

Appendix RF test data for 5G WIFI

1. Duty Cycle

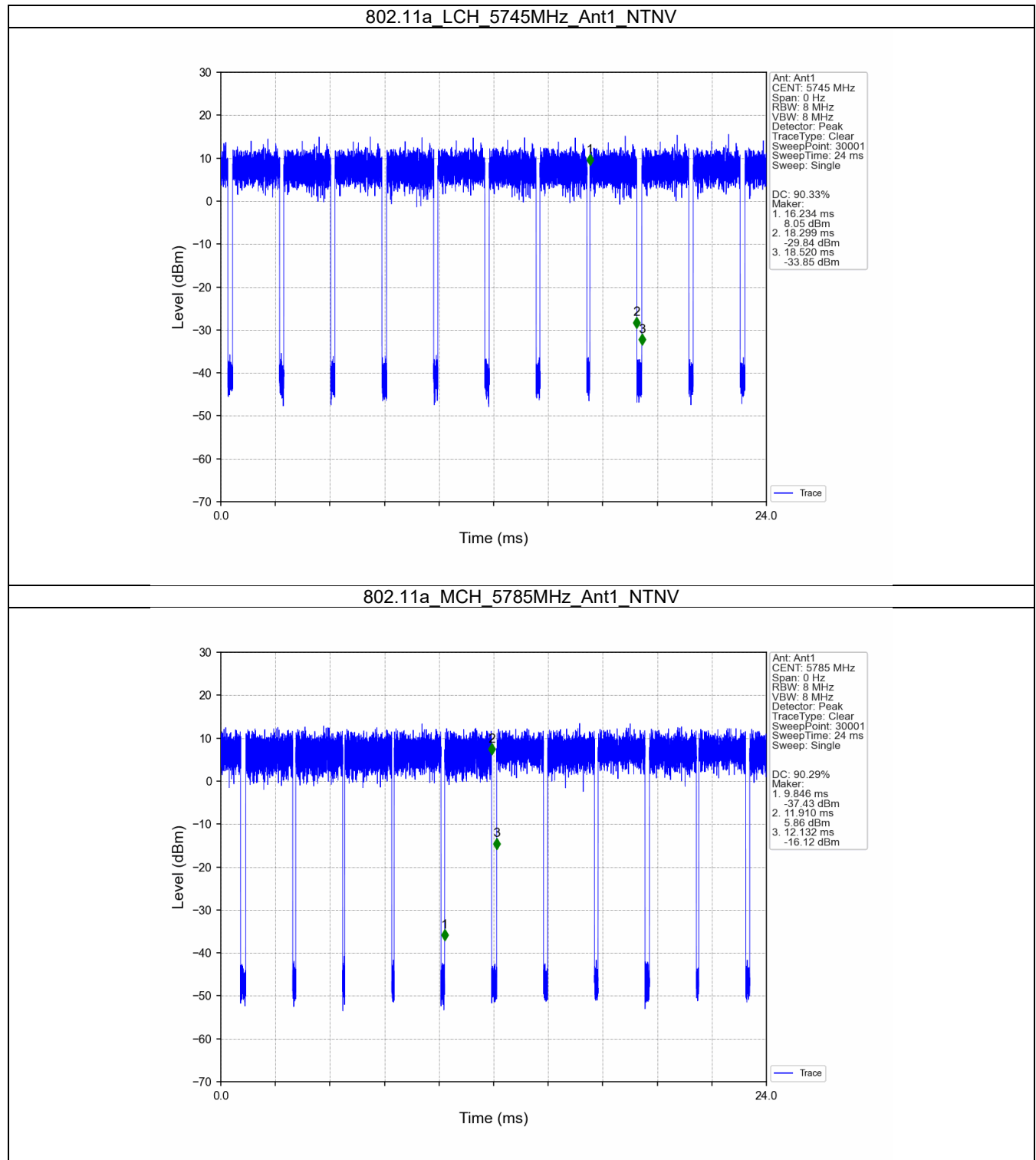
1.1 Test Result

1.1.1 Ant1

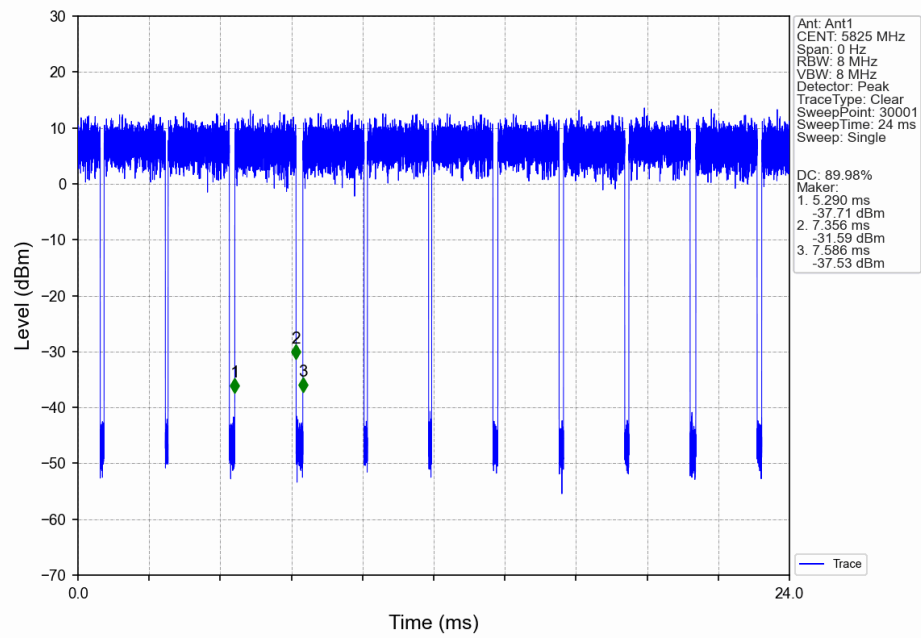
Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11a	SISO	5745	2.065	2.286	90.33	0.44	3.69
		5785	2.064	2.286	90.29	0.44	5.29
		5825	2.066	2.296	89.98	0.46	5.60
802.11n (HT20)	SISO	5745	1.922	2.142	89.73	0.47	5.58
		5785	1.921	3.011	63.80	1.95	31.50
		5825	1.921	2.152	89.27	0.49	2.31
802.11n (HT40)	SISO	5755	0.945	1.158	81.61	0.88	9.22
		5795	0.945	1.175	80.43	0.95	10.43
802.11ac (VHT20)	SISO	5745	2.064	2.555	80.78	0.93	4.52
		5785	2.065	2.701	76.45	1.17	7.91
		5825	2.065	2.546	81.11	0.91	4.21
802.11ac (VHT40)	SISO	5755	2.064	2.555	80.78	0.93	4.52
		5795	2.064	2.574	80.19	0.96	4.52

1.2 Test Graph

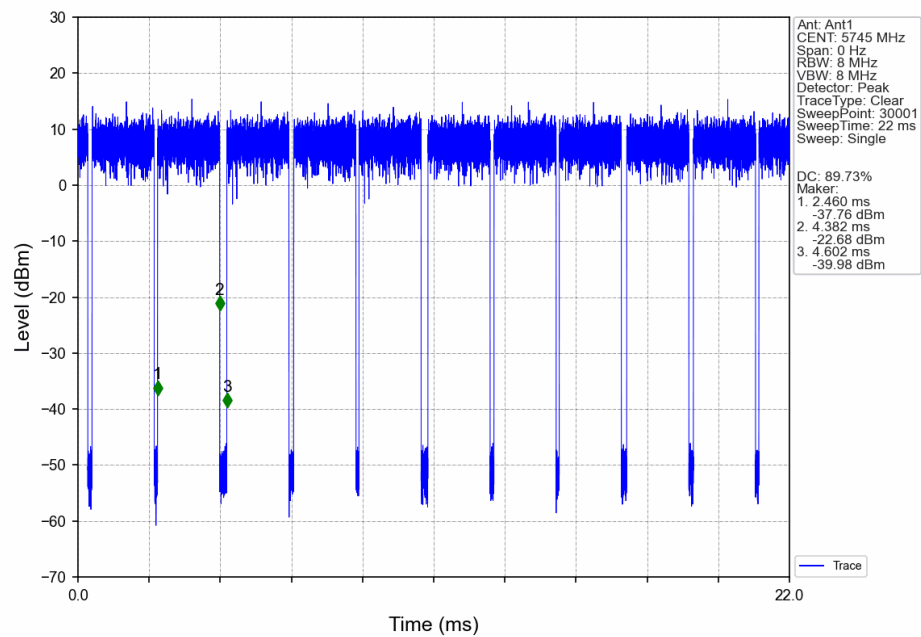
1.2.1 Ant1



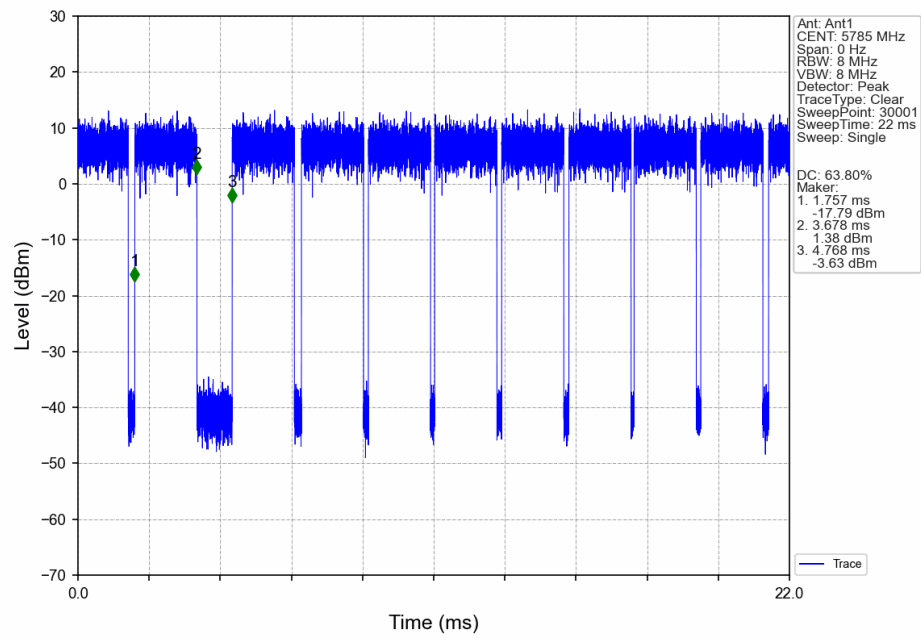
802.11a_HCH_5825MHz_Ant1_NTNV



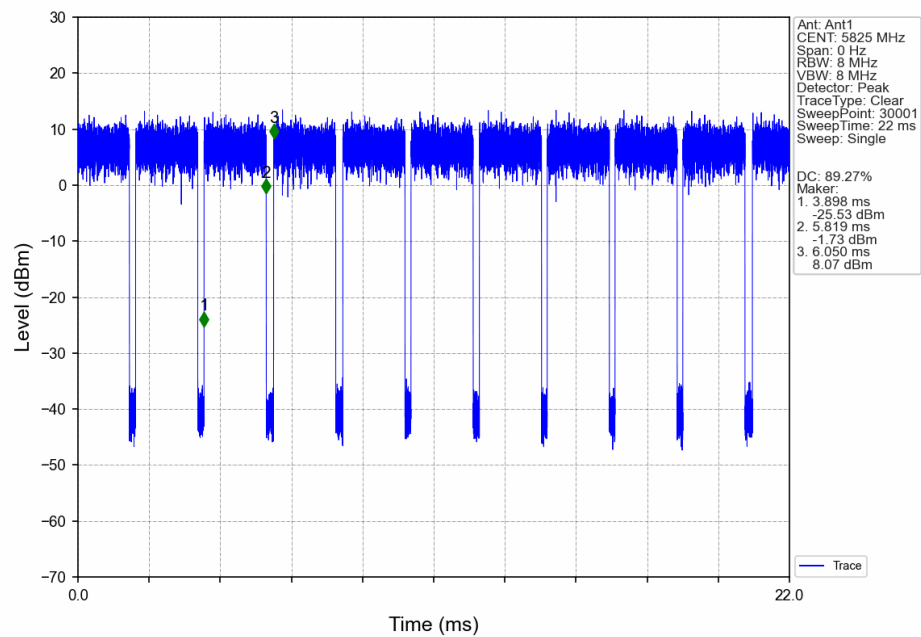
802.11n(HT20)_LCH_5745MHz_Ant1_NTNV



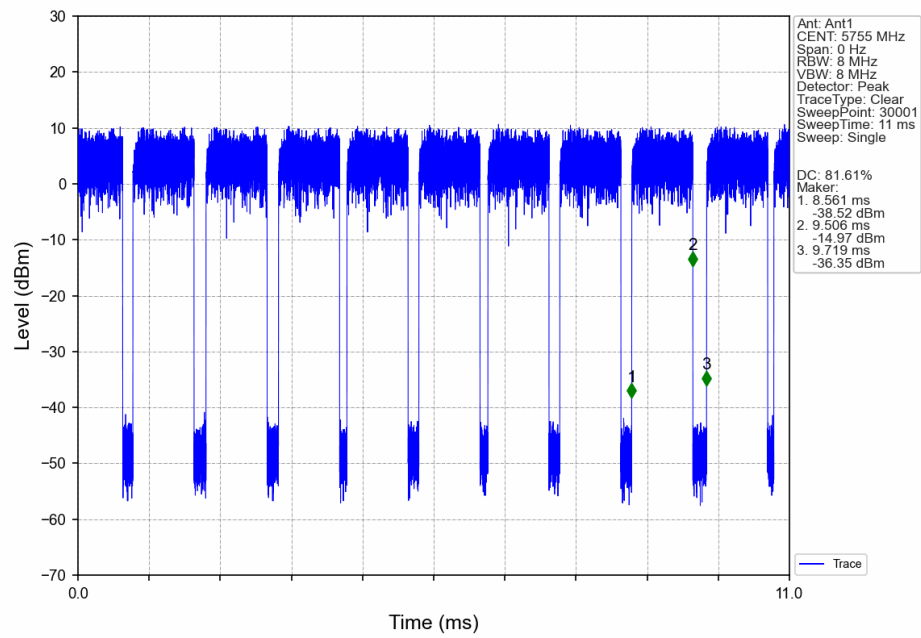
802.11n(HT20)_MCH_5785MHz_Ant1_NTNV



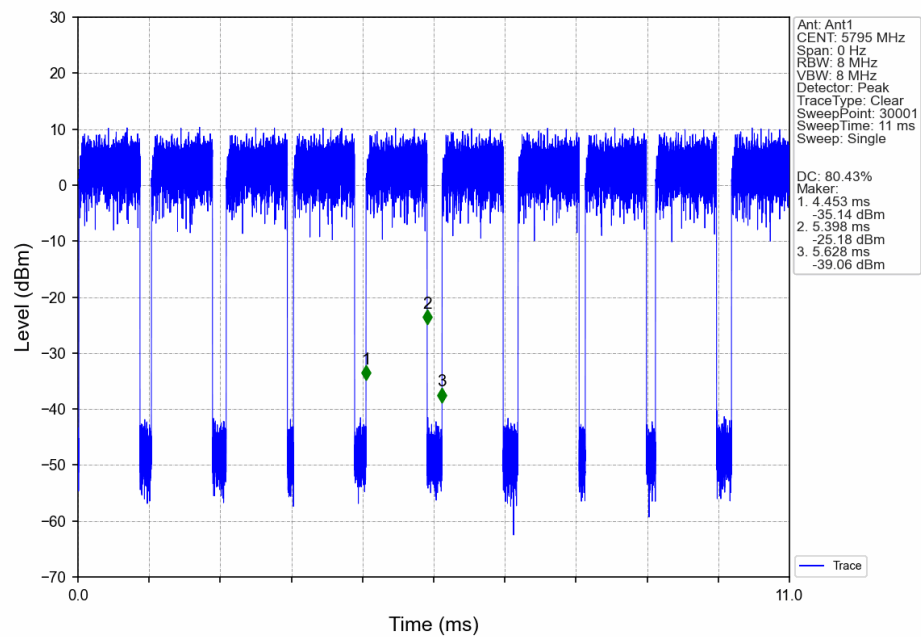
802.11n(HT20)_HCH_5825MHz_Ant1_NTNV



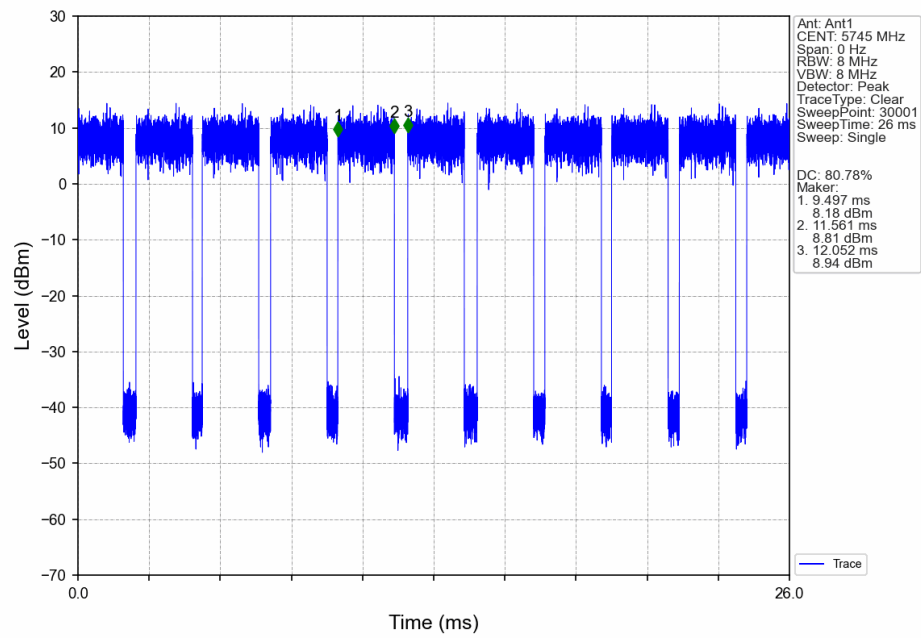
802.11n(HT40)_LCH_5755MHz_Ant1_NTNV



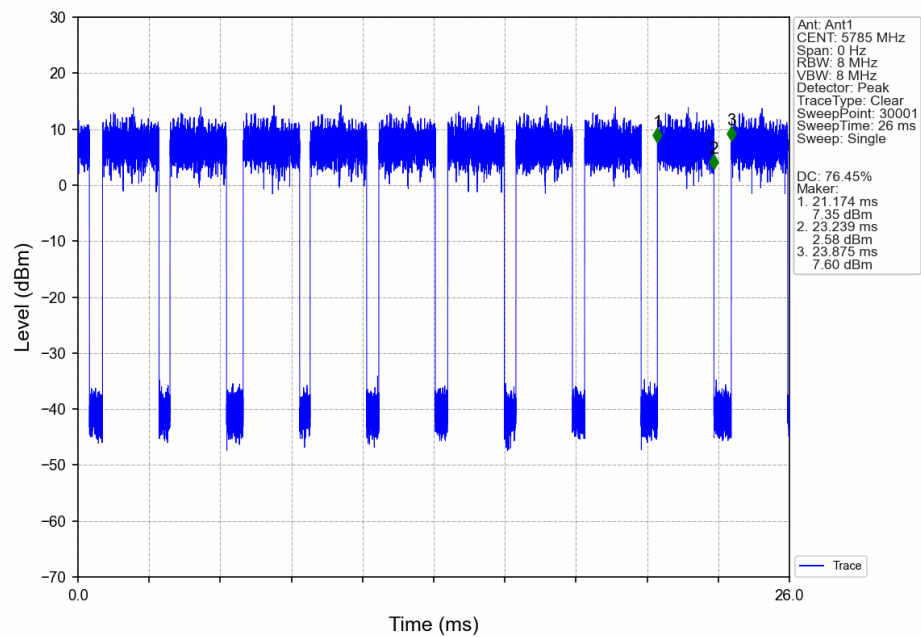
802.11n(HT40)_HCH_5795MHz_Ant1_NTNV



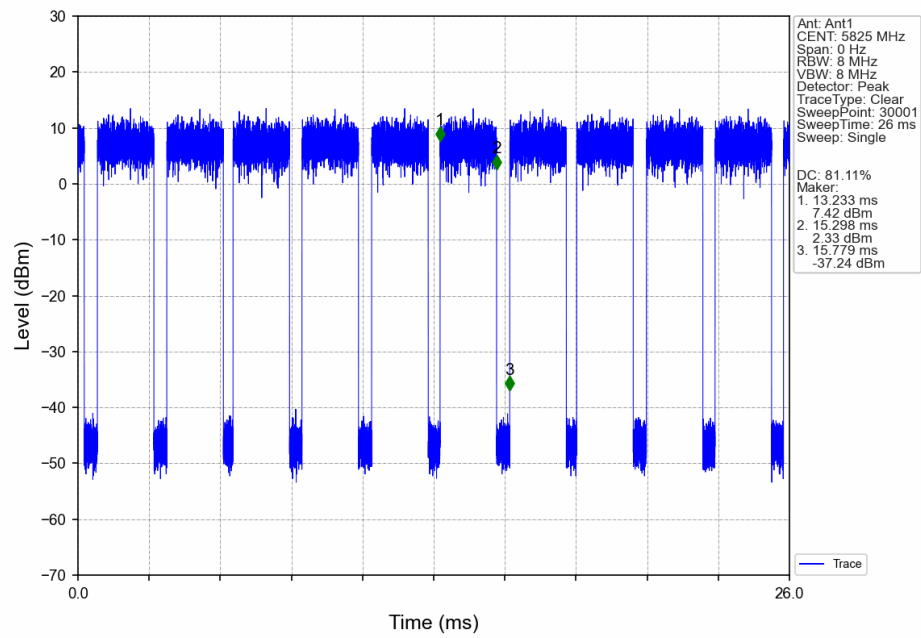
802.11ac(VHT20)_LCH_5745MHz_Ant1_NTNV



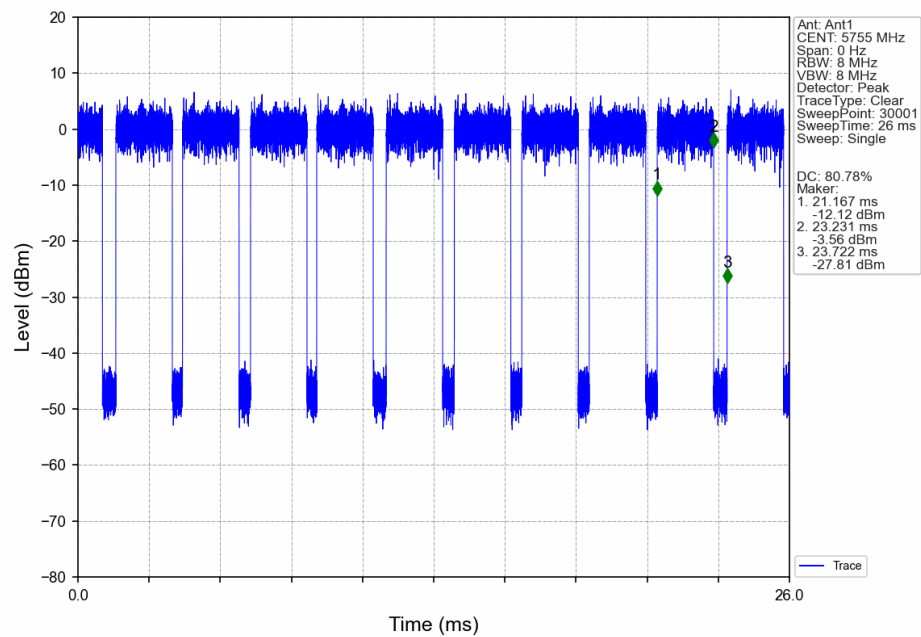
802.11ac(VHT20)_MCH_5785MHz_Ant1_NTNV



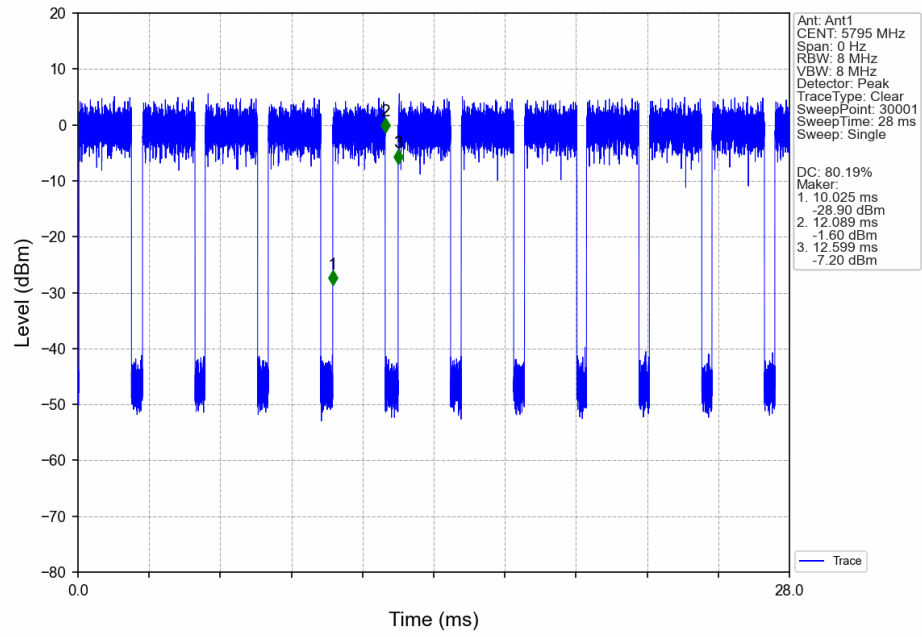
802.11ac(VHT20)_HCH_5825MHz_Ant1_NTNV



802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5795MHz_Ant1_NTNV



2. Bandwidth

2.1 Test Result

2.1.1 OBW

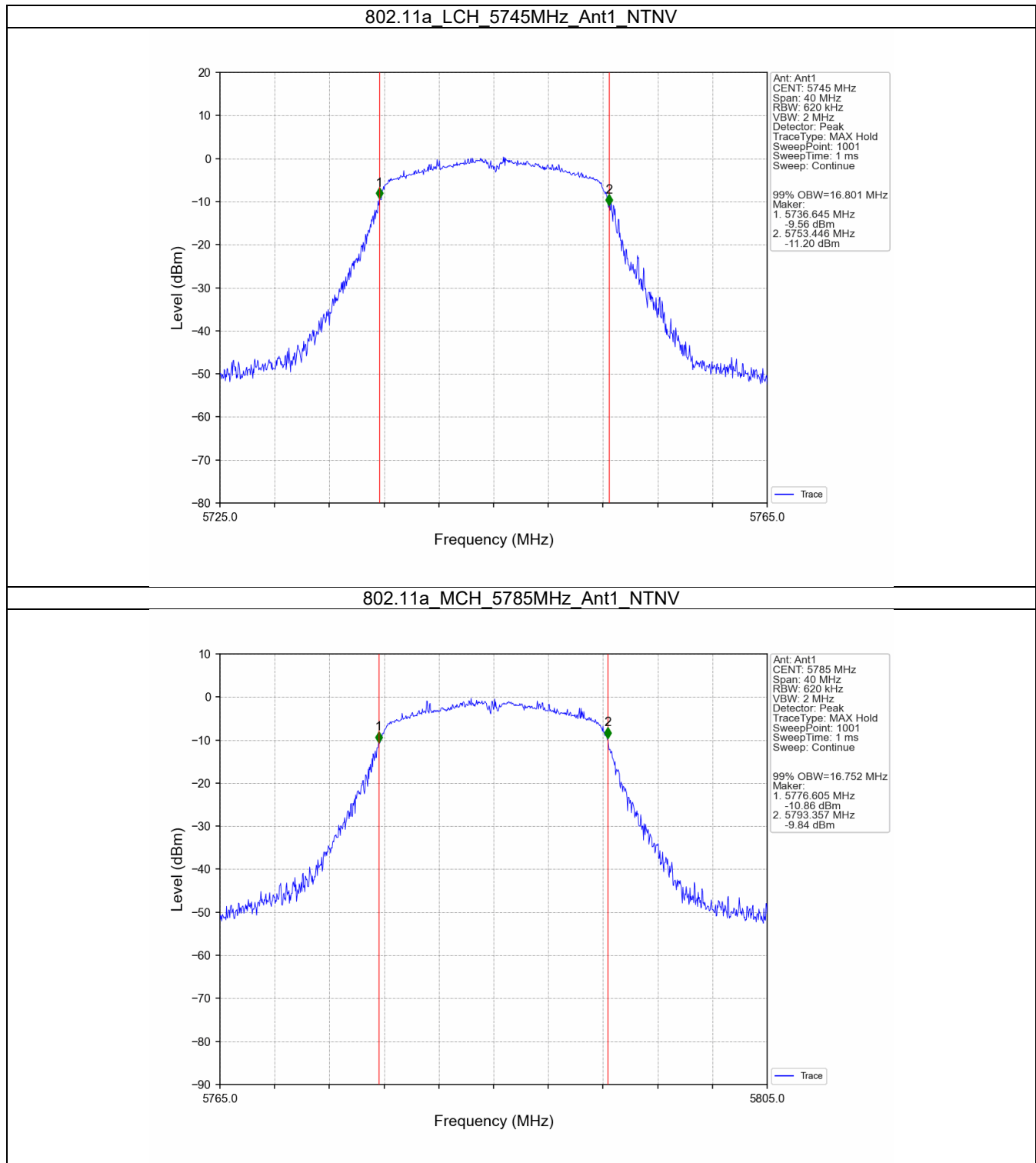
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5745	1	16.801	/	Pass
		5785	1	16.752	/	Pass
		5825	1	16.664	/	Pass
802.11n (HT20)	SISO	5745	1	17.791	/	Pass
		5785	1	17.713	/	Pass
		5825	1	17.678	/	Pass
802.11n (HT40)	SISO	5755	1	35.288	/	Pass
		5795	1	35.237	/	Pass
802.11ac (VHT20)	SISO	5745	1	16.651	/	Pass
		5785	1	16.818	/	Pass
		5825	1	16.705	/	Pass
802.11ac (VHT40)	SISO	5755	1	36.000	/	Pass
		5795	1	35.918	/	Pass

2.1.2 6dB BW

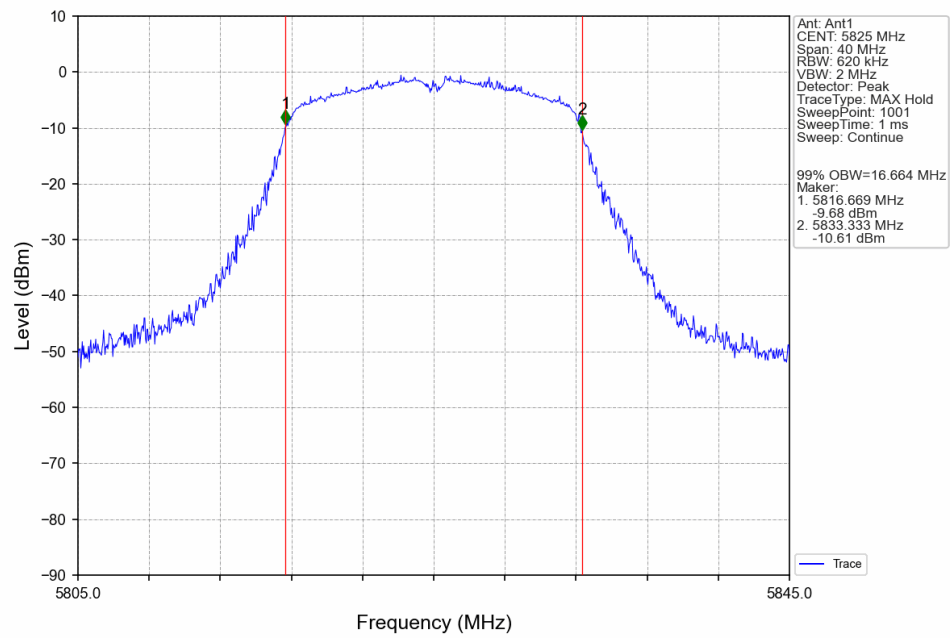
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5745	1	15.105	≥ 0.5	Pass
		5785	1	12.306	≥ 0.5	Pass
		5825	1	13.894	≥ 0.5	Pass
802.11n (HT20)	SISO	5745	1	14.402	≥ 0.5	Pass
		5785	1	15.129	≥ 0.5	Pass
		5825	1	13.944	≥ 0.5	Pass
802.11n (HT40)	SISO	5755	1	35.057	≥ 0.5	Pass
		5795	1	32.530	≥ 0.5	Pass
802.11ac (VHT20)	SISO	5745	1	11.359	≥ 0.5	Pass
		5785	1	15.123	≥ 0.5	Pass
		5825	1	11.705	≥ 0.5	Pass
802.11ac (VHT40)	SISO	5755	1	34.190	≥ 0.5	Pass
		5795	1	31.033	≥ 0.5	Pass

2.2 Test Graph

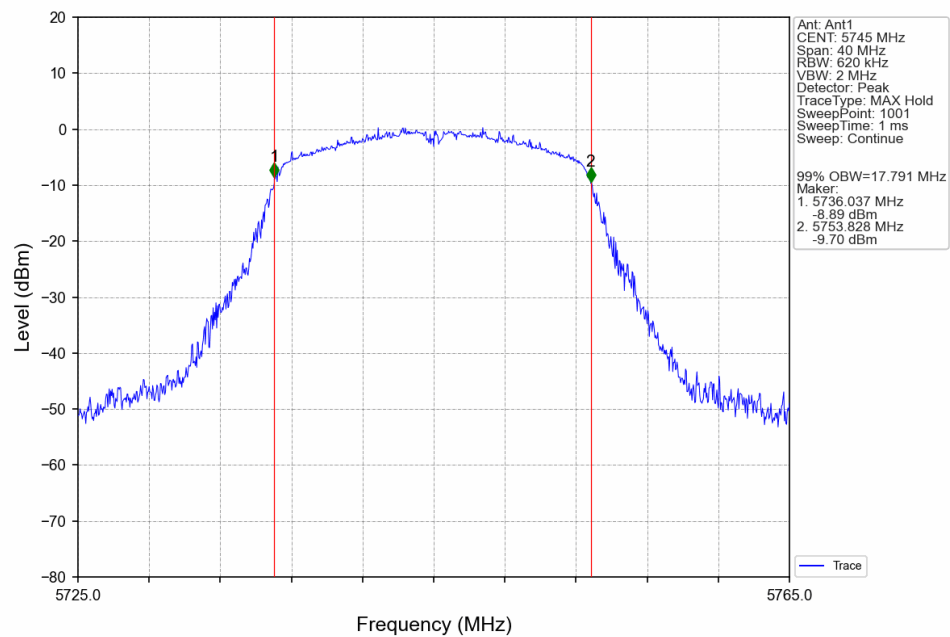
2.2.1 OBW



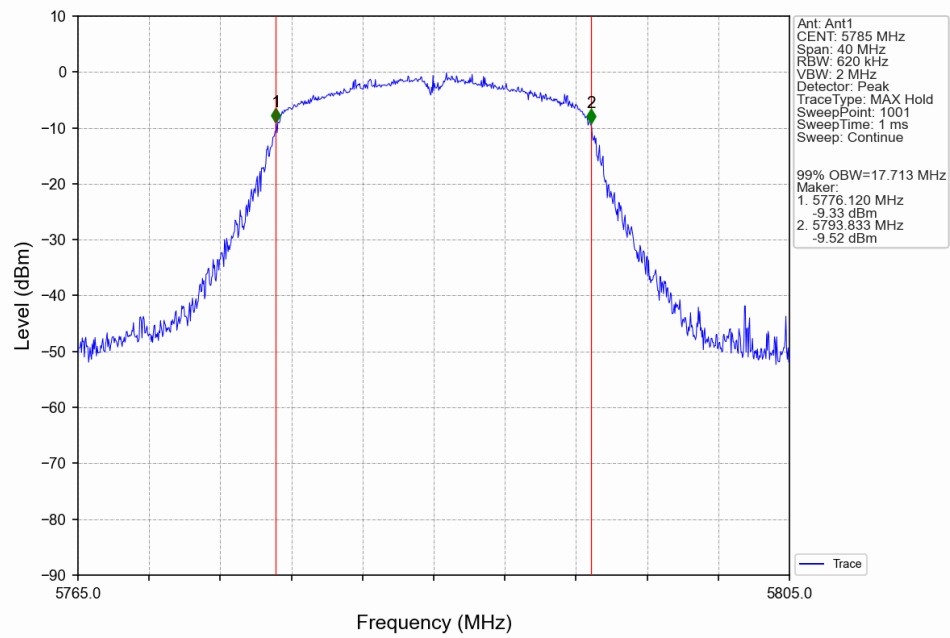
802.11a_HCH_5825MHz_Ant1_NTNV



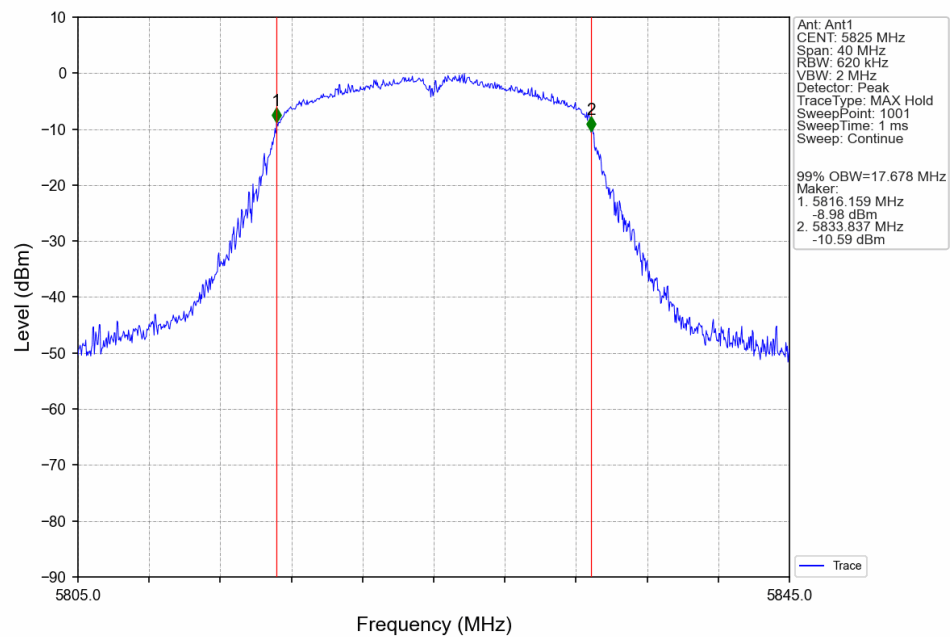
802.11n(HT20)_LCH_5745MHz_Ant1_NTNV



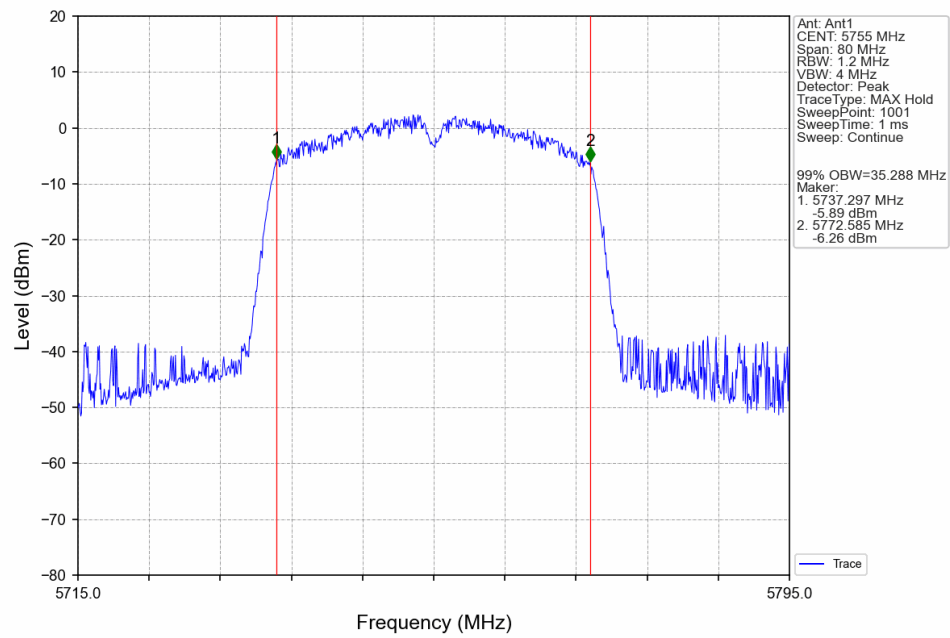
802.11n(HT20)_MCH_5785MHz_Ant1_NTNV



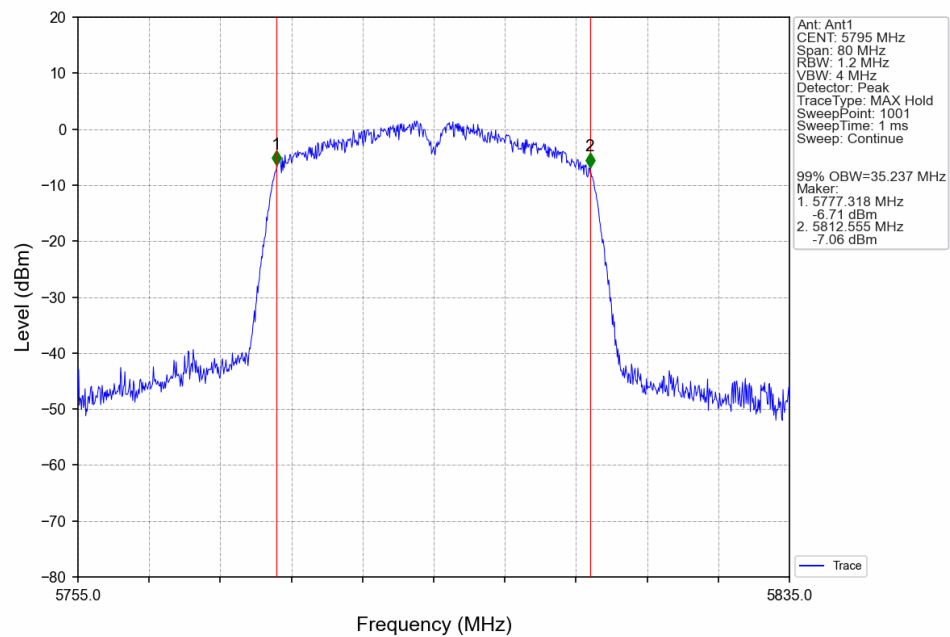
802.11n(HT20)_HCH_5825MHz_Ant1_NTNV



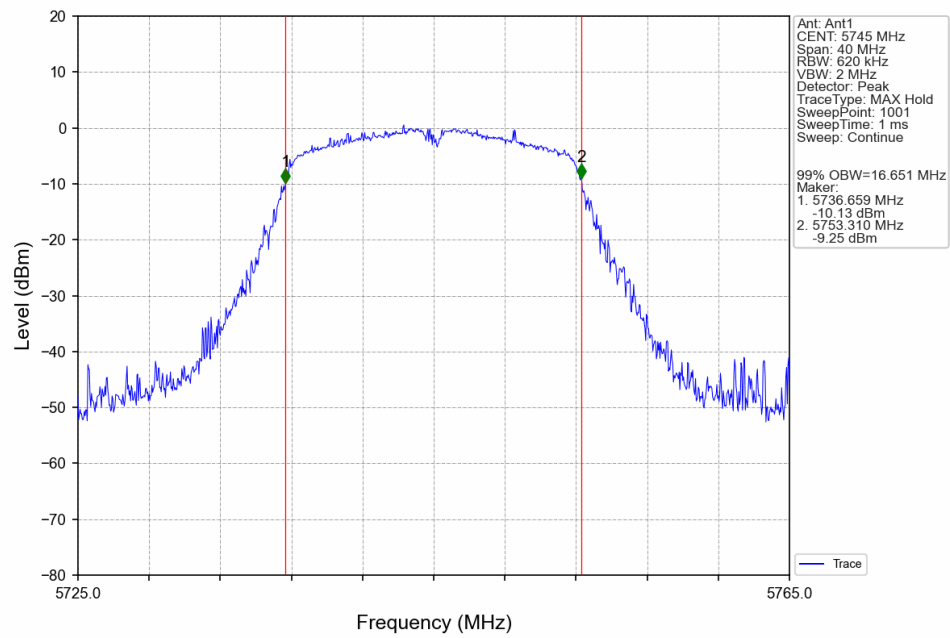
802.11n(HT40)_LCH_5755MHz_Ant1_NTNV



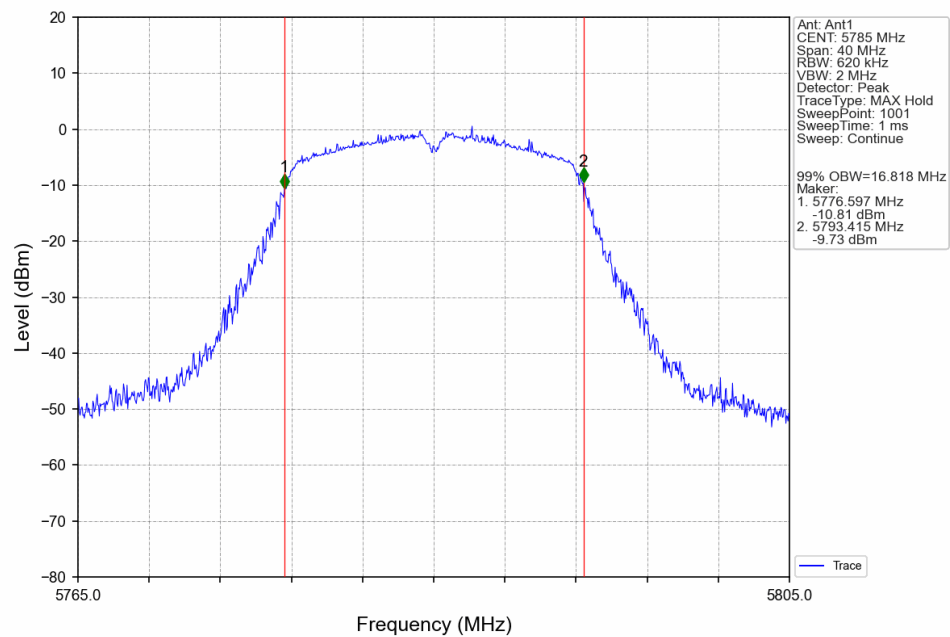
802.11n(HT40)_HCH_5795MHz_Ant1_NTNV



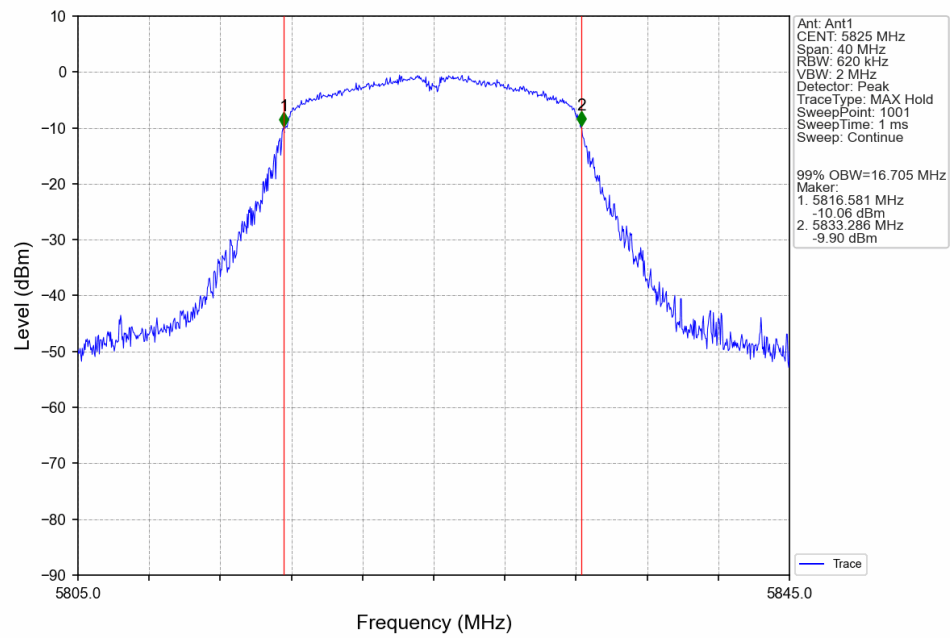
802.11ac(VHT20)_LCH_5745MHz_Ant1_NTNV



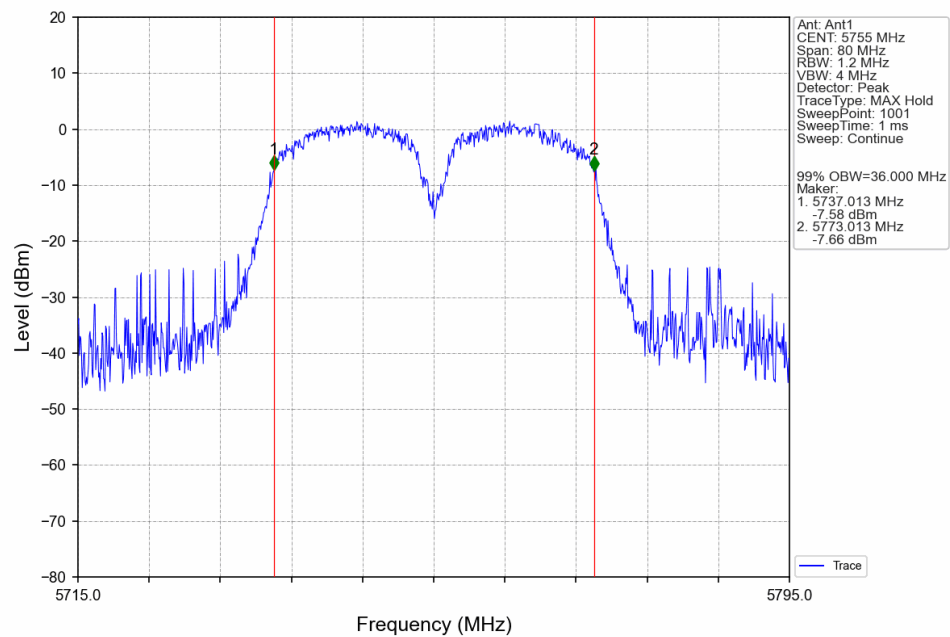
802.11ac(VHT20)_MCH_5785MHz_Ant1_NTNV



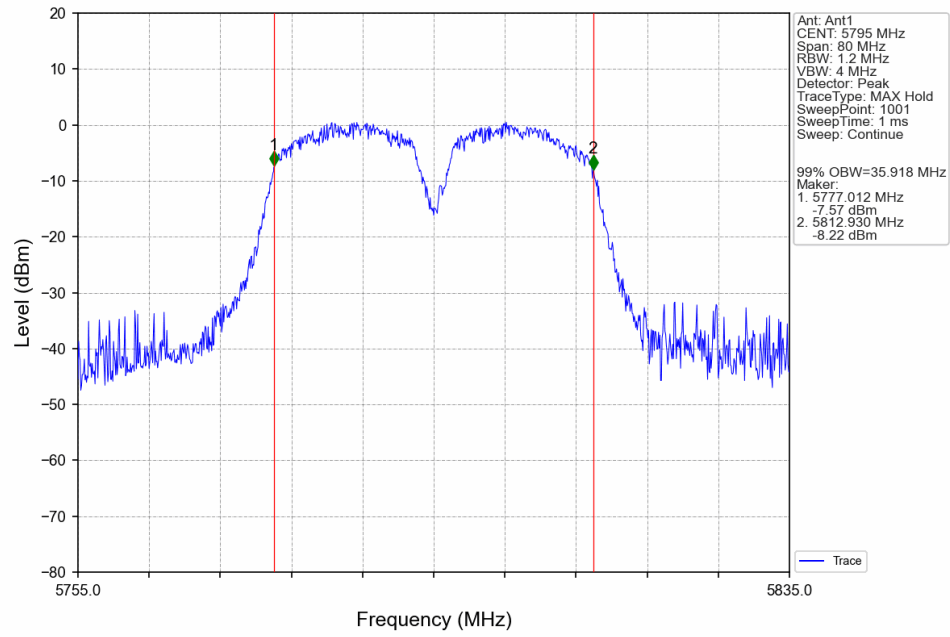
802.11ac(VHT20)_HCH_5825MHz_Ant1_NTNV



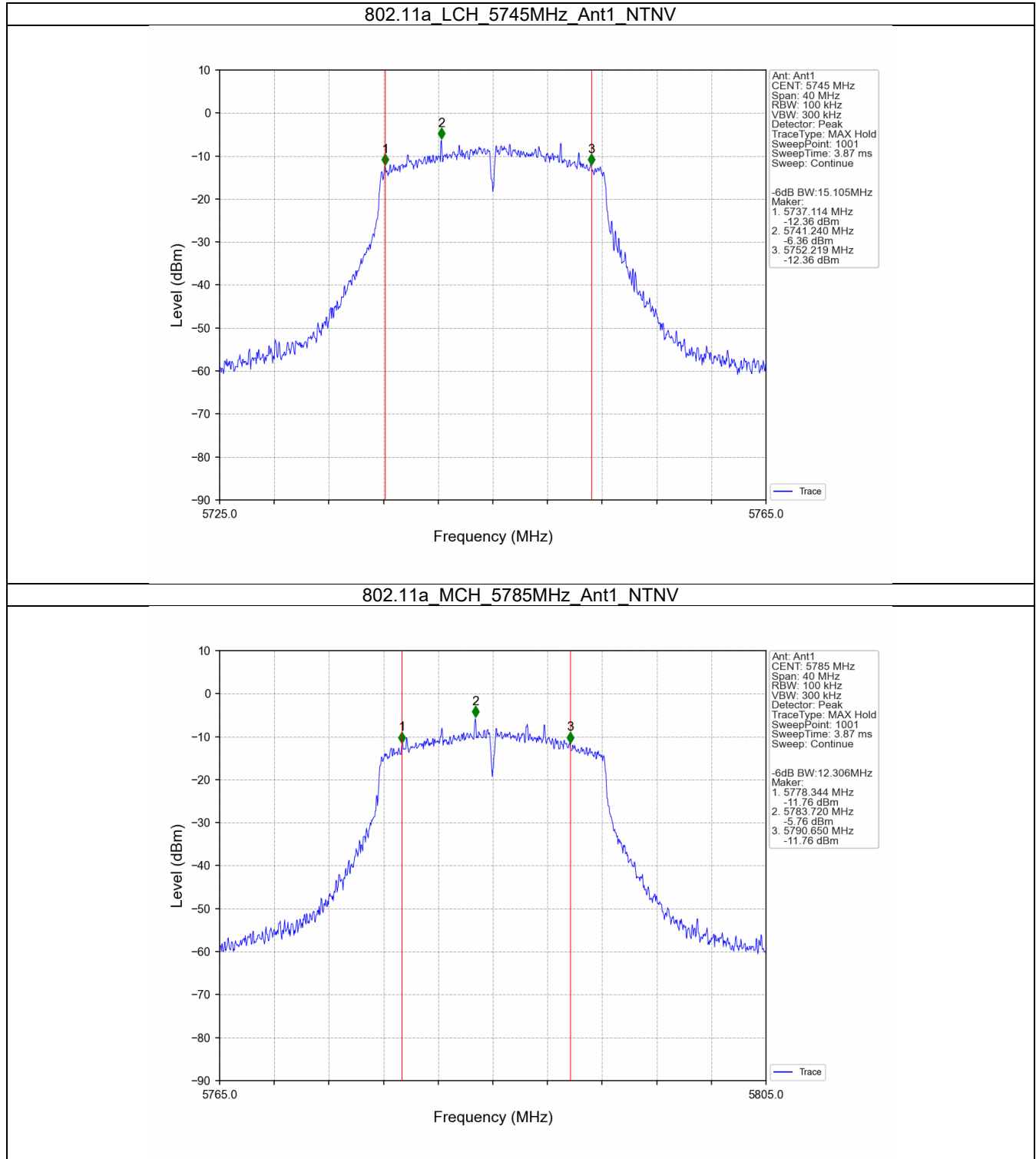
802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV



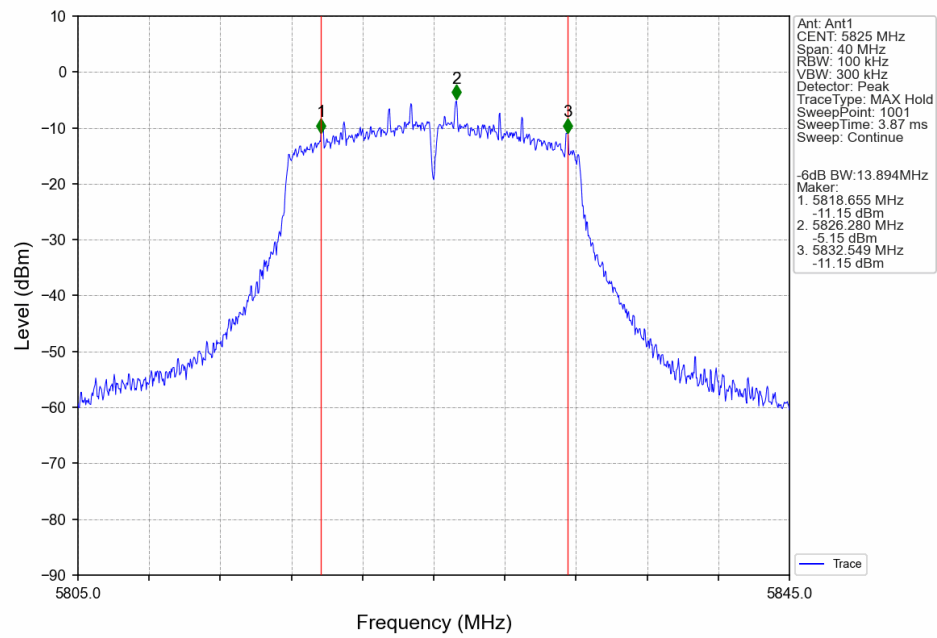
802.11ac(VHT40)_HCH_5795MHz_Ant1_NTNV



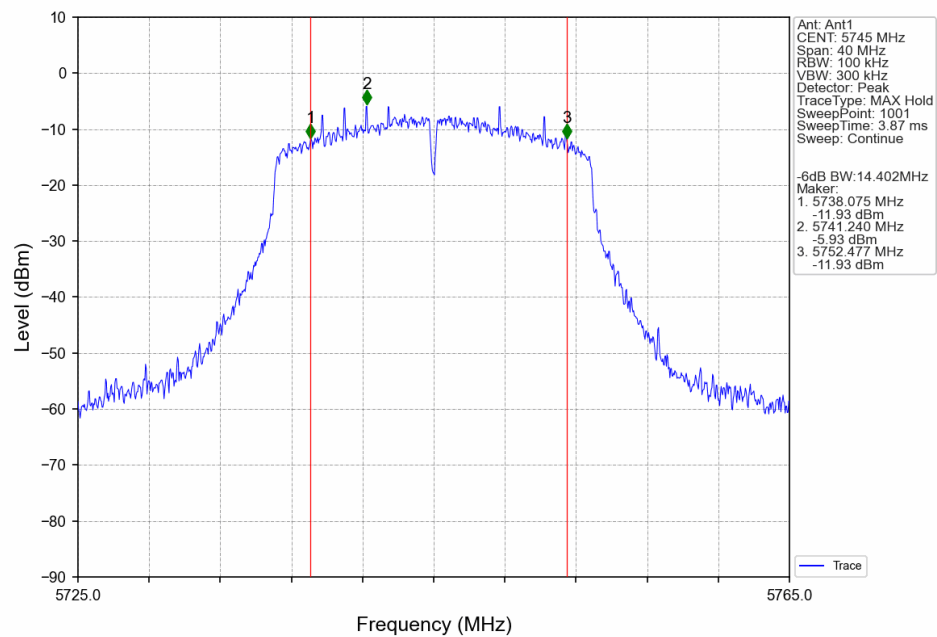
2.2.2 6dB BW



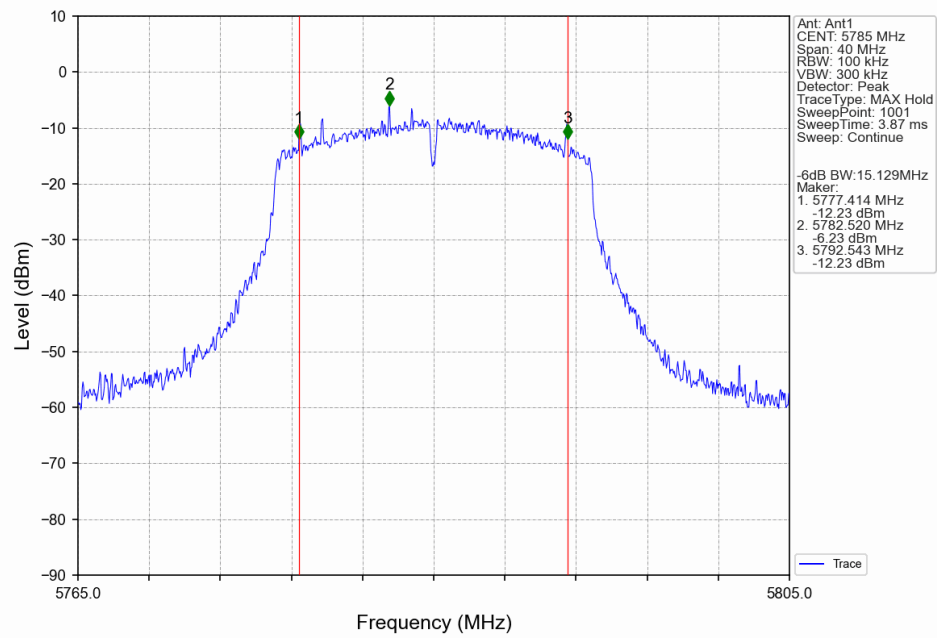
802.11a_HCH_5825MHz_Ant1_NTNV



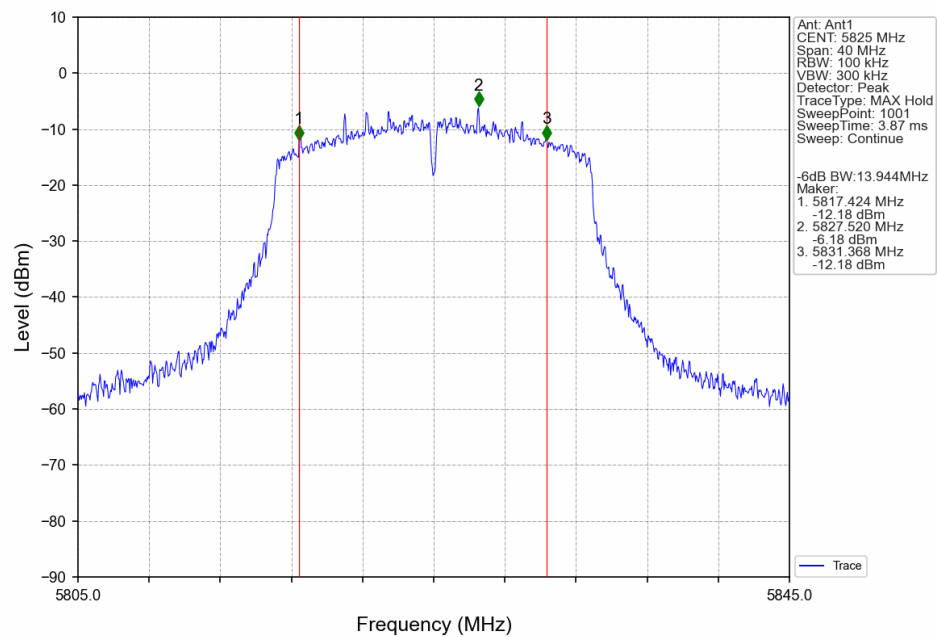
802.11n(HT20)_LCH_5745MHz_Ant1_NTNV



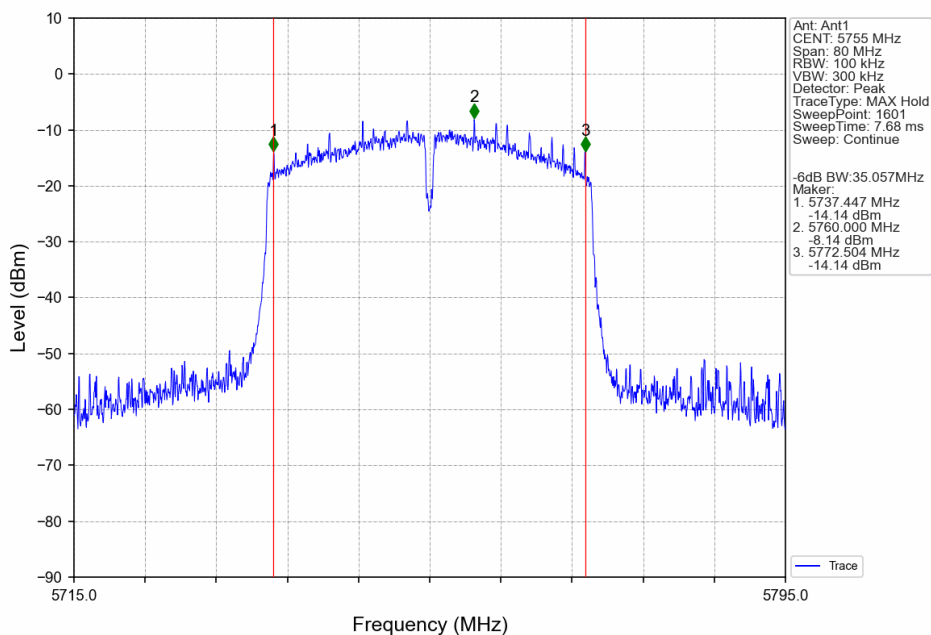
802.11n(HT20)_MCH_5785MHz_Ant1_NTNV



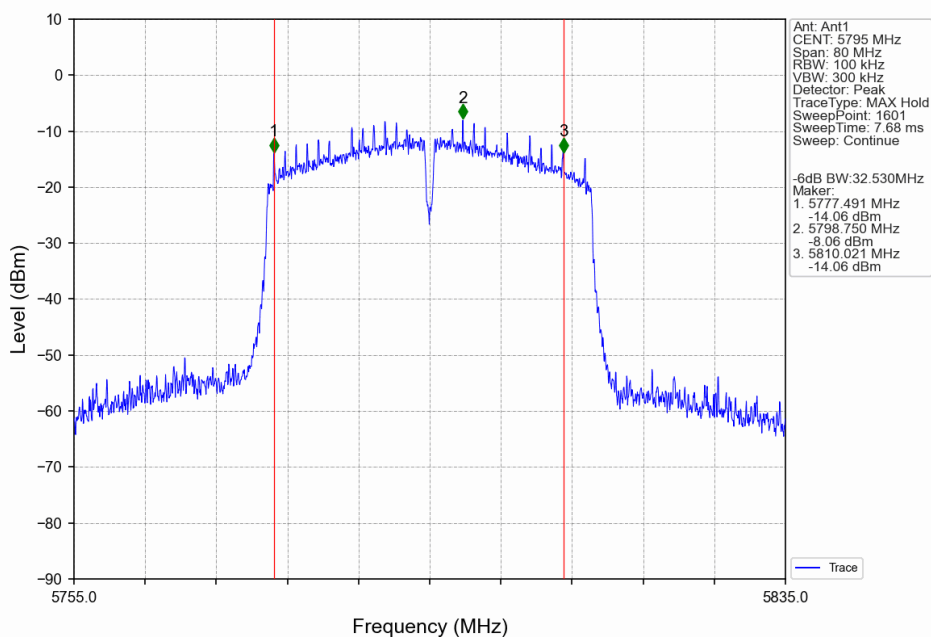
802.11n(HT20)_HCH_5825MHz_Ant1_NTNV



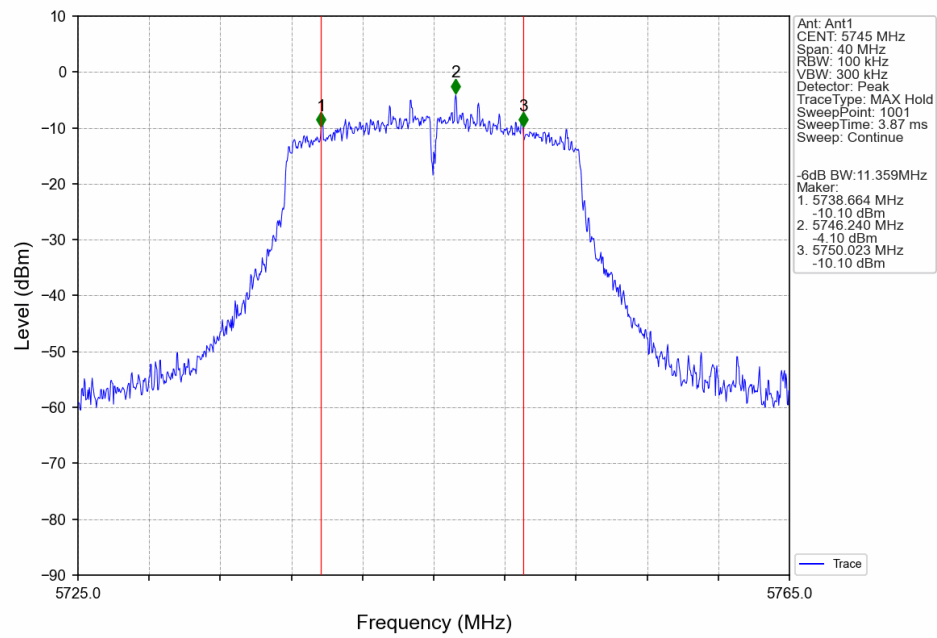
802.11n(HT40)_LCH_5755MHz_Ant1_NTNV



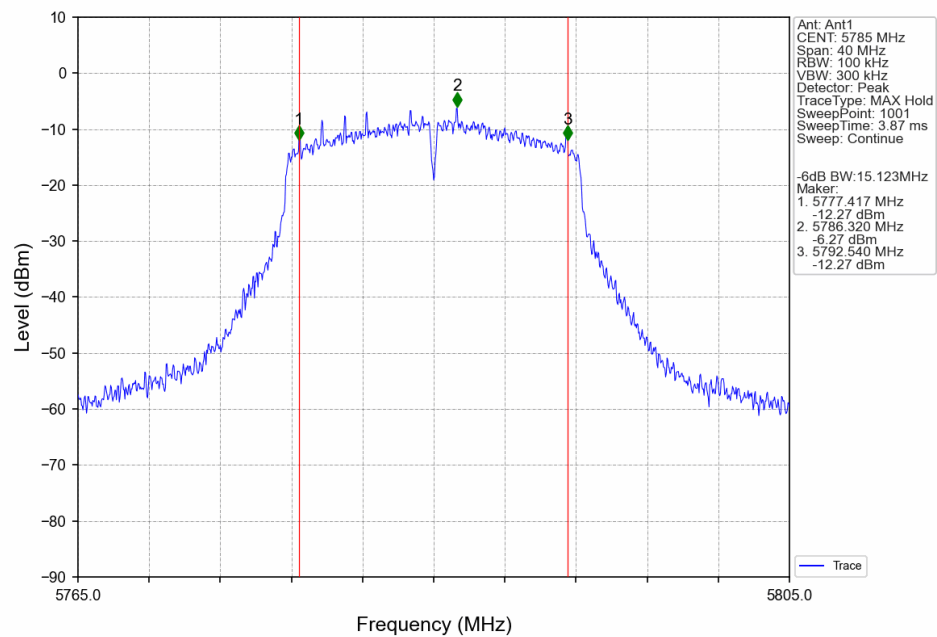
802.11n(HT40)_HCH_5795MHz_Ant1_NTNV



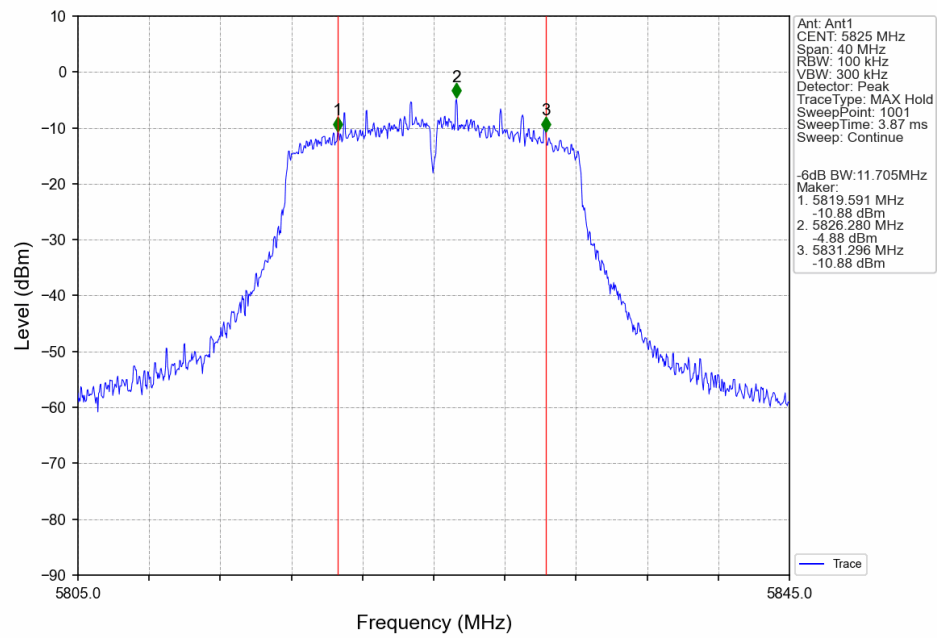
802.11ac(VHT20)_LCH_5745MHz_Ant1_NTNV



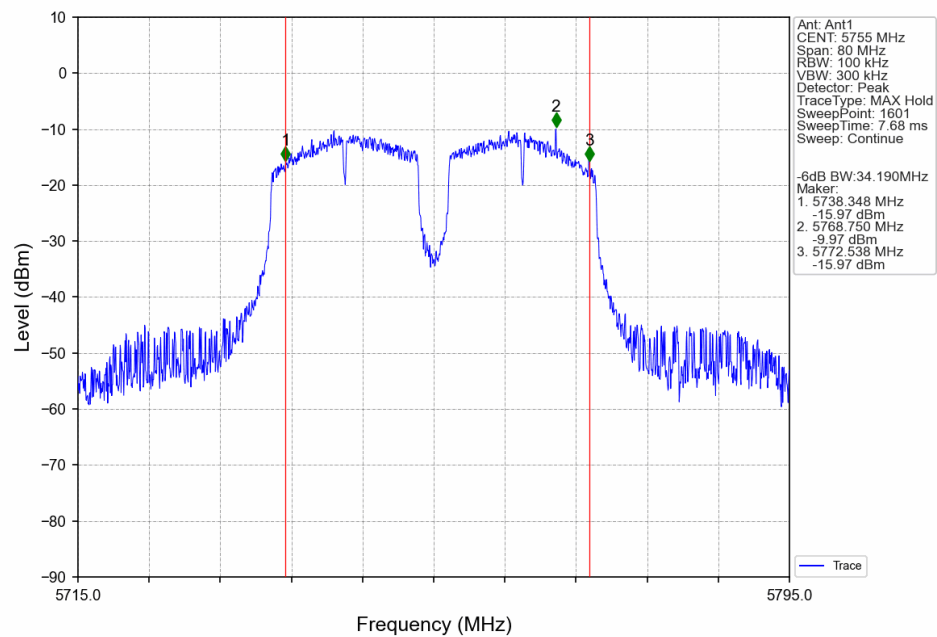
802.11ac(VHT20)_MCH_5785MHz_Ant1_NTNV



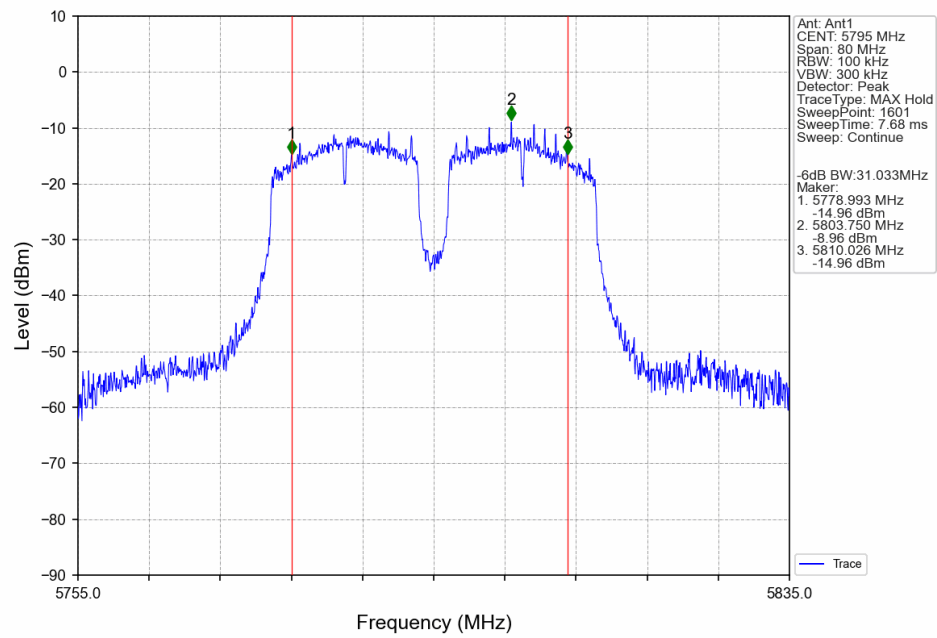
802.11ac(VHT20)_HCH_5825MHz_Ant1_NTNV



802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5795MHz_Ant1_NTNV



3. Maximum Conducted Output Power

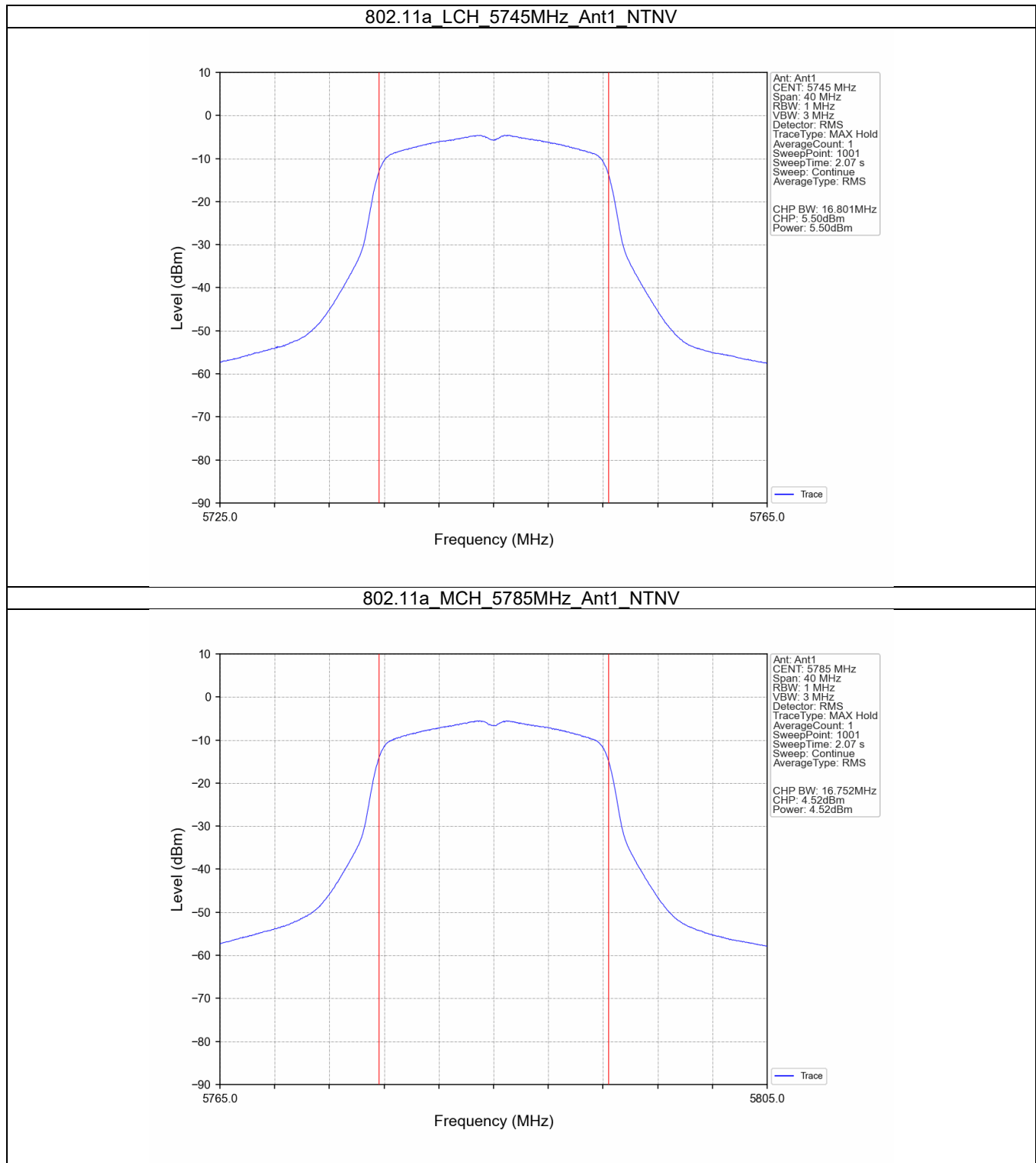
3.1 Test Result

3.1.1 Power

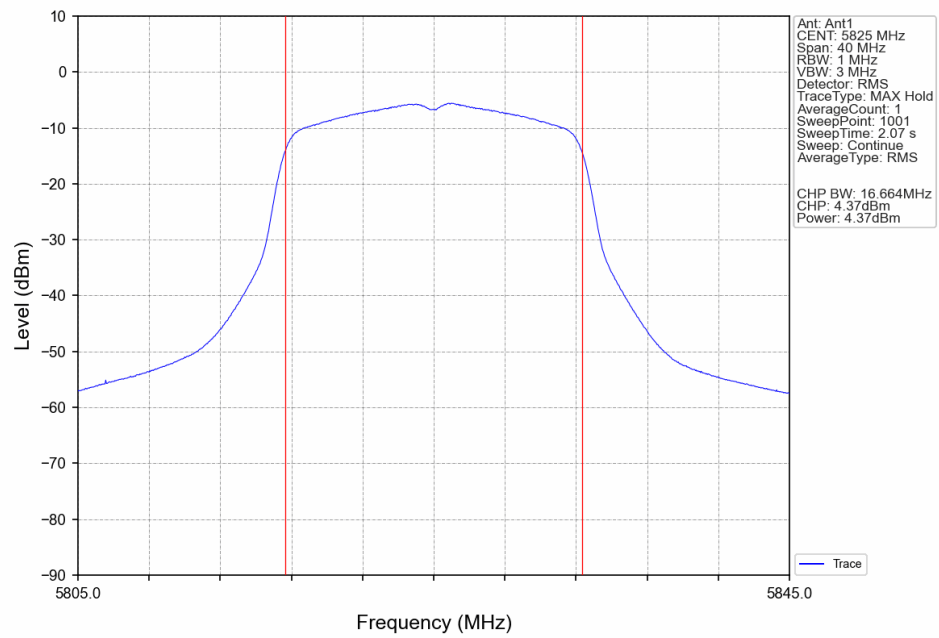
Mode	TX Type	Frequency (MHz)	Maximum Average Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11a	SISO	5745	5.50	<=30	Pass
		5785	4.52	<=30	Pass
		5825	4.37	<=30	Pass
802.11n (HT20)	SISO	5745	5.64	<=30	Pass
		5785	4.73	<=30	Pass
		5825	4.58	<=30	Pass
802.11n (HT40)	SISO	5755	5.62	<=30	Pass
		5795	4.56	<=30	Pass
802.11ac (VHT20)	SISO	5745	5.64	<=30	Pass
		5785	4.80	<=30	Pass
		5825	4.71	<=30	Pass
802.11ac (VHT40)	SISO	5755	5.18	<=30	Pass
		5795	4.25	<=30	Pass

3.2 Test Graph

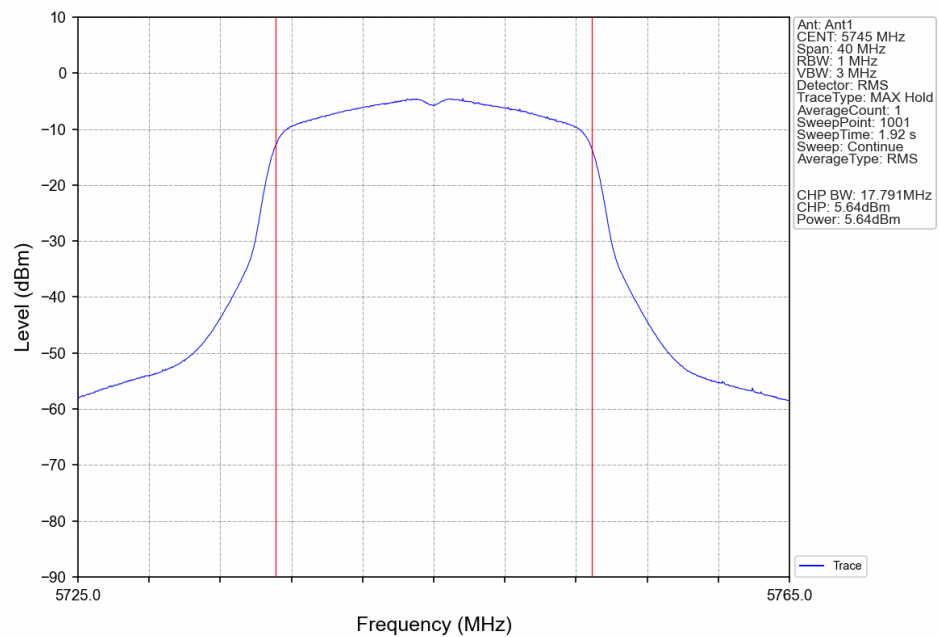
3.2.1 Power



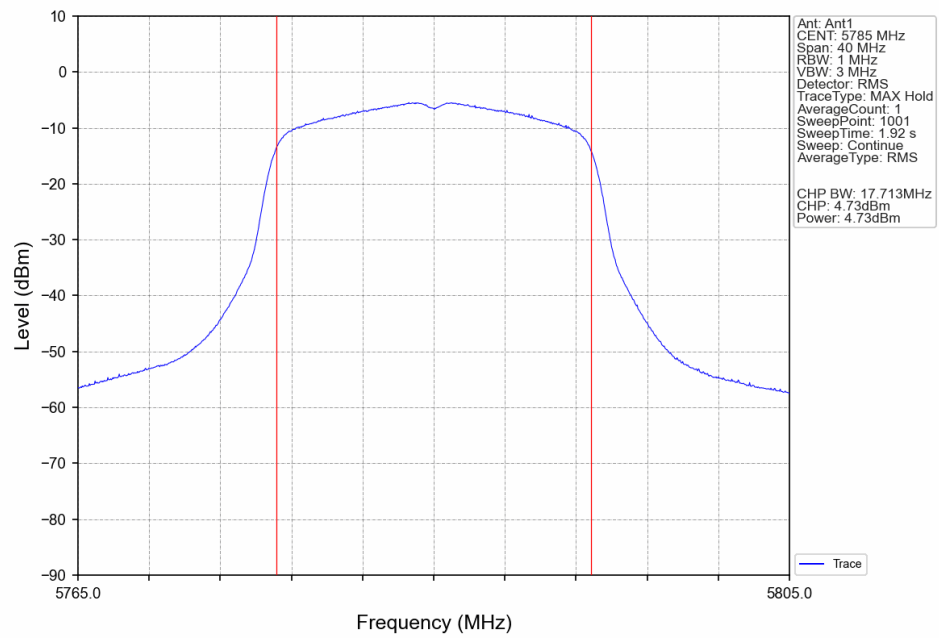
802.11a_HCH_5825MHz_Ant1_NTNV



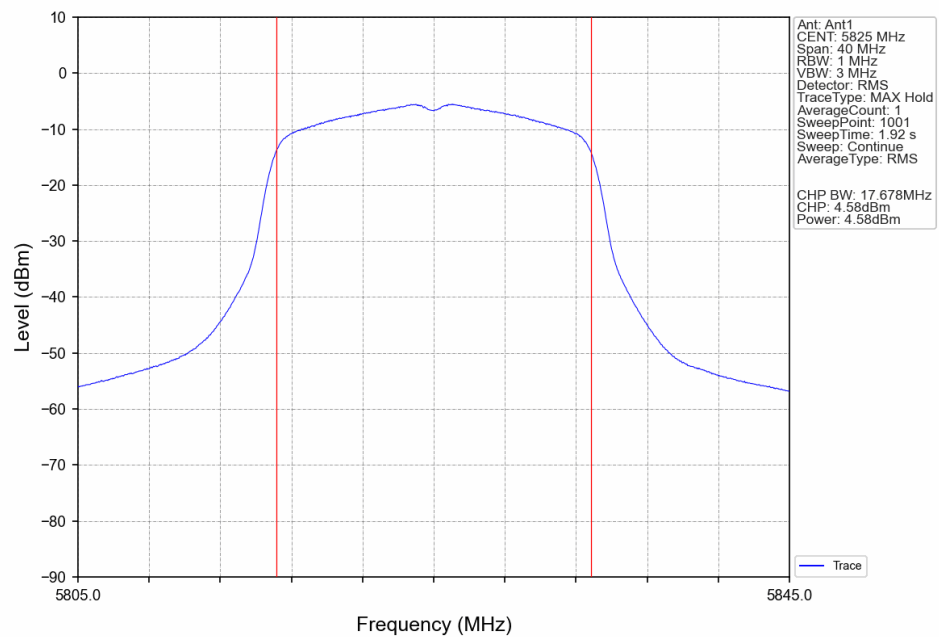
802.11n(HT20)_LCH_5745MHz_Ant1_NTNV



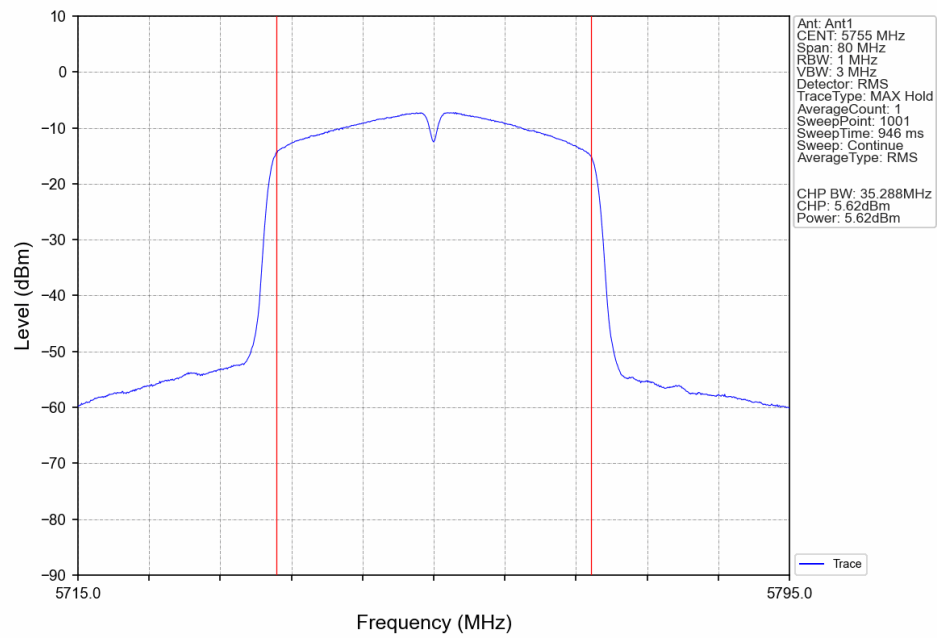
802.11n(HT20)_MCH_5785MHz_Ant1_NTNV



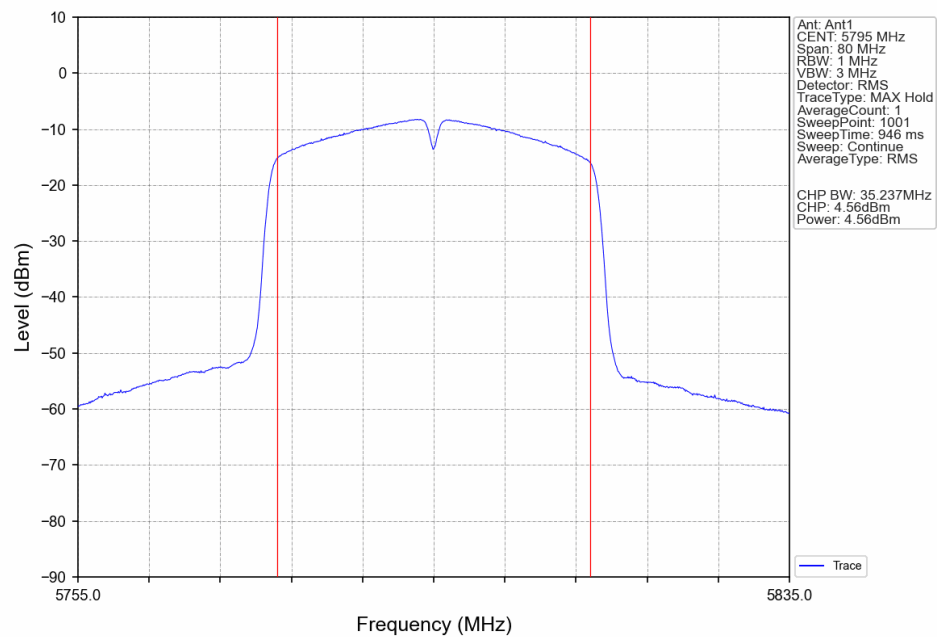
802.11n(HT20)_HCH_5825MHz_Ant1_NTNV



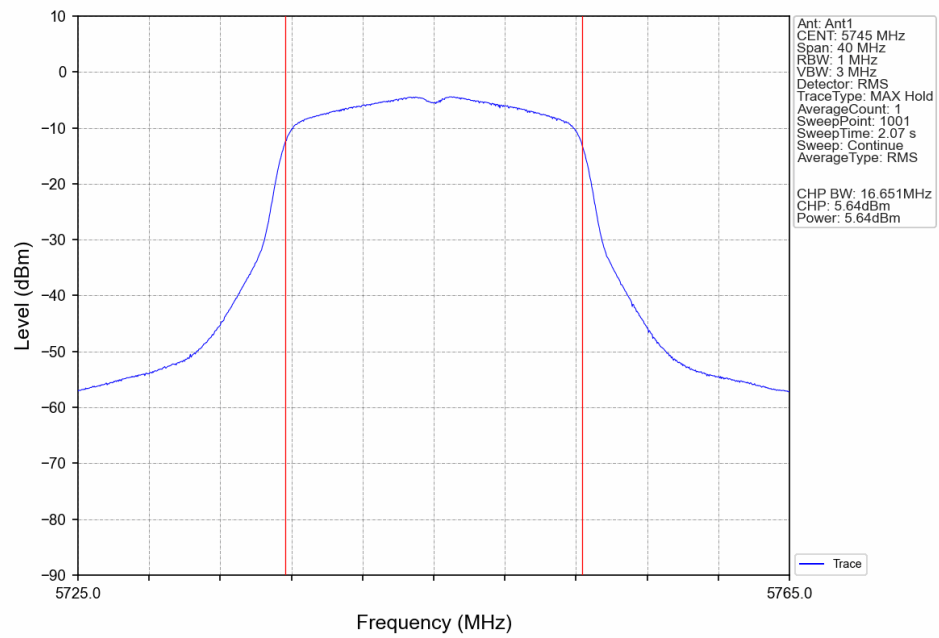
802.11n(HT40)_LCH_5755MHz_Ant1_NTNV



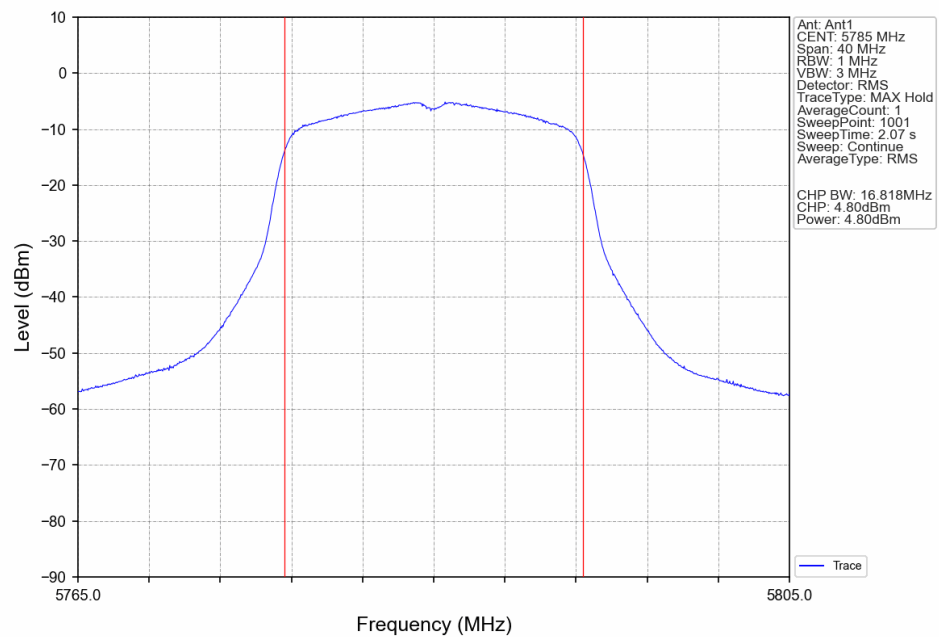
802.11n(HT40)_HCH_5795MHz_Ant1_NTNV



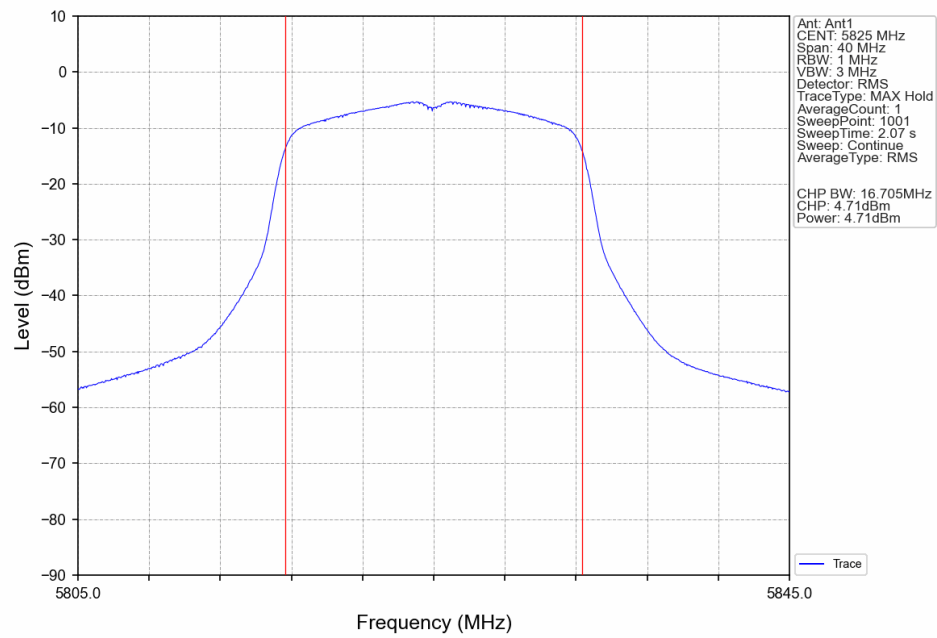
802.11ac(VHT20)_LCH_5745MHz_Ant1_NTNV



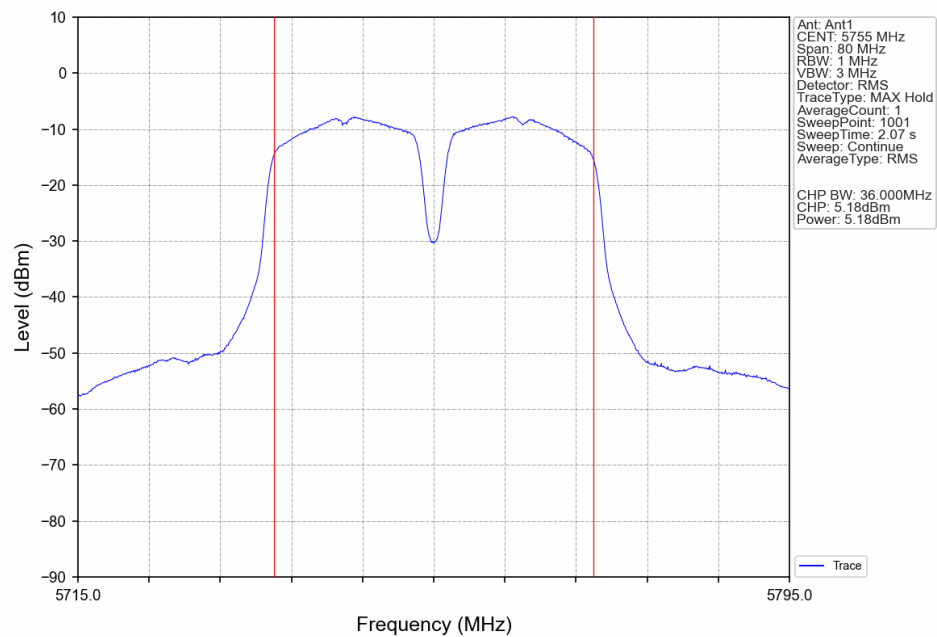
802.11ac(VHT20)_MCH_5785MHz_Ant1_NTNV



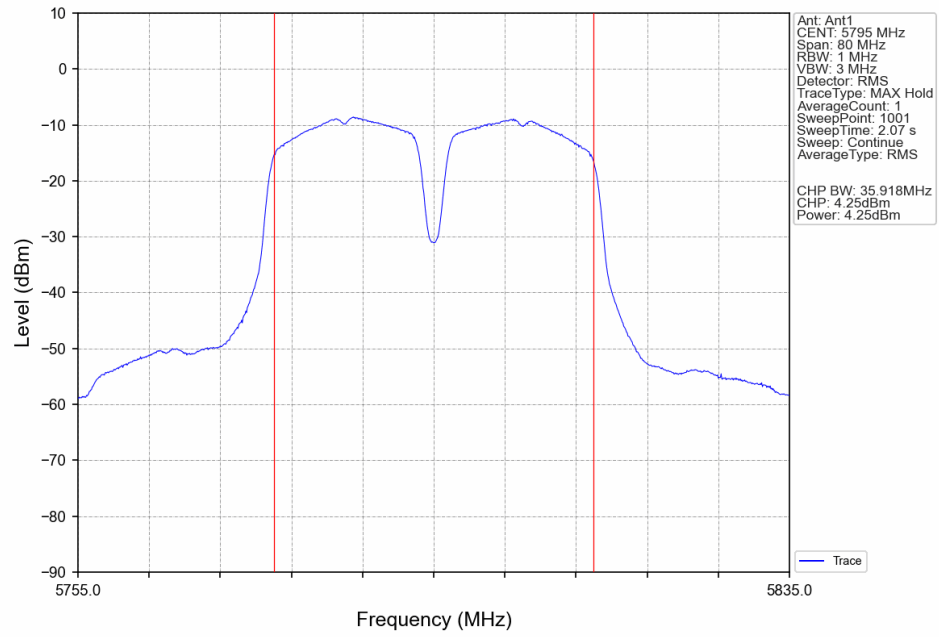
802.11ac(VHT20)_HCH_5825MHz_Ant1_NTNV



802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5795MHz_Ant1_NTNV



4. Maximum Power Spectral Density

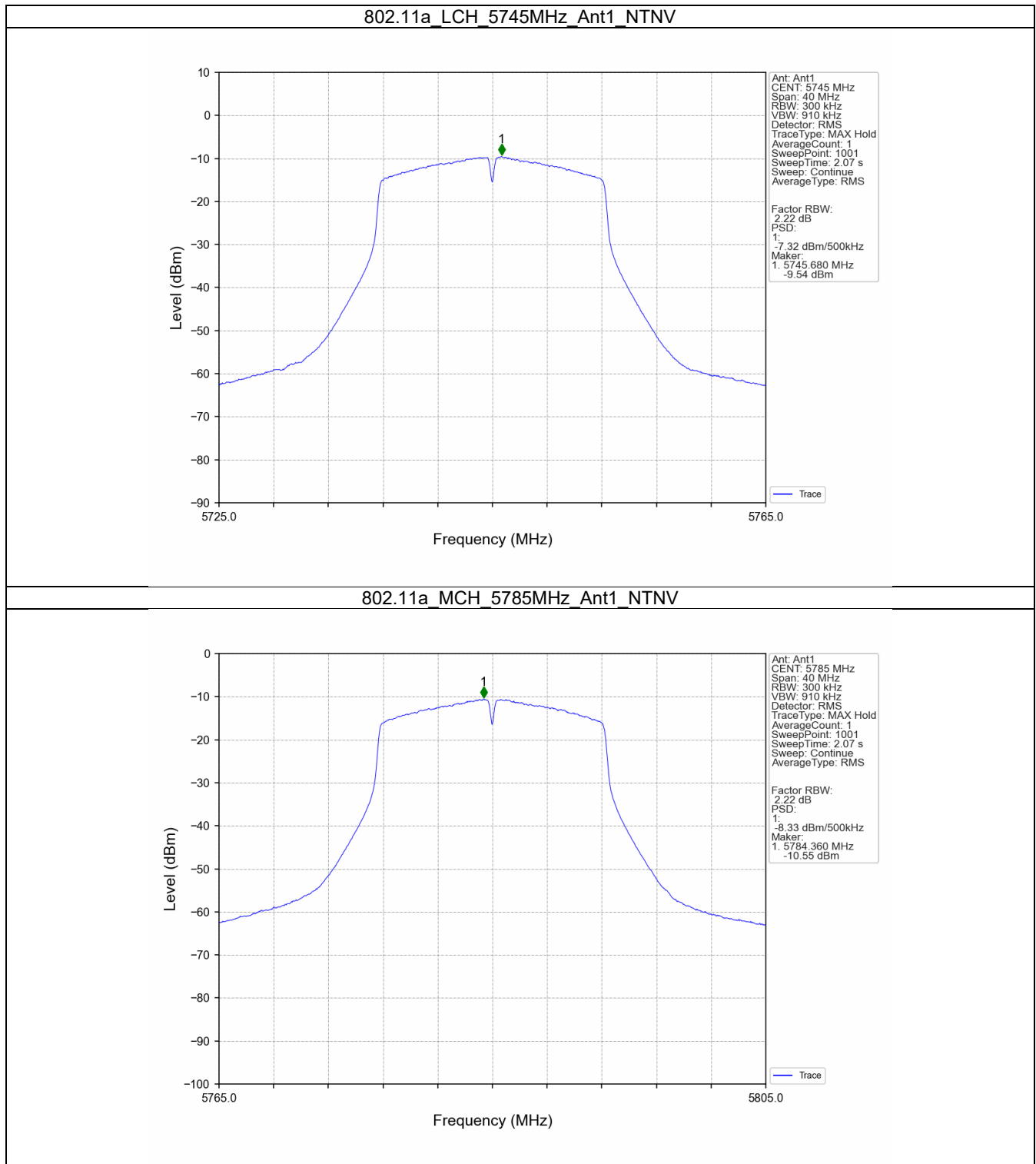
4.1 Test Result

4.1.1 PSD-Band3

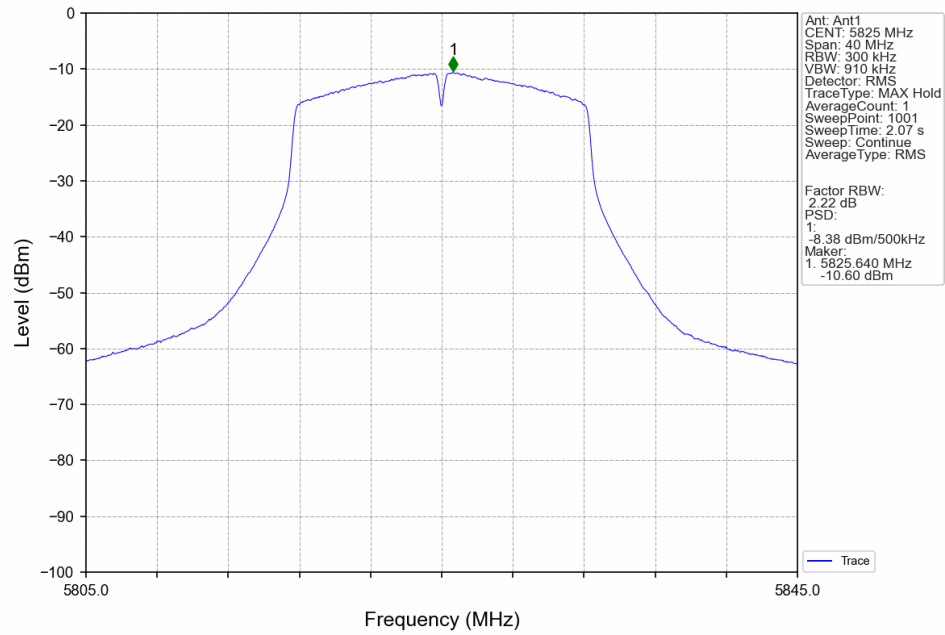
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/500kHz)		Verdict
			ANT1	Limit	
802.11a	SISO	5745	-7.32	<=30	Pass
		5785	-8.33	<=30	Pass
		5825	-8.38	<=30	Pass
802.11n (HT20)	SISO	5745	-7.36	<=30	Pass
		5785	-8.17	<=30	Pass
		5825	-8.40	<=30	Pass
802.11n (HT40)	SISO	5755	-10.37	<=30	Pass
		5795	-11.34	<=30	Pass
802.11ac (VHT20)	SISO	5745	-7.26	<=30	Pass
		5785	-7.98	<=30	Pass
		5825	-8.07	<=30	Pass
802.11ac (VHT40)	SISO	5755	-10.70	<=30	Pass
		5795	-11.47	<=30	Pass

4.2 Test Graph

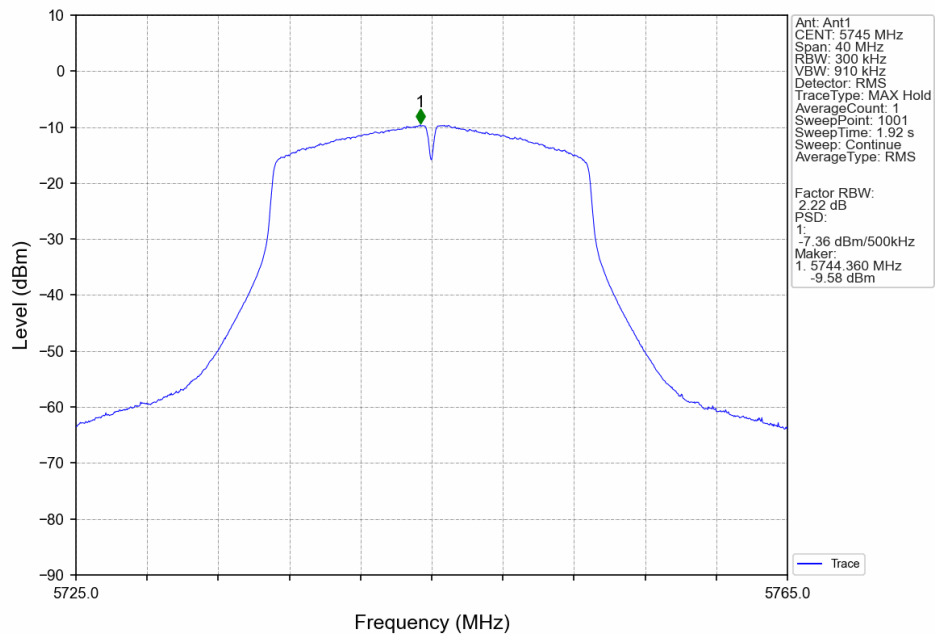
4.2.1 PSD-Band3



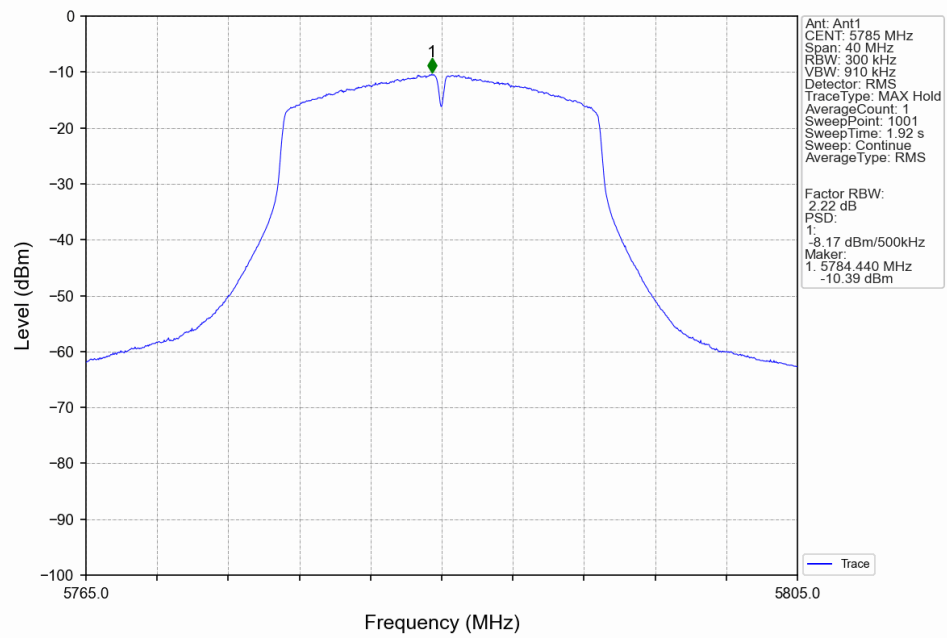
802.11a_HCH_5825MHz_Ant1_NTNV



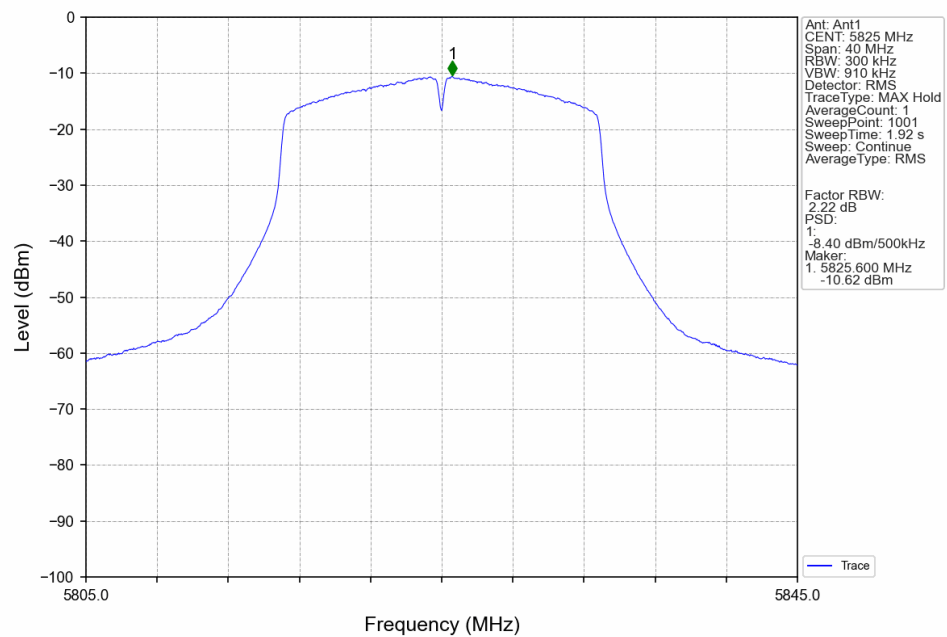
802.11n(HT20)_LCH_5745MHz_Ant1_NTNV



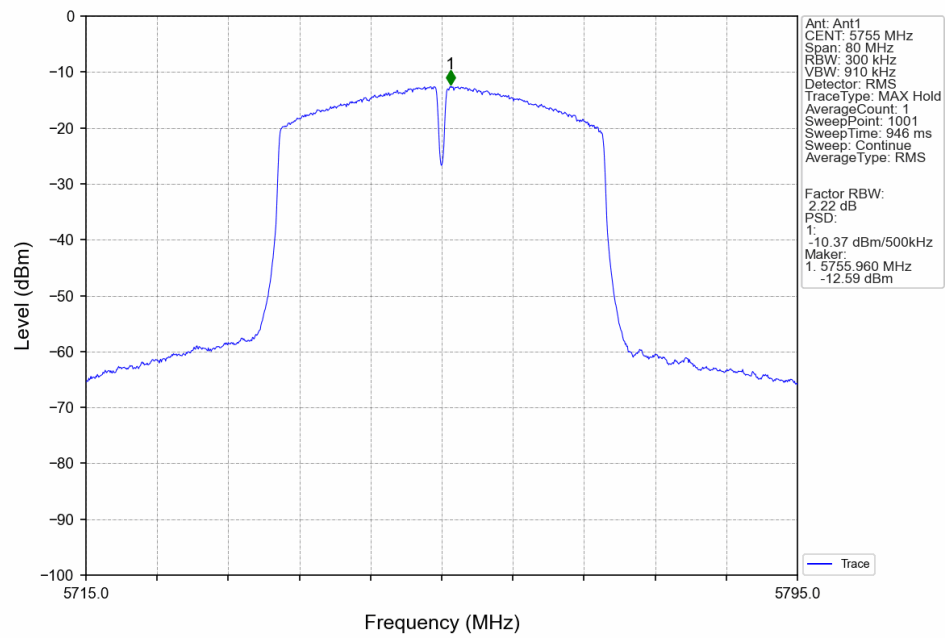
802.11n(HT20)_MCH_5785MHz_Ant1_NTNV



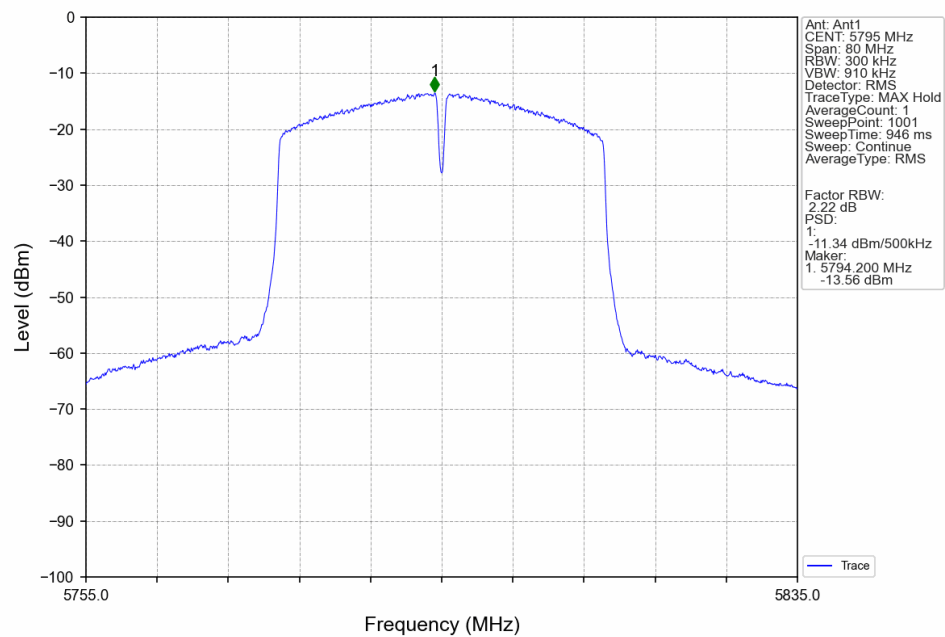
802.11n(HT20)_HCH_5825MHz_Ant1_NTNV



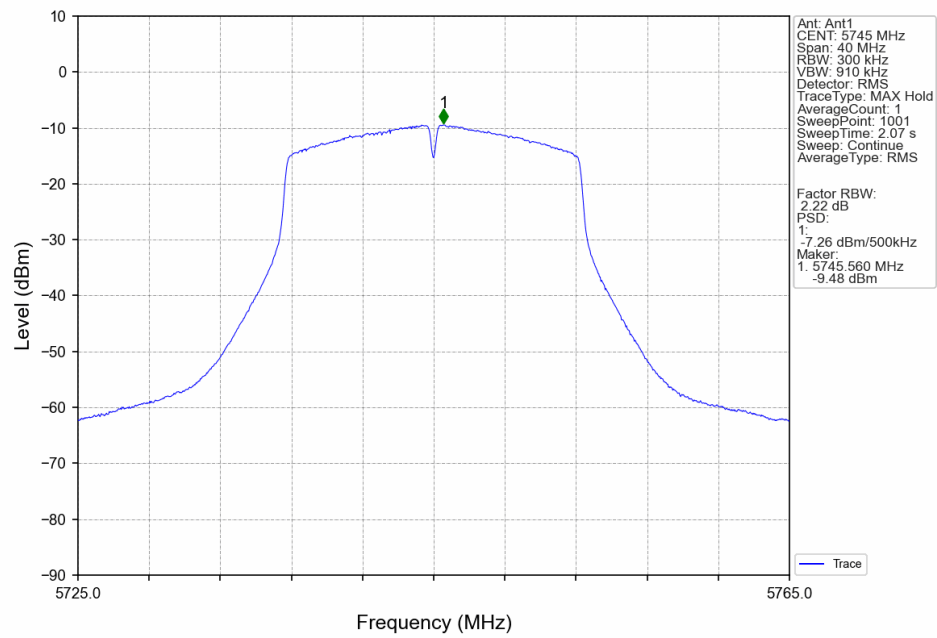
802.11n(HT40)_LCH_5755MHz_Ant1_NTNV



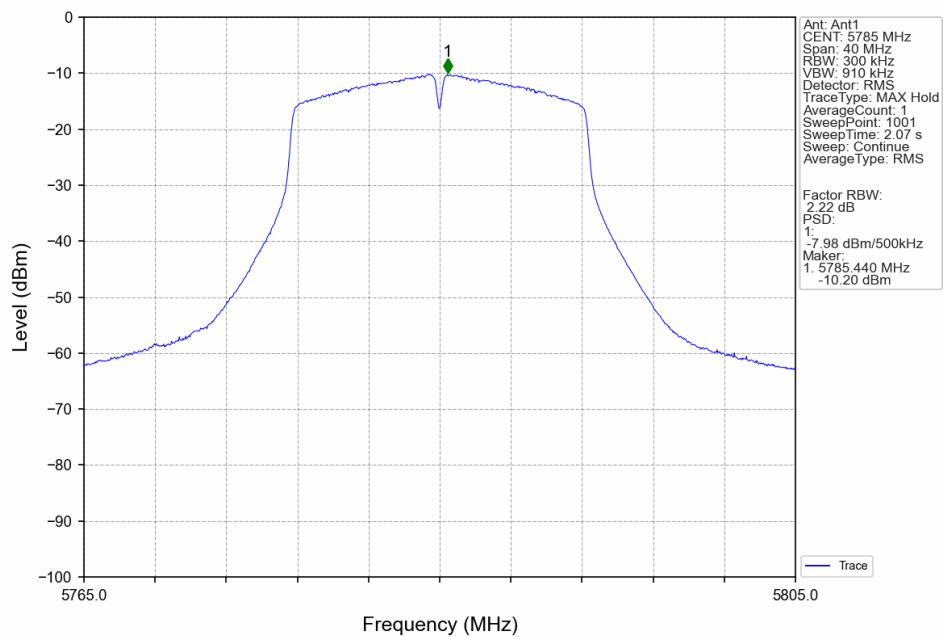
802.11n(HT40)_HCH_5795MHz_Ant1_NTNV



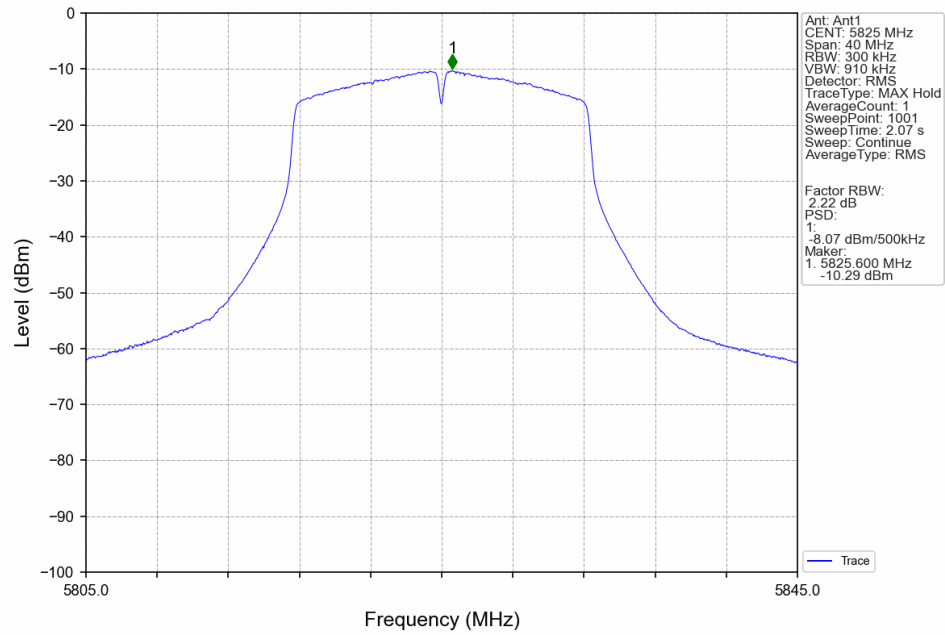
802.11ac(VHT20)_LCH_5745MHz_Ant1_NTNV



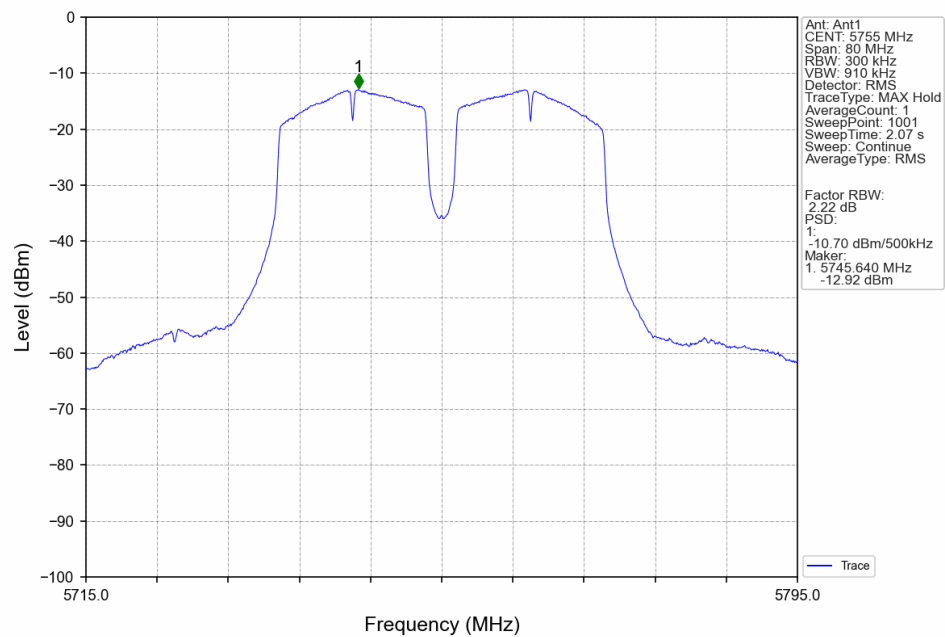
802.11ac(VHT20)_MCH_5785MHz_Ant1_NTNV



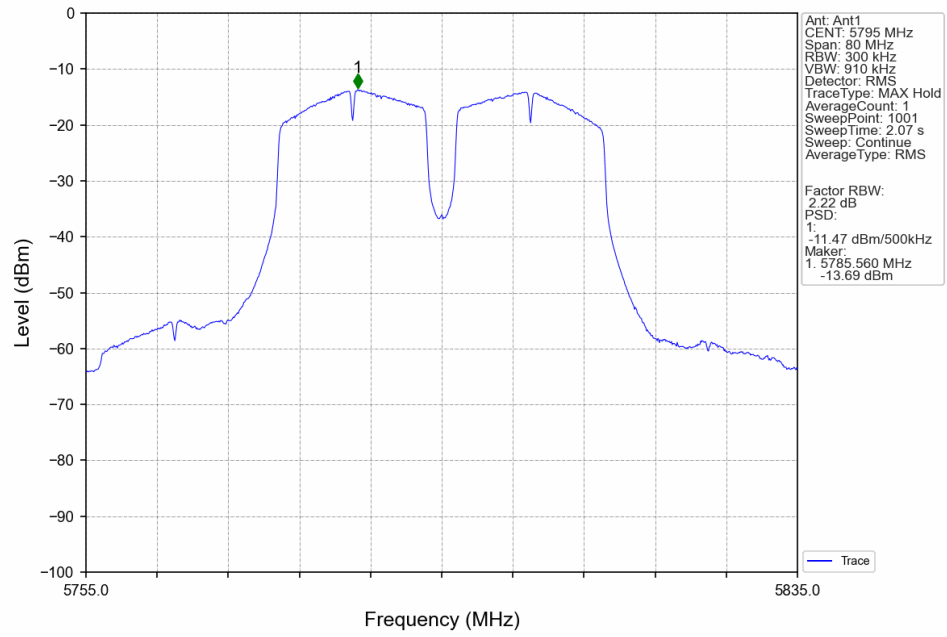
802.11ac(VHT20)_HCH_5825MHz_Ant1_NTNV



802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5795MHz_Ant1_NTNV



5. Frequency Stability

5.1 Test Result

5.1.1 Ant1

Ant1							
Mode	Tx Type	Frequency (MHz)	Temperature (°C)	Voltage (VDC)	Measured Frequency (MHz)	Limit (MHz)	Verdict
Carrier Wave	SISO	5745	20	3.80	5744.965	5725 to 5850	Pass
				3.23	5744.964	5725 to 5850	Pass
				4.37	5744.964	5725 to 5850	Pass
			-30	3.80	5744.964	5725 to 5850	Pass
			-20	3.80	5744.965	5725 to 5850	Pass
			-10	3.80	5744.965	5725 to 5850	Pass
			0	3.80	5744.965	5725 to 5850	Pass
			10	3.80	5744.965	5725 to 5850	Pass
			30	3.80	5744.965	5725 to 5850	Pass
			40	3.80	5744.965	5725 to 5850	Pass
			50	3.80	5744.965	5725 to 5850	Pass
		5785	20	3.80	5784.964	5725 to 5850	Pass
				3.23	5784.964	5725 to 5850	Pass
				4.37	5784.964	5725 to 5850	Pass
			-30	3.80	5784.964	5725 to 5850	Pass
			-20	3.80	5784.964	5725 to 5850	Pass
			-10	3.80	5784.964	5725 to 5850	Pass
			0	3.80	5784.964	5725 to 5850	Pass
			10	3.80	5784.965	5725 to 5850	Pass
			30	3.80	5784.965	5725 to 5850	Pass
			40	3.80	5784.965	5725 to 5850	Pass
			50	3.80	5784.964	5725 to 5850	Pass
		5825	20	3.80	5824.964	5725 to 5850	Pass
				3.23	5824.964	5725 to 5850	Pass
				4.37	5824.964	5725 to 5850	Pass
			-30	3.80	5824.964	5725 to 5850	Pass
			-20	3.80	5824.964	5725 to 5850	Pass
			-10	3.80	5824.964	5725 to 5850	Pass
			0	3.80	5824.964	5725 to 5850	Pass
			10	3.80	5824.964	5725 to 5850	Pass
			30	3.80	5824.964	5725 to 5850	Pass
			40	3.80	5824.964	5725 to 5850	Pass
			50	3.80	5824.964	5725 to 5850	Pass
		5755	20	3.80	5754.963	5725 to 5850	Pass
				3.23	5754.964	5725 to 5850	Pass
				4.37	5754.963	5725 to 5850	Pass
			-30	3.80	5754.963	5725 to 5850	Pass
			-20	3.80	5754.963	5725 to 5850	Pass
			-10	3.80	5754.963	5725 to 5850	Pass
			0	3.80	5754.963	5725 to 5850	Pass
			10	3.80	5754.963	5725 to 5850	Pass
			30	3.80	5754.963	5725 to 5850	Pass
			40	3.80	5754.963	5725 to 5850	Pass
			50	3.80	5754.963	5725 to 5850	Pass
		5795	20	3.80	5794.964	5725 to 5850	Pass
				3.23	5794.963	5725 to 5850	Pass



				4.37	5794.963	5725 to 5850	Pass
			-30	3.80	5794.963	5725 to 5850	Pass
			-20	3.80	5794.963	5725 to 5850	Pass
			-10	3.80	5794.963	5725 to 5850	Pass
			0	3.80	5794.963	5725 to 5850	Pass
			10	3.80	5794.963	5725 to 5850	Pass
			30	3.80	5794.963	5725 to 5850	Pass
			40	3.80	5794.963	5725 to 5850	Pass
			50	3.80	5794.963	5725 to 5850	Pass

6. Form731

6.1 Test Result

6.1.1 Form731

Lower Freq (MHz)	High Freq (MHz)	MAX Power (W)	MAX Power (dBm)
5745	5825	0.0037	5.64
5755	5795	0.0036	5.62

***** End of Report *****