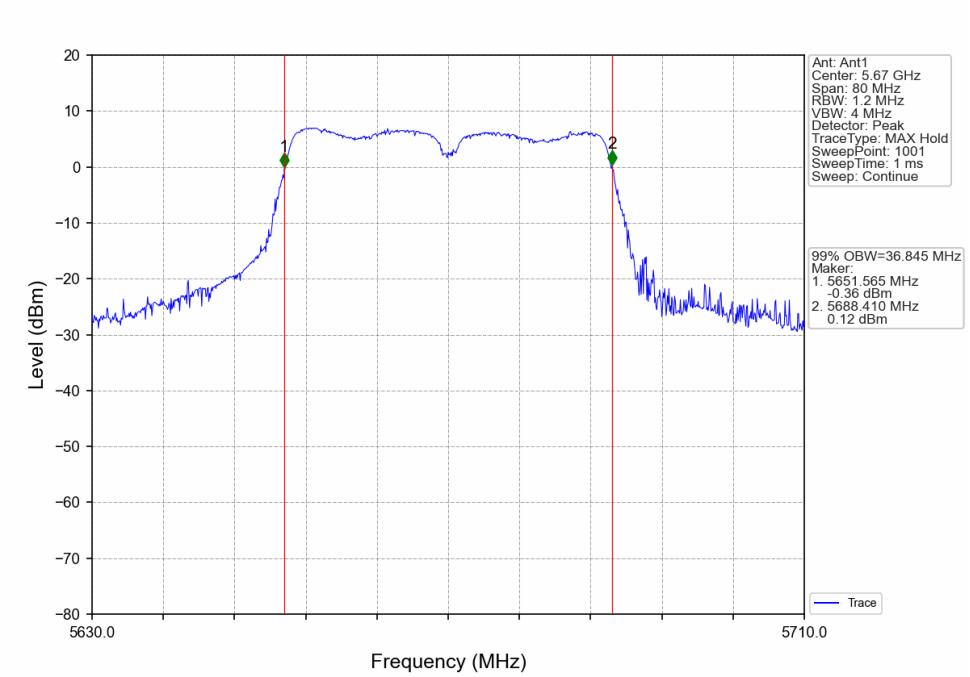
802.11ac(VHT40)_LCH_5510MHz_Ant1_NTNV



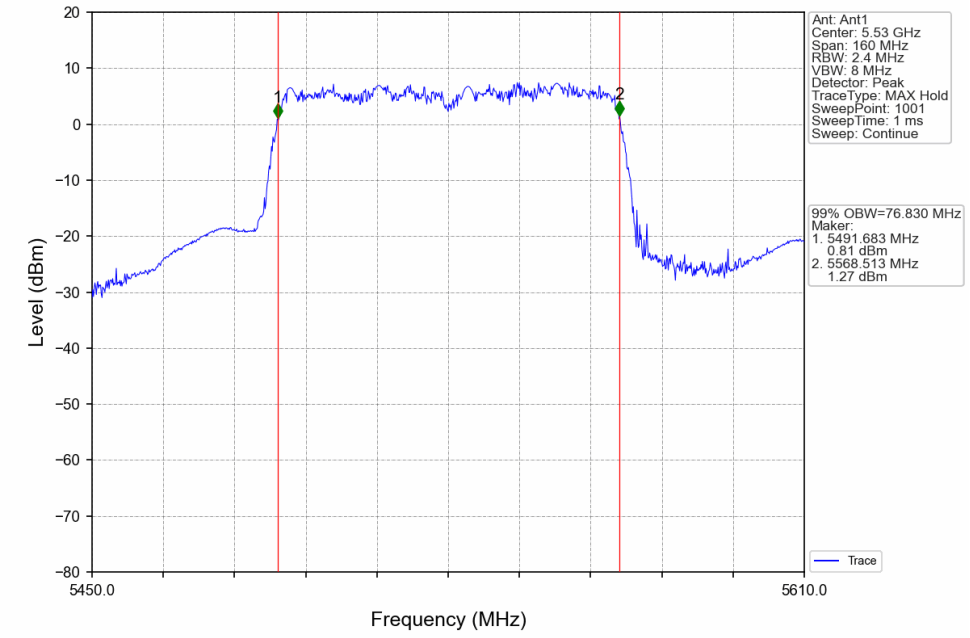
802.11ac(VHT40)_MCH_5550MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5670MHz_Ant1_NTNV



802.11ac(VHT80)_LCH_5530MHz_Ant1_NTNV



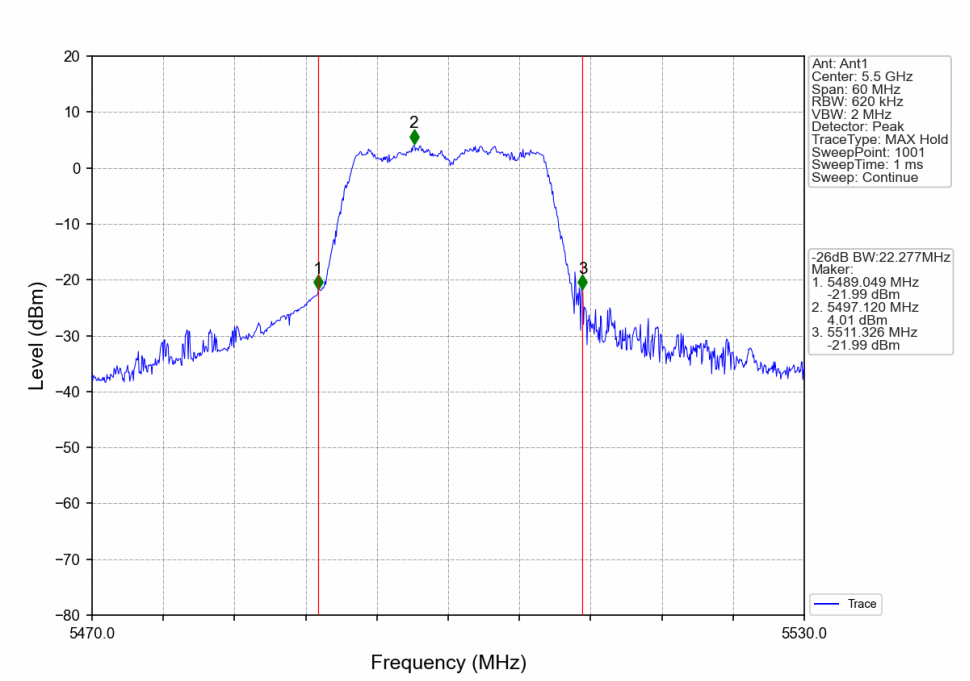
1.2 26dB BW

1.2.1 Test Result

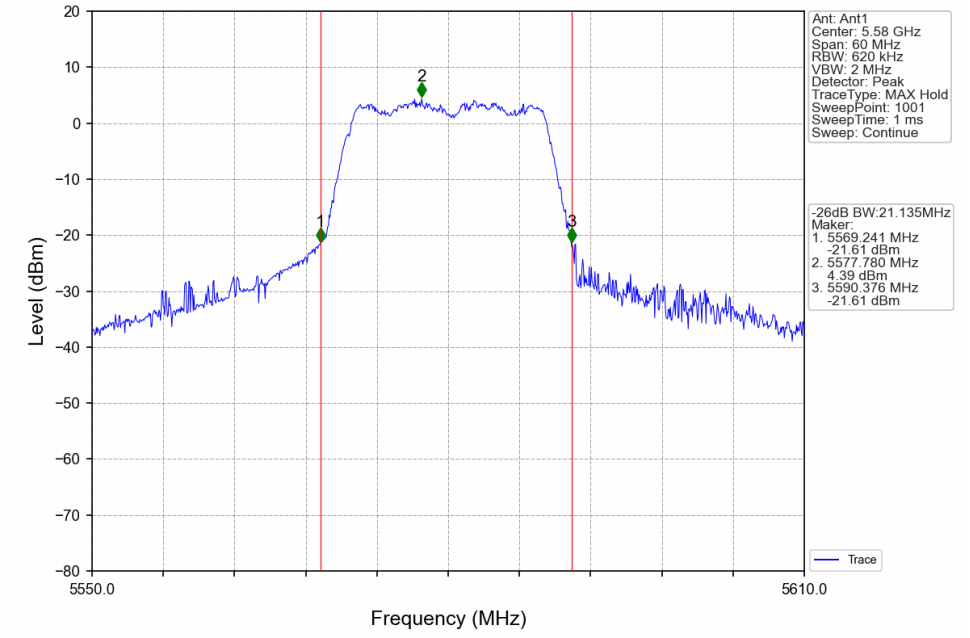
Mode	TX Type	Frequency (MHz)	ANT	26dB Bandwidth (MHz)	Verdict
				Result	
802.11a	SISO	5500	1	22.277	Pass
		5580	1	21.135	Pass
		5700	1	21.611	Pass
802.11n (HT20)	SISO	5500	1	23.007	Pass
		5580	1	21.898	Pass
		5700	1	21.727	Pass
802.11n (HT40)	SISO	5510	1	44.562	Pass
		5550	1	45.779	Pass
		5670	1	46.637	Pass
802.11ac (VHT20)	SISO	5500	1	21.630	Pass
		5580	1	22.697	Pass
		5700	1	21.450	Pass
802.11ac (VHT40)	SISO	5510	1	44.872	Pass
		5550	1	45.492	Pass
		5670	1	44.875	Pass
802.11ac (VHT80)	SISO	5530	1	94.464	Pass

1.2.2 Test Graph

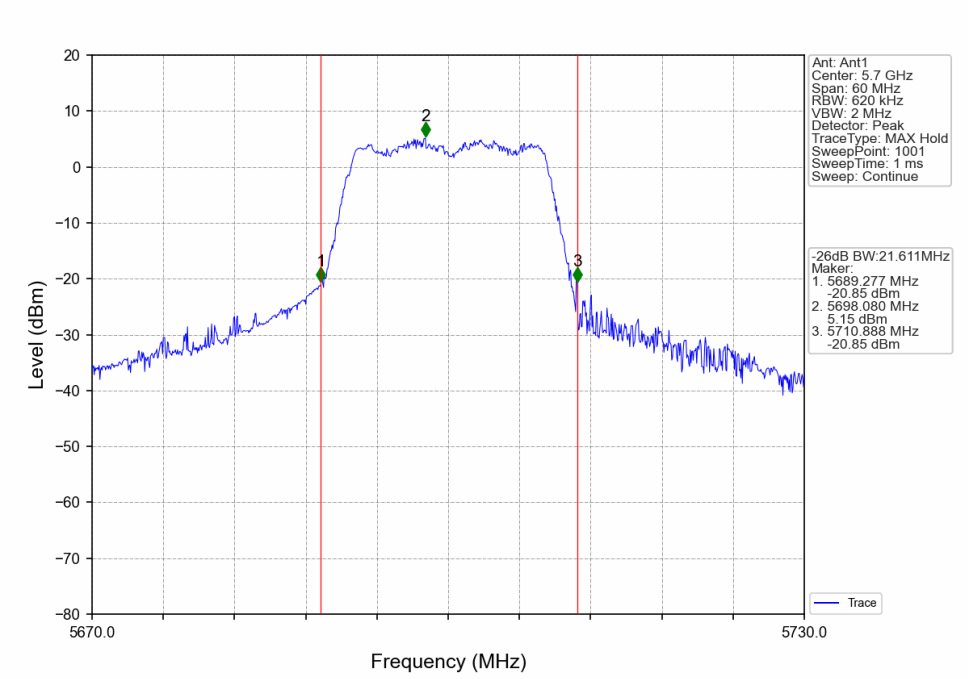
802.11a_LCH_5500MHz_Ant1_NTNV



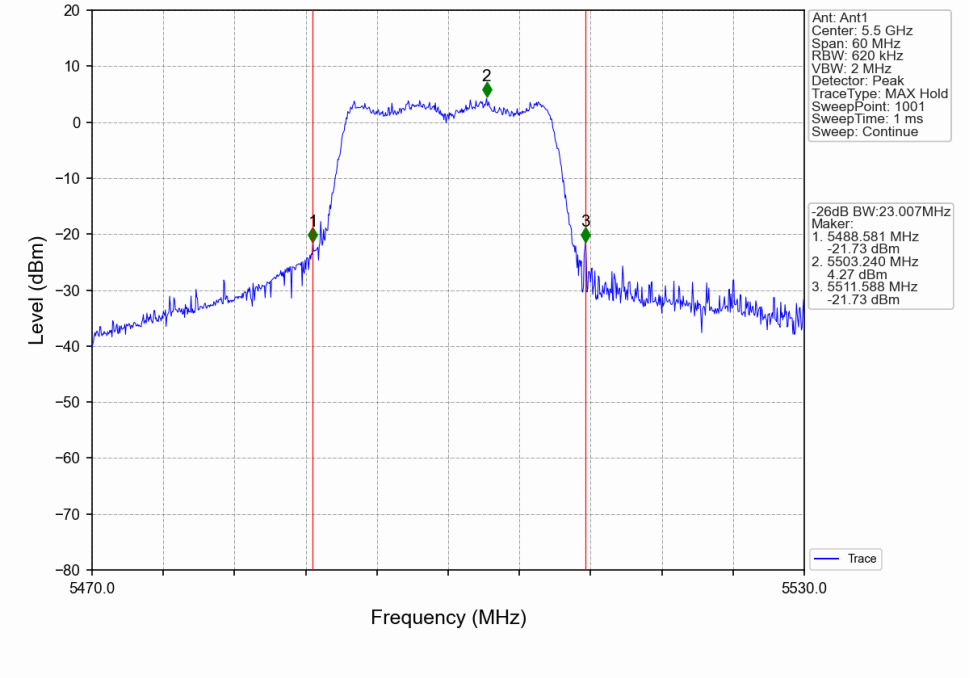
802.11a_MCH_5580MHz_Ant1_NTNV



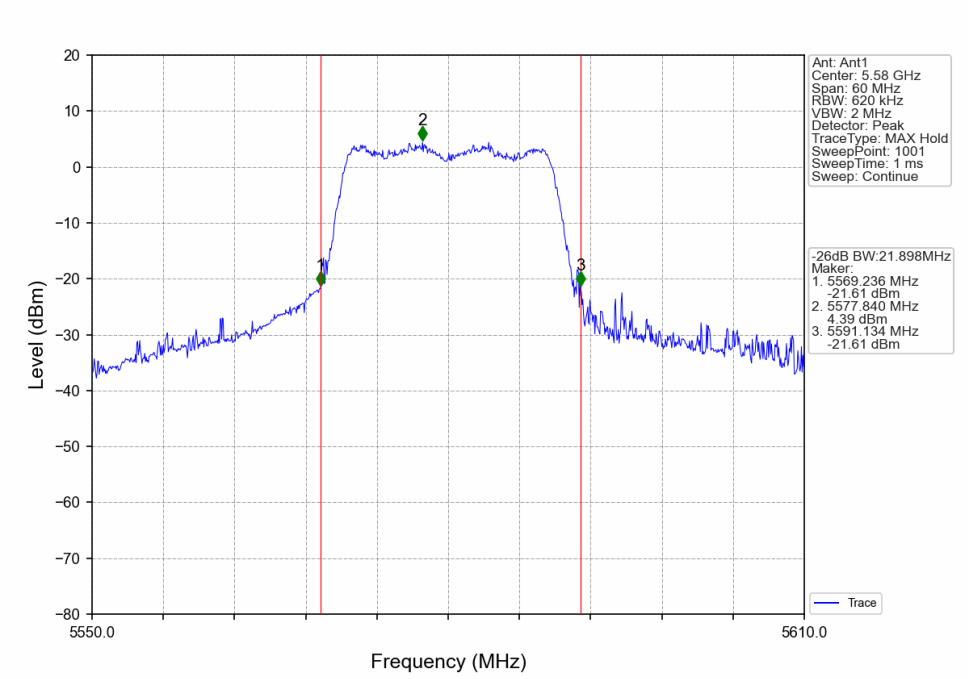
802.11a_HCH_5700MHz_Ant1_NTNV



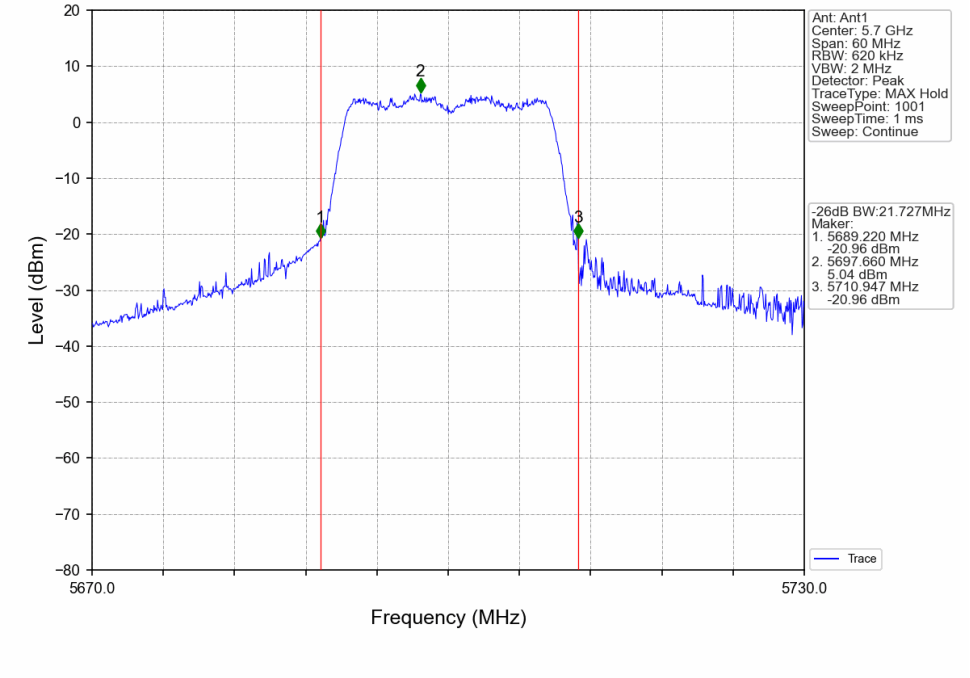
802.11n(HT20)_LCH_5500MHz_Ant1_NTNV



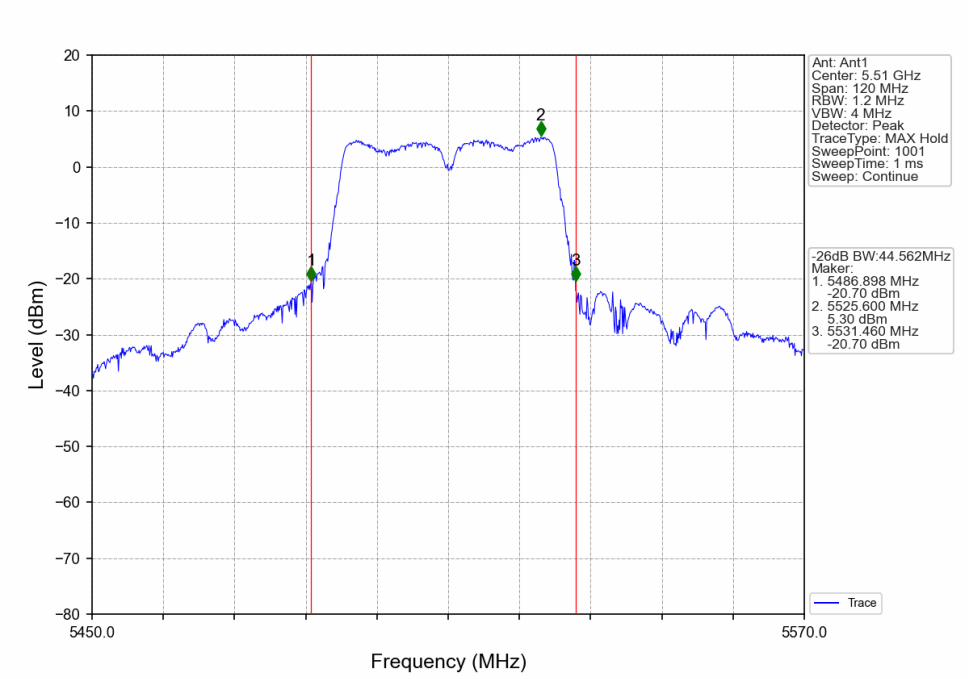
802.11n(HT20)_MCH_5580MHz_Ant1_NTNV



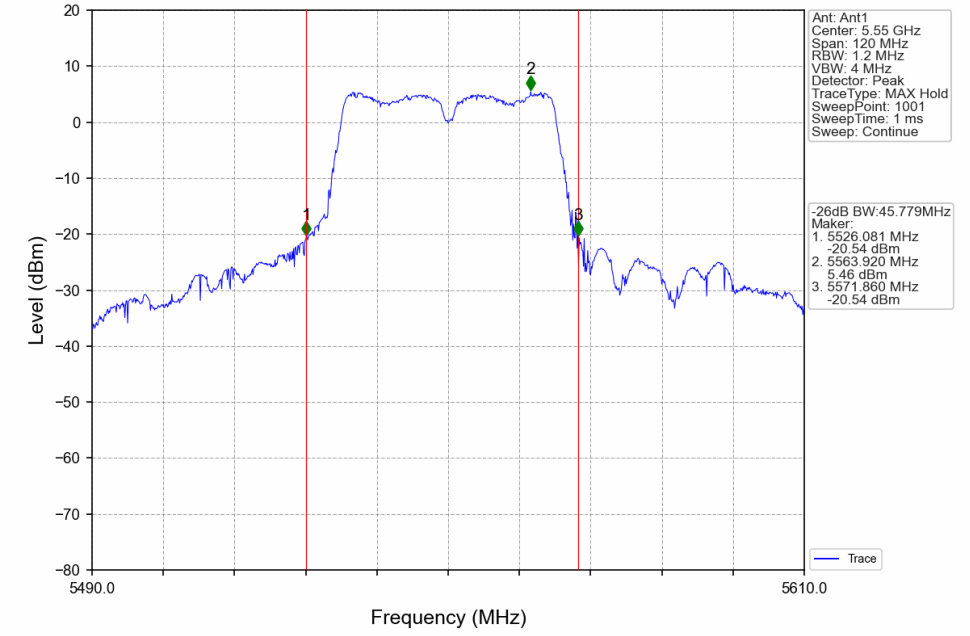
802.11n(HT20)_HCH_5700MHz_Ant1_NTNV



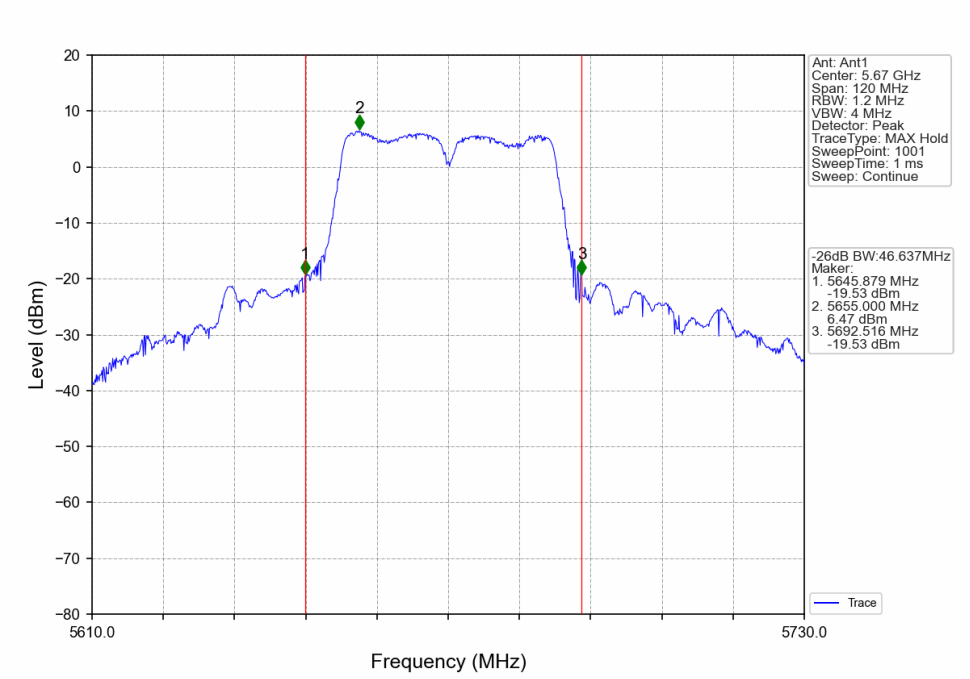
802.11n(HT40)_LCH_5510MHz_Ant1_NTNV



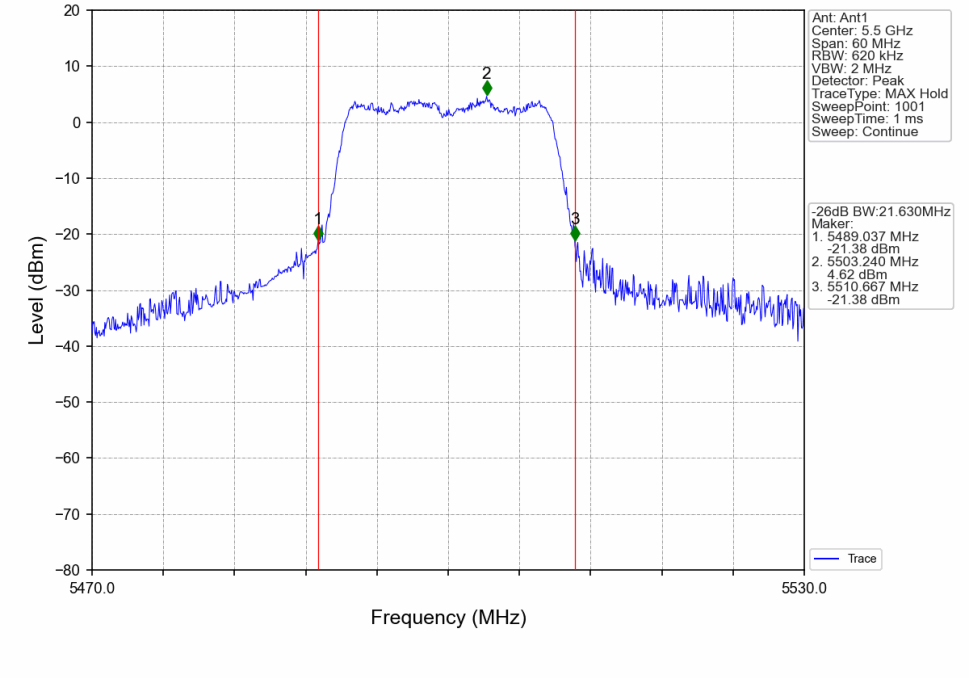
802.11n(HT40)_MCH_5550MHz_Ant1_NTNV



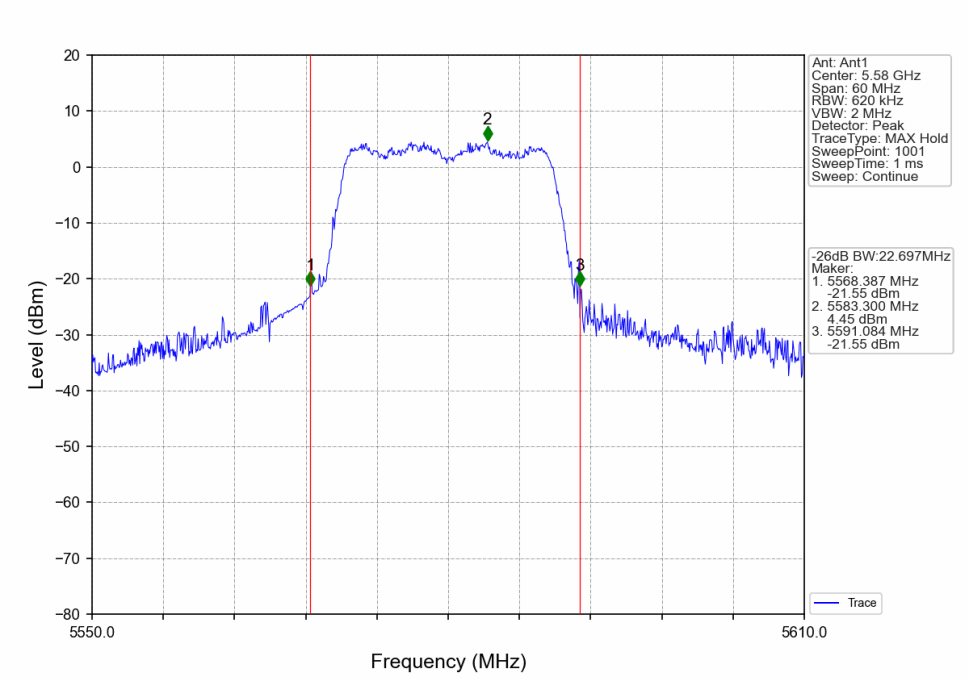
802.11n(HT40)_HCH_5670MHz_Ant1_NTNV



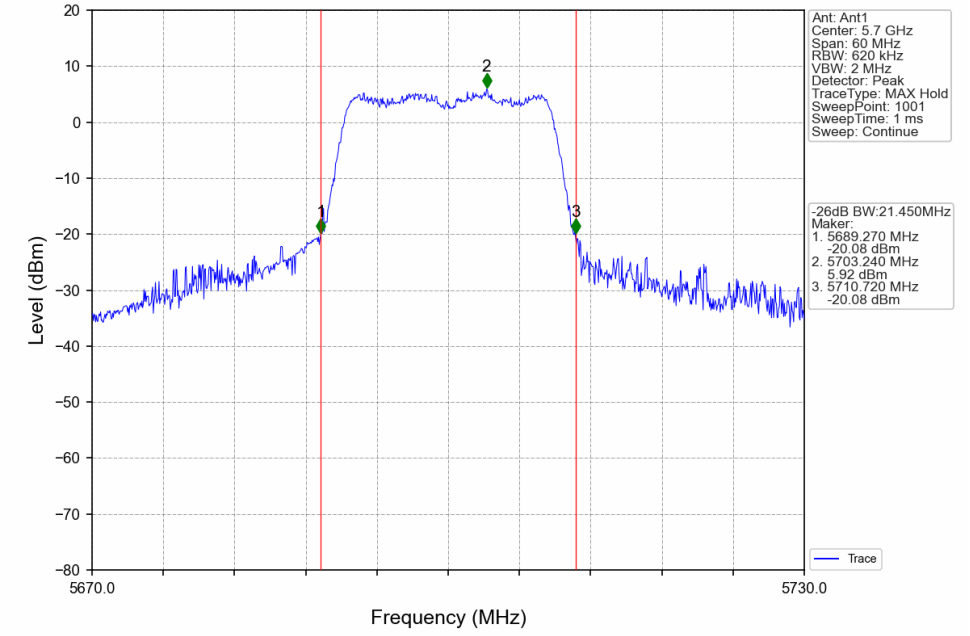
802.11ac(VHT20)_LCH_5500MHz_Ant1_NTNV



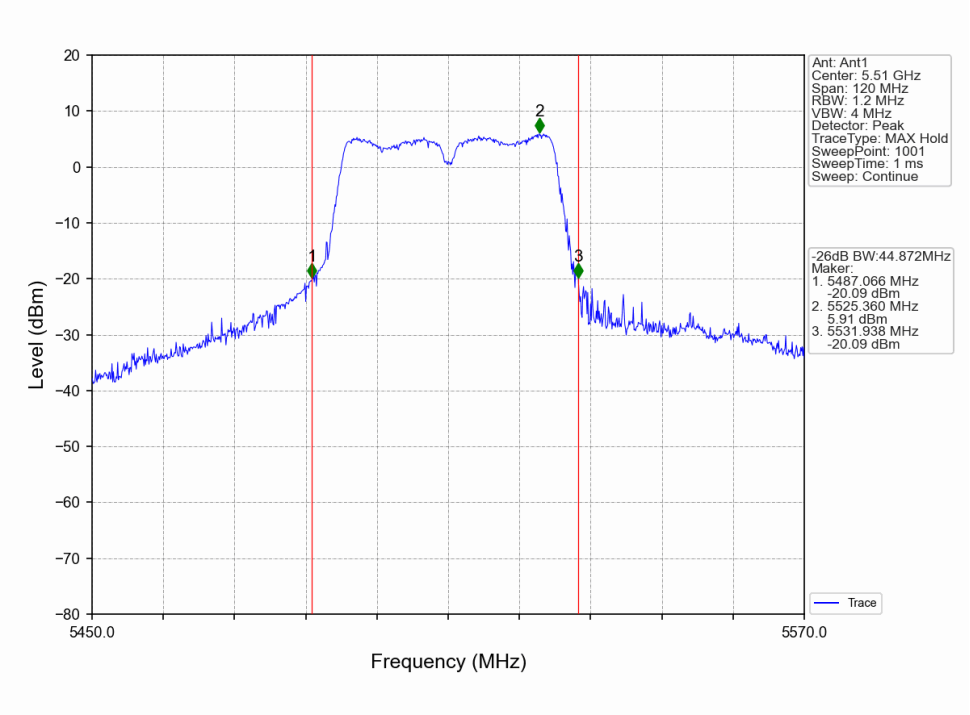
802.11ac(VHT20)_MCH_5580MHz_Ant1_NTNV



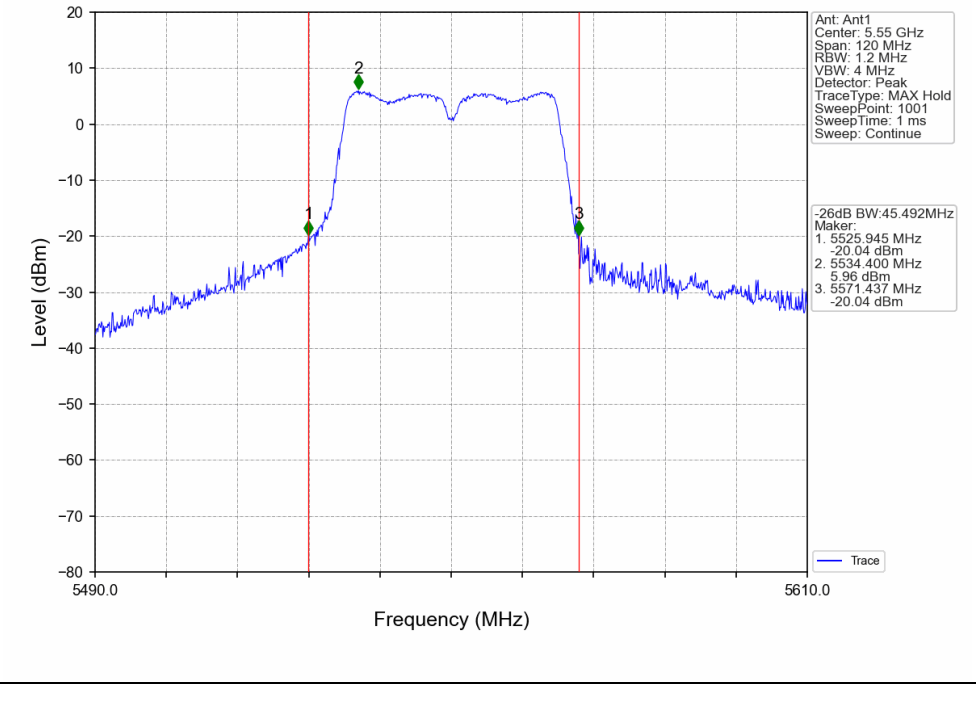
802.11ac(VHT20)_HCH_5700MHz_Ant1_NTNV



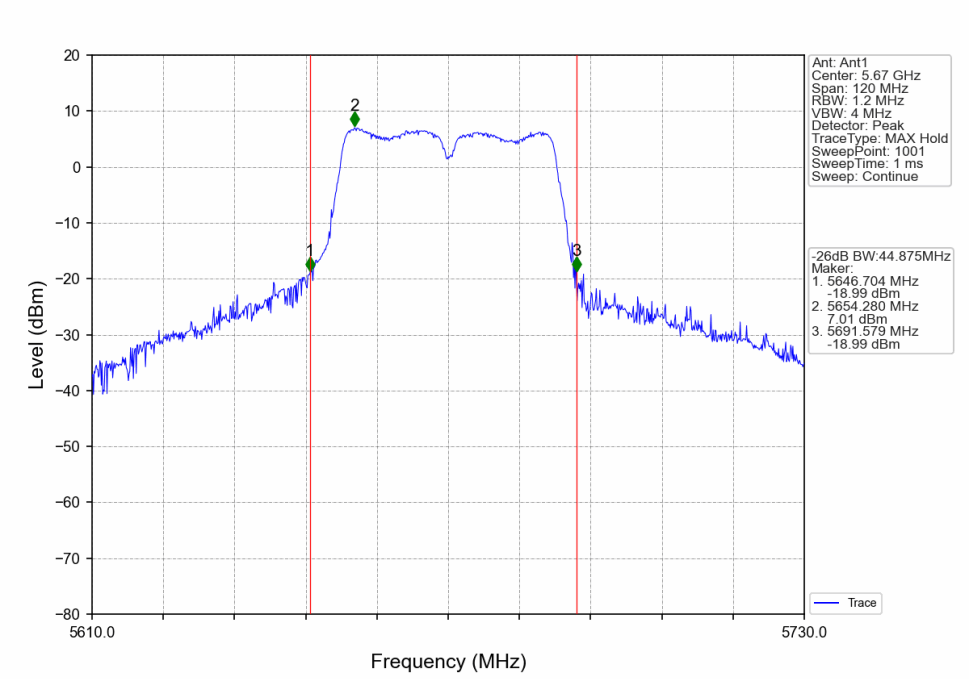
802.11ac(VHT40)_LCH_5510MHz_Ant1_NTNV



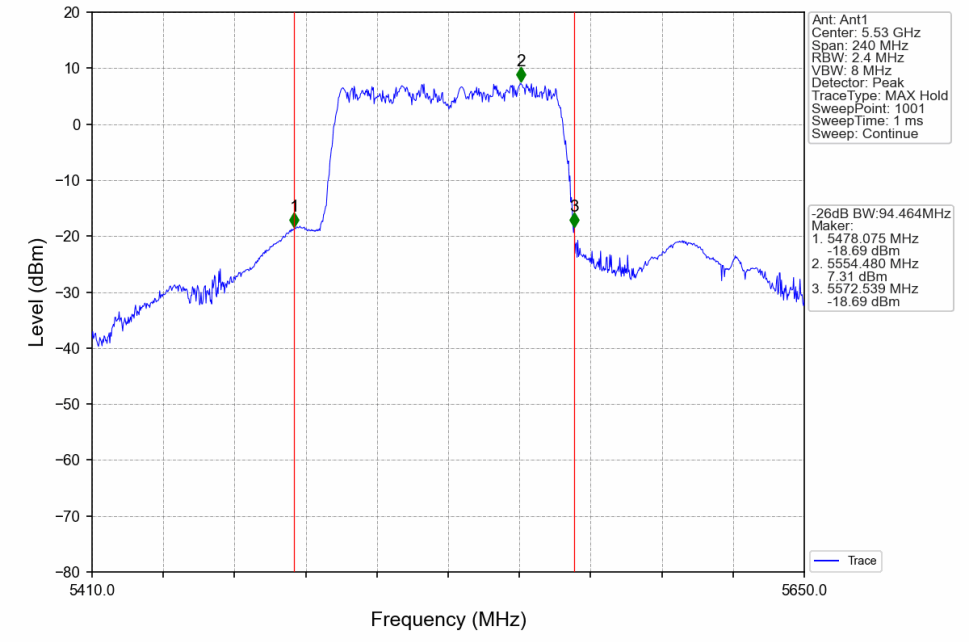
802.11ac(VHT40)_MCH_5550MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5670MHz_Ant1_NTNV



802.11ac(VHT80)_LCH_5530MHz_Ant1_NTNV



2. Maximum Conducted Output Power

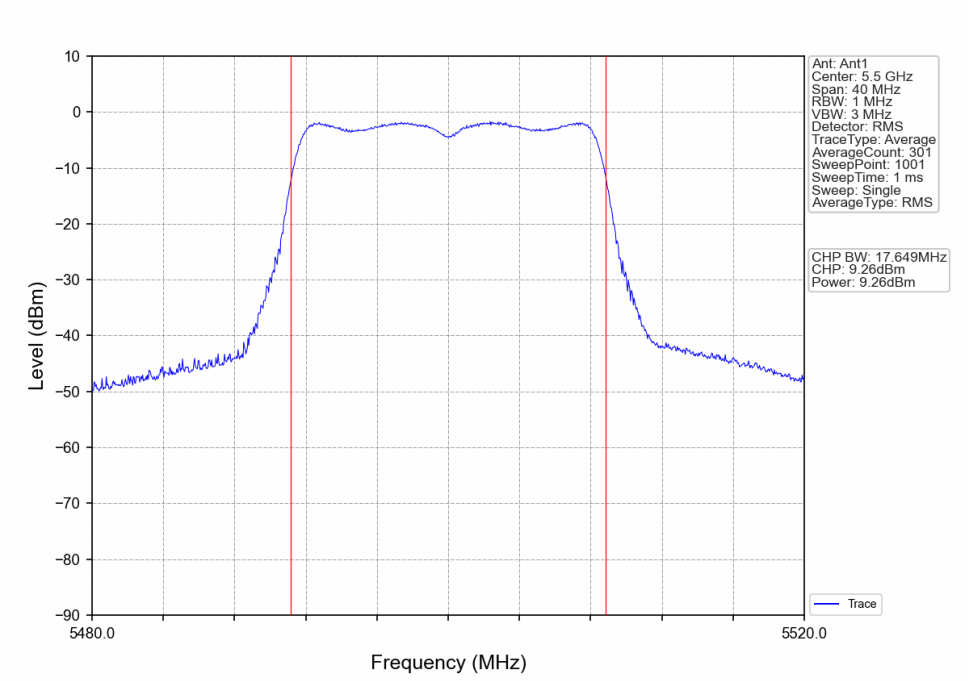
2.1 Power

2.1.1 Test Result

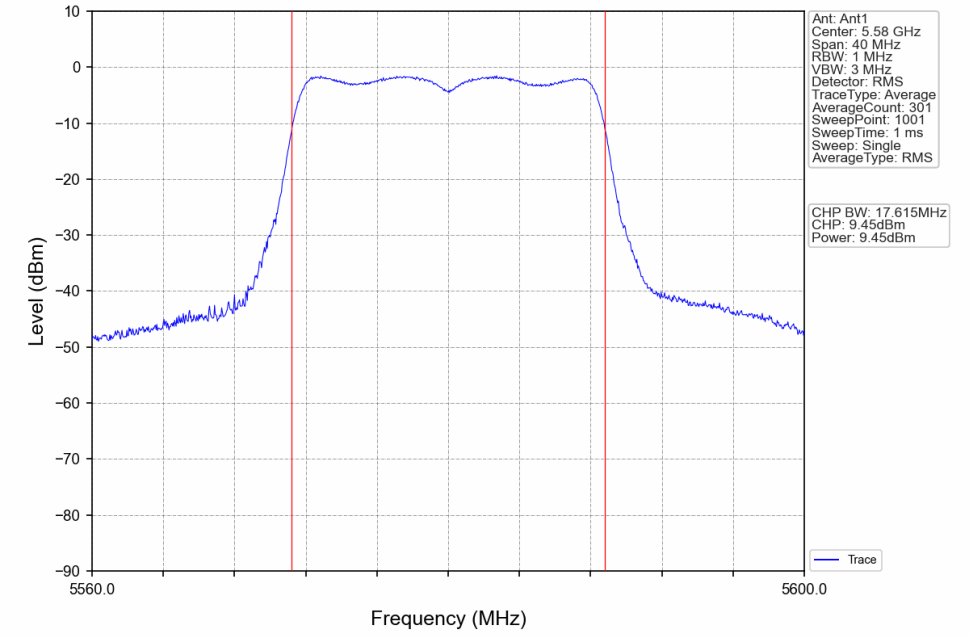
Mode	TX Type	Frequency (MHz)	Maximum Average Conducted Output Power (dBm)					Verdict
			AVG Conducted Power (dBm)	Limit	Duty Cycle Factor(dB)	EIRP	Limit	
802.11a	SISO	5500	9.26	<=23.98	0.00	13.51	<=30	Pass
		5580	9.45	<=23.98	0.00	13.70	<=30	Pass
		5700	10.22	<=23.98	0.00	14.47	<=30	Pass
802.11n (HT20)	SISO	5500	9.51	<=23.98	0.00	13.76	<=30	Pass
		5580	9.60	<=23.98	0.00	13.85	<=30	Pass
		5700	10.37	<=23.98	0.00	14.62	<=30	Pass
802.11n (HT40)	SISO	5510	9.68	<=23.98	0.00	13.93	<=30	Pass
		5550	9.99	<=23.98	0.00	14.24	<=30	Pass
		5670	10.92	<=23.98	0.00	15.17	<=30	Pass
802.11ac (VHT20)	SISO	5500	9.38	<=23.98	0.00	13.63	<=30	Pass
		5580	9.61	<=23.98	0.00	13.86	<=30	Pass
		5700	10.96	<=23.98	0.00	15.21	<=30	Pass
802.11ac (VHT40)	SISO	5510	10.25	<=23.98	0.00	14.50	<=30	Pass
		5550	10.54	<=23.98	0.00	14.79	<=30	Pass
		5670	11.44	<=23.98	0.00	15.69	<=30	Pass
802.11ac (VHT80)	SISO	5530	10.26	<=23.98	0.00	14.51	<=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

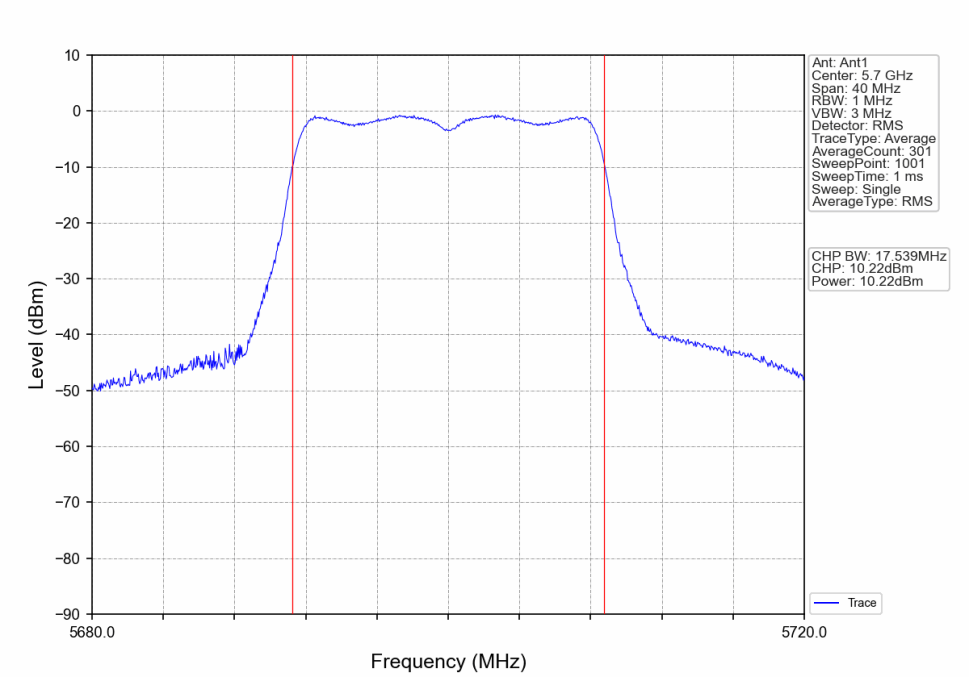
802.11a_LCH_5500MHz_Ant1_NTNV



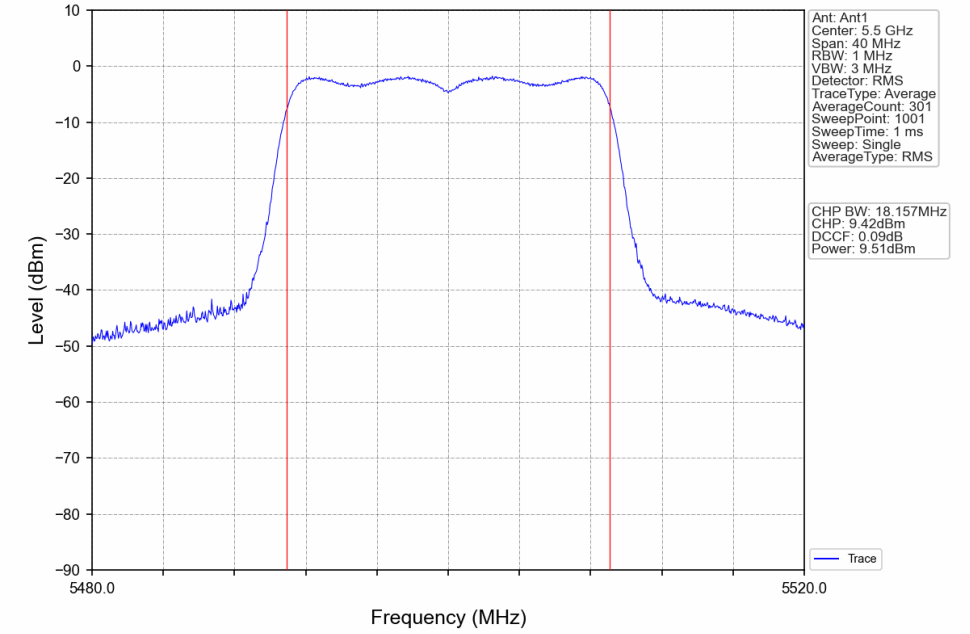
802.11a_MCH_5580MHz_Ant1_NTNV



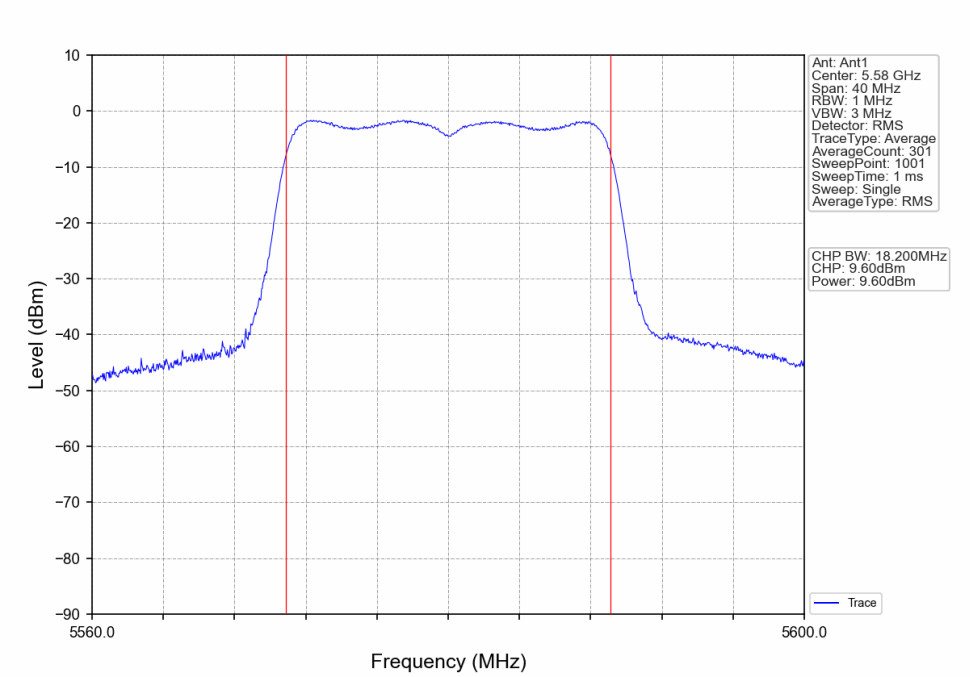
802.11a_HCH_5700MHz_Ant1_NTNV



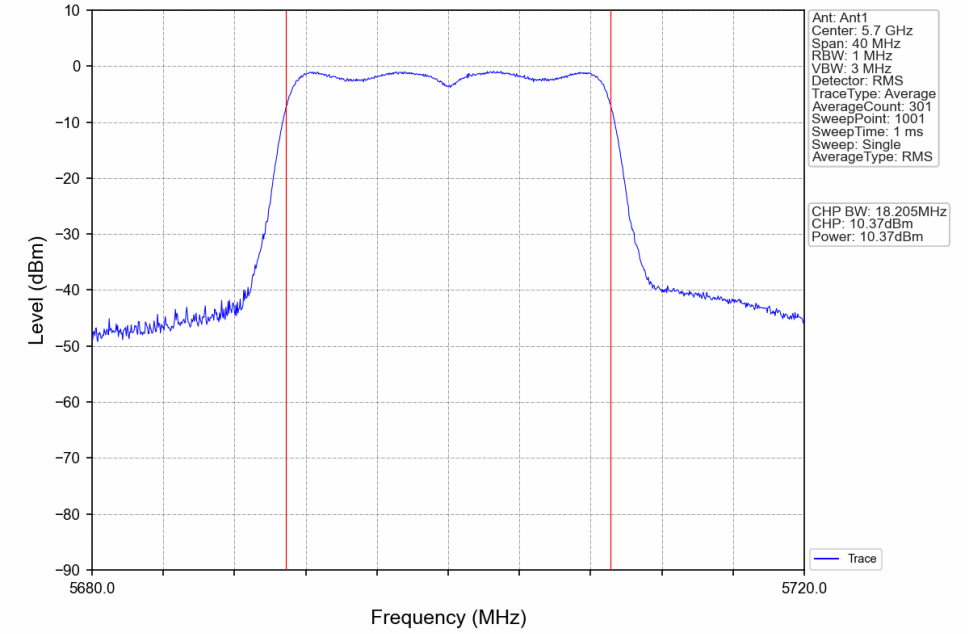
802.11n(HT20)_LCH_5500MHz_Ant1_NTNV



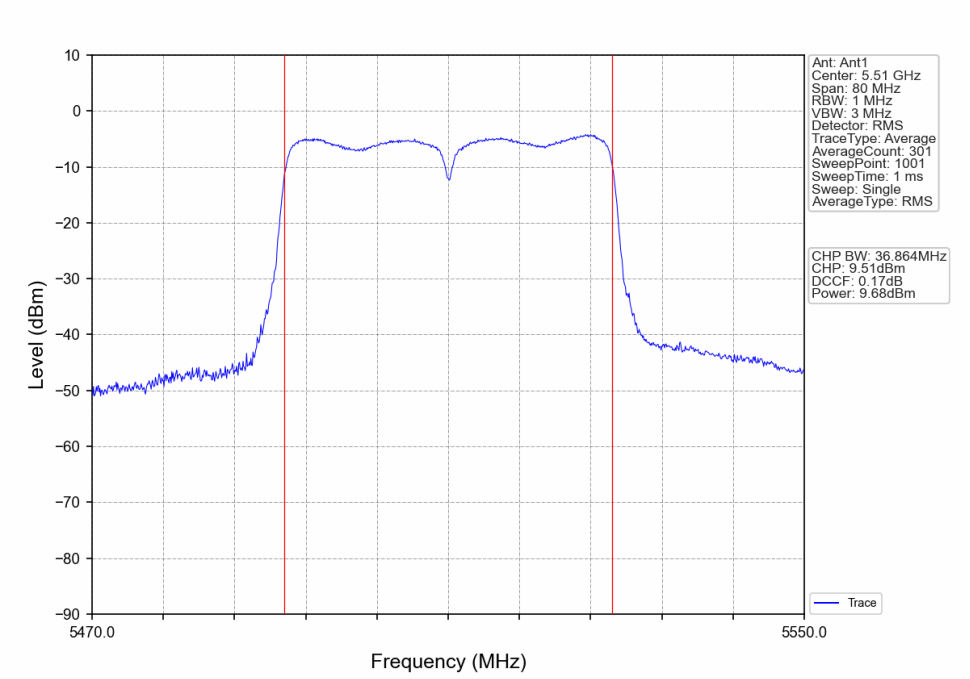
802.11n(HT20)_MCH_5580MHz_Ant1_NTNV



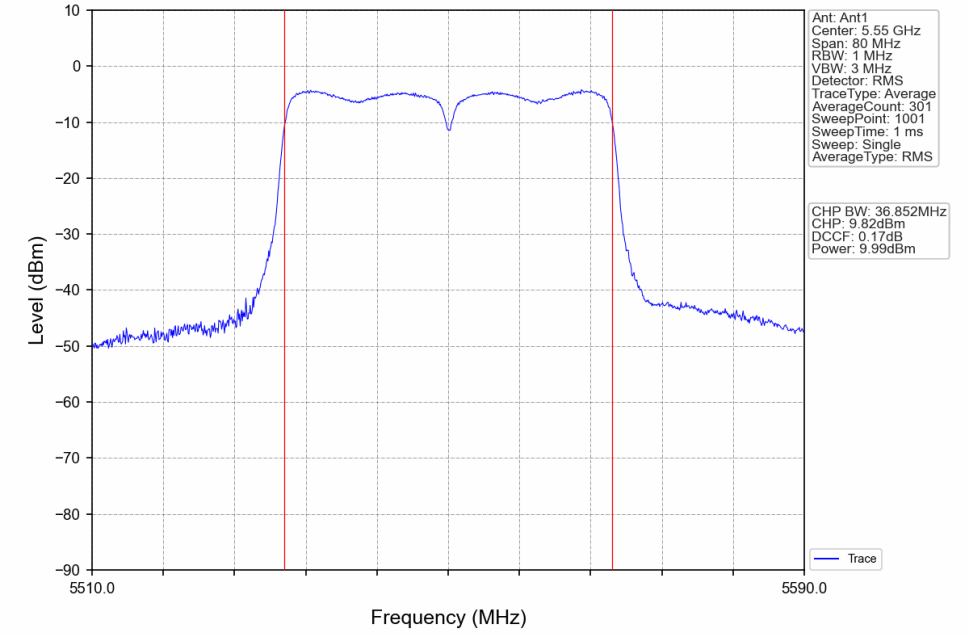
802.11n(HT20)_HCH_5700MHz_Ant1_NTNV



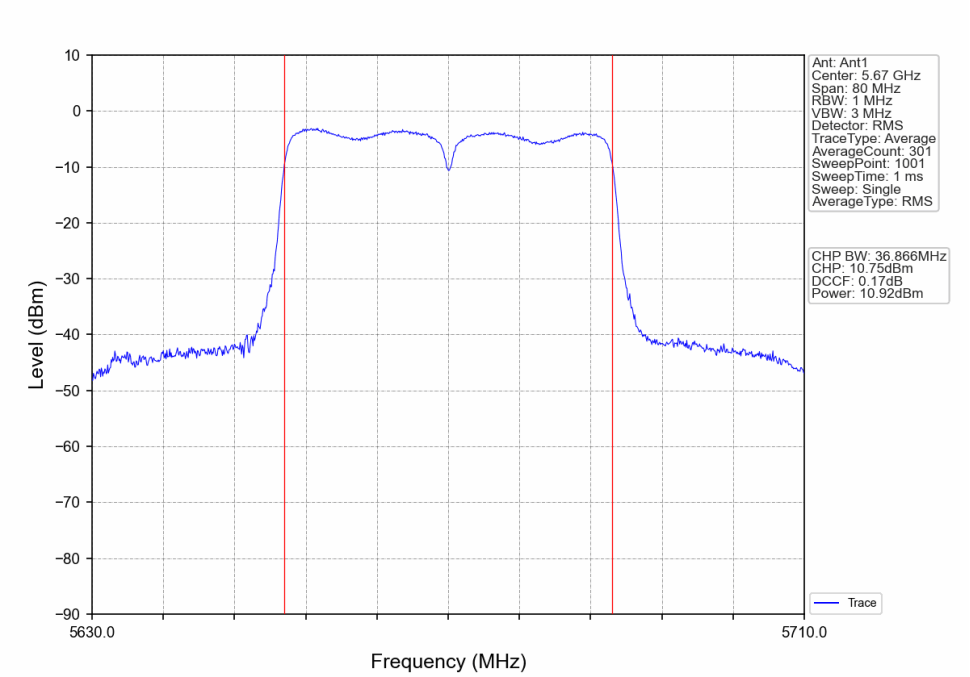
802.11n(HT40)_LCH_5510MHz_Ant1_NTNV



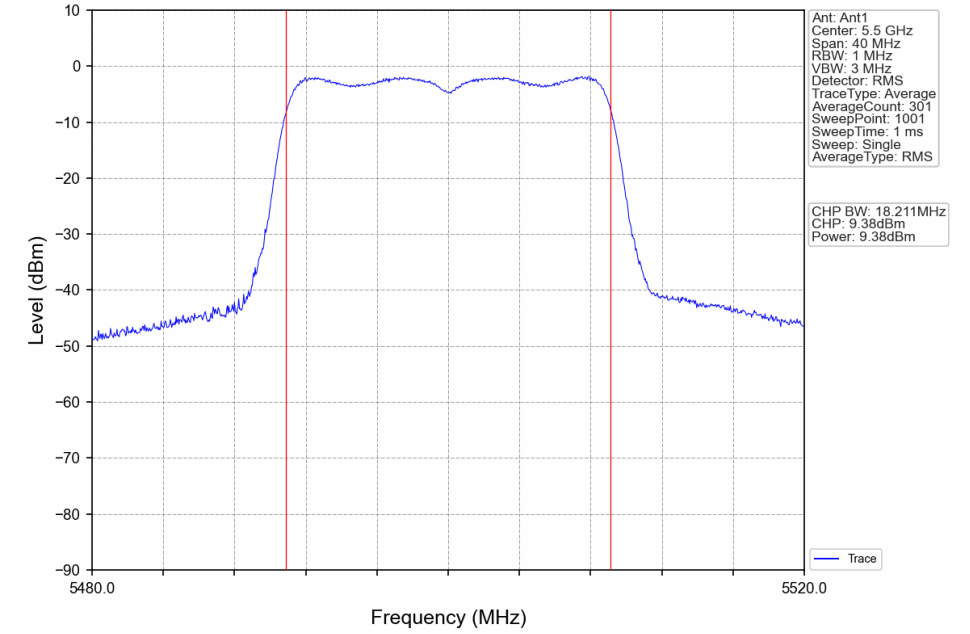
802.11n(HT40)_MCH_5550MHz_Ant1_NTNV



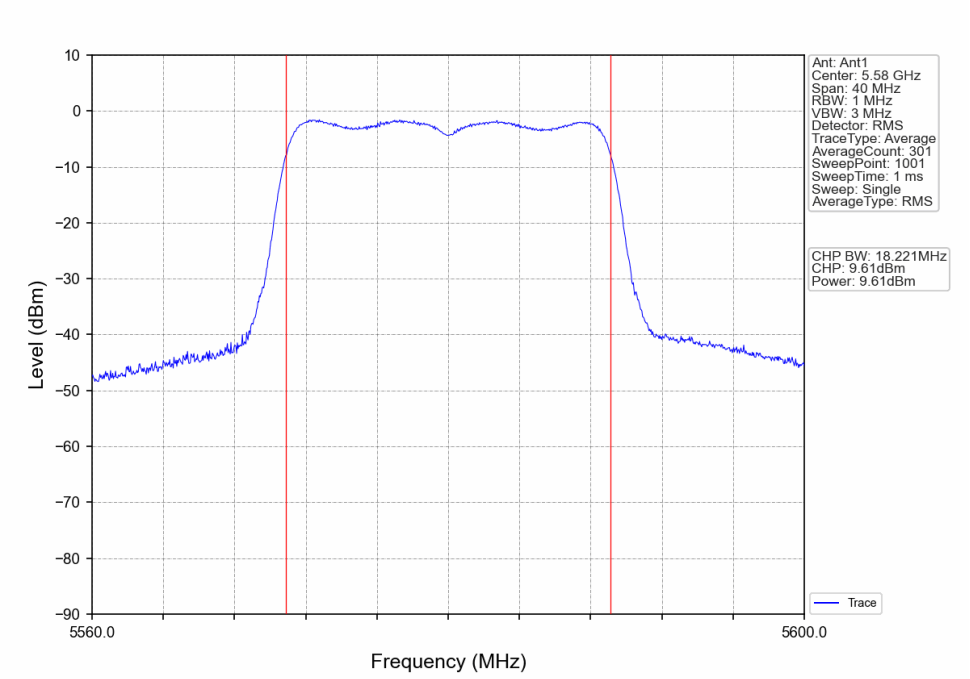
802.11n(HT40)_HCH_5670MHz_Ant1_NTNV



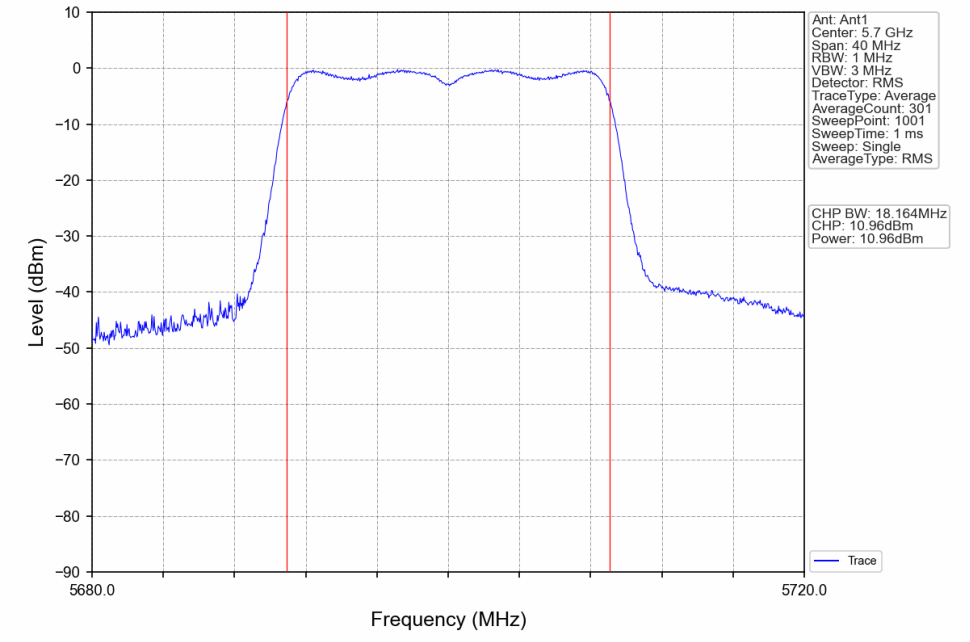
802.11ac(VHT20)_LCH_5500MHz_Ant1_NTNV



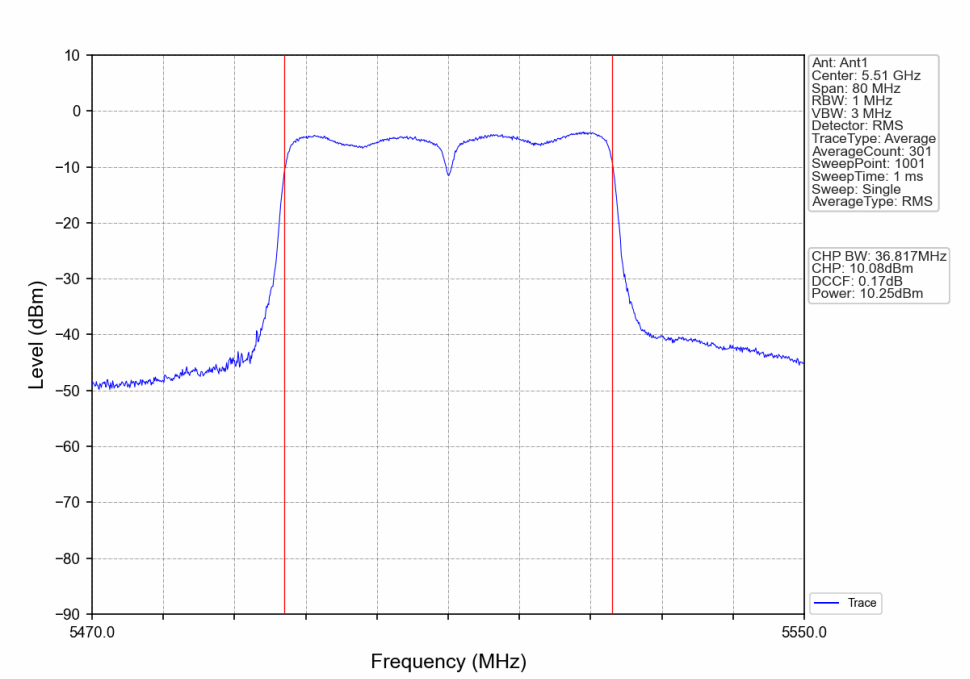
802.11ac(VHT20)_MCH_5580MHz_Ant1_NTNV



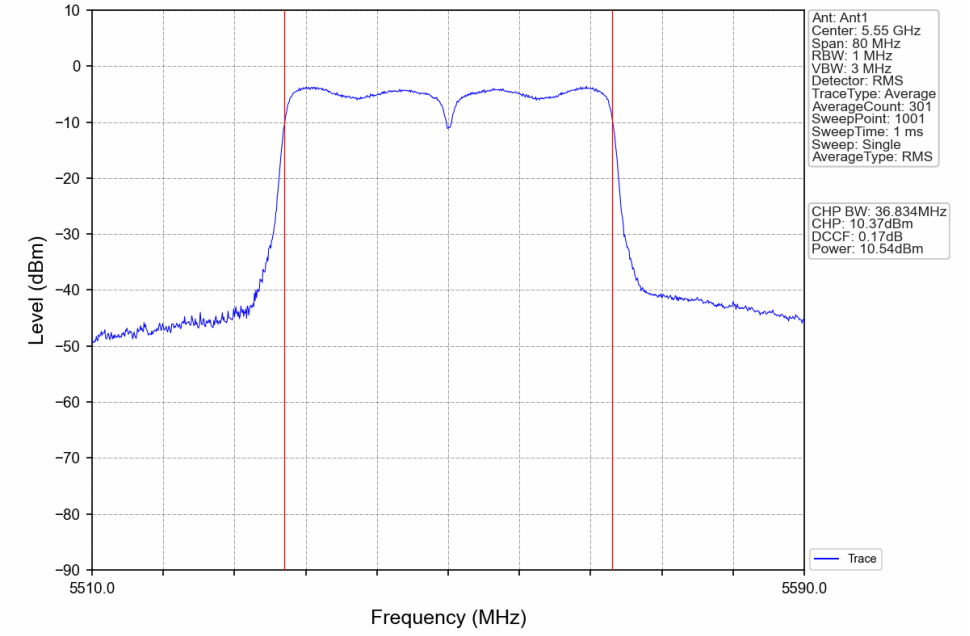
802.11ac(VHT20)_HCH_5700MHz_Ant1_NTNV



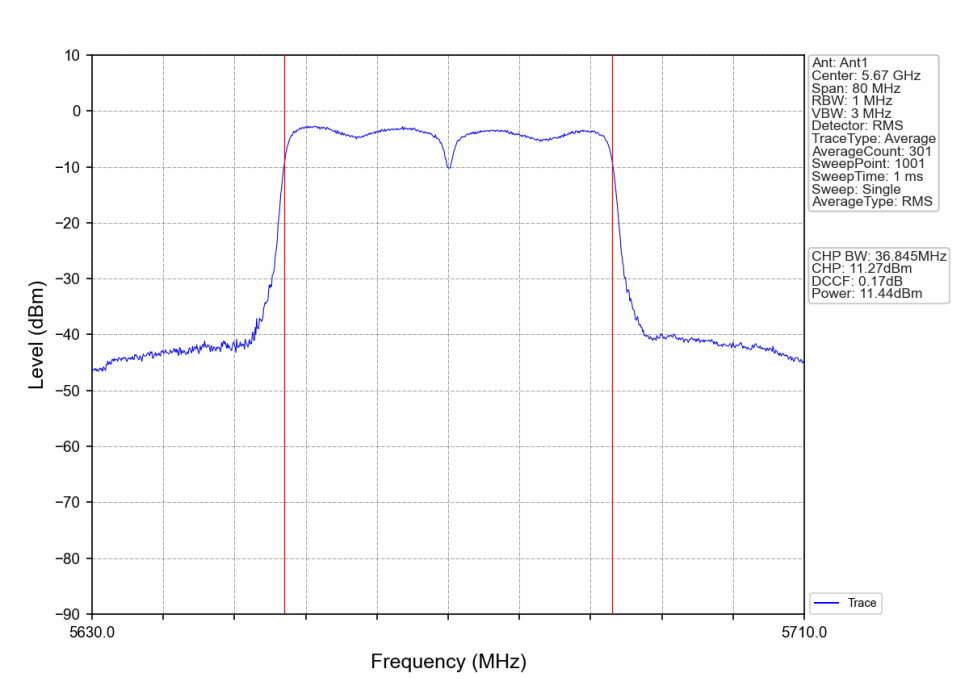
802.11ac(VHT40)_LCH_5510MHz_Ant1_NTNV



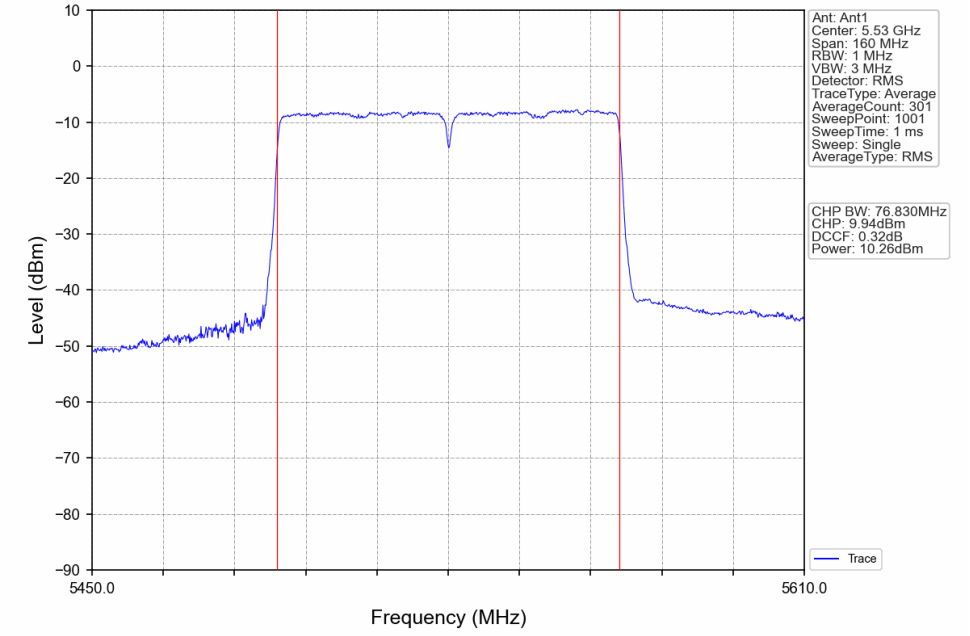
802.11ac(VHT40)_MCH_5550MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5670MHz_Ant1_NTNV



802.11ac(VHT80)_LCH_5530MHz_Ant1_NTNV



3. Maximum Power Spectral Density

3.1 PSD

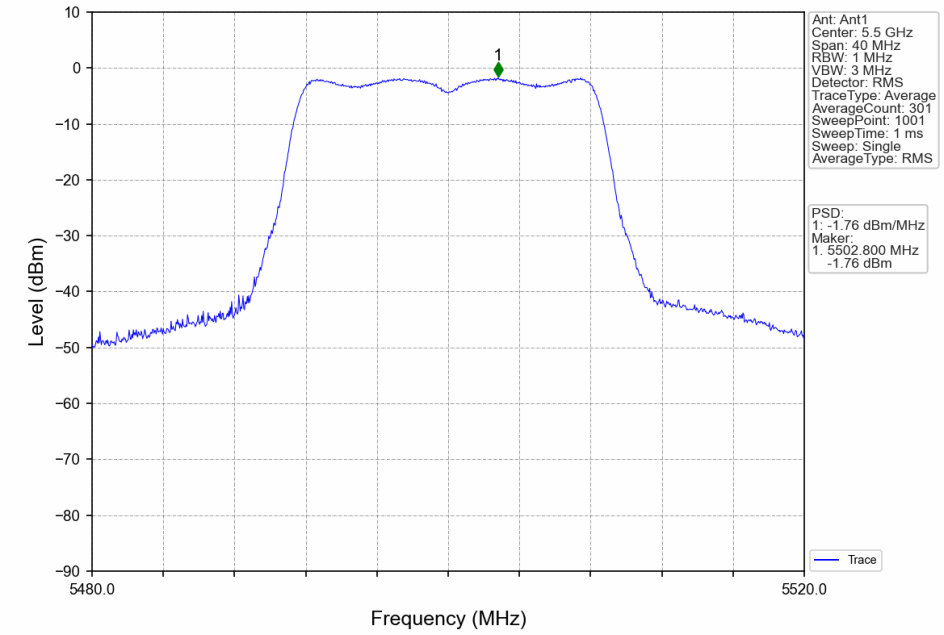
3.1.1 Test Result

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	5500	-1.76	0.00	-1.76	<=11	Pass
		5580	-1.58	0.00	-1.58	<=11	Pass
		5700	-0.84	0.00	-0.84	<=11	Pass
802.11n (HT20)	SISO	5500	-1.56	0.00	-1.56	<=11	Pass
		5580	-1.54	0.00	-1.54	<=11	Pass
		5700	-0.73	0.00	-0.73	<=11	Pass
802.11n (HT40)	SISO	5510	-4.19	0.00	-4.19	<=11	Pass
		5550	-4.07	0.00	-4.07	<=11	Pass
		5670	-2.87	0.00	-2.87	<=11	Pass
802.11ac (VHT20)	SISO	5500	-1.84	0.00	-1.84	<=11	Pass
		5580	-1.51	0.00	-1.51	<=11	Pass
		5700	-0.33	0.00	-0.33	<=11	Pass
802.11ac (VHT40)	SISO	5510	-3.37	0.00	-3.37	<=11	Pass
		5550	-3.44	0.00	-3.44	<=11	Pass
		5670	-2.38	0.00	-2.38	<=11	Pass
802.11ac (VHT80)	SISO	5530	-7.43	0.00	-7.43	<=11	Pass

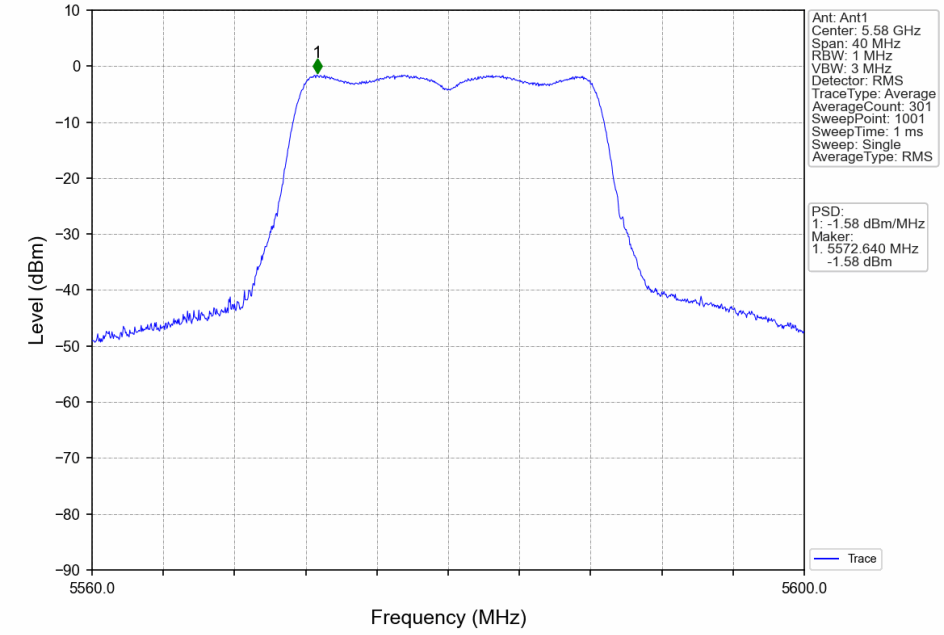
Note1: Antenna Gain: Ant1: 4.25dBi;
Note2: The Duty Cycle Factor and RBW Factor is compensated in the graph.

3.1.2 Test Graph

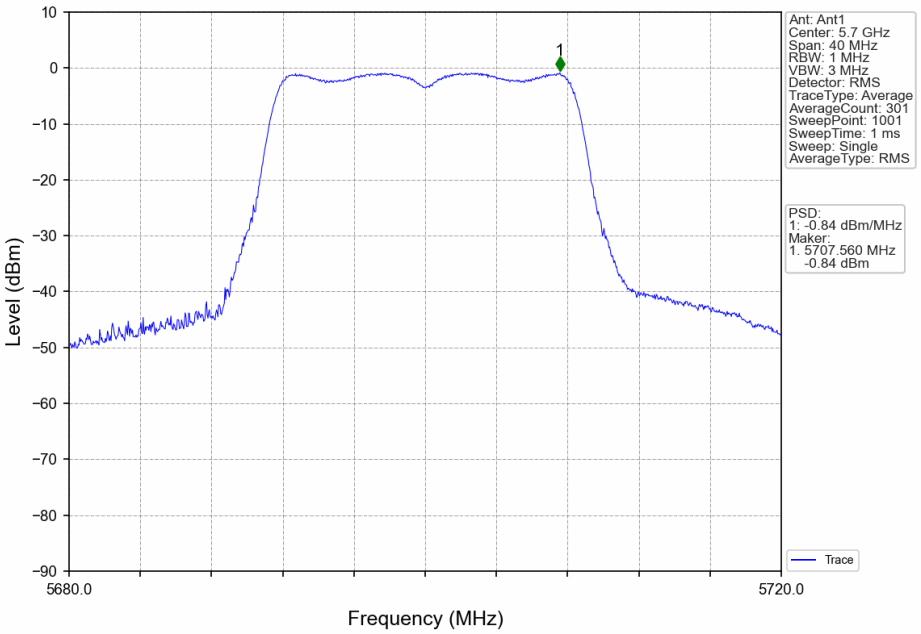
802.11a_LCH_5500MHz_Ant1_NTNV



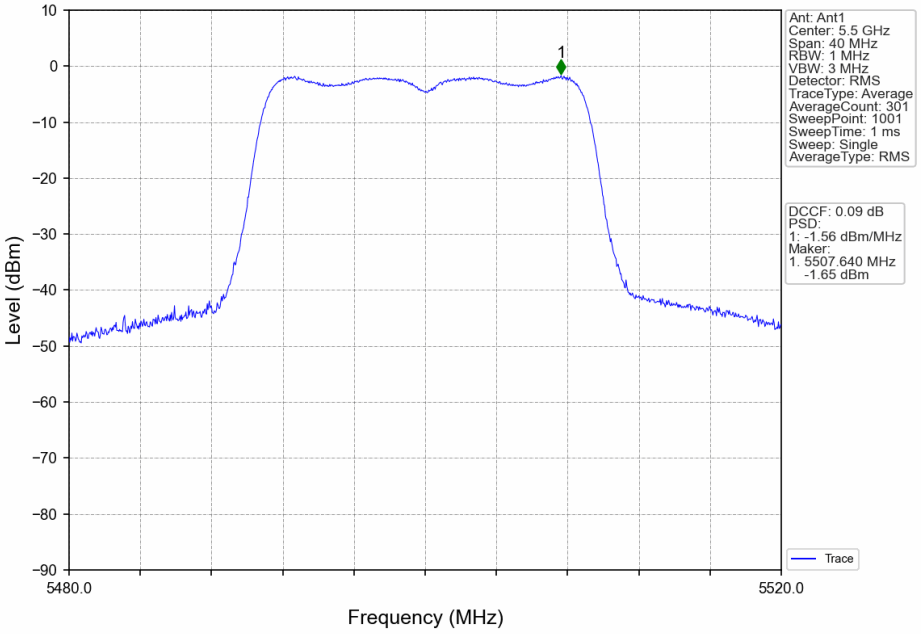
802.11a_MCH_5580MHz_Ant1_NTNV



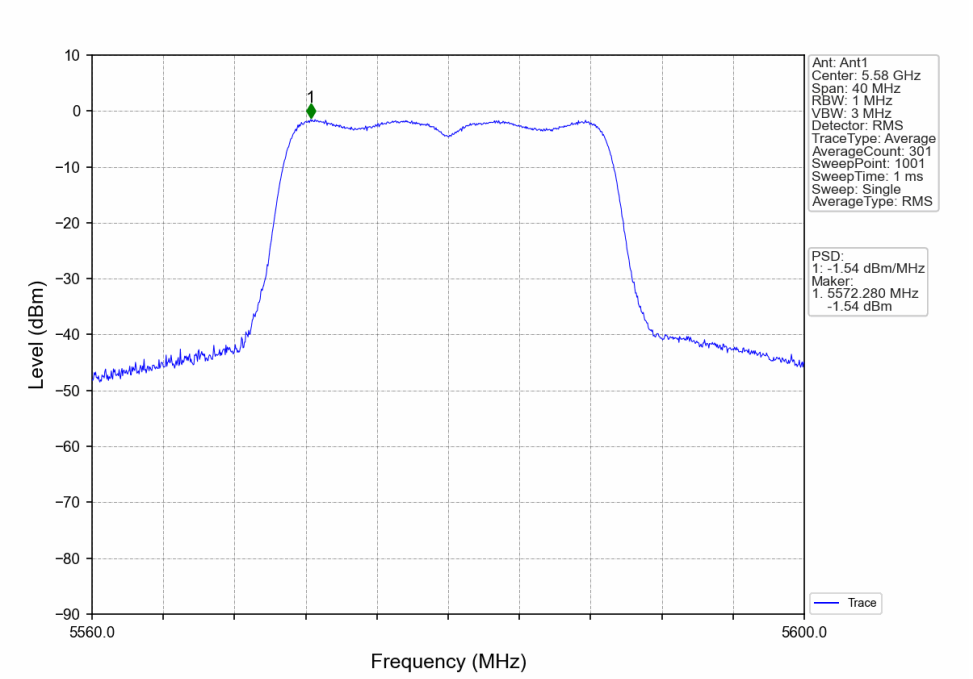
802.11a_HCH_5700MHz_Ant1_NTNV



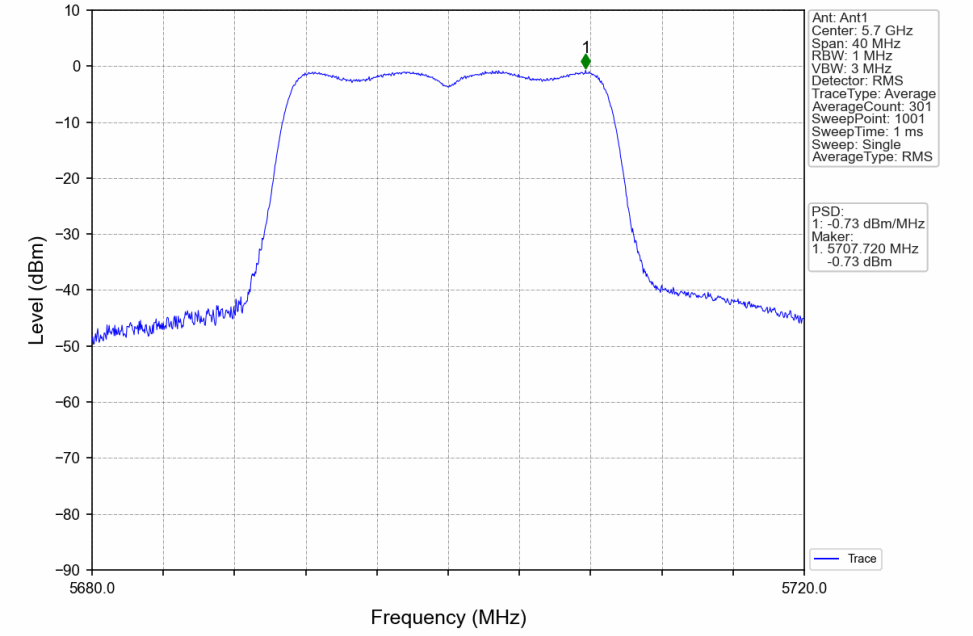
802.11n(HT20)_LCH_5500MHz_Ant1_NTNV



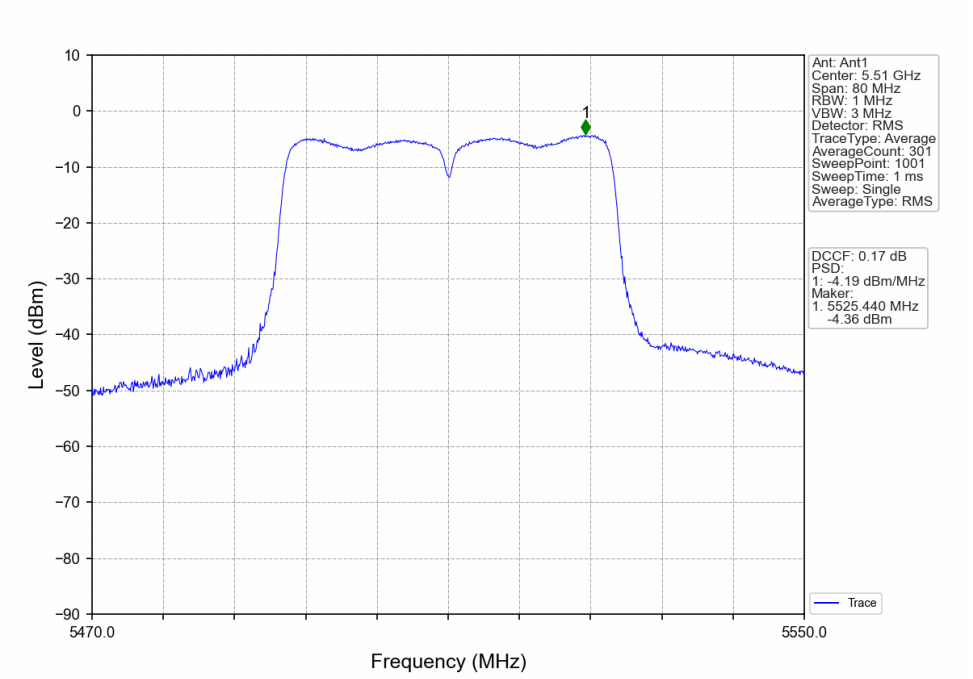
802.11n(HT20)_MCH_5580MHz_Ant1_NTNV



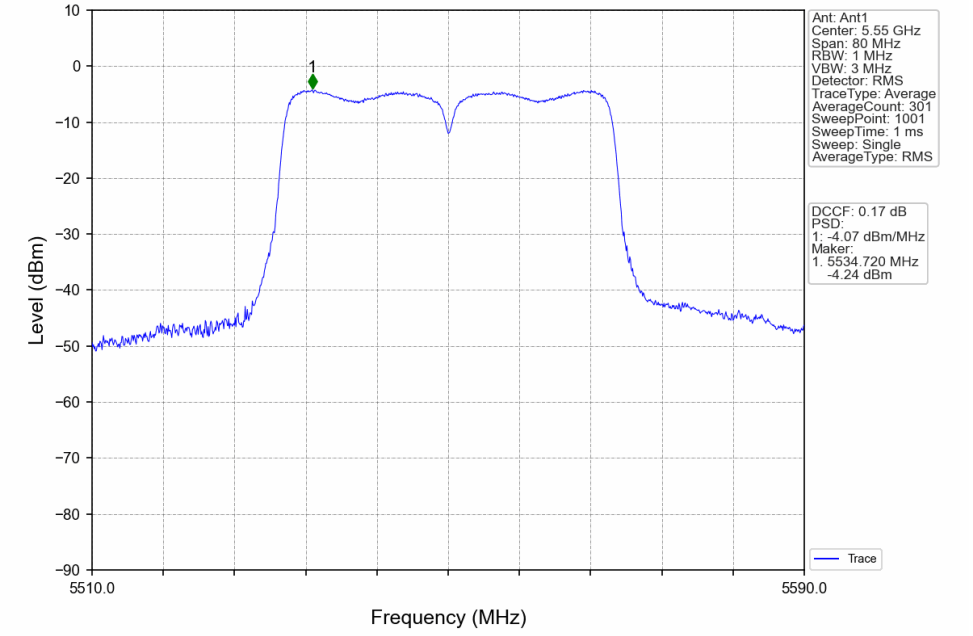
802.11n(HT20)_HCH_5700MHz_Ant1_NTNV



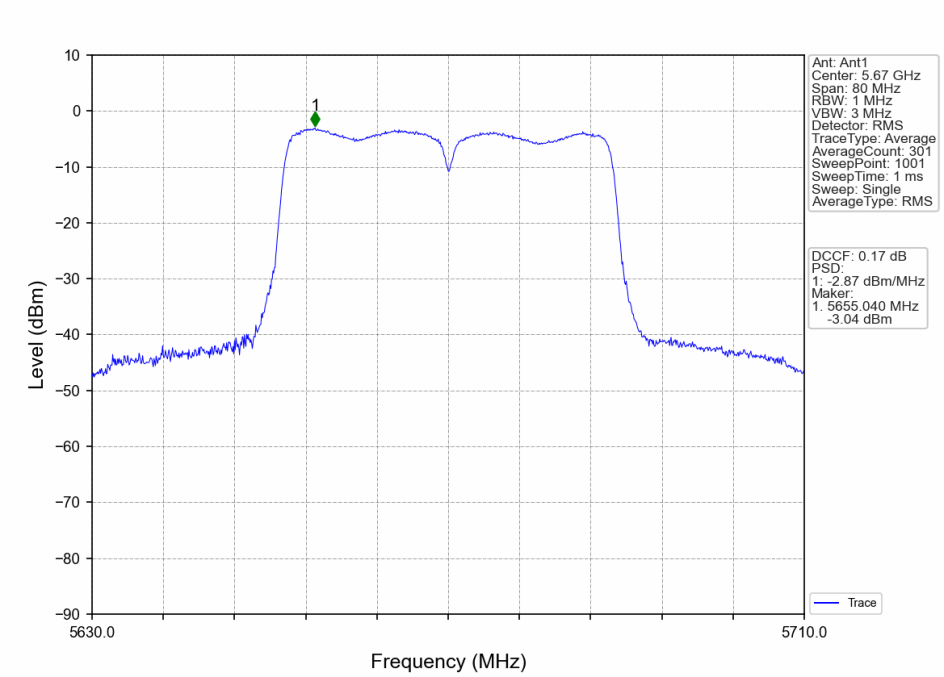
802.11n(HT40)_LCH_5510MHz_Ant1_NTNV



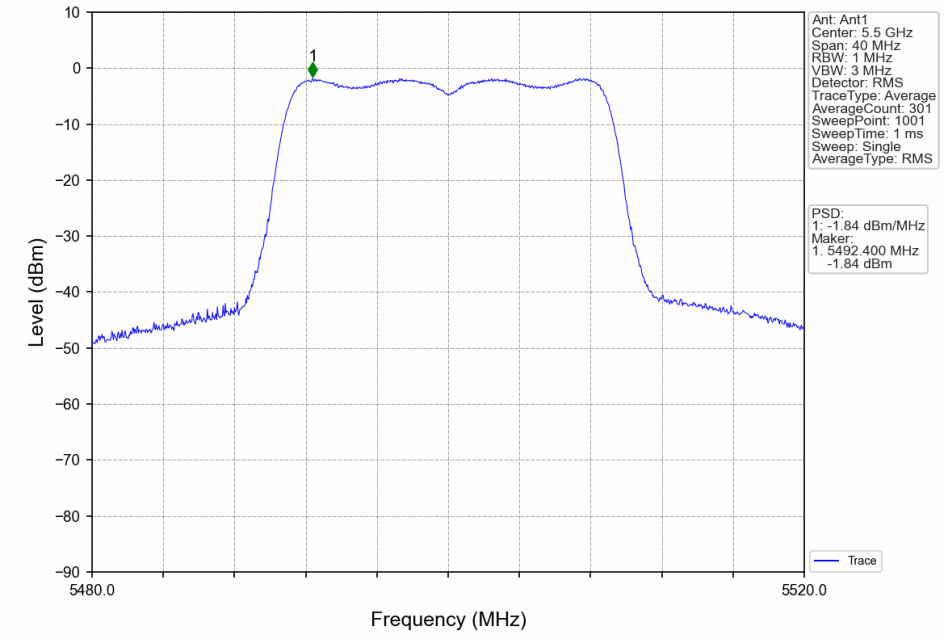
802.11n(HT40)_MCH_5550MHz_Ant1_NTNV



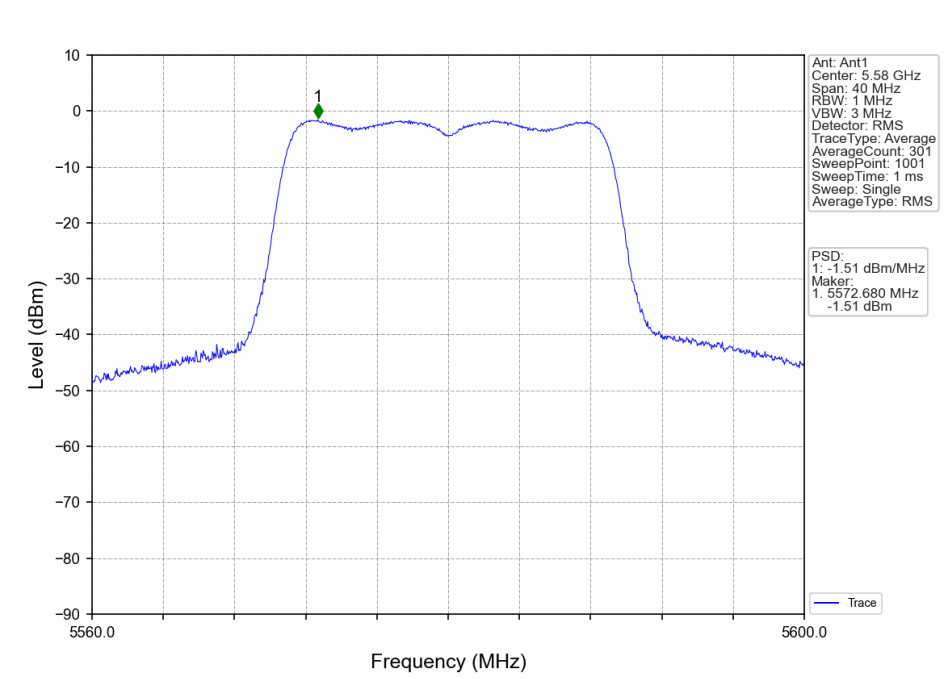
802.11n(HT40)_HCH_5670MHz_Ant1_NTNV



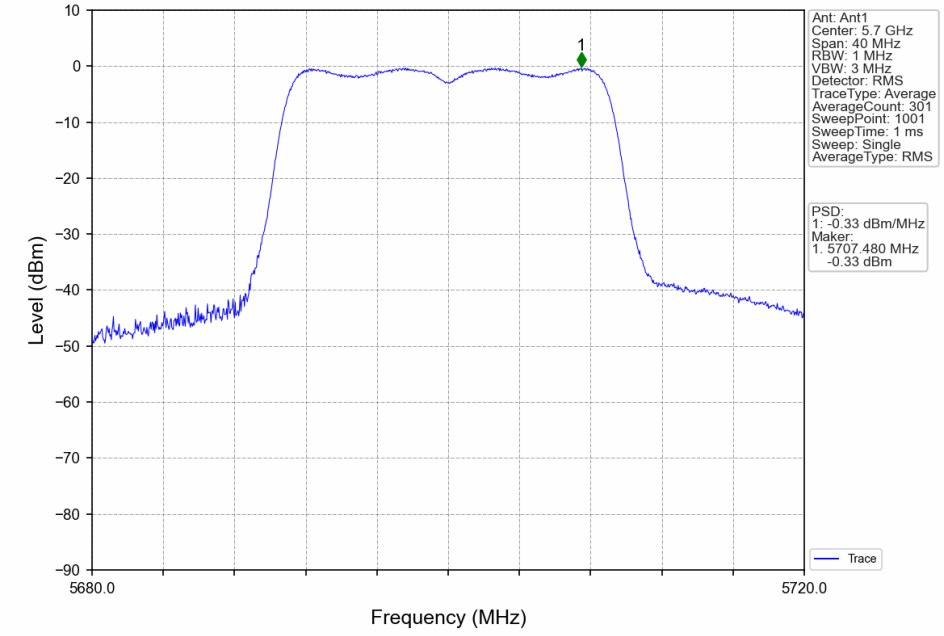
802.11ac(VHT20)_LCH_5500MHz_Ant1_NTNV



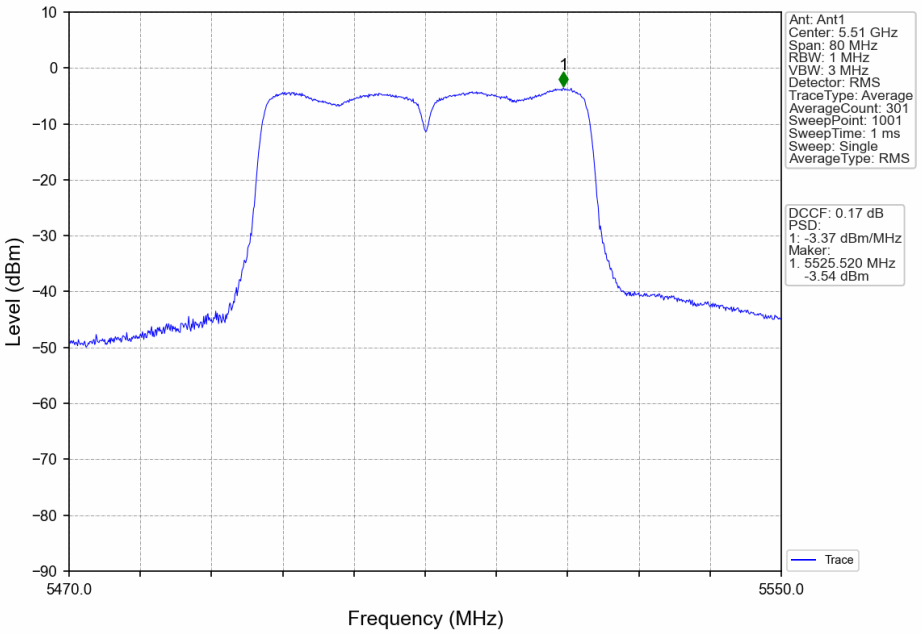
802.11ac(VHT20)_MCH_5580MHz_Ant1_NTNV



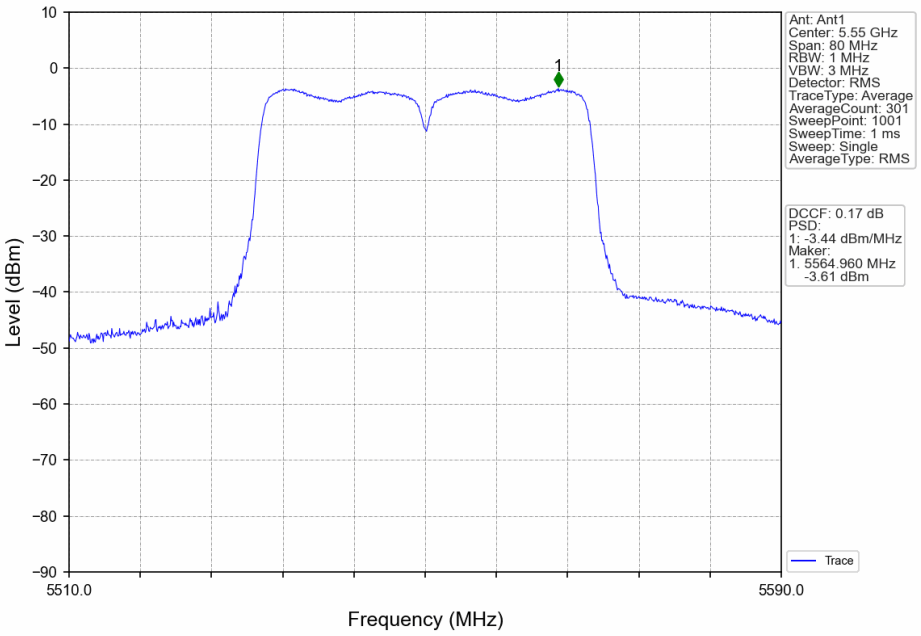
802.11ac(VHT20)_HCH_5700MHz_Ant1_NTNV



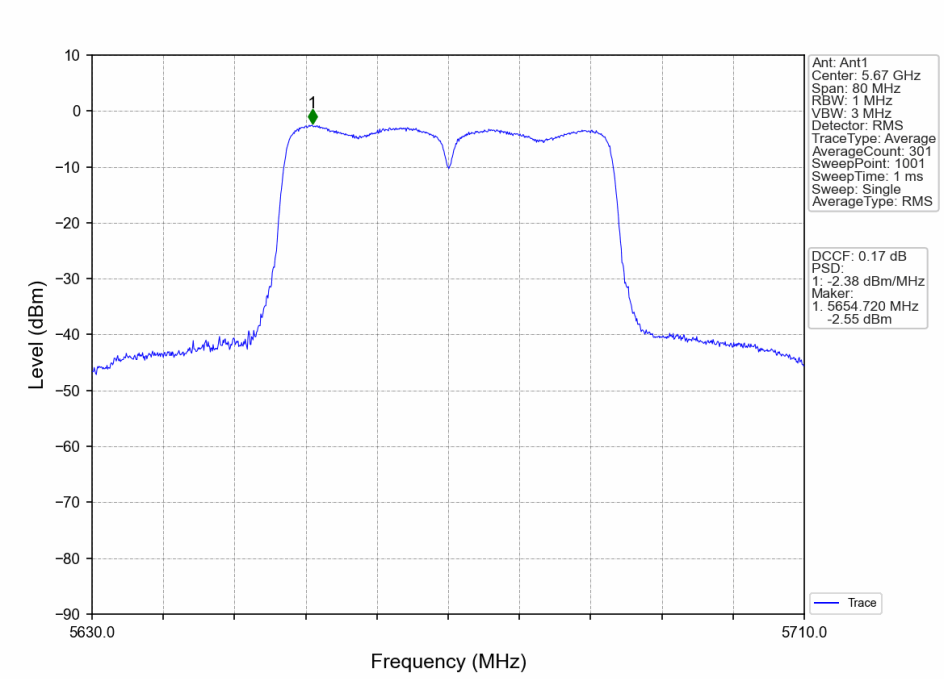
802.11ac(VHT40)_LCH_5510MHz_Ant1_NTNV



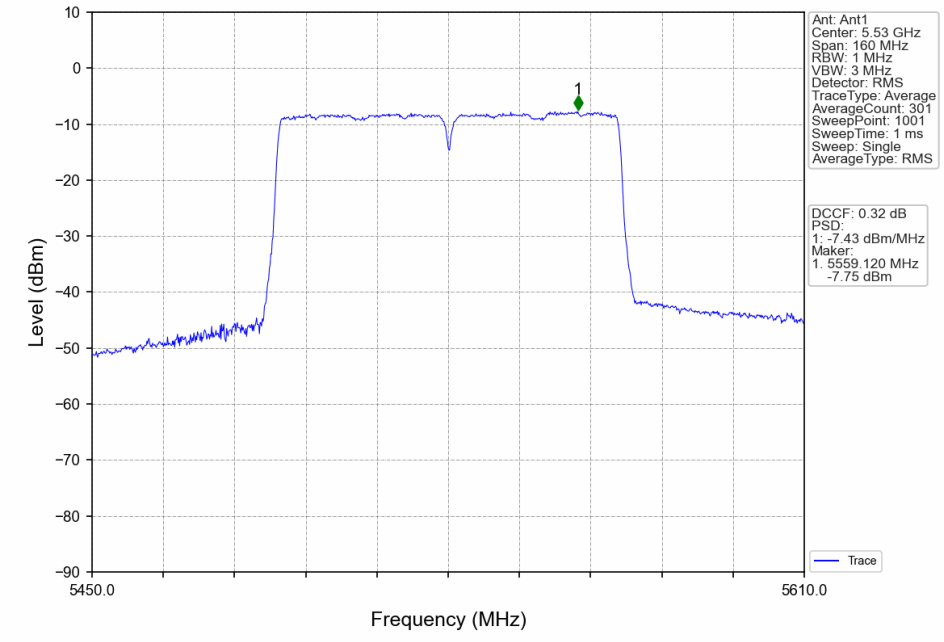
802.11ac(VHT40)_MCH_5550MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5670MHz_Ant1_NTNV



802.11ac(VHT80)_LCH_5530MHz_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	5500	20	4.25	5500.000	5470 to 5725	Pass
				5	5500.000	5470 to 5725	Pass
				5.75	5500.020	5470 to 5725	Pass
			-30	5	5499.980	5470 to 5725	Pass
			-20	5	5499.980	5470 to 5725	Pass
			-10	5	5500.020	5470 to 5725	Pass
			0	5	5500.020	5470 to 5725	Pass
			10	5	5500.000	5470 to 5725	Pass
			30	5	5500.020	5470 to 5725	Pass
			40	5	5500.000	5470 to 5725	Pass
			85	5	5500.020	5470 to 5725	Pass
		5580	20	4.25	5580.000	5470 to 5725	Pass
				5	5580.020	5470 to 5725	Pass
				5.75	5579.980	5470 to 5725	Pass
			-30	5	5579.980	5470 to 5725	Pass
			-20	5	5579.980	5470 to 5725	Pass
			-10	5	5580.000	5470 to 5725	Pass
			0	5	5579.980	5470 to 5725	Pass
			10	5	5580.000	5470 to 5725	Pass
			30	5	5580.000	5470 to 5725	Pass
			40	5	5580.020	5470 to 5725	Pass
			85	5	5580.020	5470 to 5725	Pass
		5700	20	4.25	5699.980	5470 to 5725	Pass
				5	5700.060	5470 to 5725	Pass
				5.75	5700.000	5470 to 5725	Pass
			-30	5	5700.040	5470 to 5725	Pass
			-20	5	5699.980	5470 to 5725	Pass
			-10	5	5700.000	5470 to 5725	Pass
			0	5	5700.000	5470 to 5725	Pass
			10	5	5700.020	5470 to 5725	Pass
			30	5	5700.020	5470 to 5725	Pass
			40	5	5699.980	5470 to 5725	Pass
			85	5	5700.000	5470 to 5725	Pass
802.11n (HT20)	SISO	5500	20	4.25	5500.060	5470 to 5725	Pass
				5	5500.000	5470 to 5725	Pass
				5.75	5500.020	5470 to 5725	Pass
			-30	5	5500.080	5470 to 5725	Pass
			-20	5	5500.020	5470 to 5725	Pass
			-10	5	5500.060	5470 to 5725	Pass
			0	5	5500.000	5470 to 5725	Pass
			10	5	5500.020	5470 to 5725	Pass
			30	5	5500.040	5470 to 5725	Pass
			40	5	5500.060	5470 to 5725	Pass
			85	5	5500.040	5470 to 5725	Pass
		5580	20	4.25	5580.000	5470 to 5725	Pass
				5	5580.060	5470 to 5725	Pass
				5.75	5580.020	5470 to 5725	Pass
			-30	5	5580.040	5470 to 5725	Pass
			-20	5	5580.020	5470 to 5725	Pass

			-10	5	5580.040	5470 to 5725	Pass
			0	5	5580.040	5470 to 5725	Pass
			10	5	5580.040	5470 to 5725	Pass
			30	5	5580.060	5470 to 5725	Pass
			40	5	5580.020	5470 to 5725	Pass
			85	5	5580.020	5470 to 5725	Pass
		5700	20	4.25	5700.020	5470 to 5725	Pass
				5	5700.040	5470 to 5725	Pass
				5.75	5700.060	5470 to 5725	Pass
			-30	5	5700.040	5470 to 5725	Pass
			-20	5	5700.040	5470 to 5725	Pass
			-10	5	5700.040	5470 to 5725	Pass
			0	5	5700.020	5470 to 5725	Pass
			10	5	5700.060	5470 to 5725	Pass
			30	5	5700.000	5470 to 5725	Pass
			40	5	5700.080	5470 to 5725	Pass
			85	5	5700.040	5470 to 5725	Pass
802.11n (HT40)	SISO	5510	20	4.25	5510.160	5470 to 5725	Pass
				5	5510.080	5470 to 5725	Pass
				5.75	5510.040	5470 to 5725	Pass
			-30	5	5510.120	5470 to 5725	Pass
			-20	5	5510.080	5470 to 5725	Pass
			-10	5	5510.120	5470 to 5725	Pass
			0	5	5510.120	5470 to 5725	Pass
			10	5	5510.120	5470 to 5725	Pass
			30	5	5510.160	5470 to 5725	Pass
			40	5	5510.120	5470 to 5725	Pass
			85	5	5510.120	5470 to 5725	Pass
		5550	20	4.25	5550.040	5470 to 5725	Pass
				5	5550.080	5470 to 5725	Pass
				5.75	5550.080	5470 to 5725	Pass
			-30	5	5550.120	5470 to 5725	Pass
			-20	5	5550.080	5470 to 5725	Pass
			-10	5	5550.120	5470 to 5725	Pass
			0	5	5550.120	5470 to 5725	Pass
			10	5	5550.040	5470 to 5725	Pass
			30	5	5550.040	5470 to 5725	Pass
			40	5	5550.040	5470 to 5725	Pass
			85	5	5550.000	5470 to 5725	Pass
		5670	20	4.25	5670.000	5470 to 5725	Pass
				5	5670.040	5470 to 5725	Pass
				5.75	5670.040	5470 to 5725	Pass
			-30	5	5670.040	5470 to 5725	Pass
			-20	5	5670.080	5470 to 5725	Pass
			-10	5	5670.040	5470 to 5725	Pass
			0	5	5670.040	5470 to 5725	Pass
			10	5	5670.040	5470 to 5725	Pass
			30	5	5670.000	5470 to 5725	Pass
			40	5	5670.080	5470 to 5725	Pass
			85	5	5670.040	5470 to 5725	Pass
802.11ac (VHT20)	SISO	5500	20	4.25	5500.020	5470 to 5725	Pass
				5	5500.040	5470 to 5725	Pass
				5.75	5500.020	5470 to 5725	Pass
			-30	5	5500.060	5470 to 5725	Pass
			-20	5	5500.040	5470 to 5725	Pass
			-10	5	5500.040	5470 to 5725	Pass
			0	5	5500.000	5470 to 5725	Pass
			10	5	5500.060	5470 to 5725	Pass
			30	5	5500.020	5470 to 5725	Pass

			40	5	5500.060	5470 to 5725	Pass
			85	5	5500.020	5470 to 5725	Pass
		5580	20	4.25	5580.040	5470 to 5725	Pass
				5	5580.000	5470 to 5725	Pass
				5.75	5580.060	5470 to 5725	Pass
			-30	5	5580.060	5470 to 5725	Pass
			-20	5	5580.020	5470 to 5725	Pass
			-10	5	5580.040	5470 to 5725	Pass
			0	5	5580.020	5470 to 5725	Pass
			10	5	5580.020	5470 to 5725	Pass
			30	5	5580.040	5470 to 5725	Pass
			40	5	5580.060	5470 to 5725	Pass
			85	5	5579.980	5470 to 5725	Pass
		5700	20	4.25	5700.080	5470 to 5725	Pass
				5	5700.040	5470 to 5725	Pass
				5.75	5700.040	5470 to 5725	Pass
			-30	5	5700.040	5470 to 5725	Pass
			-20	5	5700.000	5470 to 5725	Pass
			-10	5	5700.060	5470 to 5725	Pass
			0	5	5700.040	5470 to 5725	Pass
			10	5	5700.060	5470 to 5725	Pass
			30	5	5700.040	5470 to 5725	Pass
			40	5	5700.020	5470 to 5725	Pass
			85	5	5700.020	5470 to 5725	Pass
802.11ac (VHT40)	SISO	5510	20	4.25	5510.160	5470 to 5725	Pass
				5	5510.080	5470 to 5725	Pass
				5.75	5510.080	5470 to 5725	Pass
			-30	5	5510.080	5470 to 5725	Pass
			-20	5	5510.040	5470 to 5725	Pass
			-10	5	5510.080	5470 to 5725	Pass
			0	5	5510.080	5470 to 5725	Pass
			10	5	5510.080	5470 to 5725	Pass
			30	5	5510.040	5470 to 5725	Pass
			40	5	5510.080	5470 to 5725	Pass
			85	5	5510.120	5470 to 5725	Pass
		5550	20	4.25	5550.040	5470 to 5725	Pass
				5	5550.040	5470 to 5725	Pass
				5.75	5550.120	5470 to 5725	Pass
			-30	5	5550.040	5470 to 5725	Pass
			-20	5	5550.080	5470 to 5725	Pass
			-10	5	5550.040	5470 to 5725	Pass
			0	5	5550.080	5470 to 5725	Pass
			10	5	5550.080	5470 to 5725	Pass
			30	5	5550.080	5470 to 5725	Pass
			40	5	5550.000	5470 to 5725	Pass
			85	5	5550.040	5470 to 5725	Pass
		5670	20	4.25	5670.000	5470 to 5725	Pass
				5	5670.040	5470 to 5725	Pass
				5.75	5670.000	5470 to 5725	Pass
			-30	5	5670.000	5470 to 5725	Pass
			-20	5	5670.000	5470 to 5725	Pass
			-10	5	5670.040	5470 to 5725	Pass
			0	5	5670.040	5470 to 5725	Pass
			10	5	5670.000	5470 to 5725	Pass
			30	5	5670.000	5470 to 5725	Pass
			40	5	5670.040	5470 to 5725	Pass
			85	5	5670.080	5470 to 5725	Pass
802.11ac (VHT80)	SISO	5530	20	4.25	5530.075	5470 to 5725	Pass
				5	5530.150	5470 to 5725	Pass

				5.75	5530.150	5470 to 5725	Pass
			-30	5	5530.075	5470 to 5725	Pass
			-20	5	5530.075	5470 to 5725	Pass
			-10	5	5530.150	5470 to 5725	Pass
			0	5	5530.075	5470 to 5725	Pass
			10	5	5530.075	5470 to 5725	Pass
			30	5	5530.150	5470 to 5725	Pass
			40	5	5530.075	5470 to 5725	Pass
			85	5	5530.150	5470 to 5725	Pass