



RF Test Report

For

Project No.:	DLE-250808032R
Applicant:	Zhuhai Bigway Electronic Co.,Ltd.
Manufacturer:	Zhuhai Bigway Electronic Co.,Ltd.
Product Description:	GT-HDWL50UF
Test Engineer:	Alisa Song
Test Date:	2025-08-12

Test Summary

Item	Result
Duty Cycle	Pass
Bandwidth	Pass
Maximum Conducted Output Power	Pass
Maximum Power Spectral Density	Pass
Frequency Stability	Pass



1. Duty Cycle

1.1 Test Result

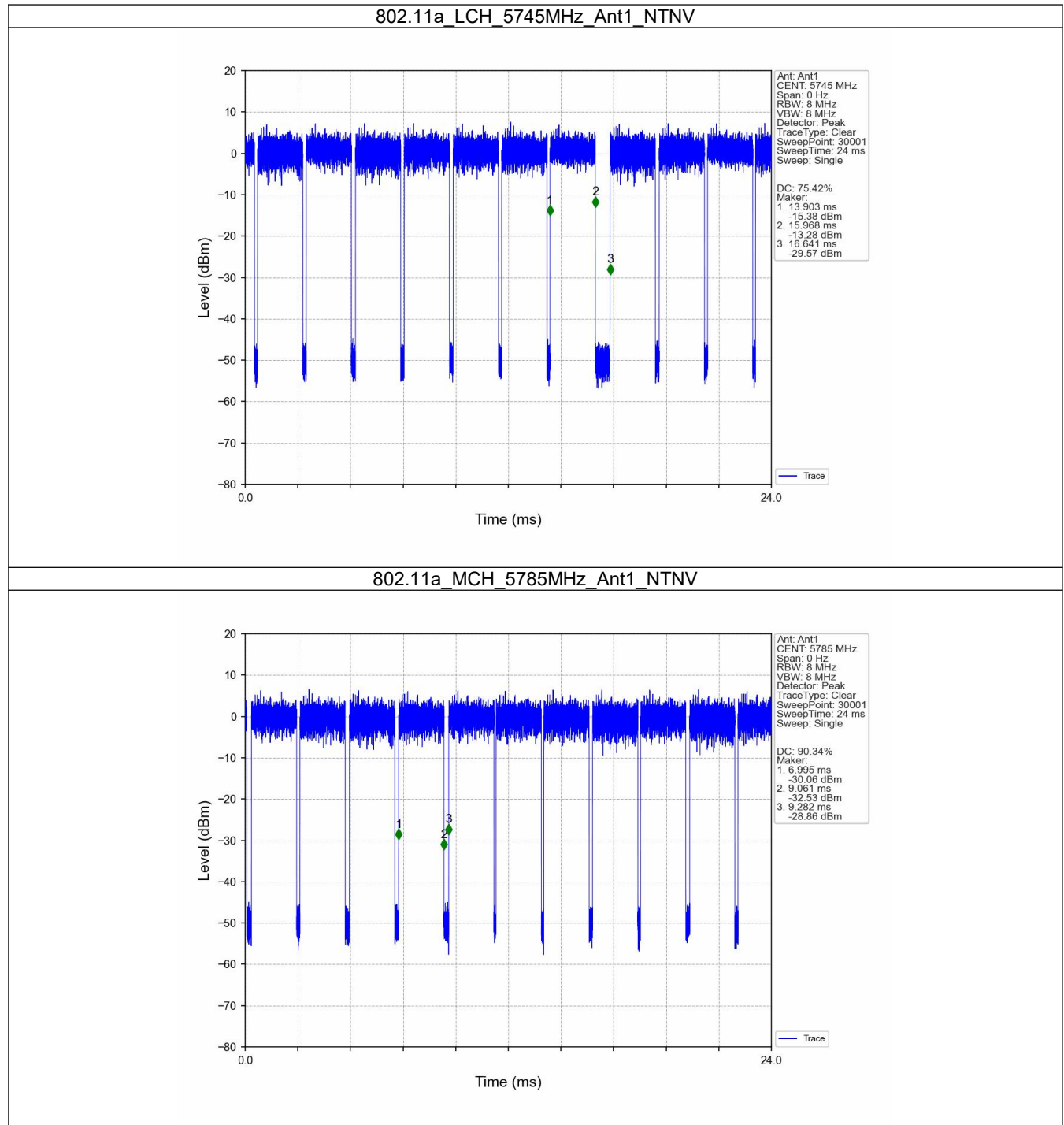
1.1.1 Ant1

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	2.738	75.42	1.23	19.02
		5785	2.066	2.287	90.34	0.44	5.25
		5825	2.065	2.286	90.33	0.44	5.29
802.11n (HT20)	SISO	5745	0.229	0.450	50.89	2.93	17.88
		5785	0.228	0.441	51.70	2.87	18.72
		5825	0.229	0.678	33.78	4.71	35.01
802.11n (HT40)	SISO	5755	0.129	0.350	36.86	4.33	20.72
		5795	0.128	0.350	36.57	4.37	18.48
802.11ac (VHT20)	SISO	5745	2.064	2.294	89.97	0.46	4.83
		5785	2.065	2.286	90.33	0.44	5.29
		5825	2.065	2.286	90.33	0.44	4.48
802.11ac (VHT40)	SISO	5755	0.128	0.341	37.54	4.26	19.59
		5795	0.132	0.359	36.77	4.35	22.22



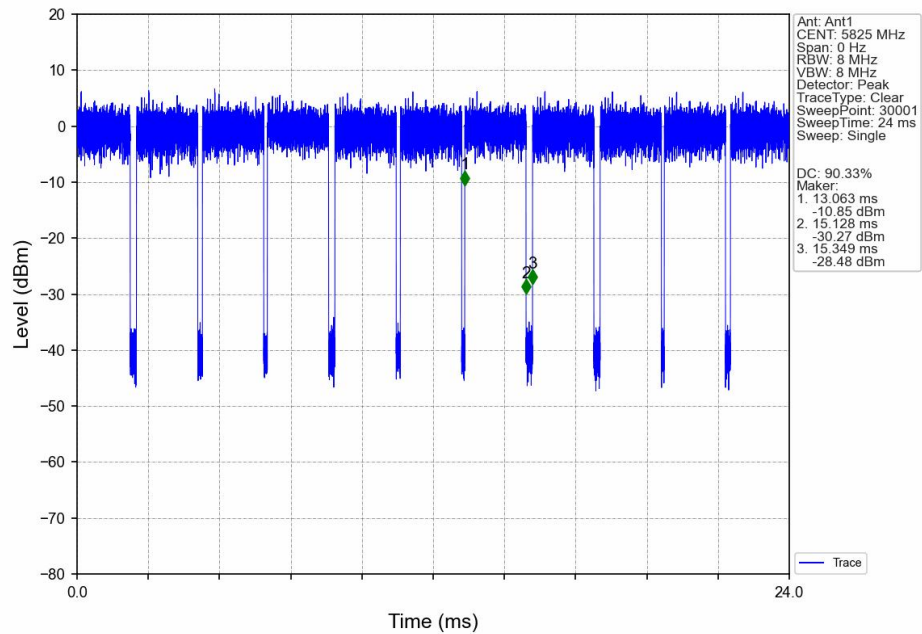
1.2 Test Graph

1.2.1 Ant1

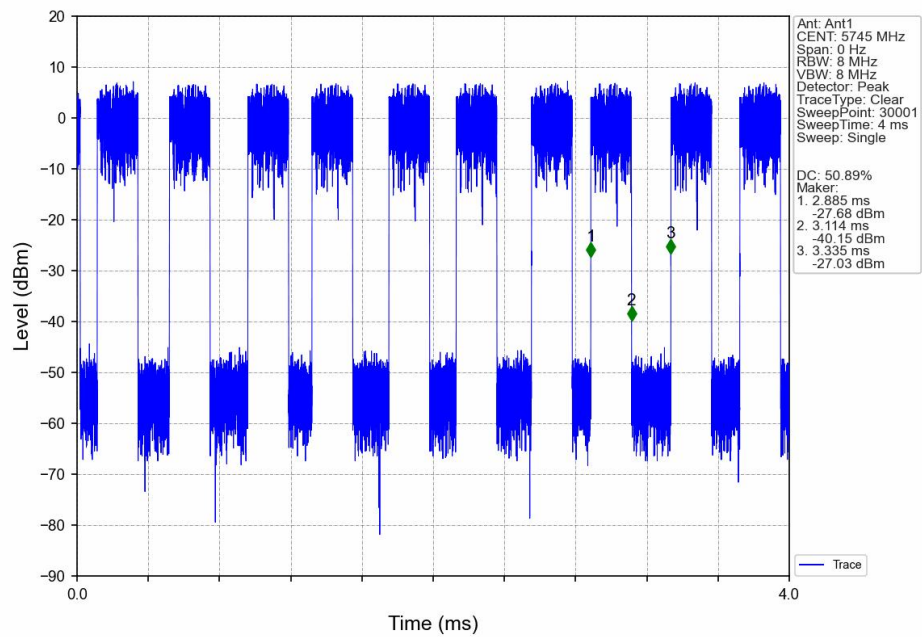




802.11a_HCH_5825MHz_Ant1_NTNV

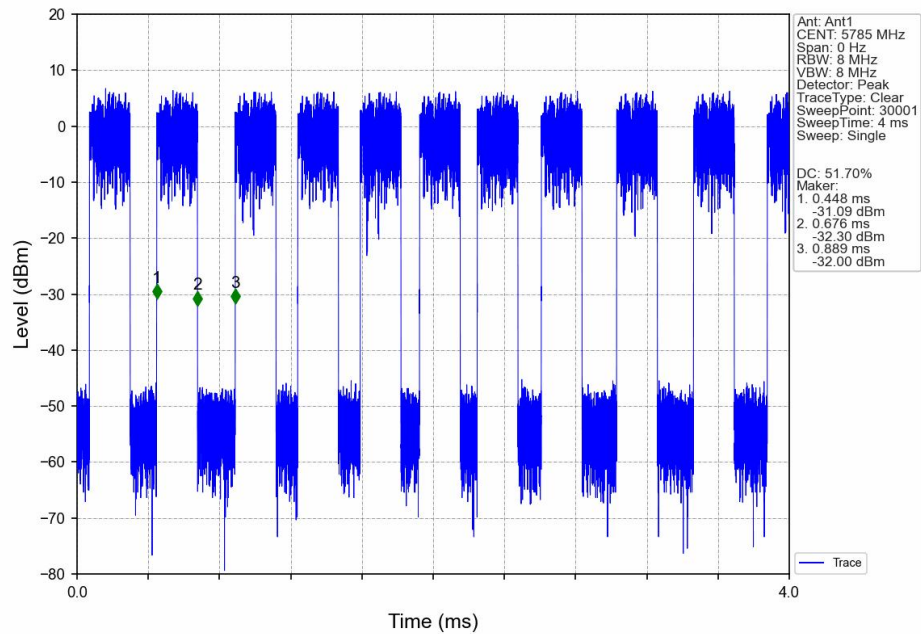


802.11n(HT20)_LCH_5745MHz_Ant1_NTNV

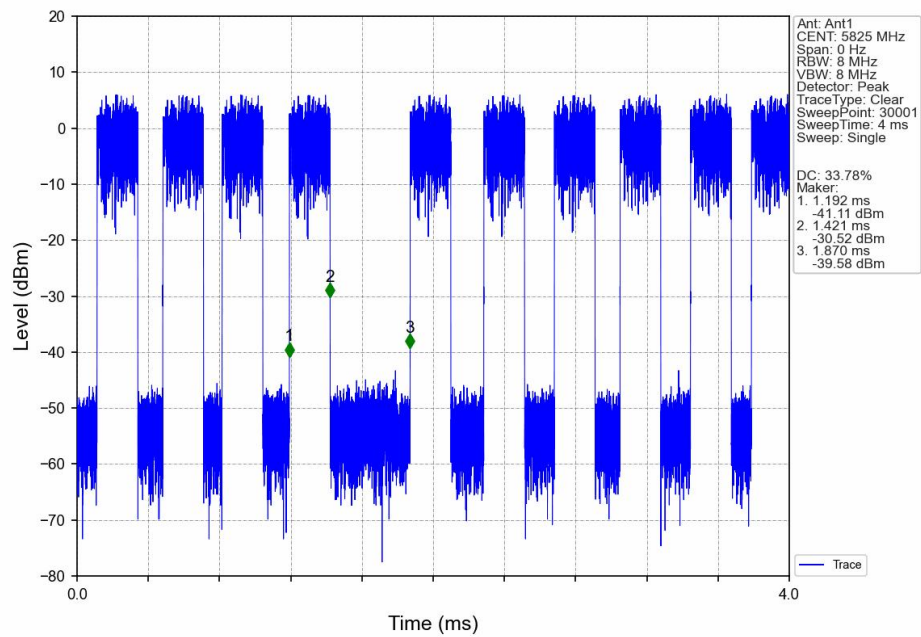




802.11n(HT20)_MCH_5785MHz_Ant1_NTNV

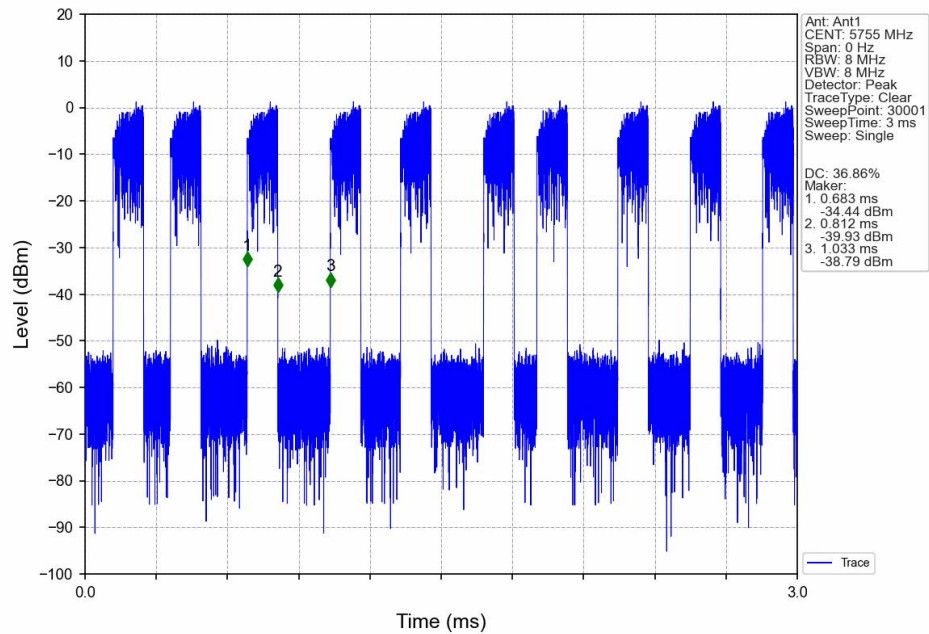


802.11n(HT20)_HCH_5825MHz_Ant1_NTNV

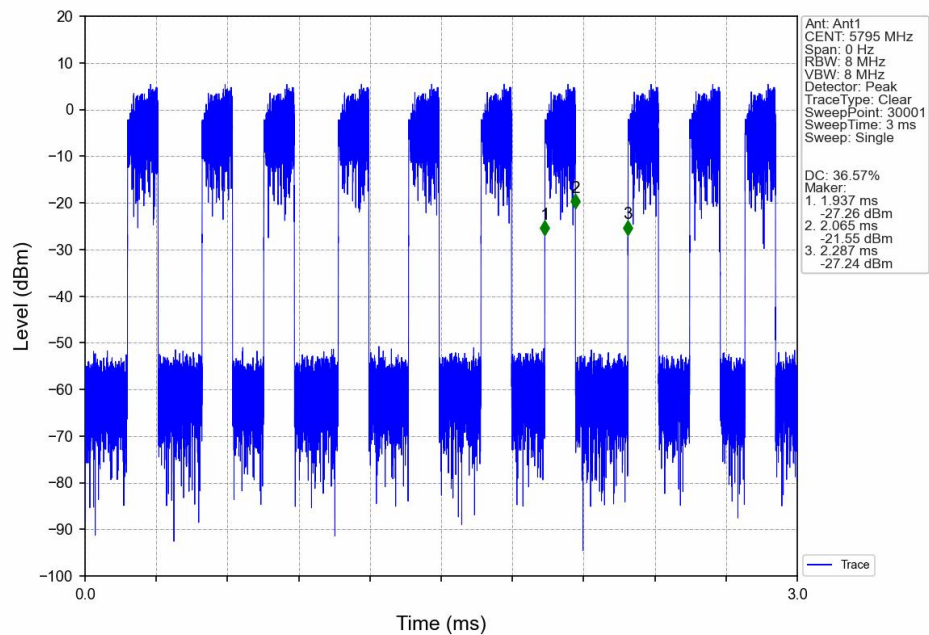




802.11n(HT40)_LCH_5755MHz_Ant1_NTNV

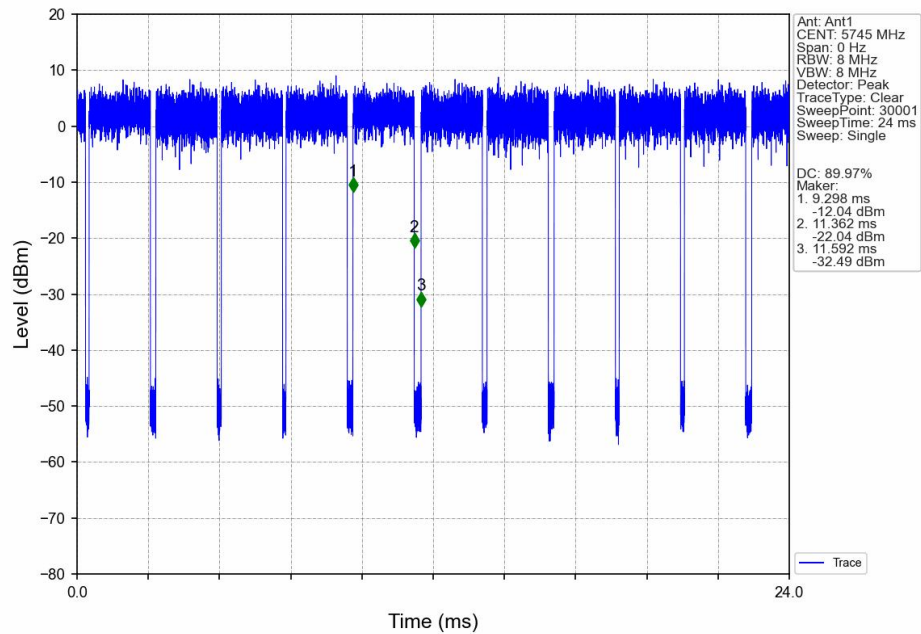


802.11n(HT40)_HCH_5795MHz_Ant1_NTNV

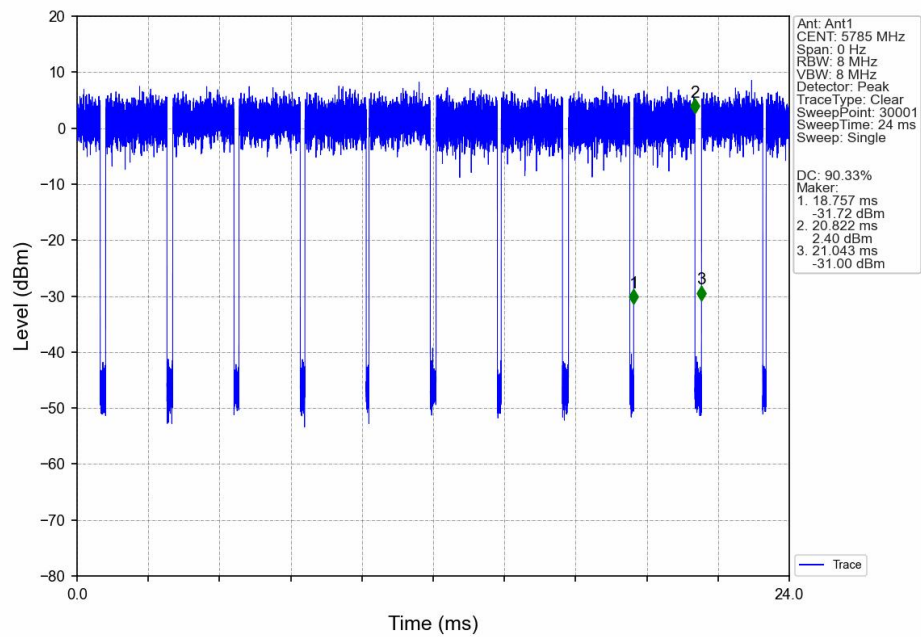




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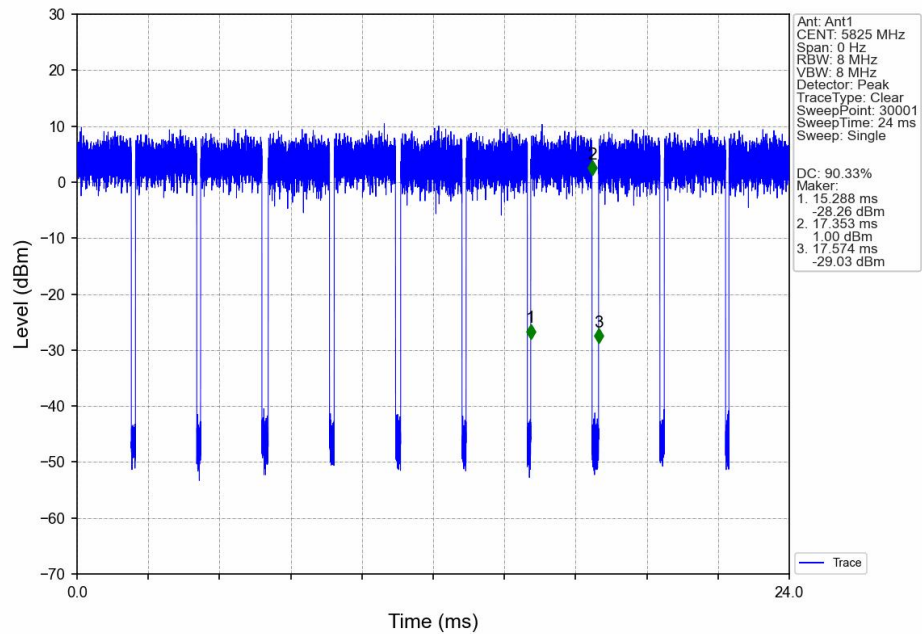


802.11ac(VHT20)_MCH_5785MHz_Ant1_NTNV

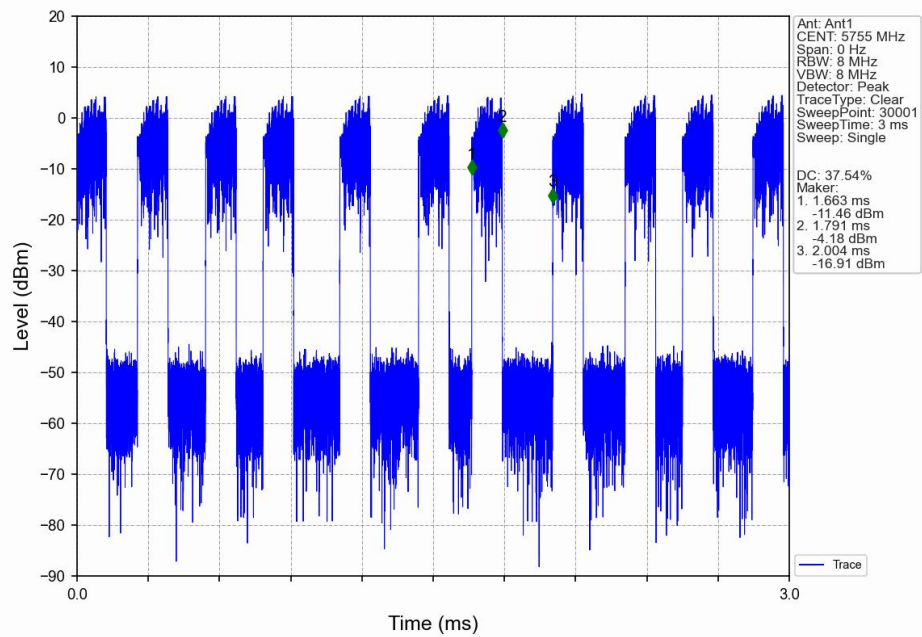




802.11ac(VHT20)_HCH_5825MHz_Ant1_NTNV

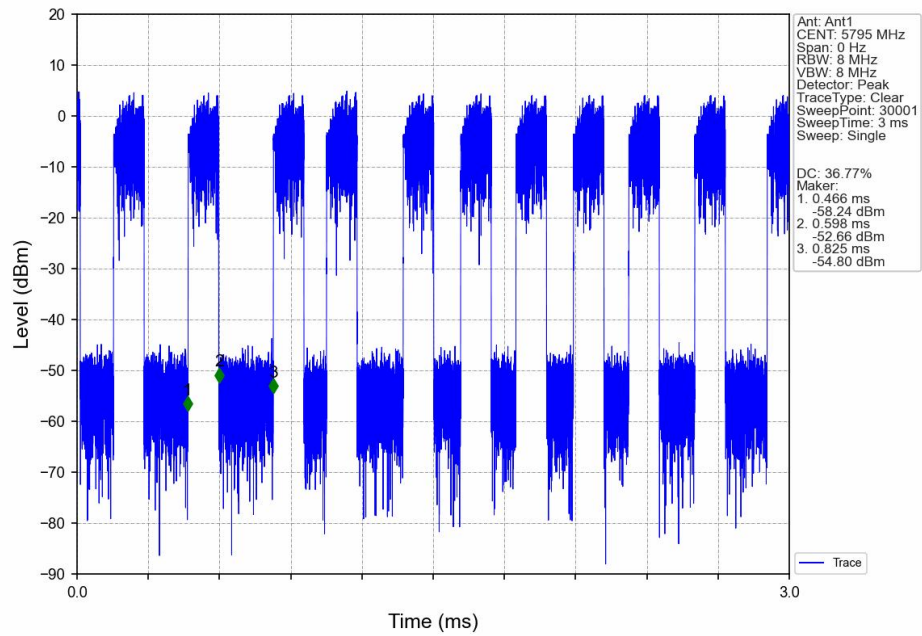


802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV





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	17.037	/	Pass
		5785	1	17.020	/	Pass
		5825	1	17.036	/	Pass
802.11n (HT20)	SISO	5745	1	18.291	/	Pass
		5785	1	18.270	/	Pass
		5825	1	18.252	/	Pass
802.11n (HT40)	SISO	5755	1	36.144	/	Pass
		5795	1	36.153	/	Pass
802.11ac (VHT20)	SISO	5745	1	16.940	/	Pass
		5785	1	16.930	/	Pass
		5825	1	16.972	/	Pass
802.11ac (VHT40)	SISO	5755	1	36.113	/	Pass
		5795	1	36.142	/	Pass

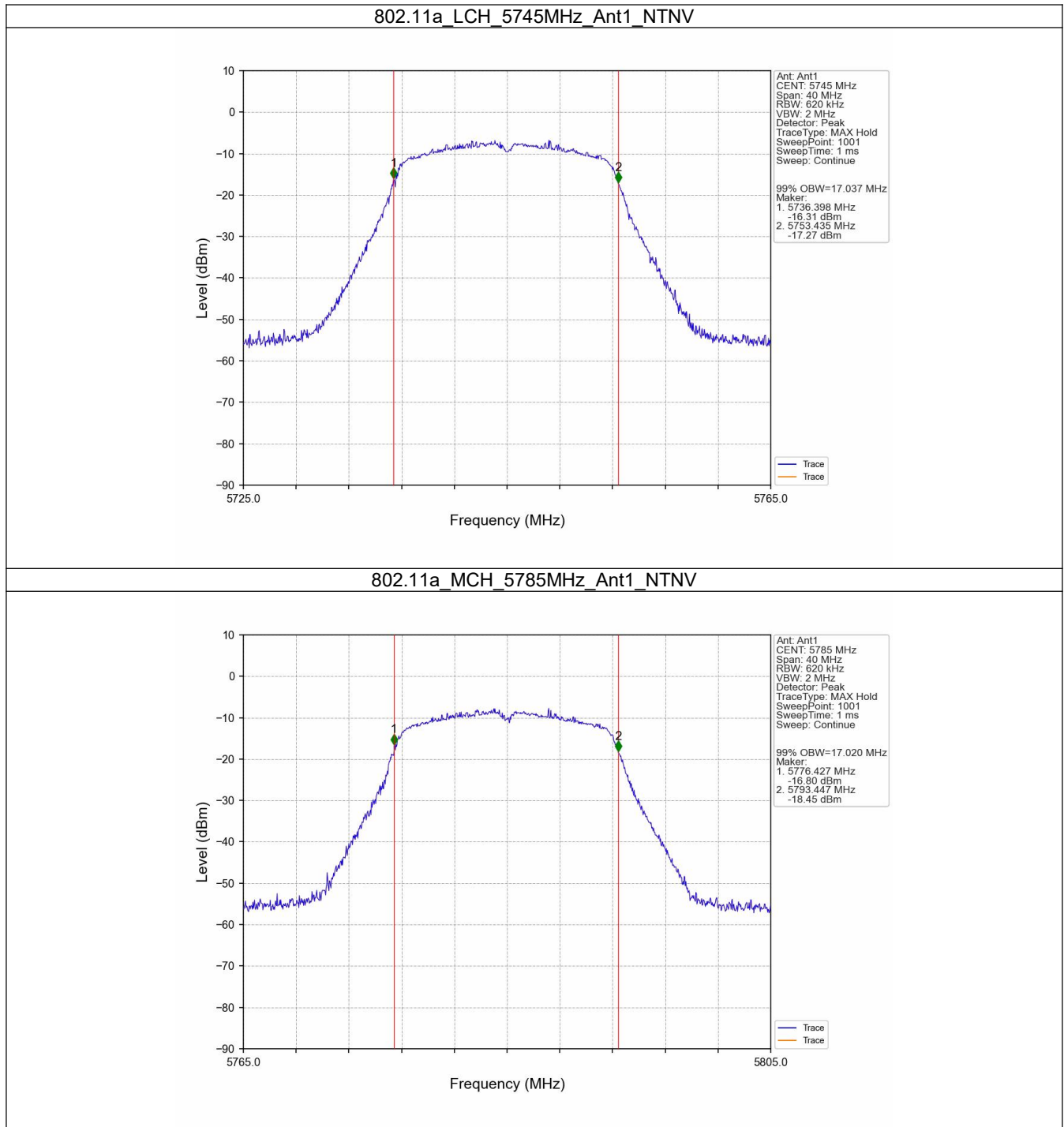
2.1.2 6dB BW

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5745	1	15.131	≥ 0.5	Pass
		5785	1	15.035	≥ 0.5	Pass
		5825	1	12.989	≥ 0.5	Pass
802.11n (HT20)	SISO	5745	1	17.677	≥ 0.5	Pass
		5785	1	17.675	≥ 0.5	Pass
		5825	1	17.694	≥ 0.5	Pass
802.11n (HT40)	SISO	5755	1	35.189	≥ 0.5	Pass
		5795	1	35.188	≥ 0.5	Pass
802.11ac (VHT20)	SISO	5745	1	15.056	≥ 0.5	Pass
		5785	1	12.673	≥ 0.5	Pass
		5825	1	15.122	≥ 0.5	Pass
802.11ac (VHT40)	SISO	5755	1	35.197	≥ 0.5	Pass
		5795	1	35.190	≥ 0.5	Pass



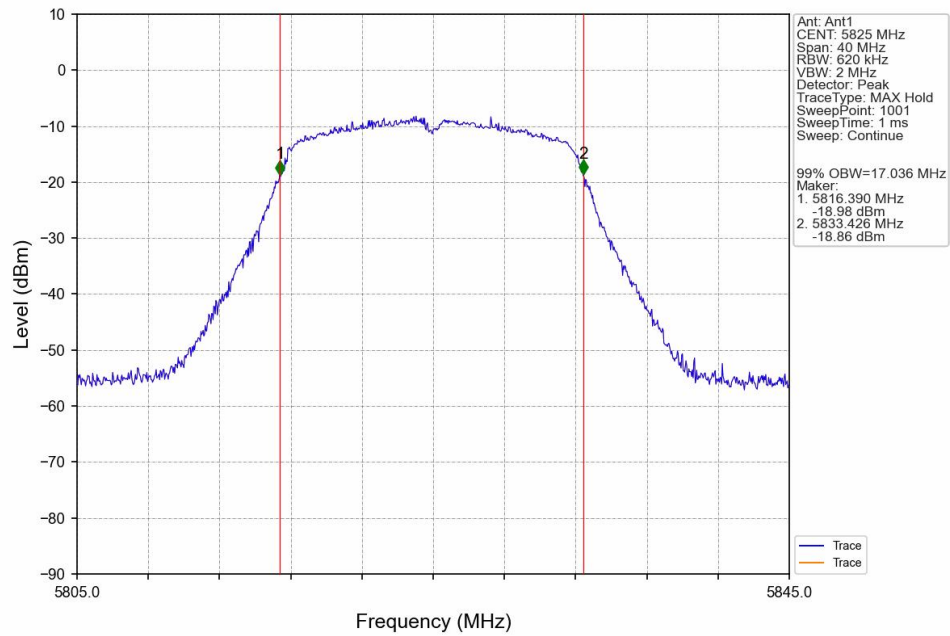
2.2 Test Graph

2.2.1 OBW

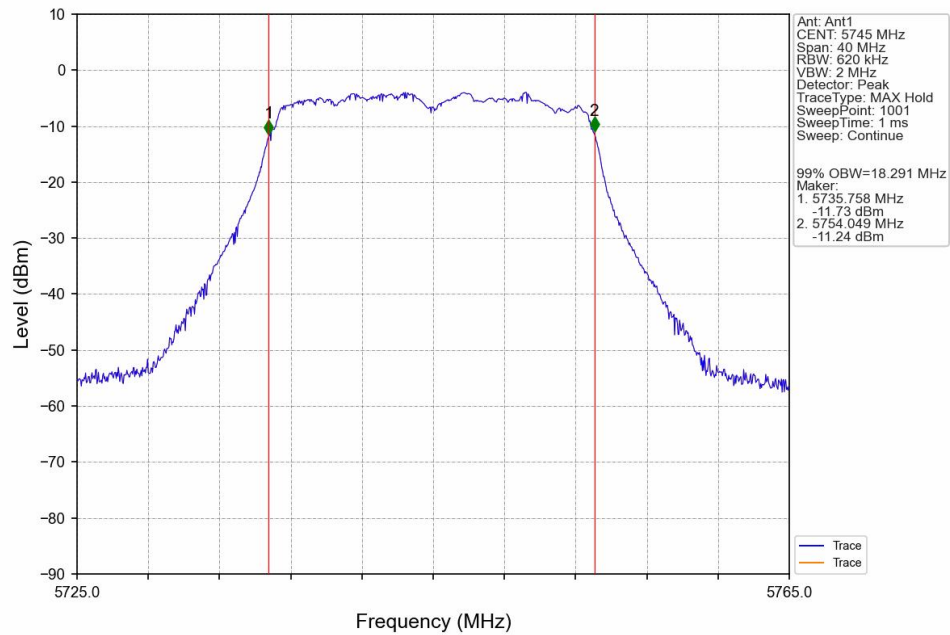




802.11a_HCH_5825MHz_Ant1_NTNV

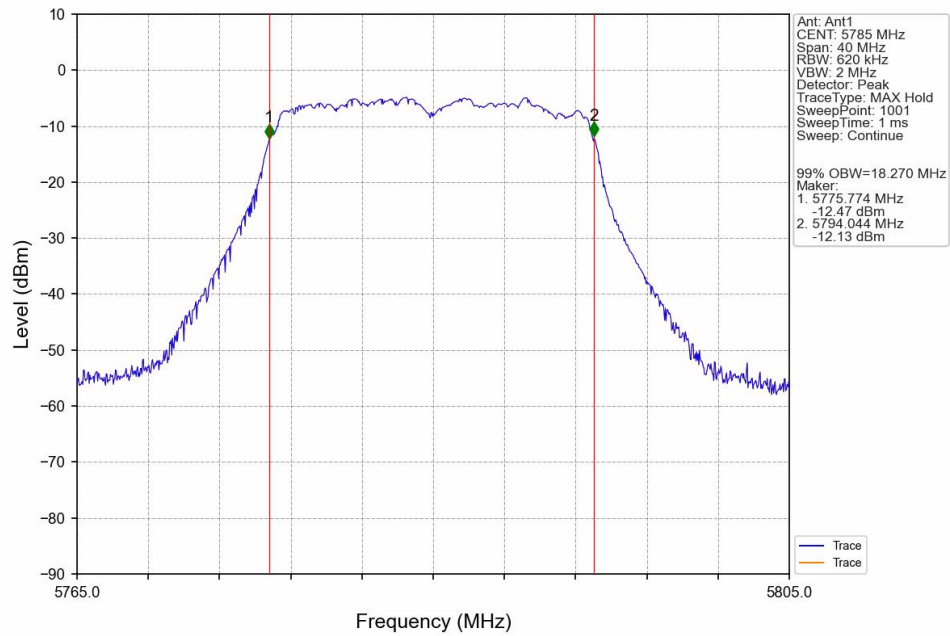


802.11n(HT20)_LCH_5745MHz_Ant1_NTNV

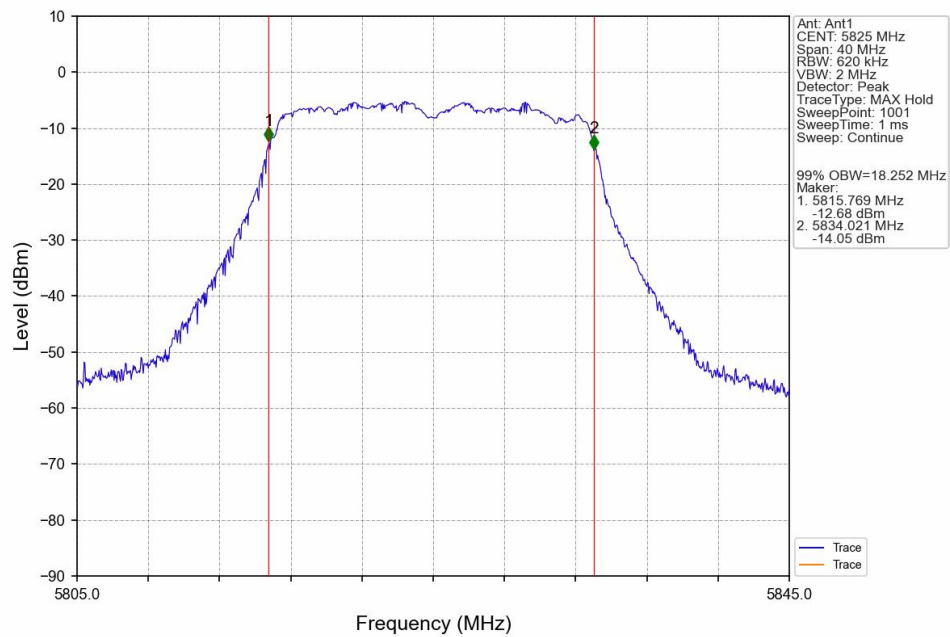




802.11n(HT20)_MCH_5785MHz_Ant1_NTNV

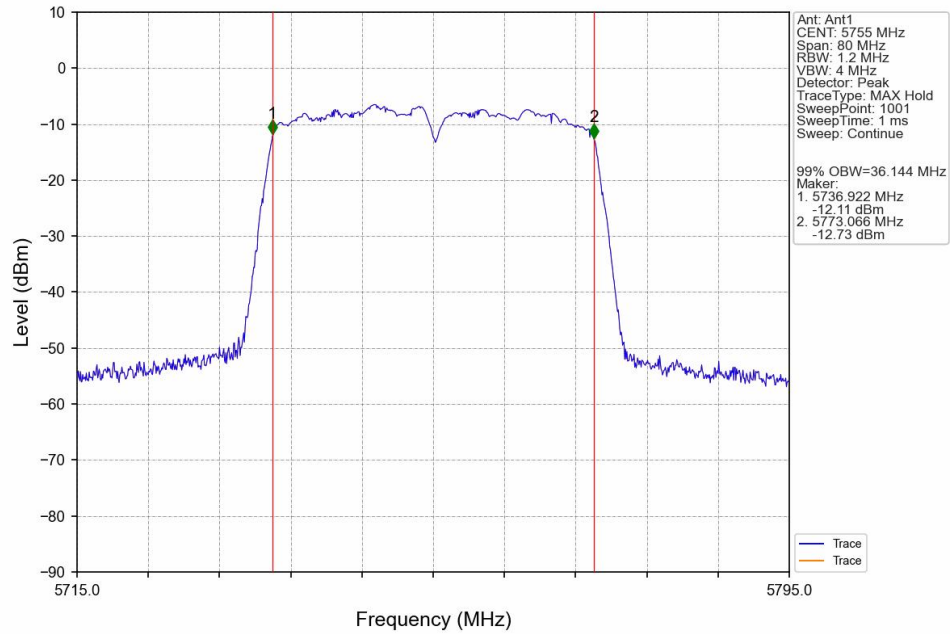


802.11n(HT20)_HCH_5825MHz_Ant1_NTNV

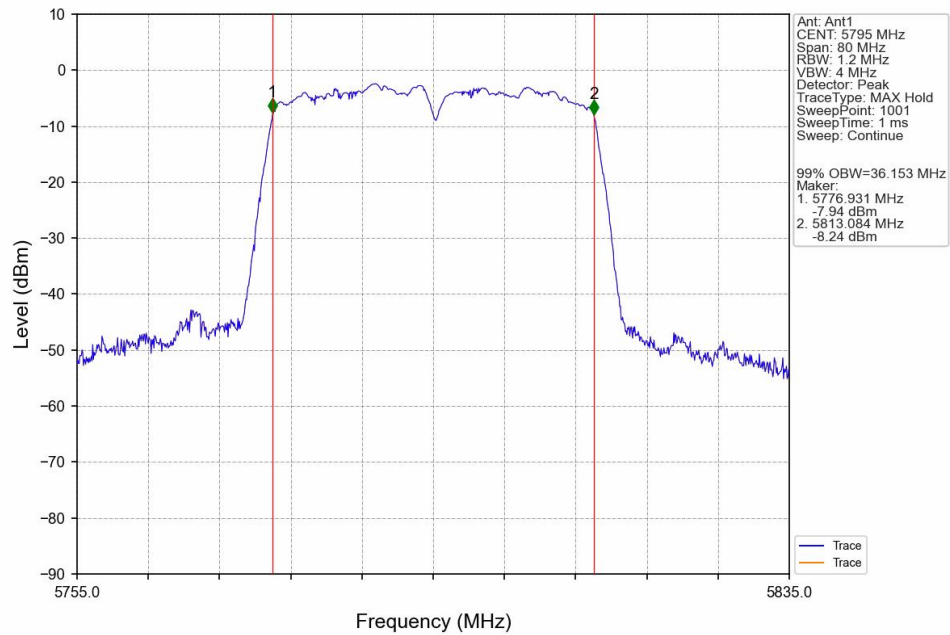




802.11n(HT40)_LCH_5755MHz_Ant1_NTNV

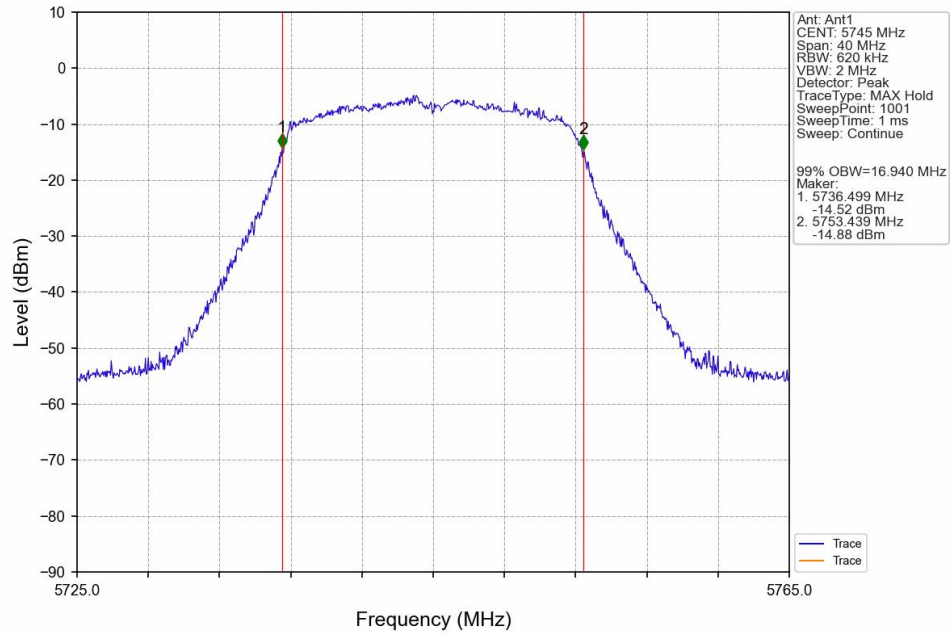


802.11n(HT40)_HCH_5795MHz_Ant1_NTNV

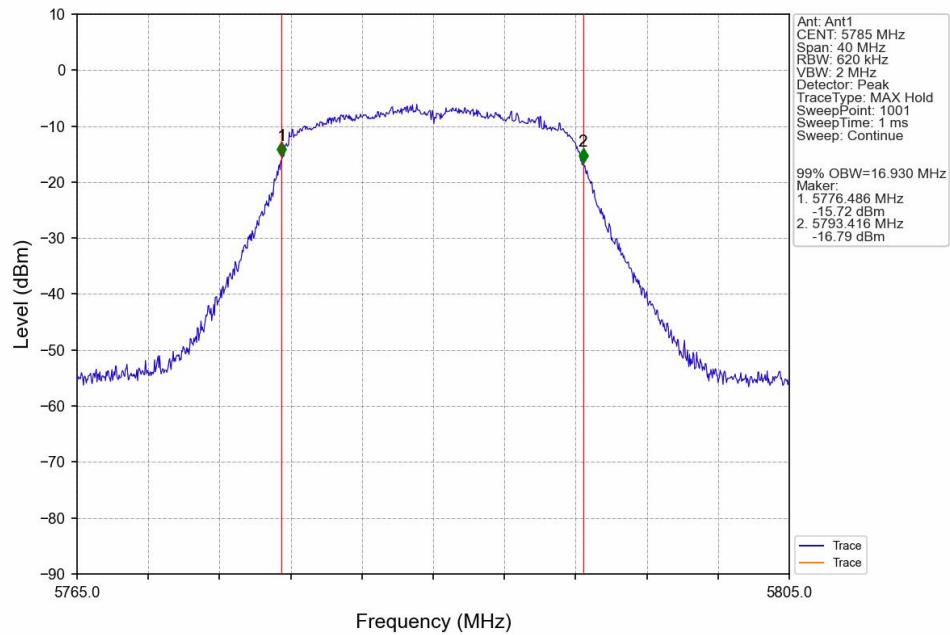




802.11ac(VHT20)_LCH_5745MHz_Ant1_NTNV

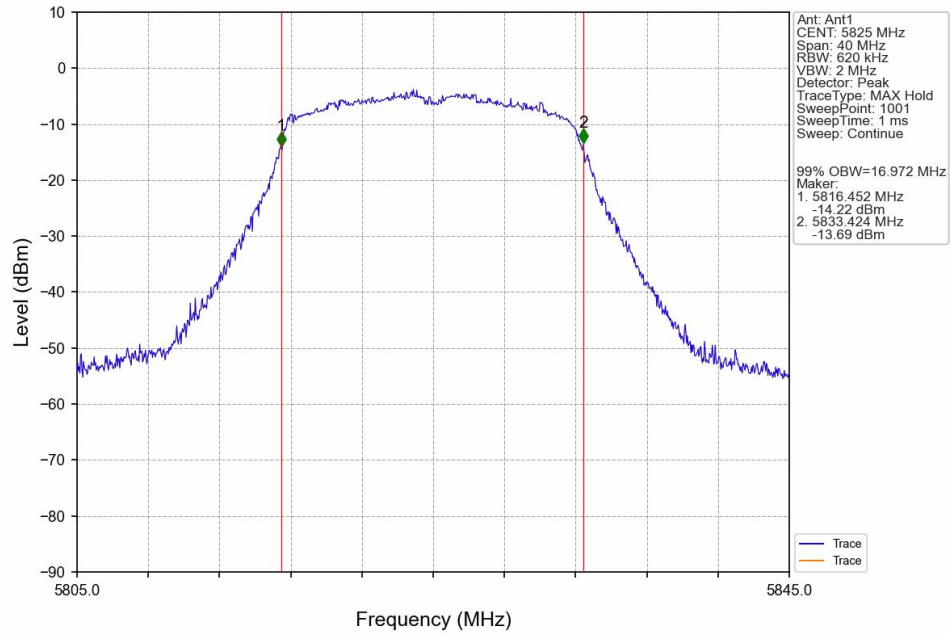


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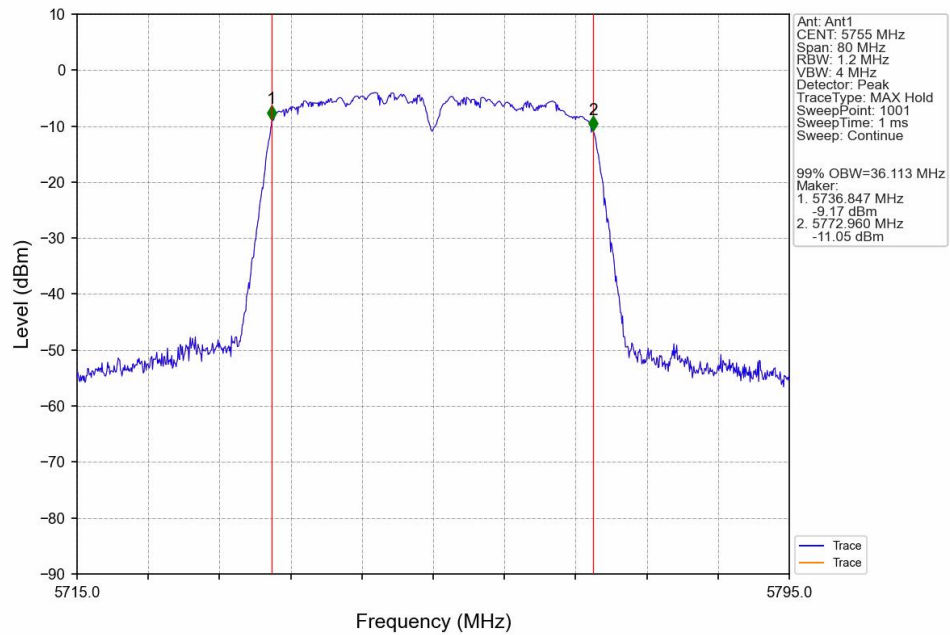




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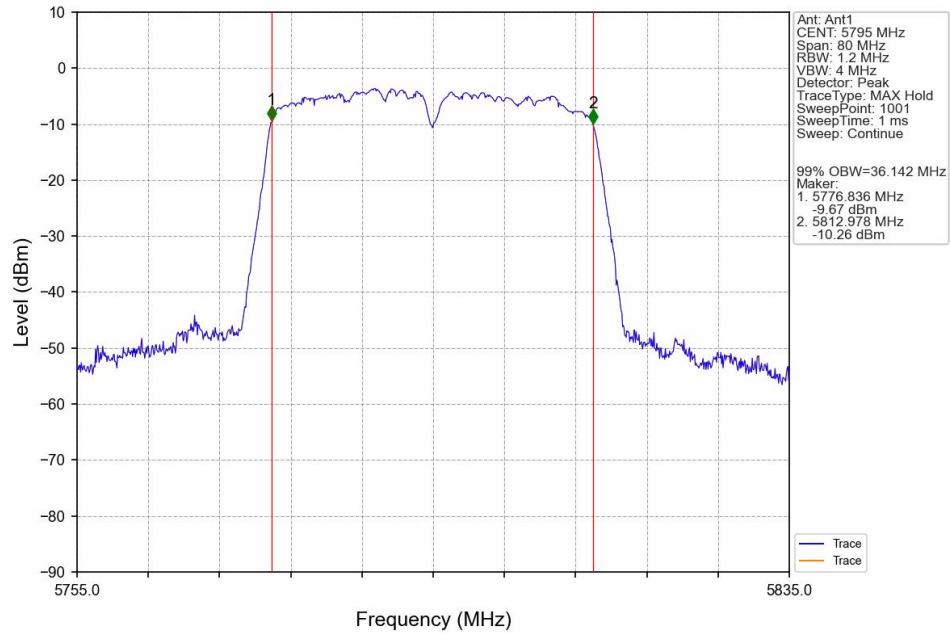


802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV





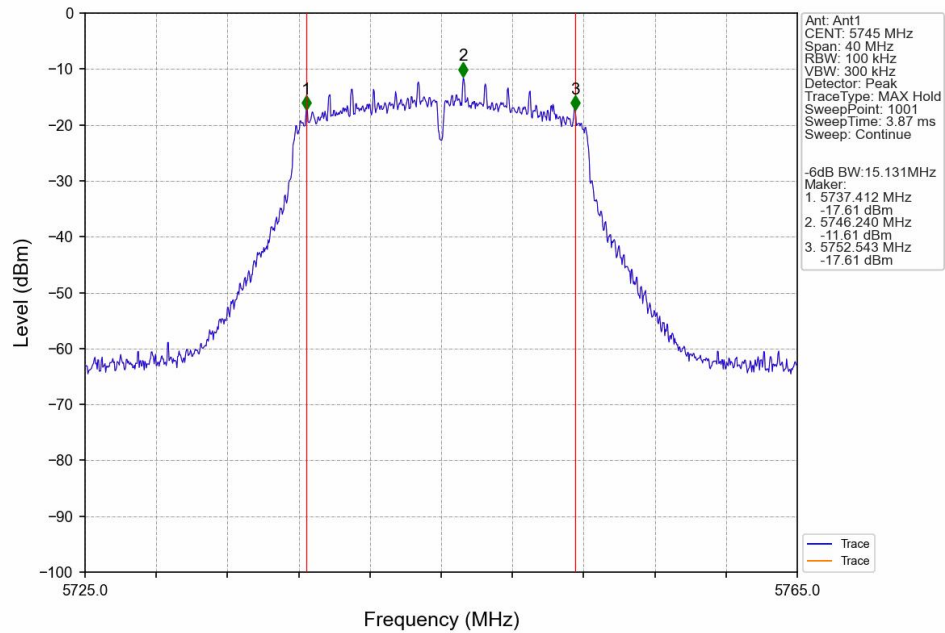
802.11ac(VHT40)_HCH_5795MHz_Ant1_NTNV



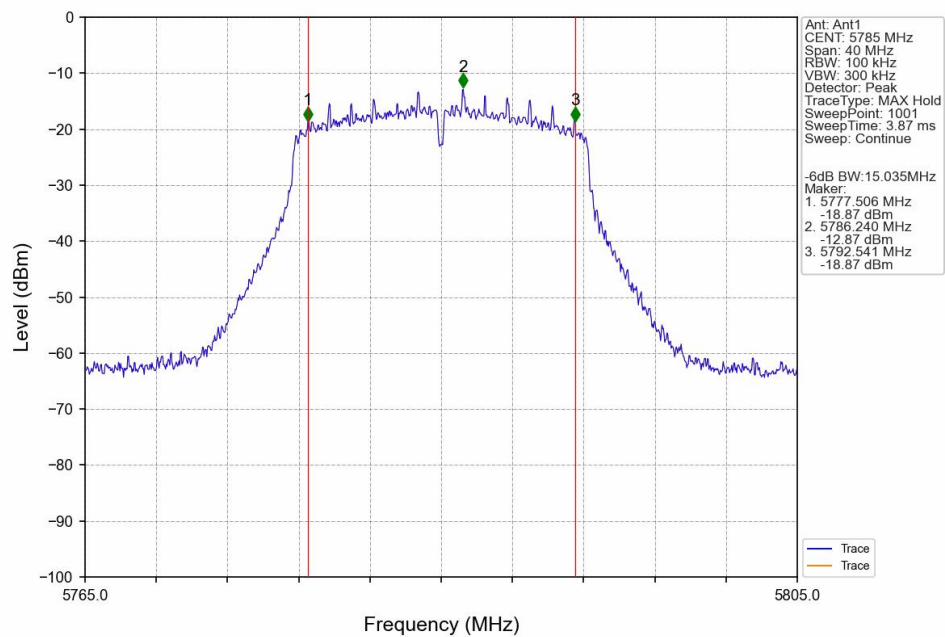


2.2.2 6dB BW

802.11a_LCH_5745MHz_Ant1_NTNV

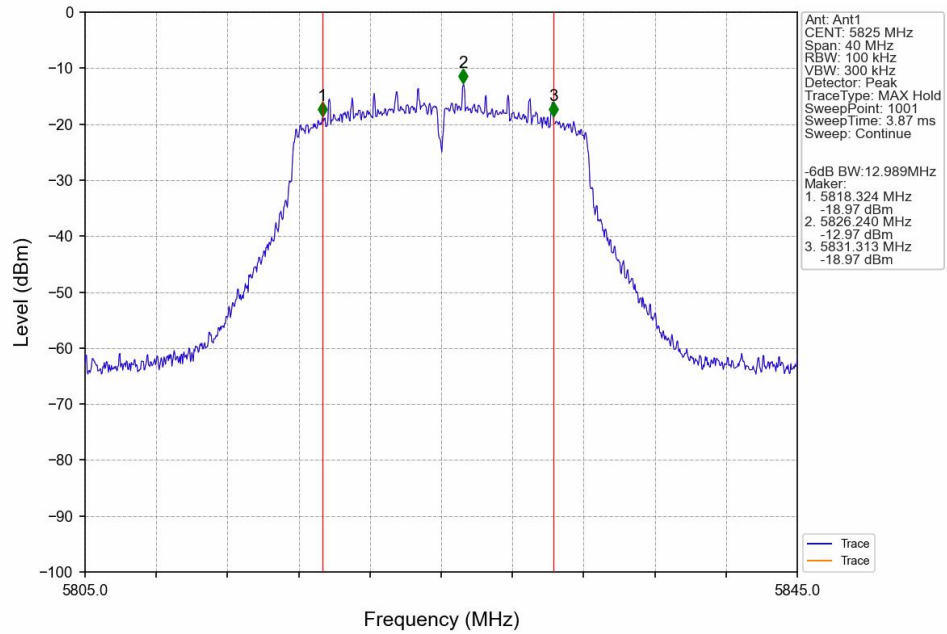


802.11a_MCH_5785MHz_Ant1_NTNV

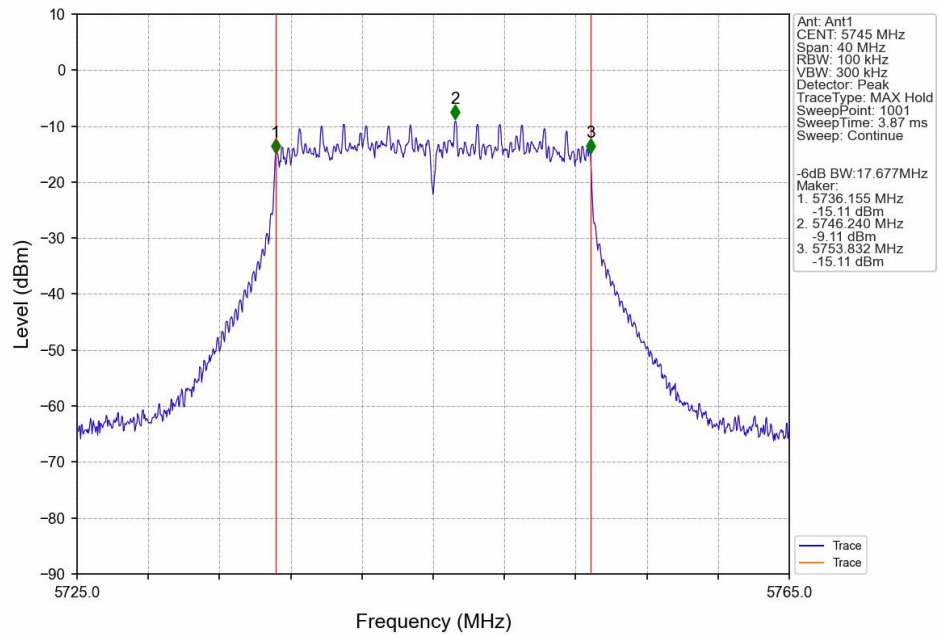




802.11a_HCH_5825MHz_Ant1_NTNV

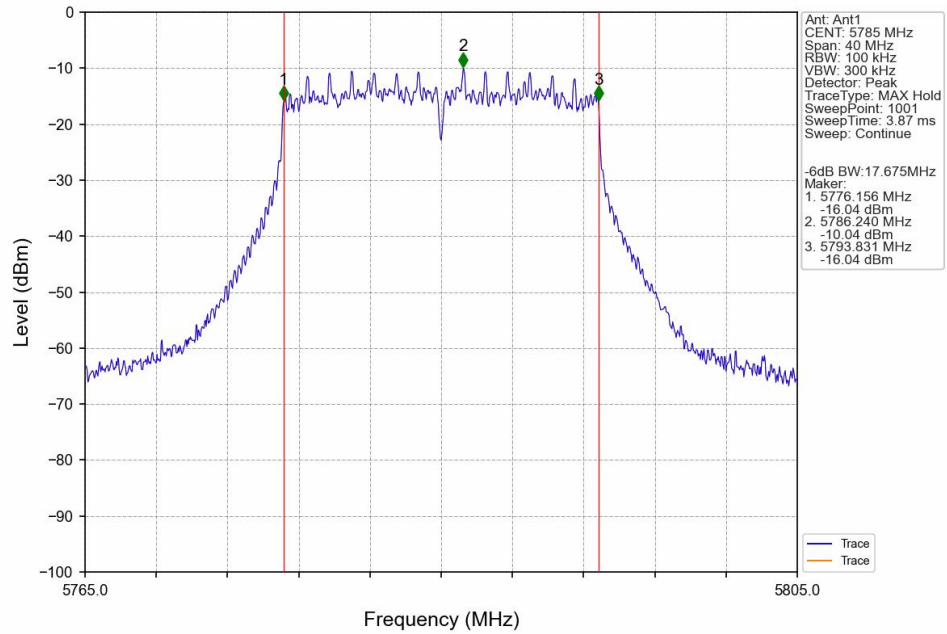


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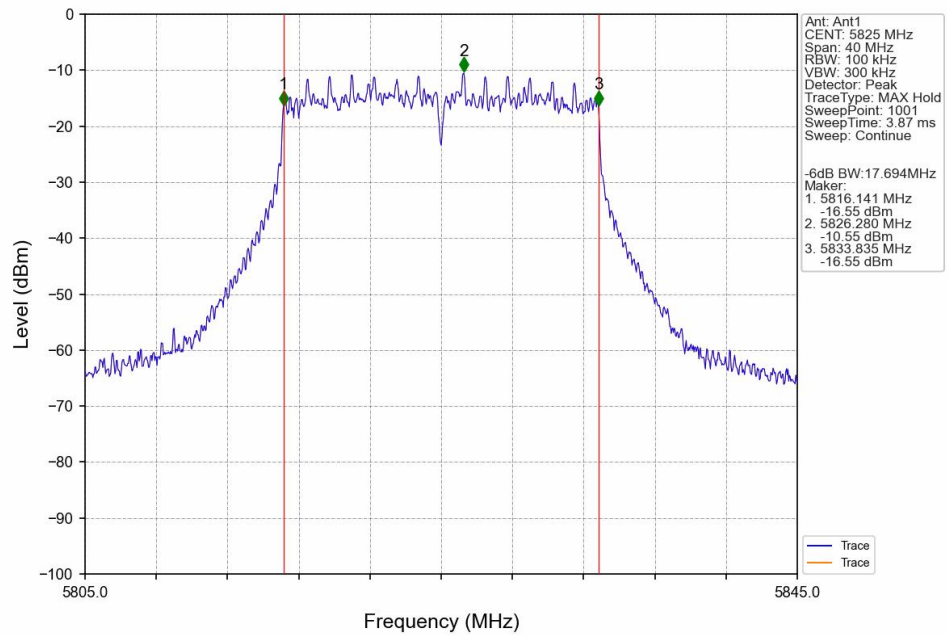




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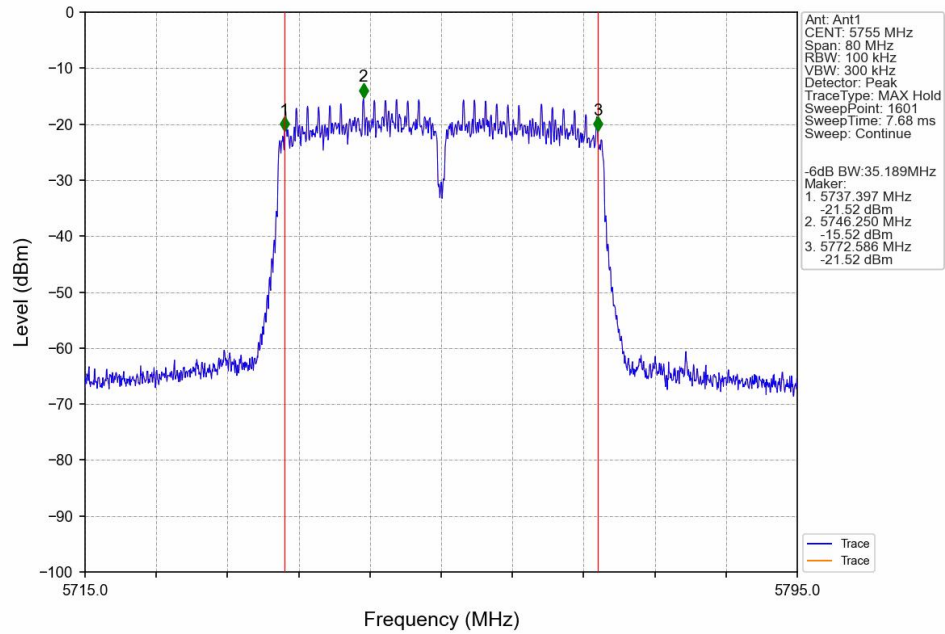


802.11n(HT20)_HCH_5825MHz_Ant1_NTNV

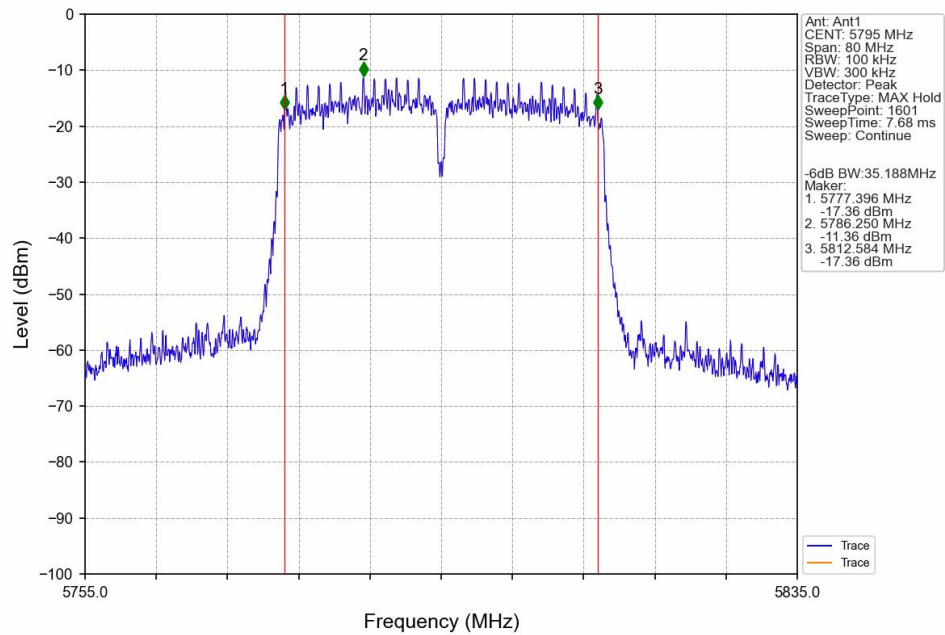




802.11n(HT40)_LCH_5755MHz_Ant1_NTNV

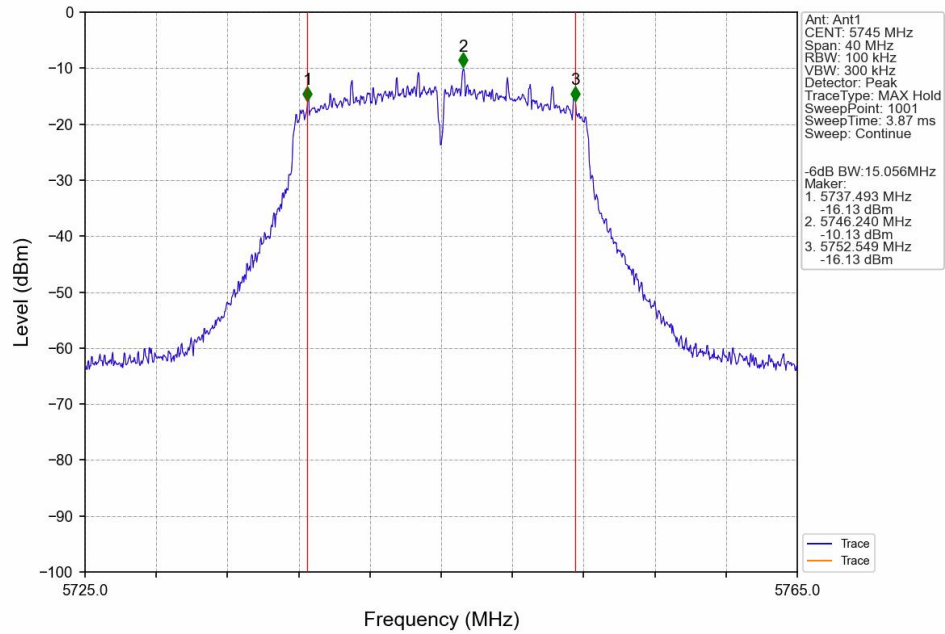


802.11n(HT40)_HCH_5795MHz_Ant1_NTNV

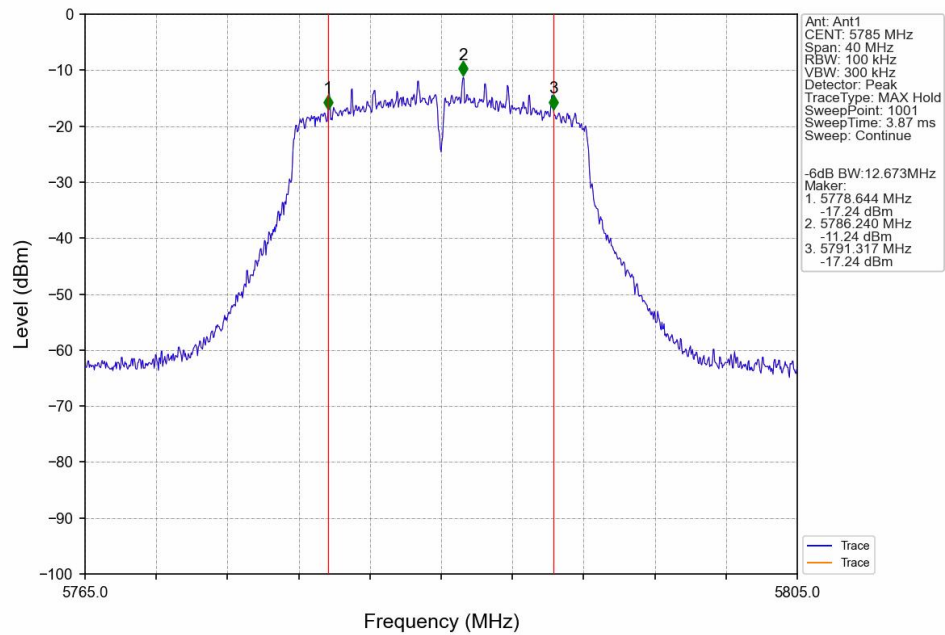




802.11ac(VHT20)_LCH_5745MHz_Ant1_NTNV

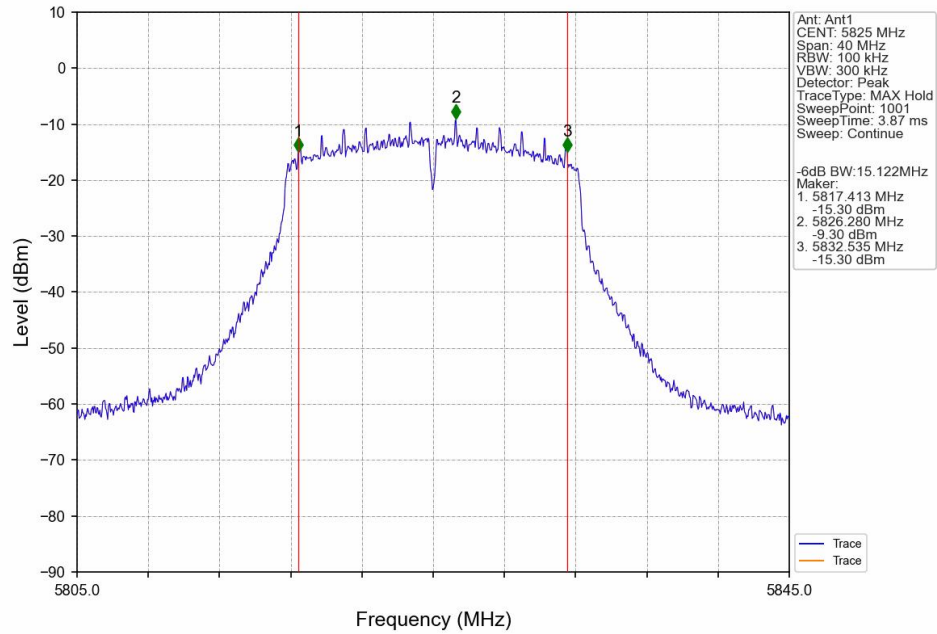


802.11ac(VHT20)_MCH_5785MHz_Ant1_NTNV

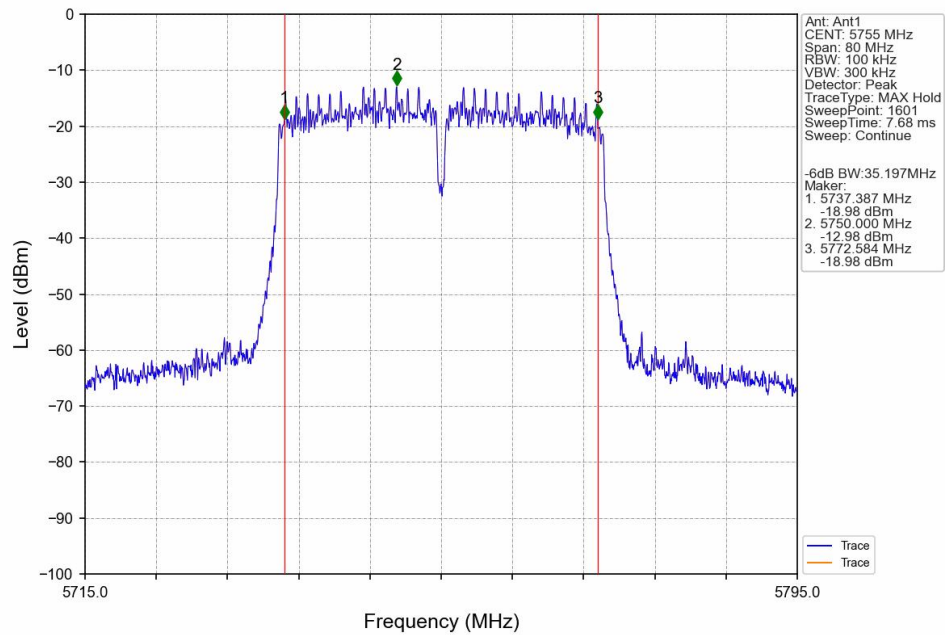




802.11ac(VHT20)_HCH_5825MHz_Ant1_NTNV

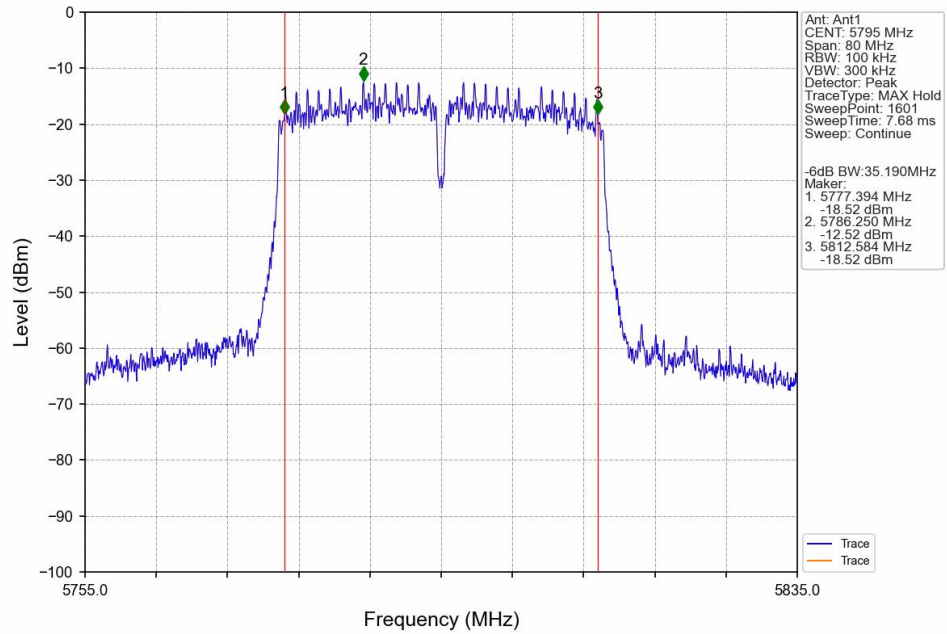


802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV





802.11ac(VHT40)_HCH_5795MHz_Ant1_NTNV





3. Maximum Conducted Output Power

3.1 Test Result

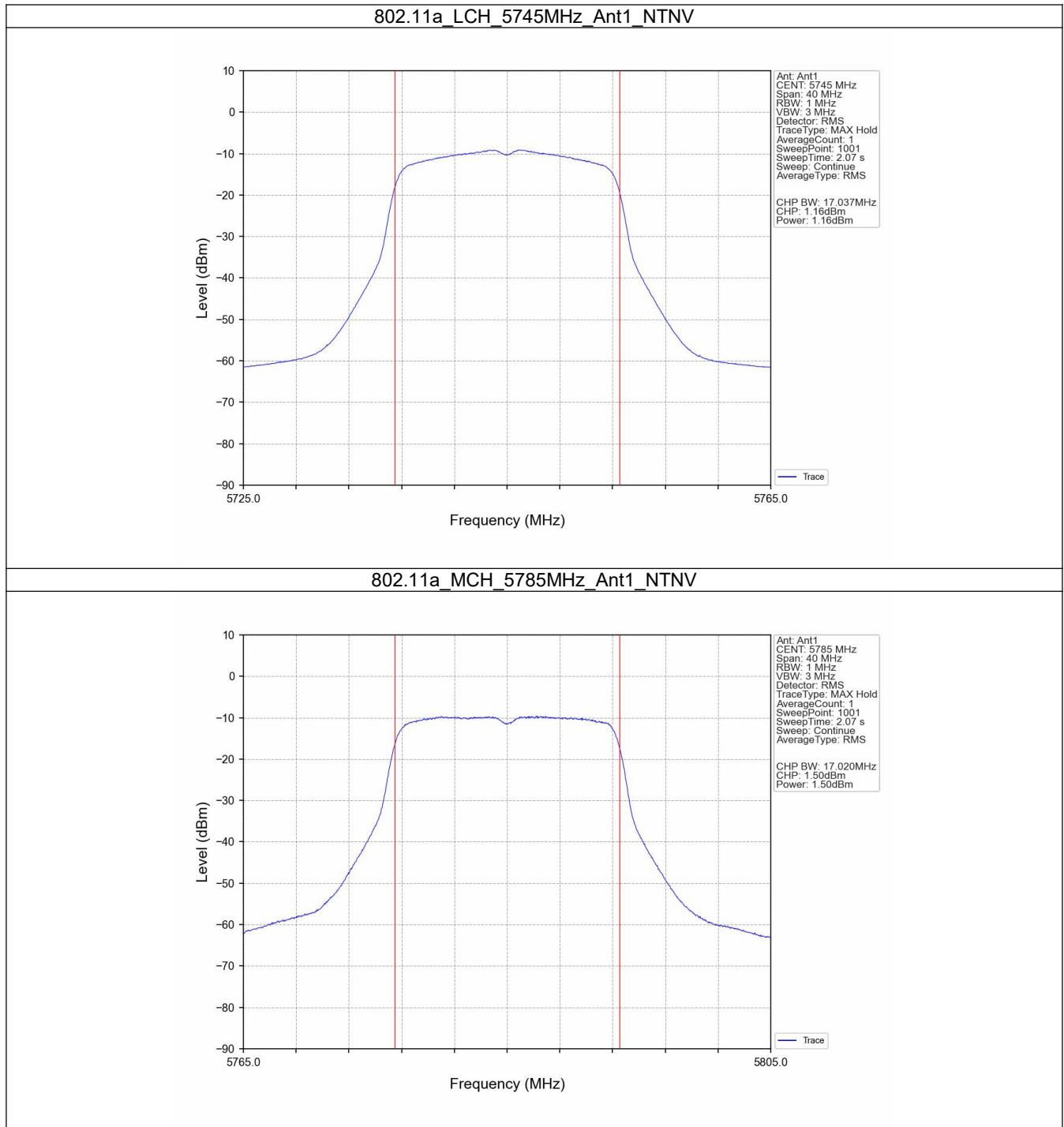
3.1.1 Power

Mode	TX Type	Frequency (MHz)	Duty Cycle Correction Factor	Conducted Measured power	Maximum Average Conducted Output Power (dBm)		Verdict
					ANT1	Limit	
802.11a	SISO	5745	1.23	1.16	2.39	<=30	Pass
		5785	0.44	1.50	1.94	<=30	Pass
		5825	0.44	1.52	1.96	<=30	Pass
802.11n (HT20)	SISO	5745	2.93	2.02	4.95	<=30	Pass
		5785	2.87	1.16	4.03	<=30	Pass
		5825	4.71	0.99	5.70	<=30	Pass
802.11n (HT40)	SISO	5755	4.33	1.24	5.57	<=30	Pass
		5795	4.37	1.26	5.63	<=30	Pass
802.11ac (VHT20)	SISO	5745	0.46	1.02	1.48	<=30	Pass
		5785	0.44	1.09	1.53	<=30	Pass
		5825	0.44	1.59	2.03	<=30	Pass
802.11ac (VHT40)	SISO	5755	4.26	1.03	5.29	<=30	Pass
		5795	4.35	1.60	5.95	<=30	Pass
Note1: Maximum Average= Conducted Measured power+ Duty Cycle Correction Factor							



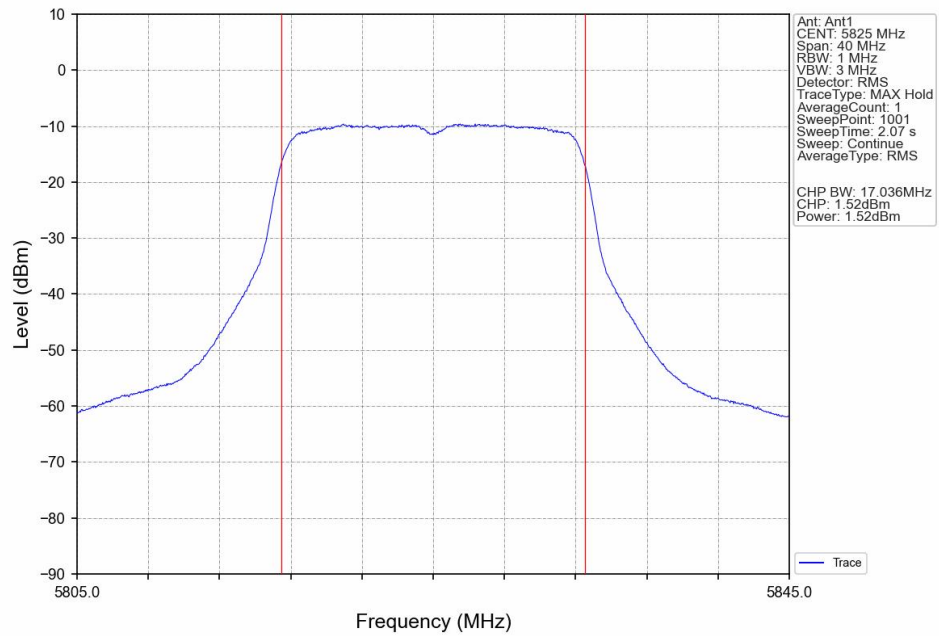
3.2 Test Graph

3.2.1 Power

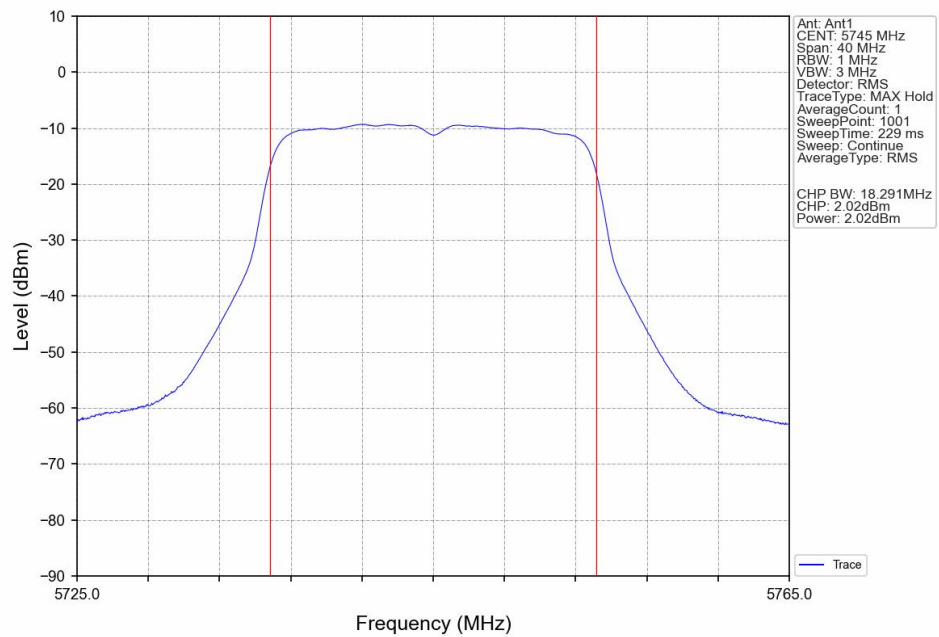




802.11a_HCH_5825MHz_Ant1_NTNV

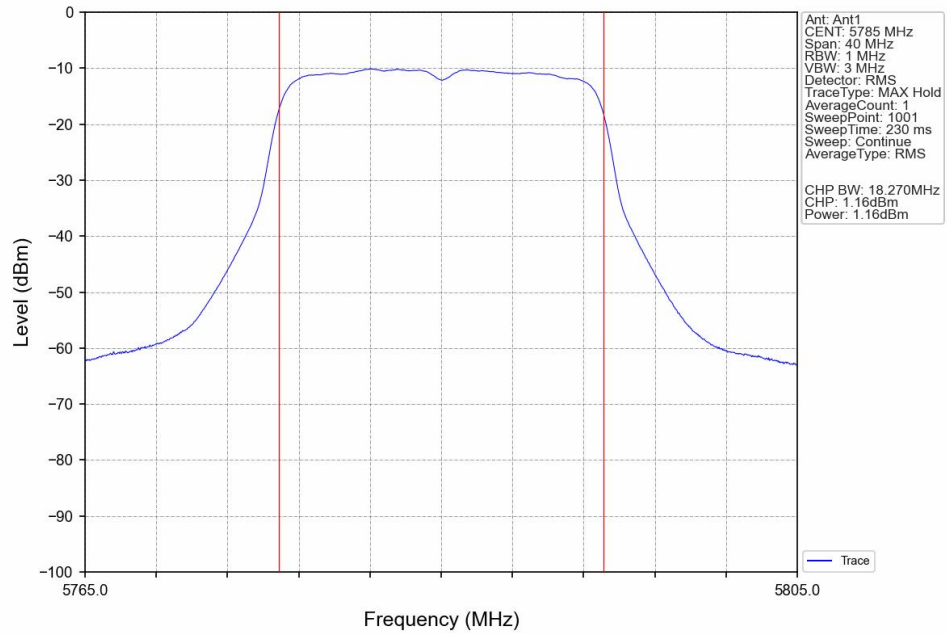


802.11n(HT20)_LCH_5745MHz_Ant1_NTNV

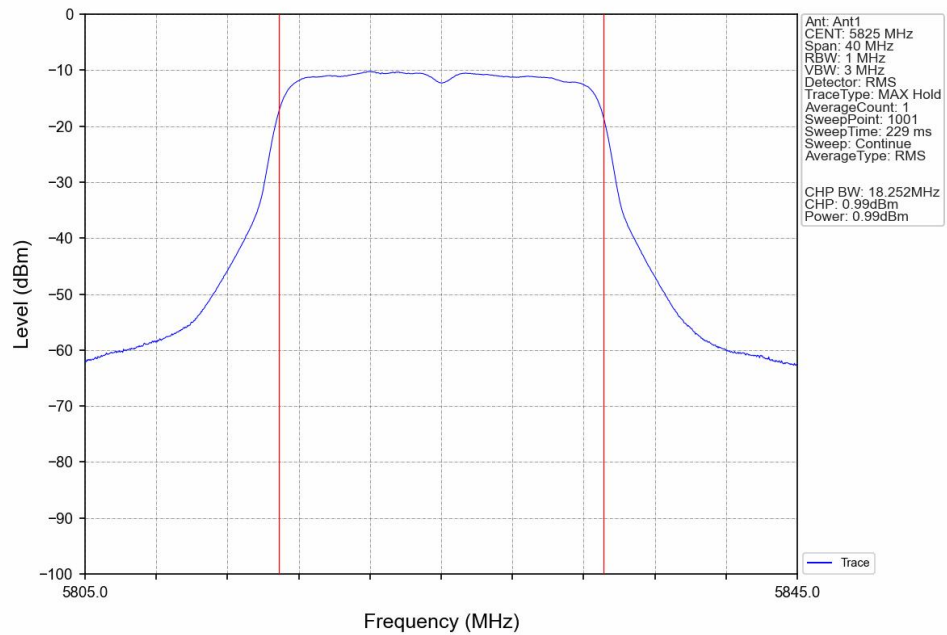




802.11n(HT20)_MCH_5785MHz_Ant1_NTNV

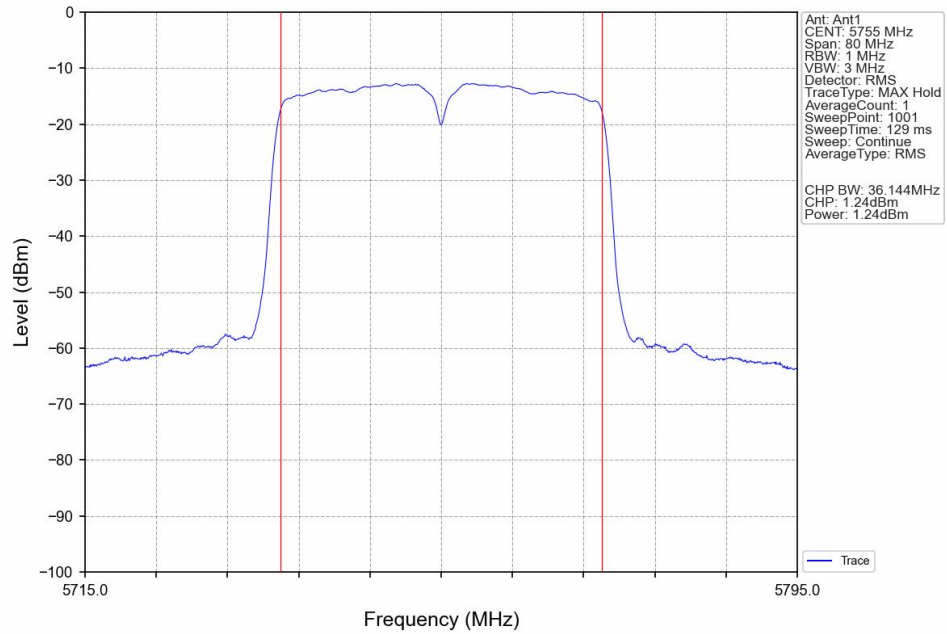


802.11n(HT20)_HCH_5825MHz_Ant1_NTNV

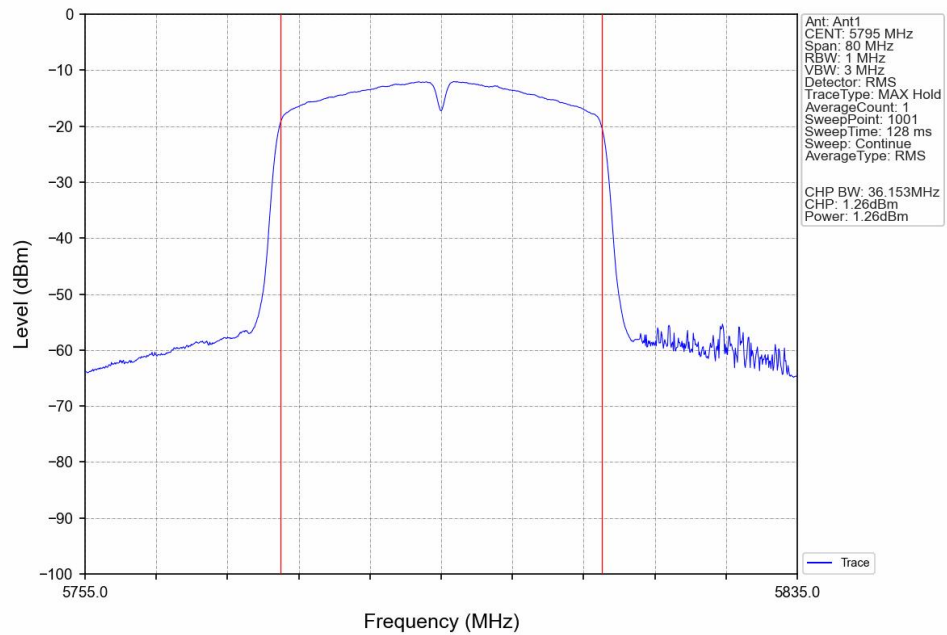




802.11n(HT40)_LCH_5755MHz_Ant1_NTNV

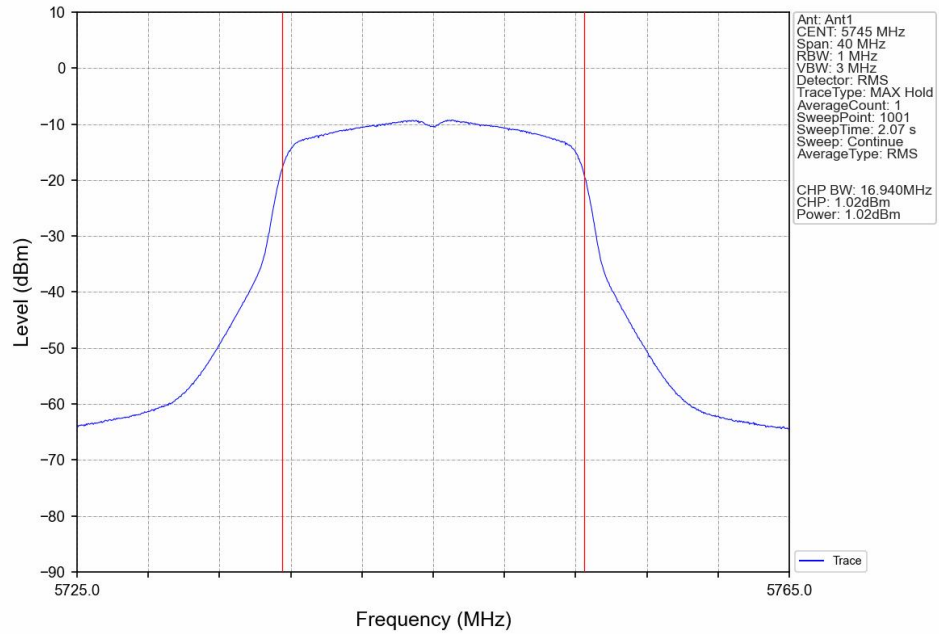


802.11n(HT40)_HCH_5795MHz_Ant1_NTNV

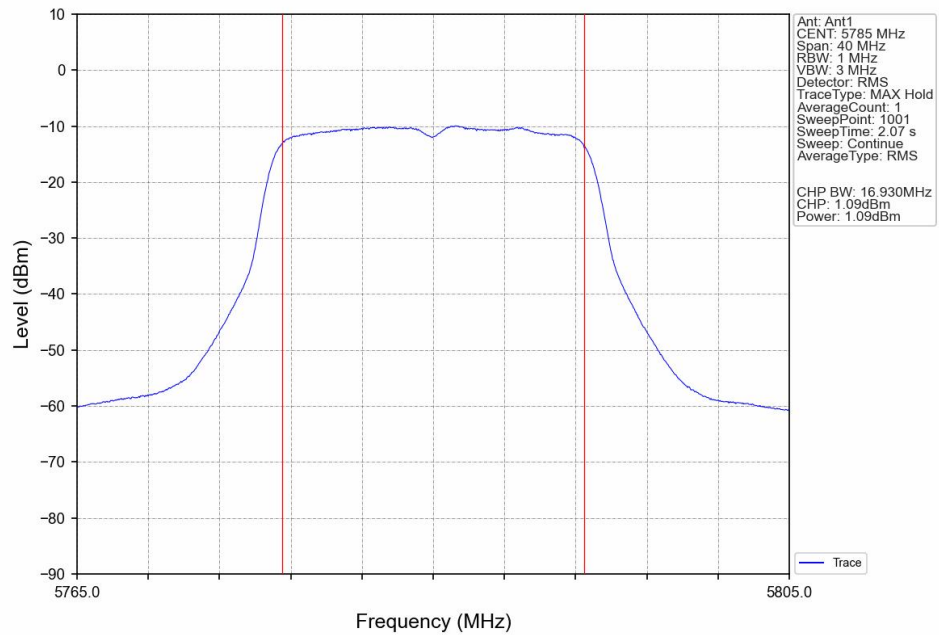




802.11ac(VHT20)_LCH_5745MHz_Ant1_NTNV

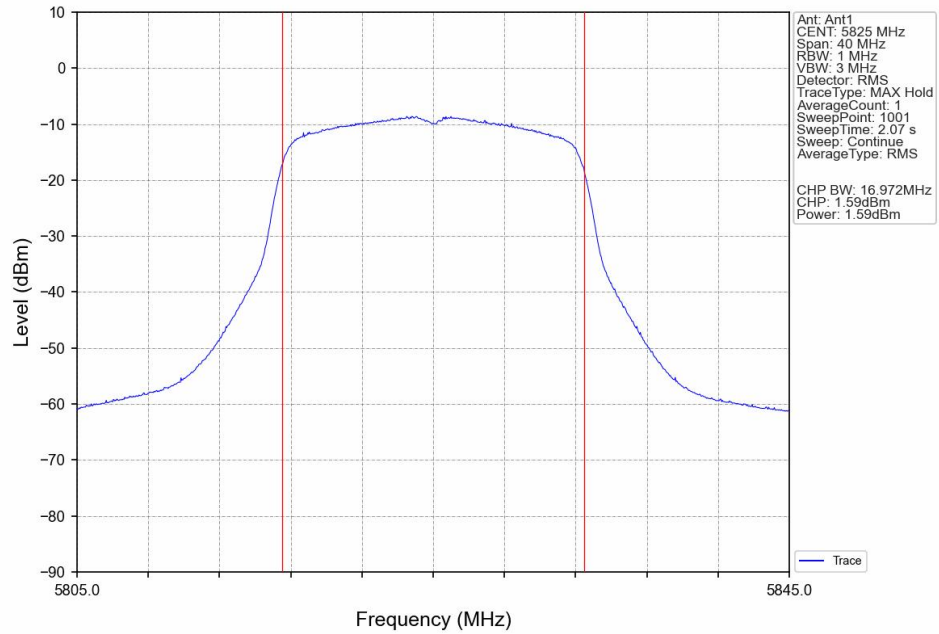


802.11ac(VHT20)_MCH_5785MHz_Ant1_NTNV

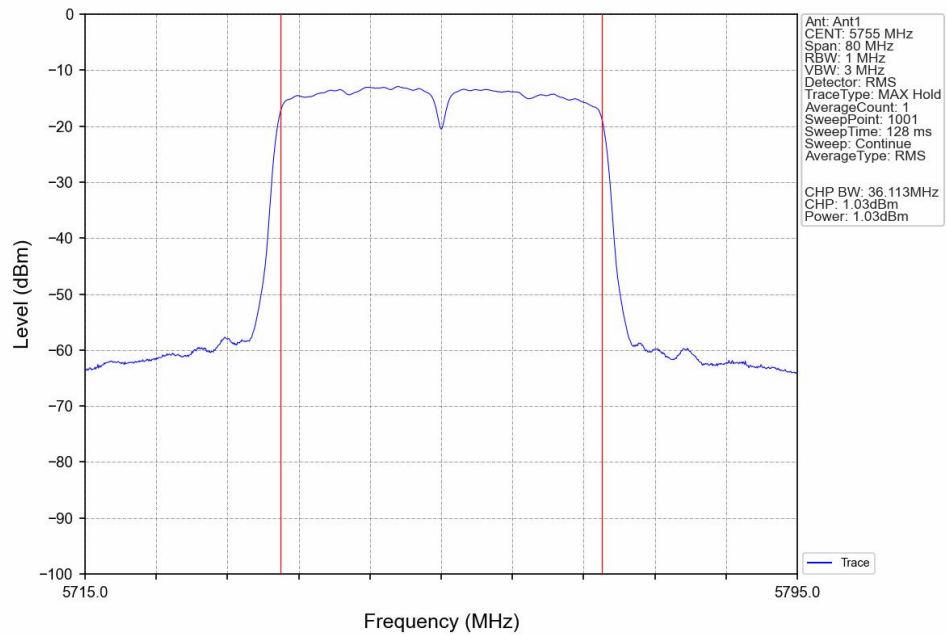




802.11ac(VHT20)_HCH_5825MHz_Ant1_NTNV

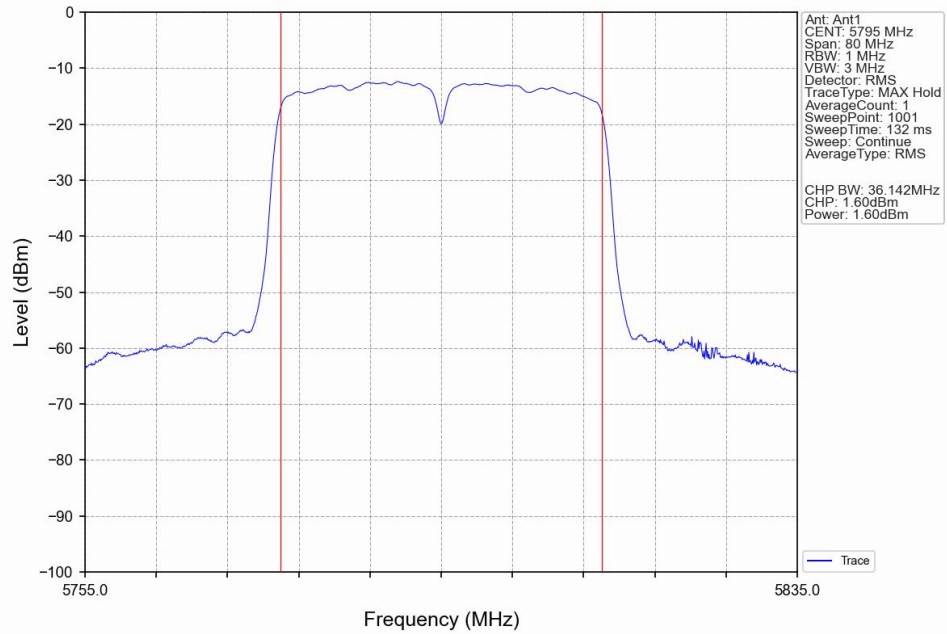


802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV





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	-14.63	<=30	Pass
		5785	-15.46	<=30	Pass
		5825	-13.18	<=30	Pass
802.11n (HT20)	SISO	5745	-11.73	<=30	Pass
		5785	-12.56	<=30	Pass
		5825	-12.64	<=30	Pass
802.11n (HT40)	SISO	5755	-17.68	<=30	Pass
		5795	-13.26	<=30	Pass
802.11ac (VHT20)	SISO	5745	-13.14	<=30	Pass
		5785	-14.07	<=30	Pass
		5825	-11.35	<=30	Pass
802.11ac (VHT40)	SISO	5755	-14.63	<=30	Pass
		5795	-14.07	<=30	Pass

Note1: Antenna Gain: Ant1: 2.12dBi;



4.2 Test Graph

4.2.1 PSD-Band3

