



Appendix for SHEM2001000178CR

Power level setting using in test:

Channel	802.11b	802.11g	802.11n(HT20)
1	48	50	50
6	48	50	50
11	48	50	50
Channel	802.11n(HT40)		
3	50		
6	50		
9	50		

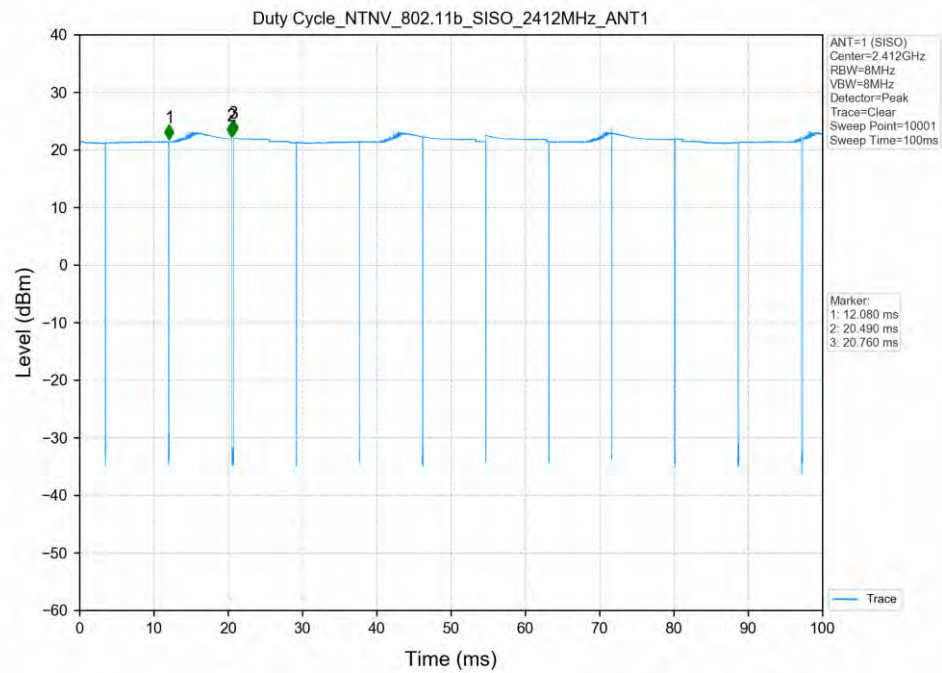
1. Duty Cycle

1.1 Test Result

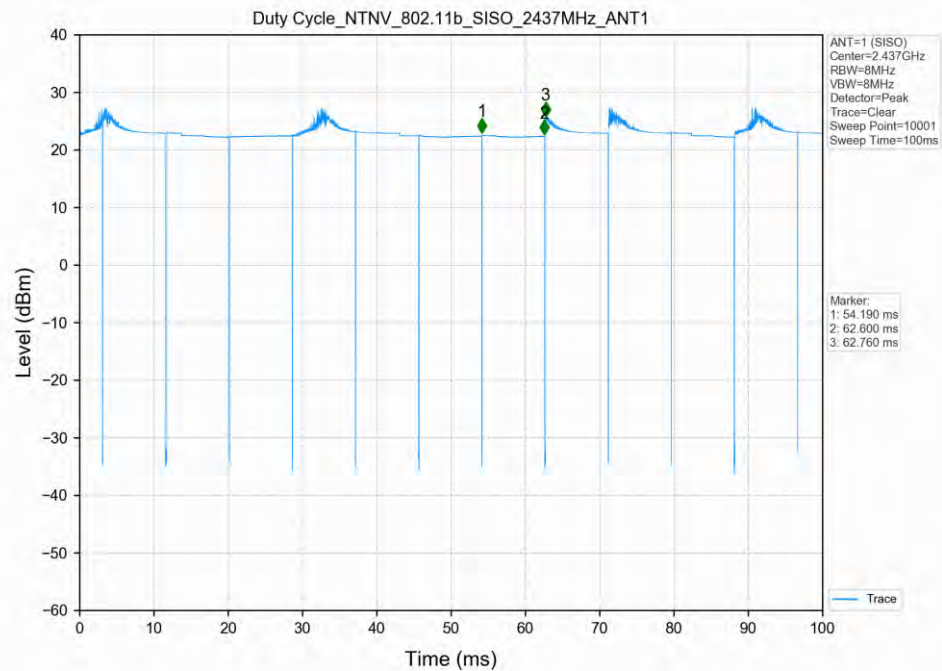
Test Mode	Channel Frequency(MHz)	TX Type	ANT No.	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
802.11b	2412	SISO	1	8.410	8.680	96.89	0.14
	2437	SISO	1	8.410	8.570	98.13	0.08
	2462	SISO	1	8.420	8.590	98.02	0.09
802.11g	2412	SISO	1	1.395	1.707	81.72	0.88
	2437	SISO	1	1.365	1.497	91.18	0.40
	2462	SISO	1	1.366	1.532	89.16	0.50
802.11n(HT20)	2412	SISO	1	1.308	1.529	85.55	0.68
	2437	SISO	1	1.309	1.461	89.60	0.48
	2462	SISO	1	1.280	1.758	72.81	1.38
802.11n(HT40)	2422	SISO	1	0.648	0.818	79.22	1.01
	2437	SISO	1	0.648	0.800	81.00	0.92
	2452	SISO	1	0.648	0.809	80.10	0.96

1.2 Test Graph

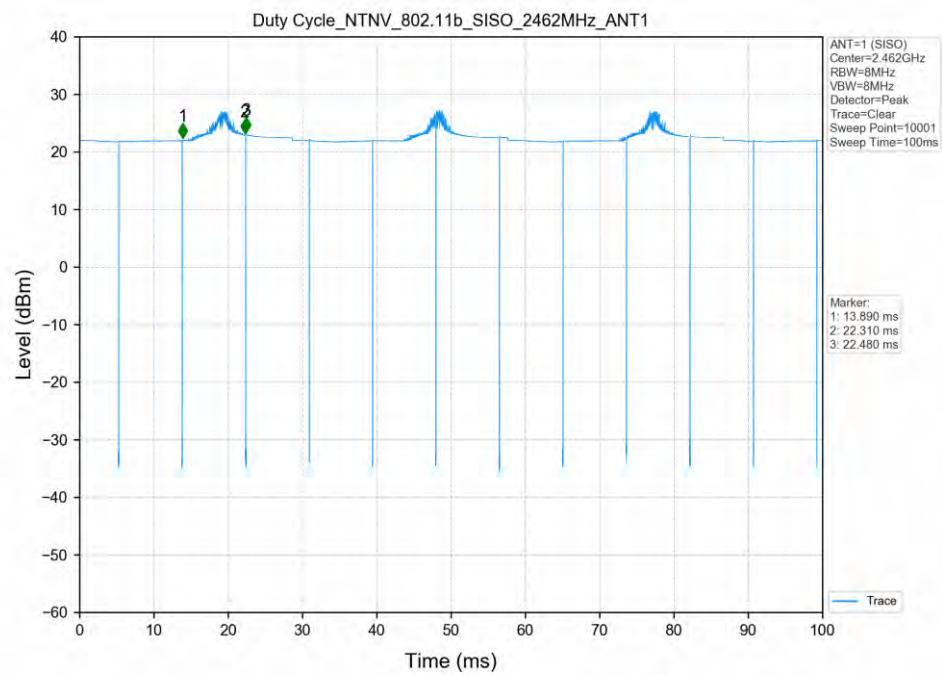
802.11b_2412MHz_SISO_ANT1



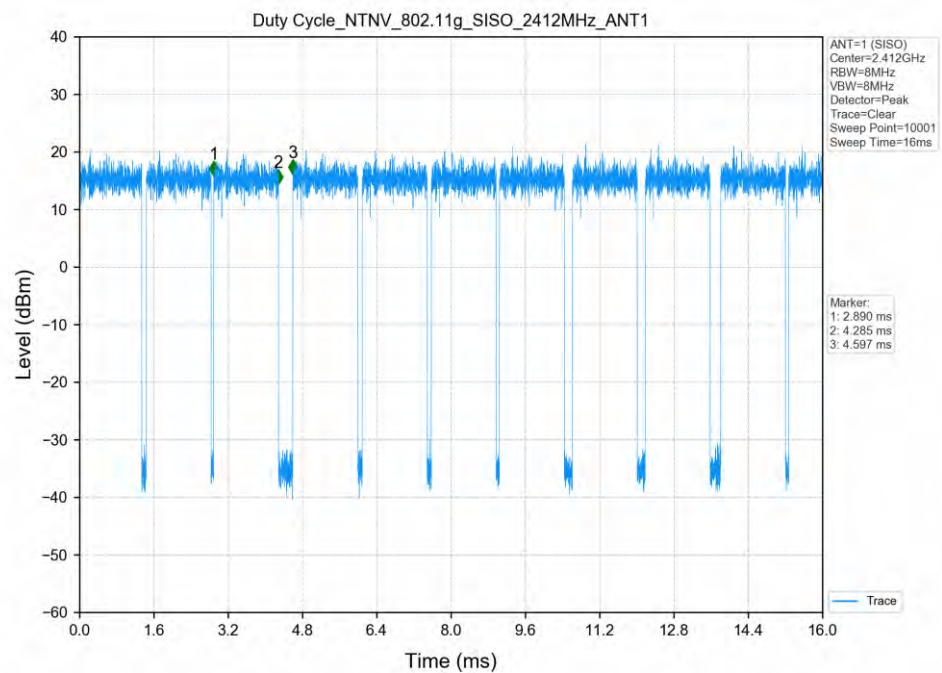
802.11b_2437MHz_SISO_ANT1



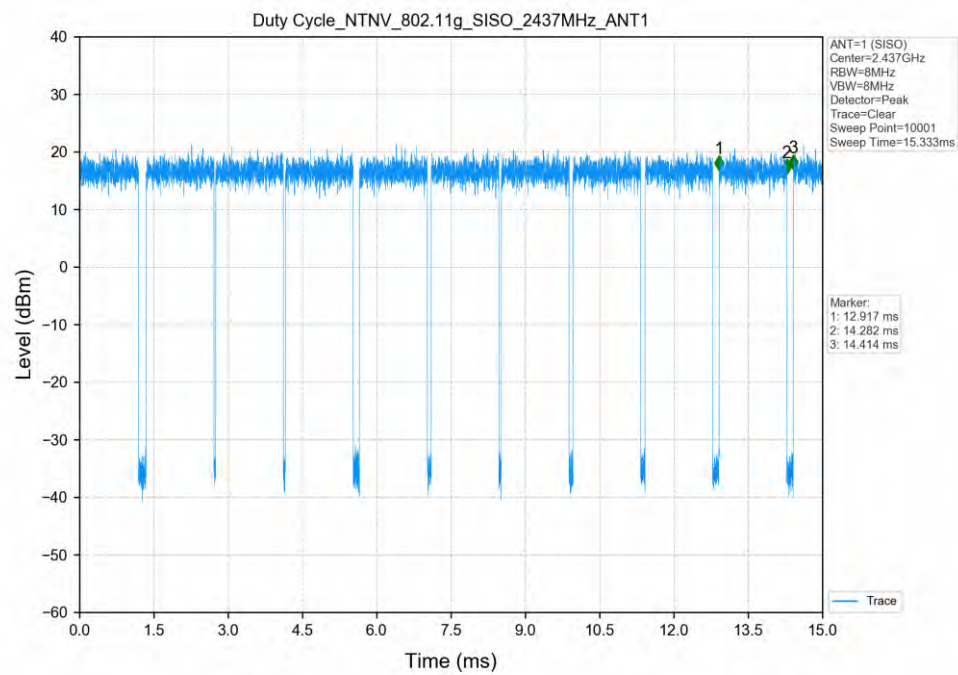
802.11b_2462MHz_SISO_ANT1



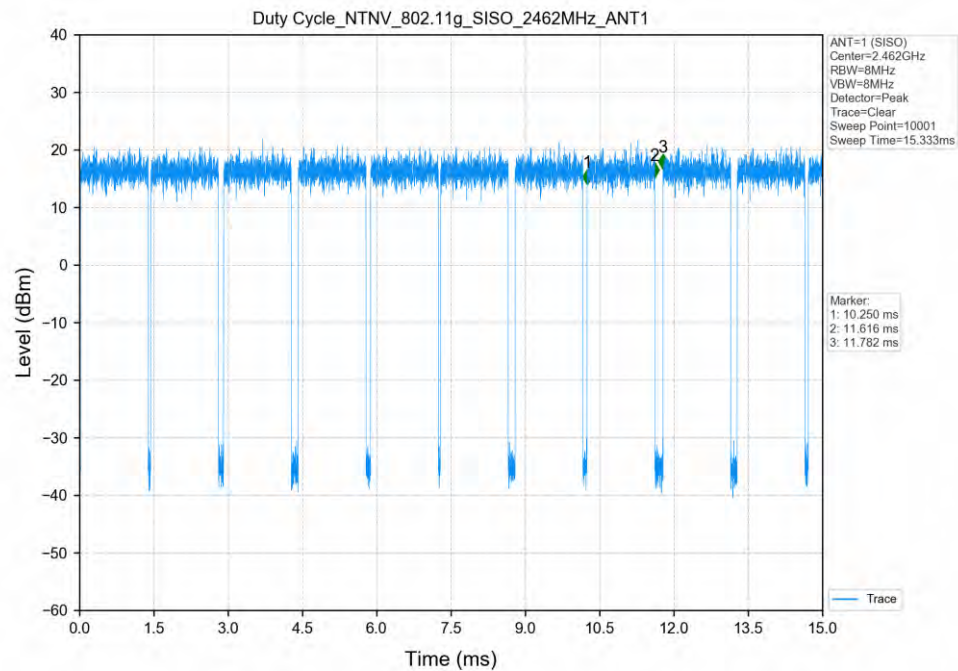
802.11g_2412MHz_SISO_ANT1



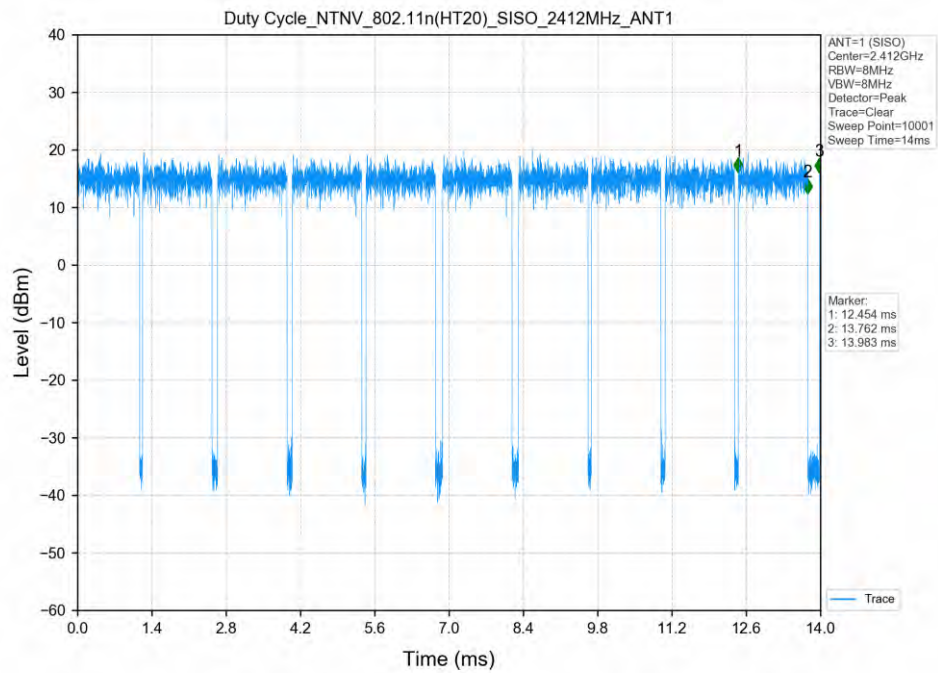
802.11g_2437MHz_SISO_ANT1



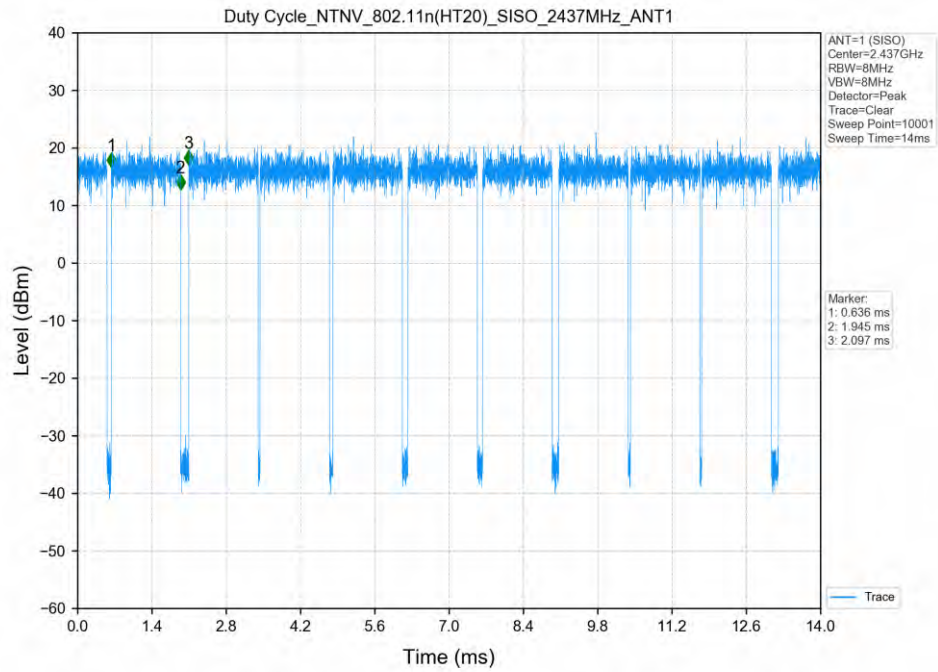
802.11g_2462MHz_SISO_ANT1



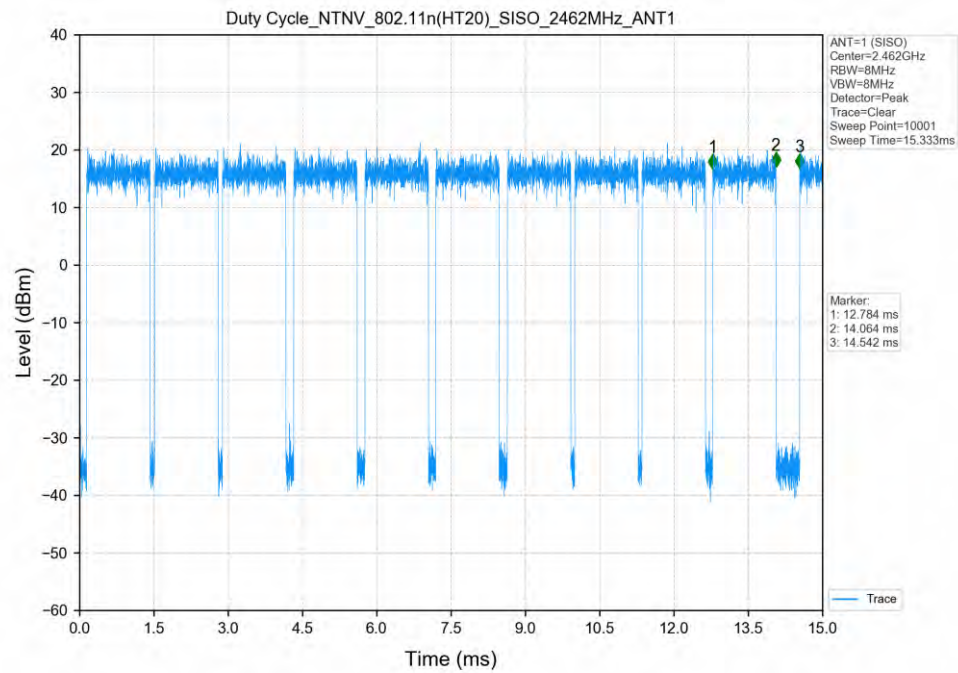
802.11n(HT20)_2412MHz_SISO_ANT1



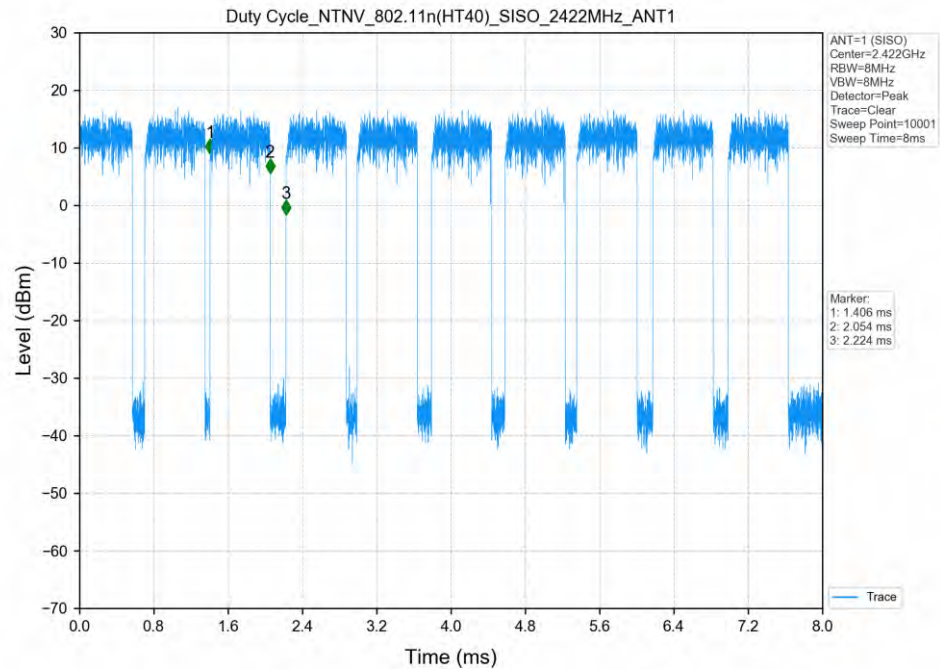
802.11n(HT20)_2437MHz_SISO_ANT1



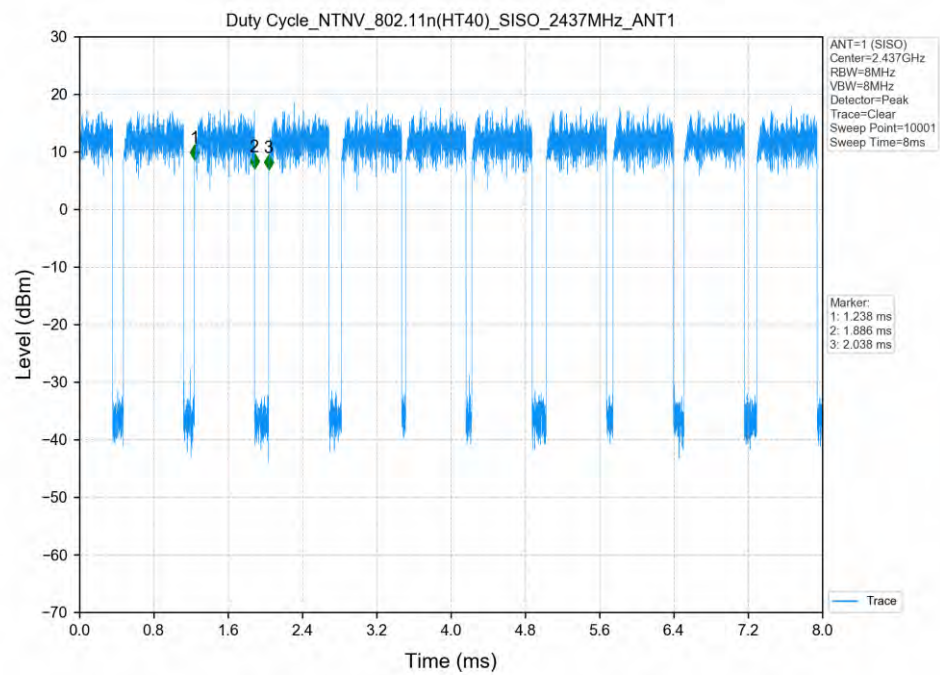
802.11n(HT20)_2462MHz_SISO_ANT1



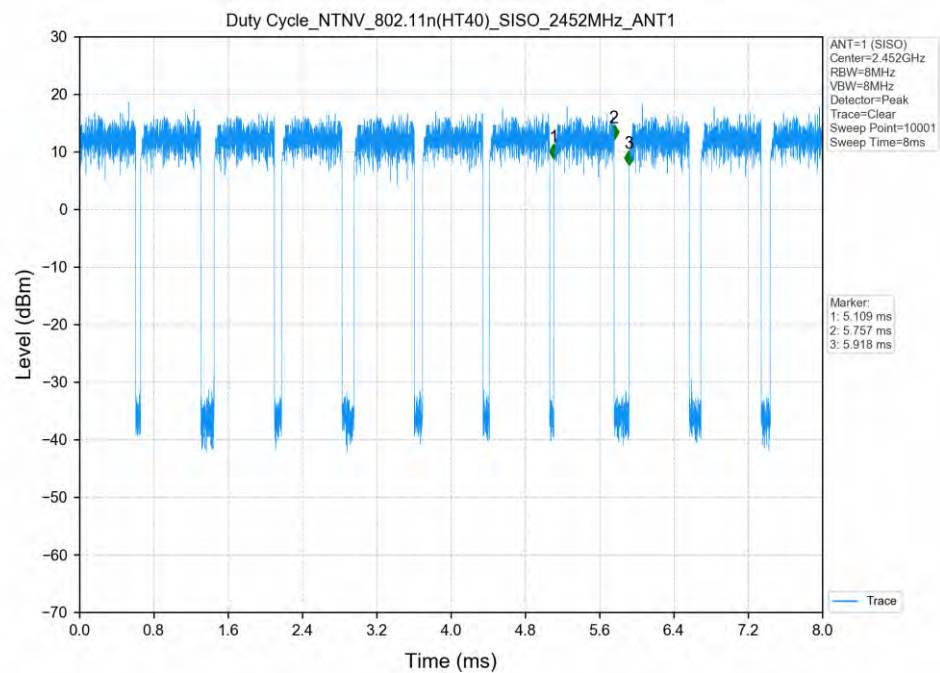
802.11n(HT40)_2422MHz_SISO_ANT1



802.11n(HT40)_2437MHz_SISO_ANT1



802.11n(HT40)_2452MHz_SISO_ANT1





2. Bandwidth

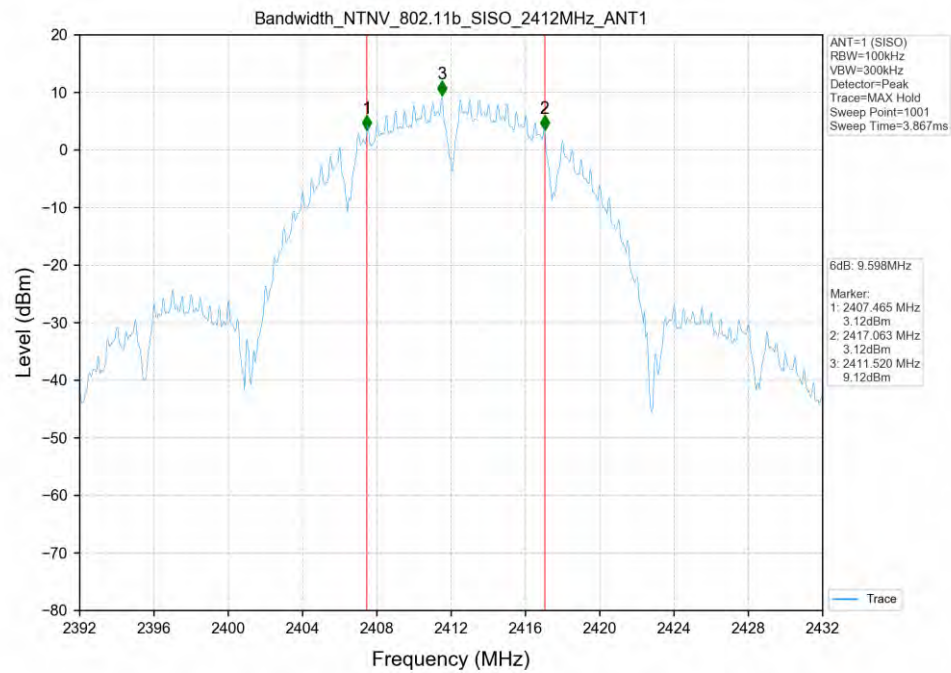
2.1 Test Result

Test Mode	Frequency (MHz)	TX Type	ANT No.	6dB Bandwidth		Verdict
				Test Result (MHz)	Limits (MHz)	
802.11b	2412	SISO	1	9.598	≥0.5	PASS
	2437	SISO	1	10.071	≥0.5	PASS
	2462	SISO	1	10.068	≥0.5	PASS
802.11g	2412	SISO	1	16.107	≥0.5	PASS
	2437	SISO	1	16.368	≥0.5	PASS
	2462	SISO	1	16.405	≥0.5	PASS
802.11n(HT20)	2412	SISO	1	16.942	≥0.5	PASS
	2437	SISO	1	17.586	≥0.5	PASS
	2462	SISO	1	17.577	≥0.5	PASS
802.11n(HT40)	2422	SISO	1	35.209	≥0.5	PASS
	2437	SISO	1	35.205	≥0.5	PASS
	2452	SISO	1	35.232	≥0.5	PASS

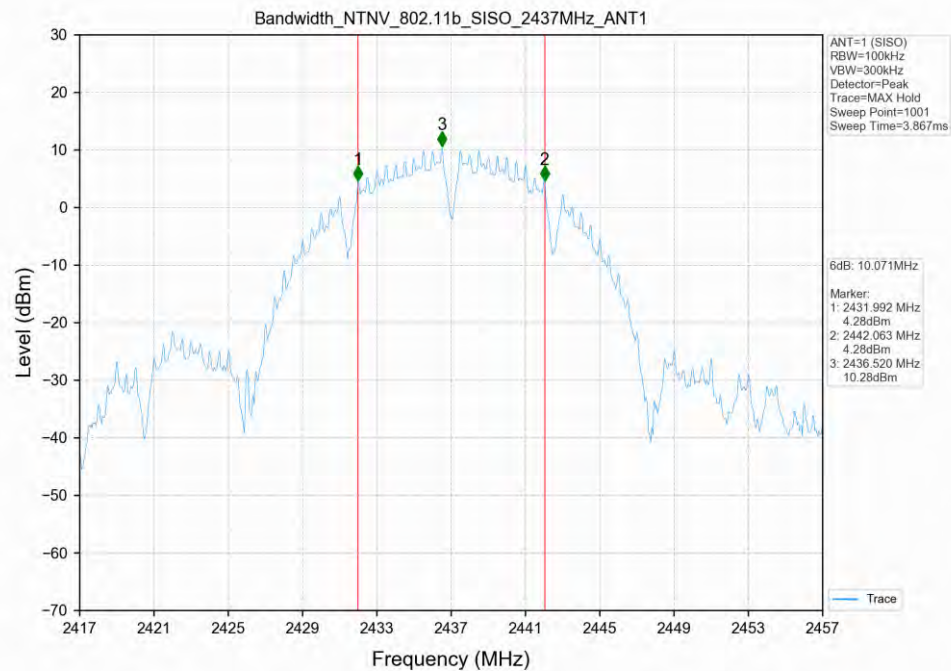
Test Mode	Frequency (MHz)	TX Type	ANT No.	99% Occupied Bandwidth	
				Test Result (MHz)	
802.11b	2412	SISO	1	15.107	Only for Report Use
	2437	SISO	1	15.121	Only for Report Use
	2462	SISO	1	15.564	Only for Report Use
802.11g	2412	SISO	1	16.950	Only for Report Use
	2437	SISO	1	17.037	Only for Report Use
	2462	SISO	1	17.221	Only for Report Use
802.11n(HT20)	2412	SISO	1	17.851	Only for Report Use
	2437	SISO	1	18.009	Only for Report Use
	2462	SISO	1	18.205	Only for Report Use
802.11n(HT40)	2422	SISO	1	36.159	Only for Report Use
	2437	SISO	1	36.435	Only for Report Use
	2452	SISO	1	36.424	Only for Report Use

2.2 Test Graph - 6dB Bandwidth

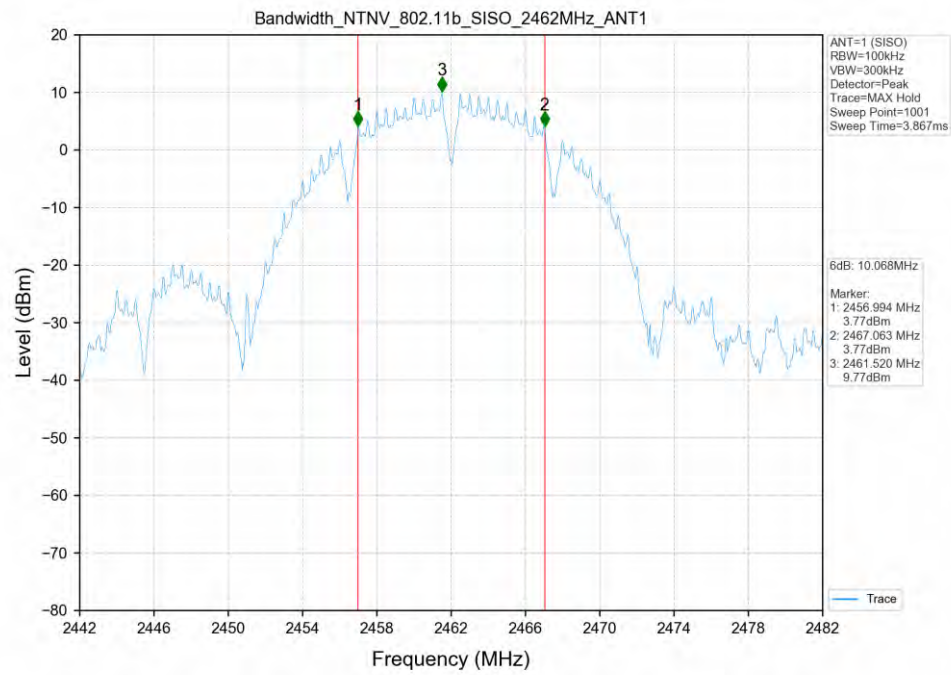
802.11b_2412MHz_SISO_ANT1



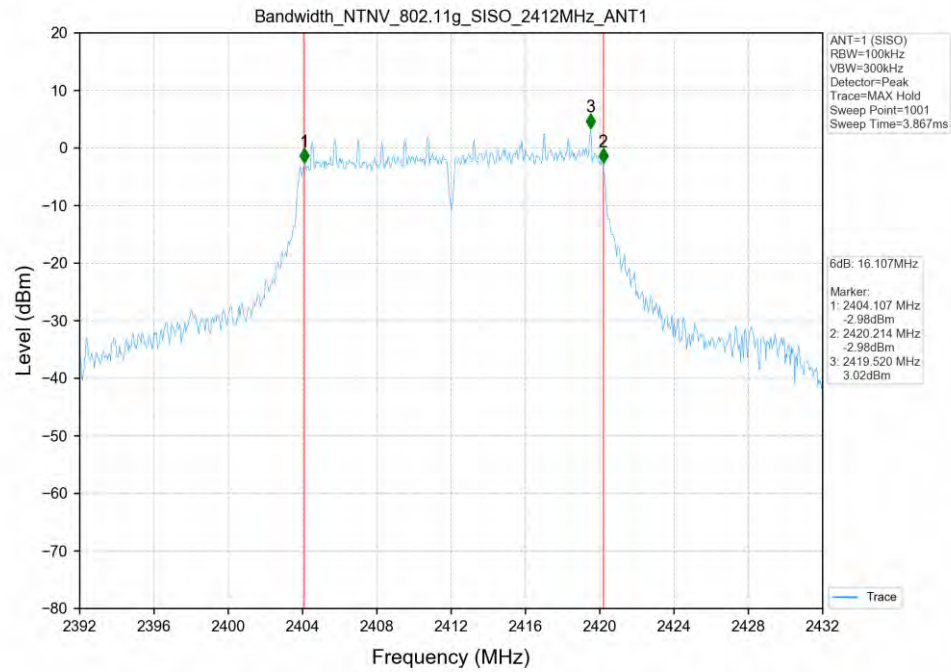
802.11b_2437MHz_SISO_ANT1



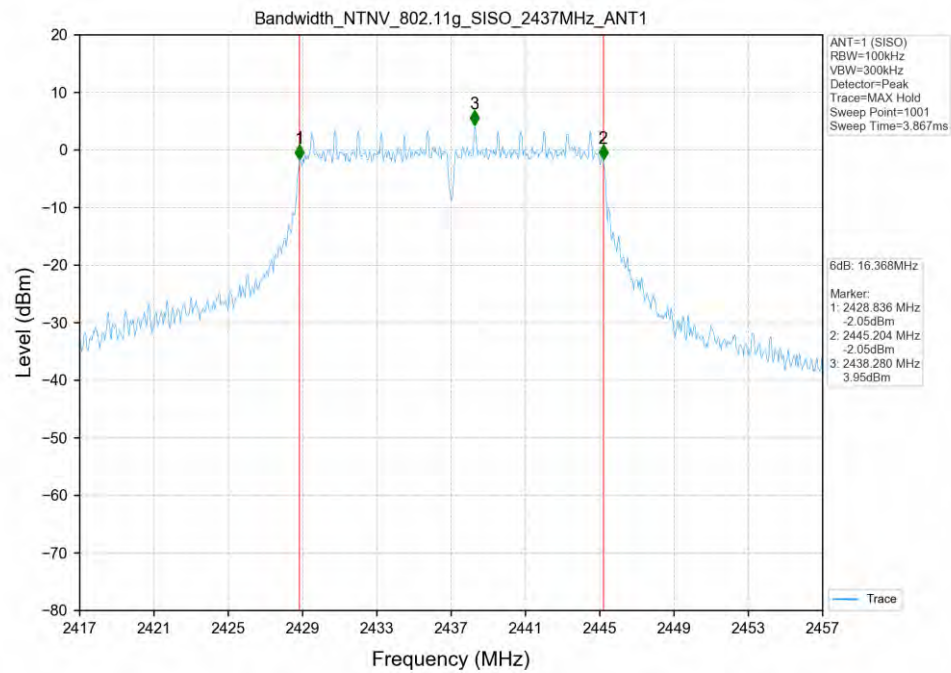
802.11b_2462MHz_SISO_ANT1



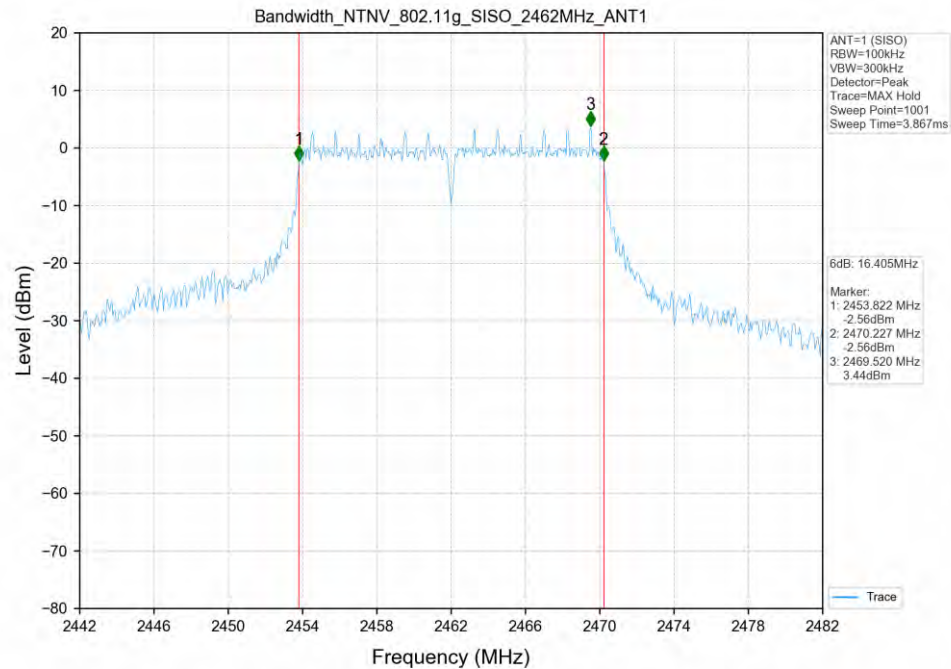
802.11g_2412MHz_SISO_ANT1



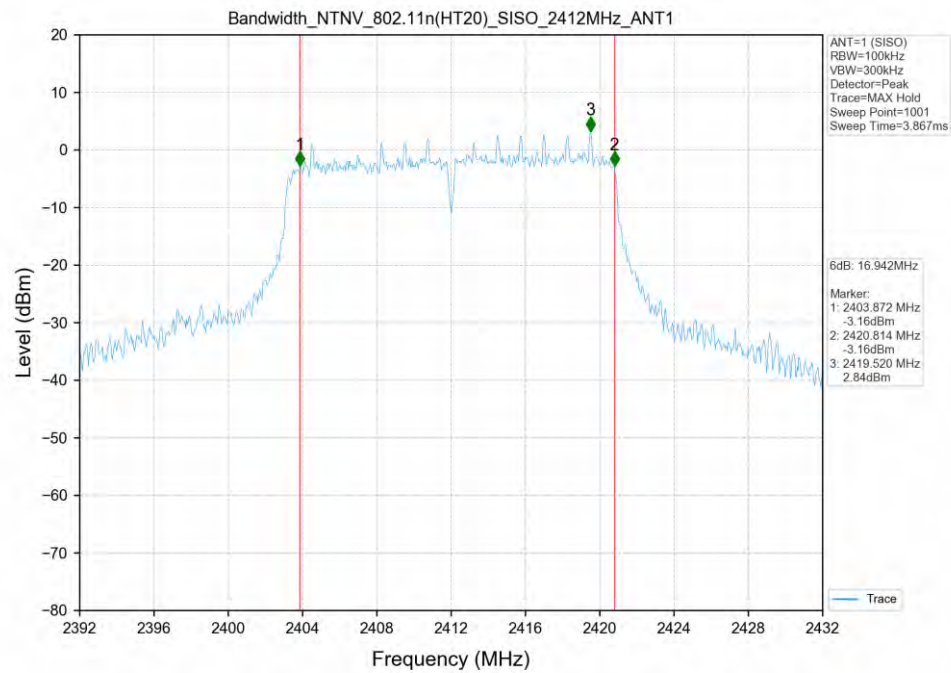
802.11g_2437MHz_SISO_ANT1



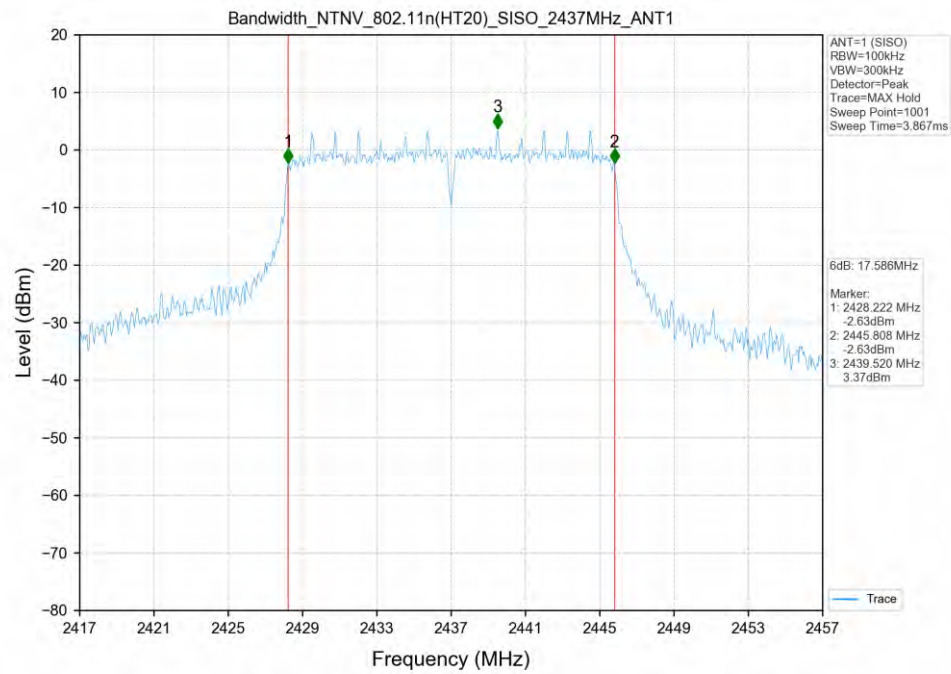
802.11g_2462MHz_SISO_ANT1



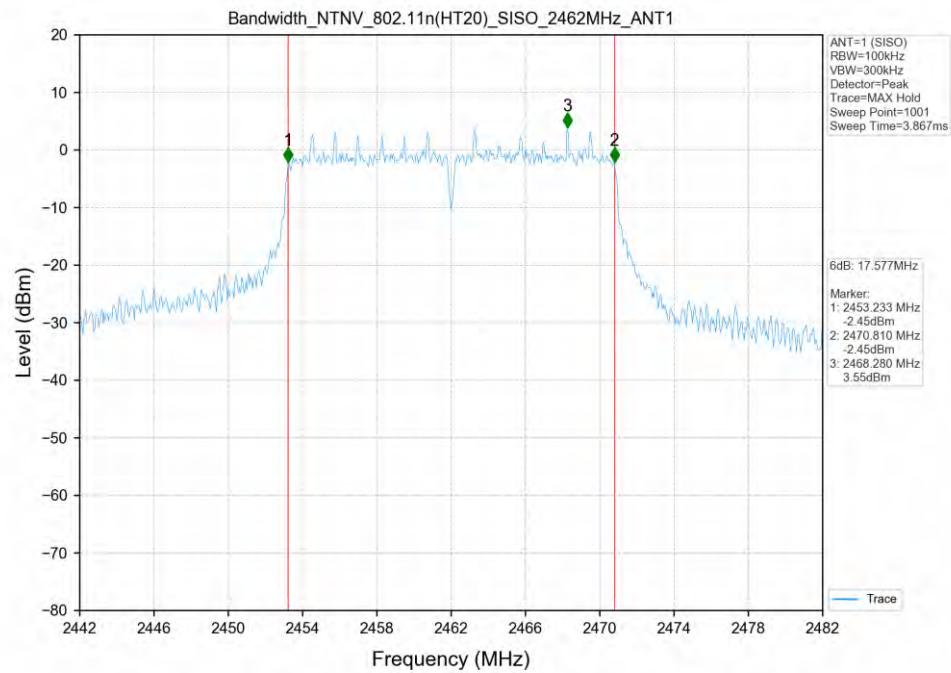
802.11n(HT20)_2412MHz_SISO_ANT1



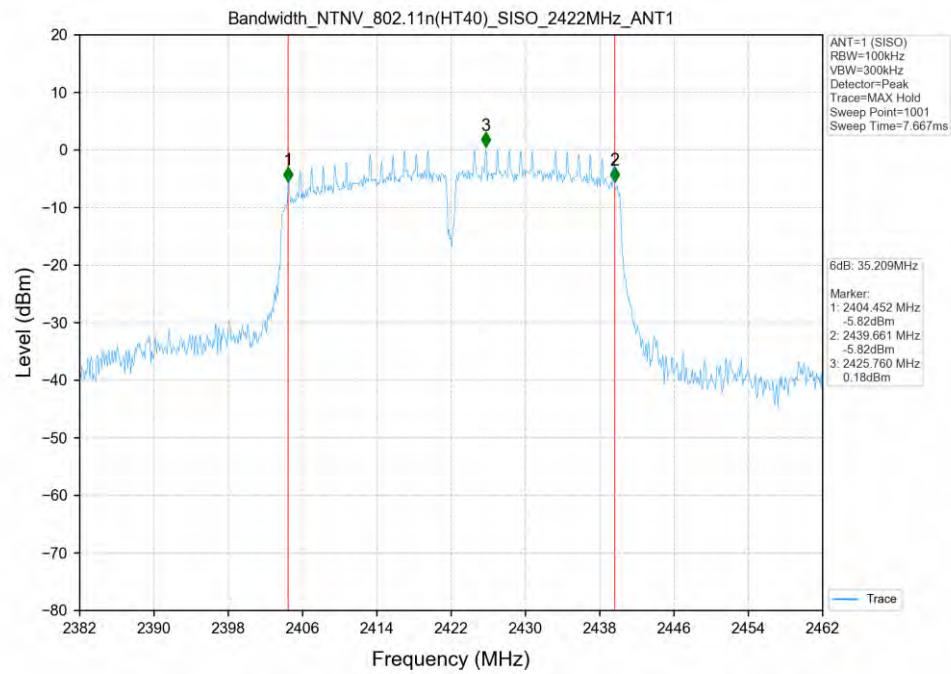
802.11n(HT20)_2437MHz_SISO_ANT1



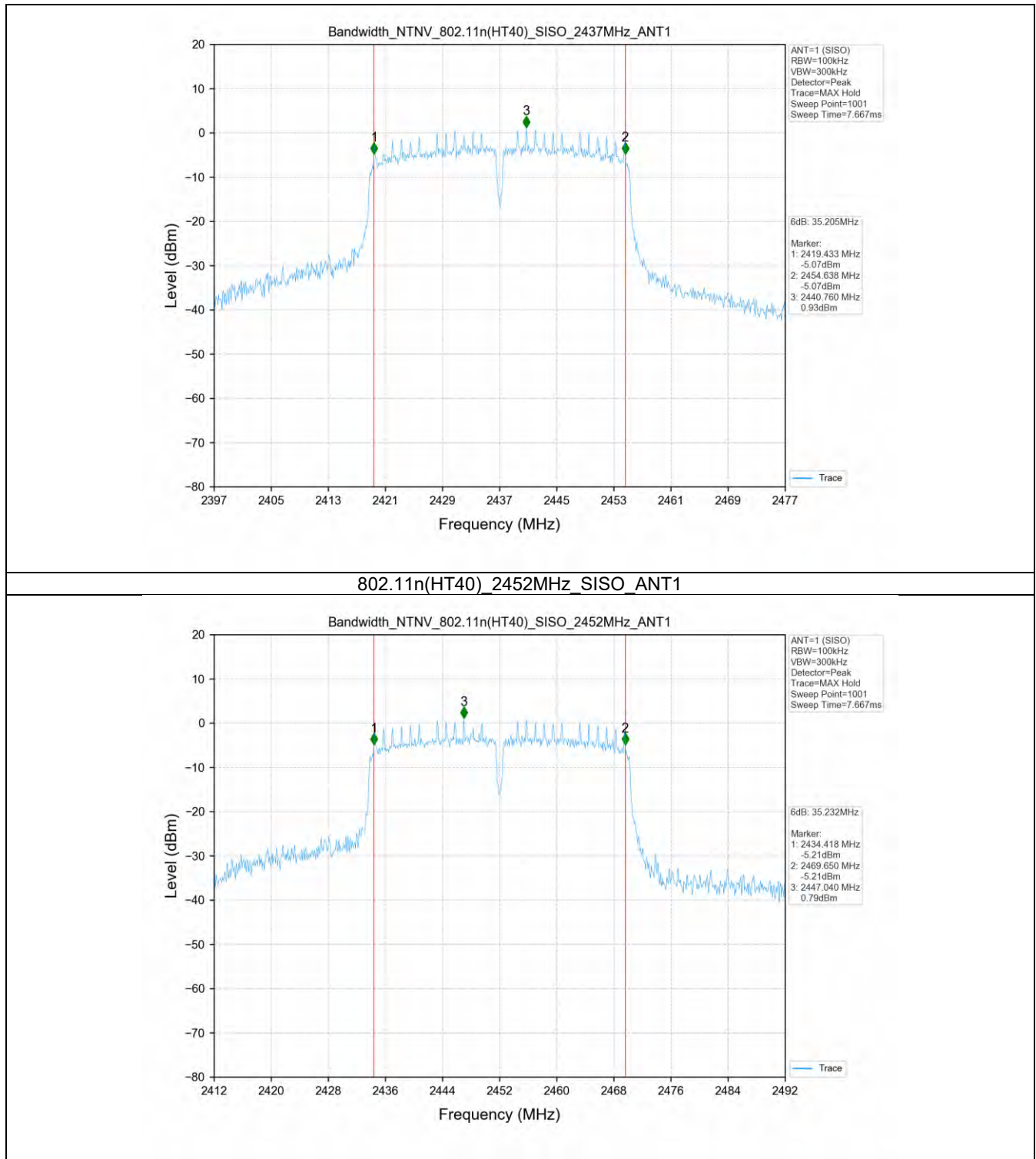
802.11n(HT20)_2462MHz_SISO_ANT1



802.11n(HT40)_2422MHz_SISO_ANT1

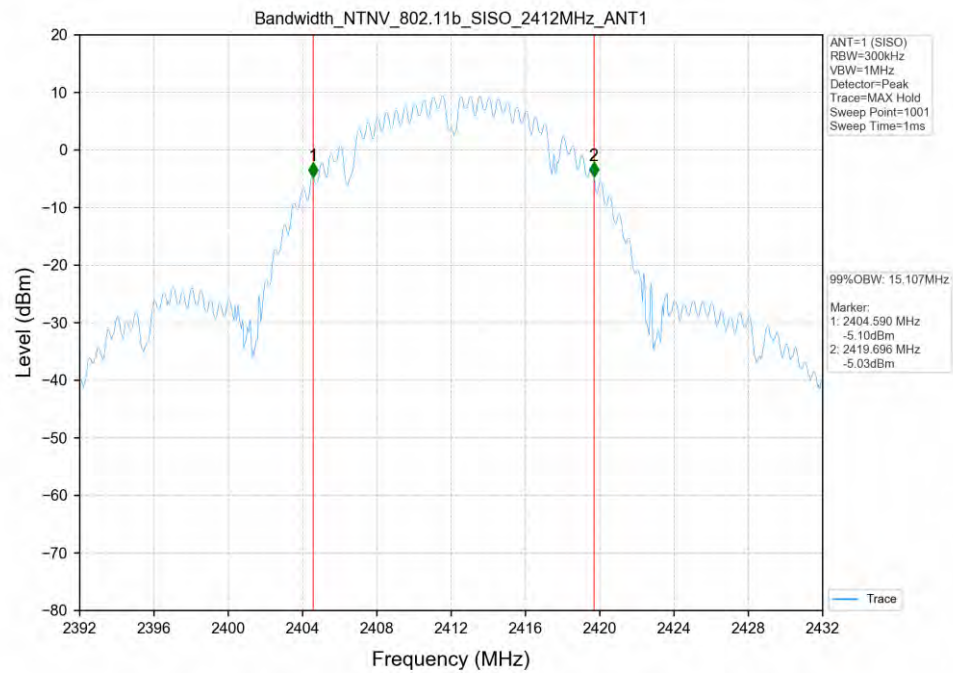


802.11n(HT40)_2437MHz_SISO_ANT1

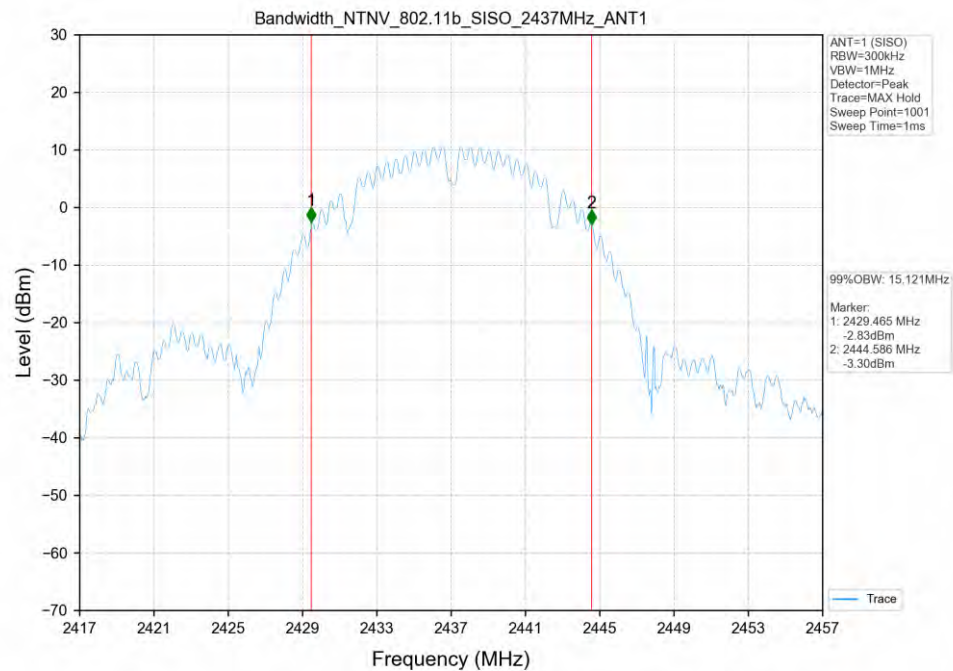


2.3 Test Graph - 99% Occupied Bandwidth

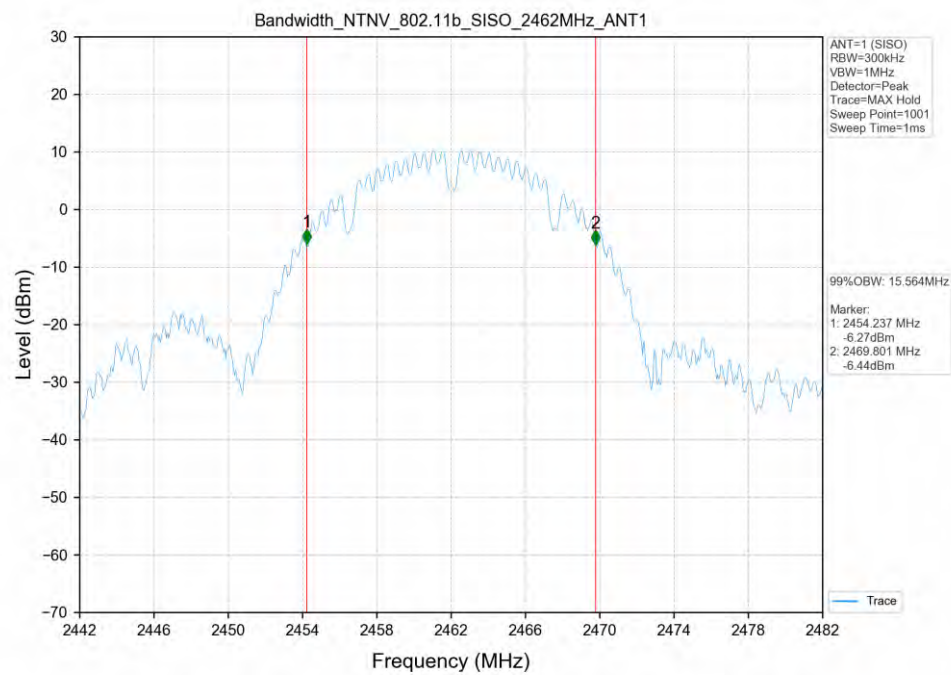
802.11b_2412MHz_SISO_ANT1



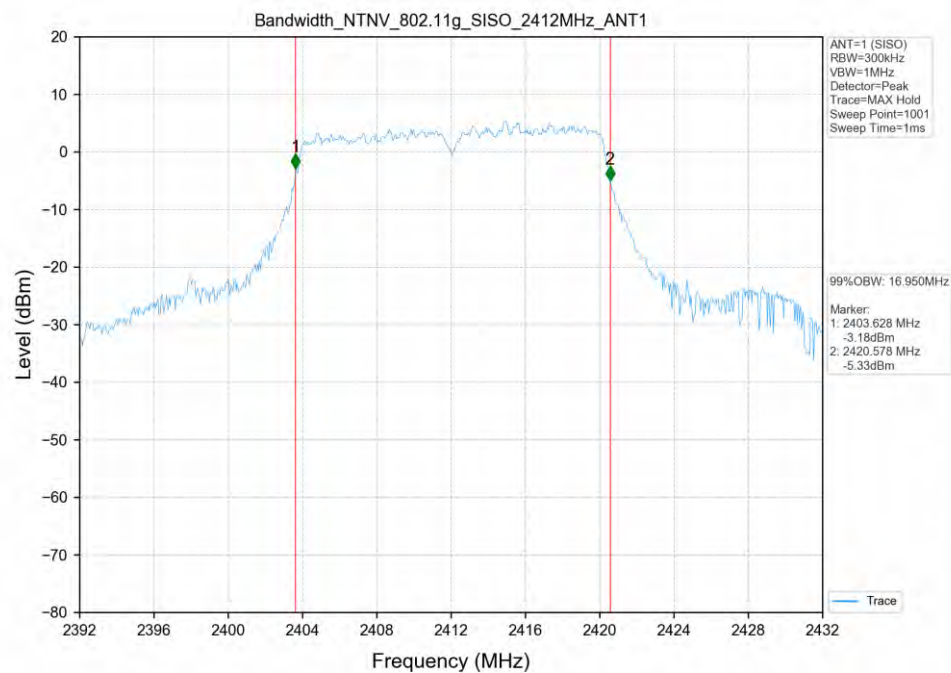
802.11b_2437MHz_SISO_ANT1



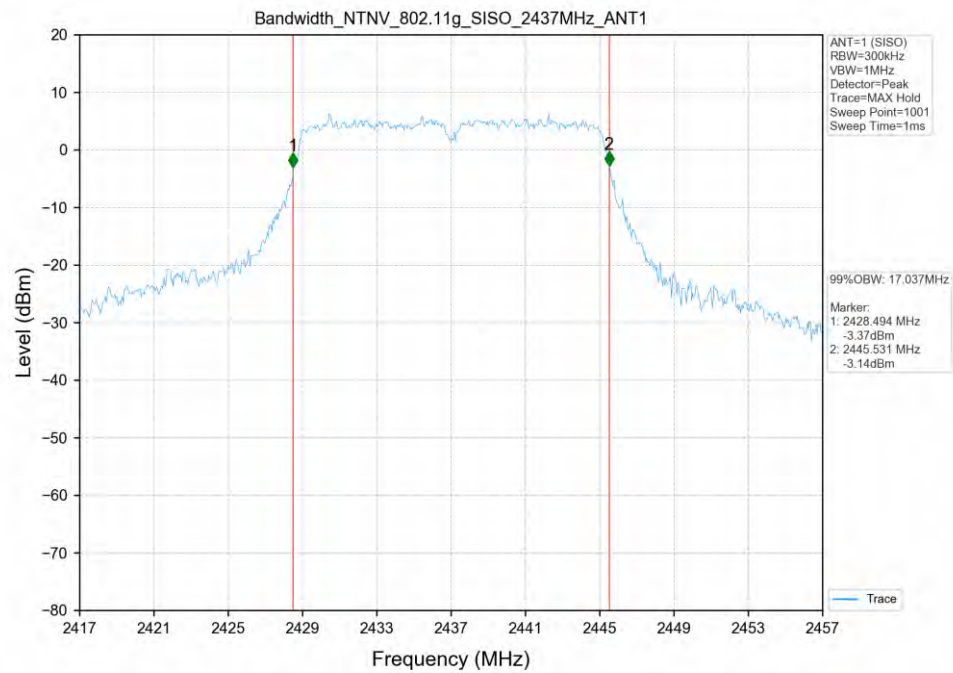
802.11b_2462MHz_SISO_ANT1



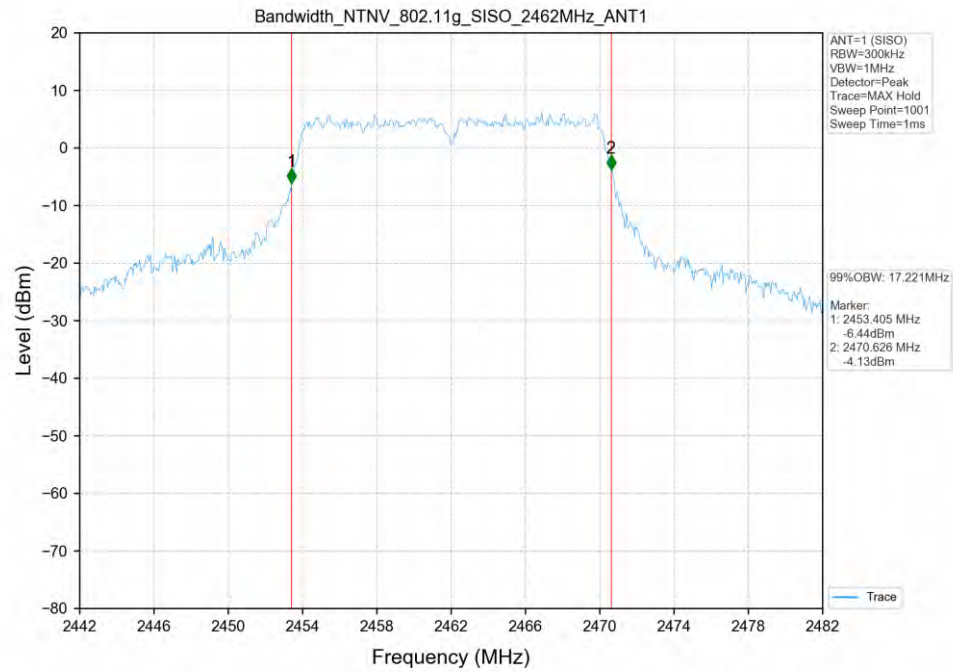
802.11g_2412MHz_SISO_ANT1



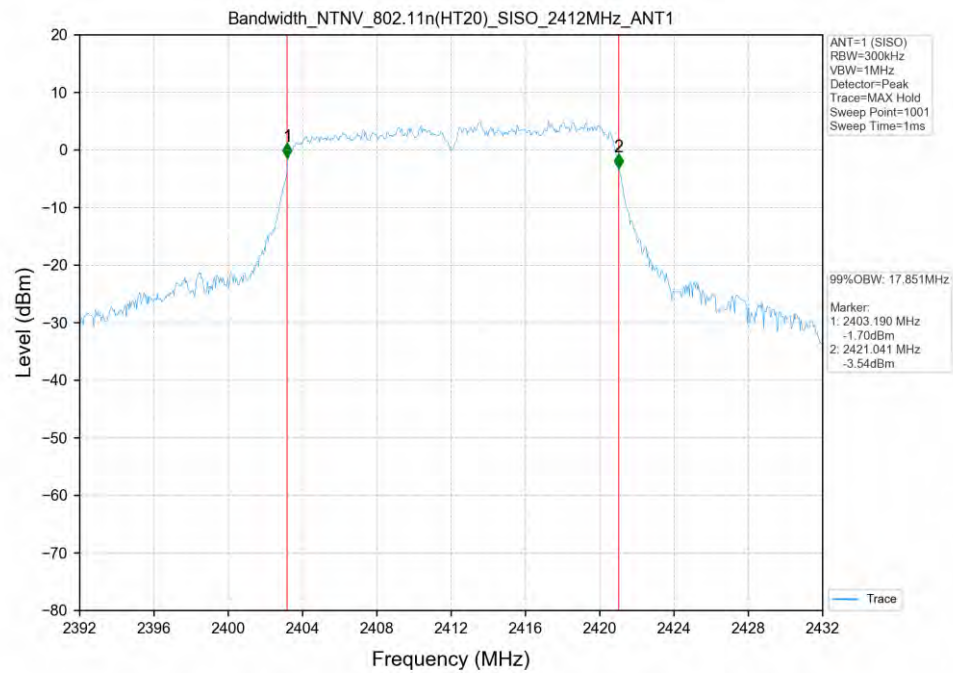
802.11g_2437MHz_SISO_ANT1



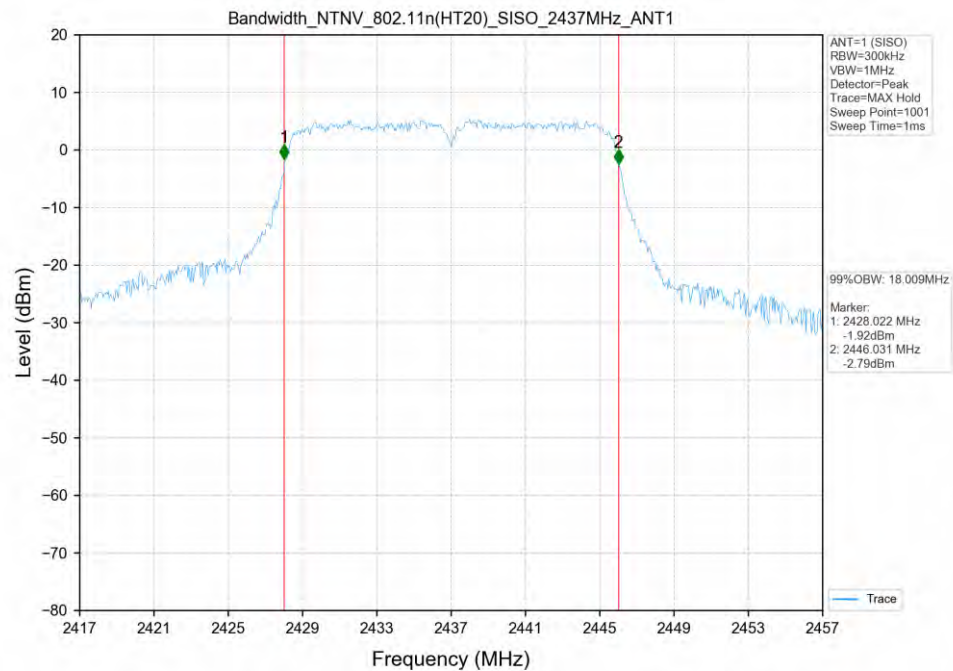
802.11g_2462MHz_SISO_ANT1



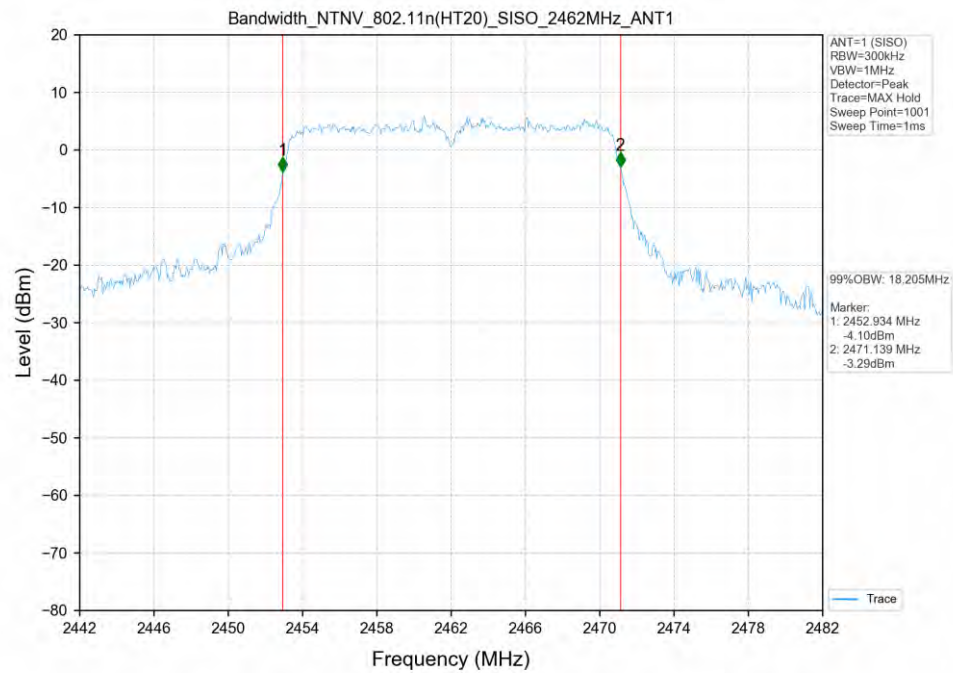
802.11n(HT20)_2412MHz_SISO_ANT1



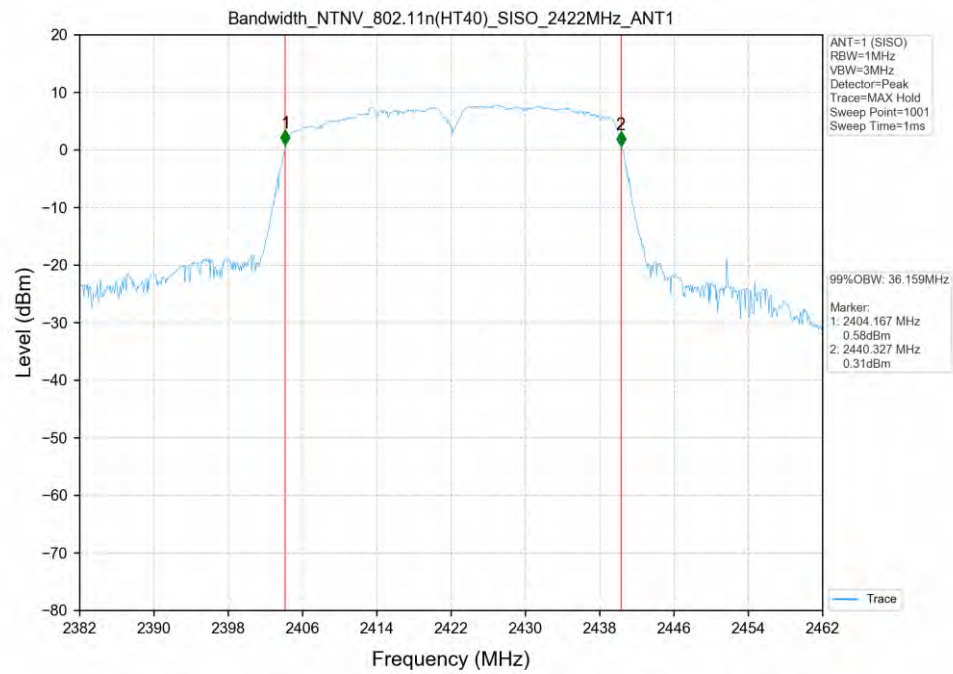
802.11n(HT20)_2437MHz_SISO_ANT1



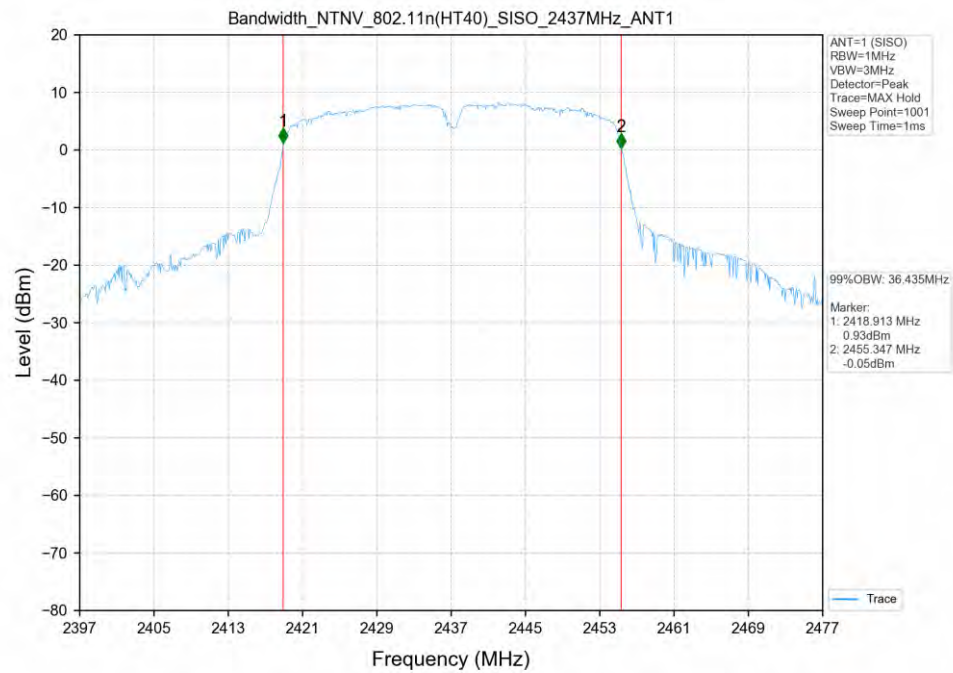
802.11n(HT20)_2462MHz_SISO_ANT1



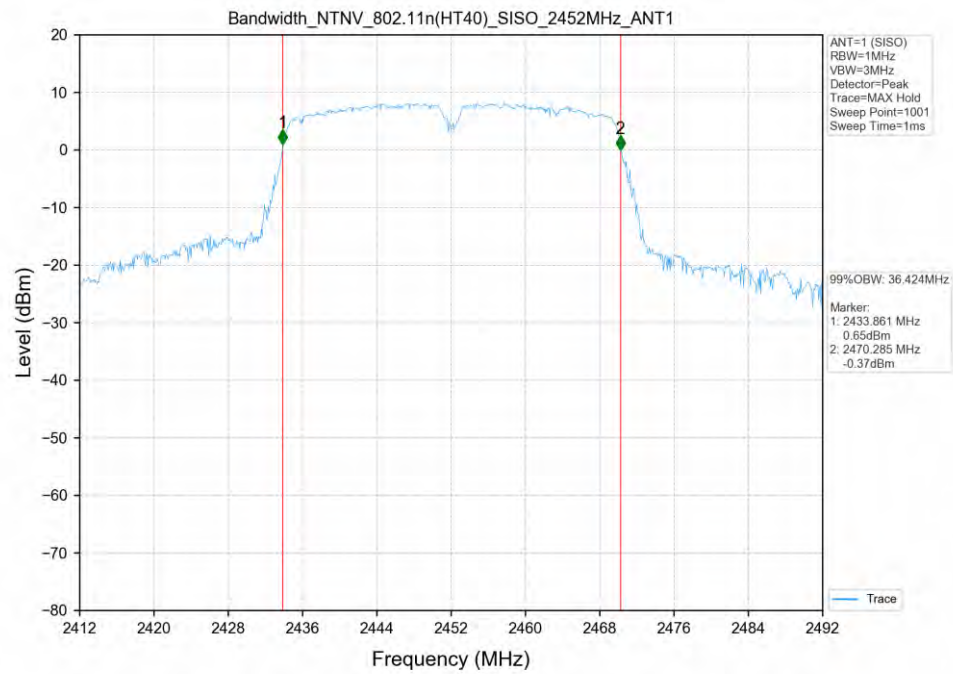
802.11n(HT40)_2422MHz_SISO_ANT1



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	Measured Output Power (dBm)	Limits (dBm)	Verdict
			Ant 1		
802.11b	2412	SISO	17.48	30	PASS
	2437	SISO	18.73	30	PASS
	2462	SISO	18.20	30	PASS
802.11g	2412	SISO	13.37	30	PASS
	2437	SISO	14.76	30	PASS
	2462	SISO	14.72	30	PASS
802.11n(HT20)	2412	SISO	13.41	30	PASS
	2437	SISO	14.61	30	PASS
	2462	SISO	14.49	30	PASS
802.11n(HT40)	2422	SISO	13.60	30	PASS
	2437	SISO	14.20	30	PASS
	2452	SISO	14.23	30	PASS

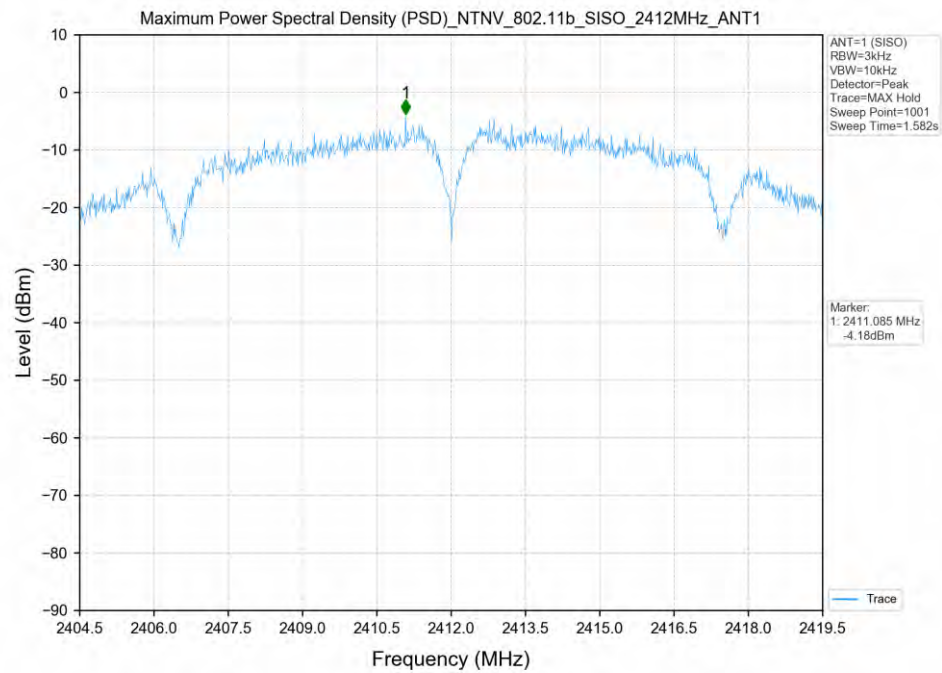
4. Maximum Power Spectral Density (PSD)

4.1 Test Result

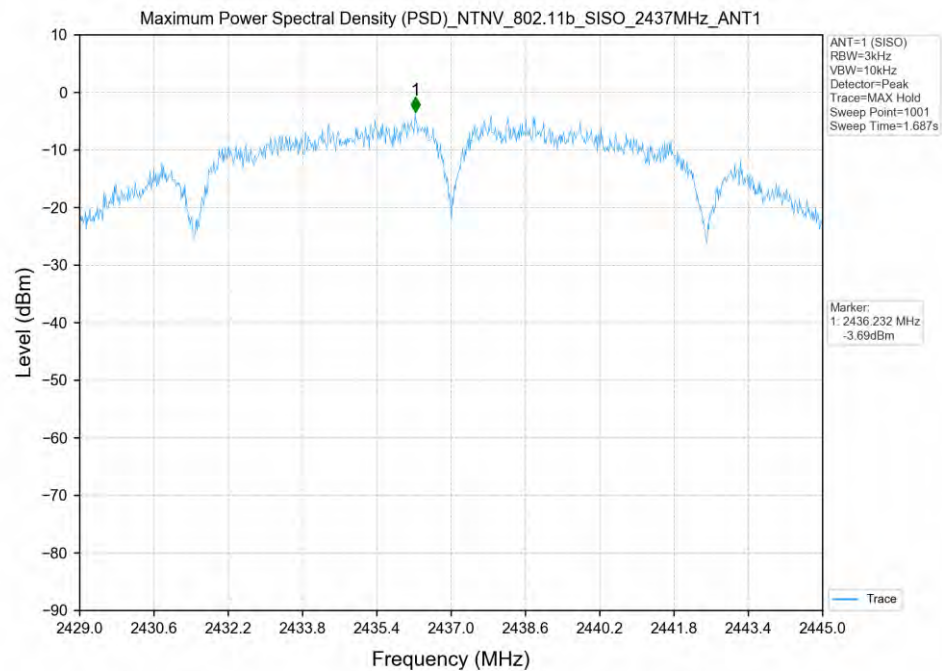
Test Mode	Frequency (MHz)	Tx Type	Maximum Power Spectral Density (dBm/3KHz)	Limits (dBm/3kHz)	Verdict
			Ant 1		
802.11b	2412	SISO	-4.18	≤8	PASS
	2437	SISO	-3.69	≤8	PASS
	2462	SISO	-4.09	≤8	PASS
802.11g	2412	SISO	-11.10	≤8	PASS
	2437	SISO	-10.43	≤8	PASS
	2462	SISO	-10.82	≤8	PASS
802.11n(HT20)	2412	SISO	-9.68	≤8	PASS
	2437	SISO	-11.12	≤8	PASS
	2462	SISO	-10.64	≤8	PASS
802.11n(HT40)	2422	SISO	-15.17	≤8	PASS
	2437	SISO	-14.25	≤8	PASS
	2452	SISO	-14.04	≤8	PASS

4.2 Test Graph

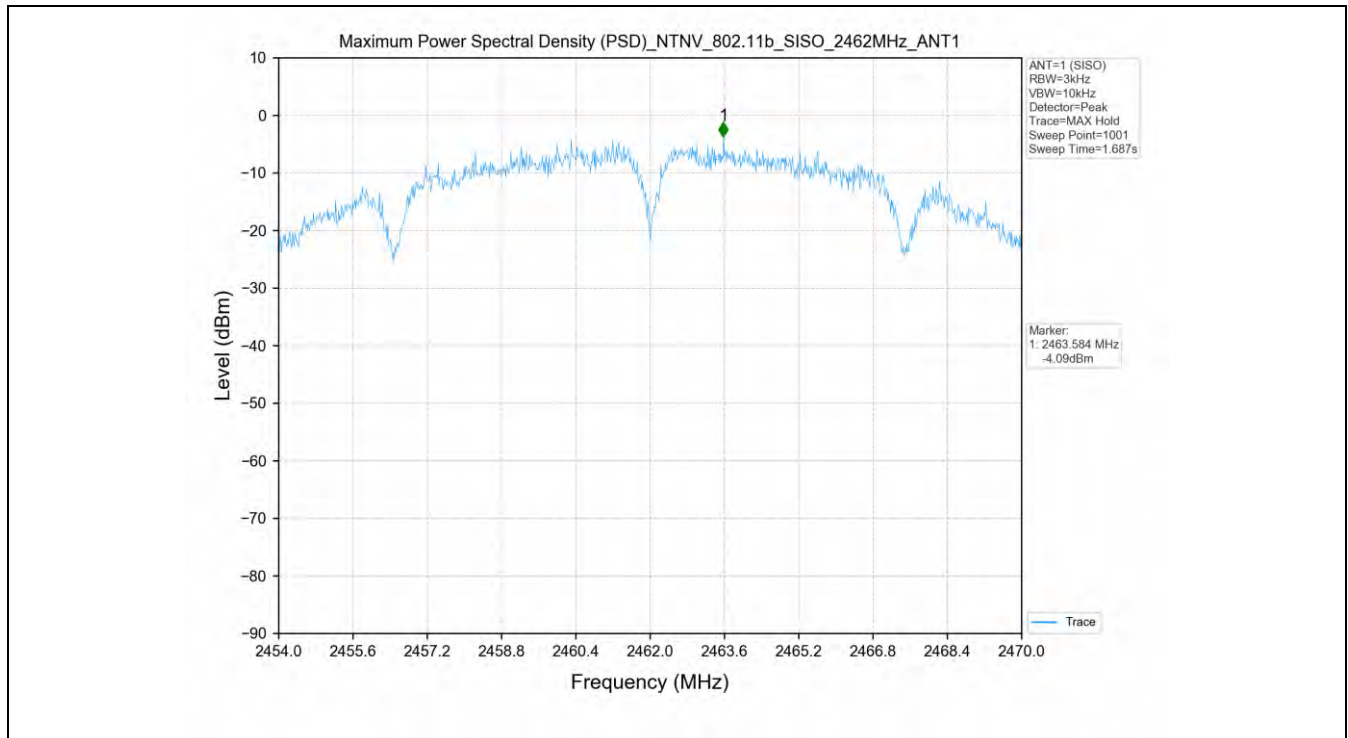
802.11b_2412MHz_SISO_ANT1



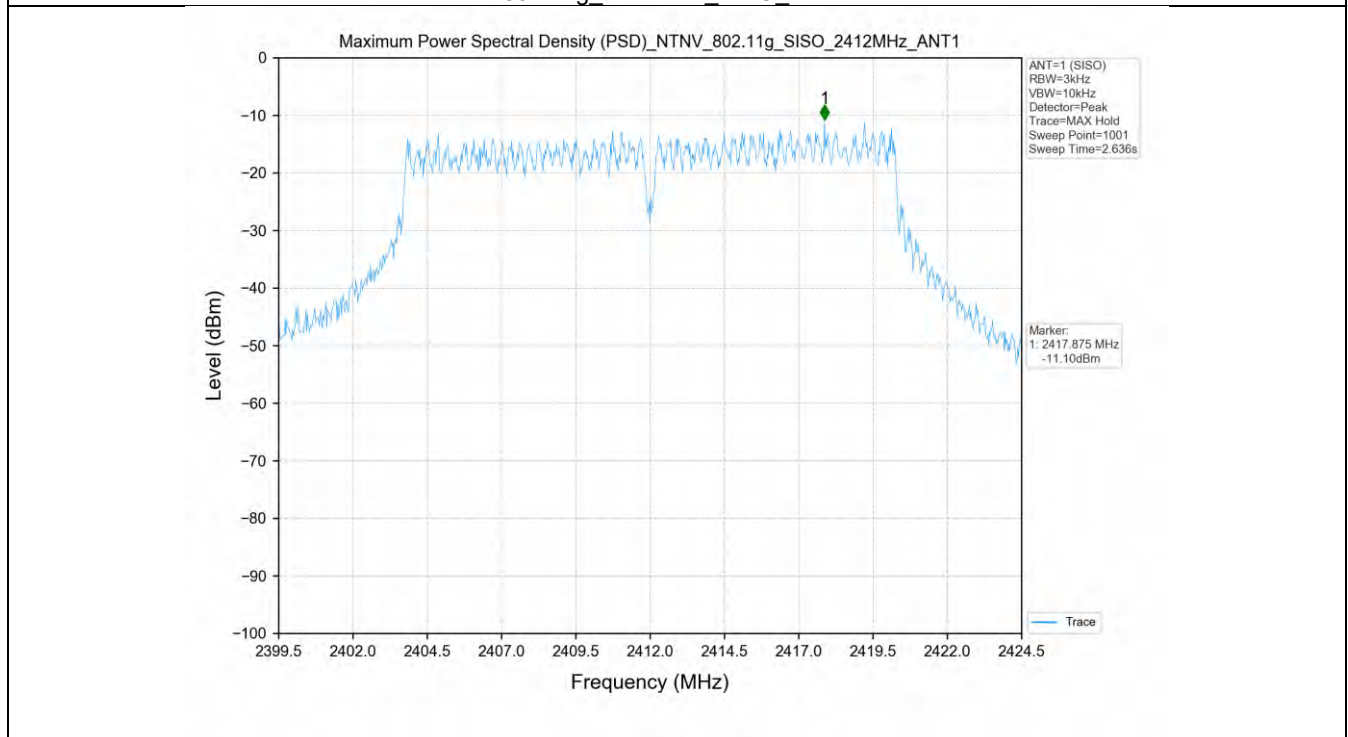
802.11b_2437MHz_SISO_ANT1



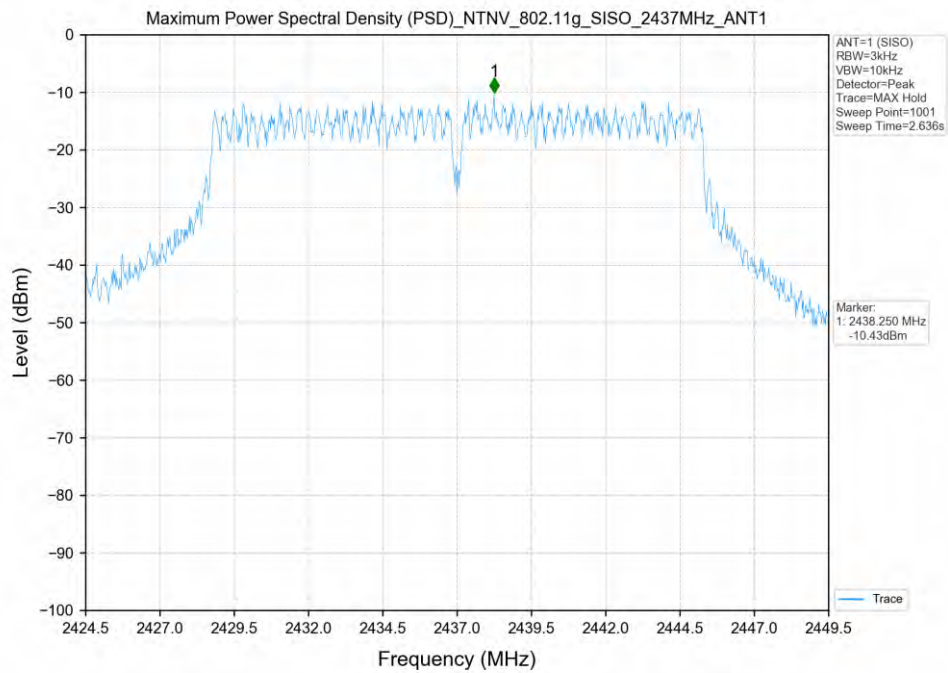
802.11b_2462MHz_SISO_ANT1



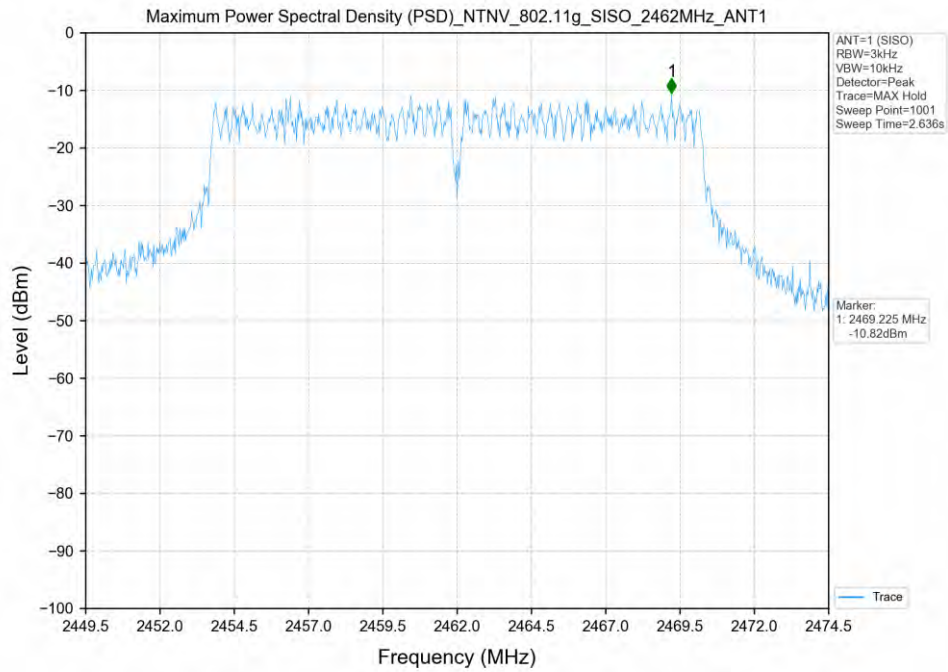
802.11g_2412MHz_SISO_ANT1



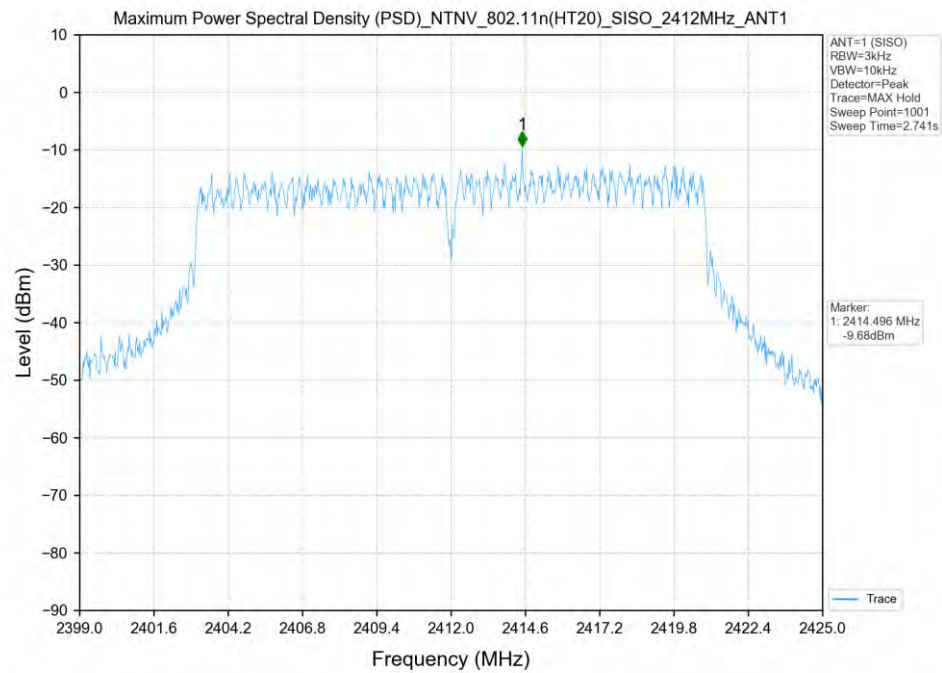
802.11g_2437MHz_SISO_ANT1



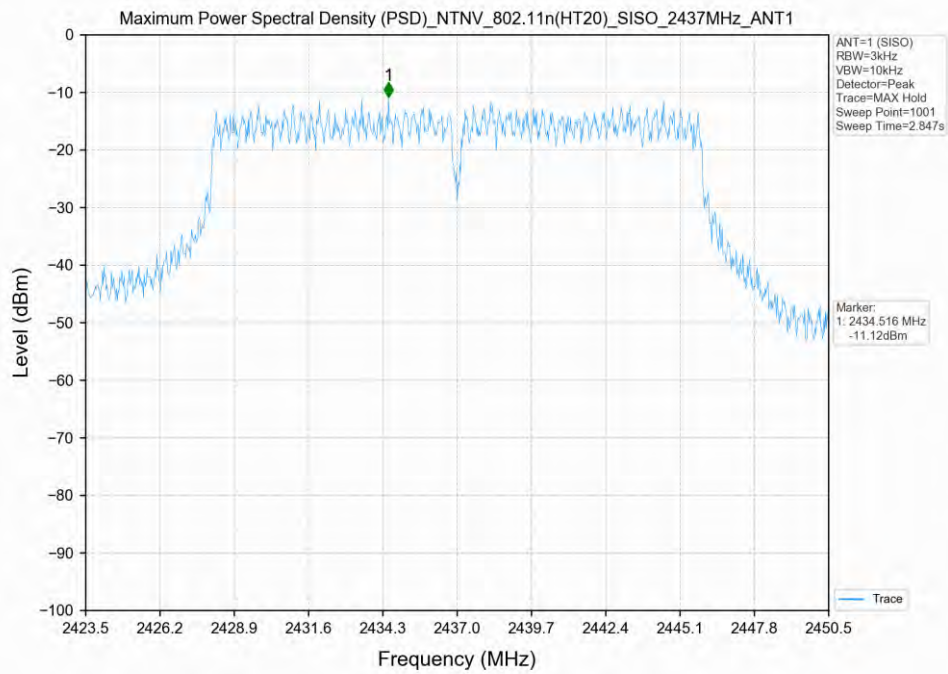
802.11g_2462MHz_SISO_ANT1



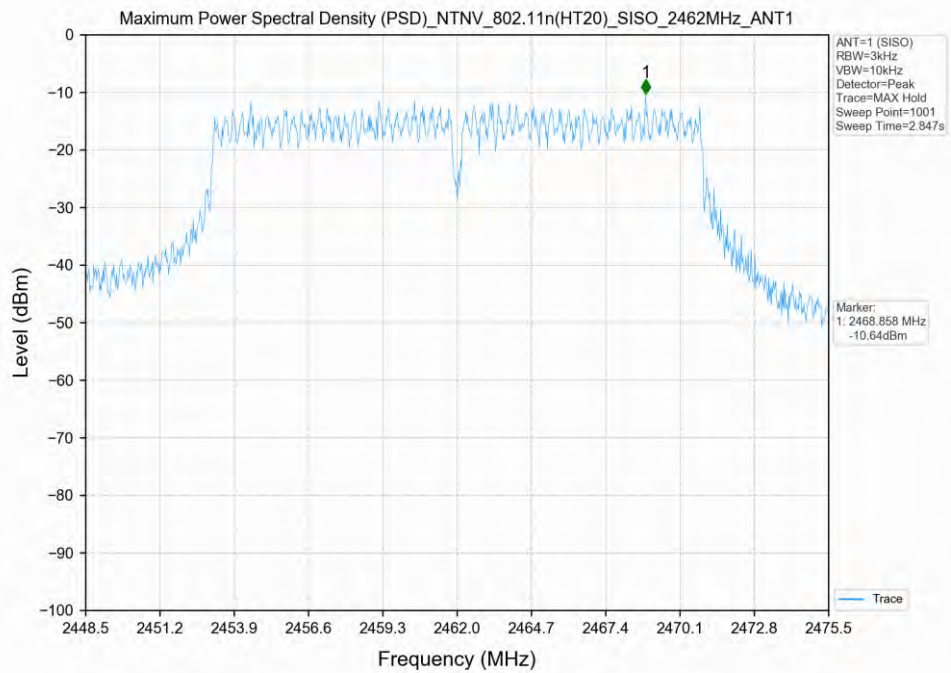
802.11n(HT20)_2412MHz_SISO_ANT1



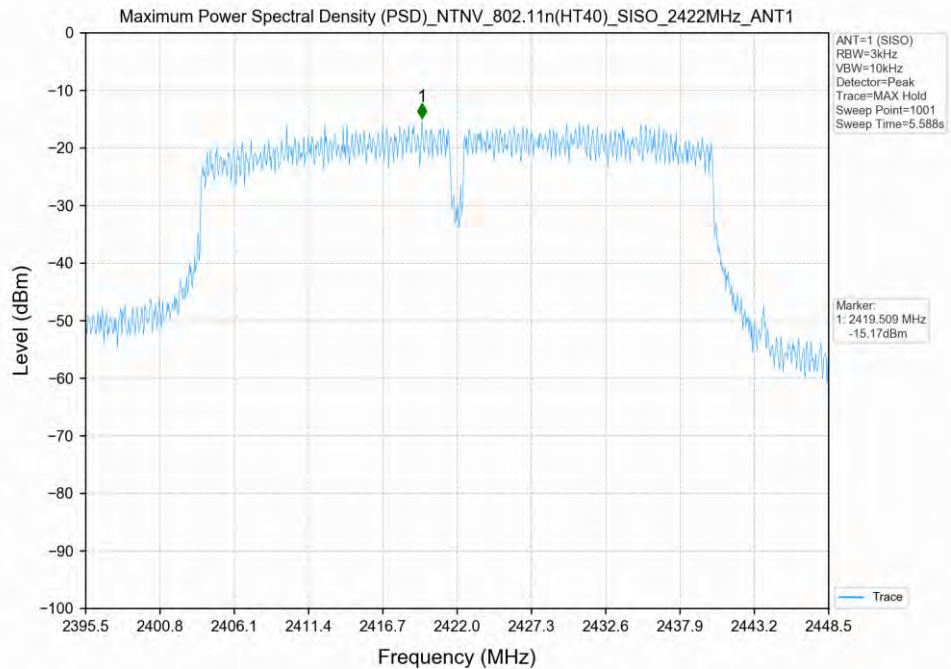
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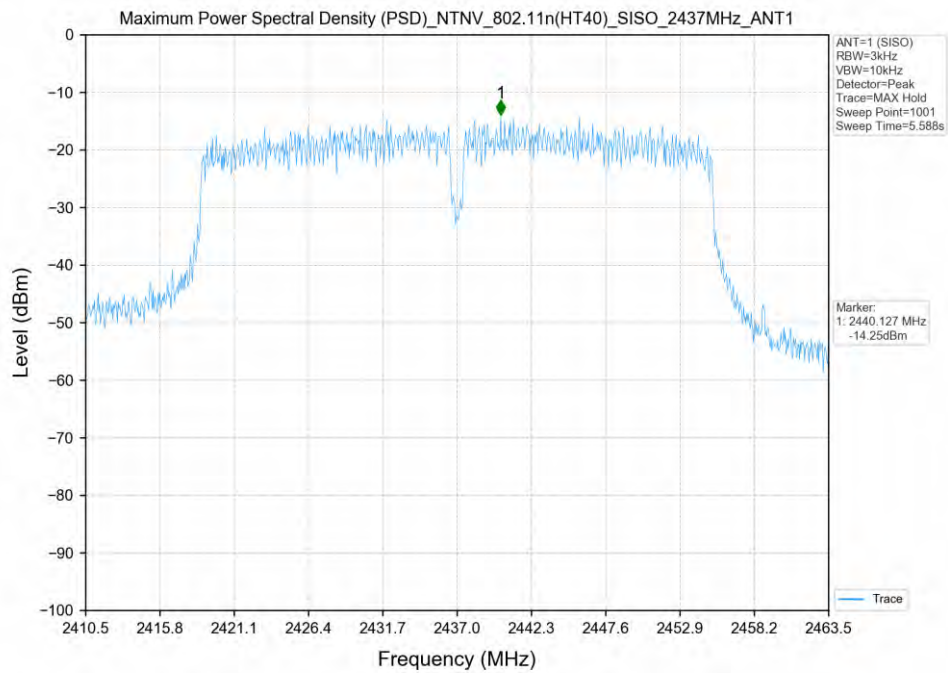
802.11n(HT20)_2462MHz_SISO_ANT1



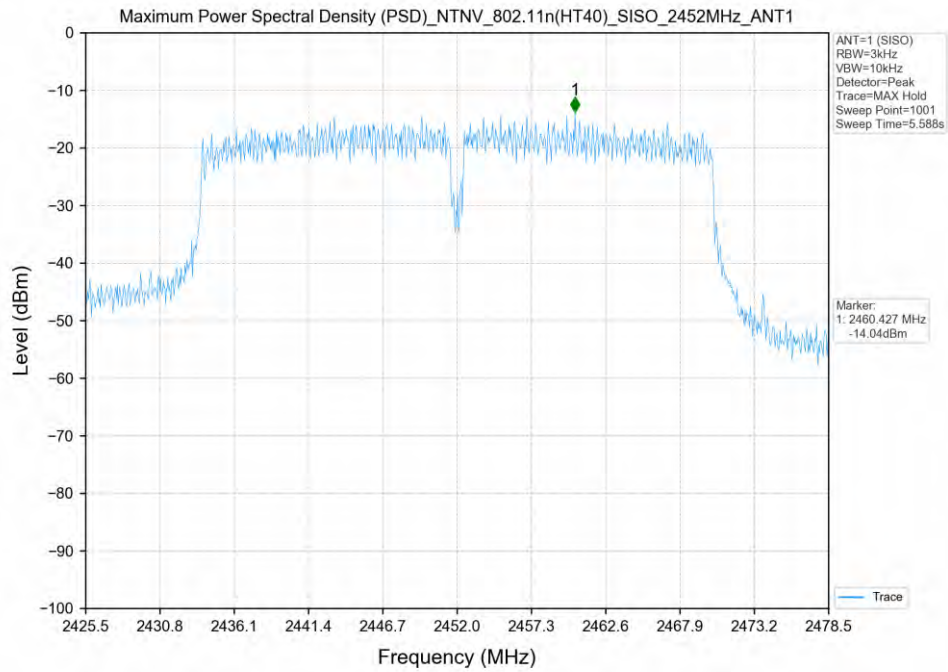
802.11n(HT40)_2422MHz_SISO_ANT1



802.11n(HT40)_2437MHz_SISO_ANT1



802.11n(HT40)_2452MHz_SISO_ANT1



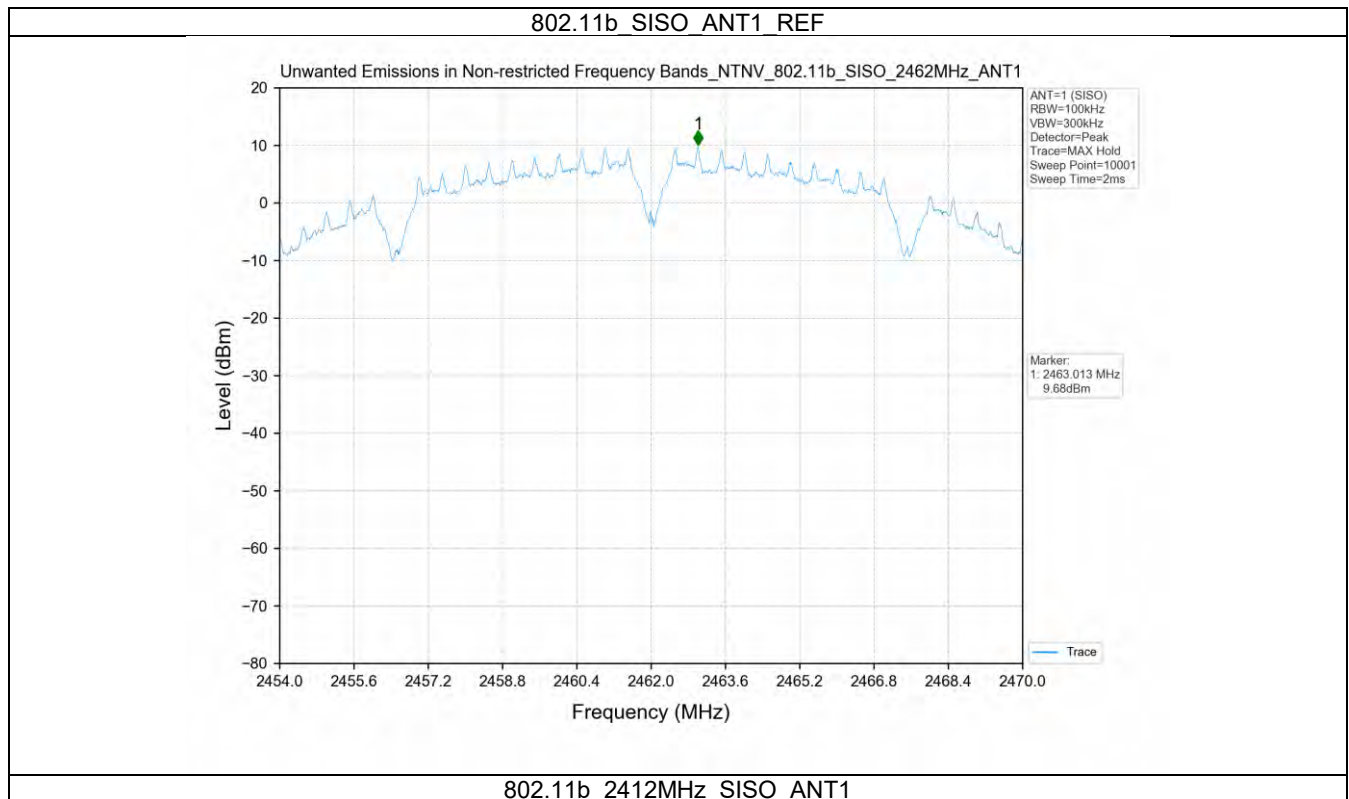


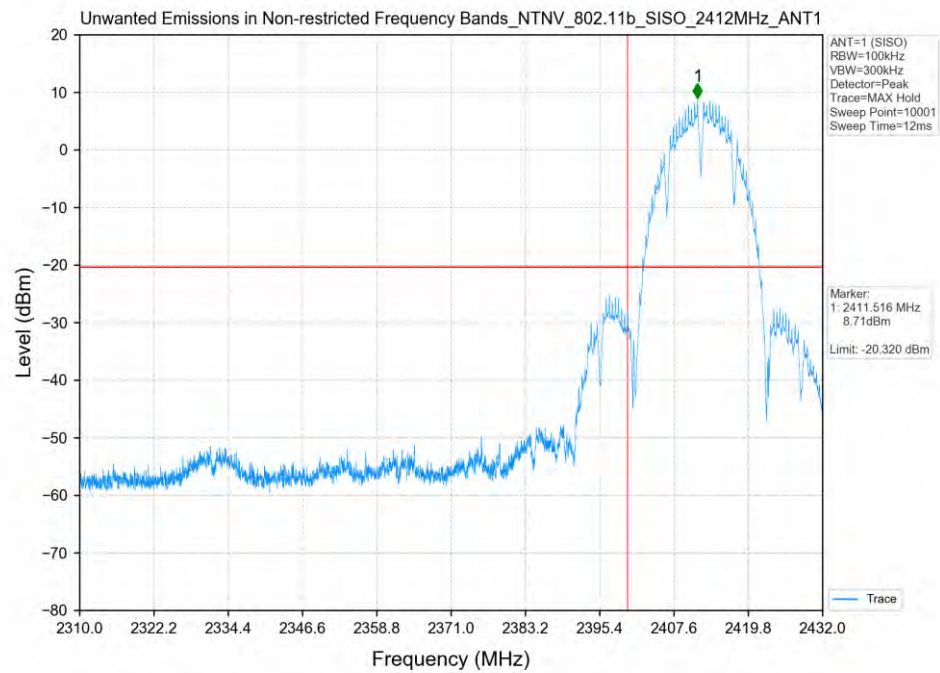
5. Unwanted Emissions in Non-restricted Frequency Bands

5.1 Test Result

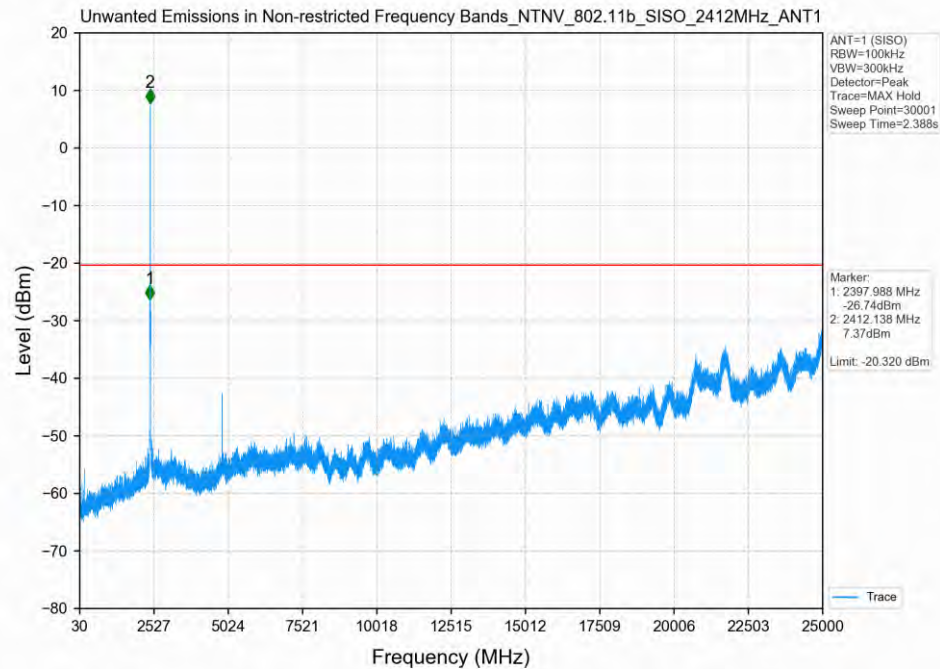
Test Mode	Frequency (MHz)	TX Type	ANT No.	Spurious Conducted Emission (dBm)	Limits (dBc)	Verdict
802.11b	2412	SISO	1	Refer to test graph	-30	PASS
	2437	SISO	1	Refer to test graph	-30	PASS
	2462	SISO	1	Refer to test graph	-30	PASS
802.11g	2412	SISO	1	Refer to test graph	-30	PASS
	2437	SISO	1	Refer to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

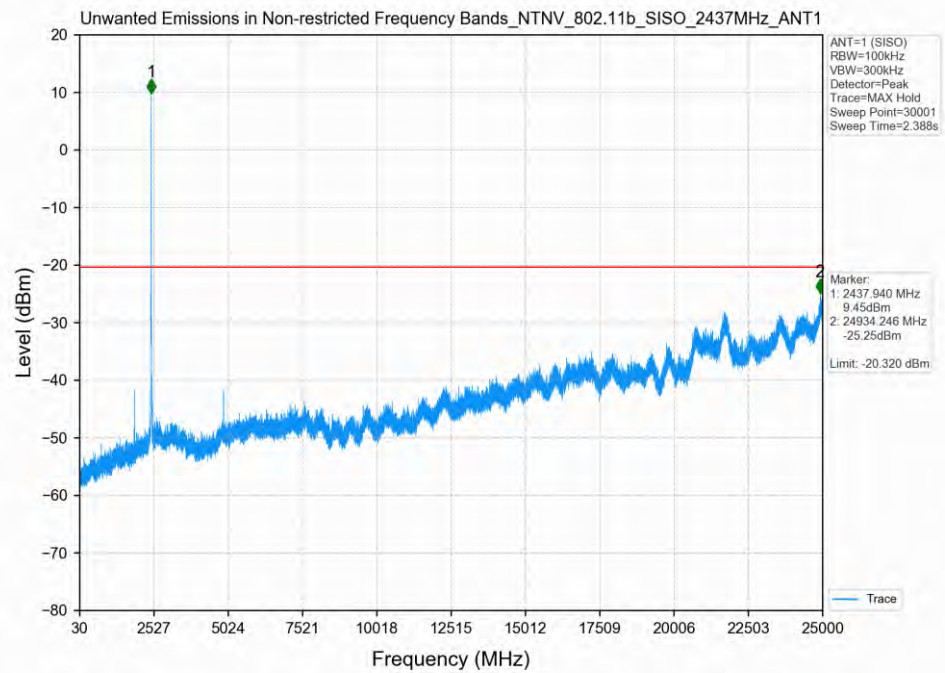




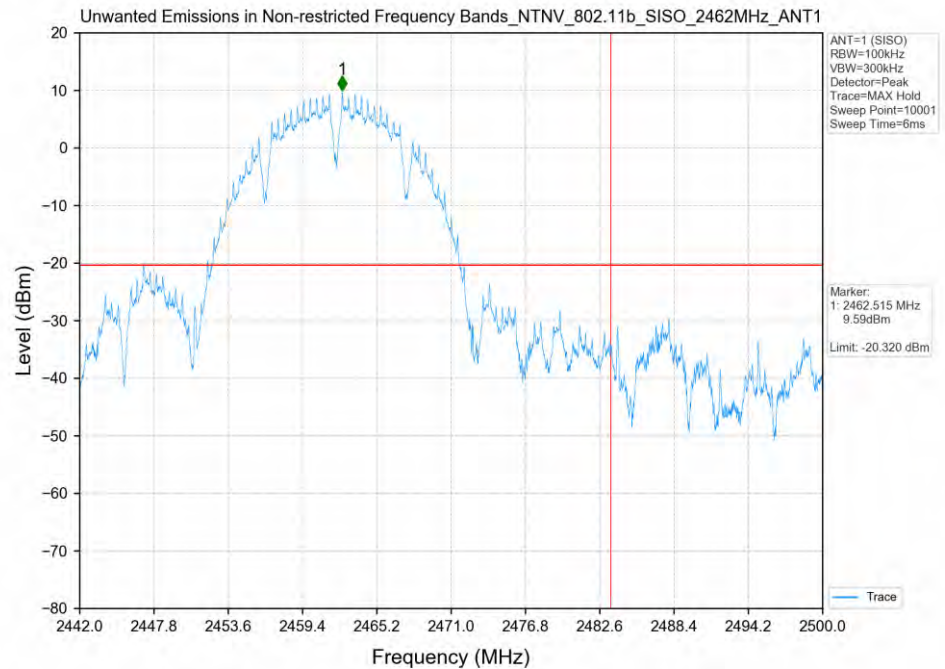
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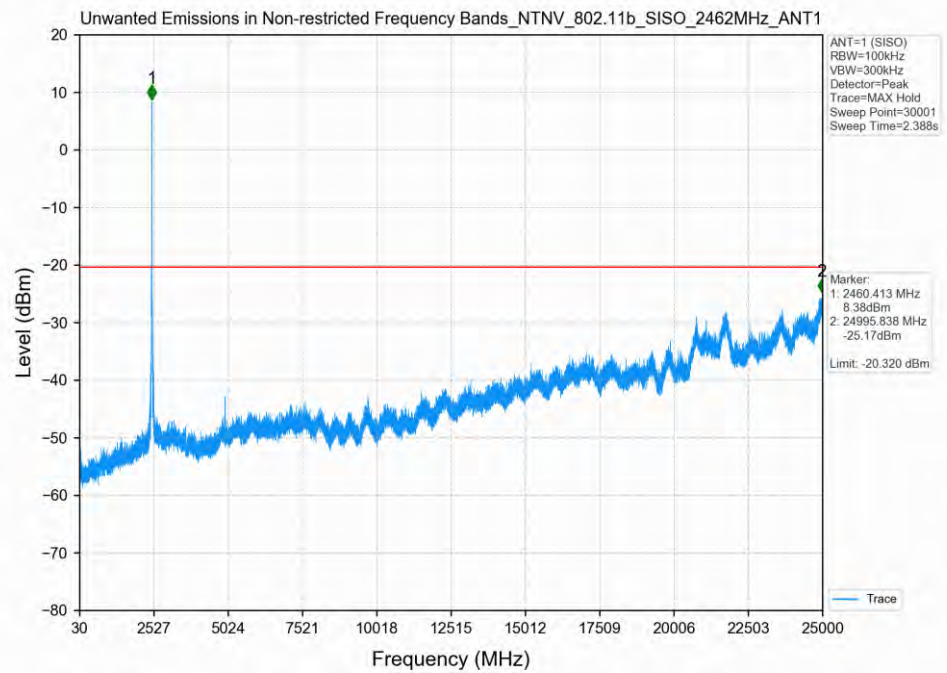
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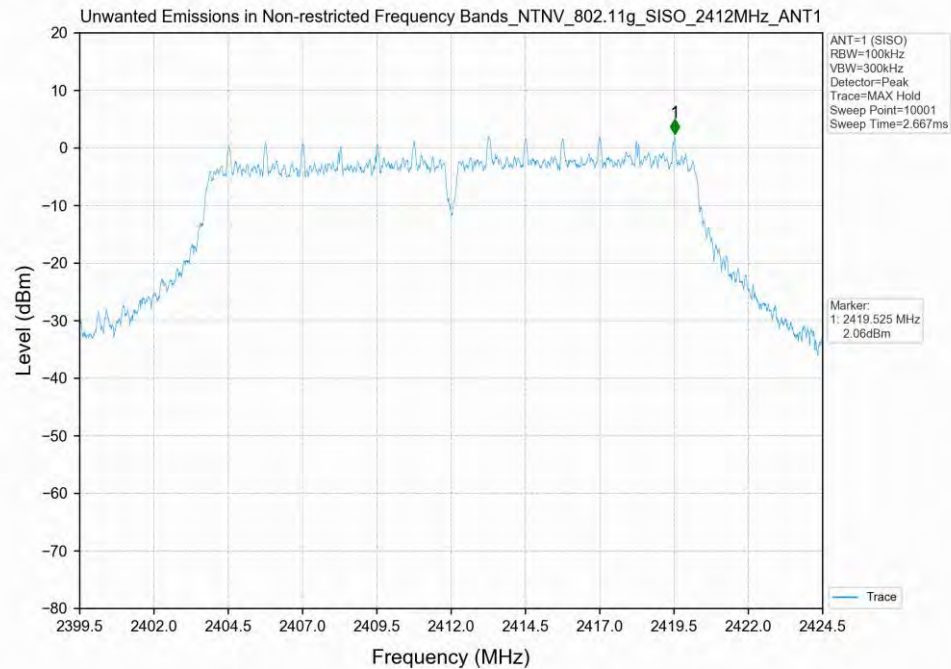
802.11b_2462MHz_SISO_ANT1



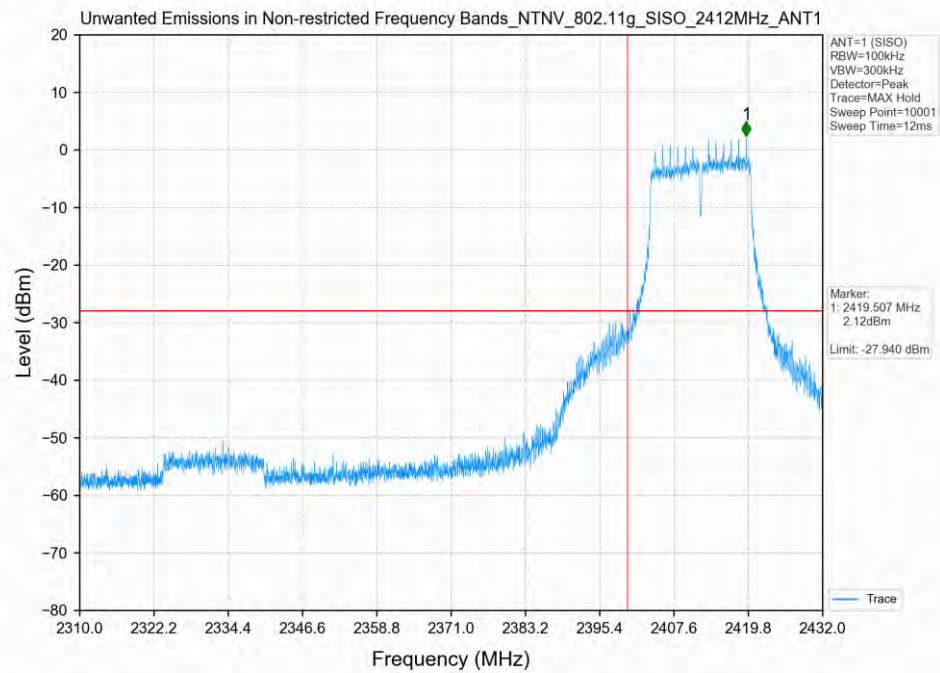
802.11b_2462MHz_SISO_ANT1



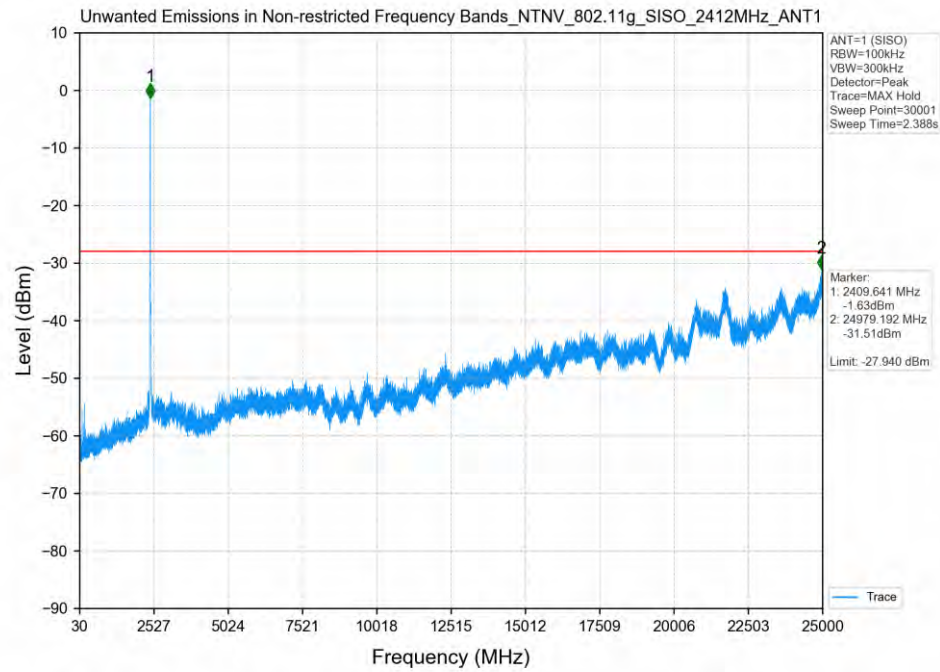
802.11g_SISO_ANT1_REF



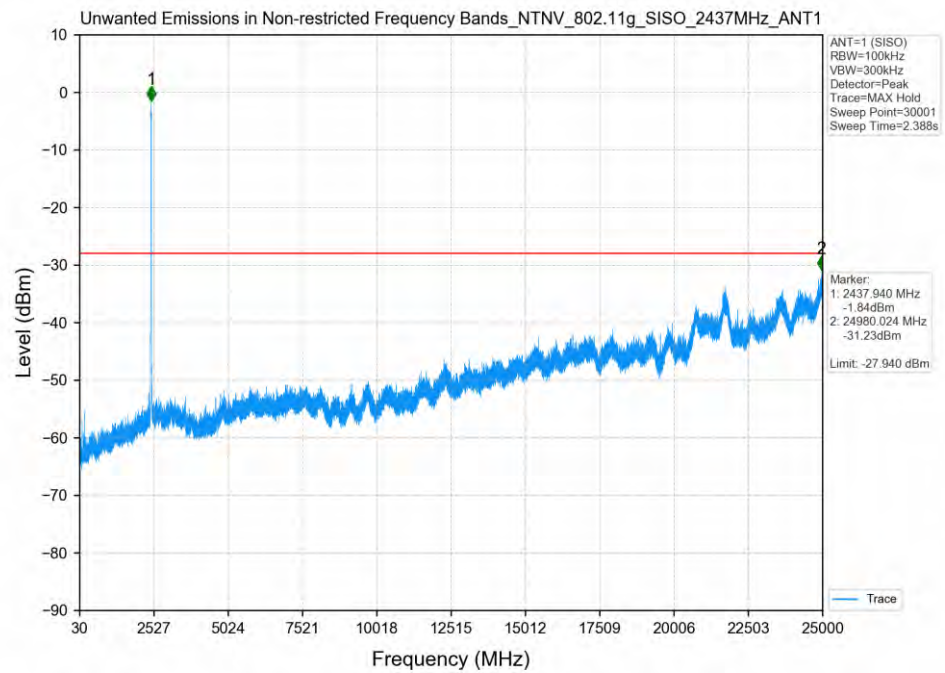
802.11g_2412MHz_SISO_ANT1



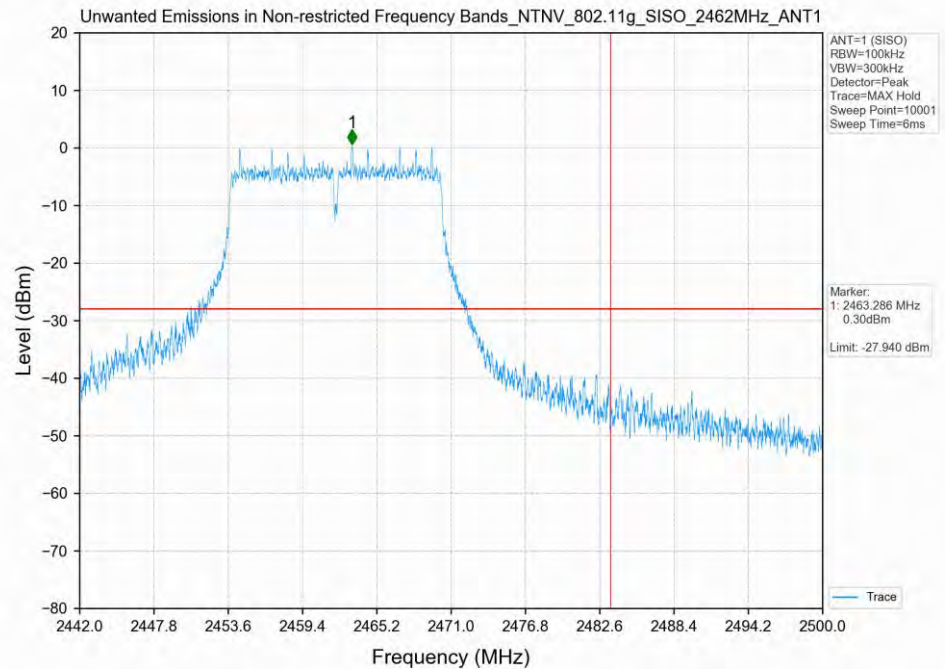
802.11g_2412MHz_SISO_ANT1



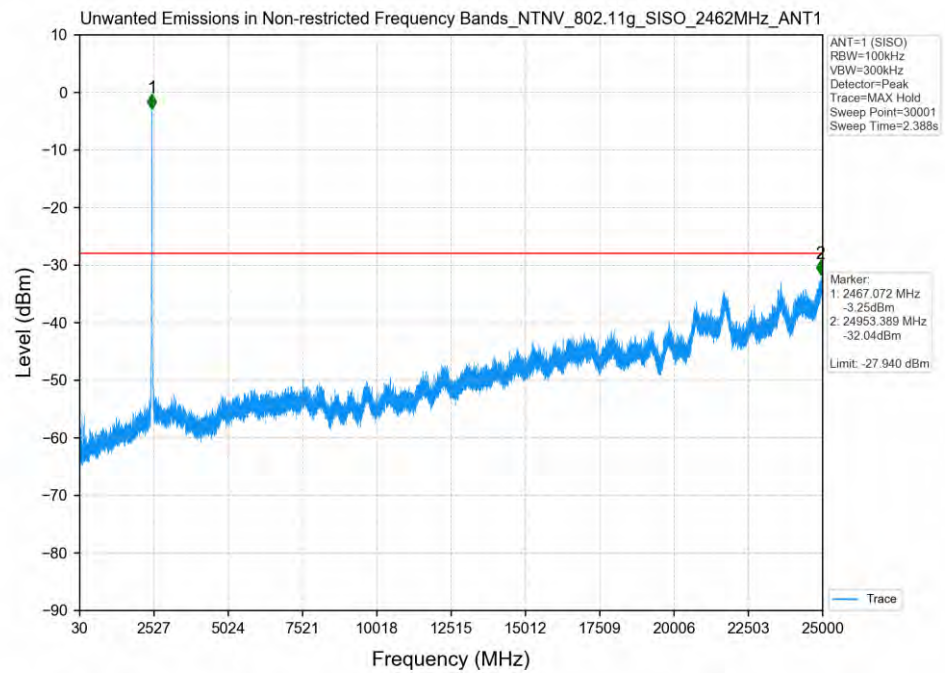
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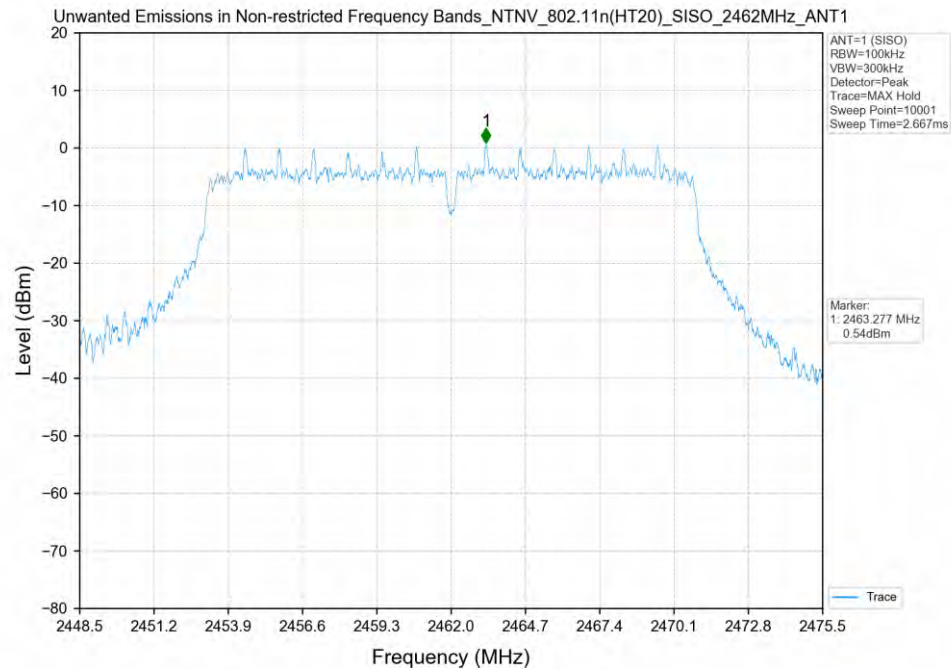
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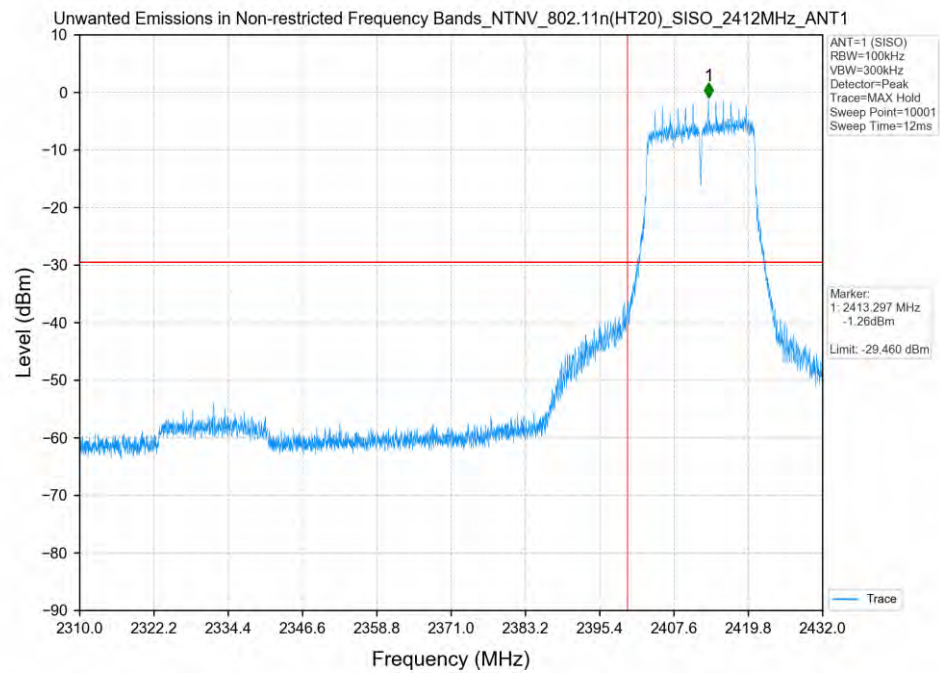
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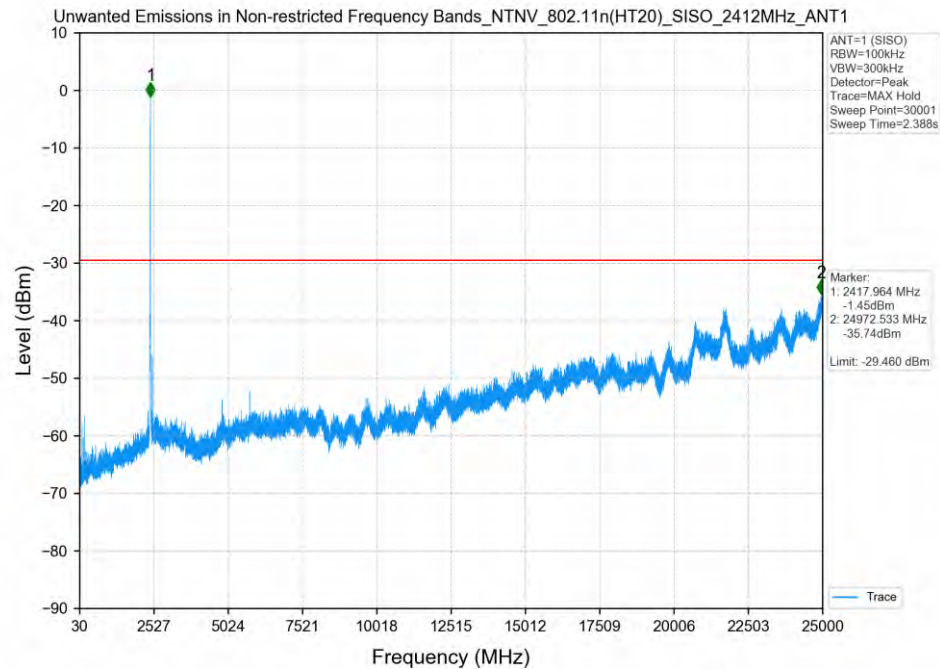
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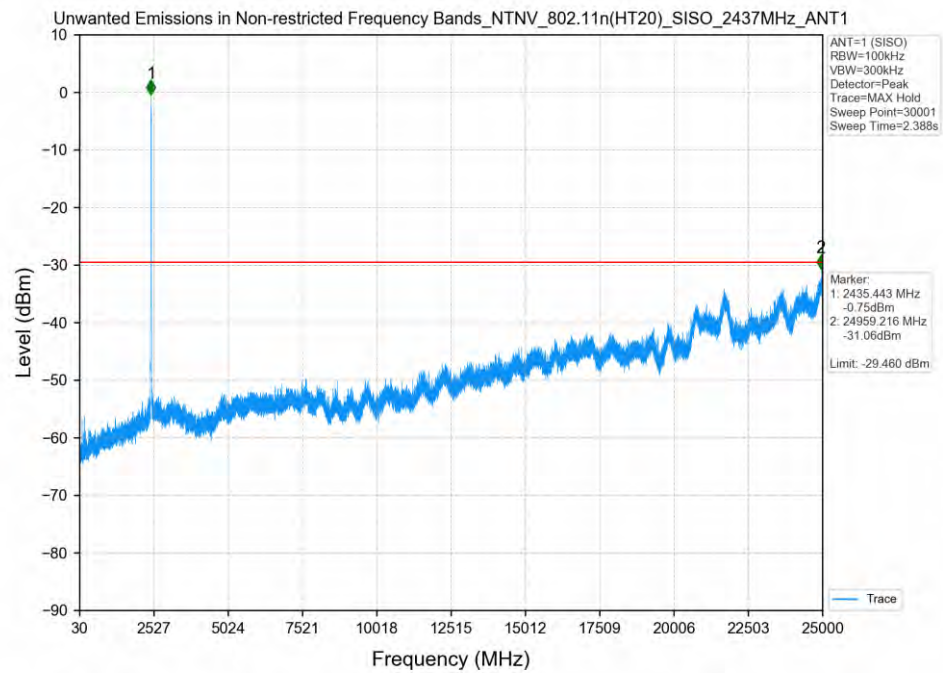
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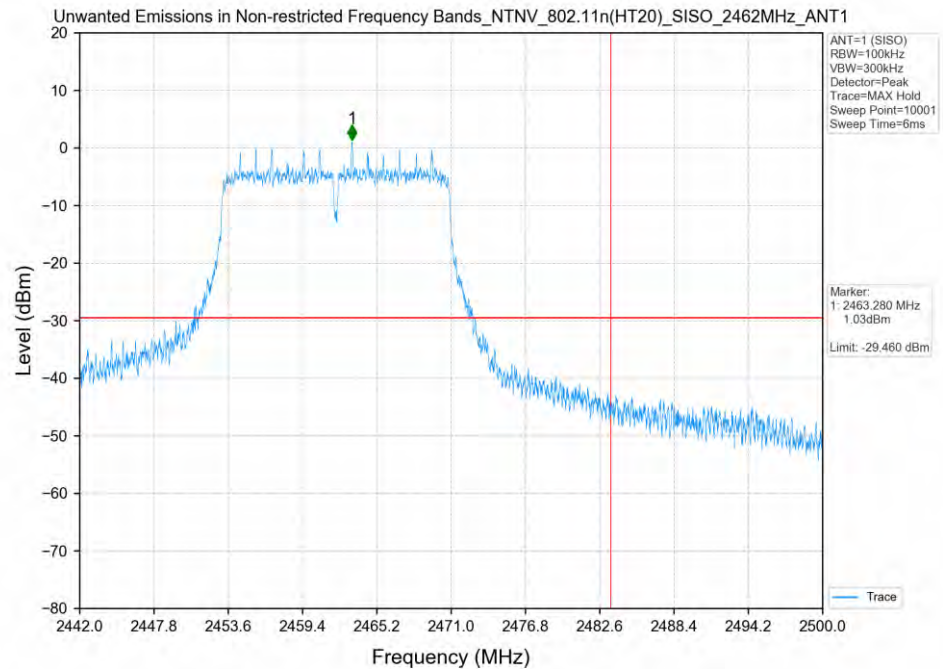
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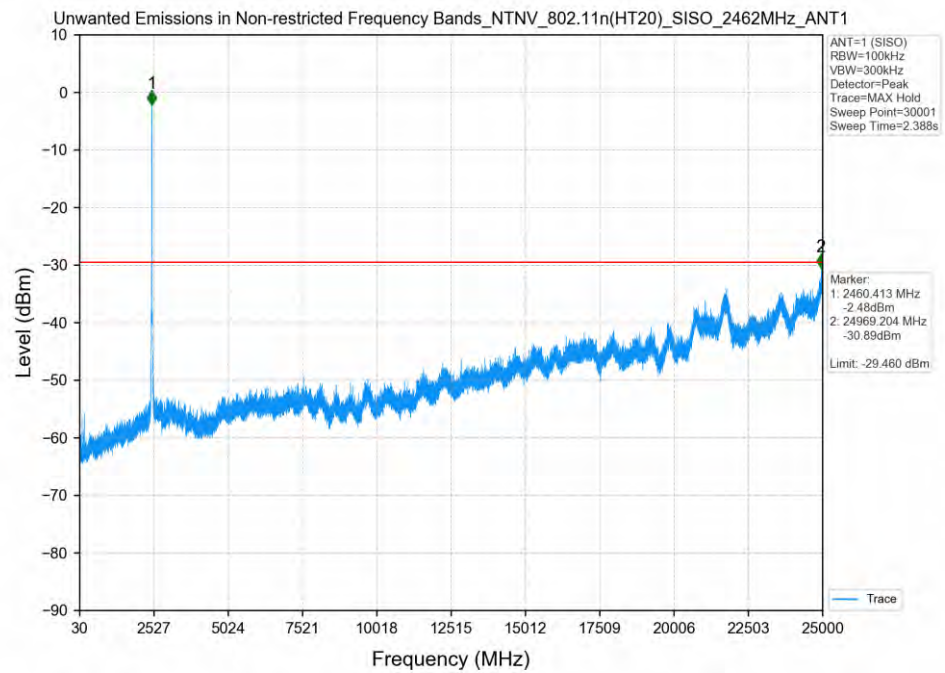
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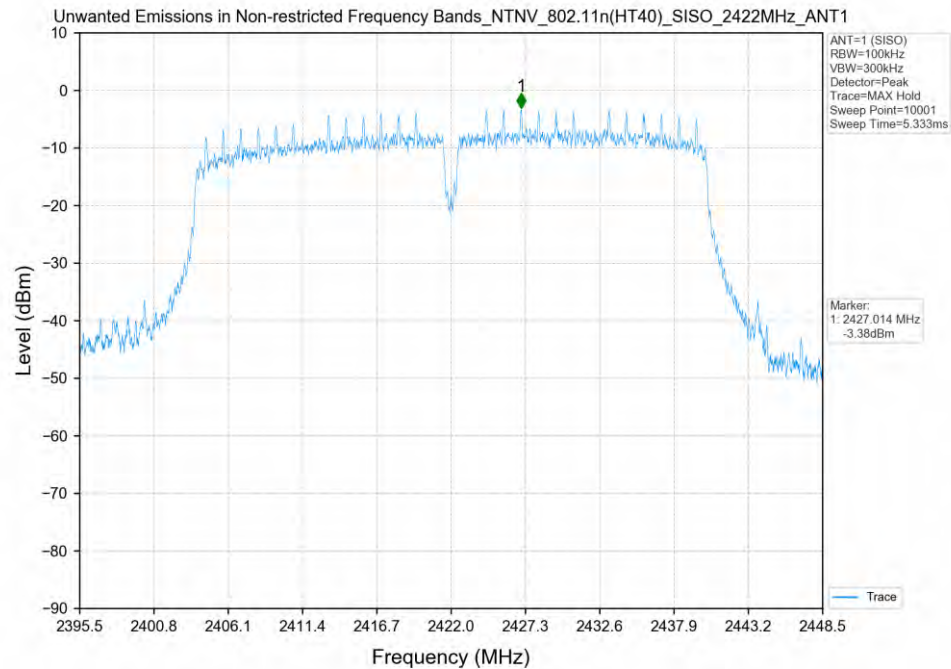
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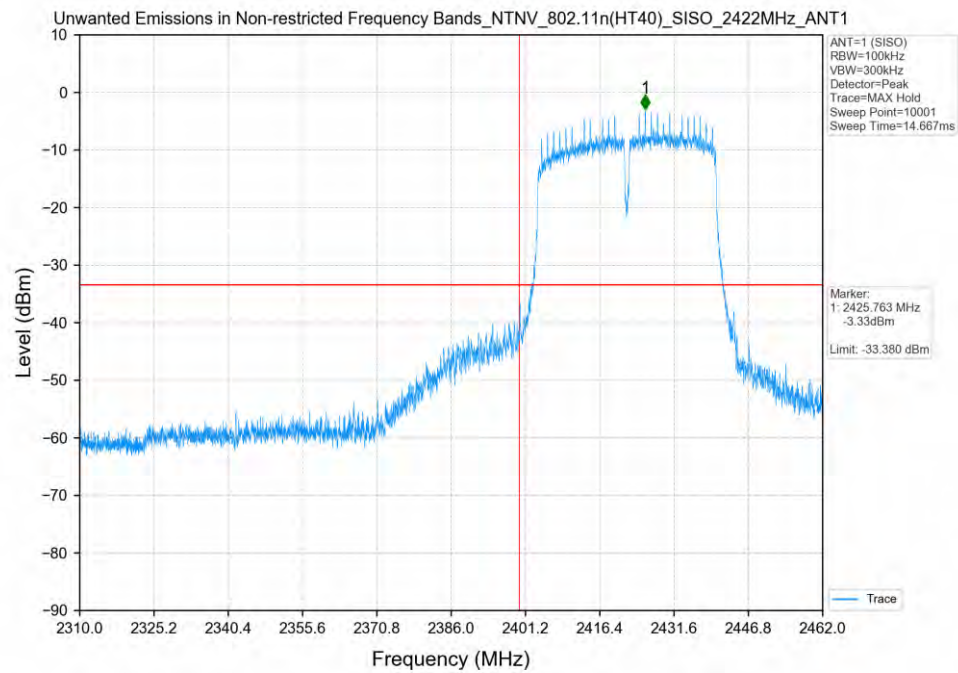
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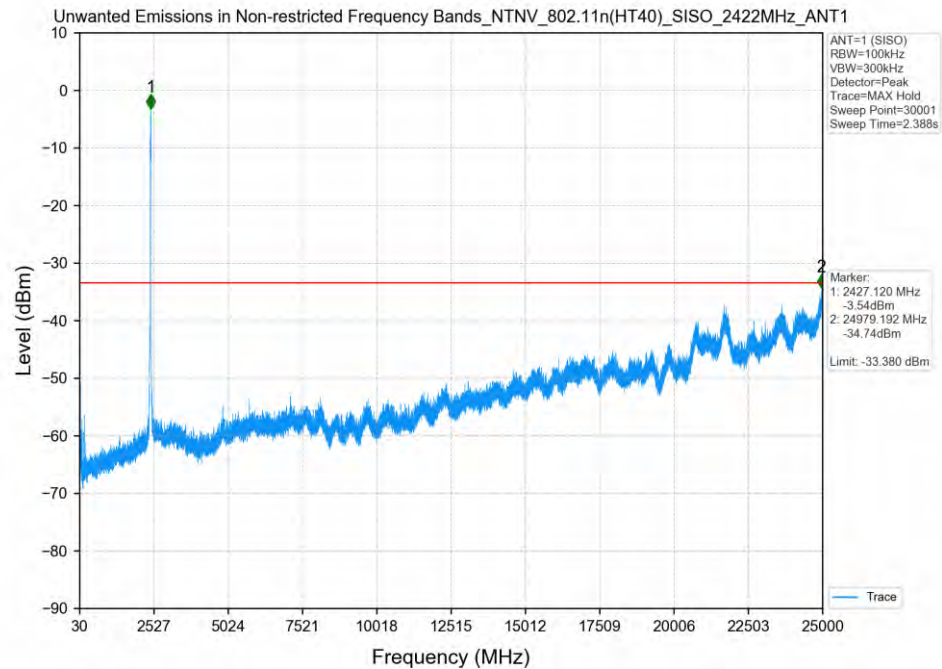
802.11n(HT40)_SISO_ANT1_REF



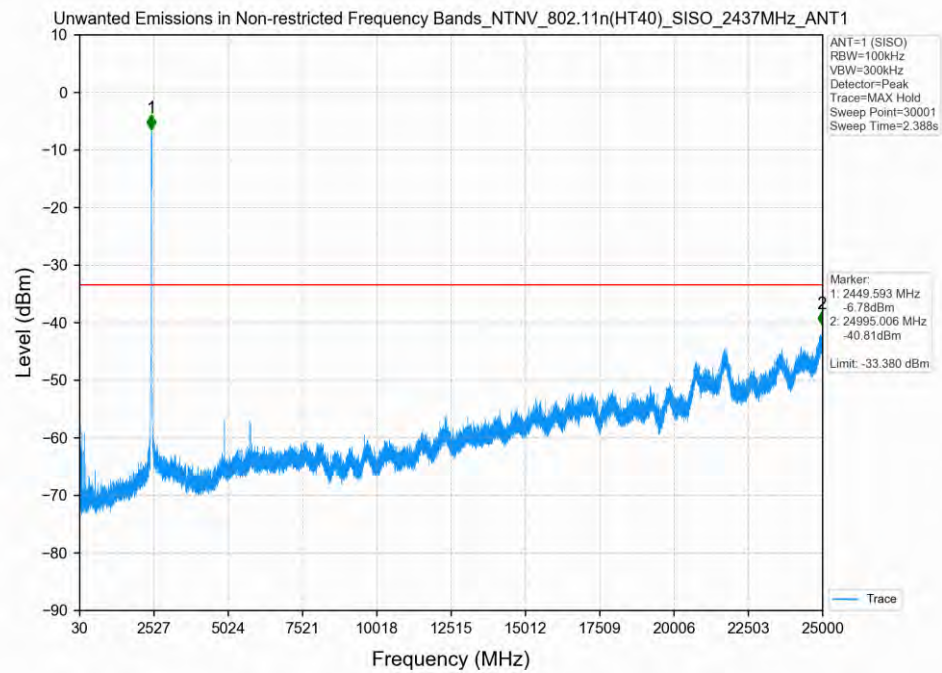
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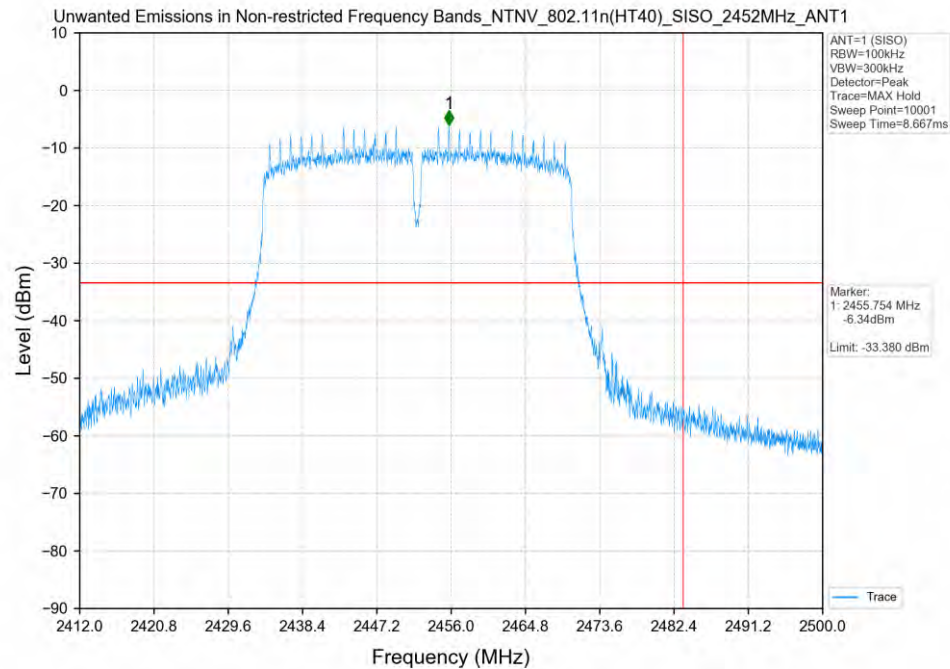
802.11n(HT40)_2422MHz_SISO_ANT1



802.11n(HT40)_2437MHz_SISO_ANT1



802.11n(HT40)_2452MHz_SISO_ANT1



802.11n(HT40)_2452MHz_SISO_ANT1

