



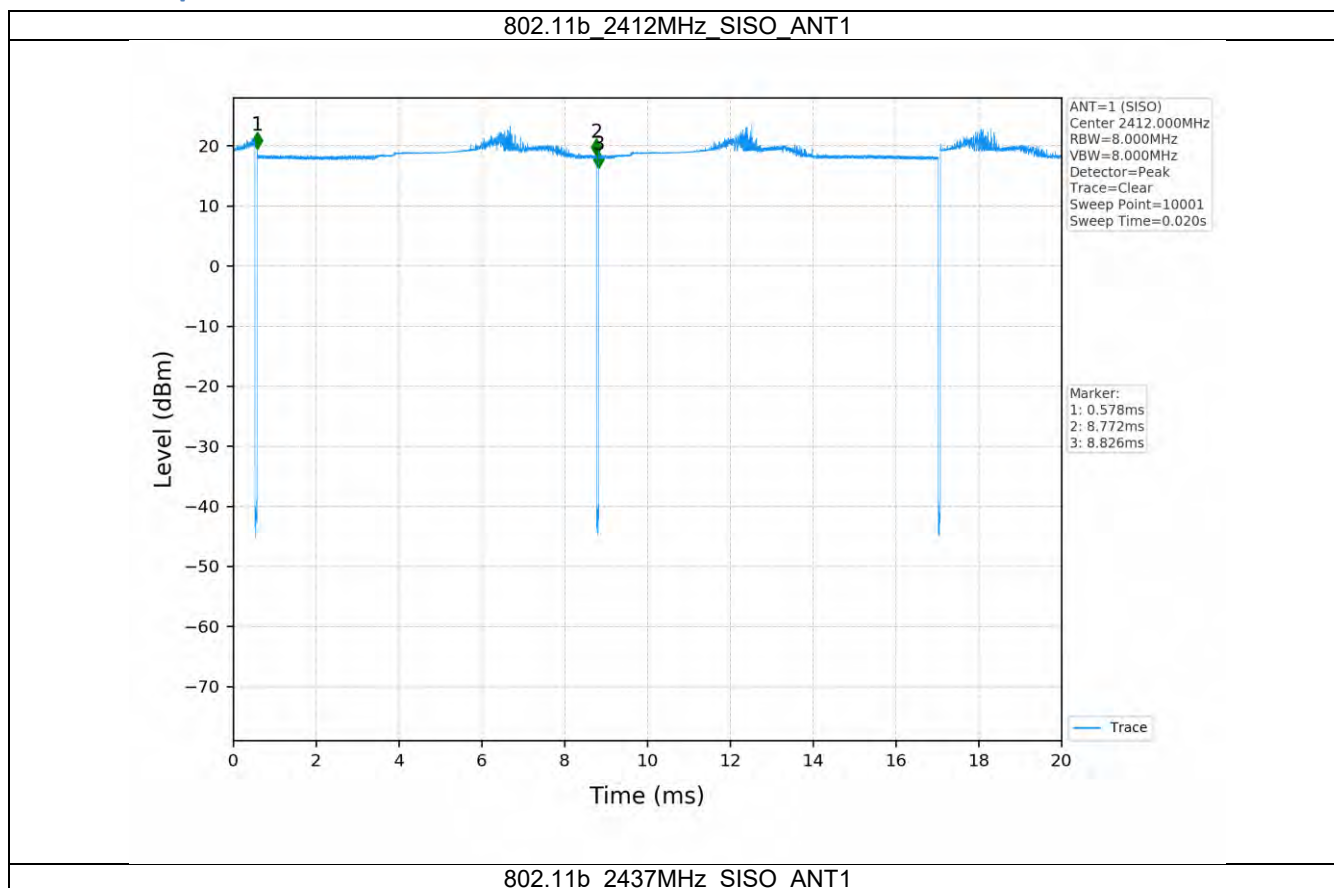
Appendix A SHEM190801594201

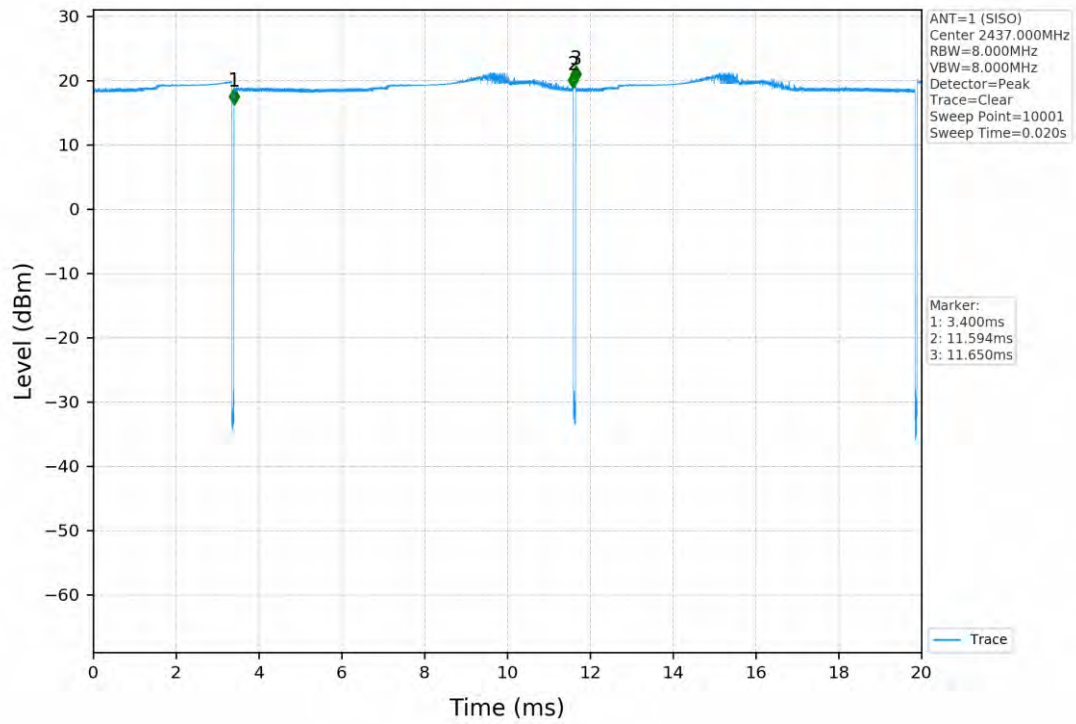
1. Duty Cycle

1.1 Test Result

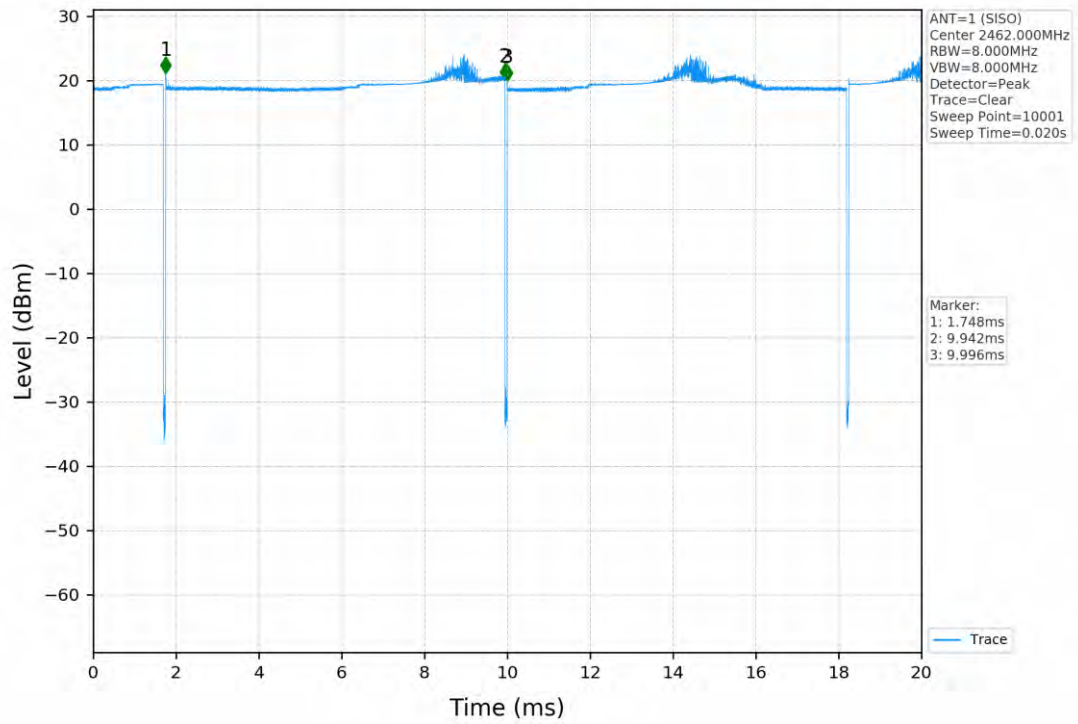
Test Mode	Channel Frequency(MHz)	TX Type	ANT No.	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
802.11b	2412	SISO	1	8.194	8.248	99.35	0.03
	2437	SISO	1	8.194	8.250	99.32	0.03
	2462	SISO	1	8.194	8.248	99.35	0.03
802.11g	2412	SISO	1	1.360	1.414	96.18	0.17
	2437	SISO	1	1.360	1.414	96.18	0.17
	2462	SISO	1	1.360	1.414	96.18	0.17
802.11n(HT20)	2412	SISO	1	1.272	1.326	95.93	0.18
	2437	SISO	1	1.272	1.326	95.93	0.18
	2462	SISO	1	1.272	1.326	95.93	0.18
802.11n(HT40)	2422	SISO	1	0.632	0.686	92.13	0.36
	2437	SISO	1	0.632	0.686	92.13	0.36
	2452	SISO	1	0.632	0.686	92.13	0.36

1.2 Test Graph

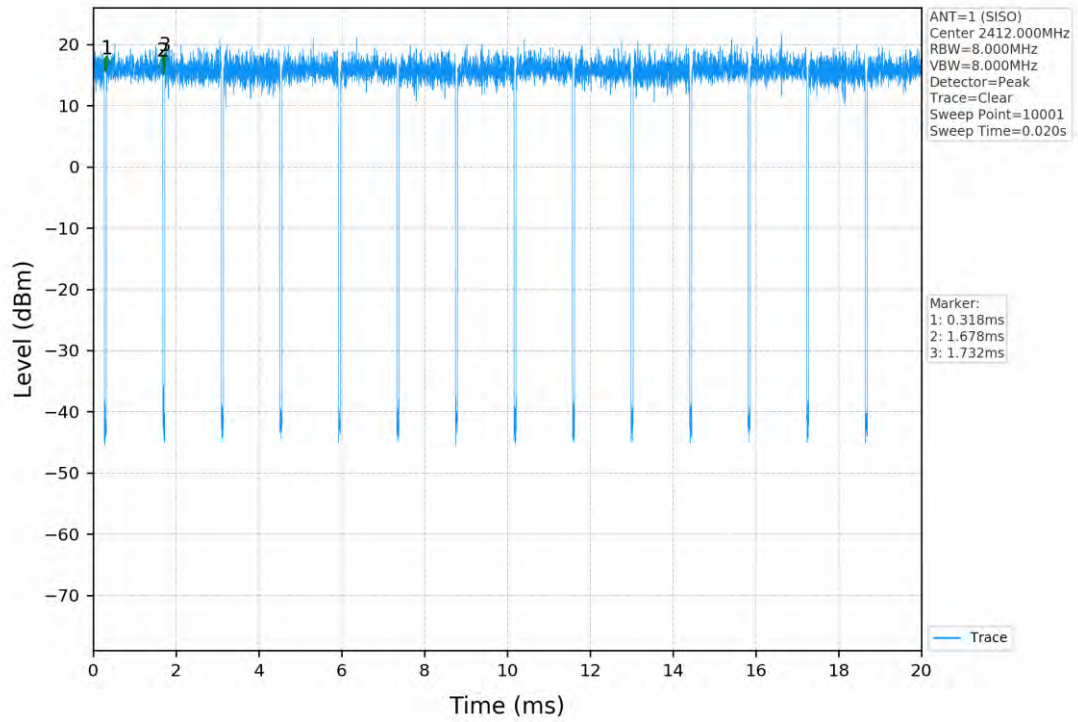




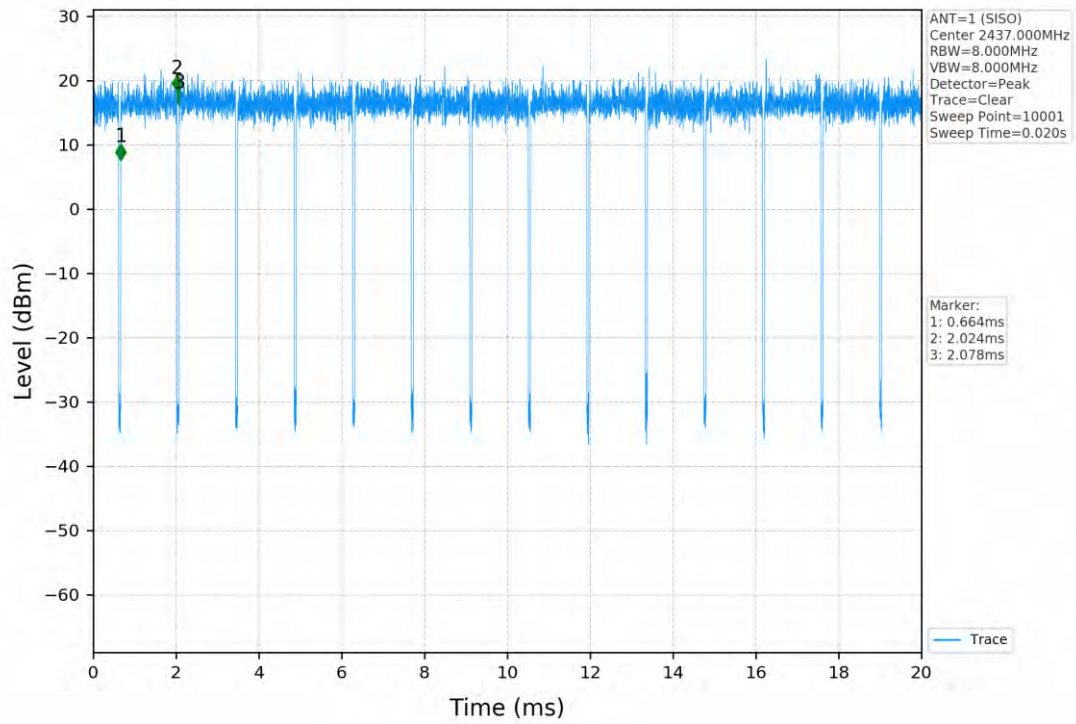
802.11b_2462MHz_SISO_ANT1



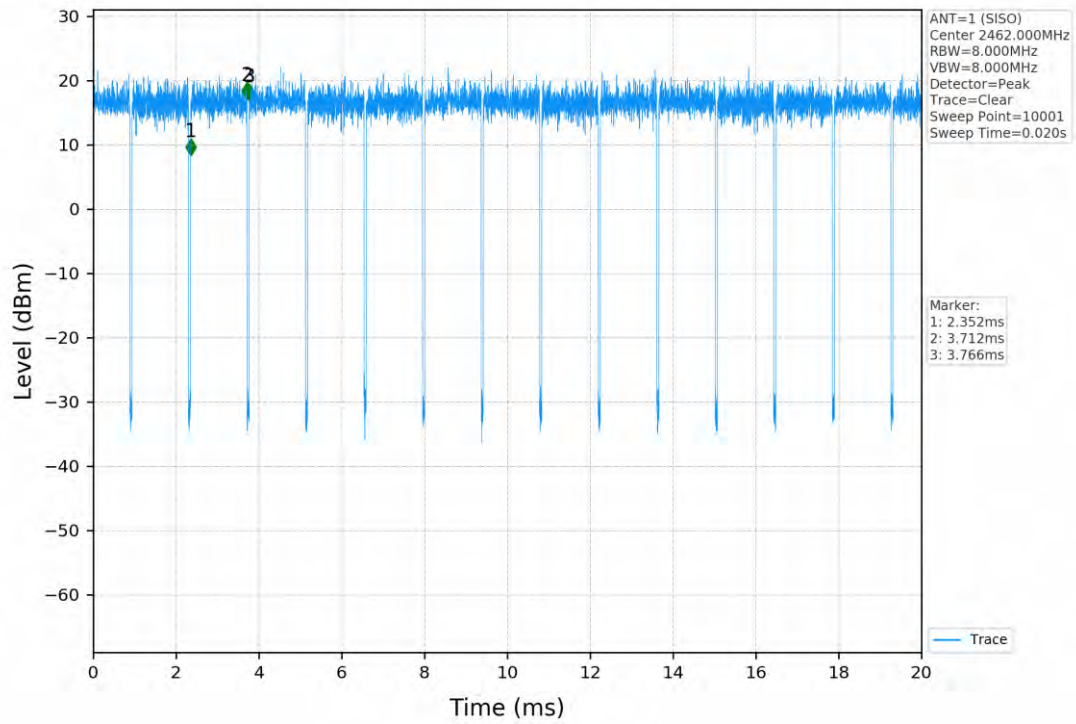
802.11g_2412MHz_SISO_ANT1



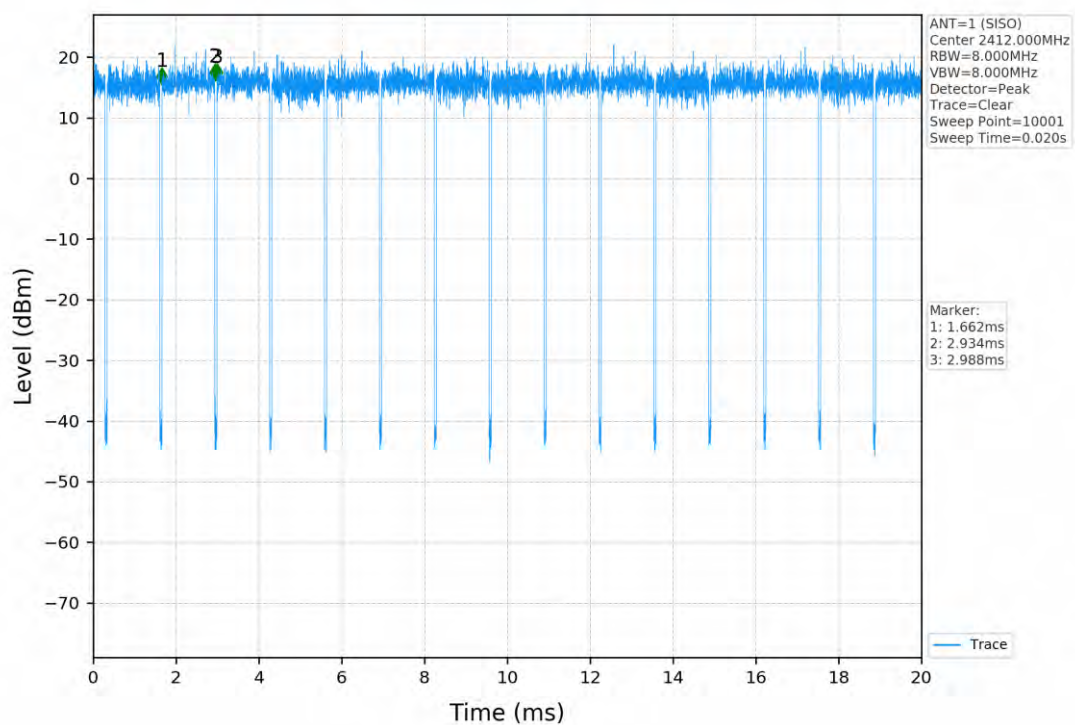
802.11g_2437MHz_SISO_ANT1



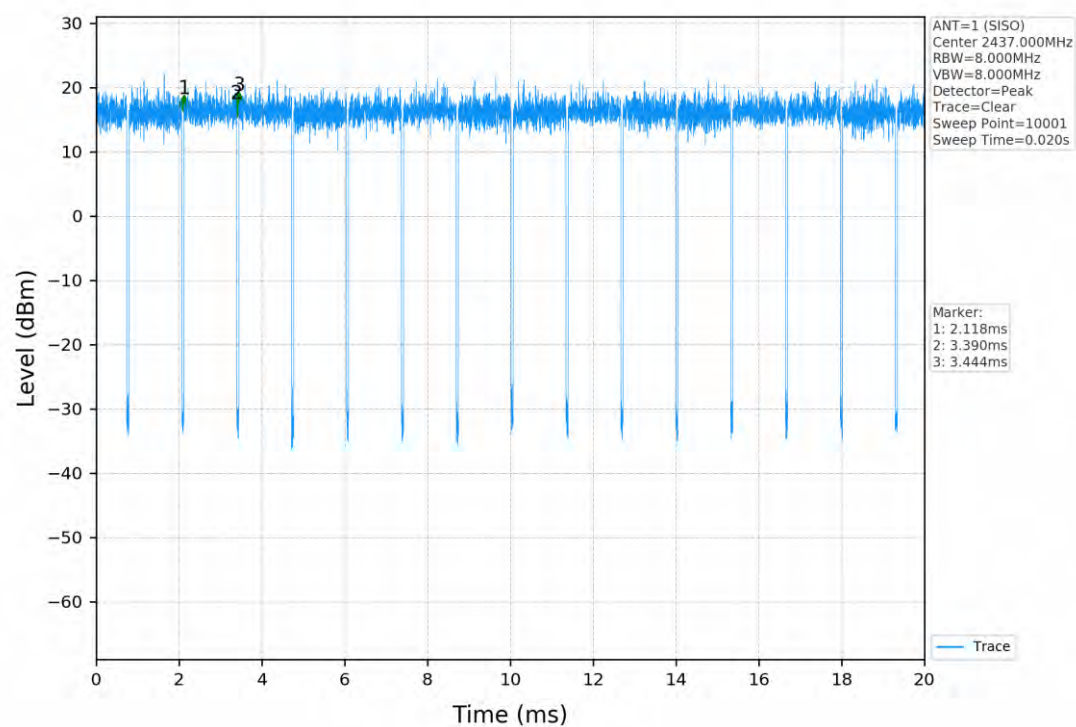
802.11g_2462MHz_SISO_ANT1



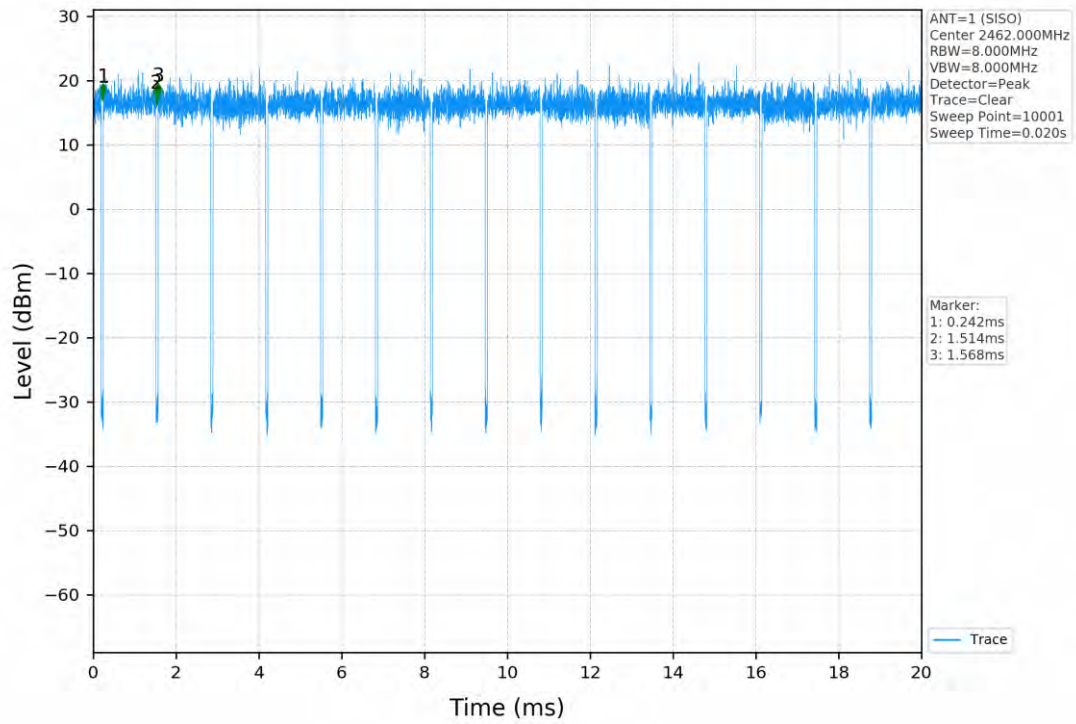
802.11n(HT20)_2412MHz_SISO_ANT1



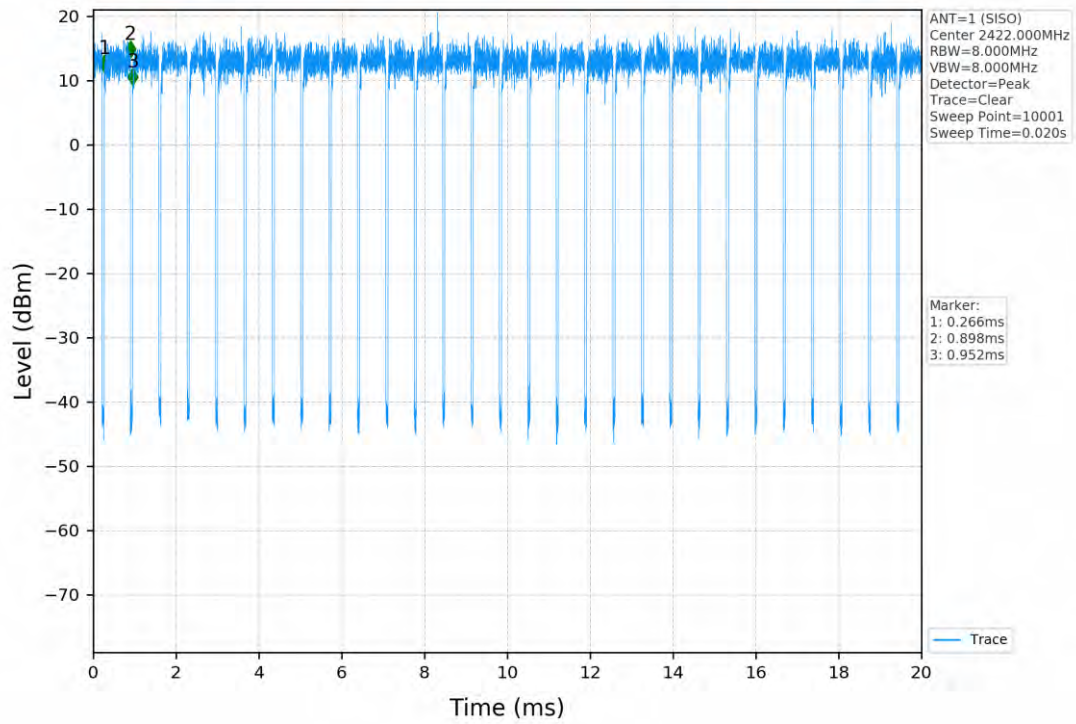
802.11n(HT20)_2437MHz_SISO_ANT1



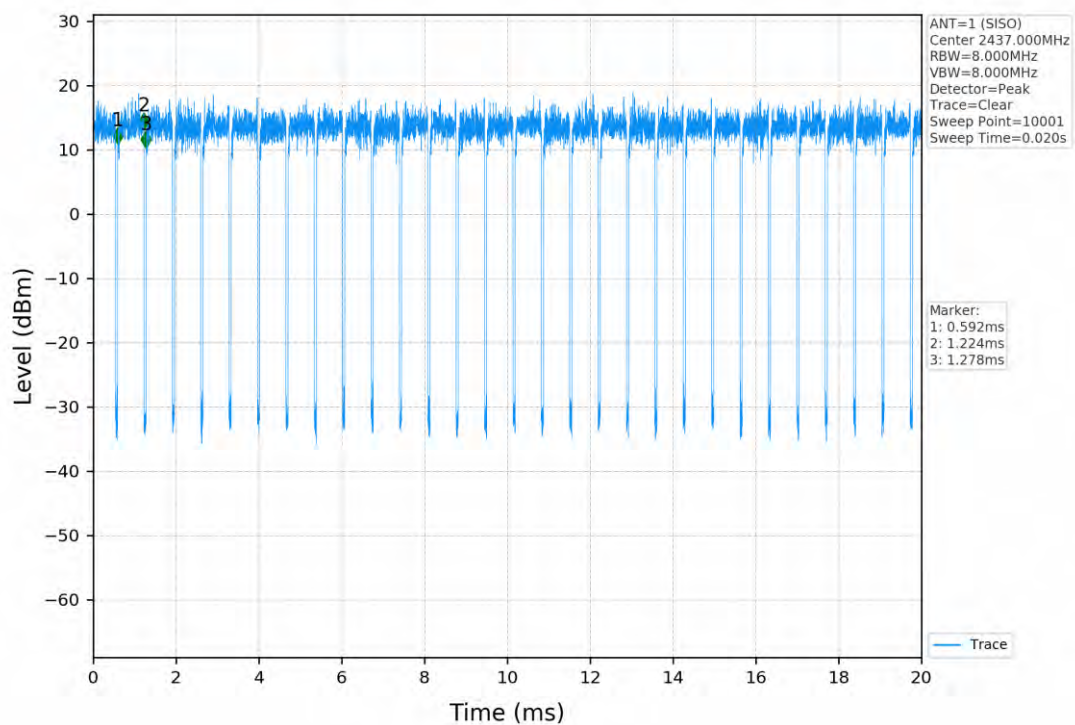
802.11n(HT20)_2462MHz_SISO_ANT1



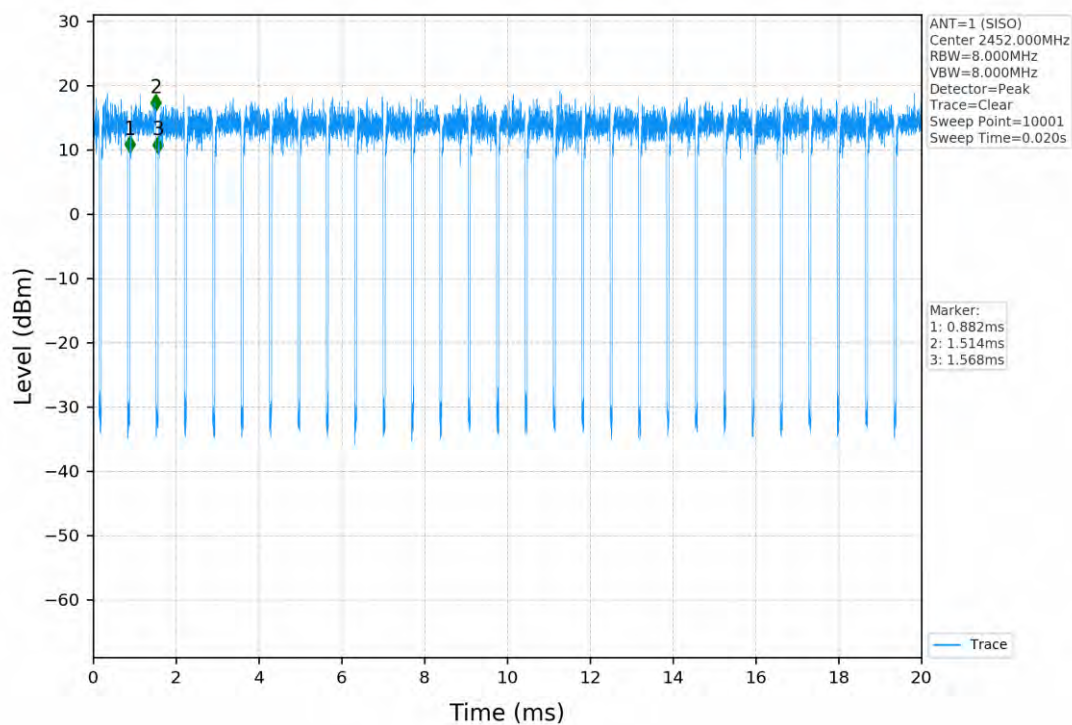
802.11n(HT40)_2422MHz_SISO_ANT1



802.11n(HT40)_2437MHz_SISO_ANT1



802.11n(HT40)_2452MHz_SISO_ANT1



2. Bandwidth

2.1 Test Result

Test Mode	Frequency (MHz)	TX Type	ANT No.	6dB Bandwidth		Verdict
				Test Result (MHz)	Limits (MHz)	
802.11b	2412	SISO	1	10.080	≥ 0.5	PASS
	2437	SISO	1	9.620	≥ 0.5	PASS
	2462	SISO	1	9.600	≥ 0.5	PASS
802.11g	2412	SISO	1	16.390	≥ 0.5	PASS
	2437	SISO	1	16.390	≥ 0.5	PASS
	2462	SISO	1	16.370	≥ 0.5	PASS
802.11n(HT20)	2412	SISO	1	17.580	≥ 0.5	PASS
	2437	SISO	1	17.370	≥ 0.5	PASS
	2462	SISO	1	17.570	≥ 0.5	PASS
802.11n(HT40)	2422	SISO	1	35.160	≥ 0.5	PASS
	2437	SISO	1	35.190	≥ 0.5	PASS
	2452	SISO	1	35.200	≥ 0.5	PASS

Test Mode	Frequency (MHz)	TX Type	ANT No.	99% Occupied Bandwidth	
				Test Result (MHz)	
802.11b	2412	SISO	1	14.950	Only for Report Use
	2437	SISO	1	14.950	Only for Report Use

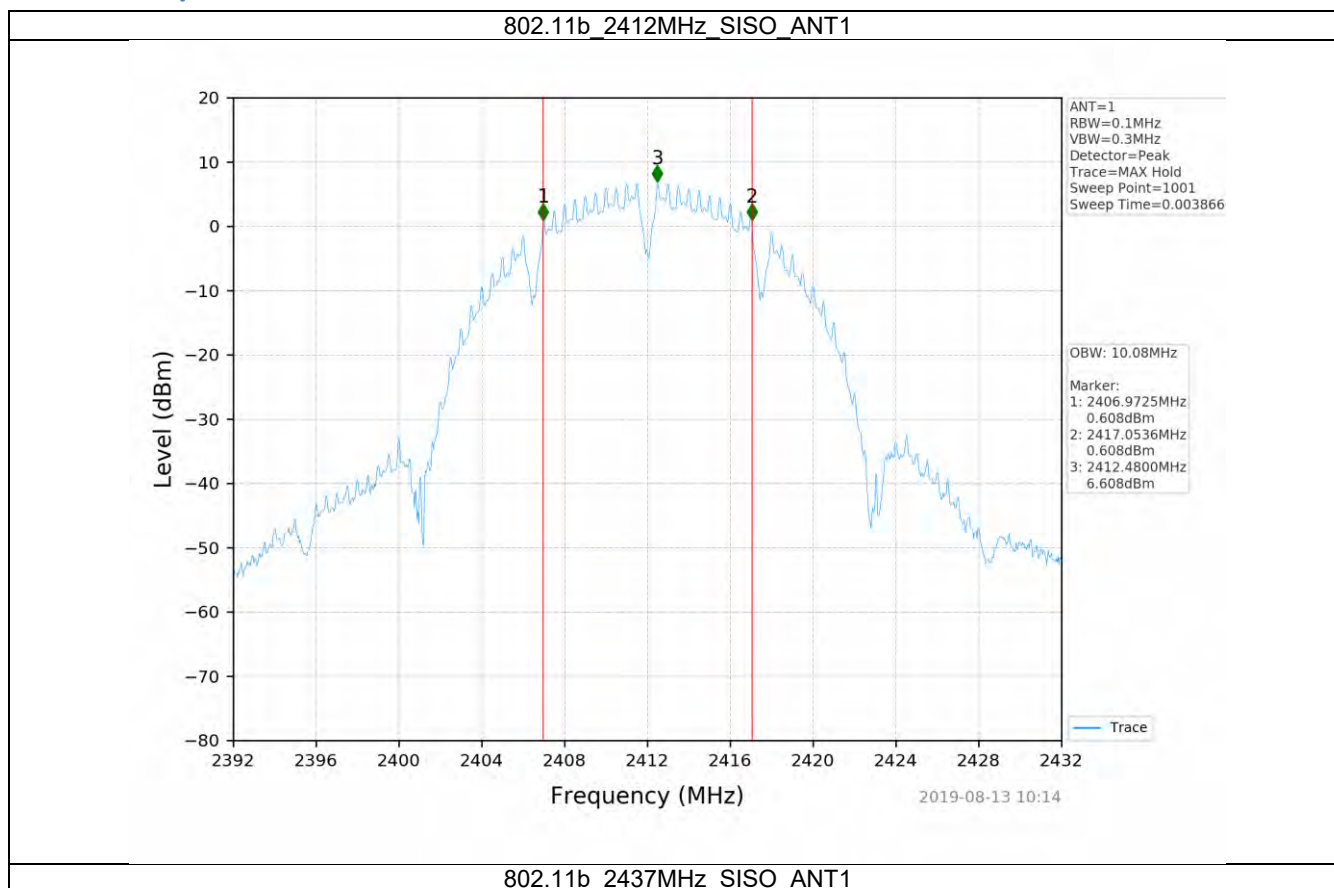


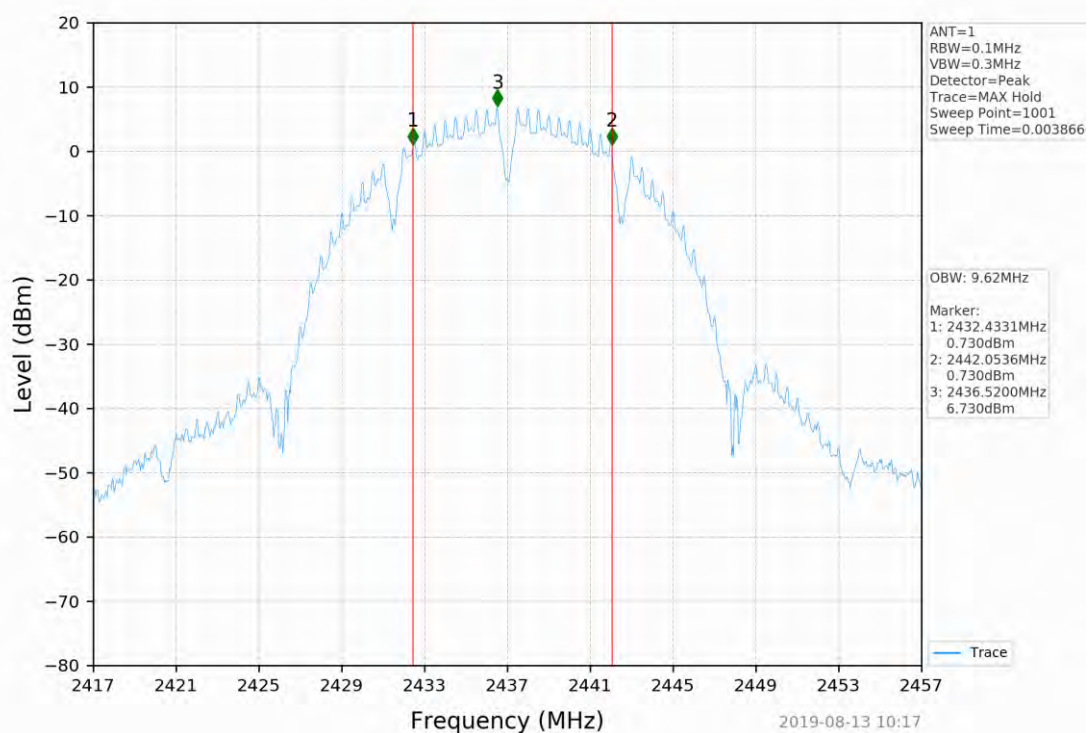
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	2462	SISO	1	14.950	Only for Report Use
802.11g	2412	SISO	1	16.850	Only for Report Use
	2437	SISO	1	16.910	Only for Report Use
	2462	SISO	1	16.980	Only for Report Use
802.11n(HT20)	2412	SISO	1	17.910	Only for Report Use
	2437	SISO	1	17.950	Only for Report Use
	2462	SISO	1	17.960	Only for Report Use
802.11n(HT40)	2422	SISO	1	36.190	Only for Report Use
	2437	SISO	1	36.120	Only for Report Use
	2452	SISO	1	36.410	Only for Report Use

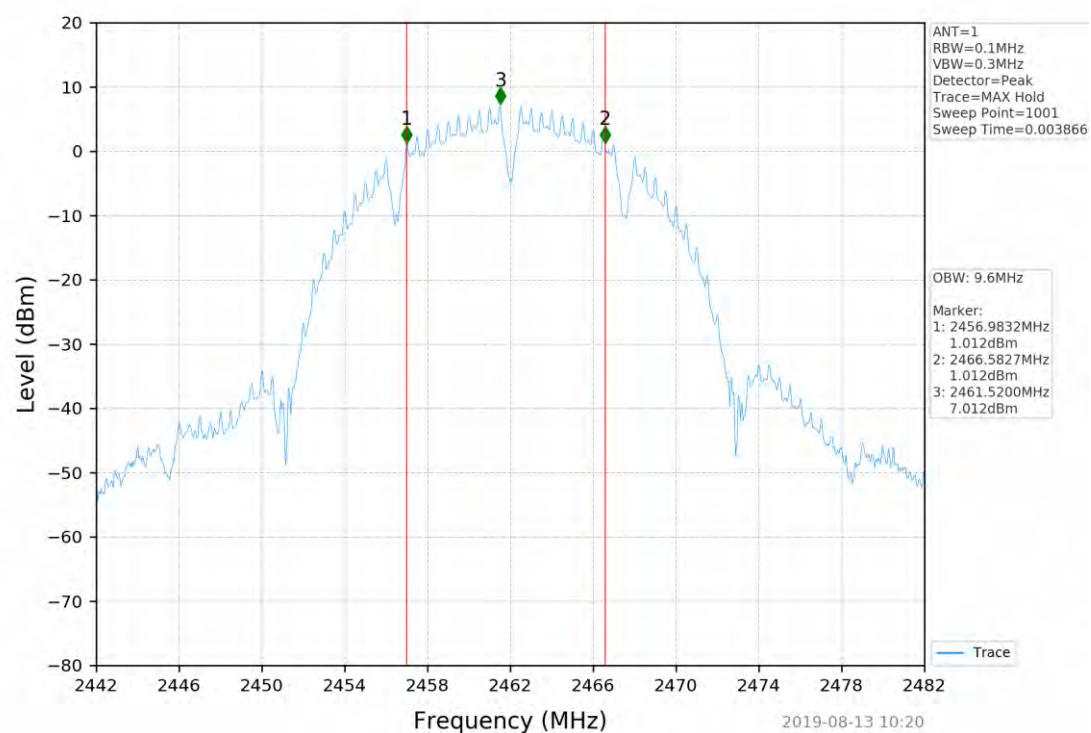


2.2 Test Graph - 6dB Bandwidth

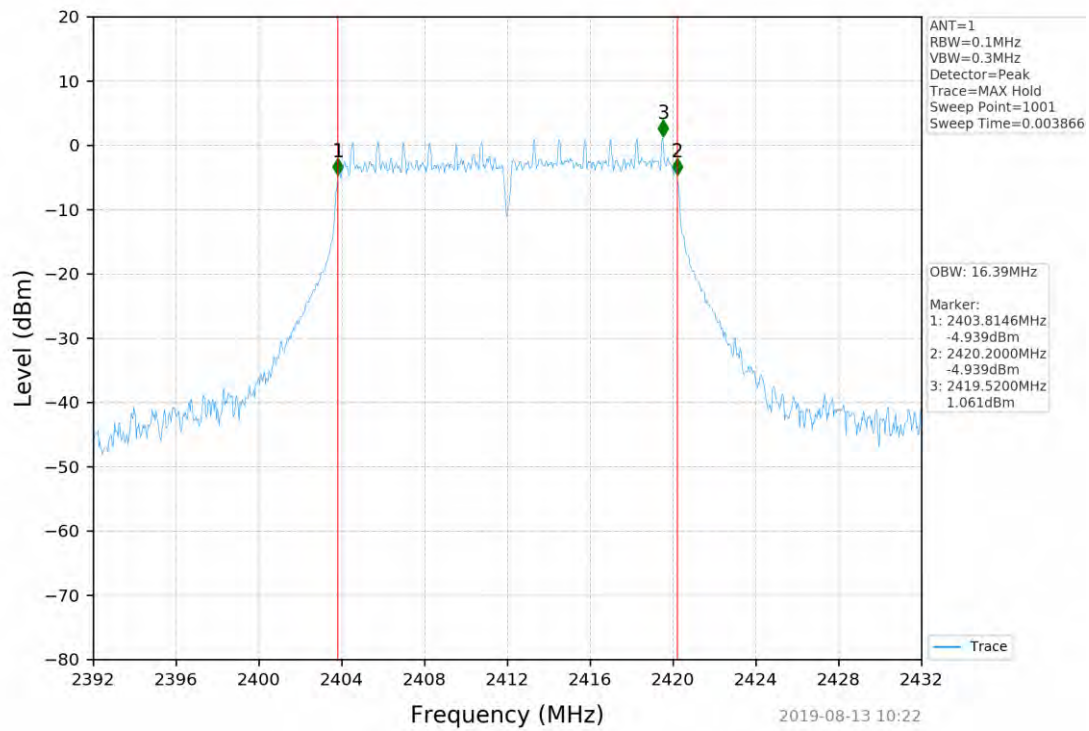




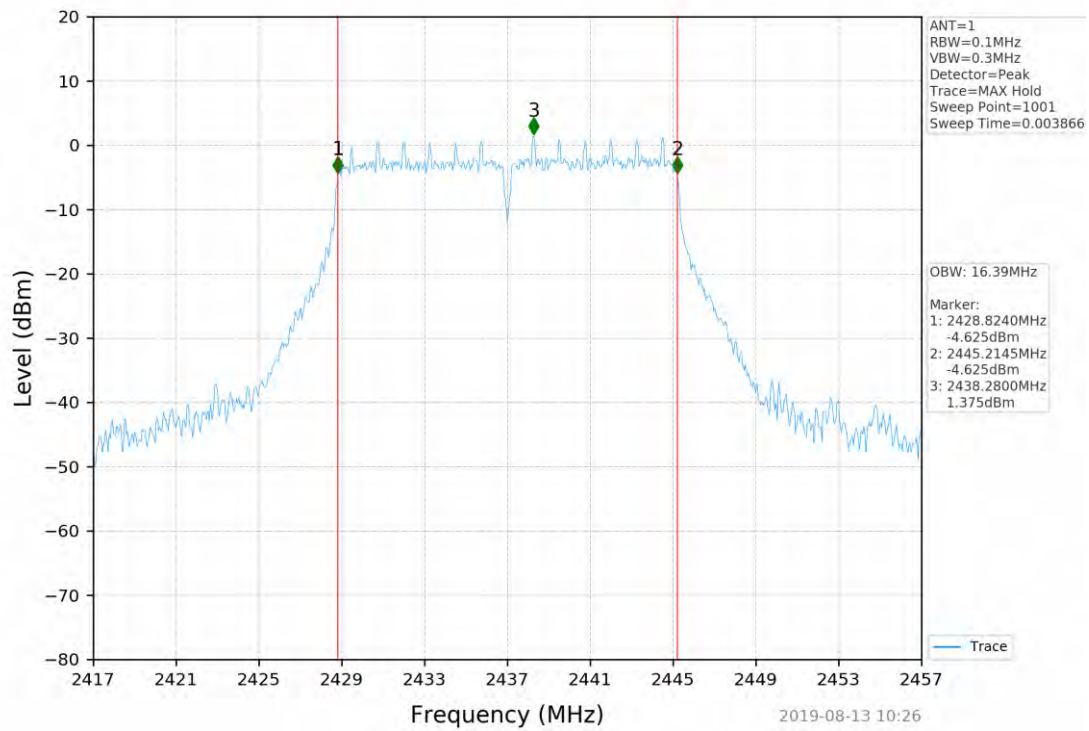
802.11b_2462MHz_SISO_ANT1



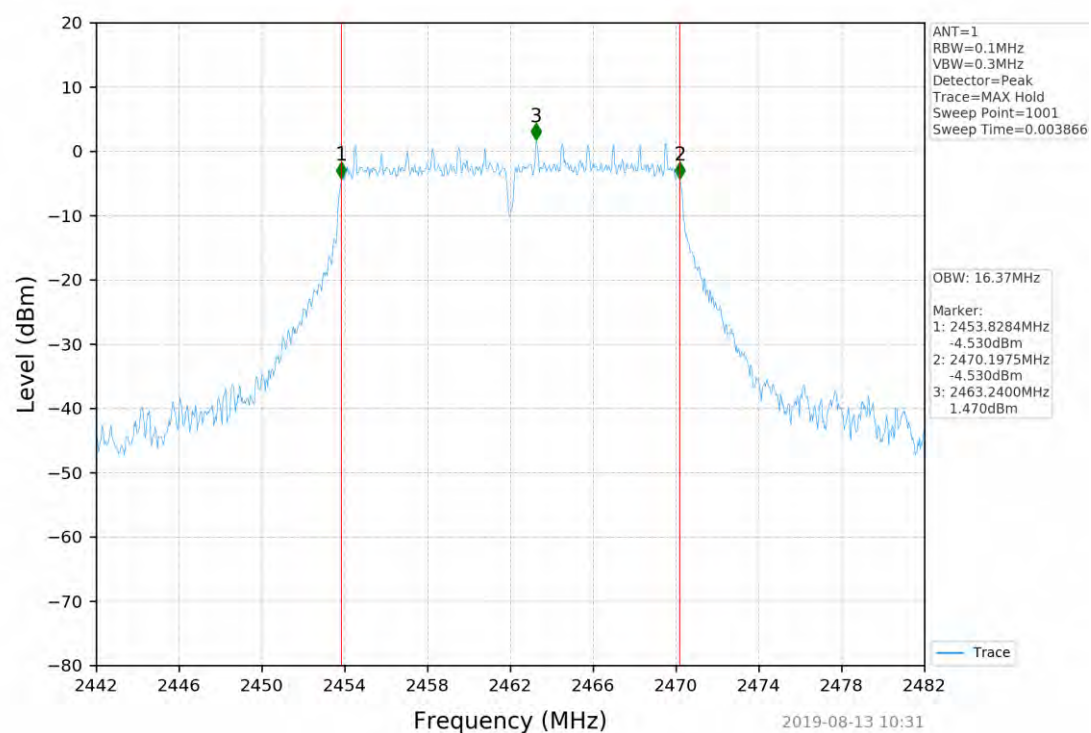
802.11g_2412MHz_SISO_ANT1



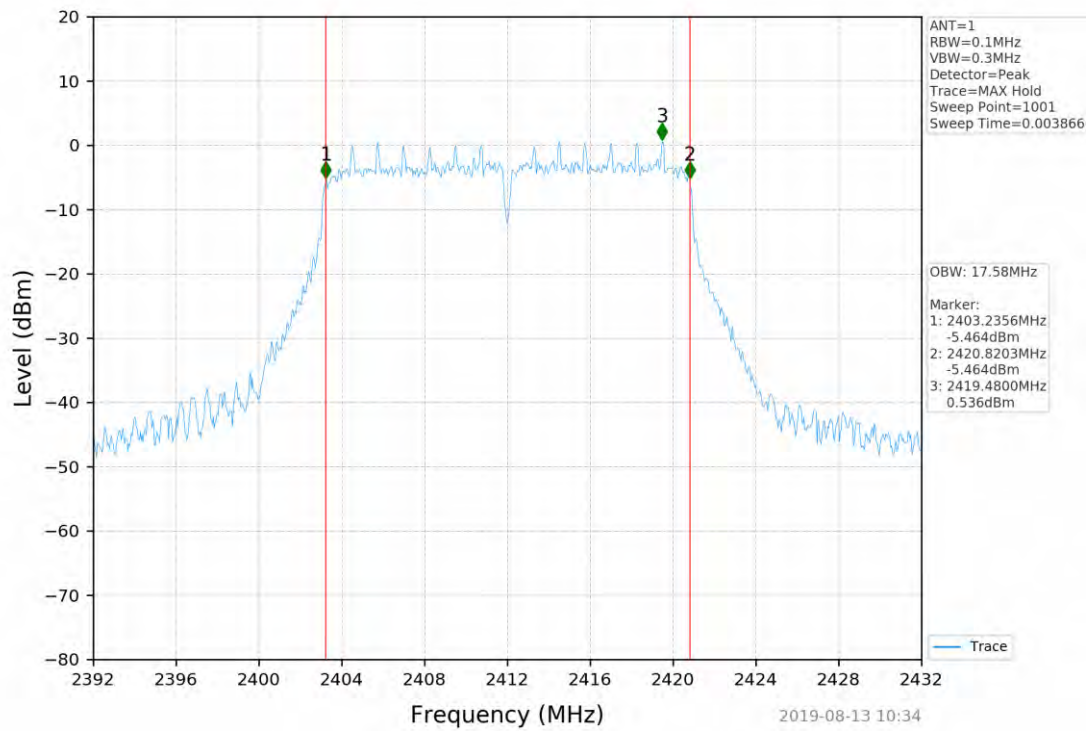
802.11g_2437MHz_SISO_ANT1



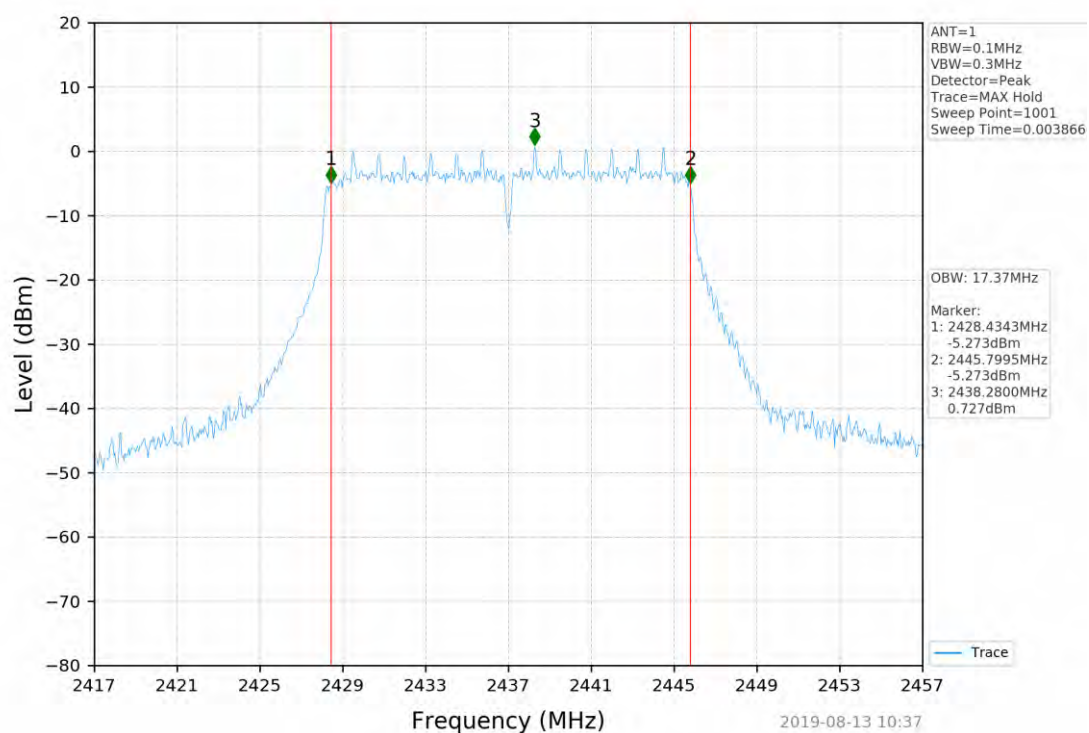
802.11g_2462MHz_SISO_ANT1



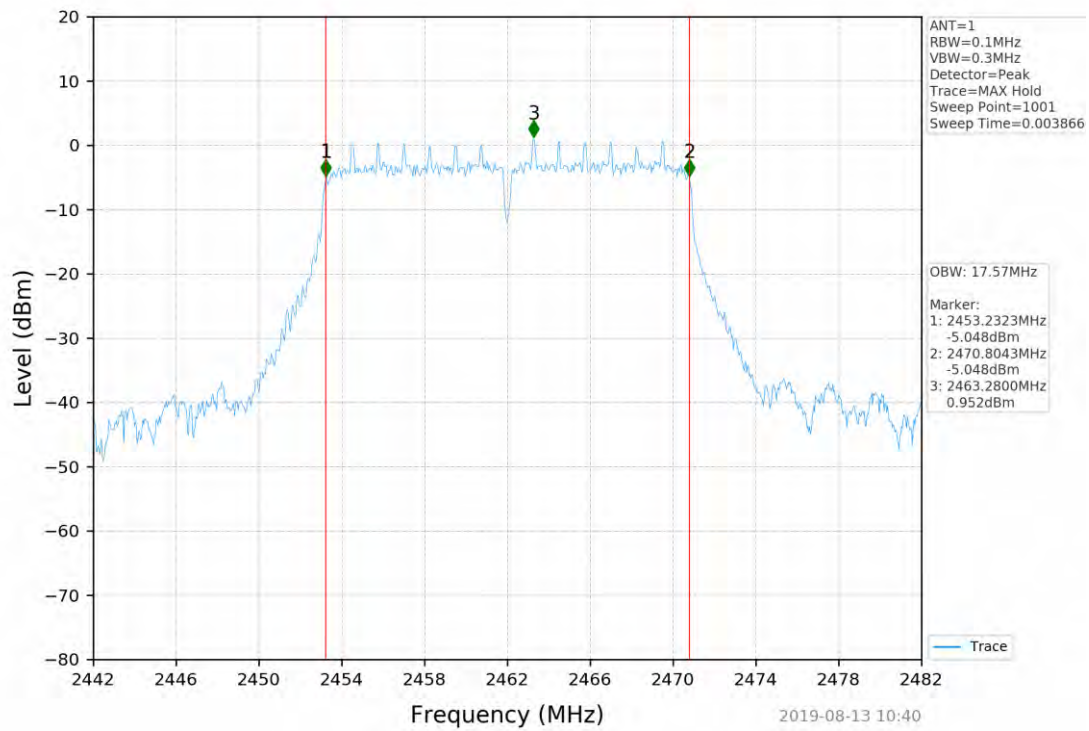
802.11n(HT20)_2412MHz_SISO_ANT1



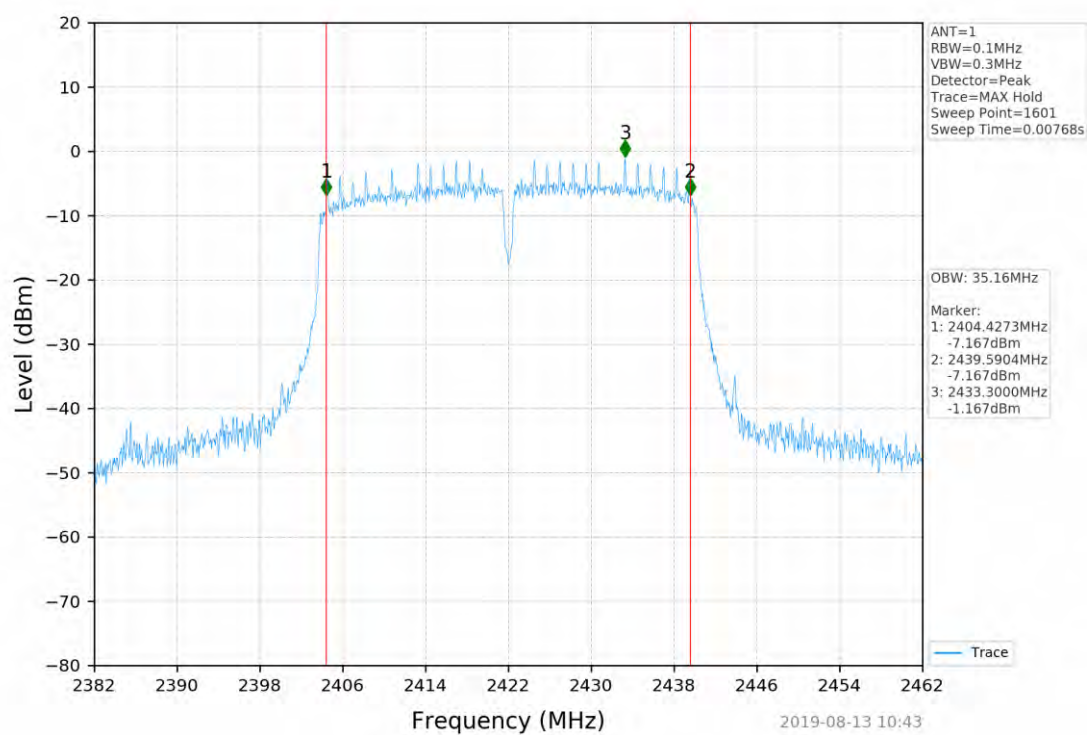
802.11n(HT20)_2437MHz_SISO_ANT1



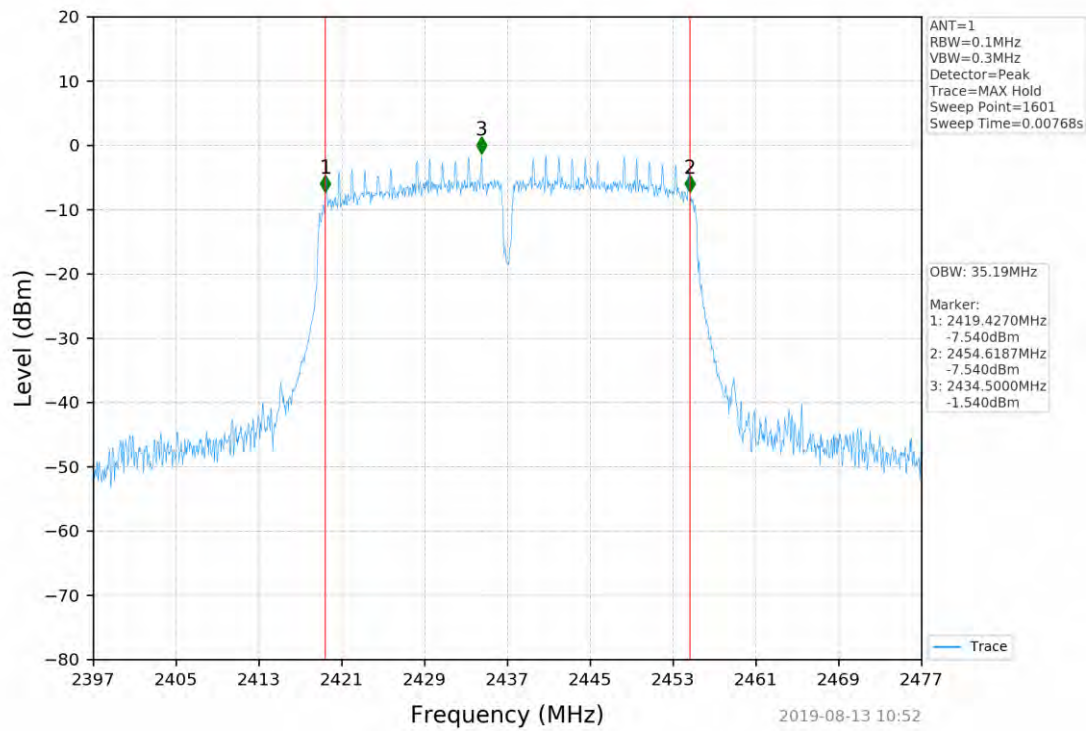
802.11n(HT20)_2462MHz_SISO_ANT1



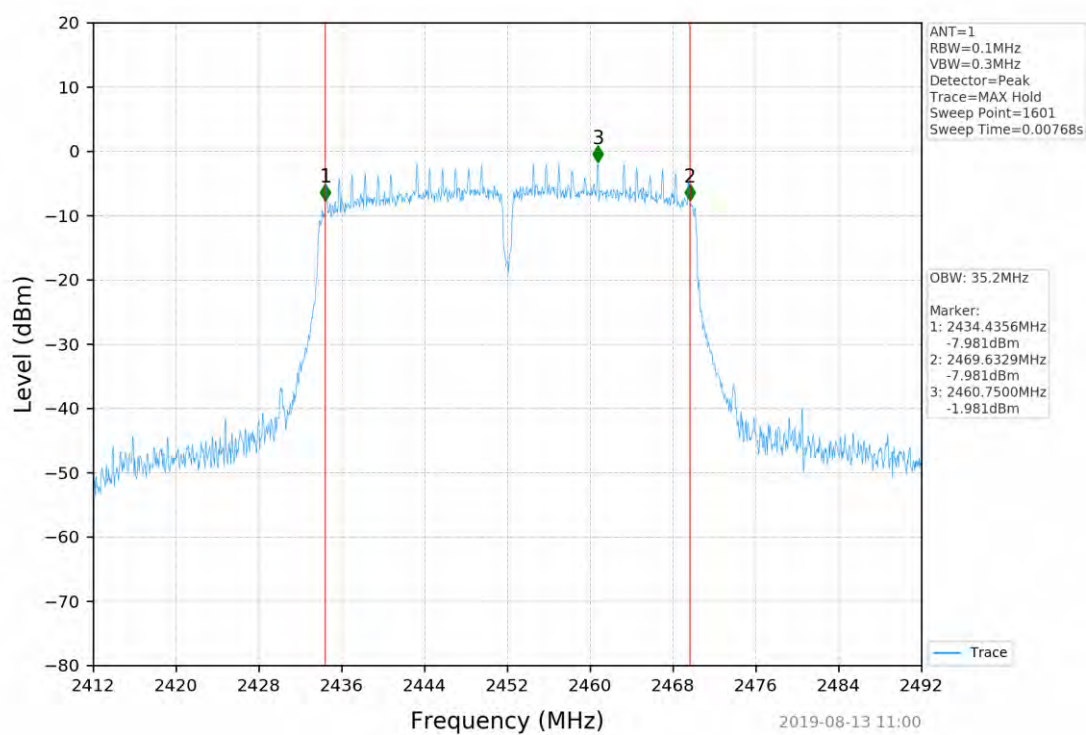
802.11n(HT40)_2422MHz_SISO_ANT1



802.11n(HT40)_2437MHz_SISO_ANT1

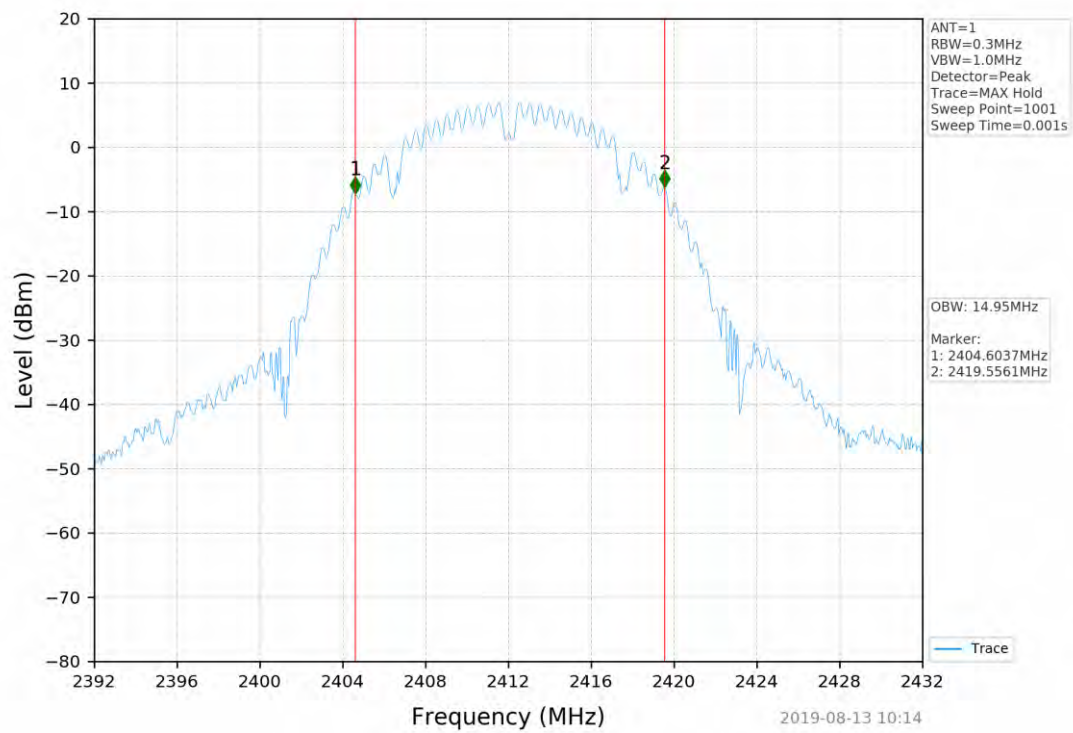


802.11n(HT40)_2452MHz_SISO_ANT1

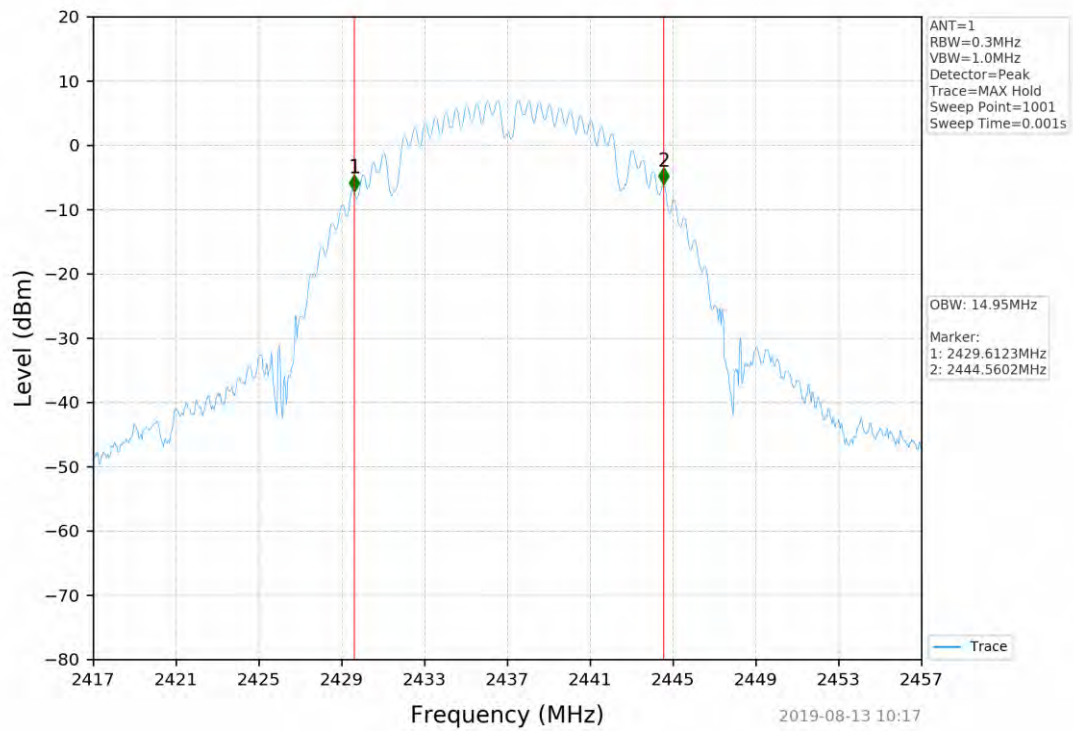


2.3 Test Graph - 99% Occupied Bandwidth

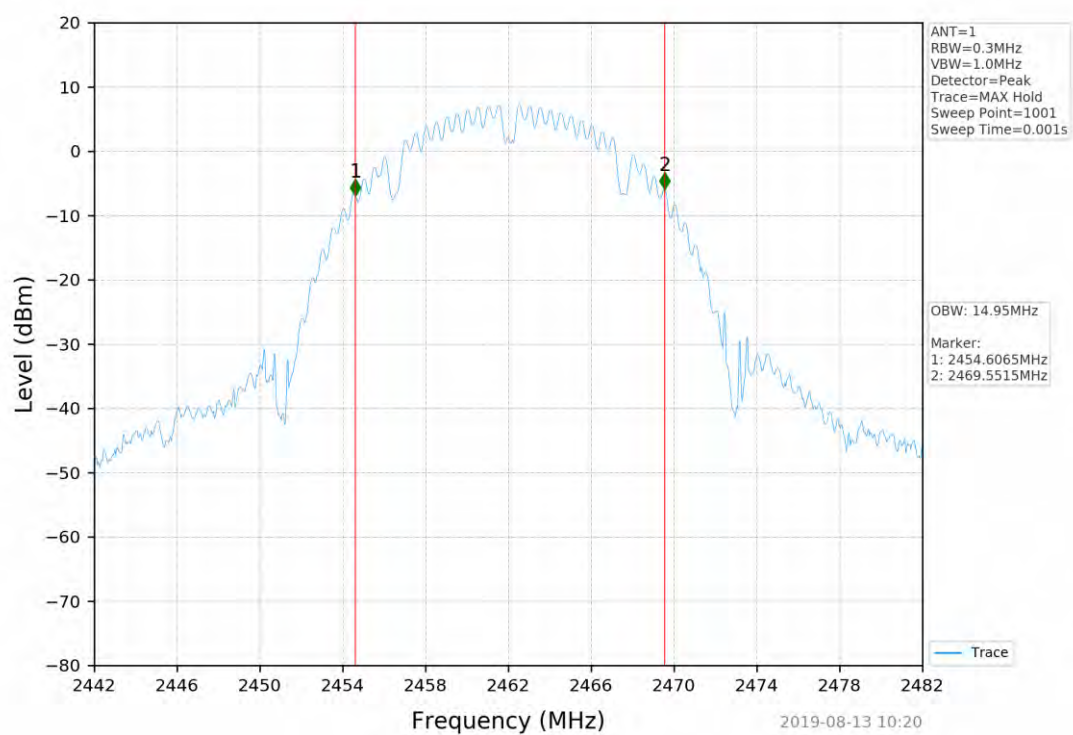
802.11b_2412MHz_SISO_ANT1



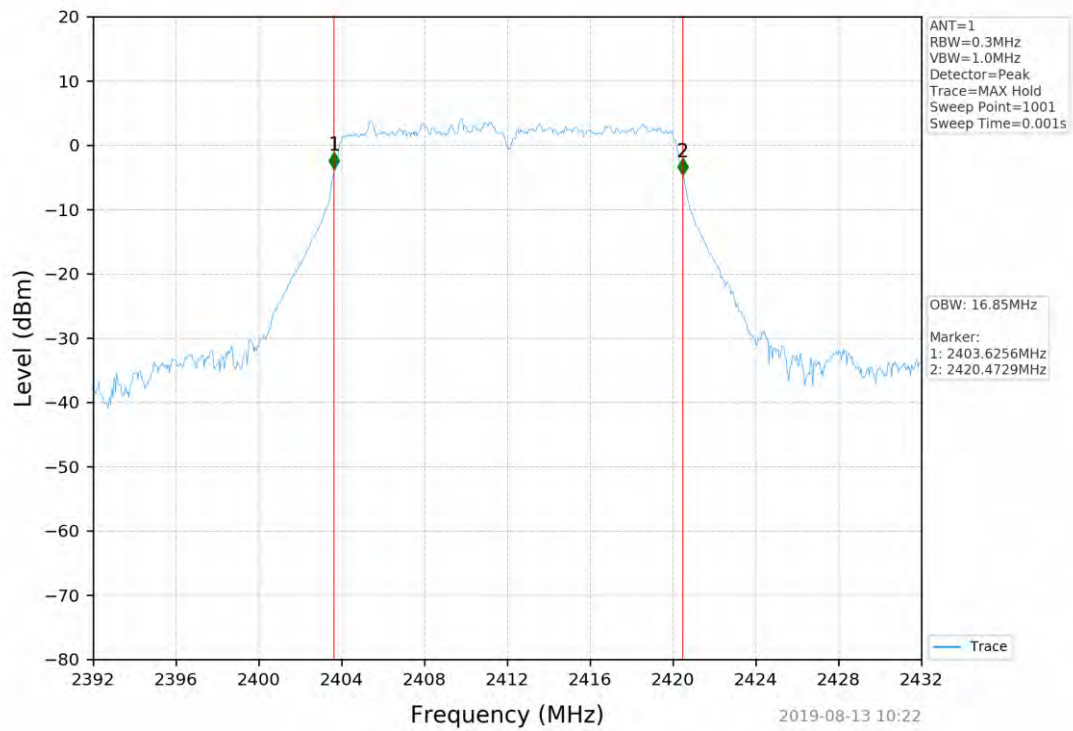
802.11b_2437MHz_SISO_ANT1



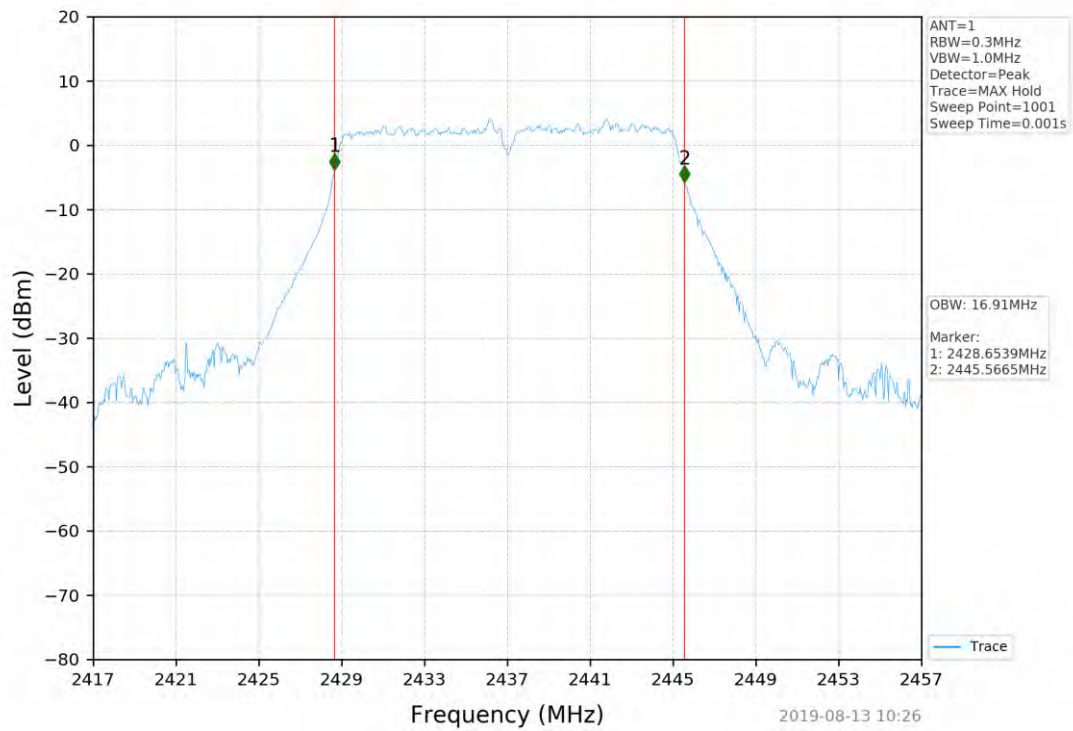
802.11b_2462MHz_SISO_ANT1



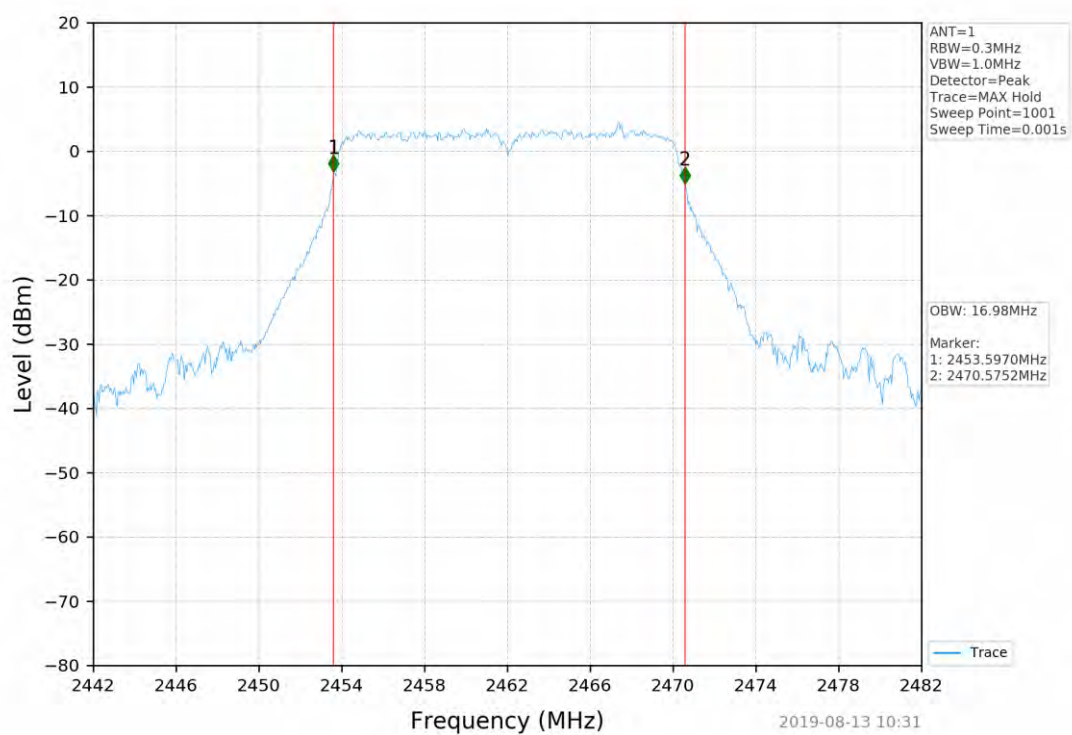
802.11g_2412MHz_SISO_ANT1



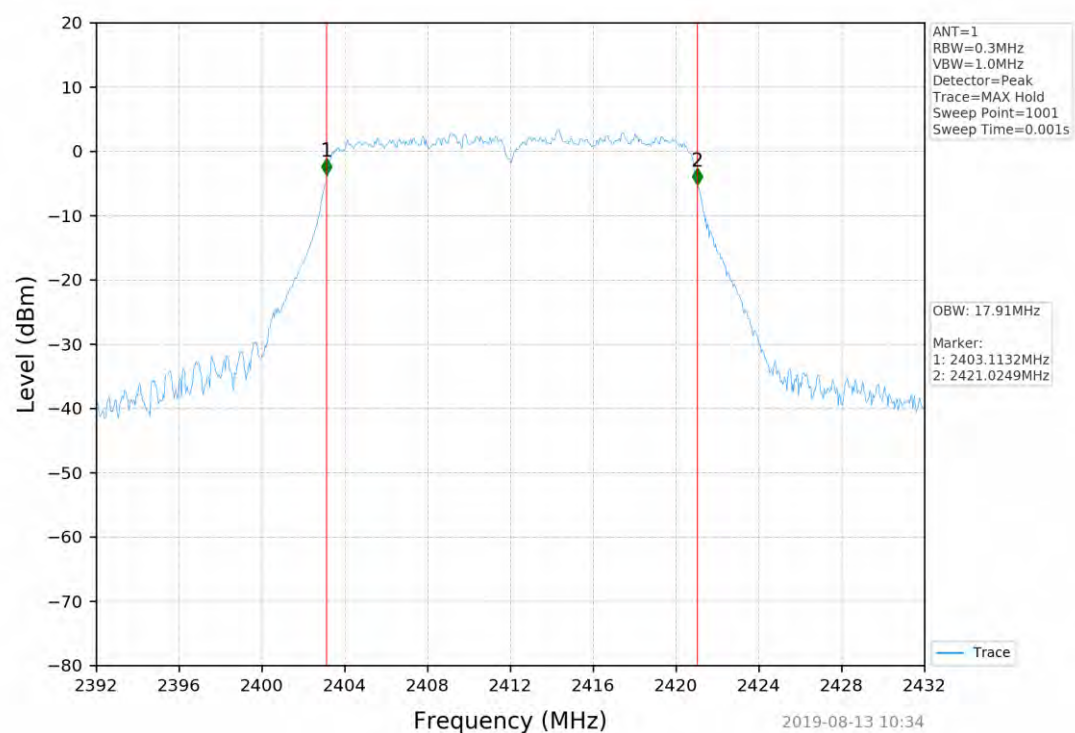
802.11g_2437MHz_SISO_ANT1



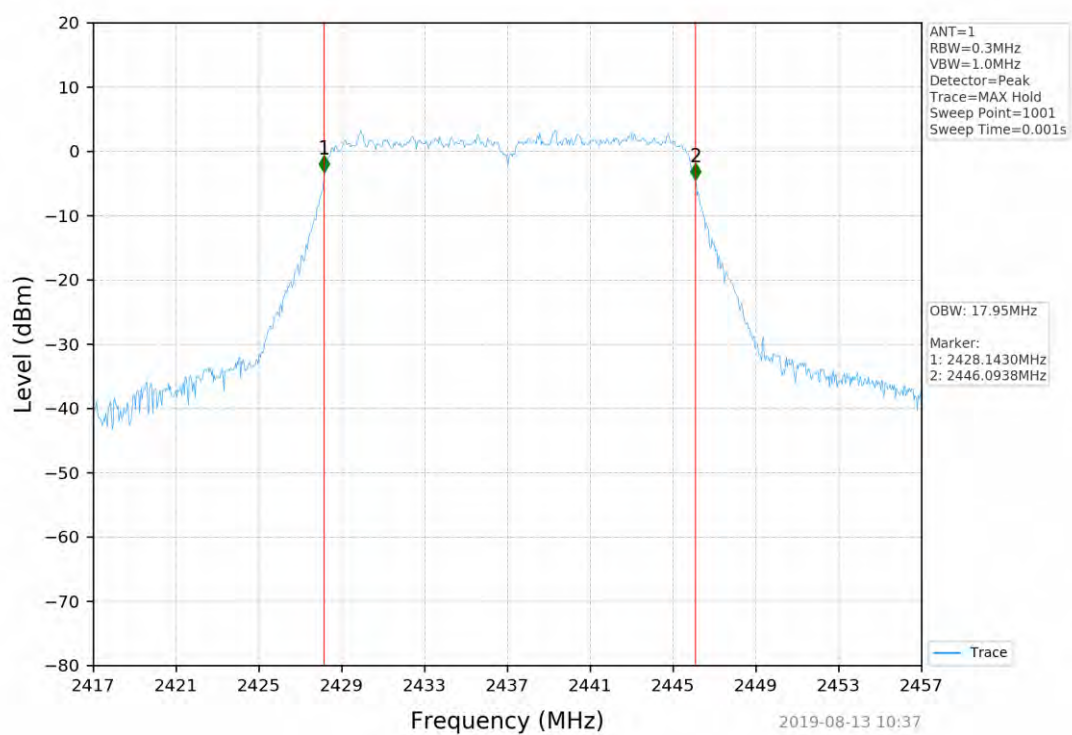
802.11g_2462MHz_SISO_ANT1



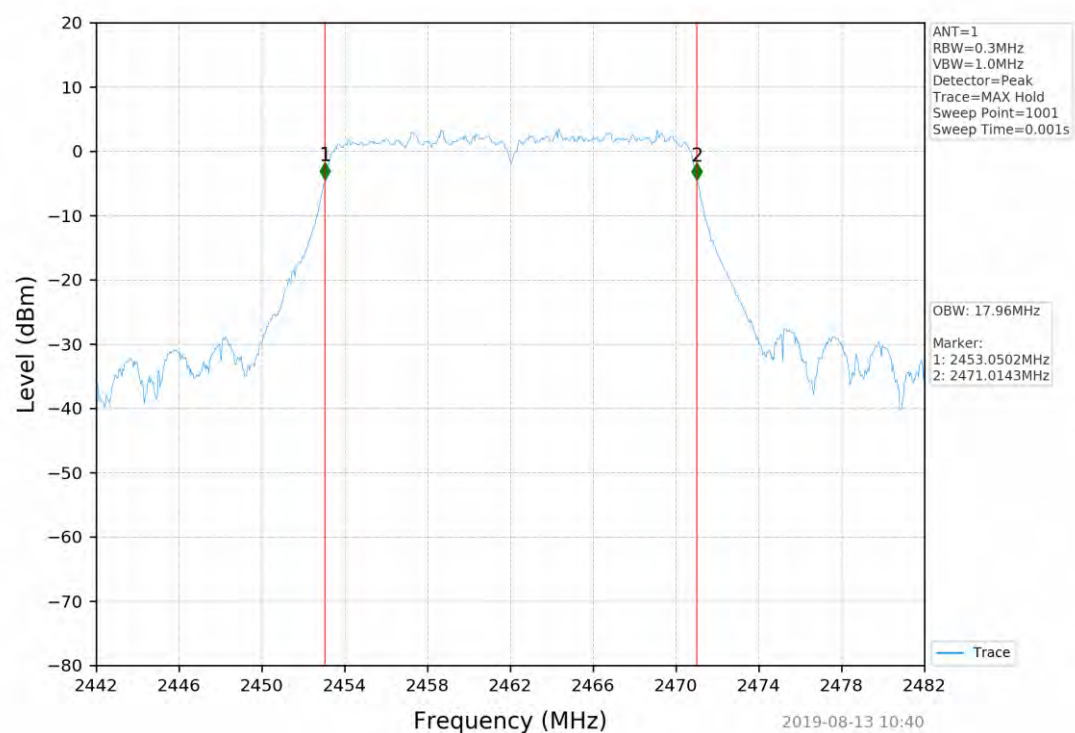
802.11n(HT20) 2412MHz_SISO_ANT1



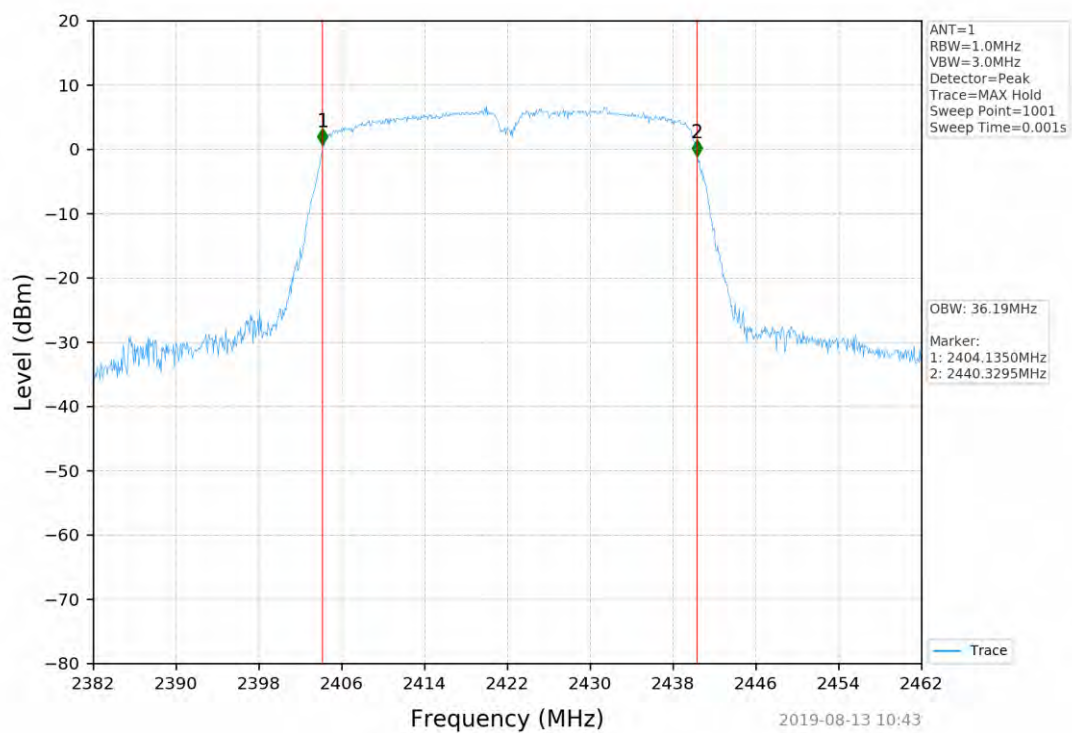
802.11n(HT20) 2437MHz_SISO_ANT1



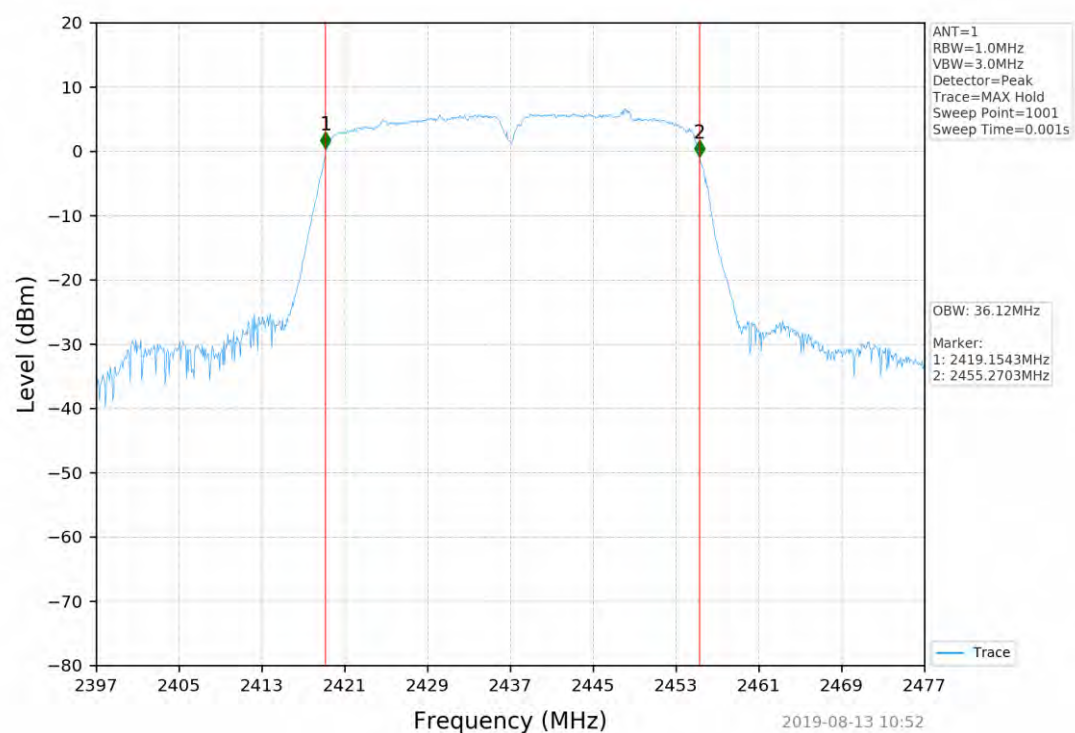
802.11n(HT20) 2462MHz_SISO_ANT1



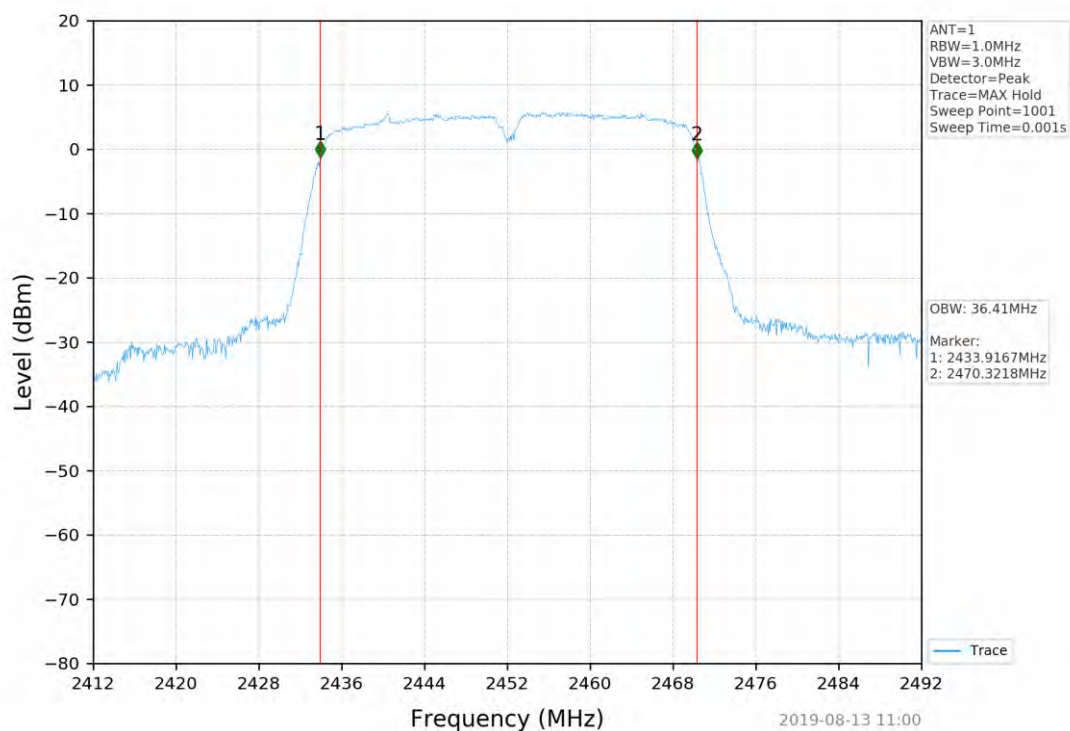
802.11n(HT40)_2422MHz_SISO_ANT1



802.11n(HT40)_2437MHz_SISO_ANT1



802.11n(HT40)_2452MHz_SISO_ANT1



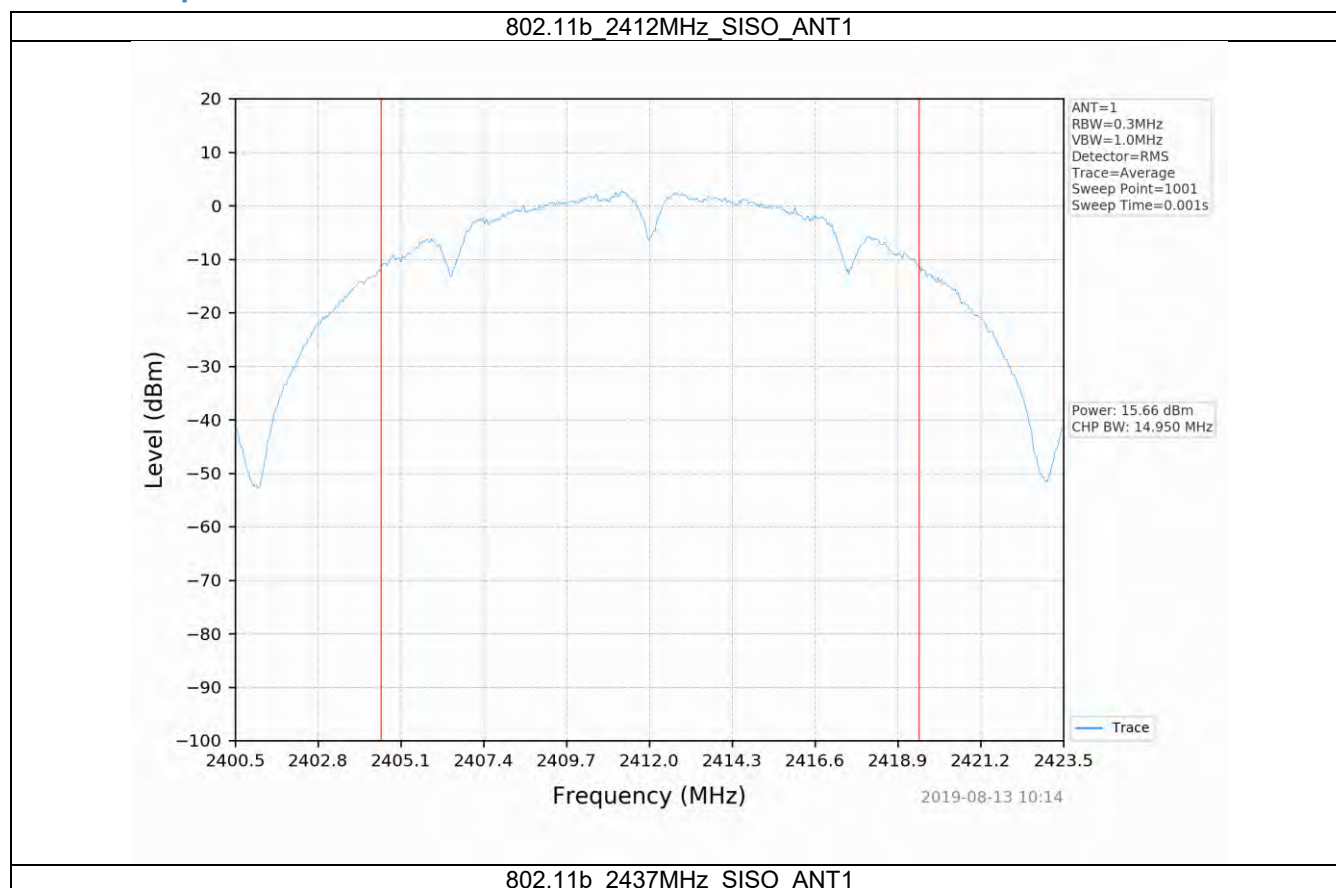
3. Maximum Conducted Output Power

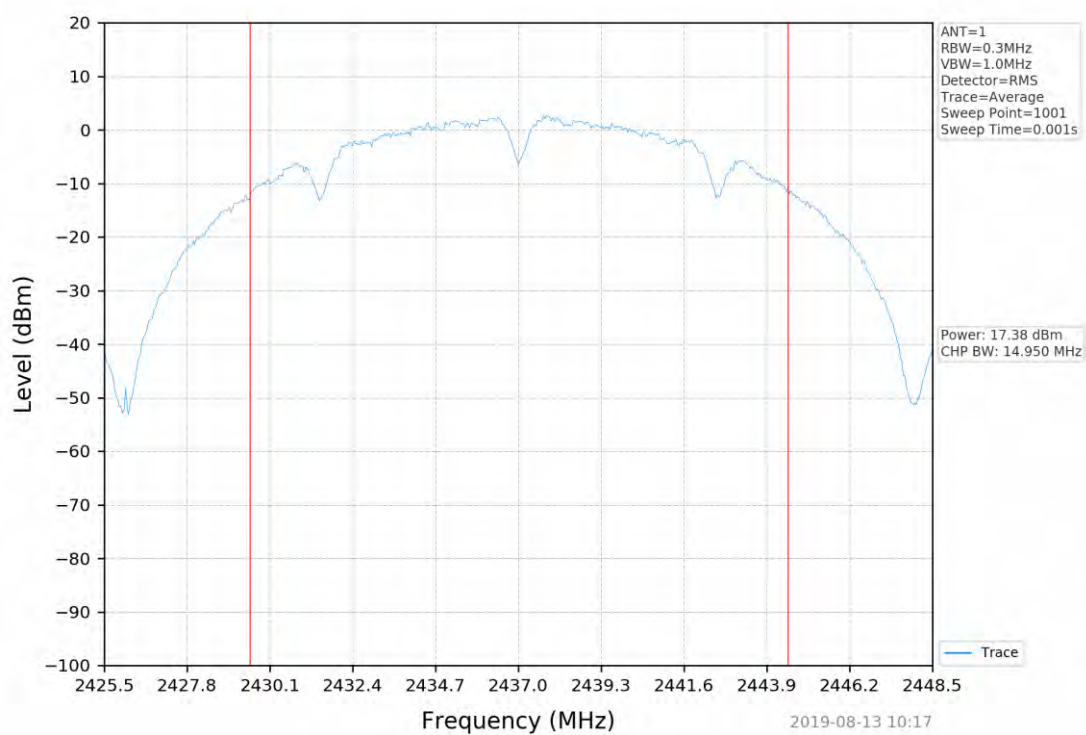
3.1 Test Result

Test Mode	Frequency (MHz)	Tx Type	Duty Cycle Correction Factor (dB)	Level (dBm)	Maximum Conducted Output Power (dBm)	Limits (dBm)	Verdict
			Ant 1	Ant 1	Ant 1		
802.11b	2412	SISO	0.03	15.66	15.69	≤30	PASS
	2437	SISO	0.03	17.38	17.41	≤30	PASS
	2462	SISO	0.03	17.70	17.73	≤30	PASS
802.11g	2412	SISO	0.17	12.44	12.61	≤30	PASS
	2437	SISO	0.17	12.43	12.60	≤30	PASS
	2462	SISO	0.17	12.63	12.80	≤30	PASS
802.11n(HT20)	2412	SISO	0.18	11.97	12.15	≤30	PASS
	2437	SISO	0.18	11.82	12.00	≤30	PASS
	2462	SISO	0.18	12.02	12.20	≤30	PASS
802.11n(HT40)	2422	SISO	0.36	13.30	13.66	≤30	PASS
	2437	SISO	0.36	18.42	18.78	≤30	PASS
	2452	SISO	0.36	12.21	12.57	≤30	PASS

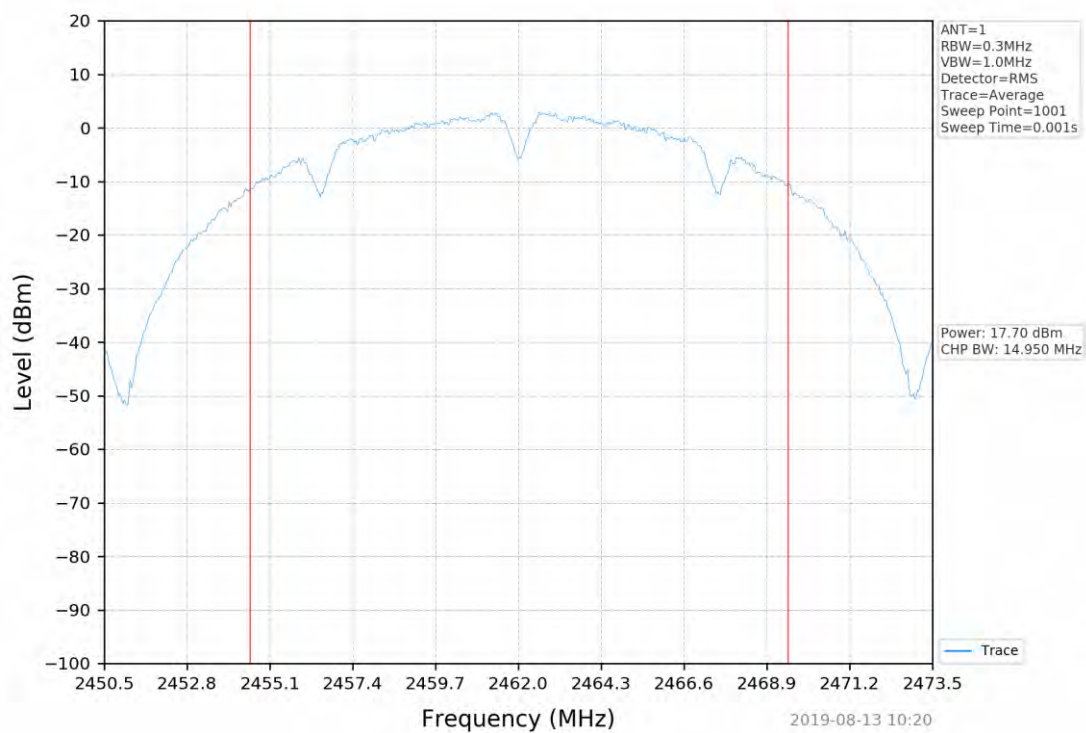


3.2 Test Graph

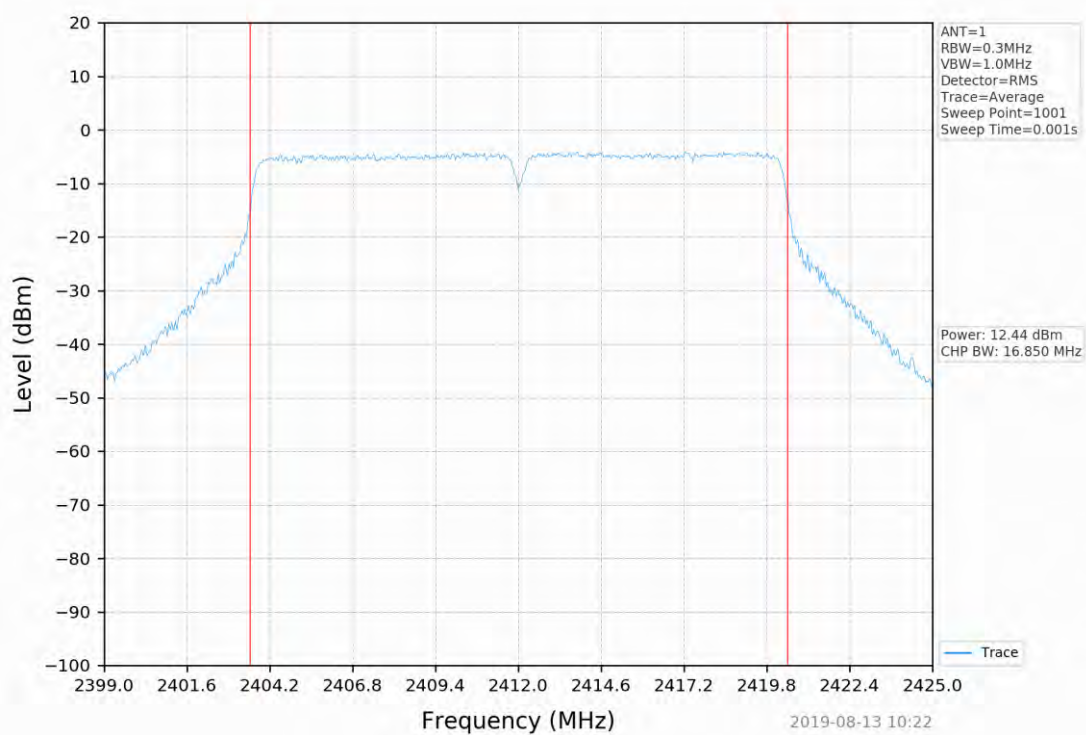




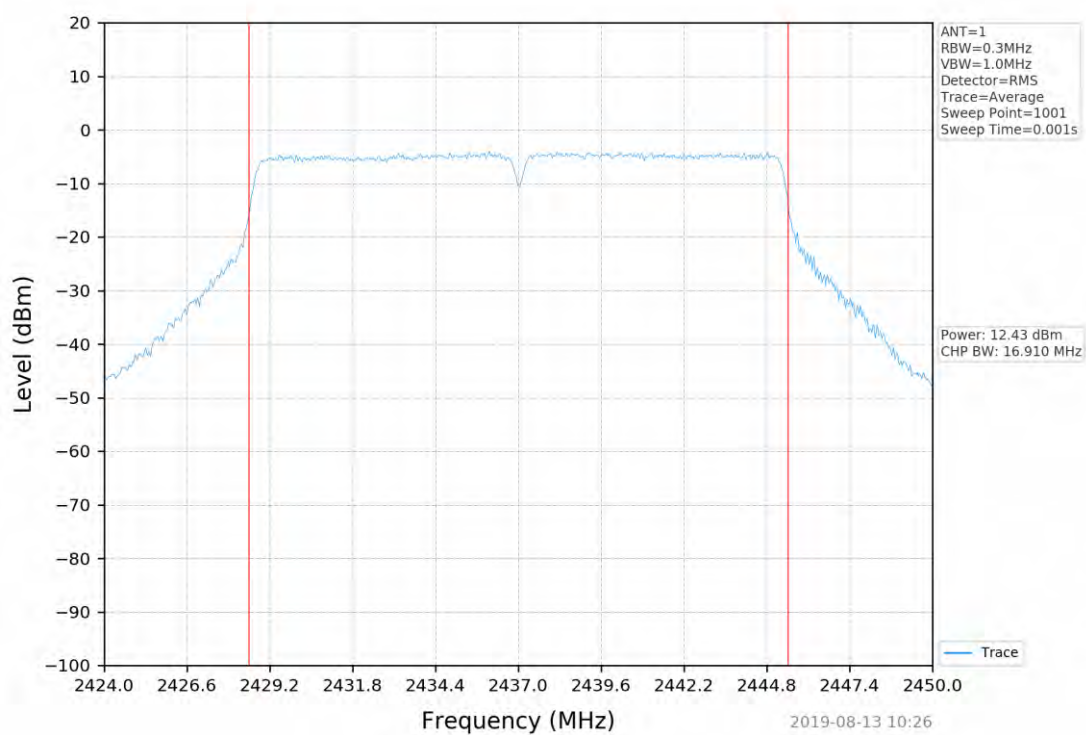
802.11b_2462MHz_SISO_ANT1



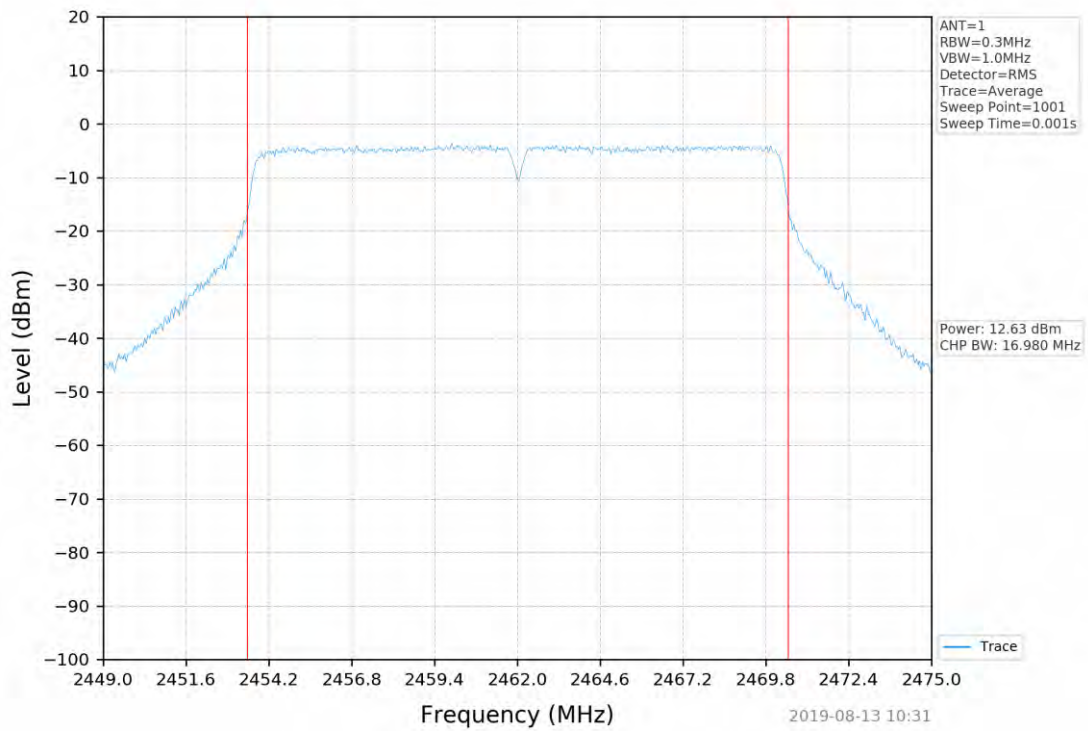
802.11g_2412MHz_SISO_ANT1



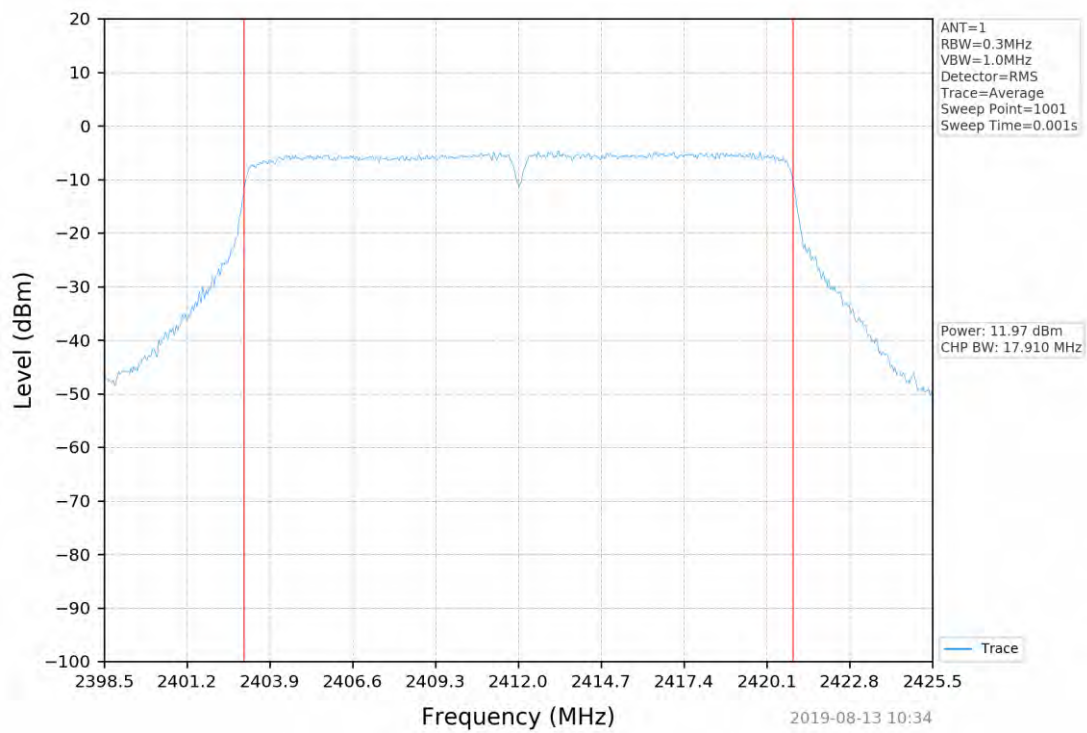
802.11g_2437MHz_SISO_ANT1



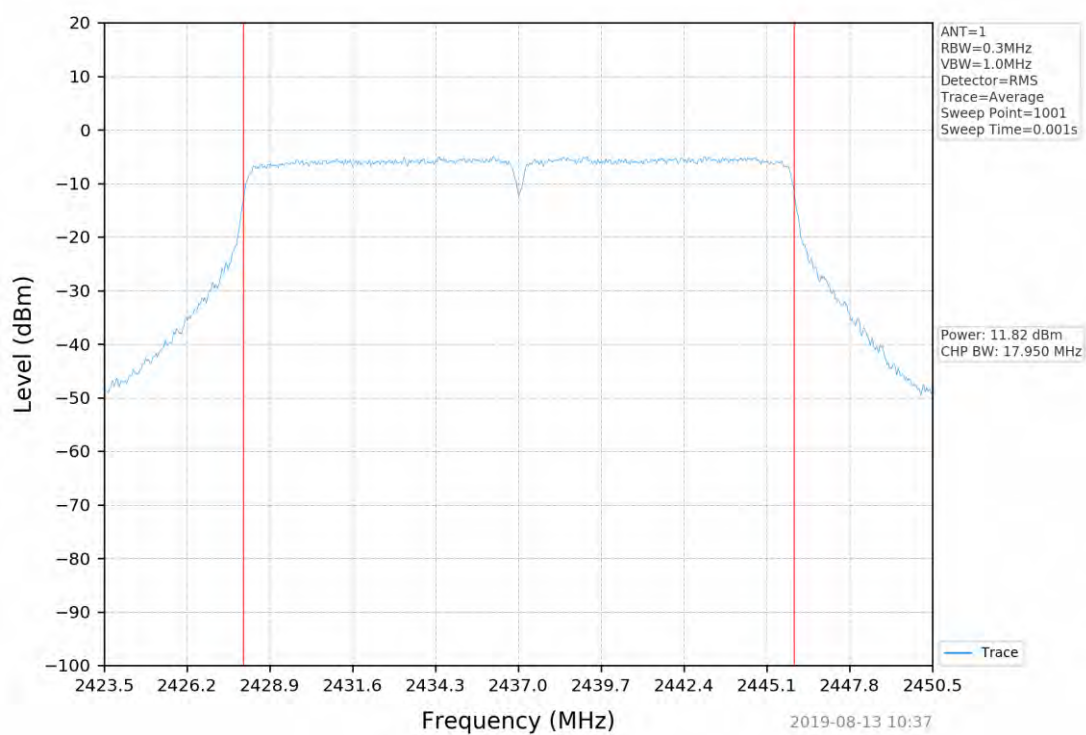
802.11g_2462MHz_SISO_ANT1



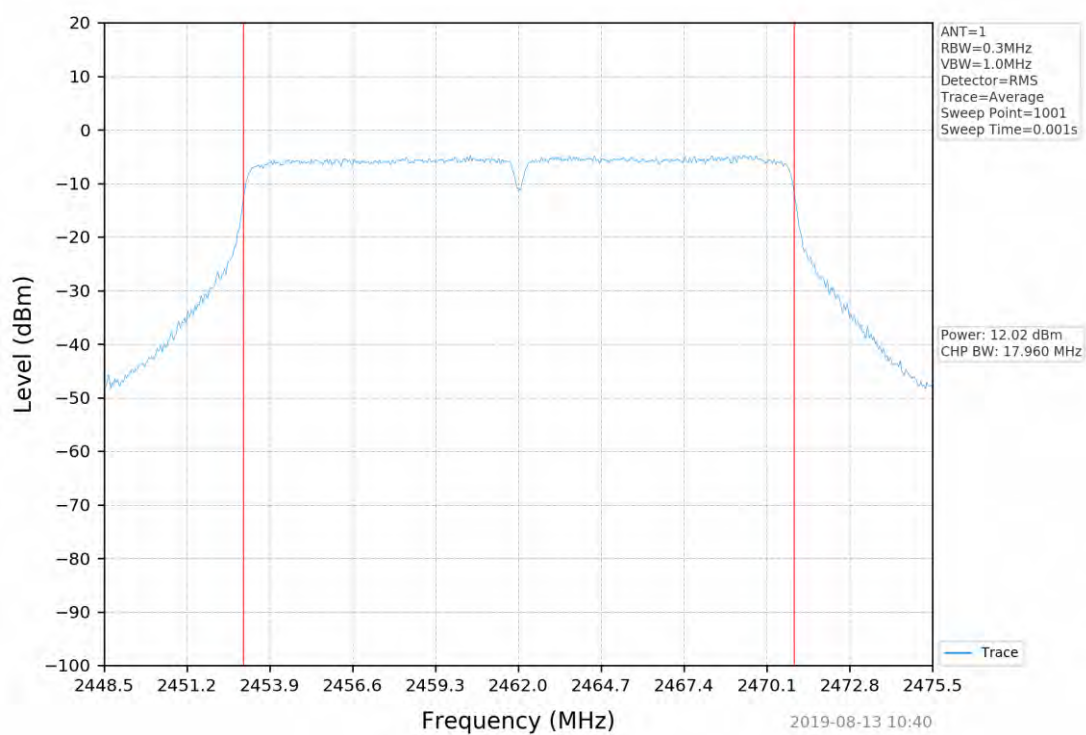
802.11n(HT20)_2412MHz_SISO_ANT1



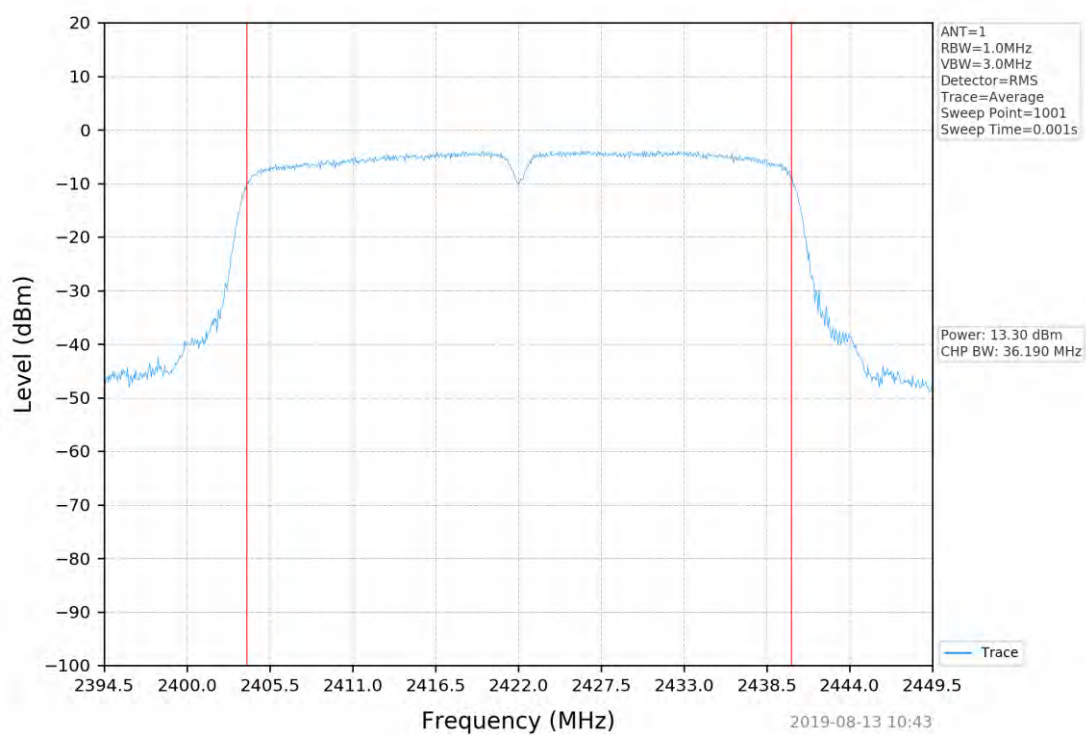
802.11n(HT20)_2437MHz_SISO_ANT1



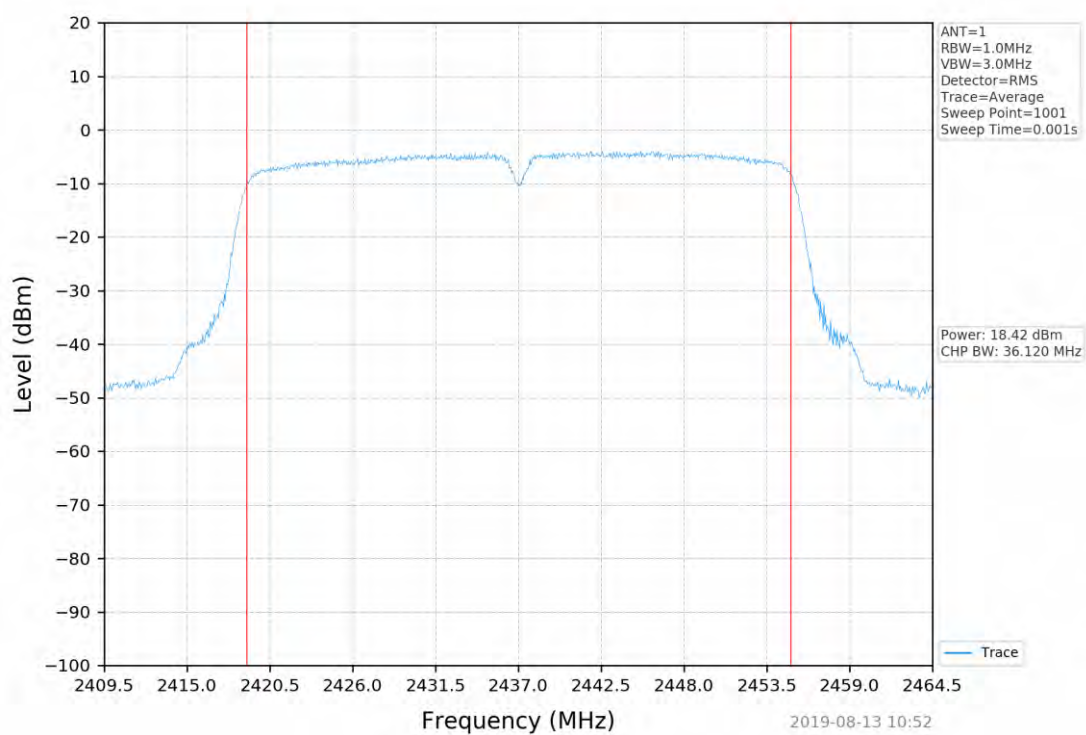
802.11n(HT20)_2462MHz_SISO_ANT1



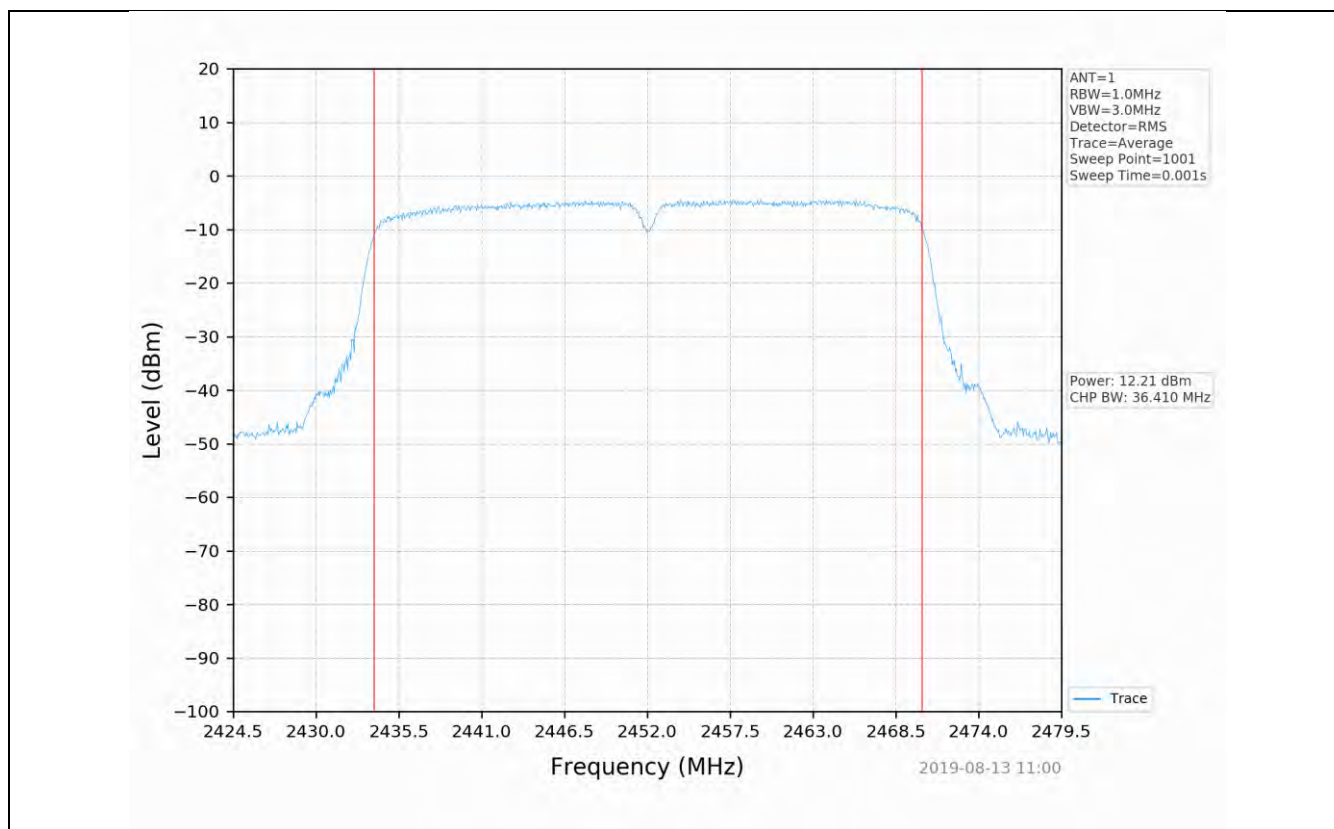
802.11n(HT40)_2422MHz_SISO_ANT1



802.11n(HT40)_2437MHz_SISO_ANT1



802.11n(HT40) 2452MHz SISO ANT1



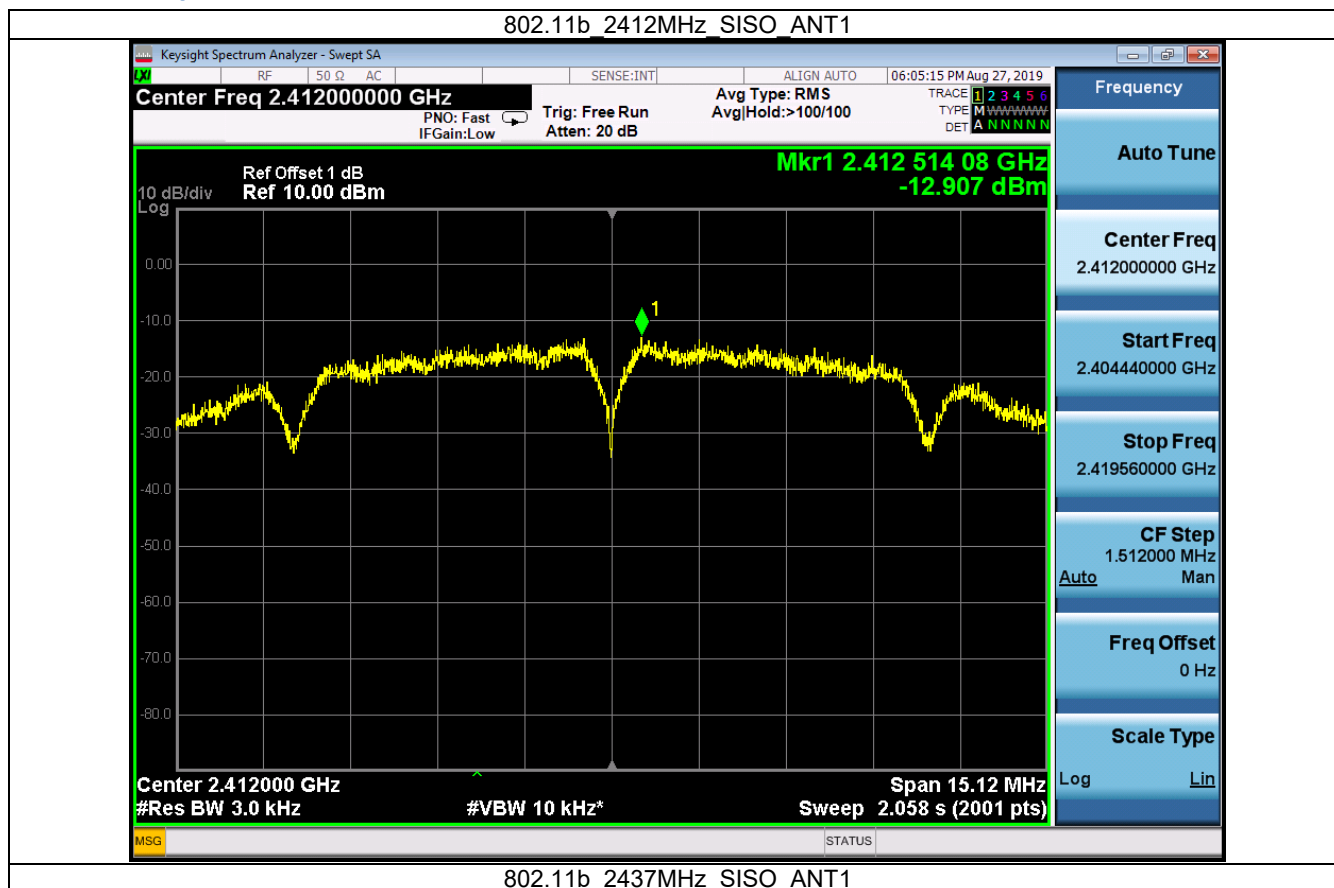
4. Maximum Power Spectral Density (PSD)

4.1 Test Result

Test Mode	Frequency (MHz)	Tx Type	Duty Cycle Correction Factor (dB)	Level (dBm/3KHz)	Maximum Power Spectral Density (dBm/3KHz)	Limits (dBm/3KHz)	Verdict
			Ant 1	Ant 1	Ant 1		
802.11b	2412	SISO	0.03	-12.907	-12.877	≤8	PASS
	2437	SISO	0.03	-13.007	-12.977	≤8	PASS
	2462	SISO	0.03	-14.039	-14.009	≤8	PASS
802.11g	2412	SISO	0.17	-17.653	-17.483	≤8	PASS
	2437	SISO	0.17	-16.466	-16.296	≤8	PASS
	2462	SISO	0.17	-16.970	-16.800	≤8	PASS
802.11n(HT20)	2412	SISO	0.18	-17.496	-17.316	≤8	PASS
	2437	SISO	0.18	-17.555	-17.375	≤8	PASS
	2462	SISO	0.18	-17.368	-17.188	≤8	PASS
802.11n(HT40)	2422	SISO	0.36	-21.779	-21.419	≤8	PASS
	2437	SISO	0.36	-22.233	-21.873	≤8	PASS
	2452	SISO	0.36	-22.051	-21.691	≤8	PASS

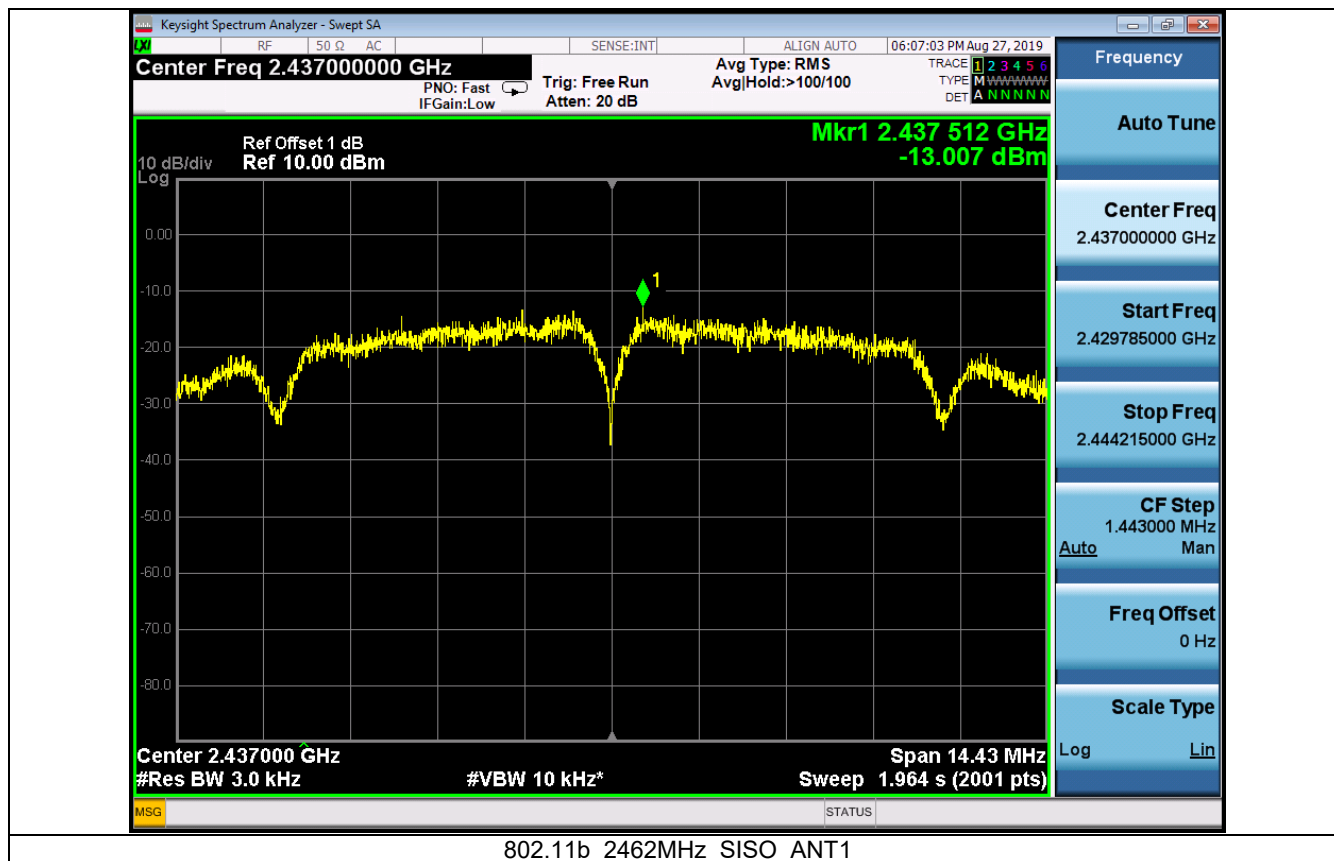


4.2 Test Graph





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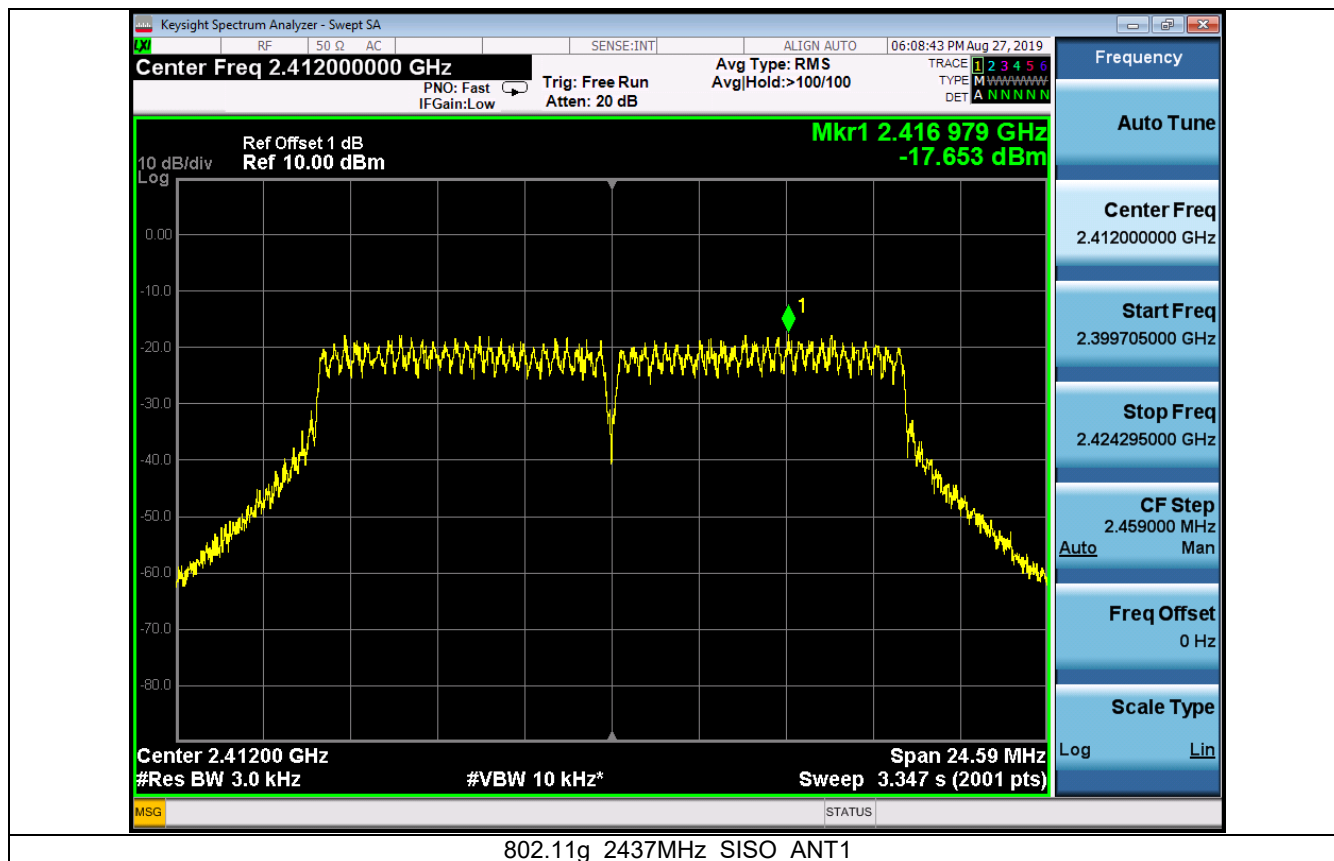


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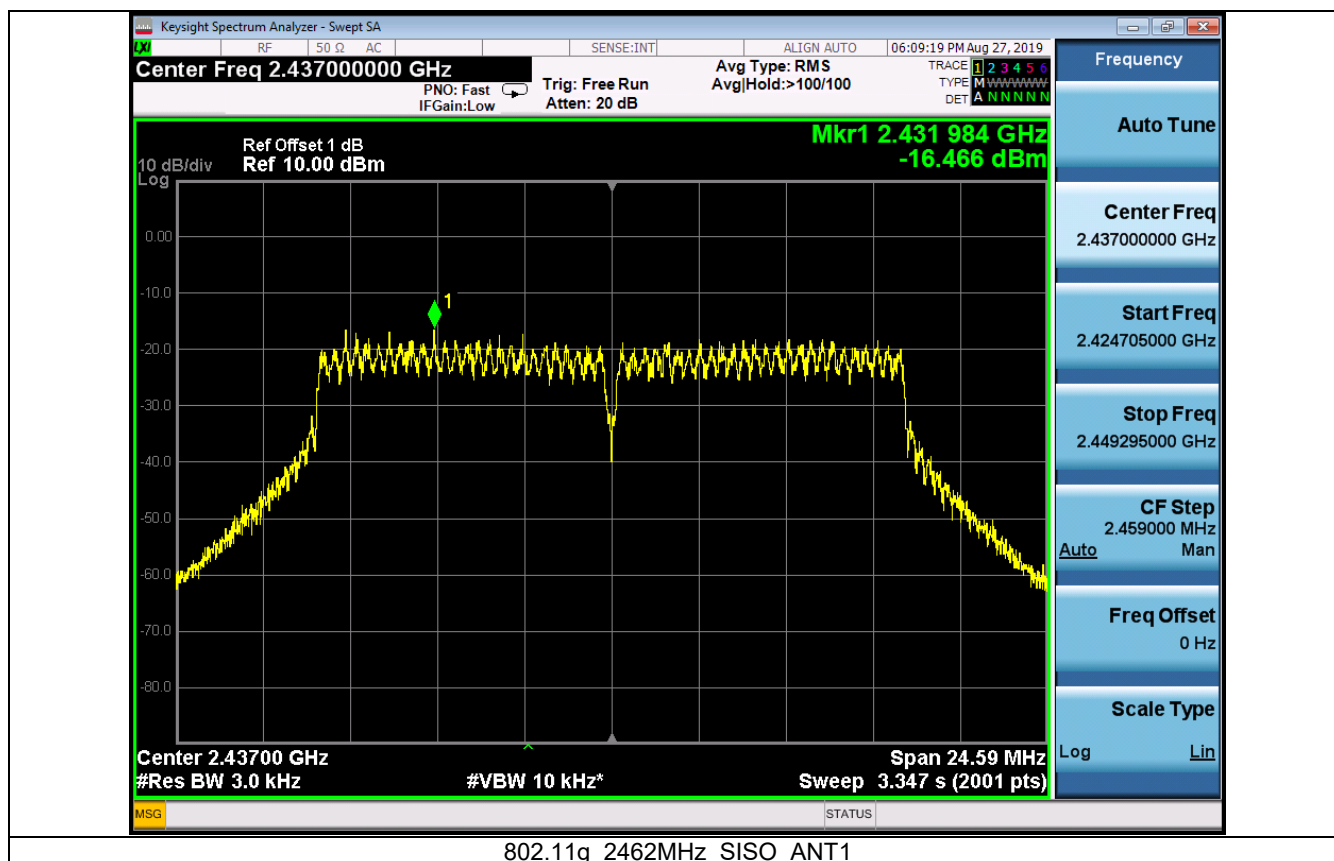


SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



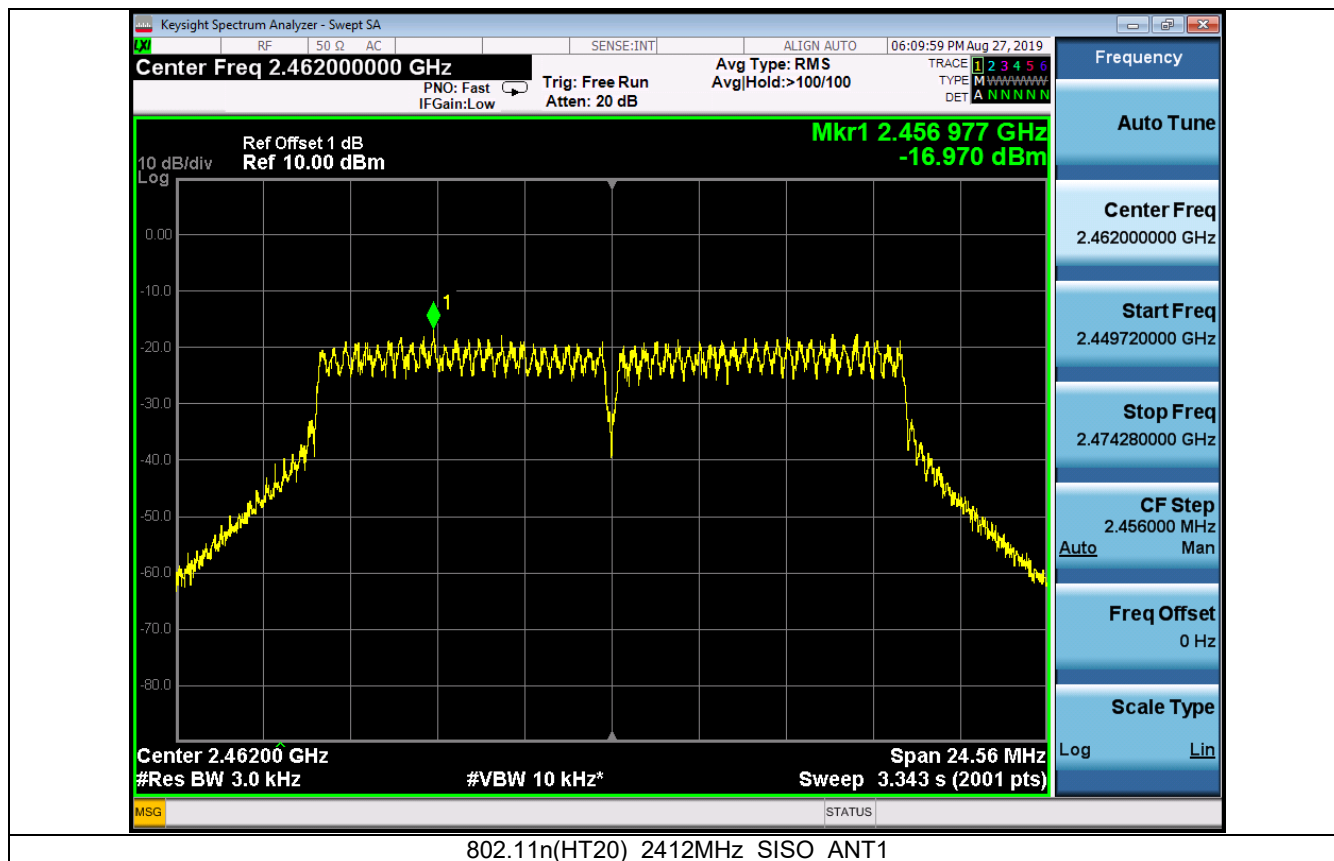


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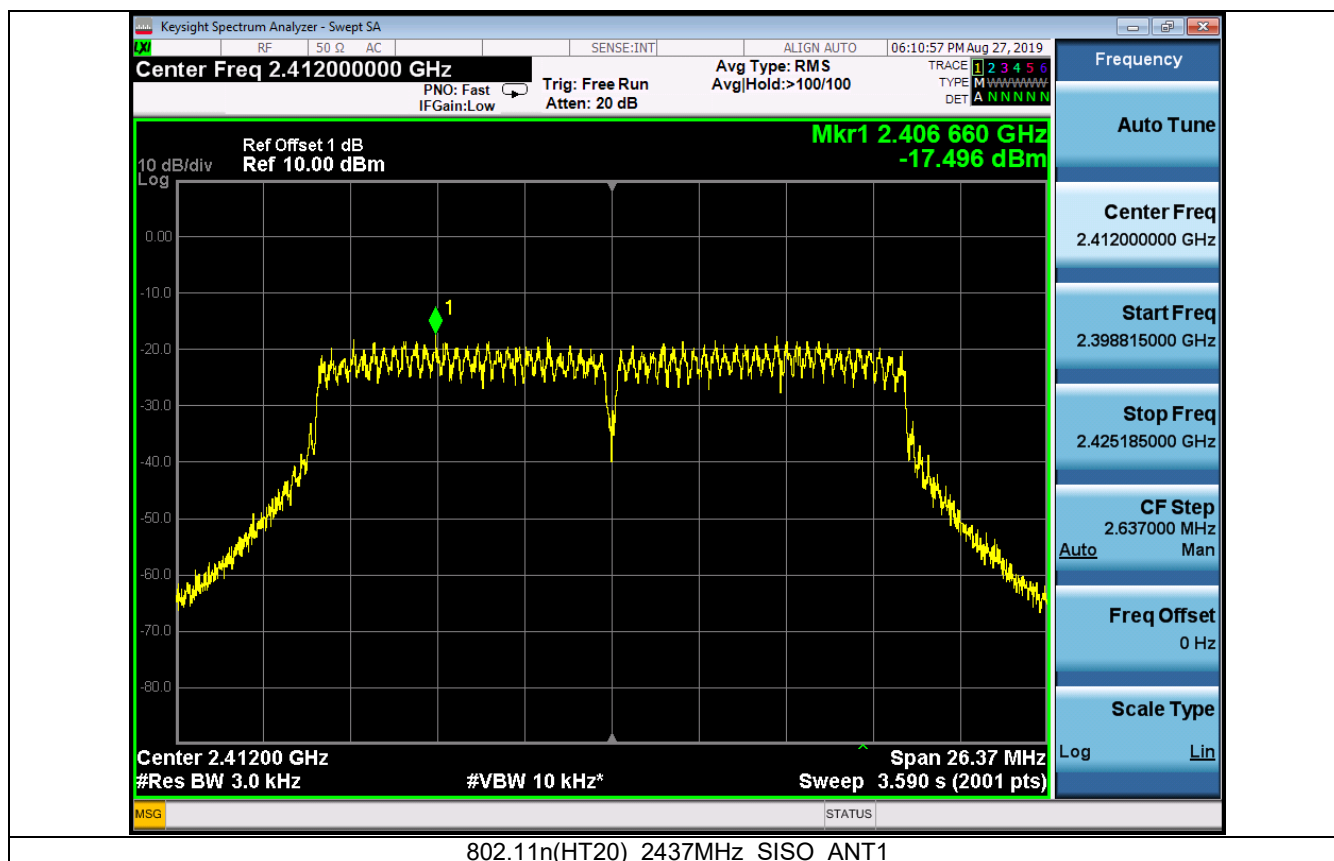


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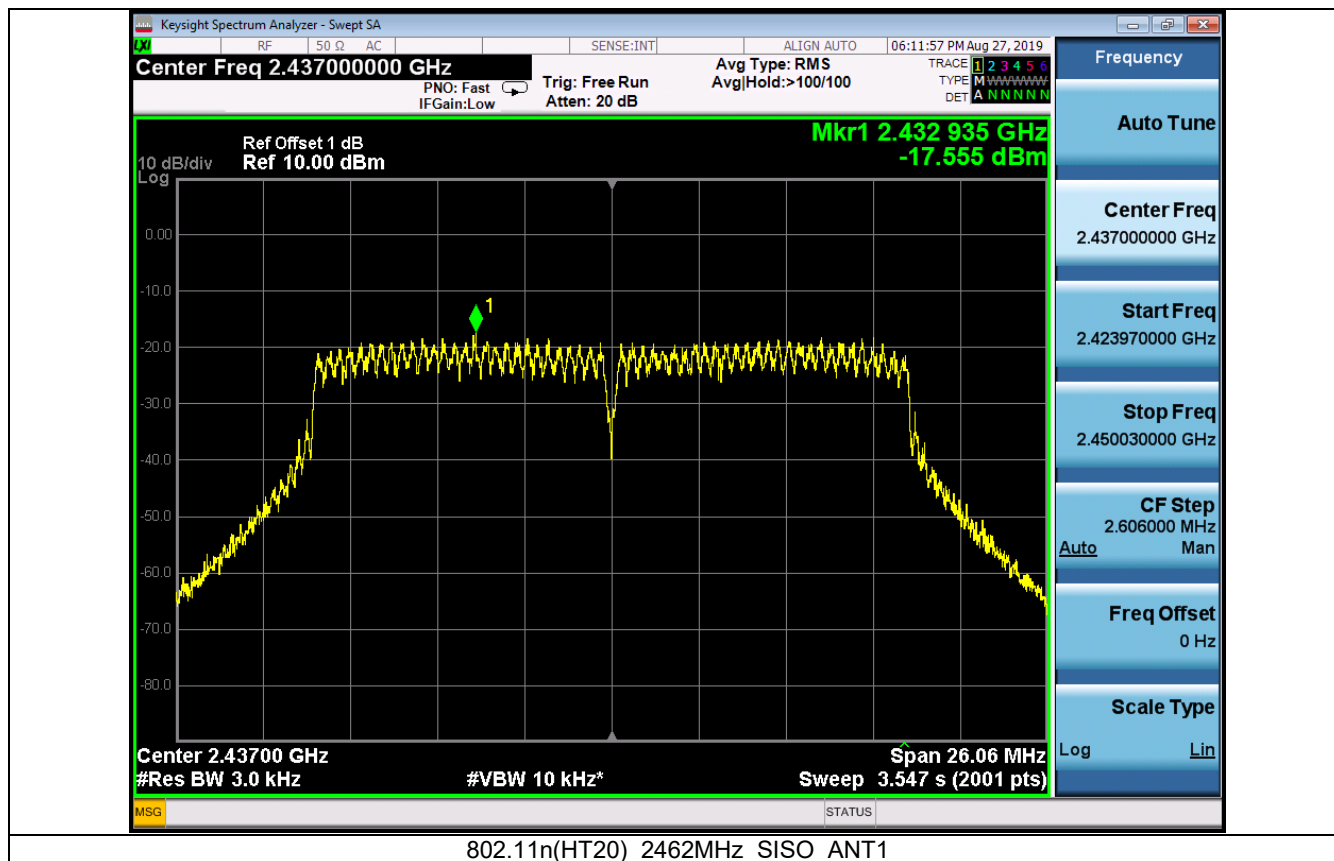


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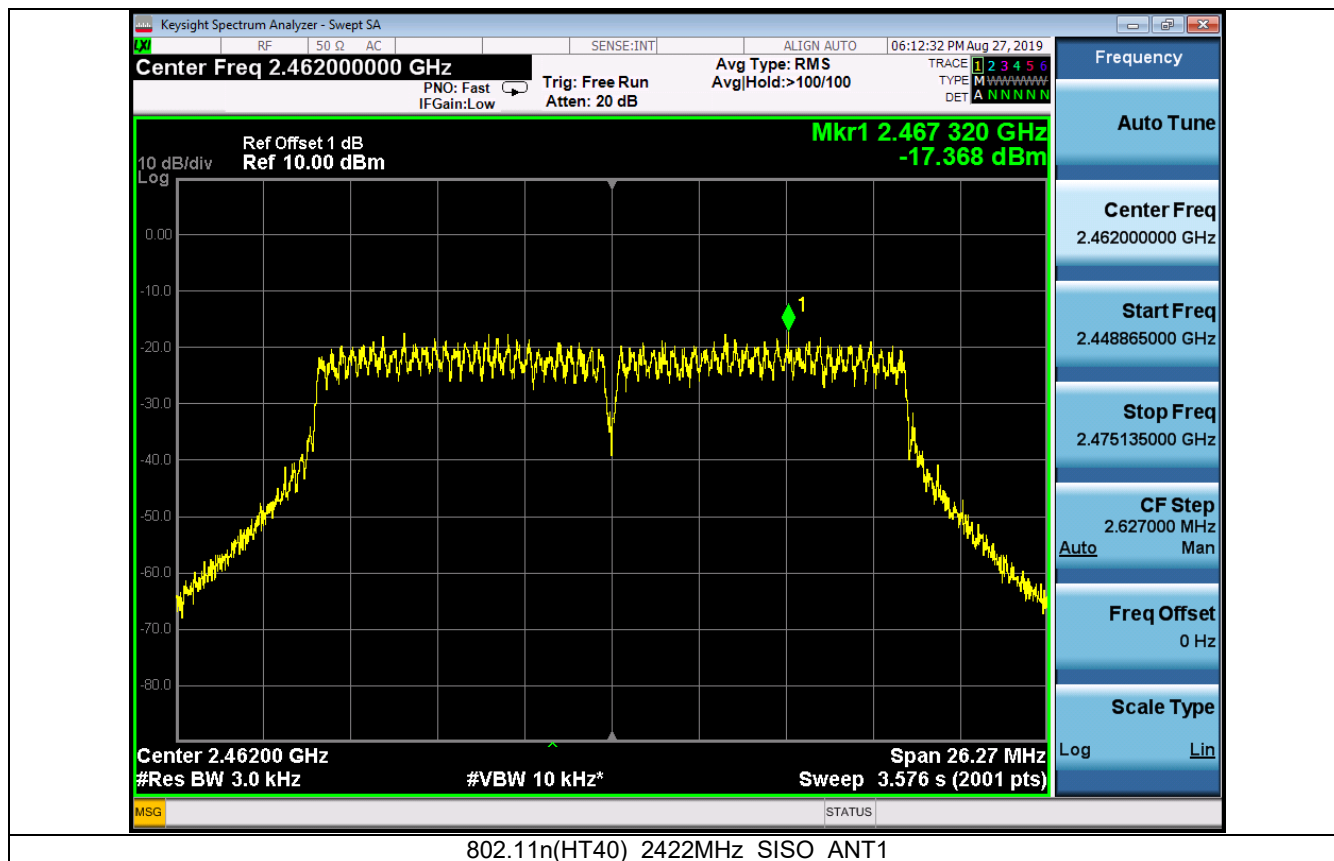


SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



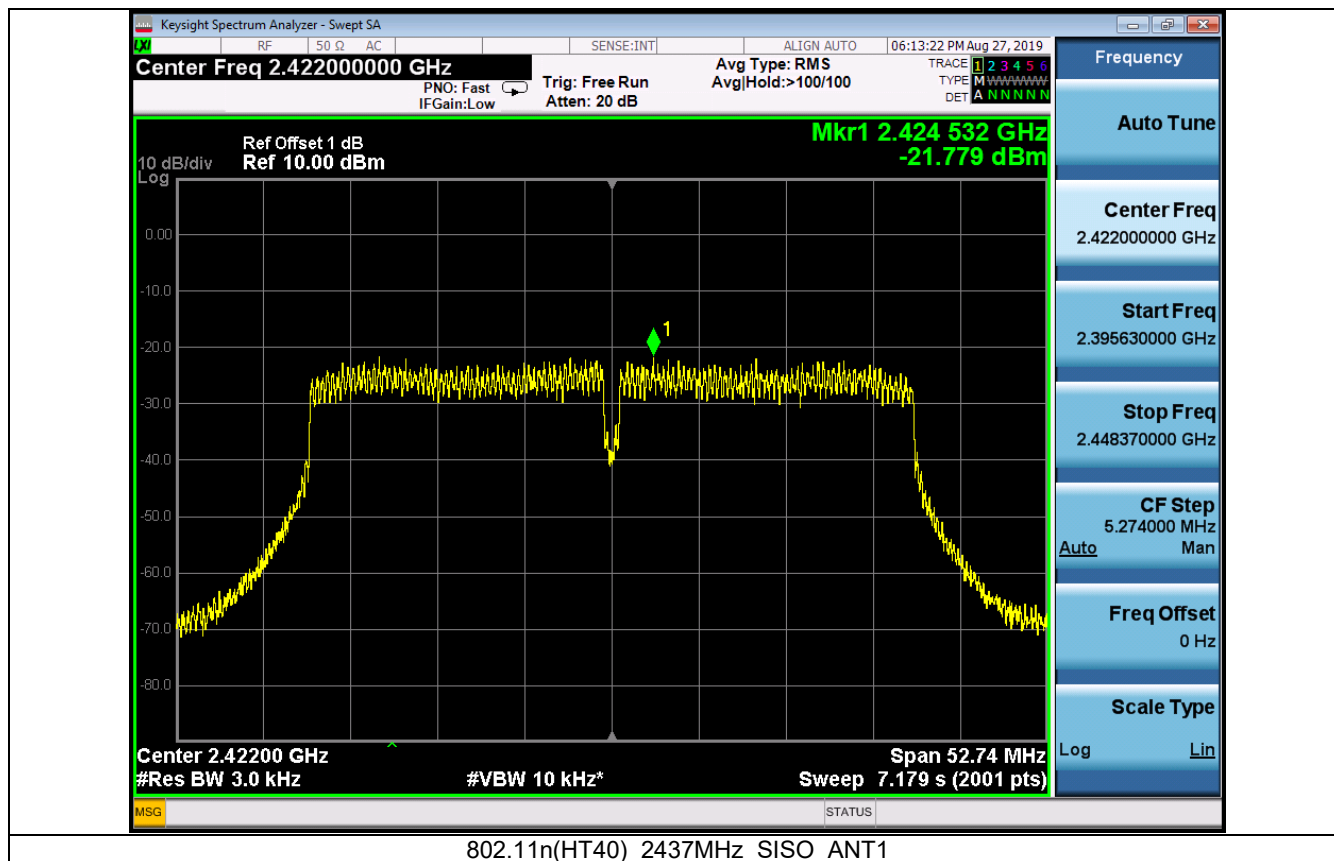


SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



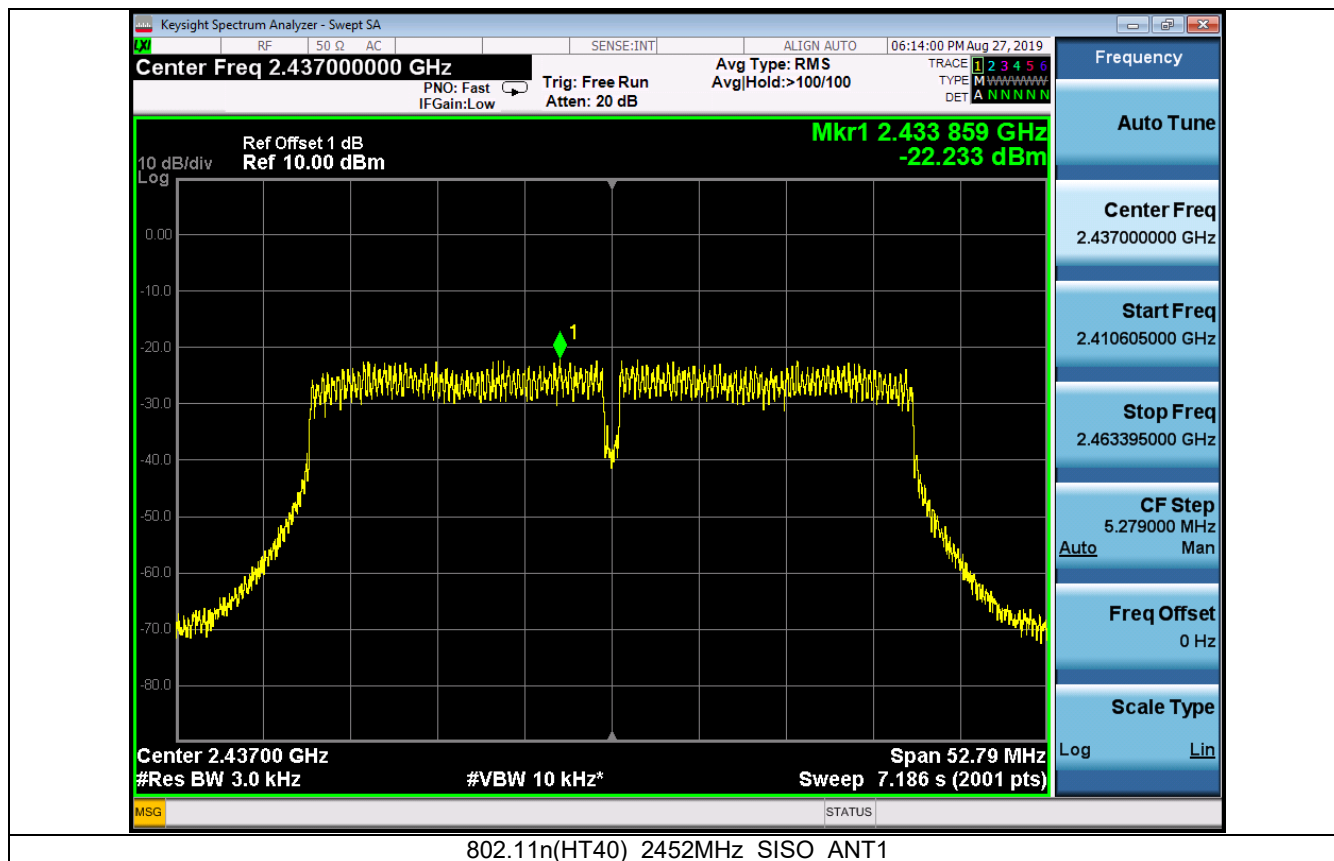


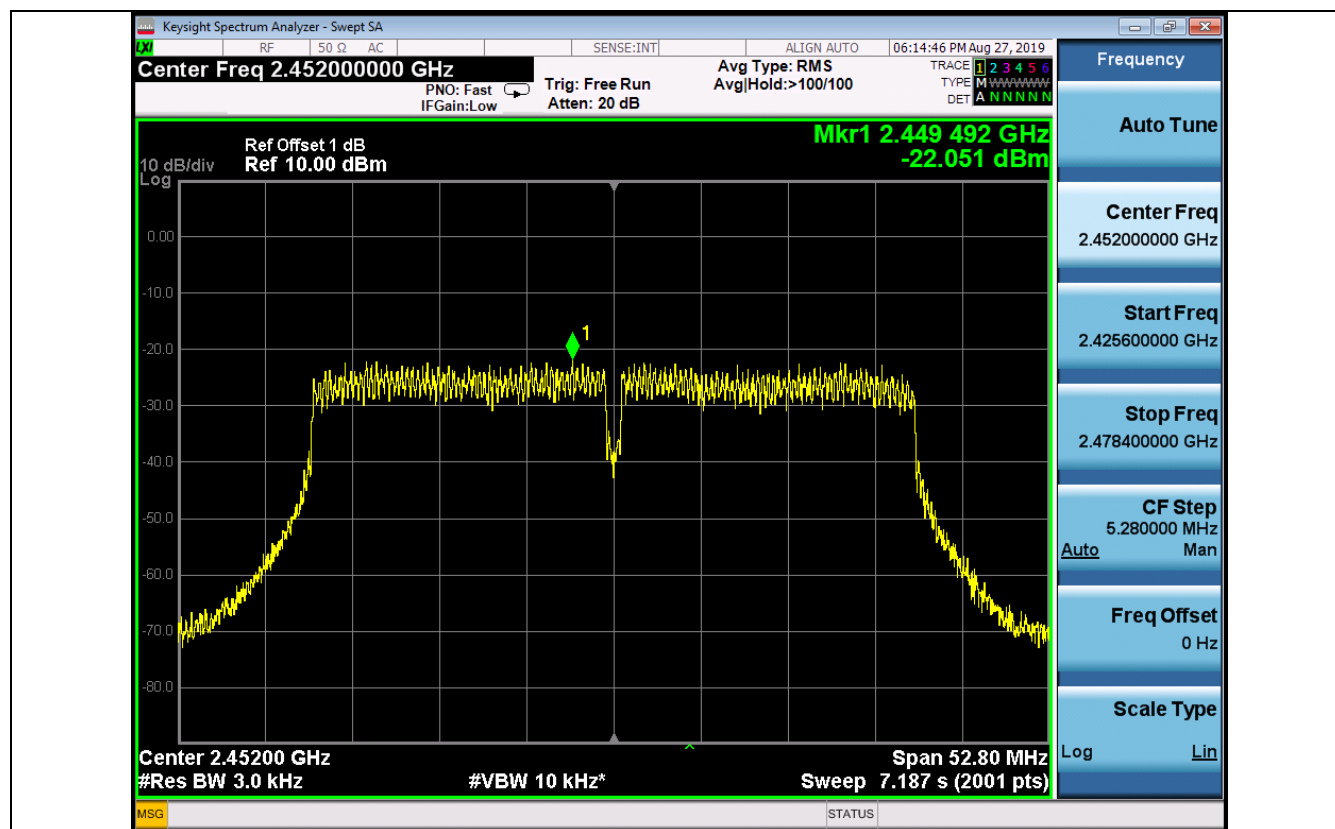
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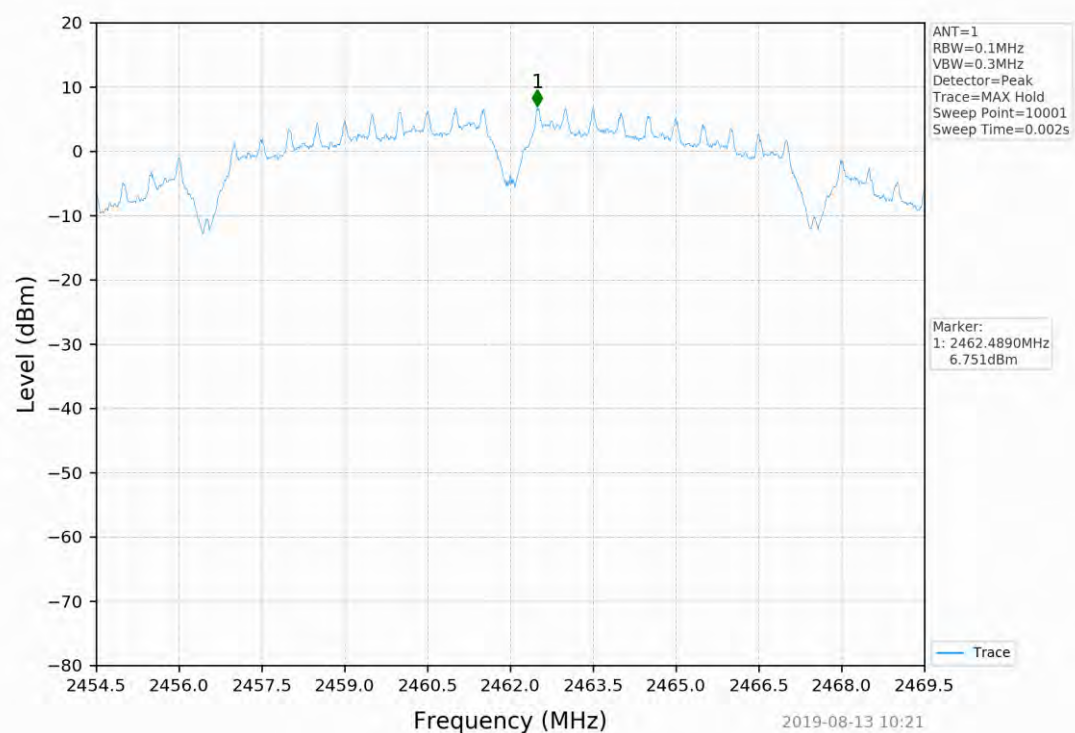
5. Unwanted Emissions in Non-restricted Frequency Bands

5.1 Test Result

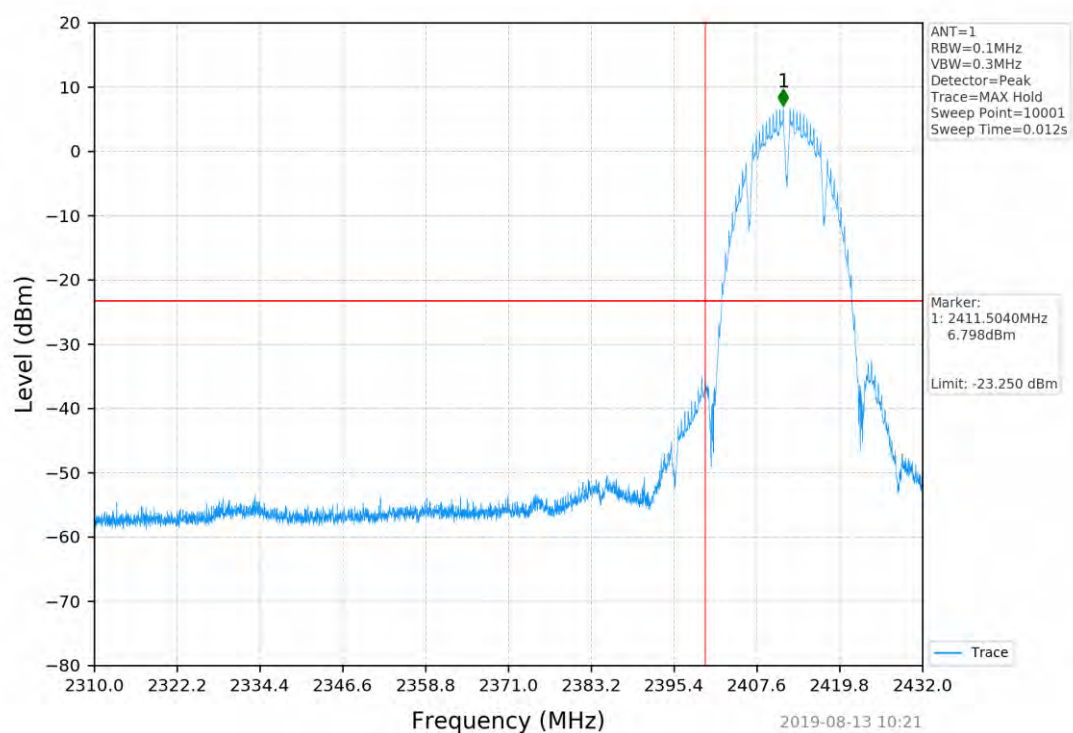
Test Mode	Frequency (MHz)	TX Type	ANT No.	Spurious Conducted Emission (dBc)	Limits (dBc)	Verdict
802.11b	2412	SISO	1	Refer to test graph	≤-30	PASS
	2437	SISO	1	Refer to test graph	≤-30	PASS
	2462	SISO	1	Refer to test graph	≤-30	PASS
802.11g	2412	SISO	1	Refer to test graph	≤-30	PASS
	2437	SISO	1	Refer to test graph	≤-30	PASS
	2462	SISO	1	Refer to test graph	≤-30	PASS
802.11n(HT20)	2412	SISO	1	Refer to test graph	≤-30	PASS
	2437	SISO	1	Refer to test graph	≤-30	PASS
	2462	SISO	1	Refer to test graph	≤-30	PASS
802.11n(HT40)	2422	SISO	1	Refer to test graph	≤-30	PASS
	2437	SISO	1	Refer to test graph	≤-30	PASS
	2452	SISO	1	Refer to test graph	≤-30	PASS

5.2 Test Graph

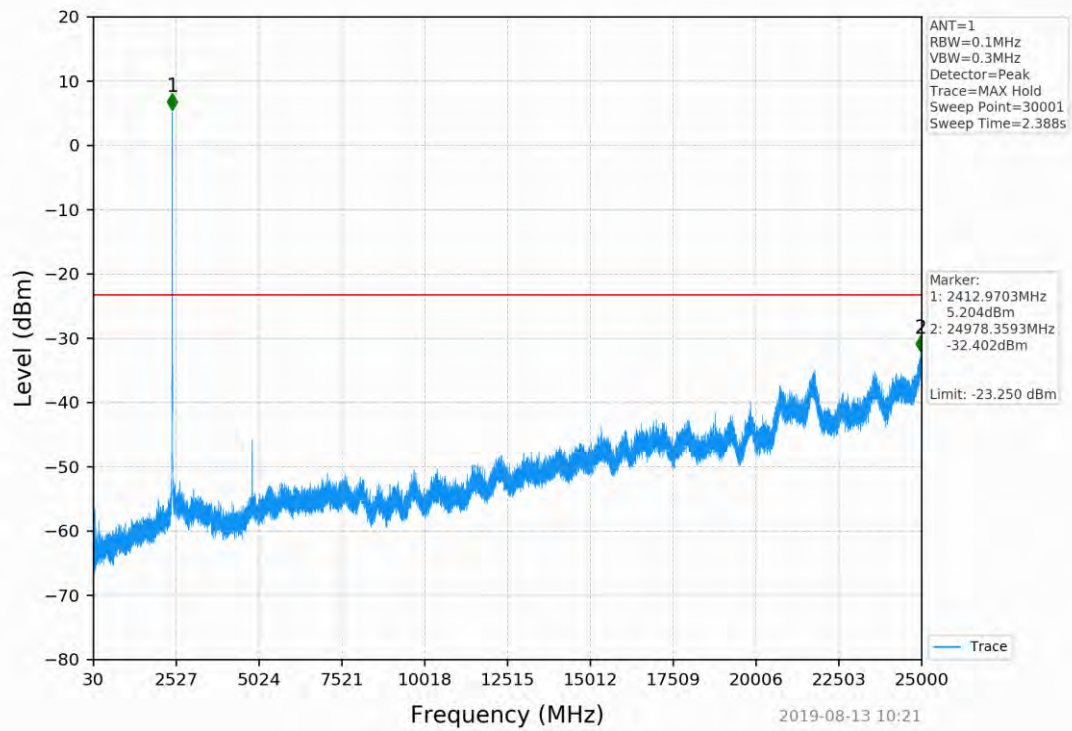
802.11b SISO ANT1 REF



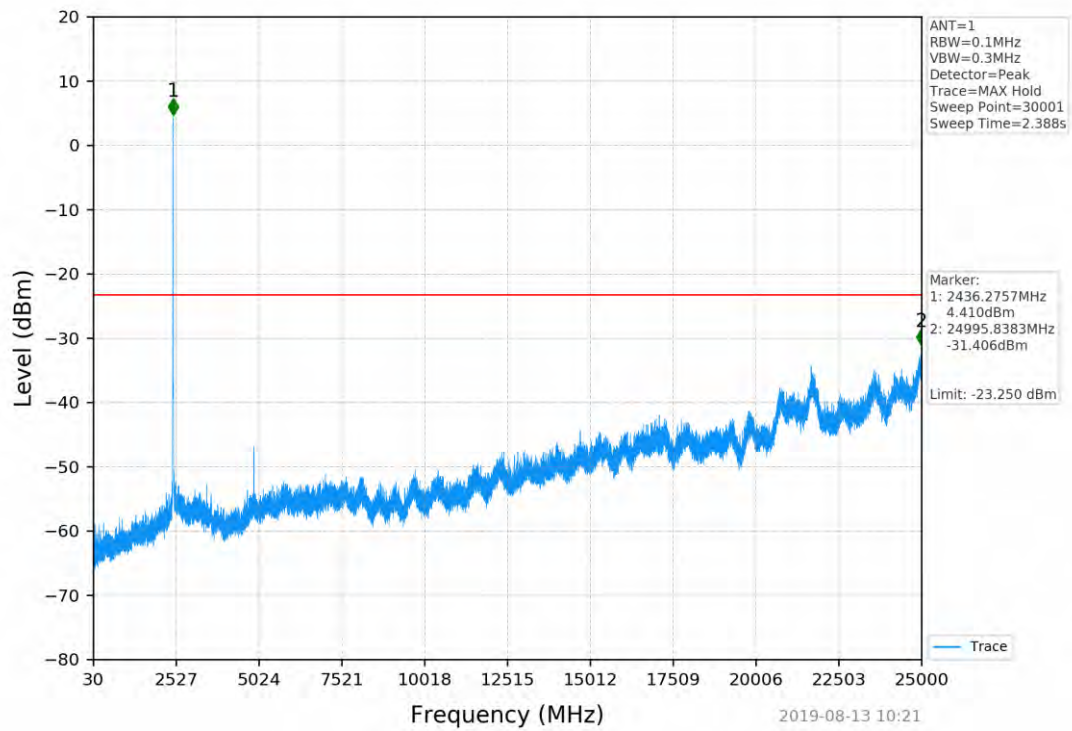
802.11b_2412MHz_SISO_ANT1



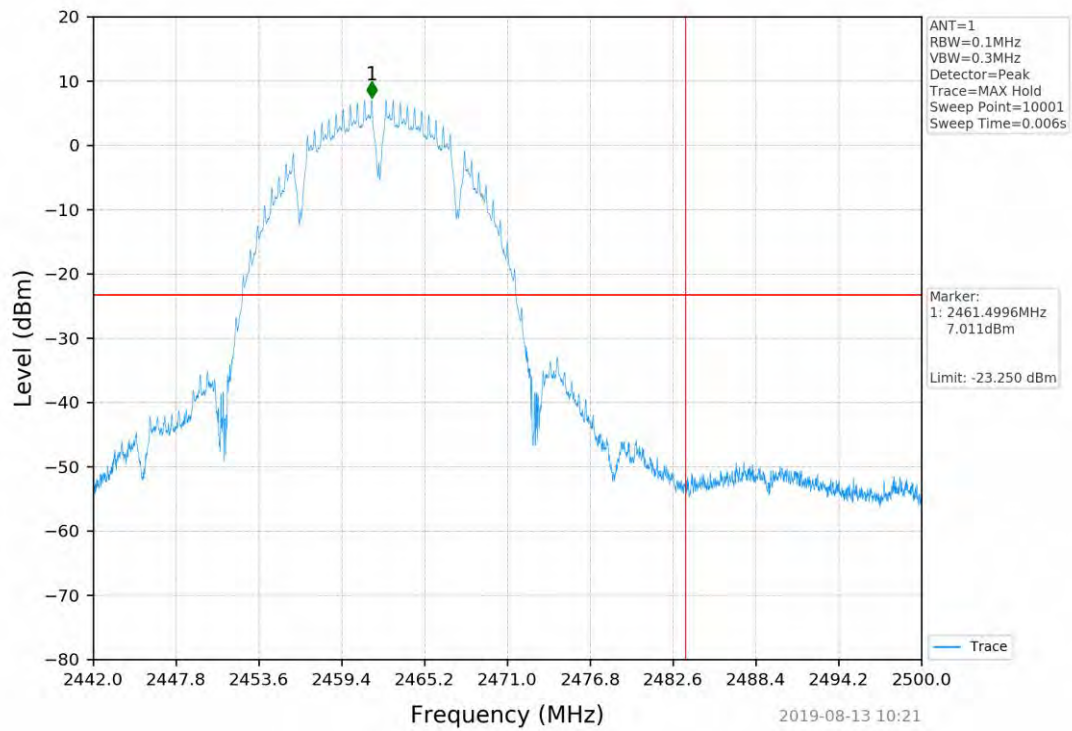
802.11b_2412MHz_SISO_ANT1



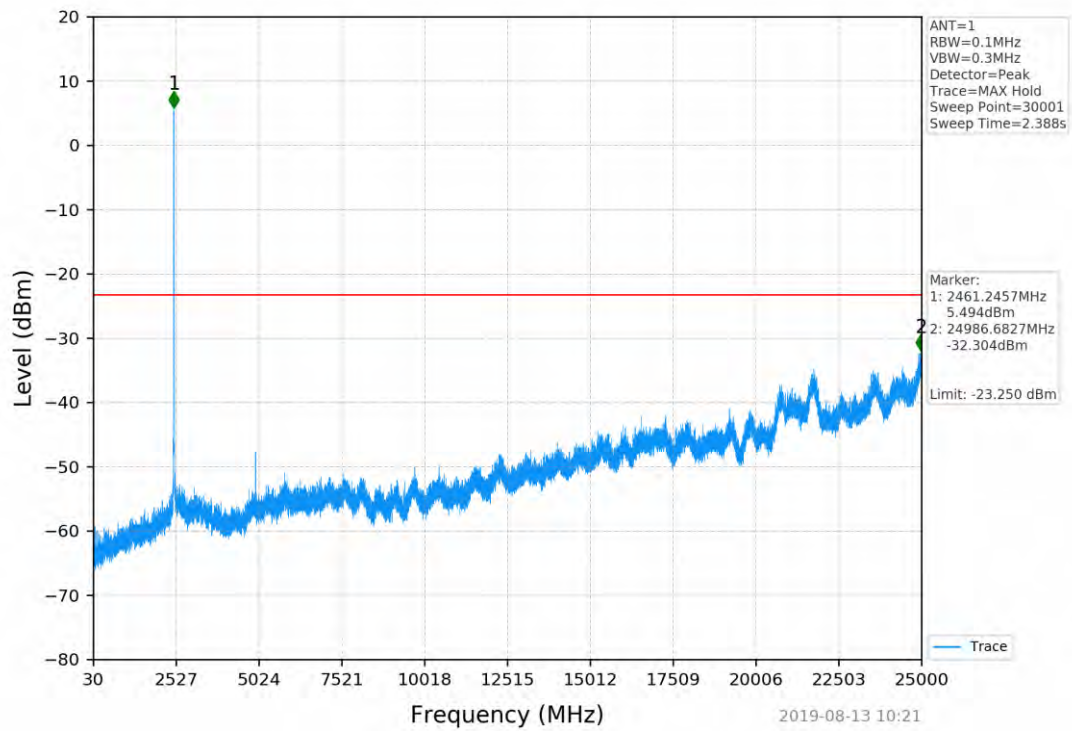
802.11b_2437MHz_SISO_ANT1



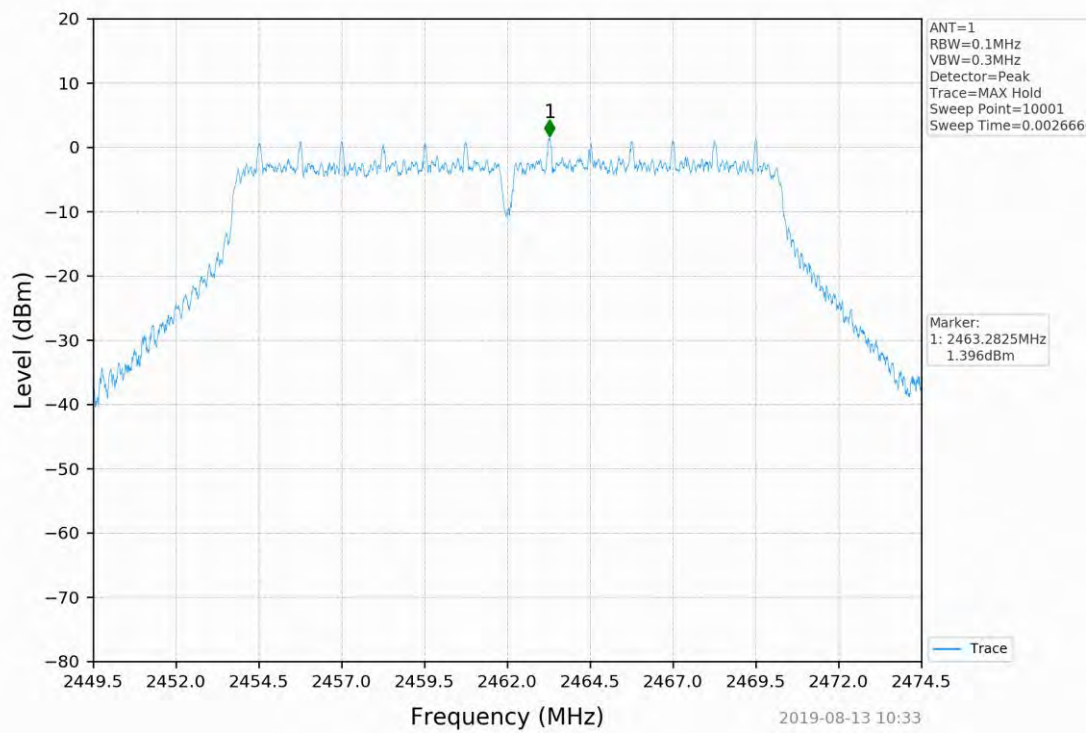
802.11b_2462MHz_SISO_ANT1



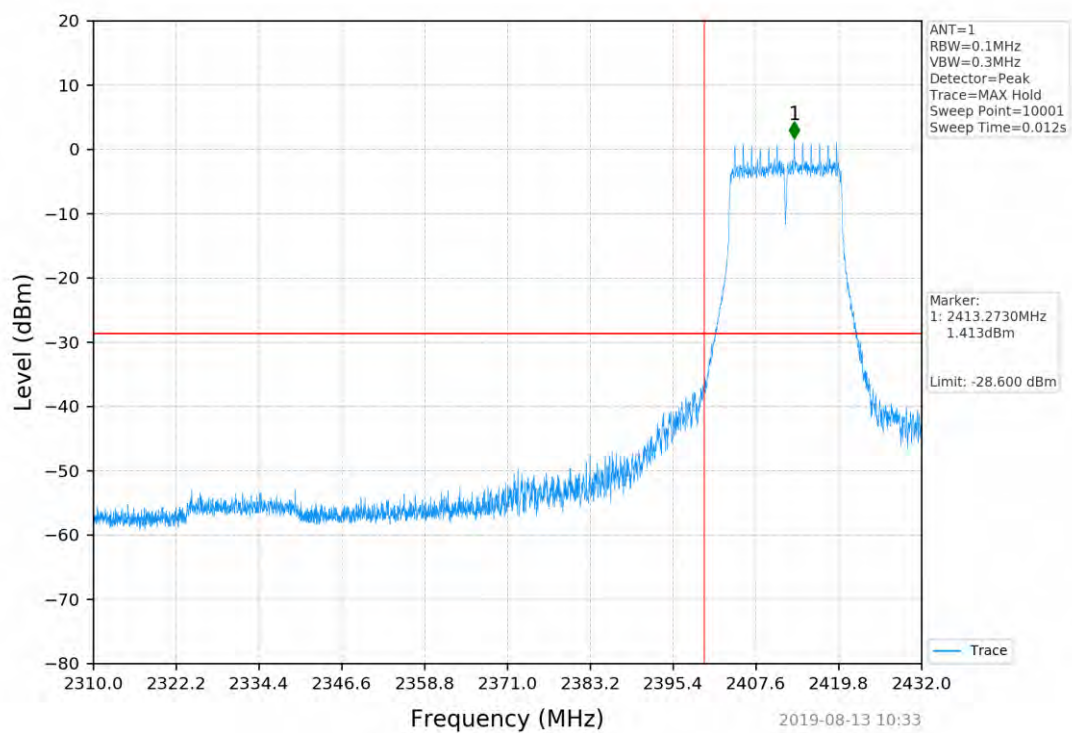
802.11b_2462MHz_SISO_ANT1



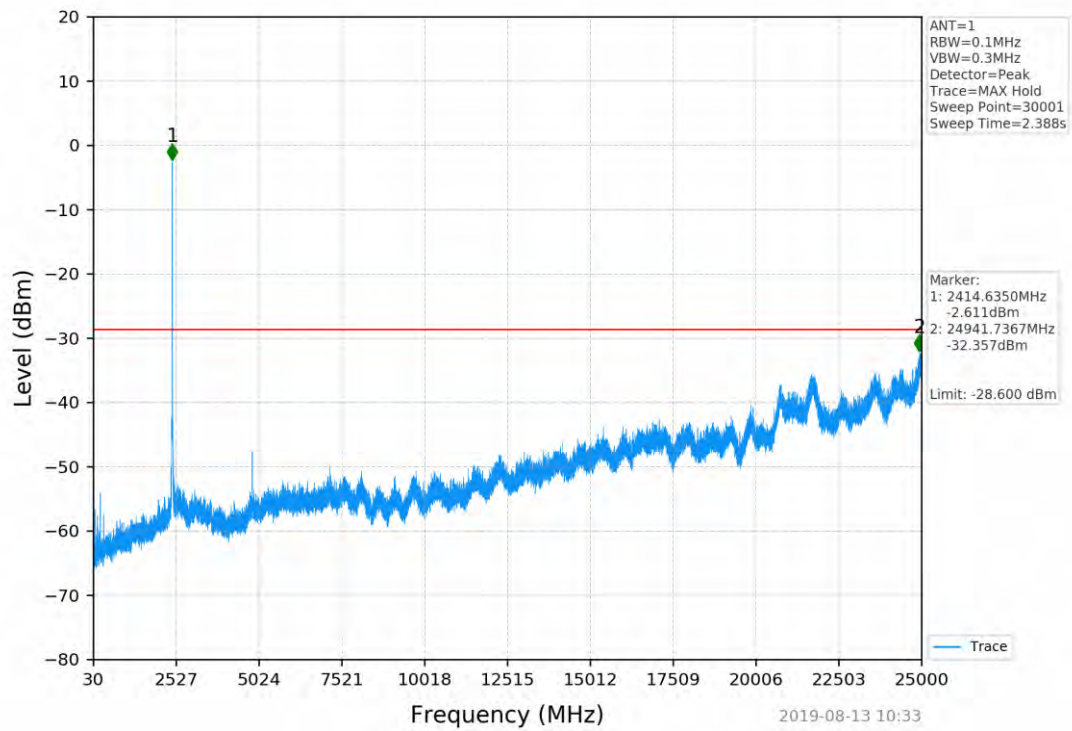
802.11g_SISO_ANT1_REF



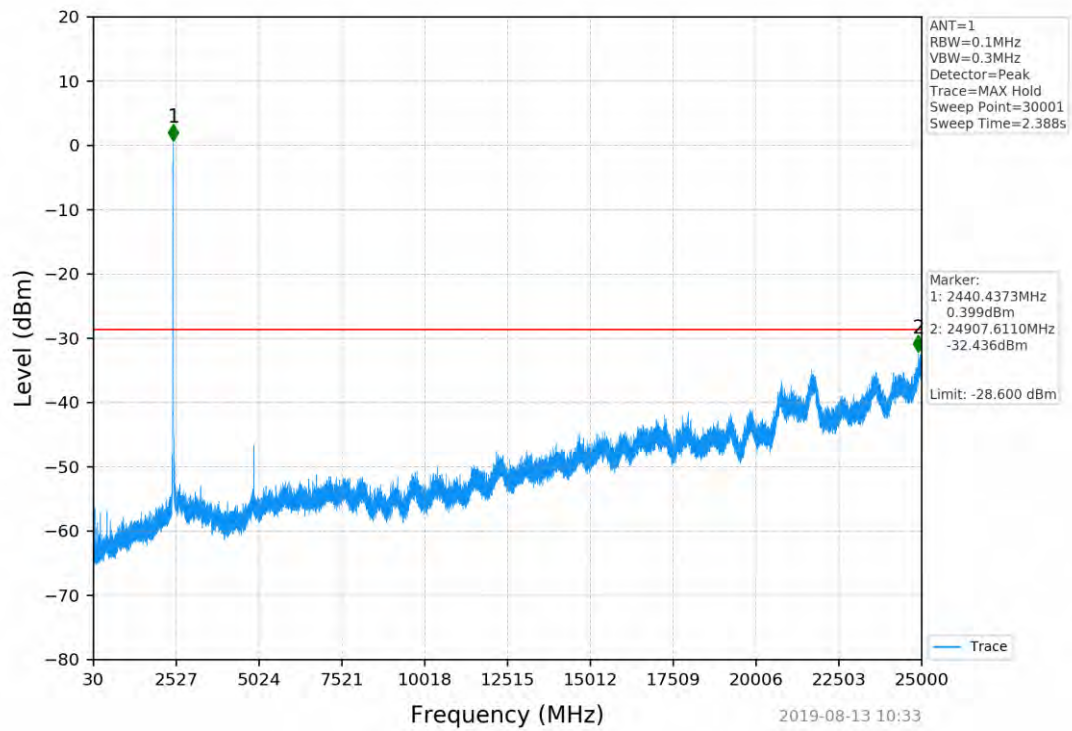
802.11g_2412MHz_SISO_ANT1



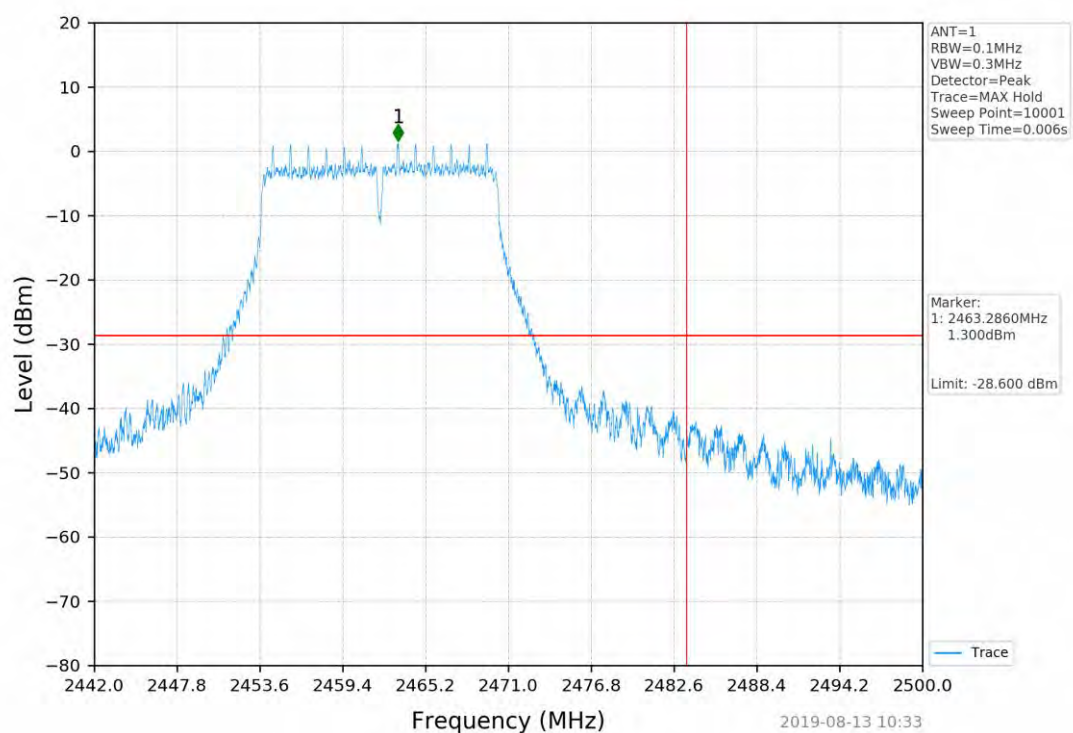
802.11g_2412MHz_SISO_ANT1



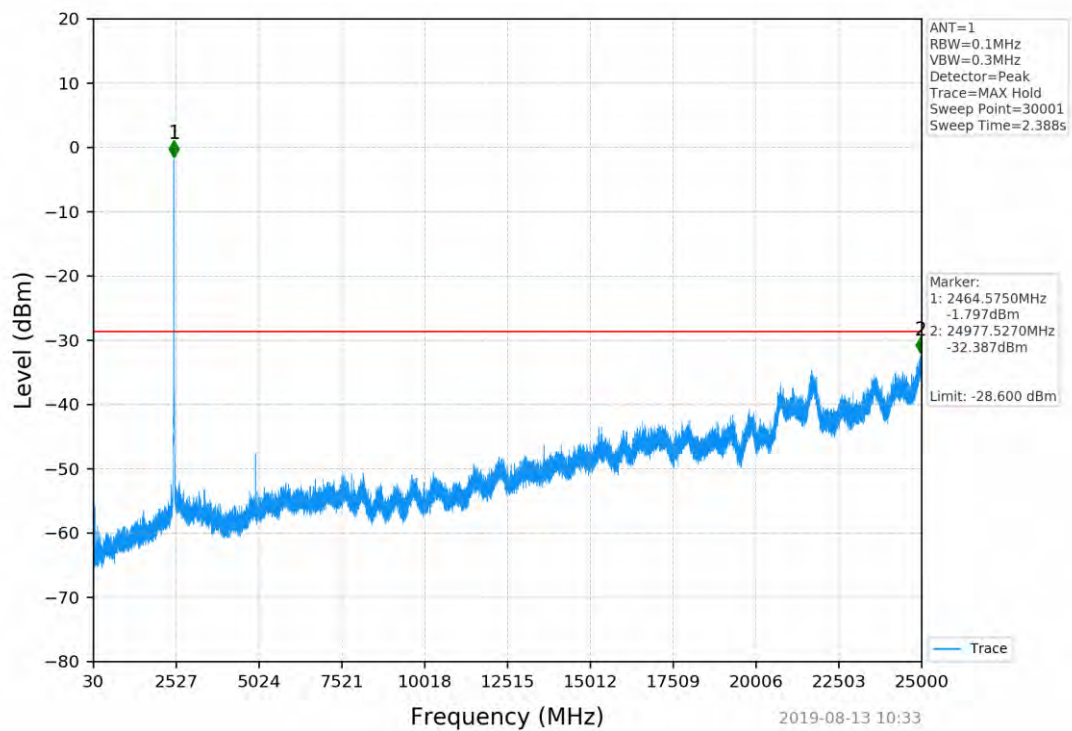
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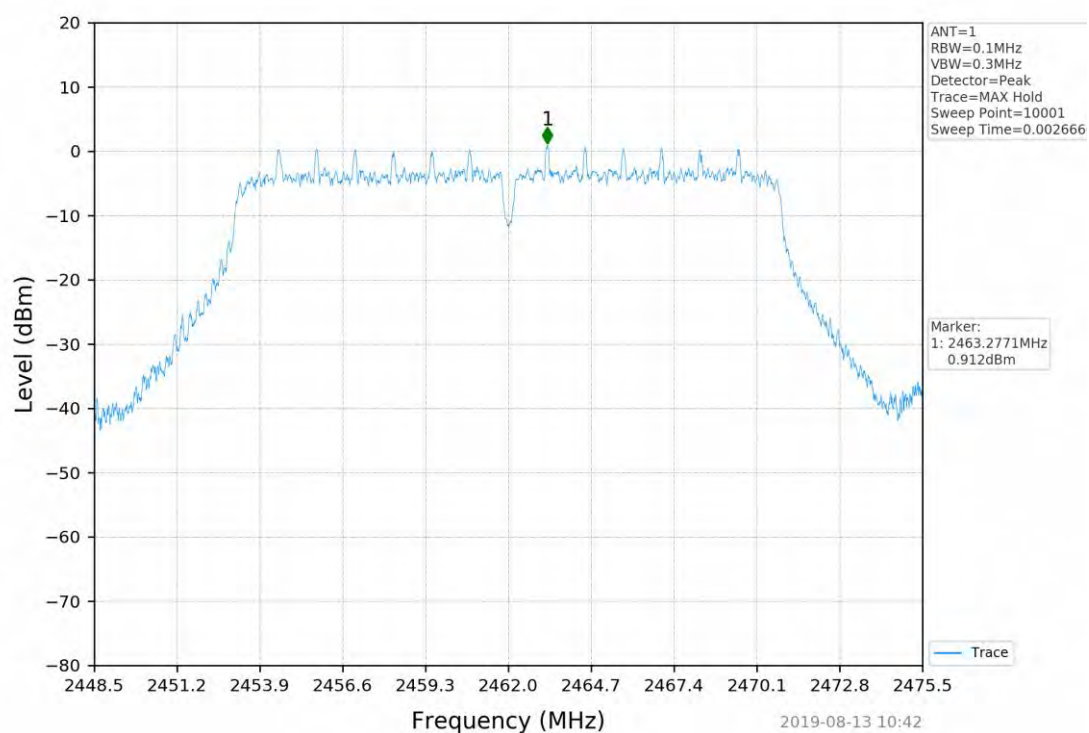
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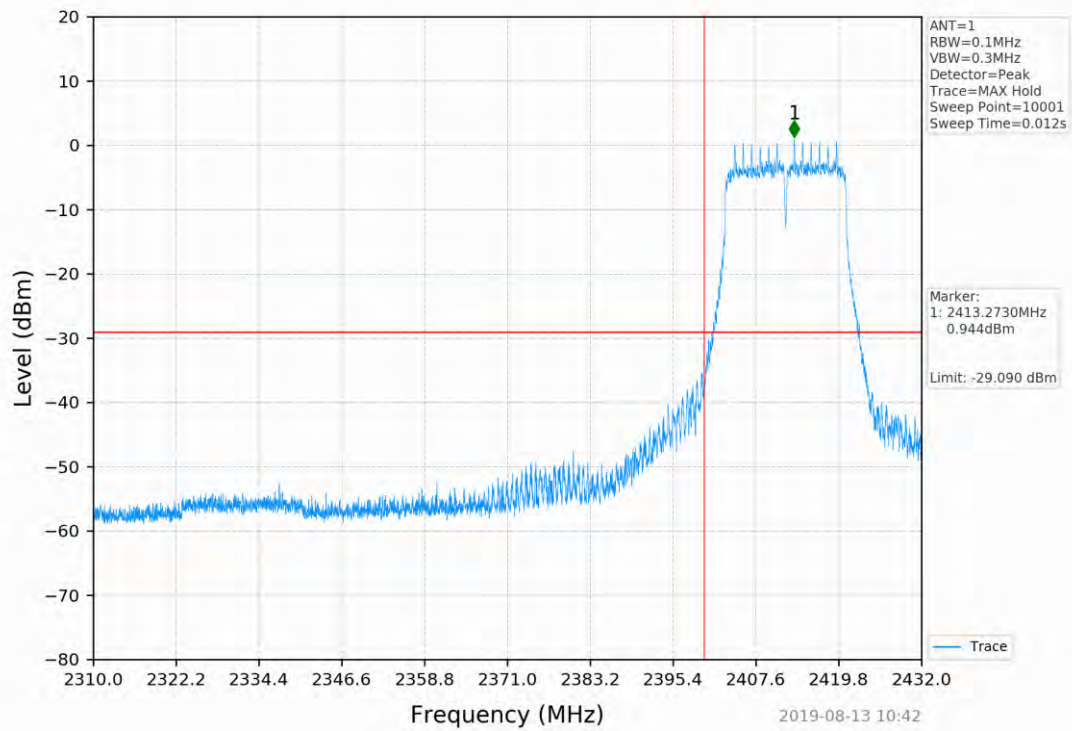
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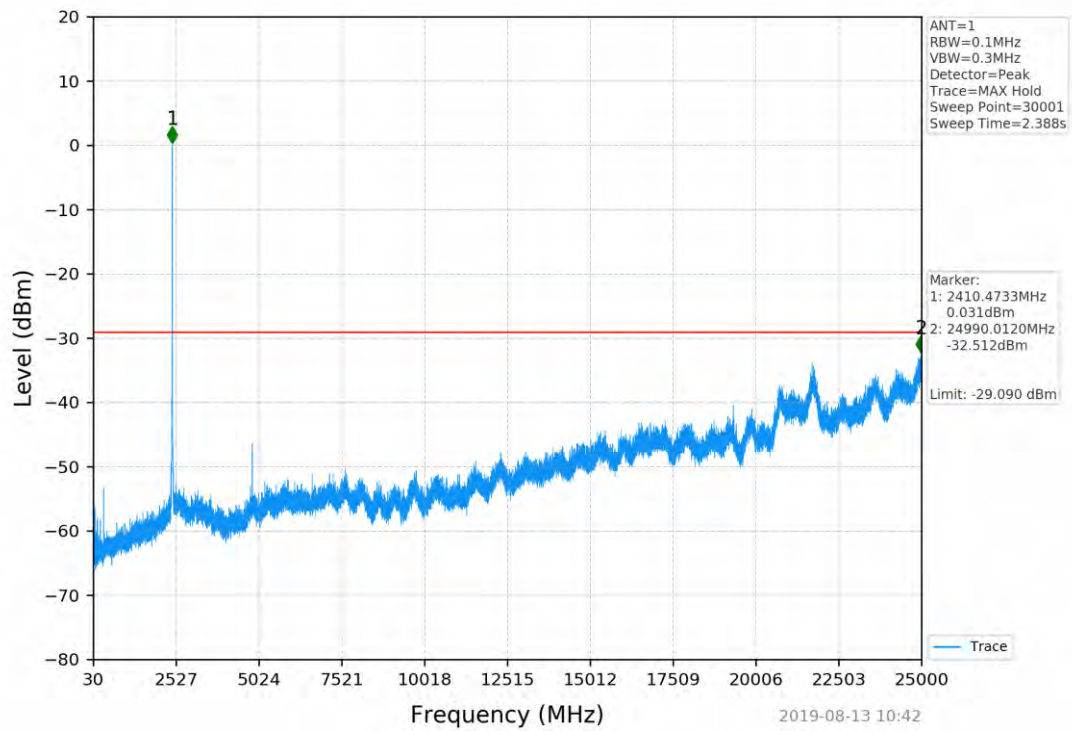
802.11n(HT20)_SISO_ANT1_REF



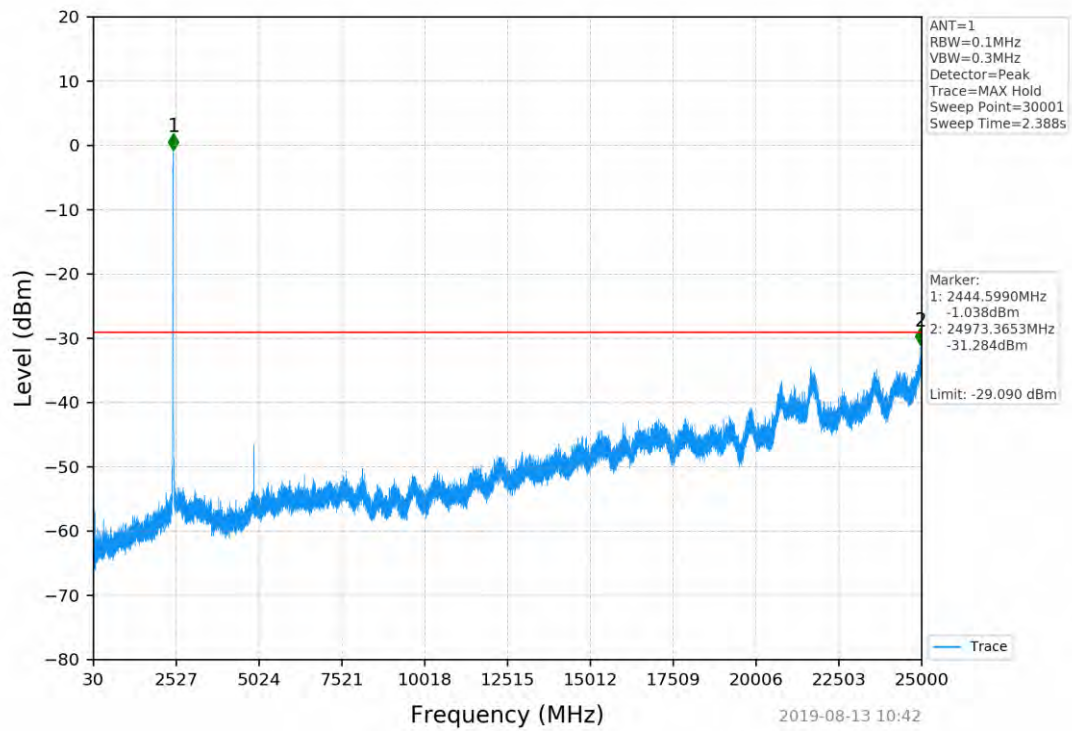
802.11n(HT20)_2412MHz_SISO_ANT1



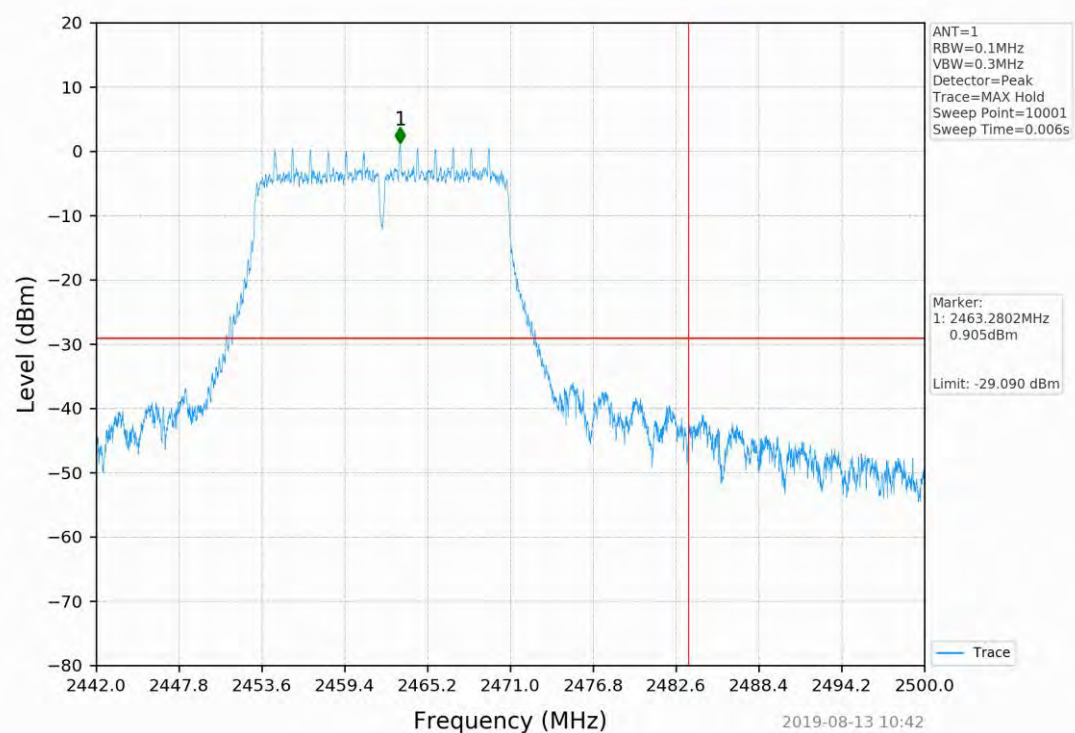
802.11n(HT20)_2412MHz_SISO_ANT1



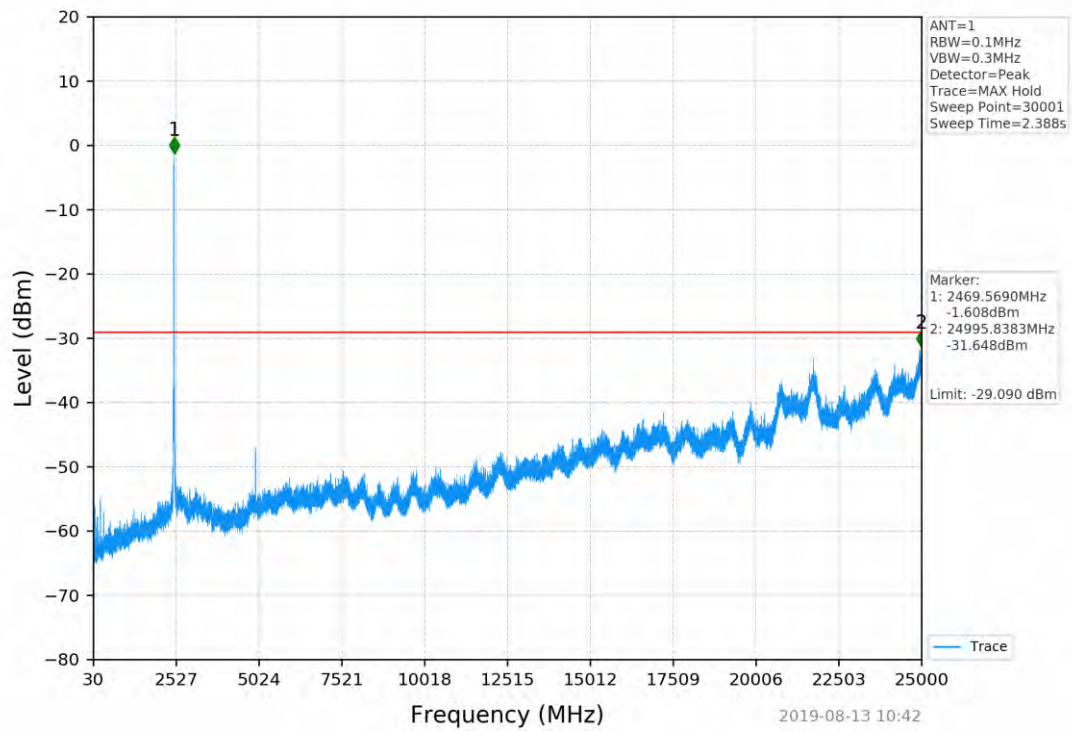
802.11n(HT20)_2437MHz_SISO_ANT1



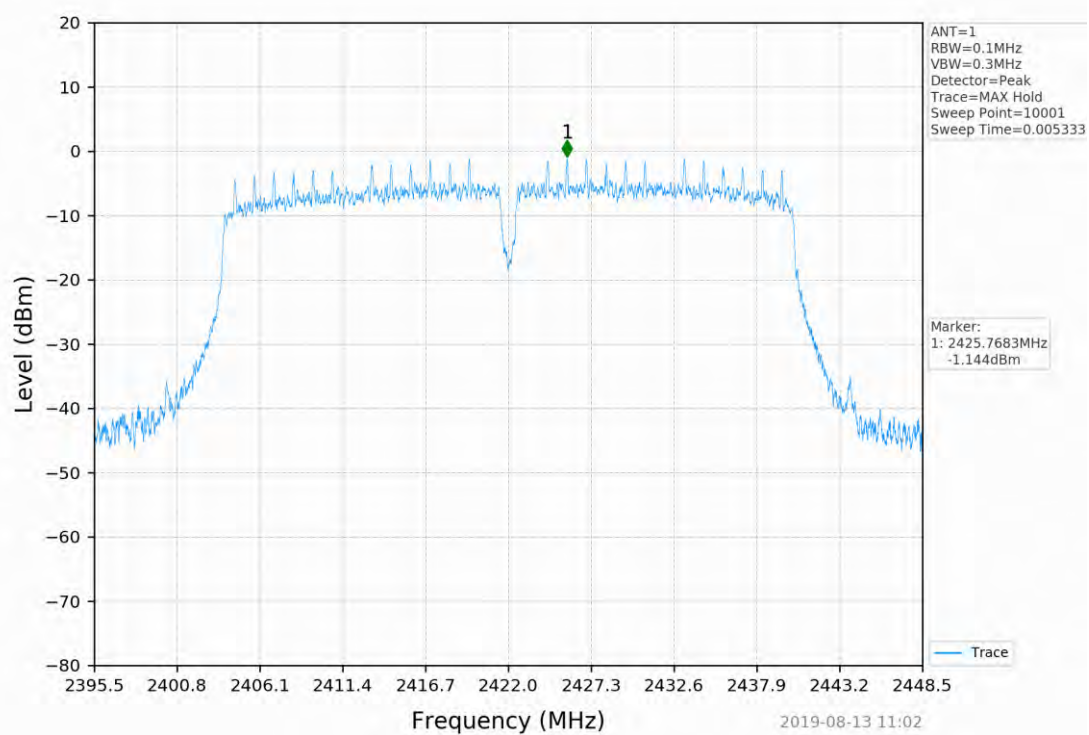
802.11n(HT20)_2462MHz_SISO_ANT1



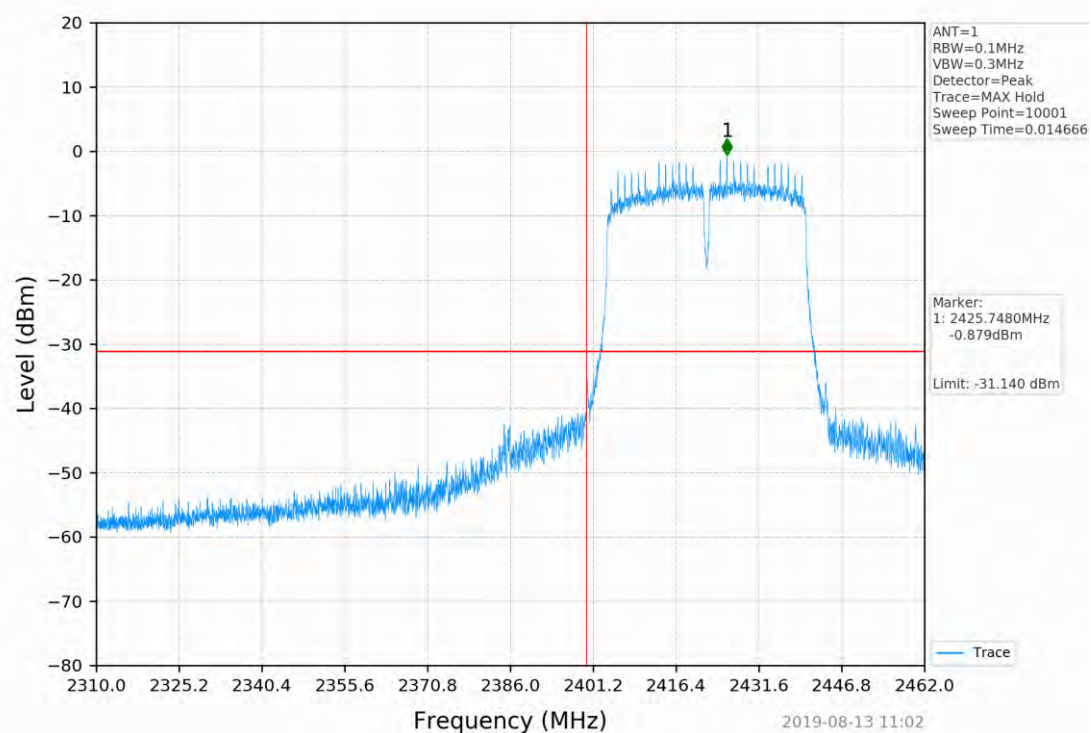
802.11n(HT20)_2462MHz_SISO_ANT1



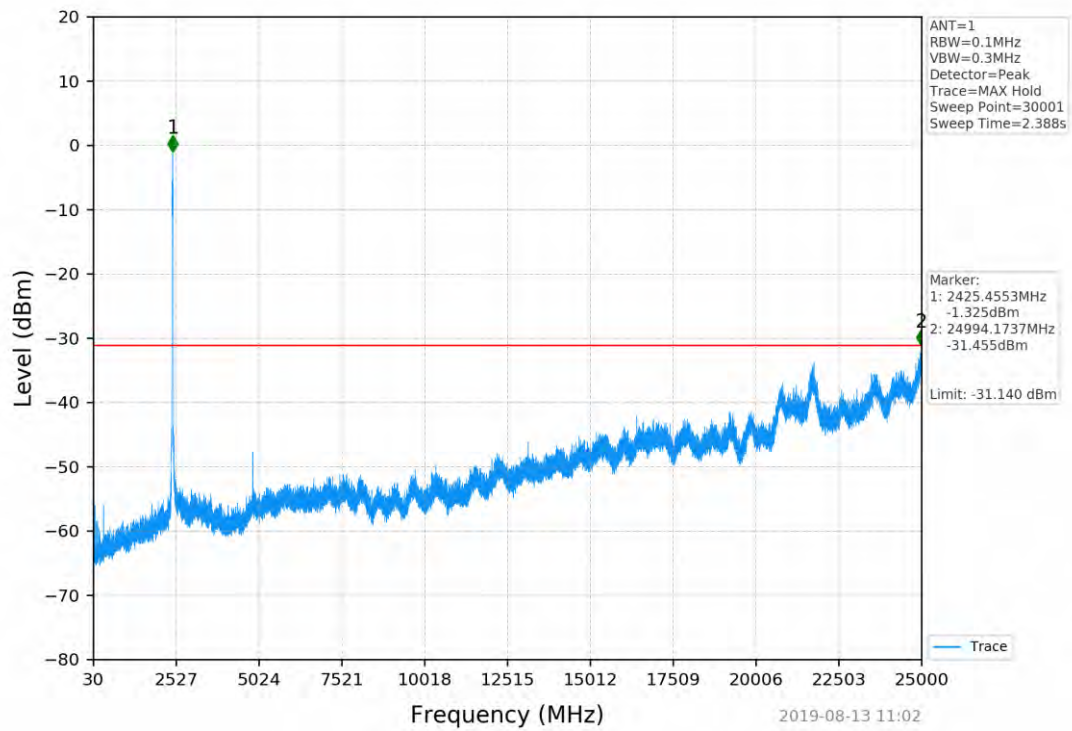
802.11n(HT40)_SISO_ANT1_REF



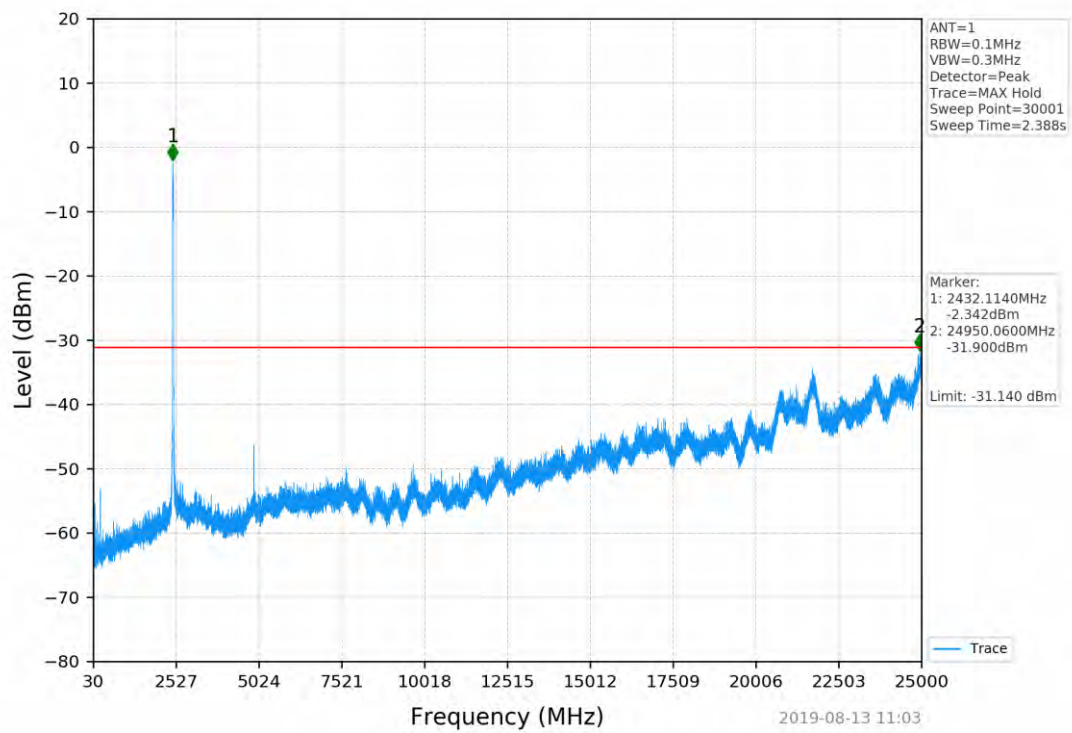
802.11n(HT40)_2422MHz_SISO_ANT1



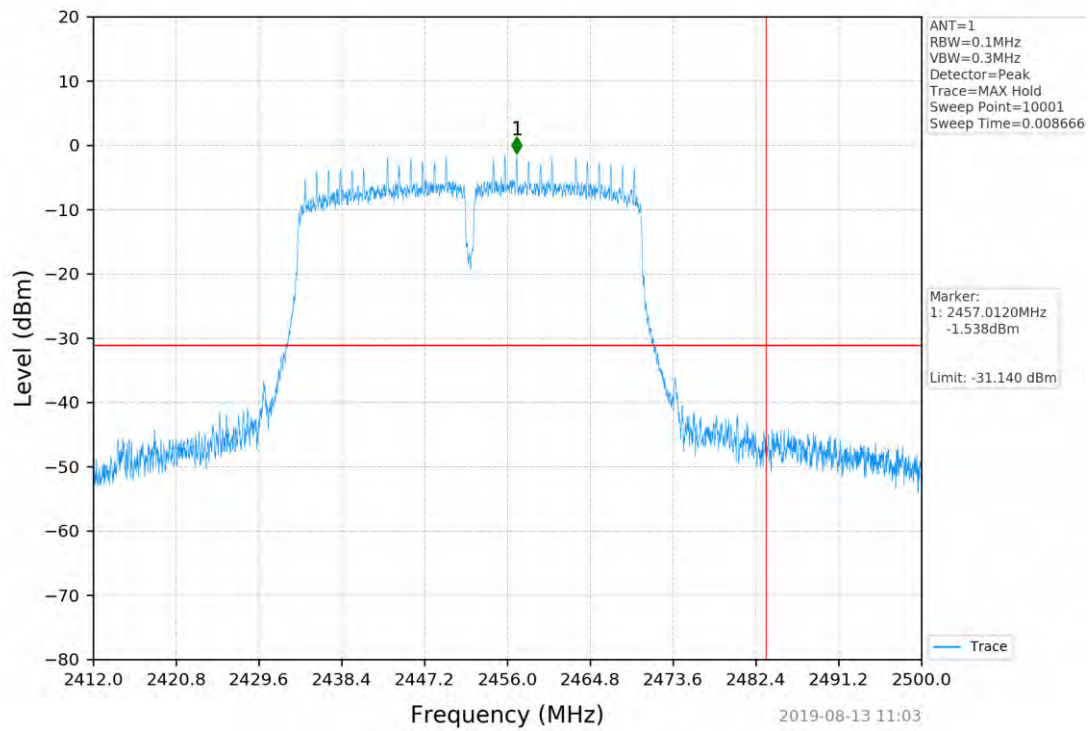
802.11n(HT40)_2422MHz_SISO_ANT1



802.11n(HT40)_2437MHz_SISO_ANT1



802.11n(HT40)_2452MHz_SISO_ANT1



802.11n(HT40)_2452MHz_SISO_ANT1

