

## Appendix B for SHEM210700797902

### 1. Duty Cycle

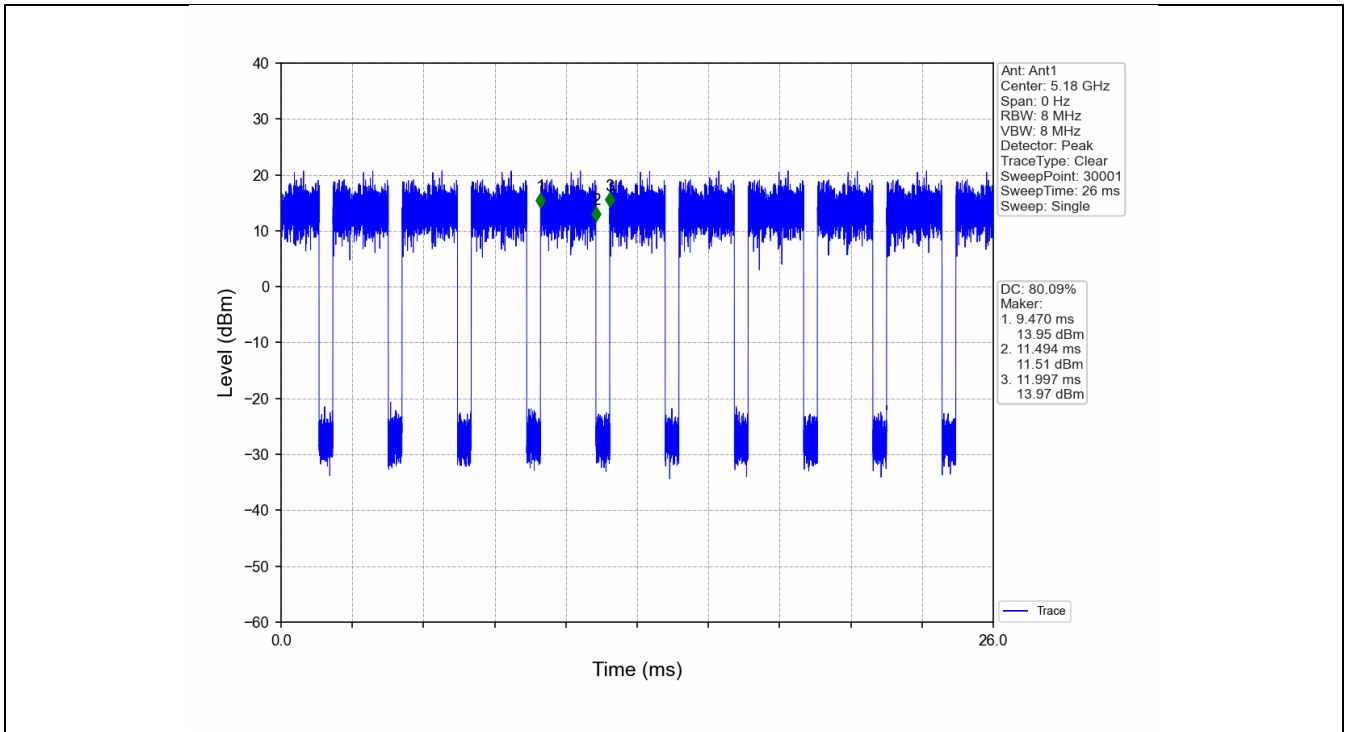
#### 1.1 Ant1

##### 1.1.1 Test Result

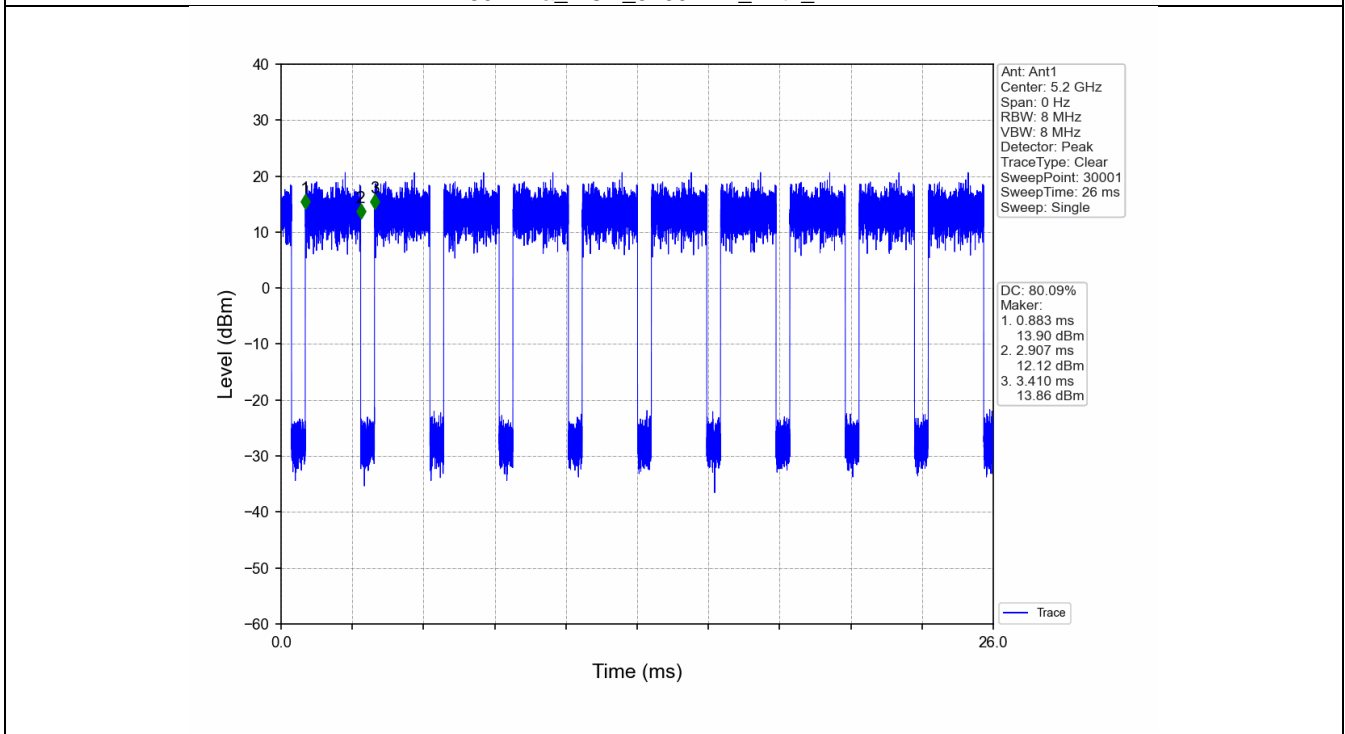
Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11a	SISO	5180	2.024	2.527	80.09	0.96	0.03
		5200	2.024	2.527	80.09	0.96	0.03
		5240	2.024	2.527	80.09	0.96	0.03
		5745	2.023	2.527	80.06	0.97	0.03
		5785	2.024	2.527	80.09	0.96	0.03
		5825	2.024	2.527	80.09	0.96	0.03
802.11n (HT20)	SISO	5180	1.887	2.391	78.92	1.03	0.01
		5200	1.887	2.390	78.95	1.03	0.01
		5240	1.887	2.390	78.95	1.03	0.01
		5745	1.887	2.390	78.95	1.03	0.01
		5785	1.864	2.391	77.96	1.08	0.04
		5825	1.887	2.390	78.95	1.03	0.01
802.11n (HT40)	SISO	5190	0.928	1.431	64.85	1.88	0.01
		5230	0.904	1.432	63.13	2.00	0.05
		5755	0.928	1.431	64.85	1.88	0.01
		5795	0.927	1.430	64.83	1.88	0.01

#### 1.1.2 Test Graph

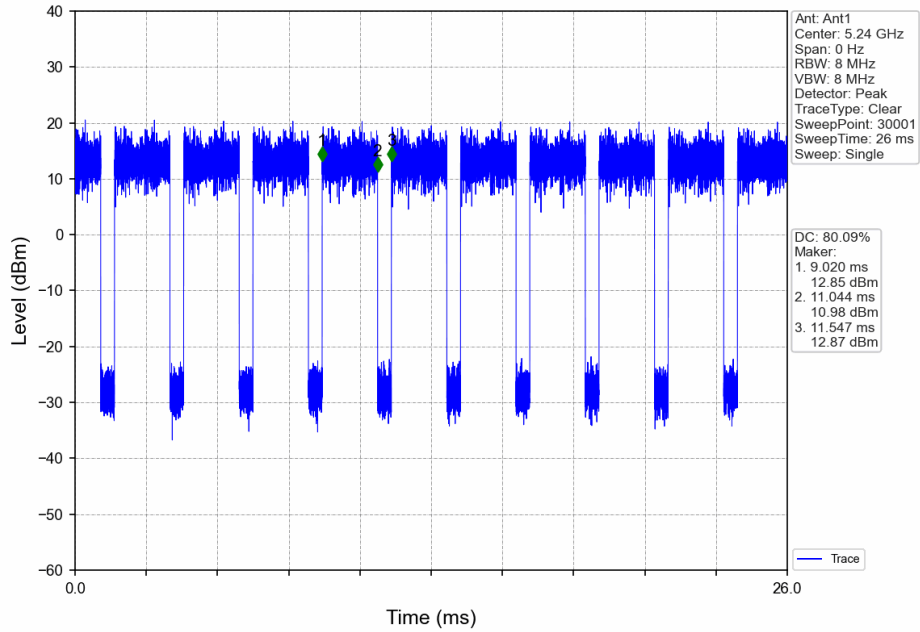
802.11a_LCH_5180MHz_Ant1_NTNV
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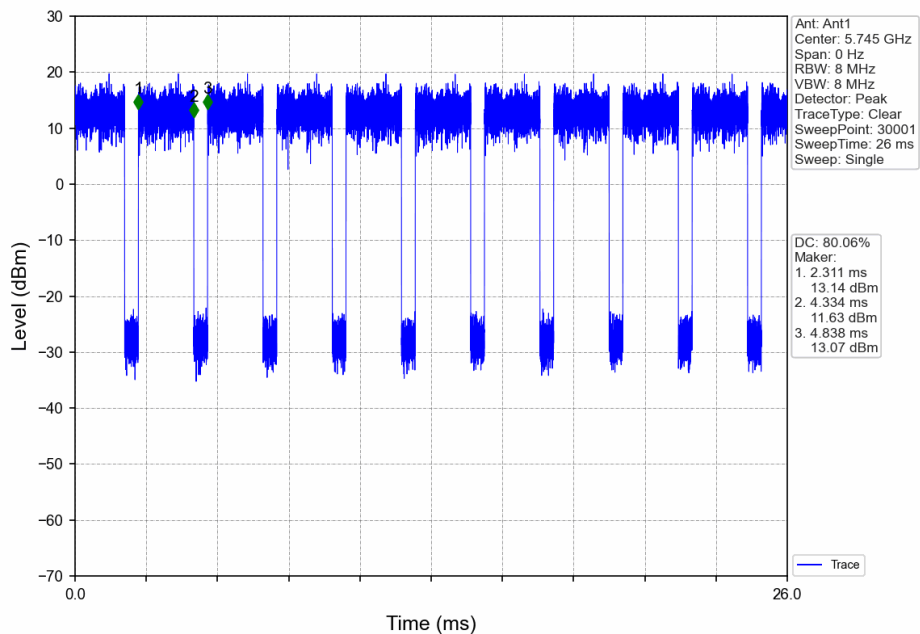
802.11a\_MCH\_5200MHz\_Ant1\_NTNV



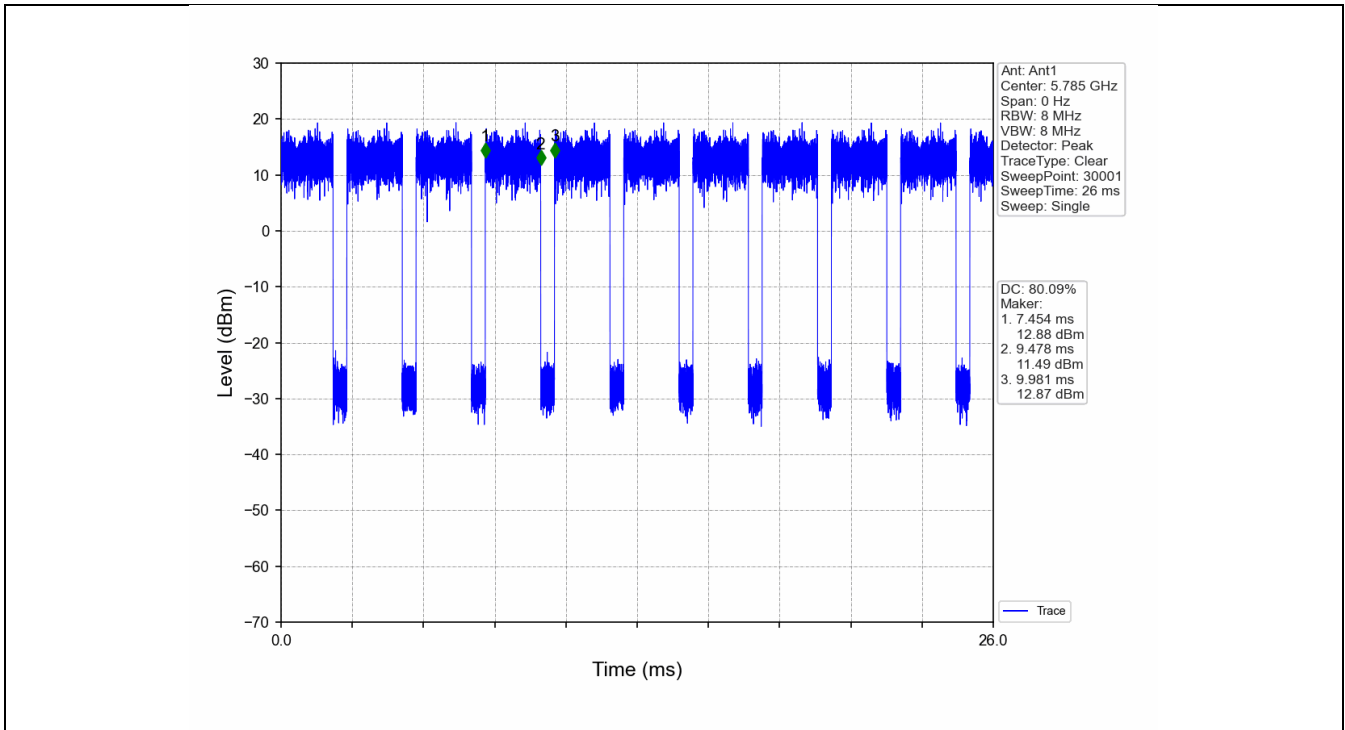
802.11a\_HCH\_5240MHz\_Ant1\_NTNV



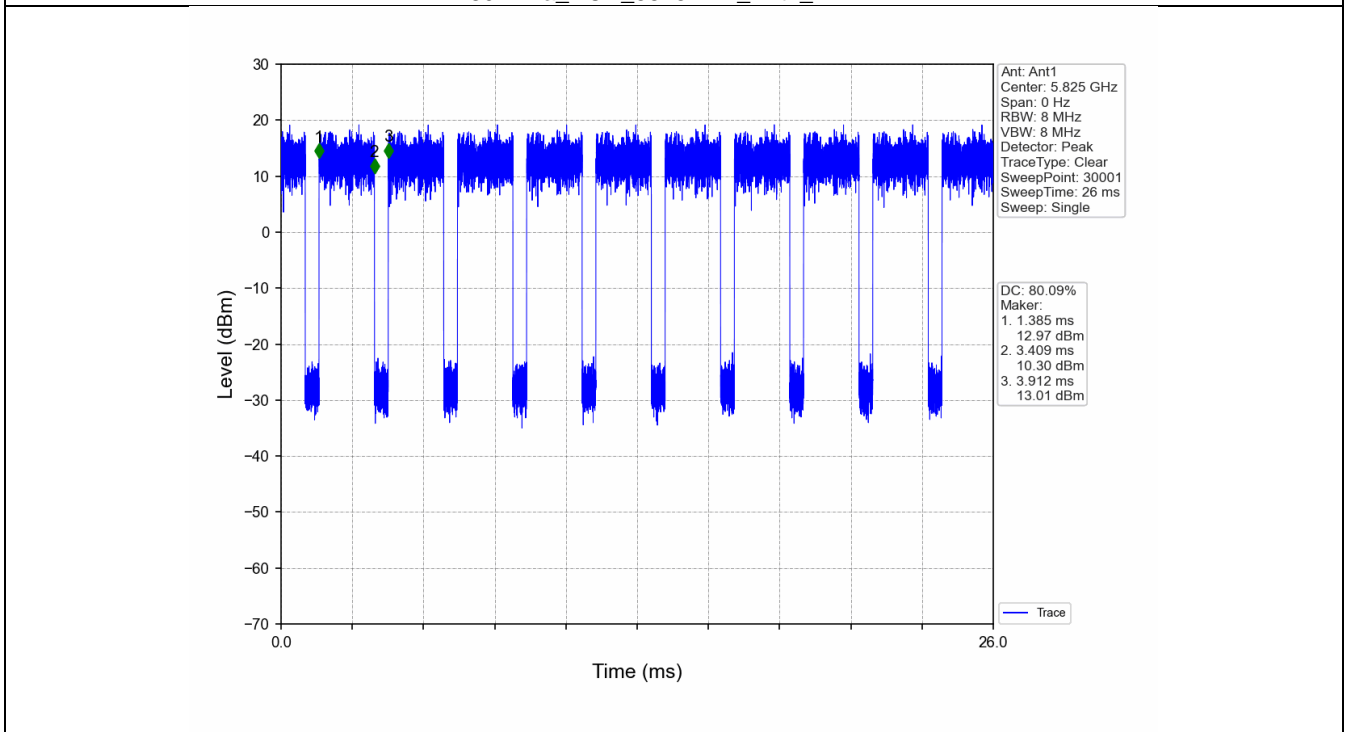
802.11a\_LCH\_5745MHz\_Ant1\_NTNV



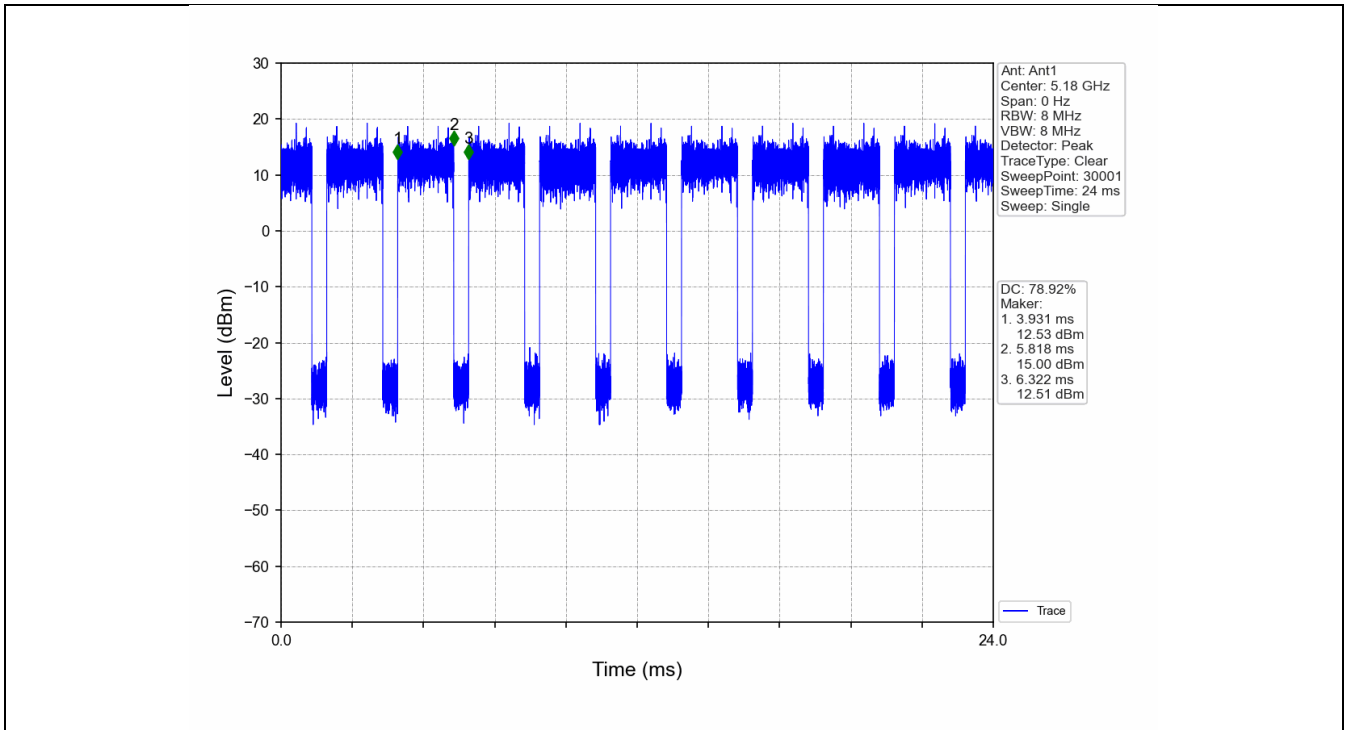
802.11a\_MCH\_5785MHz\_Ant1\_NTNV



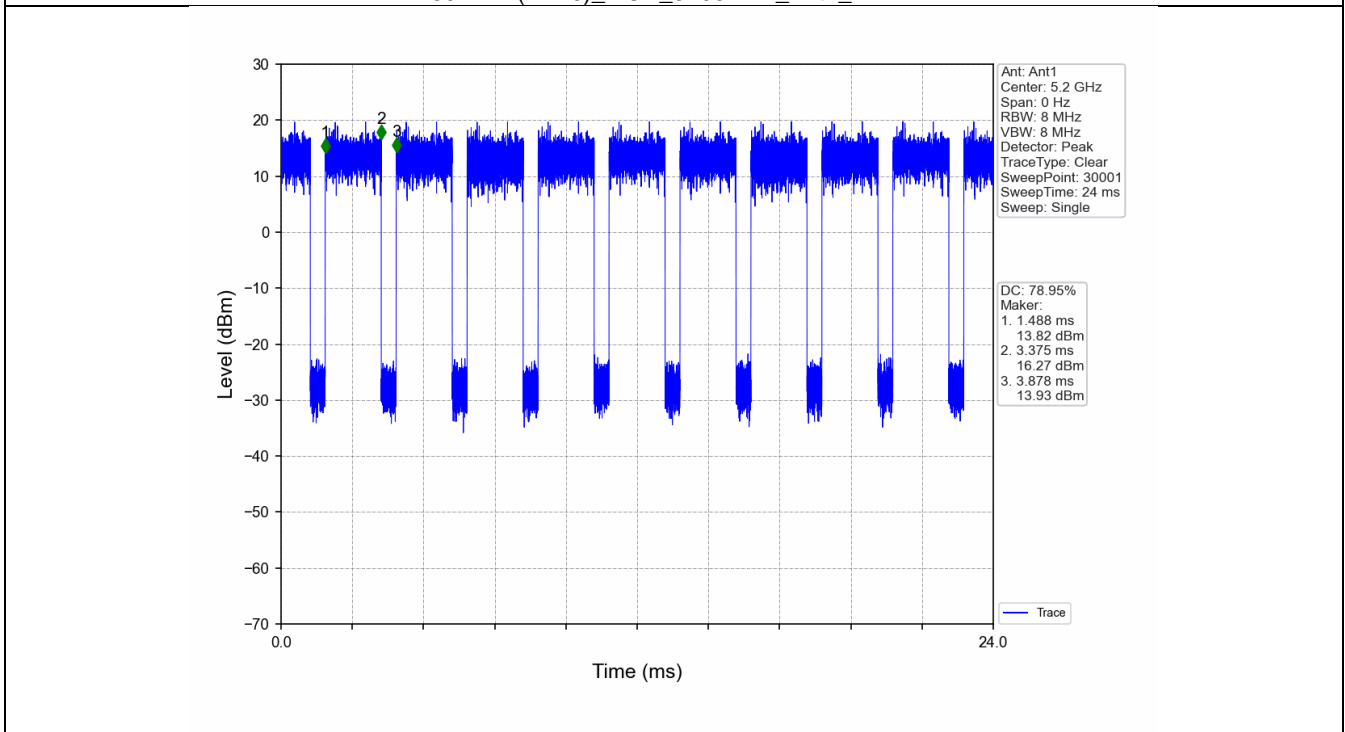
802.11a\_HCH\_5825MHz\_Ant1\_NTNV



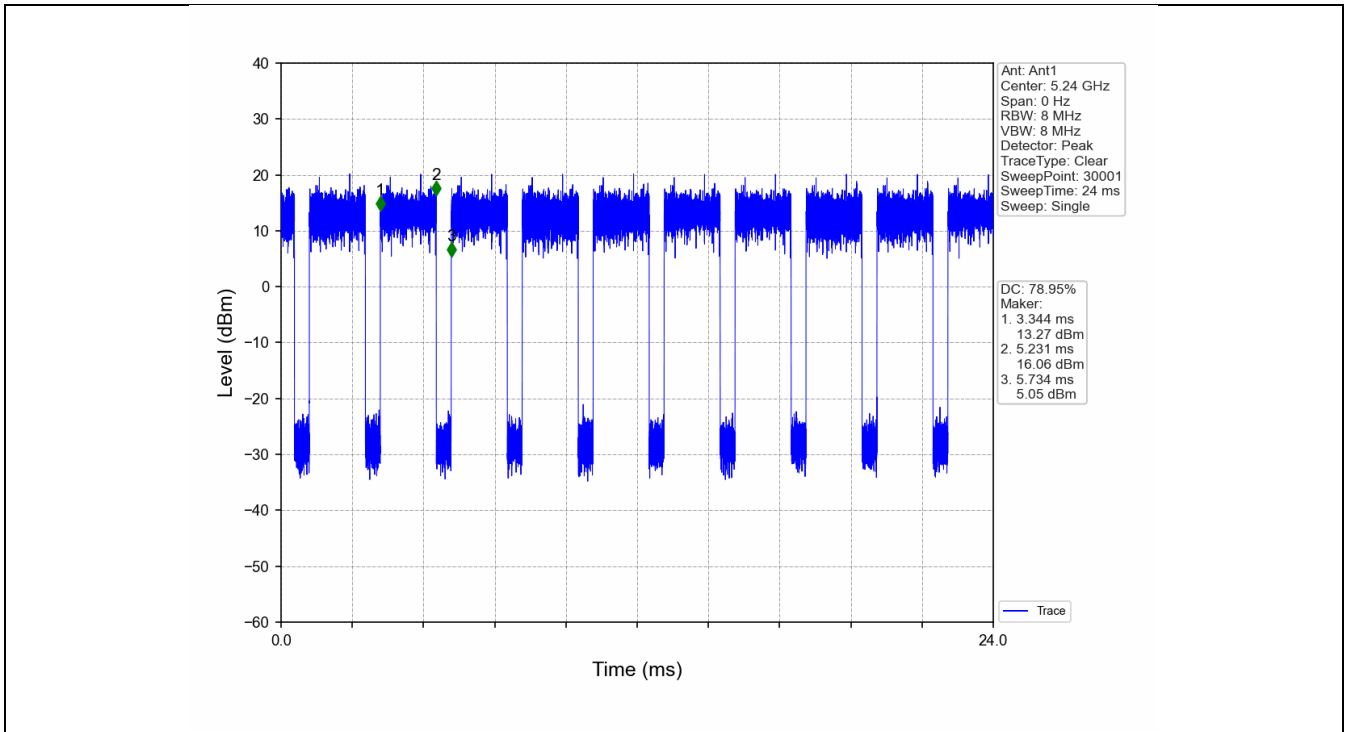
802.11n(HT20)\_LCH\_5180MHz\_Ant1\_NTNV



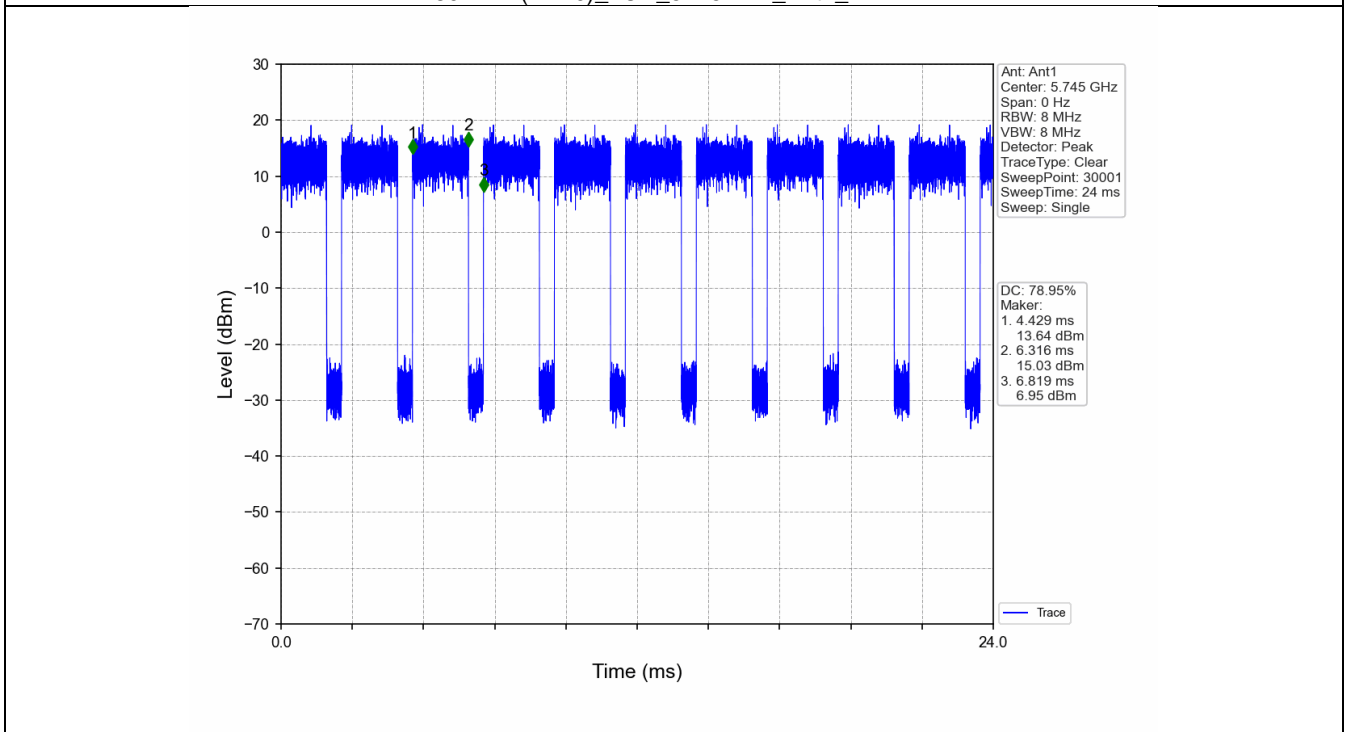
802.11n(HT20)\_MCH\_5200MHz\_Ant1\_NTNV



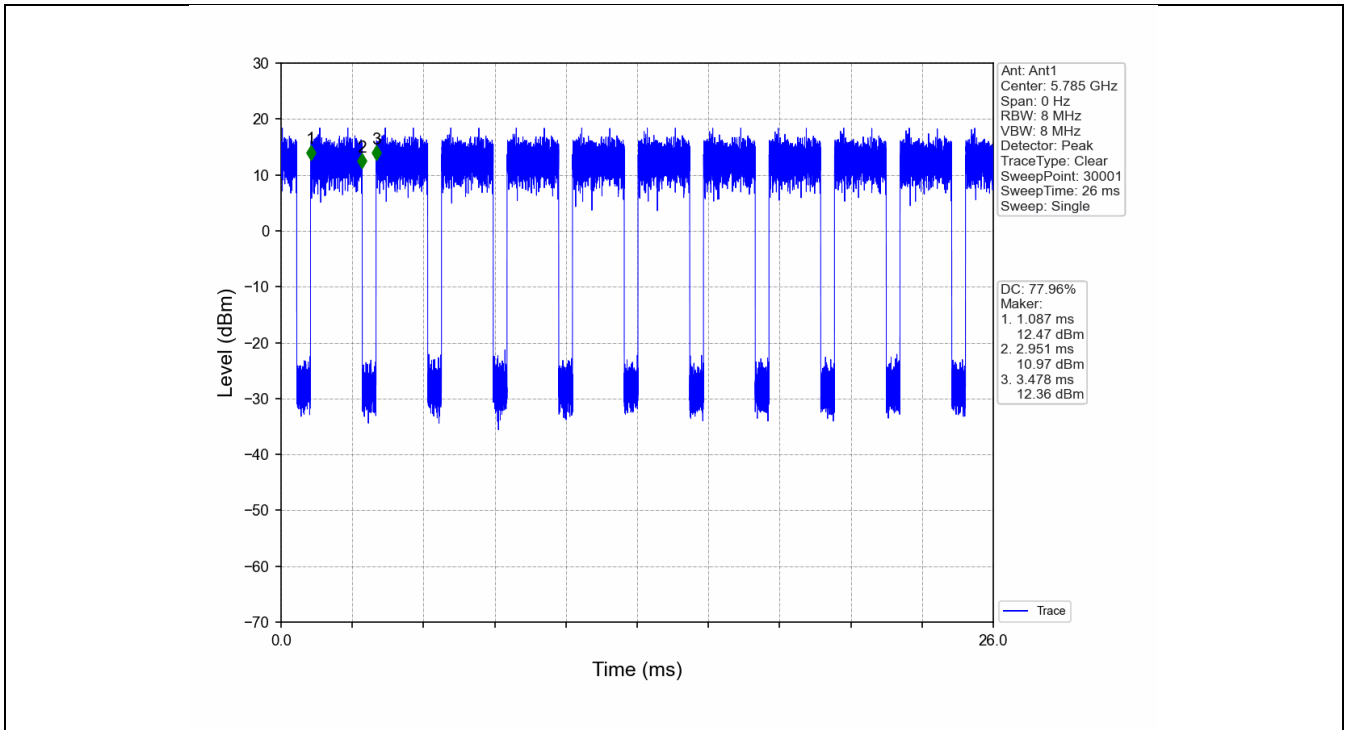
802.11n(HT20)\_HCH\_5240MHz\_Ant1\_NTNV



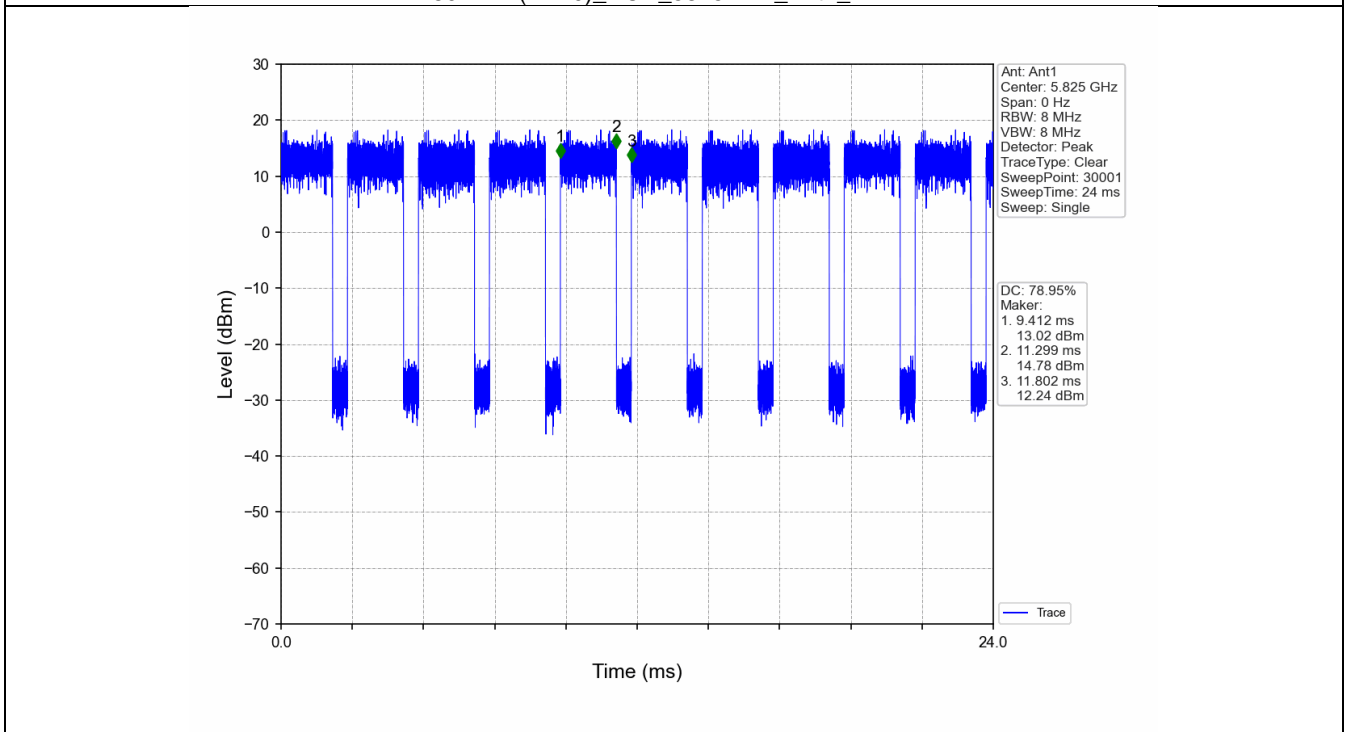
802.11n(HT20)\_LCH\_5745MHz\_Ant1\_NTNV



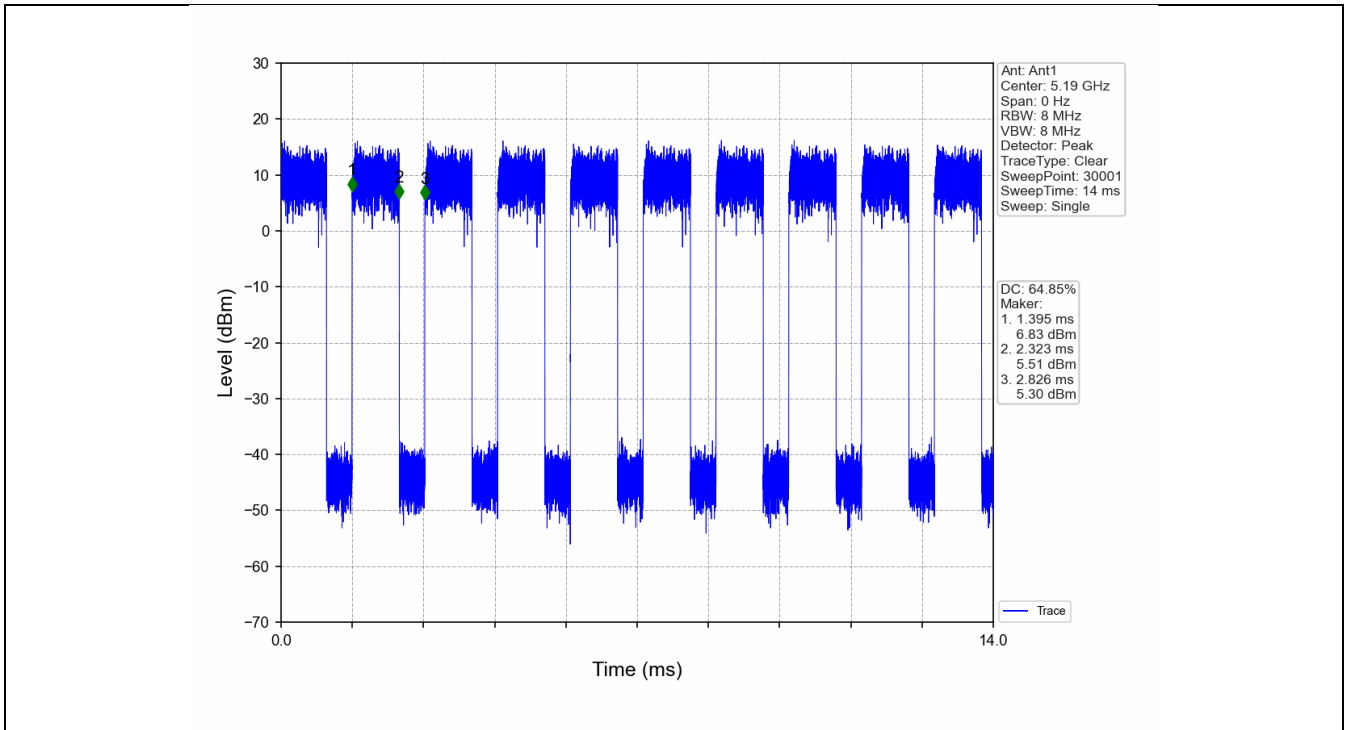
802.11n(HT20)\_MCH\_5785MHz\_Ant1\_NTNV



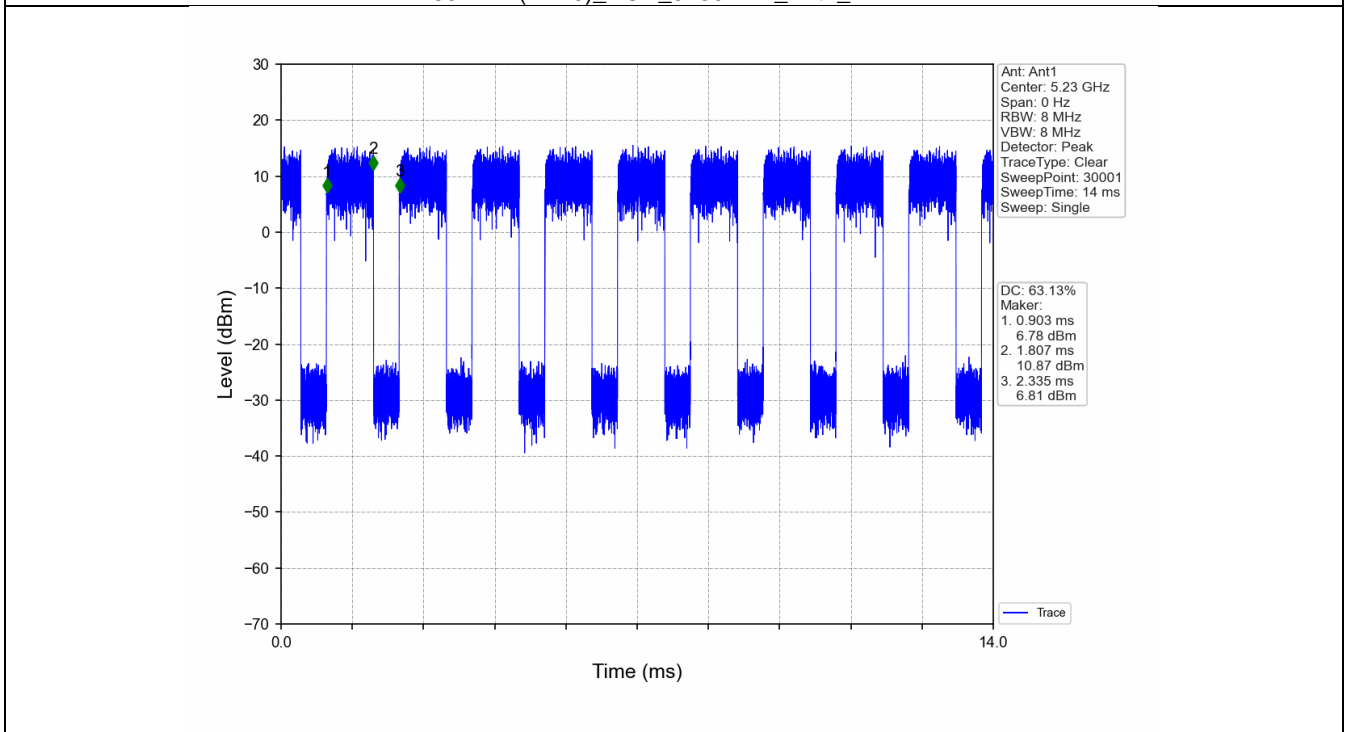
802.11n(HT20)\_HCH\_5825MHz\_Ant1\_NTNV



802.11n(HT40)\_LCH\_5190MHz\_Ant1\_NTNV

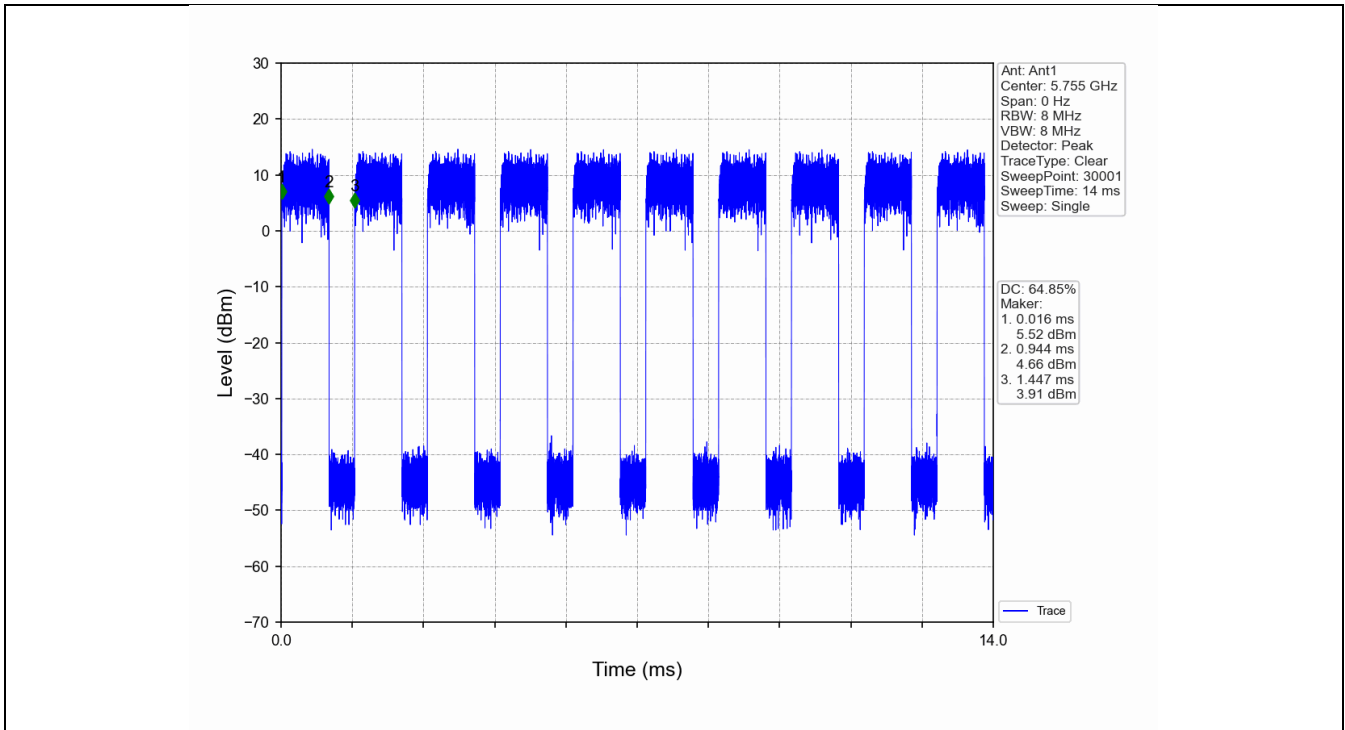


802.11n(HT40)\_HCH\_5230MHz\_Ant1\_NTNV

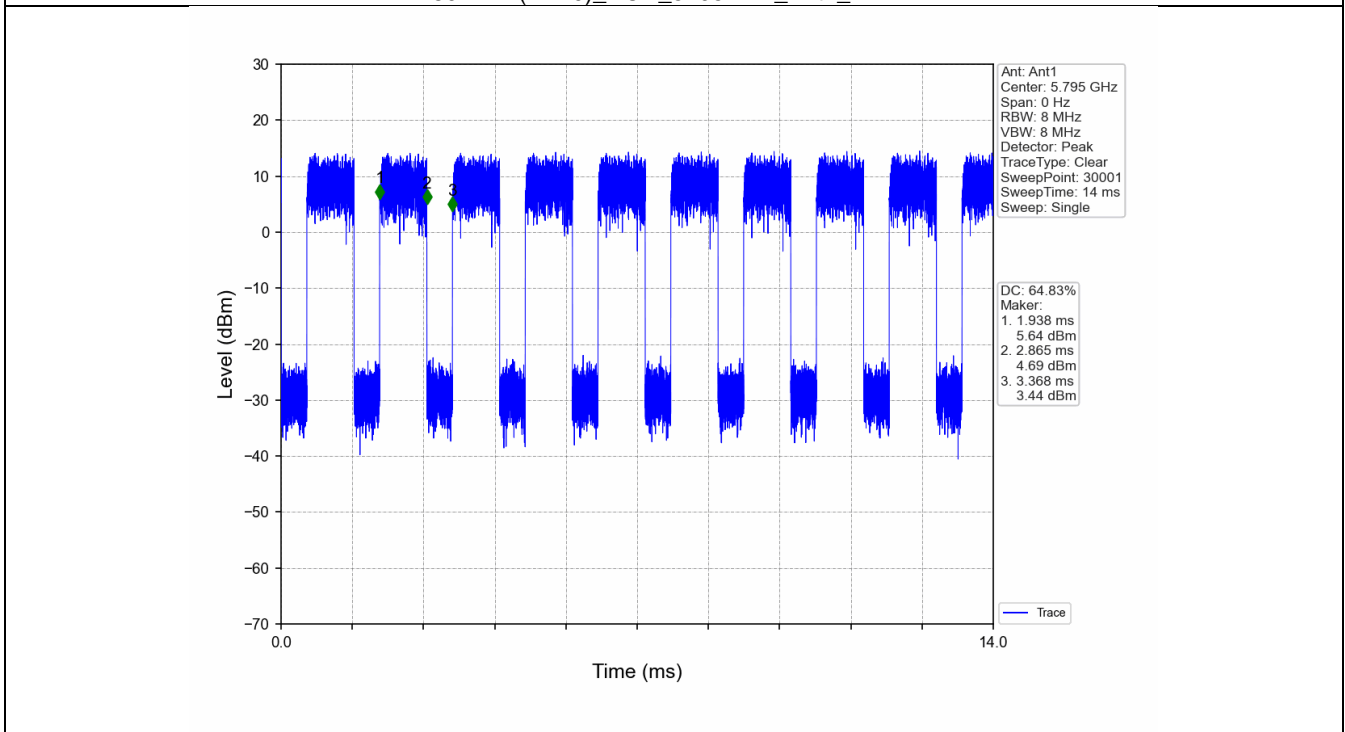


802.11n(HT40)\_LCH\_5755MHz\_Ant1\_NTNV





802.11n(HT40)\_HCH\_5795MHz\_Ant1\_NTNV



## 2. Bandwidth

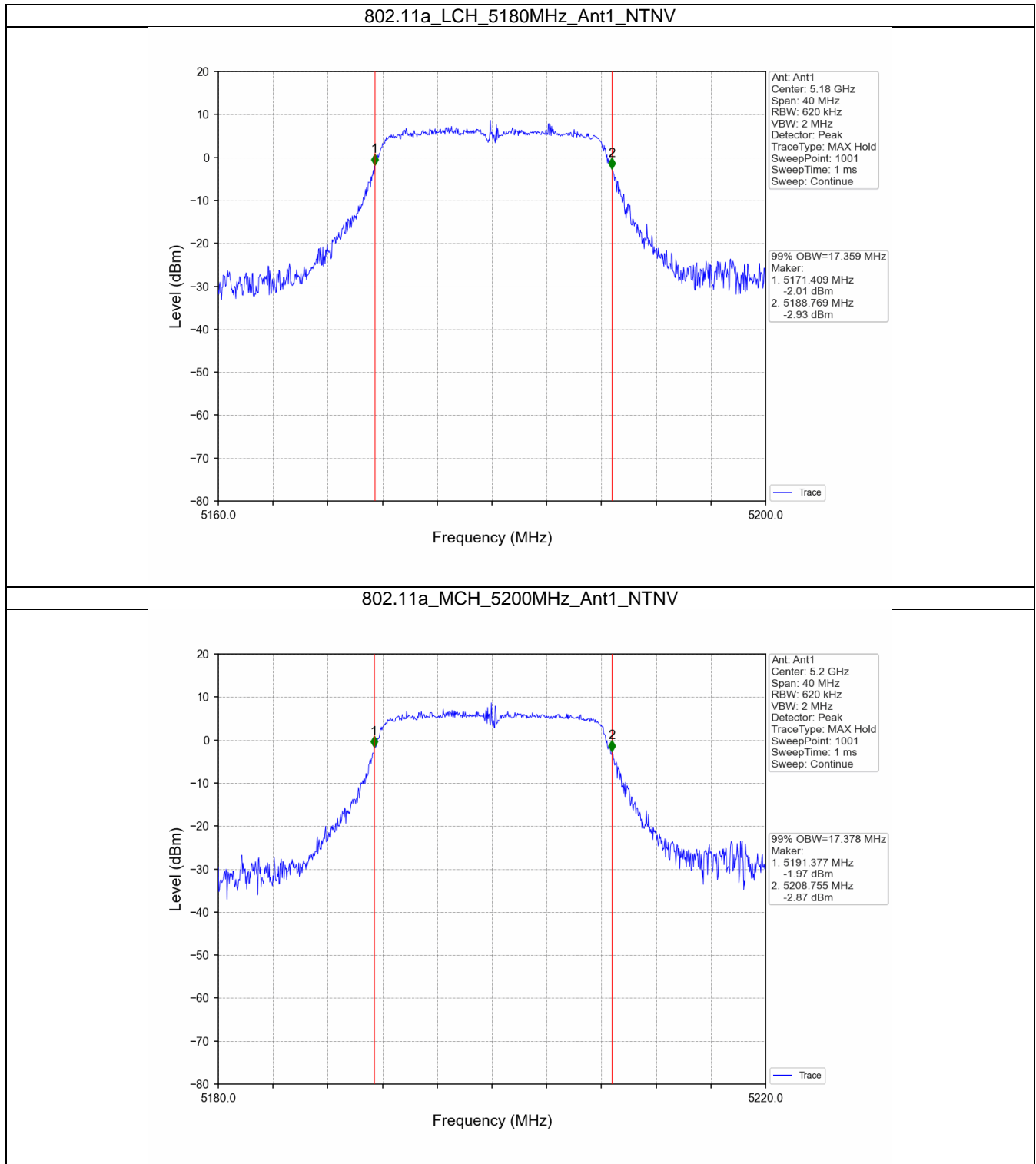


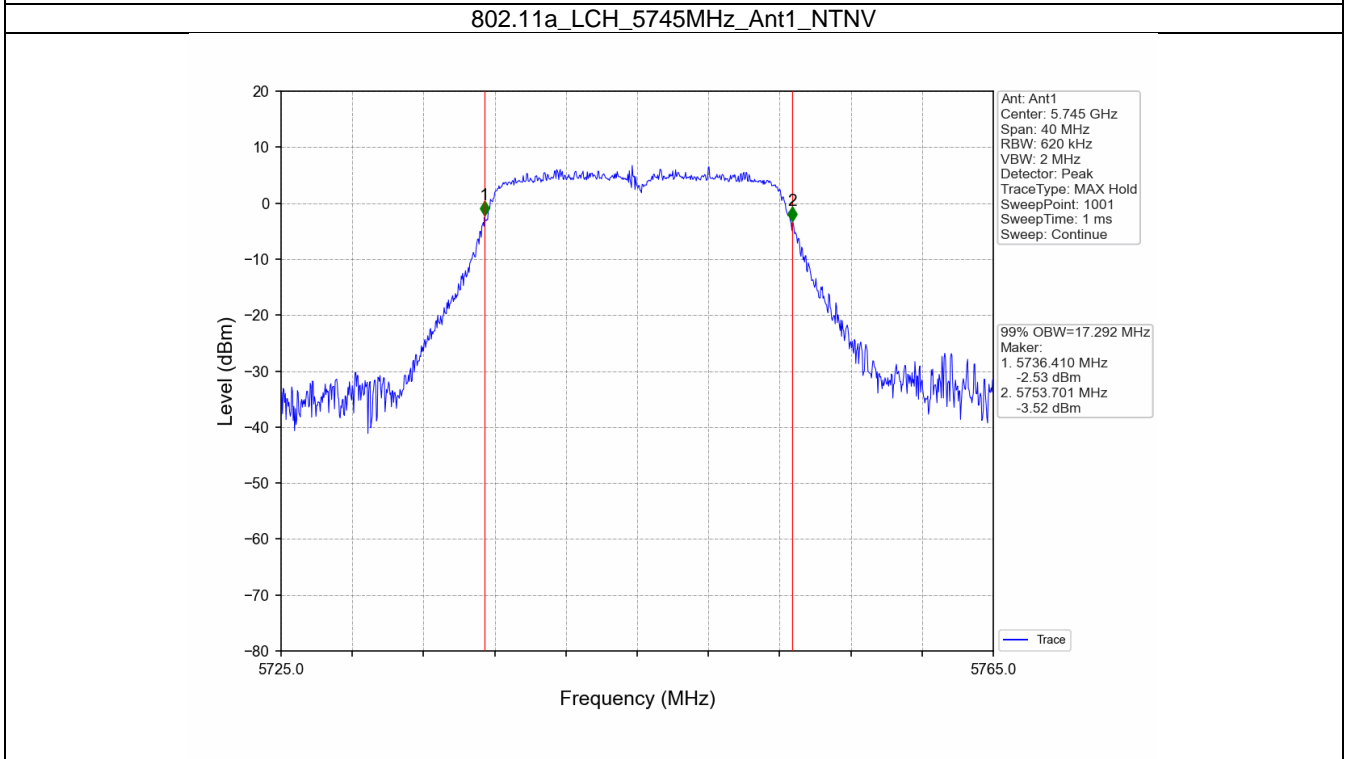
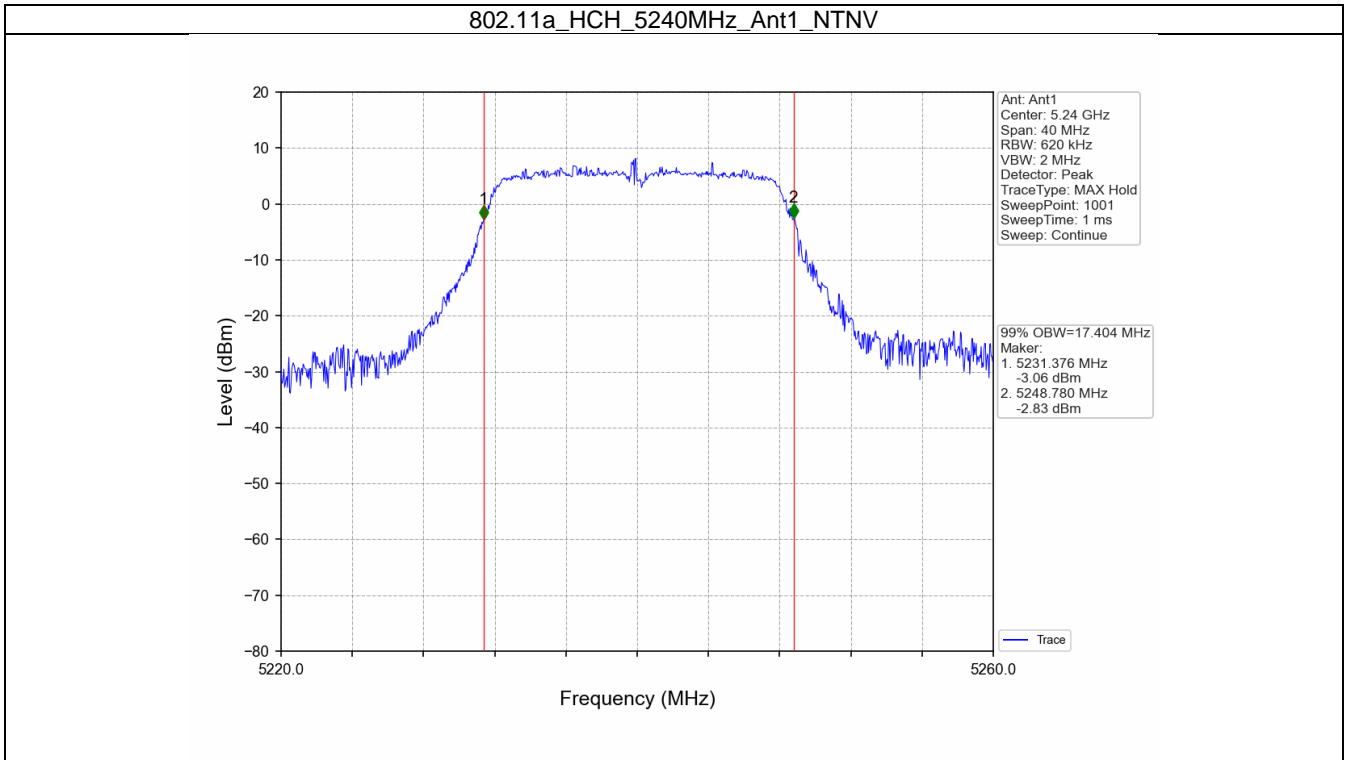
2.1 OBW

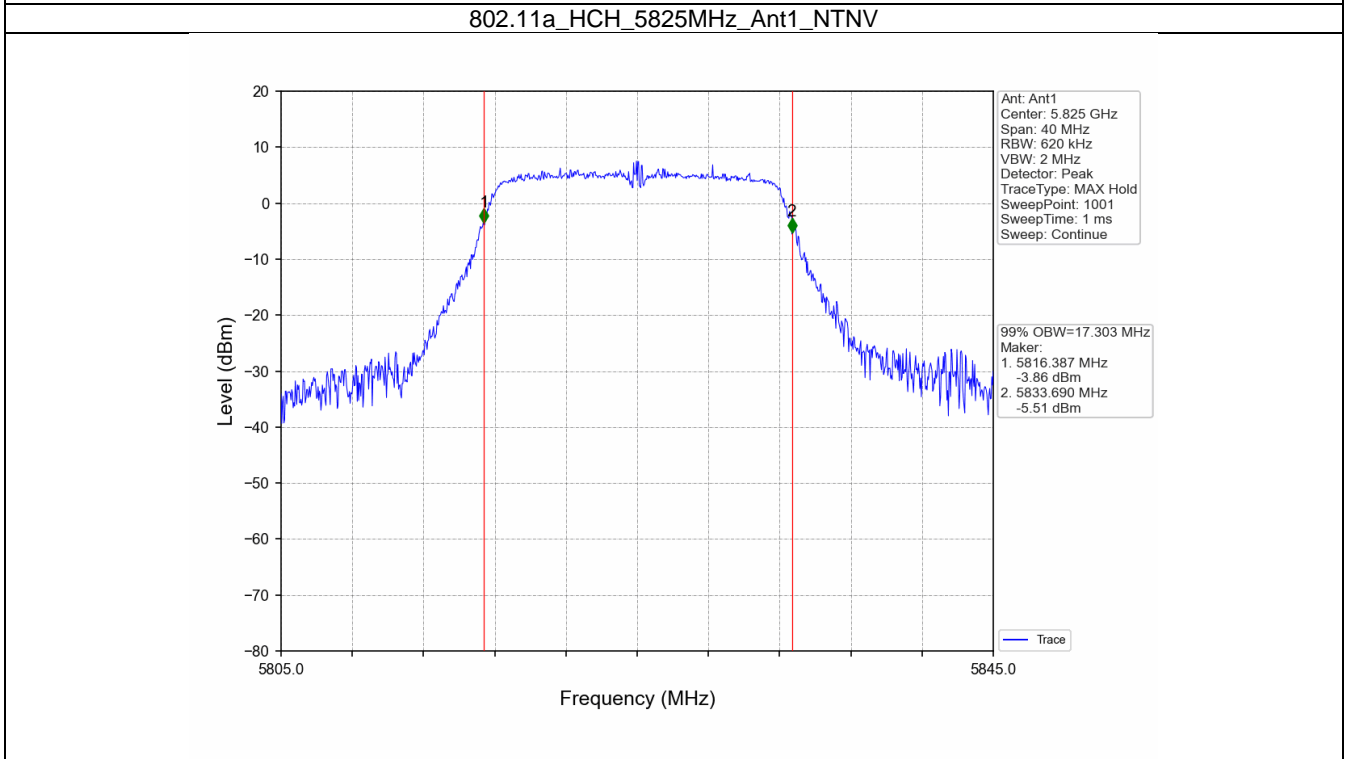
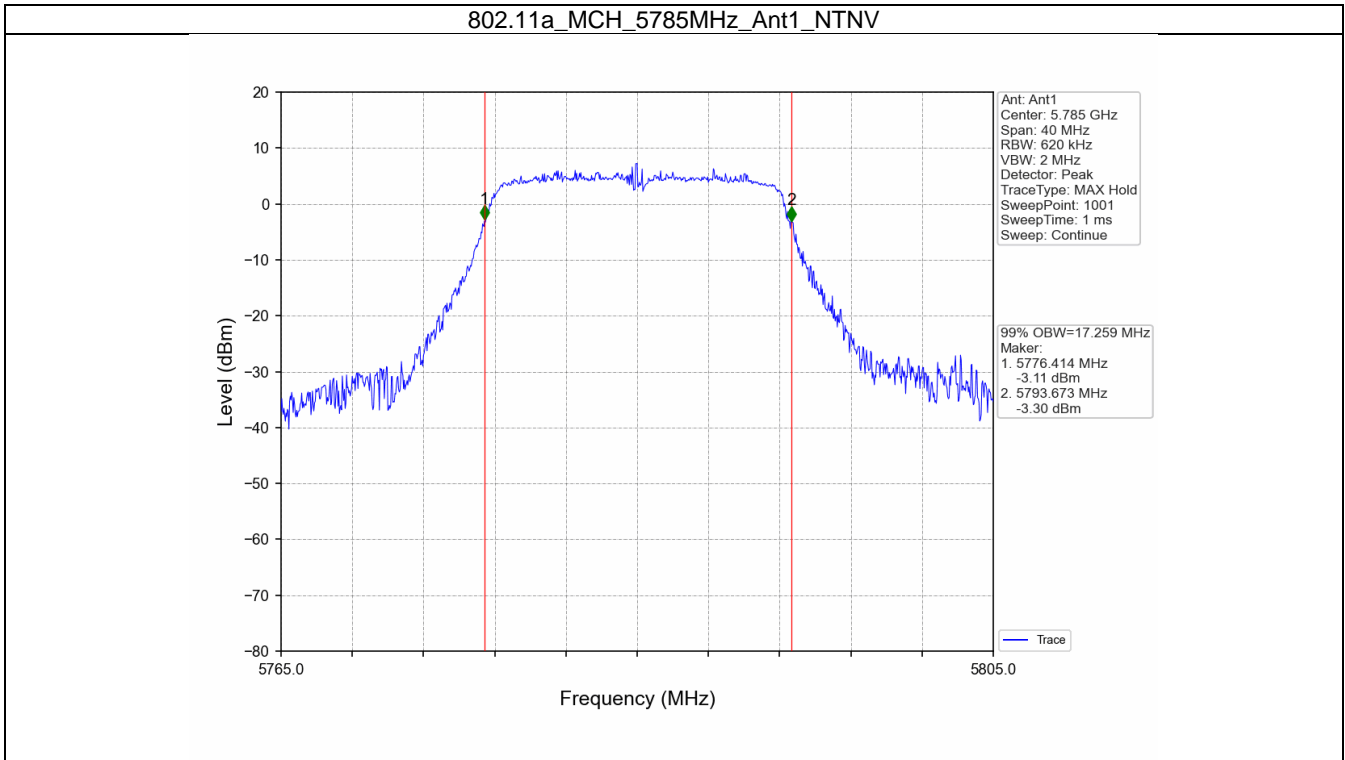
2.1.1 Test Result

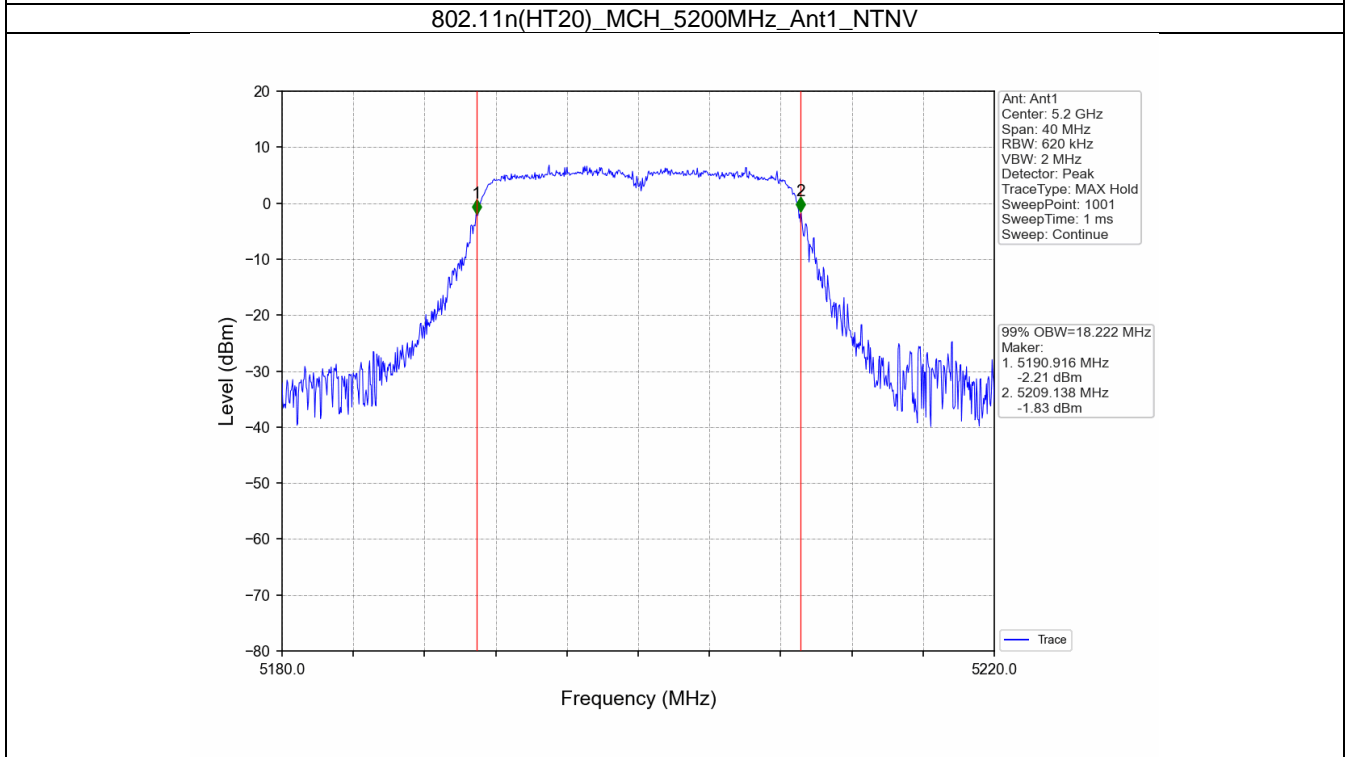
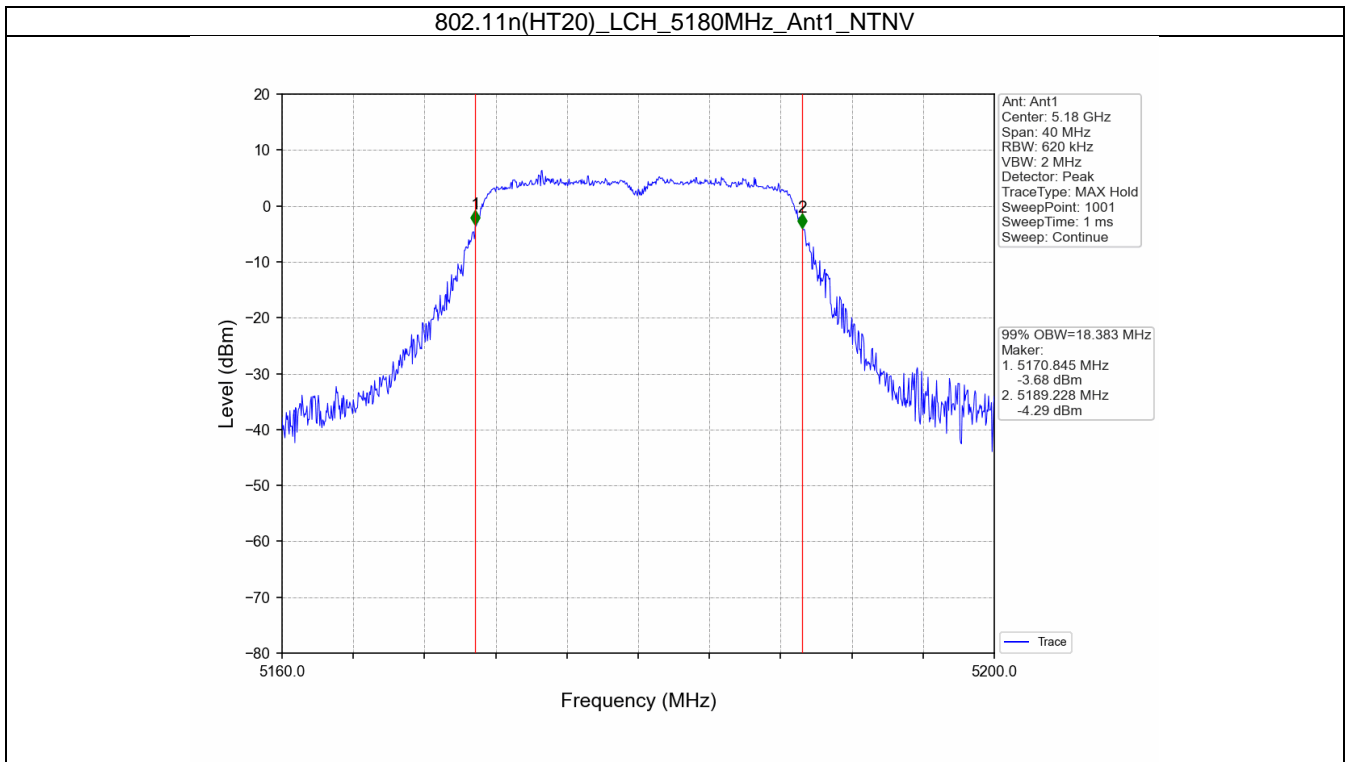
Mode	TX Type	Frequency (MHz)	Ant	99% Occupied Bandwidth (MHz)	Limit (MHz)	Verdict
802.11a	SISO	5180	1	17.359	/	Pass
		5200	1	17.378	/	Pass
		5240	1	17.404	/	Pass
		5745	1	17.292	/	Pass
		5785	1	17.259	/	Pass
		5825	1	17.303	/	Pass
802.11n (HT20)	SISO	5180	1	18.383	/	Pass
		5200	1	18.222	/	Pass
		5240	1	18.399	/	Pass
		5745	1	18.419	/	Pass
		5785	1	18.351	/	Pass
		5825	1	18.279	/	Pass
802.11n (HT40)	SISO	5190	1	36.108	/	Pass
		5230	1	36.036	/	Pass
		5755	1	36.043	/	Pass
		5795	1	36.042	/	Pass

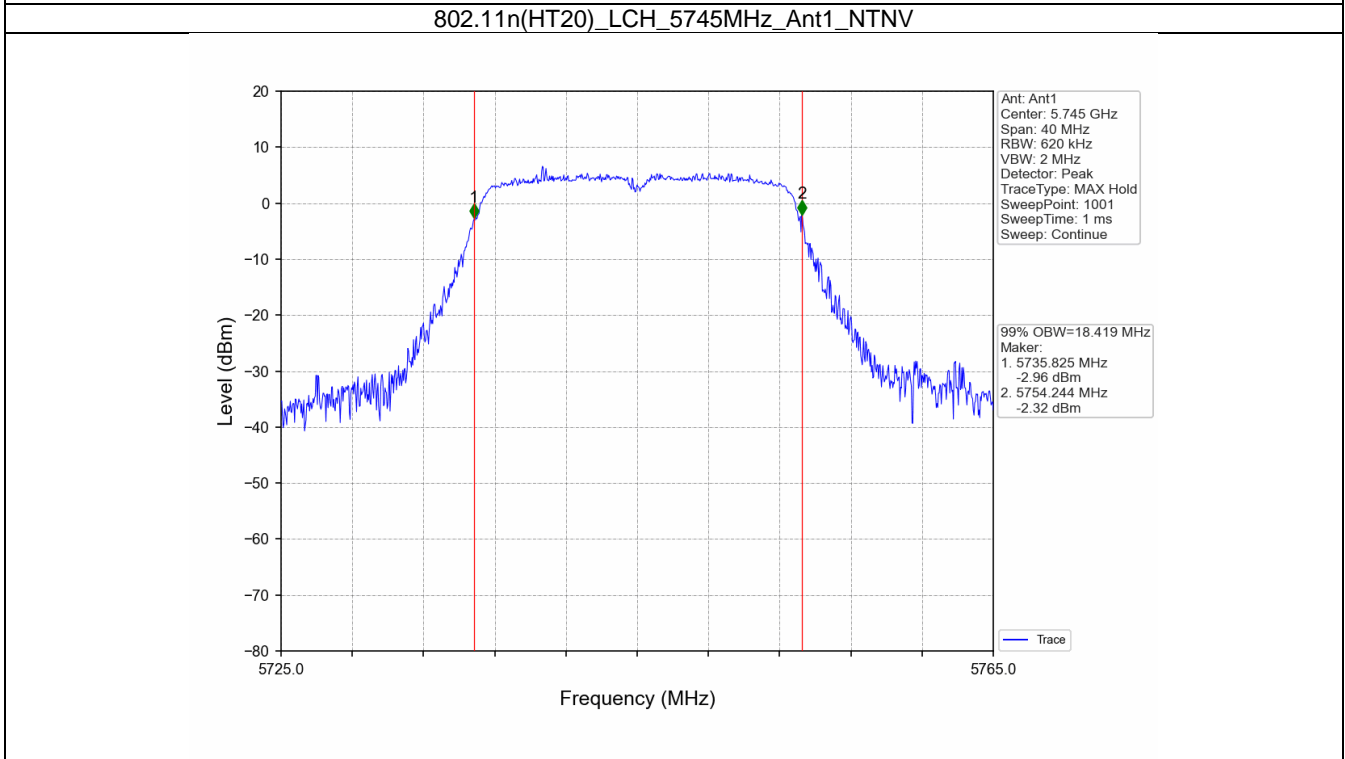
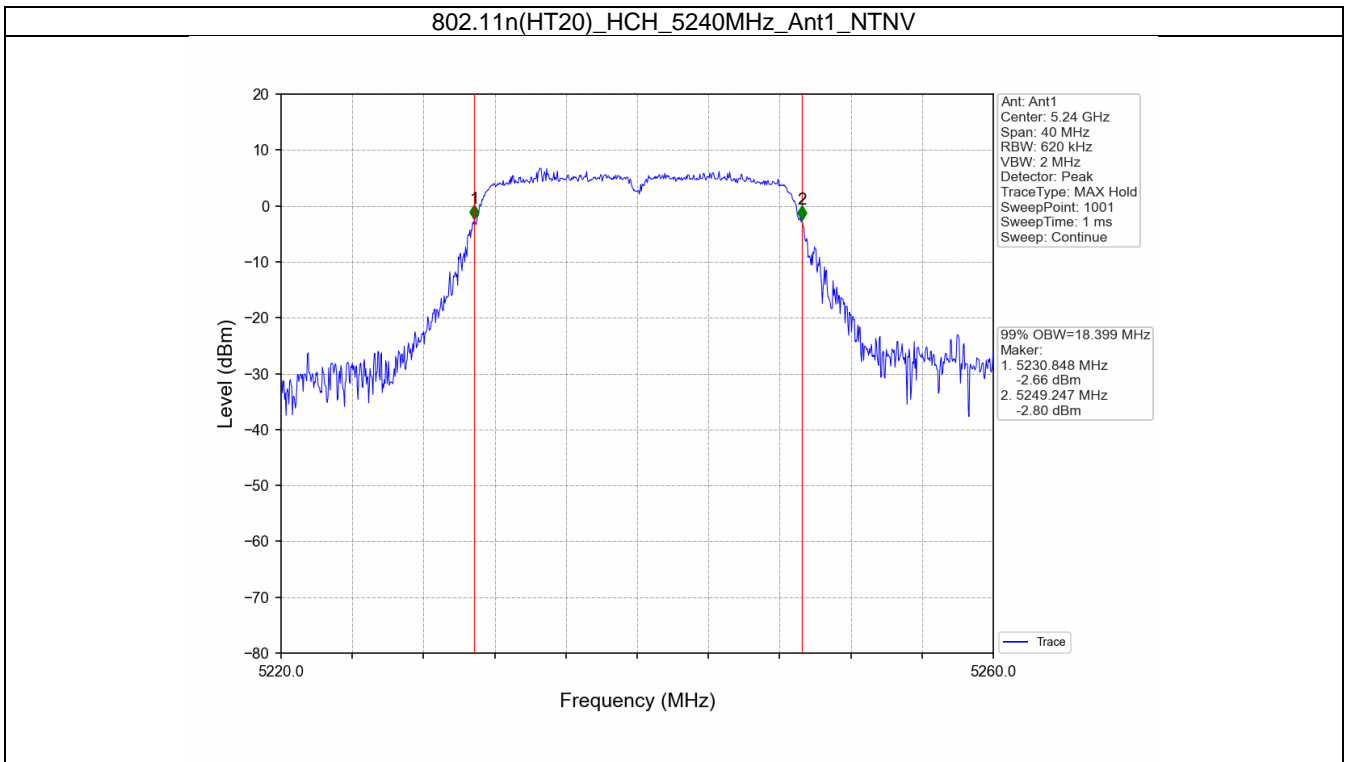
### 2.1.2 Test Graph

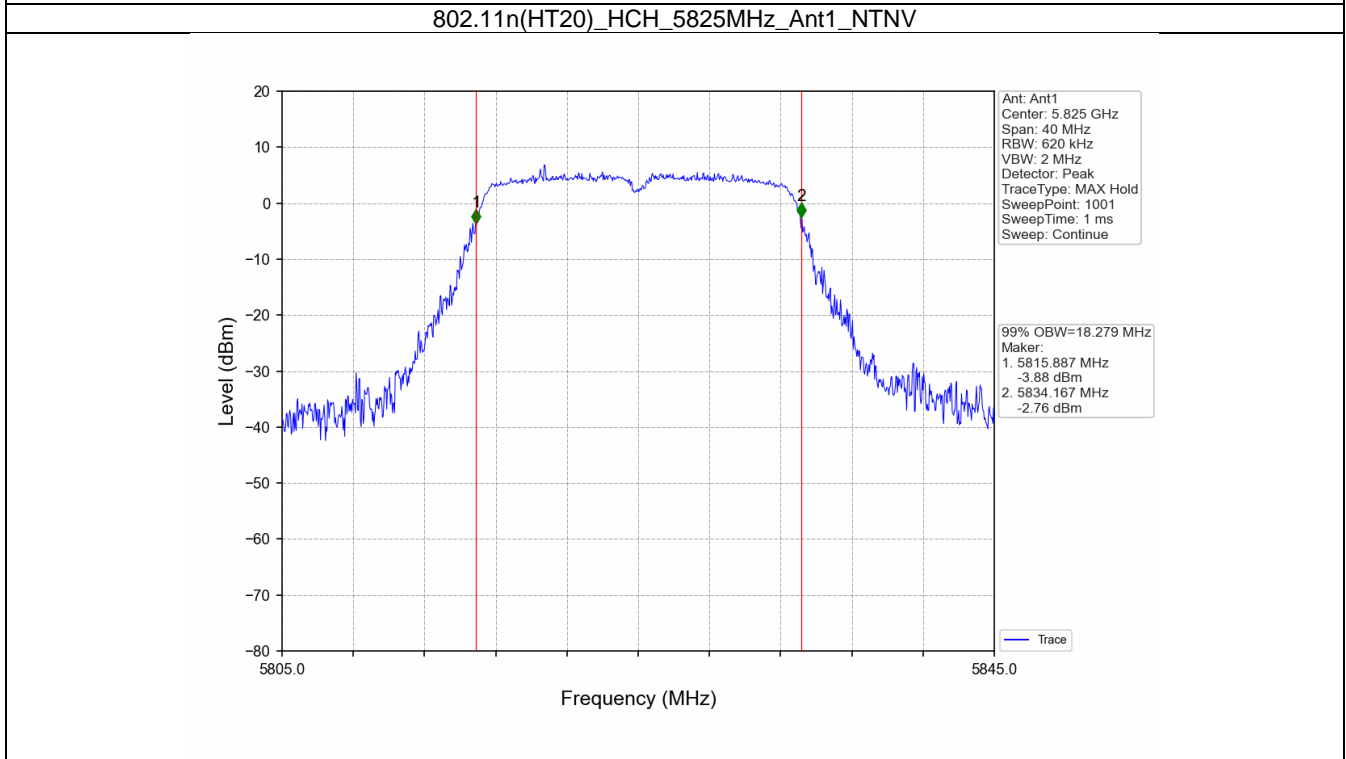
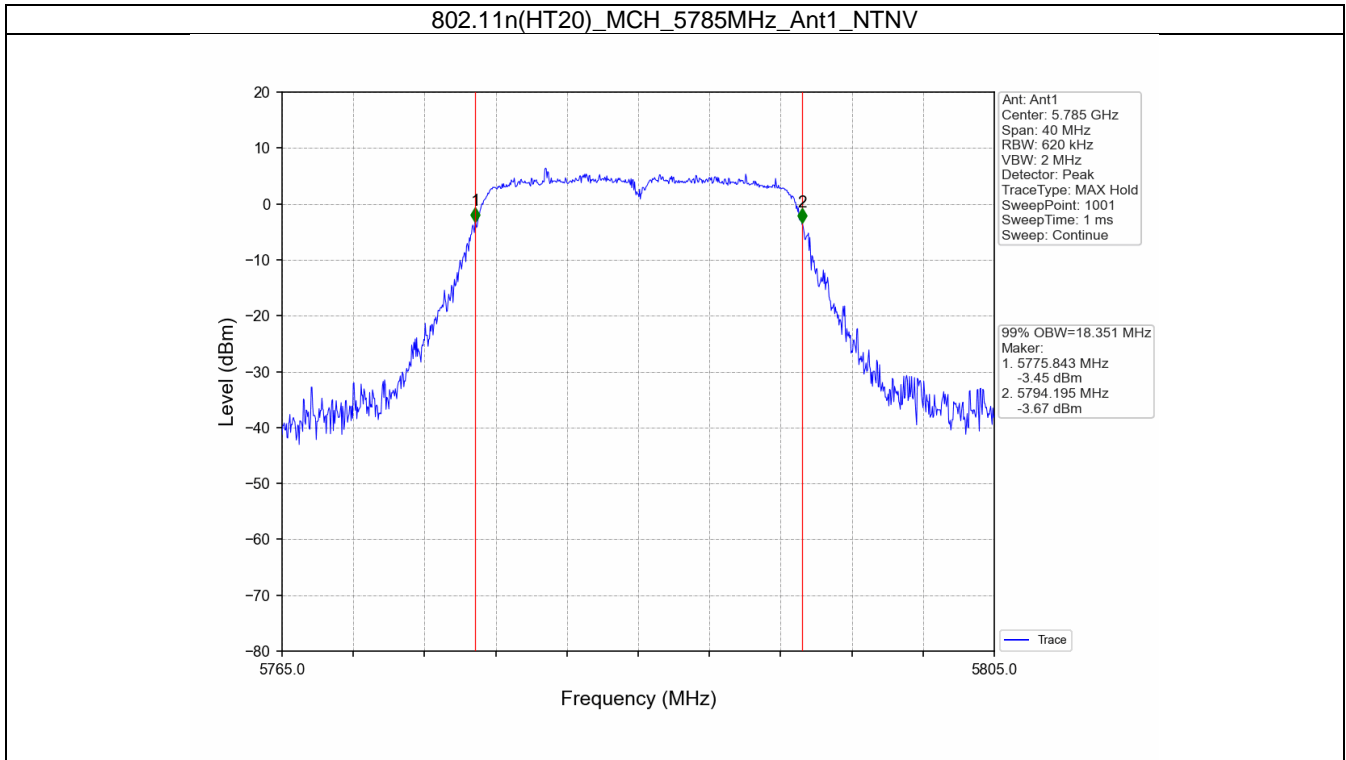




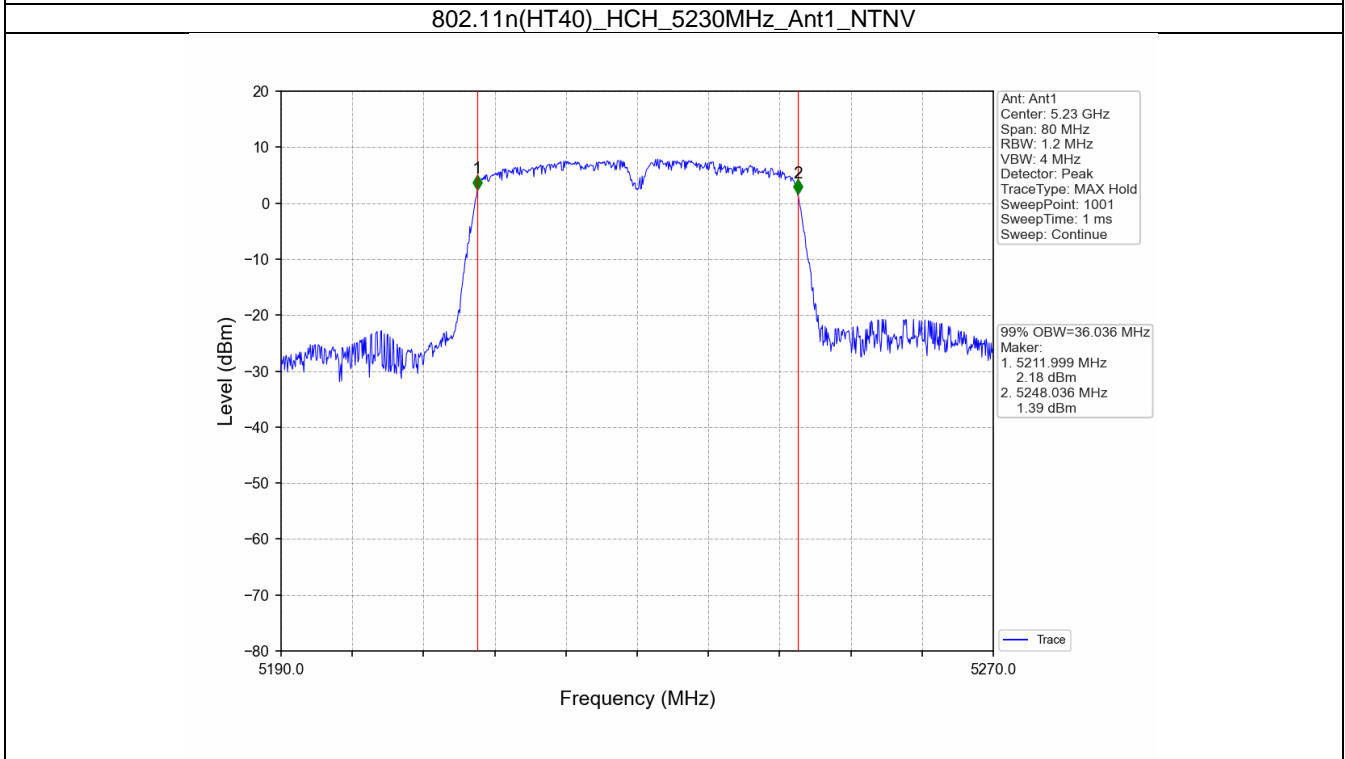
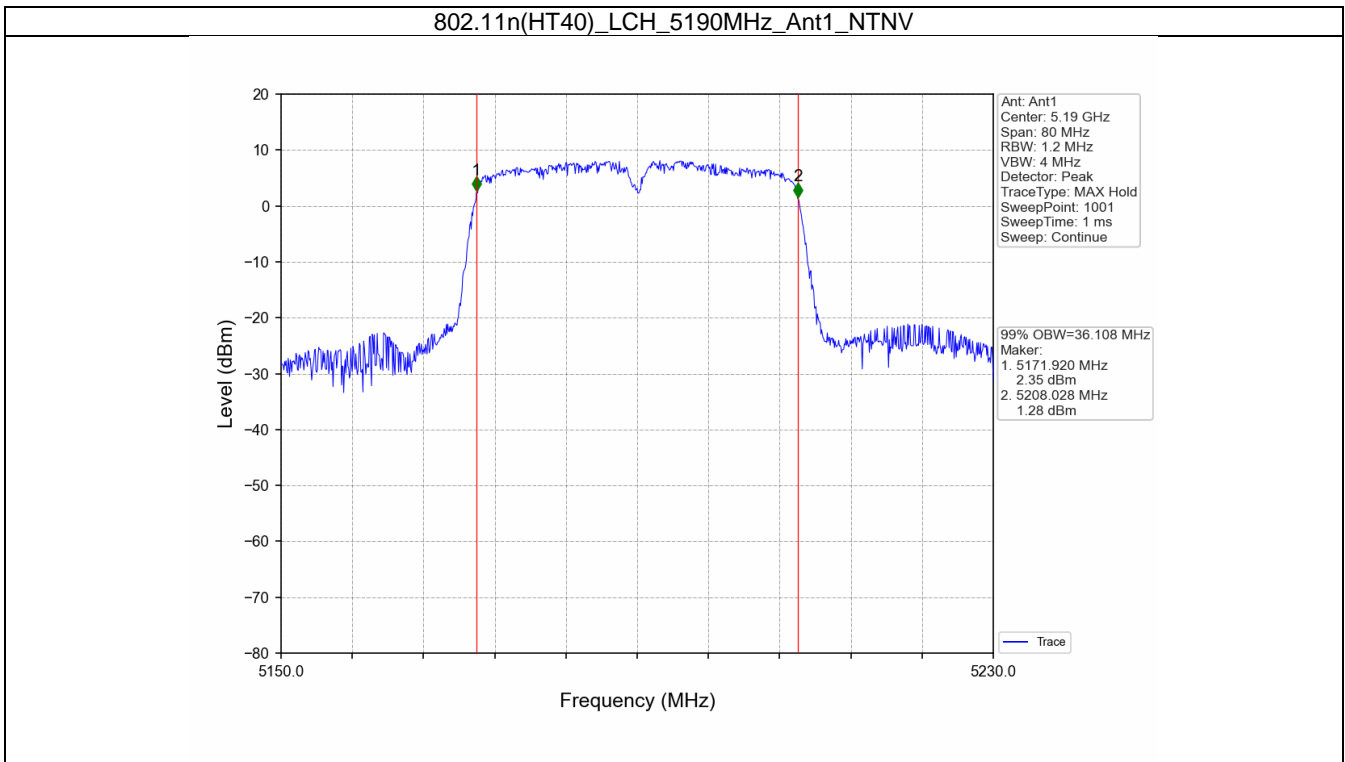


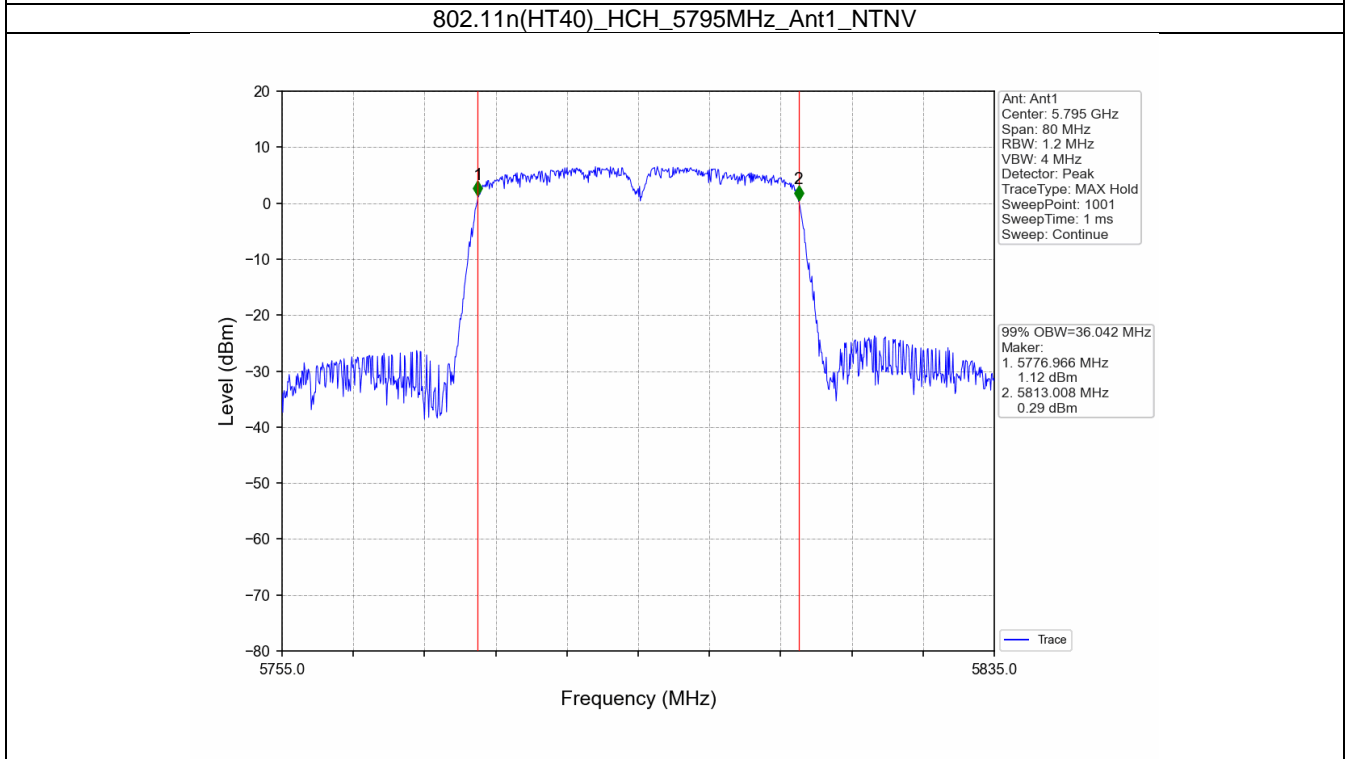
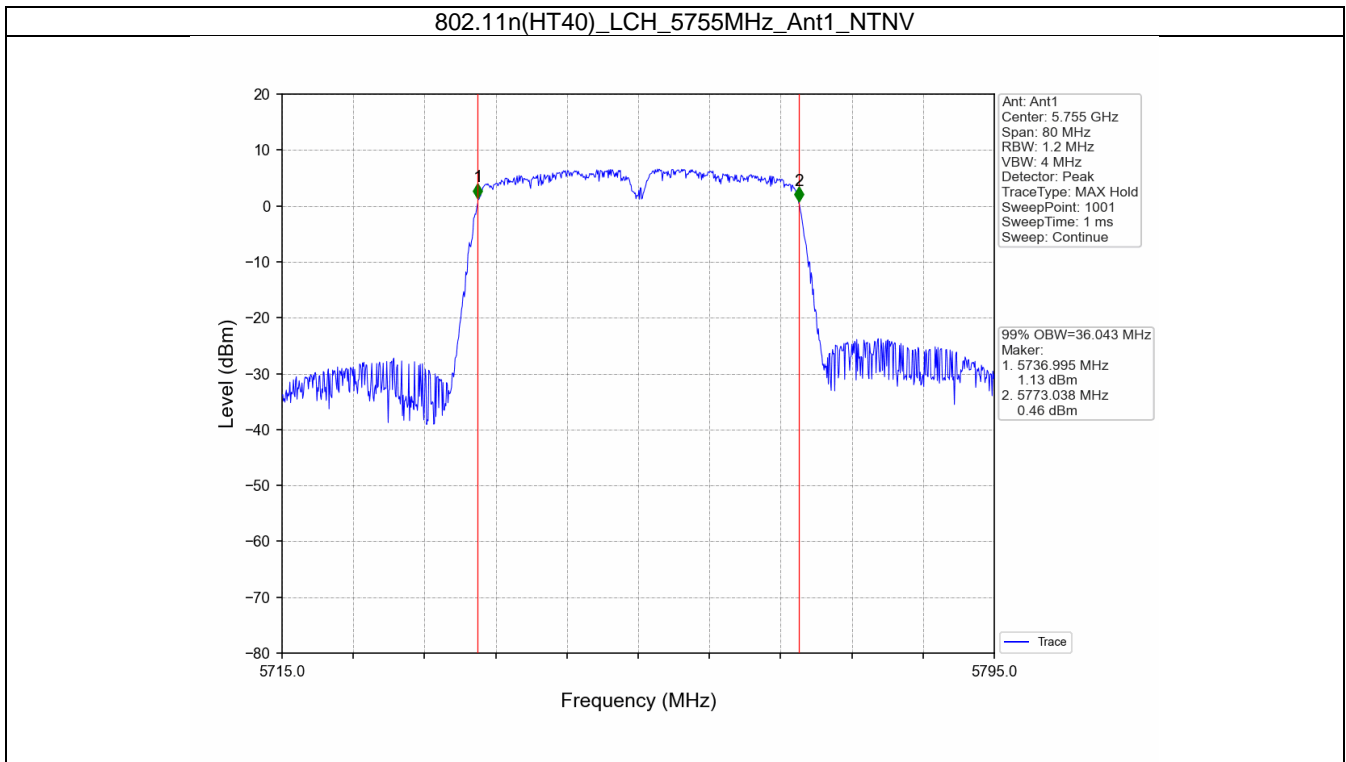










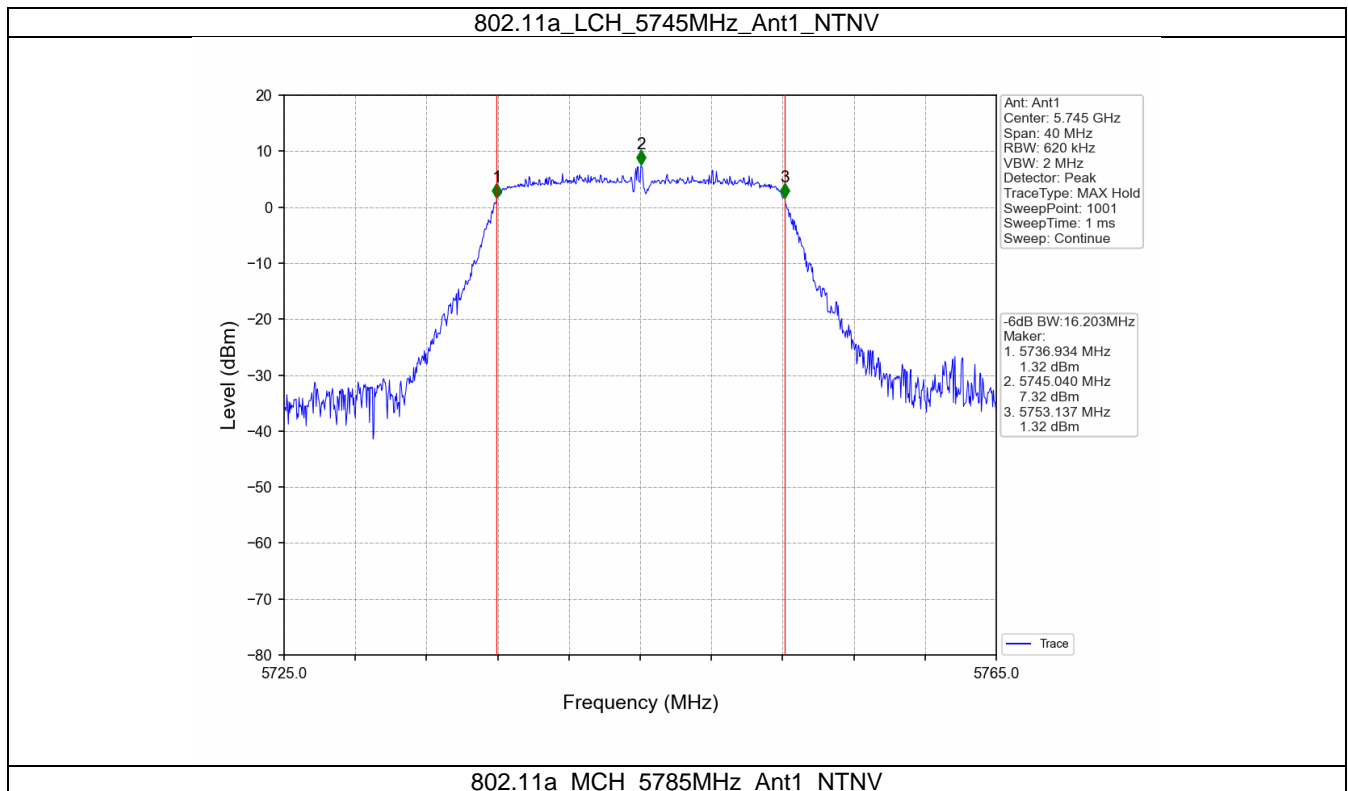


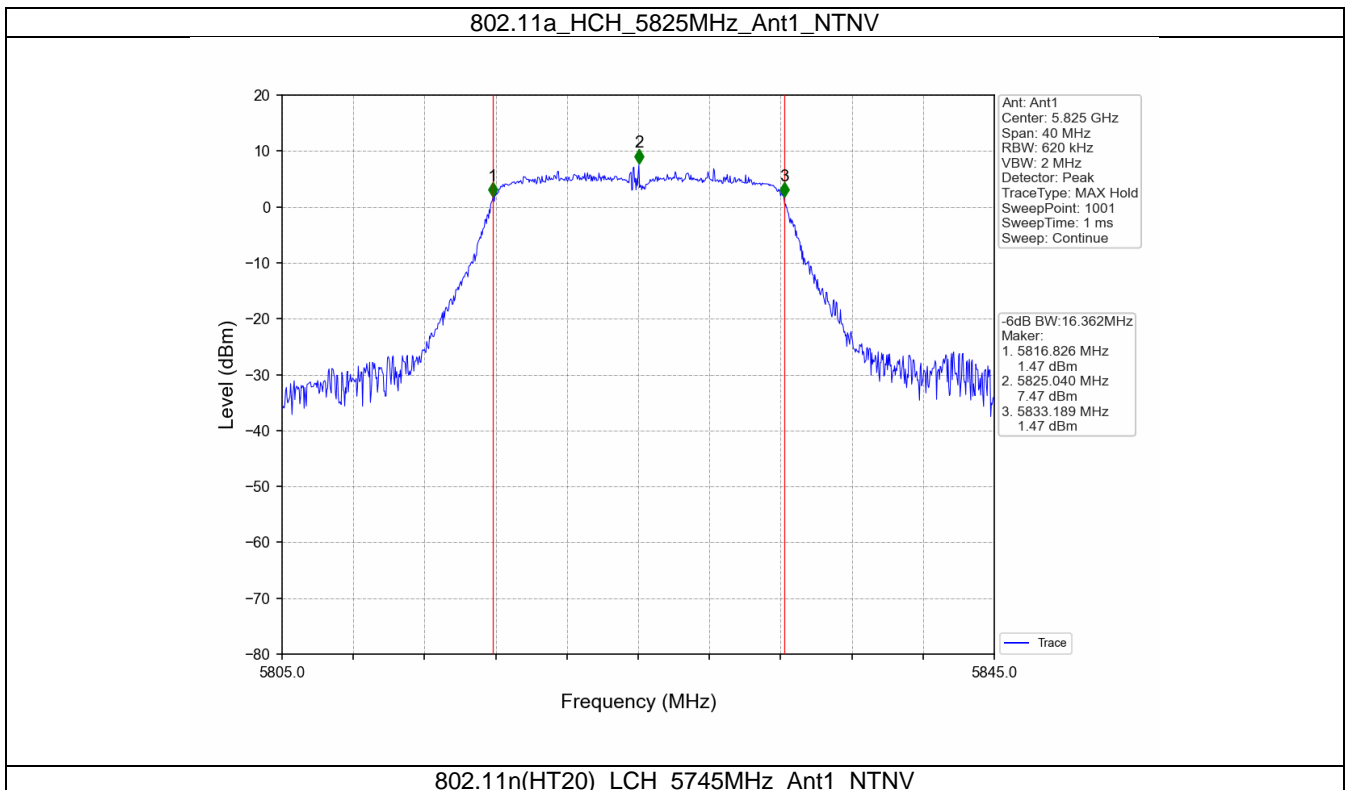
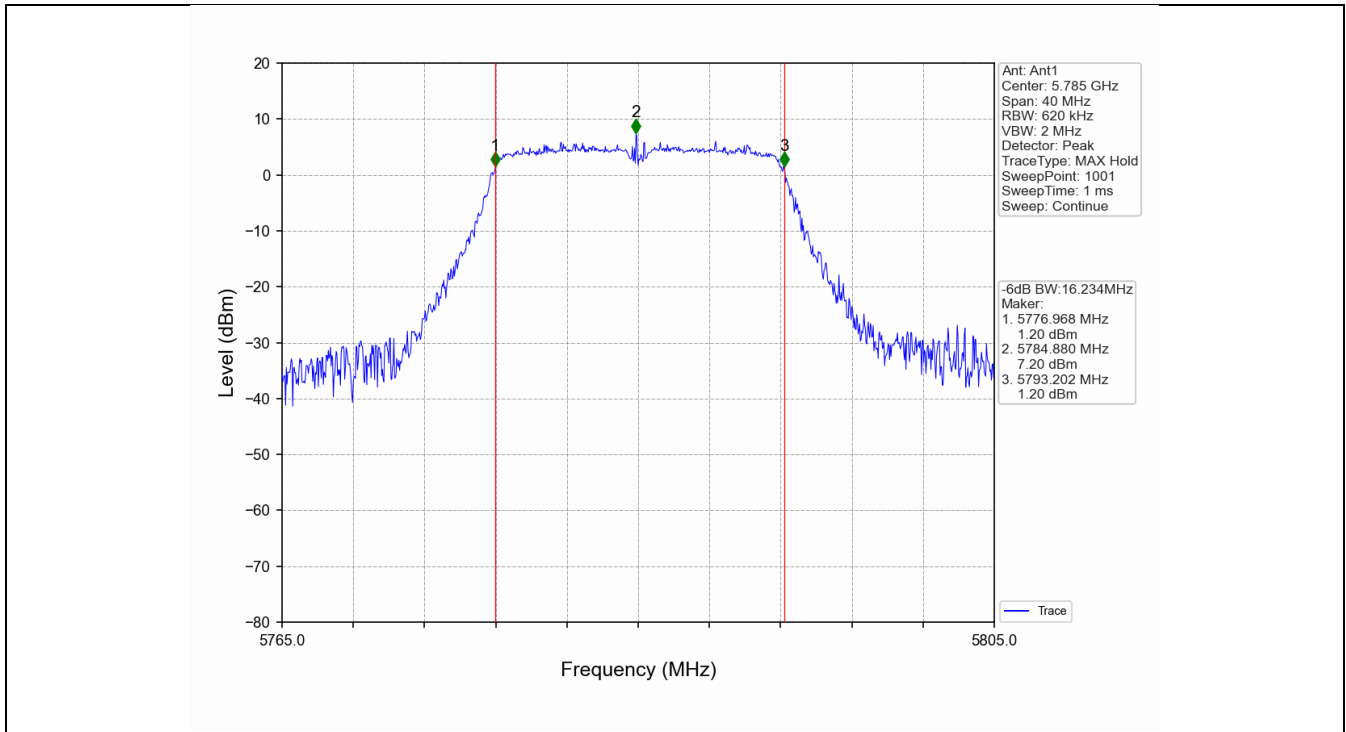
## 2.2 6dB BW

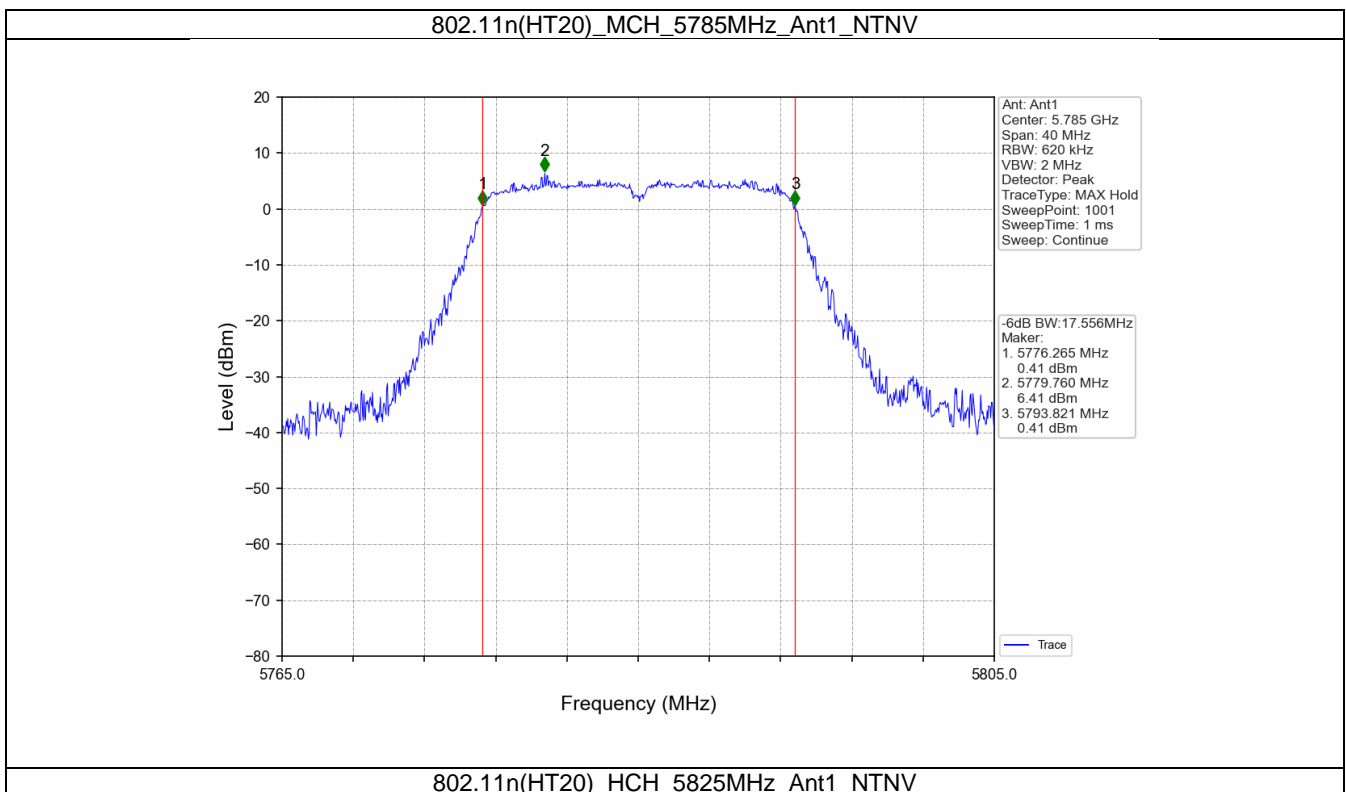
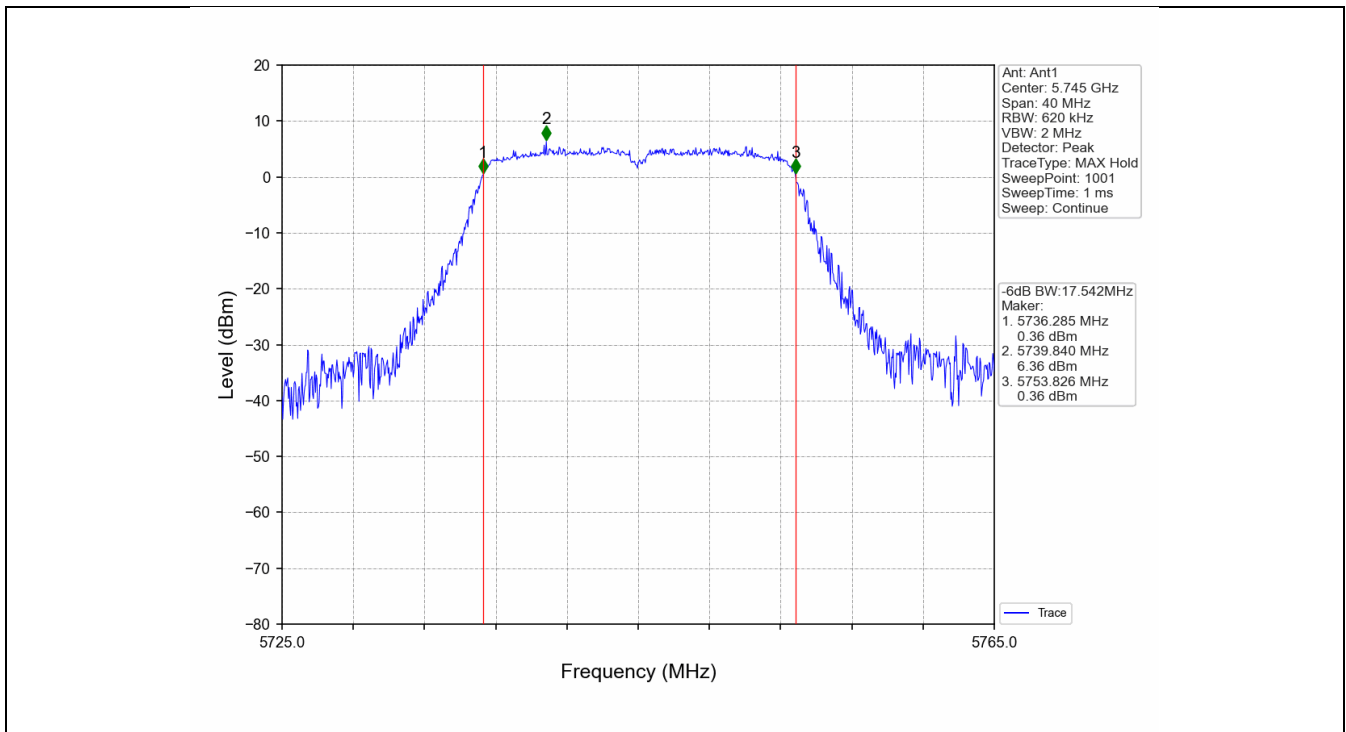
### 2.2.1 Test Result

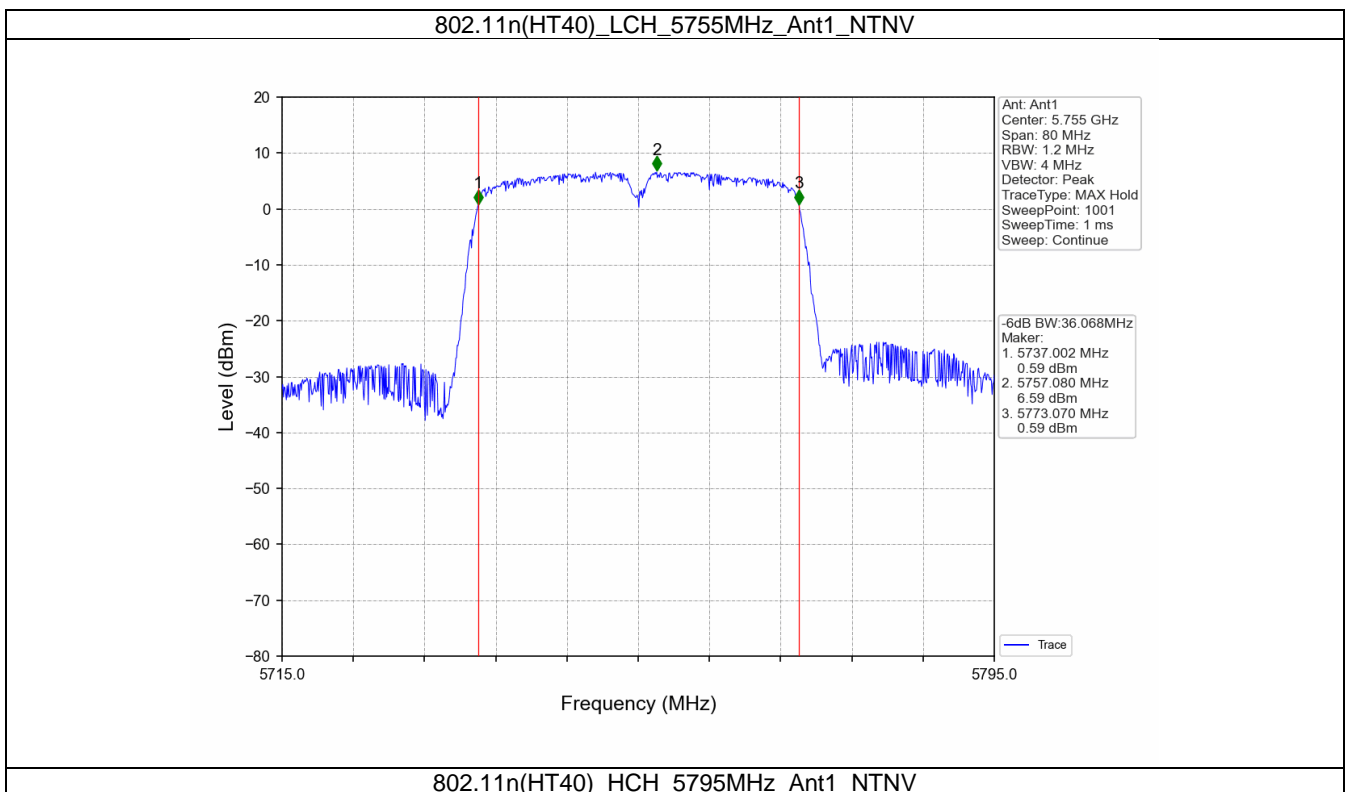
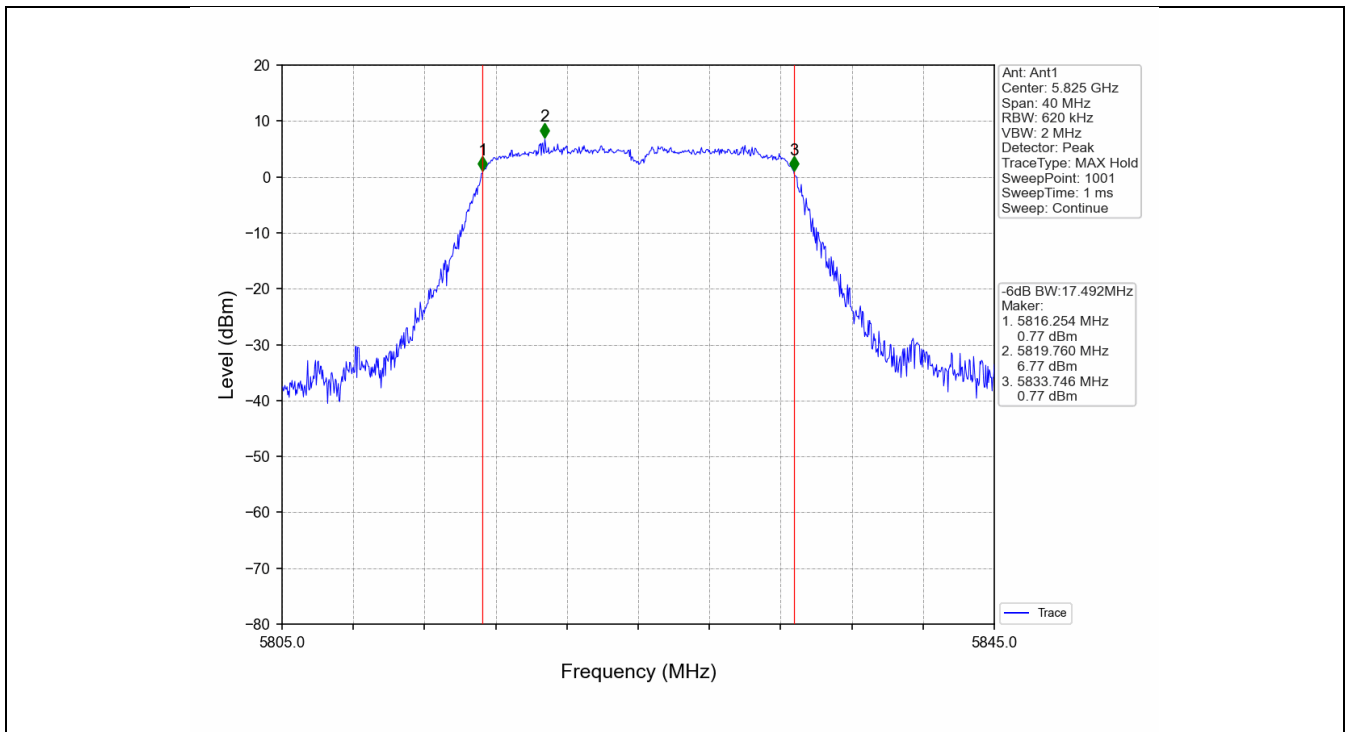
Mode	TX Type	Frequency (MHz)	Ant	6dB Bandwidth (MHz)	Limit (MHz)	Verdict
802.11a	SISO	5745	1	16.203	$\geq 0.5$	Pass
		5785	1	16.234	$\geq 0.5$	Pass
		5825	1	16.362	$\geq 0.5$	Pass
802.11n (HT20)	SISO	5745	1	17.542	$\geq 0.5$	Pass
		5785	1	17.556	$\geq 0.5$	Pass
		5825	1	17.492	$\geq 0.5$	Pass
802.11n (HT40)	SISO	5755	1	36.068	$\geq 0.5$	Pass
		5795	1	36.048	$\geq 0.5$	Pass

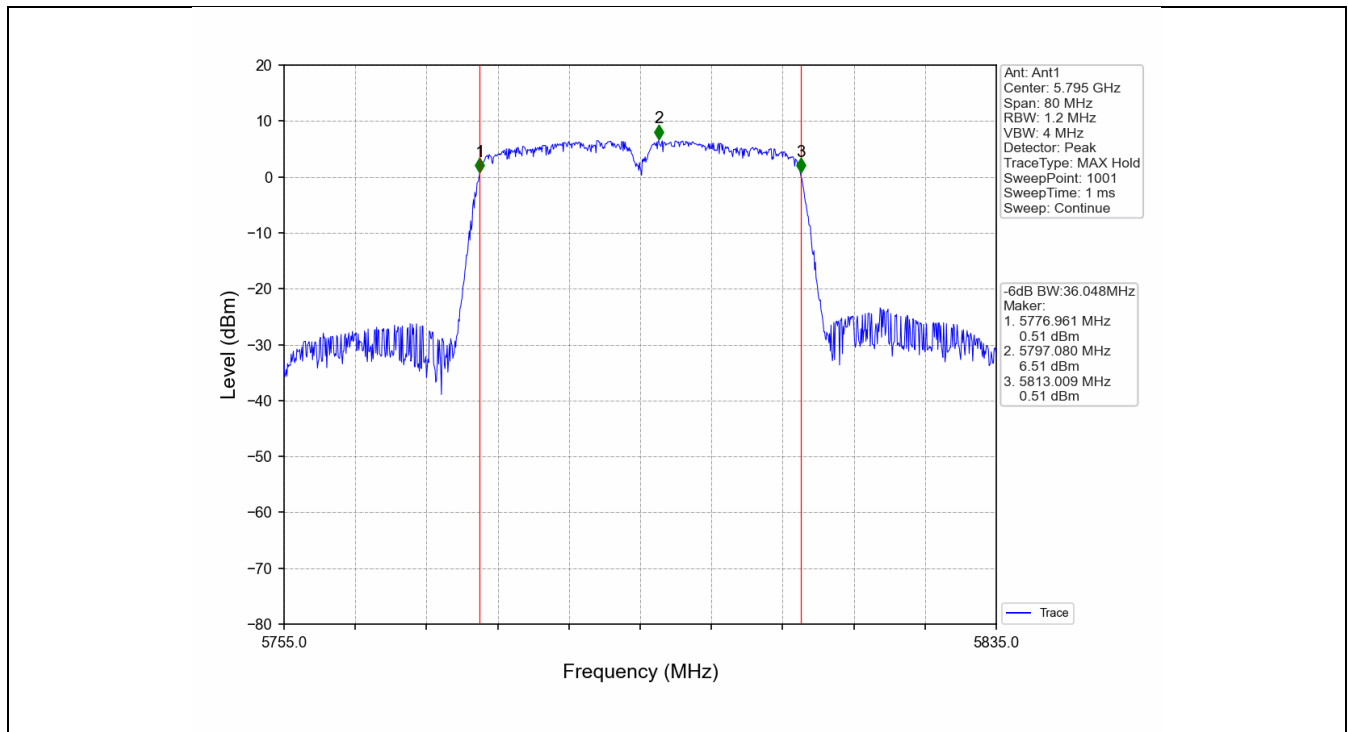
### 2.2.2 Test Graph









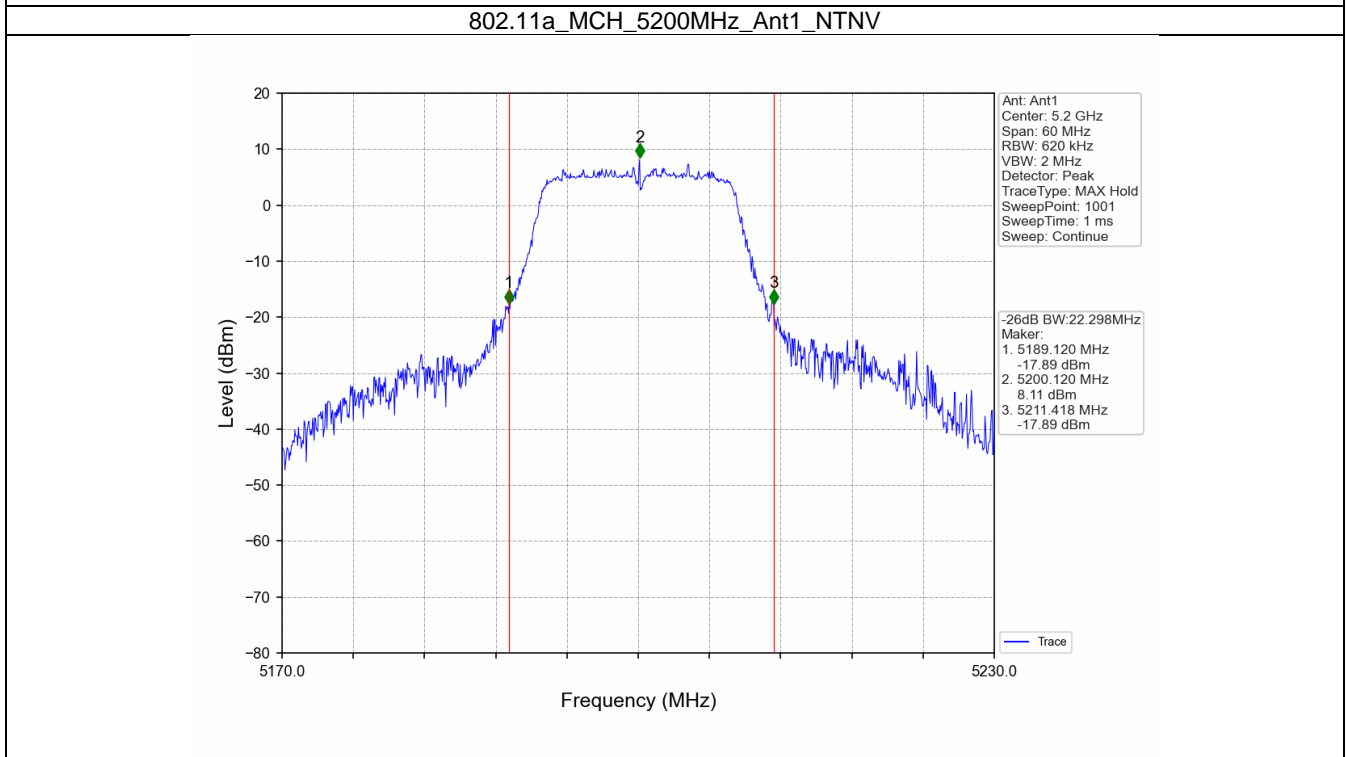
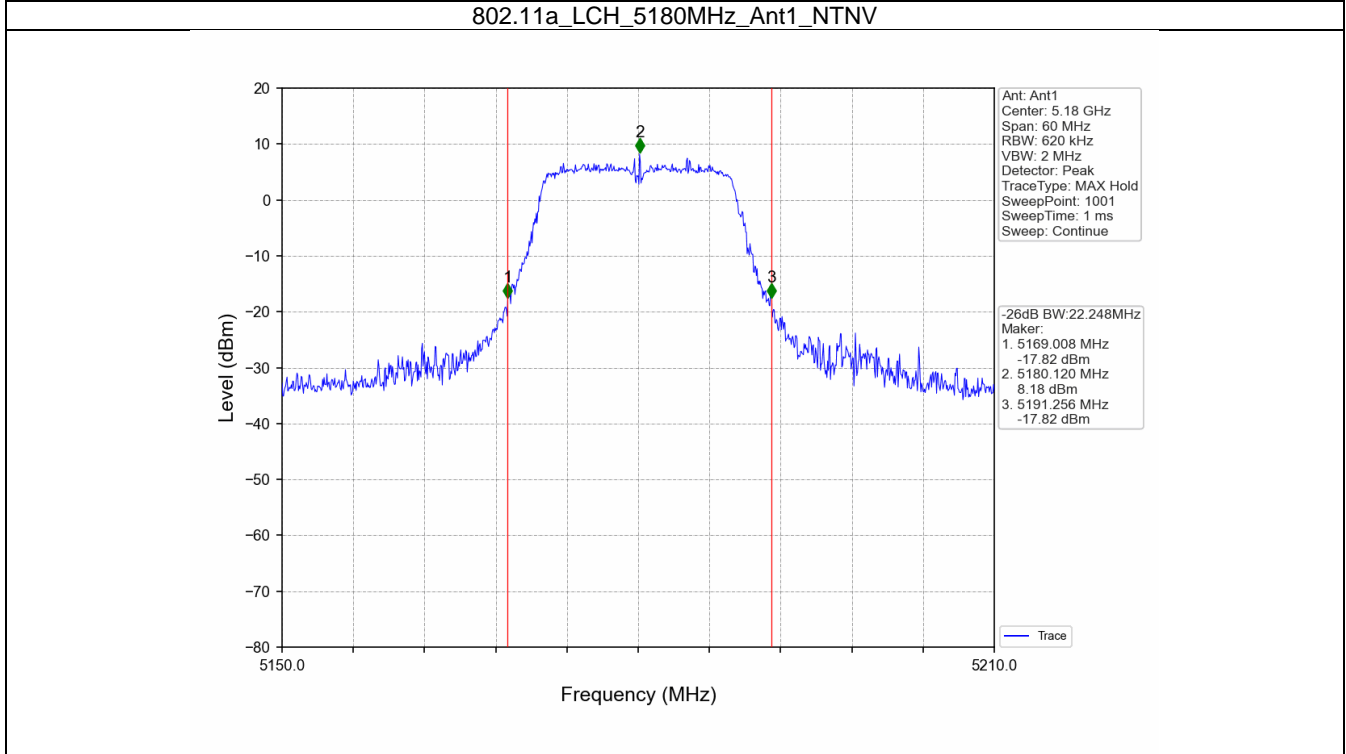


## 2.3 26dB BW

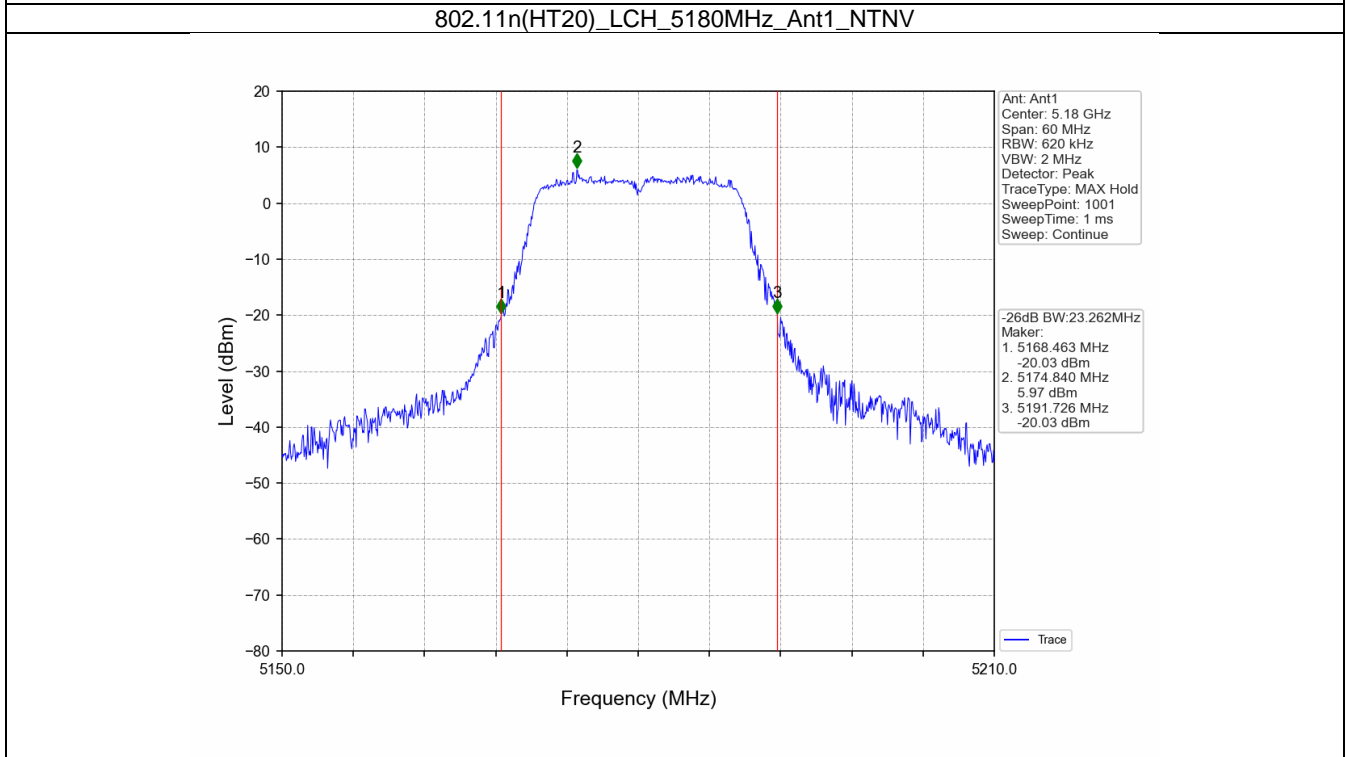
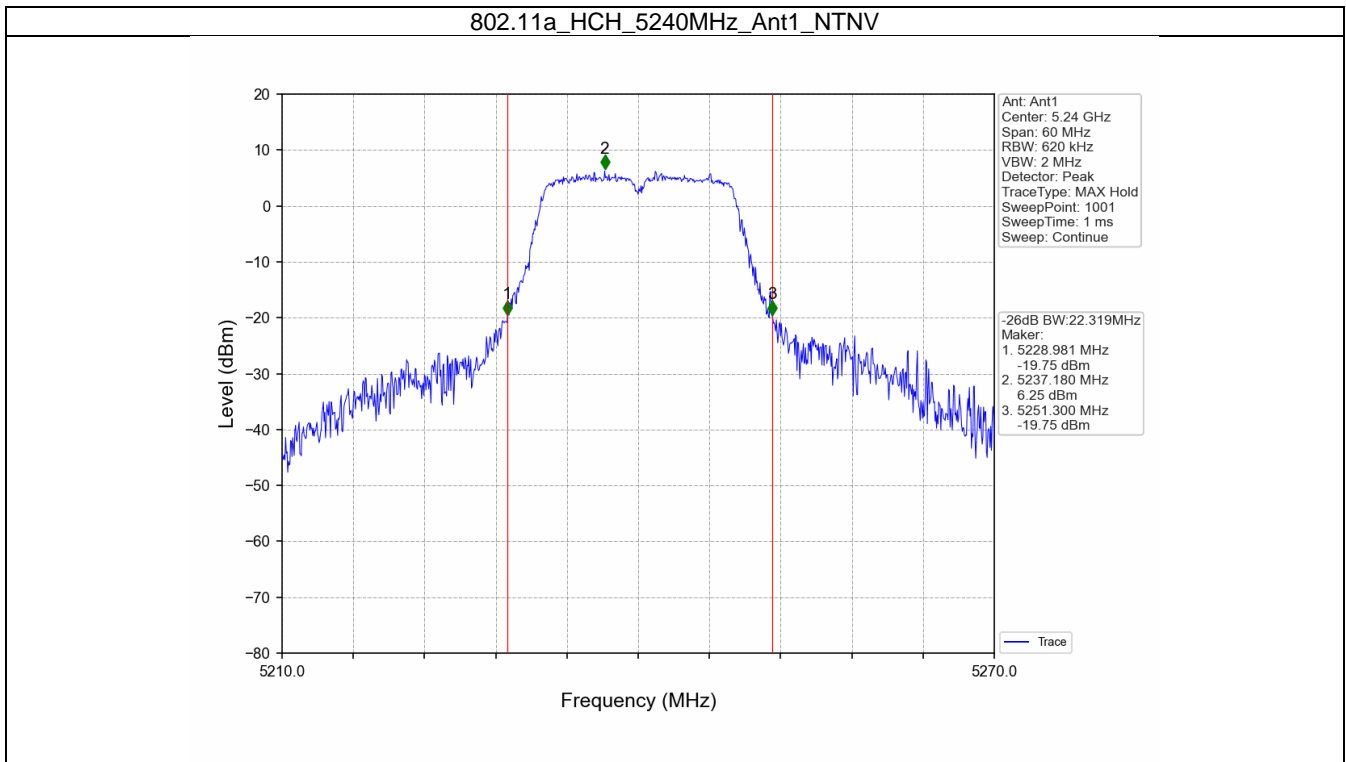
### 2.3.1 Test Result

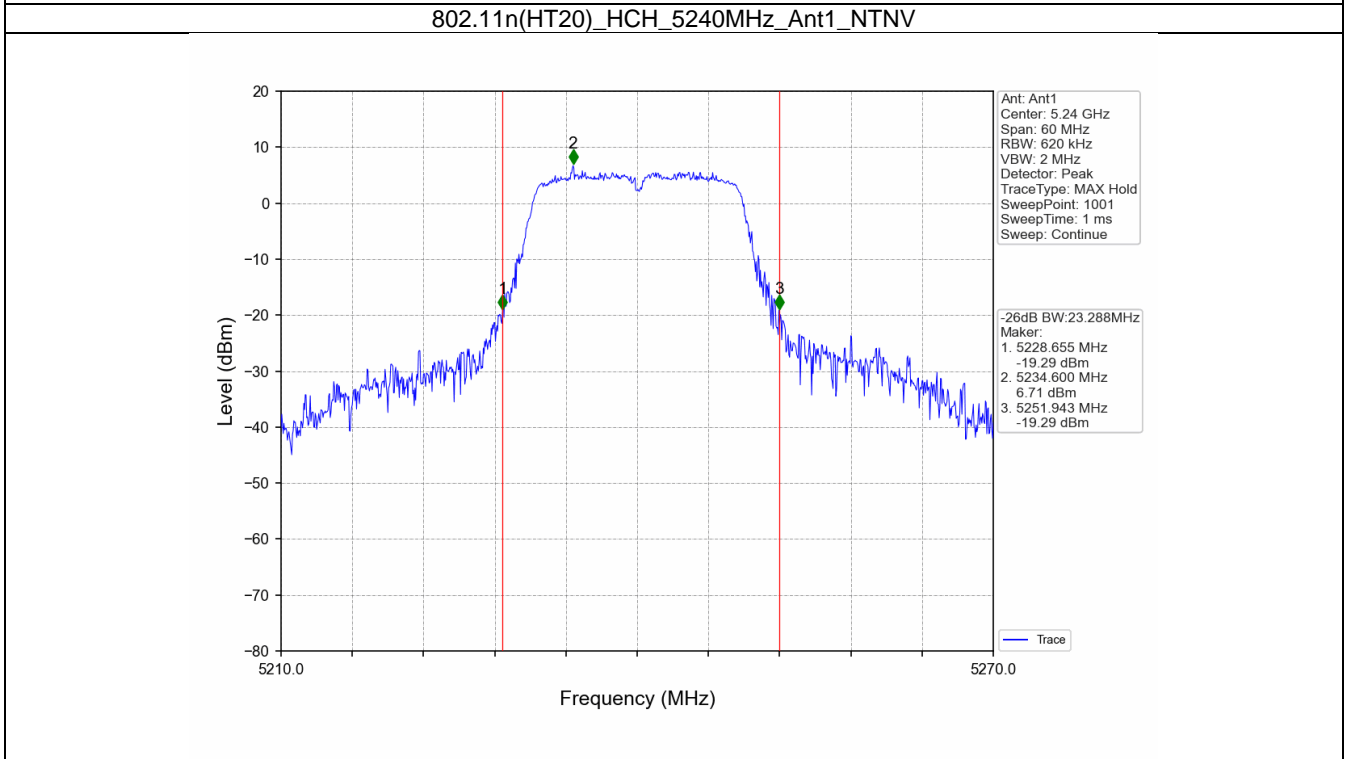
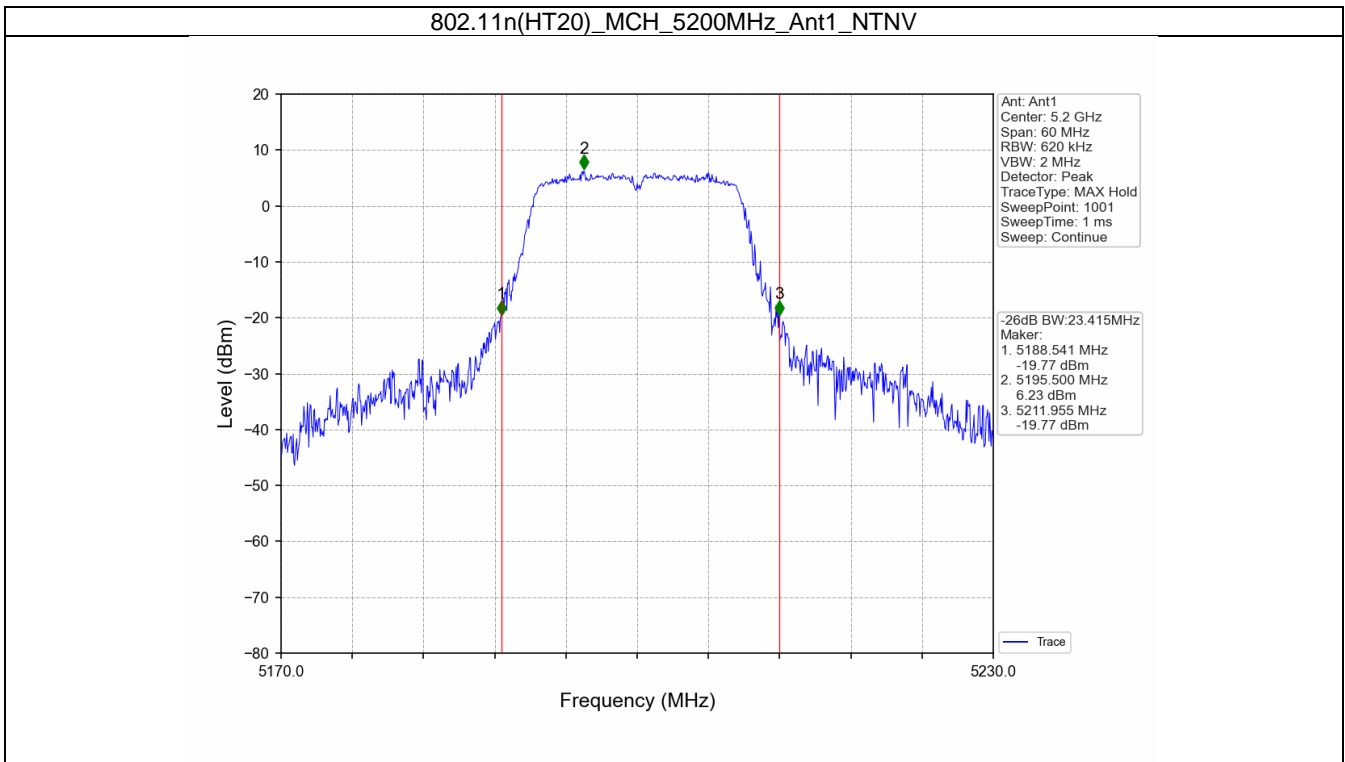
Mode	TX Type	Frequency (MHz)	Ant	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
802.11a	SISO	5180	1	22.248	/	Pass
		5200	1	22.298	/	Pass
		5240	1	22.319	/	Pass
802.11n (HT20)	SISO	5180	1	23.262	/	Pass
		5200	1	23.415	/	Pass
		5240	1	23.288	/	Pass
802.11n (HT40)	SISO	5190	1	39.912	/	Pass
		5230	1	39.947	/	Pass

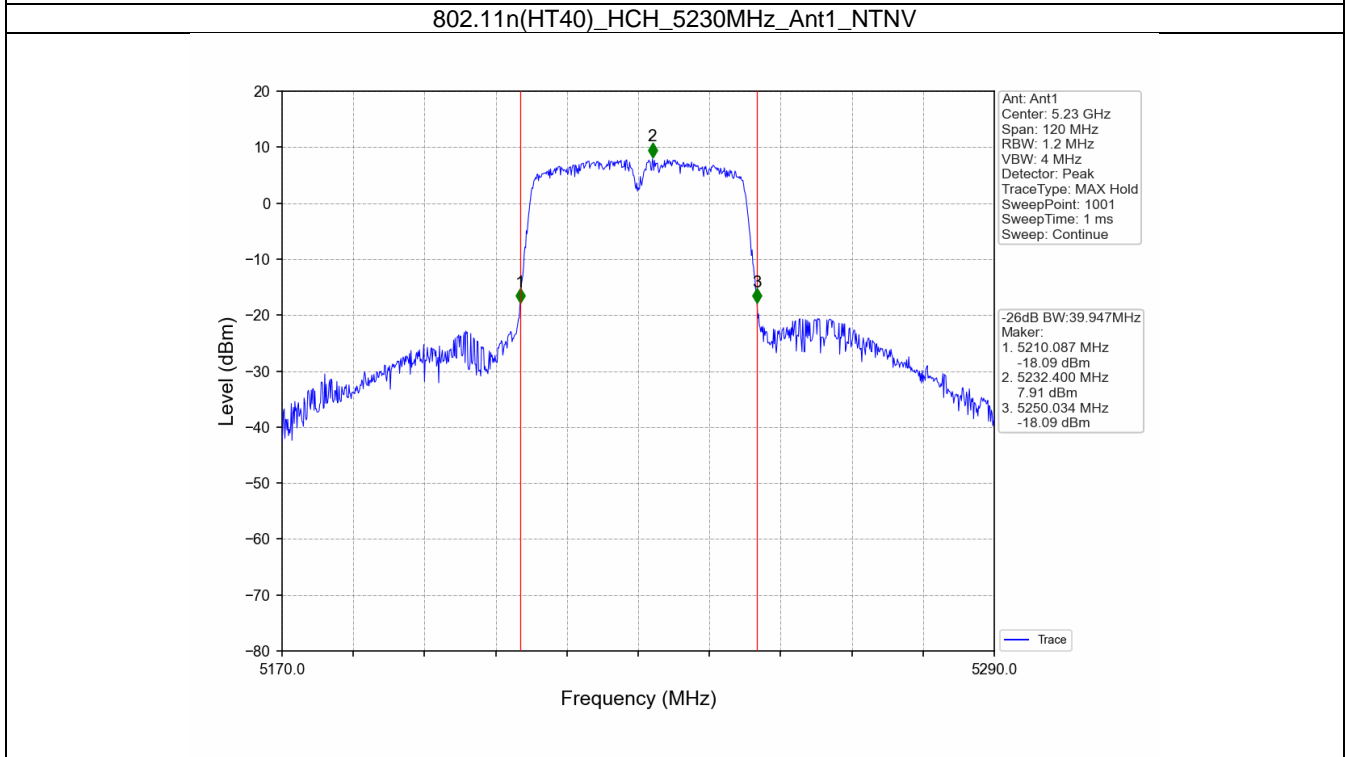
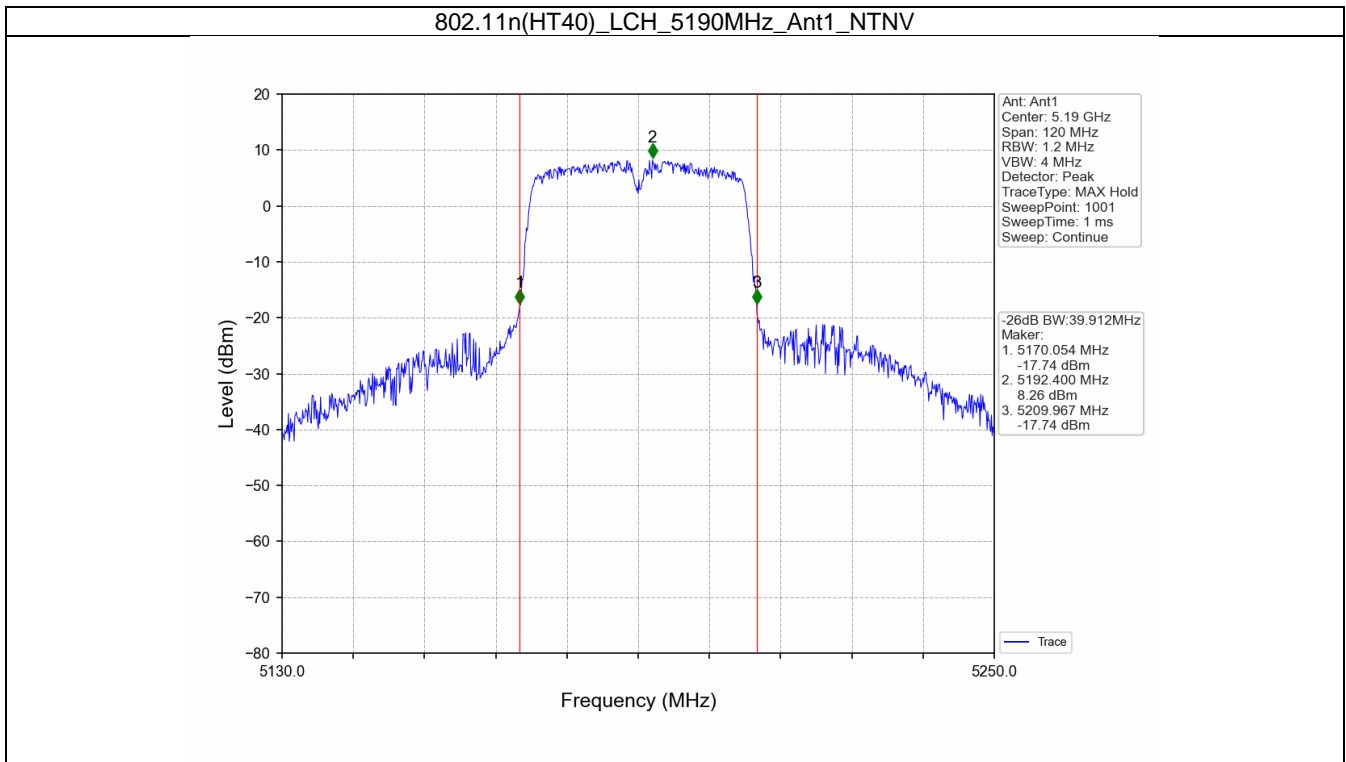
2.3.2 Test Graph











### 3. Maximum Conducted Output Power

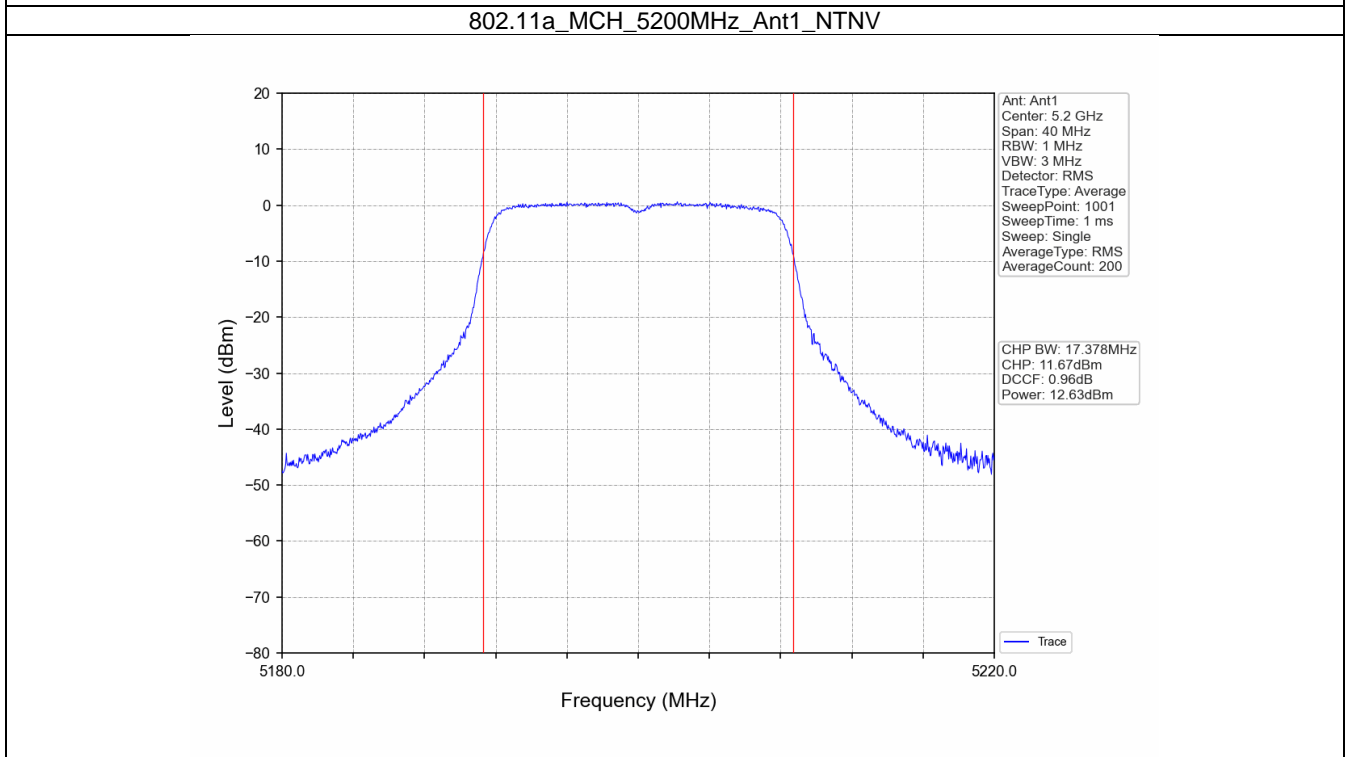
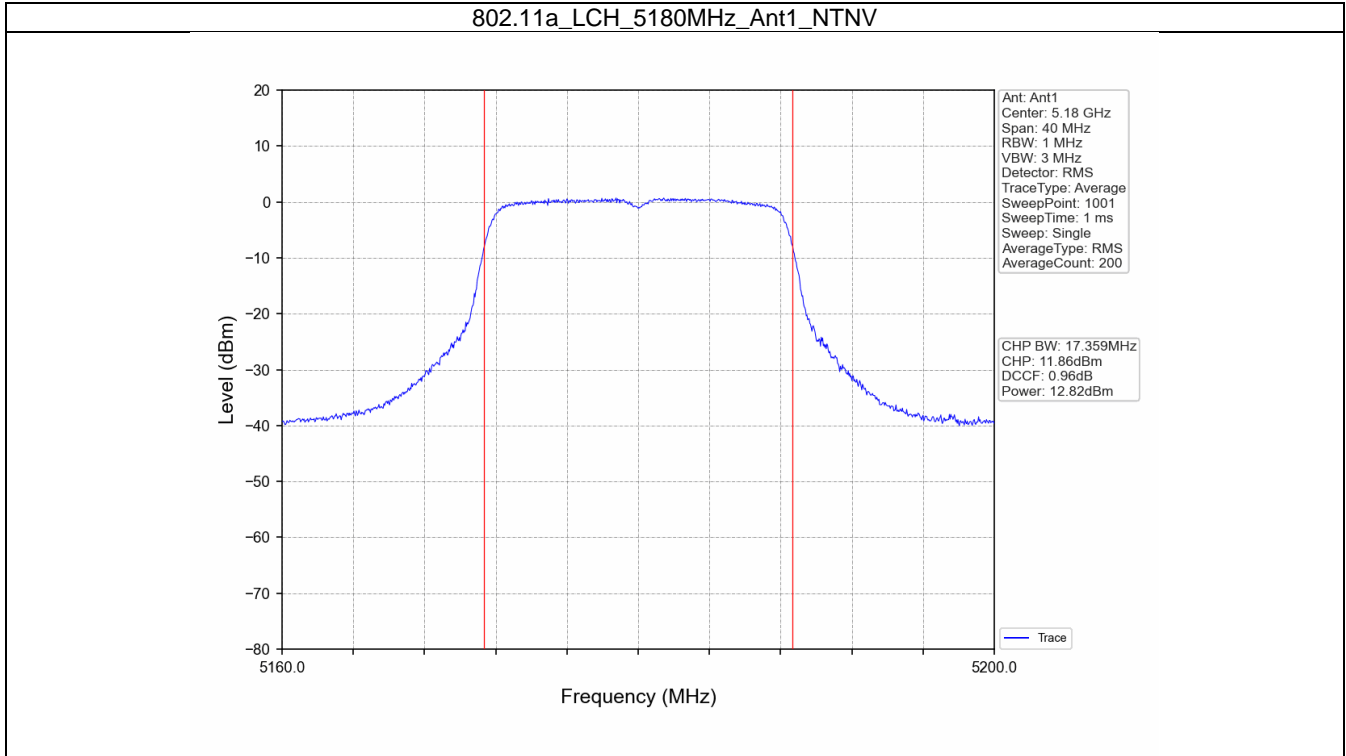
#### 3.1 Power

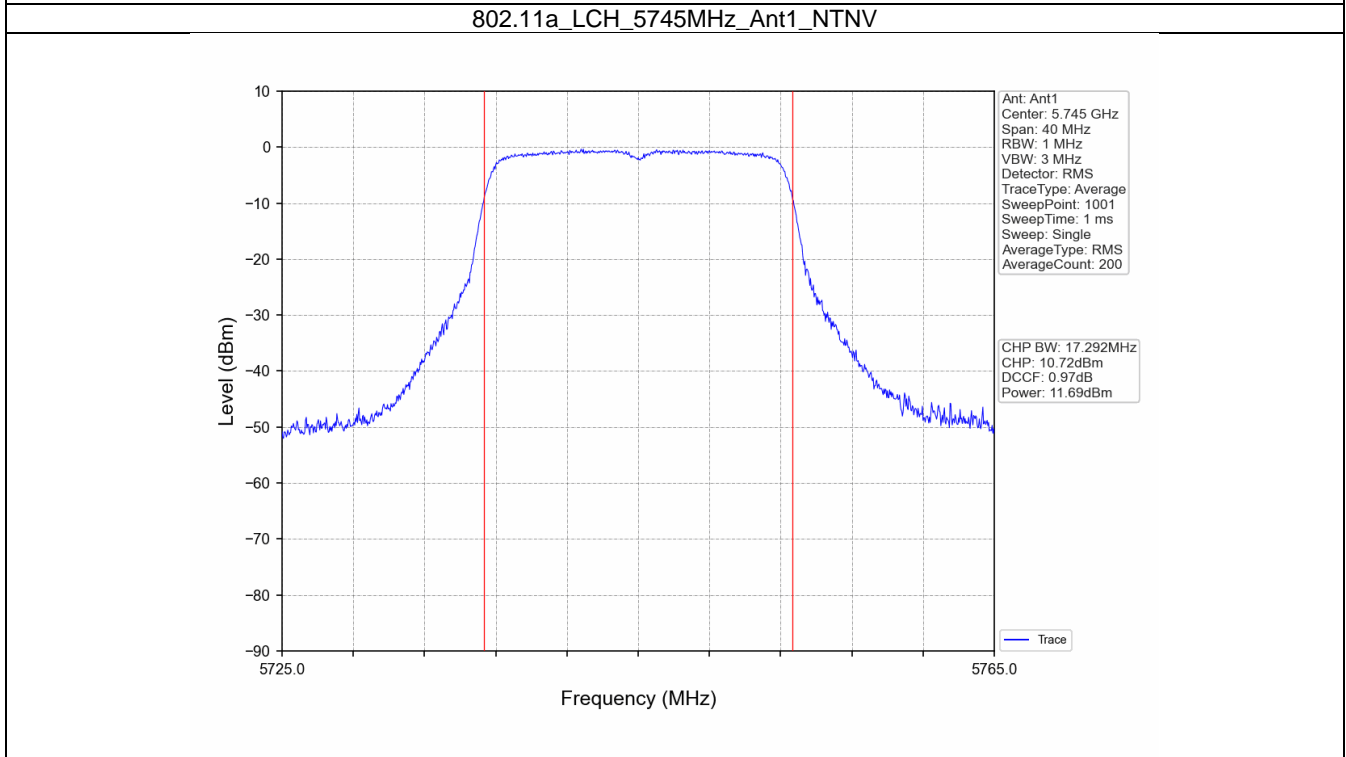
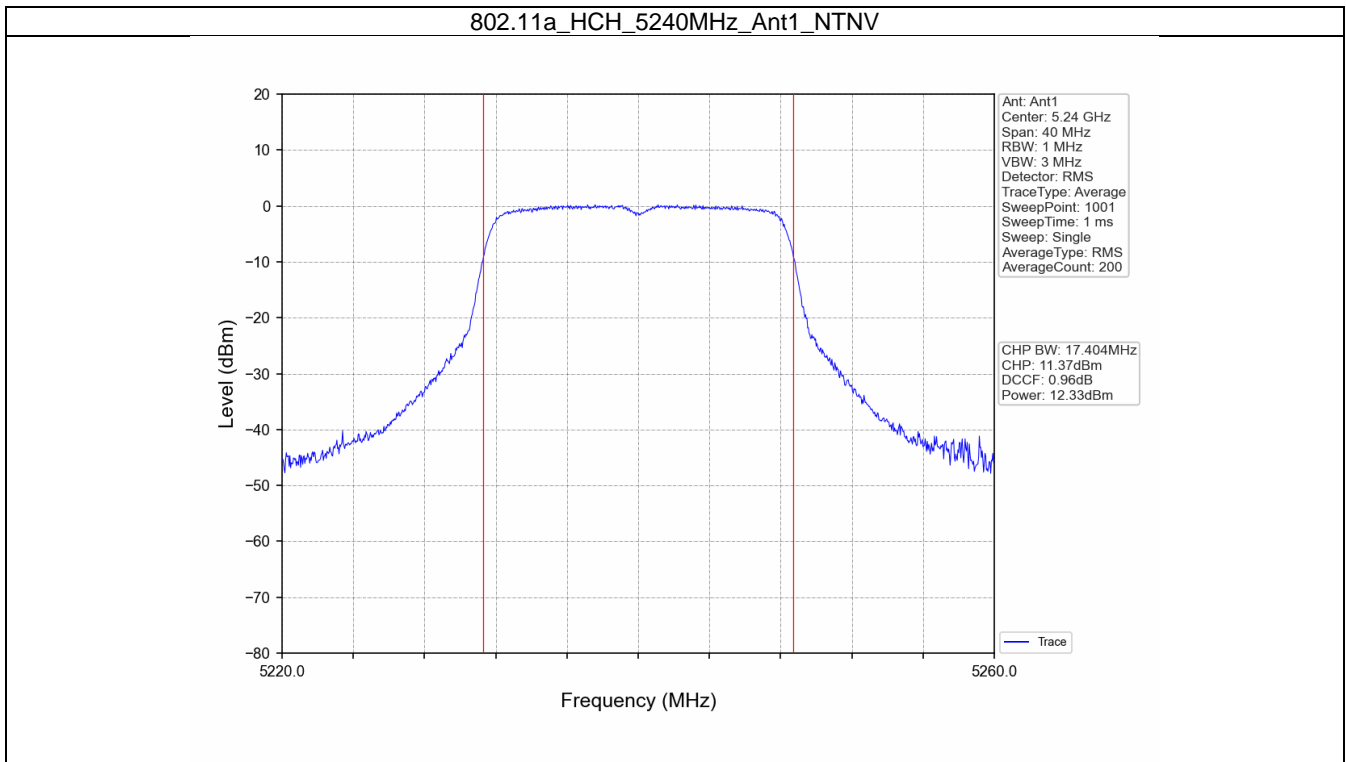
##### 3.1.1 Test Result

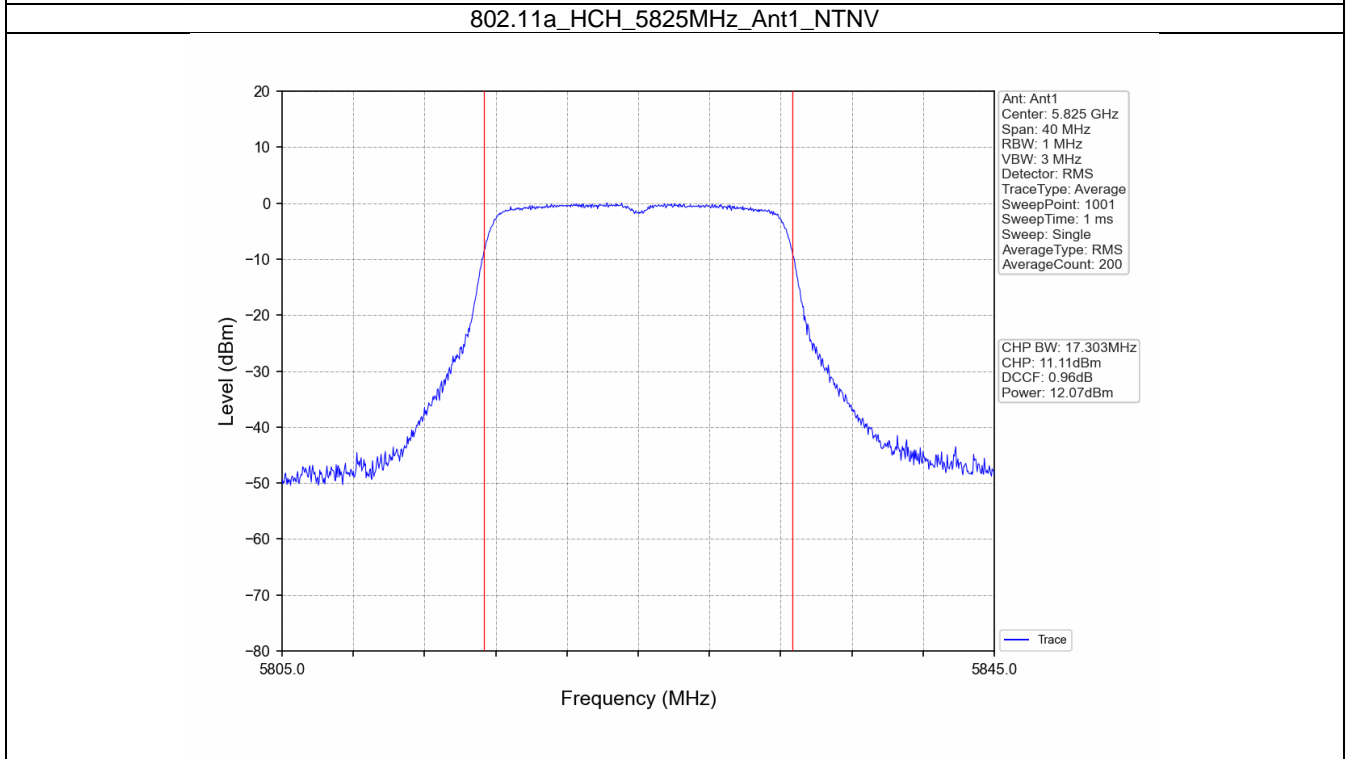
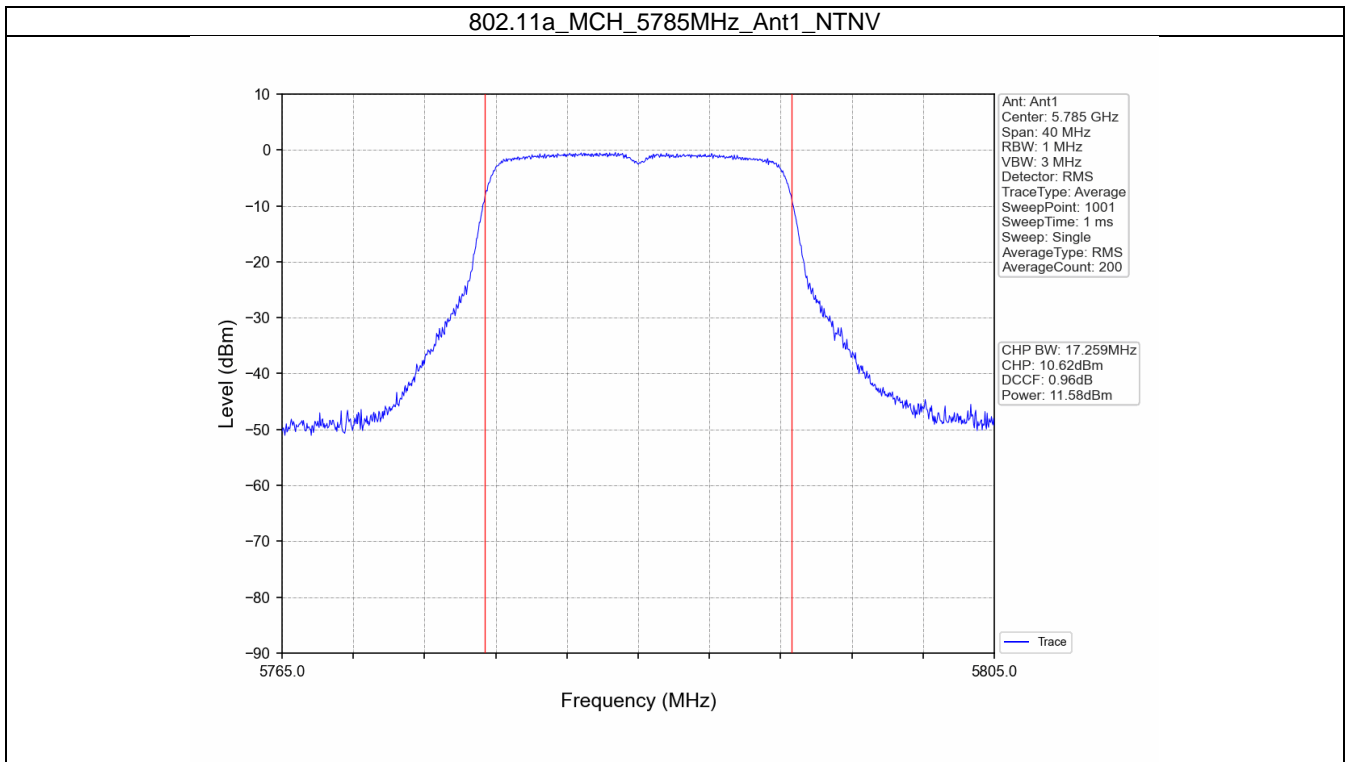
Mode	TX Type	Frequency (MHz)	Measured Peak Output Power (dBm)		Verdict
			Ant1	Limit	
802.11a	SISO	5180	12.82	<=23.98	Pass
		5200	12.63	<=23.98	Pass
		5240	12.33	<=23.98	Pass
		5745	11.69	<=30	Pass
		5785	11.58	<=30	Pass
		5825	12.07	<=30	Pass
802.11n (HT20)	SISO	5180	11.92	<=23.98	Pass
		5200	13.01	<=23.98	Pass
		5240	12.56	<=23.98	Pass
		5745	11.75	<=30	Pass
		5785	11.77	<=30	Pass
		5825	12.00	<=30	Pass
802.11n (HT40)	SISO	5190	12.86	<=23.98	Pass
		5230	12.72	<=23.98	Pass
		5755	11.54	<=30	Pass
		5795	11.46	<=30	Pass

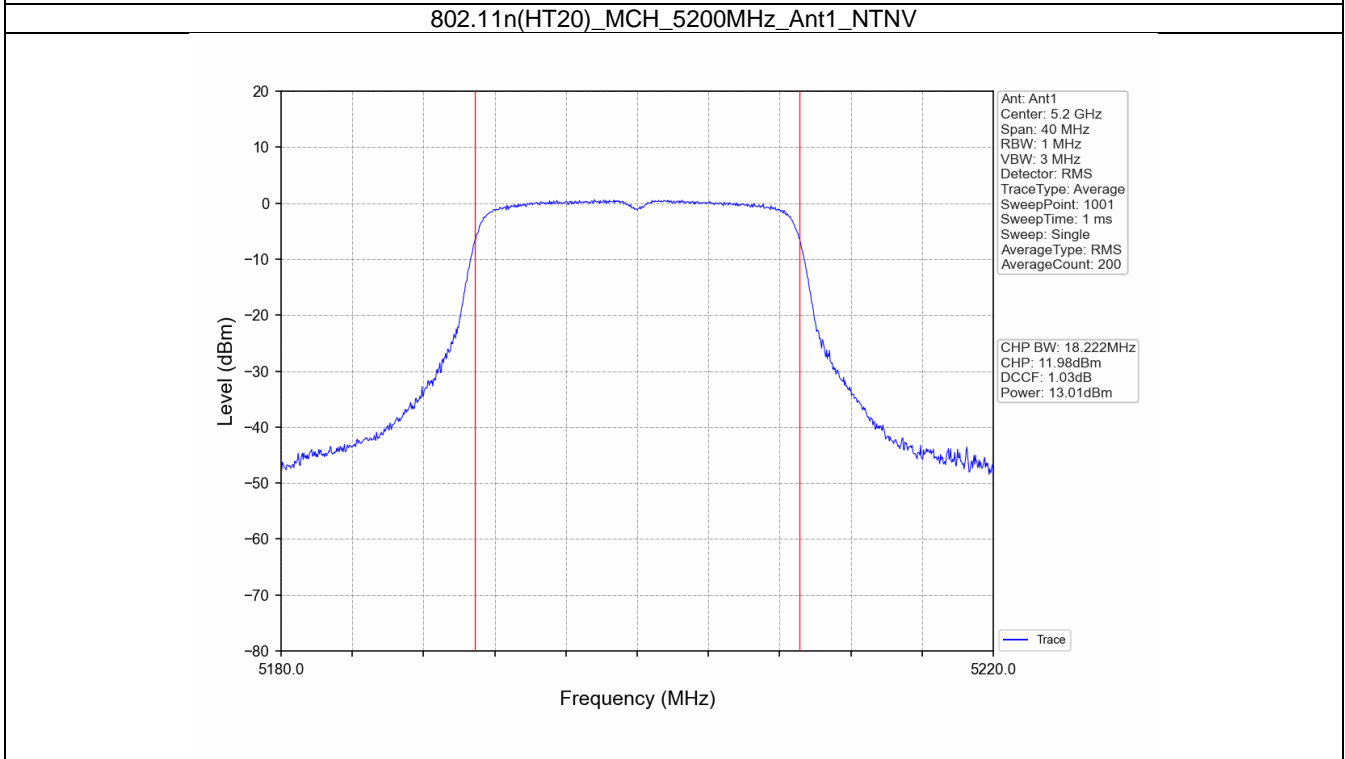
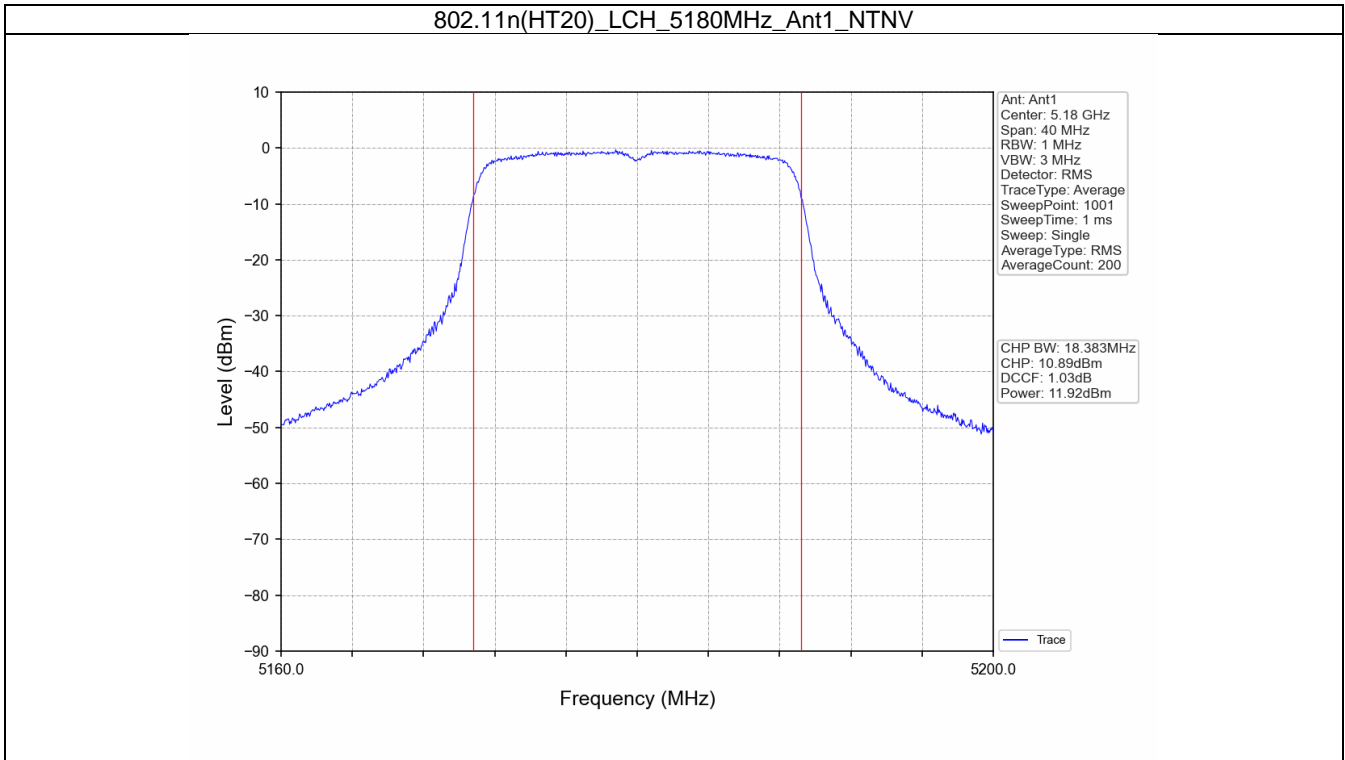
Note1: Antenna Gain: Ant1: 3.14dBi;

### 3.1.2 Test Graph

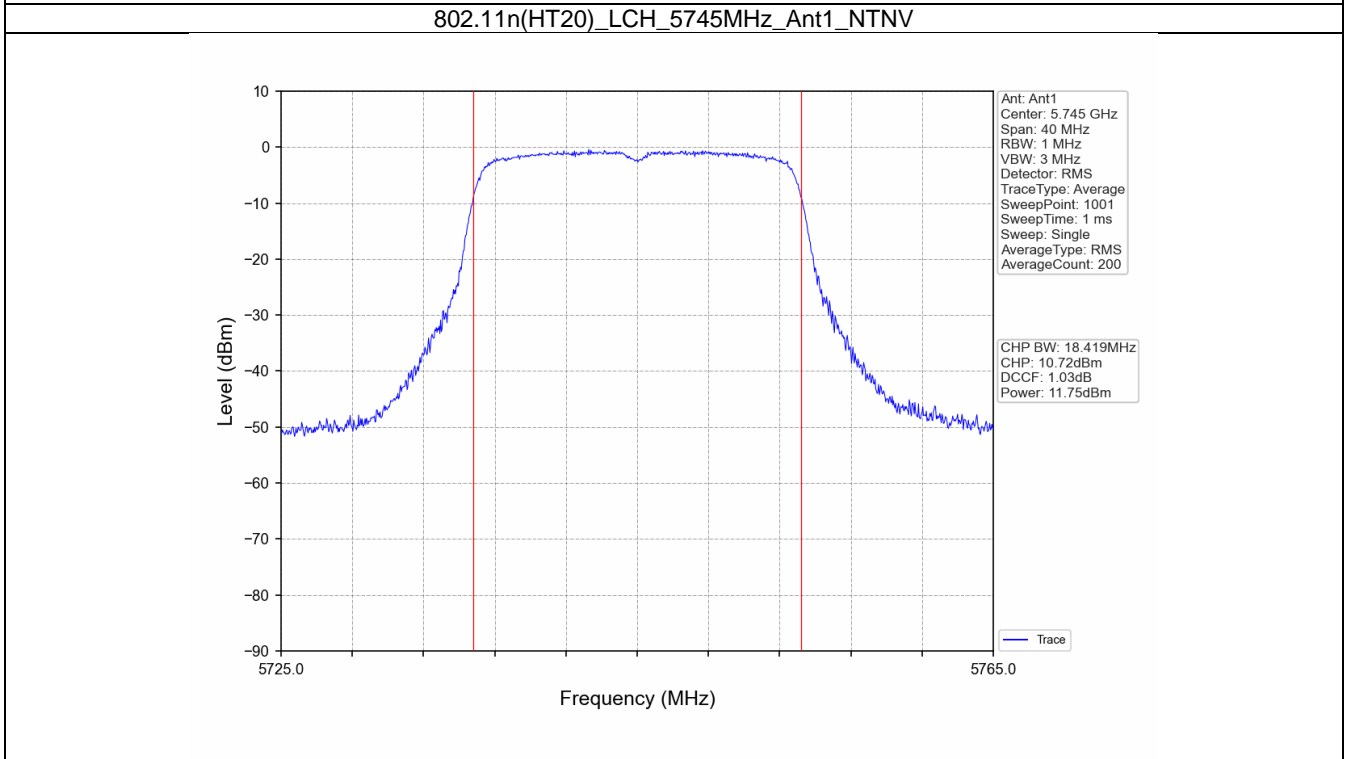
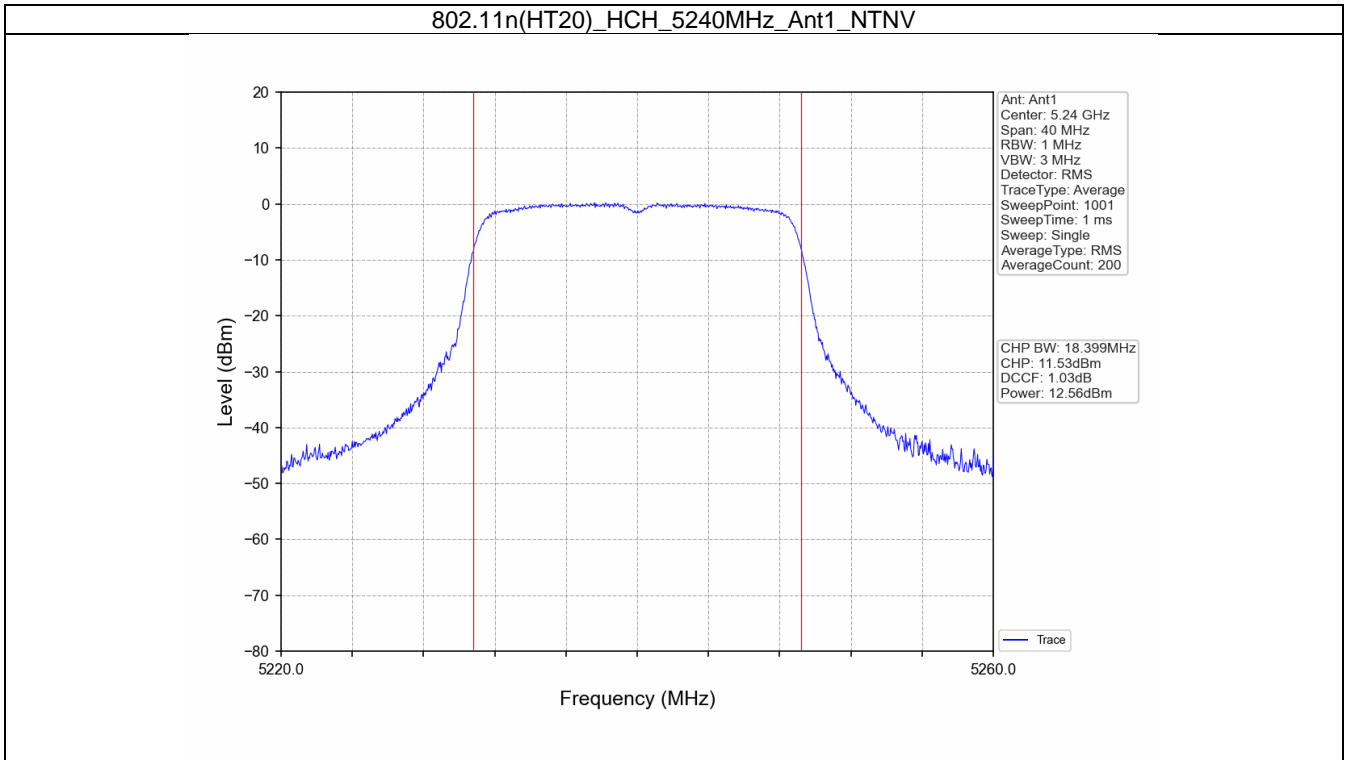


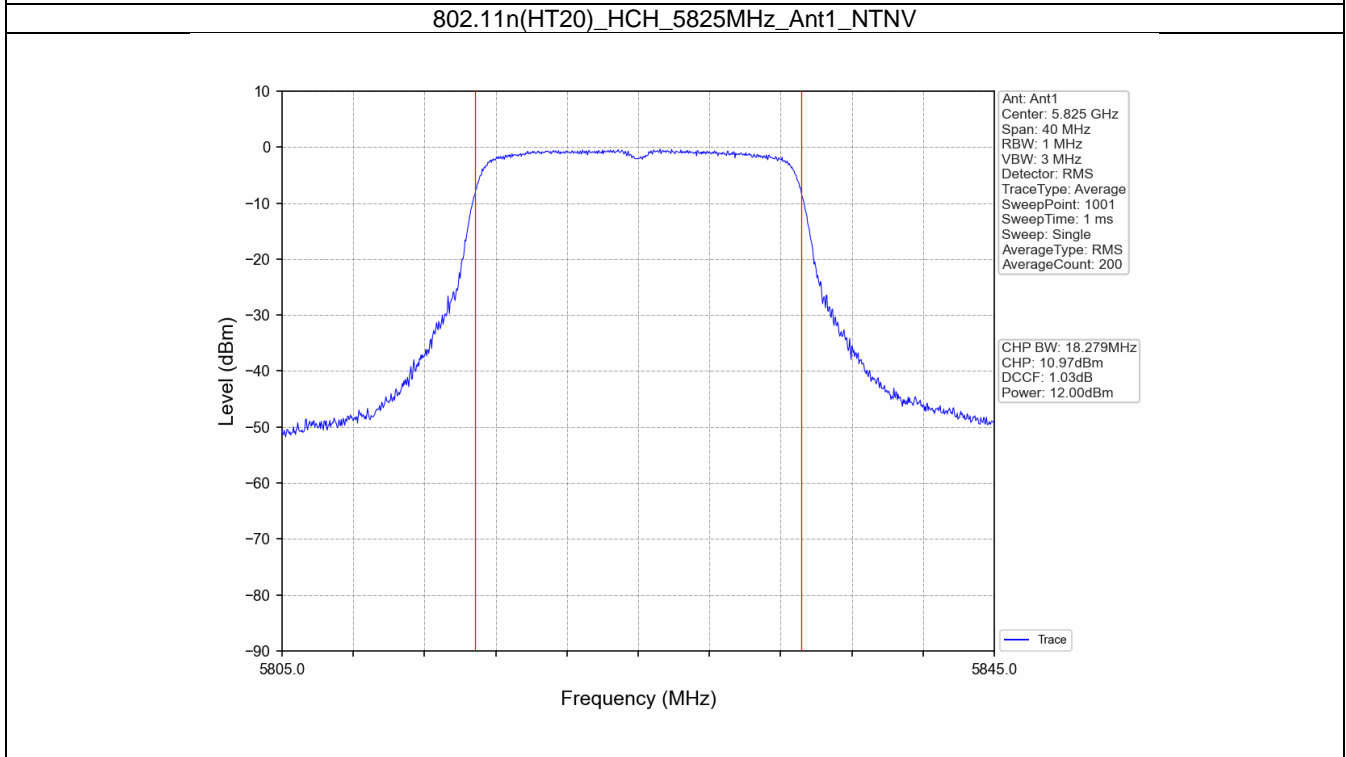
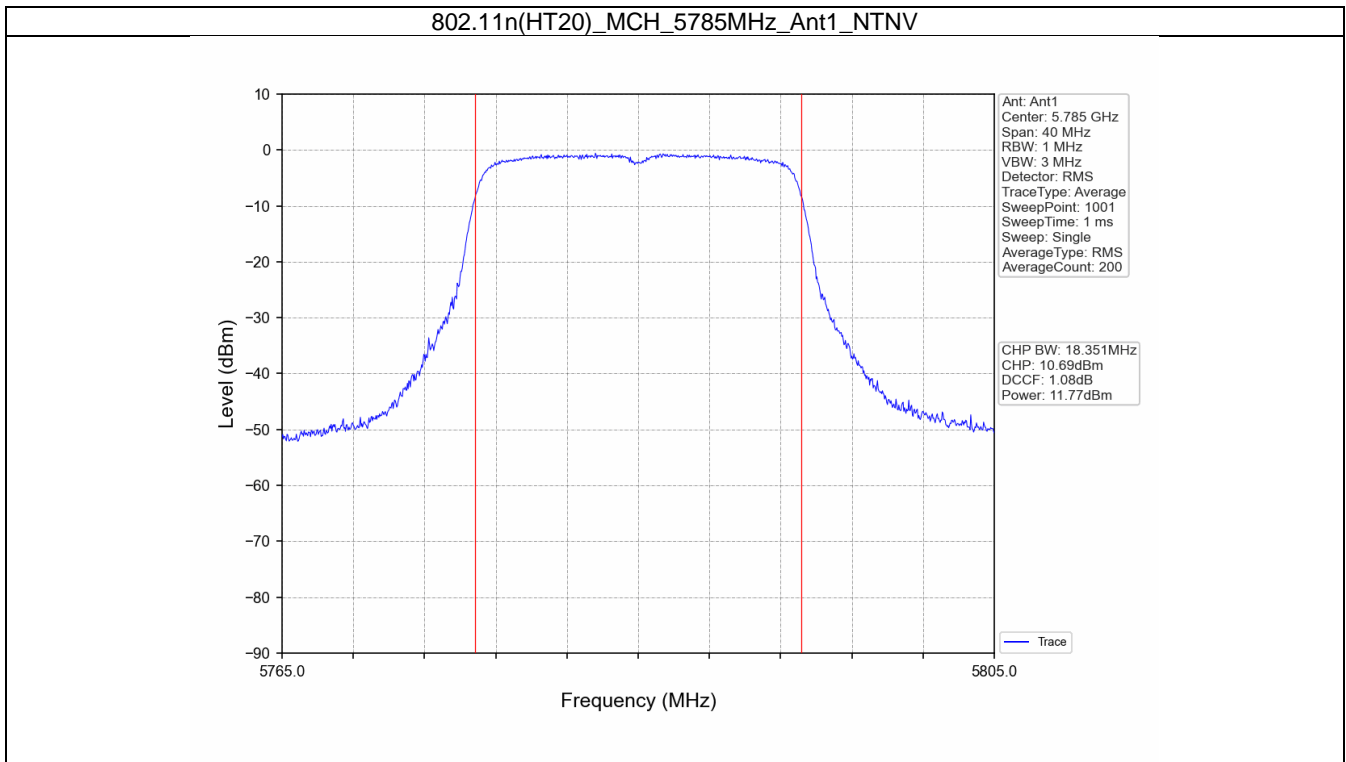


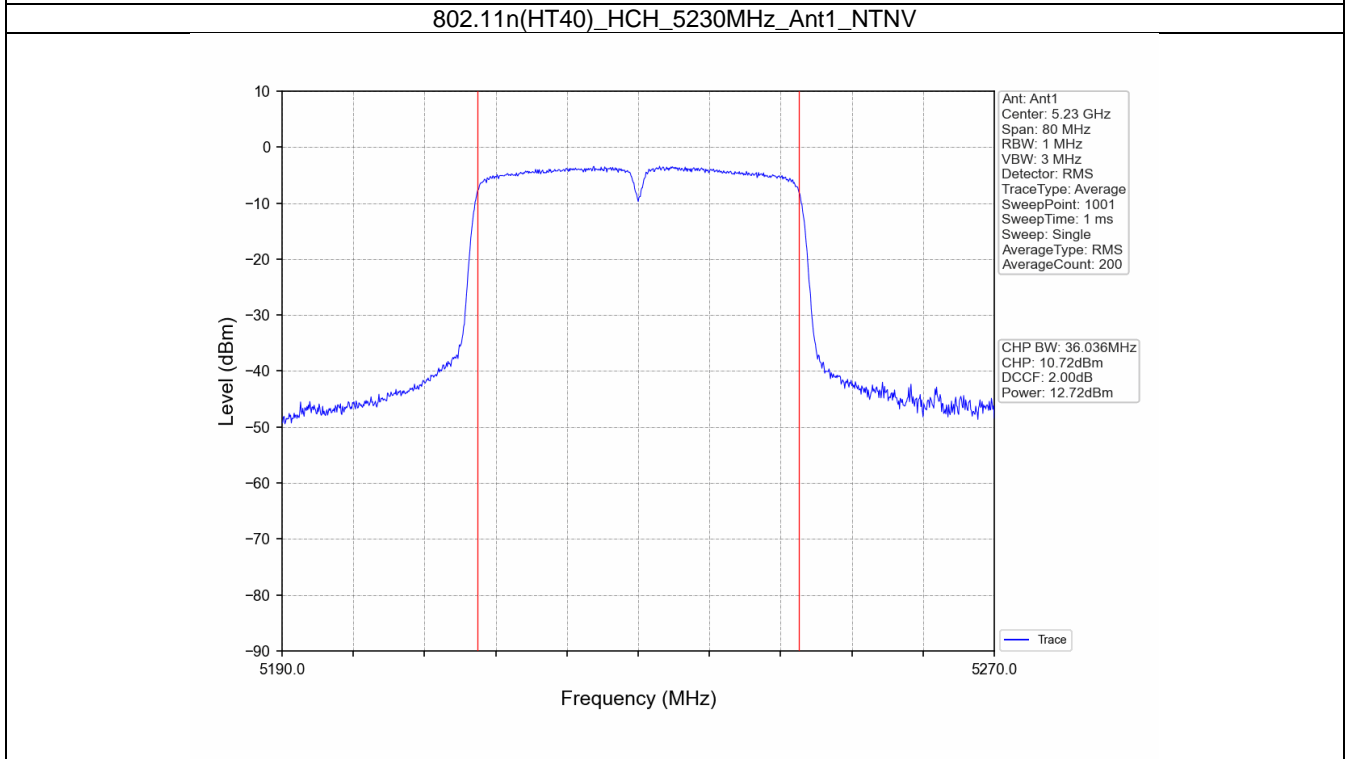
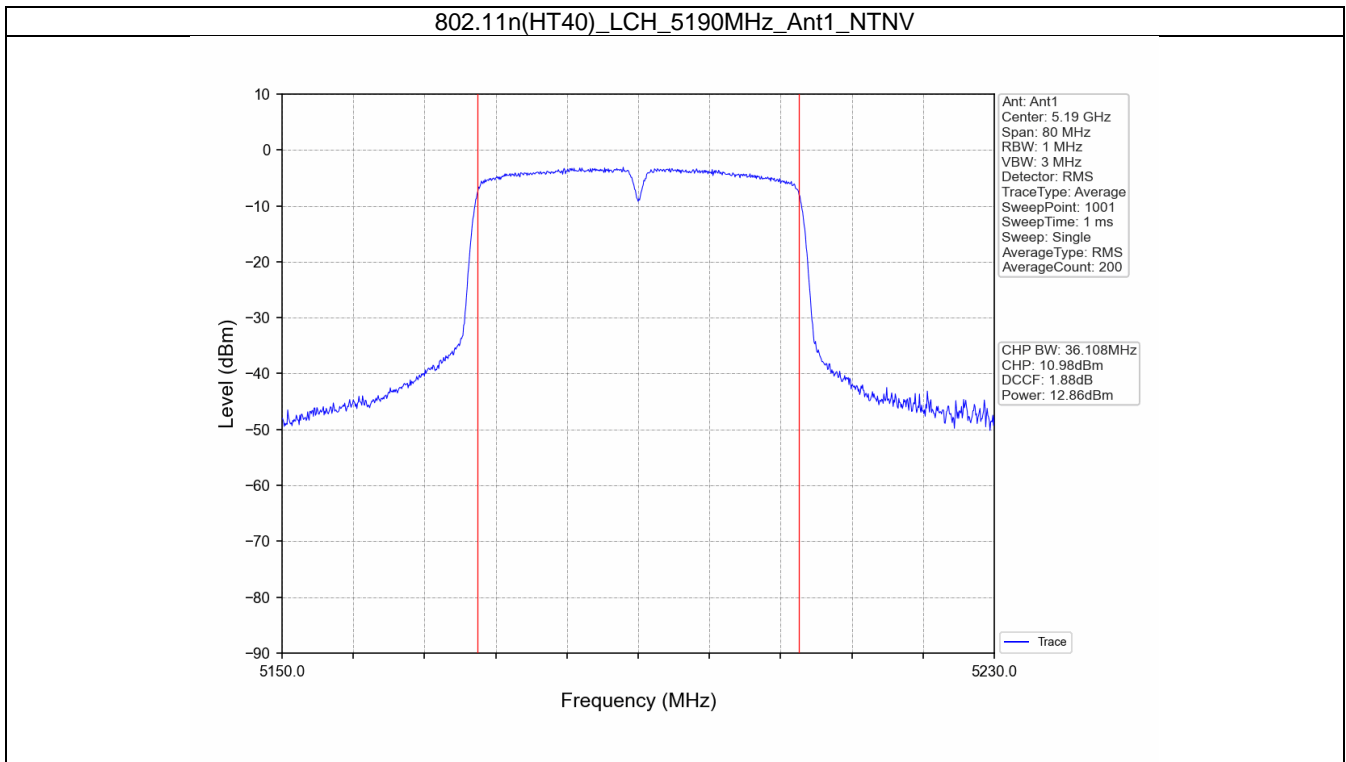


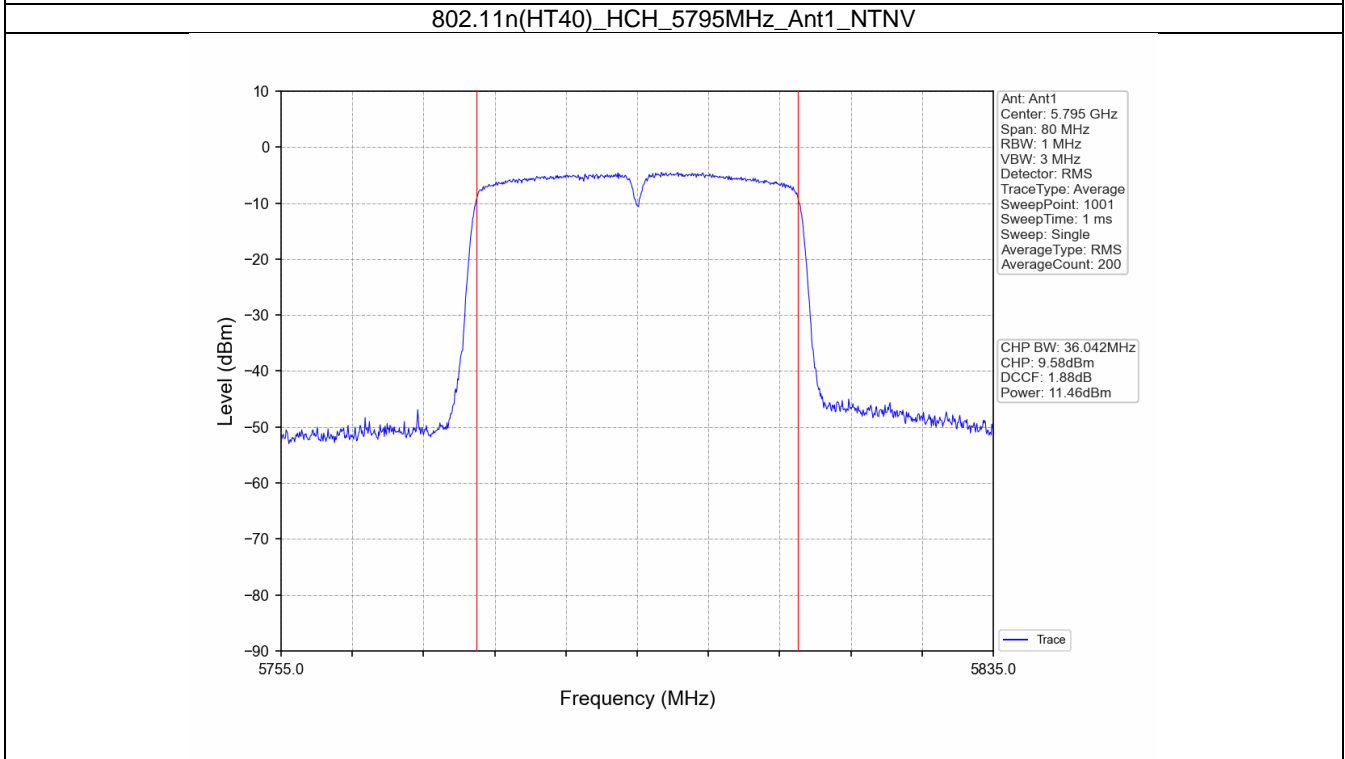
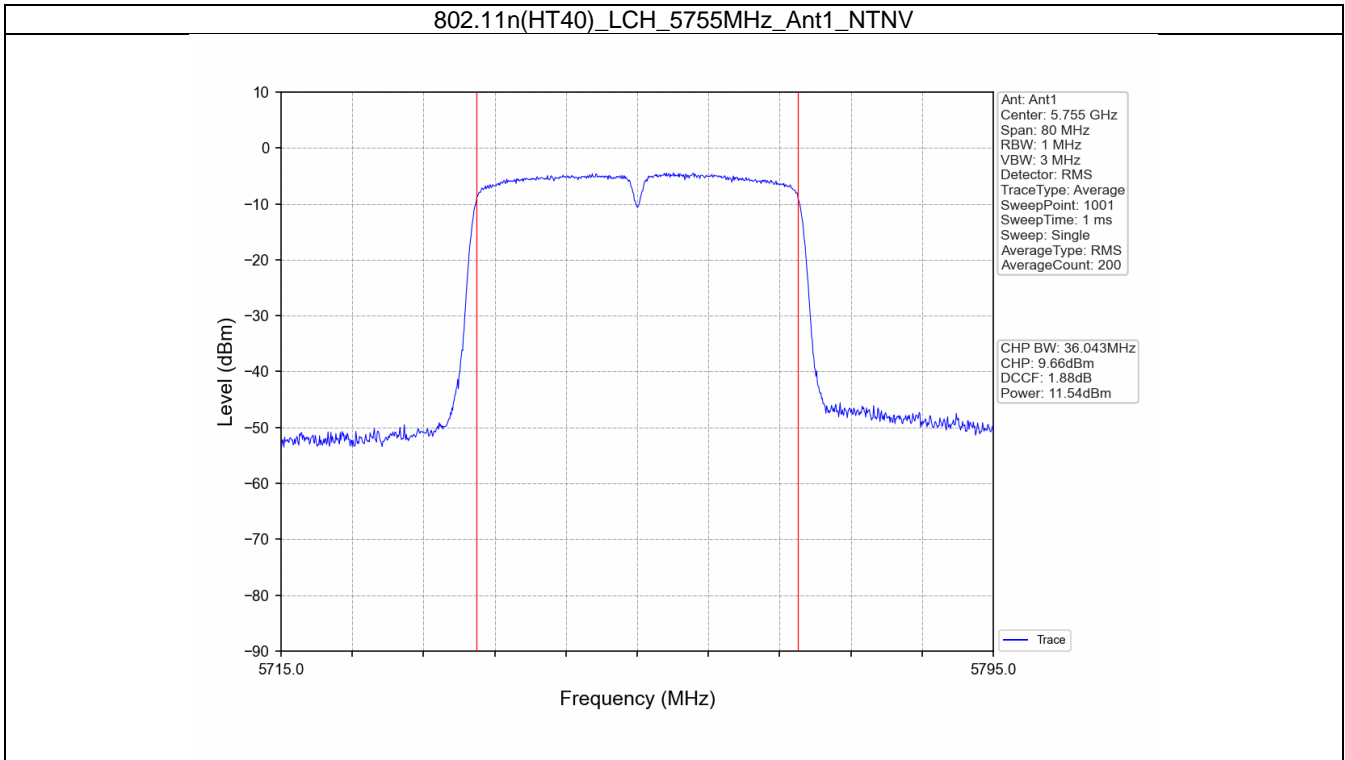












## 4. Maximum Power Spectral Density

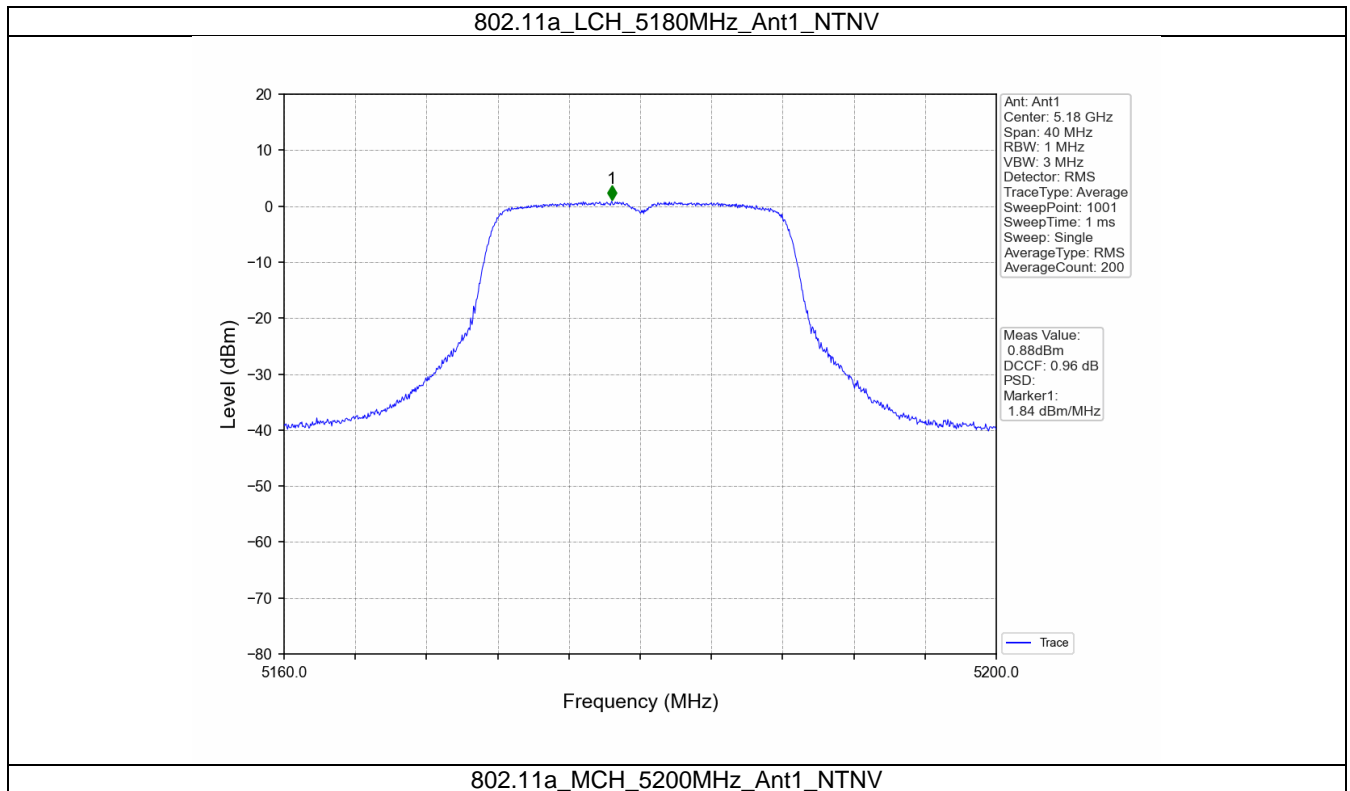
### 4.1 PSD

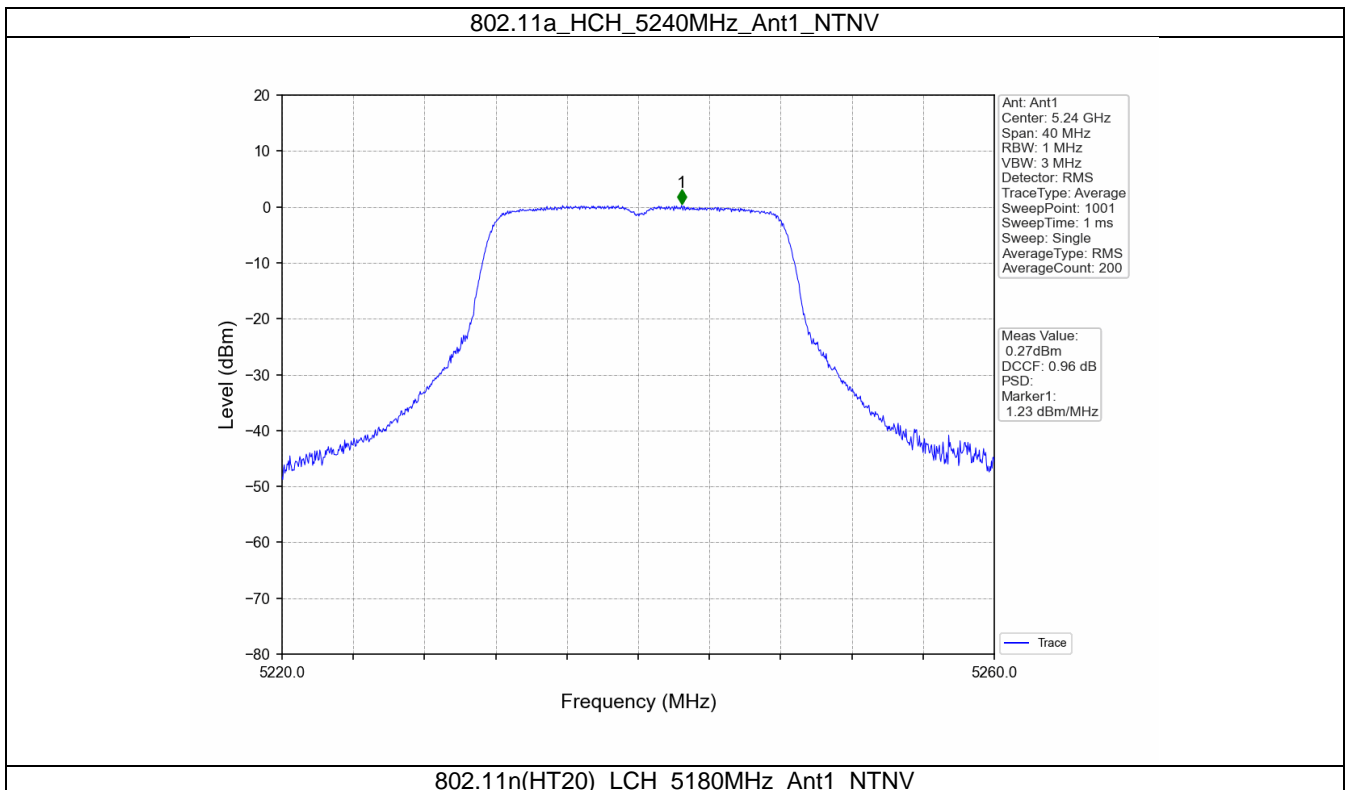
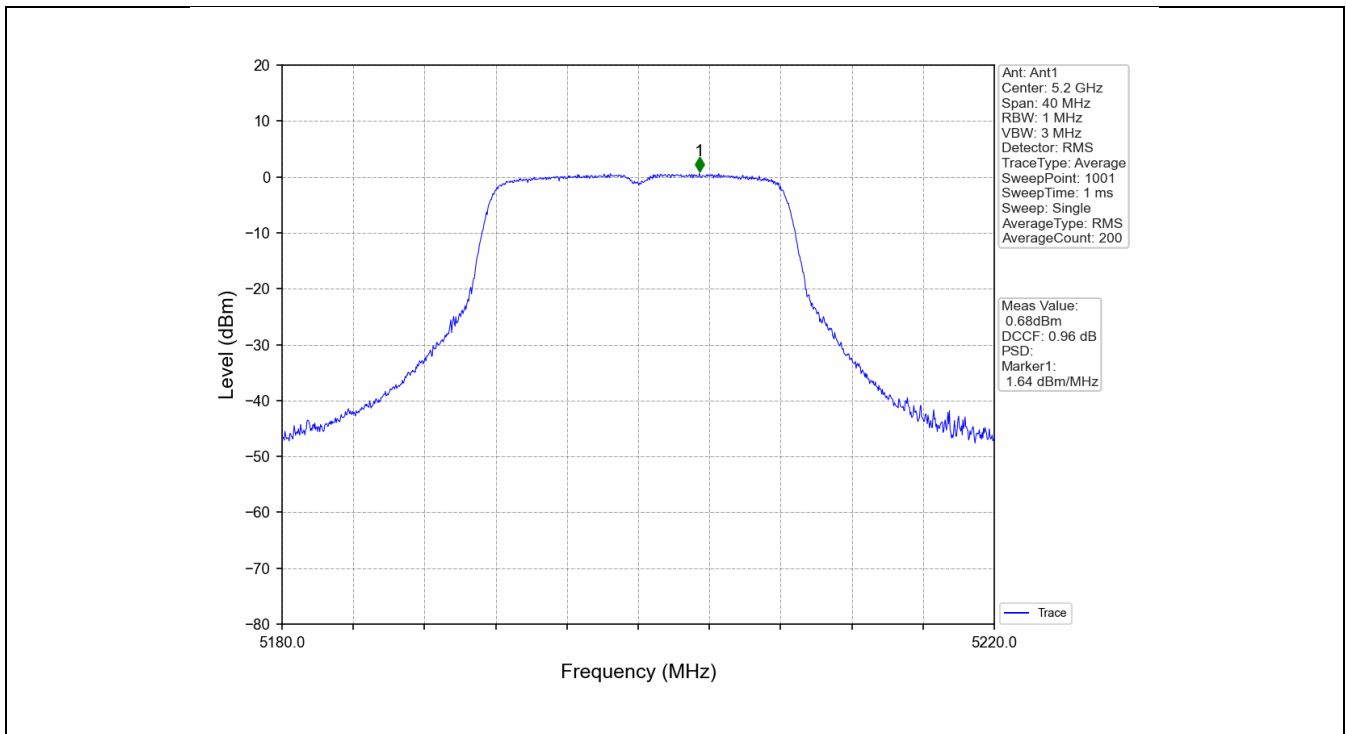
#### 4.1.1 Test Result

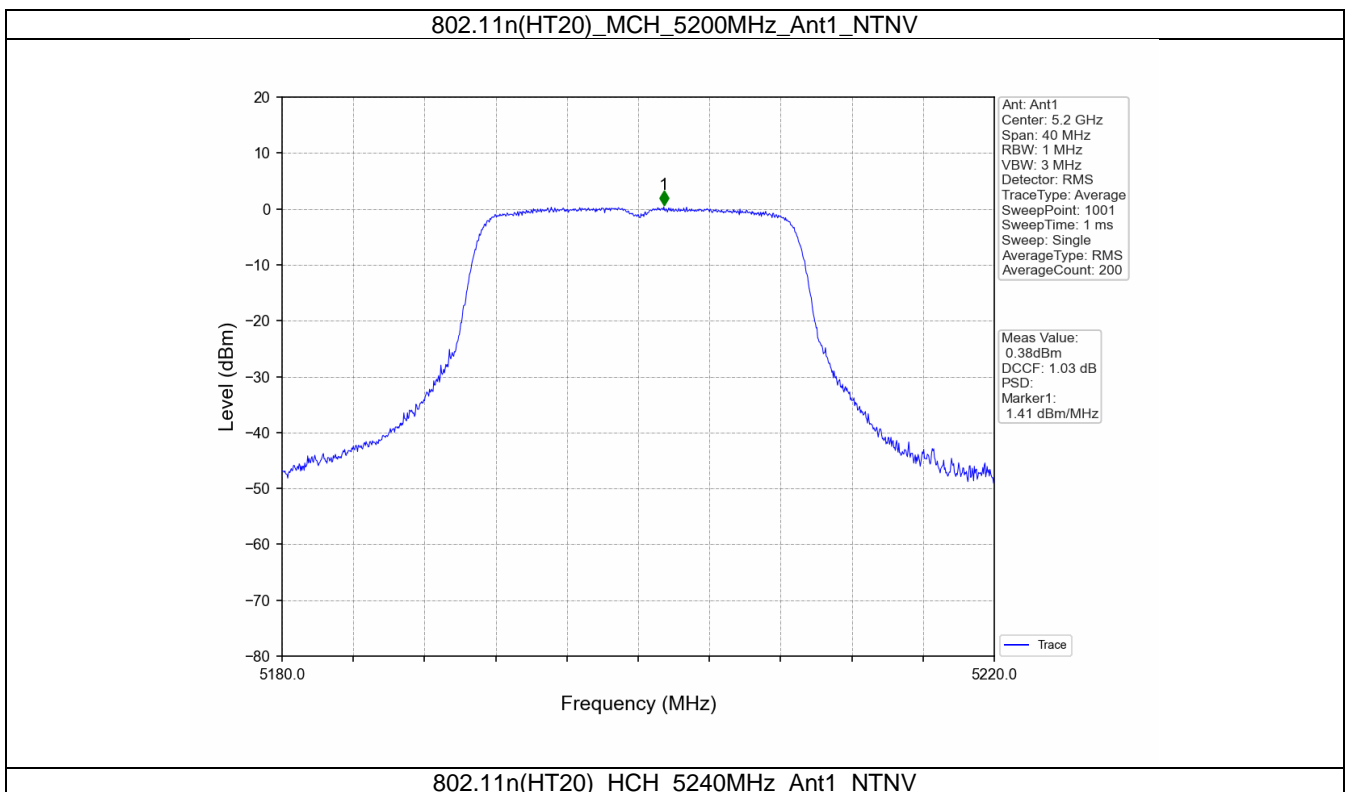
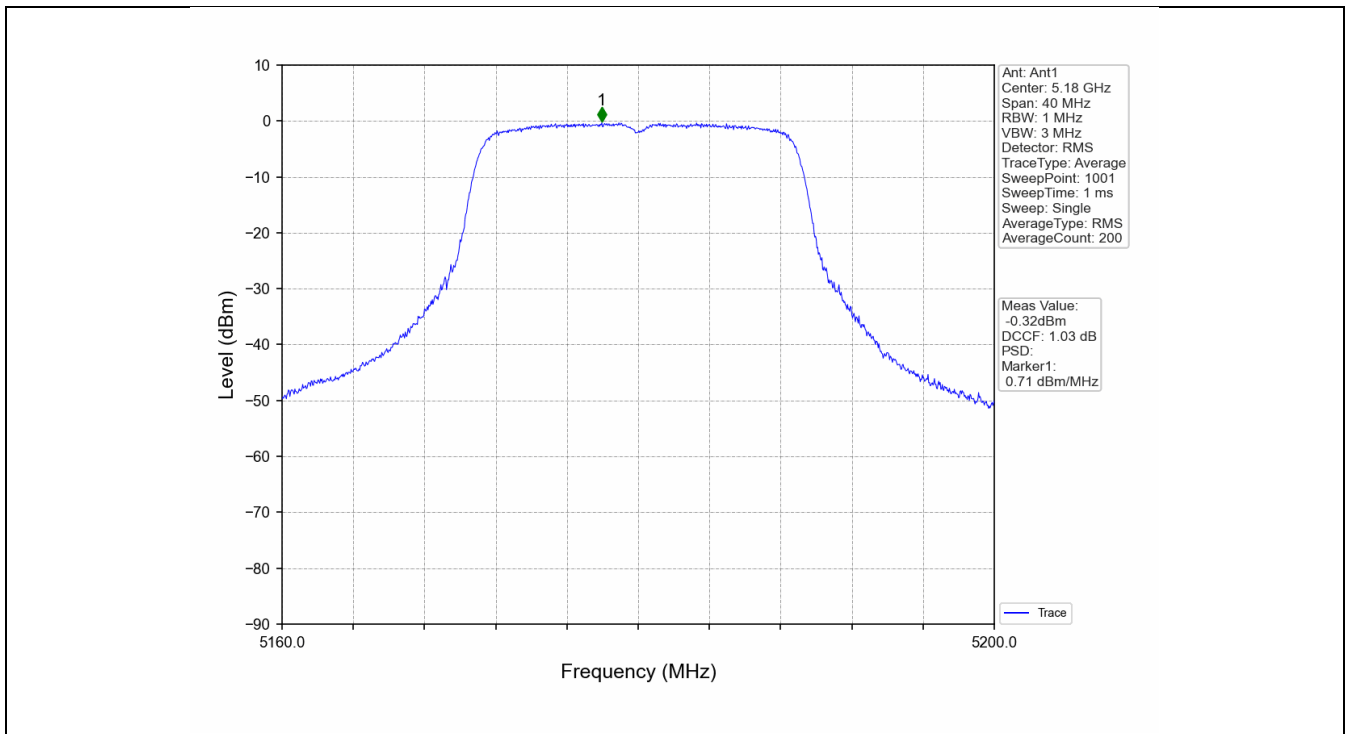
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/MHz)		Verdict
			Ant1	Limit	
802.11a	SISO	5180	1.84	<=11	Pass
		5200	1.64	<=11	Pass
		5240	1.23	<=11	Pass
802.11n (HT20)	SISO	5180	0.71	<=11	Pass
		5200	1.41	<=11	Pass
		5240	1.40	<=11	Pass
802.11n (HT40)	SISO	5190	-1.27	<=11	Pass
		5230	-1.47	<=11	Pass

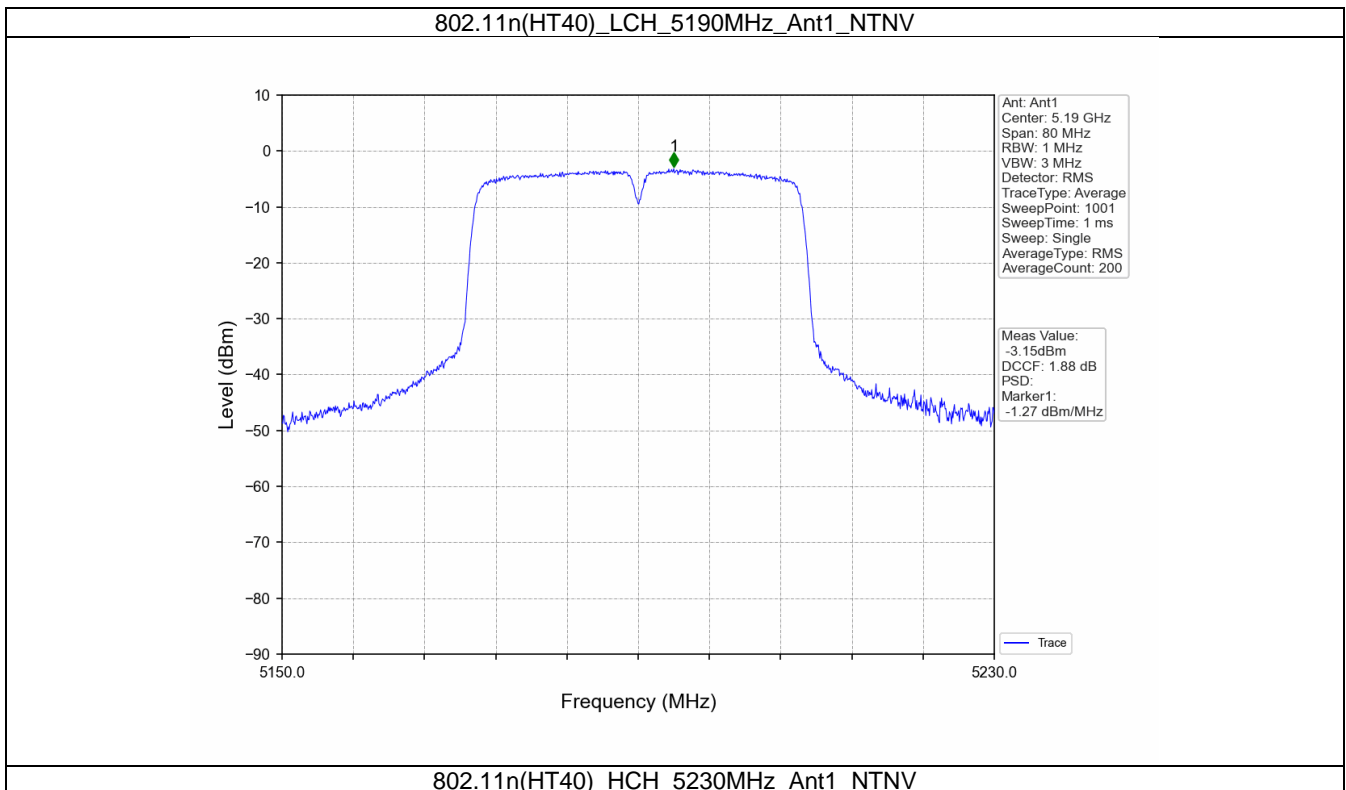
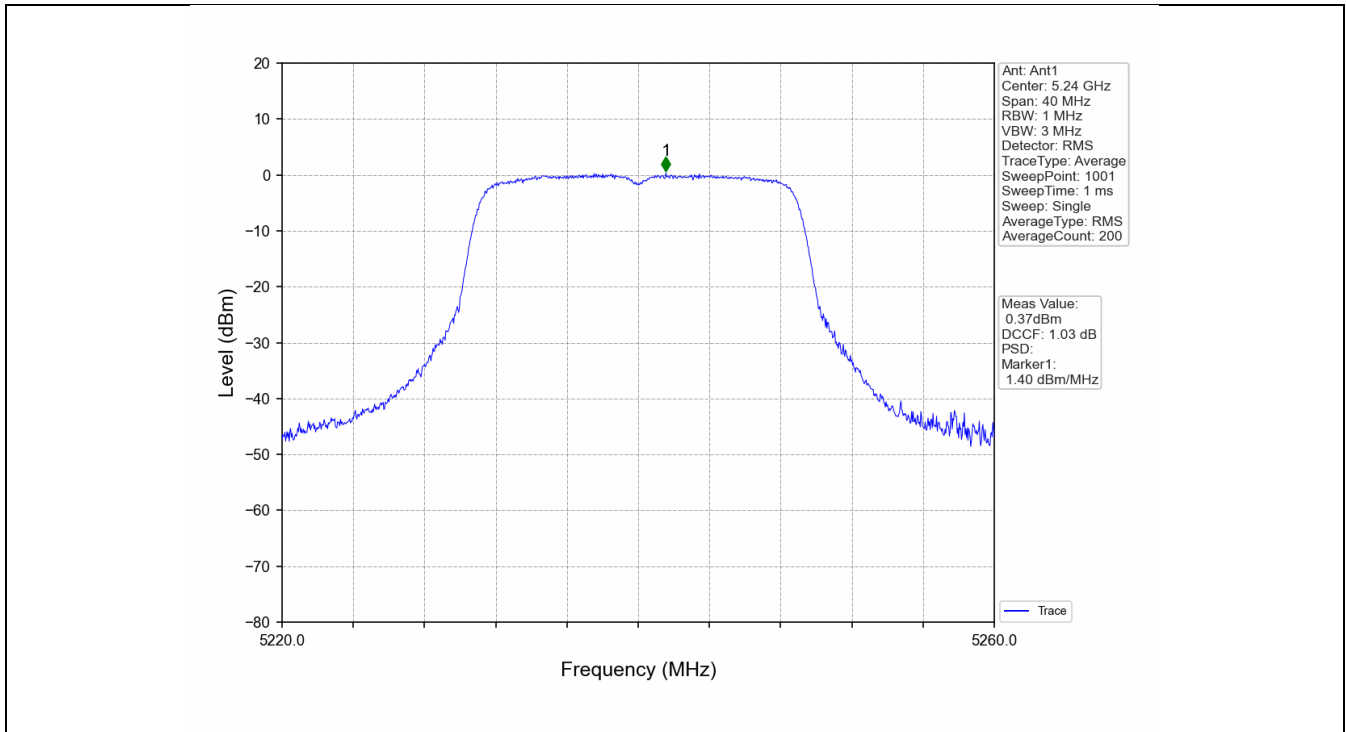
Note1: Antenna Gain: Ant1: 3.14dBi;

#### 4.1.2 Test Graph

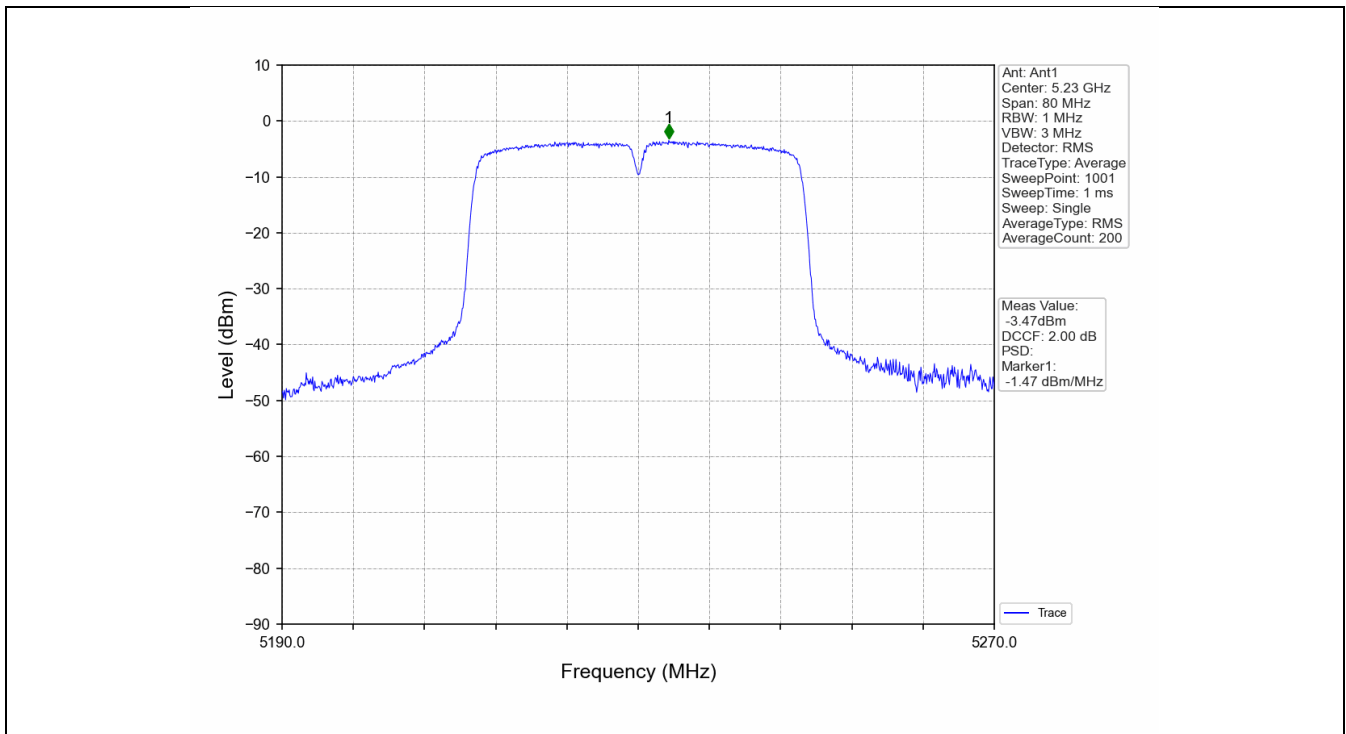












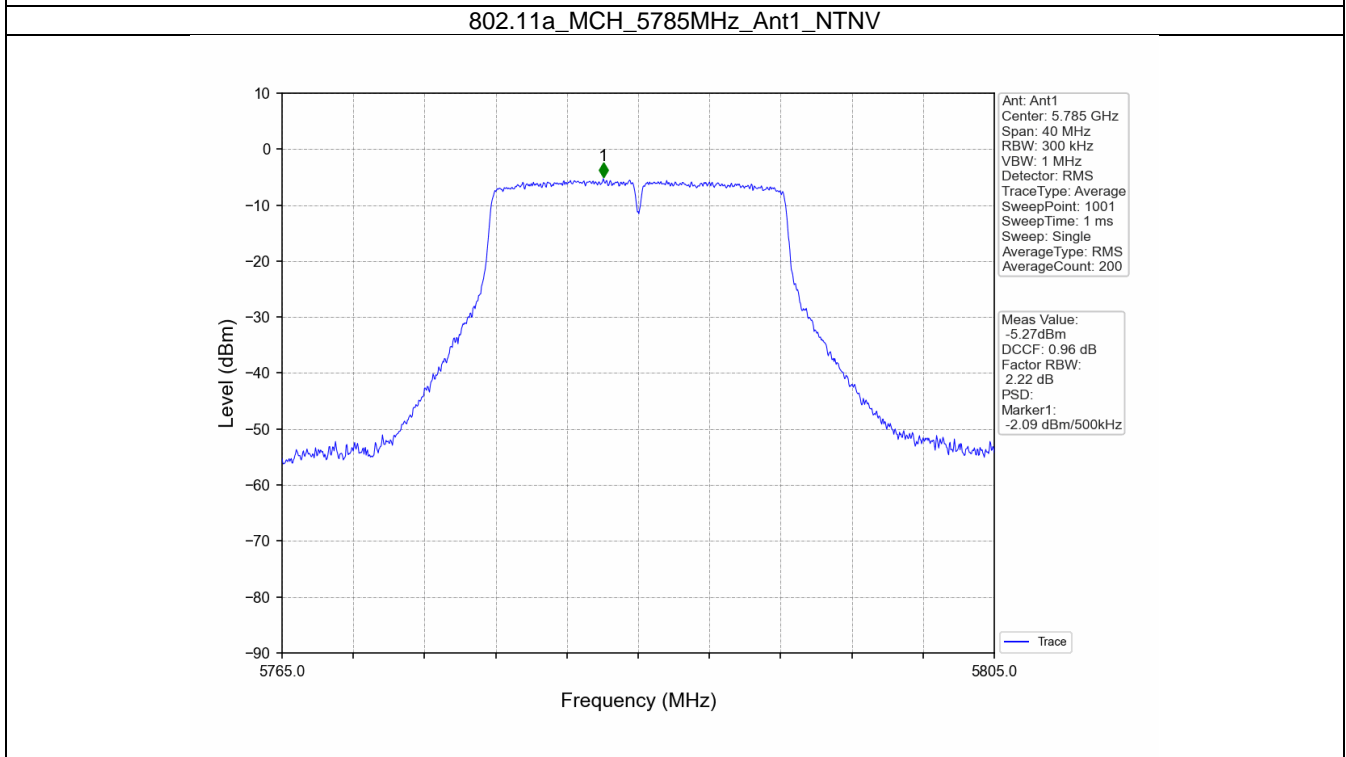
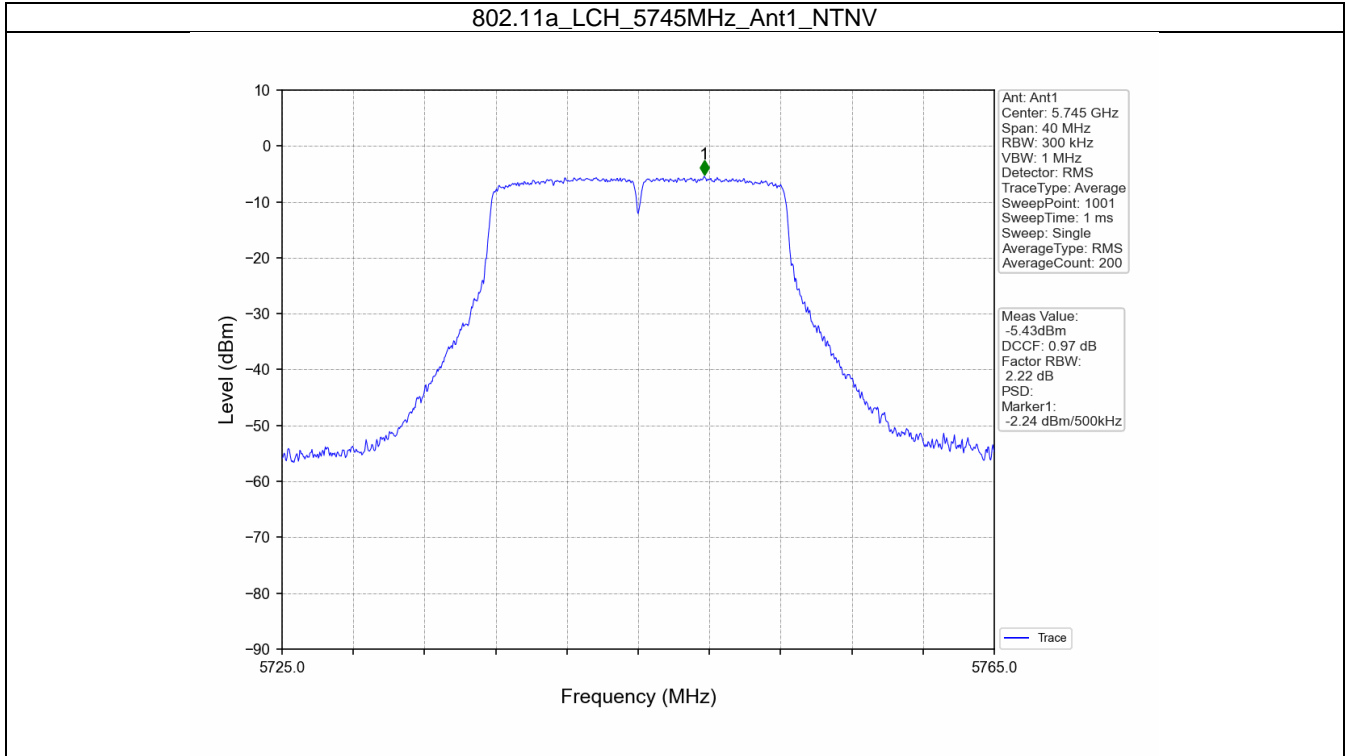
## 4.2 PSD-Band3

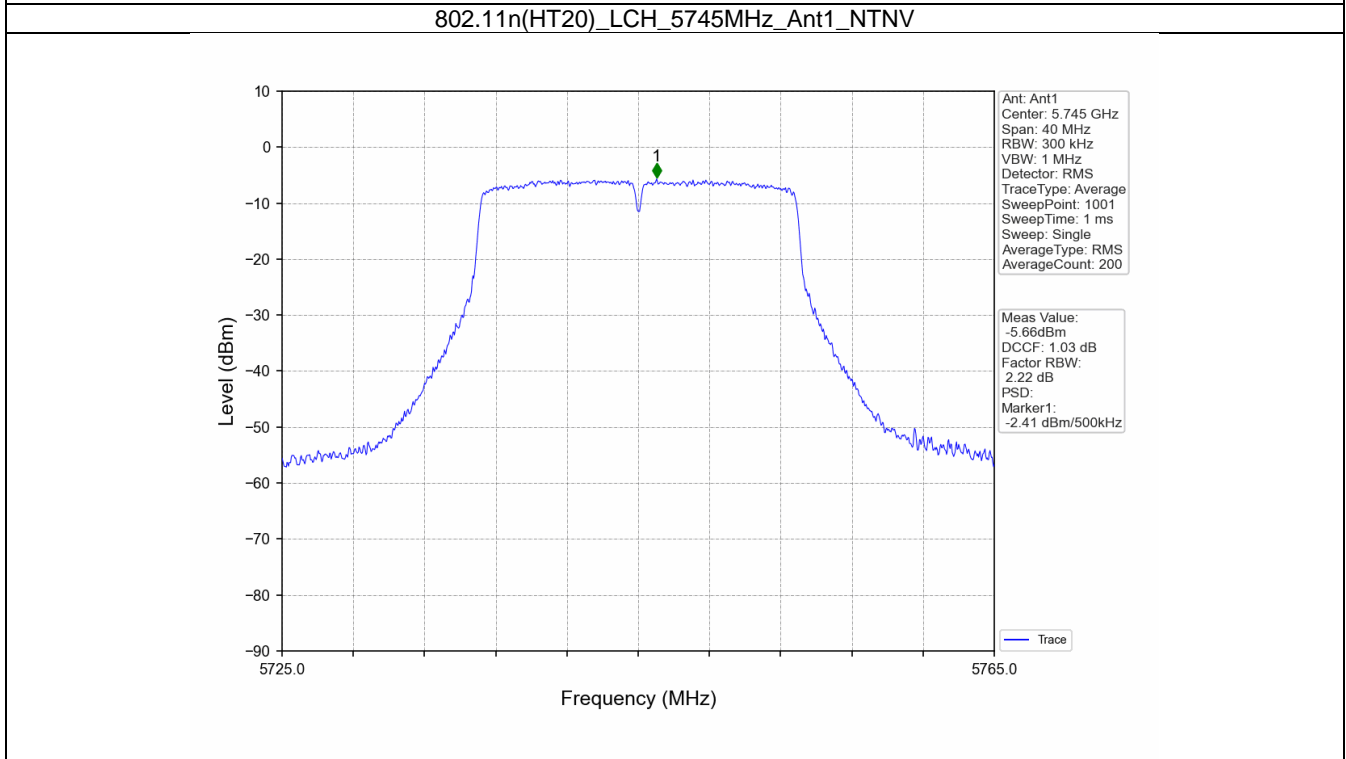
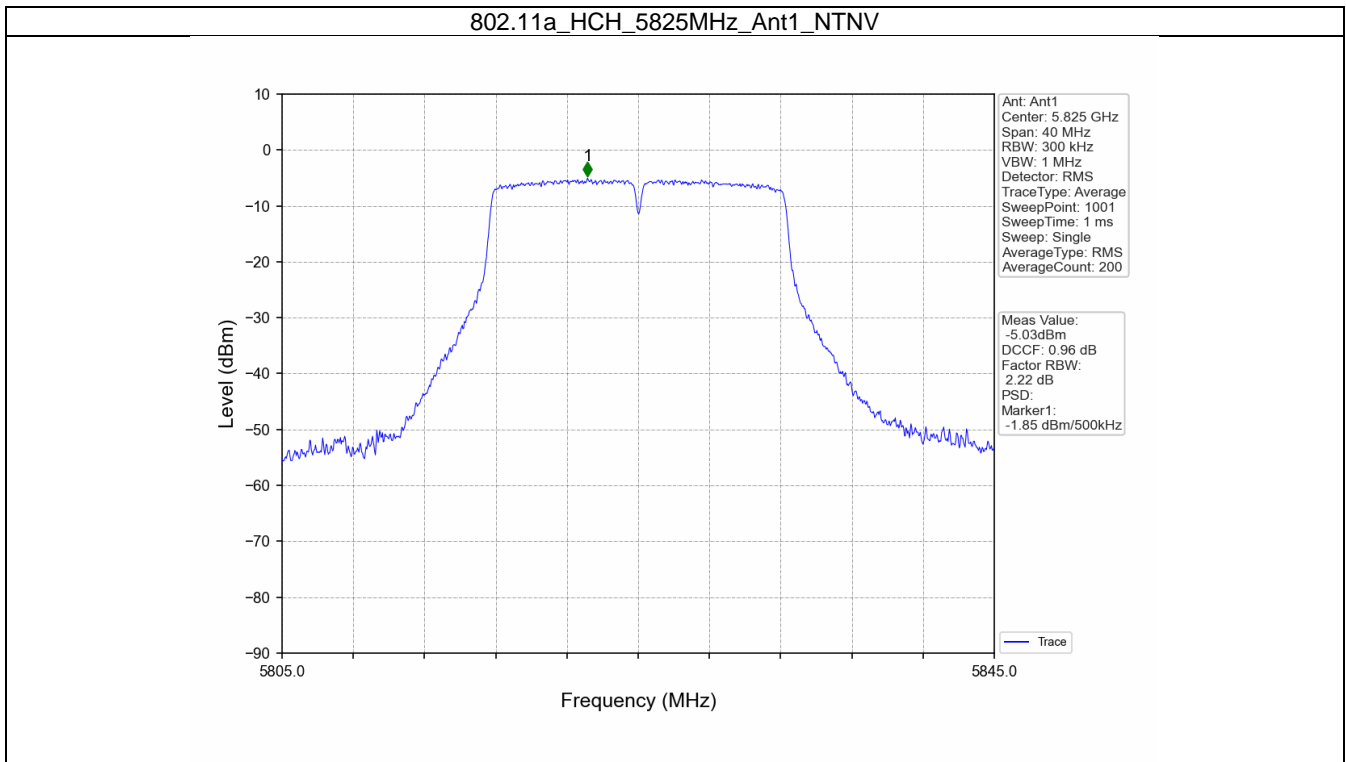
### 4.2.1 Test Result

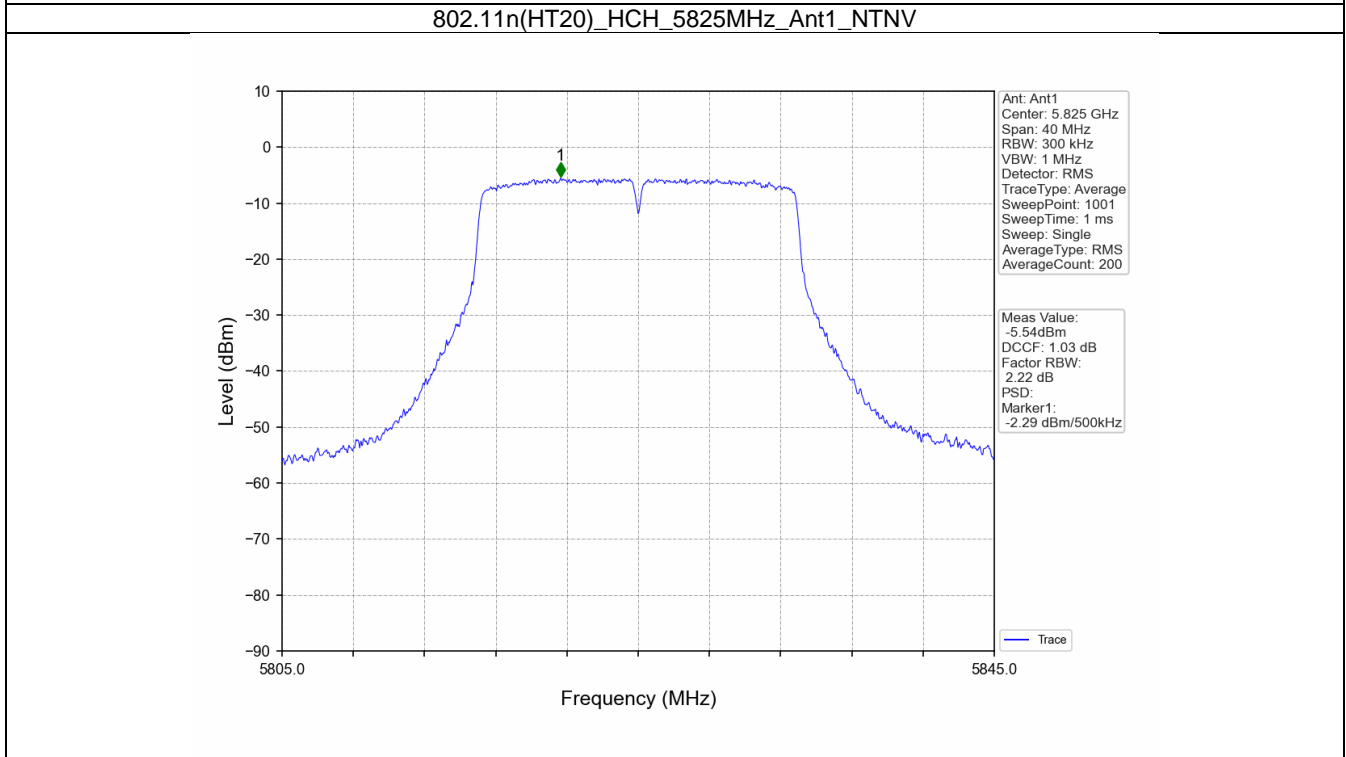
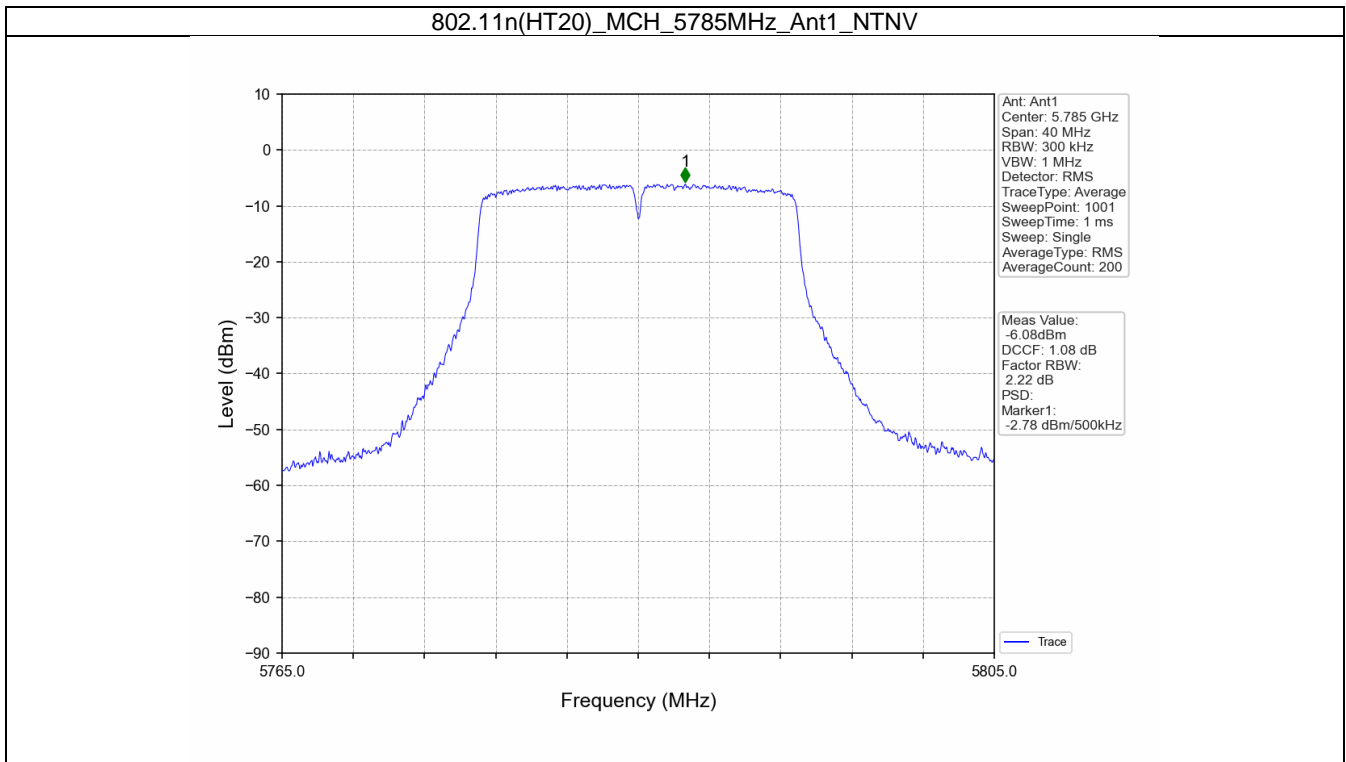
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/500kHz)		Verdict
			Ant1	Limit	
802.11a	SISO	5745	-2.24	<=30	Pass
		5785	-2.09	<=30	Pass
		5825	-1.85	<=30	Pass
802.11n (HT20)	SISO	5745	-2.41	<=30	Pass
		5785	-2.78	<=30	Pass
		5825	-2.29	<=30	Pass
802.11n (HT40)	SISO	5755	-5.46	<=30	Pass
		5795	-5.14	<=30	Pass

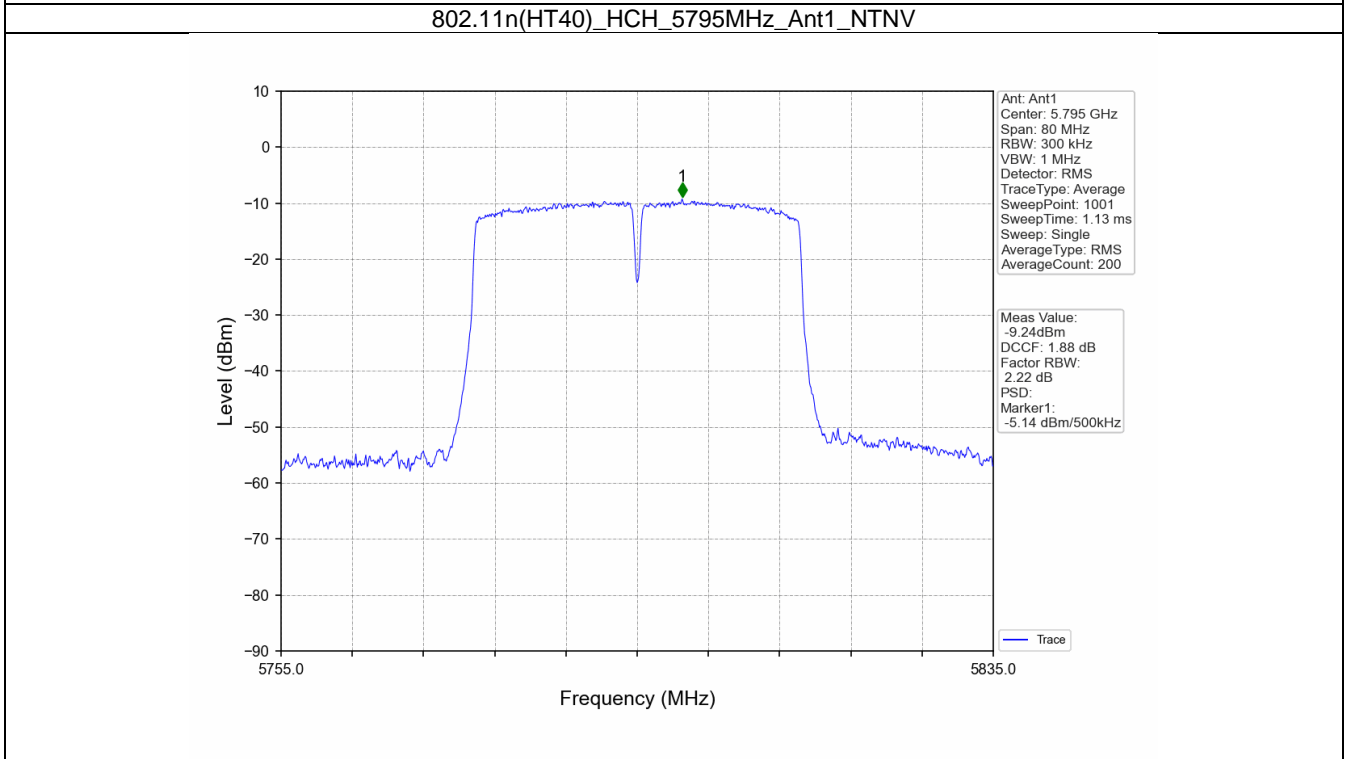
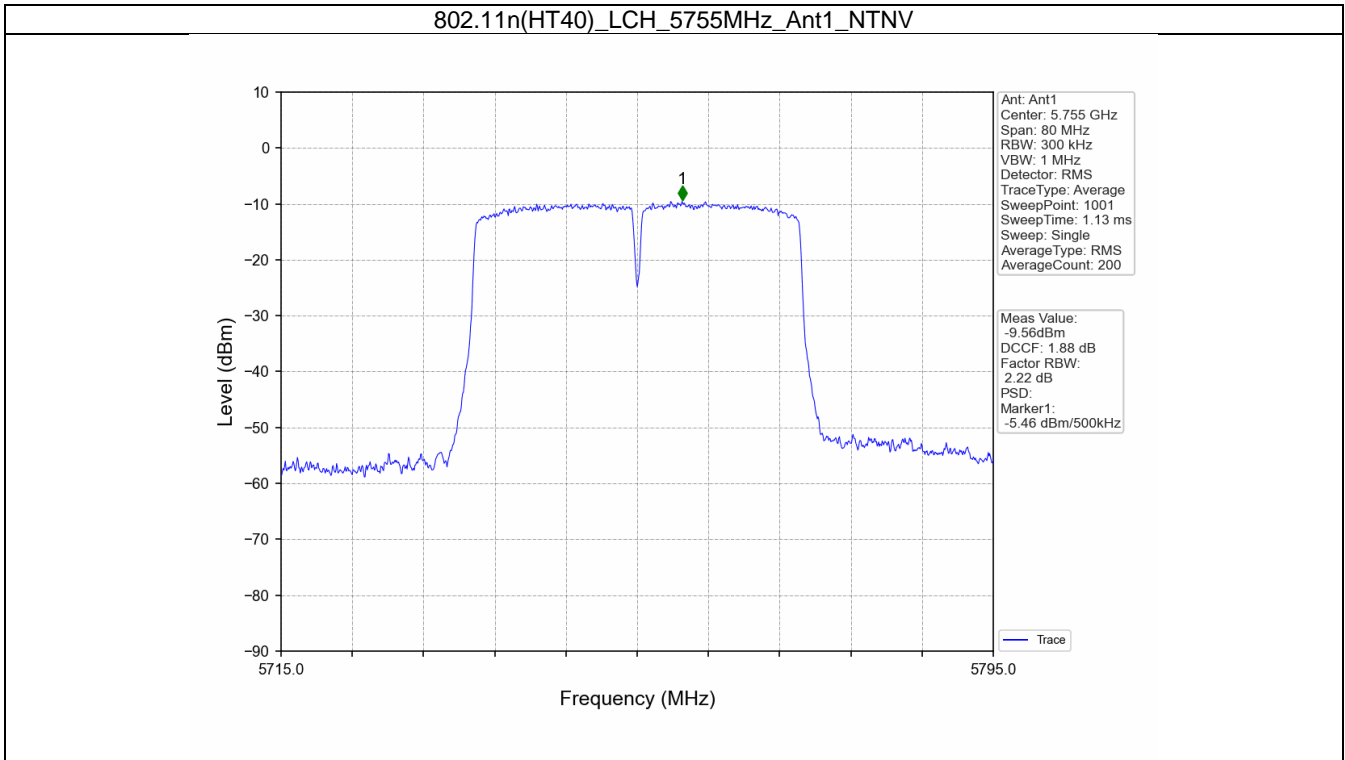
Note1: Antenna Gain: Ant1: 3.14dBi;

4.2.2 Test Graph









## 5. Frequency Stability

### 5.1 Ant1

#### 5.1.1 Test Result

Mode	TX Type	Frequency (MHz)	Temperature (°C)	Ant1			Verdict	
				Voltage (VAC)	Measured Frequency (MHz)	Limit		
802.11a	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	5180.100	5150 to 5250	Pass	
				-20	120	5180.000	5150 to 5250	Pass
					-10	120	5180.020	5150 to 5250
			0	120	5180.020	5150 to 5250	Pass	
				10	120	5180.020	5150 to 5250	Pass
				30	120	5180.020	5150 to 5250	Pass
				40	120	5180.020	5150 to 5250	Pass
				50	120	5180.000	5150 to 5250	Pass
				60	120	5180.030	5150 to 5250	Pass
		5200	20	102	5200.080	5150 to 5250	Pass	
				120	5200.020	5150 to 5250	Pass	
				138	5200.040	5150 to 5250	Pass	
			-30	120	5200.060	5150 to 5250	Pass	
				-20	120	5200.040	5150 to 5250	Pass
					-10	120	5200.100	5150 to 5250
			0	120	5199.980	5150 to 5250	Pass	
				10	120	5200.040	5150 to 5250	Pass
				30	120	5199.960	5150 to 5250	Pass
				40	120	5200.060	5150 to 5250	Pass
				50	120	5199.980	5150 to 5250	Pass
				60	120	5199.890	5150 to 5250	Pass
		5240	20	102	5240.060	5150 to 5250	Pass	
				120	5240.100	5150 to 5250	Pass	
				138	5240.040	5150 to 5250	Pass	
			-30	120	5240.000	5150 to 5250	Pass	
				-20	120	5240.060	5150 to 5250	Pass
					-10	120	5240.060	5150 to 5250
			0	120	5240.020	5150 to 5250	Pass	
				10	120	5240.040	5150 to 5250	Pass
				30	120	5240.020	5150 to 5250	Pass
				40	120	5239.980	5150 to 5250	Pass
				50	120	5240.040	5150 to 5250	Pass
				60	120	5240.031	5150 to 5250	Pass
		5745	20	102	5745.060	5725 to 5850	Pass	
				120	5745.060	5725 to 5850	Pass	
				138	5745.100	5725 to 5850	Pass	
			-30	120	5745.040	5725 to 5850	Pass	
				-20	120	5745.060	5725 to 5850	Pass
			-10	120	5745.060	5725 to 5850	Pass	
				0	120	5745.080	5725 to 5850	Pass
				10	120	5745.040	5725 to 5850	Pass
		30	120	5745.020	5725 to 5850	Pass		



			40	120	5745.020	5725 to 5850	Pass
			50	120	5745.100	5725 to 5850	Pass
			60	120	5745.050	5725 to 5850	Pass
		5785	20	102	5785.000	5725 to 5850	Pass
				120	5785.020	5725 to 5850	Pass
				138	5785.020	5725 to 5850	Pass
			-30	120	5785.080	5725 to 5850	Pass
			-20	120	5785.060	5725 to 5850	Pass
			-10	120	5785.000	5725 to 5850	Pass
			0	120	5785.000	5725 to 5850	Pass
			10	120	5785.020	5725 to 5850	Pass
			30	120	5785.060	5725 to 5850	Pass
			40	120	5785.020	5725 to 5850	Pass
			50	120	5785.040	5725 to 5850	Pass
		60	120	5785.070	5725 to 5850	Pass	
		5825	20	102	5825.040	5725 to 5850	Pass
				120	5825.020	5725 to 5850	Pass
				138	5825.040	5725 to 5850	Pass
			-30	120	5824.960	5725 to 5850	Pass
			-20	120	5825.060	5725 to 5850	Pass
			-10	120	5825.020	5725 to 5850	Pass
			0	120	5825.040	5725 to 5850	Pass
			10	120	5825.020	5725 to 5850	Pass
			30	120	5825.020	5725 to 5850	Pass
40	120		5825.040	5725 to 5850	Pass		
50	120		5825.040	5725 to 5850	Pass		
60	120	5825.060	5725 to 5850	Pass			
802.11n (HT20)	SISO	5180	20	102	5179.980	5150 to 5250	Pass
				120	5180.040	5150 to 5250	Pass
				138	5180.000	5150 to 5250	Pass
			-30	120	5180.020	5150 to 5250	Pass
			-20	120	5180.060	5150 to 5250	Pass
			-10	120	5180.060	5150 to 5250	Pass
			0	120	5180.040	5150 to 5250	Pass
			10	120	5180.020	5150 to 5250	Pass
			30	120	5179.980	5150 to 5250	Pass
			40	120	5180.080	5150 to 5250	Pass
			50	120	5180.040	5150 to 5250	Pass
		60	120	5180.020	5150 to 5250	Pass	
		5200	20	102	5200.020	5150 to 5250	Pass
				120	5200.060	5150 to 5250	Pass
				138	5200.000	5150 to 5250	Pass
			-30	120	5200.000	5150 to 5250	Pass
			-20	120	5200.040	5150 to 5250	Pass
			-10	120	5200.000	5150 to 5250	Pass
			0	120	5200.060	5150 to 5250	Pass
			10	120	5200.000	5150 to 5250	Pass
			30	120	5200.080	5150 to 5250	Pass
			40	120	5200.020	5150 to 5250	Pass
			50	120	5199.960	5150 to 5250	Pass
		60	120	5199.850	5150 to 5250	Pass	
		5240	20	102	5240.020	5150 to 5250	Pass
				120	5240.100	5150 to 5250	Pass
				138	5240.000	5150 to 5250	Pass
			-30	120	5240.040	5150 to 5250	Pass

			-20	120	5240.040	5150 to 5250	Pass	
			-10	120	5240.060	5150 to 5250	Pass	
			0	120	5240.060	5150 to 5250	Pass	
			10	120	5240.060	5150 to 5250	Pass	
			30	120	5239.960	5150 to 5250	Pass	
			40	120	5240.080	5150 to 5250	Pass	
			50	120	5240.080	5150 to 5250	Pass	
		60	120	5140.070	5150 to 5250	Pass		
		5745	20	102	5745.000	5725 to 5850	Pass	
				120	5745.100	5725 to 5850	Pass	
				138	5745.000	5725 to 5850	Pass	
			-30	120	5745.000	5725 to 5850	Pass	
			-20	120	5745.060	5725 to 5850	Pass	
			-10	120	5744.980	5725 to 5850	Pass	
			0	120	5745.020	5725 to 5850	Pass	
			10	120	5745.000	5725 to 5850	Pass	
			30	120	5745.040	5725 to 5850	Pass	
			40	120	5745.020	5725 to 5850	Pass	
			50	120	5745.020	5725 to 5850	Pass	
			60	120	5745.020	5725 to 5850	Pass	
			5785	20	102	5785.040	5725 to 5850	Pass
					120	5784.980	5725 to 5850	Pass
		138			5785.060	5725 to 5850	Pass	
		-30		120	5785.000	5725 to 5850	Pass	
		-20		120	5785.000	5725 to 5850	Pass	
		-10		120	5785.000	5725 to 5850	Pass	
		0		120	5785.020	5725 to 5850	Pass	
		10		120	5785.000	5725 to 5850	Pass	
		30		120	5785.040	5725 to 5850	Pass	
		40		120	5785.020	5725 to 5850	Pass	
		50		120	5785.020	5725 to 5850	Pass	
		60	120	5785.010	5725 to 5850	Pass		
		5825	20	102	5824.960	5725 to 5850	Pass	
				120	5824.940	5725 to 5850	Pass	
				138	5825.000	5725 to 5850	Pass	
			-30	120	5825.020	5725 to 5850	Pass	
			-20	120	5824.960	5725 to 5850	Pass	
			-10	120	5825.020	5725 to 5850	Pass	
			0	120	5825.020	5725 to 5850	Pass	
			10	120	5825.000	5725 to 5850	Pass	
			30	120	5825.040	5725 to 5850	Pass	
			40	120	5825.060	5725 to 5850	Pass	
50	120		5824.960	5725 to 5850	Pass			
60	120		5825.860	5725 to 5850	Pass			
802.11n (HT40)	SISO		5190	20	102	5190.000	5150 to 5250	Pass
		120			5190.000	5150 to 5250	Pass	
		138			5190.000	5150 to 5250	Pass	
		-30		120	5190.040	5150 to 5250	Pass	
		-20		120	5190.040	5150 to 5250	Pass	
		-10		120	5190.040	5150 to 5250	Pass	
		0		120	5190.000	5150 to 5250	Pass	
		10		120	5190.000	5150 to 5250	Pass	
		30		120	5190.000	5150 to 5250	Pass	
		40		120	5190.040	5150 to 5250	Pass	
50	120	5190.000	5150 to 5250	Pass				



		60	120	5190.000	5150 to 5250	Pass
	5230	20	102	5230.000	5150 to 5250	Pass
			120	5230.000	5150 to 5250	Pass
			138	5230.040	5150 to 5250	Pass
		-30	120	5230.000	5150 to 5250	Pass
		-20	120	5230.040	5150 to 5250	Pass
		-10	120	5230.040	5150 to 5250	Pass
		0	120	5230.040	5150 to 5250	Pass
		10	120	5230.040	5150 to 5250	Pass
		30	120	5230.040	5150 to 5250	Pass
		40	120	5230.040	5150 to 5250	Pass
		50	120	5230.040	5150 to 5250	Pass
		60	120	5230.030	5150 to 5250	Pass
	5755	20	102	5755.040	5725 to 5850	Pass
			120	5755.040	5725 to 5850	Pass
			138	5755.040	5725 to 5850	Pass
		-30	120	5755.040	5725 to 5850	Pass
		-20	120	5755.040	5725 to 5850	Pass
		-10	120	5755.000	5725 to 5850	Pass
		0	120	5755.040	5725 to 5850	Pass
		10	120	5755.000	5725 to 5850	Pass
		30	120	5755.000	5725 to 5850	Pass
		40	120	5755.040	5725 to 5850	Pass
		50	120	5755.040	5725 to 5850	Pass
		60	120	5755.040	5725 to 5850	Pass
	5795	20	102	5795.040	5725 to 5850	Pass
			120	5795.000	5725 to 5850	Pass
			138	5795.000	5725 to 5850	Pass
		-30	120	5795.000	5725 to 5850	Pass
		-20	120	5795.040	5725 to 5850	Pass
		-10	120	5795.040	5725 to 5850	Pass
		0	120	5795.040	5725 to 5850	Pass
		10	120	5795.040	5725 to 5850	Pass
		30	120	5795.000	5725 to 5850	Pass
		40	120	5795.000	5725 to 5850	Pass
		50	120	5795.040	5725 to 5850	Pass
		60	120	5795.050	5725 to 5850	Pass