Appendix for SHEM210600600601

1. Duty Cycle

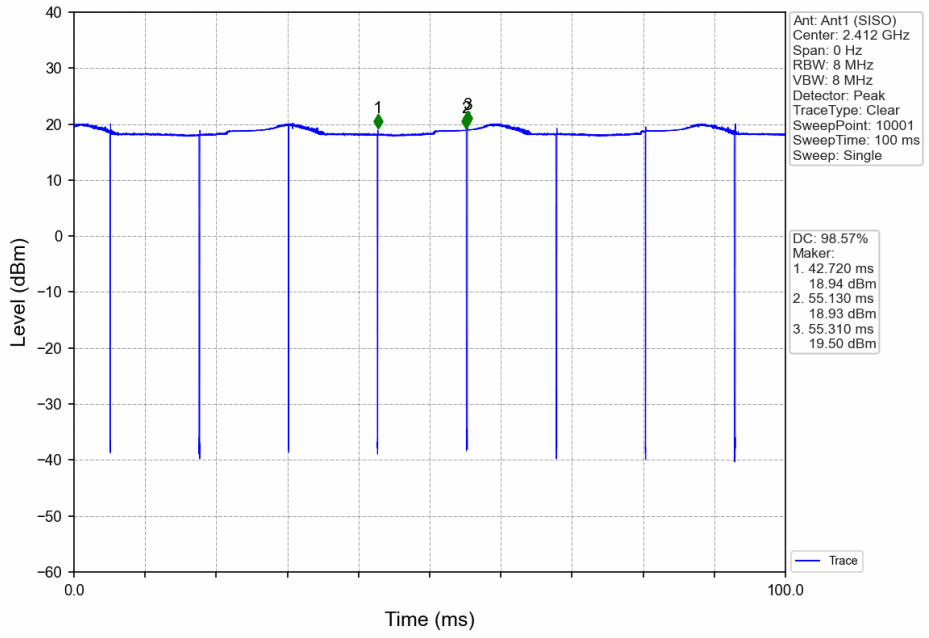
1.1 Ant1

1.1.1 Test Result

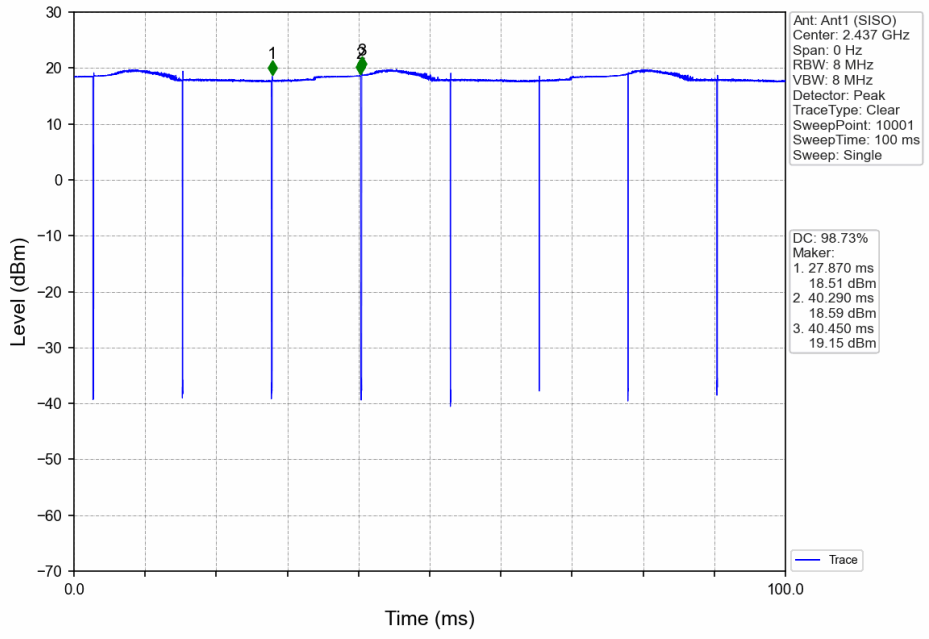
Ant1									
Mode	TX Type	Frequency (MHz)	RU	RU Pos	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11b	SISO	2412	/	/	12.41	12.59	98.57	0.06	0.87
		2437	/	/	12.42	12.58	98.73	0.06	0.95
		2462	/	/	12.42	12.58	98.73	0.06	0.79
802.11g	SISO	2412	/	/	2.06	2.24	92.27	0.35	5.90
		2437	/	/	2.06	2.23	92.35	0.35	5.49
		2462	/	/	2.06	2.24	92.27	0.35	5.13
802.11n (HT20)	SISO	2412	/	/	1.92	2.06	92.98	0.32	4.76
		2437	/	/	1.92	2.09	91.73	0.37	6.35
		2462	/	/	1.92	2.08	92.49	0.34	4.58
802.11n (HT40)	SISO	2422	/	/	0.94	1.10	85.90	0.66	10.21
		2437	/	/	0.94	1.11	85.20	0.70	10.94
		2452	/	/	0.94	1.12	84.44	0.73	11.72
Note1: Only for Report Use									

1.1.2 Test Graph

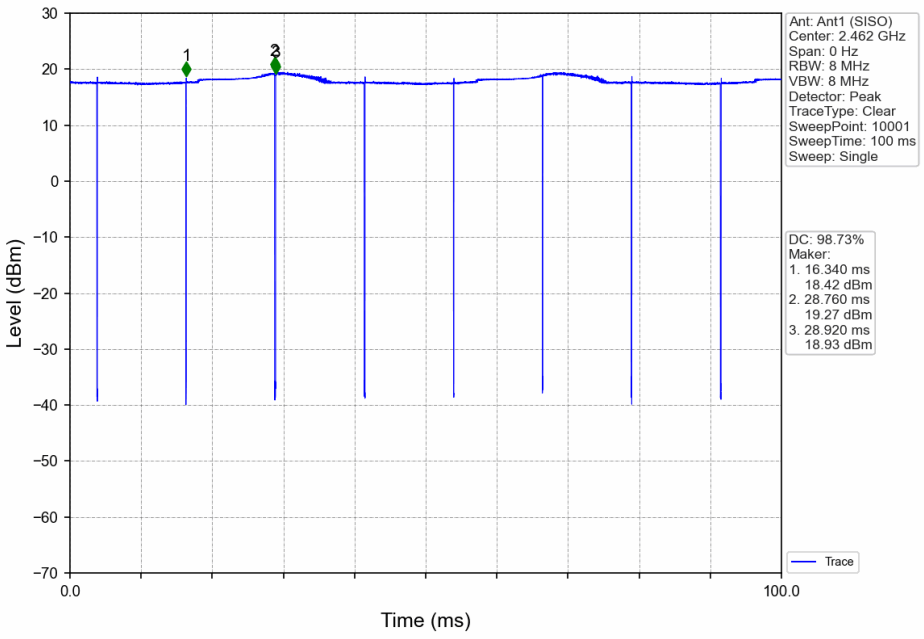
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



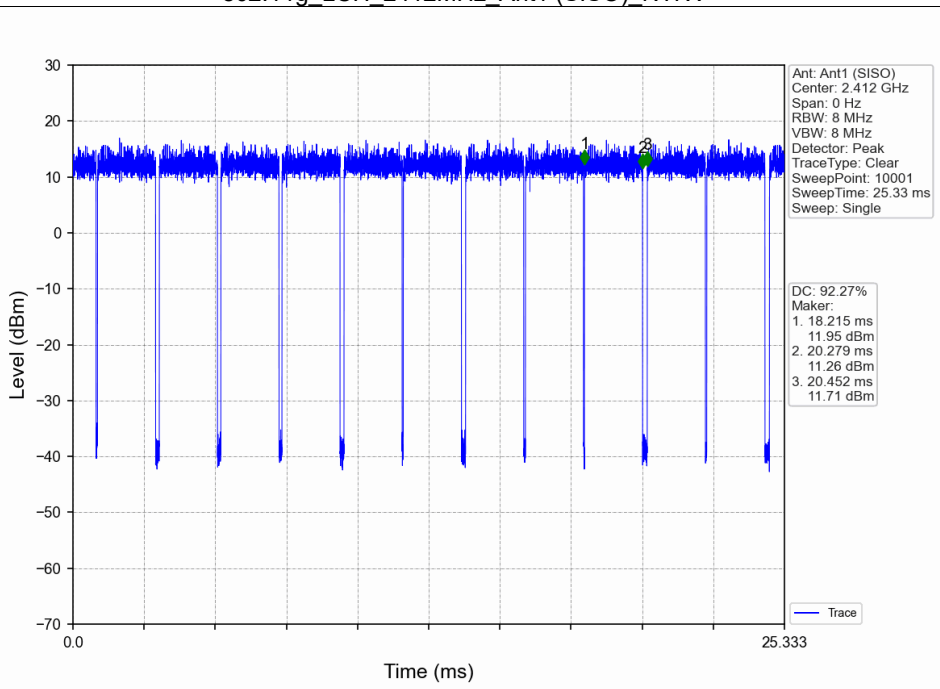
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



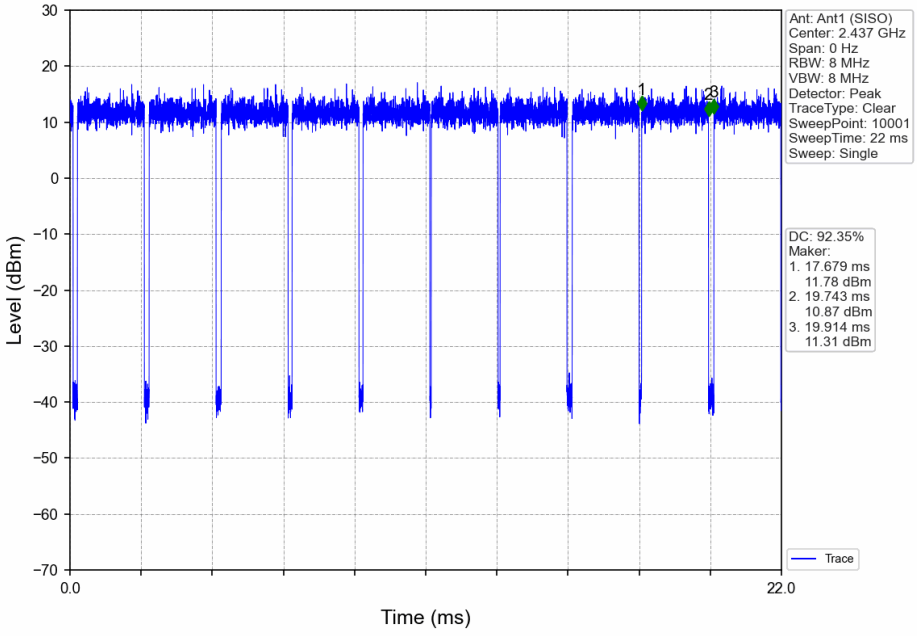
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



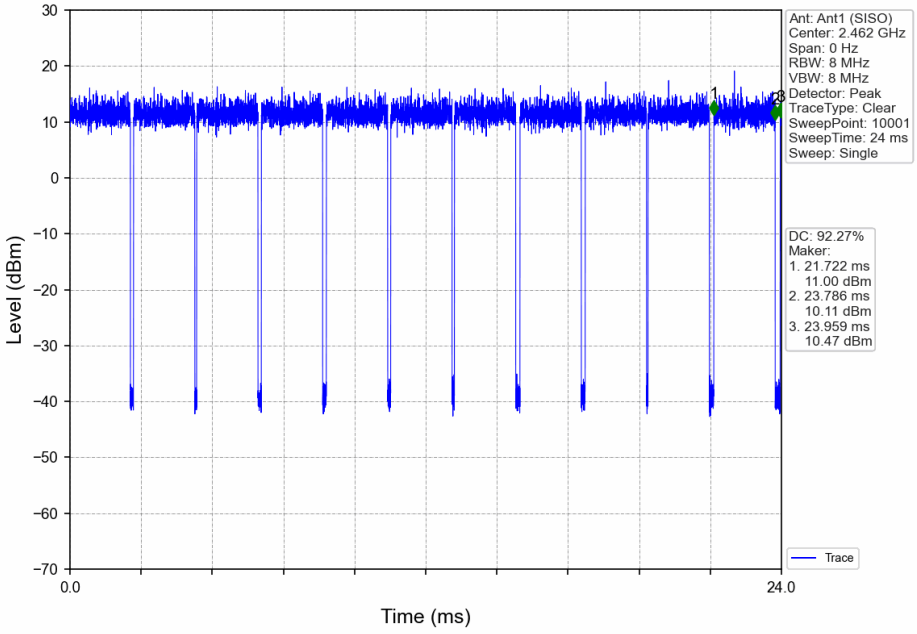
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



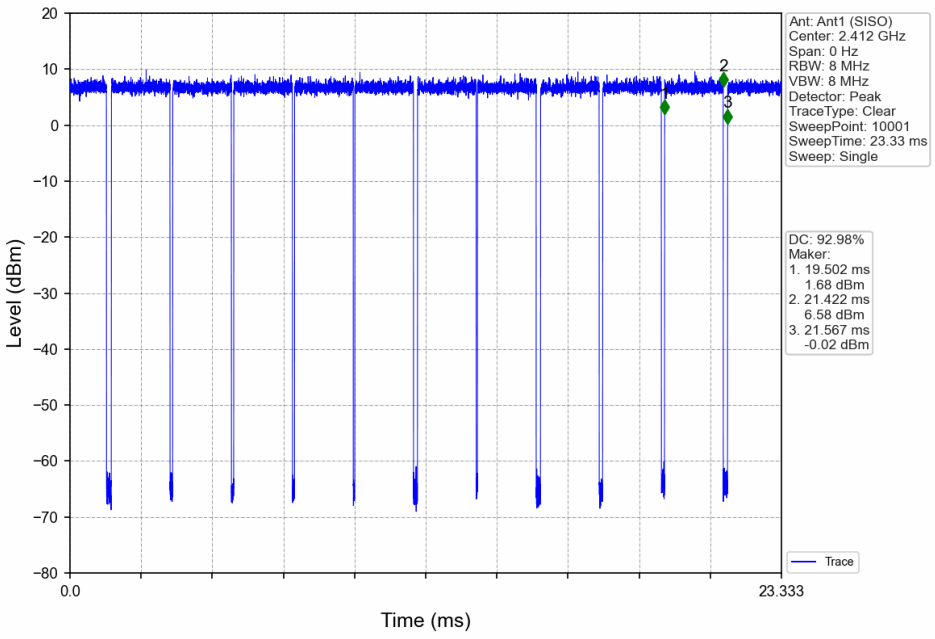
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



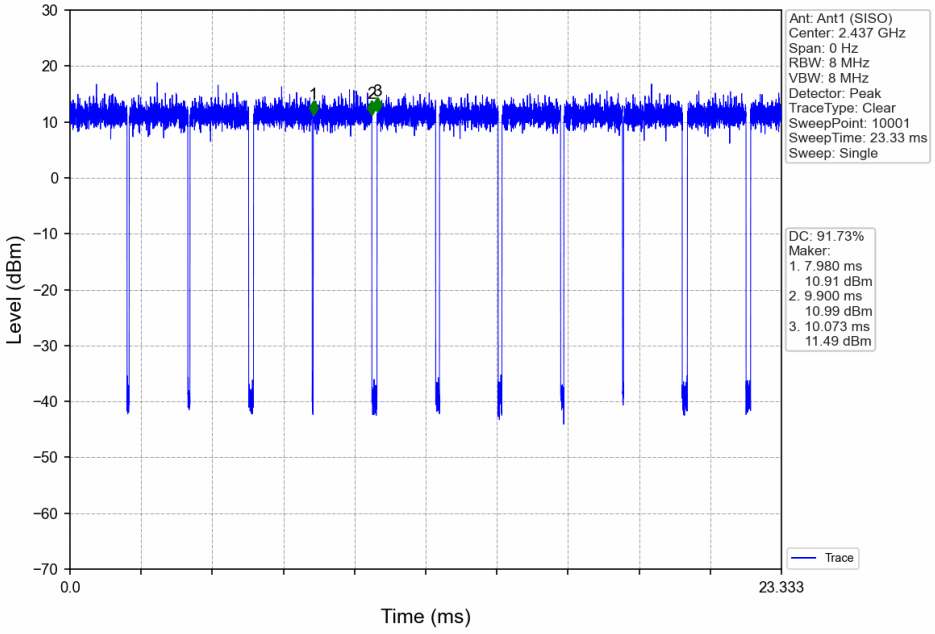
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



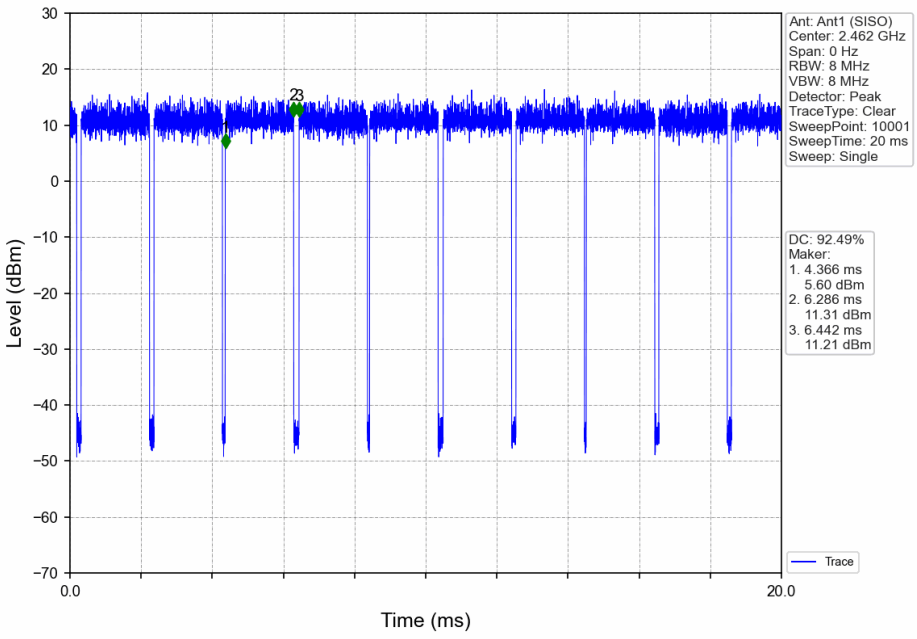
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



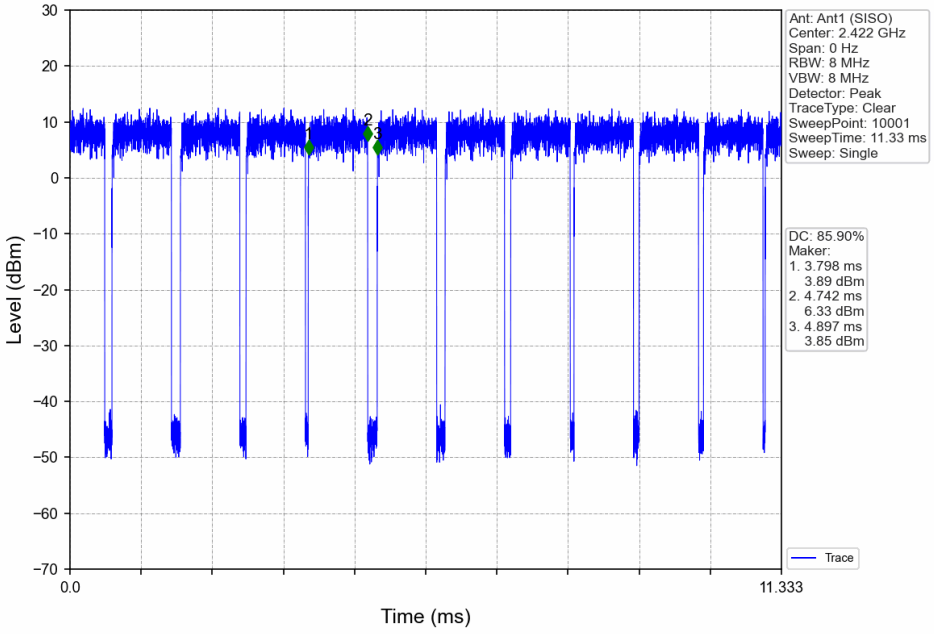
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



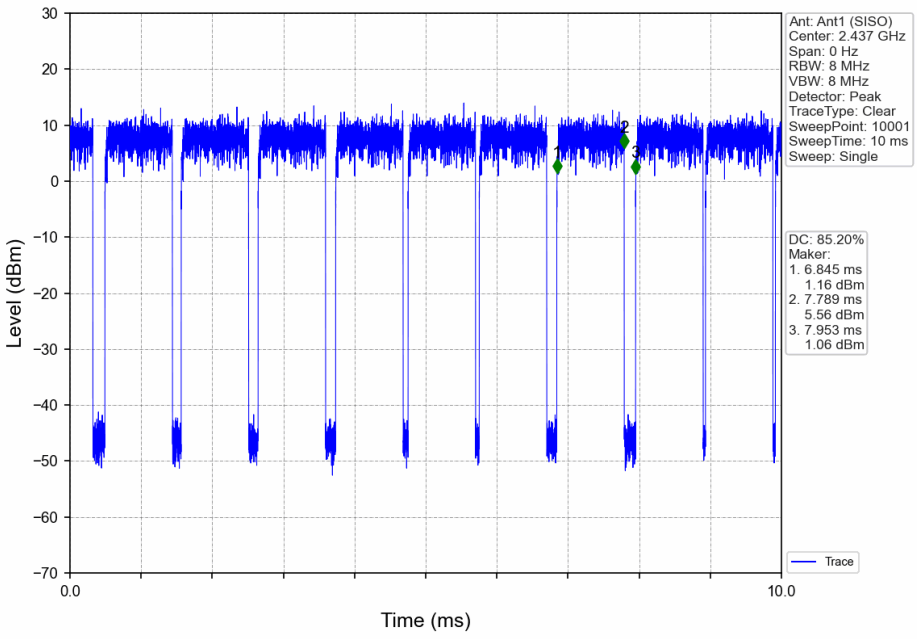
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



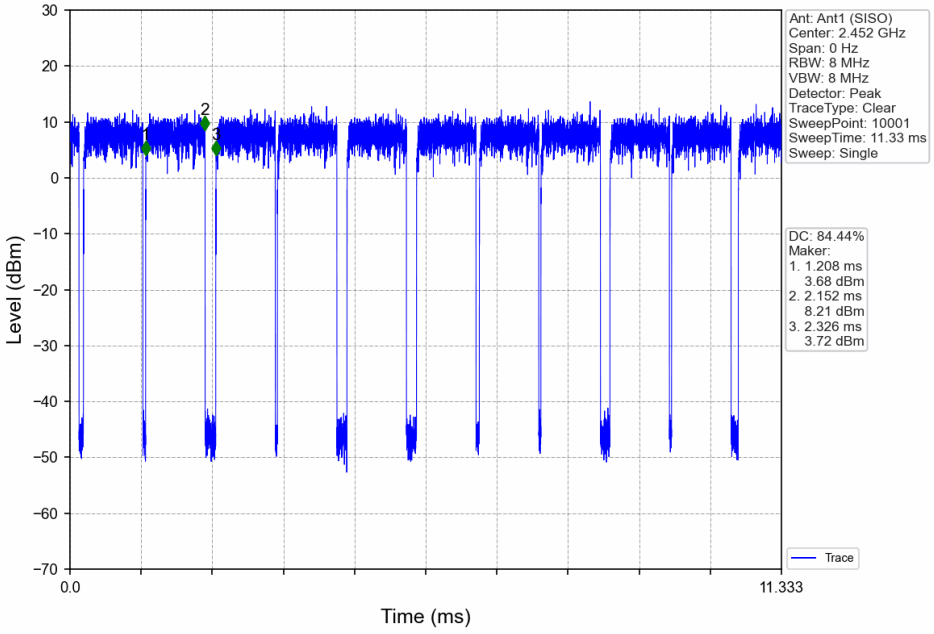
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



2. Bandwidth

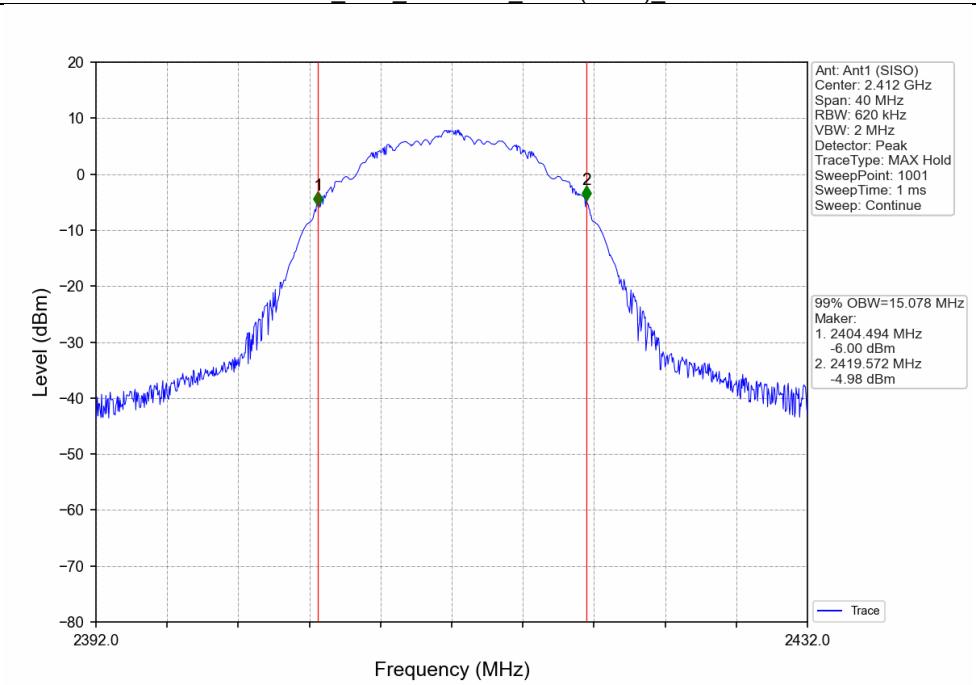
2.1 OBW

2.1.1 Test Result

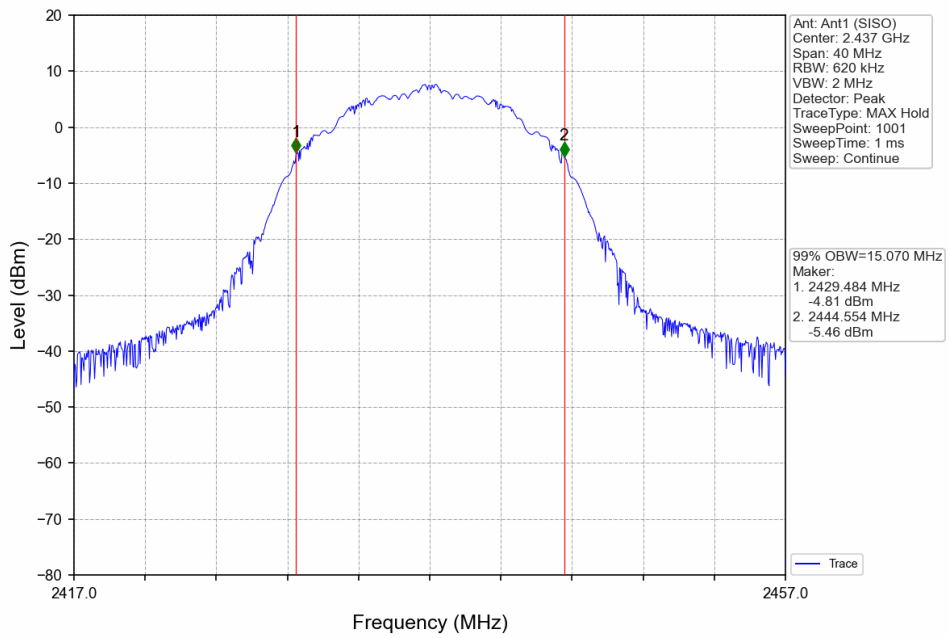
Mode	TX Type	Frequency (MHz)	RU	RU Pos	Ant	99% Occupied Bandwidth (MHz)	Limit	Verdict
802.11b	SISO	2412	/	/	1	15.08	/	Note1
		2437	/	/	1	15.07	/	Note1
		2462	/	/	1	15.05	/	Note1
802.11g	SISO	2412	/	/	1	17.39	/	Note1
		2437	/	/	1	17.69	/	Note1
		2462	/	/	1	17.40	/	Note1
802.11n (HT20)	SISO	2412	/	/	1	18.31	/	Note1
		2437	/	/	1	18.30	/	Note1
		2462	/	/	1	18.38	/	Note1
802.11n (HT40)	SISO	2422	/	/	1	36.87	/	Note1
		2437	/	/	1	36.80	/	Note1
		2452	/	/	1	36.80	/	Note1
Note1: Only for Report Use								

2.1.2 Test Graph

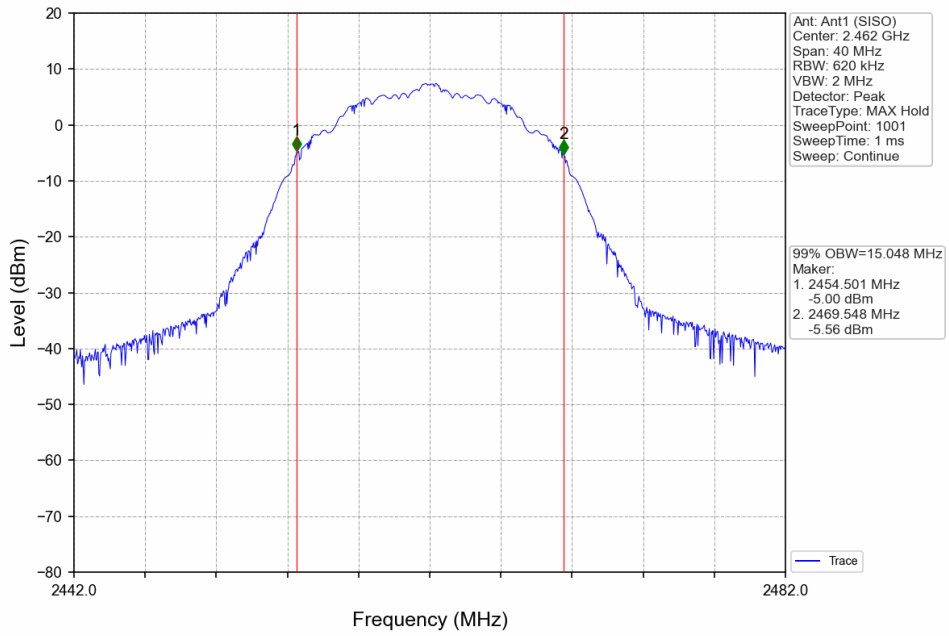
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



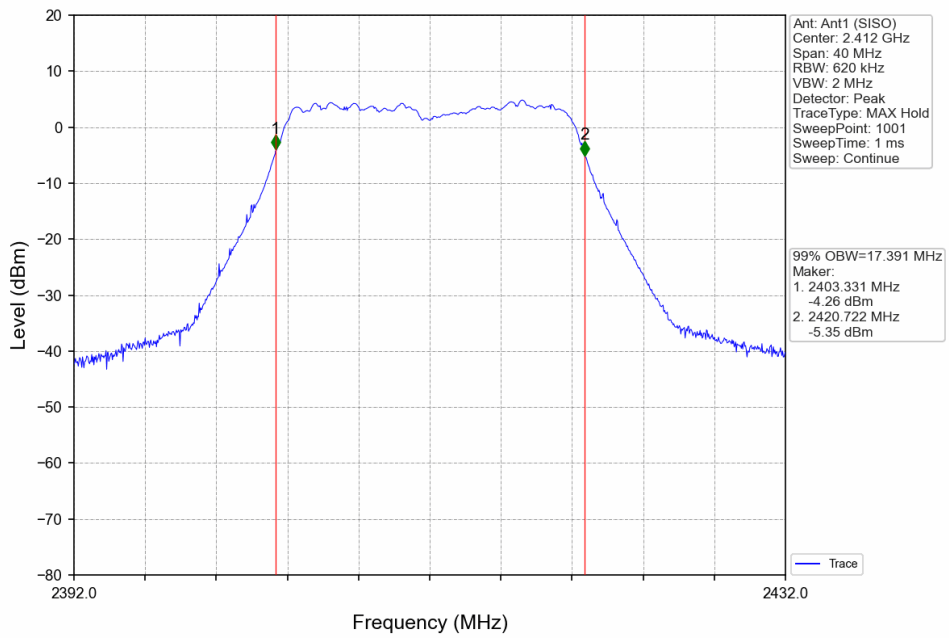
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



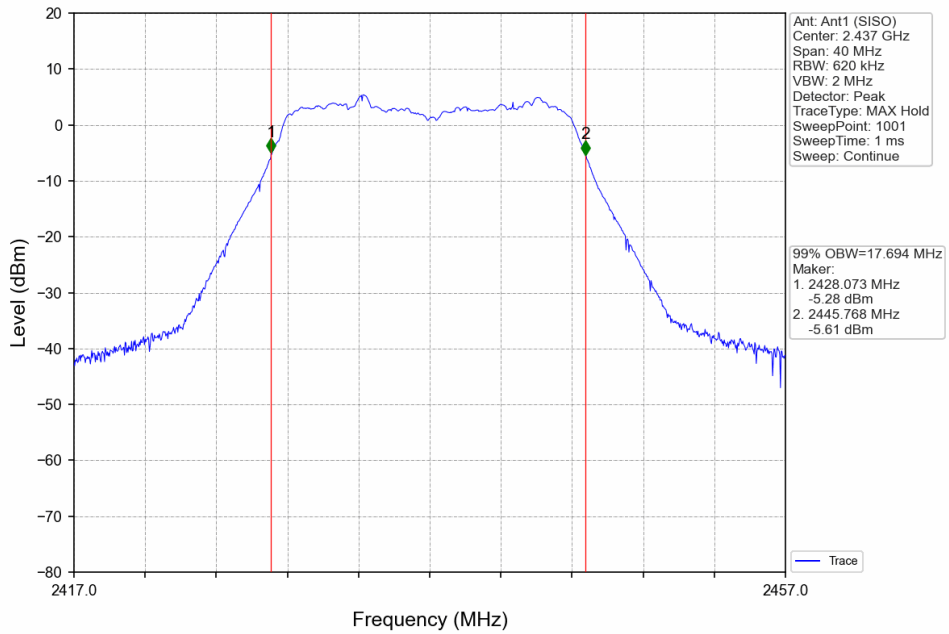
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



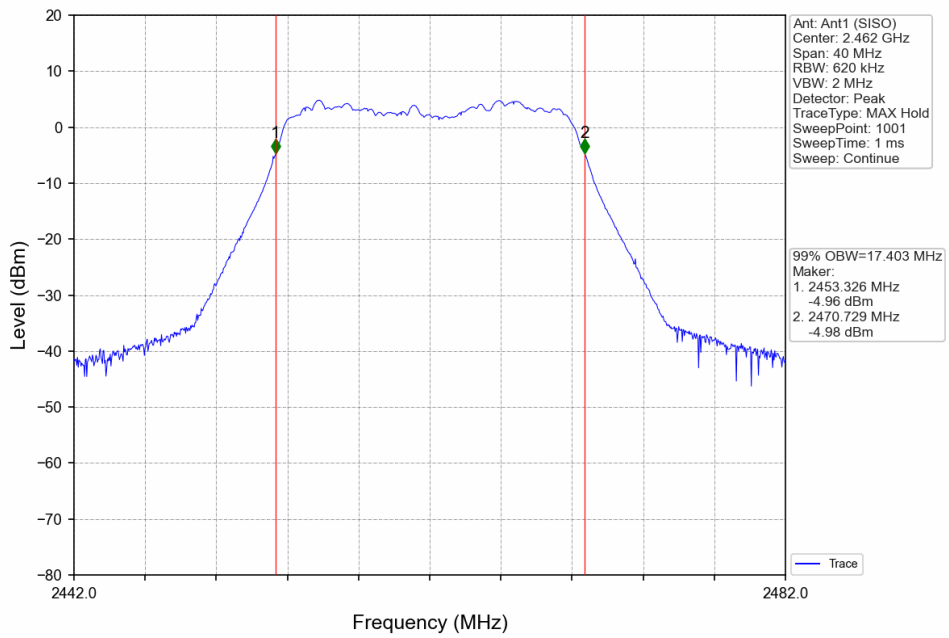
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



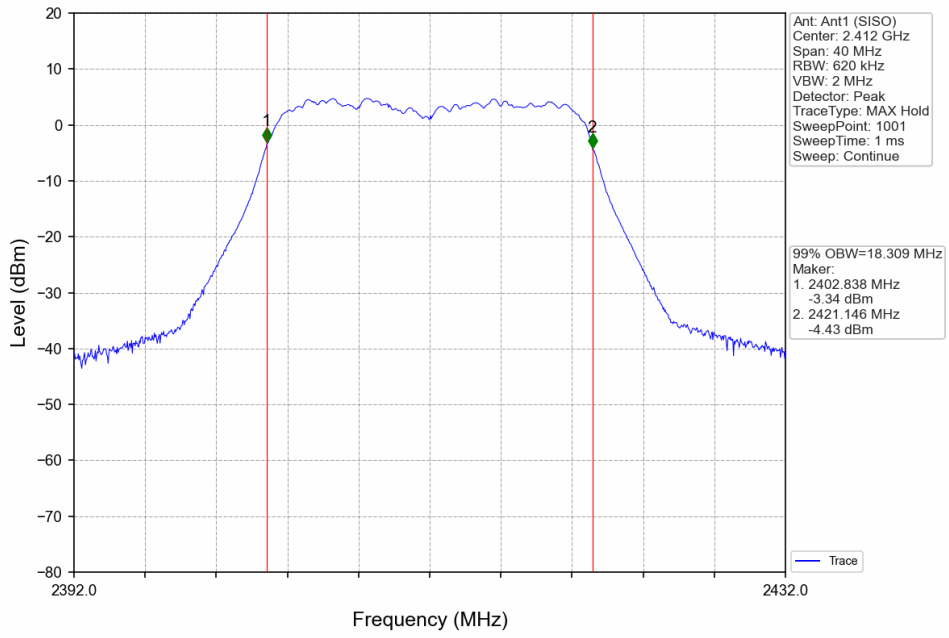
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



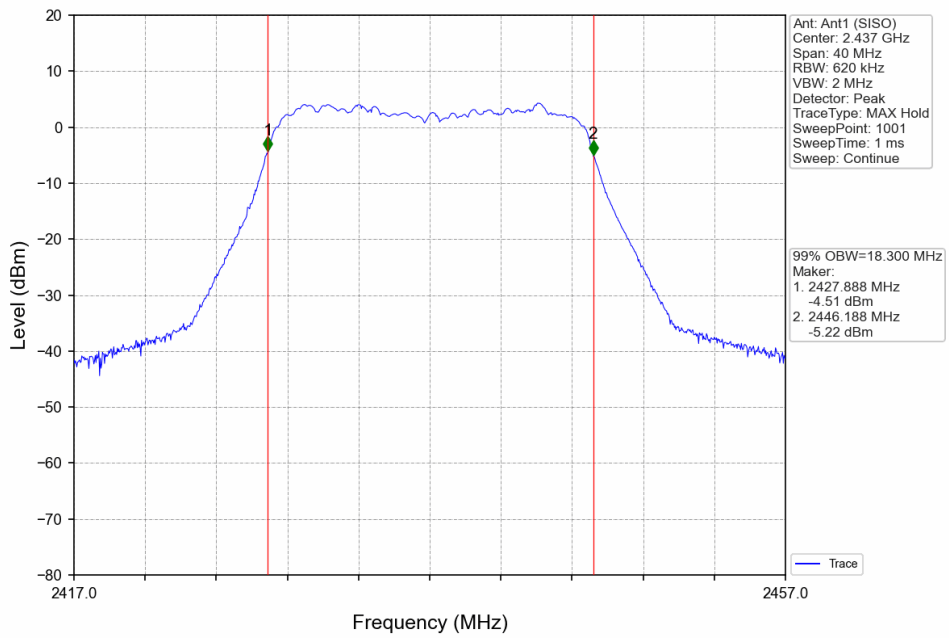
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



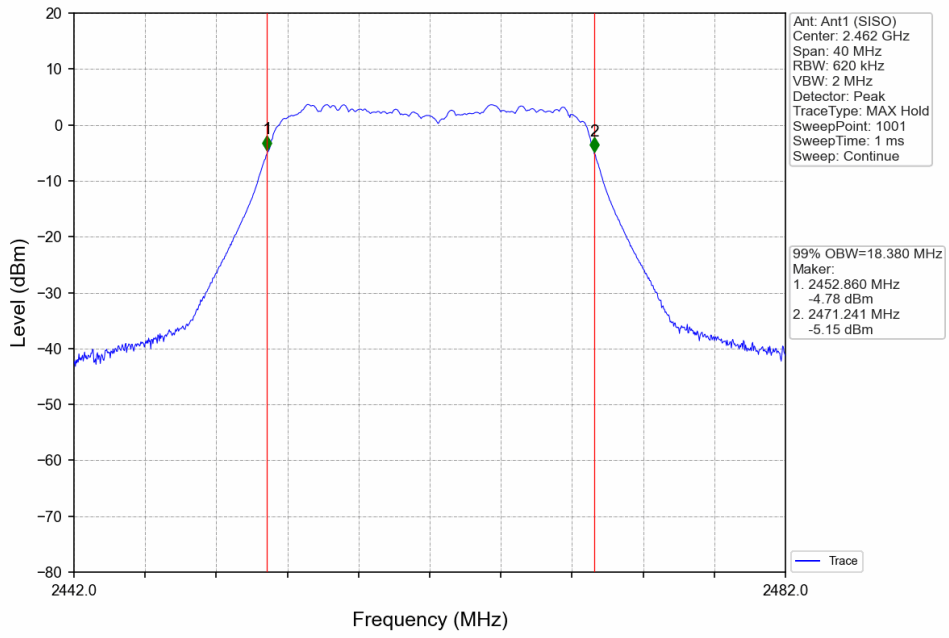
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



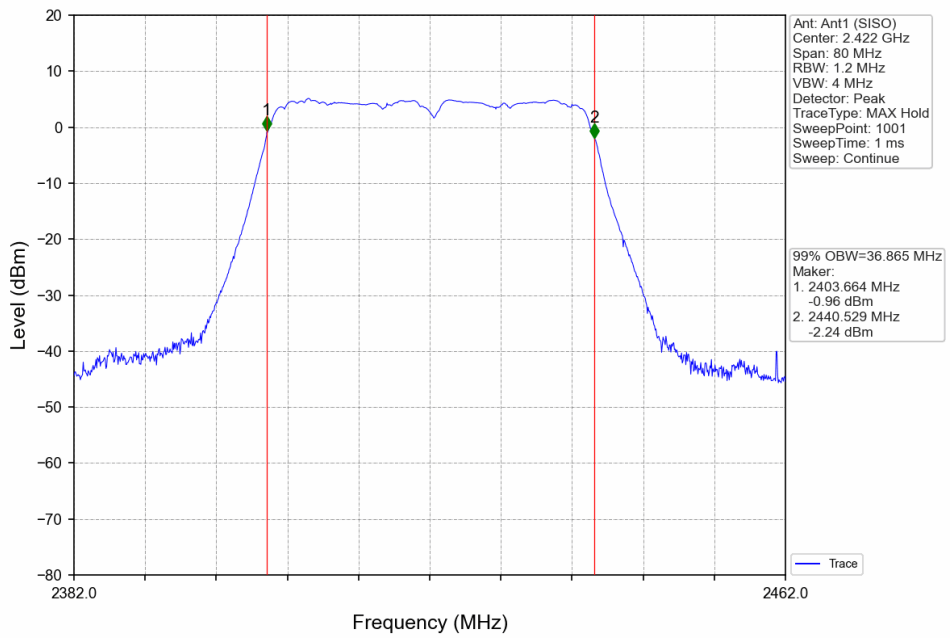
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



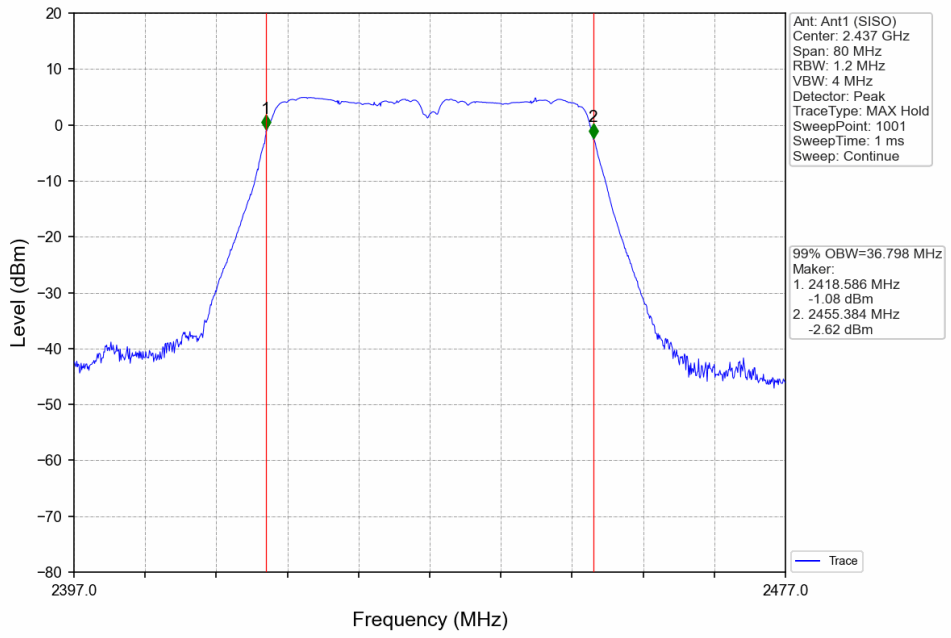
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



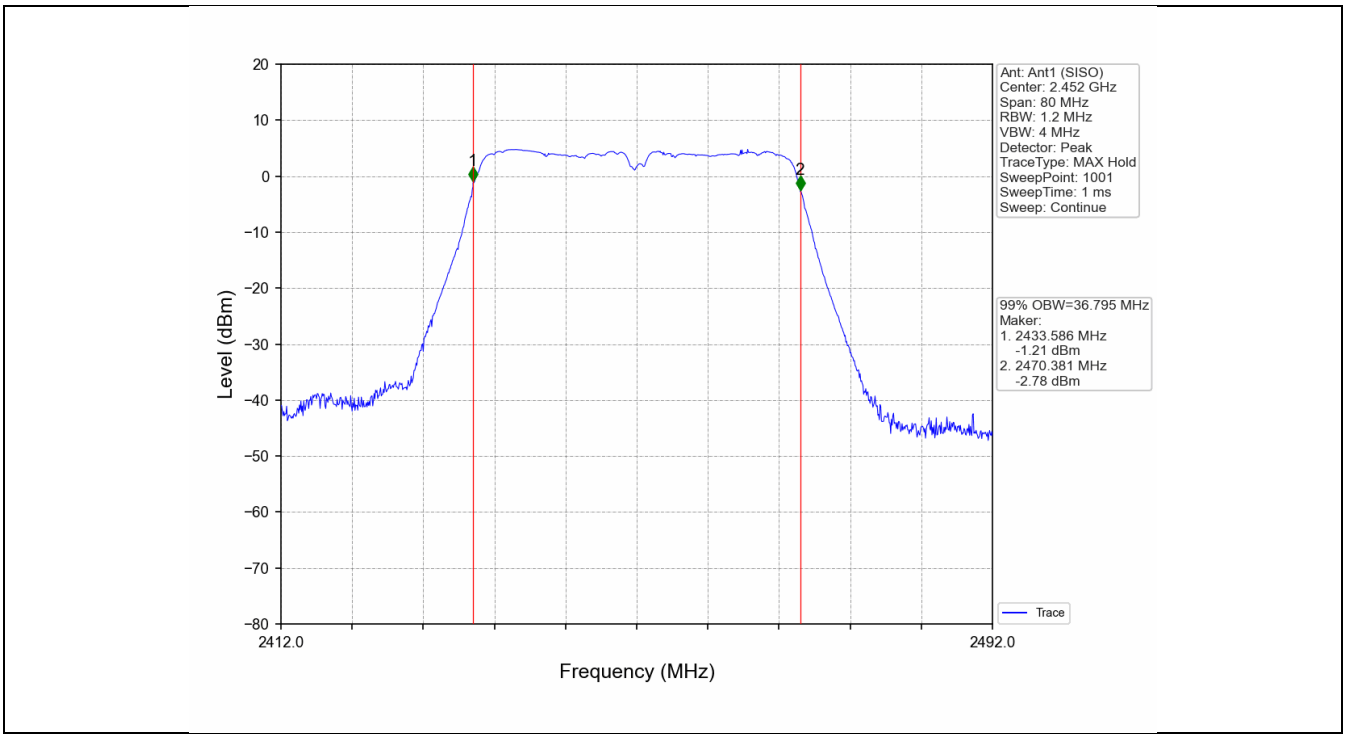
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



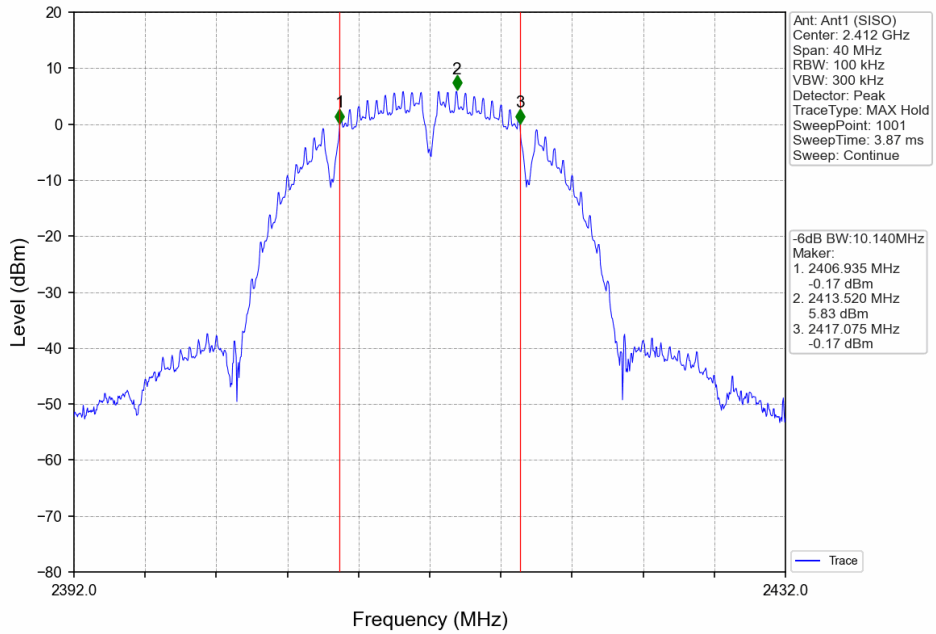
2.2 XDB

2.2.1 Test Result

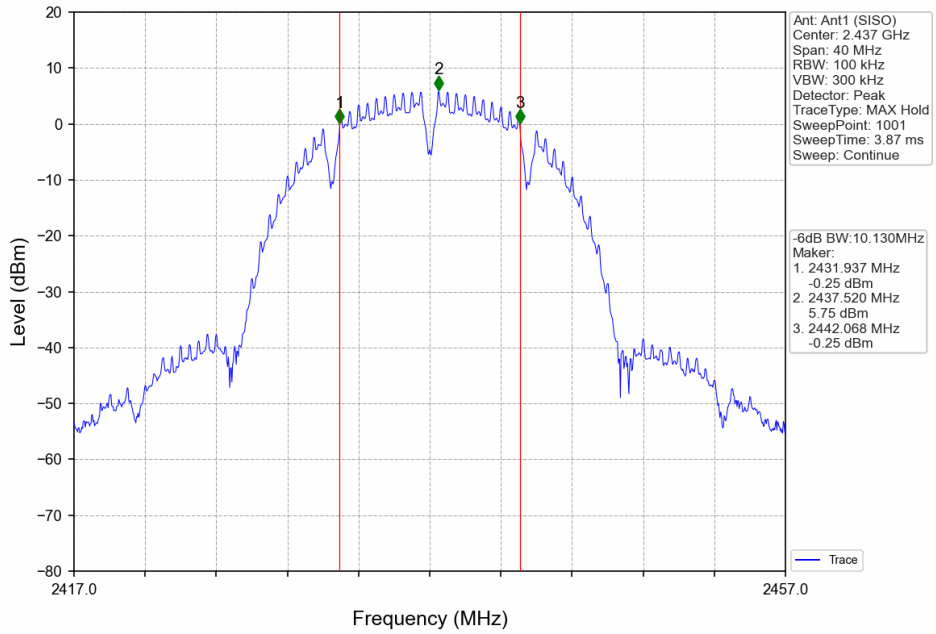
Mode	TX Type	Frequency (MHz)	RU	RU Pos	Ant	6dB Bandwidth (MHz)	Limit	Verdict
802.11b	SISO	2412	/	/	1	10.14	>=0.5	Pass
		2437	/	/	1	10.13	>=0.5	Pass
		2462	/	/	1	10.12	>=0.5	Pass
802.11g	SISO	2412	/	/	1	16.37	>=0.5	Pass
		2437	/	/	1	16.37	>=0.5	Pass
		2462	/	/	1	16.36	>=0.5	Pass
802.11n (HT20)	SISO	2412	/	/	1	17.16	>=0.5	Pass
		2437	/	/	1	17.10	>=0.5	Pass
		2462	/	/	1	17.11	>=0.5	Pass
802.11n (HT40)	SISO	2422	/	/	1	35.53	>=0.5	Pass
		2437	/	/	1	35.83	>=0.5	Pass
		2452	/	/	1	35.82	>=0.5	Pass

2.2.2 Test Graph

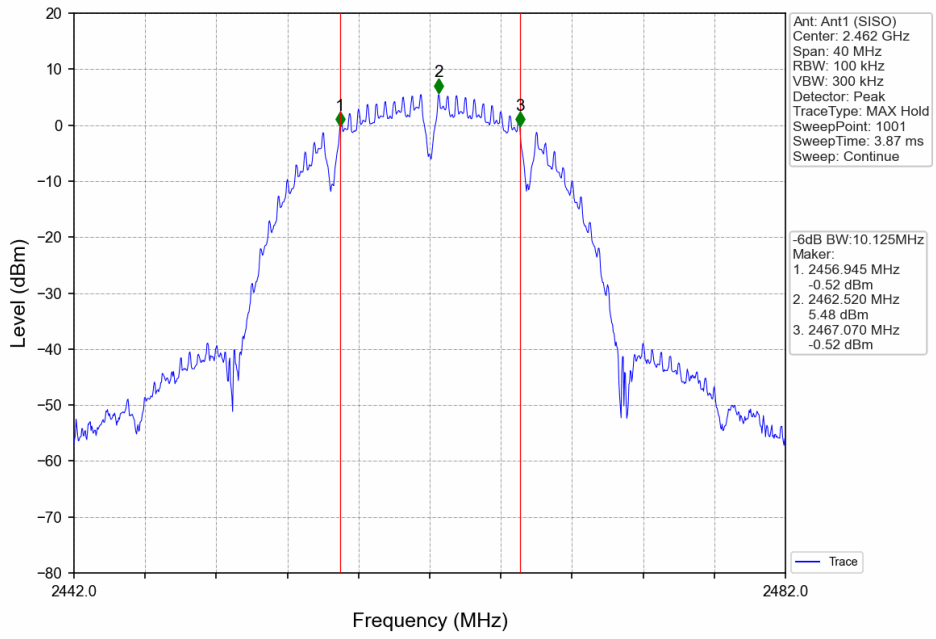
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



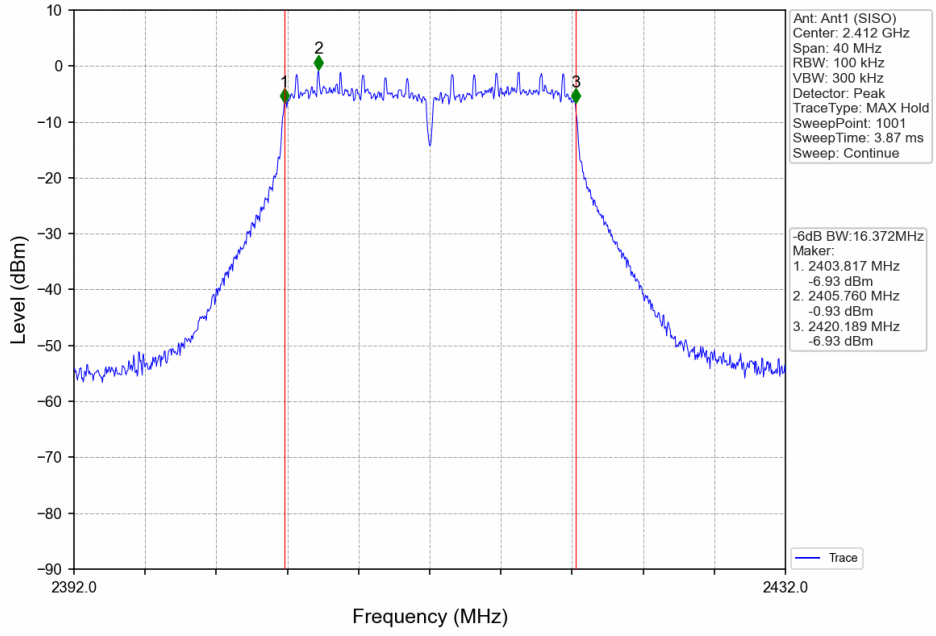
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



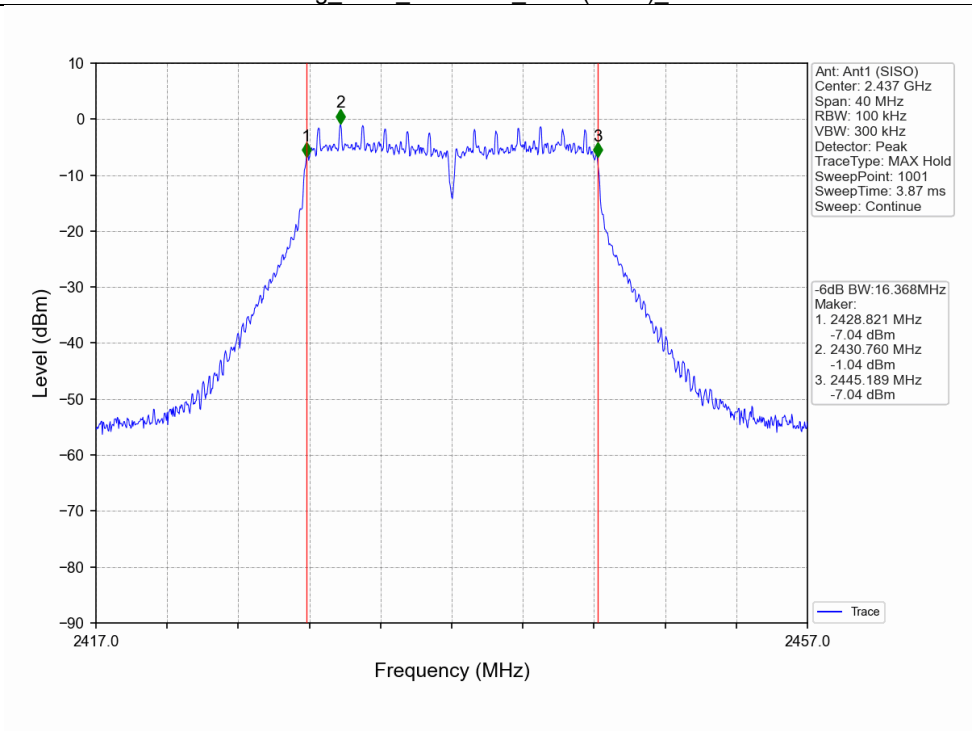
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



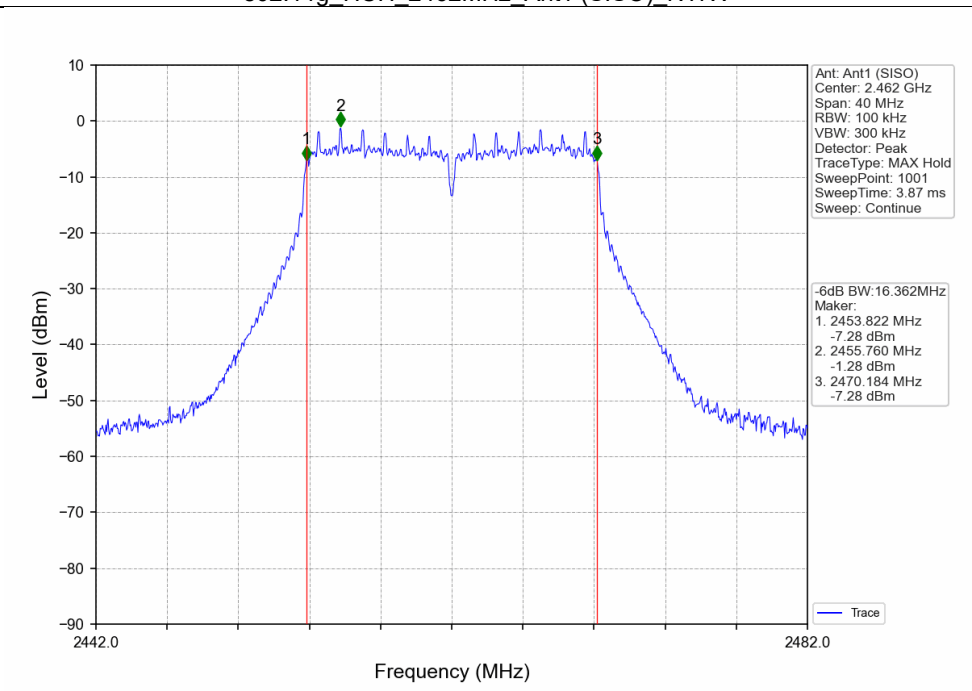
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



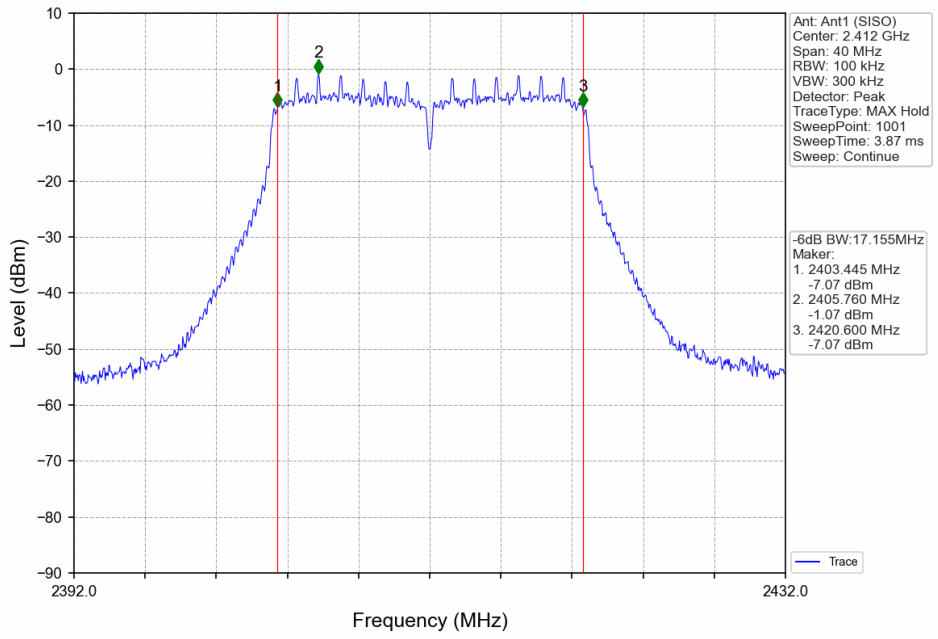
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



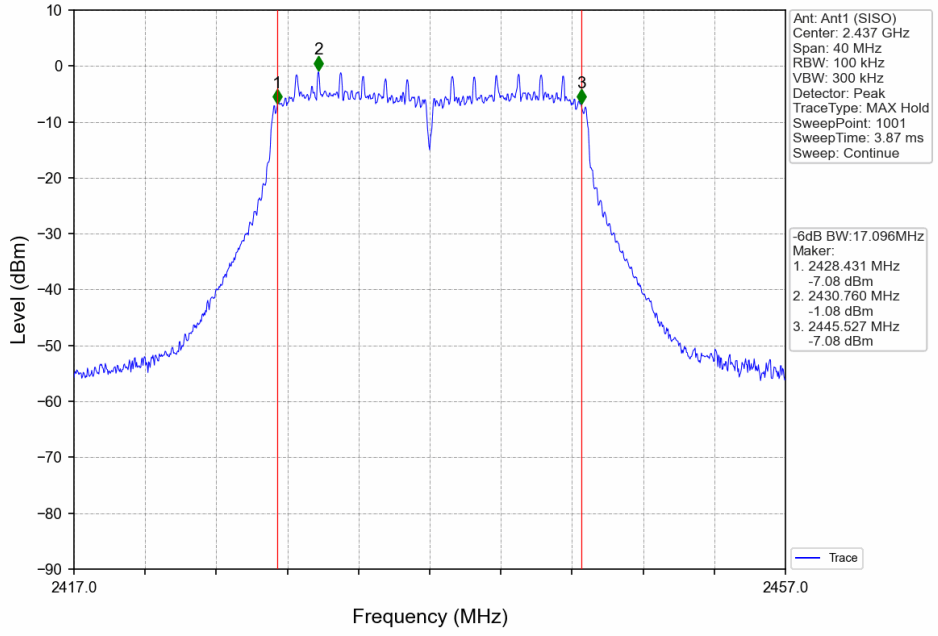
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



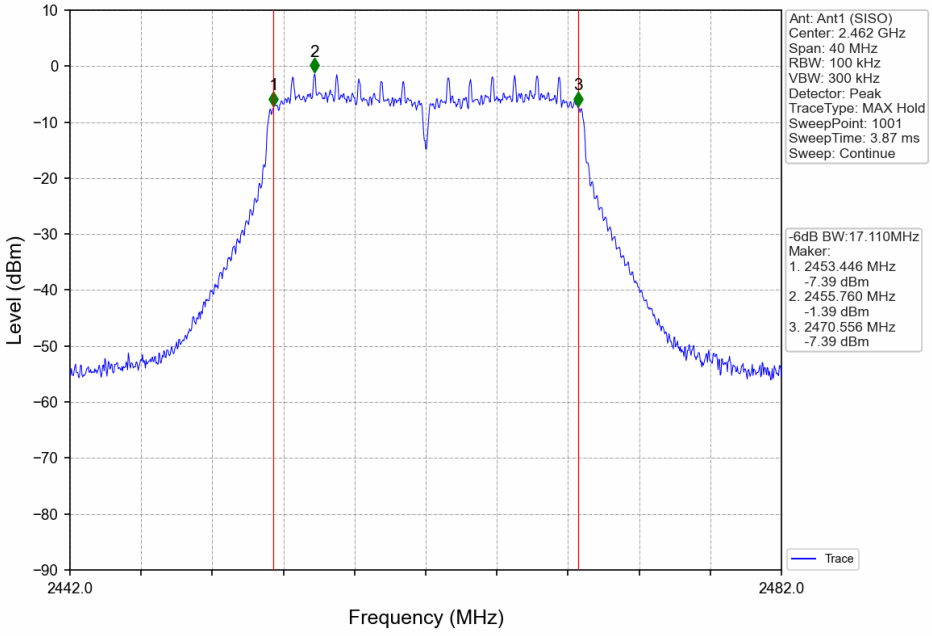
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



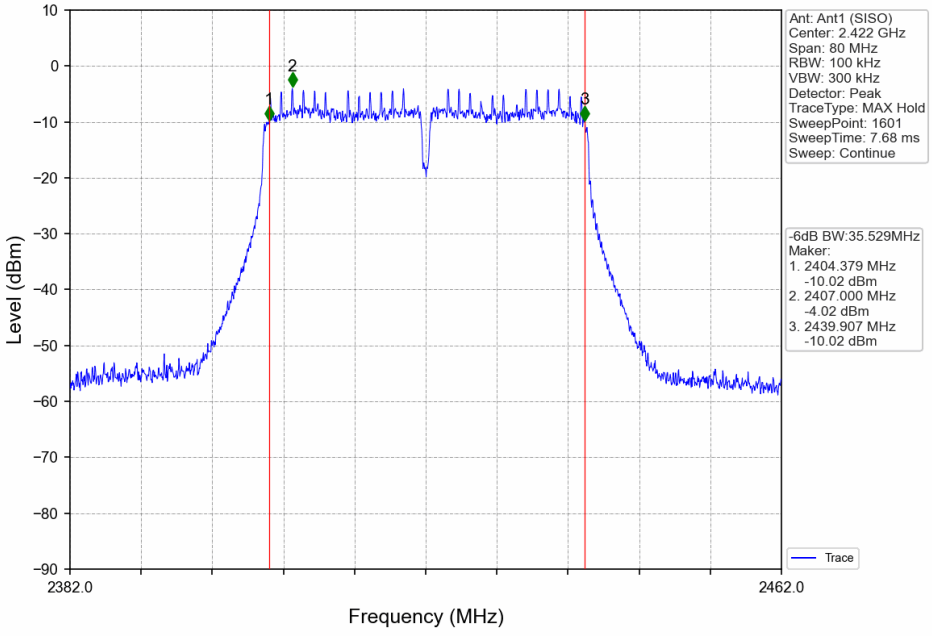
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



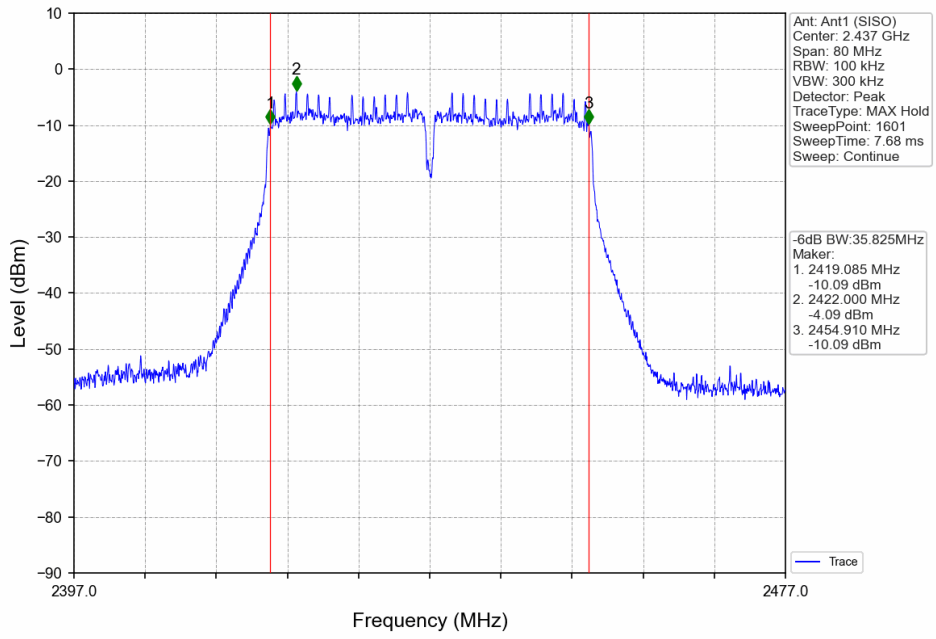
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



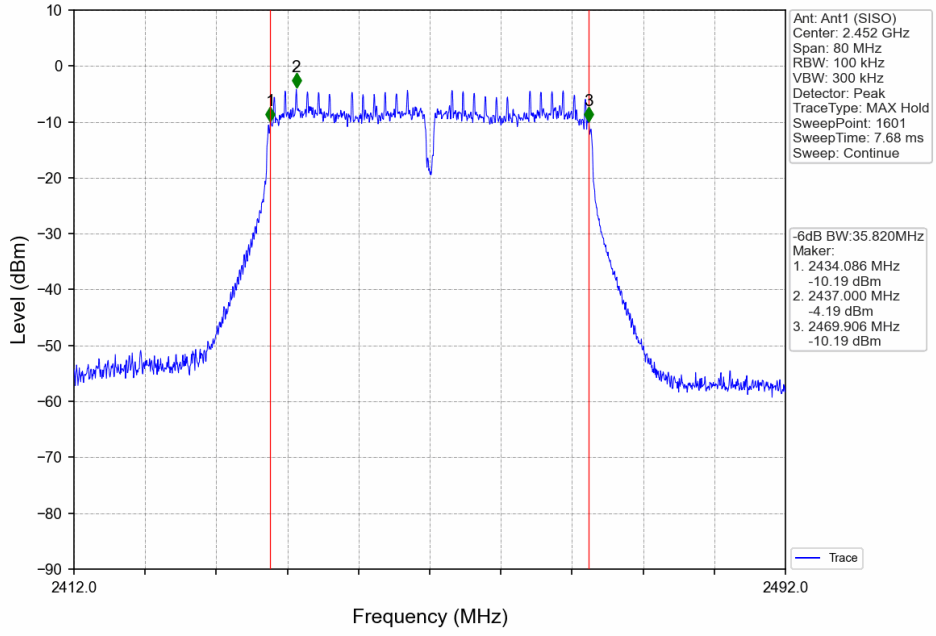
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



3. Maximum Conducted Output Power

3.1 Power

3.1.1 Test Result

Mode	TX Type	Frequency (MHz)	RU	RU Pos	Measured Peak Output Power (dBm) Ant1	Limit (dBm)	Verdict
802.11b	SISO	2412	/	/	17.69	<=30	Pass
		2437	/	/	17.44	<=30	Pass
		2462	/	/	17.24	<=30	Pass
802.11g	SISO	2412	/	/	17.82	<=30	Pass
		2437	/	/	17.61	<=30	Pass
		2462	/	/	17.51	<=30	Pass
802.11n (HT20)	SISO	2412	/	/	17.69	<=30	Pass
		2437	/	/	17.49	<=30	Pass
		2462	/	/	17.15	<=30	Pass
802.11n (HT40)	SISO	2422	/	/	17.91	<=30	Pass
		2437	/	/	17.79	<=30	Pass
		2452	/	/	17.59	<=30	Pass
Note1: Antenna Gain: 1: 2.00dBi;							

4. Maximum Power Spectral Density

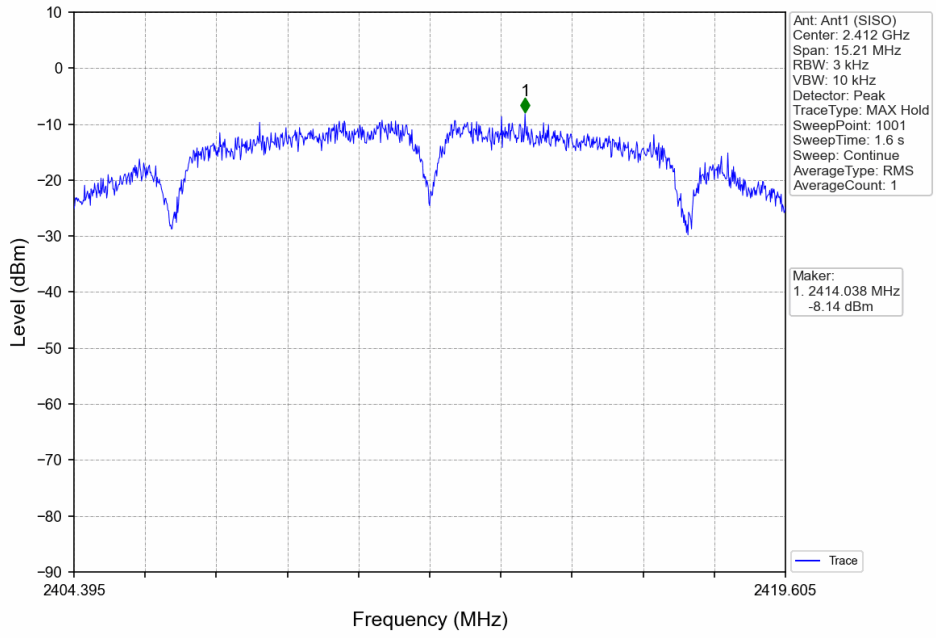
4.1 PSD

4.1.1 Test Result

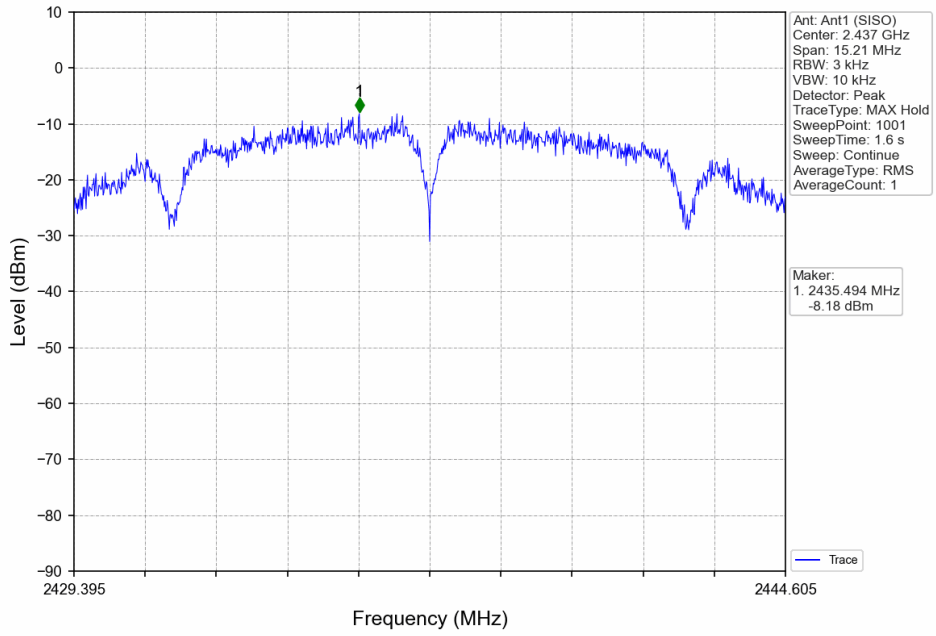
Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum PSD (dBm/3kHz) Ant1	Limit (dBm/3kHz)	Verdict
802.11b	SISO	2412	/	/	-8.14	<=8	Pass
		2437	/	/	-8.18	<=8	Pass
		2462	/	/	-7.23	<=8	Pass
802.11g	SISO	2412	/	/	-14.60	<=8	Pass
		2437	/	/	-15.09	<=8	Pass
		2462	/	/	-15.50	<=8	Pass
802.11n (HT20)	SISO	2412	/	/	-15.90	<=8	Pass
		2437	/	/	-15.77	<=8	Pass
		2462	/	/	-16.16	<=8	Pass
802.11n (HT40)	SISO	2422	/	/	-18.68	<=8	Pass
		2437	/	/	-18.31	<=8	Pass
		2452	/	/	-18.69	<=8	Pass
Note1: Antenna Gain: 1: 2.00dBi;							

4.1.2 Test Graph

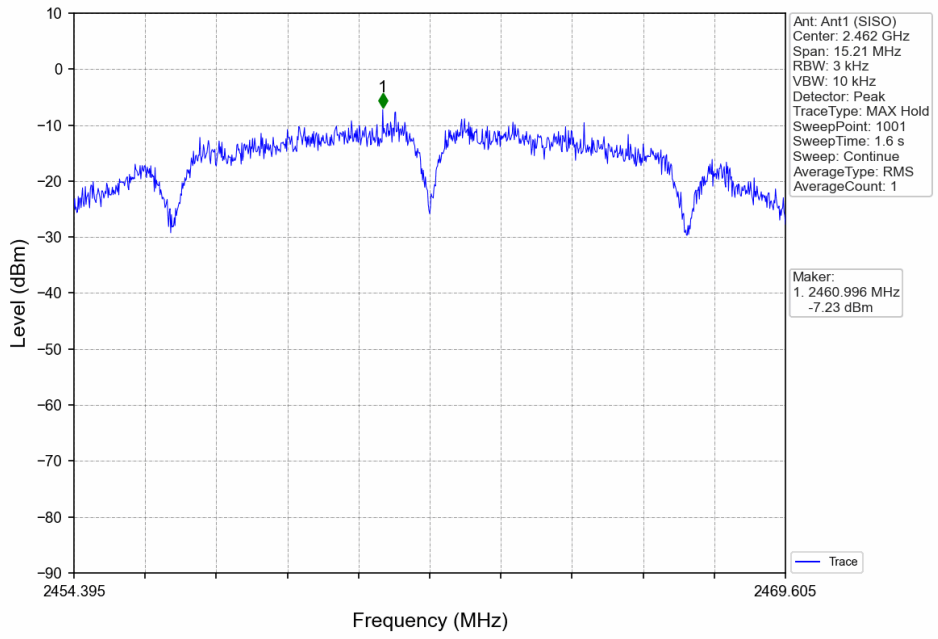
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



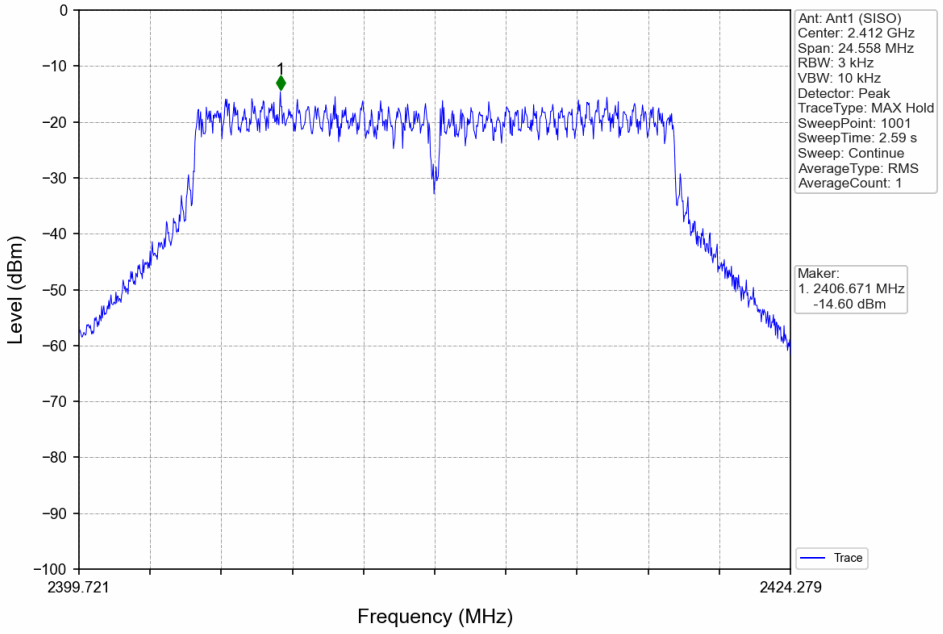
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



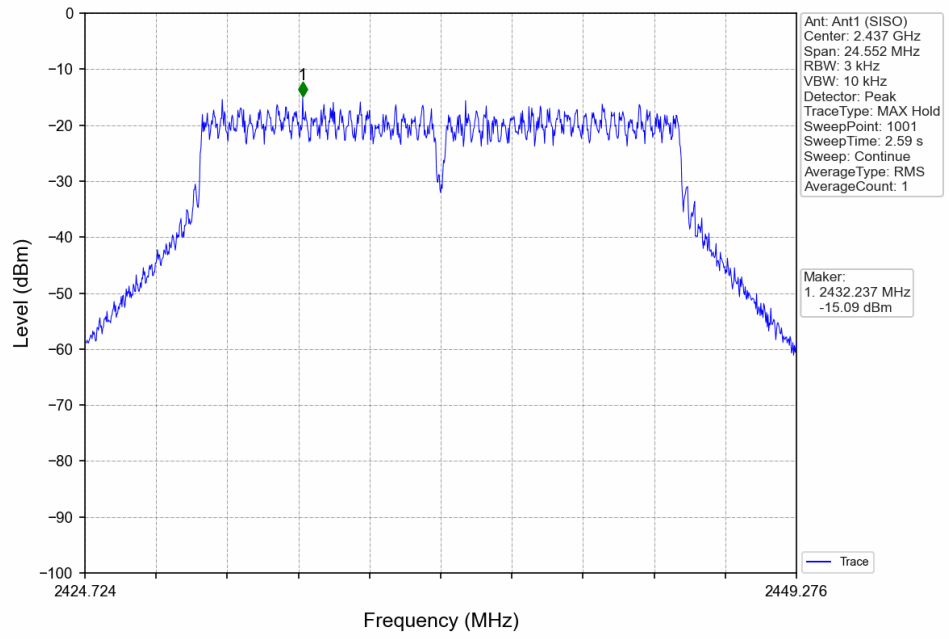
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



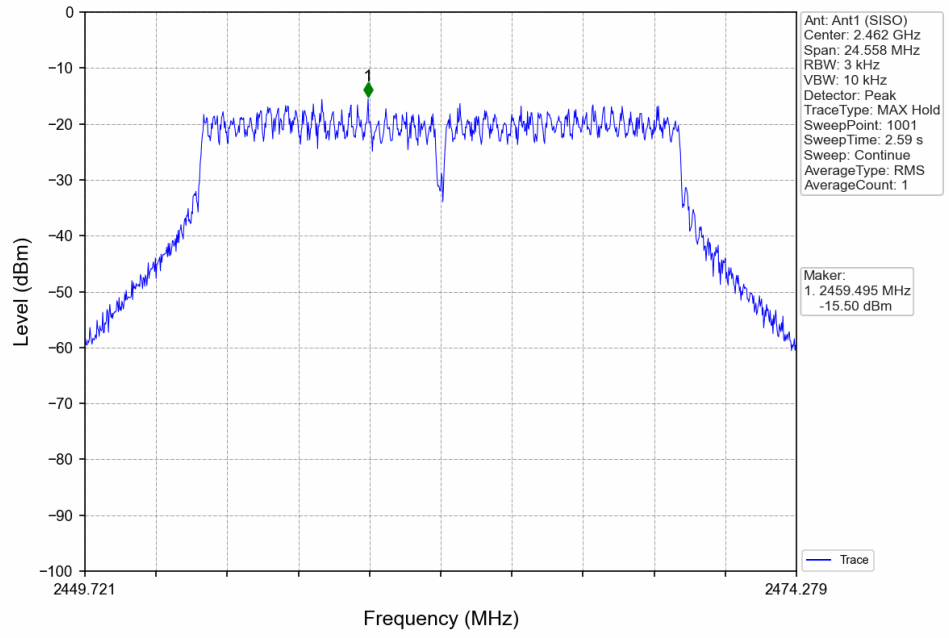
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



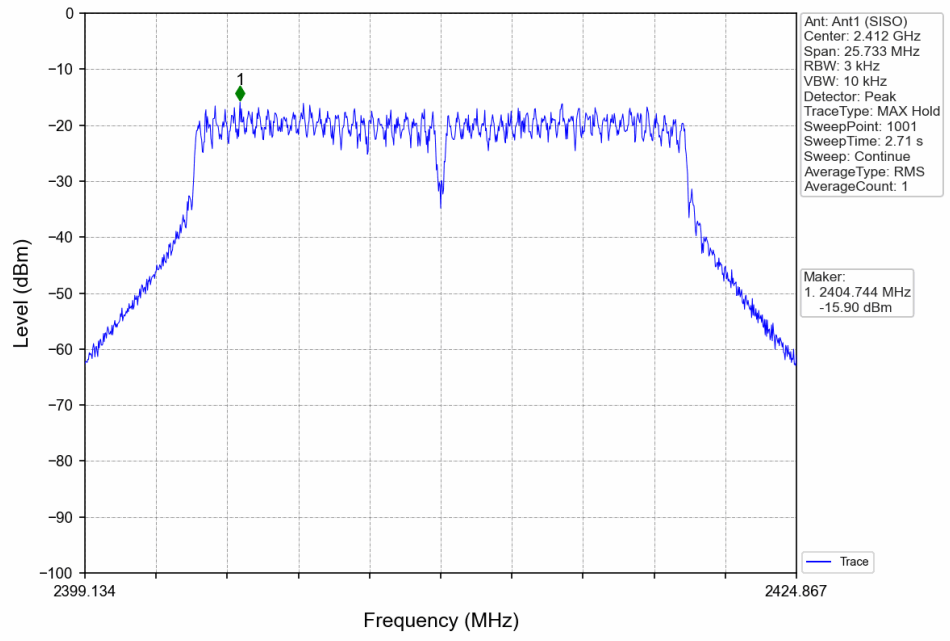
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



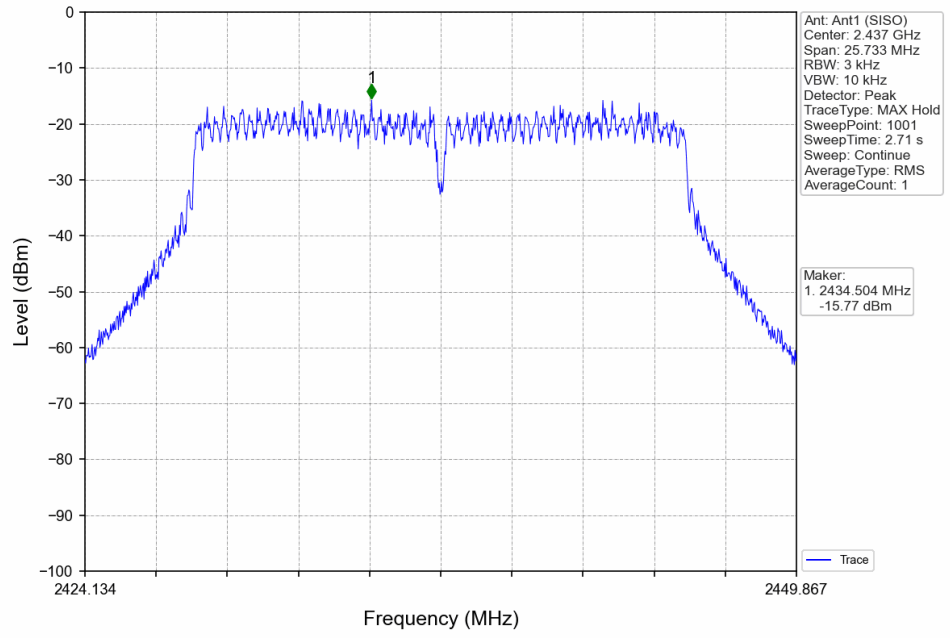
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



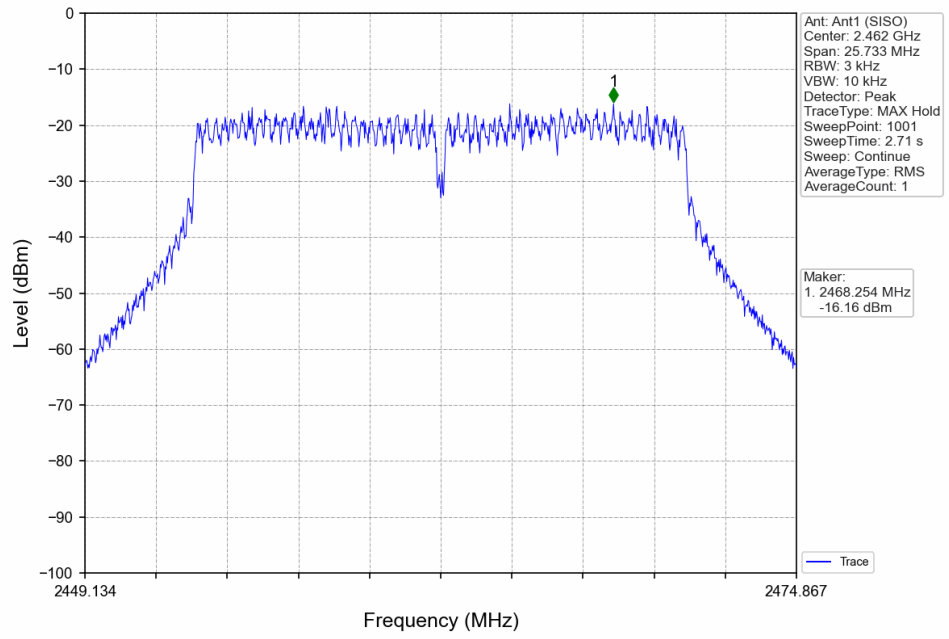
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



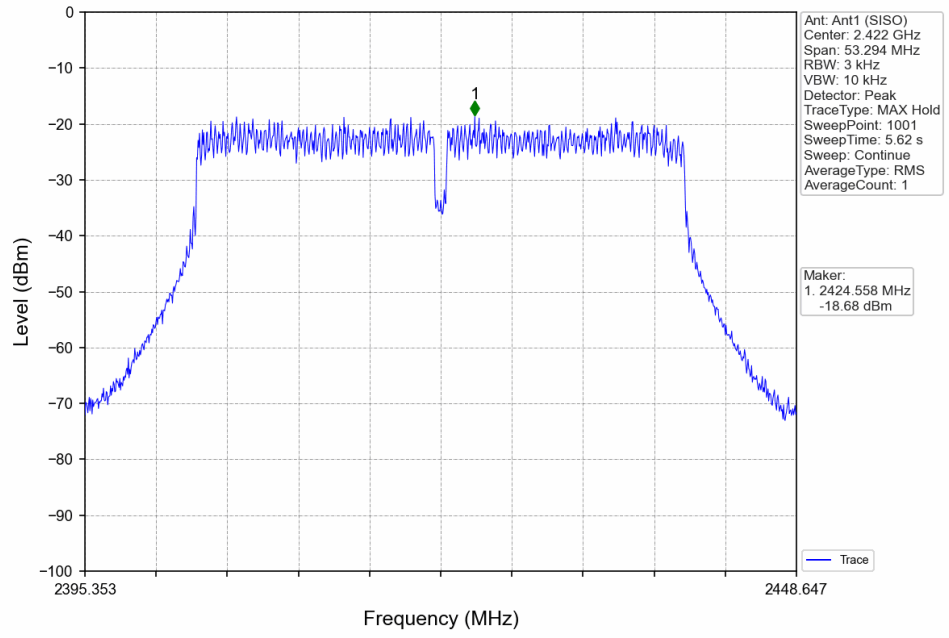
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



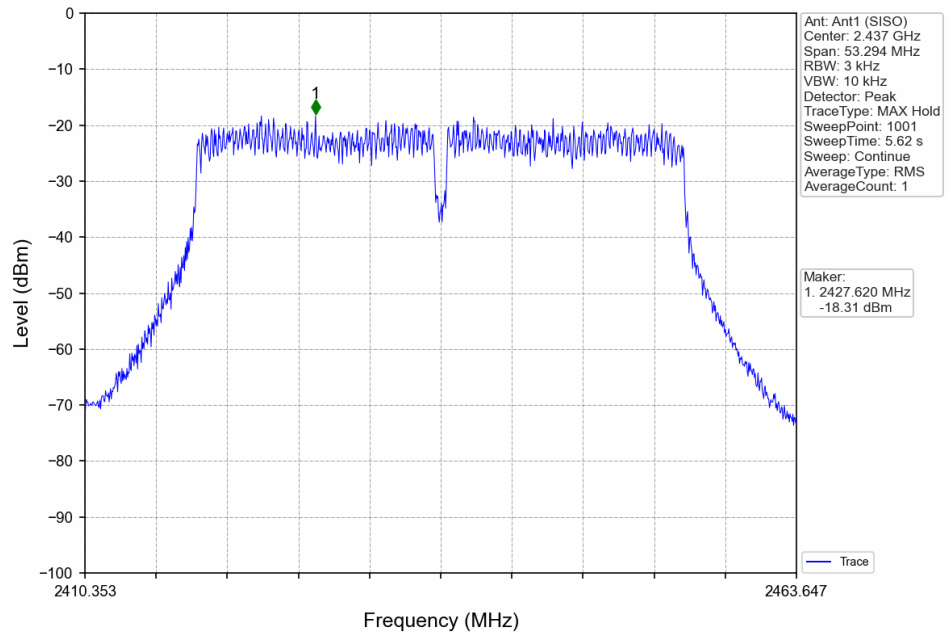
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



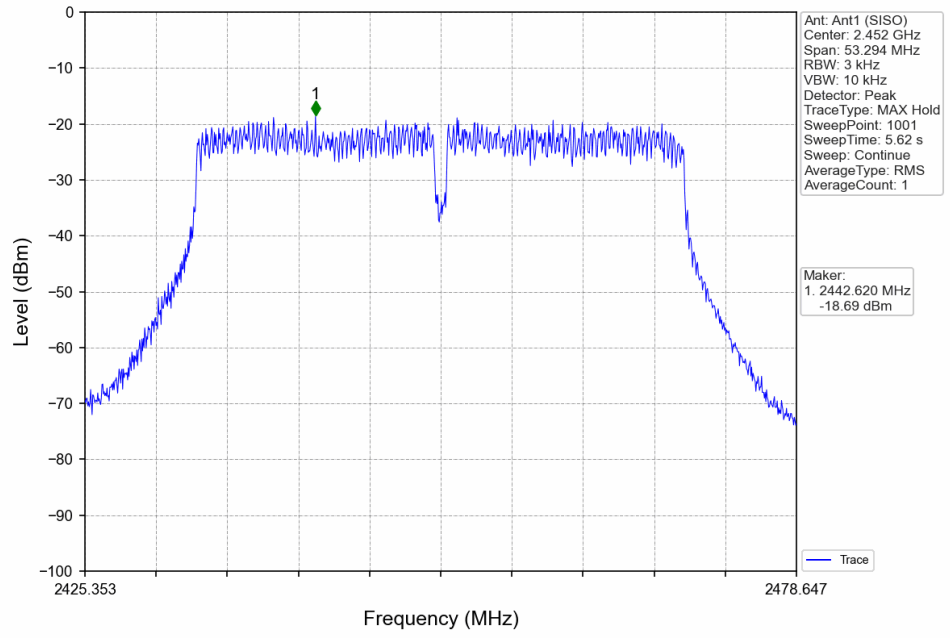
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



5. Unwanted Emissions In Non-restricted Frequency Bands

5.1 Ref

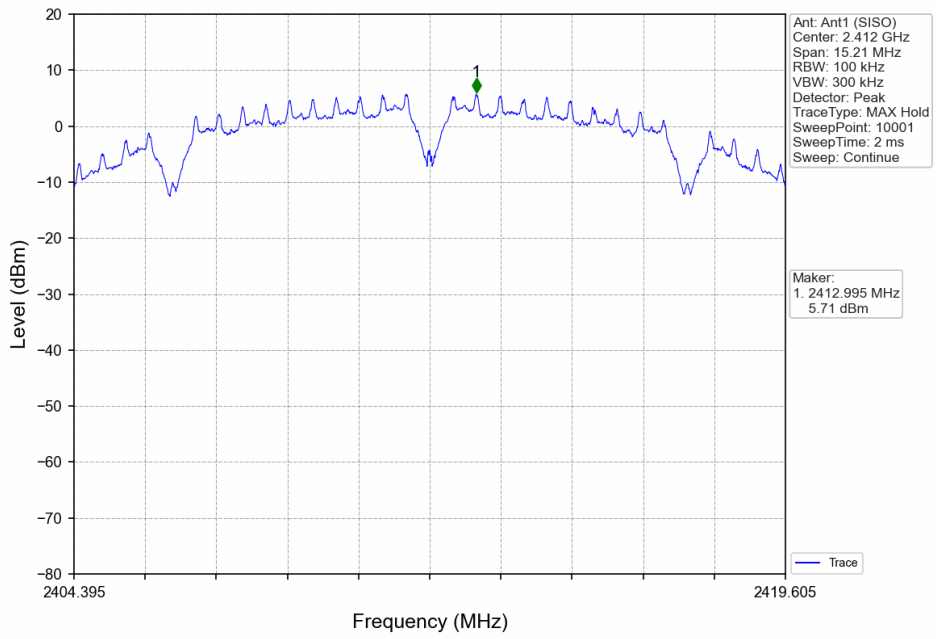
5.1.1 Test Result

Mode	TX Type	Frequency (MHz)	RU	RU Pos	Ant	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	/	/	1	5.71	/	/
		2437	/	/	1	5.62	/	/
		2462	/	/	1	5.24	/	/
802.11g	SISO	2412	/	/	1	-1.42	/	/
		2437	/	/	1	-1.14	/	/
		2462	/	/	1	-1.48	/	/
802.11n (HT20)	SISO	2412	/	/	1	-0.99	/	/
		2437	/	/	1	-1.16	/	/
		2462	/	/	1	-1.54	/	/
802.11n (HT40)	SISO	2422	/	/	1	-4.11	/	/
		2437	/	/	1	-4.18	/	/
		2452	/	/	1	-4.33	/	/

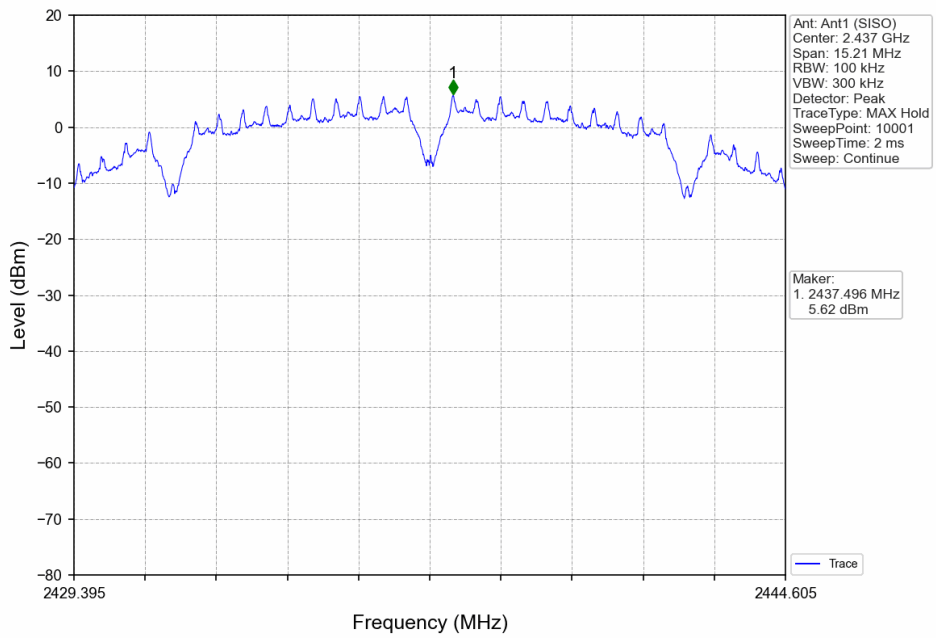
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.
Note2: Only for Report Use

5.1.2 Test Graph

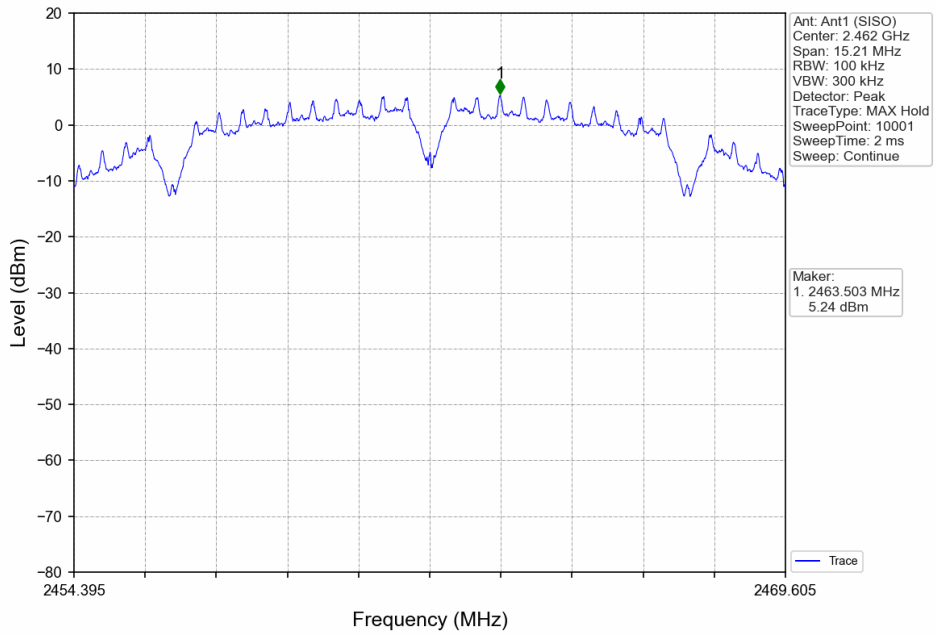
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



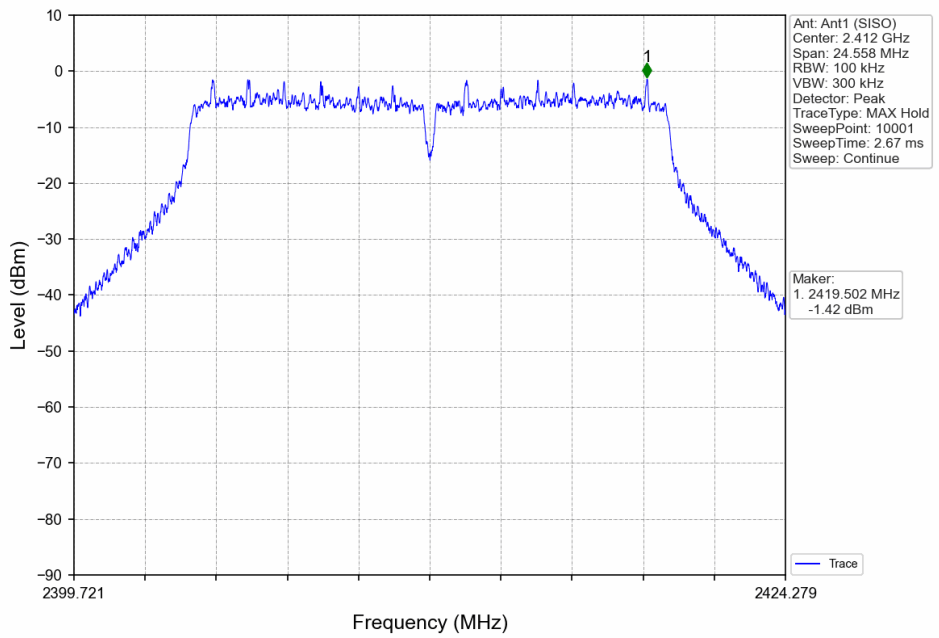
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



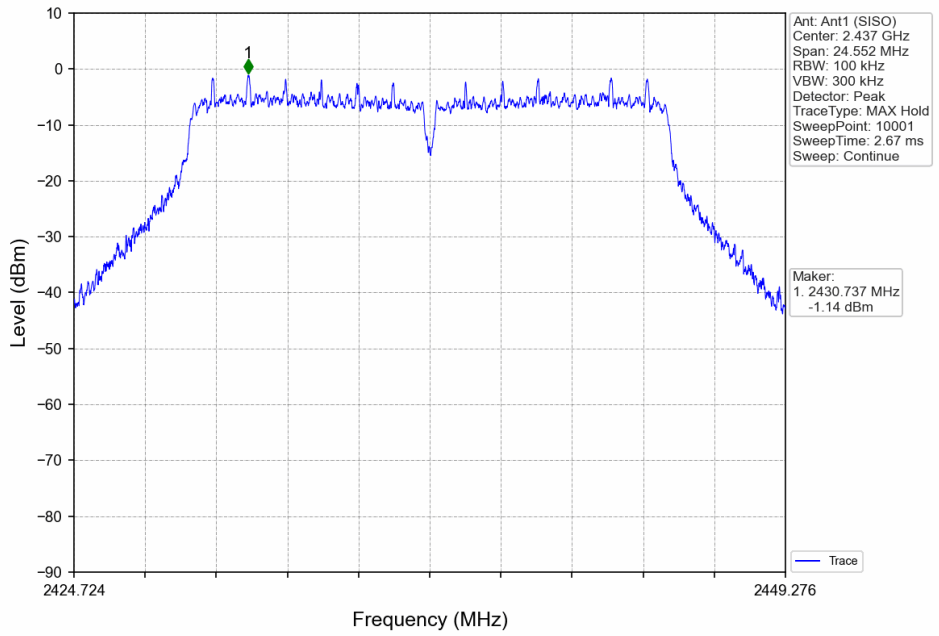
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



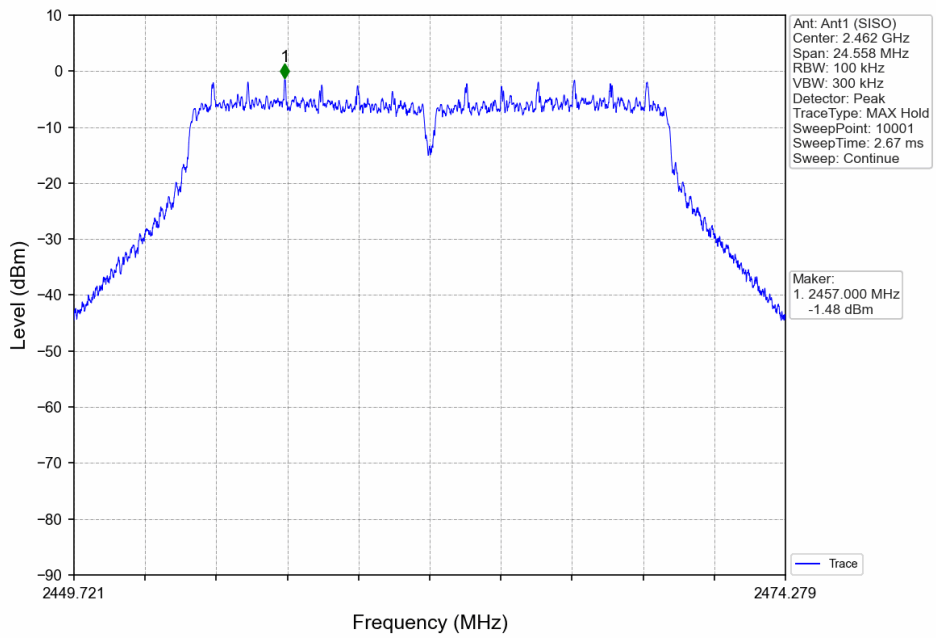
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



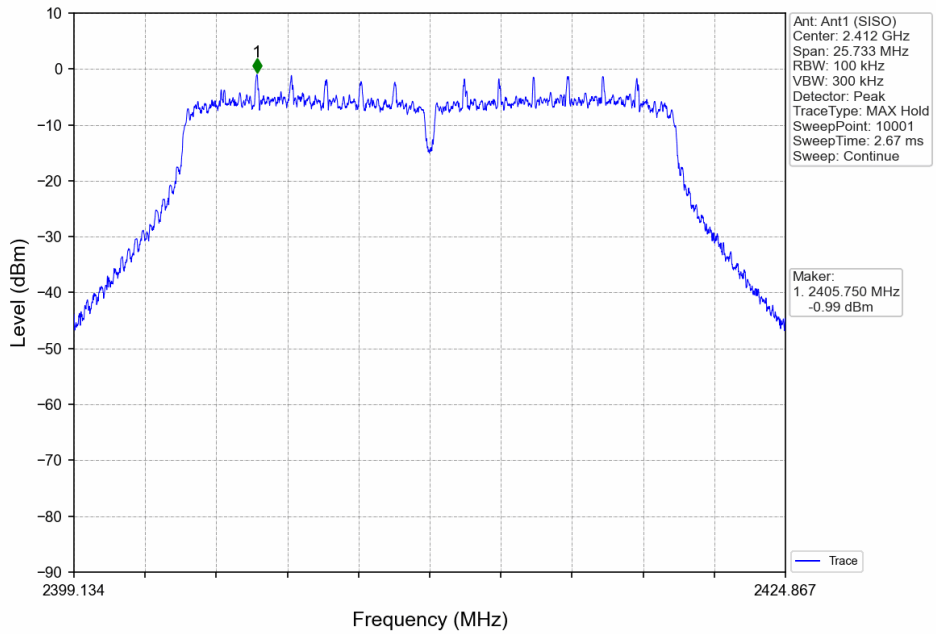
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



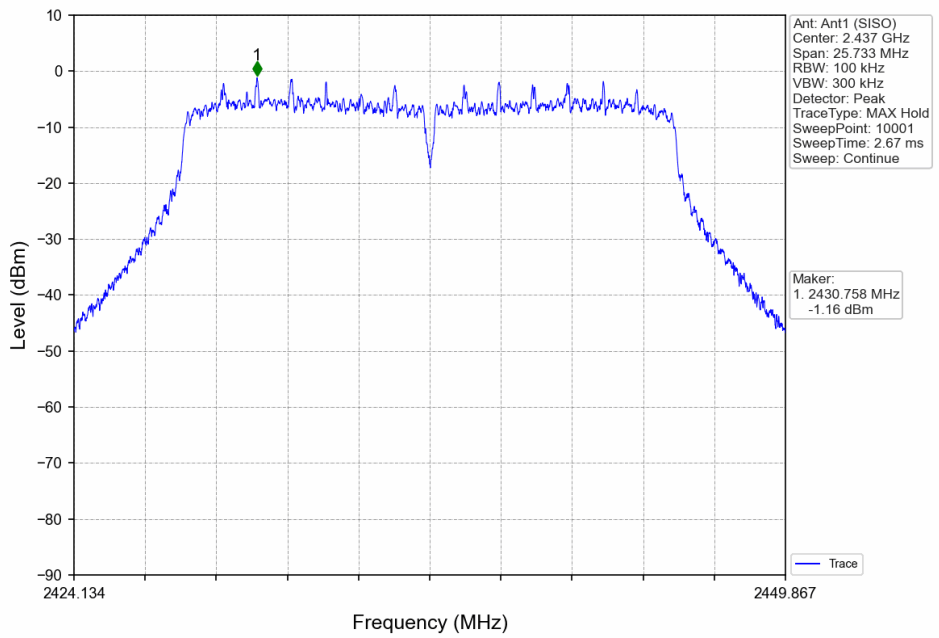
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



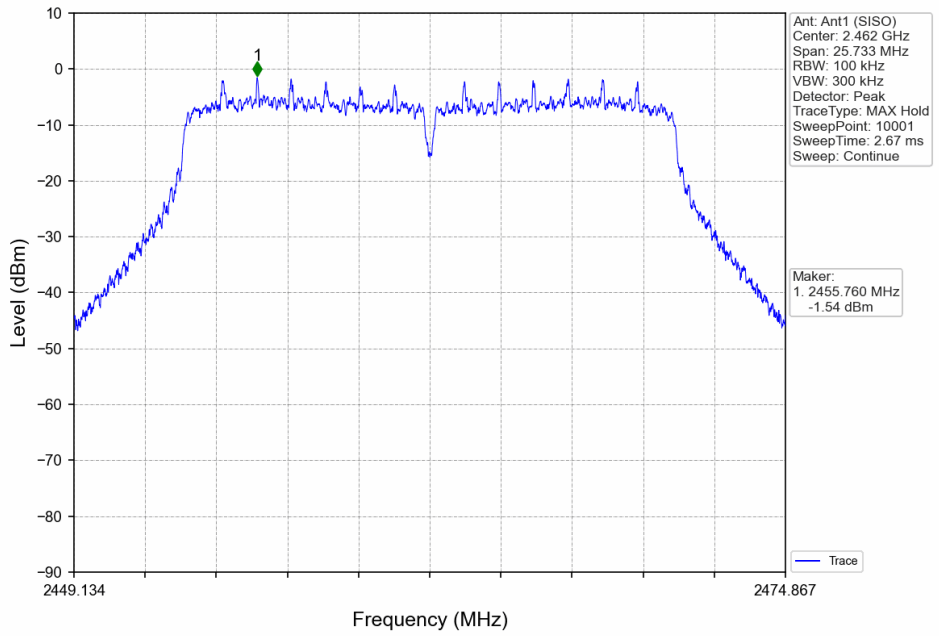
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



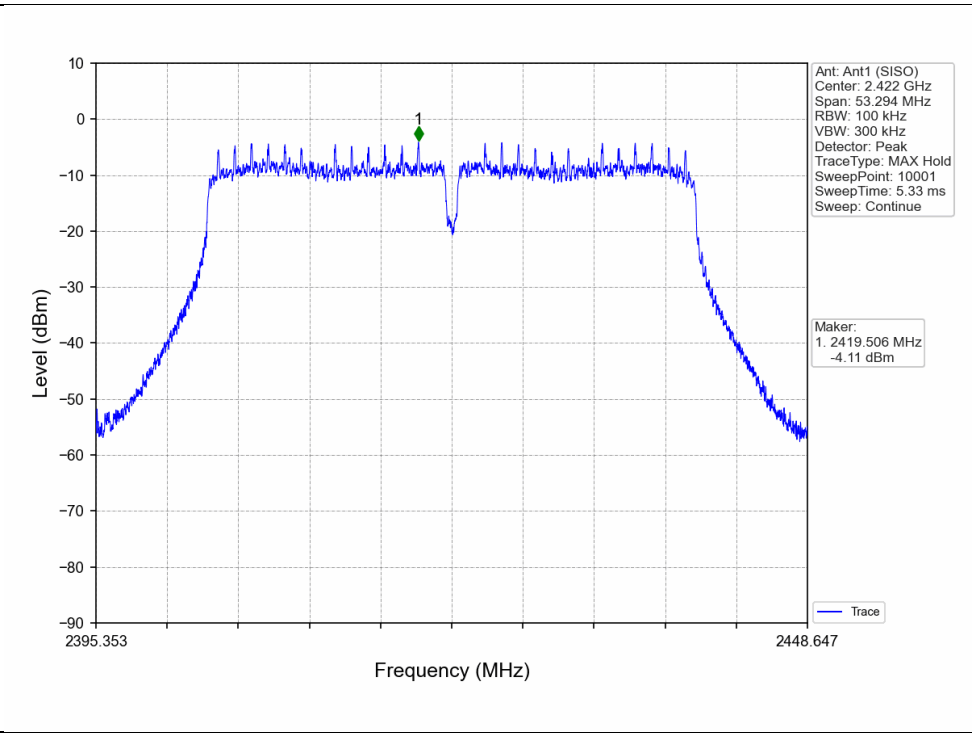
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



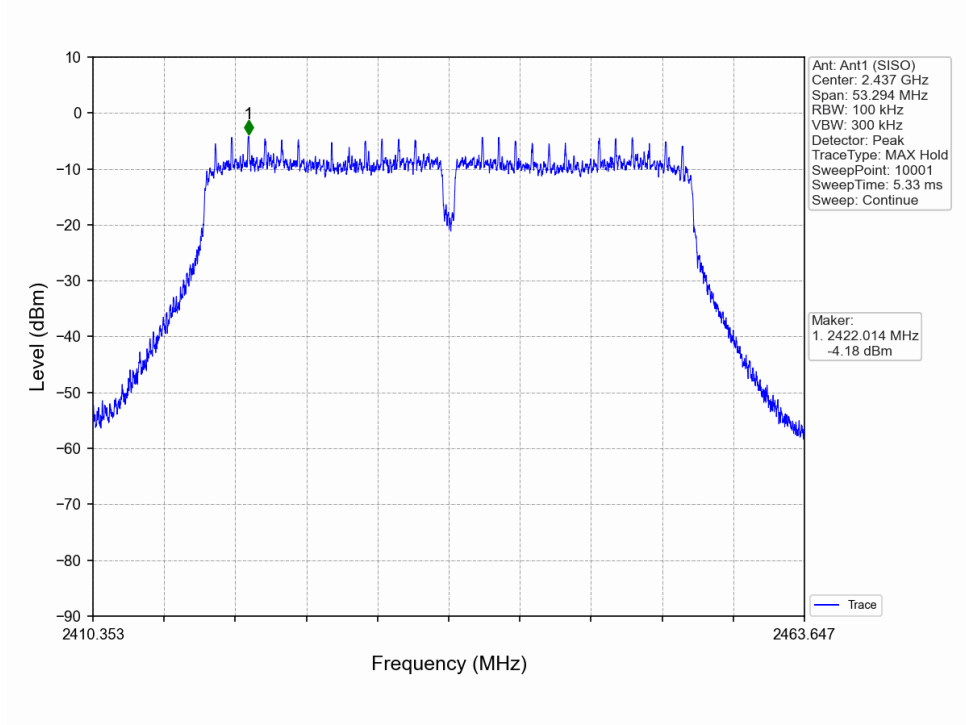
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



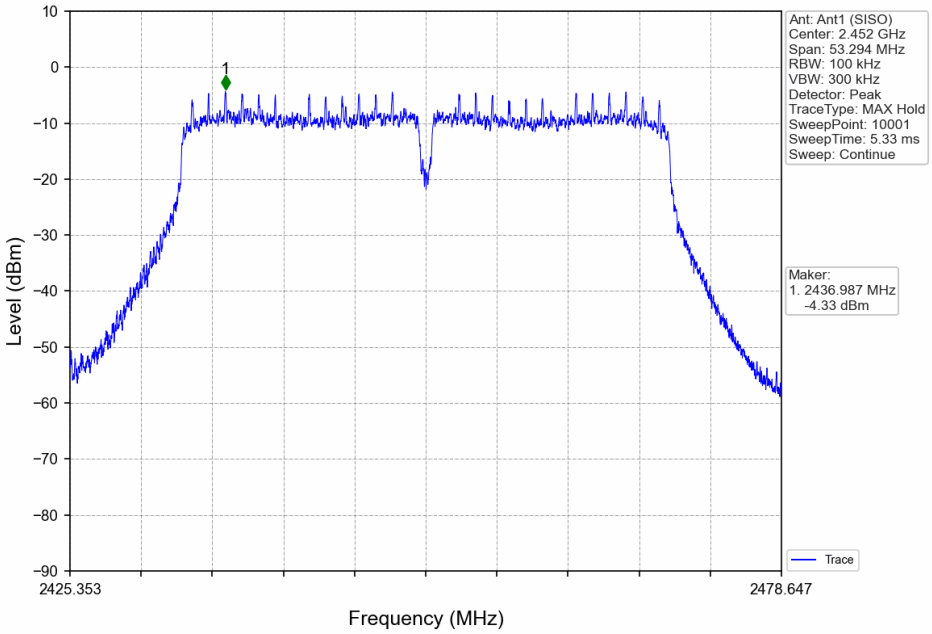
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV


Ant: Ant1 (SISO)
Center: 2.452 GHz
Span: 53.294 MHz
RBW: 100 kHz
VBW: 300 kHz
Detector: Peak
TraceType: MAX Hold
SweepPoint: 10001
SweepTime: 5.33 ms
Sweep: Continue
Maker:
1. 2436.987 MHz
-4.33 dBm
Trace
Level (dBm)
10
0
−10
−20
−30
−40
−50
−60
−70
−80
−90
1
2425.353
2478.647
Frequency (MHz)

5.2 CSE

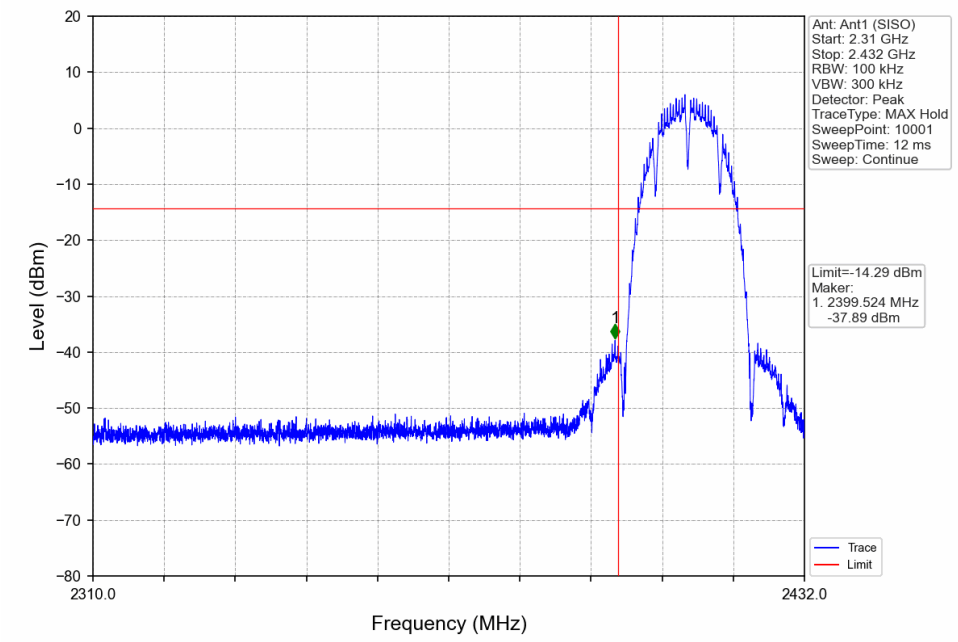
5.2.1 Test Result

Mode	TX Type	Frequency (MHz)	RU	RU Pos	Ant	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	/	/	1	Refer To Test Graph	Refer To Test Graph	Note2
		2437	/	/	1	Refer To Test Graph	Refer To Test Graph	Note2
		2462	/	/	1	Refer To Test Graph	Refer To Test Graph	Note2
802.11g	SISO	2412	/	/	1	Refer To Test Graph	Refer To Test Graph	Note2
		2437	/	/	1	Refer To Test Graph	Refer To Test Graph	Note2
		2462	/	/	1	Refer To Test Graph	Refer To Test Graph	Note2
802.11n (HT20)	SISO	2412	/	/	1	Refer To Test Graph	Refer To Test Graph	Note2
		2437	/	/	1	Refer To Test Graph	Refer To Test Graph	Note2
		2462	/	/	1	Refer To Test Graph	Refer To Test Graph	Note2
802.11n (HT40)	SISO	2422	/	/	1	Refer To Test Graph	Refer To Test Graph	Note2
		2437	/	/	1	Refer To Test Graph	Refer To Test Graph	Note2
		2452	/	/	1	Refer To Test Graph	Refer To Test Graph	Note2

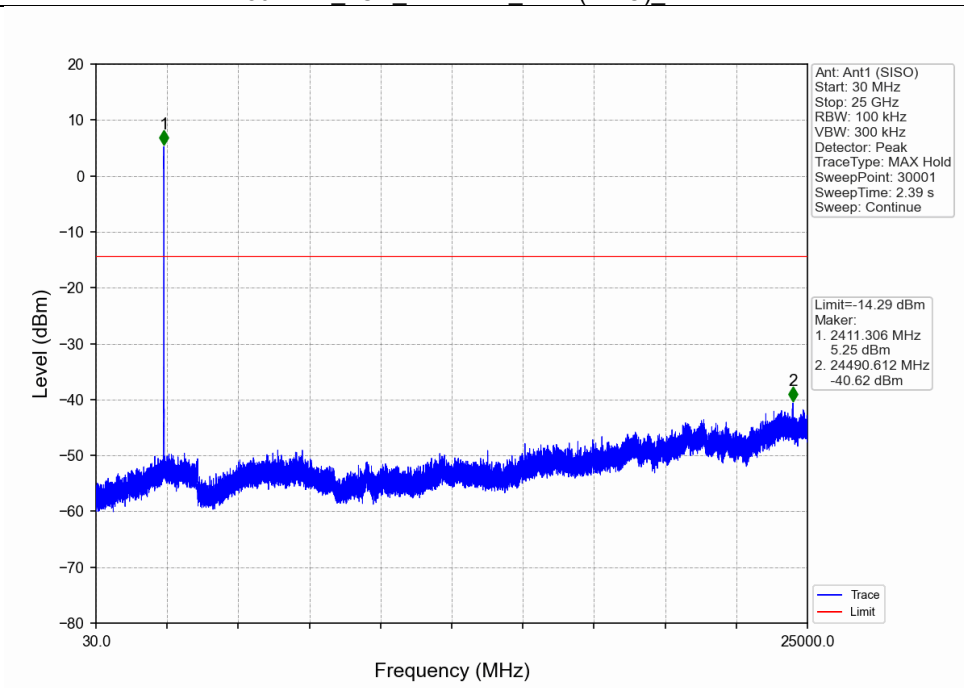
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.
Note2: Only for Report Use

5.2.2 Test Graph

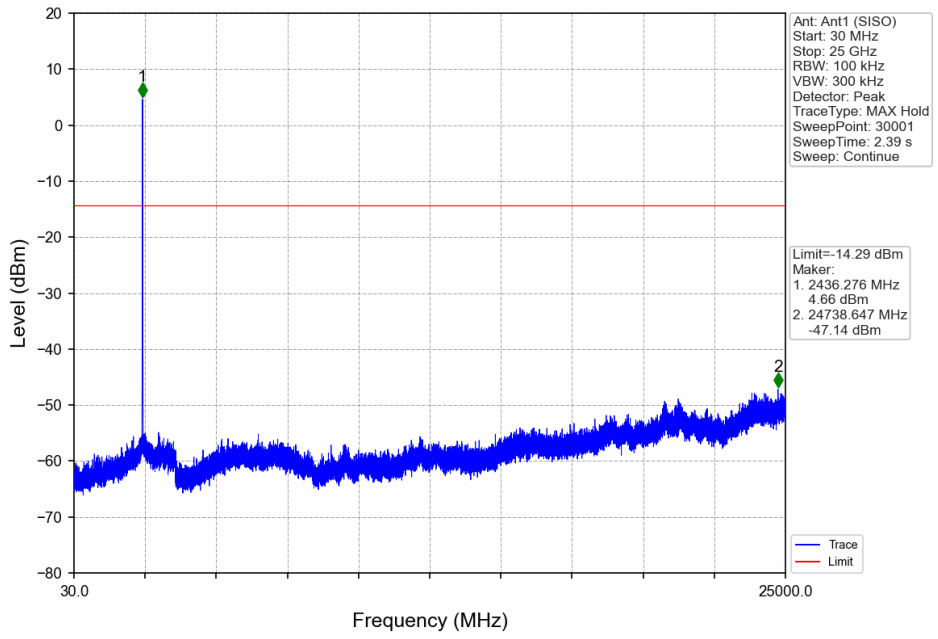
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



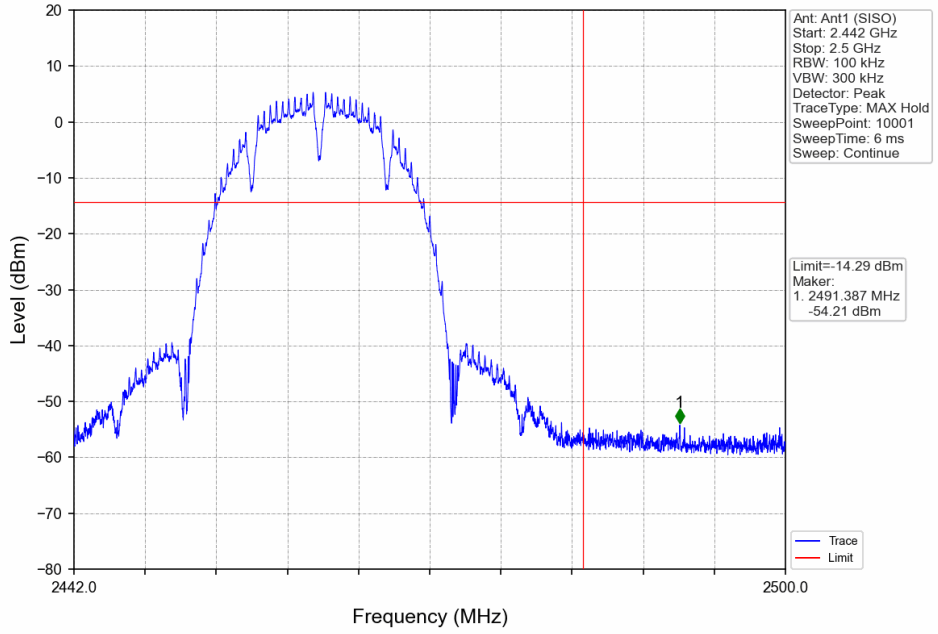
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



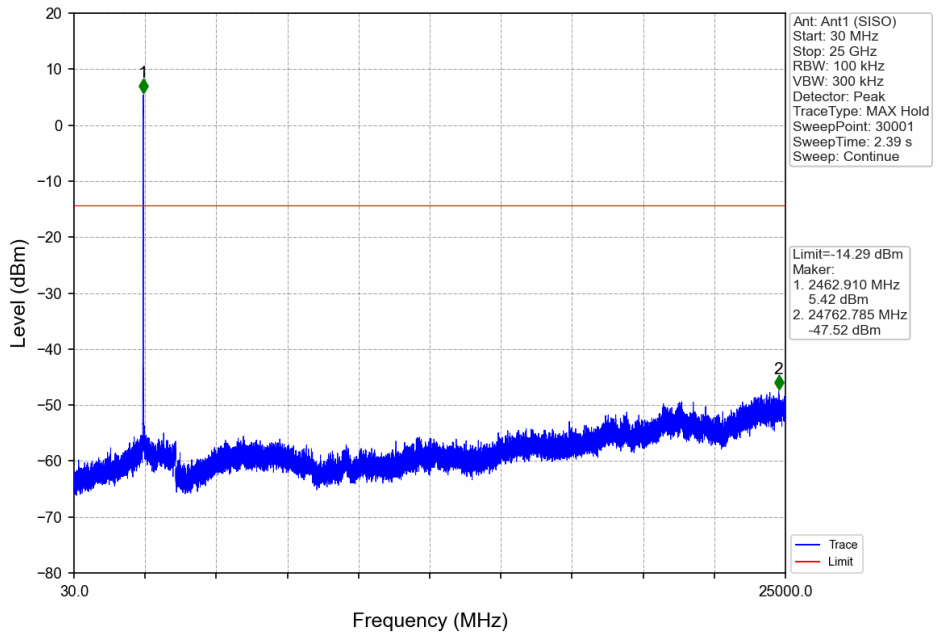
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



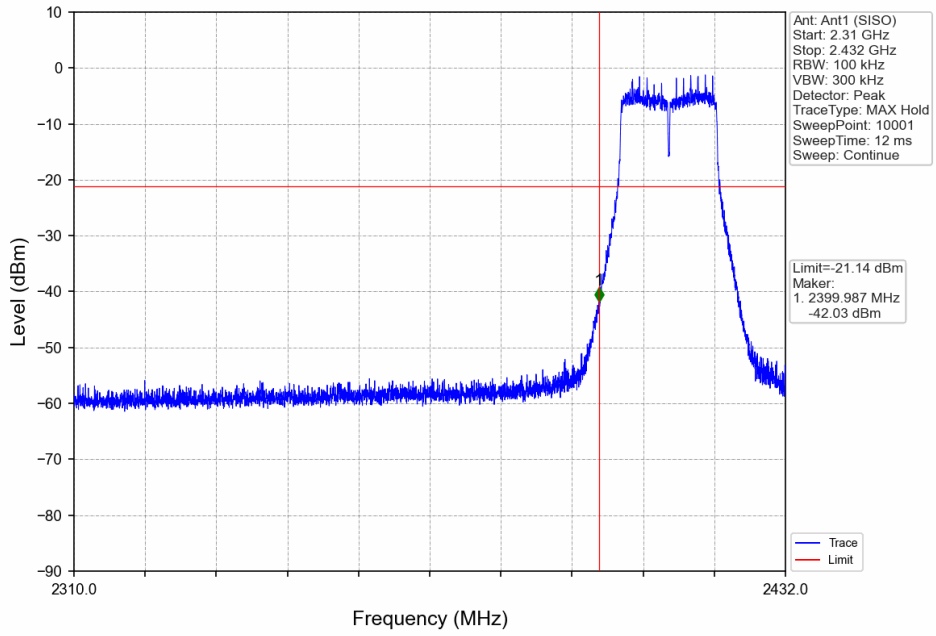
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



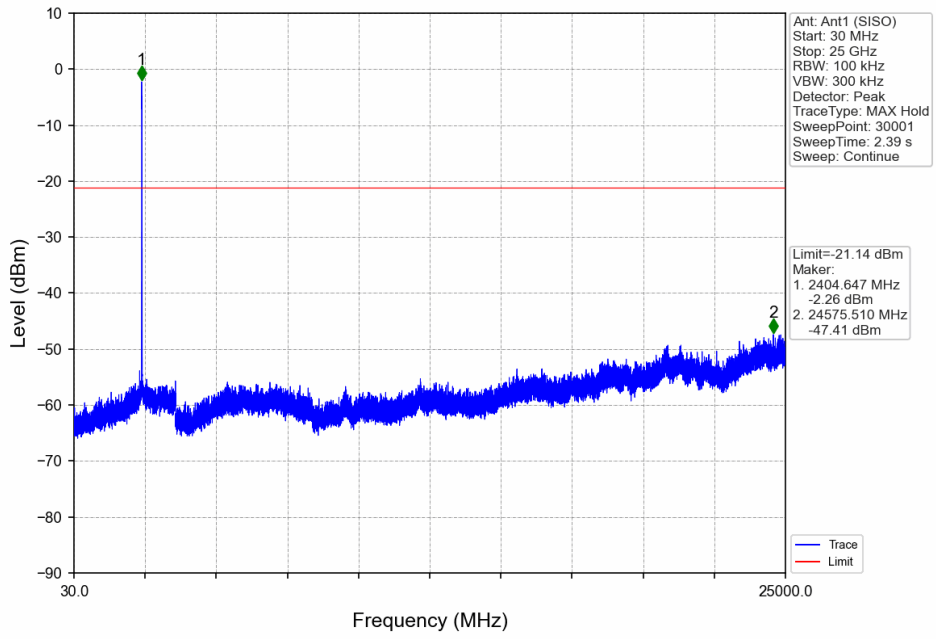
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



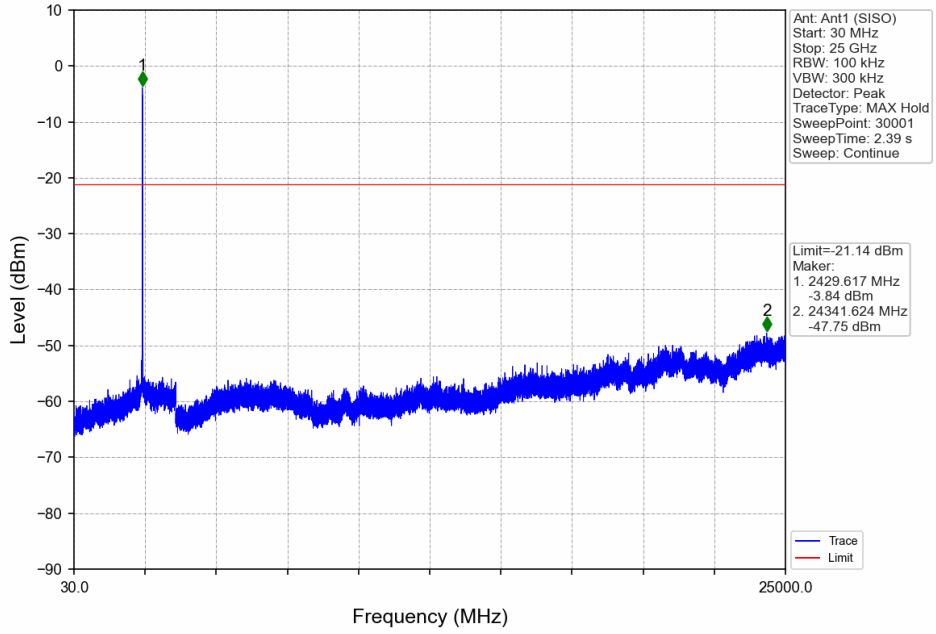
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



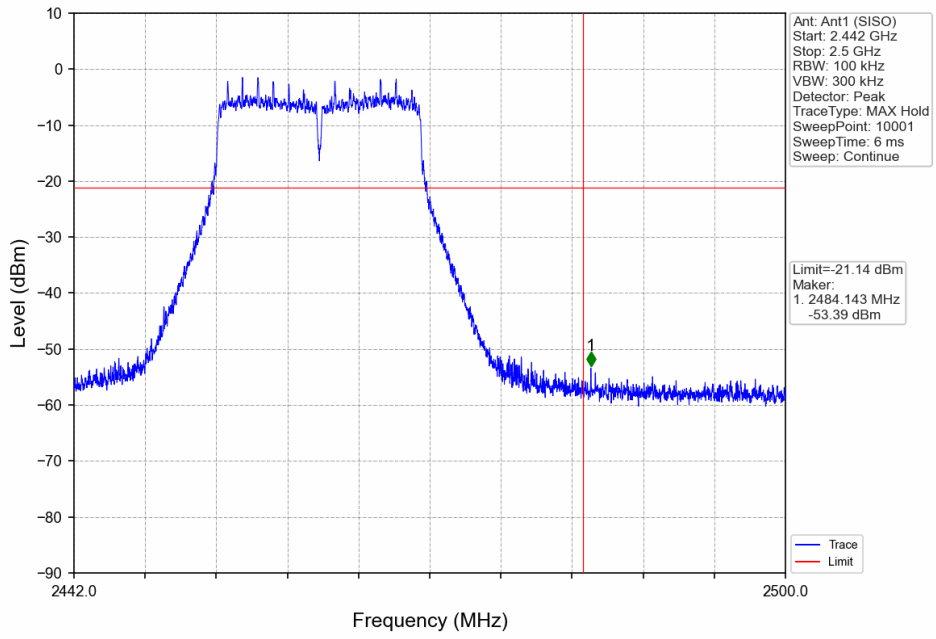
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



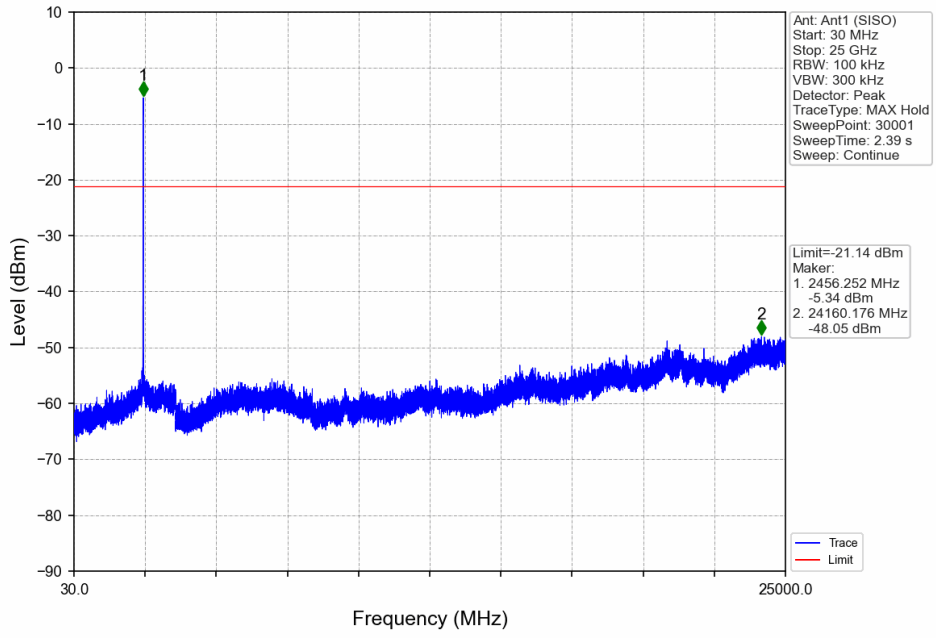
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



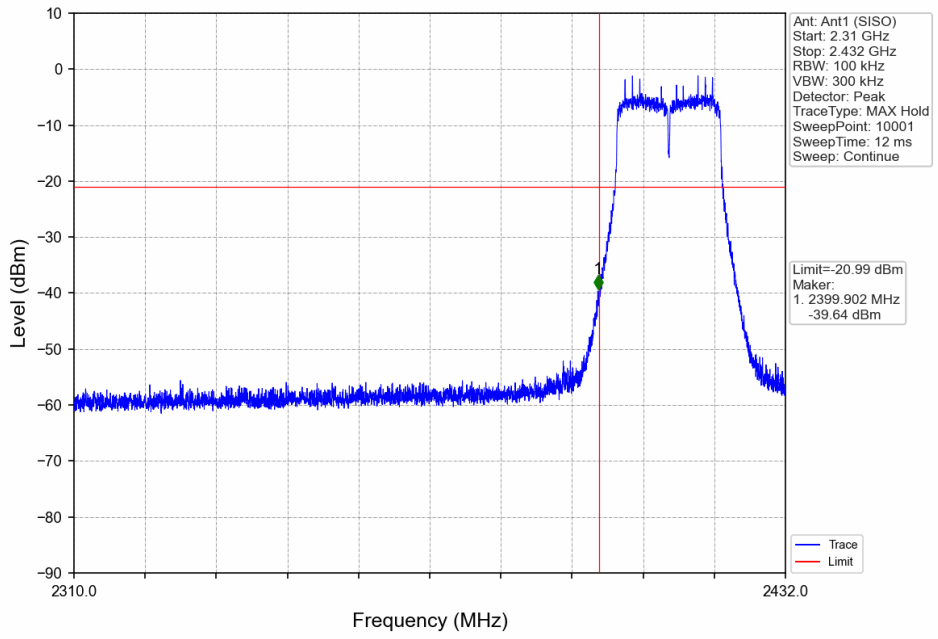
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



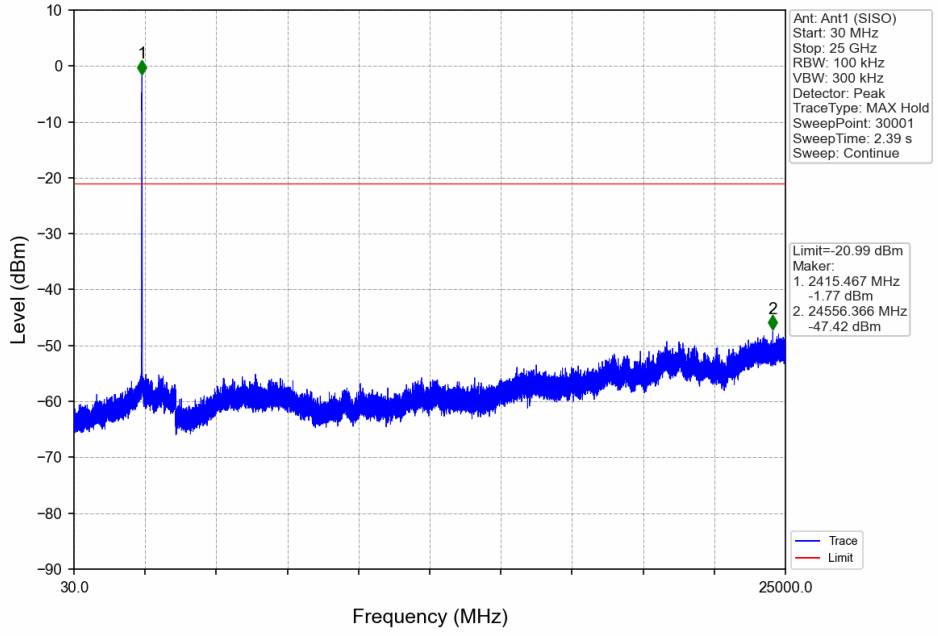
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



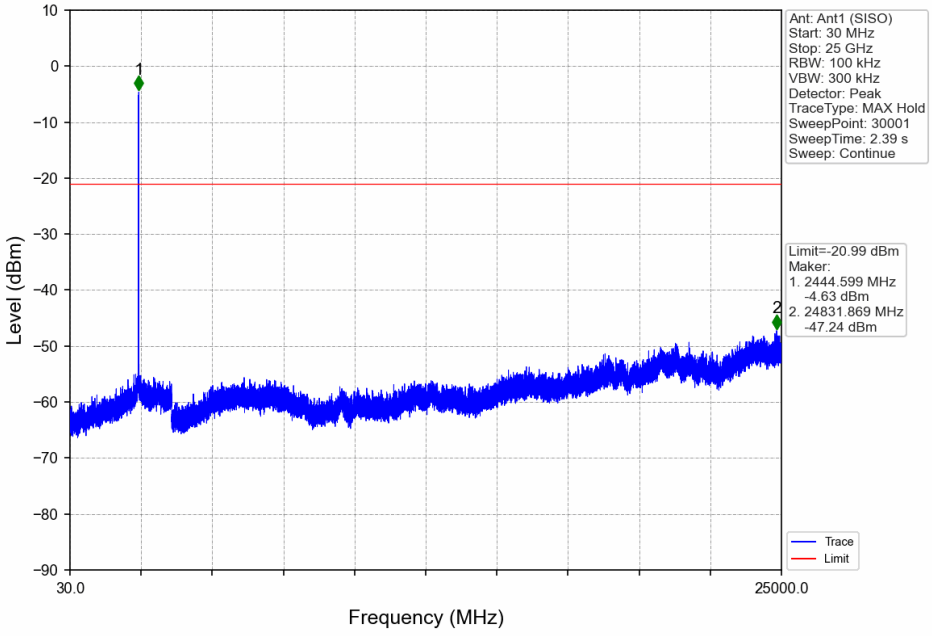
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



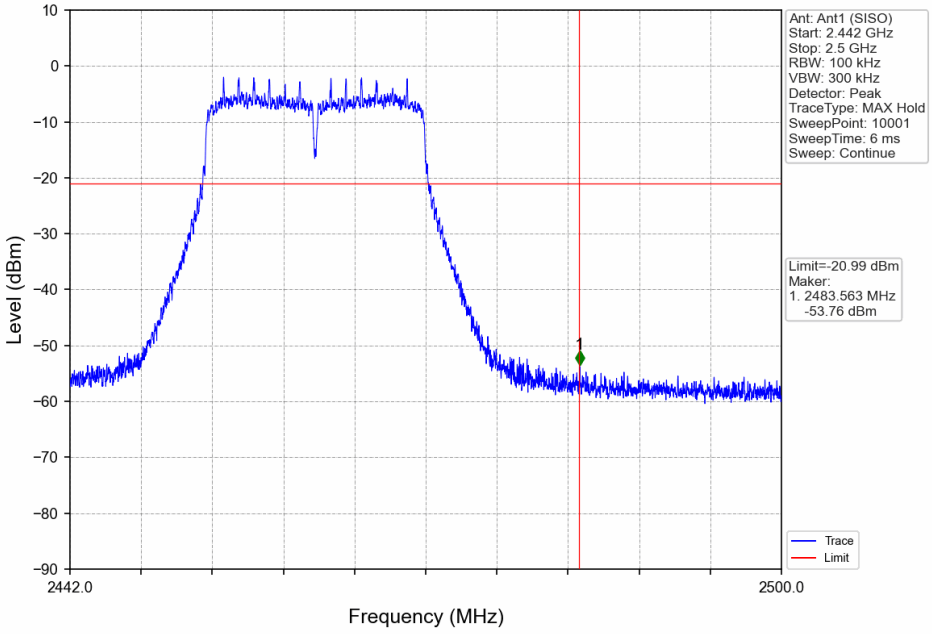
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



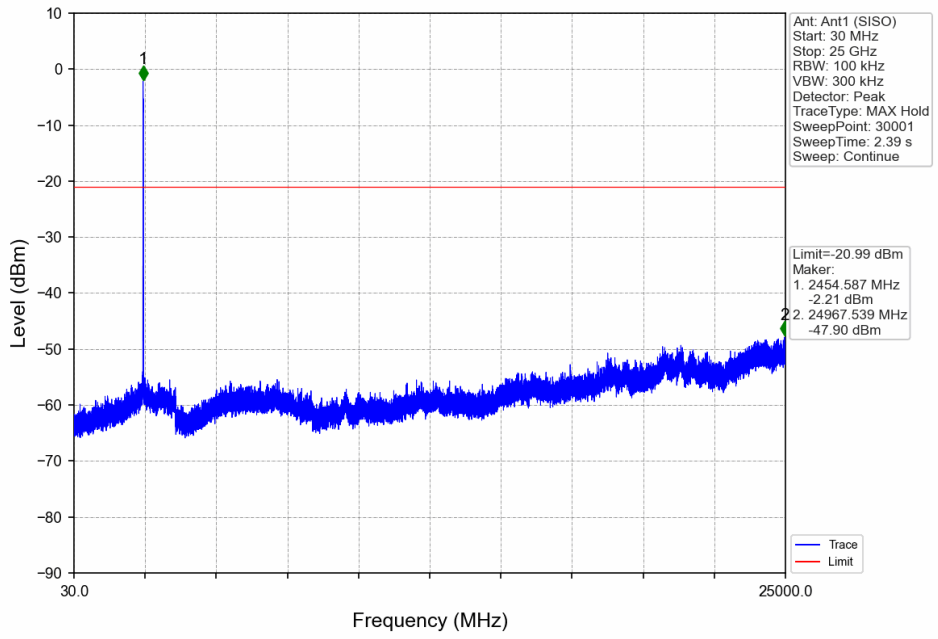
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



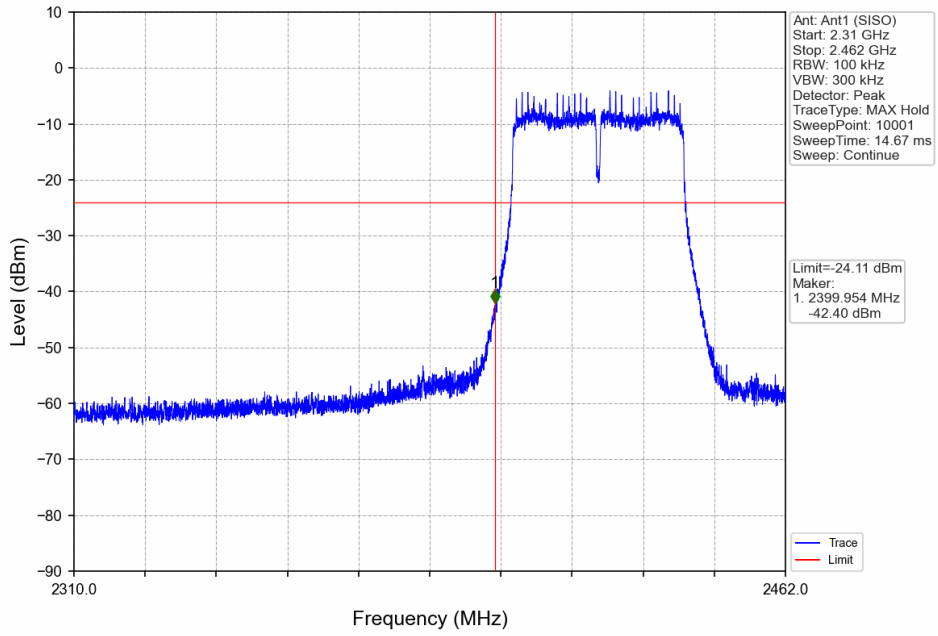
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



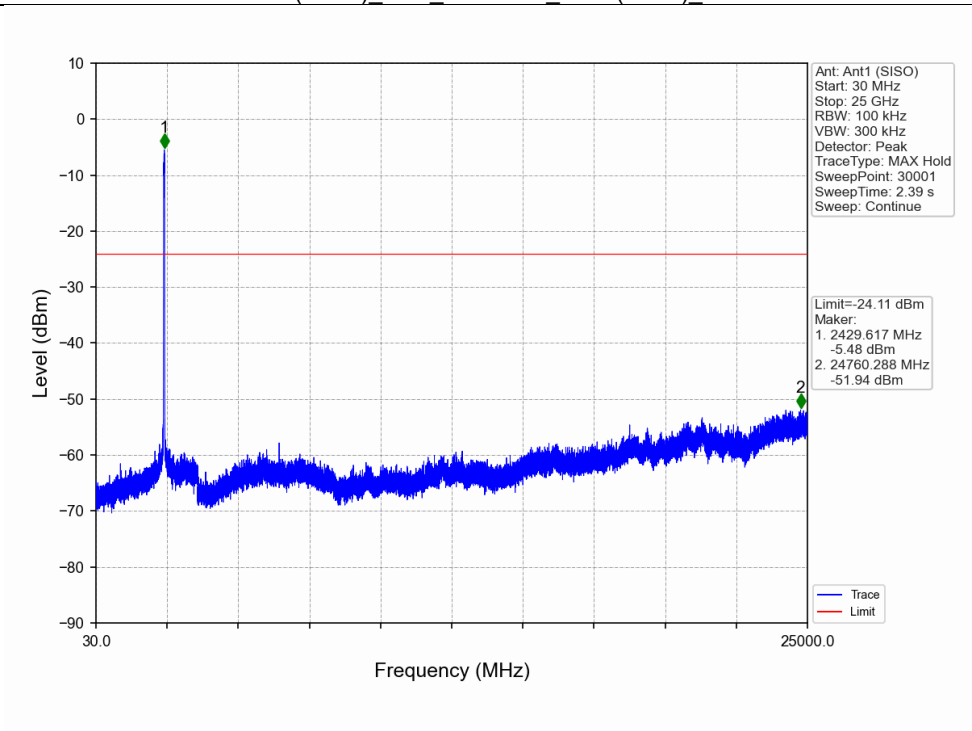
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



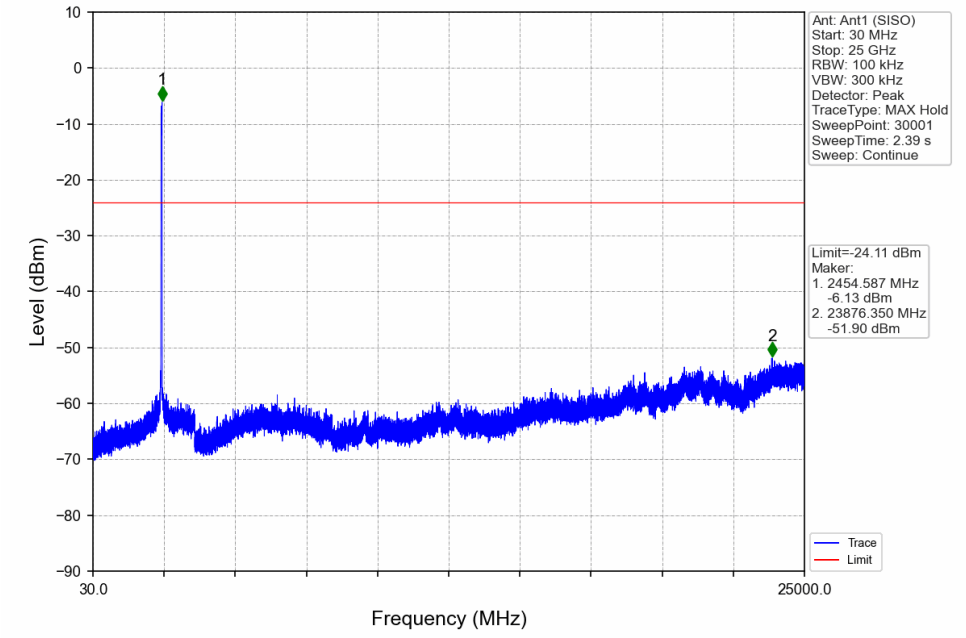
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



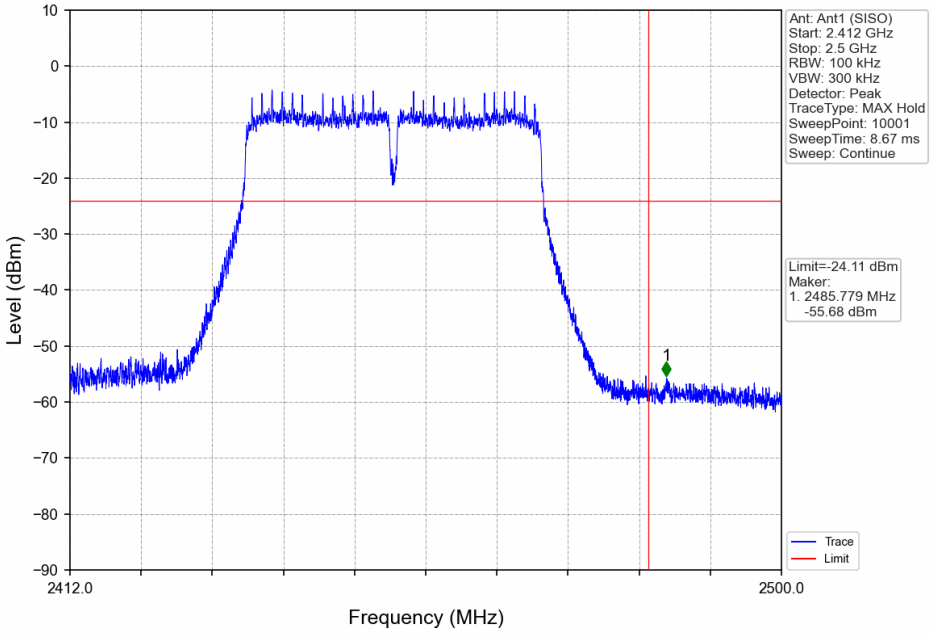
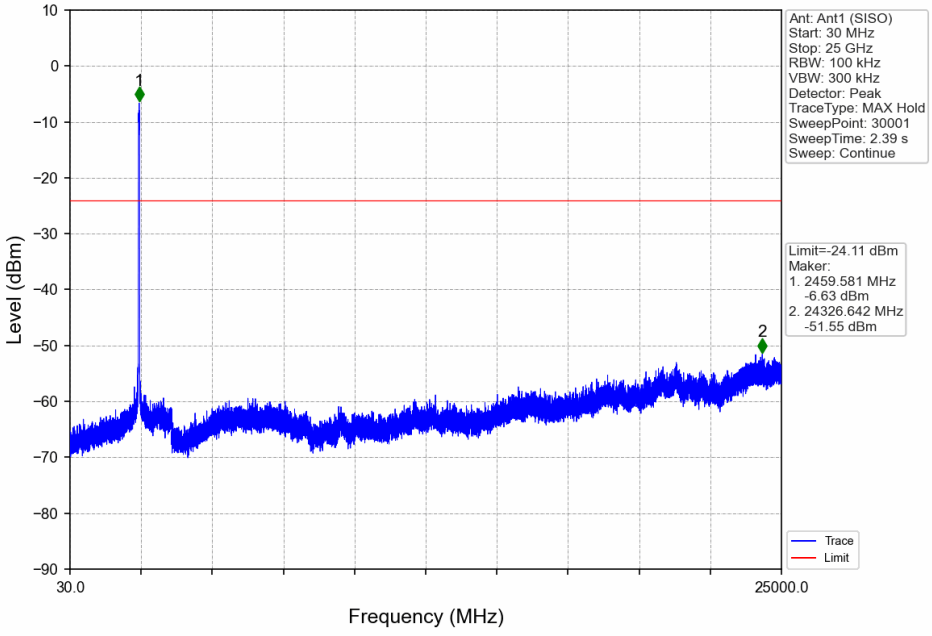
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV