



Shenzhen CTL Testing Technology Co., Ltd.

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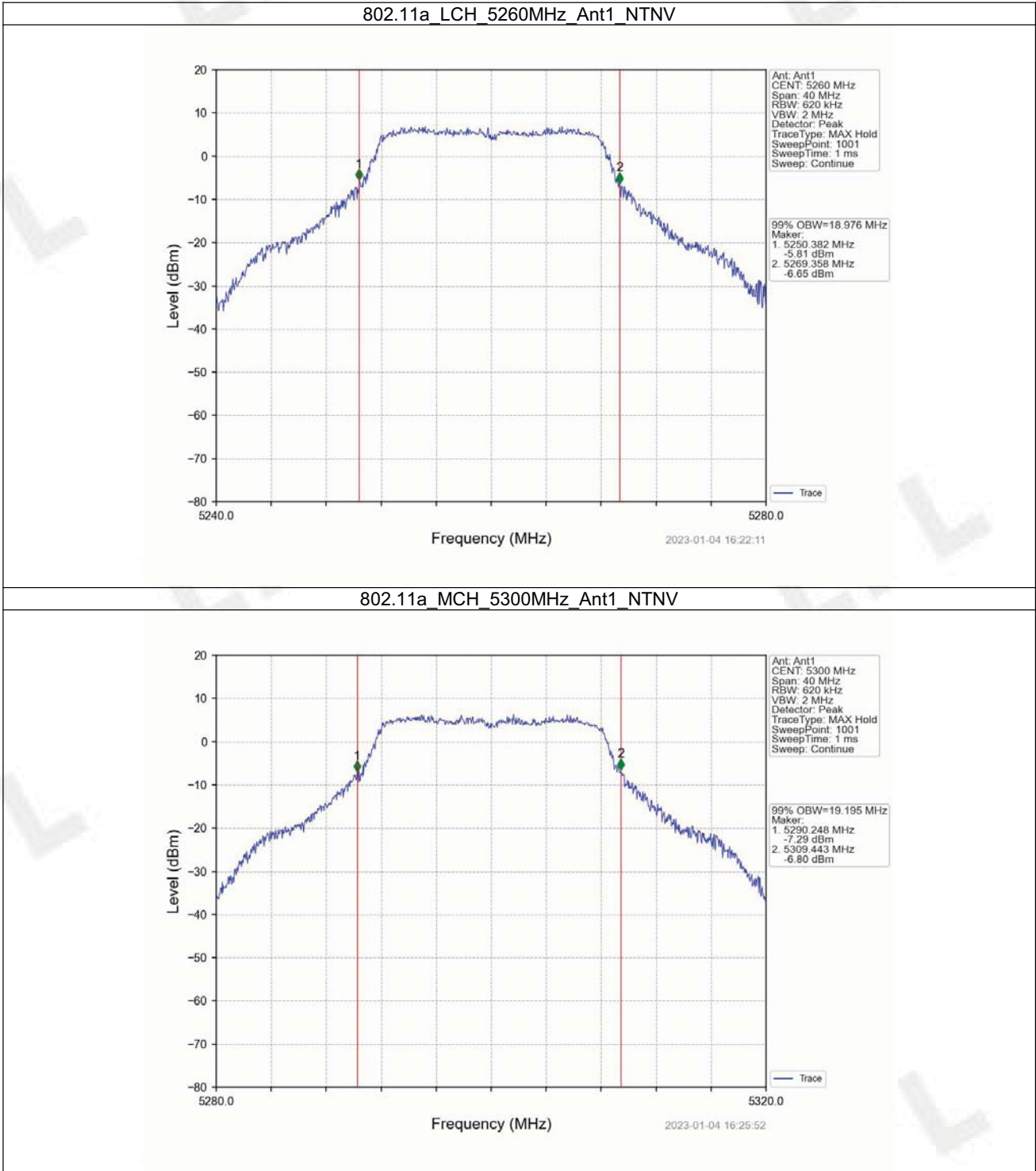
1. Bandwidth

1.1 OBW

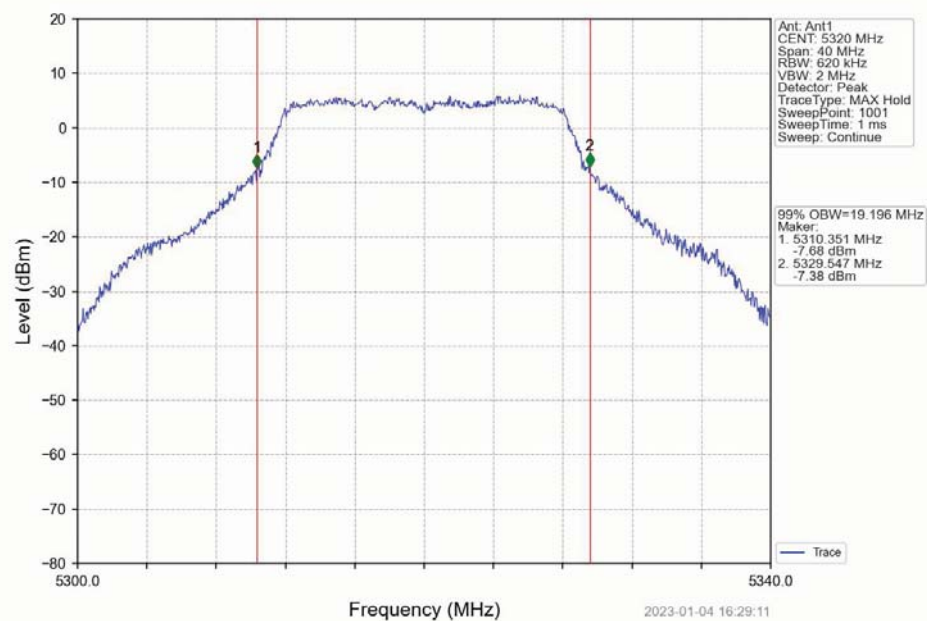
1.1.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)	Verdict
				Result	
802.11a	SISO	5260	1	18.976	Pass
		5300	1	19.195	Pass
		5320	1	19.196	Pass
802.11n (HT20)	SISO	5260	1	20.060	Pass
		5300	1	20.027	Pass
		5320	1	20.108	Pass
802.11n (HT40)	SISO	5270	1	38.302	Pass
		5310	1	38.459	Pass
802.11ac (VHT20)	SISO	5260	1	20.298	Pass
		5300	1	20.392	Pass
		5320	1	20.470	Pass
802.11ac (VHT40)	SISO	5270	1	38.214	Pass
		5310	1	38.398	Pass

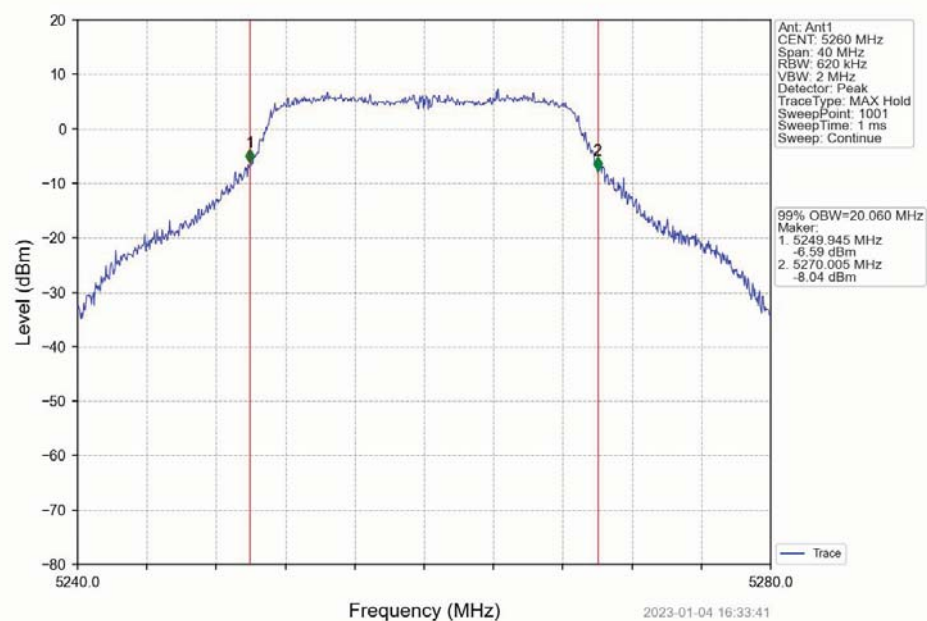
1.1.2 Test Graph



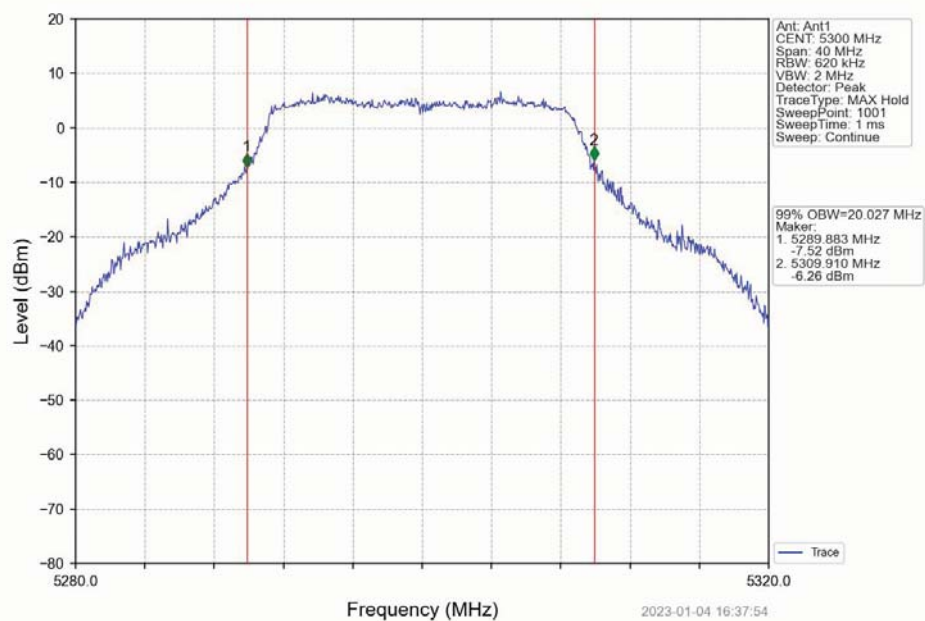
802.11a_HCH_5320MHz_Ant1_NTNV



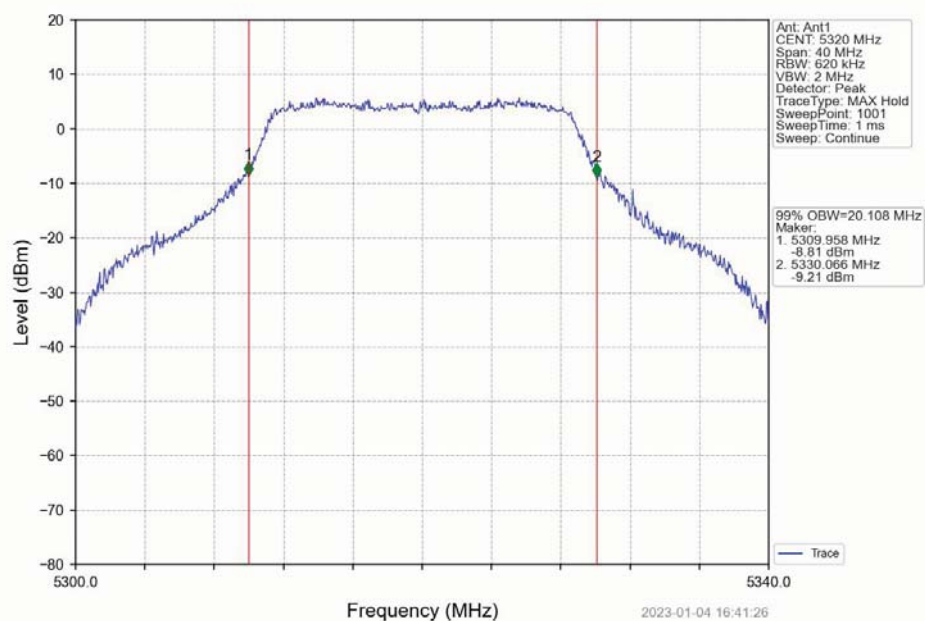
802.11n(HT20)_LCH_5260MHz_Ant1_NTNV



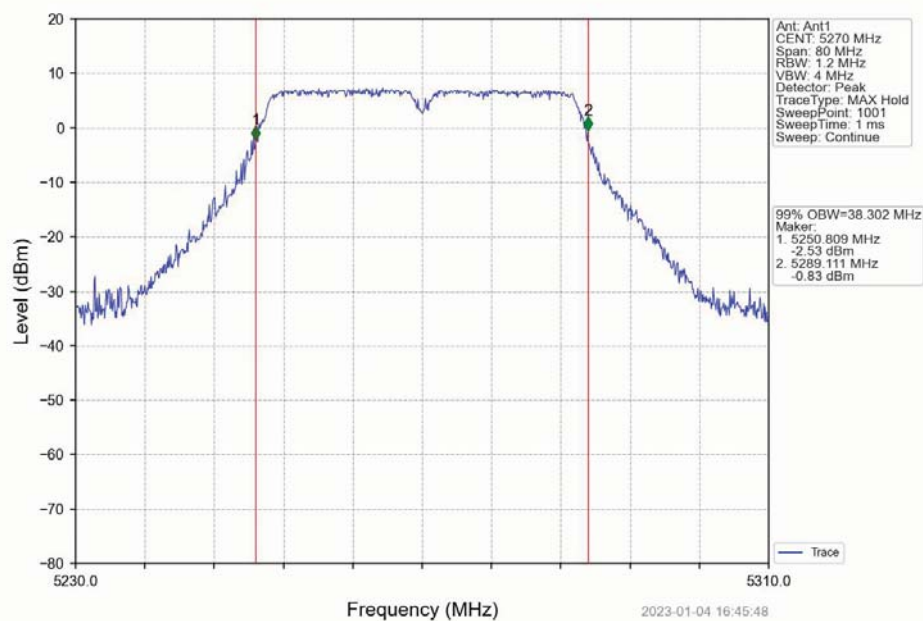
802.11n(HT20)_MCH_5300MHz_Ant1_NTNV



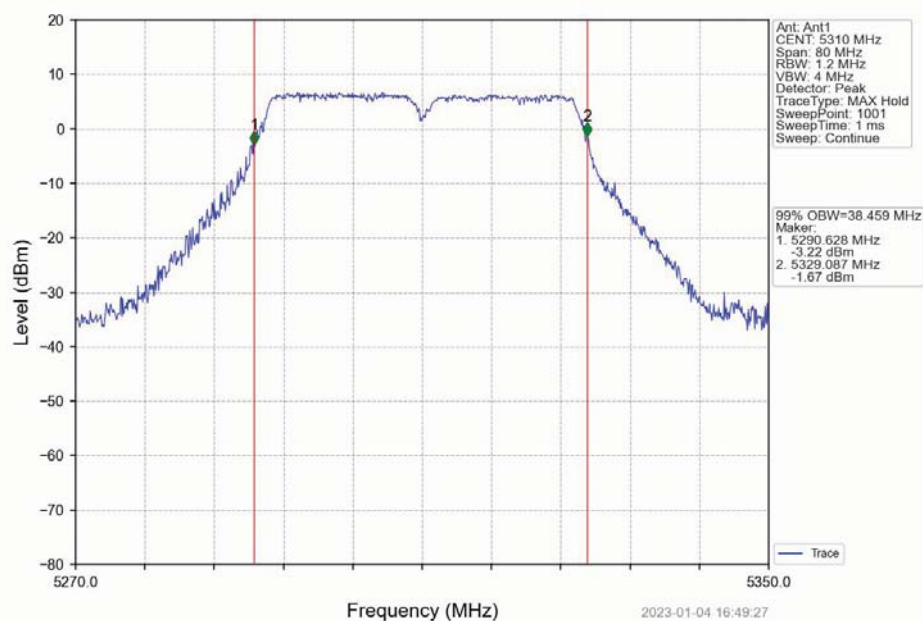
802.11n(HT20)_HCH_5320MHz_Ant1_NTNV



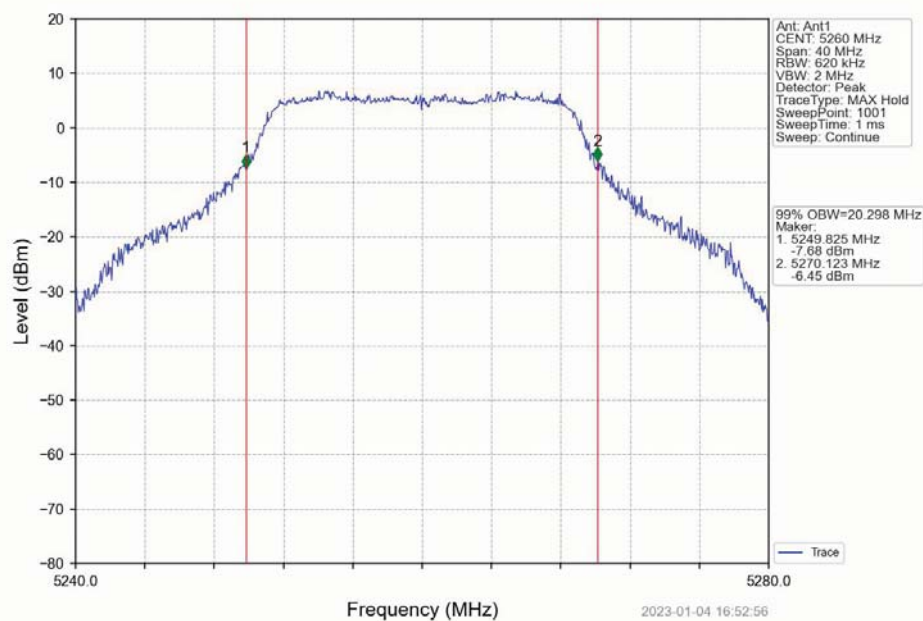
802.11n(HT40)_LCH_5270MHz_Ant1_NTNV



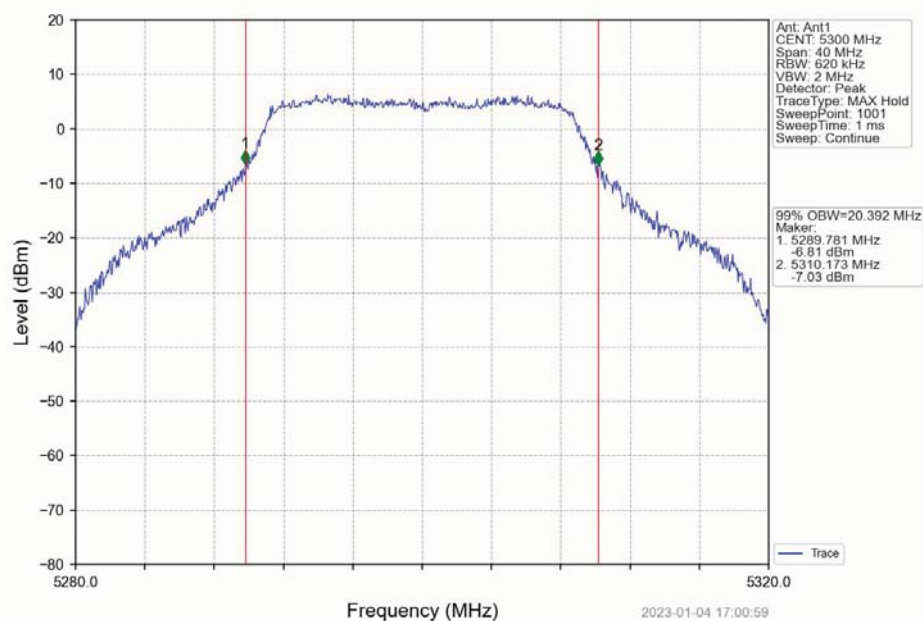
802.11n(HT40)_HCH_5310MHz_Ant1_NTNV



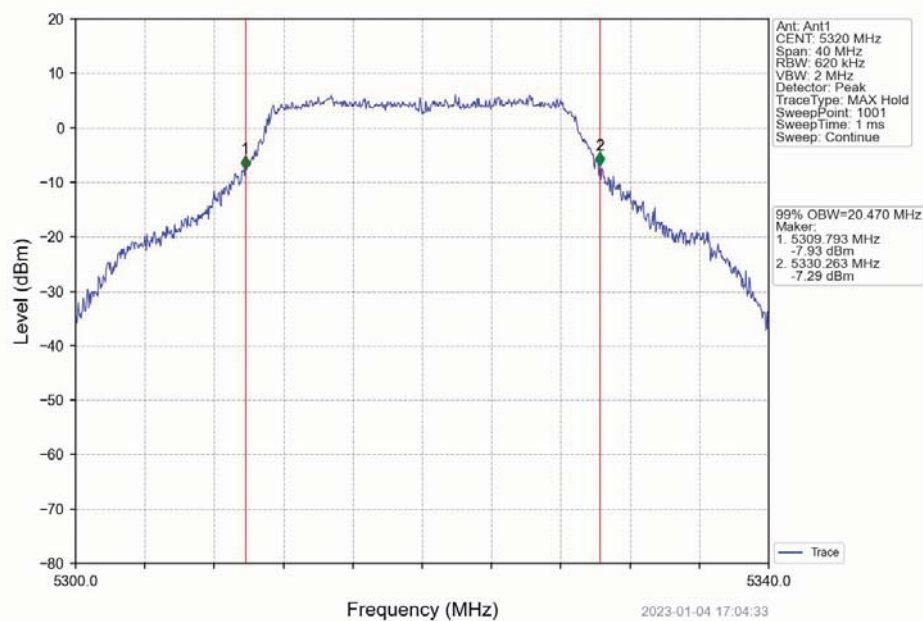
802.11ac(VHT20)_LCH_5260MHz_Ant1_NTNV



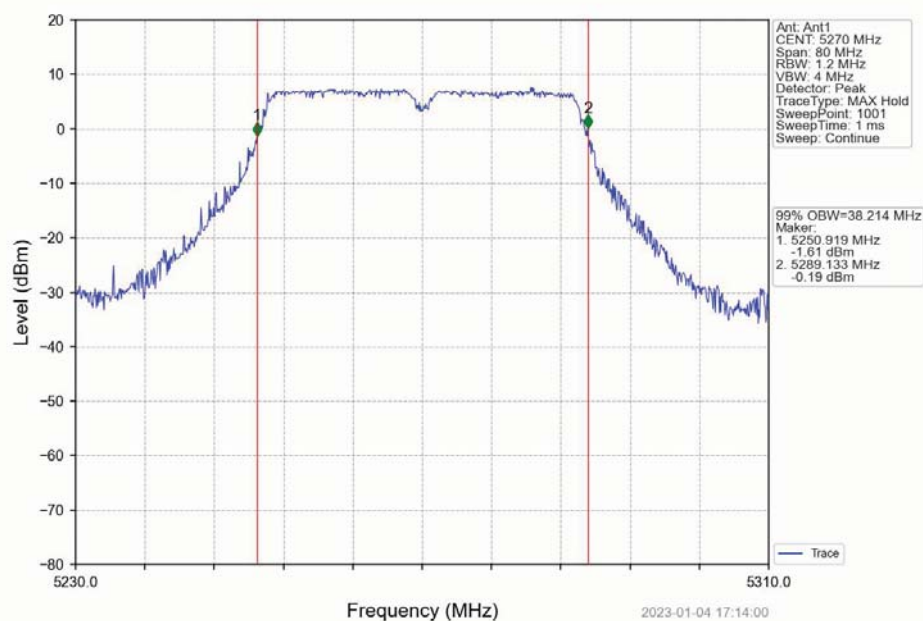
802.11ac(VHT20)_MCH_5300MHz_Ant1_NTNV

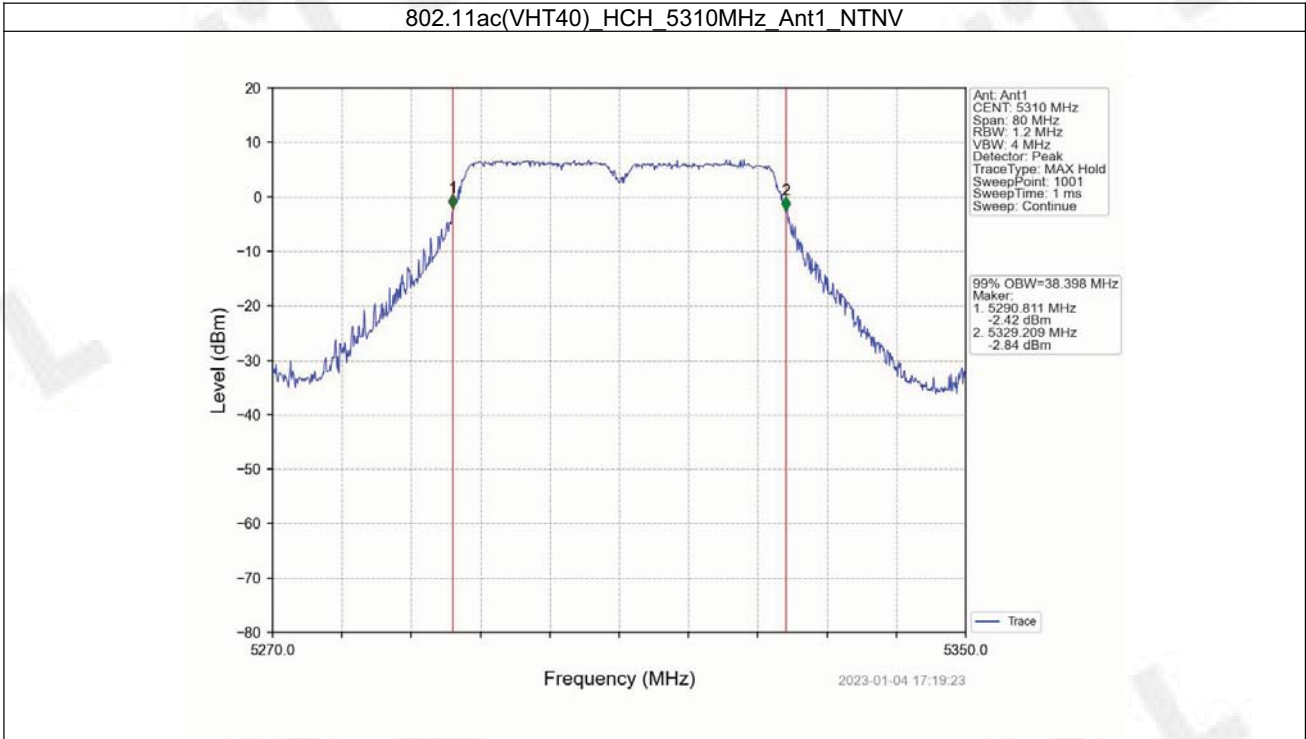


802.11ac(VHT20)_HCH_5320MHz_Ant1_NTNV



802.11ac(VHT40)_LCH_5270MHz_Ant1_NTNV



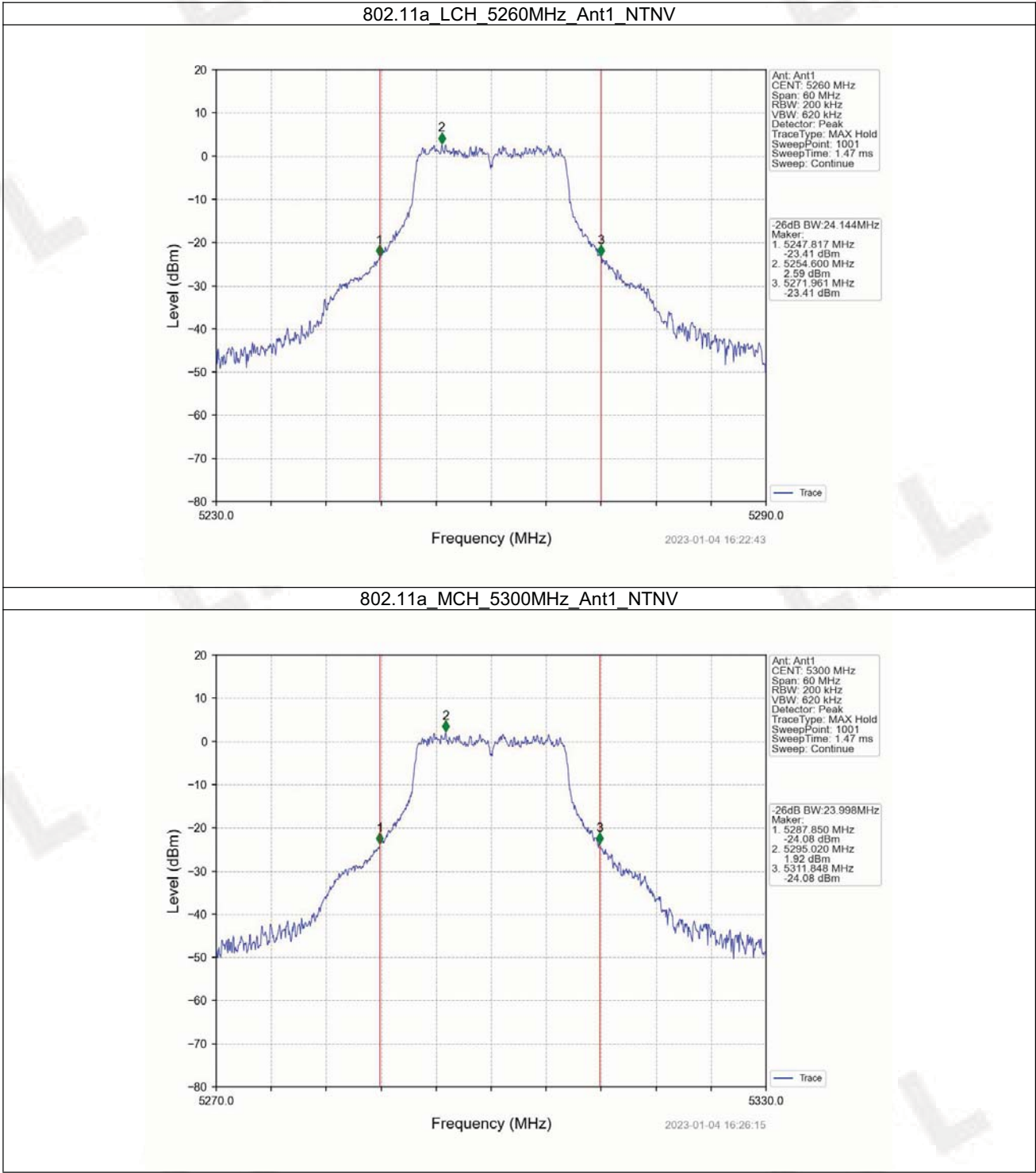


1.2 26dB BW

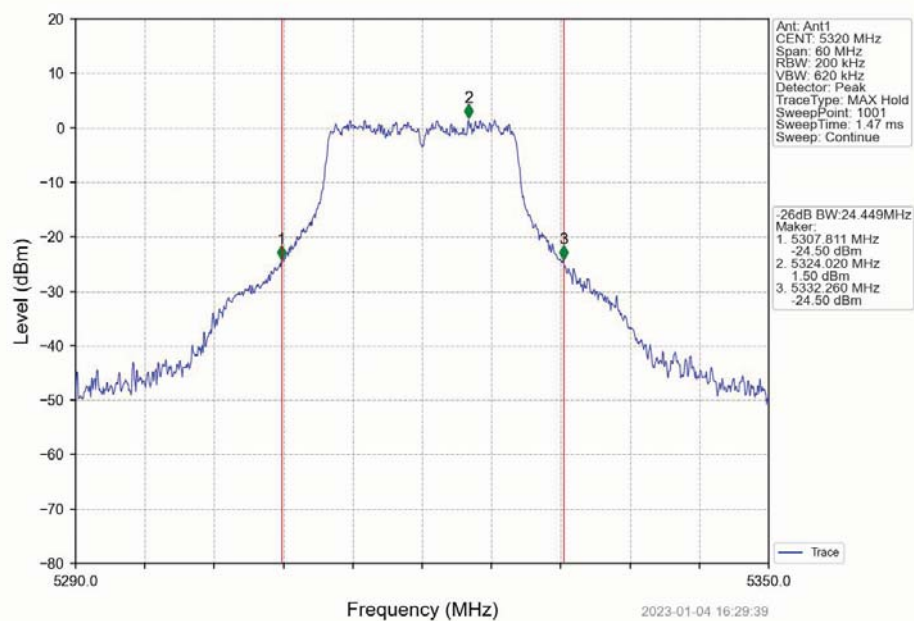
1.2.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	26dB Bandwidth (MHz)	Verdict
				Result	
802.11a	SISO	5260	1	24.144	Pass
		5300	1	23.998	Pass
		5320	1	24.449	Pass
802.11n (HT20)	SISO	5260	1	25.120	Pass
		5300	1	24.603	Pass
		5320	1	25.148	Pass
802.11n (HT40)	SISO	5270	1	47.960	Pass
		5310	1	48.722	Pass
802.11ac (VHT20)	SISO	5260	1	25.323	Pass
		5300	1	25.325	Pass
		5320	1	25.400	Pass
802.11ac (VHT40)	SISO	5270	1	47.388	Pass
		5310	1	49.472	Pass

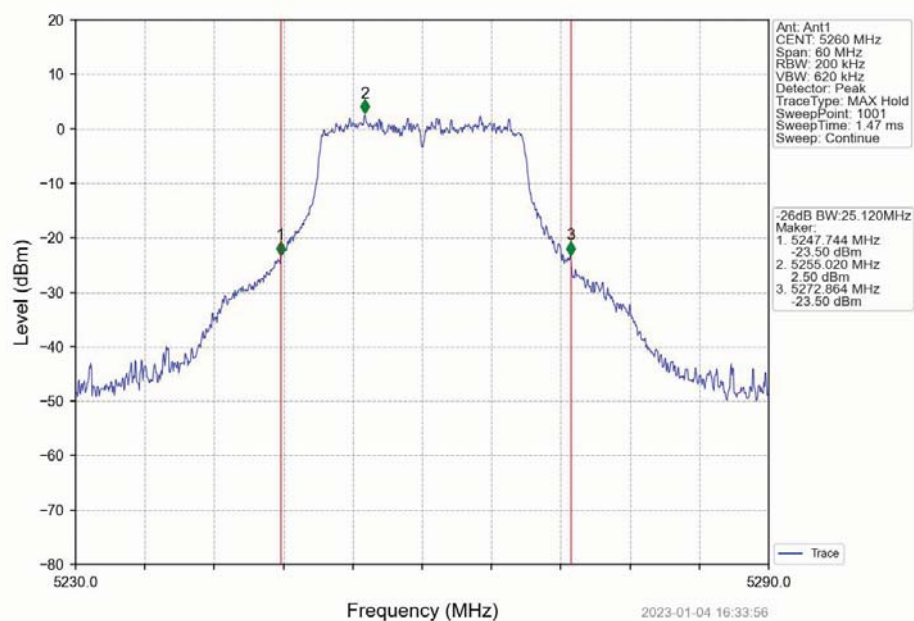
1.2.2 Test Graph



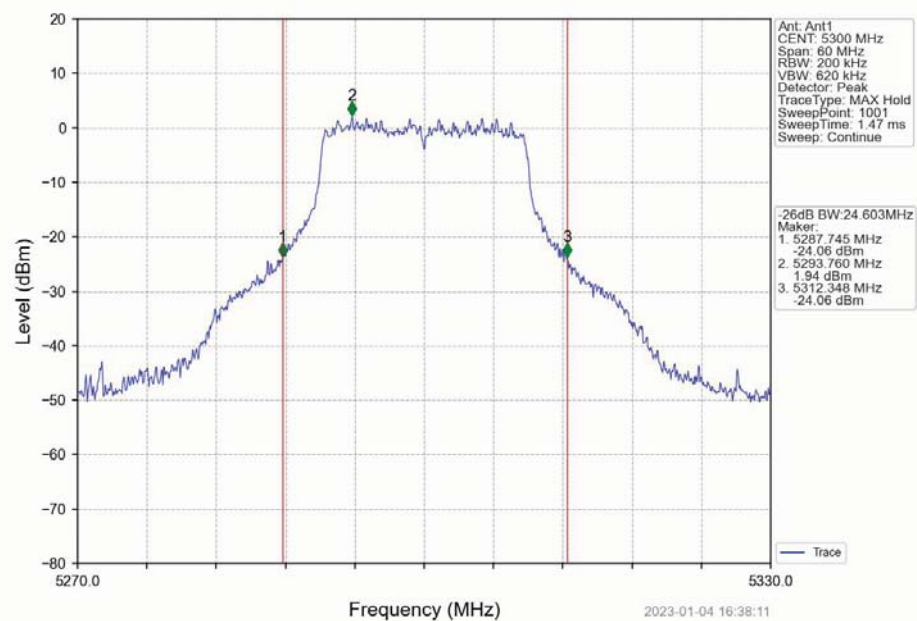
802.11a_HCH_5320MHz_Ant1_NTNV



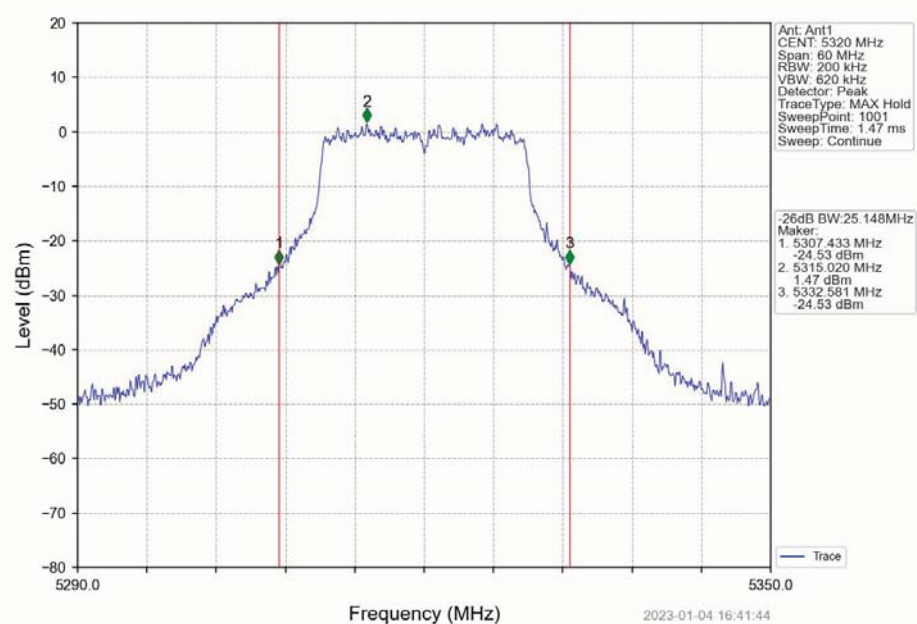
802.11n(HT20)_LCH_5260MHz_Ant1_NTNV



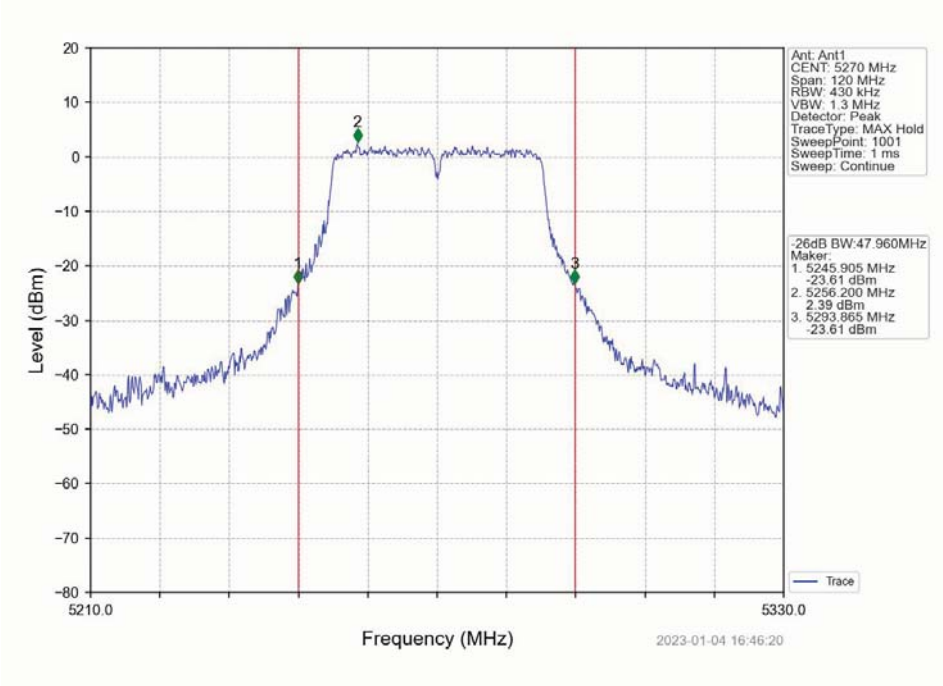
802.11n(HT20)_MCH_5300MHz_Ant1_NTNV



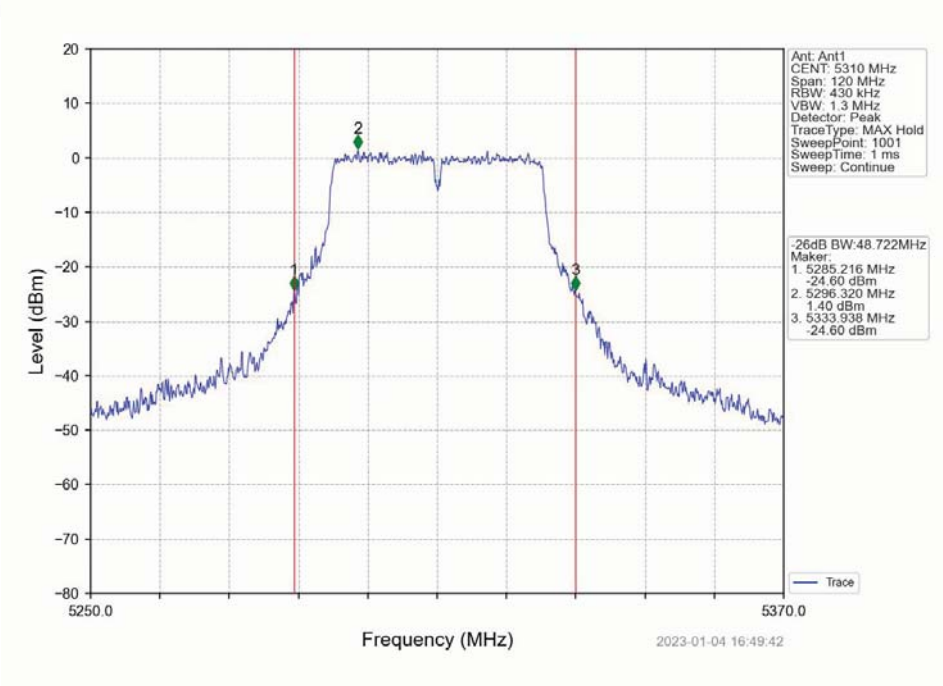
802.11n(HT20)_HCH_5320MHz_Ant1_NTNV



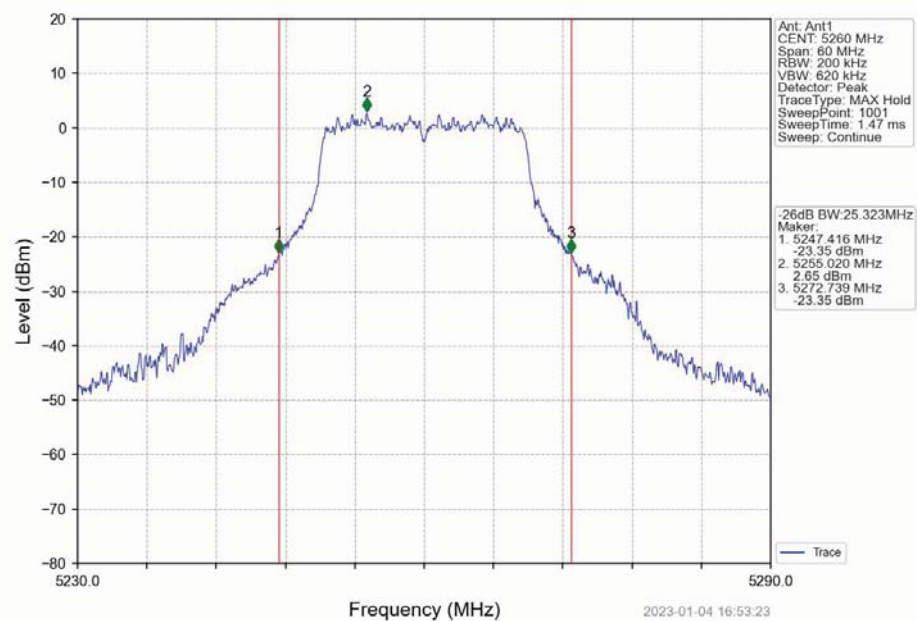
802.11n(HT40)_LCH_5270MHz_Ant1_NTNV



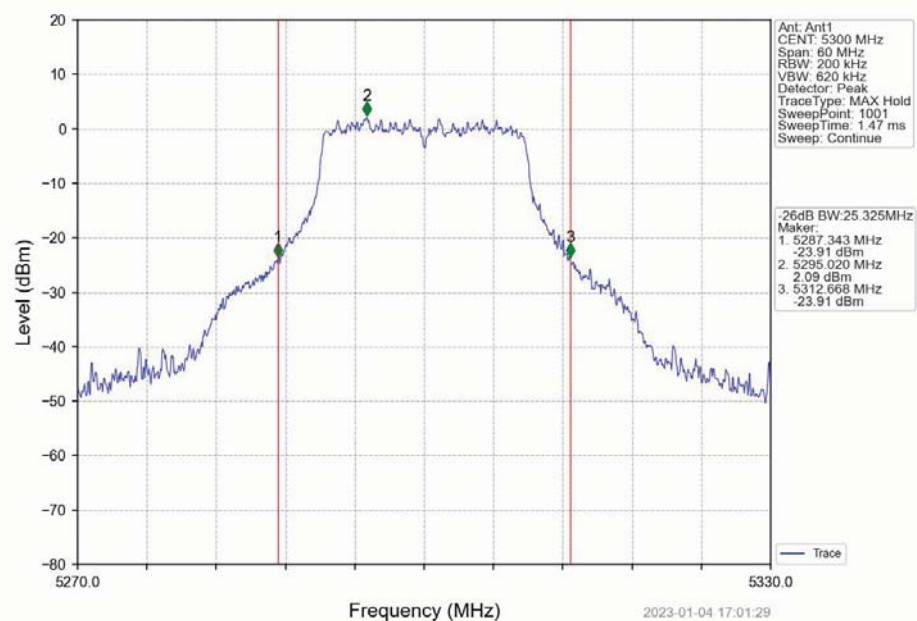
802.11n(HT40)_HCH_5310MHz_Ant1_NTNV



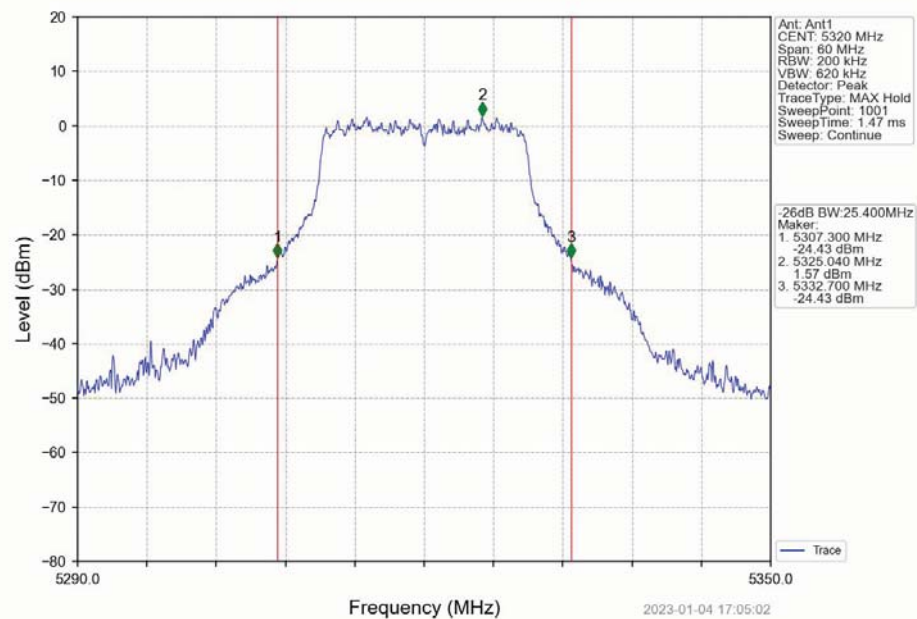
802.11ac(VHT20)_LCH_5260MHz_Ant1_NTNV



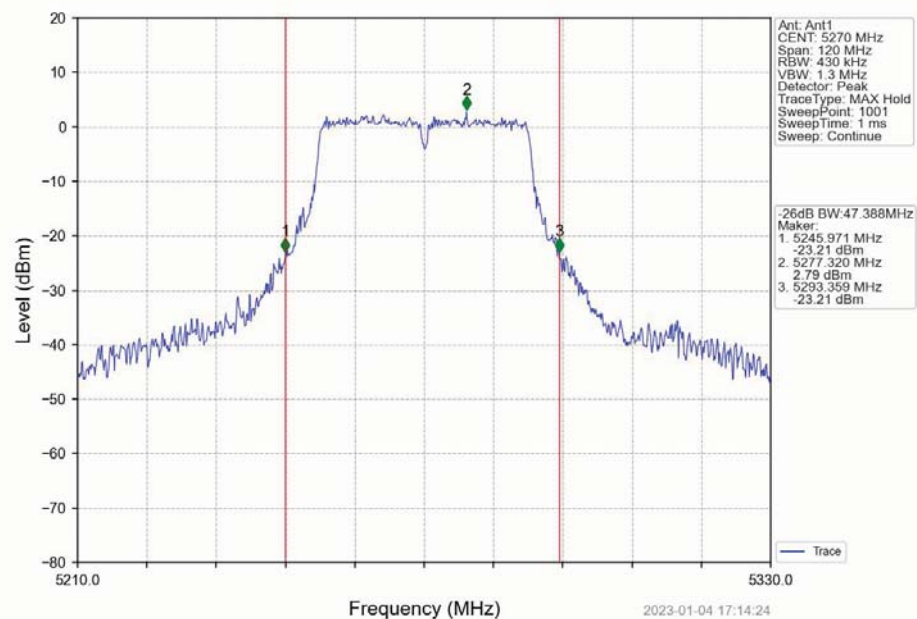
802.11ac(VHT20)_MCH_5300MHz_Ant1_NTNV

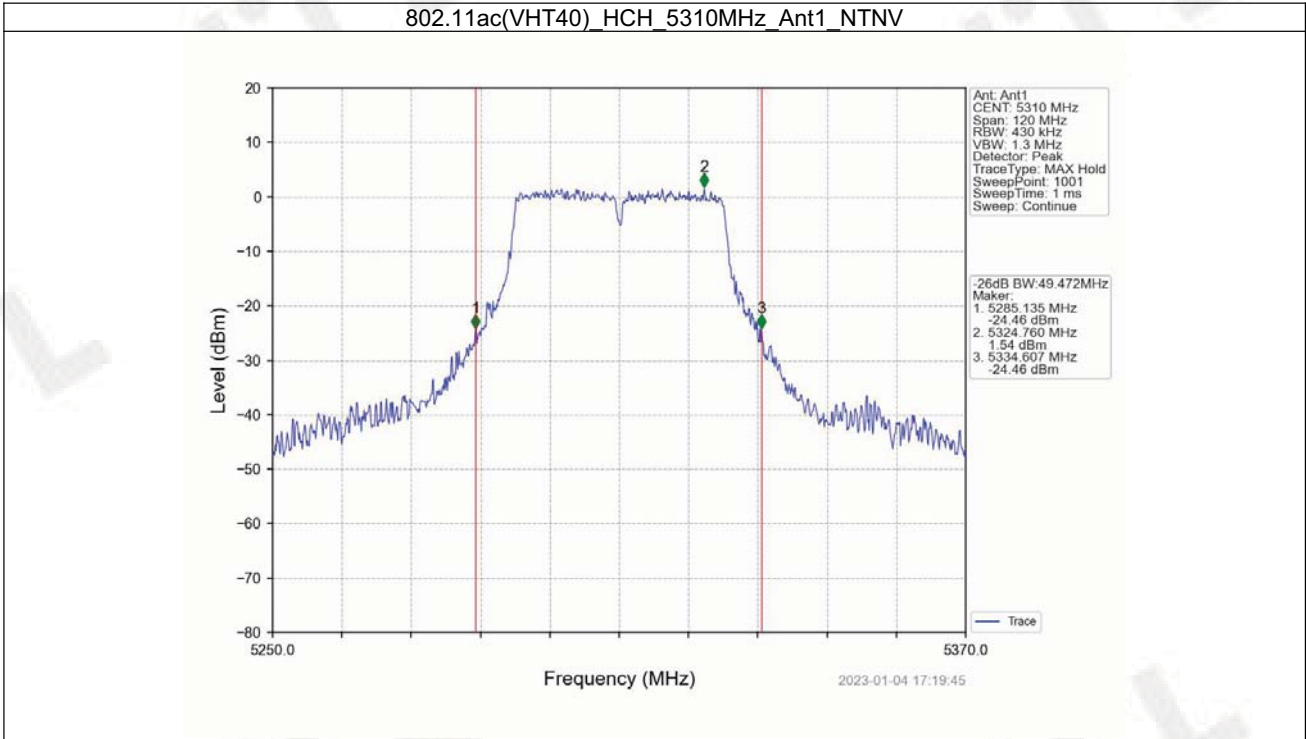


802.11ac(VHT20)_HCH_5320MHz_Ant1_NTNV



802.11ac(VHT40)_LCH_5270MHz_Ant1_NTNV





2. Maximum Conducted Output Power

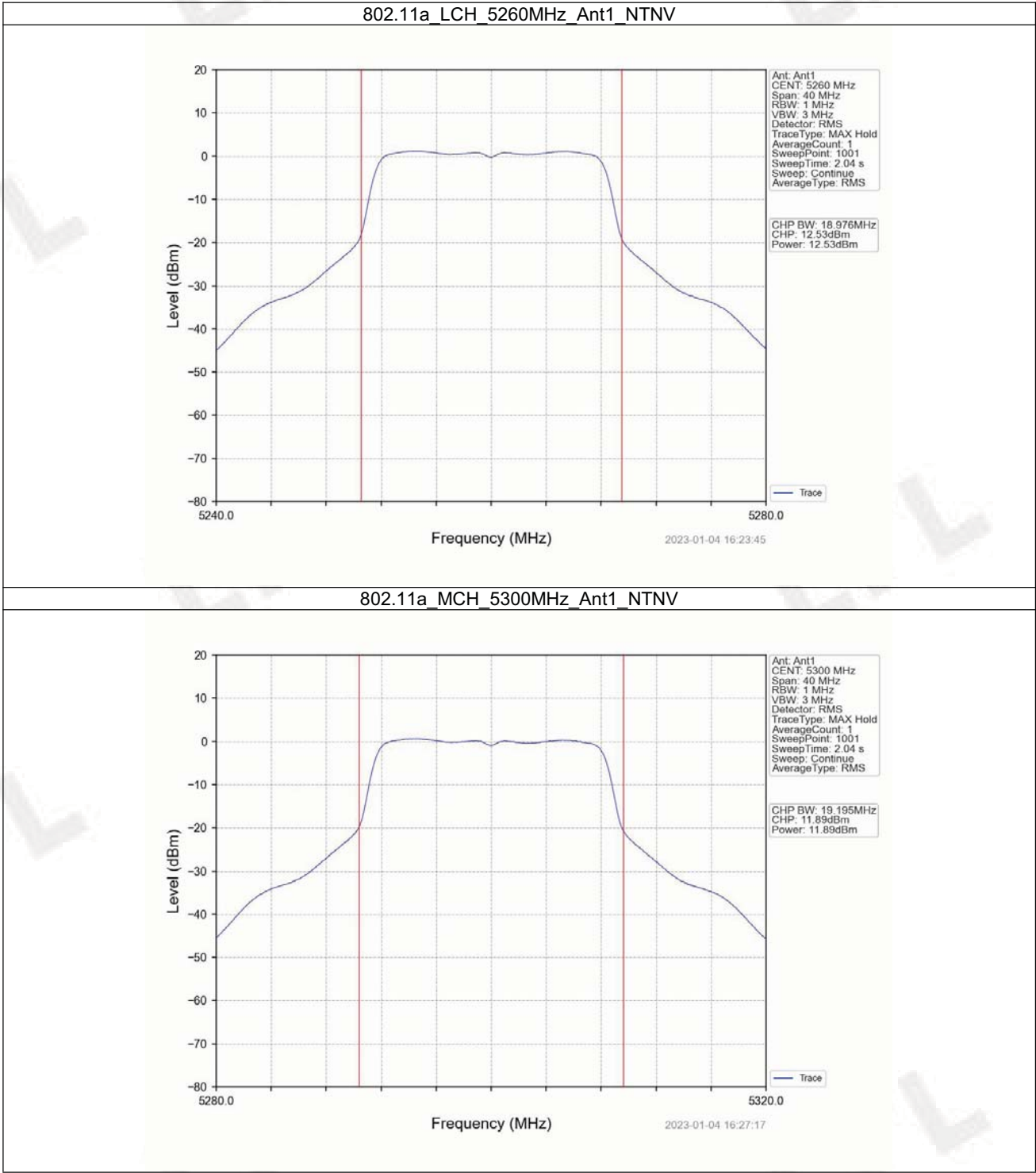
2.1 Power

2.1.1 Test Result

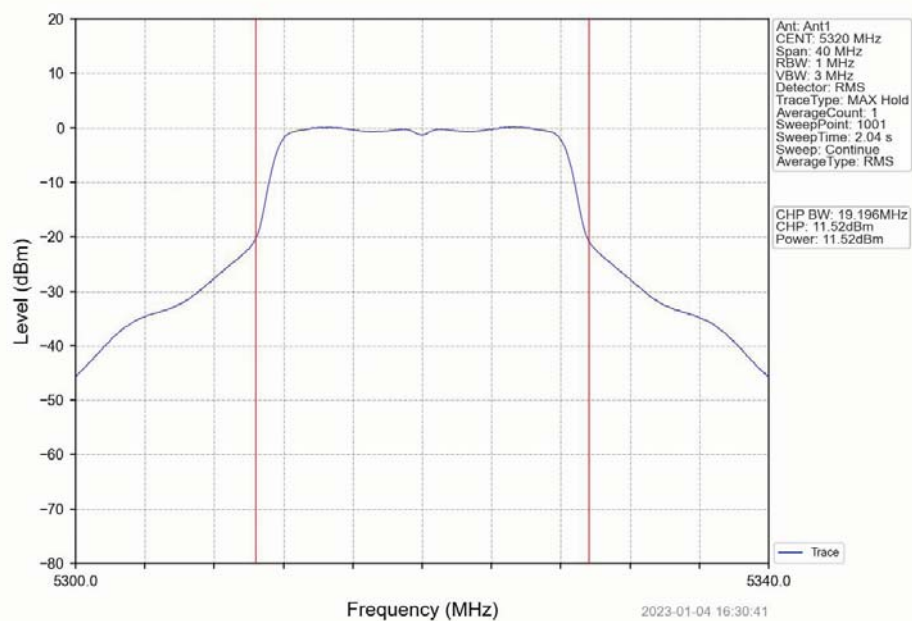
Mode	TX Type	Frequency (MHz)	Maximum Average Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11a	SISO	5260	12.53	<=23.98	Pass
		5300	11.89	<=23.98	Pass
		5320	11.52	<=23.98	Pass
802.11n (HT20)	SISO	5260	12.52	<=23.98	Pass
		5300	11.88	<=23.98	Pass
		5320	11.53	<=23.98	Pass
802.11n (HT40)	SISO	5270	12.50	<=23.98	Pass
		5310	11.77	<=23.98	Pass
802.11ac (VHT20)	SISO	5260	12.56	<=23.98	Pass
		5300	11.98	<=23.98	Pass
		5320	11.60	<=23.98	Pass
802.11ac (VHT40)	SISO	5270	12.54	<=23.98	Pass
		5310	11.81	<=23.98	Pass

Note1: Antenna Gain: Ant1:4.53dBi;

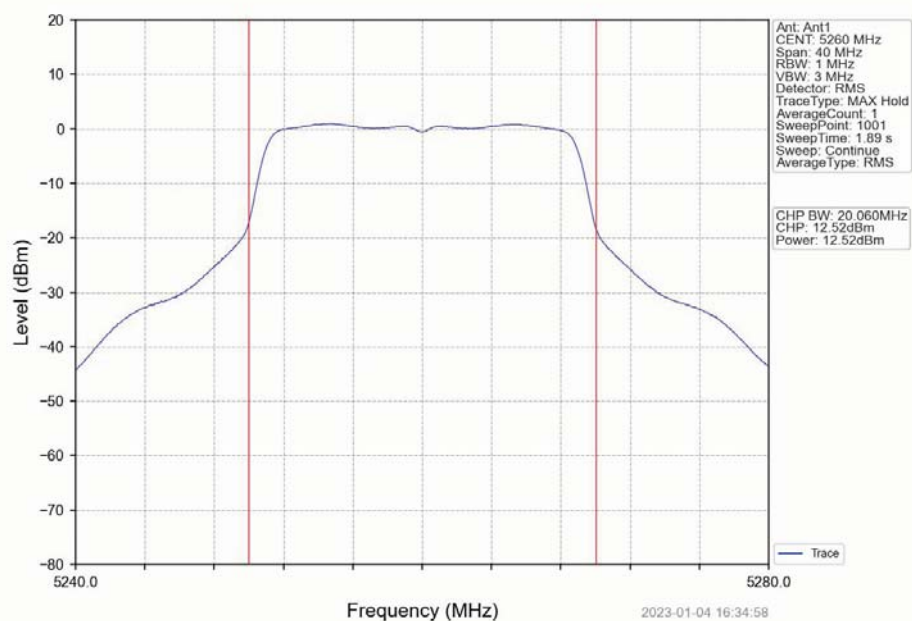
2.1.2 Test Graph



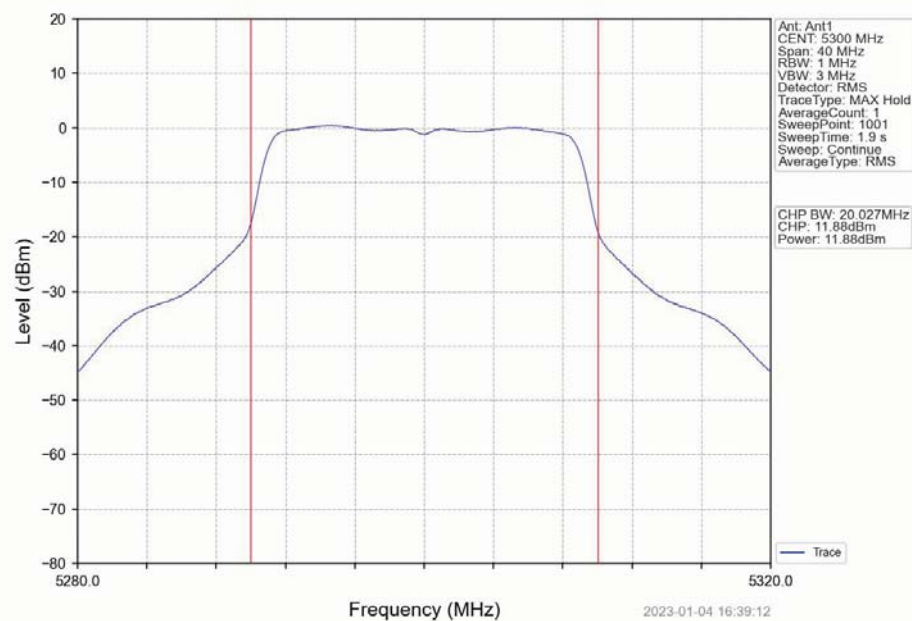
802.11a_HCH_5320MHz_Ant1_NTNV



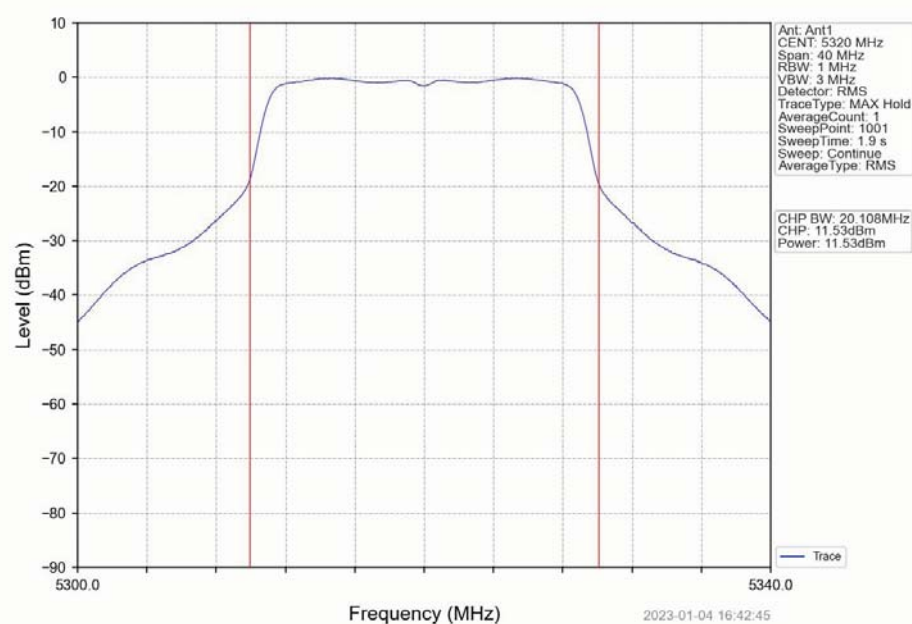
802.11n(HT20)_LCH_5260MHz_Ant1_NTNV



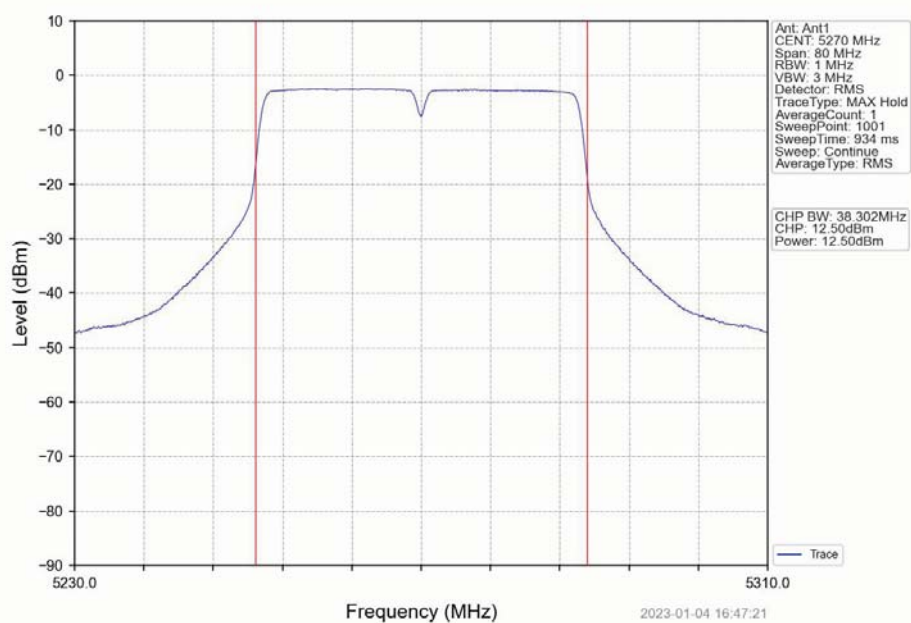
802.11n(HT20)_MCH_5300MHz_Ant1_NTNV



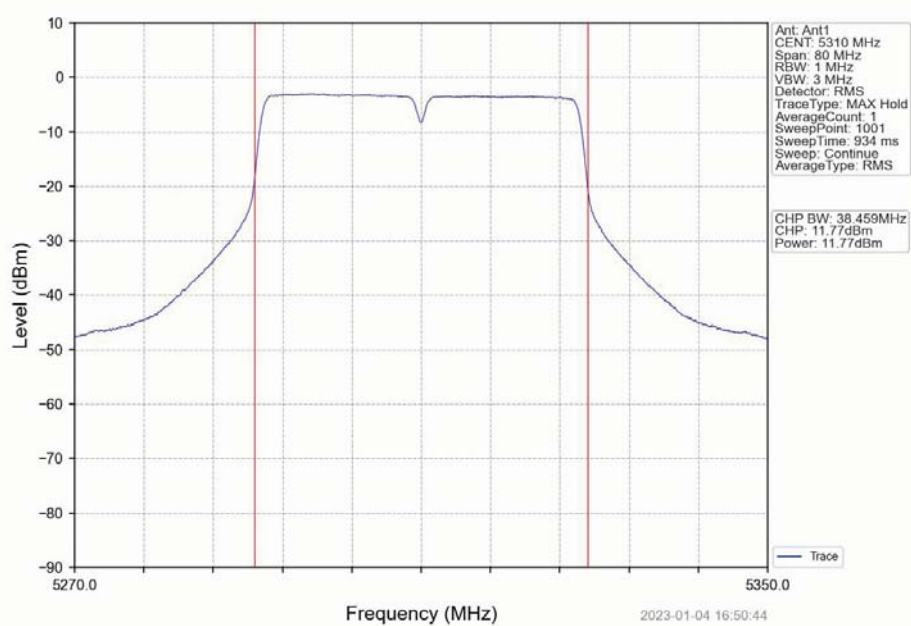
802.11n(HT20)_HCH_5320MHz_Ant1_NTNV



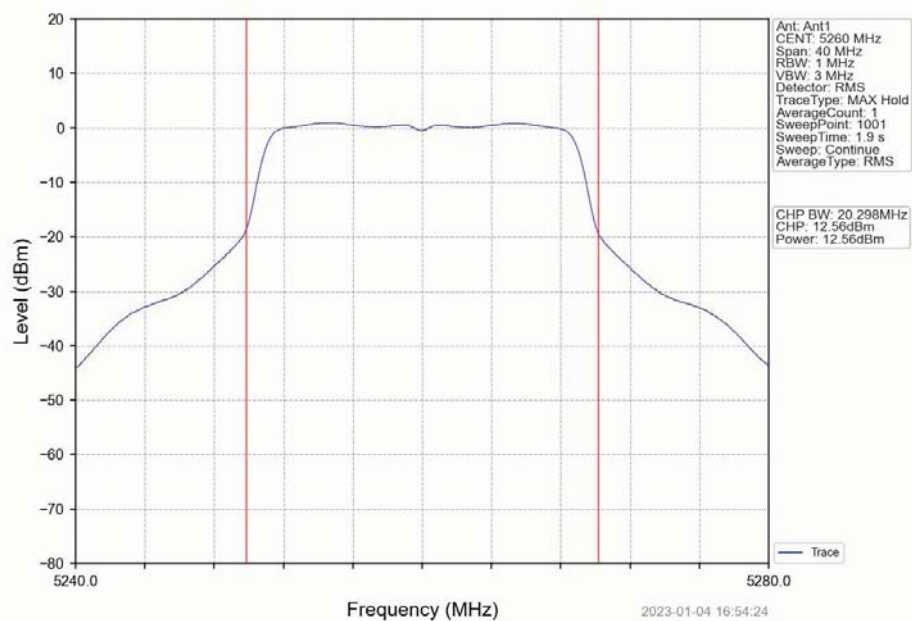
802.11n(HT40)_LCH_5270MHz_Ant1_NTNV



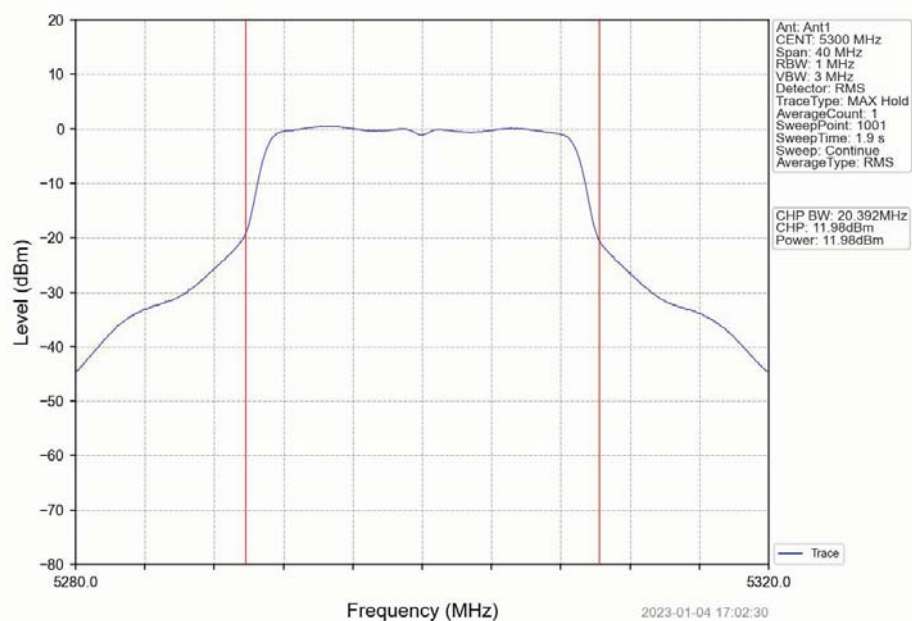
802.11n(HT40)_HCH_5310MHz_Ant1_NTNV



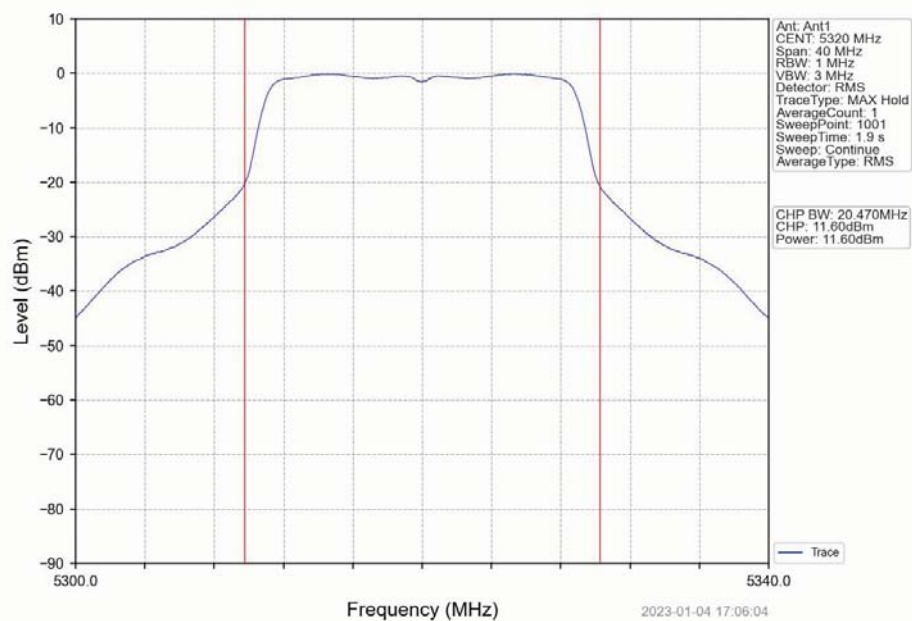
802.11ac(VHT20)_LCH_5260MHz_Ant1_NTNV



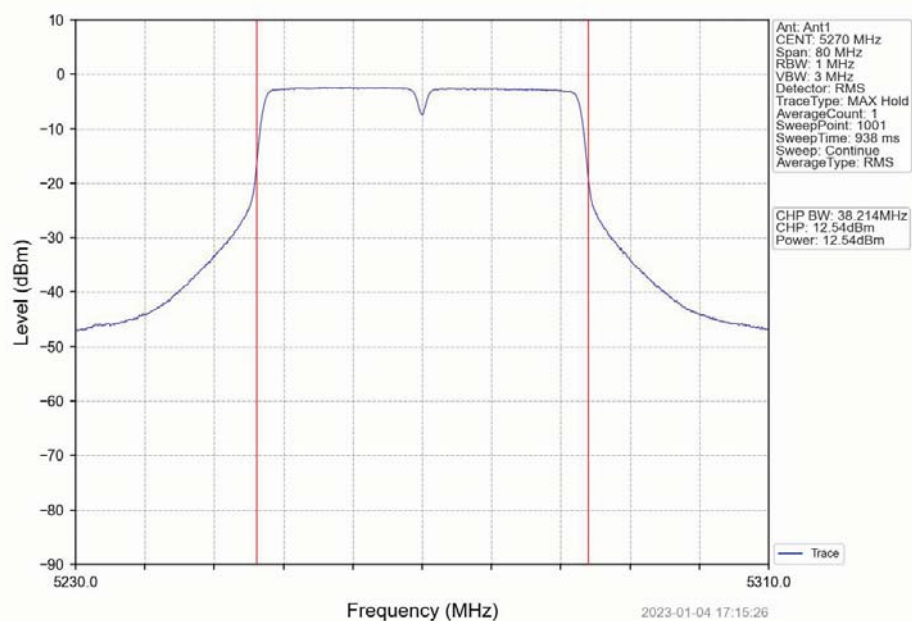
802.11ac(VHT20)_MCH_5300MHz_Ant1_NTNV



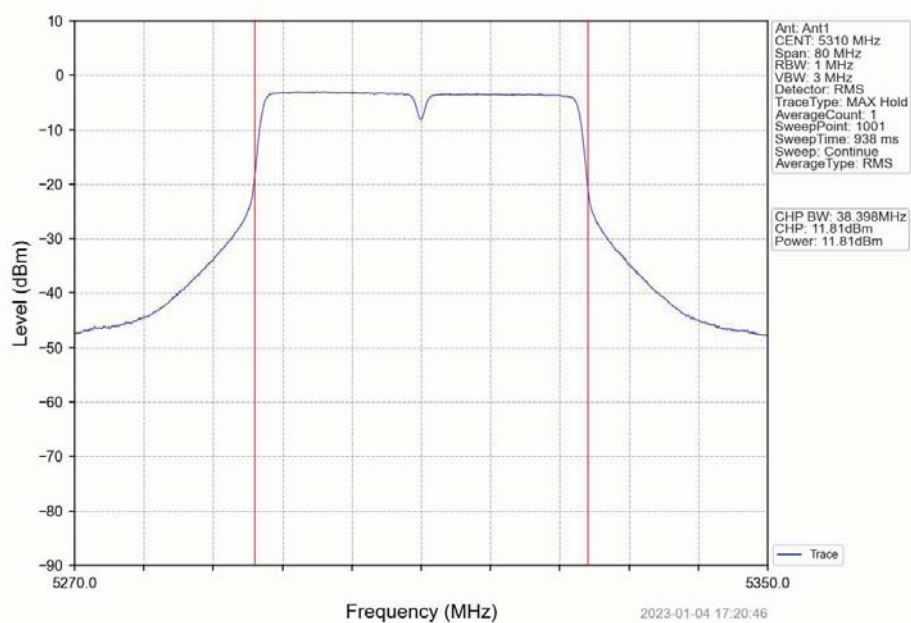
802.11ac(VHT20)_HCH_5320MHz_Ant1_NTNV



802.11ac(VHT40)_LCH_5270MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5310MHz_Ant1_NTNV



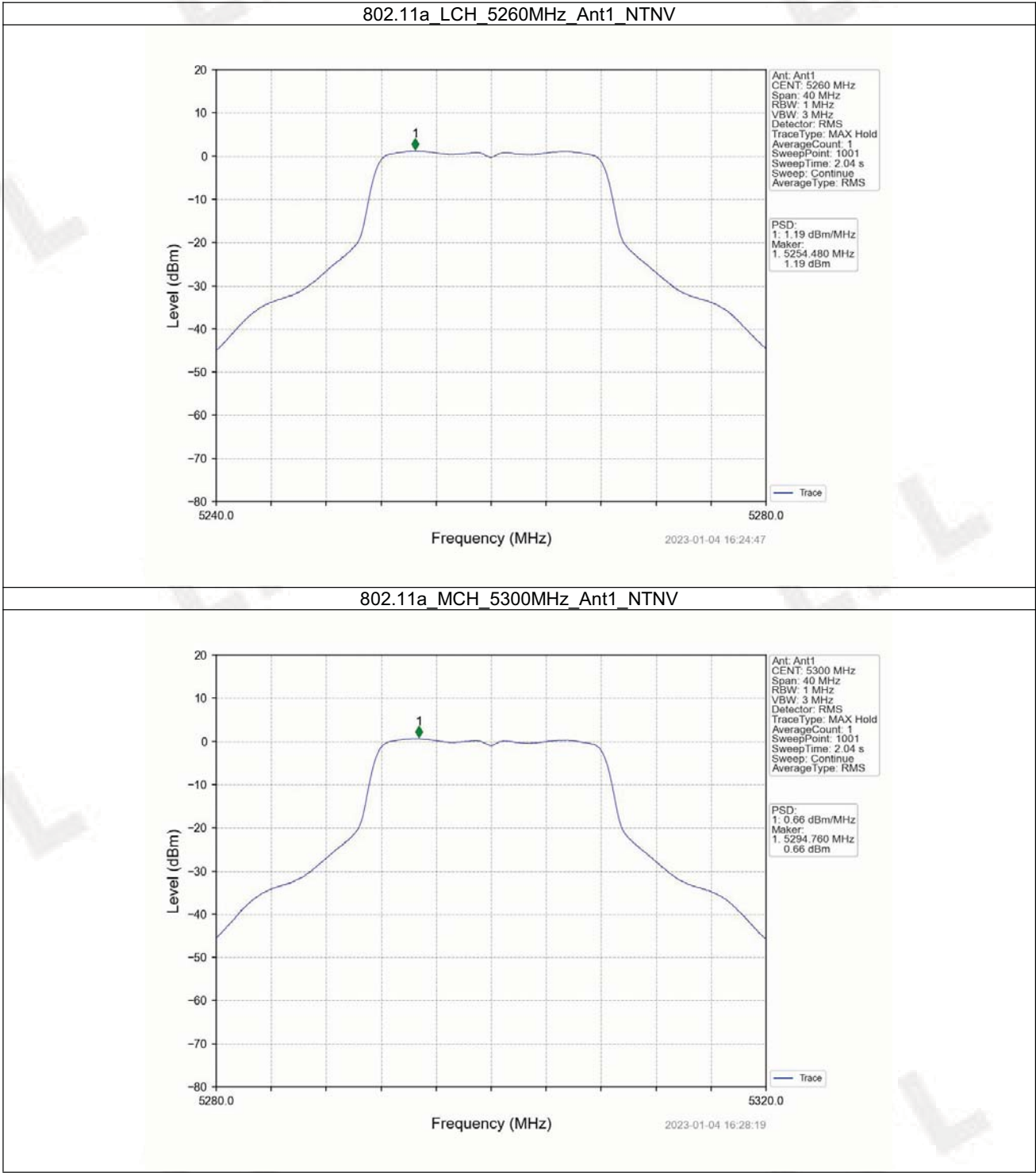
3. Maximum Power Spectral Density

3.1 PSD

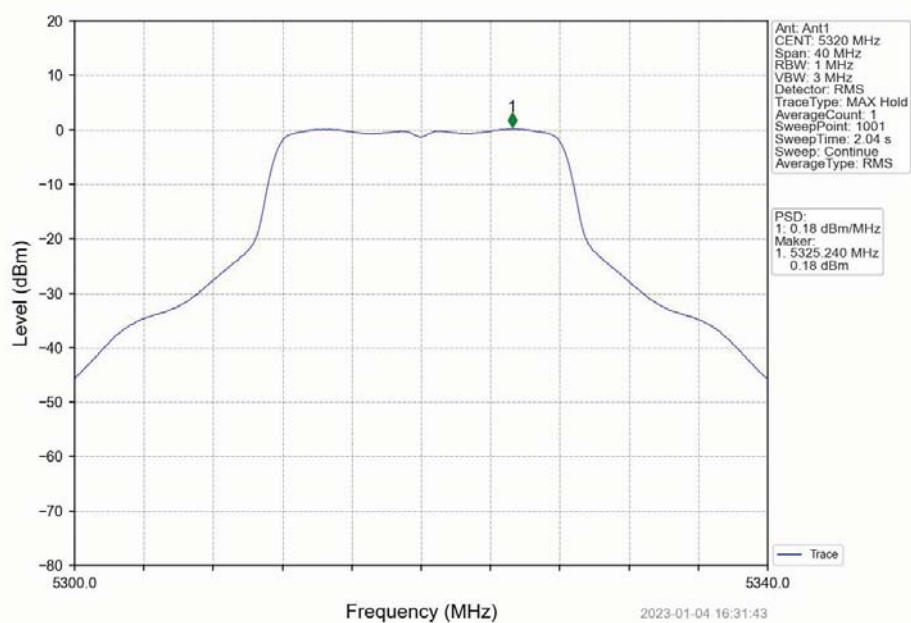
3.1.1 Test Result

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/MHz)		Verdict
			ANT1	Limit	
802.11a	SISO	5260	1.19	<=11	Pass
		5300	0.66	<=11	Pass
		5320	0.18	<=11	Pass
802.11n (HT20)	SISO	5260	0.90	<=11	Pass
		5300	0.42	<=11	Pass
		5320	-0.08	<=11	Pass
802.11n (HT40)	SISO	5270	-2.38	<=11	Pass
		5310	-3.03	<=11	Pass
802.11ac (VHT20)	SISO	5260	0.98	<=11	Pass
		5300	0.52	<=11	Pass
		5320	-0.05	<=11	Pass
802.11ac (VHT40)	SISO	5270	-2.36	<=11	Pass
		5310	-2.96	<=11	Pass
Note1: Antenna Gain: Ant1:4.53dBi;					

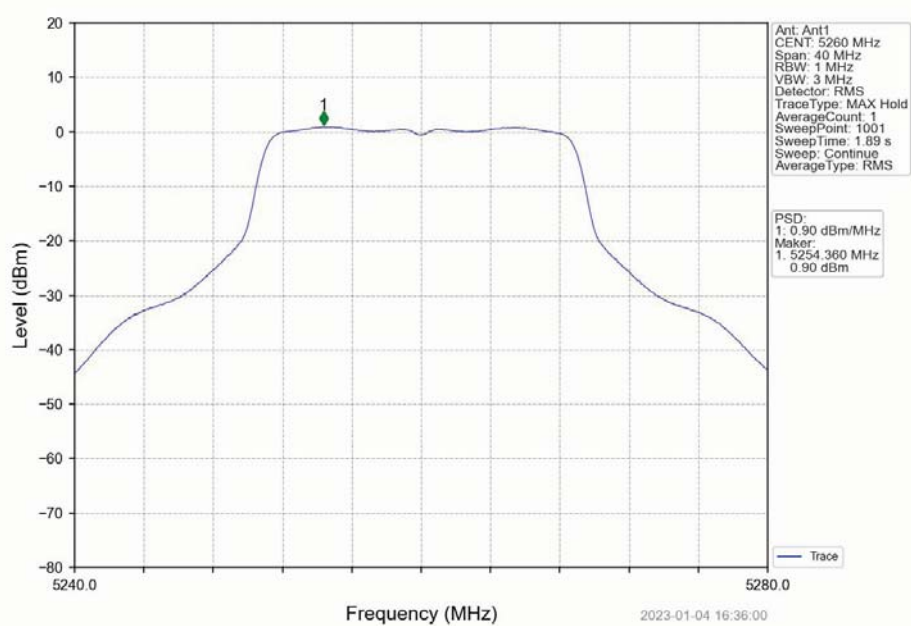
3.1.2 Test Graph



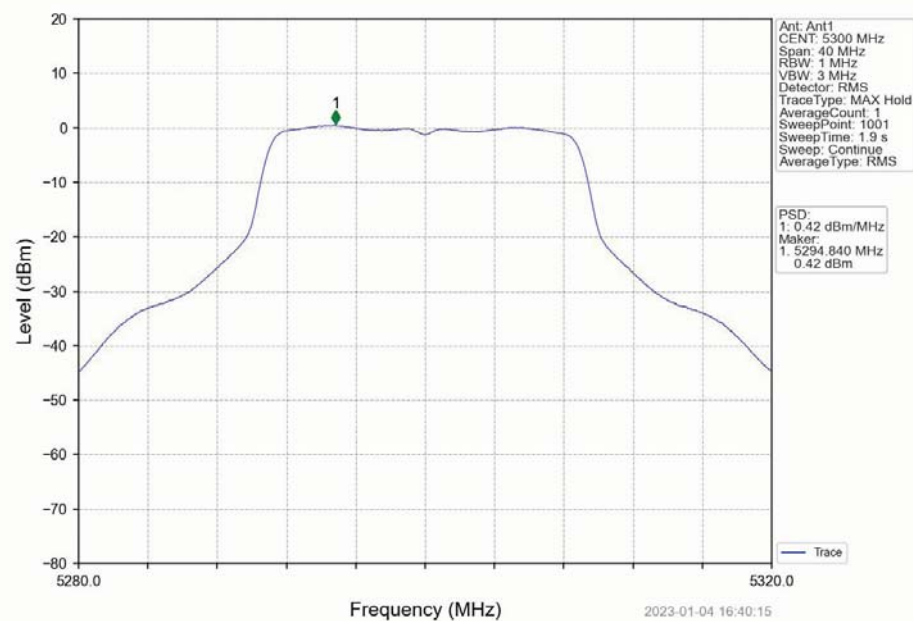
802.11a_HCH_5320MHz_Ant1_NTNV



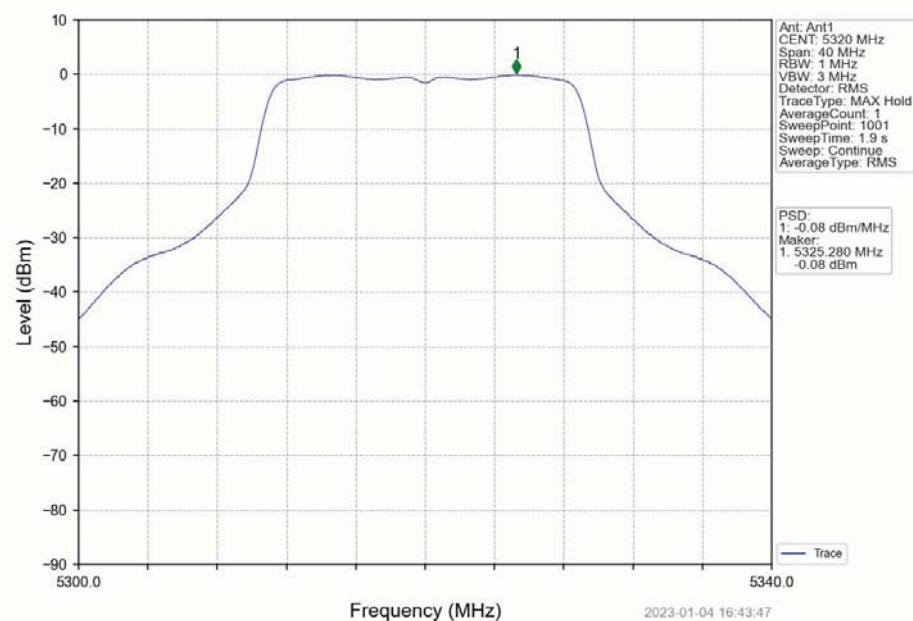
802.11n(HT20)_LCH_5260MHz_Ant1_NTNV



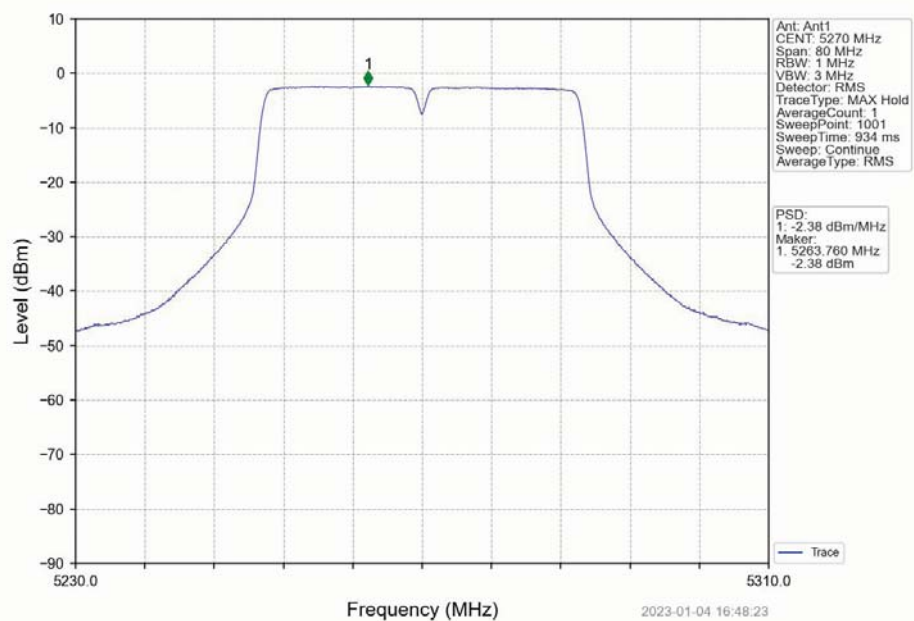
802.11n(HT20)_MCH_5300MHz_Ant1_NTNV



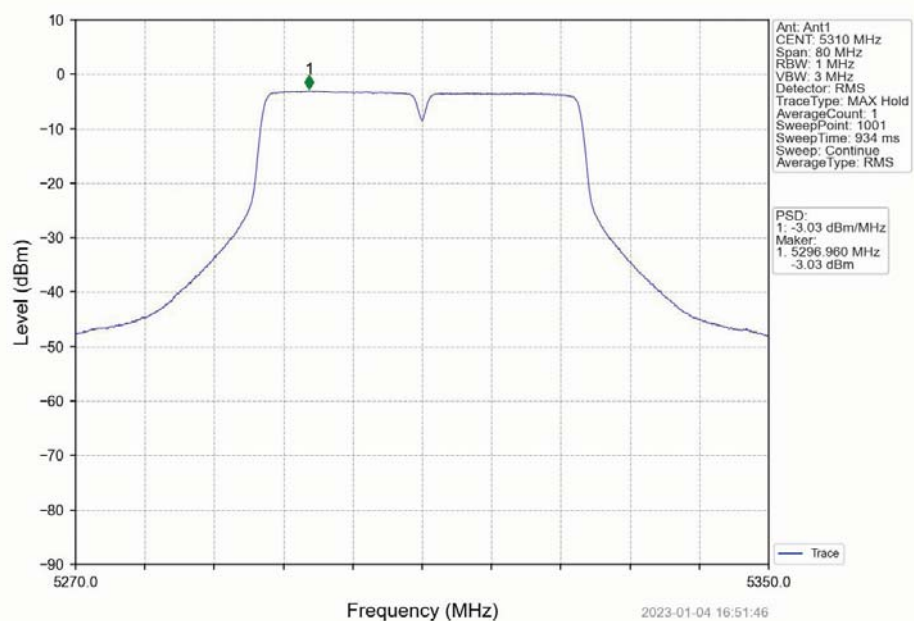
802.11n(HT20)_HCH_5320MHz_Ant1_NTNV



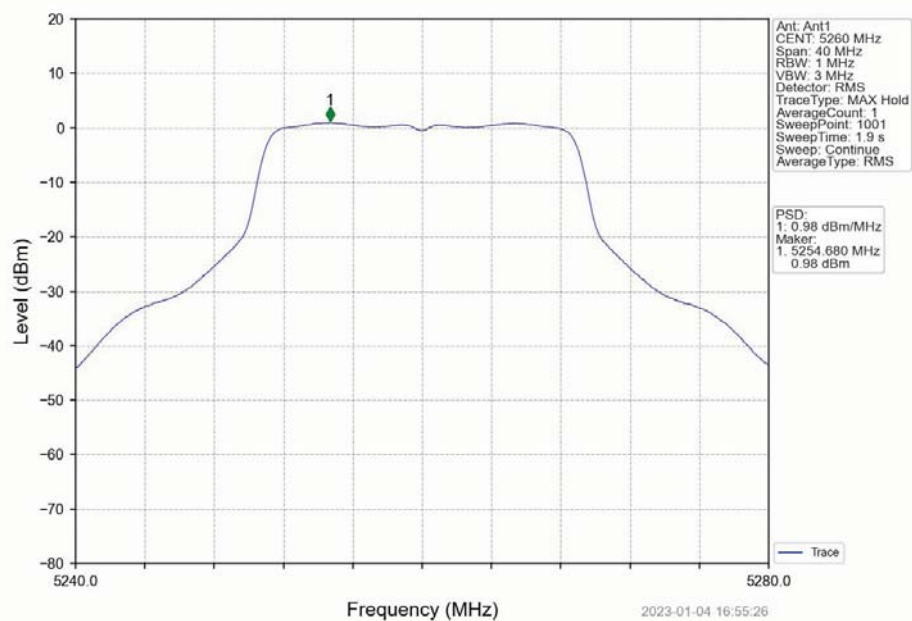
802.11n(HT40)_LCH_5270MHz_Ant1_NTNV



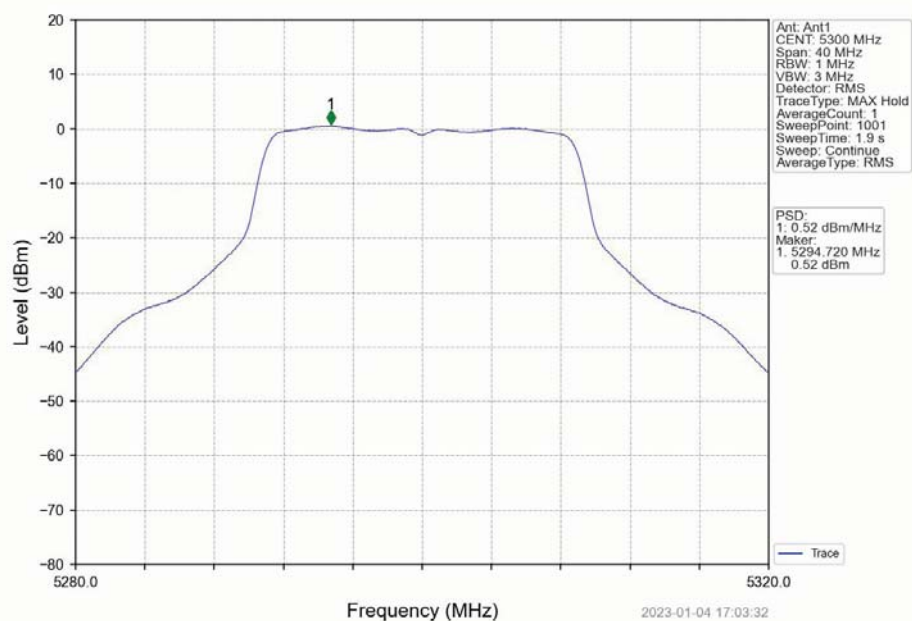
802.11n(HT40)_HCH_5310MHz_Ant1_NTNV



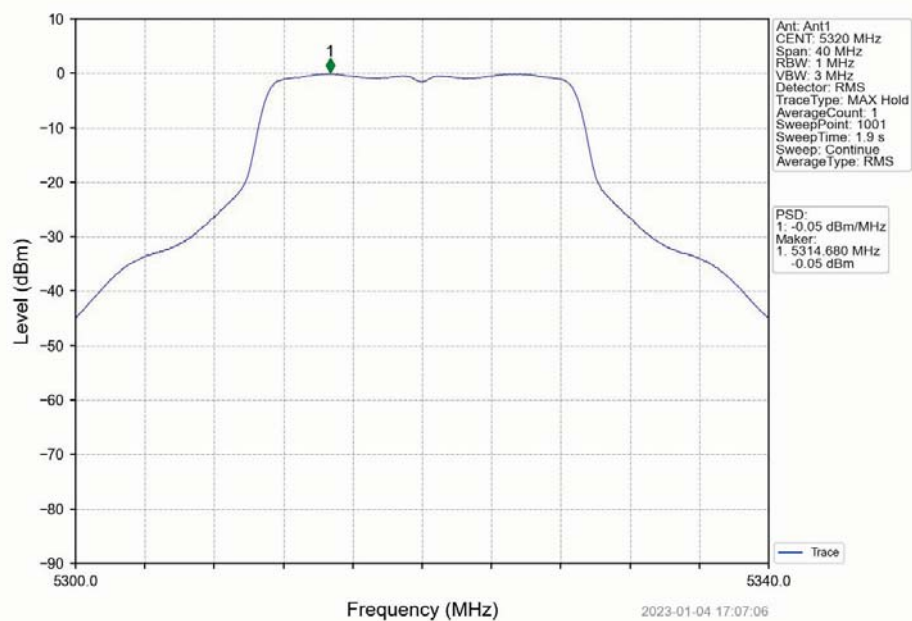
802.11ac(VHT20)_LCH_5260MHz_Ant1_NTNV



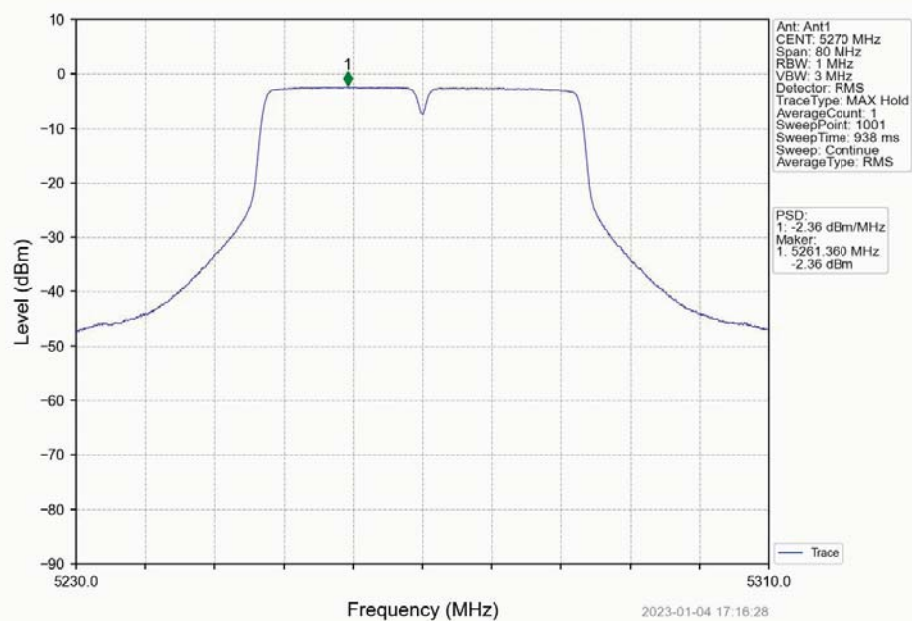
802.11ac(VHT20)_MCH_5300MHz_Ant1_NTNV



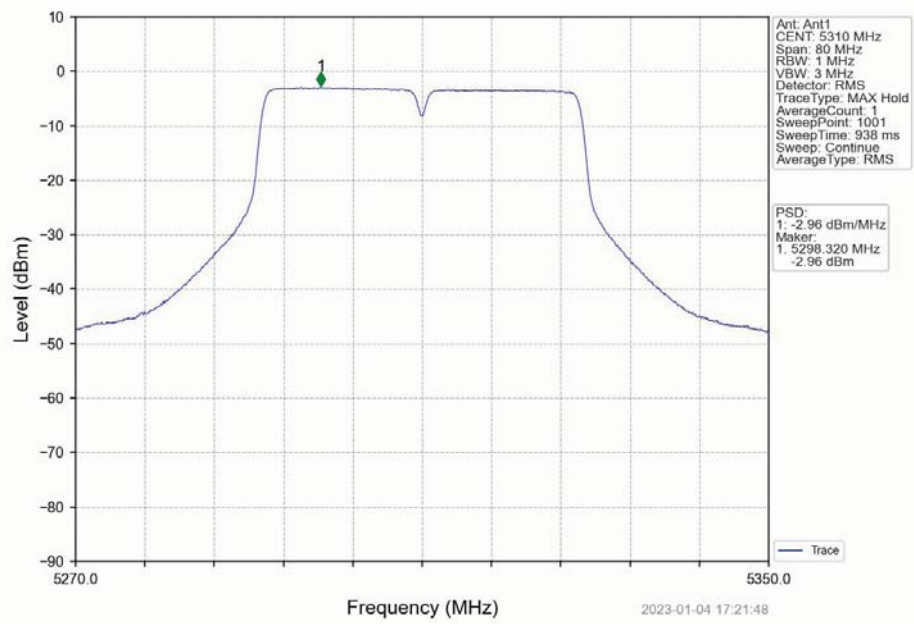
802.11ac(VHT20)_HCH_5320MHz_Ant1_NTNV



802.11ac(VHT40)_LCH_5270MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5310MHz_Ant1_NTNV



4. Frequency Stability

4.1 Ant1

4.1.1 Test Result

Ant1							
Mode	TX Type	Frequency (MHz)	Temperature (°C)	Voltage (VAC)	Measured Frequency (MHz)	Limit (MHz)	Verdict
Carrier Wave	SISO	5260	20	102	5259.986	5250 to 5350	Pass
				120	5259.986	5250 to 5350	Pass
				138	5259.986	5250 to 5350	Pass
			-30	120	5259.986	5250 to 5350	Pass
			-20	120	5259.986	5250 to 5350	Pass
			-10	120	5259.986	5250 to 5350	Pass
			0	120	5259.986	5250 to 5350	Pass
			10	120	5259.986	5250 to 5350	Pass
			30	120	5259.986	5250 to 5350	Pass
			40	120	5259.986	5250 to 5350	Pass
			50	120	5259.986	5250 to 5350	Pass
		5300	20	102	5299.871	5250 to 5350	Pass
				120	5300.407	5250 to 5350	Pass
				138	5300.093	5250 to 5350	Pass
			-30	120	5300.007	5250 to 5350	Pass
			-20	120	5300.470	5250 to 5350	Pass
			-10	120	5300.076	5250 to 5350	Pass
			0	120	5300.243	5250 to 5350	Pass
			10	120	5300.452	5250 to 5350	Pass
			30	120	5300.251	5250 to 5350	Pass
			40	120	5300.057	5250 to 5350	Pass
			50	120	5300.062	5250 to 5350	Pass
		5320	20	102	5320.106	5250 to 5350	Pass
				120	5320.113	5250 to 5350	Pass
				138	5320.477	5250 to 5350	Pass
			-30	120	5320.312	5250 to 5350	Pass
			-20	120	5320.400	5250 to 5350	Pass
			-10	120	5320.490	5250 to 5350	Pass
			0	120	5320.496	5250 to 5350	Pass
			10	120	5320.484	5250 to 5350	Pass
			30	120	5320.448	5250 to 5350	Pass
			40	120	5320.114	5250 to 5350	Pass
			50	120	5320.450	5250 to 5350	Pass
		5270	20	102	5269.625	5250 to 5350	Pass
				120	5269.988	5250 to 5350	Pass
				138	5269.538	5250 to 5350	Pass
			-30	120	5269.631	5250 to 5350	Pass
			-20	120	5270.156	5250 to 5350	Pass
			-10	120	5269.637	5250 to 5350	Pass
			0	120	5269.854	5250 to 5350	Pass
			10	120	5269.600	5250 to 5350	Pass
			30	120	5269.573	5250 to 5350	Pass
			40	120	5270.208	5250 to 5350	Pass
			50	120	5269.950	5250 to 5350	Pass
		5310	20	102	5309.985	5250 to 5350	Pass
				120	5309.985	5250 to 5350	Pass
				138	5309.985	5250 to 5350	Pass

			-30	120	5309.985	5250 to 5350	Pass
			-20	120	5309.985	5250 to 5350	Pass
			-10	120	5309.985	5250 to 5350	Pass
			0	120	5309.985	5250 to 5350	Pass
			10	120	5309.985	5250 to 5350	Pass
			30	120	5309.985	5250 to 5350	Pass
			40	120	5309.985	5250 to 5350	Pass
			50	120	5309.985	5250 to 5350	Pass