

Appendix Test Data

Project No.:	18220WC10119802	Test Date:	2021.6.24
Test Engineer:	<i>Tony He</i>	Auditor:	<i>Edward Pan</i>
Temperature:	24.3°C	Relative Humidity:	56 %
Pressure:	1012 hPa		

1. Duty Cycle

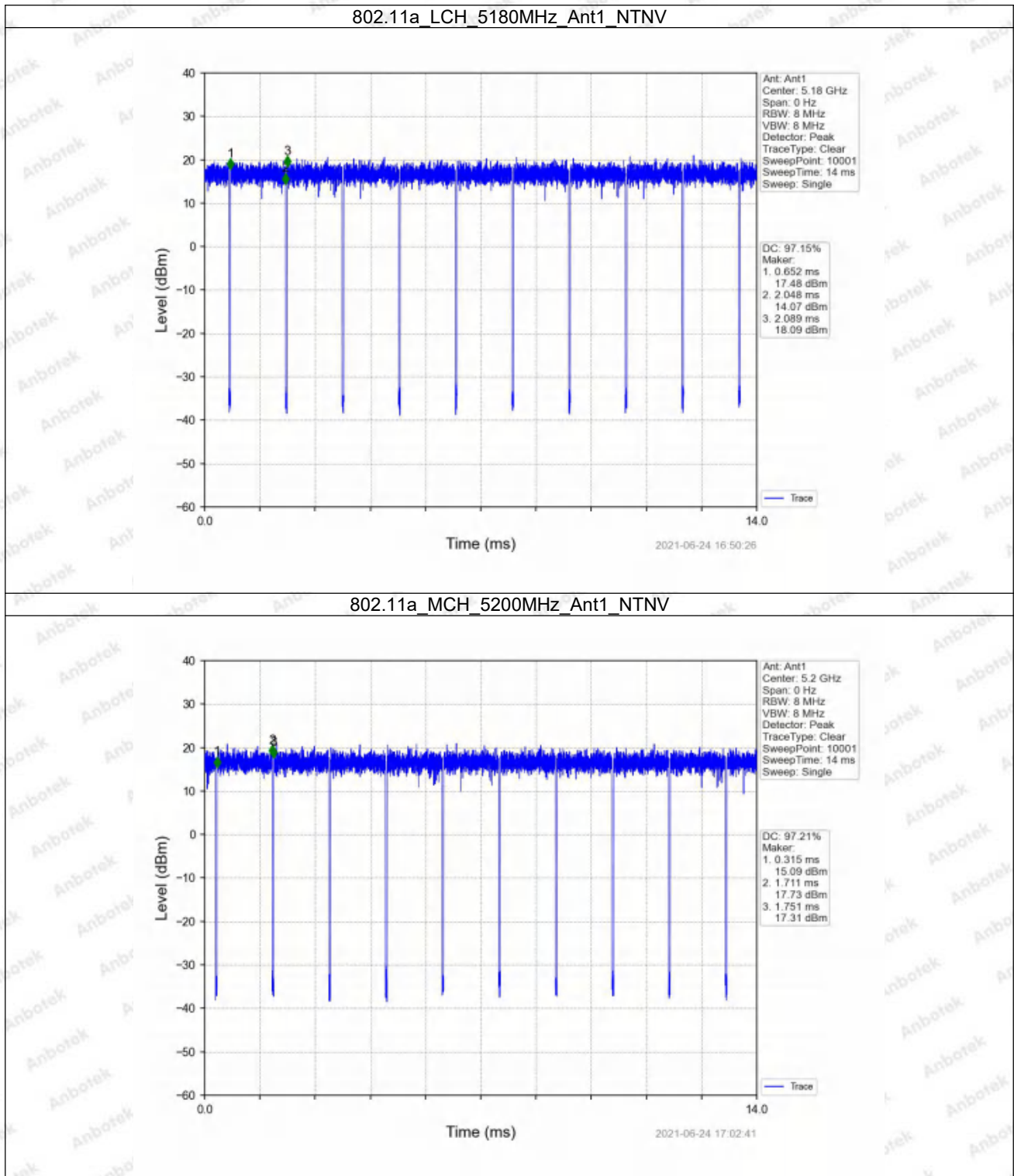
1.1 Ant1

1.1.1 Test Result

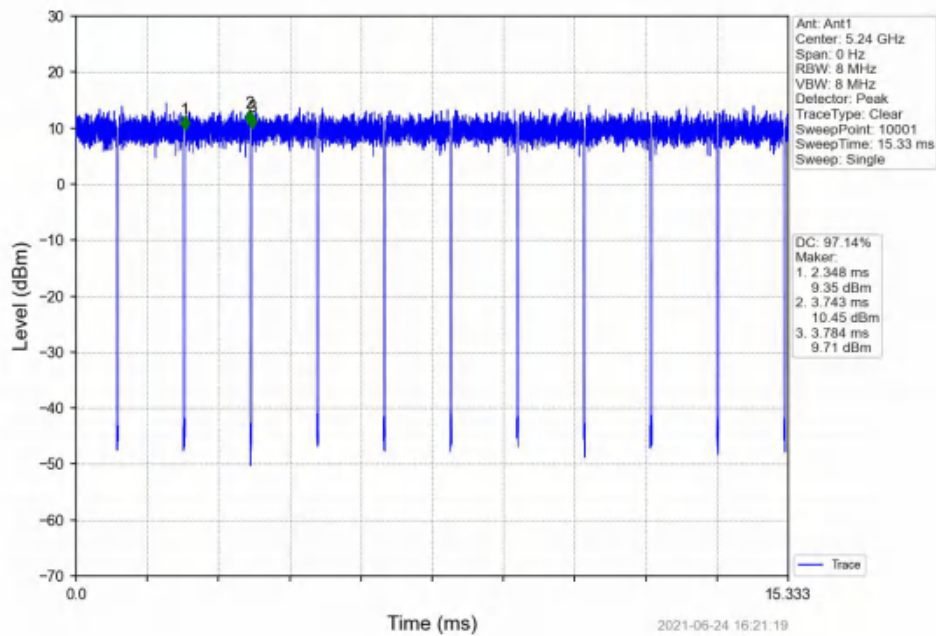
Ant1									
Mode	TX Type	Frequency (MHz)	RU	RU Pos	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11a	SISO	5180	/	/	1.40	1.44	97.15	0.13	0.09
		5200	/	/	1.40	1.44	97.21	0.12	0.10
		5240	/	/	1.40	1.44	97.14	0.13	0.11
802.11n (HT20)	SISO	5180	/	/	1.31	1.35	96.96	0.13	0.00
		5200	/	/	1.31	1.35	97.03	0.13	0.10
		5240	/	/	1.31	1.35	97.03	0.13	0.10
802.11n (HT40)	SISO	5190	/	/	0.65	0.69	94.04	0.27	0.11
		5230	/	/	0.65	0.69	94.19	0.26	0.11
802.11ac (VHT20)	SISO	5180	/	/	1.32	1.36	97.05	0.13	0.10
		5200	/	/	1.31	1.35	97.05	0.13	0.00
		5240	/	/	1.31	1.35	96.97	0.13	0.10
802.11ac (VHT40)	SISO	5190	/	/	0.66	0.69	94.24	0.26	0.11
		5230	/	/	0.66	0.70	94.11	0.26	0.11
802.11ac (VHT80)	SISO	5210	/	/	0.32	0.36	89.01	0.51	0.00

Note1: Only for Report Use

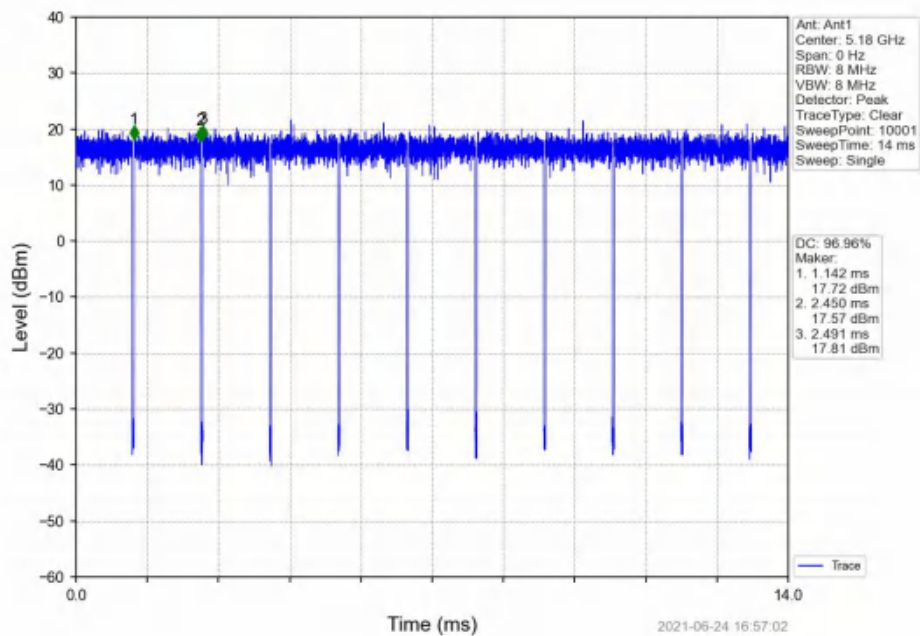
1.1.2 Test Graph



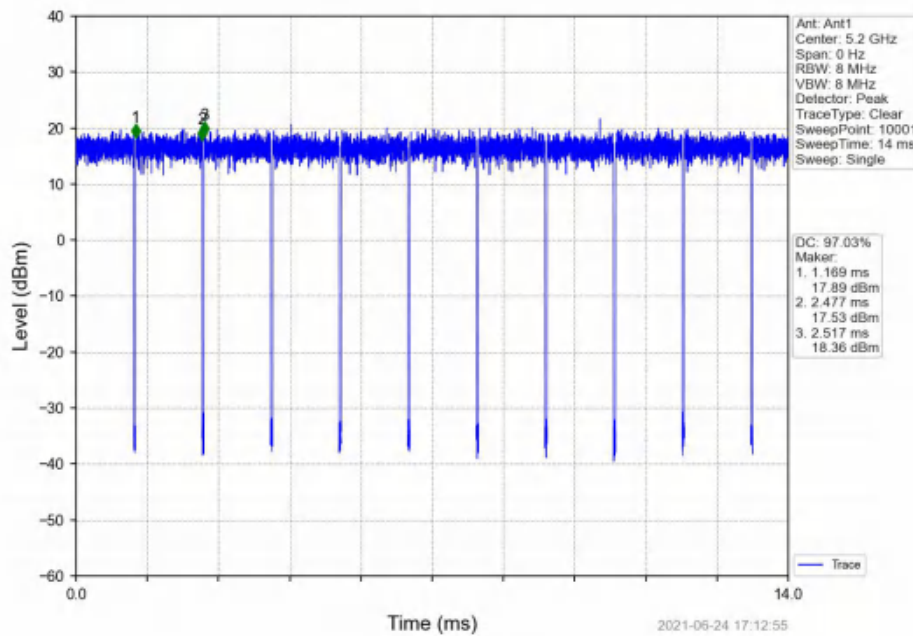
802.11a_HCH_5240MHz_Ant1_NTNV



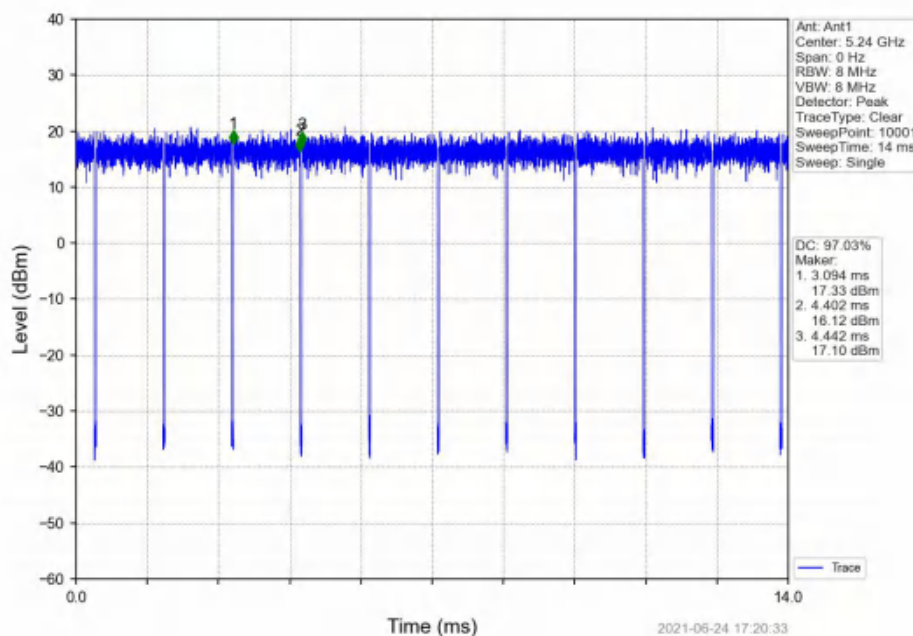
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



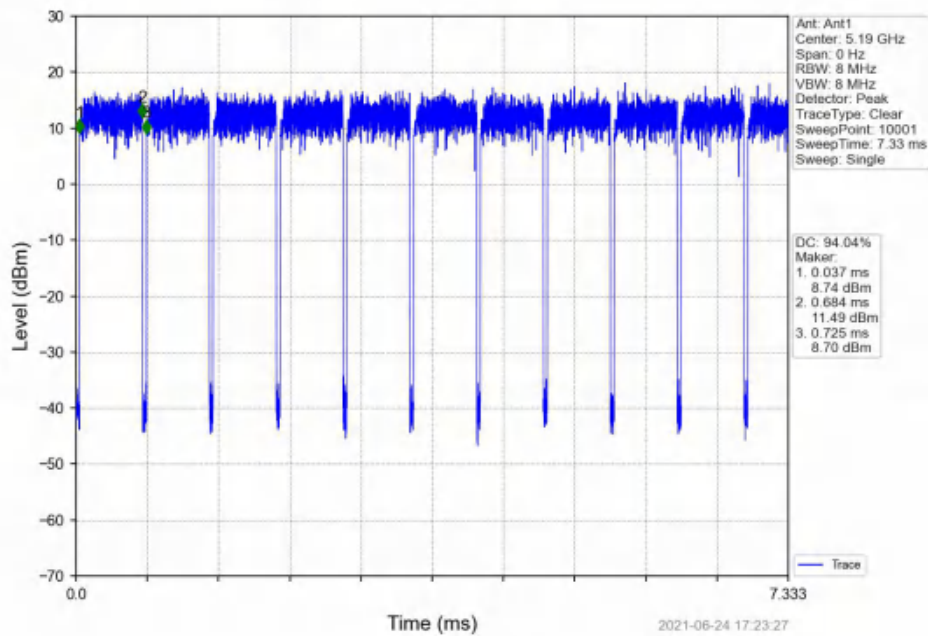
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



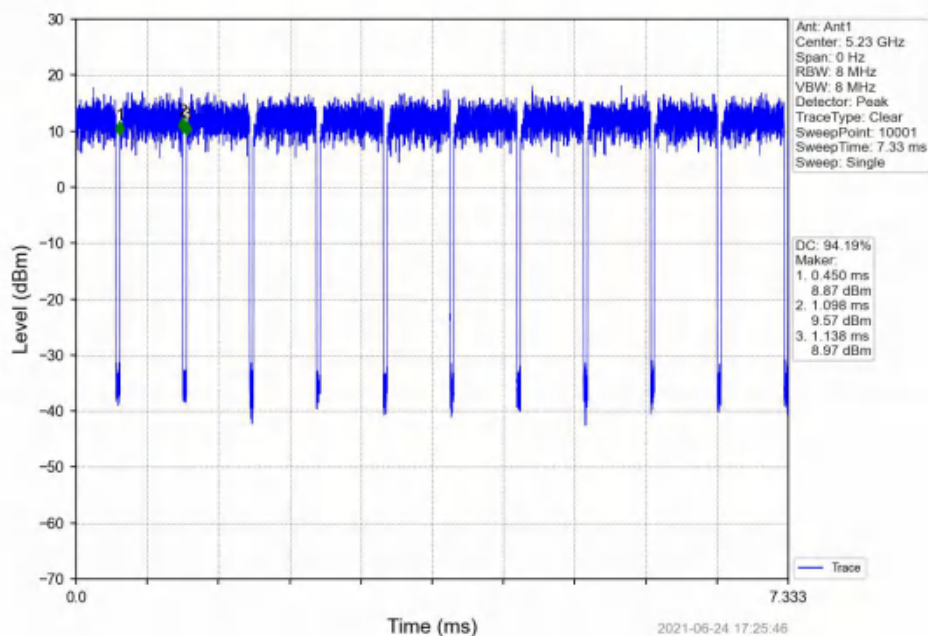
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



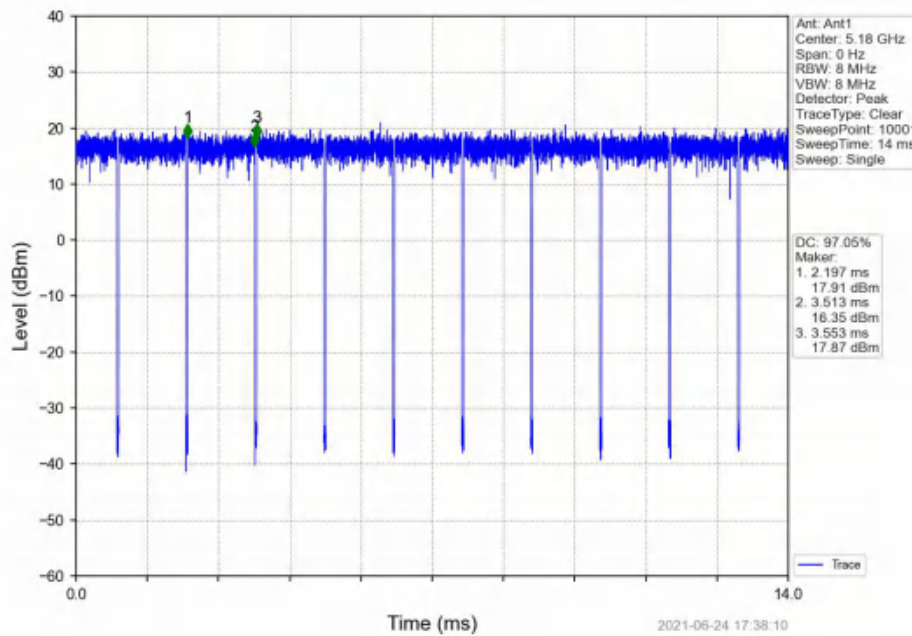
802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



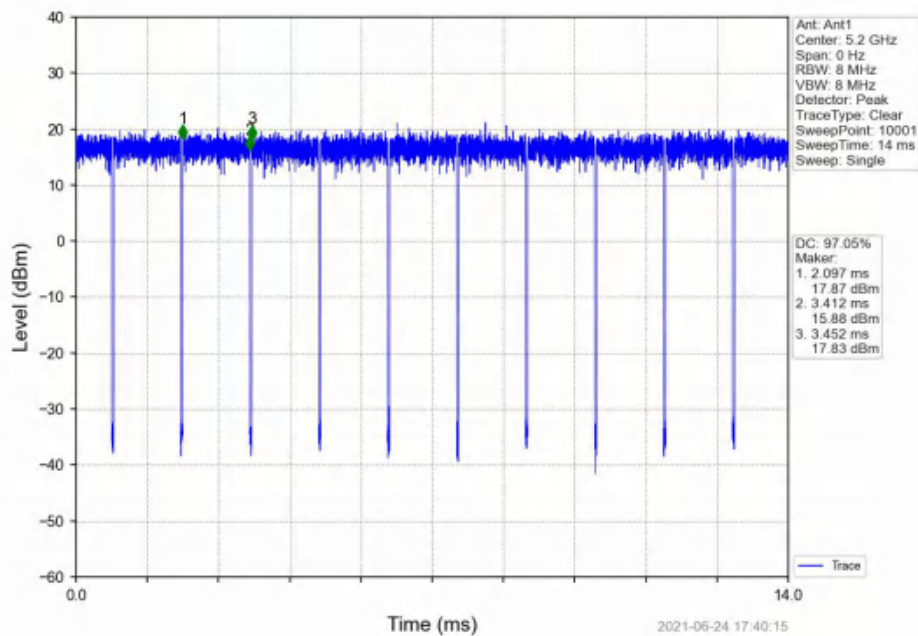
802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



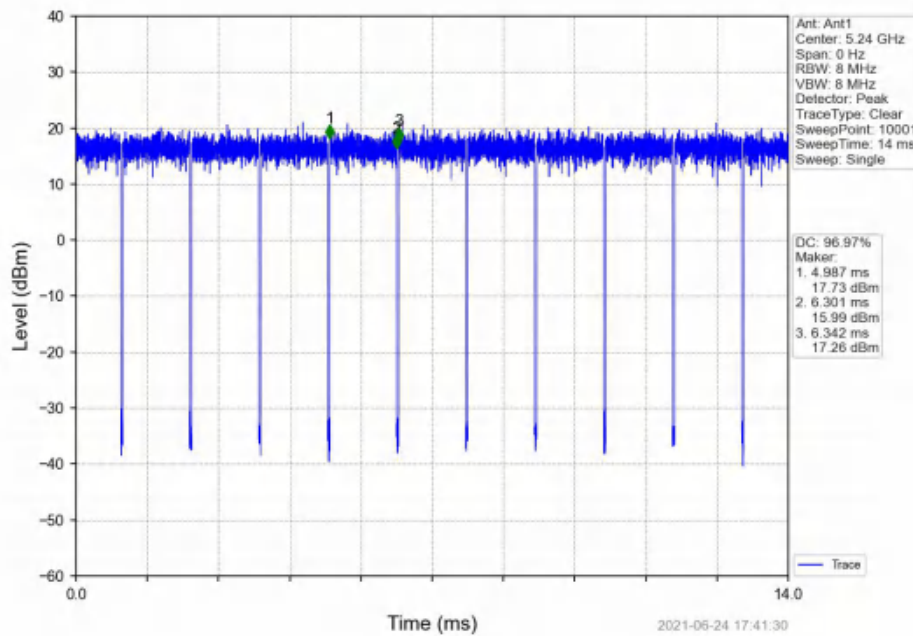
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



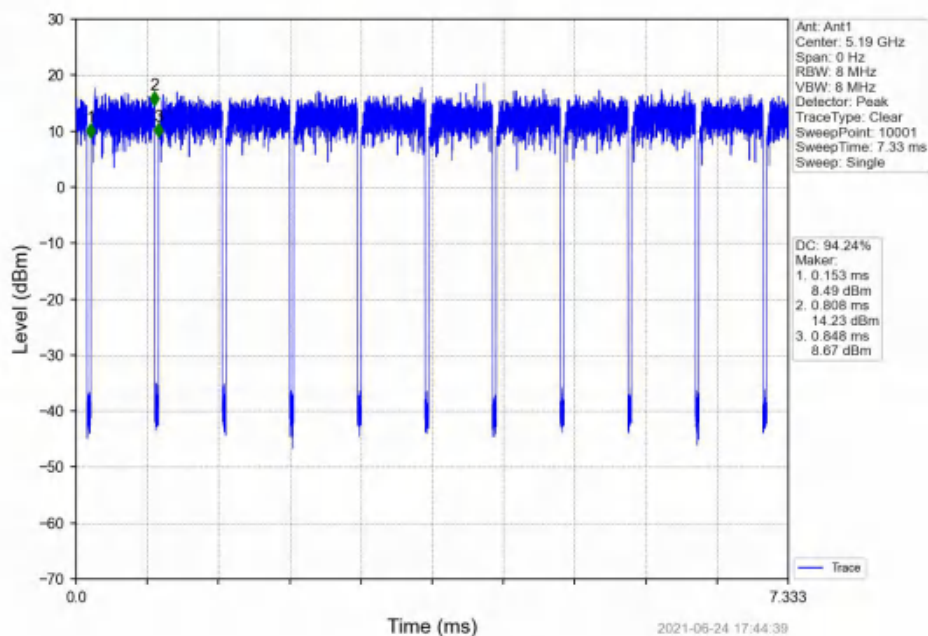
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



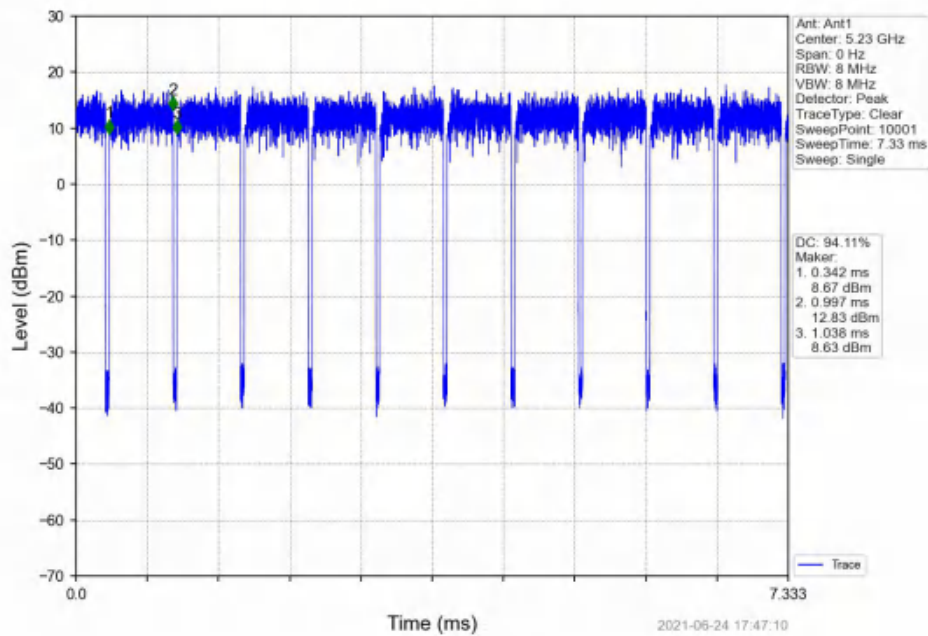
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



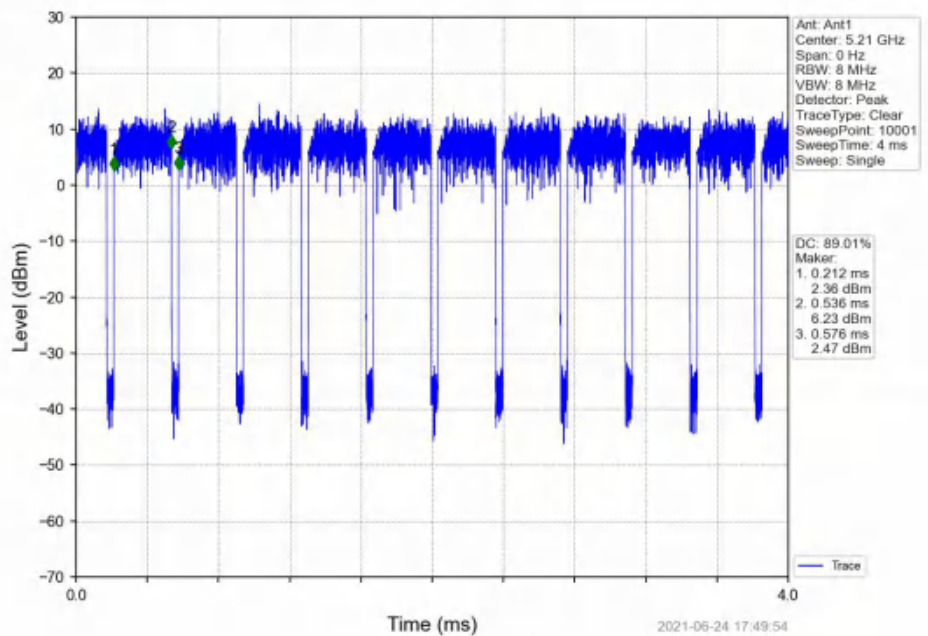
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5210MHz_Ant1_NTNV



2. Bandwidth

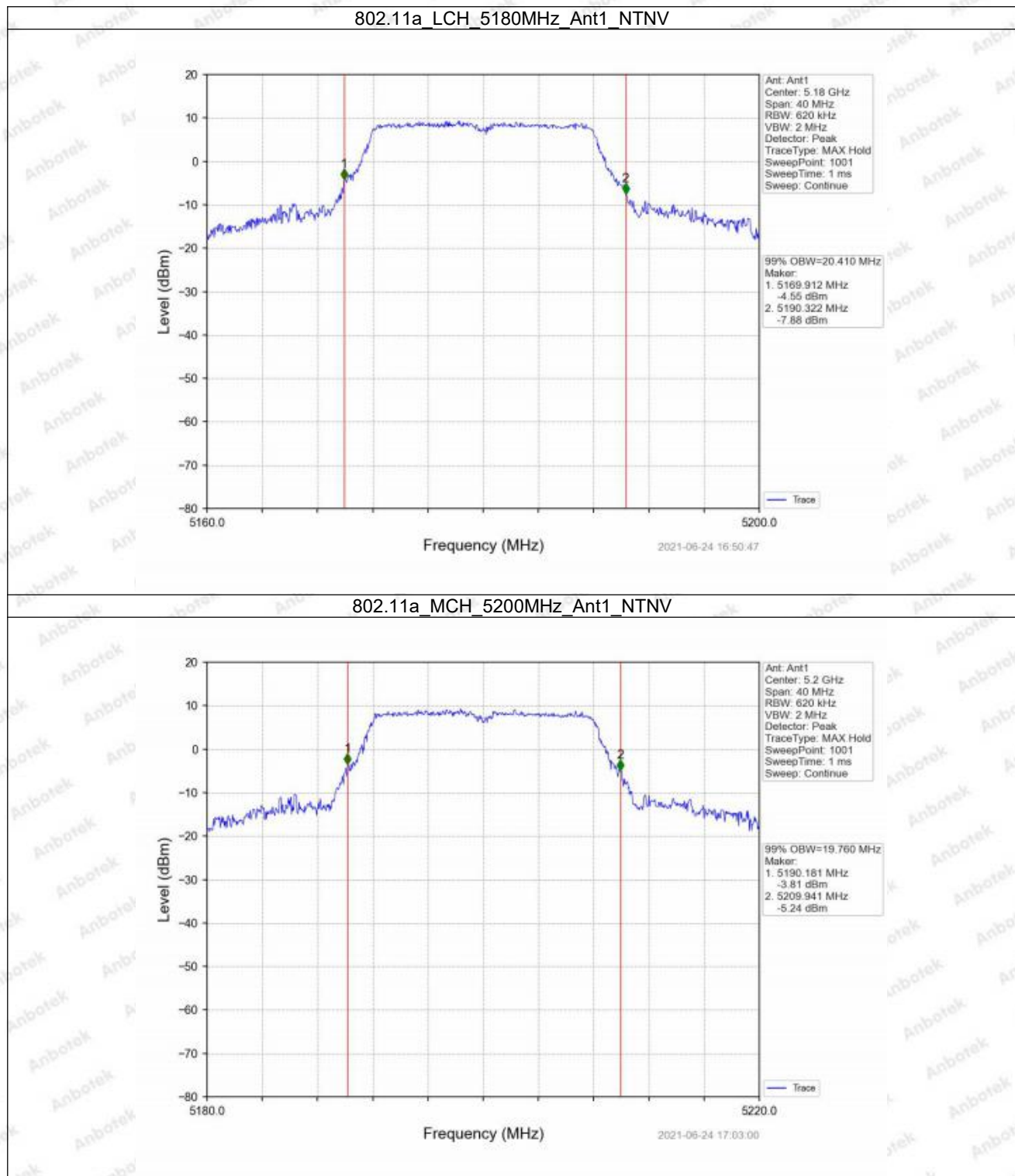
2.1 OBW

2.1.1 Test Result

Mode	TX Type	Frequency (MHz)	RU	RU Pos	Ant	99% Occupied Bandwidth (MHz)	Limit	Verdict
802.11a	SISO	5180	/	/	1	20.41	/	Note1
		5200	/	/	1	19.76	/	Note1
		5240	/	/	1	18.03	/	Note1
802.11n (HT20)	SISO	5180	/	/	1	18.84	/	Note1
		5200	/	/	1	18.85	/	Note1
		5240	/	/	1	19.35	/	Note1
802.11n (HT40)	SISO	5190	/	/	1	40.07	/	Note1
		5230	/	/	1	36.78	/	Note1
802.11ac (VHT20)	SISO	5180	/	/	1	18.91	/	Note1
		5200	/	/	1	18.85	/	Note1
		5240	/	/	1	19.39	/	Note1
802.11ac (VHT40)	SISO	5190	/	/	1	41.11	/	Note1
		5230	/	/	1	37.94	/	Note1
802.11ac (VHT80)	SISO	5210	/	/	1	78.14	/	Note1

Note1: Only for Report Use

2.1.2 Test Graph



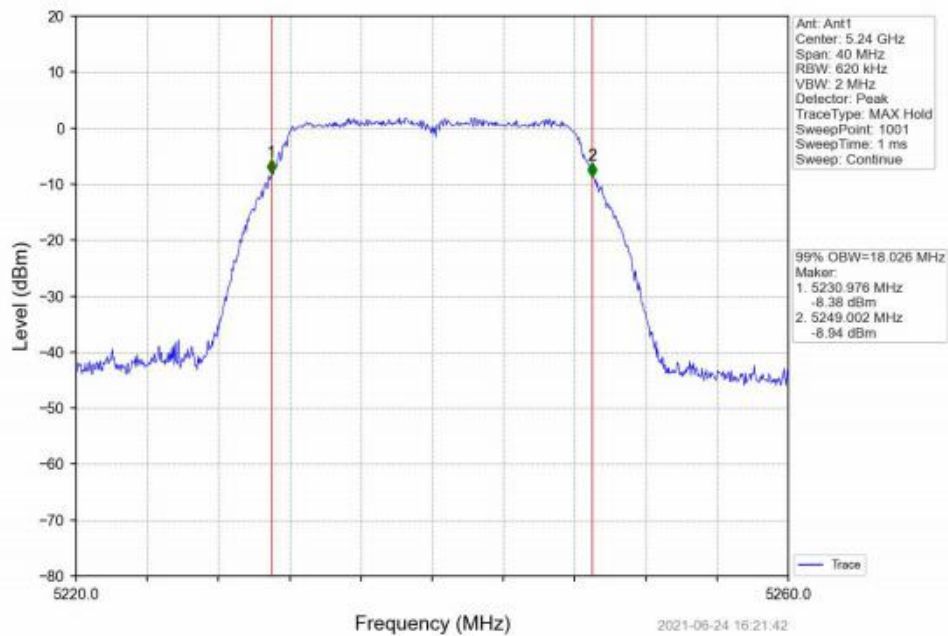
Shenzhen Anbotech Compliance Laboratory Limited

Address: 1/F., Building D, Sogood Science and Technology Park, Sanwei Community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China.

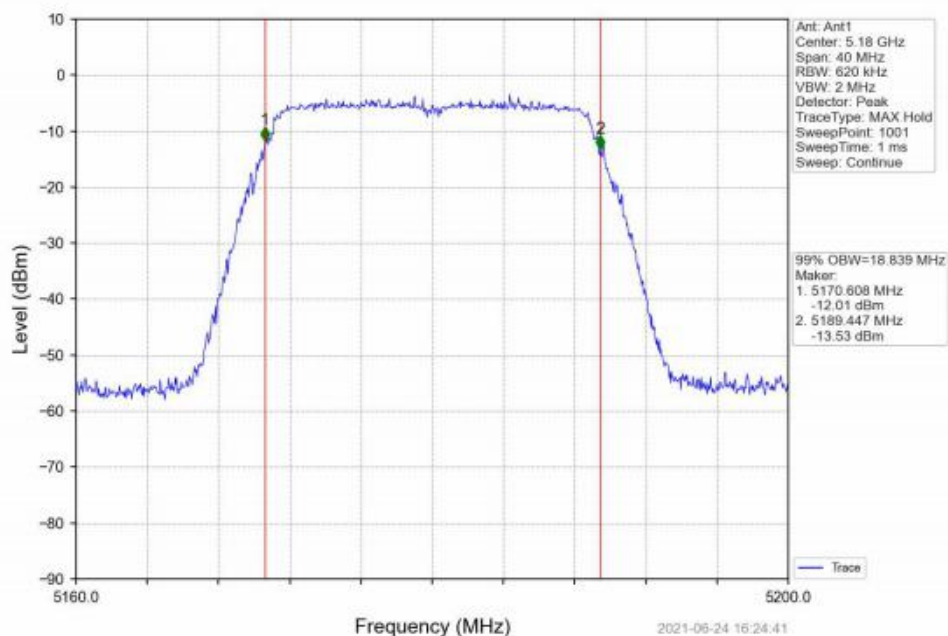
Tel: (86) 755-26066440 Fax: (86) 755-26014772 Email: service@anbotech.com

Hotline
400-003-0500
www.anbotech.com

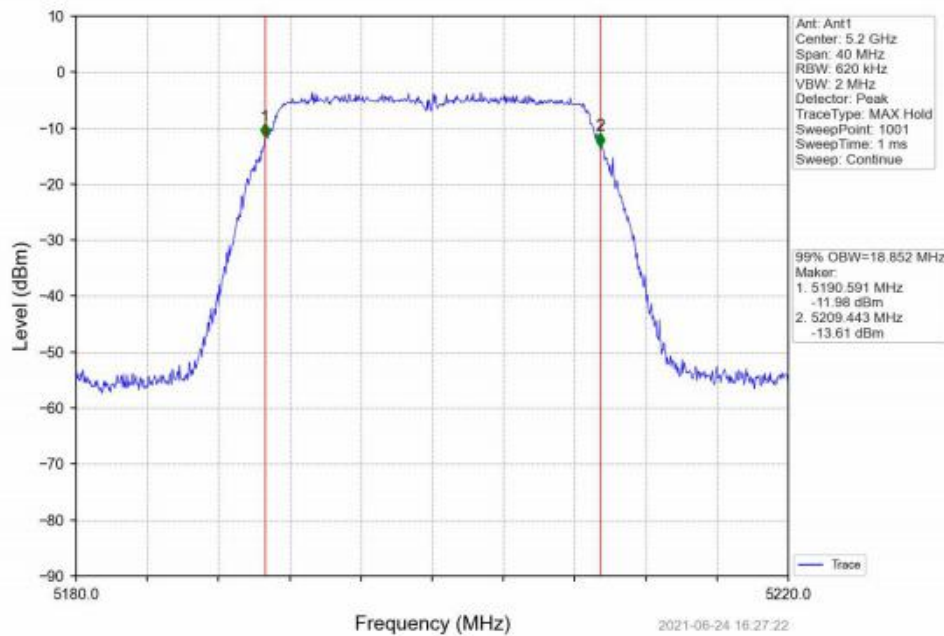
802.11a_HCH_5240MHz_Ant1_NTNV



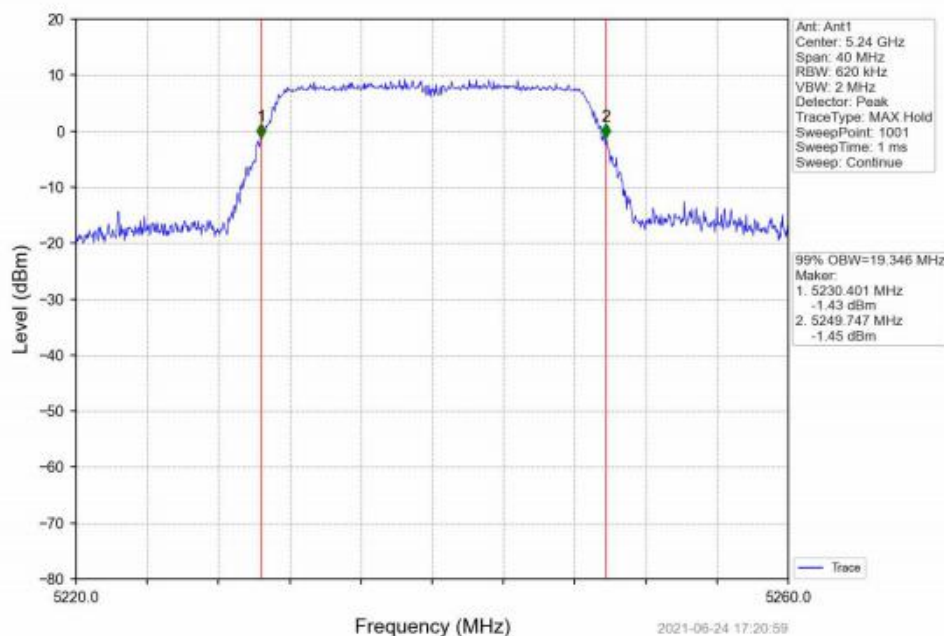
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



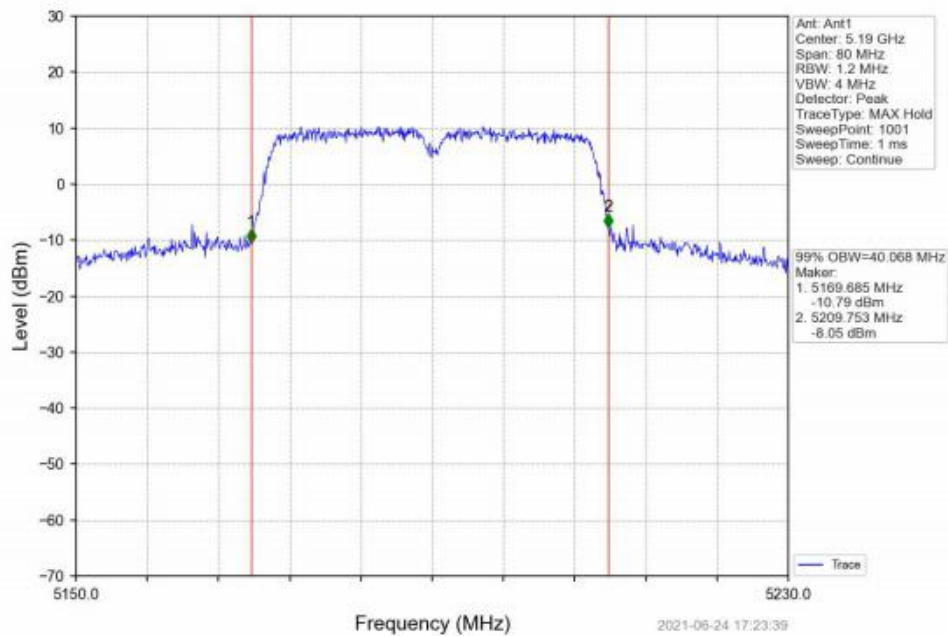
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



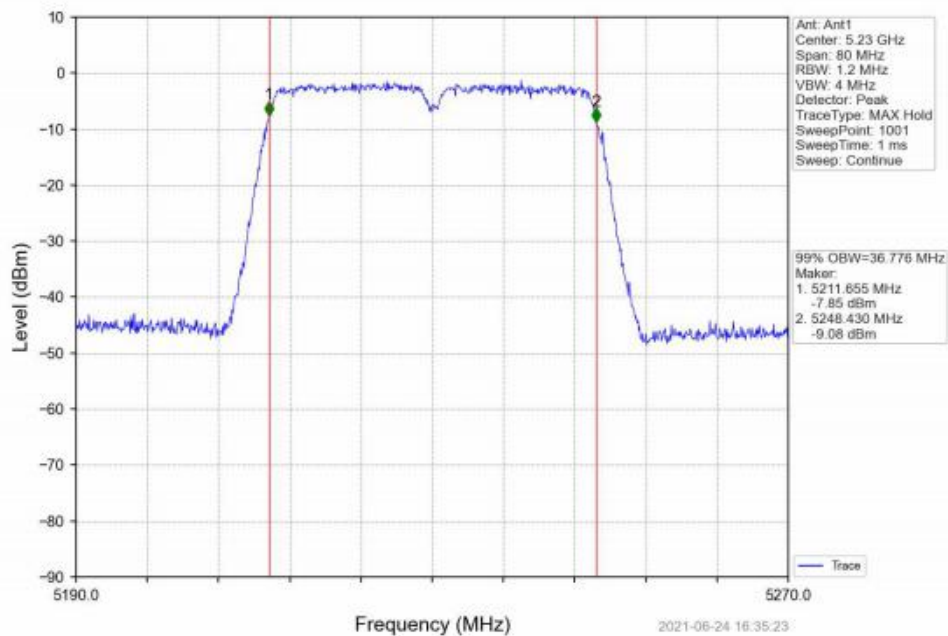
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



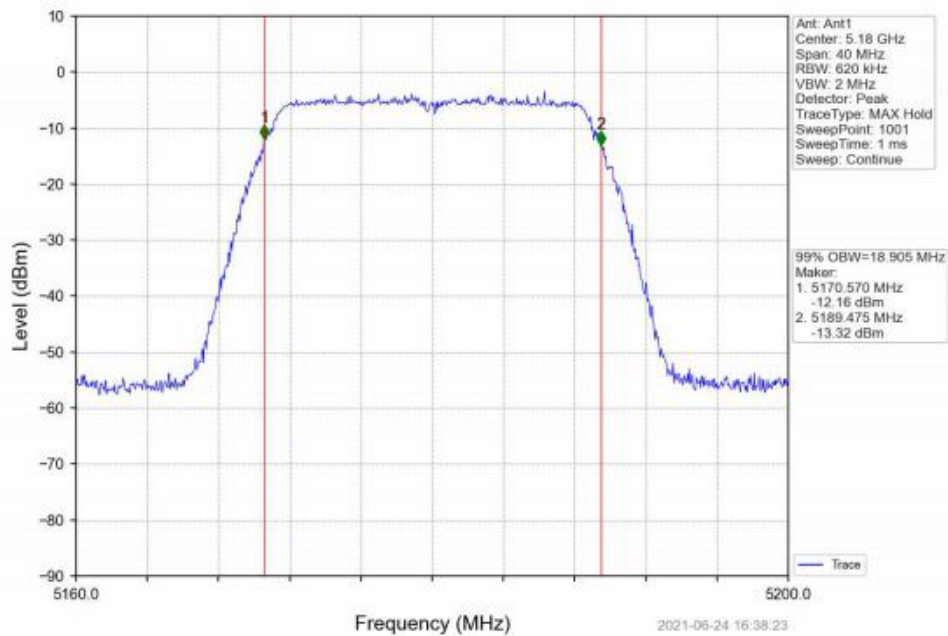
802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



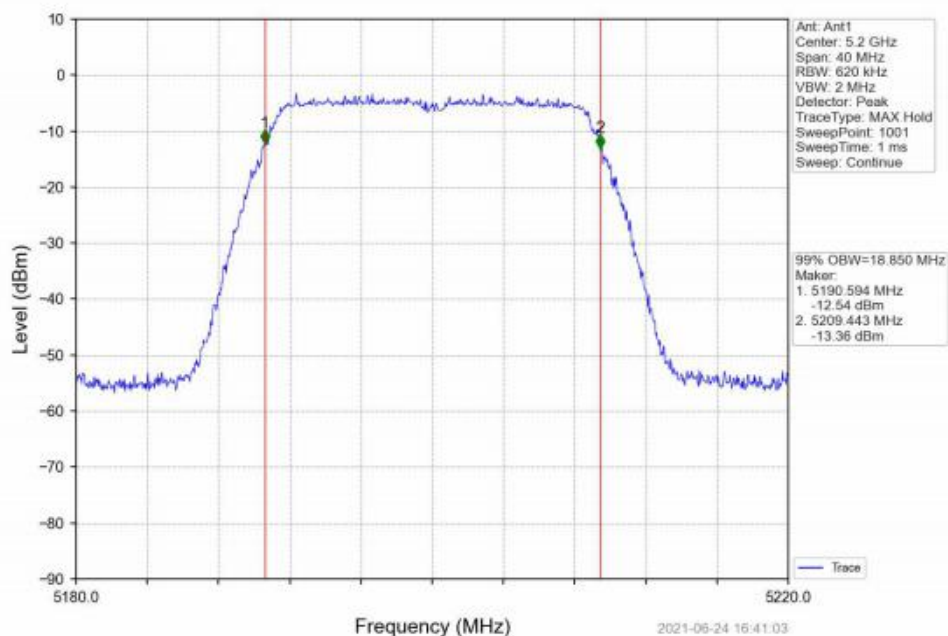
802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



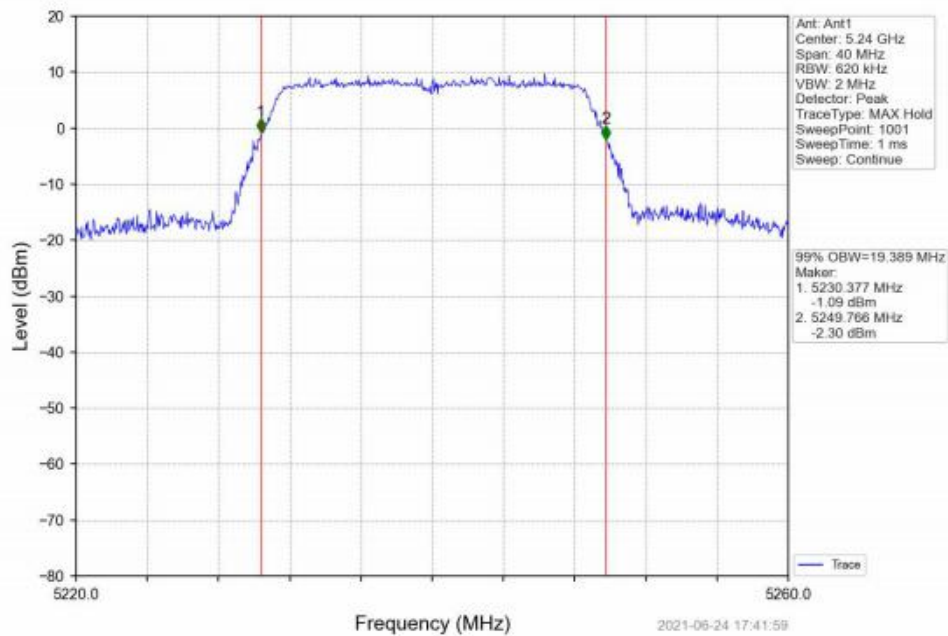
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



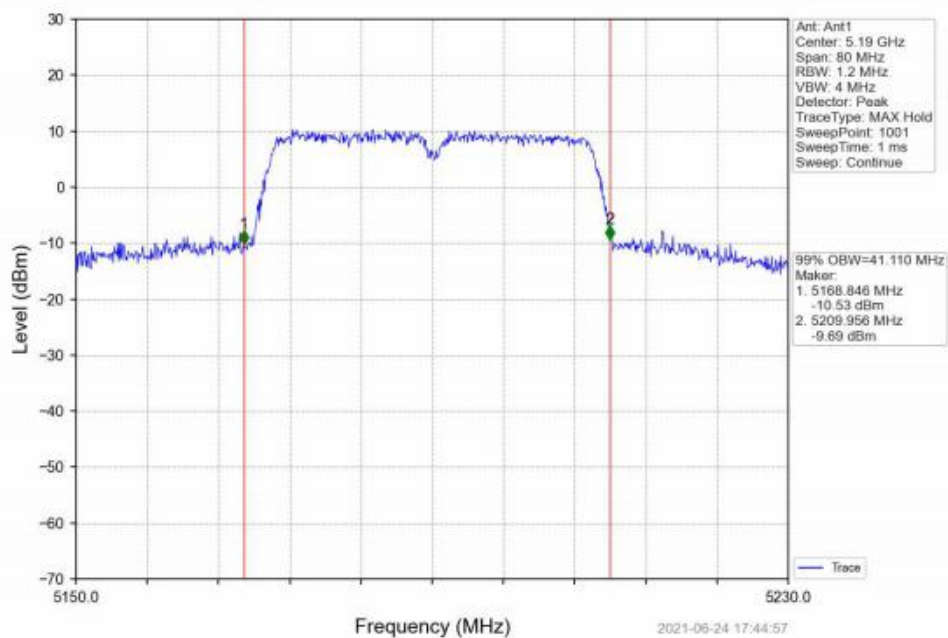
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



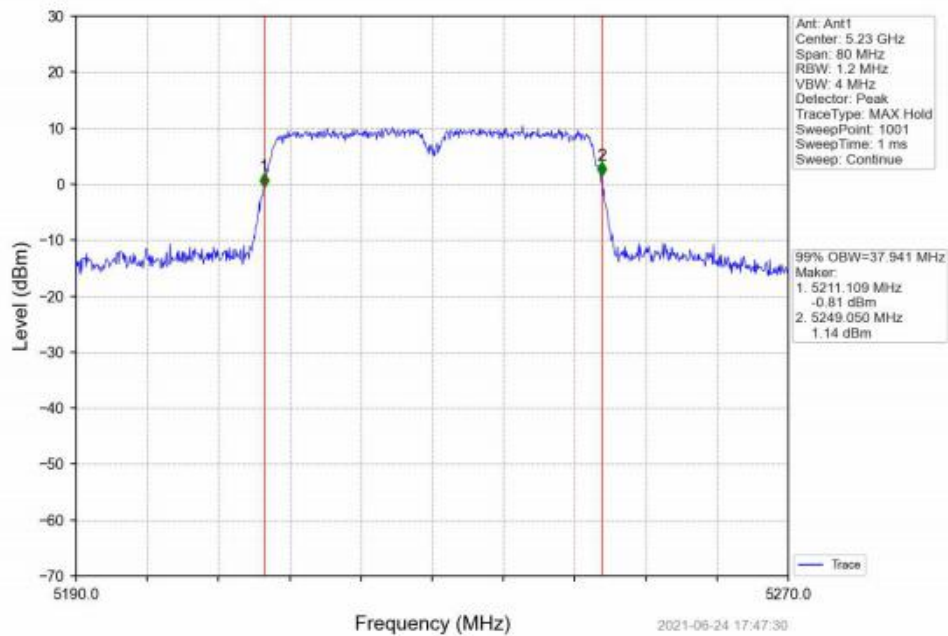
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



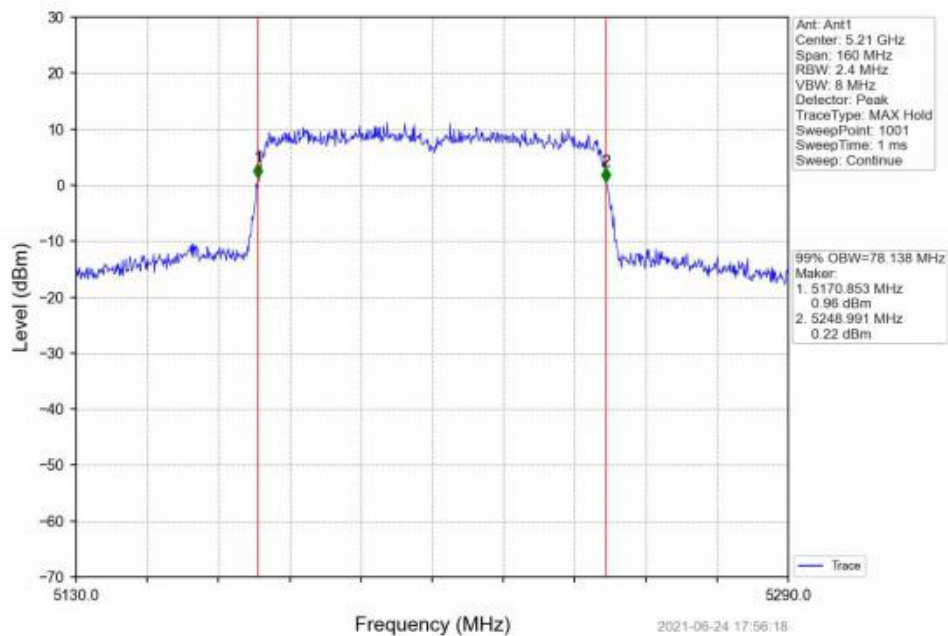
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5210MHz_Ant1_NTNV



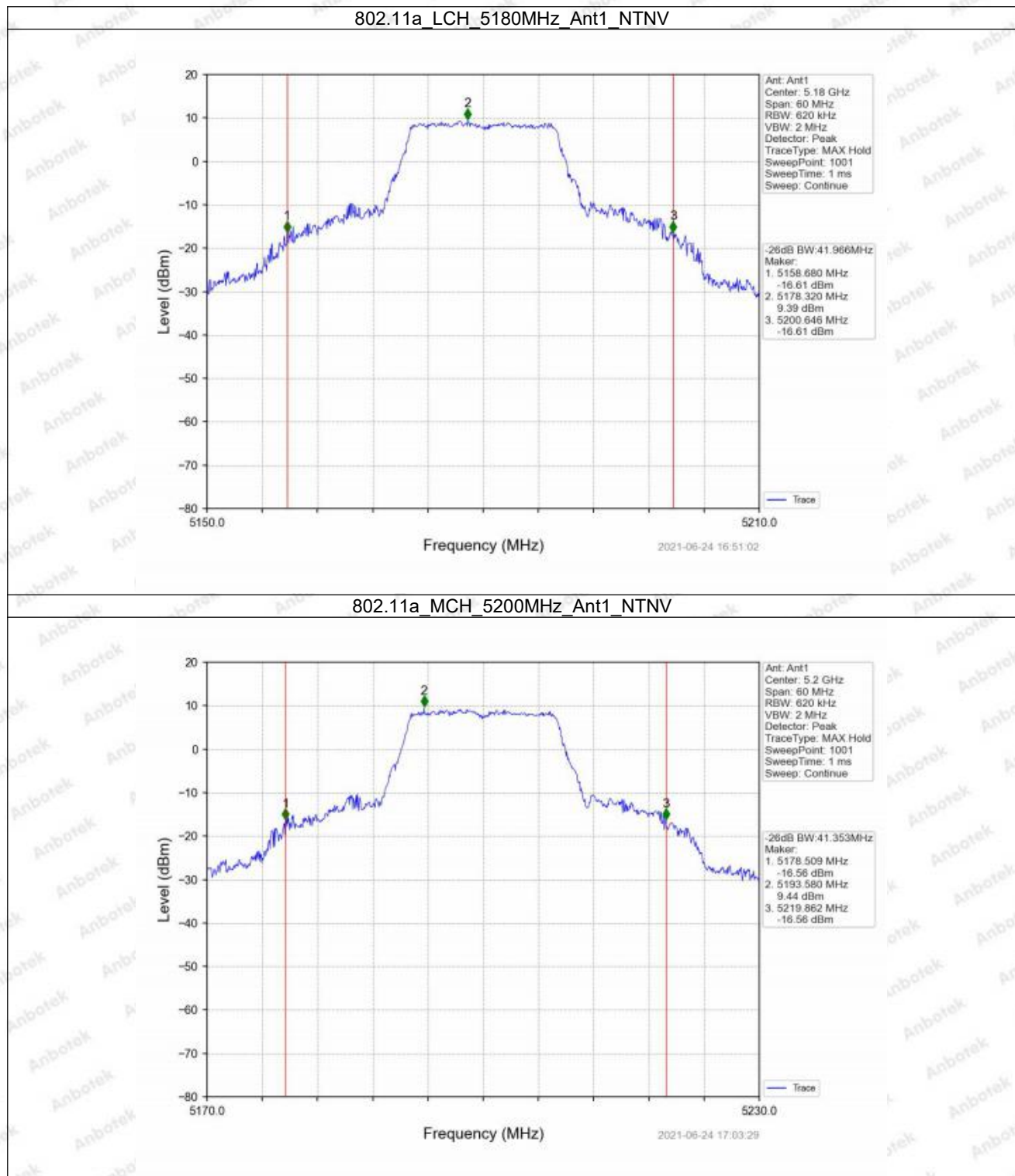
2.2 26dB BW

2.2.1 Test Result

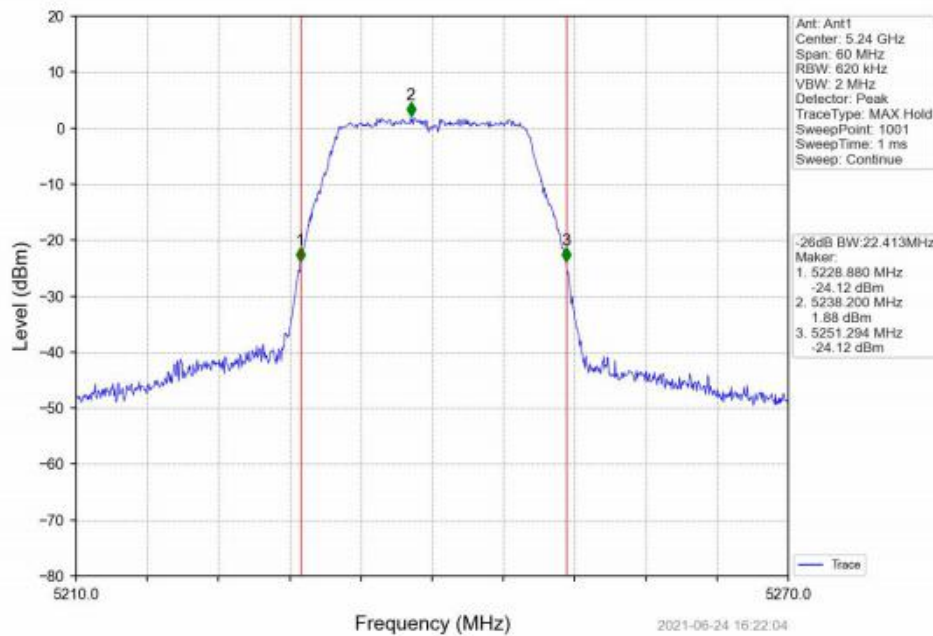
Mode	TX Type	Frequency (MHz)	RU	RU Pos	Ant	26dB Bandwidth (MHz)	Limit	Verdict
802.11a	SISO	5180	/	/	1	41.97	/	Note1
		5200	/	/	1	41.35	/	Note1
		5240	/	/	1	22.41	/	Note1
802.11n (HT20)	SISO	5180	/	/	1	22.42	/	Note1
		5200	/	/	1	22.15	/	Note1
		5240	/	/	1	35.69	/	Note1
802.11n (HT40)	SISO	5190	/	/	1	92.38	/	Note1
		5230	/	/	1	41.09	/	Note1
802.11ac (VHT20)	SISO	5180	/	/	1	22.50	/	Note1
		5200	/	/	1	22.27	/	Note1
		5240	/	/	1	38.77	/	Note1
802.11ac (VHT40)	SISO	5190	/	/	1	99.13	/	Note1
		5230	/	/	1	93.47	/	Note1
802.11ac (VHT80)	SISO	5210	/	/	1	177.70	/	Note1

Note1: Only for Report Use

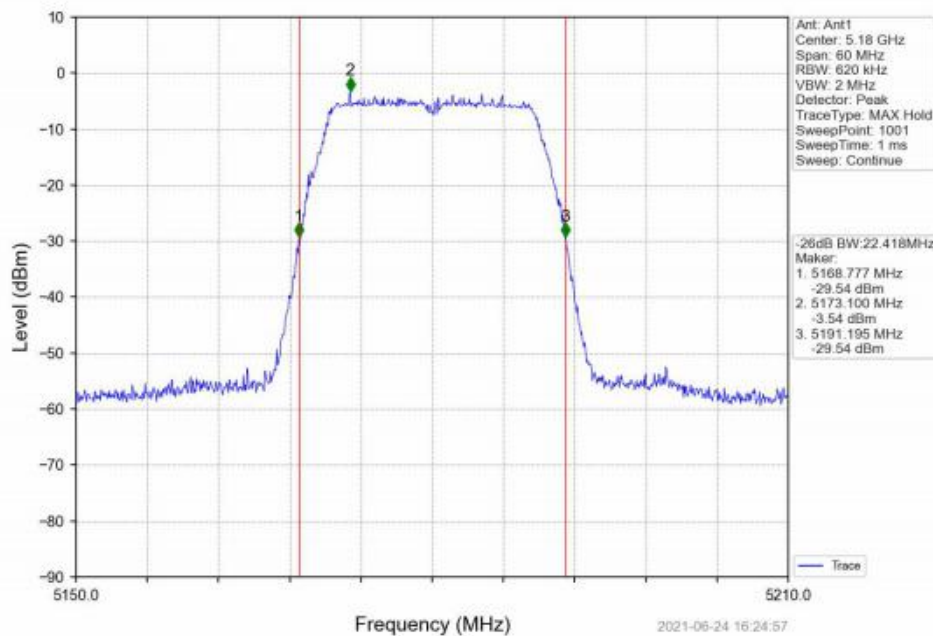
2.2.2 Test Graph



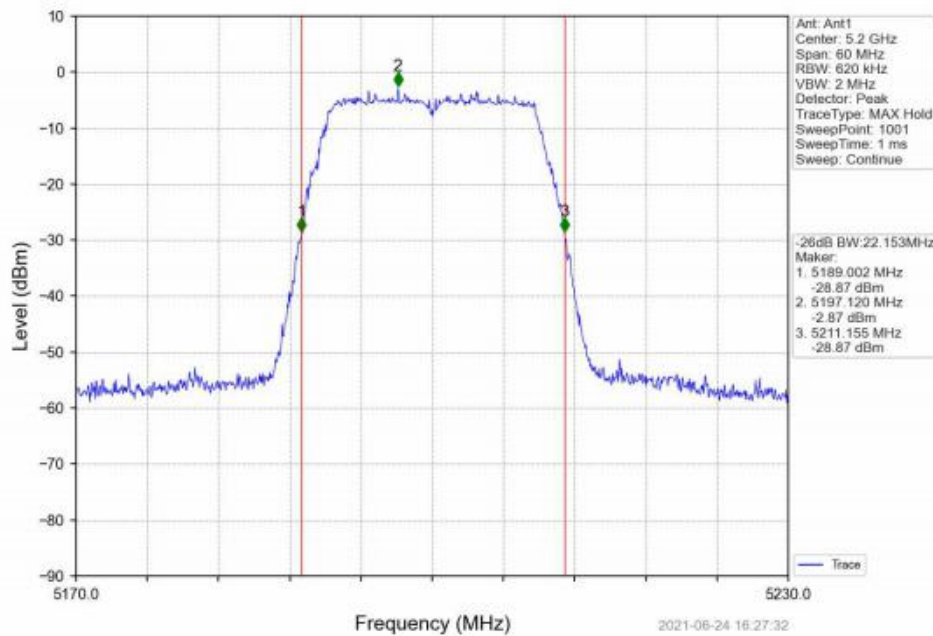
802.11a_HCH_5240MHz_Ant1_NTNV



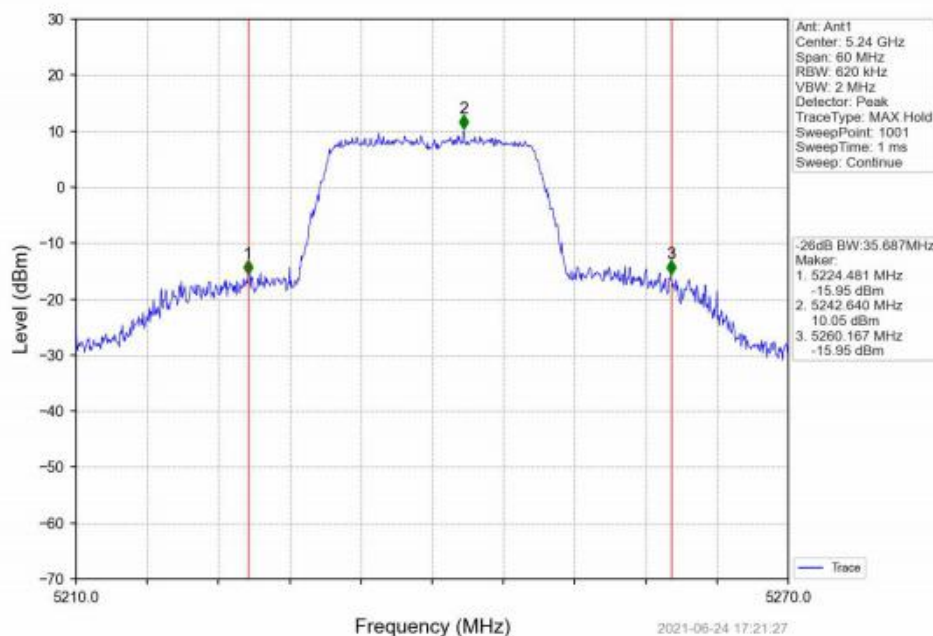
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



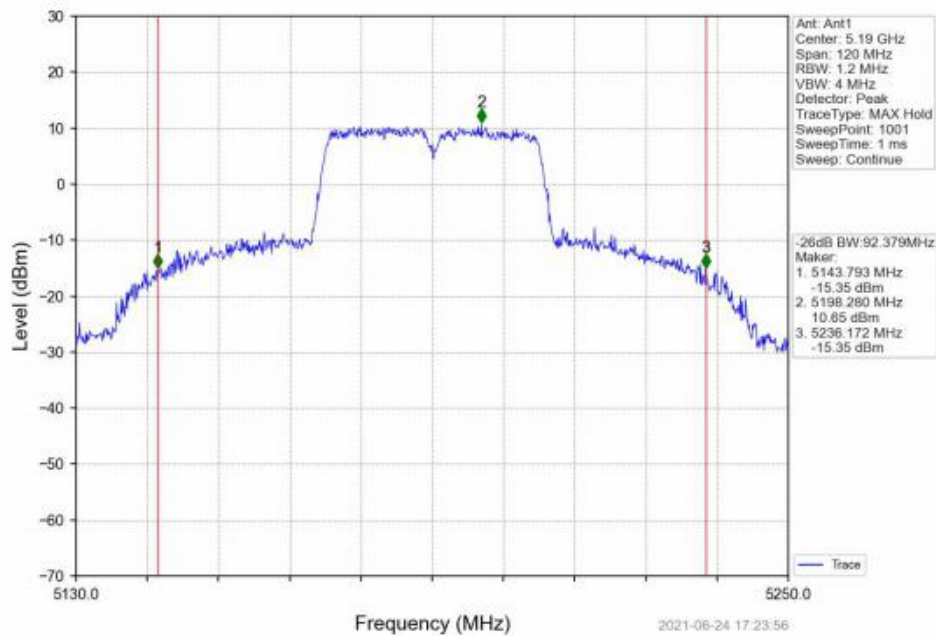
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



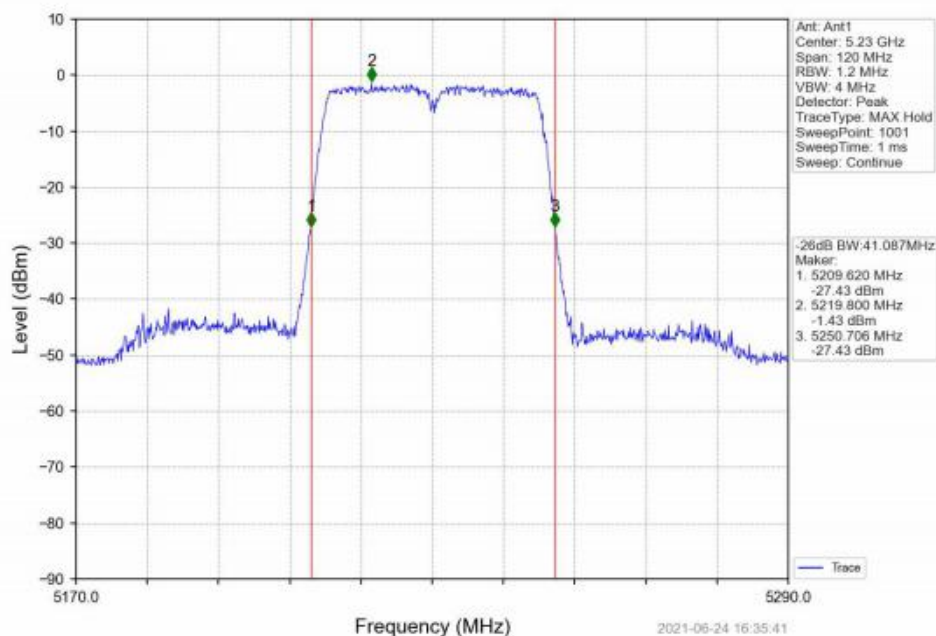
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



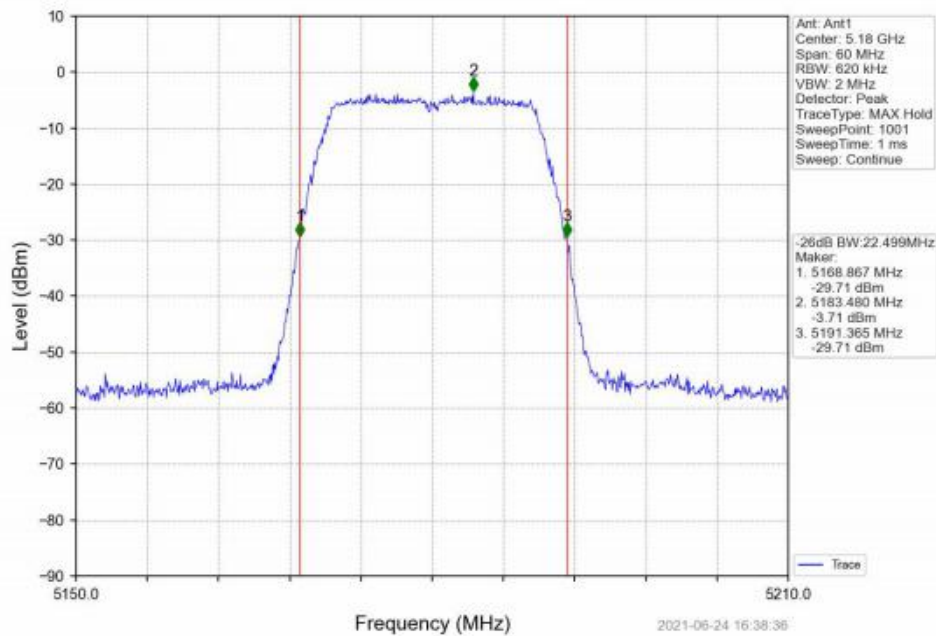
802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



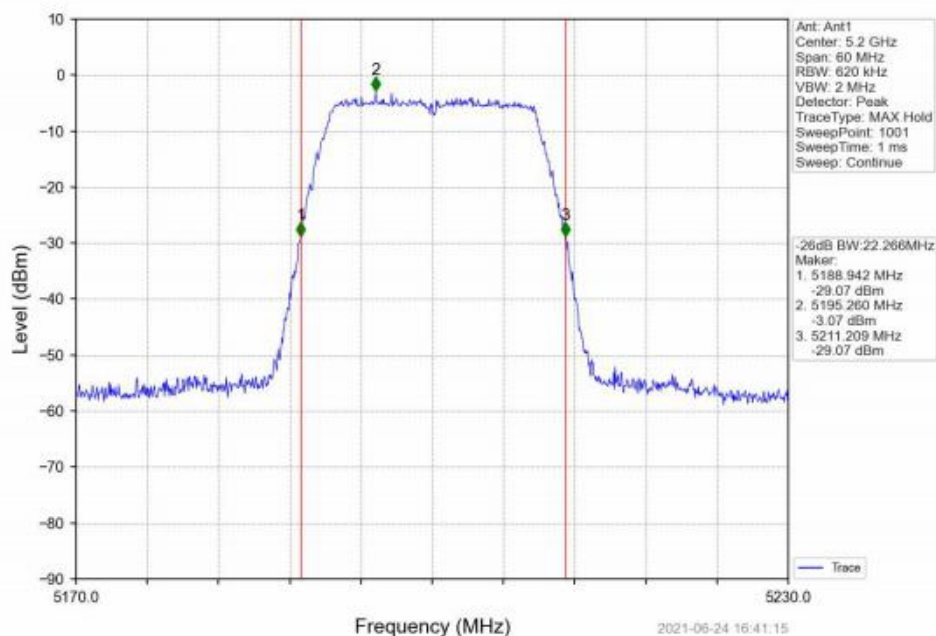
802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



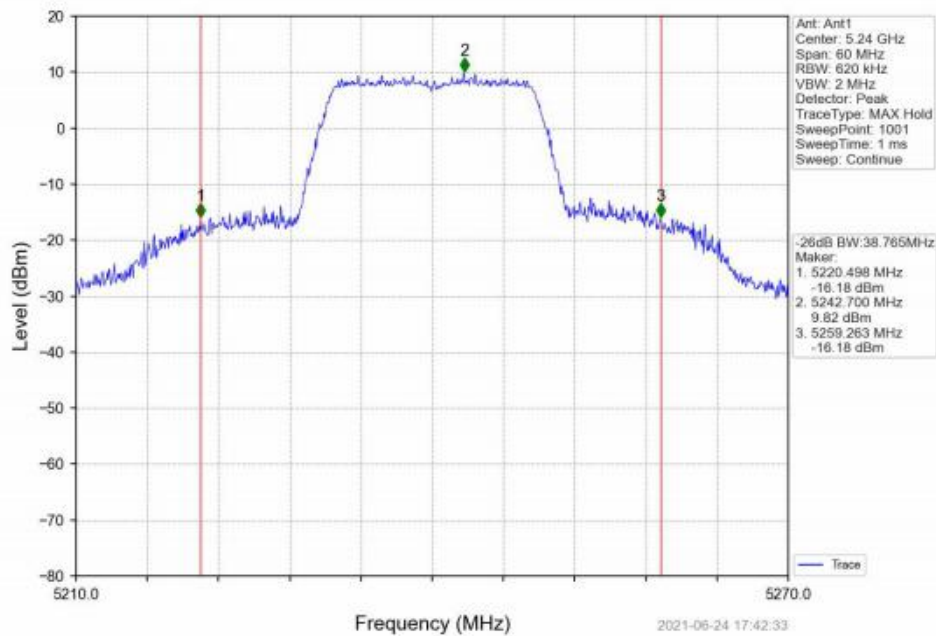
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



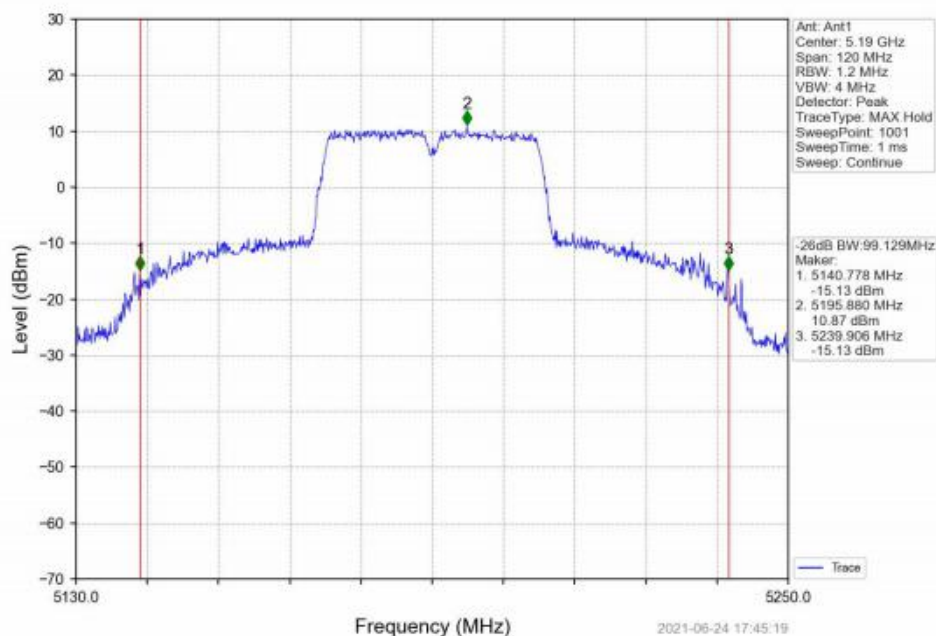
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



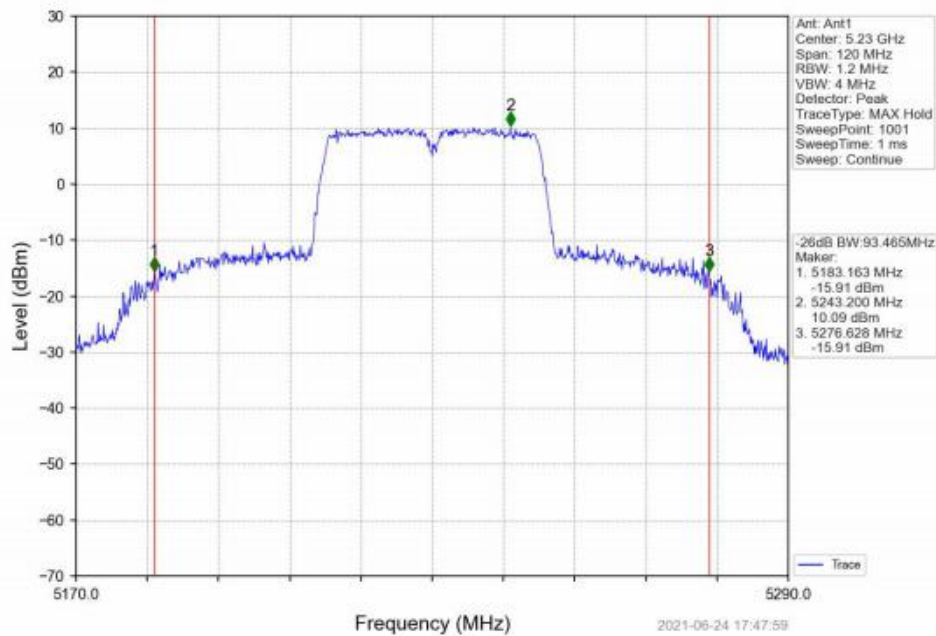
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



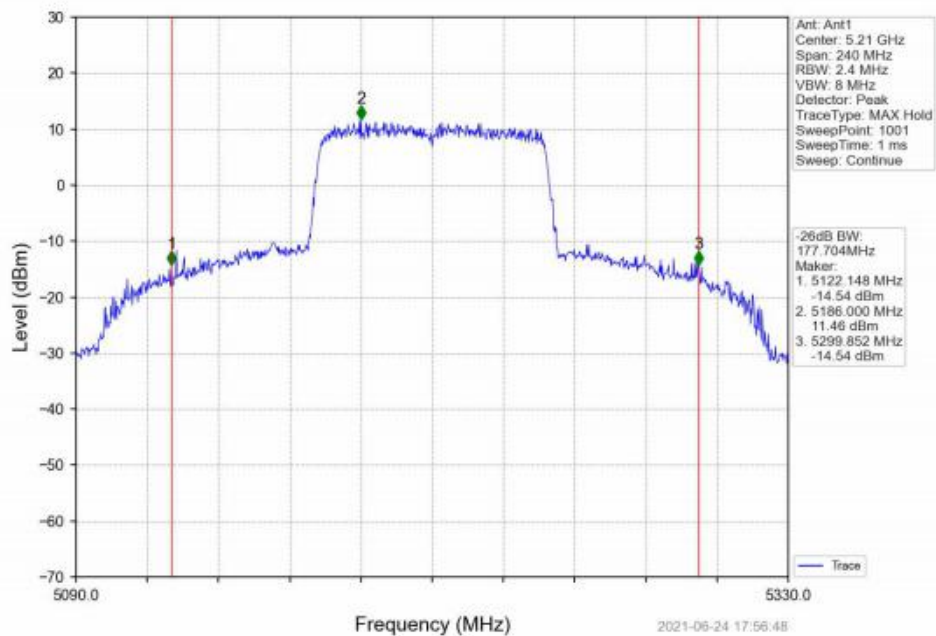
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5210MHz_Ant1_NTNV



3. Maximum Conducted Output Power

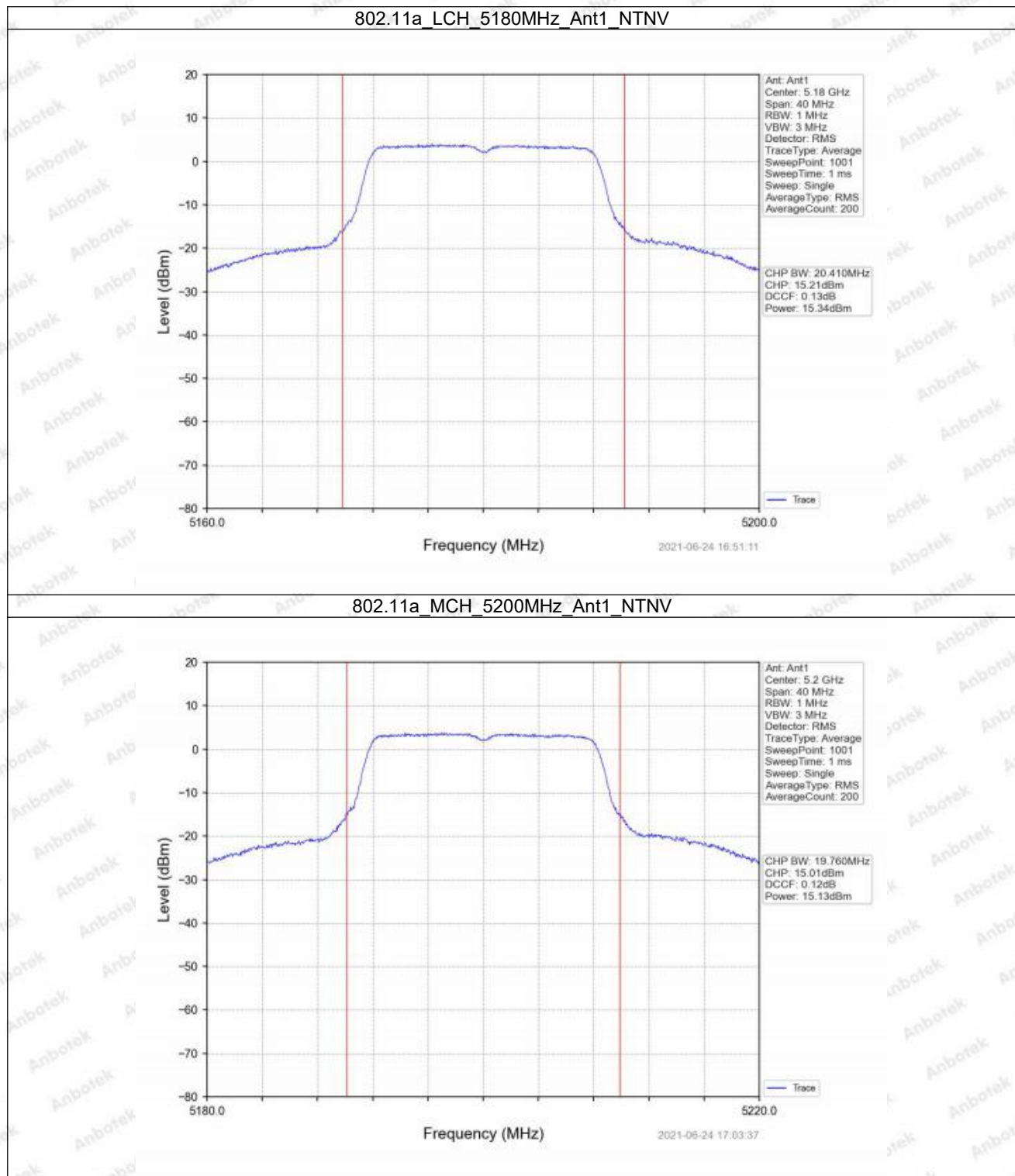
3.1 Power

3.1.1 Test Result

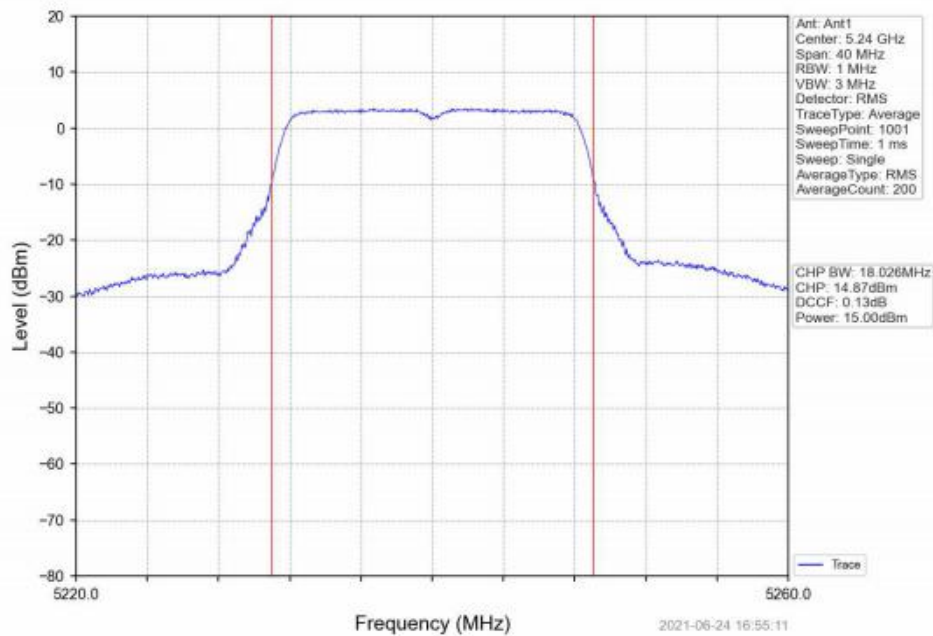
Mode	TX Type	Frequency (MHz)	RU	RU Pos	Measured Peak Output Power (dBm)	Limit (dBm)	Verdict
					Ant1		
802.11a	SISO	5180	/	/	15.34	<=23.98	Pass
		5200	/	/	15.13	<=23.98	Pass
		5240	/	/	15.00	<=23.98	Pass
802.11n (HT20)	SISO	5180	/	/	15.19	<=23.98	Pass
		5200	/	/	15.24	<=23.98	Pass
		5240	/	/	15.08	<=23.98	Pass
802.11n (HT40)	SISO	5190	/	/	15.05	<=23.98	Pass
		5230	/	/	14.87	<=23.98	Pass
802.11ac (VHT20)	SISO	5180	/	/	15.25	<=23.98	Pass
		5200	/	/	15.26	<=23.98	Pass
		5240	/	/	15.08	<=23.98	Pass
802.11ac (VHT40)	SISO	5190	/	/	15.14	<=23.98	Pass
		5230	/	/	14.90	<=23.98	Pass
802.11ac (VHT80)	SISO	5210	/	/	14.40	<=23.98	Pass

Note1: Antenna Gain:1.9 dBi;

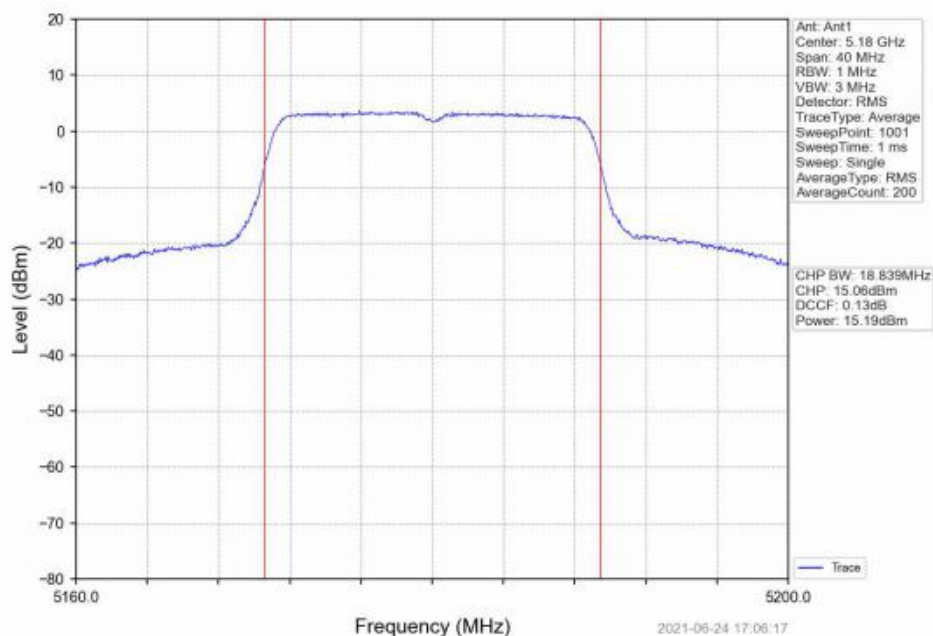
3.1.2 Test Graph



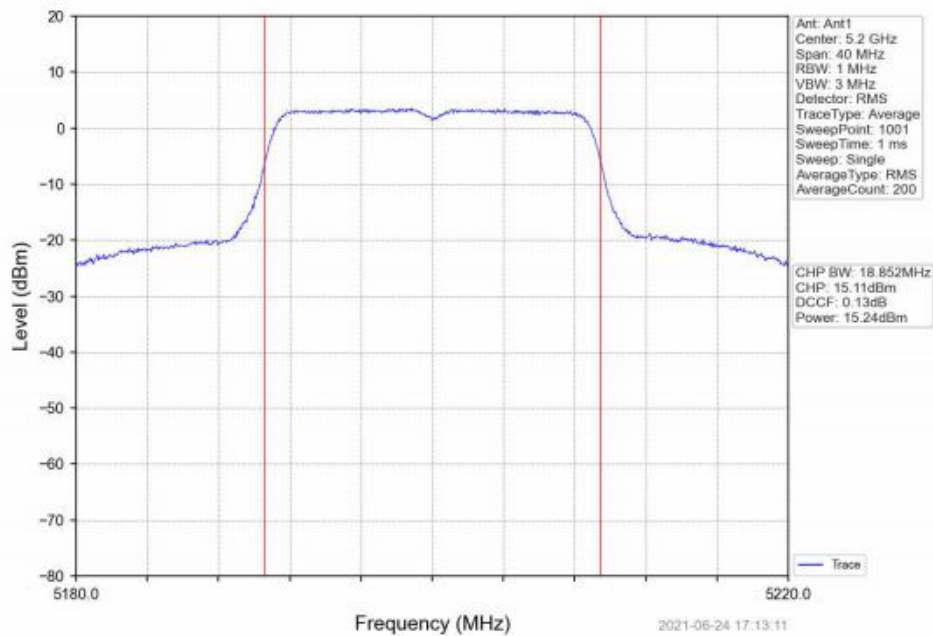
802.11a_HCH_5240MHz_Ant1_NTNV



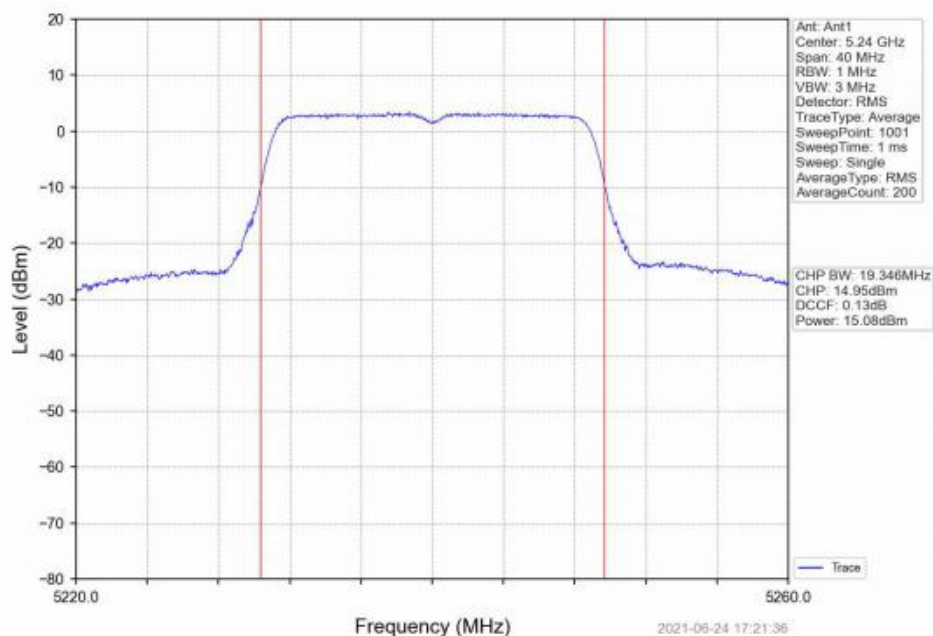
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



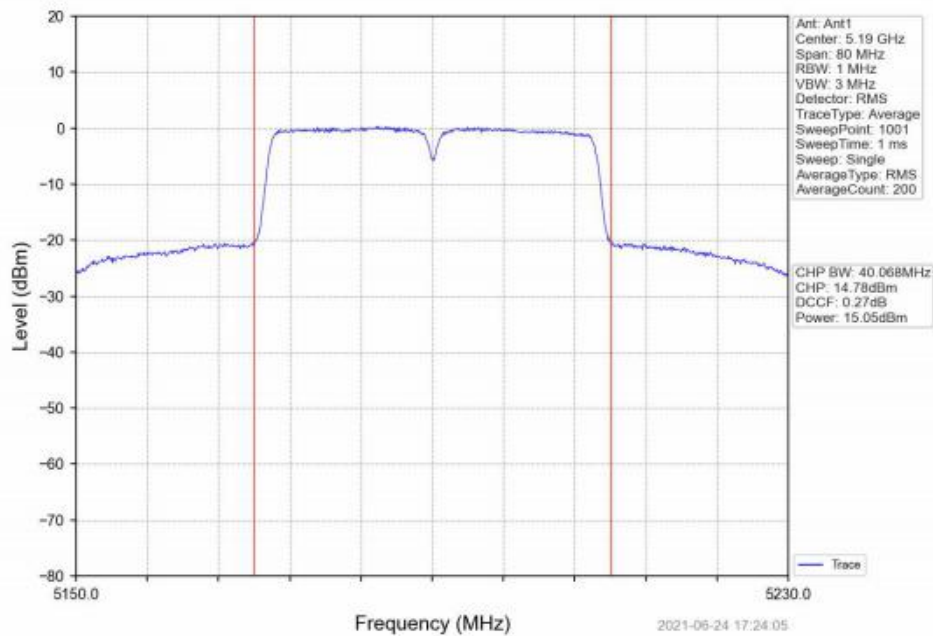
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



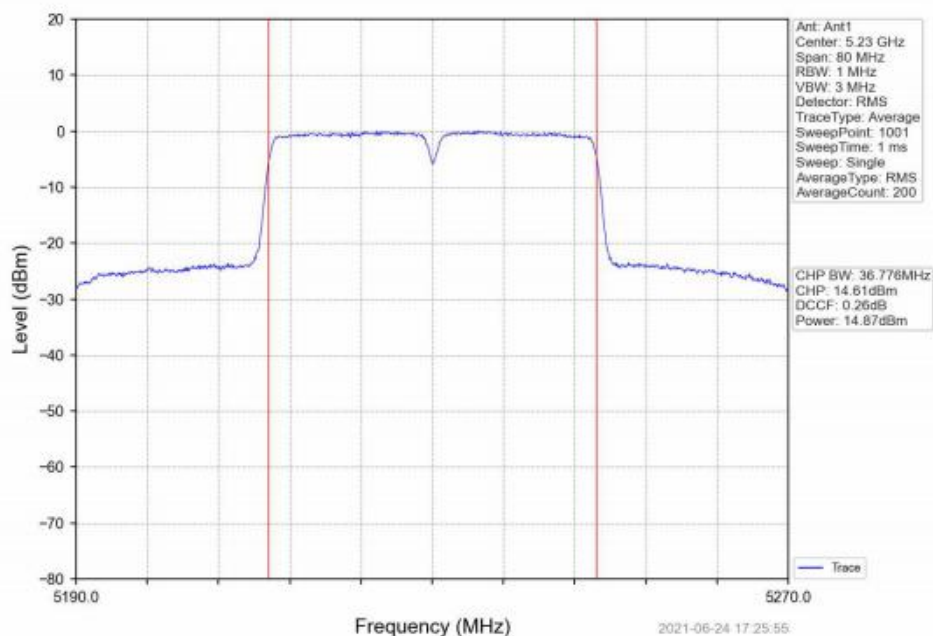
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



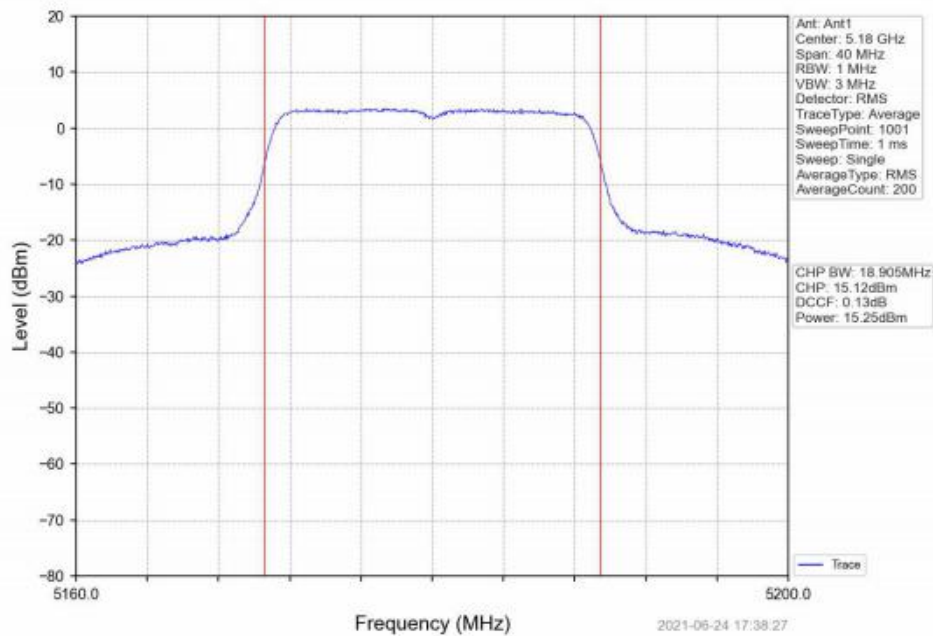
802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



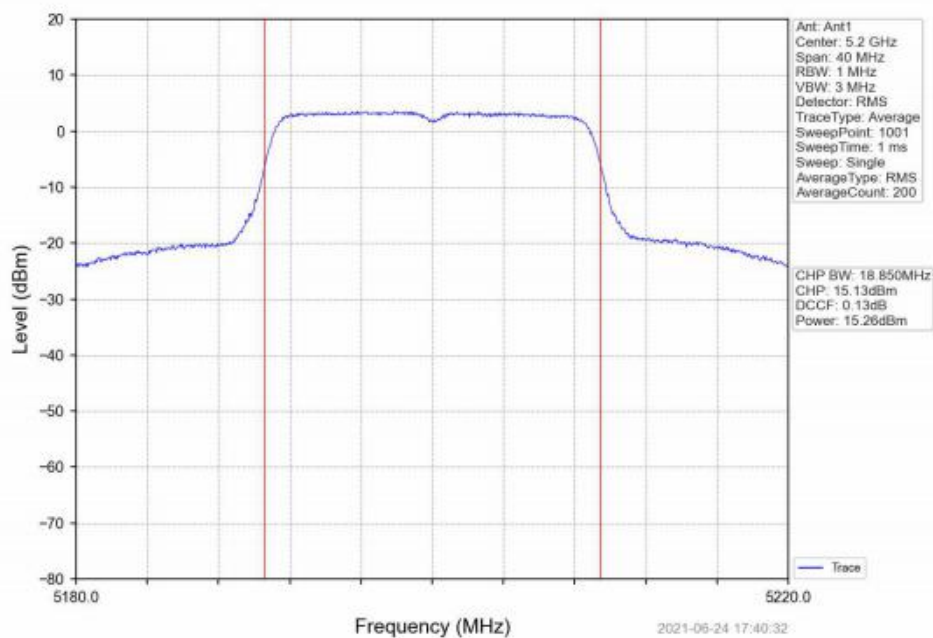
802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



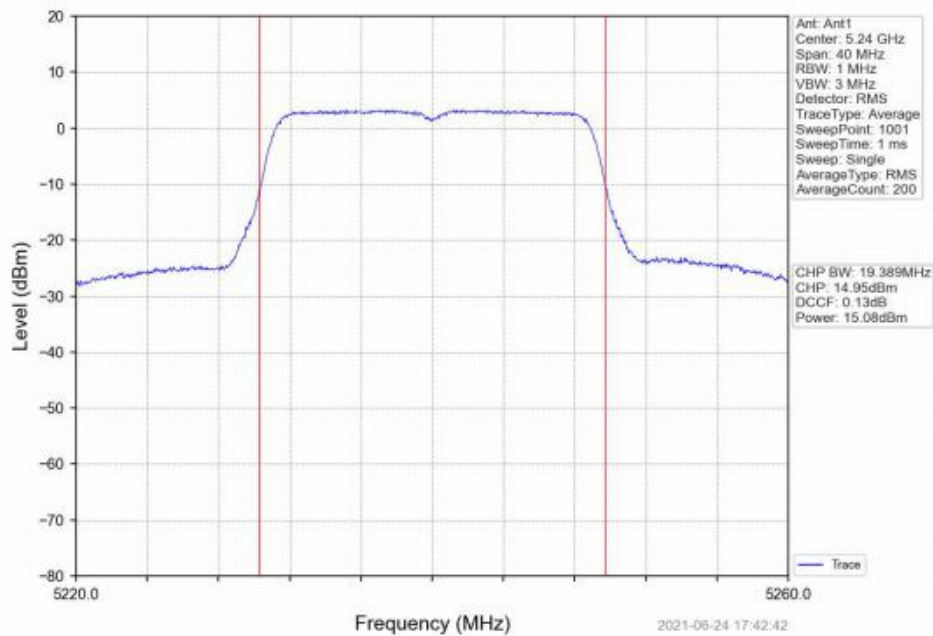
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



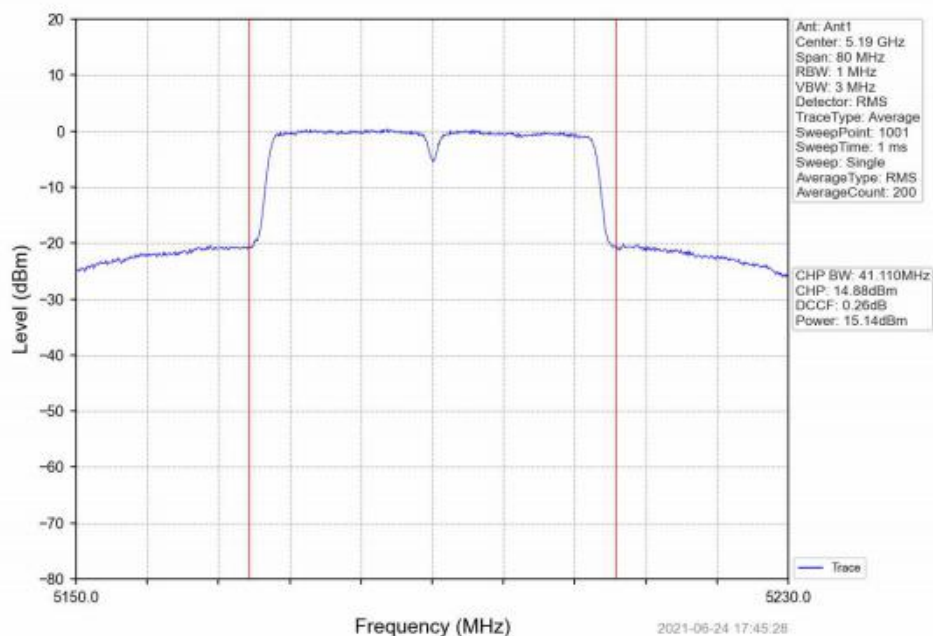
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



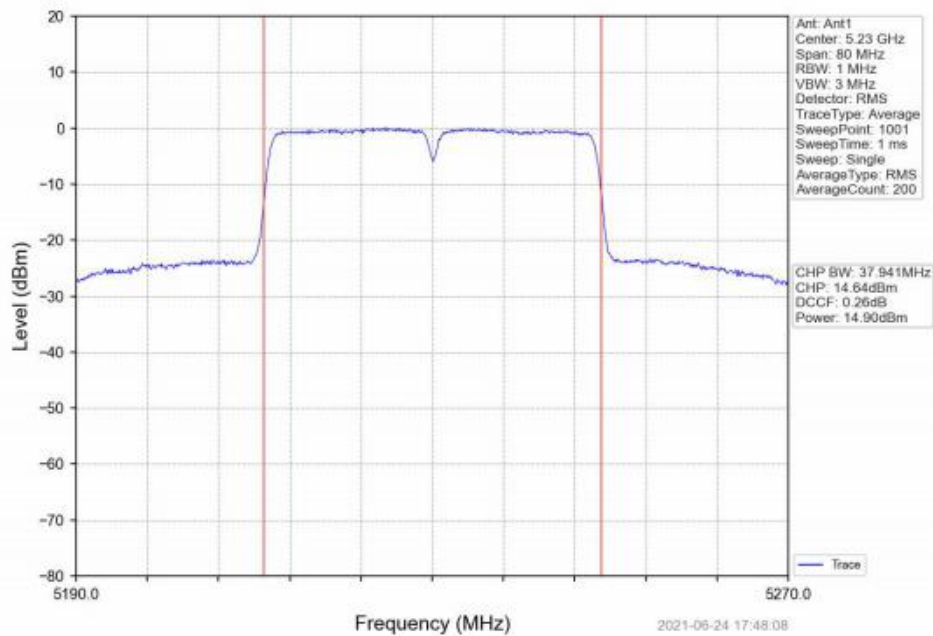
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



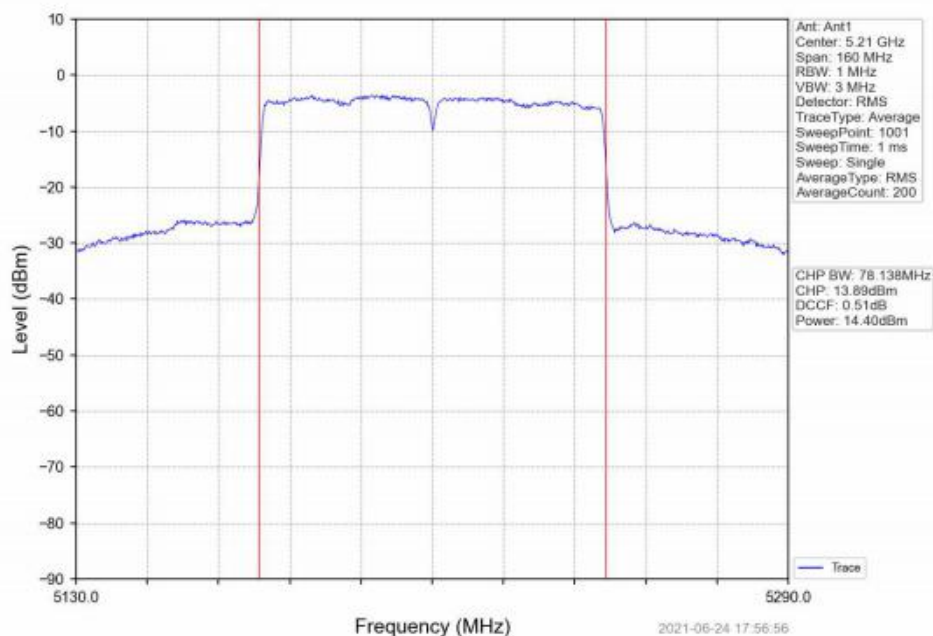
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5210MHz_Ant1_NTNV



4. Maximum Power Spectral Density

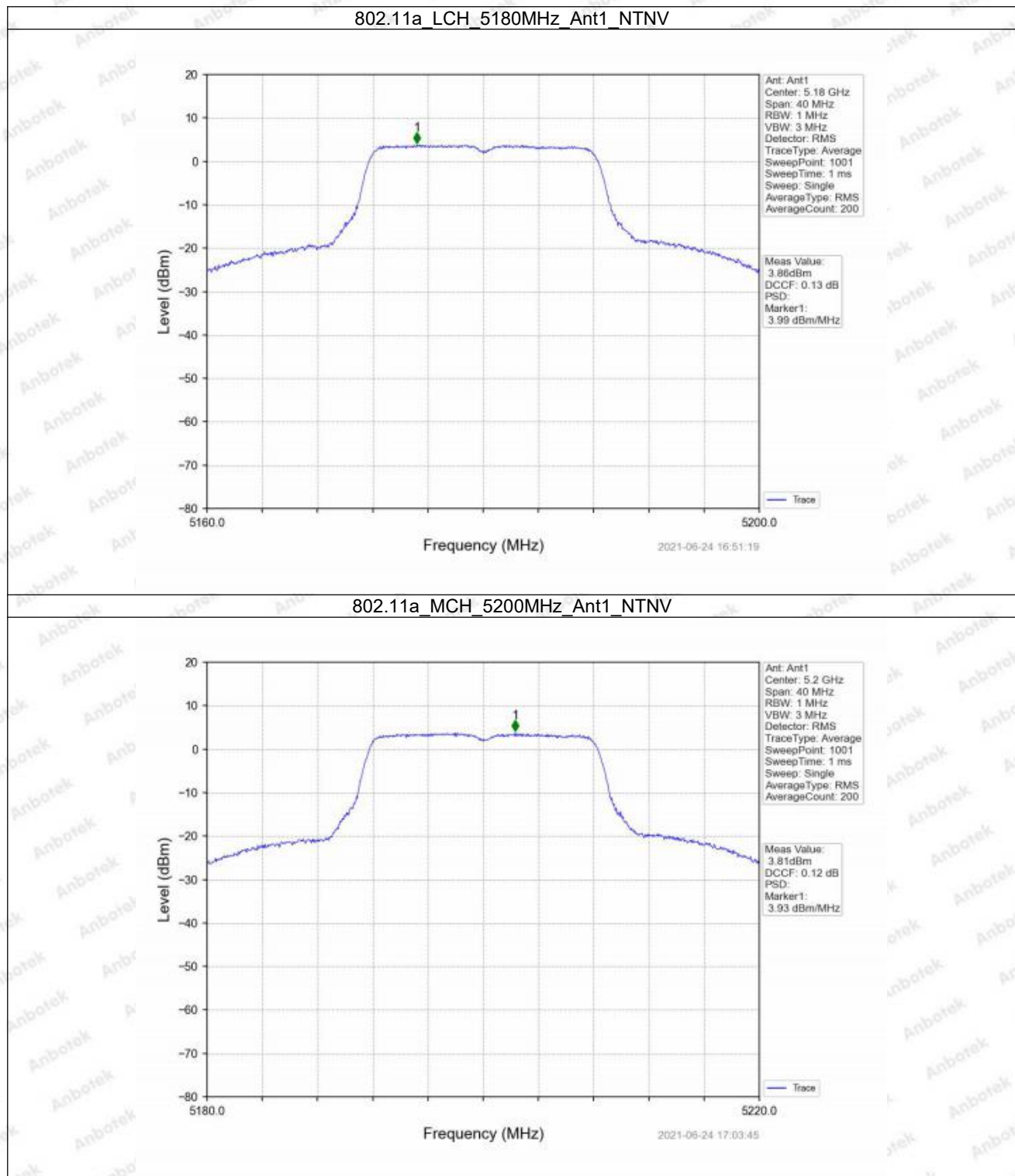
4.1 PSD

4.1.1 Test Result

Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
					Ant1		
802.11a	SISO	5180	/	/	3.99	<=11	Pass
		5200	/	/	3.93	<=11	Pass
		5240	/	/	3.53	<=11	Pass
802.11n (HT20)	SISO	5180	/	/	3.62	<=11	Pass
		5200	/	/	3.77	<=11	Pass
		5240	/	/	3.54	<=11	Pass
802.11n (HT40)	SISO	5190	/	/	0.55	<=11	Pass
		5230	/	/	0.42	<=11	Pass
802.11ac (VHT20)	SISO	5180	/	/	3.81	<=11	Pass
		5200	/	/	3.76	<=11	Pass
		5240	/	/	3.58	<=11	Pass
802.11ac (VHT40)	SISO	5190	/	/	0.52	<=11	Pass
		5230	/	/	0.36	<=11	Pass
802.11ac (VHT80)	SISO	5210	/	/	-3.07	<=11	Pass

Note1: Antenna Gain: 1.9 dBi;

4.1.2 Test Graph



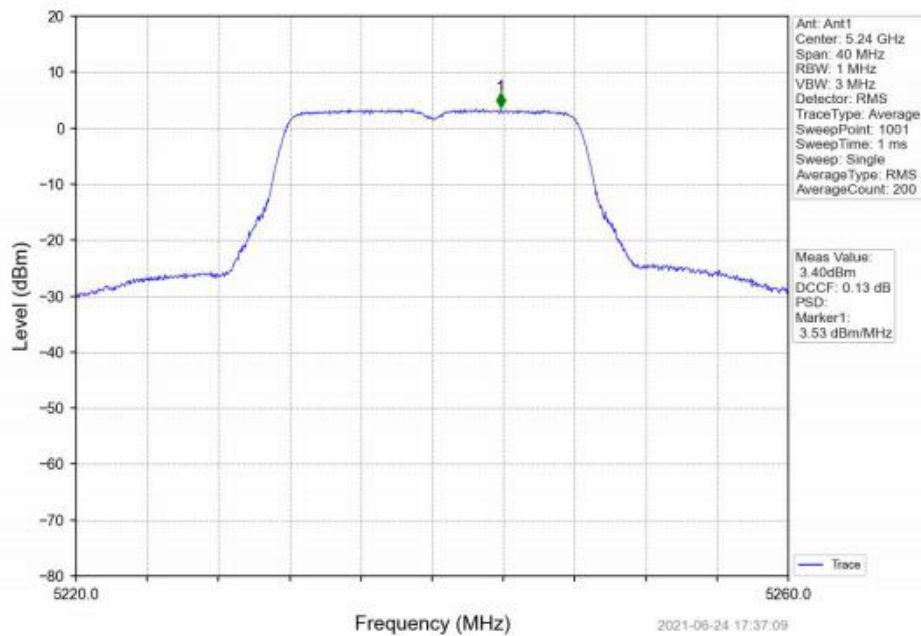
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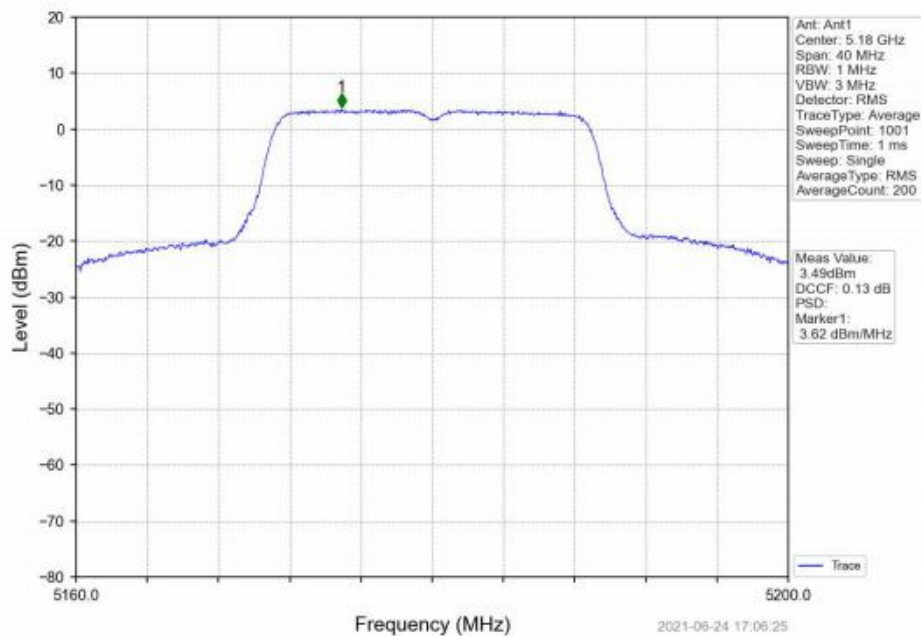
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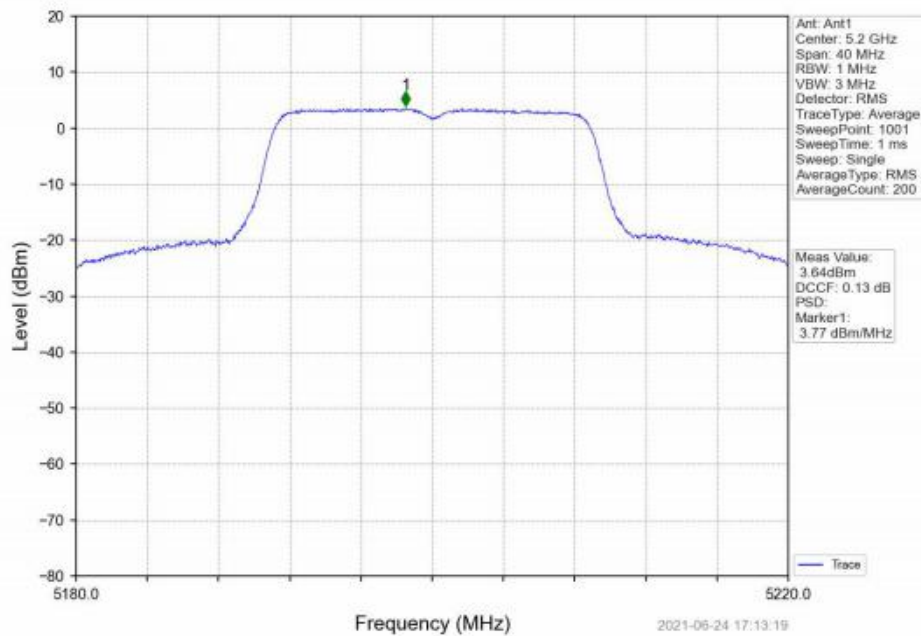
802.11a_HCH_5240MHz_Ant1_NTNV



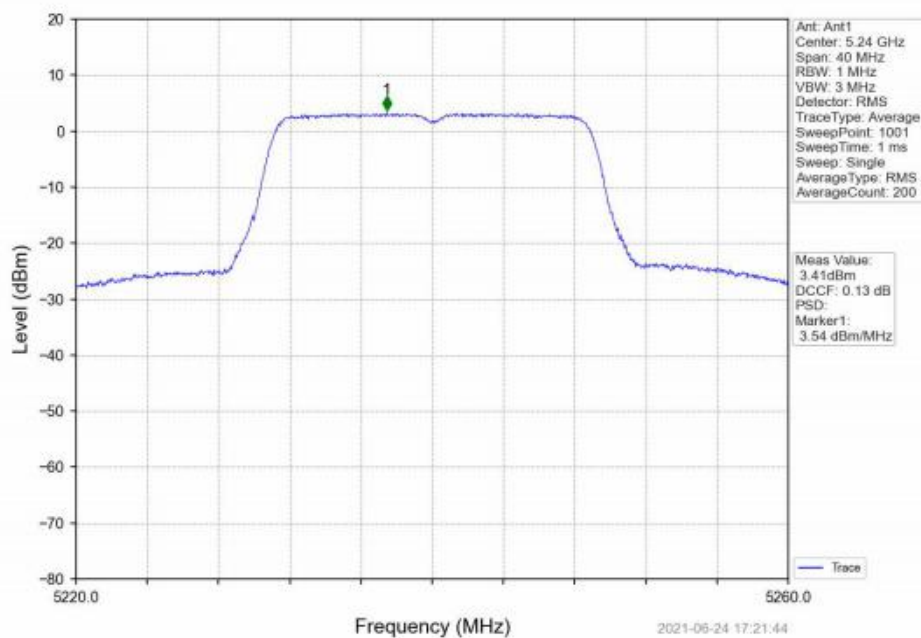
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



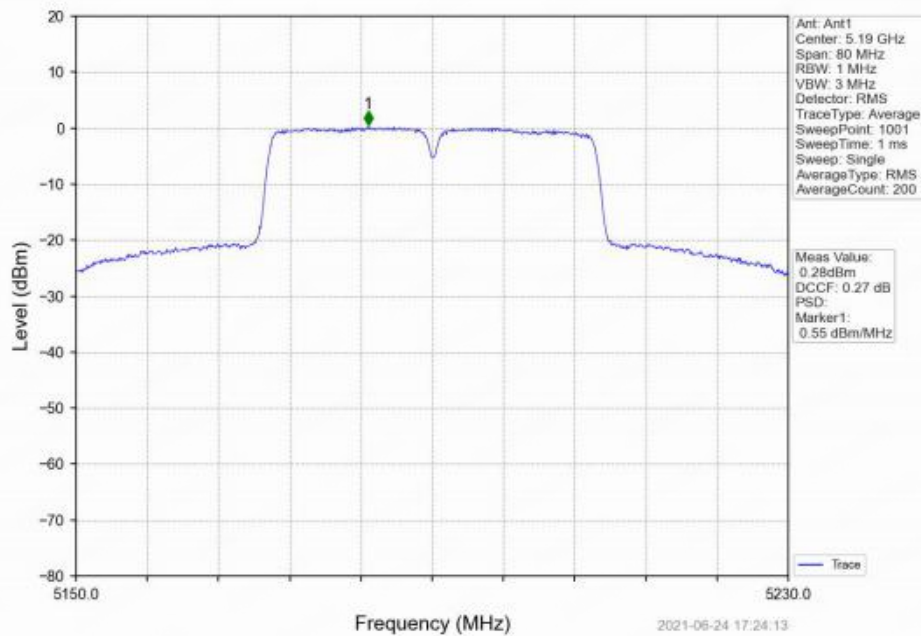
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



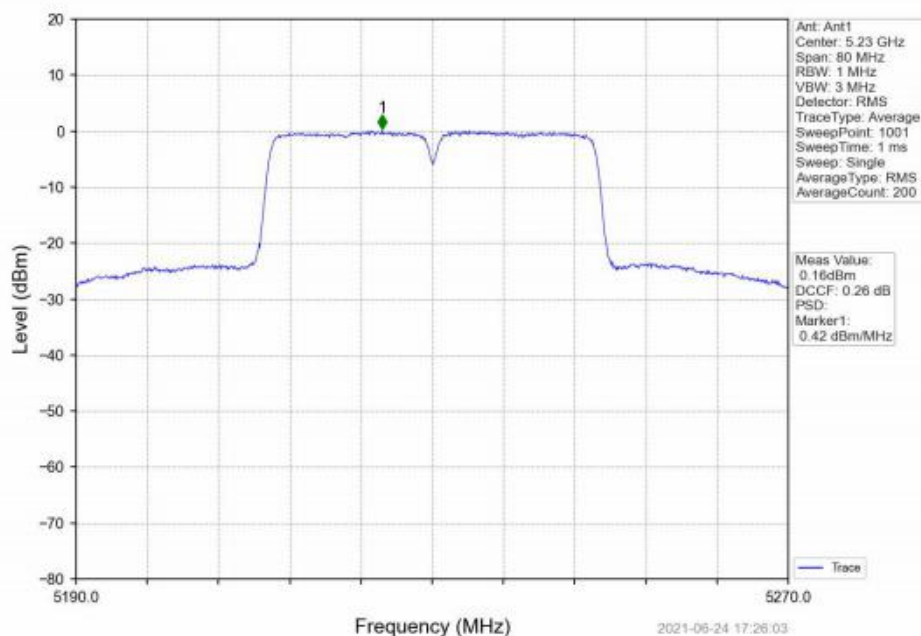
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



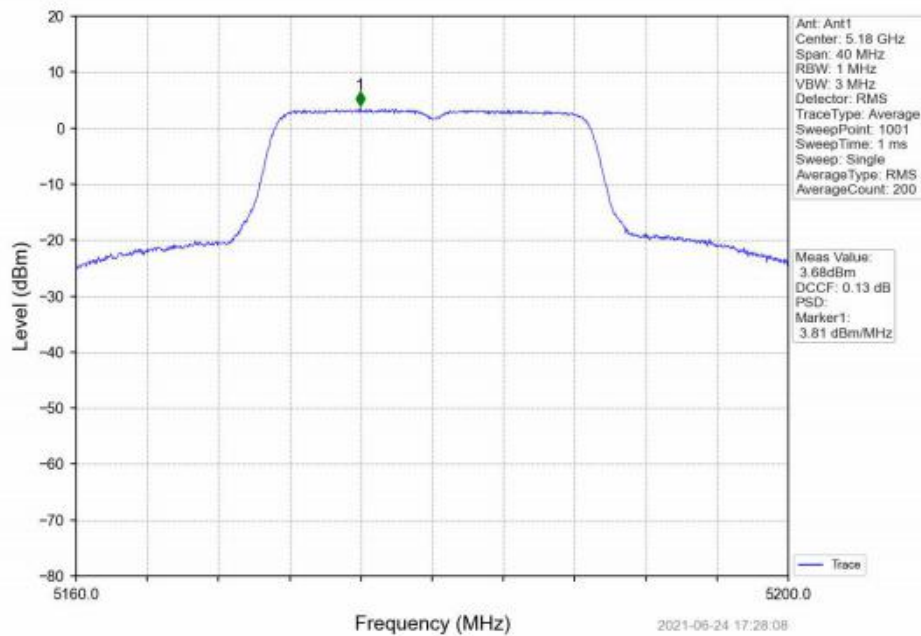
802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



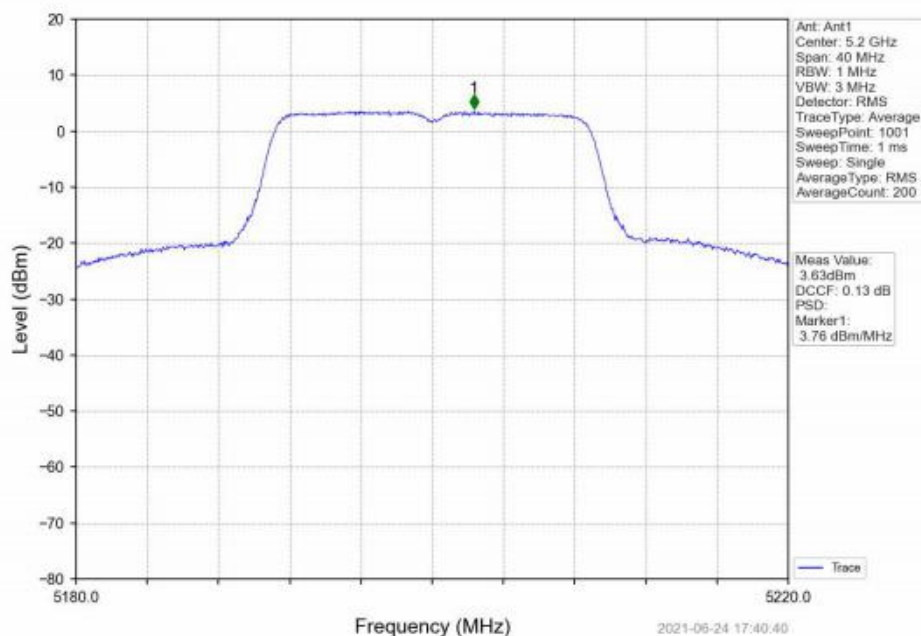
802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



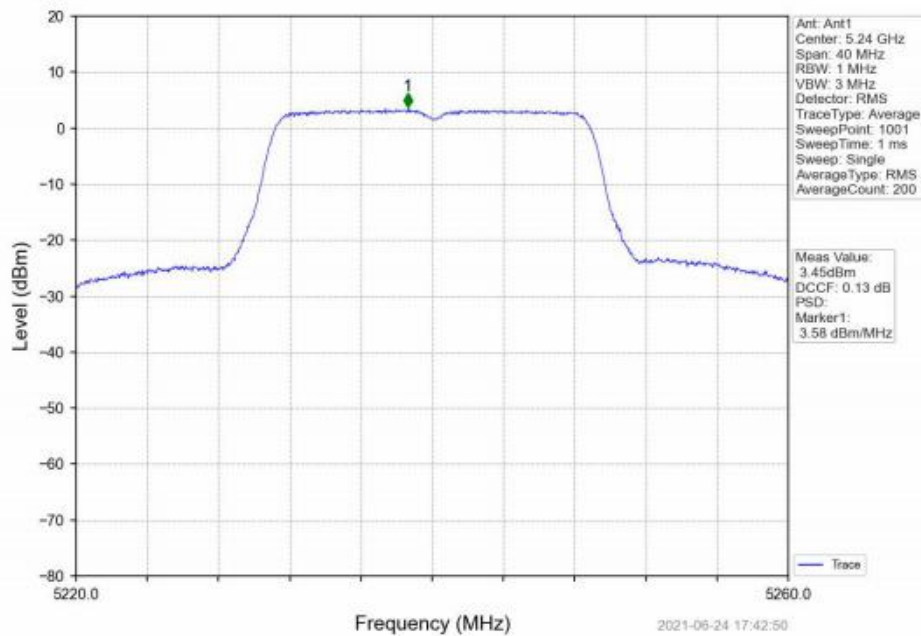
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



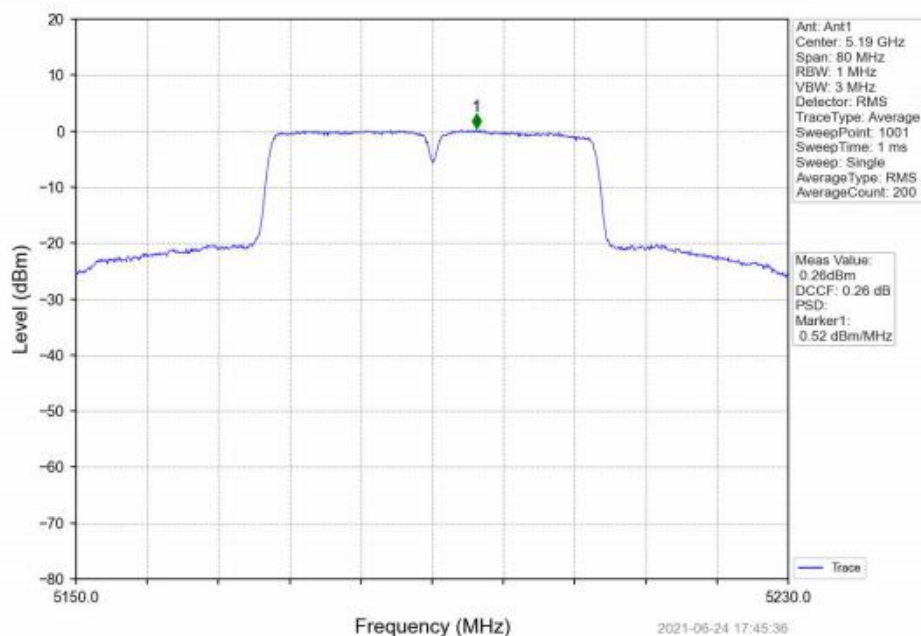
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



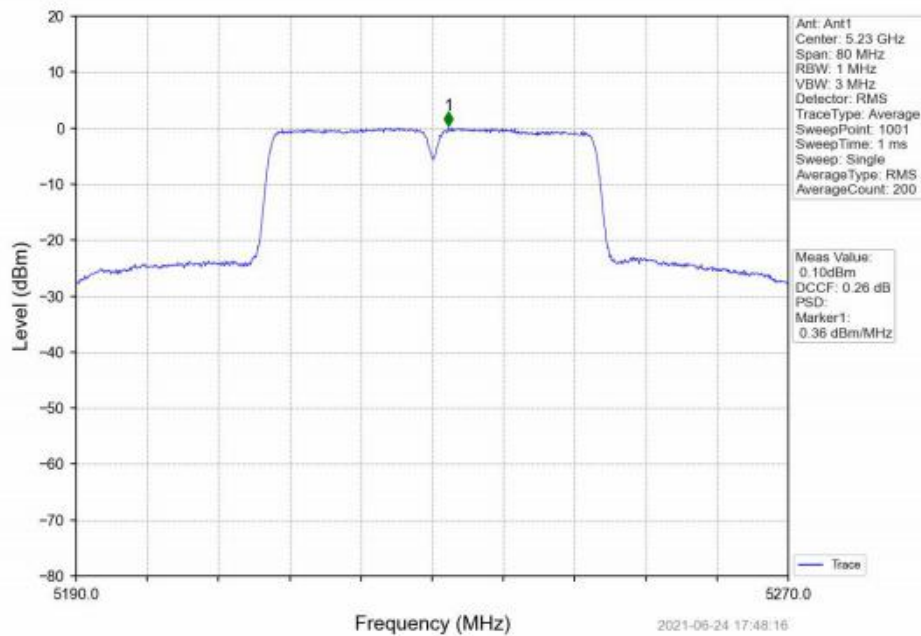
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



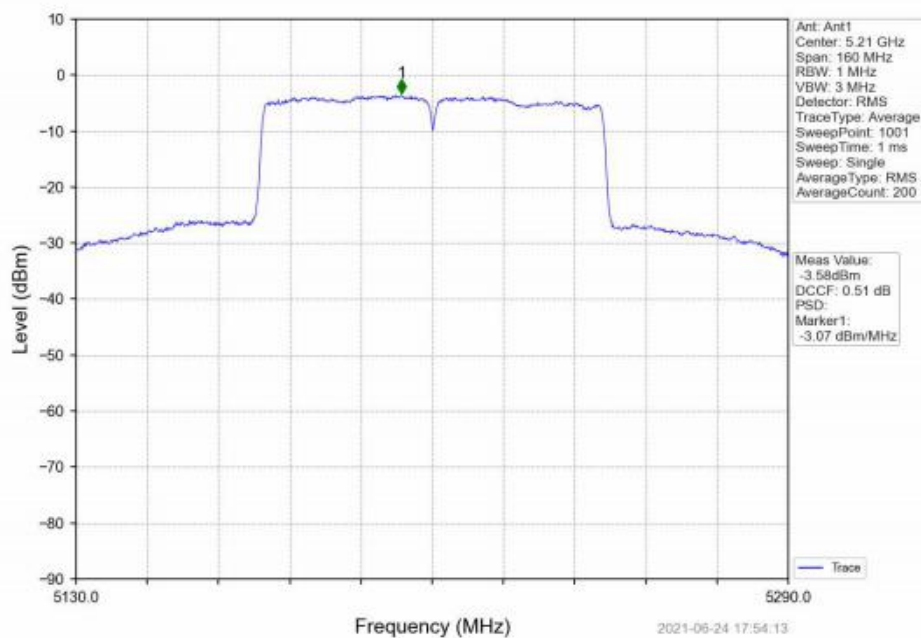
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5210MHz_Ant1_NTNV



5. Frequency Stability

5.1 Ant1

5.1.1 Test Result

Ant1									
Mode	TX Type	Frequency (MHz)	RU	RU Pos	Temperature (°C)	Voltage (VAC)	Measured Frequency (MHz)	Limit	Verdict
802.11a	SISO	5180	/	/	20	102	5180.040	5150 to 5250	Pass
						120	5180.040	5150 to 5250	Pass
						138	5180.040	5150 to 5250	Pass
					-30	120	5180.000	5150 to 5250	Pass
					-20	120	5180.000	5150 to 5250	Pass
					-10	120	5180.080	5150 to 5250	Pass
					0	120	5180.020	5150 to 5250	Pass
					10	120	5180.040	5150 to 5250	Pass
					30	120	5180.120	5150 to 5250	Pass
					40	120	5180.040	5150 to 5250	Pass
					50	120	5180.020	5150 to 5250	Pass
		5200	/	/	20	102	5200.020	5150 to 5250	Pass
						120	5200.040	5150 to 5250	Pass
						138	5200.000	5150 to 5250	Pass
					-30	120	5200.080	5150 to 5250	Pass
					-20	120	5200.060	5150 to 5250	Pass
					-10	120	5200.040	5150 to 5250	Pass
					0	120	5200.000	5150 to 5250	Pass
					10	120	5200.000	5150 to 5250	Pass
					30	120	5200.040	5150 to 5250	Pass
					40	120	5200.020	5150 to 5250	Pass
					50	120	5200.060	5150 to 5250	Pass
		5240	/	/	20	102	5240.000	5150 to 5250	Pass
						120	5240.060	5150 to 5250	Pass
						138	5239.980	5150 to 5250	Pass
					-30	120	5240.020	5150 to 5250	Pass
					-20	120	5240.060	5150 to 5250	Pass
					-10	120	5240.040	5150 to 5250	Pass
					0	120	5240.060	5150 to 5250	Pass
					10	120	5240.040	5150 to 5250	Pass
					30	120	5240.020	5150 to 5250	Pass
					40	120	5240.000	5150 to 5250	Pass
					50	120	5240.020	5150 to 5250	Pass
802.11n (HT20)	SISO	5180	/	/	20	102	5180.080	5150 to 5250	Pass
						120	5180.000	5150 to 5250	Pass
						138	5180.020	5150 to 5250	Pass
					-30	120	5180.040	5150 to 5250	Pass
					-20	120	5180.080	5150 to 5250	Pass
					-10	120	5180.060	5150 to 5250	Pass
					0	120	5180.020	5150 to 5250	Pass
					10	120	5180.080	5150 to 5250	Pass
					30	120	5179.980	5150 to 5250	Pass
					40	120	5179.980	5150 to 5250	Pass
					50	120	5180.040	5150 to 5250	Pass
		5200	/	/	20	102	5200.040	5150 to 5250	Pass

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802.11n (HT40)	SISO	5240	/	/		120	5200.060	5150 to 5250	Pass
						138	5200.020	5150 to 5250	Pass
					-30	120	5200.000	5150 to 5250	Pass
					-20	120	5200.040	5150 to 5250	Pass
					-10	120	5200.020	5150 to 5250	Pass
					0	120	5200.060	5150 to 5250	Pass
					10	120	5200.020	5150 to 5250	Pass
					30	120	5199.960	5150 to 5250	Pass
					40	120	5200.020	5150 to 5250	Pass
					50	120	5200.040	5150 to 5250	Pass
					20	102	5240.060	5150 to 5250	Pass
						120	5240.120	5150 to 5250	Pass
						138	5240.060	5150 to 5250	Pass
					-30	120	5240.040	5150 to 5250	Pass
					-20	120	5240.040	5150 to 5250	Pass
					-10	120	5240.120	5150 to 5250	Pass
					0	120	5240.080	5150 to 5250	Pass
					10	120	5240.020	5150 to 5250	Pass
					30	120	5240.000	5150 to 5250	Pass
					40	120	5240.080	5150 to 5250	Pass
					50	120	5240.060	5150 to 5250	Pass
802.11n (HT40)	SISO	5190	/	/		102	5190.120	5150 to 5250	Pass
					20	120	5189.960	5150 to 5250	Pass
						138	5190.040	5150 to 5250	Pass
					-30	120	5190.040	5150 to 5250	Pass
					-20	120	5190.080	5150 to 5250	Pass
					-10	120	5190.040	5150 to 5250	Pass
					0	120	5190.120	5150 to 5250	Pass
					10	120	5190.040	5150 to 5250	Pass
					30	120	5190.080	5150 to 5250	Pass
					40	120	5190.080	5150 to 5250	Pass
					50	120	5190.120	5150 to 5250	Pass
		5230	/	/	20	102	5230.080	5150 to 5250	Pass
						120	5230.160	5150 to 5250	Pass
						138	5230.120	5150 to 5250	Pass
					-30	120	5230.120	5150 to 5250	Pass
					-20	120	5230.080	5150 to 5250	Pass
					-10	120	5230.080	5150 to 5250	Pass
					0	120	5230.160	5150 to 5250	Pass
					10	120	5230.120	5150 to 5250	Pass
					30	120	5230.040	5150 to 5250	Pass
					40	120	5230.160	5150 to 5250	Pass
					50	120	5230.120	5150 to 5250	Pass
802.11ac (VHT20)	SISO	5180	/	/	20	102	5180.040	5150 to 5250	Pass
						120	5180.080	5150 to 5250	Pass
						138	5180.020	5150 to 5250	Pass
					-30	120	5180.040	5150 to 5250	Pass
					-20	120	5180.020	5150 to 5250	Pass
					-10	120	5180.040	5150 to 5250	Pass
					0	120	5180.000	5150 to 5250	Pass
					10	120	5180.060	5150 to 5250	Pass
					30	120	5180.000	5150 to 5250	Pass
					40	120	5179.980	5150 to 5250	Pass
					50	120	5180.000	5150 to 5250	Pass
		5200	/	/	20	102	5200.040	5150 to 5250	Pass
						120	5200.060	5150 to 5250	Pass
						138	5200.100	5150 to 5250	Pass
					-30	120	5200.040	5150 to 5250	Pass

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802.11ac (VHT40)	SISO	5240	/	/	-20	120	5200.000	5150 to 5250	Pass
					-10	120	5200.040	5150 to 5250	Pass
					0	120	5200.000	5150 to 5250	Pass
					10	120	5200.060	5150 to 5250	Pass
					30	120	5200.040	5150 to 5250	Pass
					40	120	5200.040	5150 to 5250	Pass
					50	120	5199.980	5150 to 5250	Pass
		5190	/	/	20	102	5239.980	5150 to 5250	Pass
						120	5240.080	5150 to 5250	Pass
						138	5240.060	5150 to 5250	Pass
					-30	120	5240.020	5150 to 5250	Pass
					-20	120	5240.000	5150 to 5250	Pass
					-10	120	5239.980	5150 to 5250	Pass
					0	120	5240.060	5150 to 5250	Pass
					10	120	5240.040	5150 to 5250	Pass
					30	120	5240.080	5150 to 5250	Pass
					40	120	5240.120	5150 to 5250	Pass
					50	120	5240.040	5150 to 5250	Pass
					20	102	5190.080	5150 to 5250	Pass
						120	5190.160	5150 to 5250	Pass
						138	5190.080	5150 to 5250	Pass
					-30	120	5190.080	5150 to 5250	Pass
					-20	120	5190.080	5150 to 5250	Pass
					-10	120	5190.040	5150 to 5250	Pass
					0	120	5190.120	5150 to 5250	Pass
					10	120	5190.080	5150 to 5250	Pass
					30	120	5190.080	5150 to 5250	Pass
					40	120	5190.120	5150 to 5250	Pass
					50	120	5190.080	5150 to 5250	Pass
802.11ac (VHT80)	SISO	5230	/	/	20	102	5230.120	5150 to 5250	Pass
						120	5230.160	5150 to 5250	Pass
						138	5230.080	5150 to 5250	Pass
					-30	120	5230.080	5150 to 5250	Pass
					-20	120	5230.120	5150 to 5250	Pass
					-10	120	5230.080	5150 to 5250	Pass
					0	120	5230.120	5150 to 5250	Pass
					10	120	5230.080	5150 to 5250	Pass
					30	120	5230.040	5150 to 5250	Pass
					40	120	5230.080	5150 to 5250	Pass
					50	120	5230.120	5150 to 5250	Pass
		5210	/	/	20	102	5210.075	5150 to 5250	Pass
						120	5210.150	5150 to 5250	Pass
						138	5210.000	5150 to 5250	Pass
					-30	120	5210.150	5150 to 5250	Pass
					-20	120	5210.150	5150 to 5250	Pass
					-10	120	5210.075	5150 to 5250	Pass
					0	120	5210.075	5150 to 5250	Pass
					10	120	5210.150	5150 to 5250	Pass
					30	120	5210.075	5150 to 5250	Pass
					40	120	5210.150	5150 to 5250	Pass
					50	120	5210.075	5150 to 5250	Pass

---End---

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