

Appendix for 15.247

1. Duty Cycle

1.1 Test Result

ANT 1:

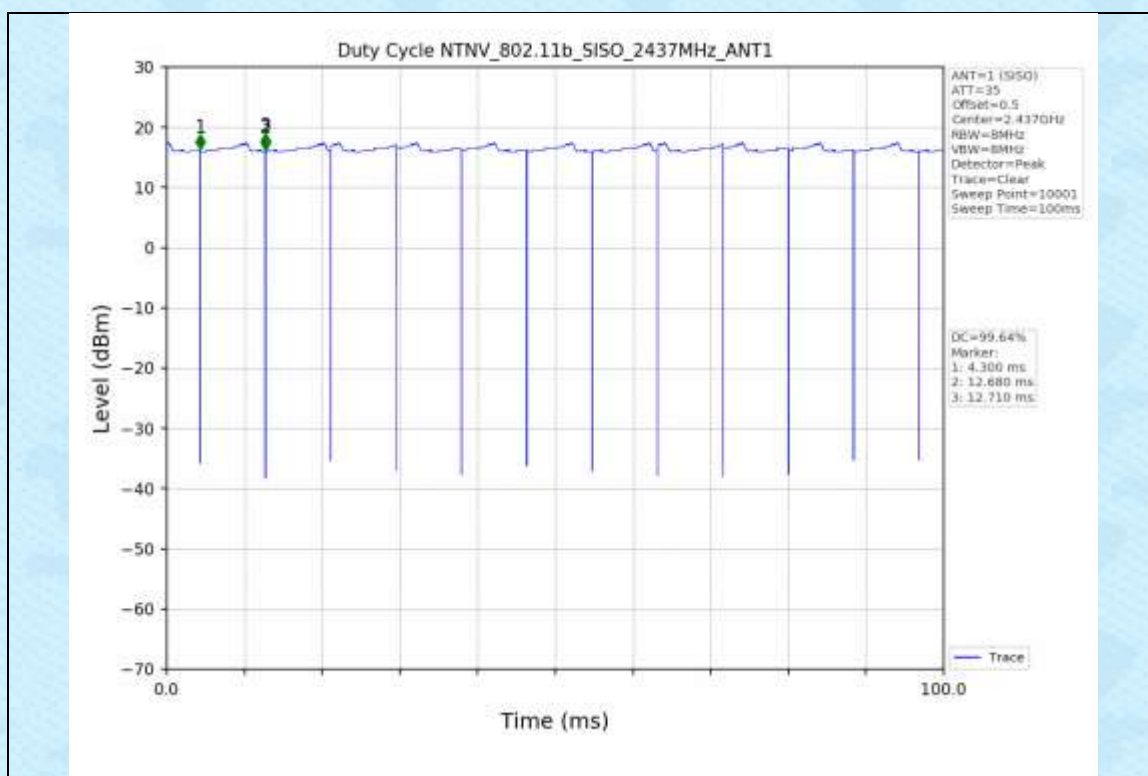
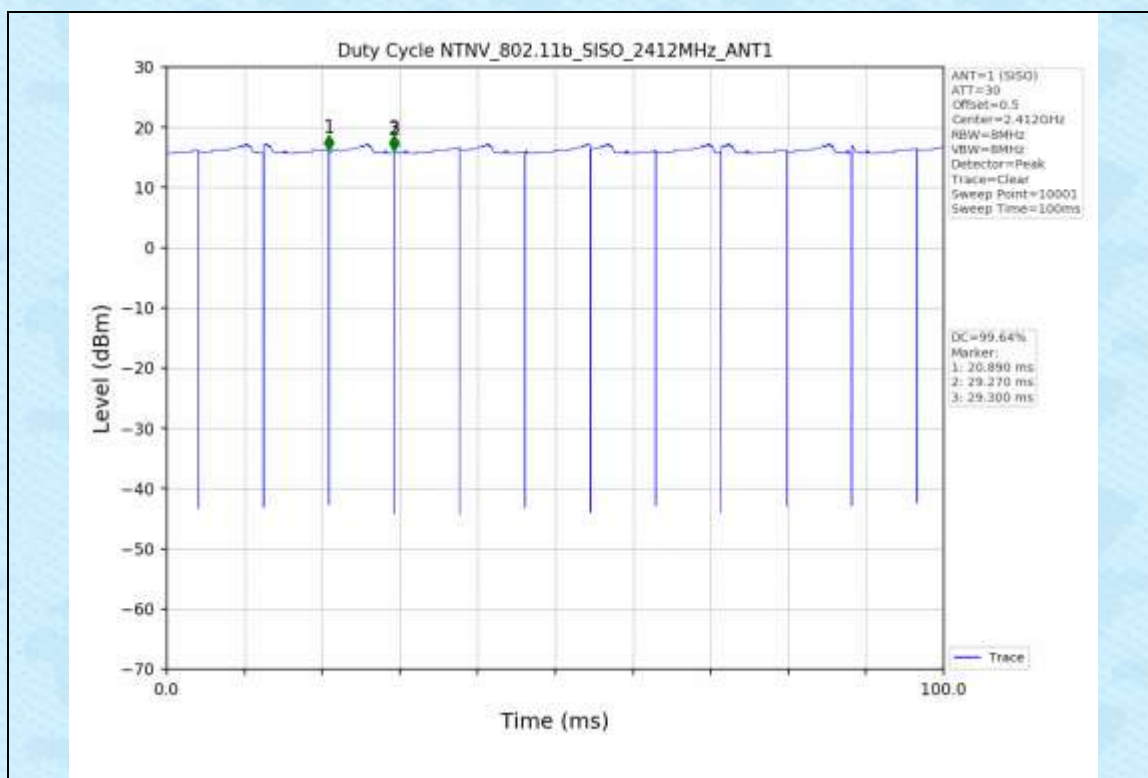
Test Mode	Channel Frequency(M Hz)	TX Type	ANT No.	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
802.11b	2412	SISO	1	8.380	8.410	99.64	0.02
	2437	SISO	1	8.380	8.410	99.64	0.02
	2462	SISO	1	8.380	8.410	99.64	0.02
802.11g	2412	SISO	1	1.360	1.396	97.42	0.11
	2437	SISO	1	1.360	1.396	97.42	0.11
	2462	SISO	1	1.360	1.396	97.42	0.11
802.11n(HT20)	2412	SISO	1	1.299	1.336	97.23	0.12
	2437	SISO	1	1.300	1.336	97.31	0.12
	2462	SISO	1	1.300	1.336	97.31	0.12
802.11n(HT40)	2422	SISO	1	0.618	0.651	94.93	0.23
	2437	SISO	1	0.618	0.652	94.79	0.23
	2452	SISO	1	0.618	0.652	94.79	0.23

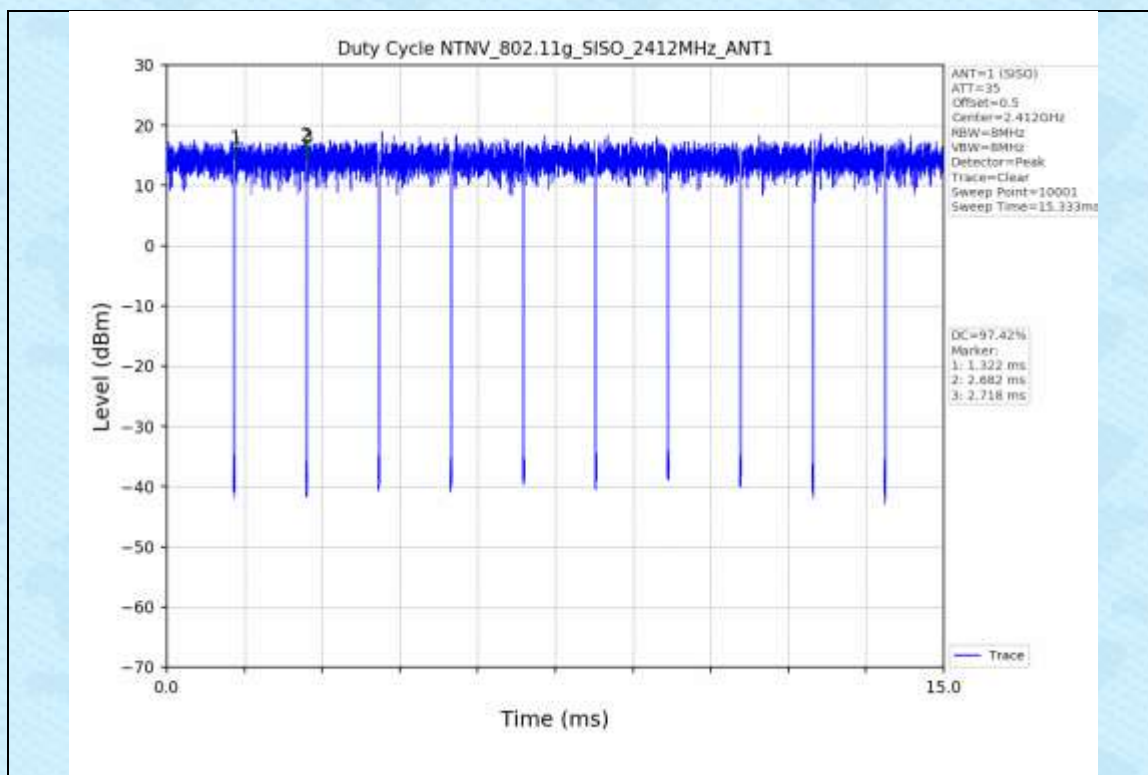
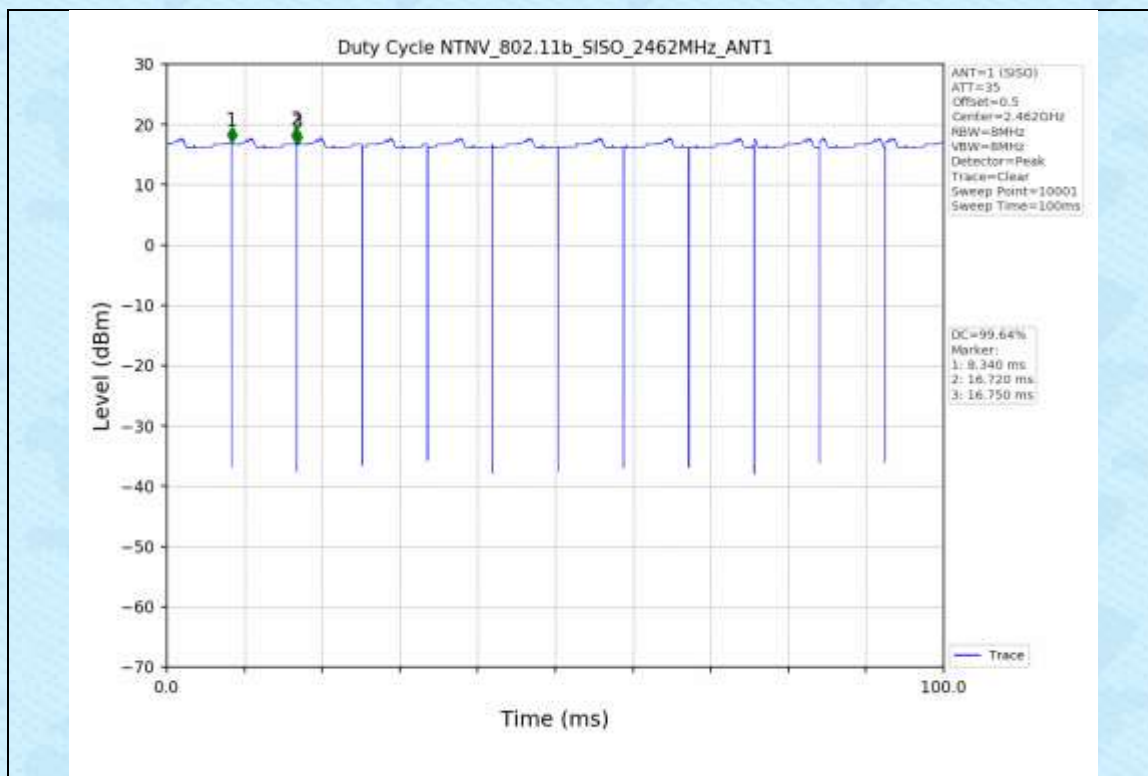
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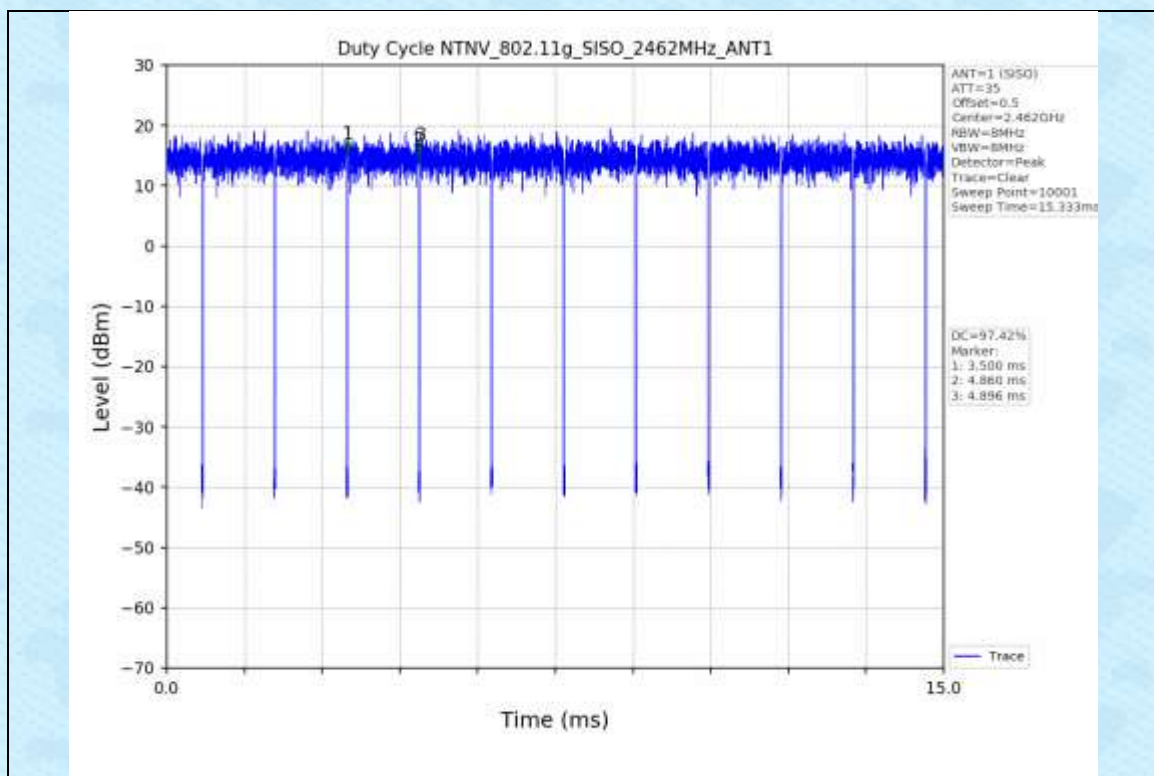
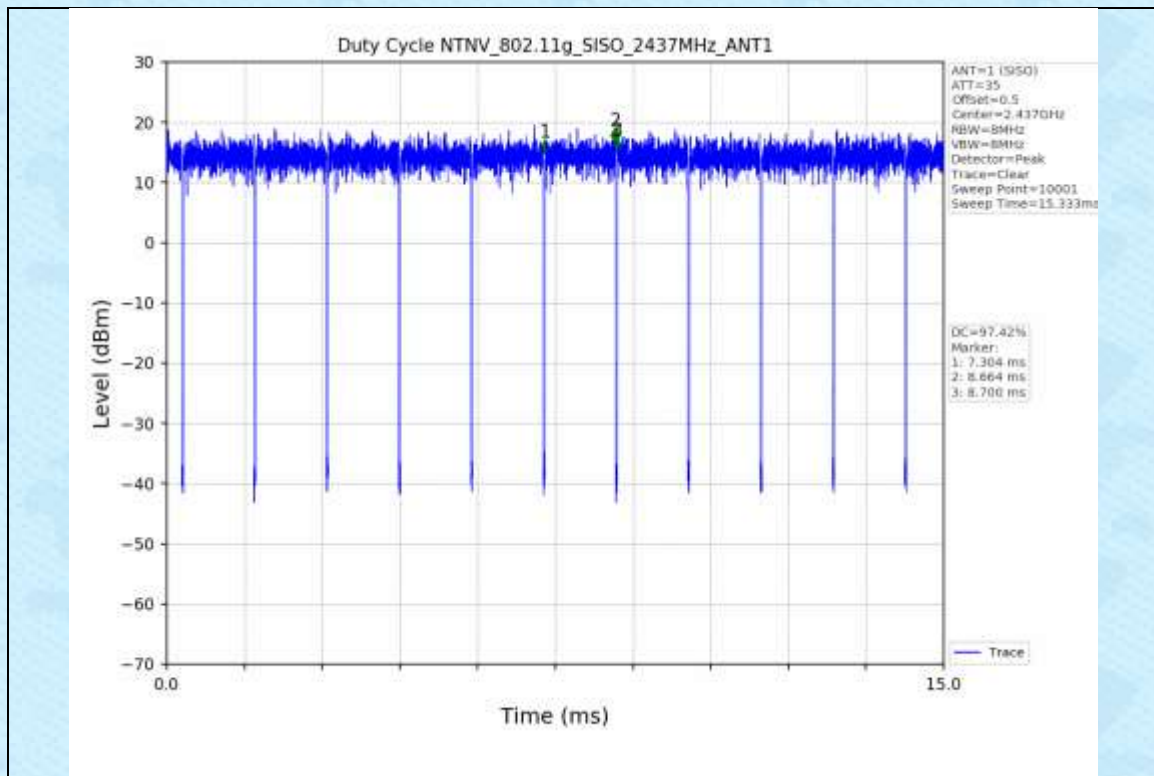
Test Mode	Channel Frequency(M Hz)	TX Type	ANT No.	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
802.11b	2412	SISO	1	8.380	8.410	99.64	0.02
	2437	SISO	1	8.380	8.410	99.64	0.02
	2462	SISO	1	8.380	8.410	99.64	0.02
802.11g	2412	SISO	1	1.361	1.397	97.42	0.11
	2437	SISO	1	1.360	1.396	97.42	0.11
	2462	SISO	1	1.360	1.396	97.42	0.11
802.11n(HT20)	2412	SISO	1	1.300	1.336	97.31	0.12
	2437	SISO	1	1.300	1.336	97.31	0.12
	2462	SISO	1	1.299	1.336	97.23	0.12
802.11n(HT40)	2422	SISO	1	0.618	0.651	94.93	0.23
	2437	SISO	1	0.618	0.652	94.79	0.23
	2452	SISO	1	0.618	0.652	94.79	0.23

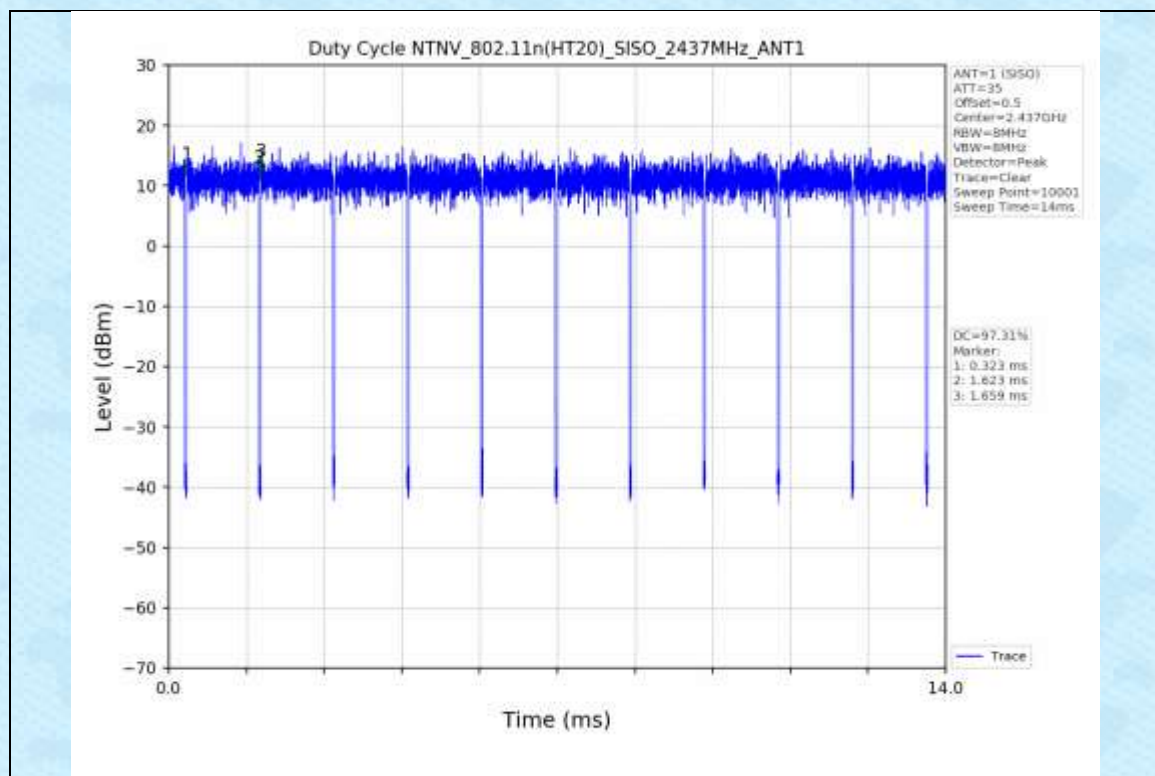
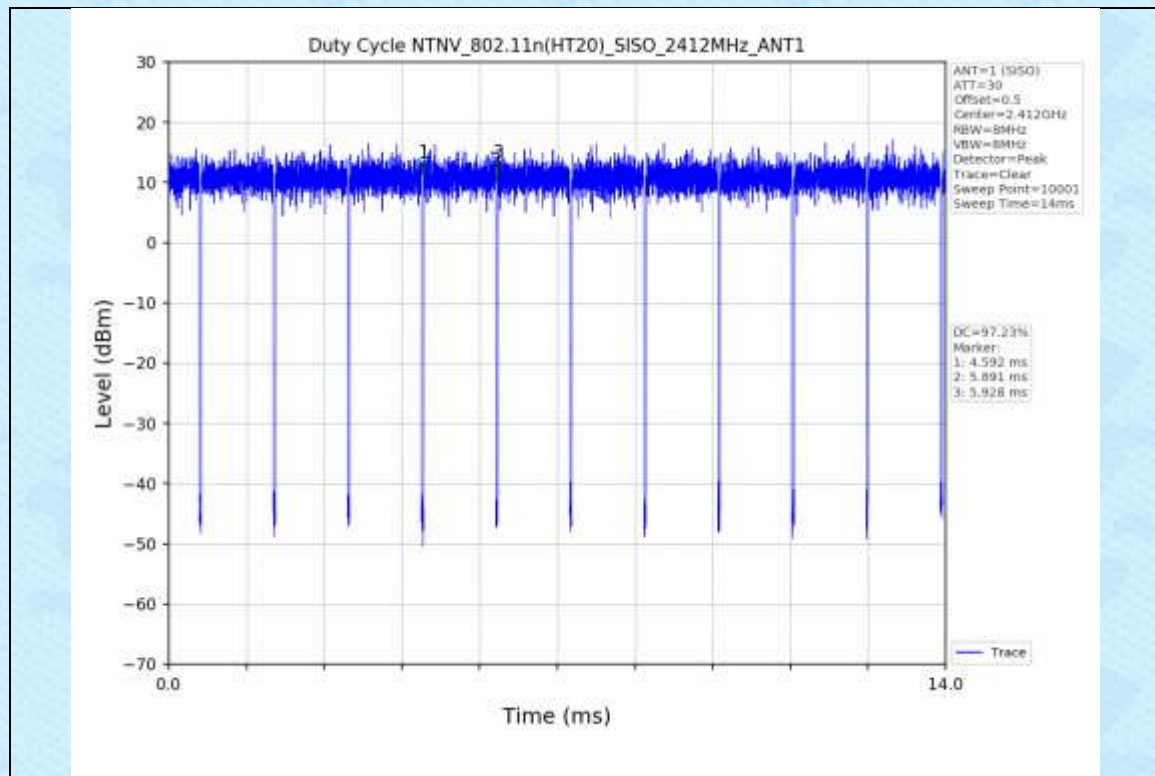
1.2 Test Graph

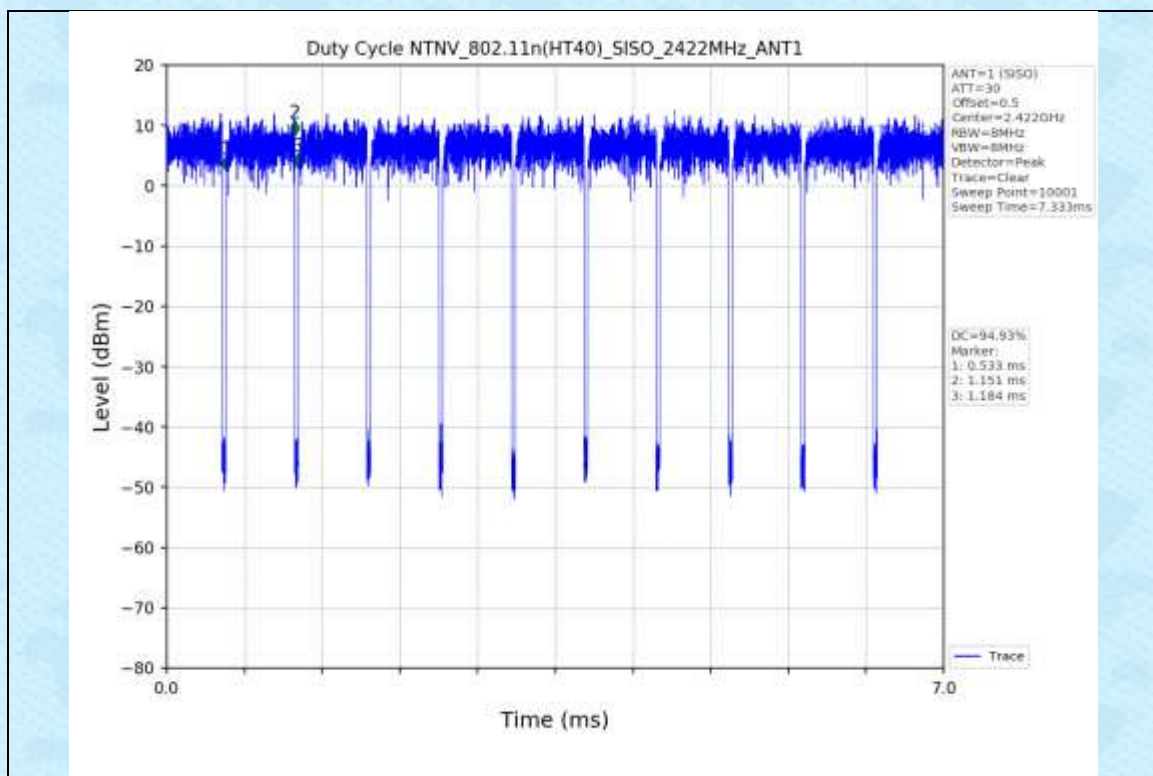
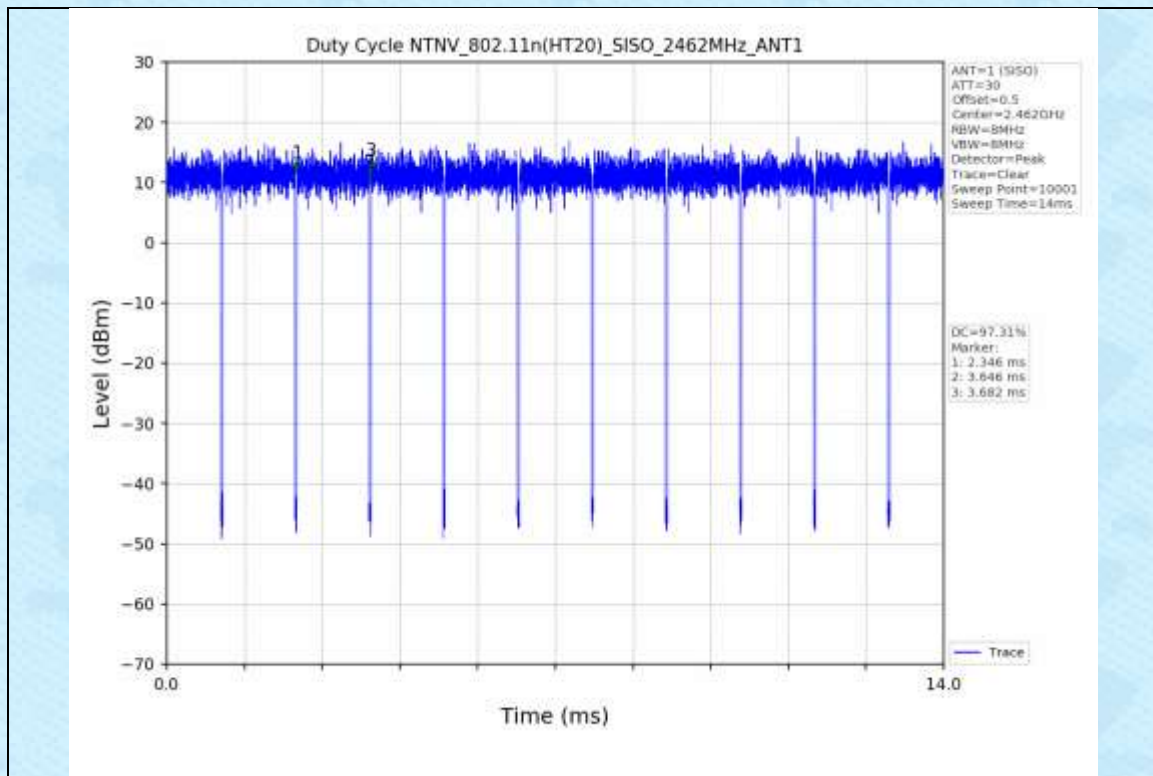
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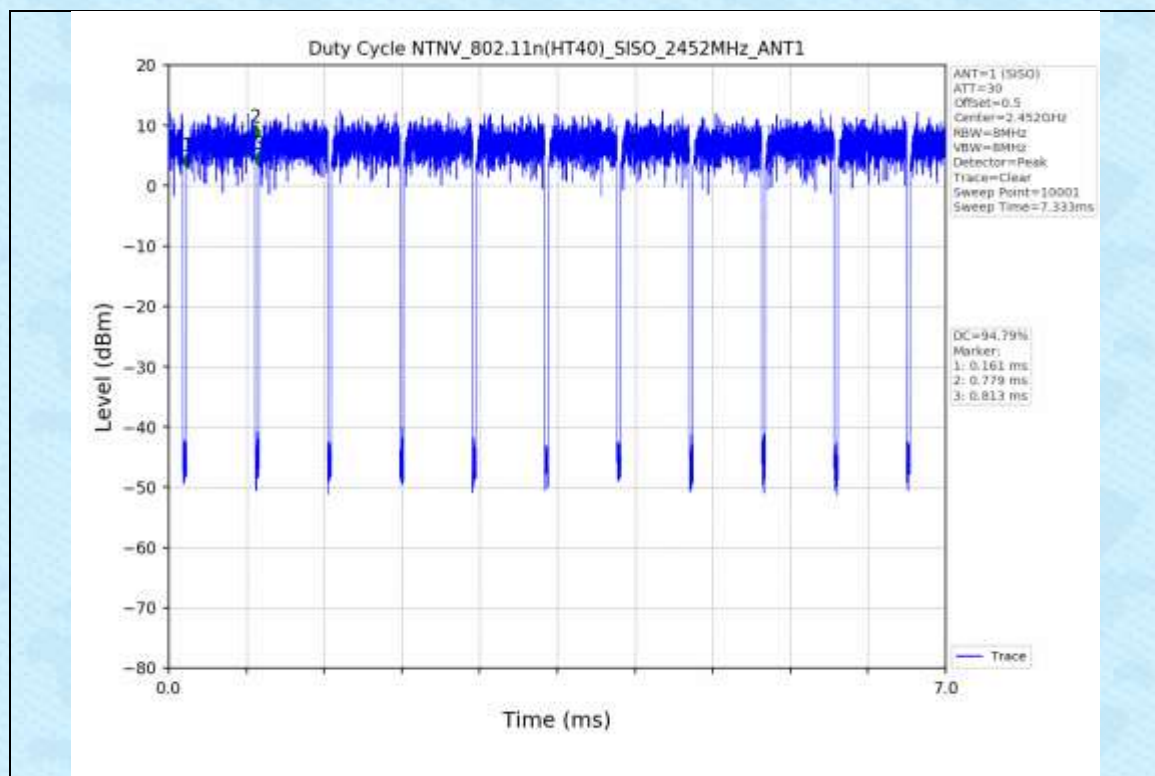
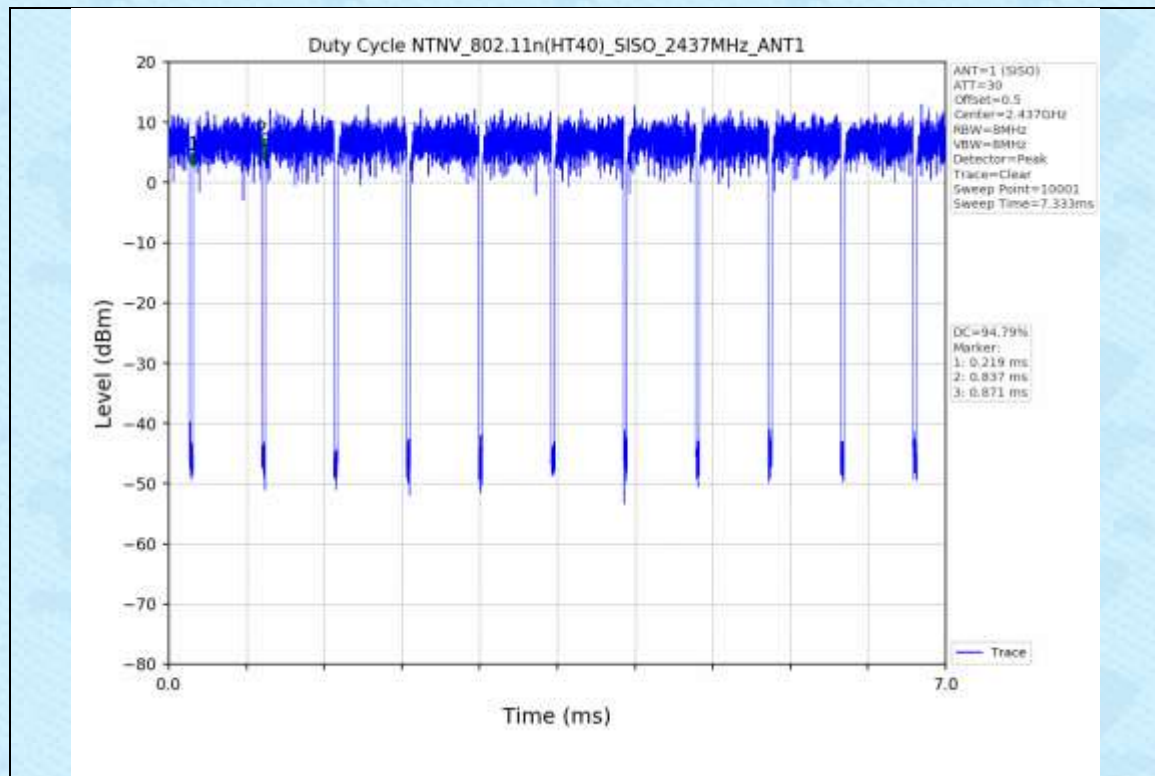




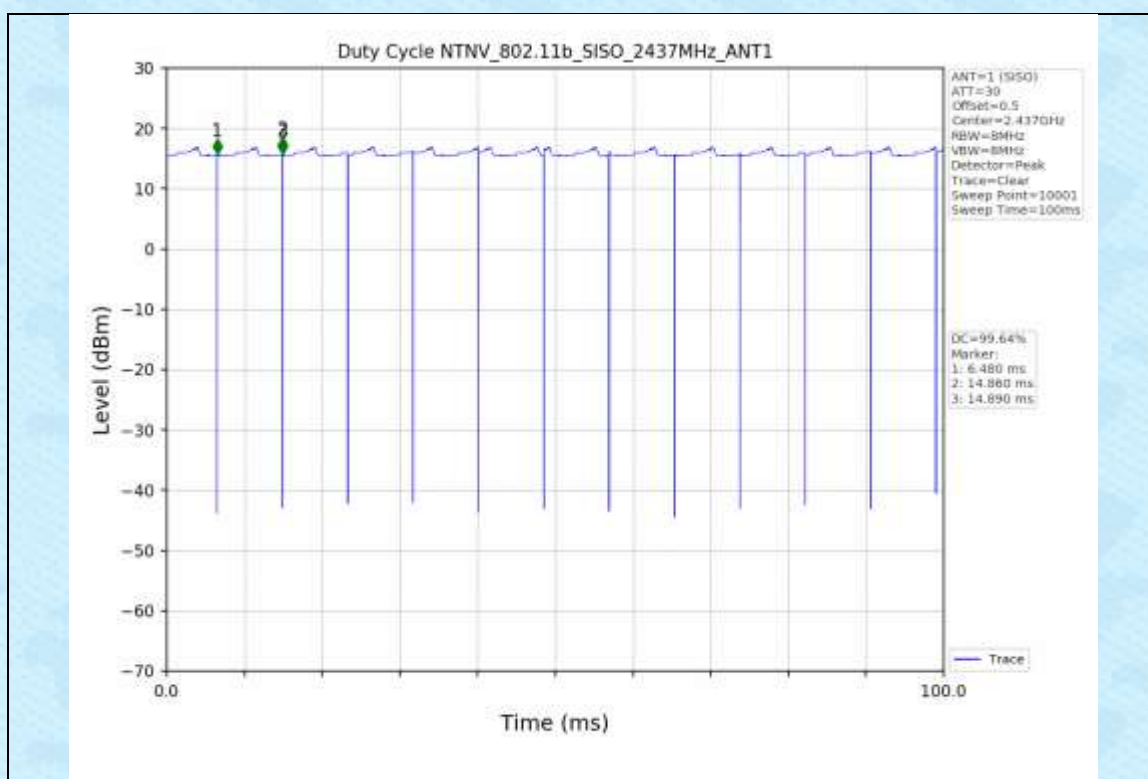
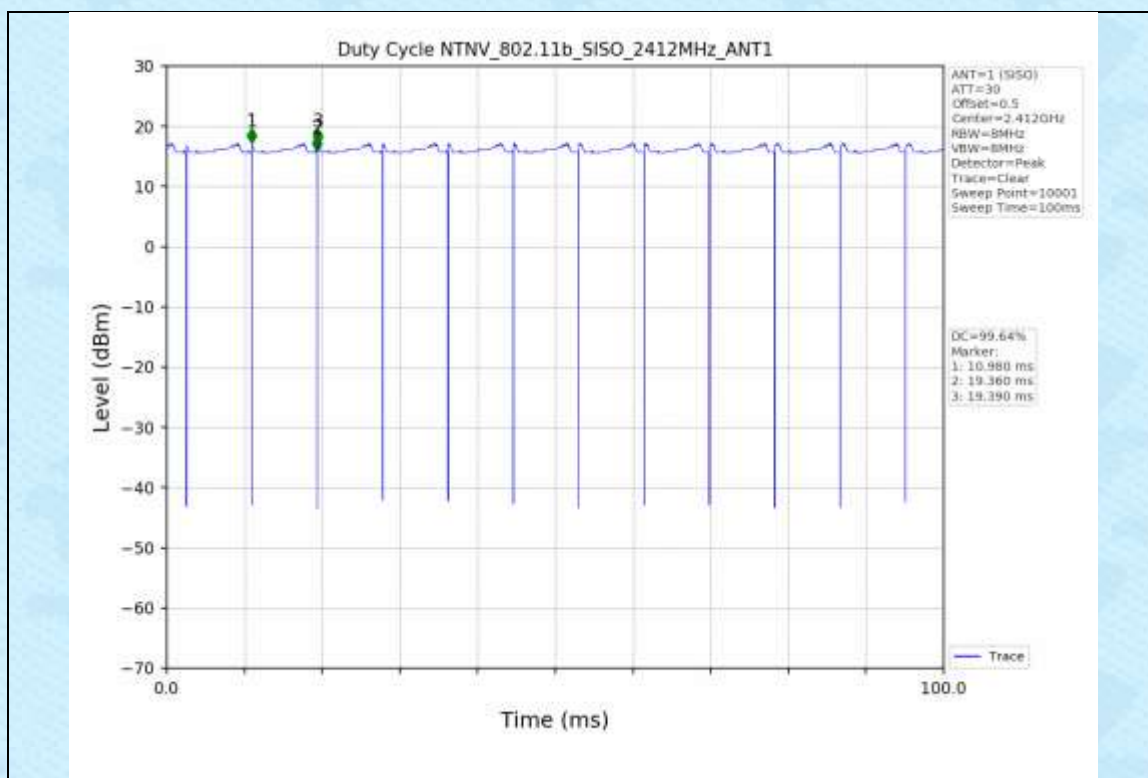


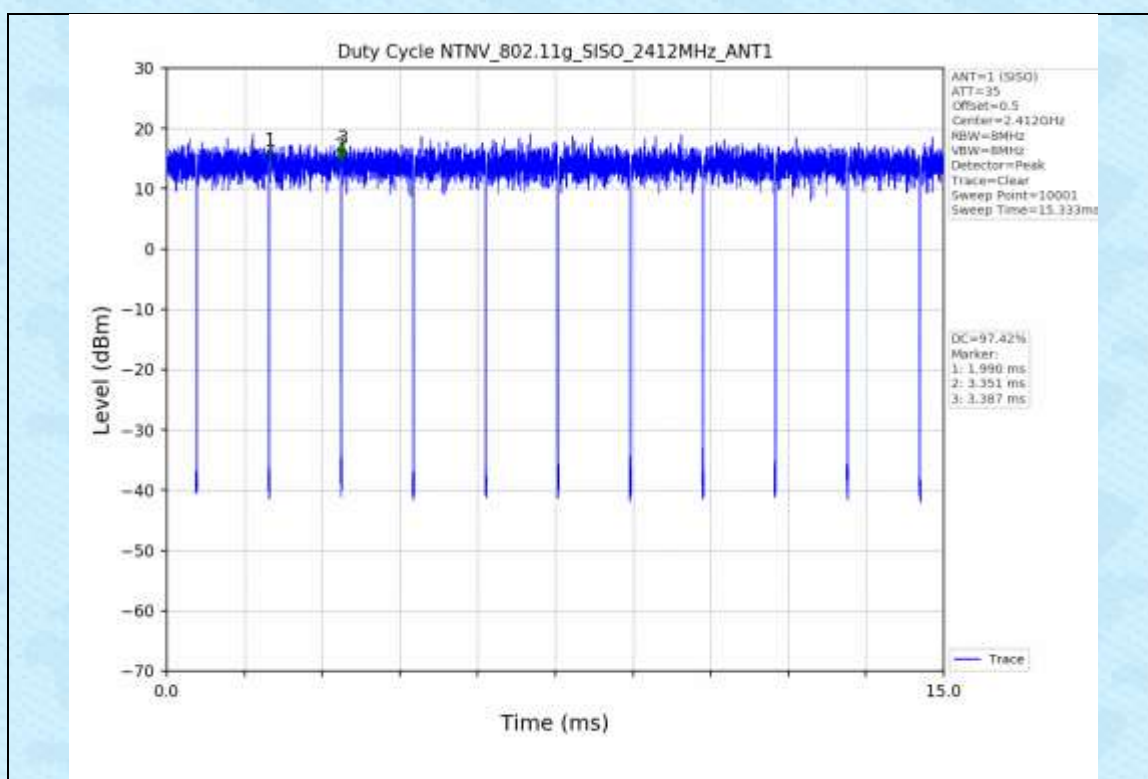
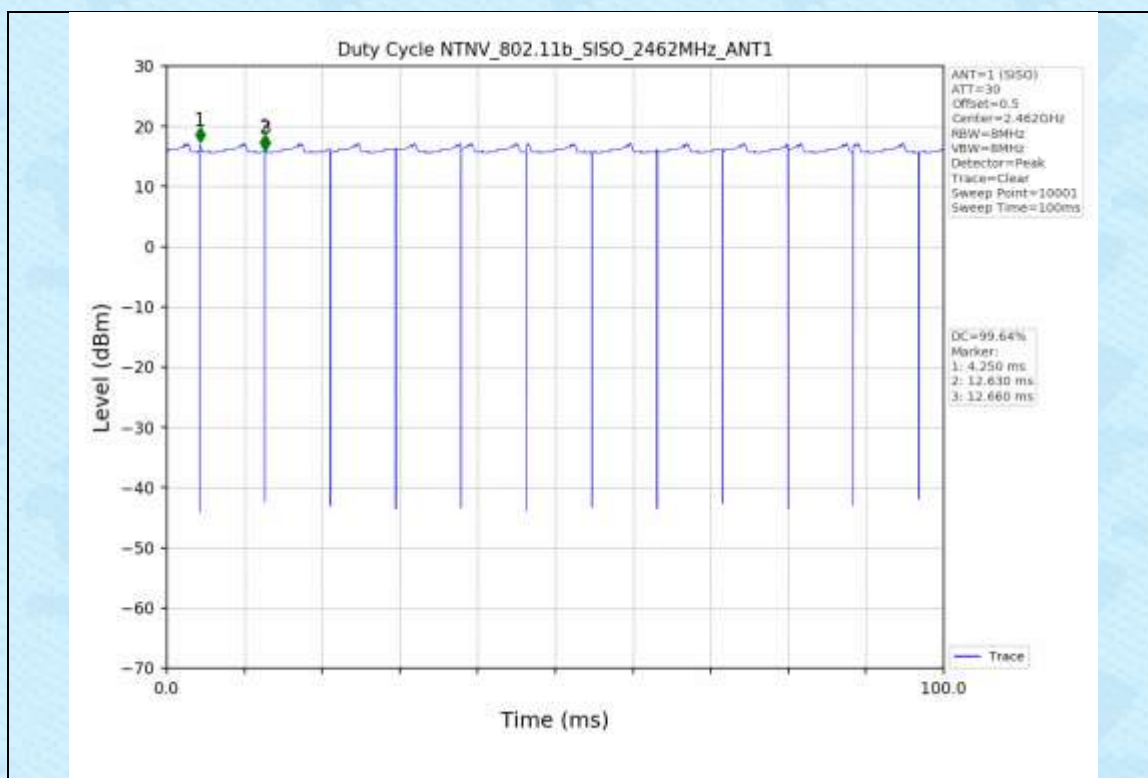


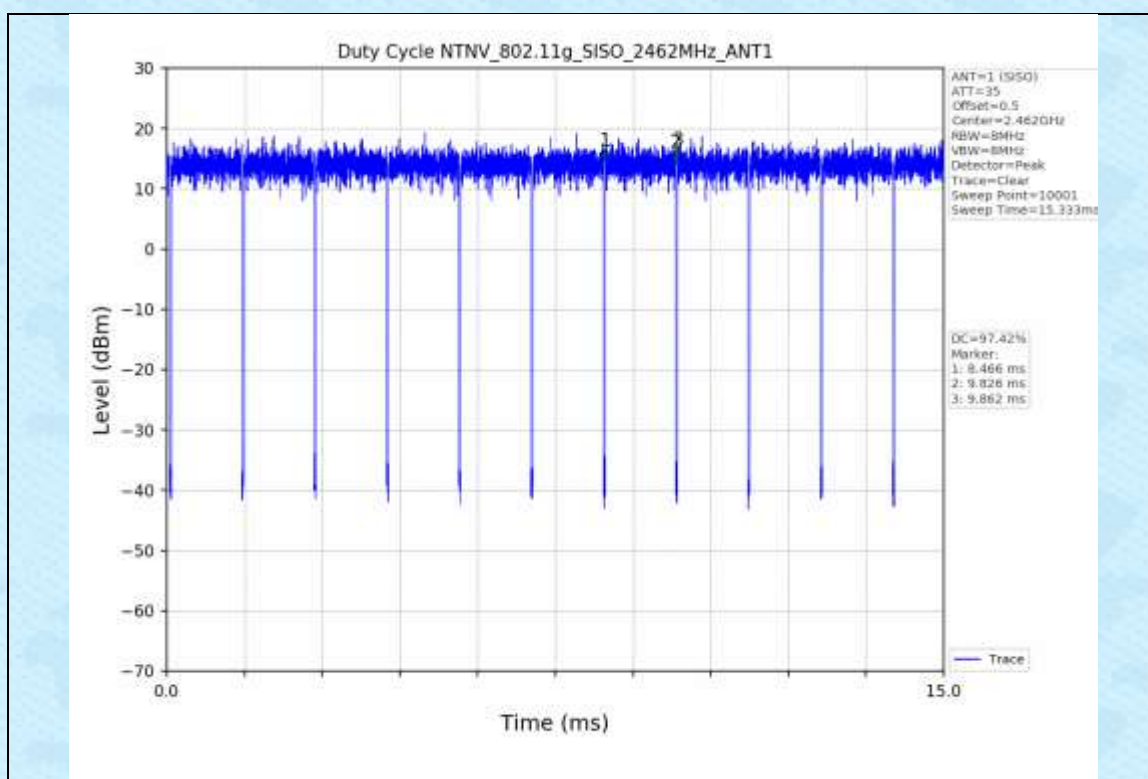
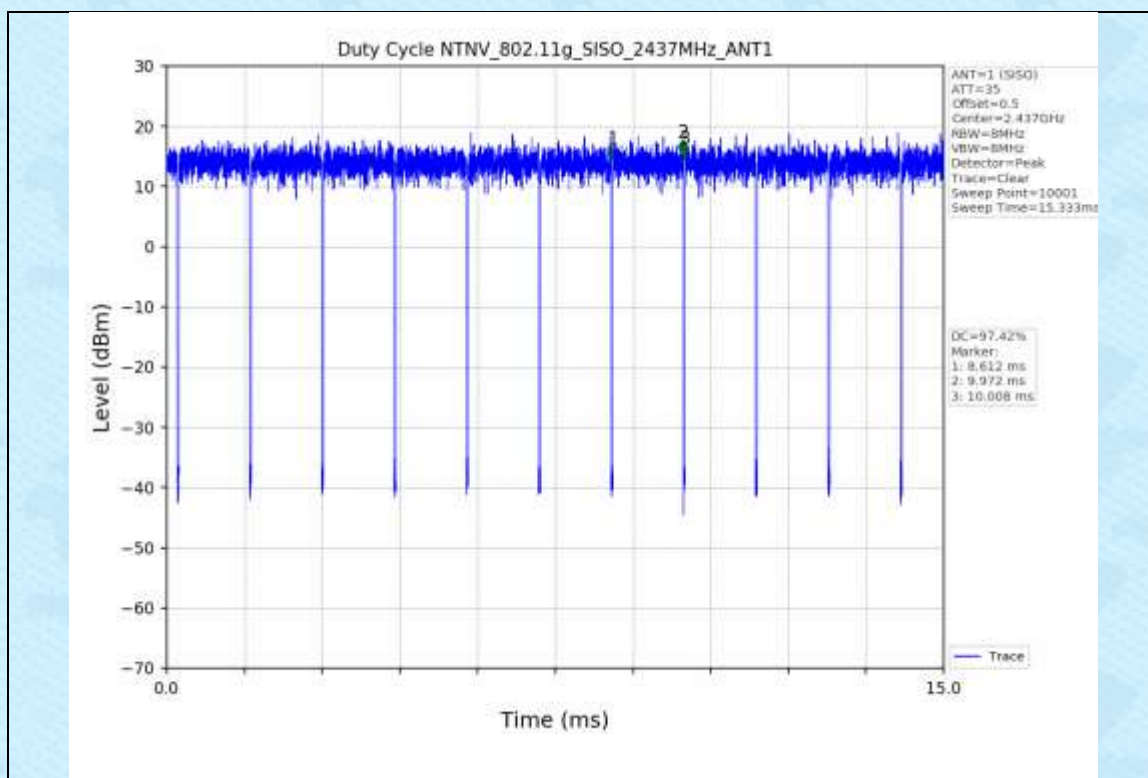


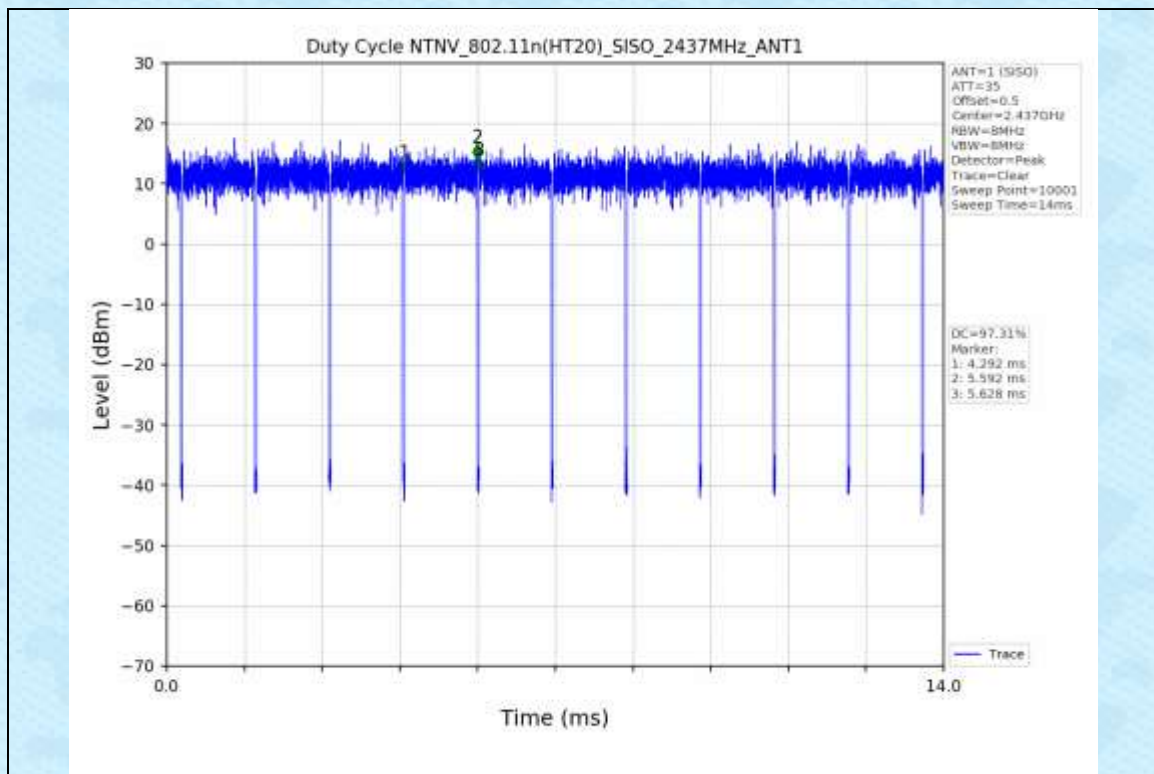
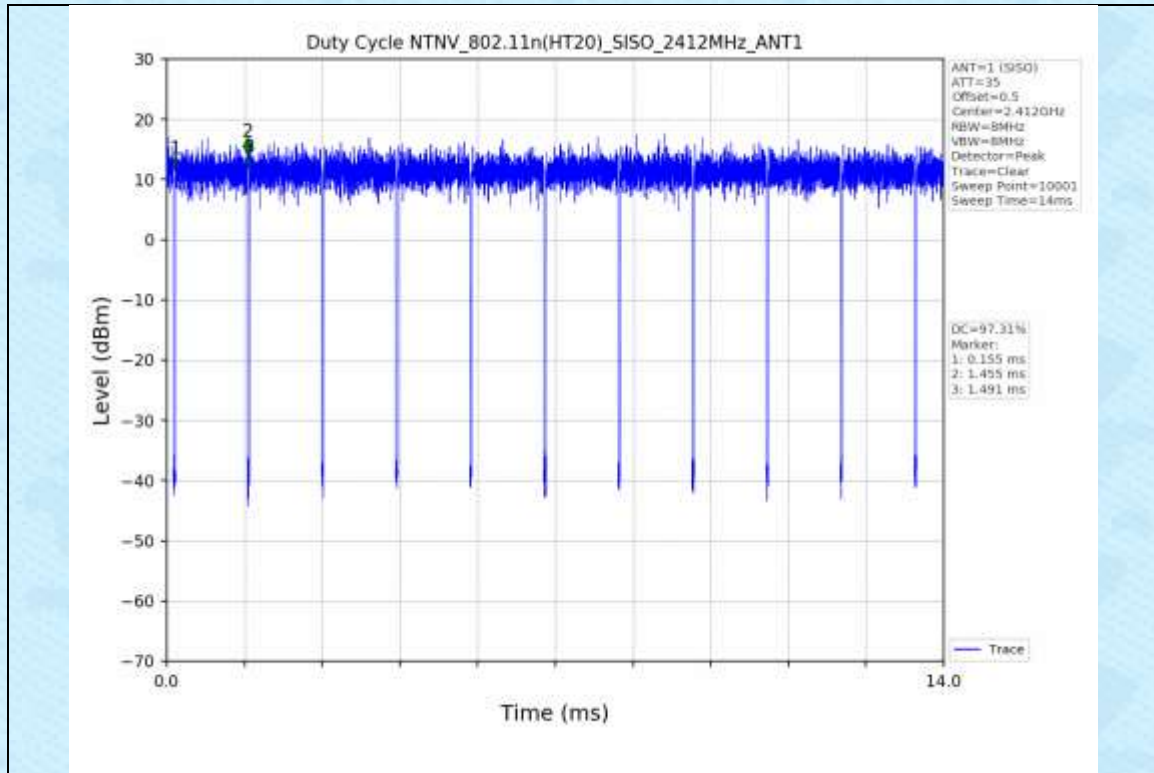


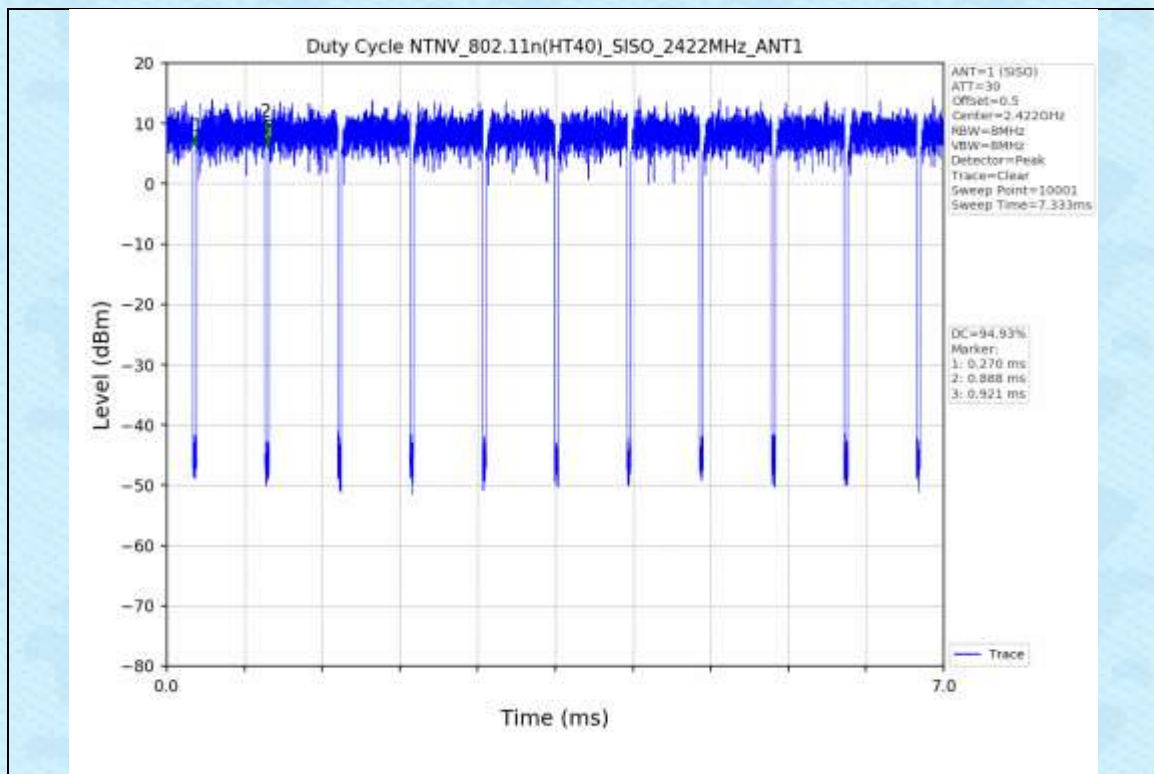
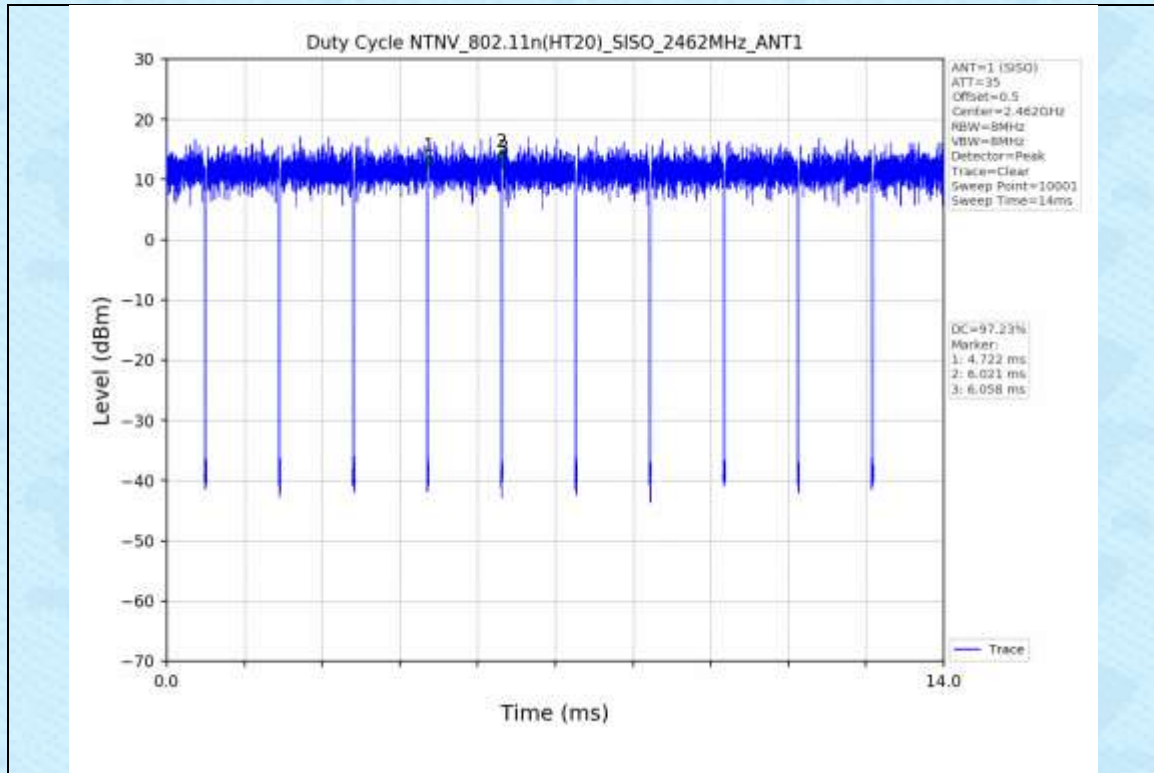
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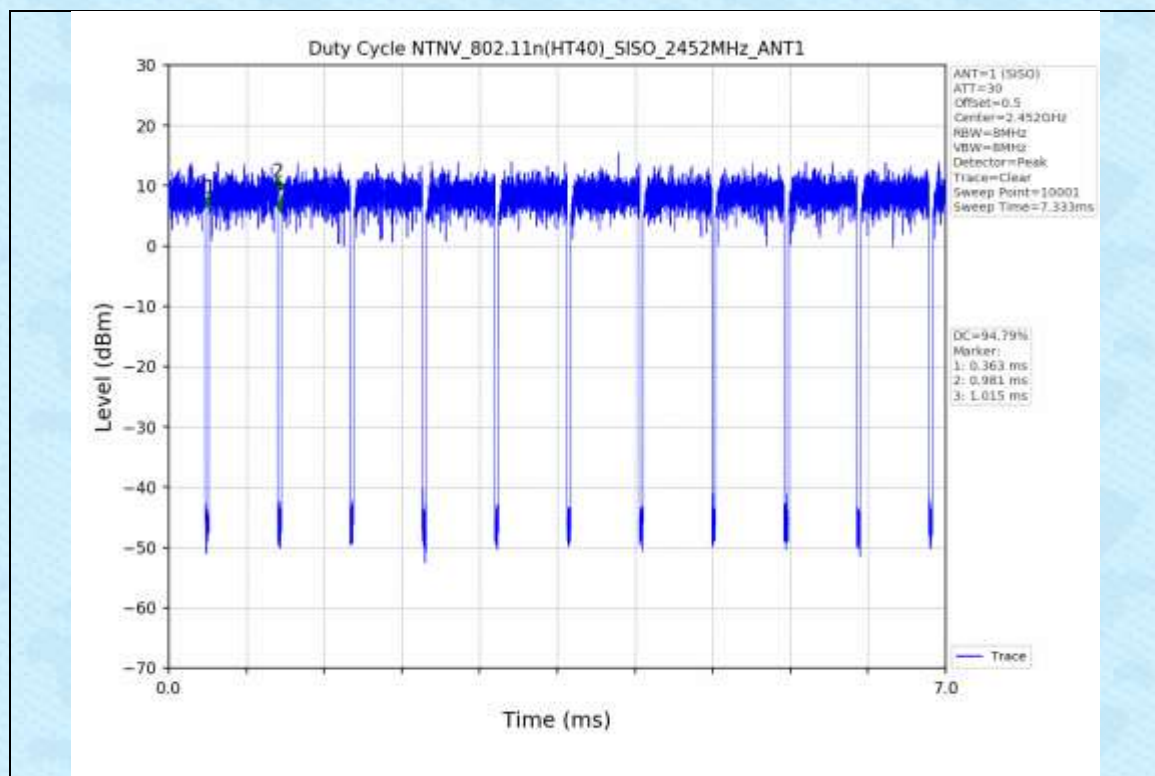
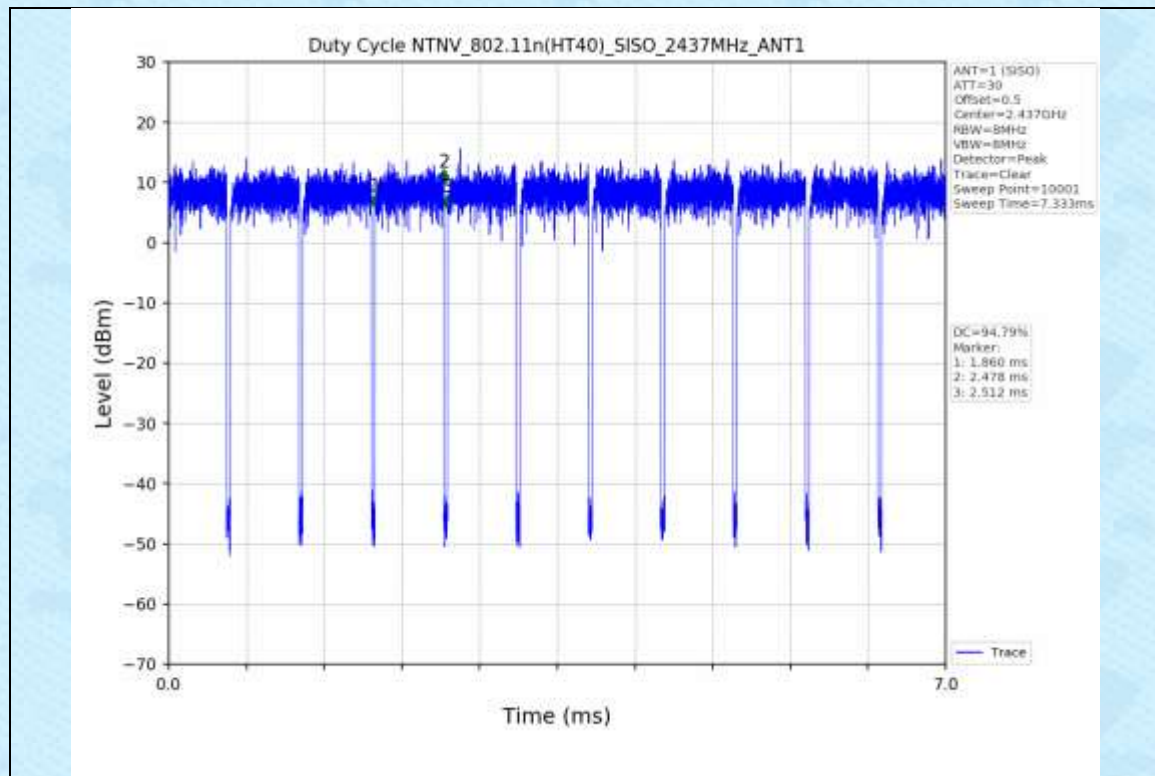












2. Bandwidth

2.1 Test Result

ANT 1:

Test Mode	Frequency (MHz)	TX Type	ANT No.	6dB Bandwidth		Verdict
				Test Result (MHz)	Limits (MHz)	
802.11b	2412	SISO	1	9.095	≥0.5	PASS
	2437	SISO	1	9.085	≥0.5	PASS
	2462	SISO	1	9.096	≥0.5	PASS
802.11g	2412	SISO	1	15.150	≥0.5	PASS
	2437	SISO	1	15.143	≥0.5	PASS
	2462	SISO	1	15.152	≥0.5	PASS
802.11n(HT20)	2412	SISO	1	16.303	≥0.5	PASS
	2437	SISO	1	16.304	≥0.5	PASS
	2462	SISO	1	16.306	≥0.5	PASS
802.11n(HT40)	2422	SISO	1	35.233	≥0.5	PASS
	2437	SISO	1	35.213	≥0.5	PASS
	2452	SISO	1	35.208	≥0.5	PASS

Test Mode	Frequency (MHz)	TX Type	ANT No.	99% Occupied Bandwidth	
				Test Result (MHz)	
802.11b	2412	SISO	1	13.361	Only for Report Use
	2437	SISO	1	13.358	Only for Report Use
	2462	SISO	1	13.366	Only for Report Use
802.11g	2412	SISO	1	16.465	Only for Report Use
	2437	SISO	1	16.468	Only for Report Use
	2462	SISO	1	16.464	Only for Report Use
802.11n(HT20)	2412	SISO	1	17.510	Only for Report Use
	2437	SISO	1	17.503	Only for Report Use
	2462	SISO	1	17.496	Only for Report Use
802.11n(HT40)	2422	SISO	1	36.624	Only for Report Use
	2437	SISO	1	36.591	Only for Report Use
	2452	SISO	1	36.497	Only for Report Use

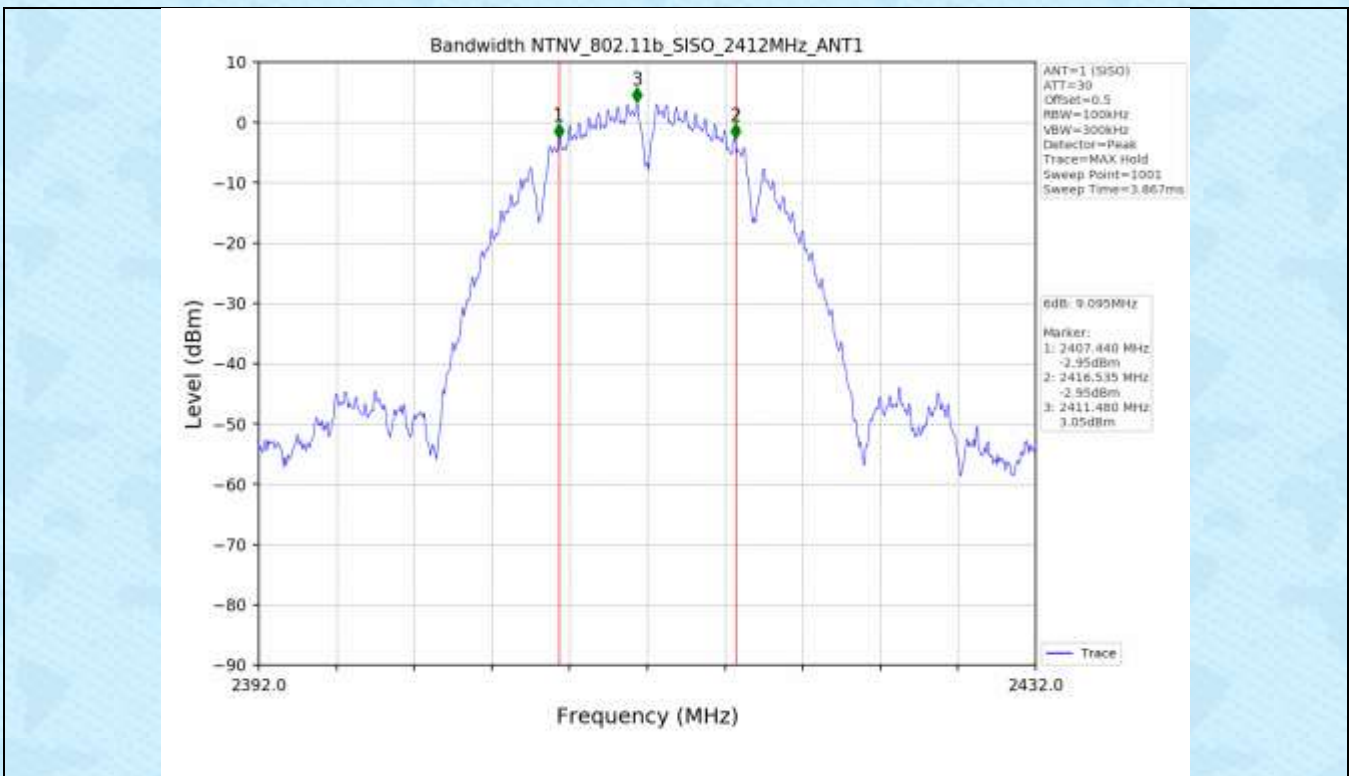
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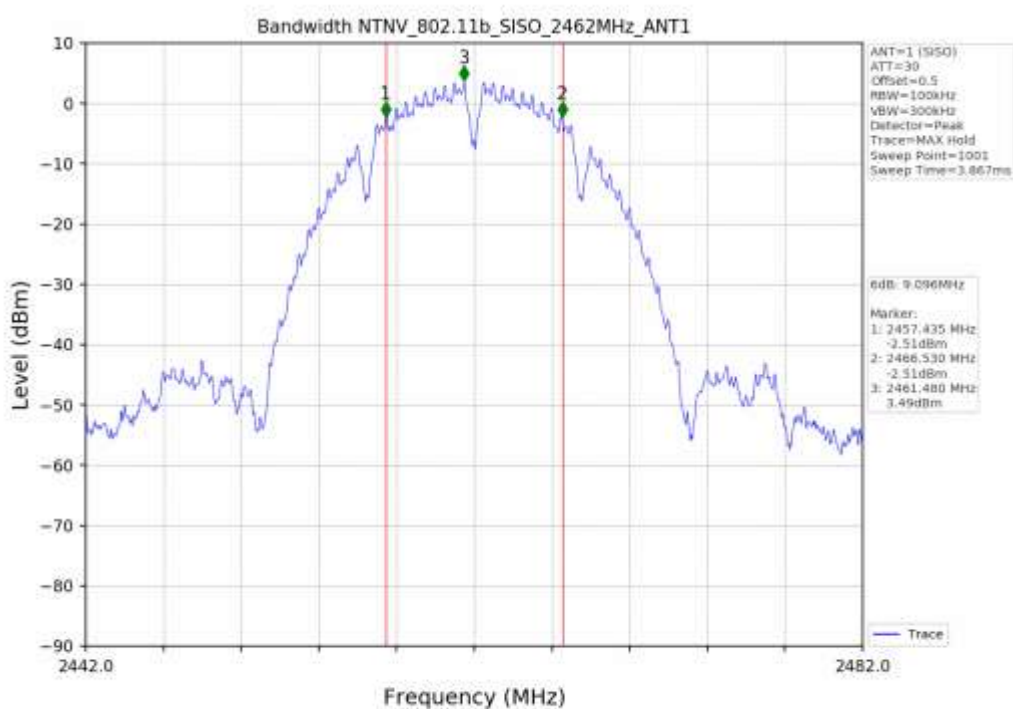
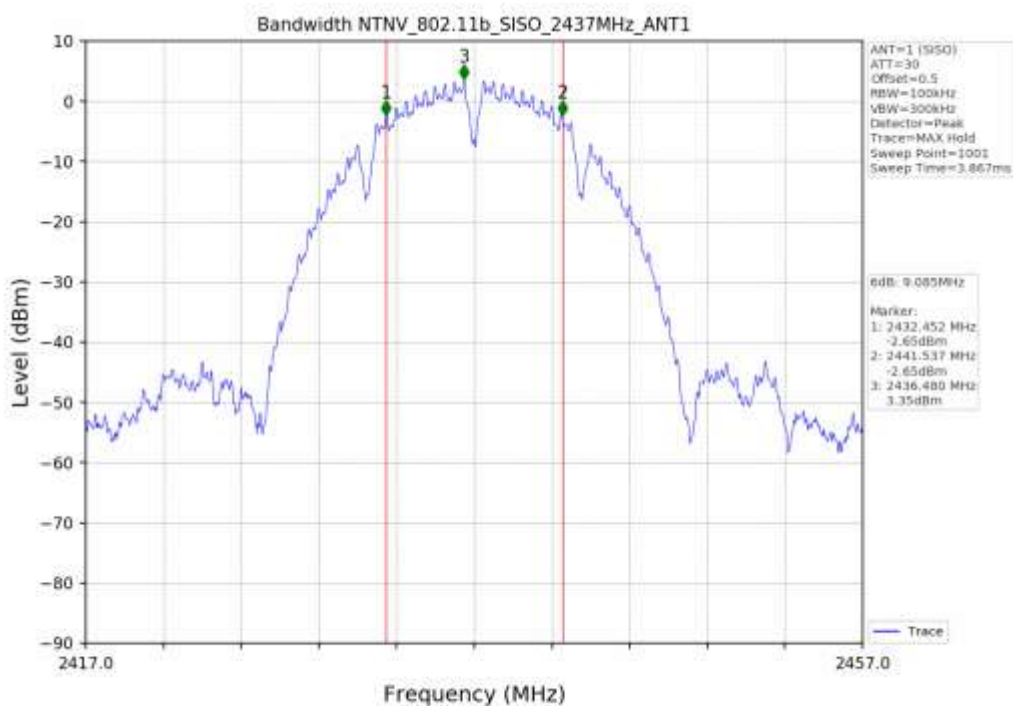
Test Mode	Frequency (MHz)	TX Type	ANT No.	6dB Bandwidth		Verdict
				Test Result (MHz)	Limits (MHz)	
802.11b	2412	SISO	1	9.086	≥0.5	PASS
	2437	SISO	1	9.078	≥0.5	PASS
	2462	SISO	1	9.092	≥0.5	PASS
802.11g	2412	SISO	1	15.149	≥0.5	PASS
	2437	SISO	1	15.140	≥0.5	PASS
	2462	SISO	1	15.157	≥0.5	PASS
802.11n(HT20)	2412	SISO	1	15.141	≥0.5	PASS
	2437	SISO	1	15.151	≥0.5	PASS
	2462	SISO	1	15.147	≥0.5	PASS
802.11n(HT40)	2422	SISO	1	35.203	≥0.5	PASS
	2437	SISO	1	35.221	≥0.5	PASS
	2452	SISO	1	35.200	≥0.5	PASS

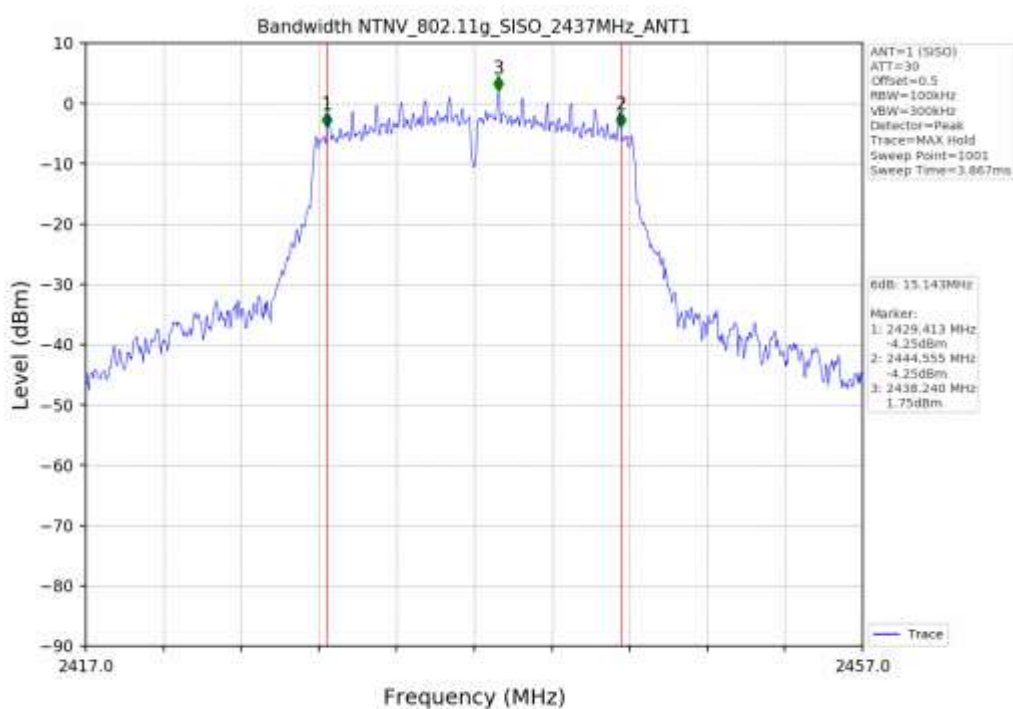
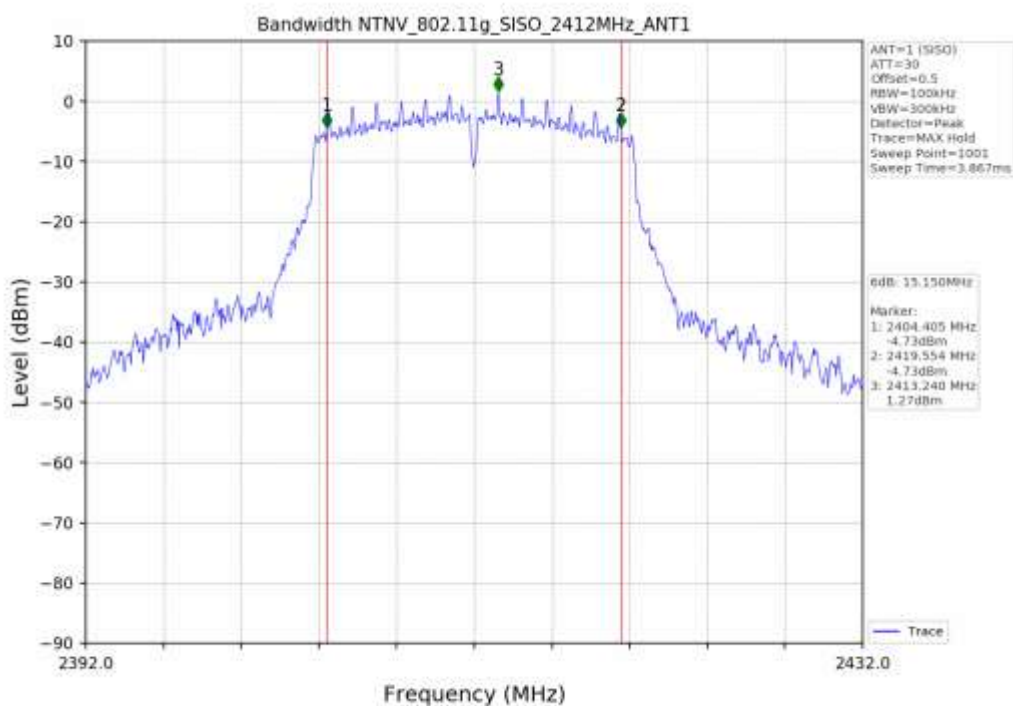
Test Mode	Frequency (MHz)	TX Type	ANT No.	99% Occupied Bandwidth	
				Test Result (MHz)	
802.11b	2412	SISO	1	13.360	Only for Report Use
	2437	SISO	1	13.403	Only for Report Use
	2462	SISO	1	13.369	Only for Report Use
802.11g	2412	SISO	1	16.772	Only for Report Use
	2437	SISO	1	16.766	Only for Report Use
	2462	SISO	1	16.793	Only for Report Use
802.11n(HT20)	2412	SISO	1	17.651	Only for Report Use
	2437	SISO	1	17.678	Only for Report Use
	2462	SISO	1	17.666	Only for Report Use
802.11n(HT40)	2422	SISO	1	36.515	Only for Report Use
	2437	SISO	1	36.490	Only for Report Use
	2452	SISO	1	36.429	Only for Report Use

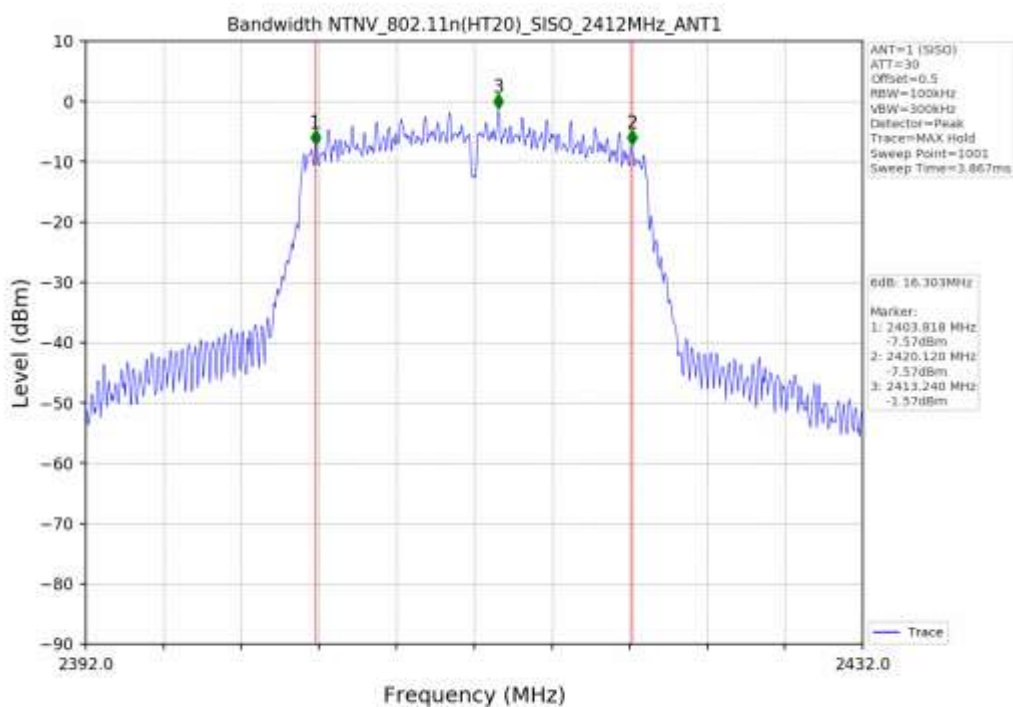
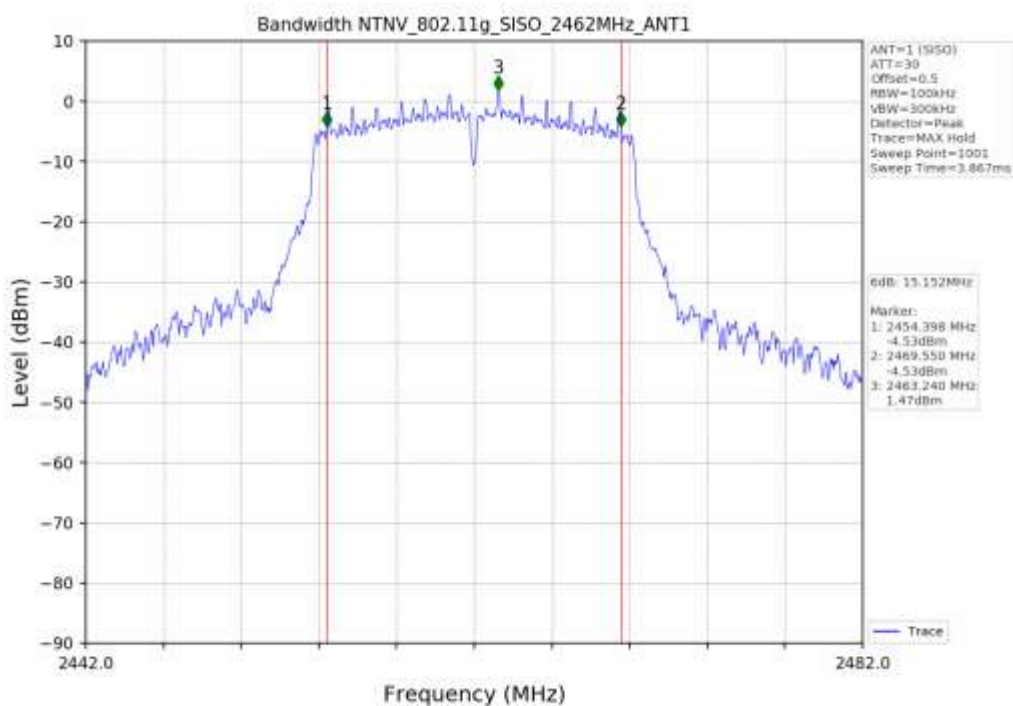
2.2 Test Graph - 6dB Bandwidth

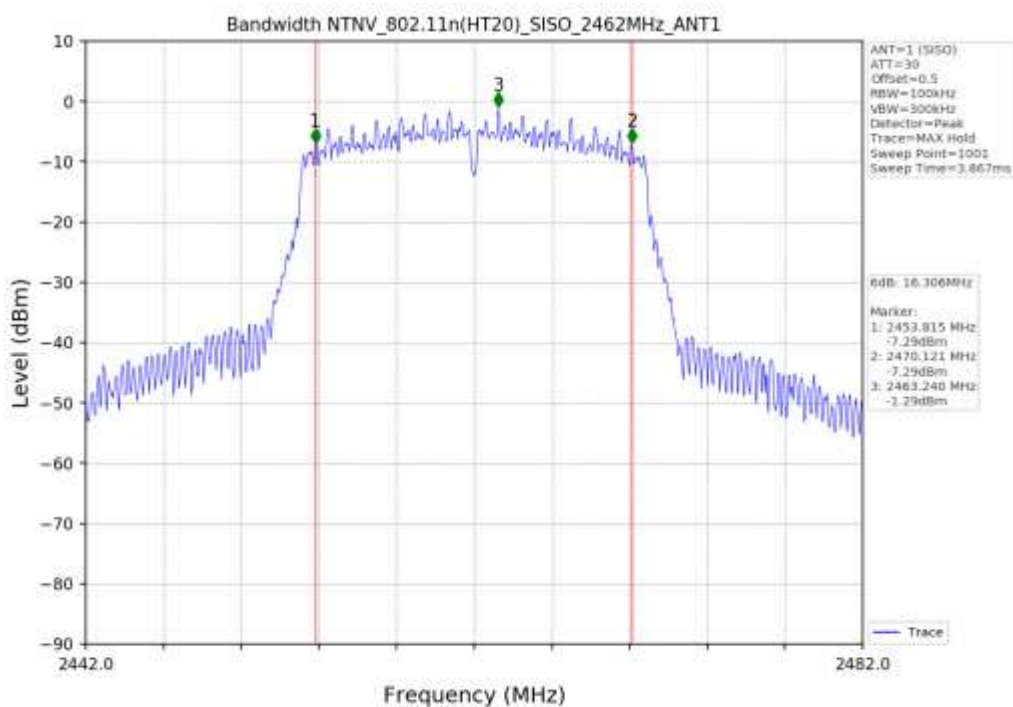
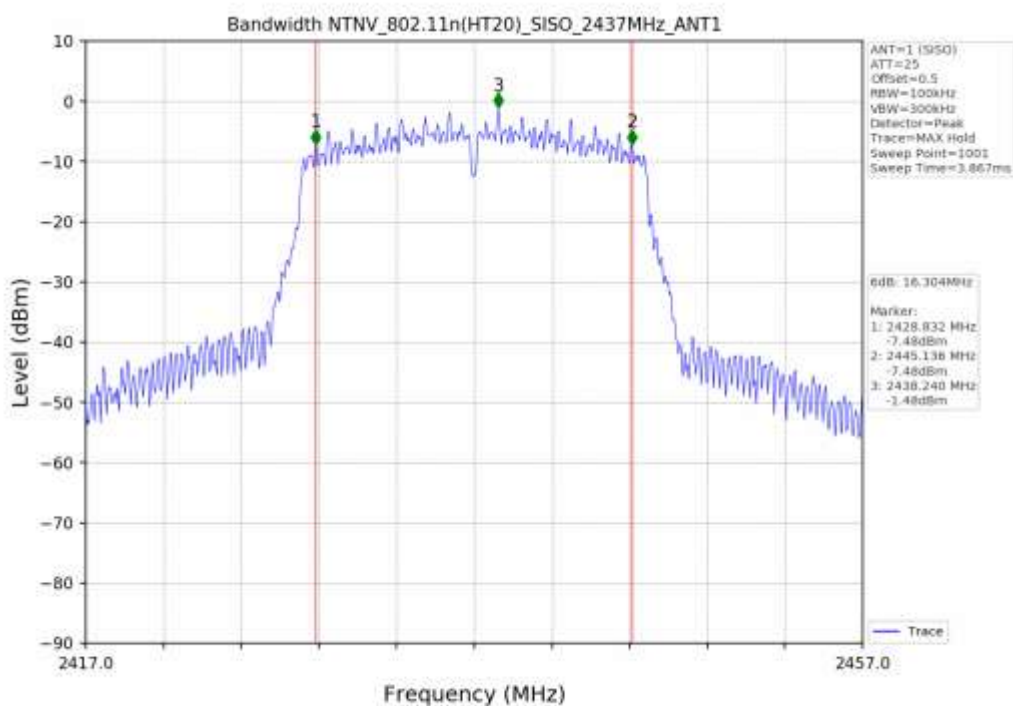
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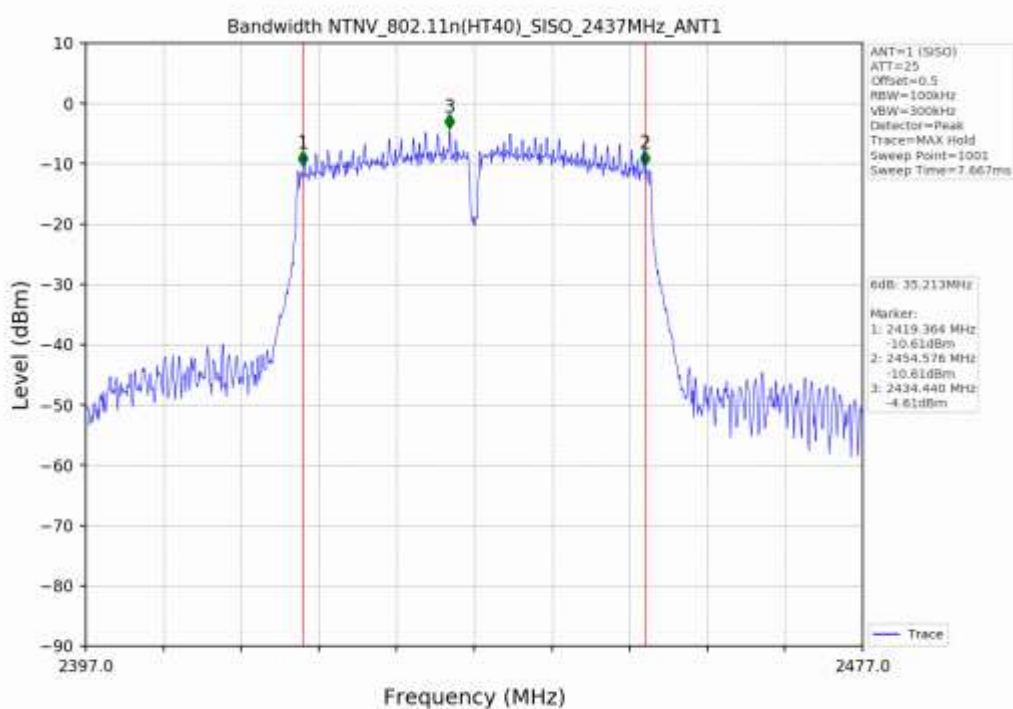
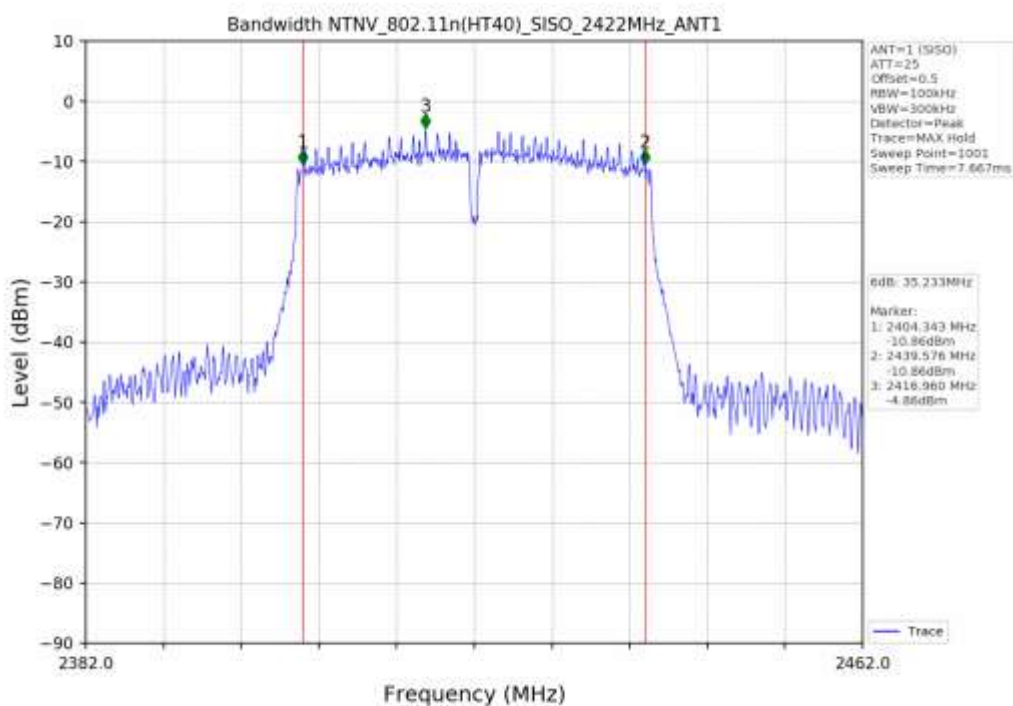


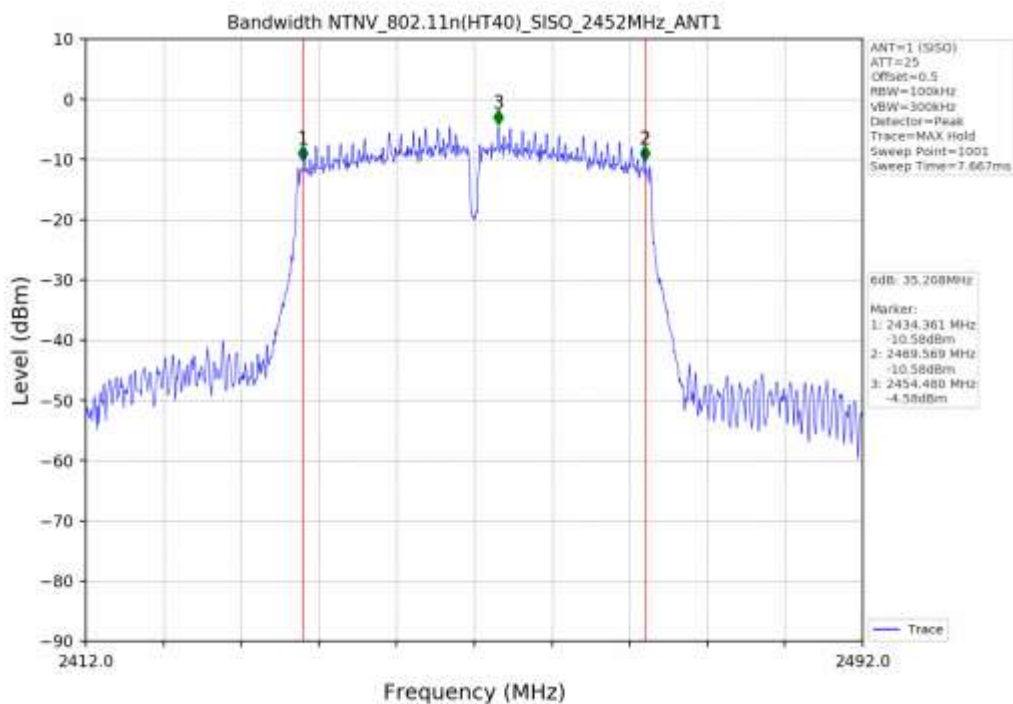




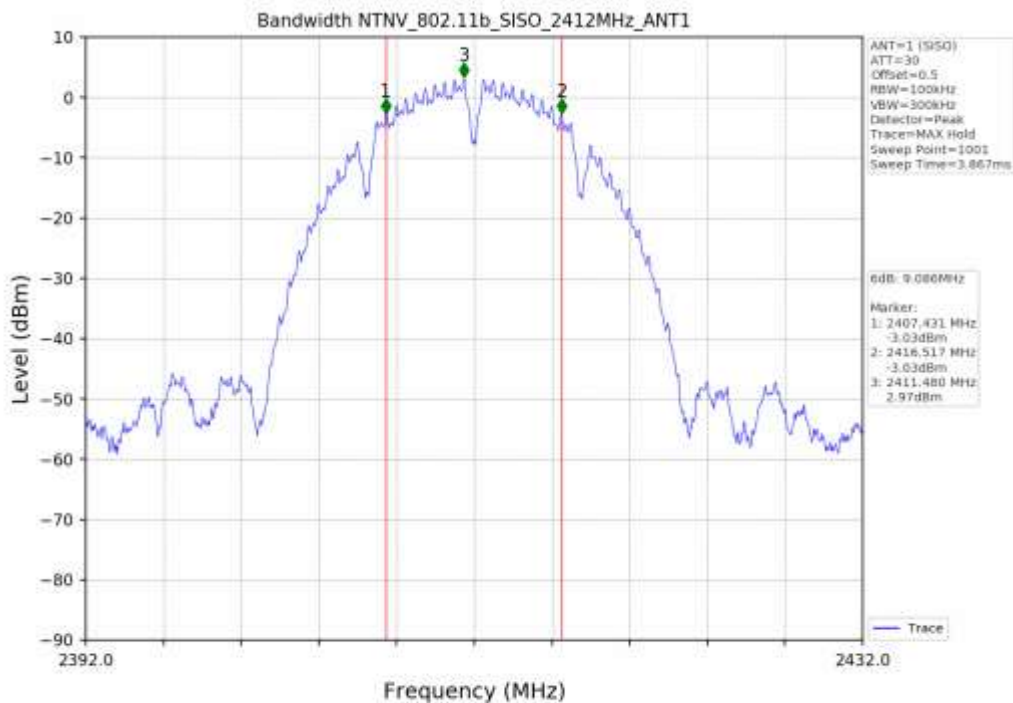


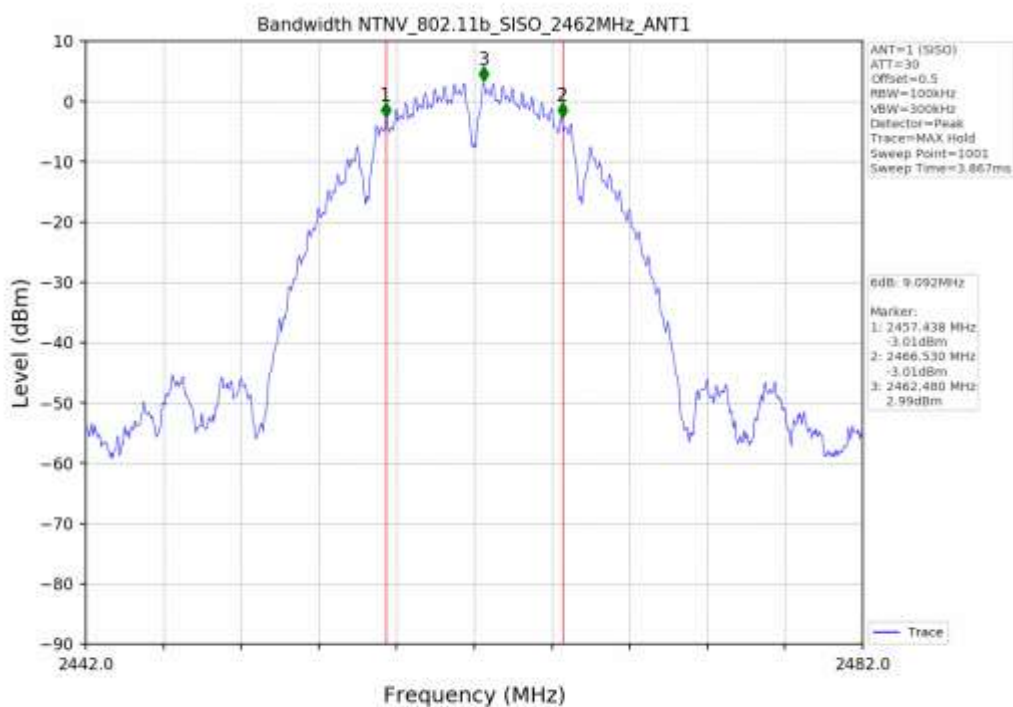
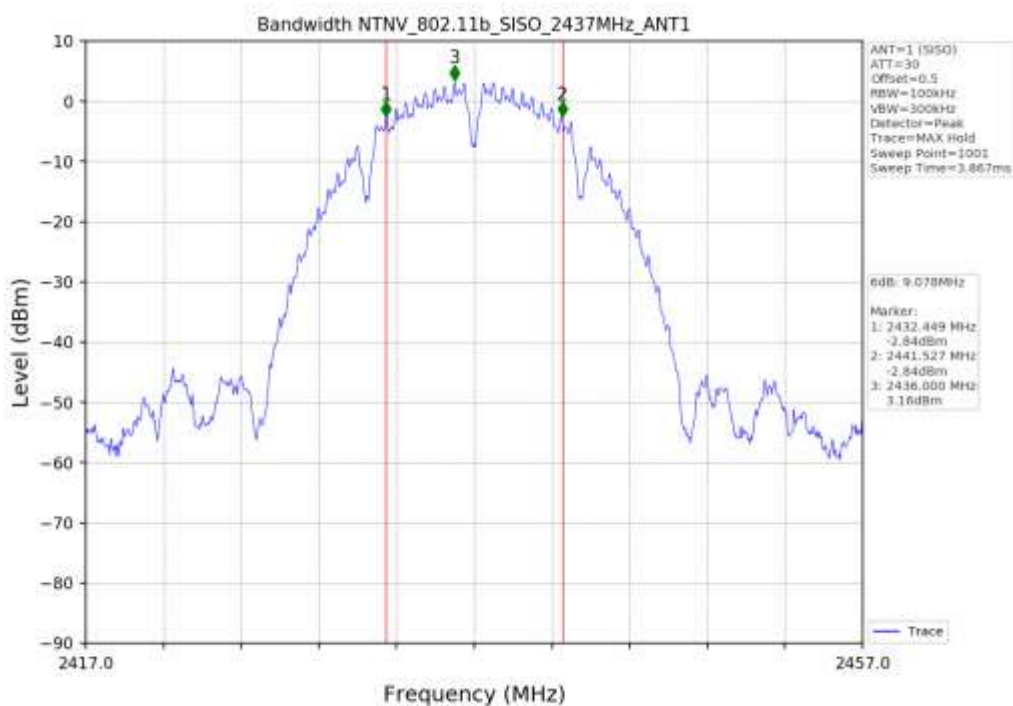


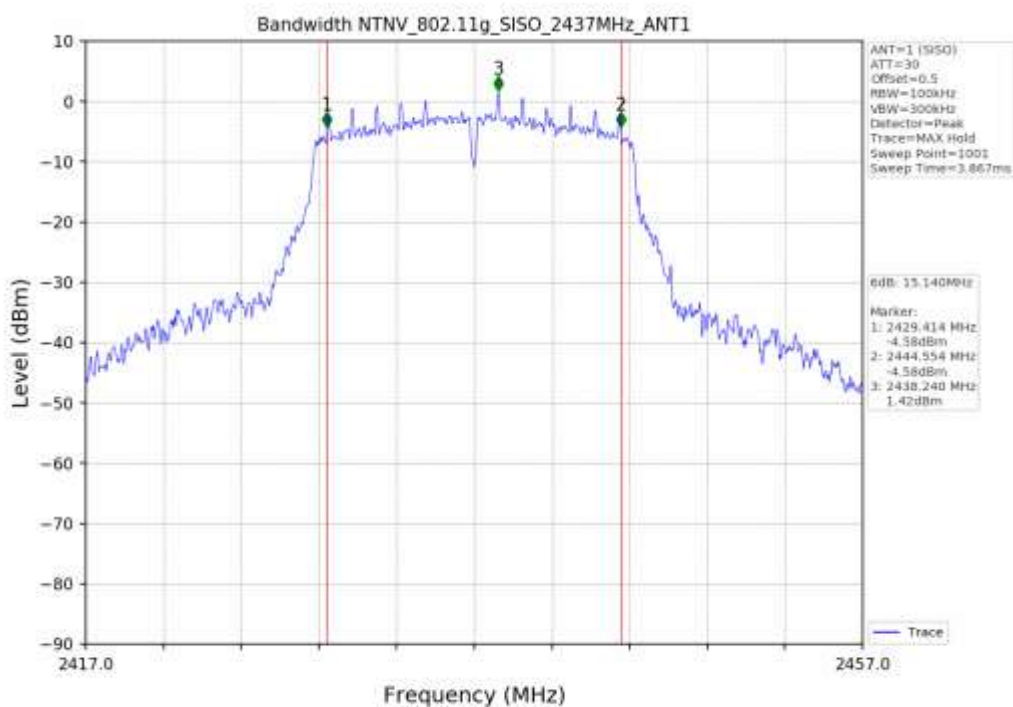
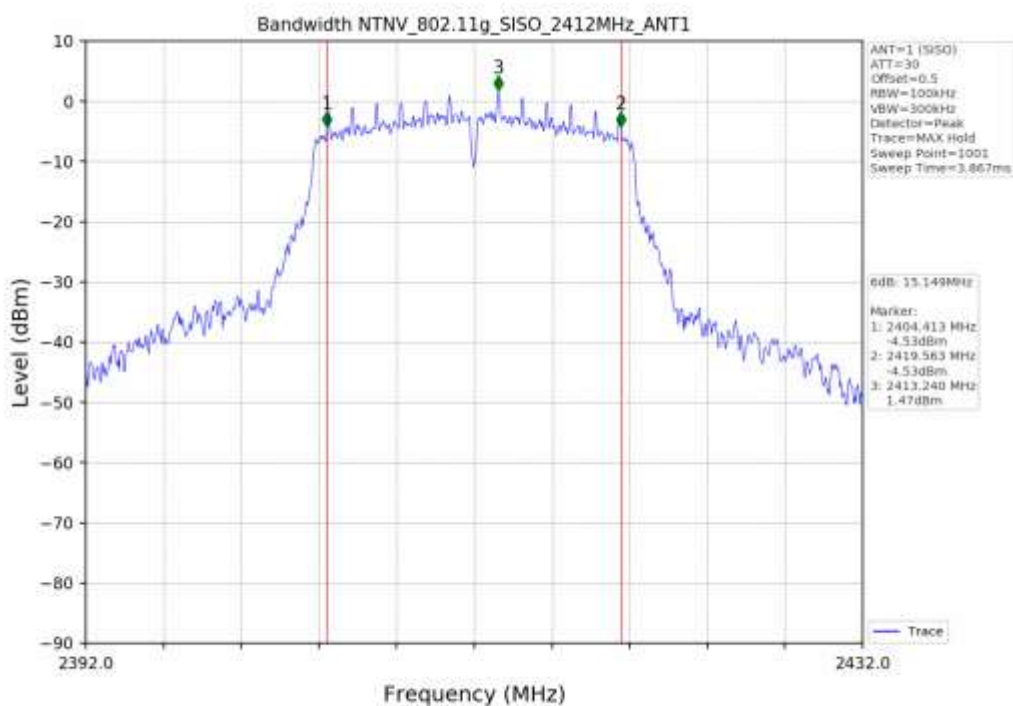


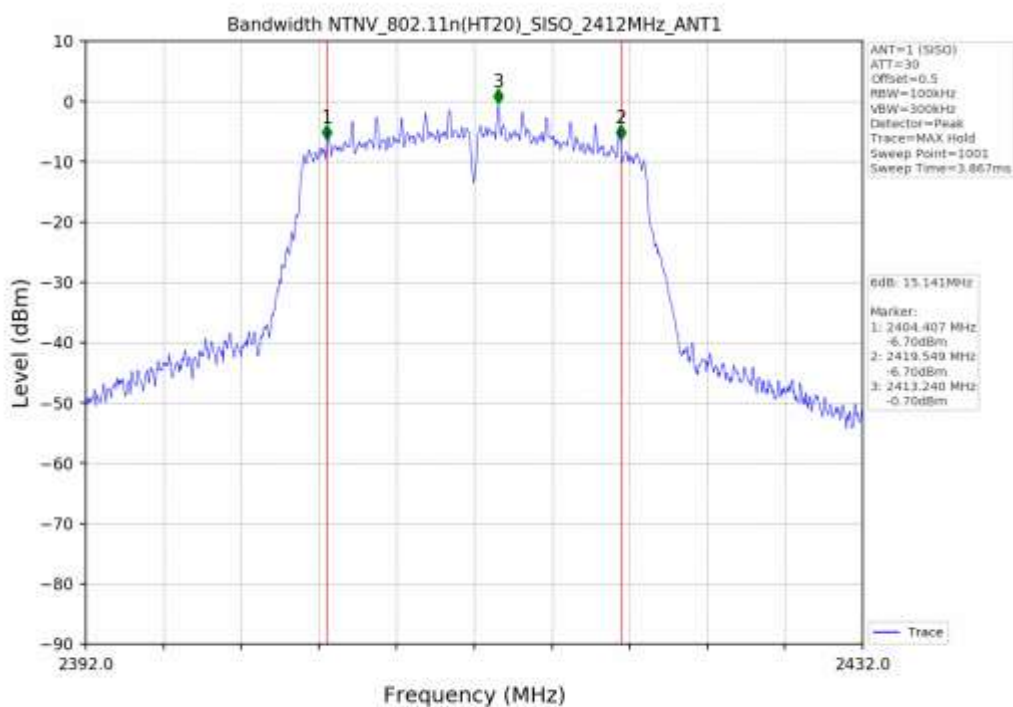
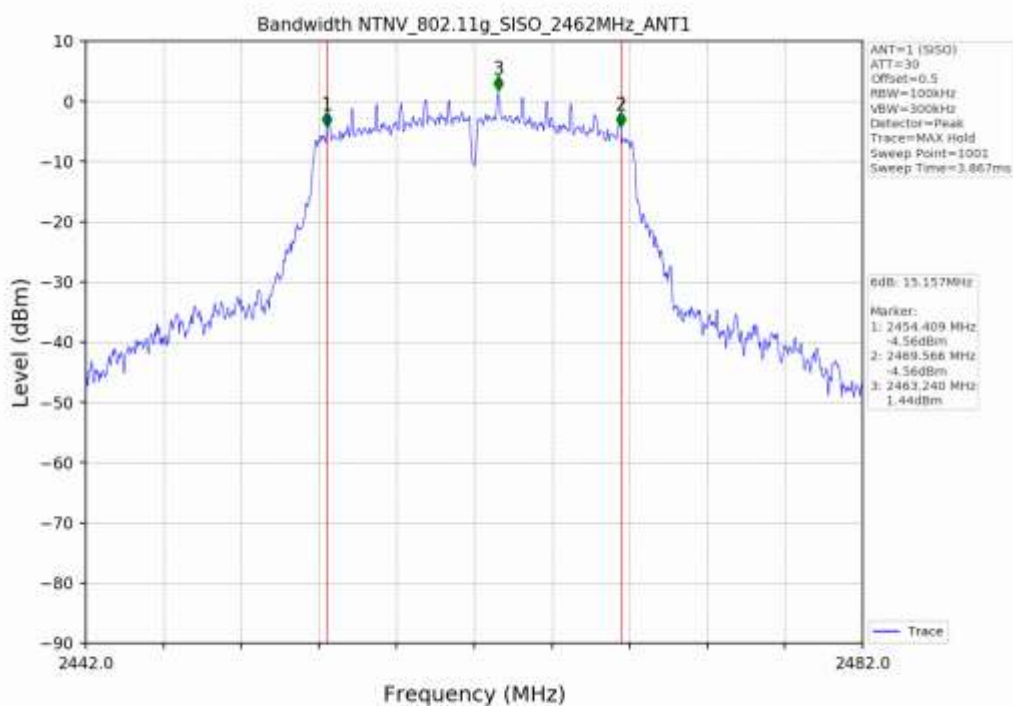


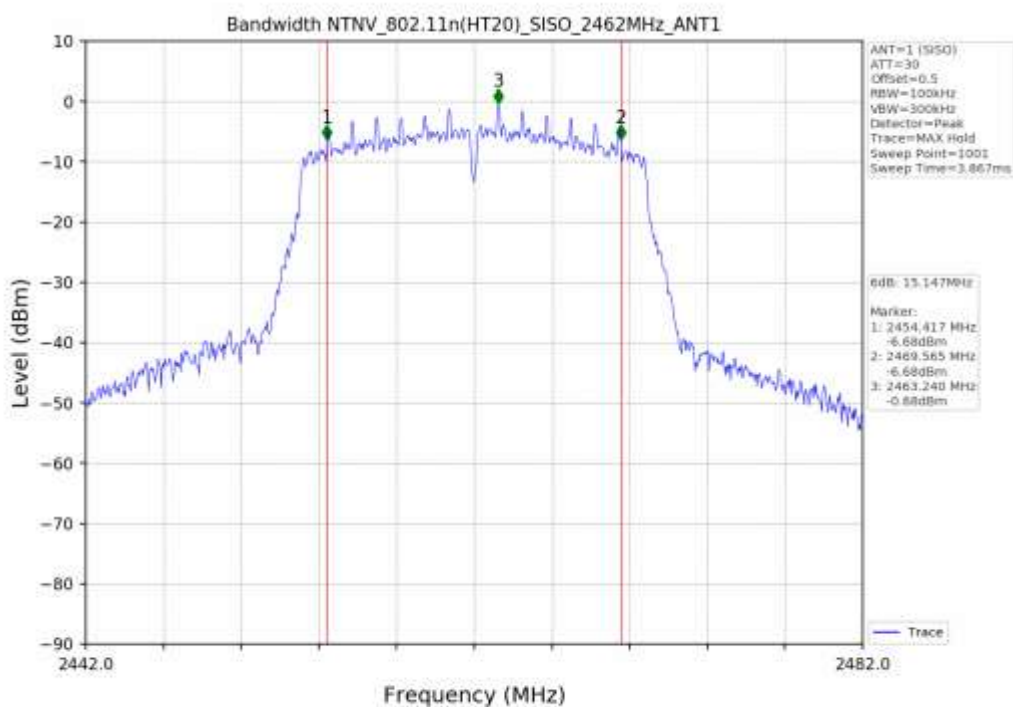
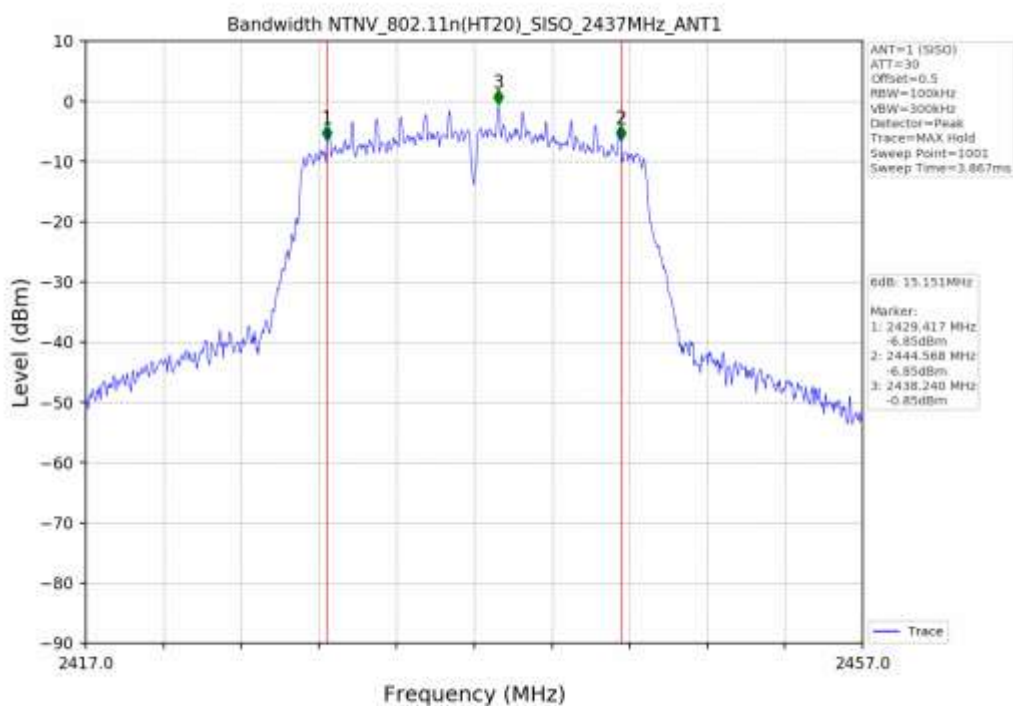
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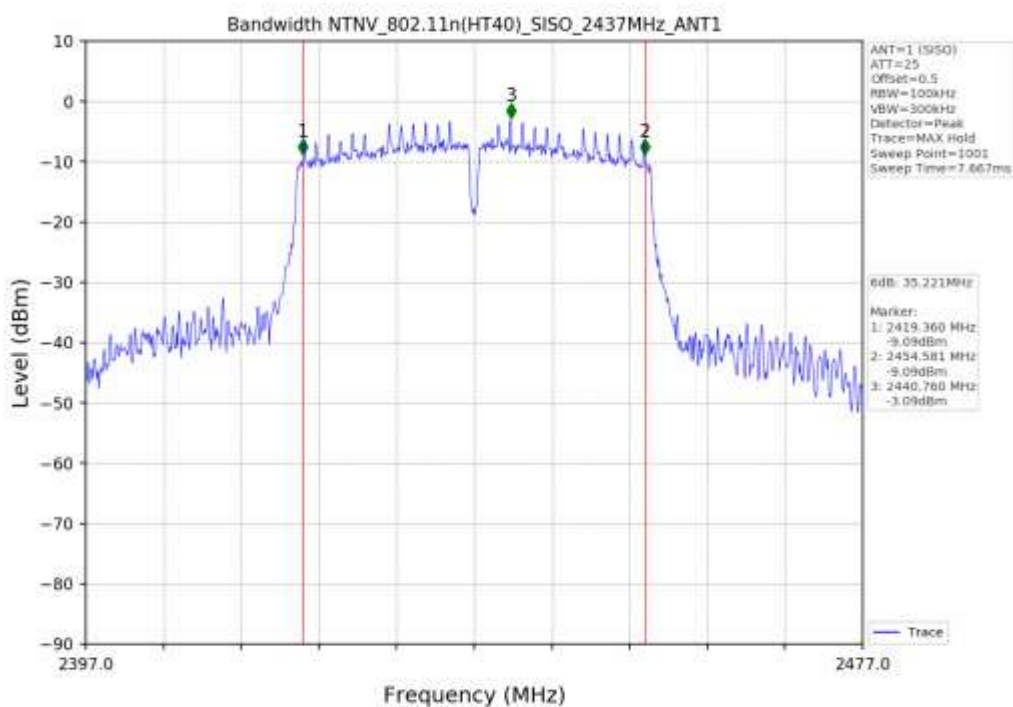
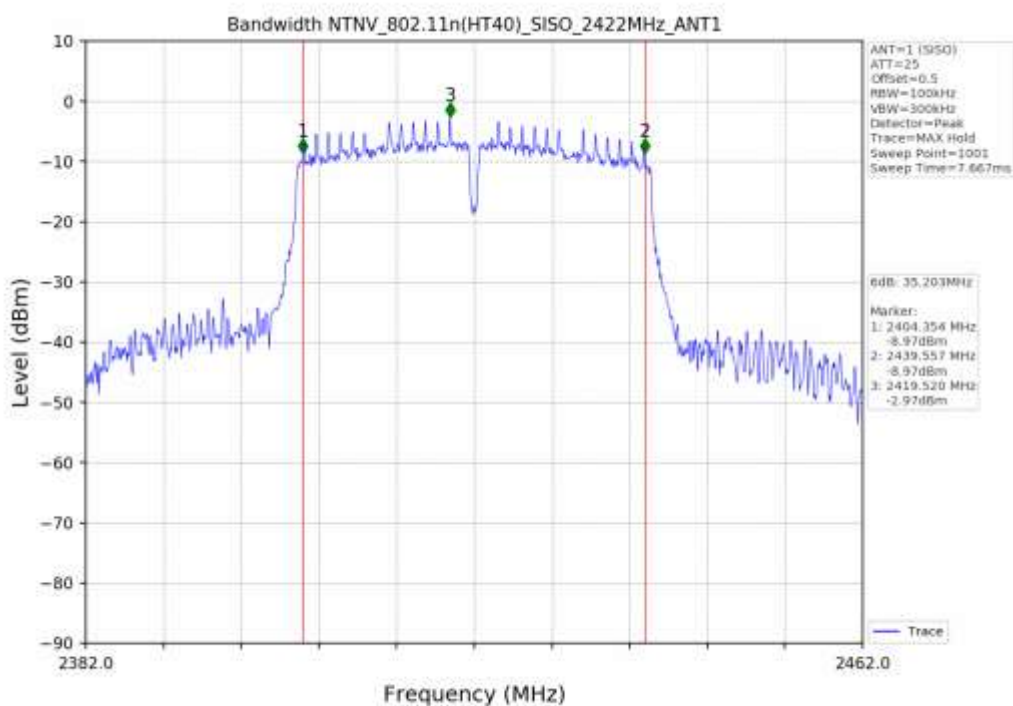


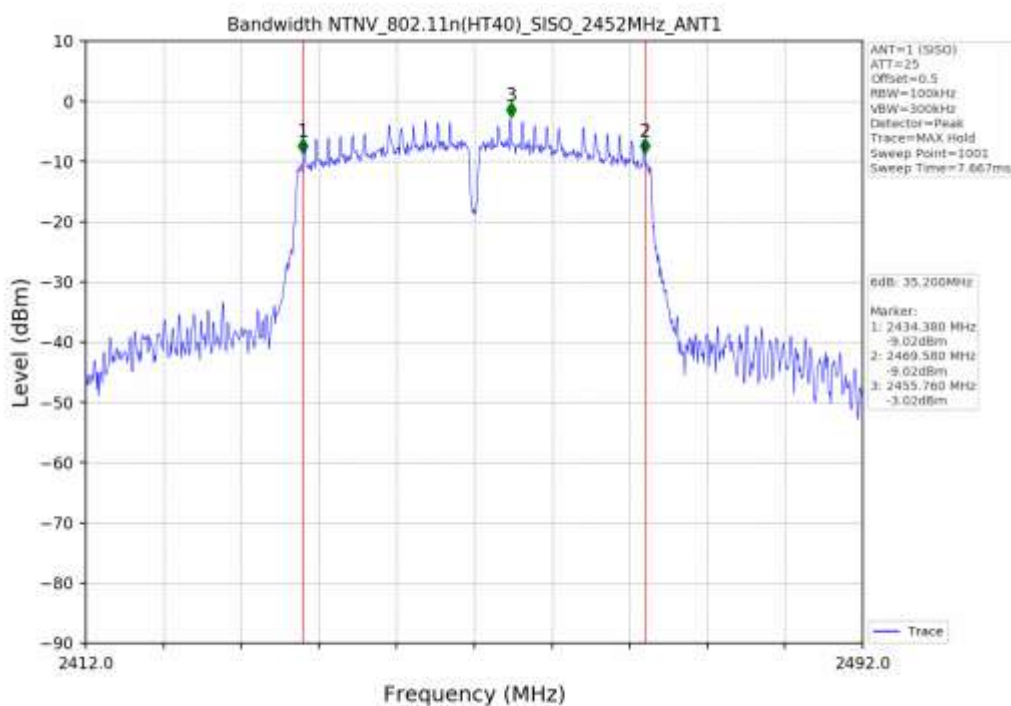






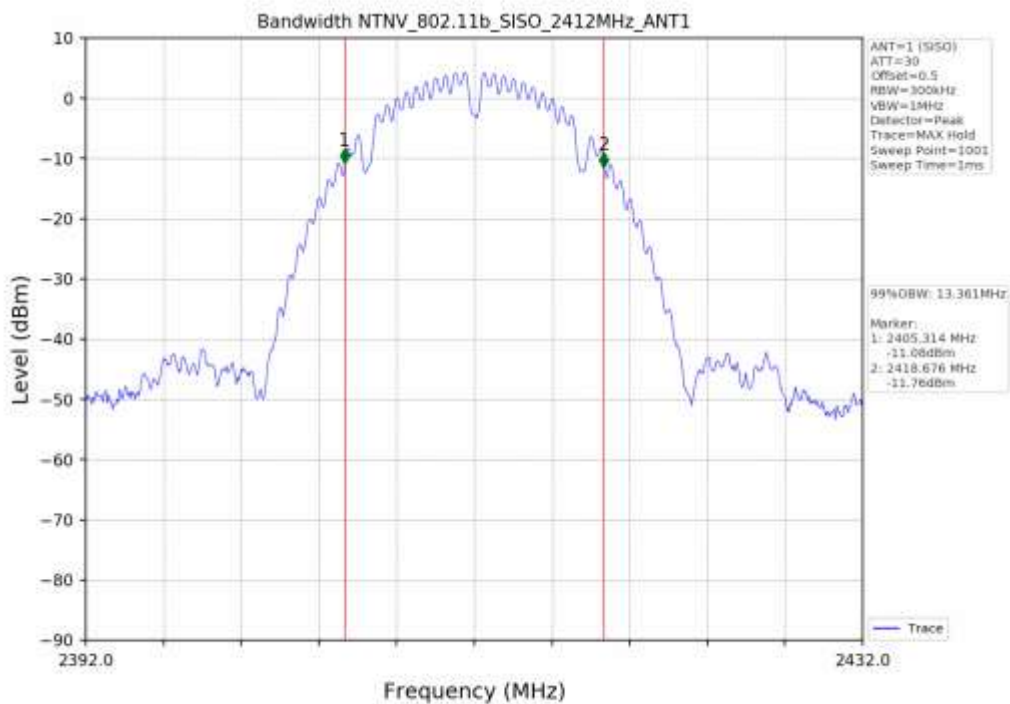


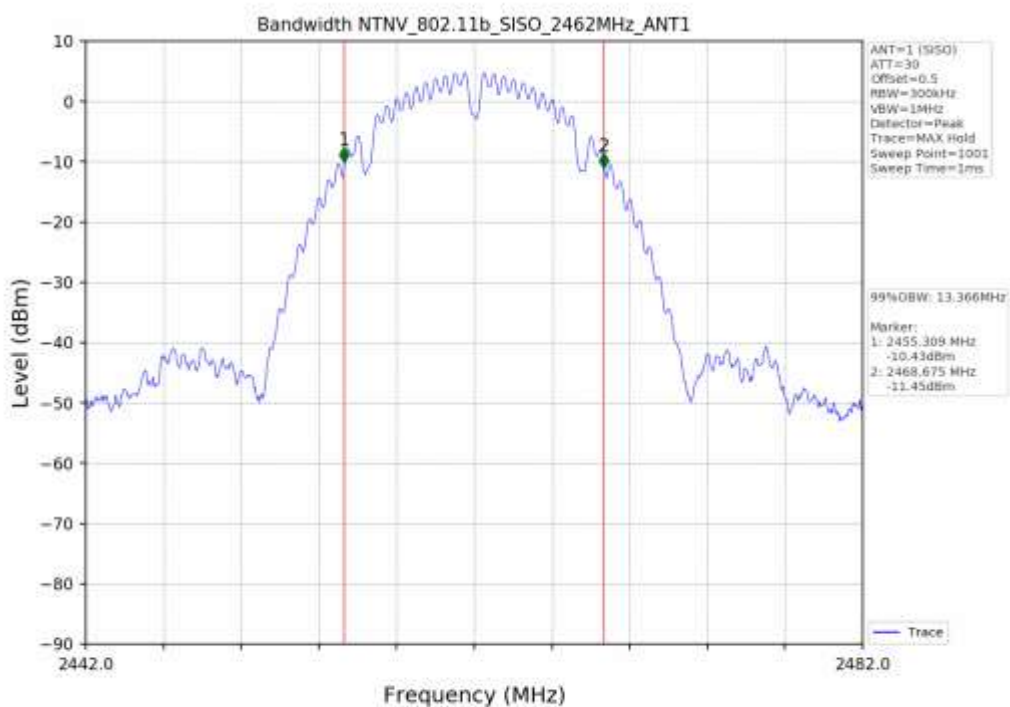
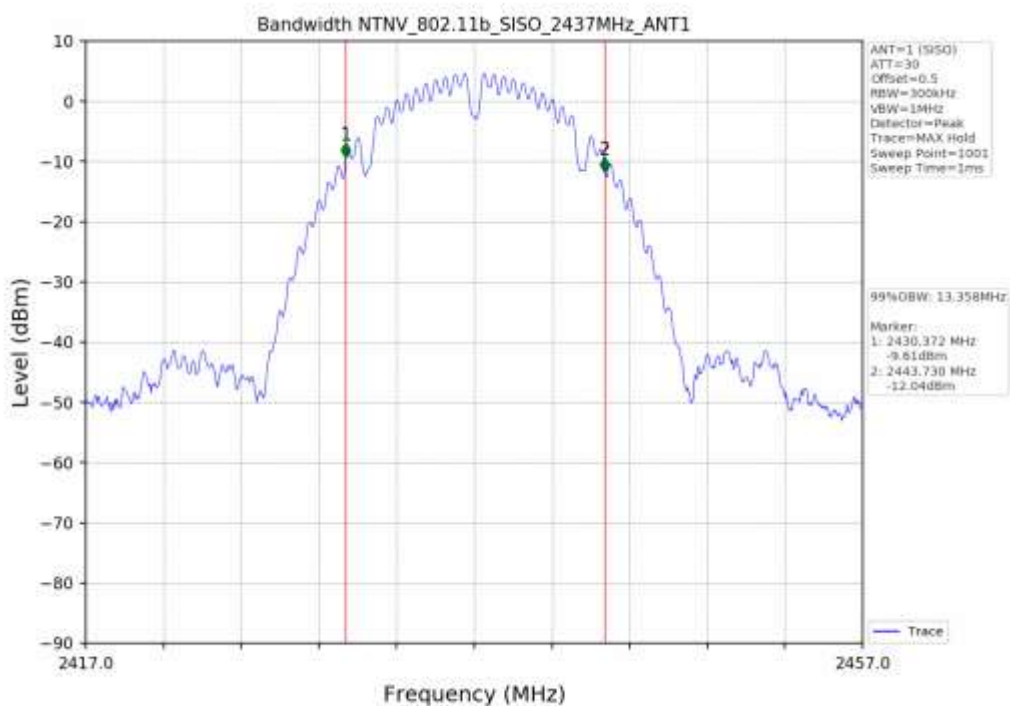


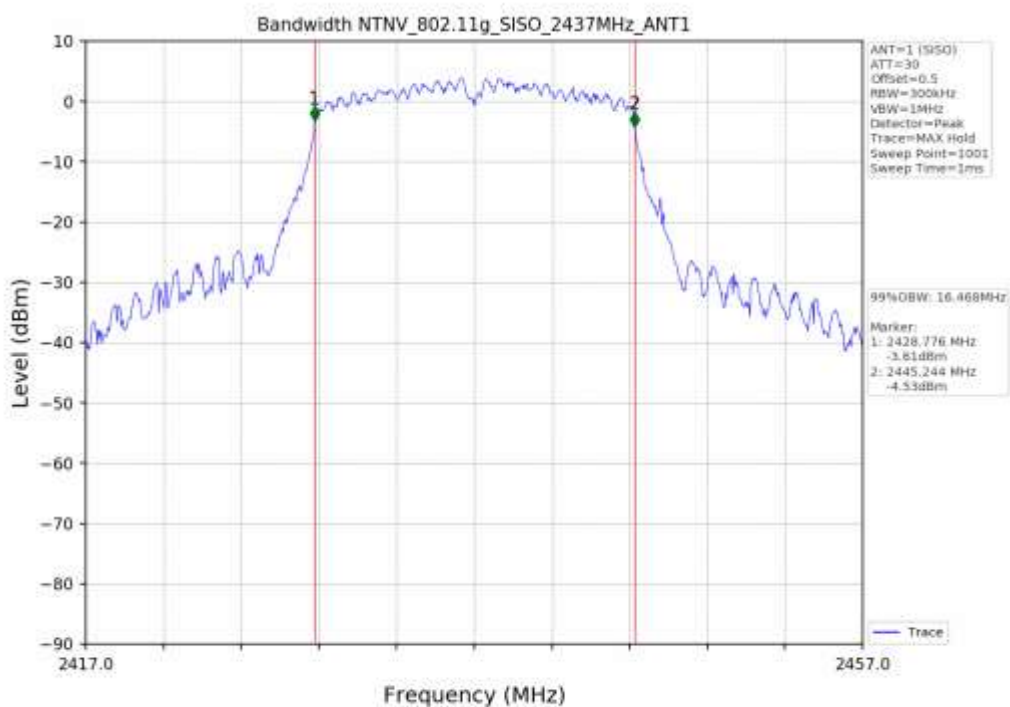
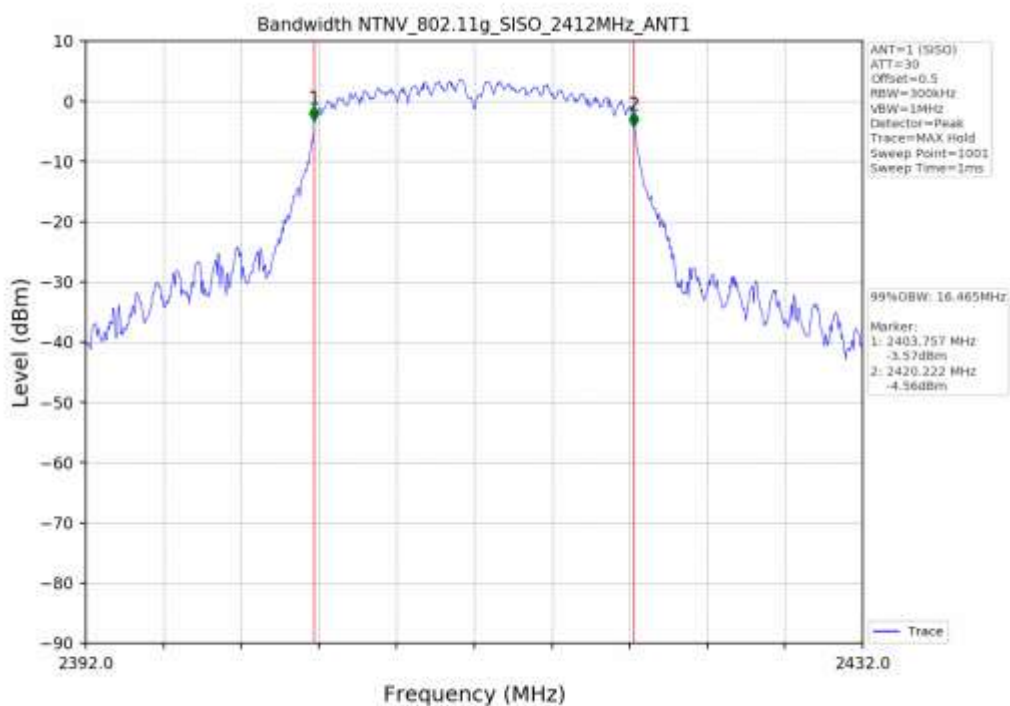


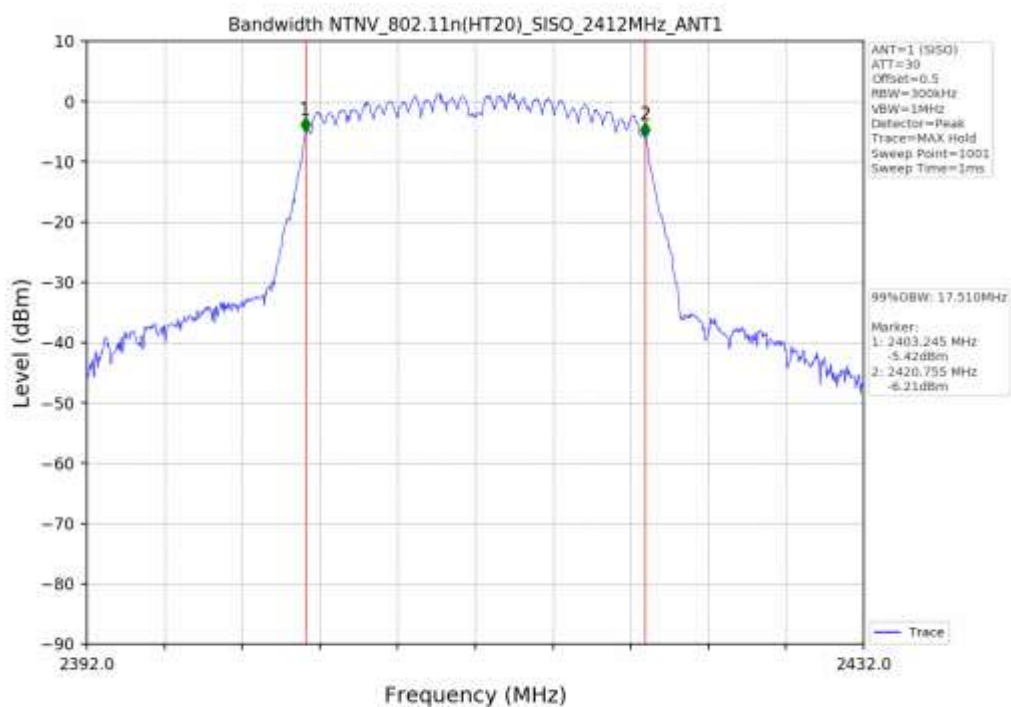
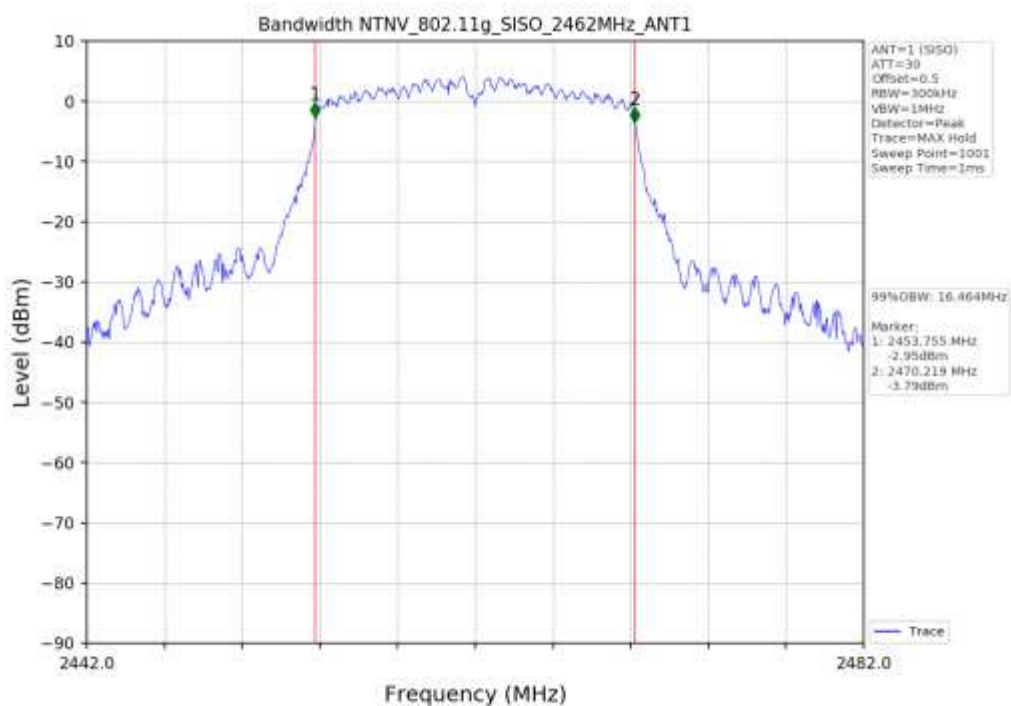
2.3 Test Graph - 99% Occupied Bandwidth

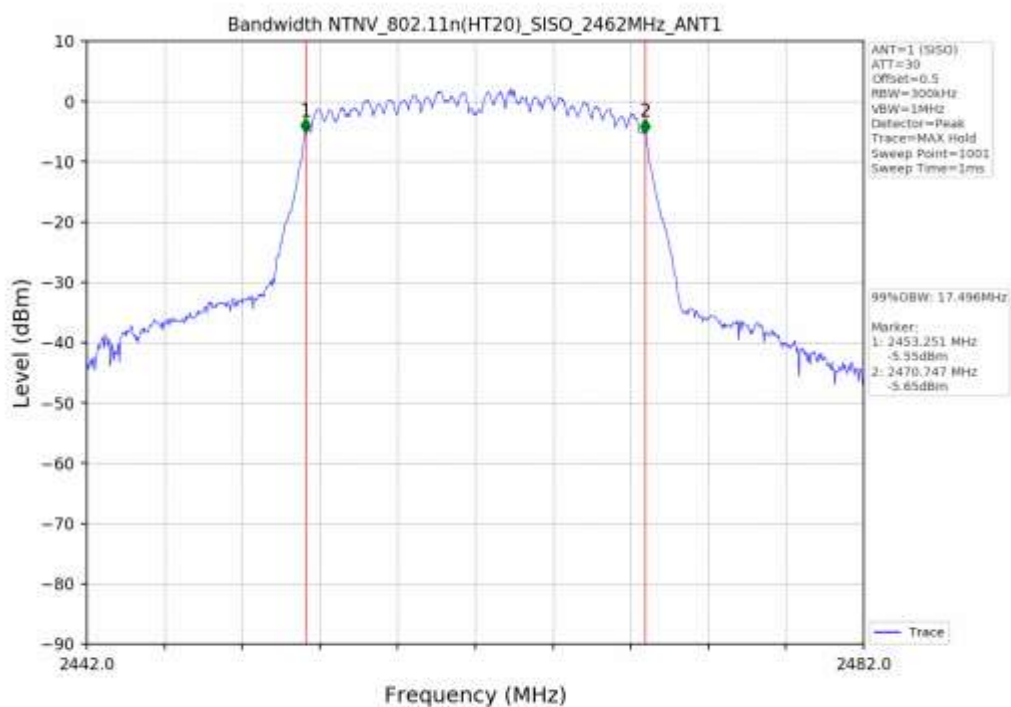
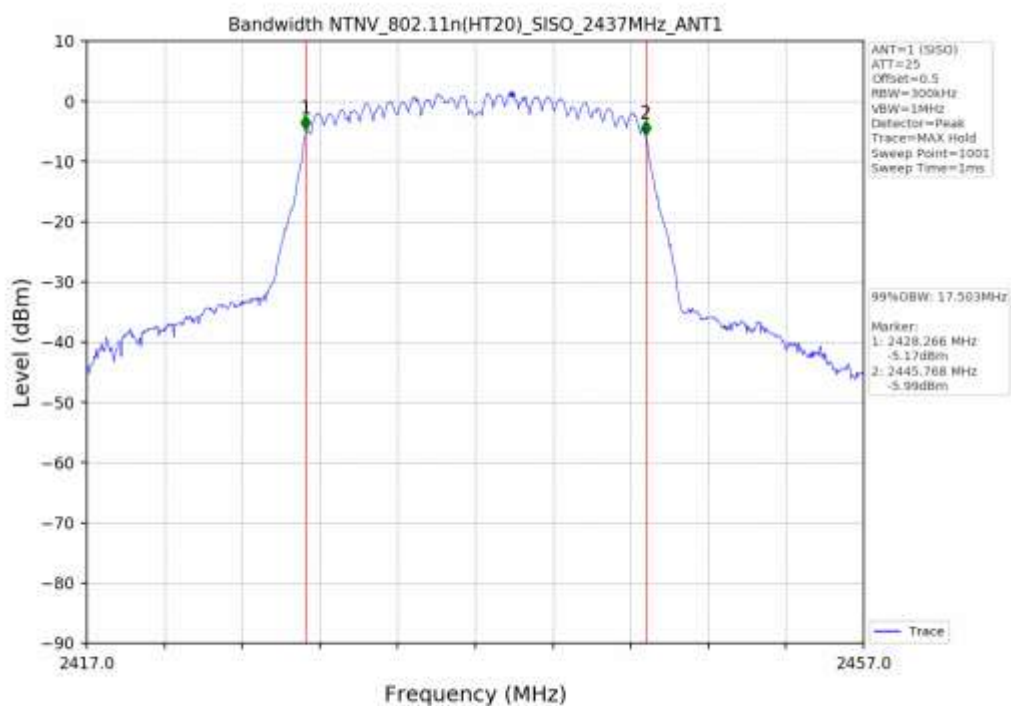
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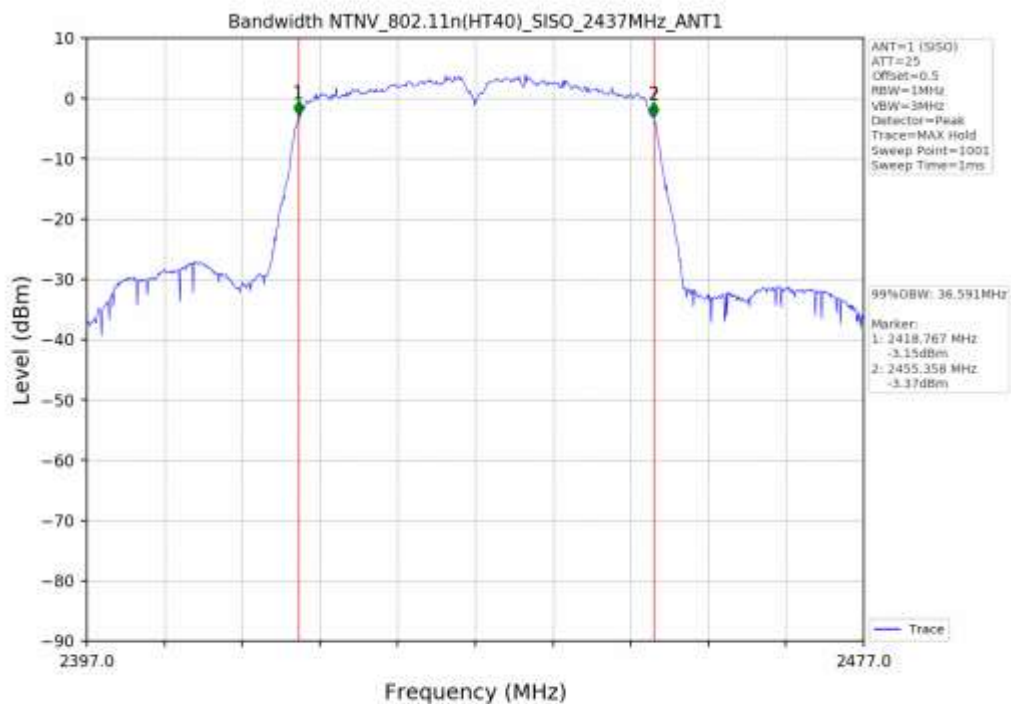
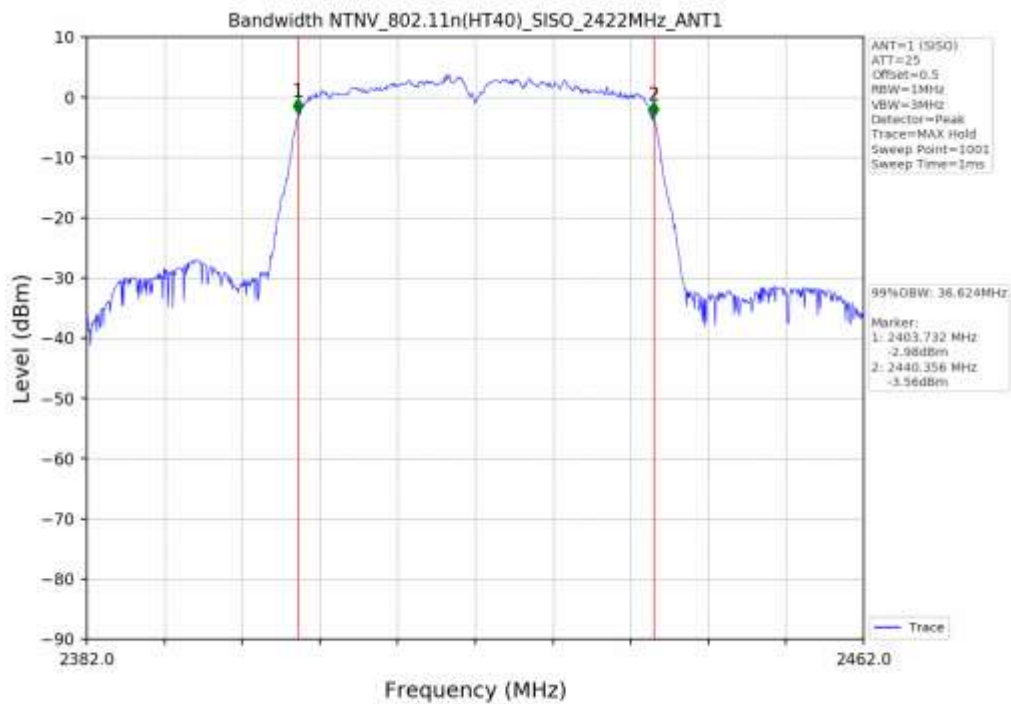


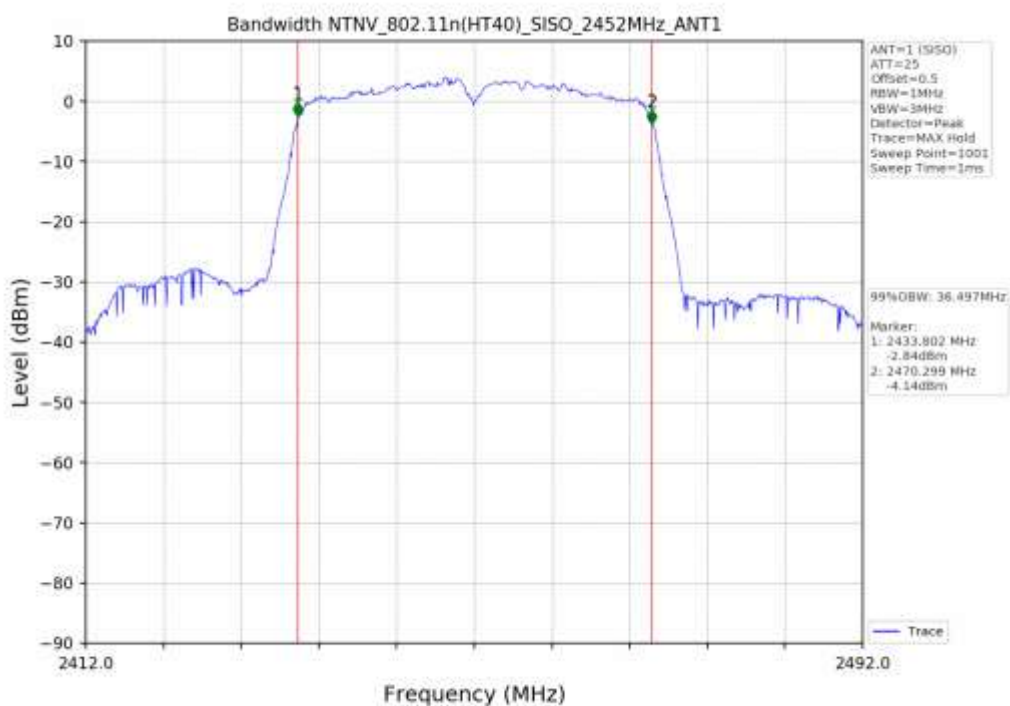




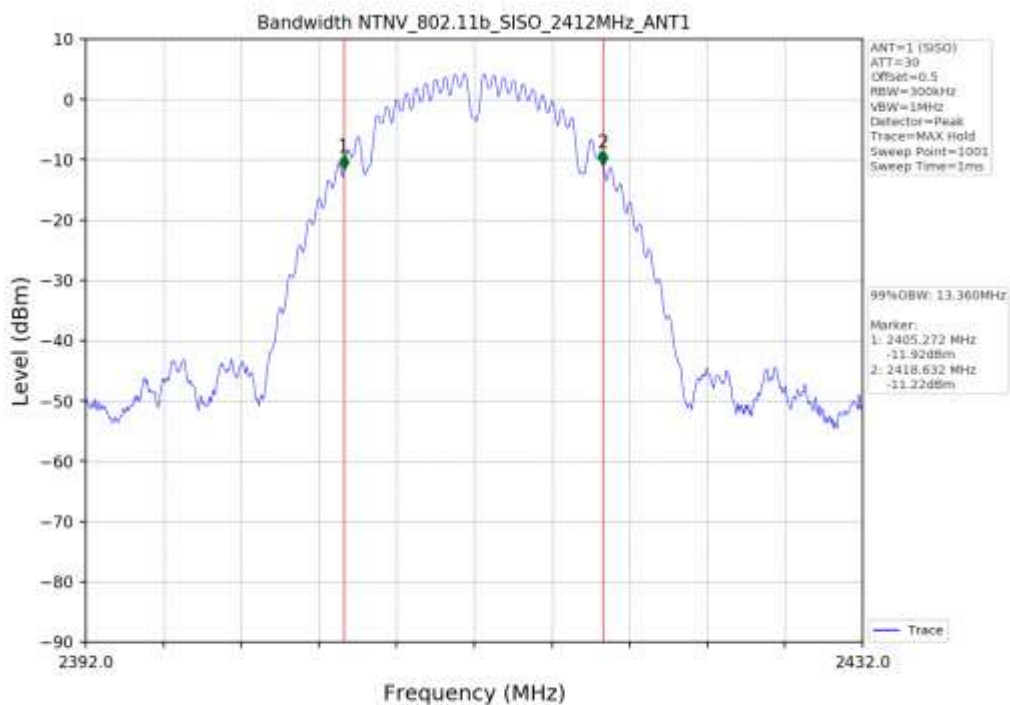


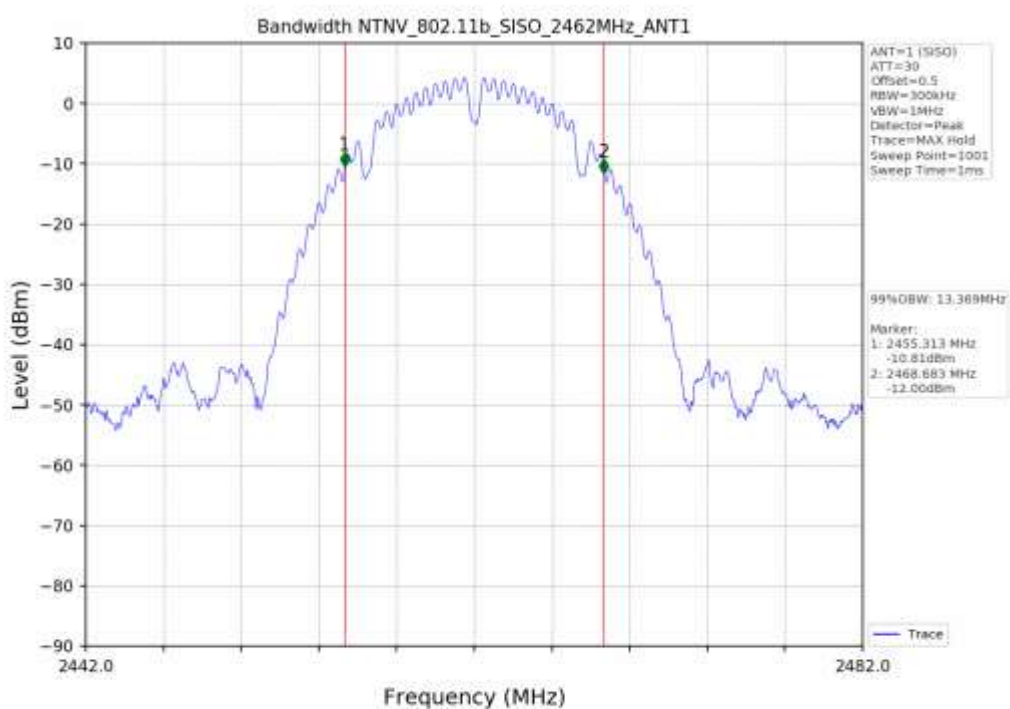
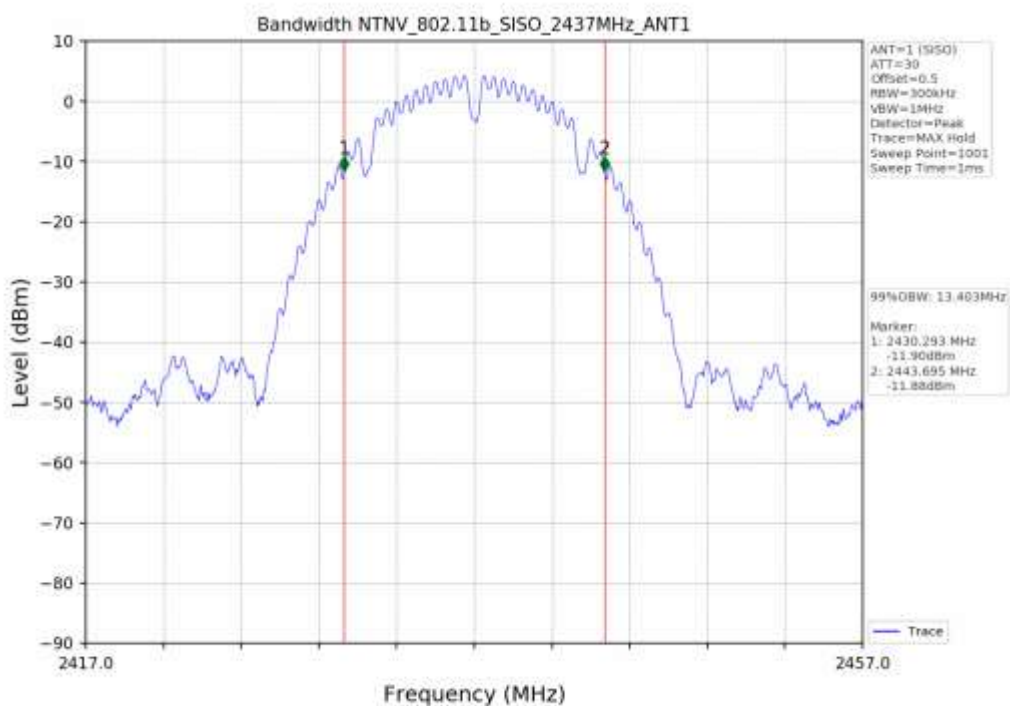


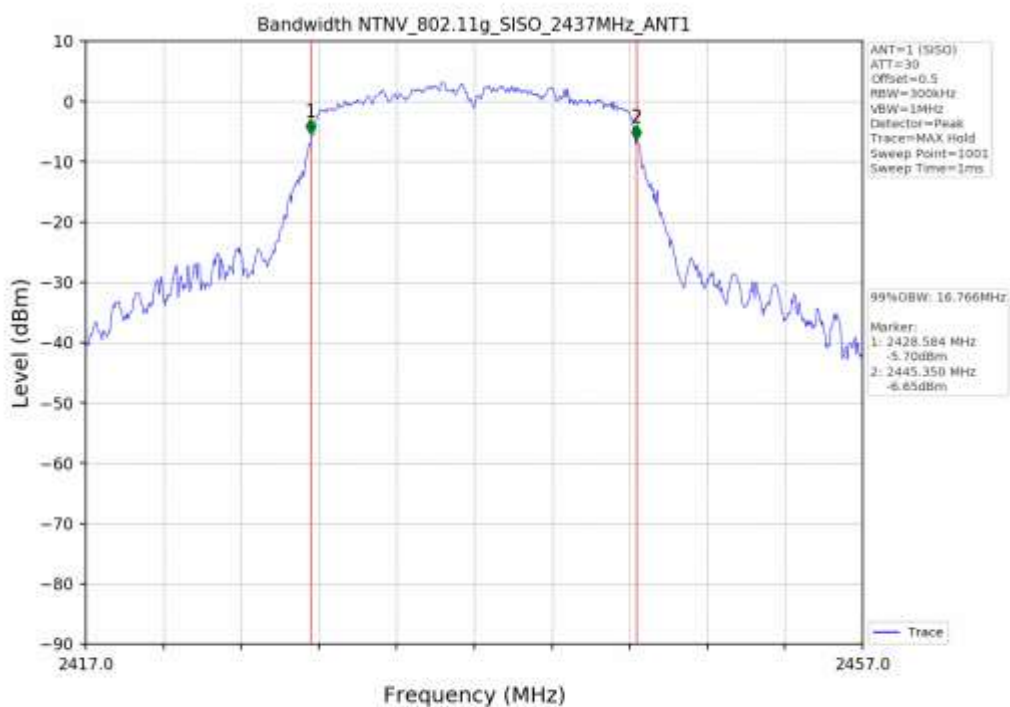
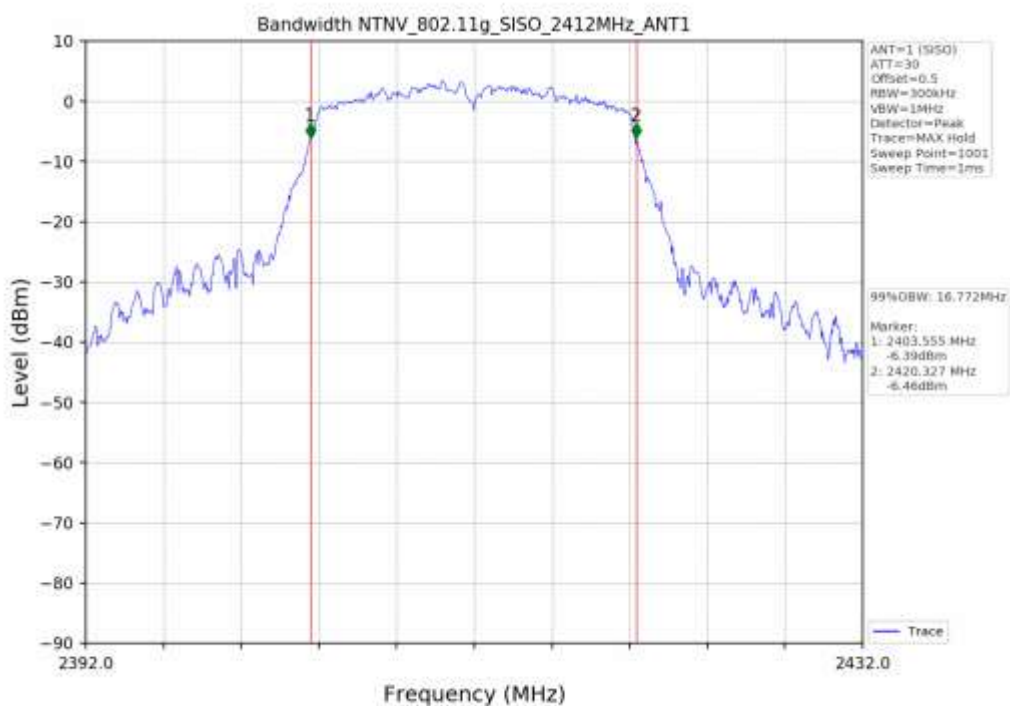


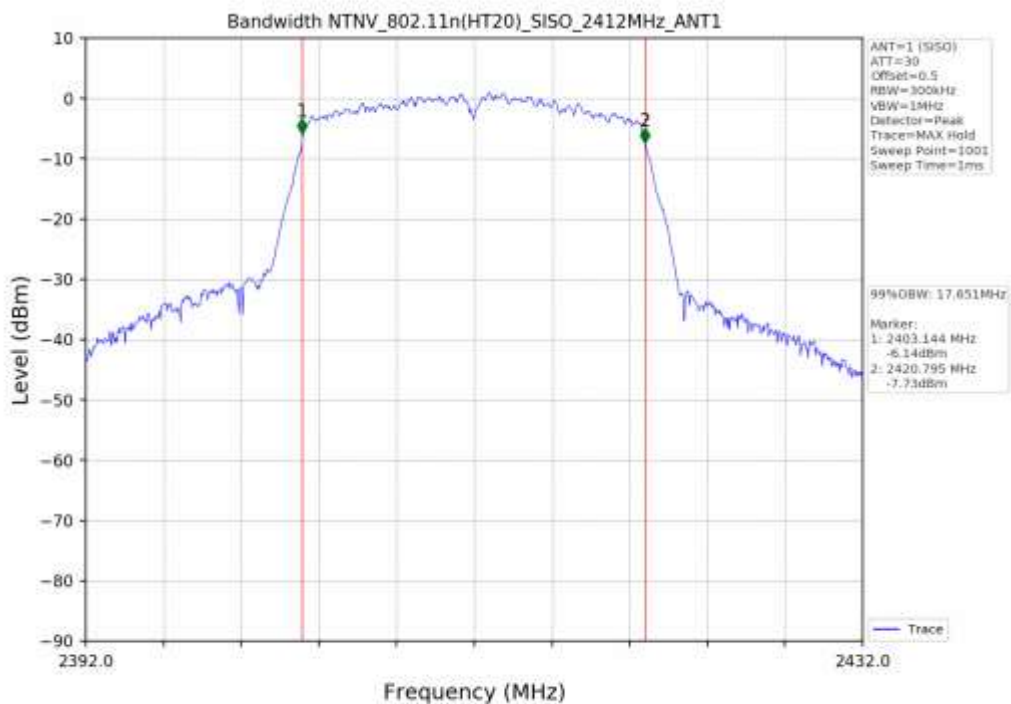
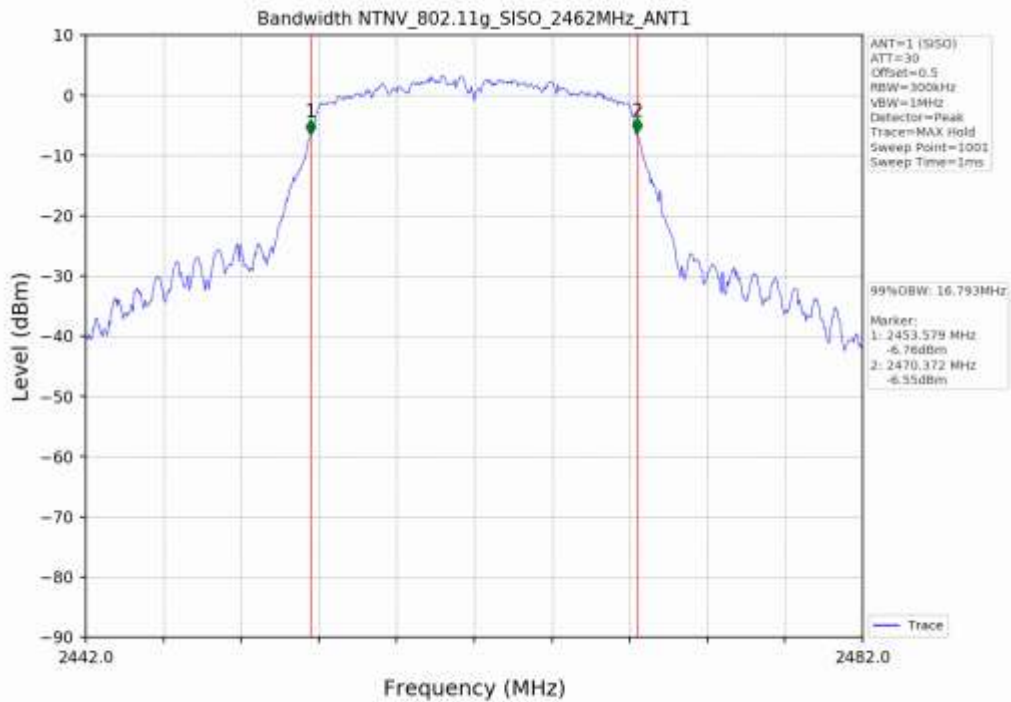


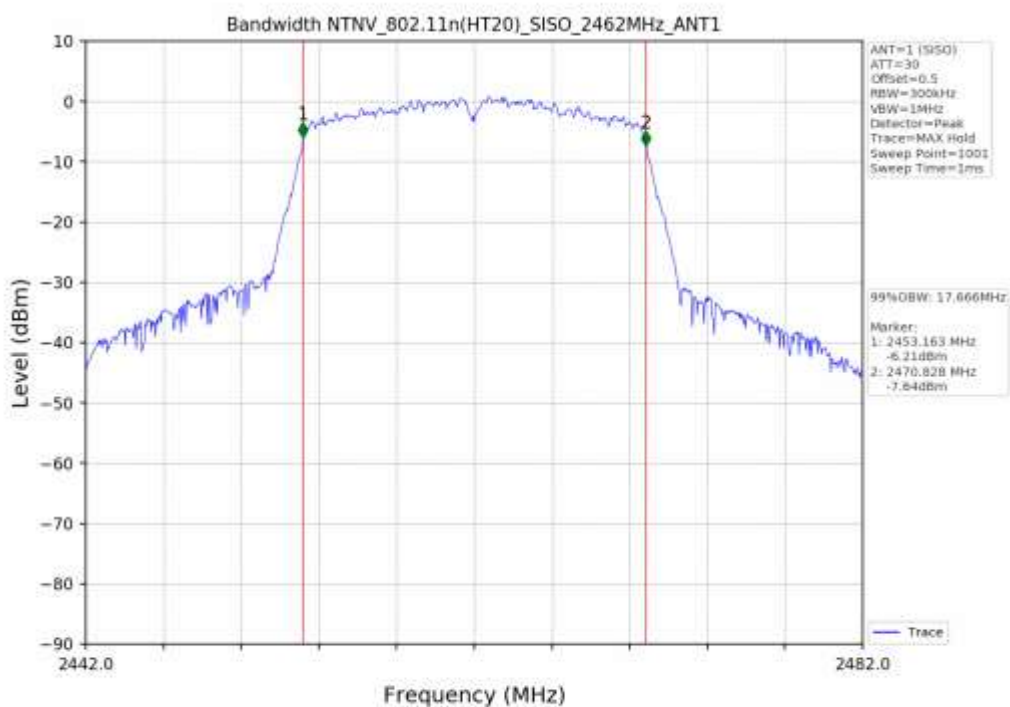
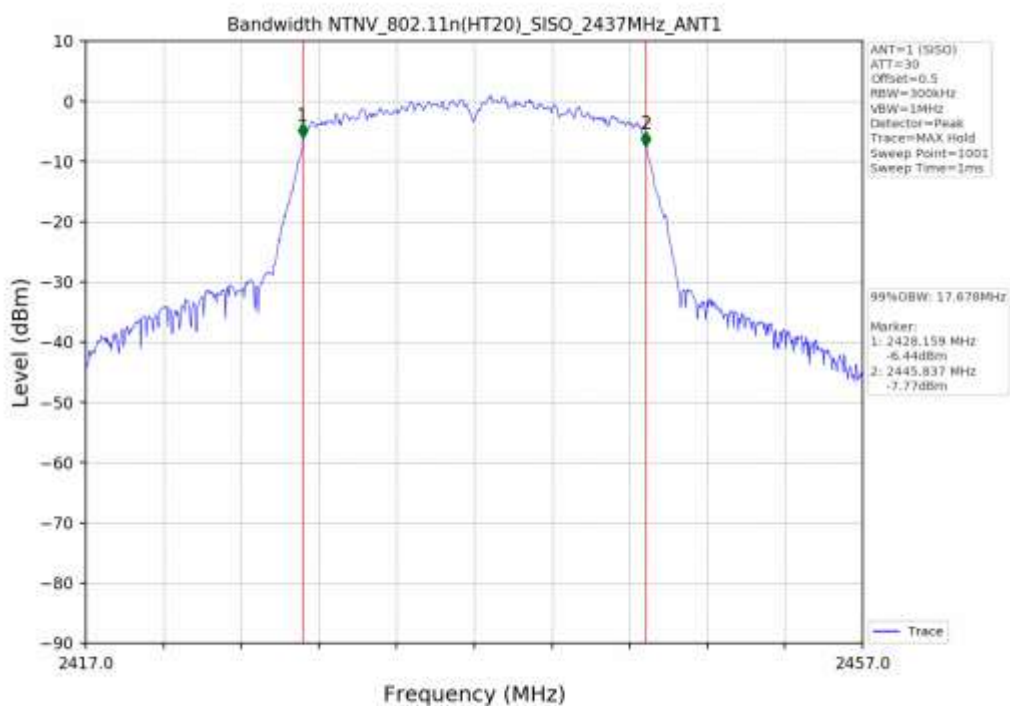
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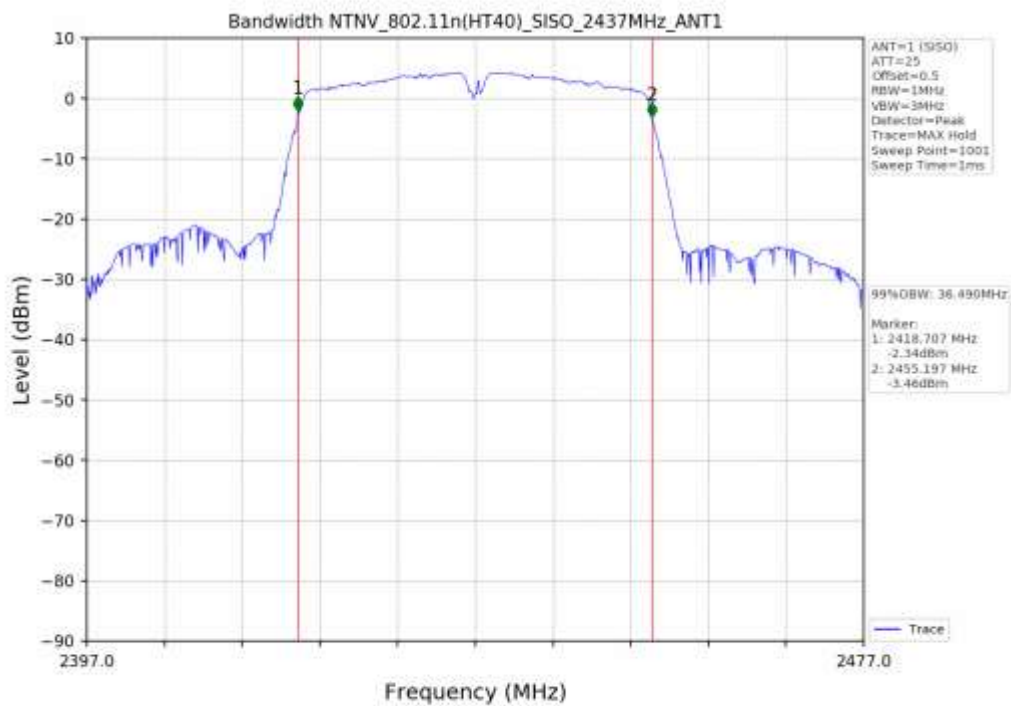
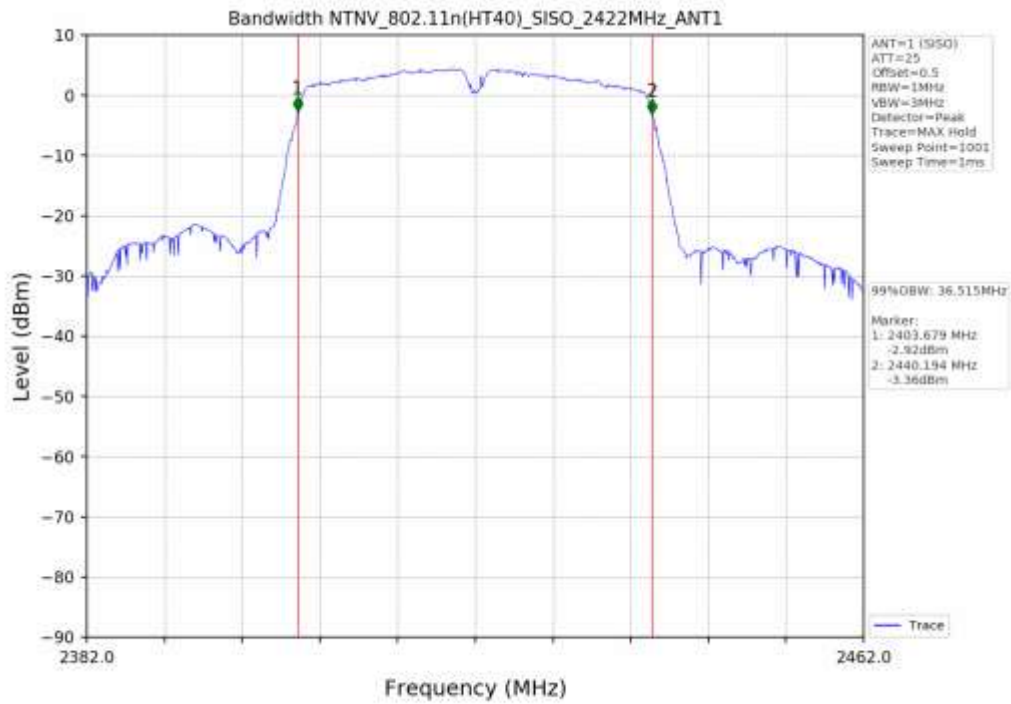


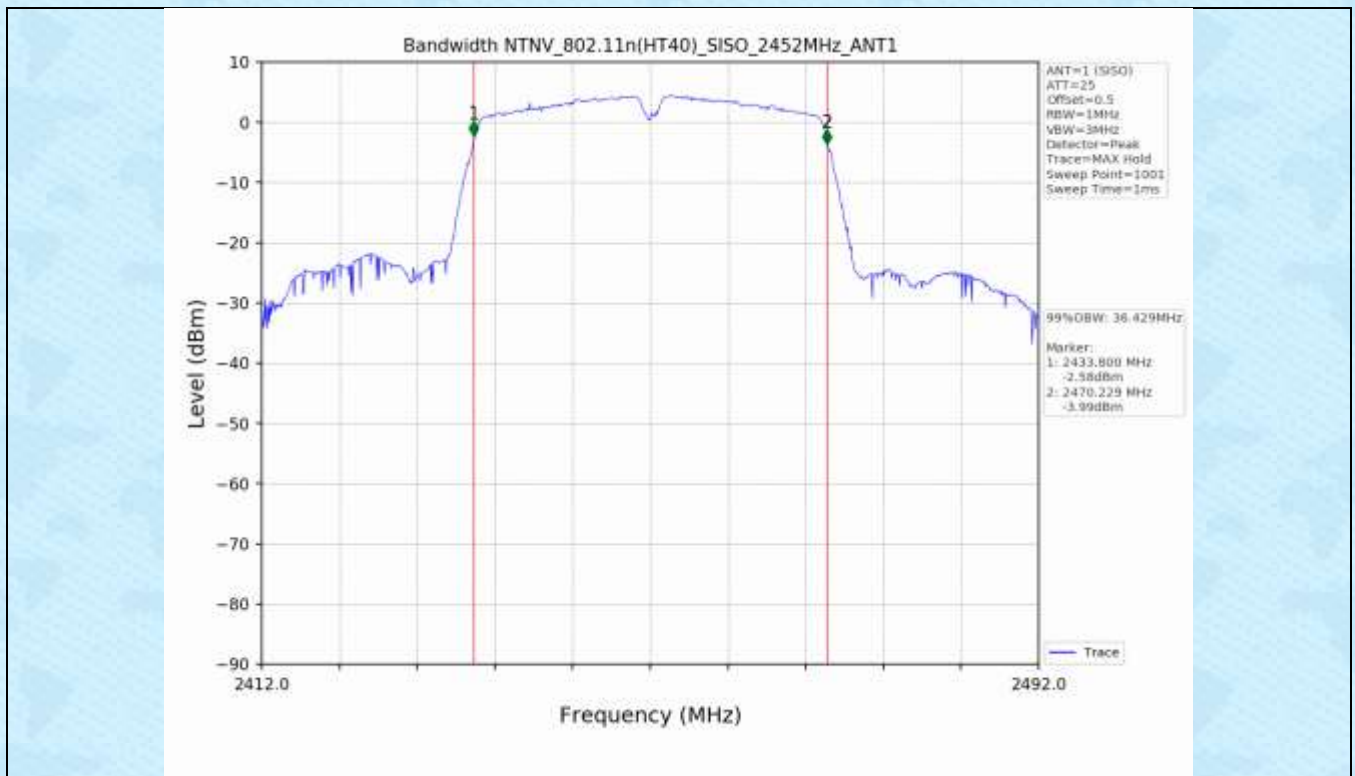












3. Maximum Conducted Output Power

3.1 Test Result

Test Mode	Frequency (MHz)	Tx Type	Measured Peak Output Power (dBm)	Limits (dBm)	Verdict
802.11b	2412	1	14.80	30	PASS
	2412	2	14.72	30	PASS
	2437	1	15.13	30	PASS
	2437	2	14.79	30	PASS
	2462	1	15.28	30	PASS
	2462	2	14.78	30	PASS
802.11g	2412	1	19.10	30	PASS
	2412	2	19.04	30	PASS
	2437	1	19.33	30	PASS
	2437	2	18.87	30	PASS
	2462	1	19.49	30	PASS
	2462	2	18.93	30	PASS
802.11n(HT20)	2412	1	16.65	30	PASS
	2412	2	16.59	30	PASS
	2412	Total	19.63	28.69	PASS
	2437	1	16.71	30	PASS
	2437	2	16.37	30	PASS
	2437	Total	19.55	28.69	PASS
	2462	1	17.03	30	PASS
	2462	2	16.58	30	PASS
802.11n(HT40)	2422	1	16.54	30	PASS
	2422	2	17.99	30	PASS
	2422	Total	20.34	28.69	PASS
	2437	1	16.77	30	PASS
	2437	2	17.92	30	PASS
	2437	Total	20.39	28.69	PASS
	2452	1	16.77	30	PASS
	2452	2	17.92	30	PASS
	2452	Total	20.39	28.69	PASS

Note: transmit signals are completely *correlated*,

Directional gain= $10 \times \log[(10^{4.4/20} + 10^{4.2/20})/2]$ =7.31dBi

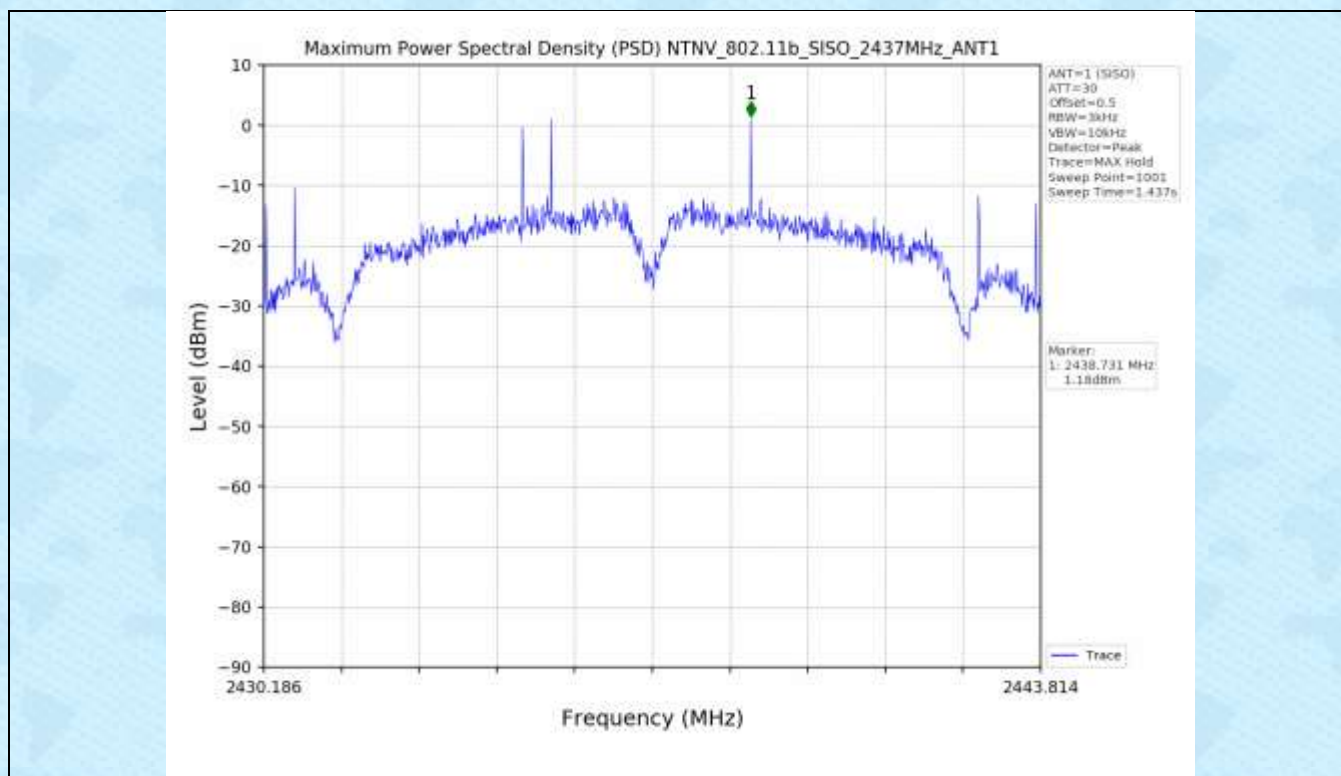
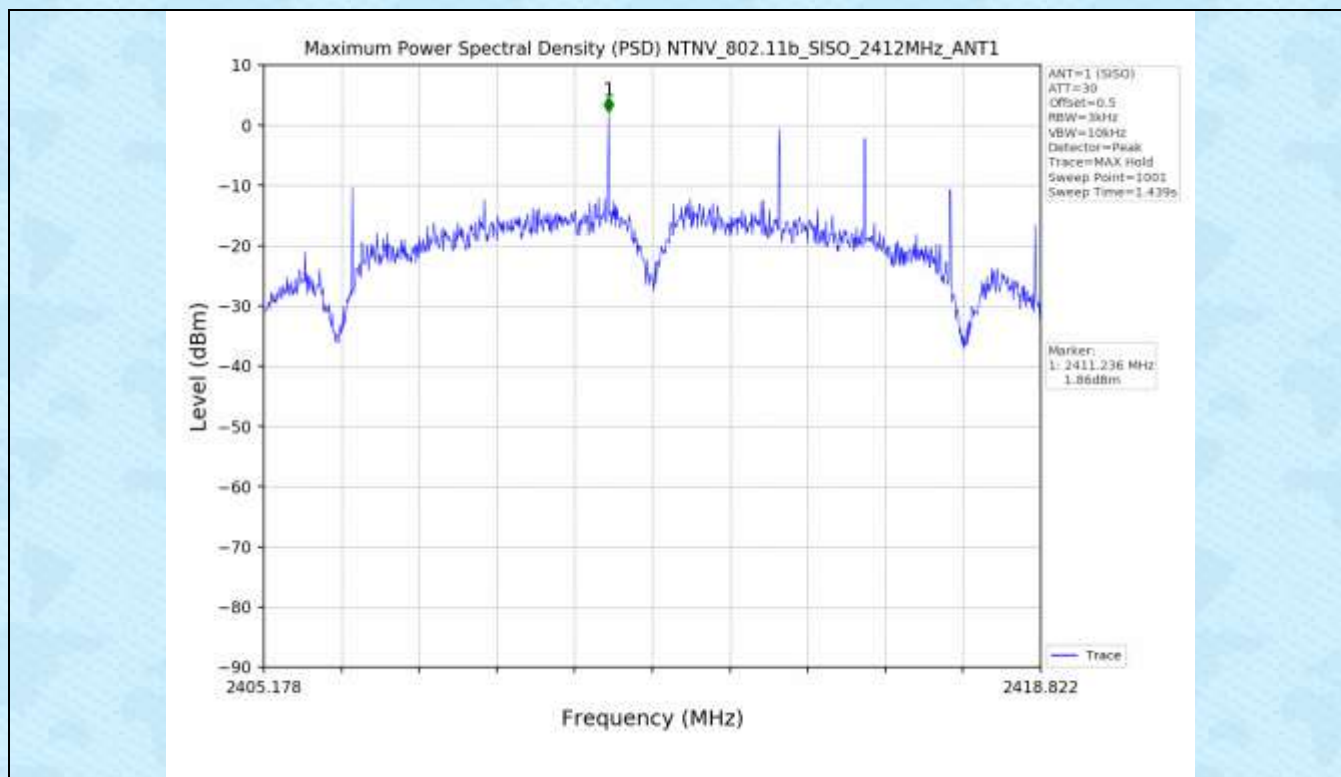
4. Maximum Power Spectral Density (PSD)

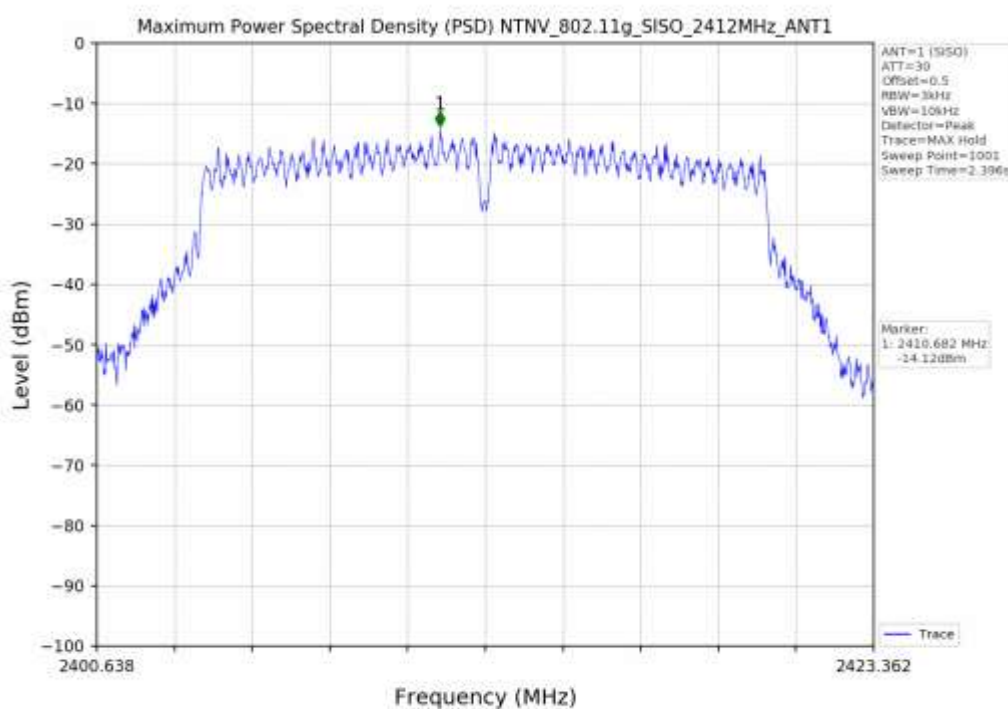
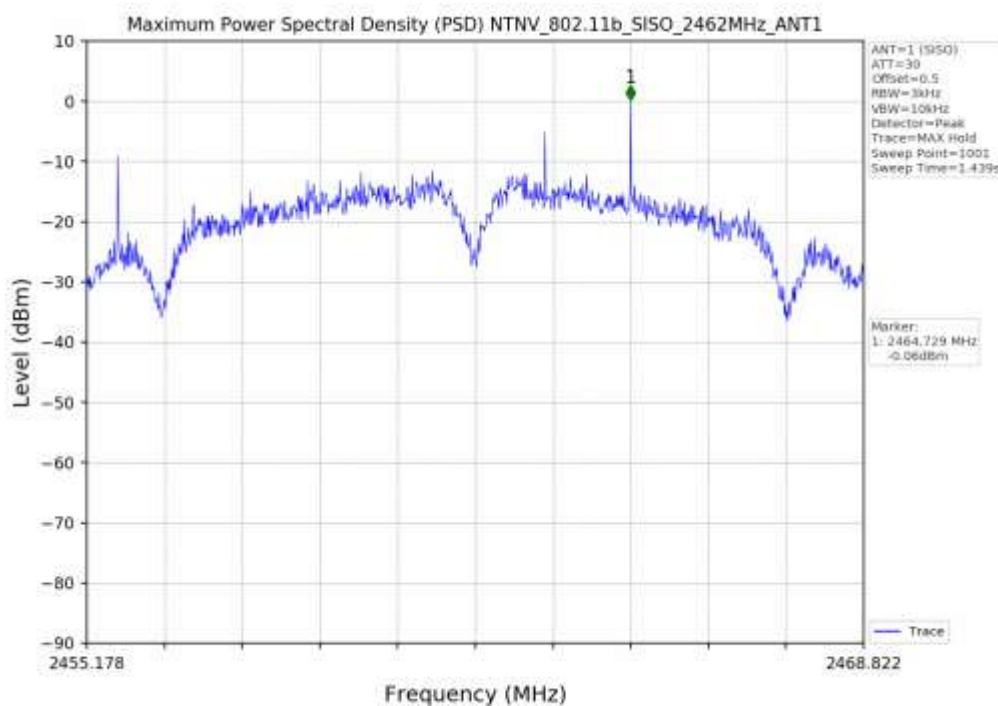
4.1 Test Result

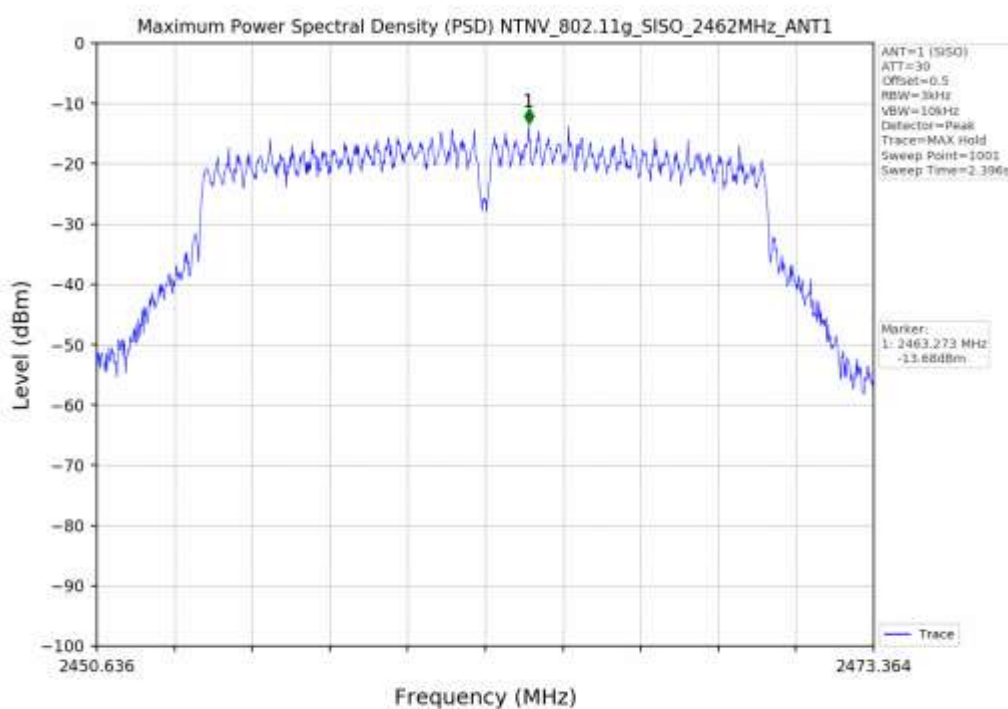
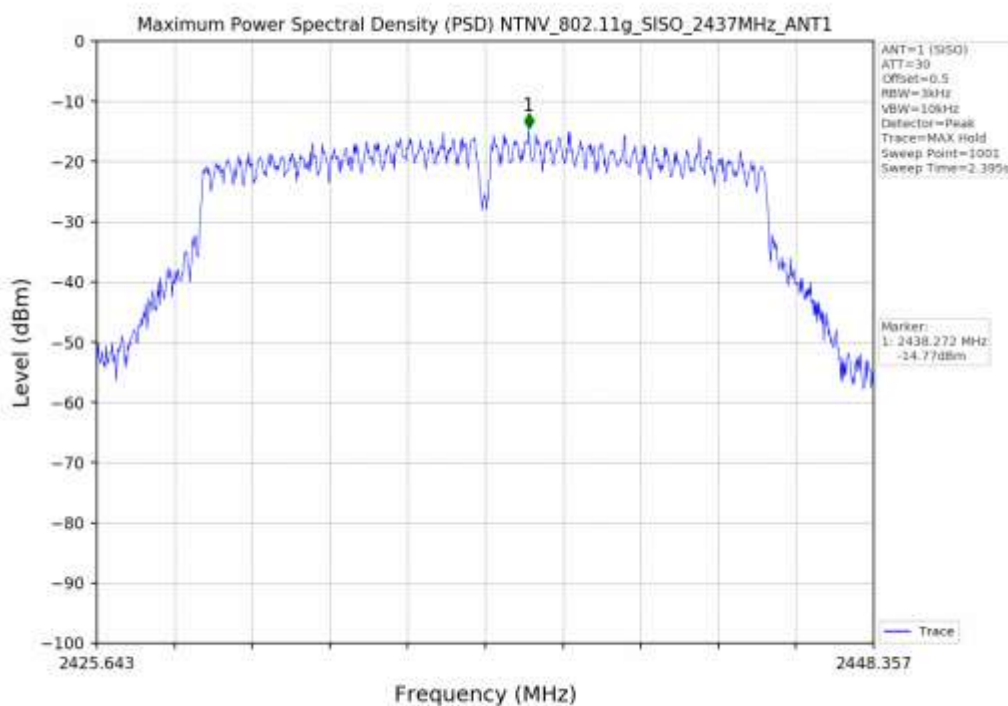
Test Mode	Frequency (MHz)	Tx Type	Maximum Power Spectral Density (dBm/3KHz)	Limits (dBm/3kHz)	Verdict
802.11b	2412	1	1.86	≤8	PASS
	2412	2	1.99	≤8	PASS
	2437	1	1.18	≤8	PASS
	2437	2	-4.30	≤8	PASS
	2462	1	-0.06	≤8	PASS
	2462	2	1.85	≤8	PASS
802.11g	2412	1	-14.12	≤8	PASS
	2412	2	-14.65	≤8	PASS
	2437	1	-14.77	≤8	PASS
	2437	2	-12.65	≤8	PASS
	2462	1	-13.68	≤8	PASS
	2462	2	-13.48	≤8	PASS
802.11n(HT20)	2412	1	-15.55	≤8	PASS
	2412	2	-16.81	≤8	PASS
	2412	Total	-13.12	≤6.69	PASS
	2437	1	-16.74	≤8	PASS
	2437	2	-16.45	≤8	PASS
	2437	Total	-13.58	≤6.69	PASS
	2462	1	-15.67	≤8	PASS
	2462	2	-17.06	≤8	PASS
802.11n(HT40)	2422	1	-20.37	≤8	PASS
	2422	2	-18.82	≤8	PASS
	2422	Total	-16.52	≤6.69	PASS
	2437	1	-20.06	≤8	PASS
	2437	2	-18.56	≤8	PASS
	2437	Total	-16.24	≤6.69	PASS
	2452	1	-19.98	≤8	PASS
	2452	2	-18.72	≤8	PASS
	2452	Total	-16.29	≤6.69	PASS

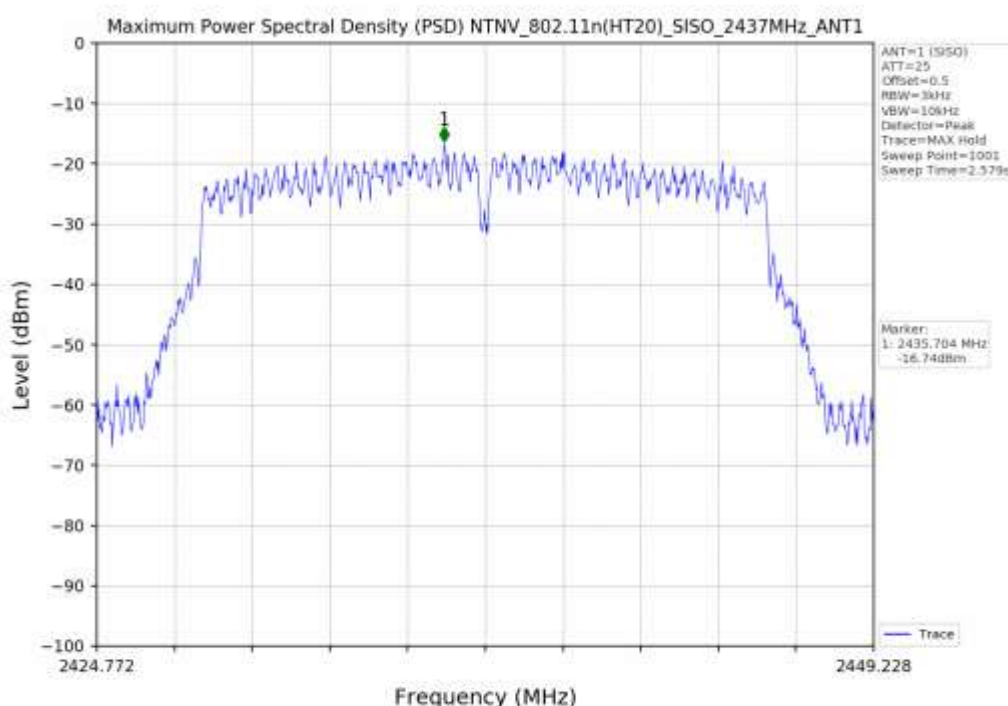
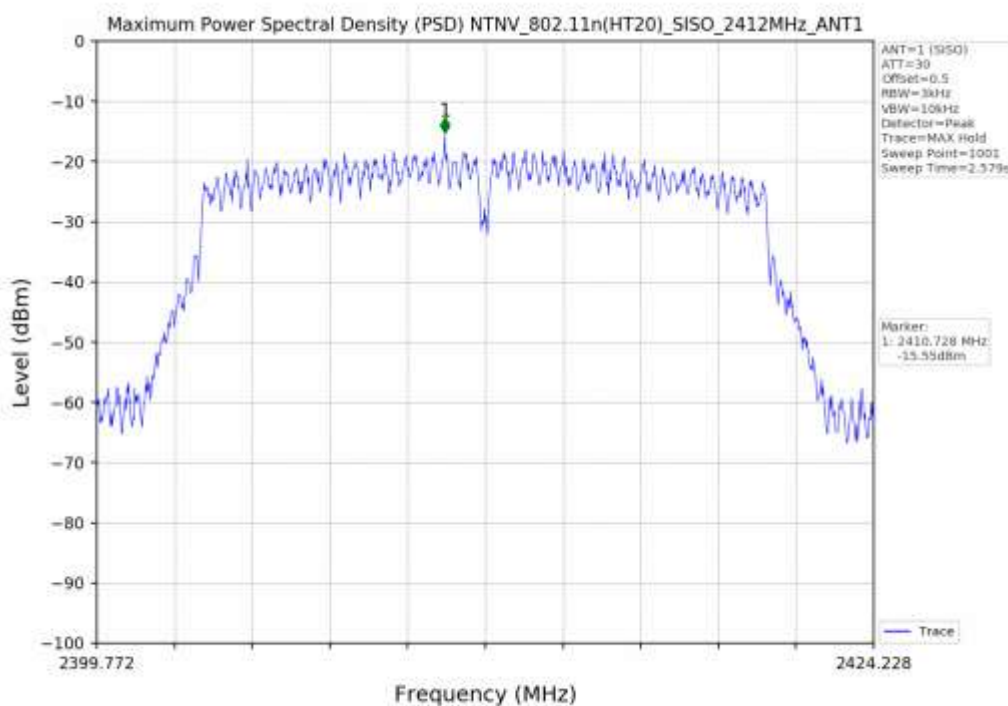
4.2 Test Graph

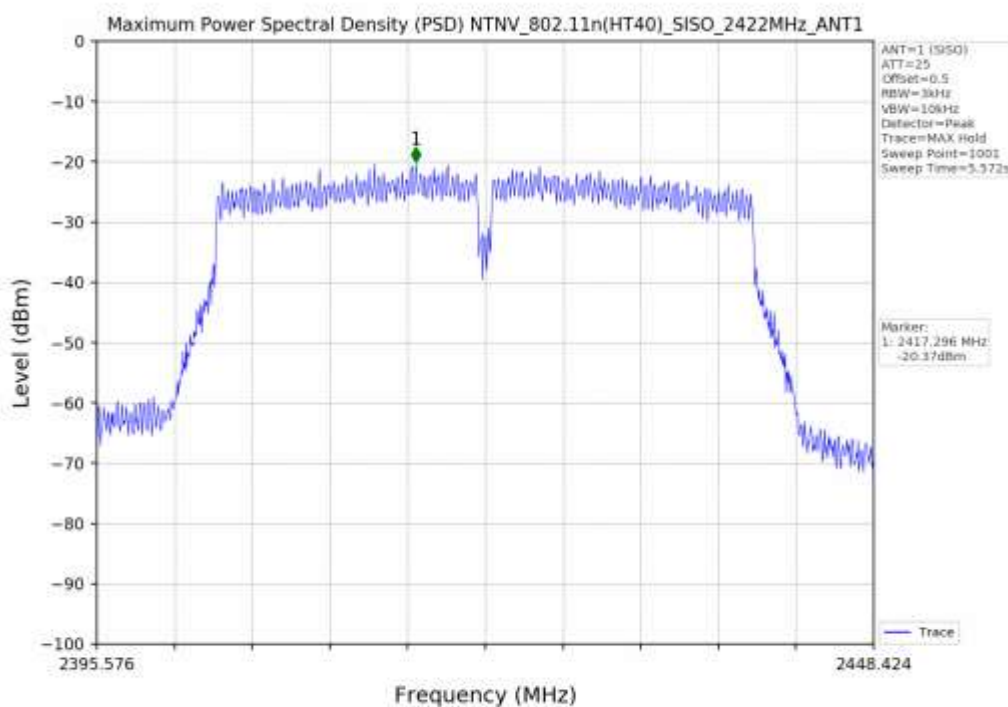
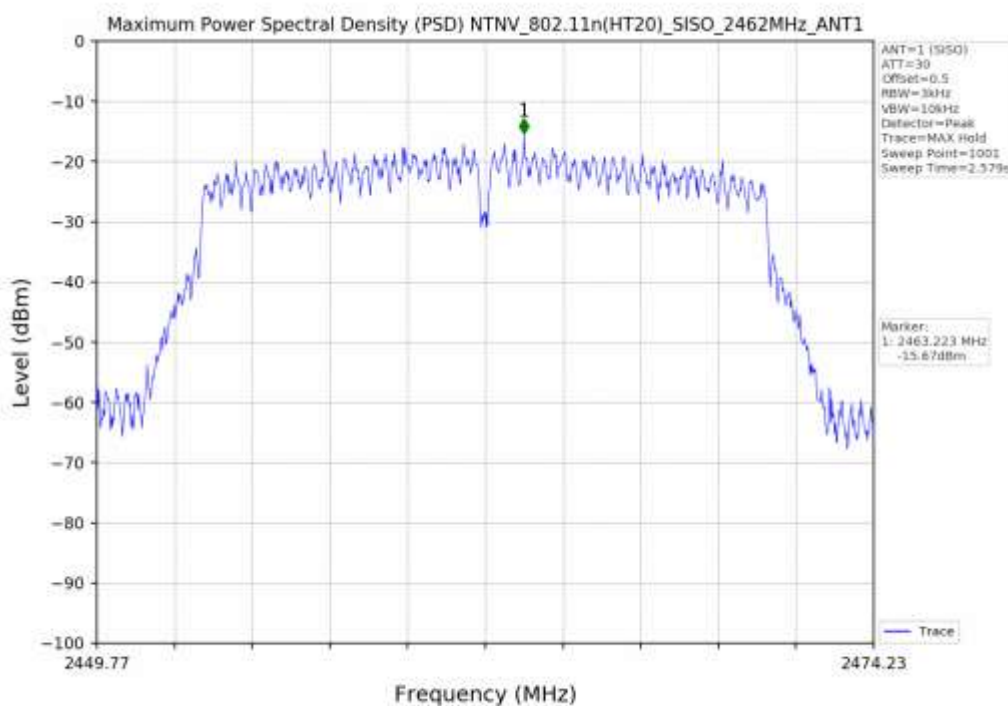
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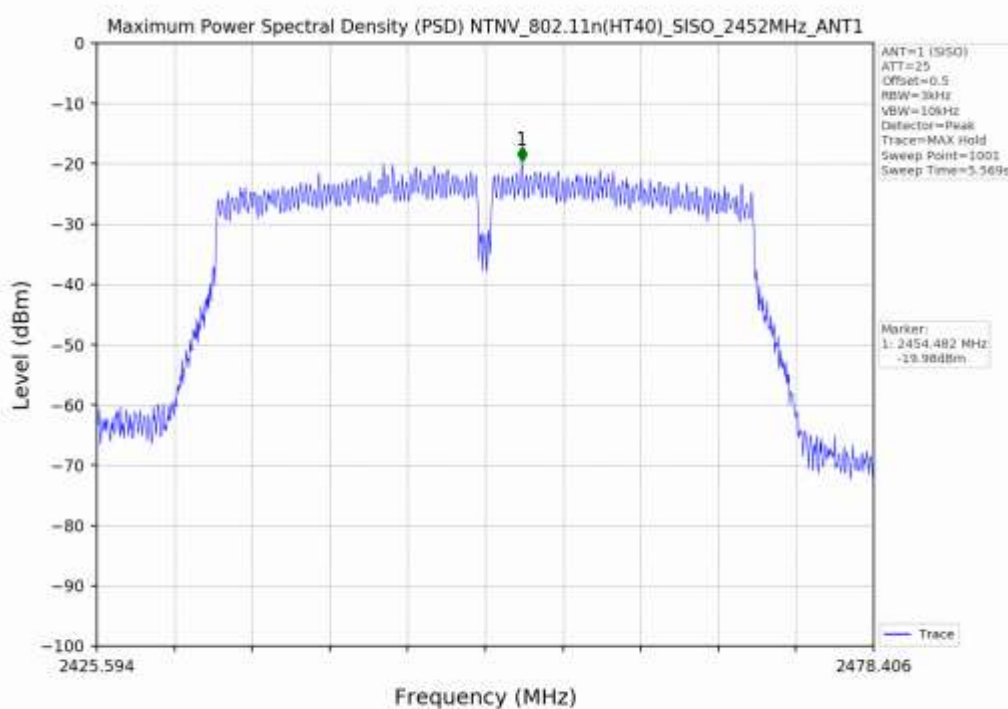
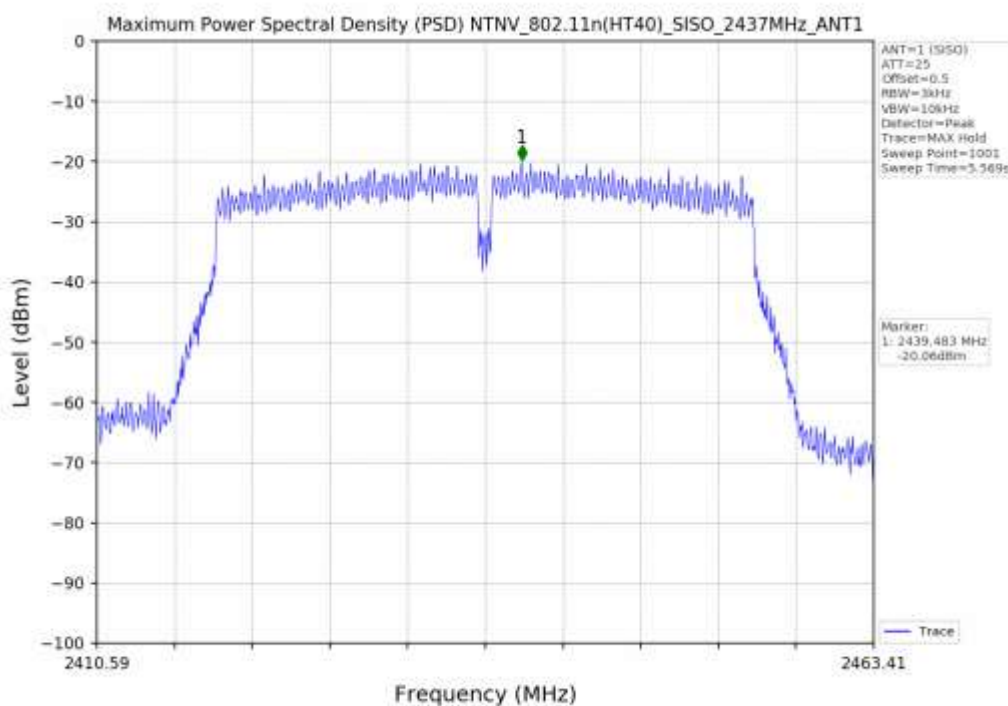




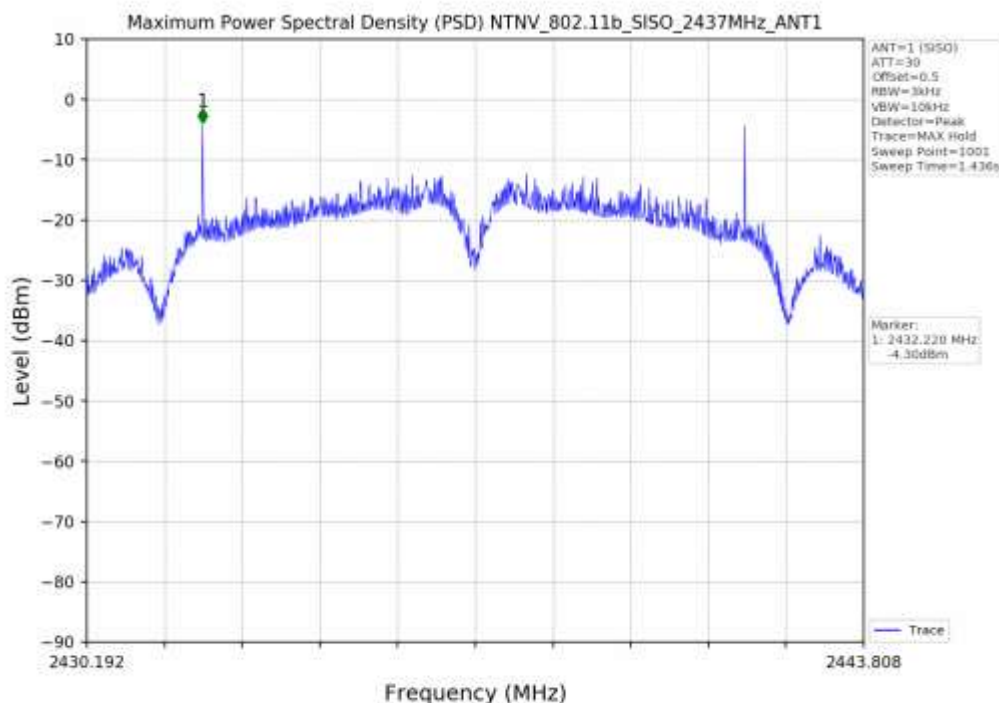
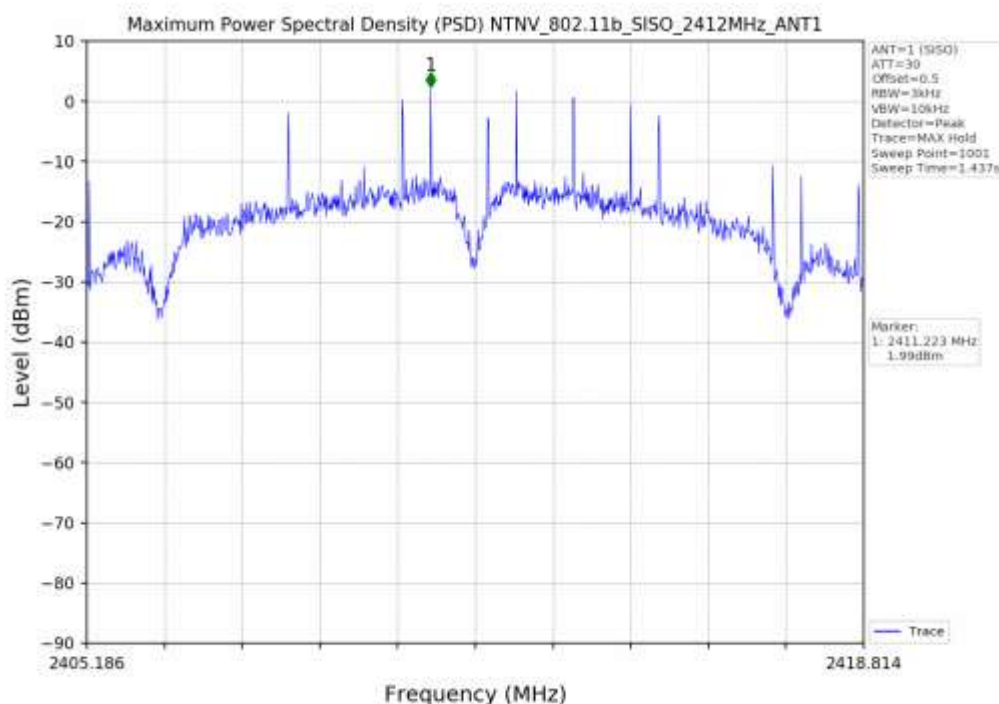


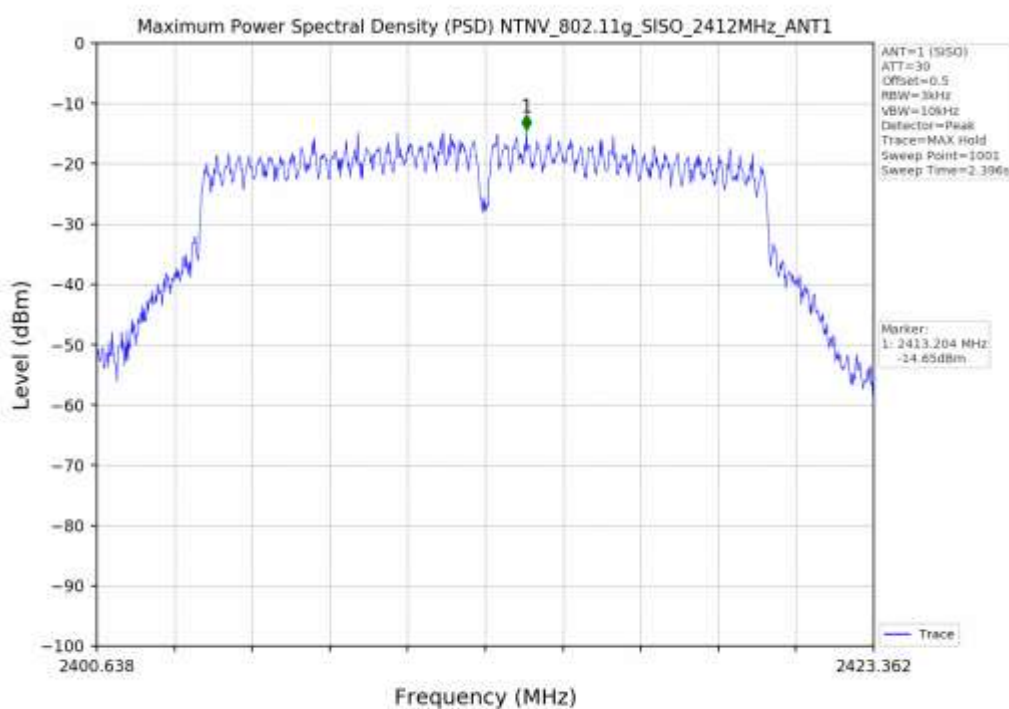
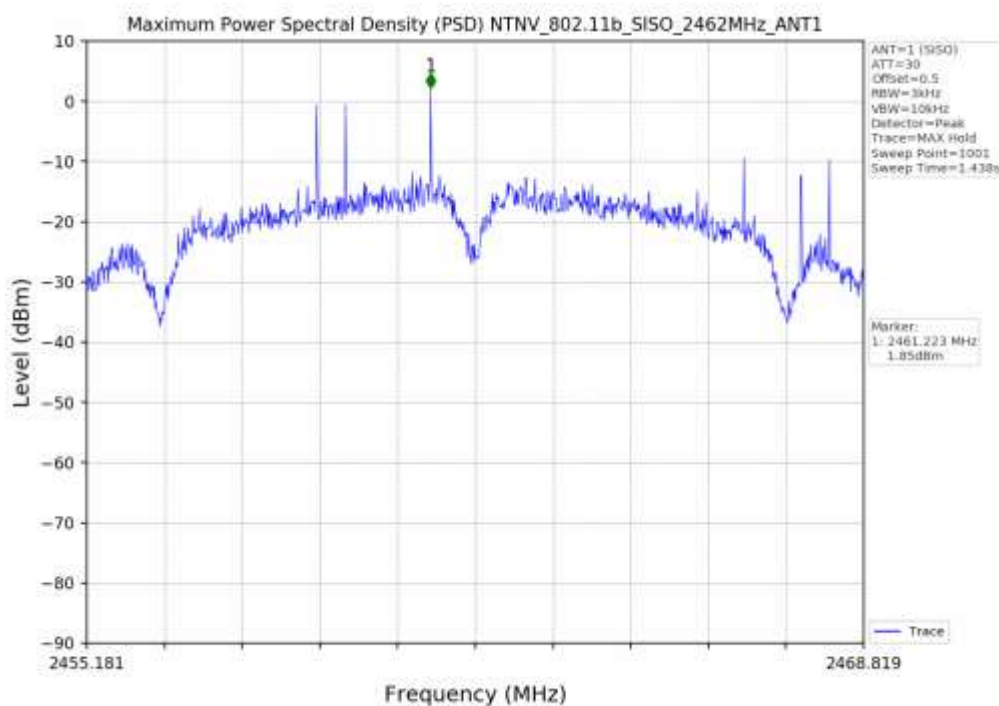


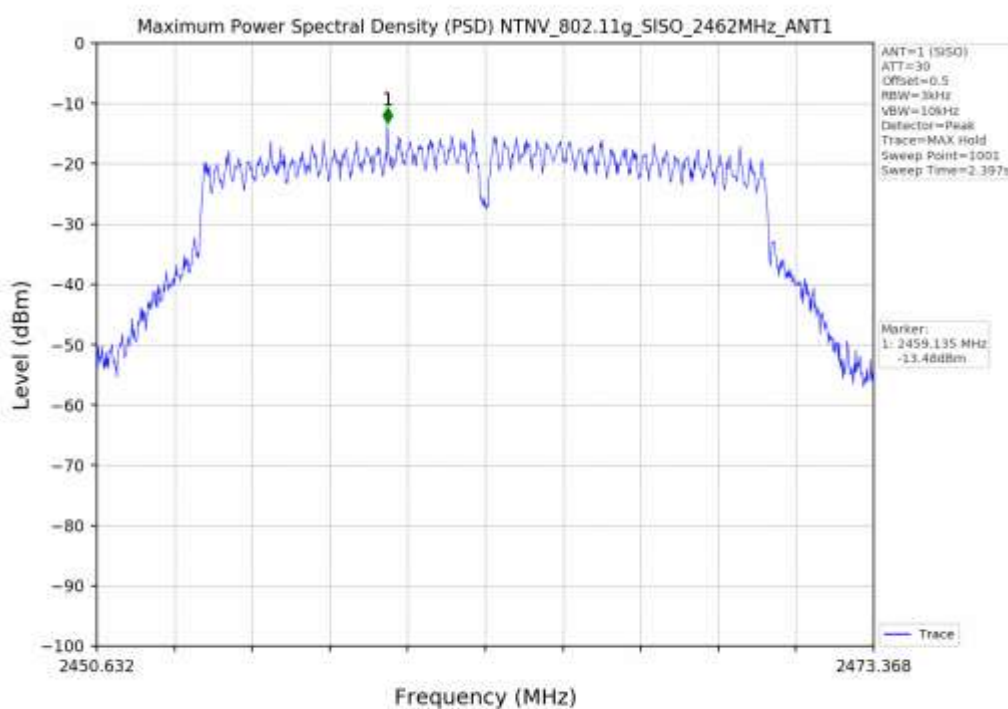
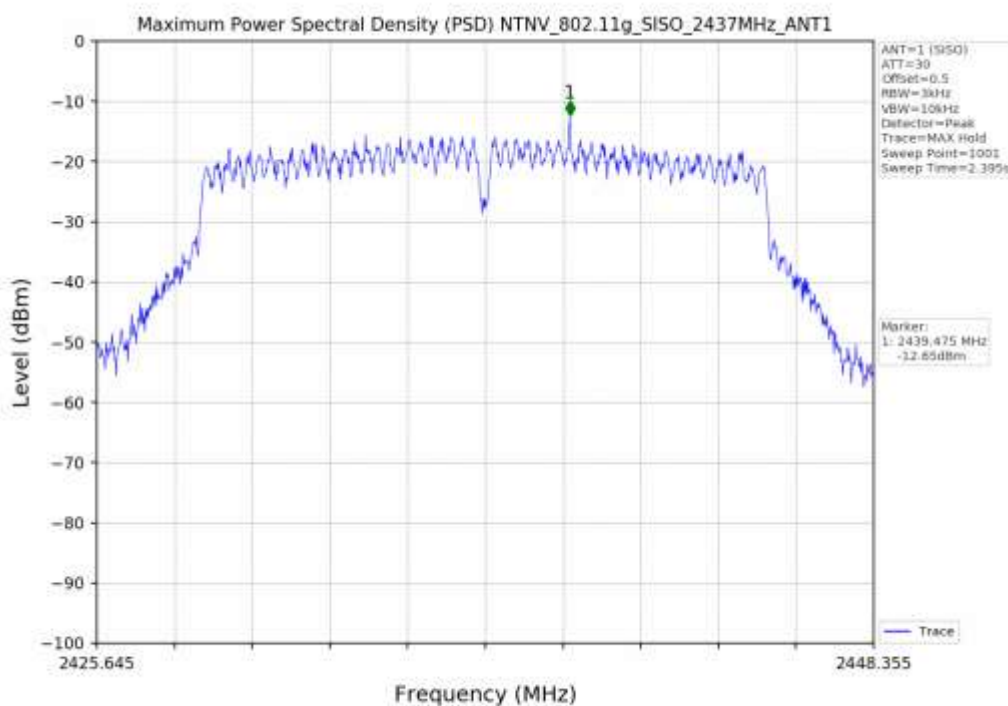


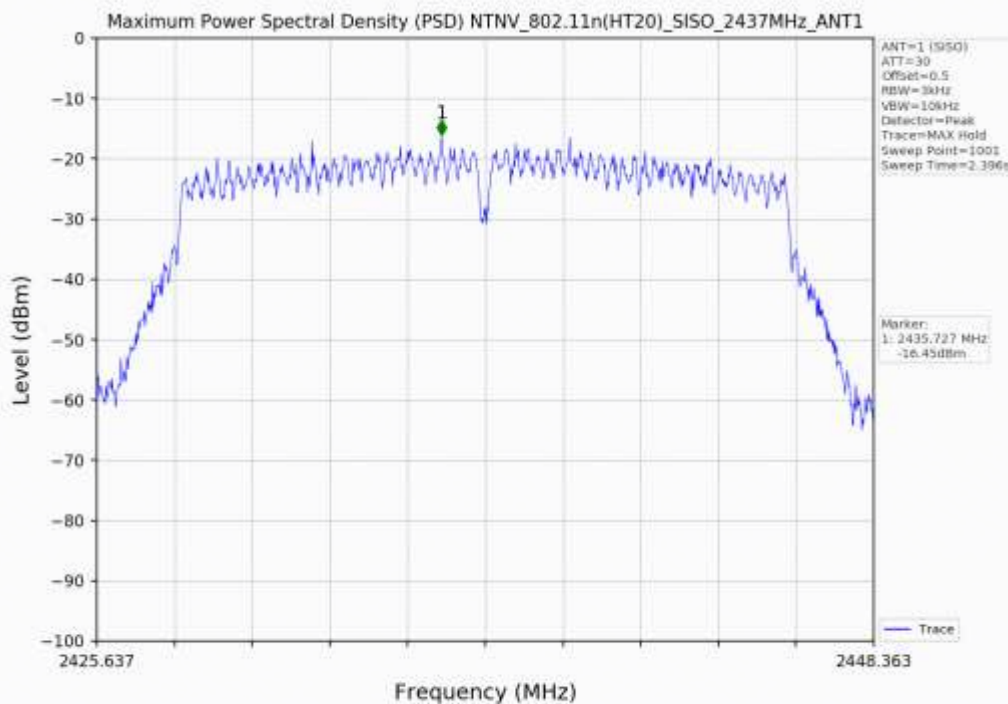
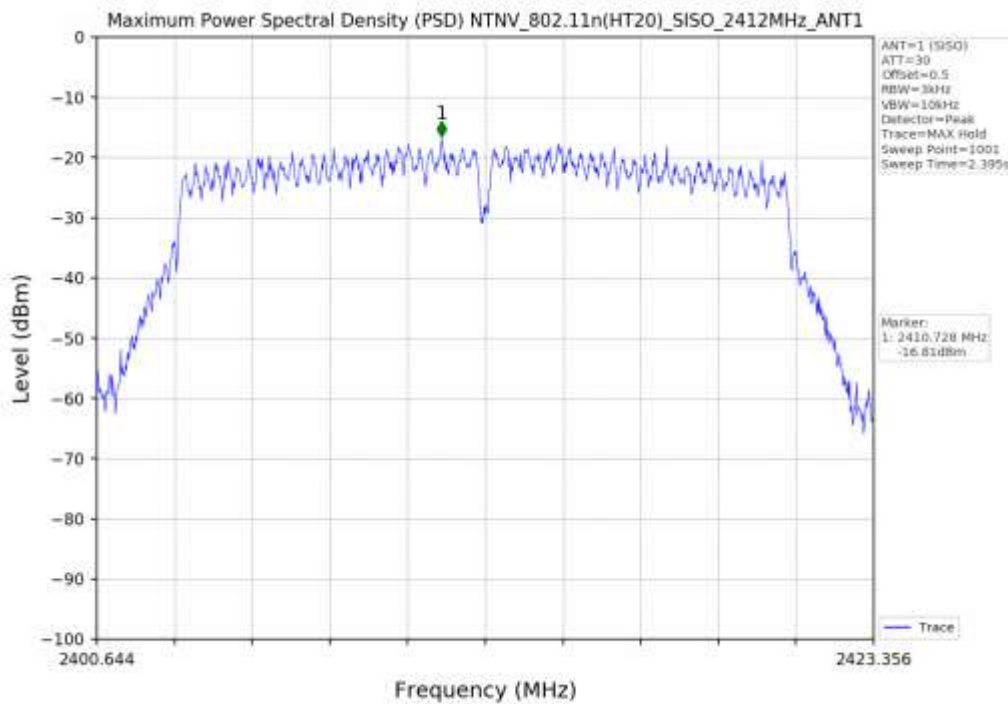


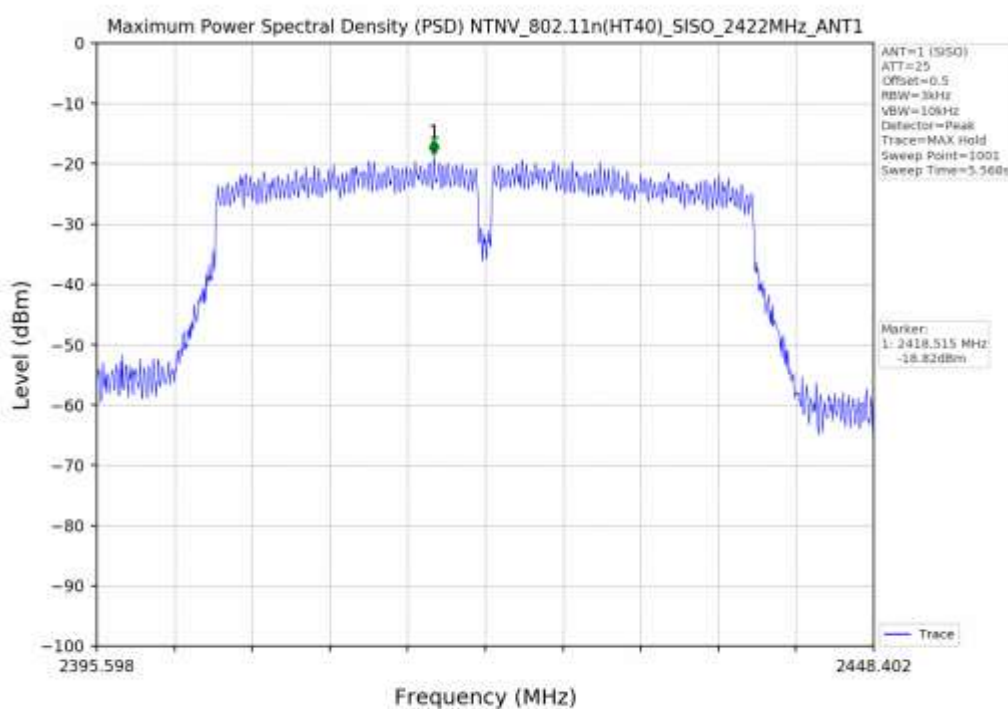
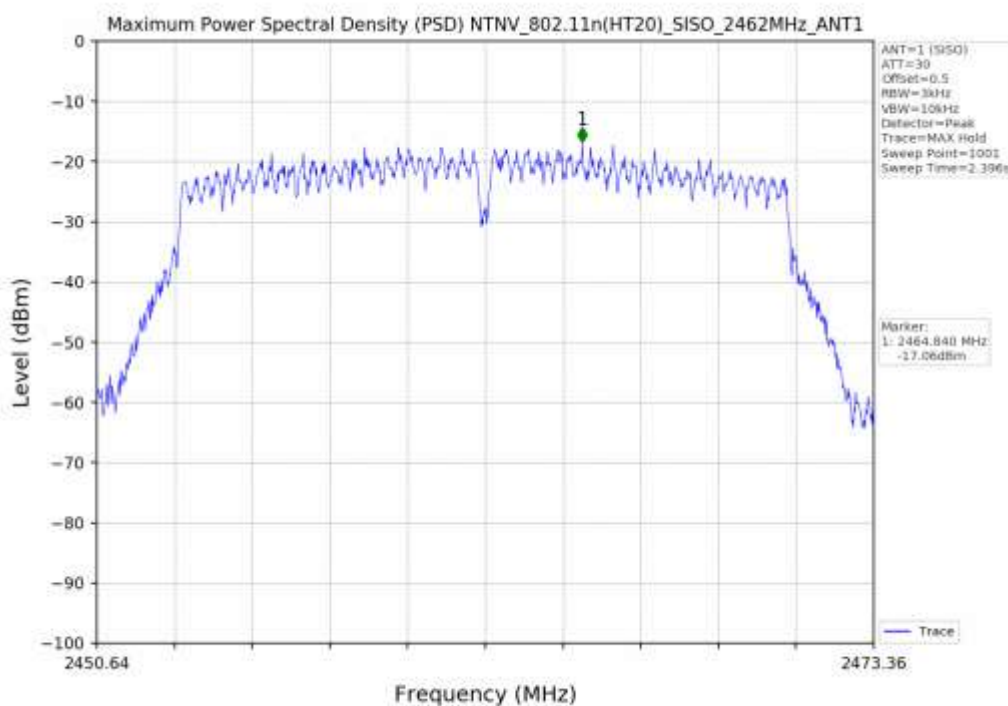
ANT 2:

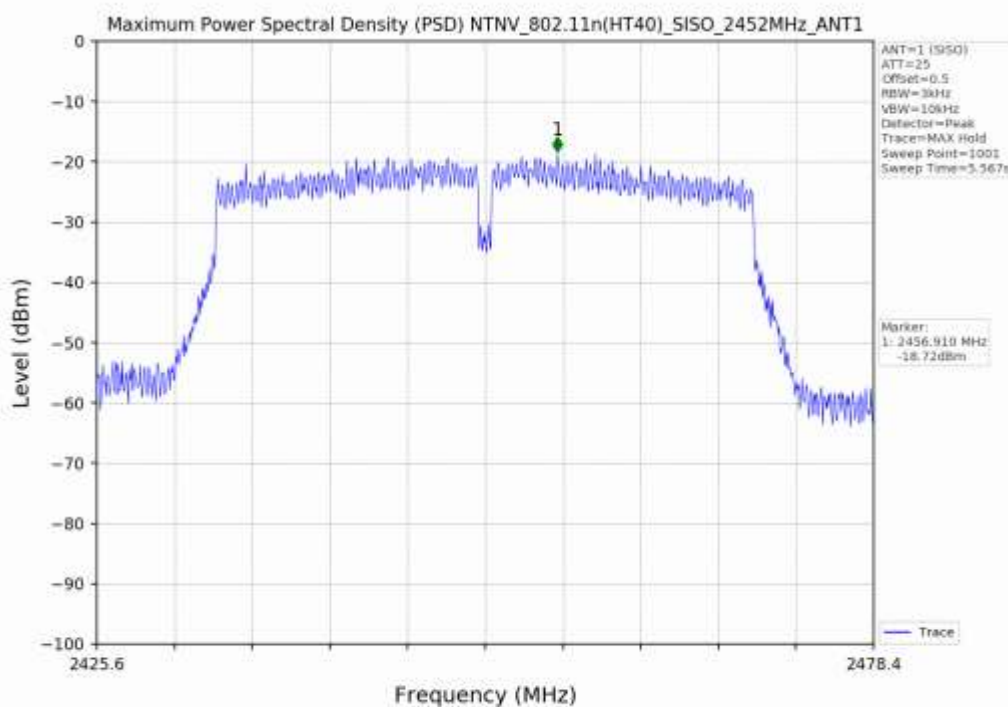
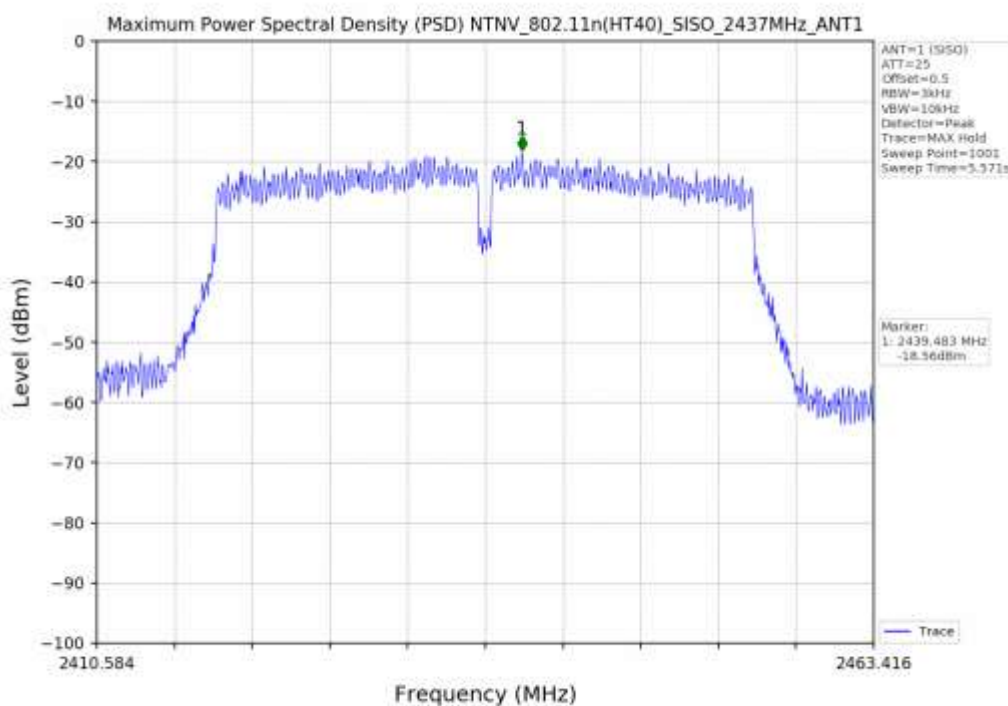












5. Unwanted Emissions in Non-restricted Frequency Bands

5.1 Test Result

ANT 1:

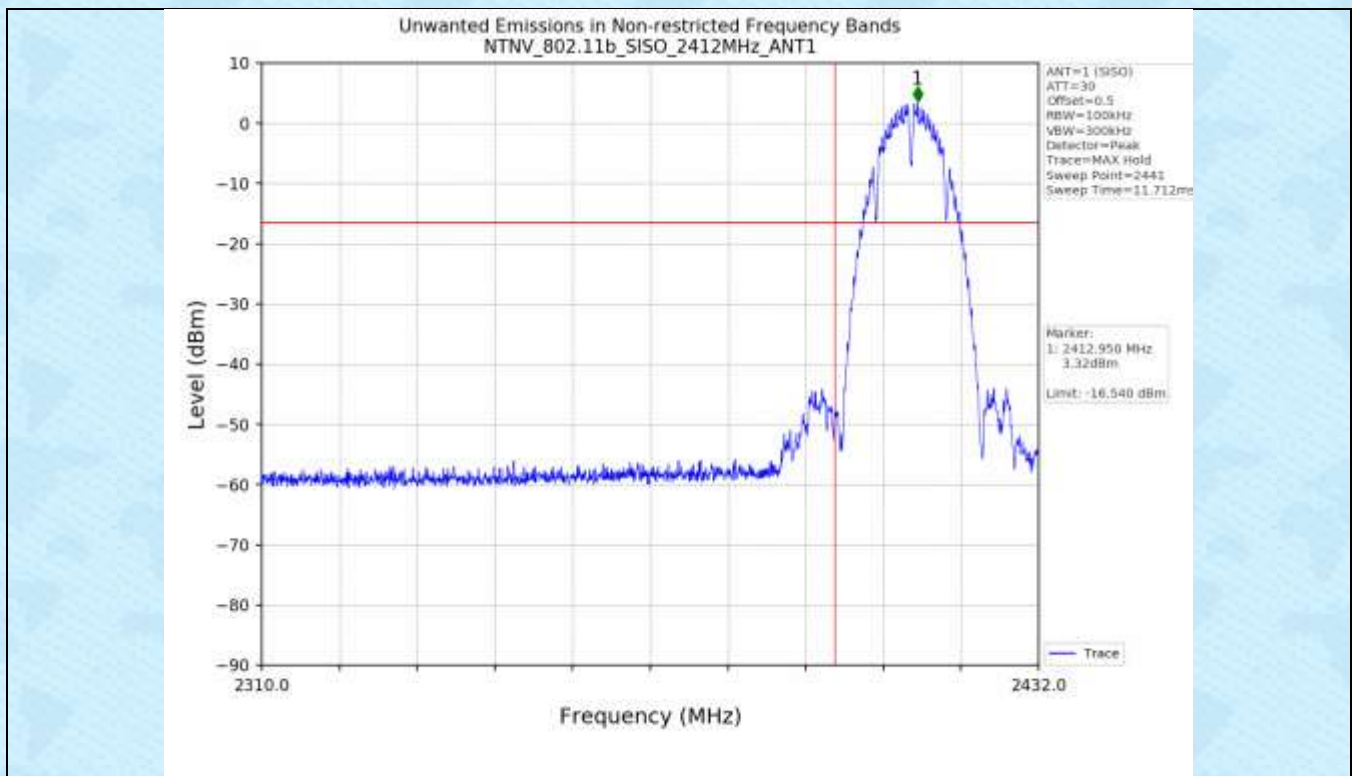
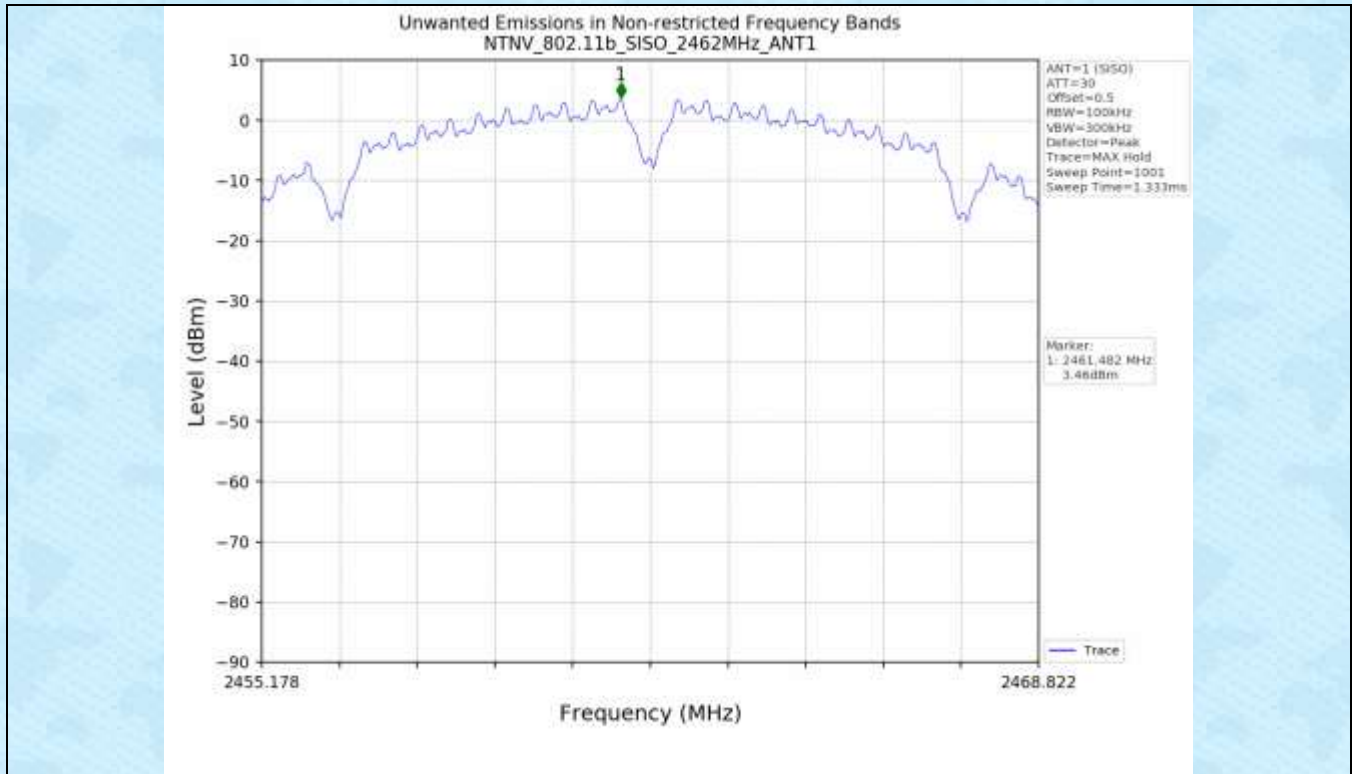
Test Mode	Frequency (MHz)	TX Type	ANT No.	Spurious Conducted Emission (dBm)	Limits (dBm)	Verdict
802.11b	2412	SISO	1	Refer to test graph	-16.54	PASS
	2437	SISO	1	Refer to test graph	-16.54	PASS
	2462	SISO	1	Refer to test graph	-16.54	PASS
802.11g	2412	SISO	1	Refer to test graph	-18.17	PASS
	2437	SISO	1	Refer to test graph	-18.17	PASS
	2462	SISO	1	Refer to test graph	-18.17	PASS
802.11n(HT20)	2412	SISO	1	Refer to test graph	-21.26	PASS
	2437	SISO	1	Refer to test graph	-21.26	PASS
	2462	SISO	1	Refer to test graph	-21.26	PASS
802.11n(HT40)	2422	SISO	1	Refer to test graph	-24.58	PASS
	2437	SISO	1	Refer to test graph	-24.58	PASS
	2452	SISO	1	Refer to test graph	-24.58	PASS

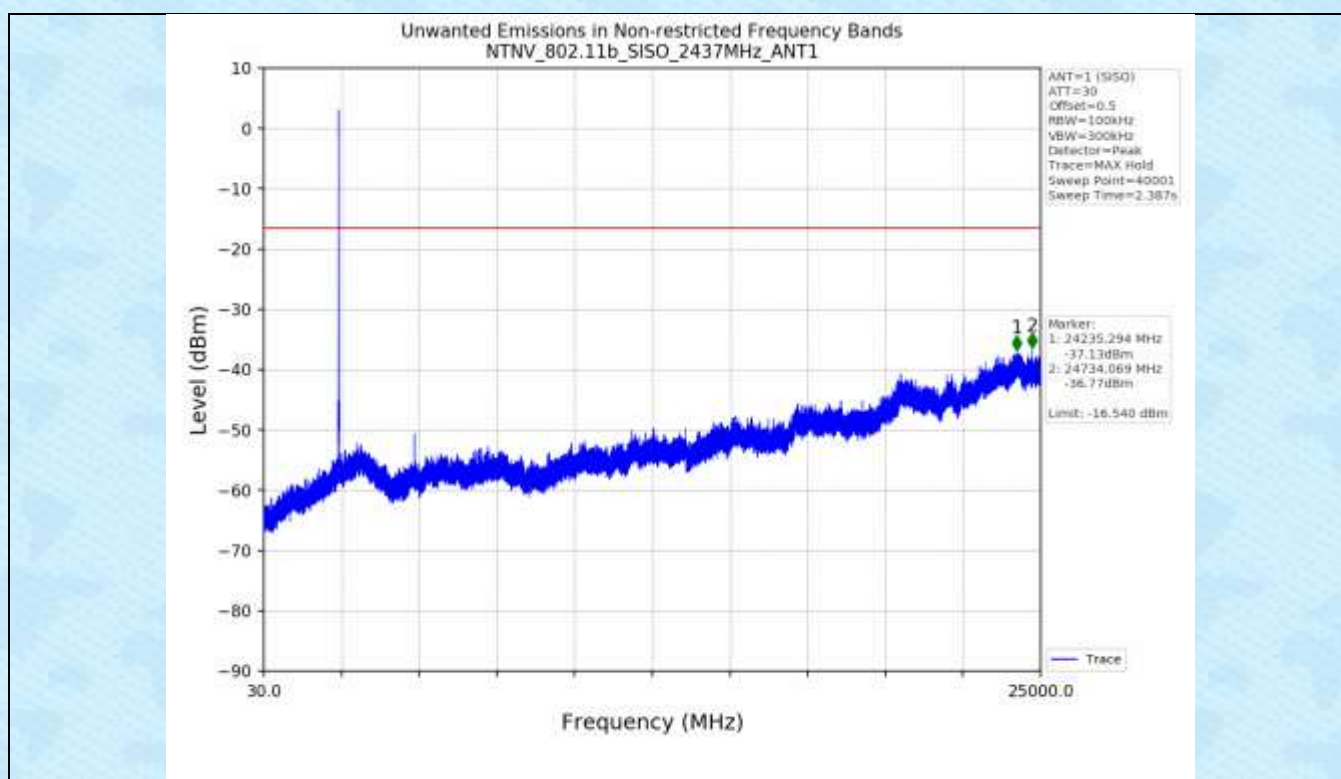
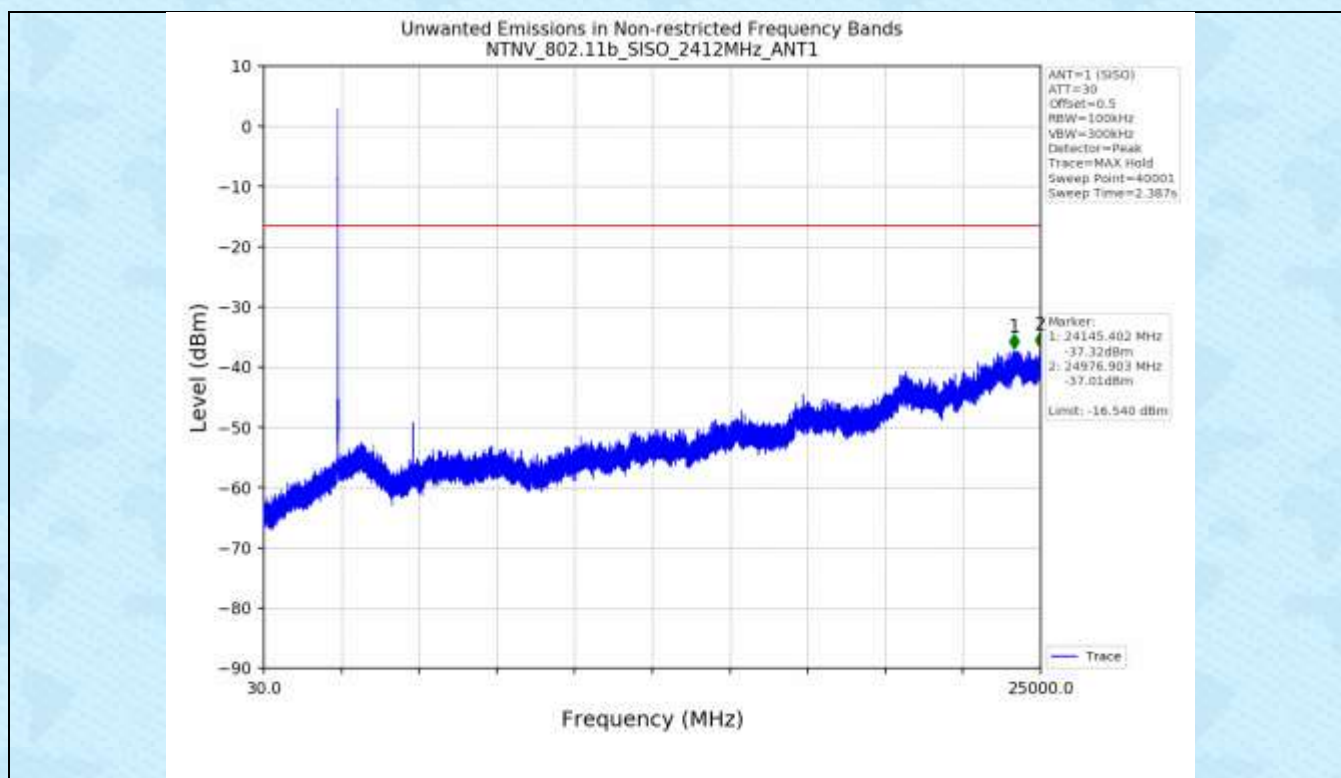
ANT 2:

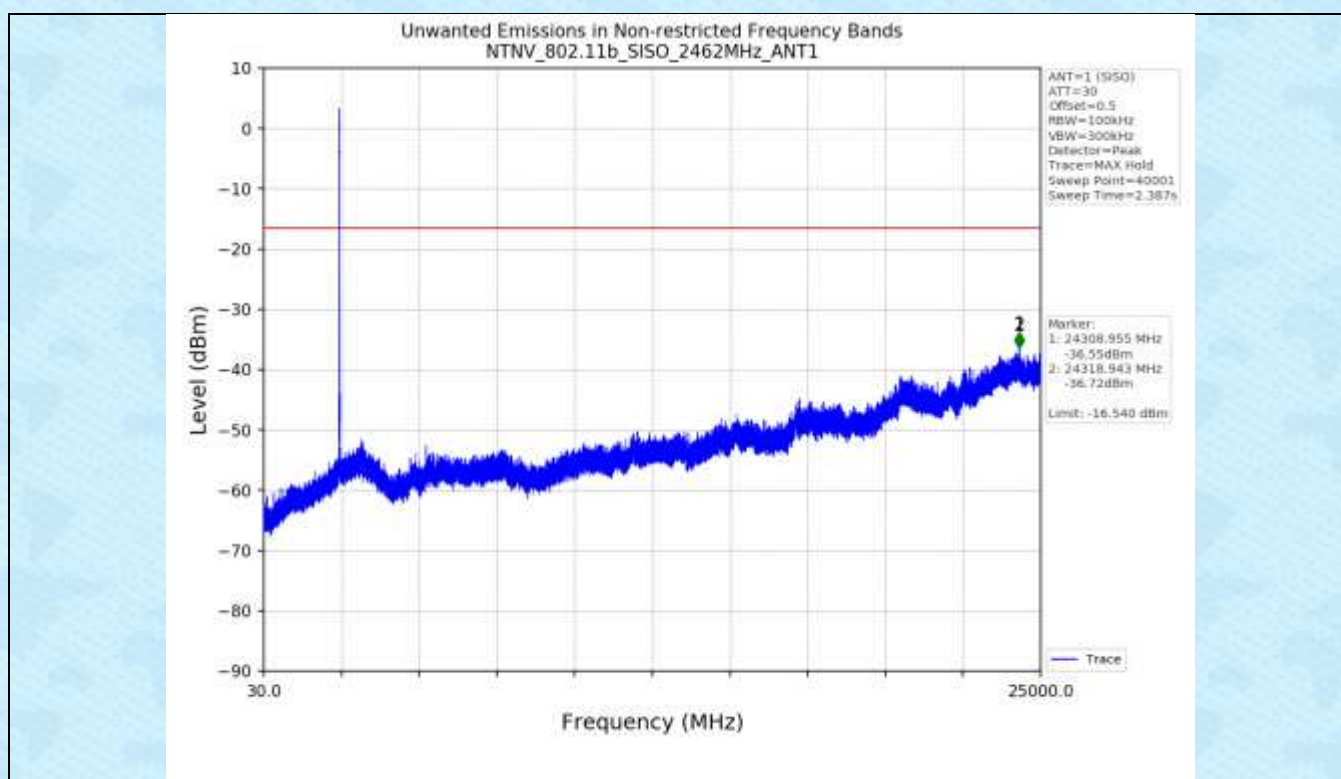
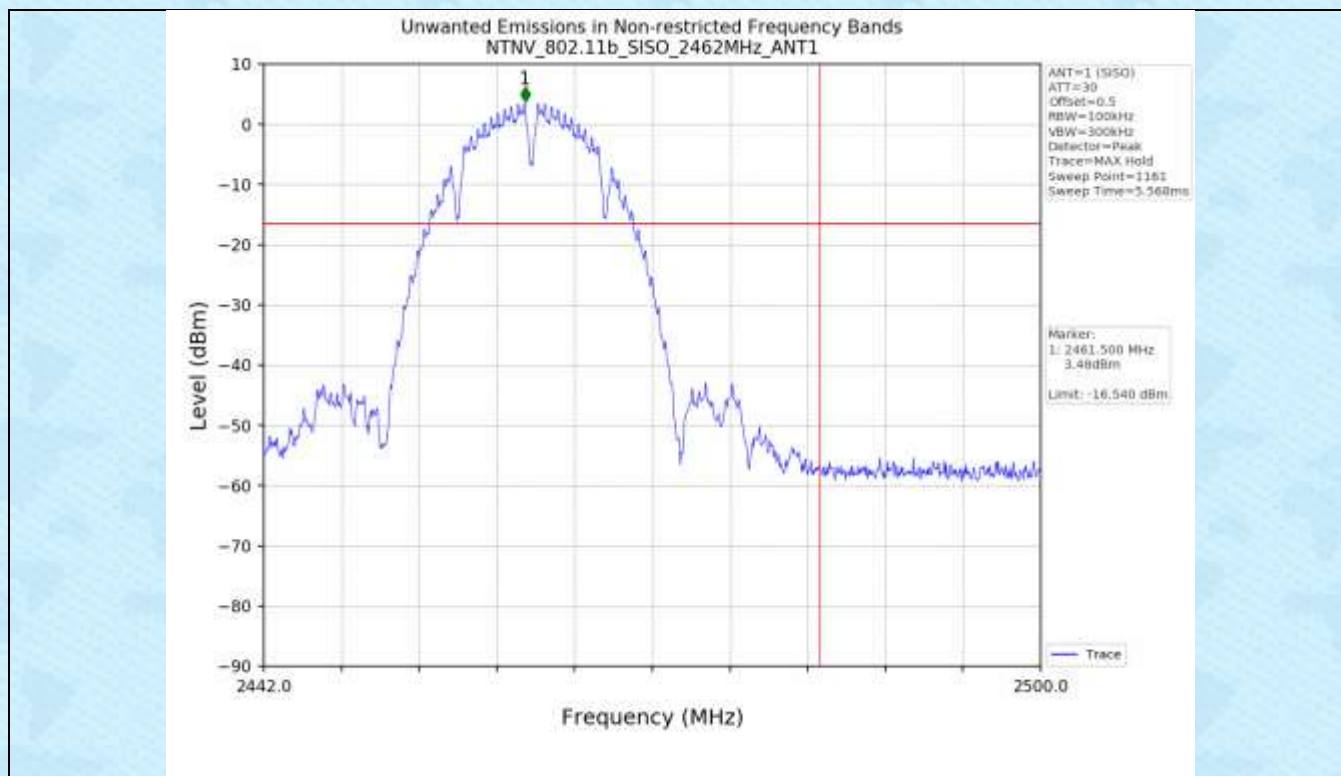
Test Mode	Frequency (MHz)	TX Type	ANT No.	Spurious Conducted Emission (dBm)	Limits (dBm)	Verdict
802.11b	2412	SISO	1	Refer to test graph	-16.92	PASS
	2437	SISO	1	Refer to test graph	-16.92	PASS
	2462	SISO	1	Refer to test graph	-16.92	PASS
802.11g	2412	SISO	1	Refer to test graph	-18.41	PASS
	2437	SISO	1	Refer to test graph	-18.41	PASS
	2462	SISO	1	Refer to test graph	-18.41	PASS
802.11n(HT20)	2412	SISO	1	Refer to test graph	-20.68	PASS
	2437	SISO	1	Refer to test graph	-20.68	PASS
	2462	SISO	1	Refer to test graph	-20.68	PASS
802.11n(HT40)	2422	SISO	1	Refer to test graph	-22.97	PASS
	2437	SISO	1	Refer to test graph	-22.97	PASS
	2452	SISO	1	Refer to test graph	-22.97	PASS

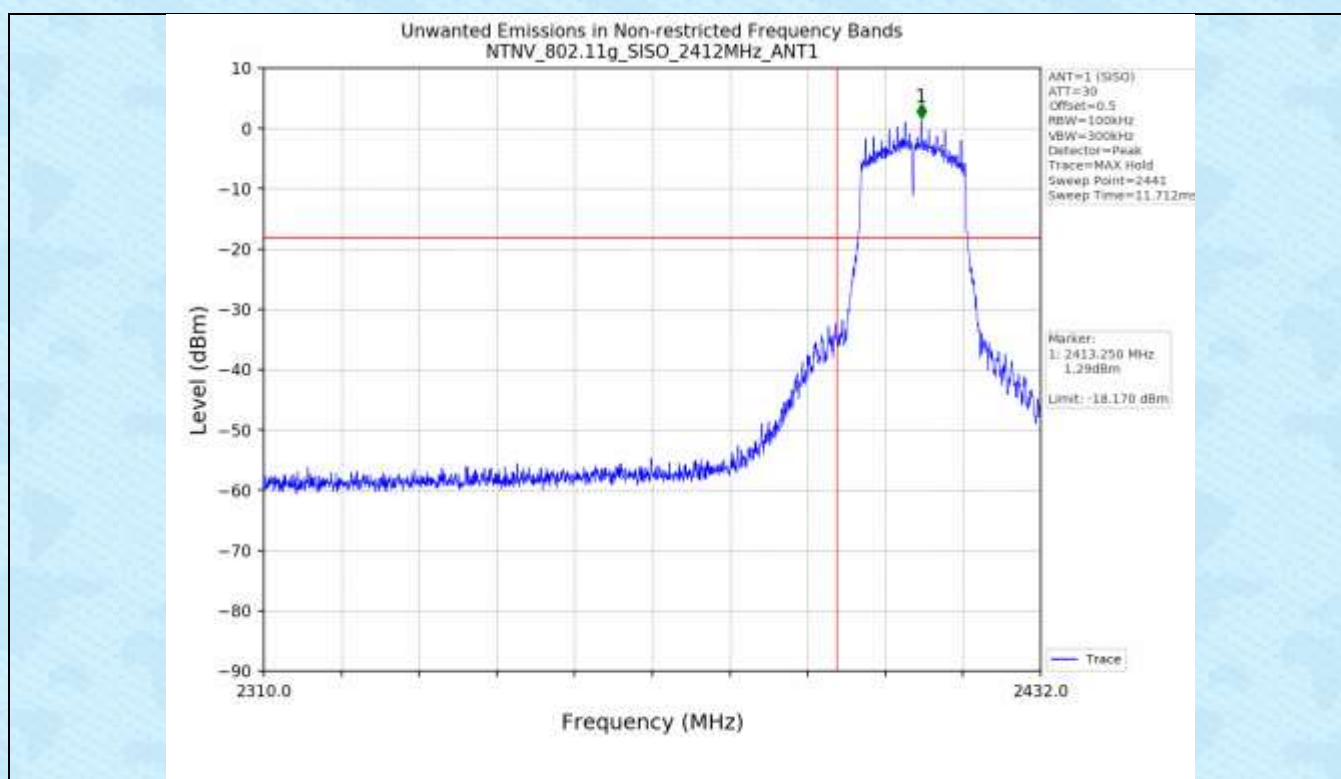
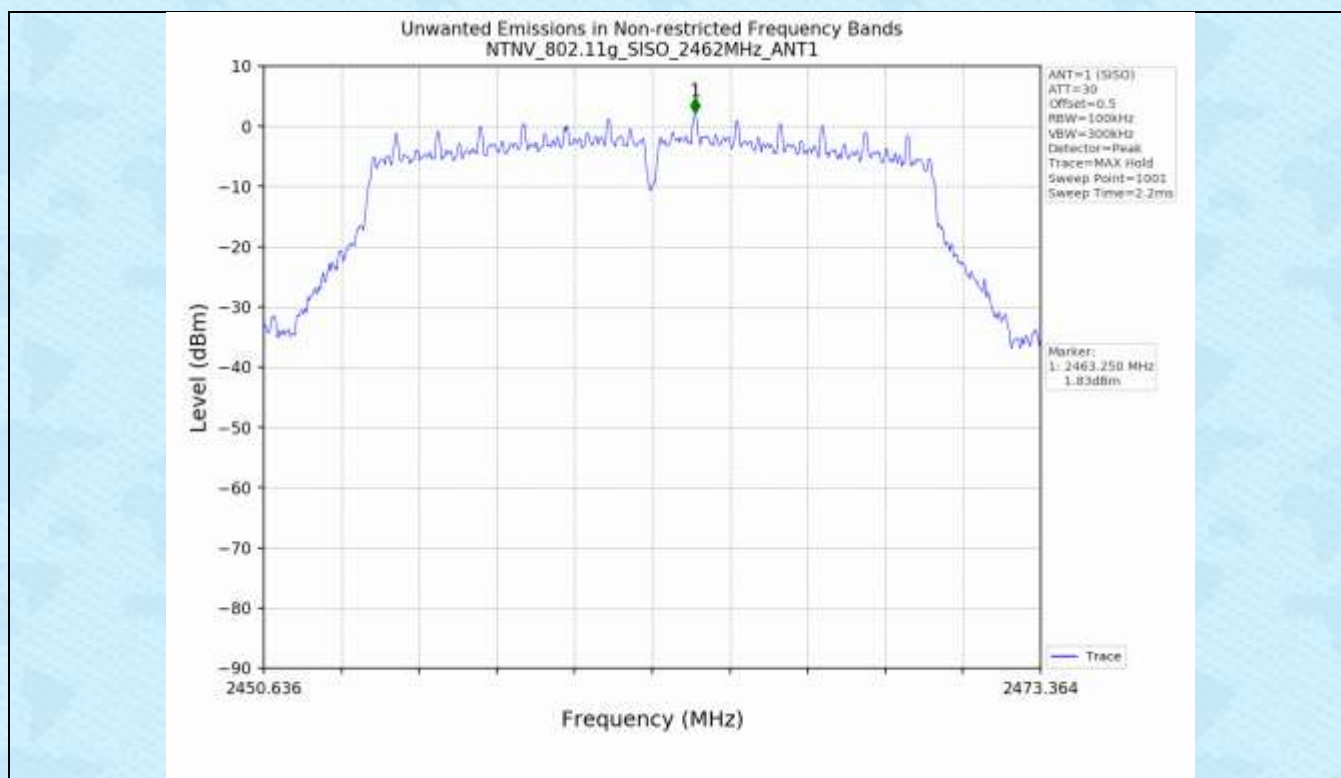
5.2 Test Graph

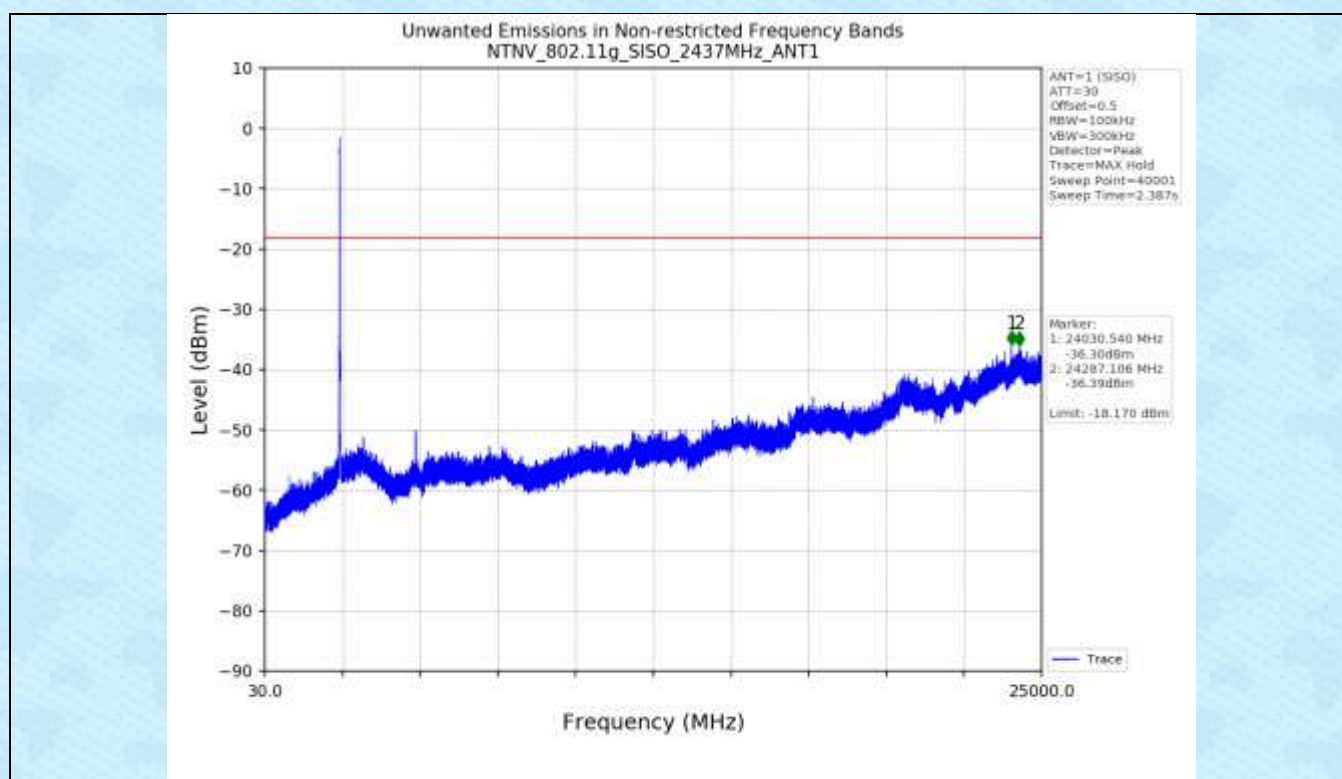
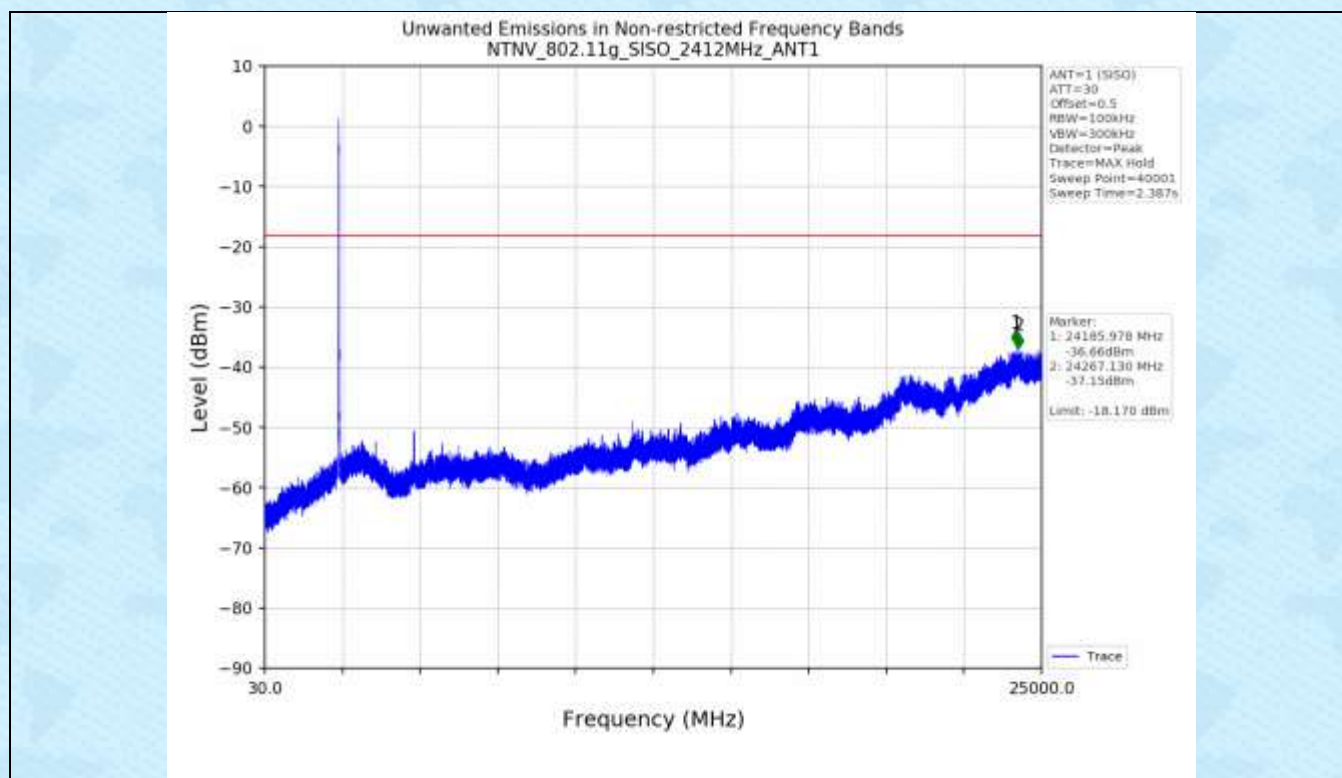
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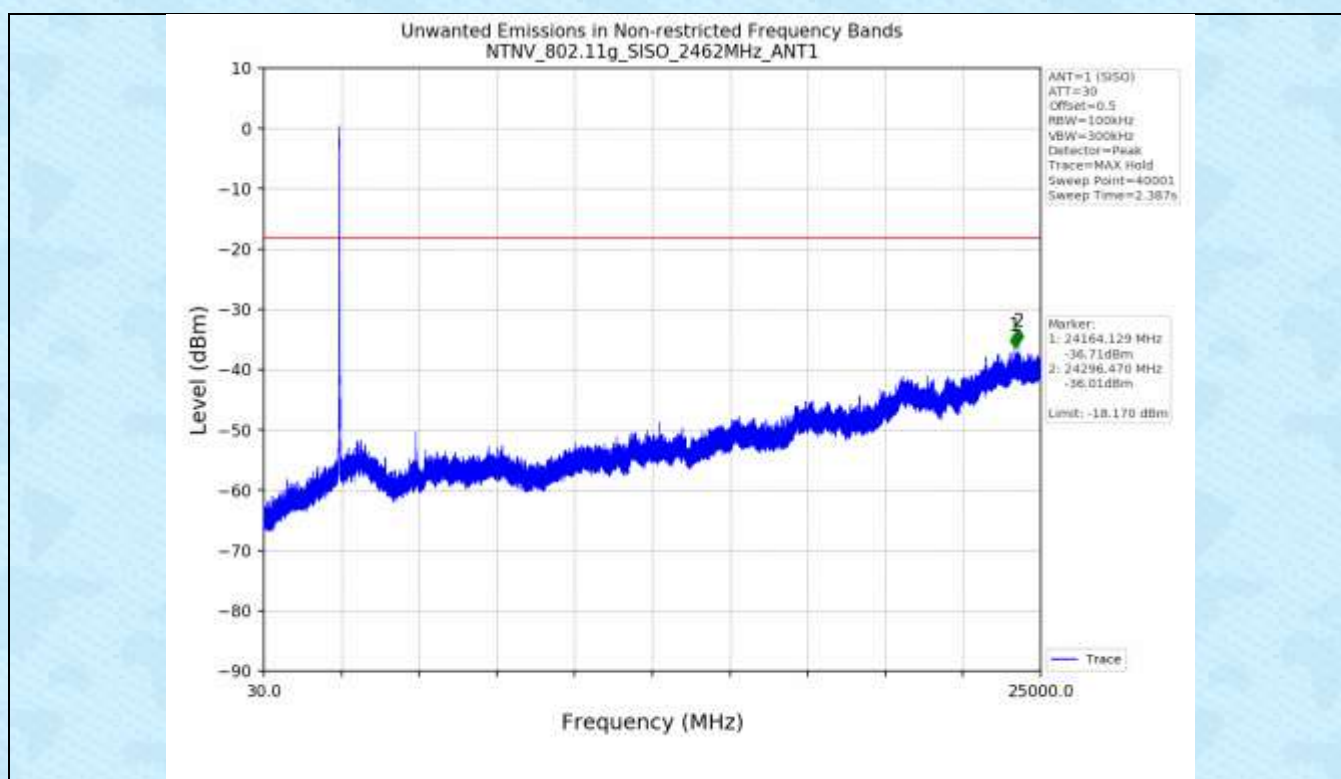
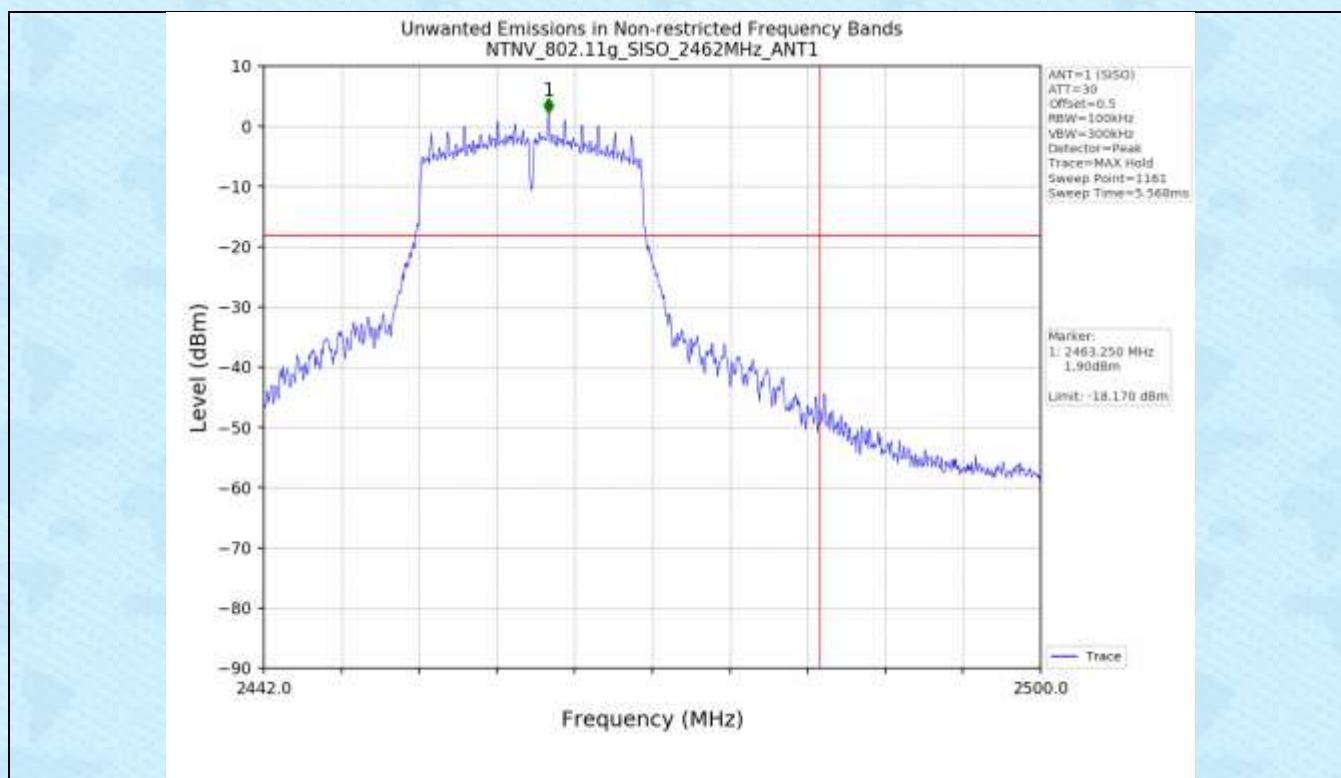


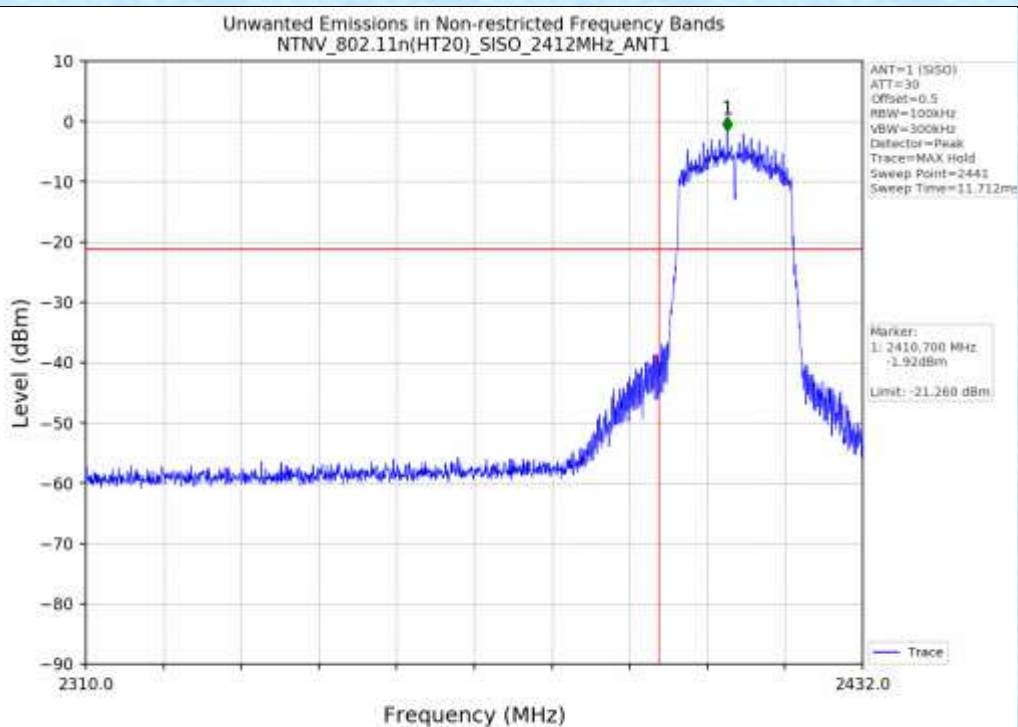
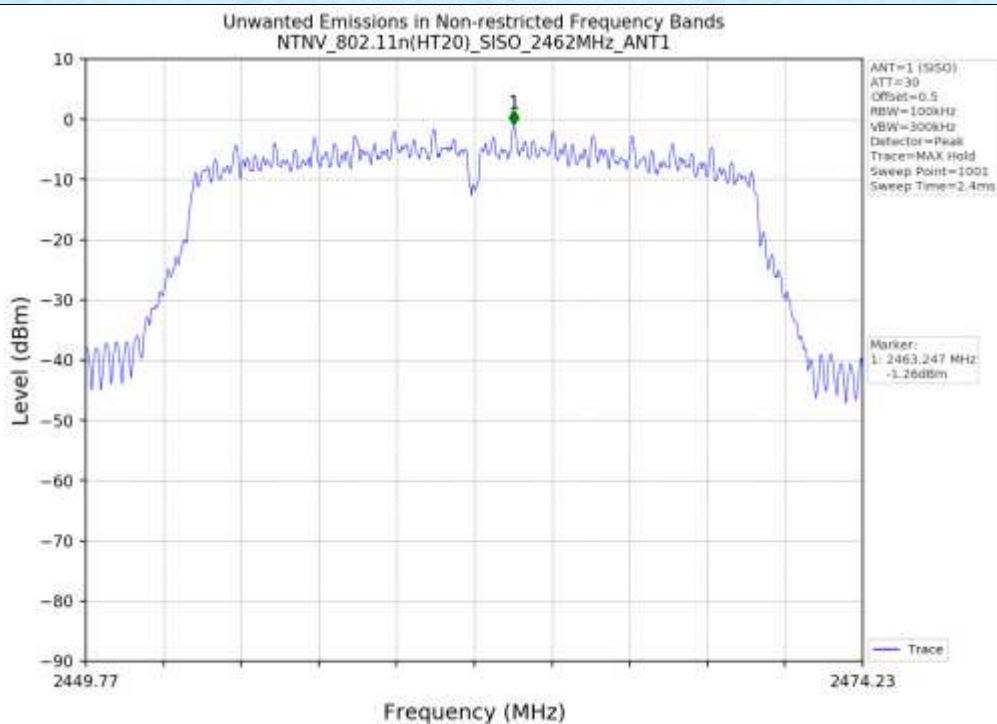


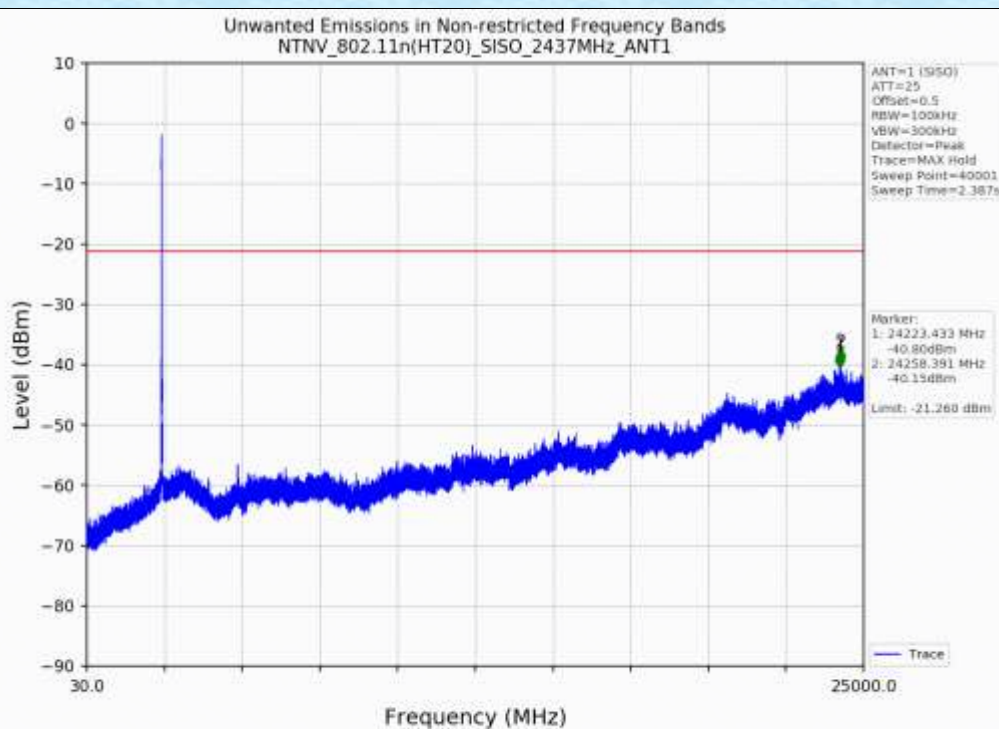
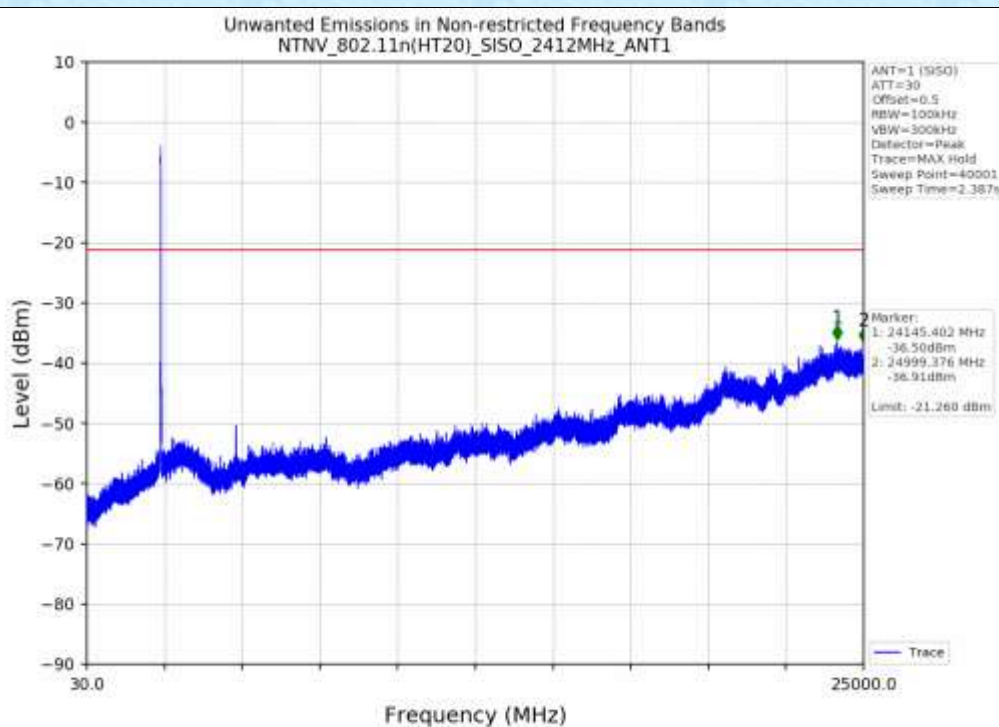


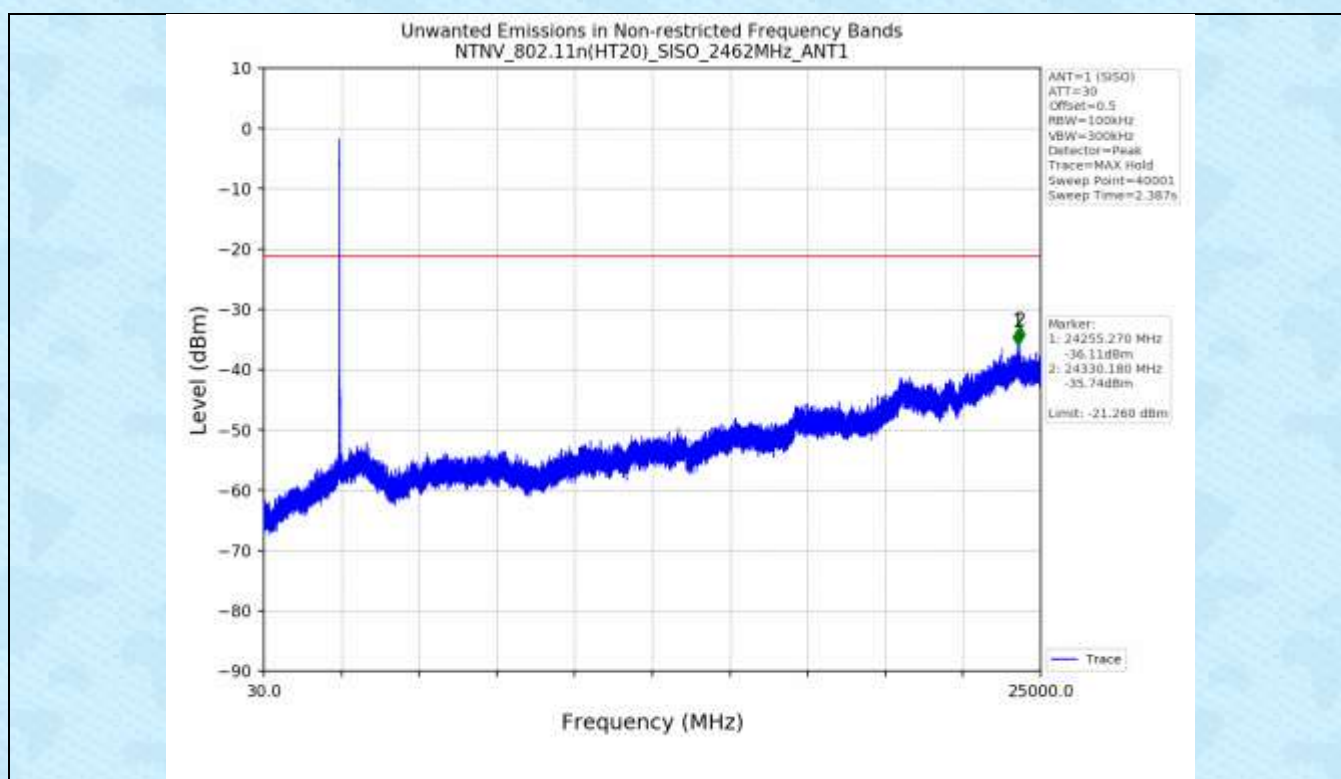
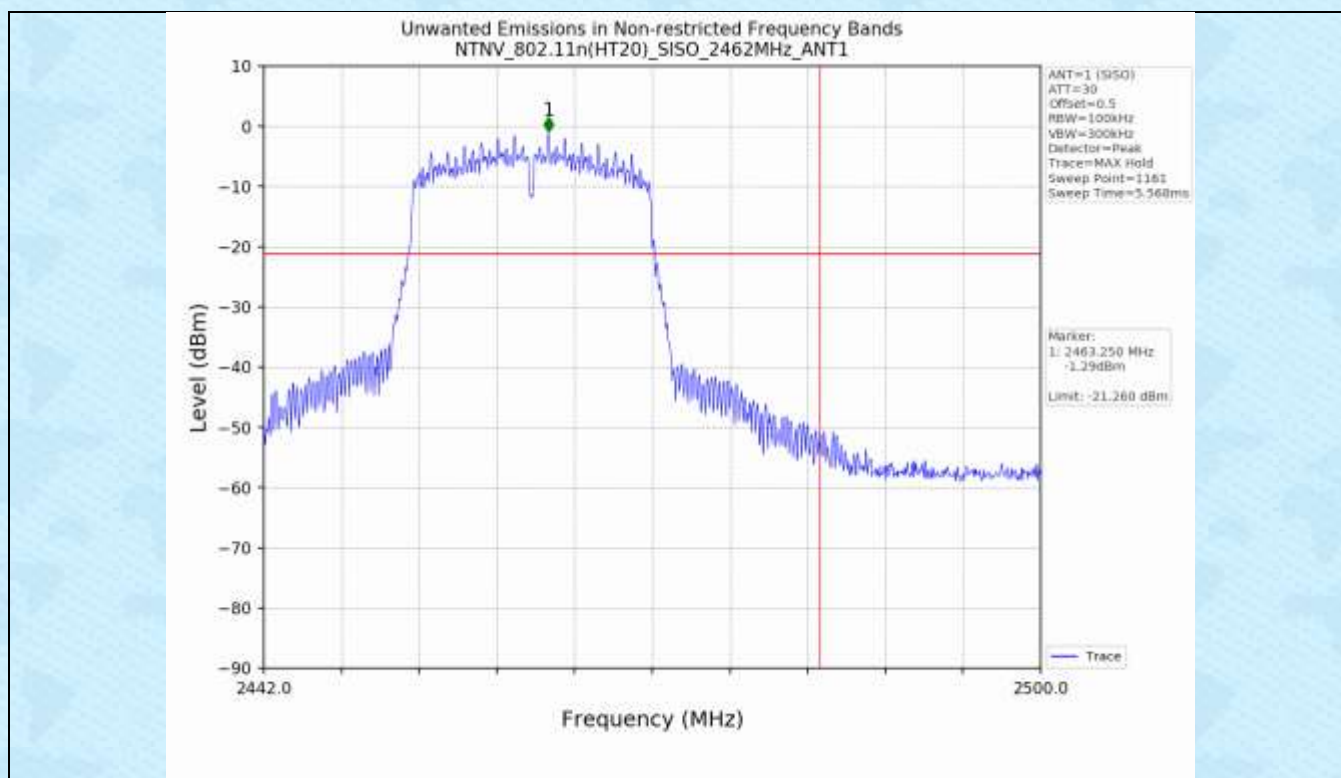


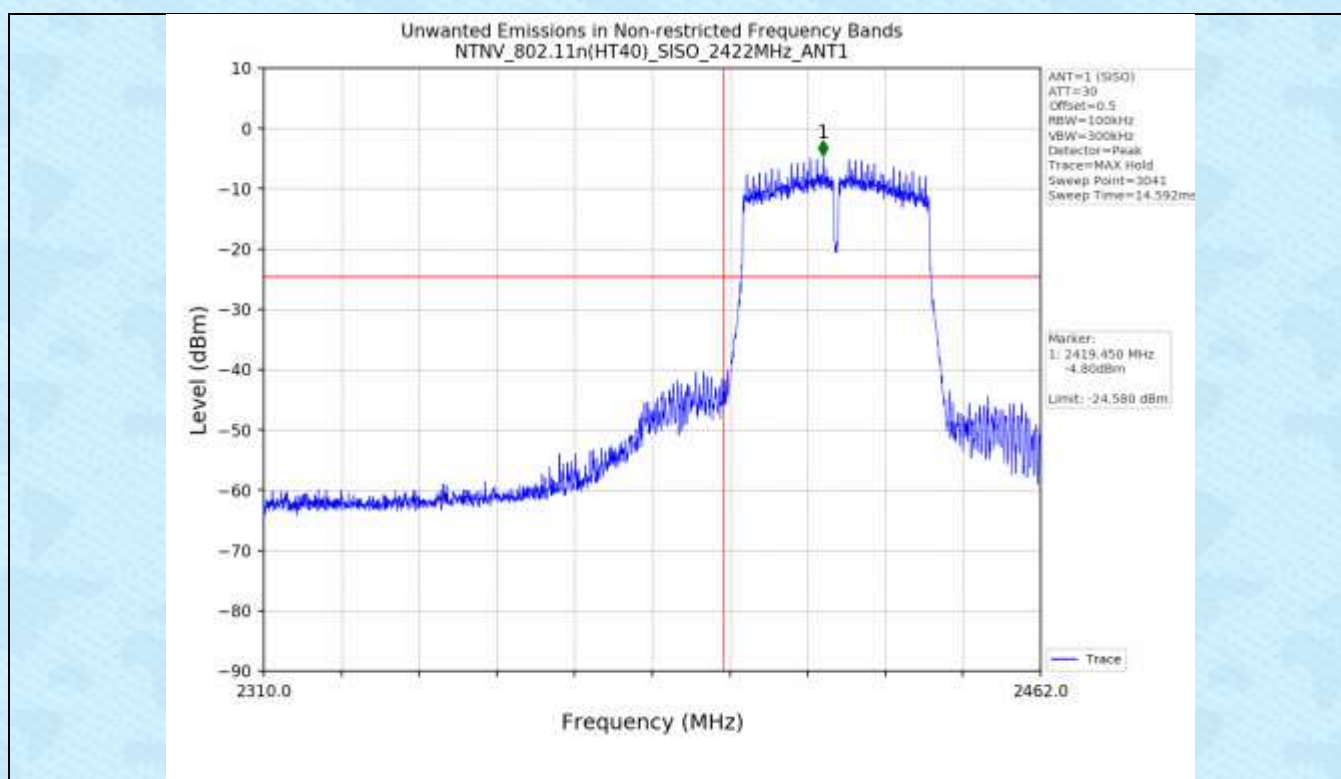
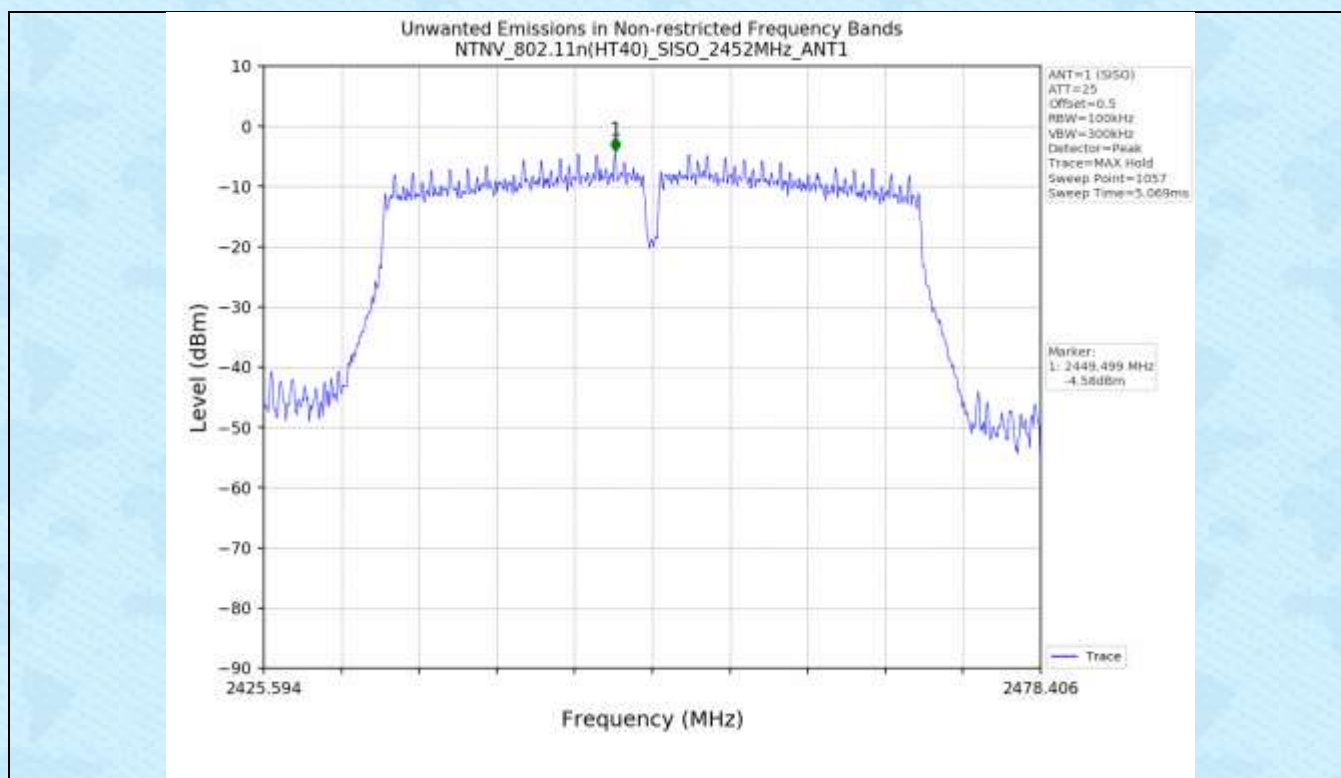


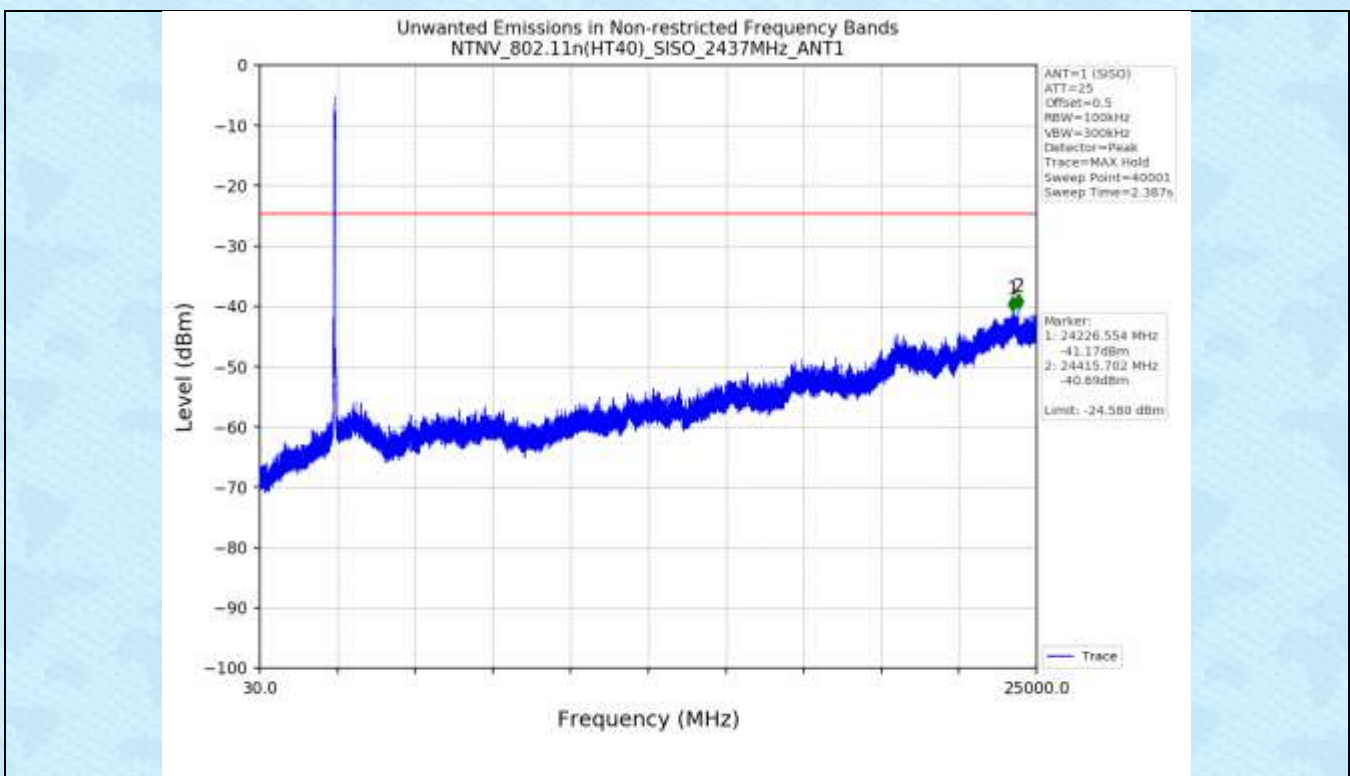
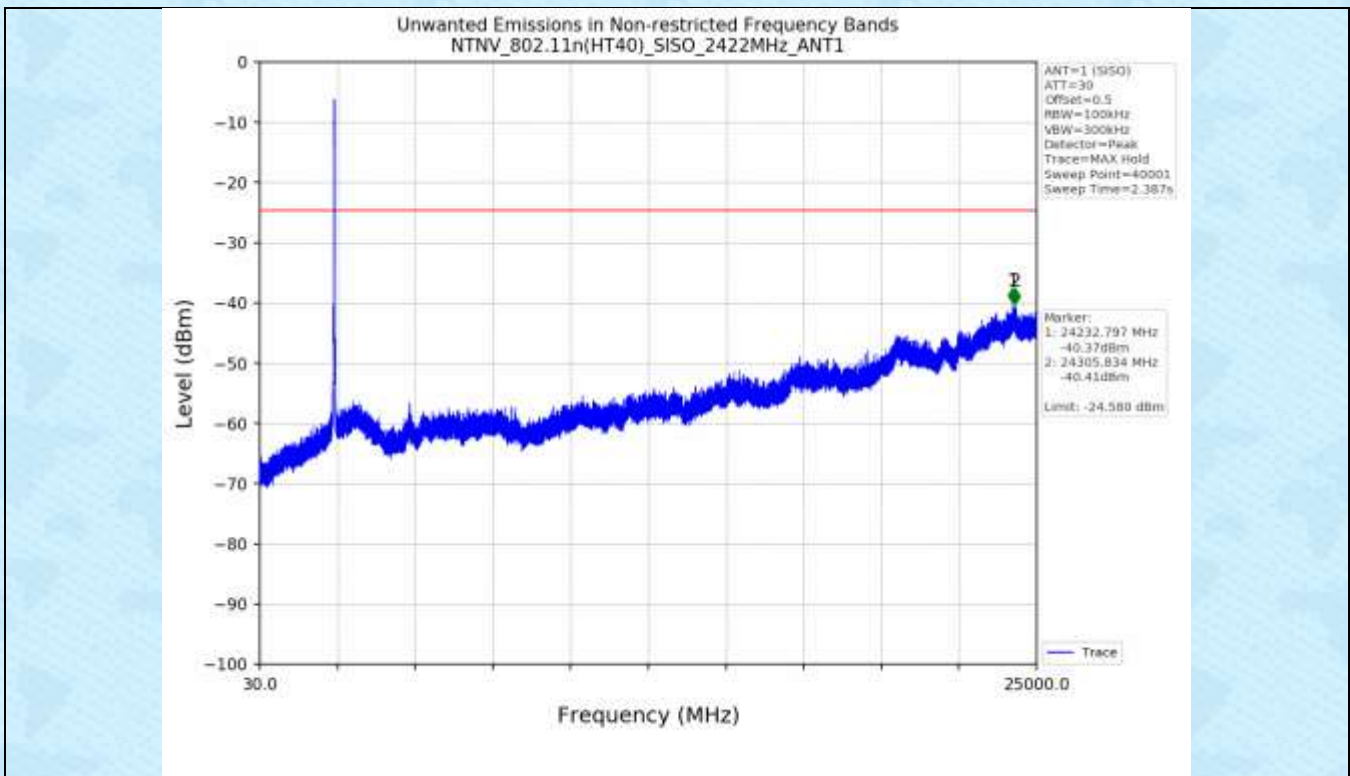


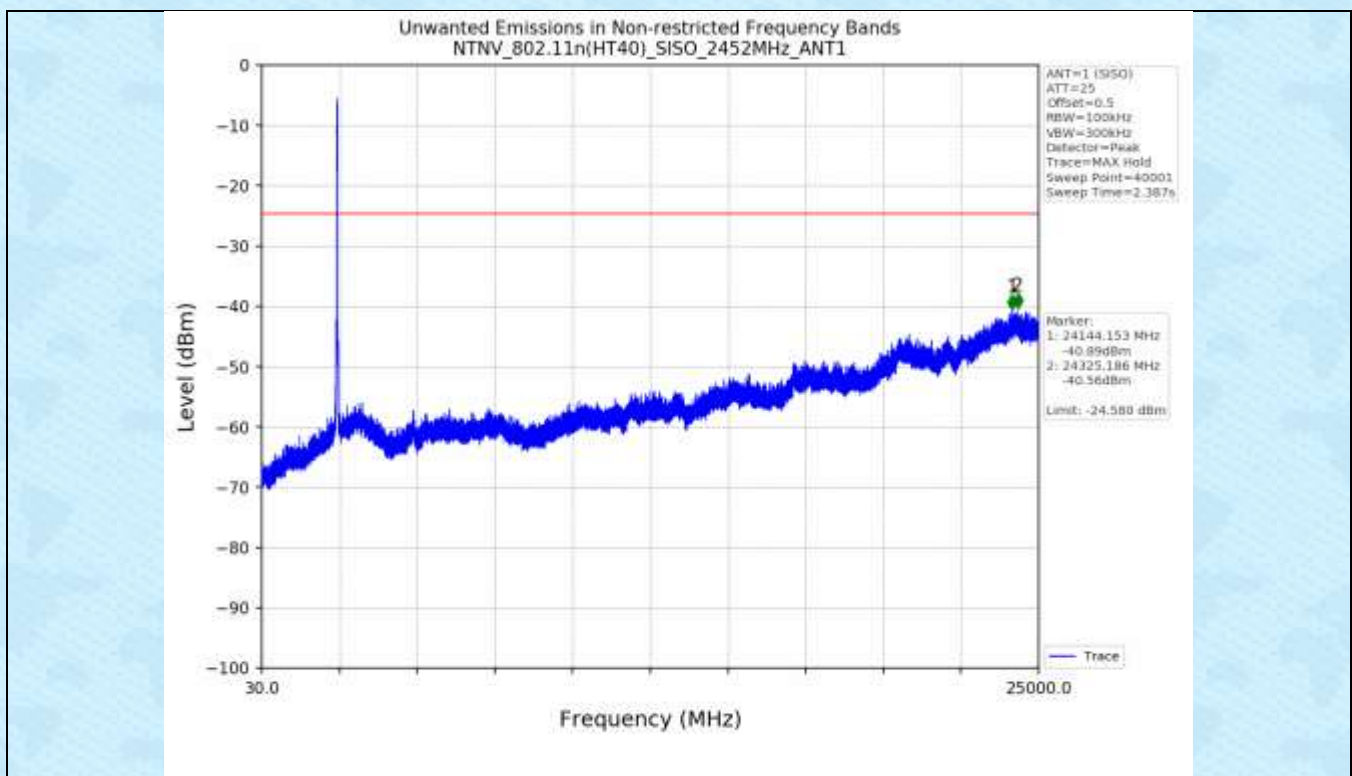
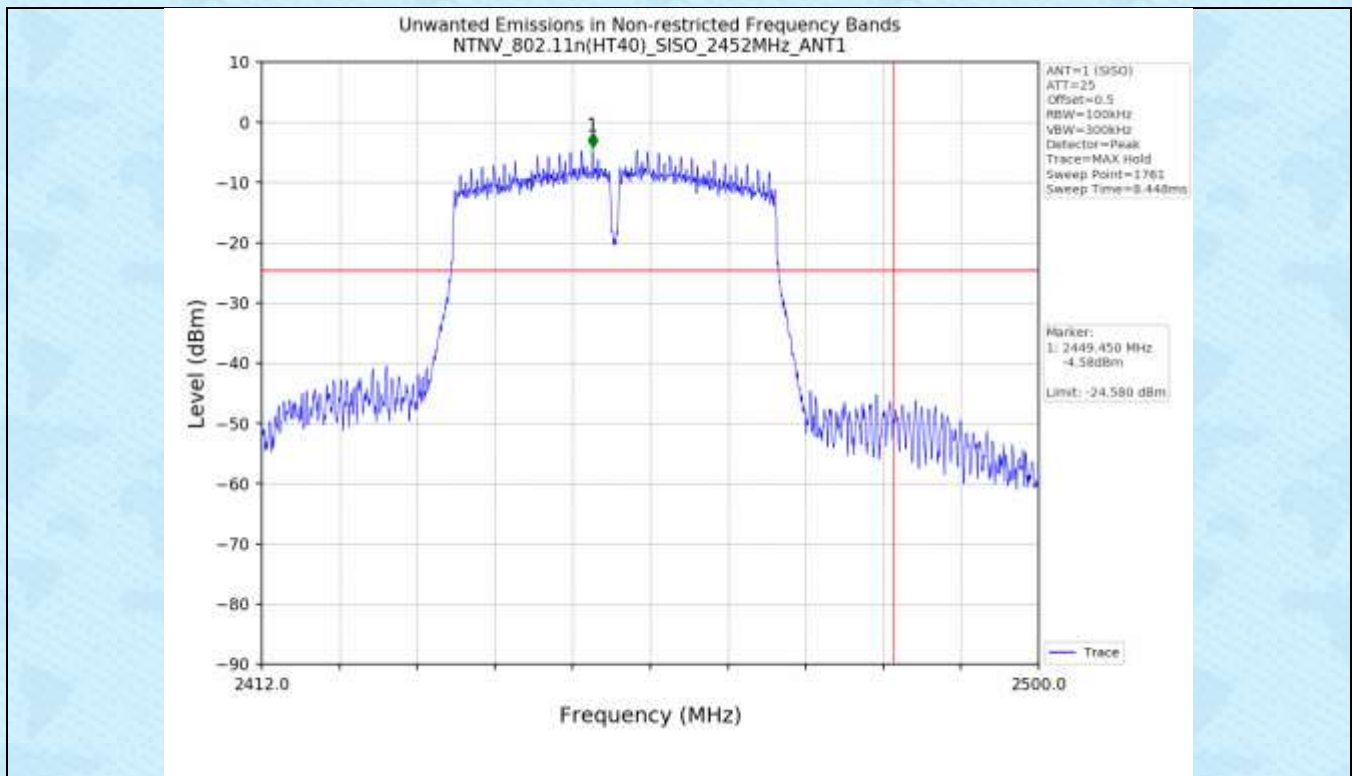




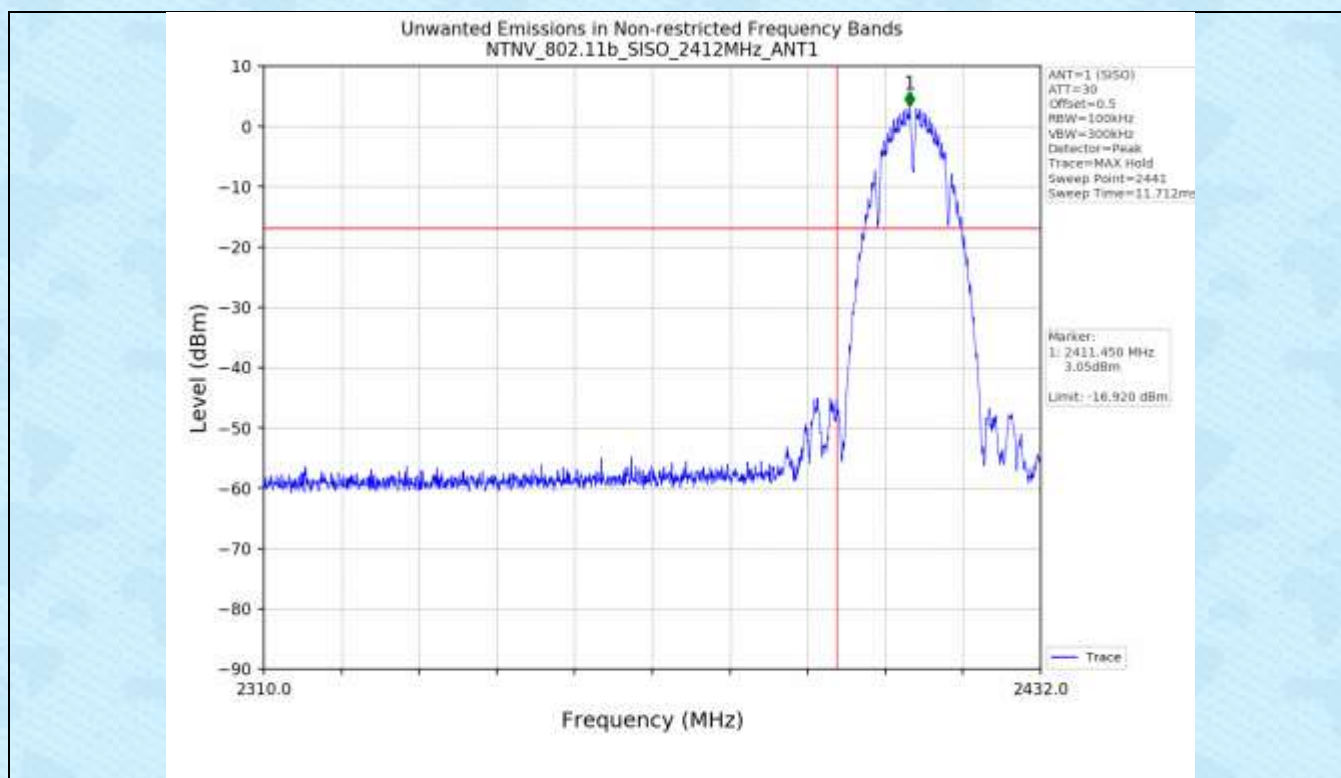
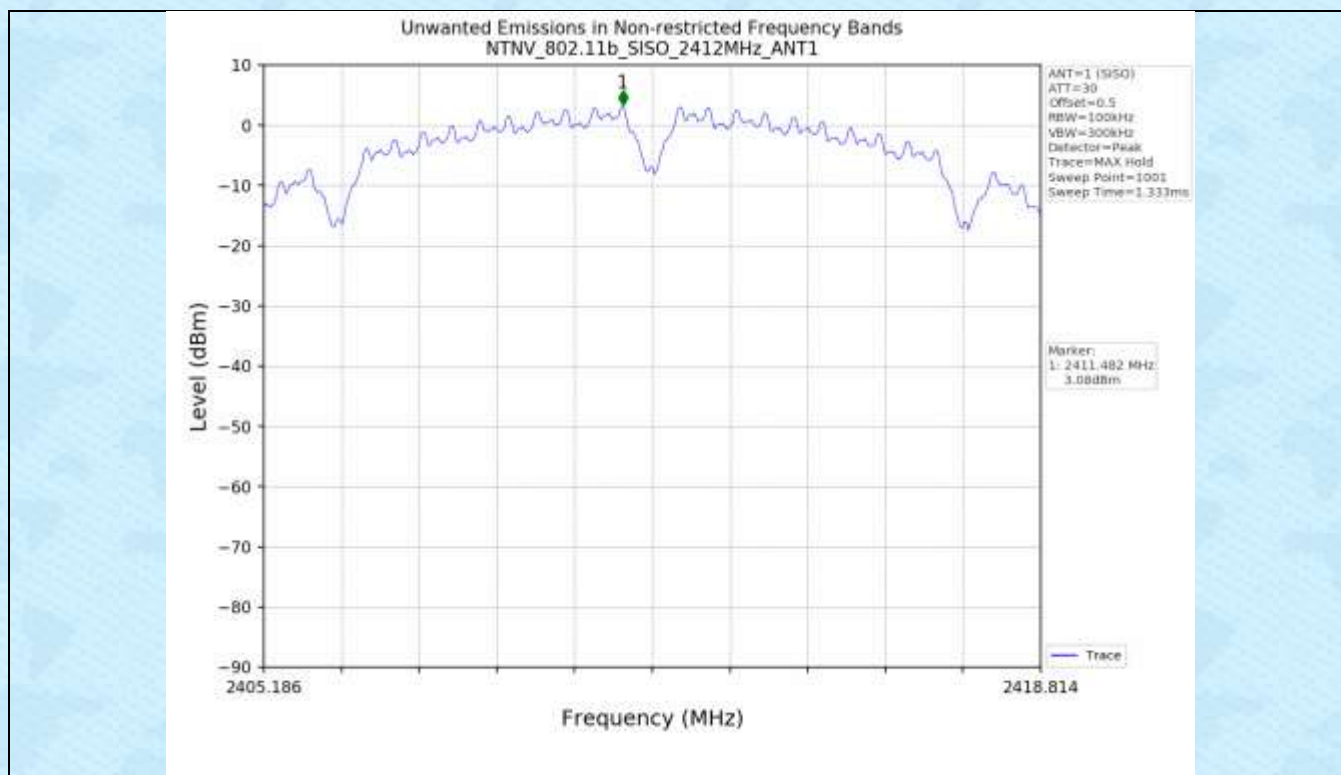


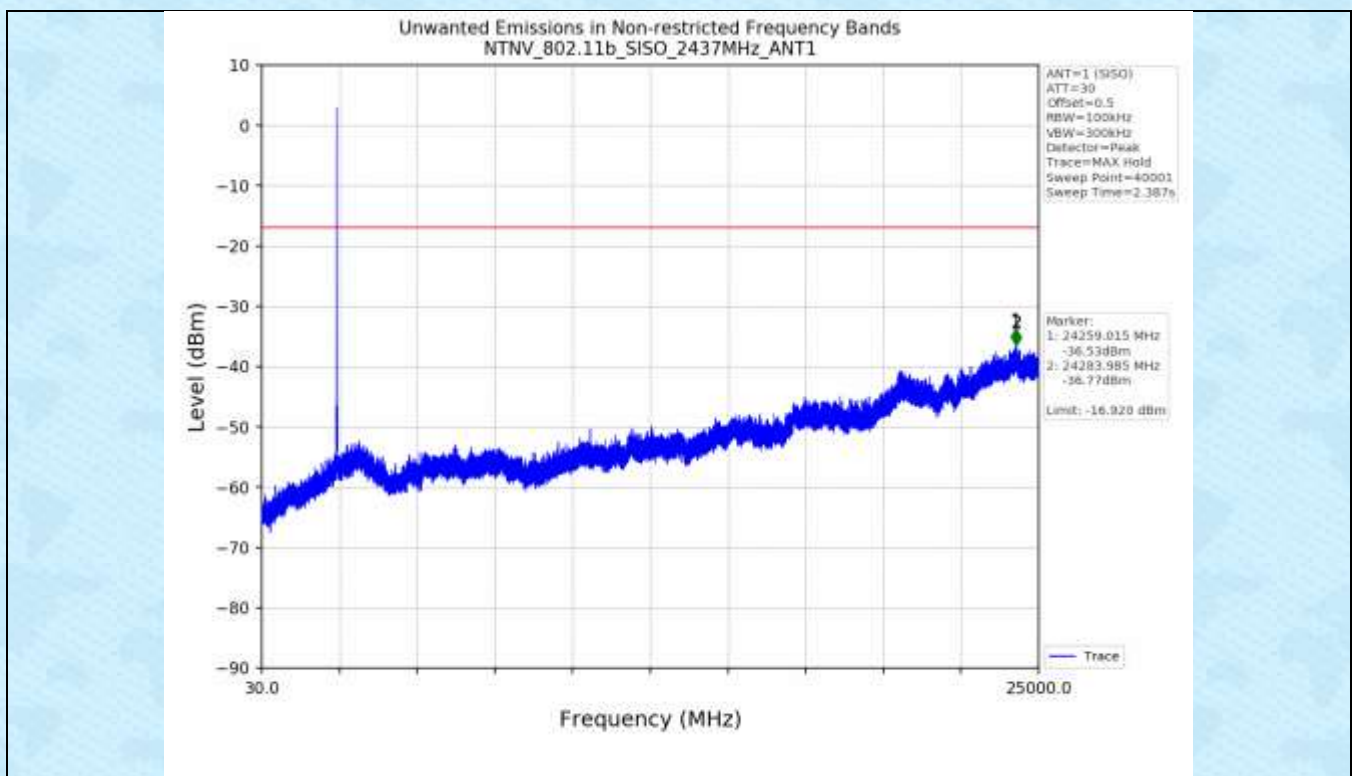
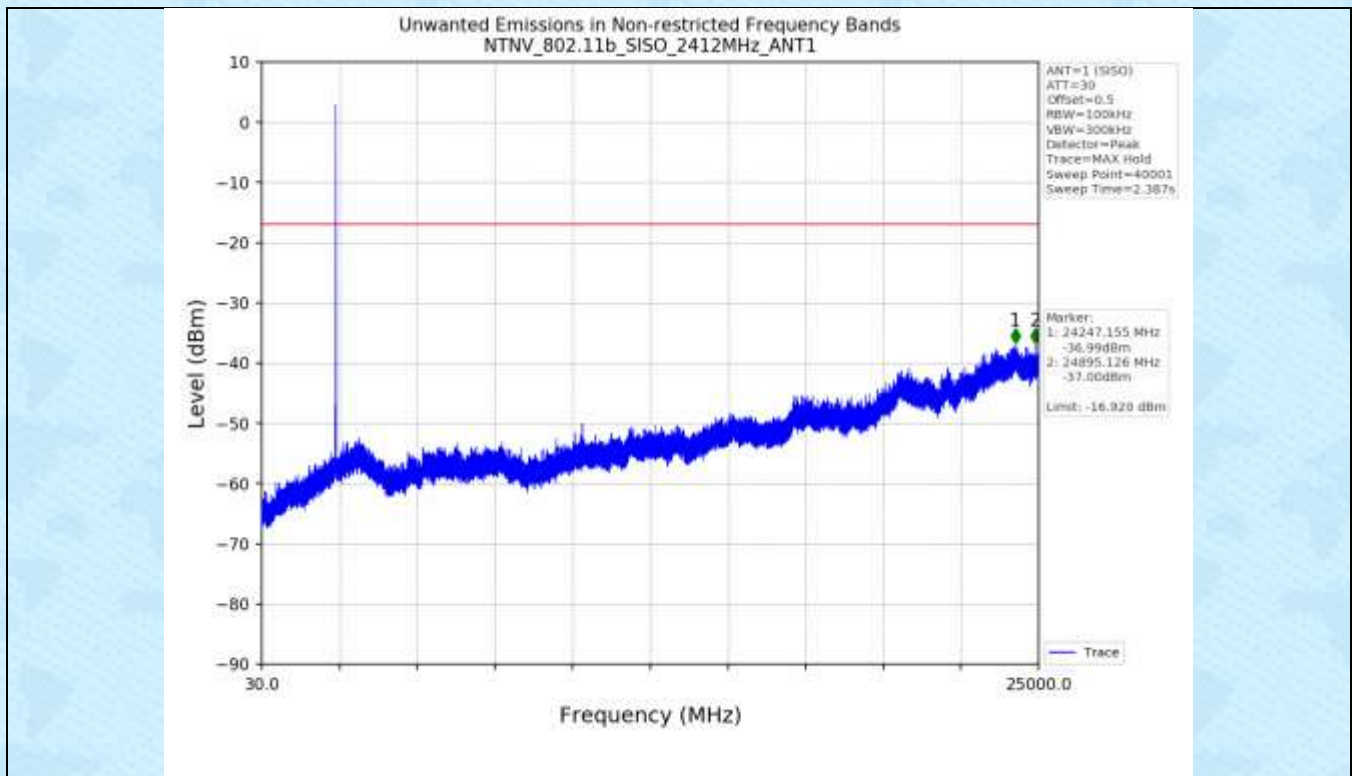


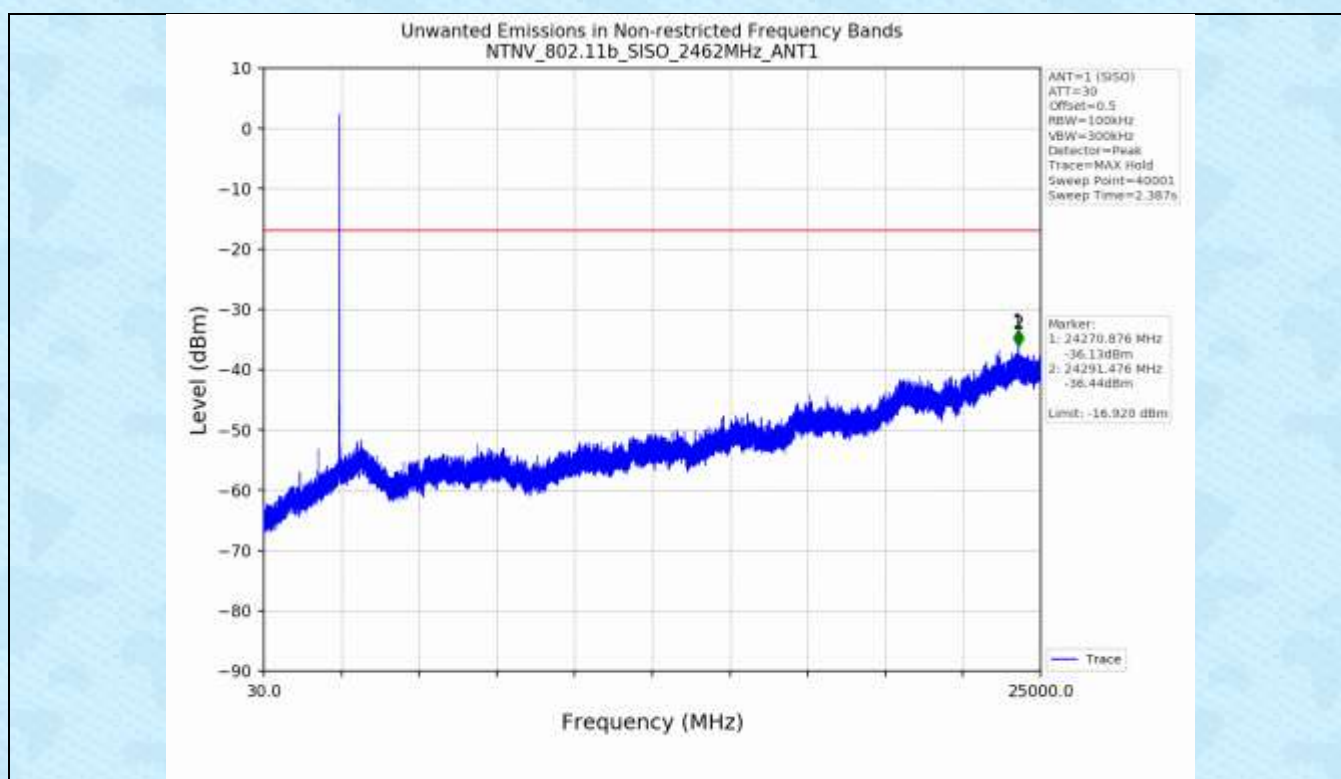
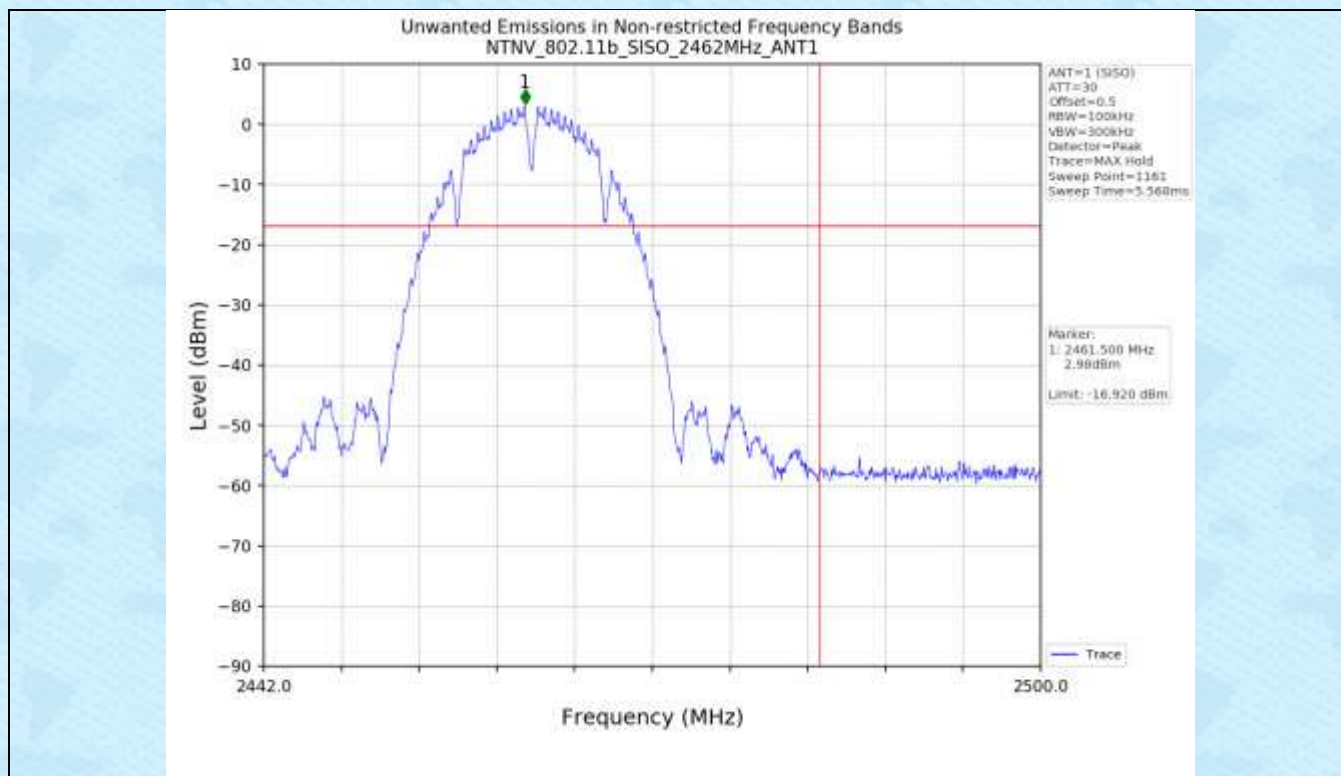


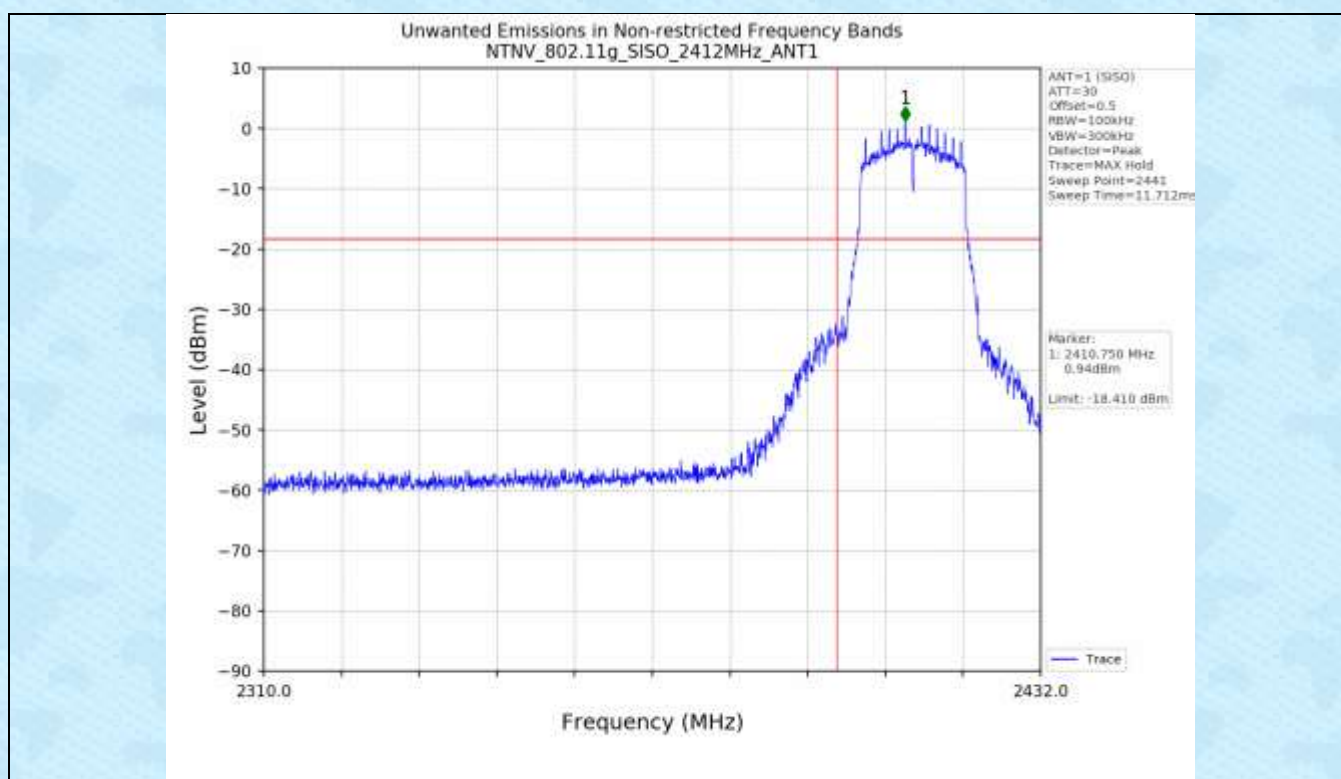
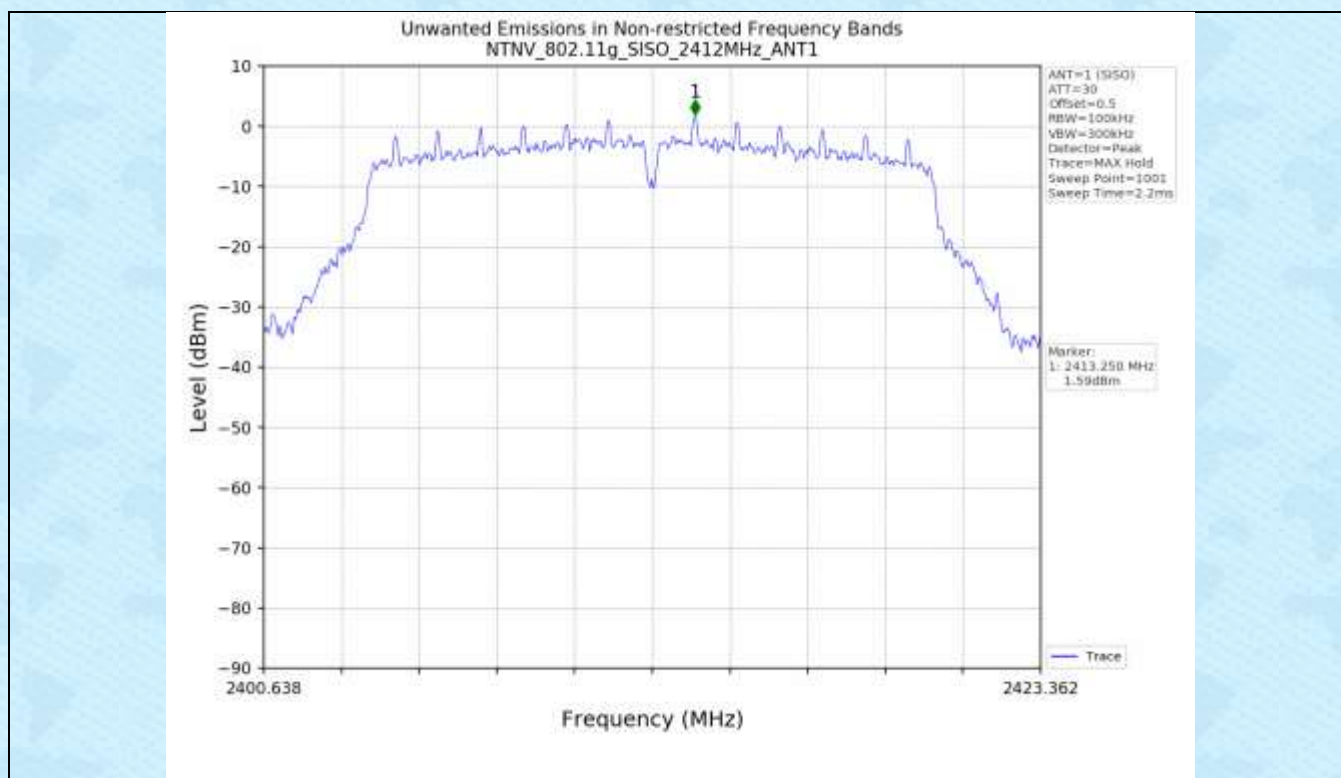


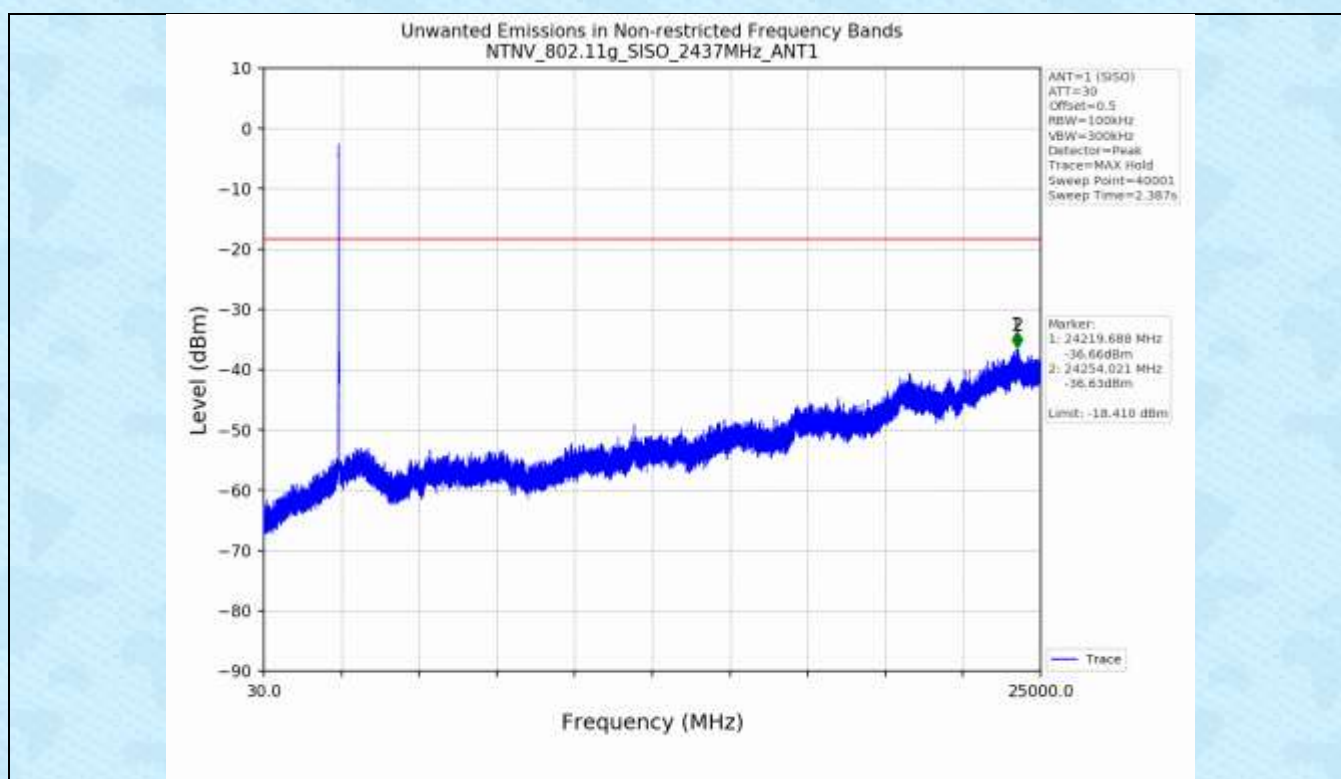
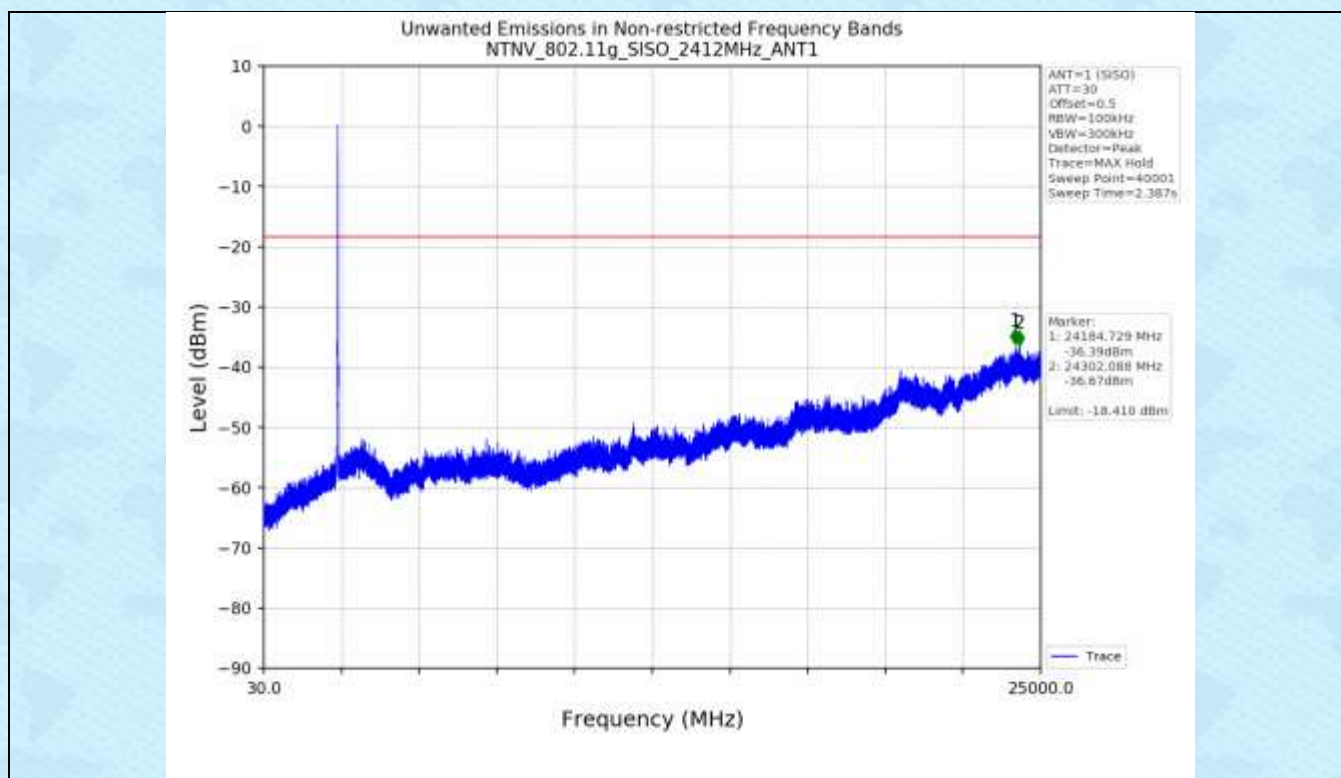
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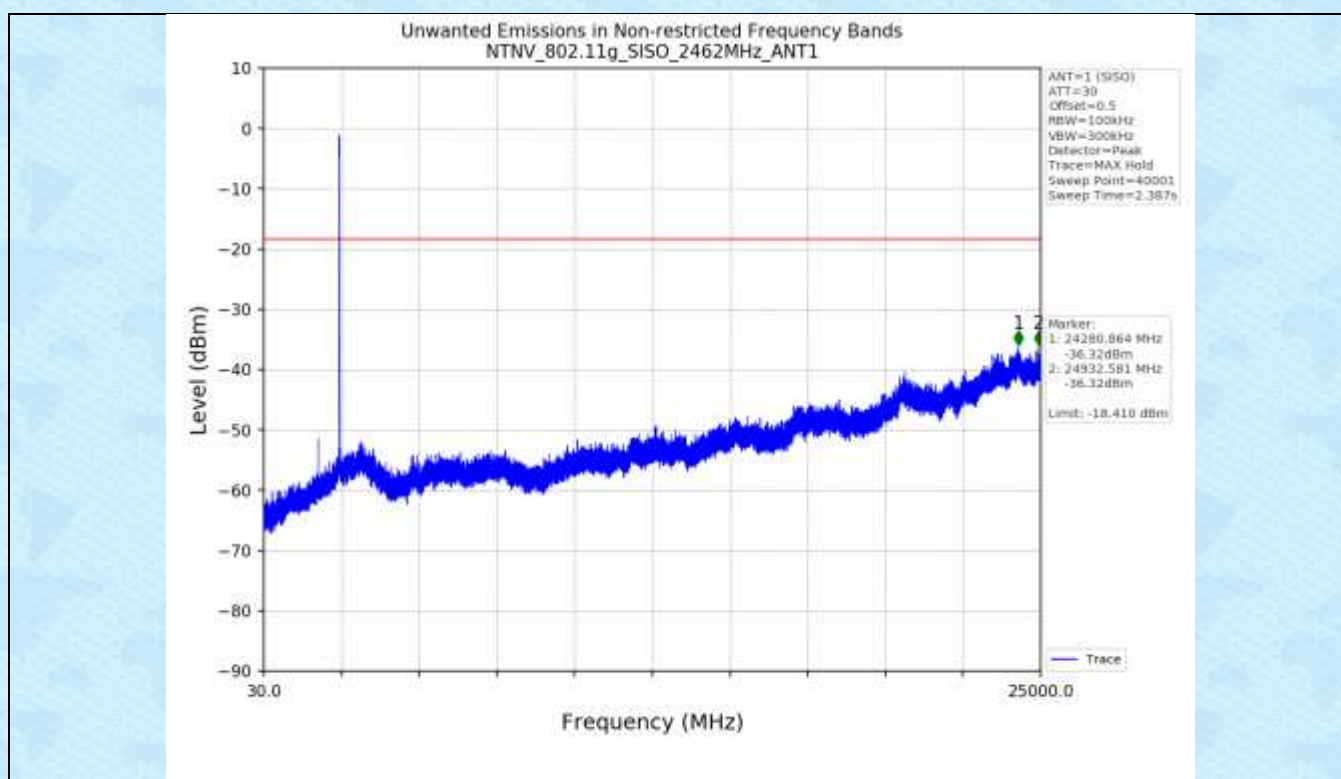
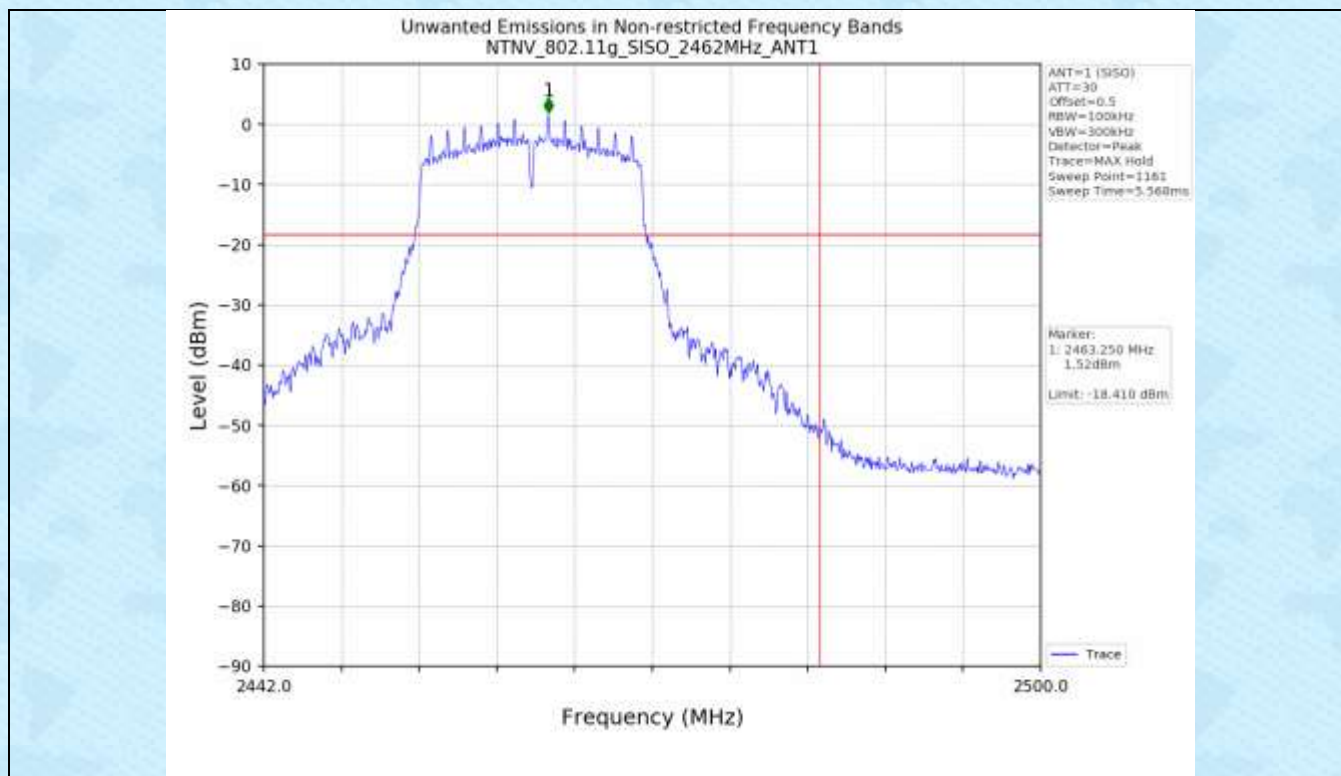


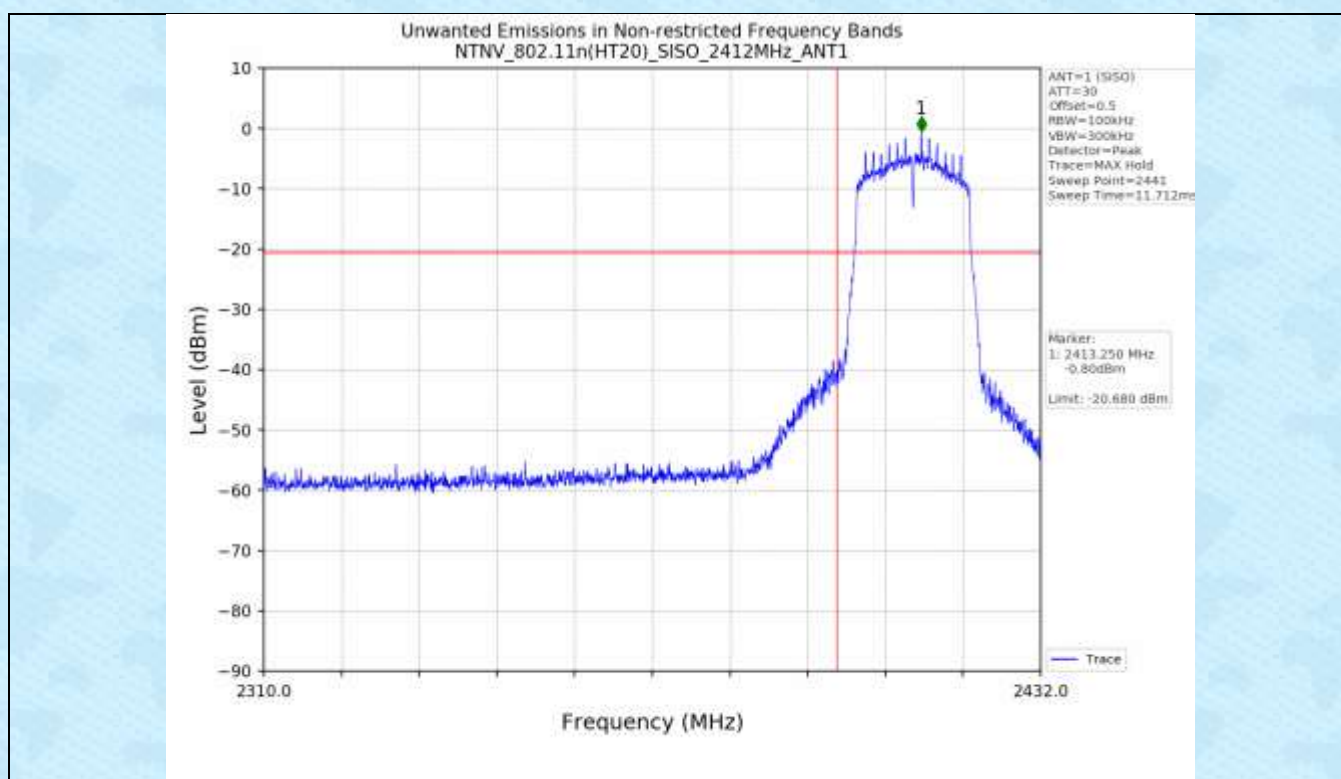
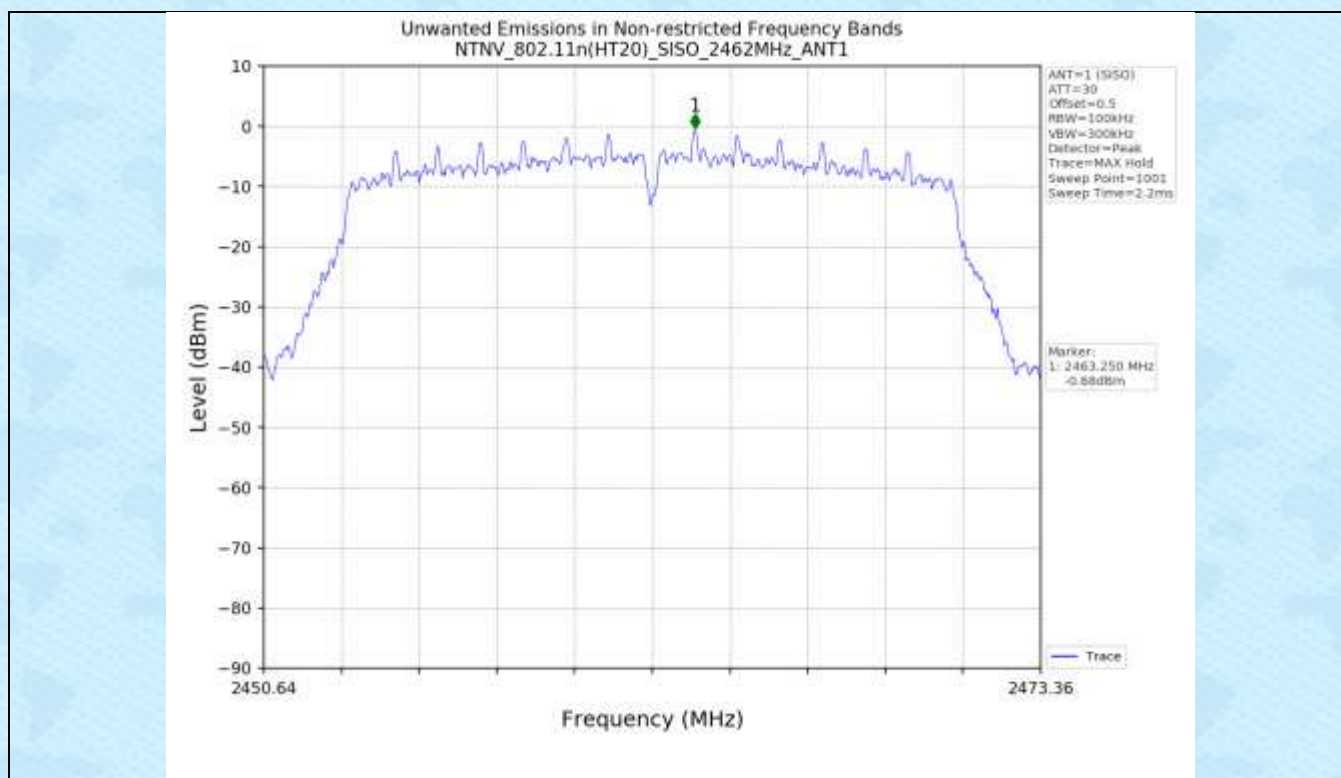


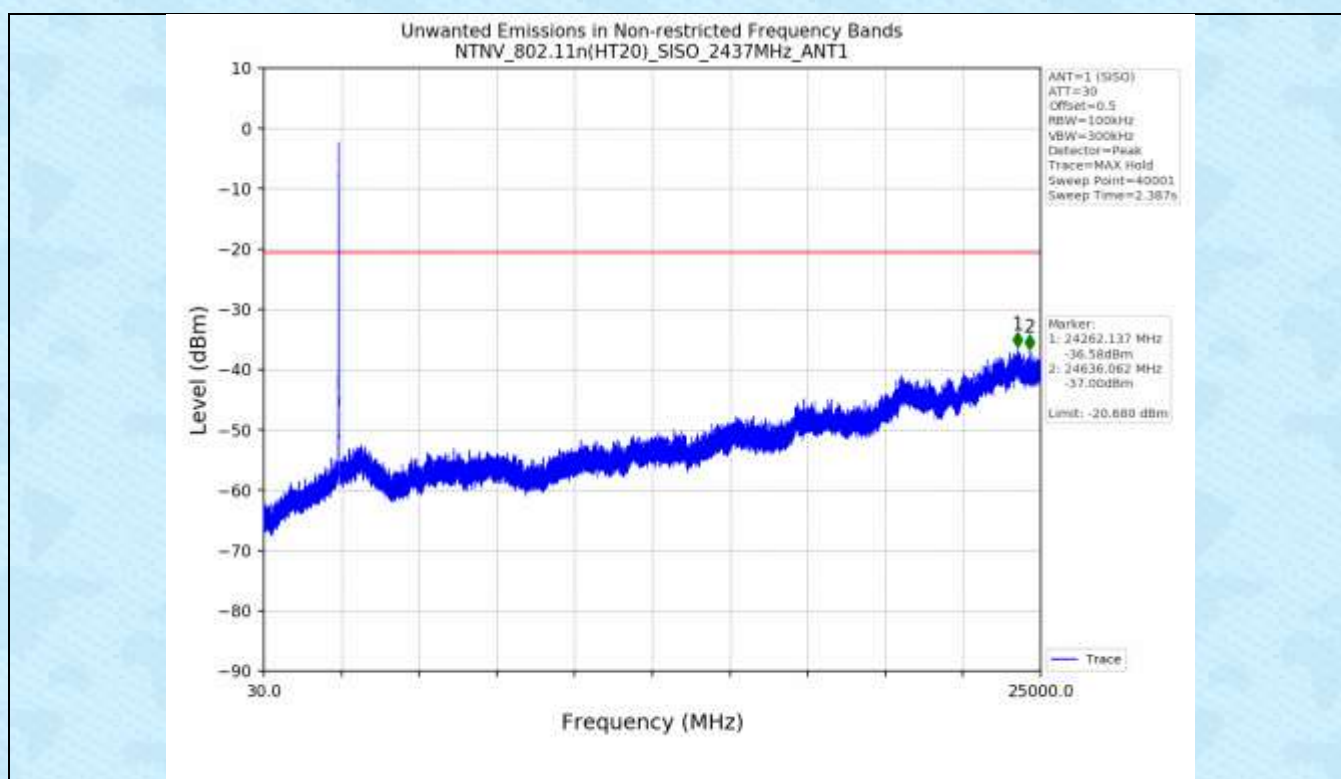
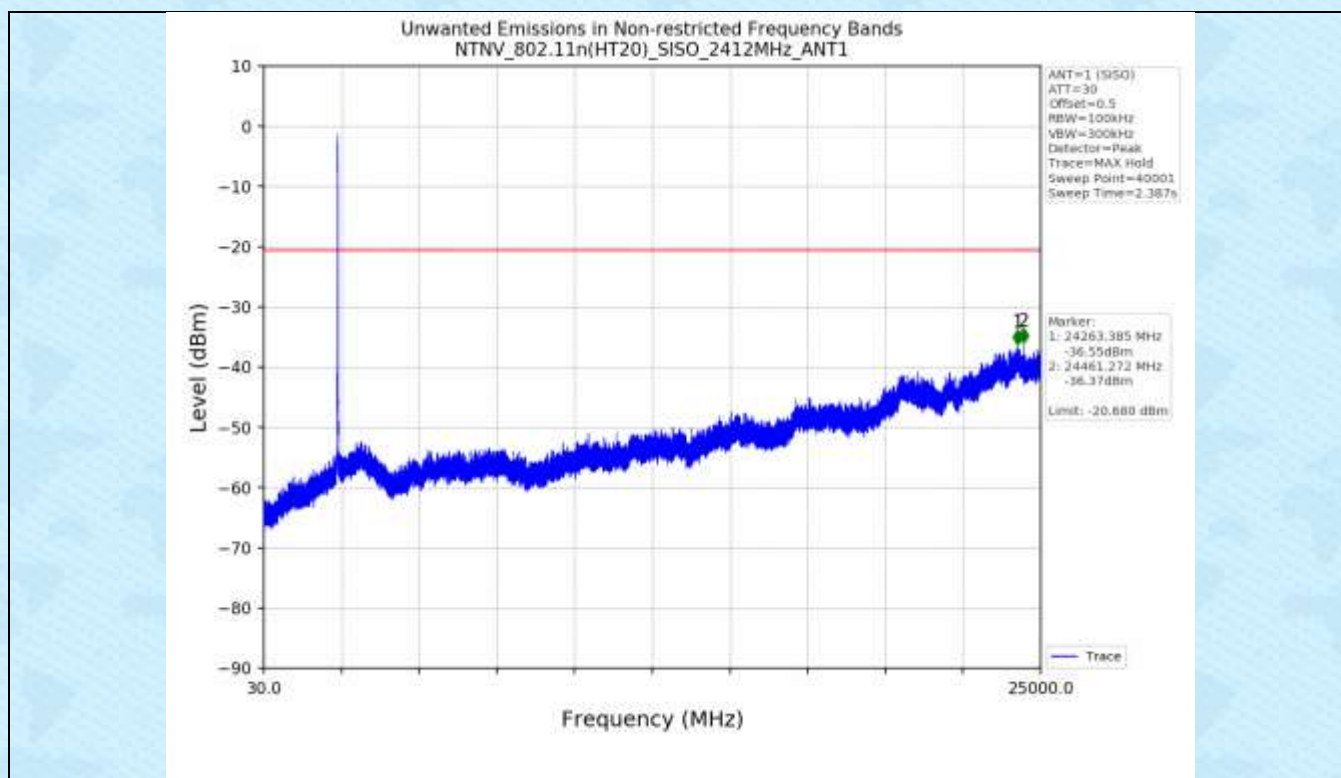


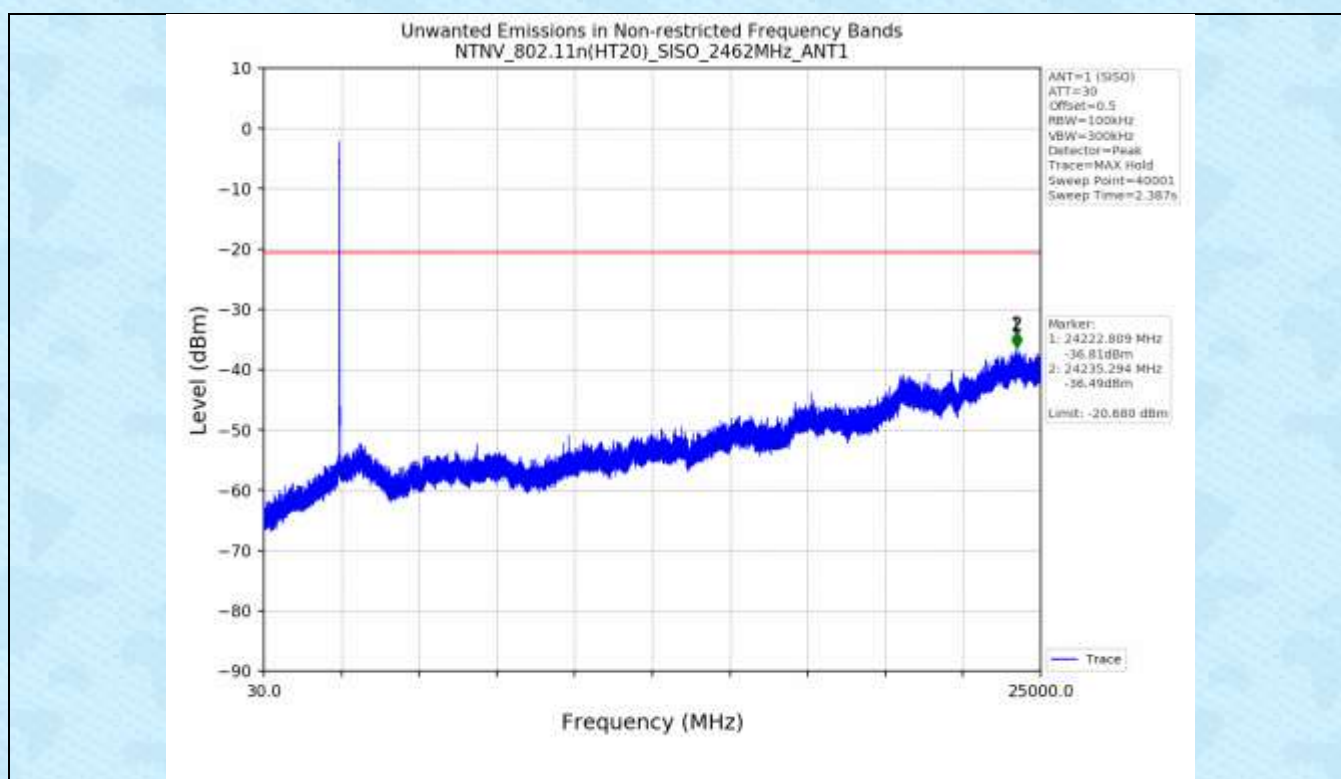
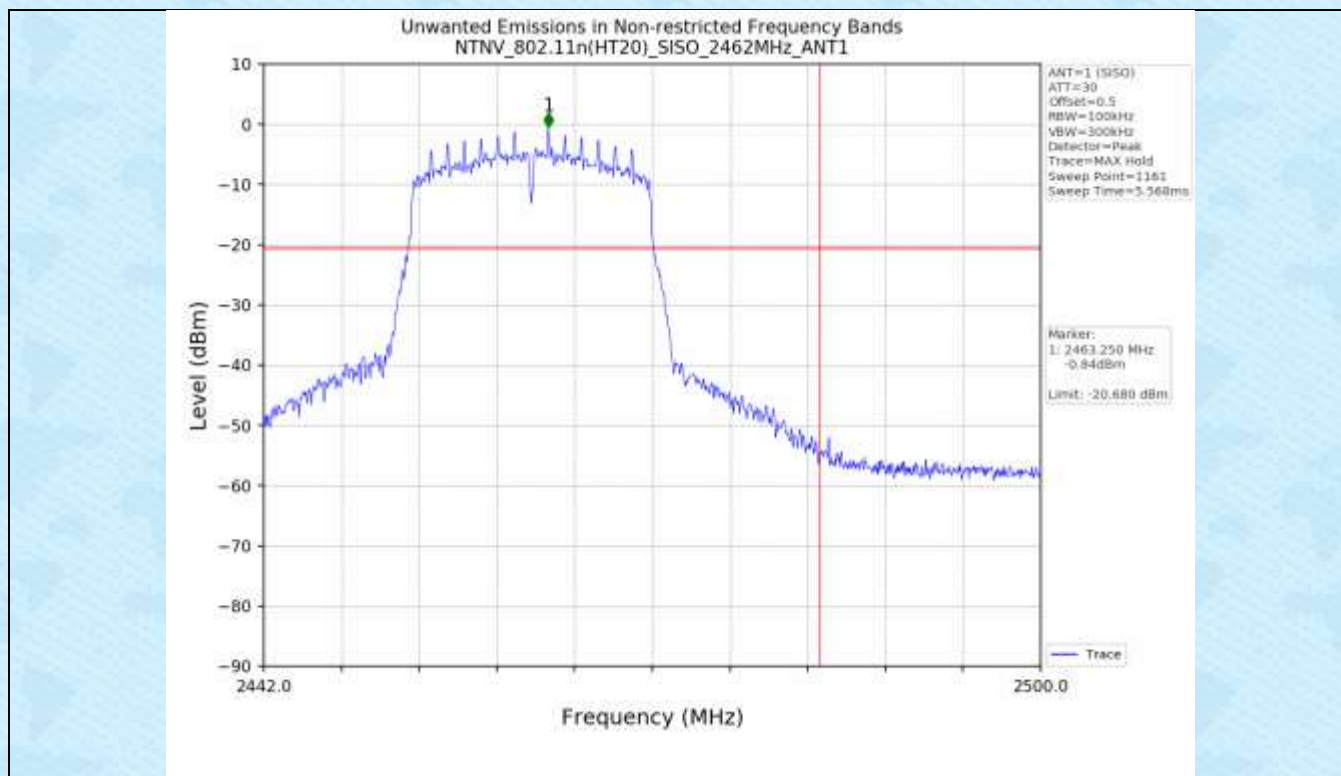


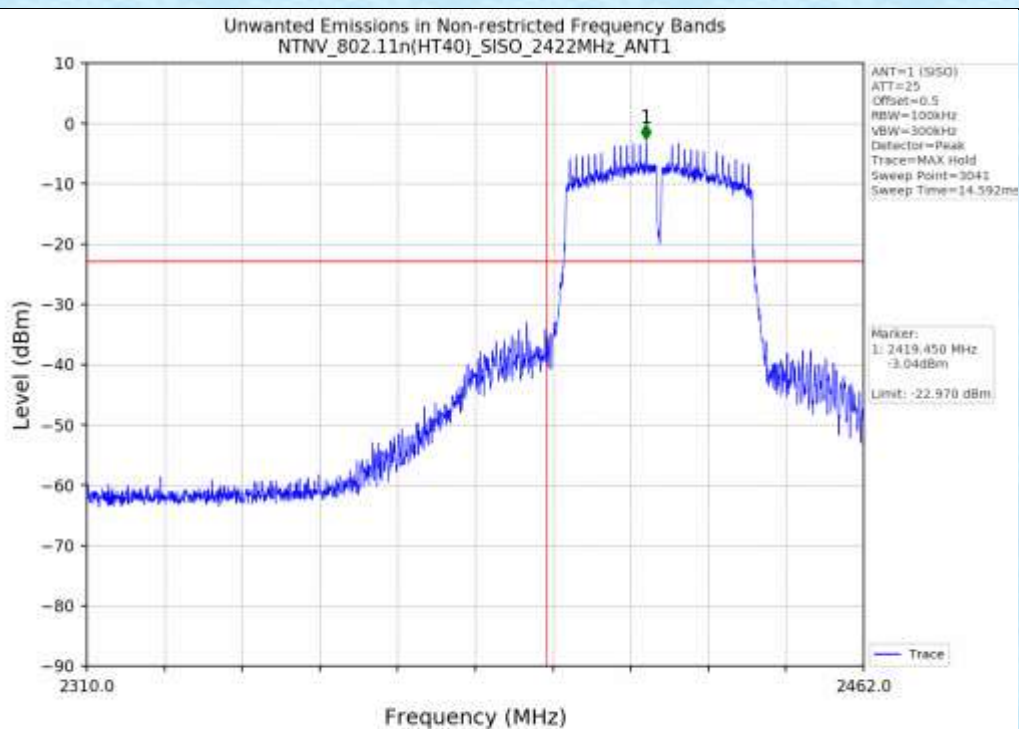
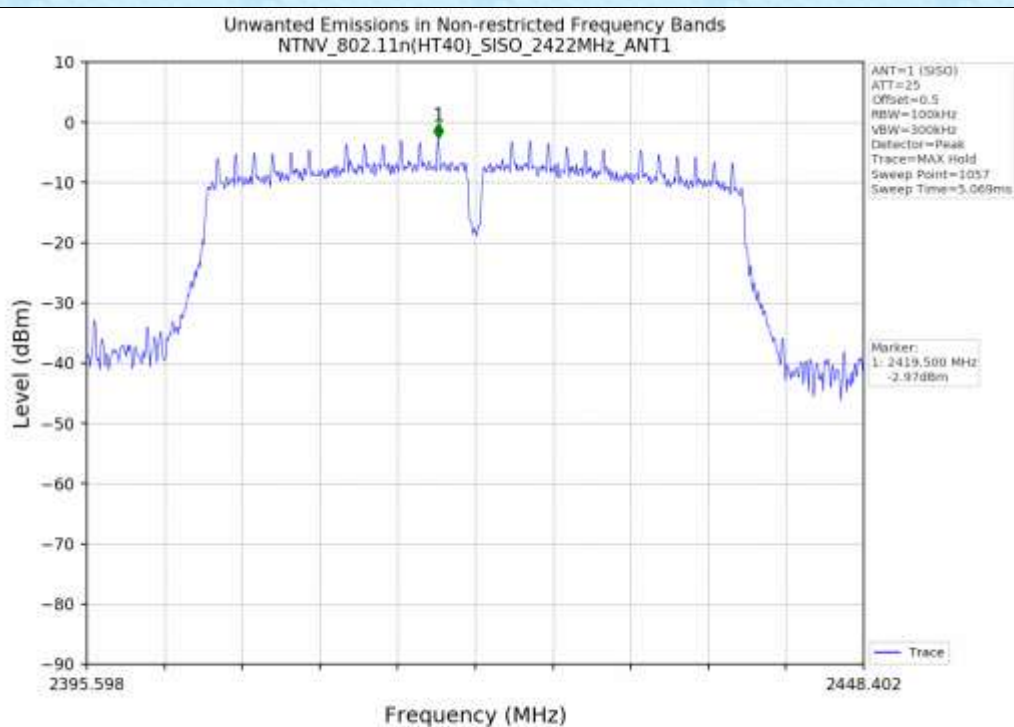


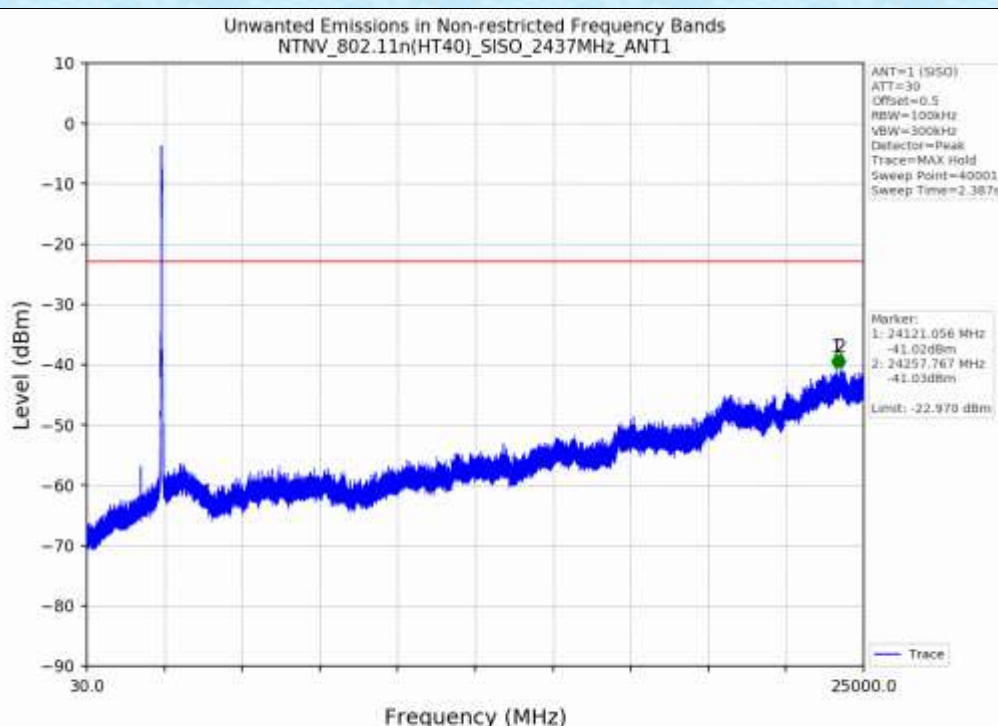
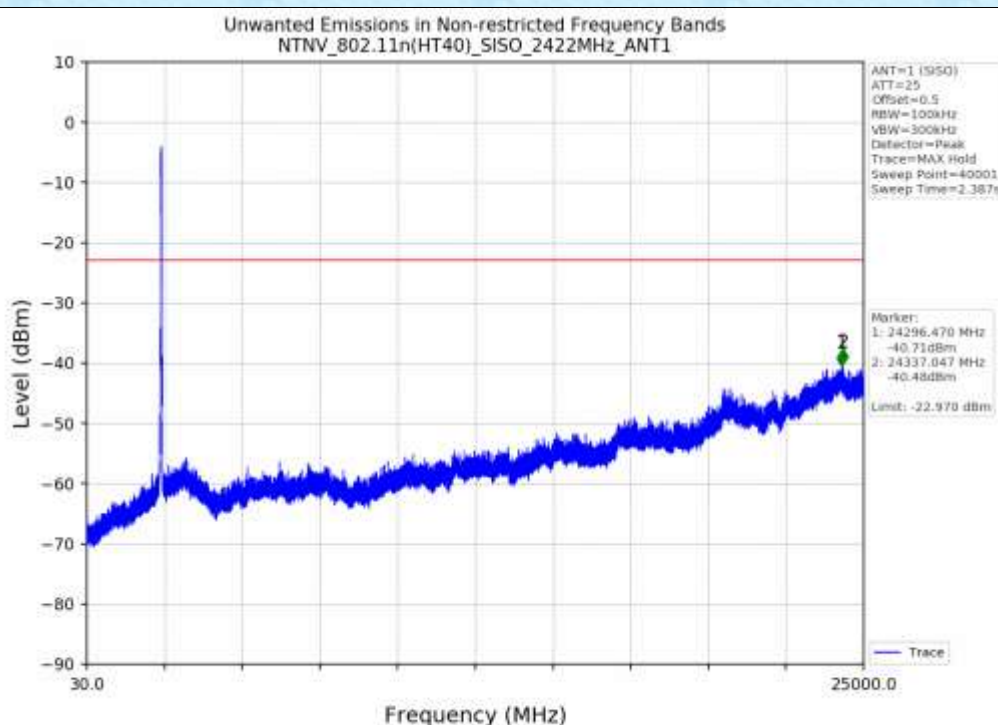


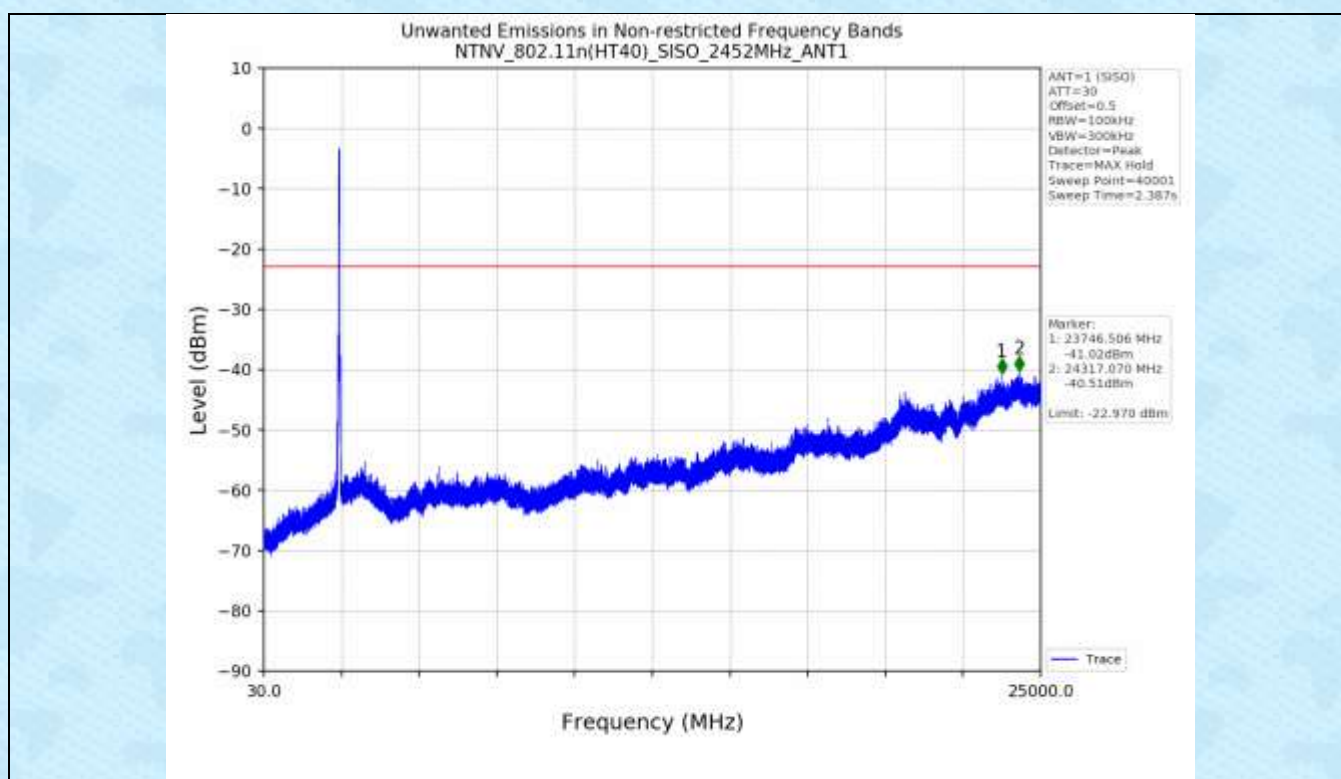
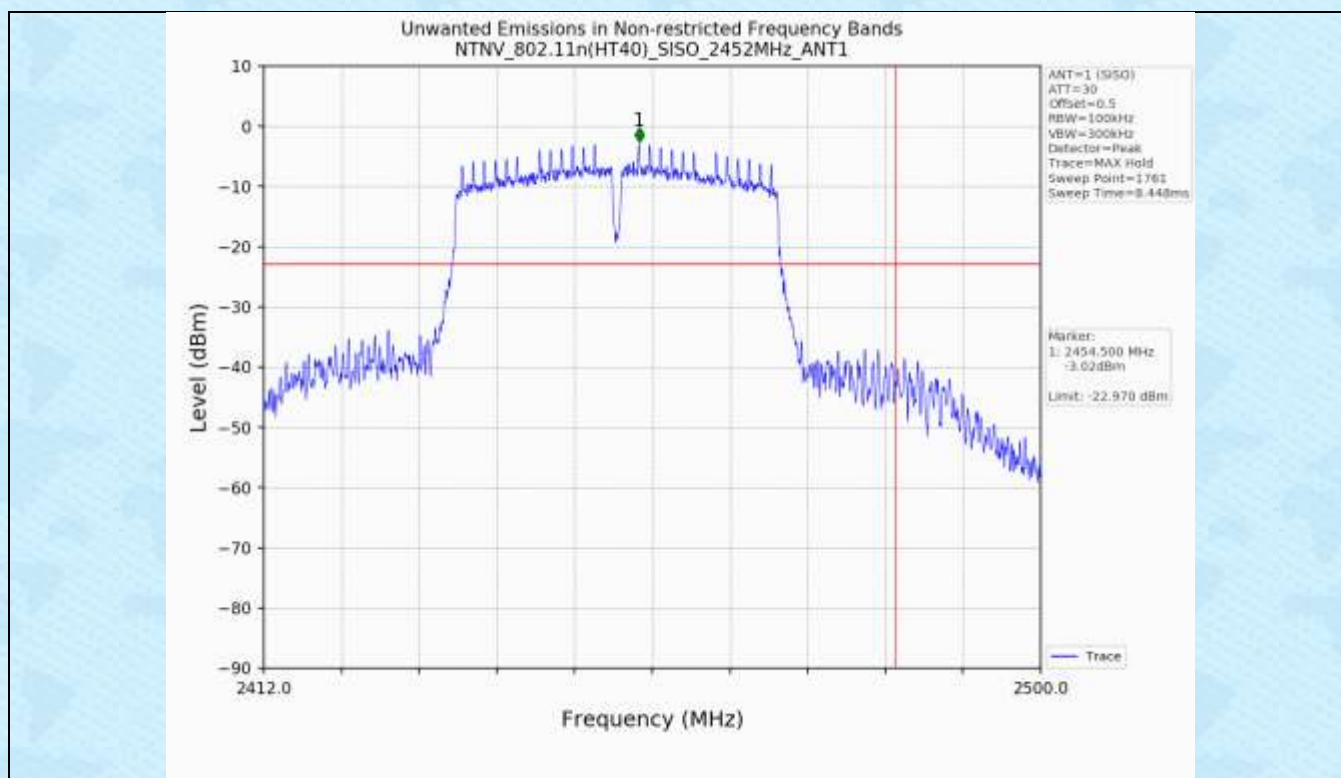












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