



Appendix A for SHEM190901758301

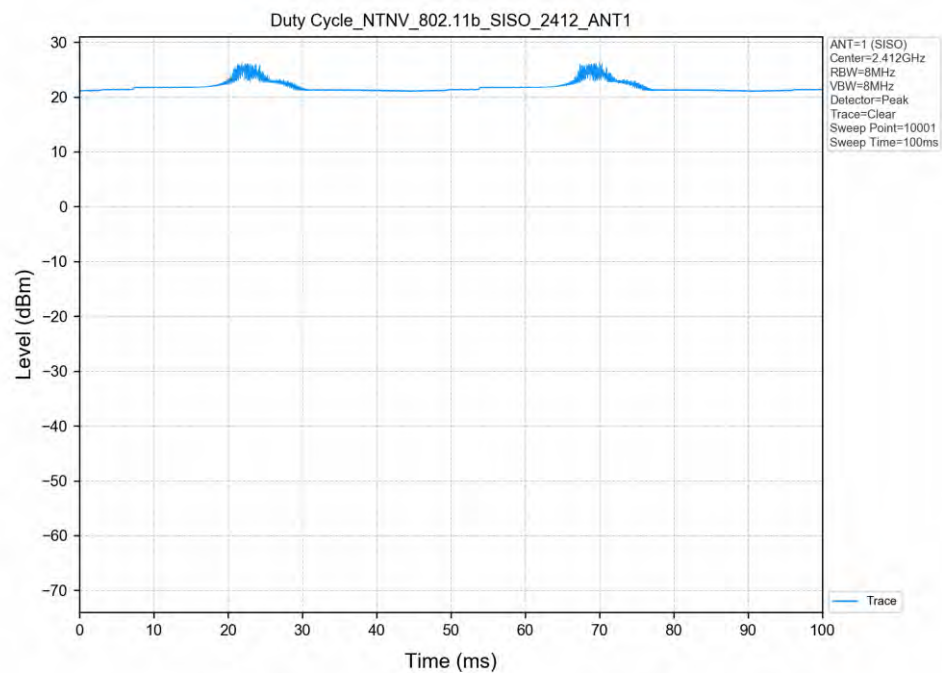
1. Duty Cycle

1.1 Test Result

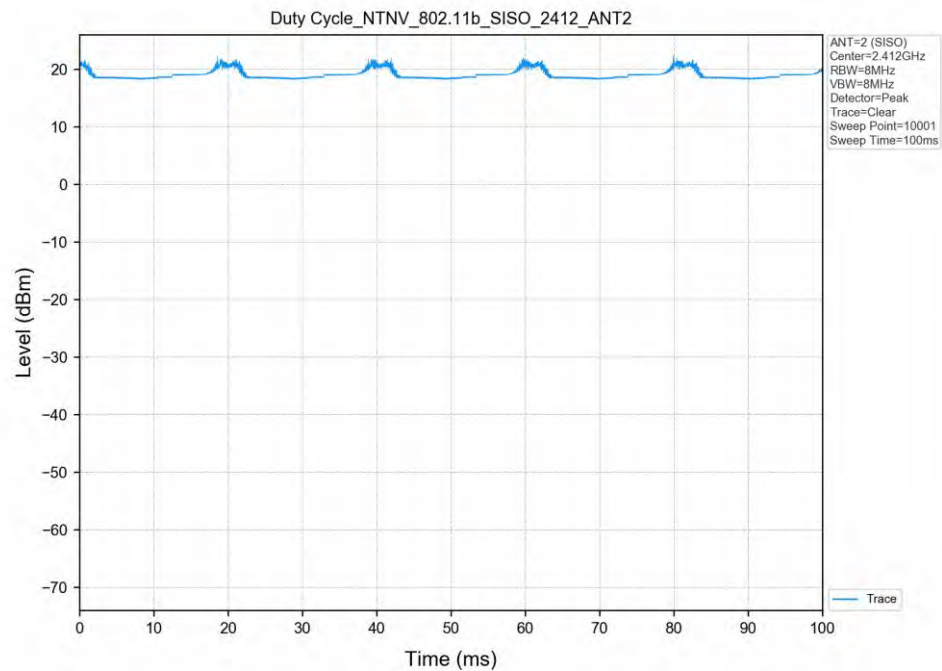
Test Mode	Channel Frequency(MHz)	TX Type	ANT No.	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
802.11b	2412	SISO	1	100.000	100.000	100.00	0.00
			2	100.000	100.000	100.00	0.00
	2437	SISO	1	100.000	100.000	100.00	0.00
			2	100.000	100.000	100.00	0.00
	2462	SISO	1	100.000	100.000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

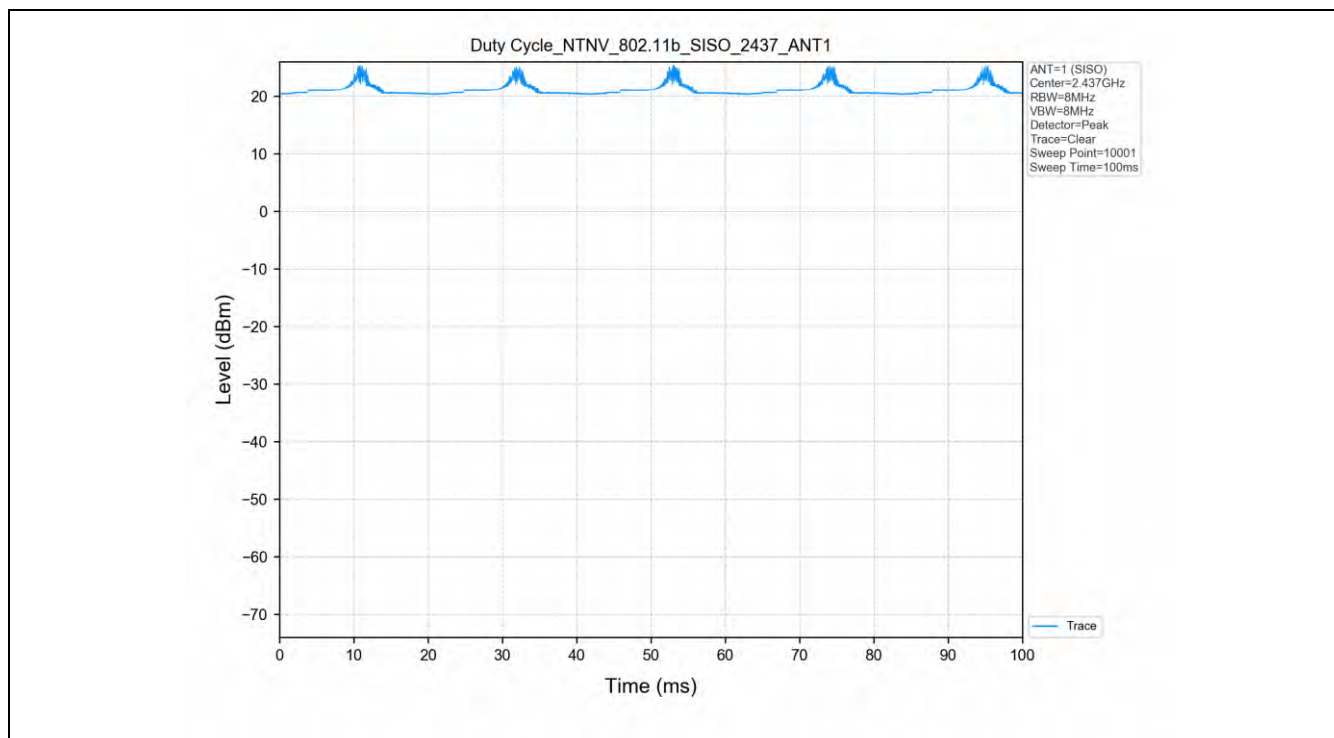
802.11b_2412MHz_SISO_ANT1



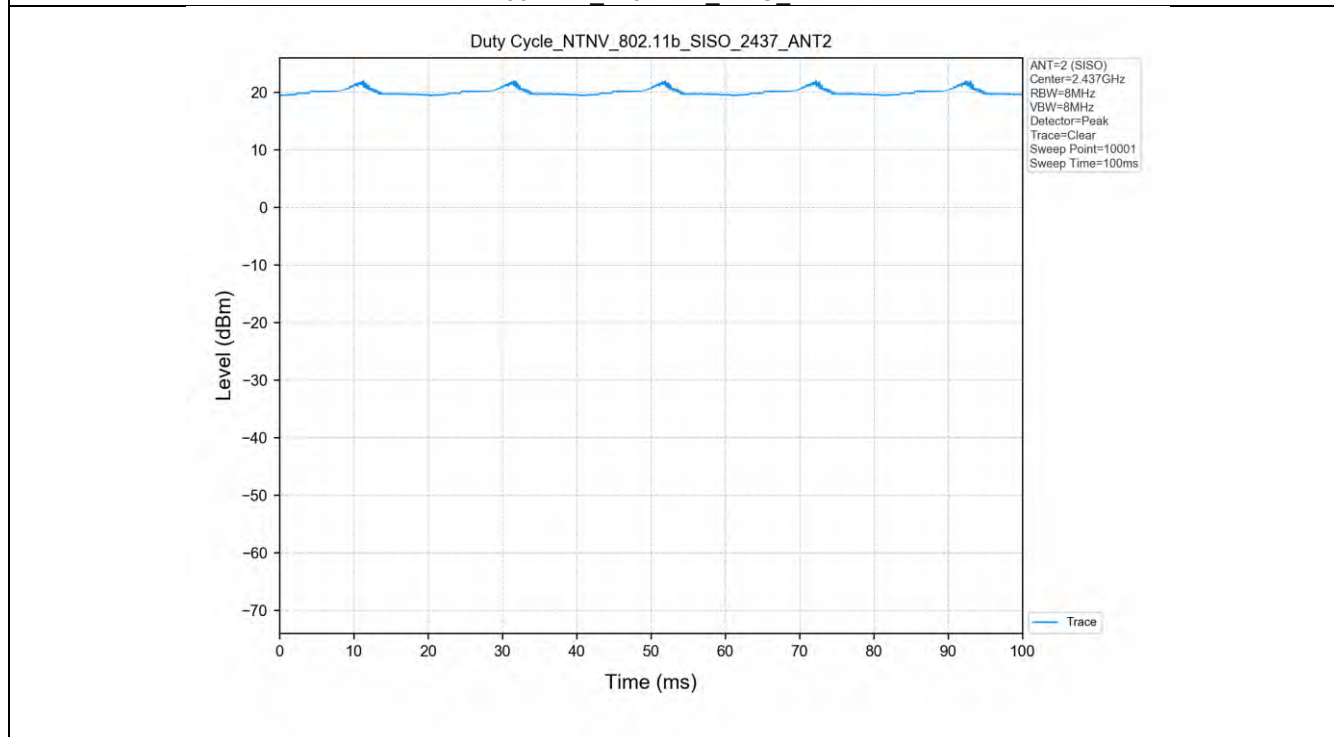
802.11b_2412MHz_SISO_ANT2



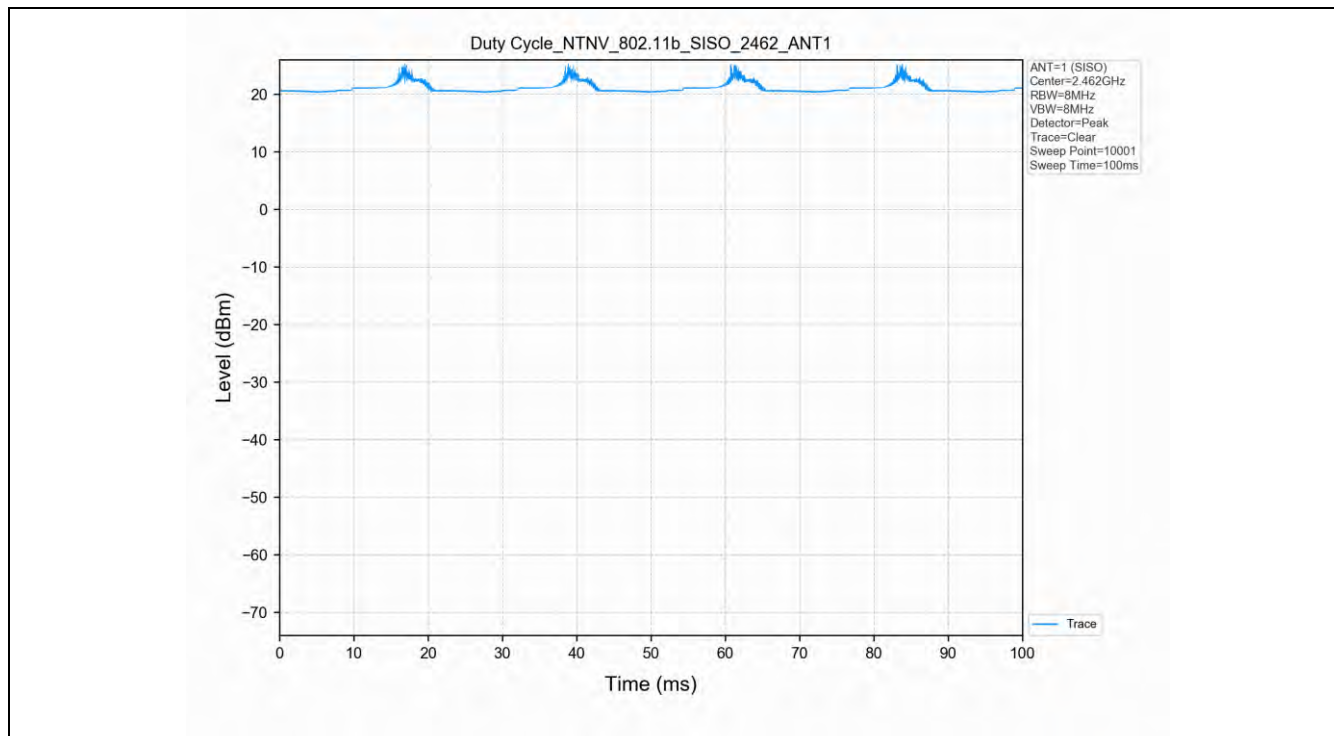
802.11b_2437MHz_SISO_ANT1



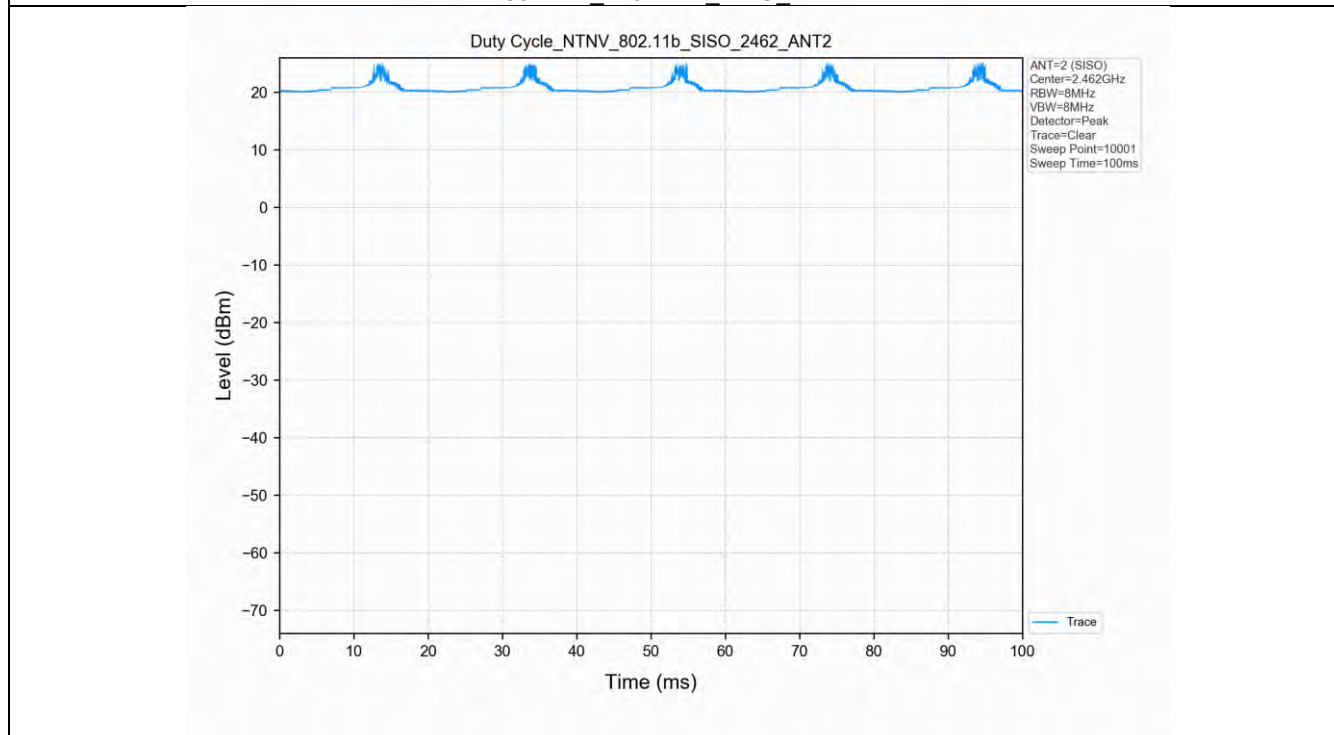
802.11b_2437MHz_SISO_ANT2



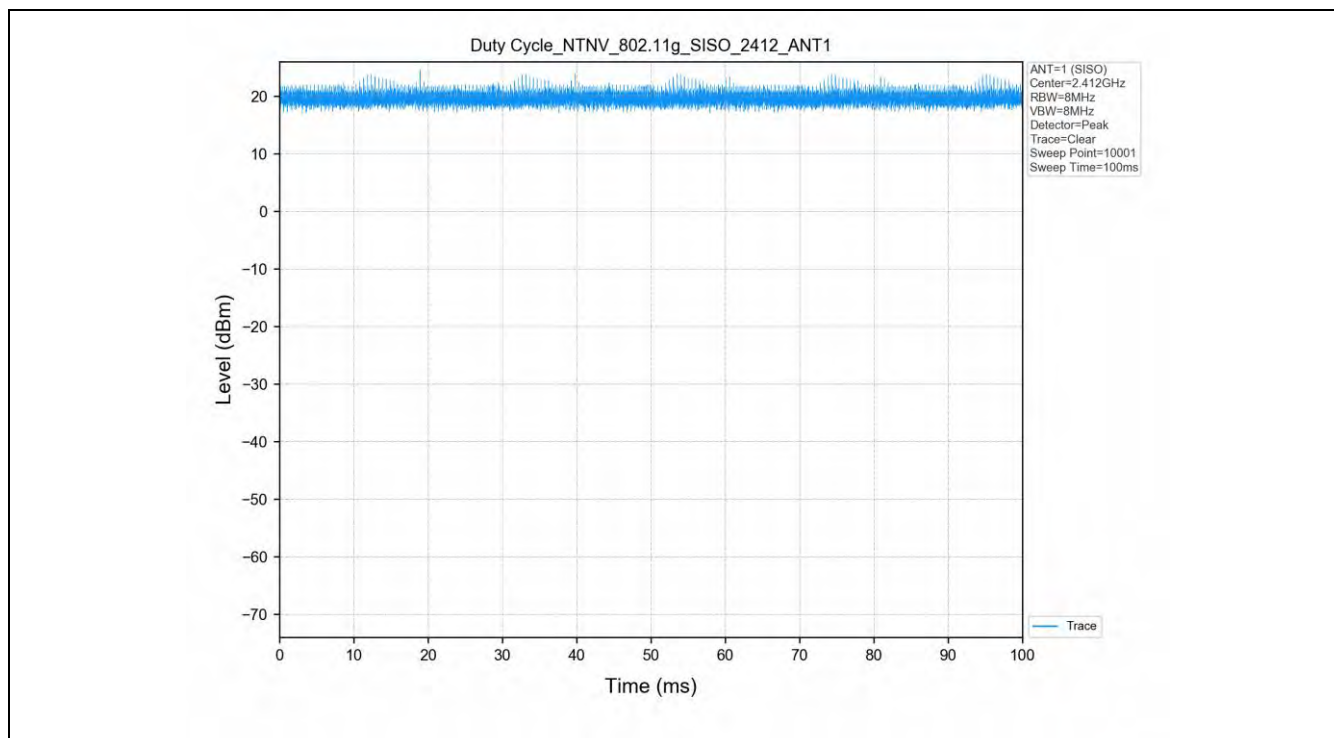
802.11b_2462MHz_SISO_ANT1



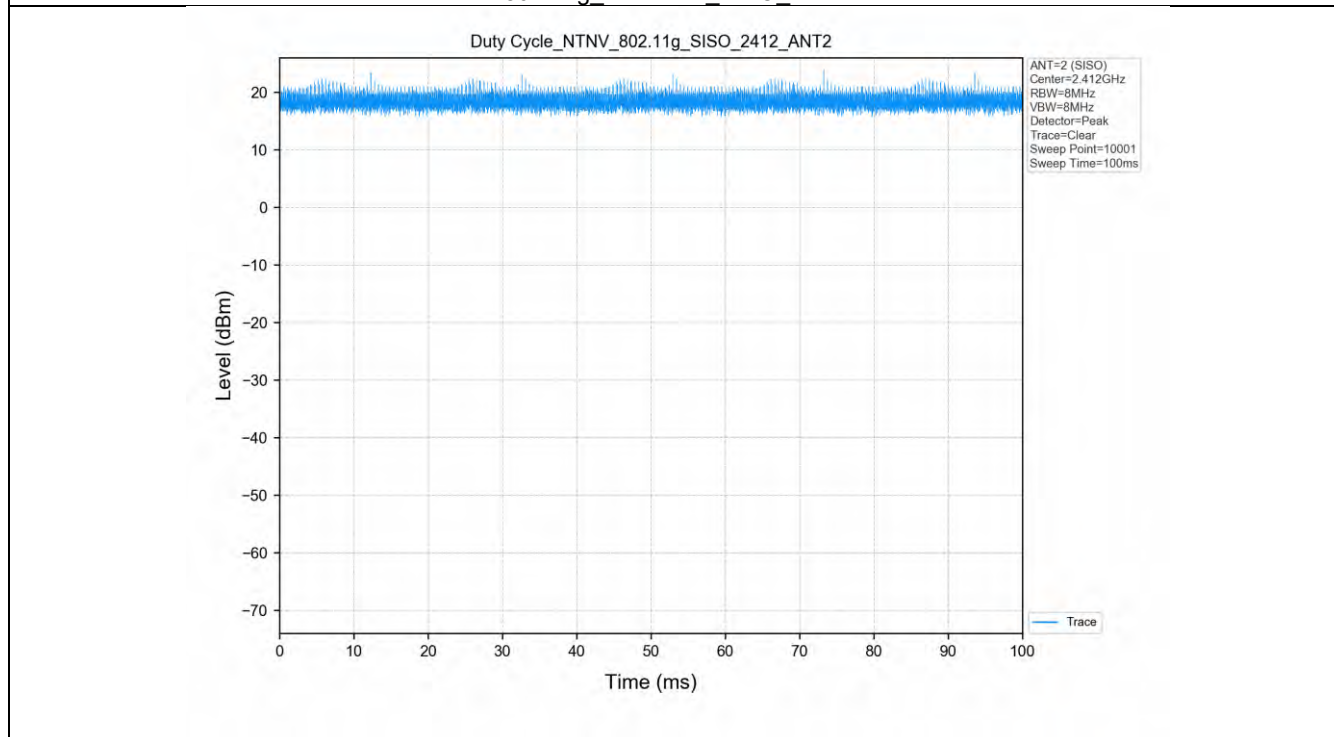
802.11b_2462MHz_SISO_ANT2



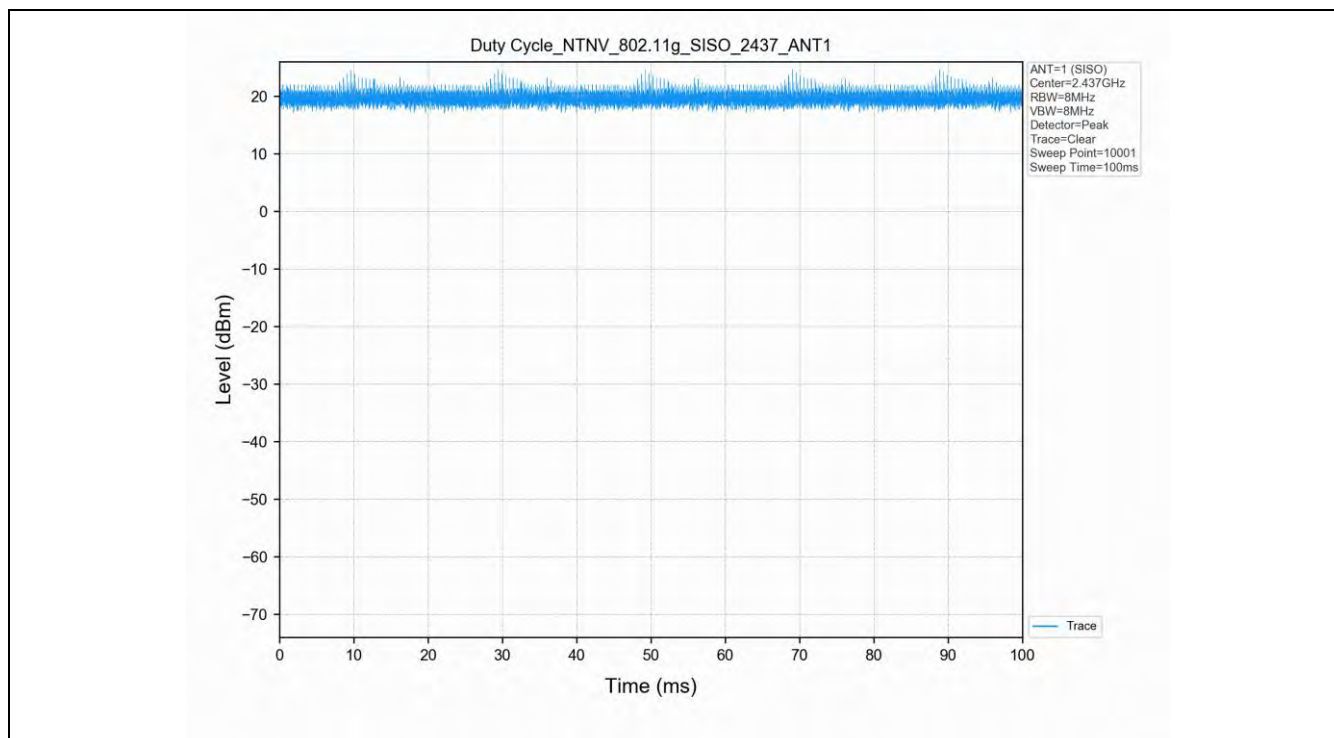
802.11g_2412MHz_SISO_ANT1



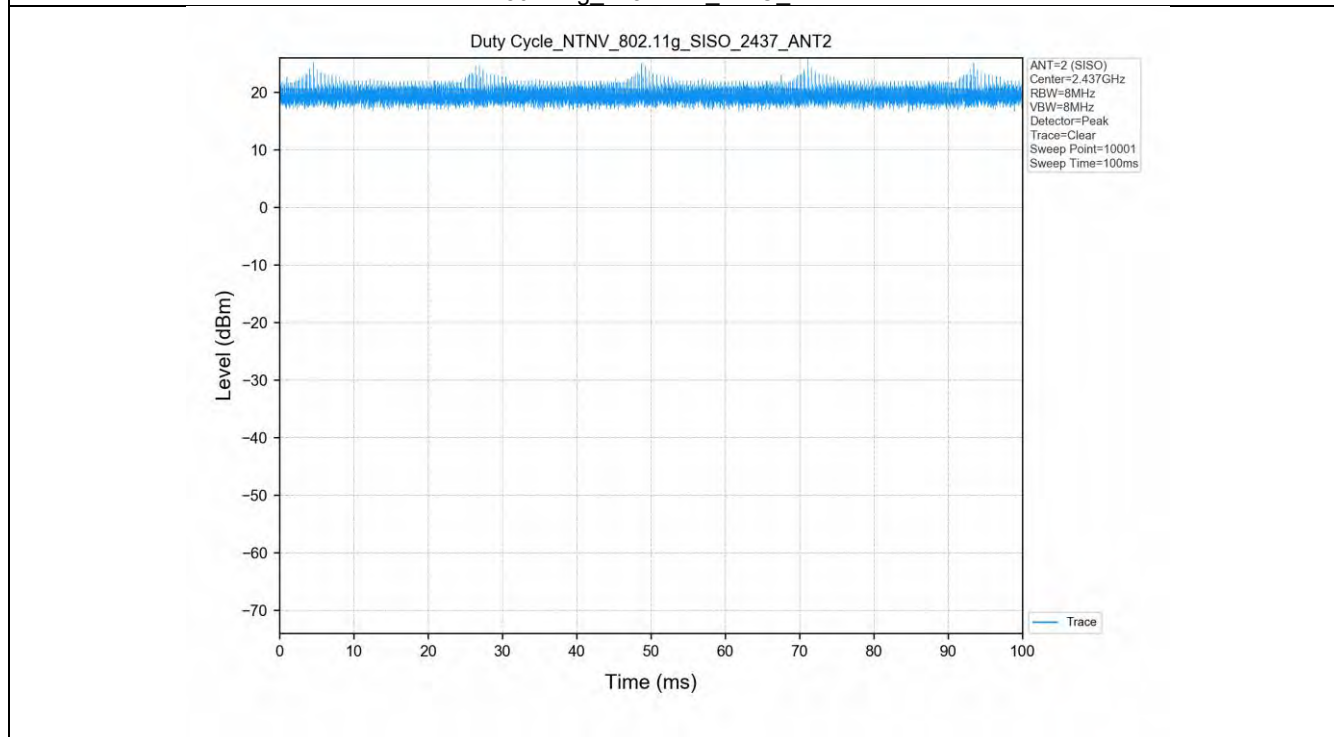
802.11g_2412MHz_SISO_ANT2



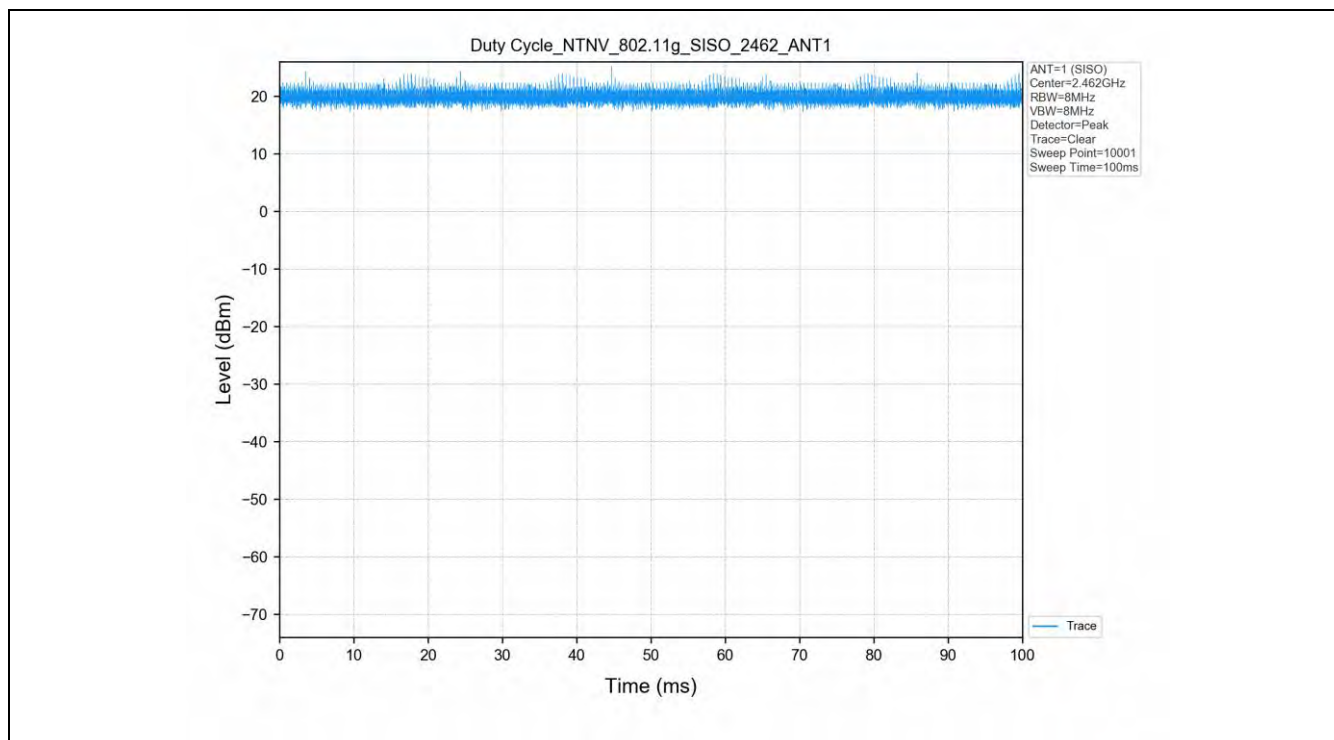
802.11g_2437MHz_SISO_ANT1



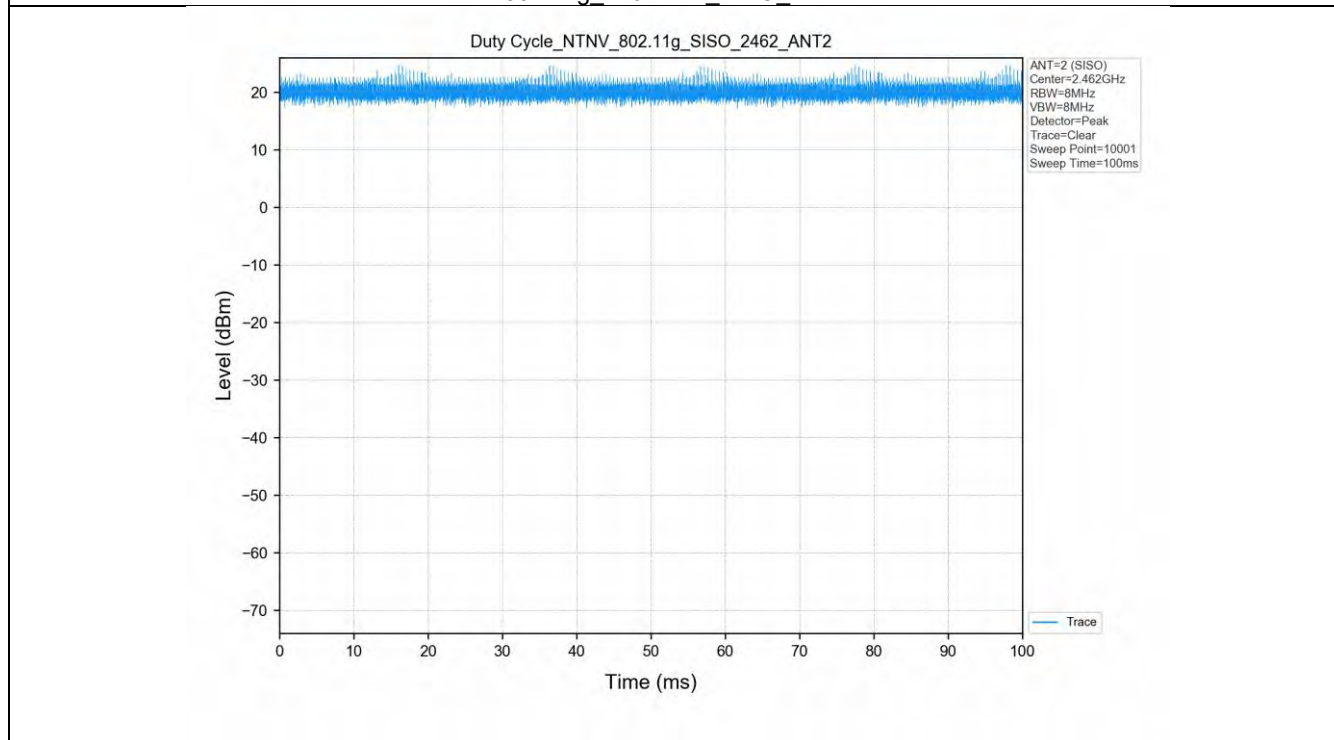
802.11g_2437MHz_SISO_ANT2



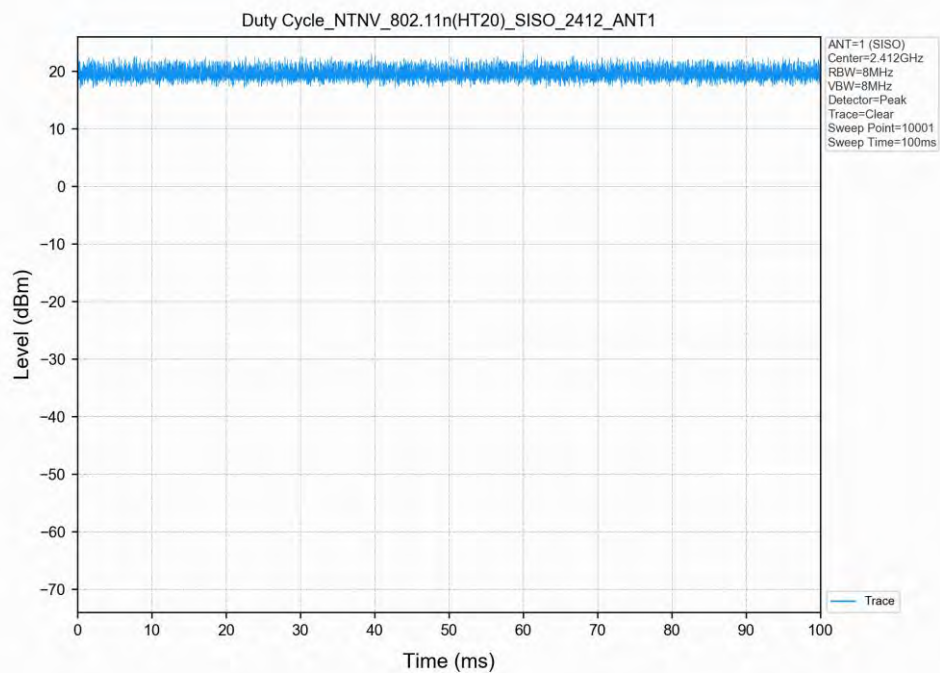
802.11g_2462MHz_SISO_ANT1



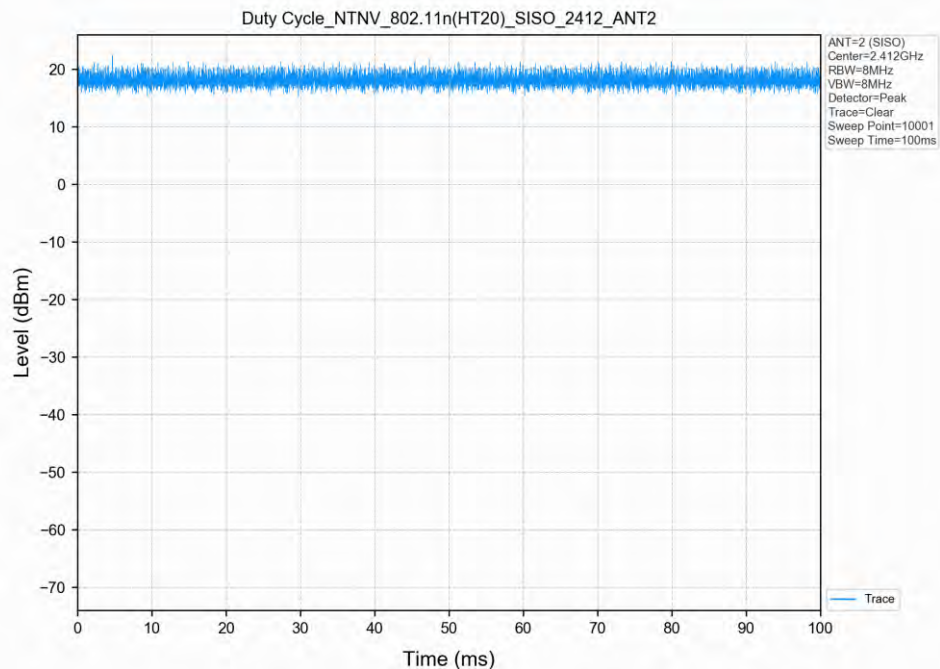
802.11g_2462MHz_SISO_ANT2



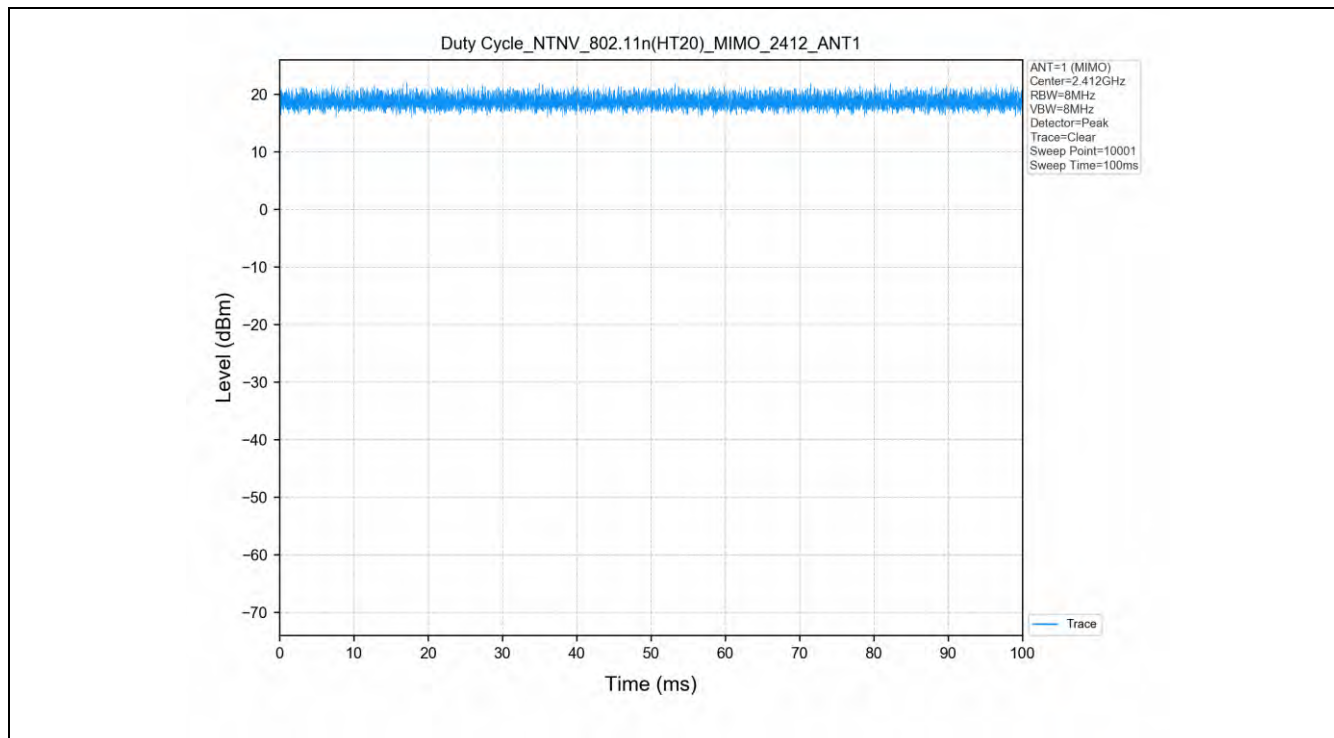
802.11n(HT20)_2412MHz_SISO_ANT1



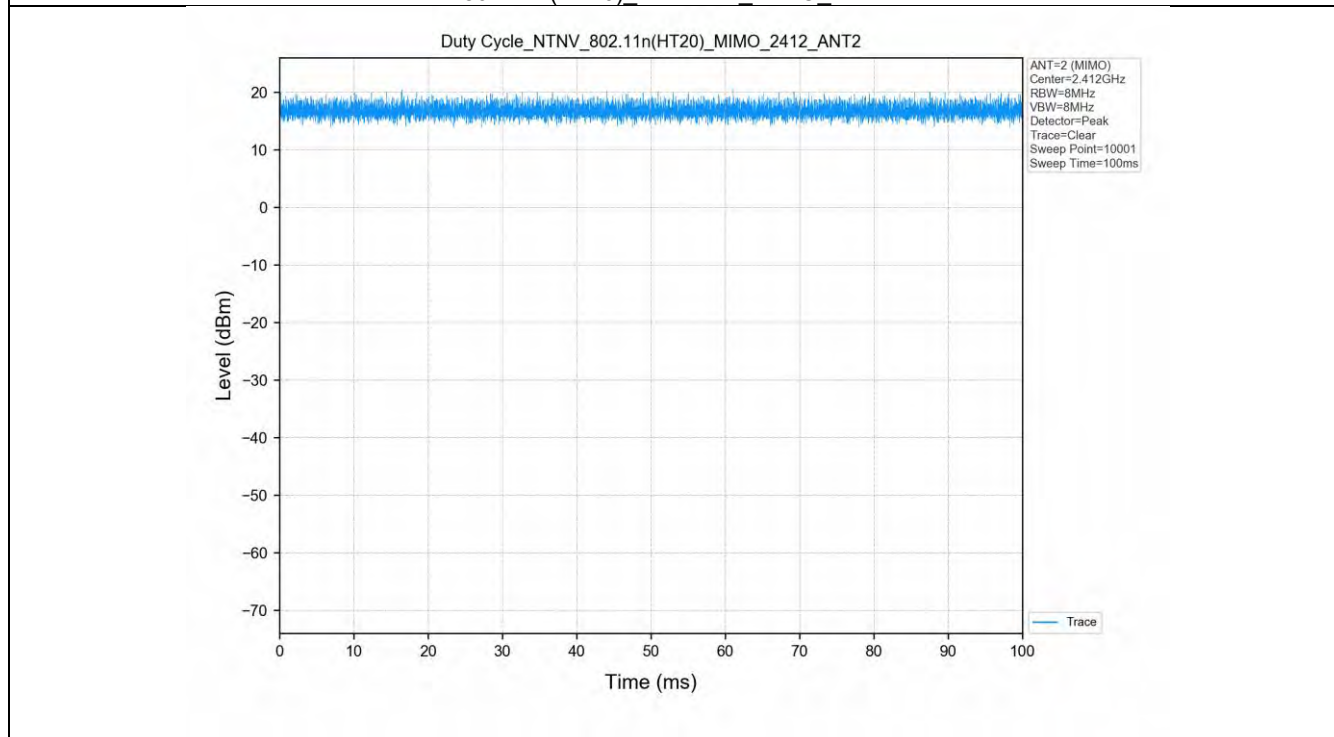
802.11n(HT20)_2412MHz_SISO_ANT2



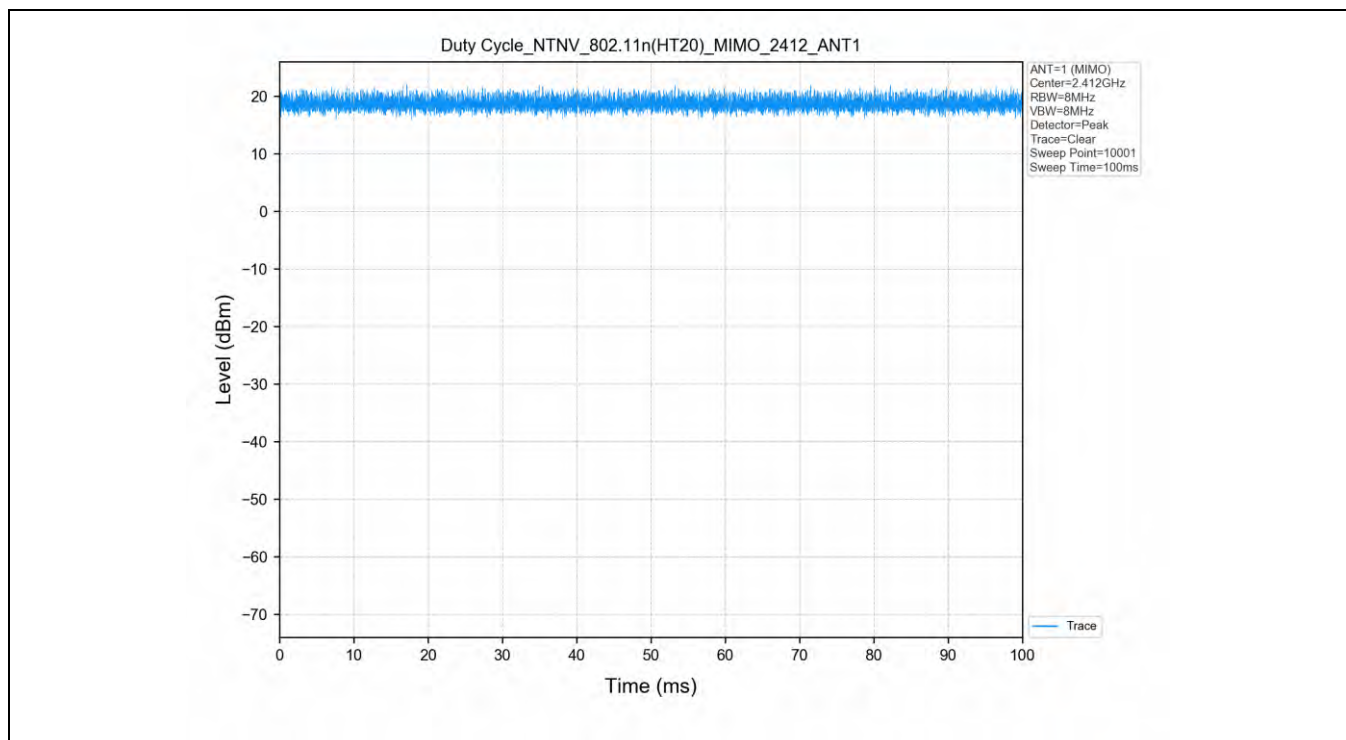
802.11n(HT20)_2412MHz_MIMO_ANT1



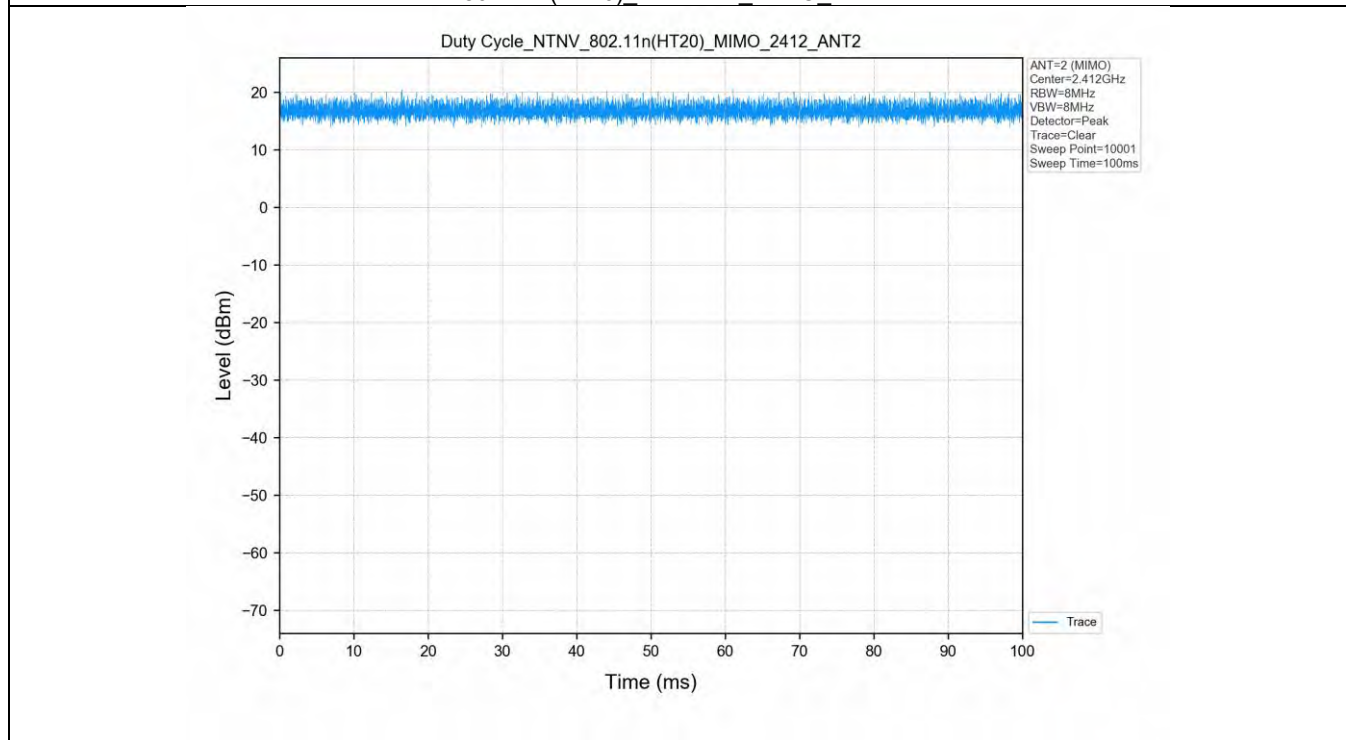
802.11n(HT20)_2412MHz_MIMO_ANT1



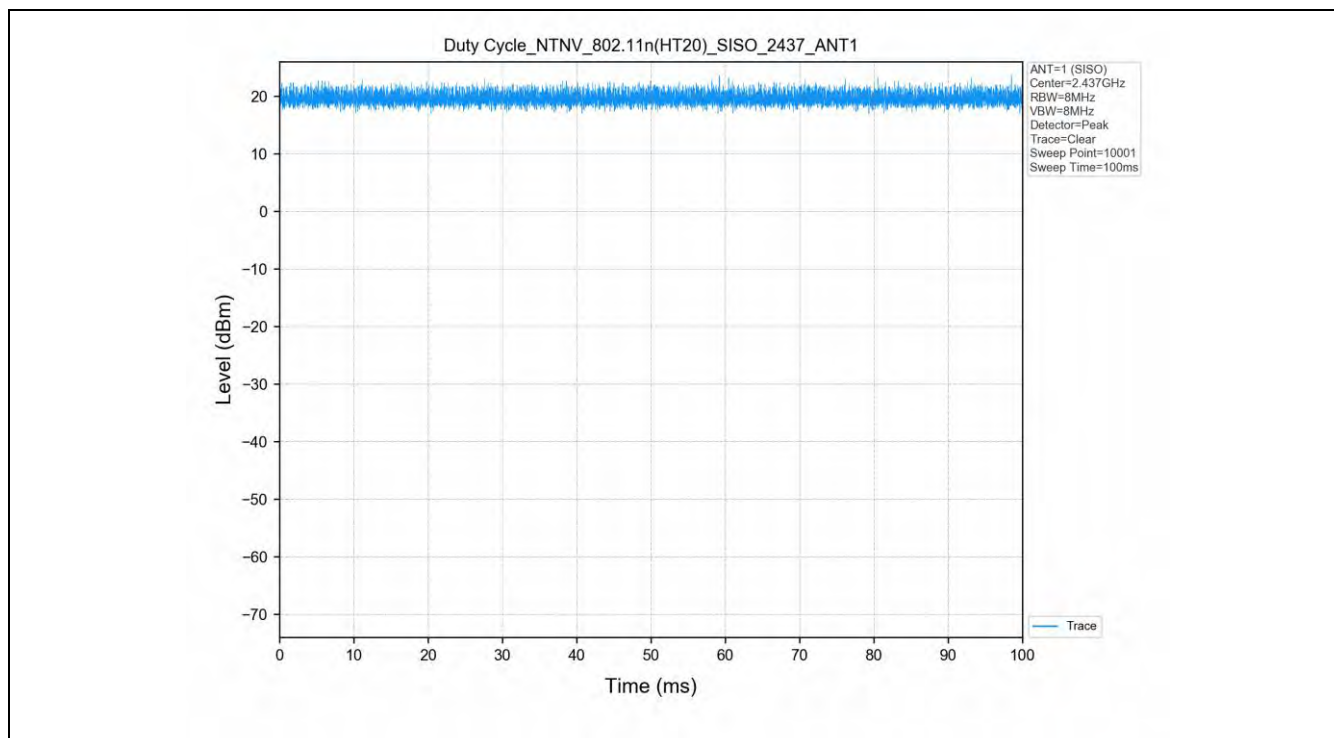
802.11n(HT20)_2412MHz_MIMO_ANT2



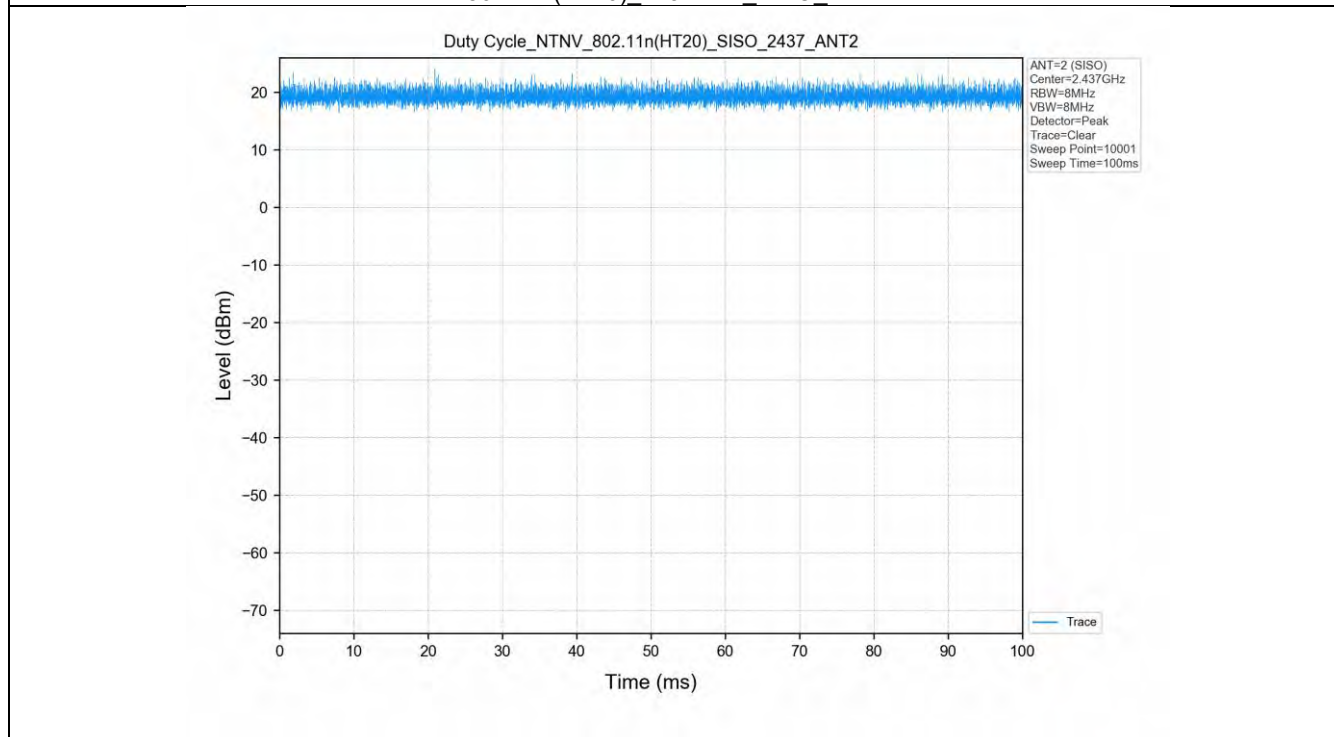
802.11n(HT20)_2412MHz_MIMO_ANT2



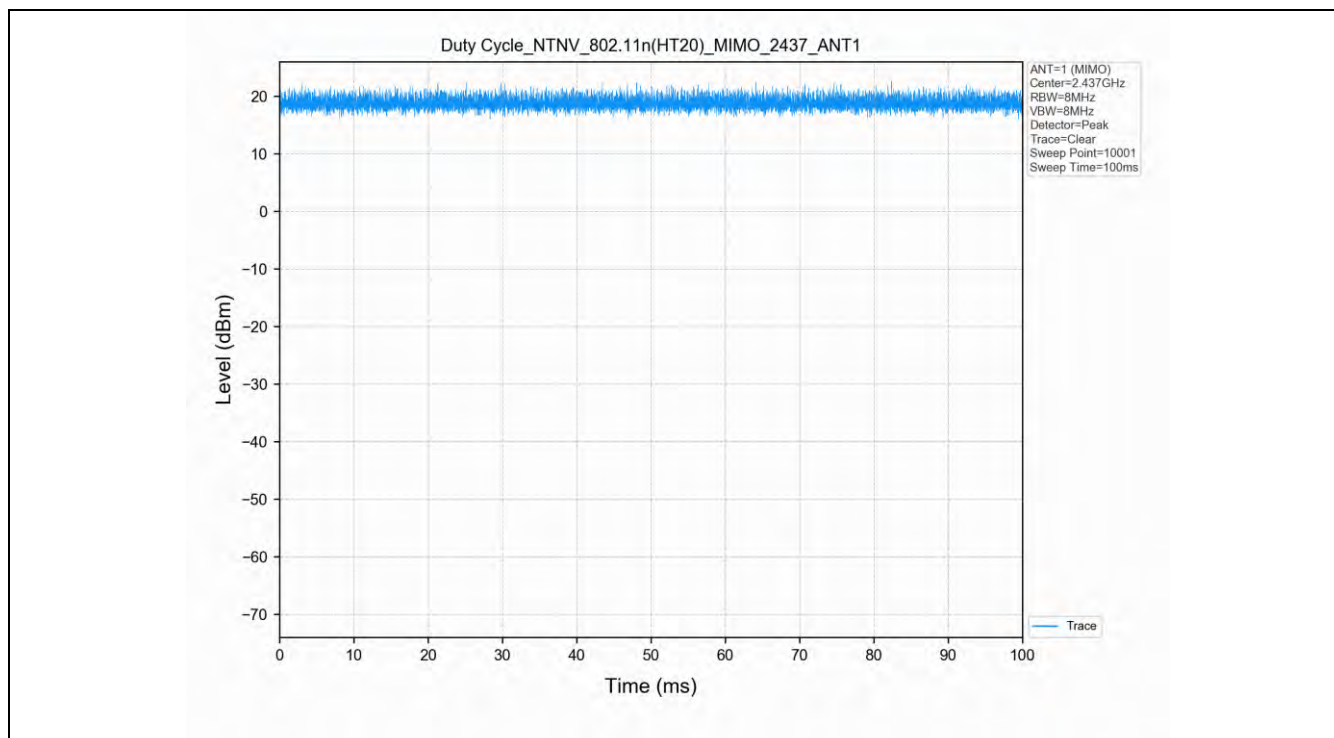
802.11n(HT20)_2437MHz_SISO_ANT1



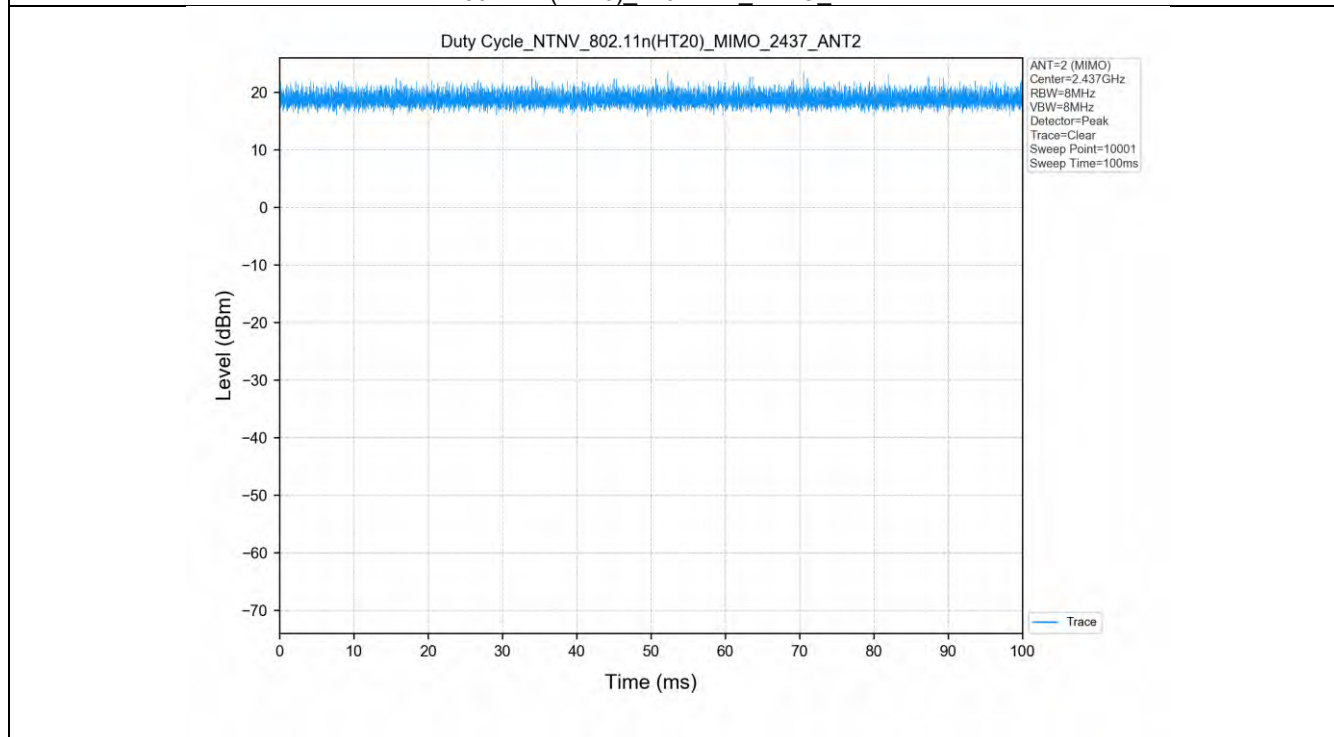
802.11n(HT20)_2437MHz_SISO_ANT2



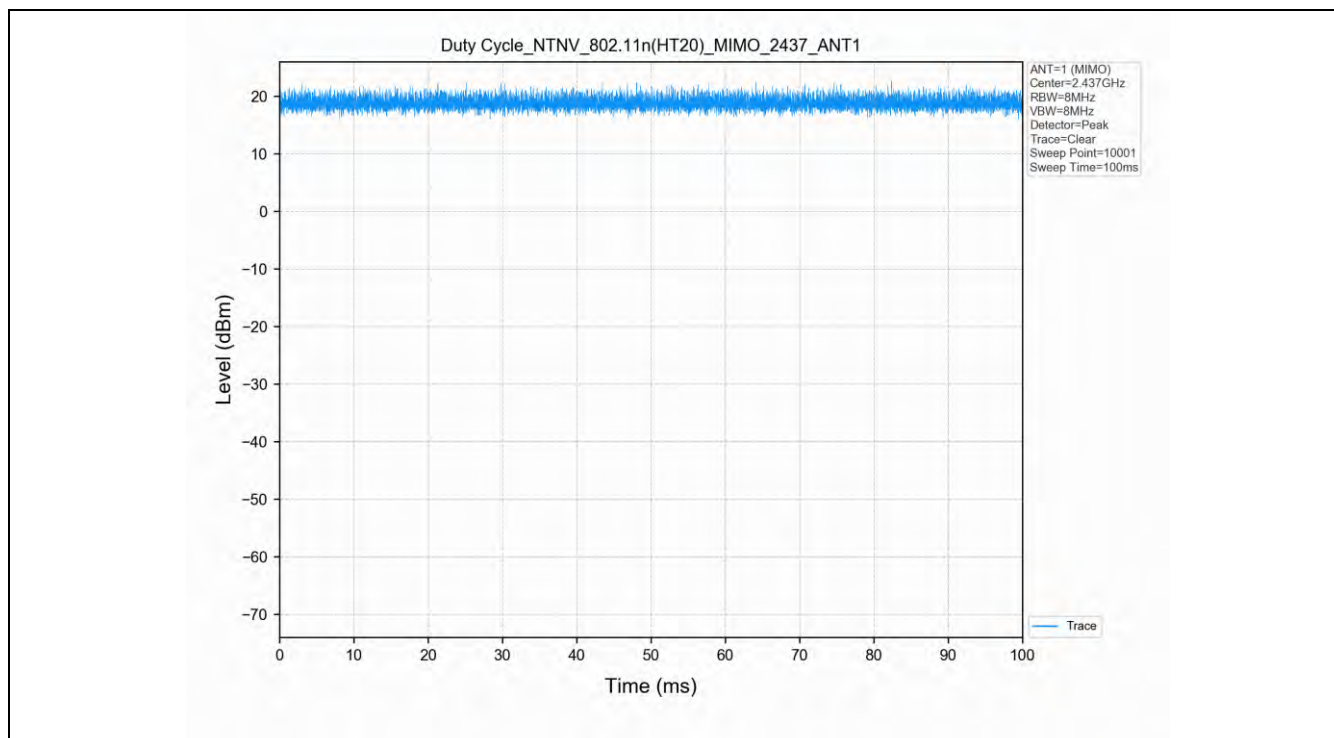
802.11n(HT20)_2437MHz_MIMO_ANT1



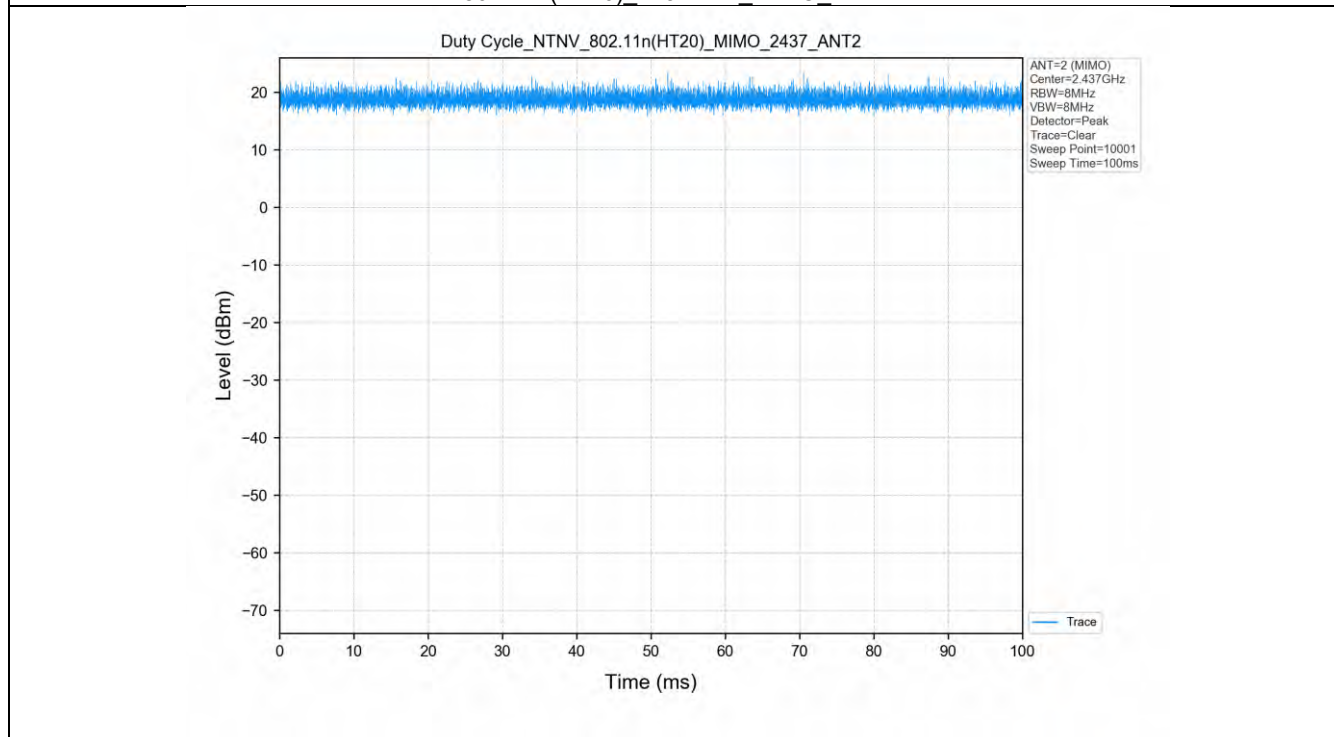
802.11n(HT20)_2437MHz_MIMO_ANT1



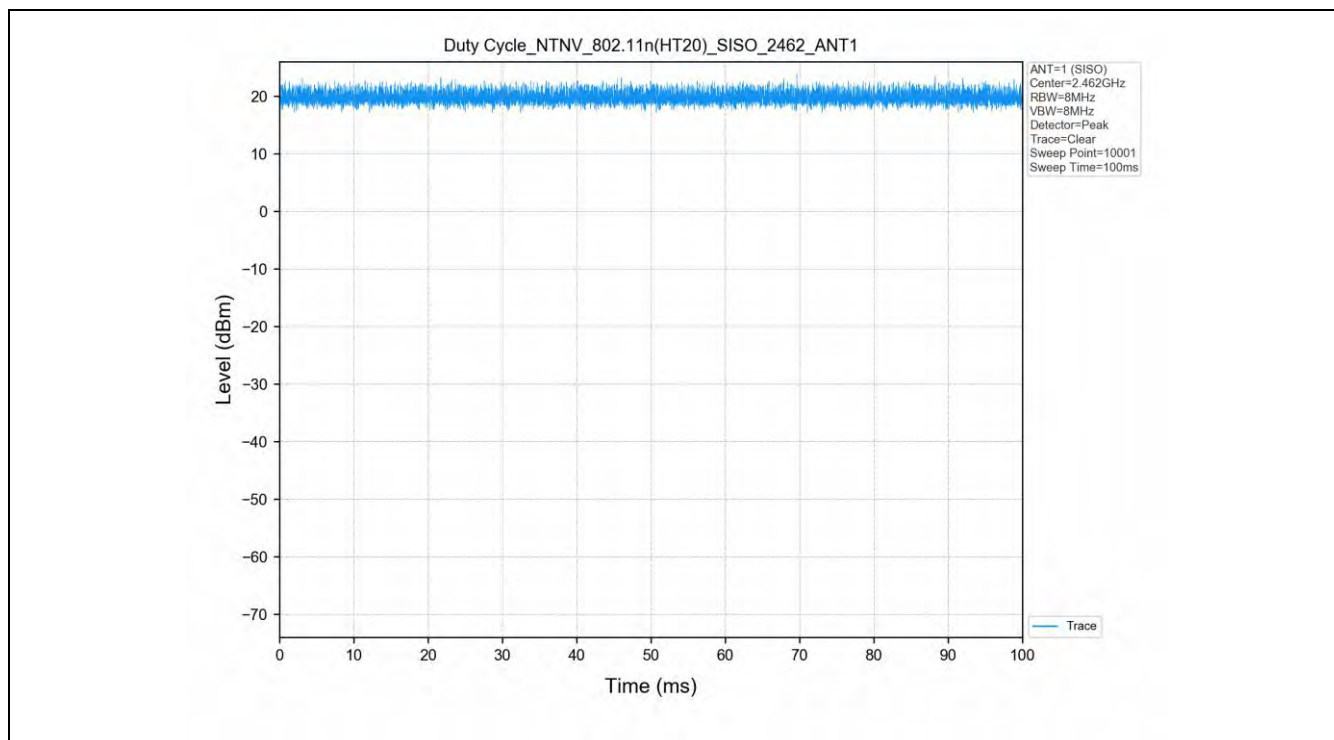
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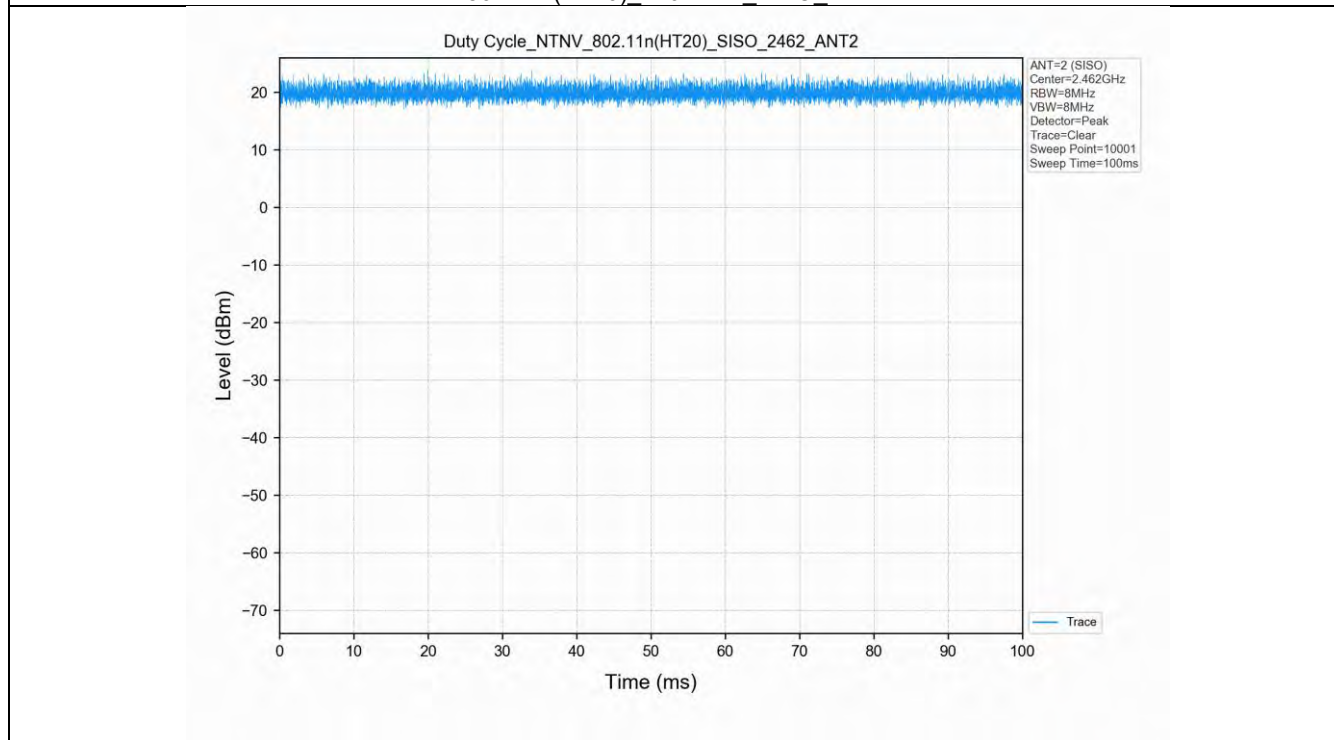
802.11n(HT20)_2437MHz_MIMO_ANT2



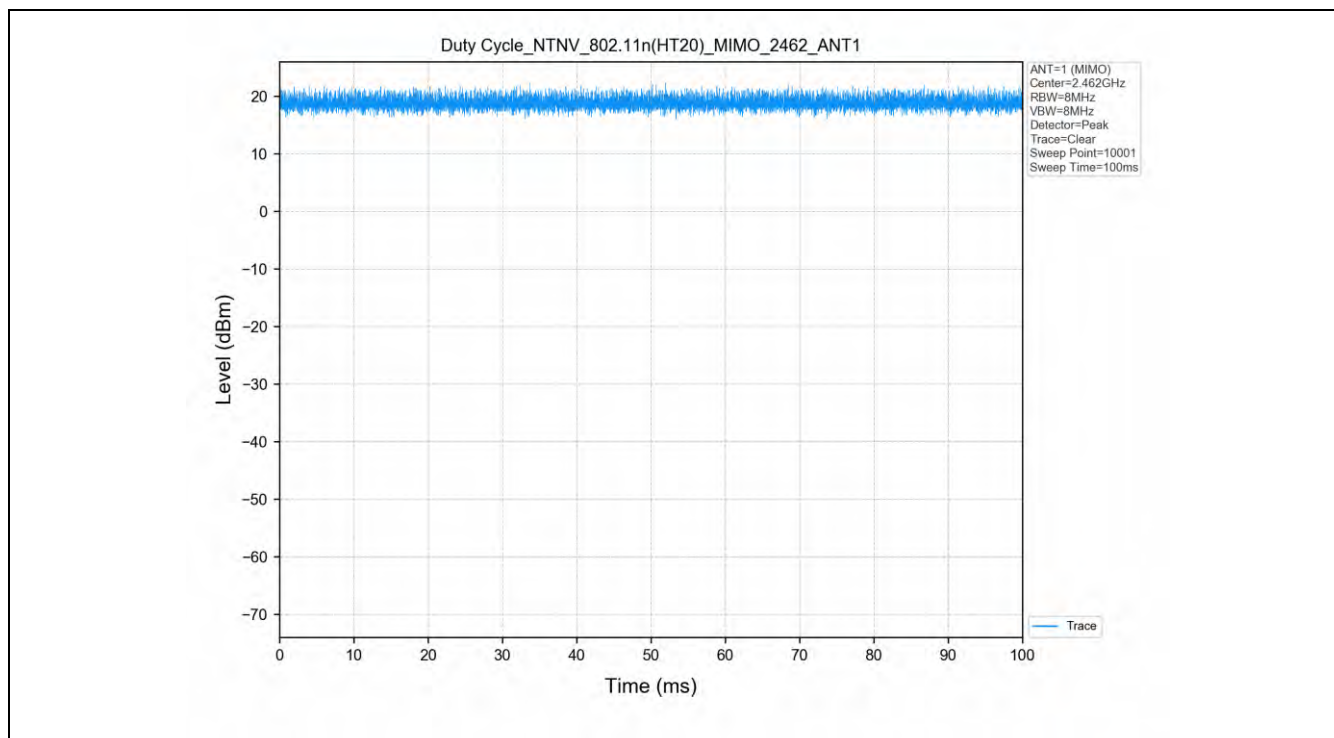
802.11n(HT20)_2462MHz_SISO_ANT1



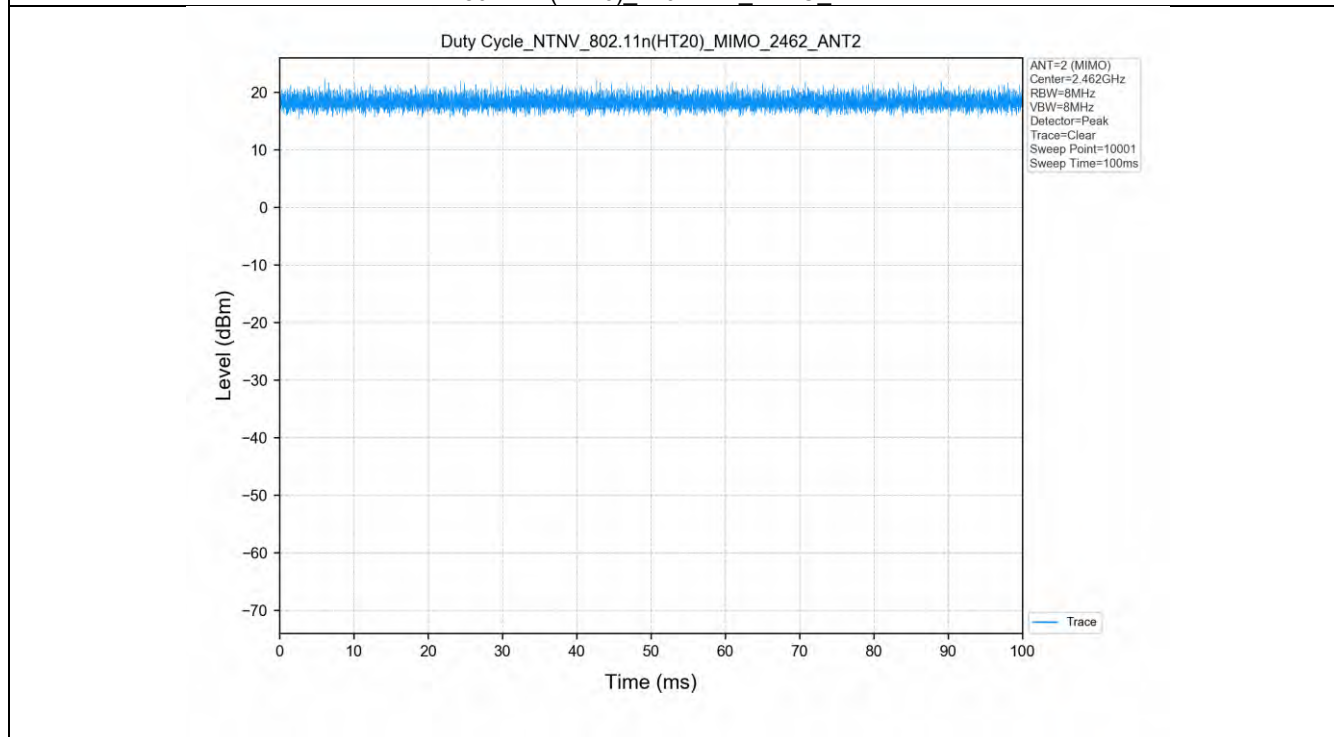
802.11n(HT20)_2462MHz_SISO_ANT2



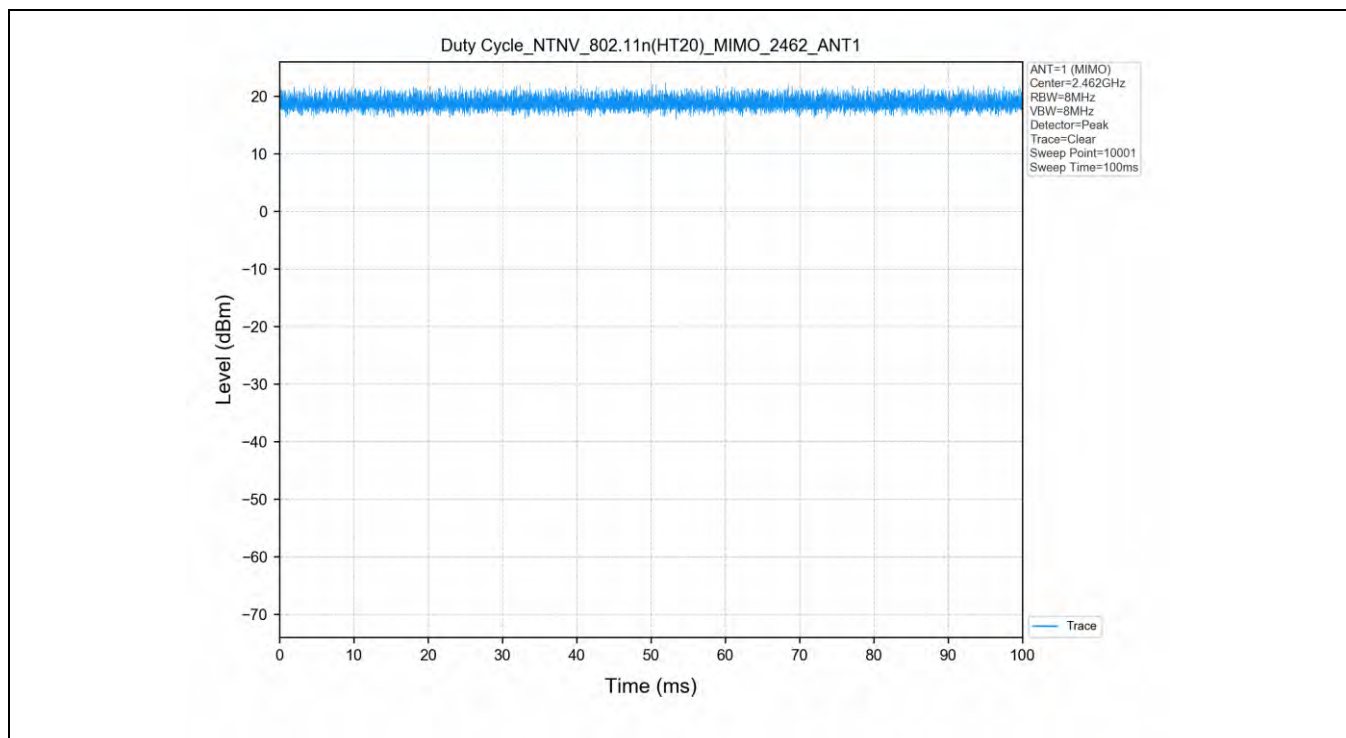
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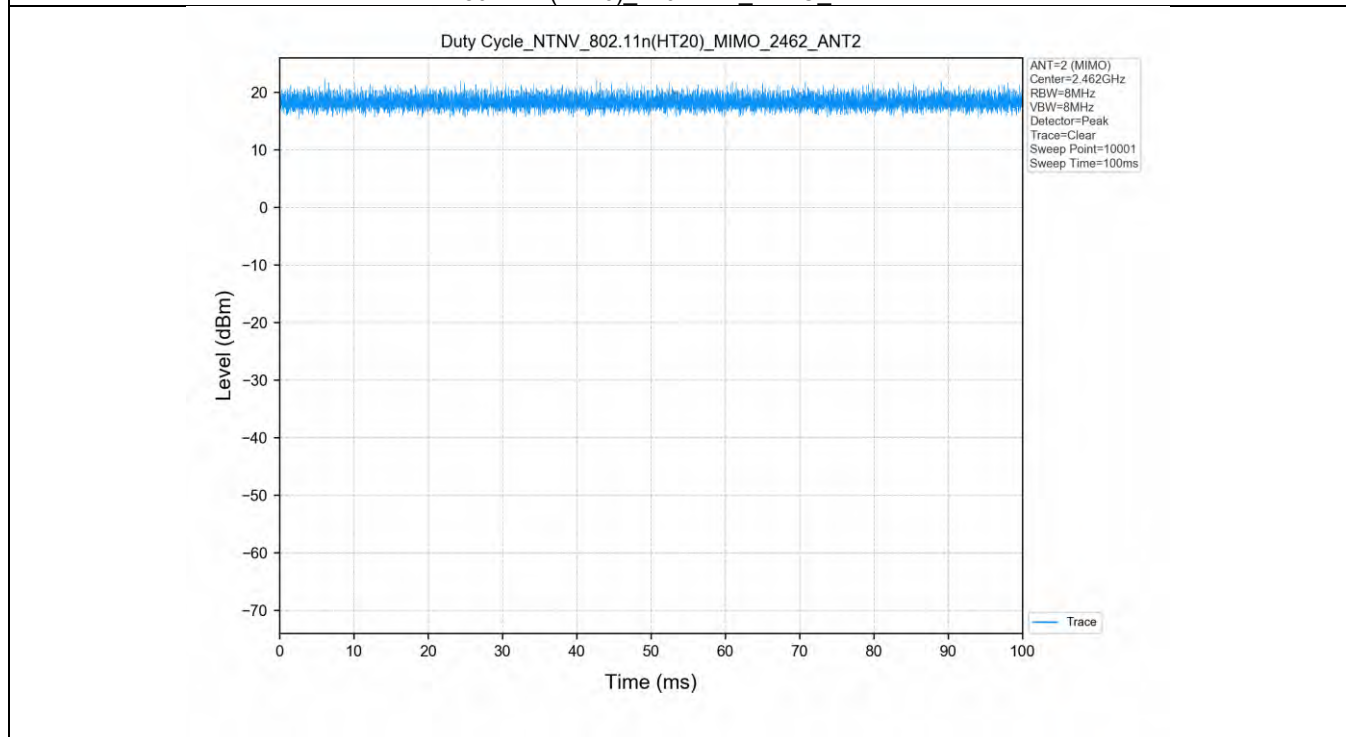
802.11n(HT20)_2462MHz_MIMO_ANT1



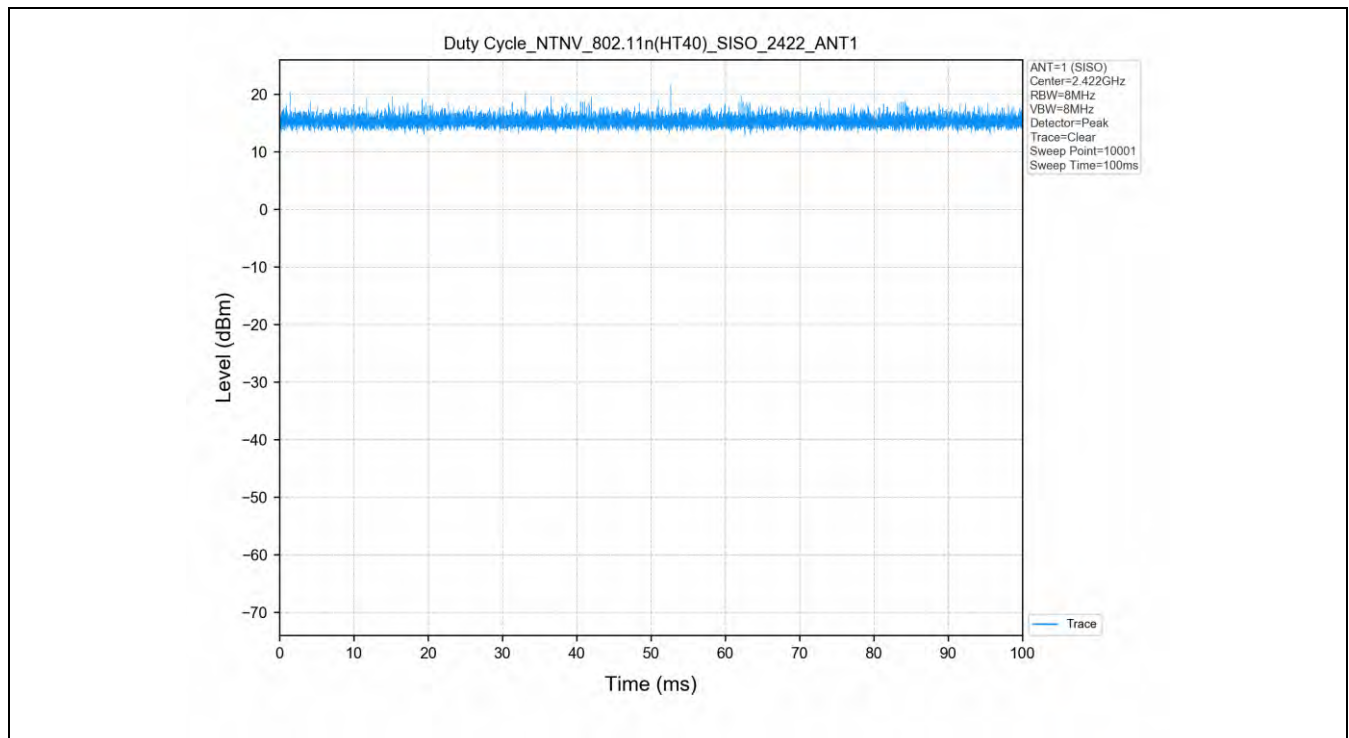
802.11n(HT20)_2462MHz_MIMO_ANT2



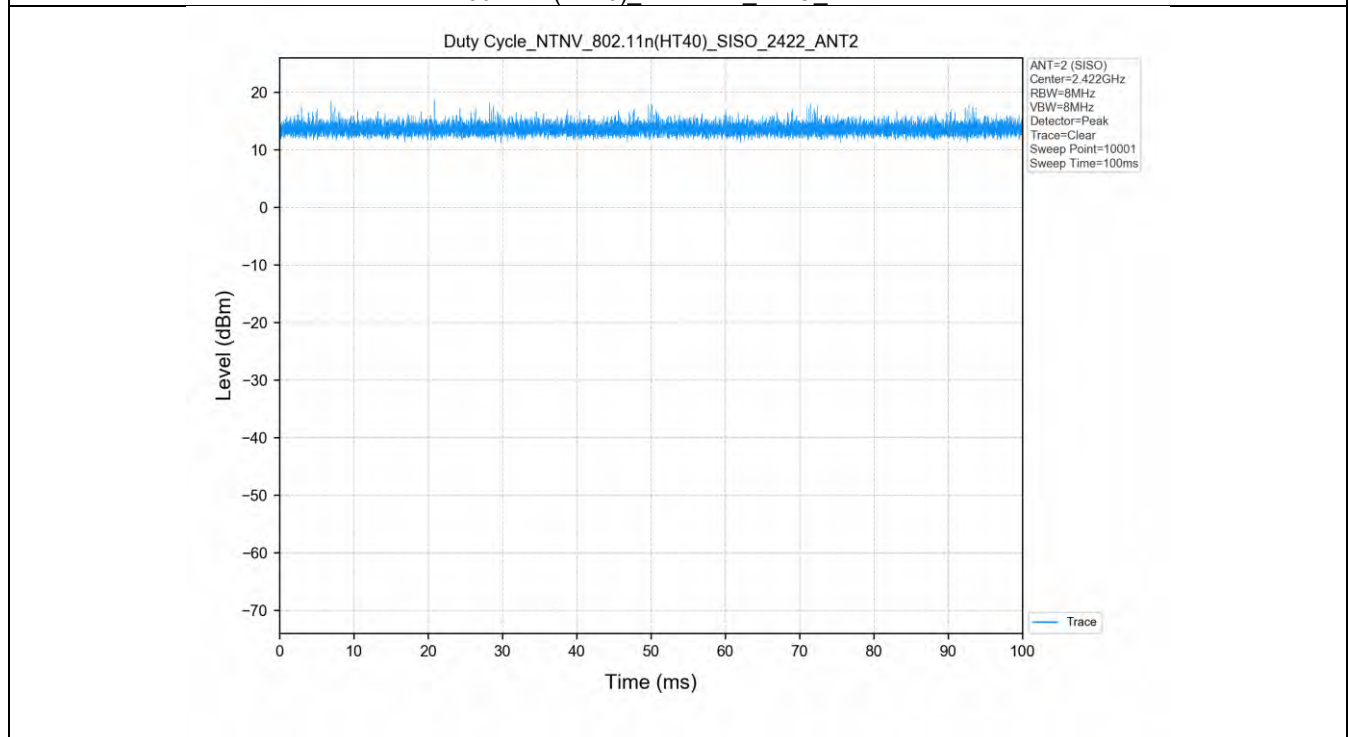
802.11n(HT20)_2462MHz_MIMO_ANT2



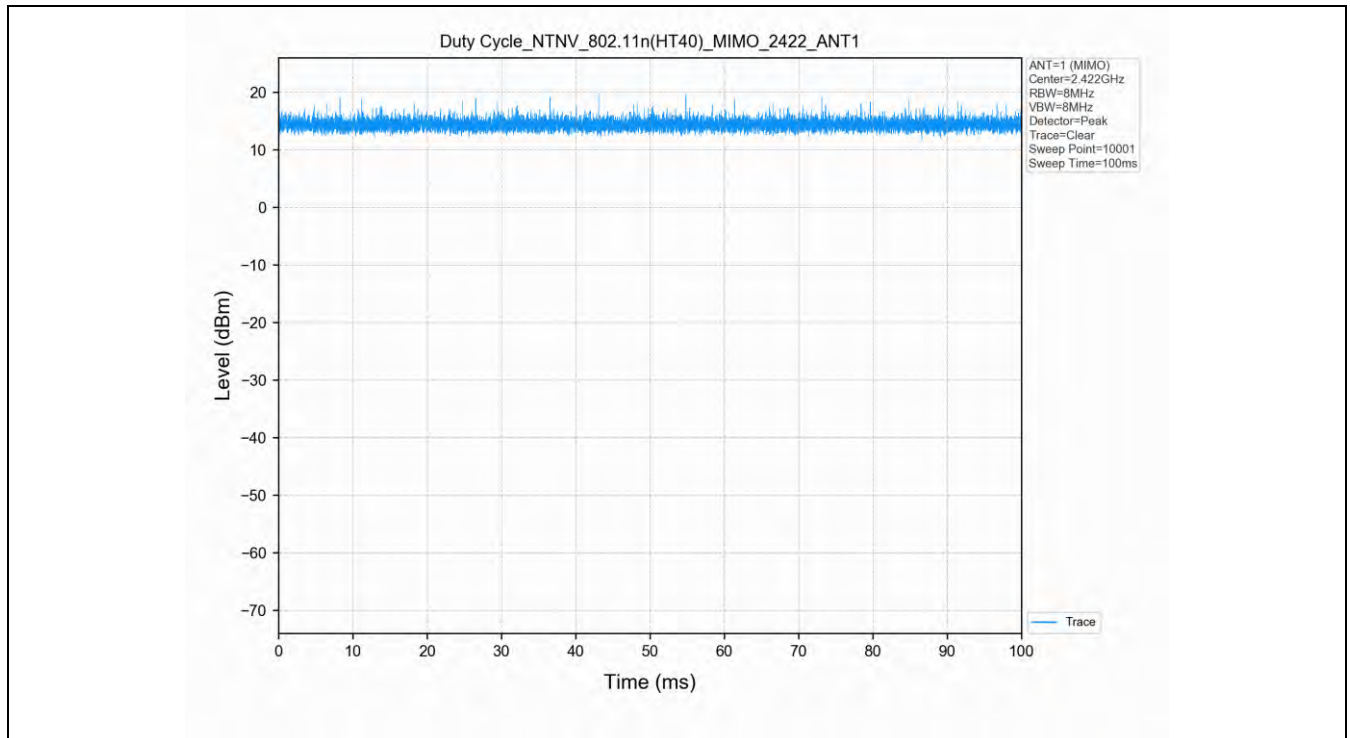
802.11n(HT40)_2422MHz_SISO_ANT1



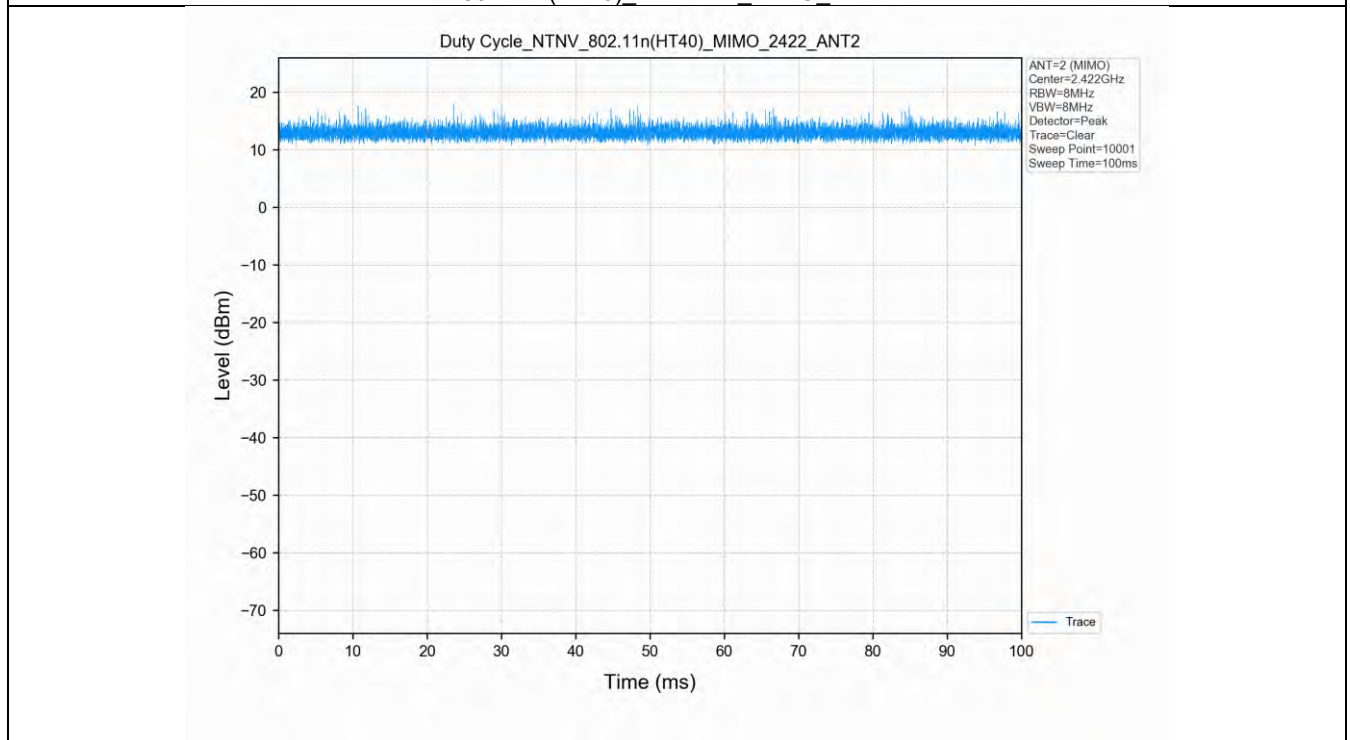
802.11n(HT40)_2422MHz_SISO_ANT2



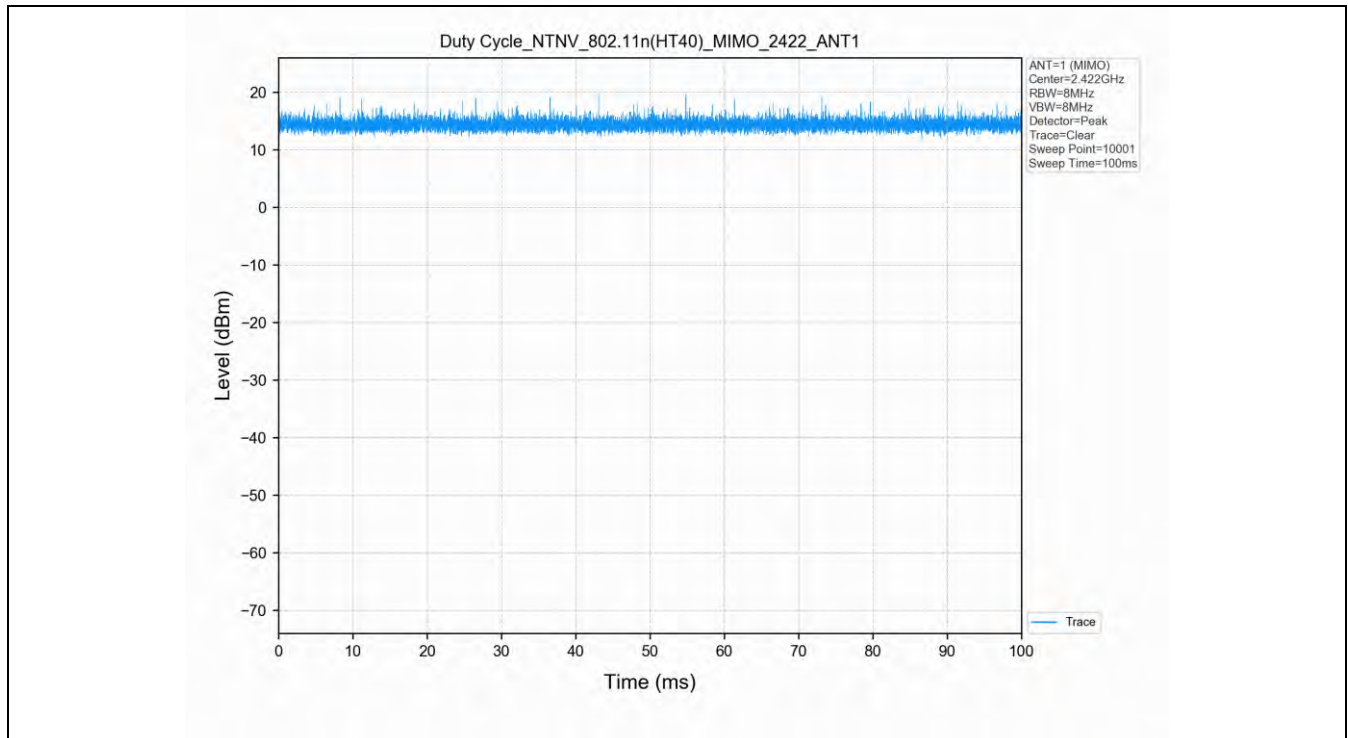
802.11n(HT40)_2422MHz_MIMO_ANT1



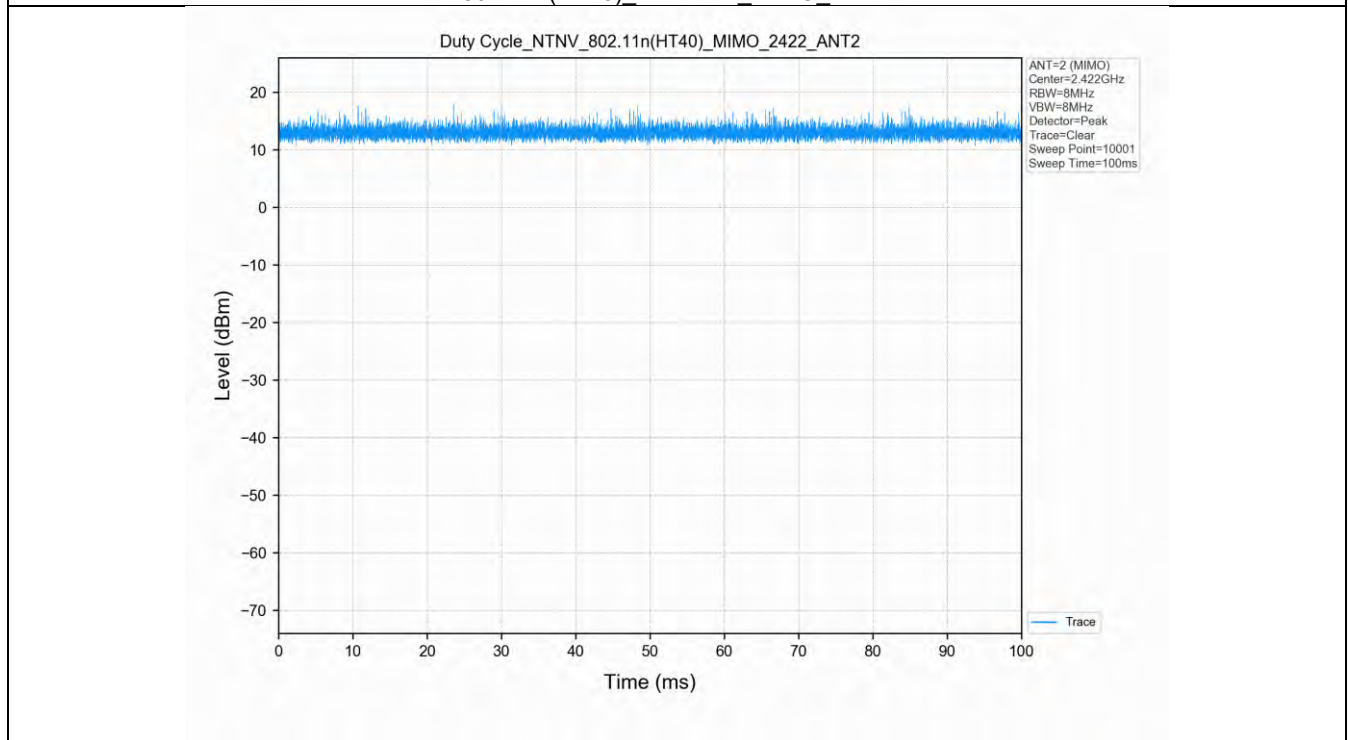
802.11n(HT40)_2422MHz_MIMO_ANT1



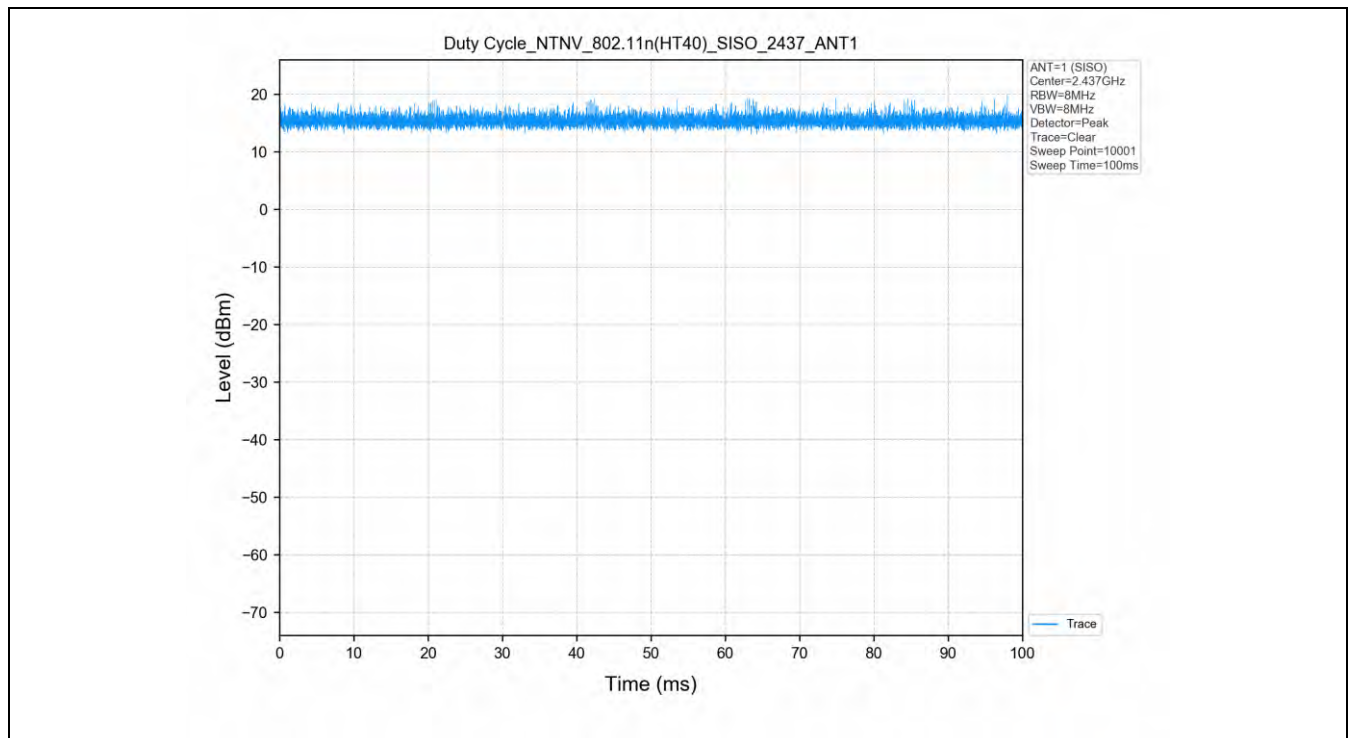
802.11n(HT40)_2422MHz_MIMO_ANT2



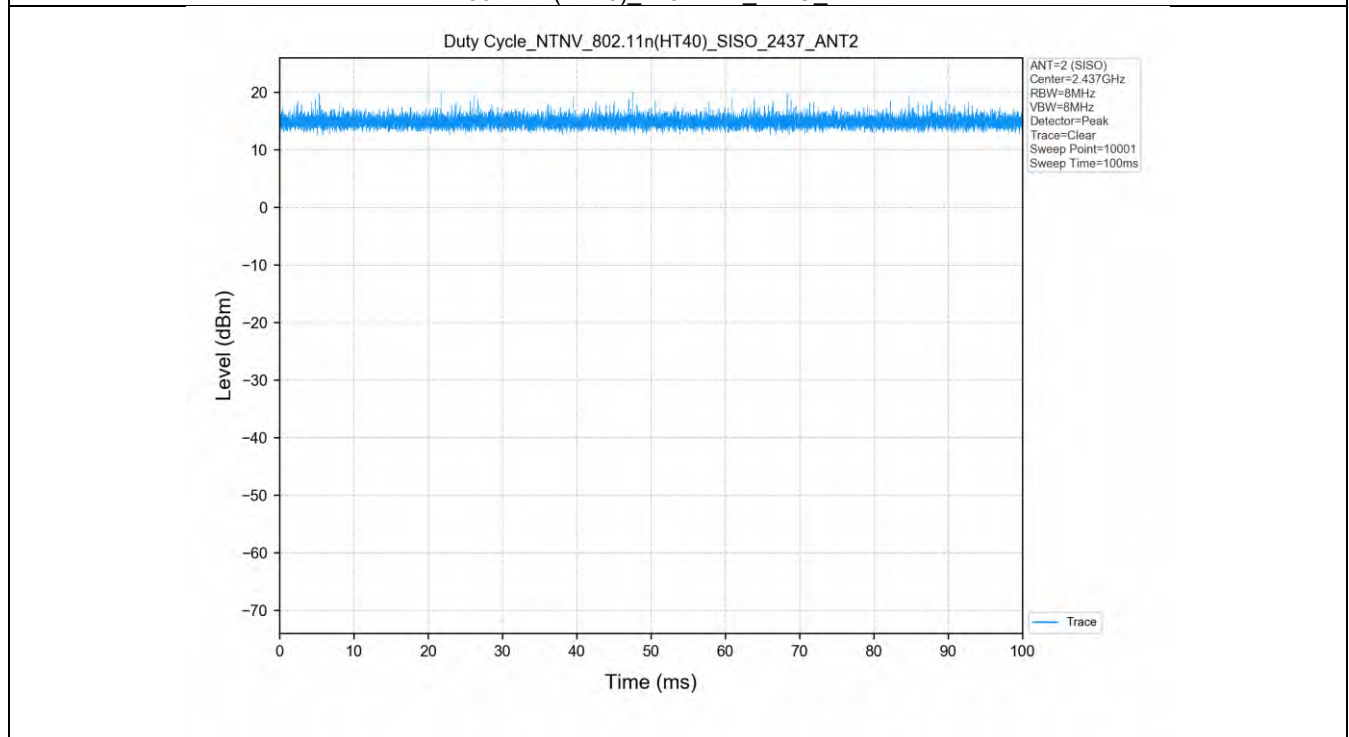
802.11n(HT40)_2422MHz_MIMO_ANT2



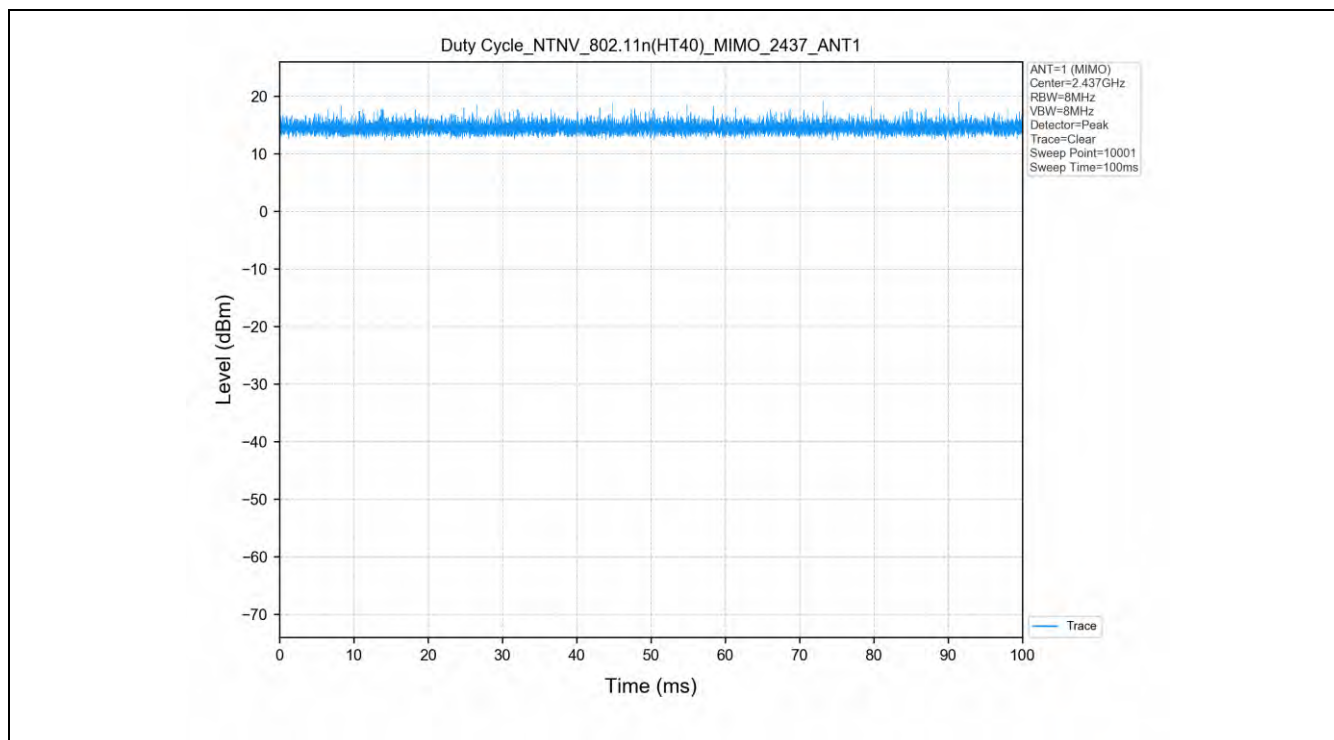
802.11n(HT40)_2437MHz_SISO_ANT1



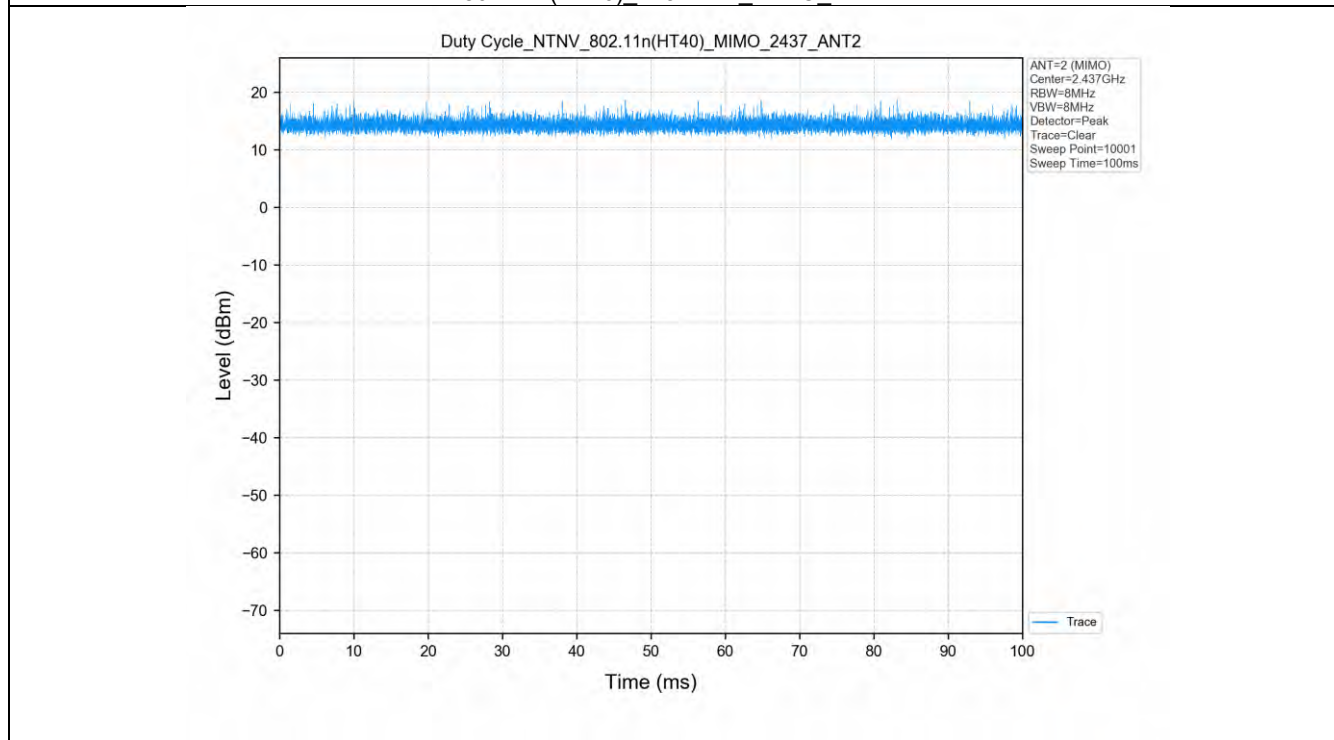
802.11n(HT40)_2437MHz_SISO_ANT2



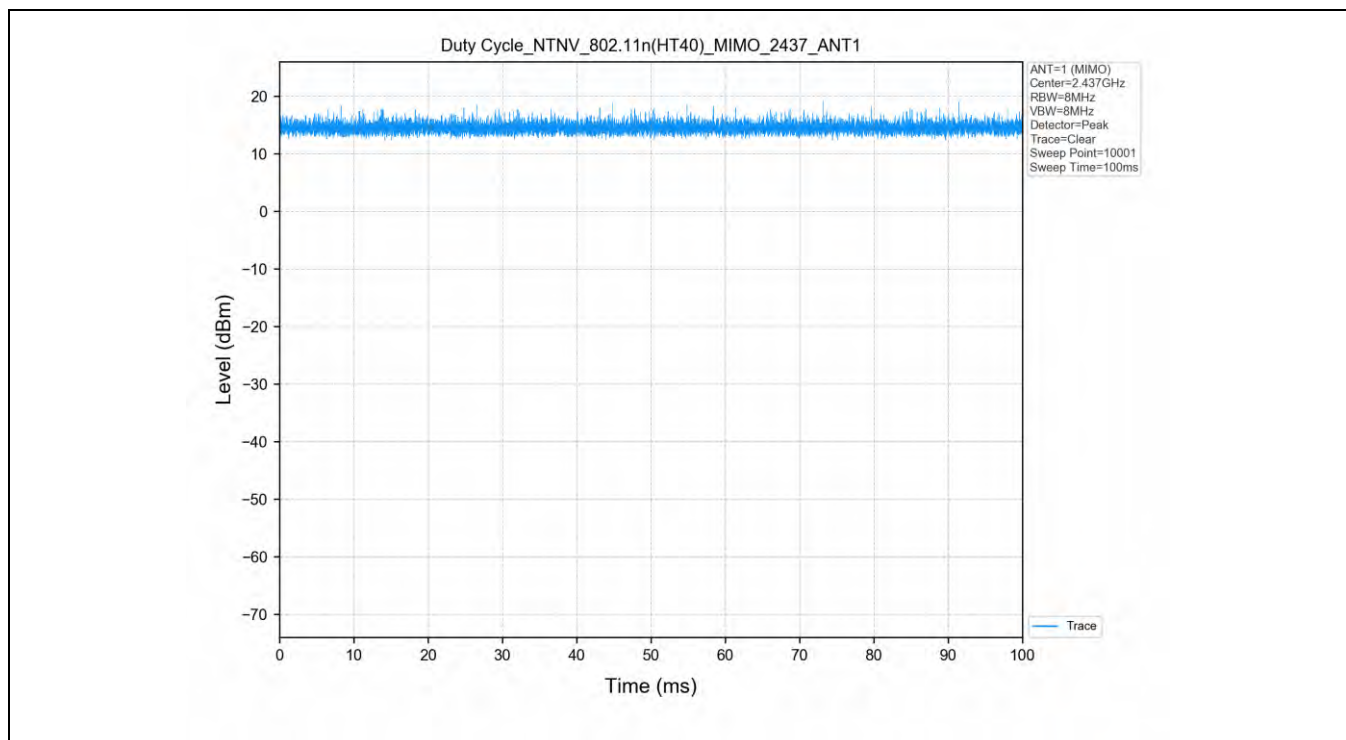
802.11n(HT40)_2437MHz_MIMO_ANT1



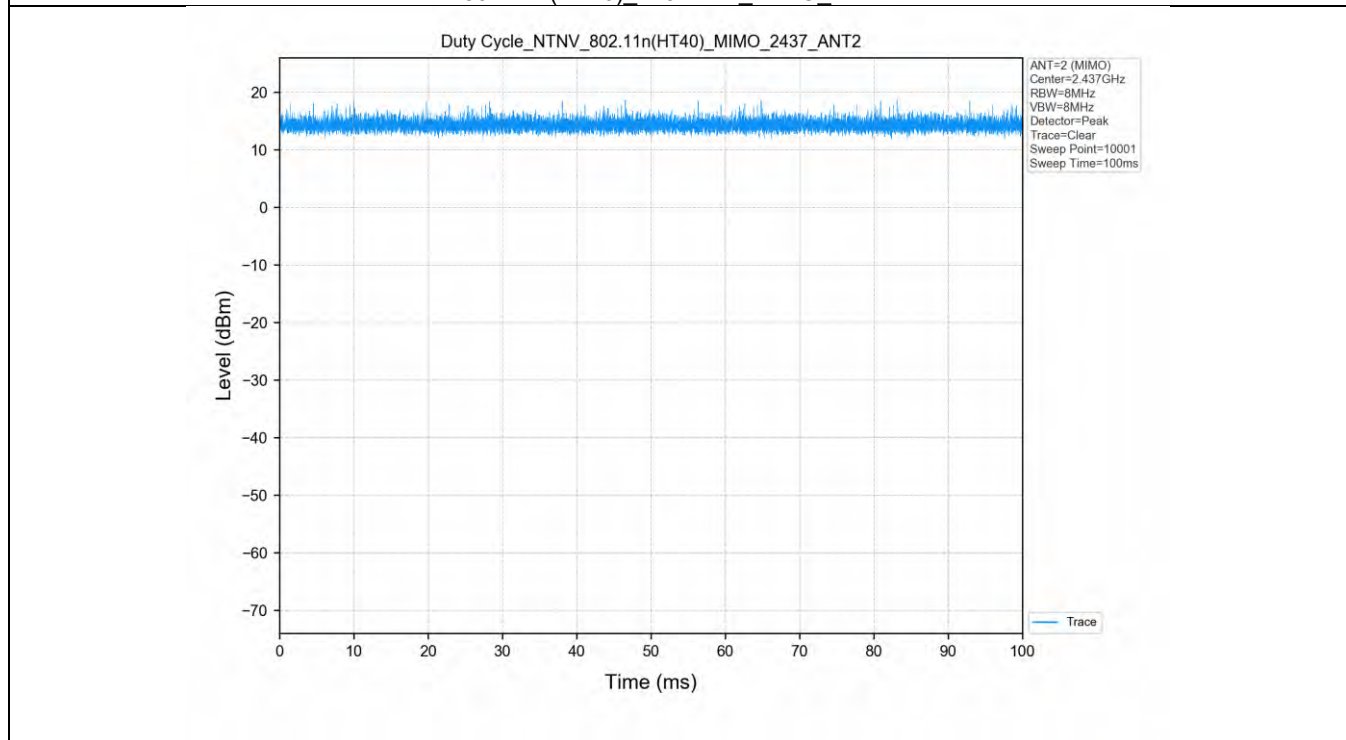
802.11n(HT40)_2437MHz_MIMO_ANT1



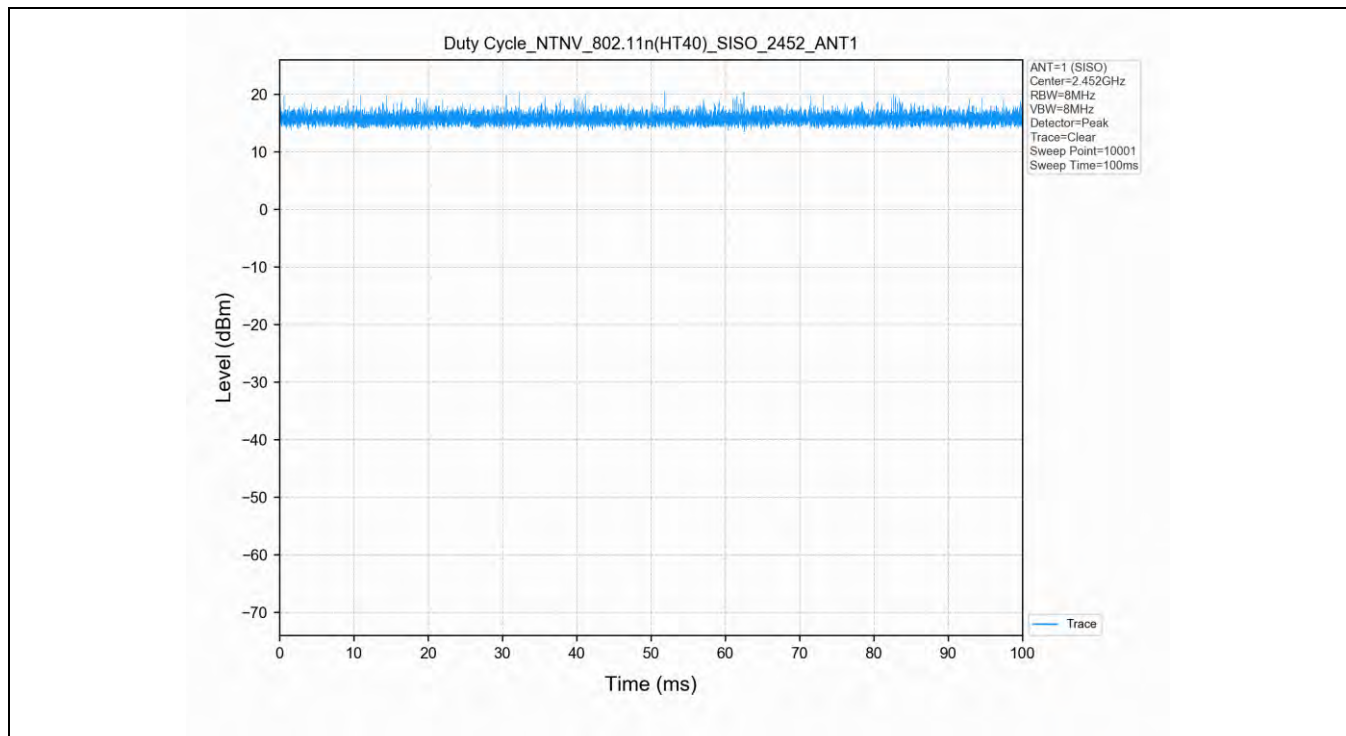
802.11n(HT40)_2437MHz_MIMO_ANT2



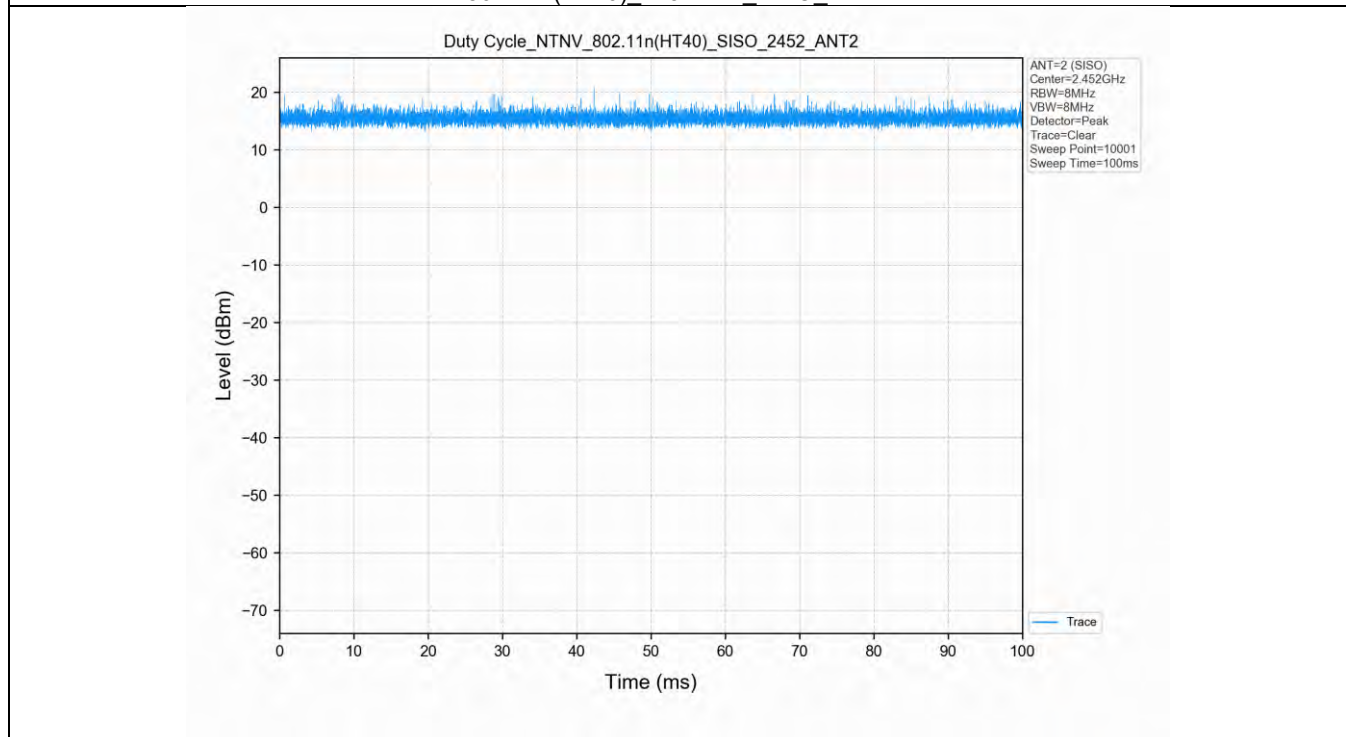
802.11n(HT40)_2437MHz_MIMO_ANT2



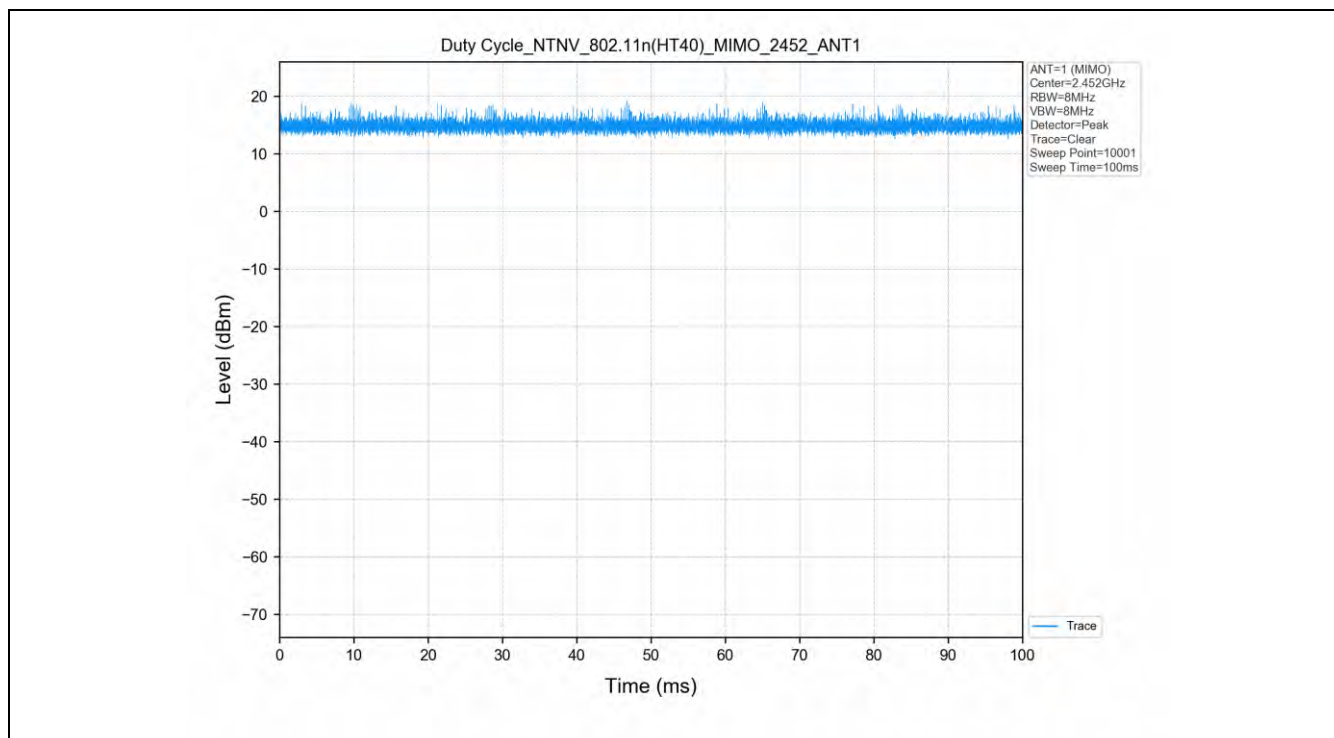
802.11n(HT40)_2452MHz_SISO_ANT1



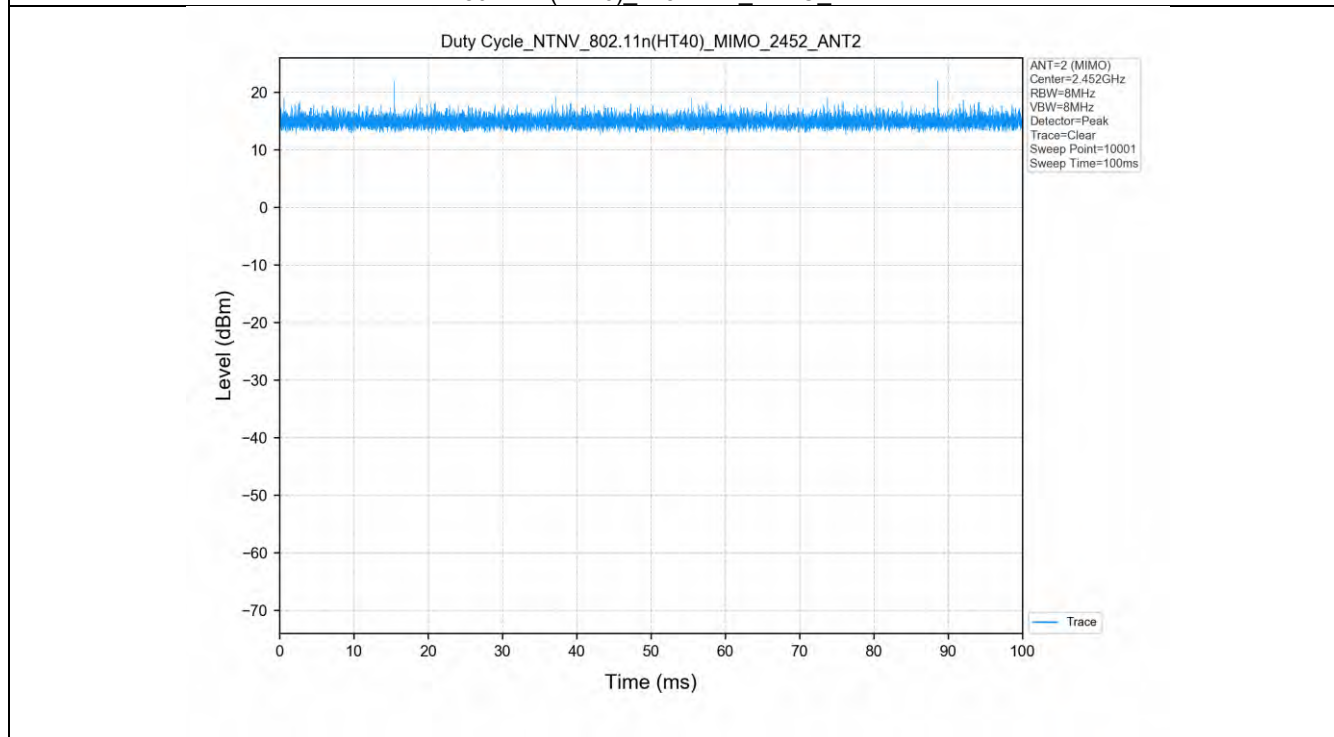
802.11n(HT40)_2452MHz_SISO_ANT2



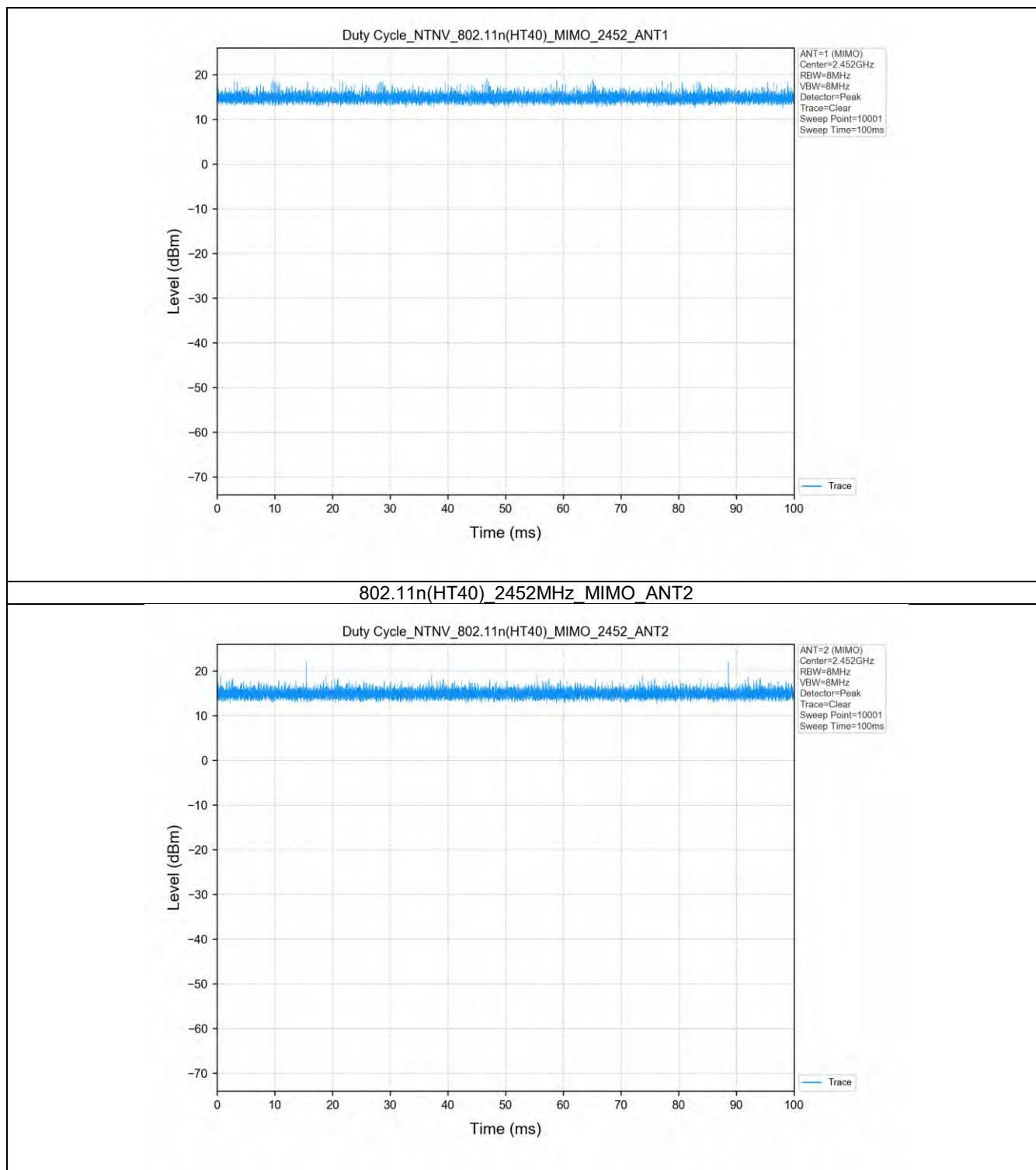
802.11n(HT40)_2452MHz_MIMO_ANT1



802.11n(HT40)_2452MHz_MIMO_ANT1



802.11n(HT40)_2452MHz_MIMO_ANT2





2. Bandwidth

2.1 Test Result

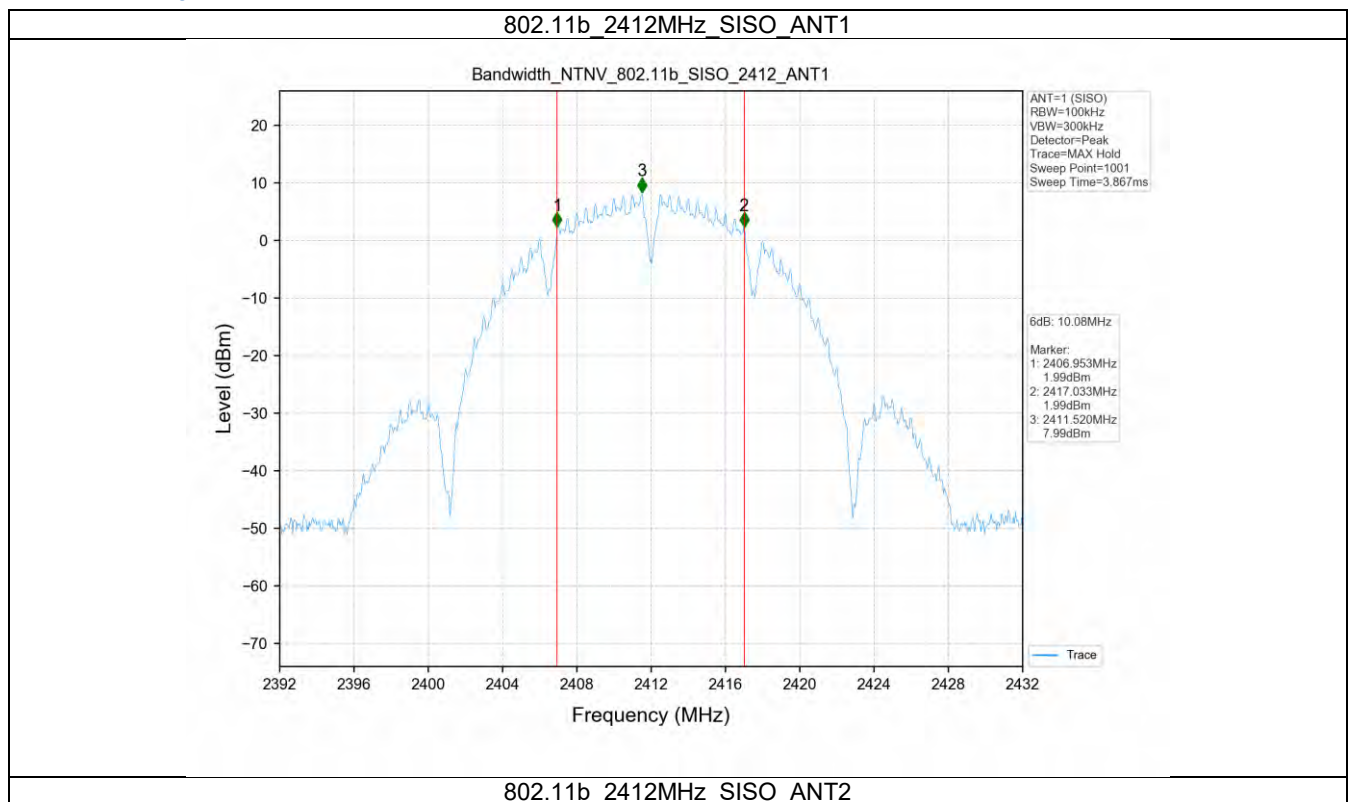
Test Mode	Frequency (MHz)	TX Type	ANT No.	6dB Bandwidth		Verdict
				Test Result (MHz)	Limits (MHz)	
802.11b	2412	SISO	1	10.080	≥0.5	PASS
			2	10.090	≥0.5	PASS
	2437	SISO	1	10.100	≥0.5	PASS
			2	10.080	≥0.5	PASS
	2462	SISO	1	10.100	≥0.5	PASS
			2	10.100	≥0.5	PASS
802.11g	2412	SISO	1	16.610	≥0.5	PASS
			2	16.610	≥0.5	PASS
	2437	SISO	1	16.610	≥0.5	PASS
			2	16.600	≥0.5	PASS
	2462	SISO	1	16.600	≥0.5	PASS
			2	16.620	≥0.5	PASS
802.11n(HT20)	2412	SISO	1	17.850	≥0.5	PASS
			2	17.850	≥0.5	PASS
	2437	MIMO	0	17.850	≥0.5	PASS
			1	17.860	≥0.5	PASS
		SISO	2	17.790	≥0.5	PASS
			0	17.800	≥0.5	PASS
	2462	MIMO	1	17.850	≥0.5	PASS
			2	17.840	≥0.5	PASS
		SISO	0	17.850	≥0.5	PASS
			1	17.850	≥0.5	PASS
802.11n(HT40)	2422	SISO	1	36.520	≥0.5	PASS
			2	36.550	≥0.5	PASS
		MIMO	0	36.550	≥0.5	PASS
	2437	SISO	1	36.440	≥0.5	PASS
			2	36.430	≥0.5	PASS
		MIMO	0	36.440	≥0.5	PASS
	2452	SISO	1	36.460	≥0.5	PASS
			2	36.480	≥0.5	PASS
		MIMO	1	36.460	≥0.5	PASS
			0	36.460	≥0.5	PASS

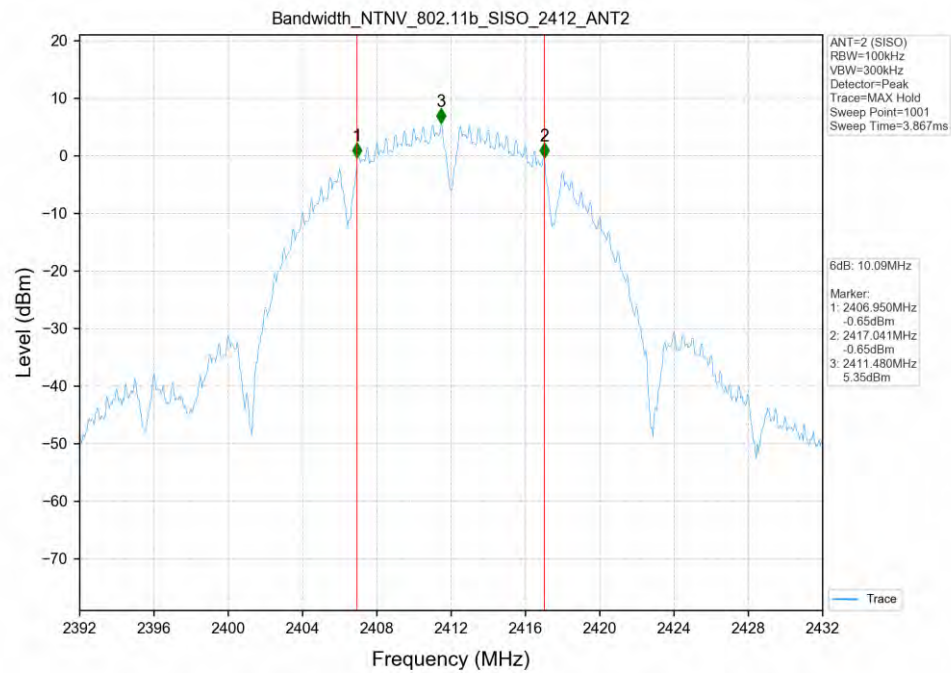
Test Mode	Frequency (MHz)	TX Type	ANT No.	99% Occupied Bandwidth	
				Test Result (MHz)	
802.11b	2412	SISO	1	15.110	Only for Report Use
			2	15.050	Only for Report Use
	2437	SISO	1	15.120	Only for Report Use
			2	14.980	Only for Report Use
	2462	SISO	1	15.100	Only for Report Use
			2	15.090	Only for Report Use
802.11g	2412	SISO	1	17.030	Only for Report Use
			2	17.080	Only for Report Use
	2437	SISO	1	17.020	Only for Report Use
			2	16.970	Only for Report Use
	2462	SISO	1	17.030	Only for Report Use
			2	17.040	Only for Report Use
802.11n(HT20)	2412	SISO	1	18.060	Only for Report Use
			2	18.080	Only for Report Use
		MIMO	0	18.090	Only for Report Use



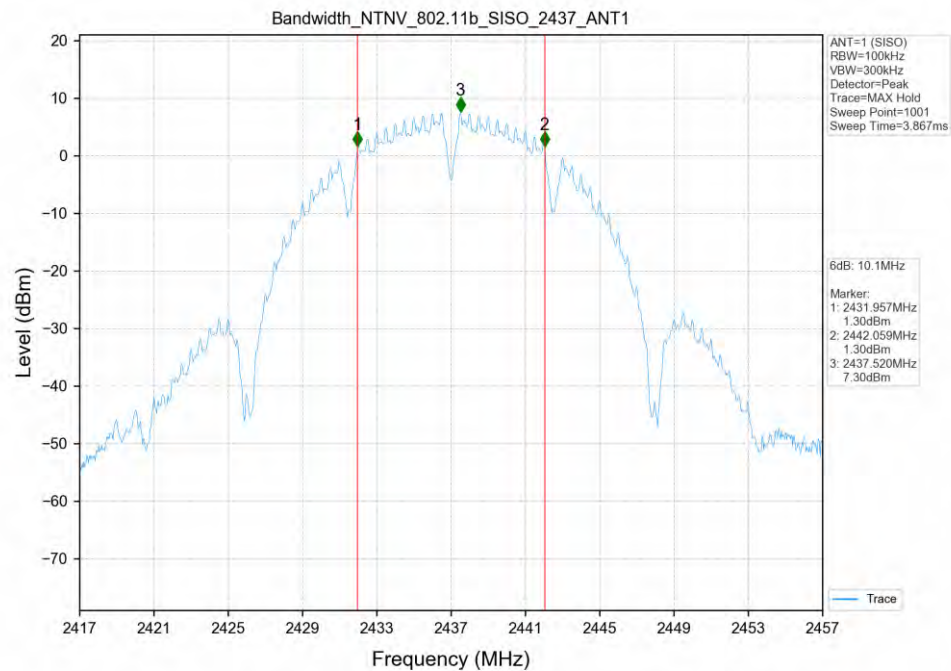
	2437	SISO	1	18.060	Only for Report Use
			2	18.030	Only for Report Use
		MIMO	0	18.020	Only for Report Use
	2462	SISO	1	18.040	Only for Report Use
			2	18.090	Only for Report Use
		MIMO	0	18.070	Only for Report Use
802.11n(HT40)	2422	SISO	1	36.770	Only for Report Use
			2	37.030	Only for Report Use
		MIMO	0	37.020	Only for Report Use
	2437	SISO	1	36.800	Only for Report Use
			2	36.660	Only for Report Use
		MIMO	0	36.650	Only for Report Use
	2452	SISO	1	36.650	Only for Report Use
			2	36.650	Only for Report Use
		MIMO	0	36.610	Only for Report Use

2.2 Test Graph - 6dB Bandwidth

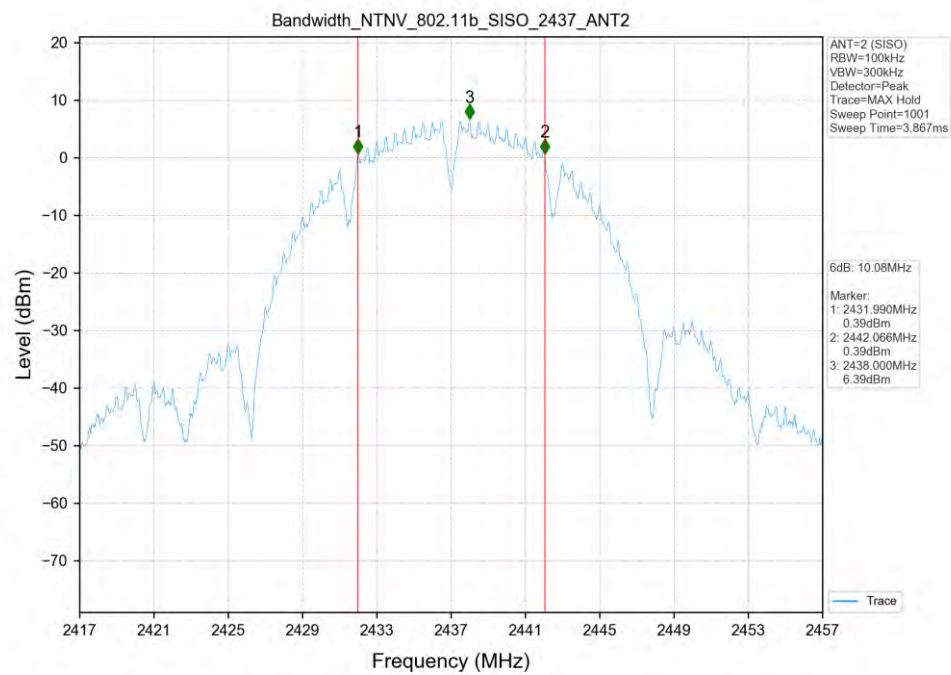




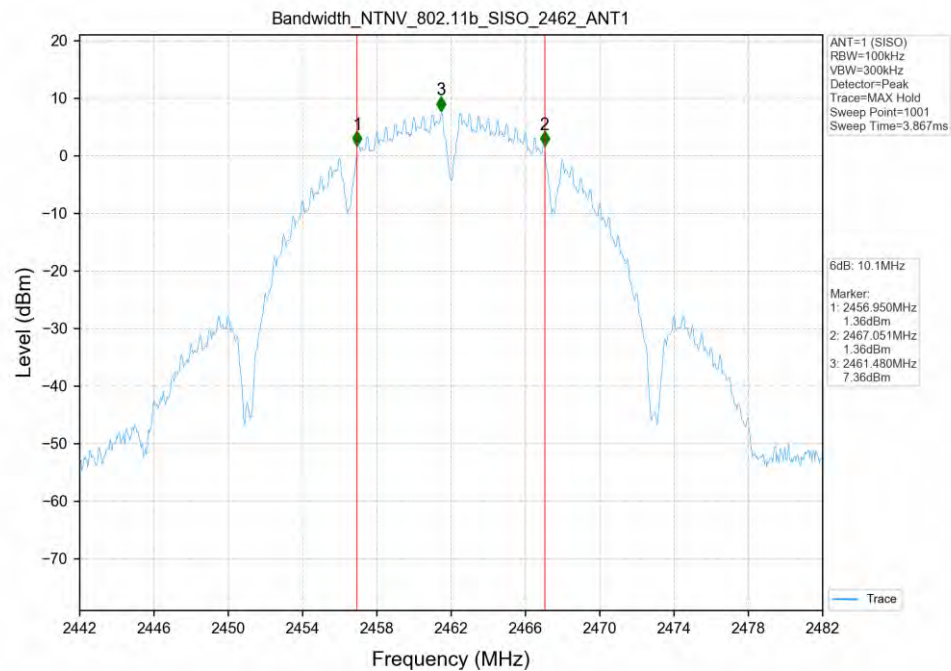
802.11b_2437MHz_SISO_ANT1



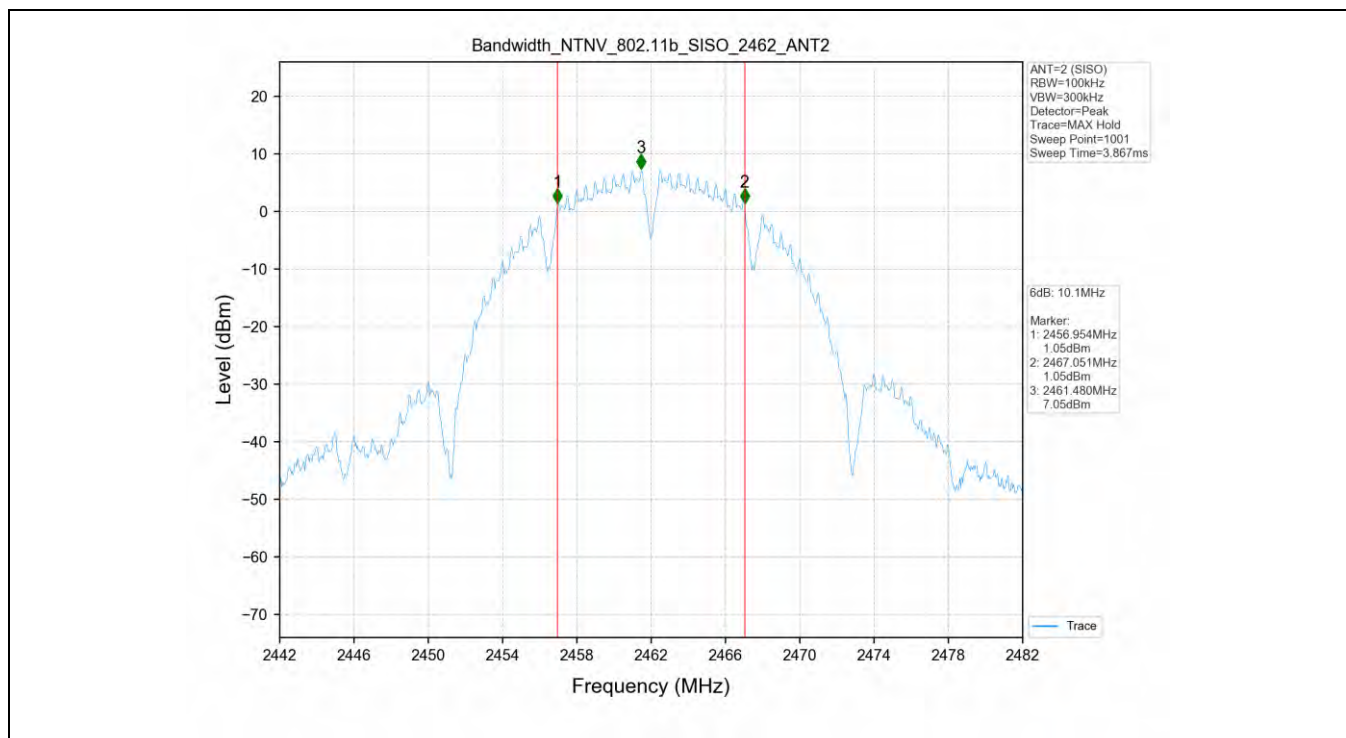
802.11b_2437MHz_SISO_ANT2



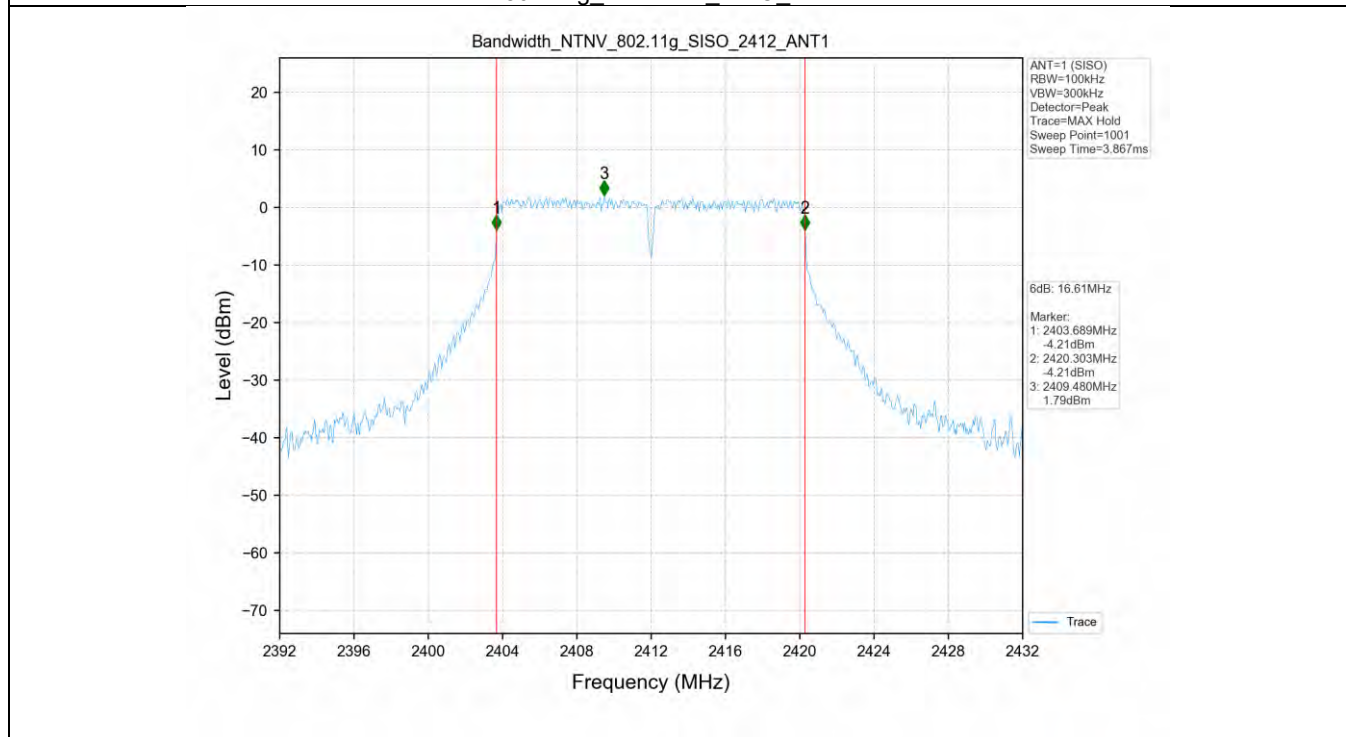
802.11b_2462MHz_SISO_ANT1



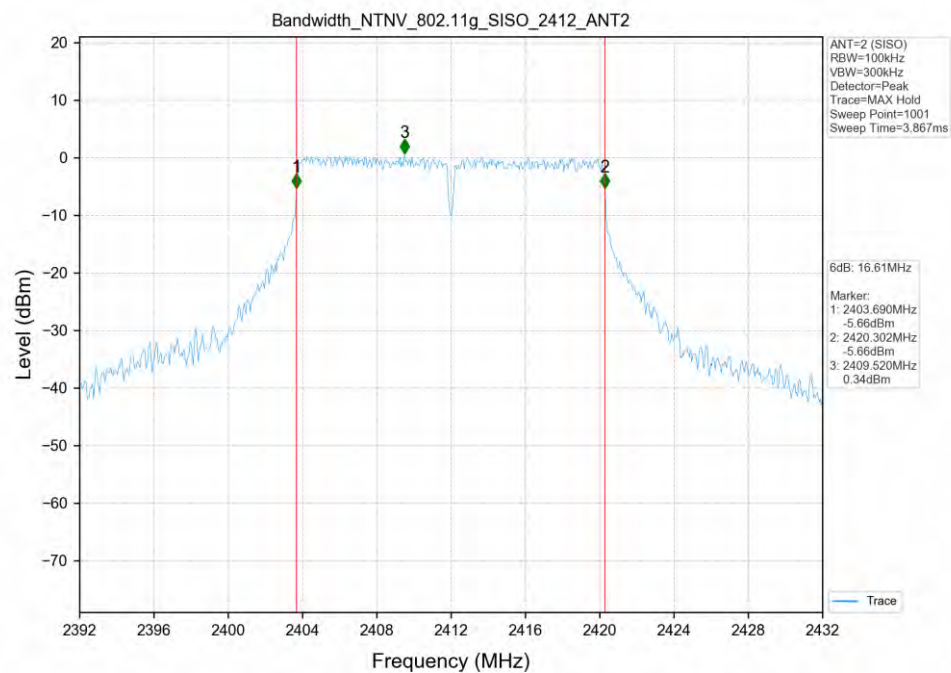
802.11b_2462MHz_SISO_ANT2



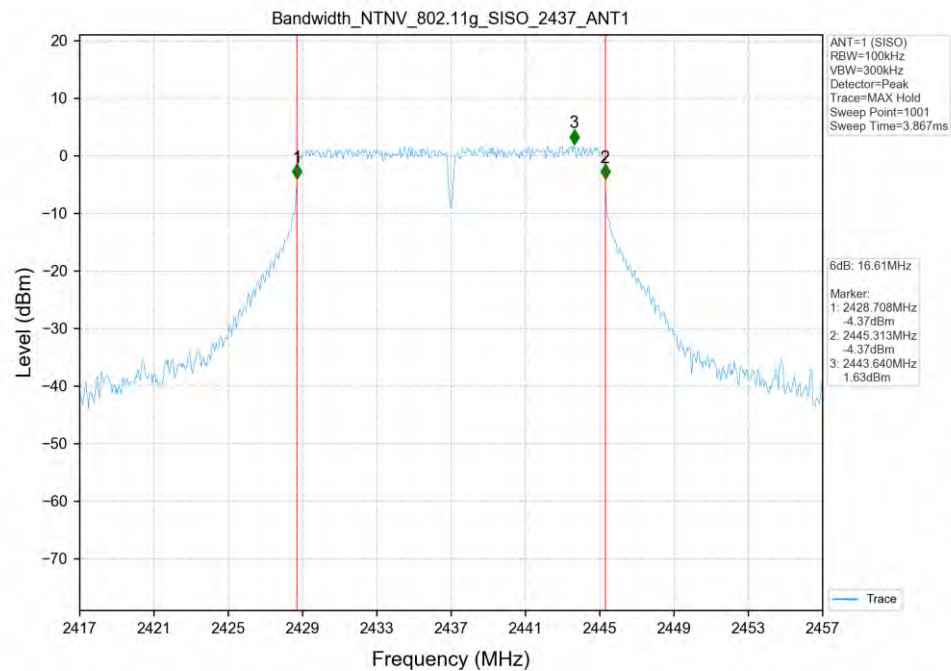
802.11g_2412MHz_SISO_ANT1



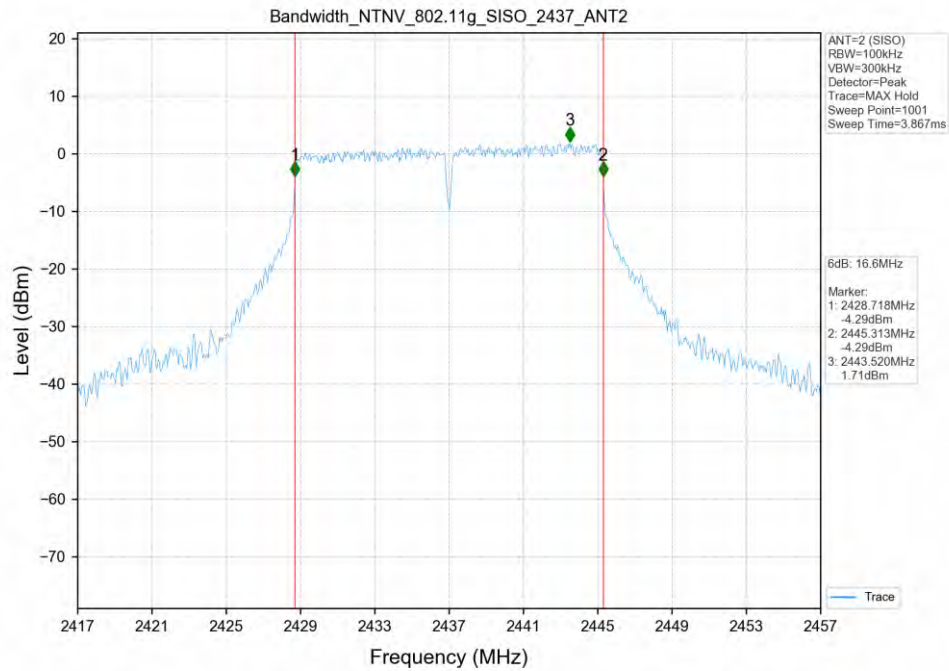
802.11g_2412MHz_SISO_ANT2



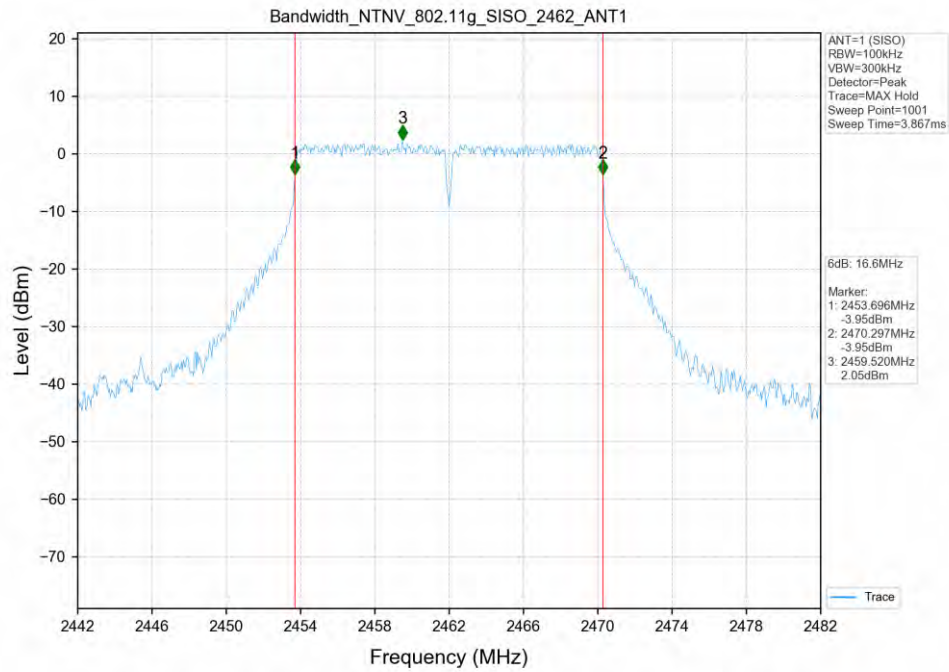
802.11g_2437MHz_SISO_ANT1



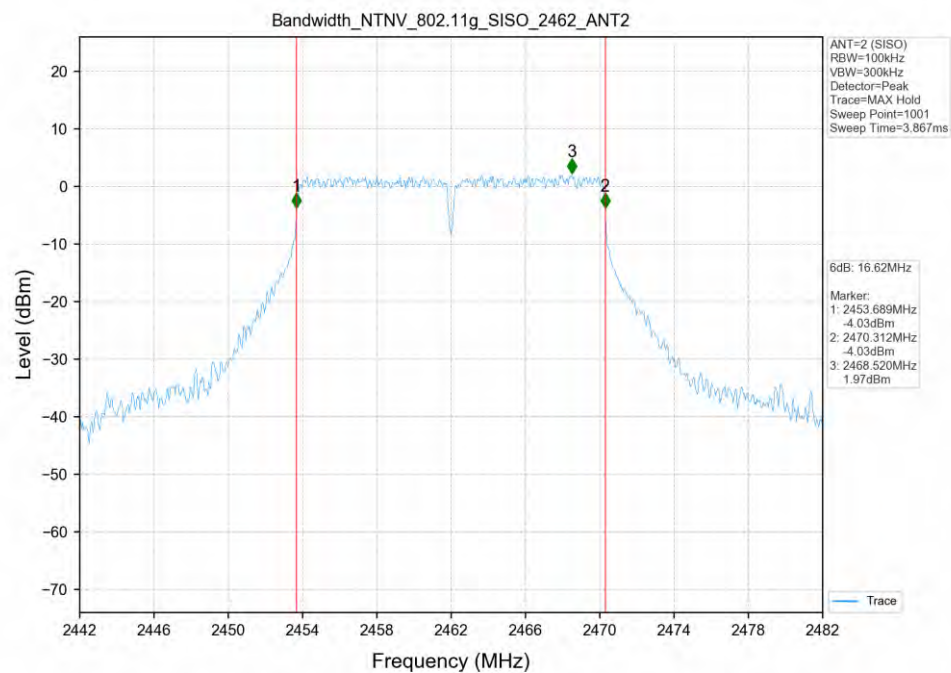
802.11g_2437MHz_SISO_ANT2



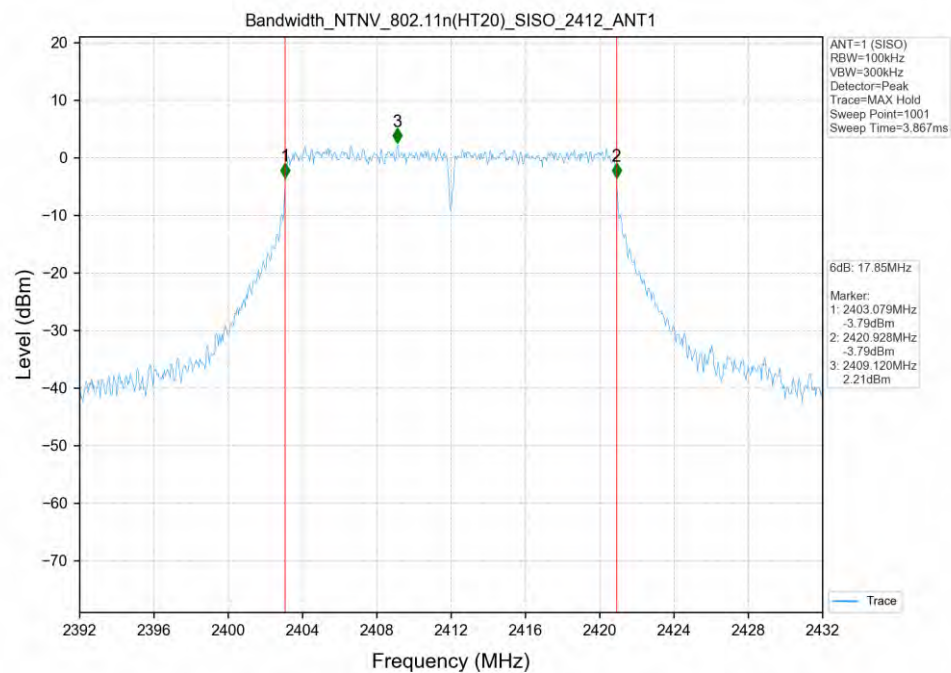
802.11g_2462MHz_SISO_ANT1



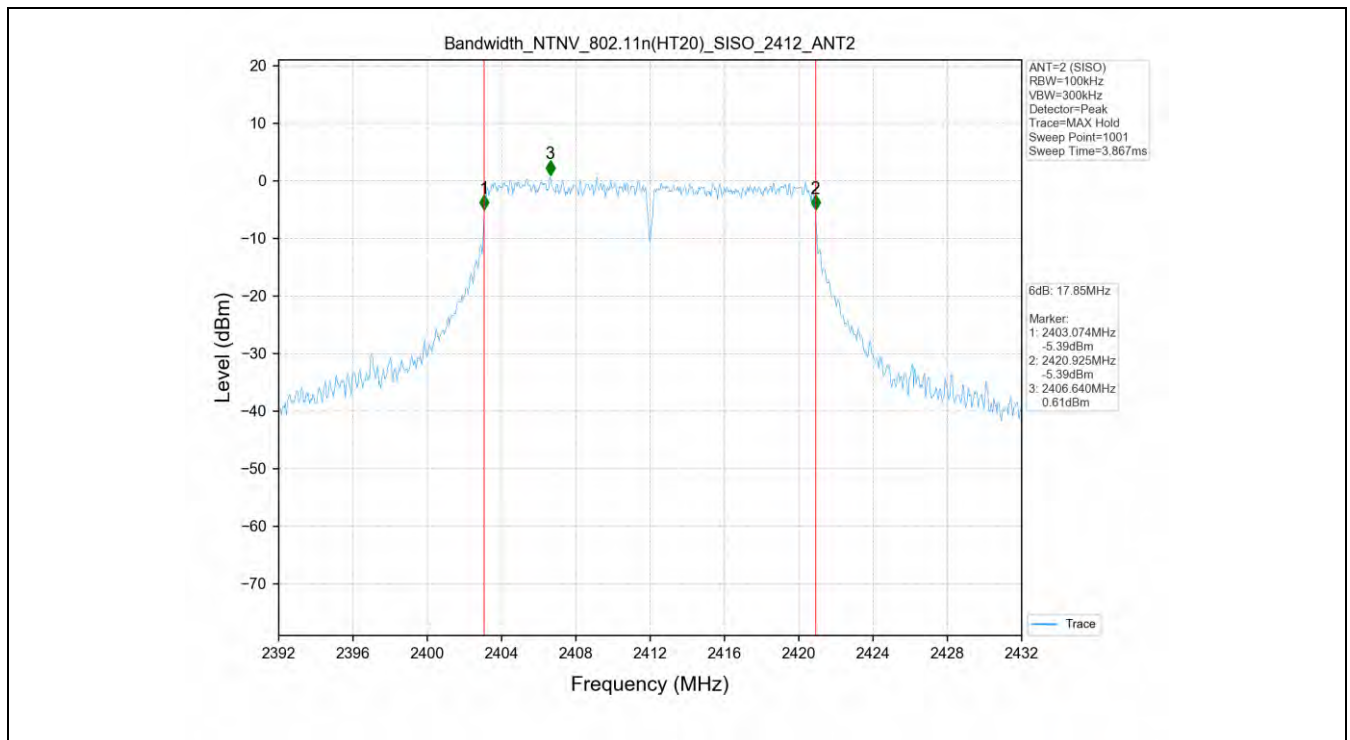
802.11g_2462MHz_SISO_ANT2



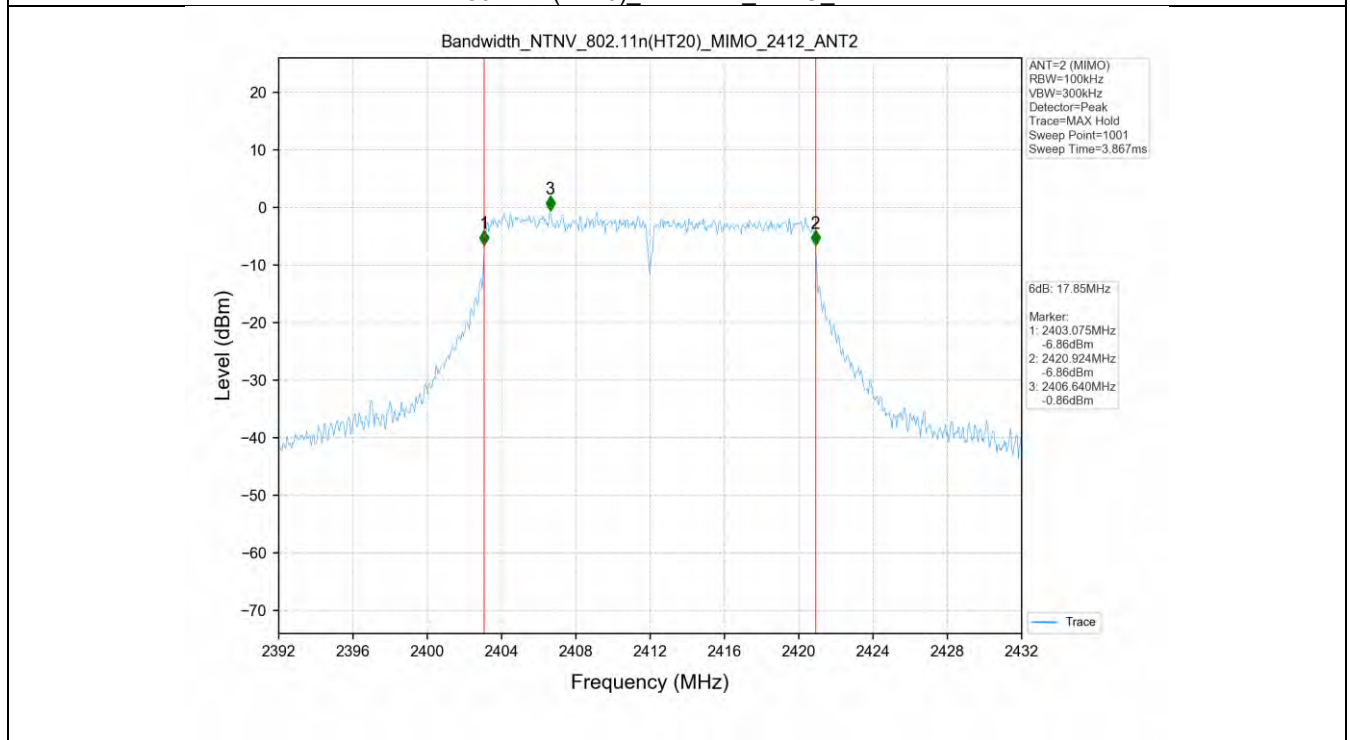
802.11n(HT20)_2412MHz_SISO_ANT1



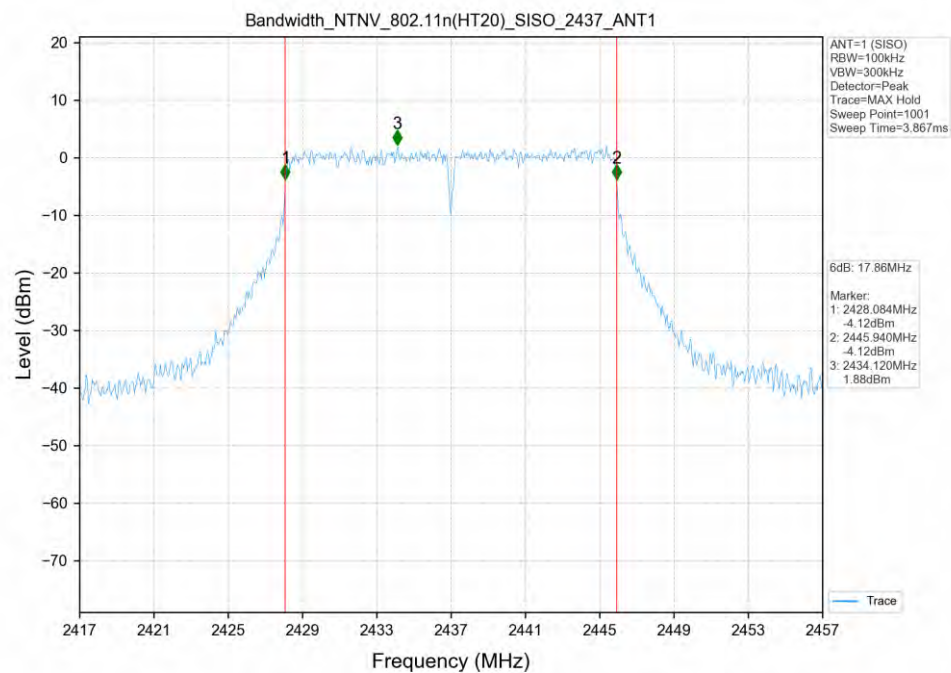
802.11n(HT20)_2412MHz_SISO_ANT2



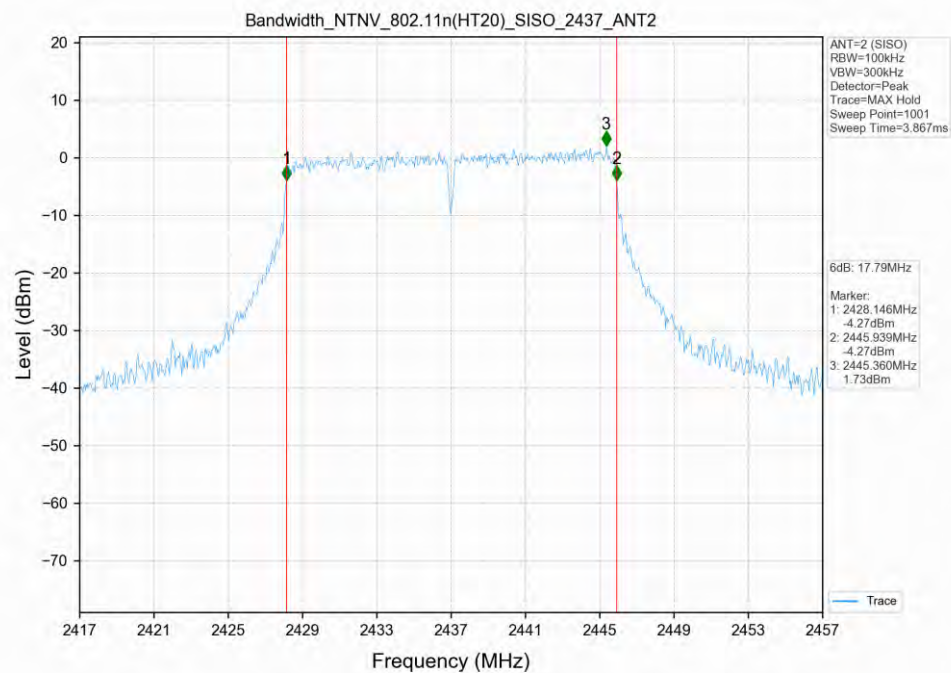
802.11n(HT20)_2412MHz_MIMO_Total



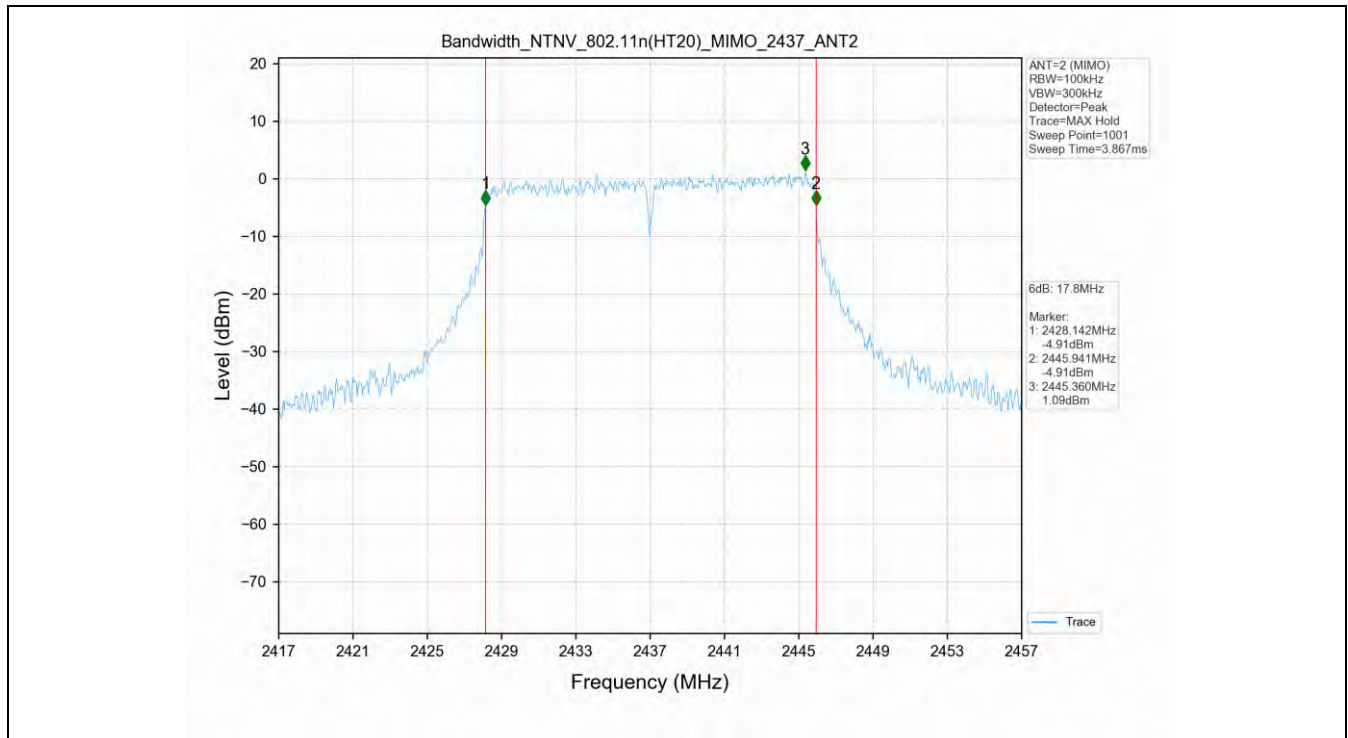
802.11n(HT20)_2437MHz_SISO_ANT1



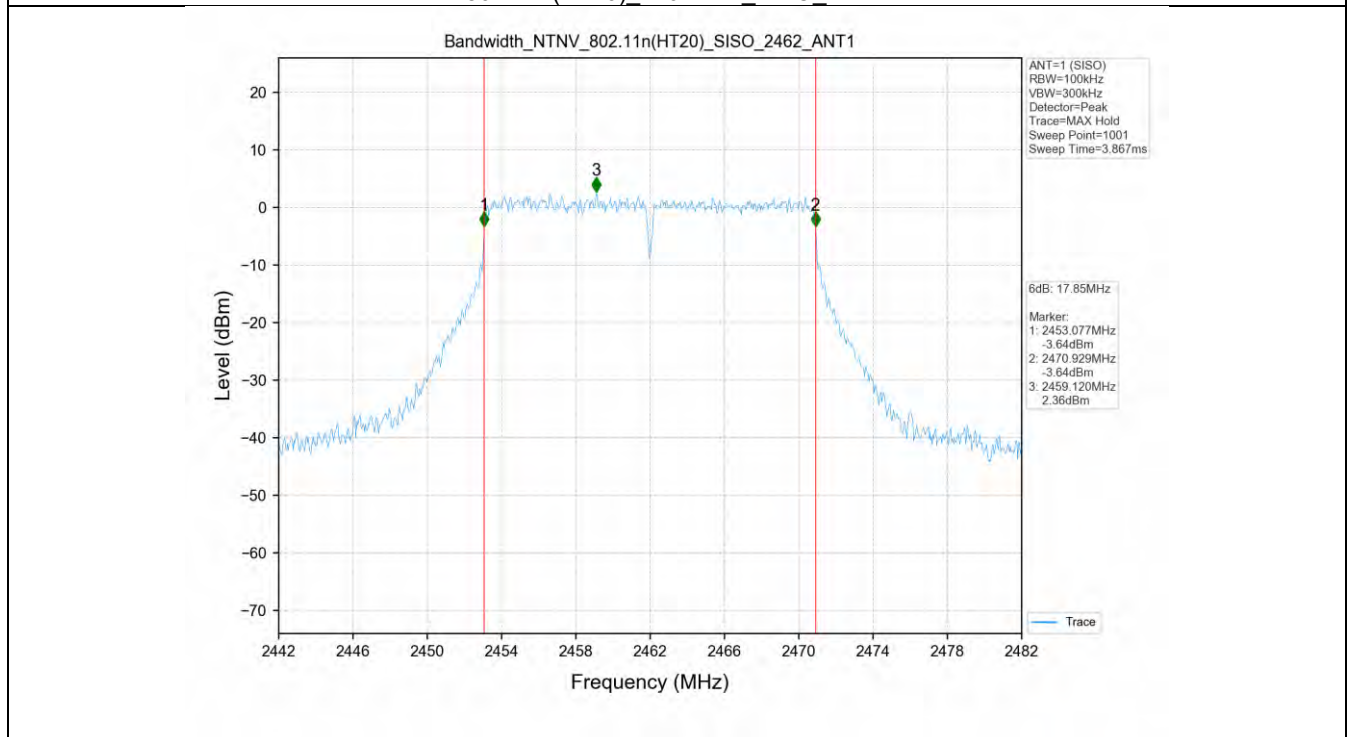
802.11n(HT20)_2437MHz_SISO_ANT2



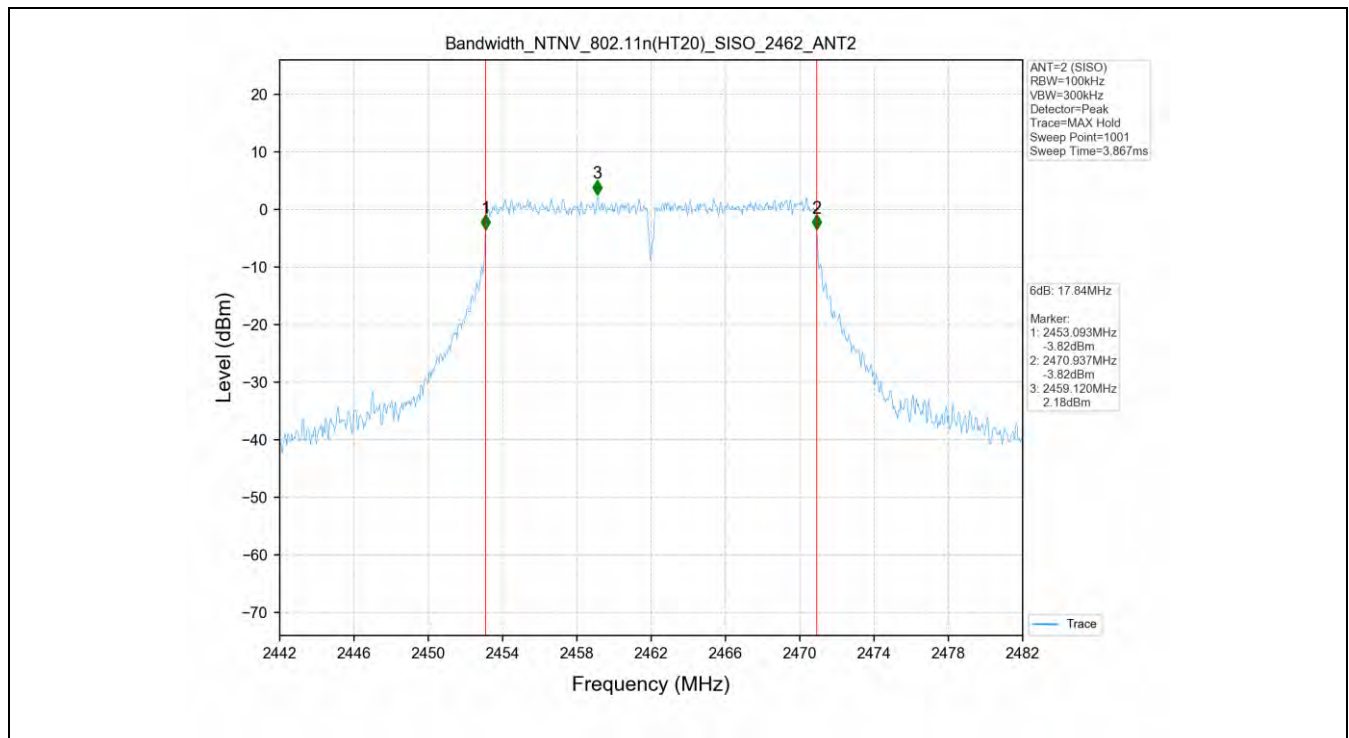
802.11n(HT20)_2437MHz_MIMO_Total



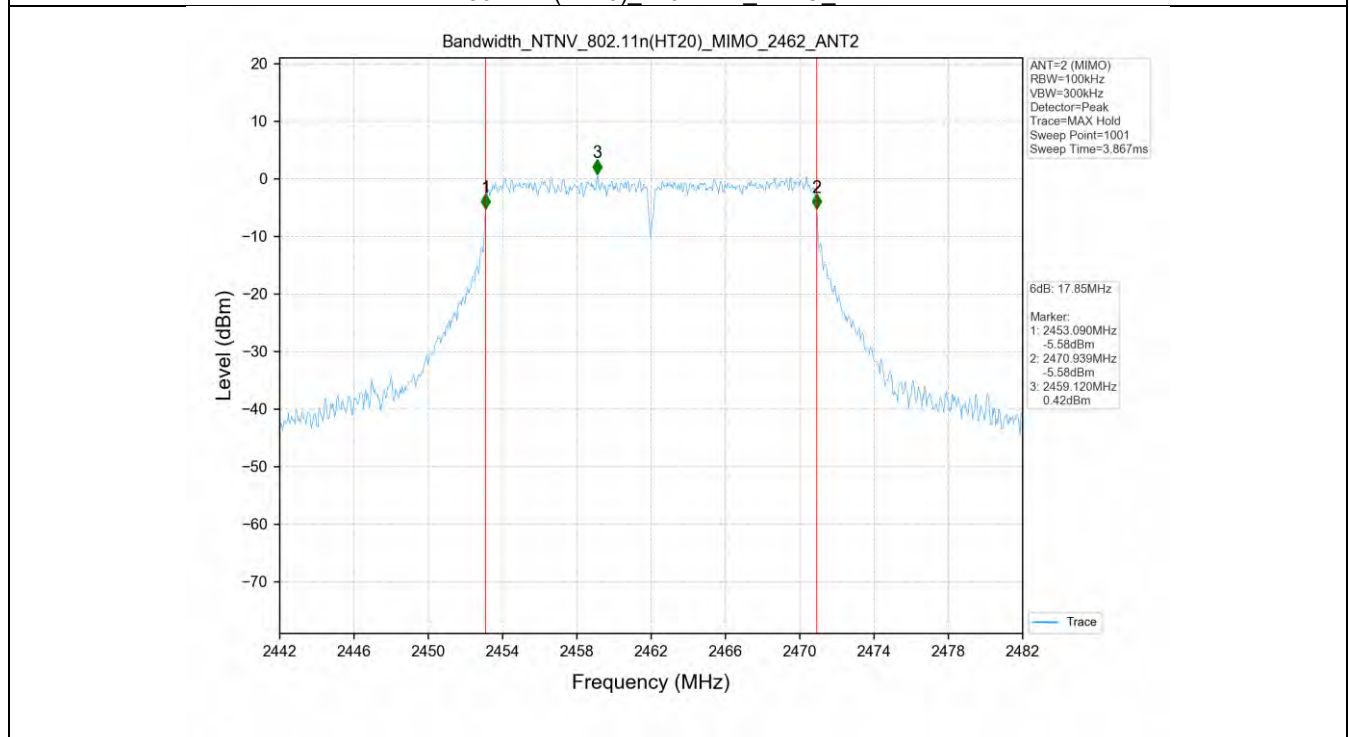
802.11n(HT20)_2462MHz_SISO_ANT1



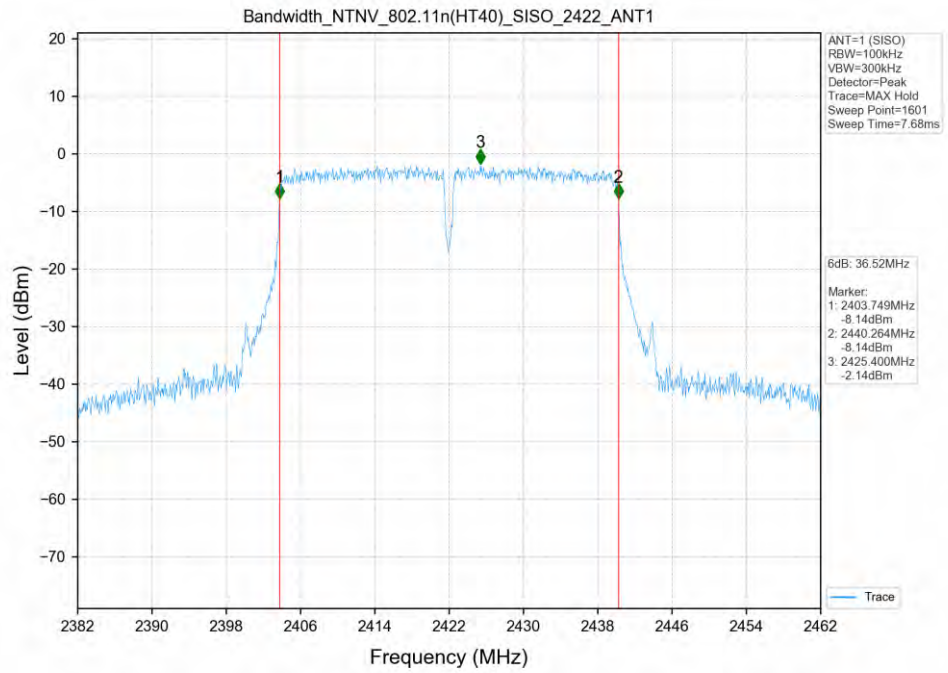
802.11n(HT20)_2462MHz_SISO_ANT2



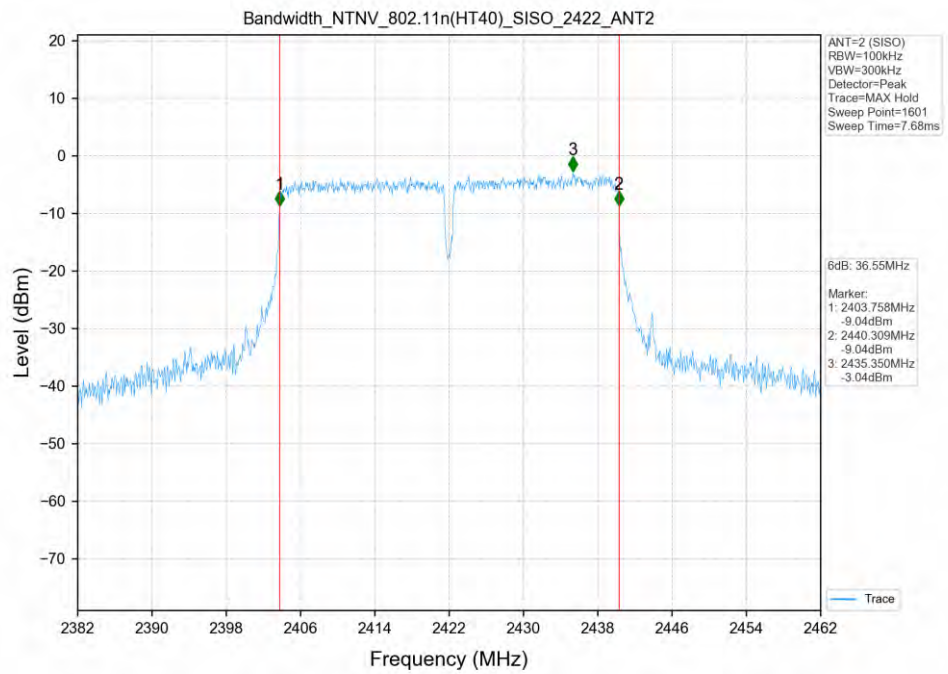
802.11n(HT20)_2462MHz_MIMO_Total



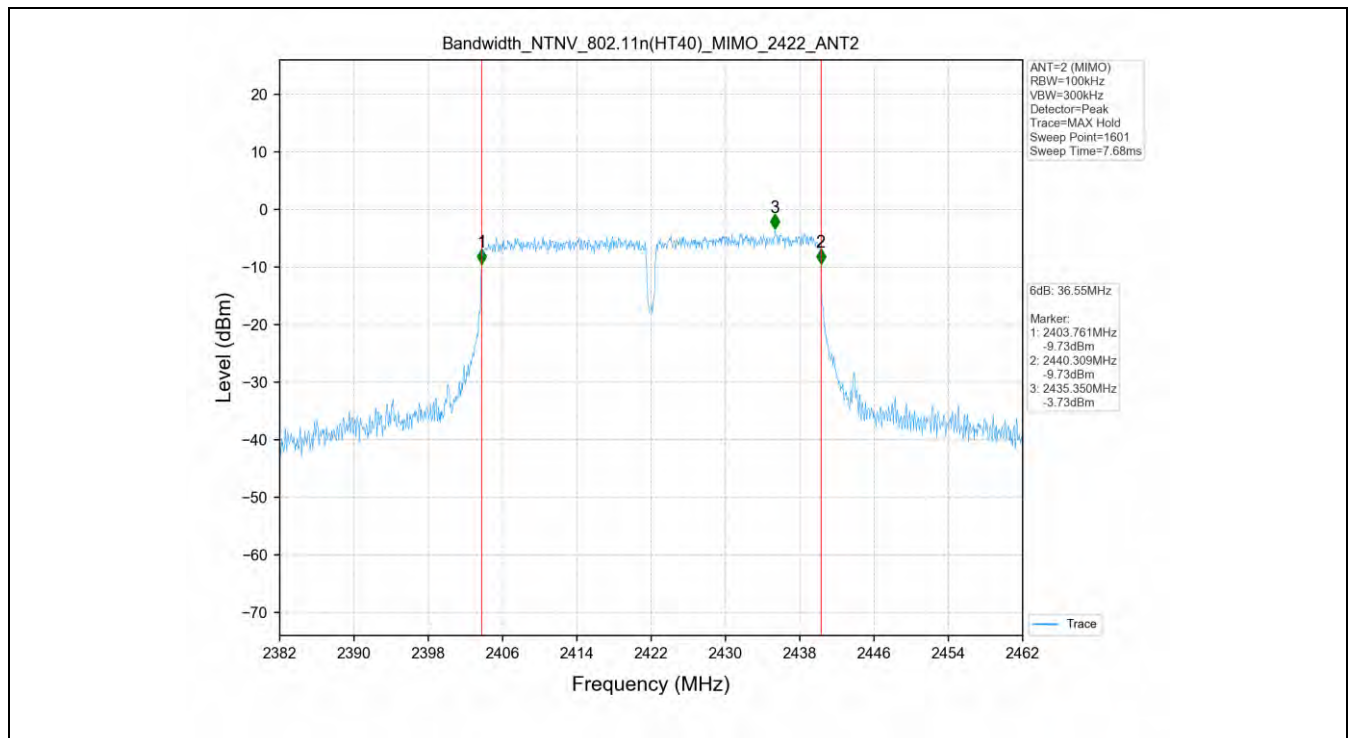
802.11n(HT40)_2422MHz_SISO_ANT1



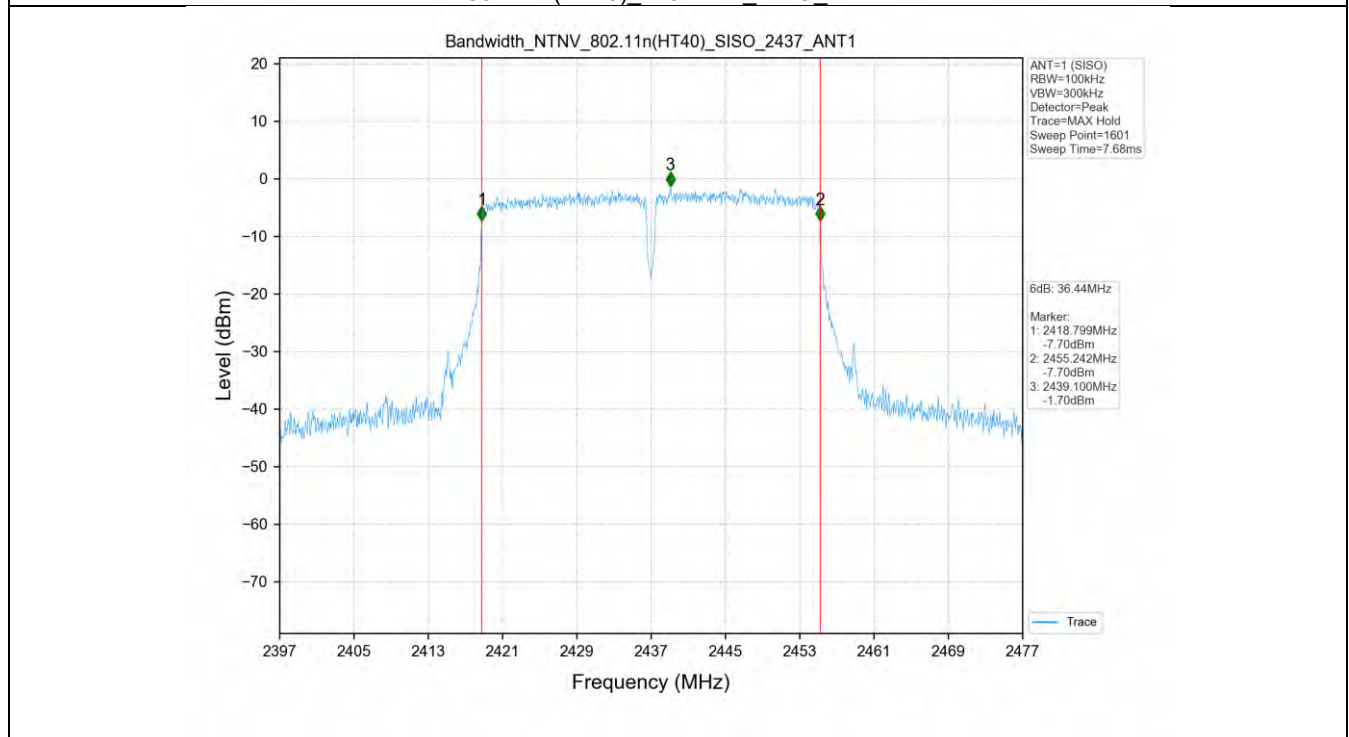
802.11n(HT40)_2422MHz_SISO_ANT2



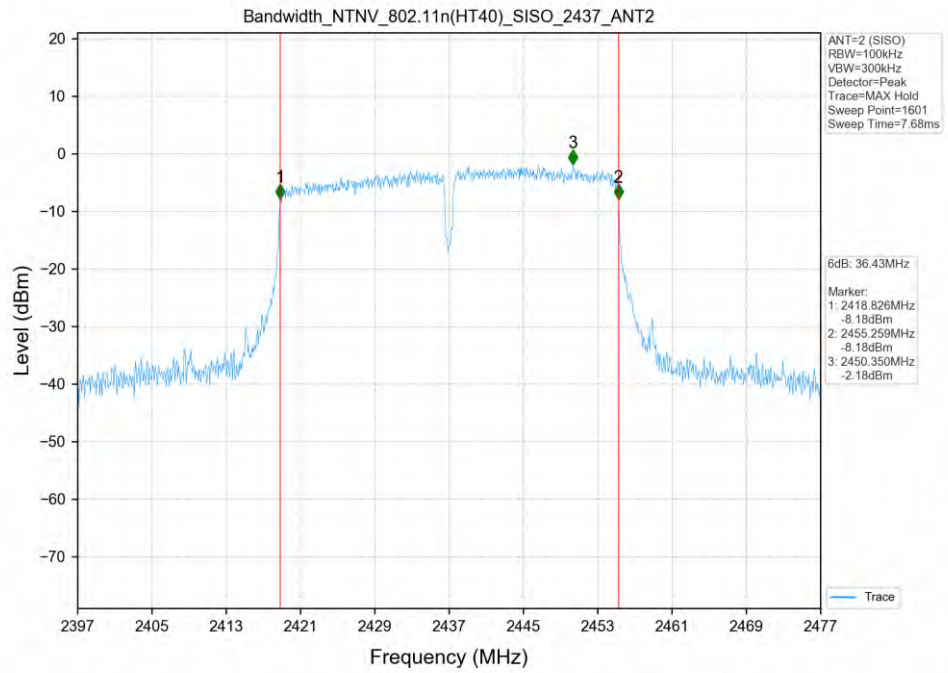
802.11n(HT40)_2422MHz_MIMO_Total



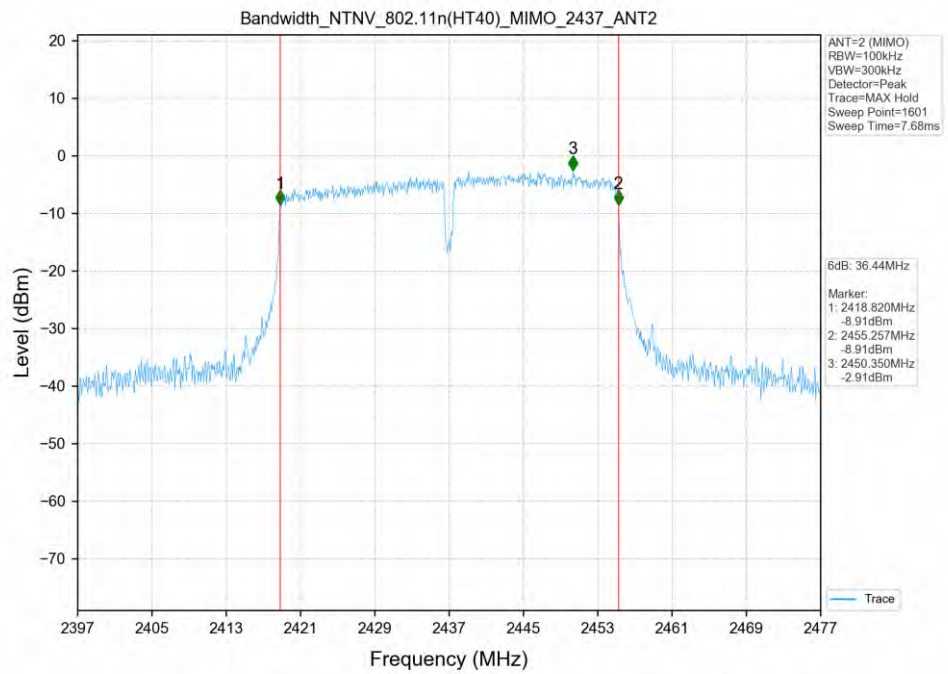
802.11n(HT40)_2437MHz_SISO_ANT1



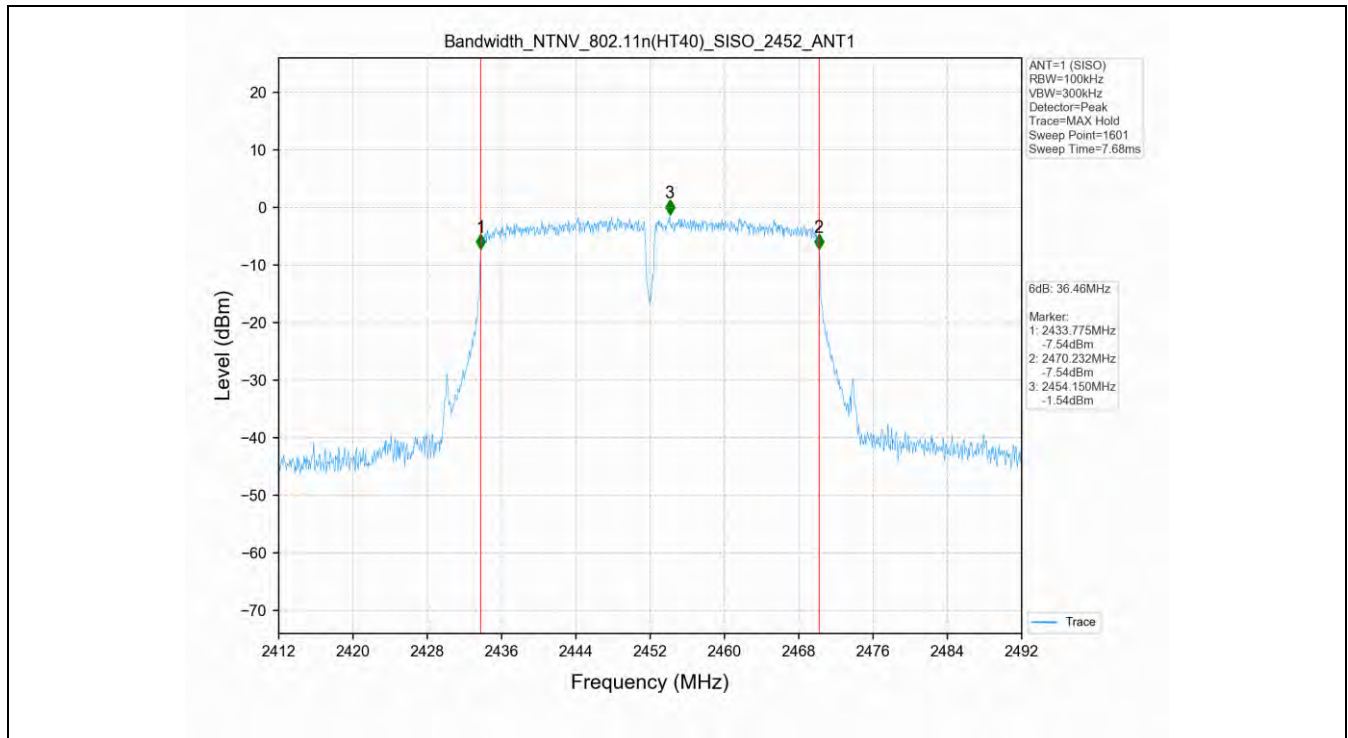
802.11n(HT40)_2437MHz_SISO_ANT2



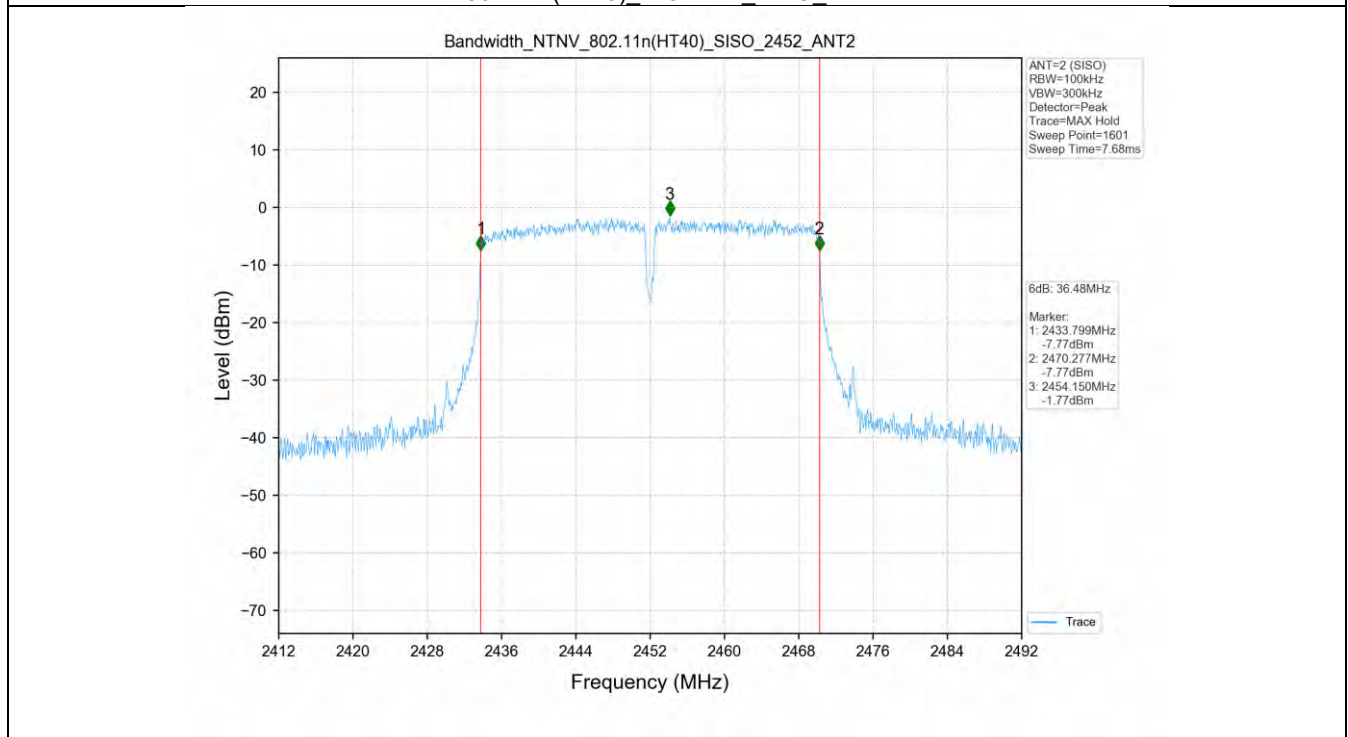
802.11n(HT40)_2437MHz_MIMO_Total



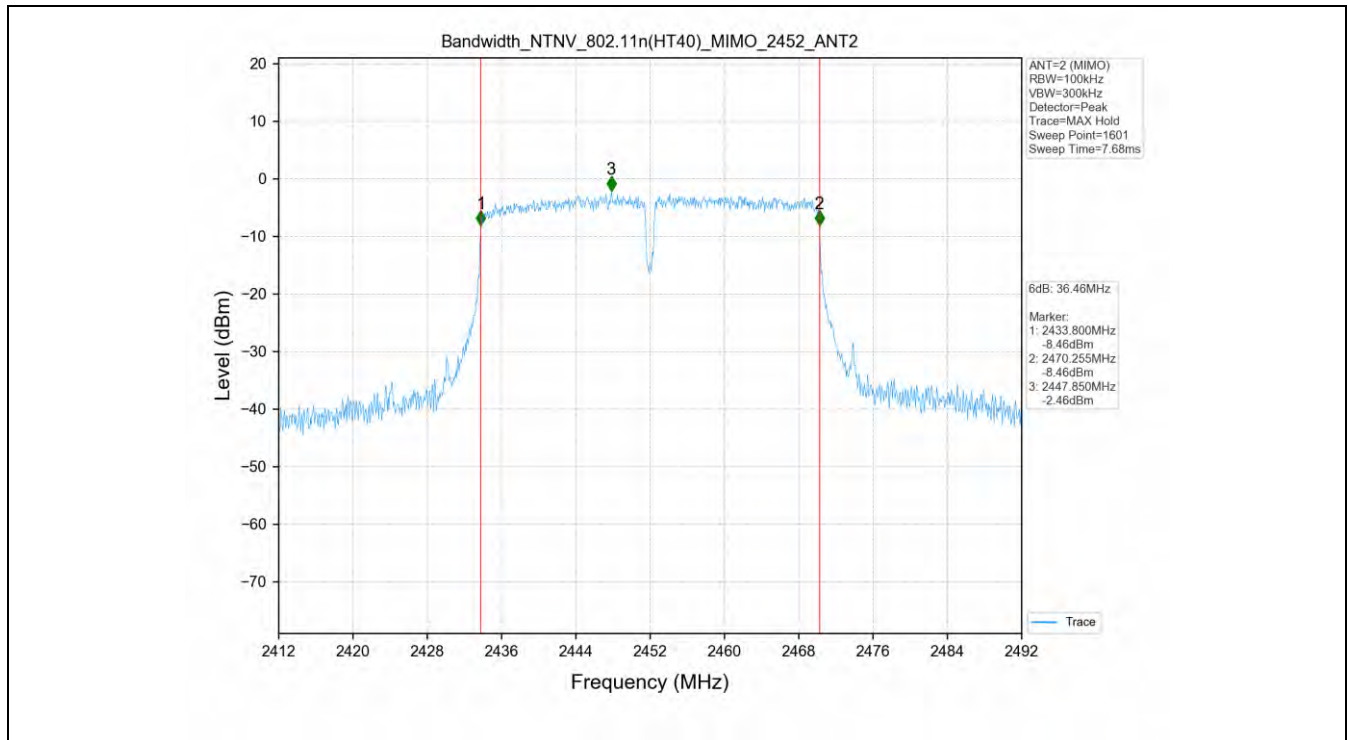
802.11n(HT40)_2452MHz_SISO_ANT1



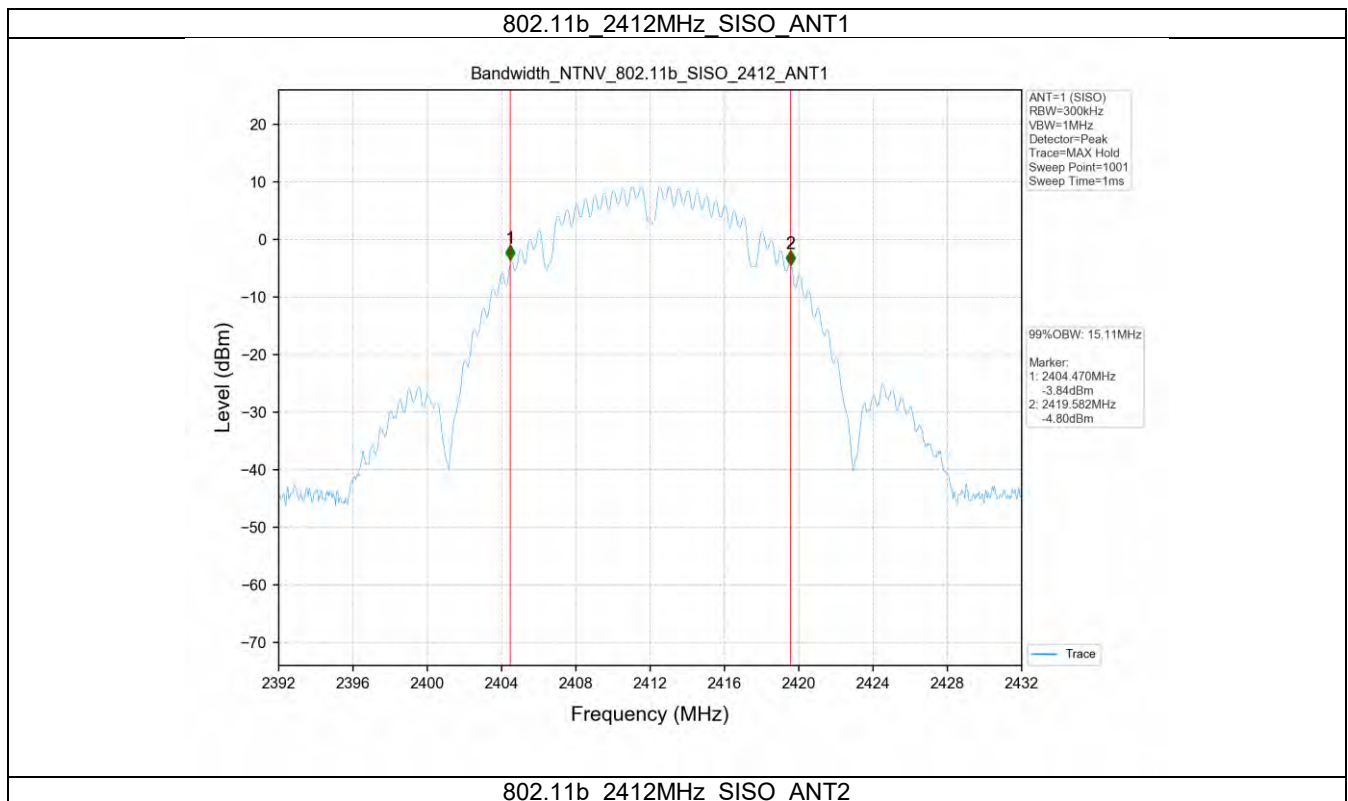
802.11n(HT40)_2452MHz_SISO_ANT2

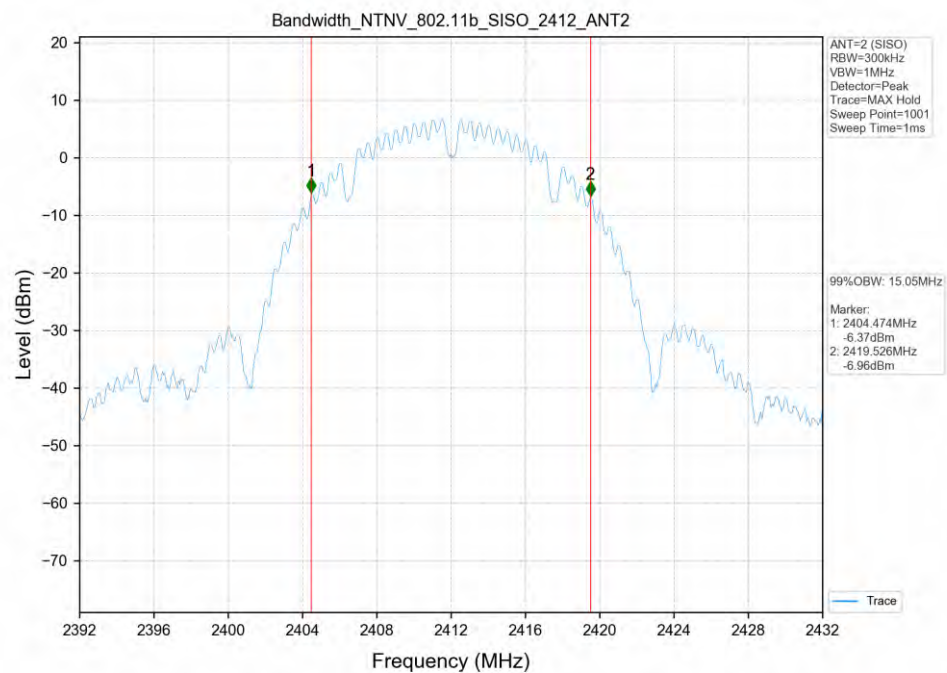


802.11n(HT40)_2452MHz_MIMO_Total

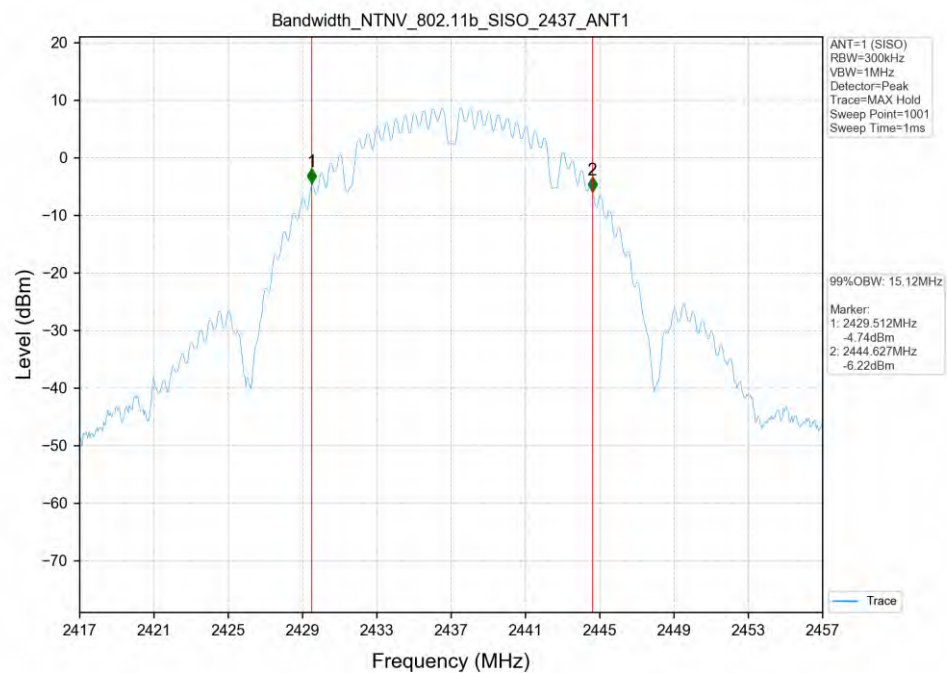


2.3 Test Graph - 99% Occupied Bandwidth

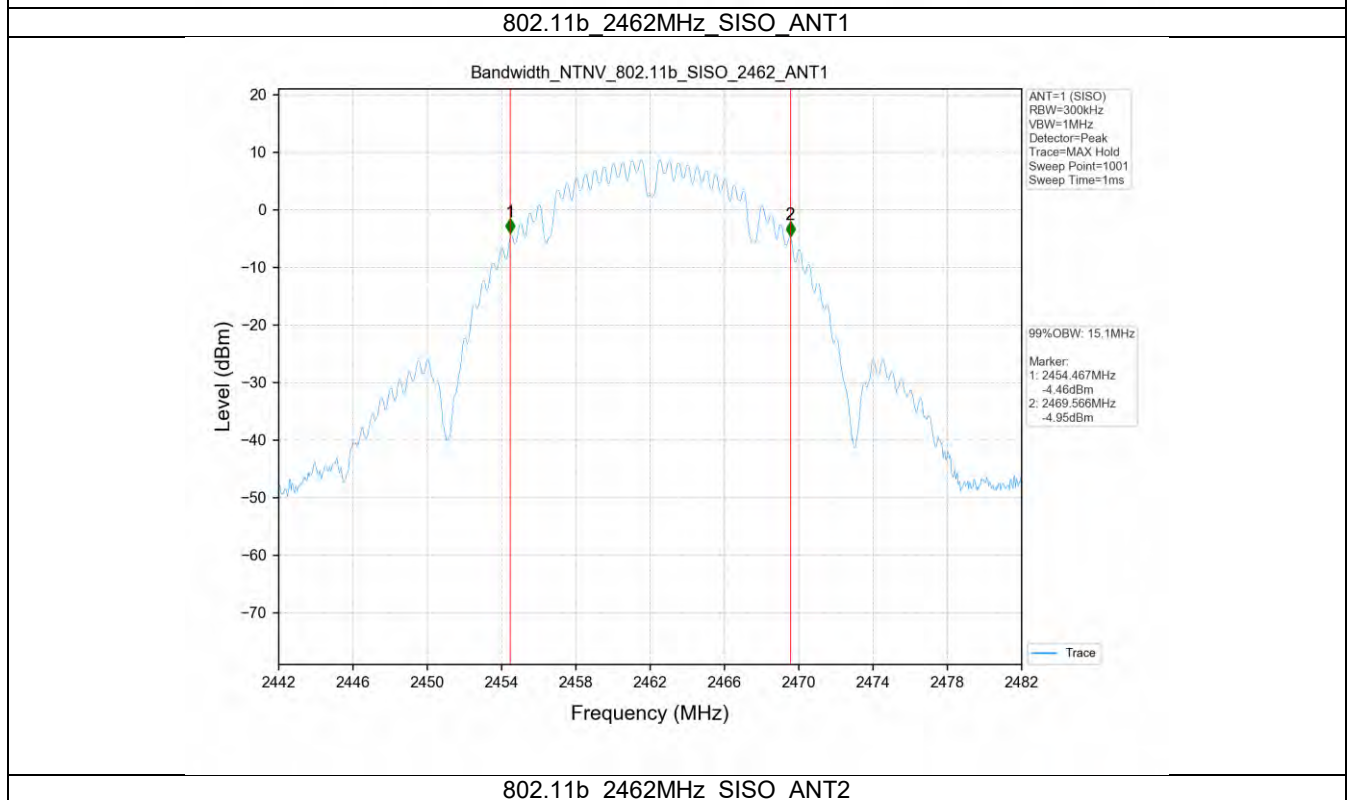
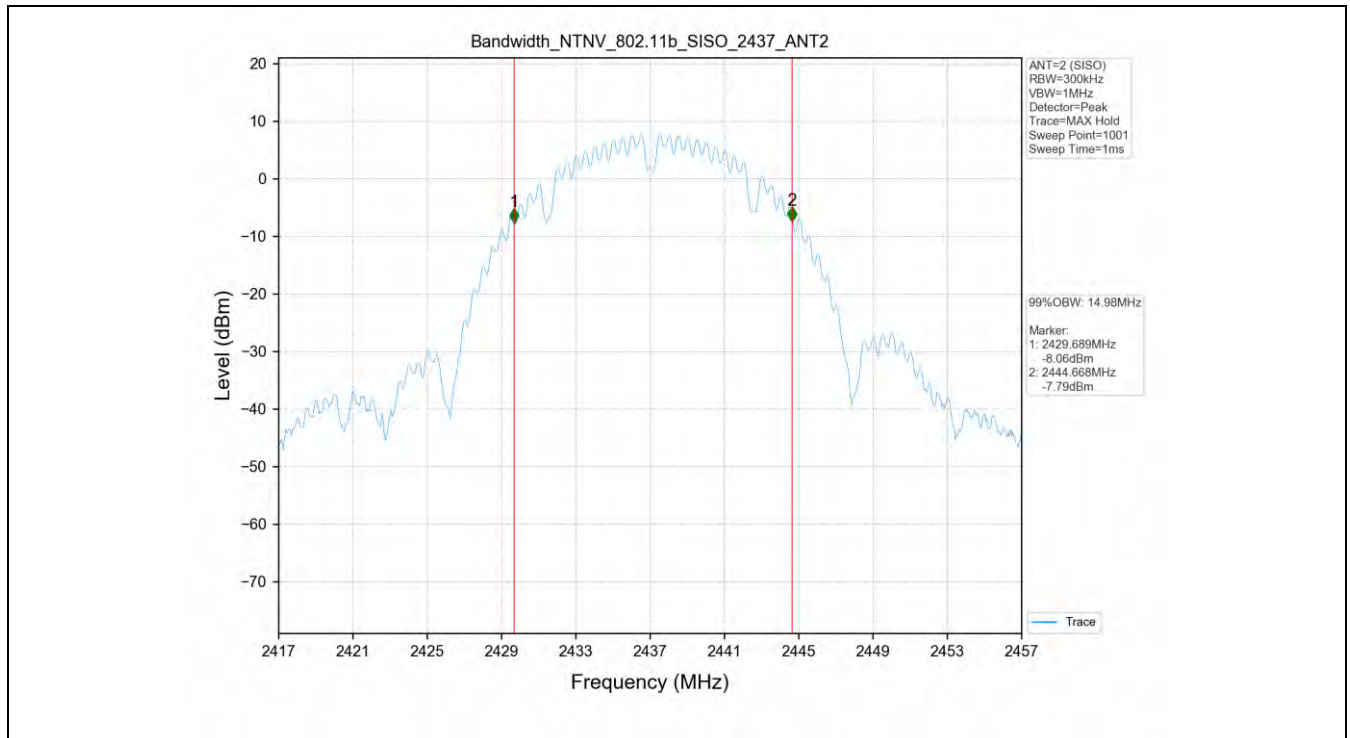


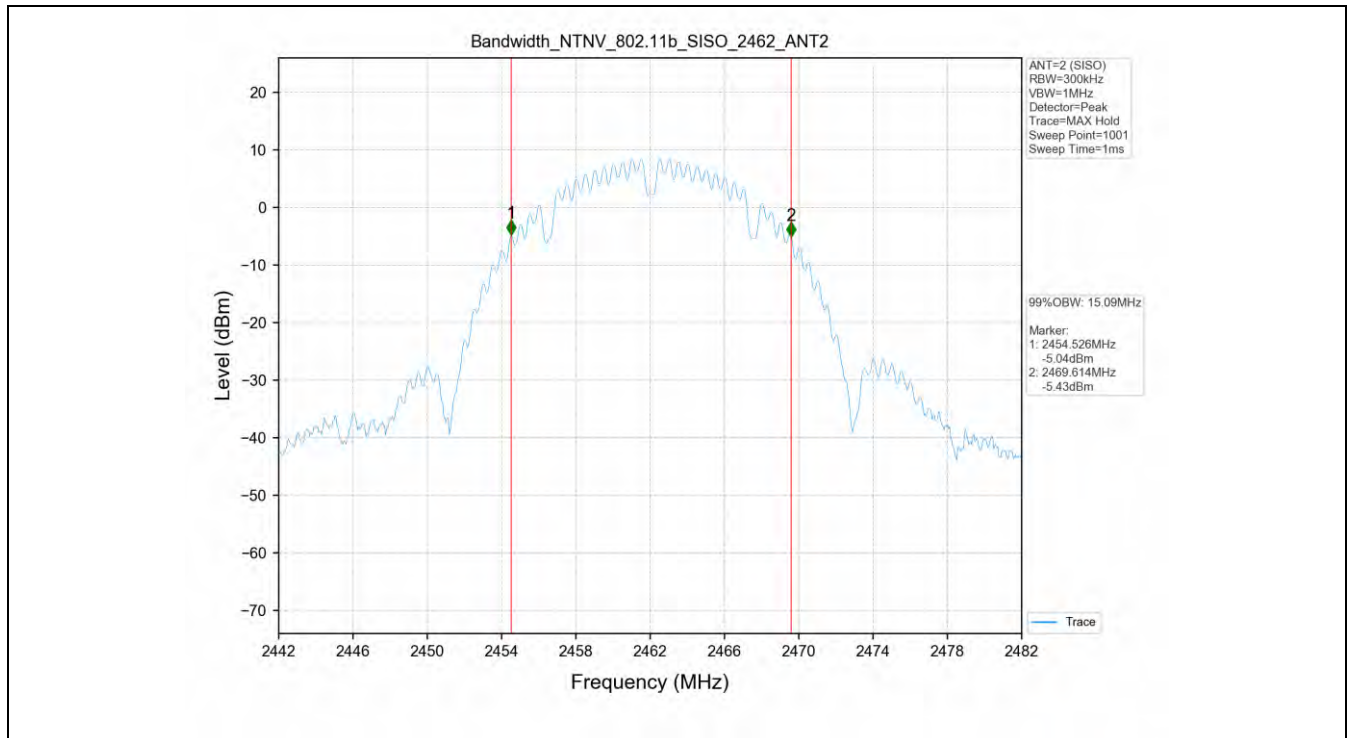


802.11b_2437MHz_SISO_ANT1

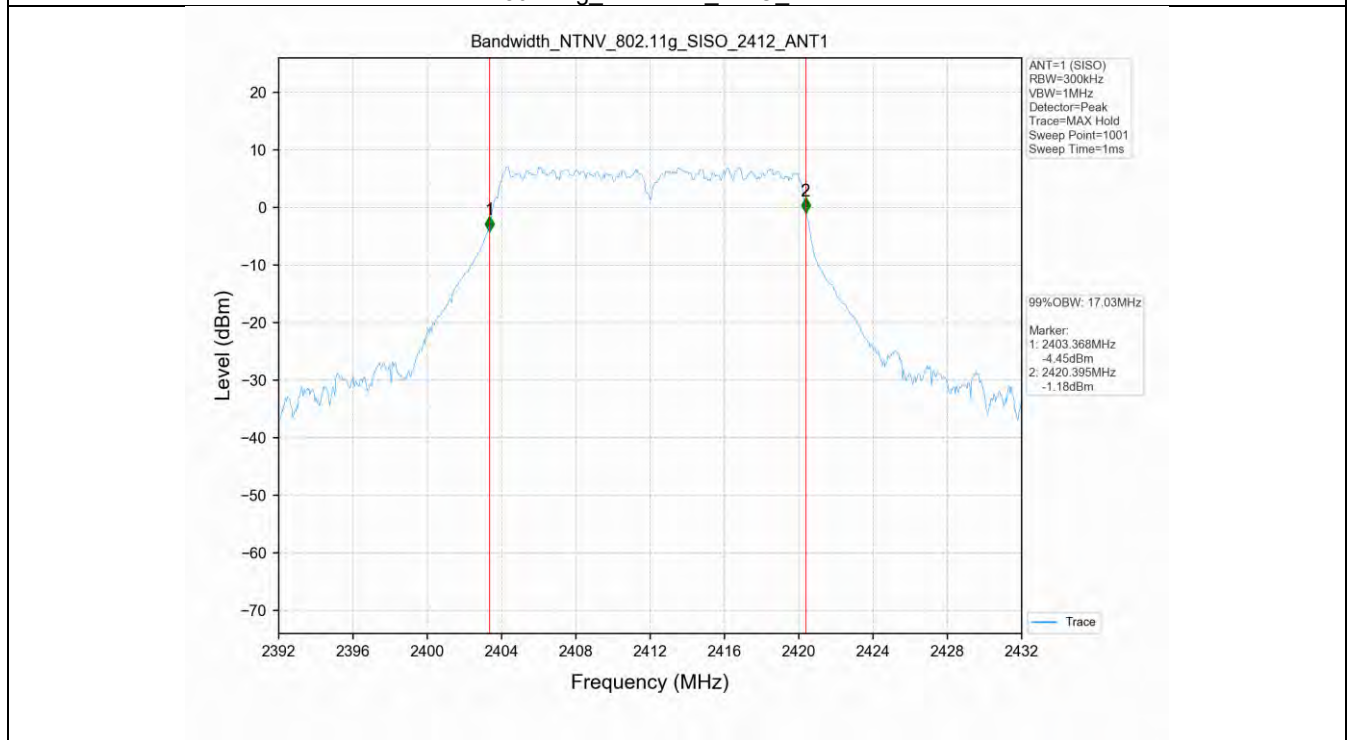


802.11b_2437MHz_SISO_ANT2

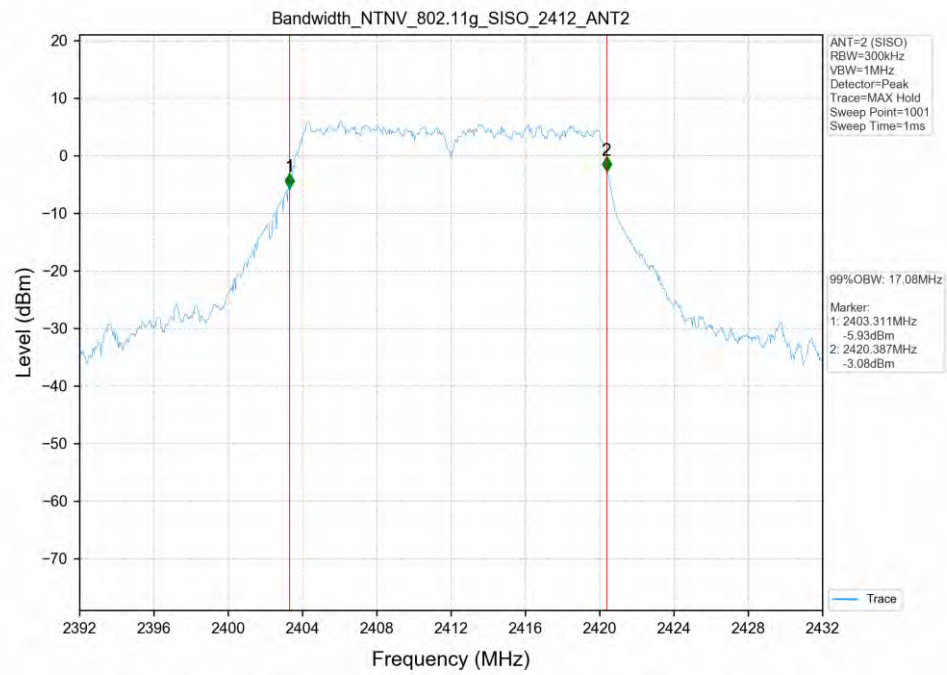




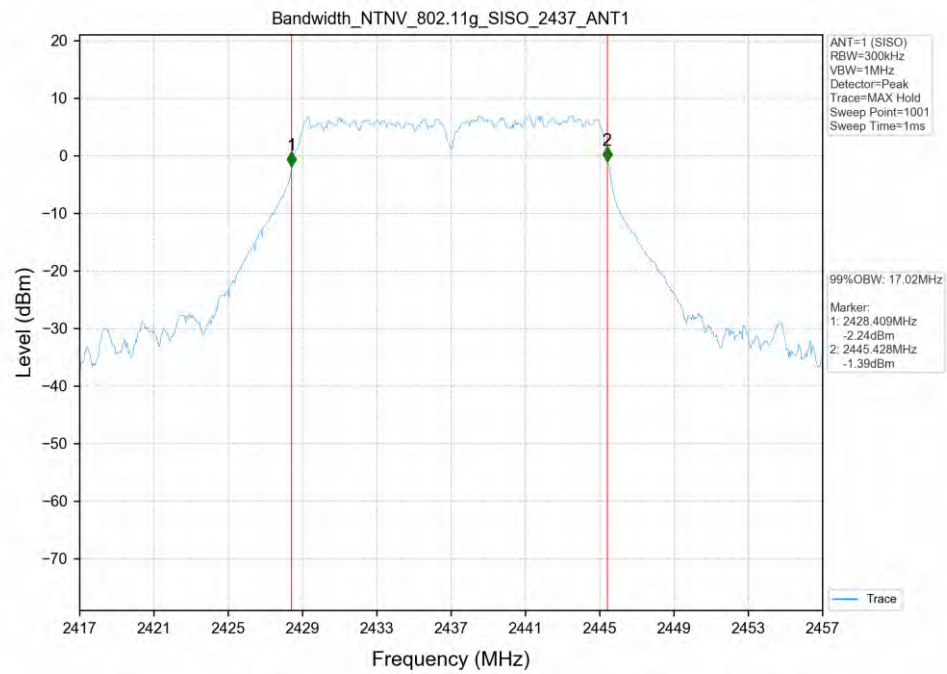
802.11g_2412MHz_SISO_ANT1



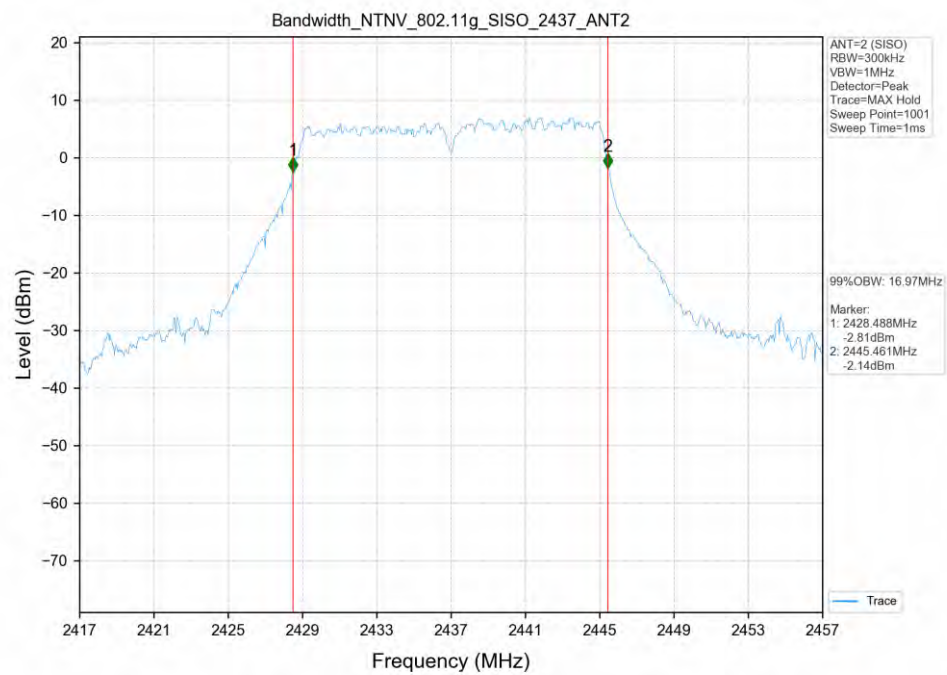
802.11g_2412MHz_SISO_ANT2



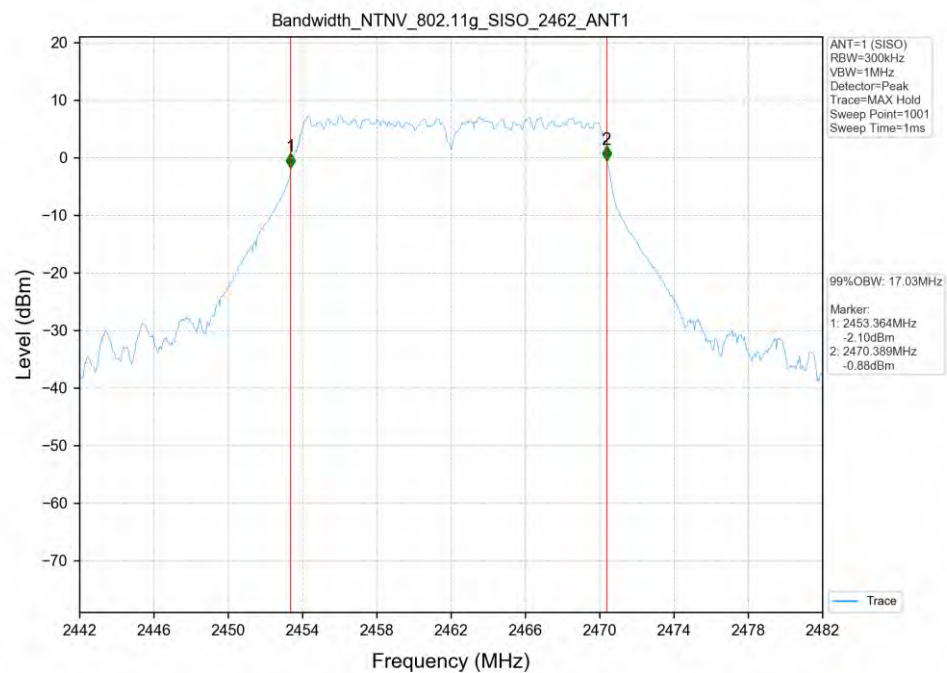
802.11g_2437MHz_SISO_ANT1



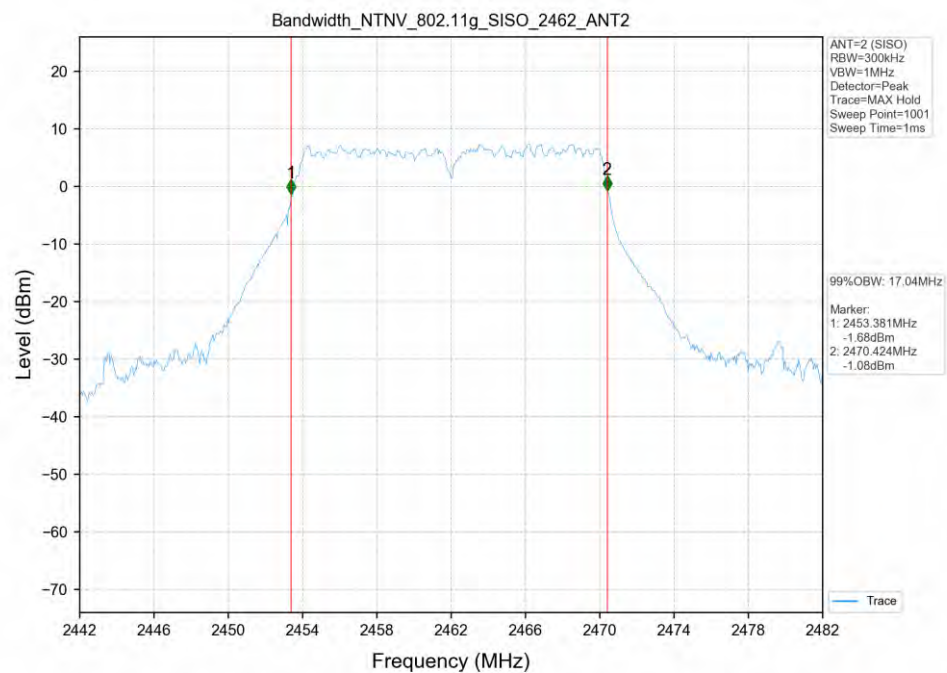
802.11g_2437MHz_SISO_ANT2



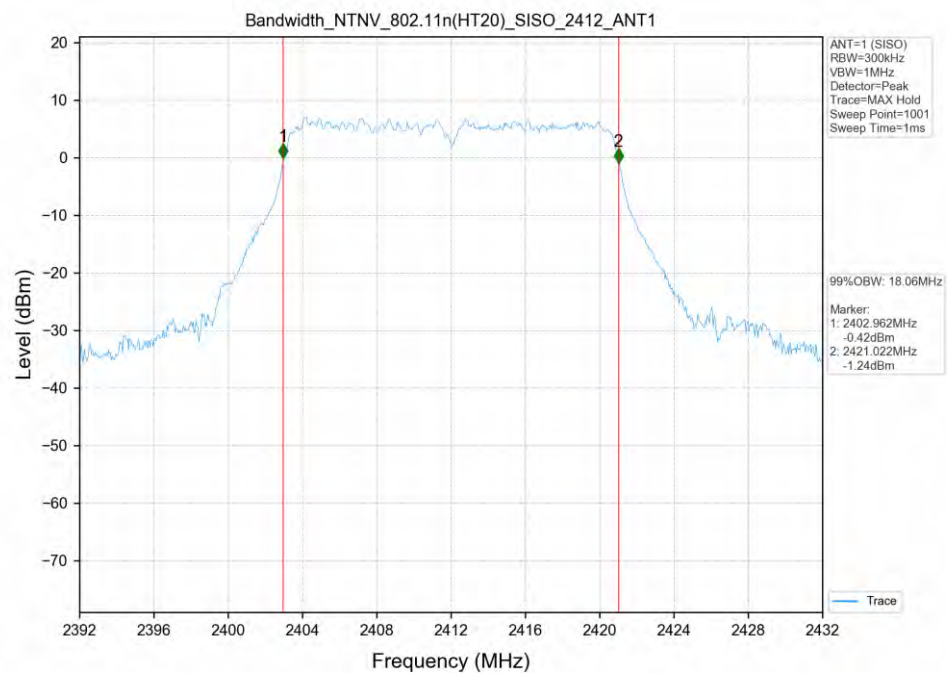
802.11g_2462MHz_SISO_ANT1



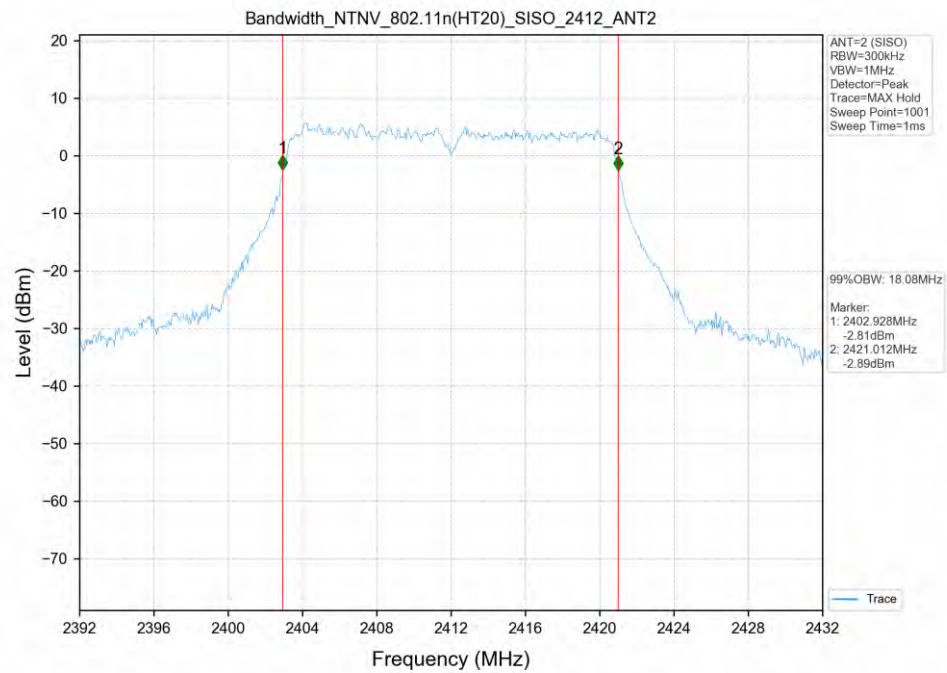
802.11g_2462MHz_SISO_ANT2



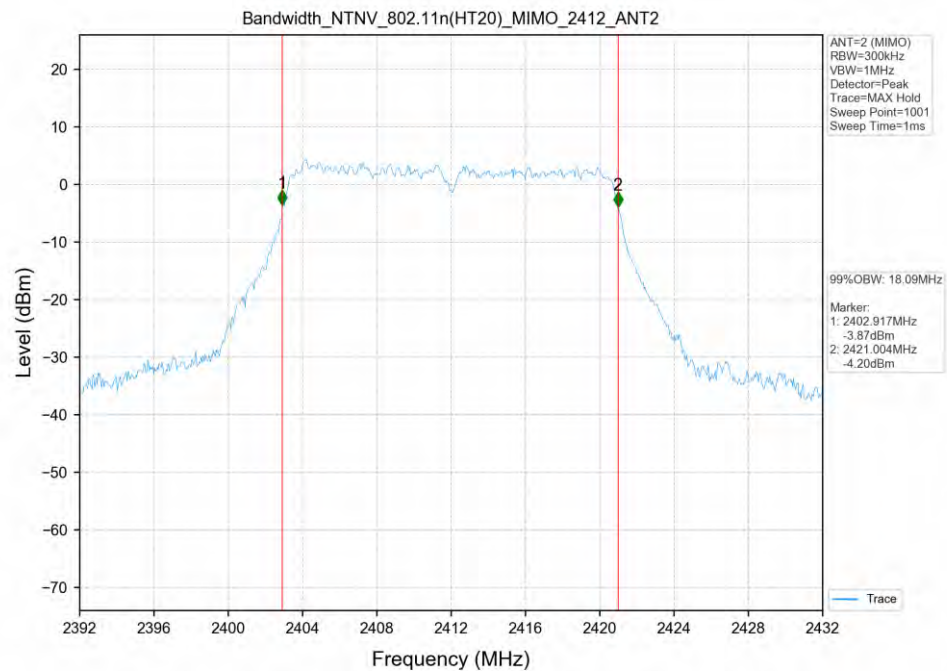
802.11n(HT20)_2412MHz_SISO_ANT1



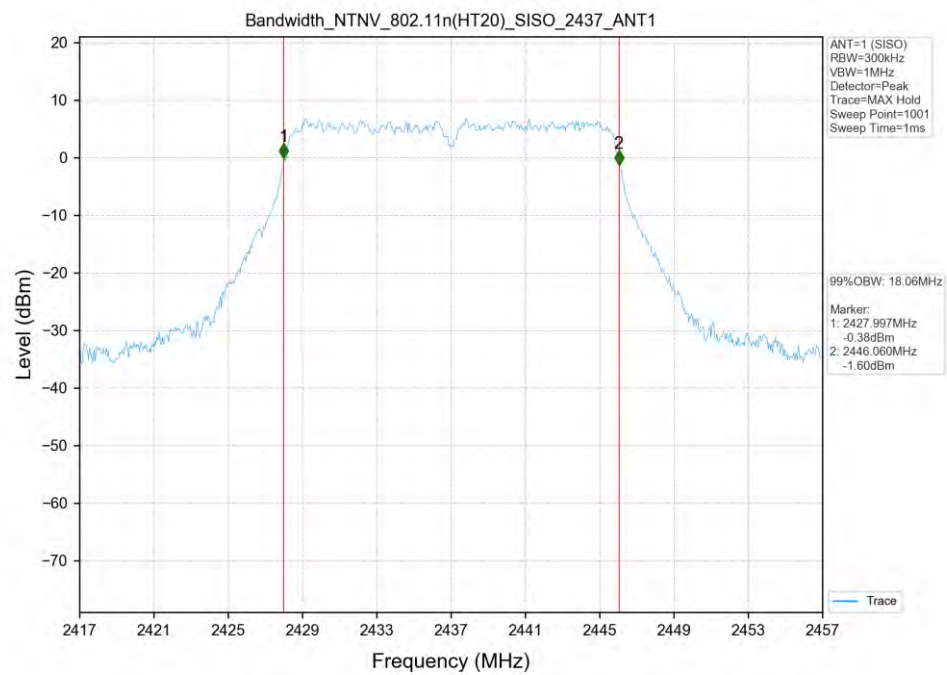
802.11n(HT20)_2412MHz_SISO_ANT2



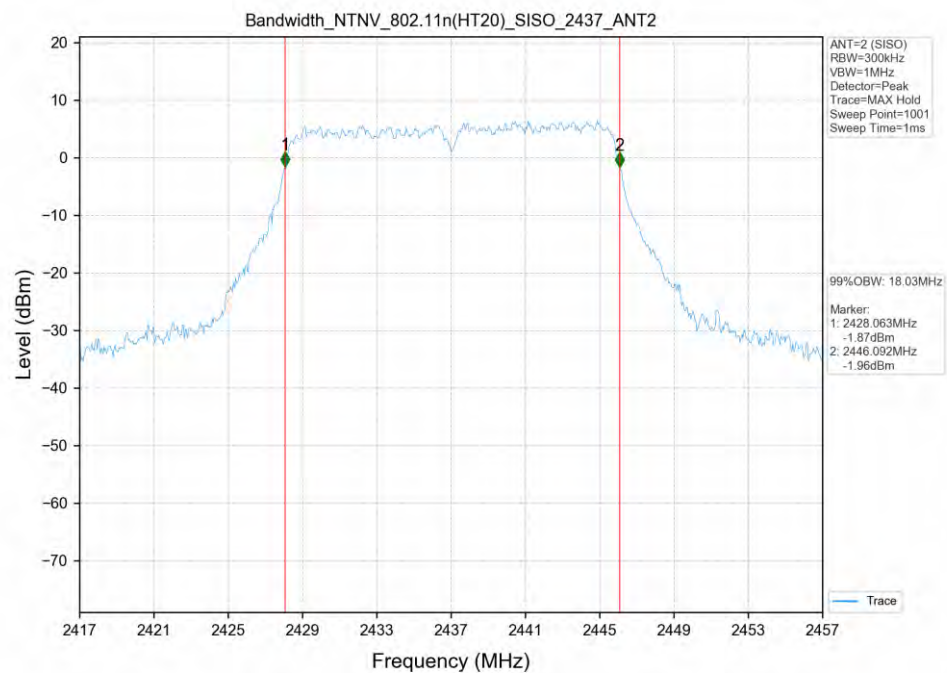
802.11n(HT20)_2412MHz_MIMO_Total



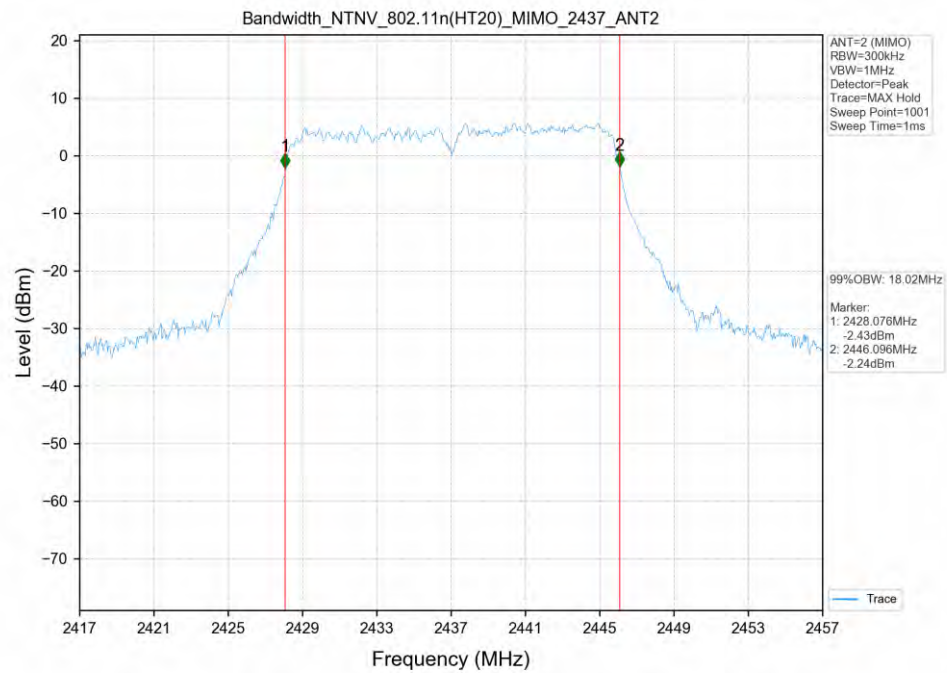
802.11n(HT20)_2437MHz_SISO_ANT1



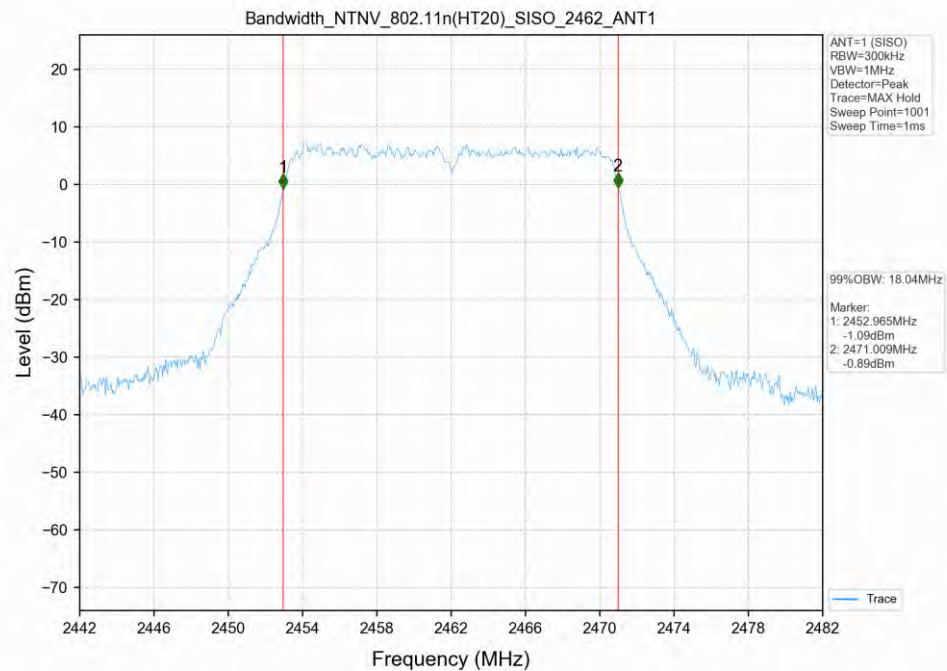
802.11n(HT20)_2437MHz_SISO_ANT2



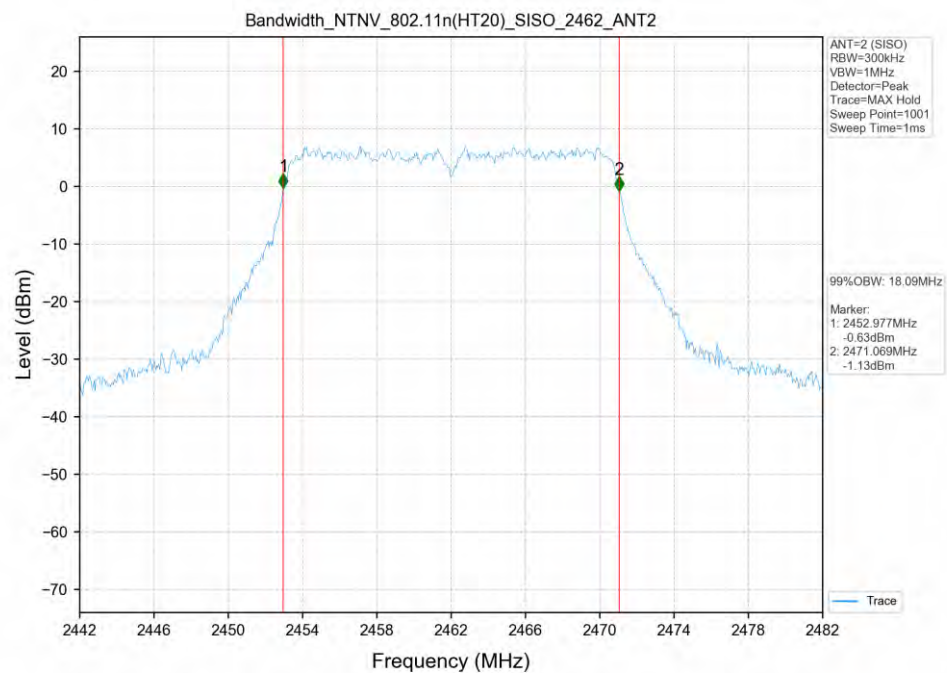
802.11n(HT20)_2437MHz_MIMO_Total



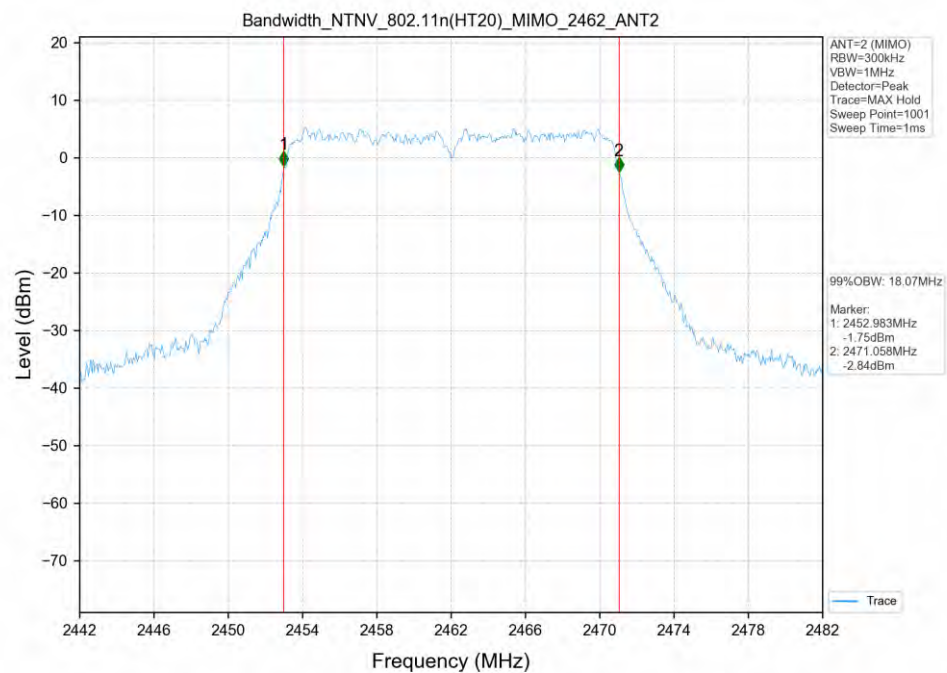
802.11n(HT20)_2462MHz_SISO_ANT1



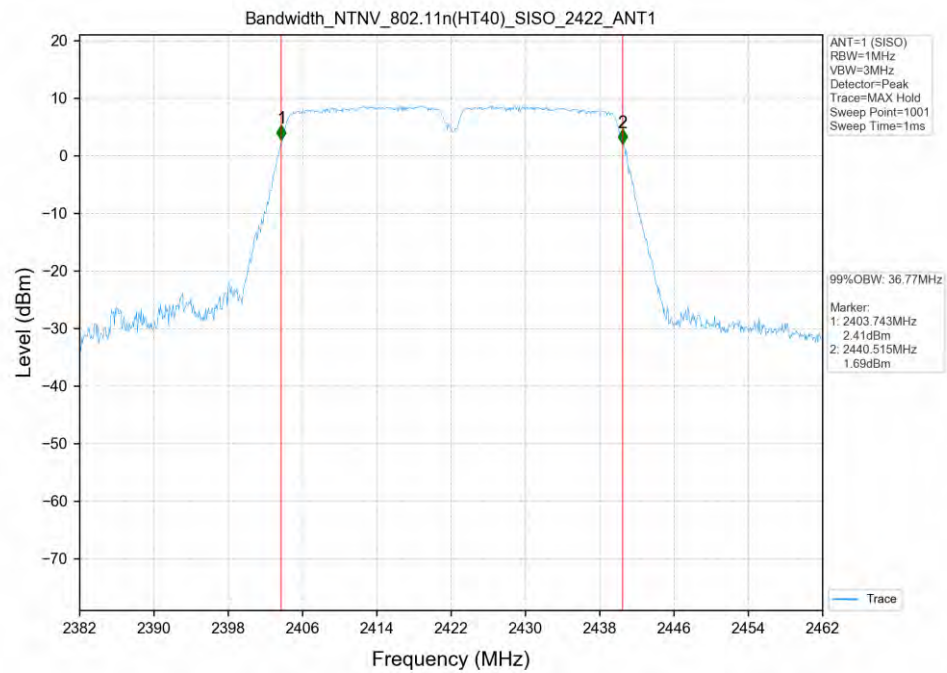
802.11n(HT20)_2462MHz_SISO_ANT2



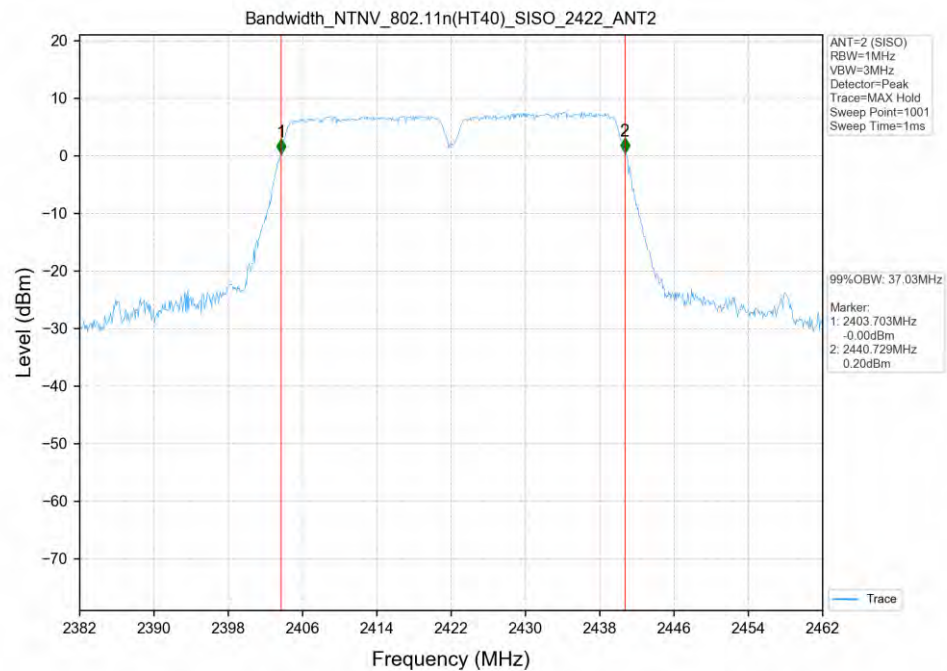
802.11n(HT20)_2462MHz_MIMO_Total



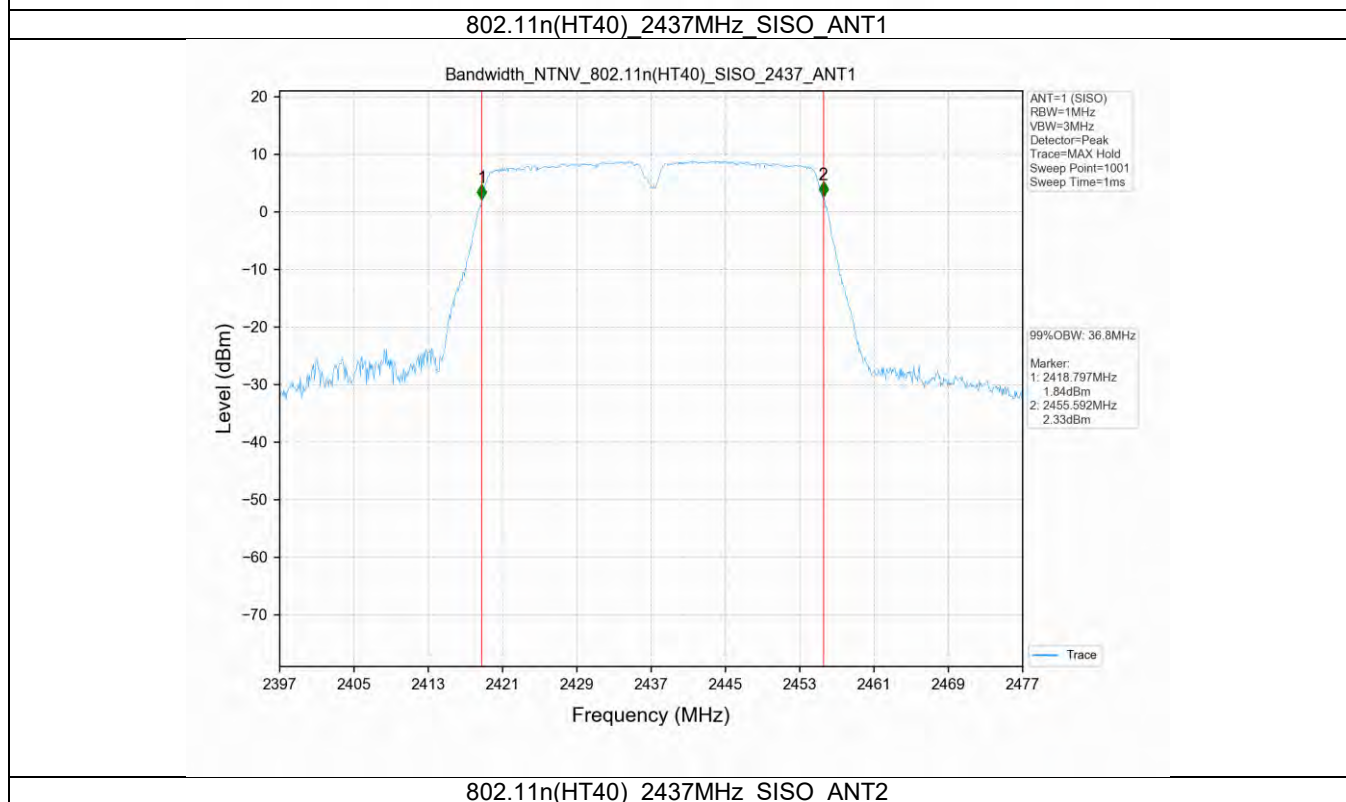
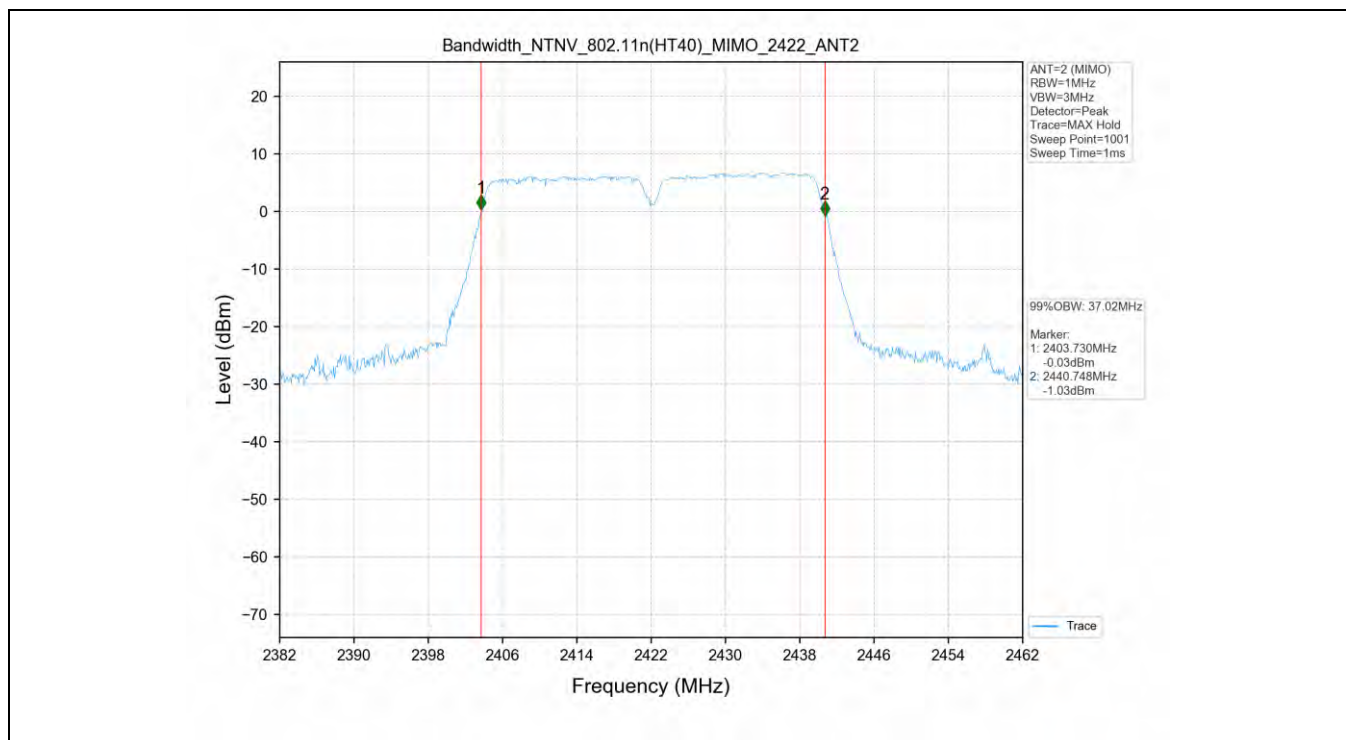
802.11n(HT40)_2422MHz_SISO_ANT1

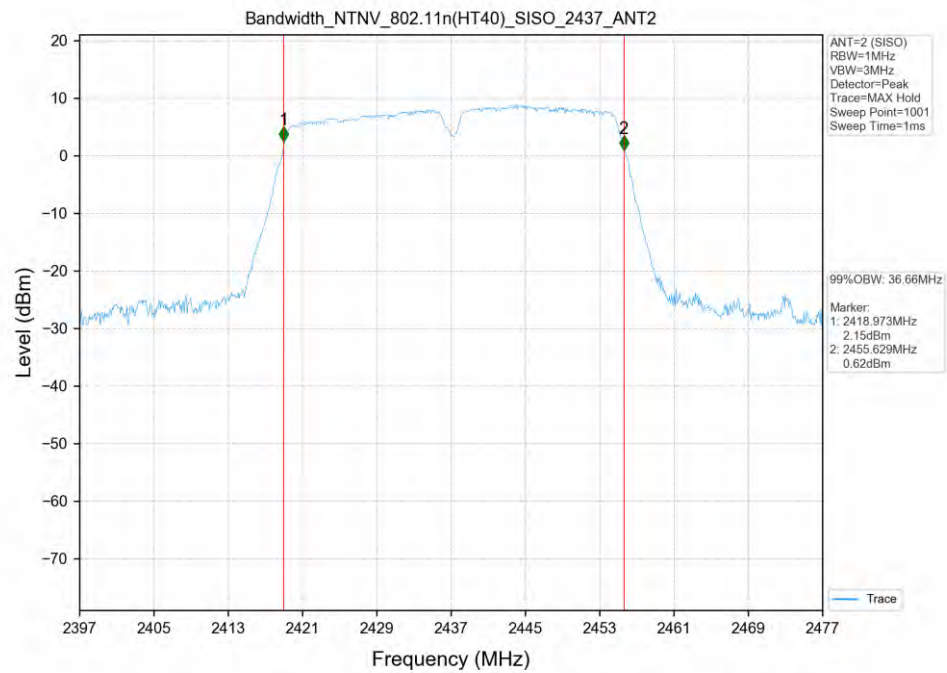


802.11n(HT40)_2422MHz_SISO_ANT2

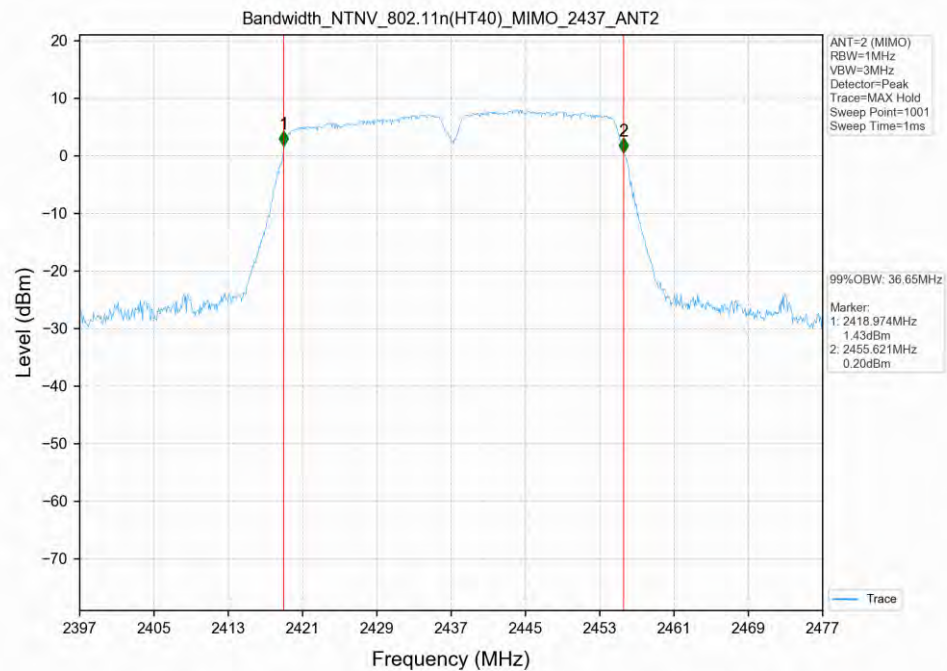


802.11n(HT40)_2422MHz_MIMO_Total

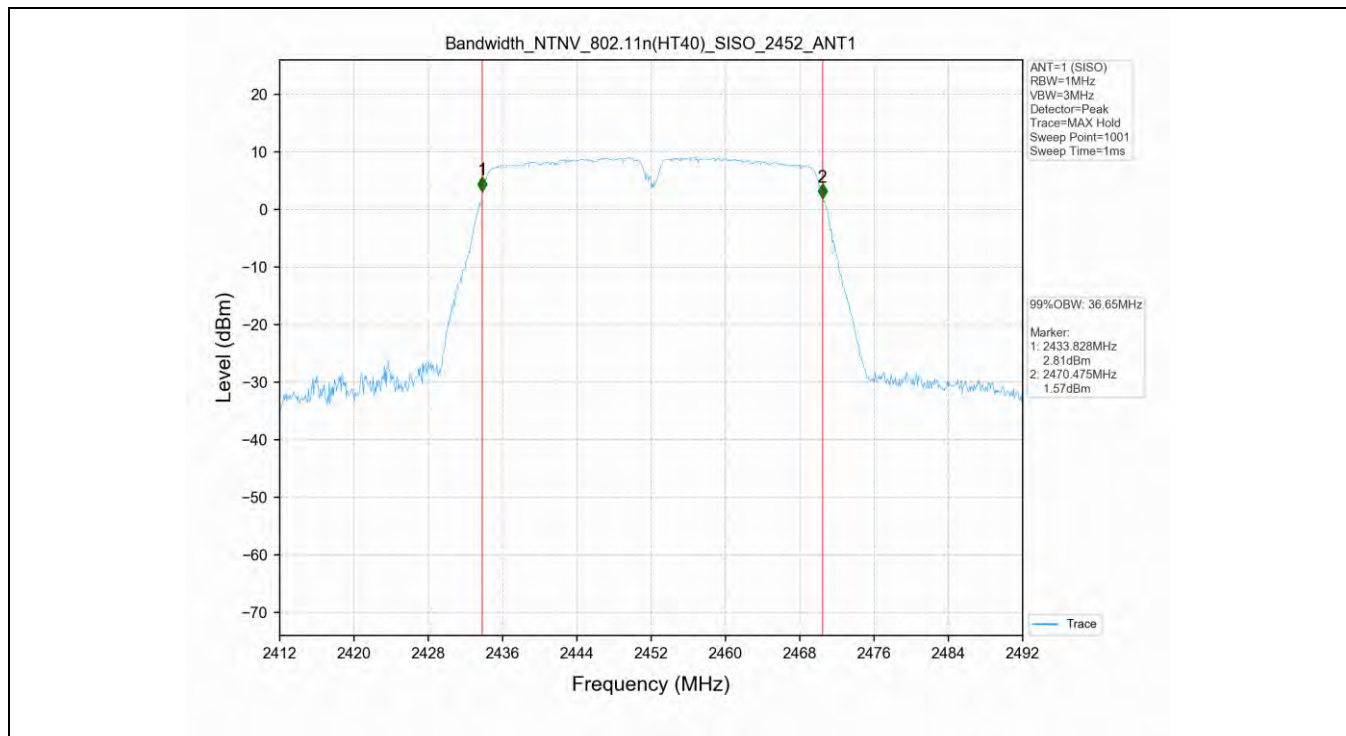




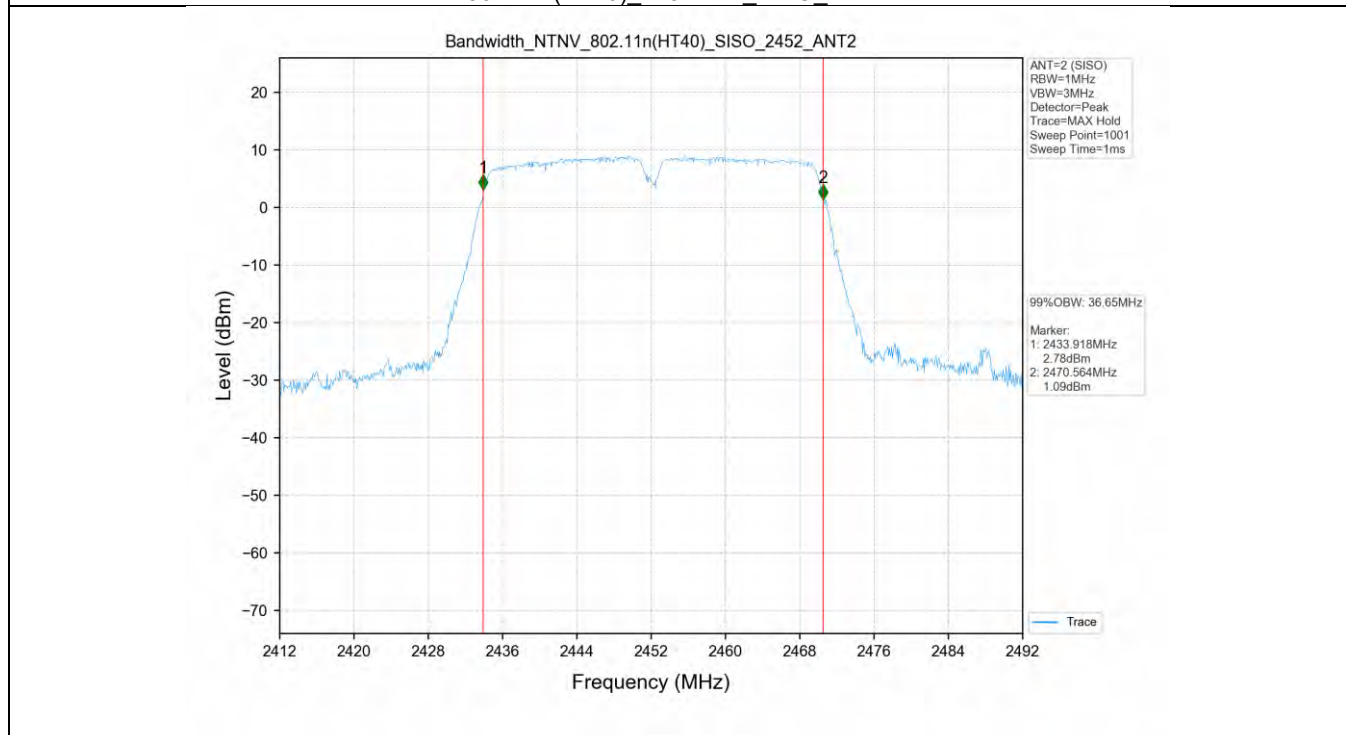
802.11n(HT40)_2437MHz_MIMO_Total



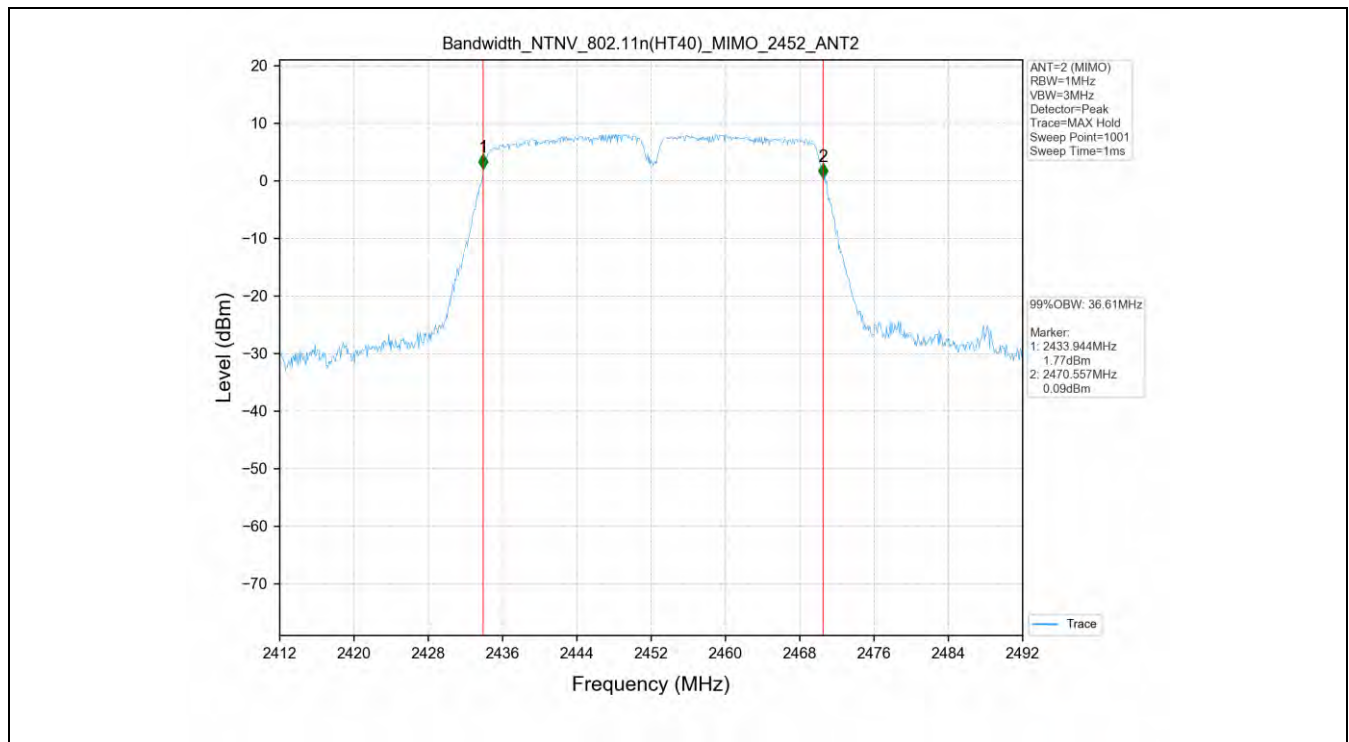
802.11n(HT40)_2452MHz_SISO_ANT1



802.11n(HT40)_2452MHz_SISO_ANT2



802.11n(HT40)_2452MHz_MIMO_Total



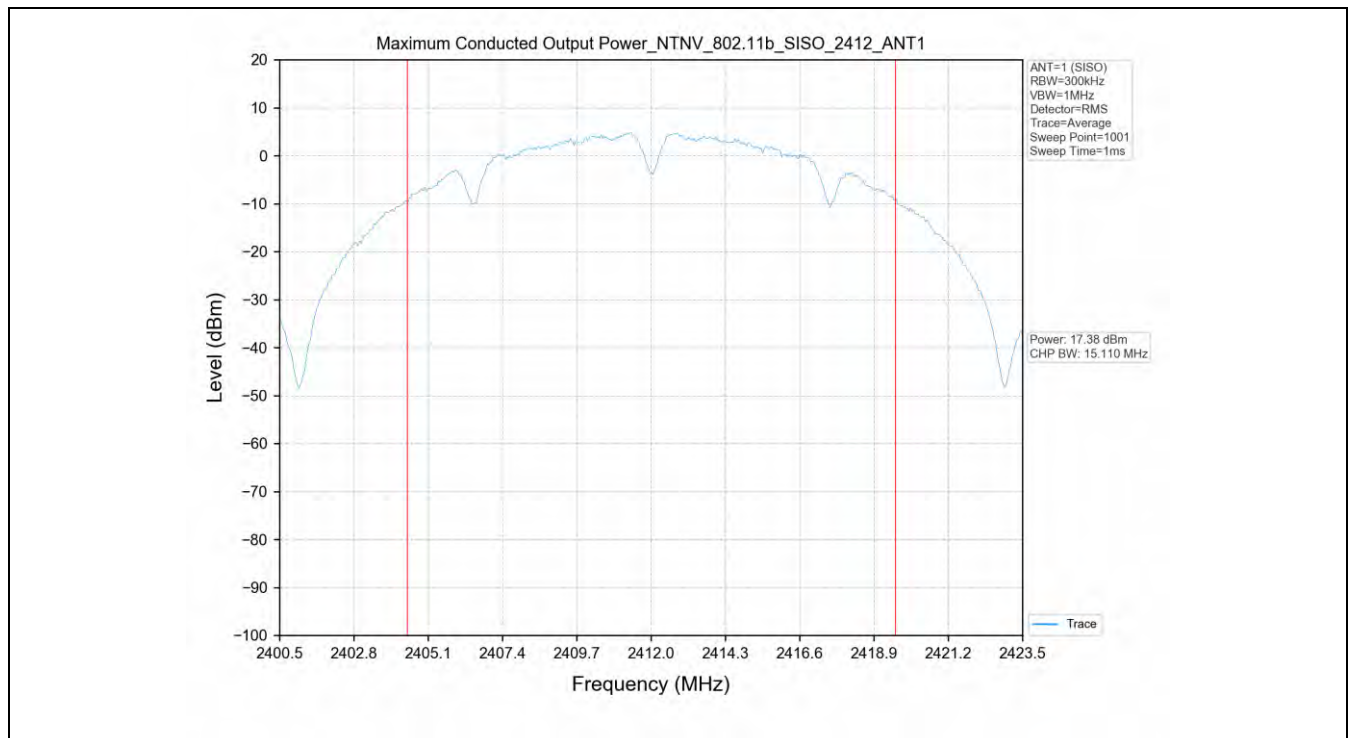
3. Maximum Conducted Output Power

3.1 Test Result

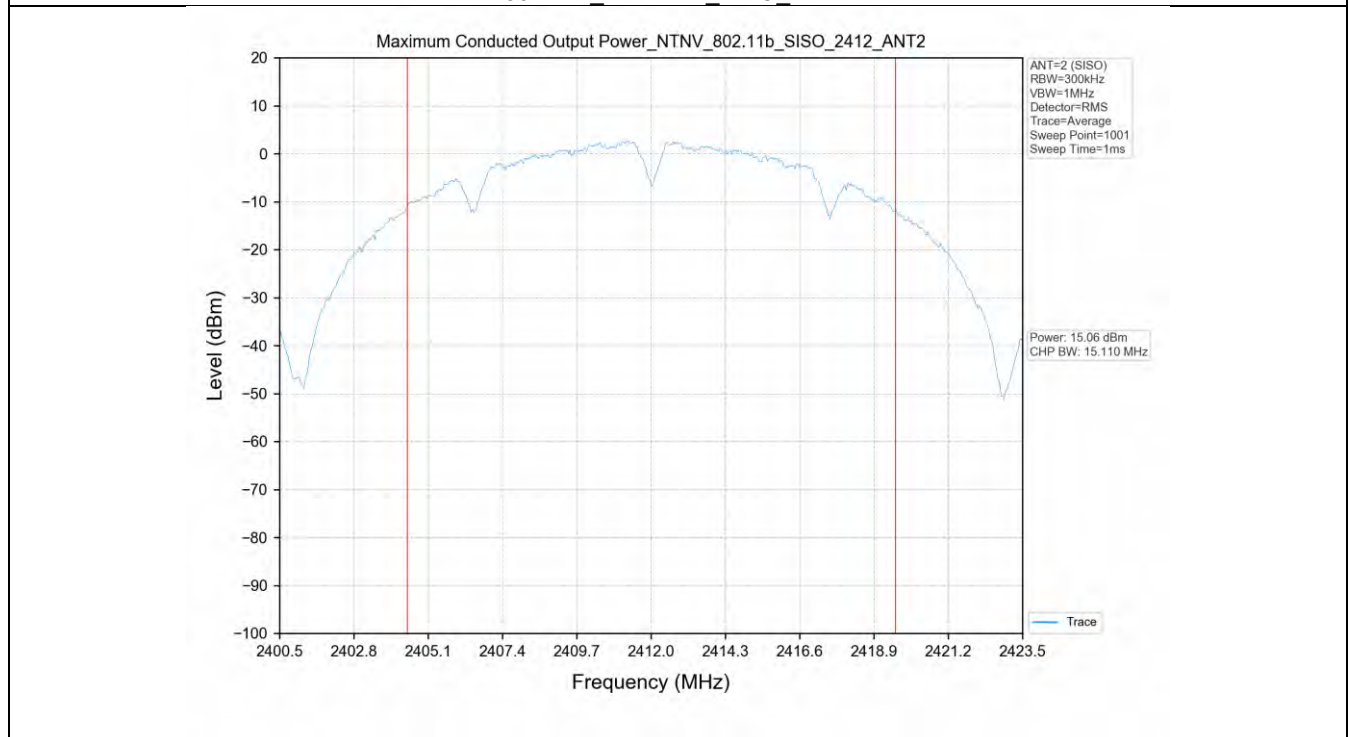
Test Mode	Frequency (MHz)	Tx Type	Measured Average Output Power (dBm)			Limits (dBm)	Verdict
			Ant 1	Ant 2	Total		
802.11b	2412	SISO	17.38	15.06	/	≤30	PASS
	2437	SISO	16.79	15.77	/	≤30	PASS
	2462	SISO	16.81	16.37	/	≤30	PASS
802.11g	2412	SISO	16.19	14.55	/	≤30	PASS
	2437	SISO	16.07	15.56	/	≤30	PASS
	2462	SISO	16.29	16.25	/	≤30	PASS
802.11n(HT20)	2412	SISO	16.21	14.59	/	≤30	PASS
		MIMO	15.08	13.05	17.19	≤30	PASS
	2437	SISO	16.14	15.64	/	≤30	PASS
		MIMO	15.08	14.91	18.01	≤30	PASS
	2462	SISO	16.38	16.34	/	≤30	PASS
		MIMO	15.15	14.59	17.89	≤30	PASS
802.11n(HT40)	2422	SISO	15.30	13.89	/	≤30	PASS
		MIMO	14.27	13.15	16.76	≤30	PASS
	2437	SISO	15.36	14.62	/	≤30	PASS
		MIMO	14.31	13.89	17.12	≤30	PASS
	2452	SISO	15.52	15.29	/	≤30	PASS
		MIMO	14.47	14.55	17.52	≤30	PASS

3.2 Test Graph

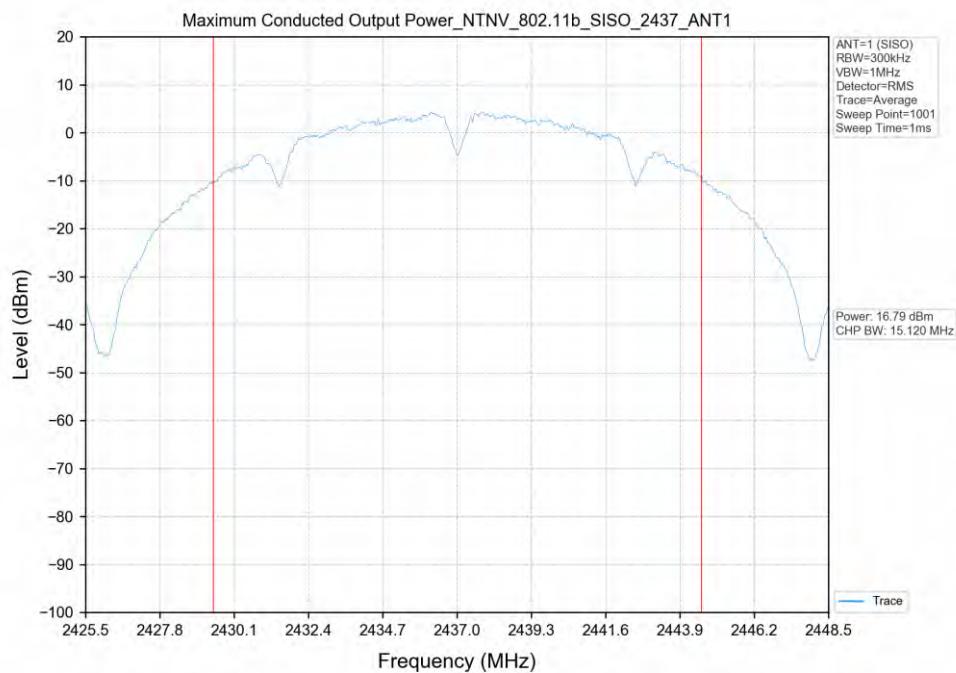
802.11b_2412MHz_SISO_ANT1



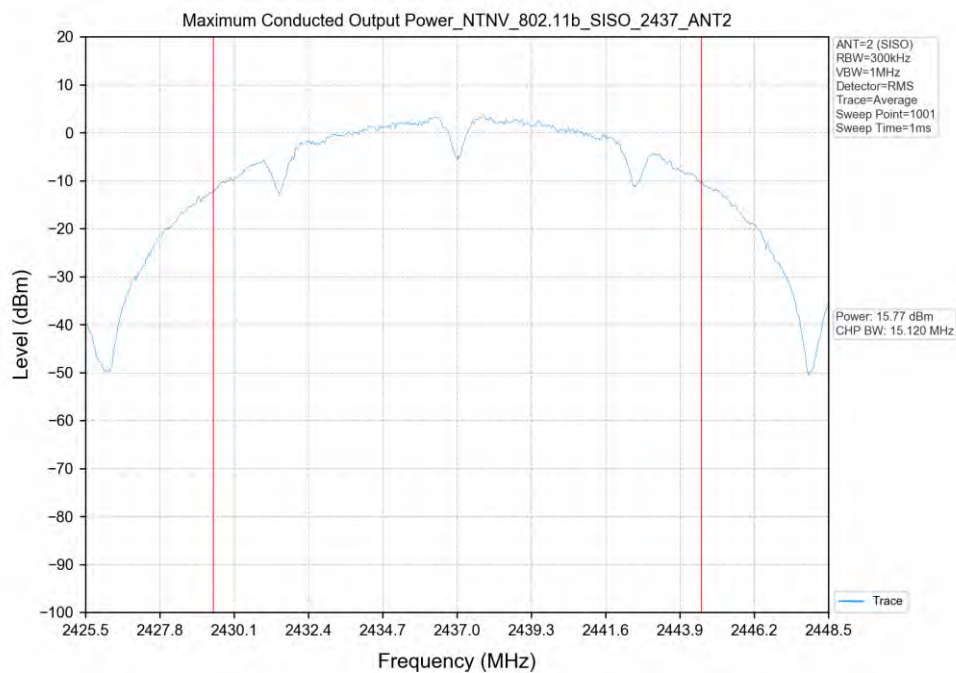
802.11b_2412MHz_SISO_ANT2



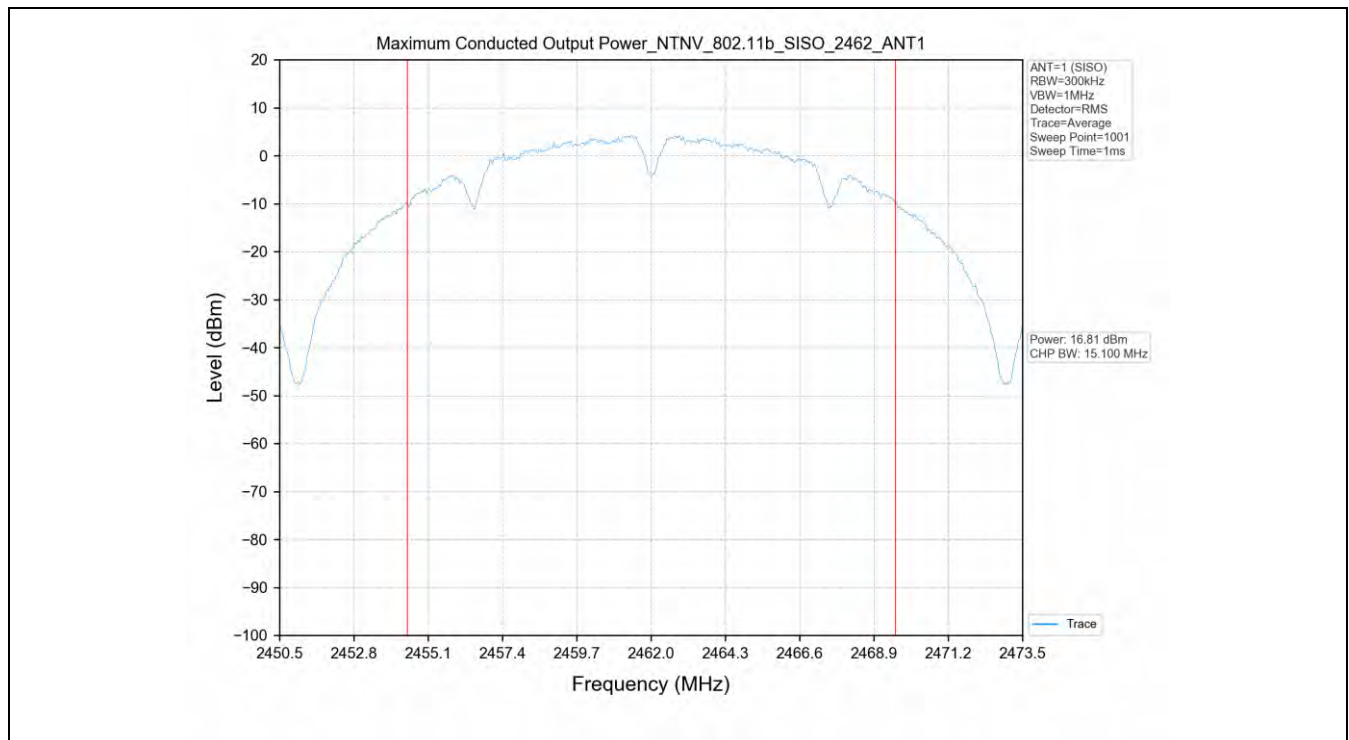
802.11b_2437MHz_SISO_ANT1



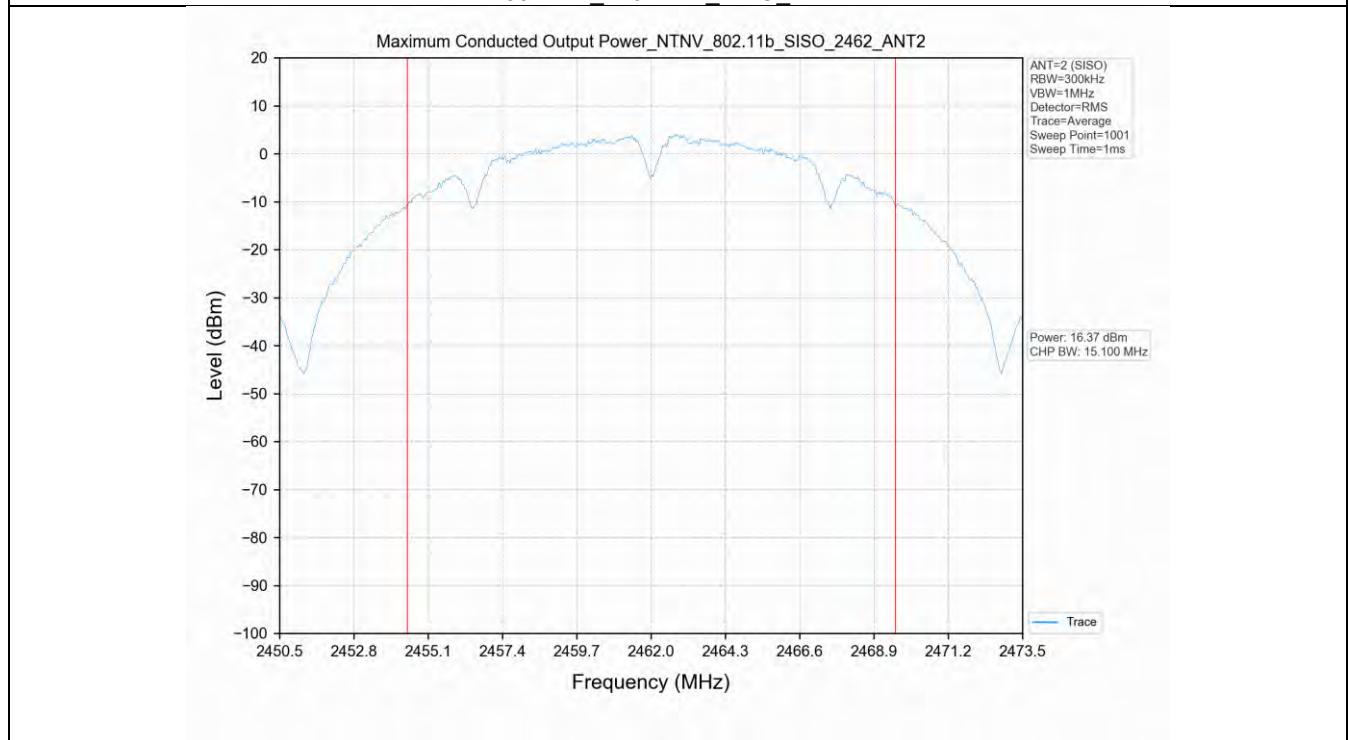
802.11b_2437MHz_SISO_ANT2



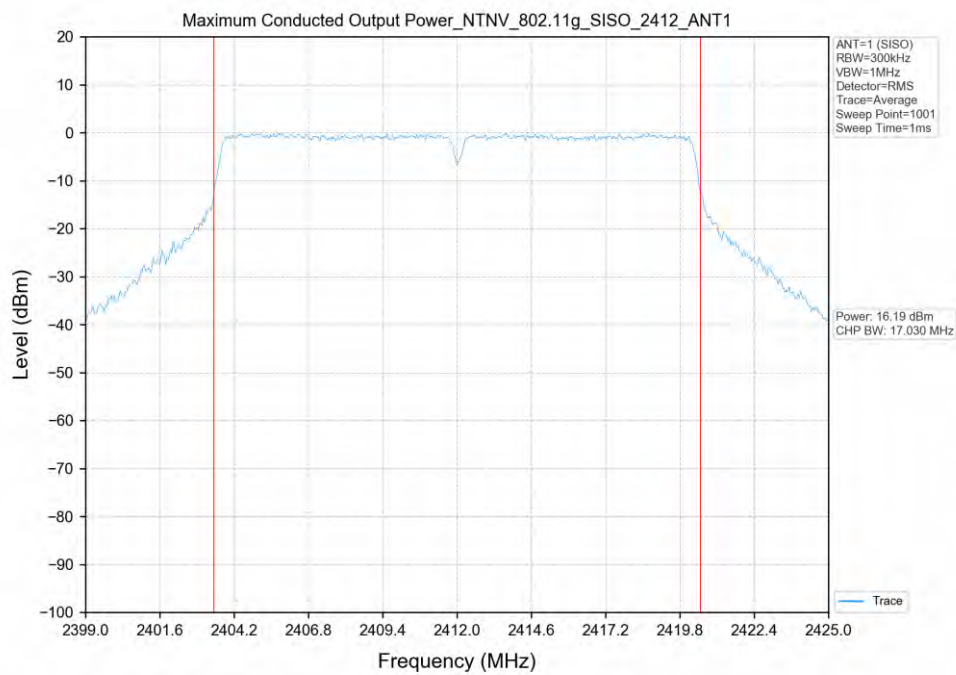
802.11b_2462MHz_SISO_ANT1



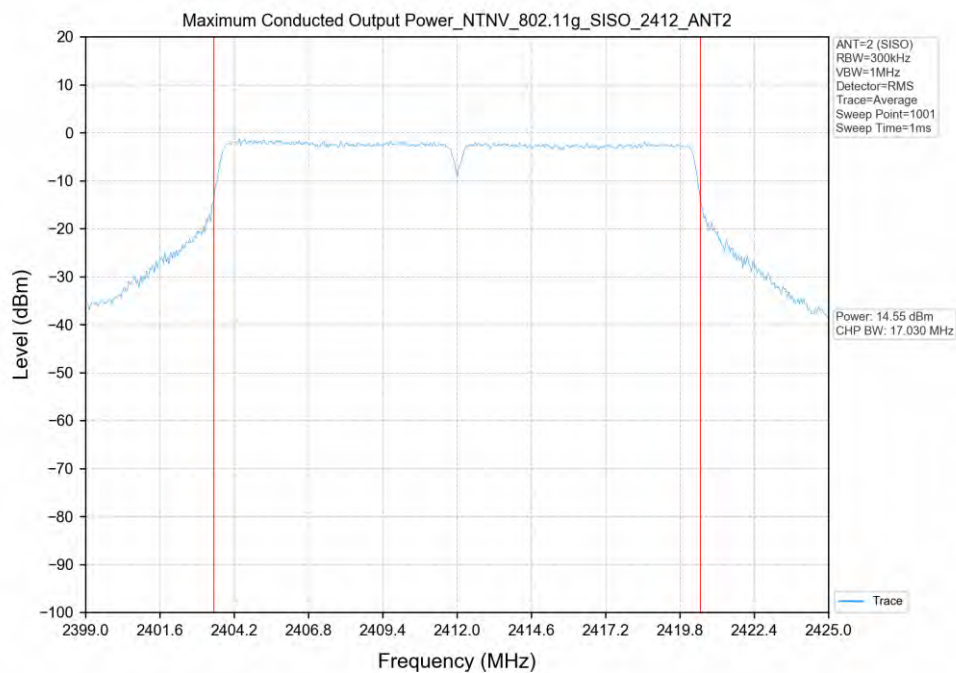
802.11b_2462MHz_SISO_ANT2



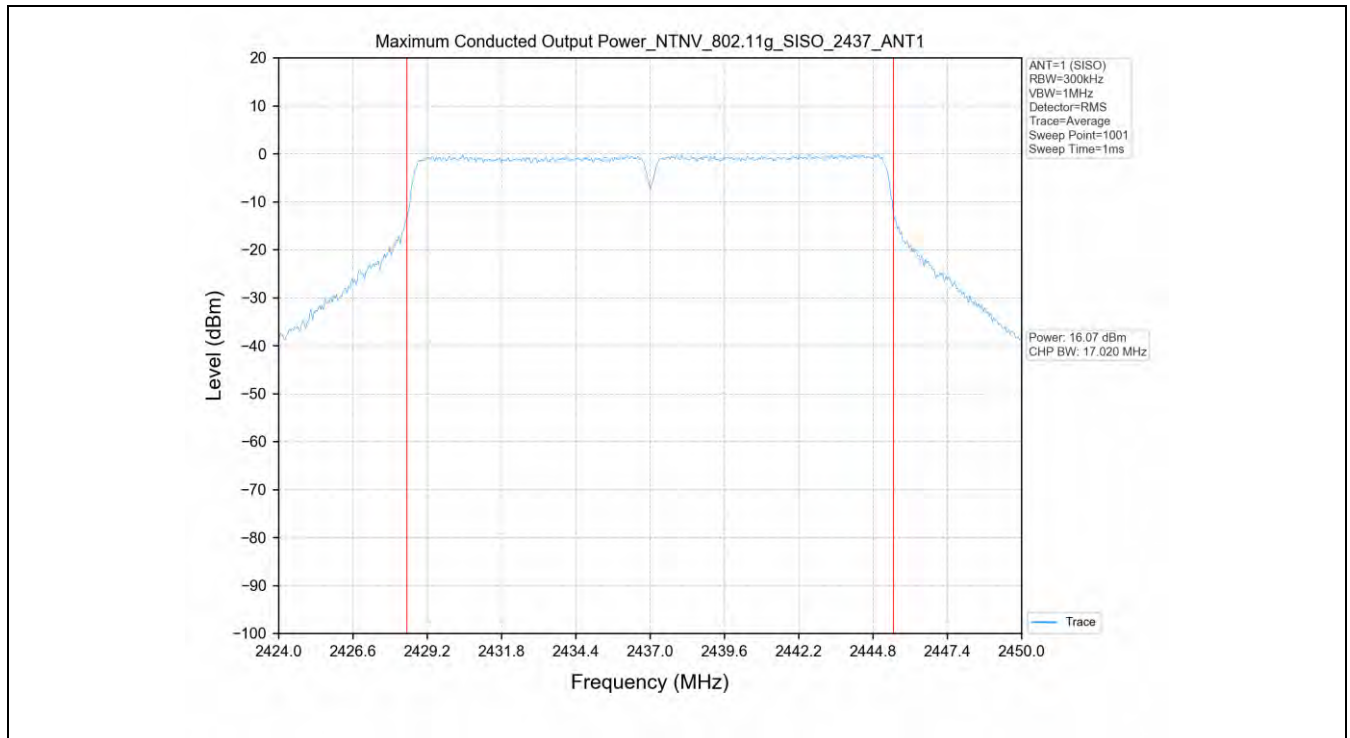
802.11g_2412MHz_SISO_ANT1



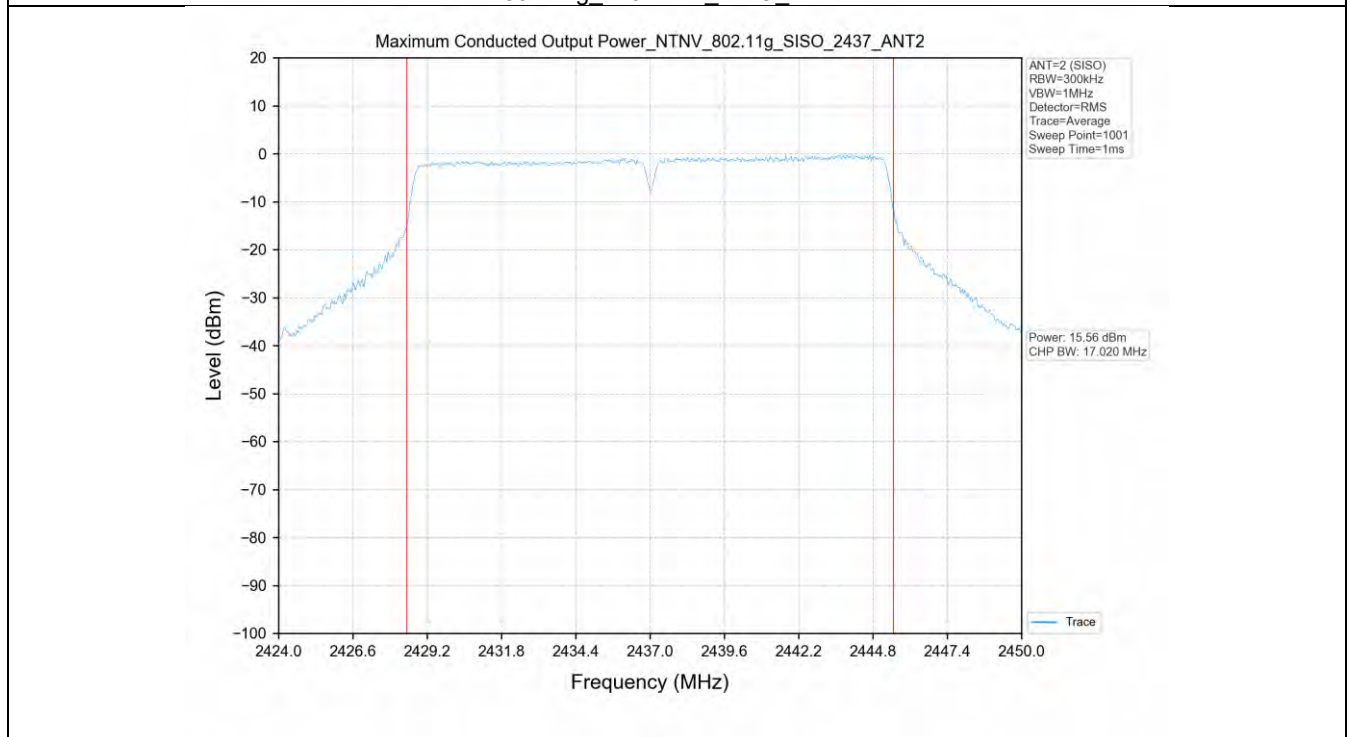
802.11g_2412MHz_SISO_ANT2



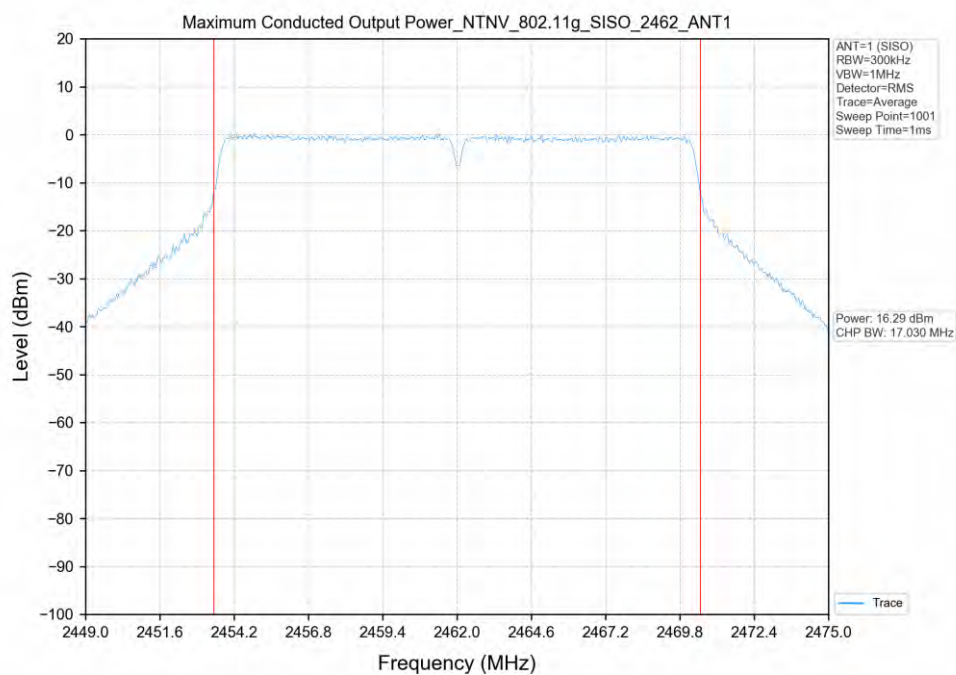
802.11g_2437MHz_SISO_ANT1



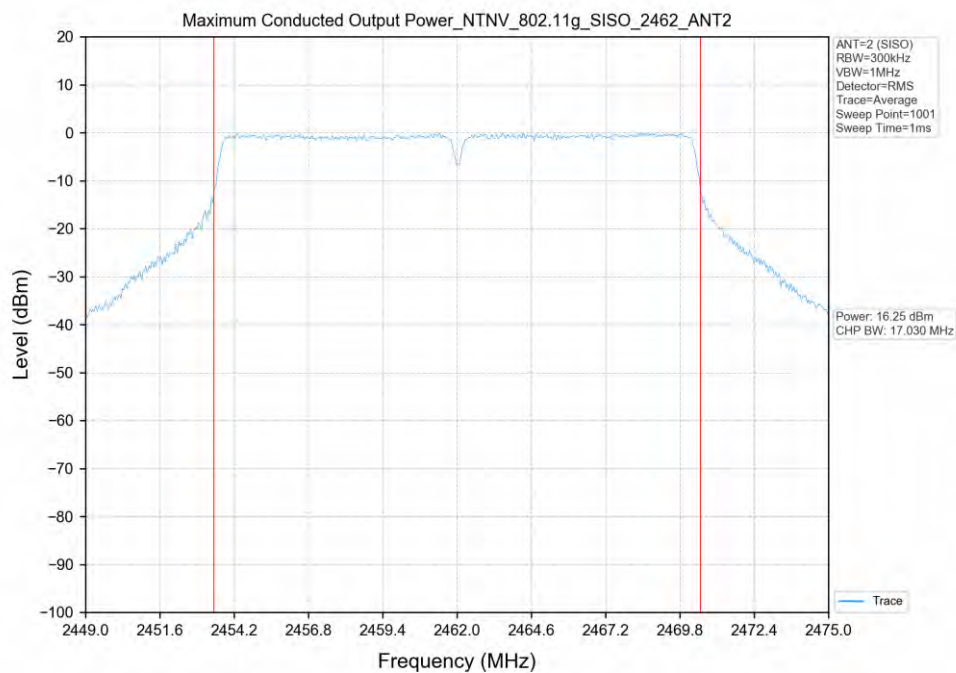
802.11g_2437MHz_SISO_ANT2



802.11g_2462MHz_SISO_ANT1



802.11g_2462MHz_SISO_ANT2



802.11n(HT20)_2412MHz_SISO_ANT1