

Appendix RF test data for 5G WIFI_UNII_Band 3

1. Duty Cycle

1.1 Test Result

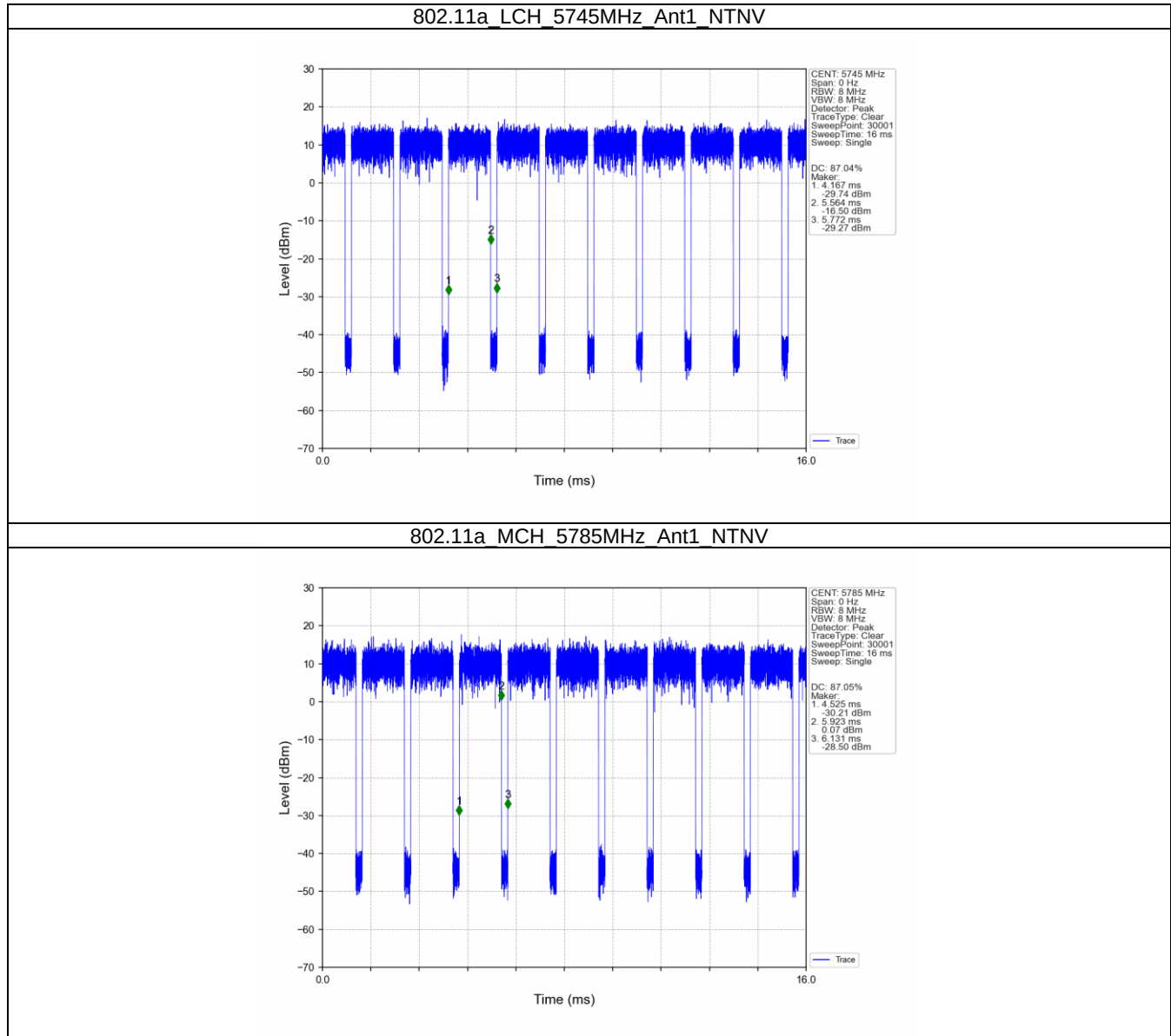
1.1.1 Ant1

Ant1									
Mode	TX Type	Frequency (MHz)	RU	RU Pos	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11a	SISO	5745	/	/	1.397	1.605	87.04	0.60	0.03
		5785	/	/	1.398	1.606	87.05	0.60	0.03
		5825	/	/	1.398	1.606	87.05	0.60	0.06
802.11n (HT20)	MIMO	5745	/	/	1.309	1.517	86.29	0.64	0.07
		5785	/	/	1.309	1.517	86.29	0.64	0.03
		5825	/	/	1.309	1.517	86.29	0.64	0.03
802.11n (HT40)	MIMO	5755	/	/	0.649	0.856	75.82	1.20	0.04
		5795	/	/	0.650	0.857	75.85	1.20	0.03
802.11ac (VHT20)	MIMO	5745	/	/	0.481	0.689	69.81	1.56	0.03
		5785	/	/	0.481	0.689	69.81	1.56	0.03
		5825	/	/	0.481	0.689	69.81	1.56	0.00
802.11ac (VHT40)	MIMO	5755	/	/	0.260	0.469	55.44	2.56	0.07
		5795	/	/	0.267	0.469	56.93	2.45	0.09
802.11ac (VHT80)	MIMO	5775	/	/	0.149	0.357	41.74	3.79	0.04
802.11ax (HEW20)	MIMO	5745	SU	/	0.429	0.638	67.24	1.72	0.03
		5785	SU	/	0.430	0.638	67.40	1.71	0.03
		5825	SU	/	0.429	0.638	67.24	1.72	0.05
802.11ax (HEW40)	MIMO	5755	SU	/	0.270	0.479	56.37	2.49	0.08
		5795	SU	/	0.269	0.479	56.16	2.51	0.09
802.11ax (HEW80)	MIMO	5775	SU	/	0.184	0.394	46.70	3.31	0.03

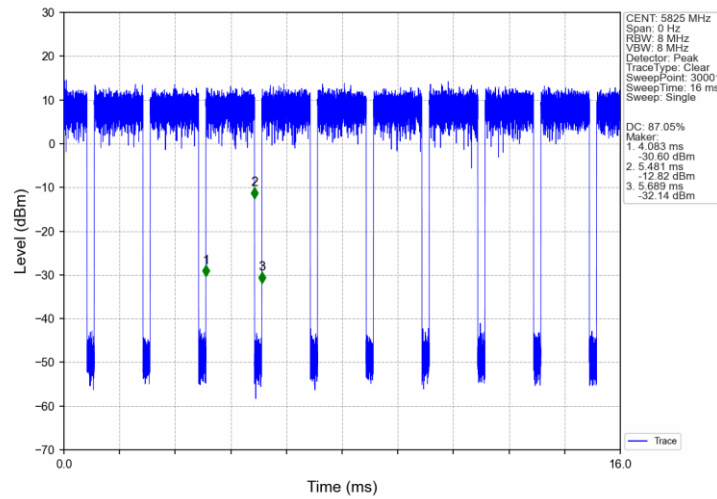
Note: All antennas were tested and recorded the worst result of Ant 1.

1.2 Test Graph

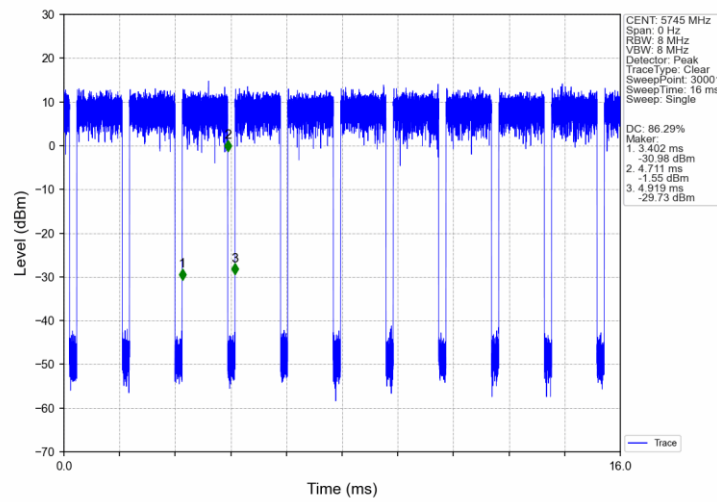
1.2.1 Ant1



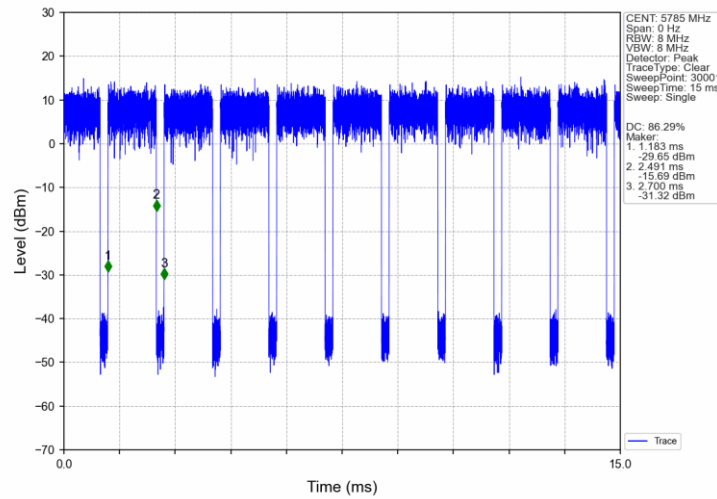
802.11a_HCH_5825MHz_Ant1_NTNV



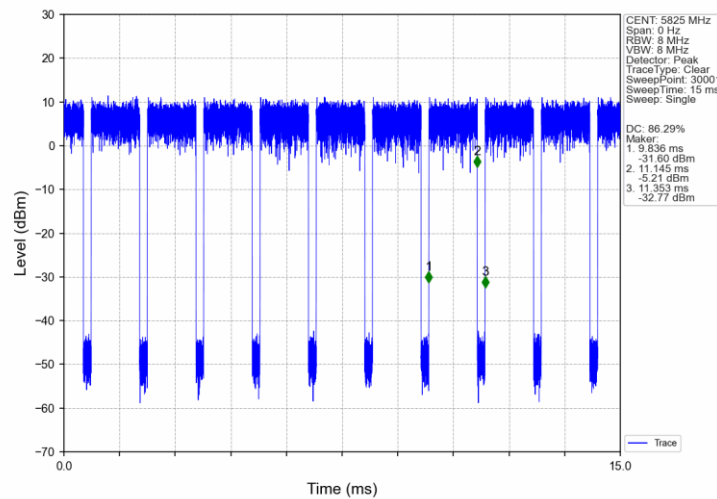
802.11n(HT20)_LCH_5745MHz_Ant1_NTNV



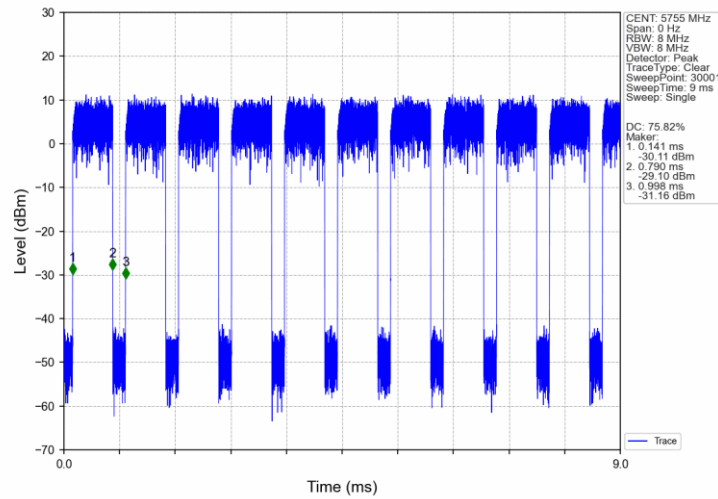
802.11n(HT20)_MCH_5785MHz_Ant1_NTNV



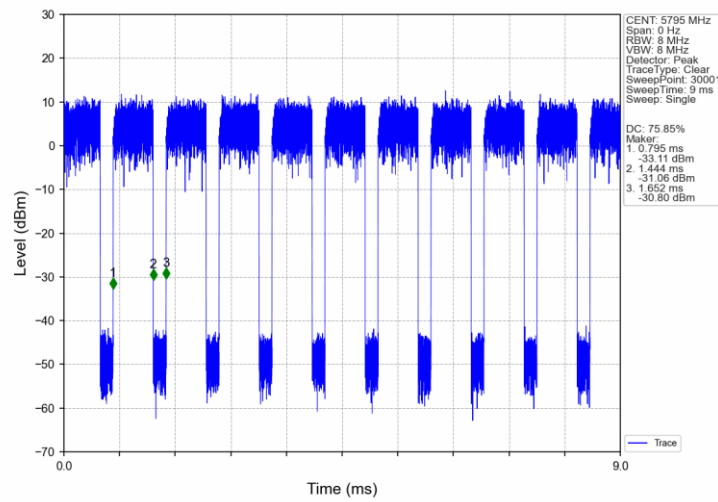
802.11n(HT20)_HCH_5825MHz_Ant1_NTNV



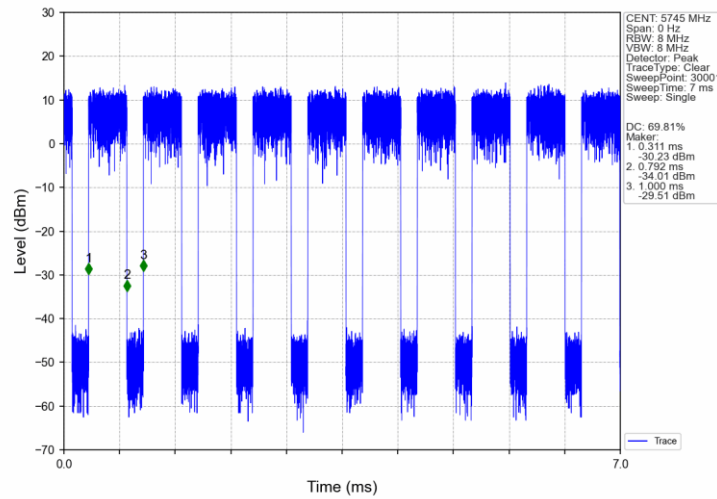
802.11n(HT40)_LCH_5755MHz_Ant1_NTNV



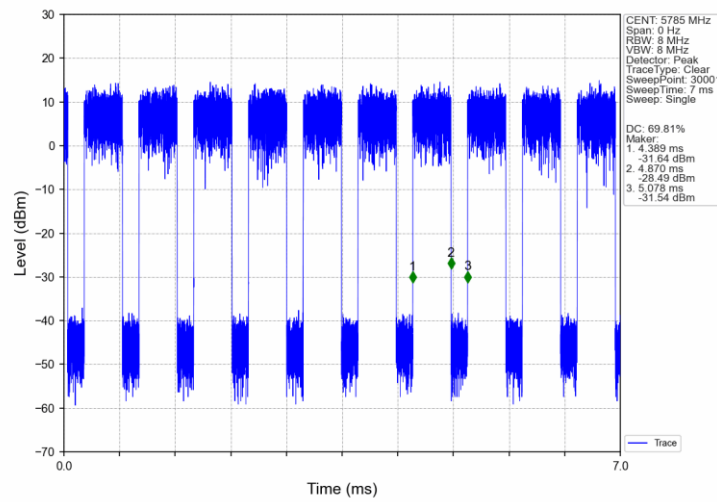
802.11n(HT40)_HCH_5795MHz_Ant1_NTNV



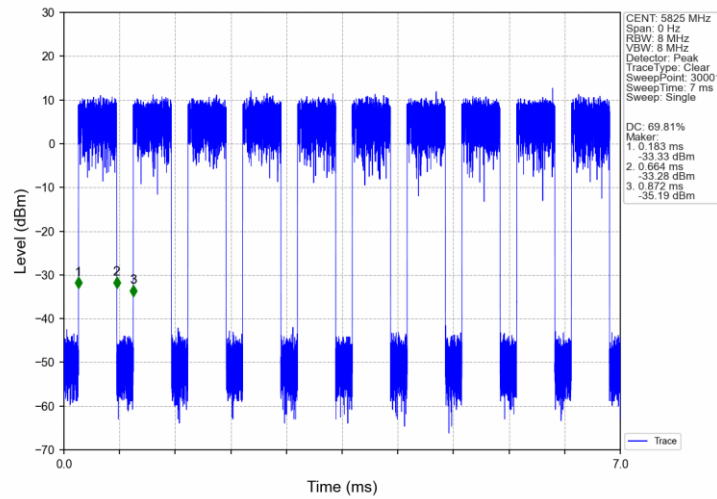
802.11ac(VHT20)_LCH_5745MHz_Ant1_NTNV



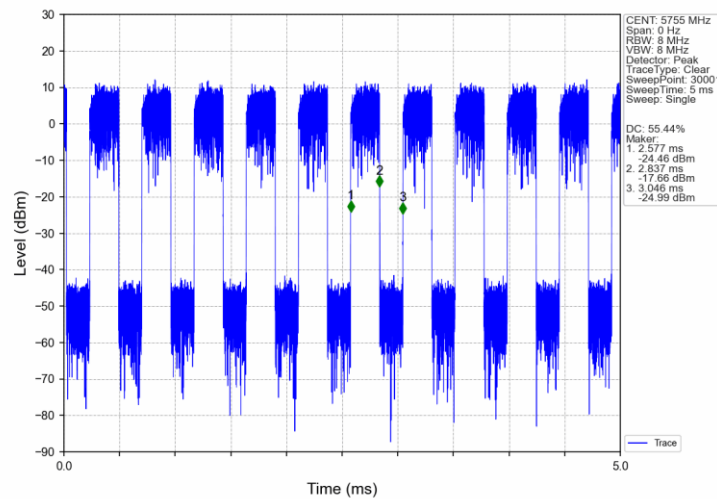
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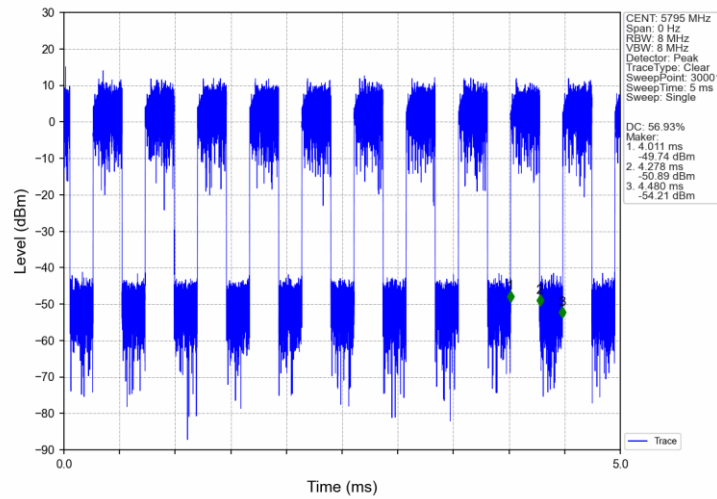
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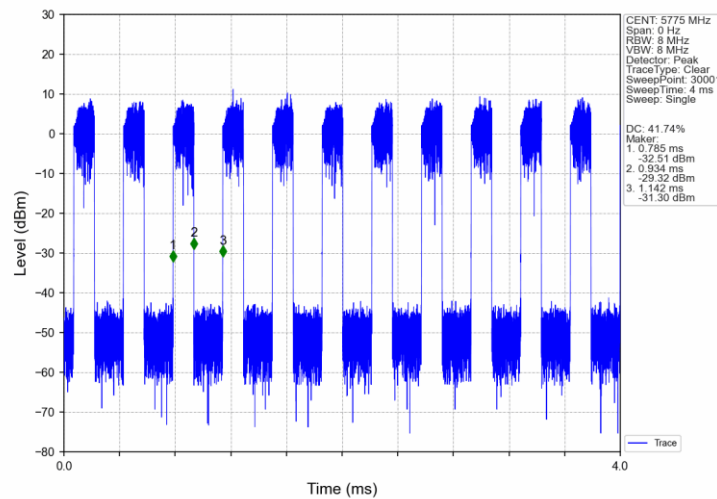
802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV



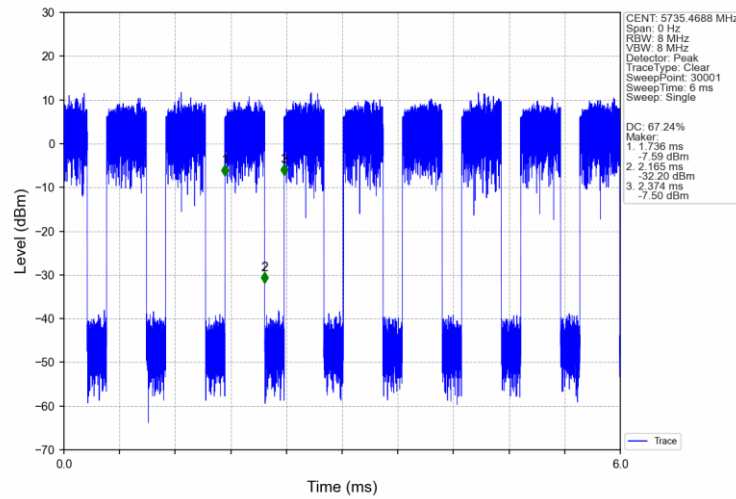
802.11ac(VHT40)_HCH_5795MHz_Ant1_NTNV



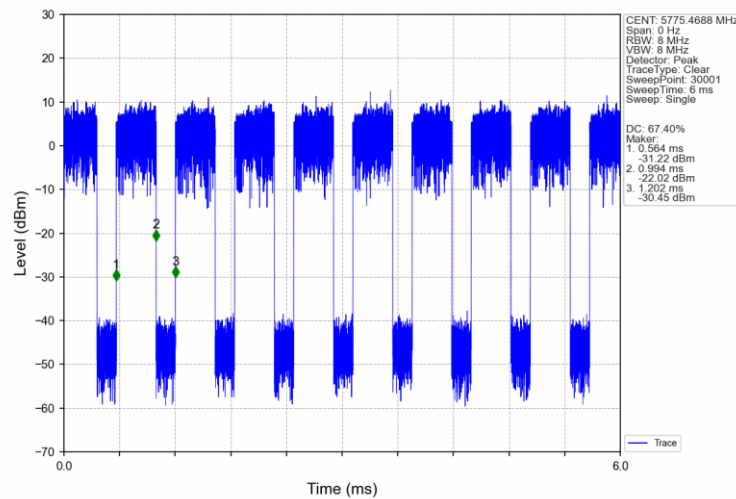
802.11ac(VHT80)_MCH_5775MHz_Ant1_NTNV



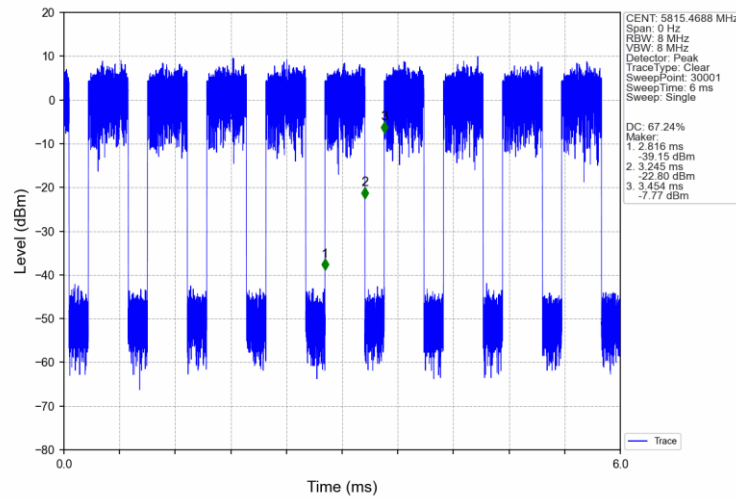
802.11ax(HEW20)_LCH_5745MHz_SU_/_Ant1_NTNV



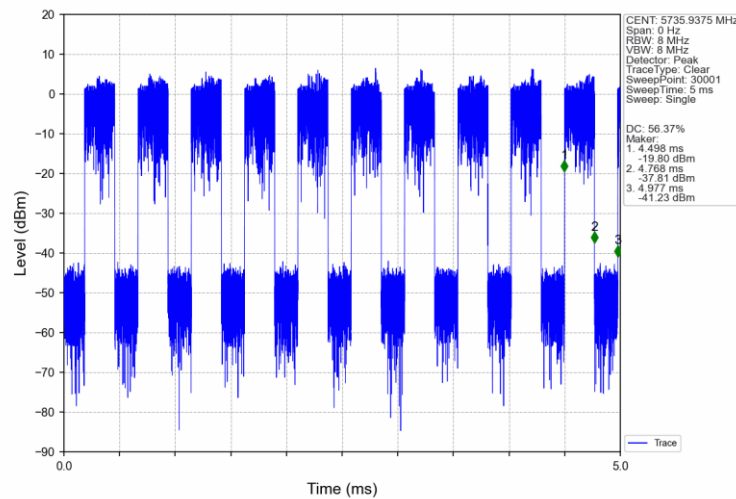
802.11ax(HEW20)_MCH_5785MHz_SU_/_Ant1_NTNV



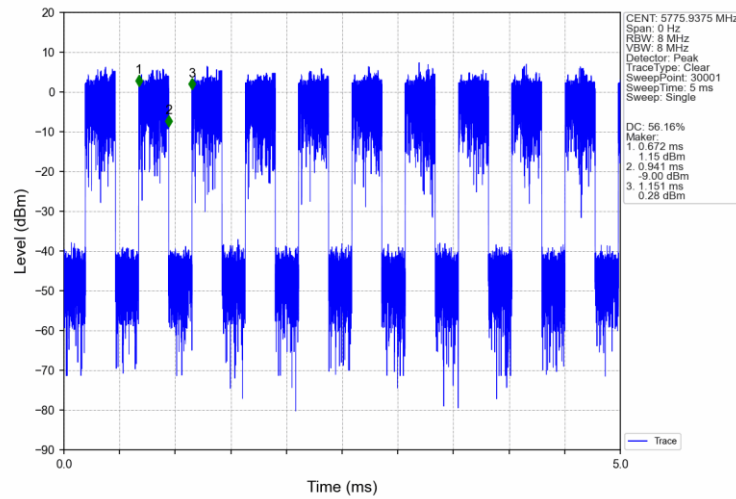
802.11ax(HEW20)_HCH_5825MHz_SU_/_Ant1_NTNV



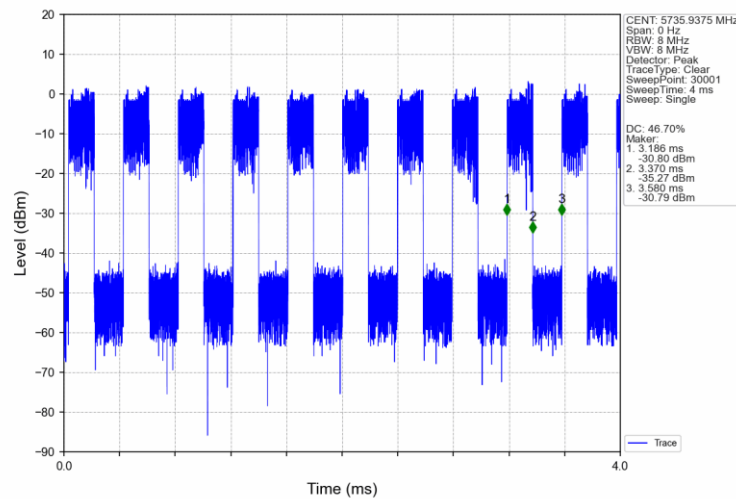
802.11ax(HEW40)_LCH_5755MHz_SU_/_Ant1_NTNV



802.11ax(HEW40)_HCH_5795MHz_SU_ / Ant1_NTNV



802.11ax(HEW80)_MCH_5775MHz_SU_ / Ant1_NTNV



2. Bandwidth

2.1 Test Result

2.1.1 OBW

Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	99% Occupied Bandwidth (MHz)		Verdict
						Result	Limit	
802.11a	SISO	5745	/	/	1	16.970	/	Pass
		5785	/	/	1	16.965	/	Pass
		5825	/	/	1	17.097	/	Pass
802.11n (HT20)	MIMO	5745	/	/	1	18.132	/	Pass
		5785	/	/	1	18.009	/	Pass
		5825	/	/	1	18.202	/	Pass
802.11n (HT40)	MIMO	5755	/	/	1	36.068	/	Pass
		5795	/	/	1	35.963	/	Pass
802.11ac (VHT20)	MIMO	5745	/	/	1	18.121	/	Pass
		5785	/	/	1	18.063	/	Pass
		5825	/	/	1	18.090	/	Pass
802.11ac (VHT40)	MIMO	5755	/	/	1	36.214	/	Pass
		5795	/	/	1	36.023	/	Pass
802.11ac (VHT80)	MIMO	5775	/	/	1	74.678	/	Pass
802.11ax (HEW20)	MIMO	5745	SU	/	1	19.023	/	Pass
		5785	SU	/	1	18.975	/	Pass
		5825	SU	/	1	19.070	/	Pass
802.11ax (HEW40)	MIMO	5755	SU	/	1	37.619	/	Pass
		5795	SU	/	1	37.364	/	Pass
802.11ax (HEW80)	MIMO	5775	SU	/	1	76.168	/	Pass

Note: All antennas were tested and recorded worst result of Ant 1.

2.1.2 6dB BW

Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	6dB Bandwidth (MHz)		Verdict
						Result	Limit	
802.11a	SISO	5745	/	/	1	13.190	≥ 0.5	Pass
		5785	/	/	1	14.441	≥ 0.5	Pass
		5825	/	/	1	15.710	≥ 0.5	Pass
802.11n (HT20)	MIMO	5745	/	/	1	15.352	≥ 0.5	Pass
		5785	/	/	1	15.191	≥ 0.5	Pass
		5825	/	/	1	15.734	≥ 0.5	Pass
802.11n (HT40)	MIMO	5755	/	/	1	32.584	≥ 0.5	Pass
		5795	/	/	1	33.870	≥ 0.5	Pass
802.11ac (VHT20)	MIMO	5745	/	/	1	15.153	≥ 0.5	Pass
		5785	/	/	1	15.137	≥ 0.5	Pass
		5825	/	/	1	15.051	≥ 0.5	Pass
802.11ac (VHT40)	MIMO	5755	/	/	1	32.608	≥ 0.5	Pass
		5795	/	/	1	35.074	≥ 0.5	Pass
802.11ac (VHT80)	MIMO	5775	/	/	1	70.059	≥ 0.5	Pass
802.11ax (HEW20)	MIMO	5745	SU	/	1	15.374	≥ 0.5	Pass
		5785	SU	/	1	16.591	≥ 0.5	Pass

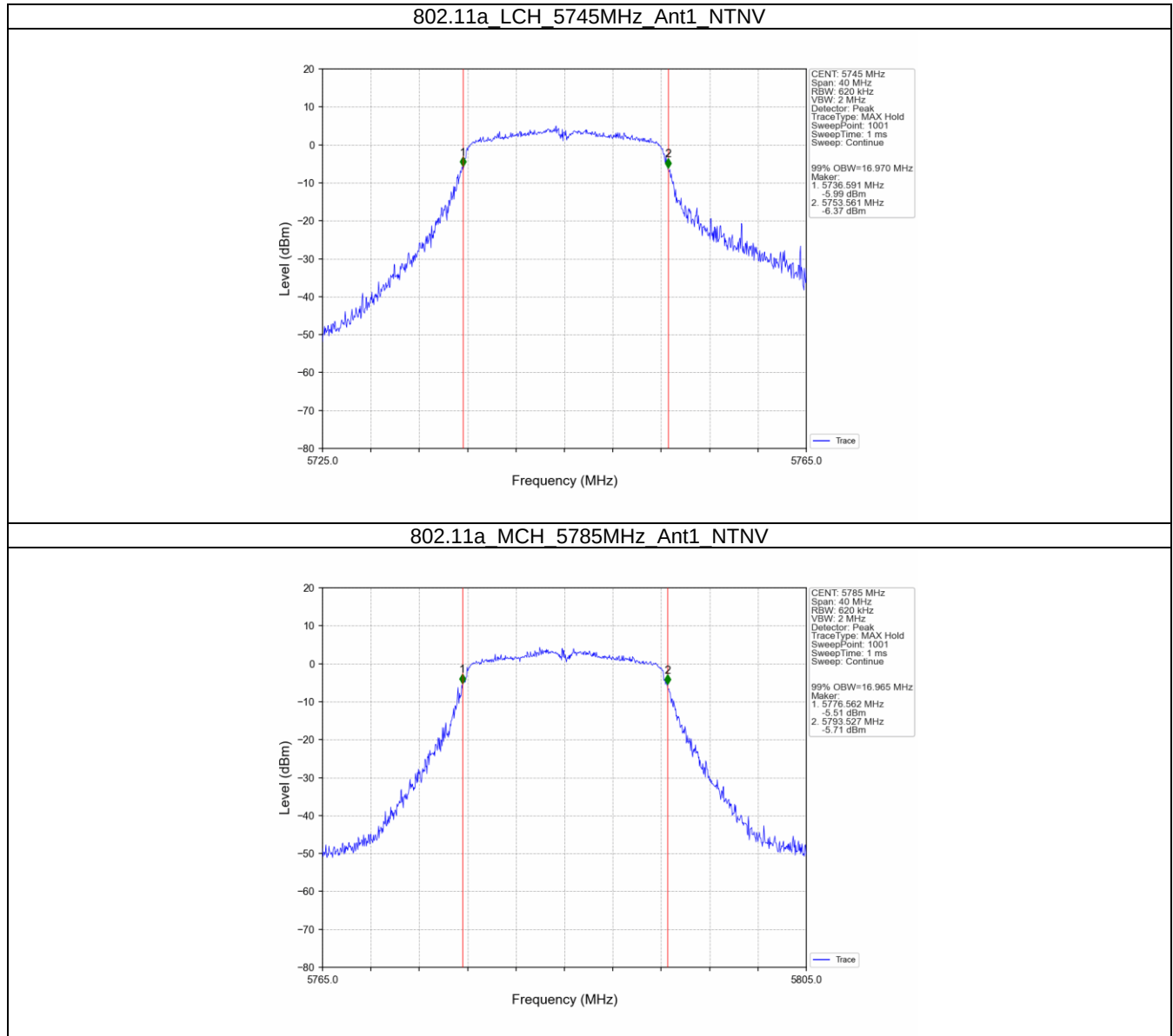


		5825	SU	/	1	17.349	≥ 0.5	Pass
802.11ax (HEW40)	MIMO	5755	SU	/	1	35.066	≥ 0.5	Pass
		5795	SU	/	1	35.084	≥ 0.5	Pass
802.11ax (HEW80)	MIMO	5775	SU	/	1	70.062	≥ 0.5	Pass

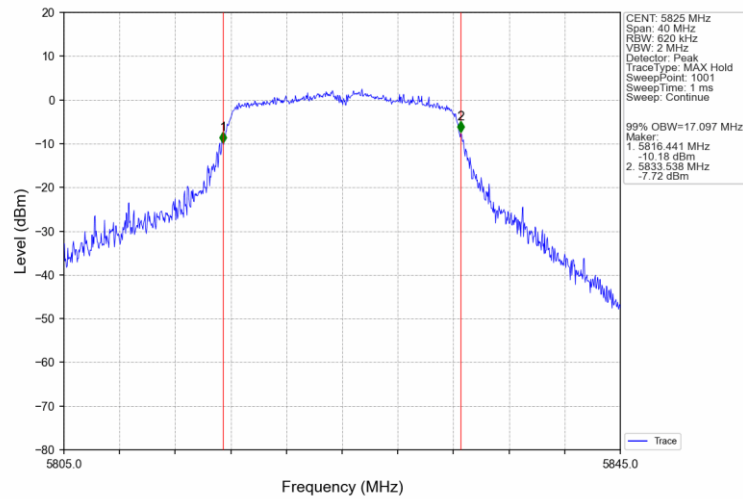
Note: All antennas were tested and recorded worst result of Ant 1.

2.2 Test Graph

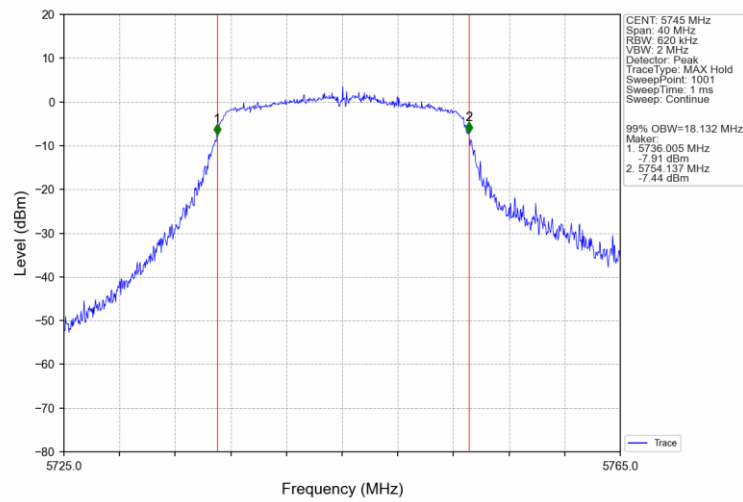
2.2.1 OBW



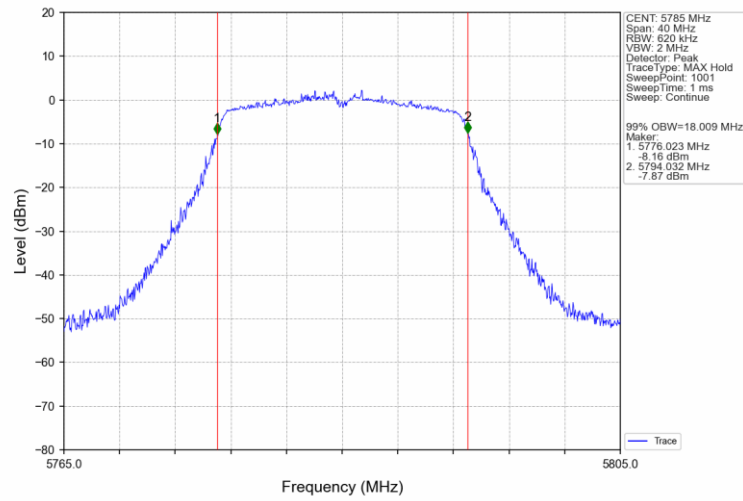
802.11a_HCH_5825MHz_Ant1_NTNV



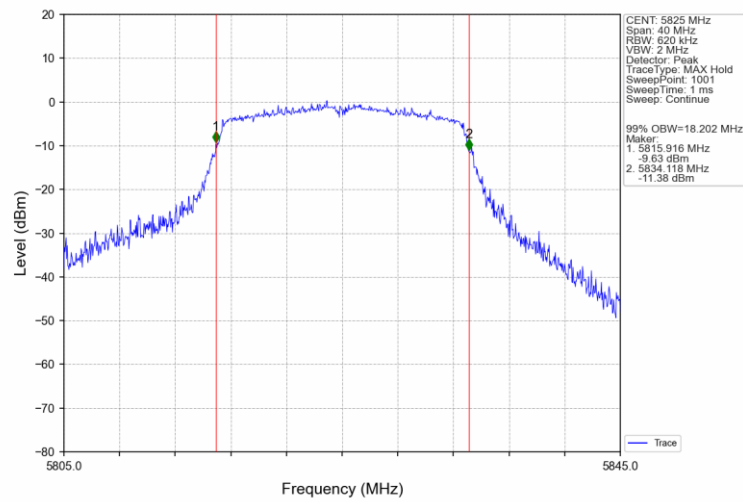
802.11n(HT20)_LCH_5745MHz_Ant1_NTNV



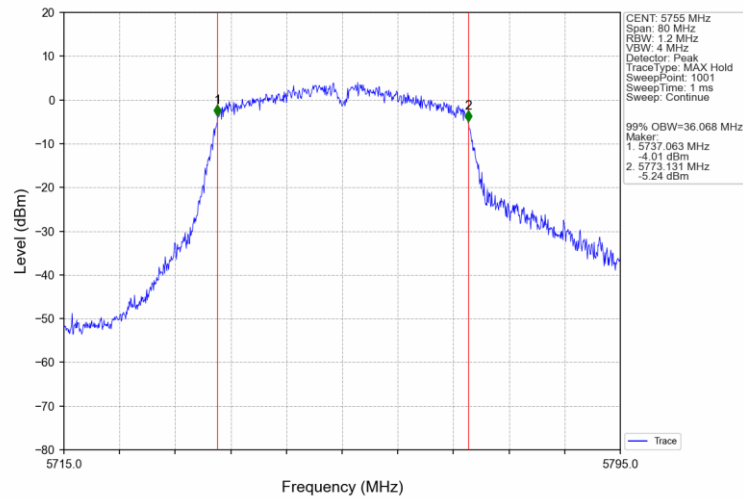
802.11n(HT20)_MCH_5785MHz_Ant1_NTNV



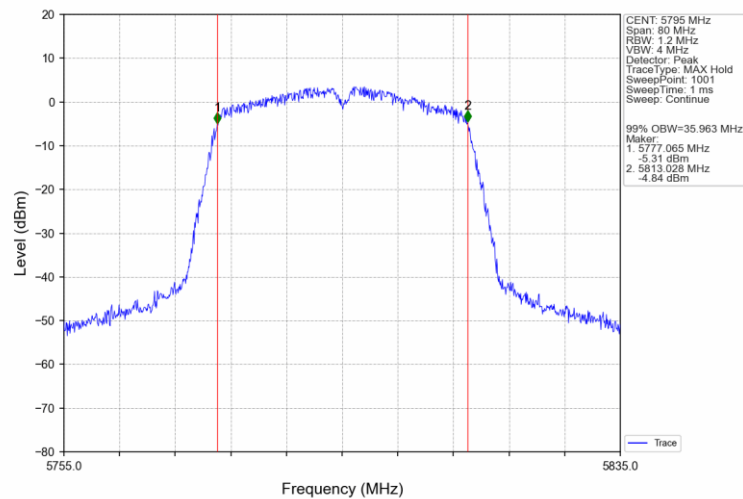
802.11n(HT20)_HCH_5825MHz_Ant1_NTNV



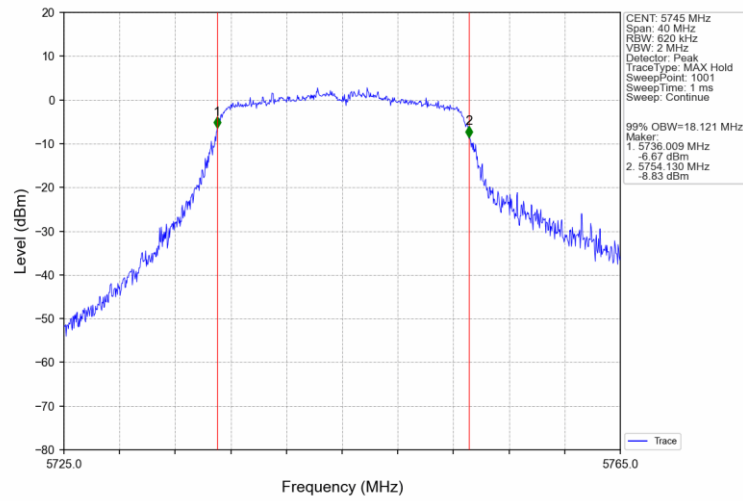
802.11n(HT40)_LCH_5755MHz_Ant1_NTNV



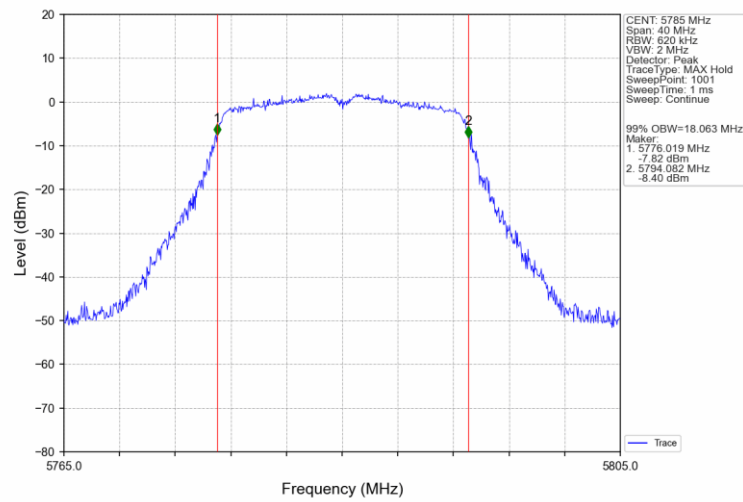
802.11n(HT40)_HCH_5795MHz_Ant1_NTNV



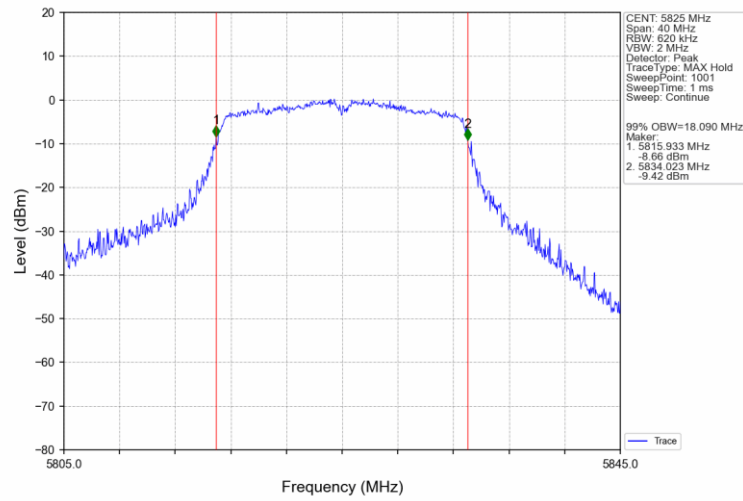
802.11ac(VHT20)_LCH_5745MHz_Ant1_NTNV



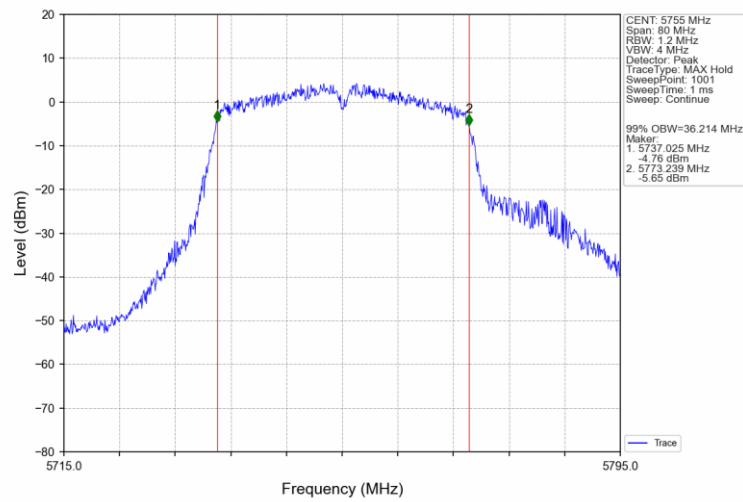
802.11ac(VHT20)_MCH_5785MHz_Ant1_NTNV



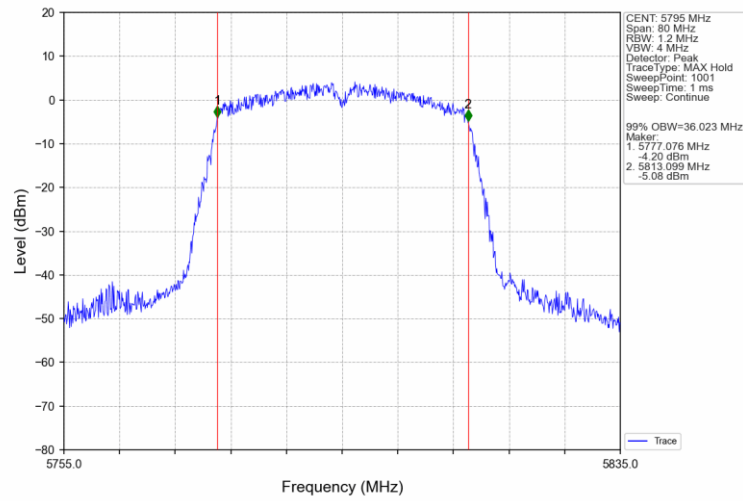
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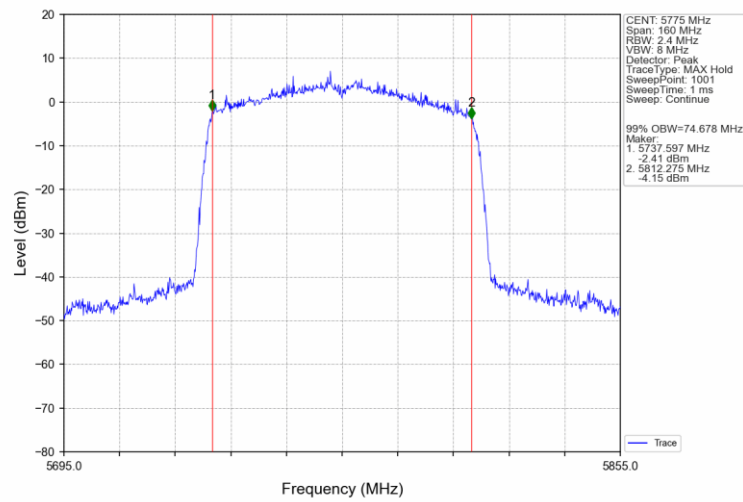
802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV



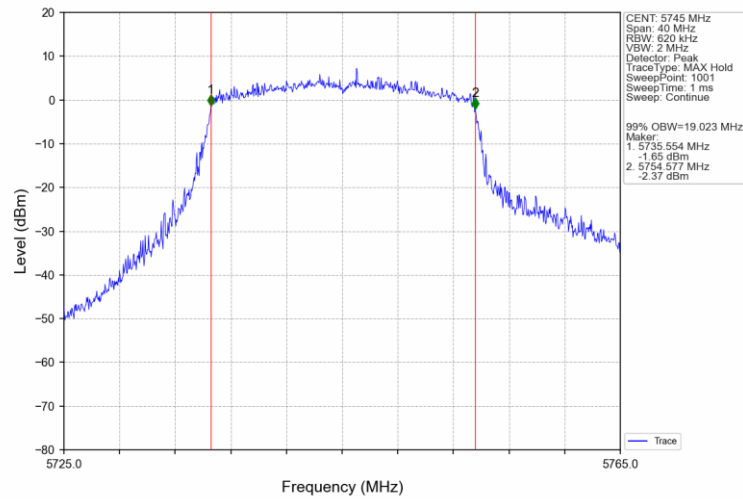
802.11ac(VHT40)_HCH_5795MHz_Ant1_NTNV



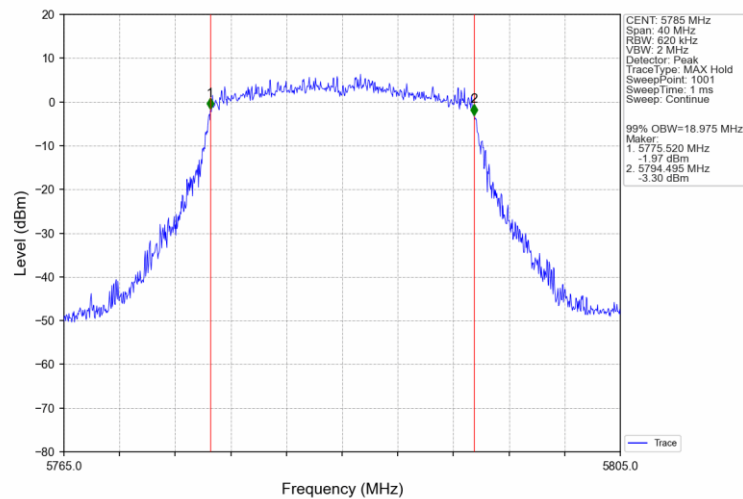
802.11ac(VHT80)_MCH_5775MHz_Ant1_NTNV



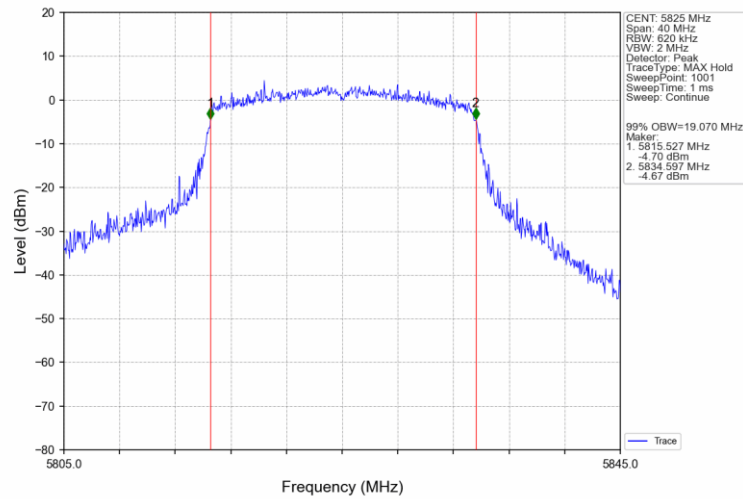
802.11ax(HEW20)_LCH_5745MHz_SU_/_Ant1_NTNV



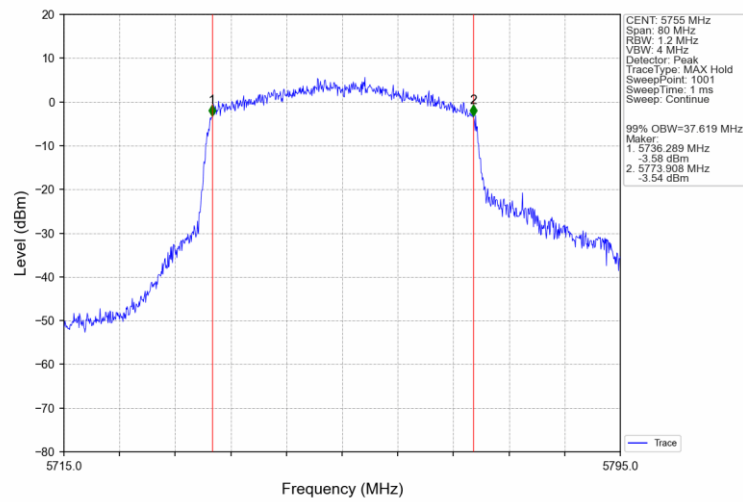
802.11ax(HEW20)_MCH_5785MHz_SU_/_Ant1_NTNV



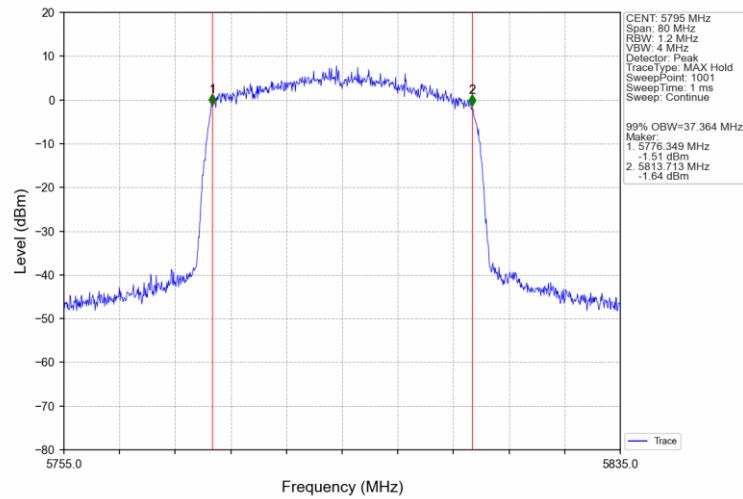
802.11ax(HEW20)_HCH_5825MHz_SU_/_Ant1_NTNV



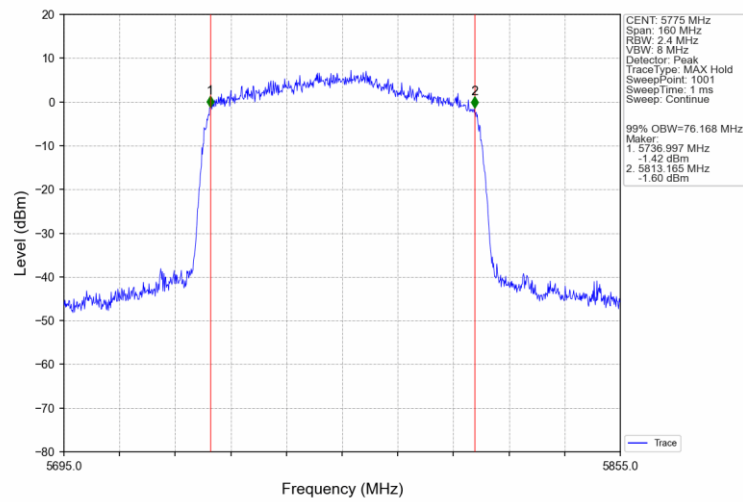
802.11ax(HEW40)_LCH_5755MHz_SU_/_Ant1_NTNV



802.11ax(HEW40)_HCH_5795MHz_SU_ / _Ant1_NTNV

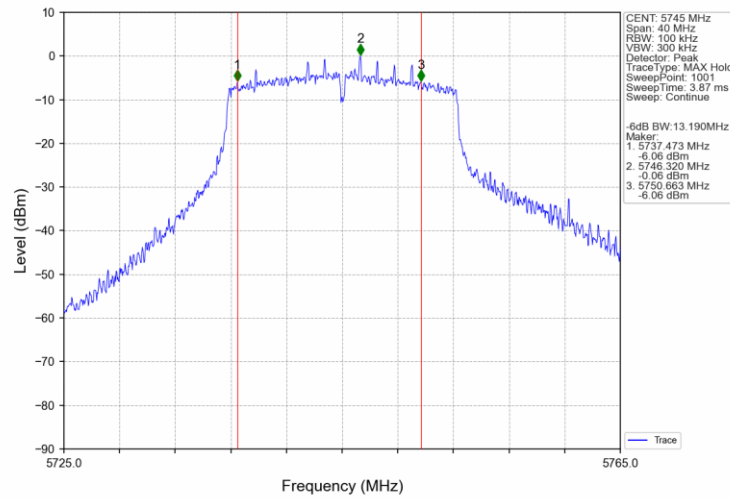


802.11ax(HEW80)_MCH_5775MHz_SU_ / _Ant1_NTNV

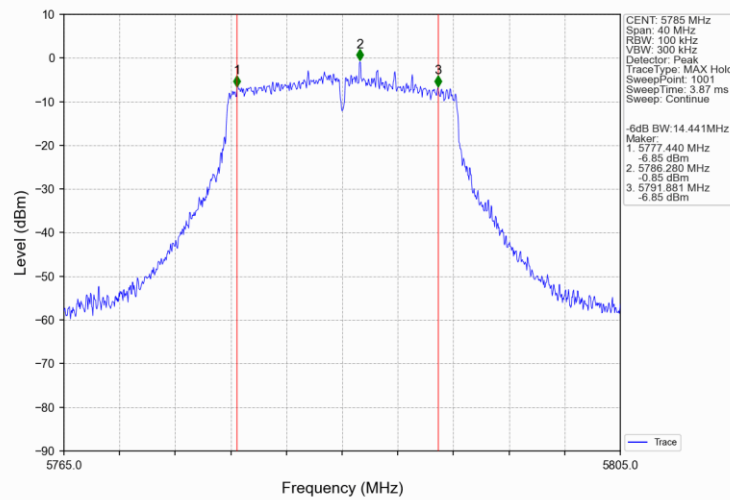


2.2.2 6dB BW

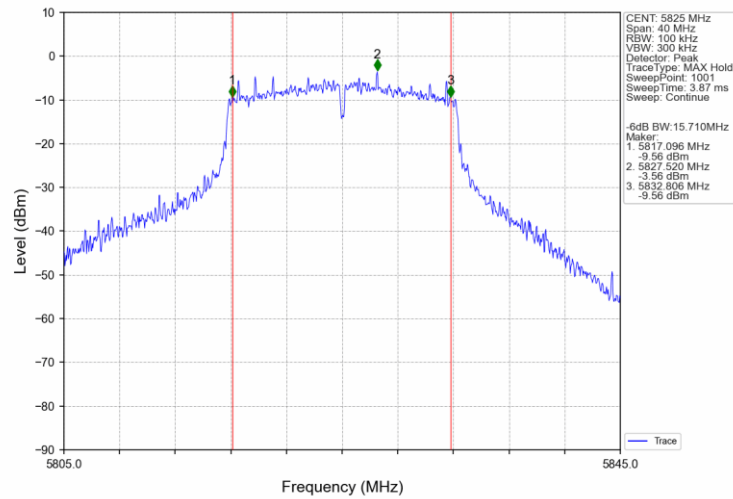
802.11a_LCH_5745MHz_Ant1_NTNV



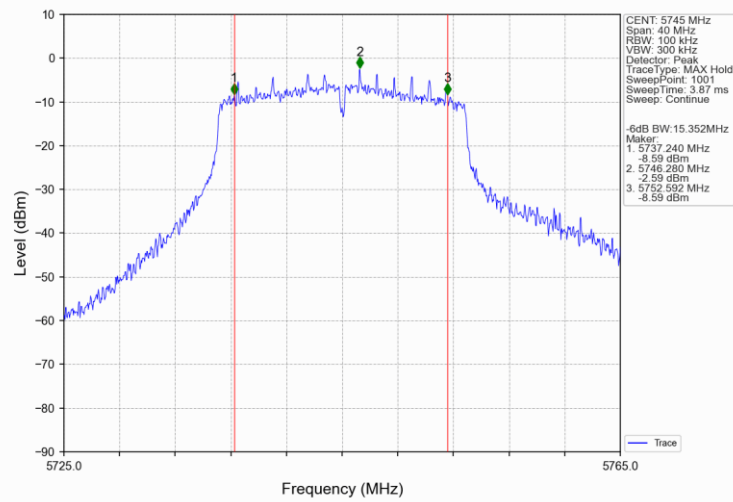
802.11a_MCH_5785MHz_Ant1_NTNV



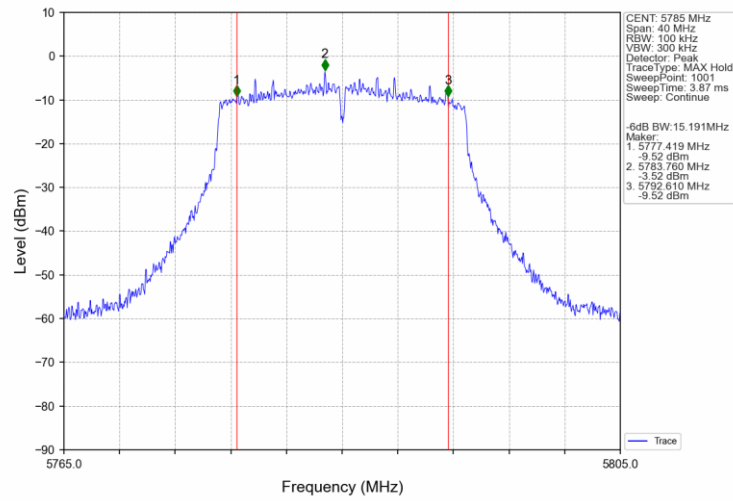
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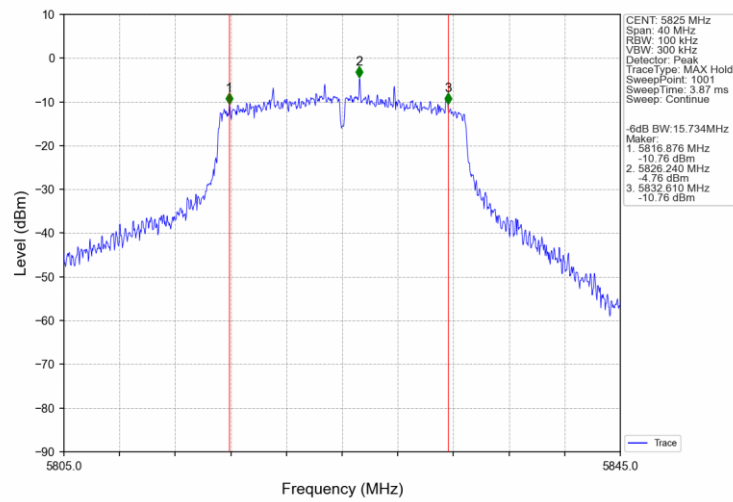
802.11n(HT20)_LCH_5745MHz_Ant1_NTNV



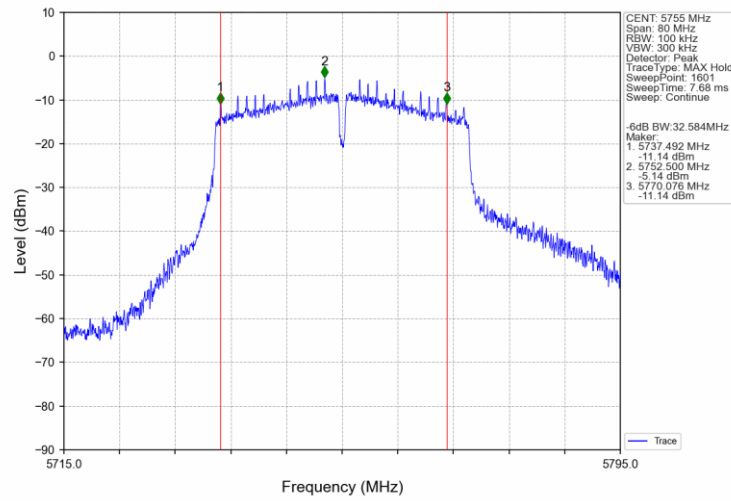
802.11n(HT20)_MCH_5785MHz_Ant1_NTNV



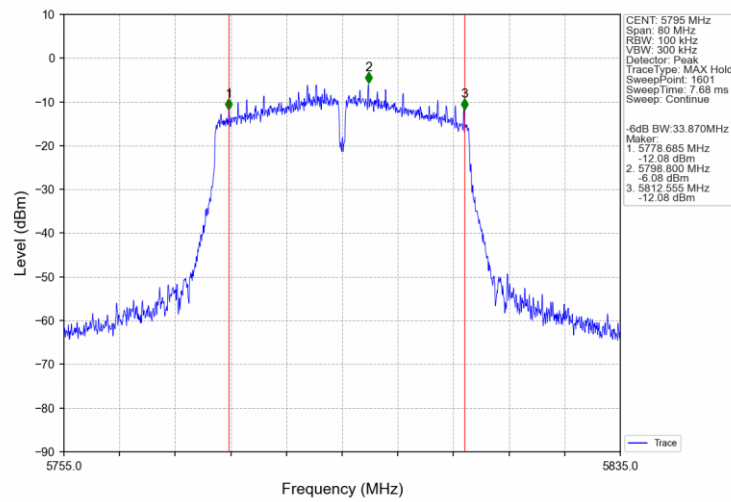
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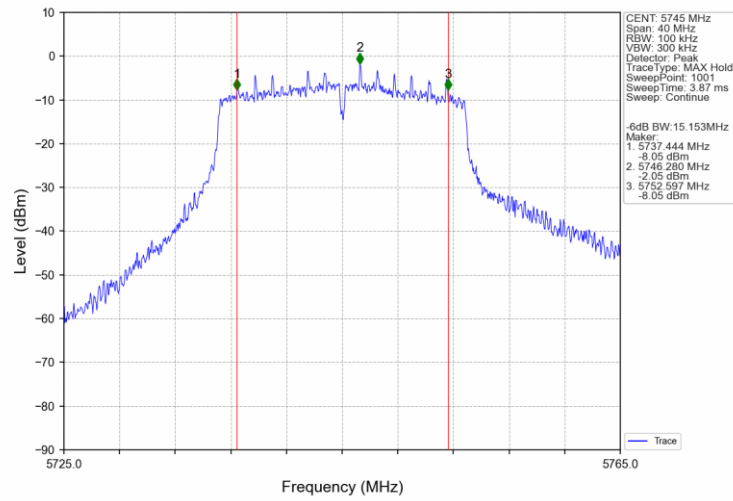
802.11n(HT40)_LCH_5755MHz_Ant1_NTNV



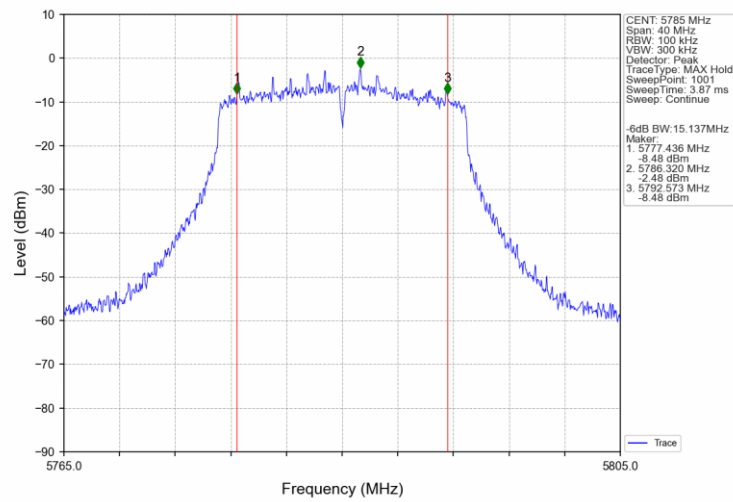
802.11n(HT40)_HCH_5795MHz_Ant1_NTNV



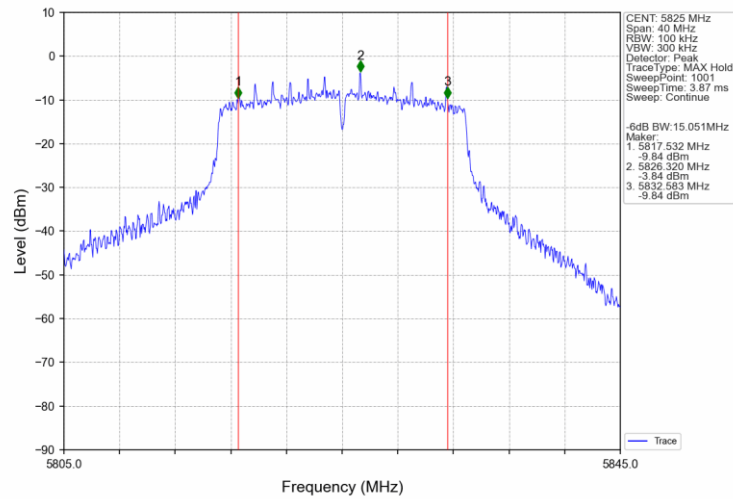
802.11ac(VHT20)_LCH_5745MHz_Ant1_NTNV



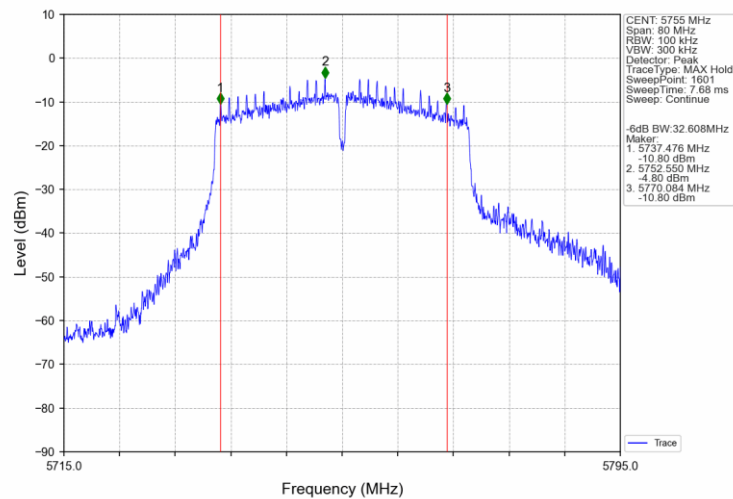
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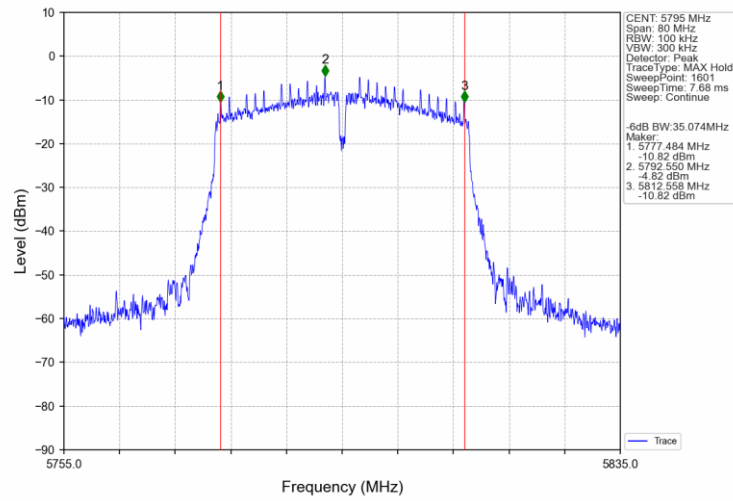
802.11ac(VHT20)_HCH_5825MHz_Ant1_NTNV



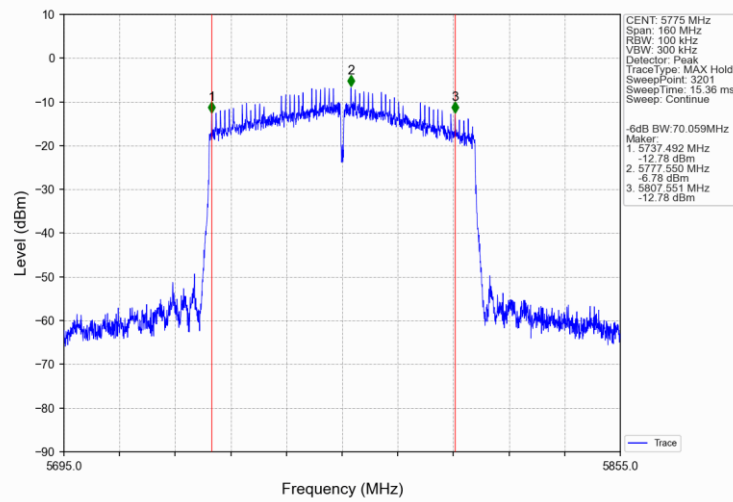
802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV



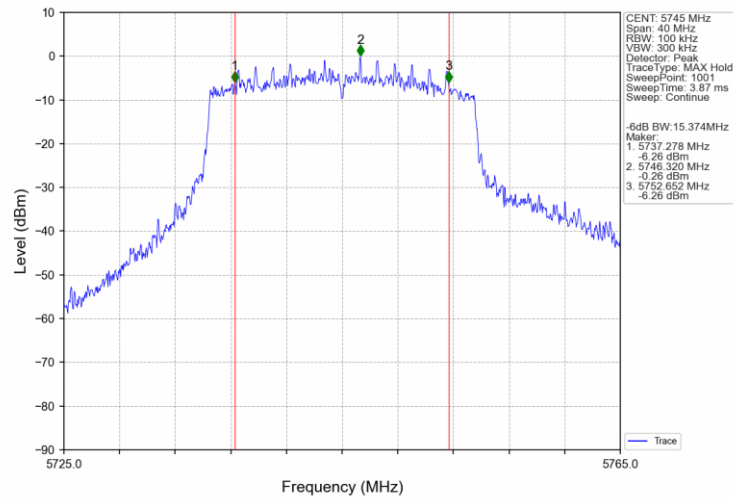
802.11ac(VHT40)_HCH_5795MHz_Ant1_NTNV



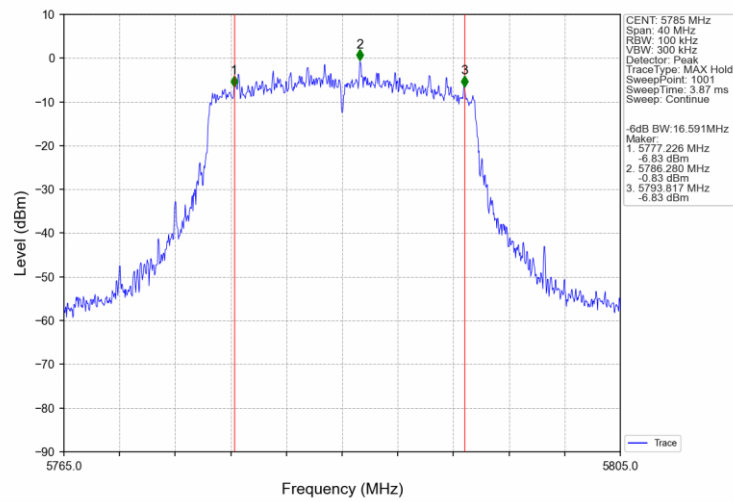
802.11ac(VHT80)_MCH_5775MHz_Ant1_NTNV



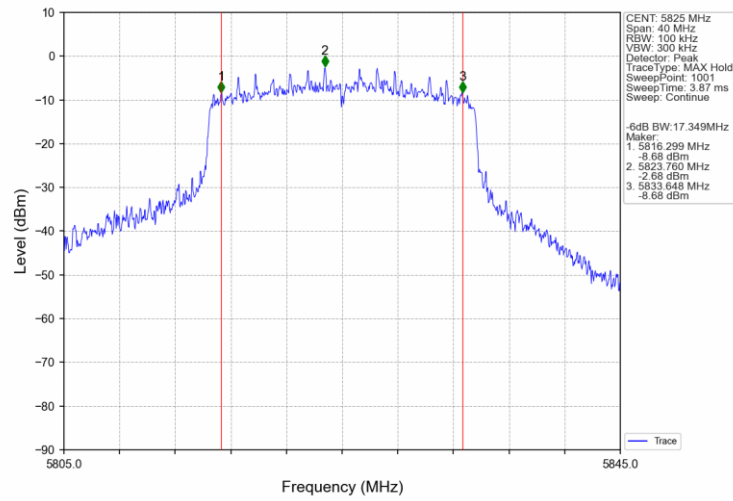
802.11ax(HEW20)_LCH_5745MHz_SU_/_Ant1_NTNV



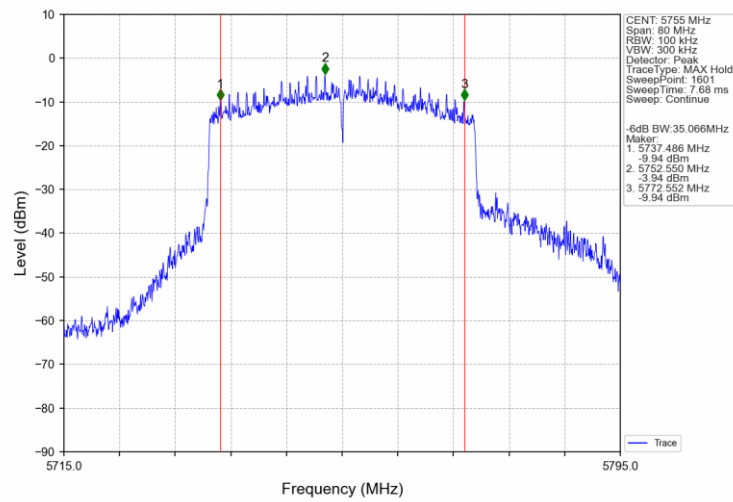
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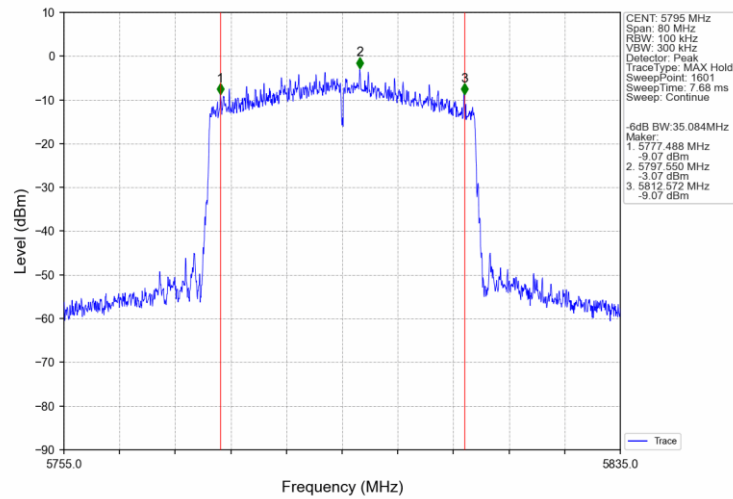
802.11ax(HEW20)_HCH_5825MHz_SU_ / _Ant1_NTNV



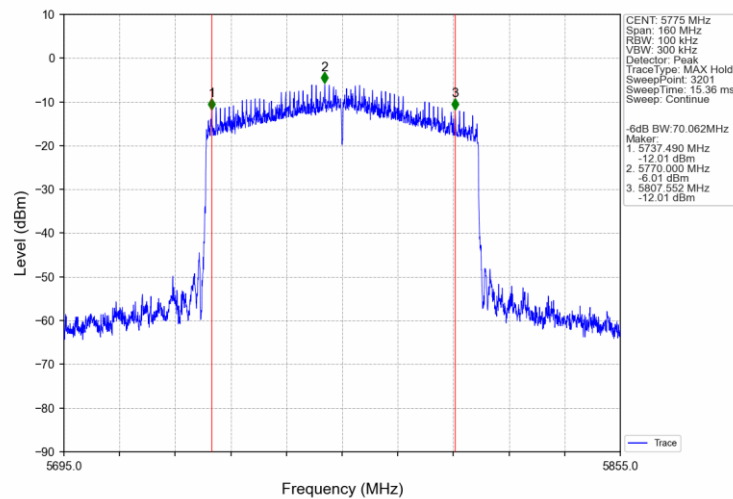
802.11ax(HEW40)_LCH_5755MHz_SU_ / _Ant1_NTNV



802.11ax(HEW40)_HCH_5795MHz_SU_ / _Ant1_NTNV



802.11ax(HEW80)_MCH_5775MHz_SU_ / _Ant1_NTNV





3. Maximum Conducted Output Power

3.1 Test Result

3.1.1 Power

Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum Average Conducted Output Power (dBm)					Verdict
					ANT1	ANT2	ANT3	MIMO	Limit	
802.11a	SISO	5745	/	/	9.83	9.60	9.31	/	<=29.17	Pass
		5785	/	/	9.30	9.84	8.86	/	<=29.17	Pass
		5825	/	/	7.33	8.35	7.50	/	<=29.17	Pass
802.11n (HT20)	MIMO	5745	/	/	7.44	7.14	7.09	12.00	<=24.4	Pass
		5785	/	/	6.95	7.69	7.10	12.03	<=24.4	Pass
		5825	/	/	5.15	6.14	5.30	10.32	<=24.4	Pass
802.11n (HT40)	MIMO	5755	/	/	7.65	7.55	7.28	12.27	<=24.4	Pass
		5795	/	/	7.35	7.89	7.17	12.25	<=24.4	Pass
802.11ac (VHT20)	MIMO	5745	/	/	7.77	7.54	7.49	12.37	<=24.4	Pass
		5785	/	/	7.78	8.46	7.58	12.73	<=24.4	Pass
		5825	/	/	5.86	6.92	5.77	10.99	<=24.4	Pass
802.11ac (VHT40)	MIMO	5755	/	/	8.00	8.20	7.76	12.76	<=24.4	Pass
		5795	/	/	7.74	8.55	7.47	12.72	<=24.4	Pass
802.11ac (VHT80)	MIMO	5775	/	/	8.36	8.81	8.12	13.21	<=24.4	Pass
802.11ax (HEW20)	MIMO	5745	SU	/	9.81	9.75	9.45	14.44	<=24.4	Pass
		5785	SU	/	9.64	10.27	9.25	14.51	<=24.4	Pass
		5825	SU	/	7.96	8.94	7.75	13.02	<=24.4	Pass
802.11ax (HEW40)	MIMO	5755	SU	/	8.67	8.89	8.38	13.42	<=24.4	Pass
		5795	SU	/	10.02	10.56	9.50	14.82	<=24.4	Pass
802.11ax (HEW80)	MIMO	5775	SU	/	9.54	9.92	9.15	14.32	<=24.4	Pass
Note1: Antenna Gain: Ant1: 6.83dBi; Ant2: 6.83dBi; Ant3: 6.83dBi;										
Note2: Directional Gain: 11.6dBi										