



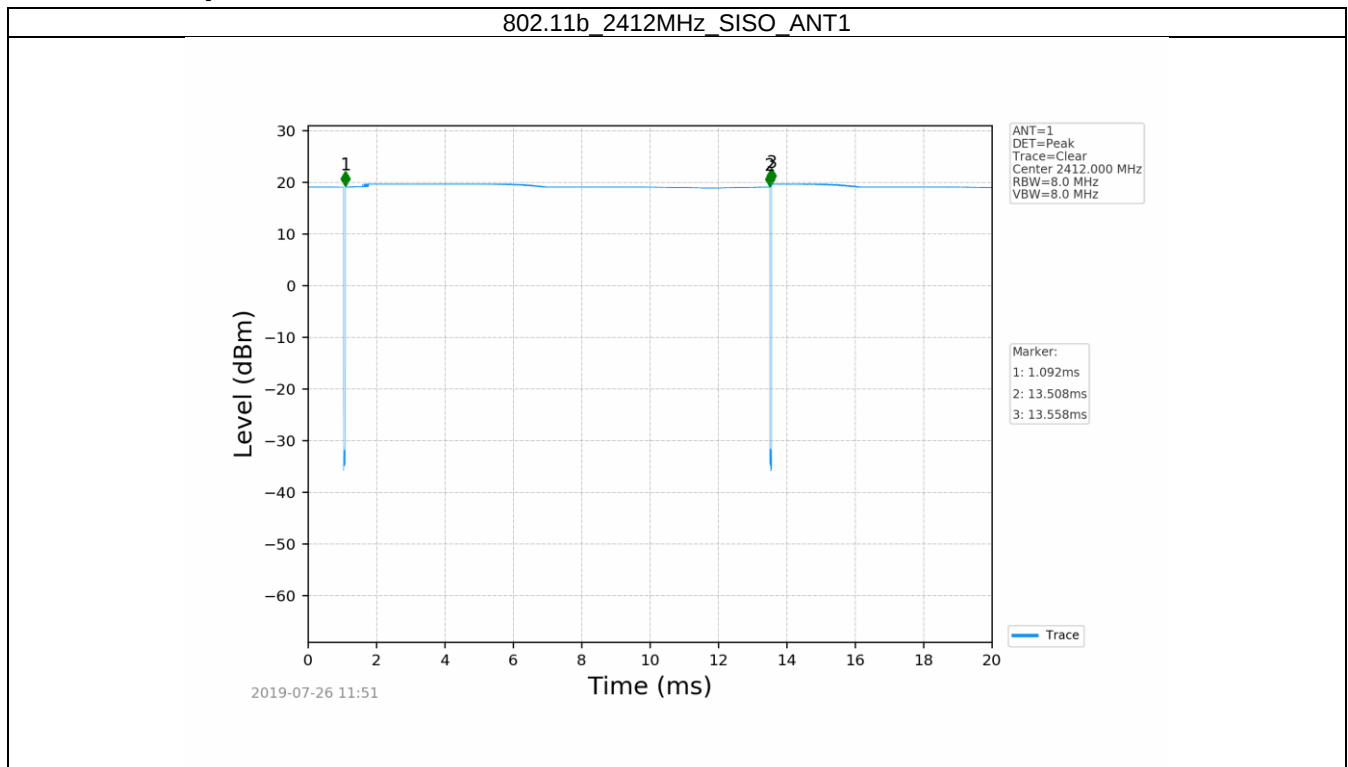
Appendix A for SHEM190601436501

1. Duty Cycle

1.1 Test Result

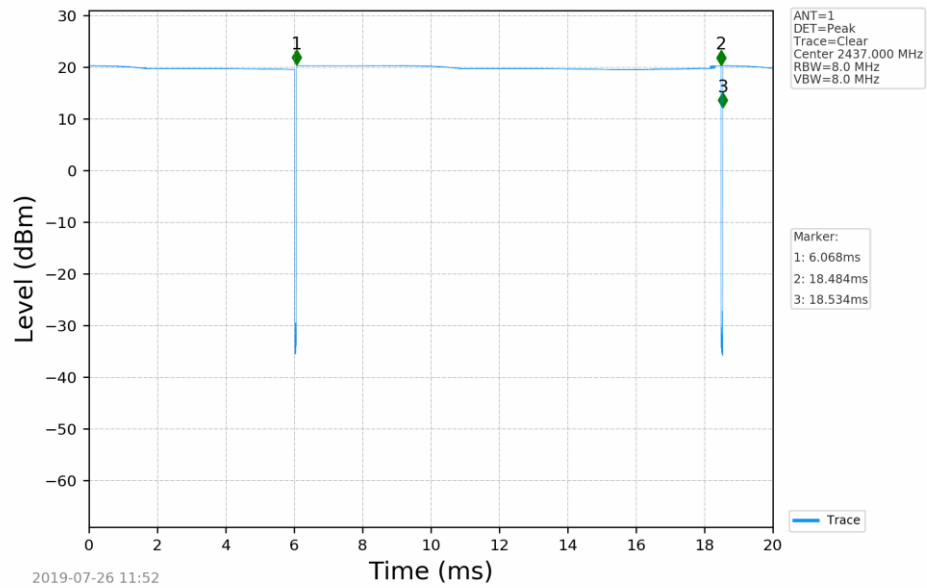
Test Mode	Channel Frequency(MHz)	TX Type	ANT No.	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
802.11b	2412	SISO	1	12.416	12.466	99.60	0.02
	2437	SISO	1	12.416	12.466	99.60	0.02
	2462	SISO	1	12.416	12.466	99.60	0.02
802.11g	2412	SISO	1	2.064	2.122	97.27	0.12
	2437	SISO	1	2.064	2.122	97.27	0.12
	2462	SISO	1	2.064	2.122	97.27	0.12
802.11n(HT20)	2412	SISO	1	1.920	1.978	97.07	0.13
		MIMO	1	1.920	1.978	97.07	0.13
	2437	SISO	1	1.920	1.978	97.07	0.13
		MIMO	1	1.920	1.978	97.07	0.13
	2462	SISO	1	1.920	1.978	97.07	0.13
		MIMO	1	1.920	1.978	97.07	0.13

1.2 Test Graph

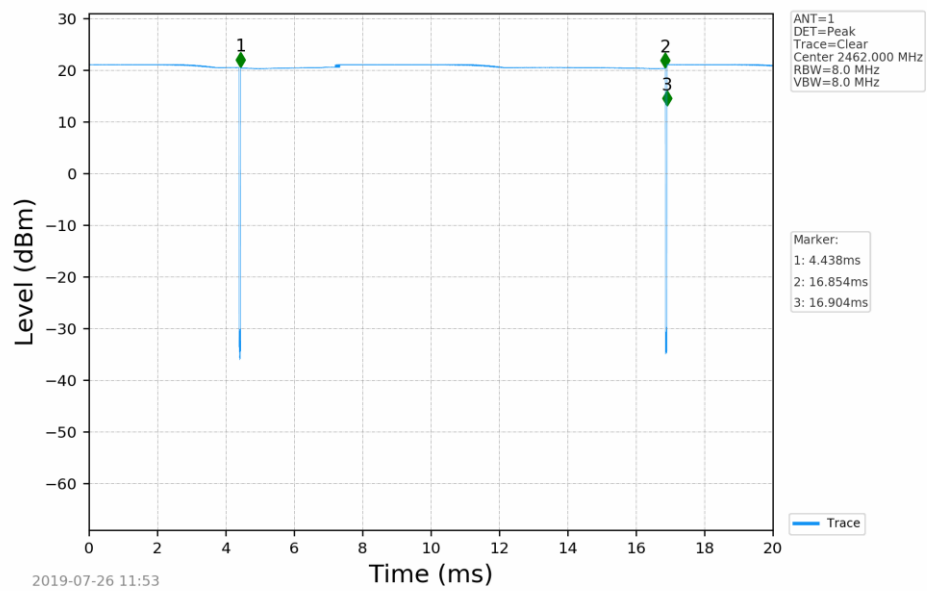




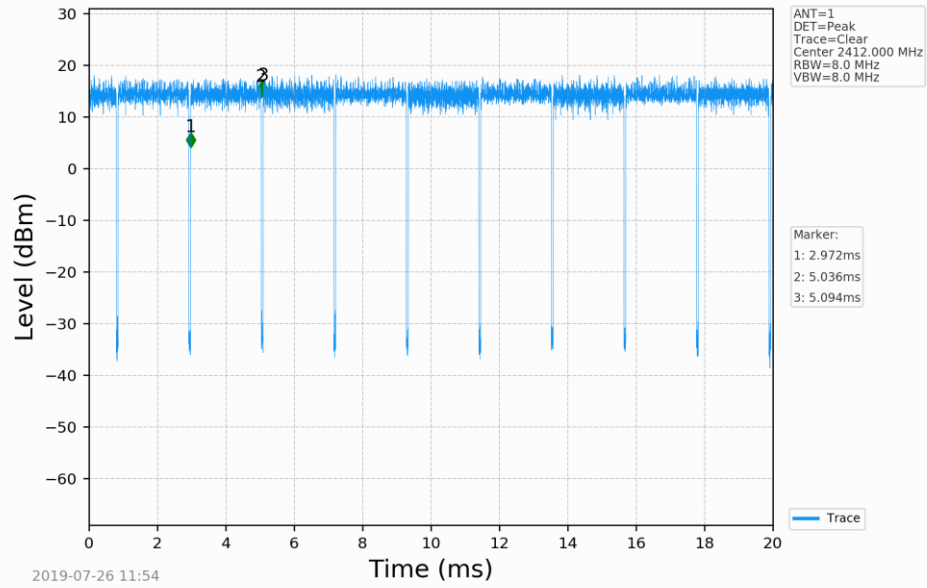
802.11b_2437MHz_SISO_ANT1



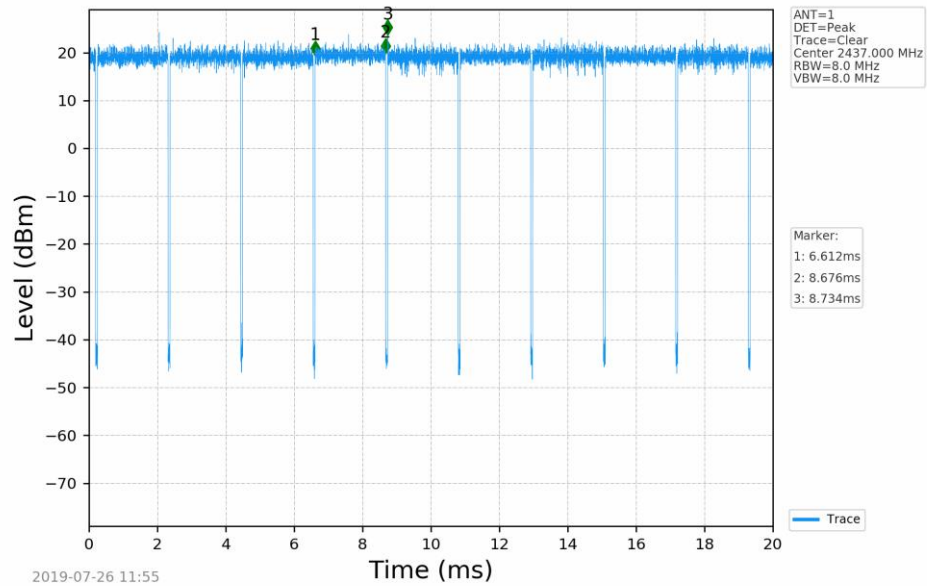
802.11b_2462MHz_SISO_ANT1



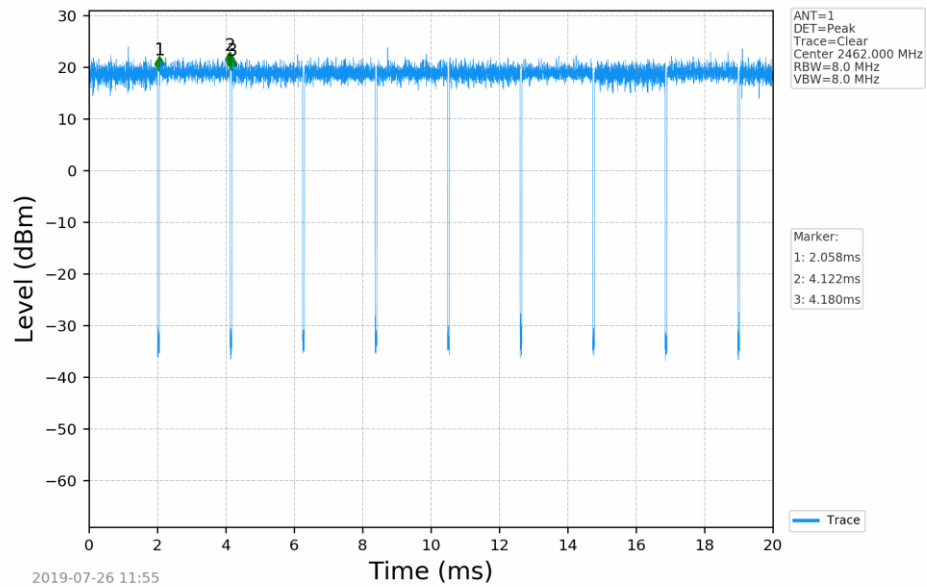
802.11g_2412MHz_SISO_ANT1



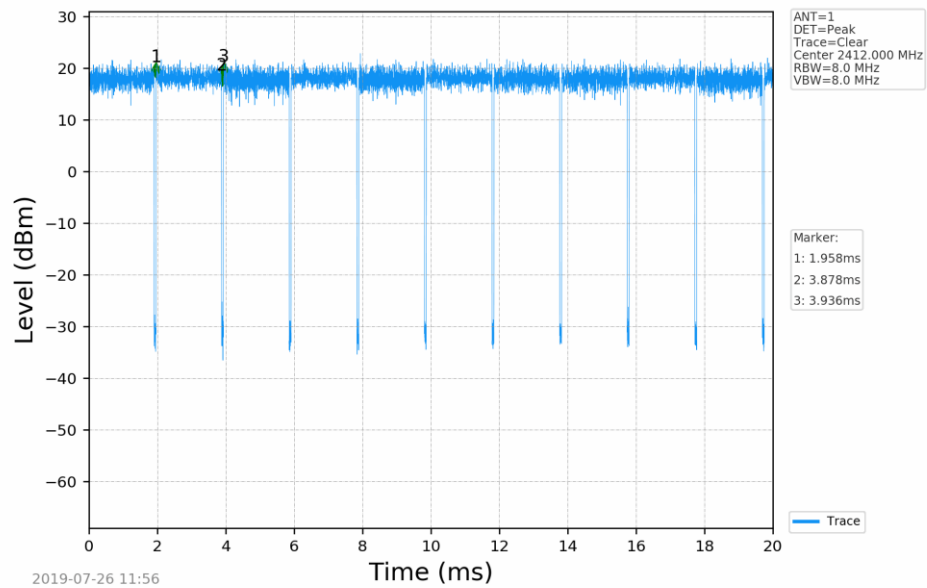
802.11g_2437MHz_SISO_ANT1



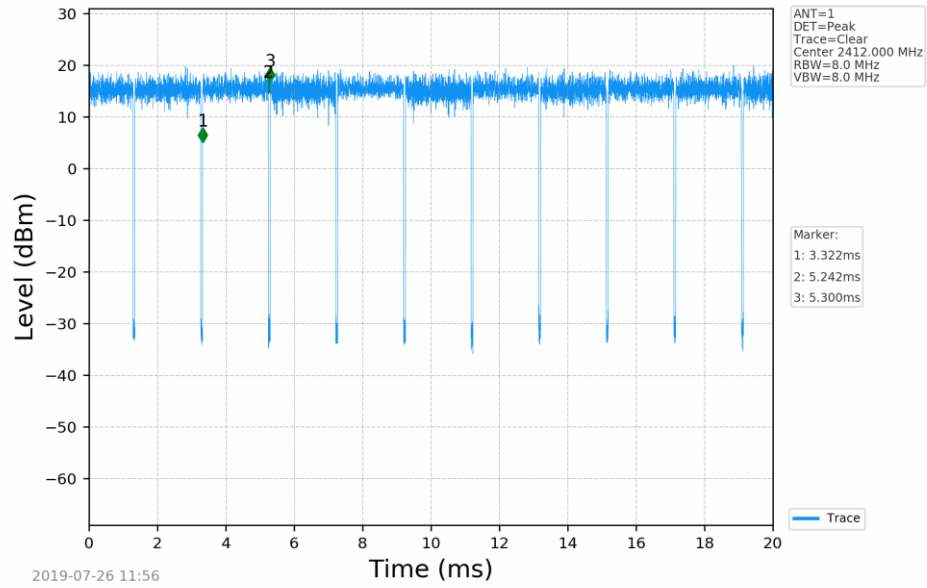
802.11g_2462MHz_SISO_ANT1



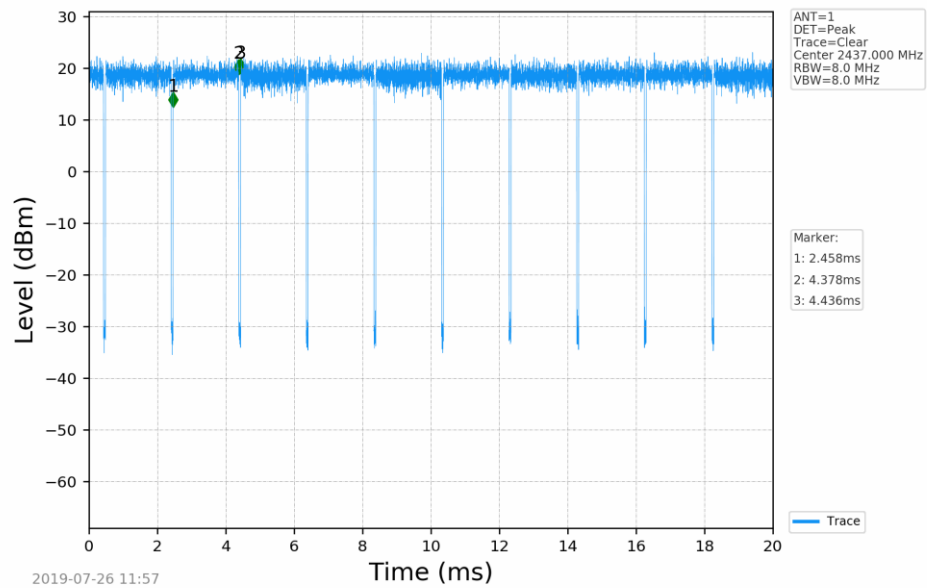
802.11n(HT20)_2412MHz_SISO_ANT1



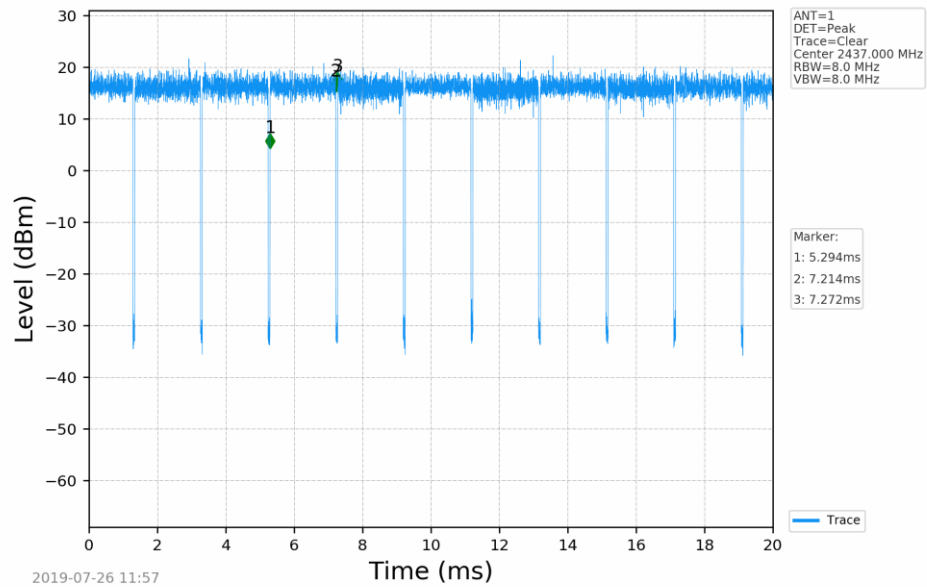
802.11n(HT20)_2412MHz_MIMO_ANT1



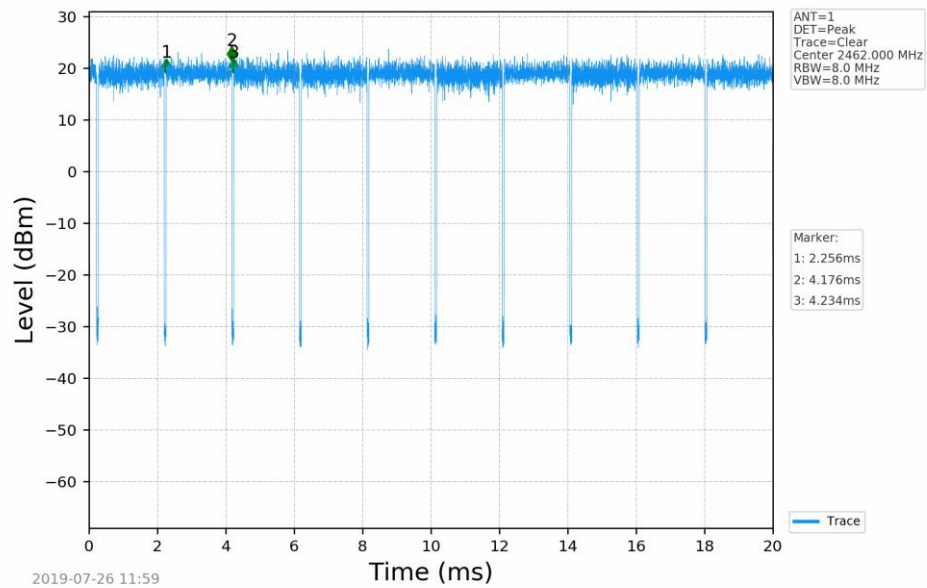
802.11n(HT20)_2437MHz_SISO_ANT1



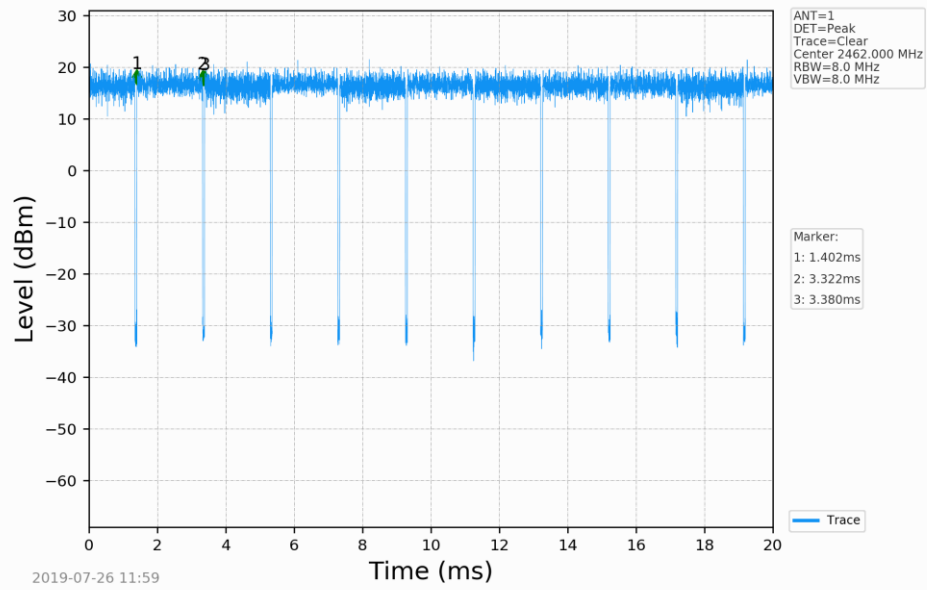
802.11n(HT20)_2437MHz_MIMO_ANT1



802.11n(HT20)_2462MHz_SISO_ANT1



802.11n(HT20)_2462MHz_MIMO_ANT1





2. Bandwidth

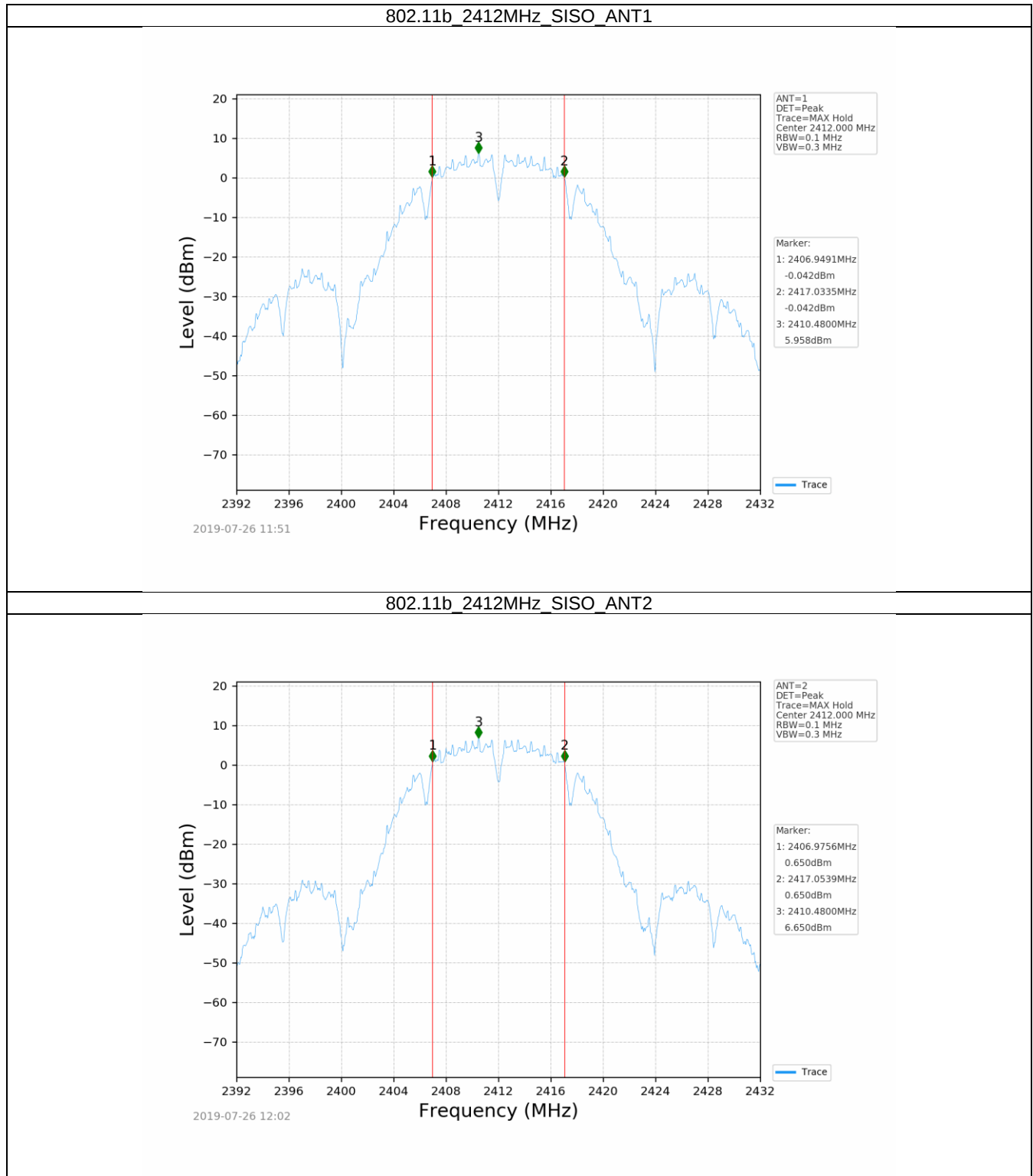
2.1 Test Result

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
			2	10.080	≥0.5	PASS
	2437	SISO	1	10.110	≥0.5	PASS
			2	10.090	≥0.5	PASS
	2462	SISO	1	10.030	≥0.5	PASS
			2	9.540	≥0.5	PASS
802.11g	2412	SISO	1	16.370	≥0.5	PASS
			2	16.350	≥0.5	PASS
	2437	SISO	1	16.290	≥0.5	PASS
			2	16.350	≥0.5	PASS
	2462	SISO	1	16.340	≥0.5	PASS
			2	16.350	≥0.5	PASS
802.11n(HT20)	2412	SISO	1	16.910	≥0.5	PASS
			2	17.220	≥0.5	PASS
		MIMO	0	17.560	≥0.5	PASS
	2437	SISO	1	17.590	≥0.5	PASS
			2	17.560	≥0.5	PASS
		MIMO	0	17.600	≥0.5	PASS
	2462	SISO	1	17.360	≥0.5	PASS
			2	17.370	≥0.5	PASS
		MIMO	0	17.270	≥0.5	PASS
			0	17.270	≥0.5	PASS

Test Mode	Frequency (MHz)	TX Type	ANT No.	99% Occupied Bandwidth	
				Test Result (MHz)	
802.11b	2412	SISO	1	14.560	Only for Report Use
			2	14.110	Only for Report Use
	2437	SISO	1	14.630	Only for Report Use
			2	14.190	Only for Report Use
	2462	SISO	1	14.560	Only for Report Use
			2	14.170	Only for Report Use
802.11g	2412	SISO	1	17.270	Only for Report Use
			2	17.350	Only for Report Use
	2437	SISO	1	24.970	Only for Report Use
			2	17.590	Only for Report Use
	2462	SISO	1	22.490	Only for Report Use
			2	17.340	Only for Report Use
802.11n(HT20)	2412	SISO	1	18.660	Only for Report Use
			2	18.440	Only for Report Use
		MIMO	0	18.440	Only for Report Use
	2437	SISO	1	18.850	Only for Report Use
			2	18.550	Only for Report Use
		MIMO	0	18.170	Only for Report Use
	2462	SISO	1	18.620	Only for Report Use
			2	18.420	Only for Report Use
		MIMO	0	18.130	Only for Report Use
			0	18.130	Only for Report Use

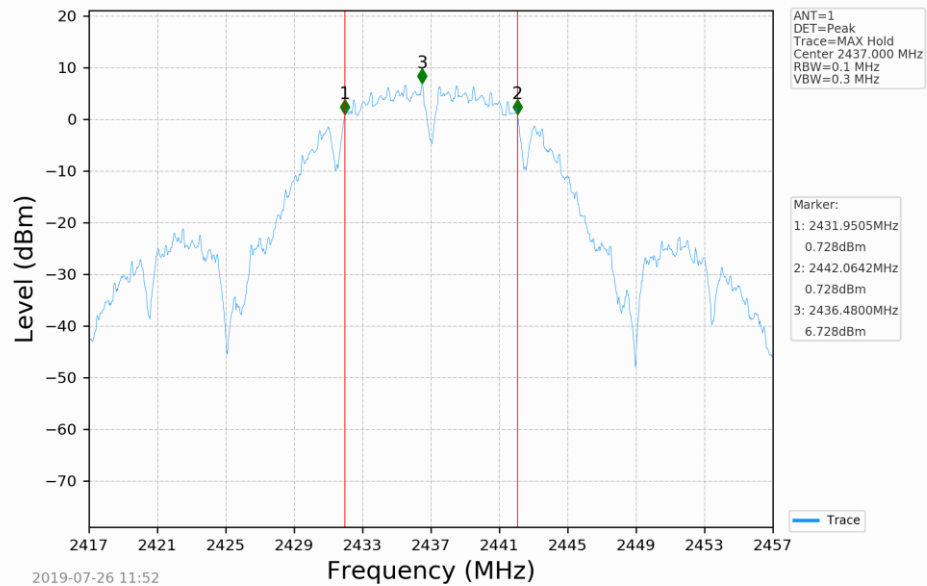


2.2 Test Graph - 6dB Bandwidth

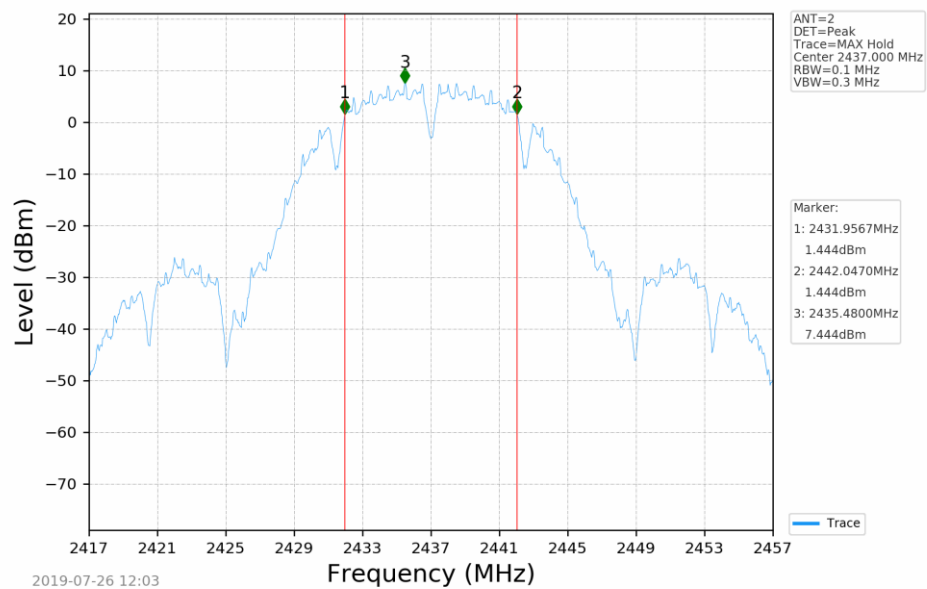




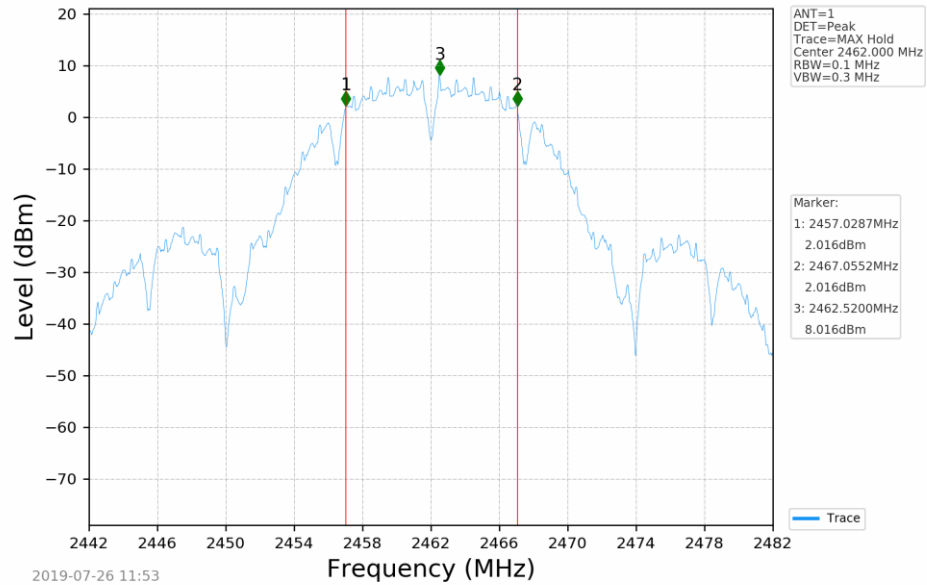
802.11b_2437MHz_SISO_ANT1



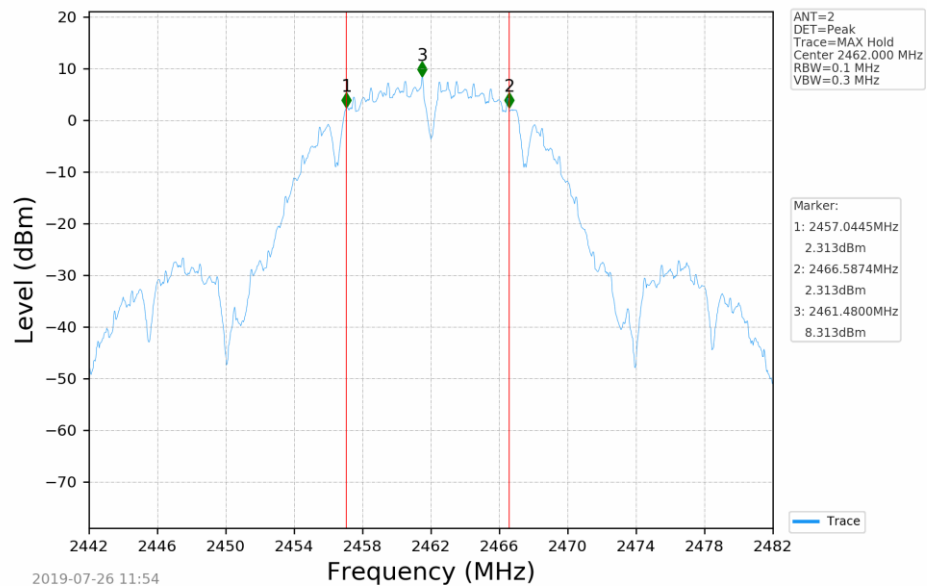
802.11b_2437MHz_SISO_ANT2



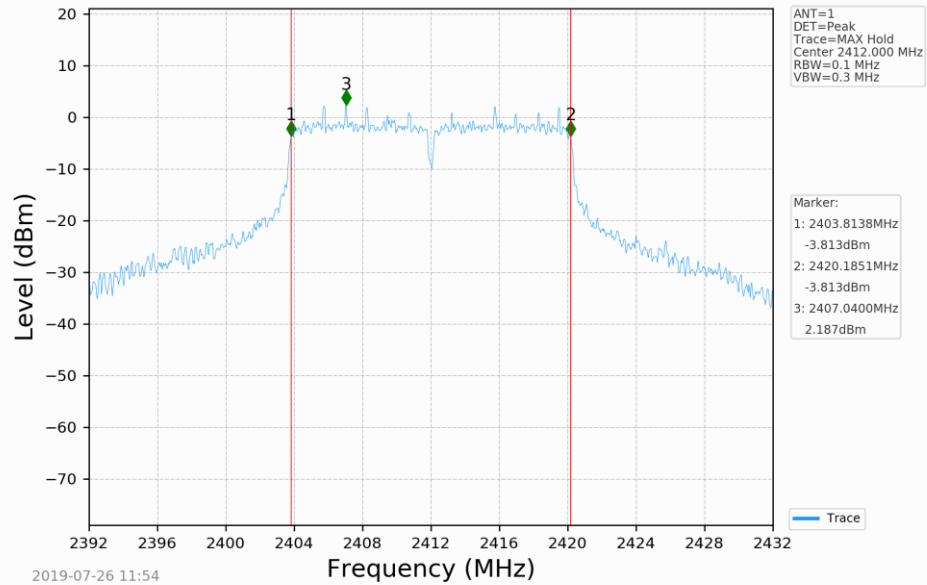
802.11b_2462MHz_SISO_ANT1



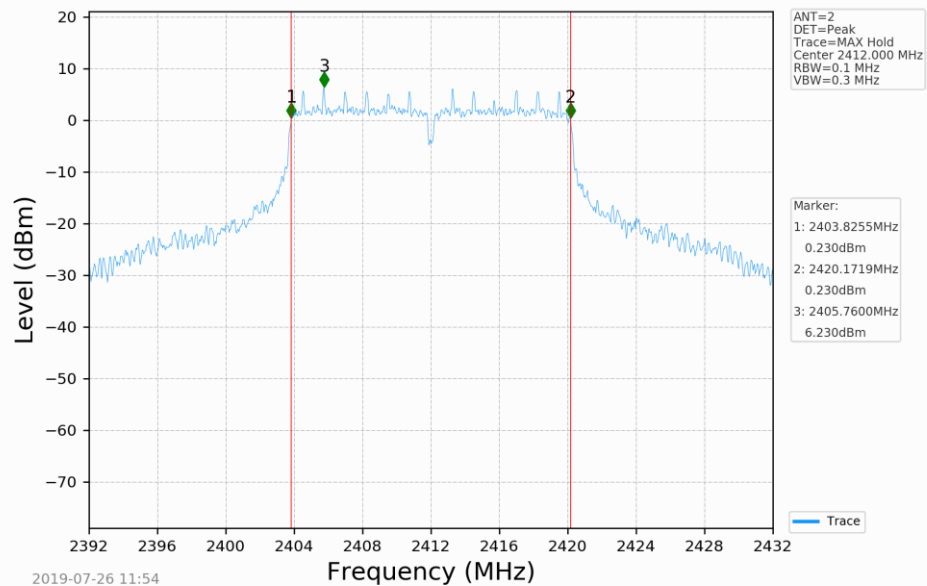
802.11b_2462MHz_SISO_ANT2



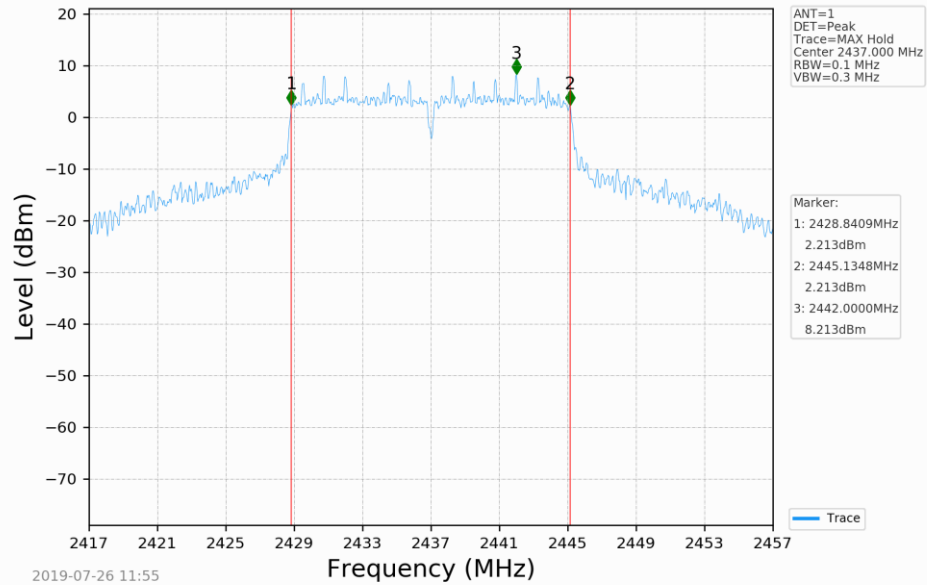
802.11g_2412MHz_SISO_ANT1



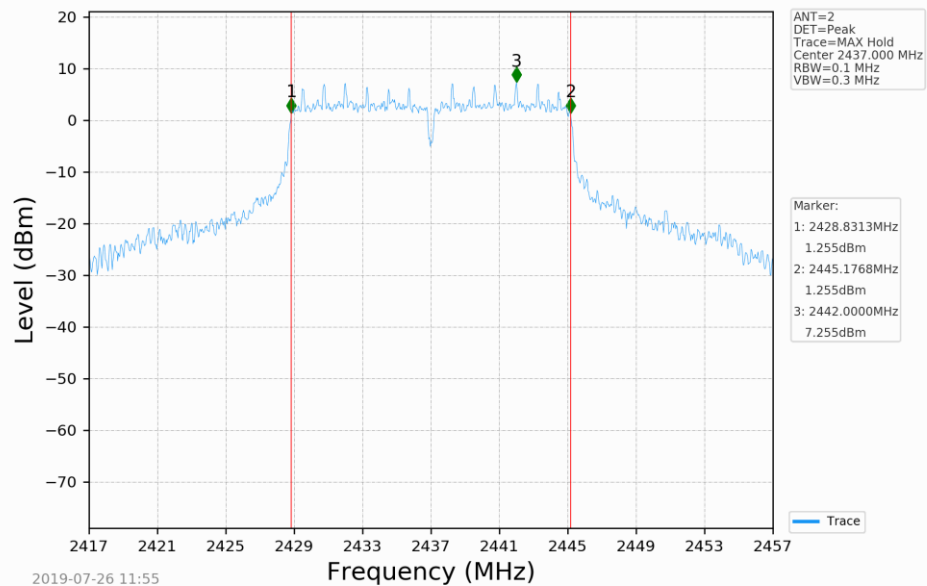
802.11g_2412MHz_SISO_ANT2



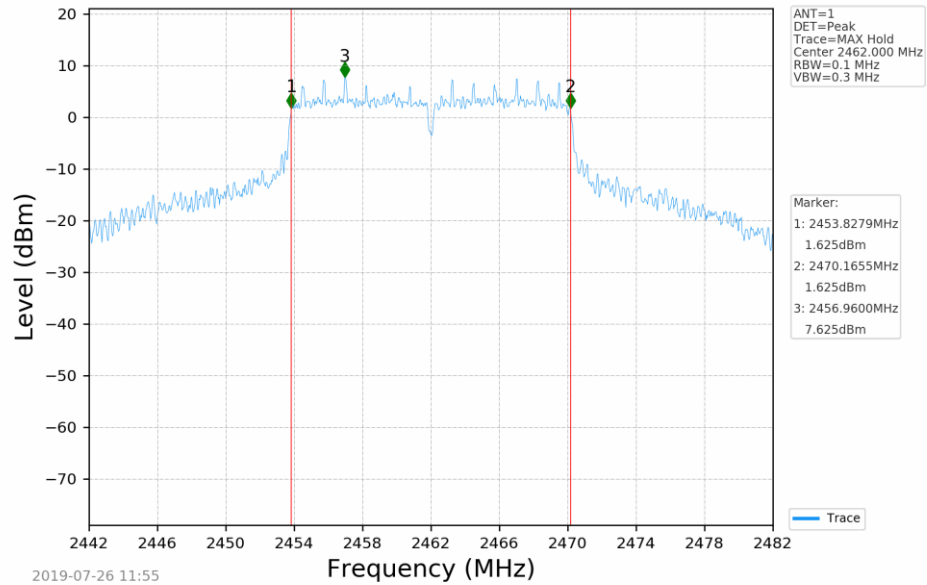
802.11g_2437MHz_SISO_ANT1



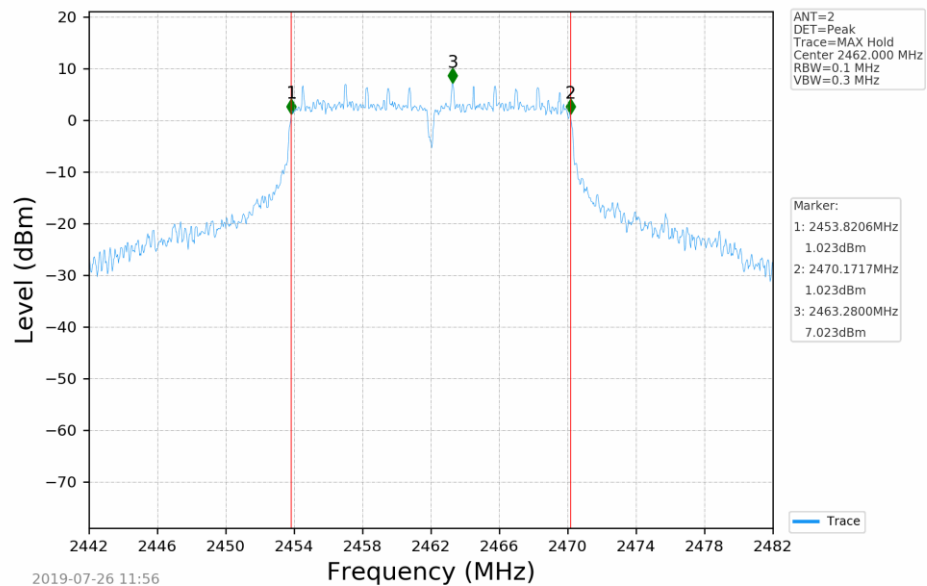
802.11g_2437MHz_SISO_ANT2



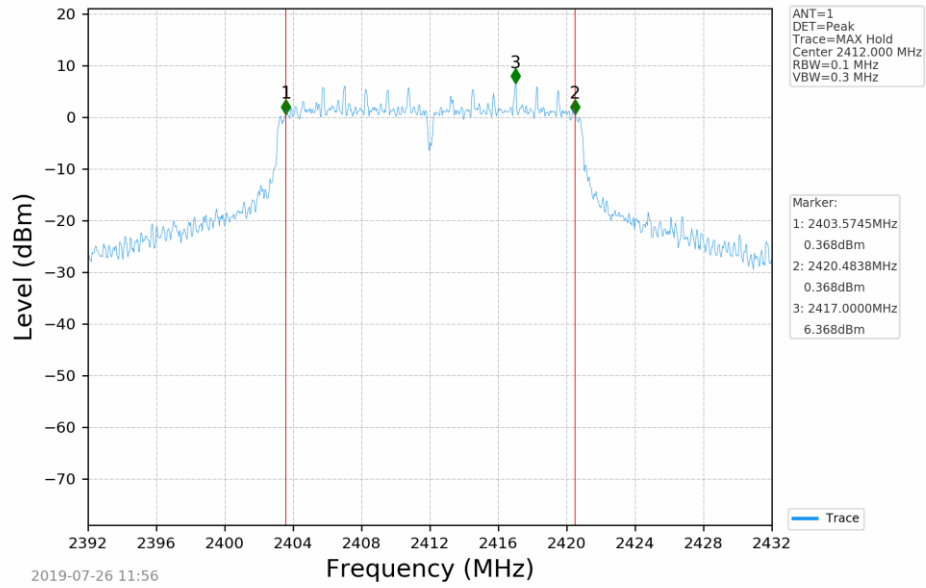
802.11g_2462MHz_SISO_ANT1



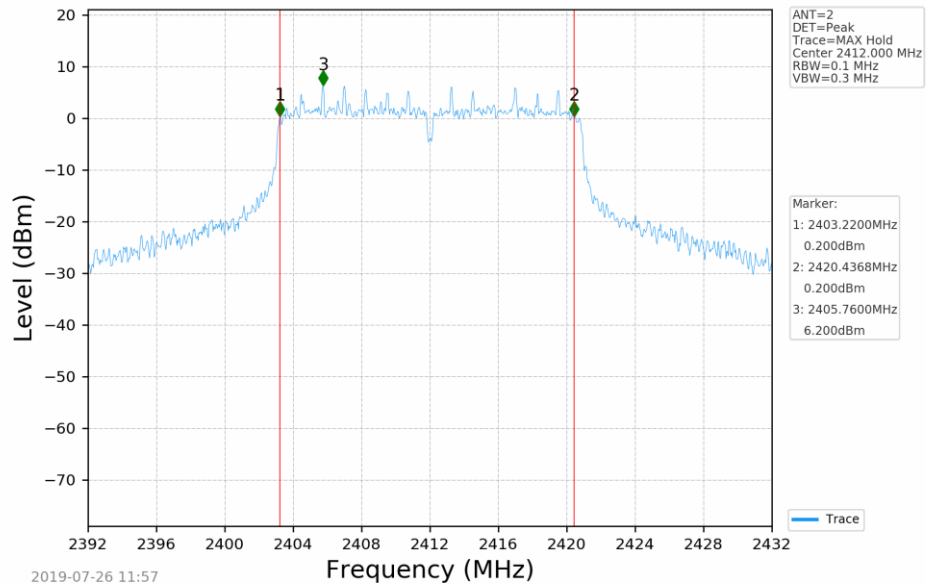
802.11g_2462MHz_SISO_ANT2



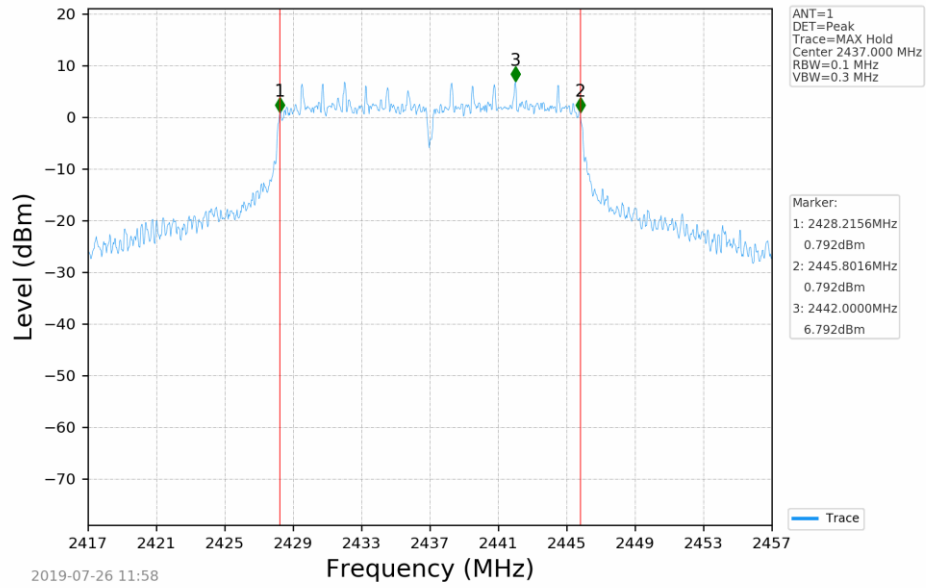
802.11n(HT20)_2412MHz_SISO_ANT1



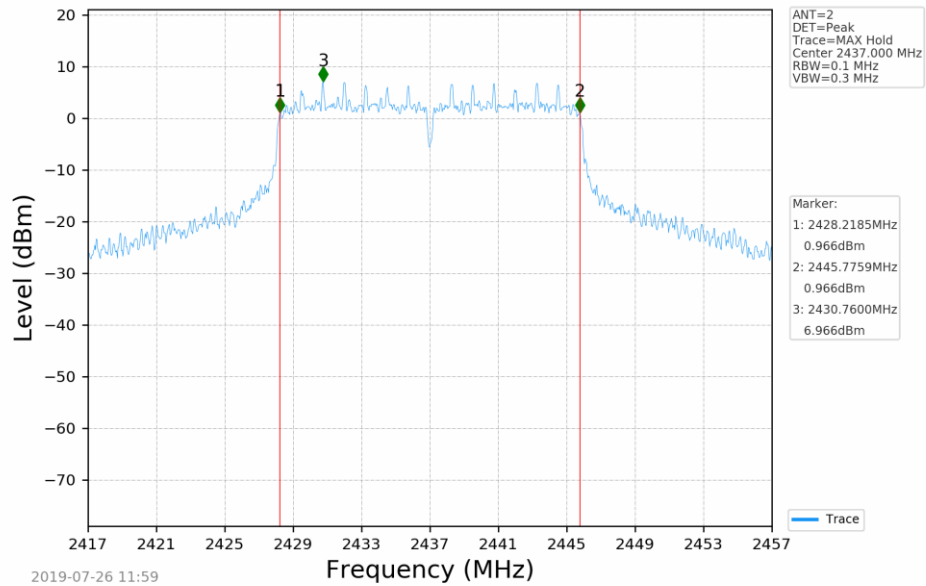
802.11n(HT20)_2412MHz_SISO_ANT2



802.11n(HT20)_2437MHz_SISO_ANT1



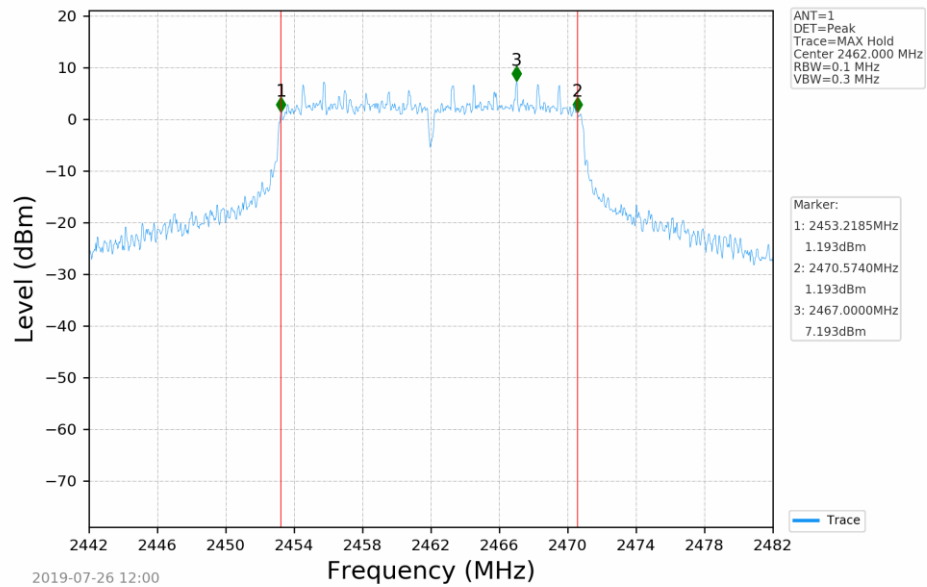
802.11n(HT20)_2437MHz_SISO_ANT2



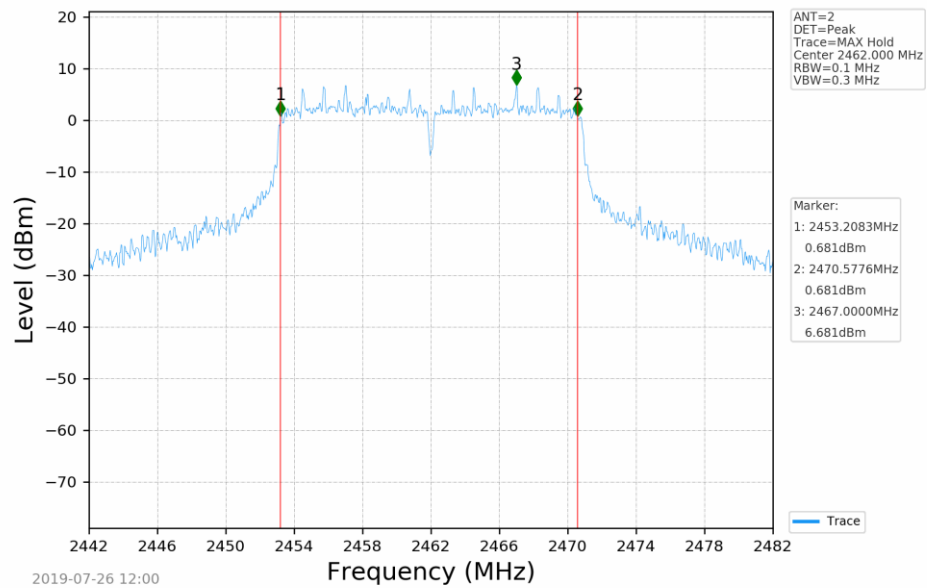
802.11n(HT20)_2462MHz_SISO_ANT1



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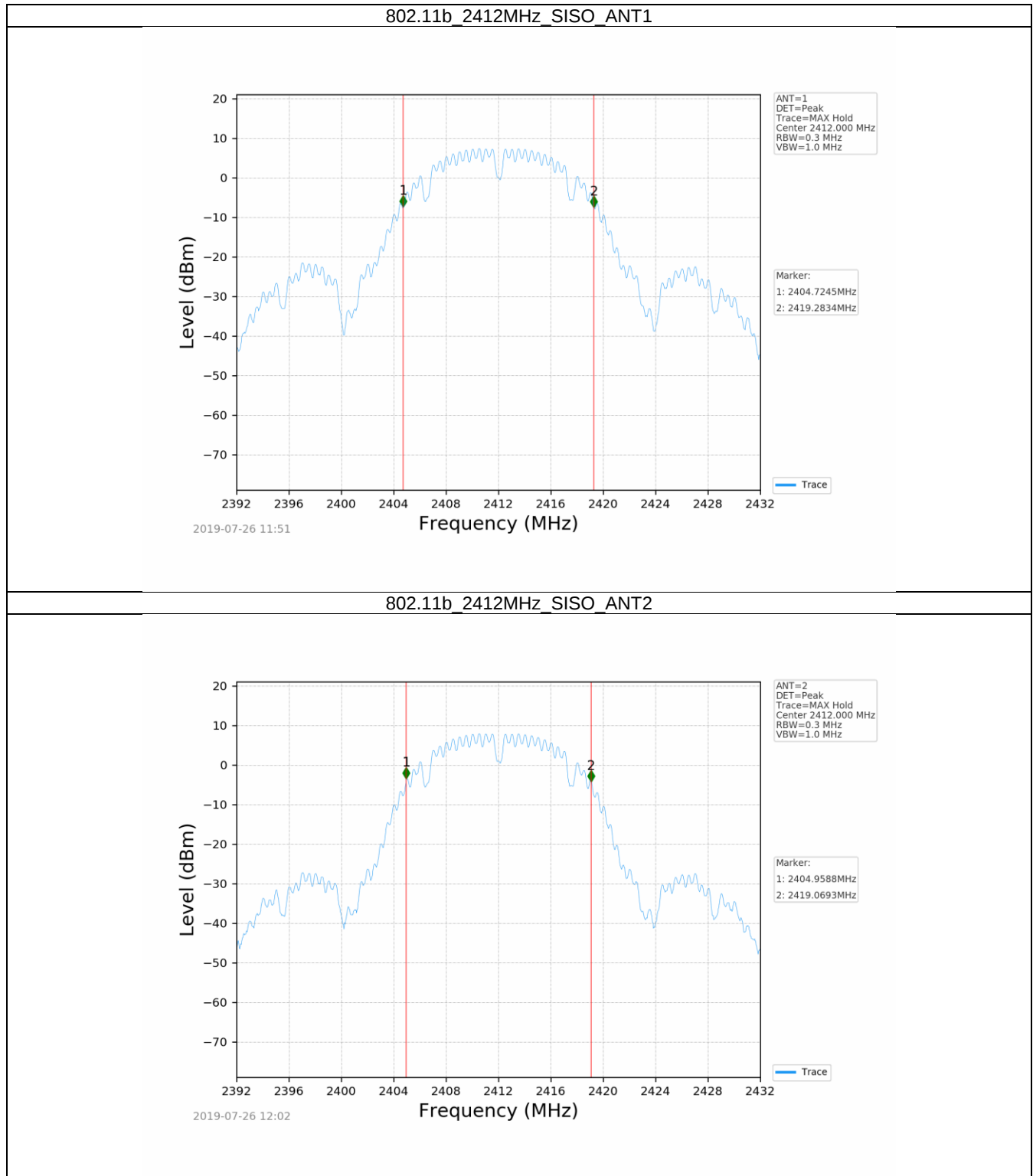


802.11n(HT20)_2462MHz_SISO_ANT2



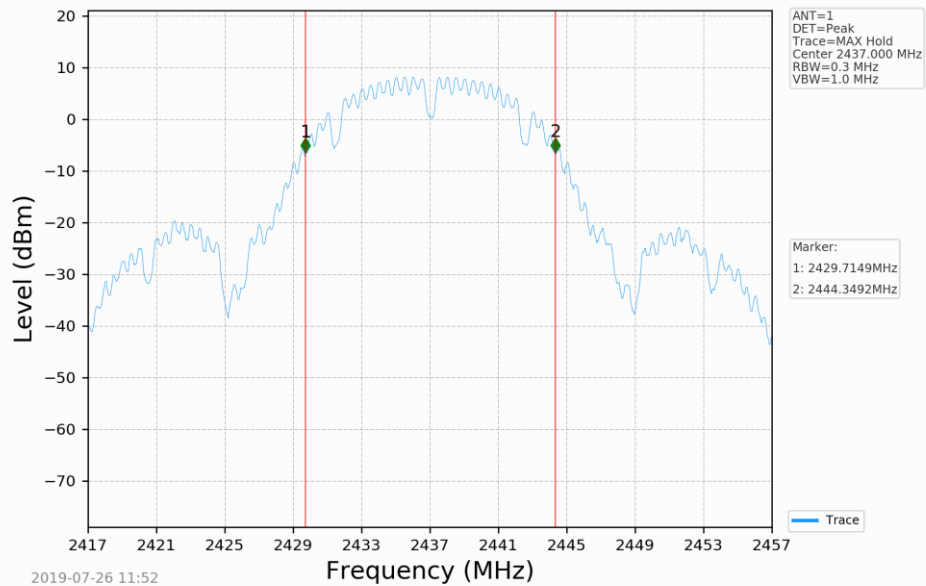


2.3 Test Graph - 99% Occupied Bandwidth

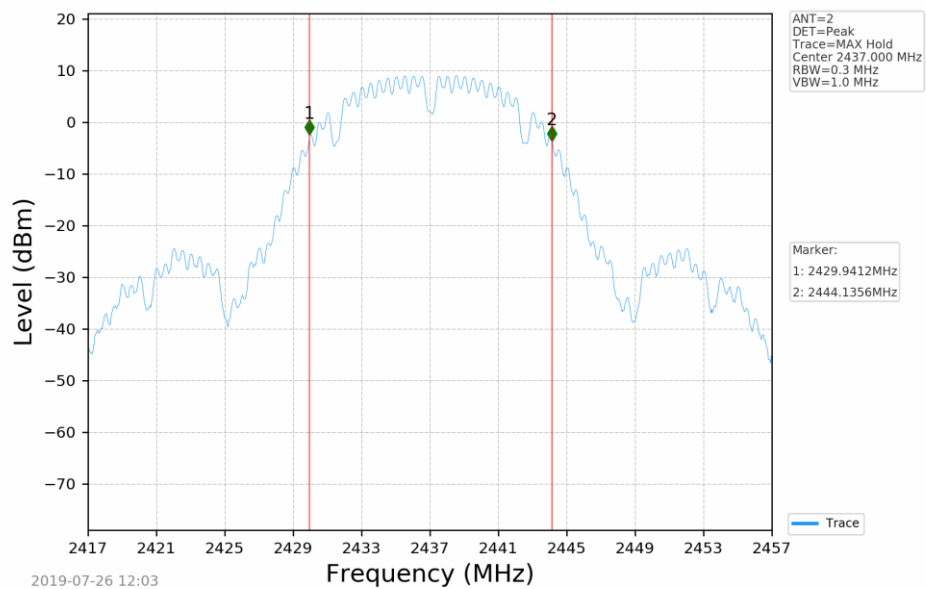




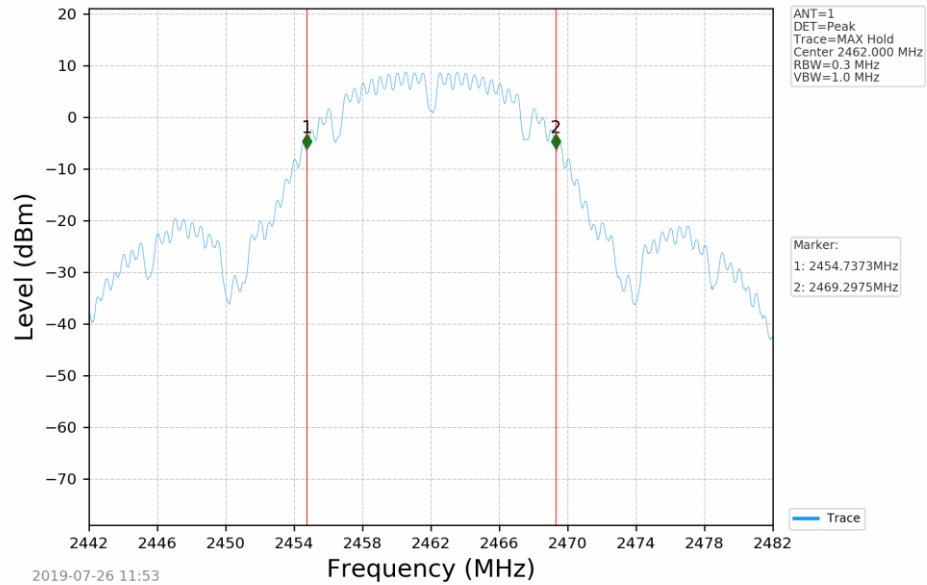
802.11b_2437MHz_SISO_ANT1



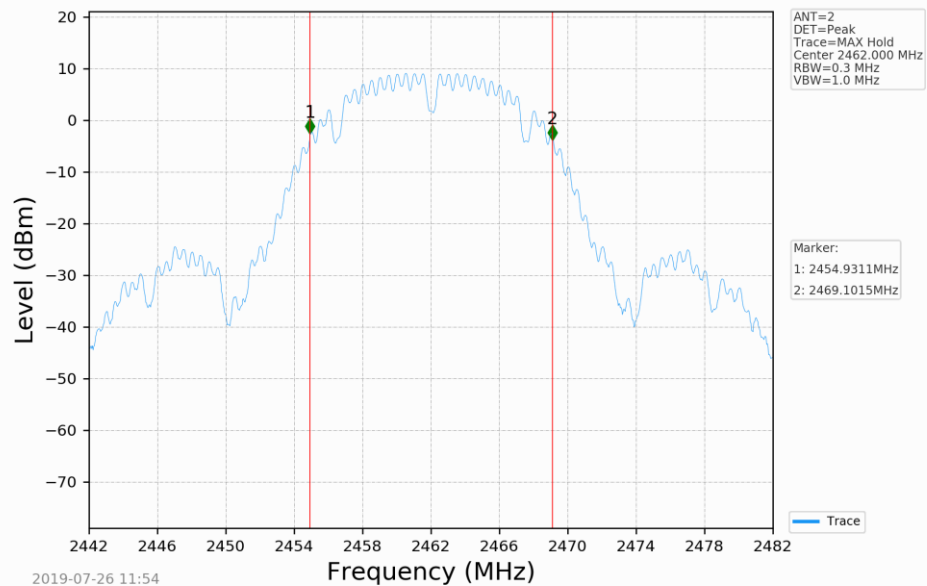
802.11b_2437MHz_SISO_ANT2



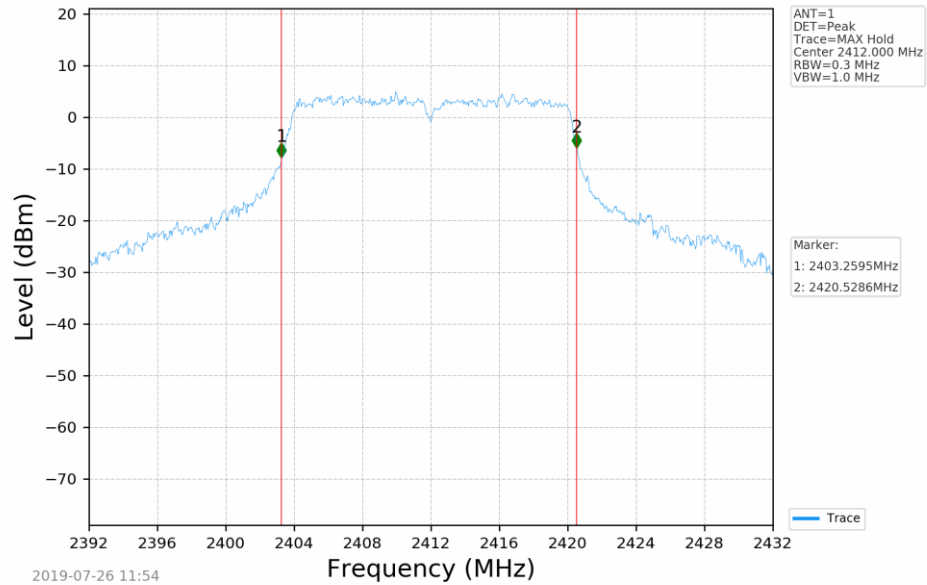
802.11b_2462MHz_SISO_ANT1



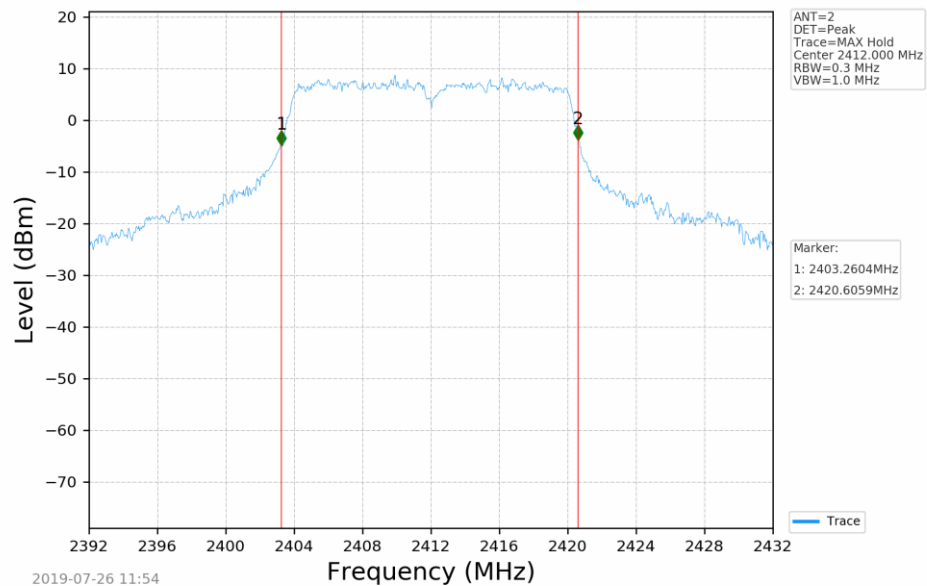
802.11b_2462MHz_SISO_ANT2



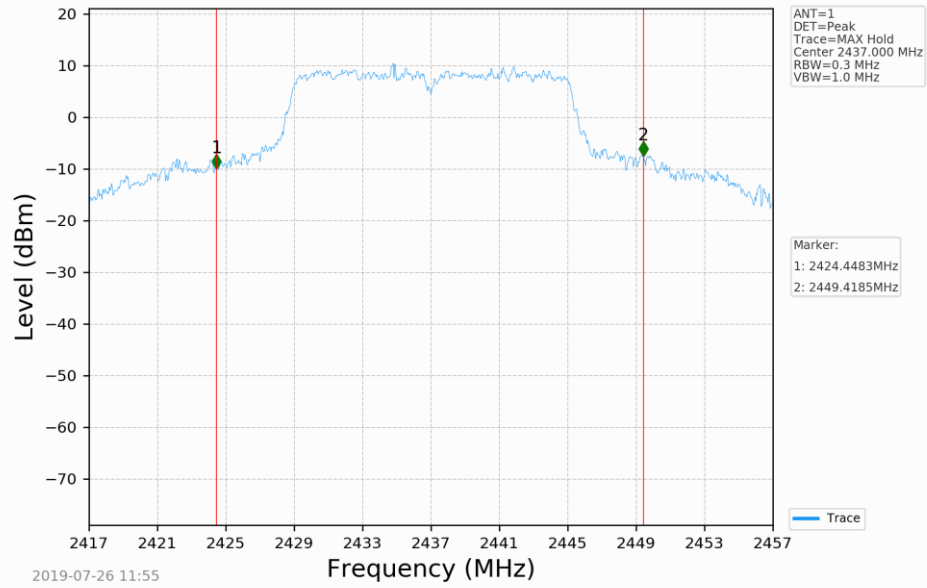
802.11g_2412MHz_SISO_ANT1



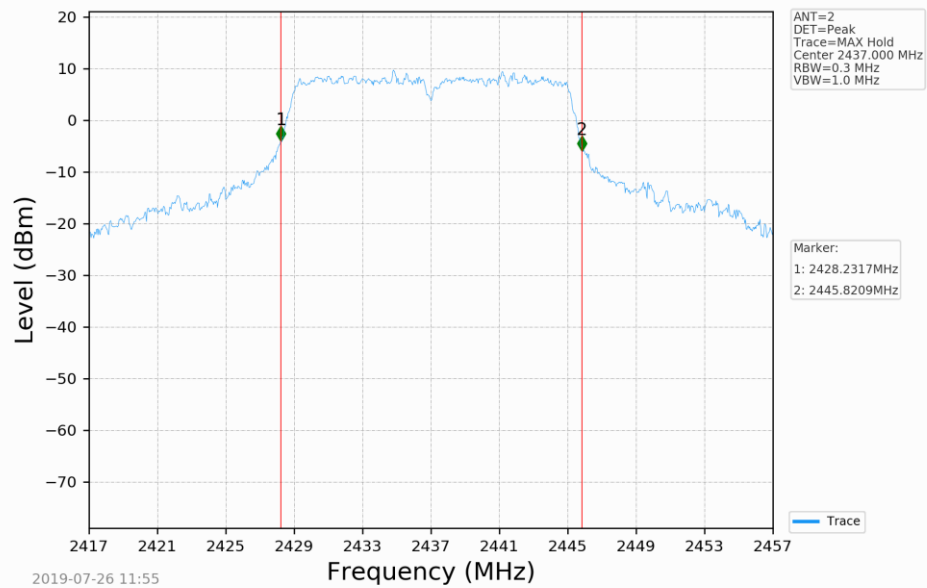
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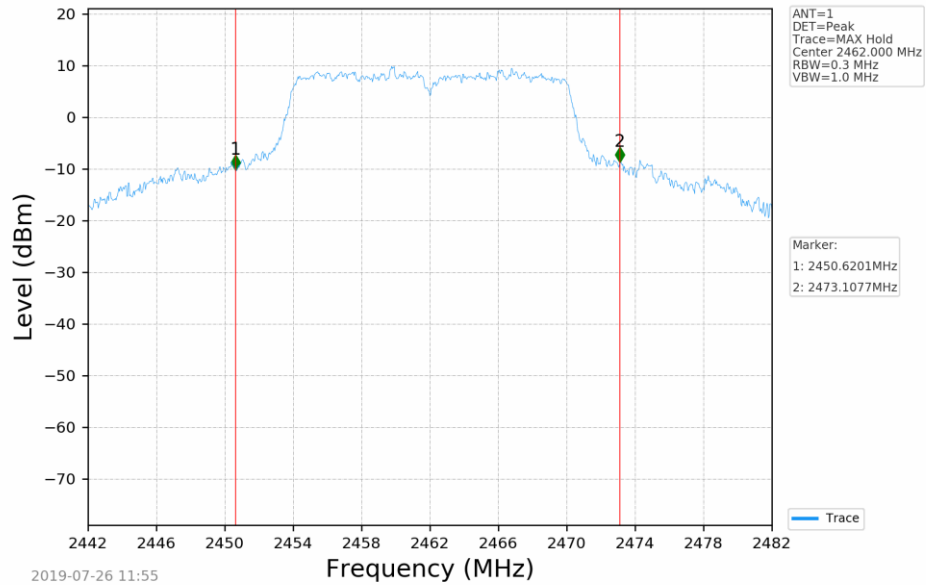
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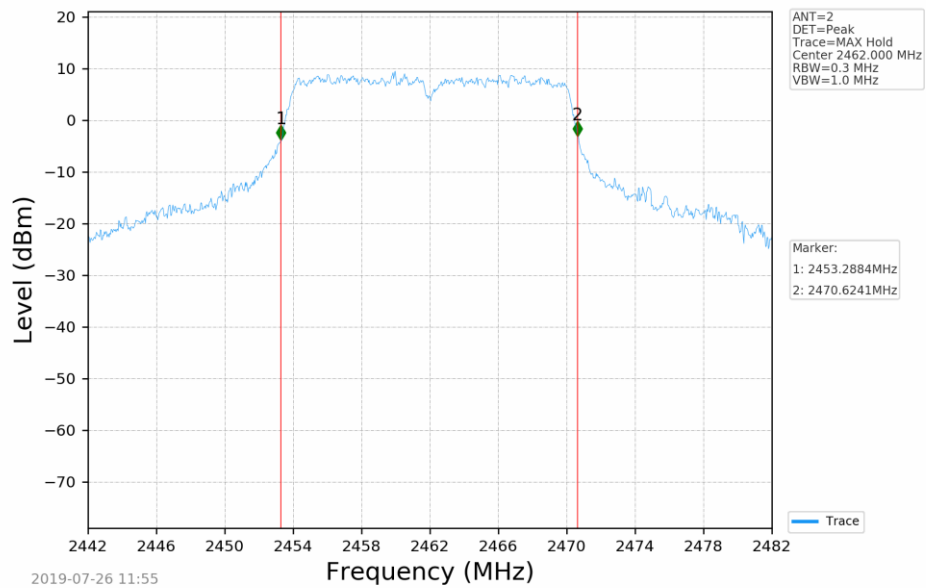
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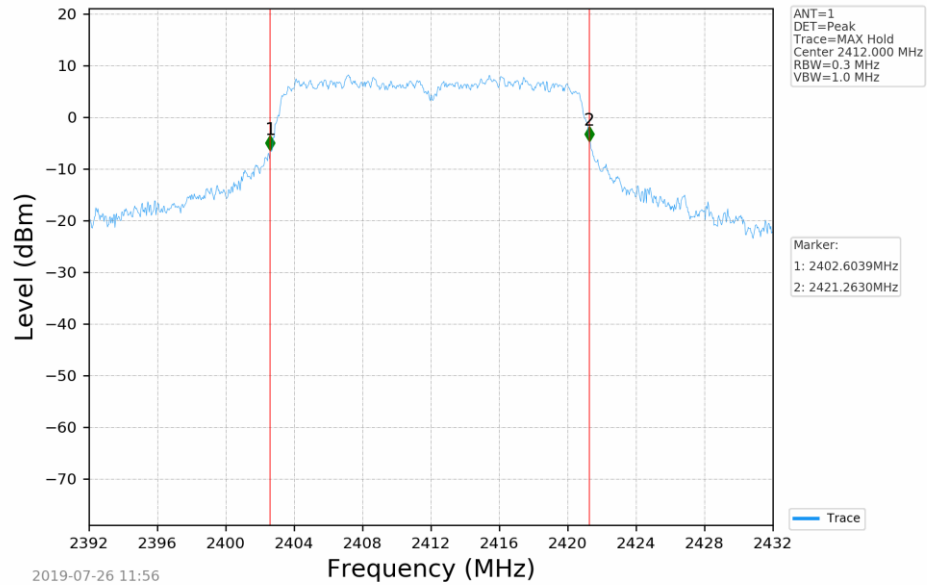
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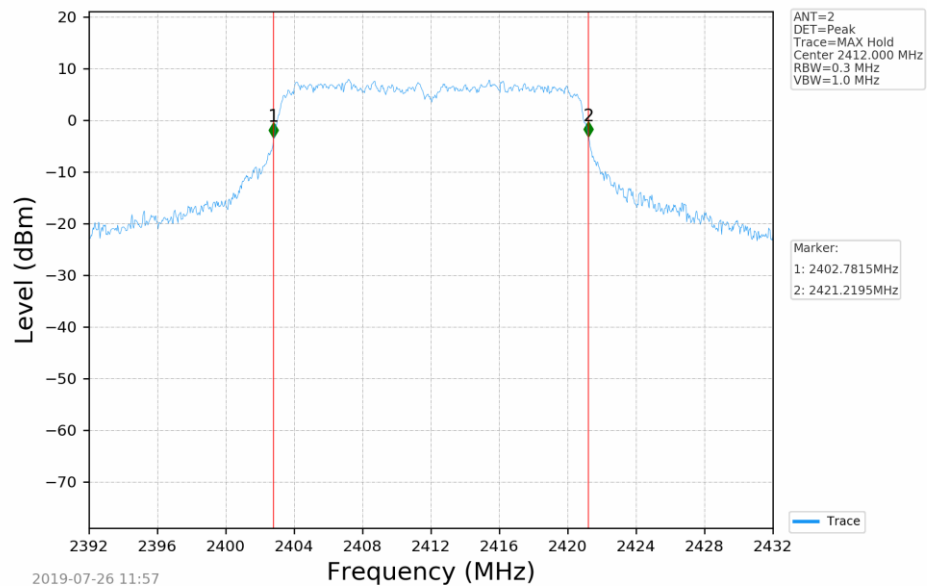
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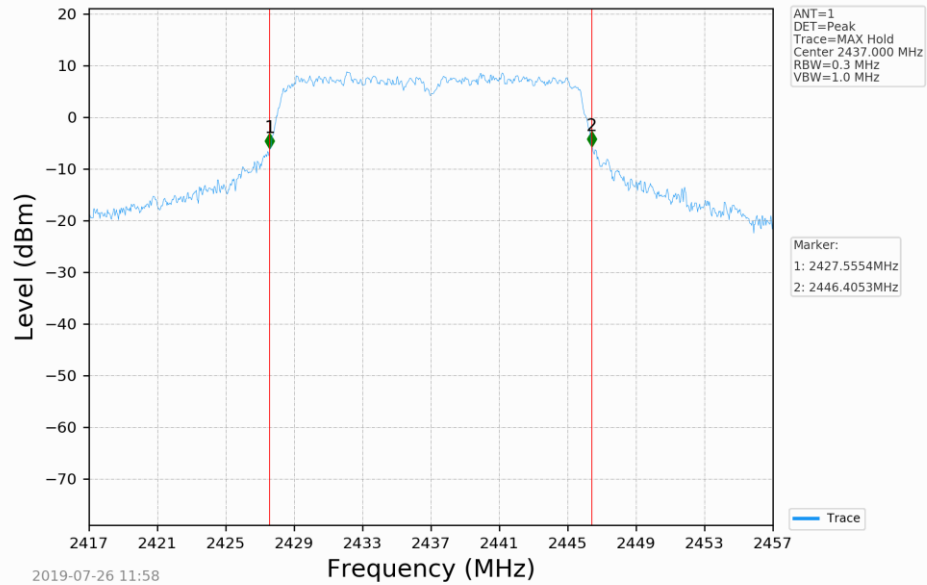
802.11n(HT20)_2412MHz_SISO_ANT1



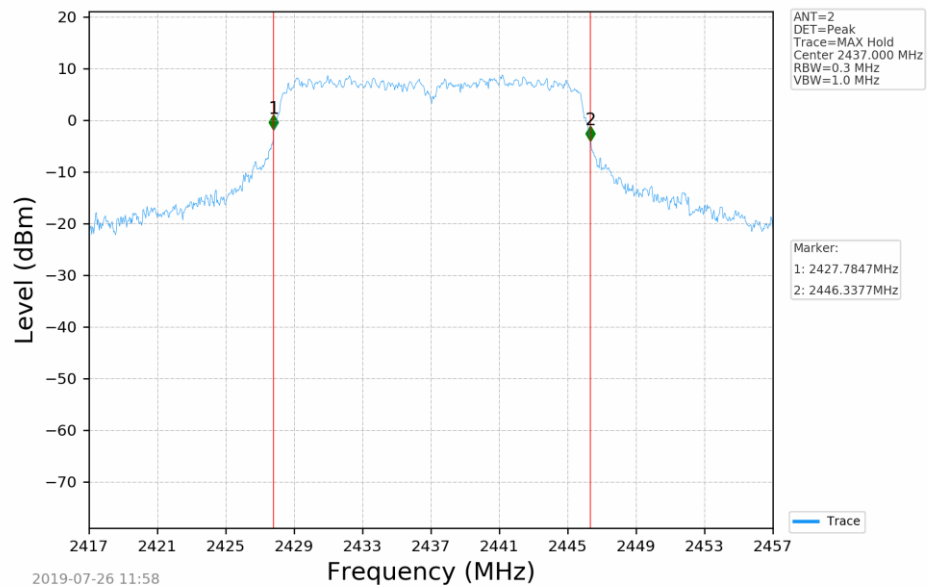
802.11n(HT20)_2412MHz_SISO_ANT2



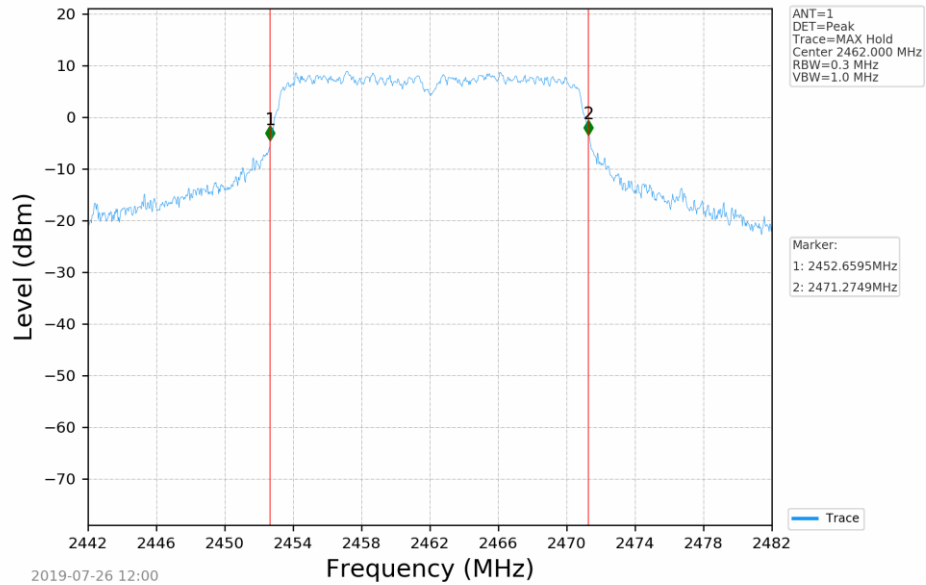
802.11n(HT20)_2437MHz_SISO_ANT1



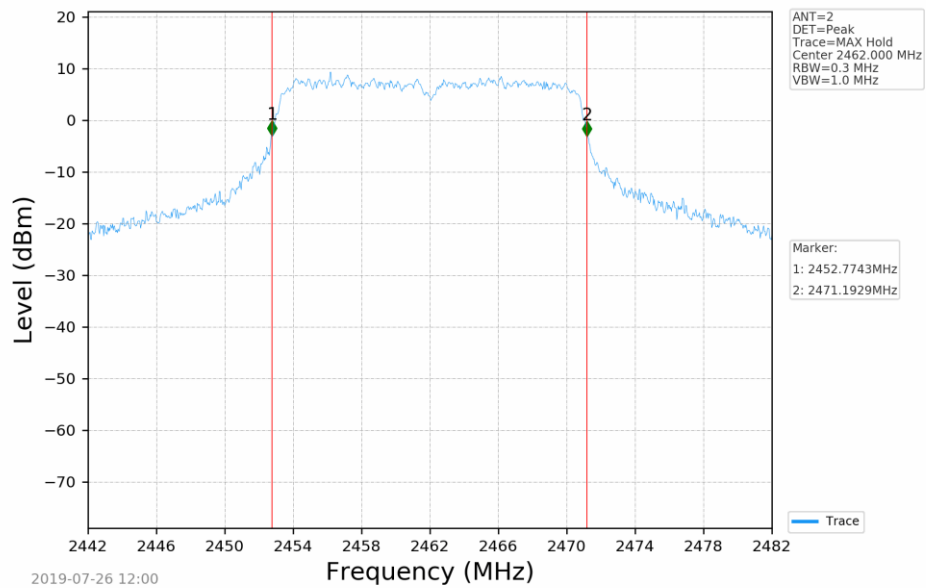
802.11n(HT20)_2437MHz_SISO_ANT2



802.11n(HT20)_2462MHz_SISO_ANT1



802.11n(HT20)_2462MHz_SISO_ANT2





3. Maximum Conducted Output Power

3.1 Test Result

Test Mode	Frequency (MHz)	Tx Type	Measured Average Output Power (dBm)			Limits (dBm)	Verdict
			Ant 1	Ant 2	Total		
802.11b	2412	SISO	17.73	17.69	/	≤30	PASS
	2437	SISO	17.46	17.51	/	≤30	PASS
	2462	SISO	17.51	17.56	/	≤30	PASS
802.11g	2412	SISO	17.36	17.33	/	≤30	PASS
	2437	SISO	17.38	17.39	/	≤30	PASS
	2462	SISO	17.34	17.41	/	≤30	PASS
802.11n(HT20)	2412	SISO	17.24	17.22	/	≤30	PASS
		MIMO	14.37	14.68	17.54	≤30	PASS
	2437	SISO	17.25	17.36	/	≤30	PASS
		MIMO	14.32	14.59	17.47	≤30	PASS
	2462	SISO	17.39	17.38	/	≤30	PASS
		MIMO	14.25	14.76	17.52	≤30	PASS

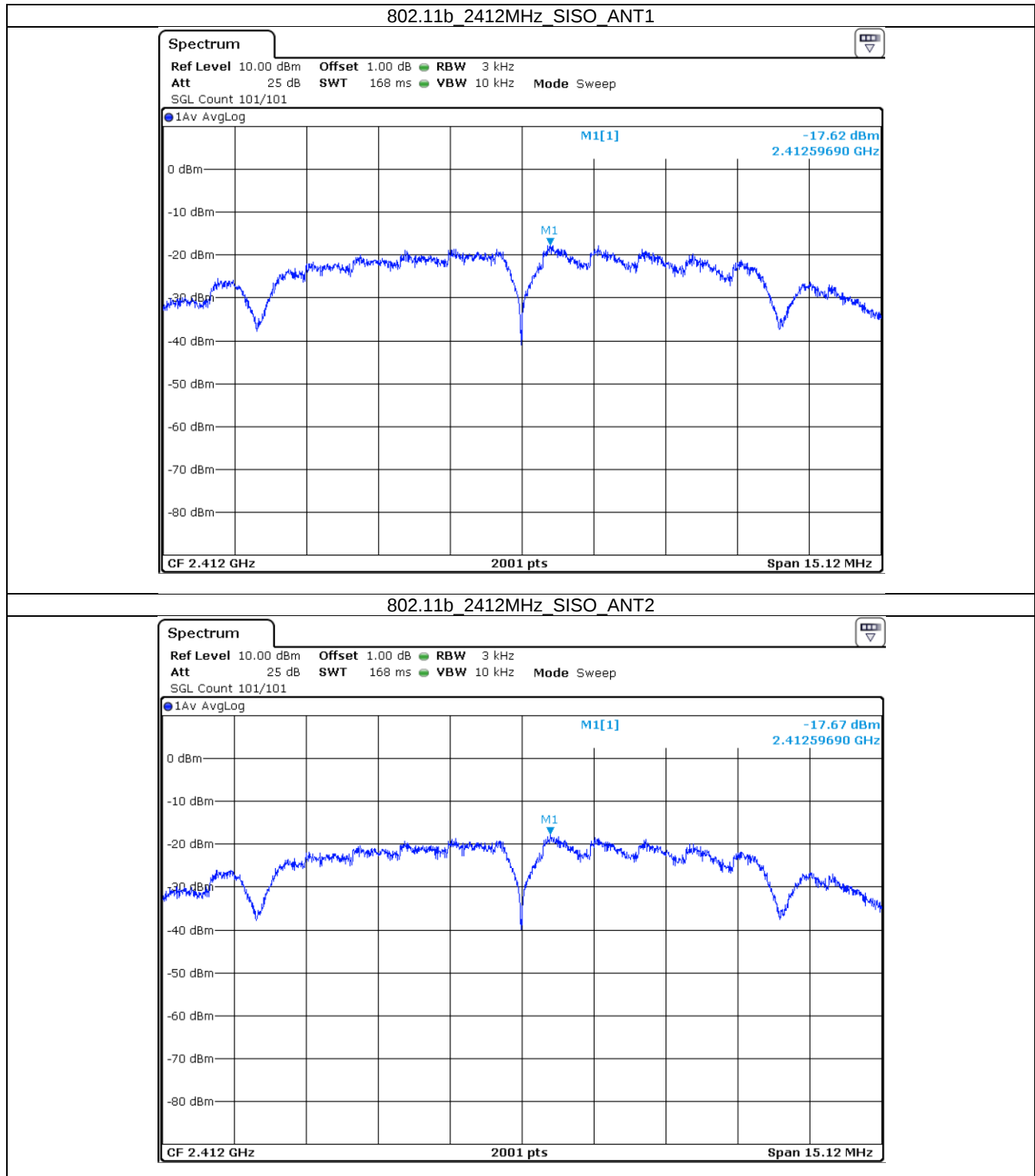
3.2 4. Maximum Power Spectral Density (PSD)

4.1 Test Result

Test Mode	Frequency (MHz)	Tx Type	Level		Duty Cycle Correction Factor (dB)	Maximum Power Spectral Density (dBm/3KHz)			Limits (dBm/3KHz)	Verdict
			Ant 1	Ant 2		Ant 1	Ant 2	Total		
802.11b	2412	SISO	-17.62	-17.67	0.02	-17.60	-17.65	/	≤8	PASS
	2437	SISO	-17.25	-17.78	0.02	-17.23	-17.76	/	≤8	PASS
	2462	SISO	-18.02	-15.89	0.02	-18.00	-15.87	/	≤8	PASS
802.11g	2412	SISO	-20.25	-20.35	0.12	-20.13	-20.23	/	≤8	PASS
	2437	SISO	-17.05	-16.40	0.12	-16.93	-16.28	/	≤8	PASS
	2462	SISO	-17.24	-17.89	0.12	-17.12	-17.77	/	≤8	PASS
802.11n(HT20)	2412	SISO	-20.27	-20.42	0.13	-20.14	-20.29	/	≤8	PASS
		MIMO	-17.42	-18.15	0.13	-17.29	-18.02	-14.63	≤8	PASS
	2437	SISO	-19.24	-19.34	0.13	-19.11	-19.21	/	≤8	PASS
		MIMO	-19.50	-19.60	0.13	-19.37	-19.47	-16.41	≤8	PASS
	2462	SISO	-18.16	-18.40	0.13	-18.03	-18.27	/	≤8	PASS
		MIMO	-20.50	-20.70	0.13	-20.37	-20.57	-17.46	≤8	PASS



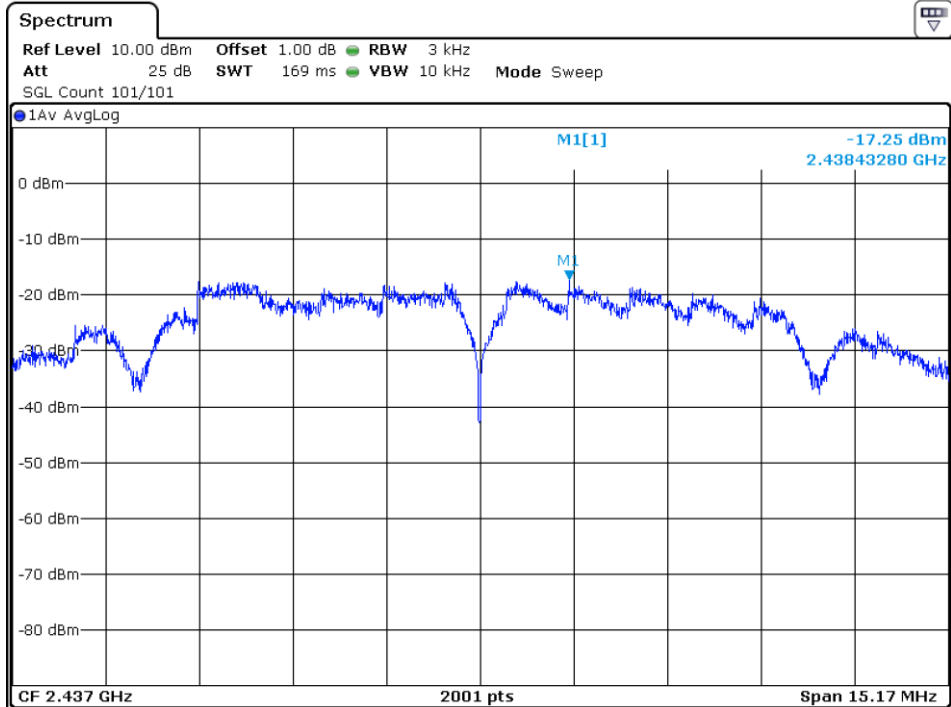
4.2 Test Graph



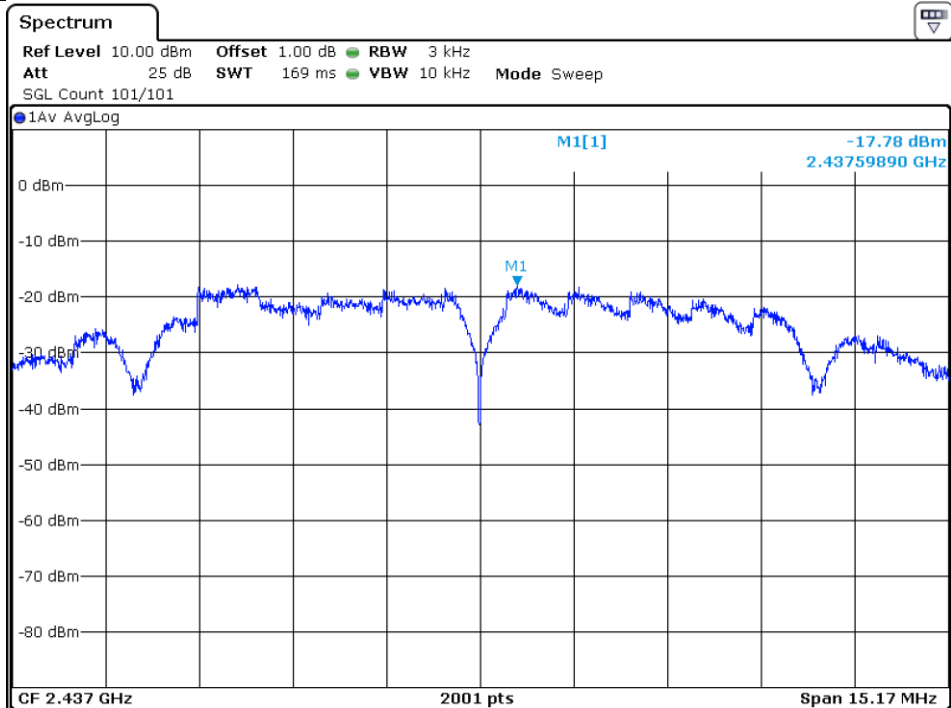


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802.11b_2437MHz_SISO_ANT1



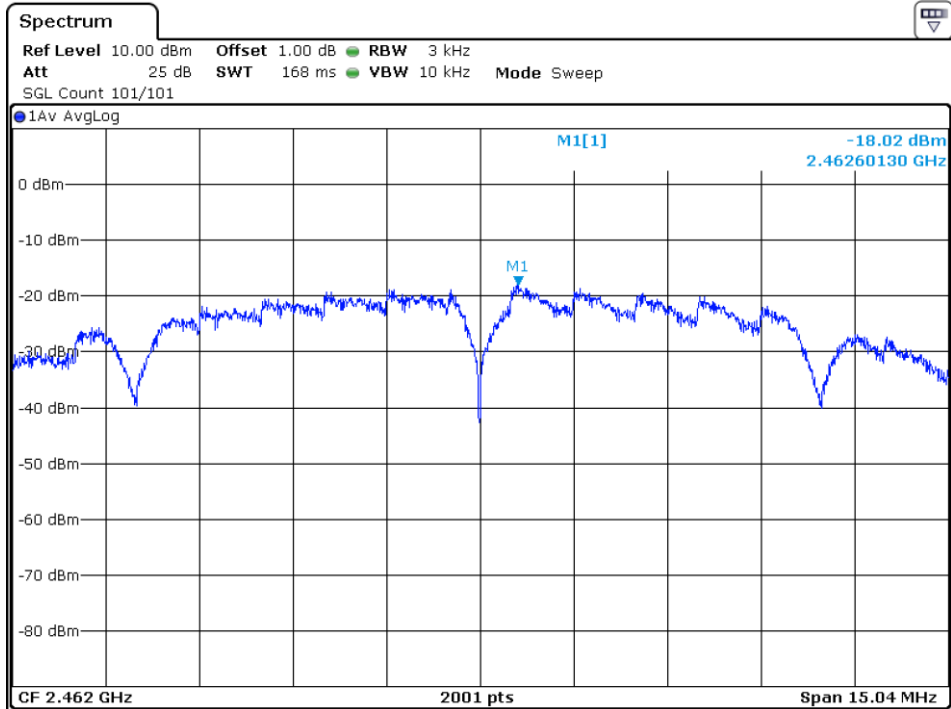
802.11b_2437MHz_SISO_ANT2



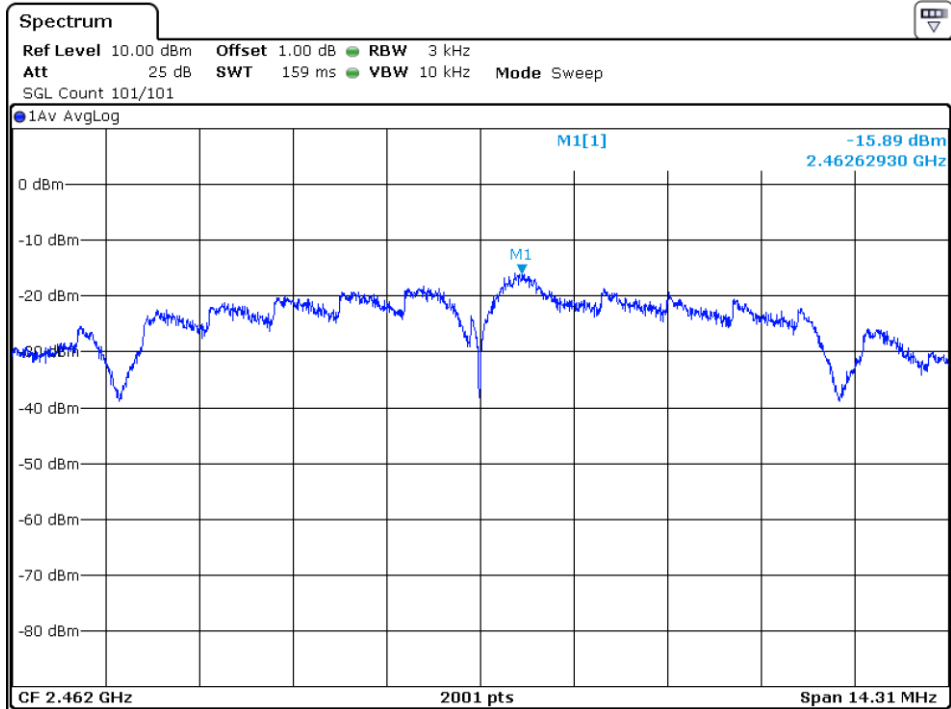
802.11b_2462MHz_SISO_ANT1



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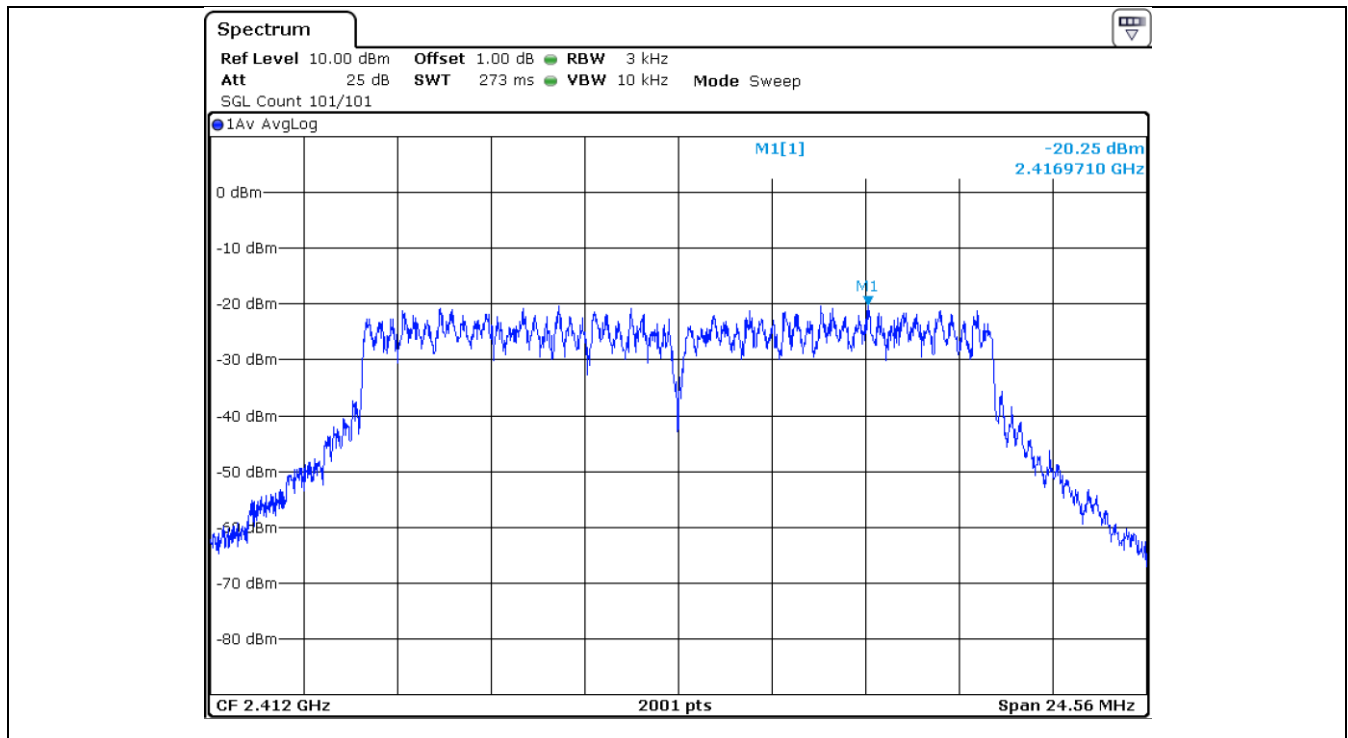
802.11b_2462MHz_SISO_ANT2



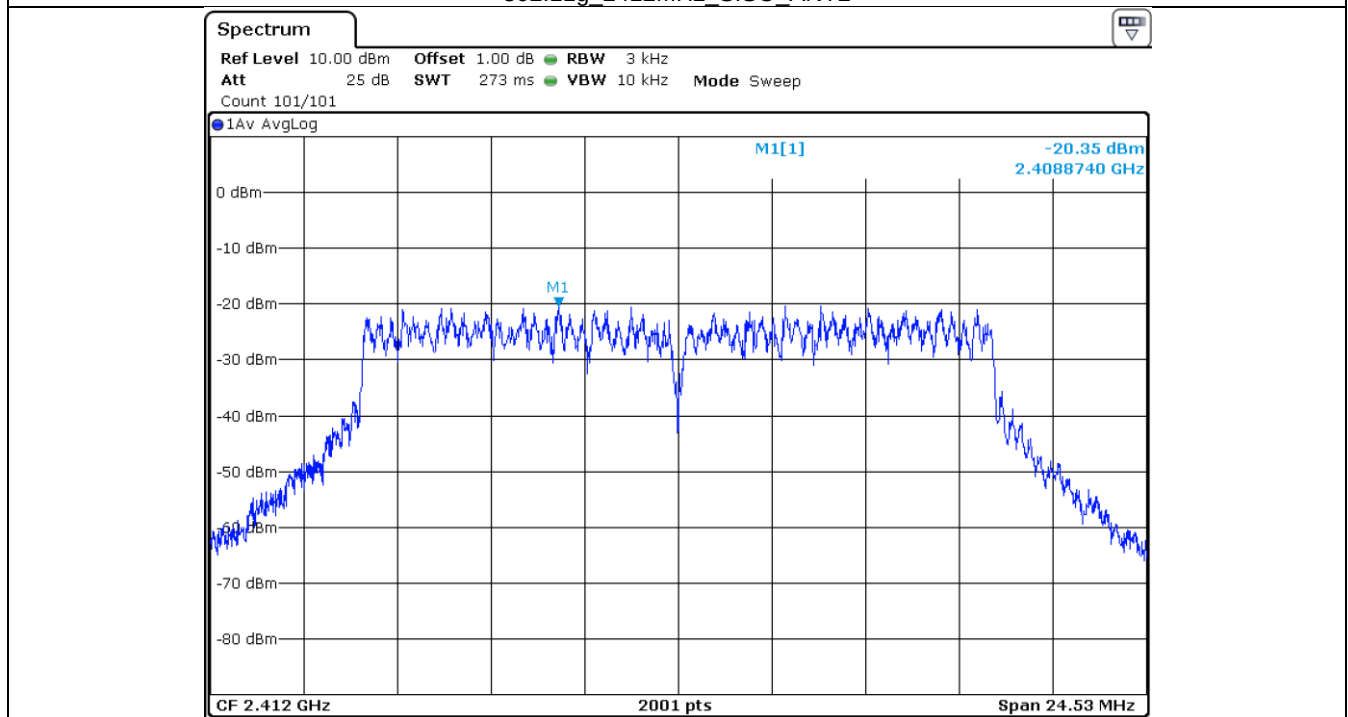
802.11g_2412MHz_SISO_ANT1



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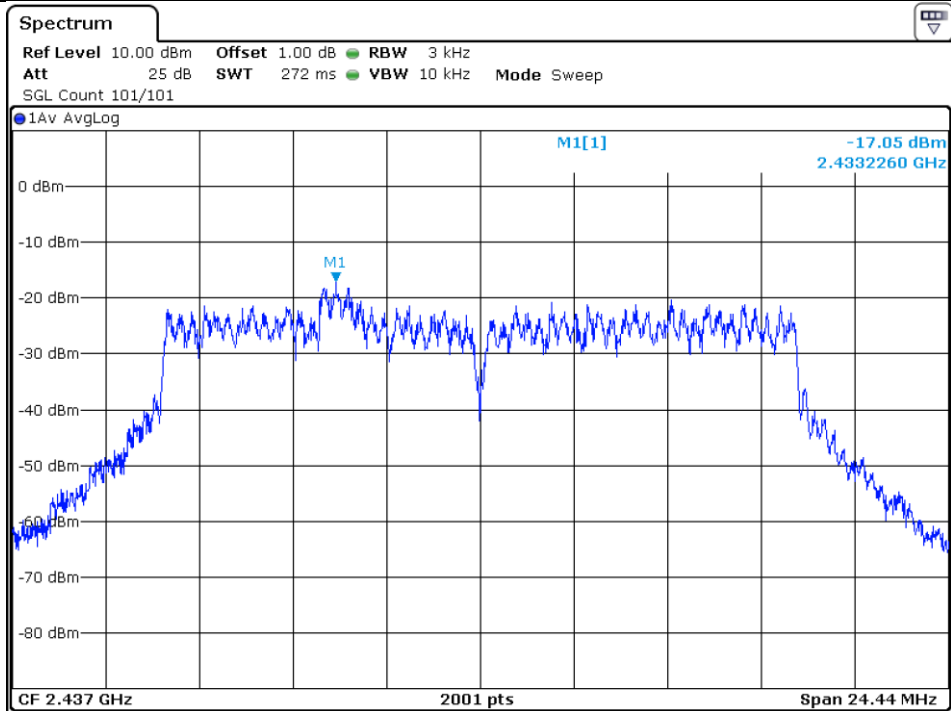
802.11g_2412MHz_SISO_ANT2



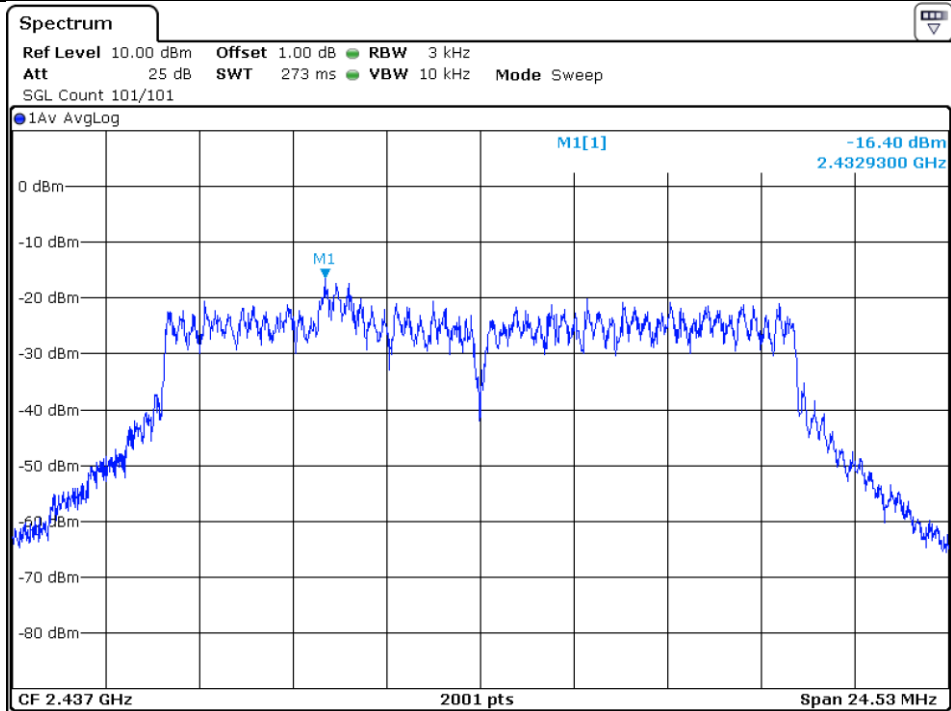
802.11g_2437MHz_SISO_ANT1



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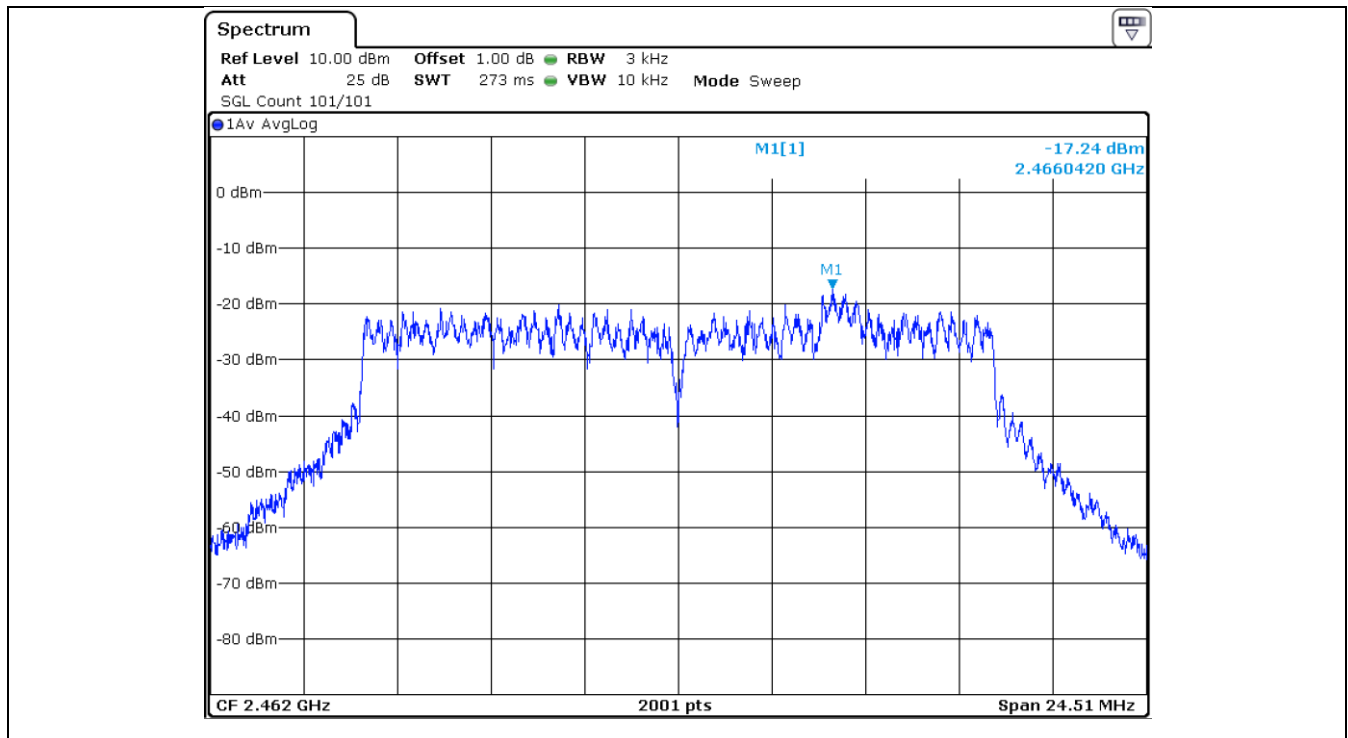
802.11g_2437MHz_SISO_ANT2



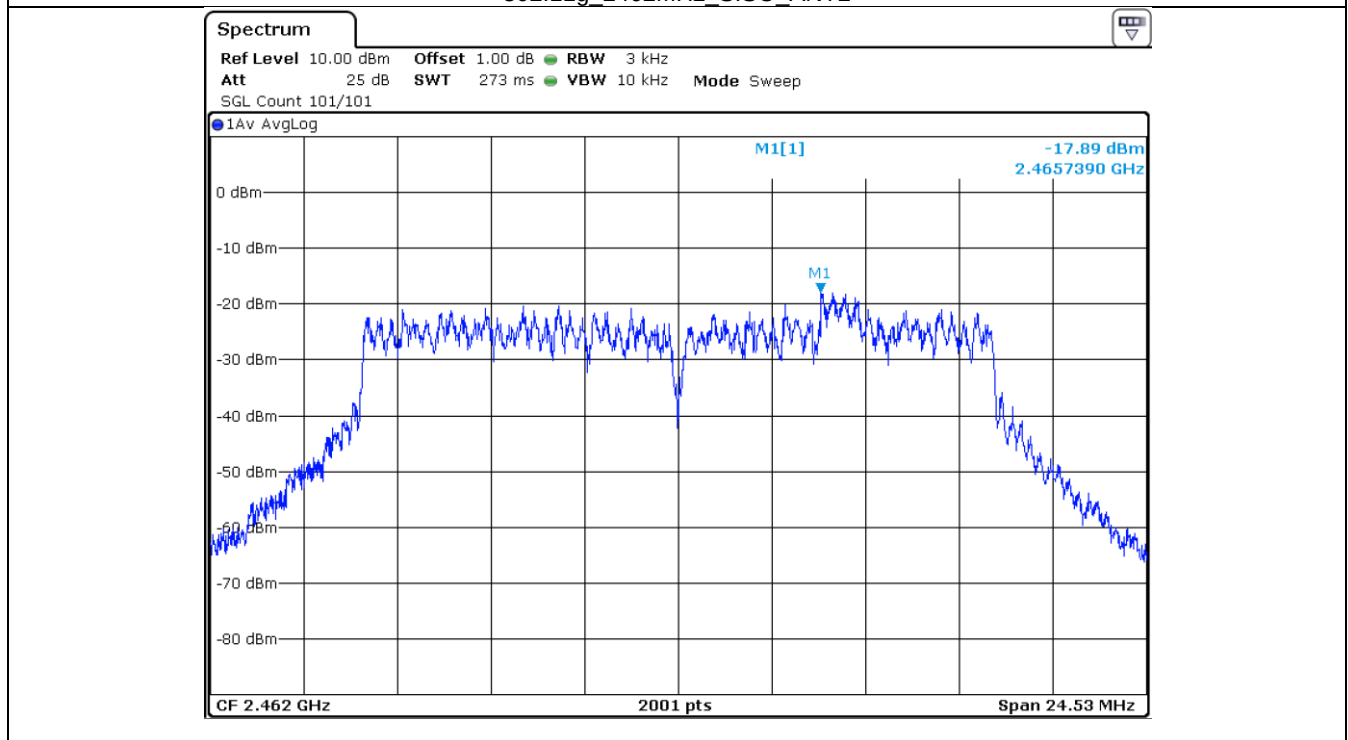
802.11g_2462MHz_SISO_ANT1



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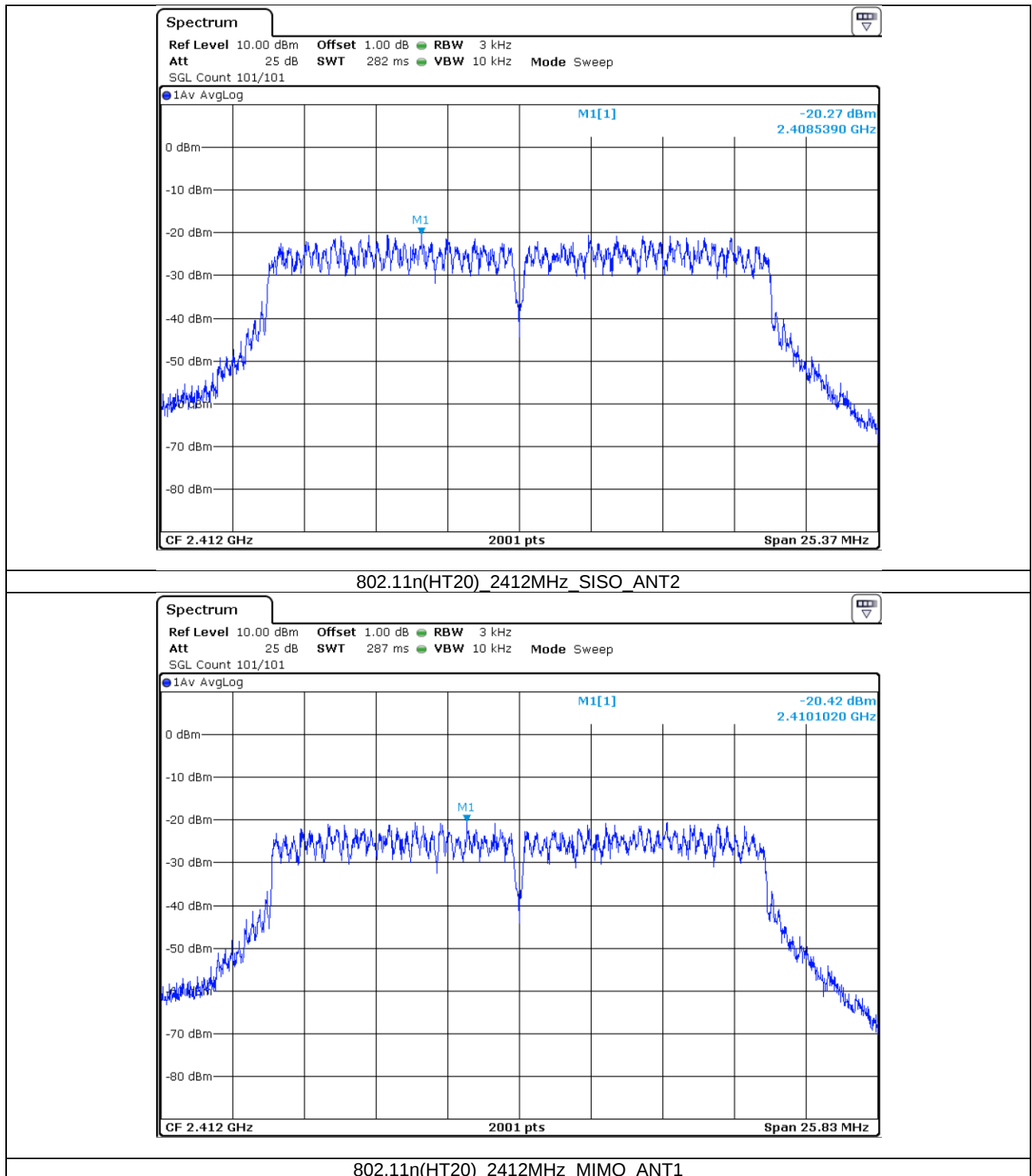
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802.11n(HT20)_2412MHz_SISO_ANT1

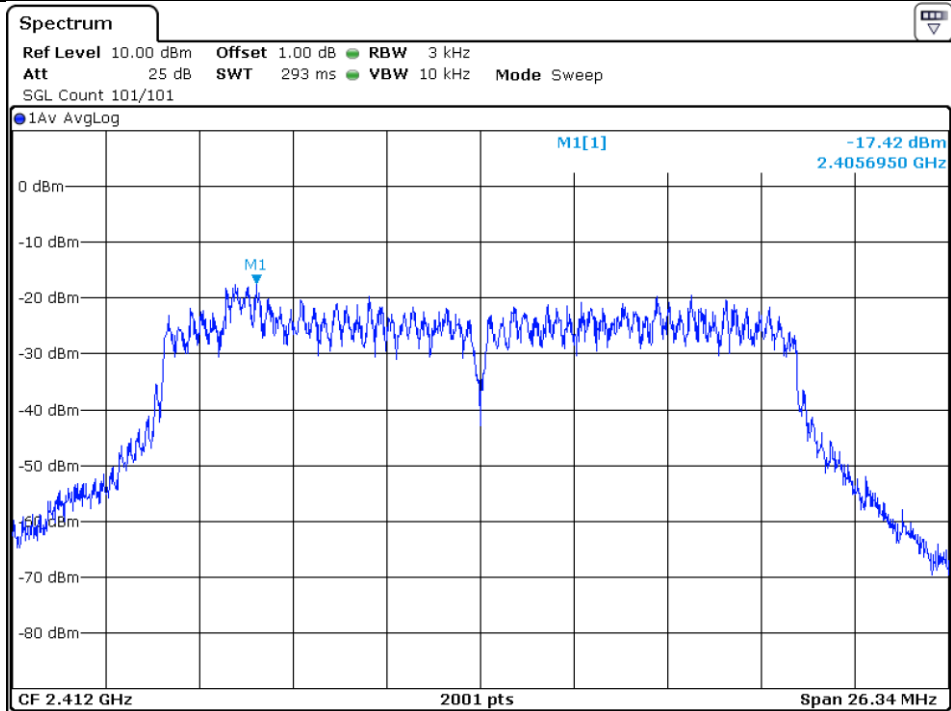


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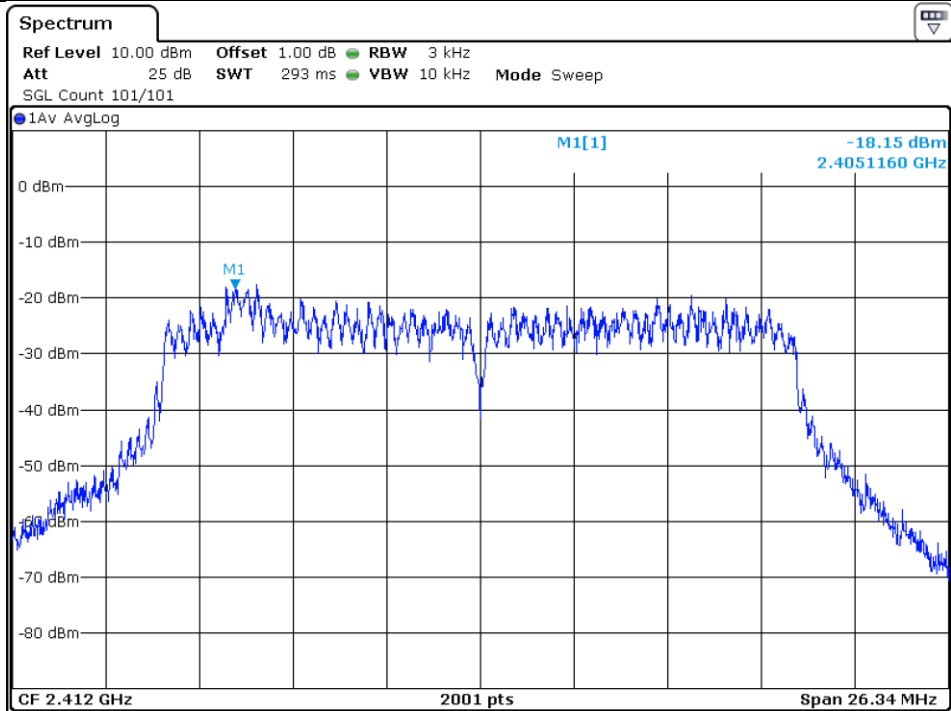




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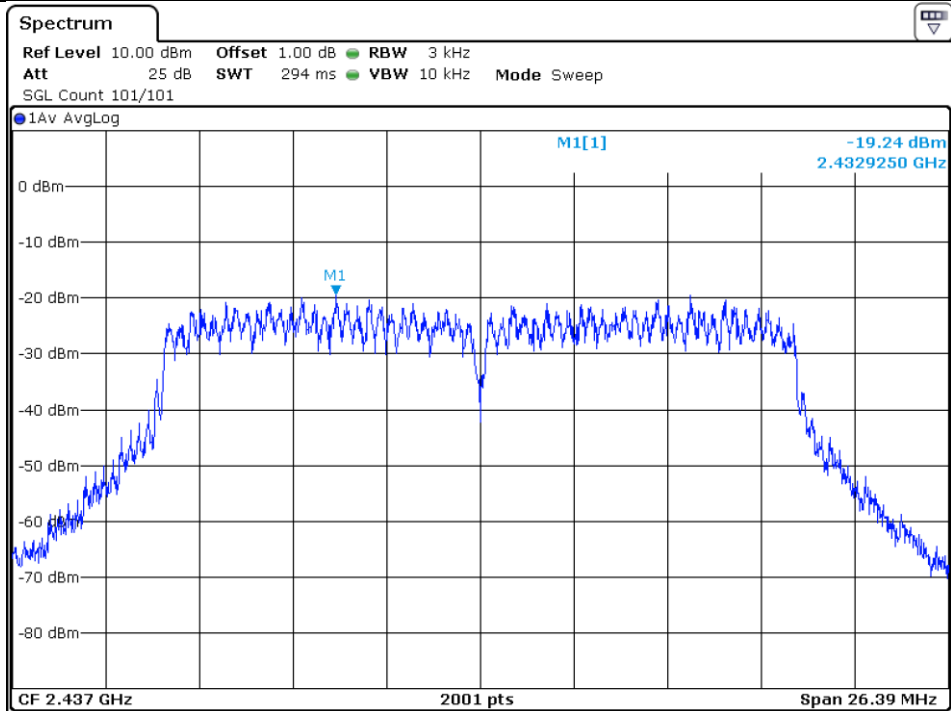
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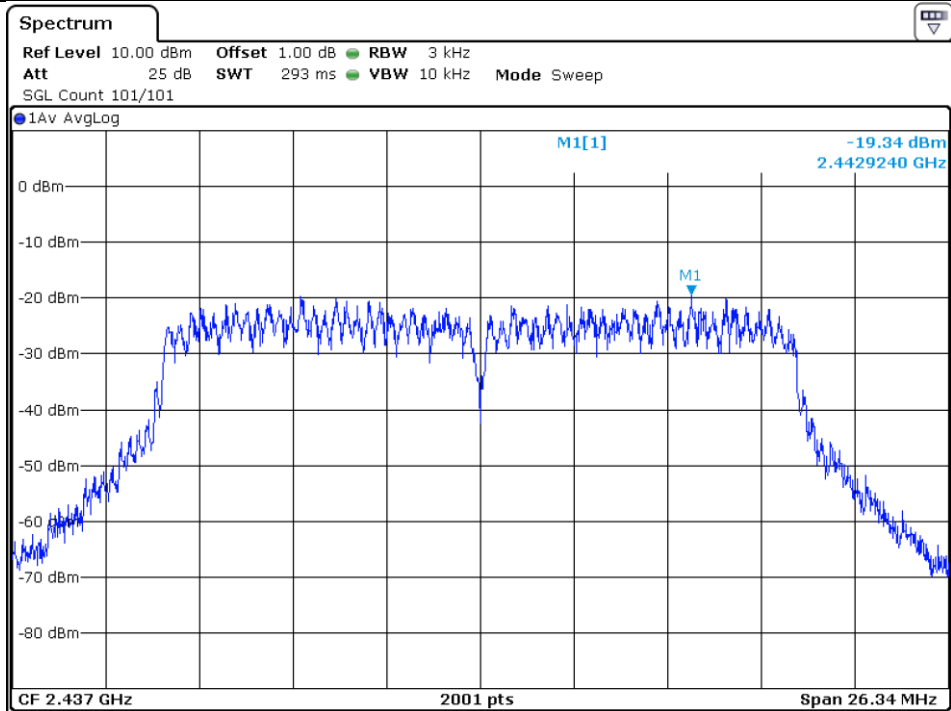
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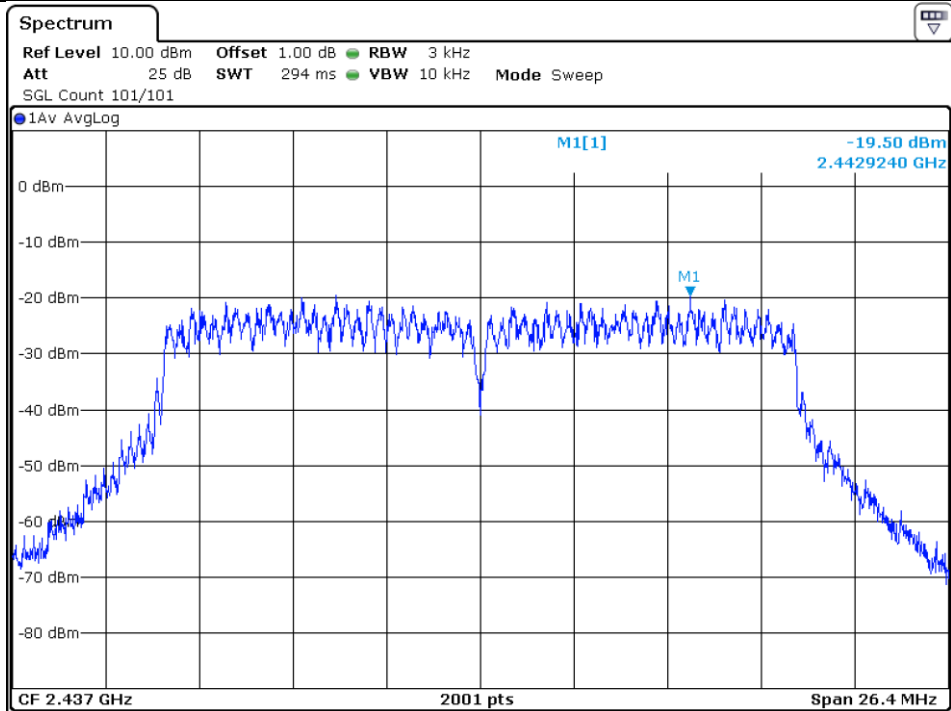
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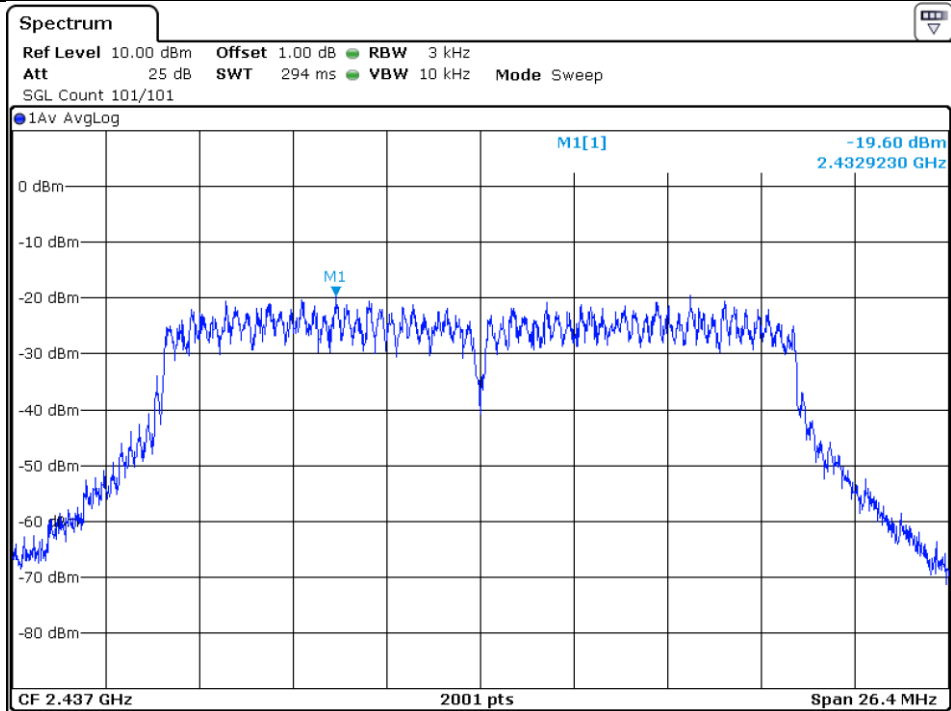
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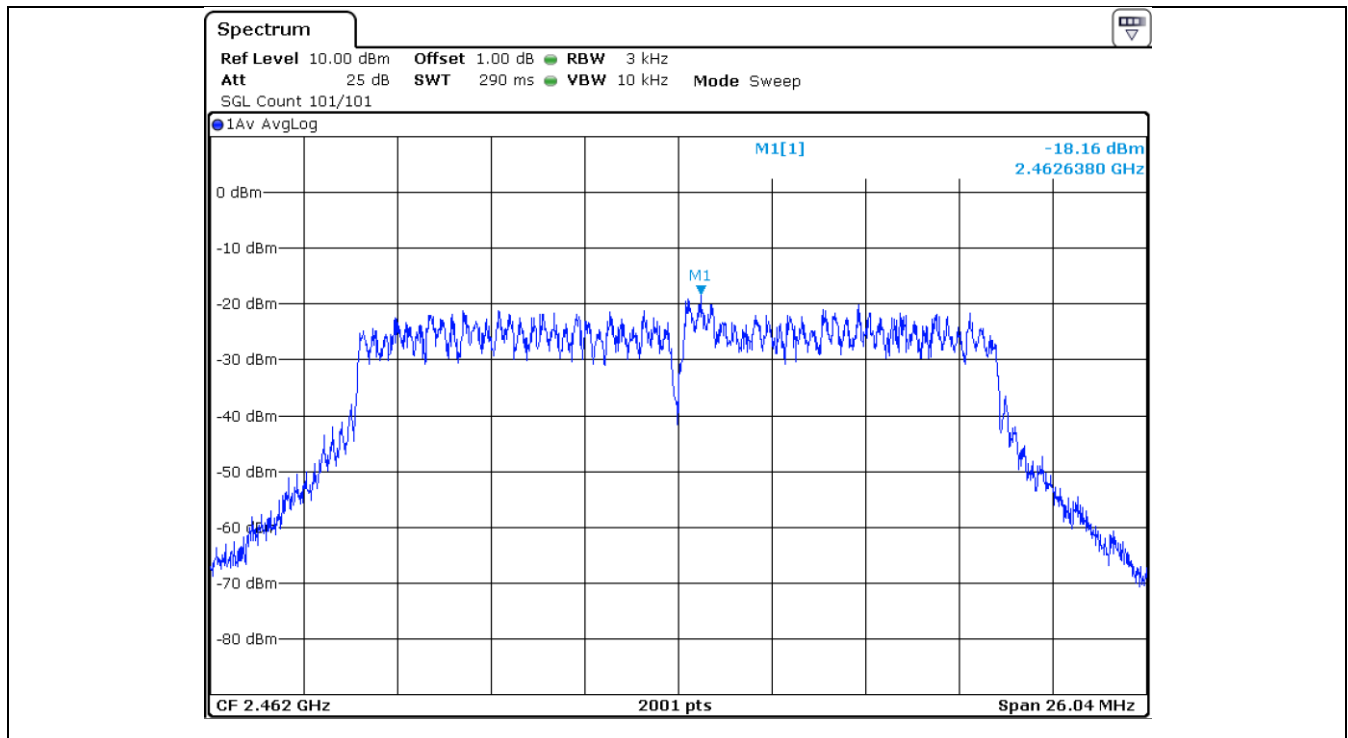
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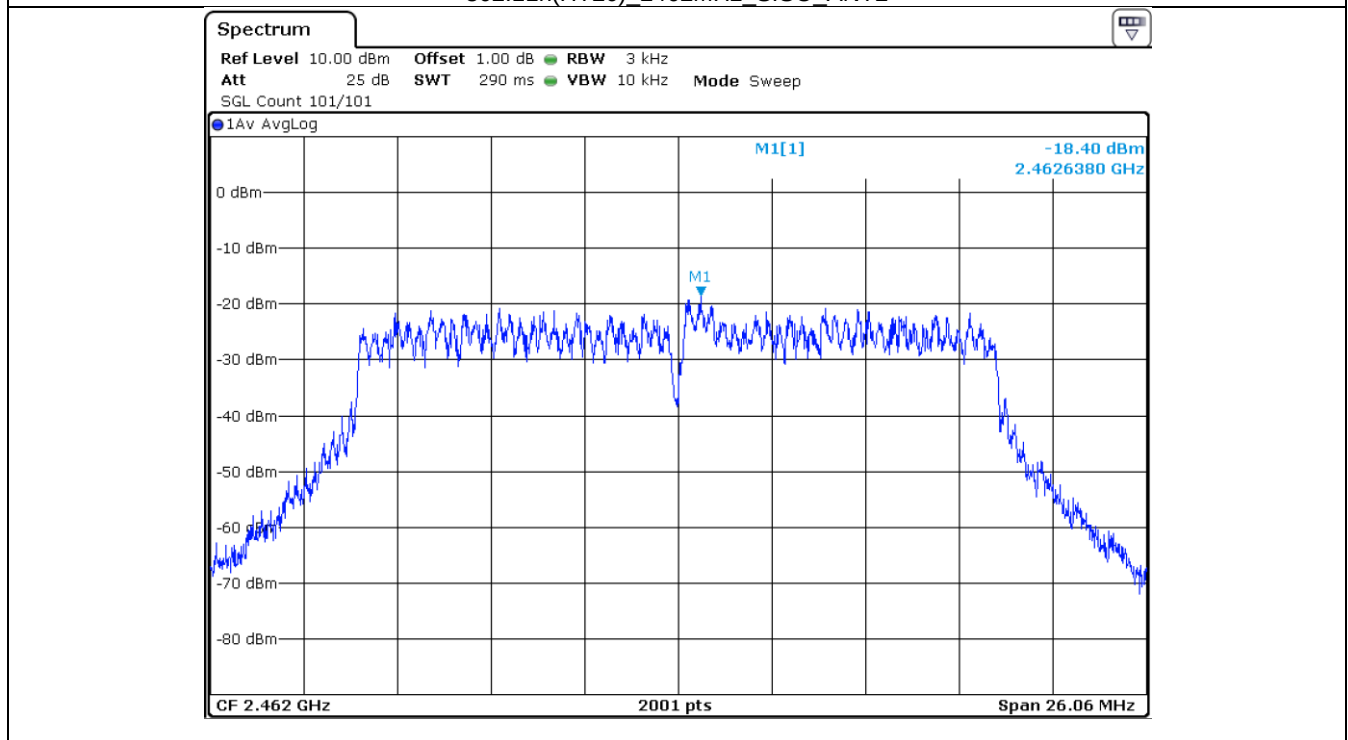
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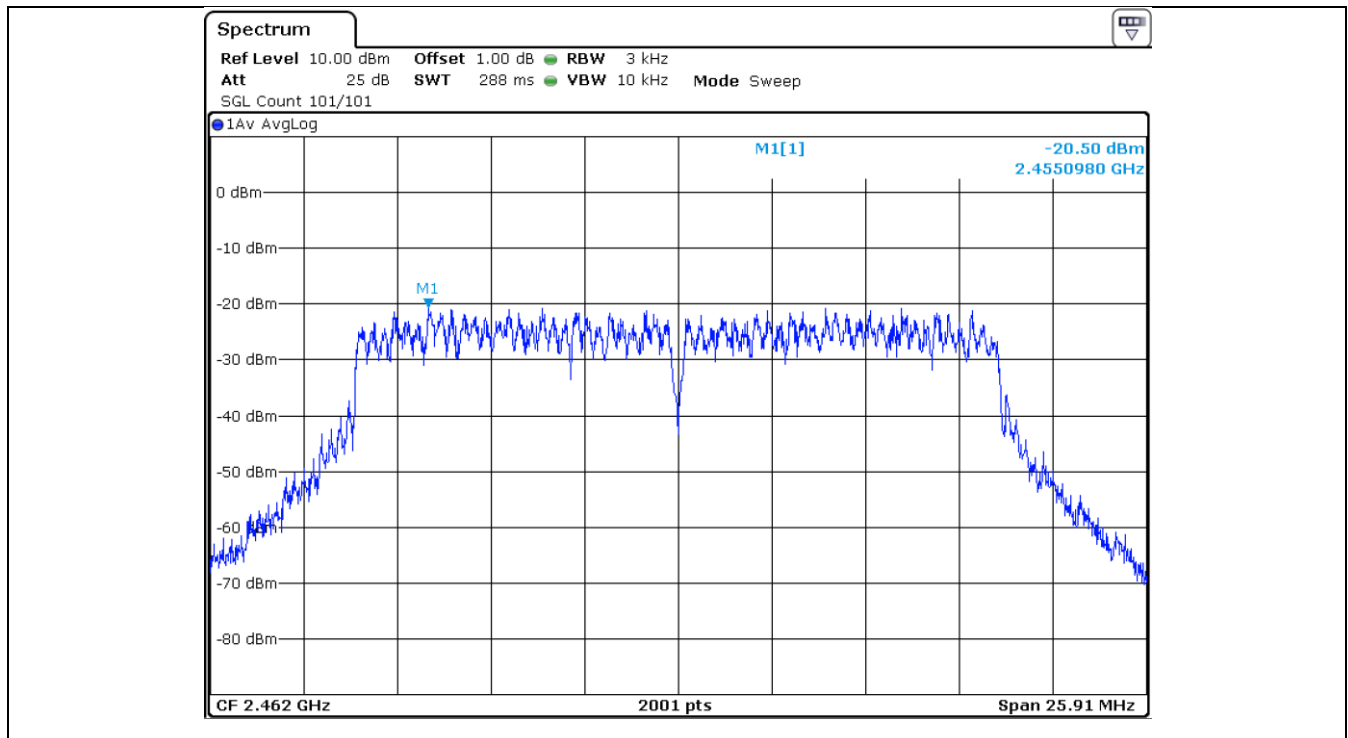
802.11n(HT20)_2462MHz_SISO_ANT2



802.11n(HT20)_2462MHz_MIMO_ANT1



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802.11n(HT20)_2462MHz_MIMO_ANT2

