Appendix Test Data for RLAN(5.2G) (Conducted Measurement)

Product Name: 1080P Wireless Extender with HUB (TYPE/CM TO PD+HDMI+2*USB-C3.0+USB-A3.0+ Button)

Trade Mark: N/A

Test Model: HB799

FCC ID: 2BKCK-HB799

Environmental Conditions

Temperature:	23.1℃
Relative Humidity:	51%
ATM Pressure:	100.0 kPa
Test voltage	DC 5V
Test Engineer:	Tony luo
Supervised by:	Max zhang
NOTE	N/A

1. Duty Cycle

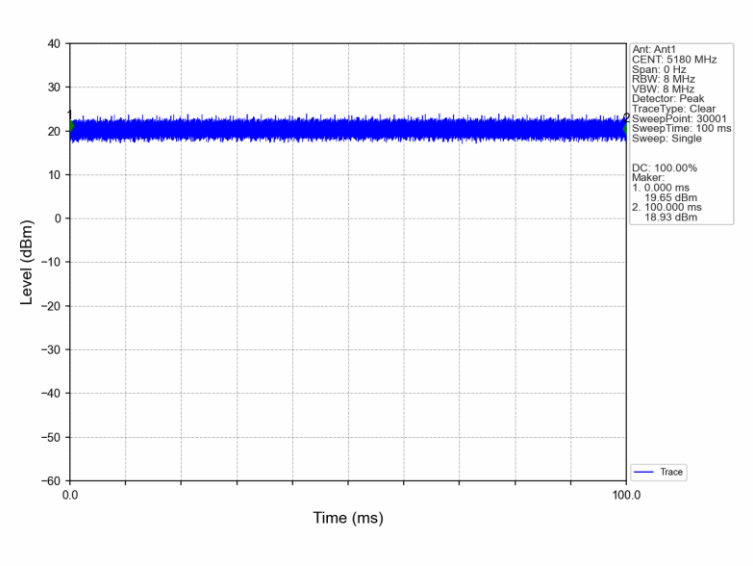
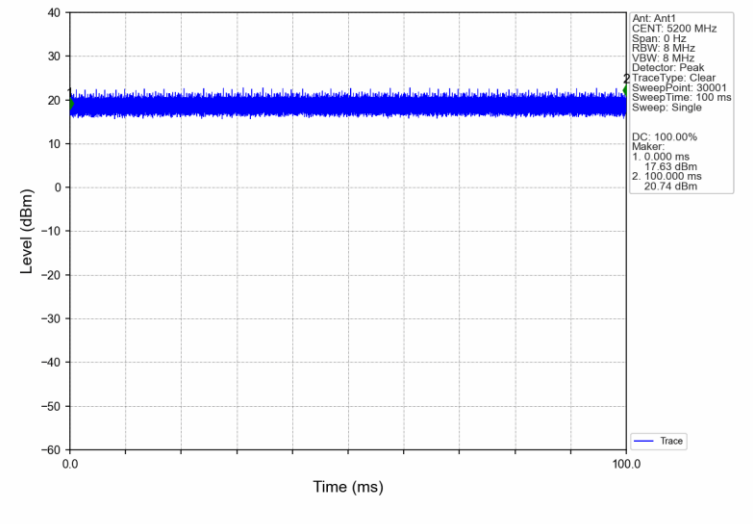
1.1 Test Result

1.1.1 Ant1

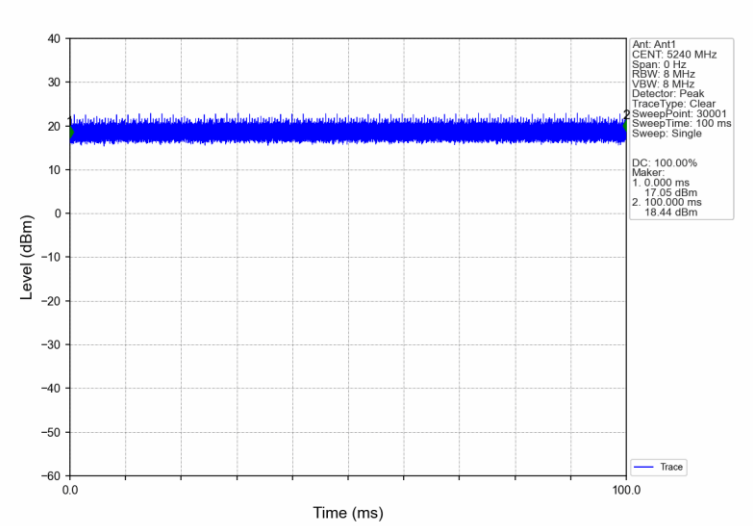
Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11a	SISO	5180	100.000	100.000	100.00	0.00	0.00
		5200	100.000	100.000	100.00	0.00	0.00
		5240	100.000	100.000	100.00	0.00	0.00
802.11n (HT20)	SISO	5180	100.000	100.000	100.00	0.00	0.00
		5200	100.000	100.000	100.00	0.00	0.00
		5240	100.000	100.000	100.00	0.00	0.00

1.2 Test Graph

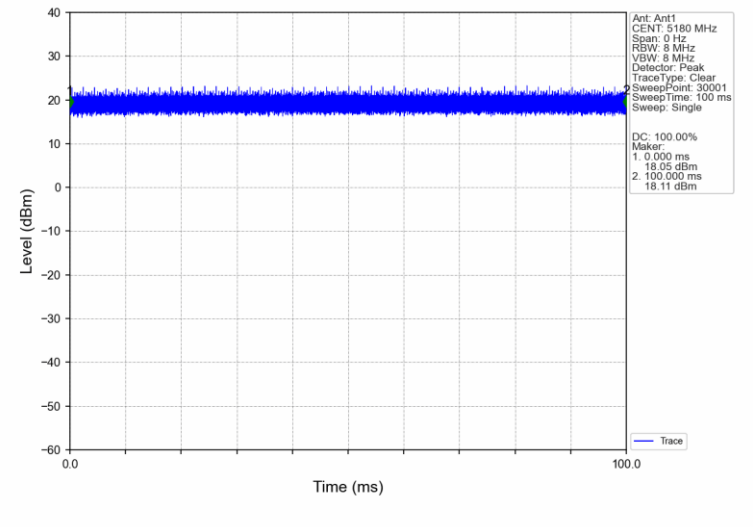
1.2.1 Ant1

802.11a_LCH_5180MHz_Ant1_NTNV

802.11a_MCH_5200MHz_Ant1_NTNV


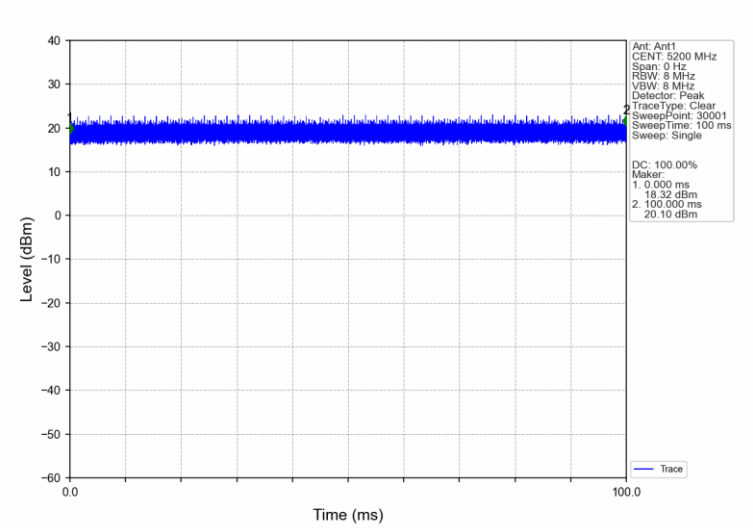
802.11a_HCH_5240MHz_Ant1_NTNV



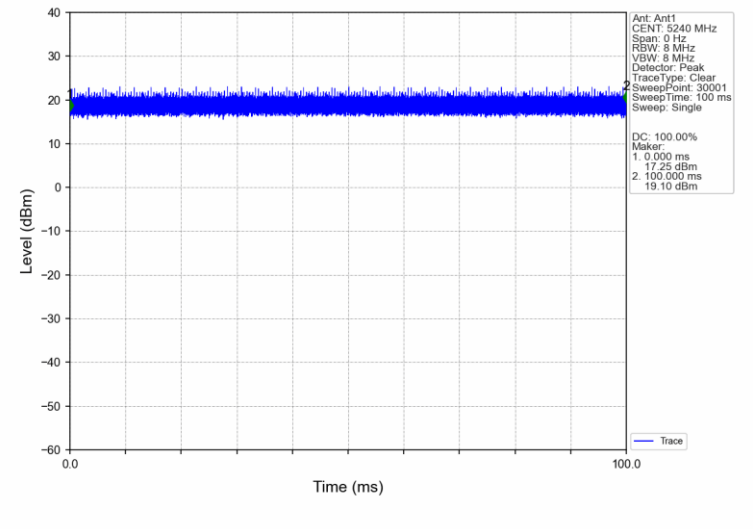
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



2. Bandwidth

2.1 Test Result

2.1.1 OBW

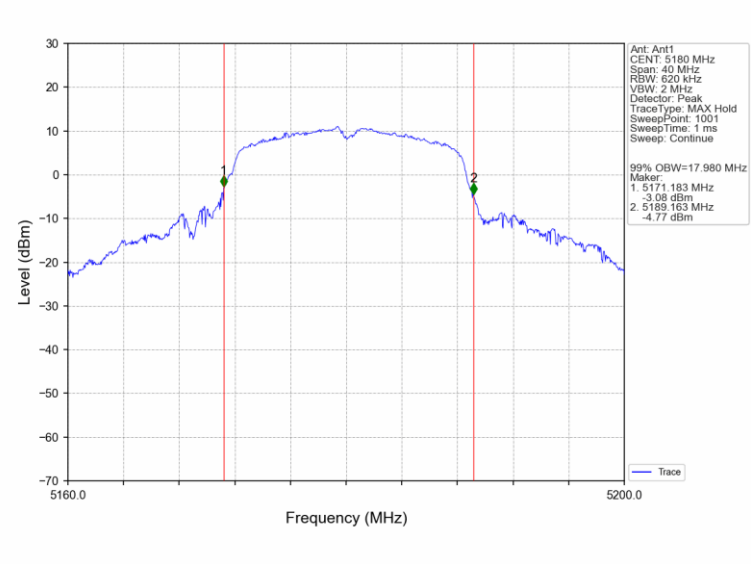
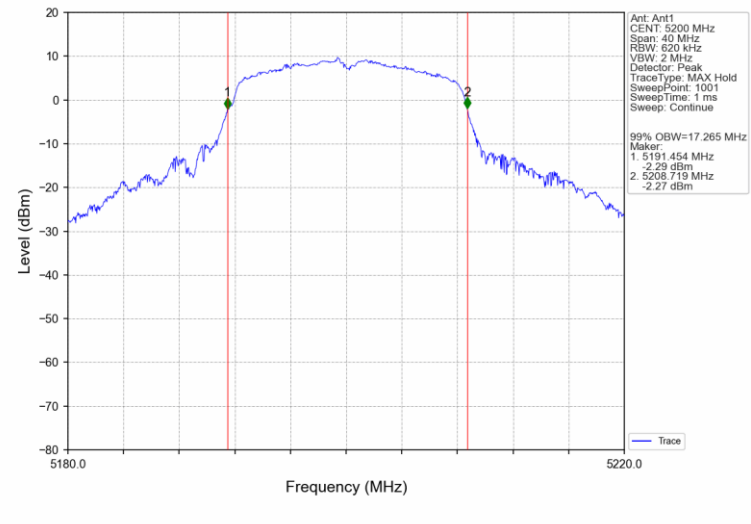
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	17.980	/	Pass
		5200	1	17.265	/	Pass
		5240	1	17.169	/	Pass
802.11n (HT20)	SISO	5180	1	17.321	/	Pass
		5200	1	17.359	/	Pass
		5240	1	17.184	/	Pass

2.1.2 26dB BW

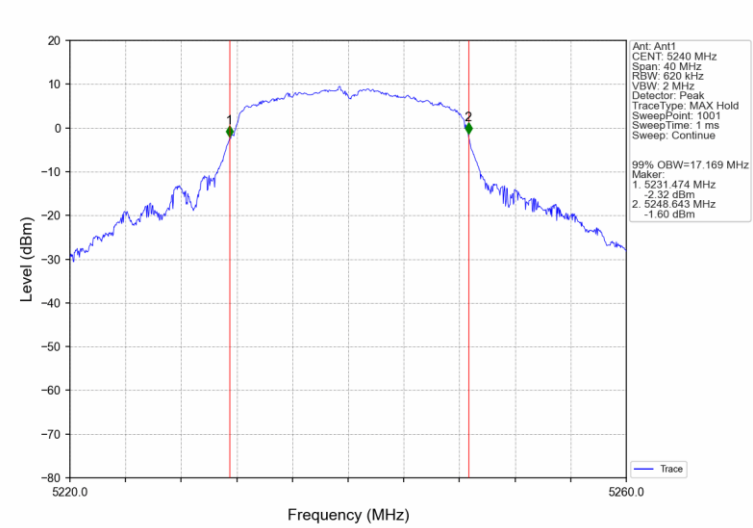
Mode	TX Type	Frequency (MHz)	ANT	26dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	30.583	/	Pass
		5200	1	24.656	/	Pass
		5240	1	21.482	/	Pass
802.11n (HT20)	SISO	5180	1	26.253	/	Pass
		5200	1	26.260	/	Pass
		5240	1	21.635	/	Pass

2.2 Test Graph

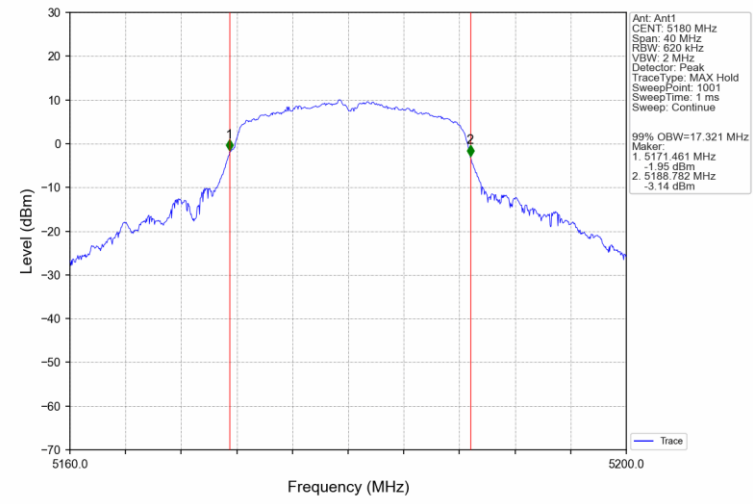
2.2.1 OBW

802.11a_LCH_5180MHz_Ant1_NTNV

802.11a_MCH_5200MHz_Ant1_NTNV


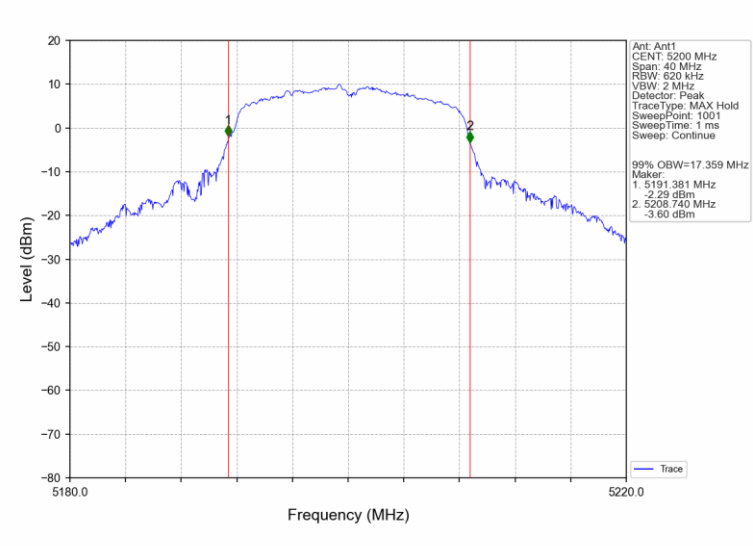
802.11a_HCH_5240MHz_Ant1_NTNV



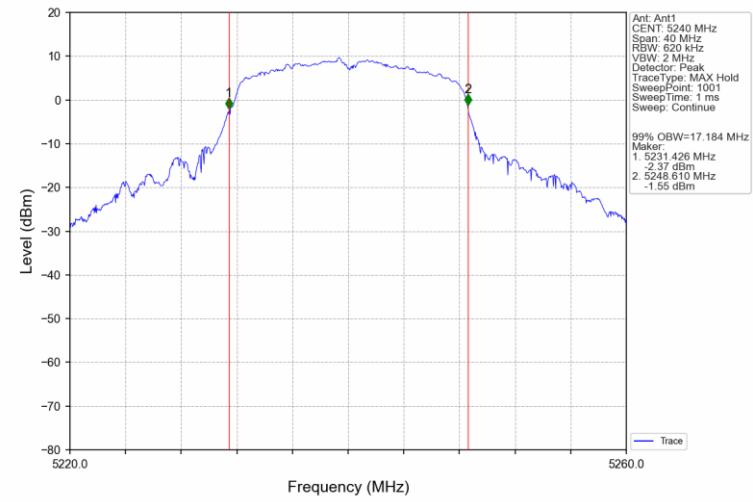
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



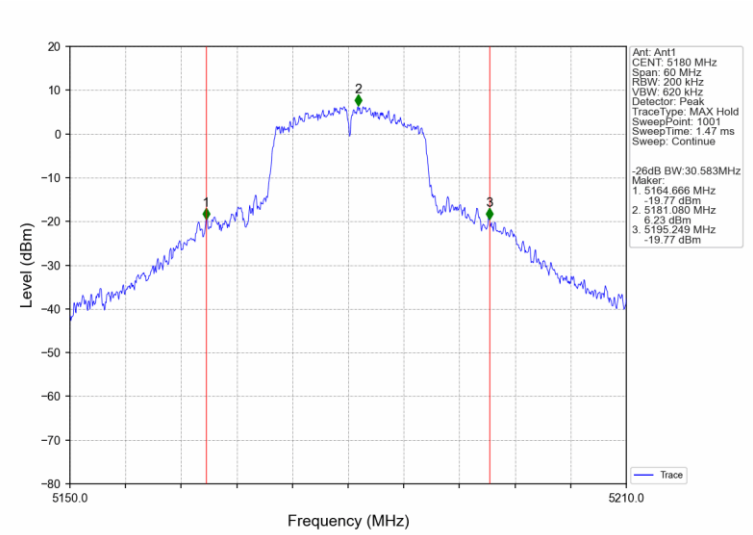
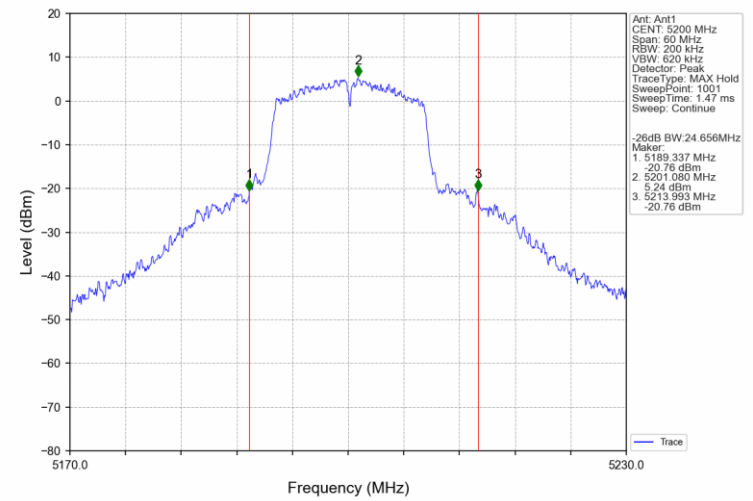
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



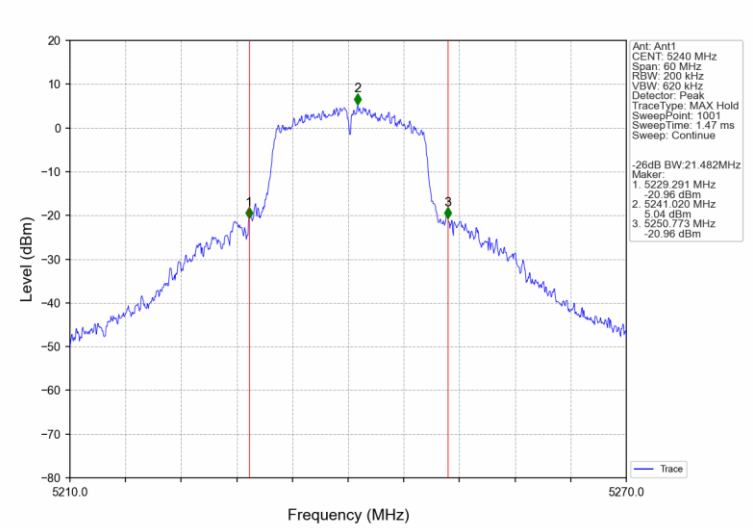
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



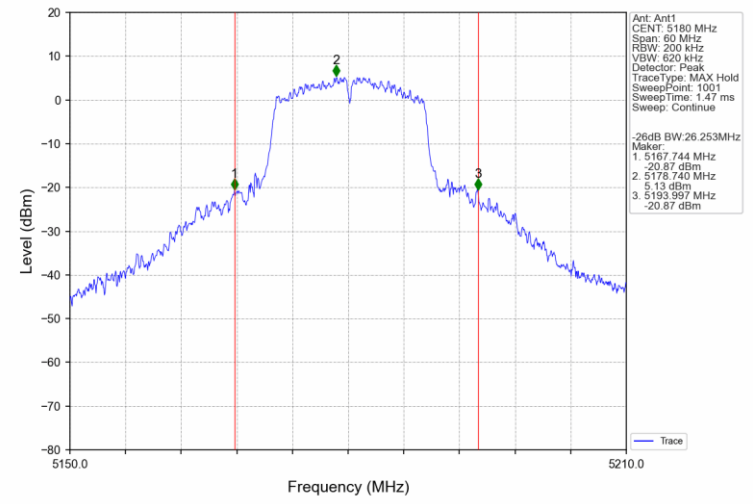
2.2.2 26dB BW

802.11a_LCH_5180MHz_Ant1_NTNV

802.11a_MCH_5200MHz_Ant1_NTNV


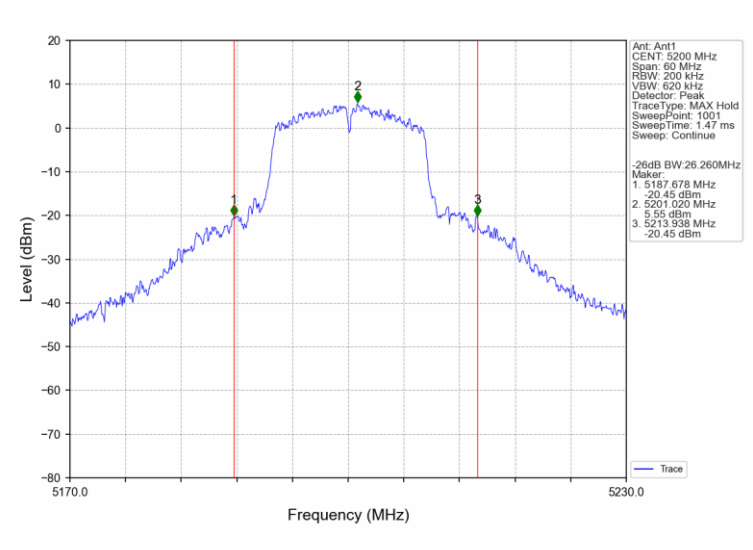
802.11a_HCH_5240MHz_Ant1_NTNV



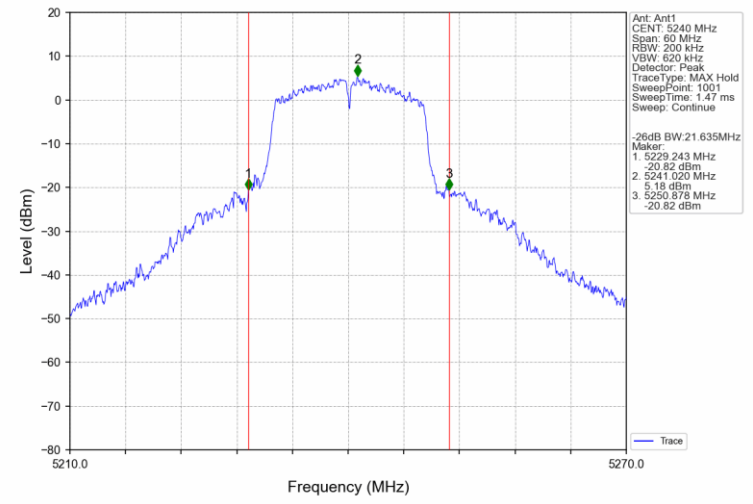
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



3. Maximum Conducted Output Power

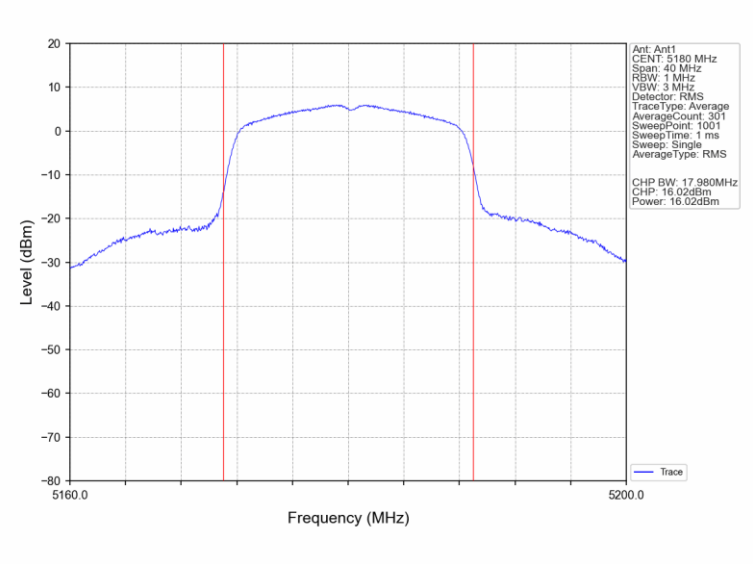
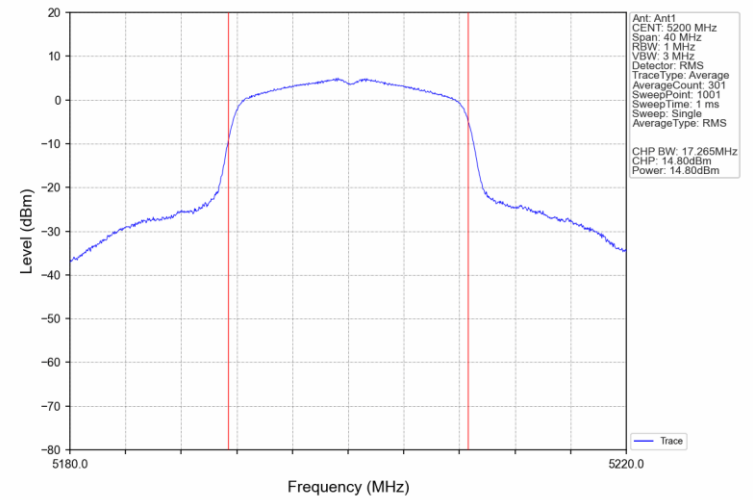
3.1 Test Result

3.1.1 Power

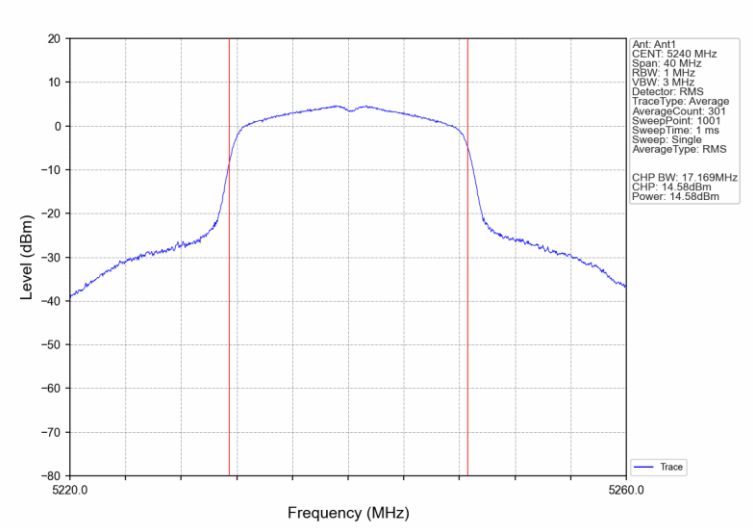
Mode	TX Type	Frequency (MHz)	Maximum Average Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11a	SISO	5180	16.02	<=23.98	Pass
		5200	14.80	<=23.98	Pass
		5240	14.58	<=23.98	Pass
802.11n (HT20)	SISO	5180	15.10	<=23.98	Pass
		5200	15.14	<=23.98	Pass
		5240	14.75	<=23.98	Pass
Note1: Antenna Gain: Ant1: 2.00dBi;					

3.2 Test Graph

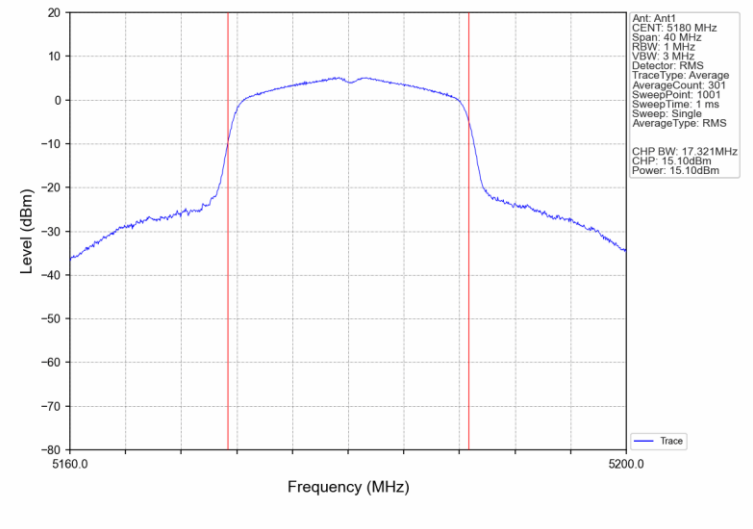
3.2.1 Power

802.11a_LCH_5180MHz_Ant1_NTNV

802.11a_MCH_5200MHz_Ant1_NTNV


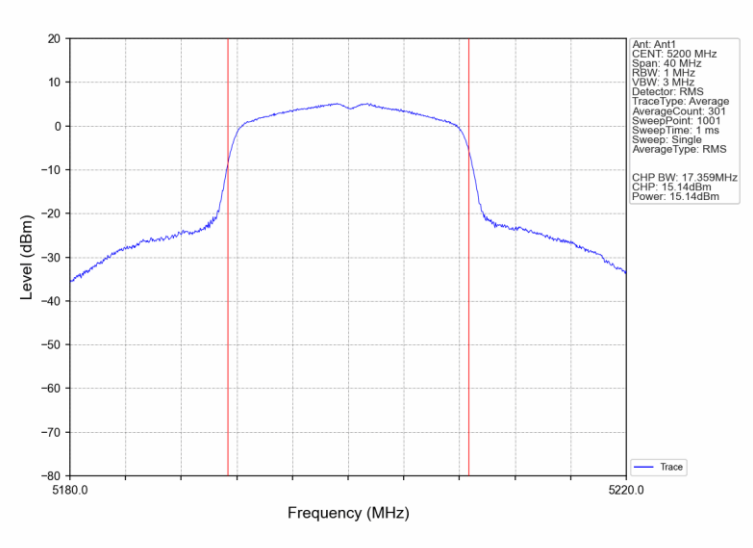
802.11a_HCH_5240MHz_Ant1_NTNV



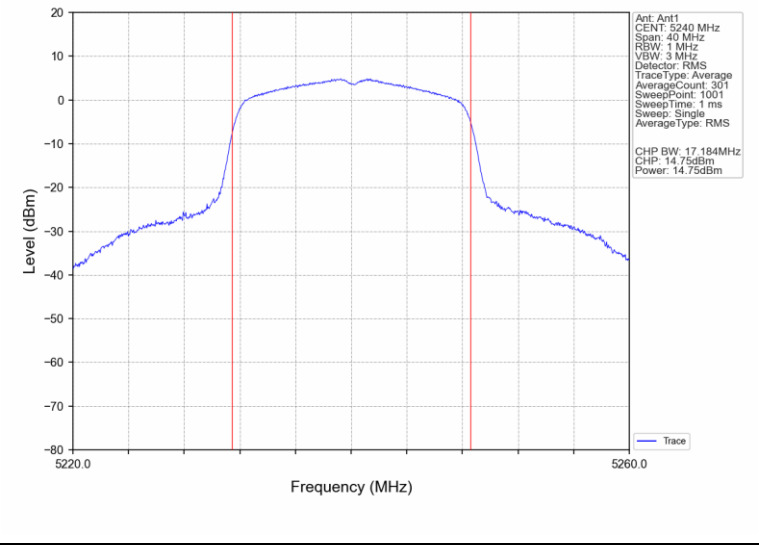
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



4. Maximum Power Spectral Density

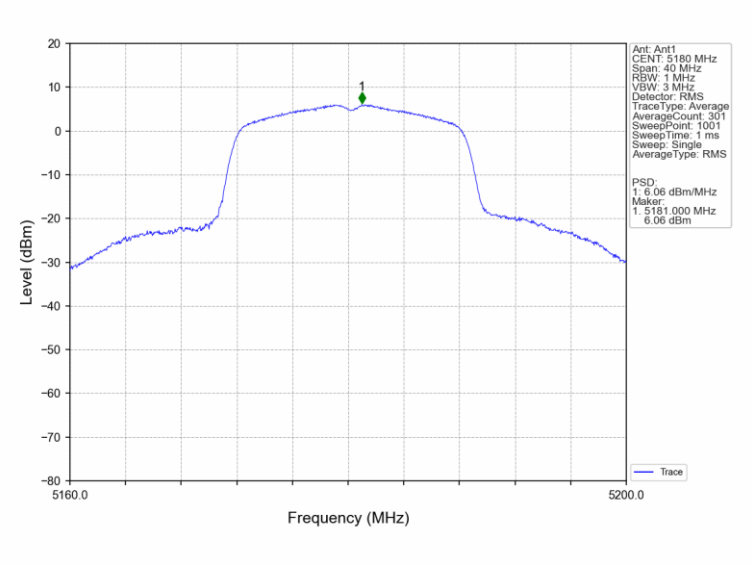
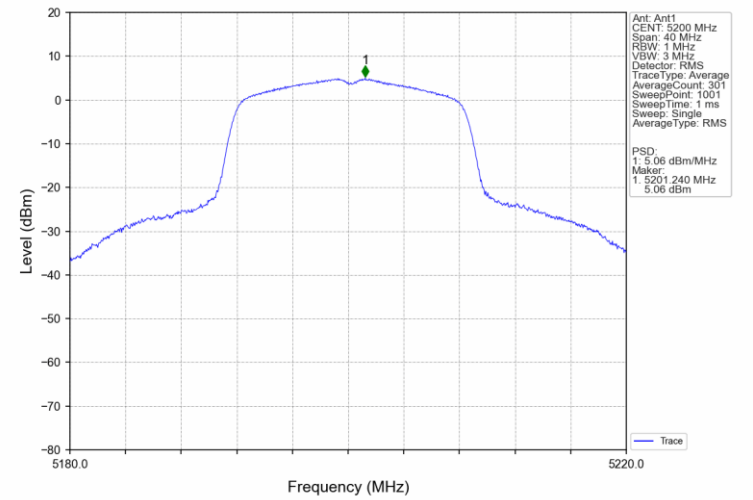
4.1 Test Result

4.1.1 PSD

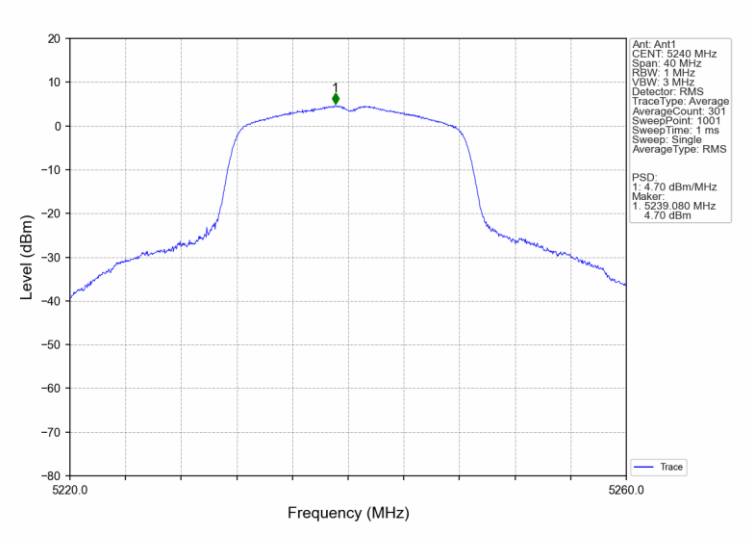
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/MHz)		Verdict
			ANT1	Limit	
802.11a	SISO	5180	6.06	<=11	Pass
		5200	5.06	<=11	Pass
		5240	4.70	<=11	Pass
802.11n (HT20)	SISO	5180	5.23	<=11	Pass
		5200	5.19	<=11	Pass
		5240	4.95	<=11	Pass
Note1: Antenna Gain: Ant1: 2.00dBi;					

4.2 Test Graph

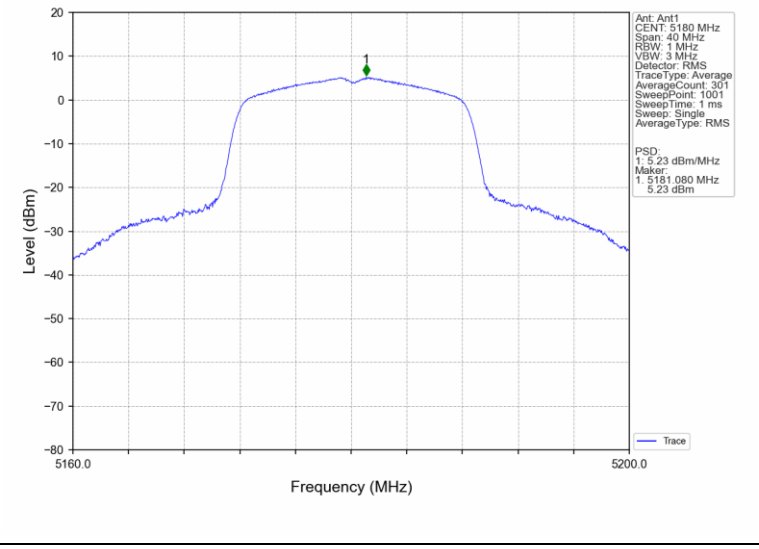
4.2.1 PSD

802.11a_LCH_5180MHz_Ant1_NTNV

802.11a_MCH_5200MHz_Ant1_NTNV


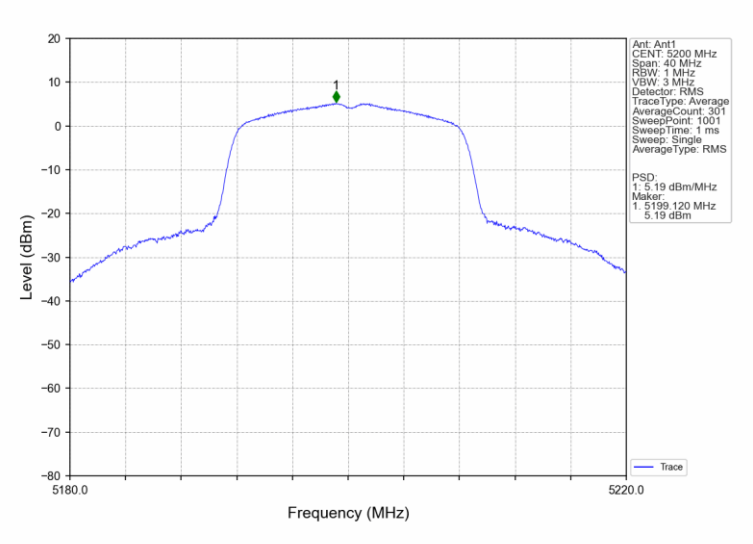
802.11a_HCH_5240MHz_Ant1_NTNV



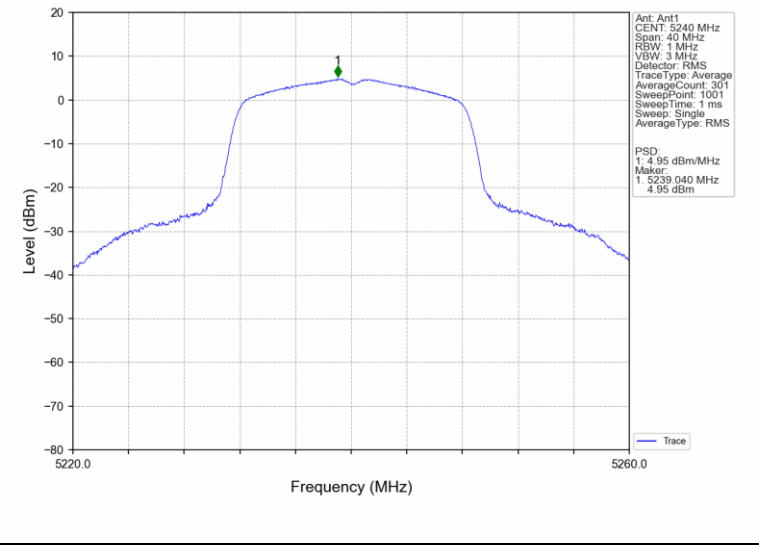
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



5. Frequency Stability

5.1 Test Result

5.1.1 Ant1

Ant1							
Mode	TX Type	Frequency (MHz)	Temperature (°C)	Voltage (VAC)	Measured Frequency (MHz)	Limit (MHz)	Verdict
802.11a	SISO	5180	20	102	5180.200	5150 to 5250	Pass
				120	5180.220	5150 to 5250	Pass
				138	5180.140	5150 to 5250	Pass
			-30	120	5180.200	5150 to 5250	Pass
			-20	120	5180.200	5150 to 5250	Pass
			-10	120	5180.220	5150 to 5250	Pass
			0	120	5180.220	5150 to 5250	Pass
			10	120	5180.220	5150 to 5250	Pass
			30	120	5180.200	5150 to 5250	Pass
			40	120	5180.220	5150 to 5250	Pass
			50	120	5180.180	5150 to 5250	Pass
		5200	20	102	5200.200	5150 to 5250	Pass
				120	5200.180	5150 to 5250	Pass
				138	5200.200	5150 to 5250	Pass
			-30	120	5200.180	5150 to 5250	Pass
			-20	120	5200.180	5150 to 5250	Pass
			-10	120	5200.180	5150 to 5250	Pass
			0	120	5200.180	5150 to 5250	Pass
			10	120	5200.200	5150 to 5250	Pass
			30	120	5200.200	5150 to 5250	Pass
			40	120	5200.200	5150 to 5250	Pass
			50	120	5200.180	5150 to 5250	Pass
		5240	20	102	5240.180	5150 to 5250	Pass
				120	5240.200	5150 to 5250	Pass
				138	5240.180	5150 to 5250	Pass
			-30	120	5240.200	5150 to 5250	Pass
			-20	120	5240.200	5150 to 5250	Pass
			-10	120	5240.180	5150 to 5250	Pass
			0	120	5240.180	5150 to 5250	Pass
			10	120	5240.180	5150 to 5250	Pass
			30	120	5240.180	5150 to 5250	Pass
			40	120	5240.200	5150 to 5250	Pass
			50	120	5240.180	5150 to 5250	Pass
802.11n (HT20)	SISO	5180	20	102	5180.200	5150 to 5250	Pass
				120	5180.200	5150 to 5250	Pass
				138	5180.200	5150 to 5250	Pass
			-30	120	5180.180	5150 to 5250	Pass

			-20	120	5180.200	5150 to 5250	Pass
			-10	120	5180.200	5150 to 5250	Pass
			0	120	5180.180	5150 to 5250	Pass
			10	120	5180.200	5150 to 5250	Pass
			30	120	5180.200	5150 to 5250	Pass
			40	120	5180.200	5150 to 5250	Pass
			50	120	5180.200	5150 to 5250	Pass
		5200	20	102	5200.120	5150 to 5250	Pass
				120	5200.140	5150 to 5250	Pass
				138	5200.140	5150 to 5250	Pass
			-30	120	5200.140	5150 to 5250	Pass
			-20	120	5200.140	5150 to 5250	Pass
			-10	120	5200.140	5150 to 5250	Pass
			0	120	5200.140	5150 to 5250	Pass
			10	120	5200.140	5150 to 5250	Pass
			30	120	5200.140	5150 to 5250	Pass
			40	120	5200.140	5150 to 5250	Pass
			50	120	5200.160	5150 to 5250	Pass
		5240	20	102	5240.120	5150 to 5250	Pass
				120	5240.140	5150 to 5250	Pass
				138	5240.120	5150 to 5250	Pass
			-30	120	5240.120	5150 to 5250	Pass
			-20	120	5240.140	5150 to 5250	Pass
			-10	120	5240.120	5150 to 5250	Pass
			0	120	5240.100	5150 to 5250	Pass
			10	120	5240.120	5150 to 5250	Pass
			30	120	5240.100	5150 to 5250	Pass
			40	120	5240.120	5150 to 5250	Pass
			50	120	5240.120	5150 to 5250	Pass