

RF Test Report

For

Project No.:	DLE-250908050R-2
Client:	Shenzhen Liangming Technology Co., Ltd.
Manufacturer:	Shenzhen Liangming Technology Co., Ltd.
Product Description:	Wireless Meat Thermometer
Model Number:	BBQ8
Test Engineer:	Alisa Song
Test Date:	2025-09-04

Test Summary

Item	Result
Duty Cycle	Pass
Bandwidth	Pass
Maximum Conducted Output Power	Pass
Maximum Power Spectral Density	Pass
Unwanted Emissions In Non-restricted Frequency Bands	Pass

1. Duty Cycle

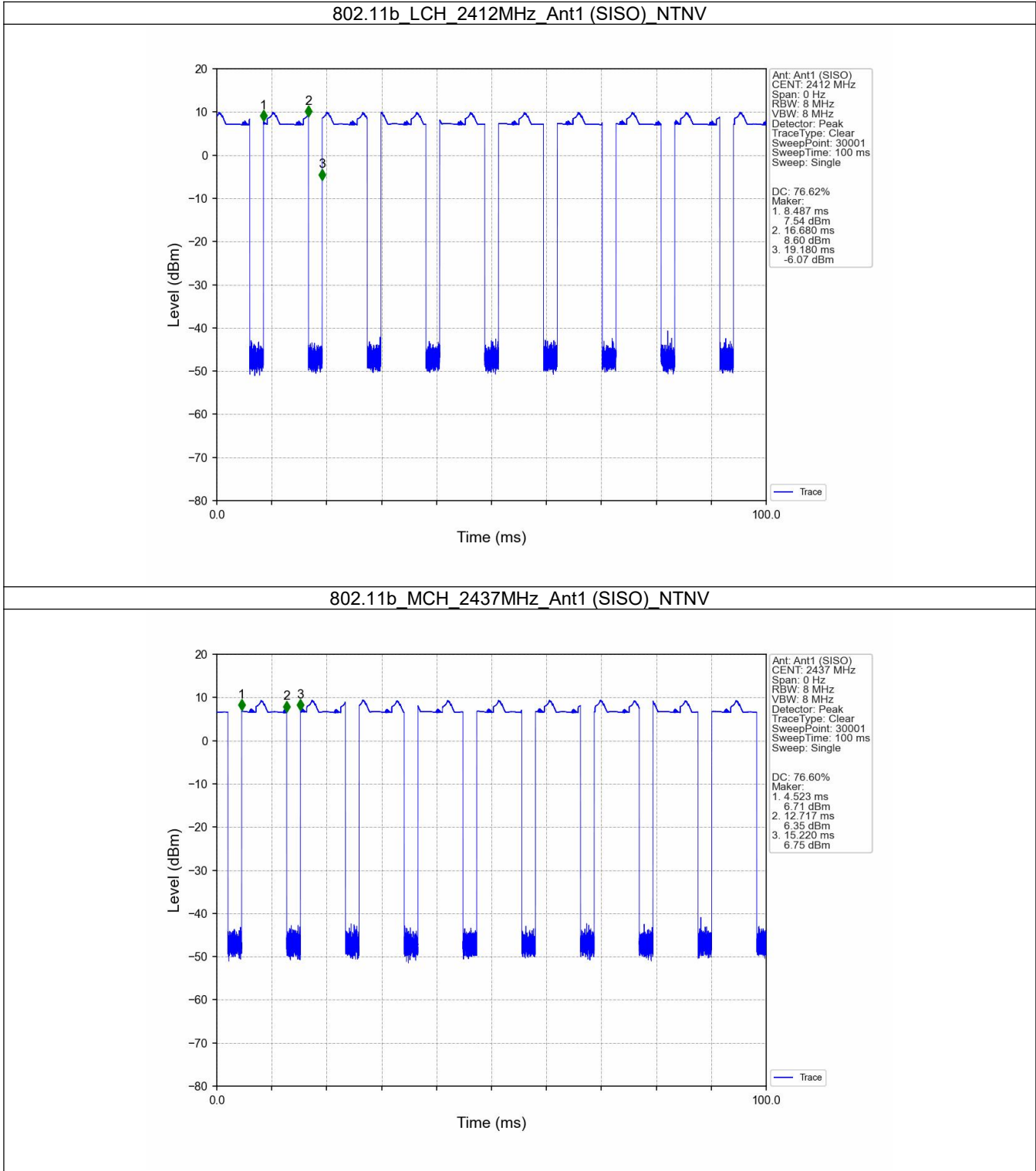
1.1 Test Result

1.1.1 Ant1

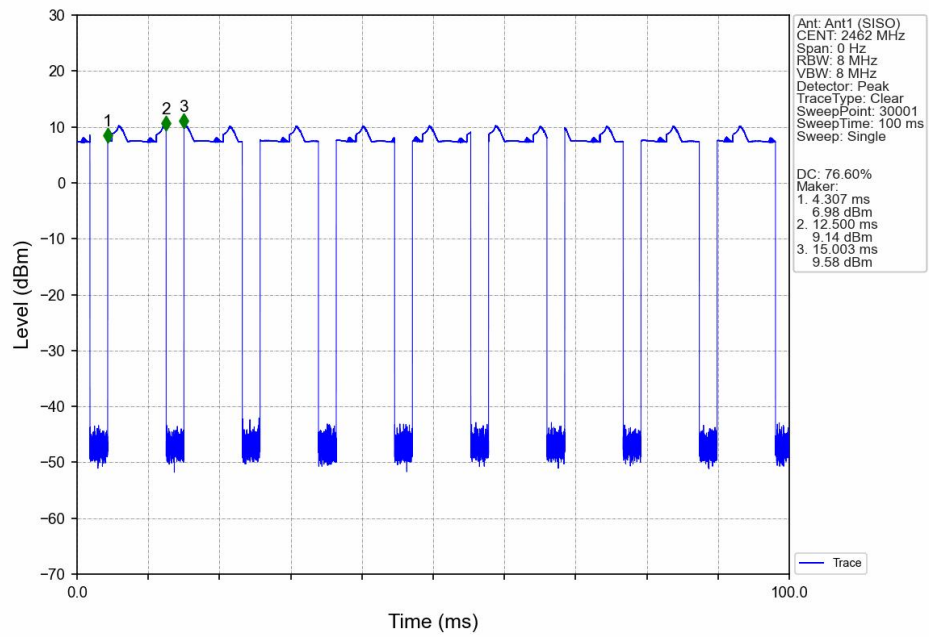
Ant1							
Mode	Tx Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11b	SISO	2412	8.193	10.693	76.62	1.16	0.01
		2437	8.194	10.697	76.60	1.16	0.02
		2462	8.193	10.696	76.60	1.16	0.03
802.11g	SISO	2412	1.362	3.863	35.26	4.53	0.00
		2437	1.361	3.862	35.24	4.53	0.00
		2462	1.361	3.862	35.24	4.53	0.00
802.11n (HT20)	SISO	2412	1.273	3.774	33.73	4.72	0.00
		2437	1.273	3.774	33.73	4.72	0.00
		2462	1.273	3.775	33.72	4.72	0.00
802.11n (HT40)	SISO	2422	0.633	3.135	20.19	6.95	0.03
		2437	0.632	3.135	20.16	6.96	0.03
		2452	0.633	3.135	20.19	6.95	0.03

1.2 Test Graph

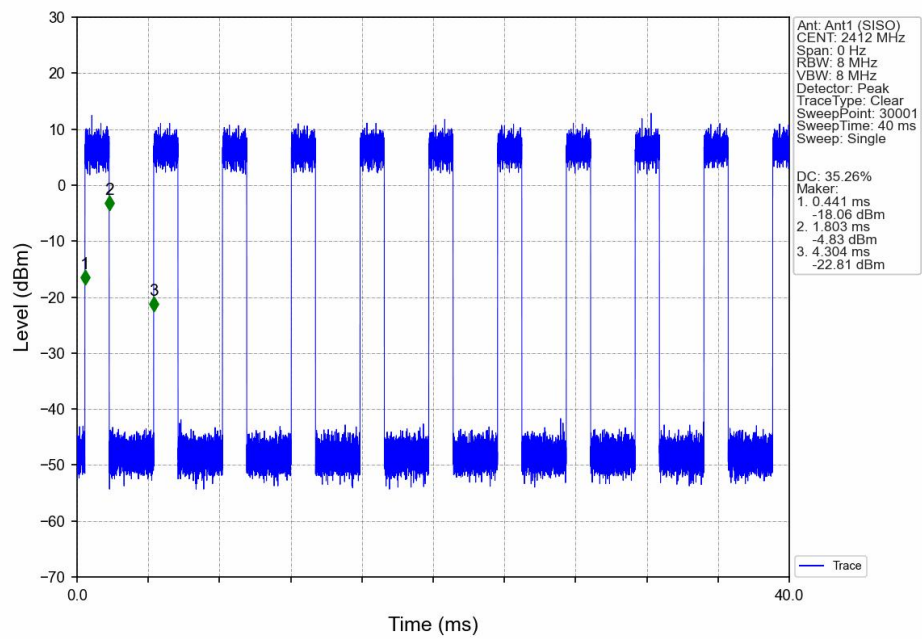
1.2.1 Ant1



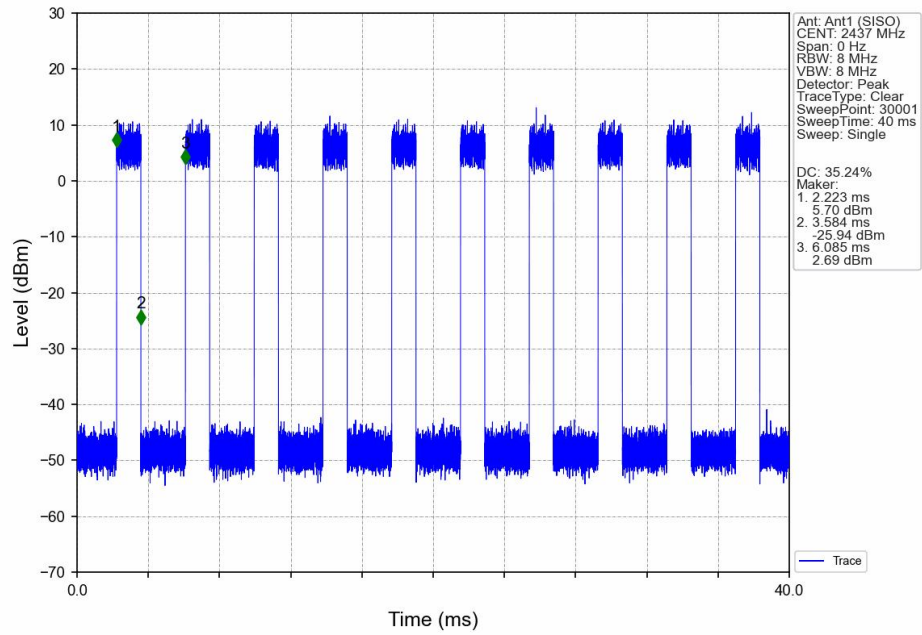
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



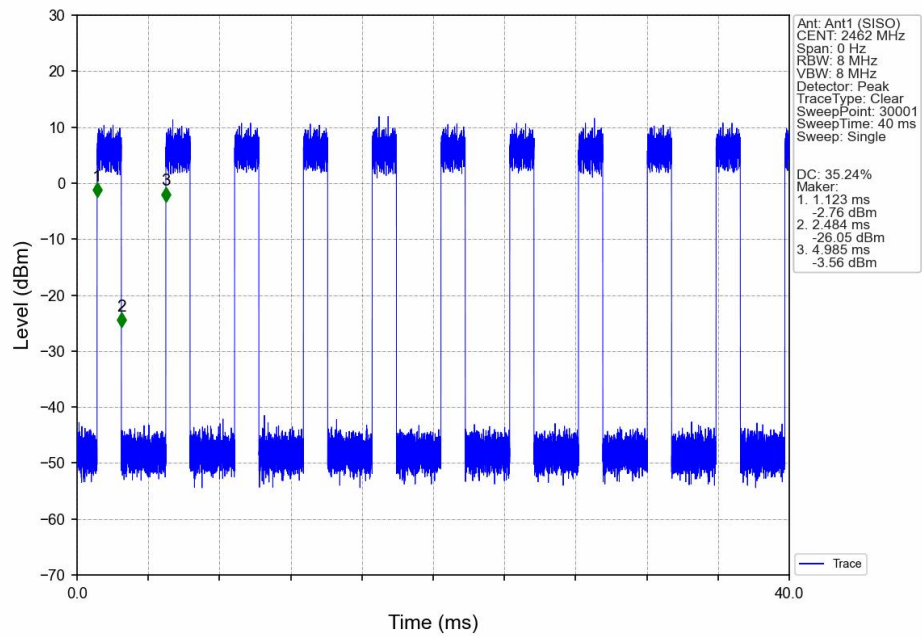
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



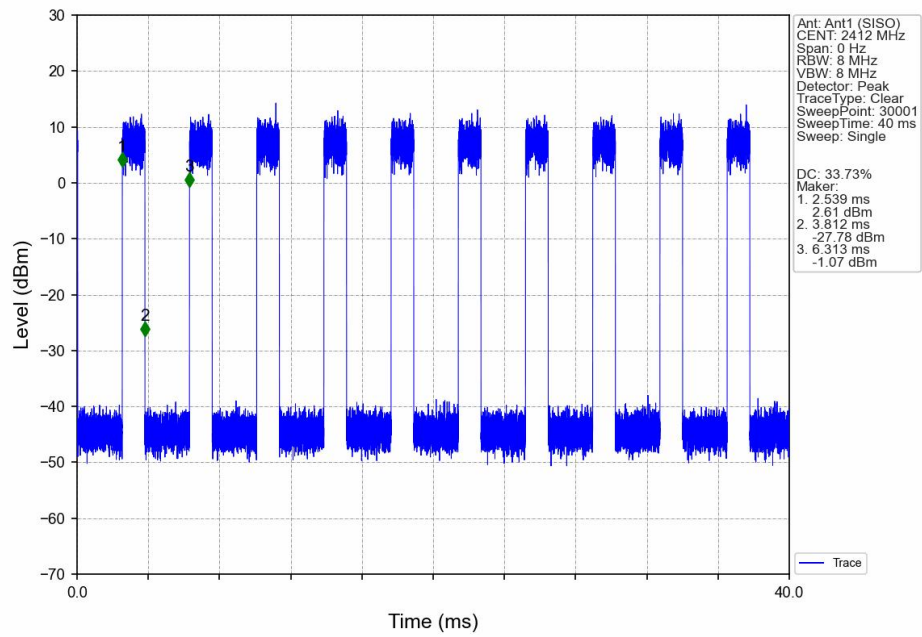
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



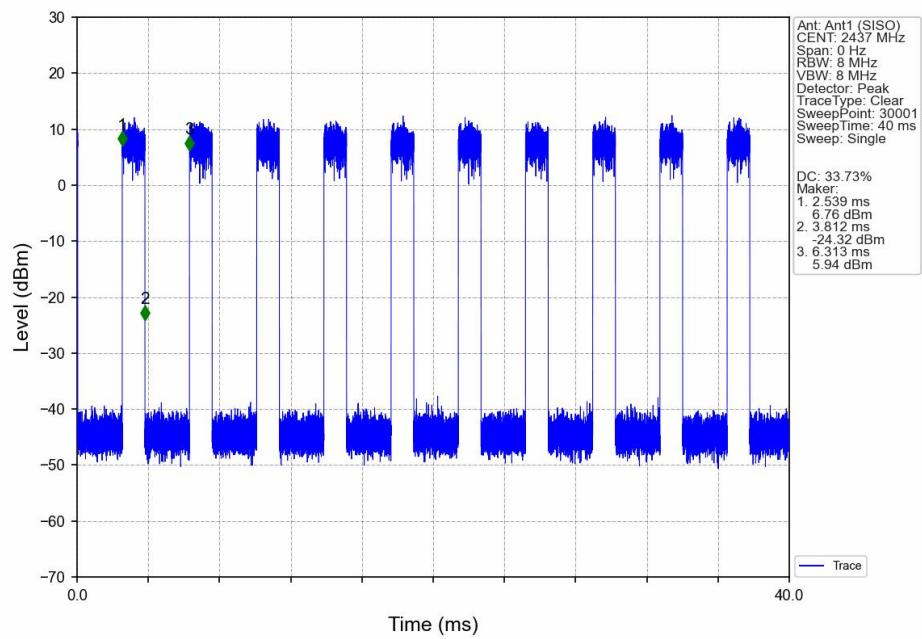
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



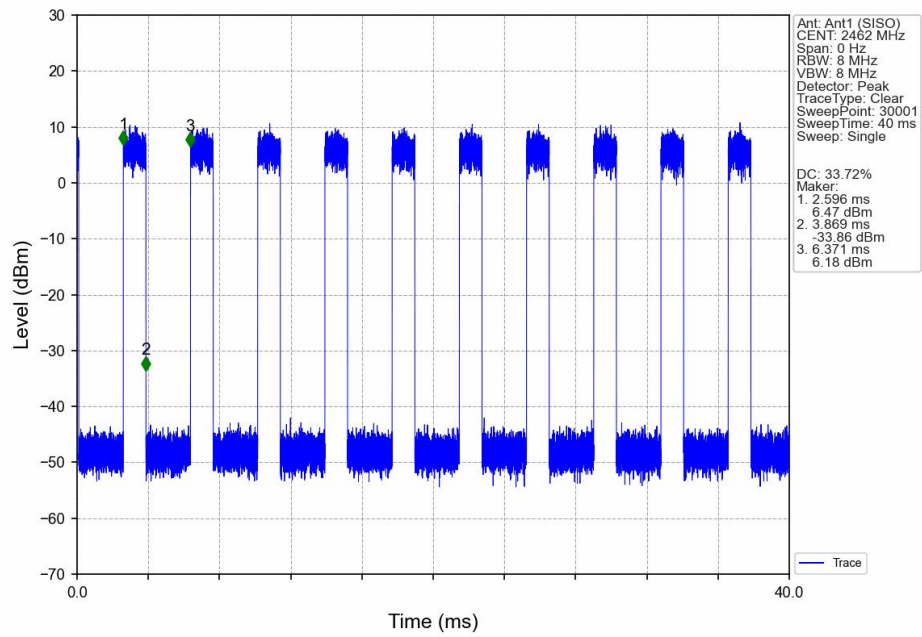
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



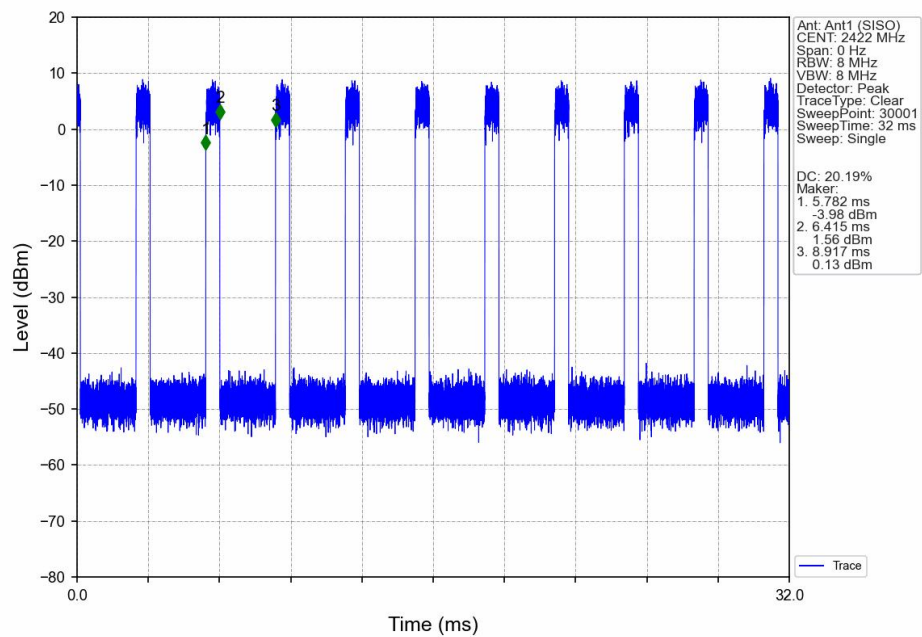
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



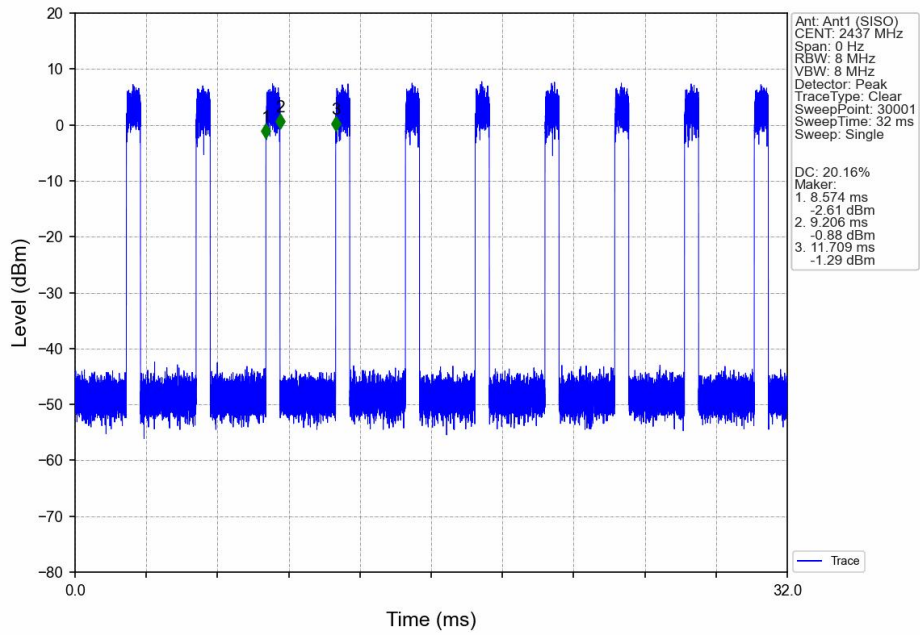
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



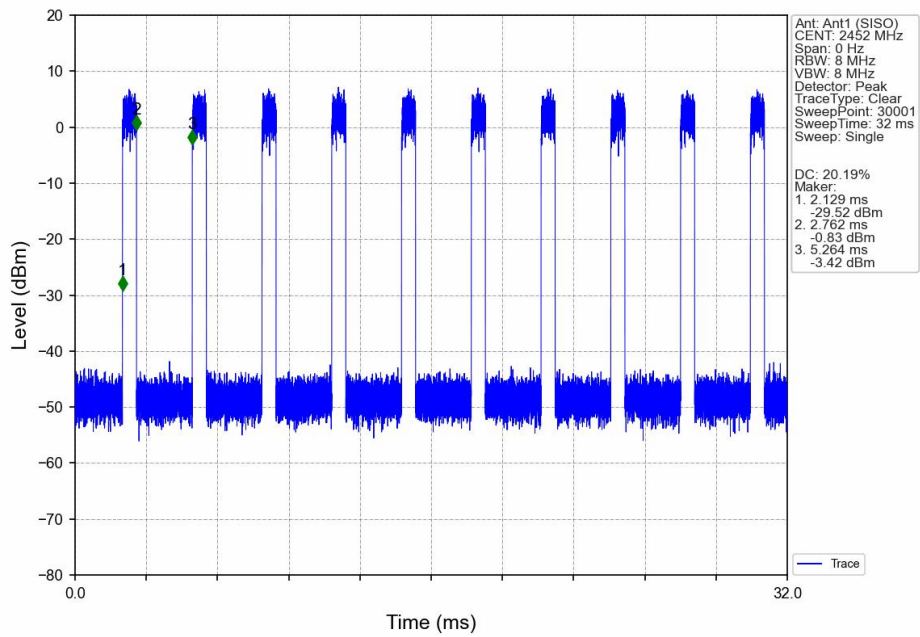
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



2. Bandwidth

2.1 Test Result

2.1.1 OBW

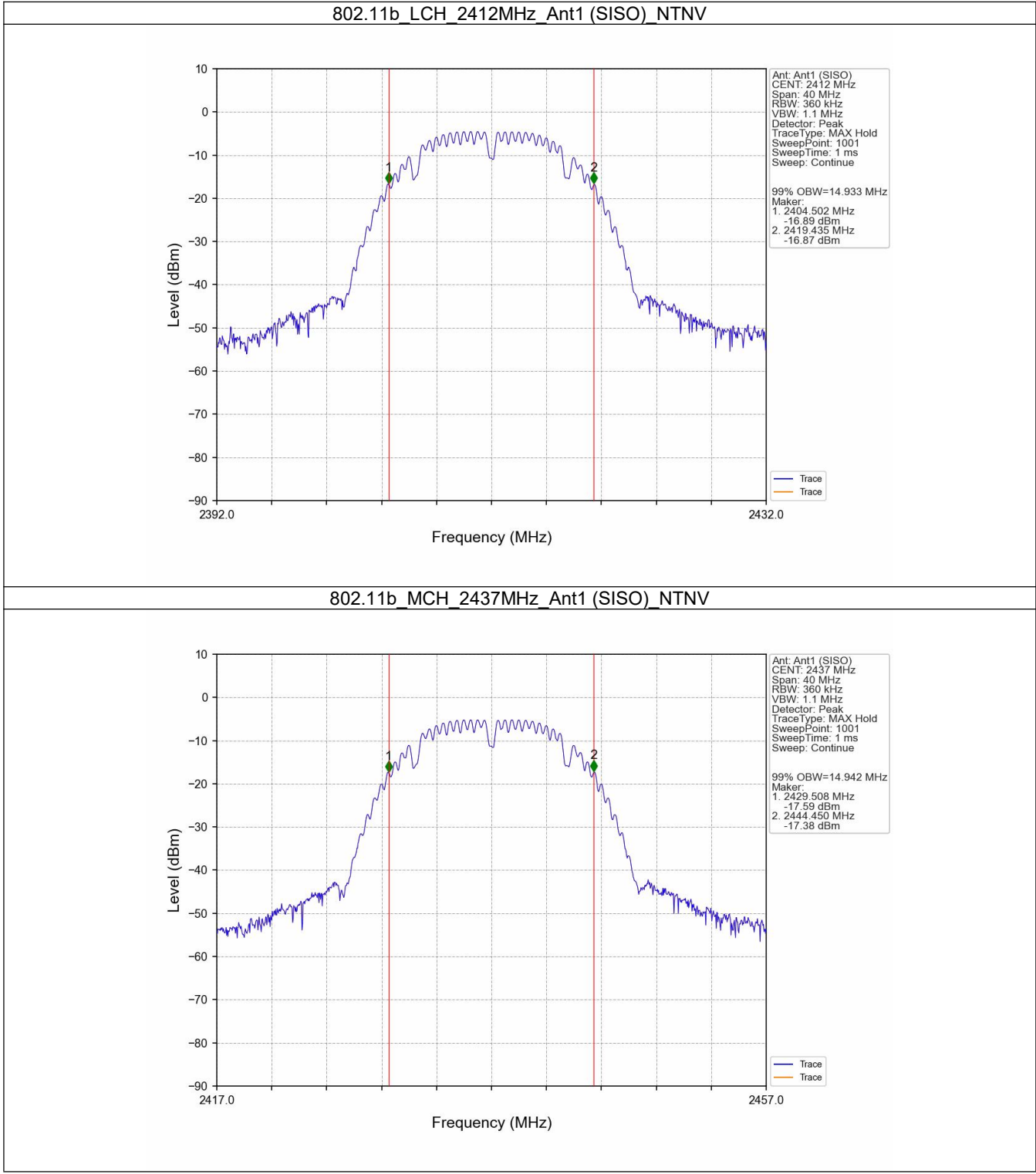
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	14.933	/	Pass
		2437	1	14.942	/	Pass
		2462	1	14.964	/	Pass
802.11g	SISO	2412	1	16.698	/	Pass
		2437	1	16.702	/	Pass
		2462	1	16.703	/	Pass
802.11n (HT20)	SISO	2412	1	17.770	/	Pass
		2437	1	17.739	/	Pass
		2462	1	17.736	/	Pass
802.11n (HT40)	SISO	2422	1	36.266	/	Pass
		2437	1	36.306	/	Pass
		2452	1	36.291	/	Pass

2.1.2 6dB BW

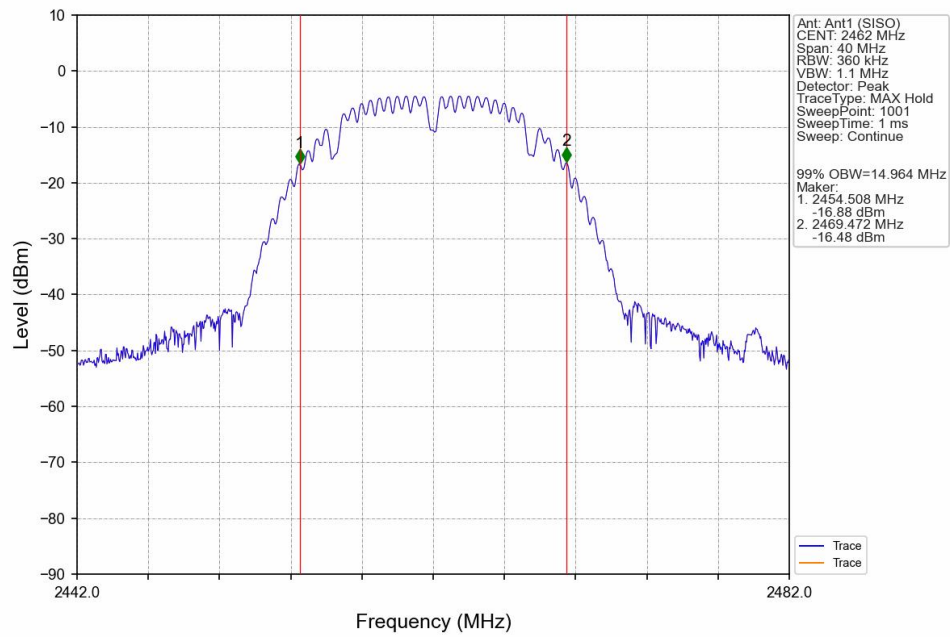
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	9.107	≥ 0.5	Pass
		2437	1	9.109	≥ 0.5	Pass
		2462	1	9.096	≥ 0.5	Pass
802.11g	SISO	2412	1	15.108	≥ 0.5	Pass
		2437	1	15.092	≥ 0.5	Pass
		2462	1	15.097	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	1	15.112	≥ 0.5	Pass
		2437	1	15.103	≥ 0.5	Pass
		2462	1	15.103	≥ 0.5	Pass
802.11n (HT40)	SISO	2422	1	27.584	≥ 0.5	Pass
		2437	1	27.585	≥ 0.5	Pass
		2452	1	27.573	≥ 0.5	Pass

2.2 Test Graph

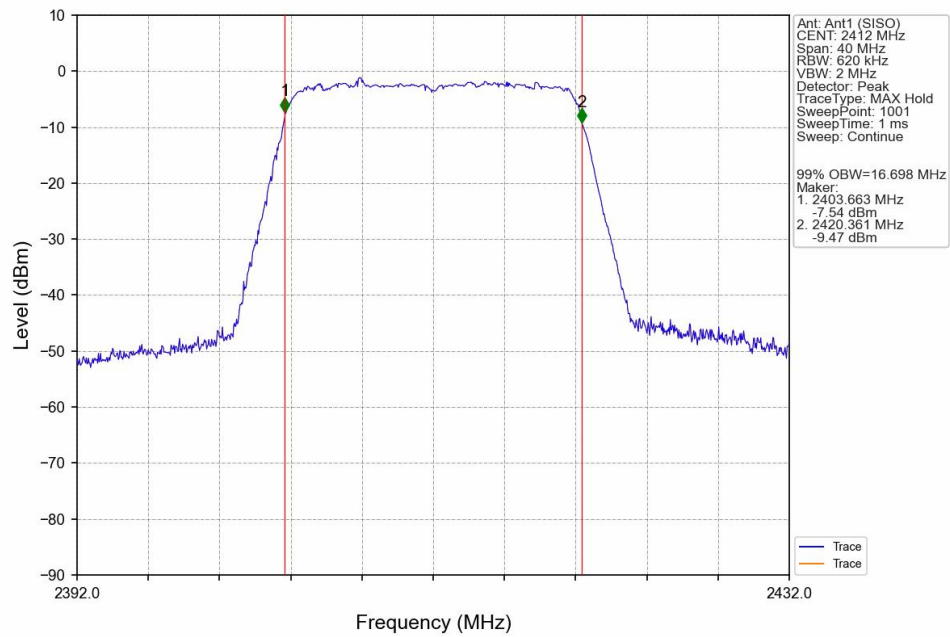
2.2.1 OBW



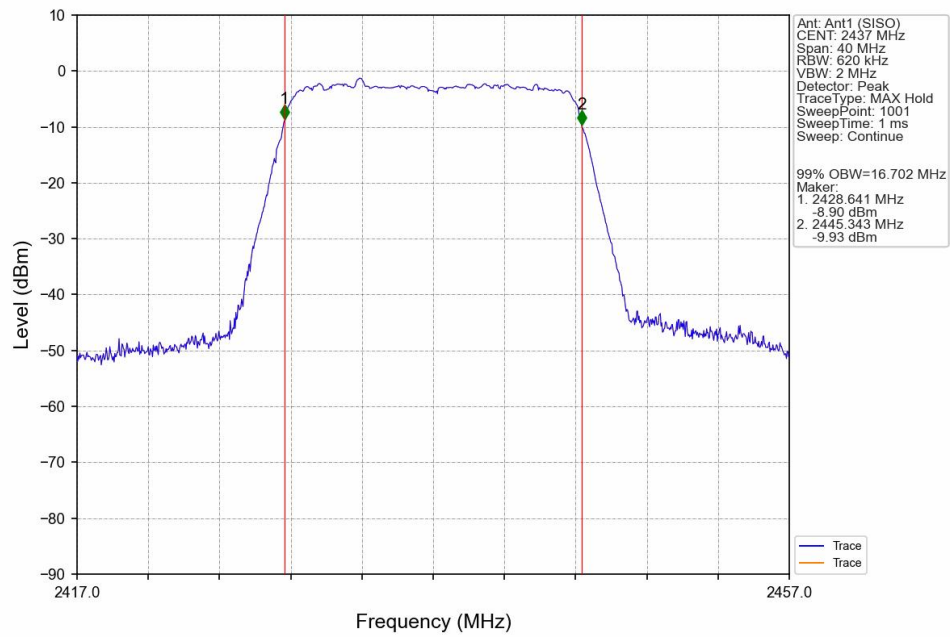
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



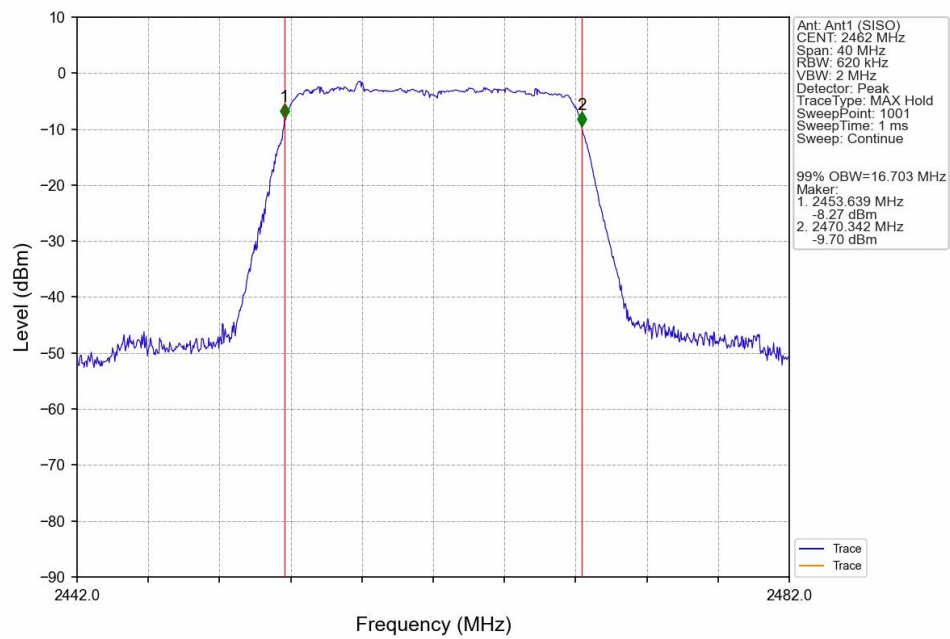
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



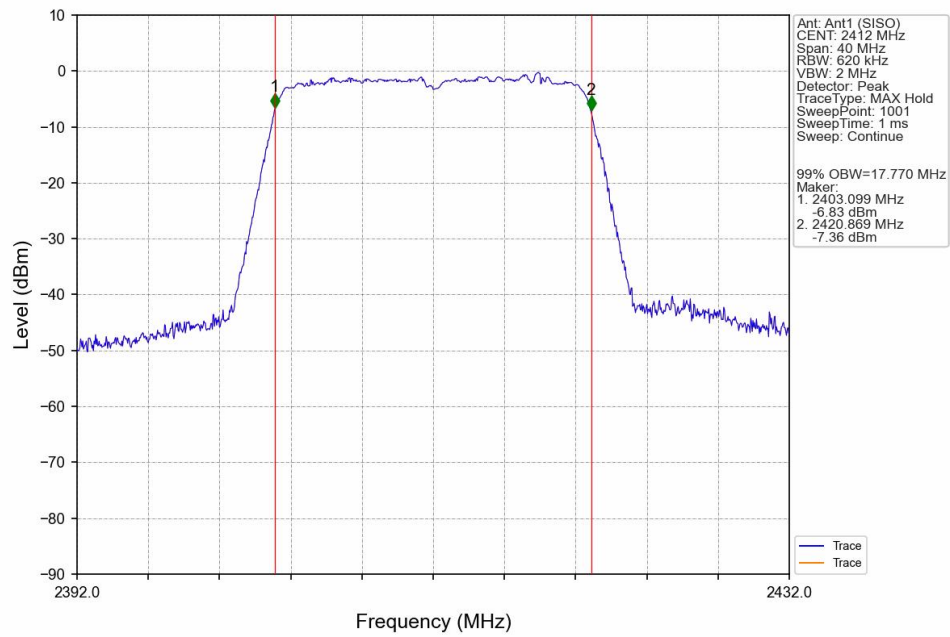
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



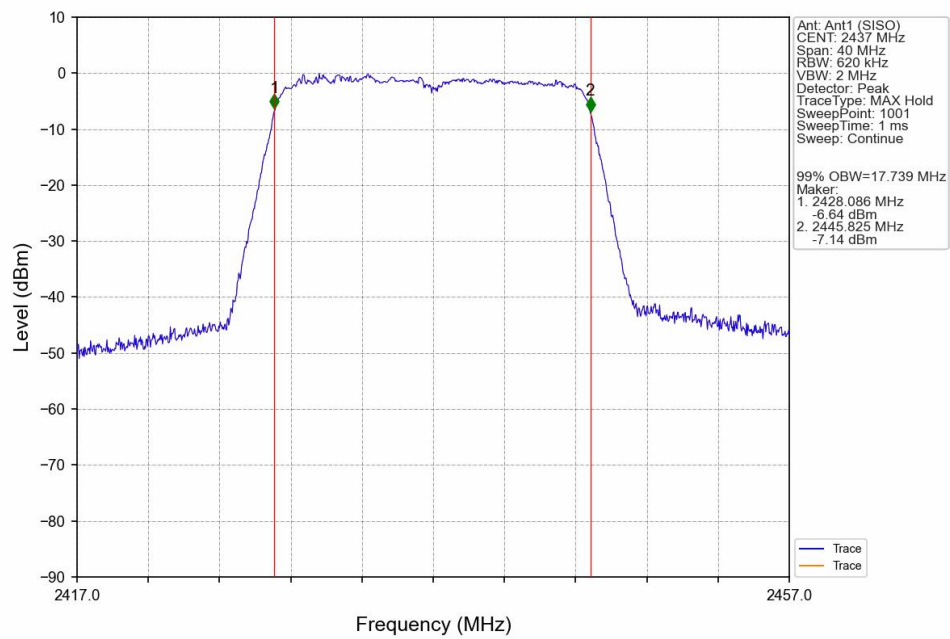
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



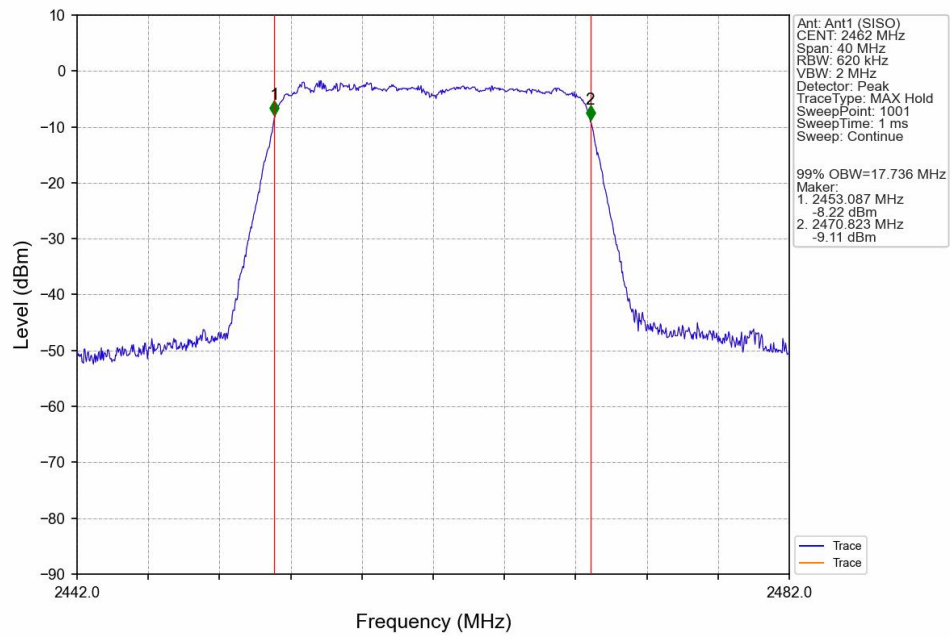
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



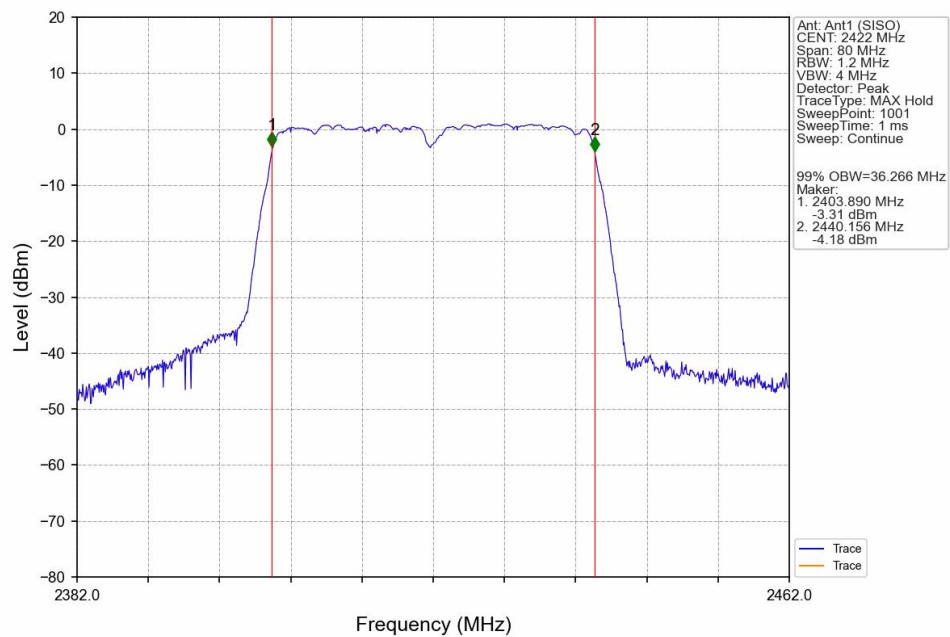
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



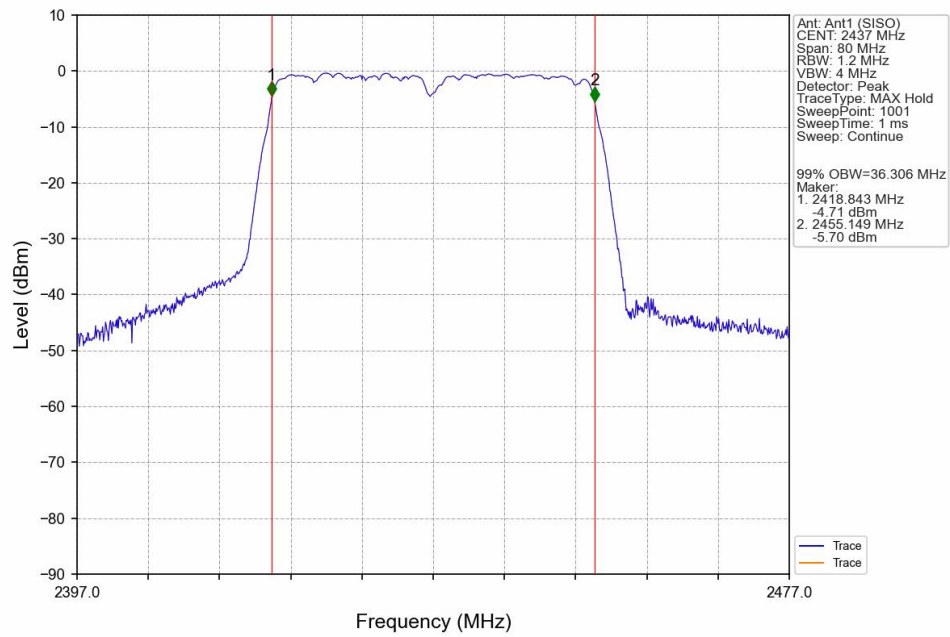
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



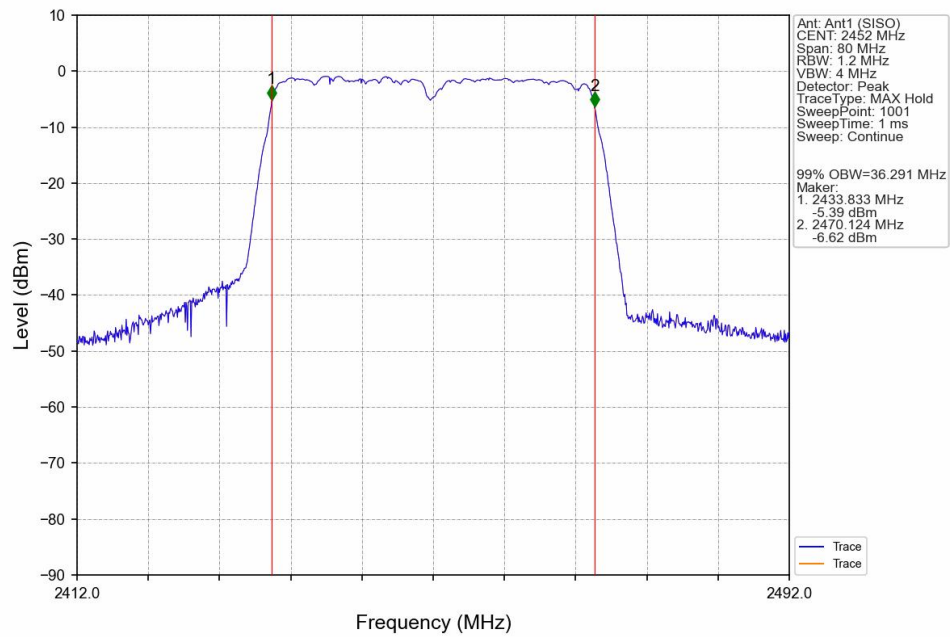
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV

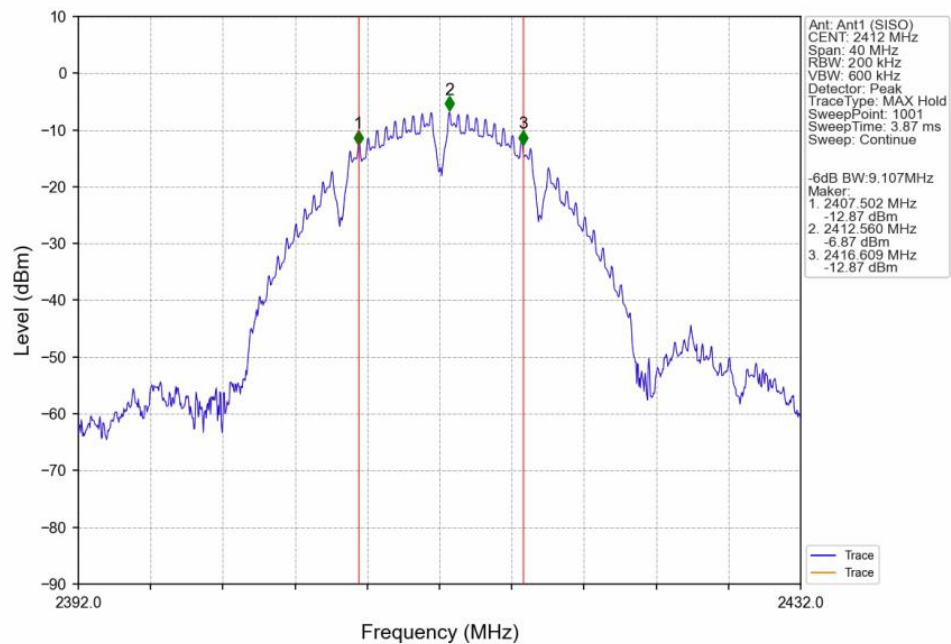


802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV

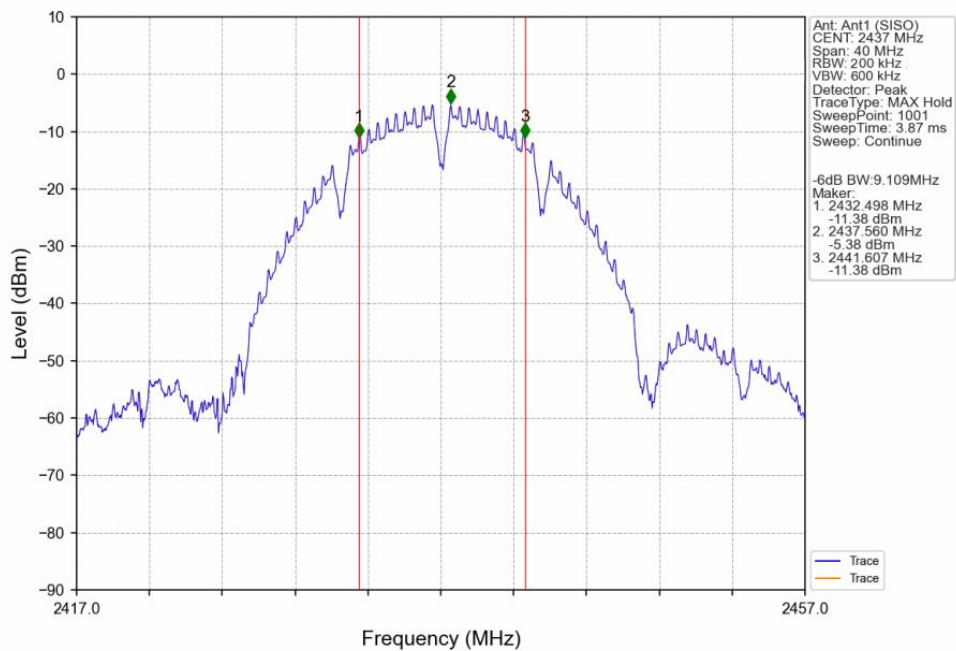


2.2.2 6dB BW

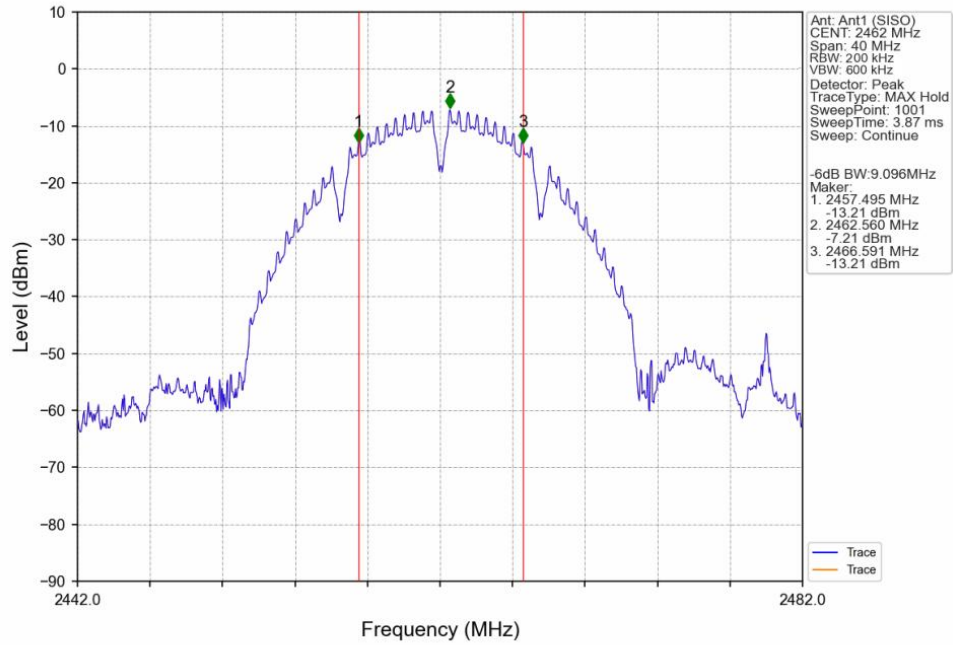
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



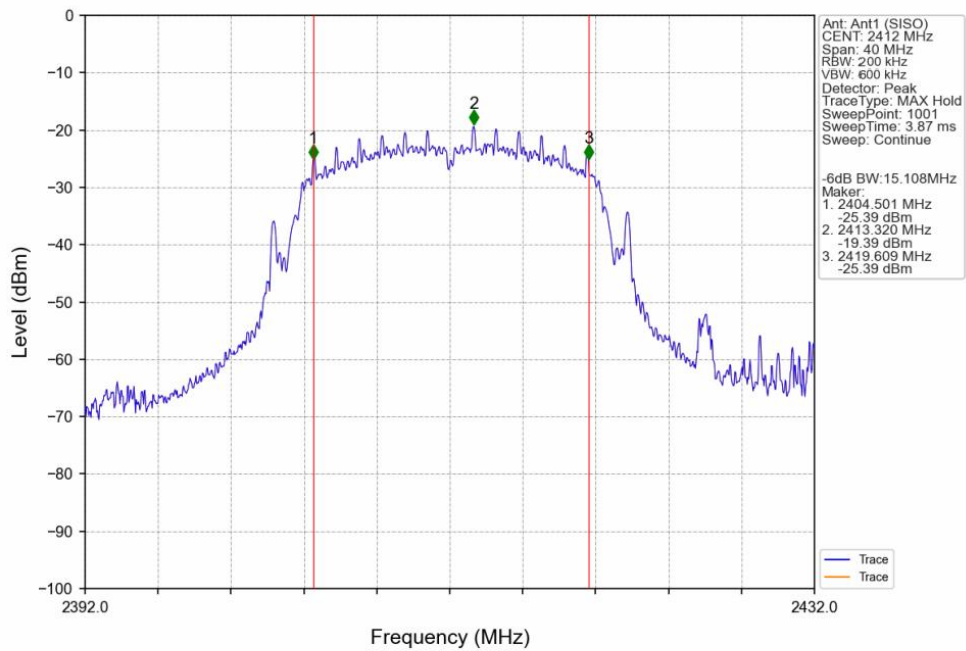
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



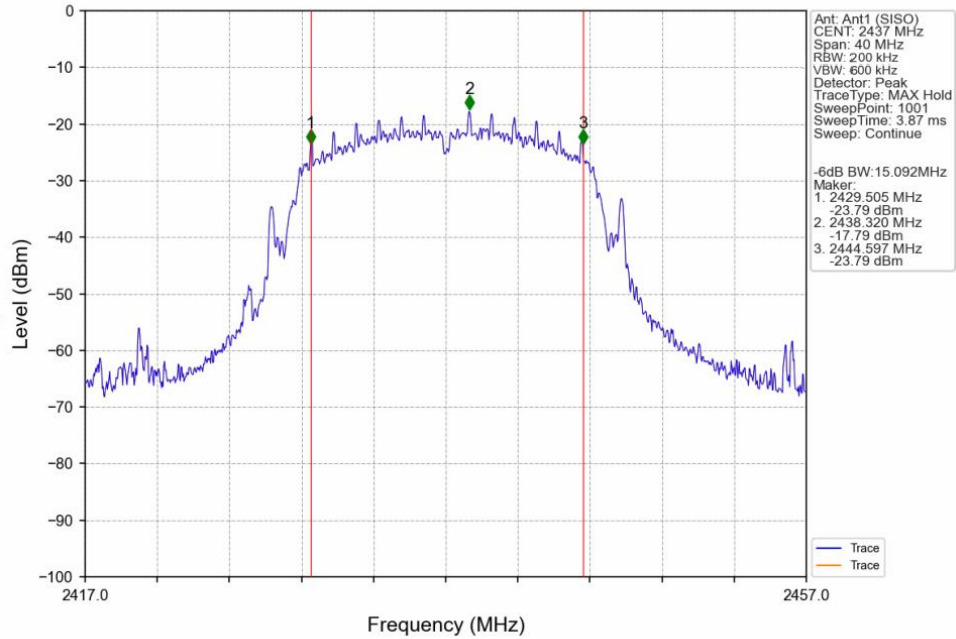
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



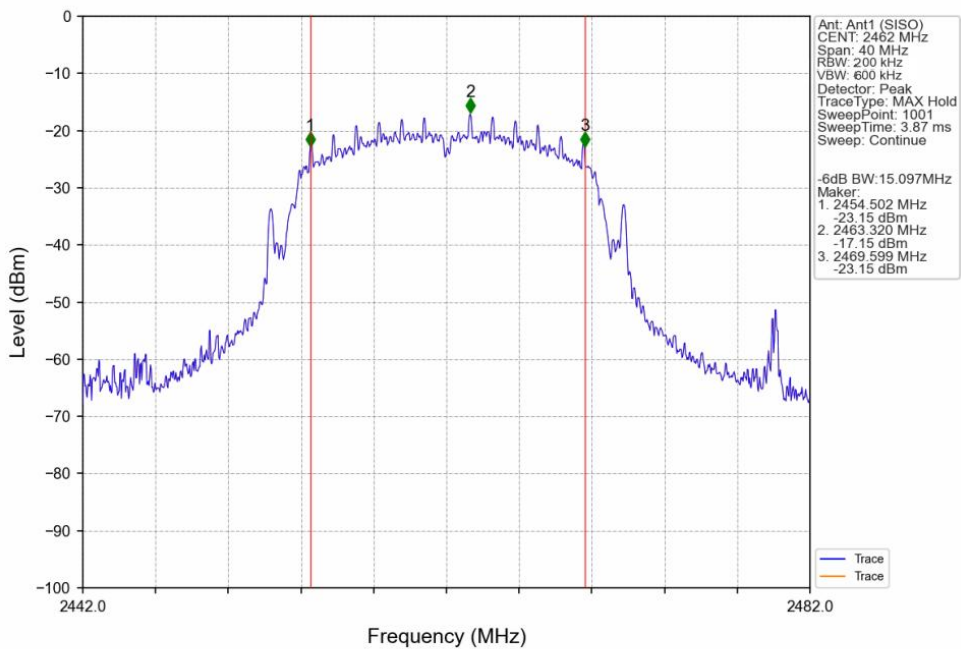
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



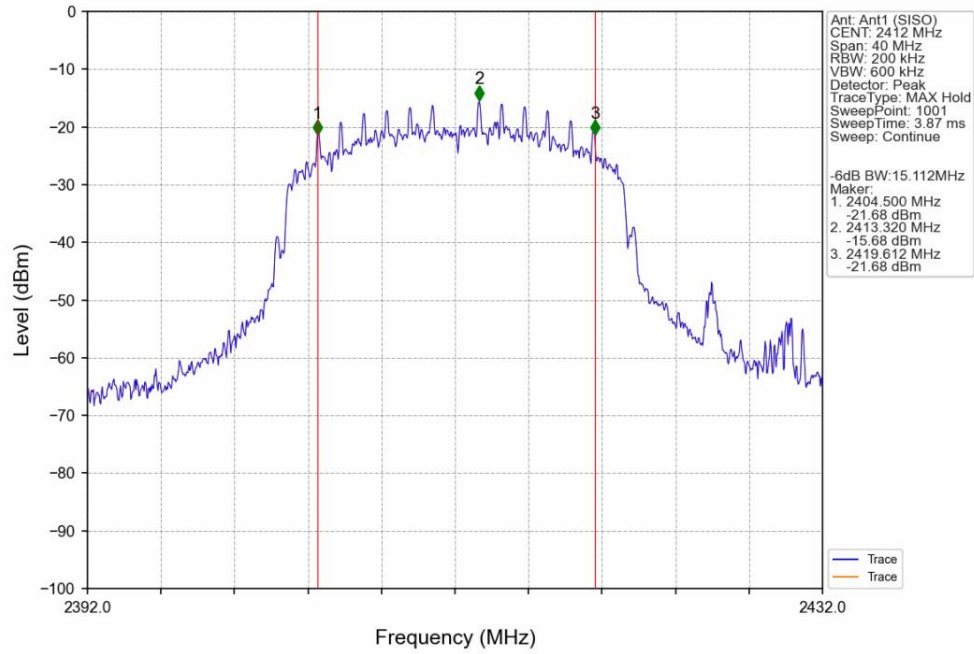
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



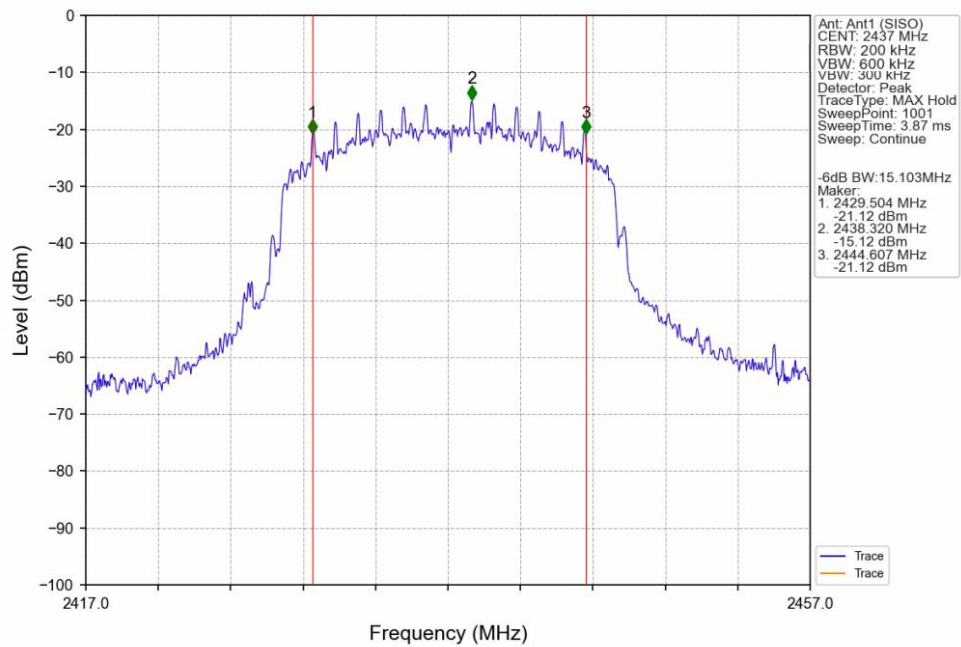
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



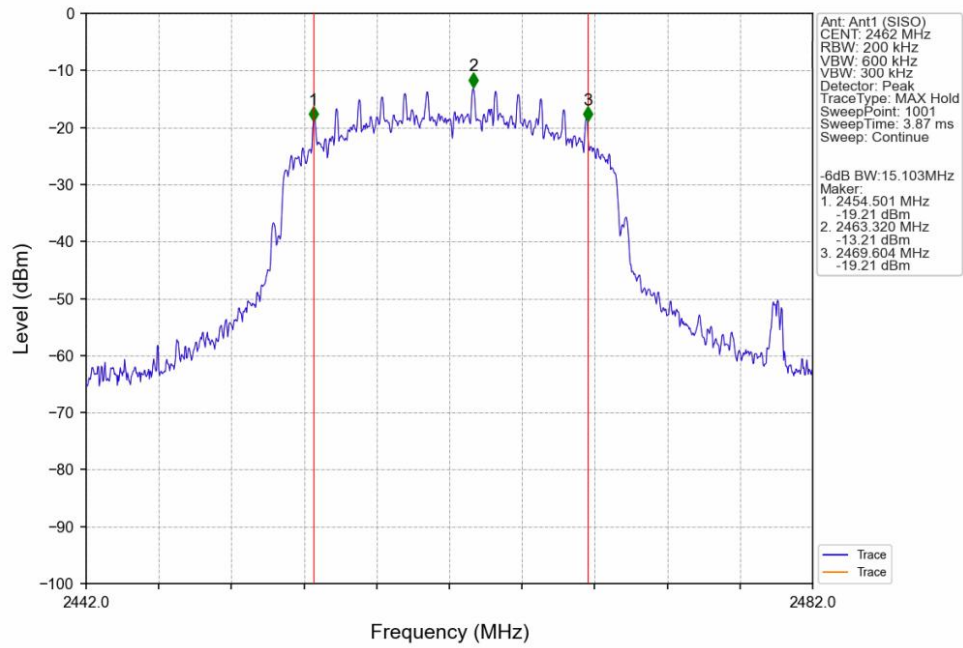
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



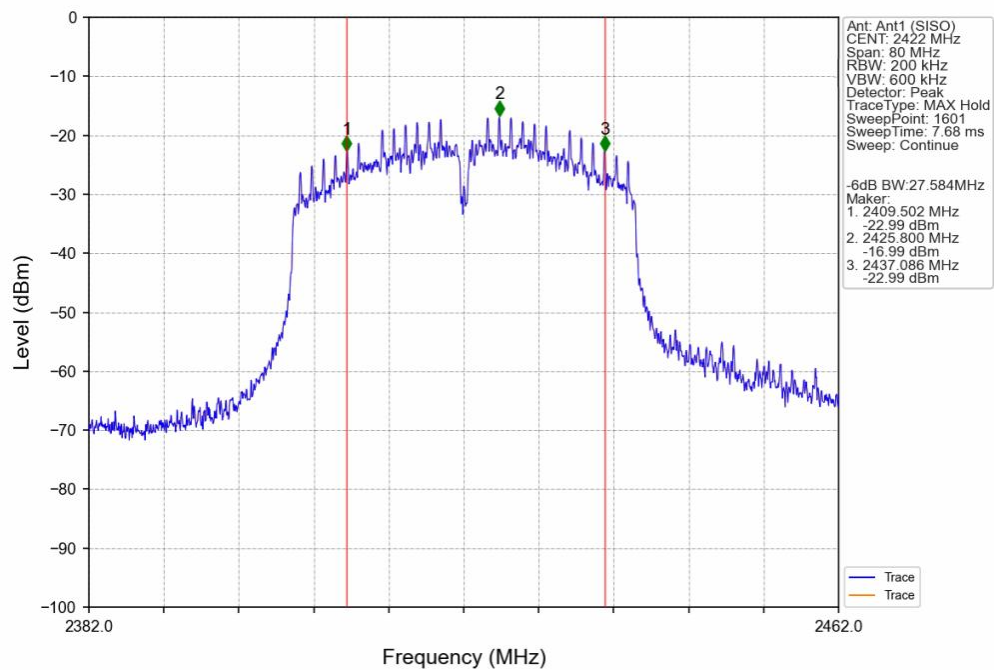
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



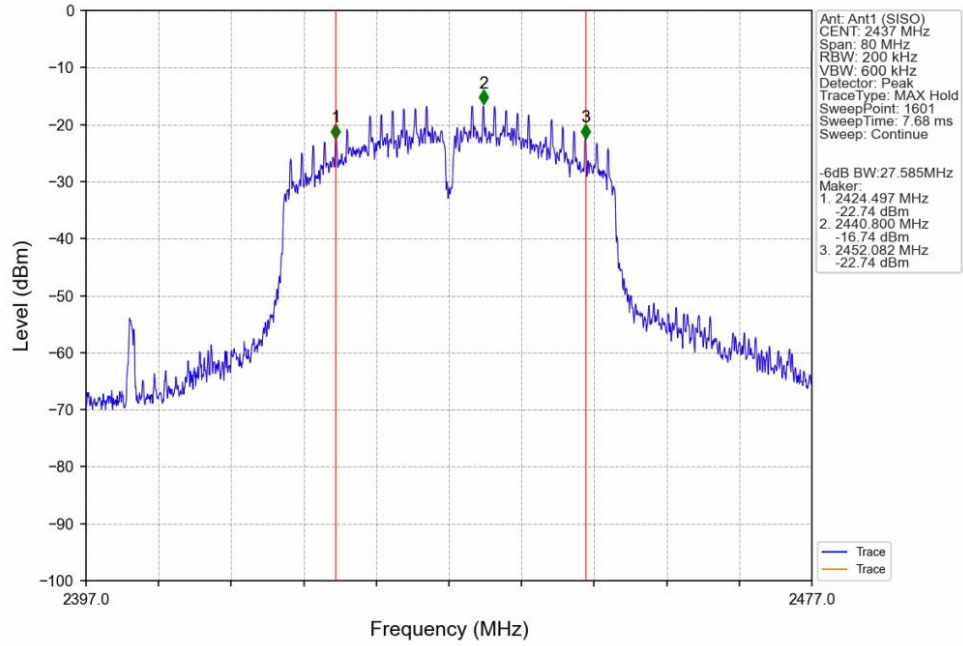
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



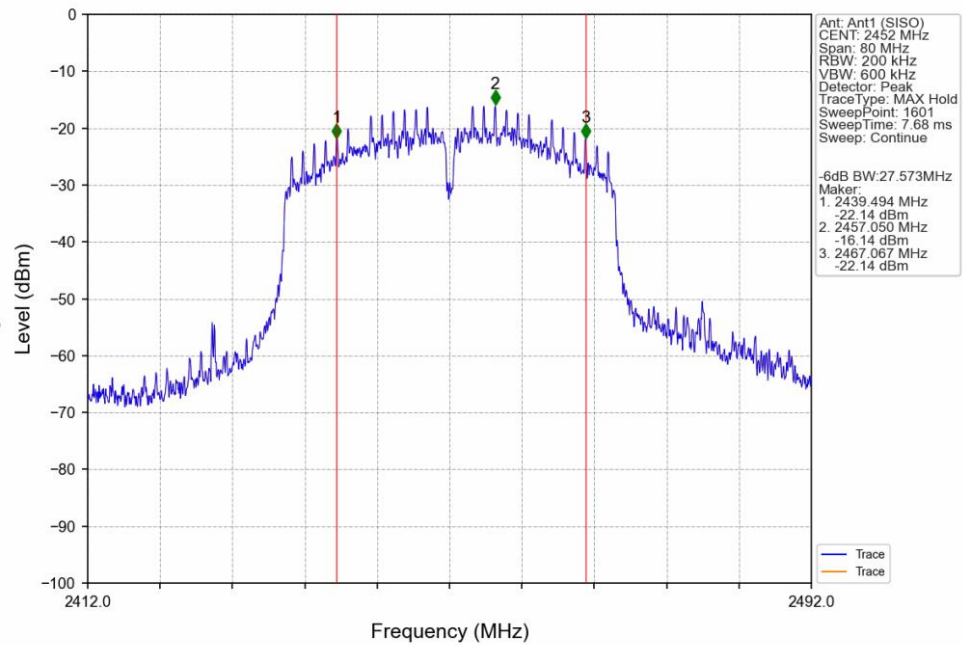
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



3. Maximum Conducted Output Power

3.1 Test Result

3.1.1 Power

Mode	TX Type	Frequency (MHz)	Duty Cycle Correction Factor (dB)	Measure Average Conducted Output Power (dBm)	Maximum Average Conducted Output Power (dBm)	Limit	Verdict
802.11b	SISO	2412	1.16	3.48	4.64	<=30	Pass
		2437	1.16	3.58	4.74	<=30	Pass
		2462	1.16	3.62	4.78	<=30	Pass
802.11g	SISO	2412	4.53	0.17	4.70	<=30	Pass
		2437	4.53	0.96	5.49	<=30	Pass
		2462	4.53	0.63	5.16	<=30	Pass
802.11n (HT20)	SISO	2412	4.72	0.00	4.72	<=30	Pass
		2437	4.72	0.39	5.11	<=30	Pass
		2462	4.72	0.26	4.98	<=30	Pass
802.11n (HT40)	SISO	2422	6.95	-1.76	5.19	<=30	Pass
		2437	6.96	-1.69	5.27	<=30	Pass
		2452	6.95	-2.35	4.60	<=30	Pass

Note: Maximum Average Conducted Output = Duty Cycle Factor + Measurement Average Conducted

4. Maximum Power Spectral Density

4.1 Test Result

4.1.1 PSD

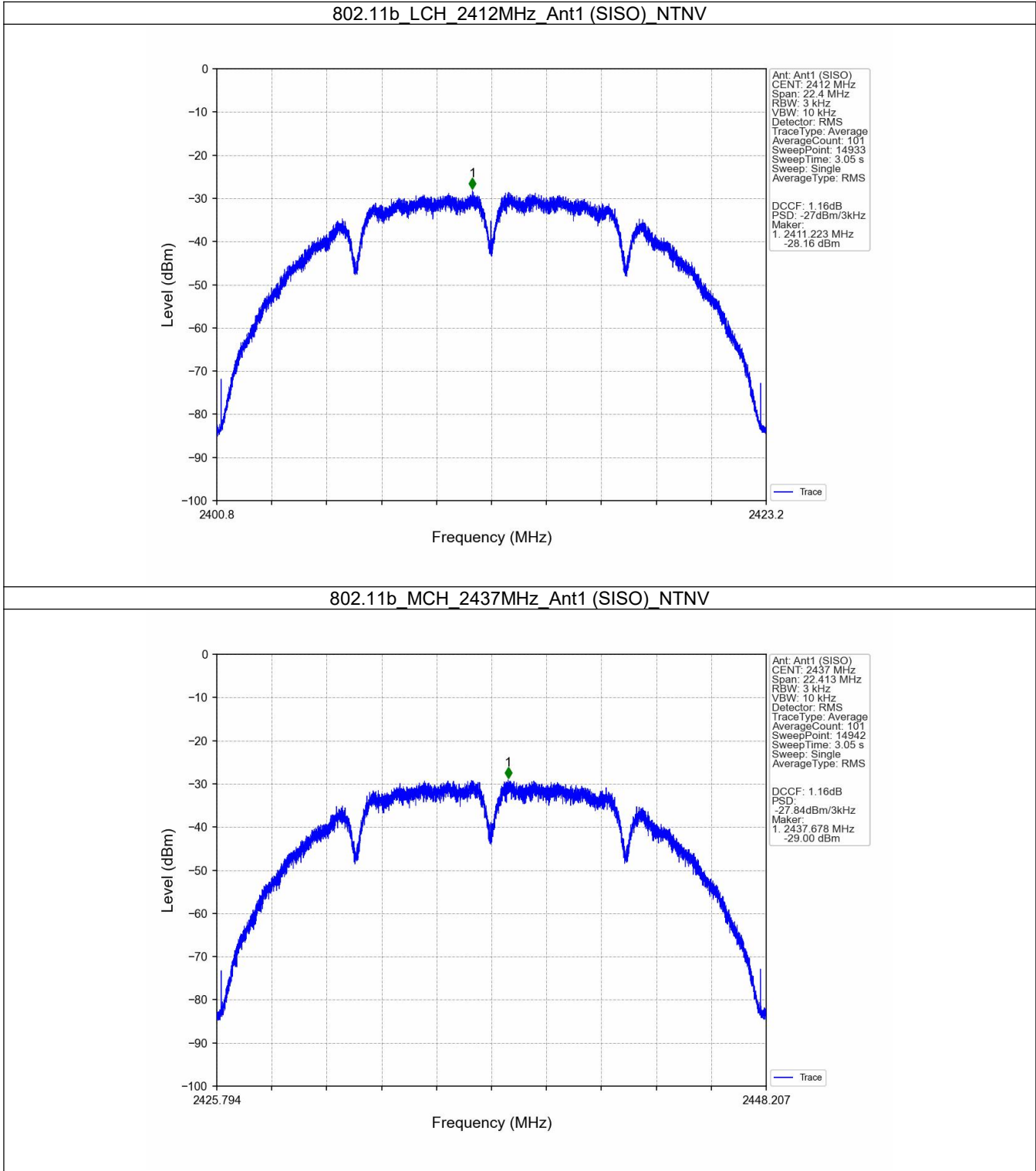
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	-27.00	<=8	Pass
		2437	-27.84	<=8	Pass
		2462	-27.34	<=8	Pass
802.11g	SISO	2412	-26.62	<=8	Pass
		2437	-27.84	<=8	Pass
		2462	-28.32	<=8	Pass
802.11n (HT20)	SISO	2412	-27.01	<=8	Pass
		2437	-25.11	<=8	Pass
		2462	-25.88	<=8	Pass
802.11n (HT40)	SISO	2422	-26.46	<=8	Pass
		2437	-26.29	<=8	Pass
		2452	-27.81	<=8	Pass

Note1: Antenna Gain: Ant1: 3.74dBi;

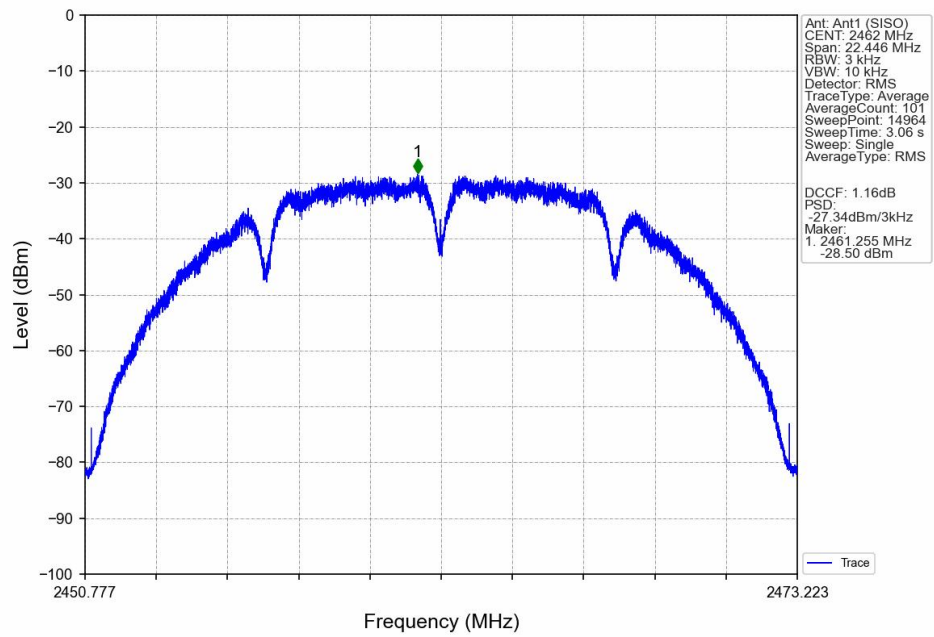
Note: The Duty cycle factor had add into the final test plots

4.2 Test Graph

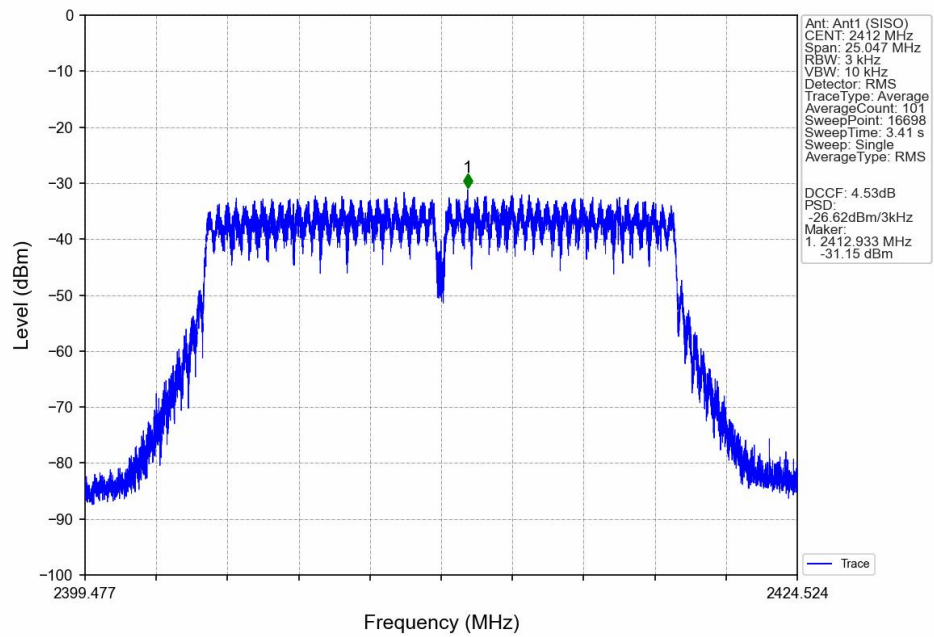
4.2.1 PSD



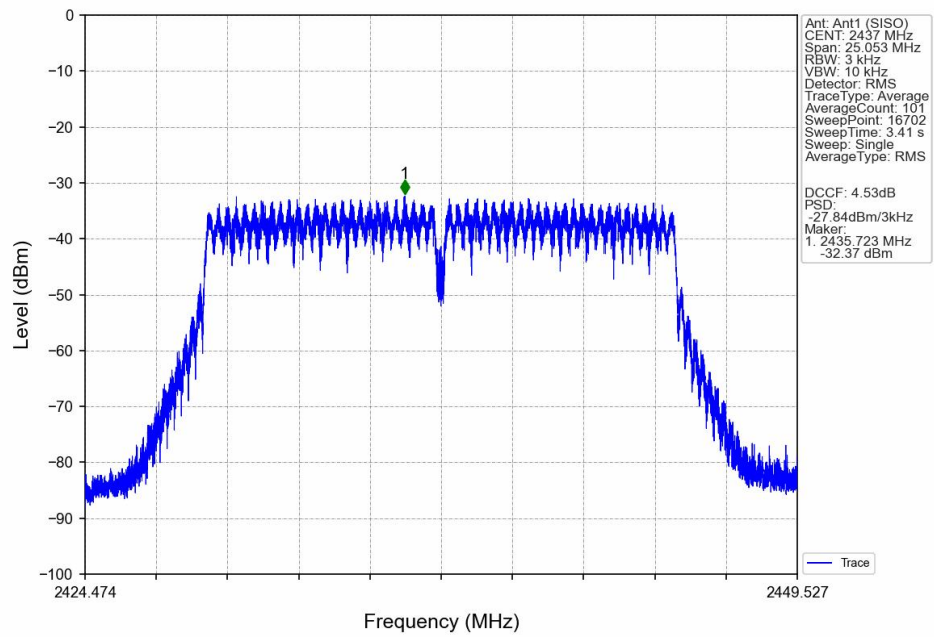
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



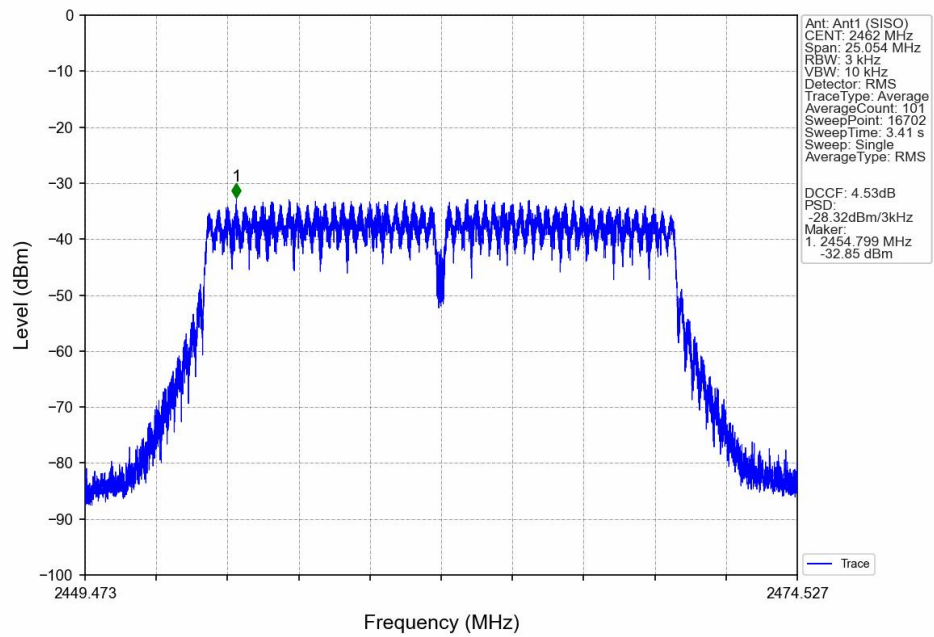
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



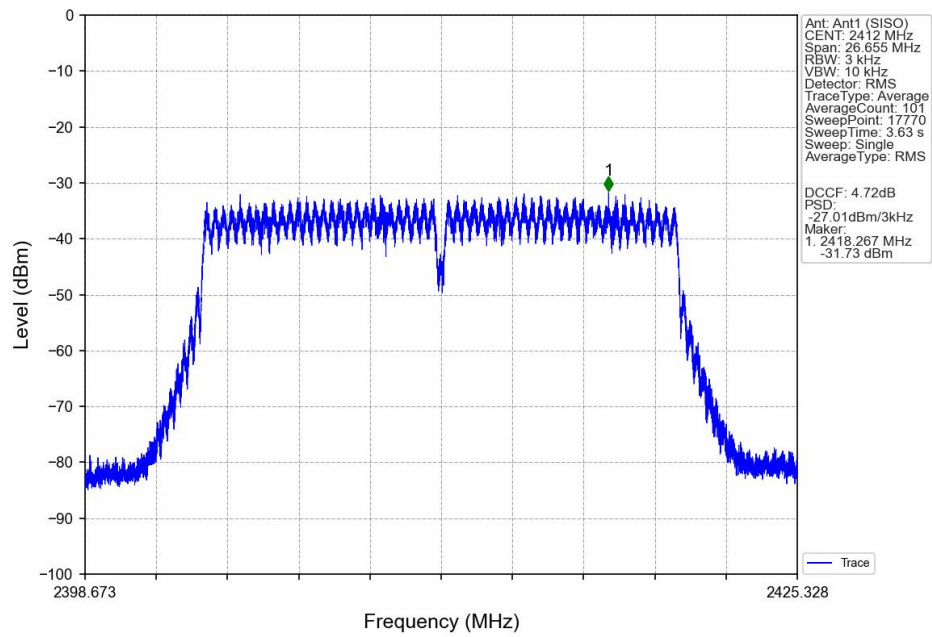
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



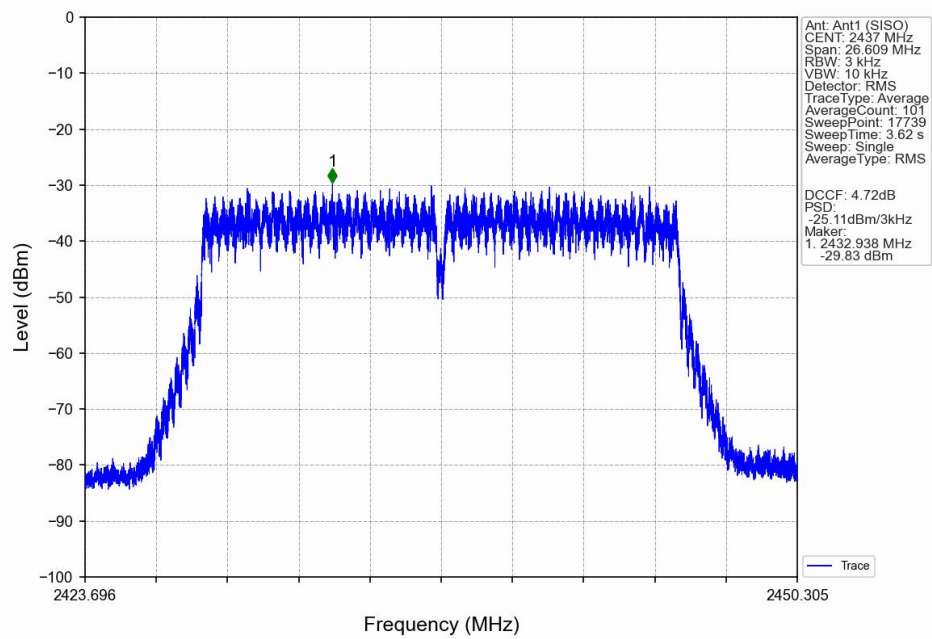
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



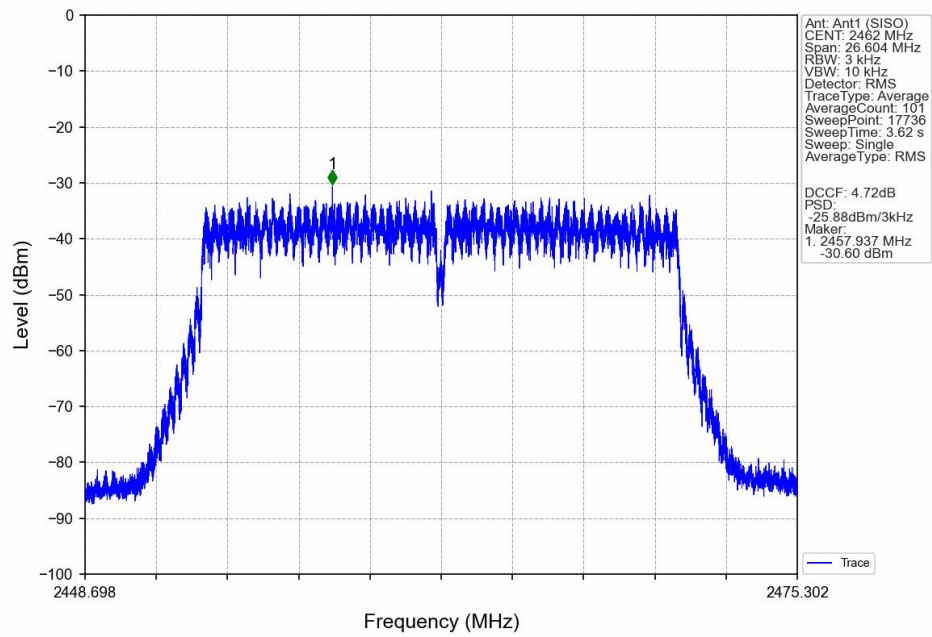
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



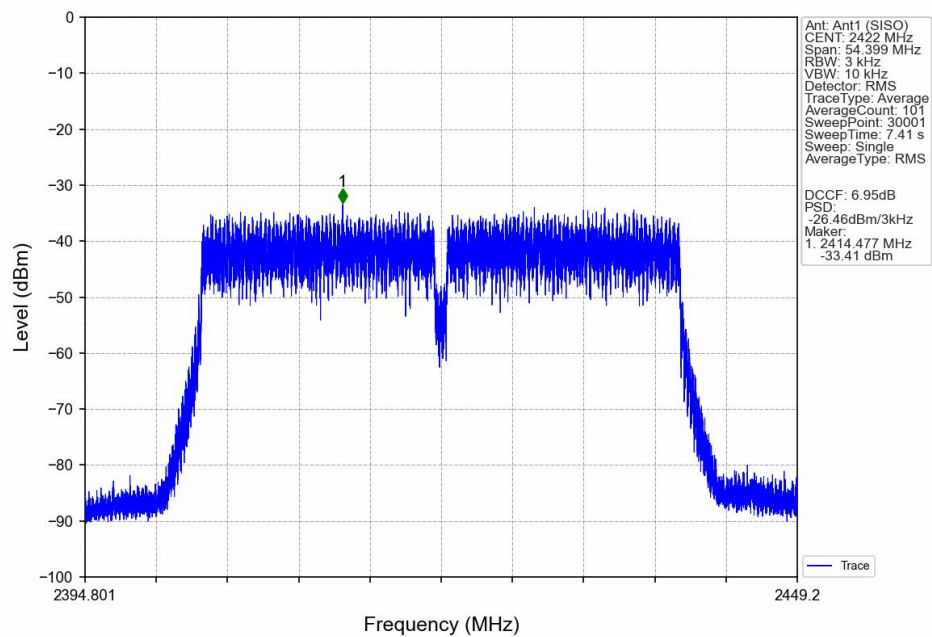
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



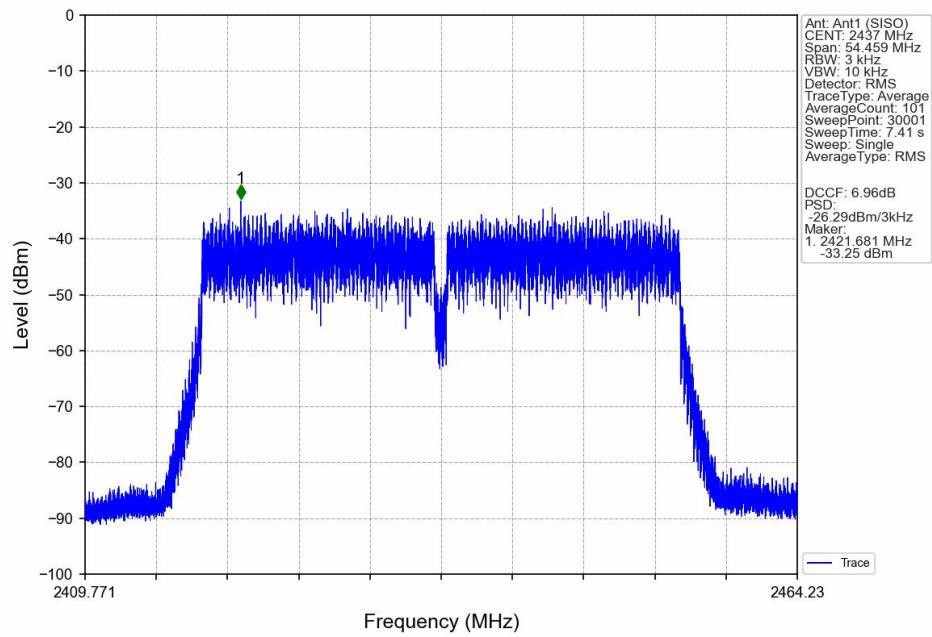
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



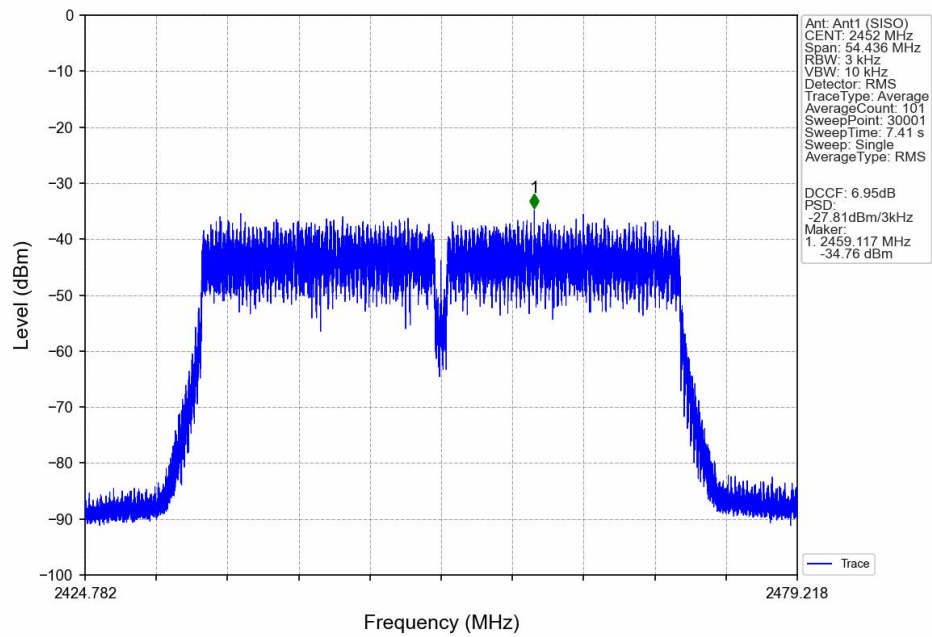
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



5. Unwanted Emissions In Non-restricted Frequency Bands

5.1 Test Result

5.1.1 Ref

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
802.11b	SISO	2412	1	-5.07
		2437	1	-5.75
		2462	1	-5.07
802.11g	SISO	2412	1	-6.00
		2437	1	-6.81
		2462	1	-7.12
802.11n (HT20)	SISO	2412	1	-5.26
		2437	1	-5.39
		2462	1	-7.02
802.11n (HT40)	SISO	2422	1	-8.62
		2437	1	-9.25
		2452	1	-9.74

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

5.1.2 CSE

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	-5.07	-35.07	Pass
		2437	1	-5.75	-35.75	Pass
		2462	1	-5.07	-35.07	Pass
802.11g	SISO	2412	1	-6.00	-36.00	Pass
		2437	1	-6.81	-36.81	Pass
		2462	1	-7.12	-37.12	Pass
802.11n (HT20)	SISO	2412	1	-5.26	-35.26	Pass
		2437	1	-5.39	-35.39	Pass
		2462	1	-7.02	-37.02	Pass
802.11n (HT40)	SISO	2422	1	-8.62	-38.62	Pass
		2437	1	-9.25	-39.25	Pass
		2452	1	-9.74	-39.74	Pass

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.