RF Test Report

For

Project No.:	ZKT-241113L15319E-2
Client:	Shanghai olymmons technology co.,ltd
Manufacturer:	Shanghai olymmons technology co.,ltd
Product Description:	Projector
Model No.:	G4
Test Engineer:	Jim Liu
Test Date:	2024-10-30

Test Summary

Item	**Result**
Duty Cycle	Pass
Bandwidth	Pass
Maximum Conducted Output Power	Pass
Maximum Power Spectral Density	Pass
Frequency Stability	Pass
Form731	Pass

1. Duty Cycle

1.1 Test Result

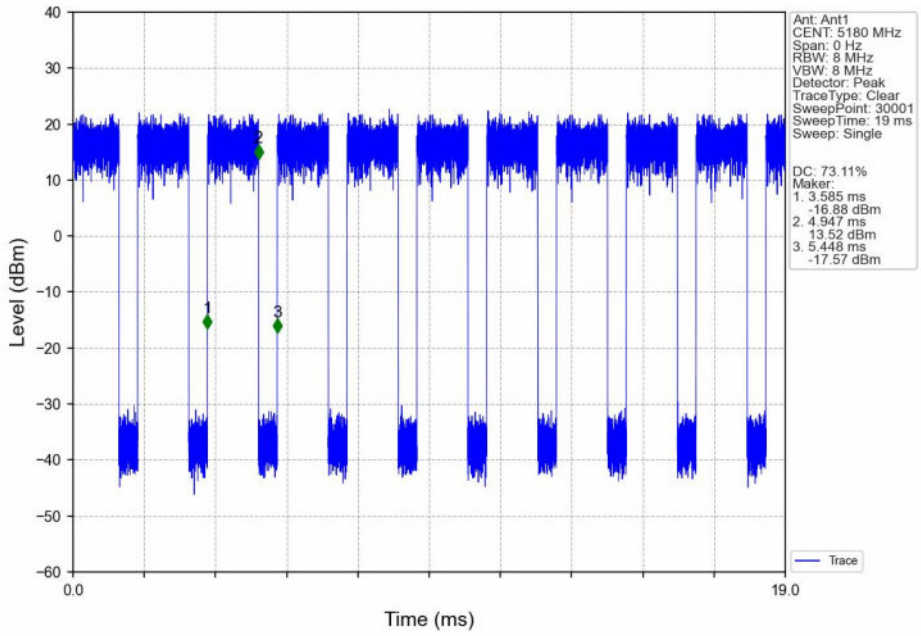
1.1.1 Ant1

Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11a	SISO	5180	1.362	1.863	73.11	1.36	0.02
		5200	1.362	1.863	73.11	1.36	0.03
		5240	1.362	1.863	73.11	1.36	0.03
		5745	1.362	1.863	73.11	1.36	0.03
		5785	1.362	1.863	73.11	1.36	0.03
		5825	1.362	1.863	73.11	1.36	0.03
802.11n (HT20)	SISO	5180	1.273	1.774	71.76	1.44	0.03
		5200	1.273	1.774	71.76	1.44	0.03
		5240	1.274	1.775	71.77	1.44	0.02
		5745	1.274	1.775	71.77	1.44	0.02
		5785	1.273	1.774	71.76	1.44	0.03
		5825	1.274	1.775	71.77	1.44	0.02
802.11n (HT40)	SISO	5190	0.633	1.134	55.82	2.53	0.03
		5230	0.634	1.135	55.86	2.53	0.01
		5755	0.634	1.134	55.91	2.53	0.01
		5795	0.633	1.134	55.82	2.53	0.03
802.11ac (VHT20)	SISO	5180	1.273	1.774	71.76	1.44	0.03
		5200	1.274	1.775	71.77	1.44	0.03
		5240	1.273	1.774	71.76	1.44	0.03
		5745	1.278	1.779	71.84	1.44	0.03
		5785	1.277	1.778	71.82	1.44	0.03
		5825	1.277	1.778	71.82	1.44	0.03
802.11ac (VHT40)	SISO	5190	0.633	1.134	55.82	2.53	0.03
		5230	0.633	1.134	55.82	2.53	0.03
		5755	0.637	1.138	55.98	2.52	0.01
		5795	0.638	1.139	56.01	2.52	0.04
802.11ac (VHT80)	SISO	5210	0.317	0.818	38.75	4.12	0.03
		5775	0.318	0.818	38.88	4.10	0.03

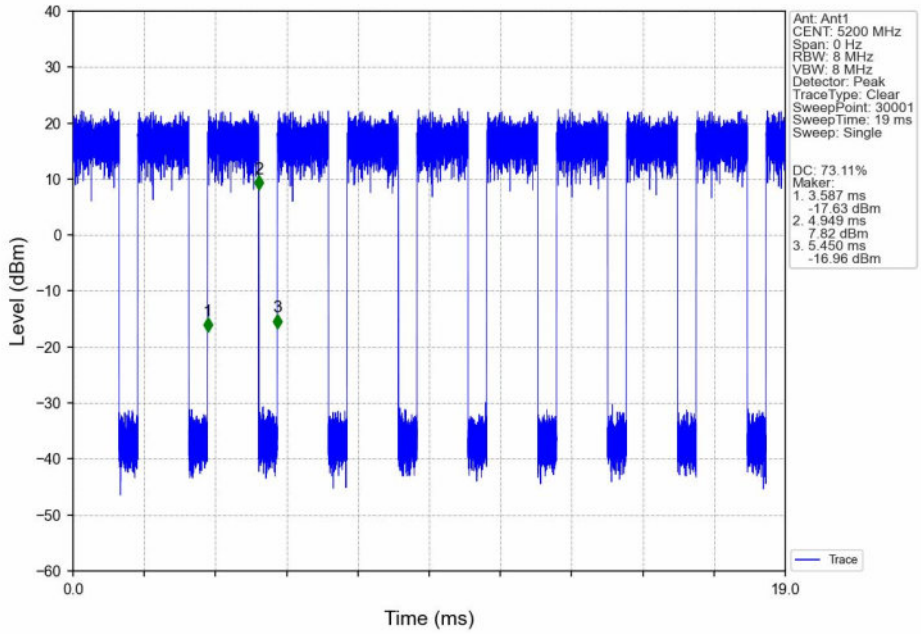
1.2 Test Graph

1.2.1 Ant1

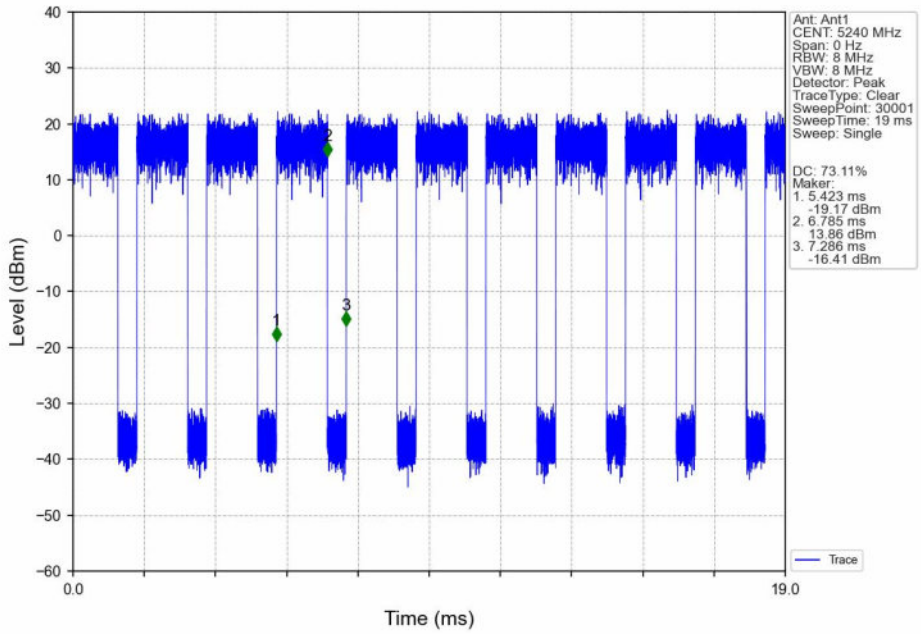
802.11a_LCH_5180MHz_Ant1_NTNV



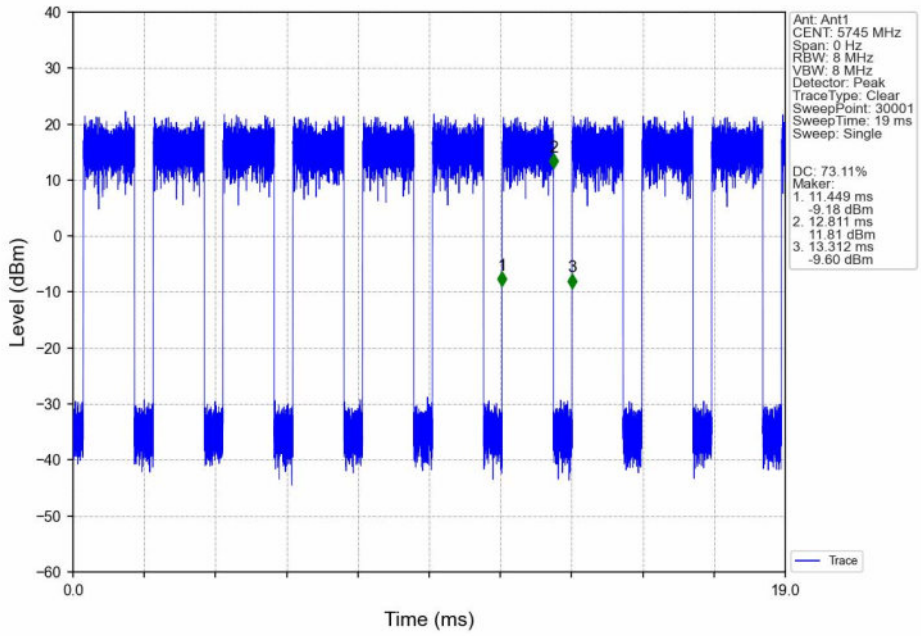
802.11a_MCH_5200MHz_Ant1_NTNV



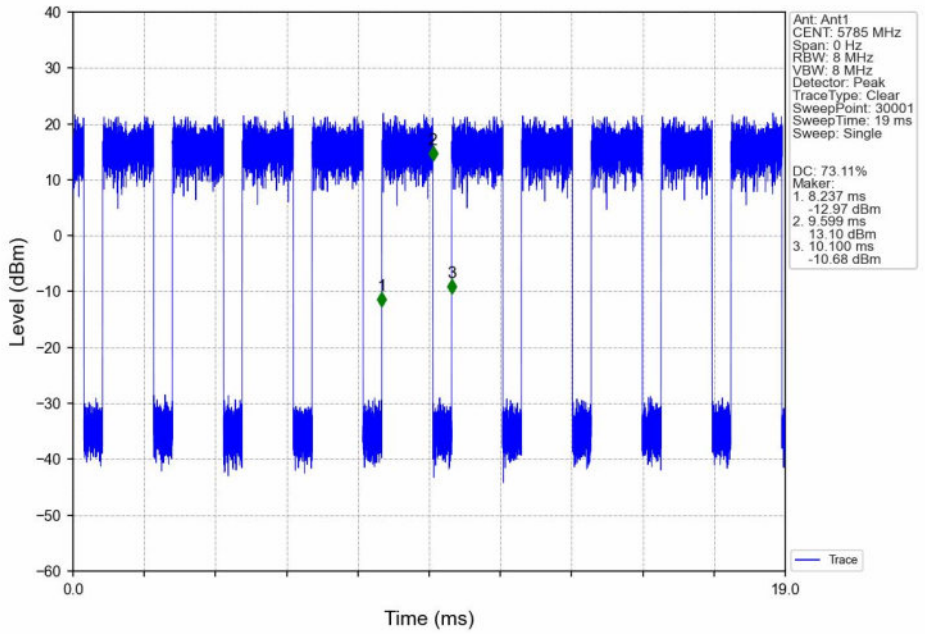
802.11a_HCH_5240MHz_Ant1_NTNV



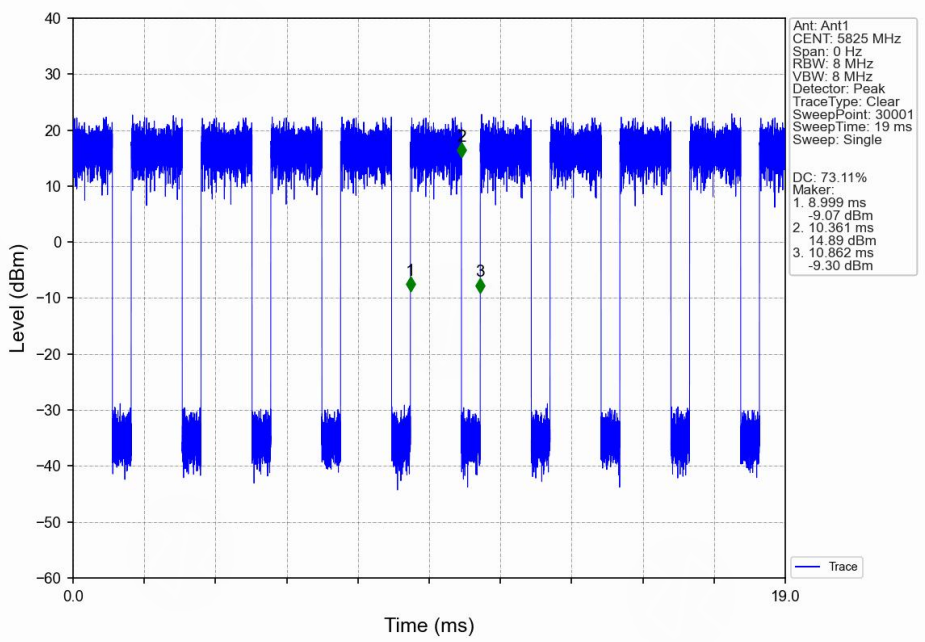
802.11a_LCH_5745MHz_Ant1_NTNV



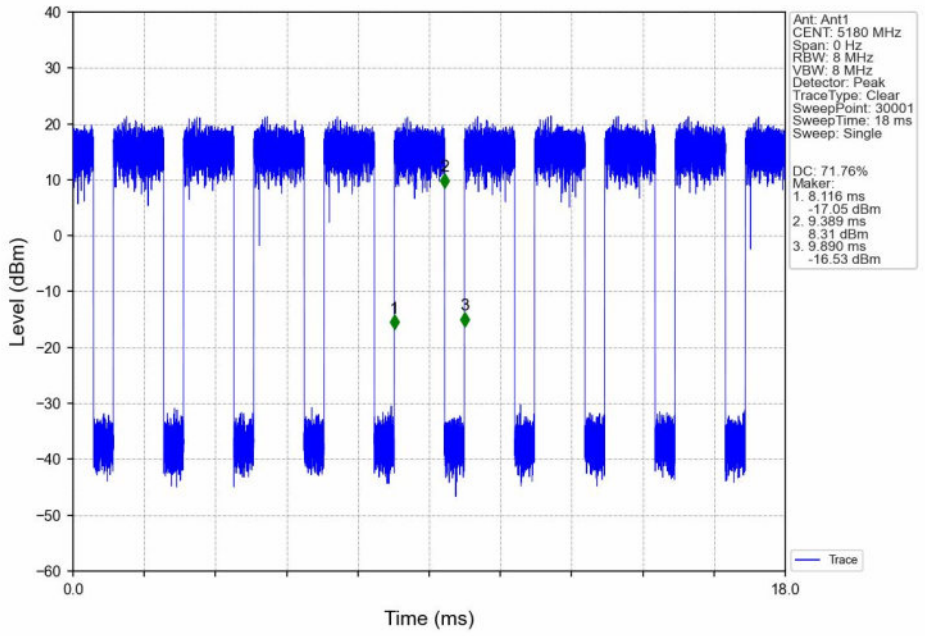
802.11a_MCH_5785MHz_Ant1_NTNV



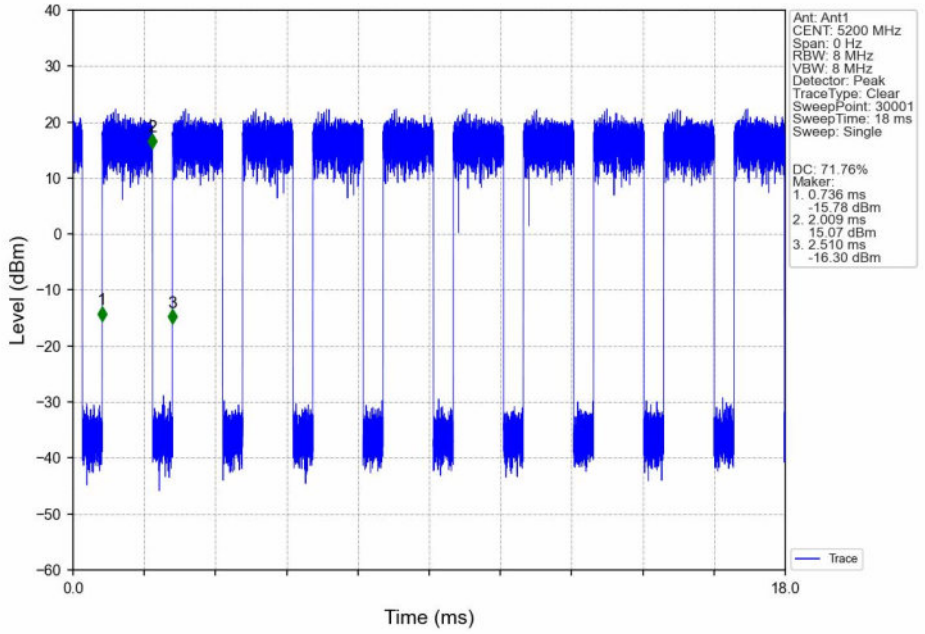
802.11a_HCH_5825MHz_Ant1_NTNV



802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



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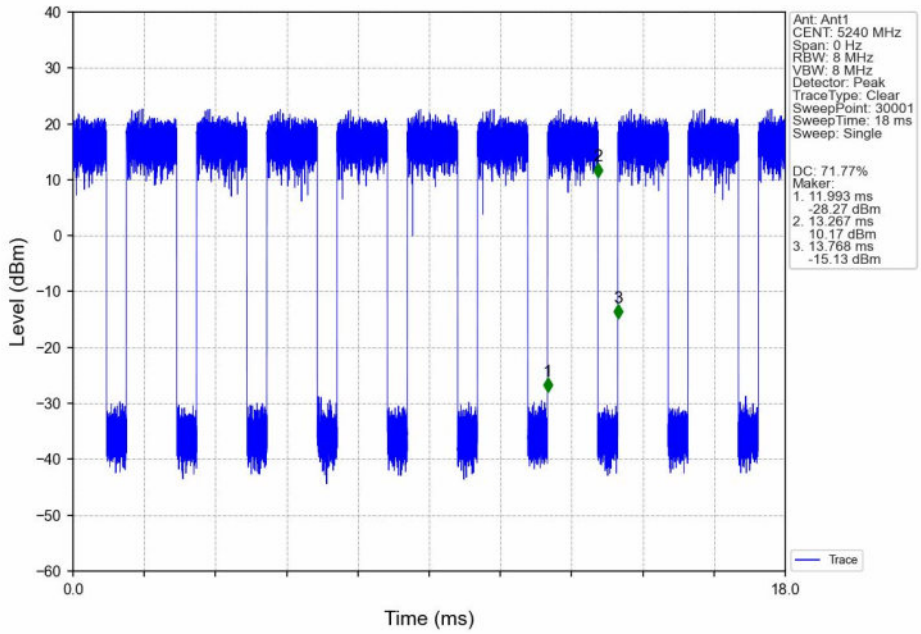
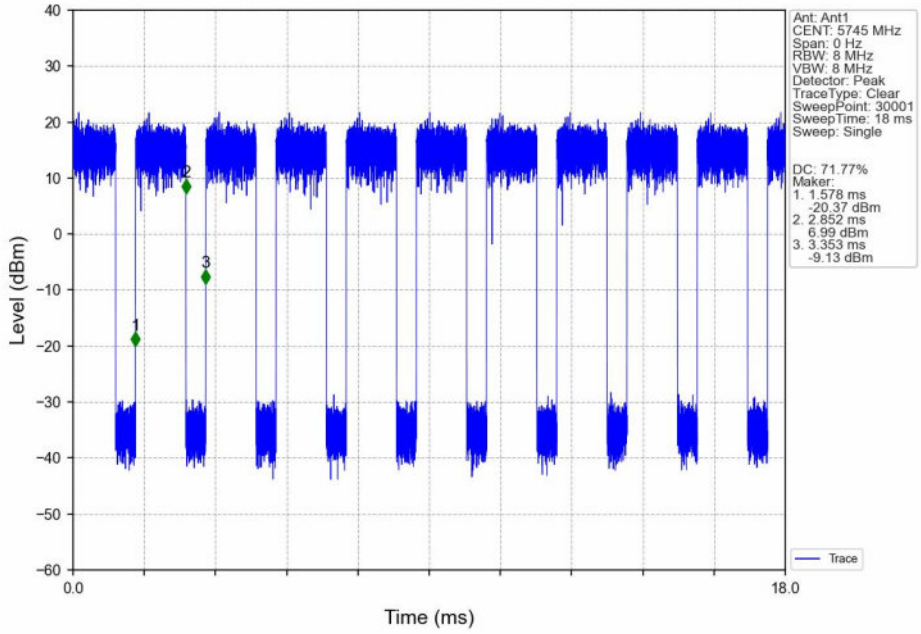
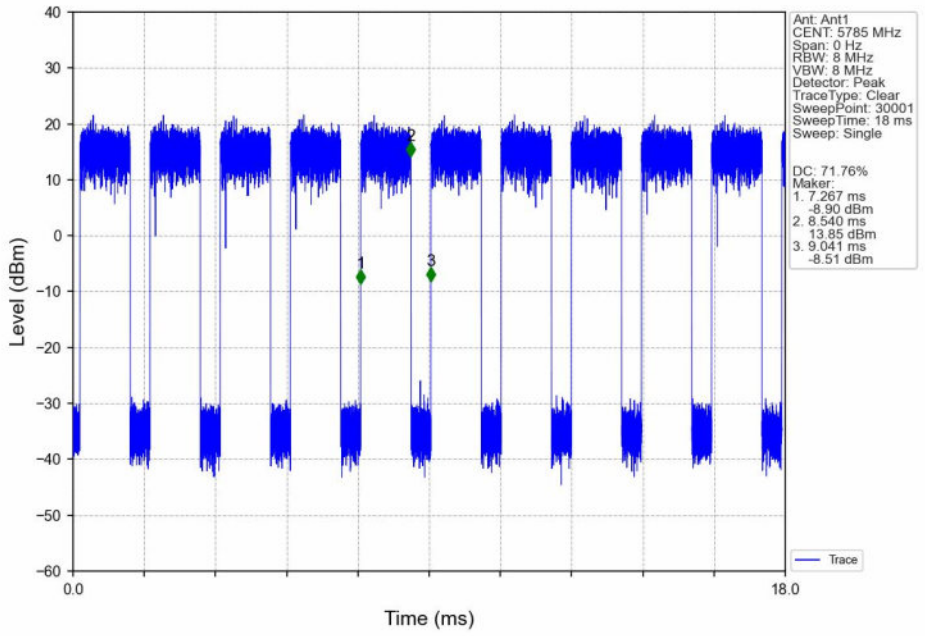


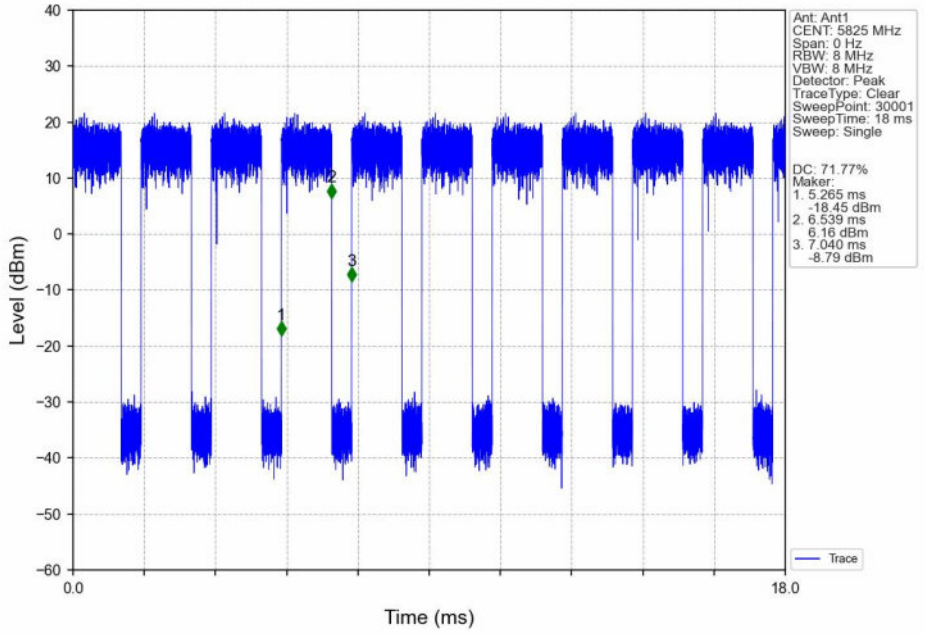
802.11n(HT20)_LCH_5745MHz_Ant1_NTNV



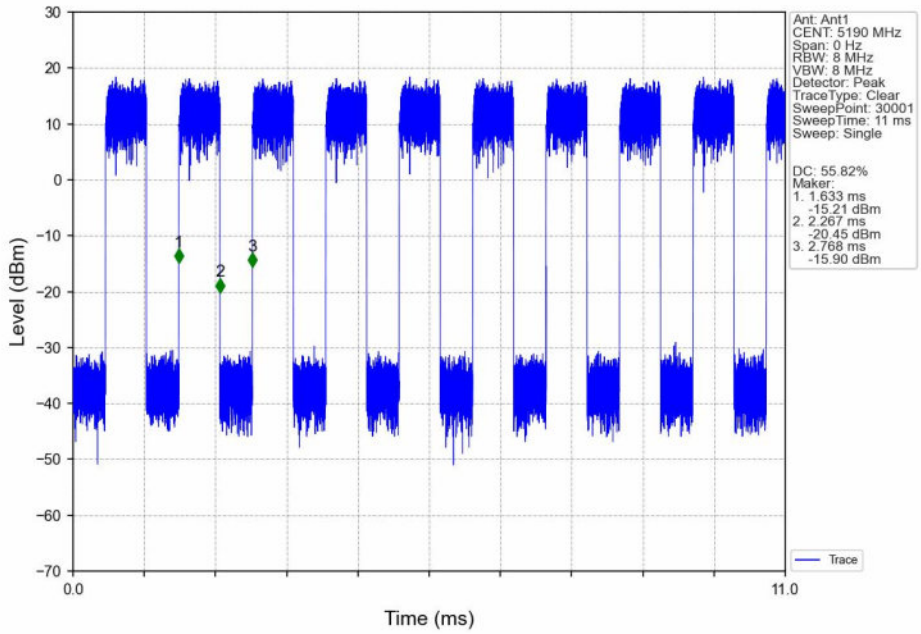
802.11n(HT20)_MCH_5785MHz_Ant1_NTNV



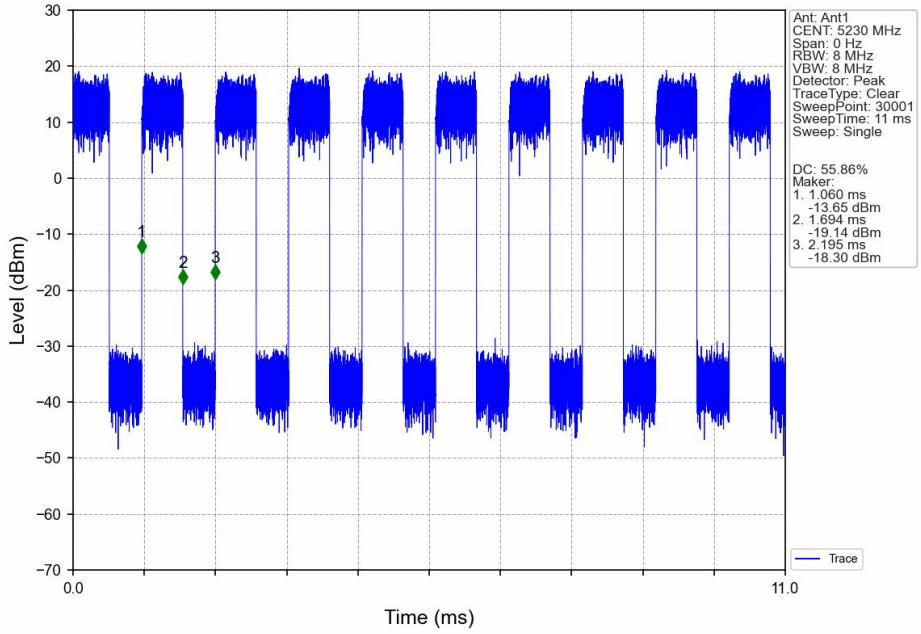
802.11n(HT20)_HCH_5825MHz_Ant1_NTNV



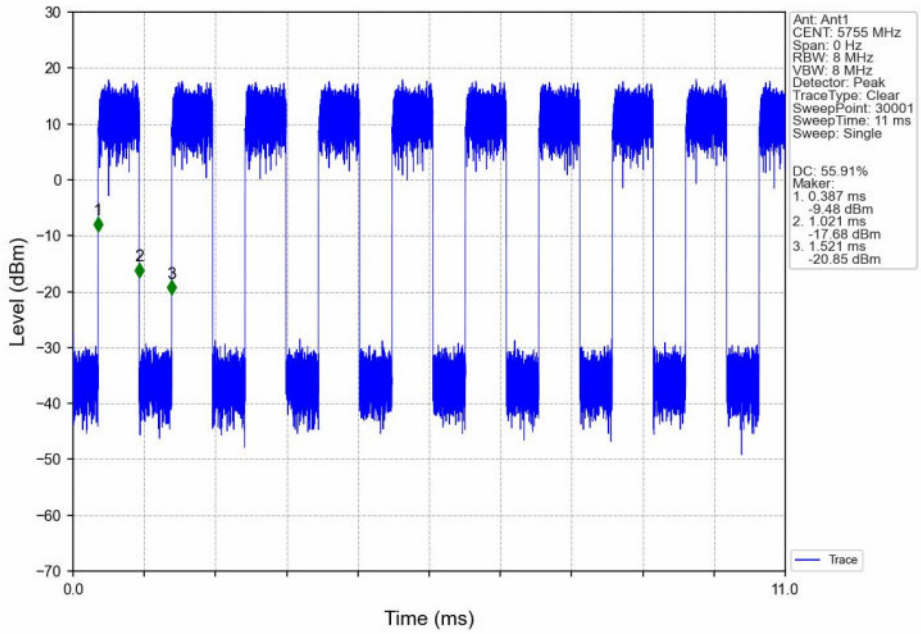
802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



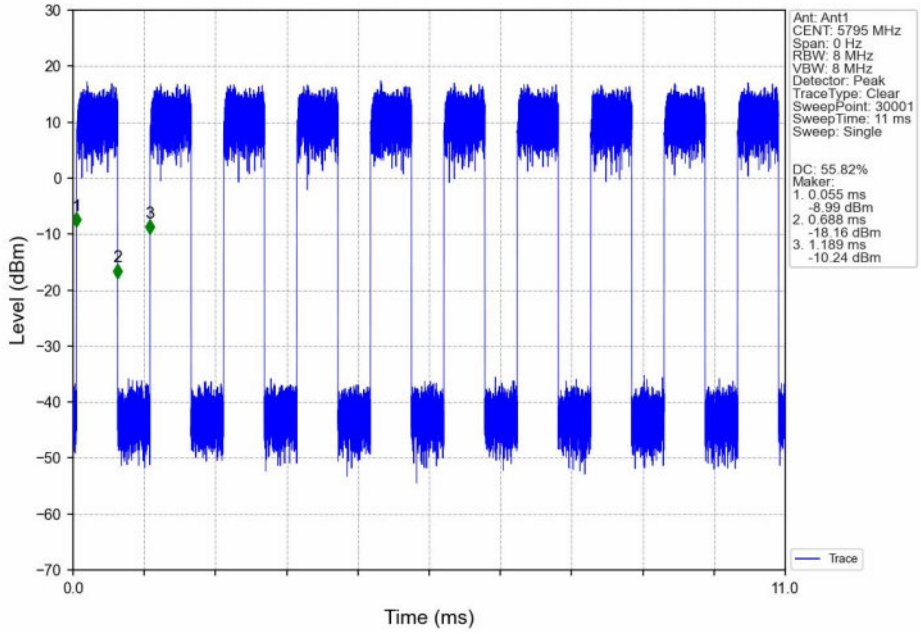
802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



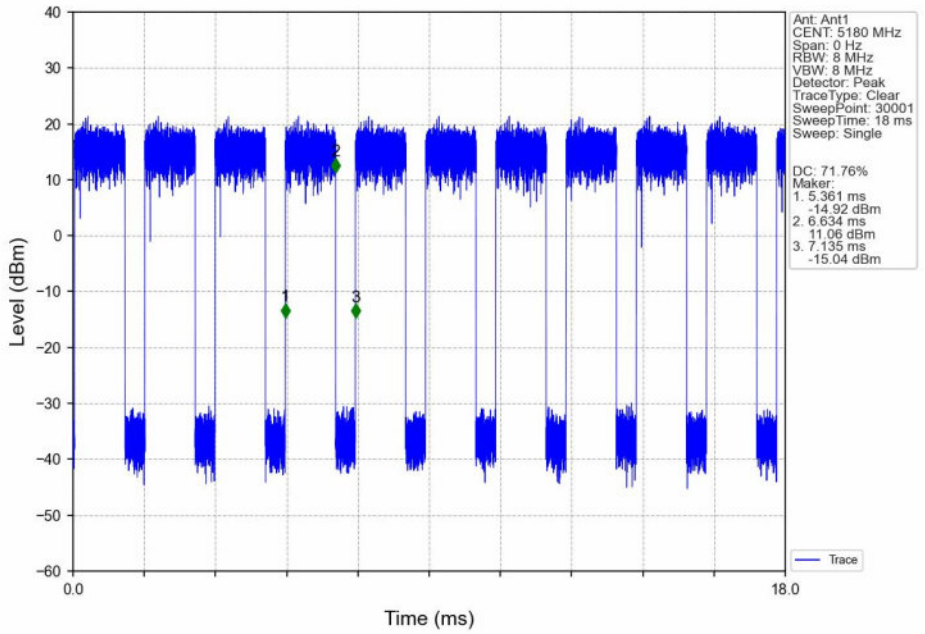
802.11n(HT40)_LCH_5755MHz_Ant1_NTNV



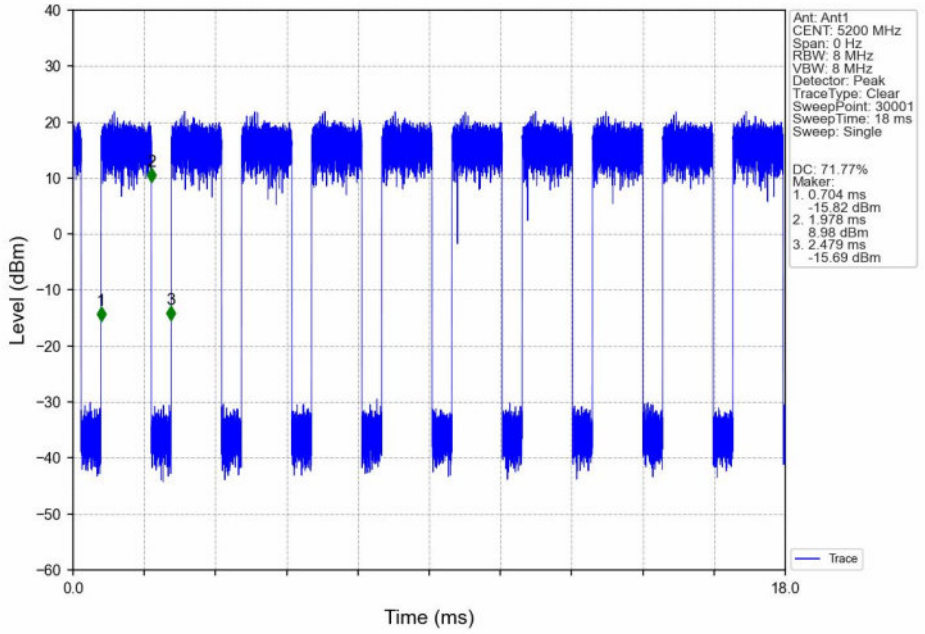
802.11n(HT40)_HCH_5795MHz_Ant1_NTNV



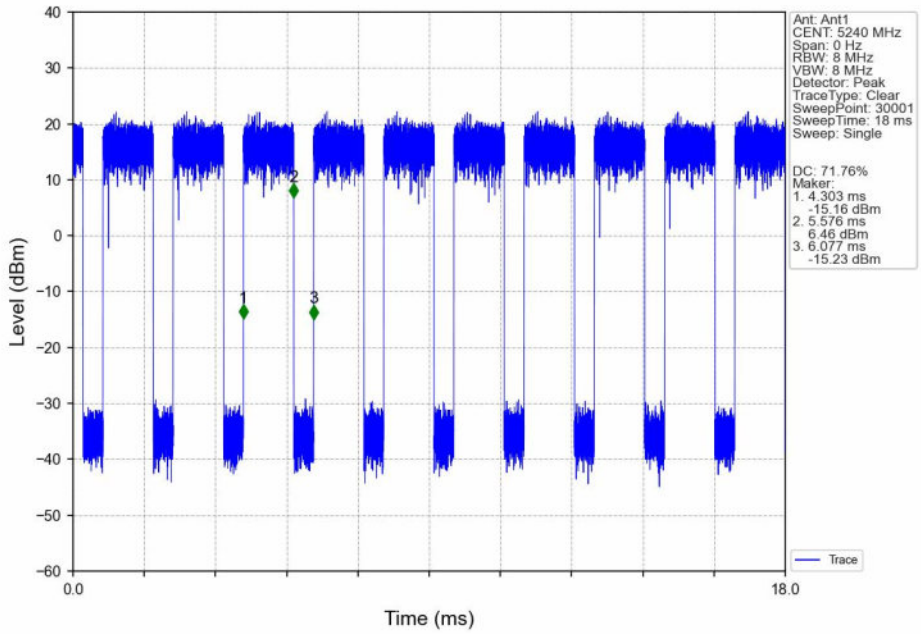
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



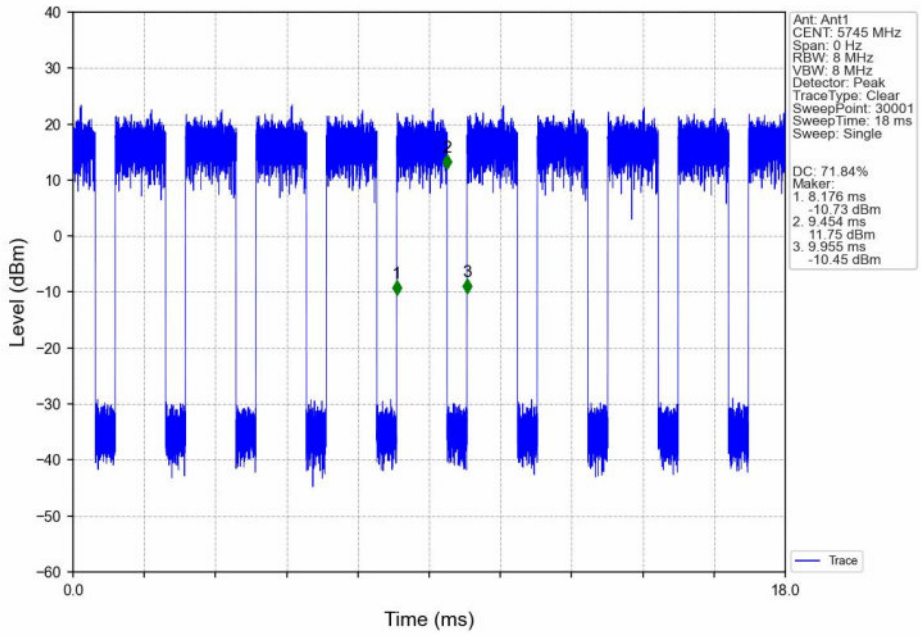
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



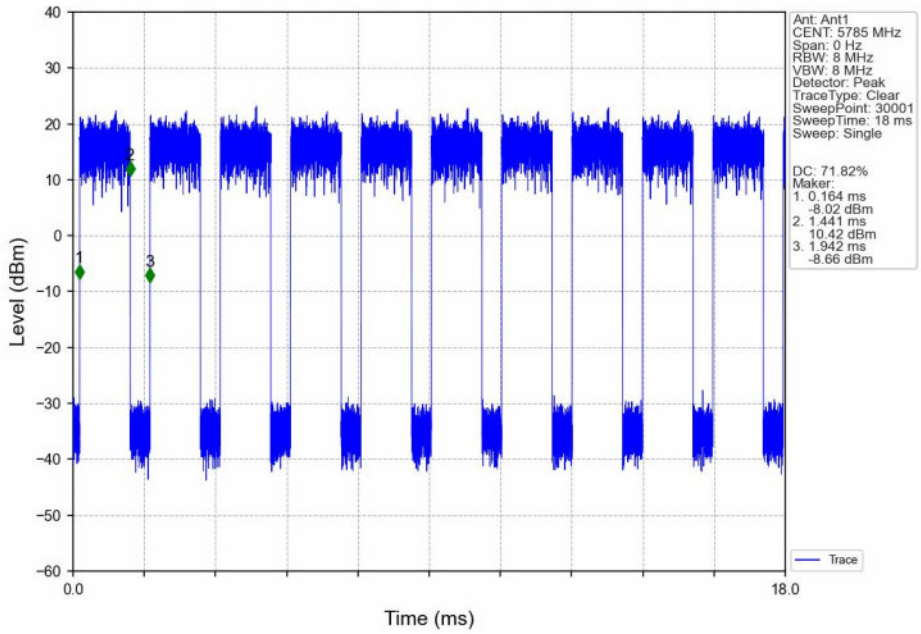
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



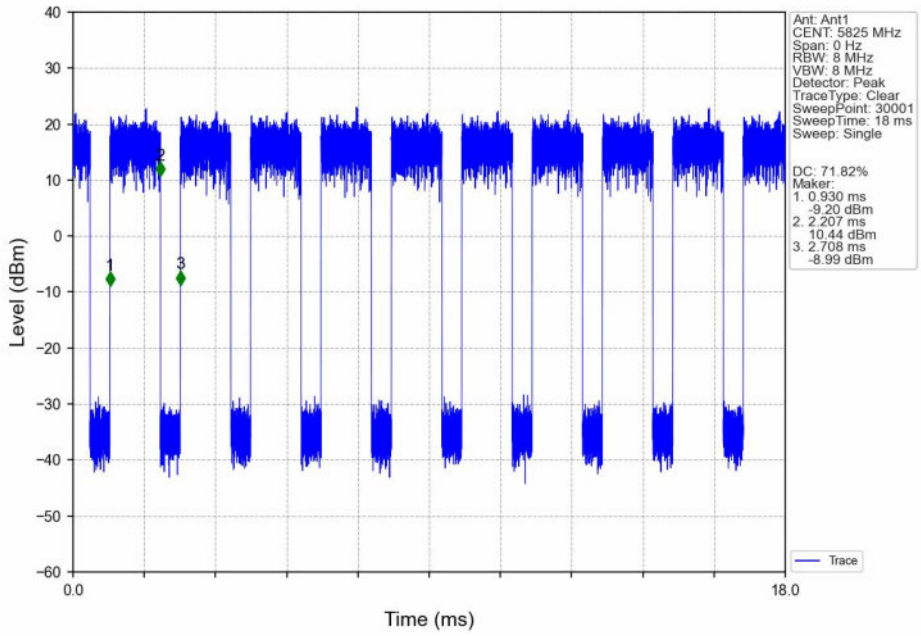
802.11ac(VHT20)_LCH_5745MHz_Ant1_NTNV



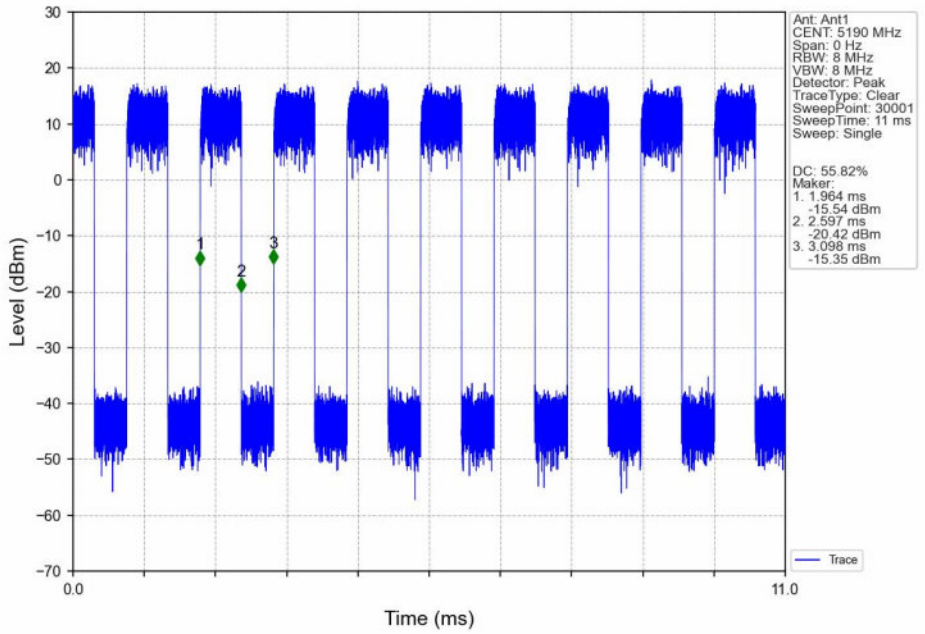
802.11ac(VHT20)_MCH_5785MHz_Ant1_NTNV



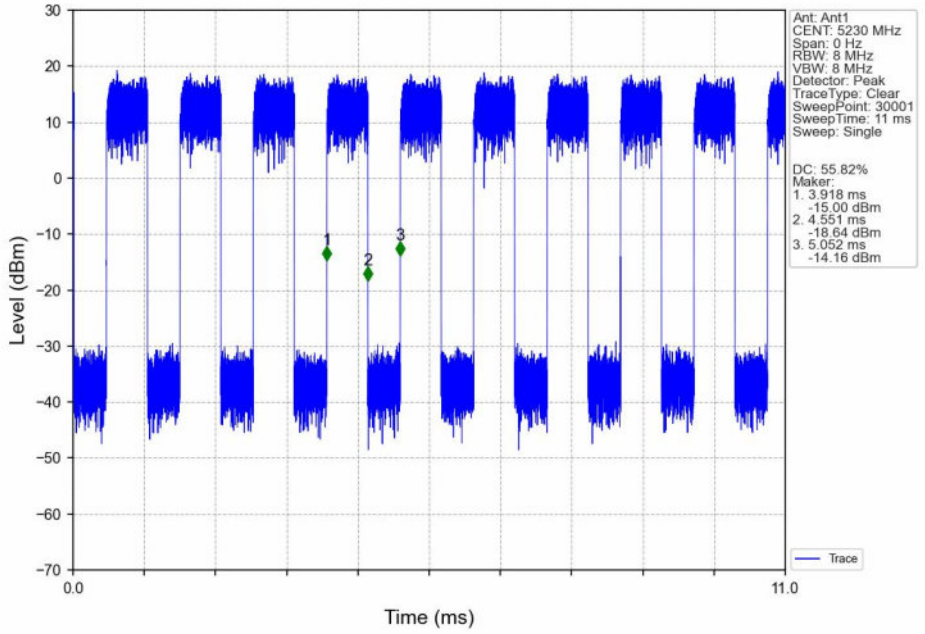
802.11ac(VHT20)_HCH_5825MHz_Ant1_NTNV



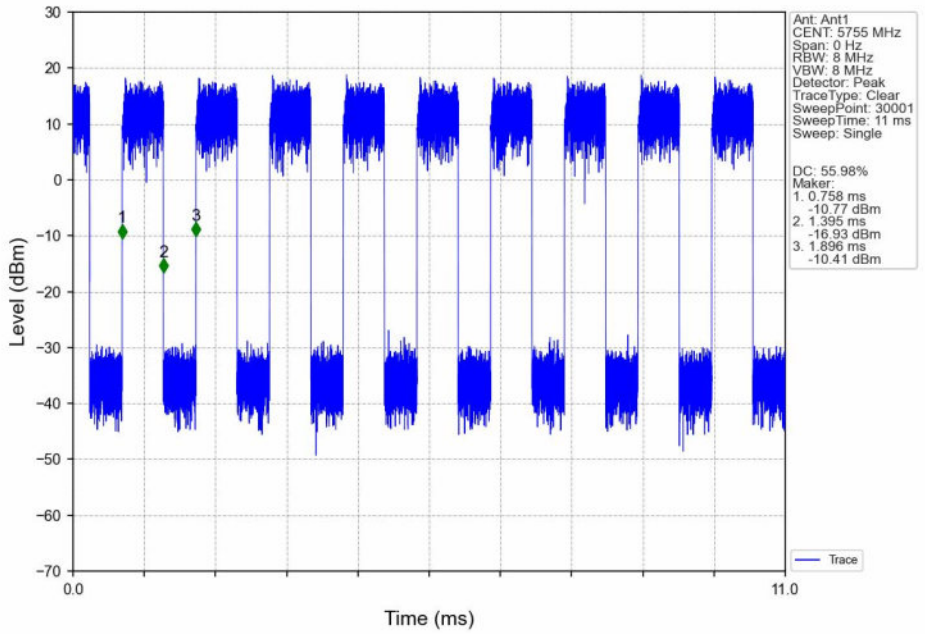
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



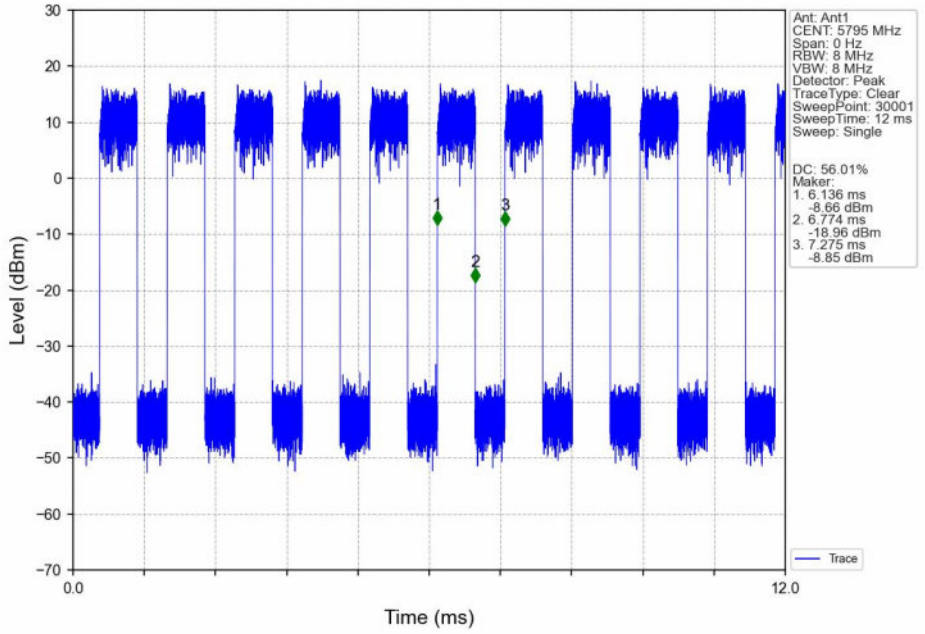
802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



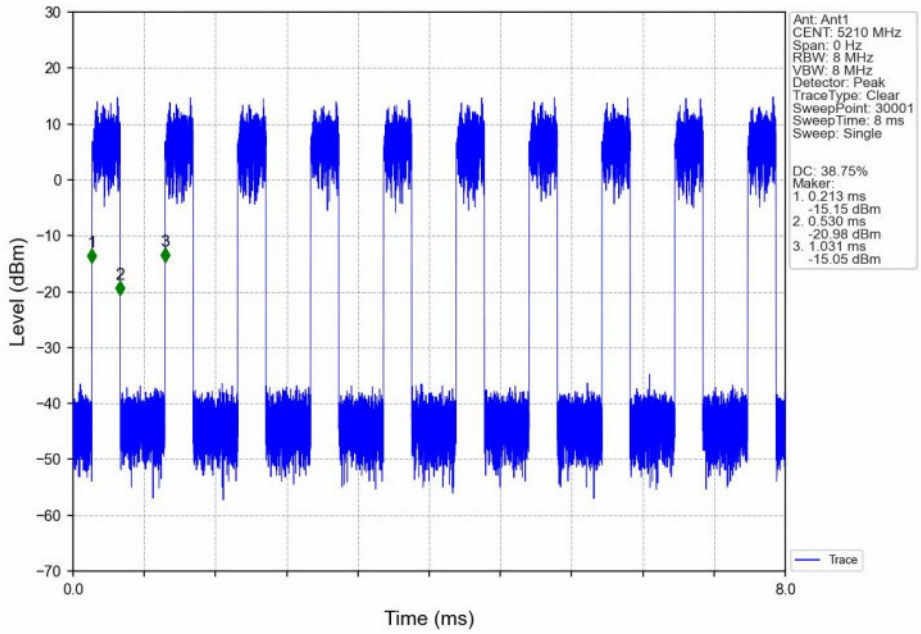
802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV



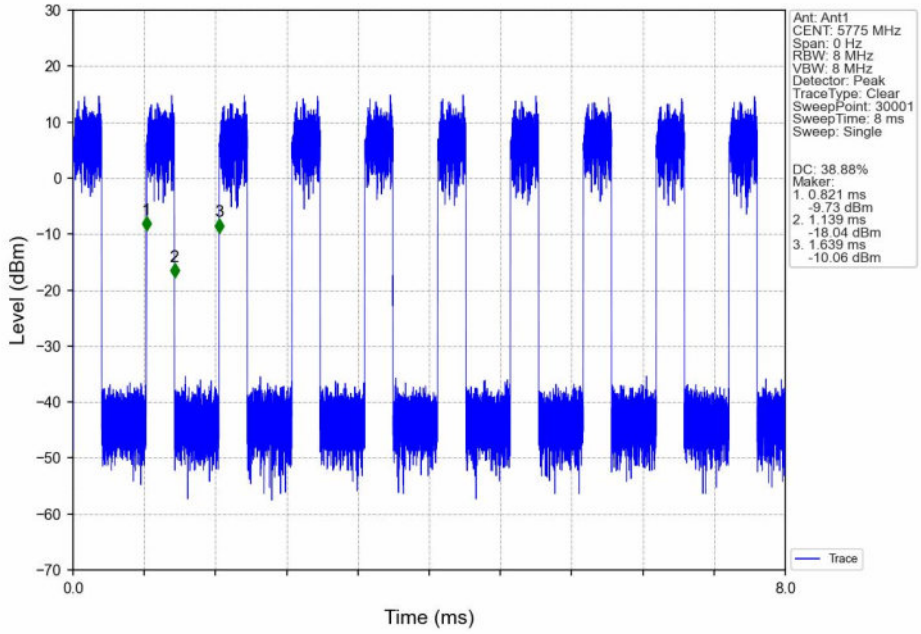
802.11ac(VHT40)_HCH_5795MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5210MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5775MHz_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	5180	1	16.740	/	Pass
		5200	1	16.735	/	Pass
		5240	1	16.750	/	Pass
		5745	1	16.703	/	Pass
		5785	1	16.741	/	Pass
		5825	1	16.839	/	Pass
802.11n (HT20)	SISO	5180	1	17.821	/	Pass
		5200	1	17.802	/	Pass
		5240	1	17.834	/	Pass
		5745	1	17.803	/	Pass
		5785	1	17.834	/	Pass
		5825	1	17.854	/	Pass
802.11n (HT40)	SISO	5190	1	36.726	/	Pass
		5230	1	36.571	/	Pass
		5755	1	36.674	/	Pass
		5795	1	36.750	/	Pass
802.11ac (VHT20)	SISO	5180	1	17.823	/	Pass
		5200	1	17.802	/	Pass
		5240	1	17.815	/	Pass
		5745	1	17.770	/	Pass
		5785	1	17.797	/	Pass
		5825	1	17.837	/	Pass
802.11ac (VHT40)	SISO	5190	1	36.730	/	Pass
		5230	1	36.531	/	Pass
		5755	1	36.385	/	Pass
		5795	1	36.441	/	Pass
802.11ac (VHT80)	SISO	5210	1	74.900	/	Pass
		5775	1	75.055	/	Pass

2.1.2 6dB BW

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5745	1	16.361	>=0.5	Pass
		5785	1	16.342	>=0.5	Pass
		5825	1	16.322	>=0.5	Pass
802.11n (HT20)	SISO	5745	1	17.540	>=0.5	Pass
		5785	1	17.555	>=0.5	Pass
		5825	1	17.339	>=0.5	Pass
802.11n (HT40)	SISO	5755	1	35.167	>=0.5	Pass
		5795	1	35.203	>=0.5	Pass
802.11ac (VHT20)	SISO	5745	1	17.308	>=0.5	Pass
		5785	1	17.538	>=0.5	Pass
		5825	1	17.072	>=0.5	Pass
802.11ac (VHT40)	SISO	5755	1	35.215	>=0.5	Pass
		5795	1	35.209	>=0.5	Pass

802.11ac (VHT80)	SISO	5775	1	75.115	>=0.5	Pass

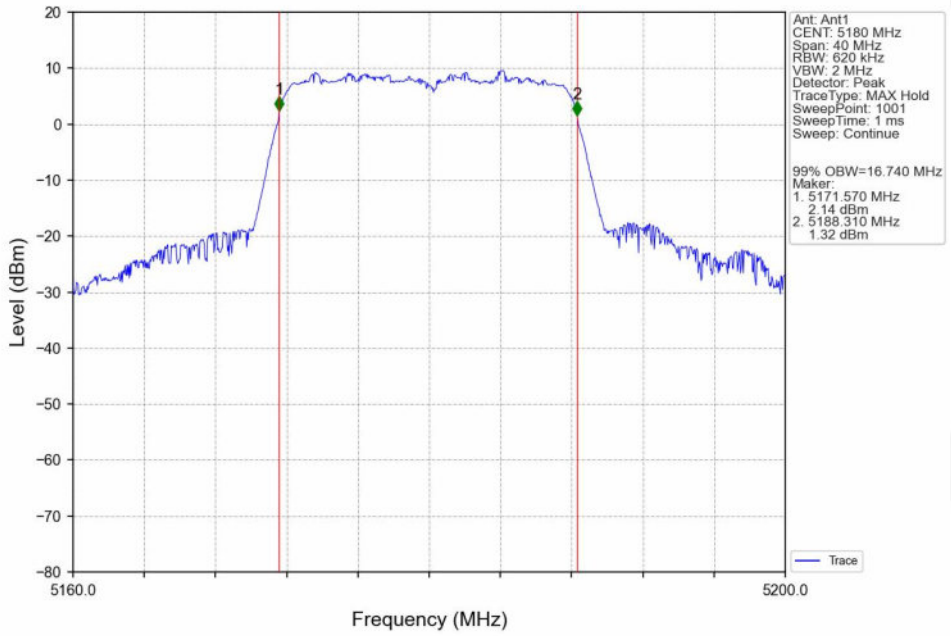
2.1.3 26dB BW

Mode	TX Type	Frequency (MHz)	ANT	26dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	18.537	/	Pass
		5200	1	18.484	/	Pass
		5240	1	18.449	/	Pass
802.11n (HT20)	SISO	5180	1	19.414	/	Pass
		5200	1	19.395	/	Pass
		5240	1	19.363	/	Pass
802.11n (HT40)	SISO	5190	1	41.070	/	Pass
		5230	1	40.805	/	Pass
802.11ac (VHT20)	SISO	5180	1	19.464	/	Pass
		5200	1	19.366	/	Pass
		5240	1	19.409	/	Pass
802.11ac (VHT40)	SISO	5190	1	41.280	/	Pass
		5230	1	40.951	/	Pass
802.11ac (VHT80)	SISO	5210	1	81.063	/	Pass

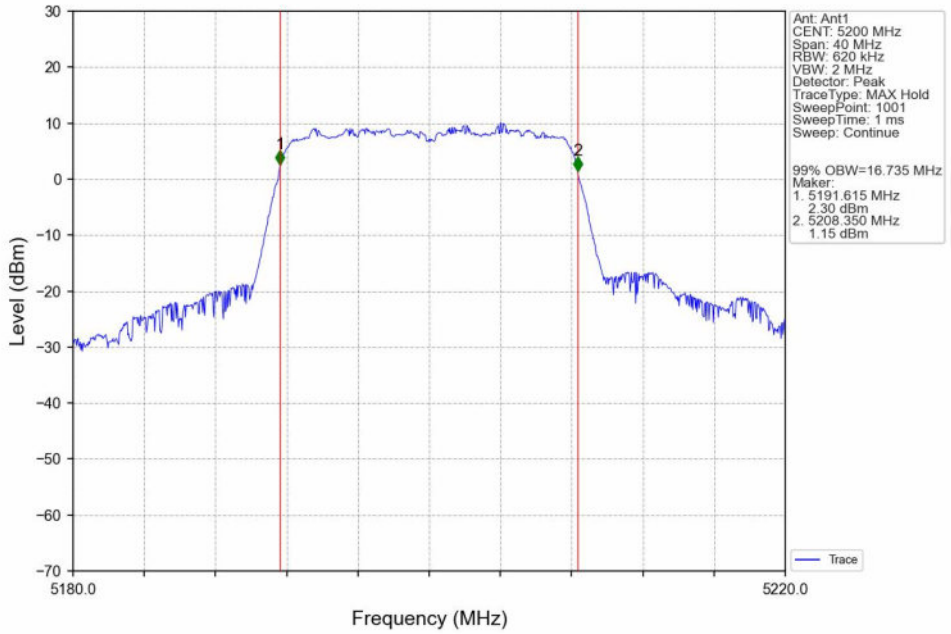
2.2 Test Graph

2.2.1 OBW

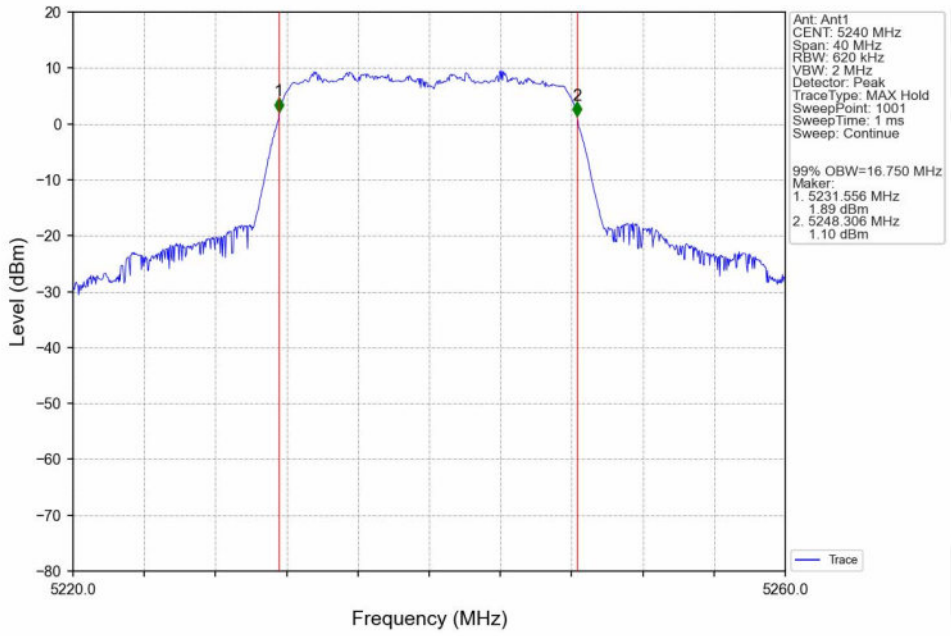
802.11a_LCH_5180MHz_Ant1_NTNV



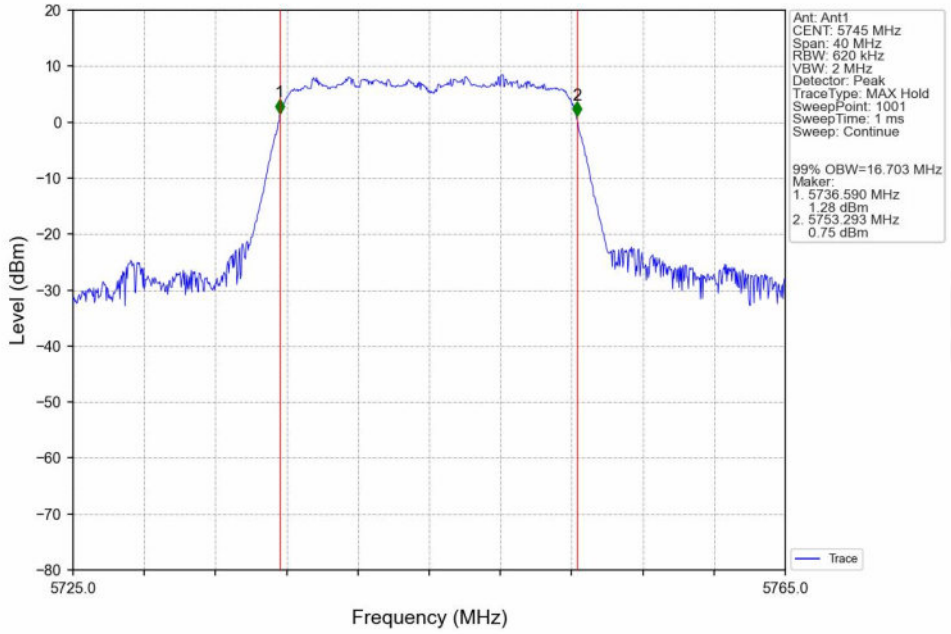
802.11a_MCH_5200MHz_Ant1_NTNV



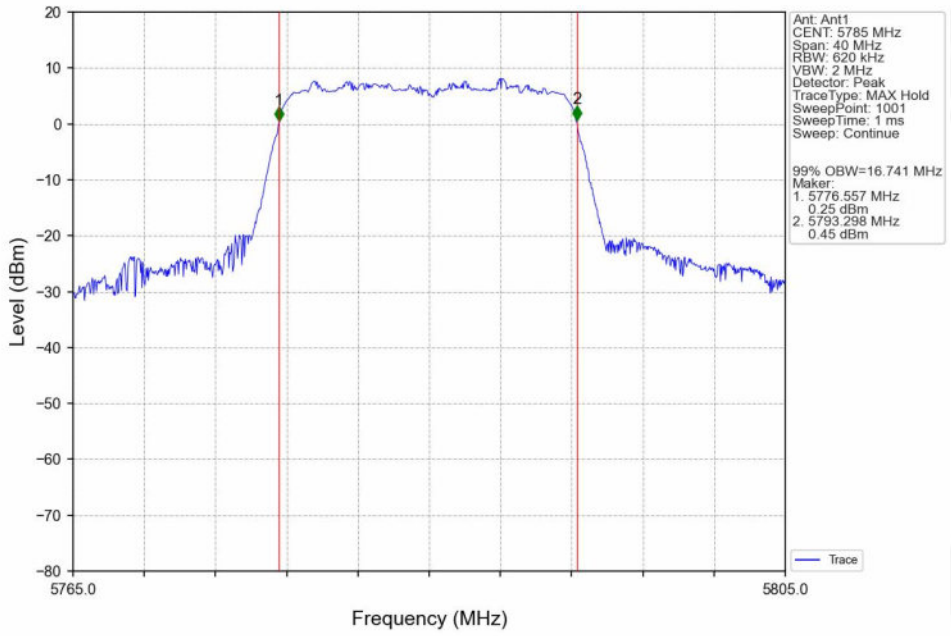
802.11a_HCH_5240MHz_Ant1_NTNV



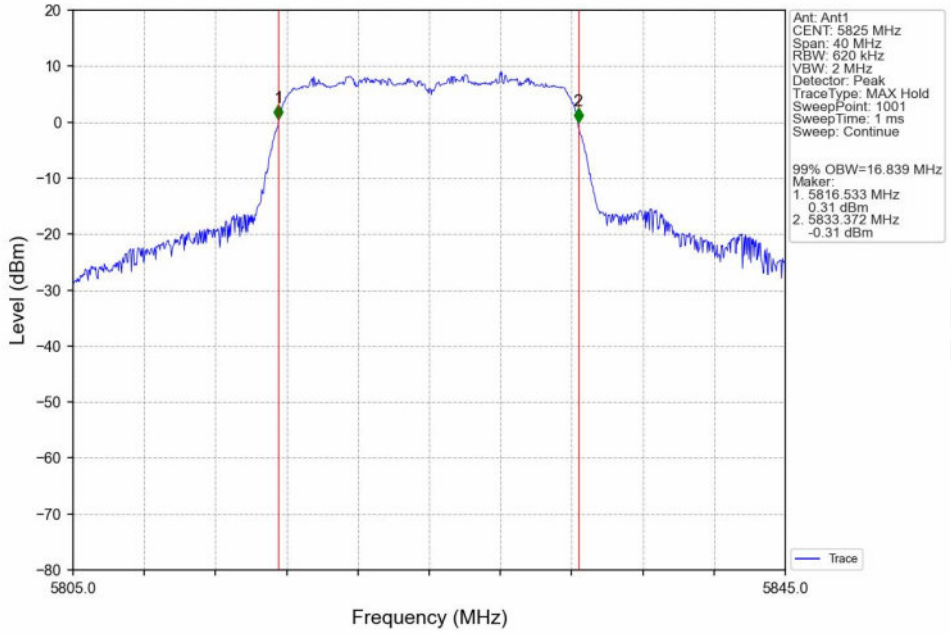
802.11a_LCH_5745MHz_Ant1_NTNV



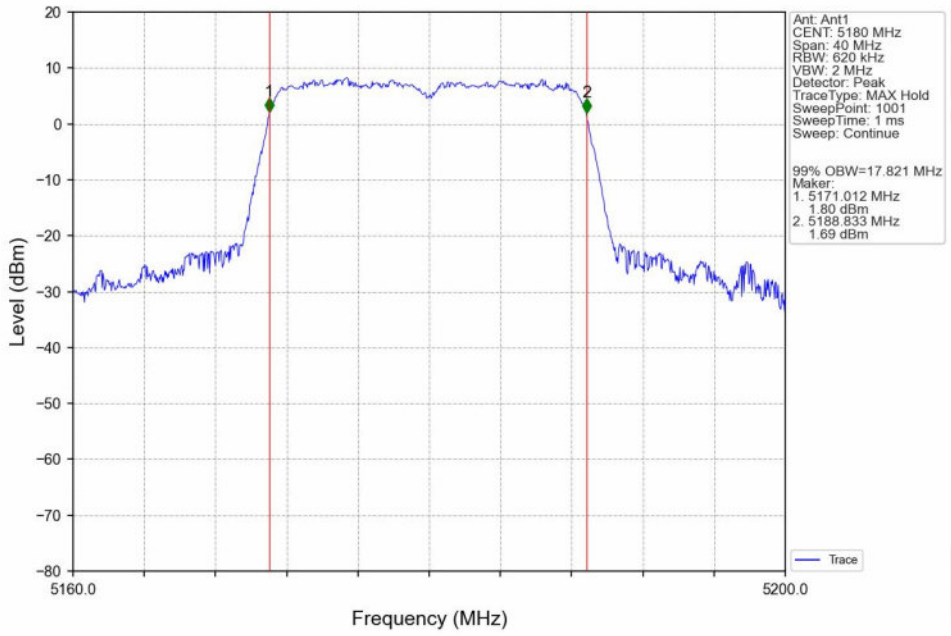
802.11a_MCH_5785MHz_Ant1_NTNV



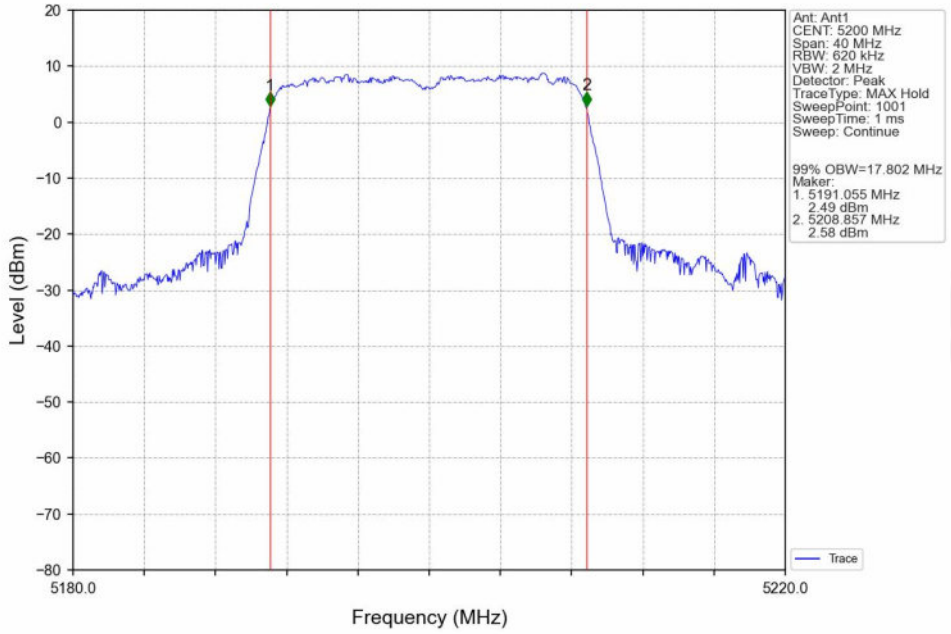
802.11a_HCH_5825MHz_Ant1_NTNV



802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



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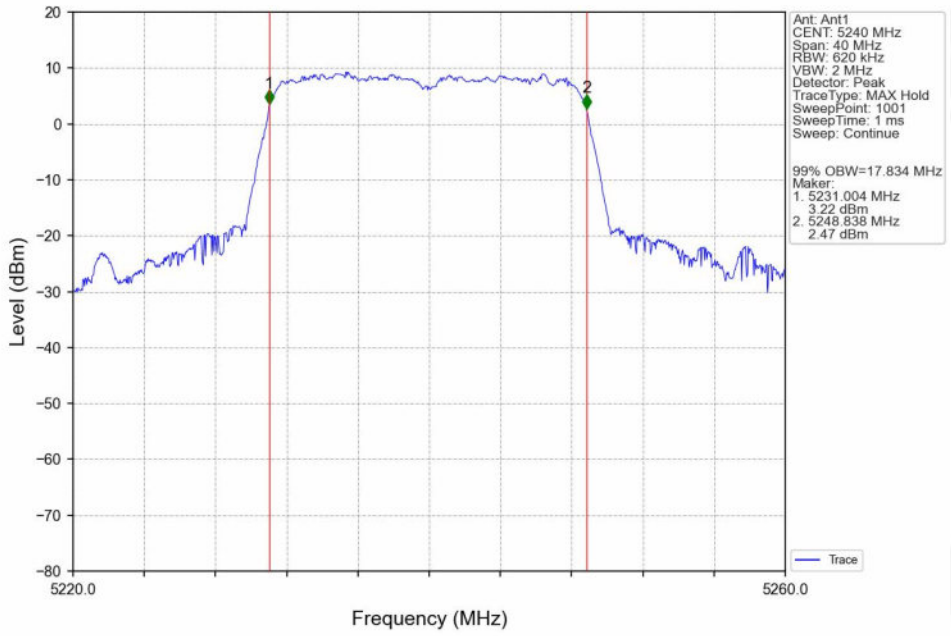
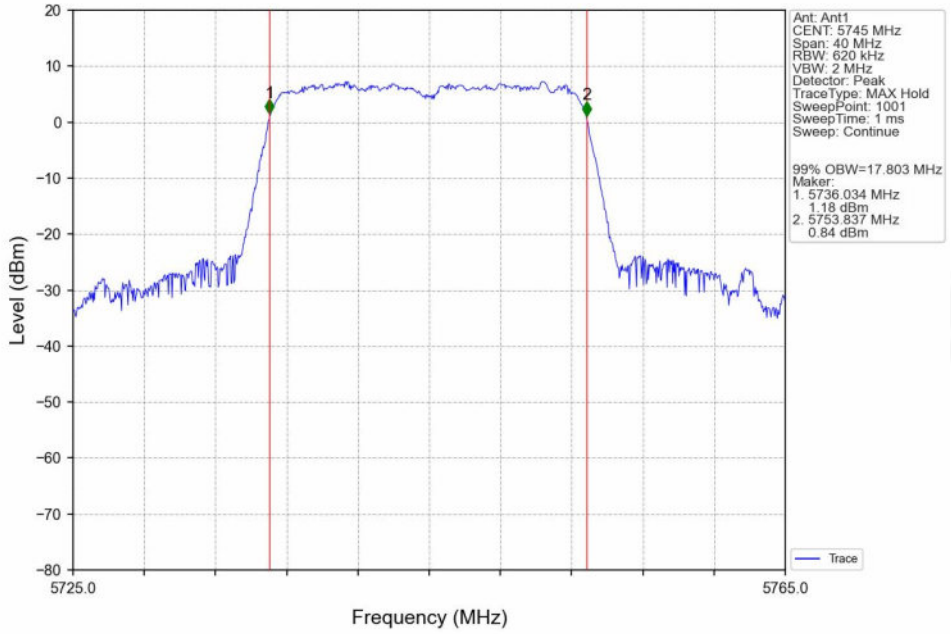


802.11n(HT20)_LCH_5745MHz_Ant1_NTNV



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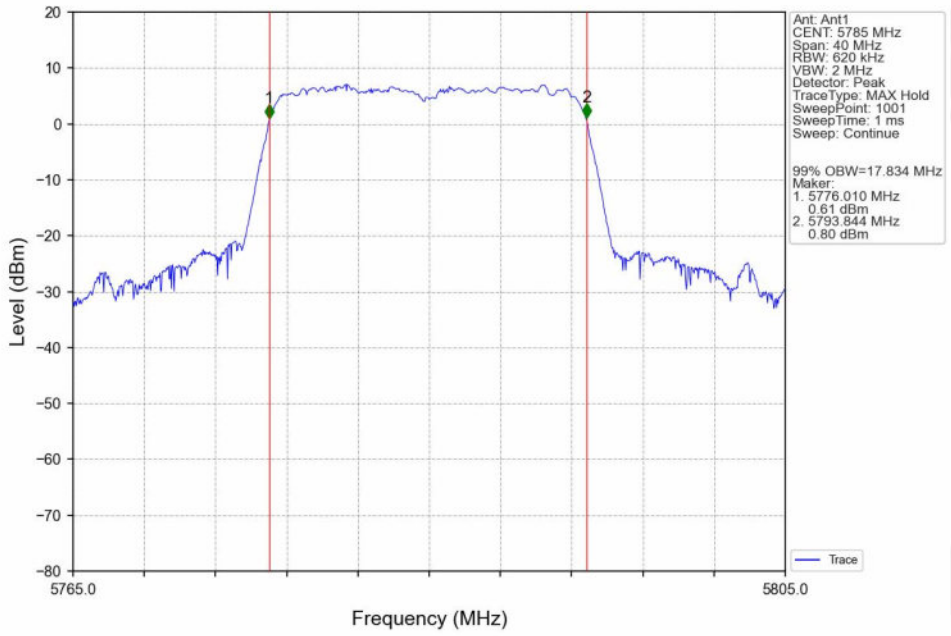
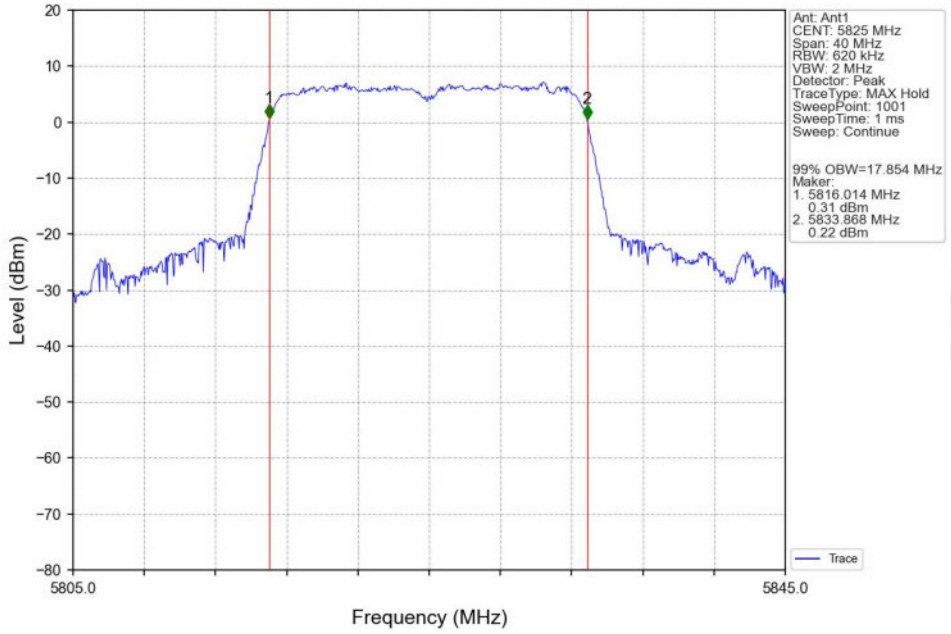


802.11n(HT20)_HCH_5825MHz_Ant1_NTNV



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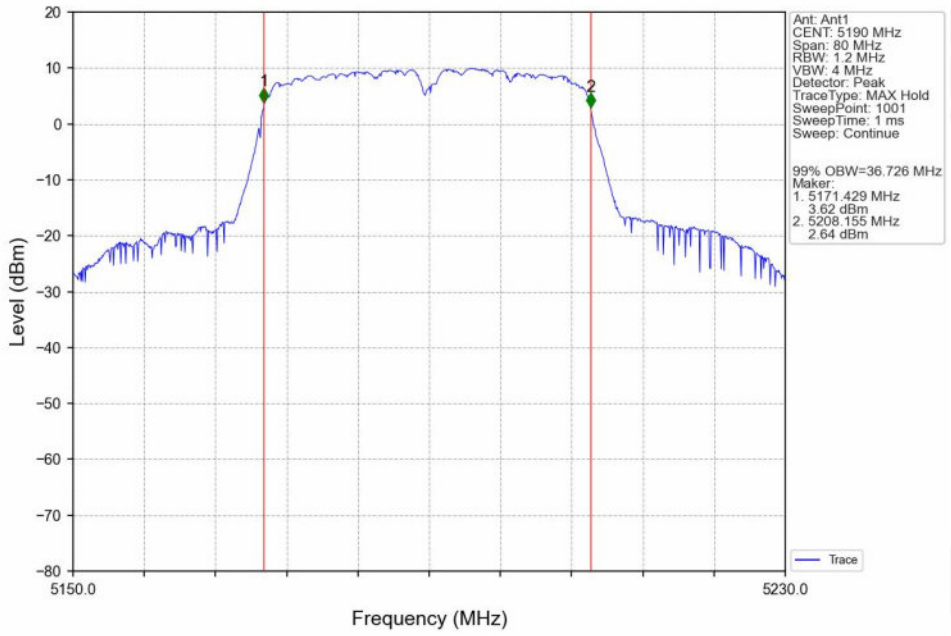
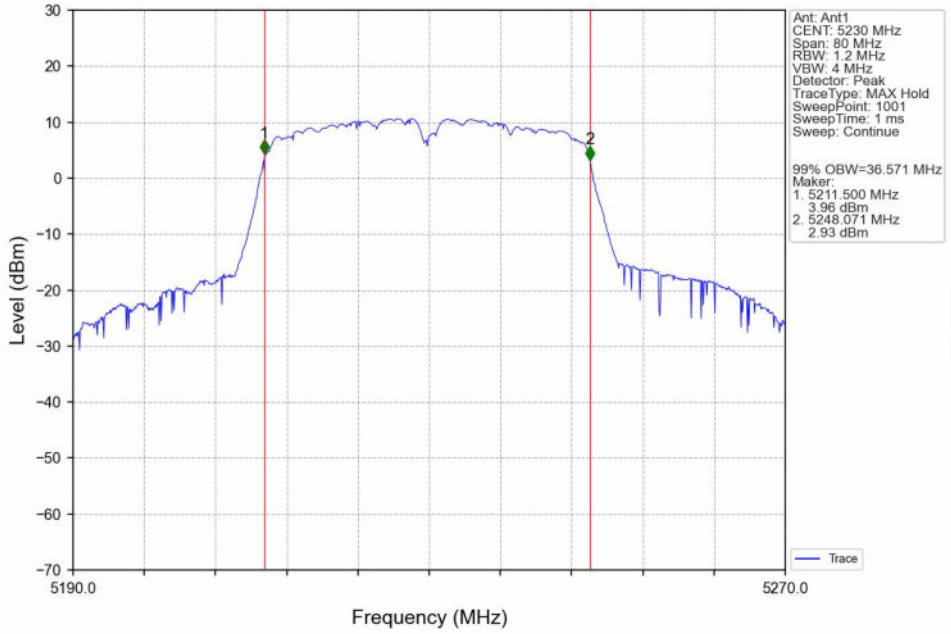
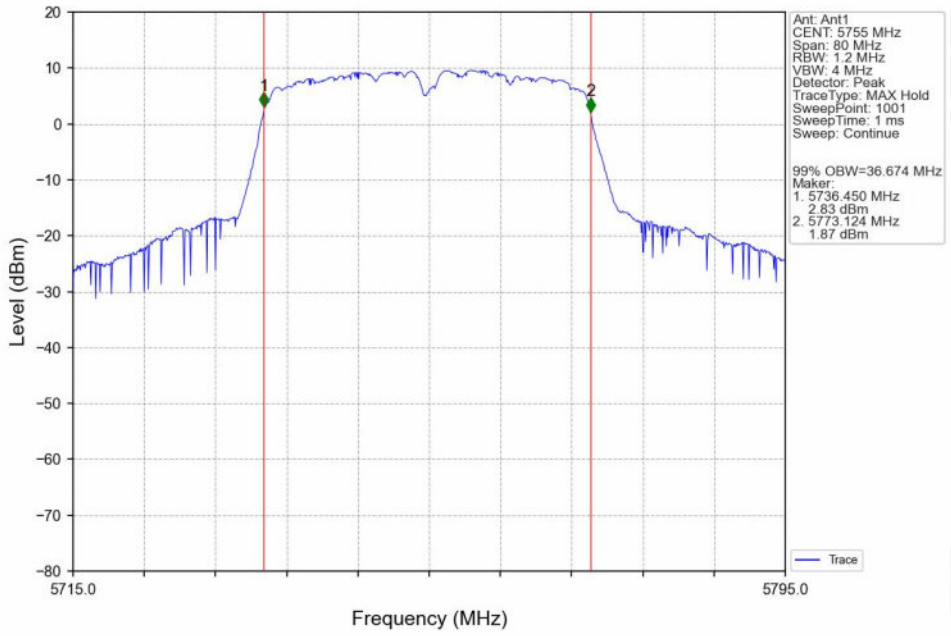


802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



802.11n(HT40)_LCH_5755MHz_Ant1_NTNV



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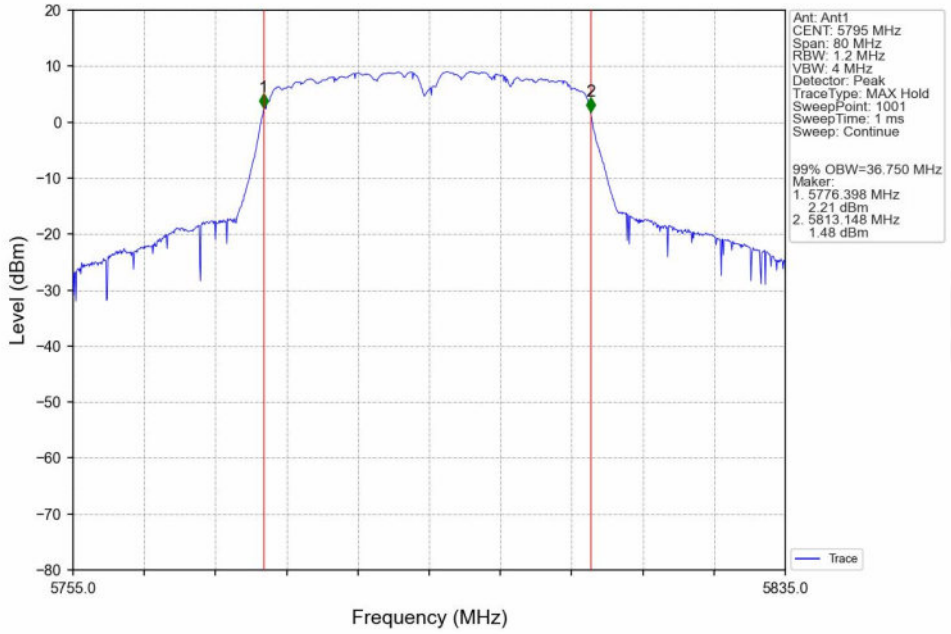

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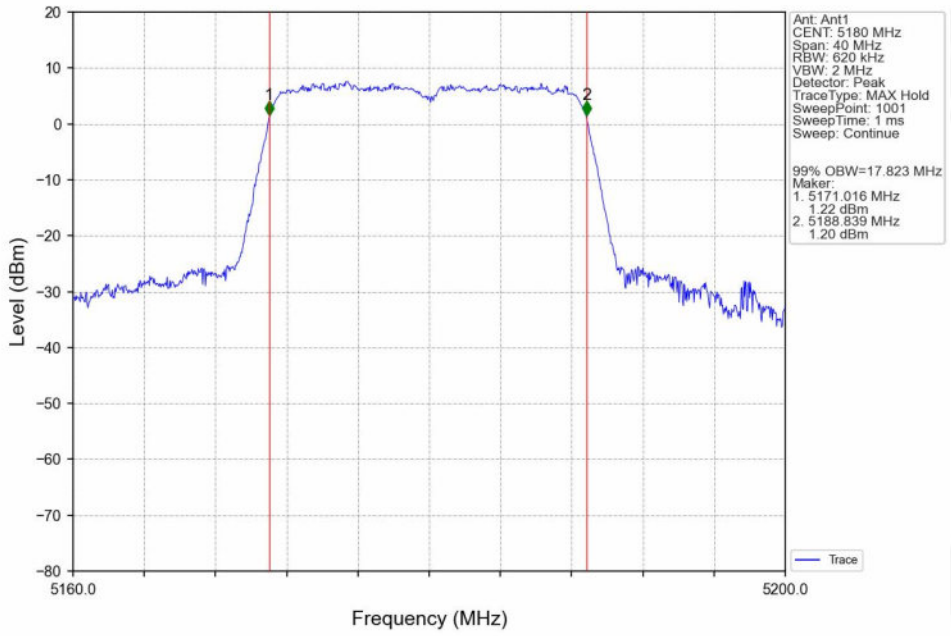
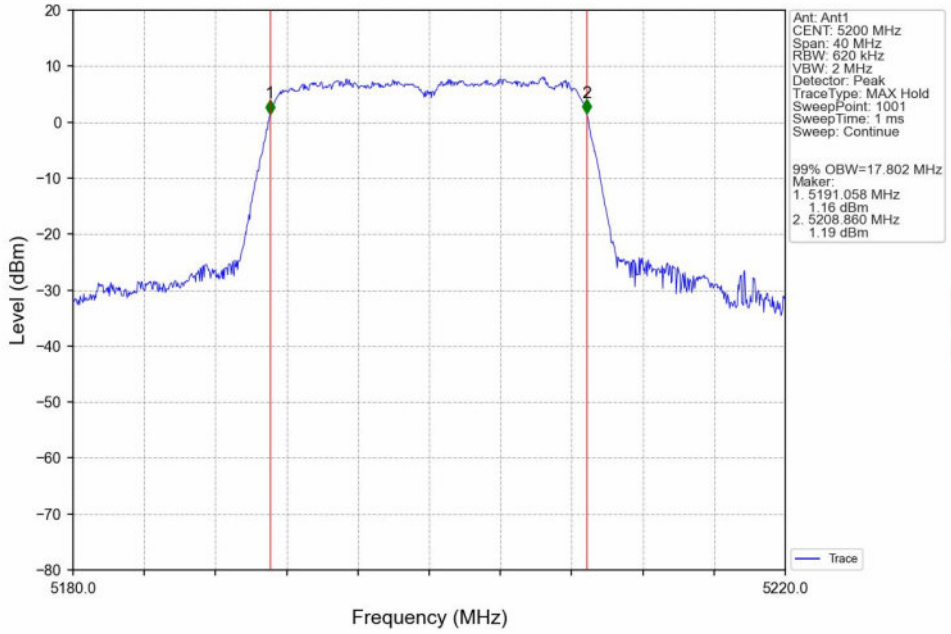


802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



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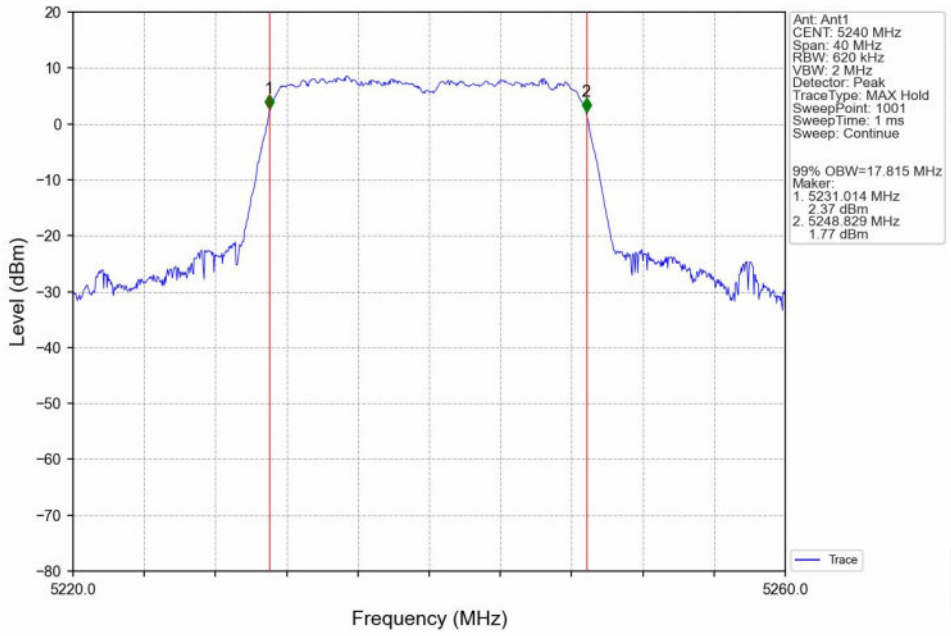
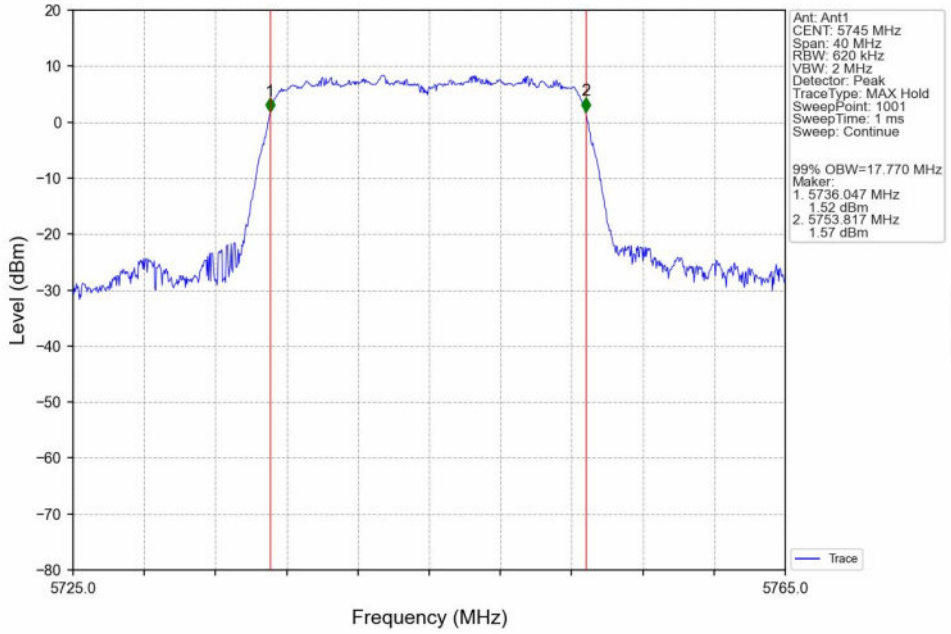


802.11ac(VHT20)_LCH_5745MHz_Ant1_NTNV



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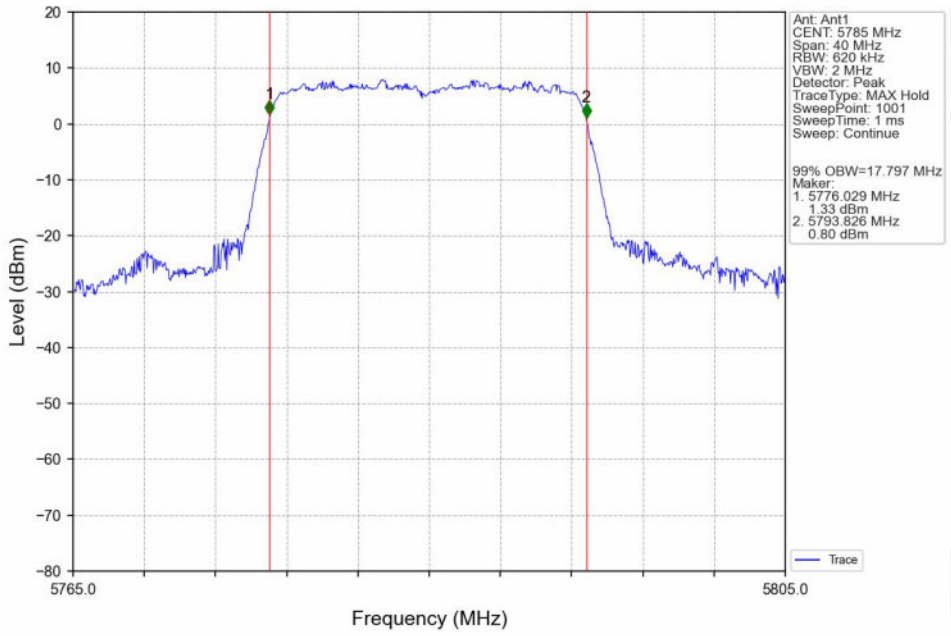
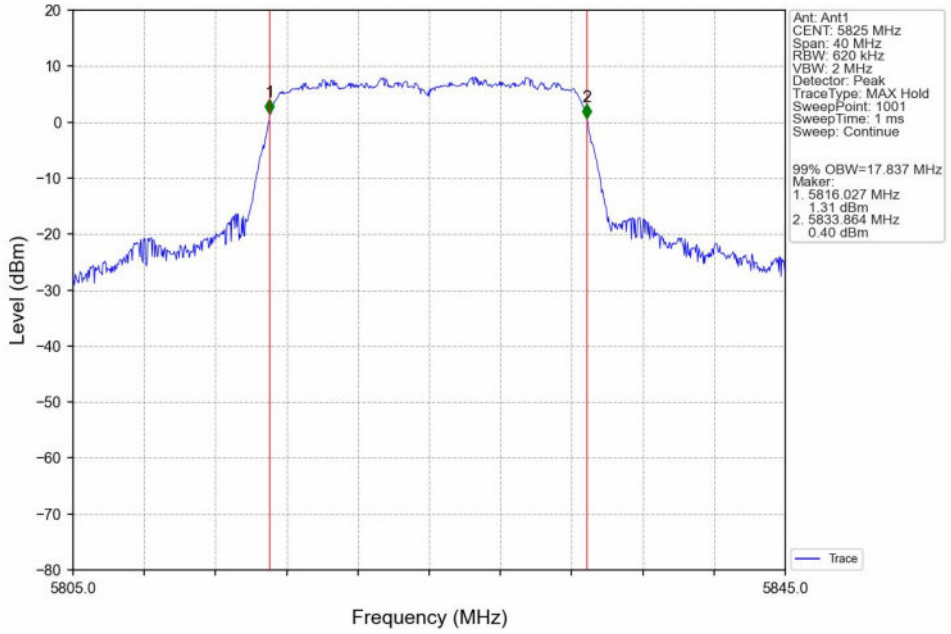
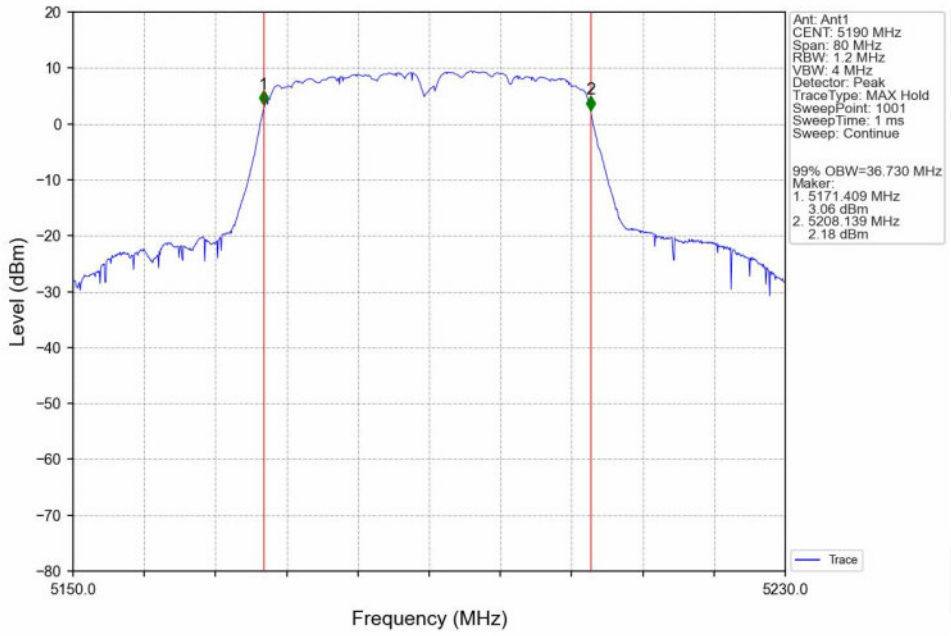


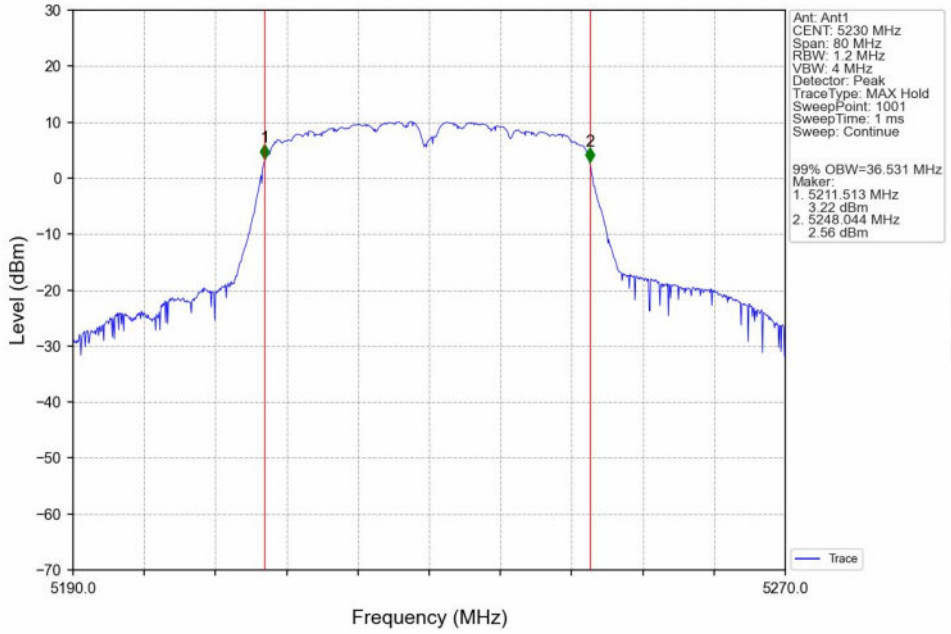
802.11ac(VHT20)_HCH_5825MHz_Ant1_NTNV



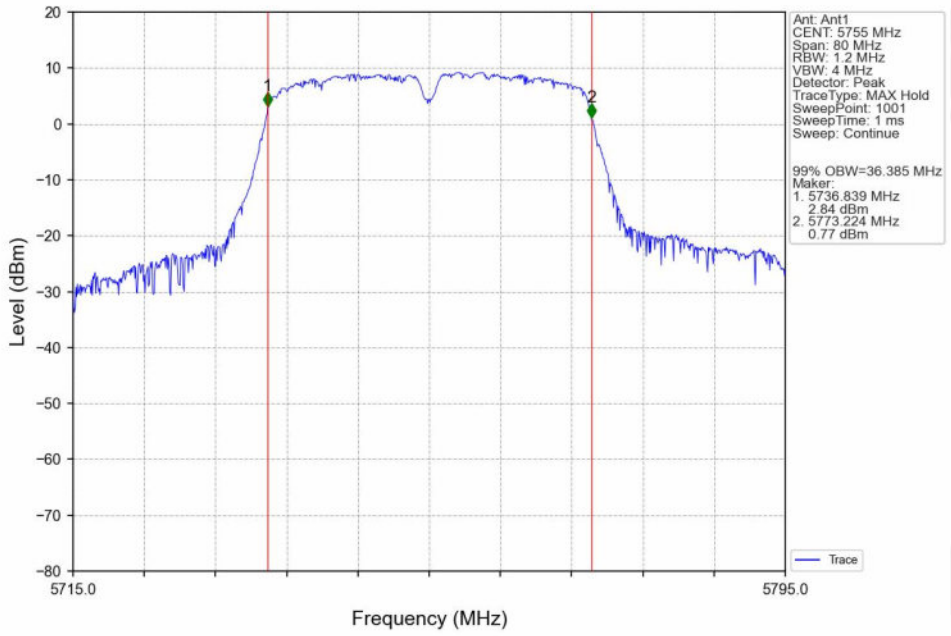
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



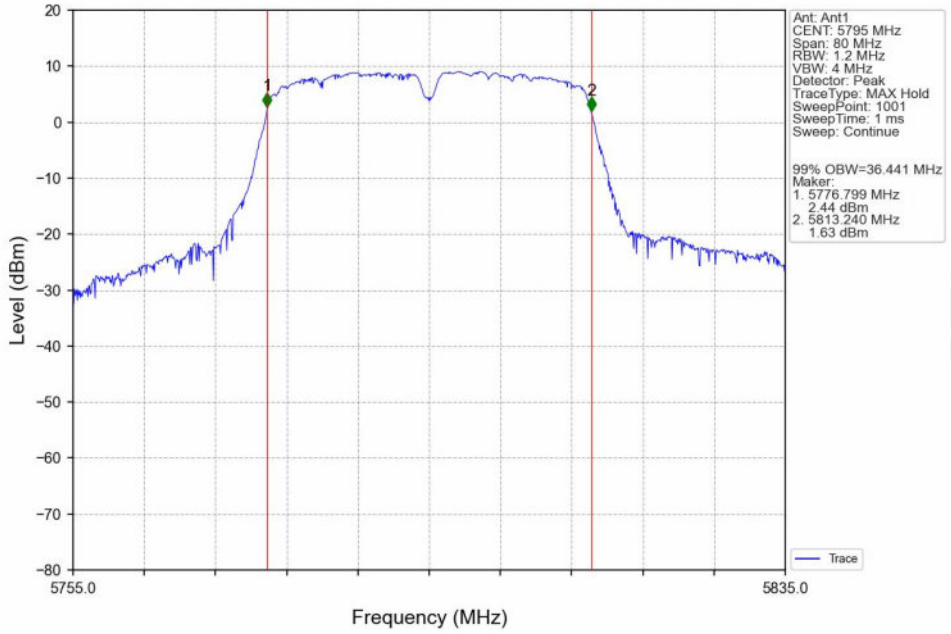
802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



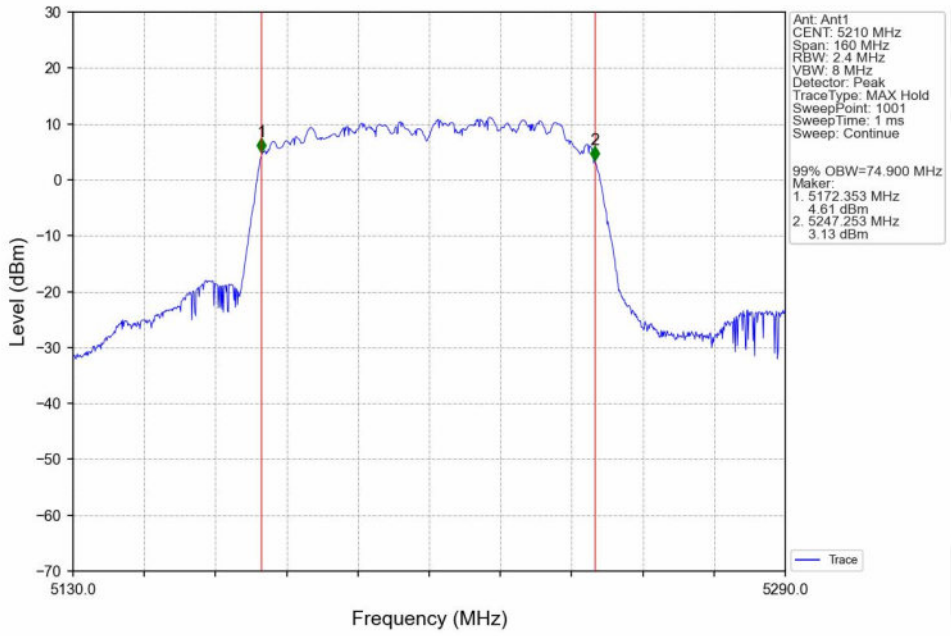
802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV



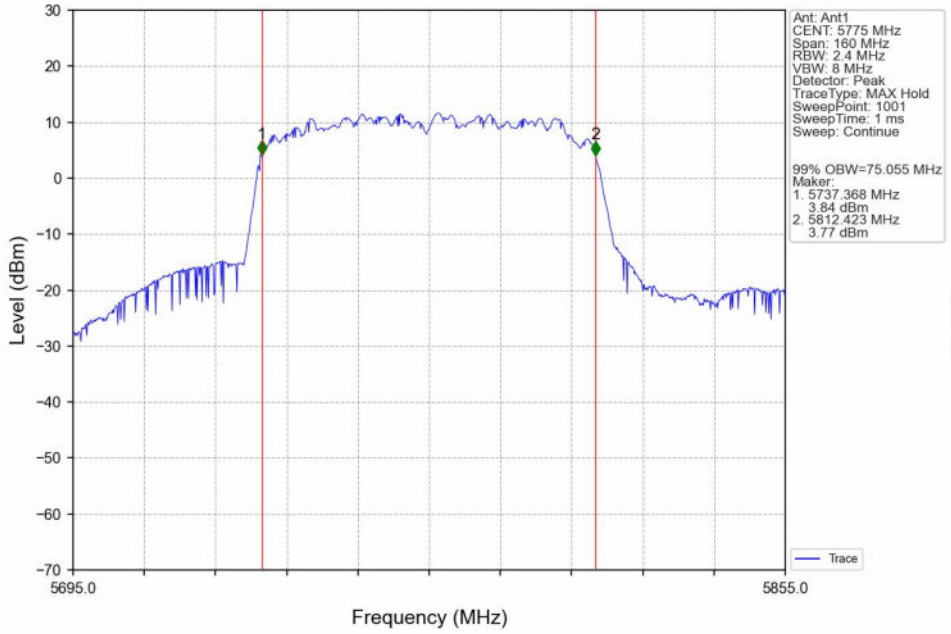
802.11ac(VHT40)_HCH_5795MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5210MHz_Ant1_NTNV

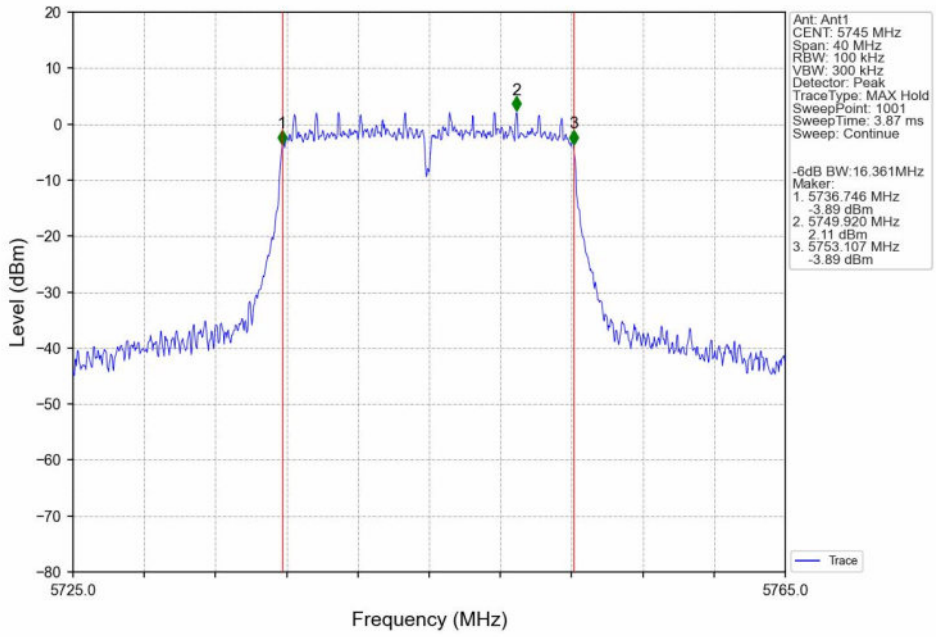


802.11ac(VHT80)_MCH_5775MHz_Ant1_NTNV



2.2.2 6dB BW

802.11a_LCH_5745MHz_Ant1_NTNV



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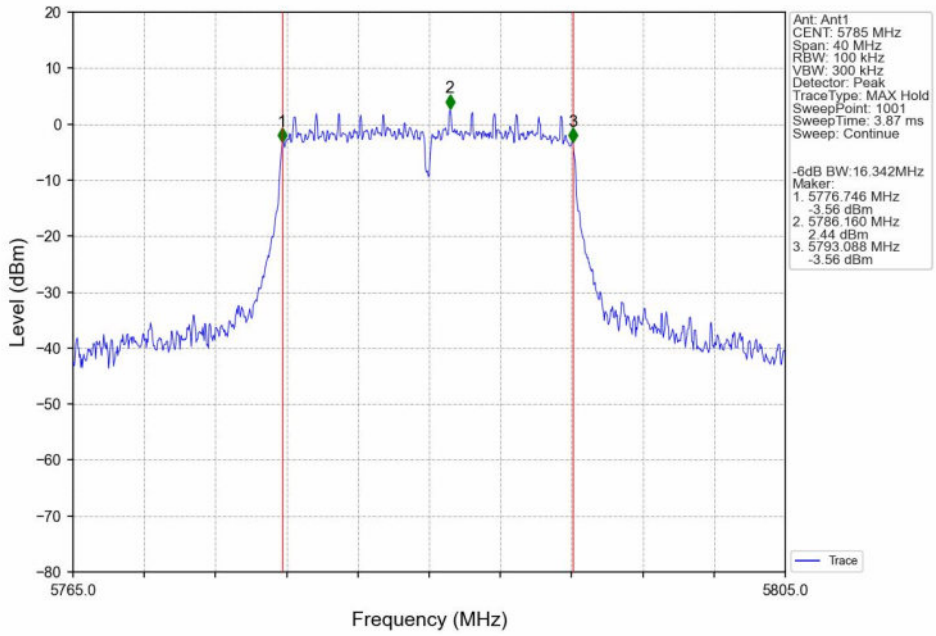

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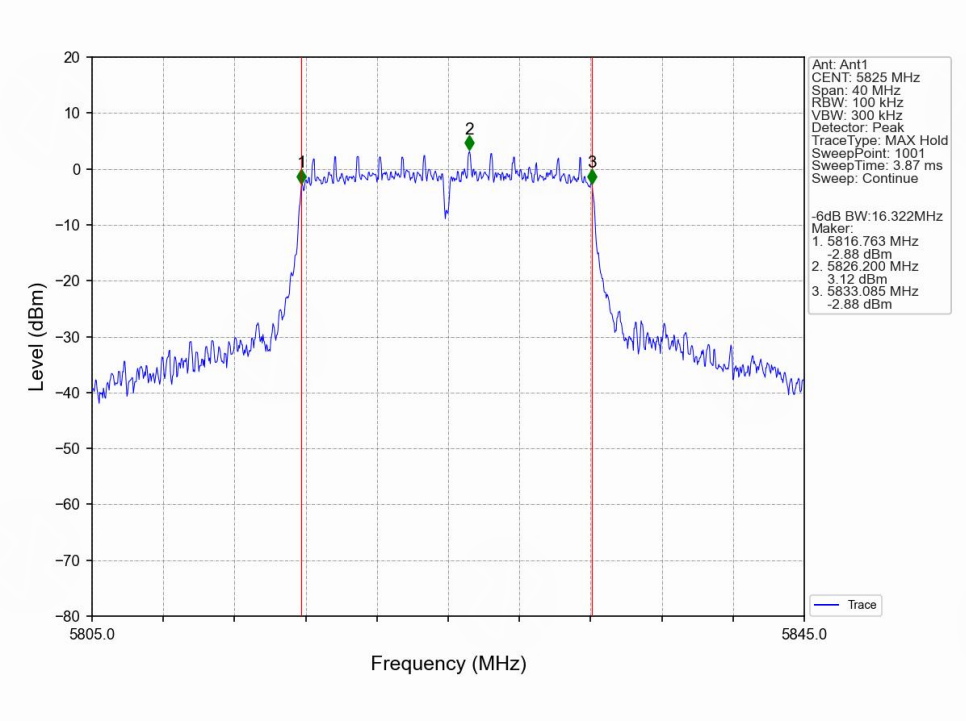
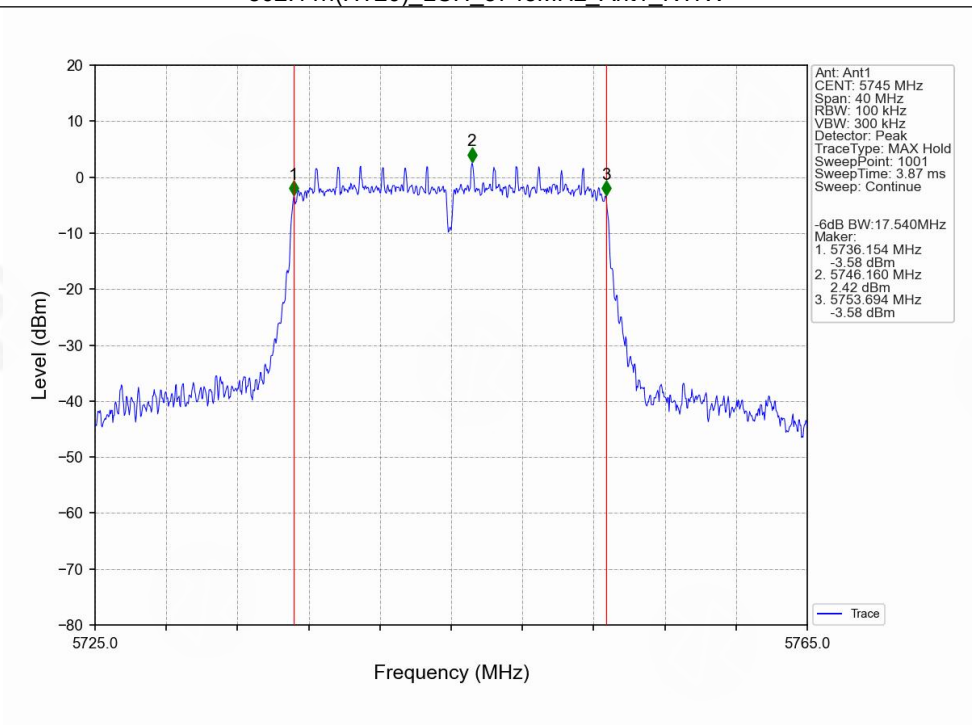


802.11n(HT20)_LCH_5745MHz_Ant1_NTNV



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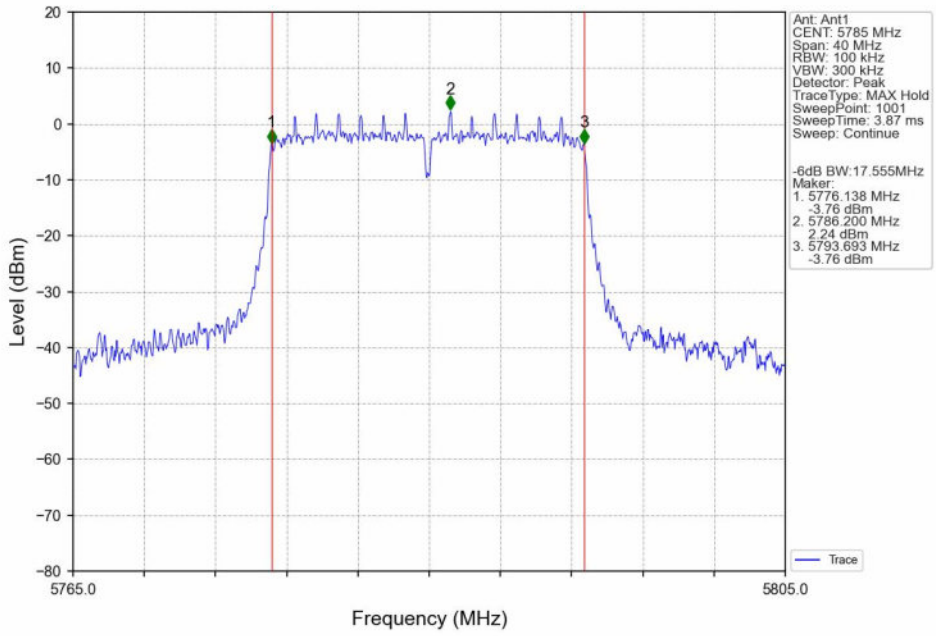

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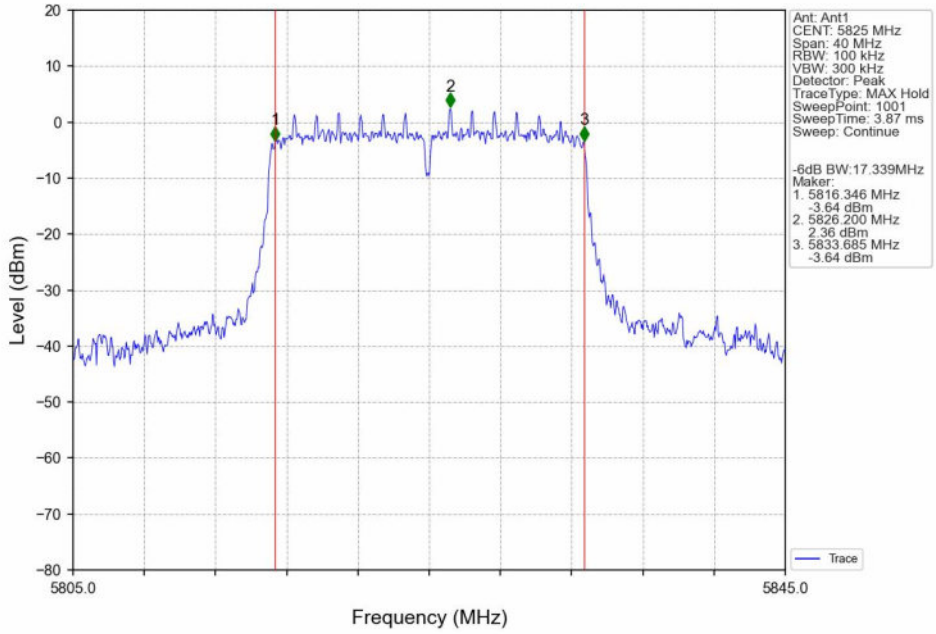
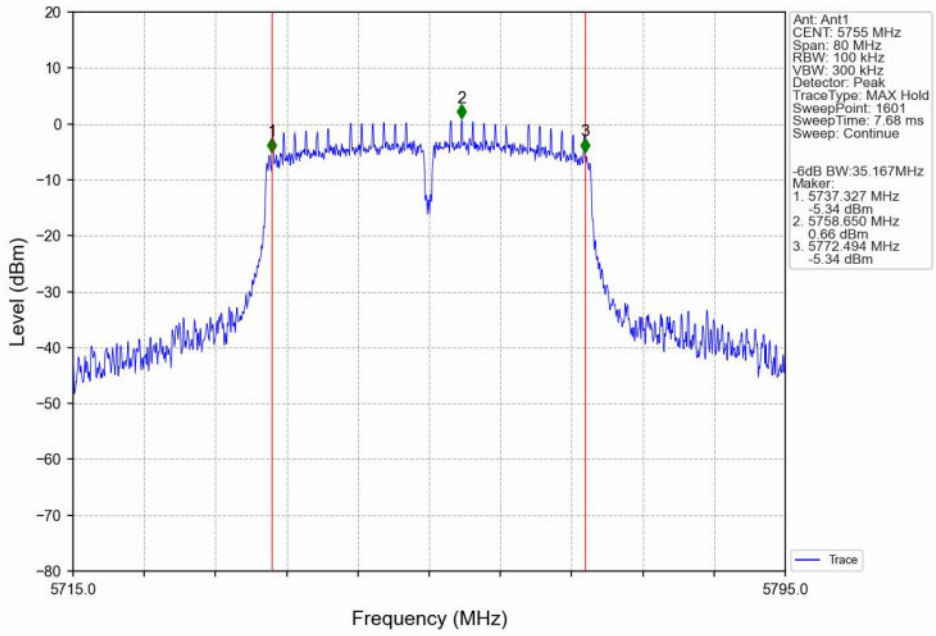
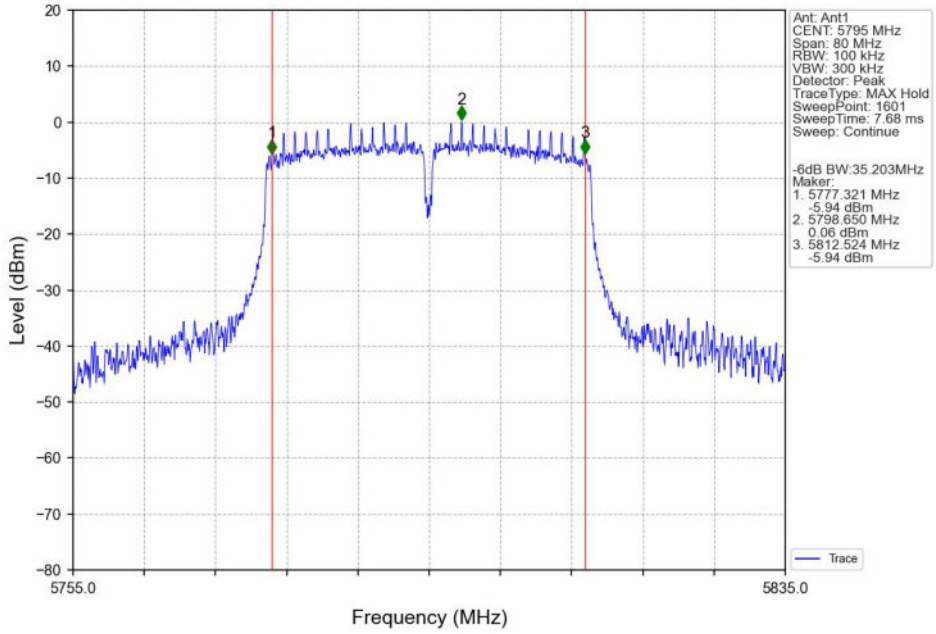


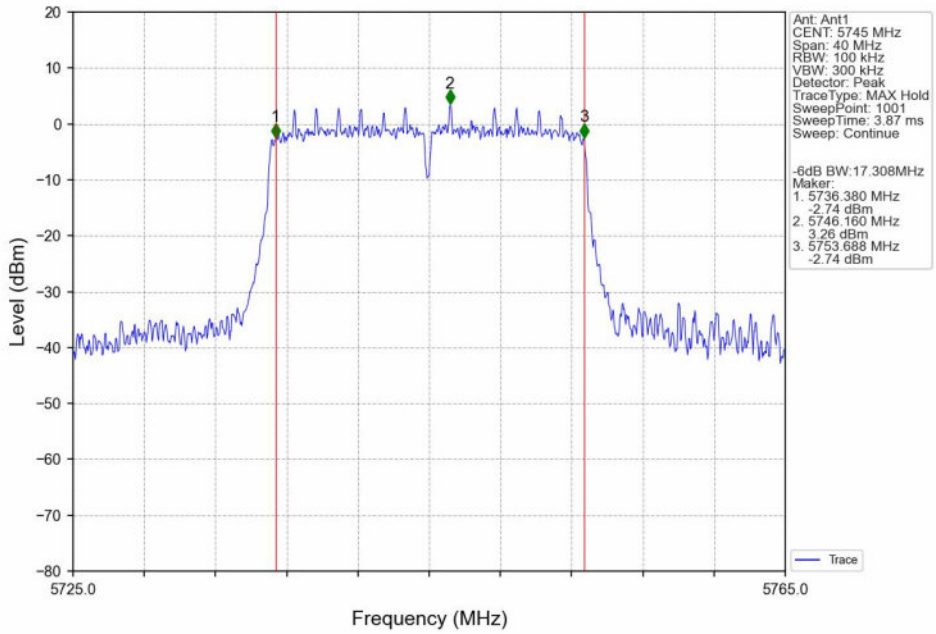
802.11n(HT40)_LCH_5755MHz_Ant1_NTNV



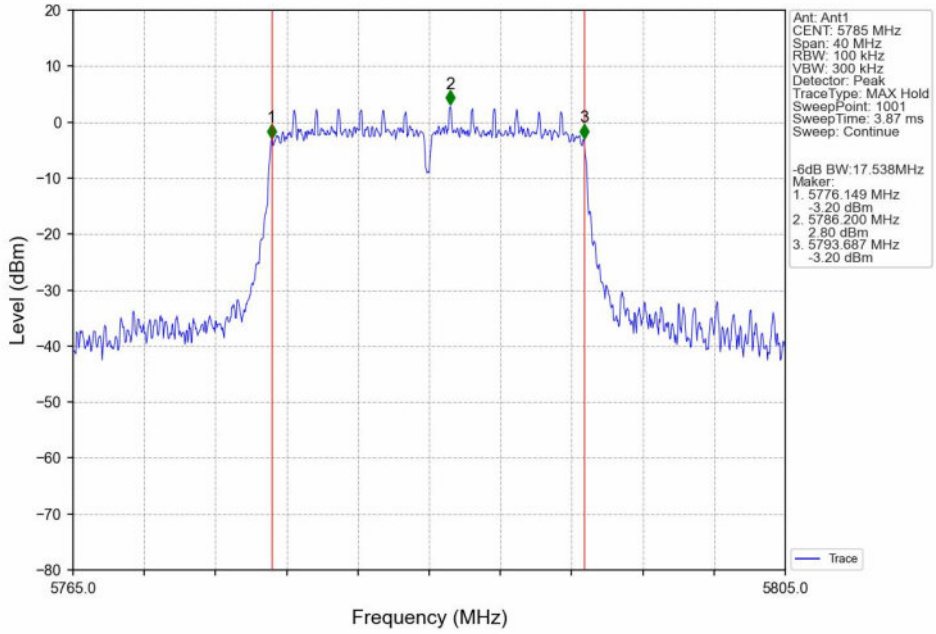
802.11n(HT40)_HCH_5795MHz_Ant1_NTNV



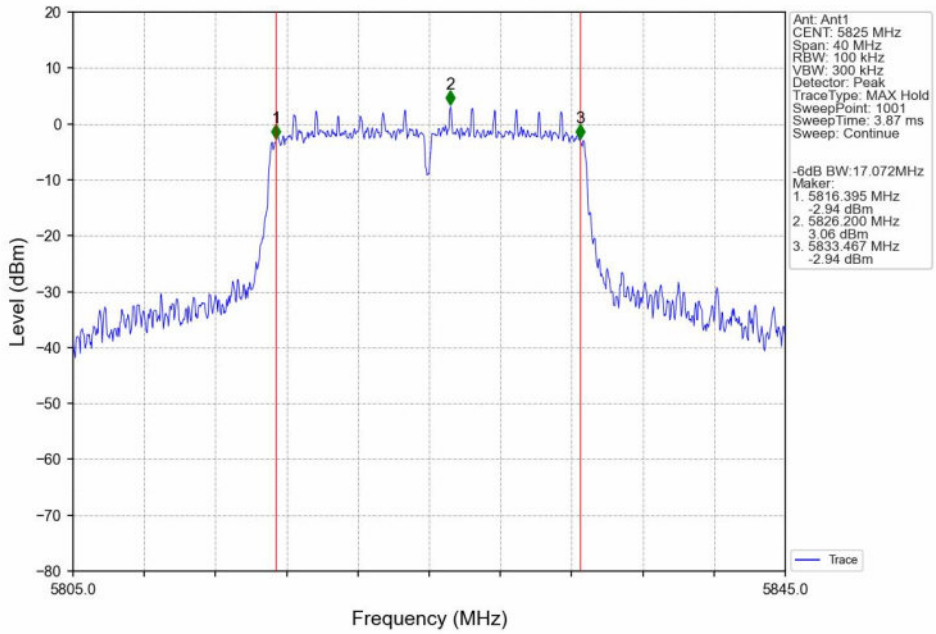
802.11ac(VHT20)_LCH_5745MHz_Ant1_NTNV



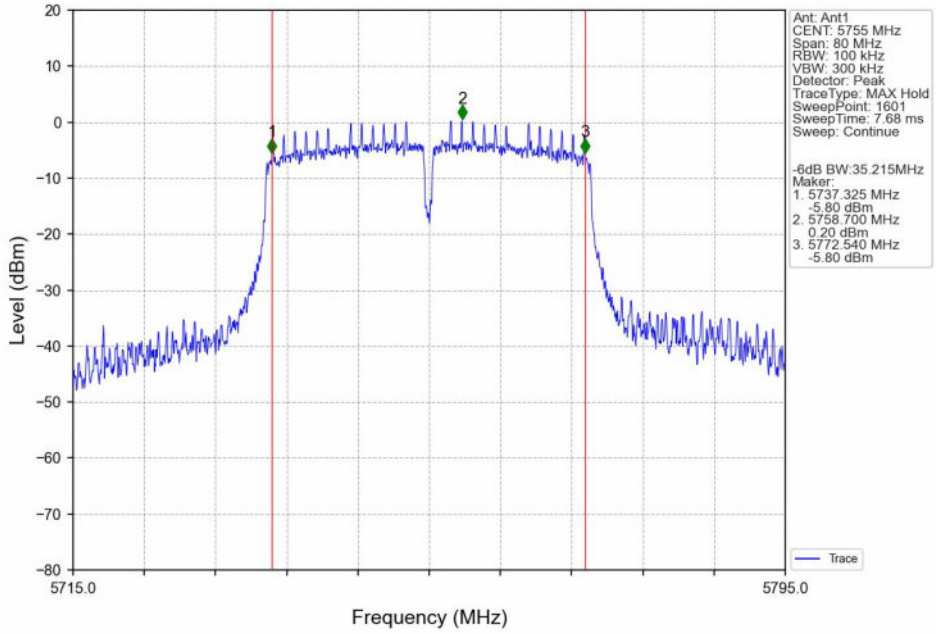
802.11ac(VHT20)_MCH_5785MHz_Ant1_NTNV



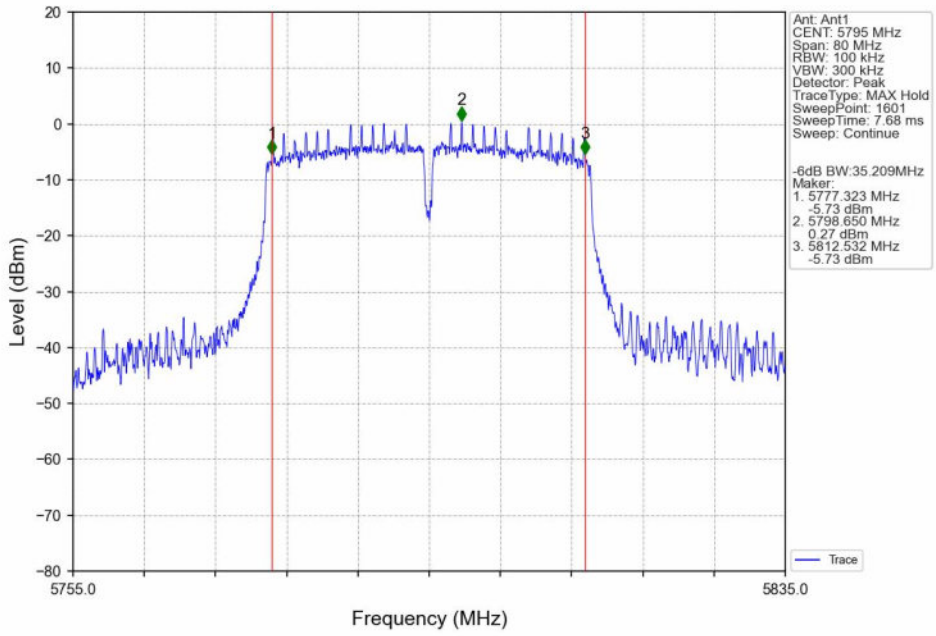
802.11ac(VHT20)_HCH_5825MHz_Ant1_NTNV



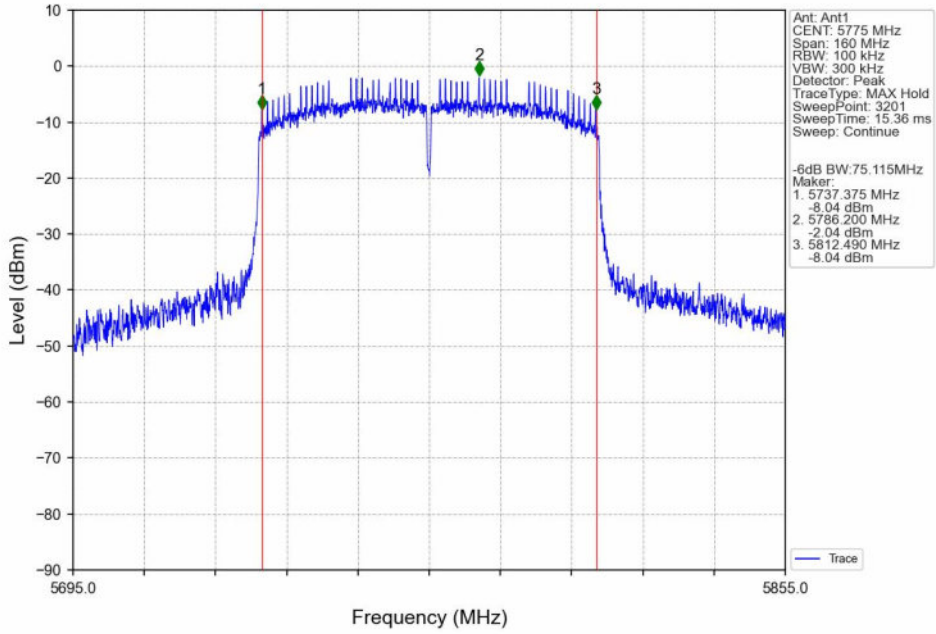
802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5795MHz_Ant1_NTNV

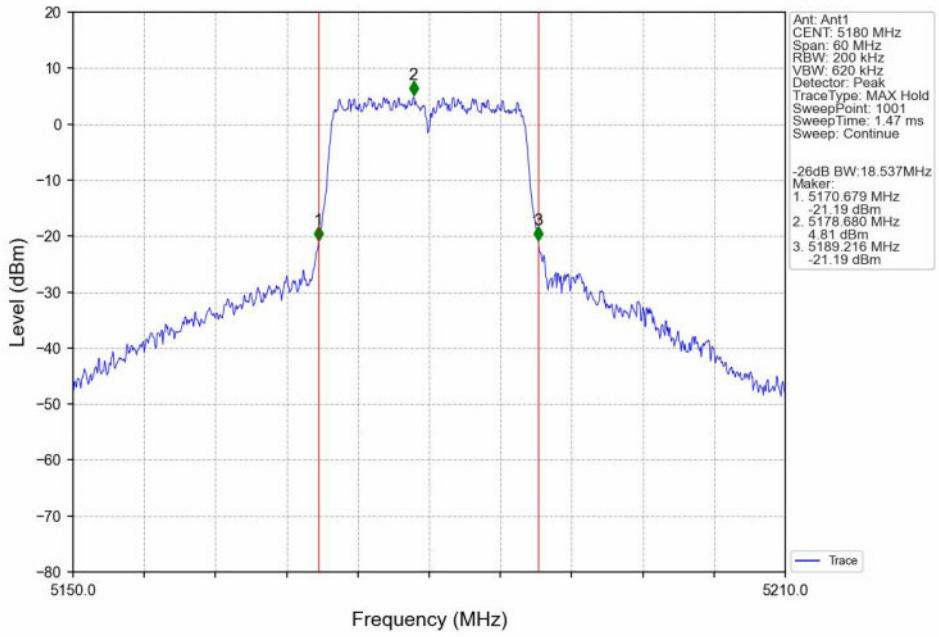


802.11ac(VHT80)_MCH_5775MHz_Ant1_NTNV

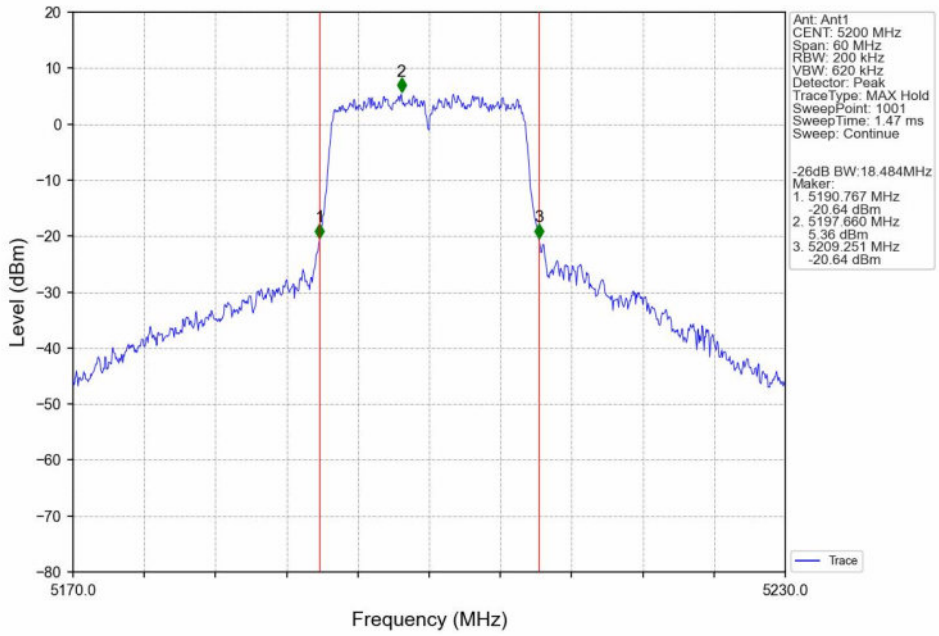


2.2.3 26dB BW

802.11a_LCH_5180MHz_Ant1_NTNV



802.11a_MCH_5200MHz_Ant1_NTNV



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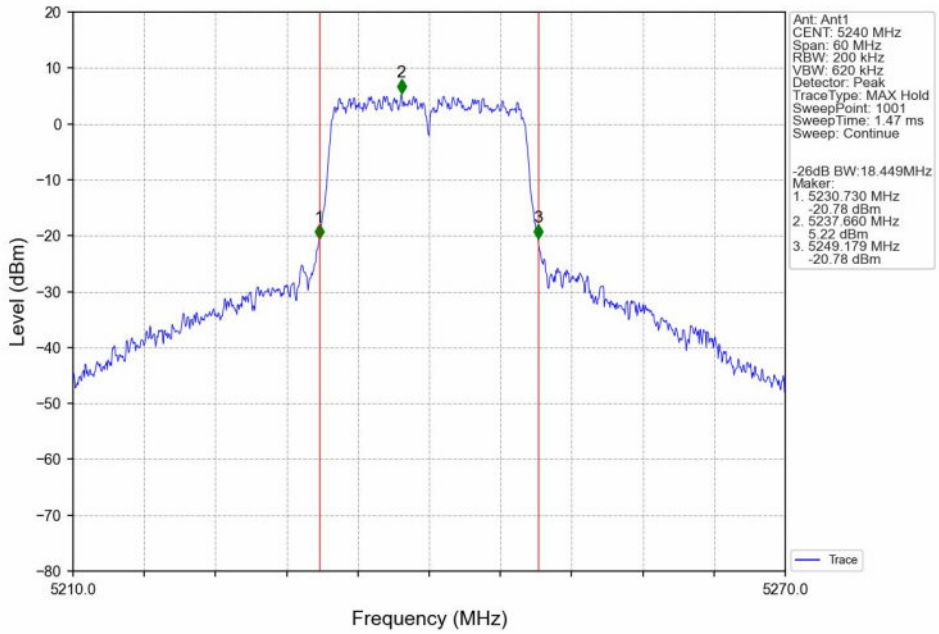
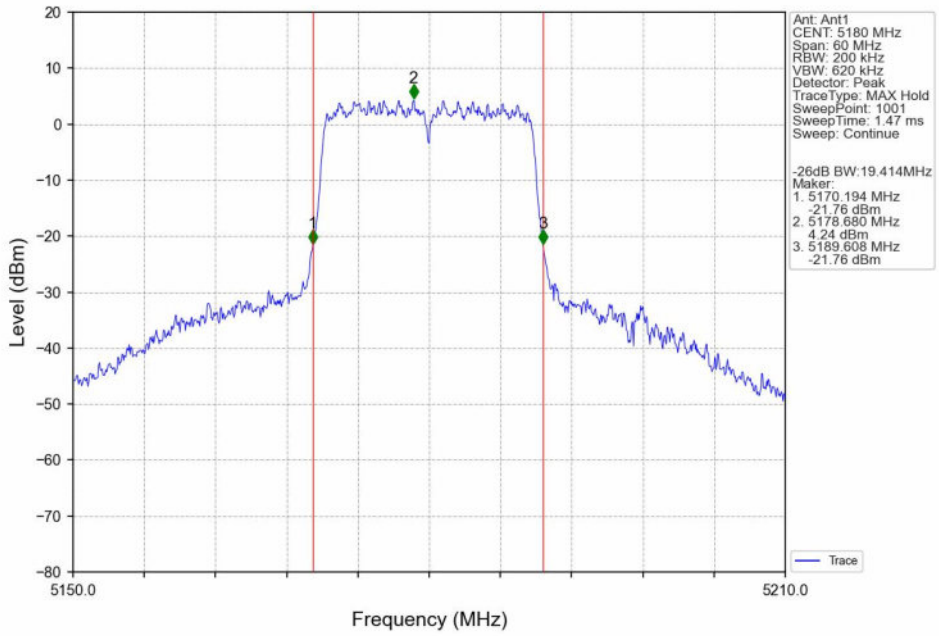
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV