



Appendix A for SHEM190901758001

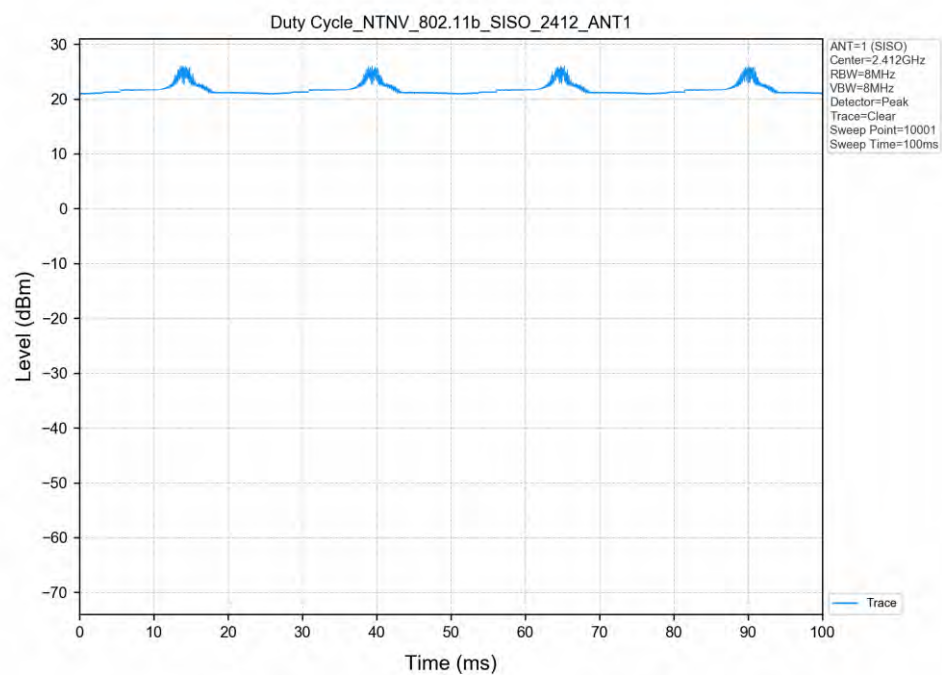
1. Duty Cycle

1.1 Test Result

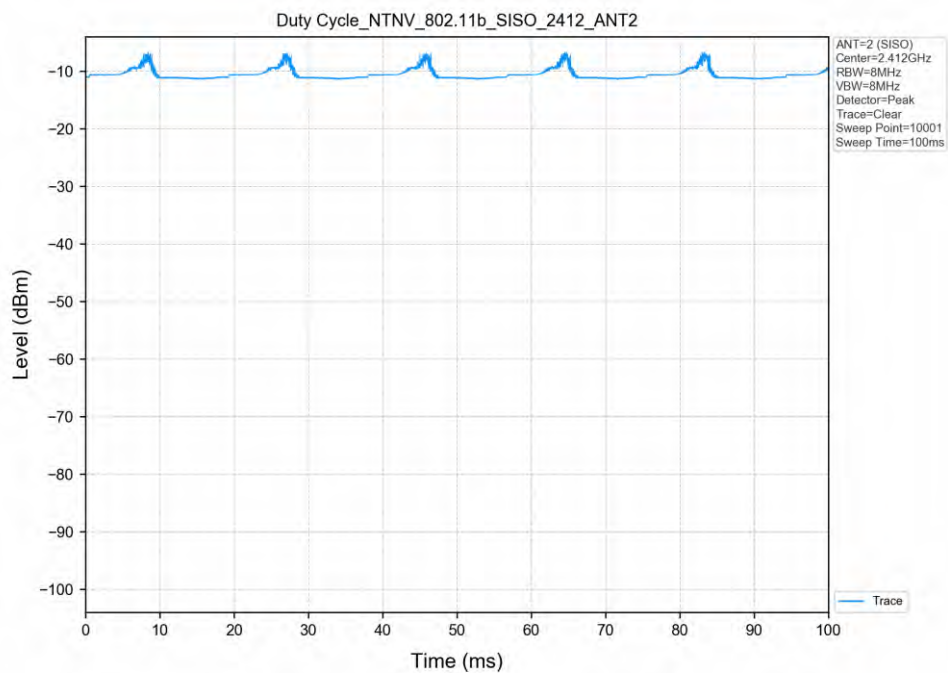
Test Mode	Channel Frequency(MHz)	TX Type	ANT No.	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
802.11b	2412	SISO	1	100.000	100.000	100.00	0.00
			2	100.000	100.000	100.00	0.00
	2437	SISO	1	100.000	100.000	100.00	0.00
			2	100.000	100.000	100.00	0.00
	2462	SISO	1	100.000	100.000	100.00	0.00
			2	100.000	100.000	100.00	0.00
802.11g	2412	SISO	1	100.000	100.000	100.00	0.00
			2	100.000	100.000	100.00	0.00
	2437	SISO	1	100.000	100.000	100.00	0.00
			2	100.000	100.000	100.00	0.00
	2462	SISO	1	100.000	100.000	100.00	0.00
			2	100.000	100.000	100.00	0.00
802.11n(HT20)	2412	SISO	1	100.000	100.000	100.00	0.00
			2	100.000	100.000	100.00	0.00
		MIMO	1	100.000	100.000	100.00	0.00
			2	100.000	100.000	100.00	0.00
	2437	SISO	1	100.000	100.000	100.00	0.00
			2	100.000	100.000	100.00	0.00
		MIMO	1	100.000	100.000	100.00	0.00
			2	100.000	100.000	100.00	0.00
	2462	SISO	1	100.000	100.000	100.00	0.00
			2	100.000	100.000	100.00	0.00
		MIMO	1	100.000	100.000	100.00	0.00
			2	100.000	100.000	100.00	0.00
802.11n(HT40)	2422	SISO	1	100.000	100.000	100.00	0.00
			2	100.000	100.000	100.00	0.00
		MIMO	1	100.000	100.000	100.00	0.00
			2	100.000	100.000	100.00	0.00
	2437	SISO	1	100.000	100.000	100.00	0.00
			2	100.000	100.000	100.00	0.00
		MIMO	1	100.000	100.000	100.00	0.00
			2	100.000	100.000	100.00	0.00
	2452	SISO	1	100.000	100.000	100.00	0.00
			2	100.000	100.000	100.00	0.00
		MIMO	1	100.000	100.000	100.00	0.00
			2	100.000	100.000	100.00	0.00

1.2 Test Graph

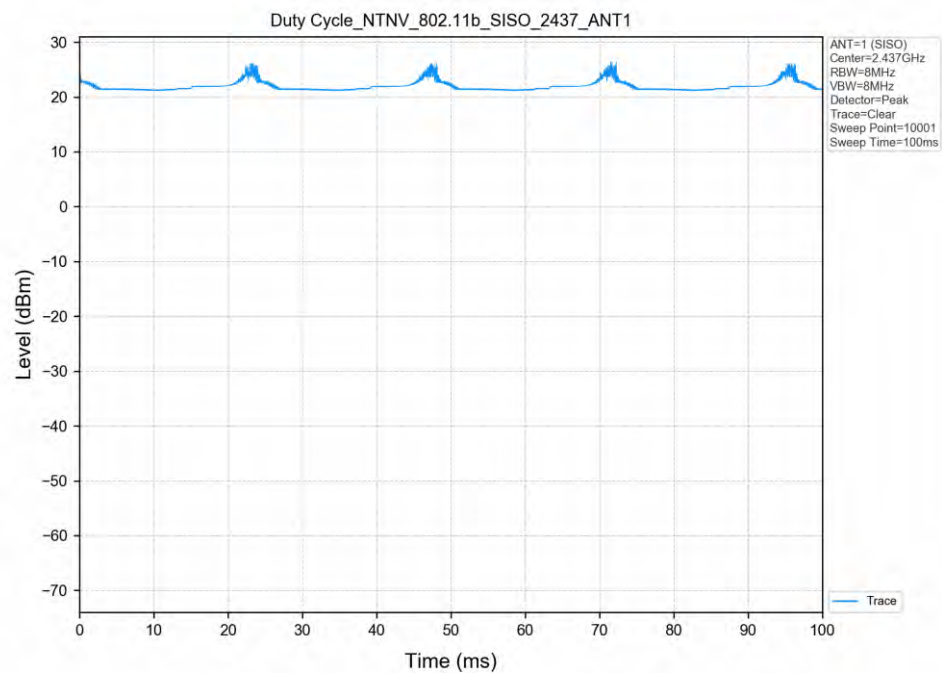
802.11b_2412MHz_SISO_ANT1



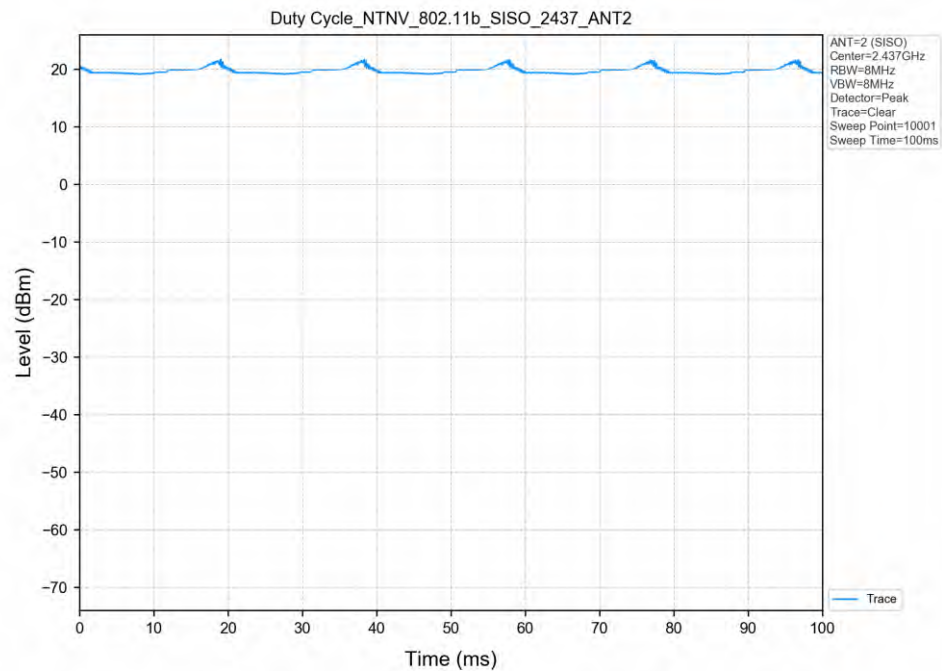
802.11b_2412MHz_SISO_ANT2



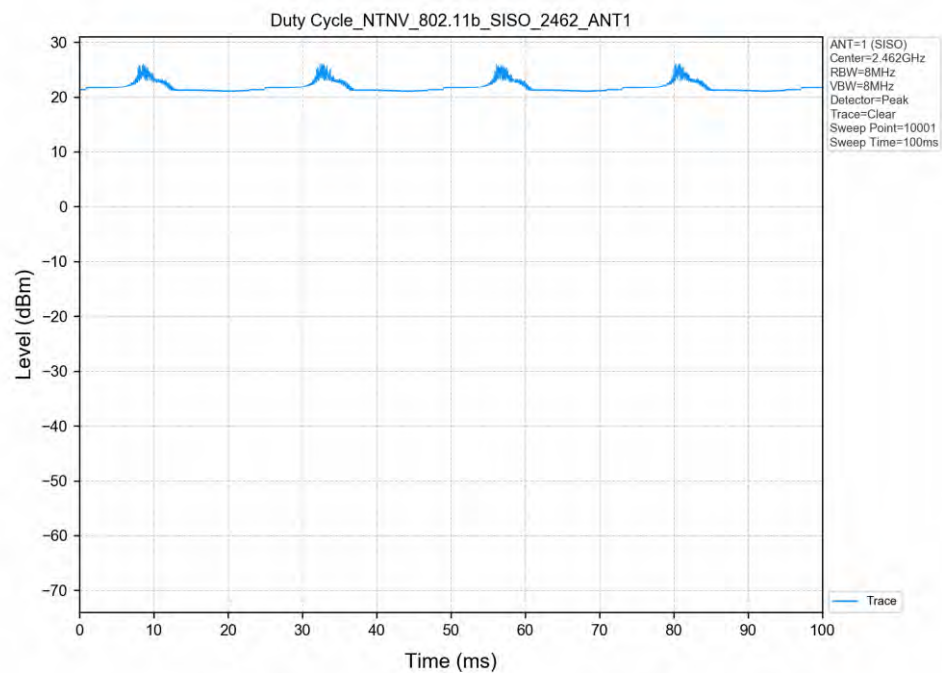
802.11b_2437MHz_SISO_ANT1



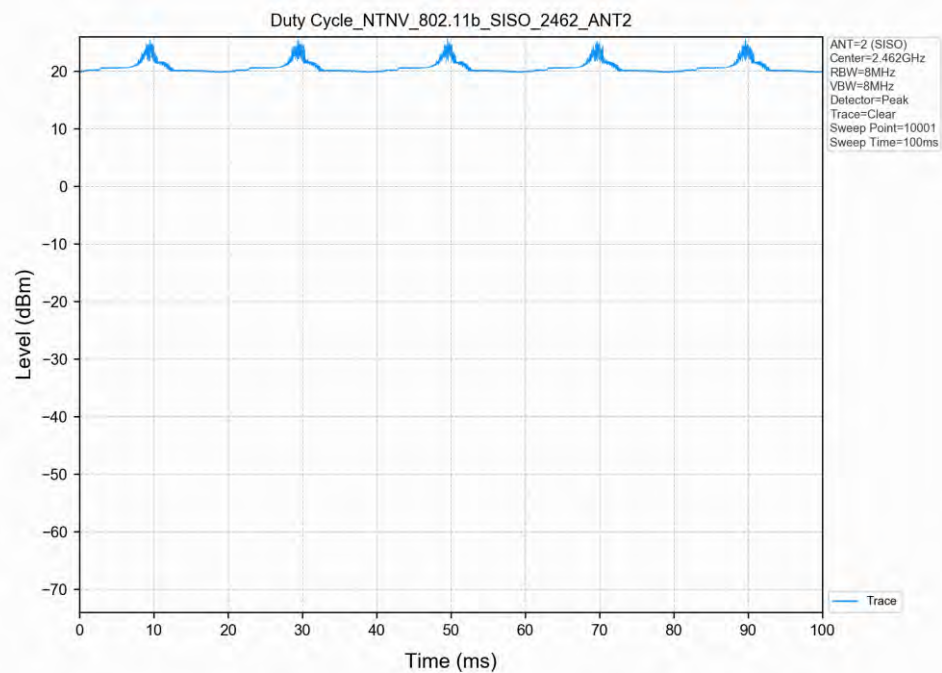
802.11b_2437MHz_SISO_ANT2



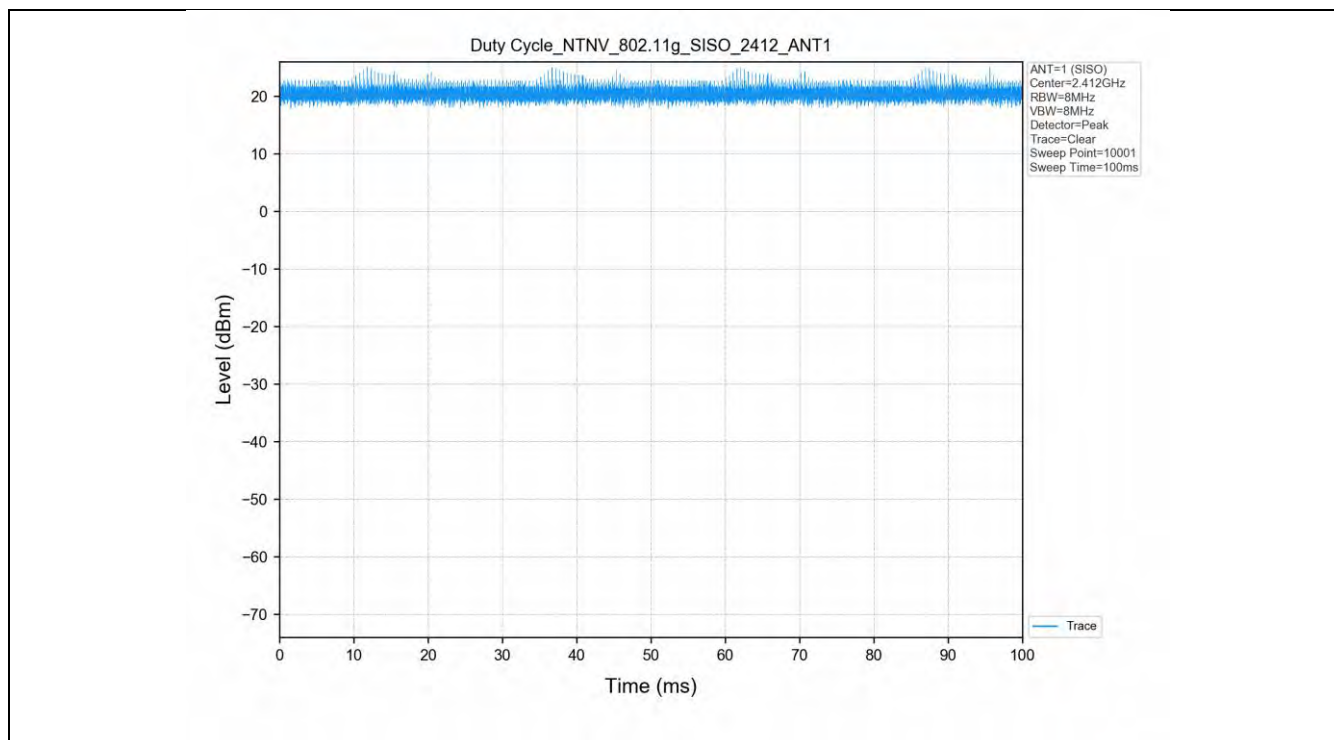
802.11b_2462MHz_SISO_ANT1



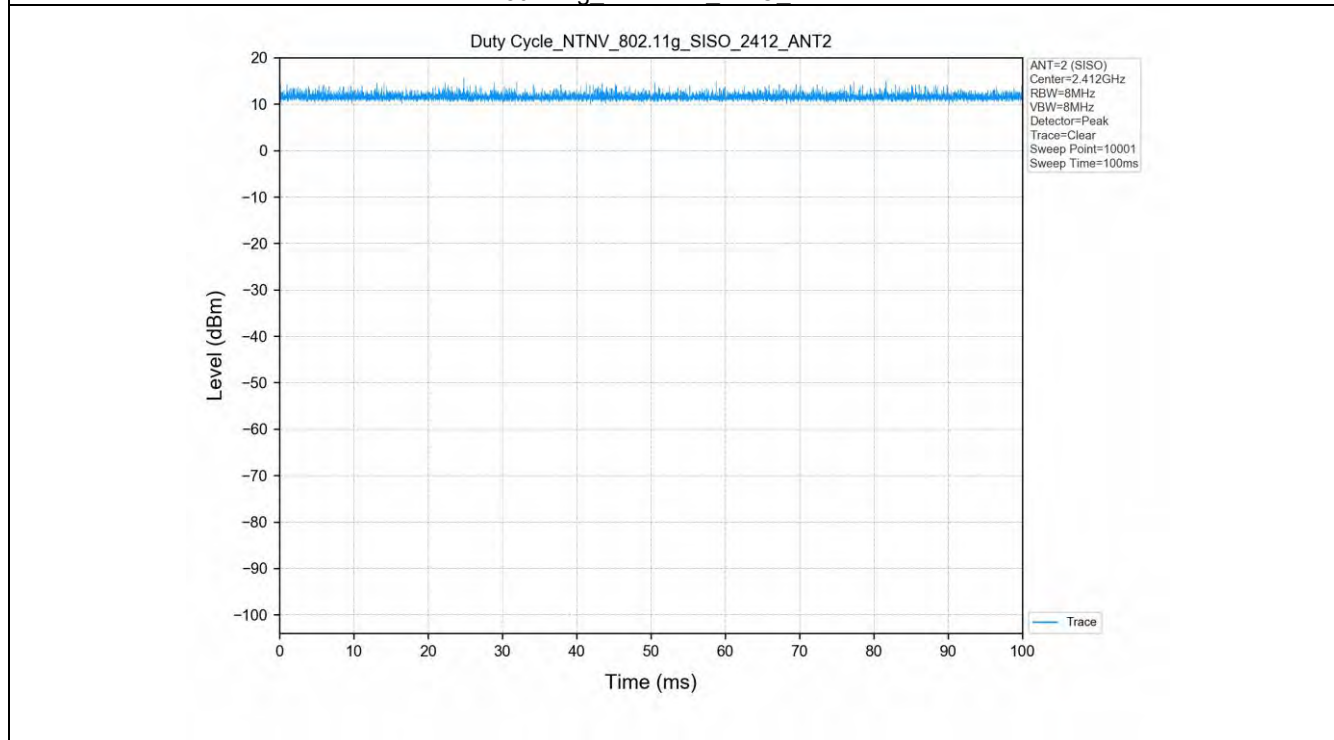
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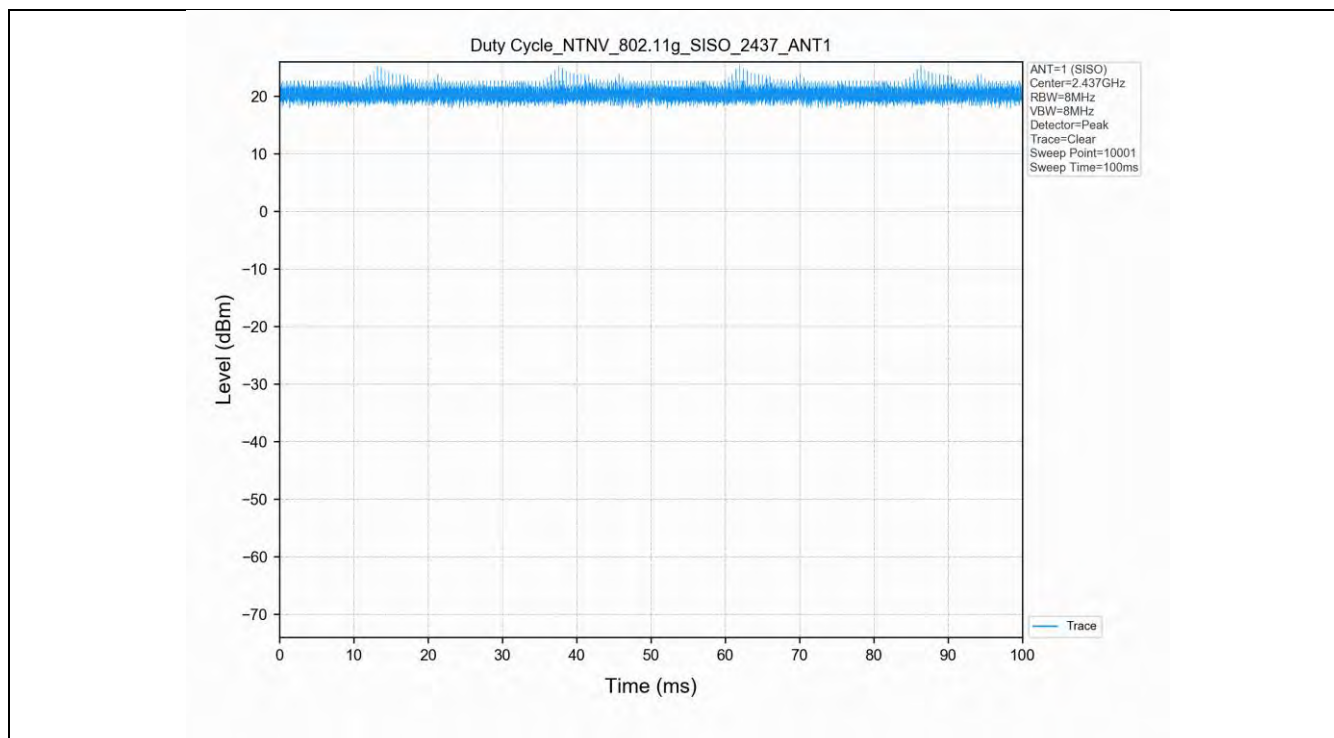
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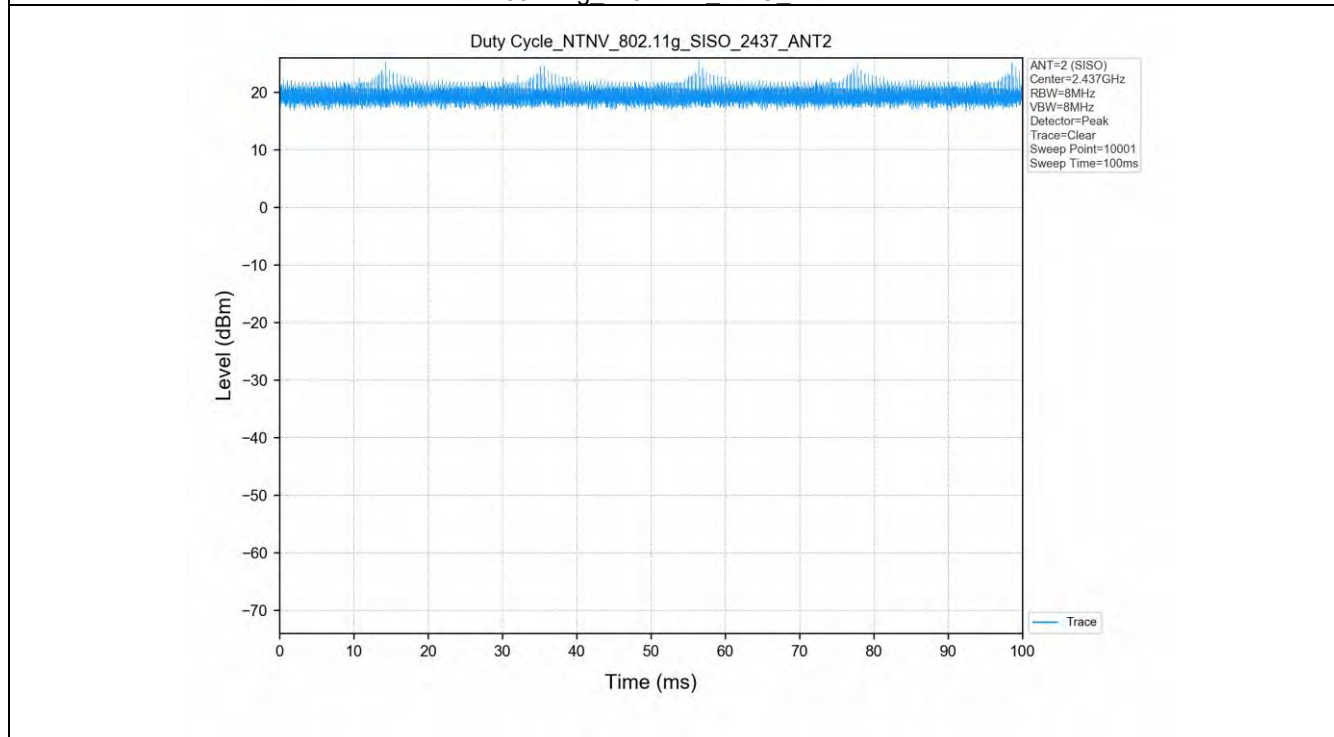
802.11g 2412MHz SISO ANT2



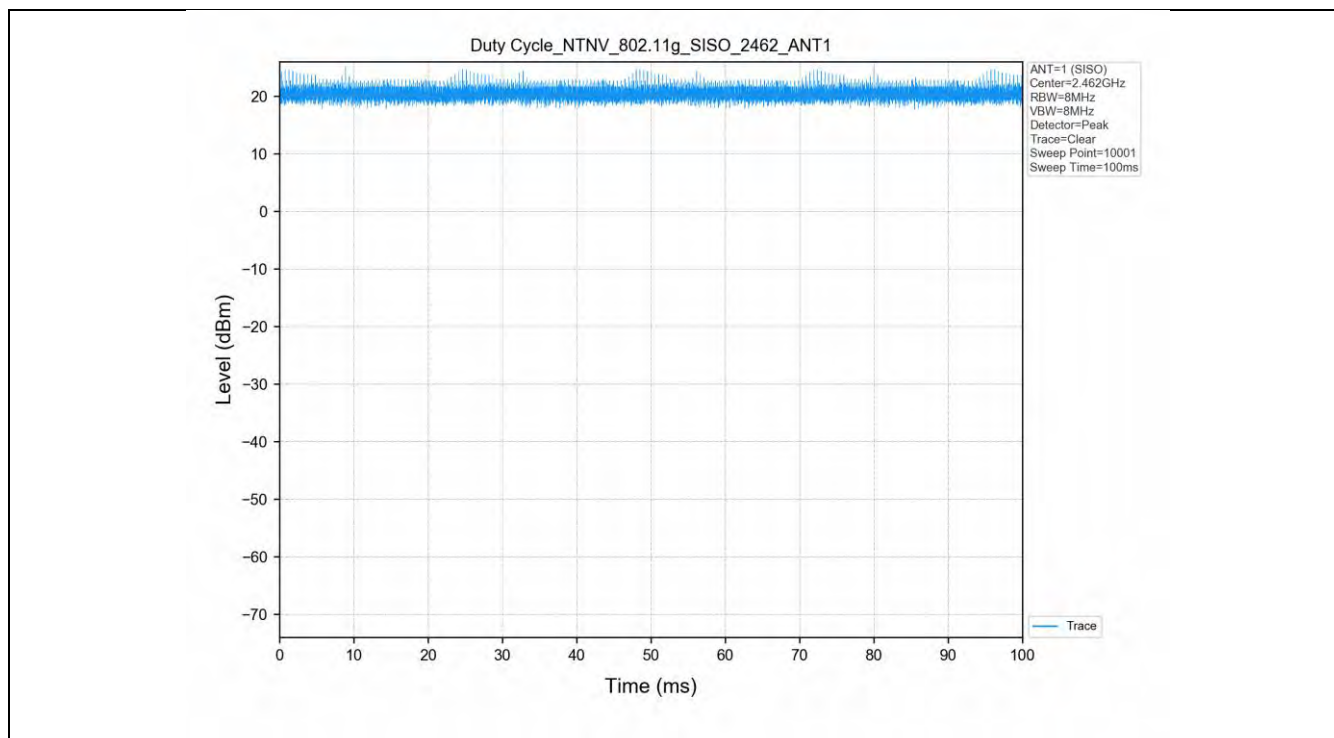
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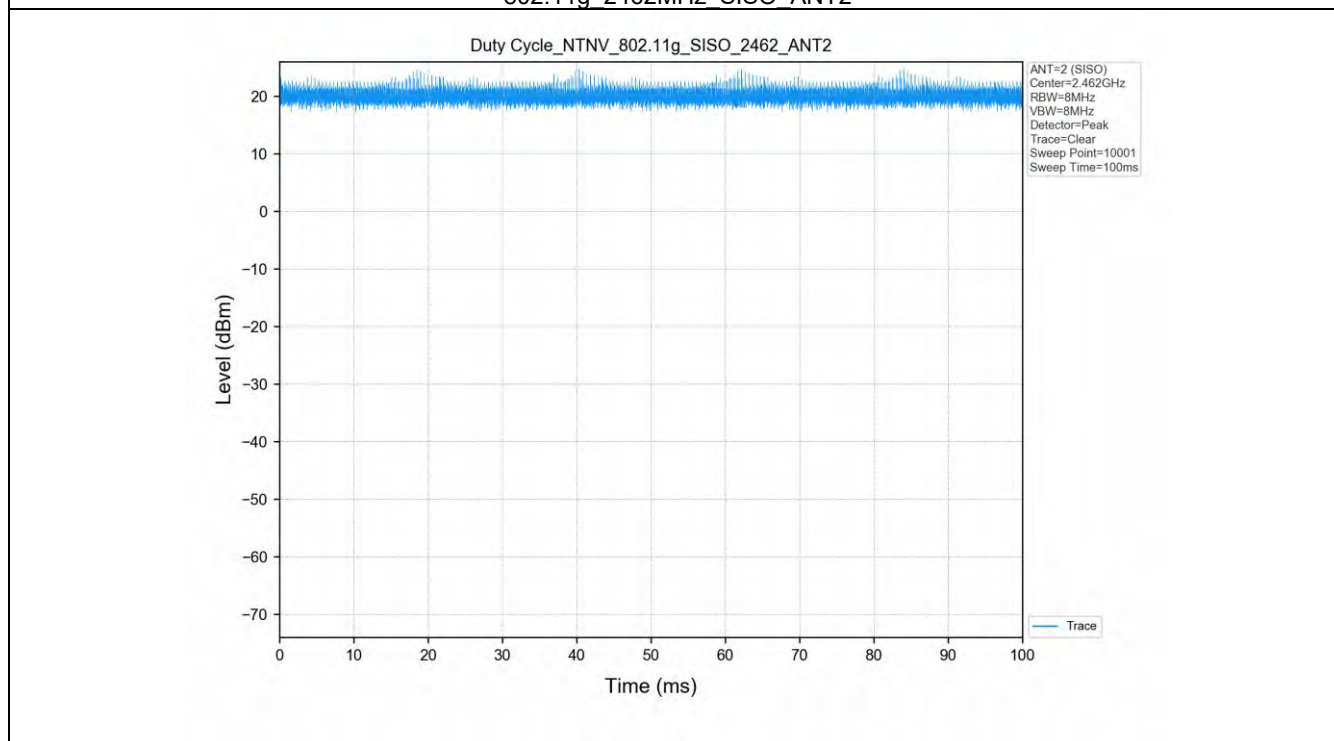
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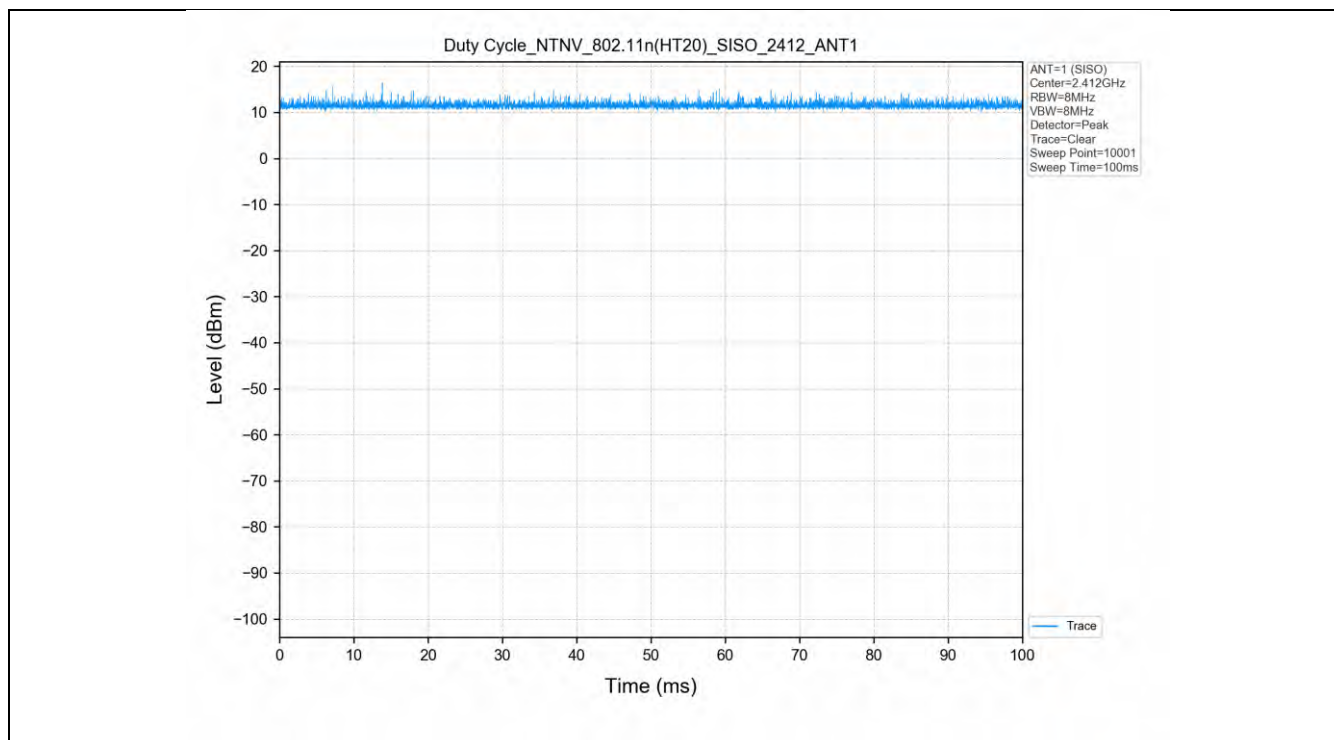
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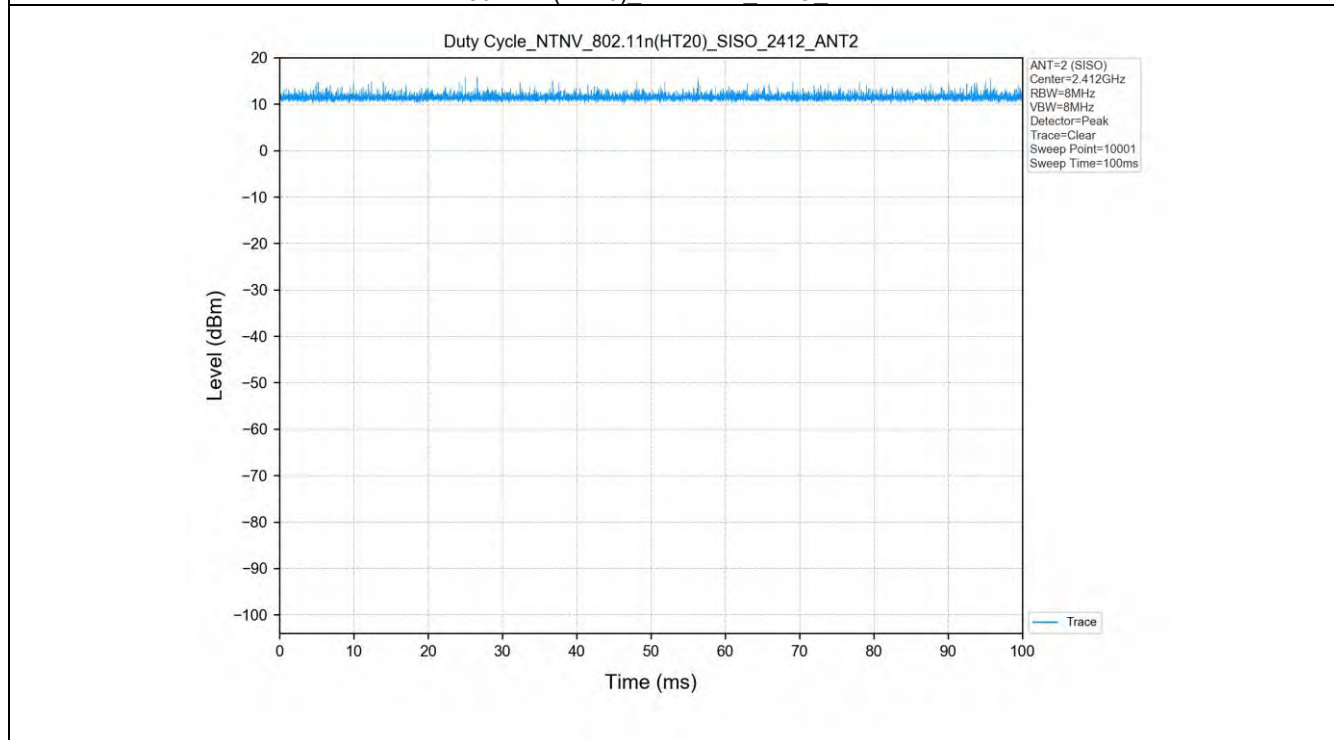
802.11g_2462MHz_SISO_ANT2



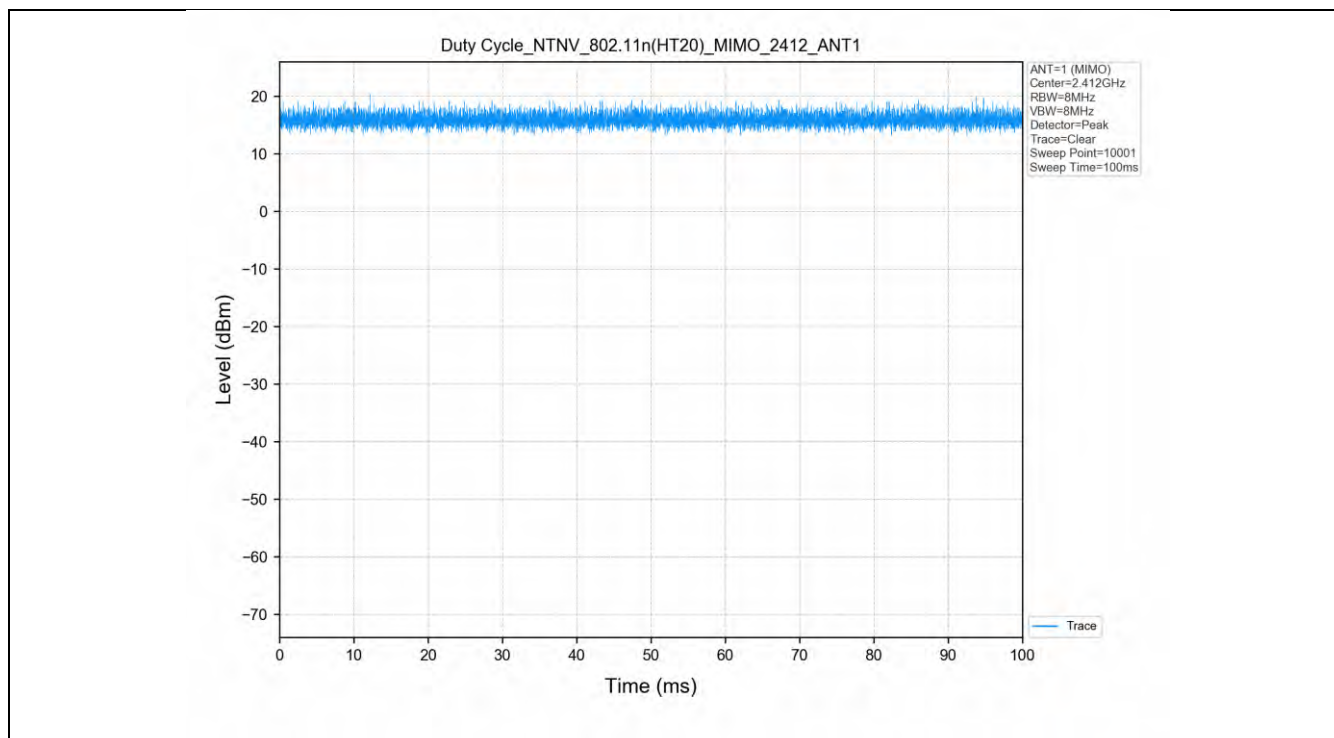
802.11n(HT20)_2412MHz_SISO_ANT1



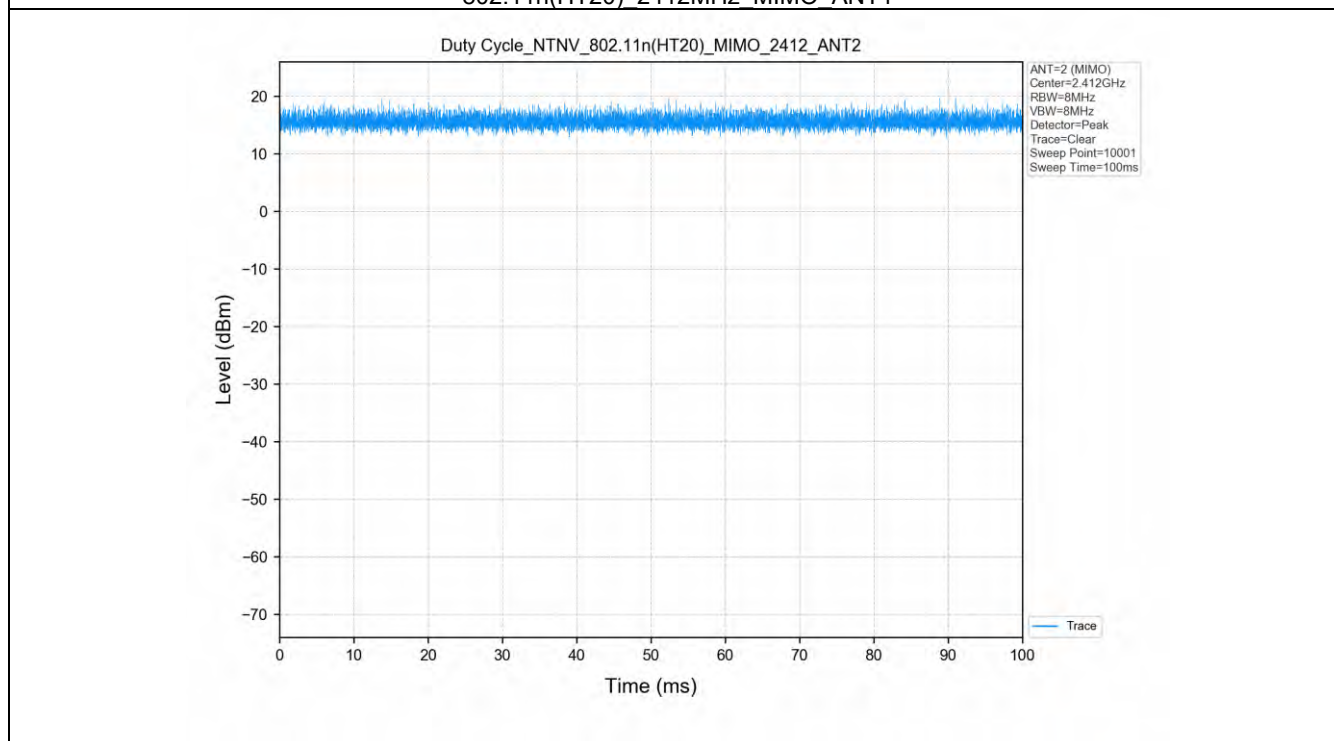
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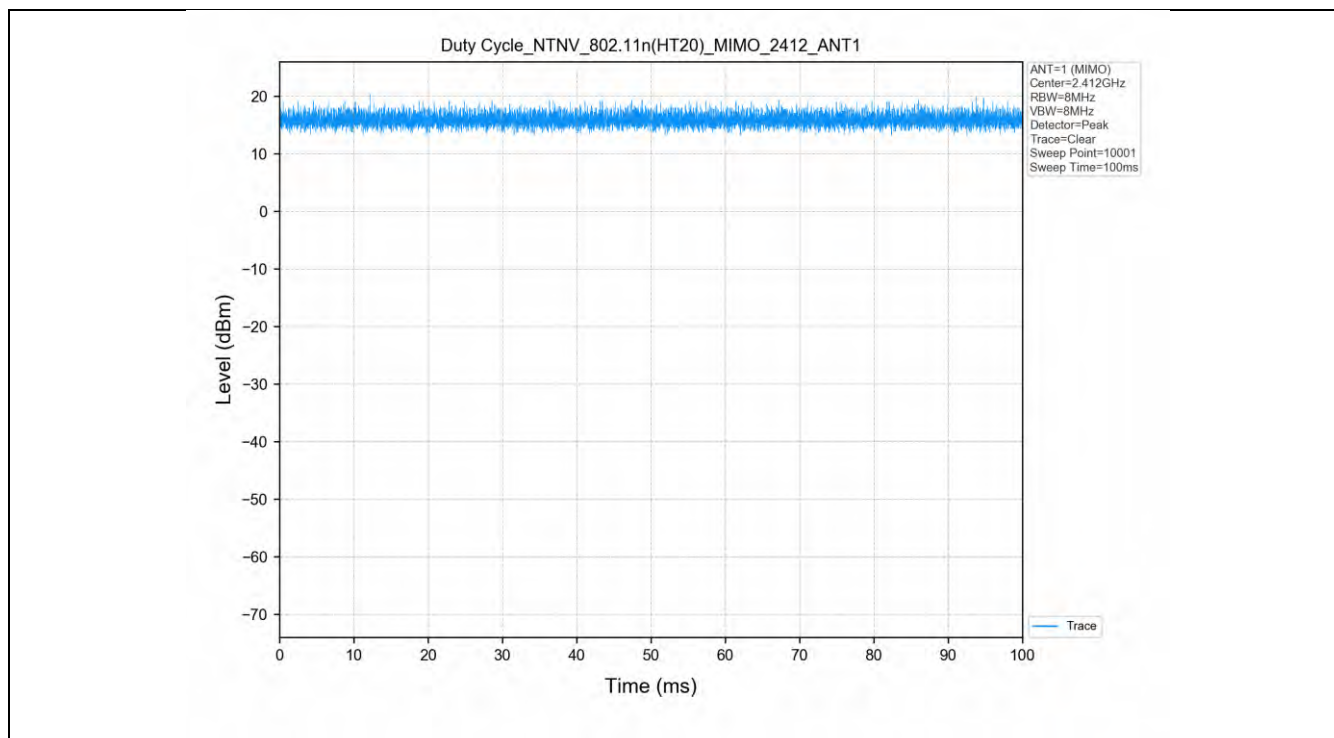
802.11n(HT20)_2412MHz_MIMO_ANT1



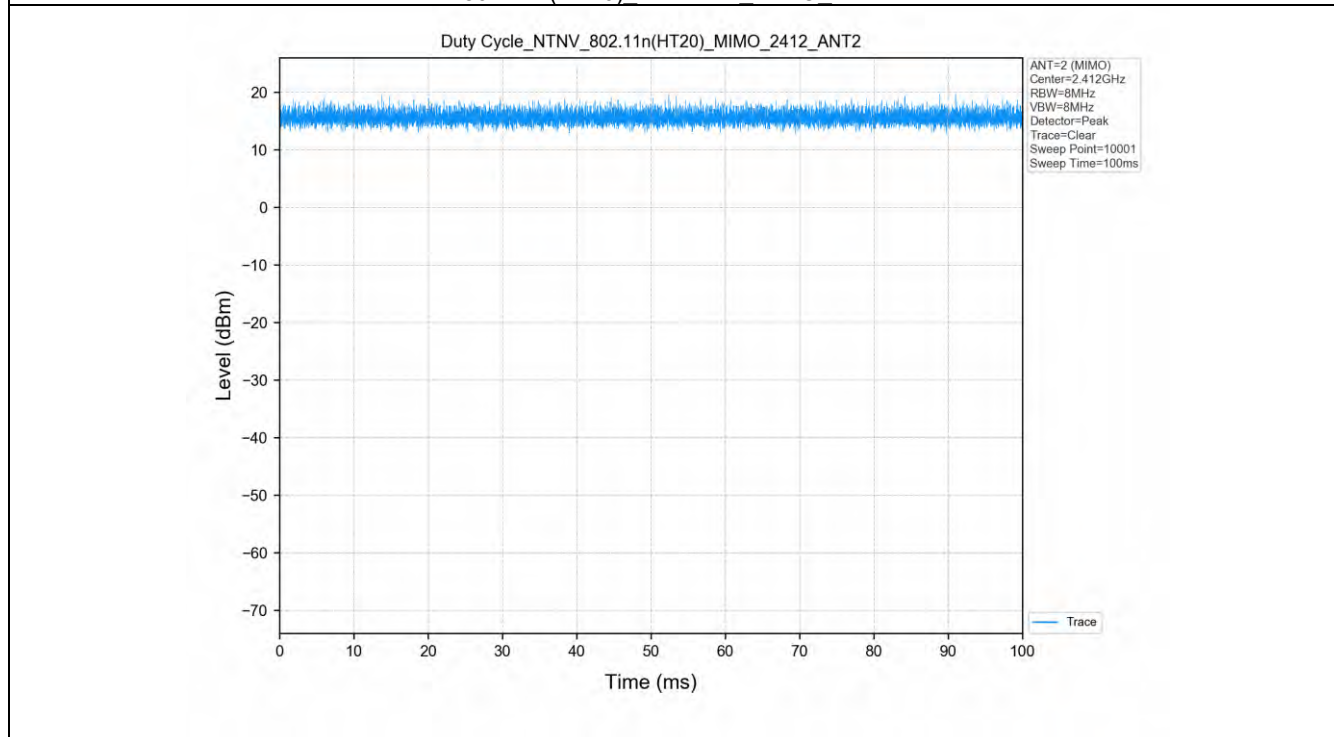
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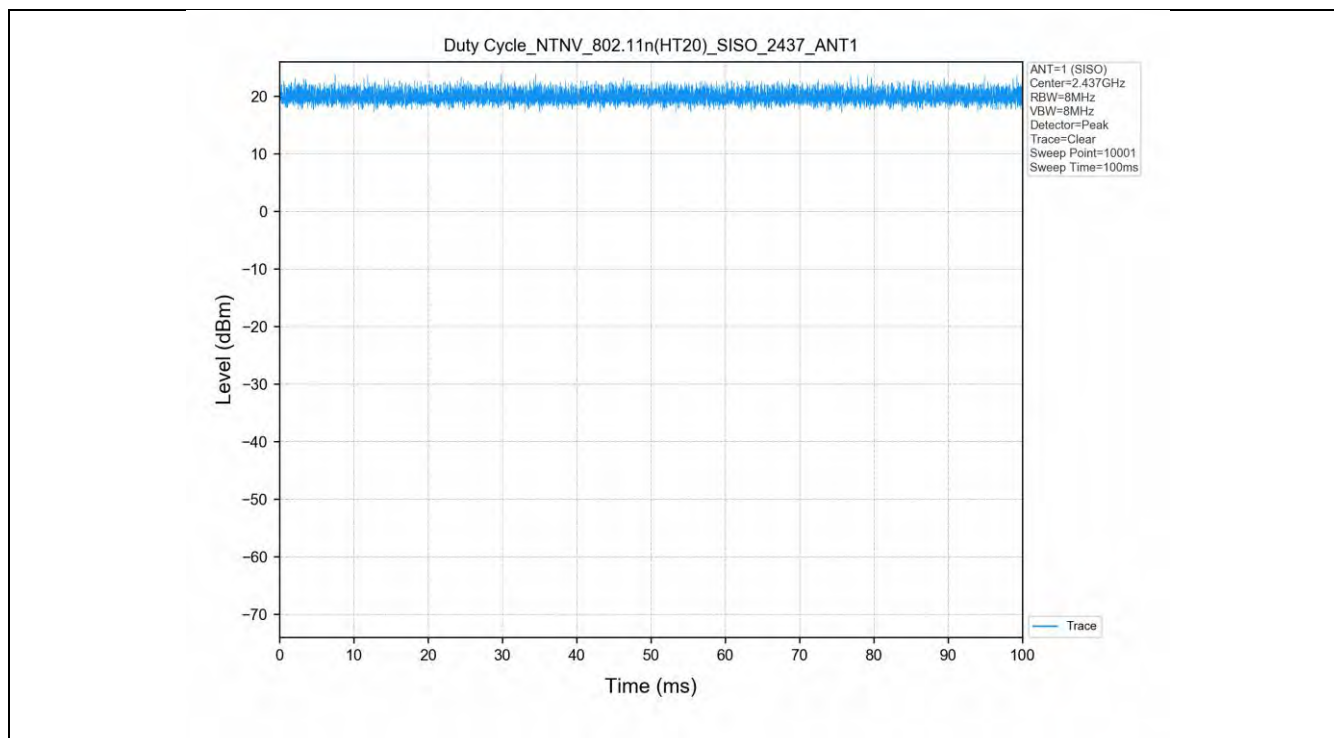
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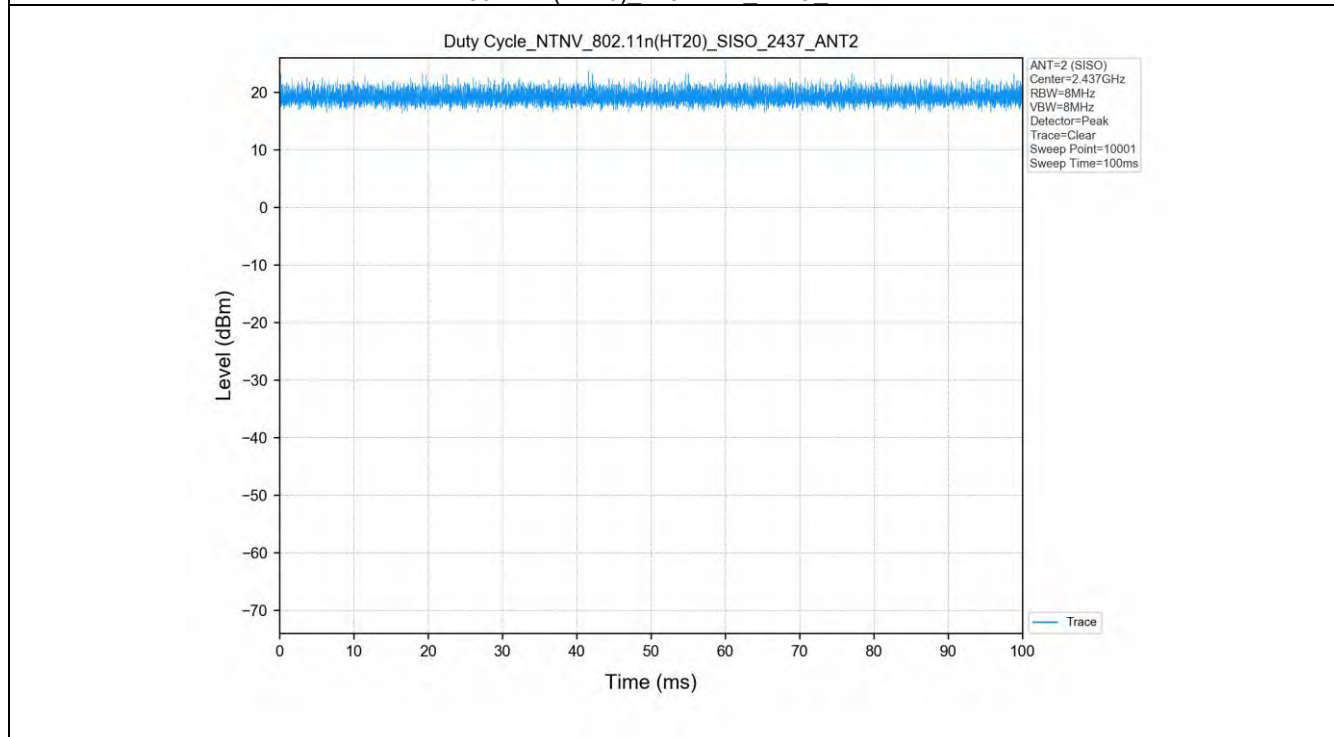
802.11n(HT20)_2412MHz MIMO ANT2



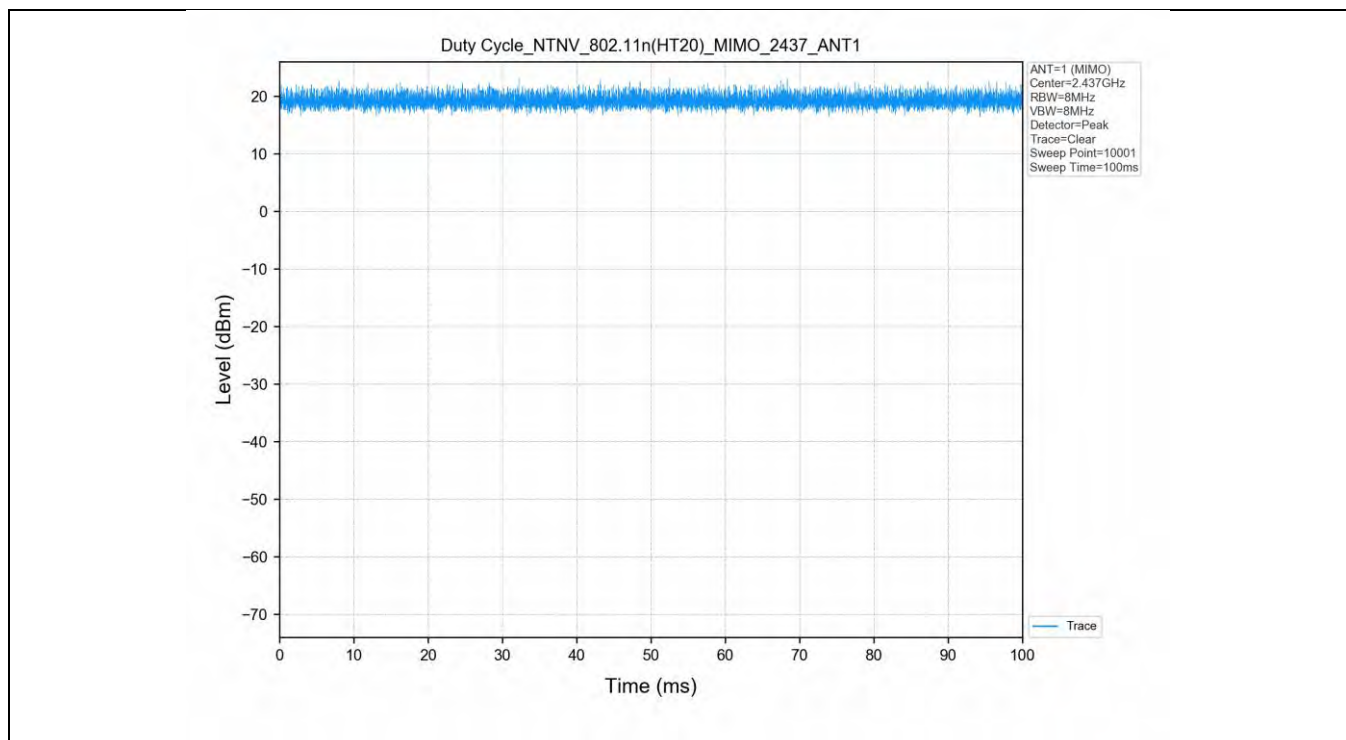
802.11n(HT20)_2437MHz SISO ANT1



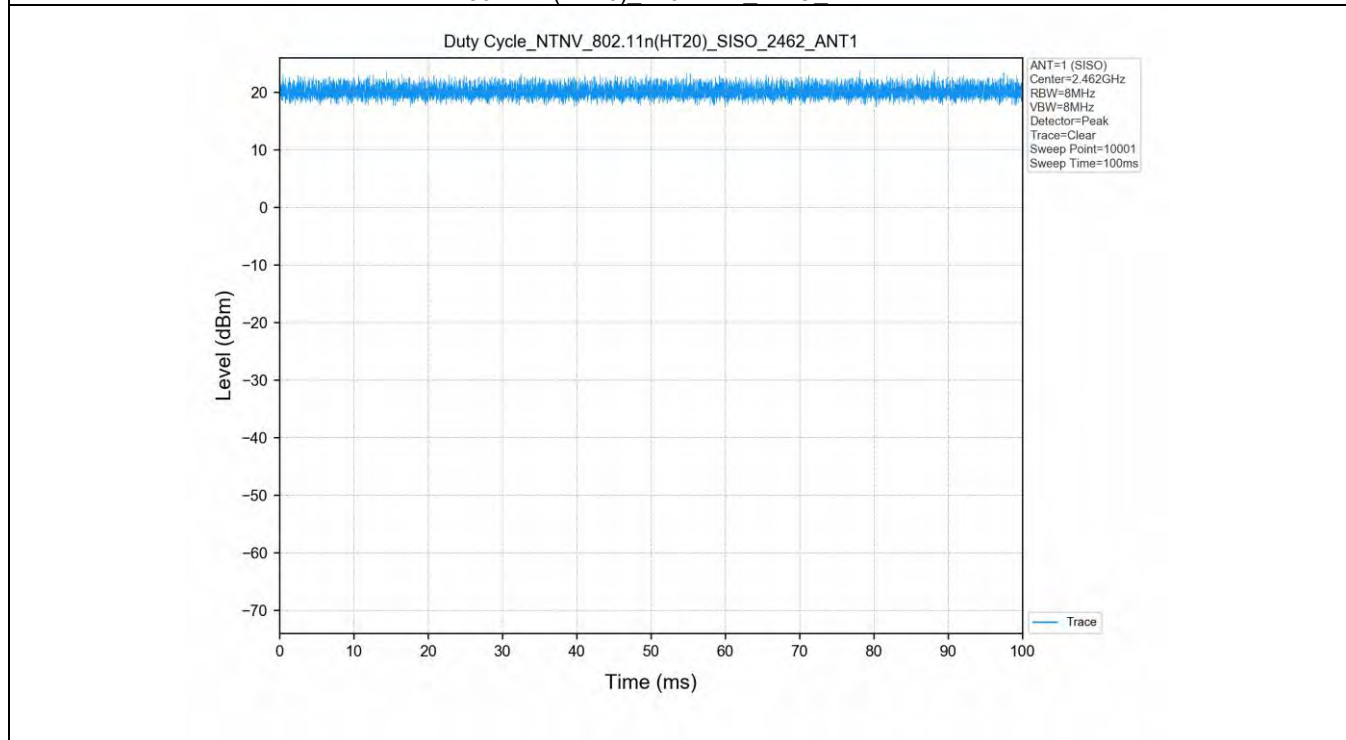
802.11n(HT20) 2437MHz SISO ANT2



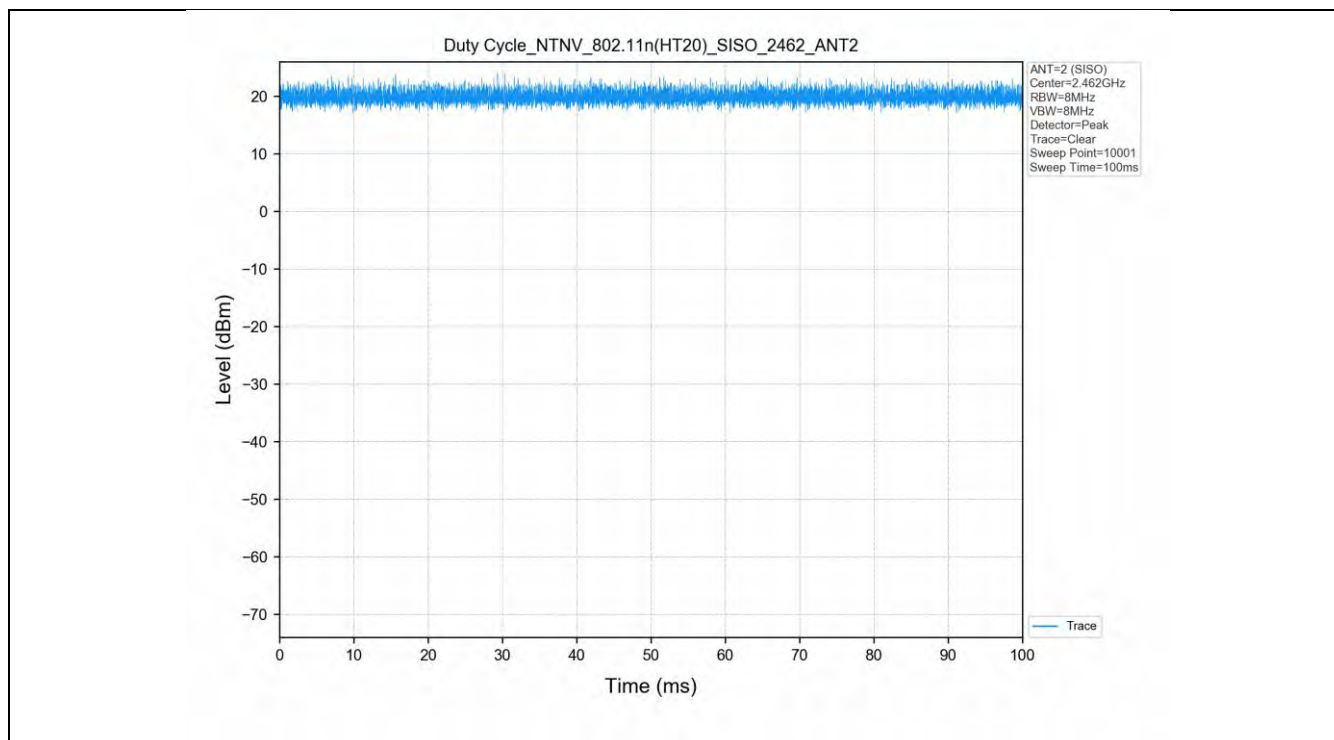
802.11n(HT20) 2437MHz MIMO ANT1



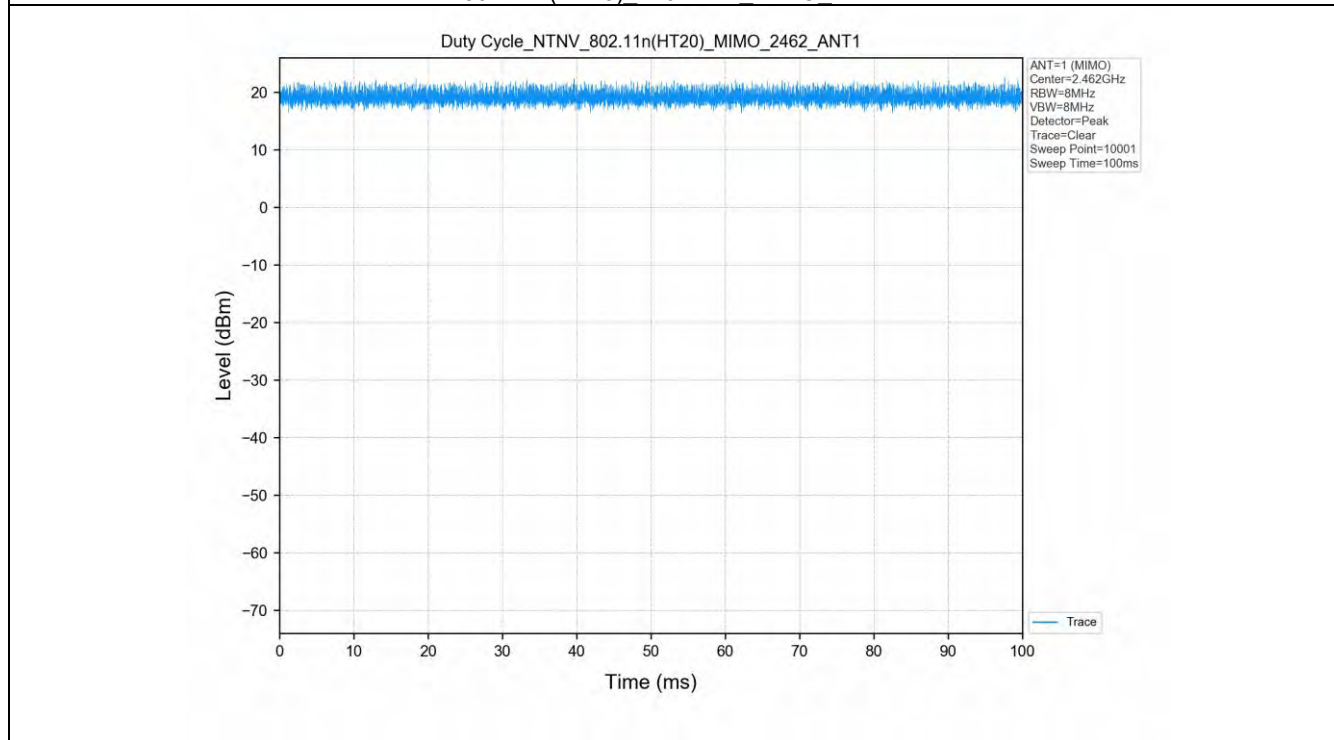
802.11n(HT20)_2462MHz_SISO_ANT1



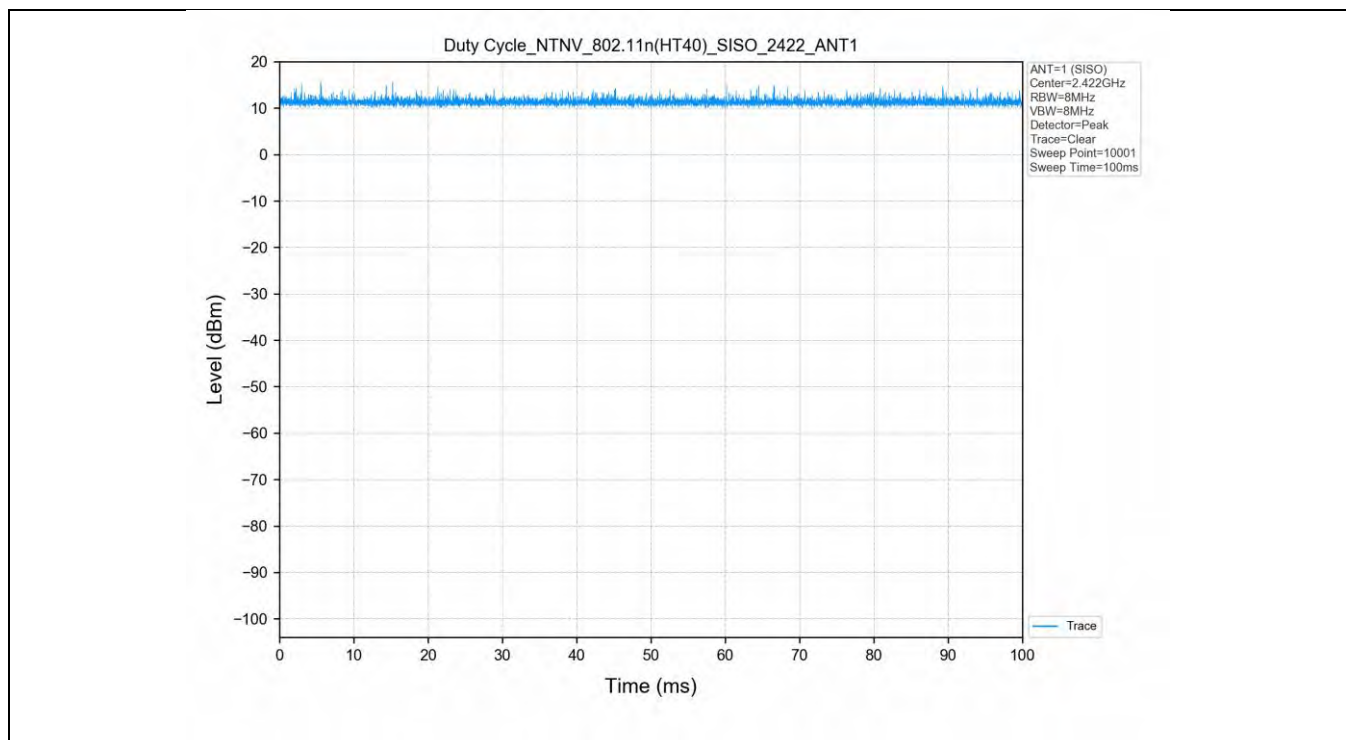
802.11n(HT20)_2462MHz_SISO_ANT2



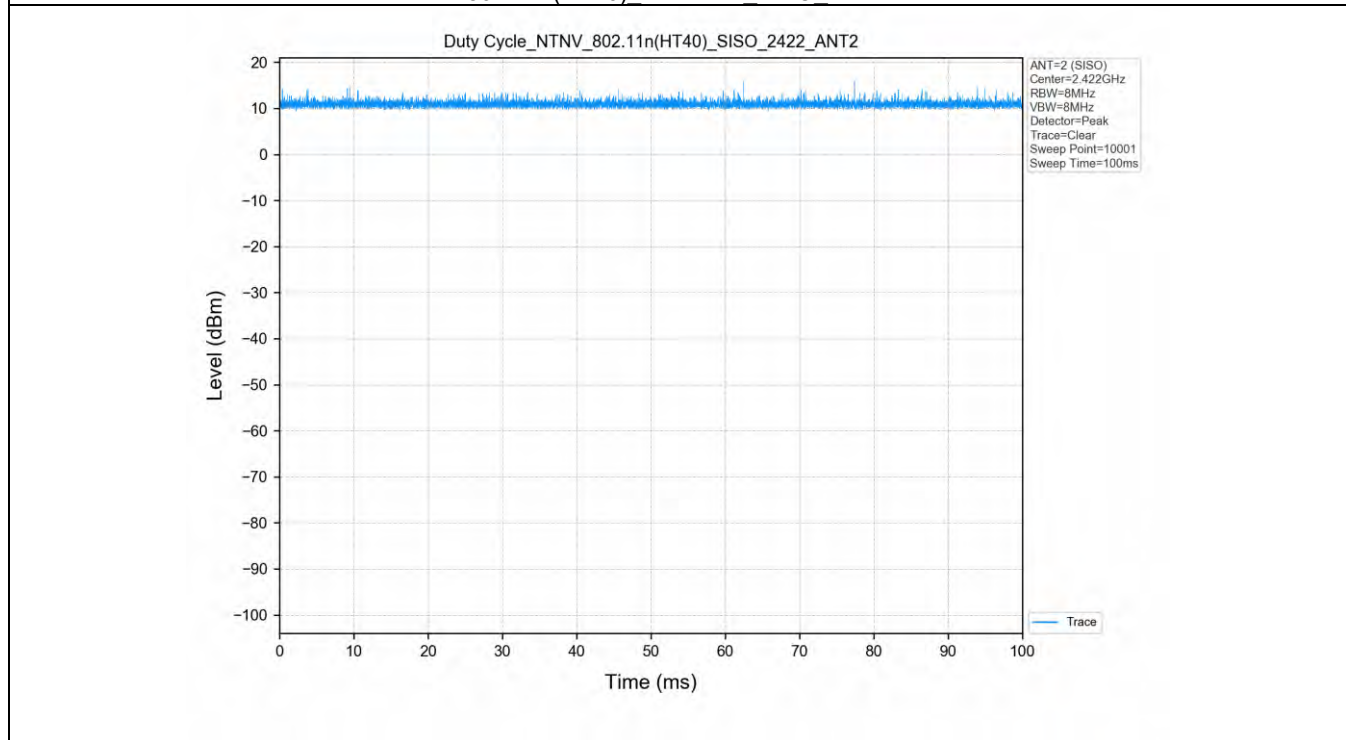
802.11n(HT20)_2462MHz_MIMO_ANT1



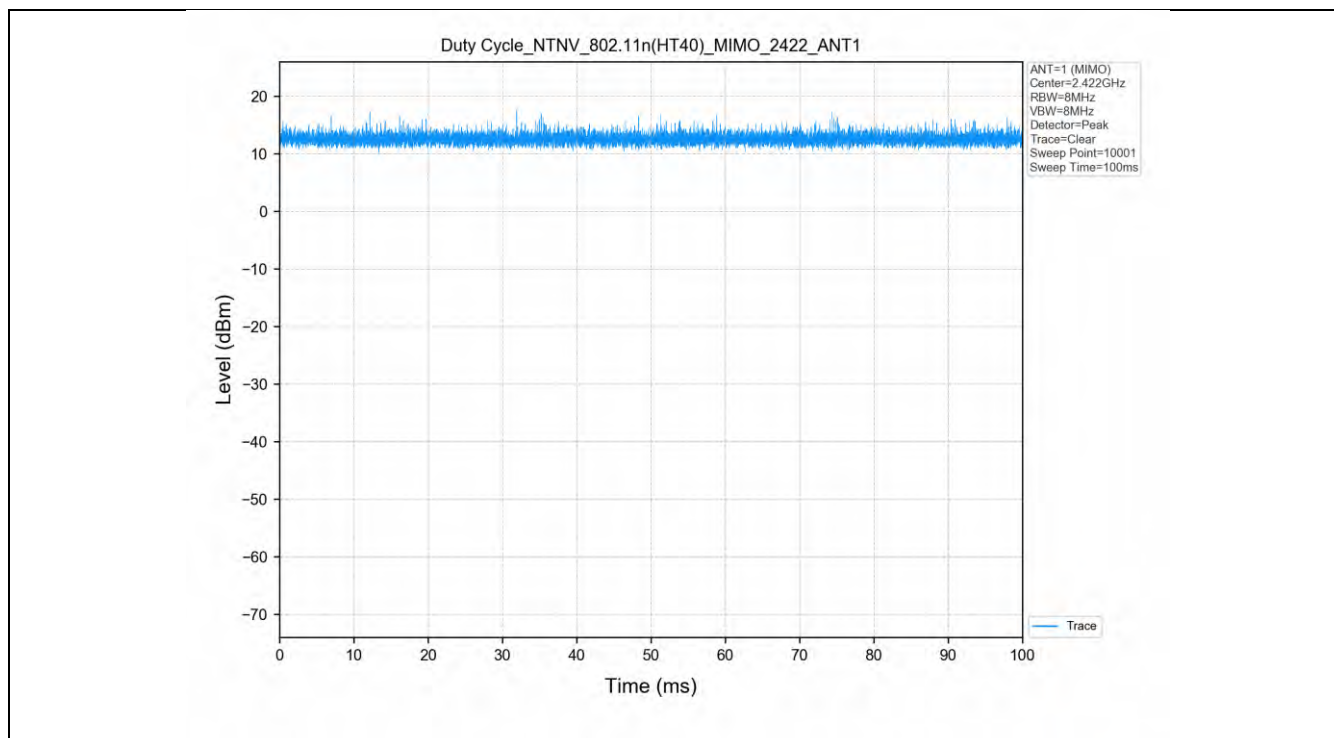
802.11n(HT40)_2422MHz_SISO_ANT1



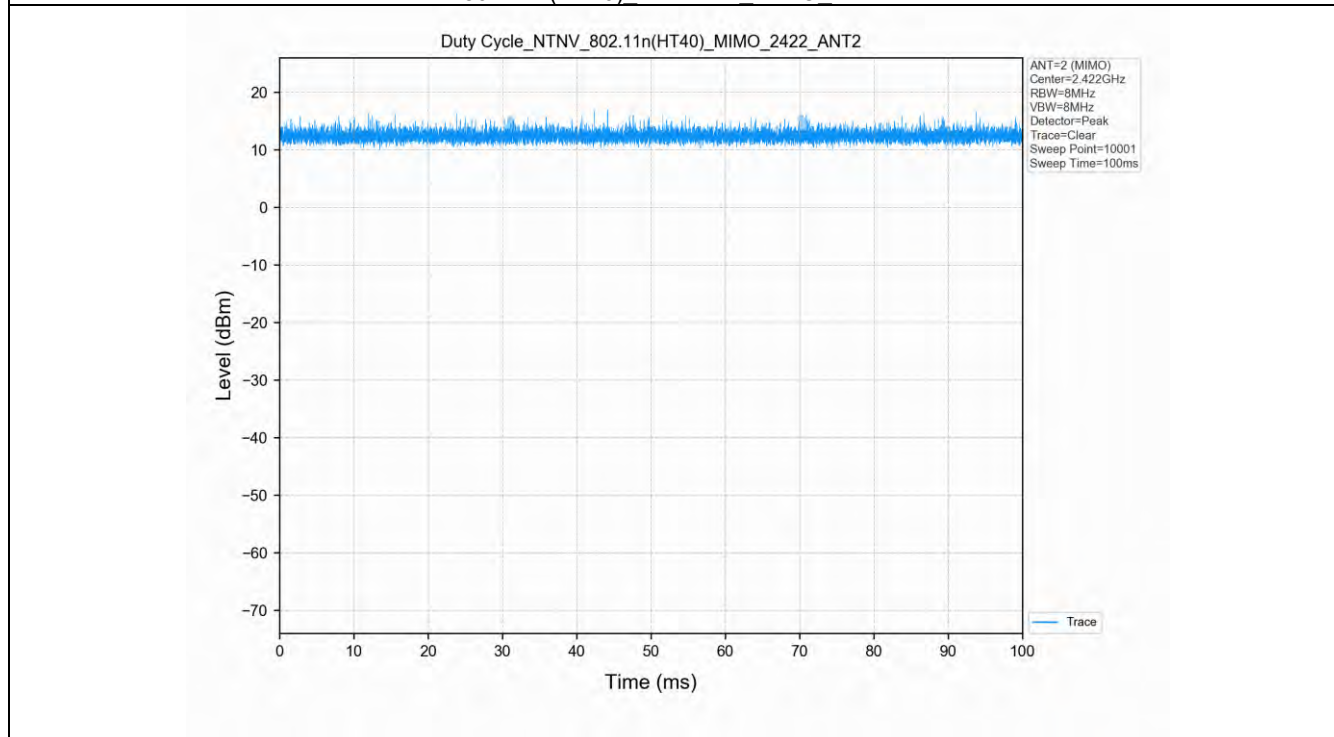
802.11n(HT40)_2422MHz_SISO_ANT2



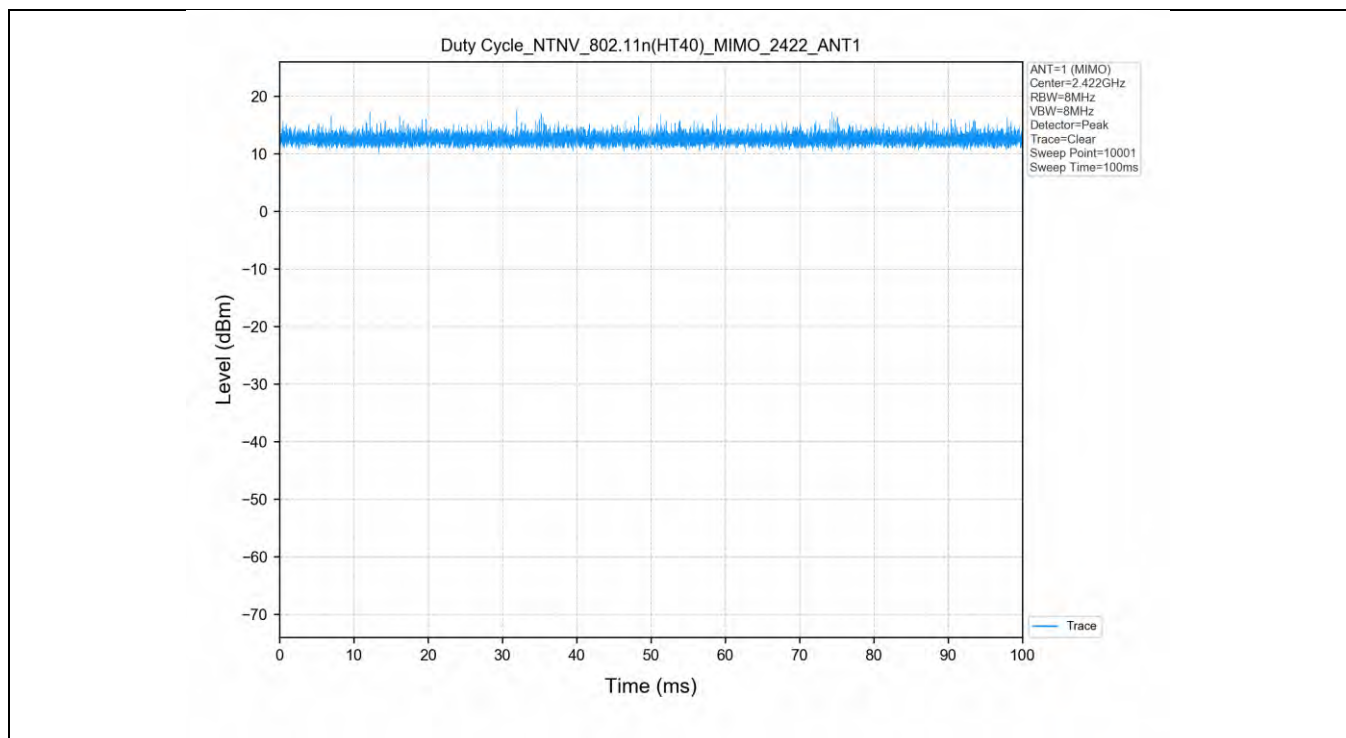
802.11n(HT40)_2422MHz_MIMO_ANT1



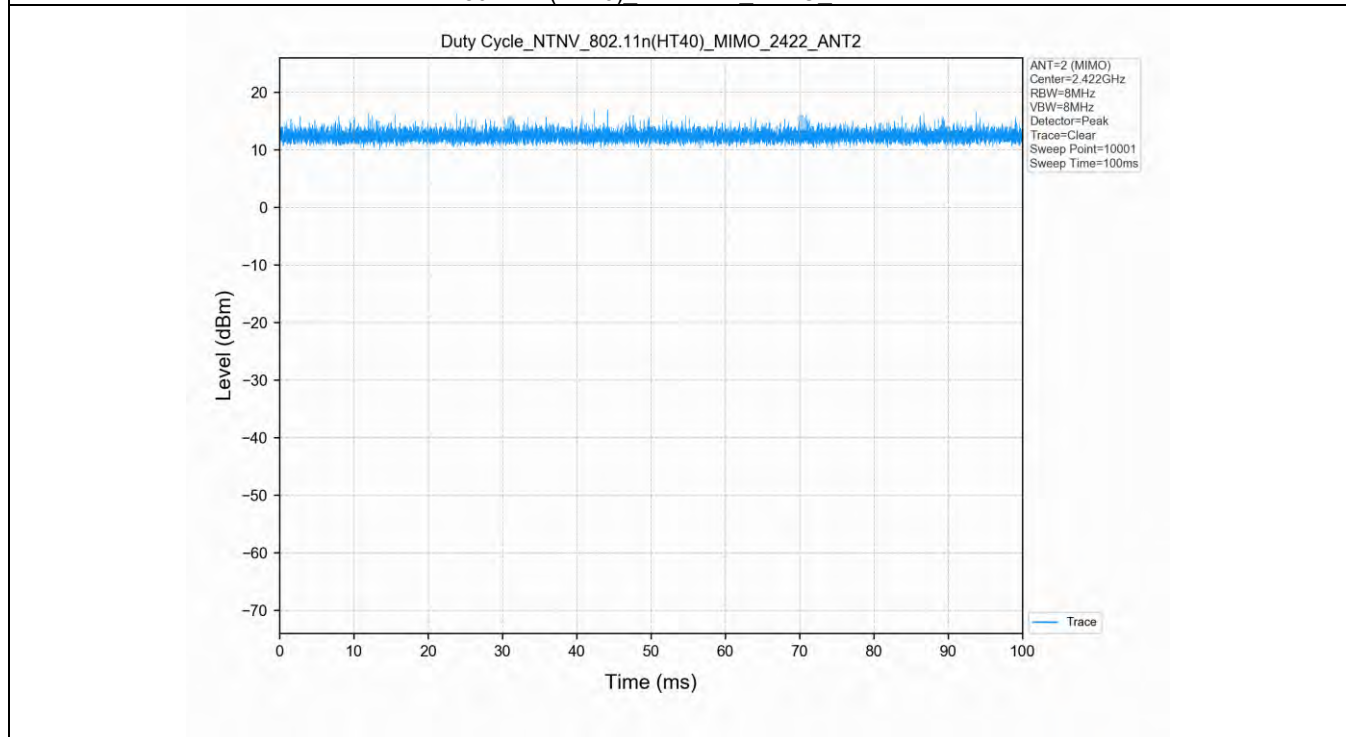
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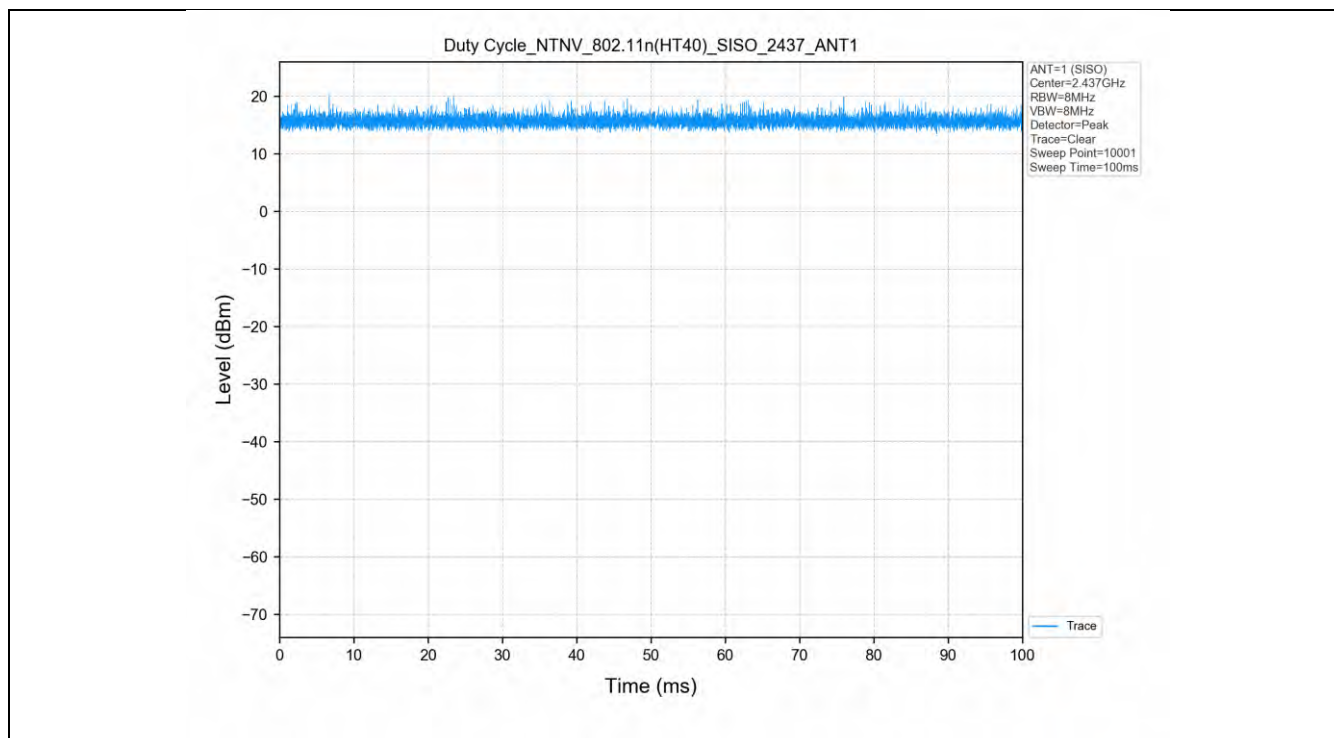
802.11n(HT40)_2422MHz_MIMO_ANT2



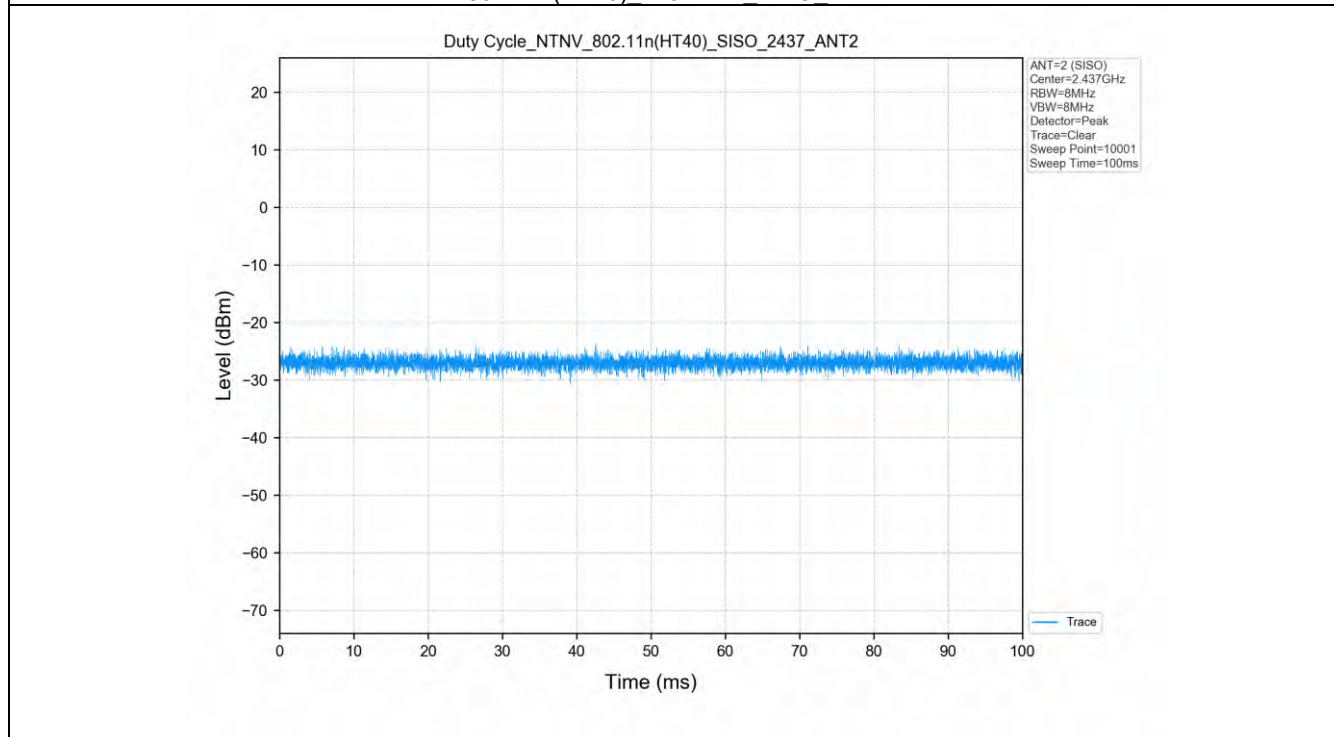
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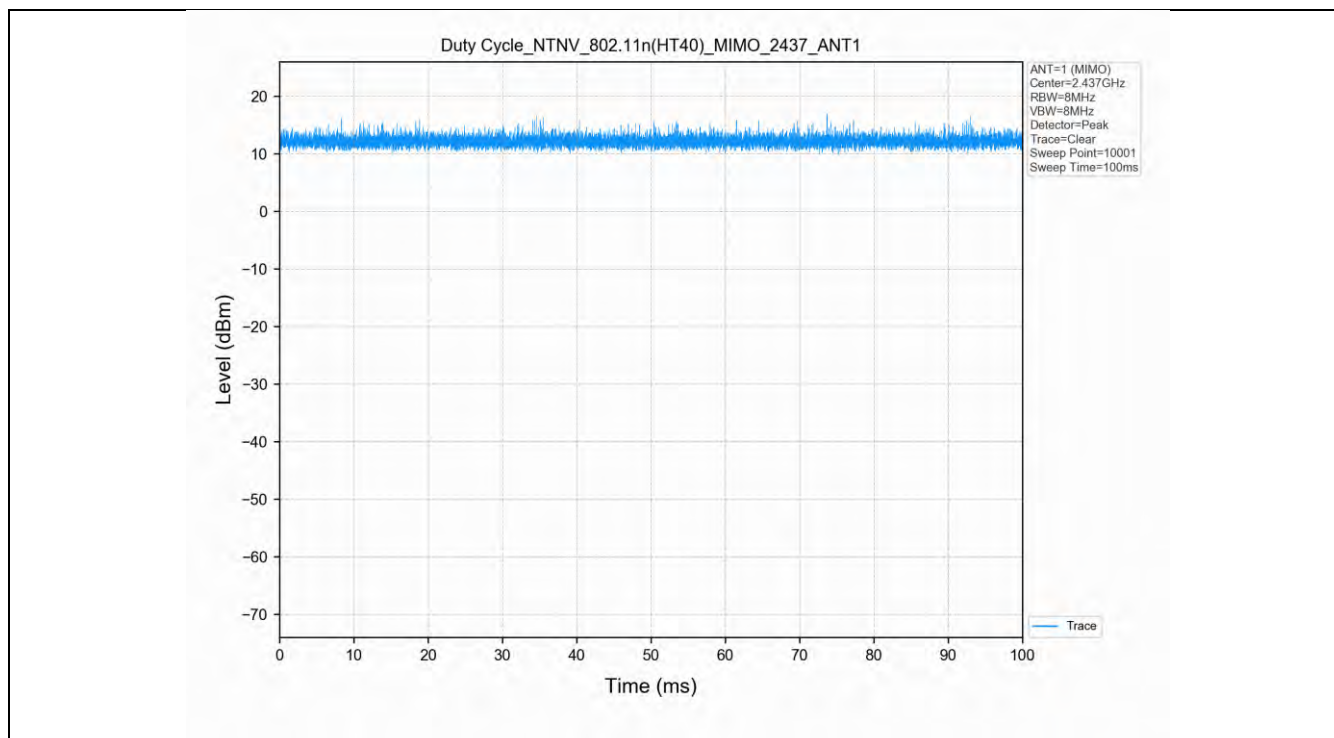
802.11n(HT40)_2437MHz SISO ANT1



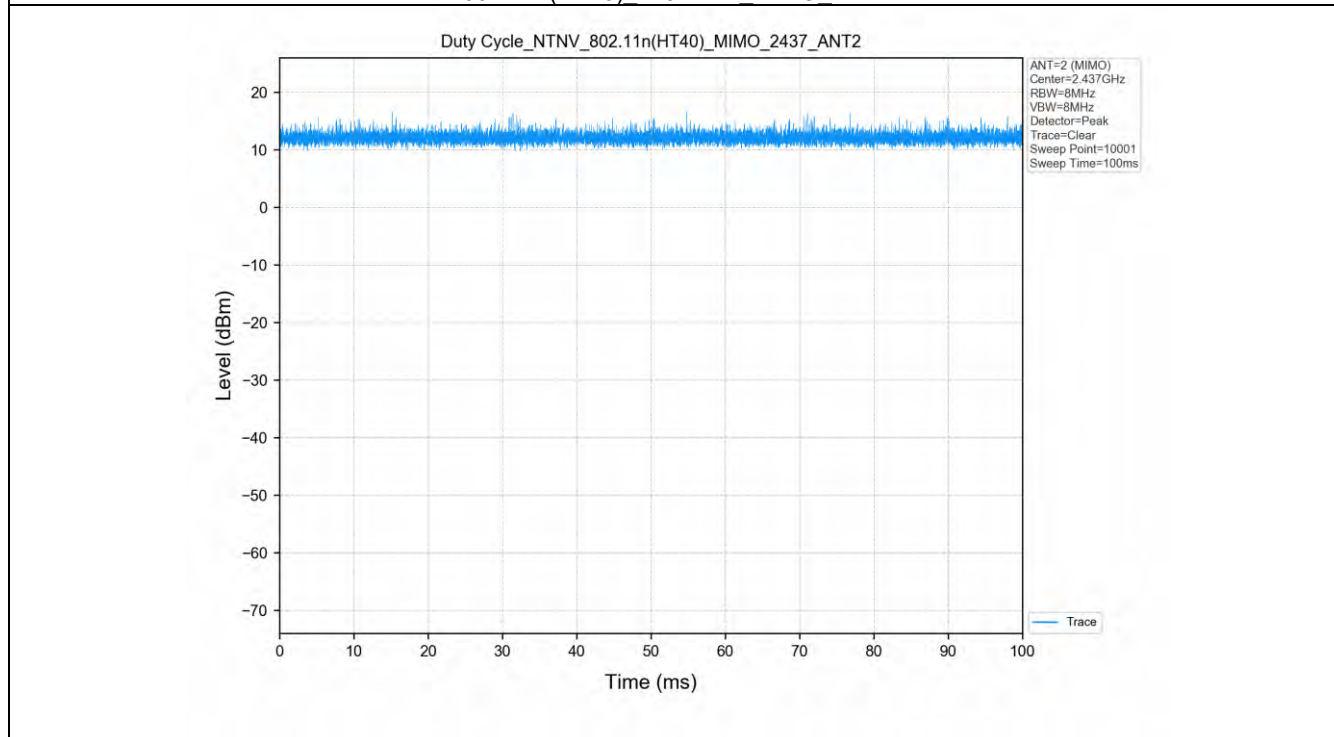
802.11n(HT40)_2437MHz_SISO_ANT2



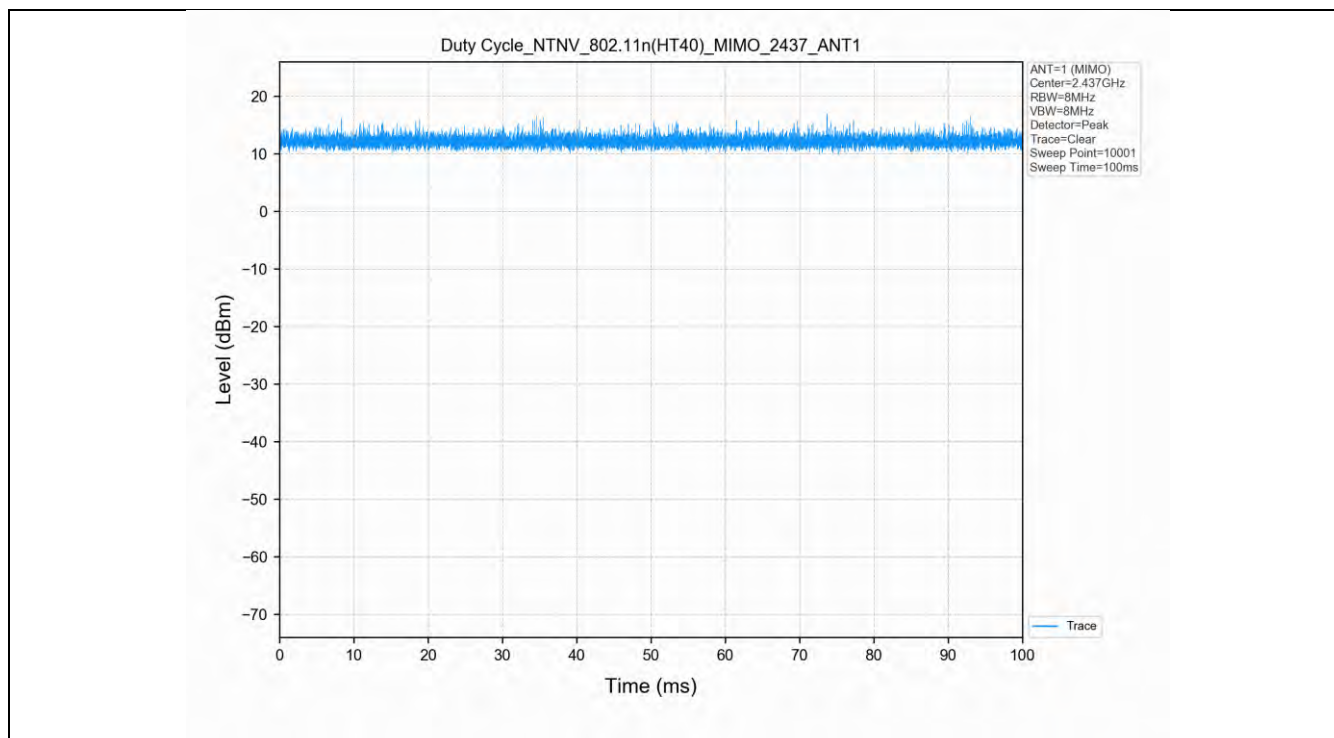
802.11n(HT40)_2437MHz_MIMO_ANT1



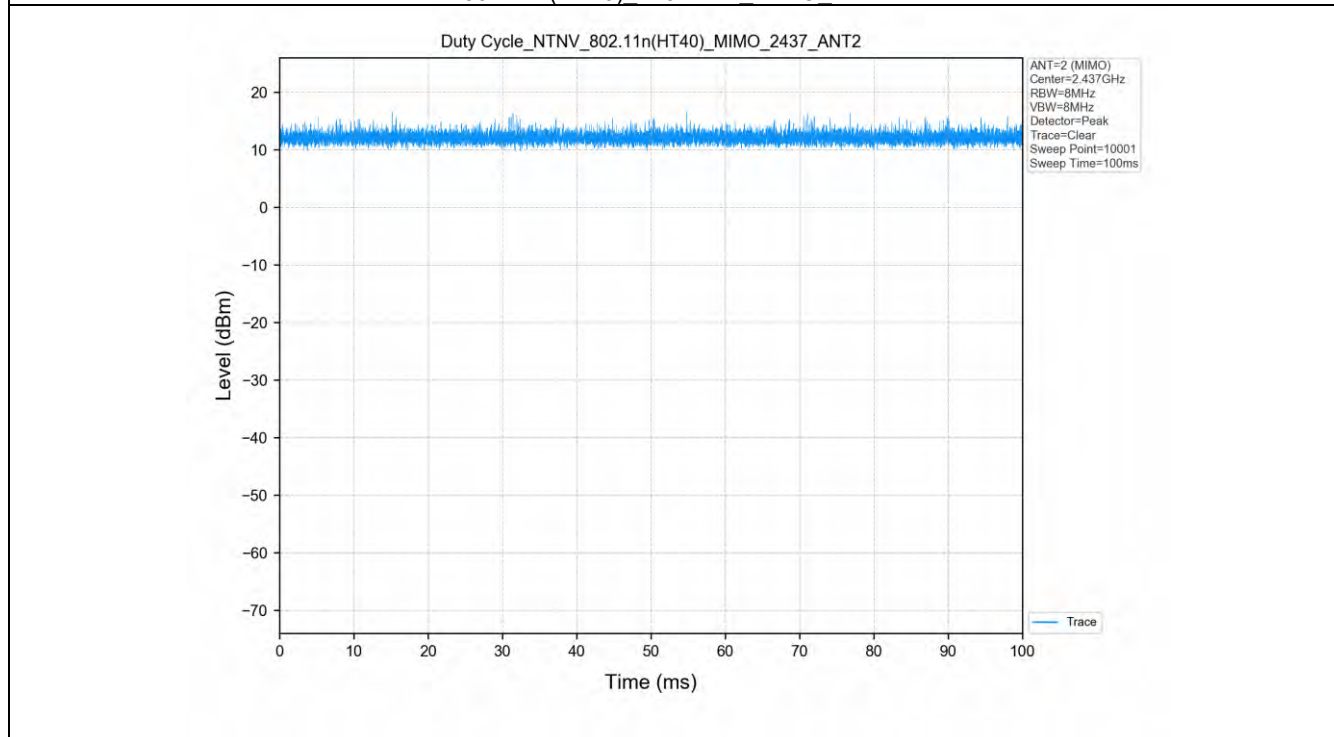
802.11n(HT40)_2437MHz_MIMO_ANT1



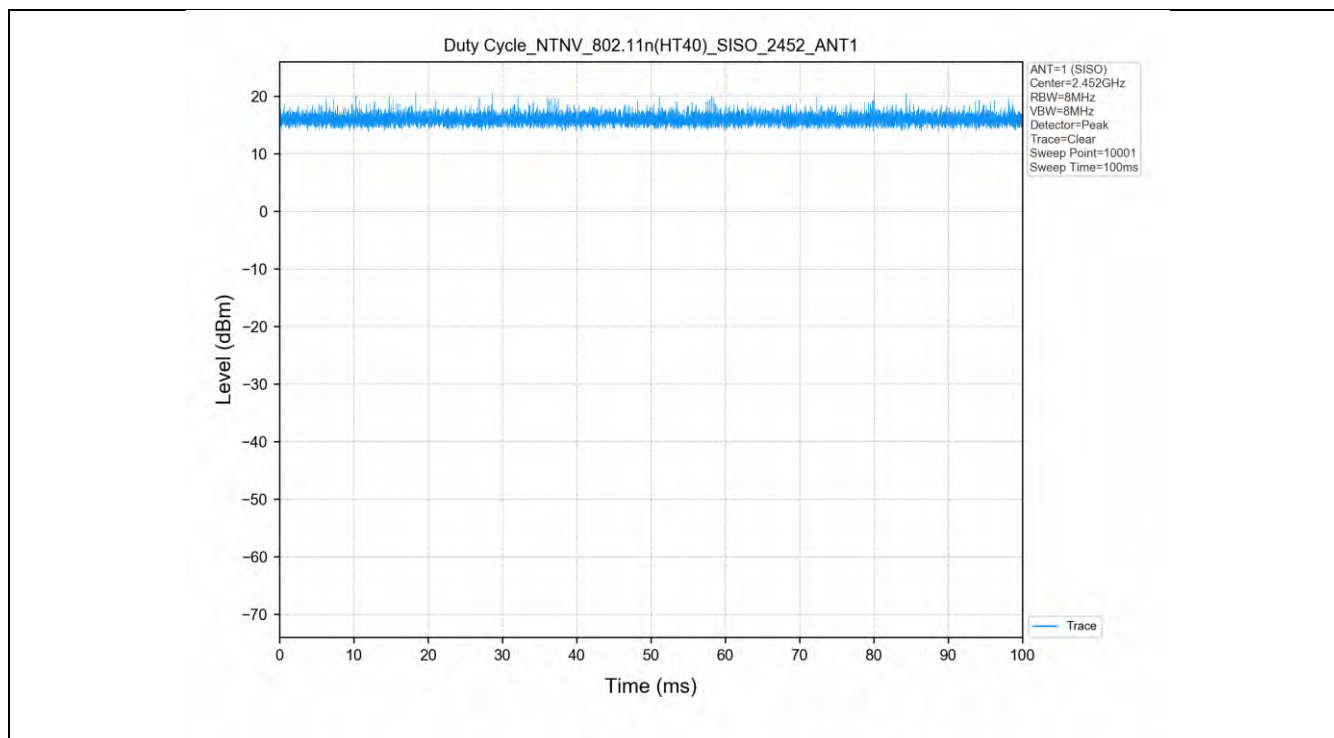
802.11n(HT40)_2437MHz_MIMO_ANT2



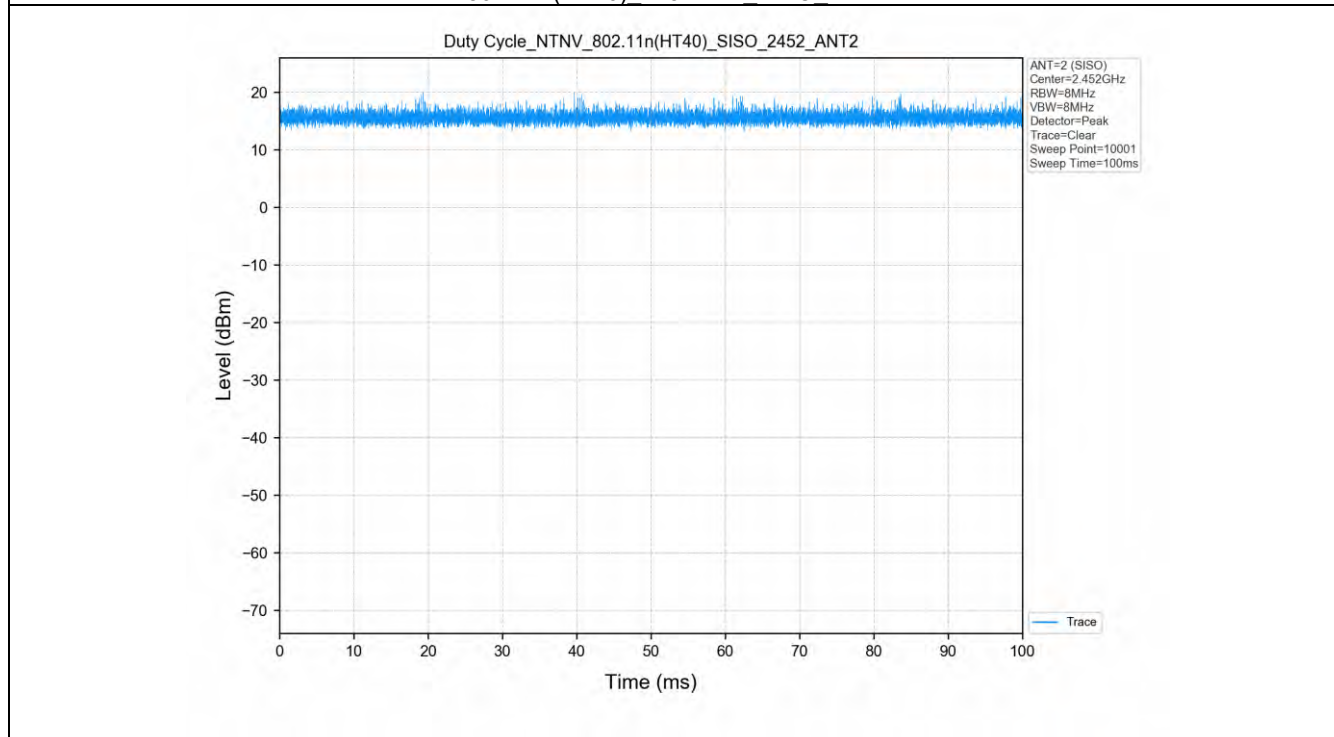
802.11n(HT40)_2437MHz MIMO_ANT2



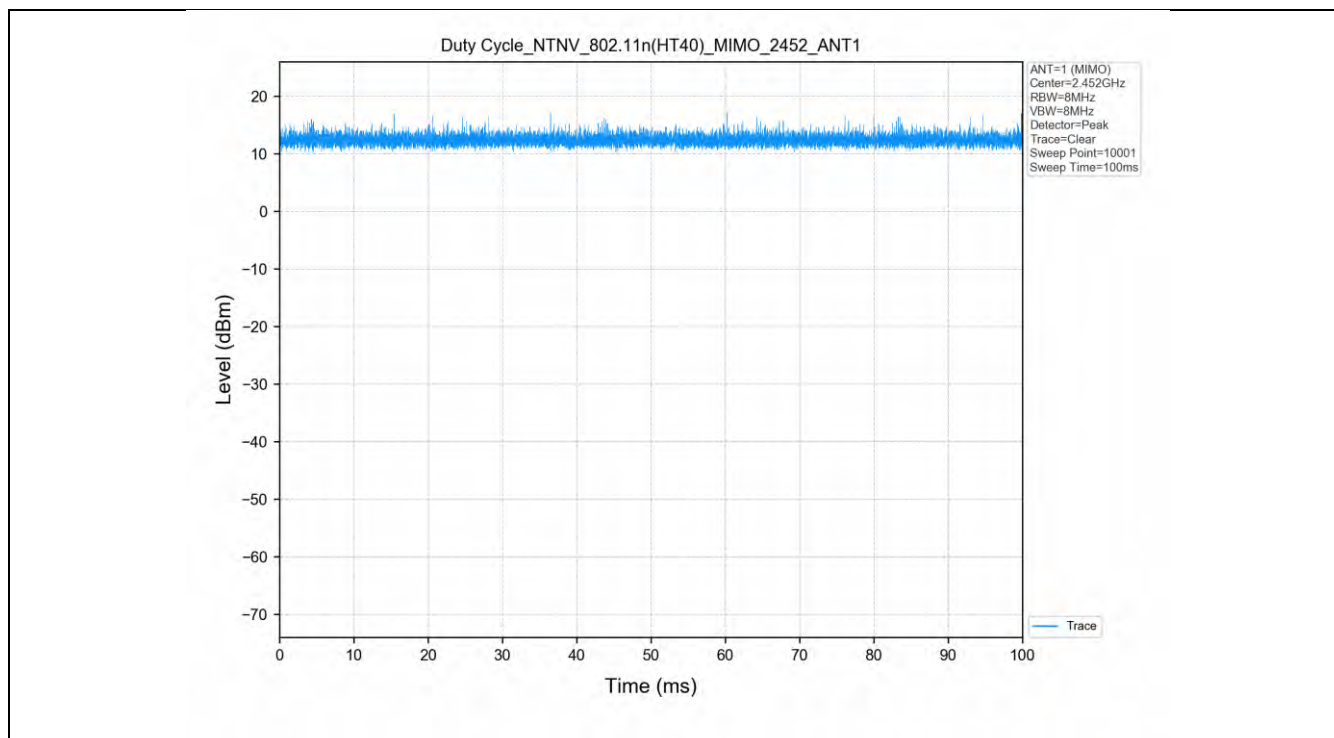
802.11n(HT40)_2452MHz SISO_ANT1



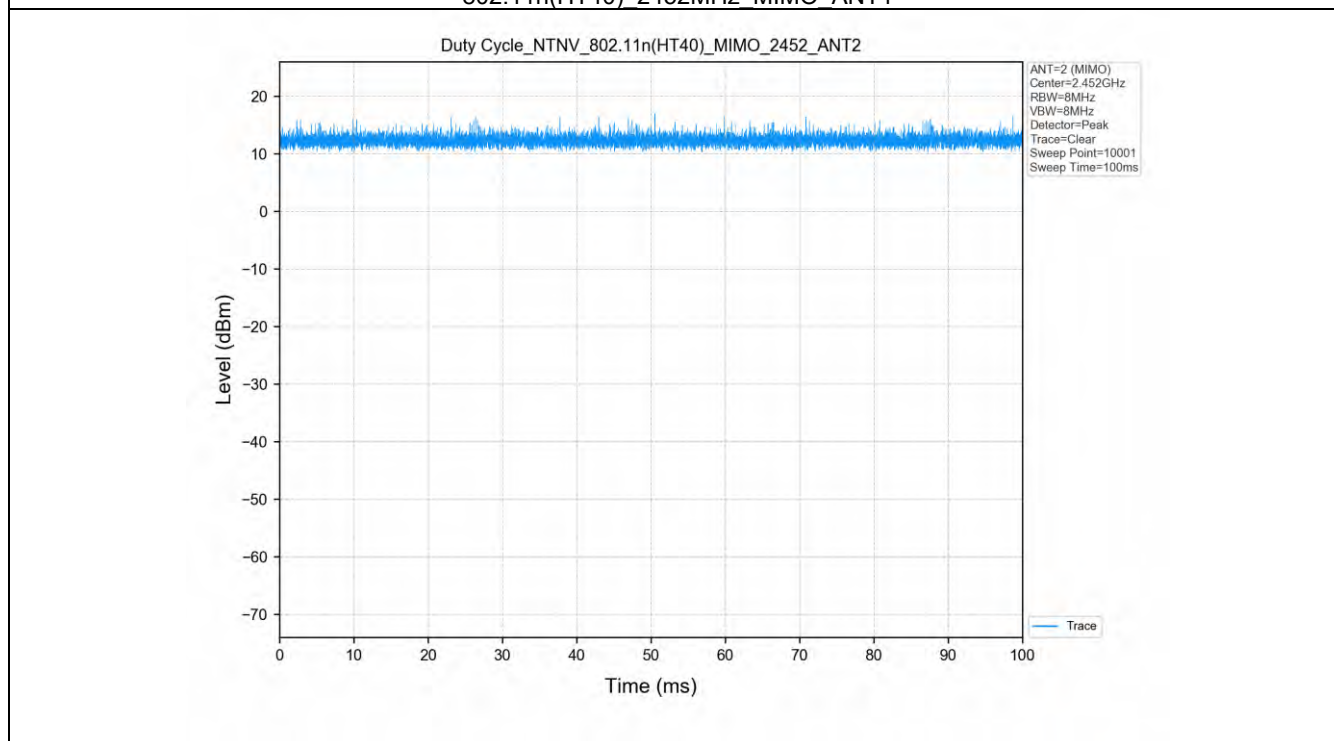
802.11n(HT40)_2452MHz_SISO_ANT2



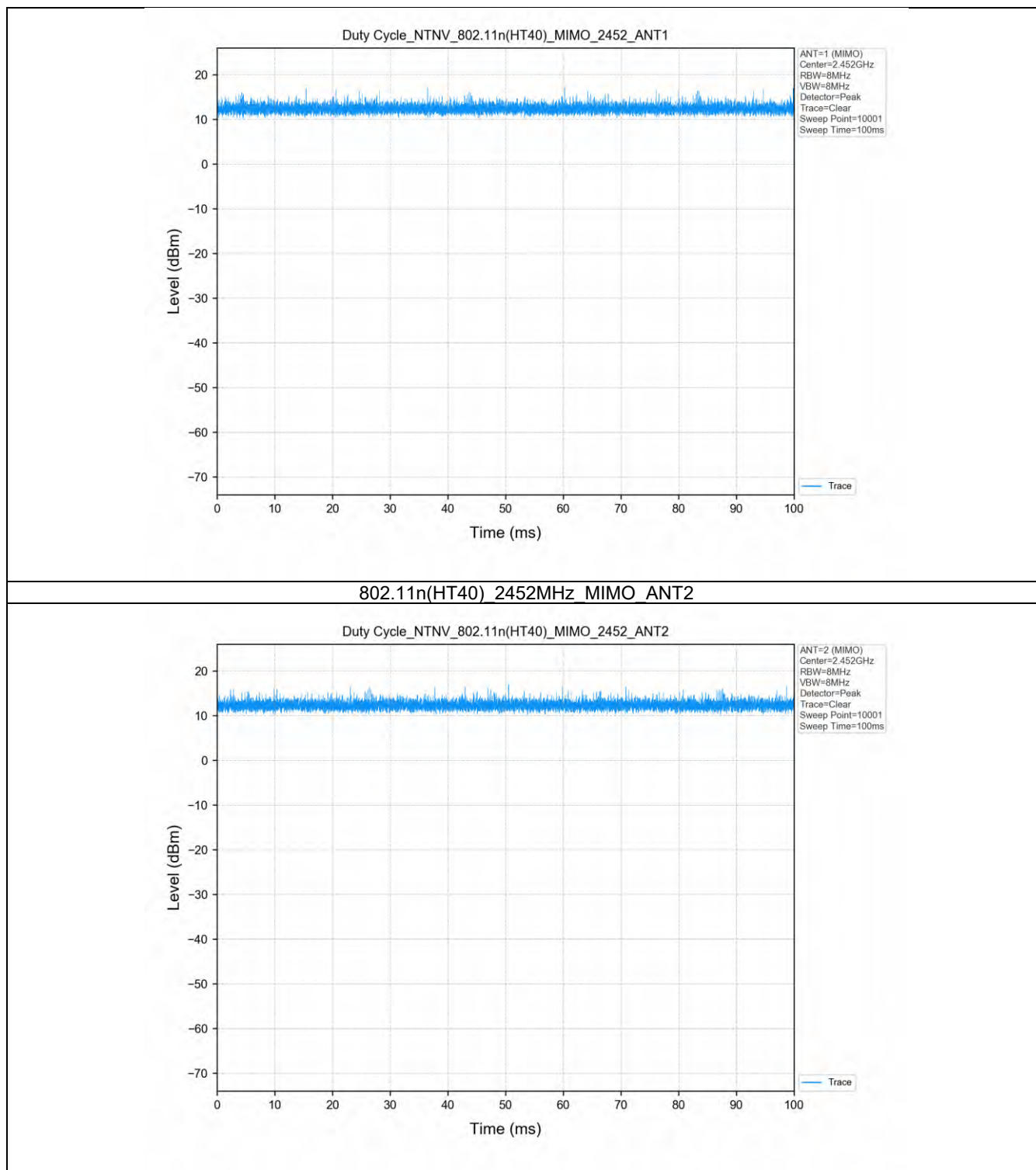
802.11n(HT40)_2452MHz_MIMO_ANT1



802.11n(HT40)_2452MHz_MIMO_ANT1



802.11n(HT40)_2452MHz_MIMO_ANT2





2. Bandwidth

2.1 Test Result

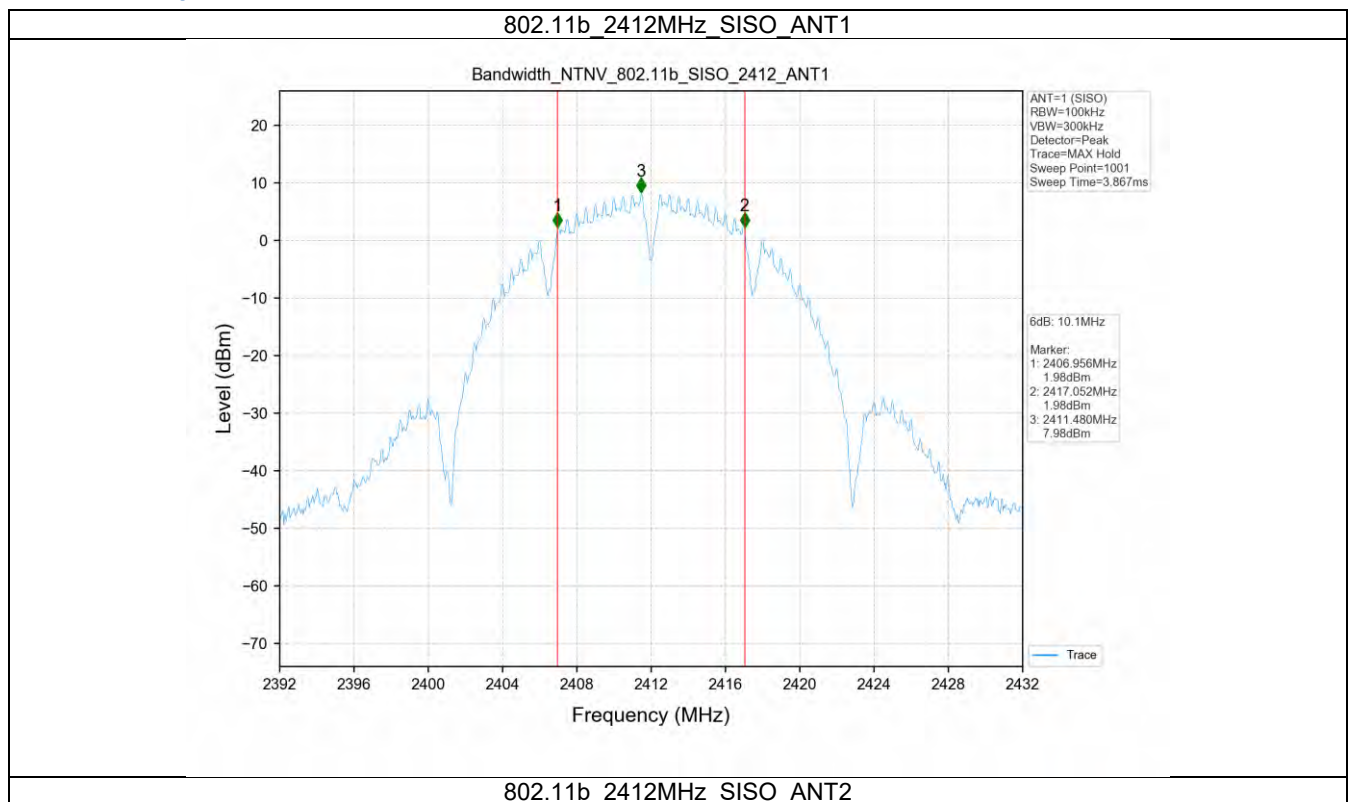
Test Mode	Frequency (MHz)	TX Type	ANT No.	6dB Bandwidth		Verdict
				Test Result (MHz)	Limits (MHz)	
802.11b	2412	SISO	1	10.100	≥0.5	PASS
			2	10.060	≥0.5	PASS
	2437	SISO	1	10.110	≥0.5	PASS
			2	10.070	≥0.5	PASS
	2462	SISO	1	10.100	≥0.5	PASS
			2	10.090	≥0.5	PASS
802.11g	2412	SISO	1	16.610	≥0.5	PASS
			2	16.610	≥0.5	PASS
	2437	SISO	1	16.620	≥0.5	PASS
			2	16.590	≥0.5	PASS
	2462	SISO	1	16.600	≥0.5	PASS
			2	16.630	≥0.5	PASS
802.11n(HT20)	2412	SISO	1	17.860	≥0.5	PASS
			2	17.850	≥0.5	PASS
	2437	MIMO	0	17.860	≥0.5	PASS
			1	17.870	≥0.5	PASS
		SISO	2	17.810	≥0.5	PASS
			0	17.820	≥0.5	PASS
	2462	MIMO	1	17.830	≥0.5	PASS
			2	17.850	≥0.5	PASS
		SISO	0	17.850	≥0.5	PASS
			0	17.850	≥0.5	PASS
802.11n(HT40)	2422	SISO	1	36.510	≥0.5	PASS
			2	36.550	≥0.5	PASS
		MIMO	0	36.490	≥0.5	PASS
	2437	SISO	1	36.470	≥0.5	PASS
			2	36.440	≥0.5	PASS
		MIMO	0	36.490	≥0.5	PASS
	2452	SISO	1	36.450	≥0.5	PASS
			2	36.450	≥0.5	PASS
		MIMO	0	36.480	≥0.5	PASS
			0	36.480	≥0.5	PASS

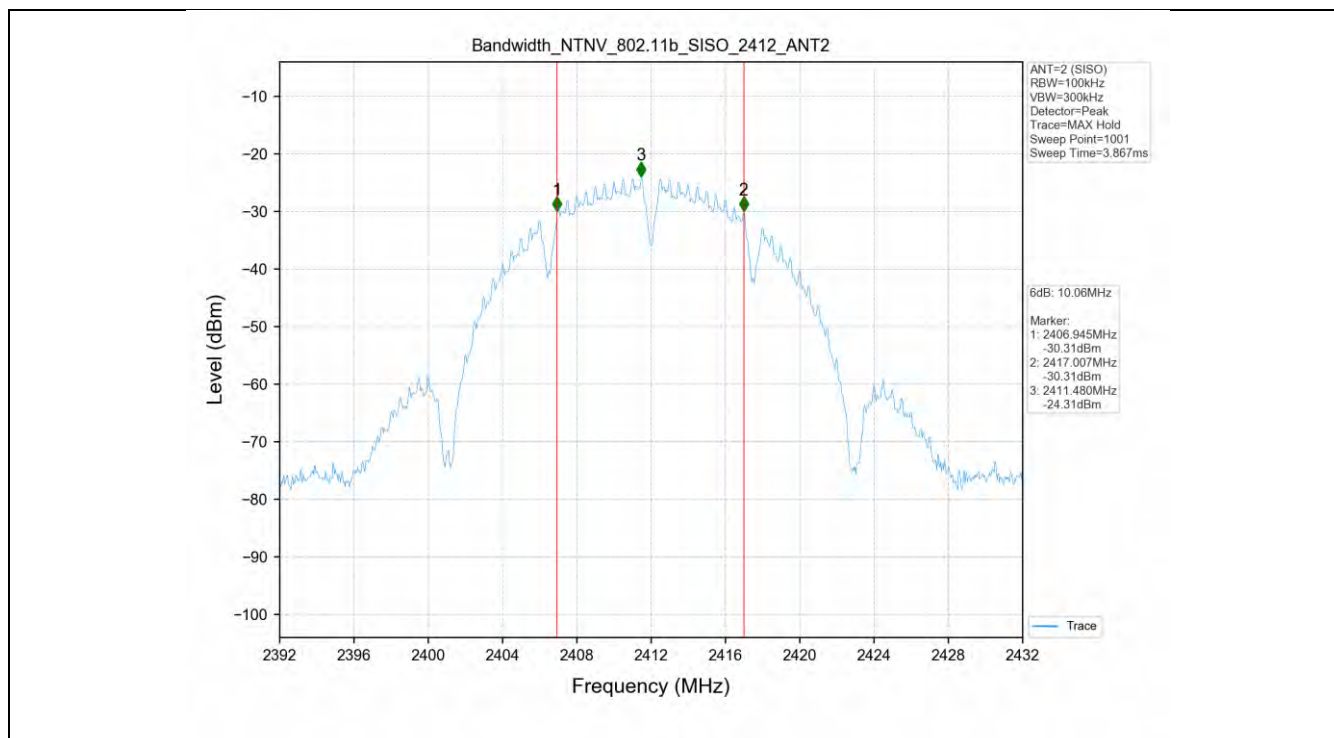
Test Mode	Frequency (MHz)	TX Type	ANT No.	99% Occupied Bandwidth	
				Test Result (MHz)	
802.11b	2412	SISO	1	15.080	Only for Report Use
			2	15.140	Only for Report Use
	2437	SISO	1	15.140	Only for Report Use
			2	14.990	Only for Report Use
	2462	SISO	1	15.120	Only for Report Use
			2	15.080	Only for Report Use
802.11g	2412	SISO	1	17.020	Only for Report Use
			2	17.110	Only for Report Use
	2437	SISO	1	17.000	Only for Report Use
			2	16.990	Only for Report Use
	2462	SISO	1	17.020	Only for Report Use
			2	17.060	Only for Report Use
802.11n(HT20)	2412	SISO	1	18.120	Only for Report Use
			2	18.100	Only for Report Use
		MIMO	0	18.040	Only for Report Use



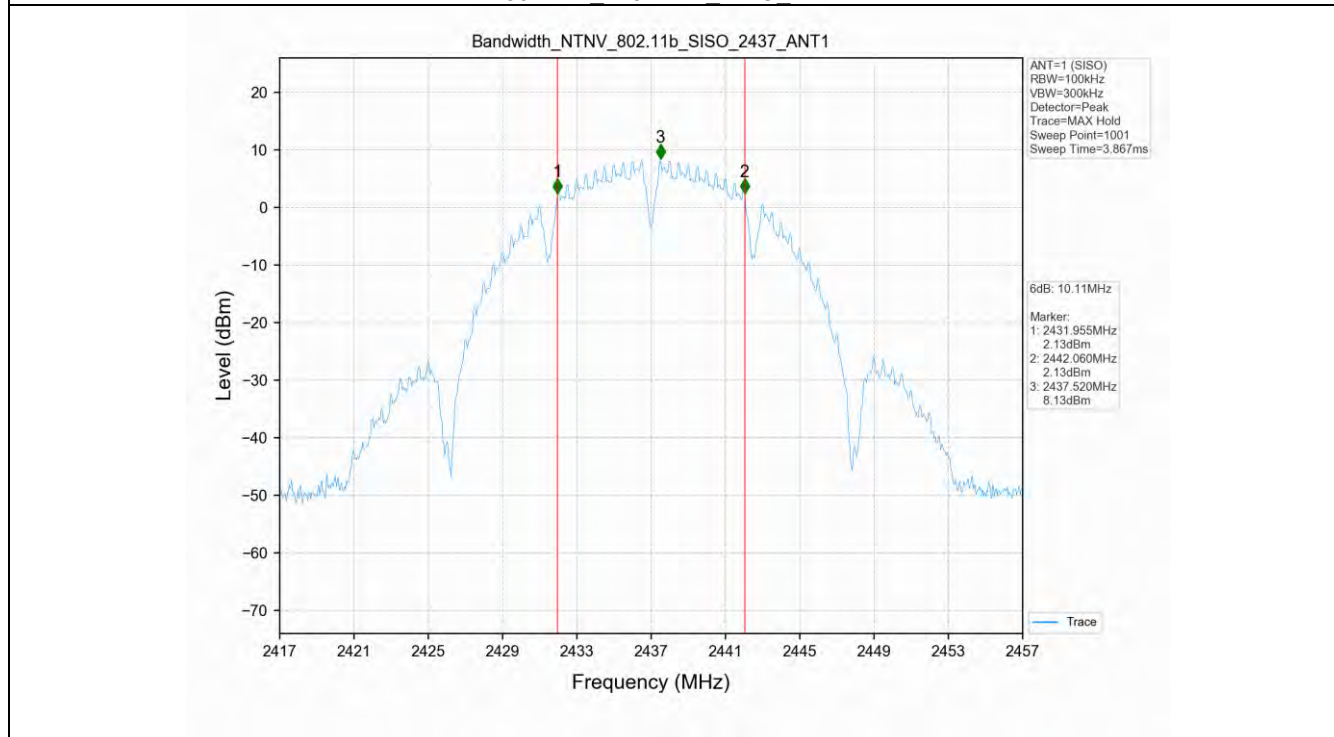
	2437	SISO	1	18.060	Only for Report Use
			2	18.050	Only for Report Use
		MIMO	0	18.080	Only for Report Use
	2462	SISO	1	18.050	Only for Report Use
			2	18.070	Only for Report Use
		MIMO	0	18.070	Only for Report Use
802.11n(HT40)	2422	SISO	1	37.430	Only for Report Use
			2	37.350	Only for Report Use
		MIMO	0	36.740	Only for Report Use
	2437	SISO	1	36.780	Only for Report Use
			2	36.650	Only for Report Use
		MIMO	0	36.680	Only for Report Use
	2452	SISO	1	36.680	Only for Report Use
			2	36.600	Only for Report Use
		MIMO	0	36.640	Only for Report Use

2.2 Test Graph - 6dB Bandwidth

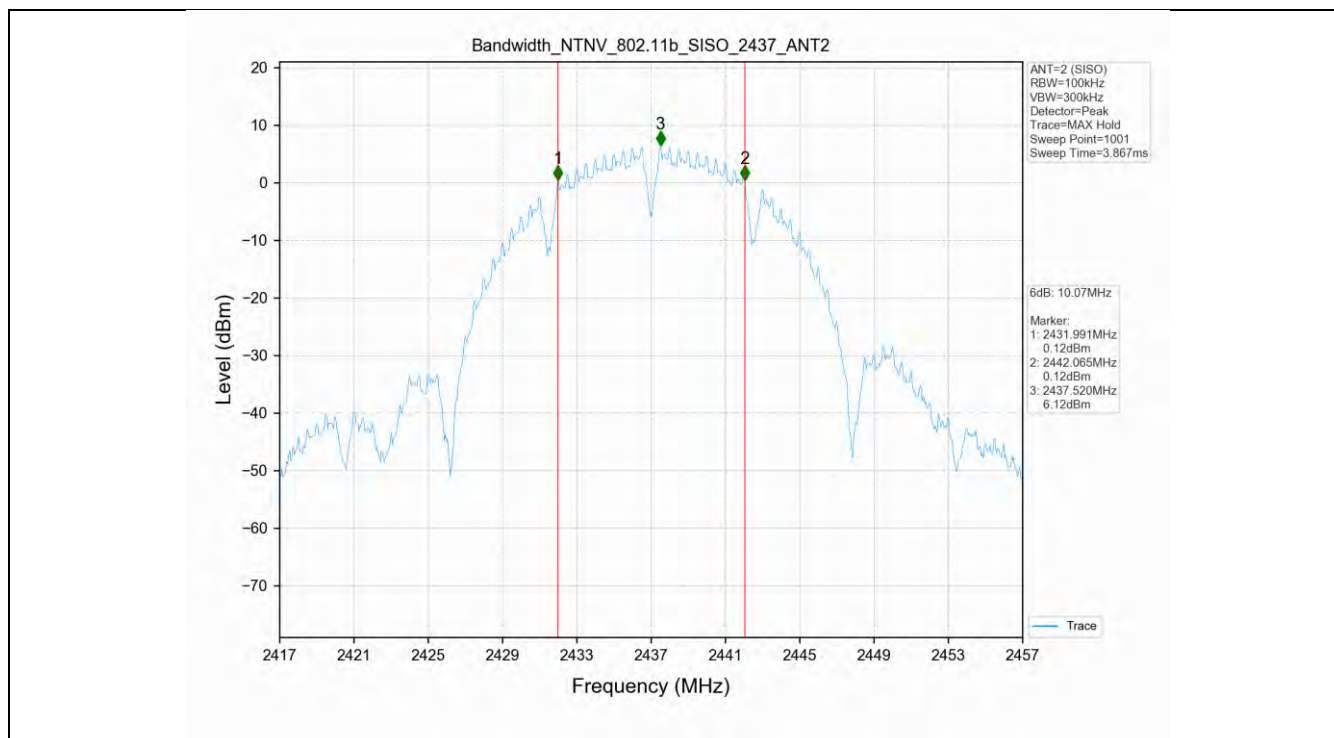




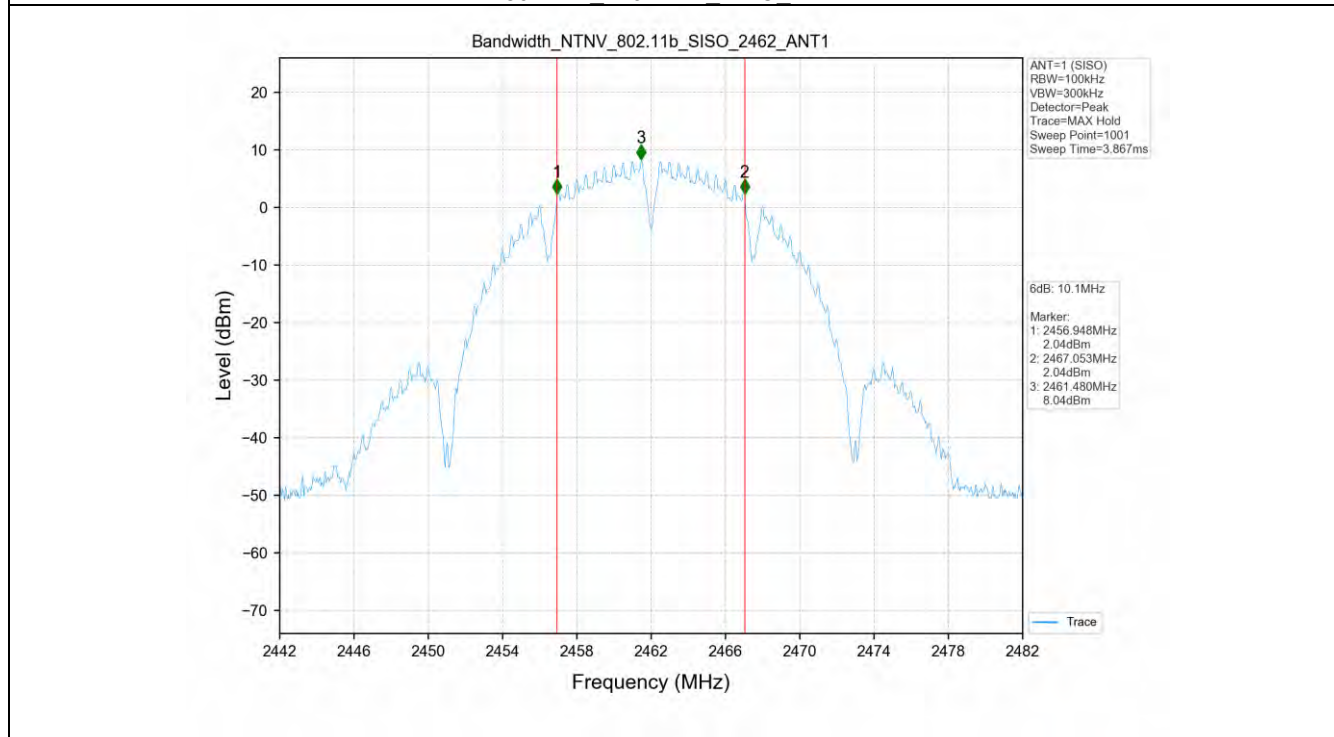
802.11b_2437MHz_SISO_ANT1



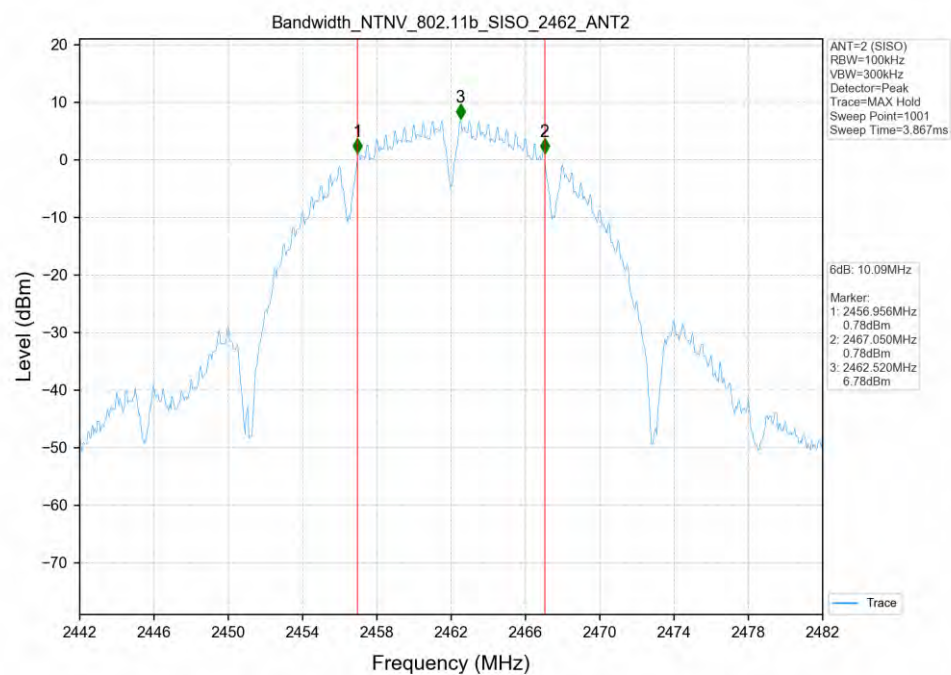
802.11b_2437MHz_SISO_ANT2



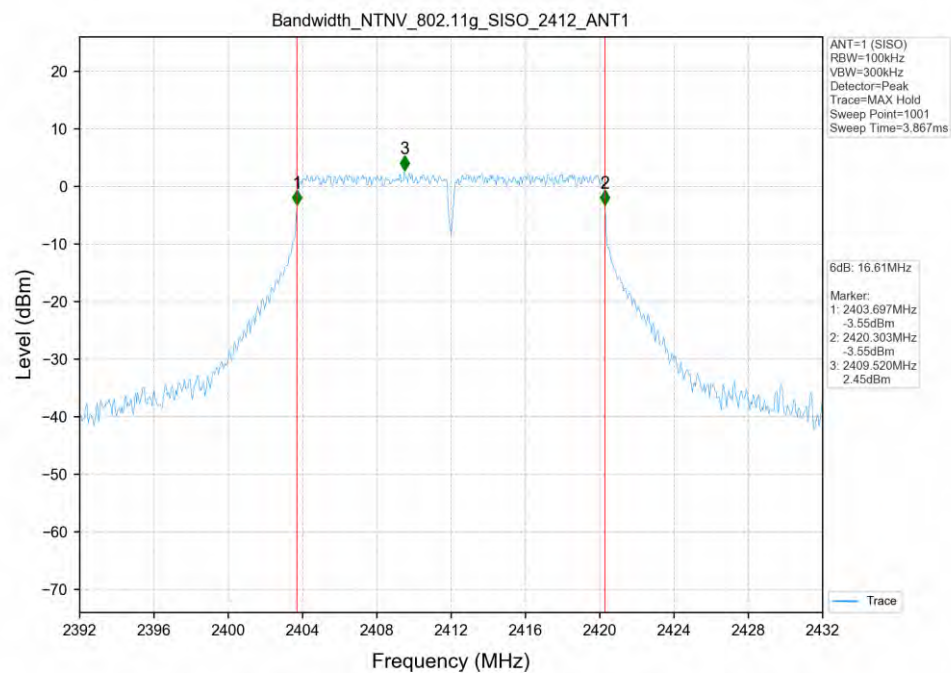
802.11b_2462MHz_SISO_ANT1



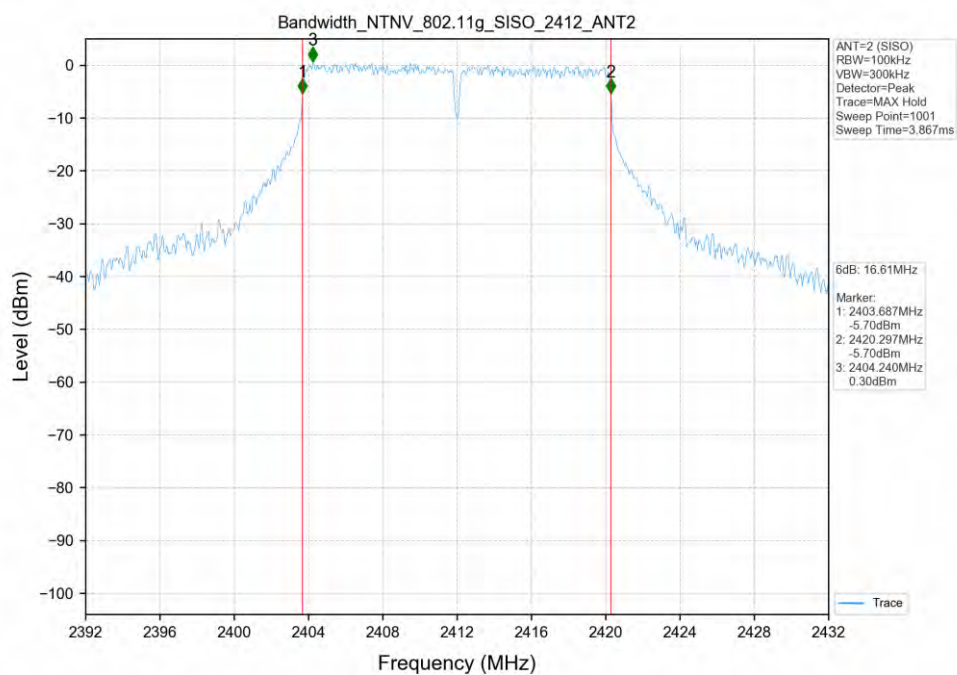
802.11b_2462MHz_SISO_ANT2



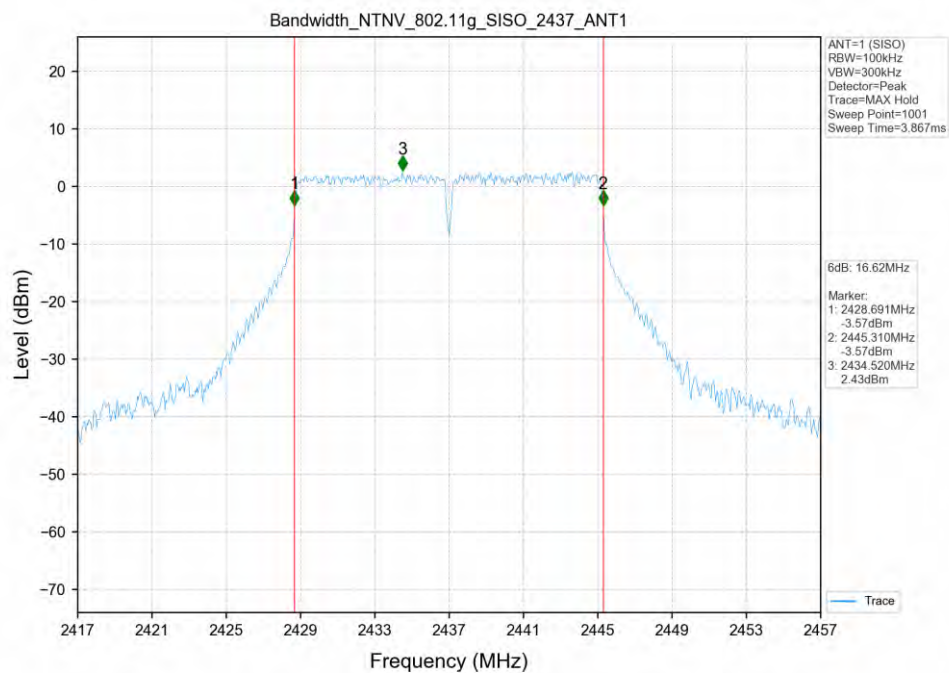
802.11g_2412MHz_SISO_ANT1



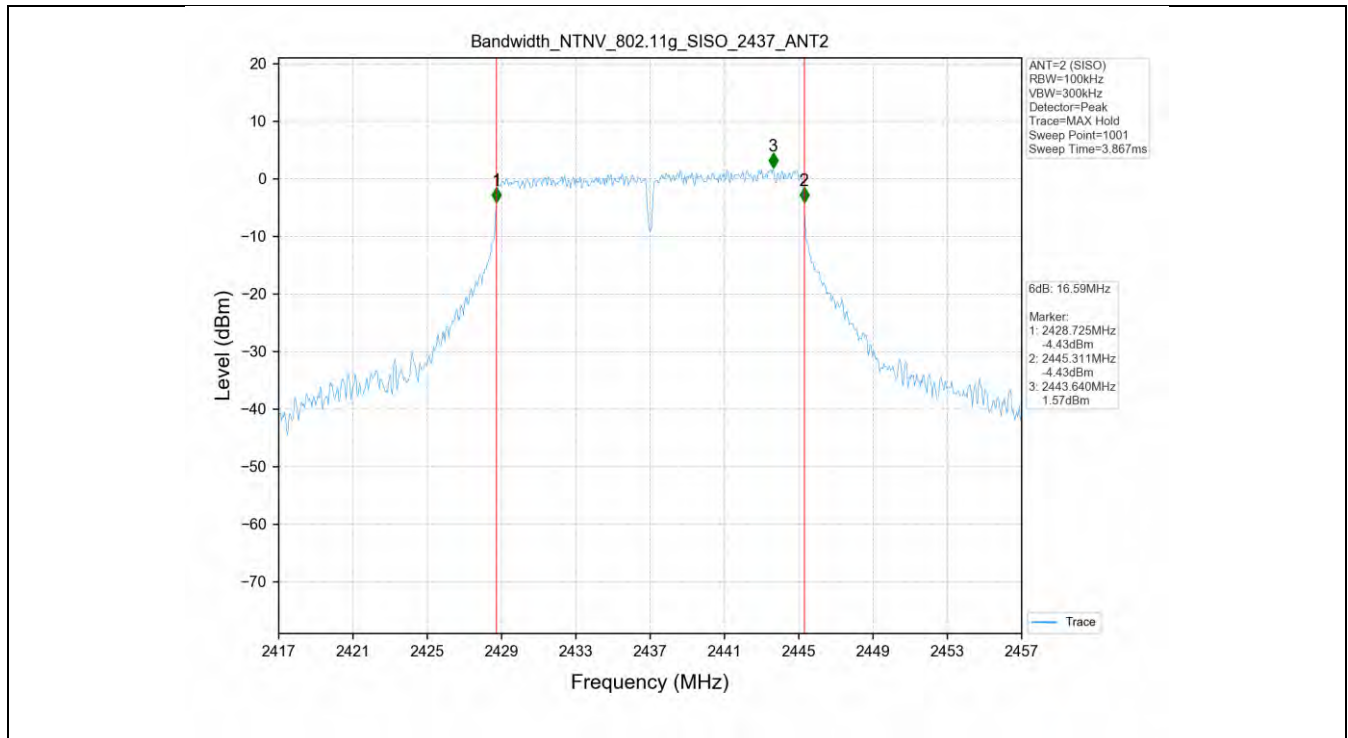
802.11g_2412MHz_SISO_ANT2



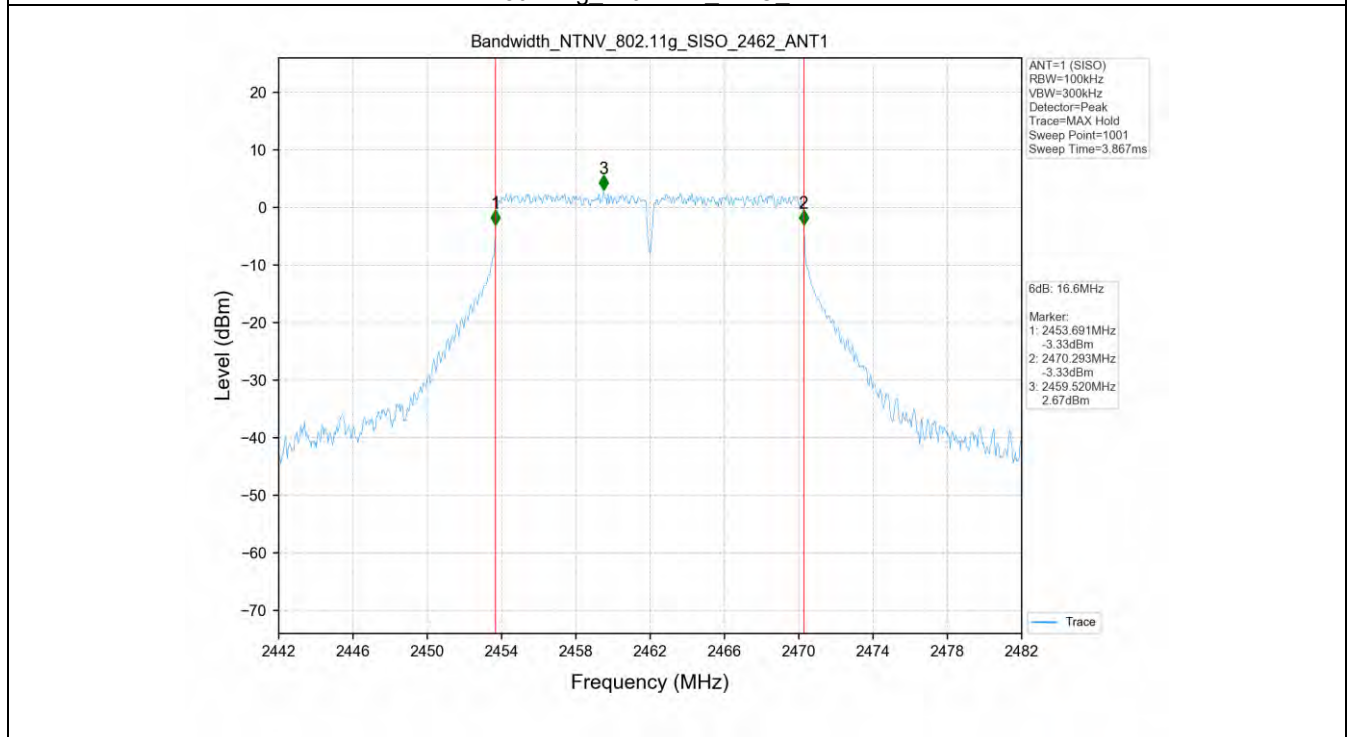
802.11g_2437MHz_SISO_ANT1



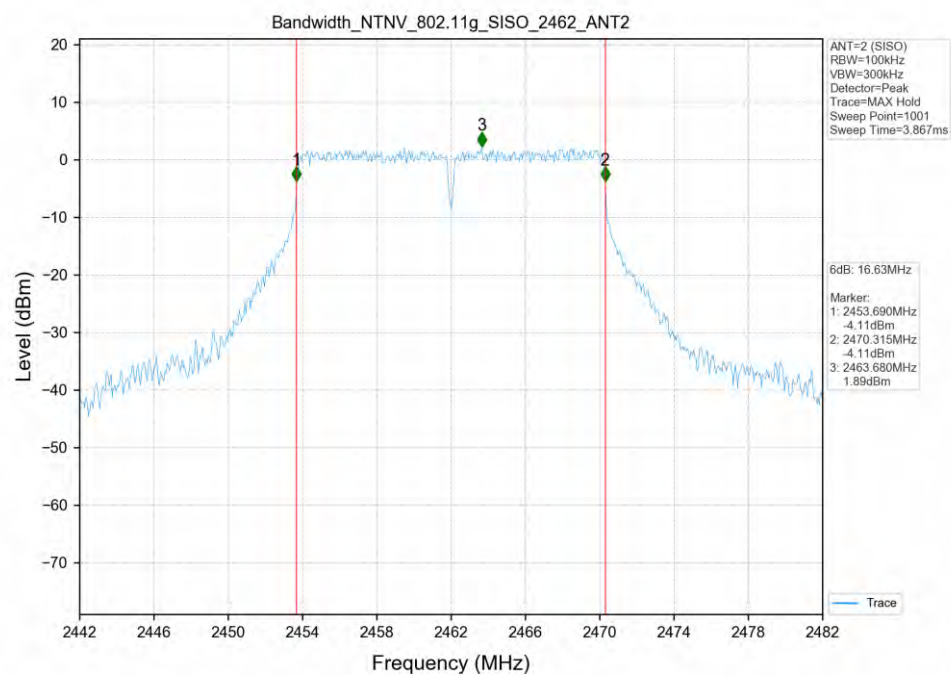
802.11g_2437MHz_SISO_ANT2



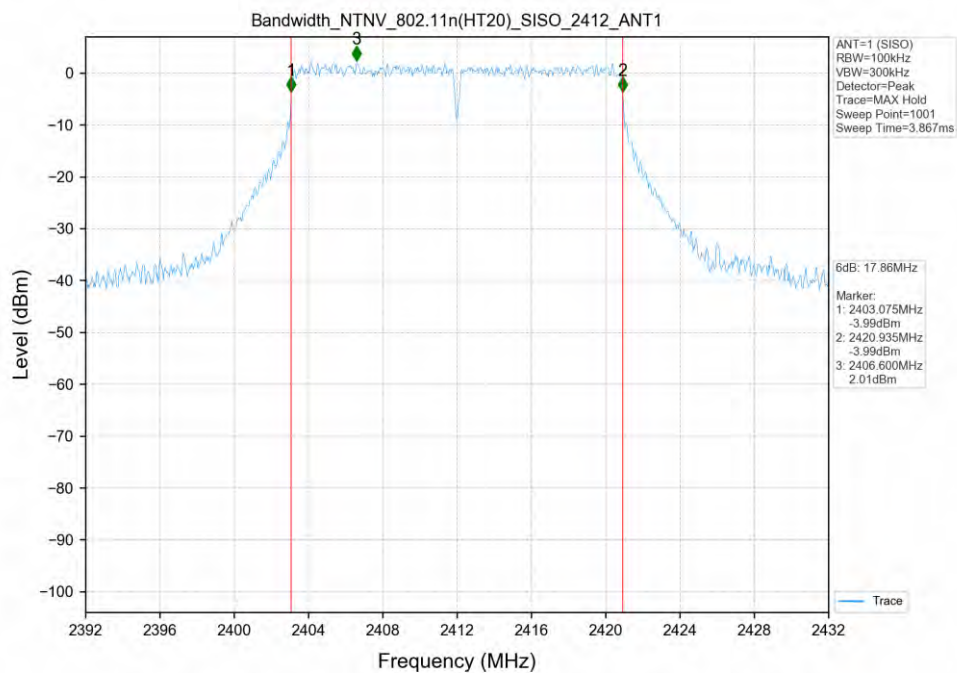
802.11g_2462MHz_SISO_ANT1



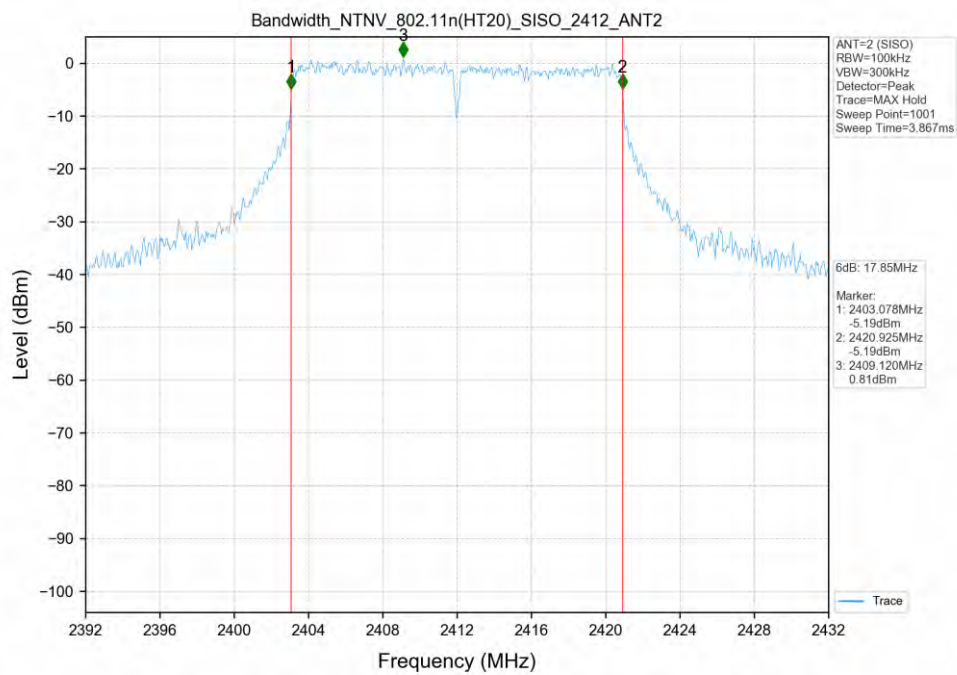
802.11g_2462MHz_SISO_ANT2



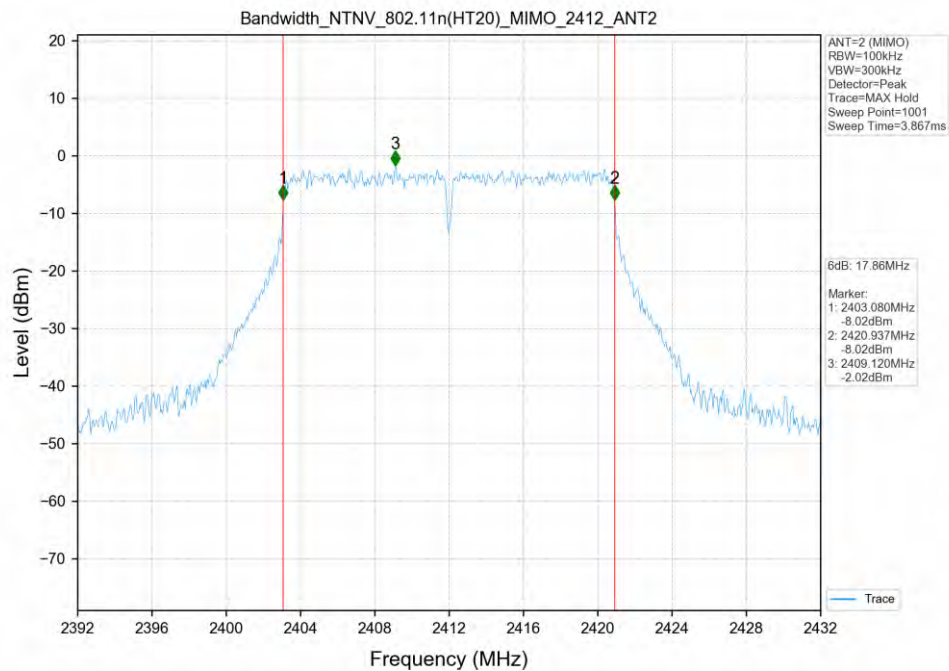
802.11n(HT20)_2412MHz_SISO_ANT1



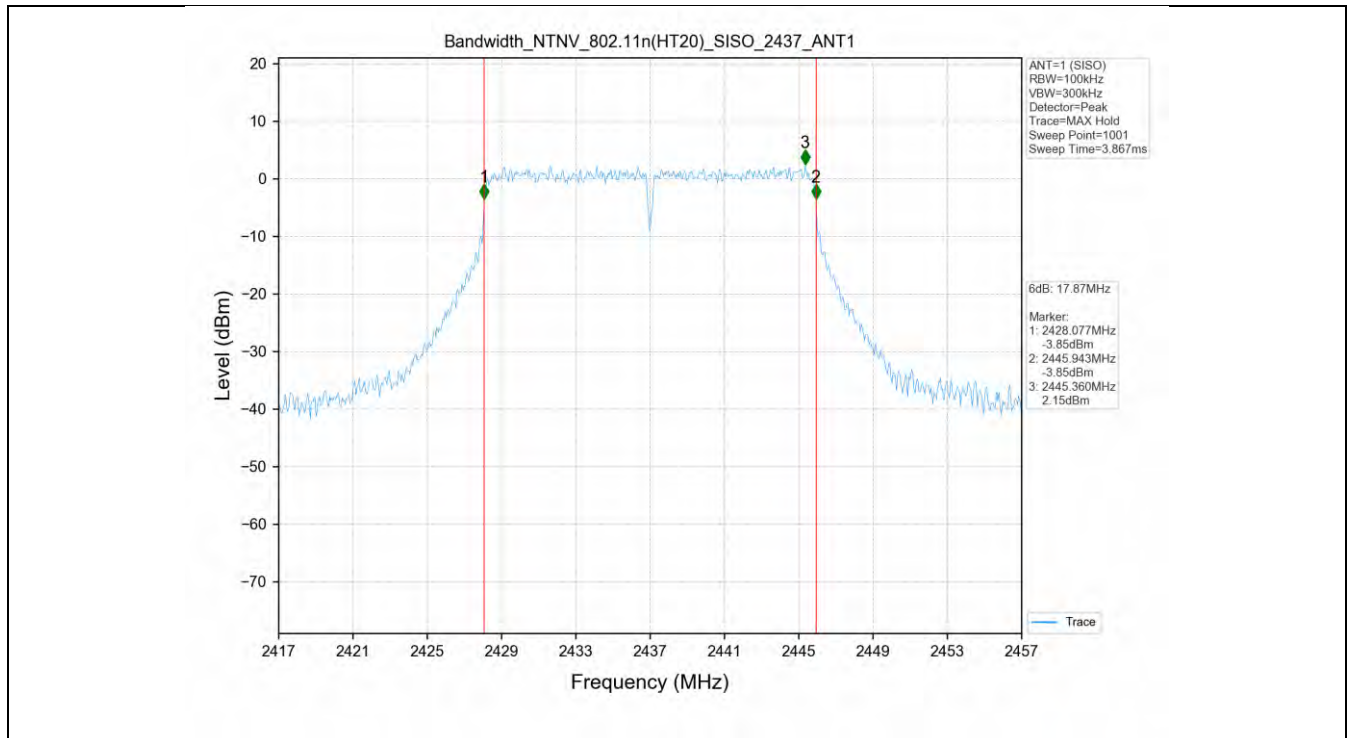
802.11n(HT20)_2412MHz_SISO_ANT2



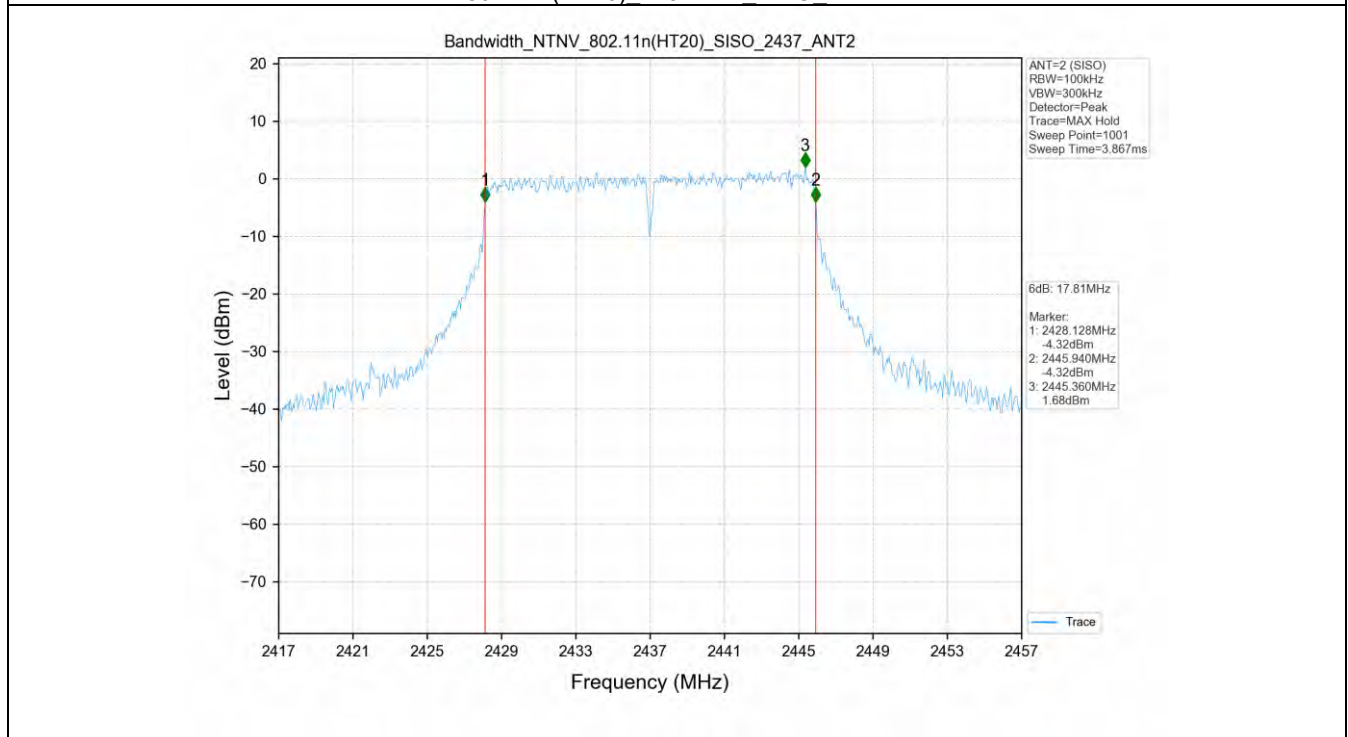
802.11n(HT20)_2412MHz_MIMO_Total



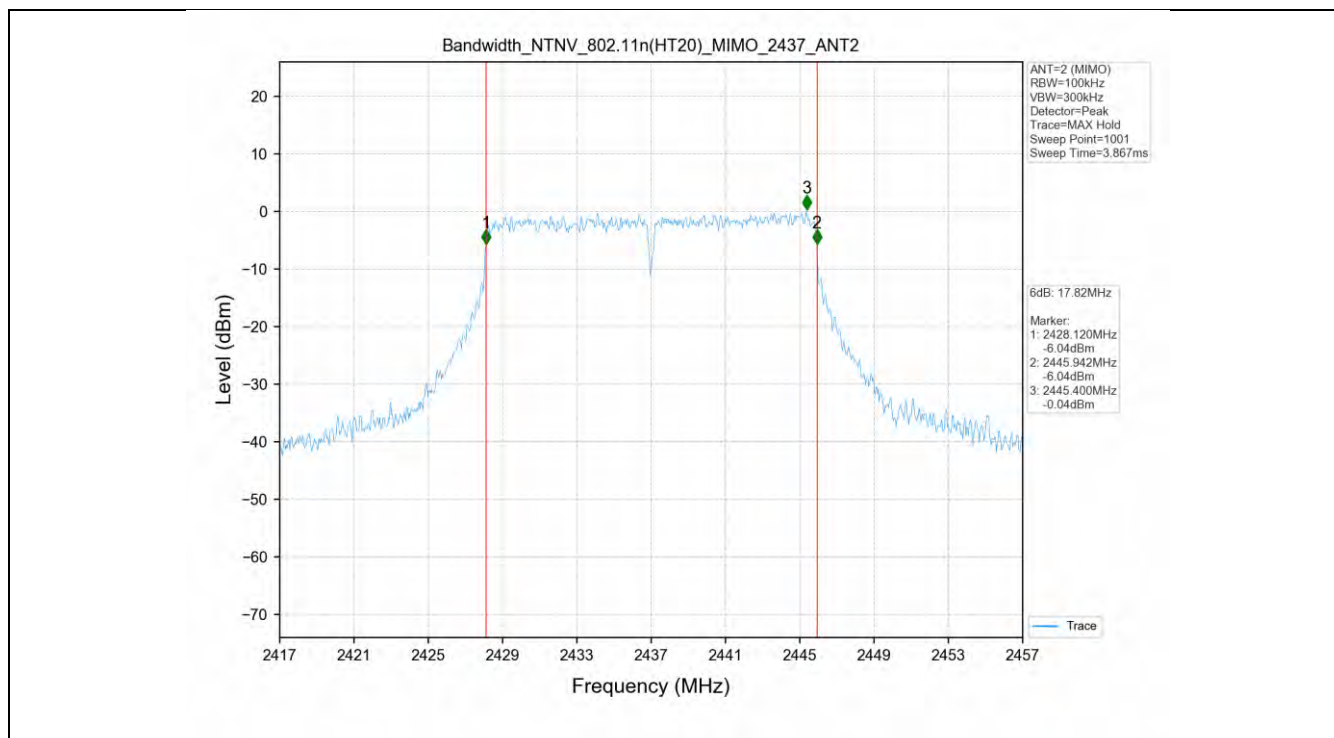
802.11n(HT20)_2437MHz_SISO_ANT1



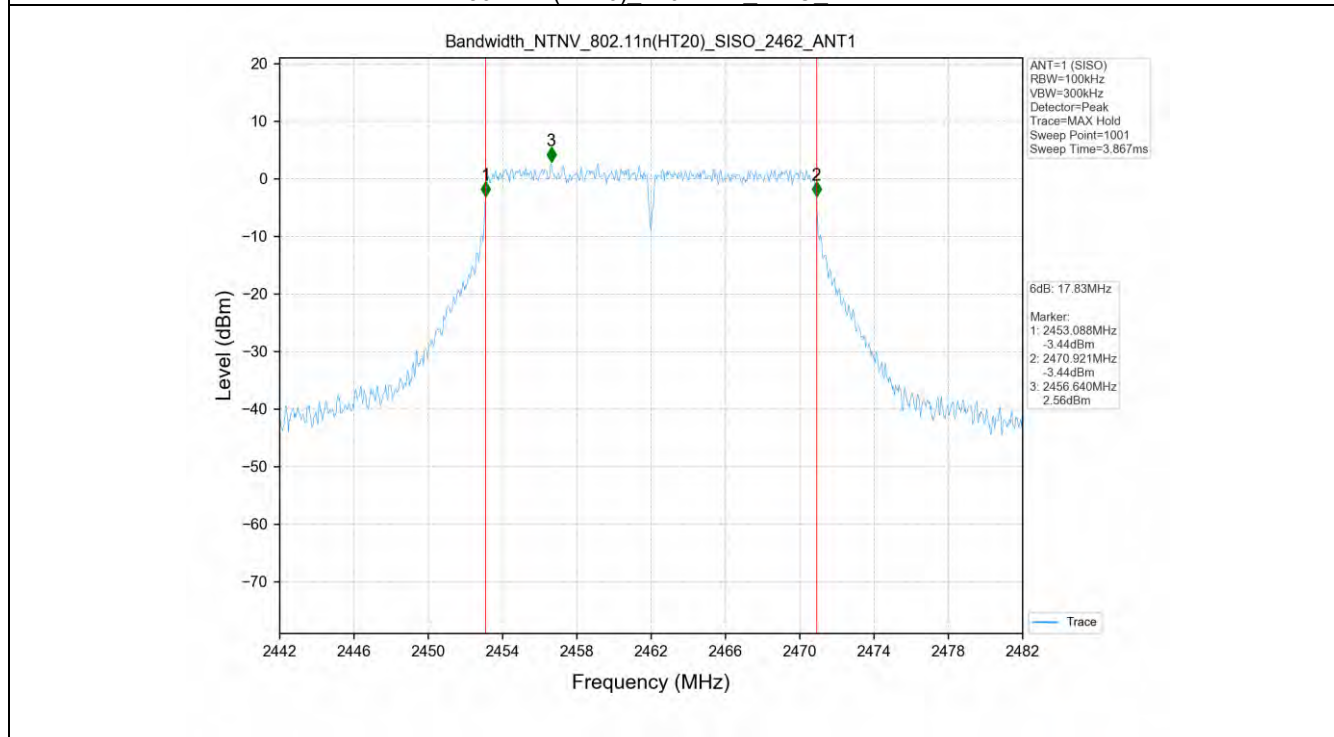
802.11n(HT20)_2437MHz_SISO_ANT2



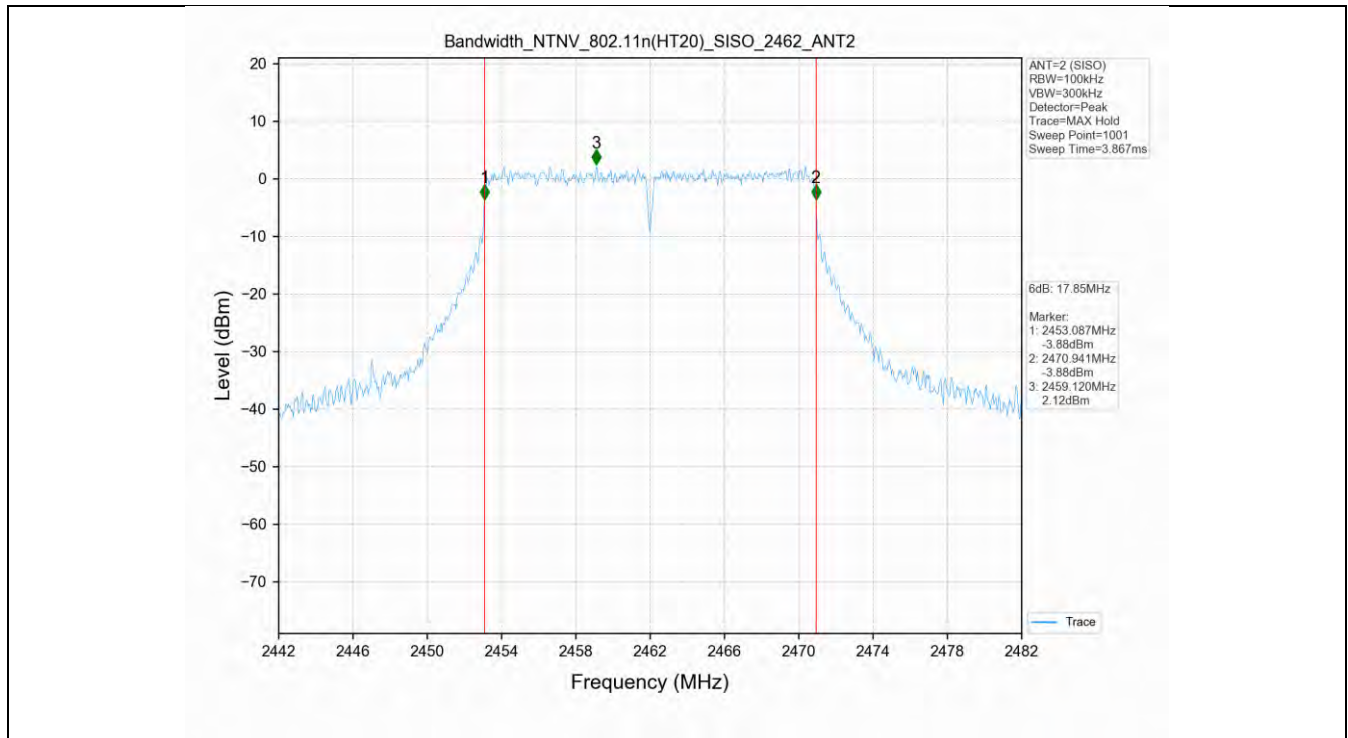
802.11n(HT20)_2437MHz_MIMO_Total



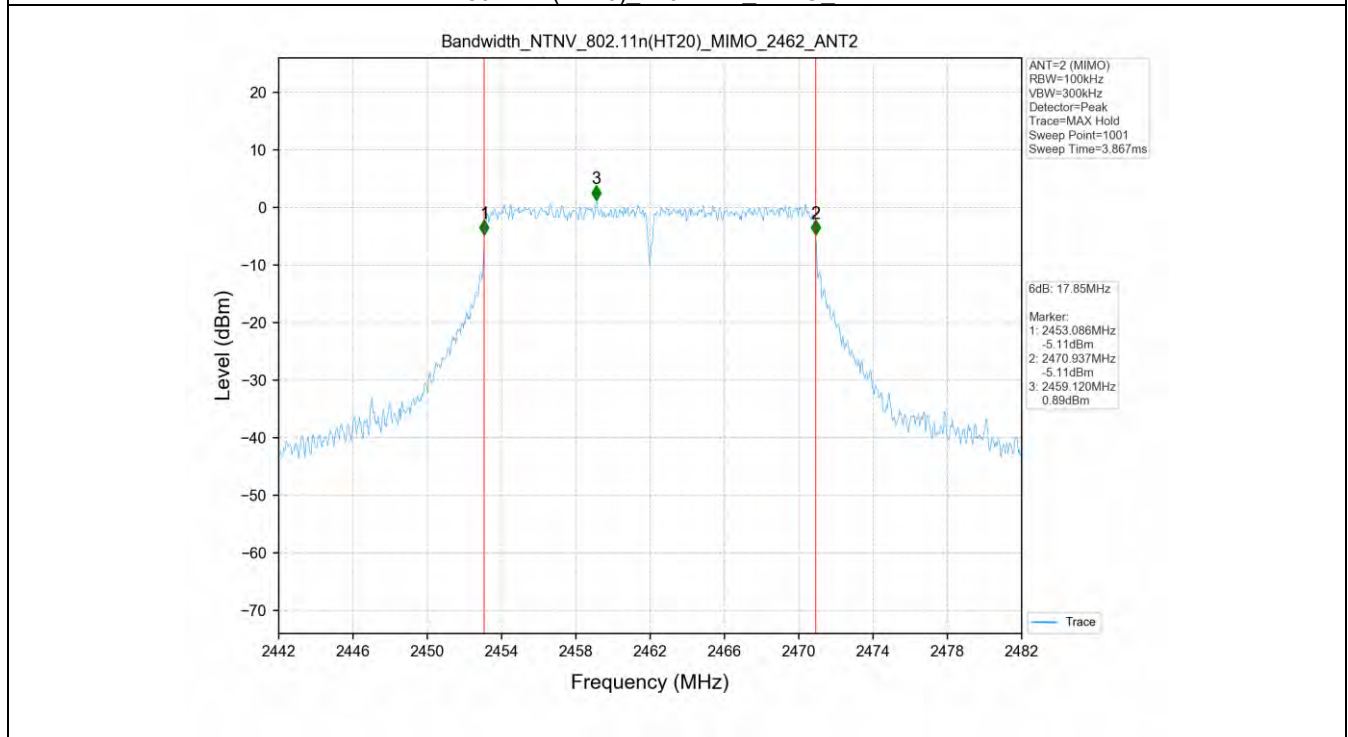
802.11n(HT20)_2462MHz_SISO_ANT1



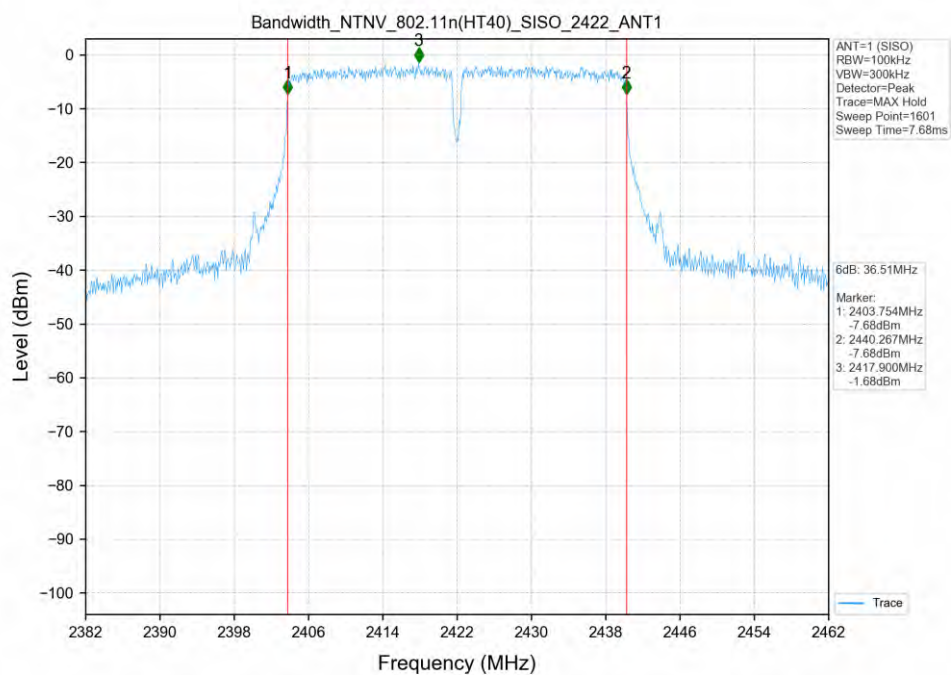
802.11n(HT20)_2462MHz_SISO_ANT2



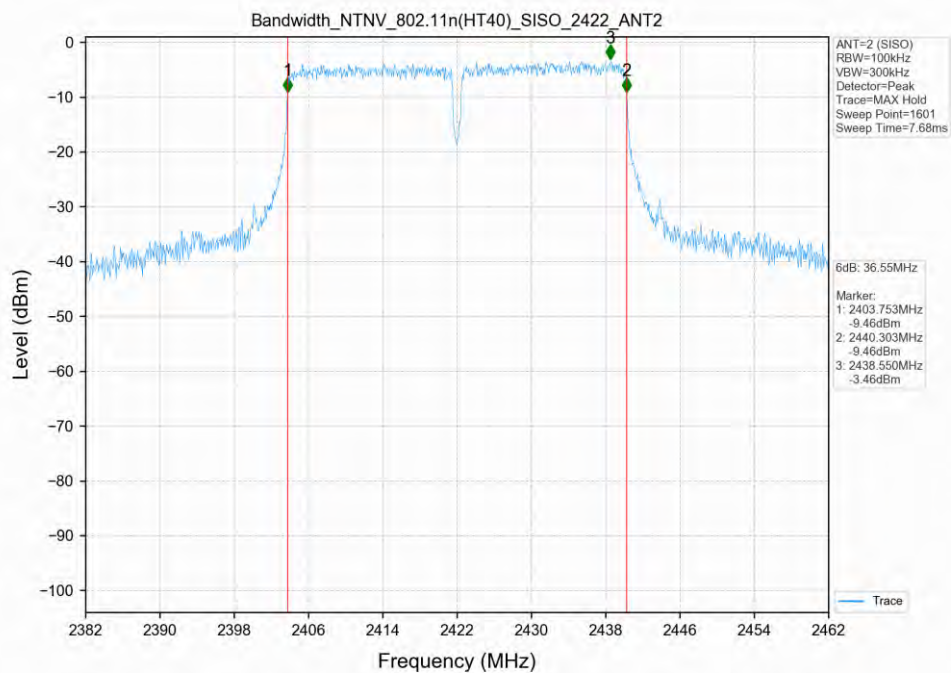
802.11n(HT20)_2462MHz_MIMO_Total



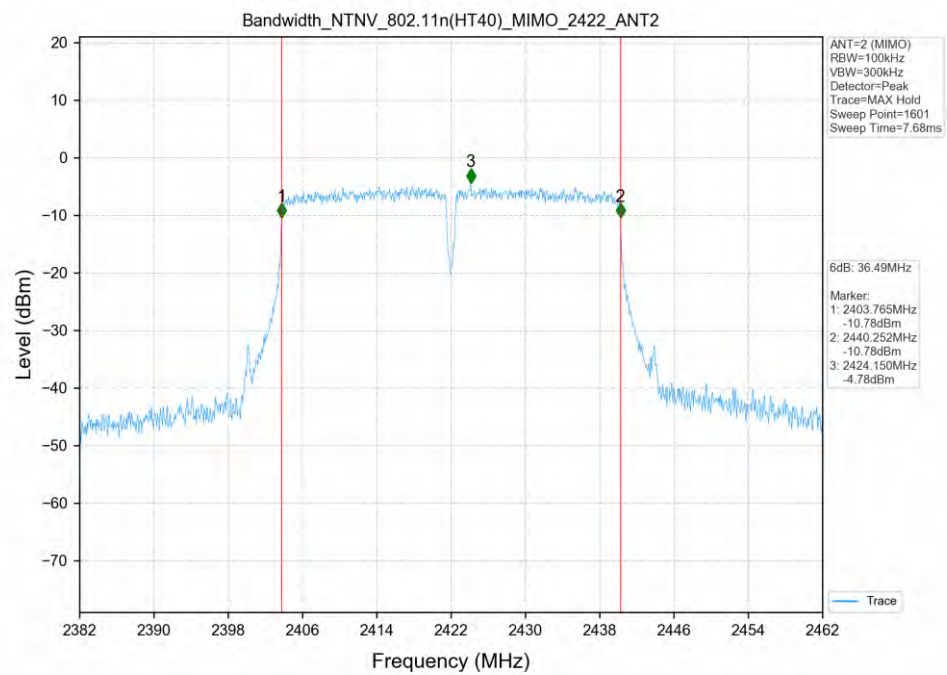
802.11n(HT40)_2422MHz_SISO_ANT1



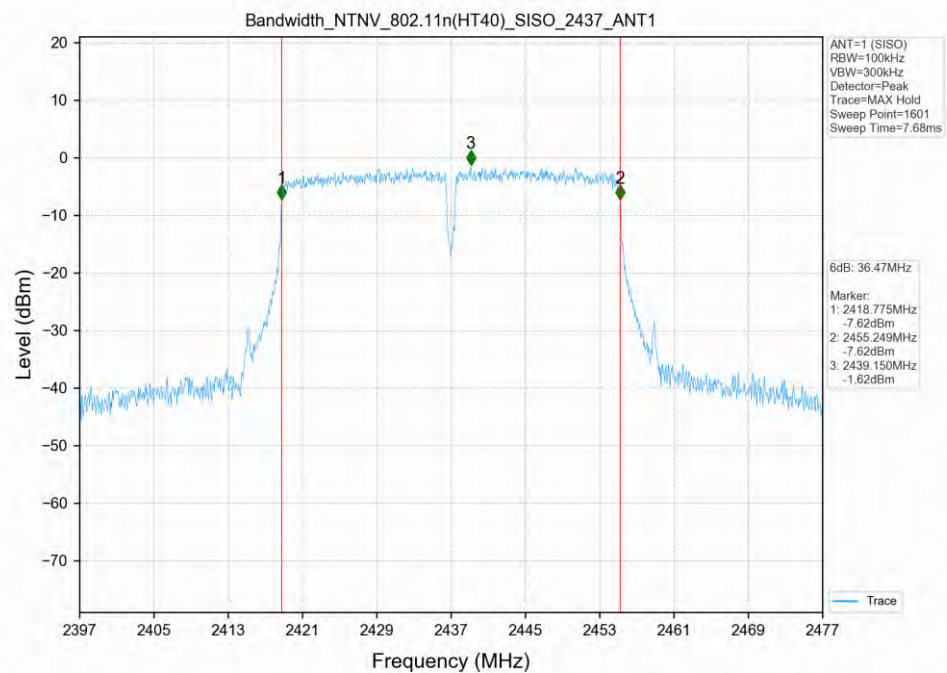
802.11n(HT40)_2422MHz_SISO_ANT2



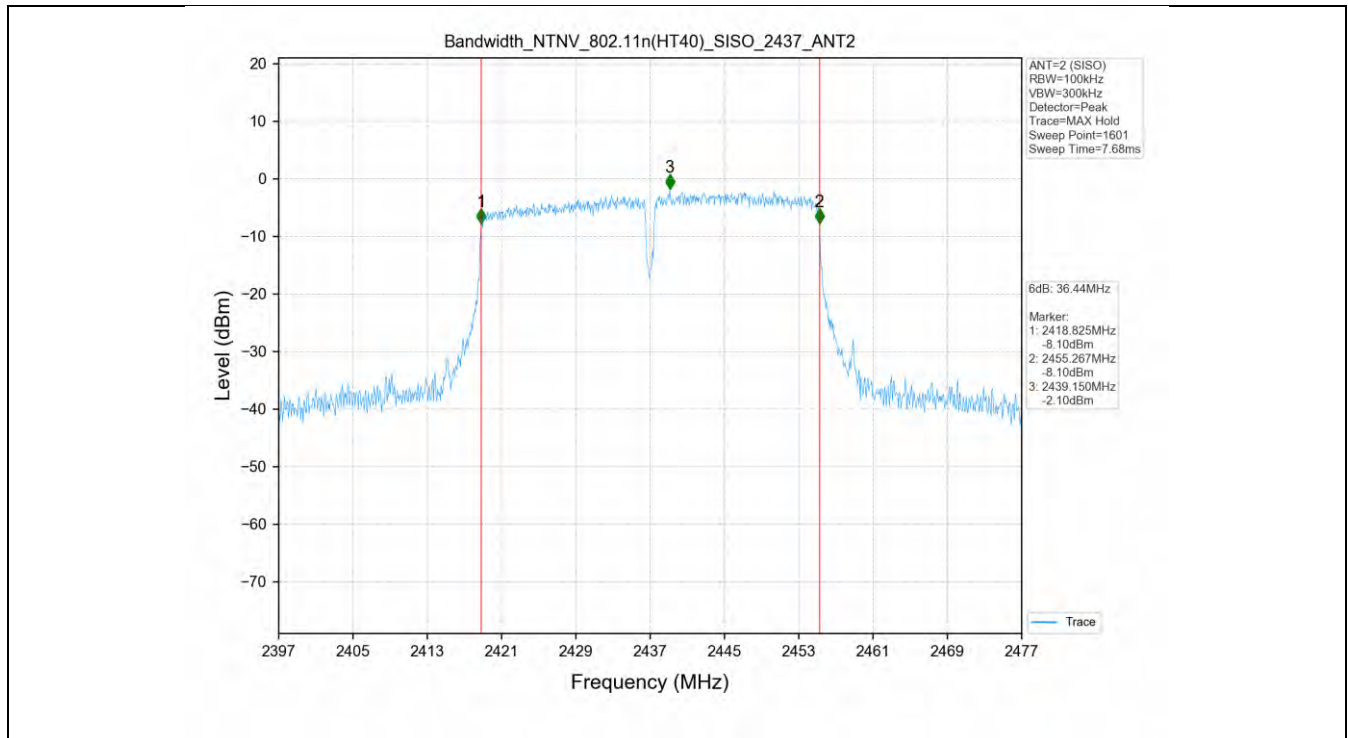
802.11n(HT40)_2422MHz_MIMO_Total



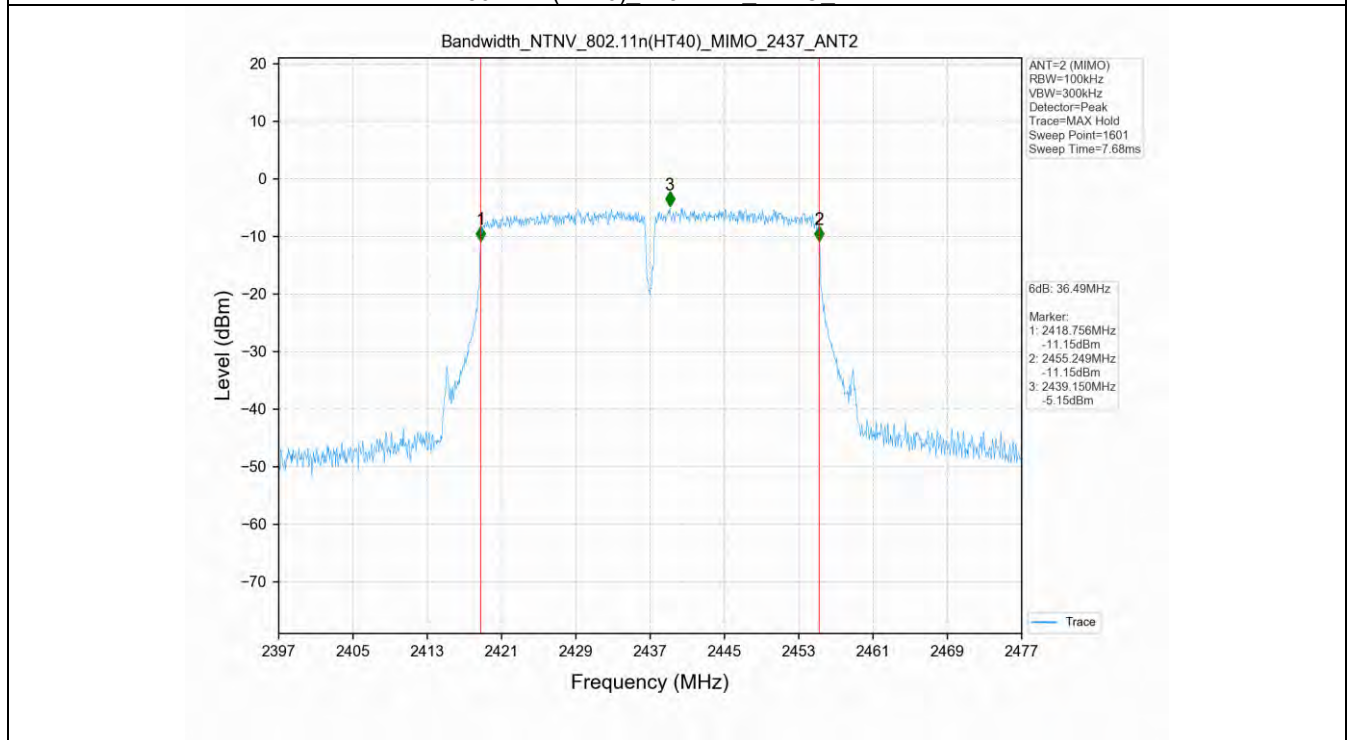
802.11n(HT40)_2437MHz_SISO_ANT1



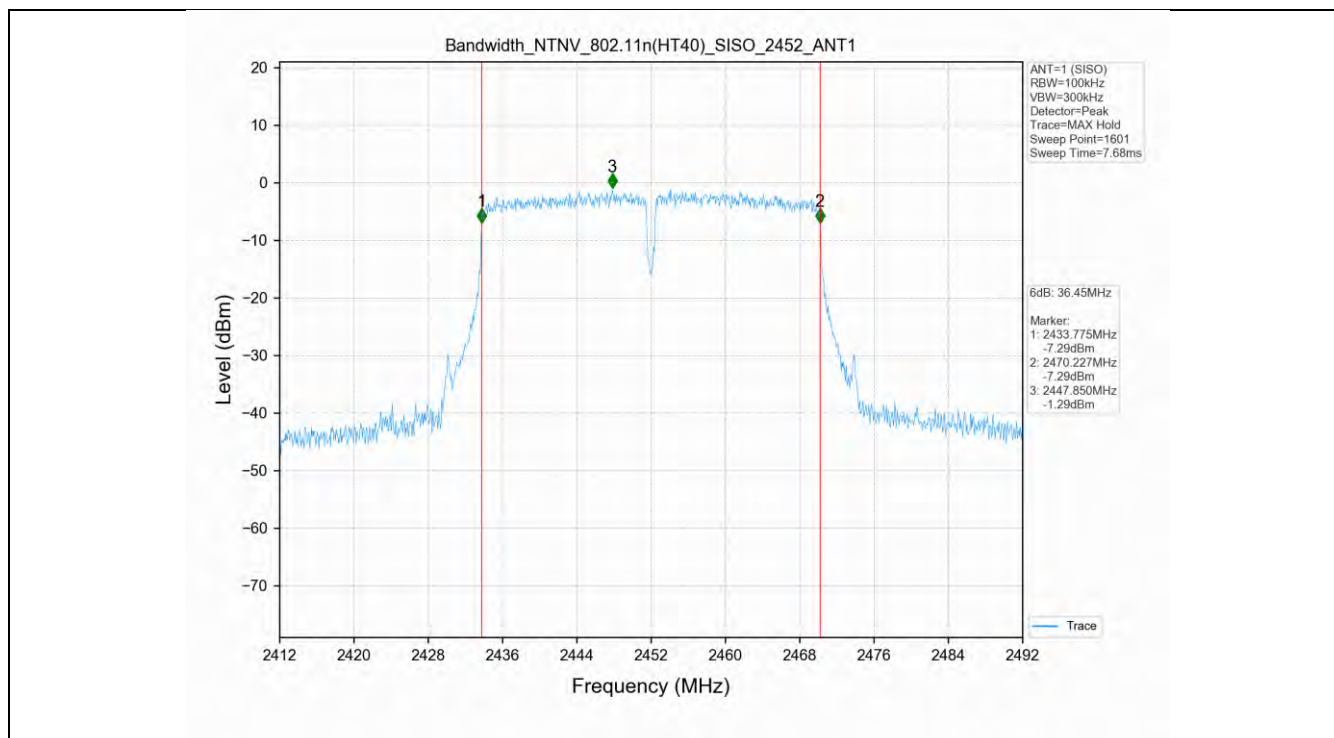
802.11n(HT40)_2437MHz_SISO_ANT2



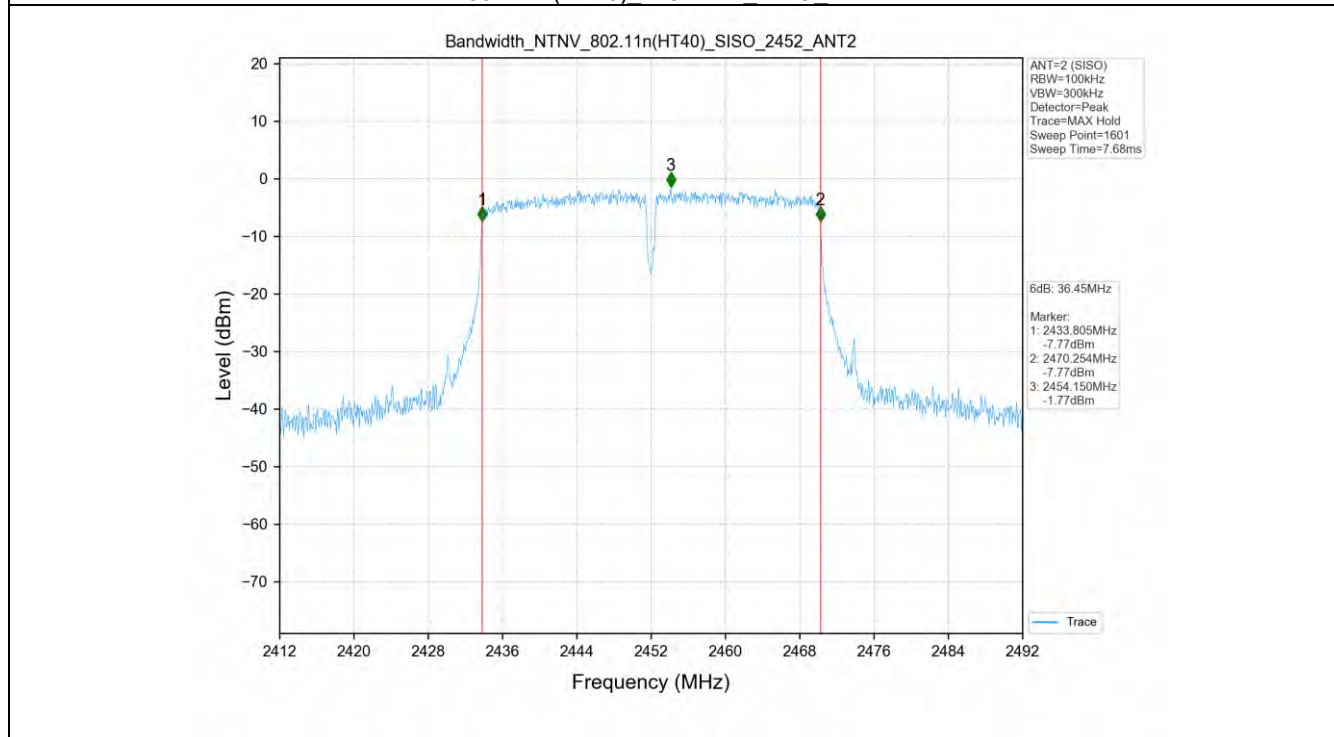
802.11n(HT40)_2437MHz_MIMO_Total



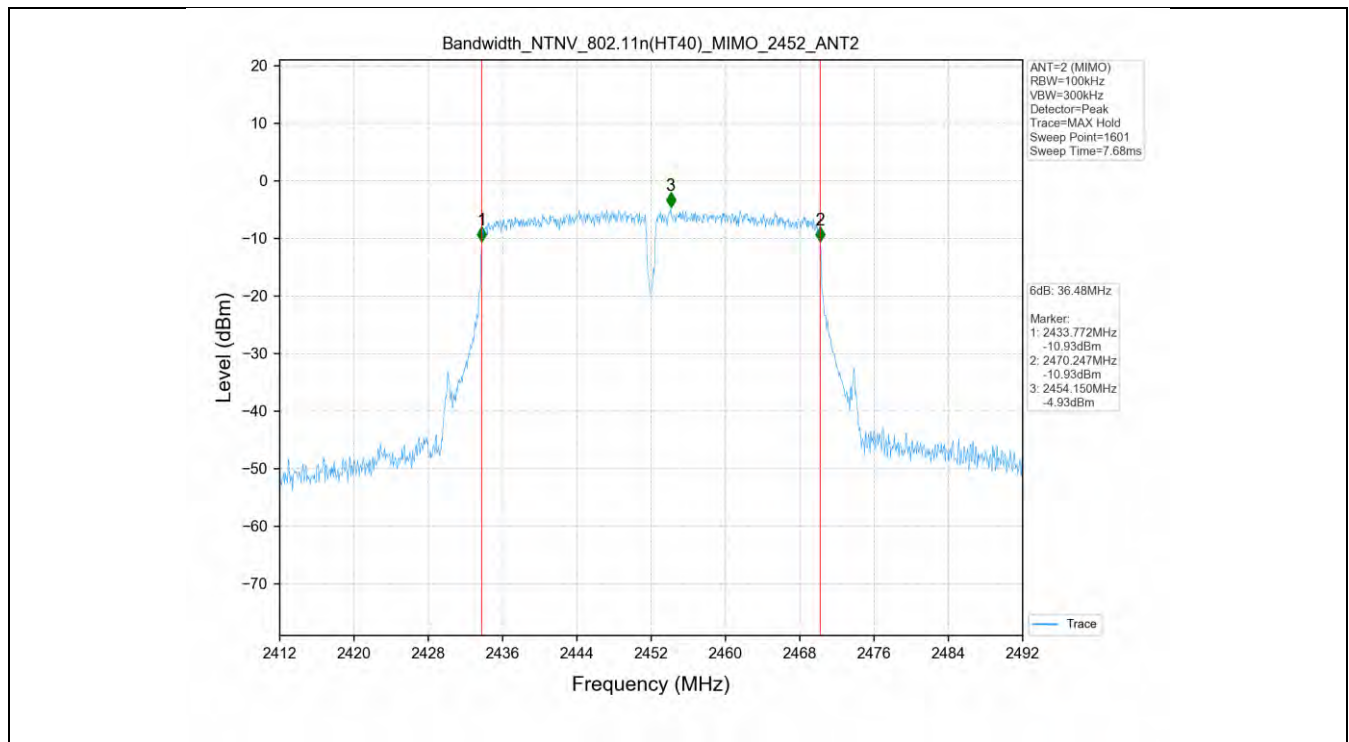
802.11n(HT40)_2452MHz_SISO_ANT1



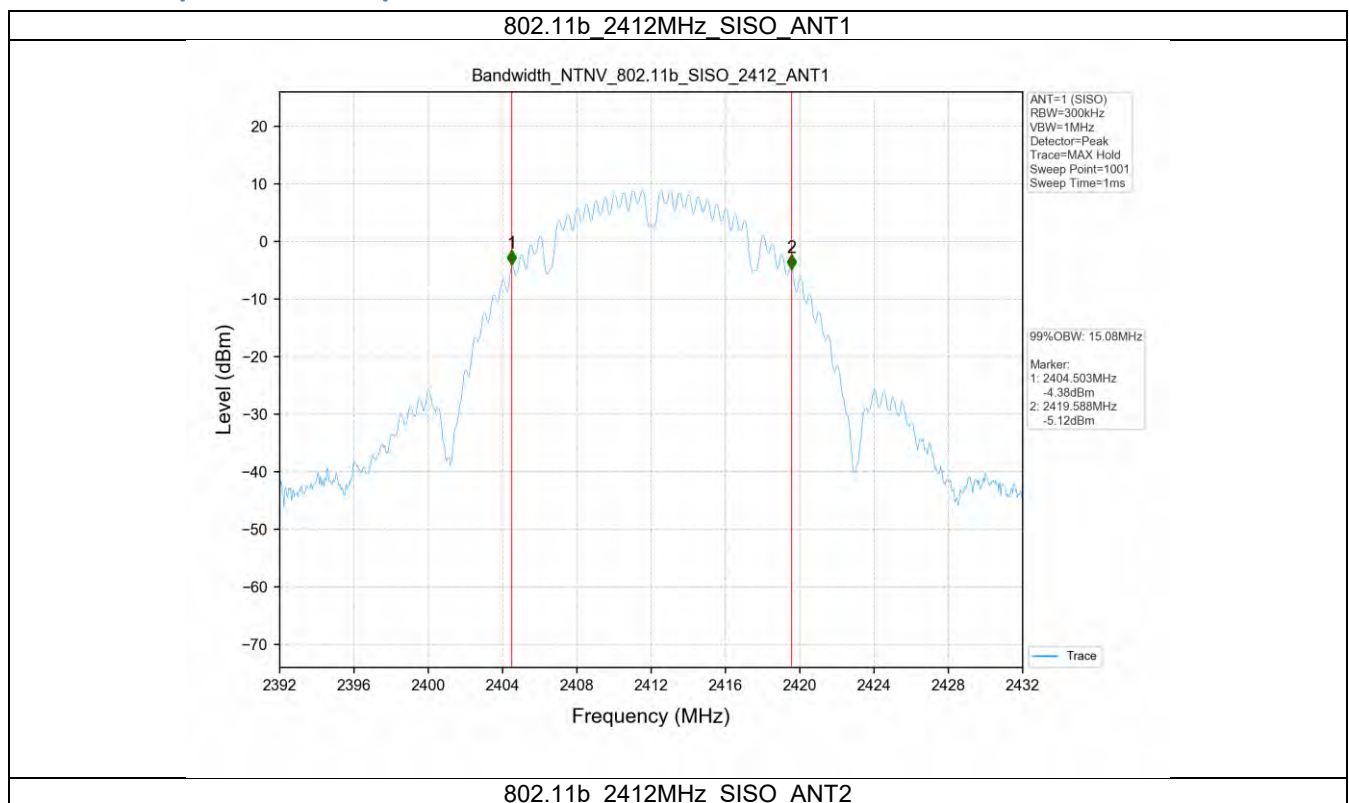
802.11n(HT40)_2452MHz_SISO_ANT2

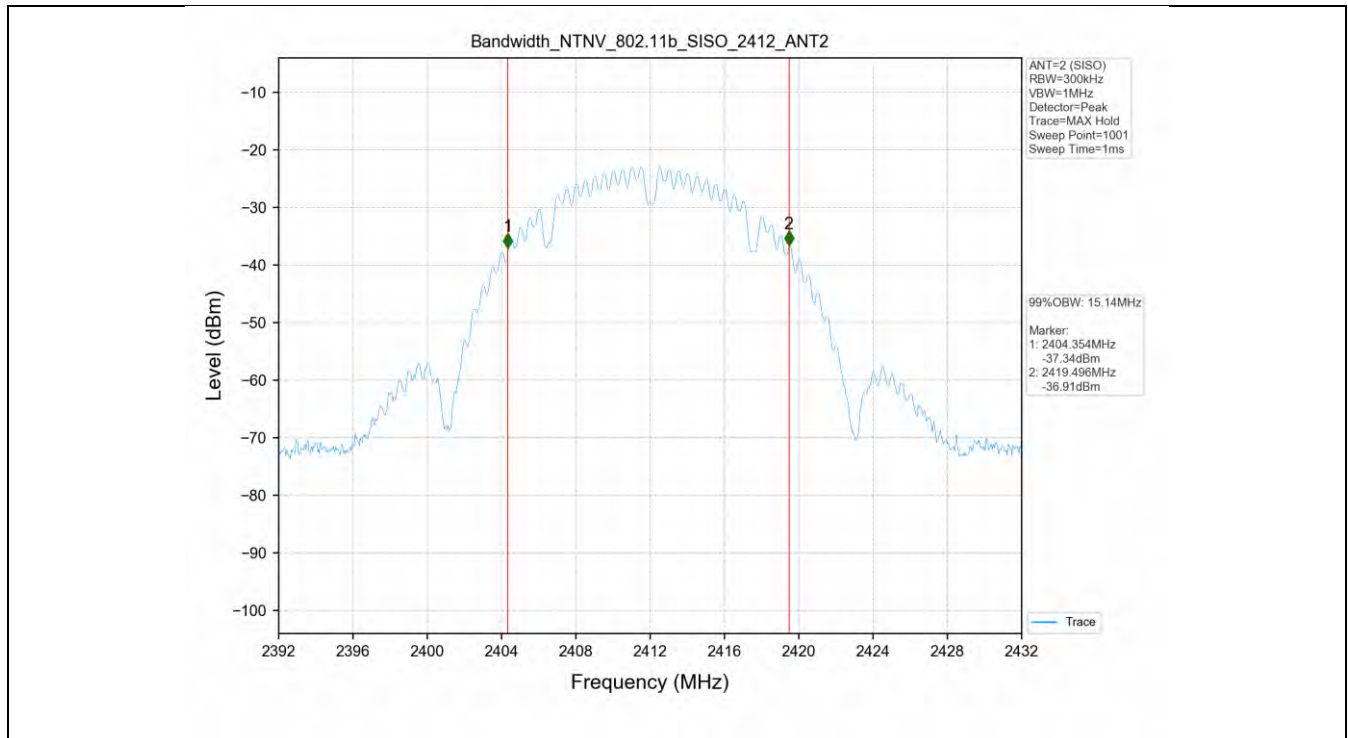


802.11n(HT40)_2452MHz_MIMO_Total

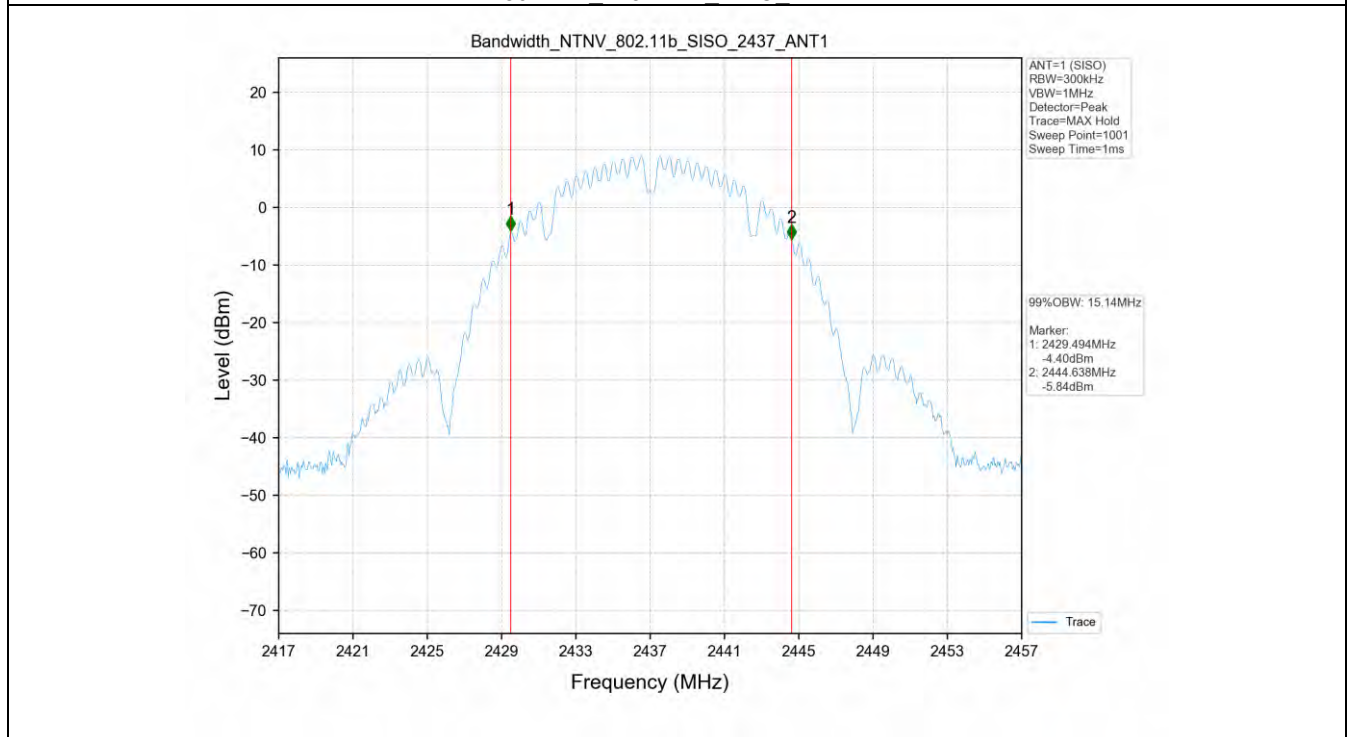


2.3 Test Graph - 99% Occupied Bandwidth

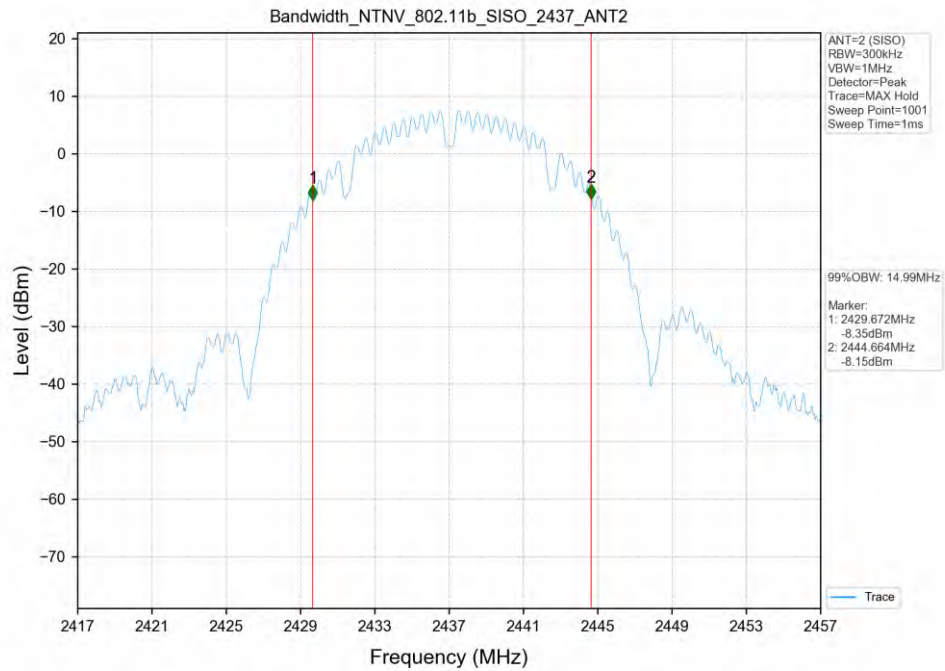




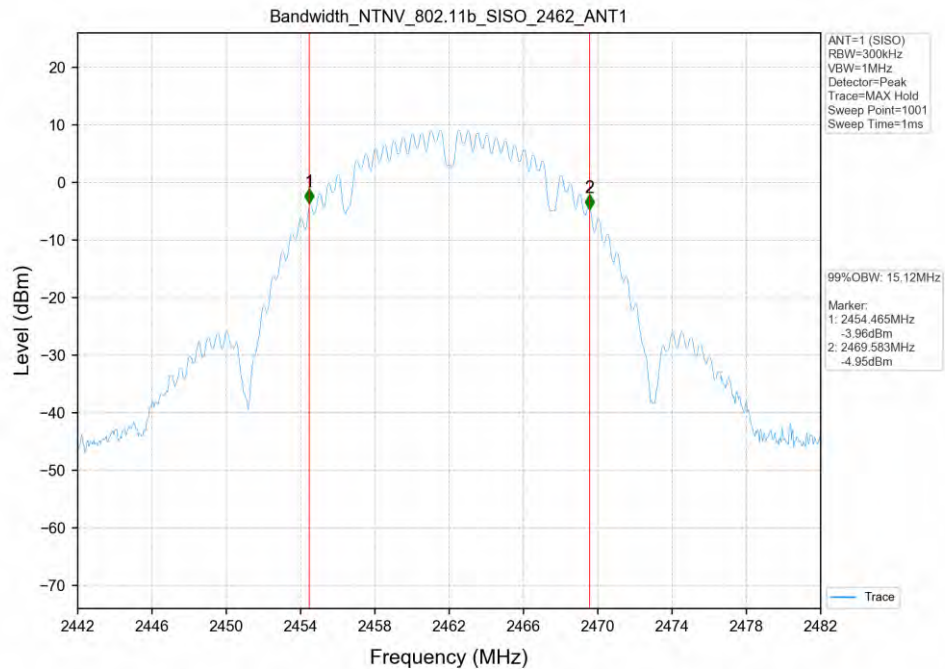
802.11b_2437MHz_SISO_ANT1



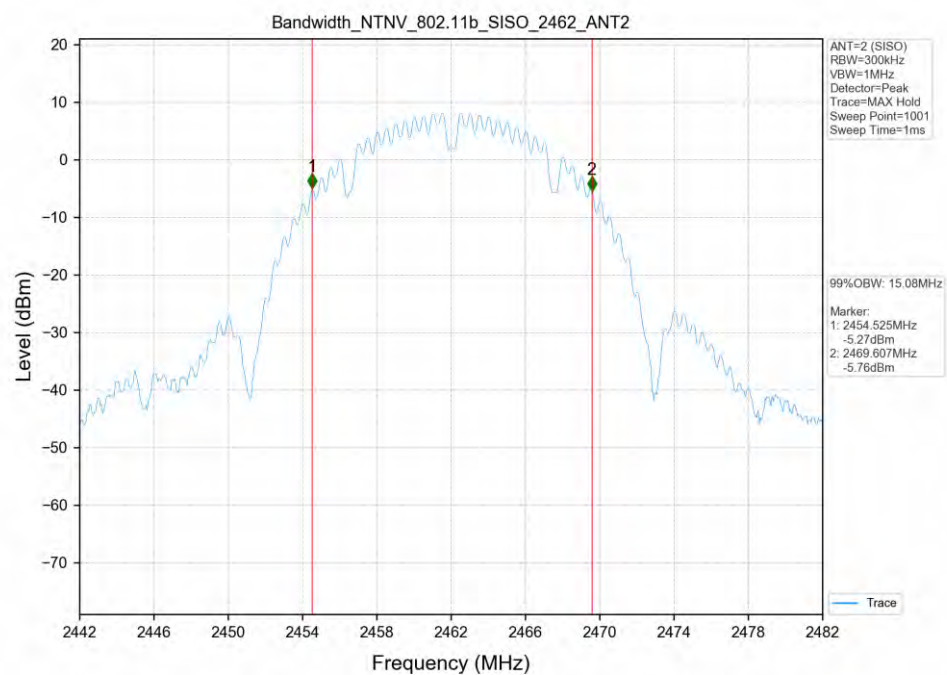
802.11b_2437MHz_SISO_ANT2



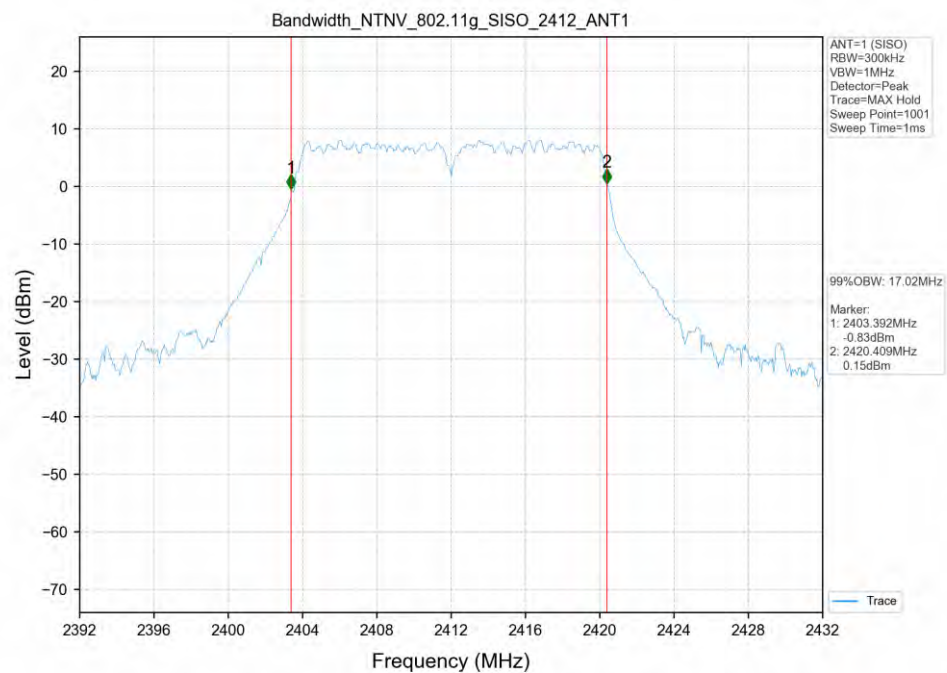
802.11b_2462MHz_SISO_ANT1



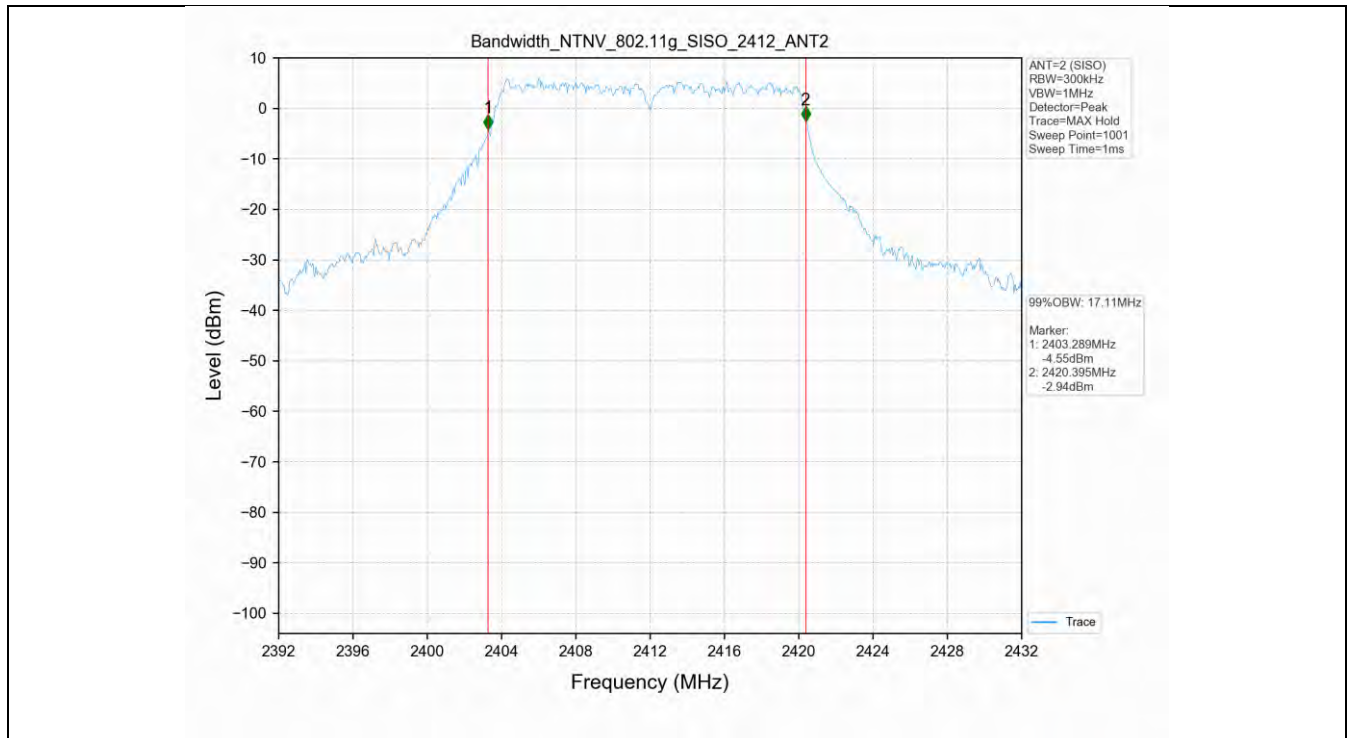
802.11b_2462MHz_SISO_ANT2



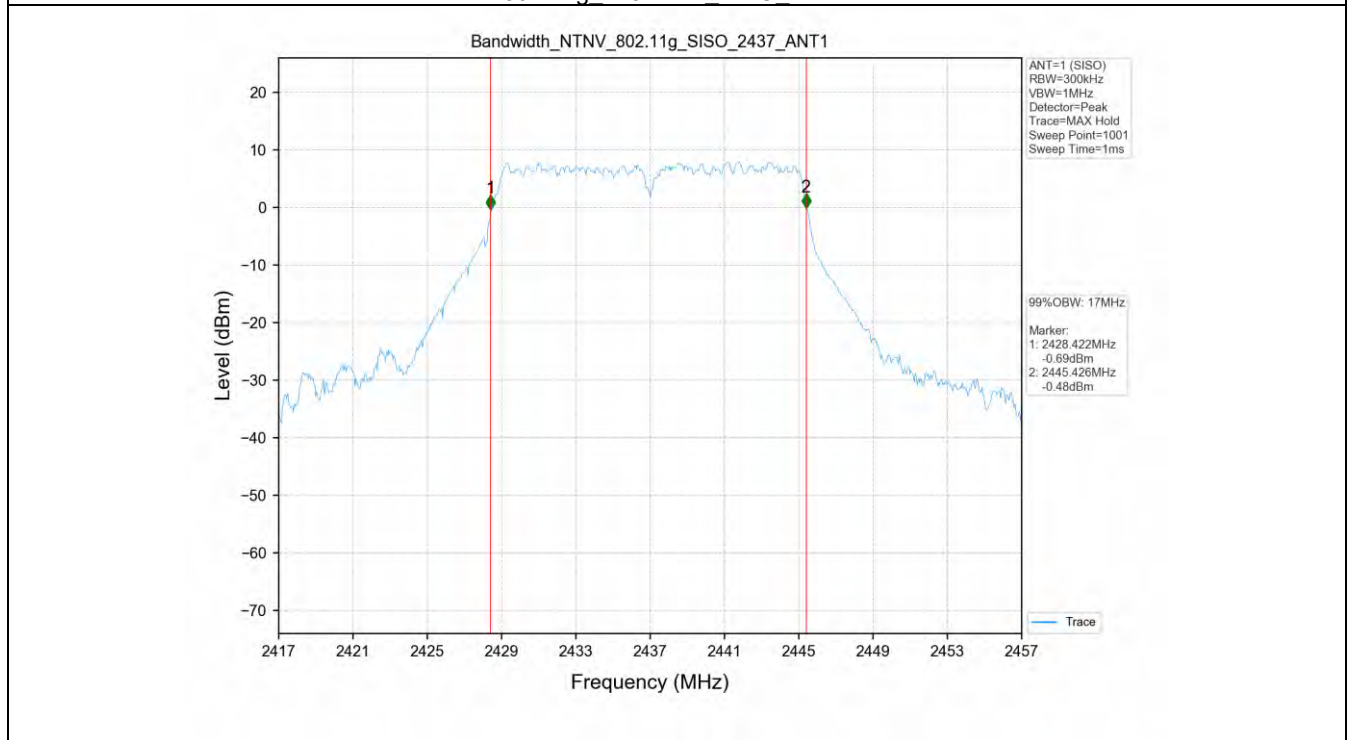
802.11g_2412MHz_SISO_ANT1



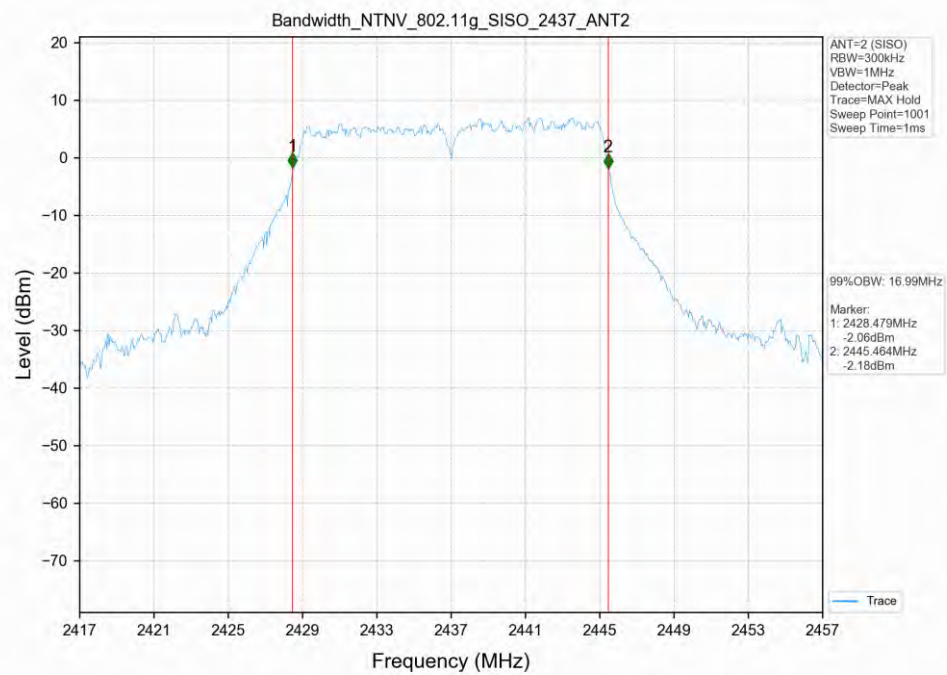
802.11g_2412MHz_SISO_ANT2



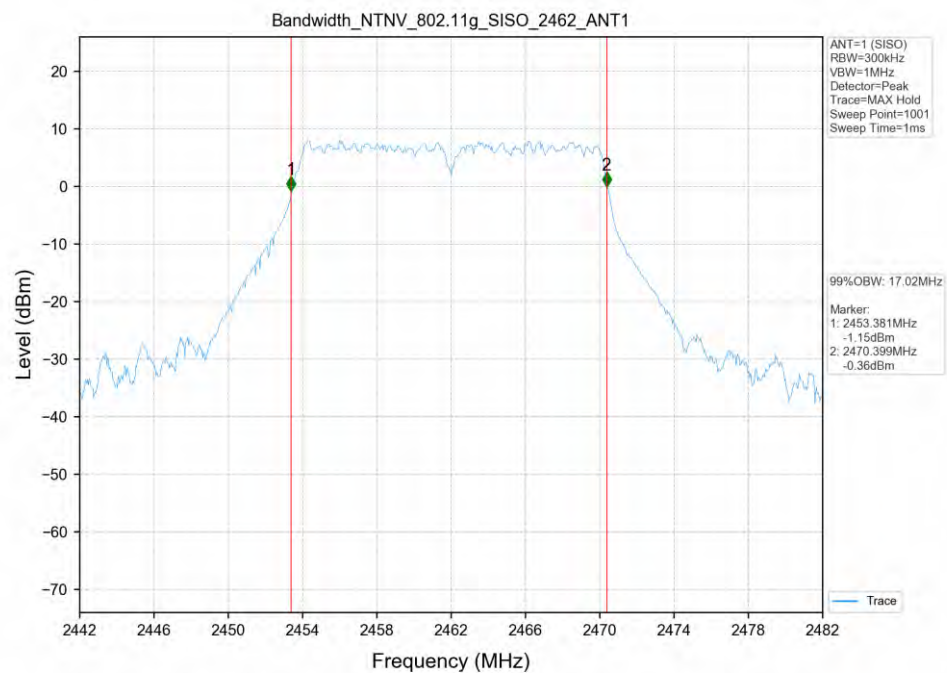
802.11g_2437MHz_SISO_ANT1



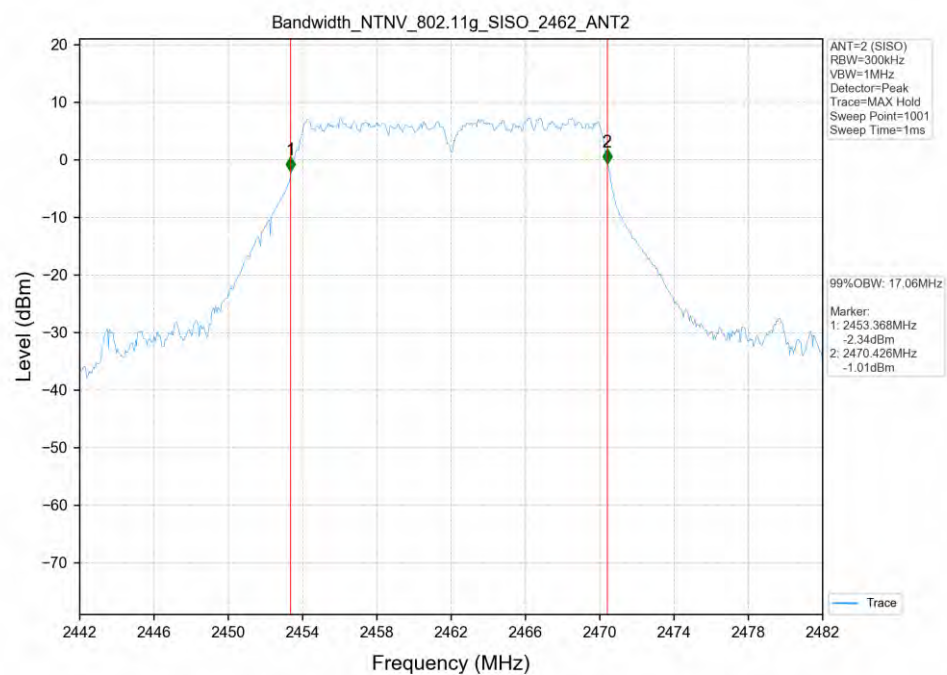
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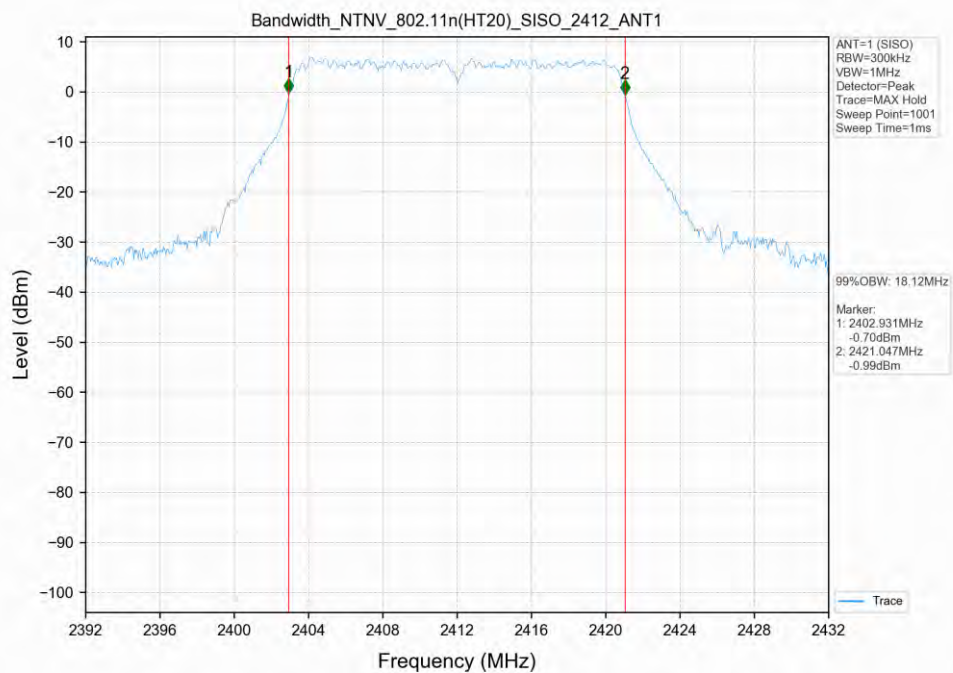
802.11g_2462MHz_SISO_ANT1



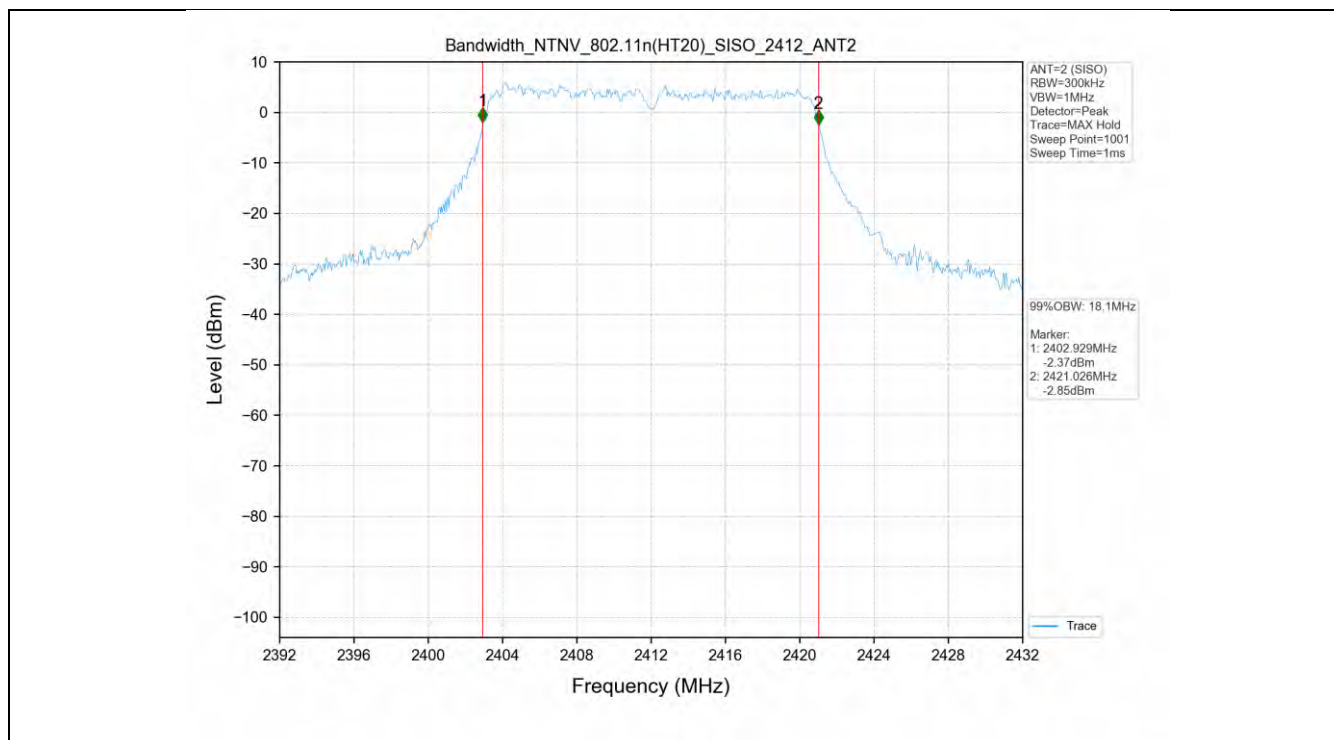
802.11g_2462MHz_SISO_ANT2



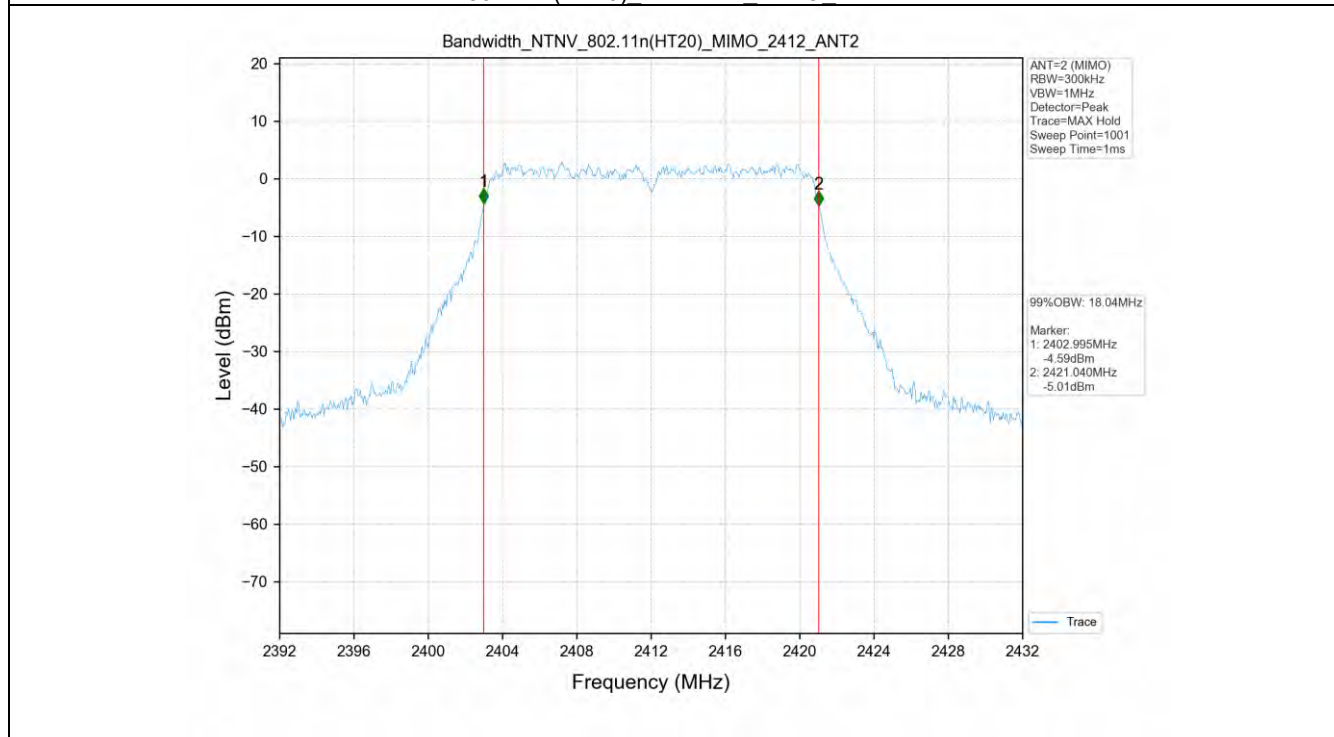
802.11n(HT20)_2412MHz_SISO_ANT1



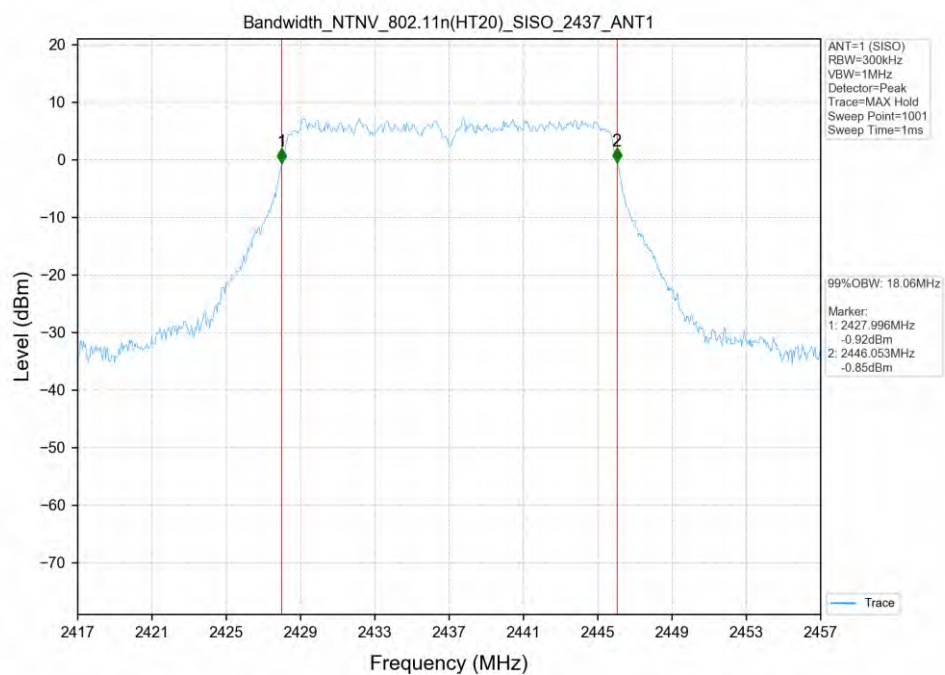
802.11n(HT20)_2412MHz_SISO_ANT2



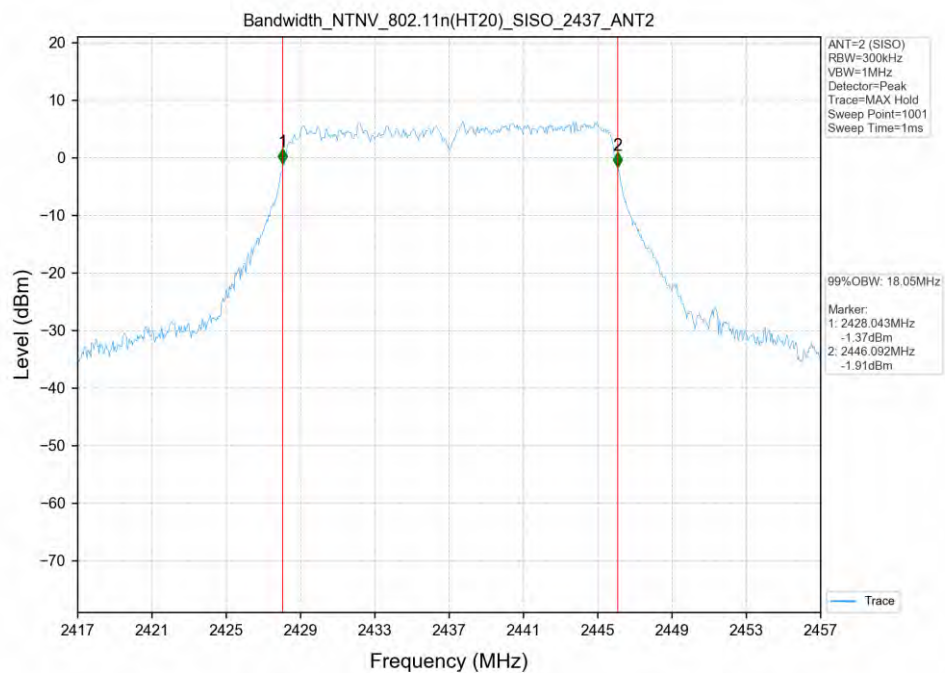
802.11n(HT20)_2412MHz_MIMO_Total



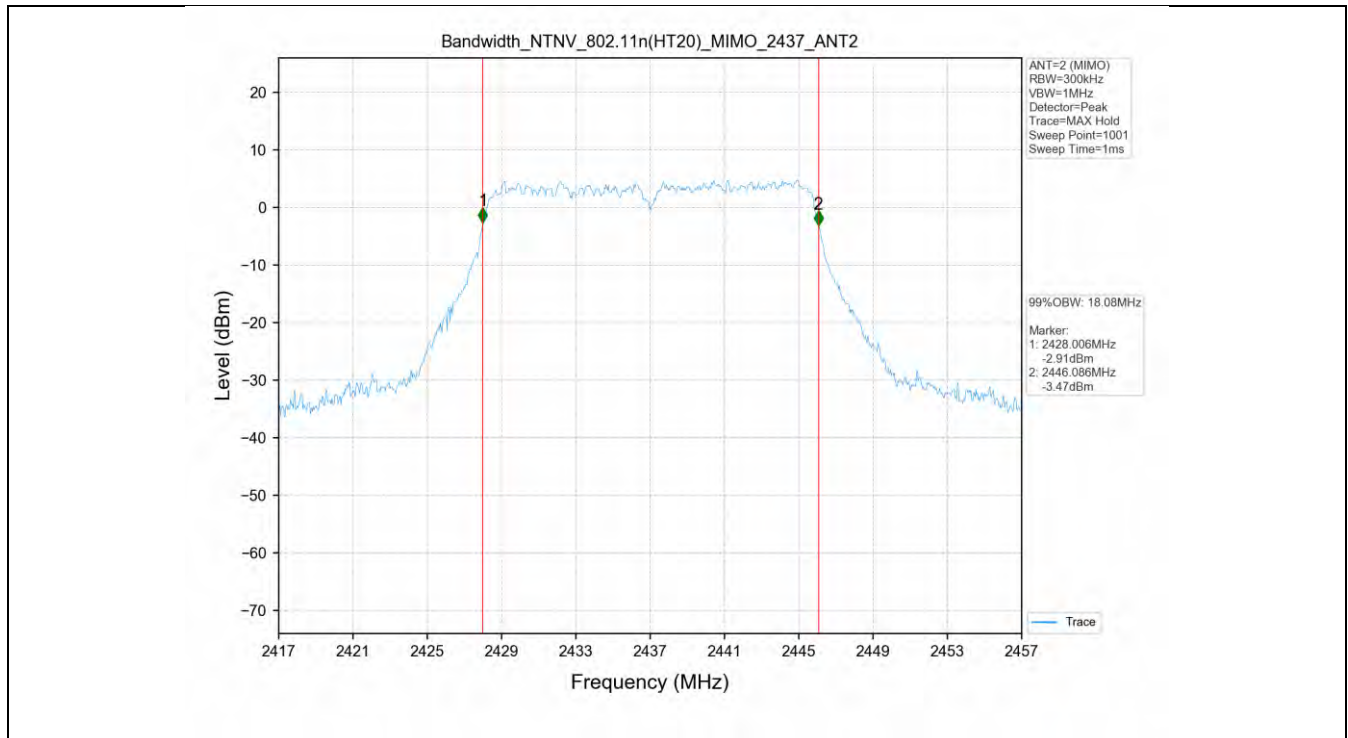
802.11n(HT20)_2437MHz_SISO_ANT1



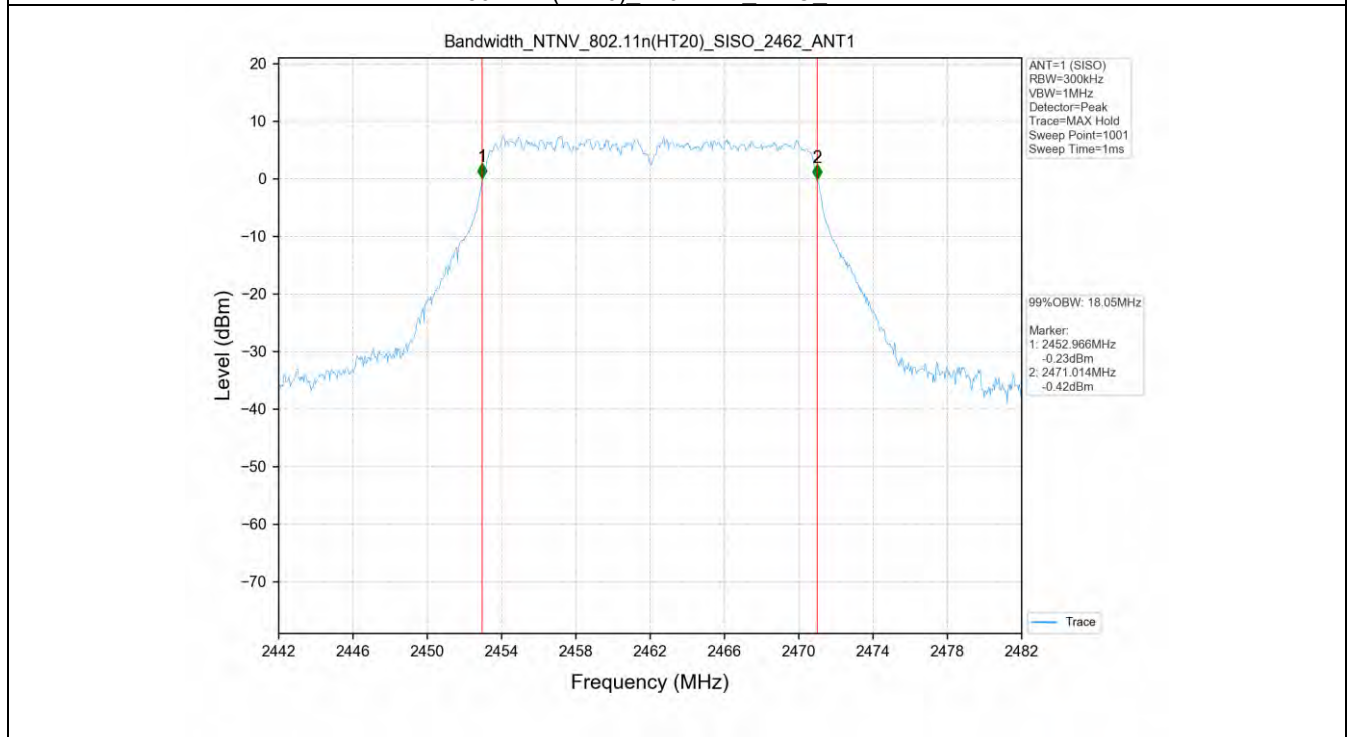
802.11n(HT20)_2437MHz_SISO_ANT2



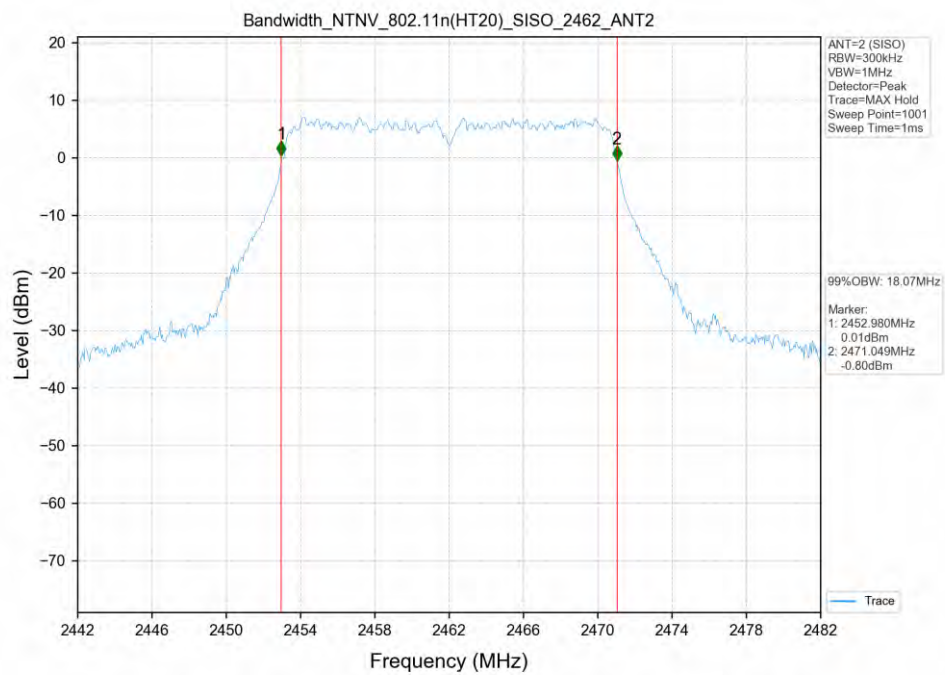
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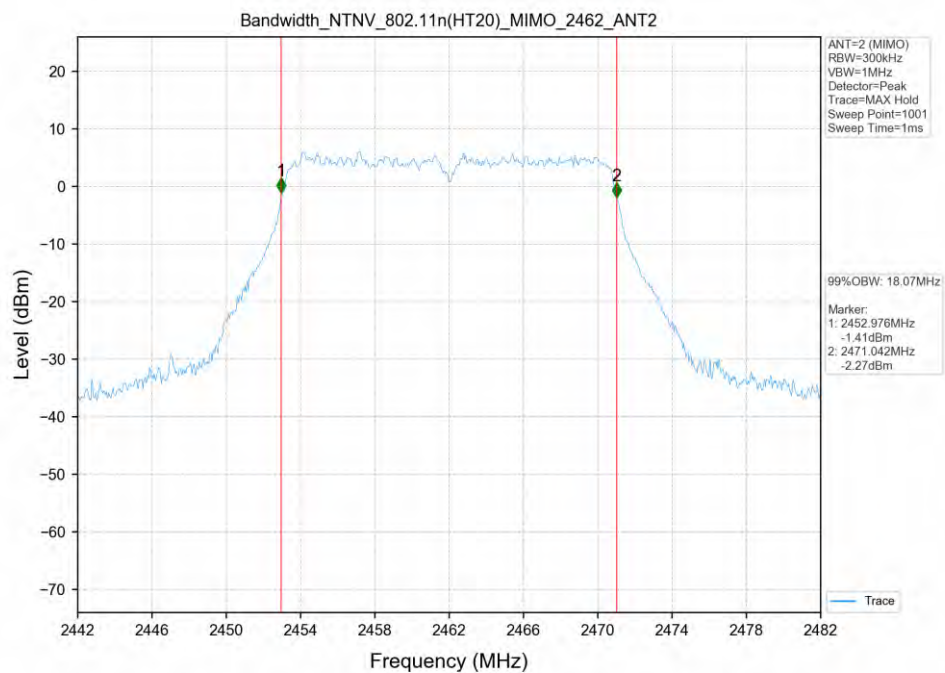
802.11n(HT20)_2462MHz_SISO_ANT1



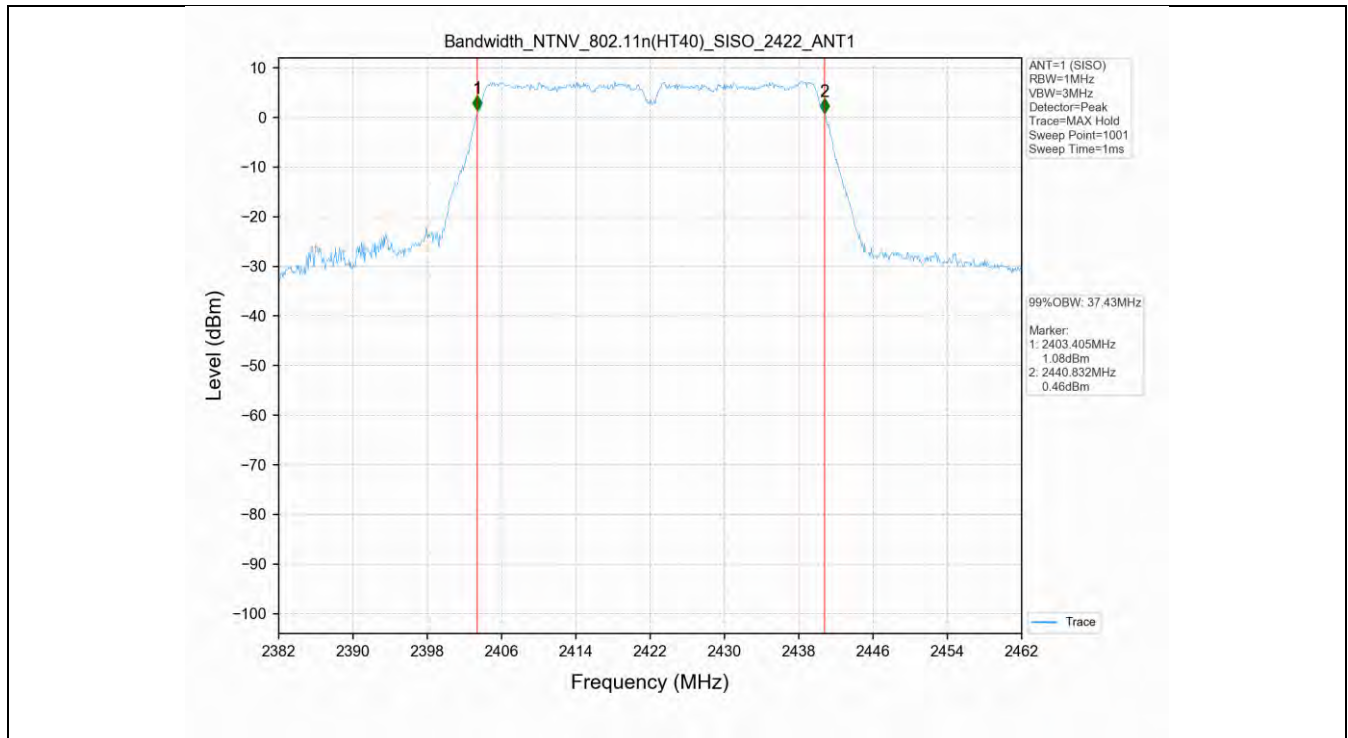
802.11n(HT20)_2462MHz_SISO_ANT2



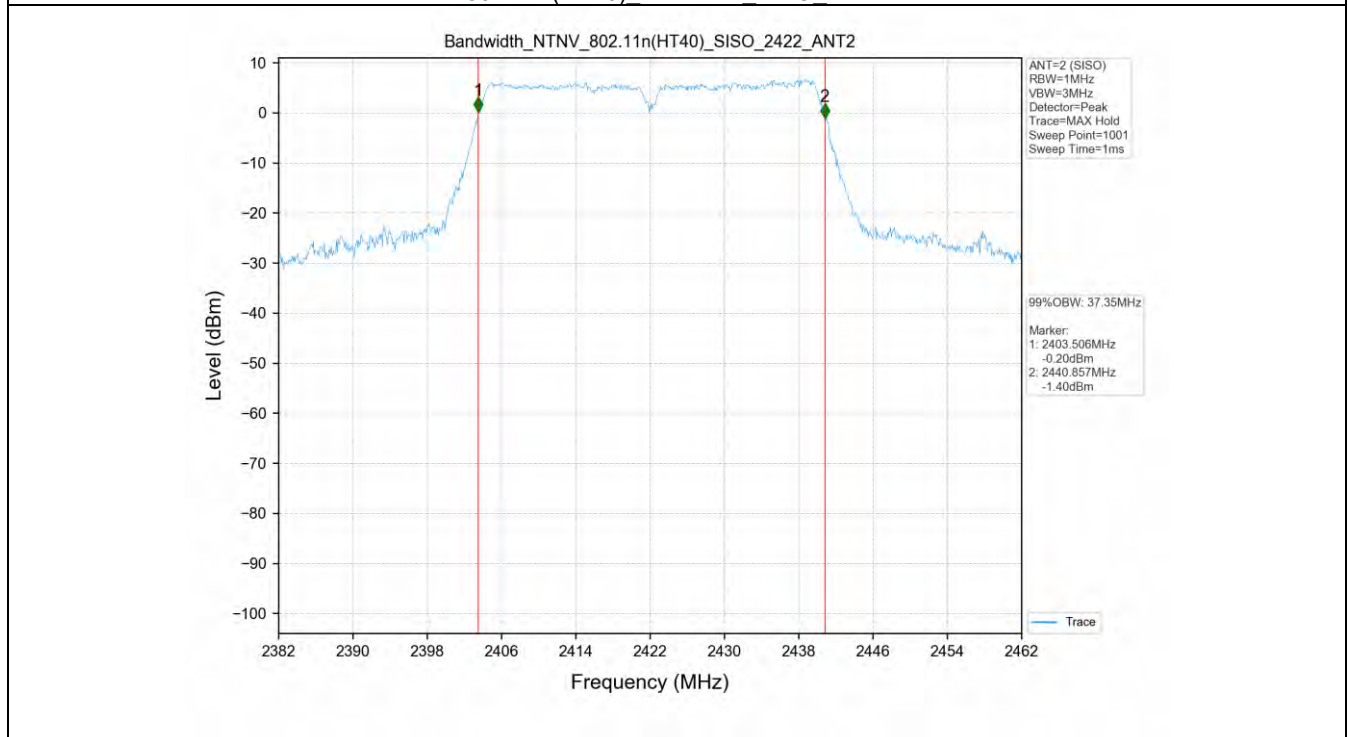
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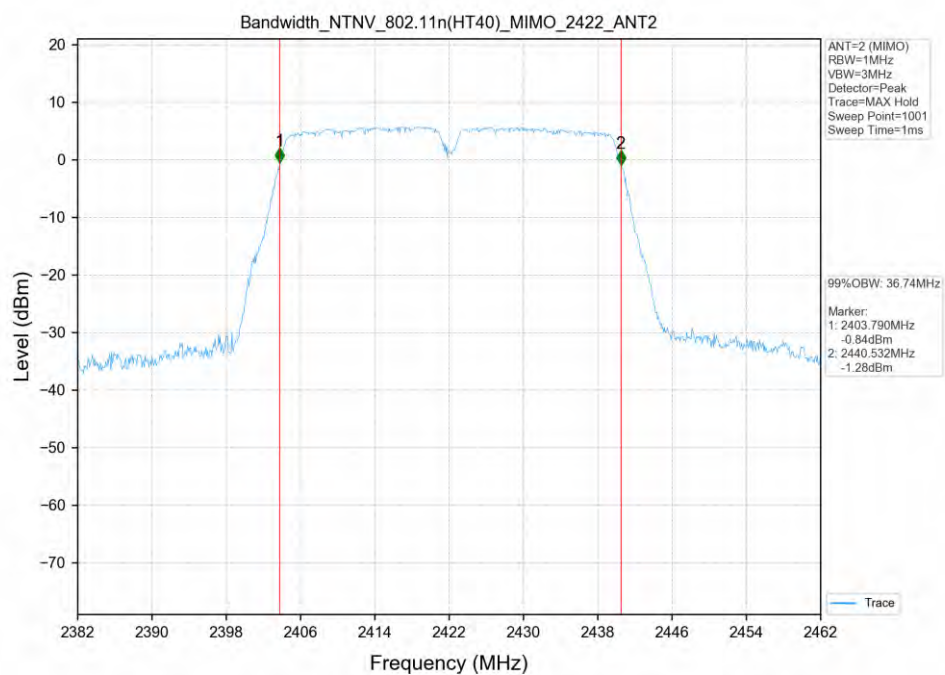
802.11n(HT40)_2422MHz_SISO_ANT1



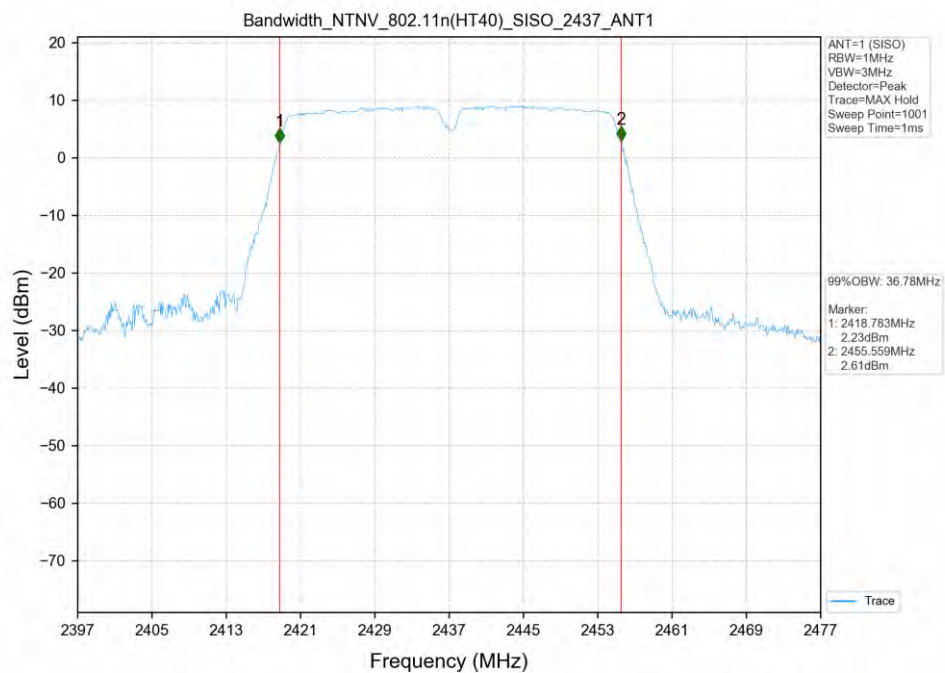
802.11n(HT40)_2422MHz_SISO_ANT2



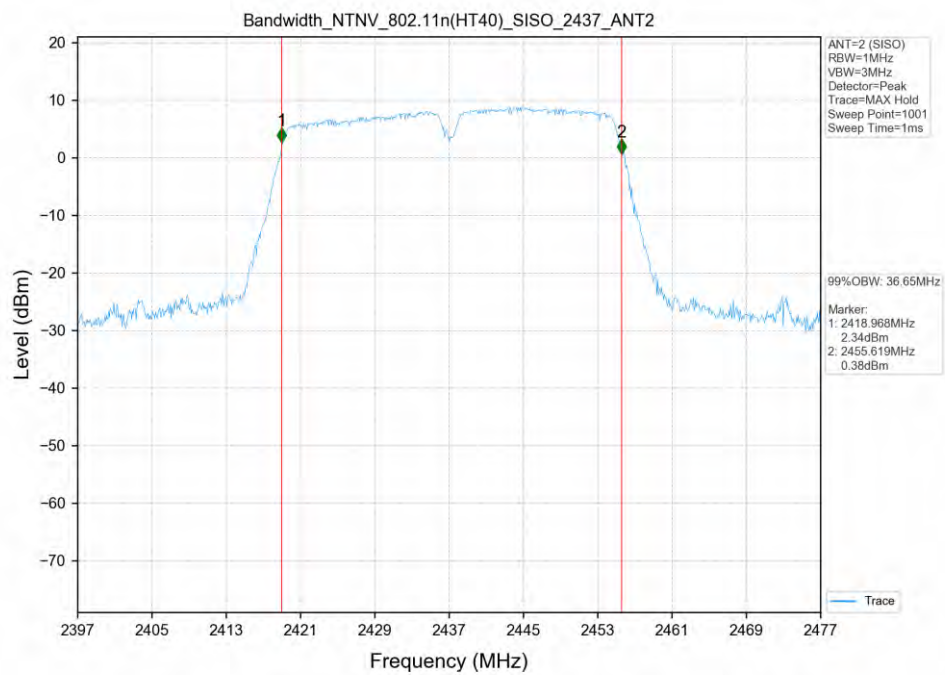
802.11n(HT40)_2422MHz_MIMO_Total



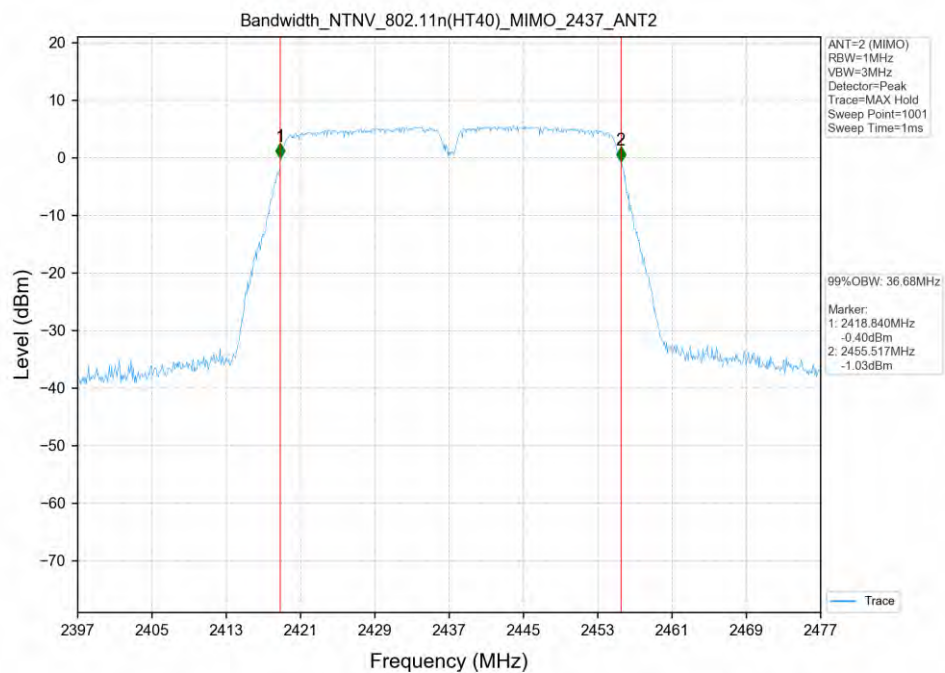
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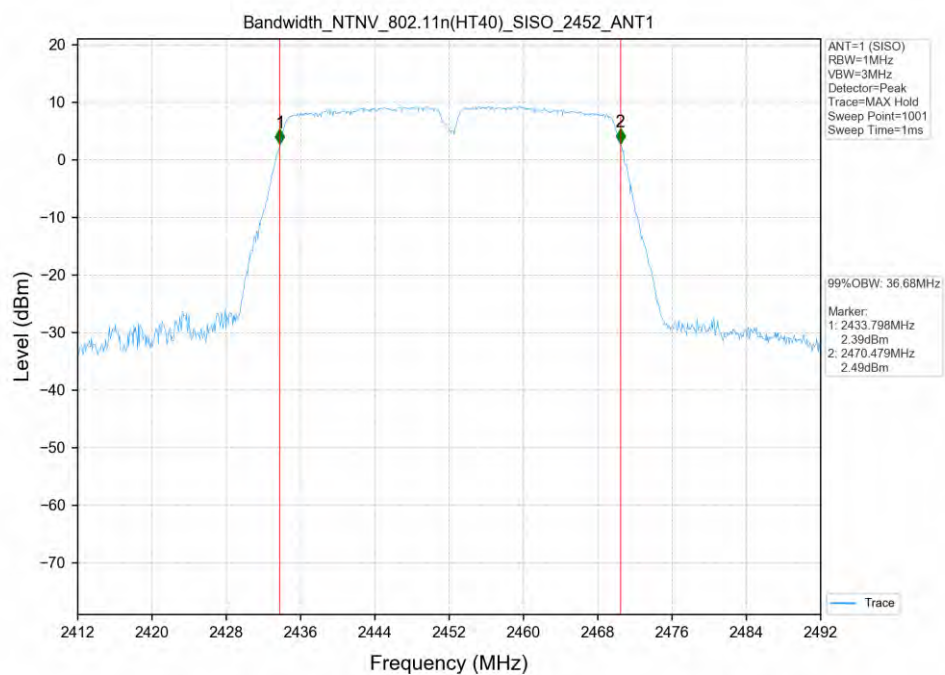
802.11n(HT40)_2437MHz_SISO_ANT2



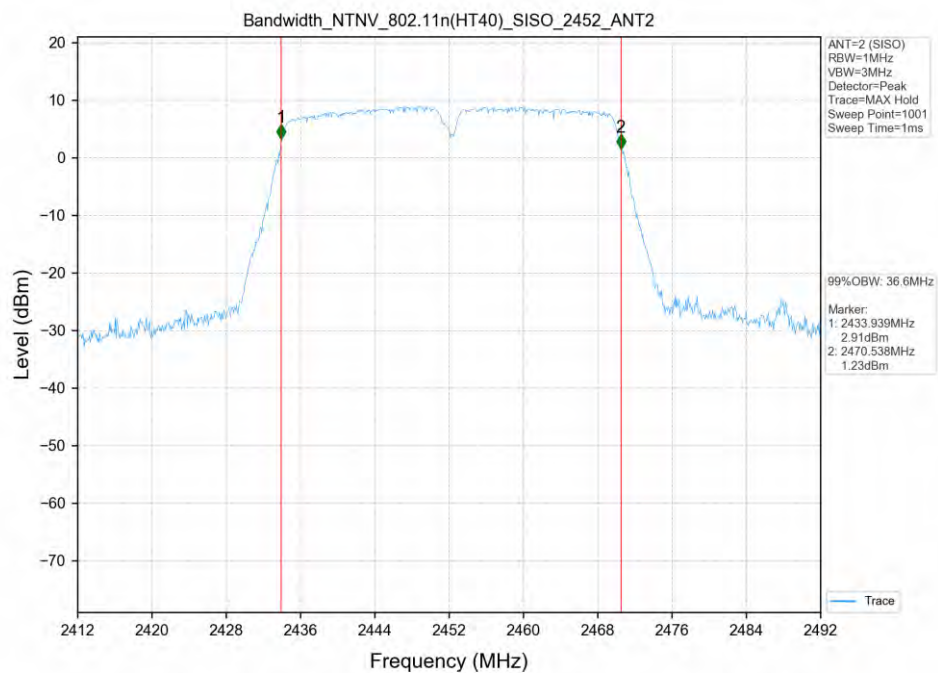
802.11n(HT40)_2437MHz_MIMO_Total



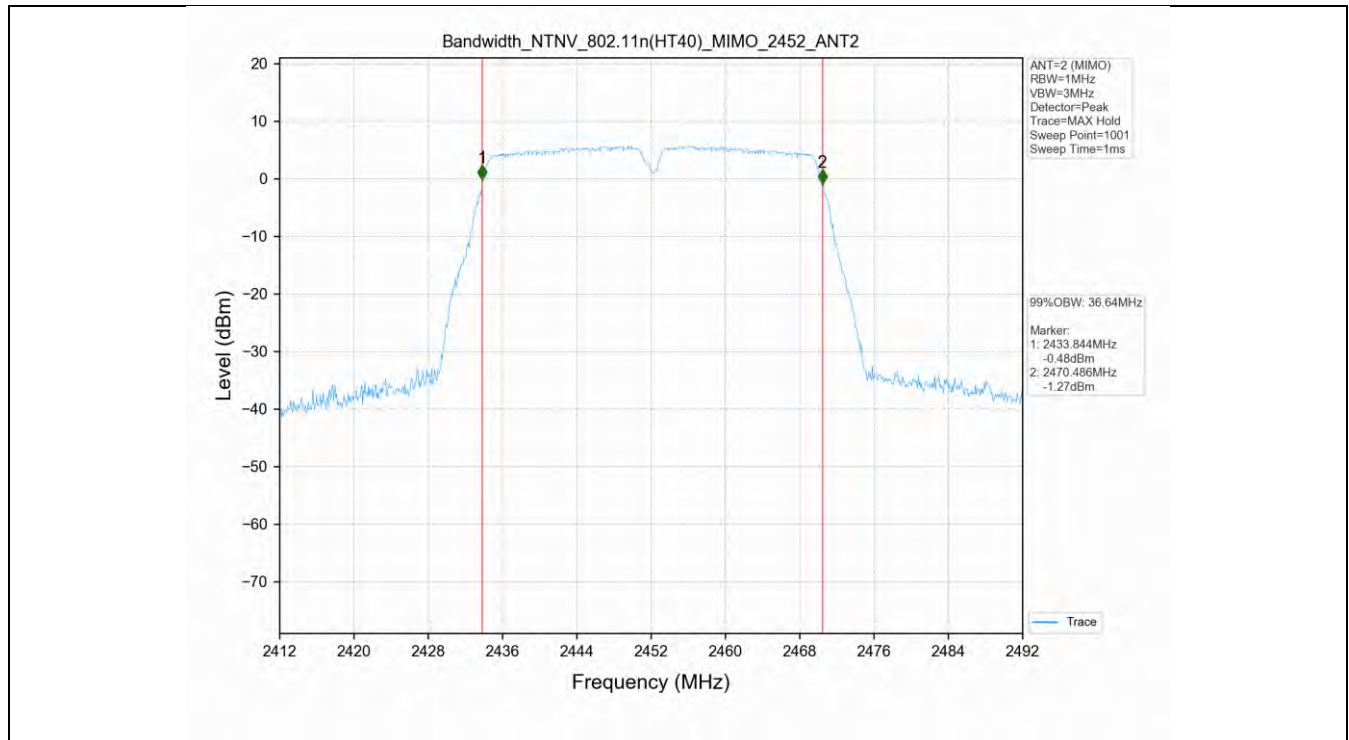
802.11n(HT40)_2452MHz_SISO_ANT1



802.11n(HT40)_2452MHz_SISO_ANT2



802.11n(HT40)_2452MHz_MIMO_Total



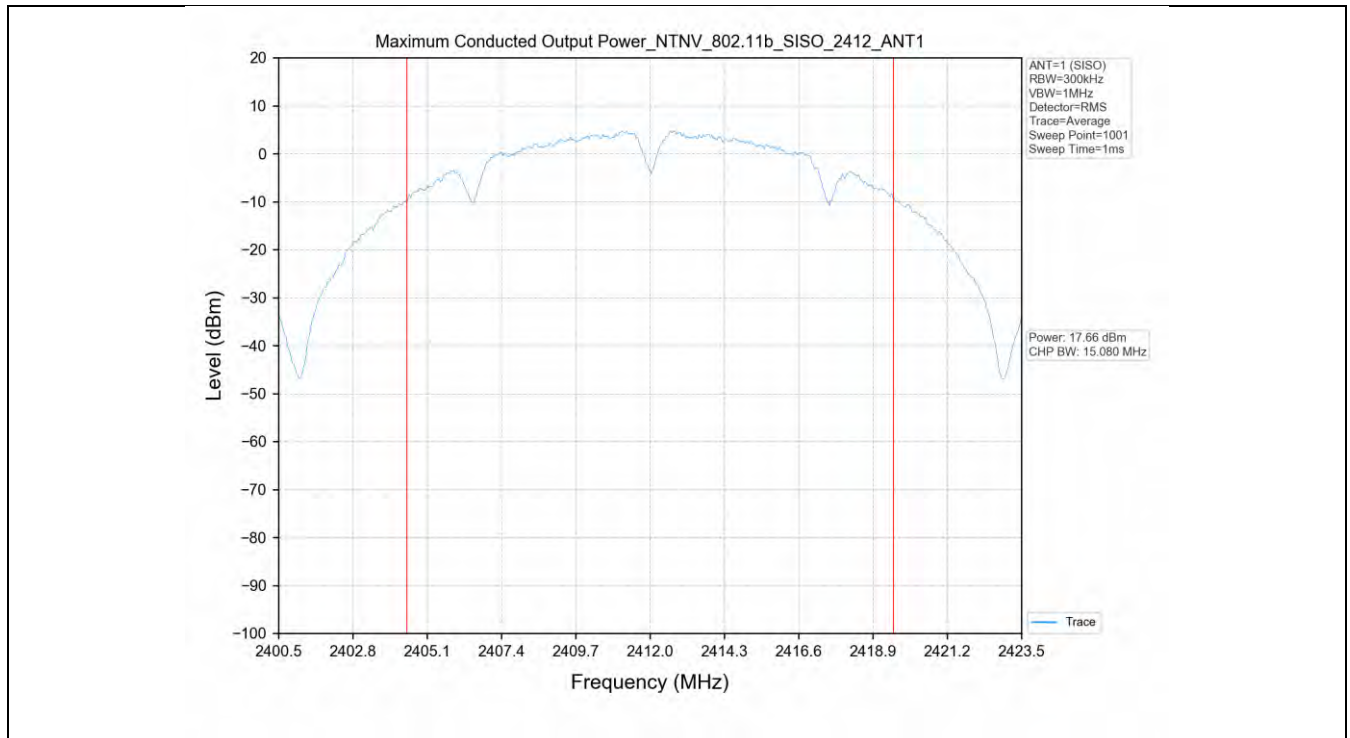
3. Maximum Conducted Output Power

3.1 Test Result

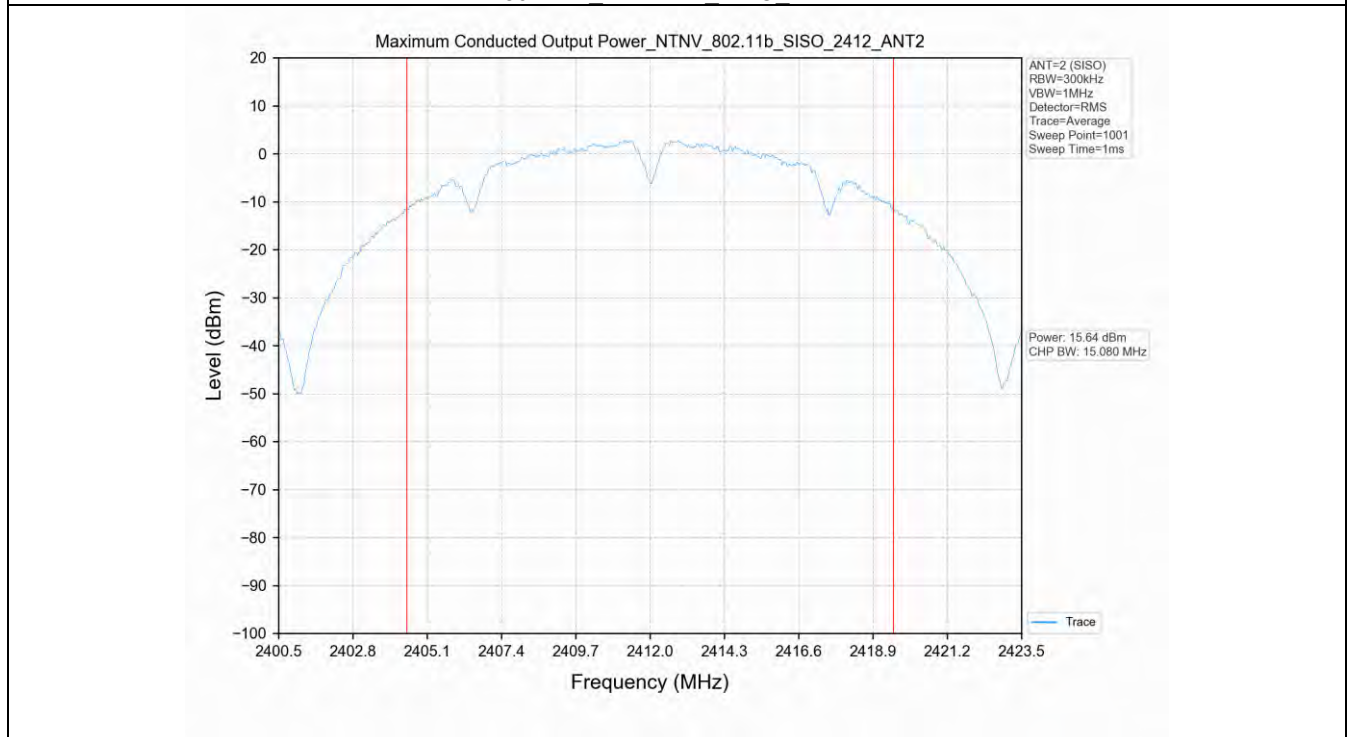
Test Mode	Frequency (MHz)	Tx Type	Measured Average Output Power (dBm)			Limits (dBm)	Verdict
			Ant 1	Ant 2	Total		
802.11b	2412	SISO	17.66	15.64	/	≤30	PASS
	2437	SISO	17.92	16.24	/	≤30	PASS
	2462	SISO	17.81	17.21	/	≤30	PASS
802.11g	2412	SISO	16.79	15.24	/	≤30	PASS
	2437	SISO	16.83	15.69	/	≤30	PASS
	2462	SISO	16.92	16.66	/	≤30	PASS
802.11n(HT20)	2412	SISO	16.22	14.61	/	≤30	PASS
		MIMO	13.11	12.86	16.00	≤30	PASS
	2437	SISO	16.49	15.62	/	≤30	PASS
		MIMO	15.74	14.90	18.35	≤30	PASS
	2462	SISO	16.62	16.30	/	≤30	PASS
		MIMO	13.60	13.34	16.48	≤30	PASS
802.11n(HT40)	2422	SISO	13.16	12.52	/	≤30	PASS
		MIMO	14.16	12.20	16.30	≤30	PASS
	2437	SISO	15.64	14.72	/	≤30	PASS
		MIMO	14.26	12.67	16.55	≤30	PASS
	2452	SISO	15.83	15.35	/	≤30	PASS
		MIMO	14.36	13.26	16.86	≤30	PASS

3.2 Test Graph

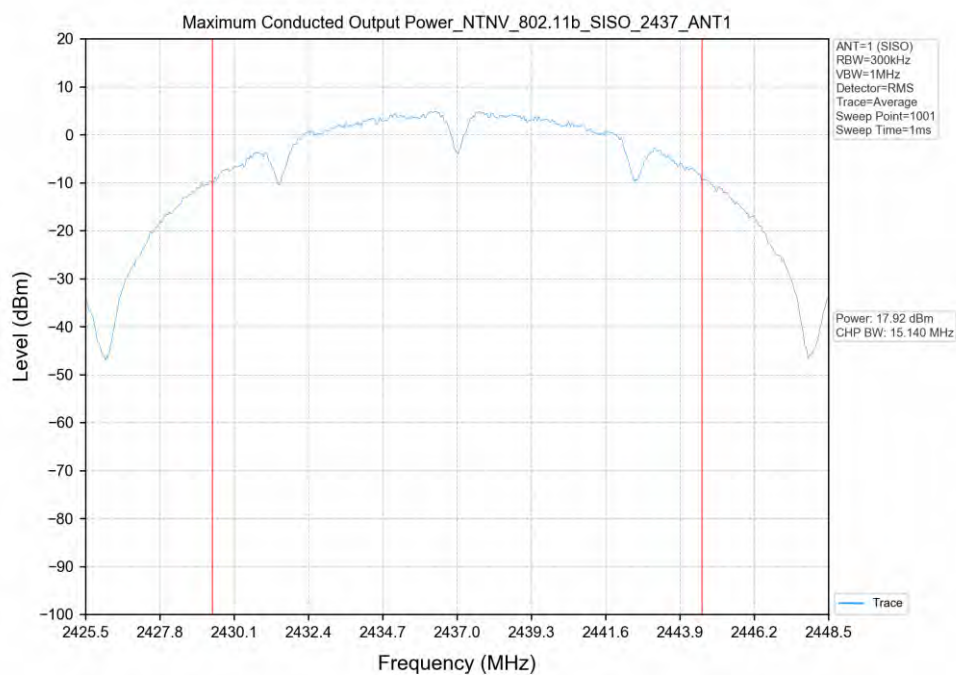
802.11b_2412MHz_SISO_ANT1



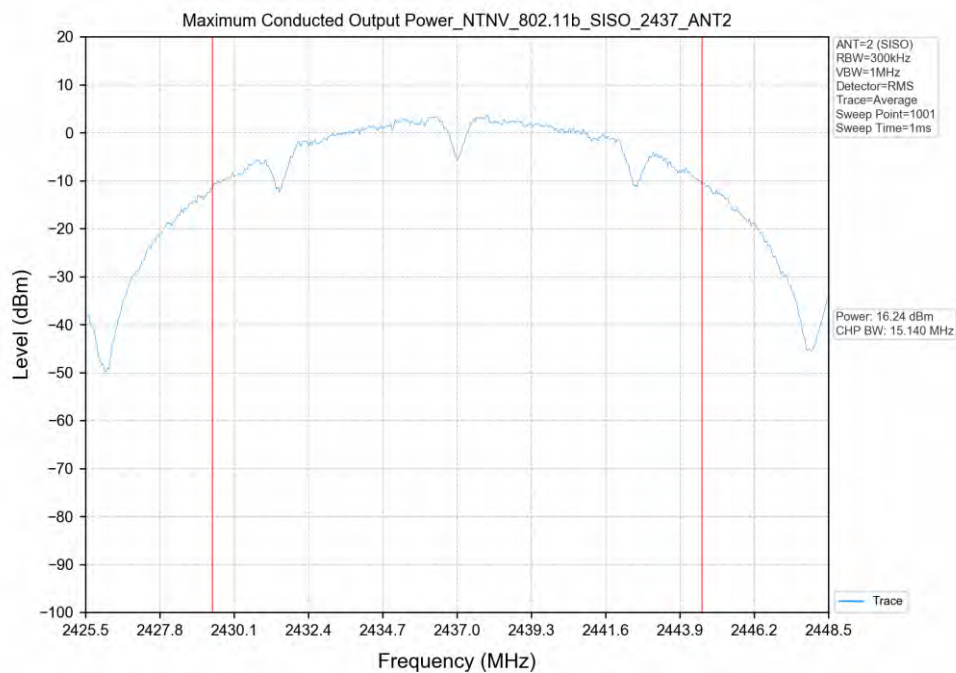
802.11b_2412MHz_SISO_ANT2



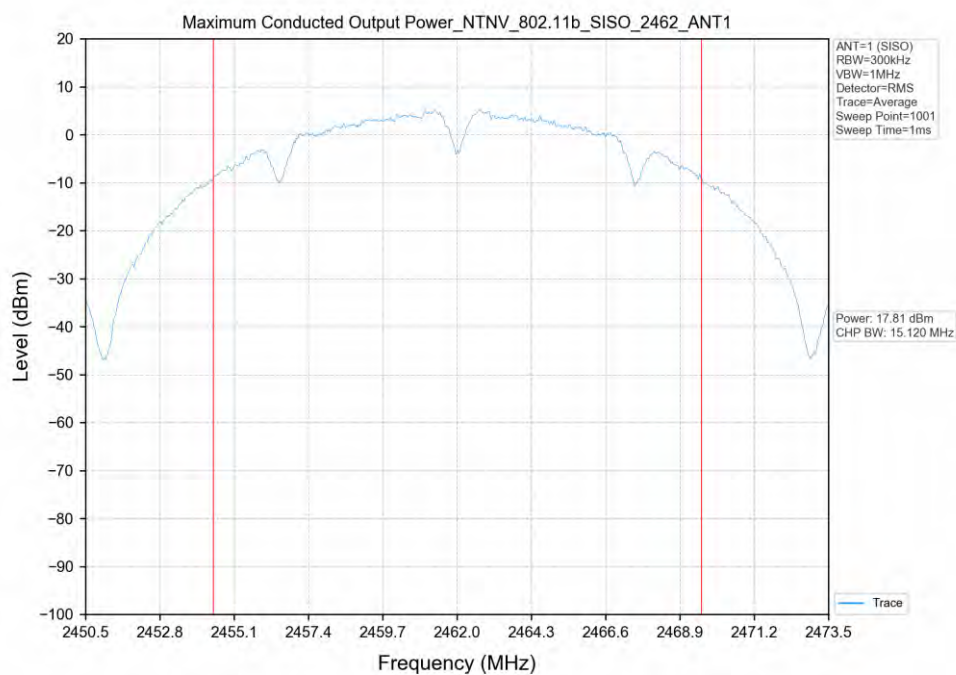
802.11b_2437MHz_SISO_ANT1



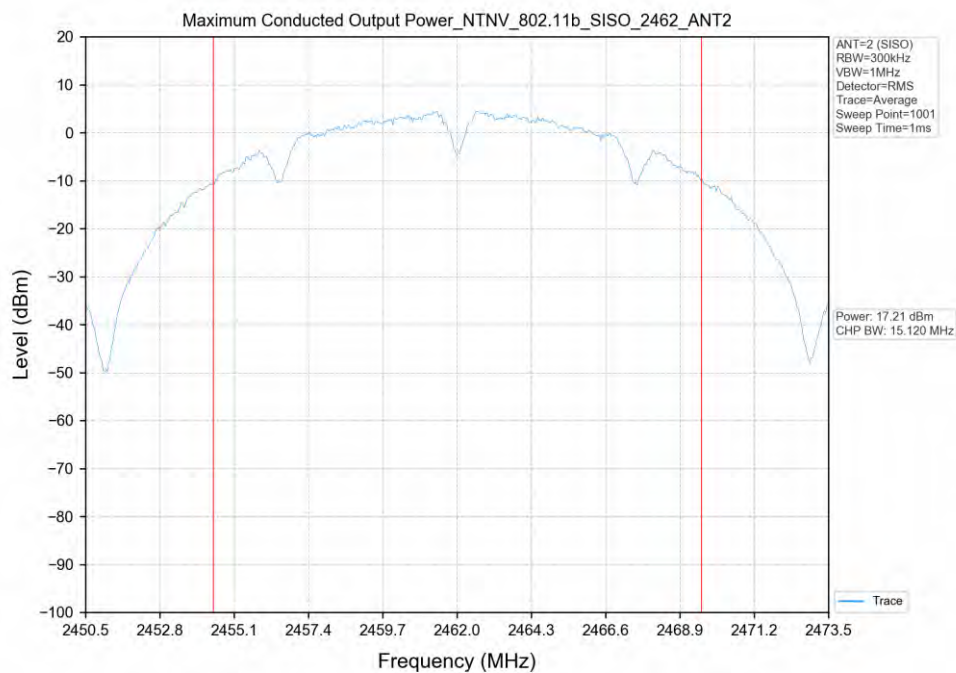
802.11b_2437MHz_SISO_ANT2



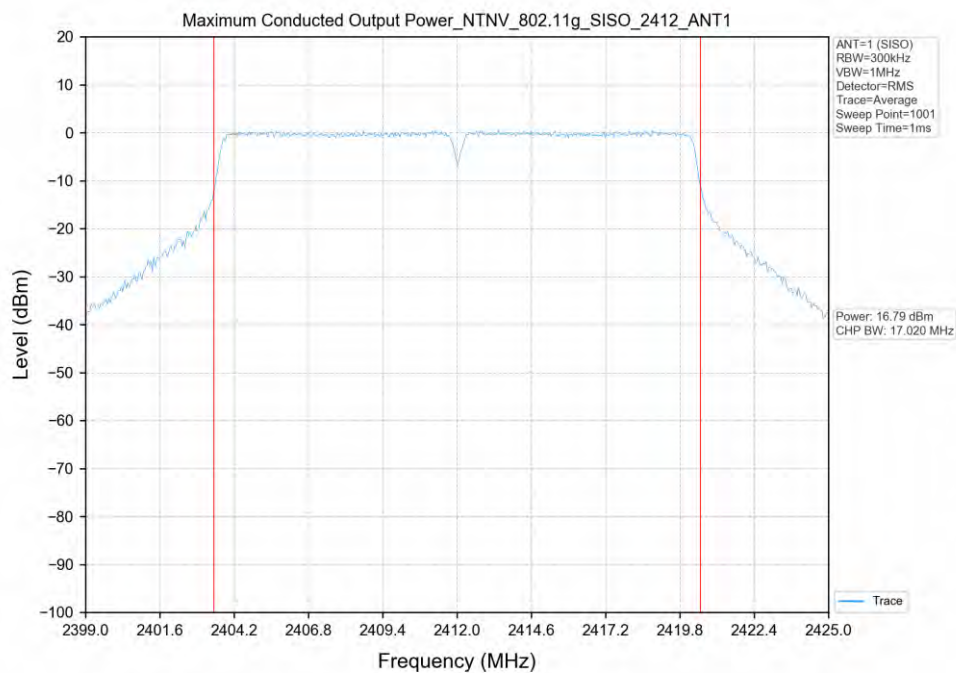
802.11b_2462MHz_SISO_ANT1



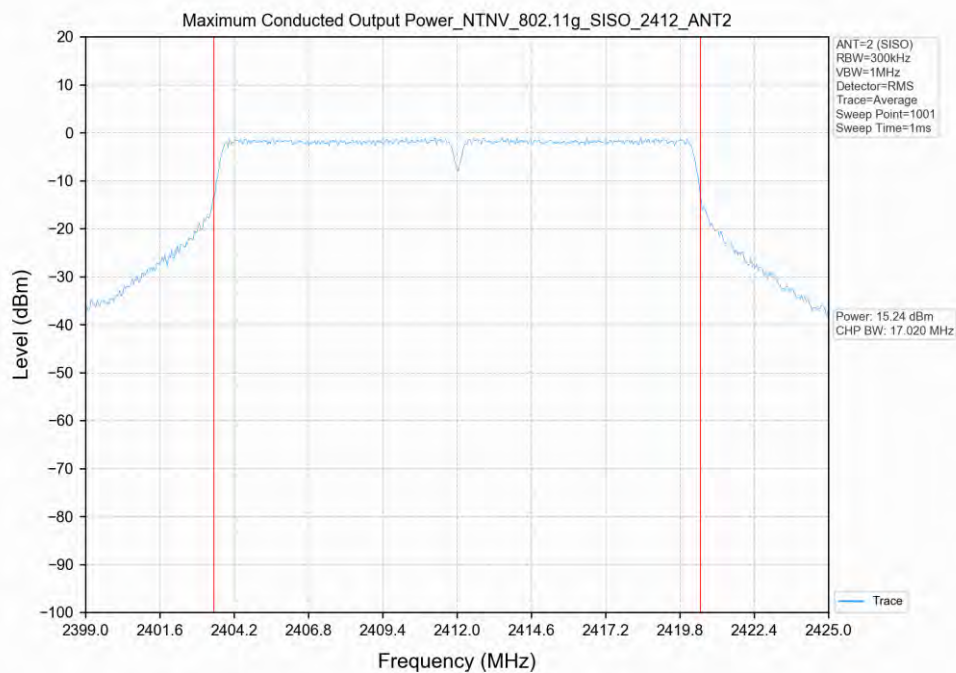
802.11b_2462MHz_SISO_ANT2



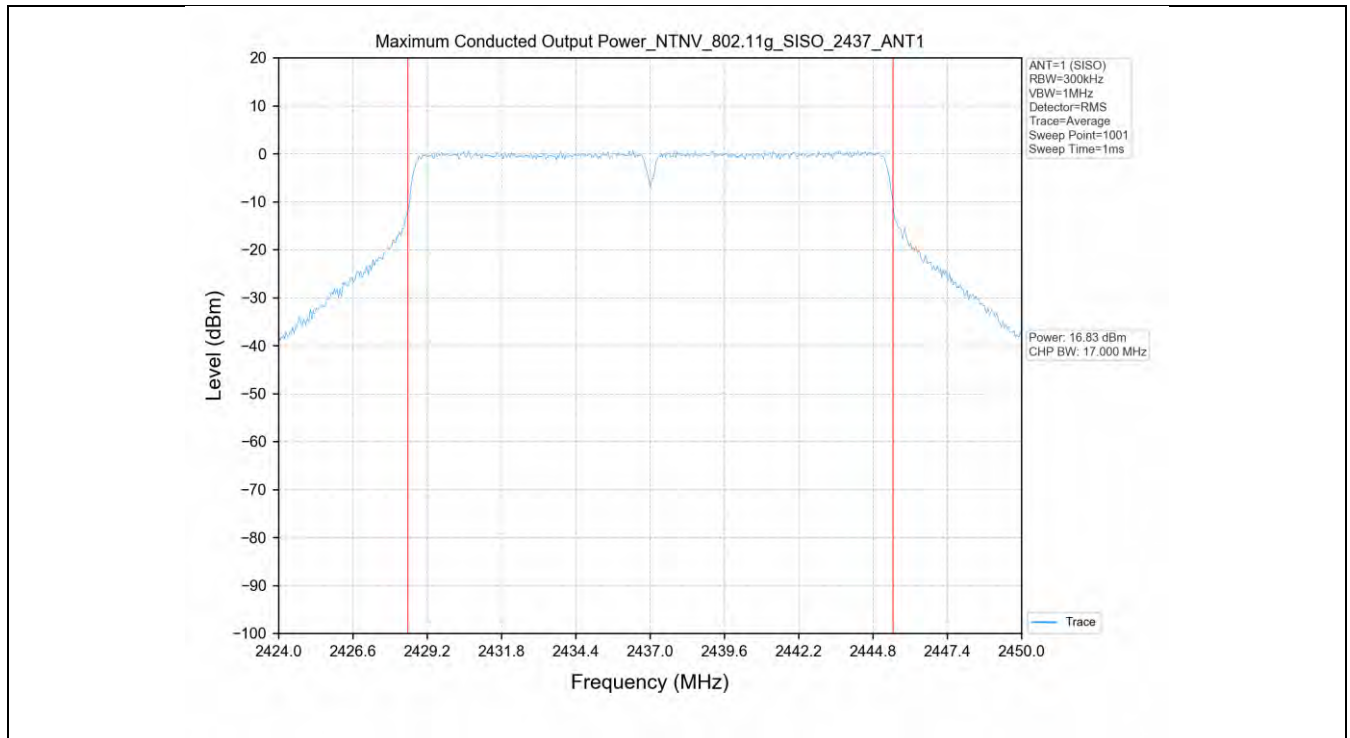
802.11g_2412MHz_SISO_ANT1



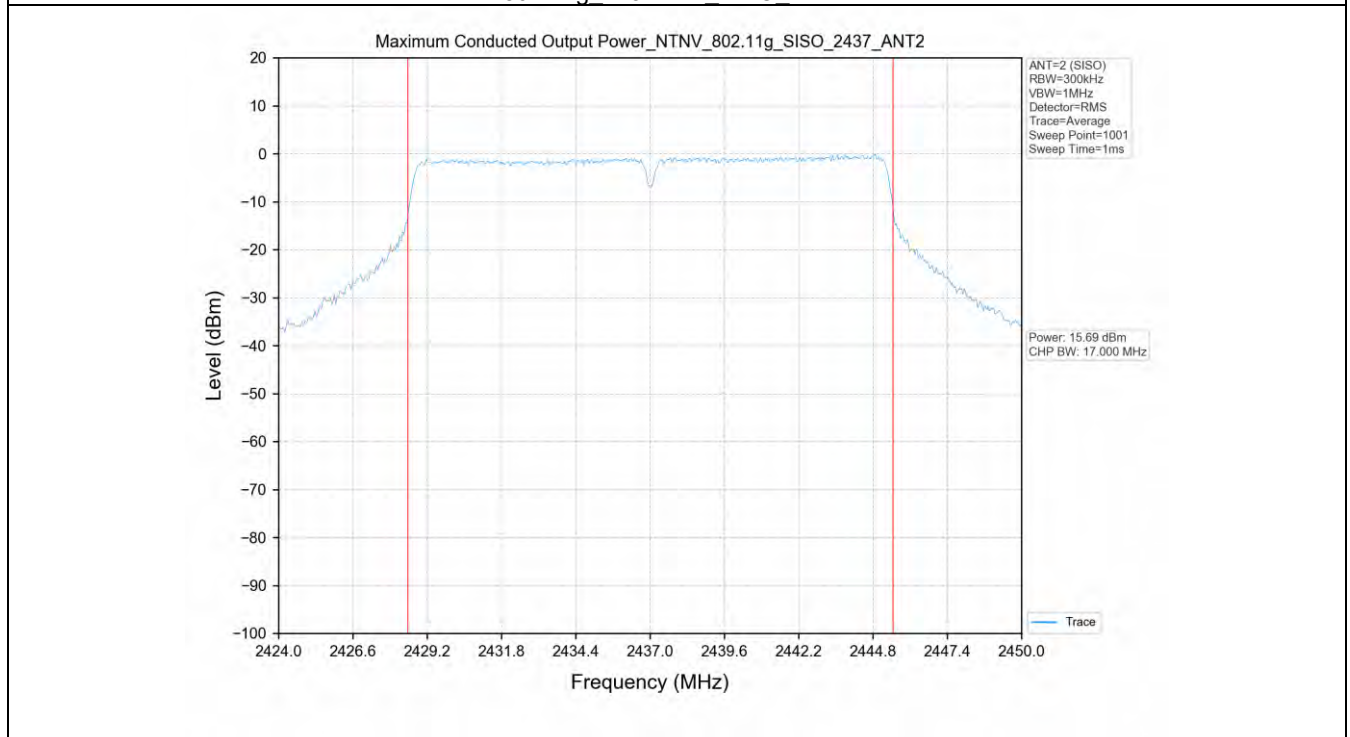
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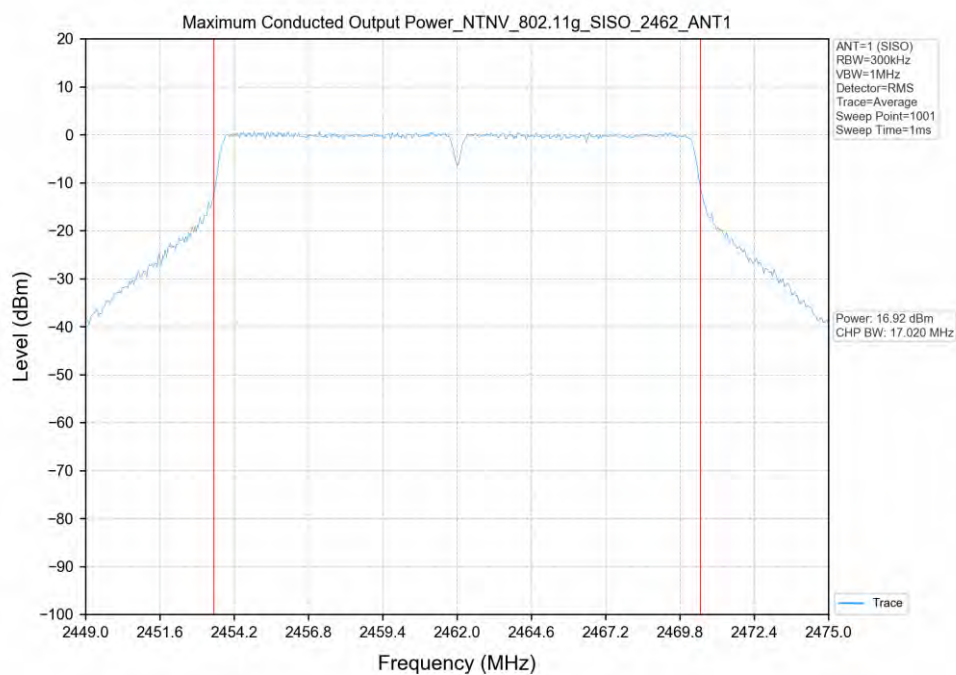
802.11g_2437MHz_SISO_ANT1



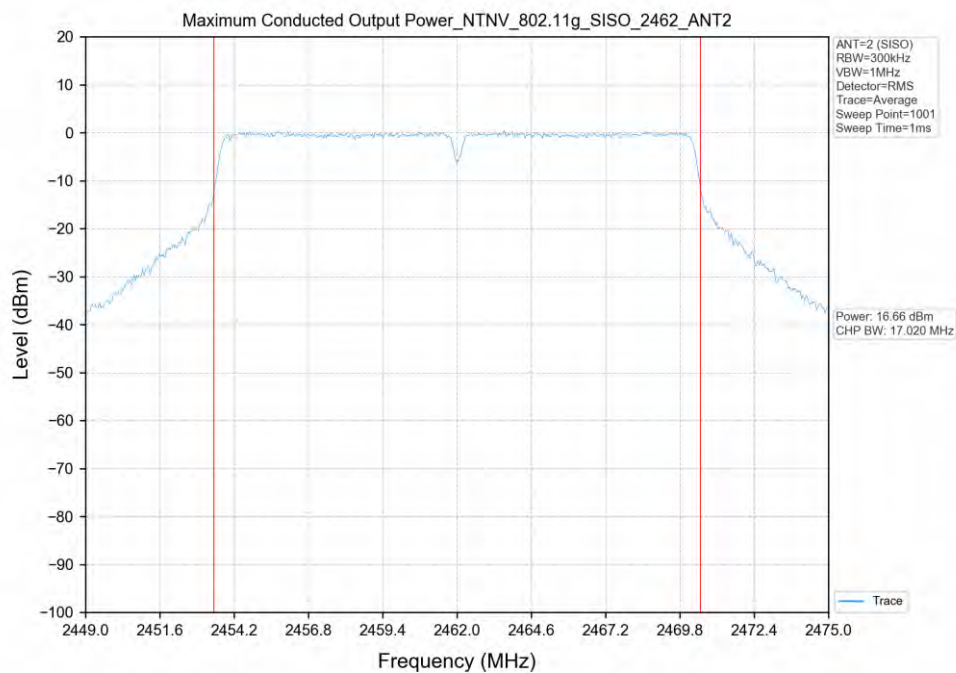
802.11g_2437MHz_SISO_ANT2



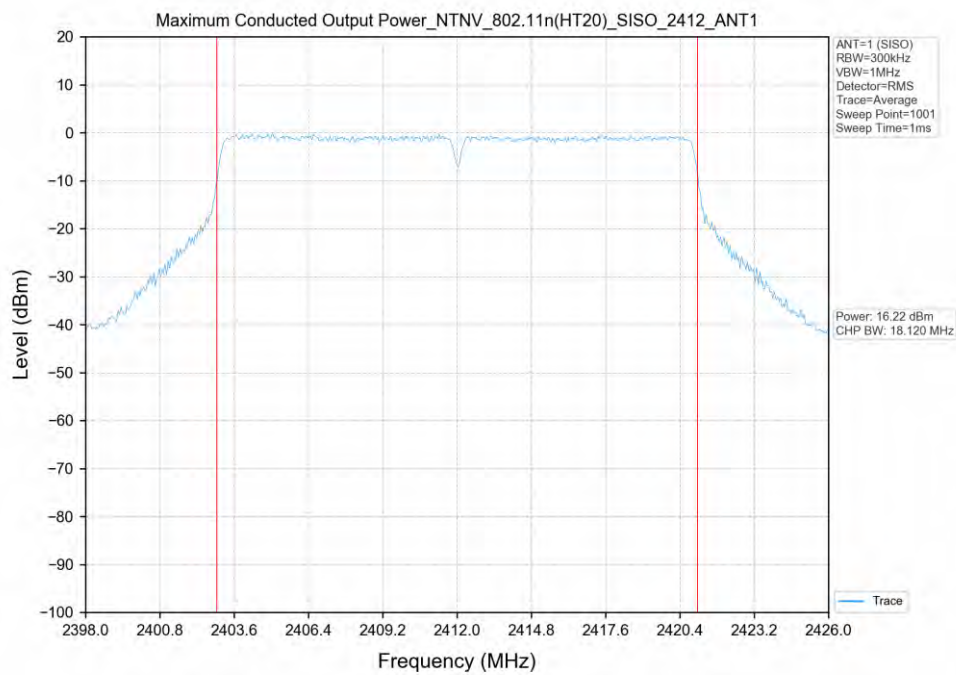
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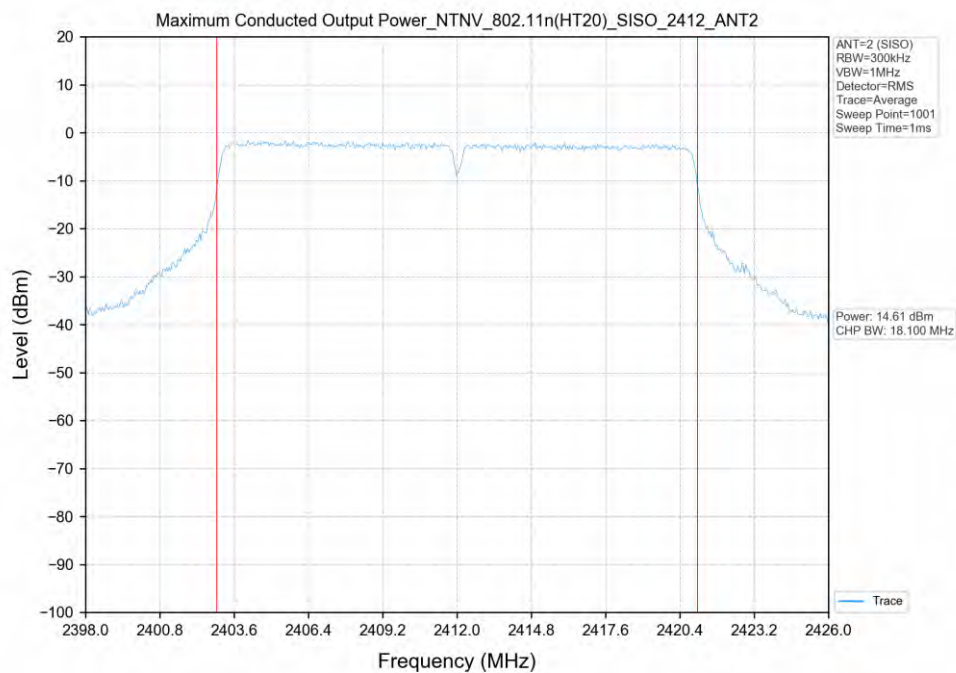
802.11g_2462MHz_SISO_ANT2



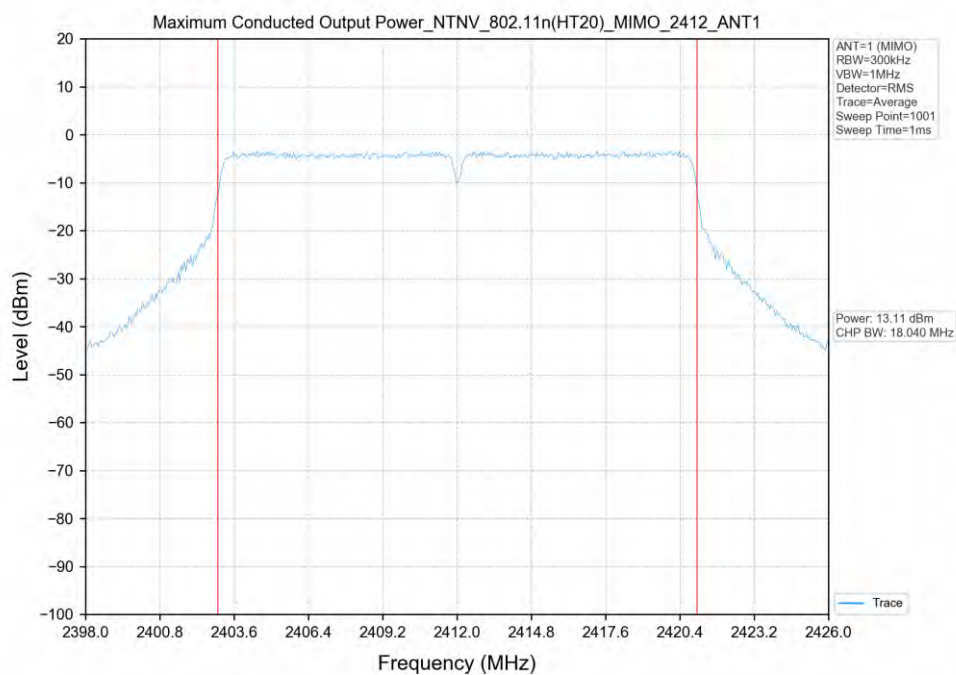
802.11n(HT20)_2412MHz_SISO_ANT1



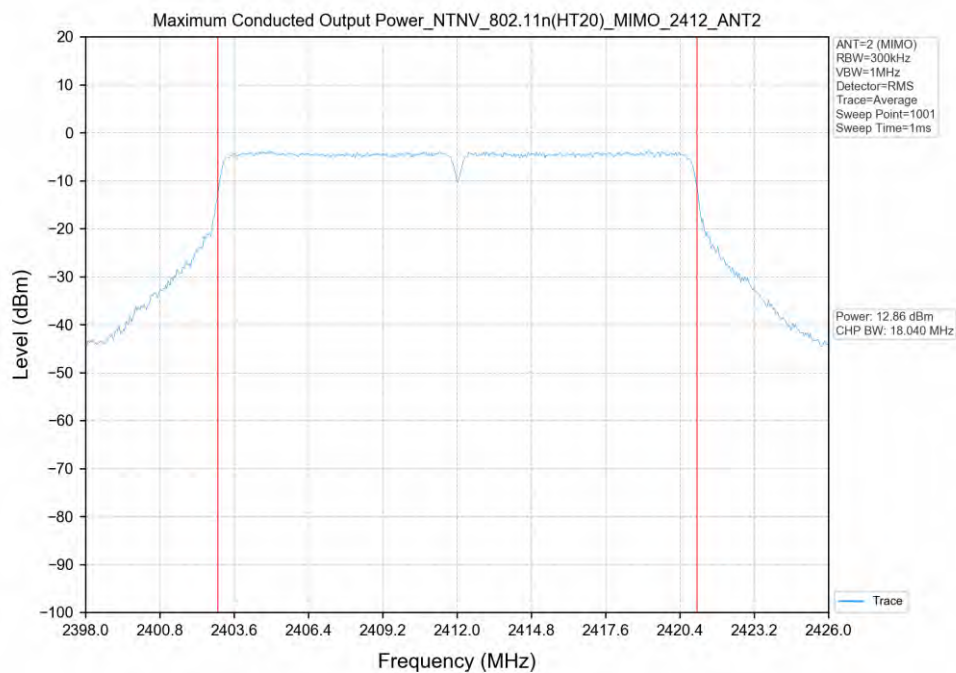
802.11n(HT20)_2412MHz_SISO_ANT2



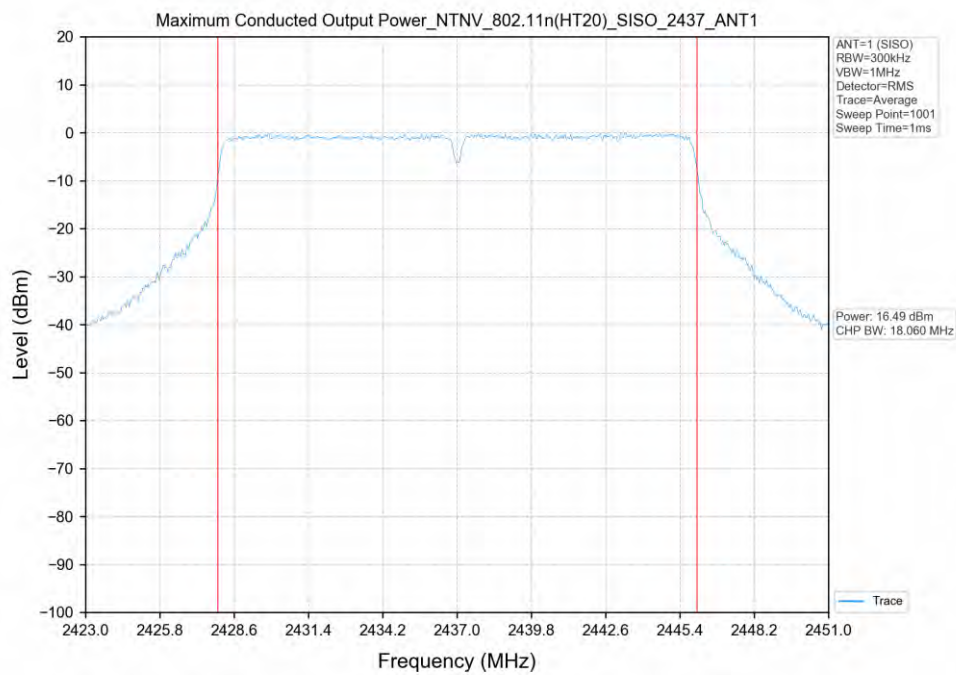
802.11n(HT20)_2412MHz_MIMO_ANT1



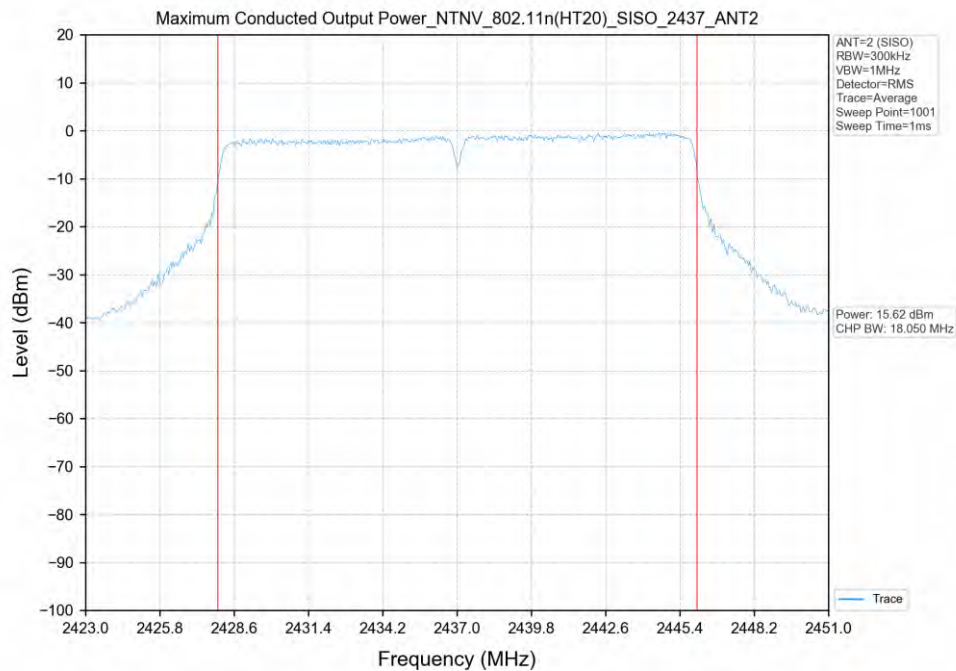
802.11n(HT20)_2412MHz MIMO_ANT2



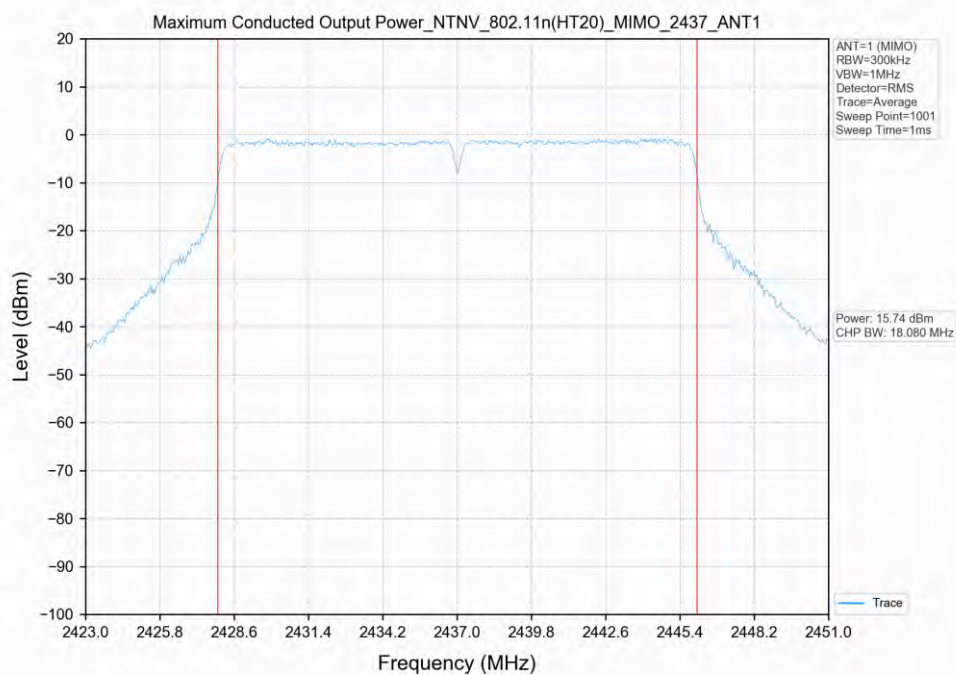
802.11n(HT20)_2437MHz SISO_ANT1



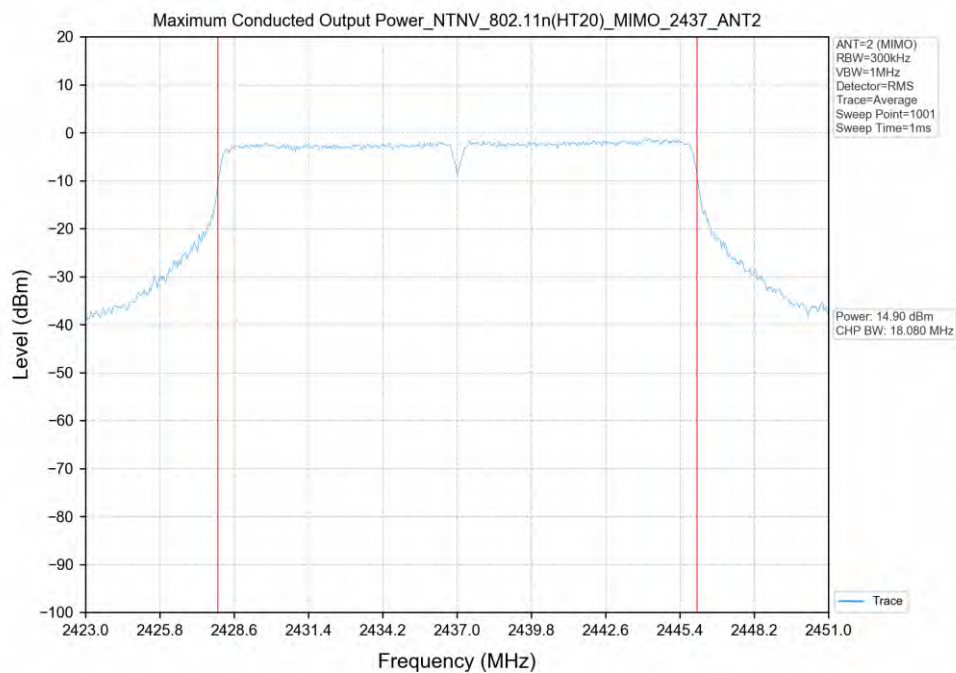
802.11n(HT20)_2437MHz_SISO_ANT2



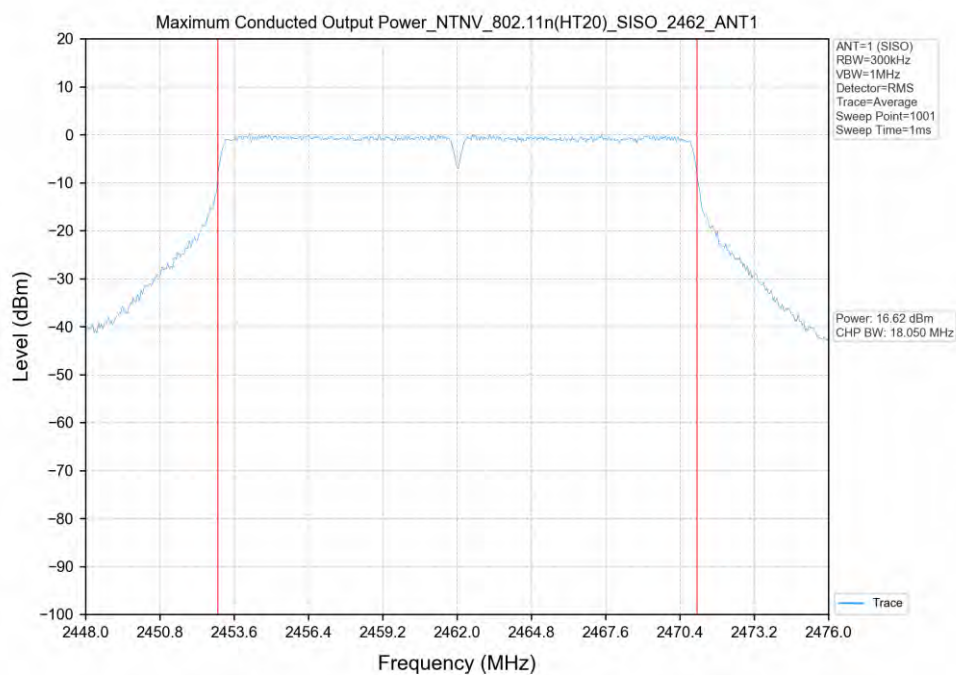
802.11n(HT20)_2437MHz_MIMO_ANT1



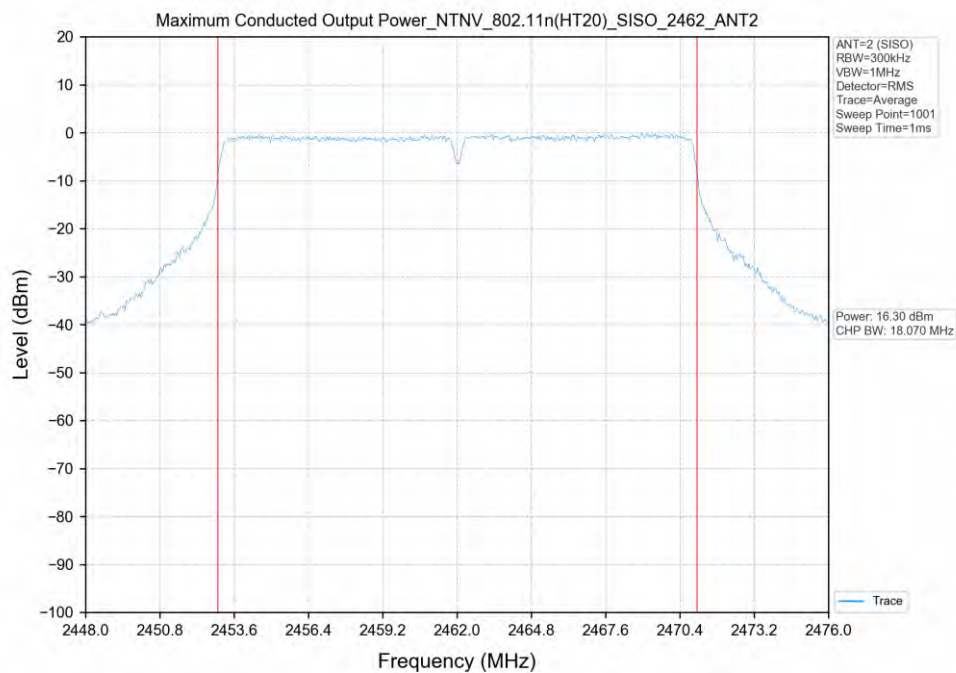
802.11n(HT20)_2437MHz MIMO_ANT2



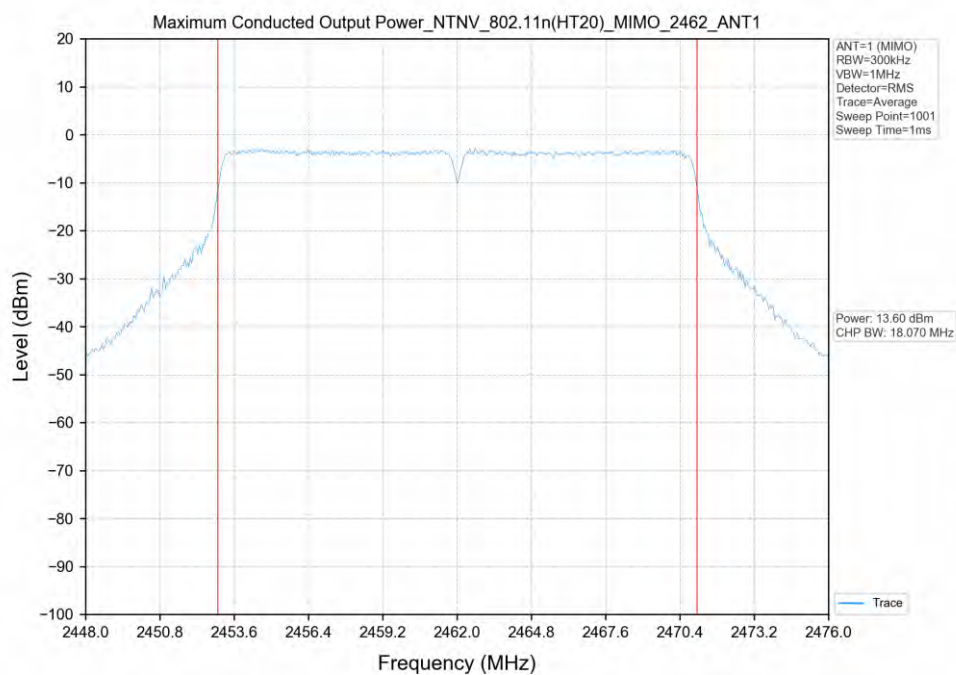
802.11n(HT20)_2462MHz SISO_ANT1



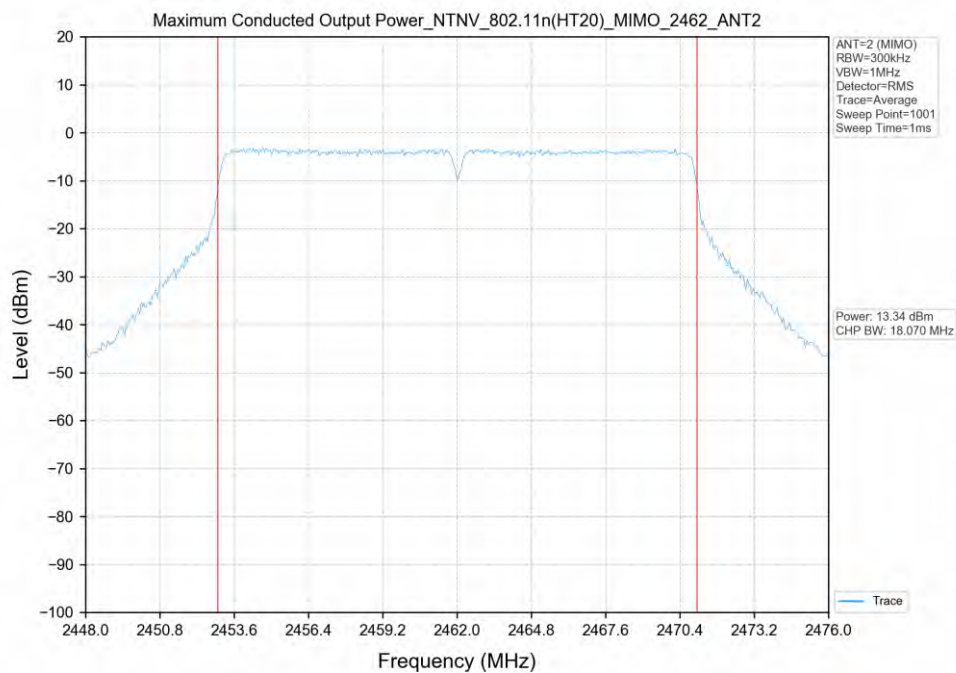
802.11n(HT20)_2462MHz_SISO_ANT2



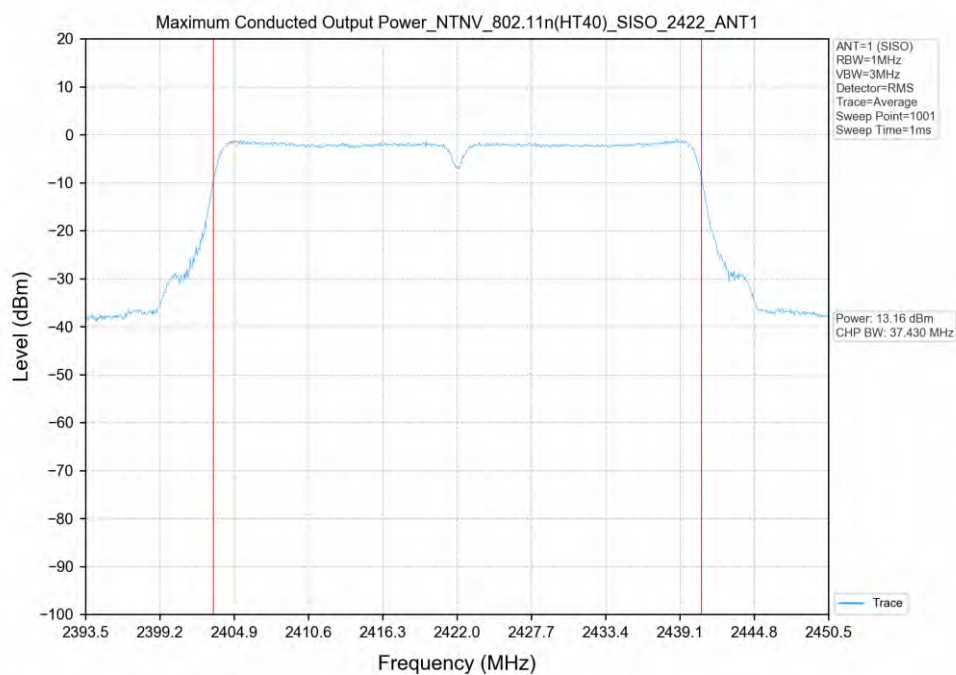
802.11n(HT20)_2462MHz_MIMO_ANT1



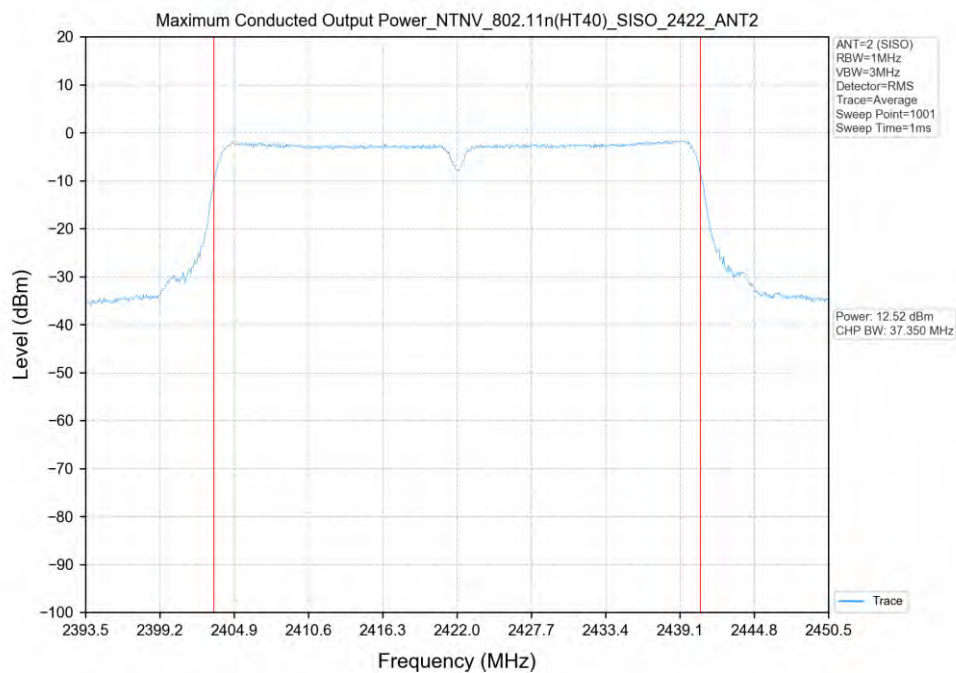
802.11n(HT20)_2462MHz MIMO_ANT2



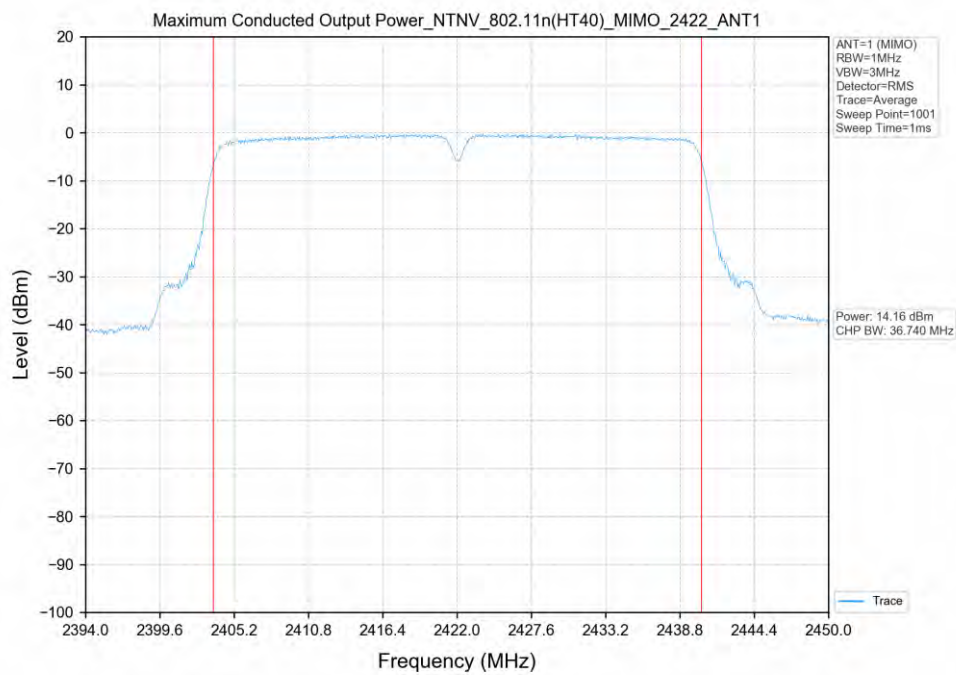
802.11n(HT40)_2422MHz_SISO_ANT1



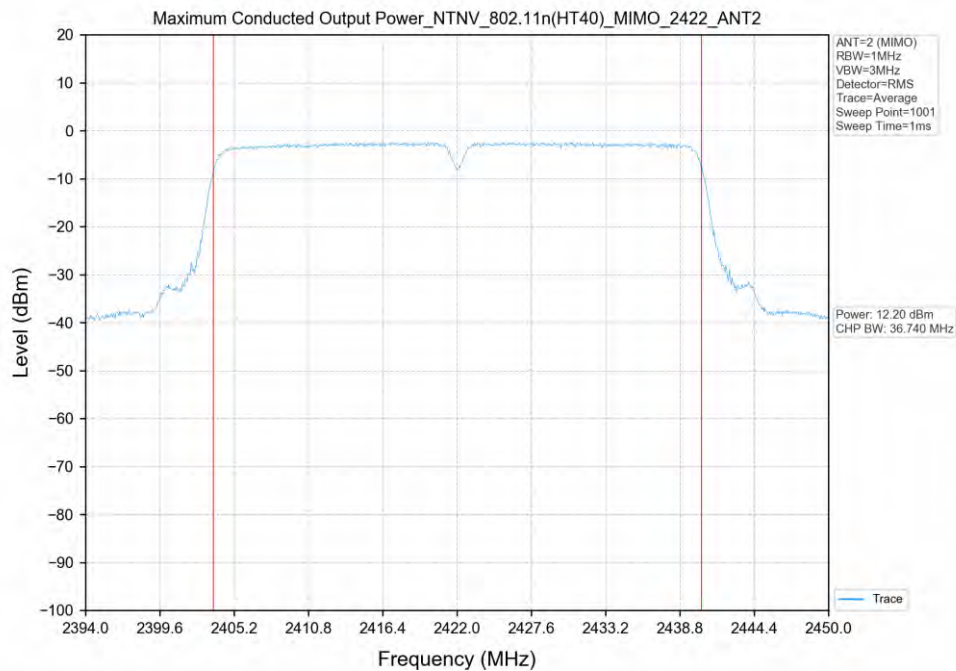
802.11n(HT40)_2422MHz_SISO_ANT2



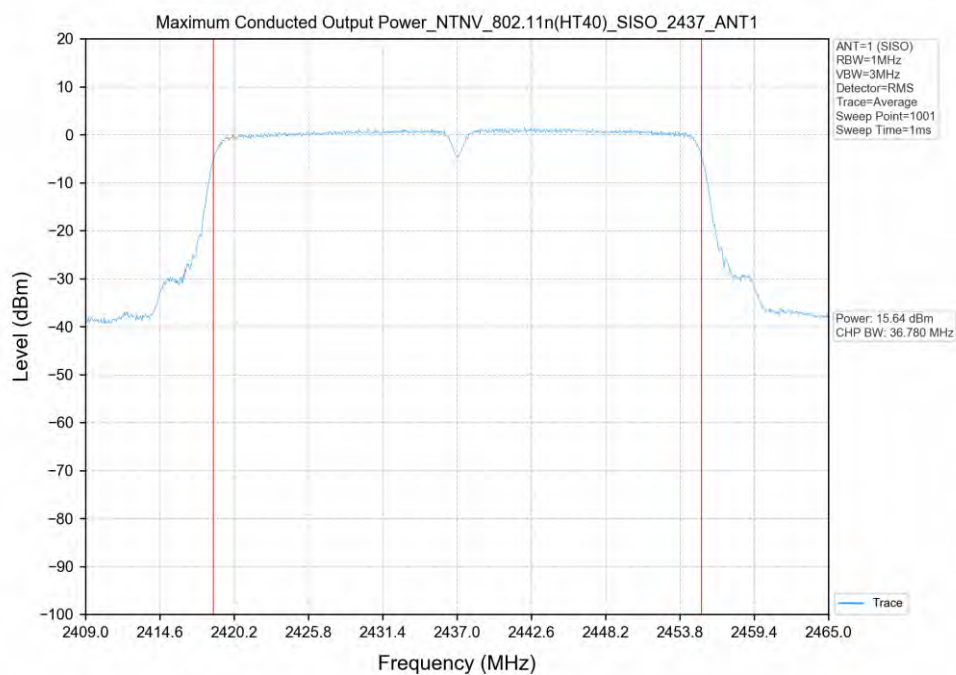
802.11n(HT40)_2422MHz_MIMO_ANT1



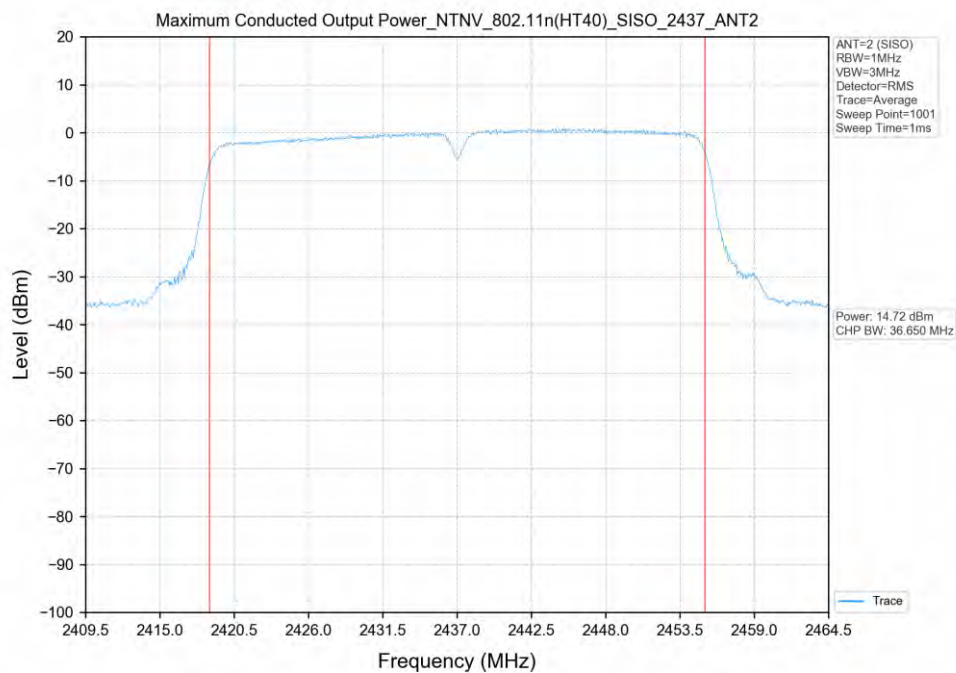
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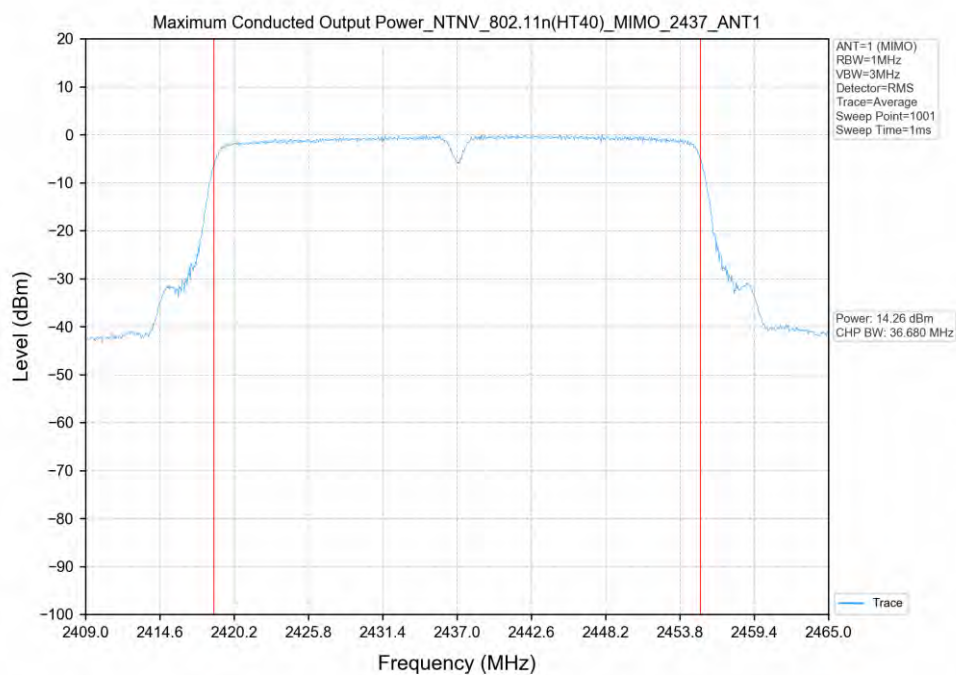
802.11n(HT40)_2437MHz_SISO_ANT1



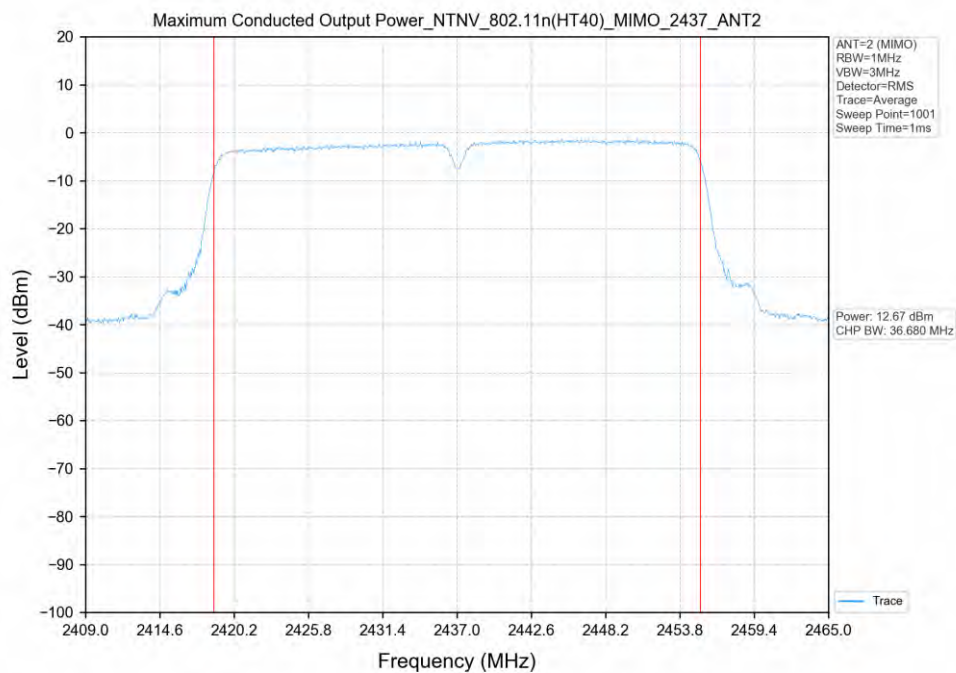
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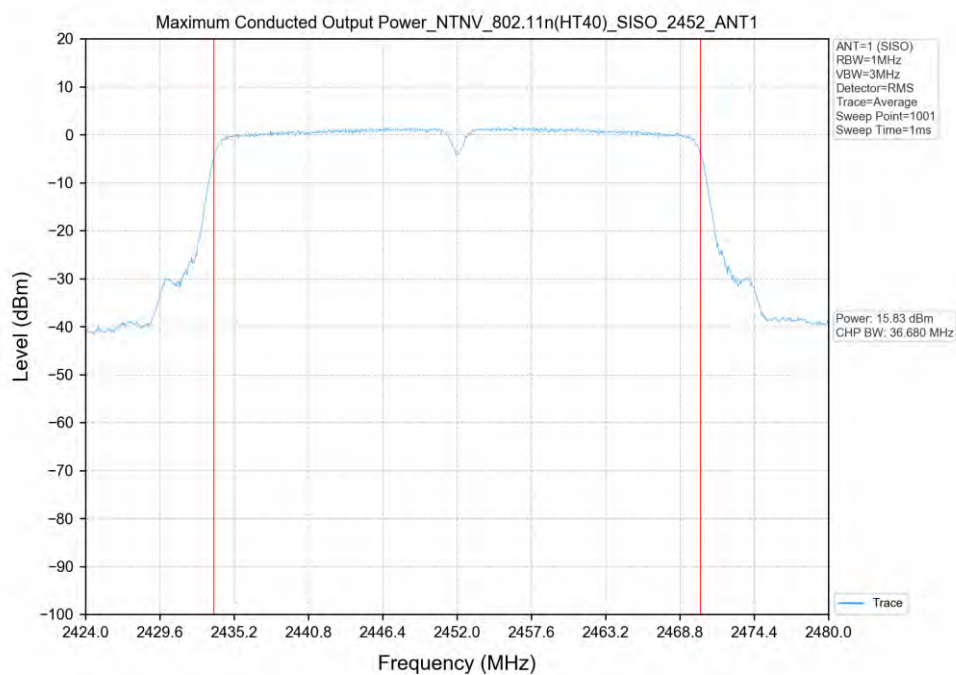
802.11n(HT40)_2437MHz_MIMO_ANT1



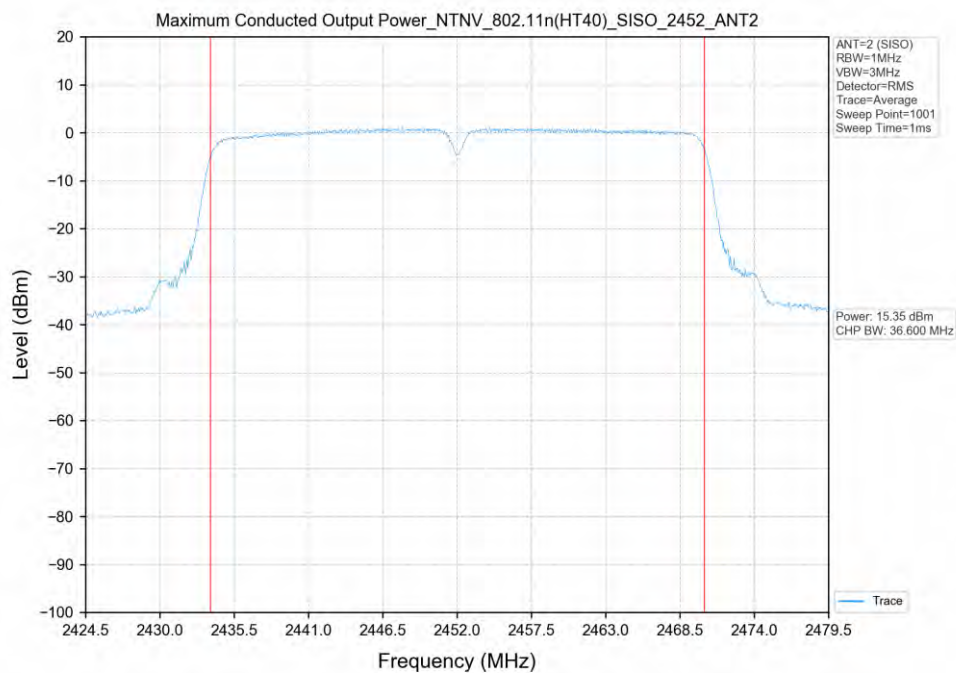
802.11n(HT40)_2437MHz MIMO_ANT2



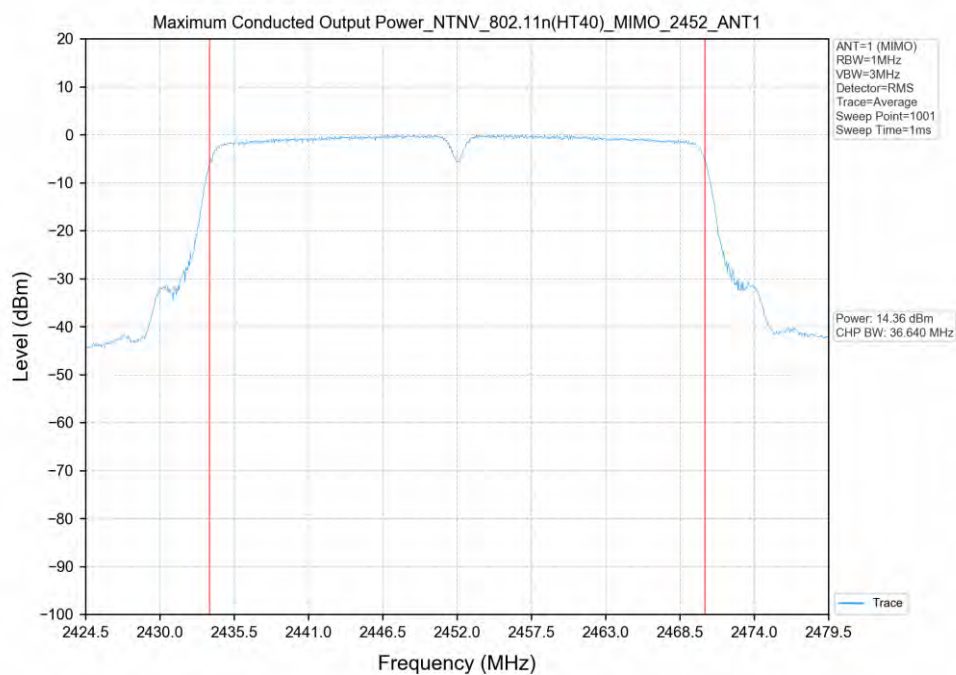
802.11n(HT40)_2452MHz SISO_ANT1



802.11n(HT40)_2452MHz_SISO_ANT2



802.11n(HT40)_2452MHz_MIMO_ANT1



802.11n(HT40)_2452MHz MIMO_ANT2

