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Annex for 5G Wi-Fi BAND1

Test Report No.: CTL2412319012-WF03

TABLE OF CONTENTS

1. Duty Cycle.....	3
1.1 Test Result.....	3
1.1.1 Ant1.....	3
1.2 Test Graph.....	4
1.2.1 Ant1.....	4
2. Bandwidth.....	9
2.1 Test Result.....	9
2.1.1 OBW.....	9
2.1.2 26dB BW.....	9
2.2 Test Graph.....	10
2.2.1 OBW.....	10
2.2.2 26dB BW.....	15
3. Maximum Conducted Output Power.....	20
3.1 Test Result.....	20
3.1.1 Power.....	20
4. Maximum Power Spectral Density.....	21
4.1 Test Result.....	21
4.1.1 PSD.....	21
4.2 Test Graph.....	22

FCCID: SMQIT50

4.2.1 PSD.....	22
5. Frequency Stability.....	27
5.1 Test Result.....	27
5.1.1 Ant1.....	27

FCCID: SMQIT50

1. Duty Cycle

1.1 Test Result

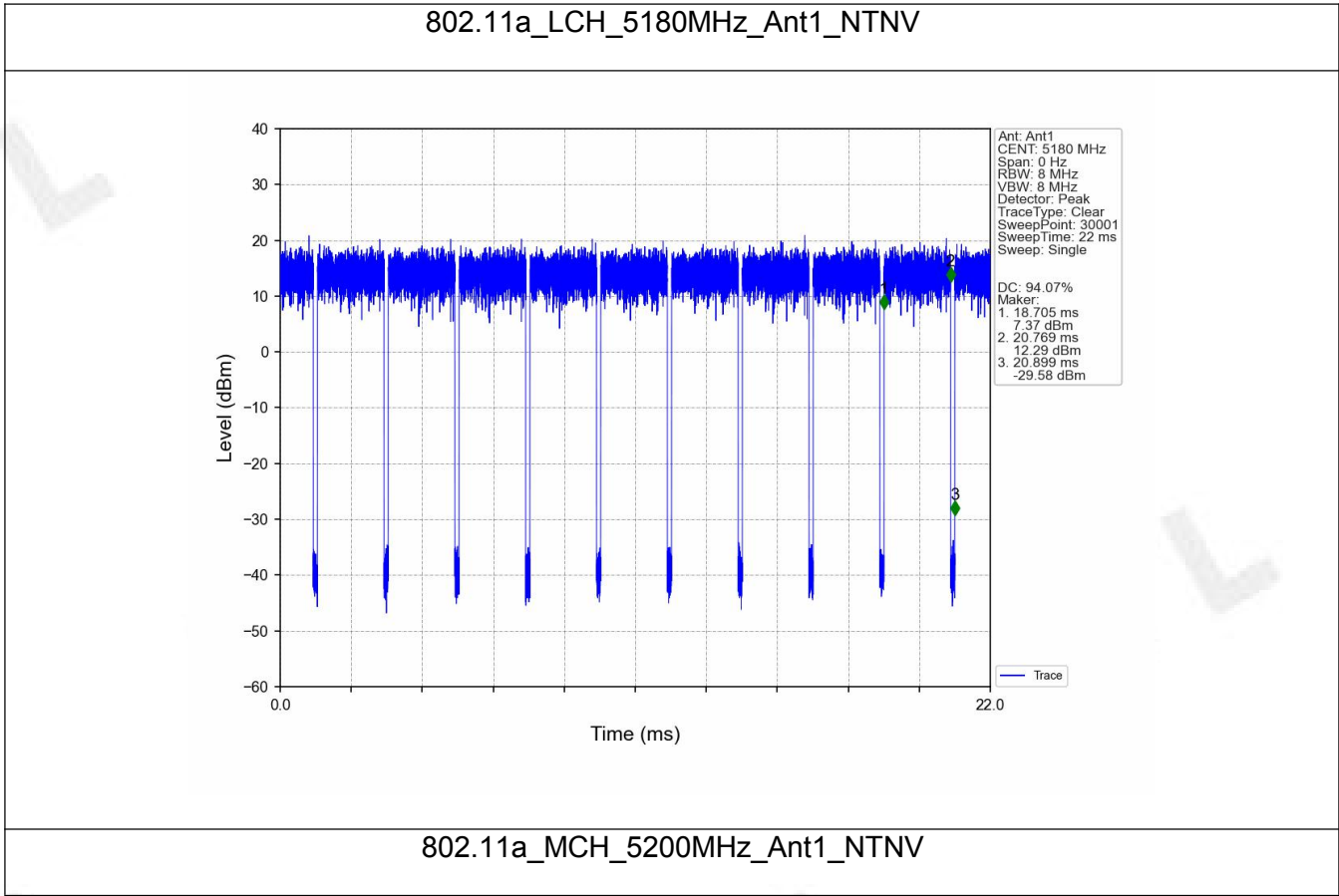
1.1.1 Ant1

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	2.064	2.194	94.07	0.27	0.03
		5200	2.065	2.194	94.12	0.26	0.00
		5240	2.064	2.193	94.12	0.26	0.00
802.11n (HT20)	SISO	5180	1.920	2.050	93.66	0.28	0.07
		5200	1.921	2.050	93.71	0.28	0.00
		5240	1.921	2.051	93.66	0.28	0.07
802.11n (HT40)	SISO	5190	0.945	1.074	87.99	0.56	0.03
		5230	0.945	1.074	87.99	0.56	0.03

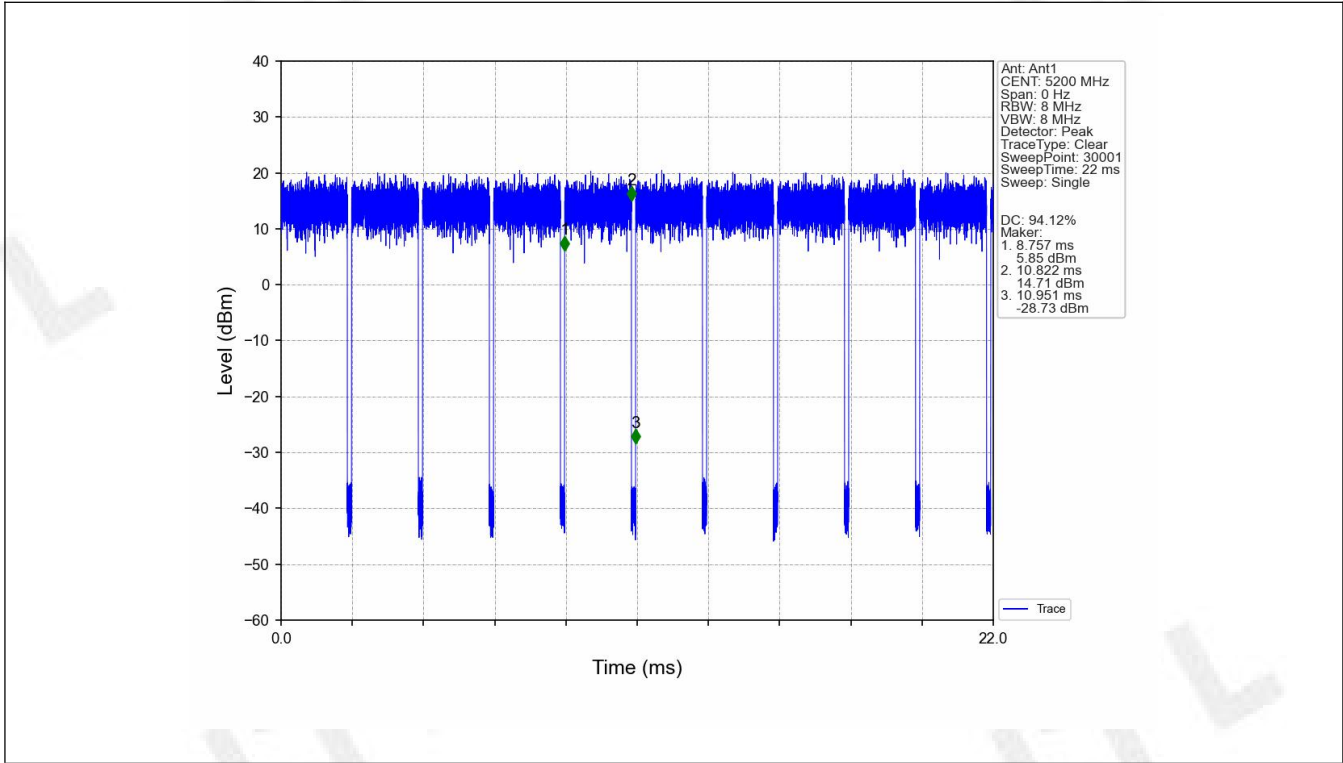
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1.2 Test Graph

1.2.1 Ant1

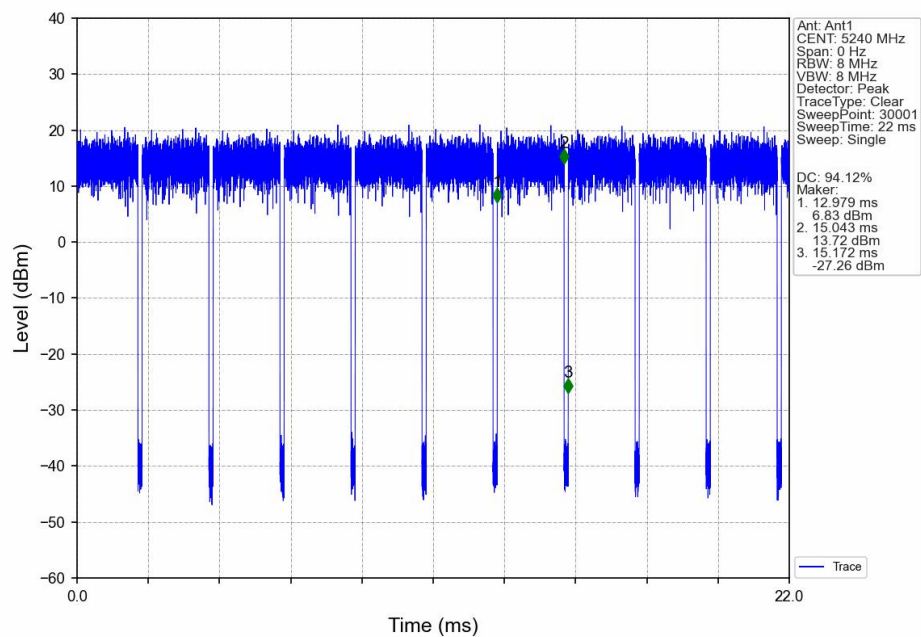


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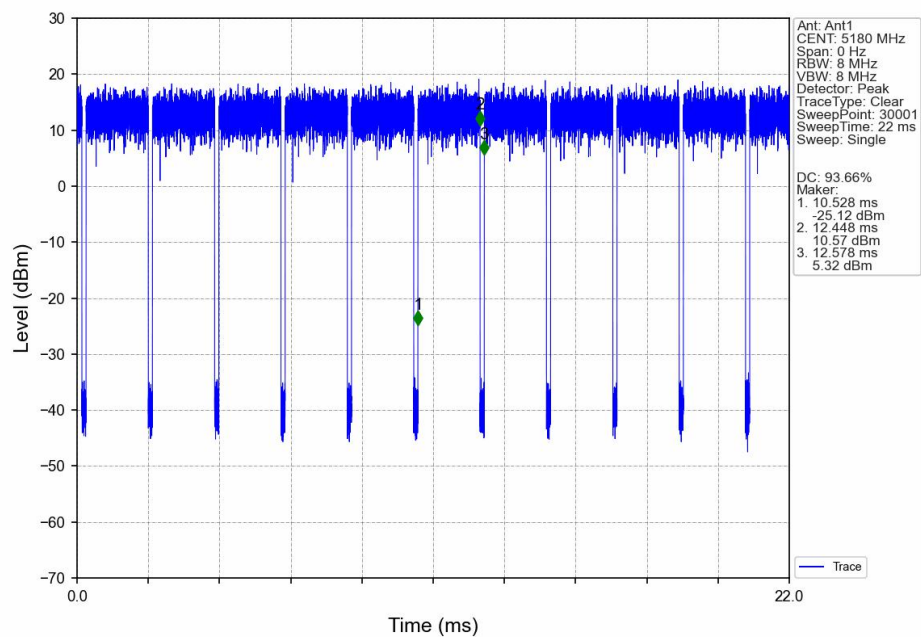


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802.11a_HCH_5240MHz_Ant1_NTNV

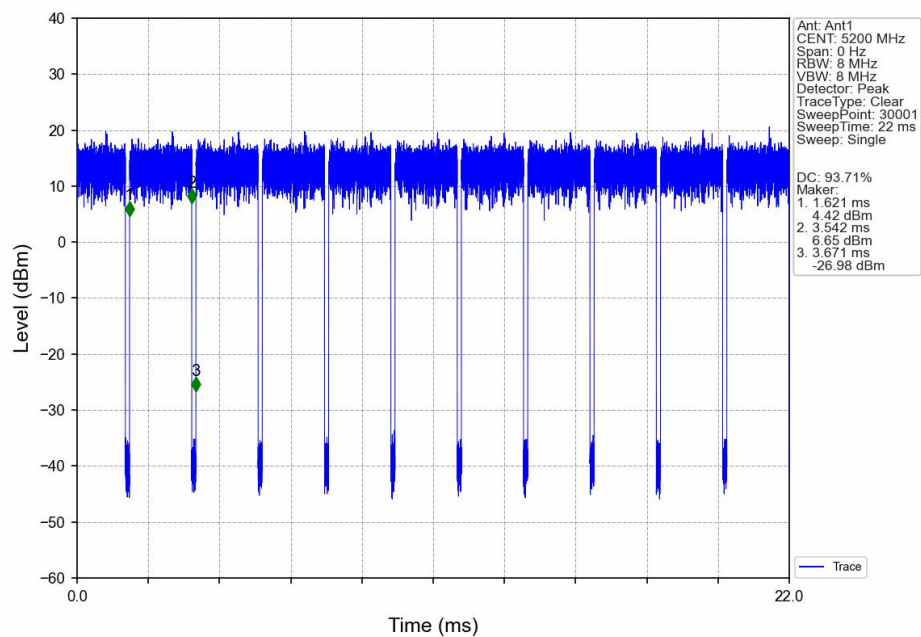


802.11n(HT20)_LCH_5180MHz_Ant1_NTNV

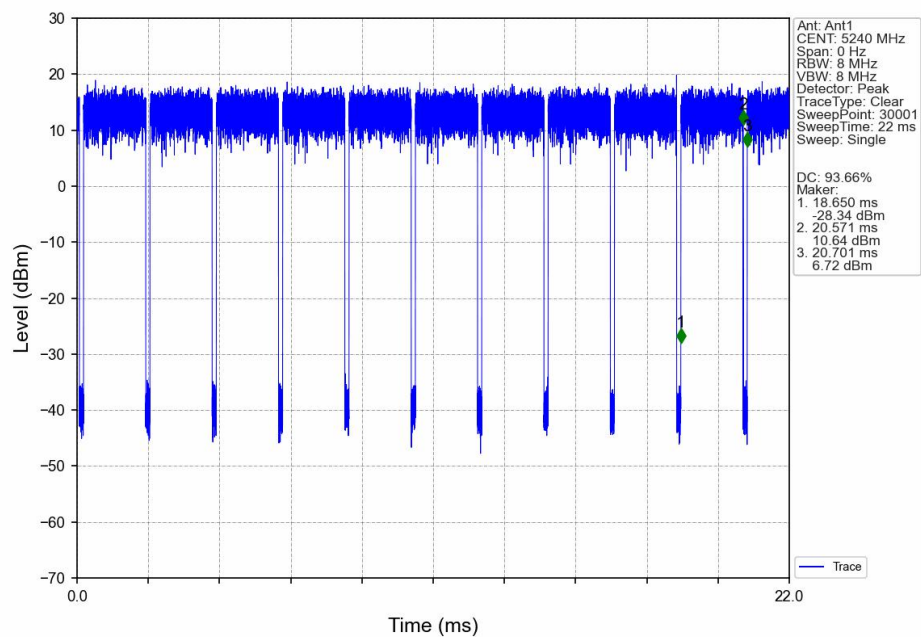


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802.11n(HT20)_MCH_5200MHz_Ant1_NTNV

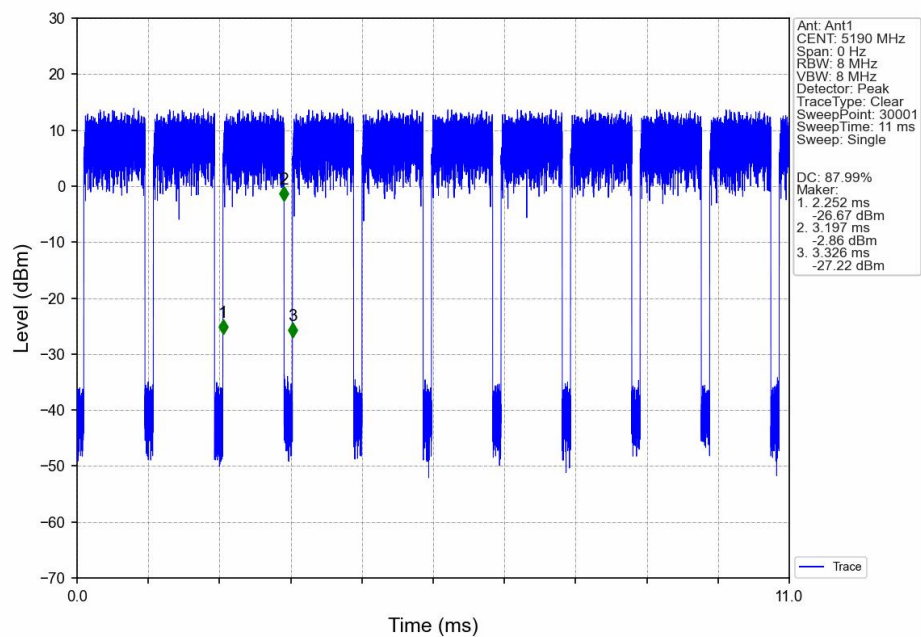


802.11n(HT20)_HCH_5240MHz_Ant1_NTNV

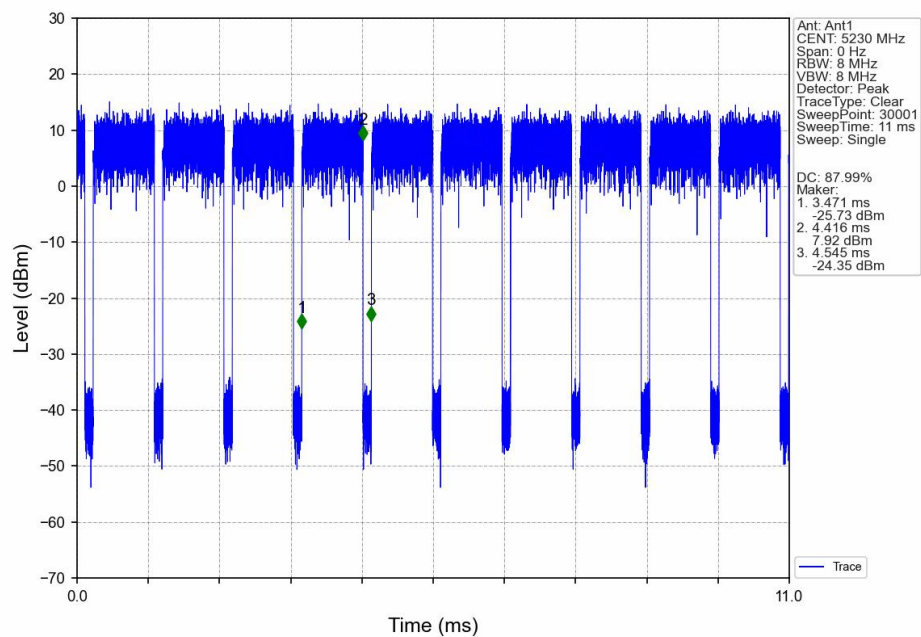


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802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



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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	17.740	/	Pass
		5200	1	17.668	/	Pass
		5240	1	18.192	/	Pass
802.11n (HT20)	SISO	5180	1	18.459	/	Pass
		5200	1	18.599	/	Pass
		5240	1	18.698	/	Pass
802.11n (HT40)	SISO	5190	1	36.034	/	Pass
		5230	1	36.046	/	Pass

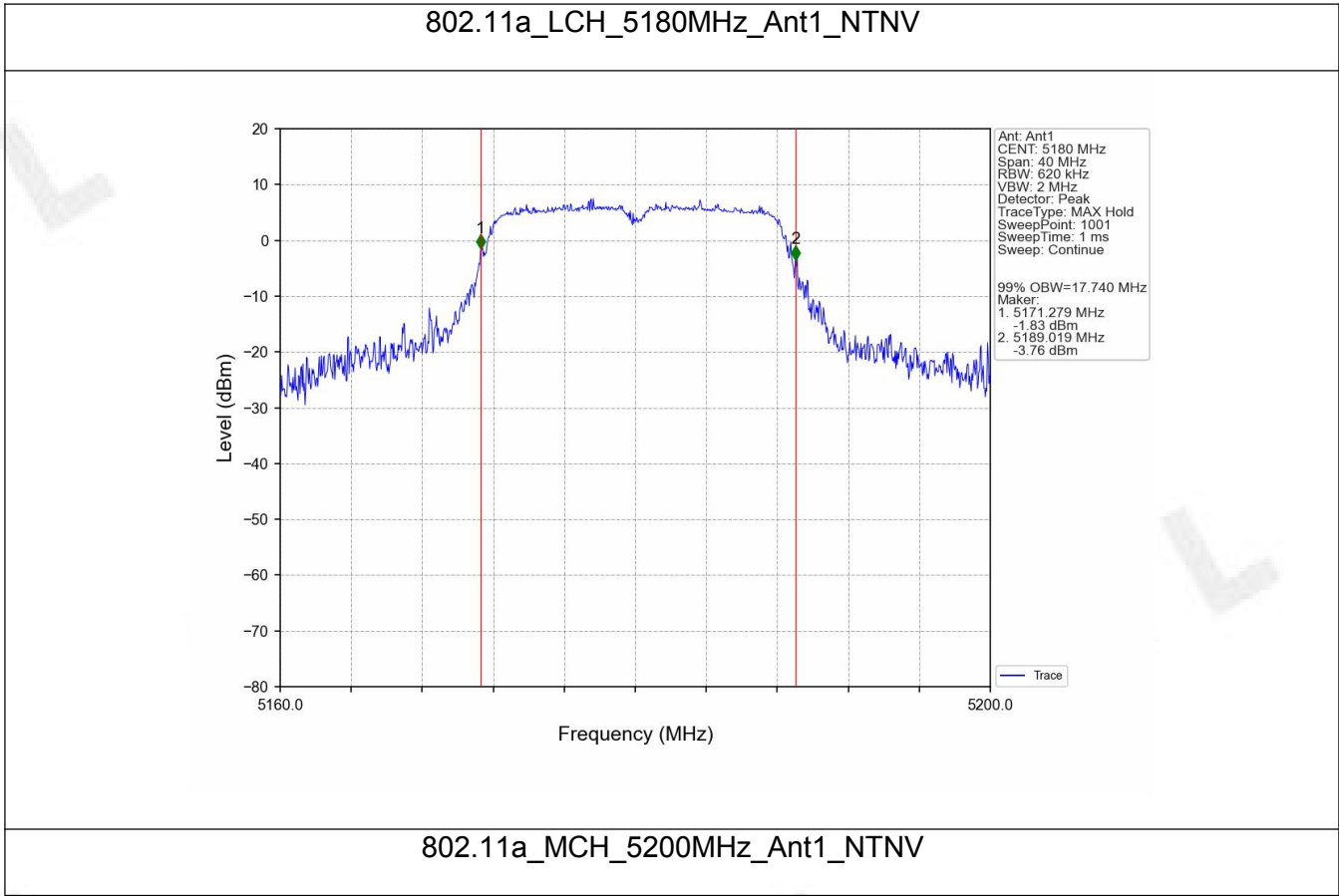
2.1.2 26dB BW

Mode	TX Type	Frequency (MHz)	ANT	26dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	25.038	/	Pass
		5200	1	27.067	/	Pass
		5240	1	28.611	/	Pass
802.11n (HT20)	SISO	5180	1	21.471	/	Pass
		5200	1	26.136	/	Pass
		5240	1	26.965	/	Pass
802.11n (HT40)	SISO	5190	1	38.572	/	Pass
		5230	1	38.492	/	Pass

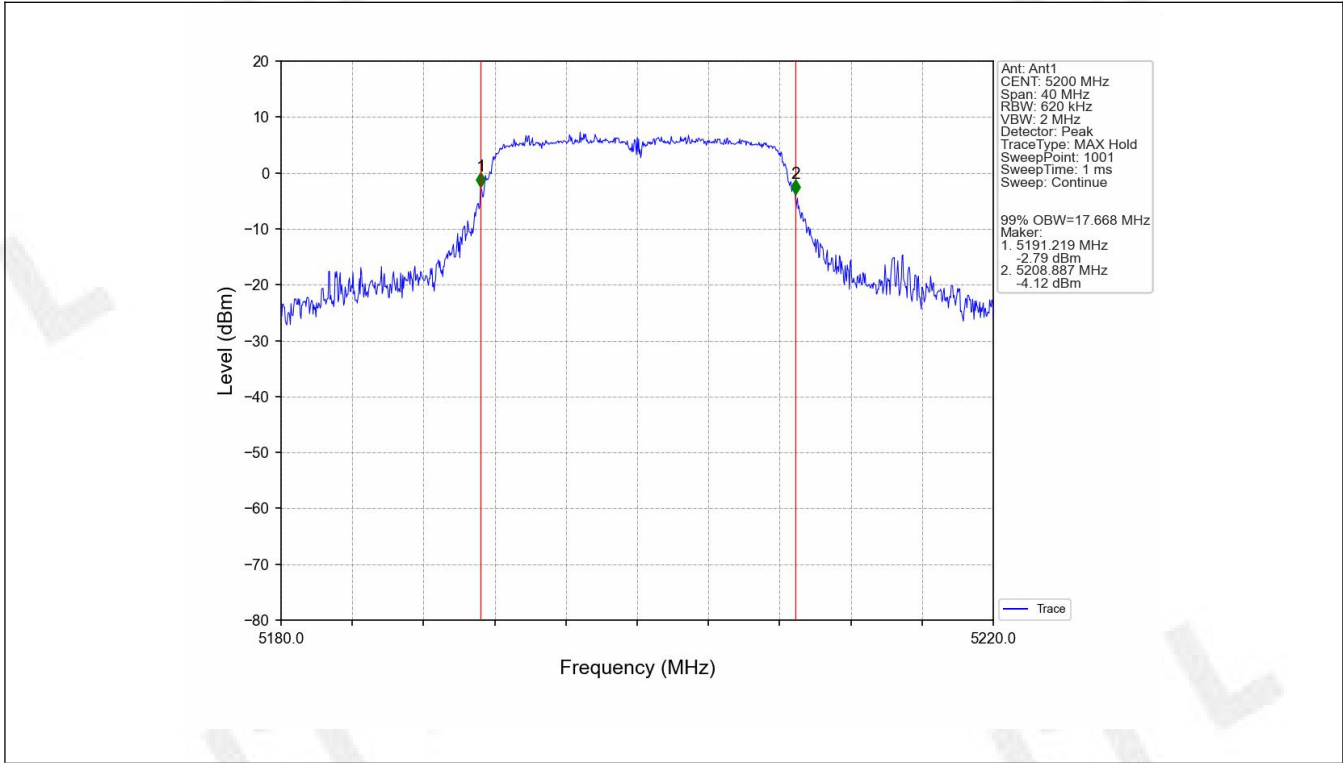
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2.2 Test Graph

2.2.1 OBW

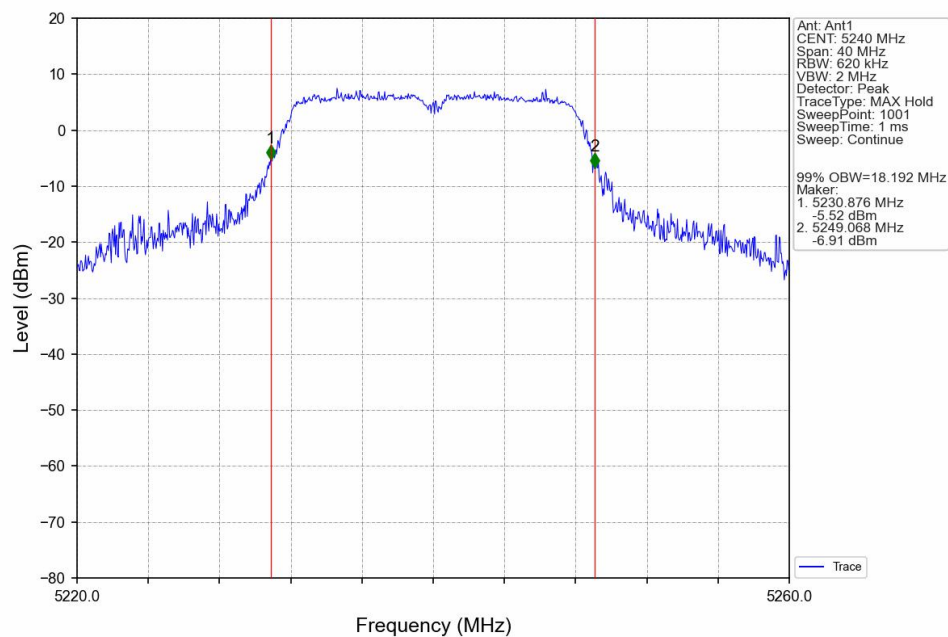


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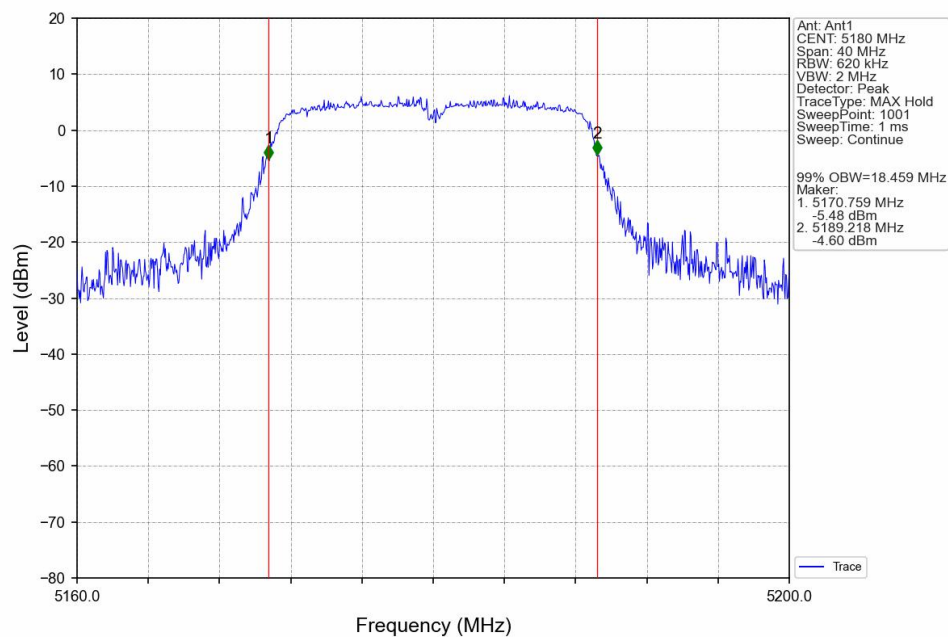


FCCID: SMQIT50

802.11a_HCH_5240MHz_Ant1_NTNV

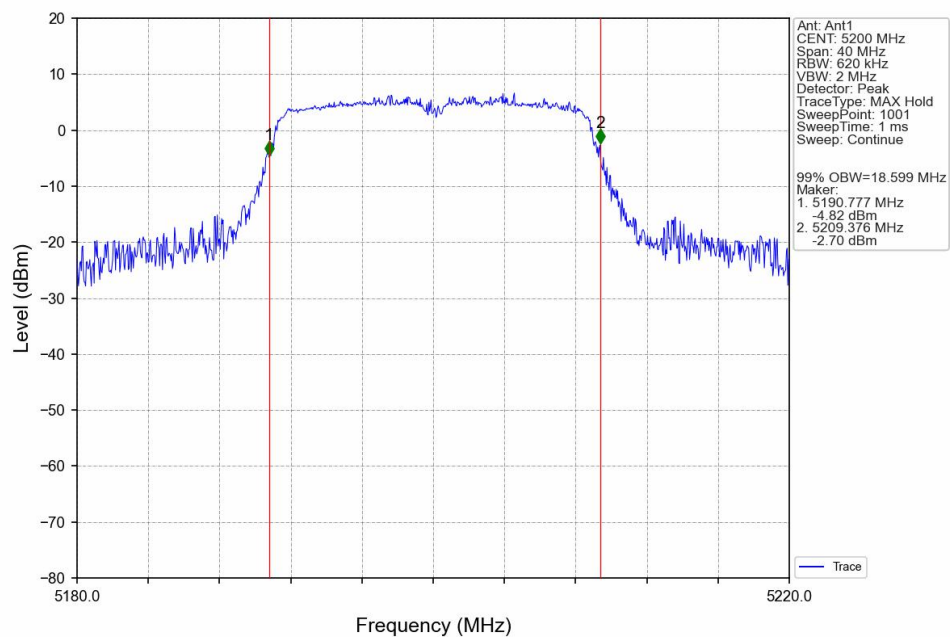


802.11n(HT20)_LCH_5180MHz_Ant1_NTNV

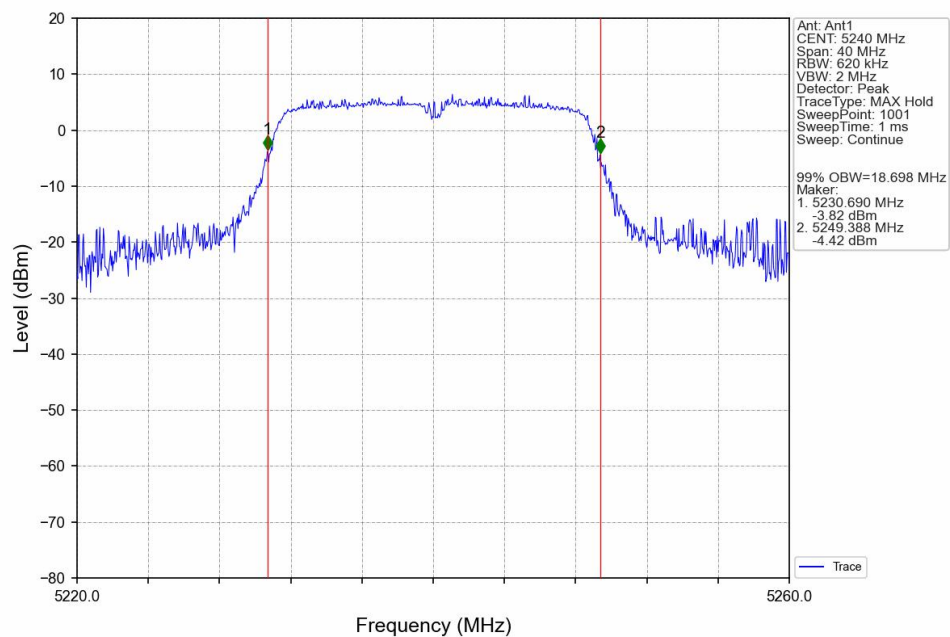


FCCID: SMQIT50

802.11n(HT20)_MCH_5200MHz_Ant1_NTNV

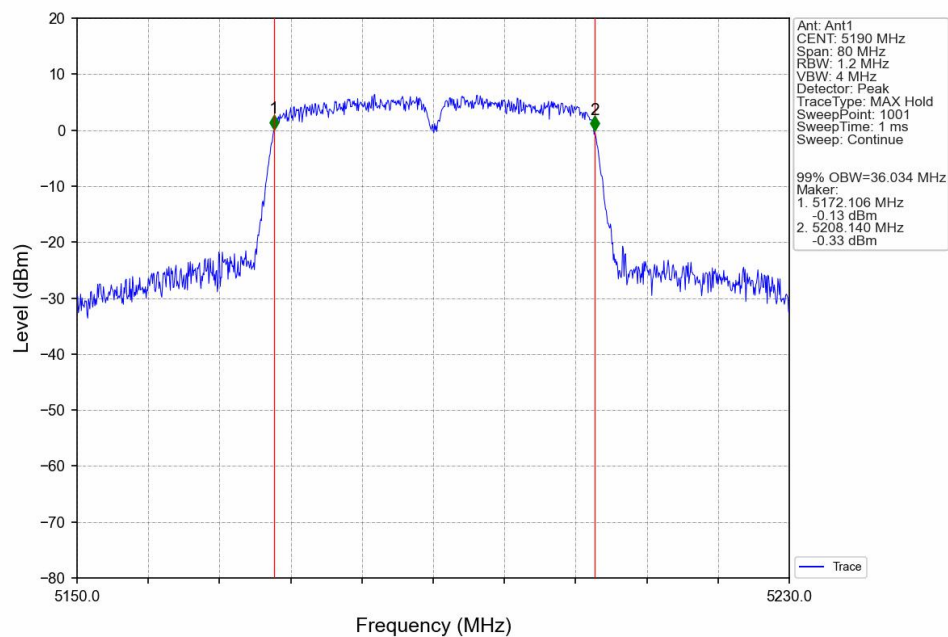


802.11n(HT20)_HCH_5240MHz_Ant1_NTNV

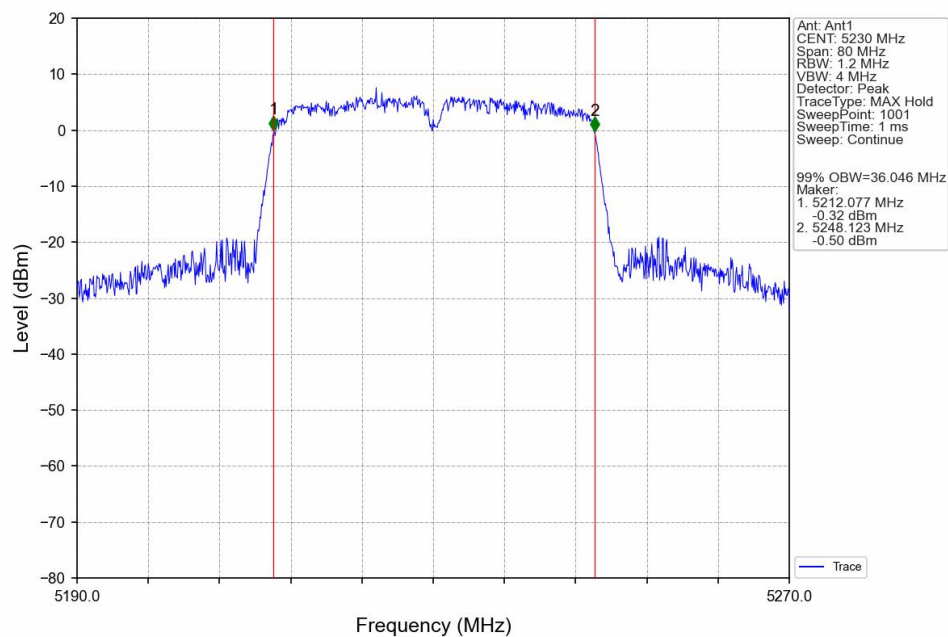


FCCID: SMQIT50

802.11n(HT40)_LCH_5190MHz_Ant1_NTNV

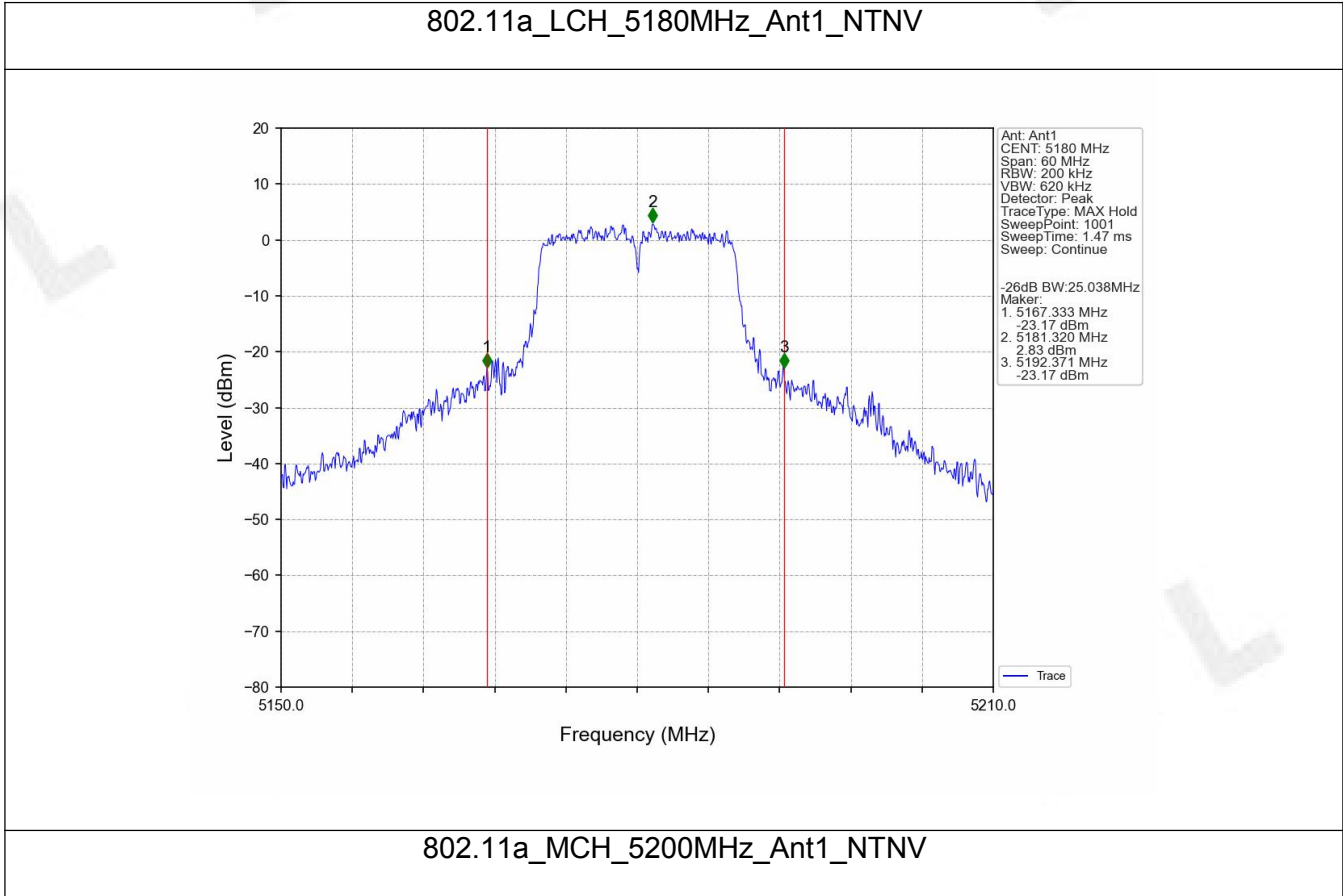


802.11n(HT40)_HCH_5230MHz_Ant1_NTNV

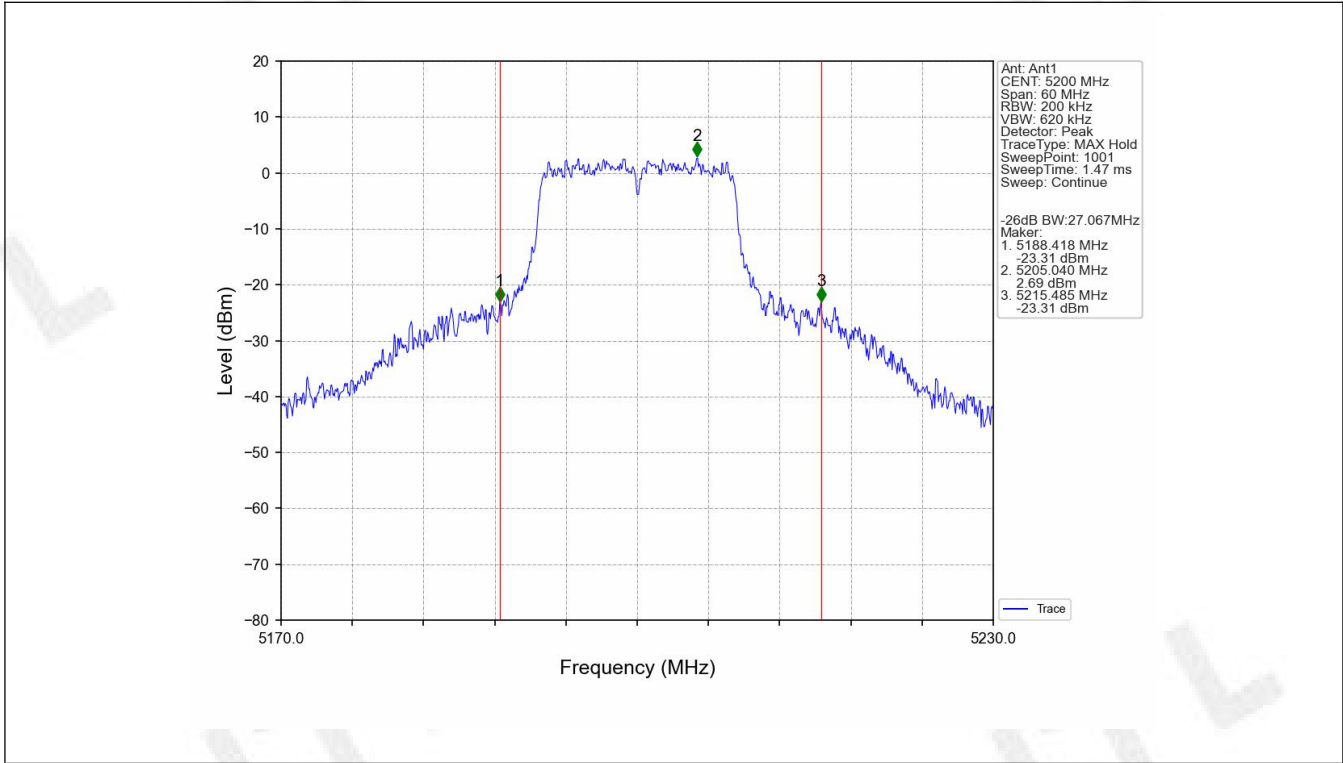


FCCID: SMQIT50

2.2.2 26dB BW

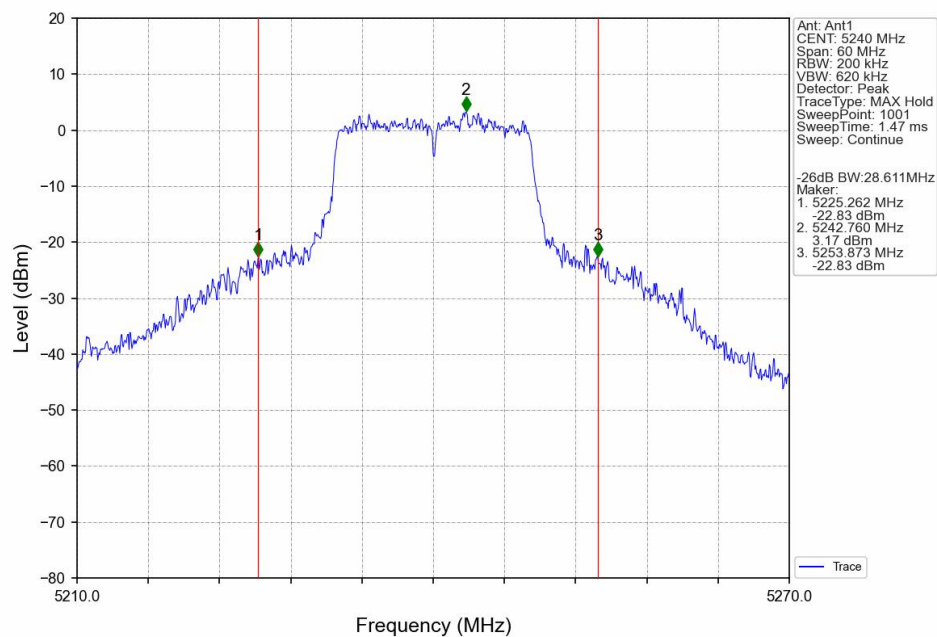


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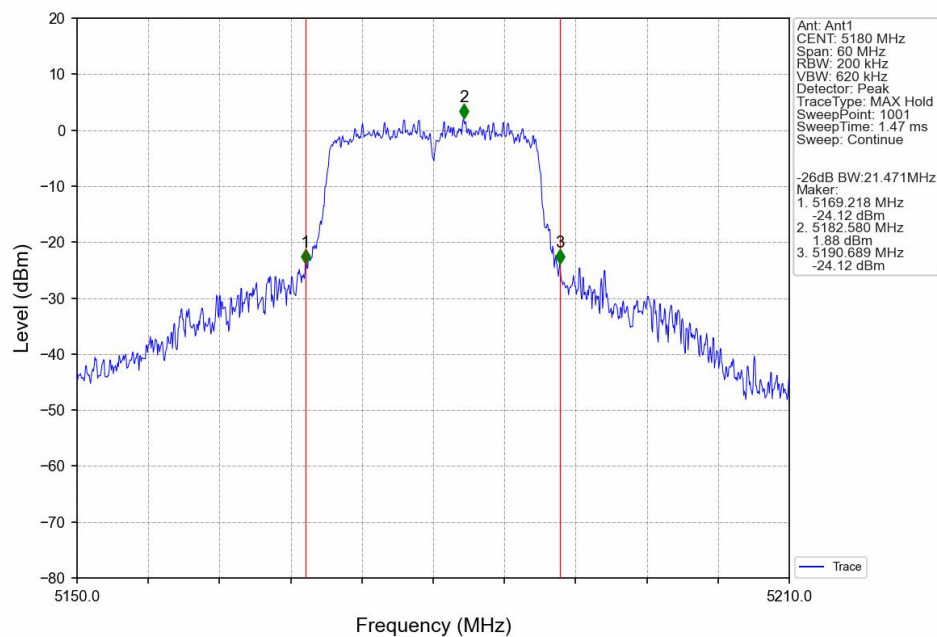


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802.11a_HCH_5240MHz_Ant1_NTNV

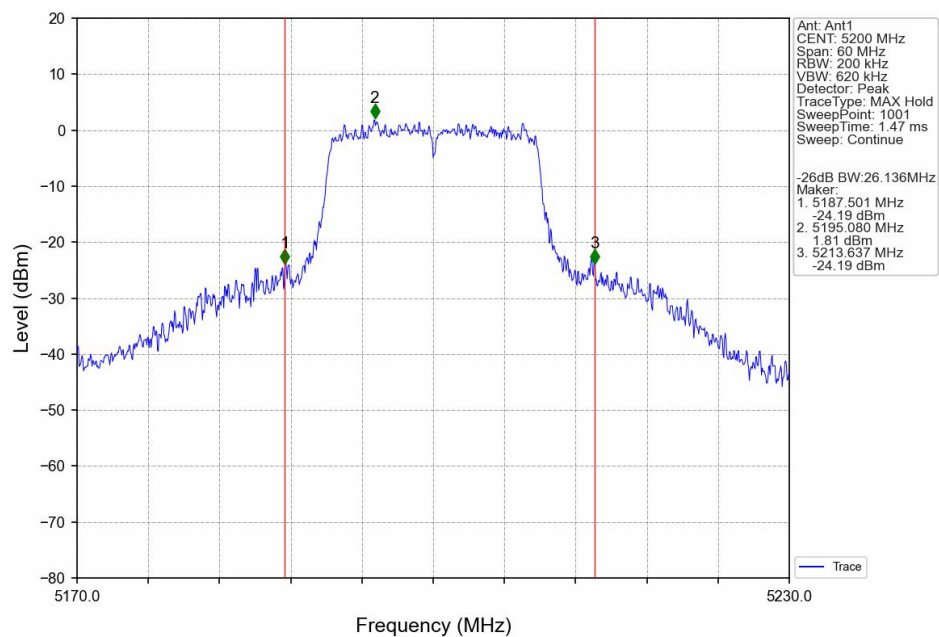


802.11n(HT20)_LCH_5180MHz_Ant1_NTNV

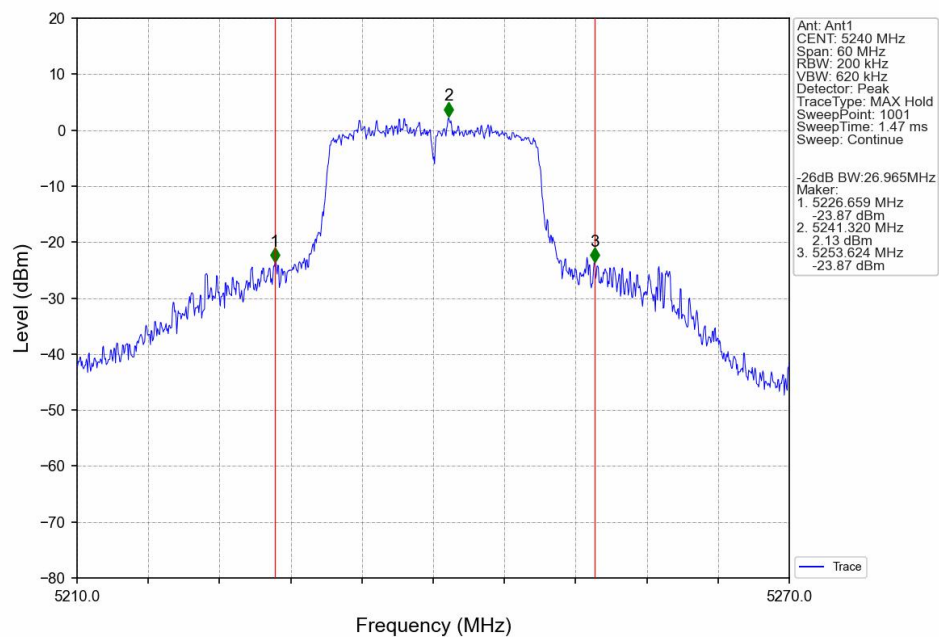


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802.11n(HT20)_MCH_5200MHz_Ant1_NTNV

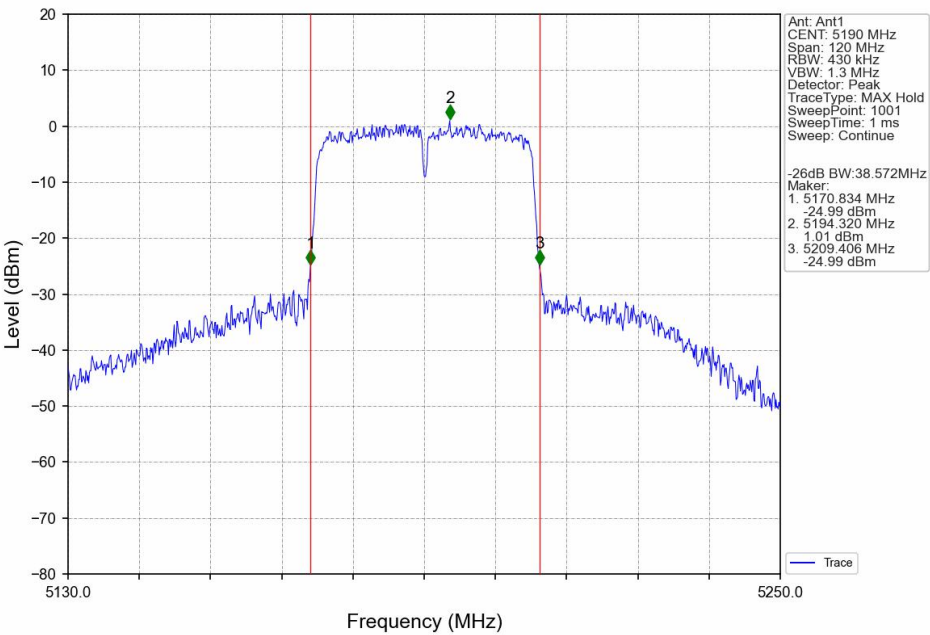


802.11n(HT20)_HCH_5240MHz_Ant1_NTNV

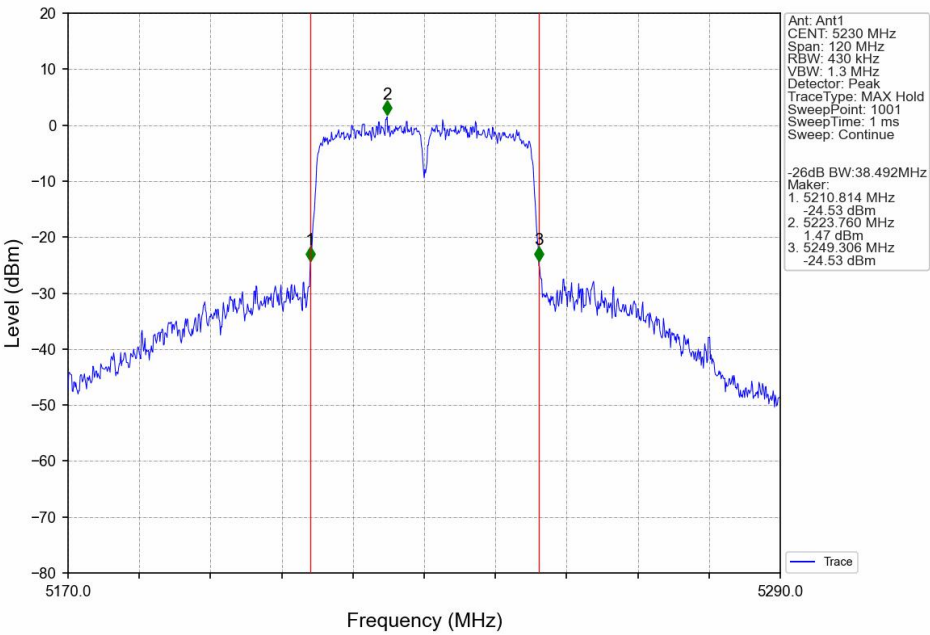


FCCID: SMQIT50

802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



FCCID: SMQIT50

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
			Duty Cycle Correction Factor (dB)	ANT1	Limit	
802.11a	SISO	5180	0.27	13.01	<=23.98	Pass
		5200	0.26	13.06	<=23.98	Pass
		5240	0.26	13.15	<=23.98	Pass
802.11n (HT20)	SISO	5180	0.28	12.01	<=23.98	Pass
		5200	0.28	12.38	<=23.98	Pass
		5240	0.28	12.26	<=23.98	Pass
802.11n (HT40)	SISO	5190	0.56	10.93	<=23.98	Pass
		5230	0.56	10.96	<=23.98	Pass
Note1: Antenna Gain: Ant1: 3.65dBi;						
Note 2: Maximum Average Conducted Output Power=DCCF+Maker;						

FCCID: SMQIT50

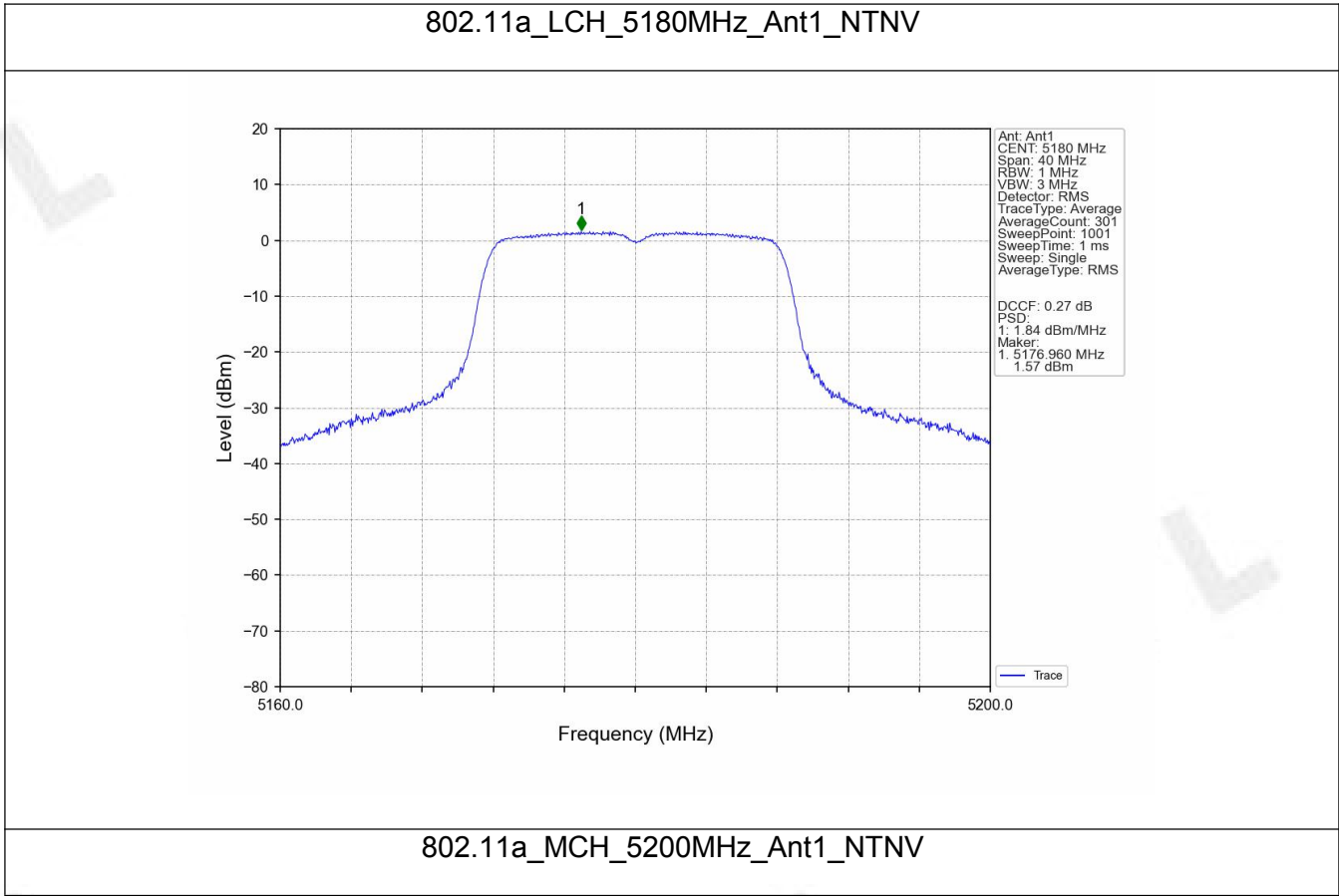
4. Maximum Power Spectral Density**4.1 Test Result****4.1.1 PSD**

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/MHz)		Verdict
			ANT1	Limit	
802.11a	SISO	5180	1.84	<=11	Pass
		5200	1.75	<=11	Pass
		5240	2.14	<=11	Pass
802.11n (HT20)	SISO	5180	0.67	<=11	Pass
		5200	1.00	<=11	Pass
		5240	0.89	<=11	Pass
802.11n (HT40)	SISO	5190	-3.19	<=11	Pass
		5230	-3.10	<=11	Pass
Note1: Antenna Gain: Ant1: 3.65dBi;					

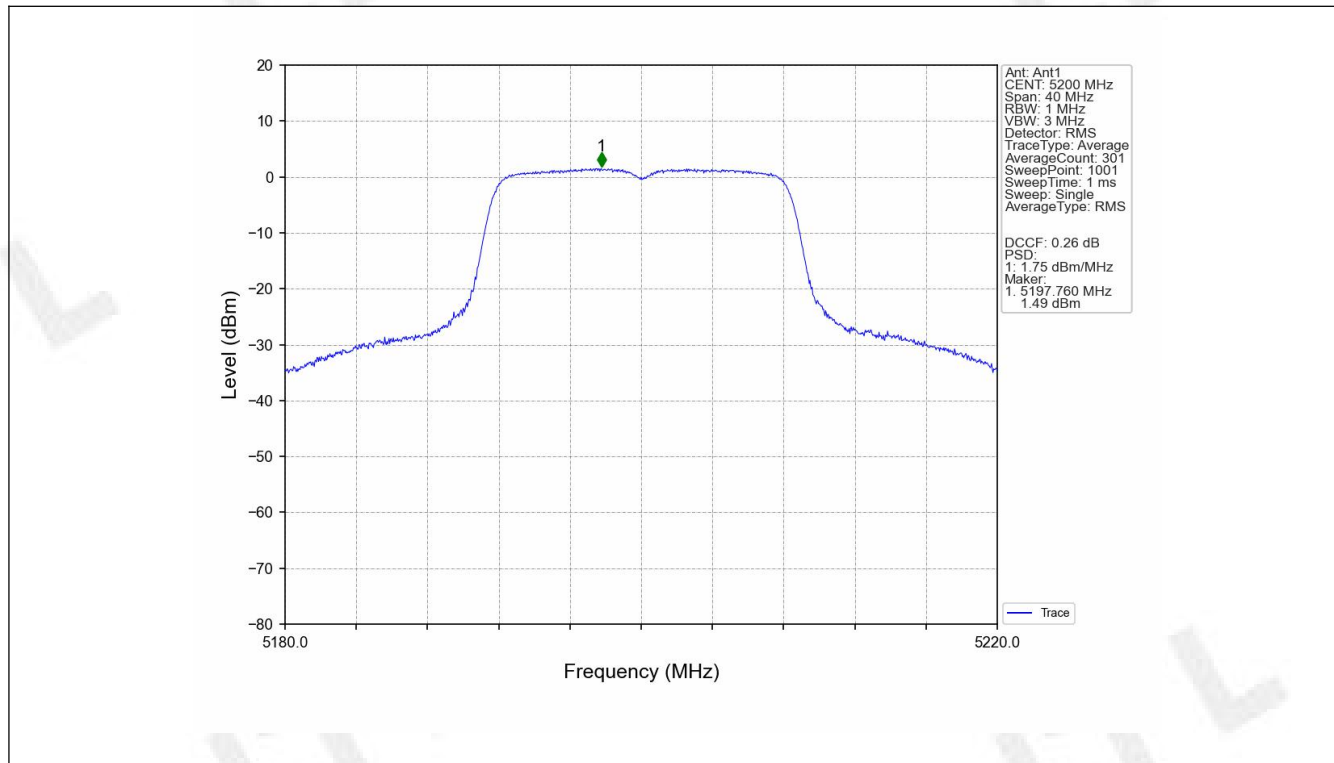
FCCID: SMQIT50

4.2 Test Graph

4.2.1 PSD

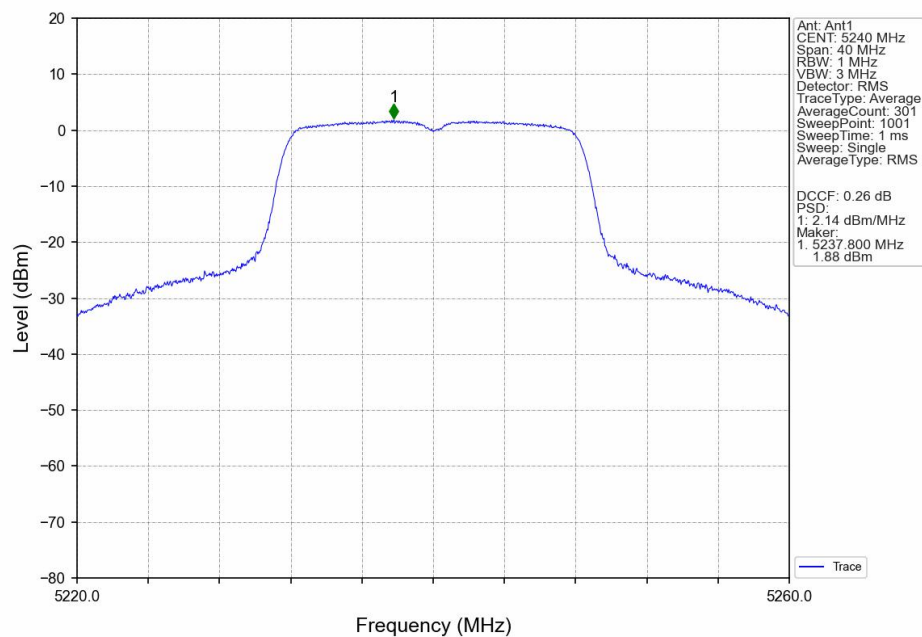


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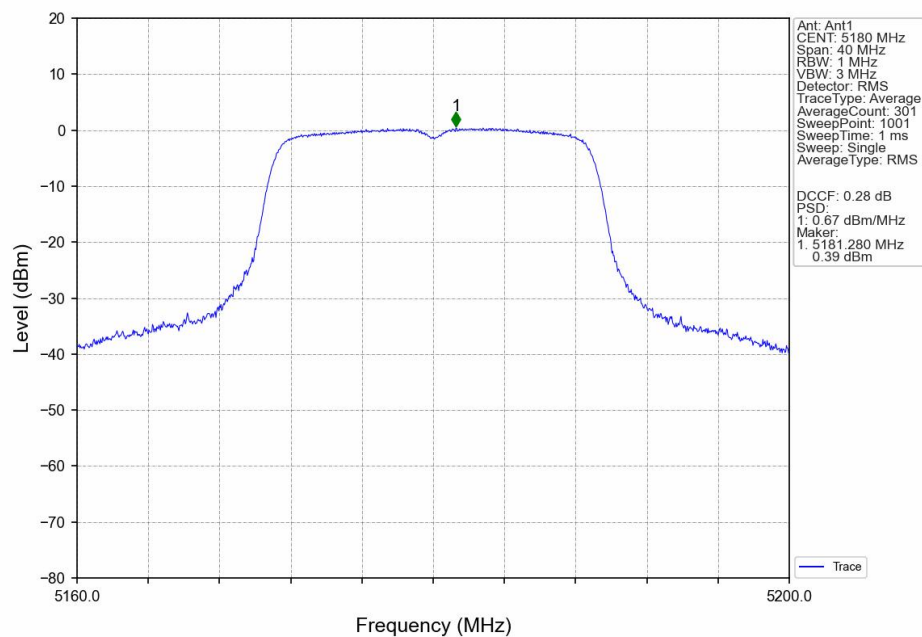


FCCID: SMQIT50

802.11a_HCH_5240MHz_Ant1_NTNV

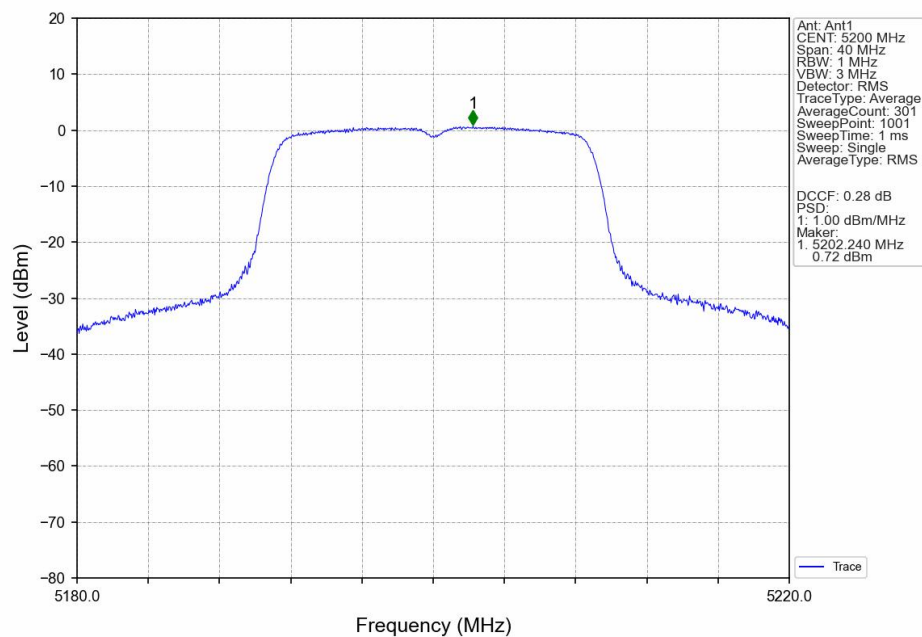


802.11n(HT20)_LCH_5180MHz_Ant1_NTNV

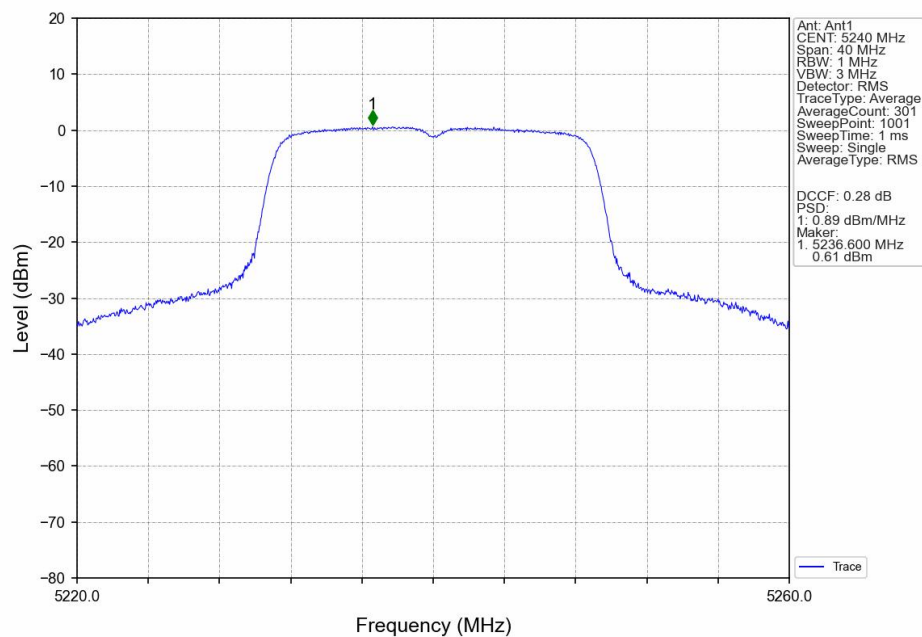


FCCID: SMQIT50

802.11n(HT20)_MCH_5200MHz_Ant1_NTNV

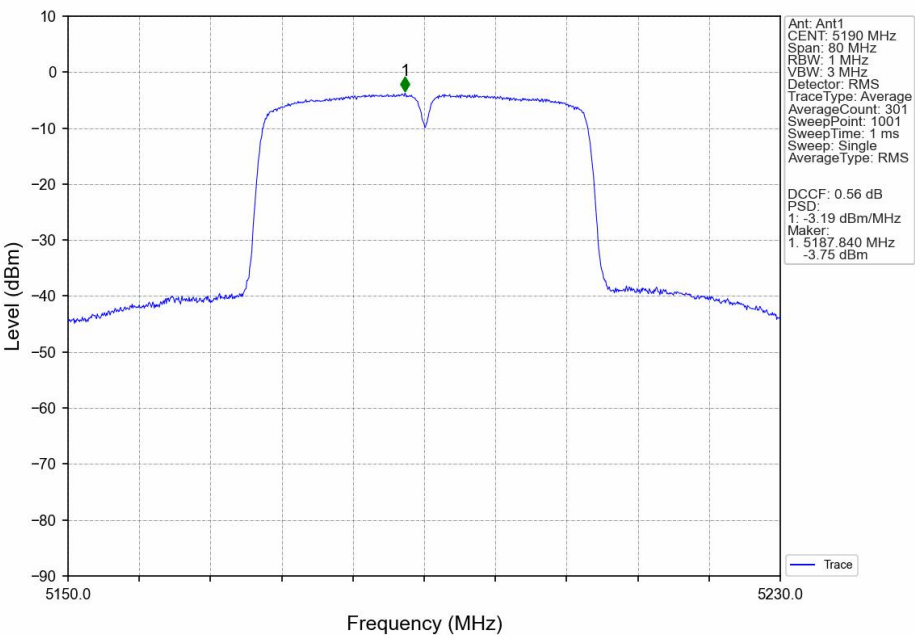


802.11n(HT20)_HCH_5240MHz_Ant1_NTNV

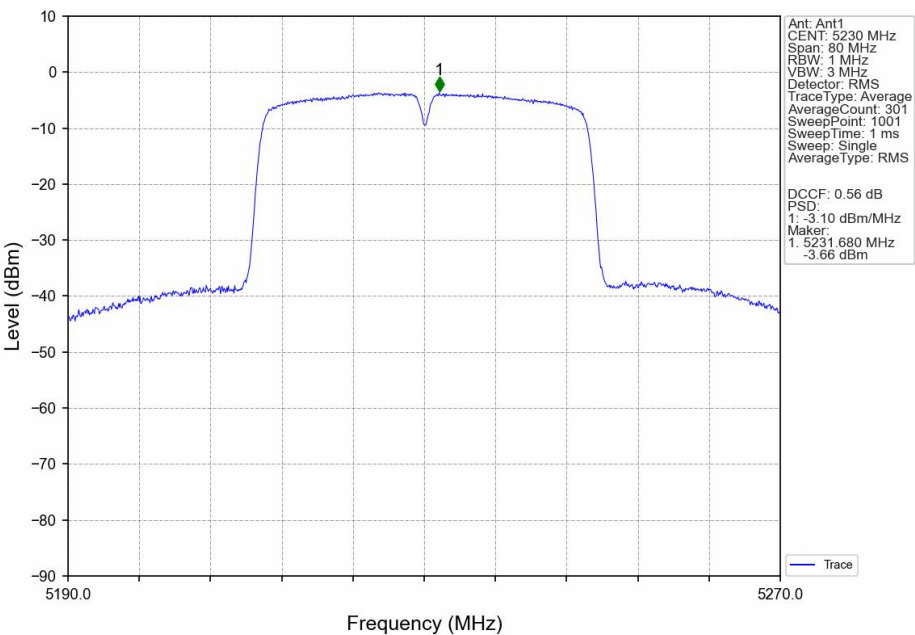


FCCID: SMQIT50

802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



FCCID: SMQIT50

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
Carrier Wave	SISO	5180	20	3.42	5179.982	5150 to 5250	Pass
				3.8	5179.980	5150 to 5250	Pass
				4.18	5179.979	5150 to 5250	Pass
			-30	3.8	5179.979	5150 to 5250	Pass
			-20	3.8	5179.978	5150 to 5250	Pass
			-10	3.8	5179.978	5150 to 5250	Pass
			0	3.8	5179.977	5150 to 5250	Pass
			10	3.8	5179.976	5150 to 5250	Pass
			30	3.8	5179.976	5150 to 5250	Pass
			40	3.8	5179.976	5150 to 5250	Pass
			50	3.8	5179.975	5150 to 5250	Pass
		5200	20	3.42	5199.974	5150 to 5250	Pass
				3.8	5199.973	5150 to 5250	Pass
				4.18	5199.973	5150 to 5250	Pass
			-30	3.8	5199.973	5150 to 5250	Pass
			-20	3.8	5199.972	5150 to 5250	Pass
			-10	3.8	5199.972	5150 to 5250	Pass
			0	3.8	5199.972	5150 to 5250	Pass
			10	3.8	5199.972	5150 to 5250	Pass

FCCID: SMQIT50

			30	3.8	5199.972	5150 to 5250	Pass
			40	3.8	5199.972	5150 to 5250	Pass
			50	3.8	5199.971	5150 to 5250	Pass
		5240	20	3.42	5240.001	5150 to 5250	Pass
				3.8	5239.997	5150 to 5250	Pass
				4.18	5239.994	5150 to 5250	Pass
			-30	3.8	5239.992	5150 to 5250	Pass
			-20	3.8	5239.990	5150 to 5250	Pass
			-10	3.8	5239.988	5150 to 5250	Pass
			0	3.8	5239.987	5150 to 5250	Pass
			10	3.8	5239.986	5150 to 5250	Pass
			30	3.8	5239.984	5150 to 5250	Pass
			40	3.8	5239.984	5150 to 5250	Pass
			50	3.8	5239.983	5150 to 5250	Pass
		5190	20	3.42	5189.981	5150 to 5250	Pass
				3.8	5189.979	5150 to 5250	Pass
				4.18	5189.978	5150 to 5250	Pass
			-30	3.8	5189.977	5150 to 5250	Pass
			-20	3.8	5189.976	5150 to 5250	Pass
			-10	3.8	5189.976	5150 to 5250	Pass
			0	3.8	5189.975	5150 to 5250	Pass
			10	3.8	5189.975	5150 to 5250	Pass
			30	3.8	5189.975	5150 to 5250	Pass
			40	3.8	5189.974	5150 to 5250	Pass
			50	3.8	5189.974	5150 to 5250	Pass

FCCID: SMQIT50

		5230	20	3.42	5229.974	5150 to 5250	Pass
				3.8	5229.974	5150 to 5250	Pass
				4.18	5229.974	5150 to 5250	Pass
			-30	3.8	5229.974	5150 to 5250	Pass
			-20	3.8	5229.973	5150 to 5250	Pass
			-10	3.8	5229.973	5150 to 5250	Pass
			0	3.8	5229.973	5150 to 5250	Pass
			10	3.8	5229.973	5150 to 5250	Pass
			30	3.8	5229.973	5150 to 5250	Pass
			40	3.8	5229.973	5150 to 5250	Pass
			50	3.8	5229.973	5150 to 5250	Pass