



Appendix A for SHEM190901758901

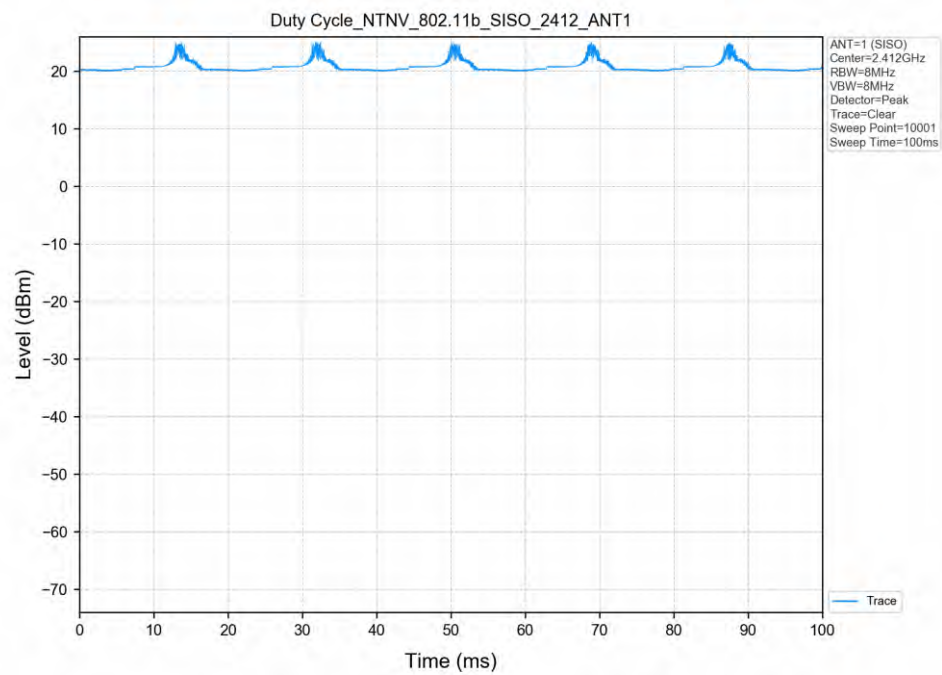
1. Duty Cycle

1.1 Test Result

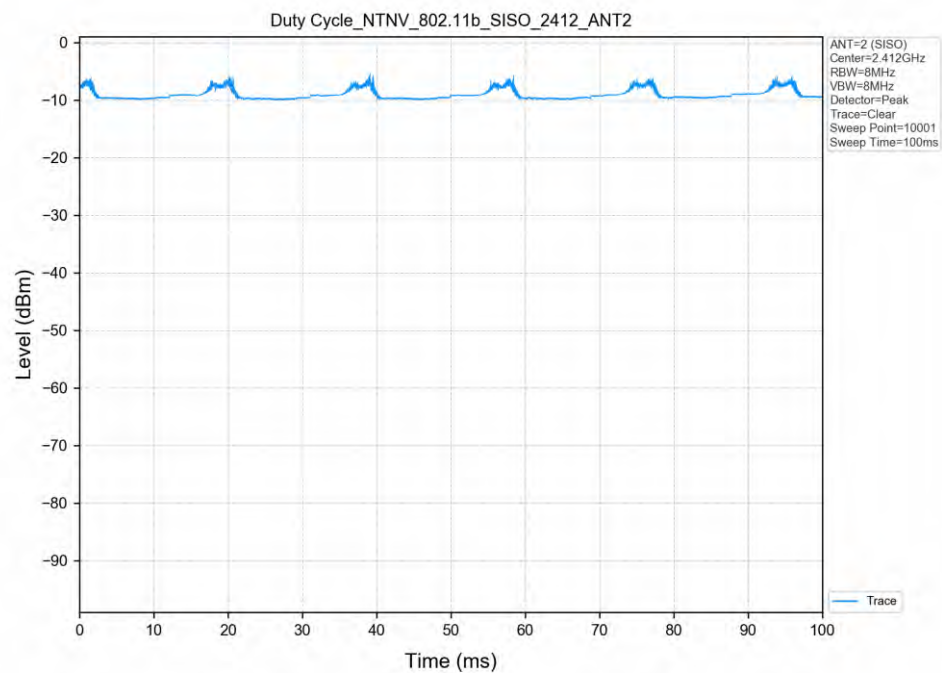
Test Mode	Channel Frequency(MHz)	TX Type	ANT No.	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
802.11b	2412	SISO	1	100.000	100.000	100.00	0.00
			2	100.000	100.000	100.00	0.00
	2437	SISO	1	100.000	100.000	100.00	0.00
			2	100.000	100.000	100.00	0.00
	2462	SISO	1	100.000	100.000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

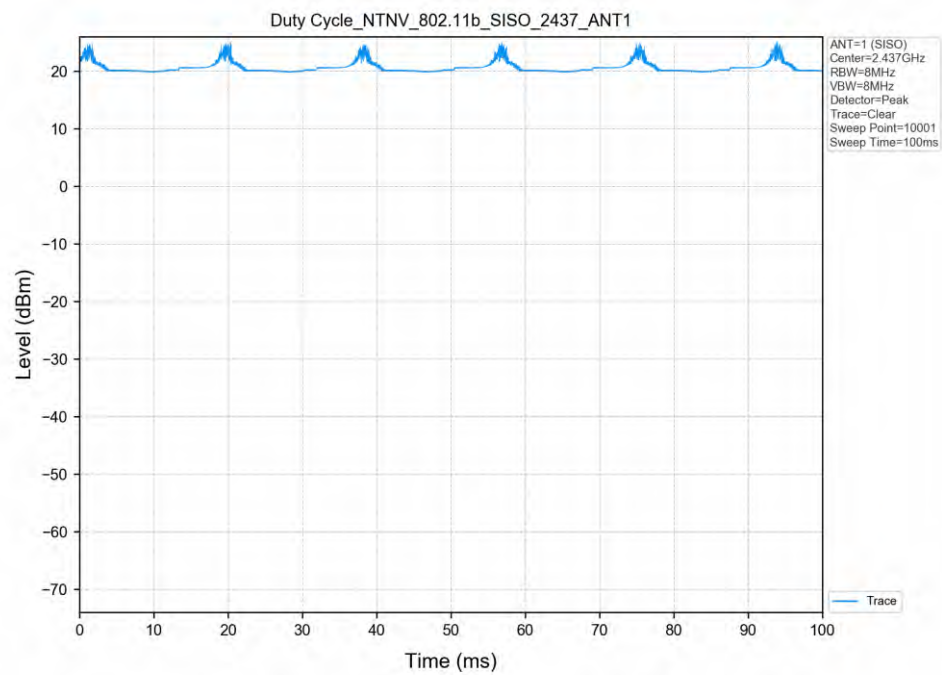
802.11b_2412MHz_SISO_ANT1



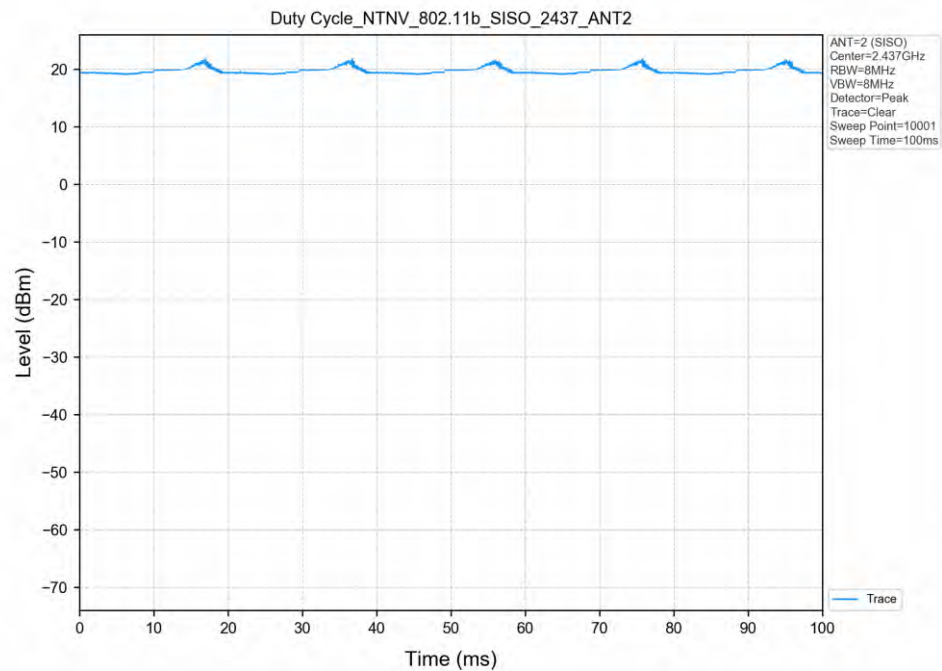
802.11b_2412MHz_SISO_ANT2



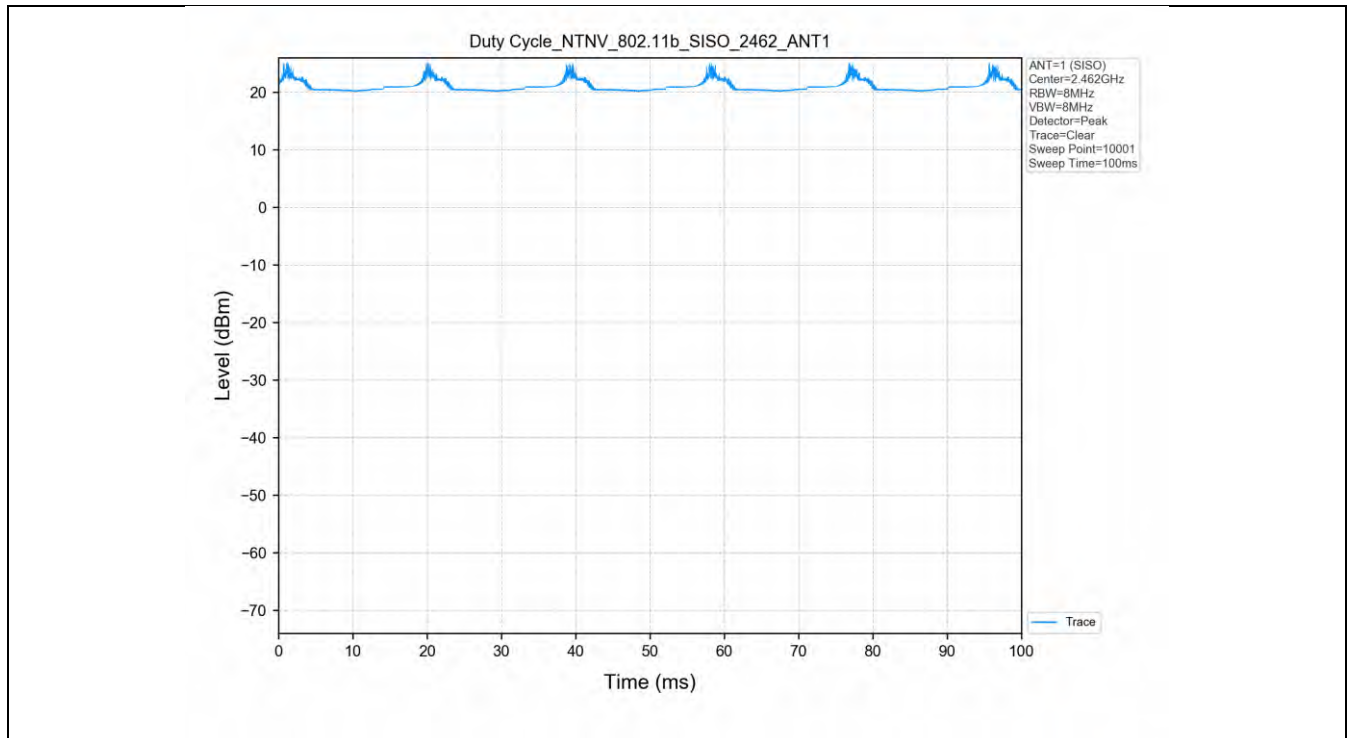
802.11b_2437MHz_SISO_ANT1



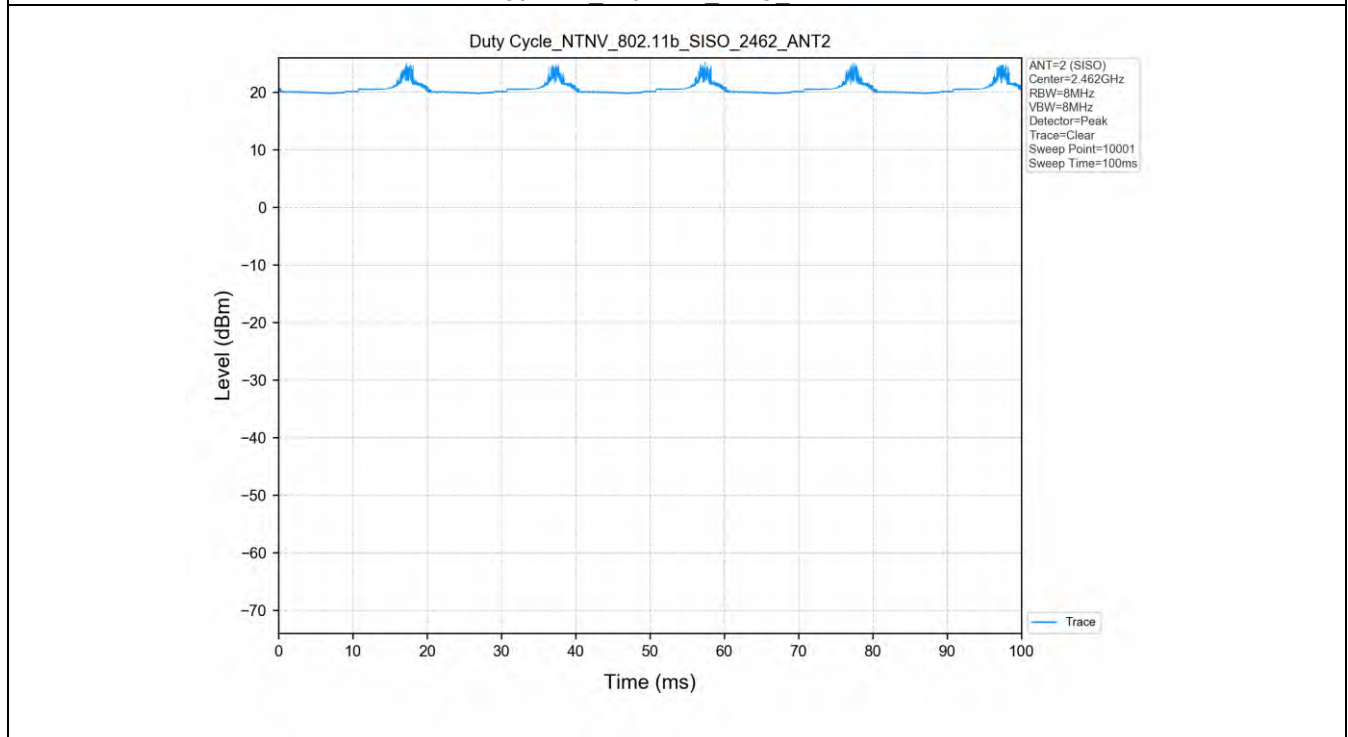
802.11b_2437MHz_SISO_ANT2



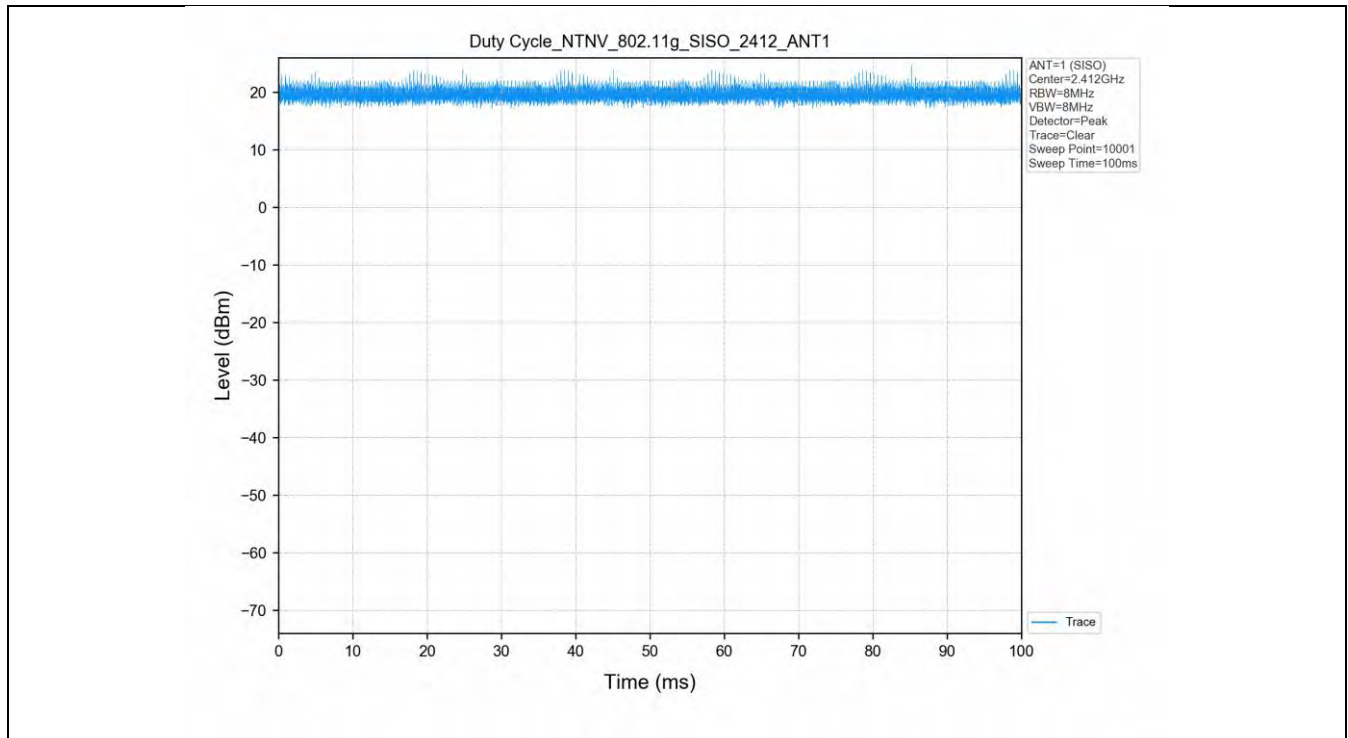
802.11b_2462MHz_SISO_ANT1



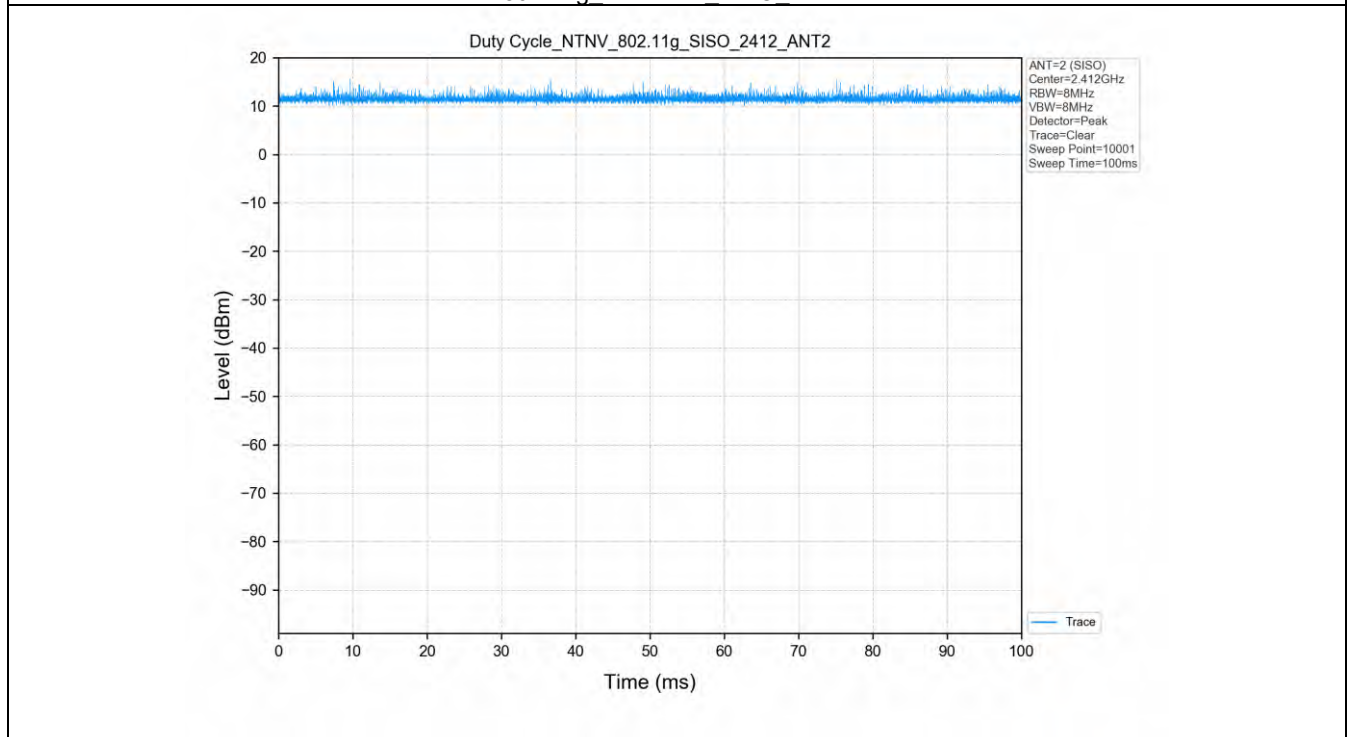
802.11b_2462MHz_SISO_ANT2



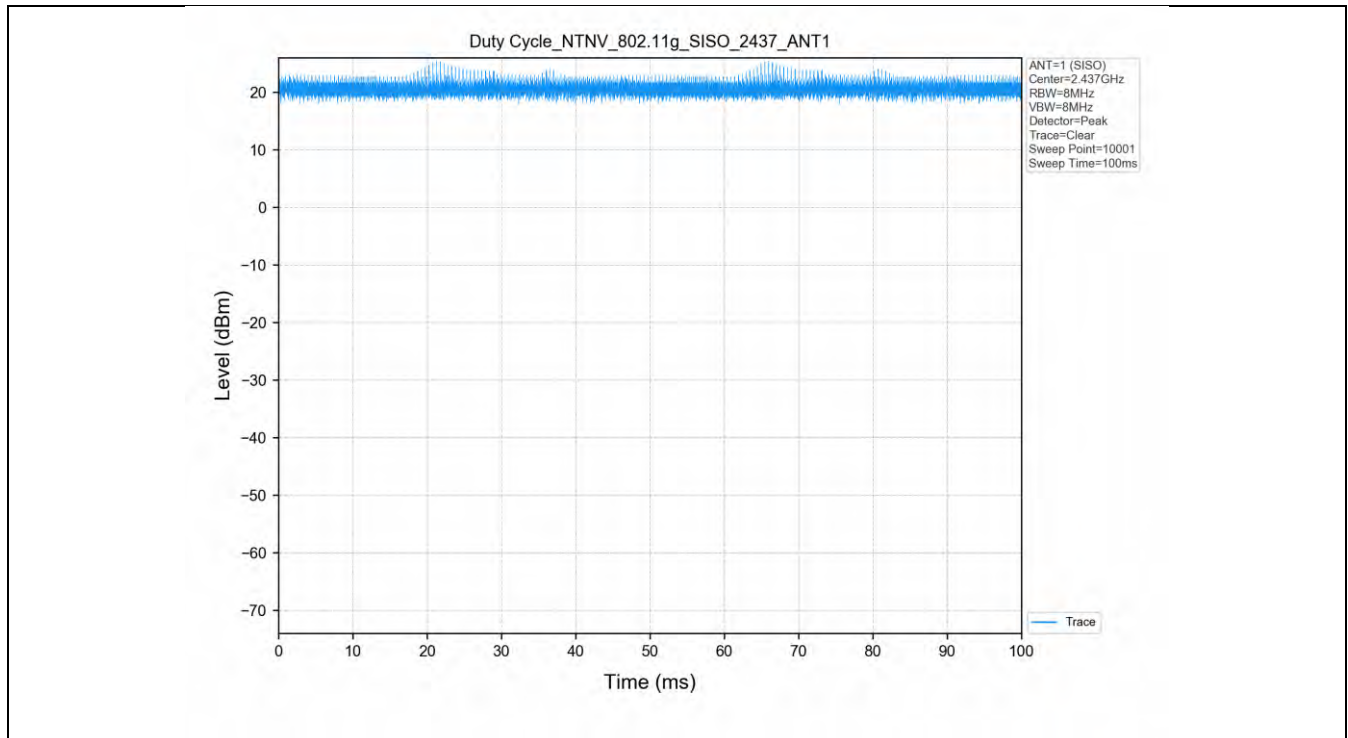
802.11g_2412MHz_SISO_ANT1



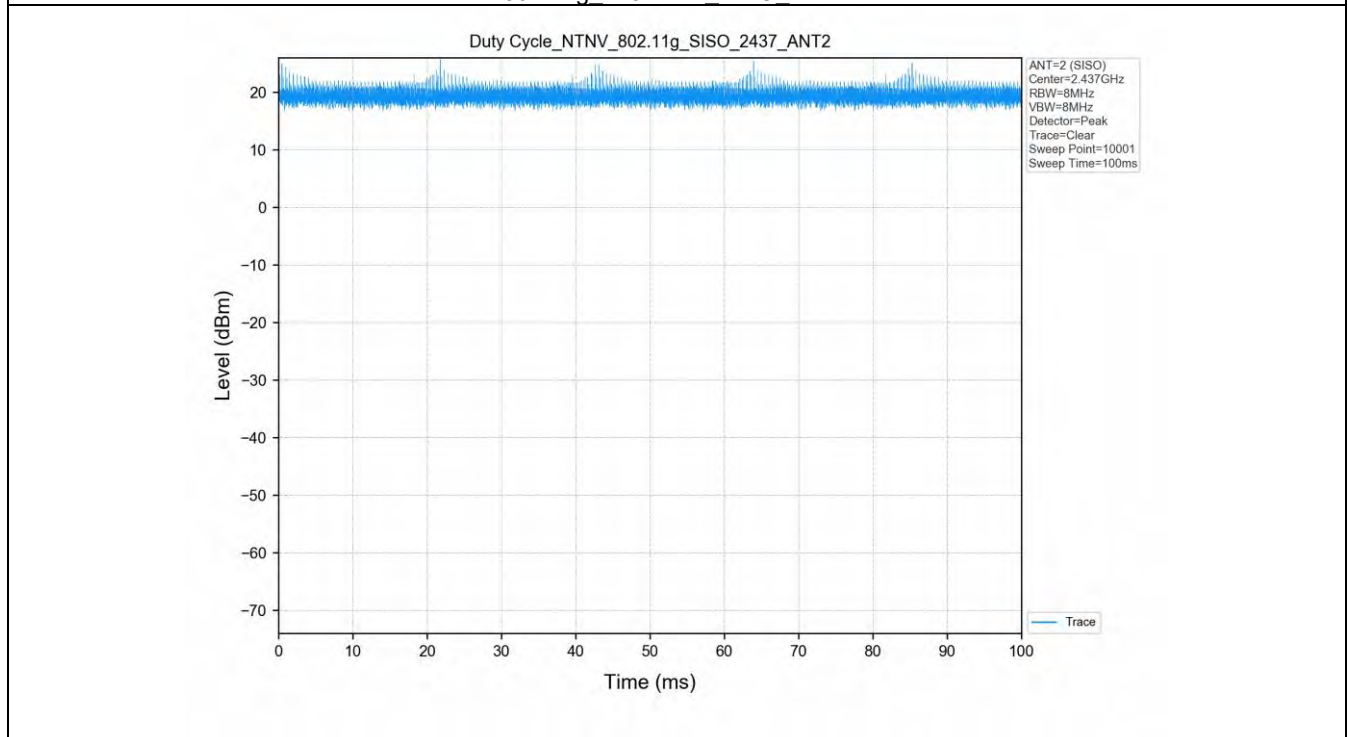
802.11g 2412MHz SISO ANT2



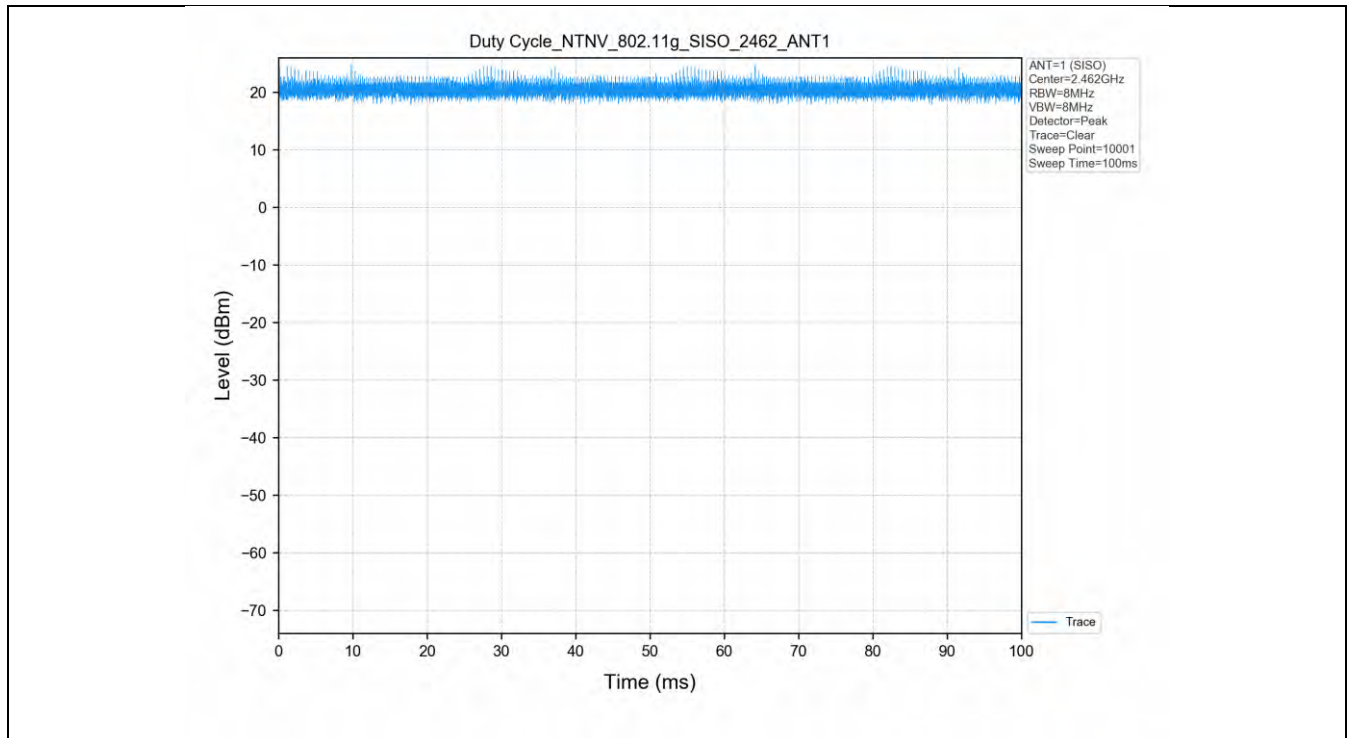
802.11g 2437MHz SISO ANT1



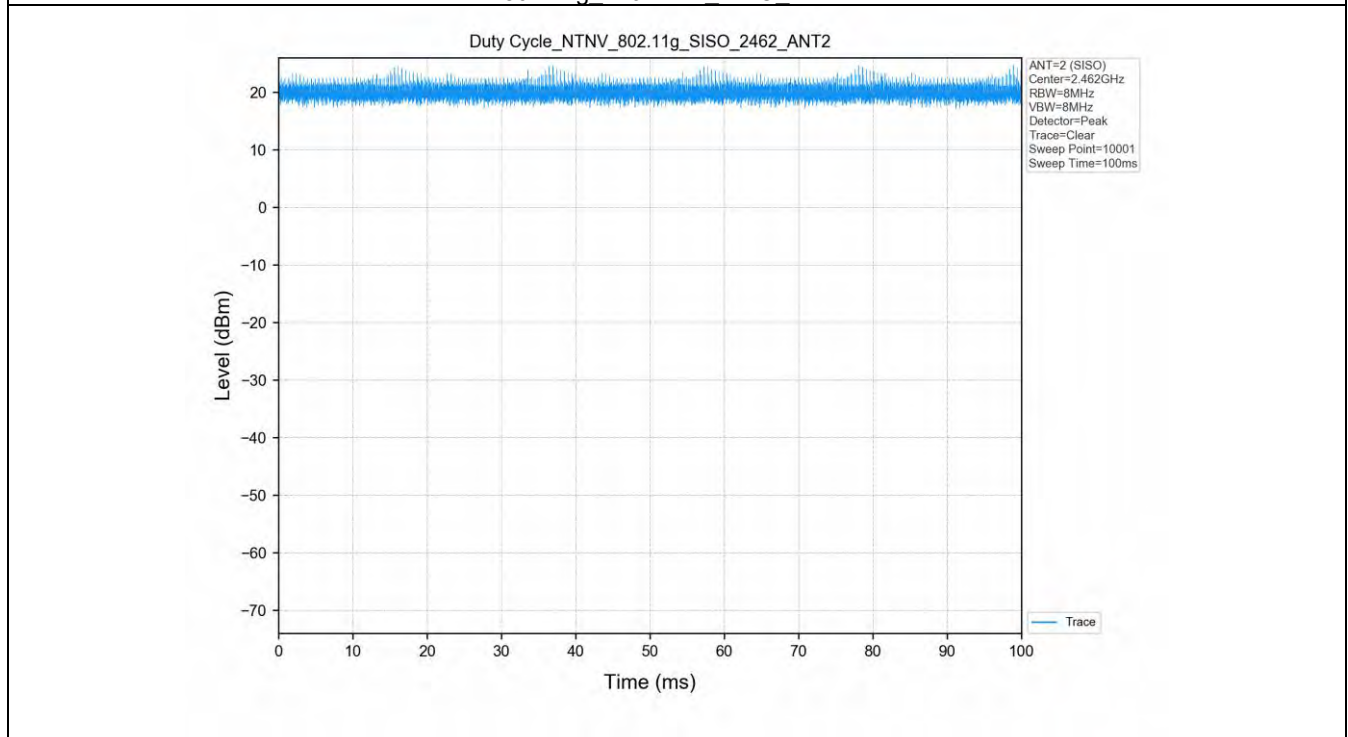
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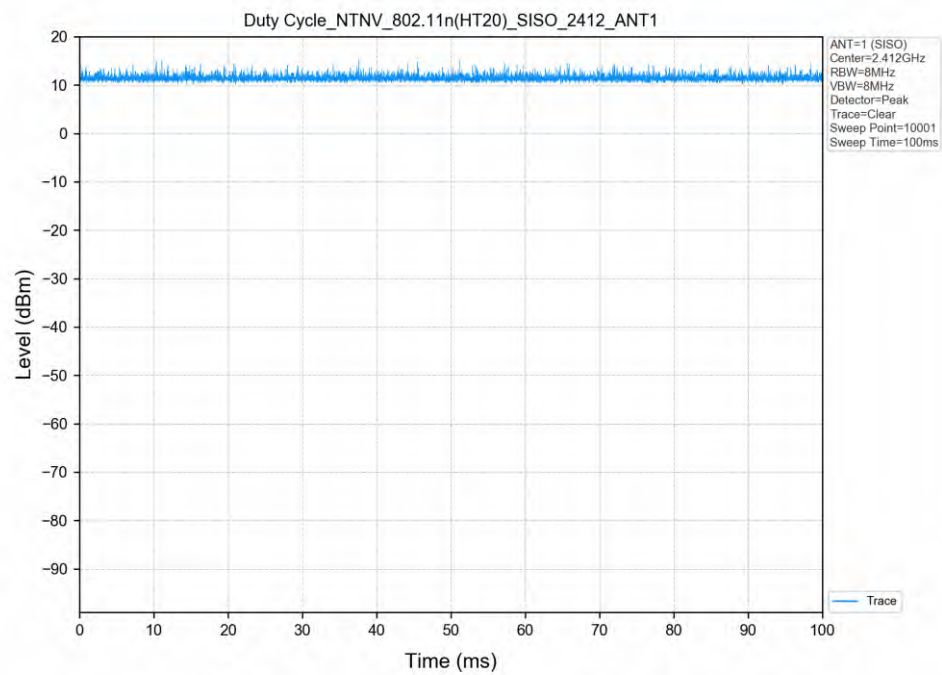
802.11g_2462MHz_SISO_ANT1



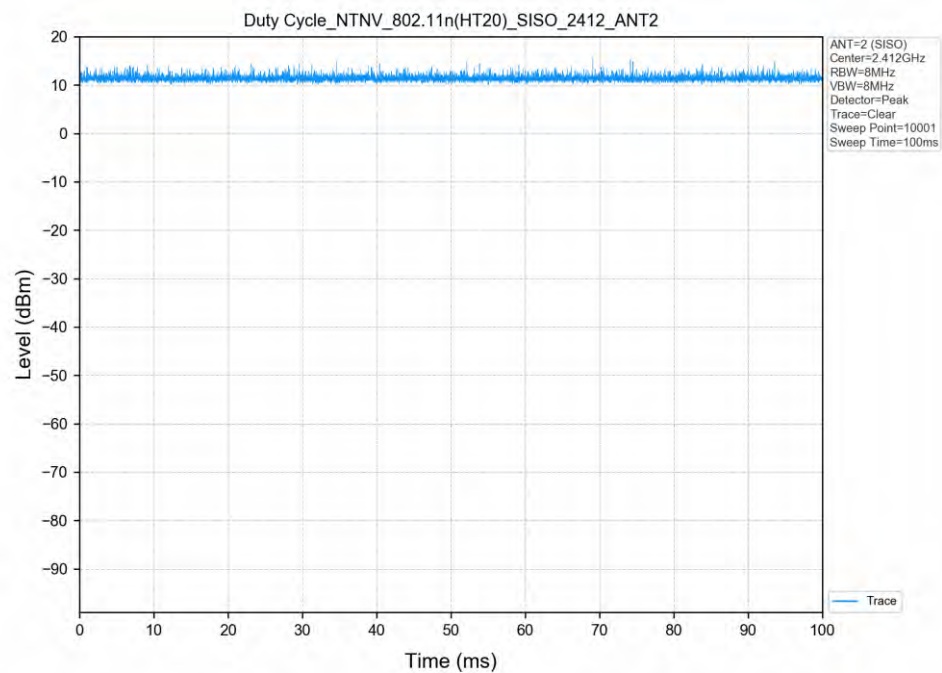
802.11g_2462MHz_SISO_ANT2



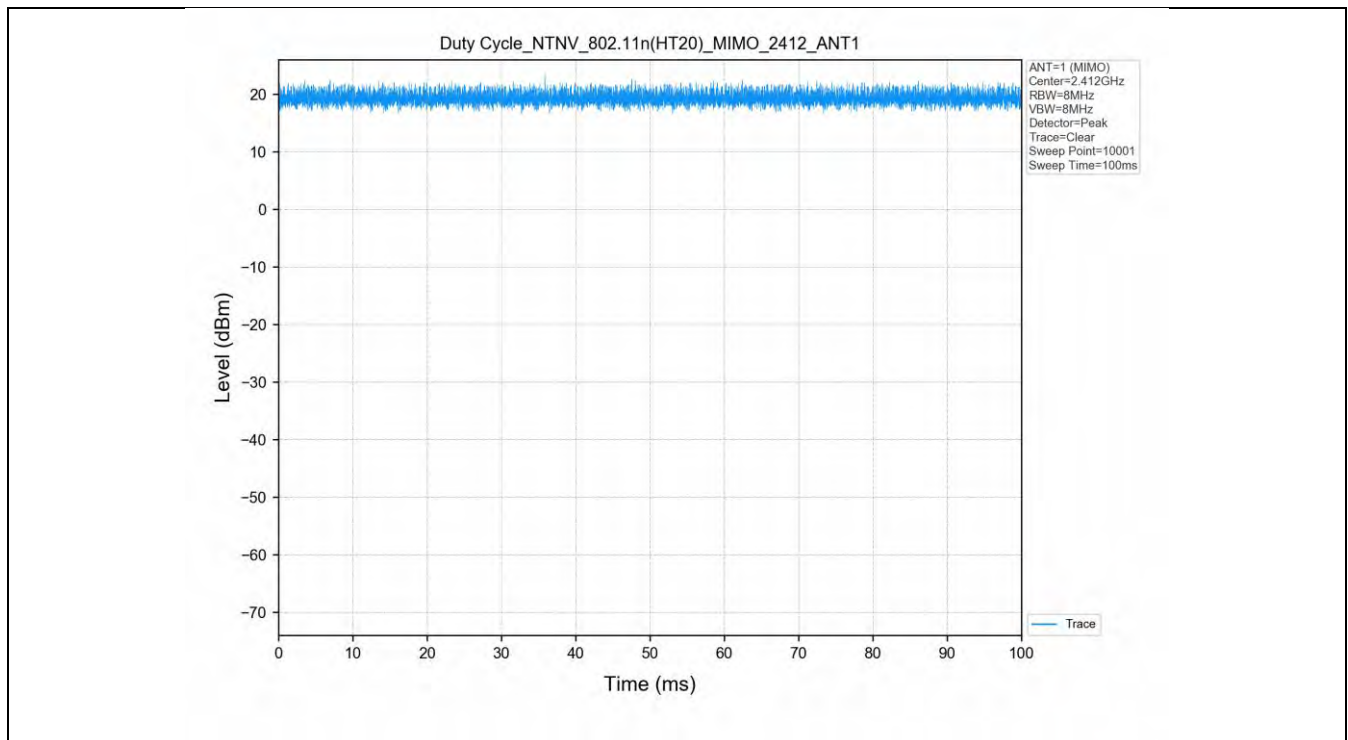
802.11n(HT20)_2412MHz_SISO_ANT1



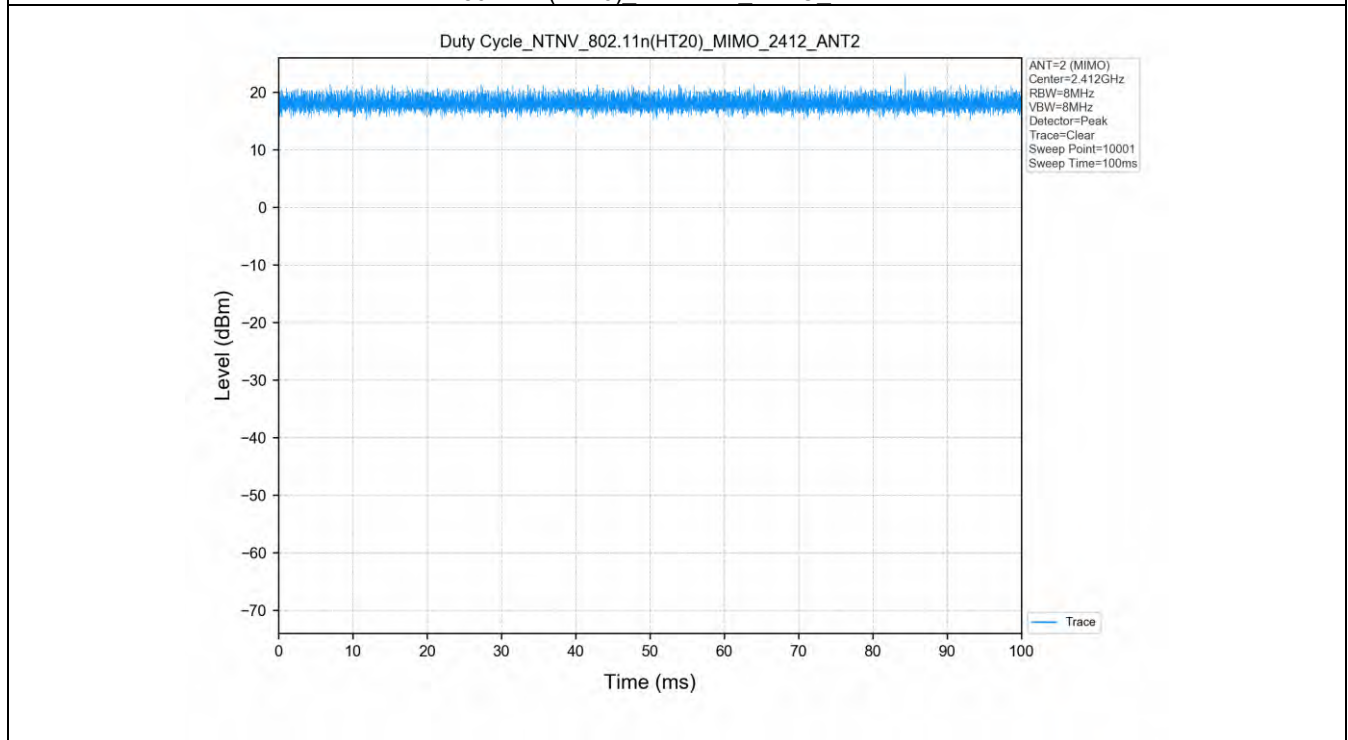
802.11n(HT20) 2412MHz SISO ANT2



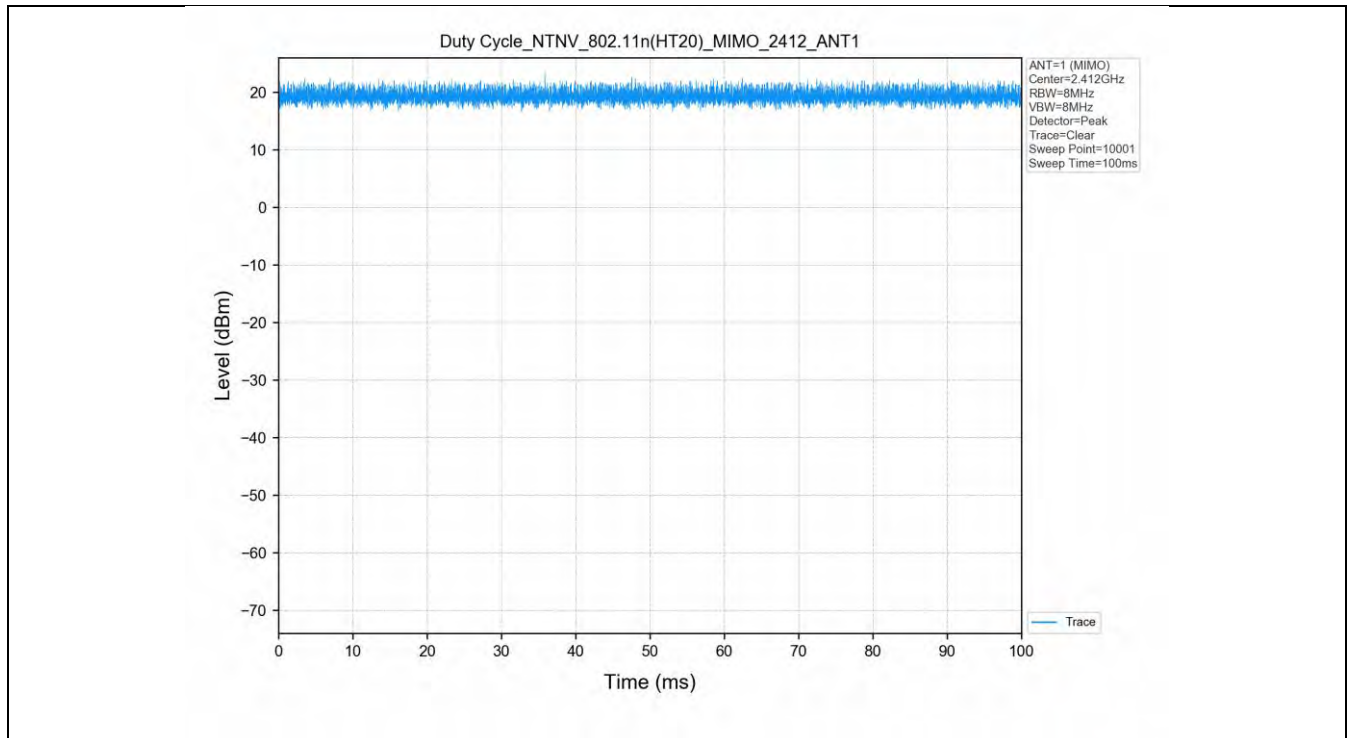
802.11n(HT20) 2412MHz MIMO ANT1



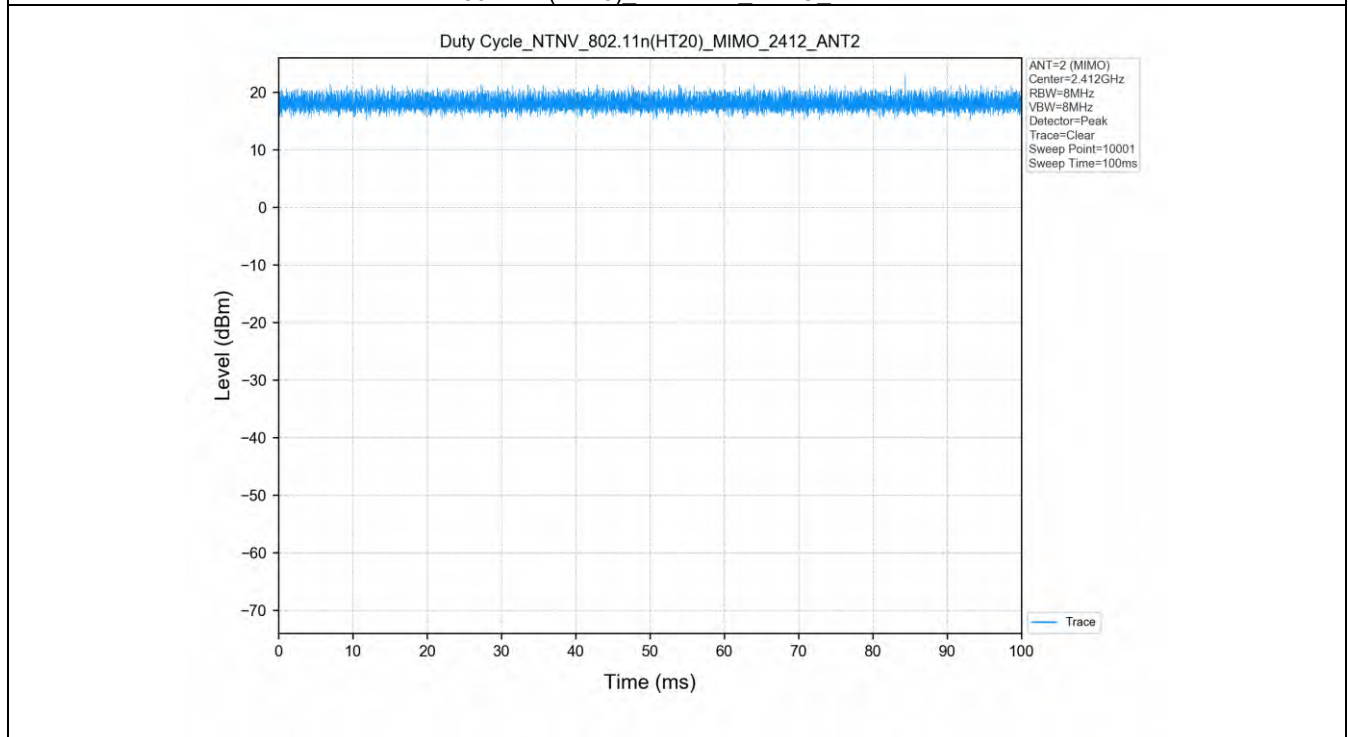
802.11n(HT20) 2412MHz MIMO ANT1



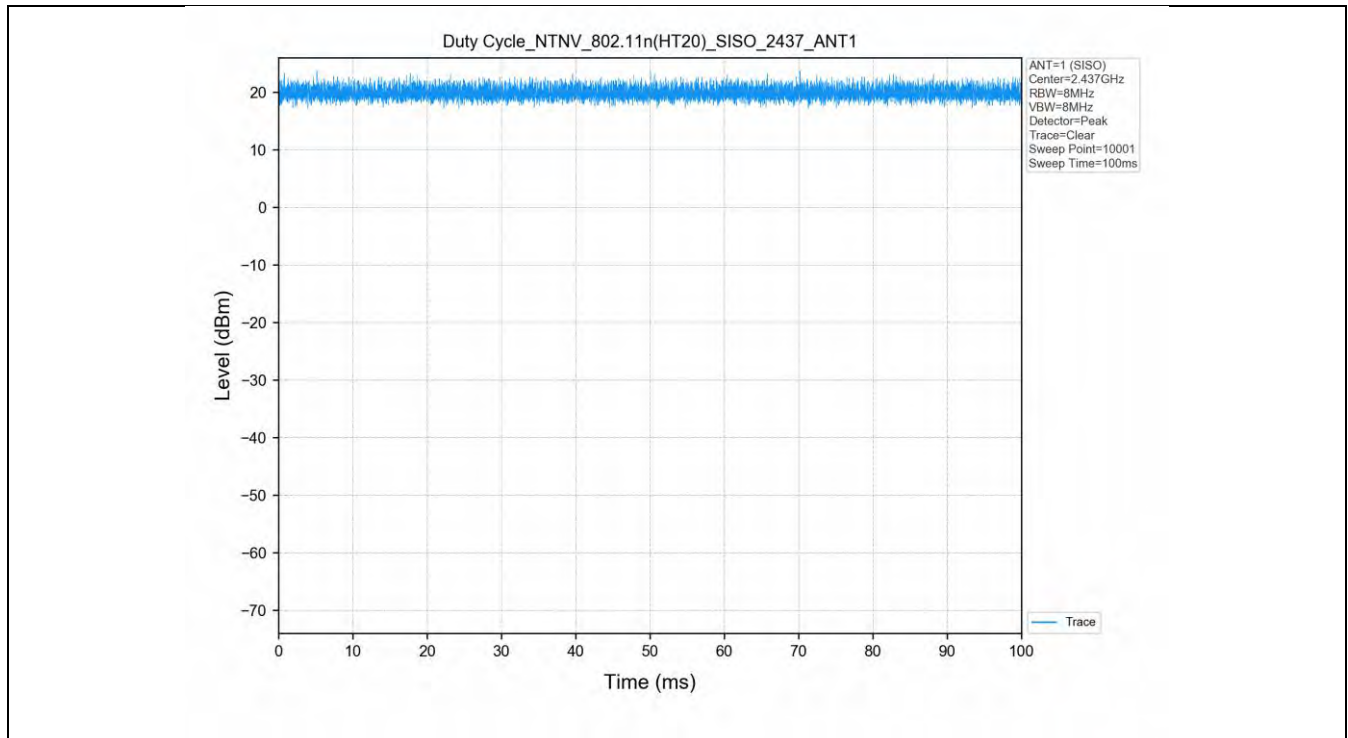
802.11n(HT20) 2412MHz MIMO ANT2



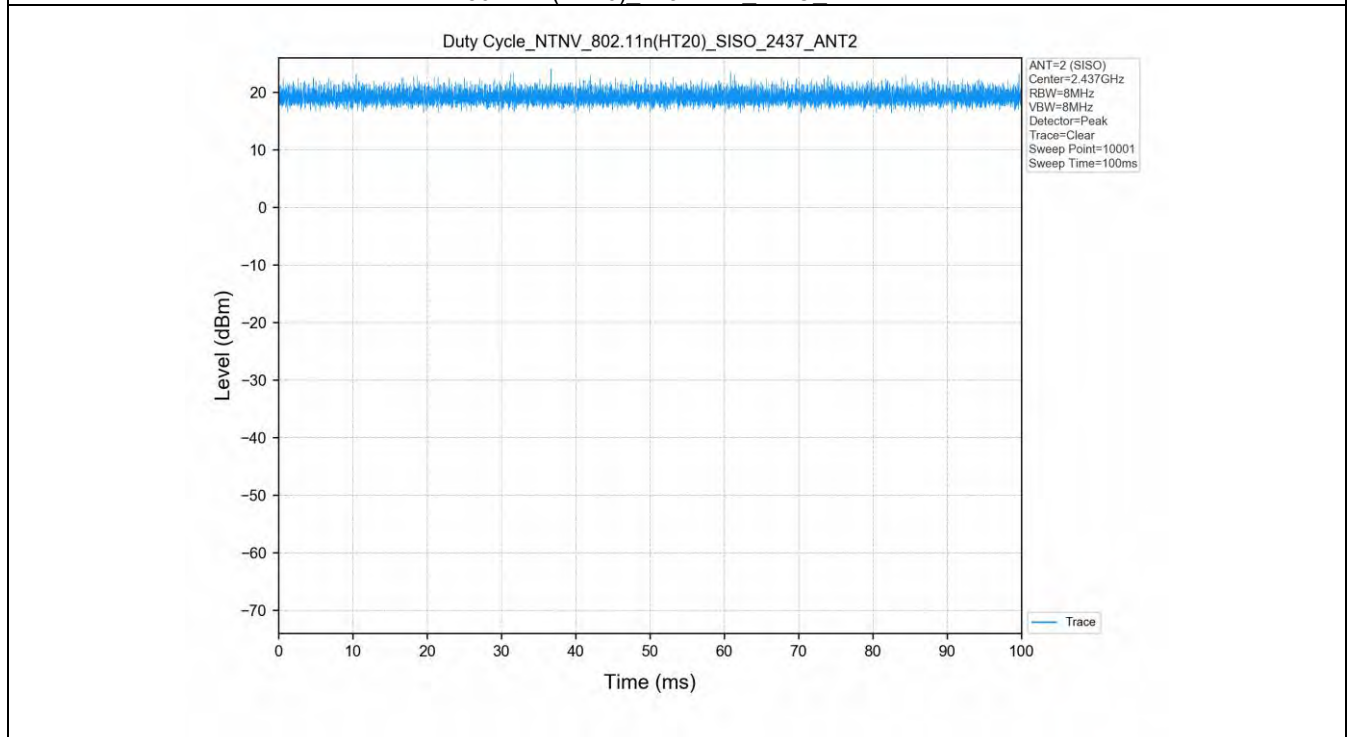
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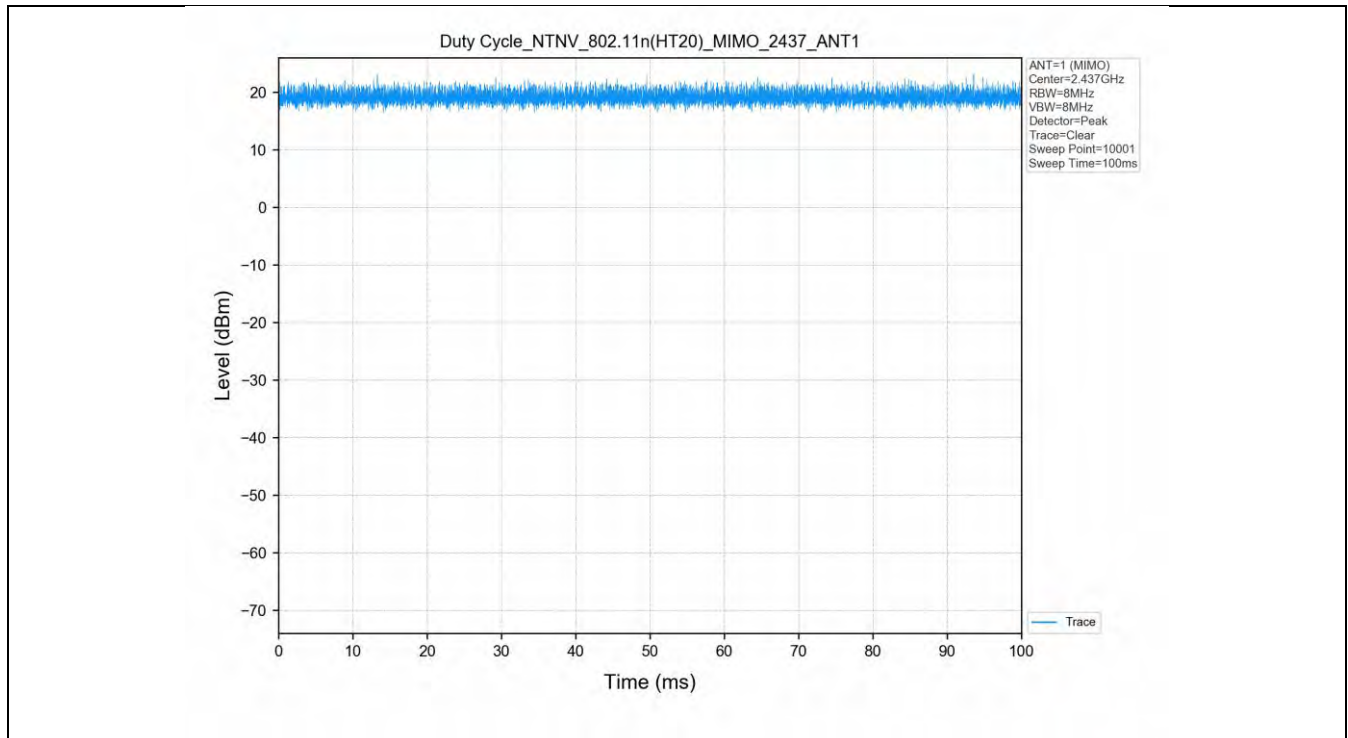
802.11n(HT20) 2437MHz SISO ANT1



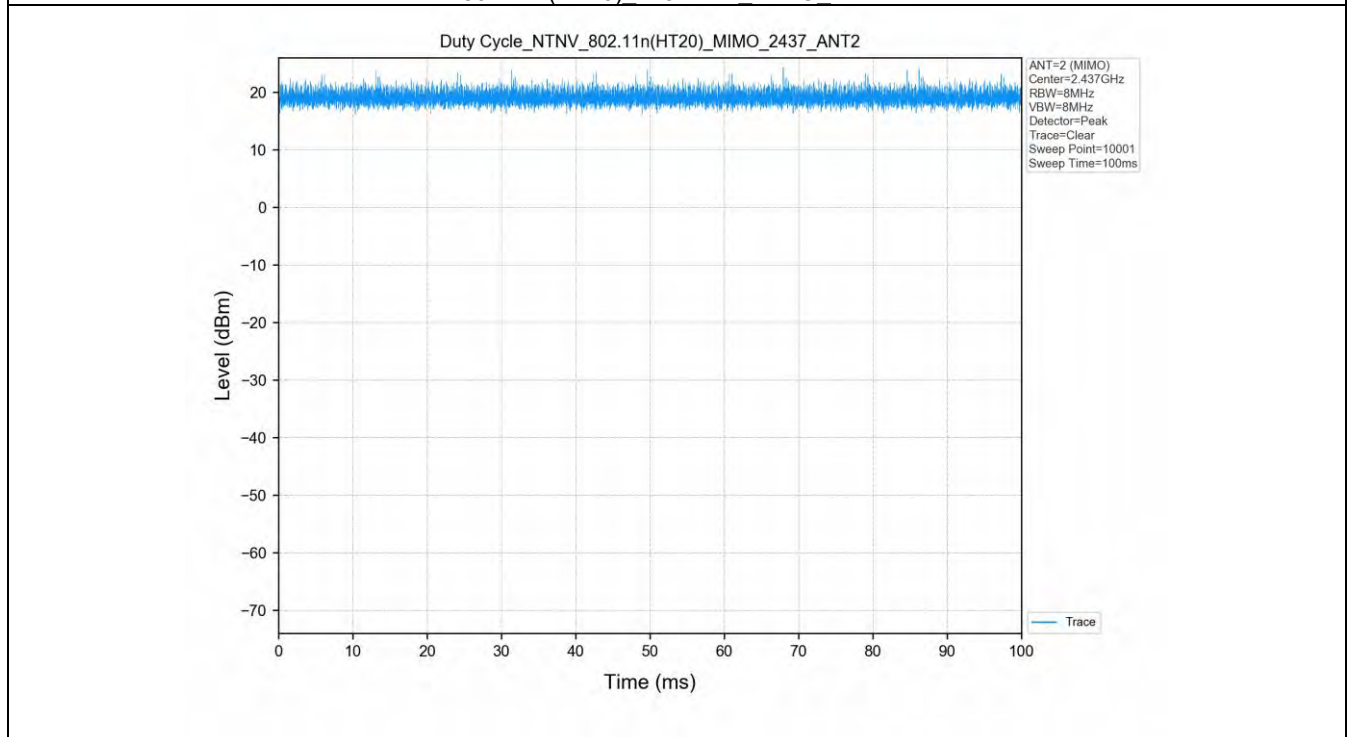
802.11n(HT20) 2437MHz SISO ANT2



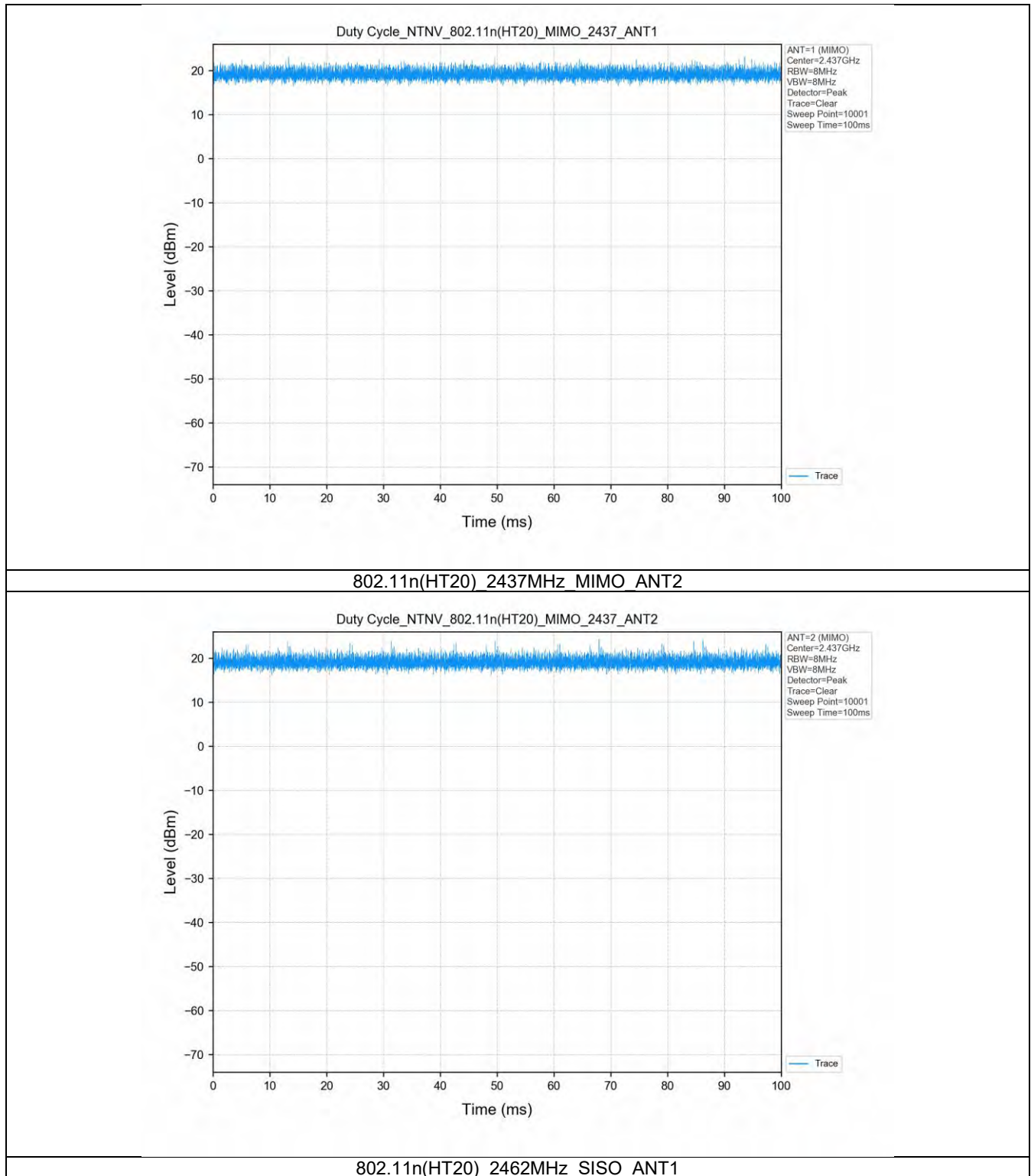
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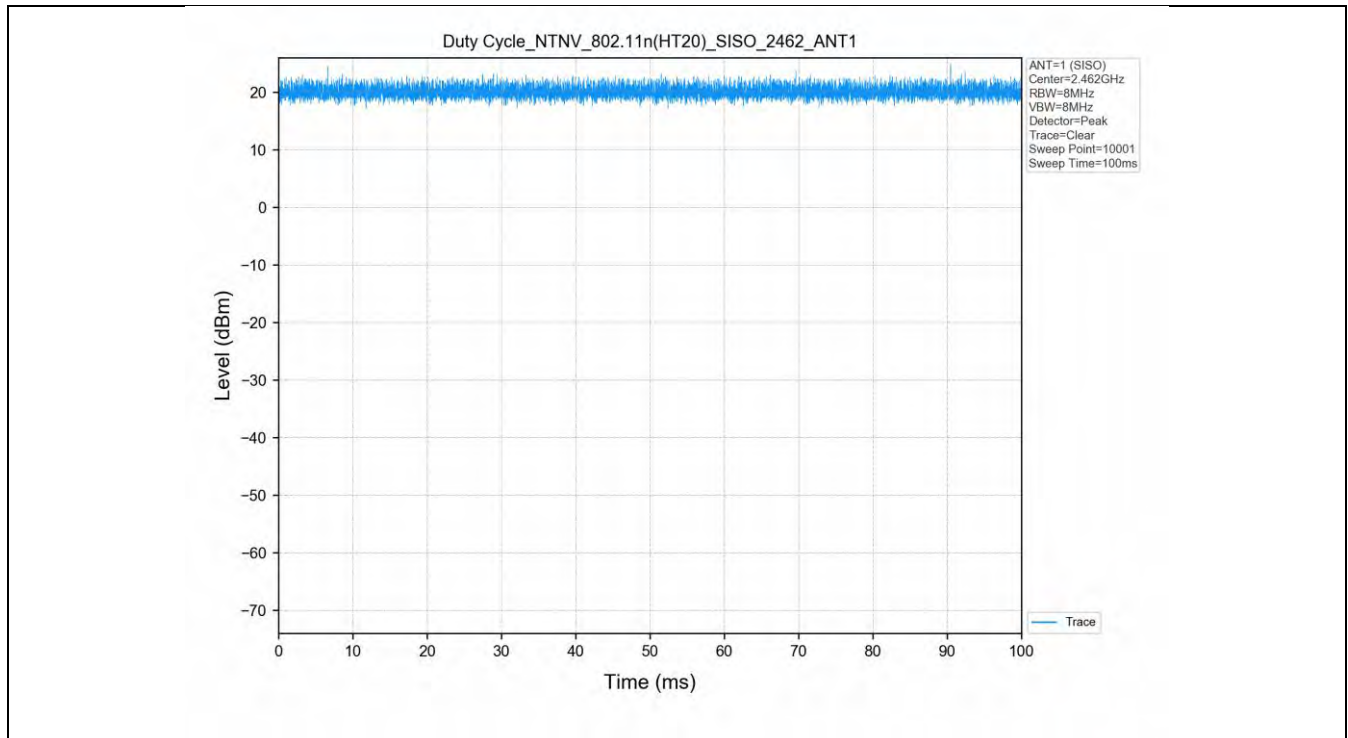


802.11n(HT20)_2437MHz_MIMO_ANT1

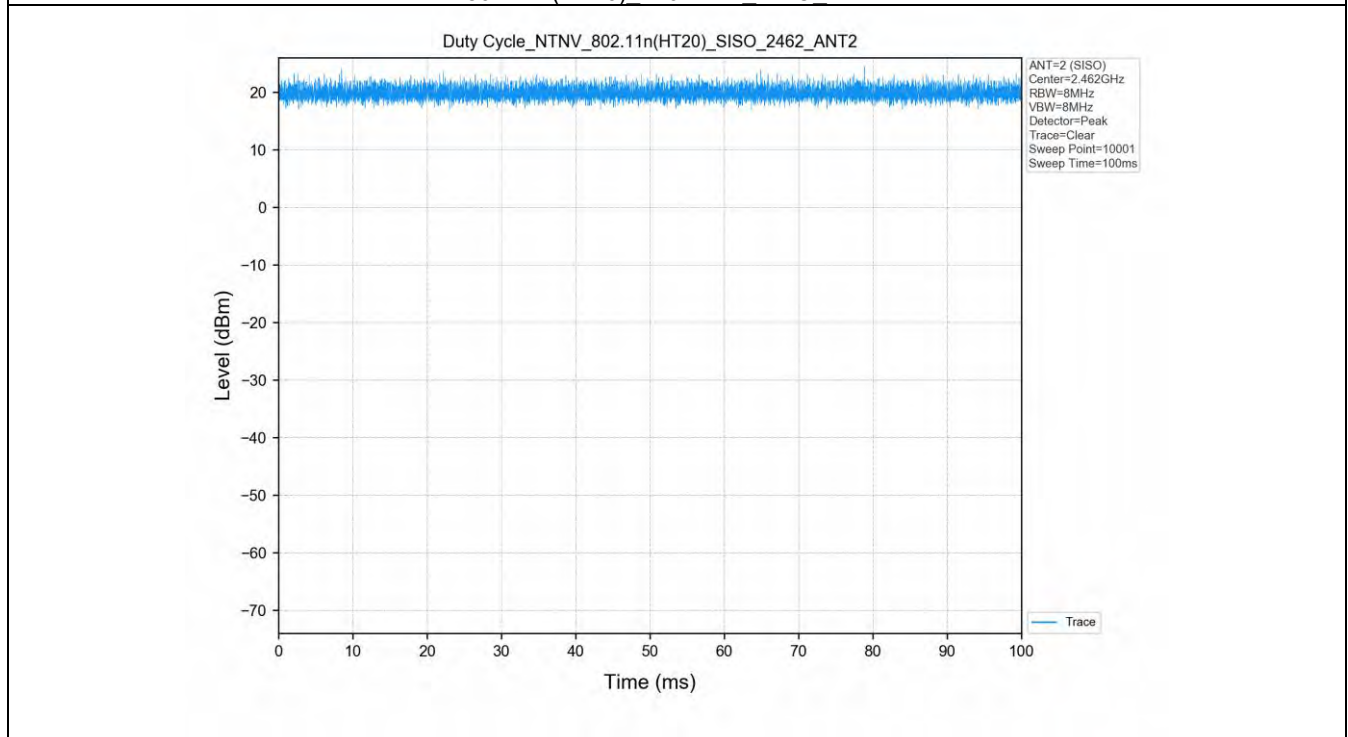


802.11n(HT20)_2437MHz_MIMO_ANT2

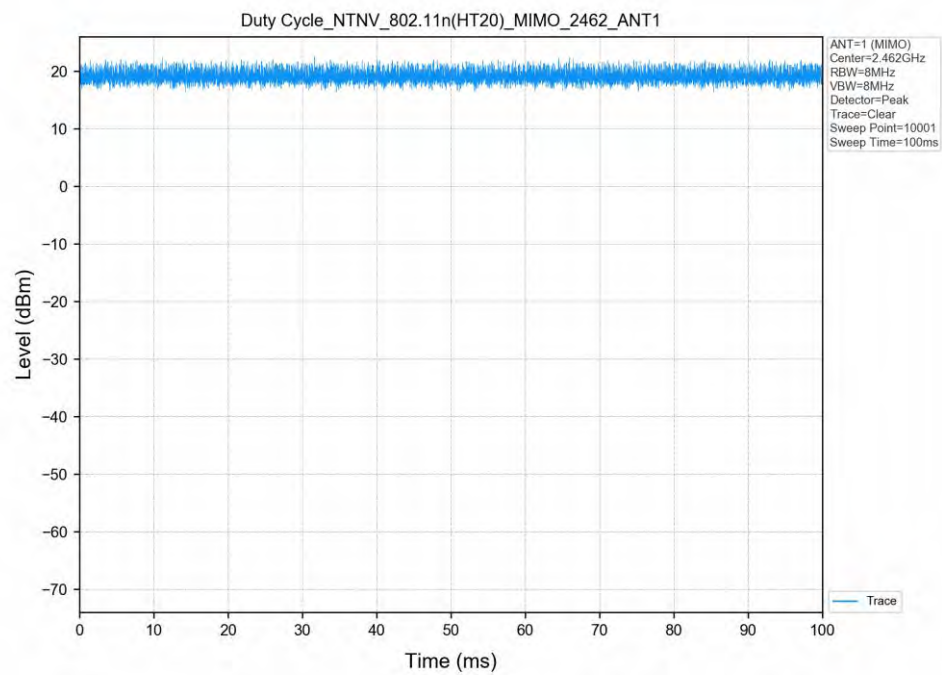




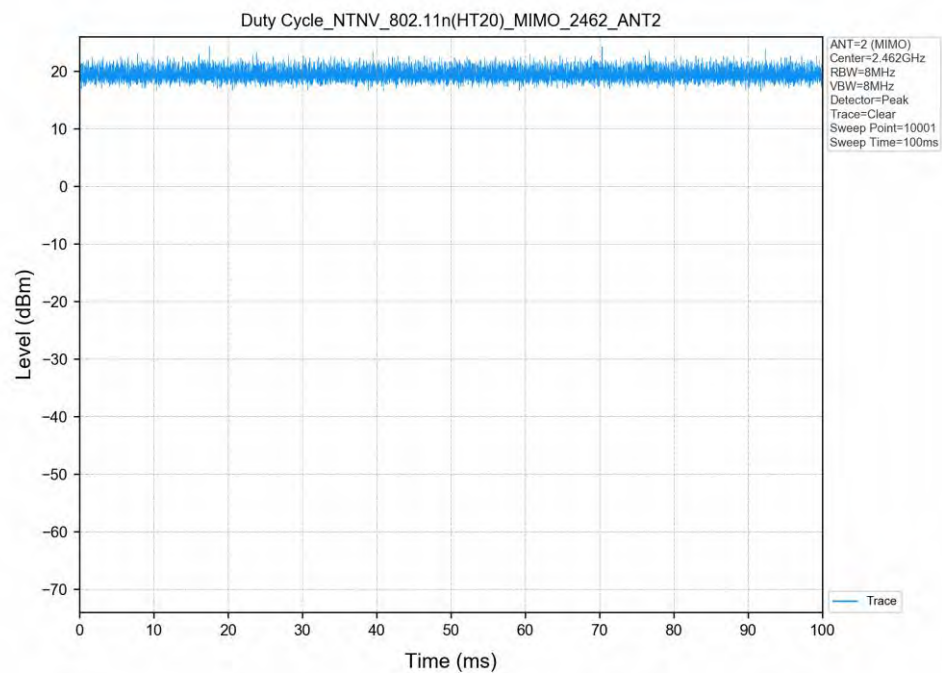
802.11n(HT20) 2462MHz SISO ANT2



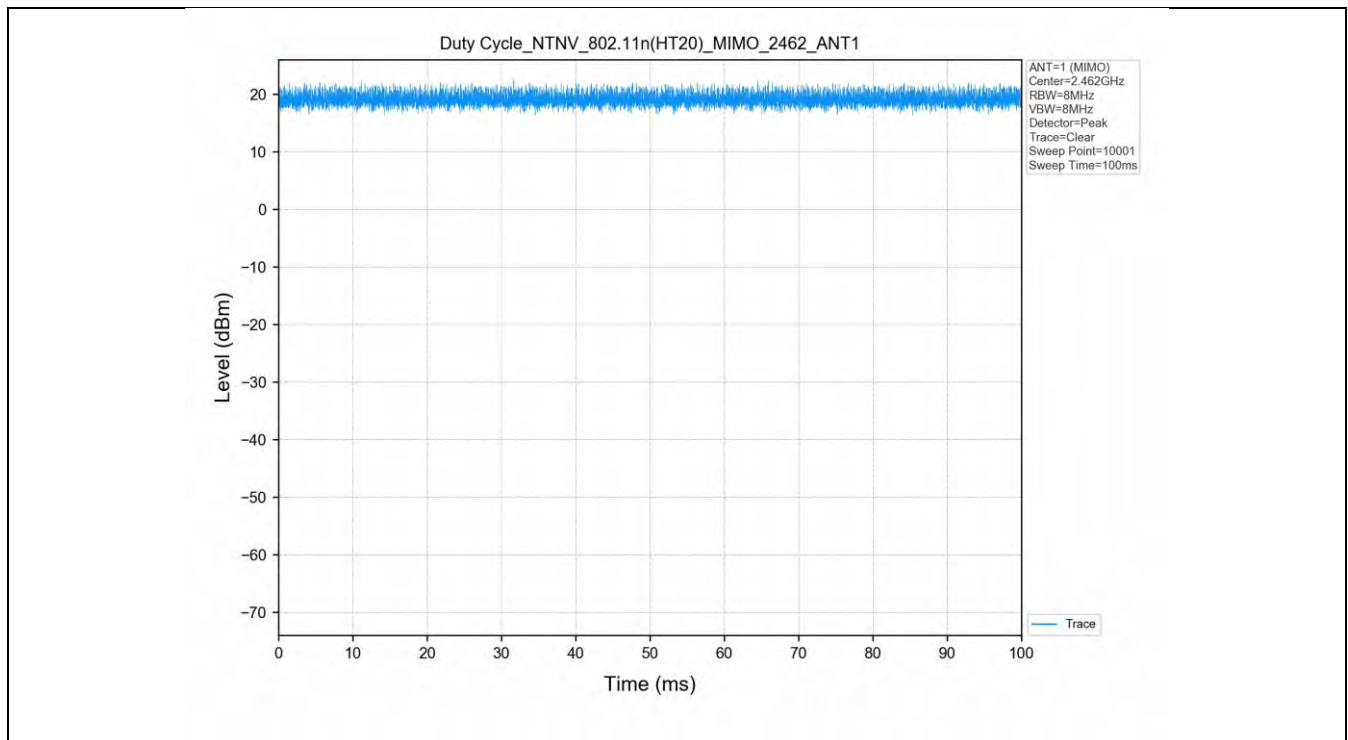
802.11n(HT20) 2462MHz MIMO ANT1



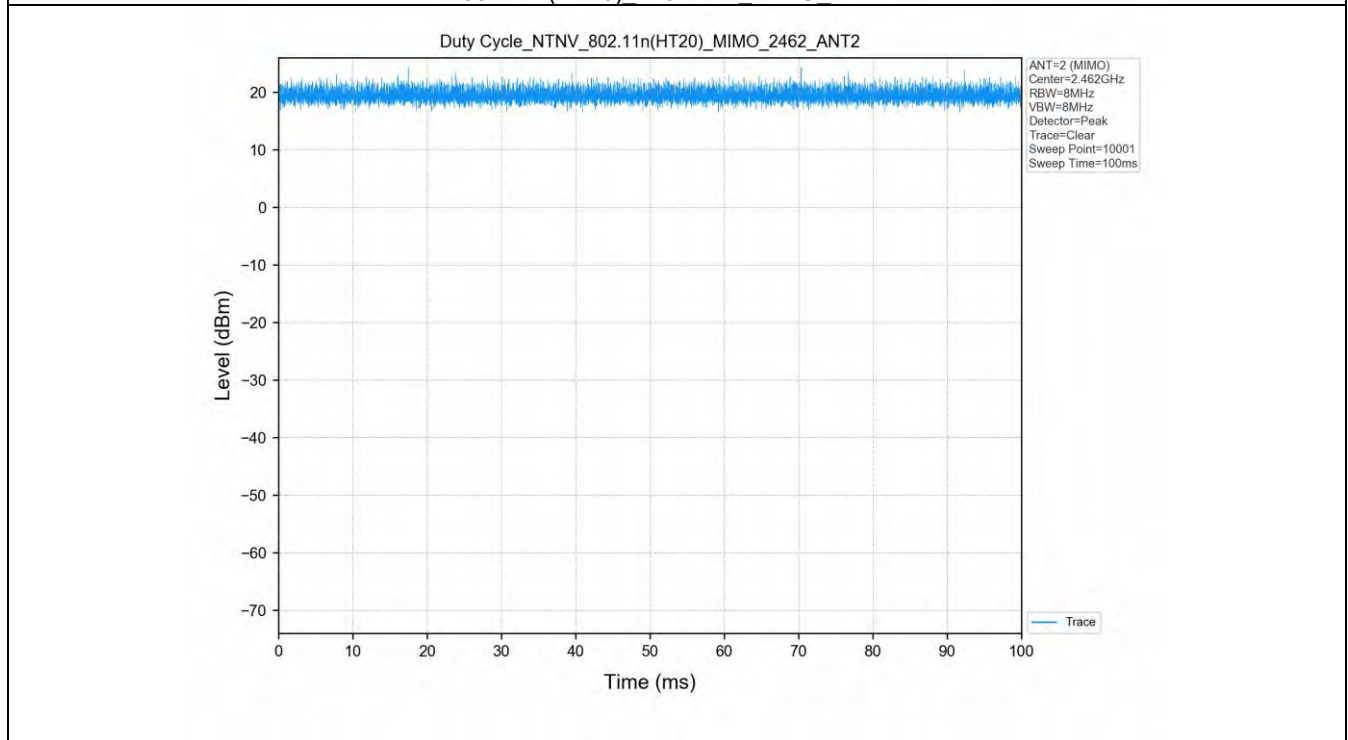
802.11n(HT20)_2462MHz_MIMO_ANT1



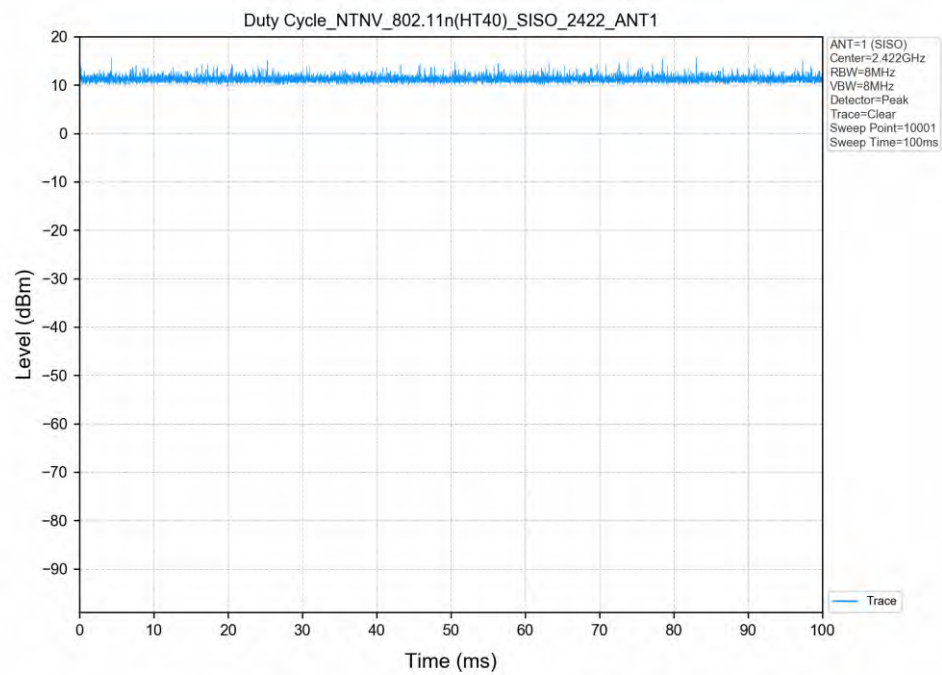
802.11n(HT20)_2462MHz_MIMO_ANT2



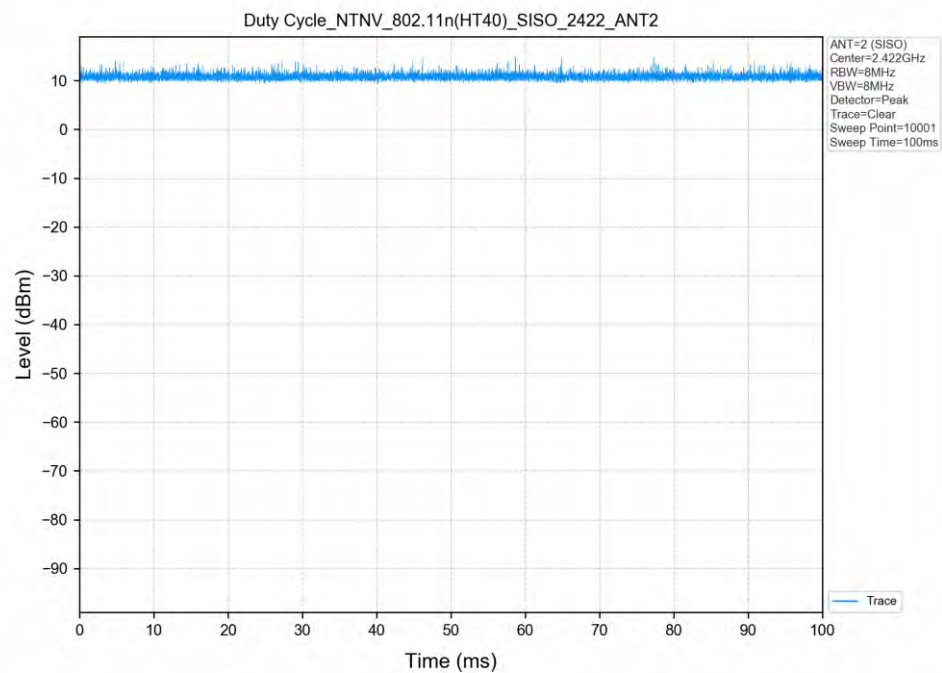
802.11n(HT20)_2462MHz MIMO_ANT2



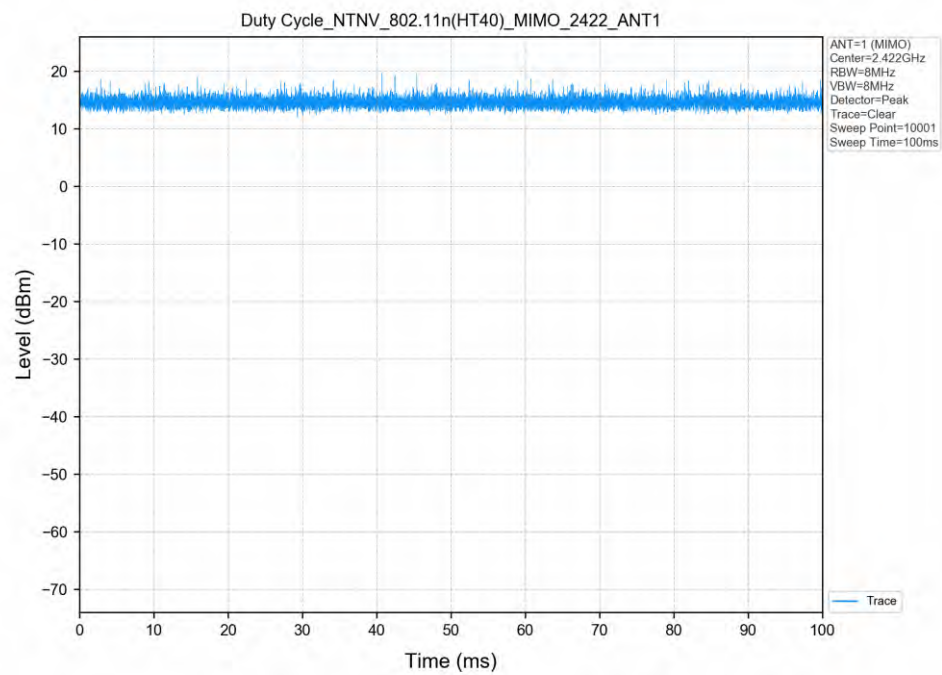
802.11n(HT40)_2422MHz SISO_ANT1



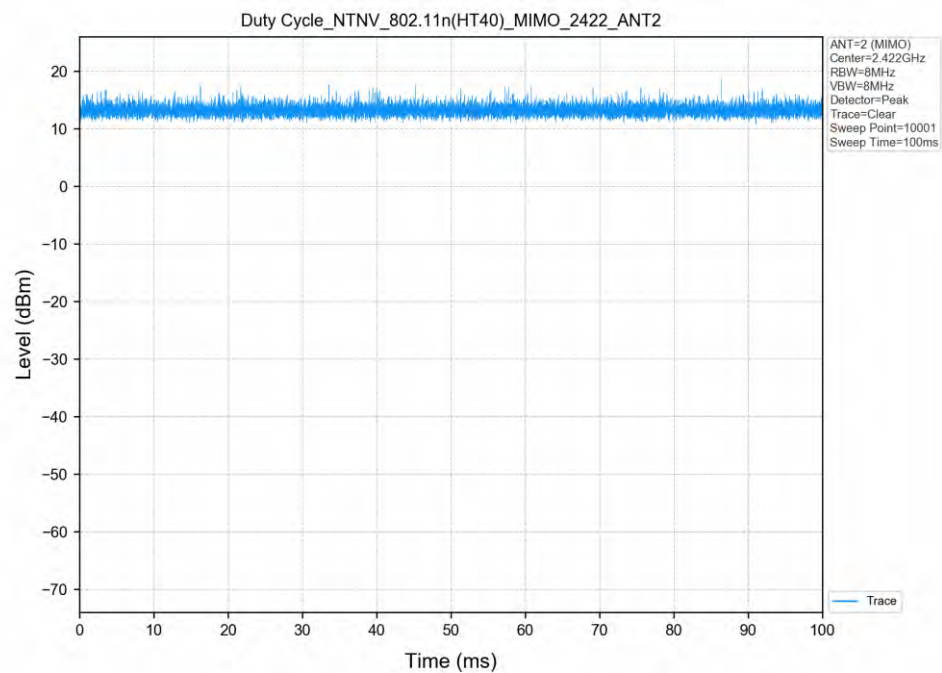
802.11n(HT40)_2422MHz_SISO_ANT2



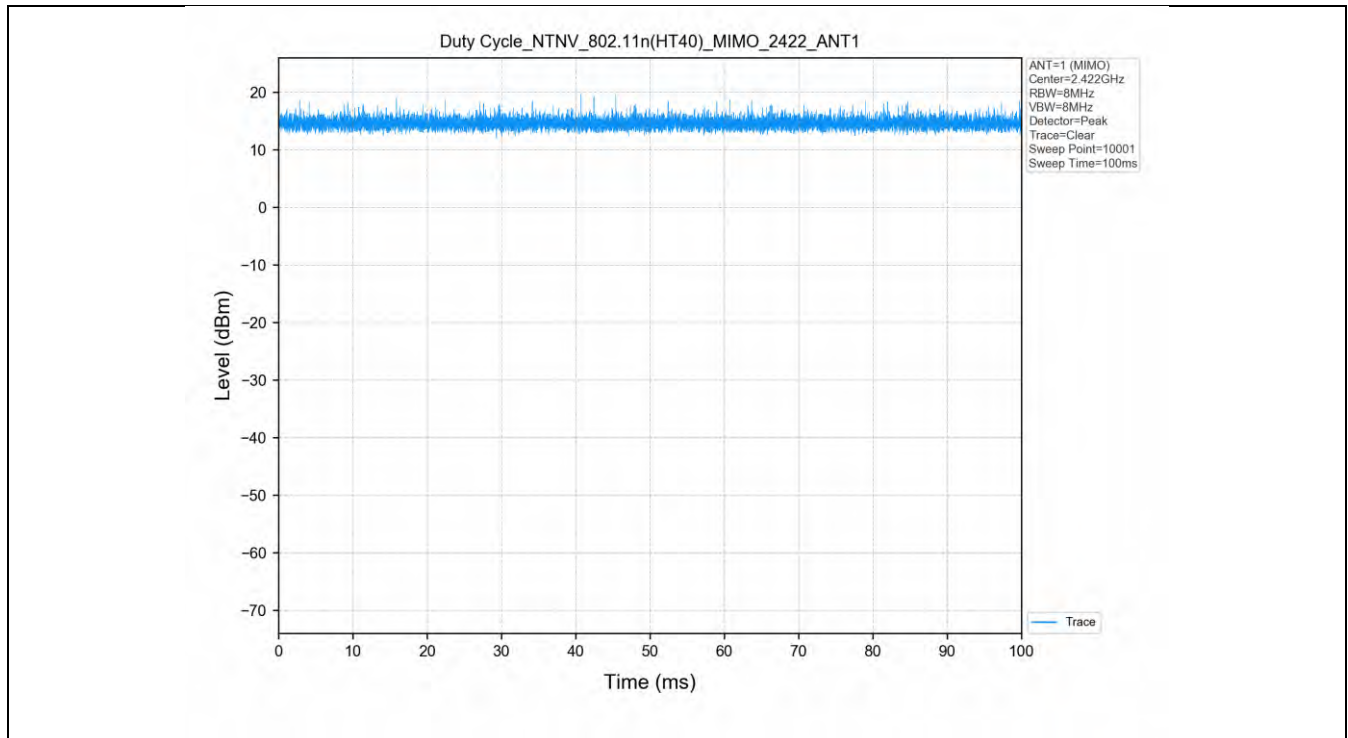
802.11n(HT40)_2422MHz_MIMO_ANT1



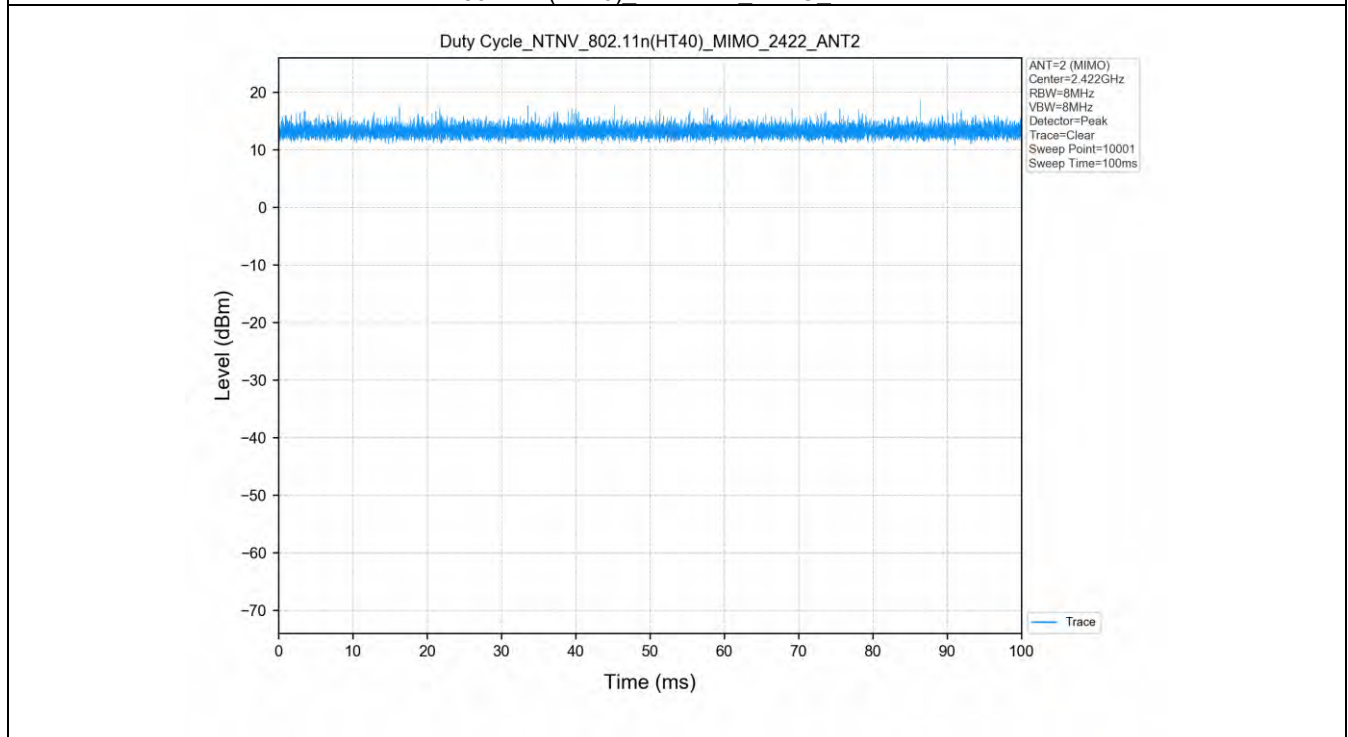
802.11n(HT40)_2422MHz_MIMO_ANT1



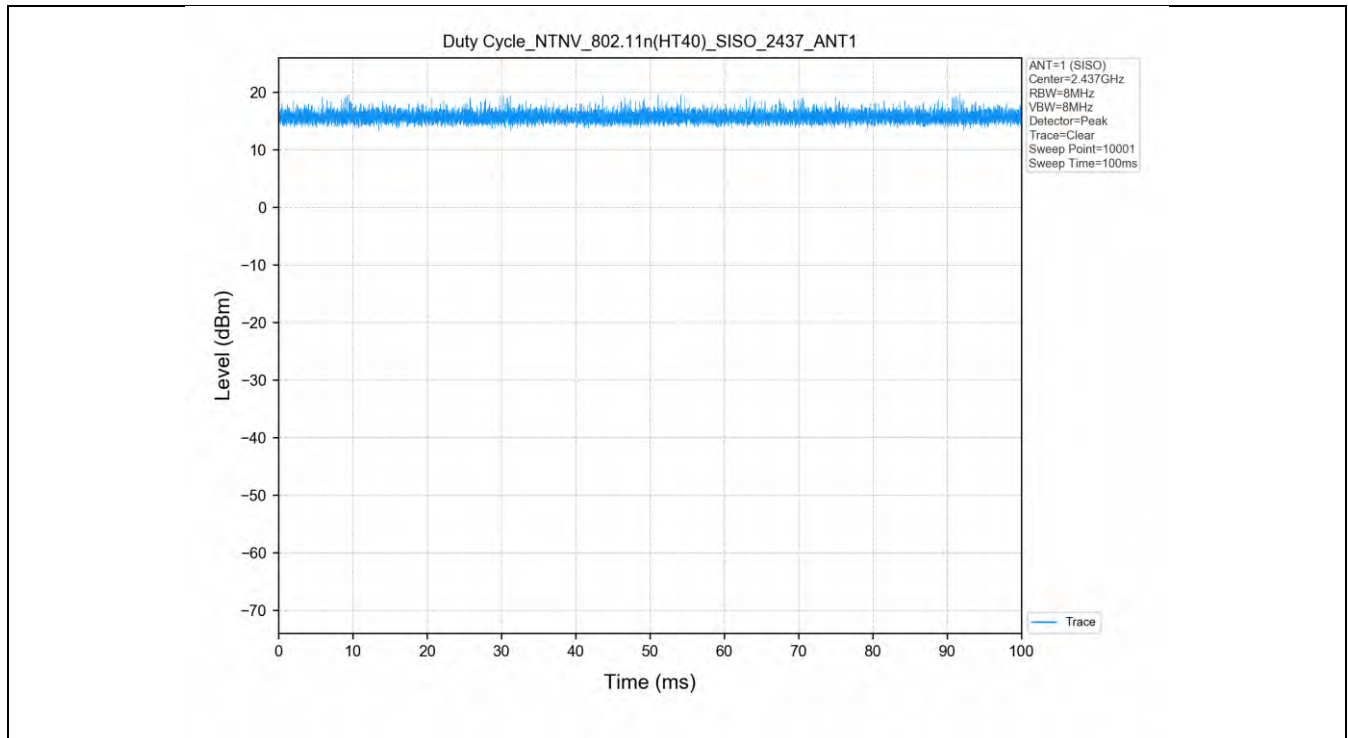
802.11n(HT40)_2422MHz_MIMO_ANT2



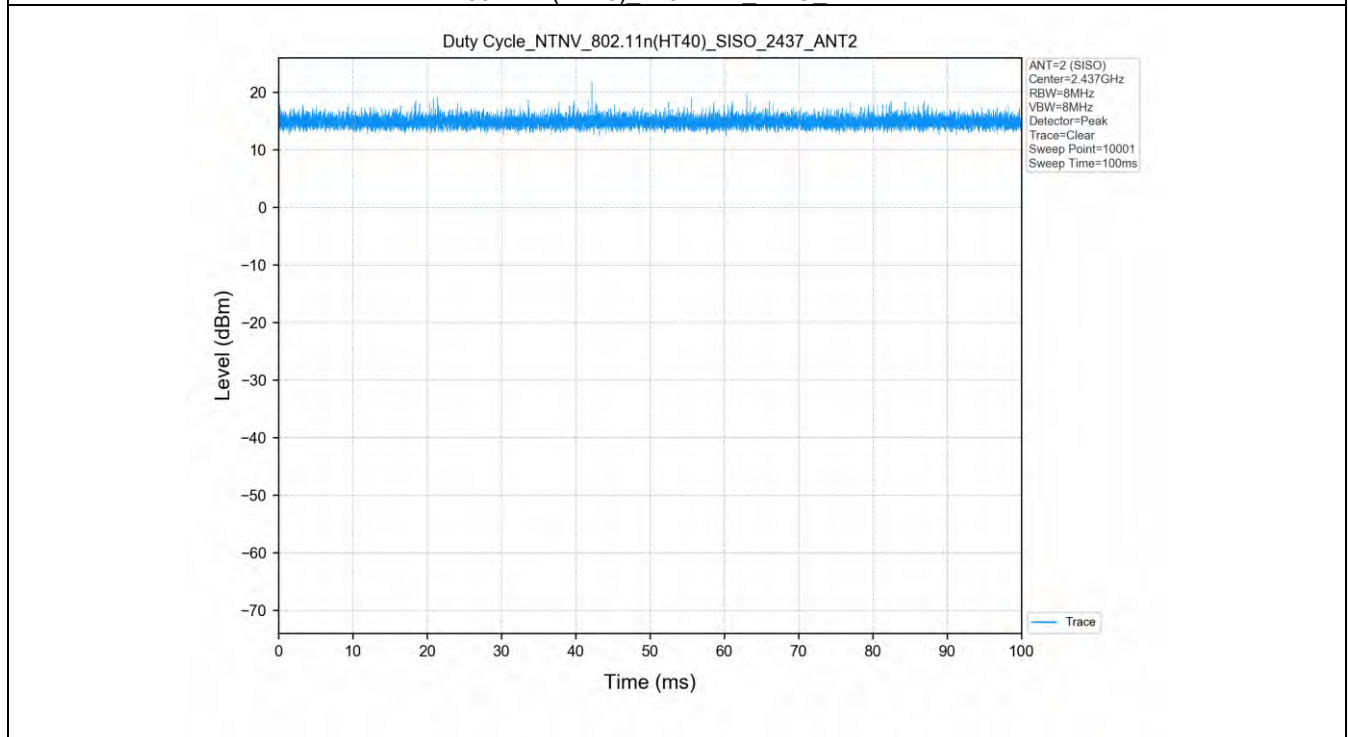
802.11n(HT40)_2422MHz MIMO ANT2



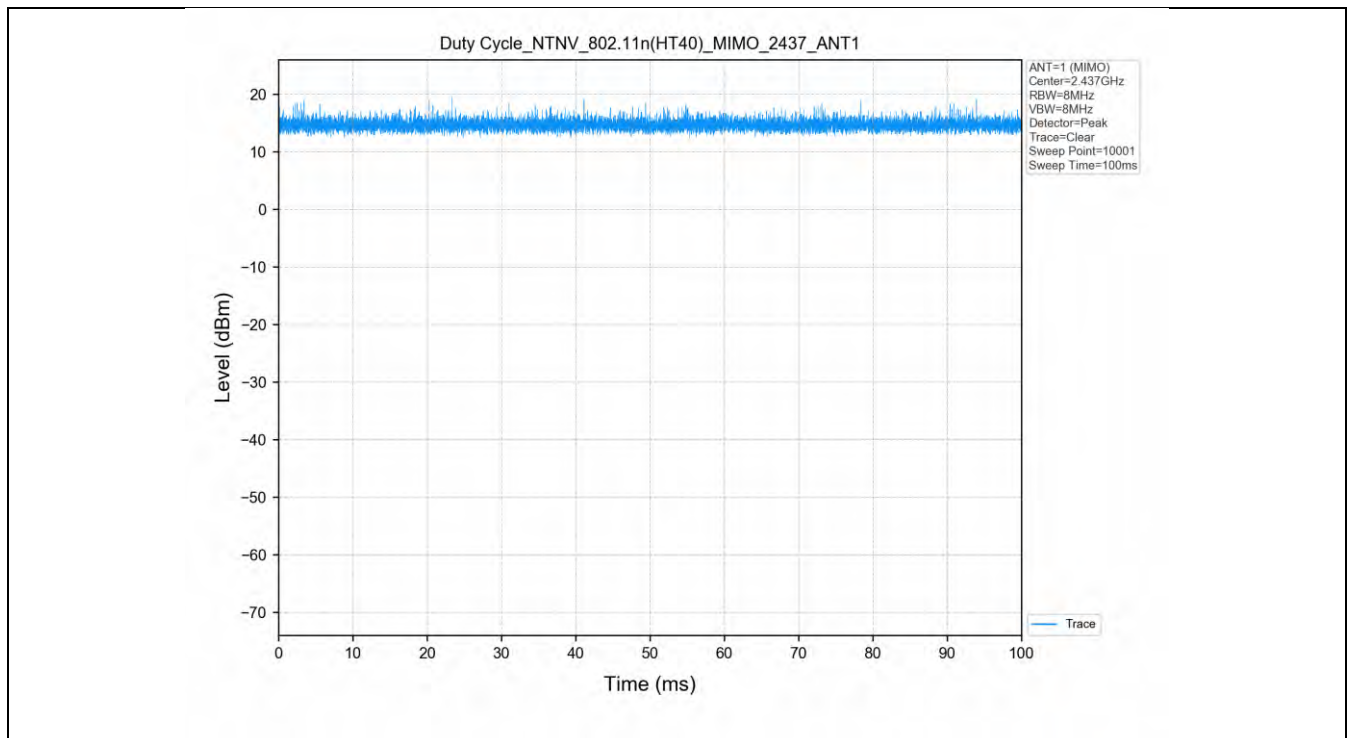
802.11n(HT40)_2437MHz SISO ANT1



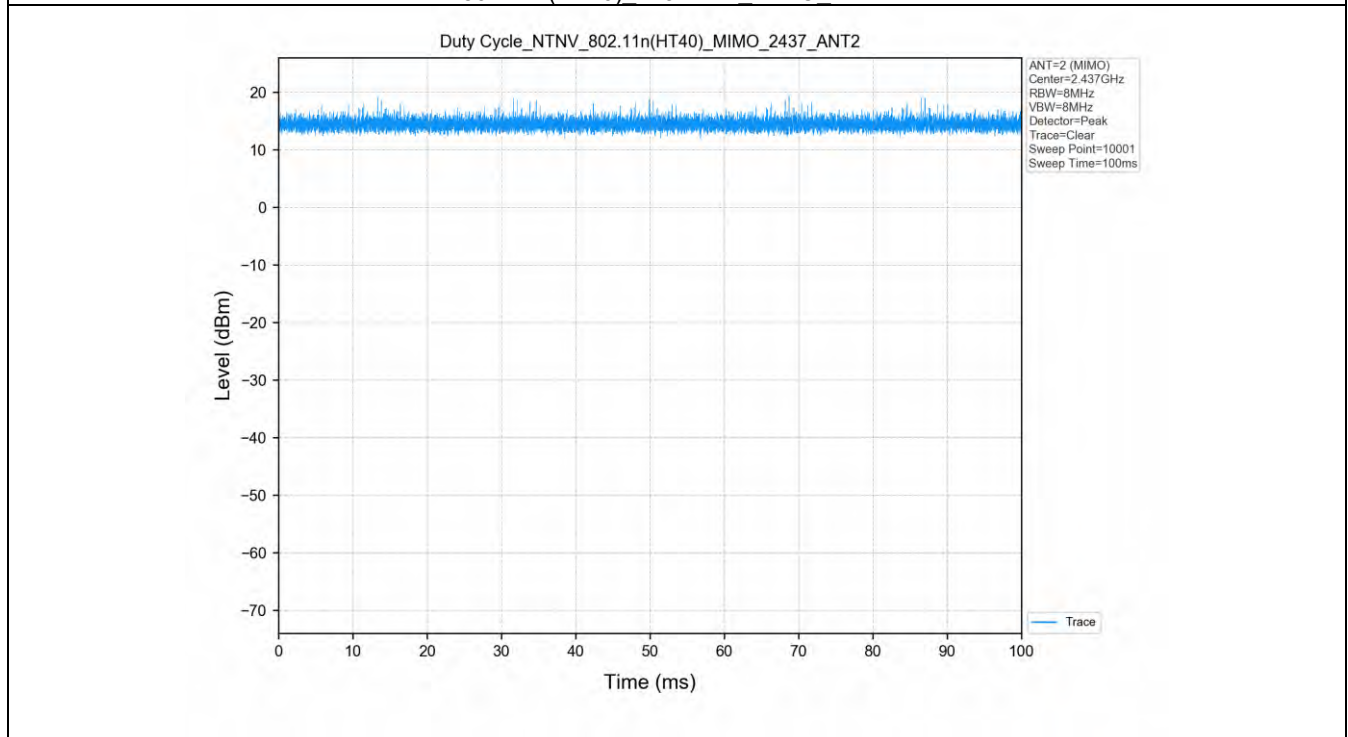
802.11n(HT40)_2437MHz_SISO_ANT2



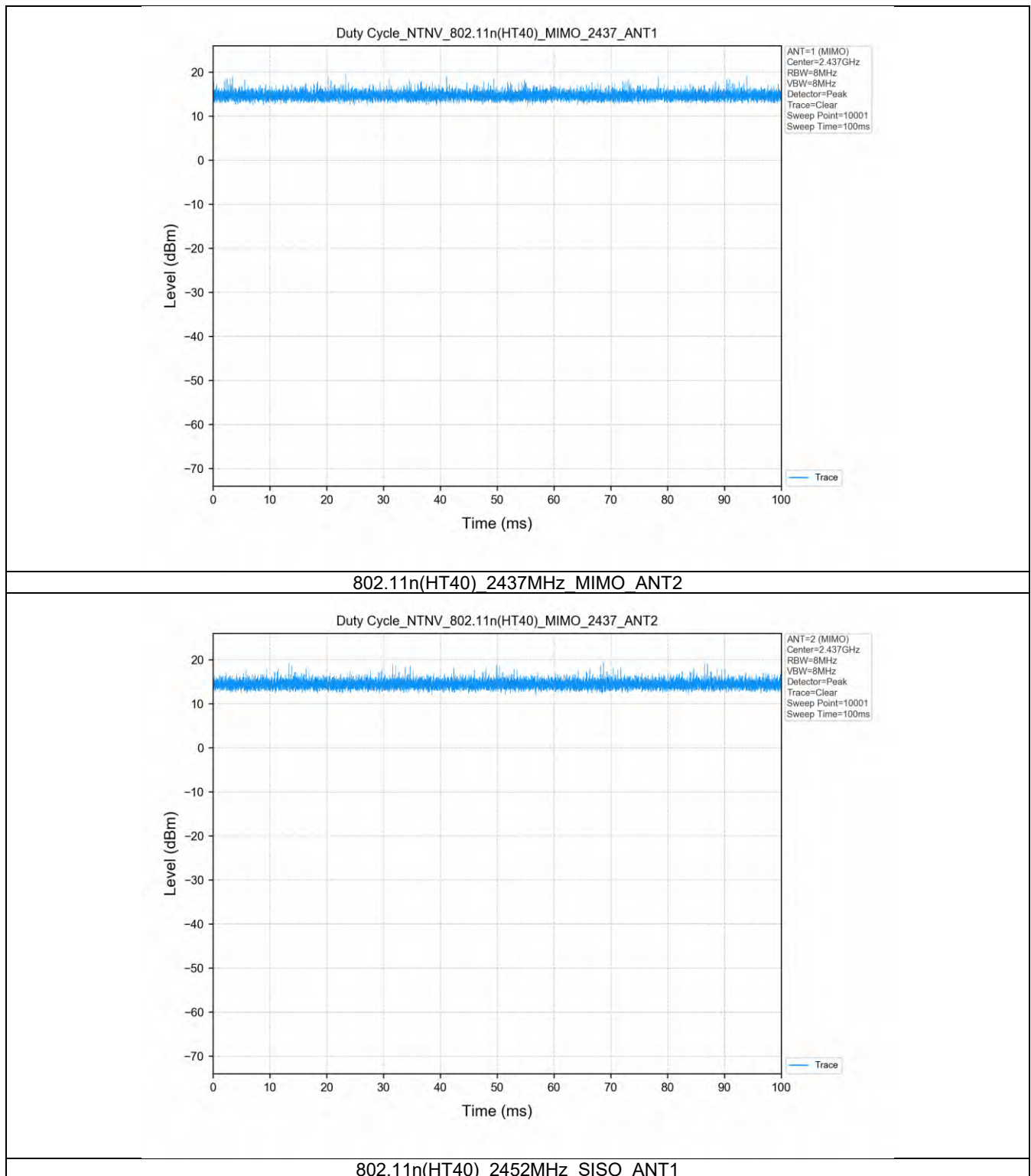
802.11n(HT40)_2437MHz_MIMO_ANT1

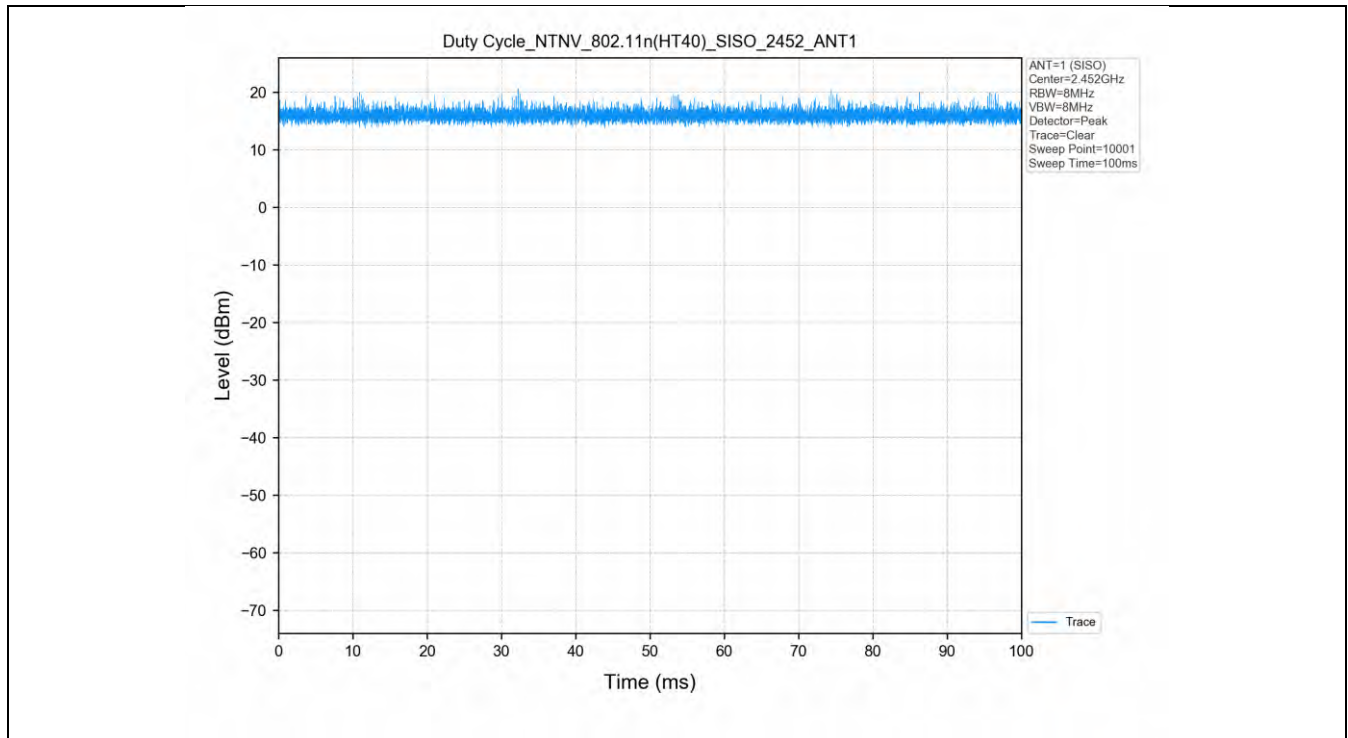


802.11n(HT40)_2437MHz_MIMO_ANT1

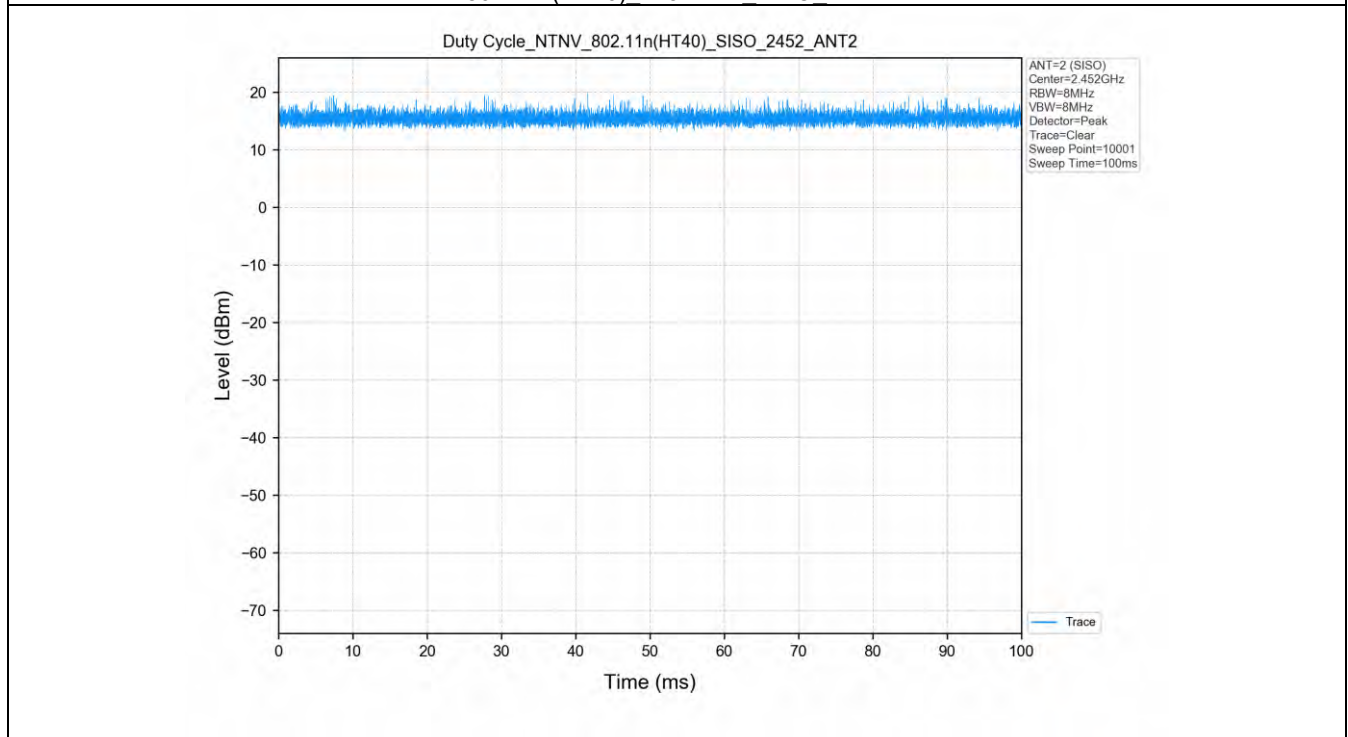


802.11n(HT40)_2437MHz_MIMO_ANT2

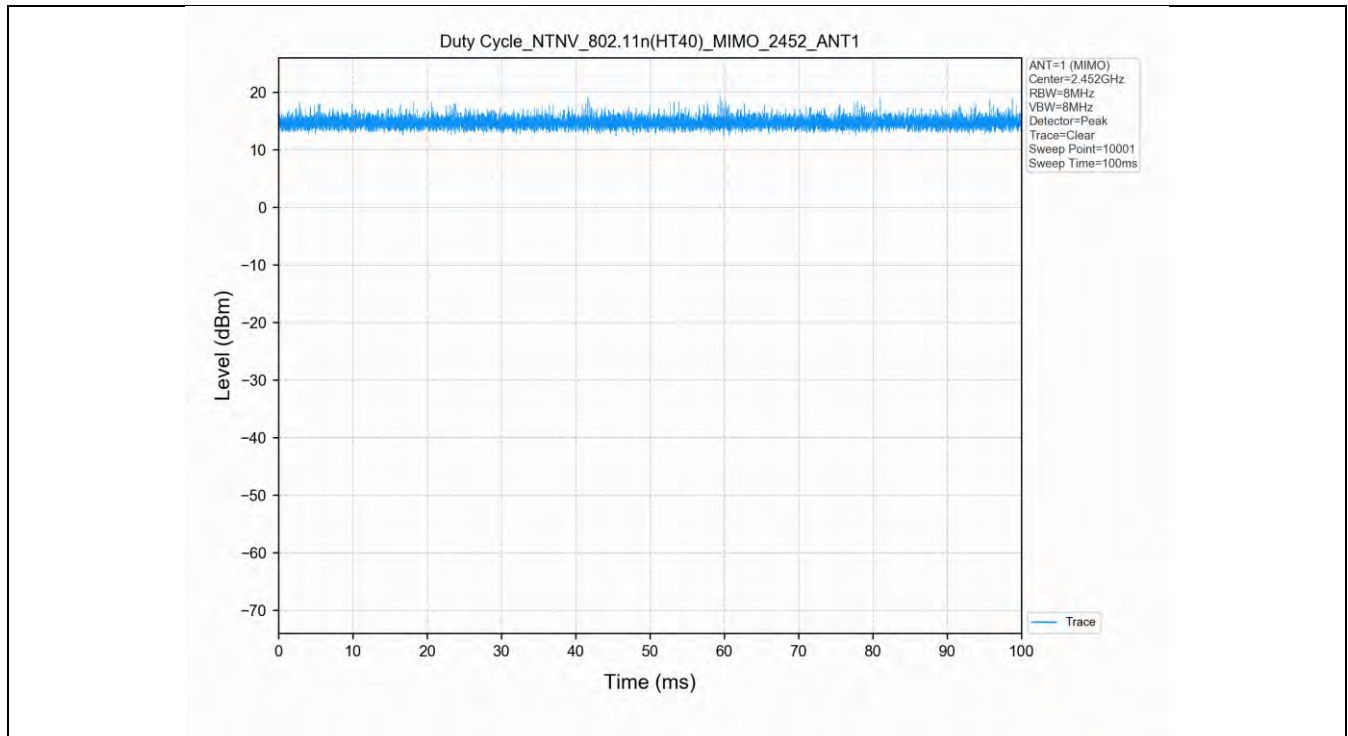




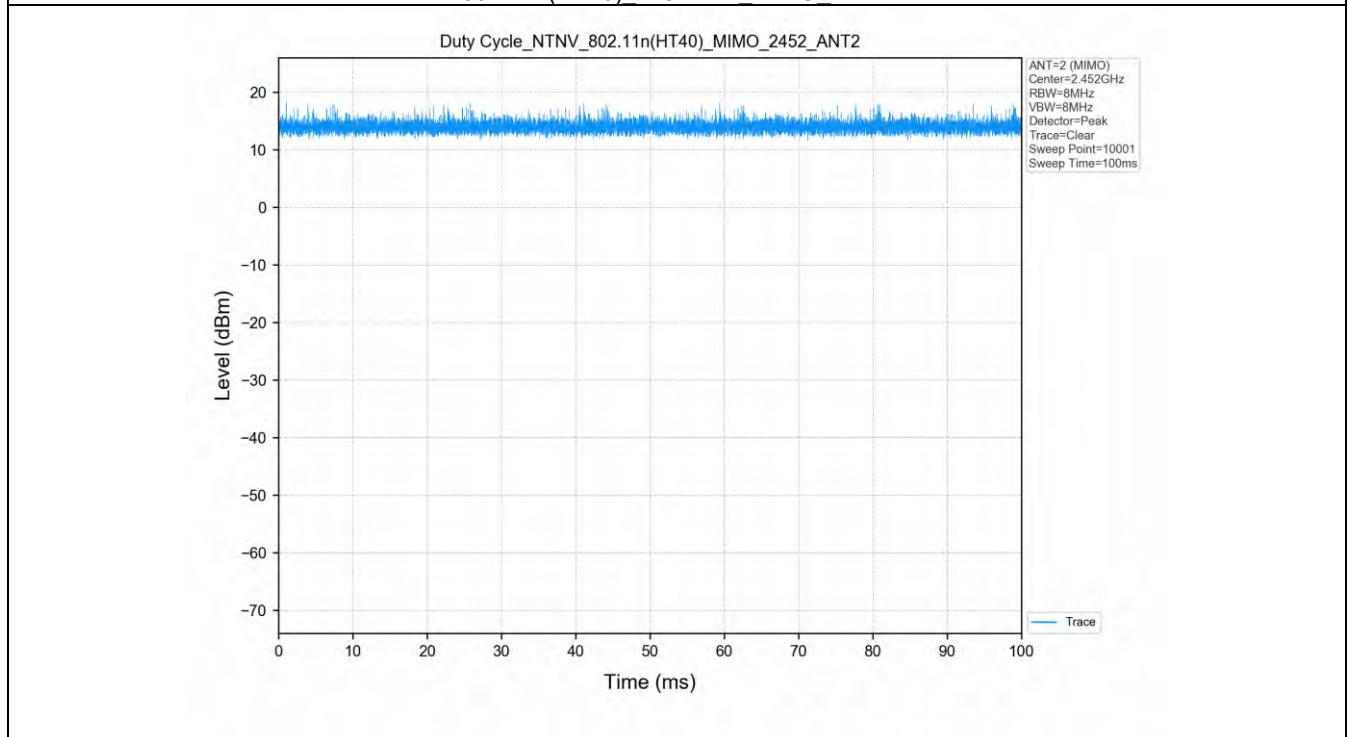
802.11n(HT40)_2452MHz_SISO_ANT2



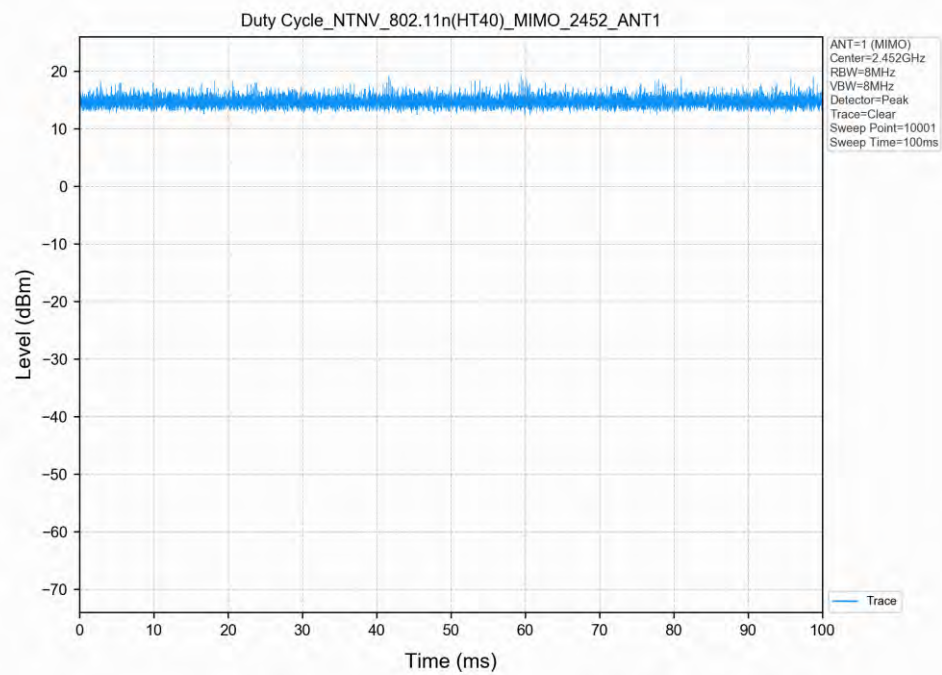
802.11n(HT40)_2452MHz_MIMO_ANT1



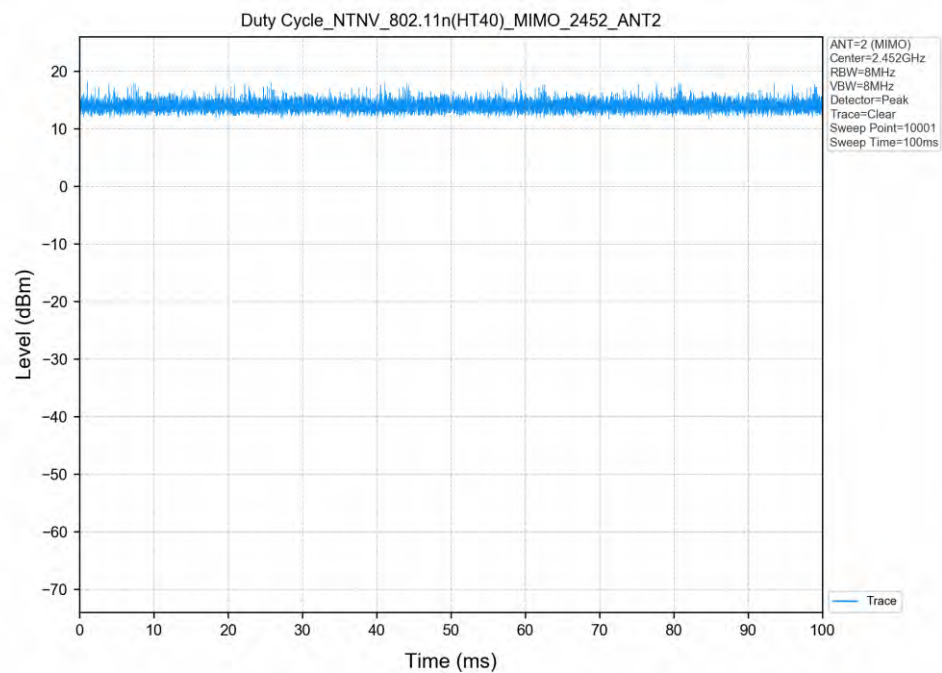
802.11n(HT40)_2452MHz_MIMO_ANT1



802.11n(HT40)_2452MHz_MIMO_ANT2



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	10.080	≥0.5	PASS
			2	10.100	≥0.5	PASS
	2437	SISO	1	10.090	≥0.5	PASS
			2	9.630	≥0.5	PASS
	2462	SISO	1	10.100	≥0.5	PASS
			2	10.110	≥0.5	PASS
802.11g	2412	SISO	1	16.620	≥0.5	PASS
			2	16.610	≥0.5	PASS
	2437	SISO	1	16.620	≥0.5	PASS
			2	16.580	≥0.5	PASS
	2462	SISO	1	16.610	≥0.5	PASS
			2	16.620	≥0.5	PASS
802.11n(HT20)	2412	SISO	1	17.850	≥0.5	PASS
			2	17.840	≥0.5	PASS
	2437	MIMO	0	17.860	≥0.5	PASS
			1	17.850	≥0.5	PASS
		SISO	2	17.810	≥0.5	PASS
			0	17.820	≥0.5	PASS
	2462	MIMO	1	17.840	≥0.5	PASS
			2	17.860	≥0.5	PASS
		SISO	0	17.850	≥0.5	PASS
			1	17.850	≥0.5	PASS
802.11n(HT40)	2422	SISO	1	36.500	≥0.5	PASS
			2	36.540	≥0.5	PASS
		MIMO	0	36.530	≥0.5	PASS
	2437	SISO	1	36.470	≥0.5	PASS
			2	36.410	≥0.5	PASS
		MIMO	0	36.430	≥0.5	PASS
	2452	SISO	1	36.470	≥0.5	PASS
			2	36.440	≥0.5	PASS
		MIMO	1	36.470	≥0.5	PASS
			0	36.470	≥0.5	PASS

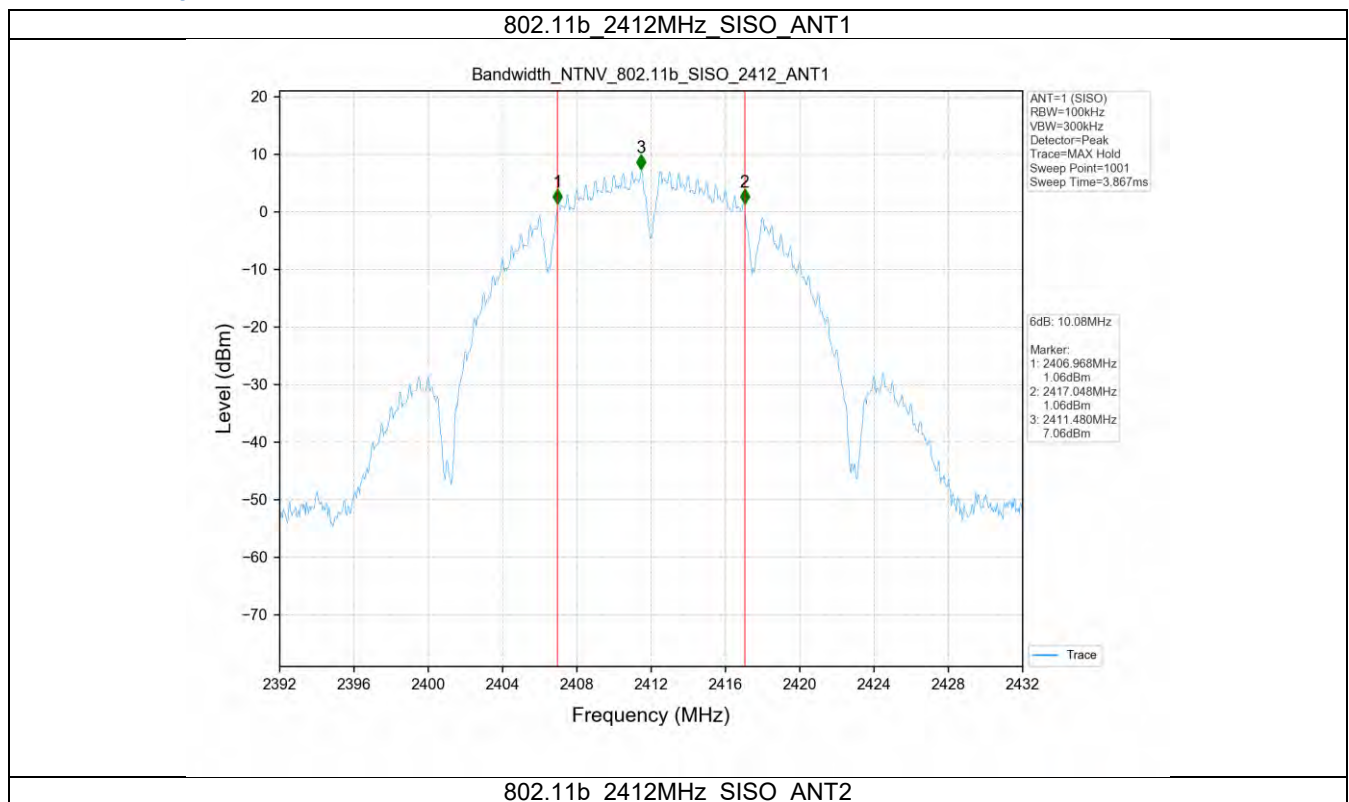
Test Mode	Frequency (MHz)	TX Type	ANT No.	99% Occupied Bandwidth	
				Test Result (MHz)	
802.11b	2412	SISO	1	15.090	Only for Report Use
			2	15.060	Only for Report Use
	2437	SISO	1	15.120	Only for Report Use
			2	14.970	Only for Report Use
	2462	SISO	1	15.130	Only for Report Use
			2	15.090	Only for Report Use
802.11g	2412	SISO	1	17.020	Only for Report Use
			2	17.080	Only for Report Use
	2437	SISO	1	16.990	Only for Report Use
			2	16.990	Only for Report Use
	2462	SISO	1	17.010	Only for Report Use
			2	17.060	Only for Report Use
802.11n(HT20)	2412	SISO	1	18.100	Only for Report Use
			2	18.130	Only for Report Use
		MIMO	0	18.120	Only for Report Use

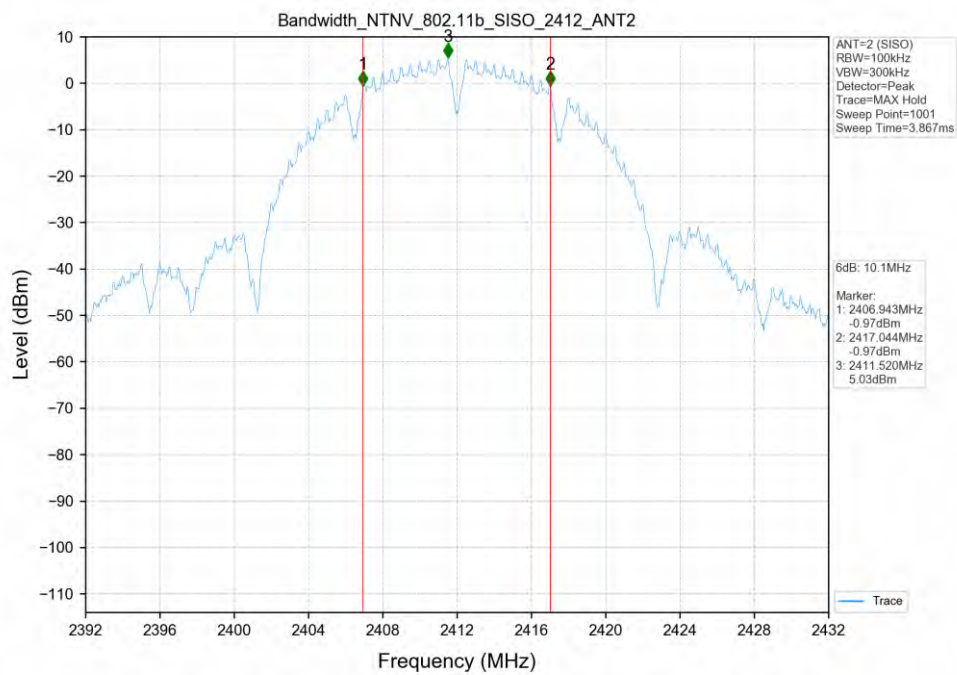


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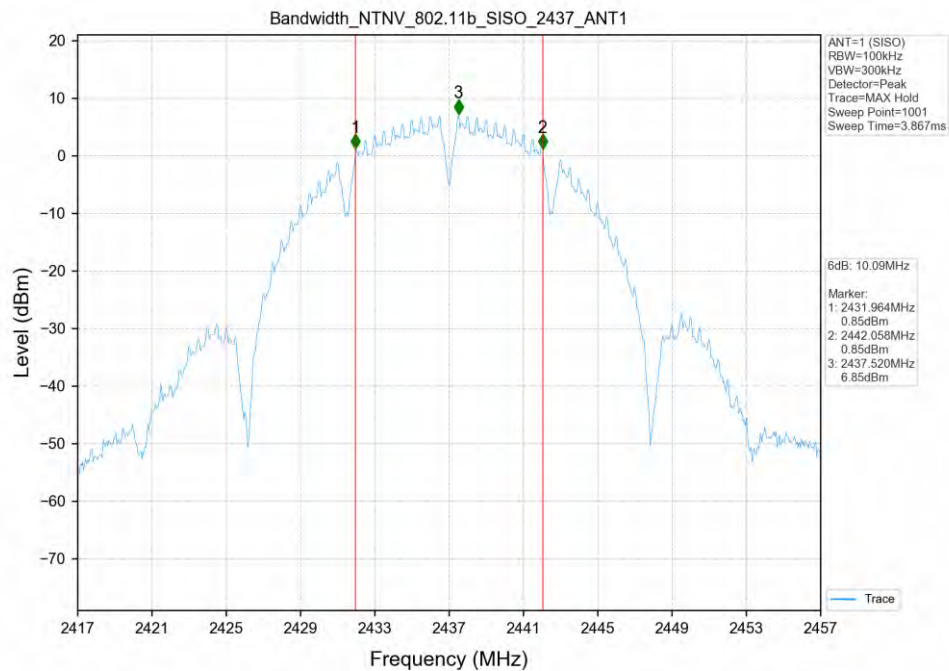
	2437	SISO	1	18.050	Only for Report Use
			2	18.020	Only for Report Use
		MIMO	0	18.030	Only for Report Use
	2462	SISO	1	18.050	Only for Report Use
			2	18.060	Only for Report Use
		MIMO	0	18.080	Only for Report Use
802.11n(HT40)	2422	SISO	1	37.430	Only for Report Use
			2	37.410	Only for Report Use
		MIMO	0	36.980	Only for Report Use
	2437	SISO	1	36.760	Only for Report Use
			2	36.600	Only for Report Use
		MIMO	0	36.670	Only for Report Use
	2452	SISO	1	36.660	Only for Report Use
			2	36.670	Only for Report Use
		MIMO	0	36.600	Only for Report Use

2.2 Test Graph - 6dB Bandwidth

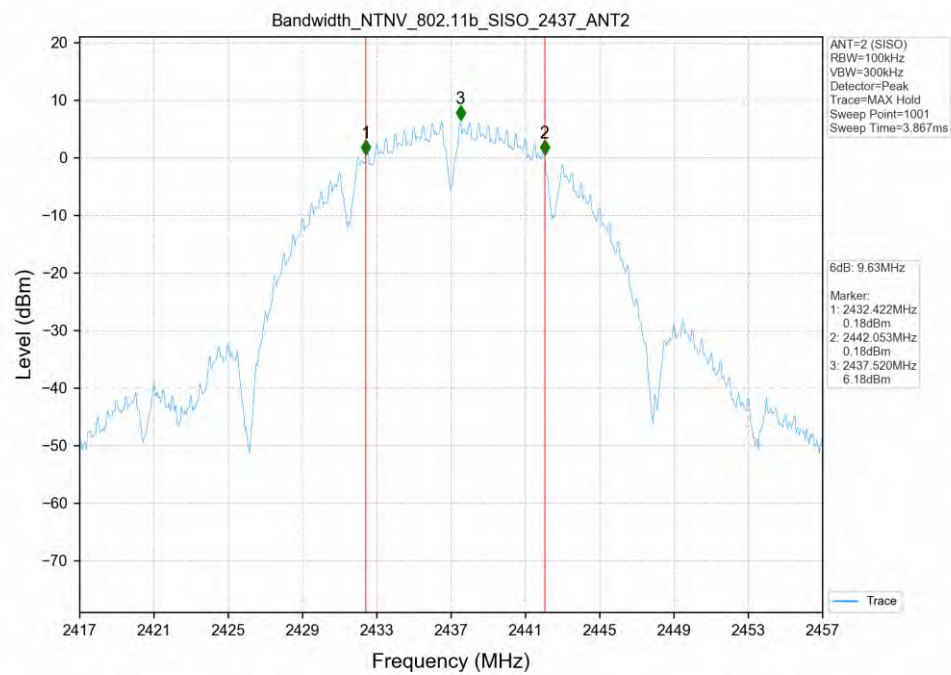




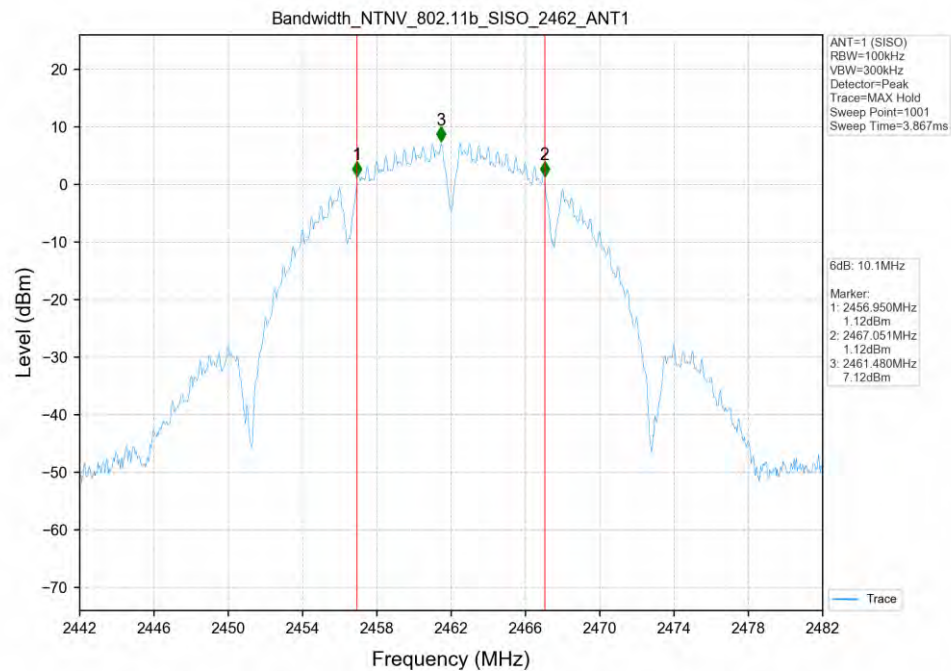
802.11b_2437MHz_SISO_ANT1



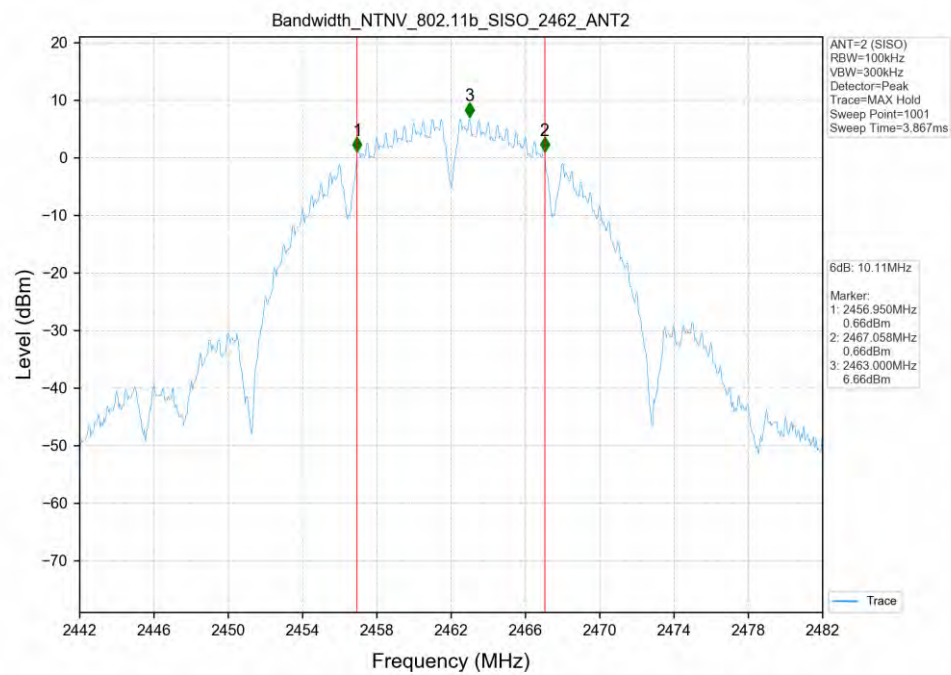
802.11b_2437MHz_SISO_ANT2



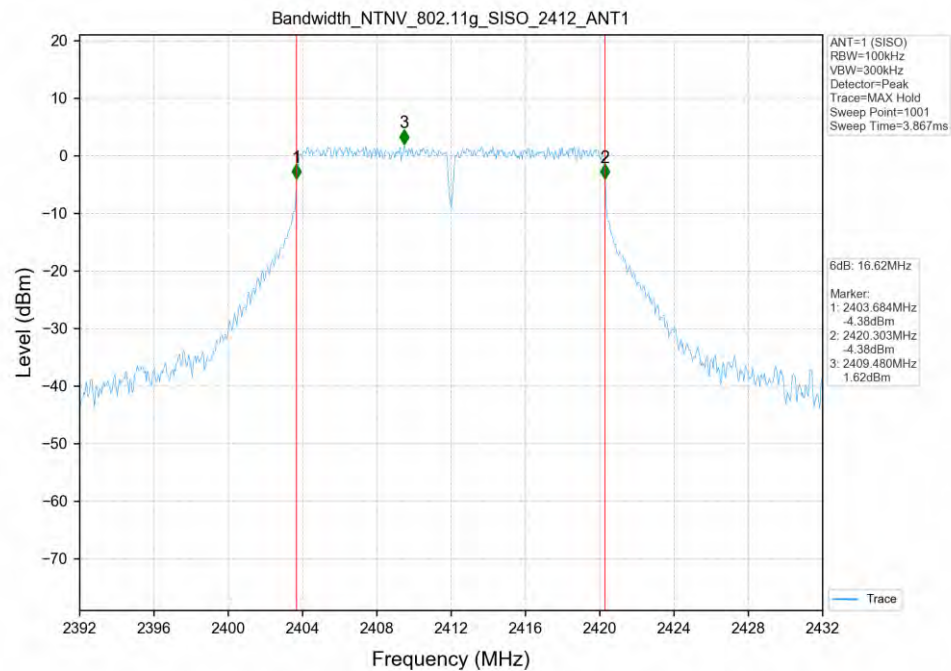
802.11b_2462MHz_SISO_ANT1



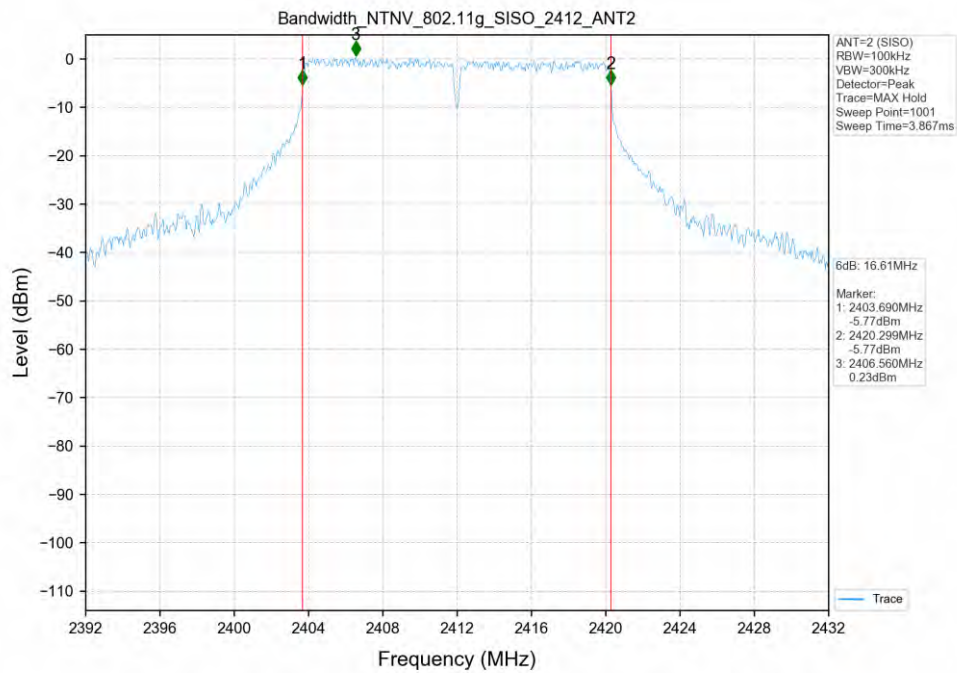
802.11b_2462MHz_SISO_ANT2



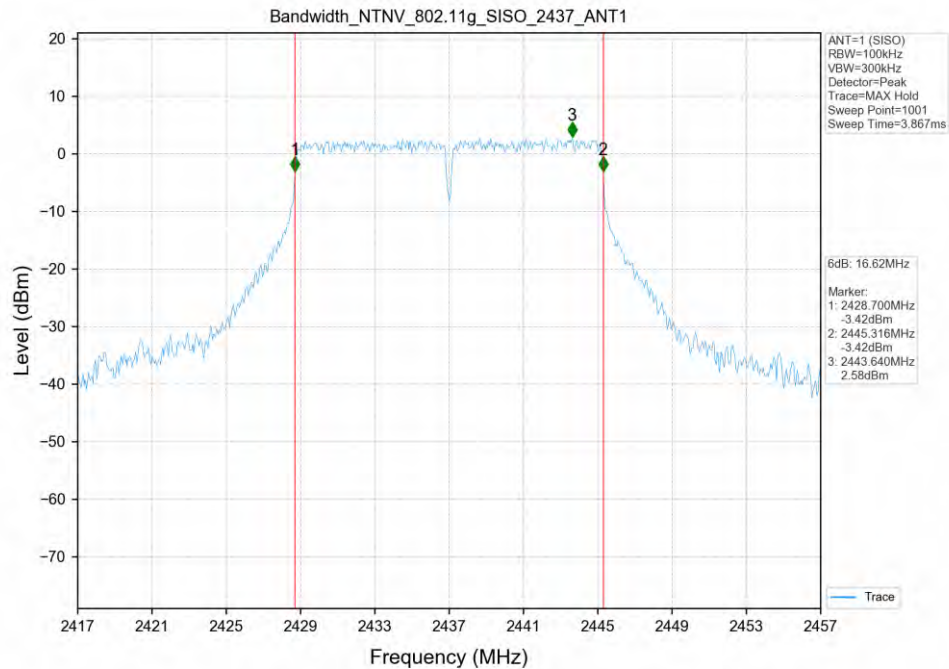
802.11g_2412MHz_SISO_ANT1



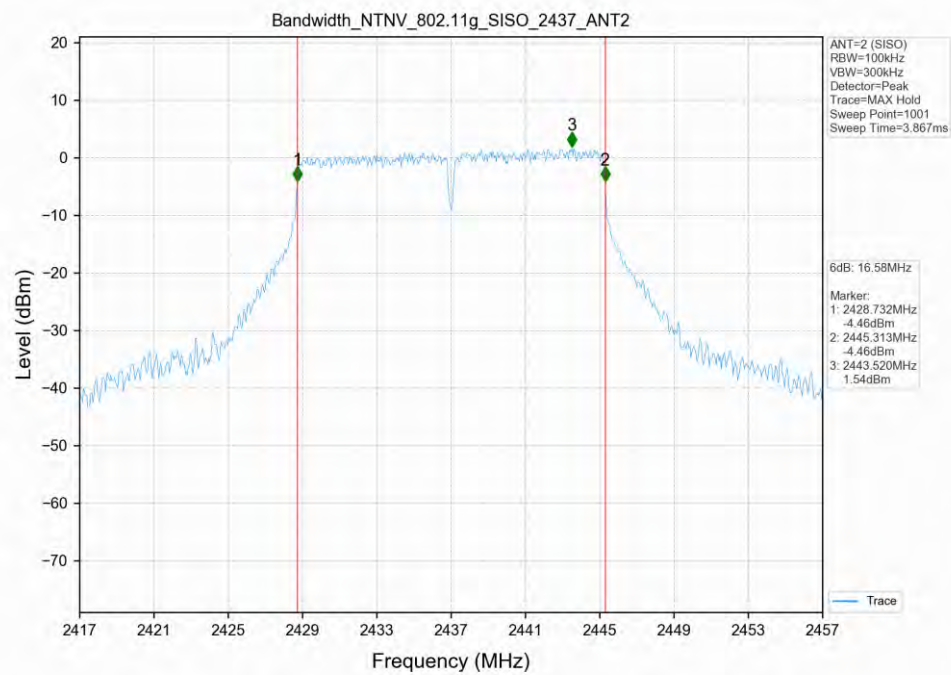
802.11g_2412MHz_SISO_ANT2



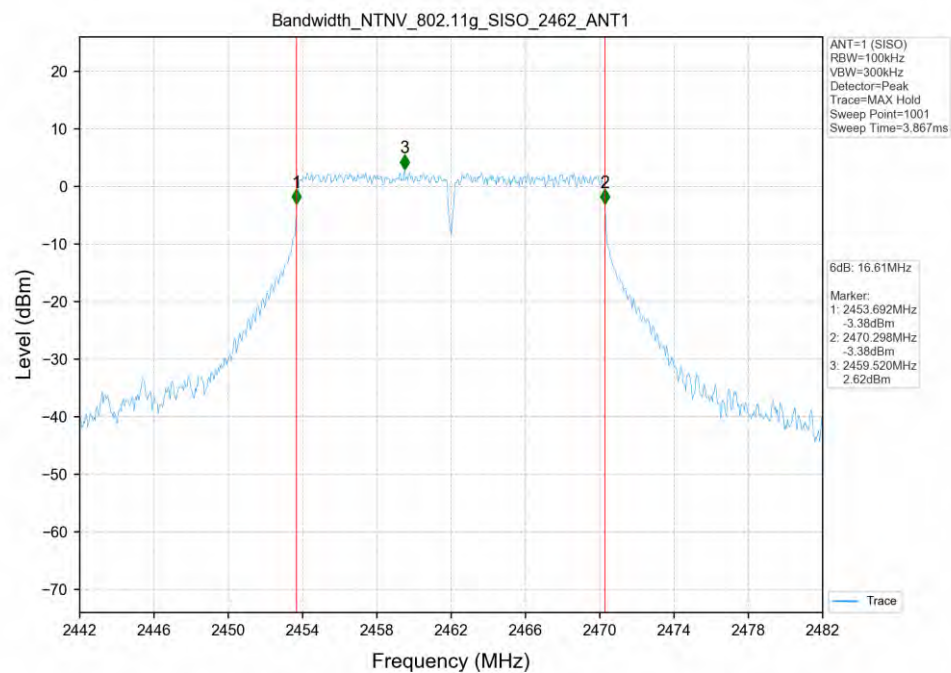
802.11g_2437MHz_SISO_ANT1



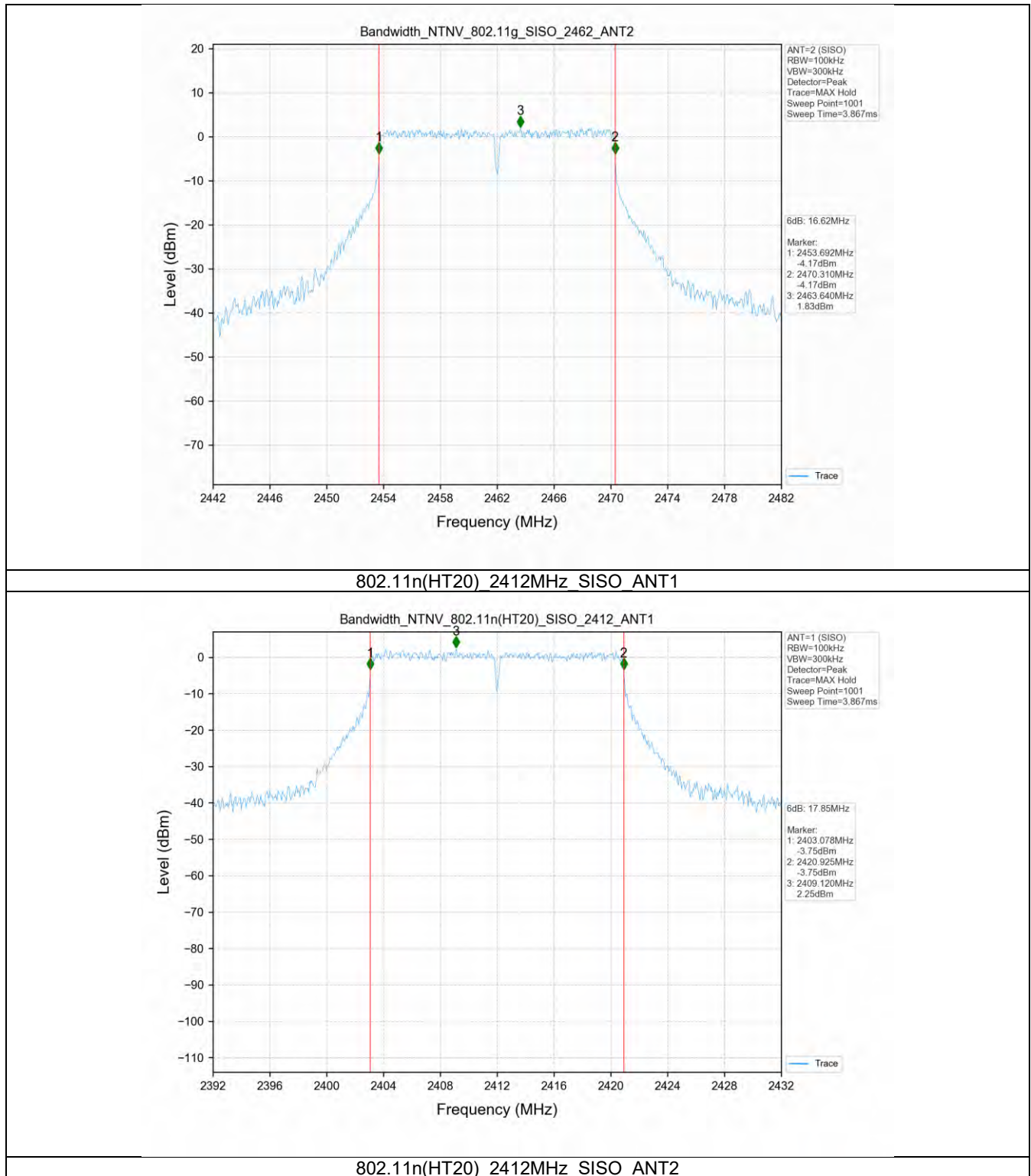
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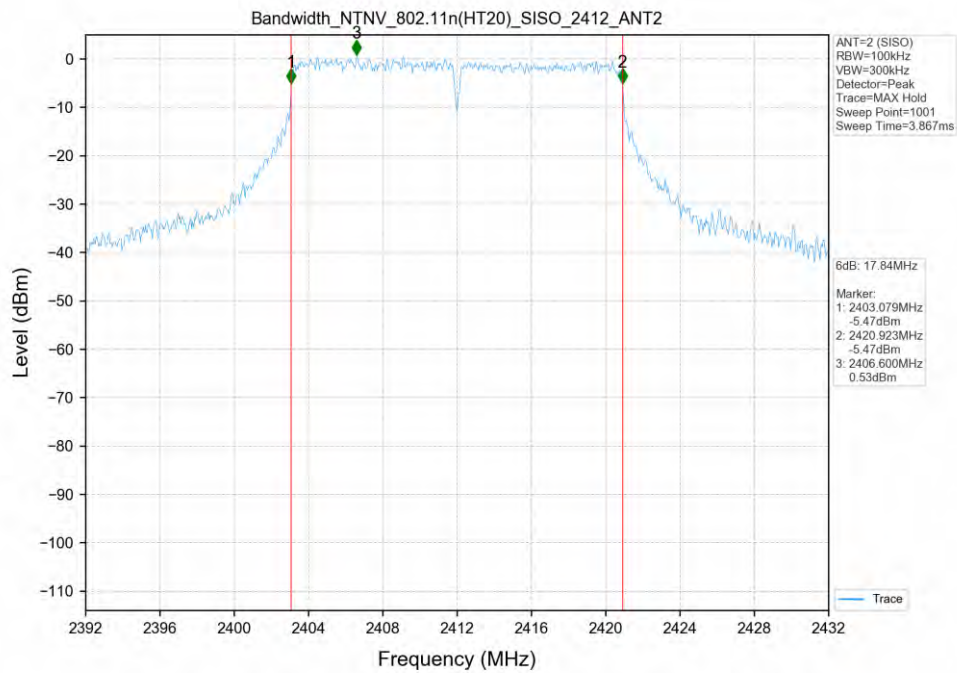


802.11g_2462MHz_SISO_ANT1

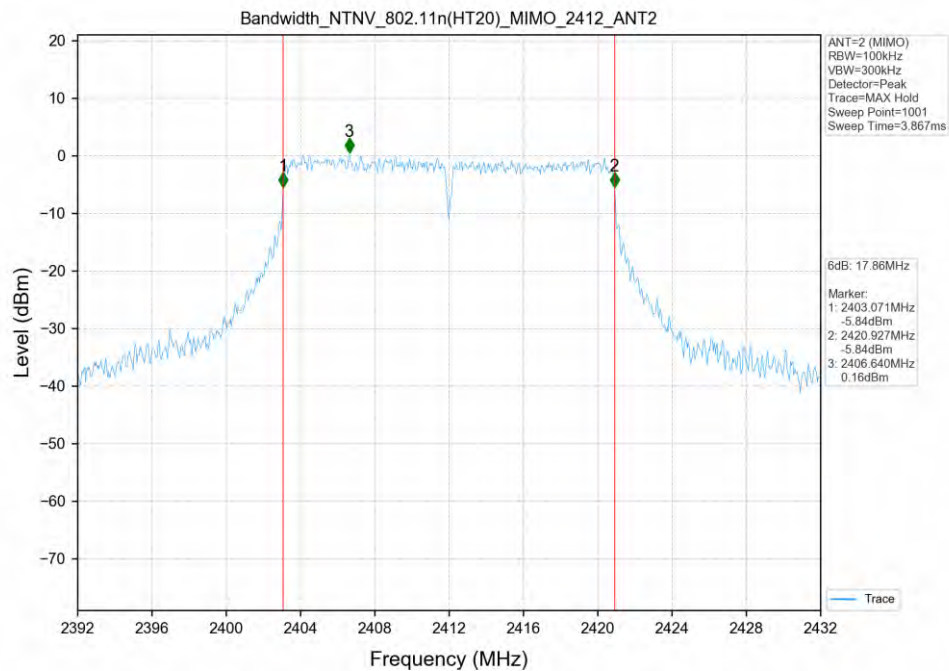


802.11g_2462MHz_SISO_ANT2

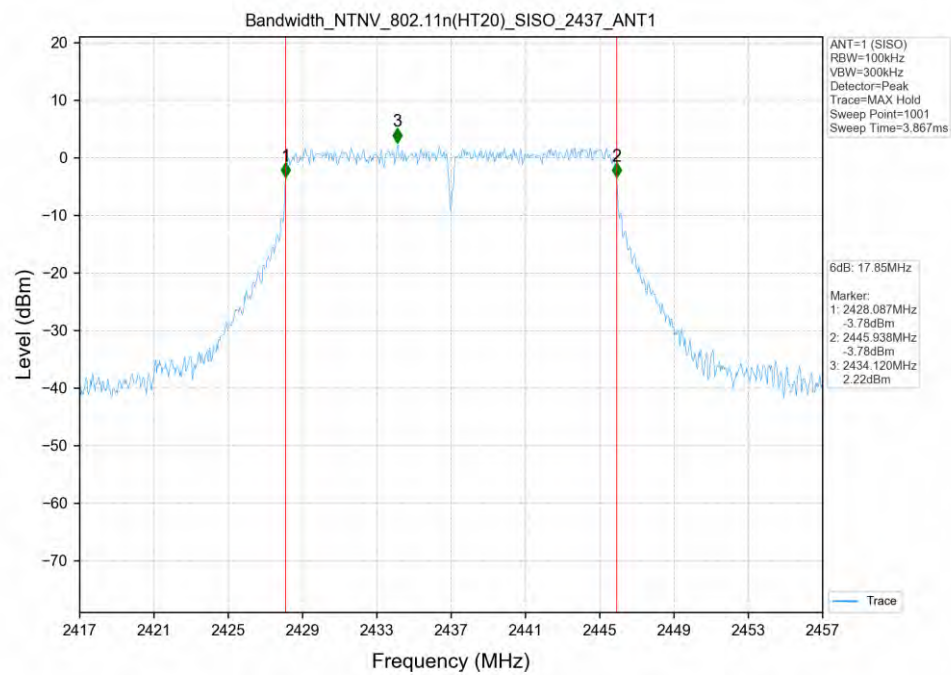




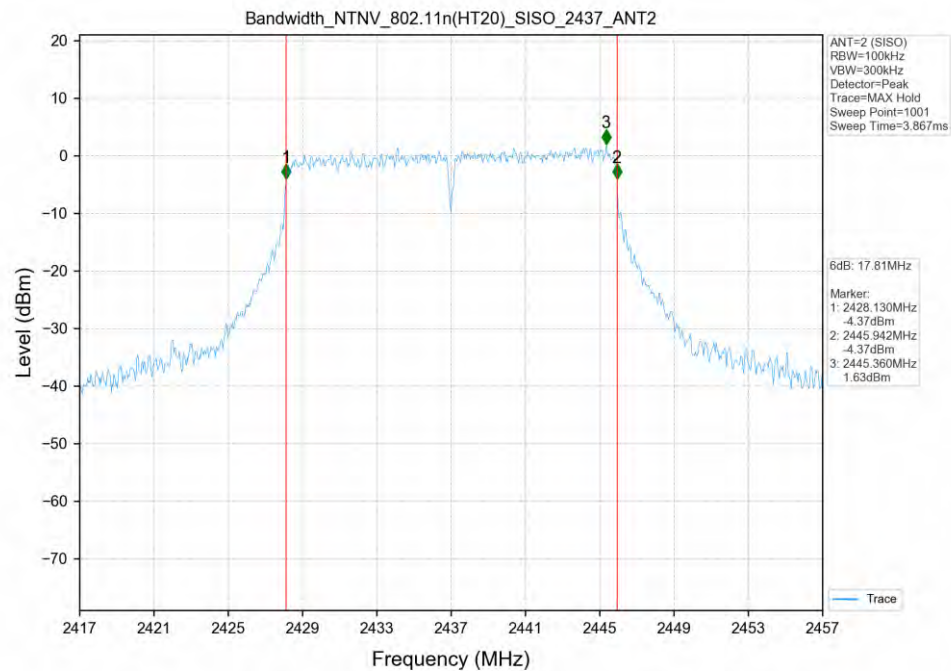
802.11n(HT20)_2412MHz_MIMO_Total



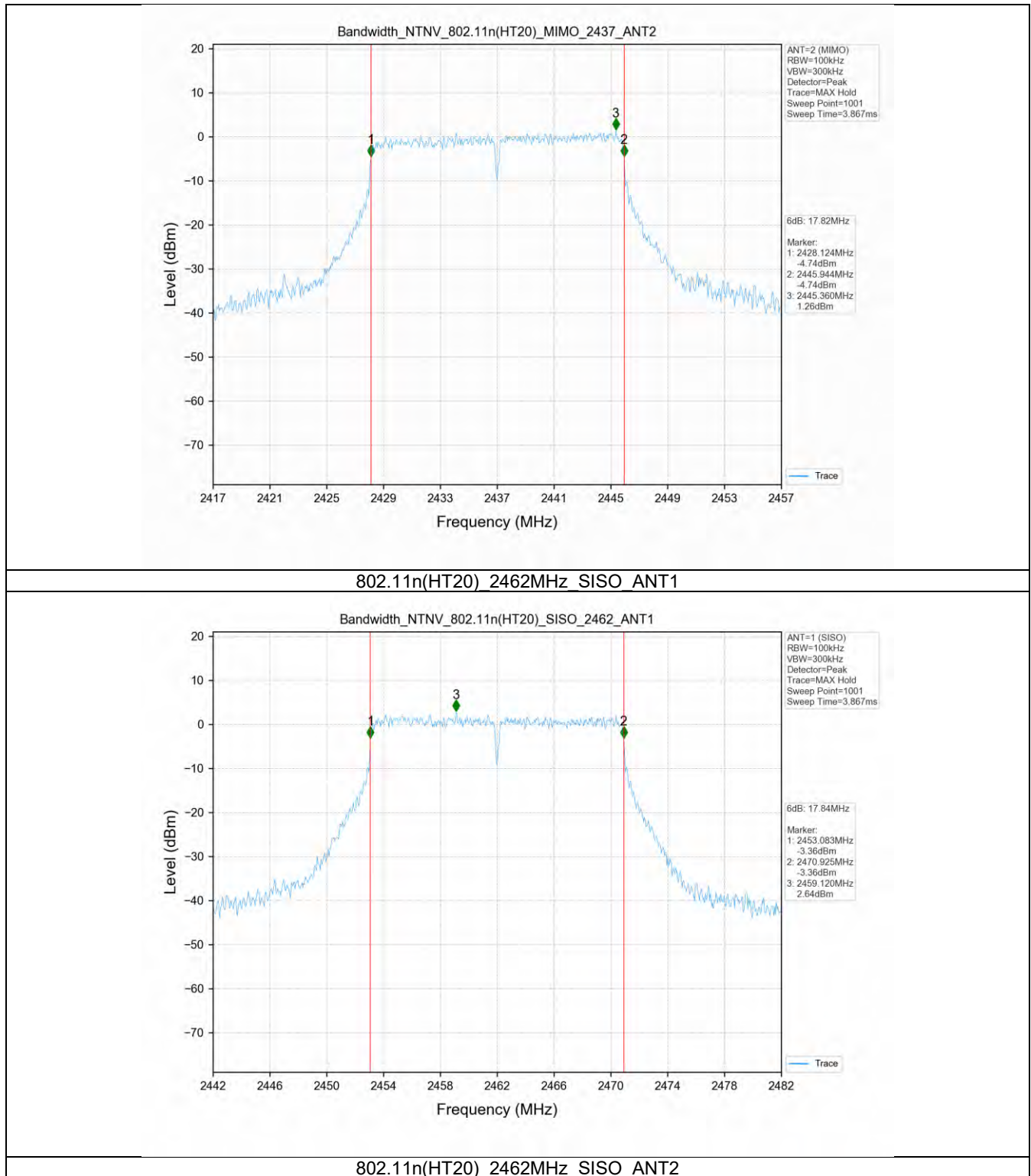
802.11n(HT20)_2437MHz_SISO_ANT1

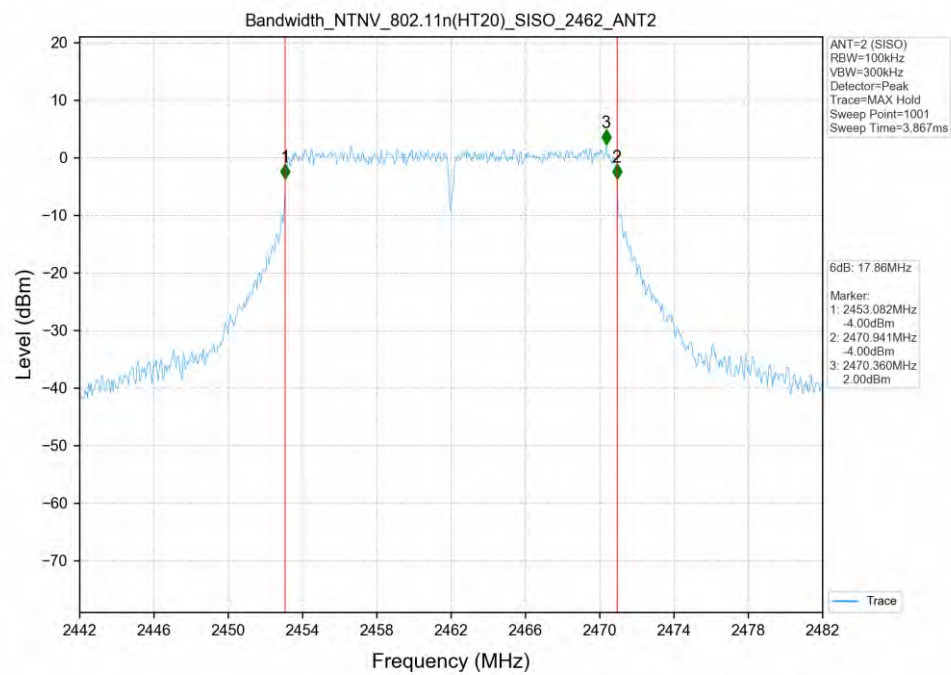


802.11n(HT20)_2437MHz_SISO_ANT2

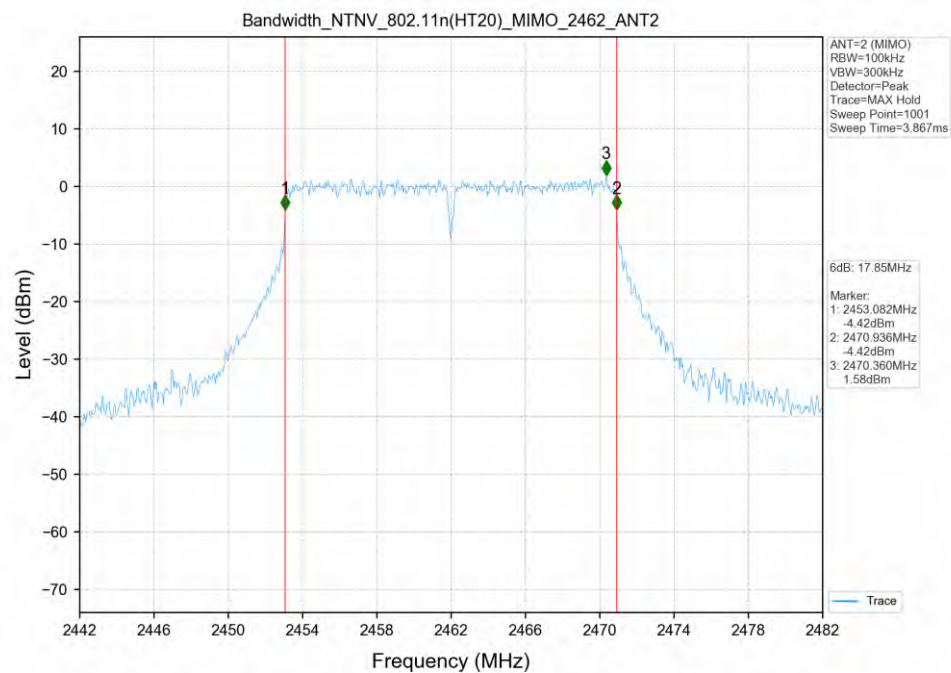


802.11n(HT20)_2437MHz_MIMO_Total

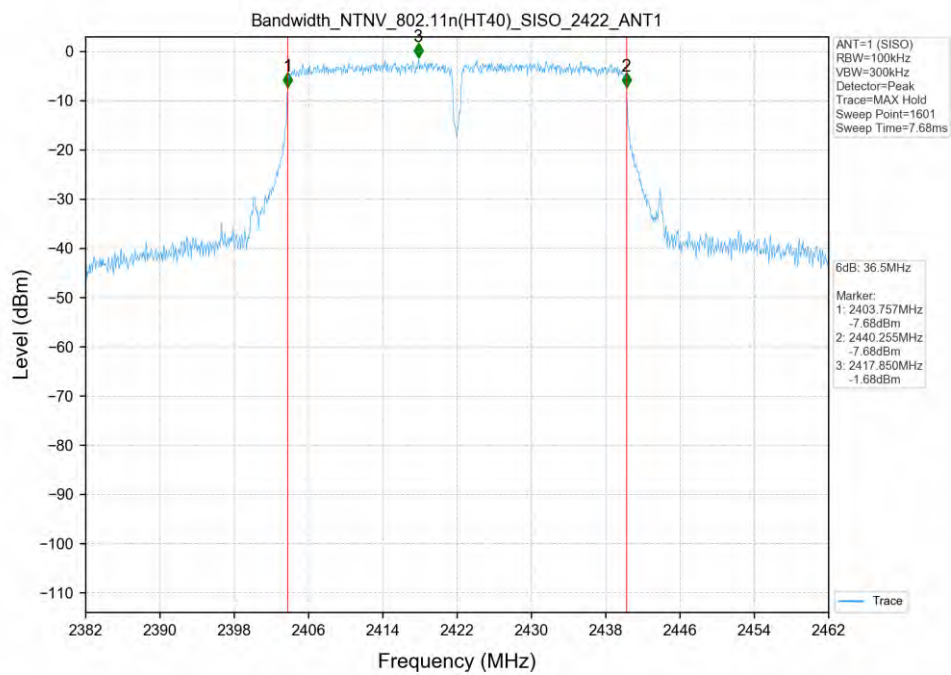




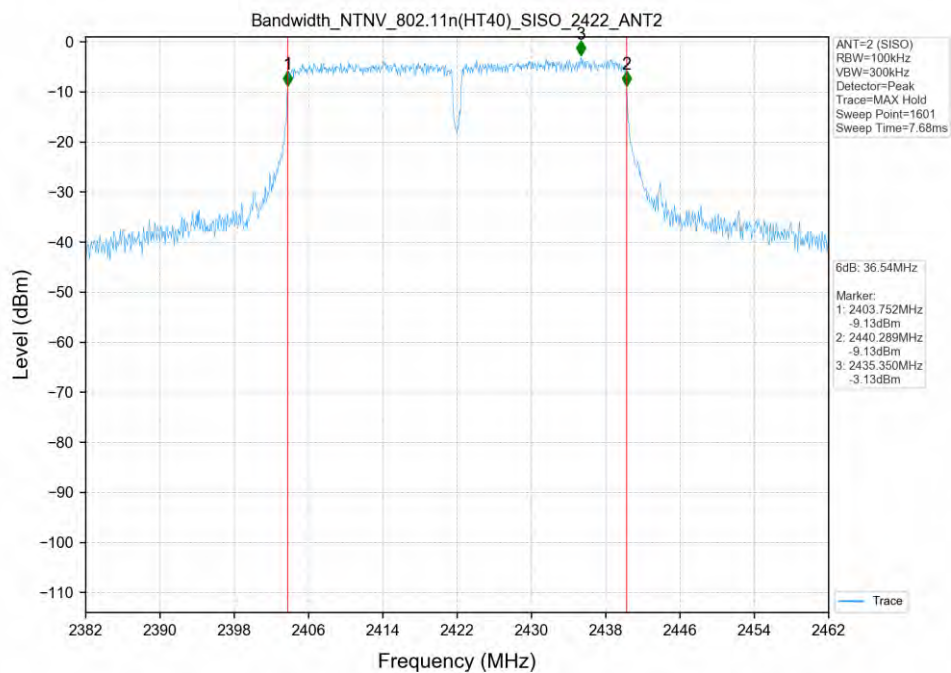
802.11n(HT20)_2462MHz_MIMO_Total



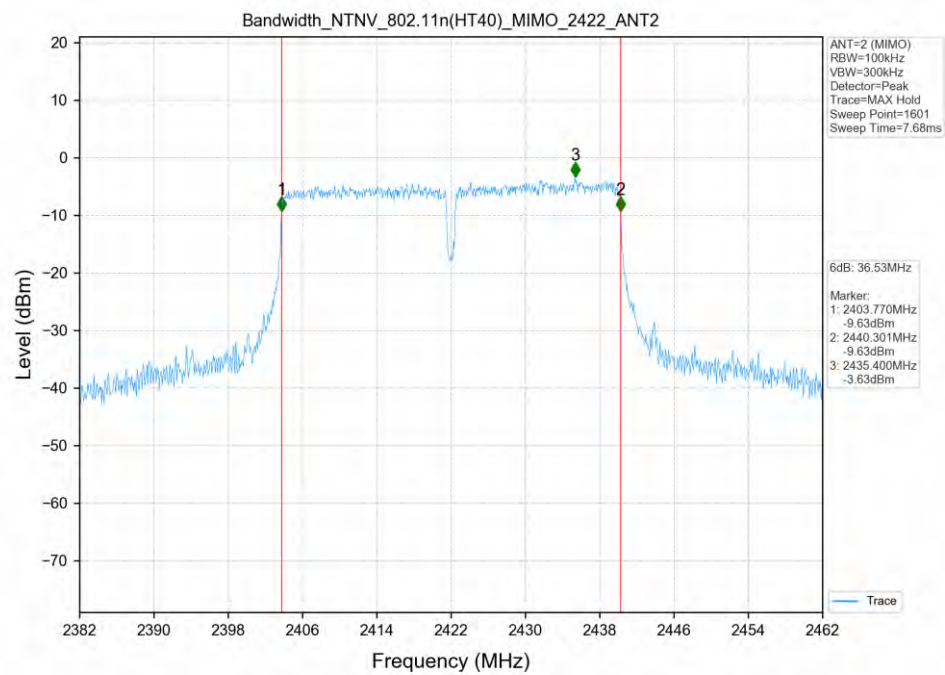
802.11n(HT40)_2422MHz_SISO_ANT1



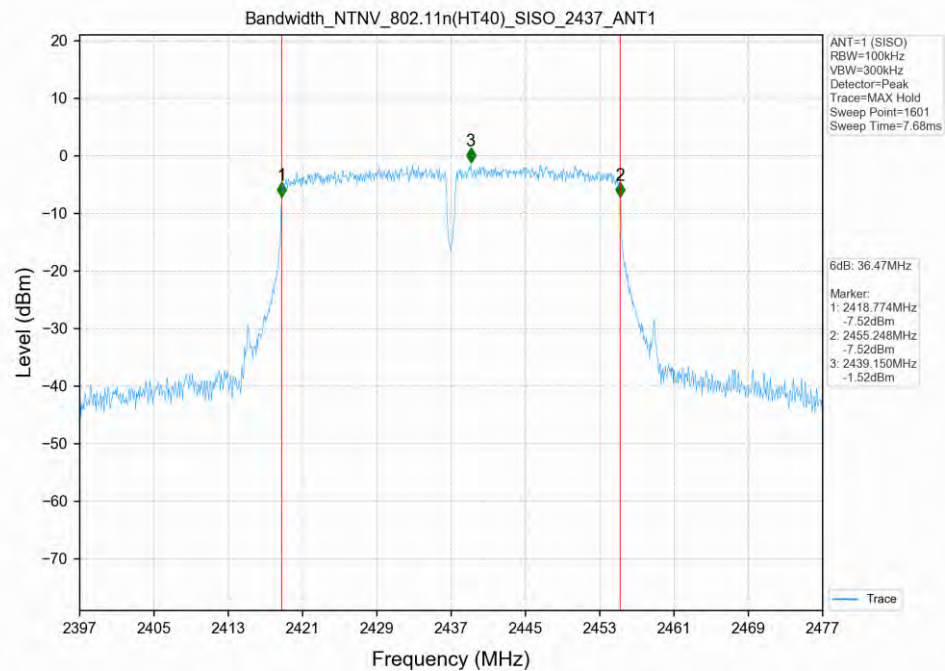
802.11n(HT40)_2422MHz_SISO_ANT2



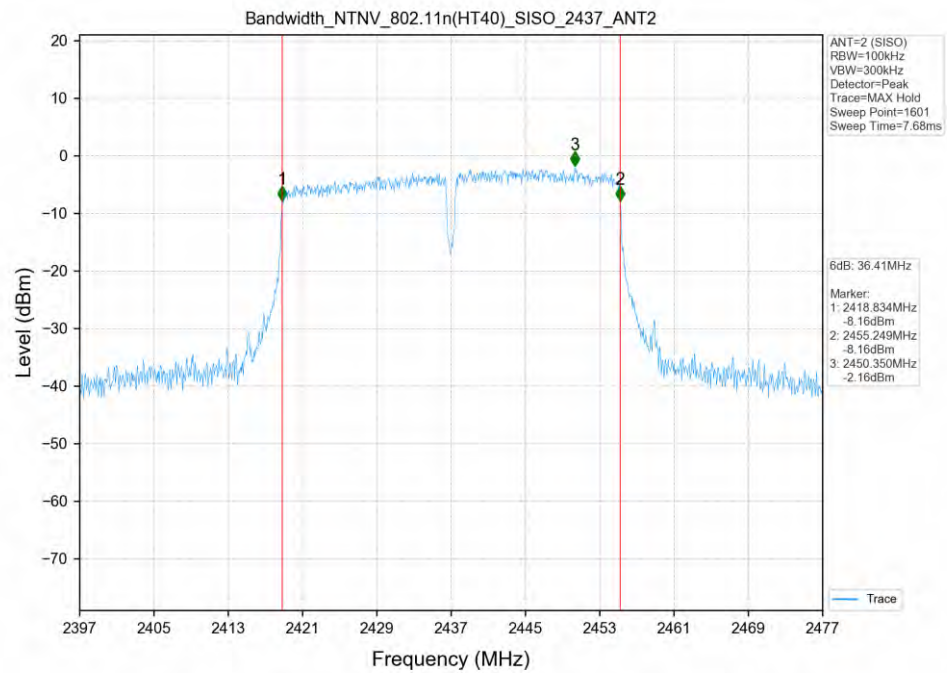
802.11n(HT40)_2422MHz_MIMO_Total



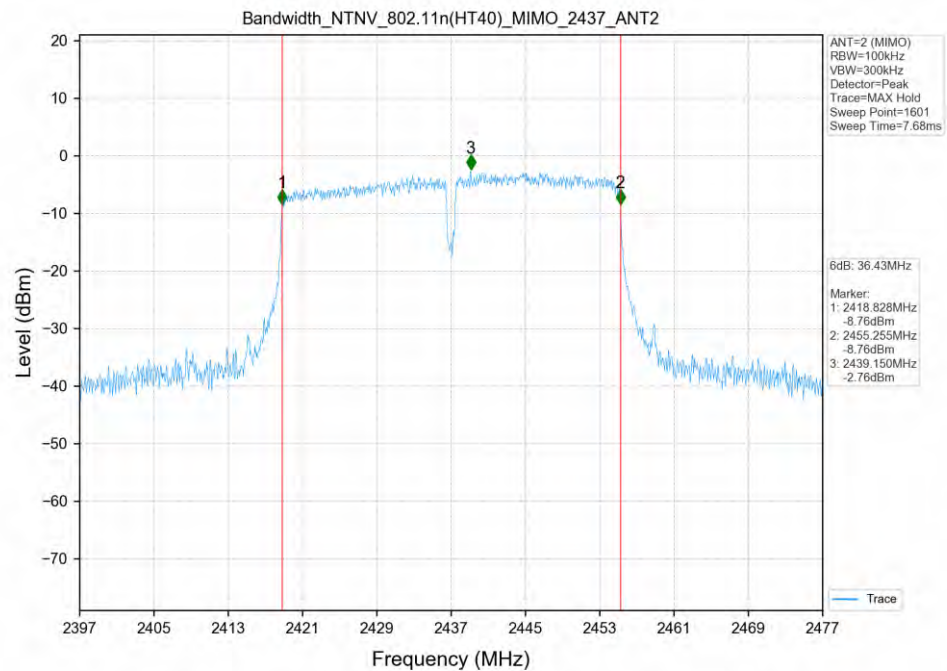
802.11n(HT40)_2437MHz_SISO_ANT1



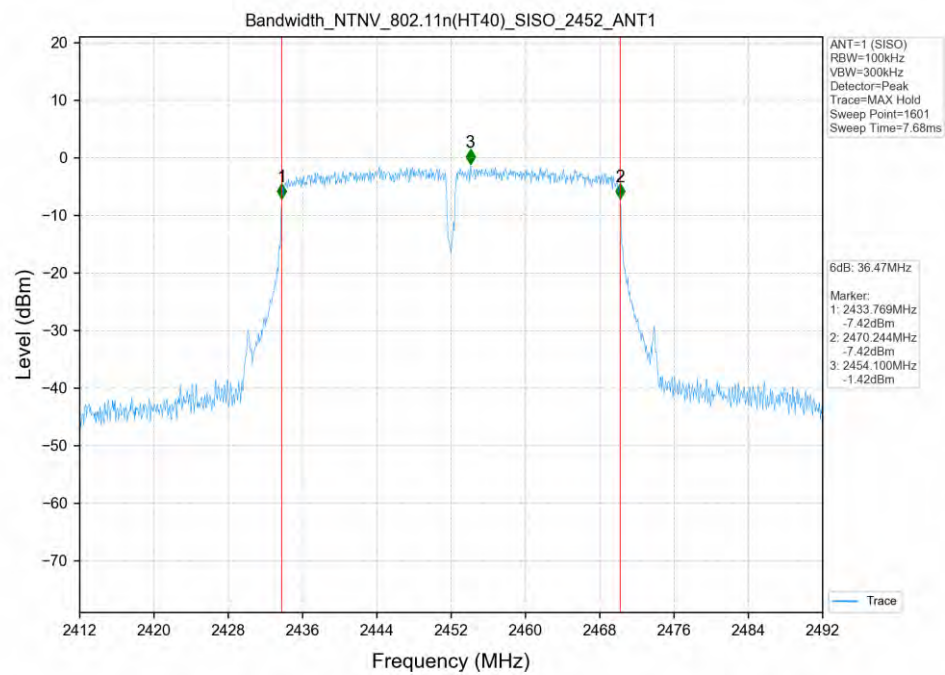
802.11n(HT40)_2437MHz_SISO_ANT2



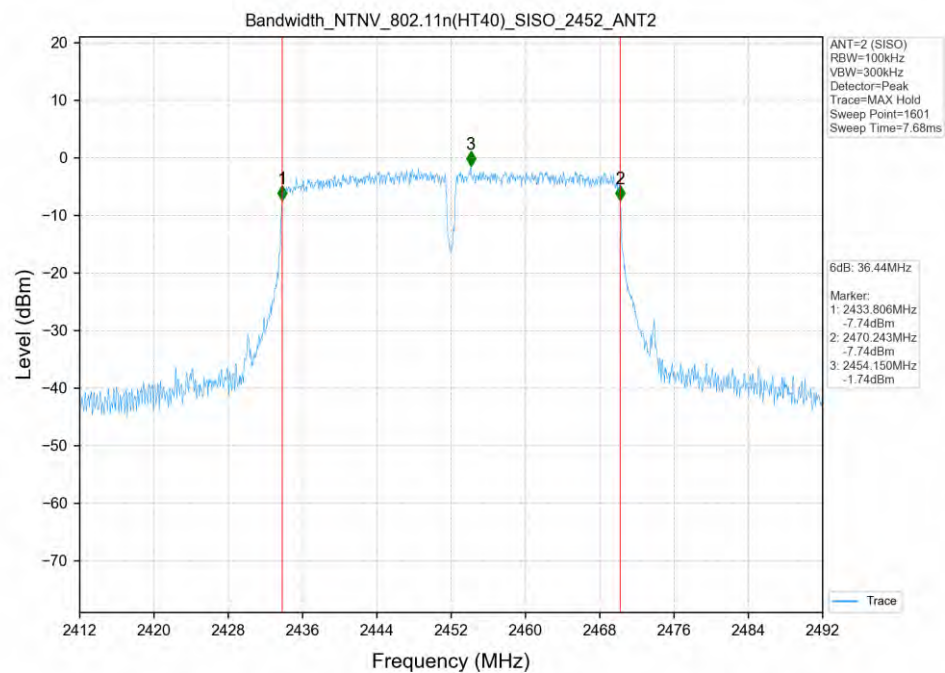
802.11n(HT40)_2437MHz_MIMO_Total



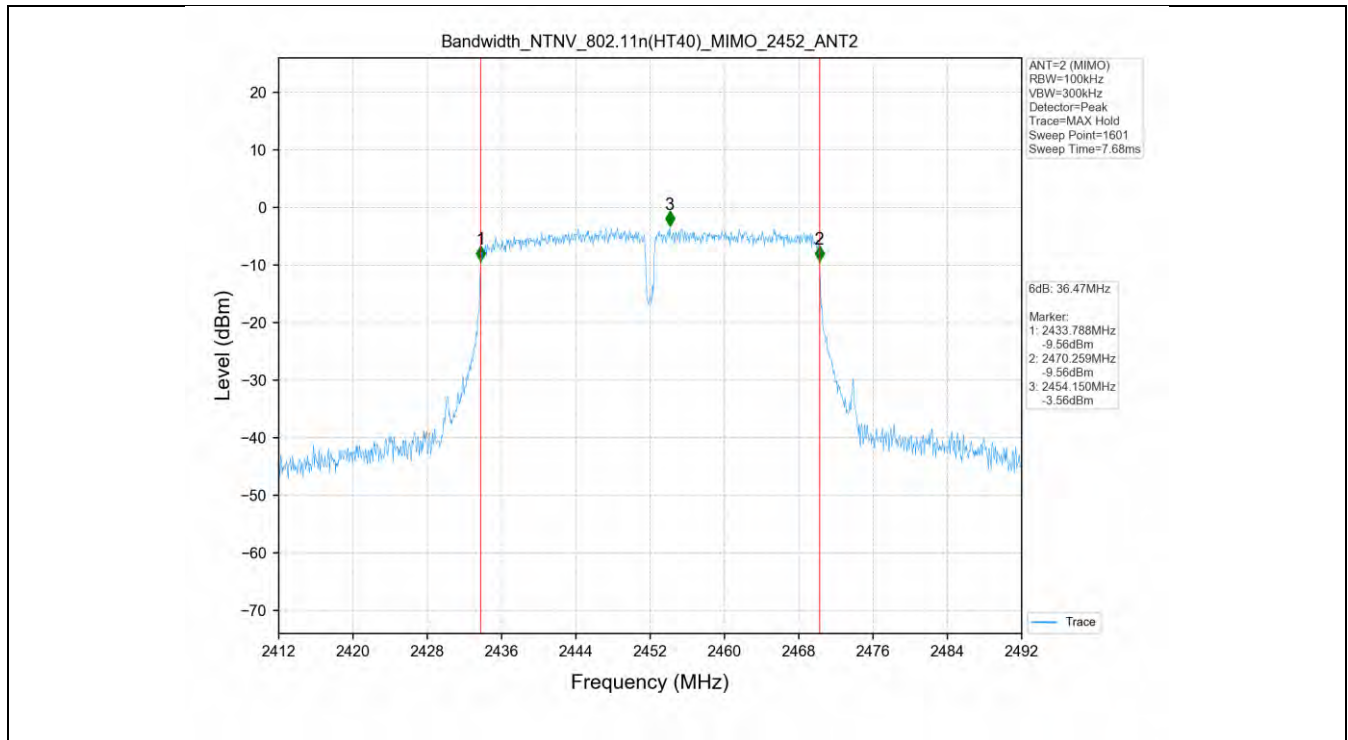
802.11n(HT40)_2452MHz_SISO_ANT1



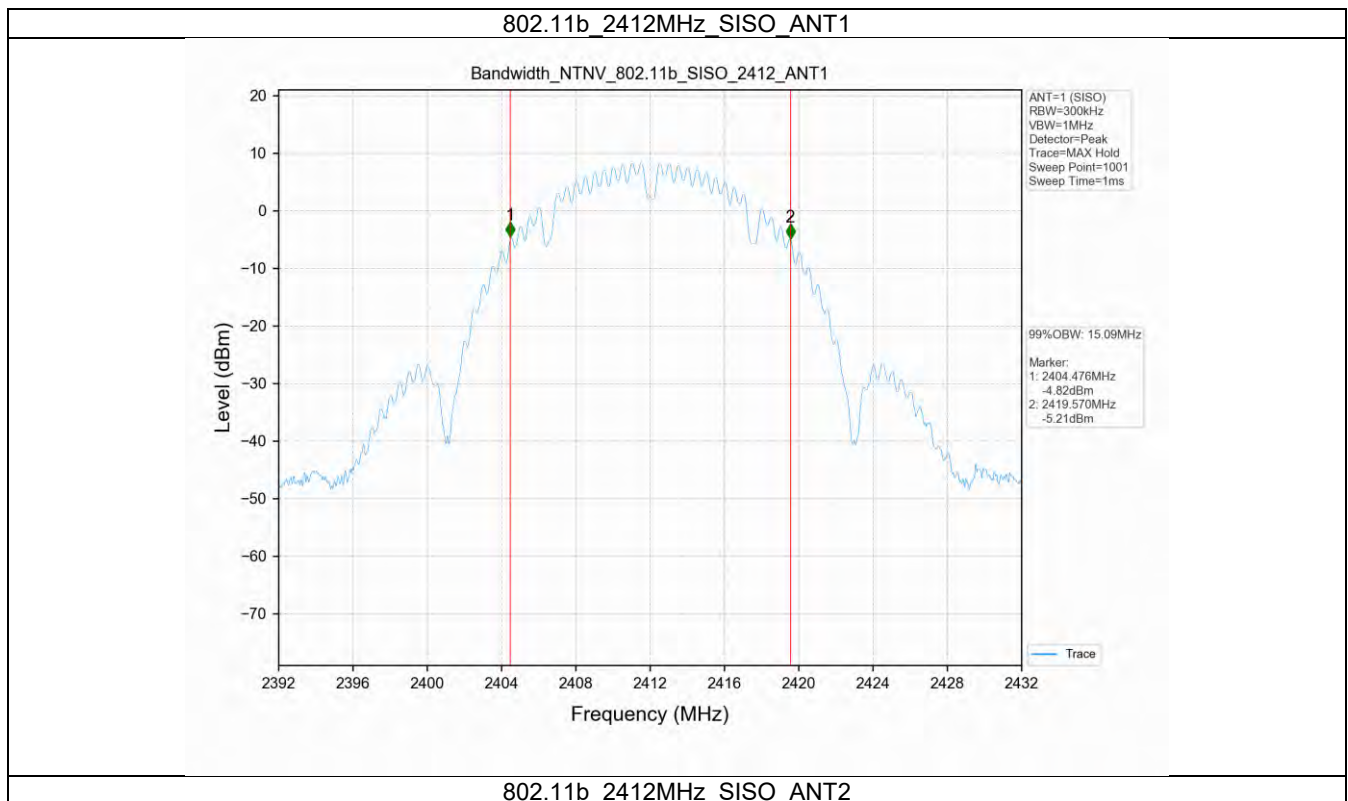
802.11n(HT40)_2452MHz_SISO_ANT2

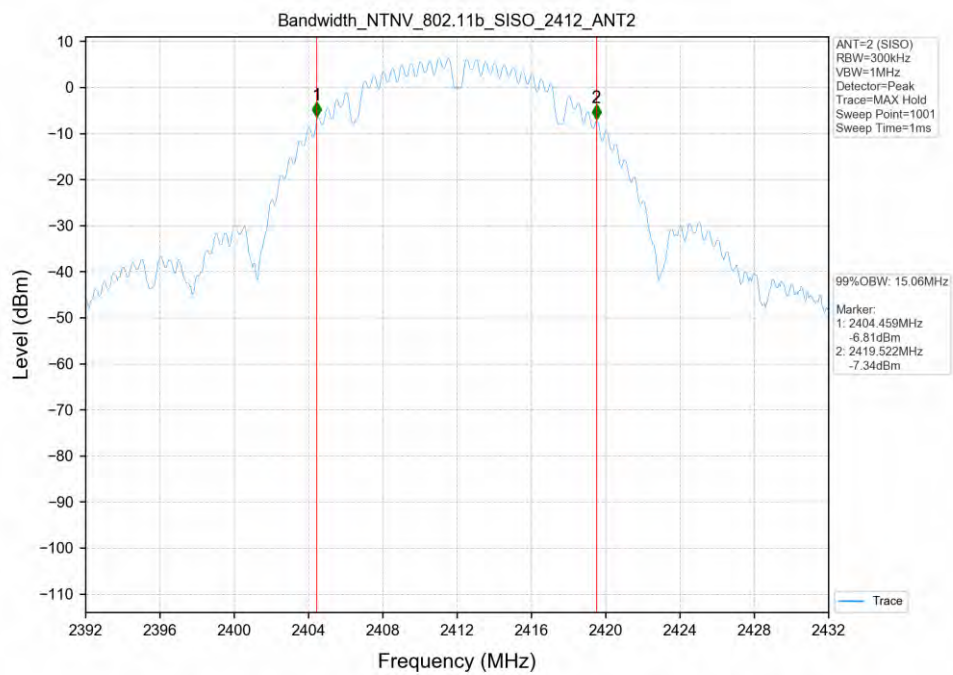


802.11n(HT40)_2452MHz_MIMO_Total

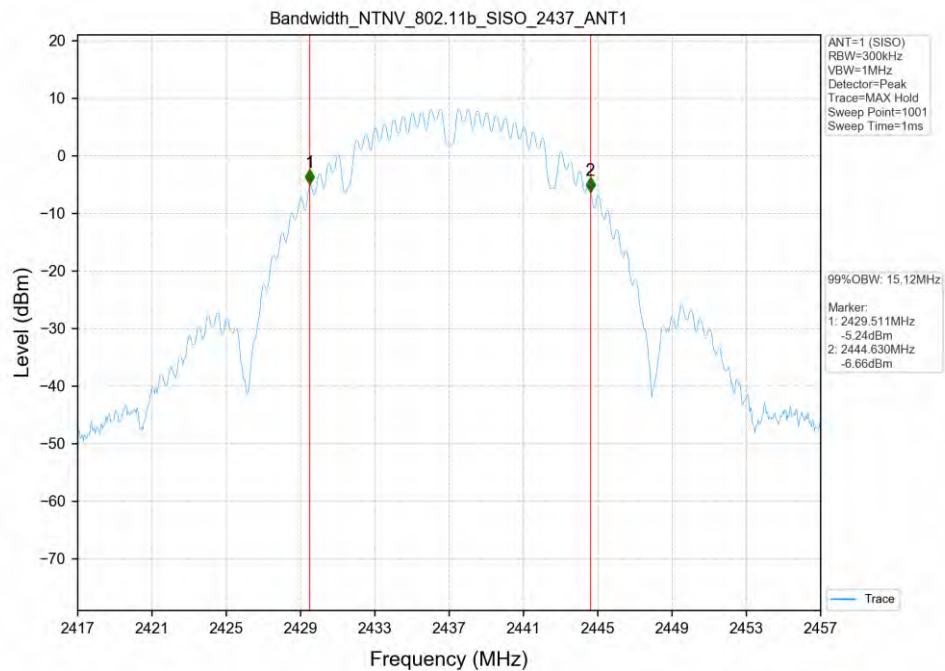


2.3 Test Graph - 99% Occupied Bandwidth

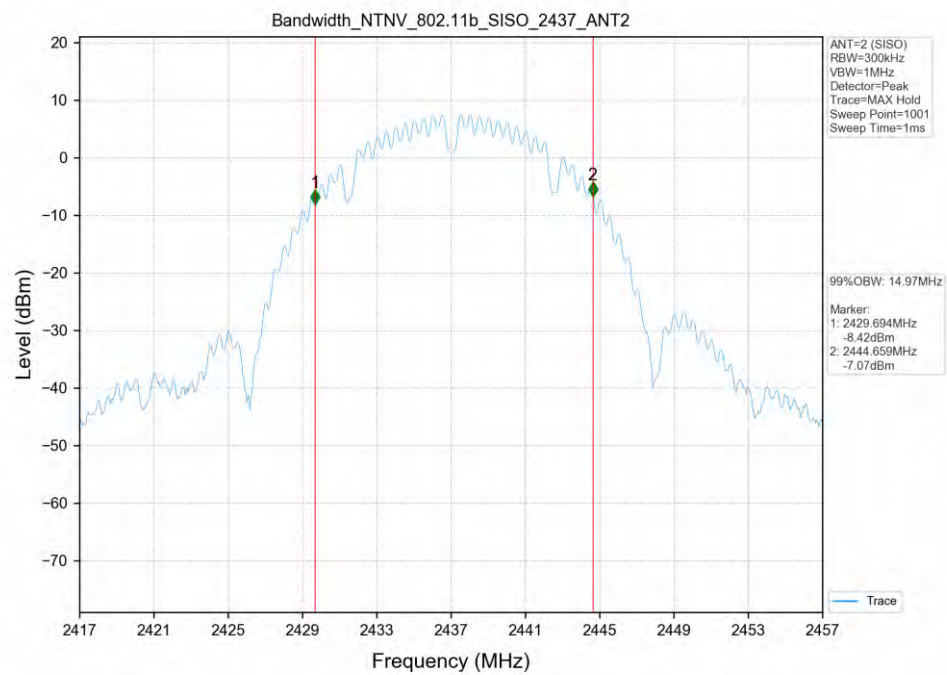




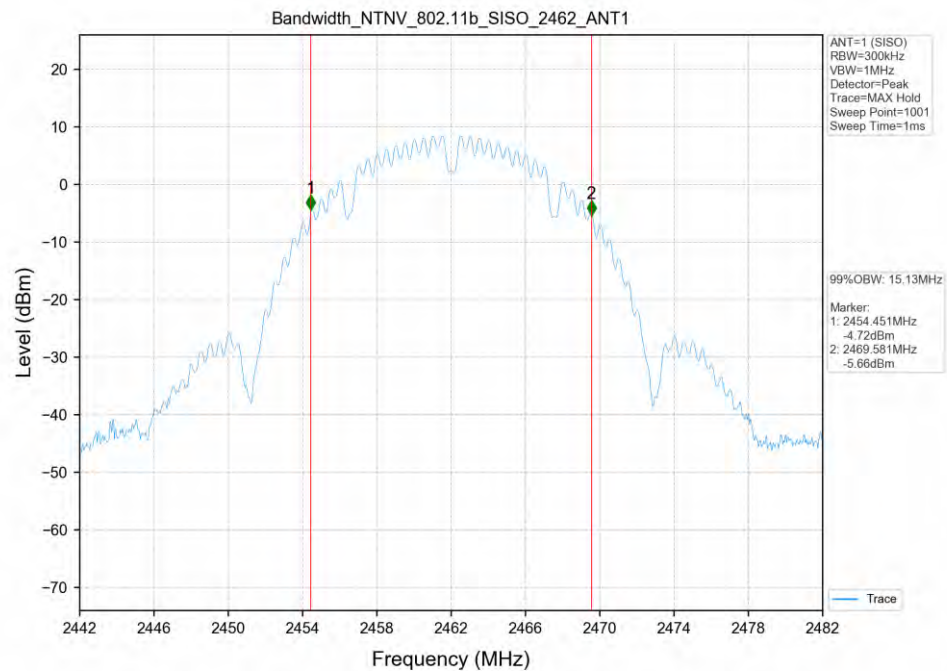
802.11b_2437MHz_SISO_ANT1



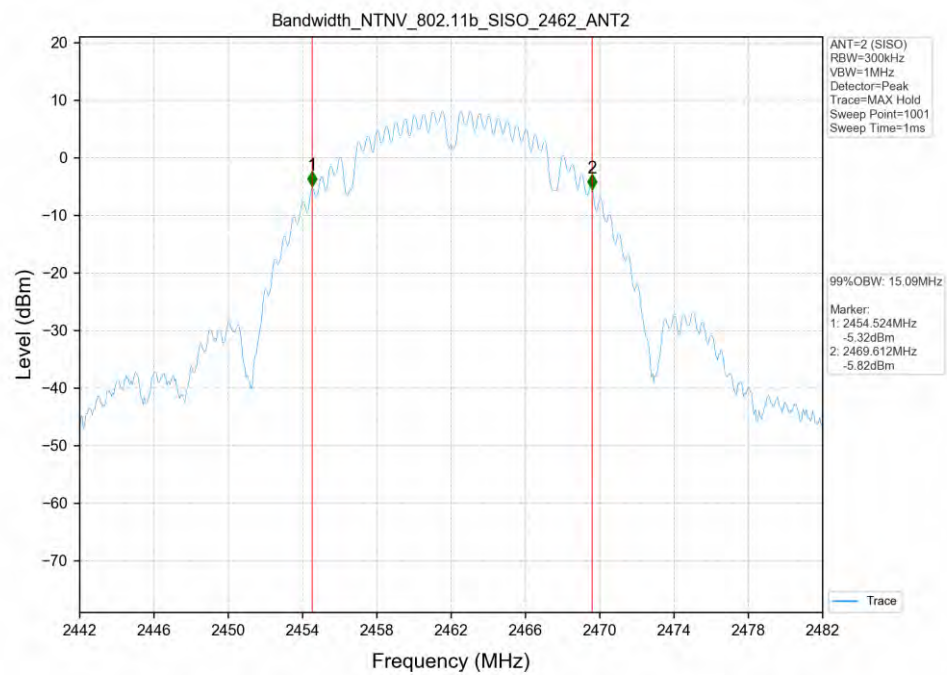
802.11b_2437MHz_SISO_ANT2



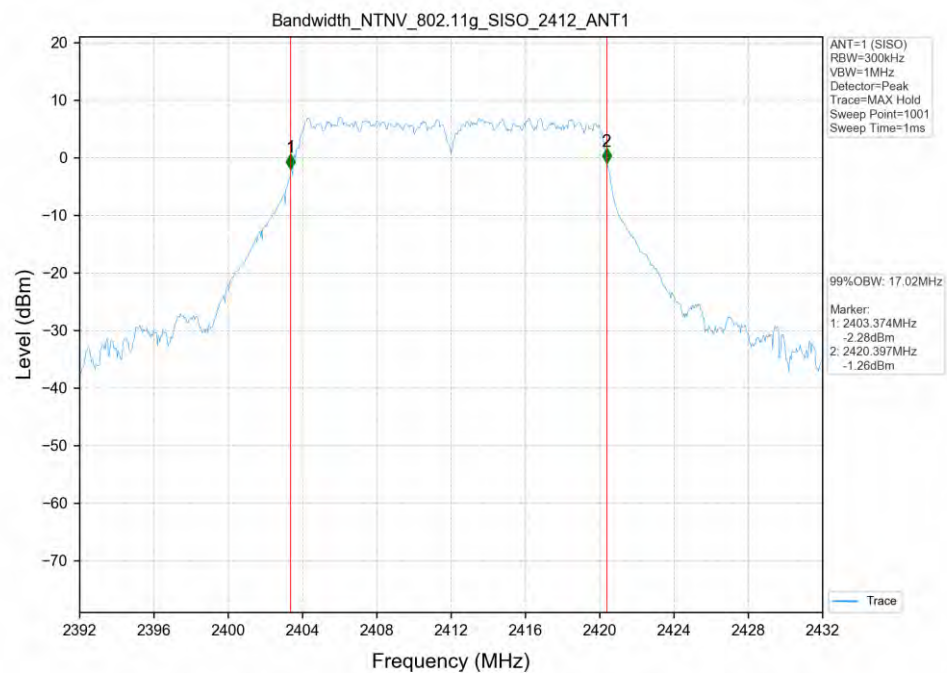
802.11b_2462MHz_SISO_ANT1



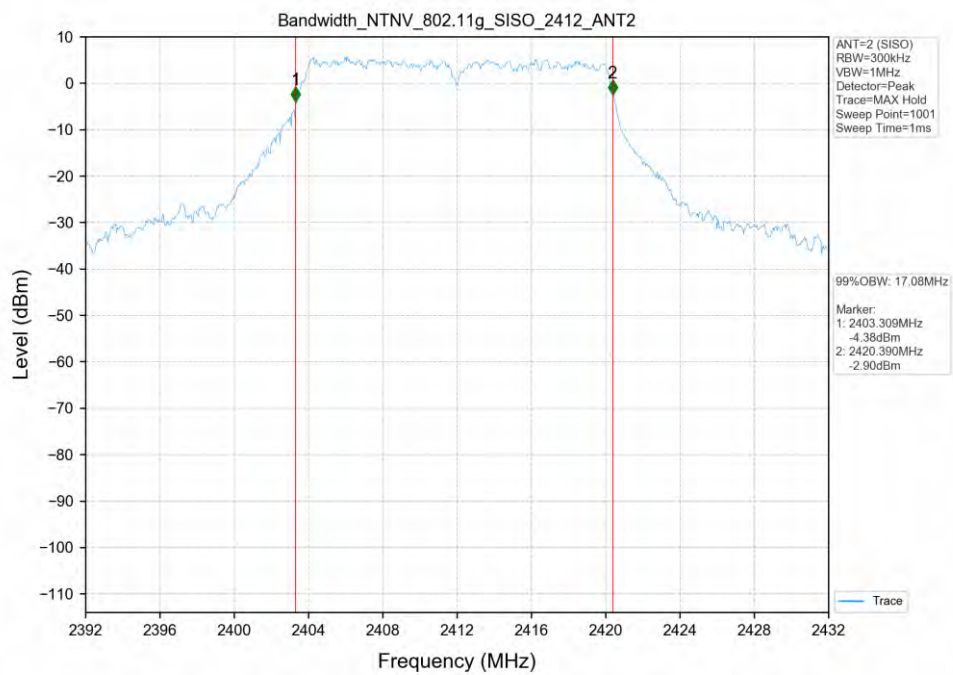
802.11b_2462MHz_SISO_ANT2



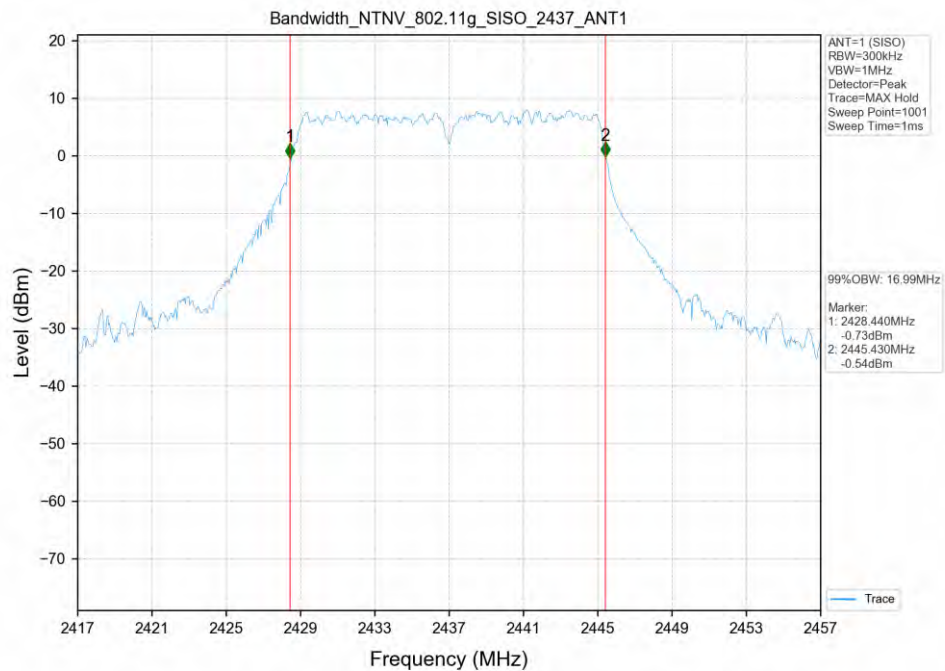
802.11g_2412MHz_SISO_ANT1



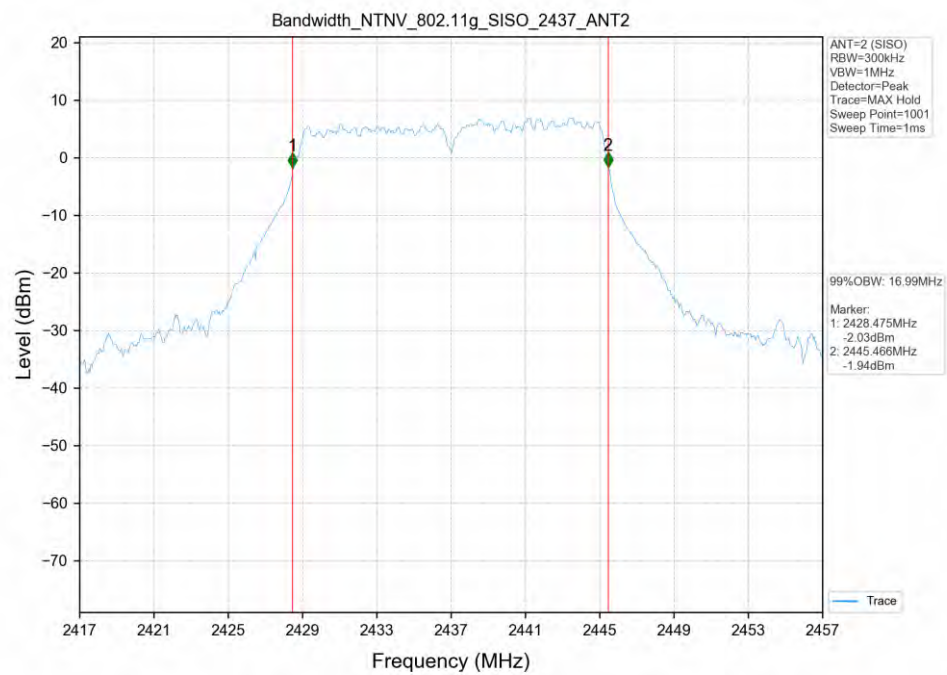
802.11g_2412MHz_SISO_ANT2



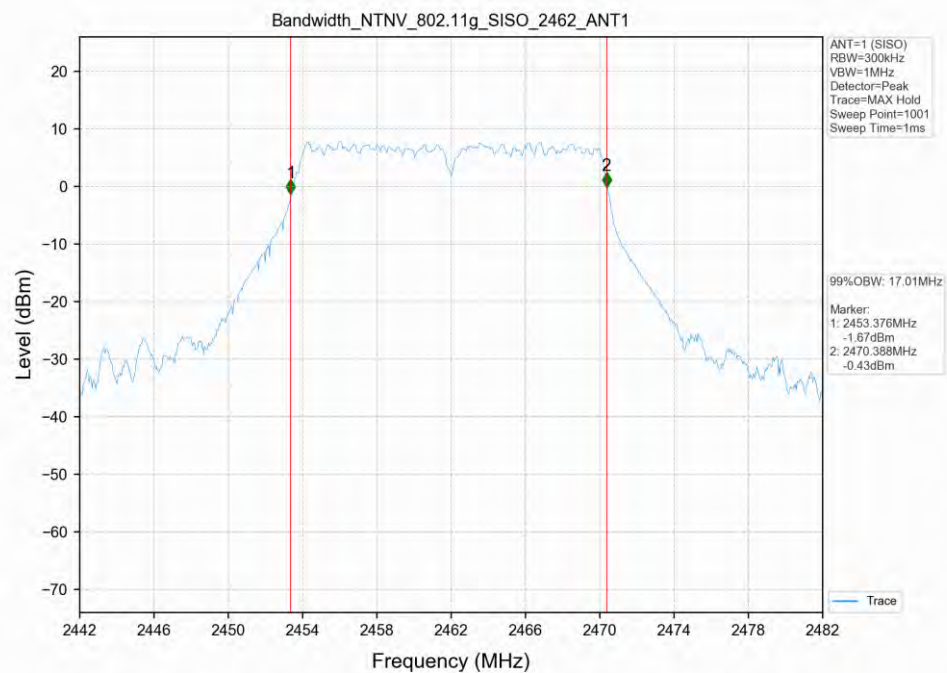
802.11g_2437MHz_SISO_ANT1



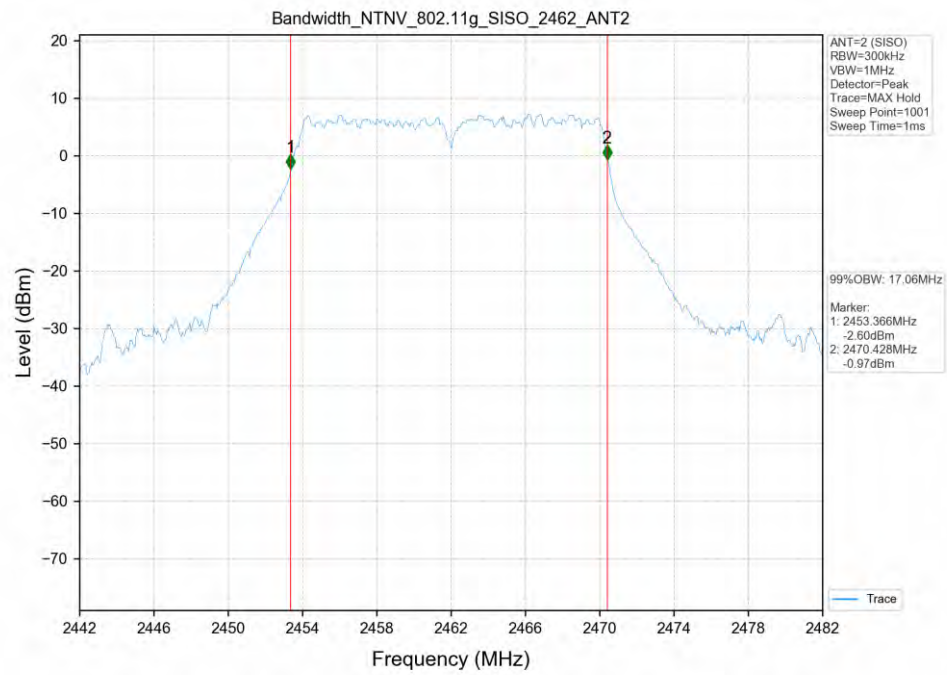
802.11g_2437MHz_SISO_ANT2



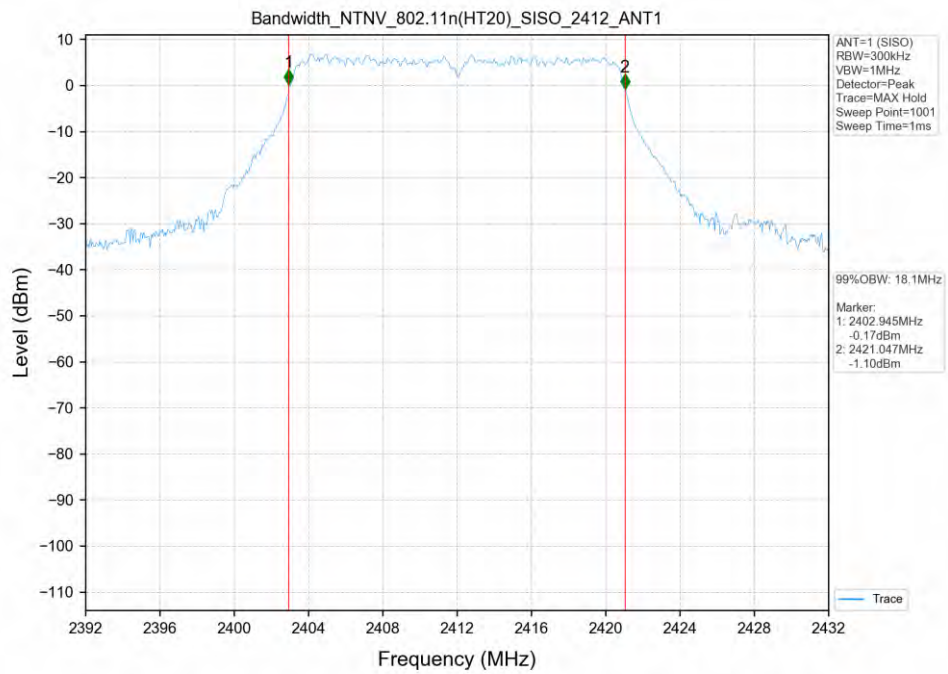
802.11g_2462MHz_SISO_ANT1



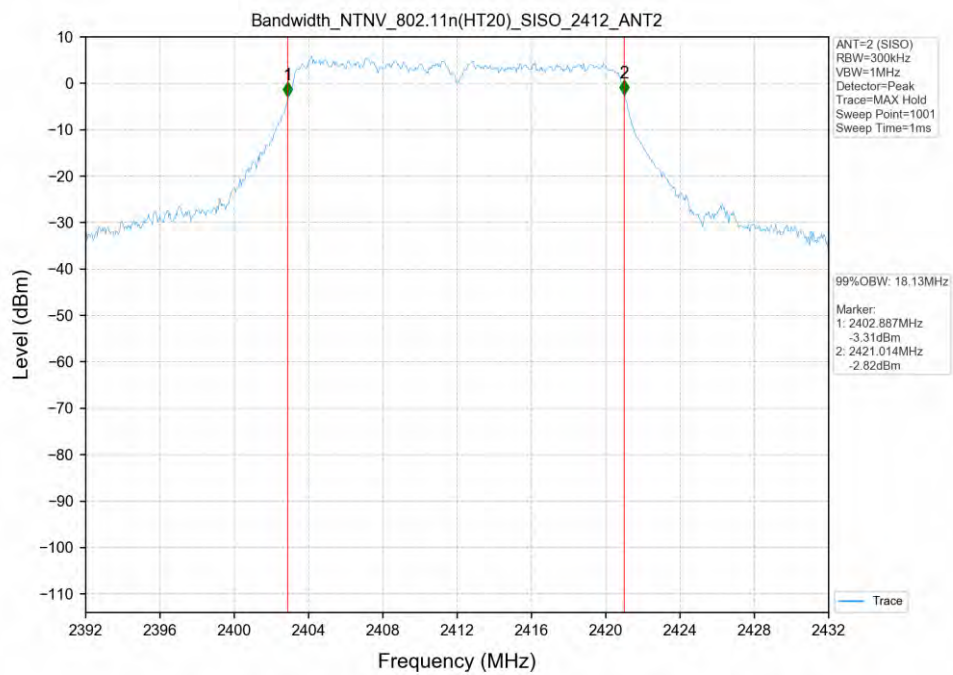
802.11g_2462MHz_SISO_ANT2



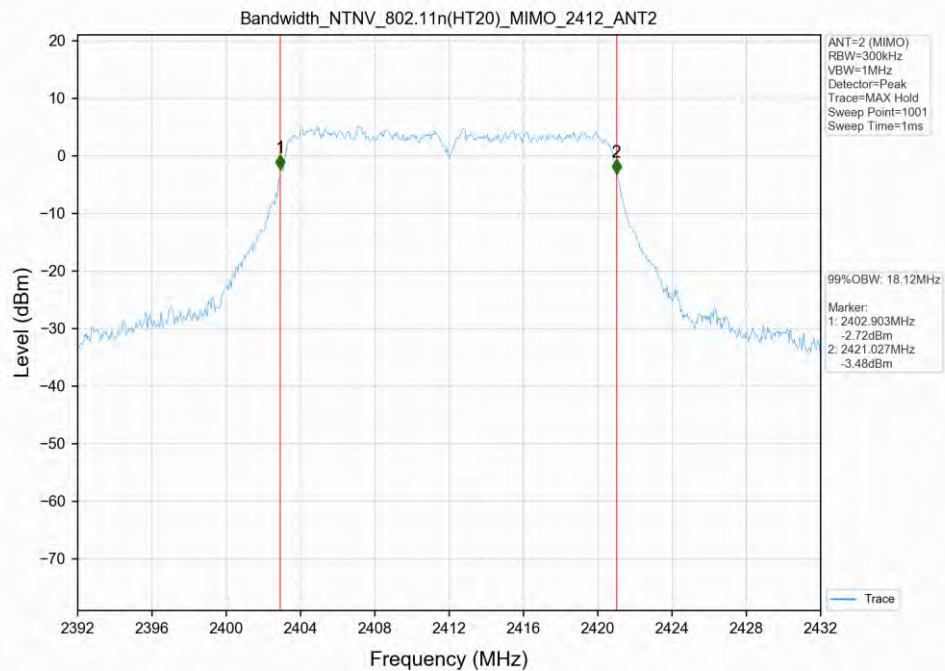
802.11n(HT20)_2412MHz_SISO_ANT1



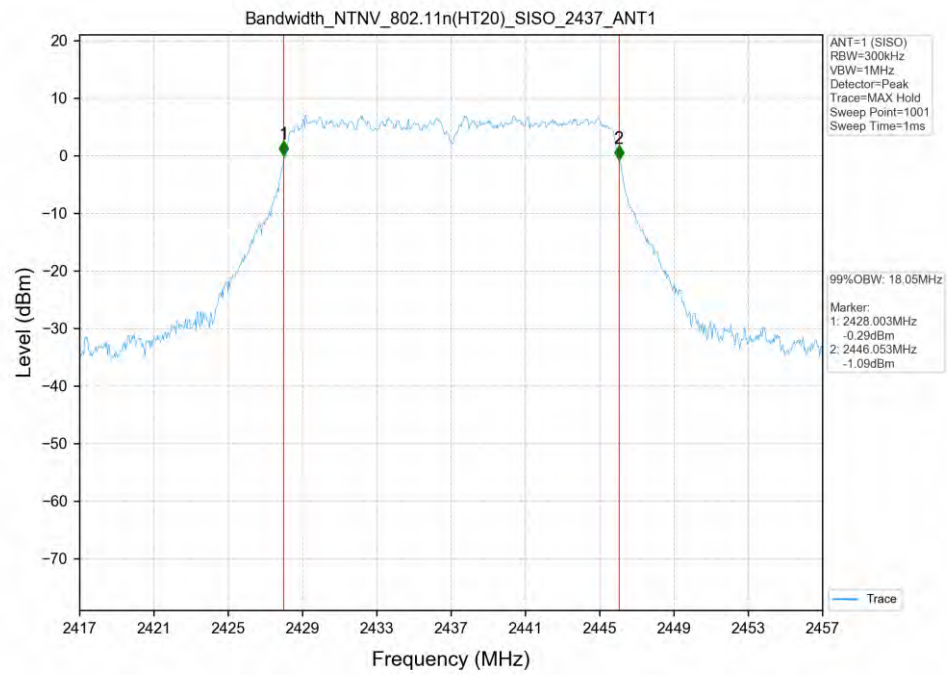
802.11n(HT20)_2412MHz_SISO_ANT2



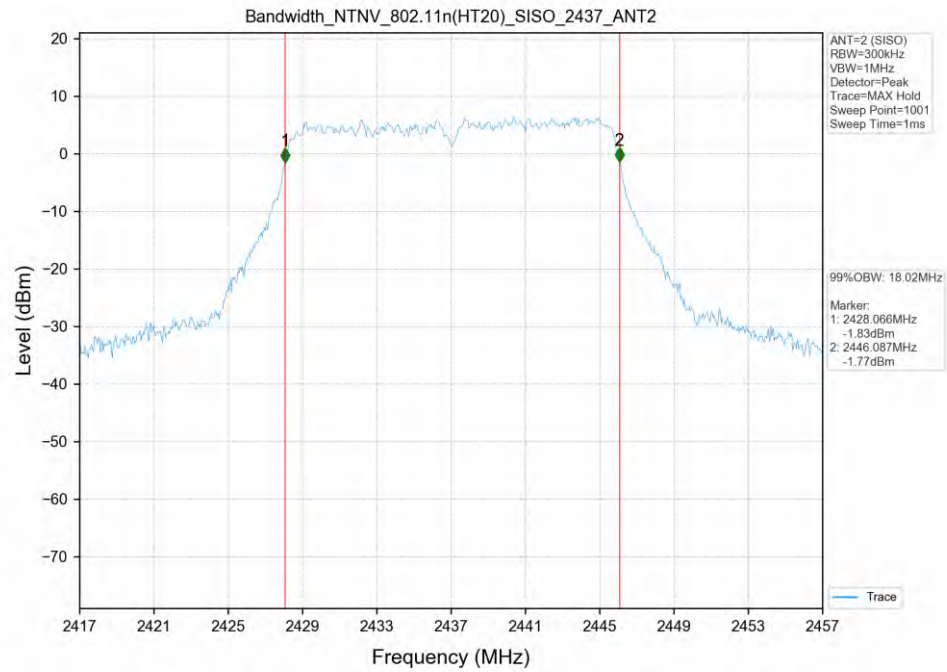
802.11n(HT20) 2412MHz MIMO Total



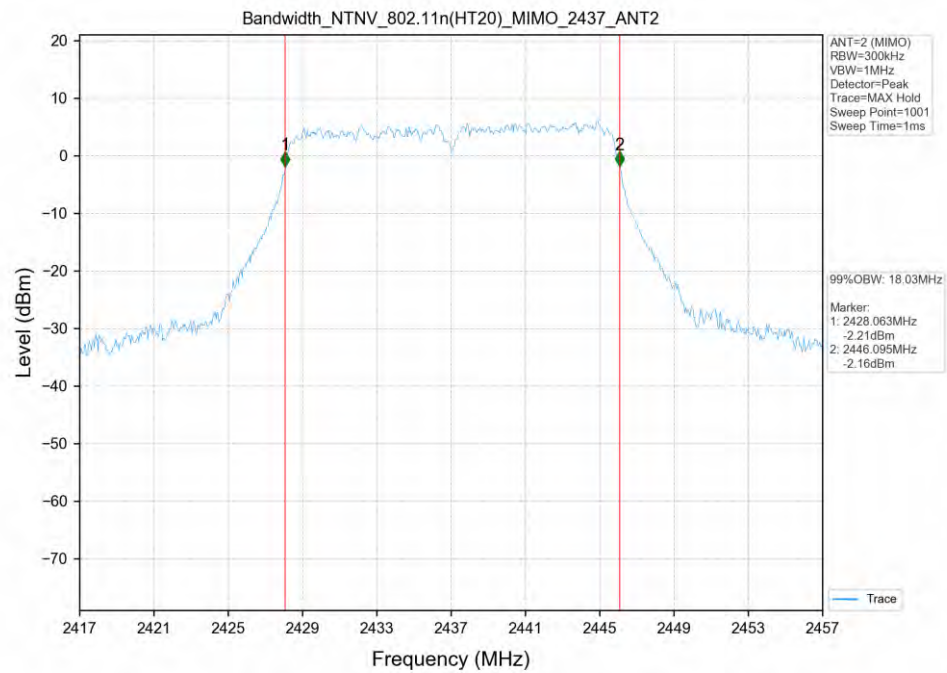
802.11n(HT20)_2437MHz_SISO_ANT1



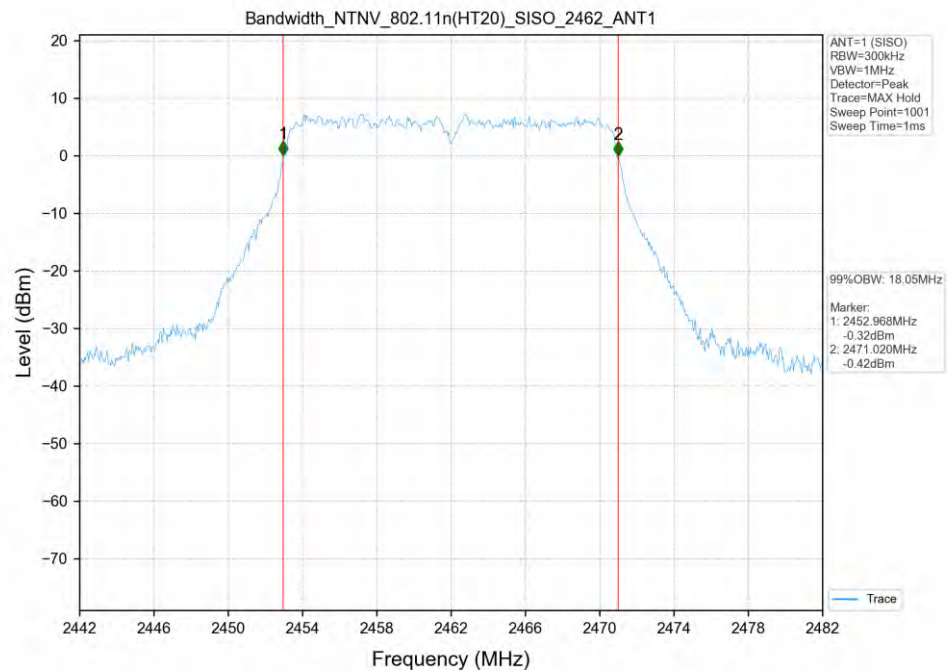
802.11n(HT20)_2437MHz_SISO_ANT2



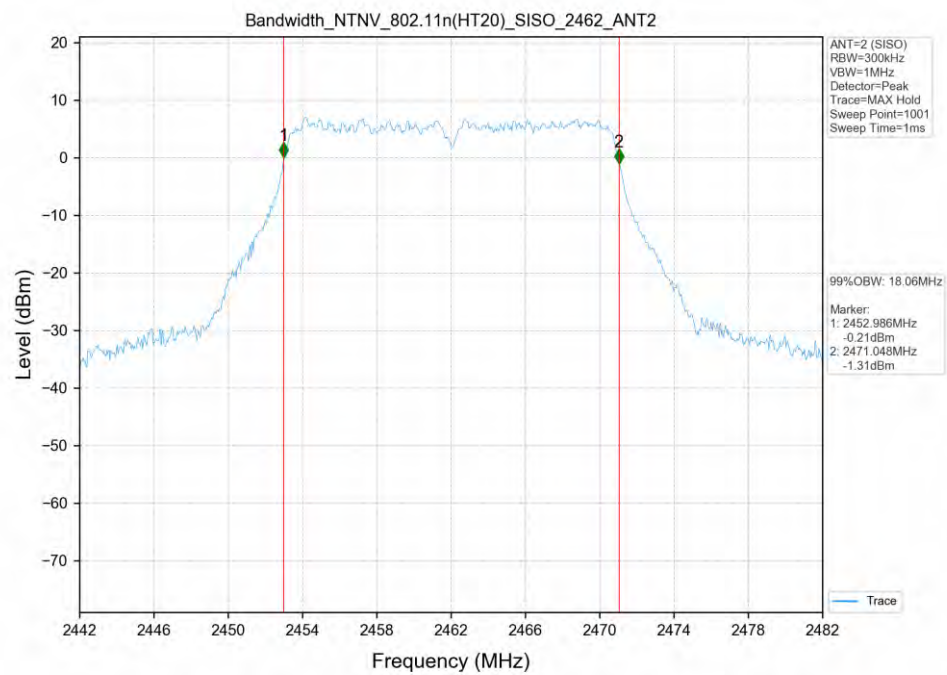
802.11n(HT20)_2437MHz_MIMO_Total



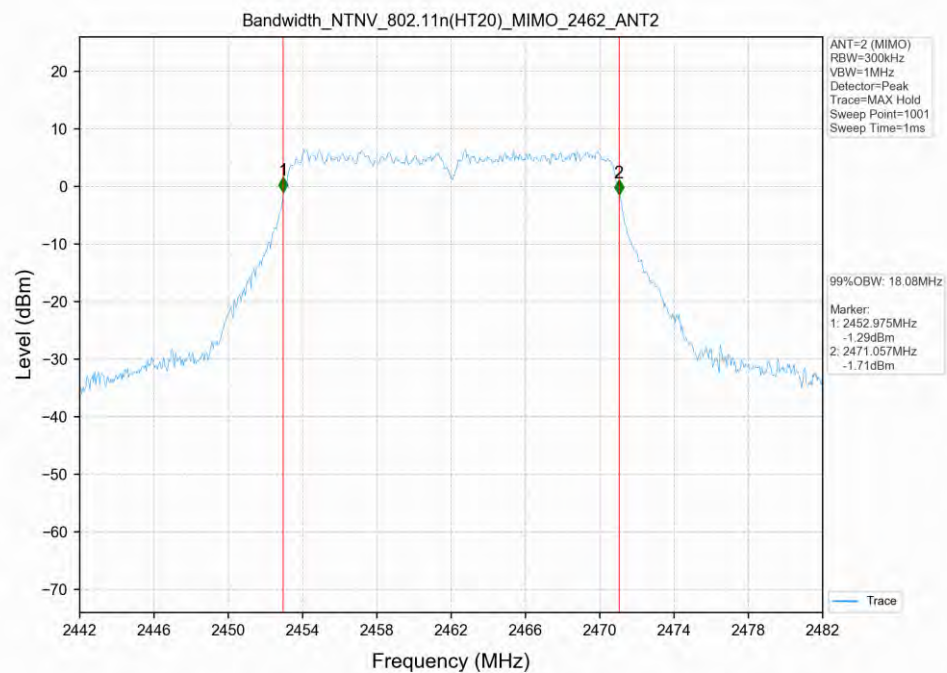
802.11n(HT20)_2462MHz_SISO_ANT1



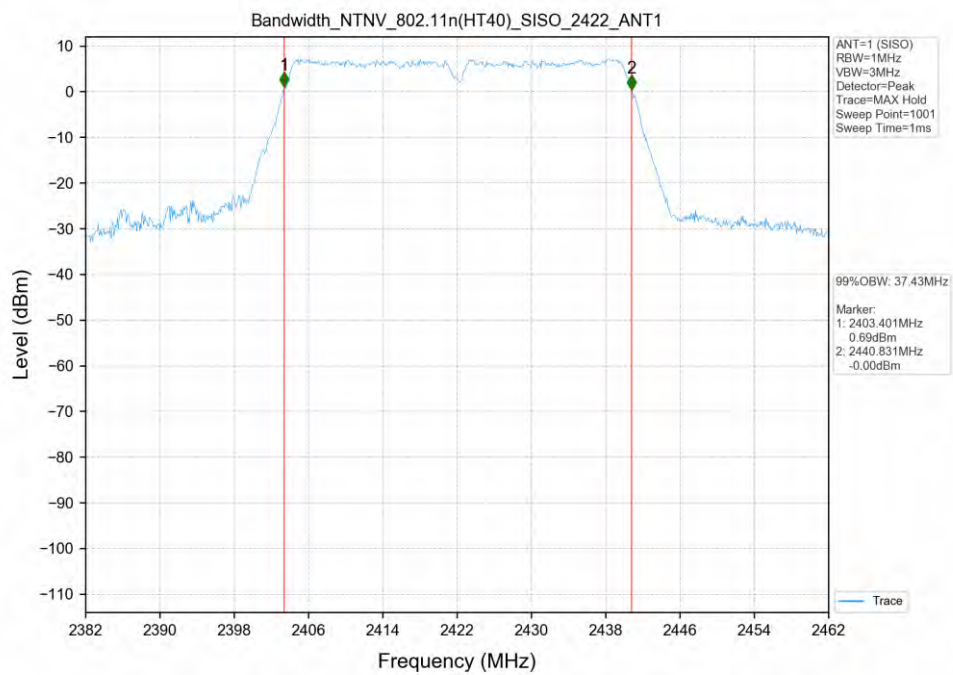
802.11n(HT20)_2462MHz_SISO_ANT2



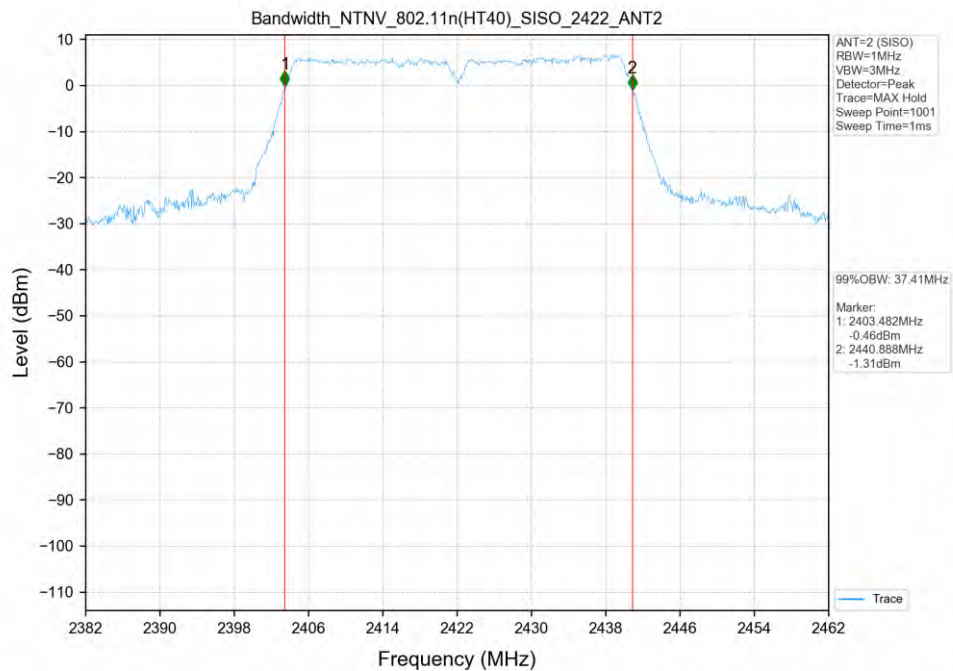
802.11n(HT20) 2462MHz MIMO Total



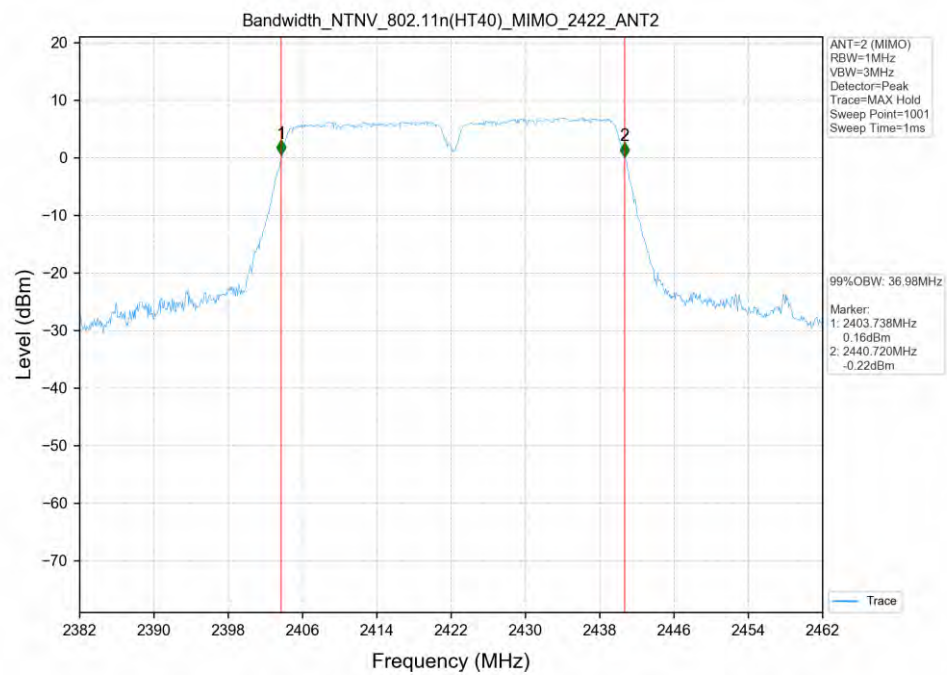
802.11n(HT40) 2422MHz SISO ANT1



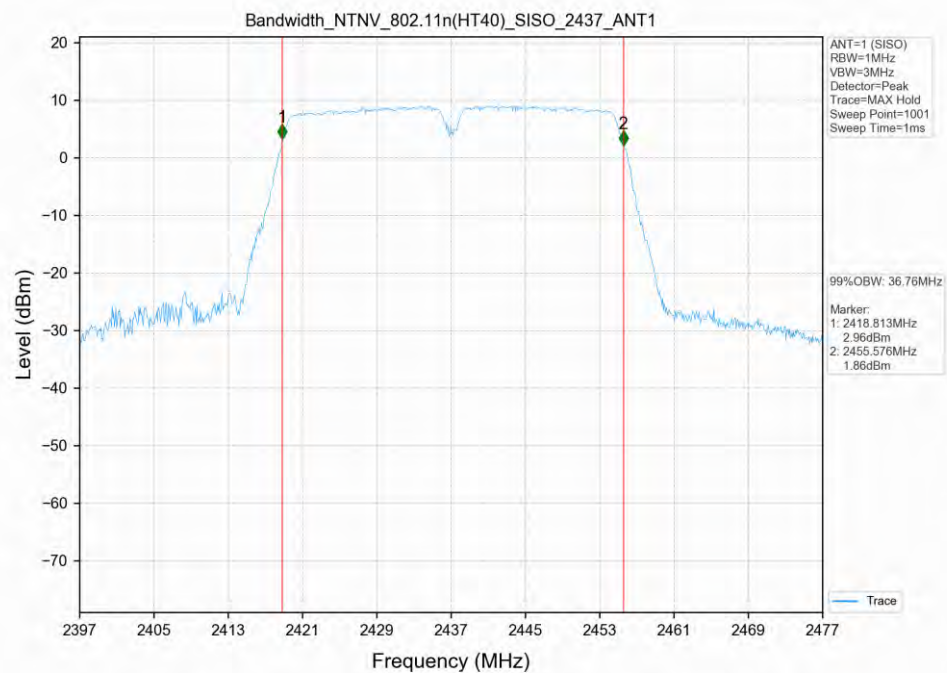
802.11n(HT40) 2422MHz SISO ANT2



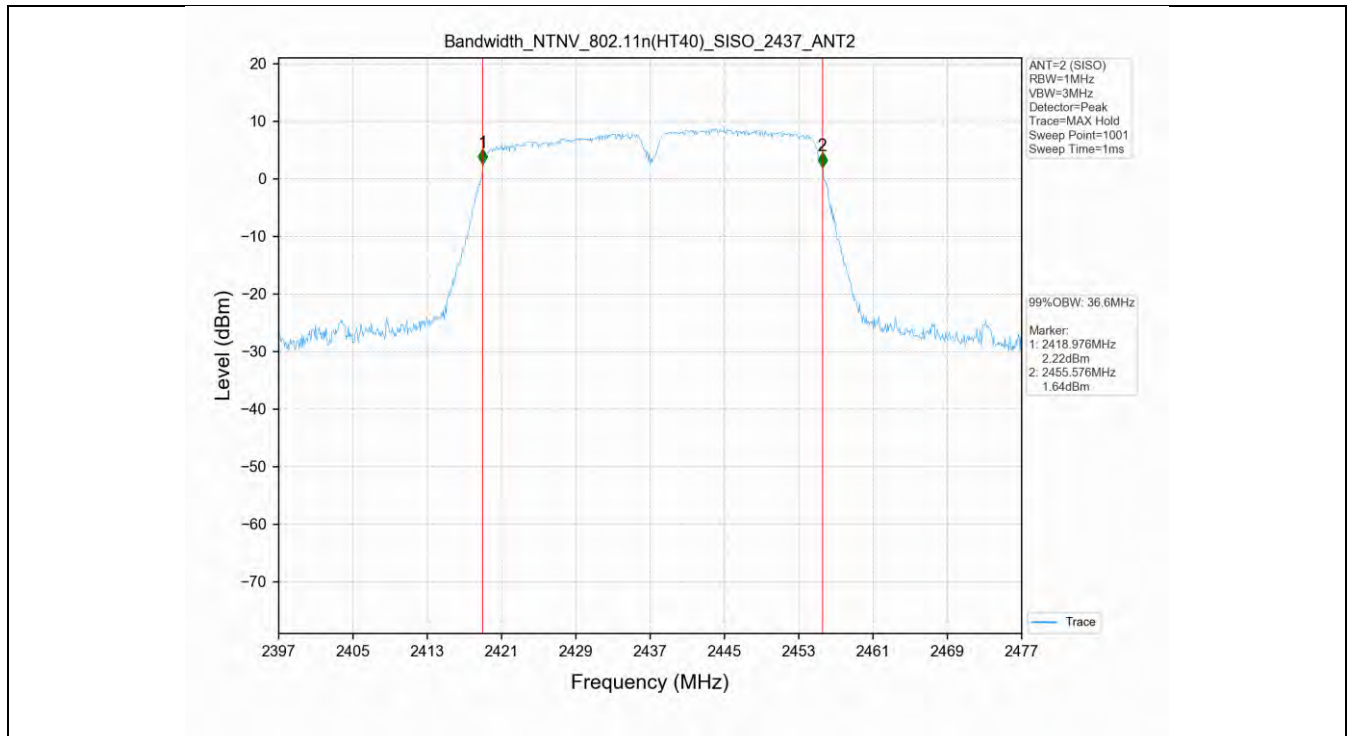
802.11n(HT40) 2422MHz MIMO Total



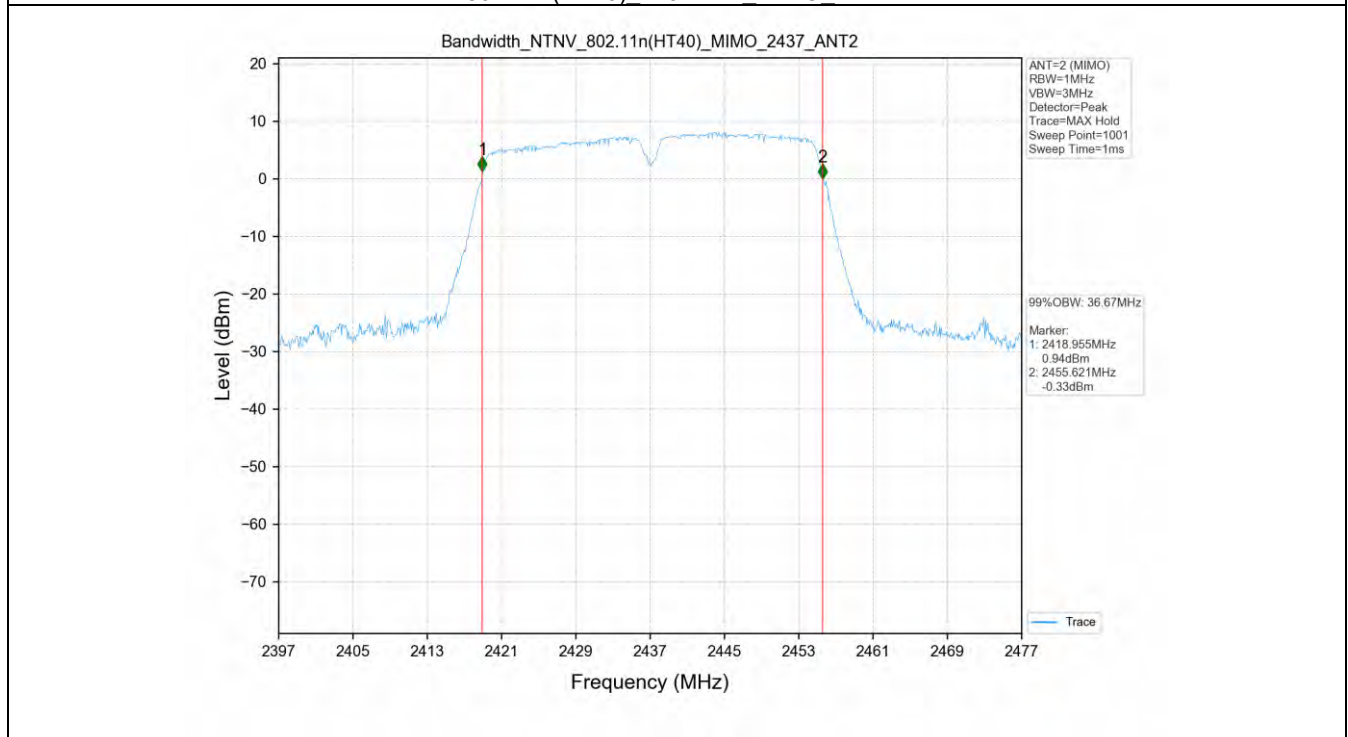
802.11n(HT40)_2437MHz_SISO_ANT1



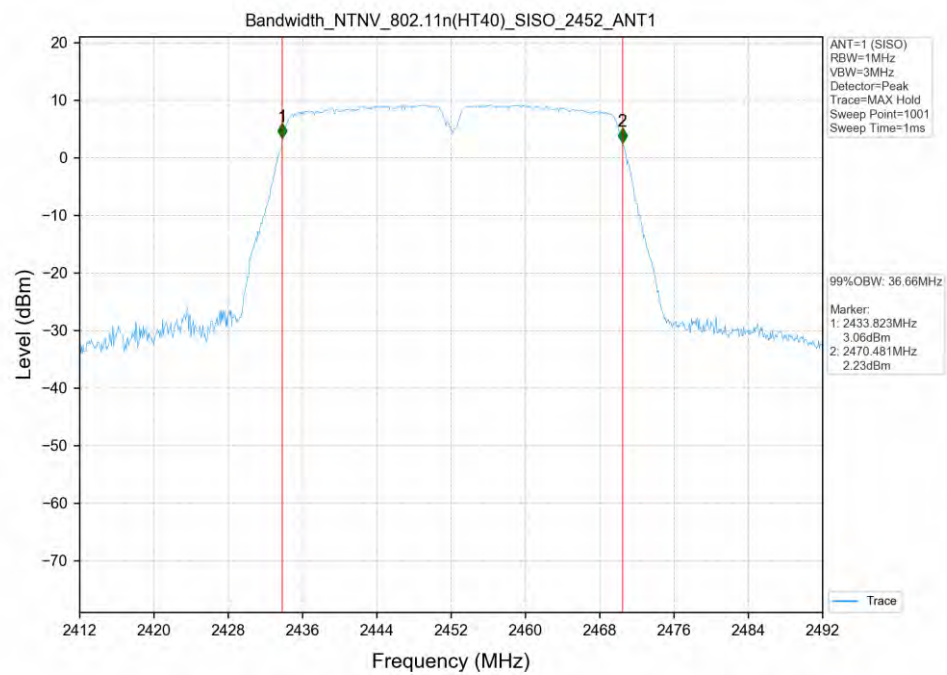
802.11n(HT40)_2437MHz_SISO_ANT2



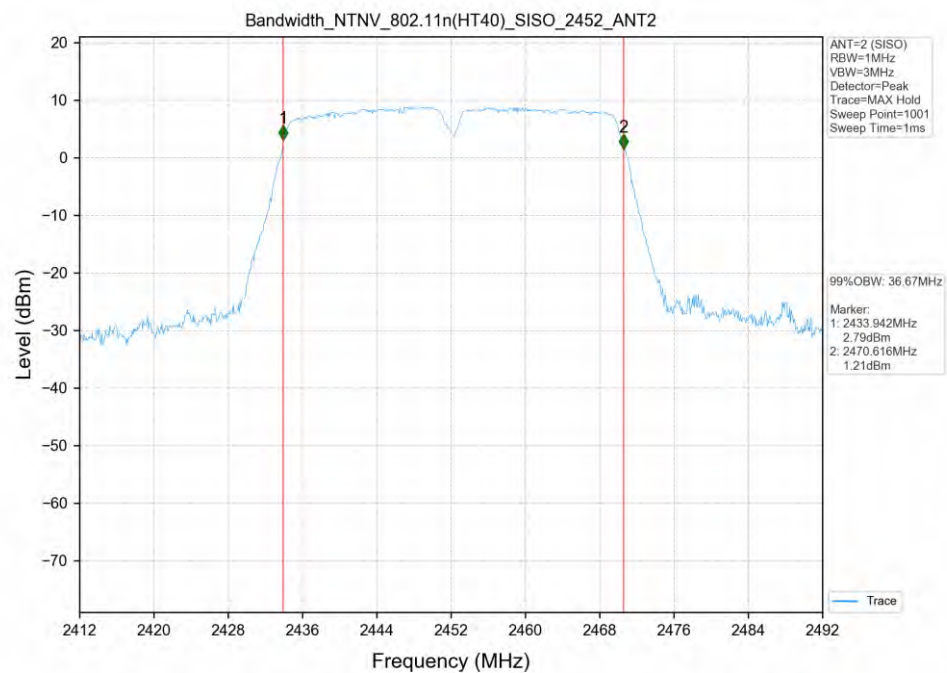
802.11n(HT40)_2437MHz_MIMO_Total



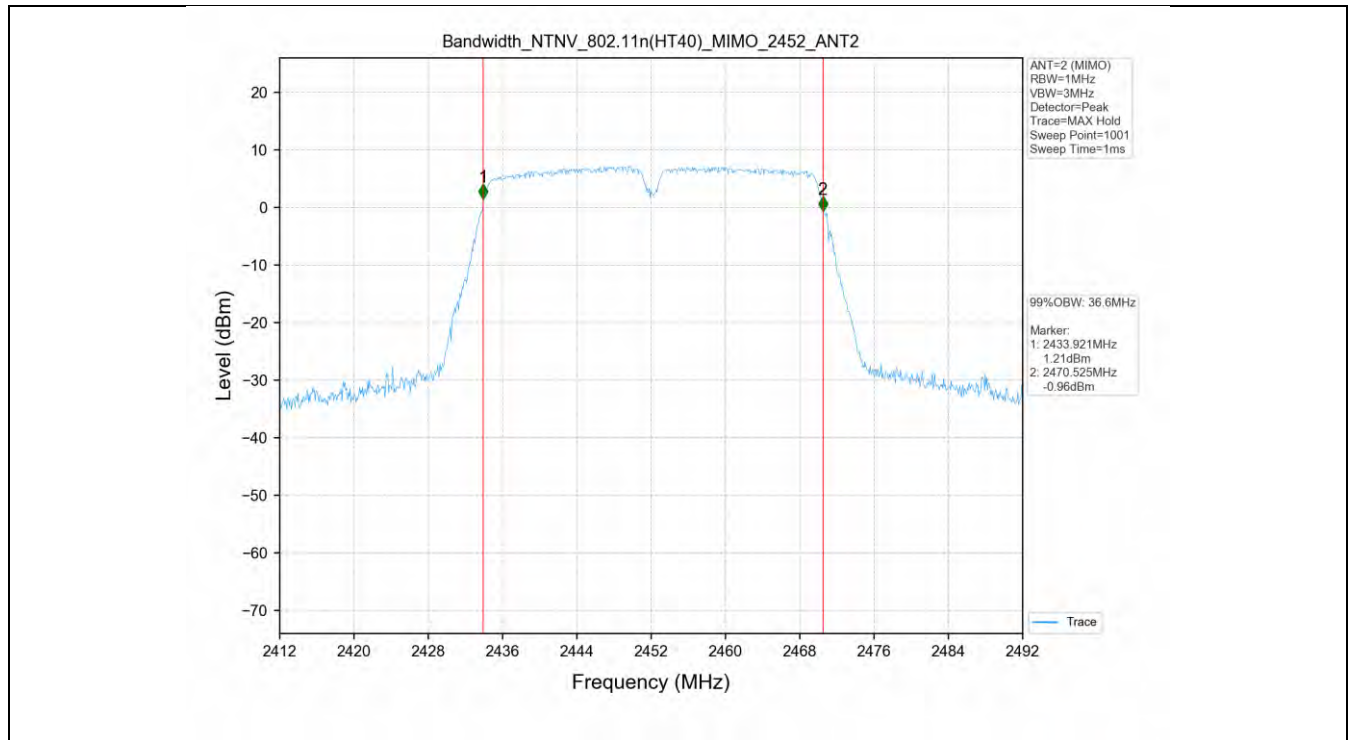
802.11n(HT40)_2452MHz_SISO_ANT1



802.11n(HT40)_2452MHz_SISO_ANT2



802.11n(HT40)_2452MHz_MIMO_Total



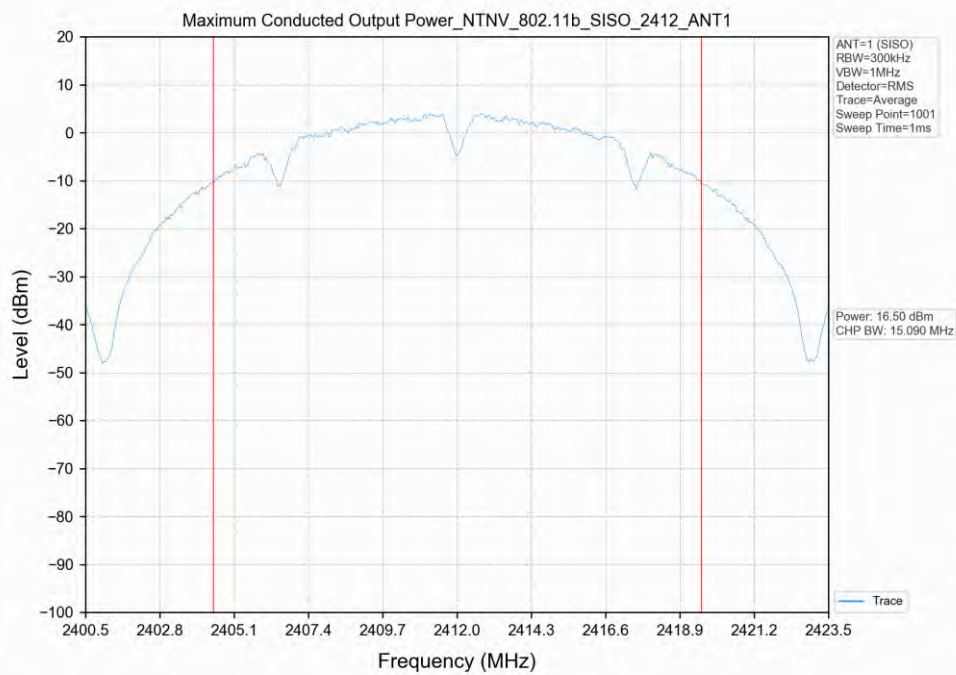
3. Maximum Conducted Output Power

3.1 Test Result

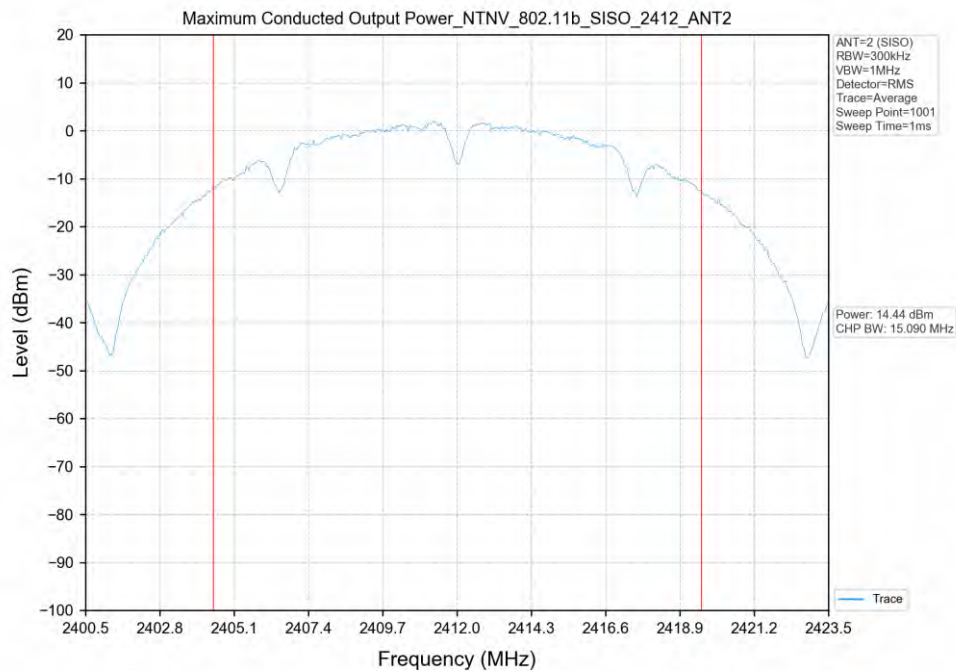
Test Mode	Frequency (MHz)	Tx Type	Measured Average Output Power (dBm)			Limits (dBm)	Verdict
			Ant 1	Ant 2	Total		
802.11b	2412	SISO	16.50	14.44	/	≤30	PASS
	2437	SISO	16.33	15.46	/	≤30	PASS
	2462	SISO	16.66	16.24	/	≤30	PASS
802.11g	2412	SISO	16.06	14.45	/	≤30	PASS
	2437	SISO	16.94	16.29	/	≤30	PASS
	2462	SISO	16.88	16.75	/	≤30	PASS
802.11n(HT20)	2412	SISO	16.05	14.50	/	≤30	PASS
		MIMO	15.58	14.21	17.96	≤30	PASS
	2437	SISO	16.43	15.58	/	≤30	PASS
		MIMO	15.35	15.13	18.25	≤30	PASS
	2462	SISO	16.59	16.27	/	≤30	PASS
		MIMO	15.47	15.77	18.63	≤30	PASS
802.11n(HT40)	2422	SISO	13.09	12.45	/	≤30	PASS
		MIMO	14.34	13.21	16.82	≤30	PASS
	2437	SISO	15.58	14.58	/	≤30	PASS
		MIMO	14.35	13.93	17.16	≤30	PASS
	2452	SISO	15.74	15.23	/	≤30	PASS
		MIMO	14.36	13.62	17.02	≤30	PASS

3.2 Test Graph

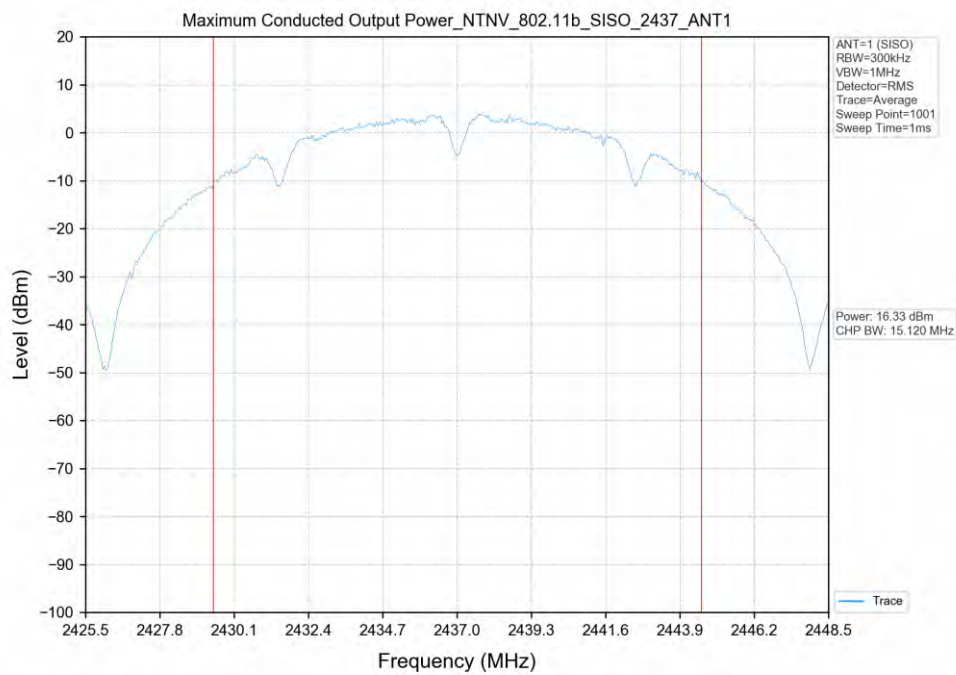
802.11b_2412MHz_SISO_ANT1



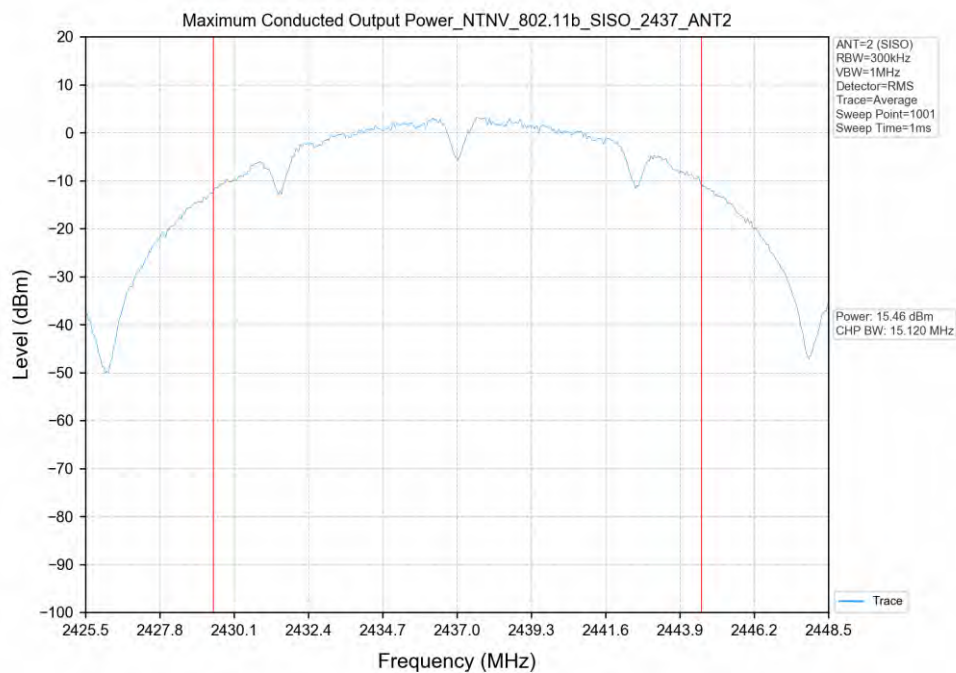
802.11b_2412MHz_SISO_ANT2



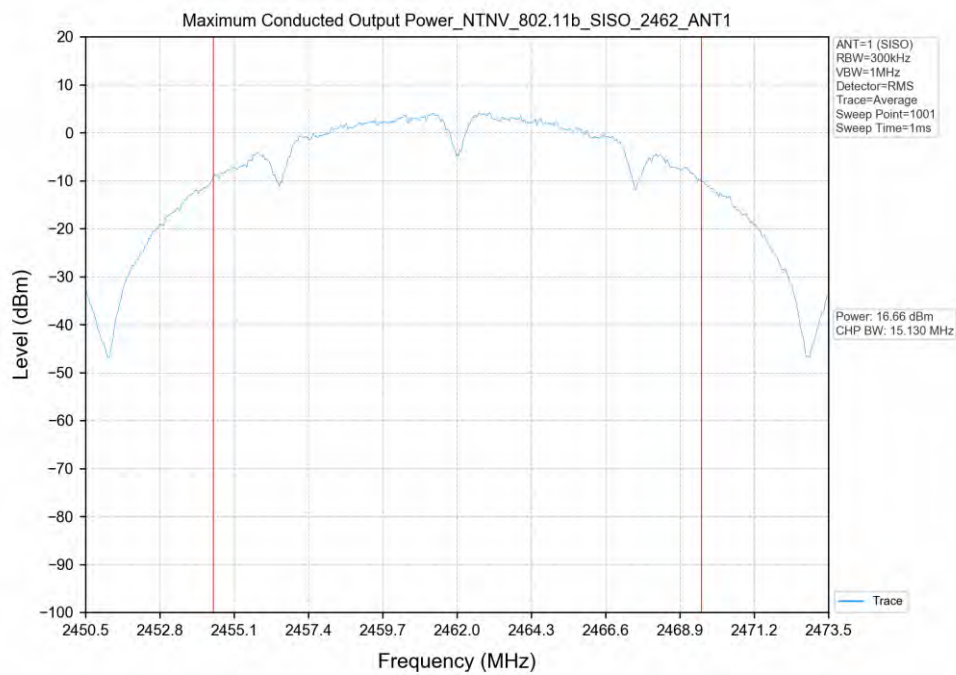
802.11b_2437MHz_SISO_ANT1



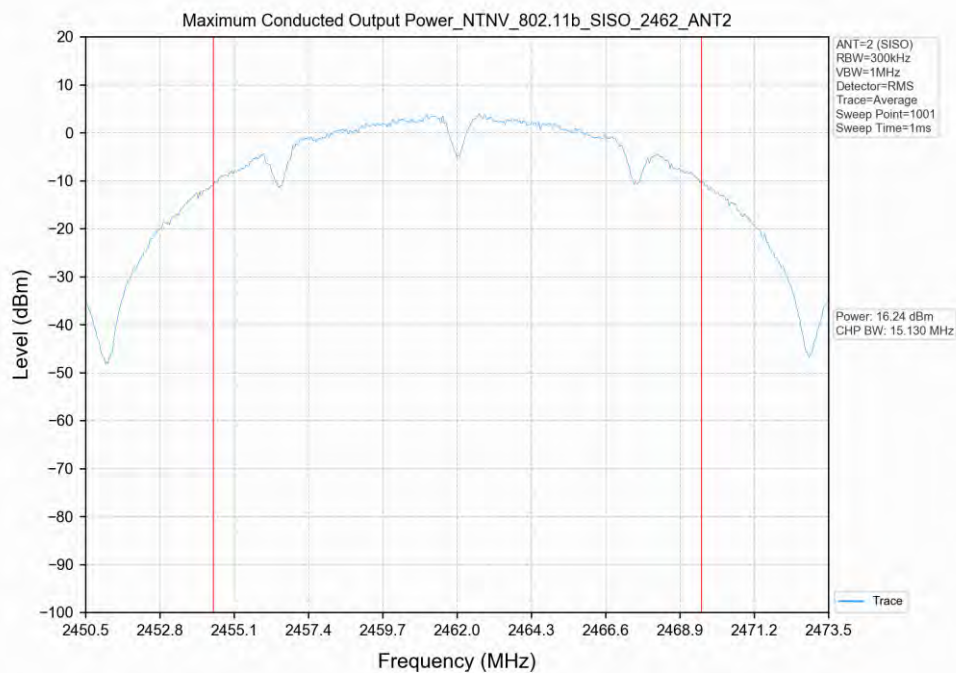
802.11b_2437MHz_SISO_ANT2



802.11b_2462MHz_SISO_ANT1



802.11b_2462MHz_SISO_ANT2



802.11g_2412MHz_SISO_ANT1