



## Appendix A for SHEM190901758601

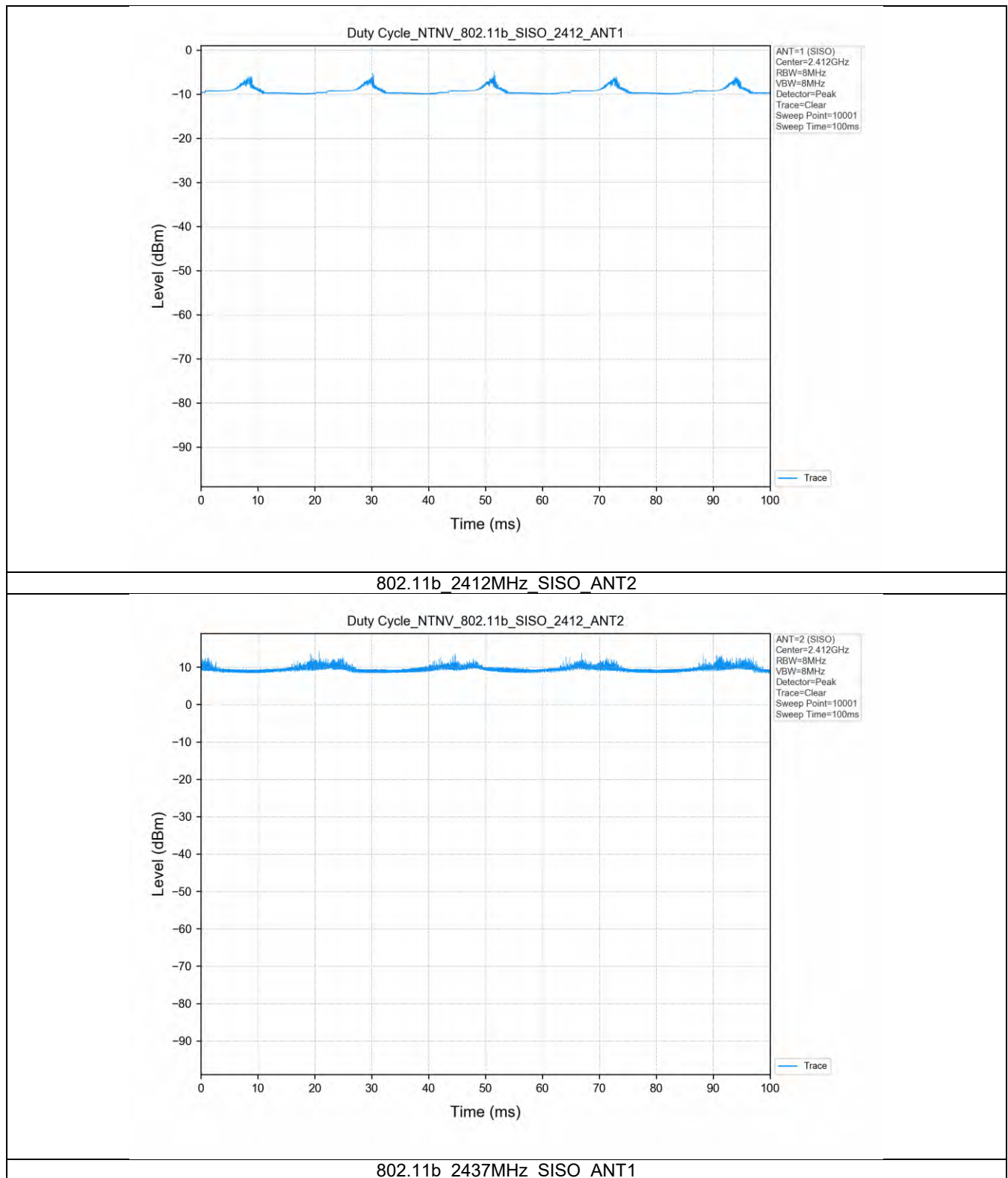
### 1. Duty Cycle

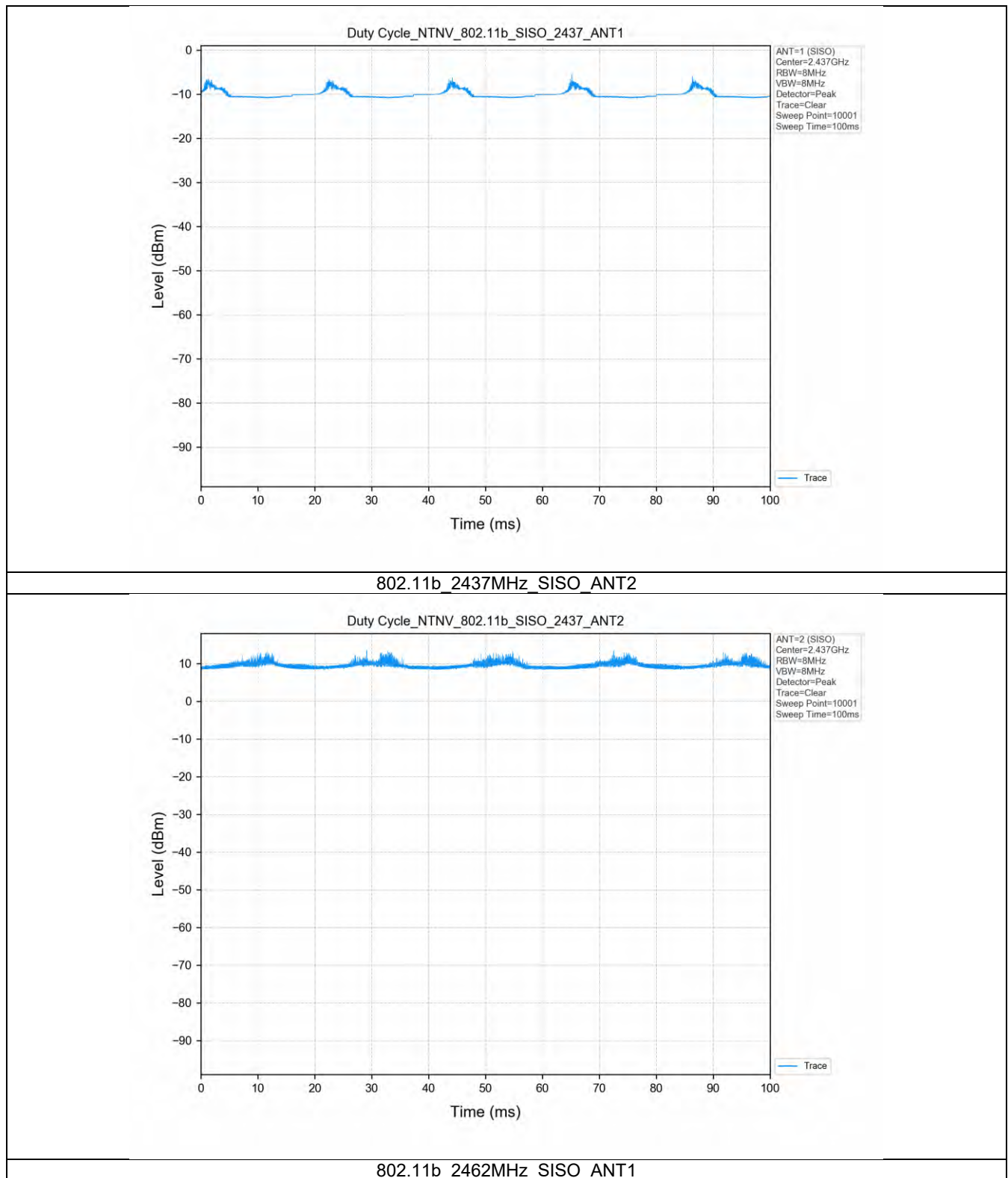
#### 1.1 Test Result

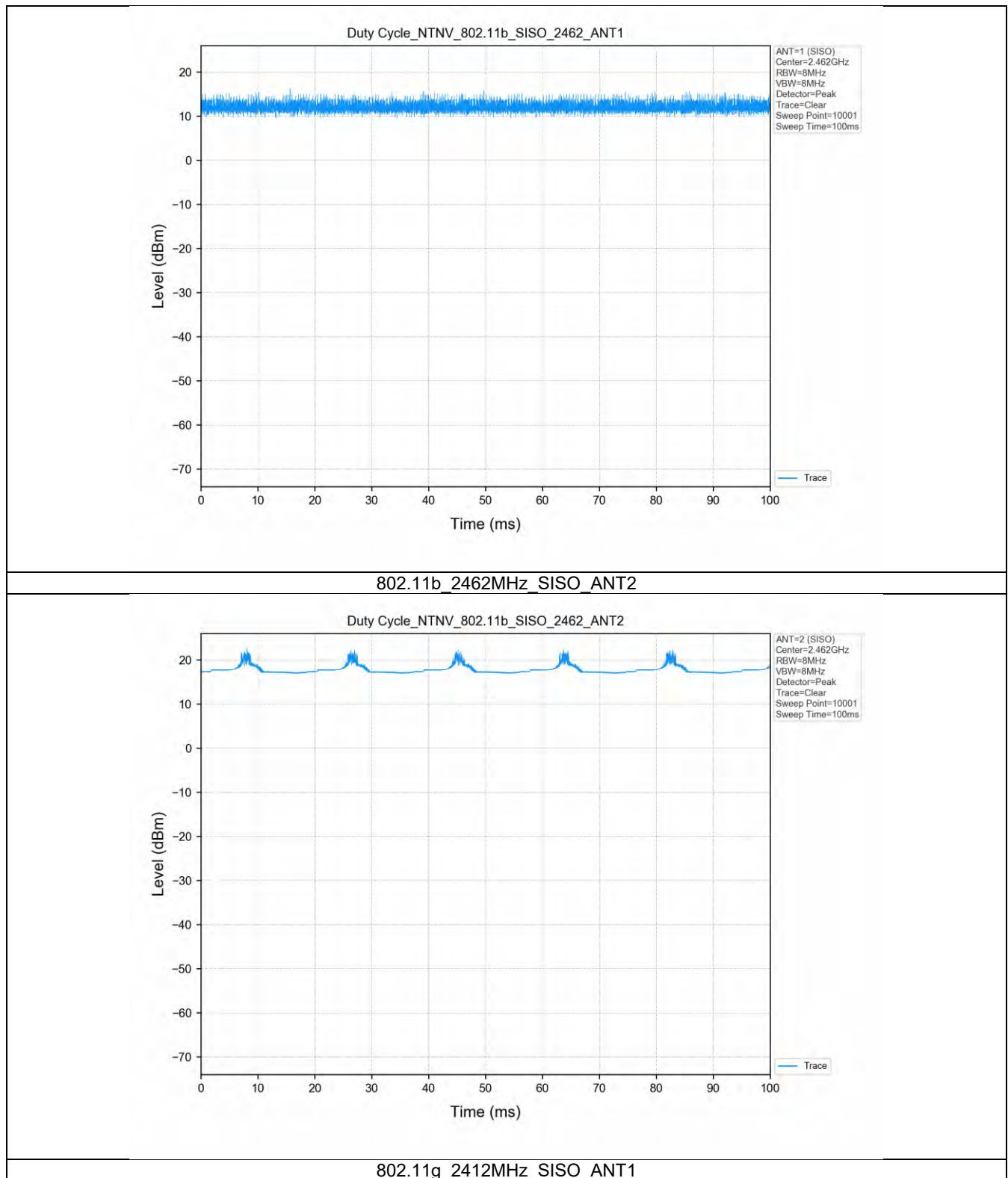
Test Mode	Channel Frequency(MHz)	TX Type	ANT No.	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
802.11b	2412	SISO	1	100.000	100.000	100.00	0.00
			2	100.000	100.000	100.00	0.00
	2437	SISO	1	100.000	100.000	100.00	0.00
			2	100.000	100.000	100.00	0.00
	2462	SISO	1	100.000	100.000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

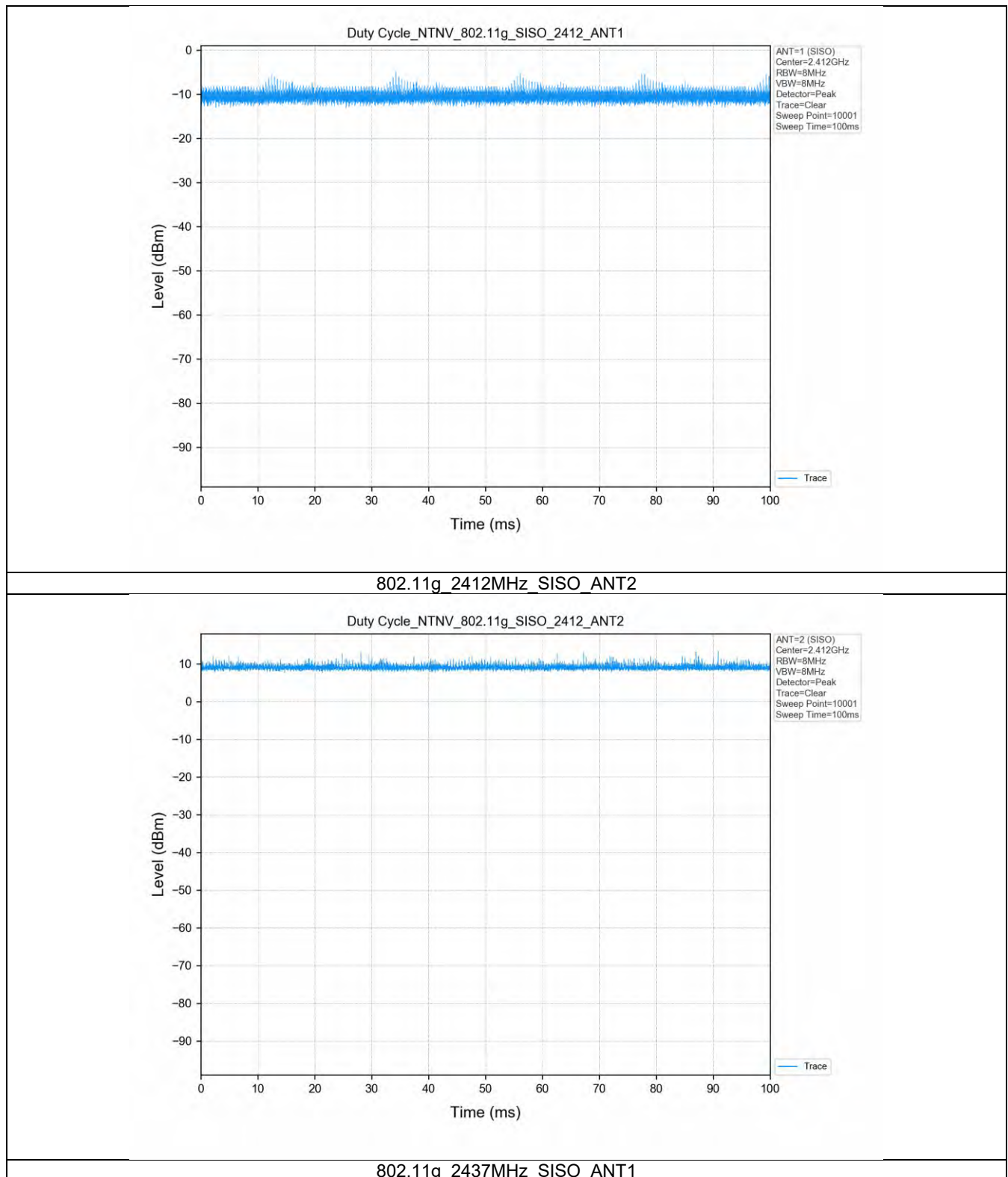
#### 1.2 Test Graph

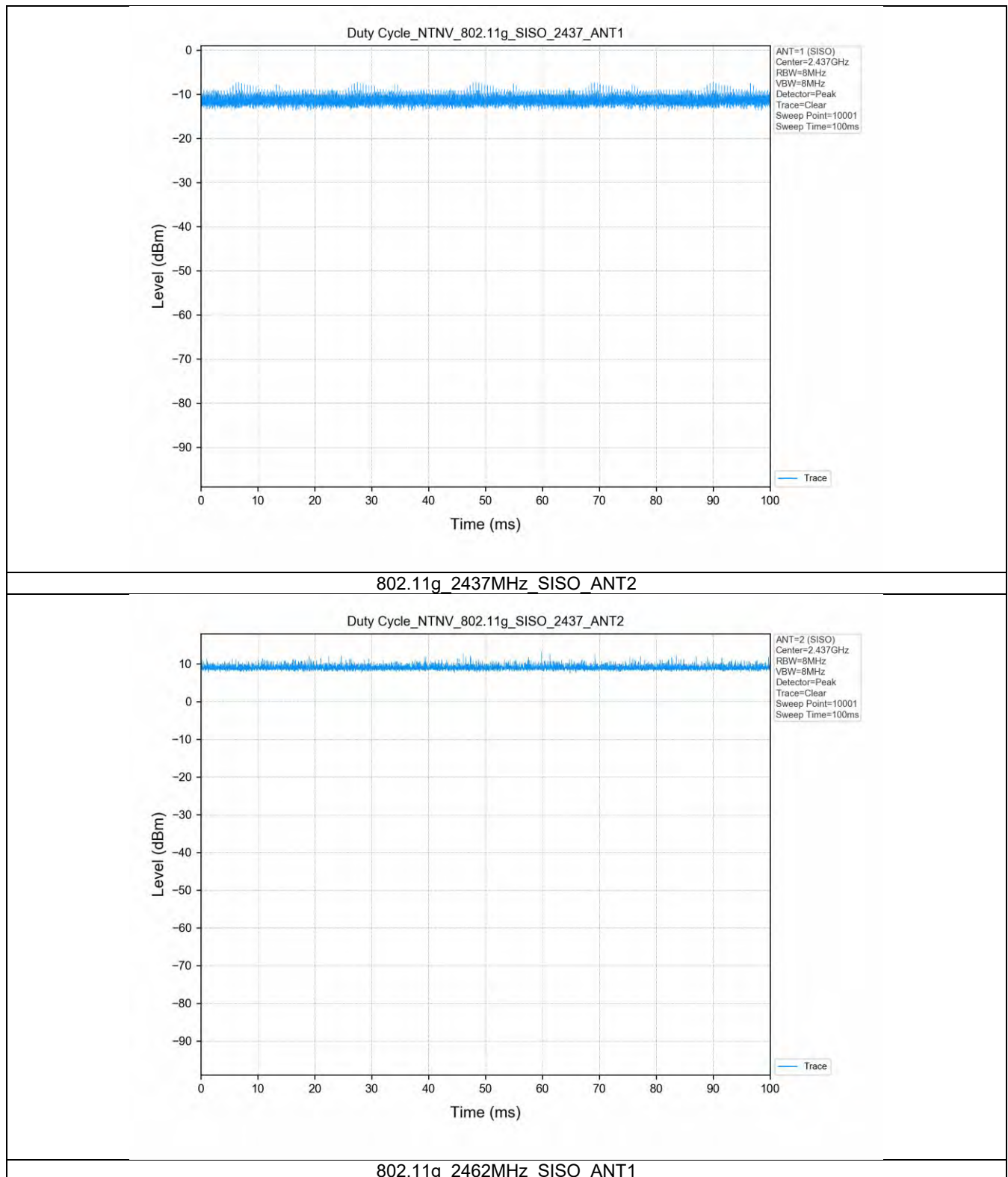
802.11b_2412MHz_SISO_ANT1
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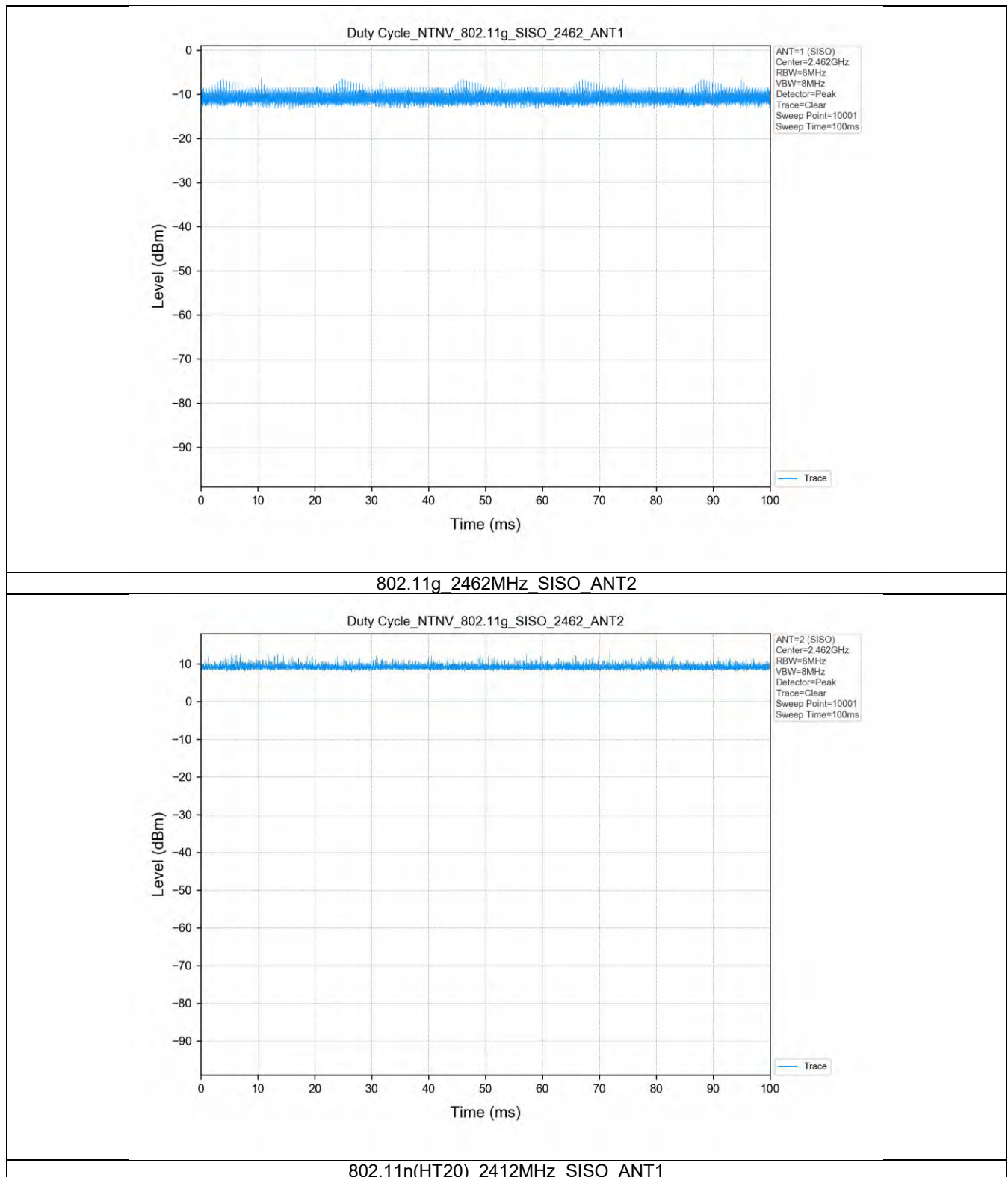


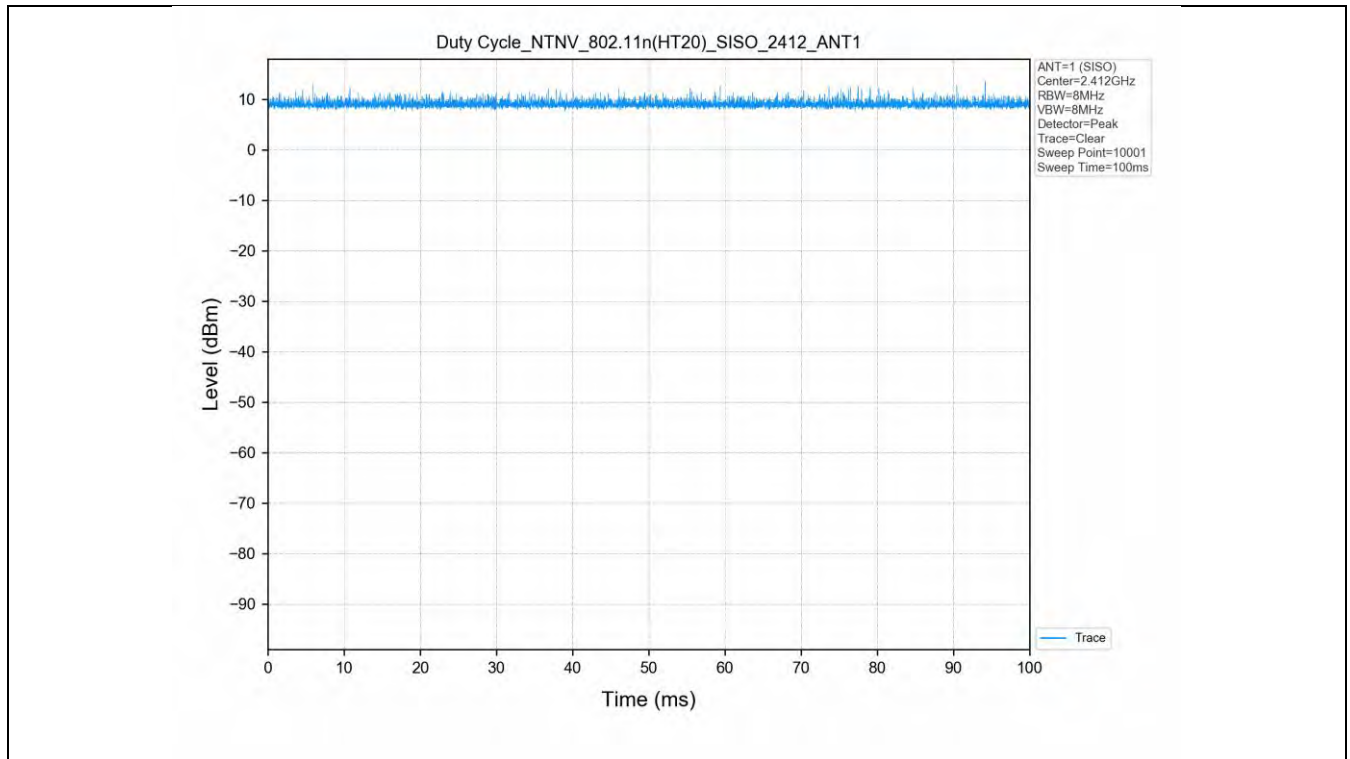




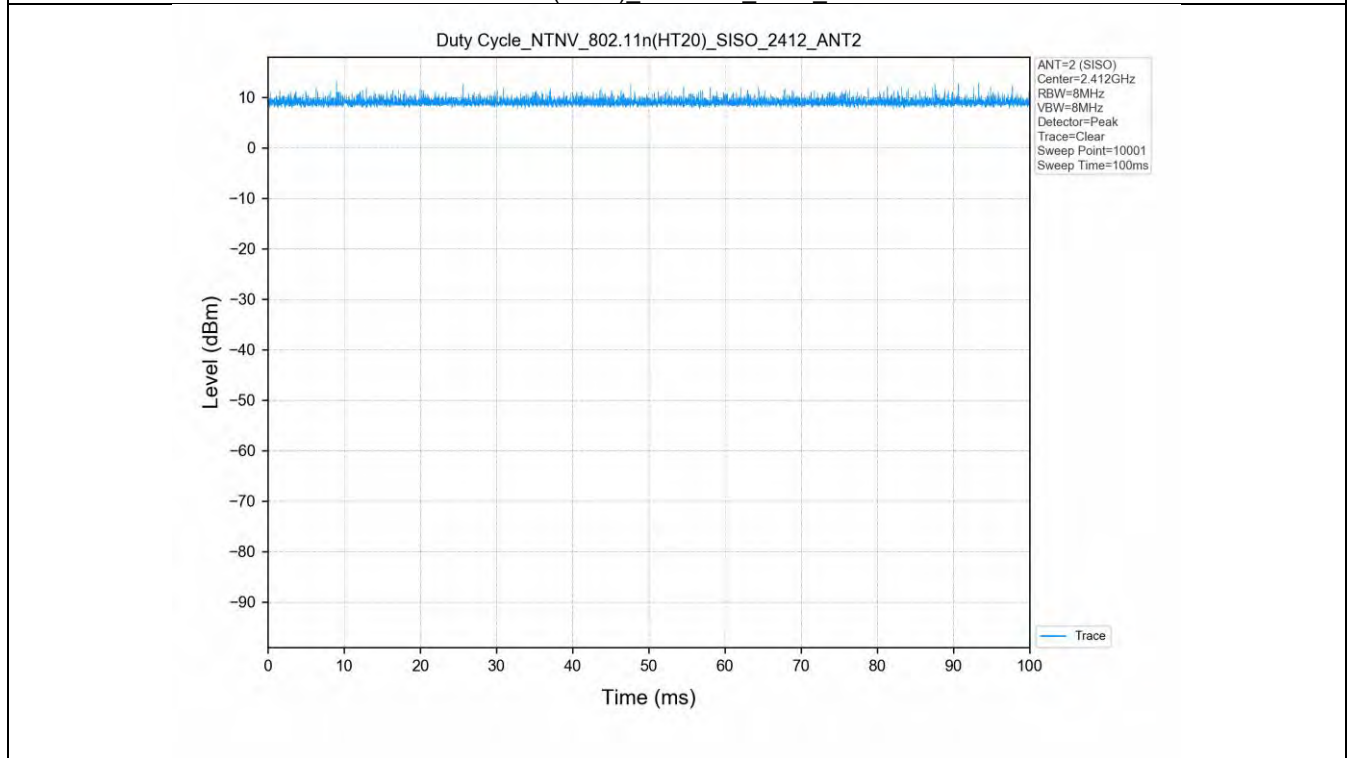






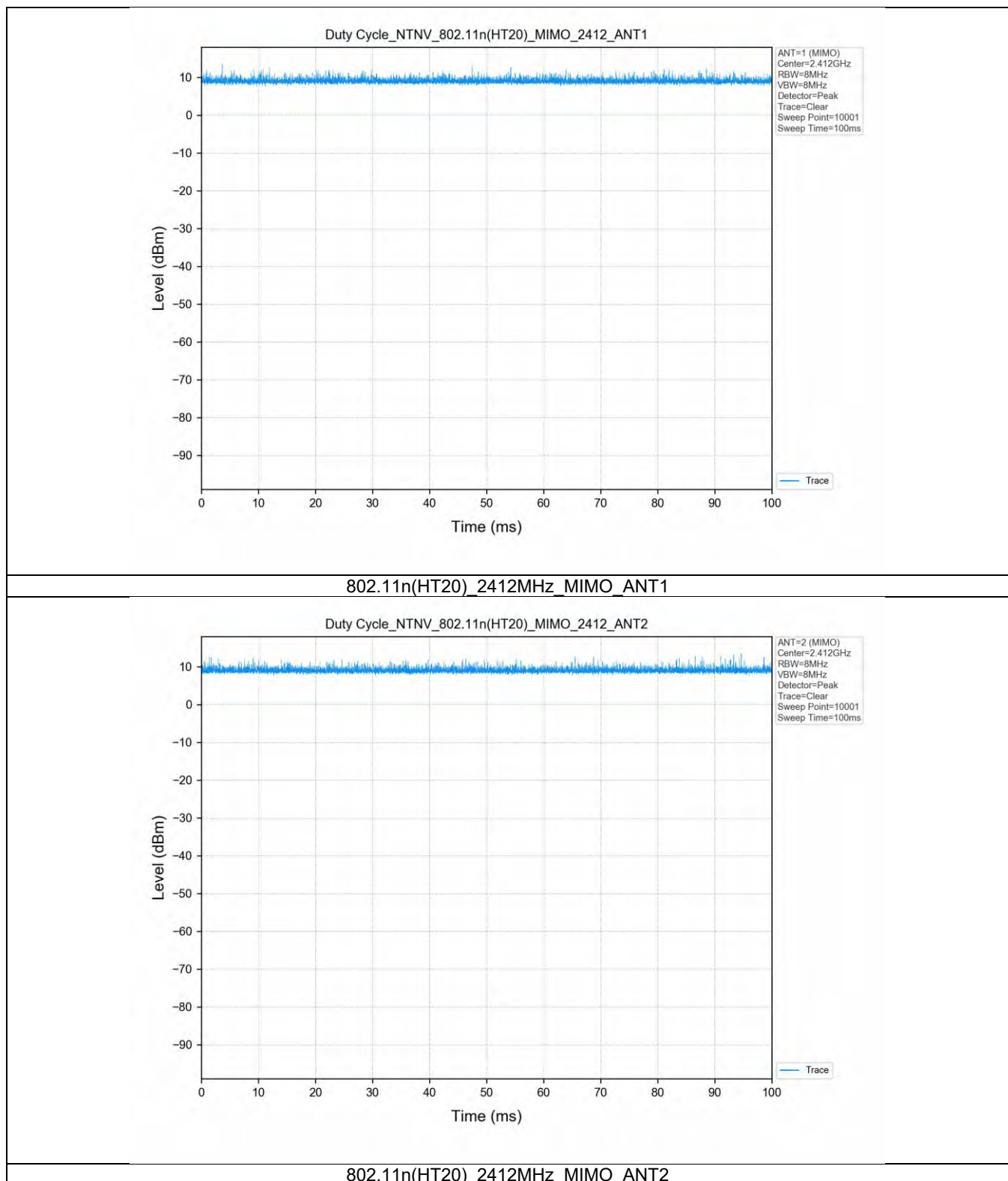


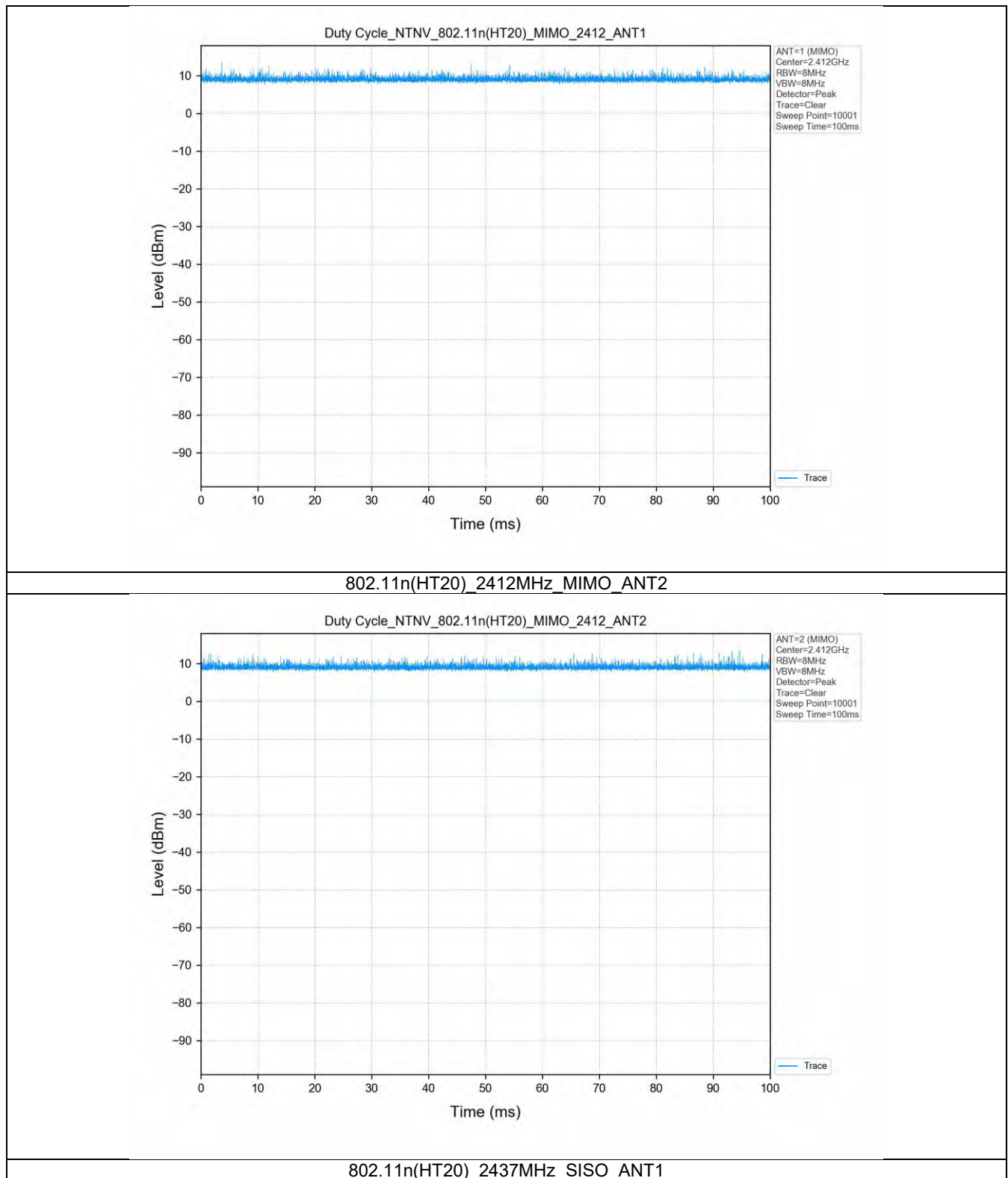
802.11n(HT20)\_2412MHz\_SISO\_ANT2

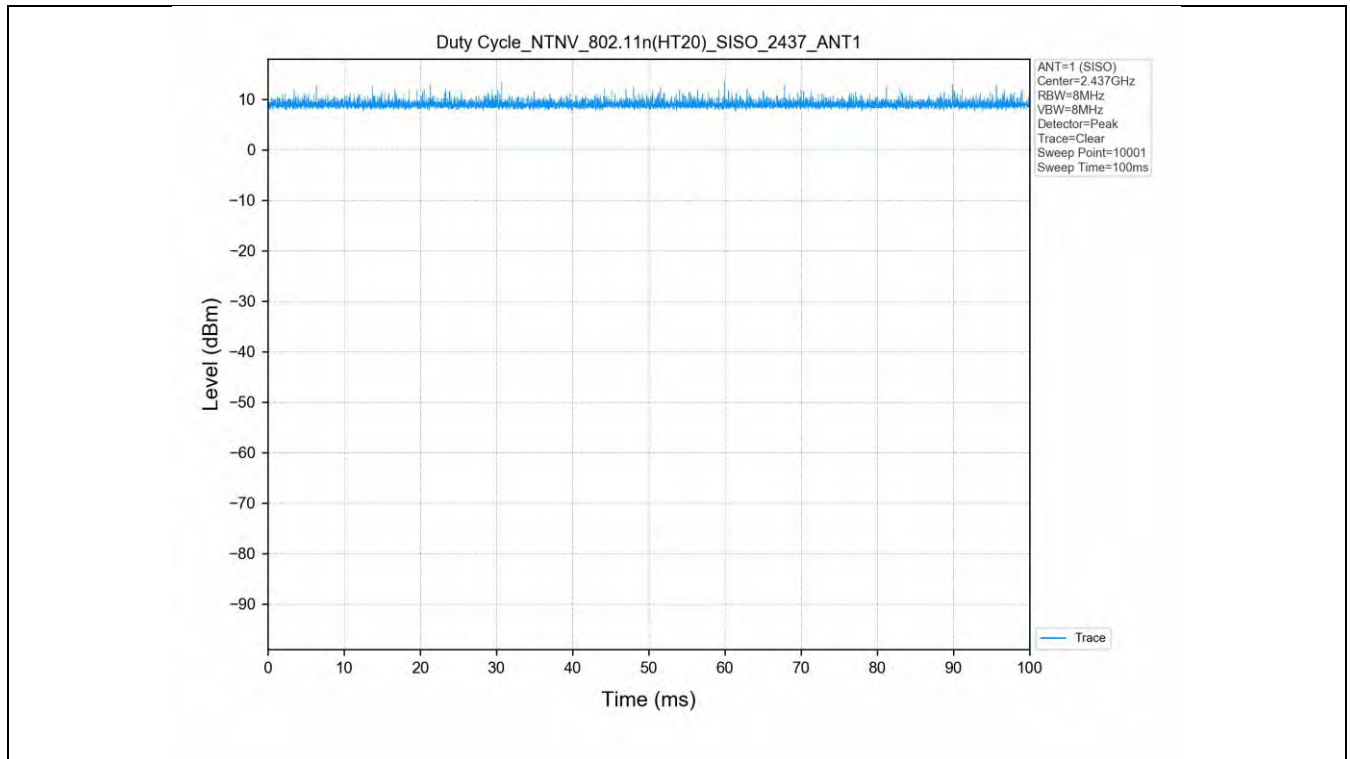


802.11n(HT20)\_2412MHz\_MIMO\_ANT1

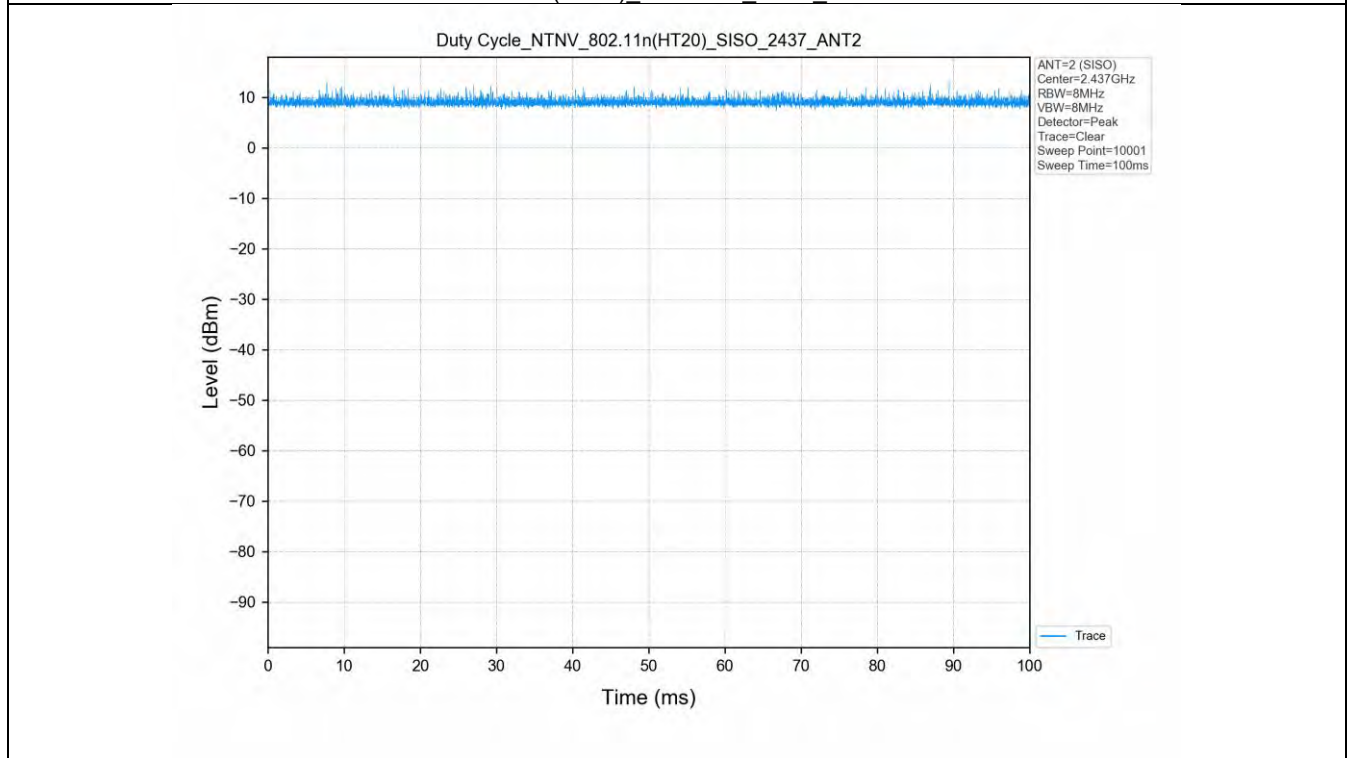




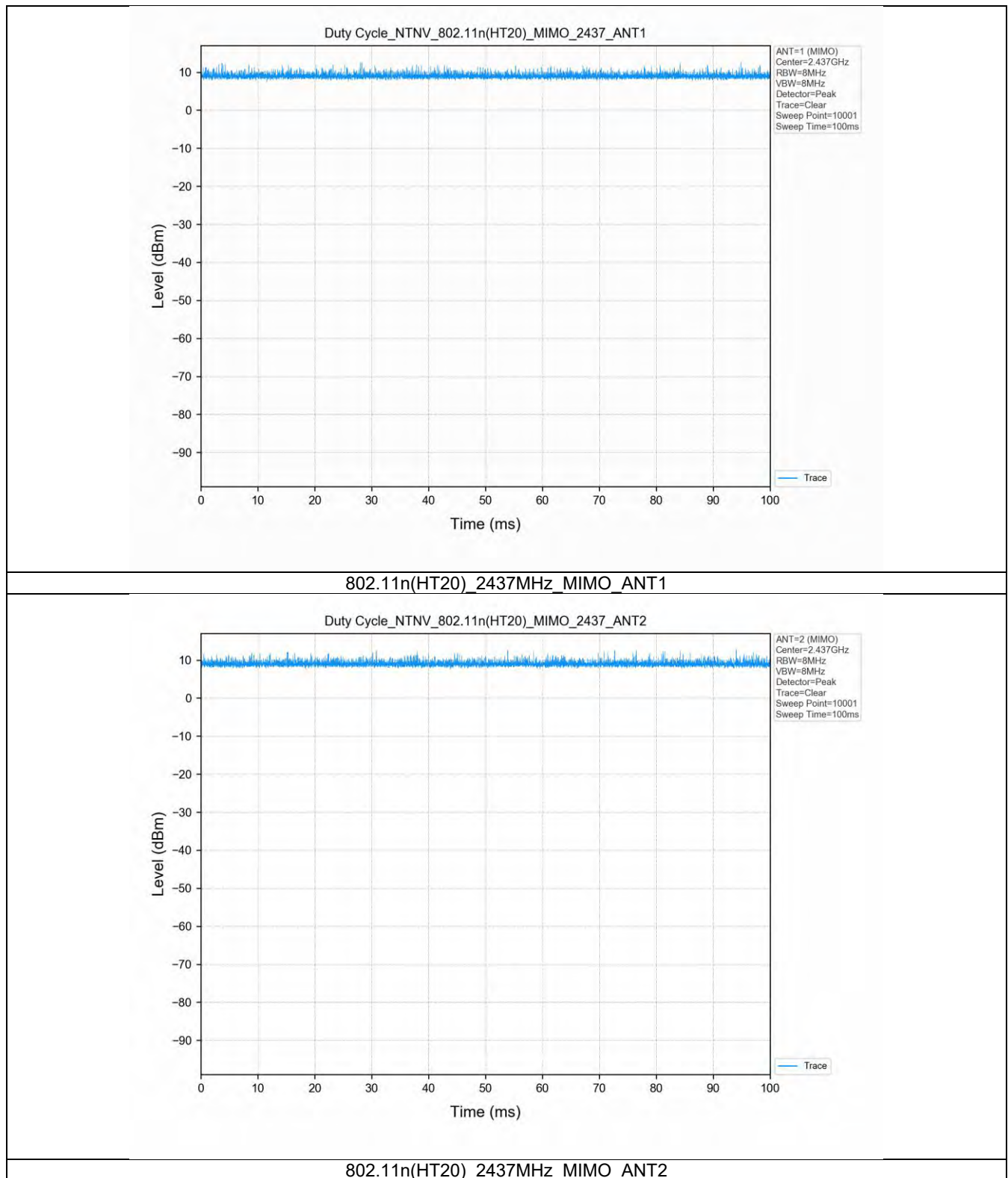


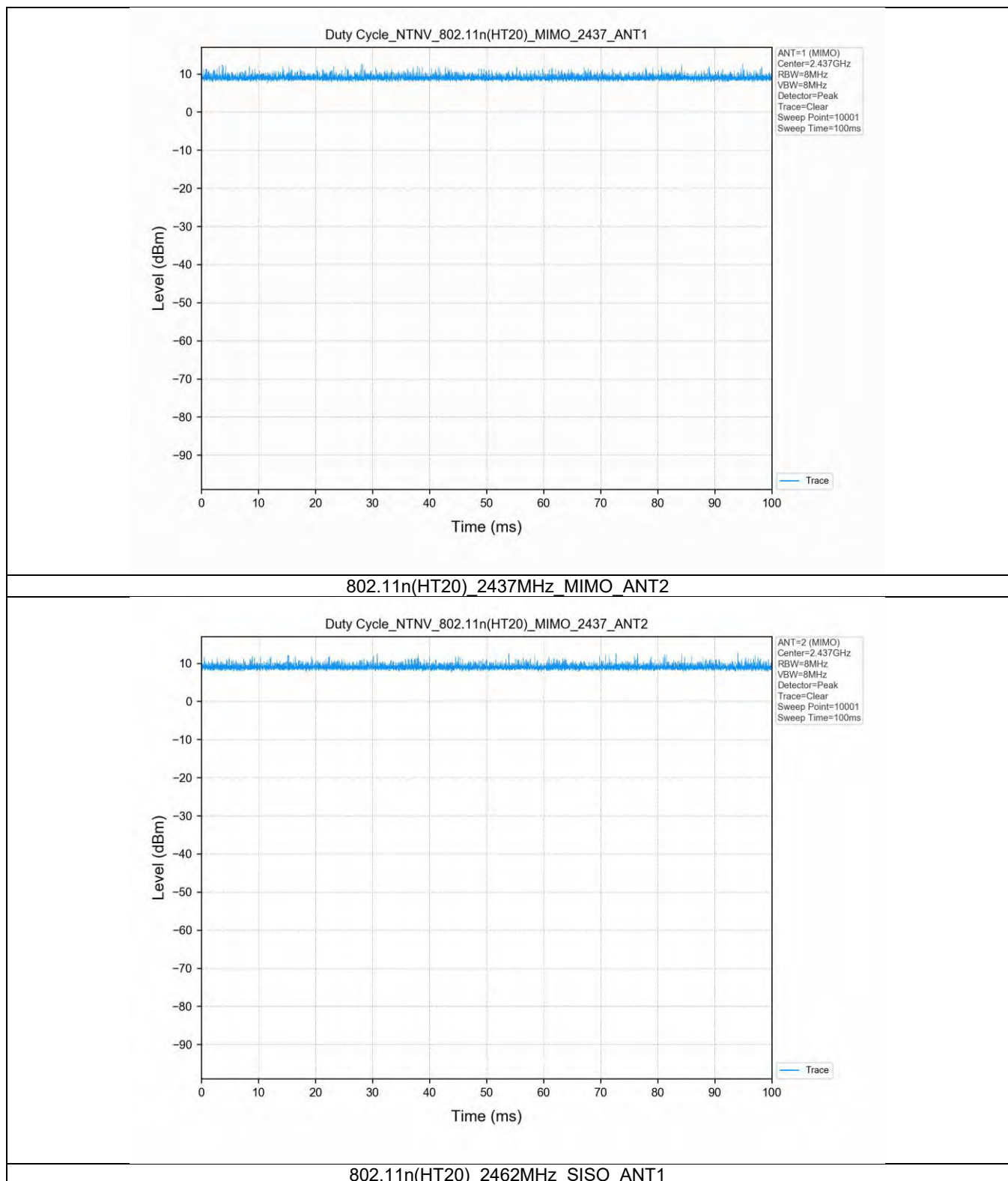


802.11n(HT20)\_2437MHz\_SISO\_ANT2

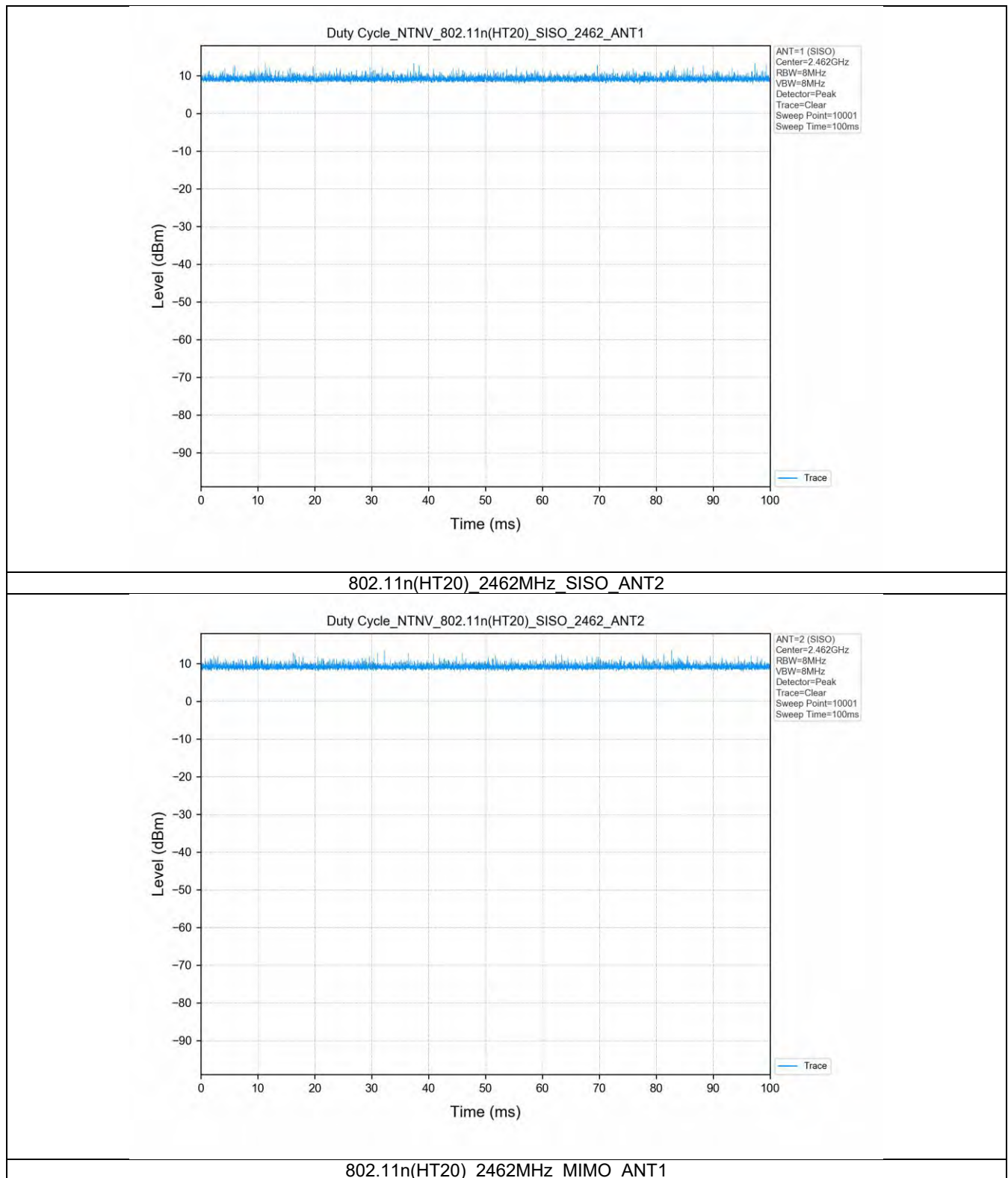


802.11n(HT20)\_2437MHz\_MIMO\_ANT1

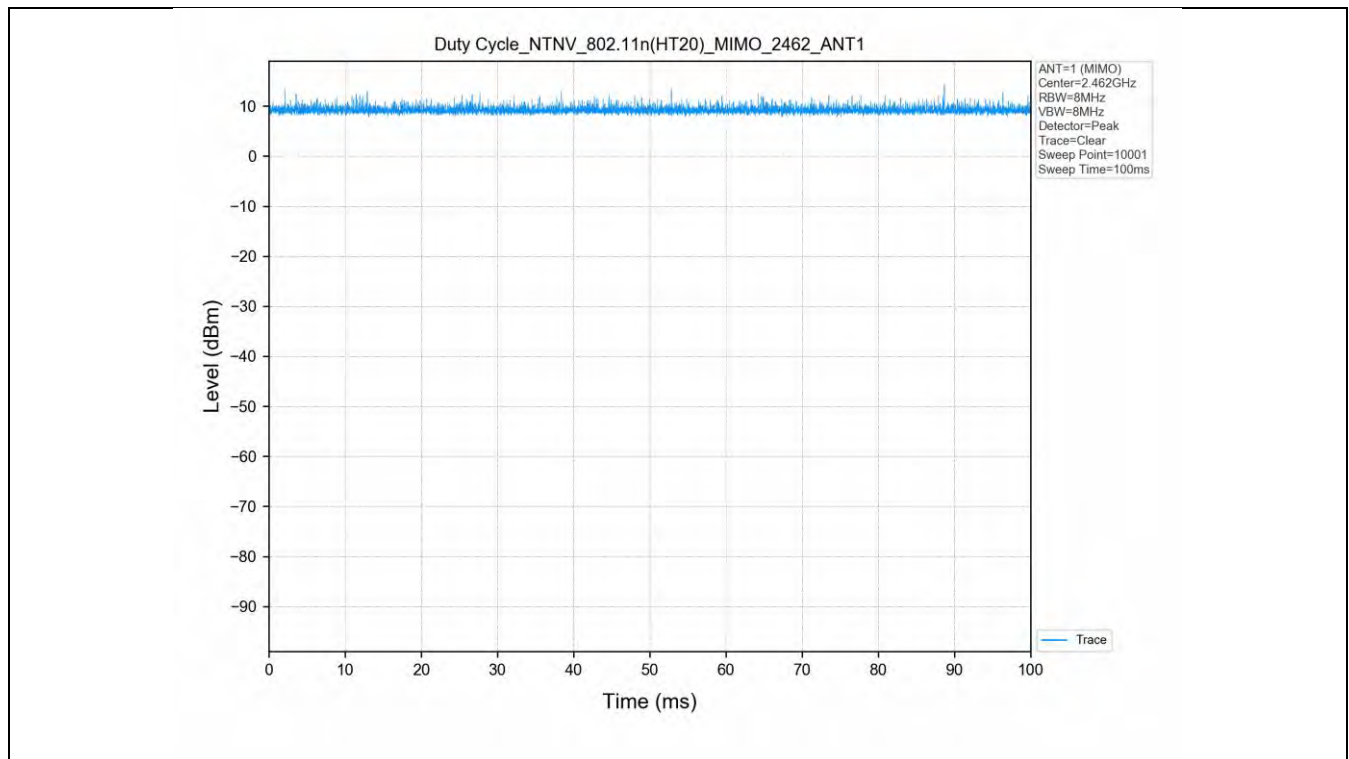




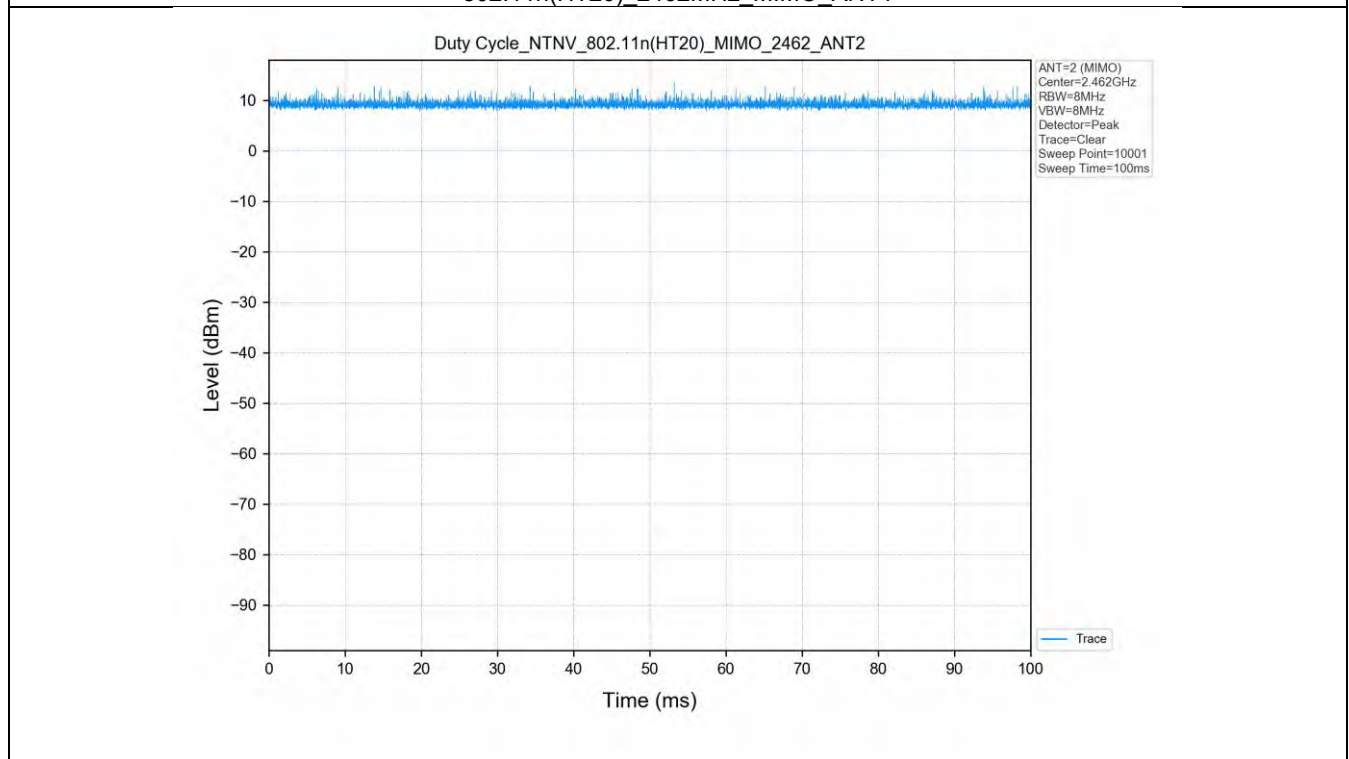




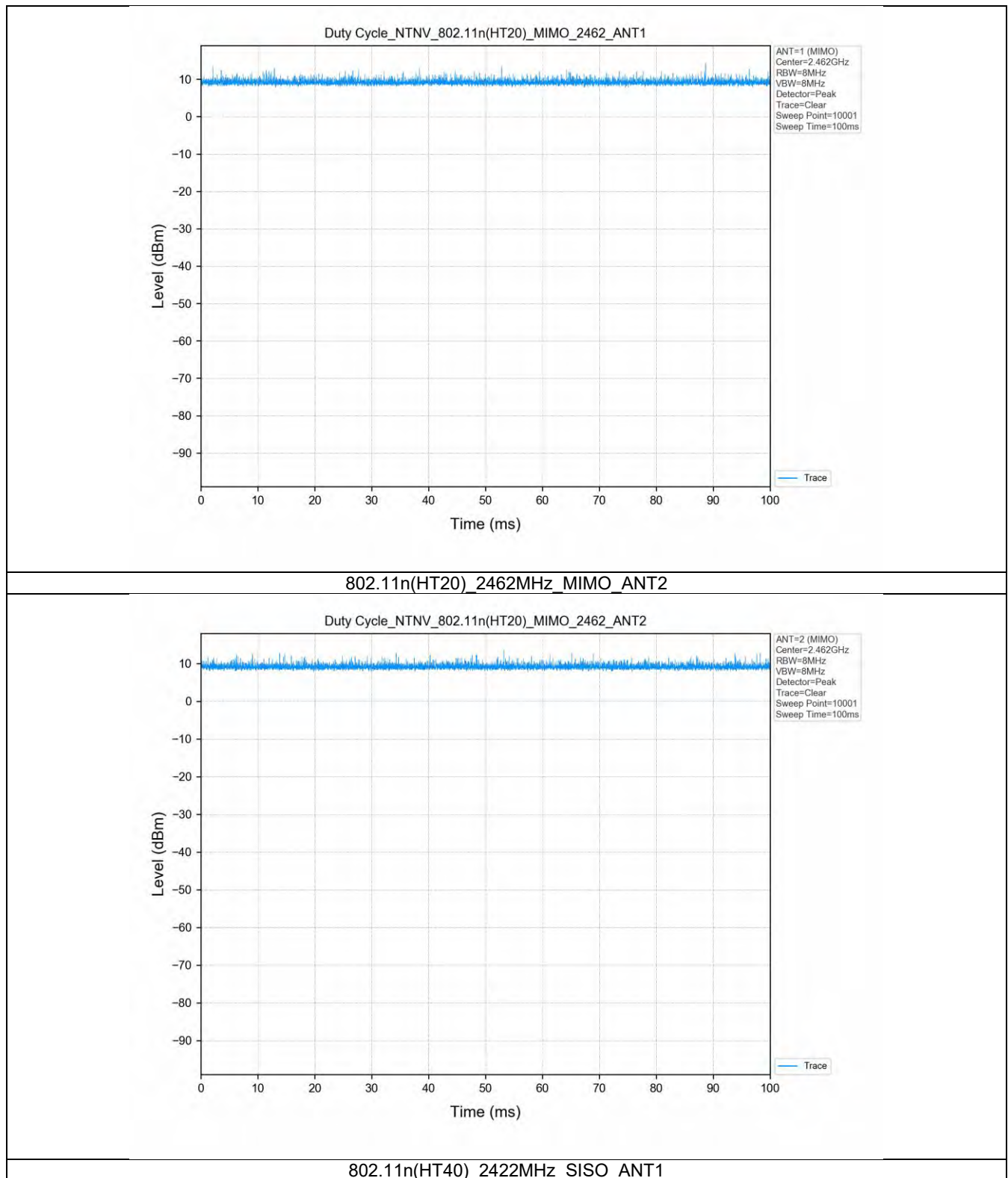


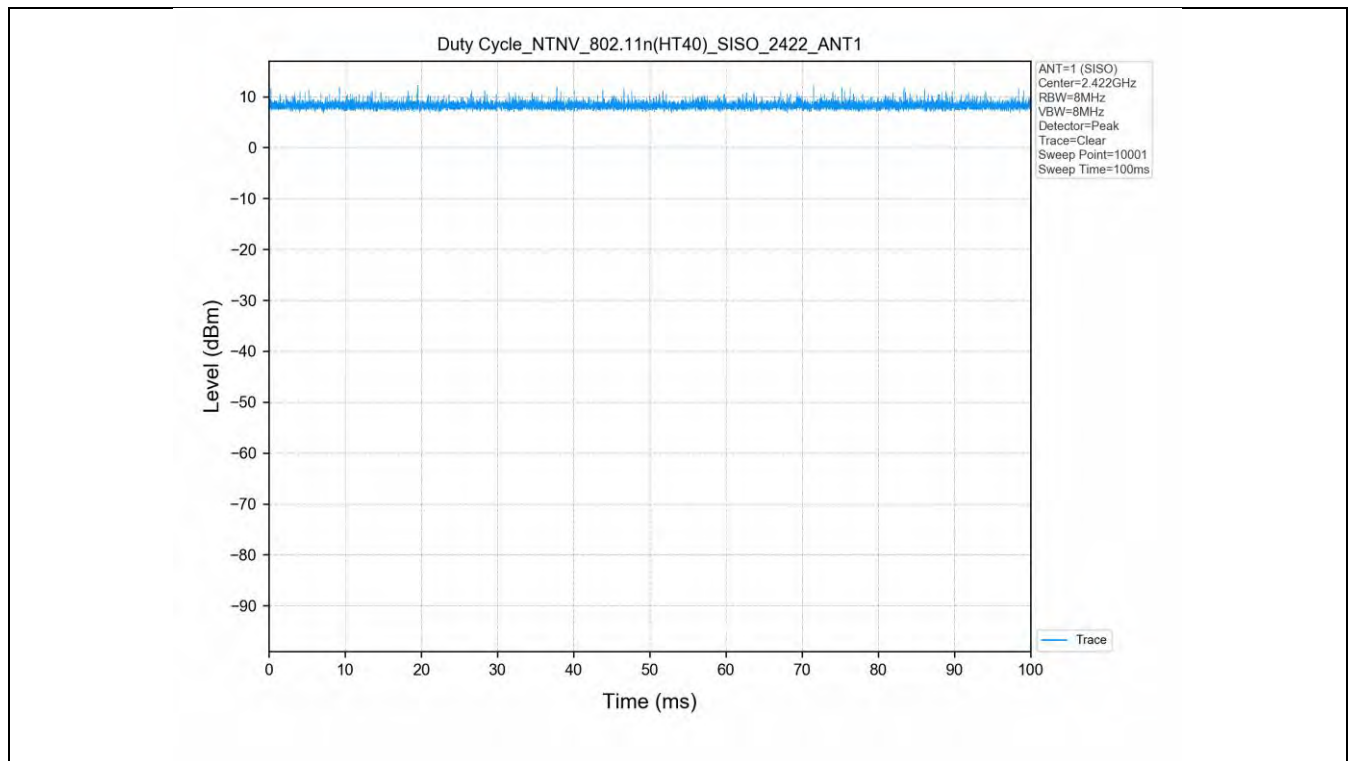


802.11n(HT20)\_2462MHz\_MIMO\_ANT1

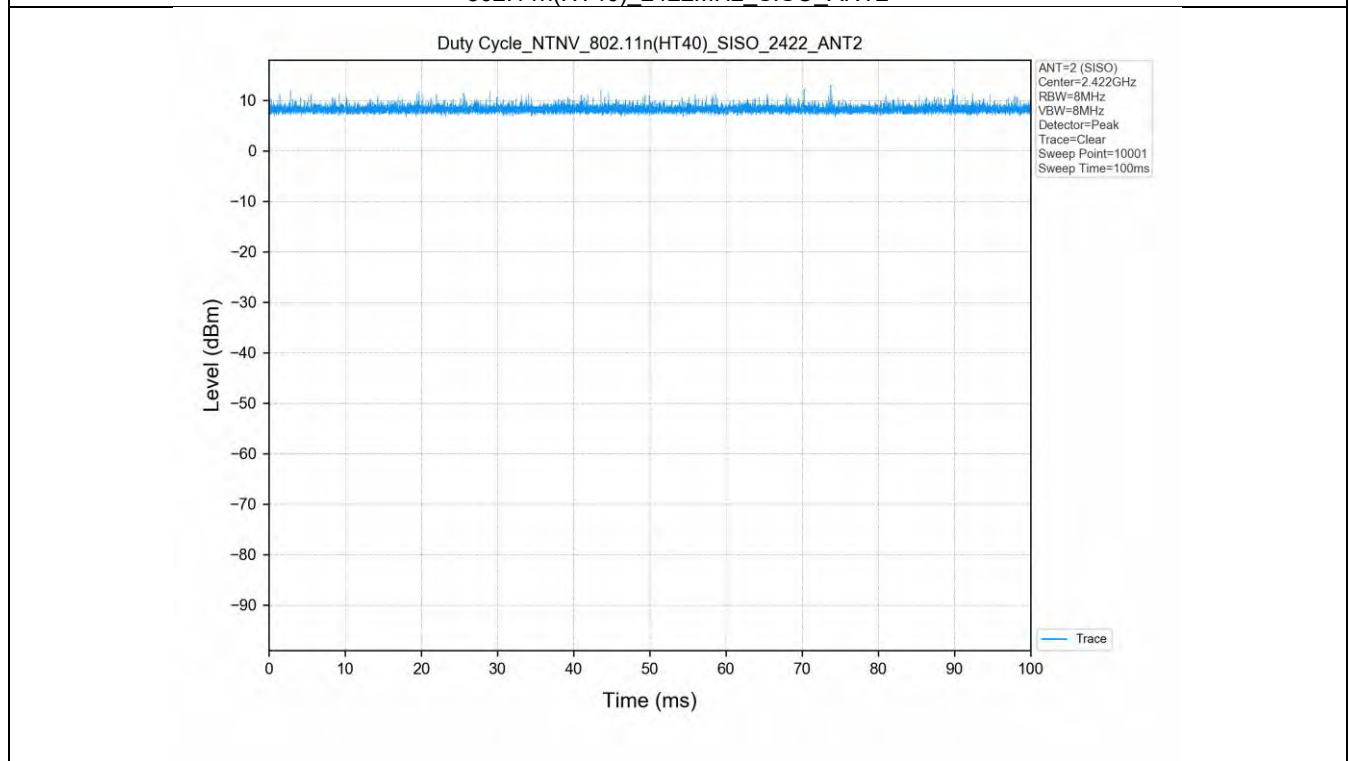


802.11n(HT20)\_2462MHz\_MIMO\_ANT2

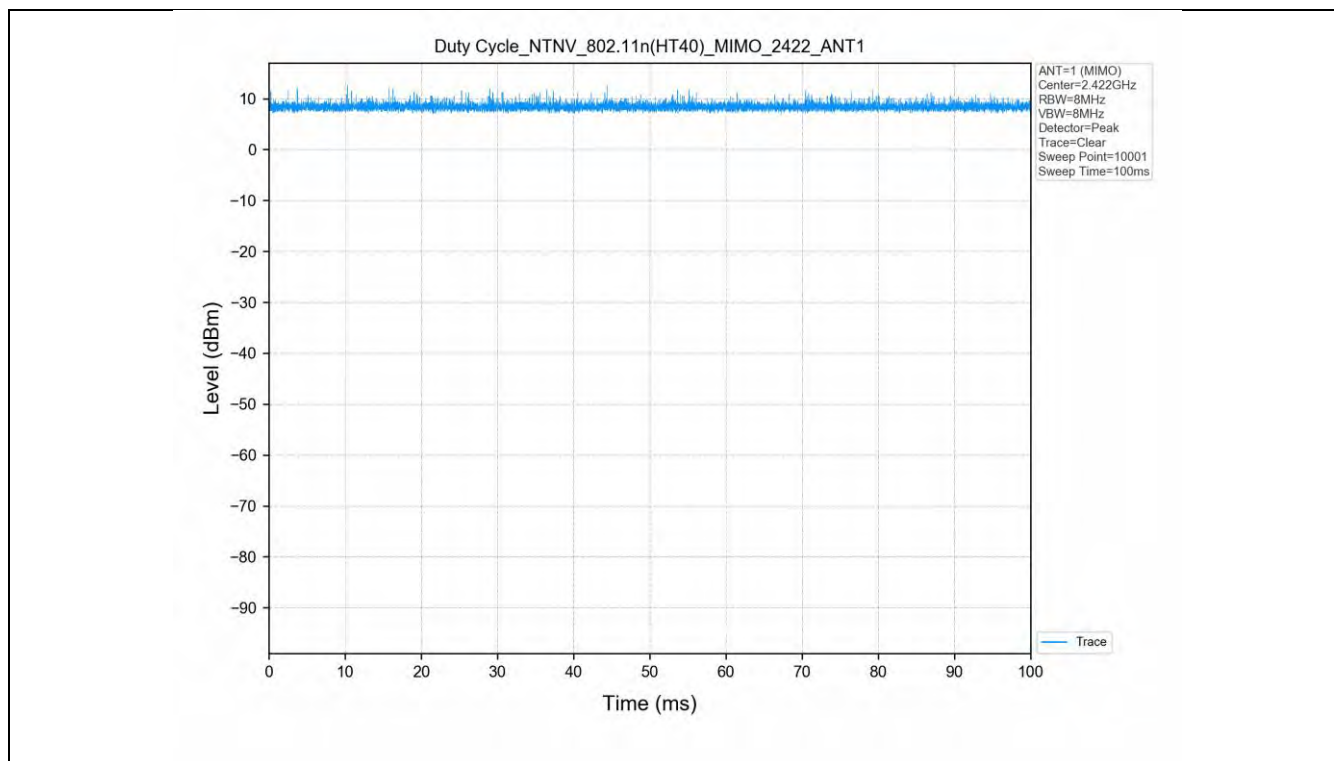




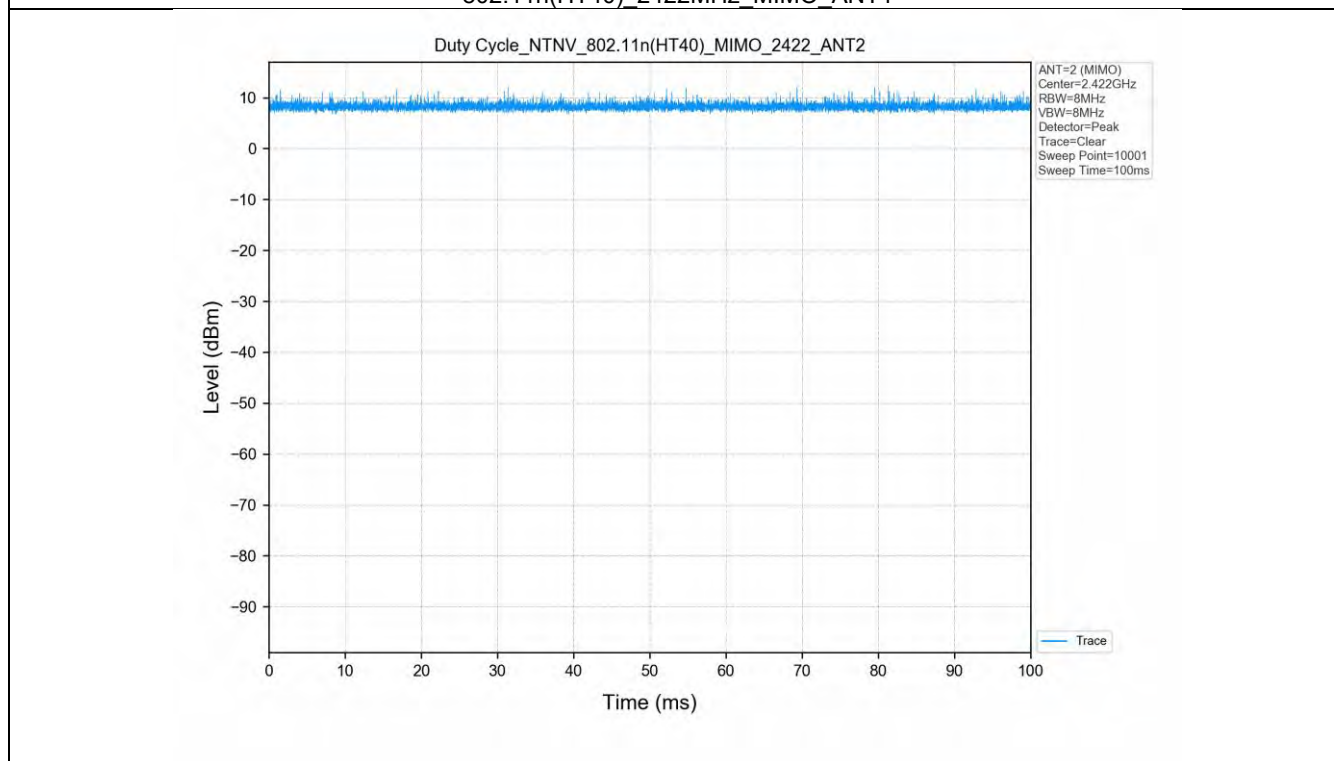
802.11n(HT40)\_2422MHz\_SISO\_ANT2



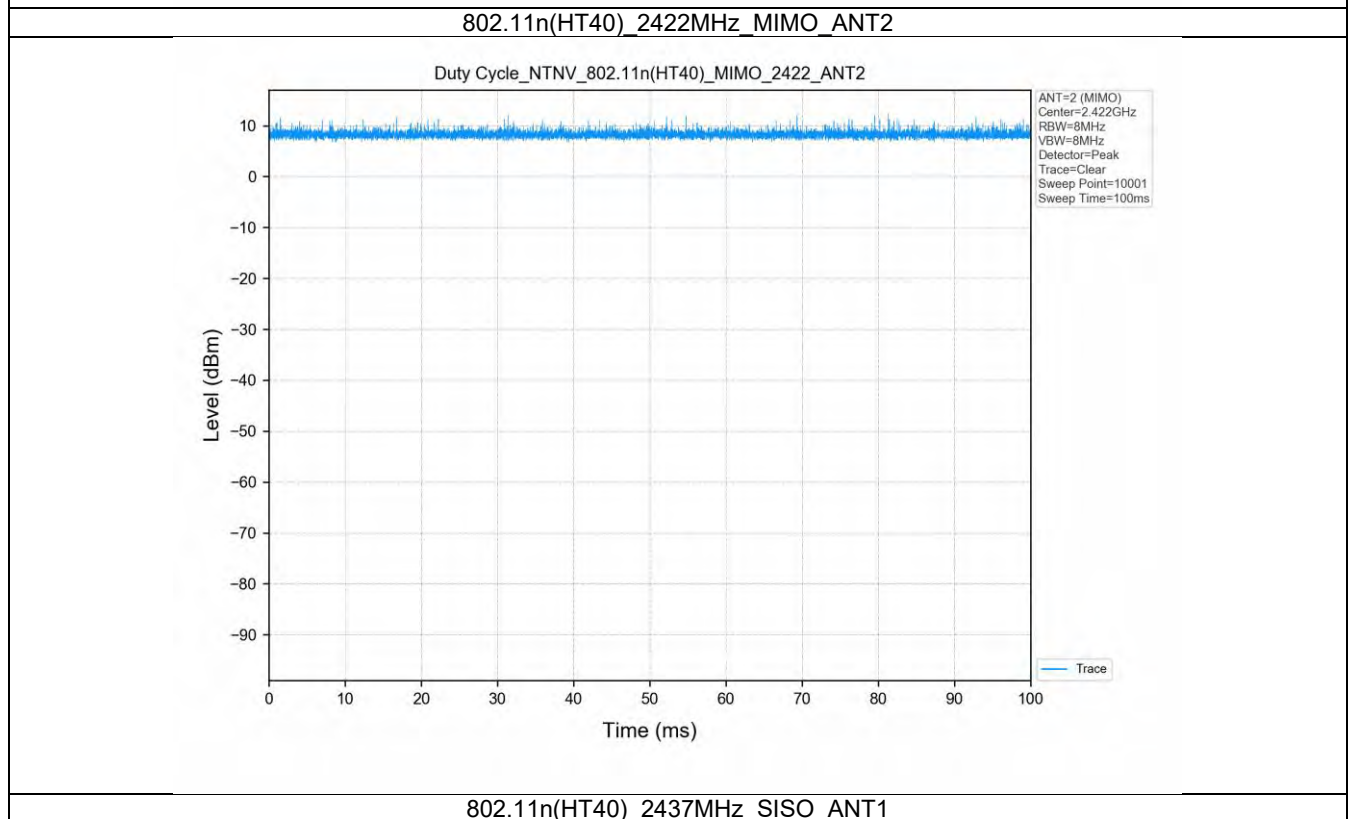
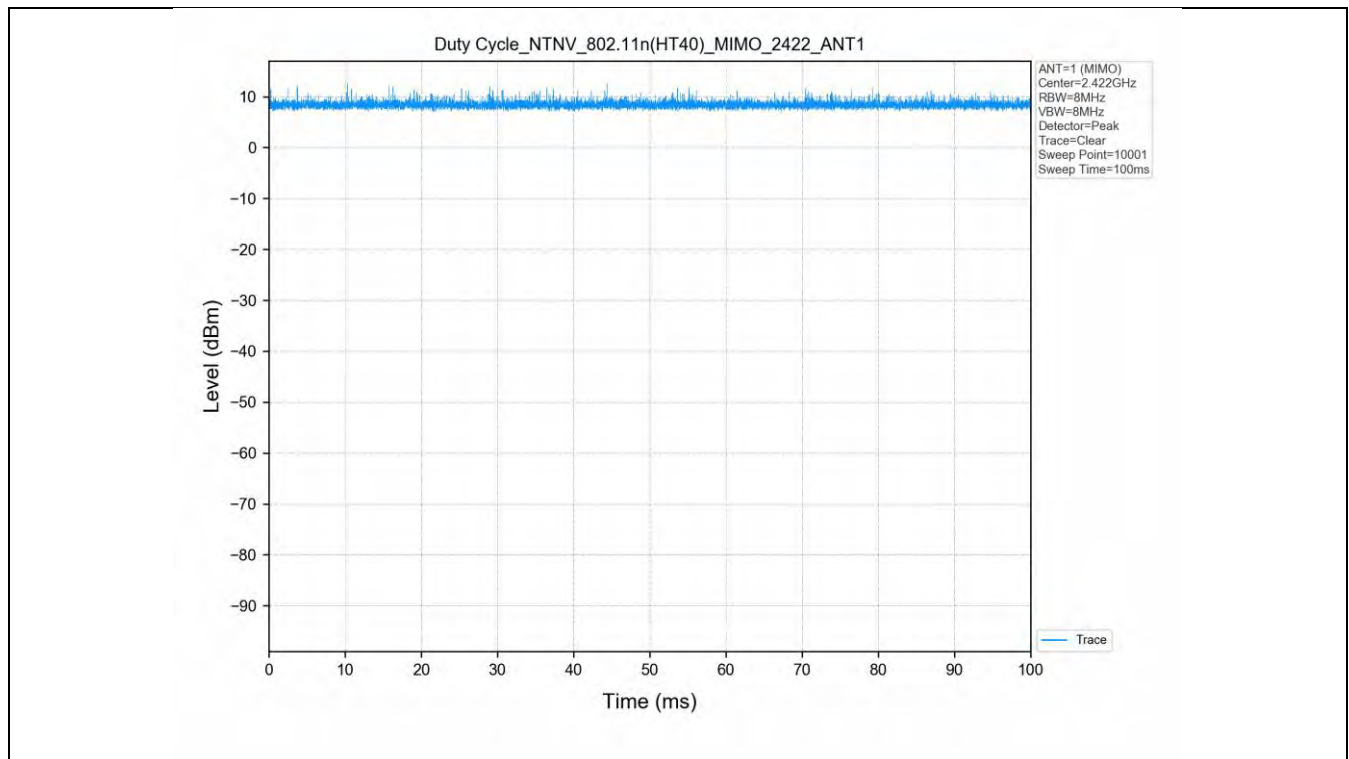
802.11n(HT40)\_2422MHz\_MIMO\_ANT1



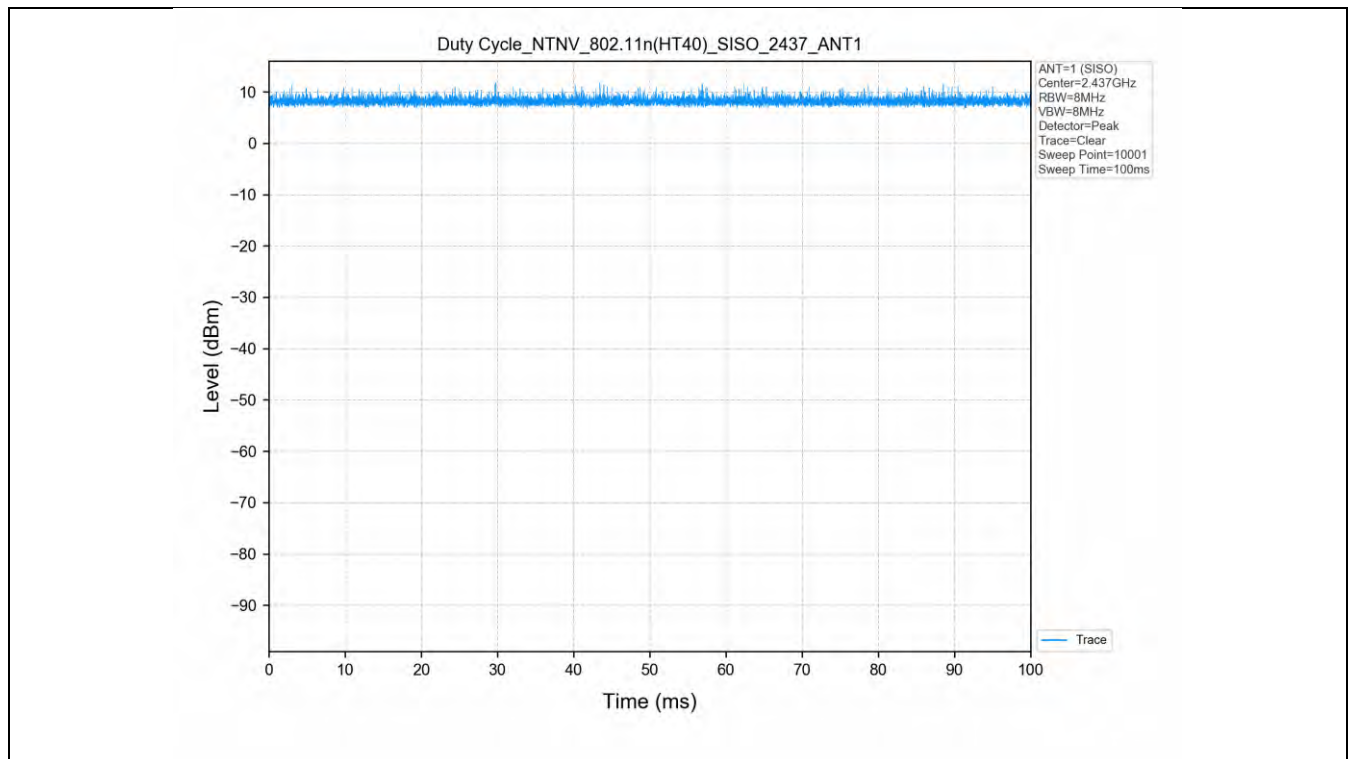
802.11n(HT40)\_2422MHz\_MIMO\_ANT1



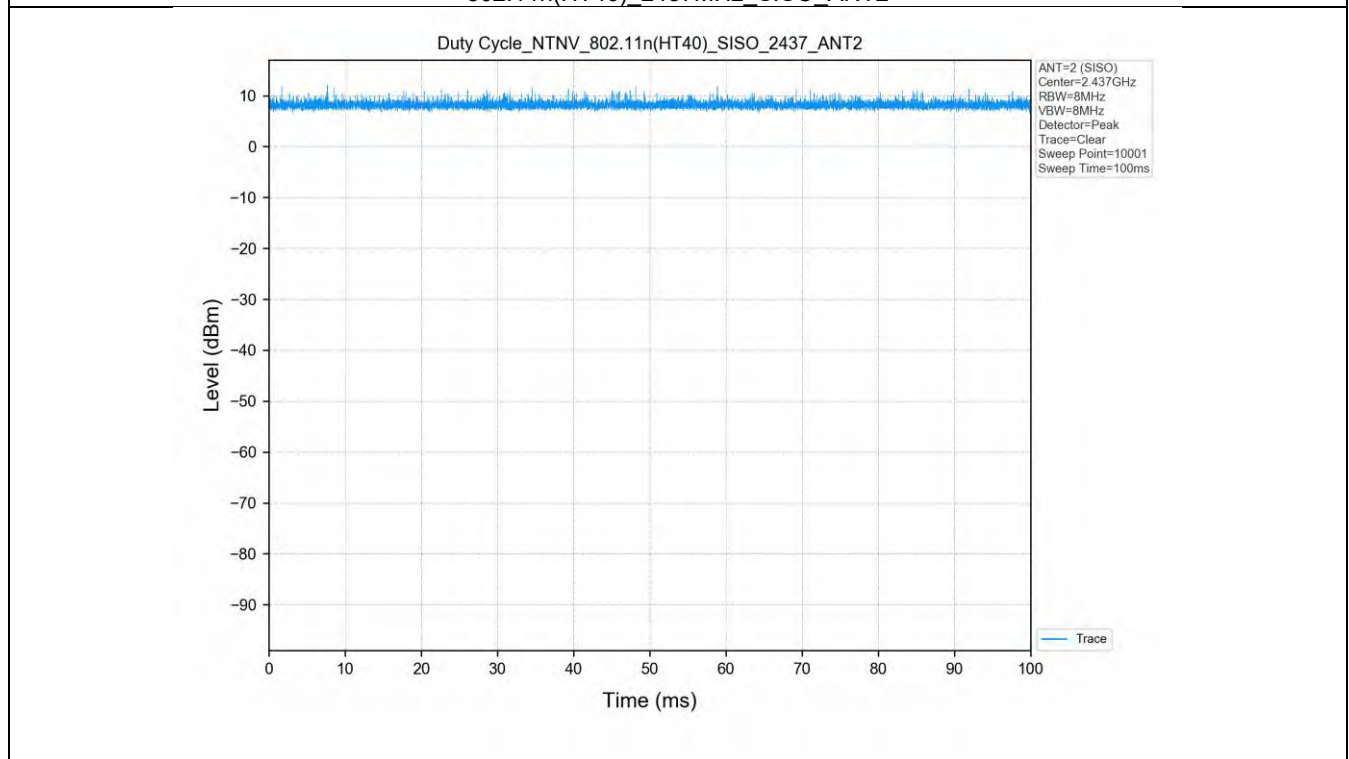
802.11n(HT40)\_2422MHz\_MIMO\_ANT2





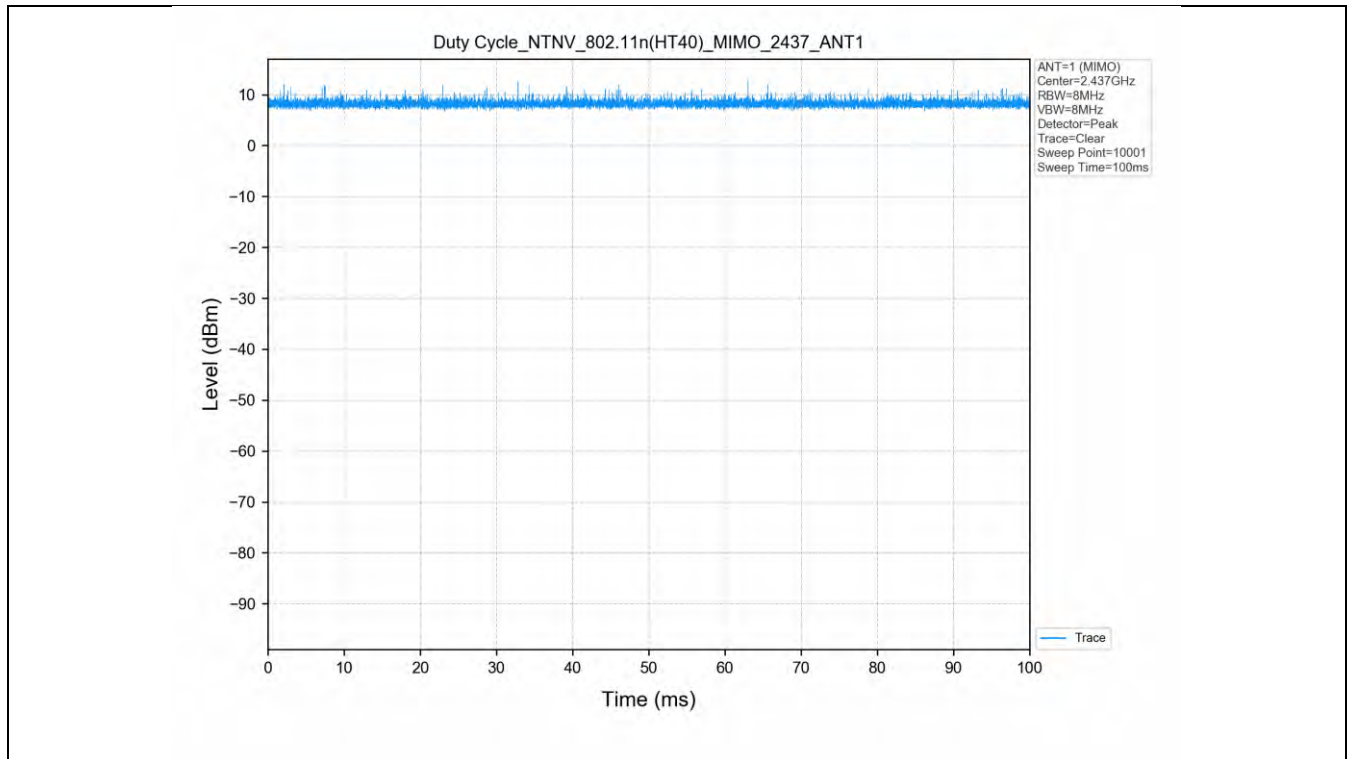


802.11n(HT40)\_2437MHz\_SISO\_ANT2

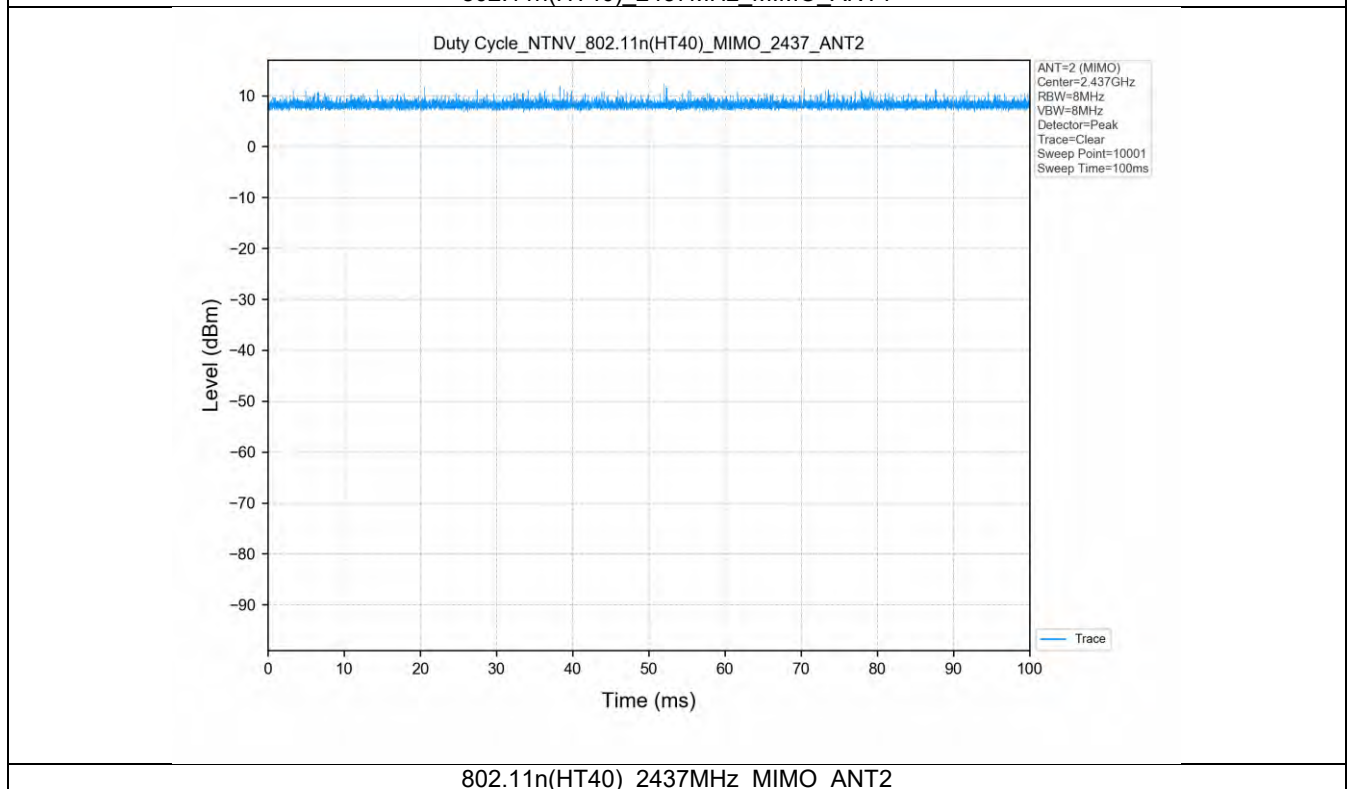


802.11n(HT40)\_2437MHz\_MIMO\_ANT1

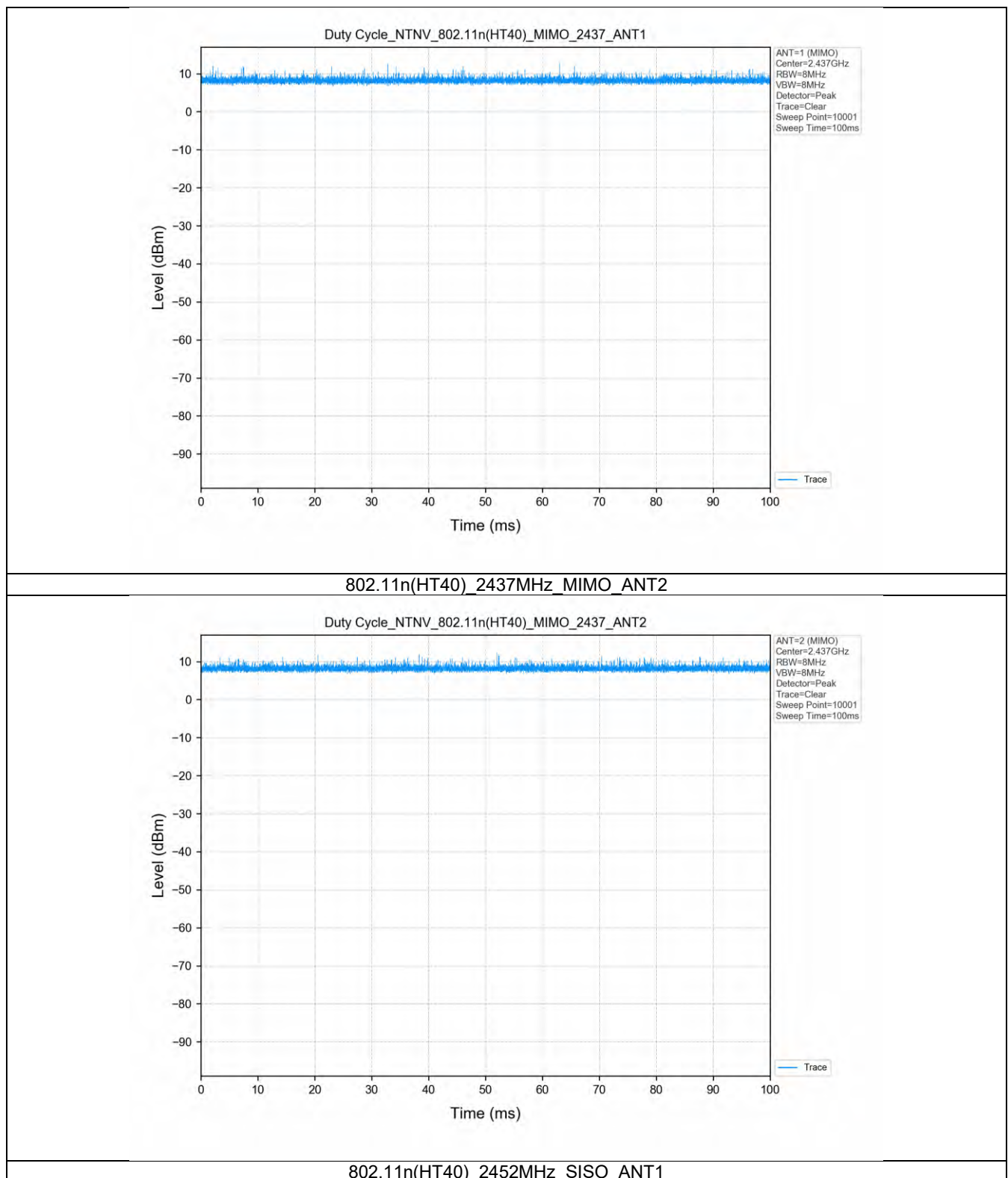


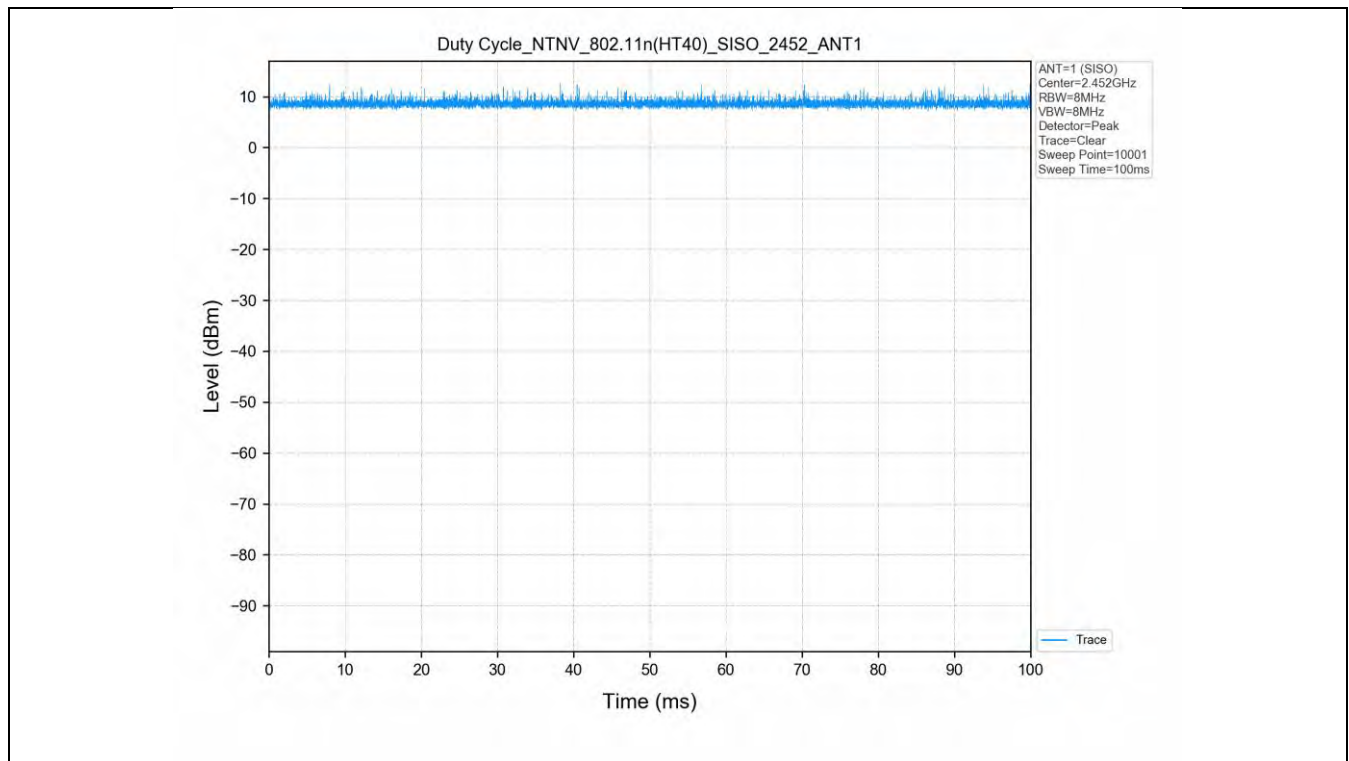


802.11n(HT40)\_2437MHz\_MIMO\_ANT1

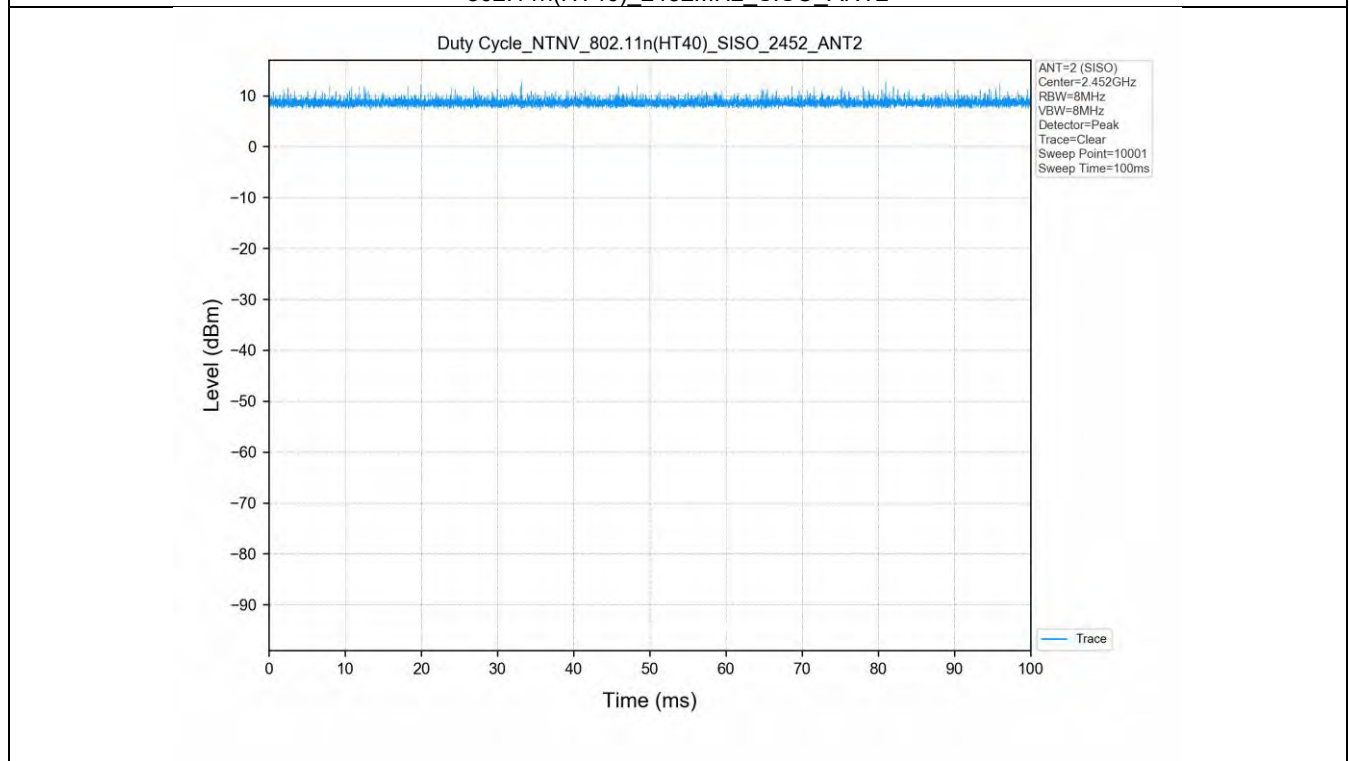


802.11n(HT40)\_2437MHz\_MIMO\_ANT2

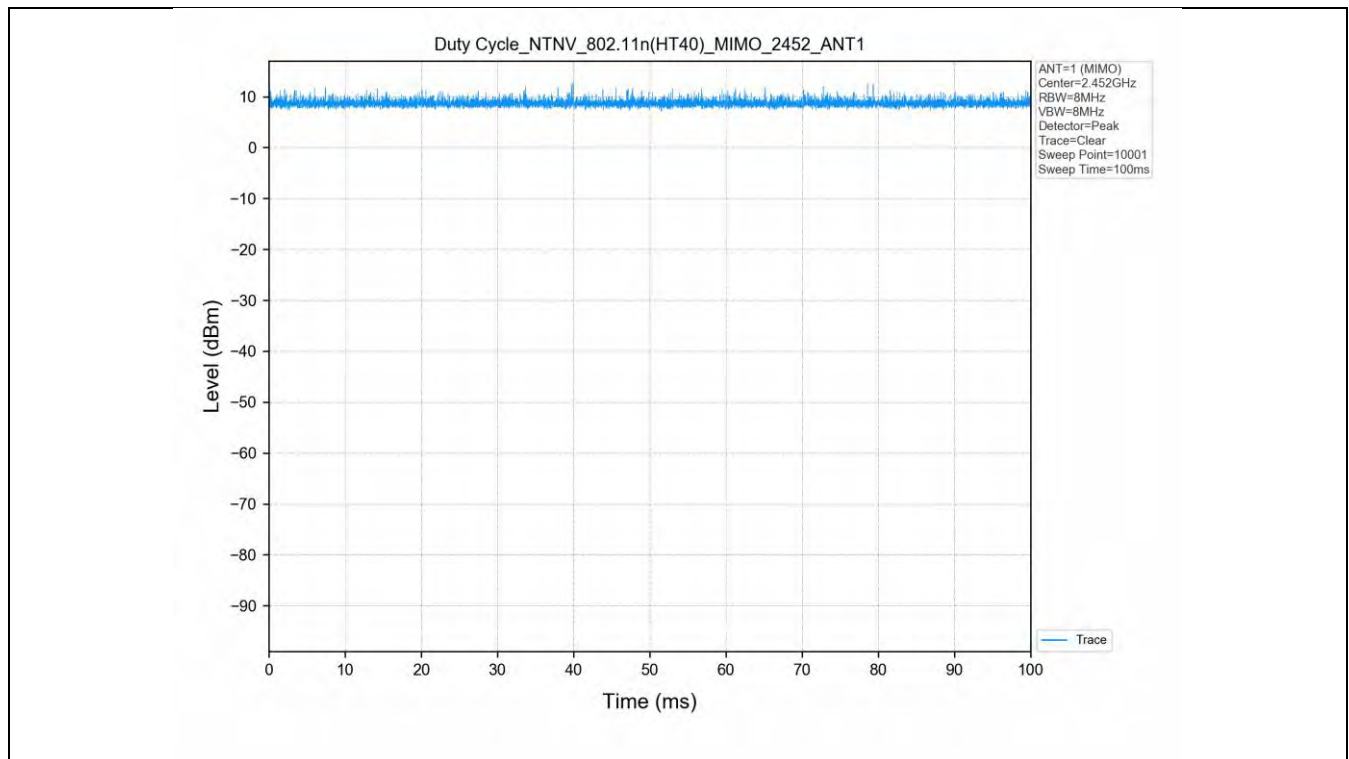




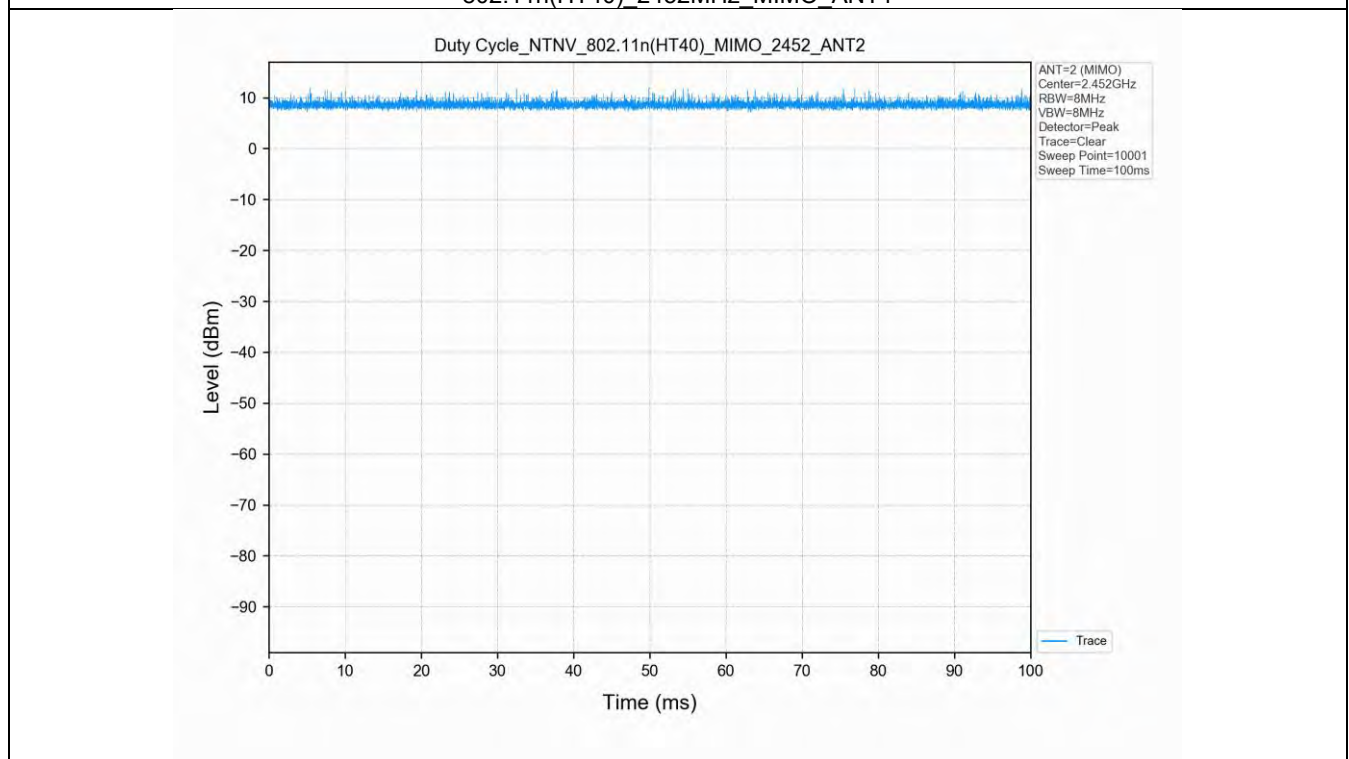
802.11n(HT40)\_2452MHz\_SISO\_ANT2



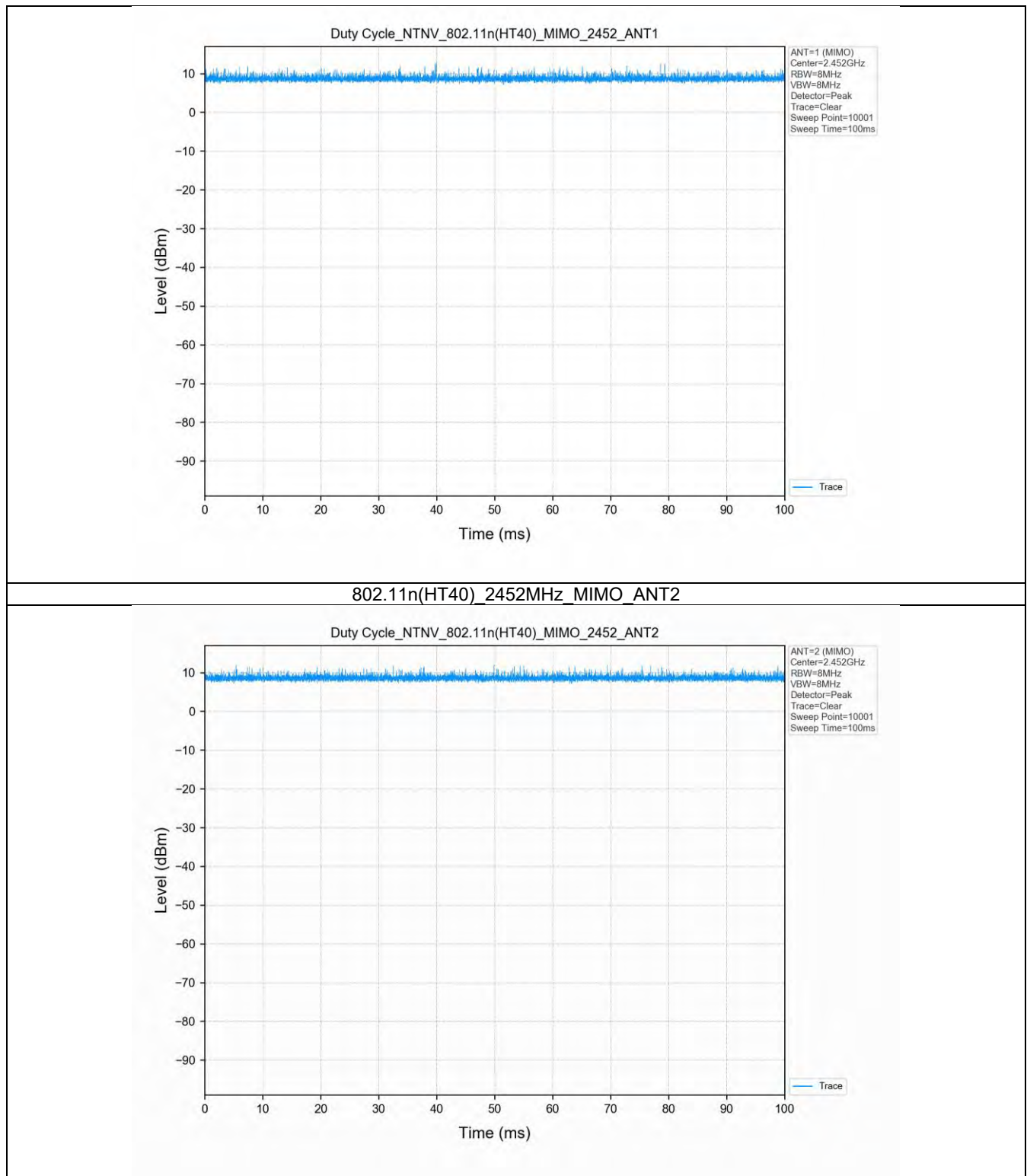
802.11n(HT40)\_2452MHz\_MIMO\_ANT1



802.11n(HT40)\_2452MHz\_MIMO\_ANT1



802.11n(HT40)\_2452MHz\_MIMO\_ANT2





## 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	10.090	≥0.5	PASS
	2437	SISO	1	10.100	≥0.5	PASS
			2	10.100	≥0.5	PASS
	2462	SISO	1	10.060	≥0.5	PASS
			2	10.100	≥0.5	PASS
802.11g	2412	SISO	1	16.620	≥0.5	PASS
			2	16.620	≥0.5	PASS
	2437	SISO	1	16.630	≥0.5	PASS
			2	16.620	≥0.5	PASS
	2462	SISO	1	16.610	≥0.5	PASS
			2	16.610	≥0.5	PASS
802.11n(HT20)	2412	SISO	1	17.860	≥0.5	PASS
			2	17.840	≥0.5	PASS
	2437	MIMO	0	17.850	≥0.5	PASS
			1	17.870	≥0.5	PASS
		SISO	2	17.870	≥0.5	PASS
			0	17.870	≥0.5	PASS
	2462	MIMO	1	17.850	≥0.5	PASS
			2	17.830	≥0.5	PASS
		SISO	0	17.830	≥0.5	PASS
			0	17.830	≥0.5	PASS
802.11n(HT40)	2422	SISO	1	36.470	≥0.5	PASS
			2	36.480	≥0.5	PASS
		MIMO	0	36.470	≥0.5	PASS
	2437	SISO	1	36.540	≥0.5	PASS
			2	36.500	≥0.5	PASS
		MIMO	0	36.530	≥0.5	PASS
	2452	SISO	1	36.510	≥0.5	PASS
			2	36.450	≥0.5	PASS
		MIMO	0	36.480	≥0.5	PASS
			0	36.480	≥0.5	PASS

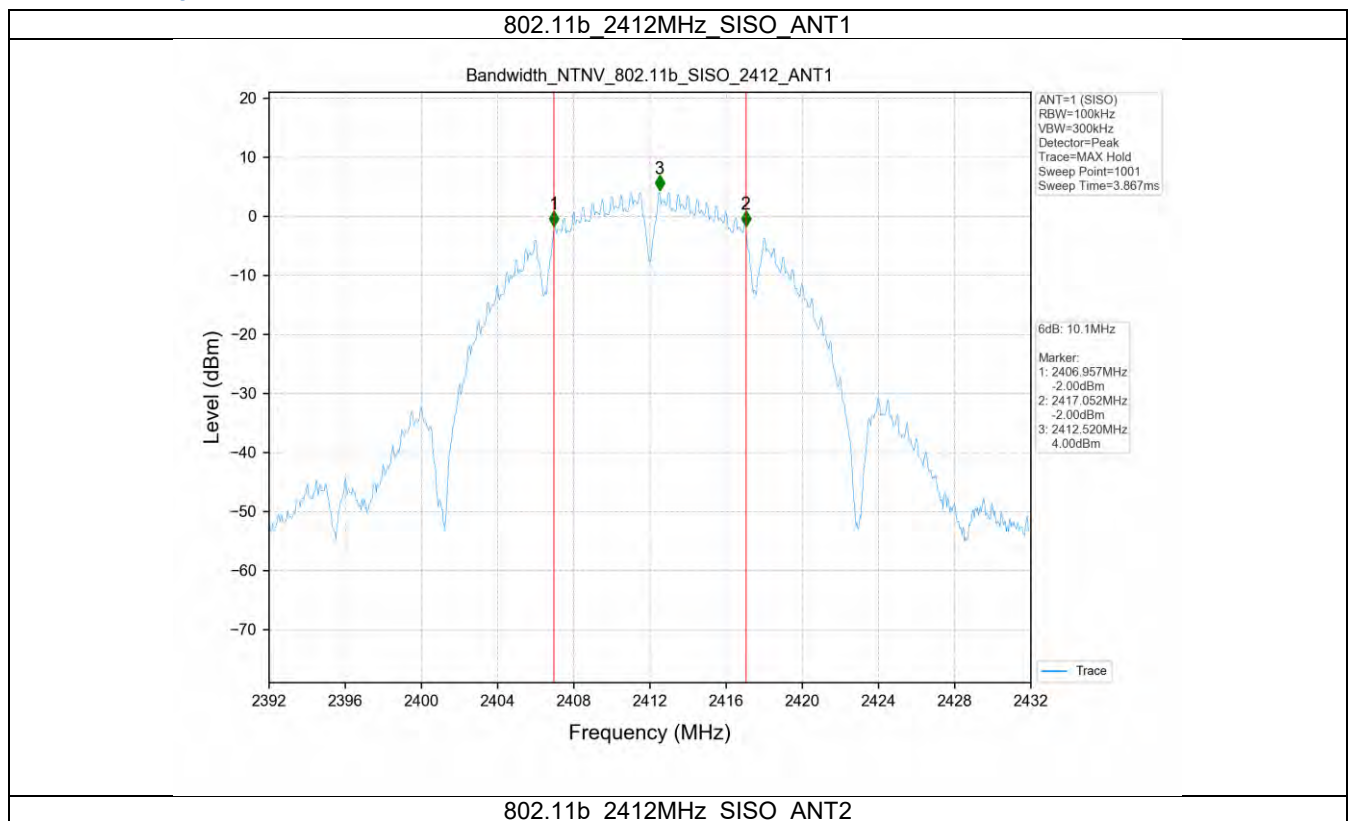
Test Mode	Frequency (MHz)	TX Type	ANT No.	99% Occupied Bandwidth	
				Test Result (MHz)	
802.11b	2412	SISO	1	15.040	Only for Report Use
			2	15.030	Only for Report Use
	2437	SISO	1	15.070	Only for Report Use
			2	15.070	Only for Report Use
	2462	SISO	1	15.030	Only for Report Use
			2	15.030	Only for Report Use
802.11g	2412	SISO	1	17.010	Only for Report Use
			2	16.980	Only for Report Use
	2437	SISO	1	17.070	Only for Report Use
			2	17.030	Only for Report Use
	2462	SISO	1	17.020	Only for Report Use
			2	17.020	Only for Report Use
802.11n(HT20)	2412	SISO	1	18.040	Only for Report Use
			2	18.040	Only for Report Use
		MIMO	0	18.030	Only for Report Use

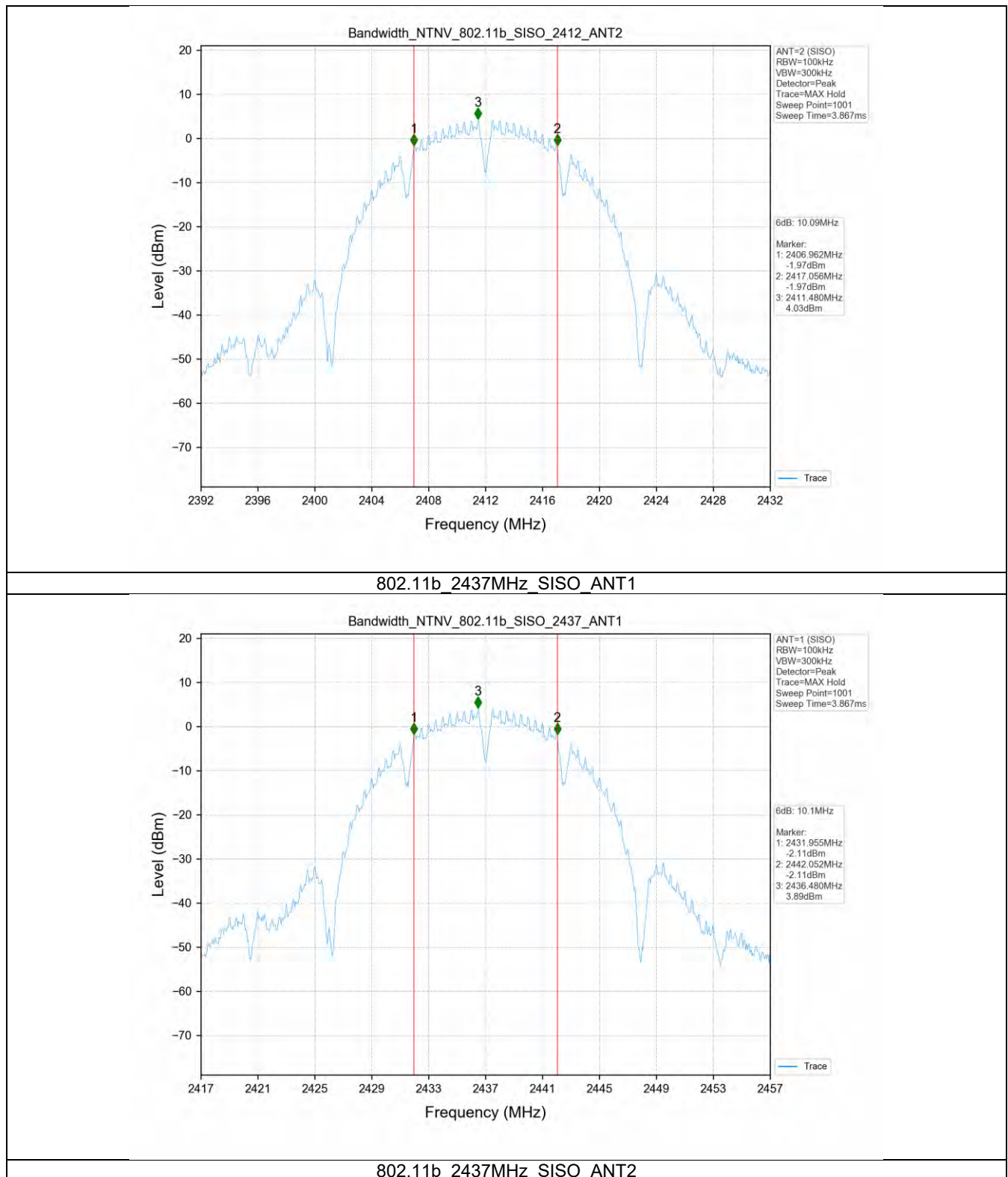


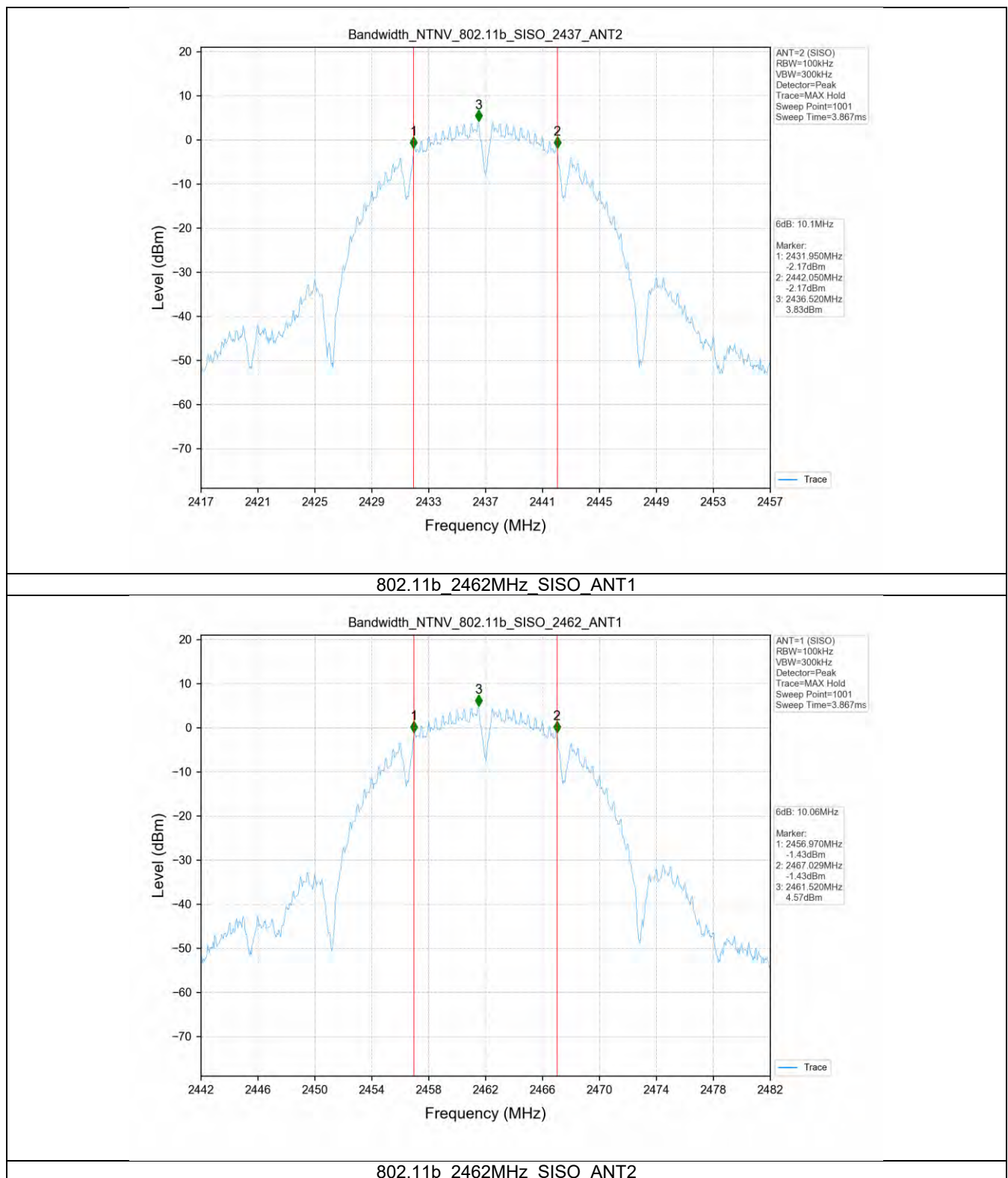


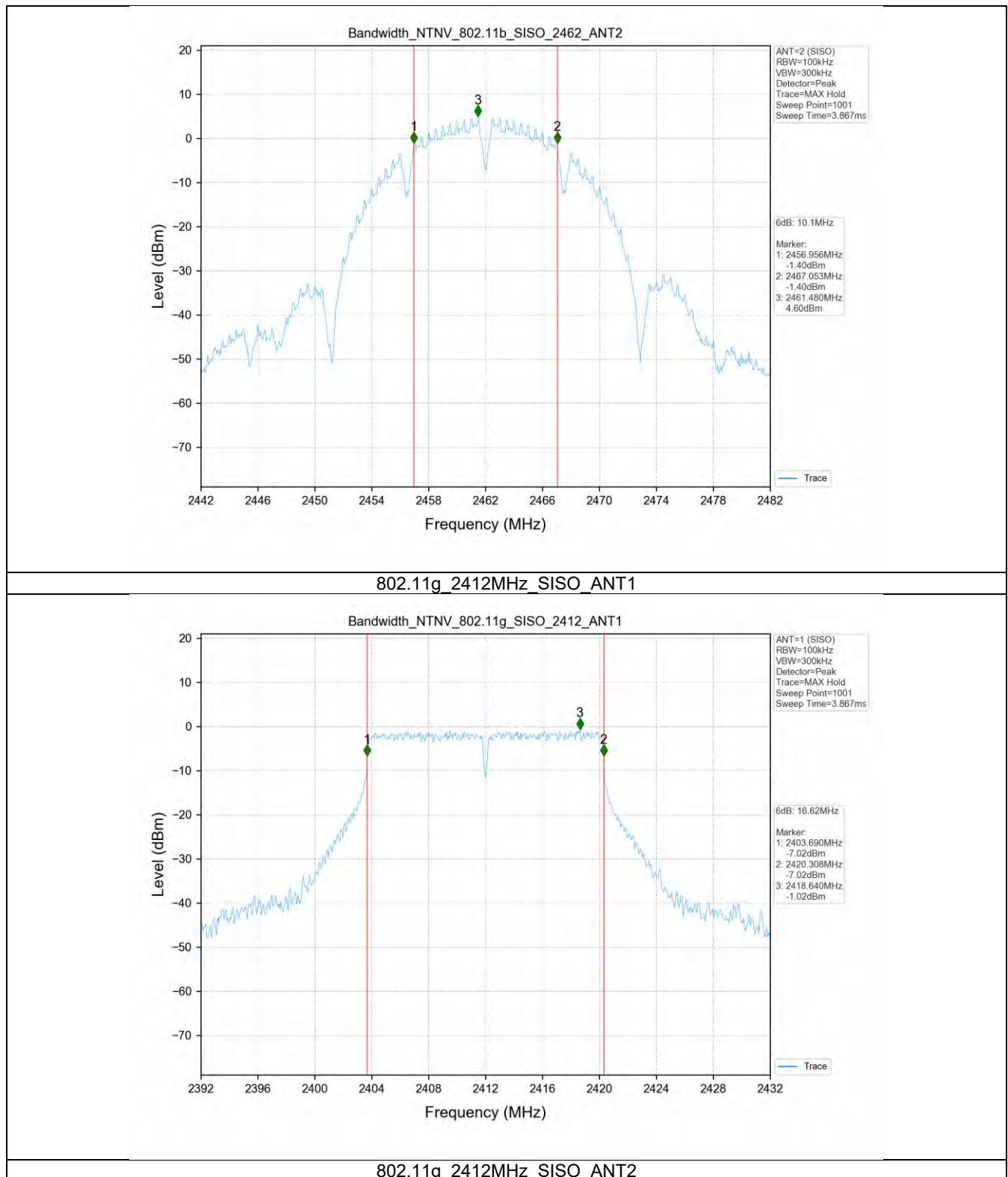
	2437	SISO	1	18.080	Only for Report Use
			2	18.100	Only for Report Use
		MIMO	0	18.090	Only for Report Use
	2462	SISO	1	18.040	Only for Report Use
			2	18.040	Only for Report Use
		MIMO	0	18.060	Only for Report Use
802.11n(HT40)	2422	SISO	1	36.660	Only for Report Use
			2	36.630	Only for Report Use
		MIMO	0	36.700	Only for Report Use
	2437	SISO	1	36.860	Only for Report Use
			2	36.800	Only for Report Use
		MIMO	0	36.800	Only for Report Use
	2452	SISO	1	36.710	Only for Report Use
			2	36.660	Only for Report Use
		MIMO	0	36.690	Only for Report Use

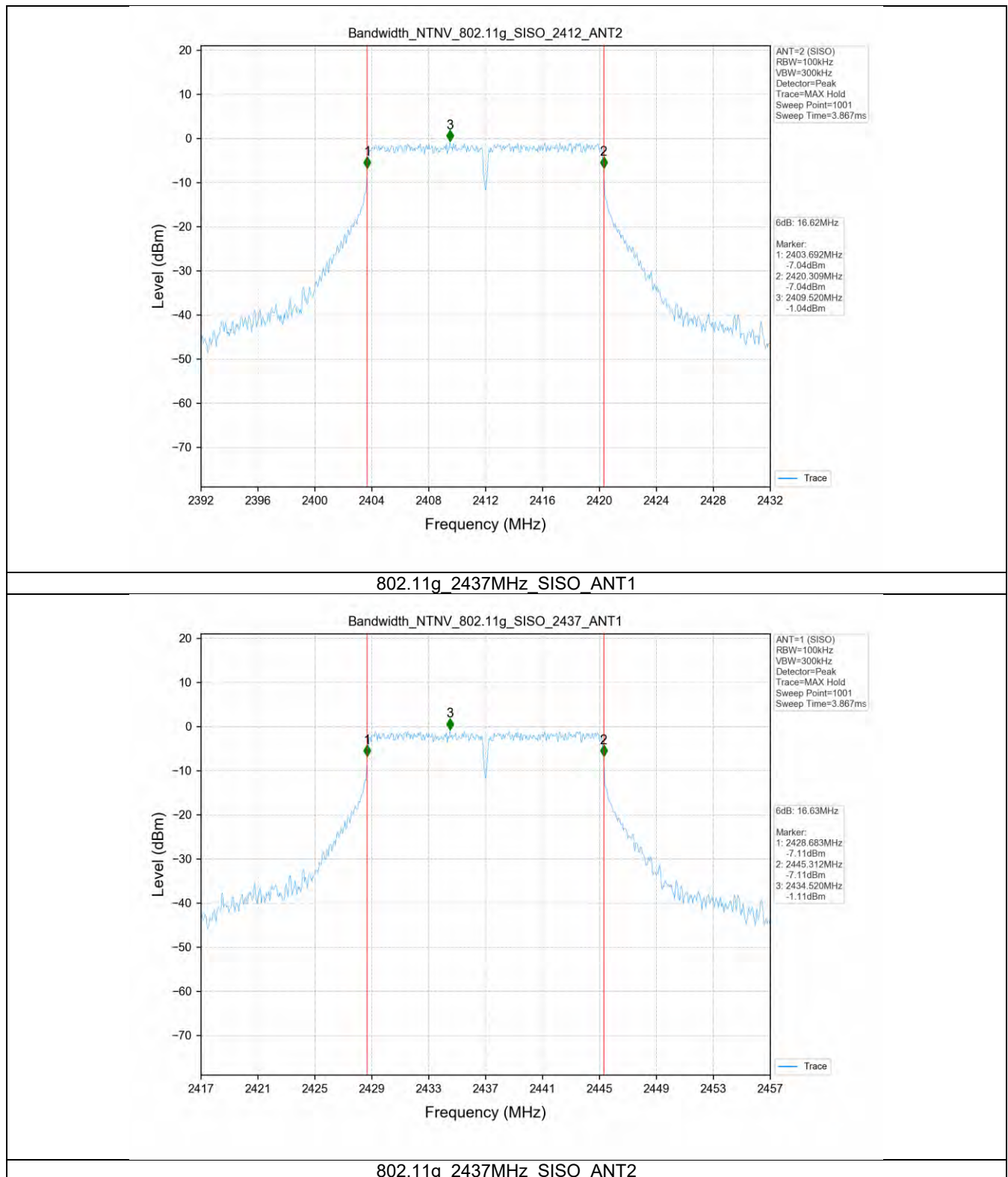
## 2.2 Test Graph - 6dB Bandwidth



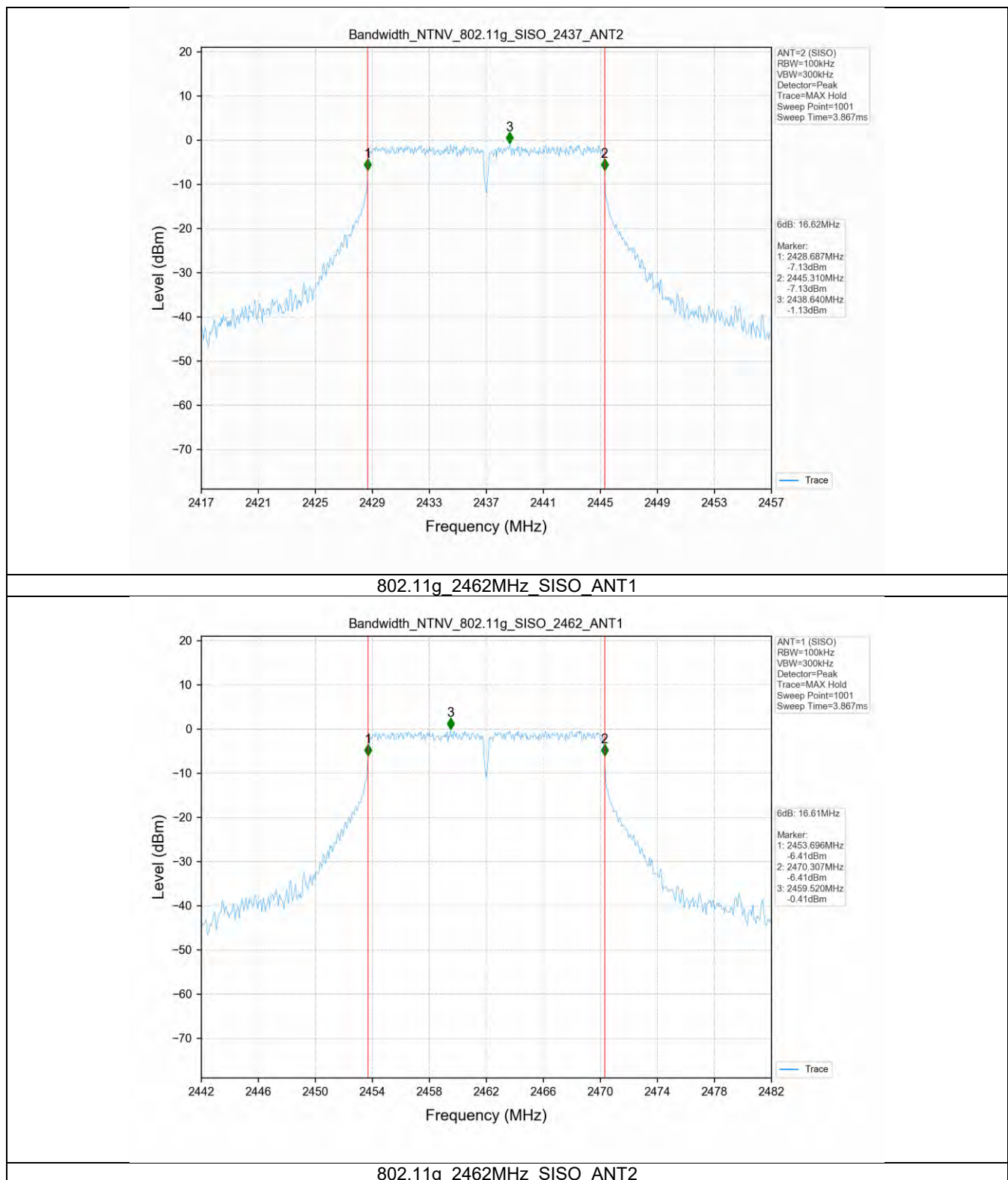




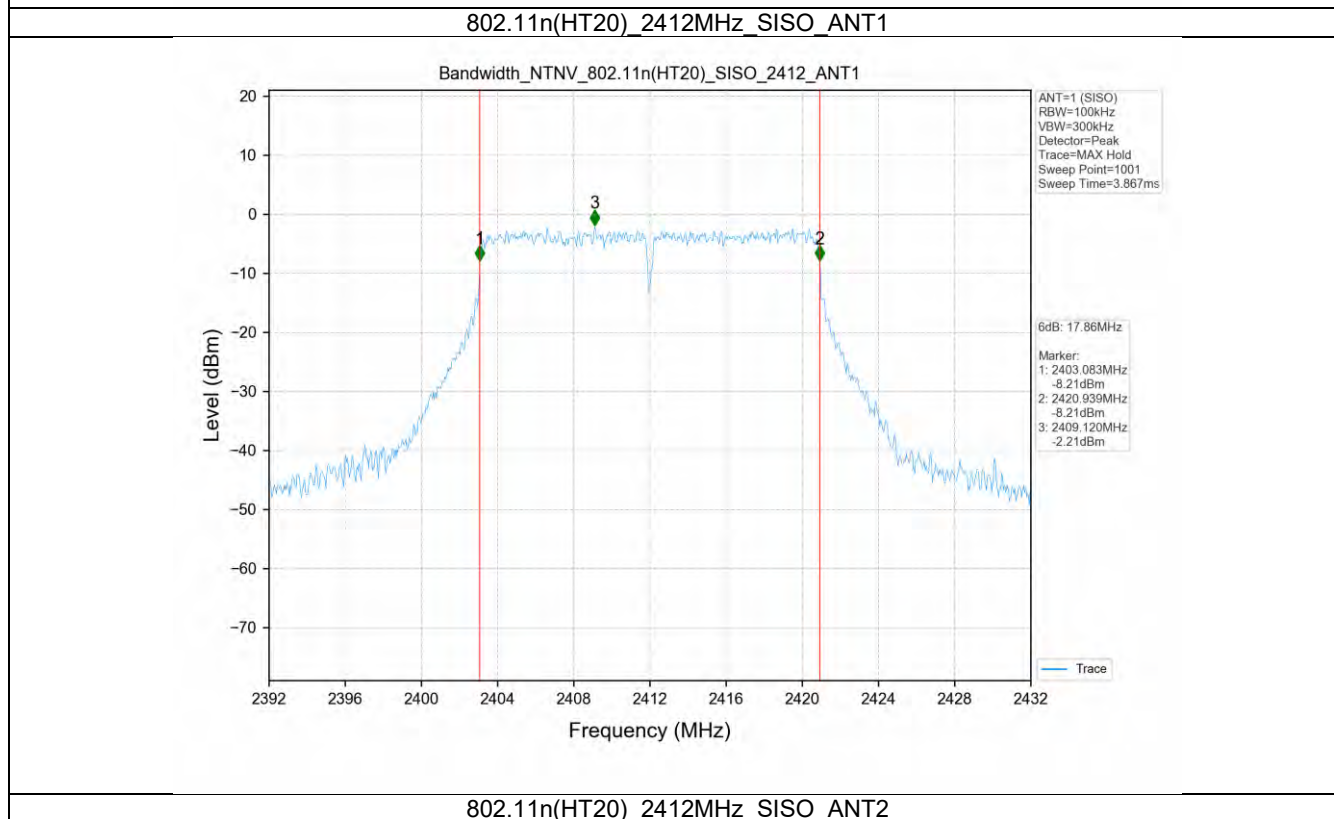
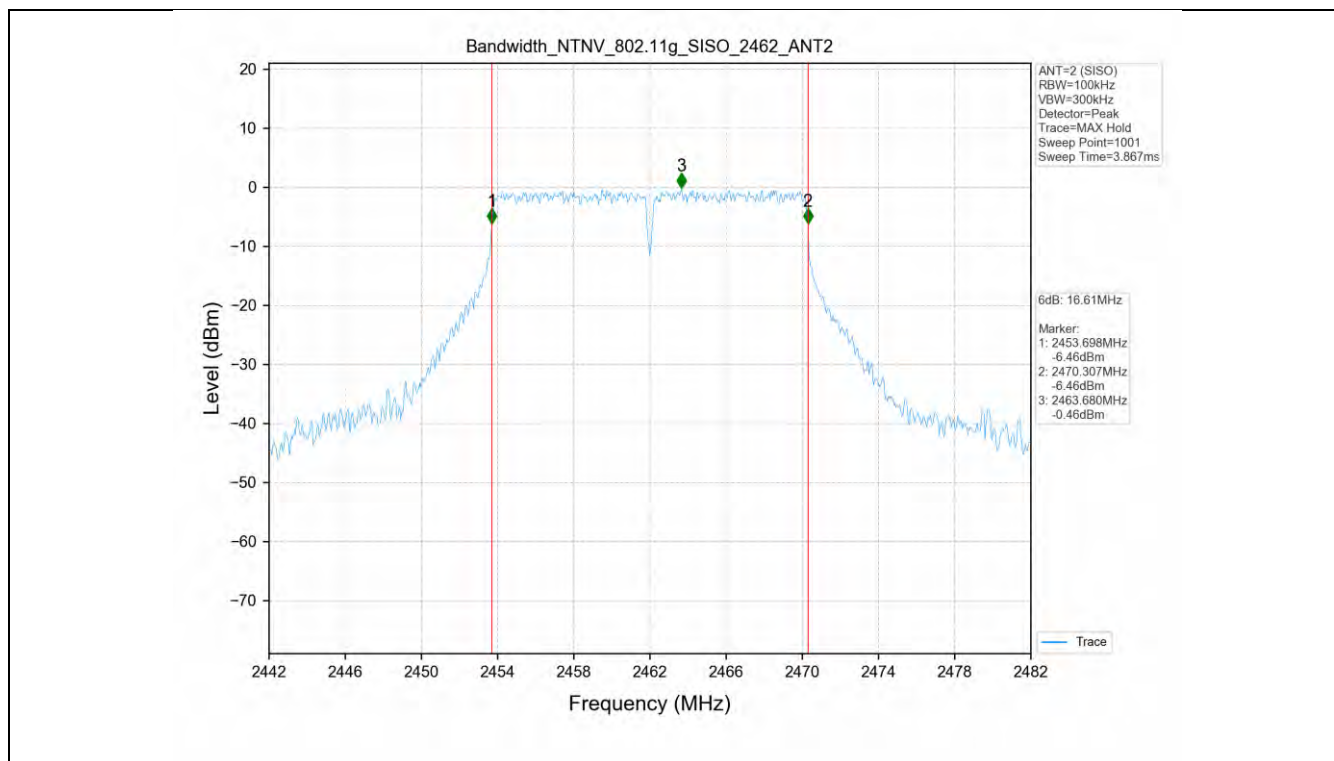


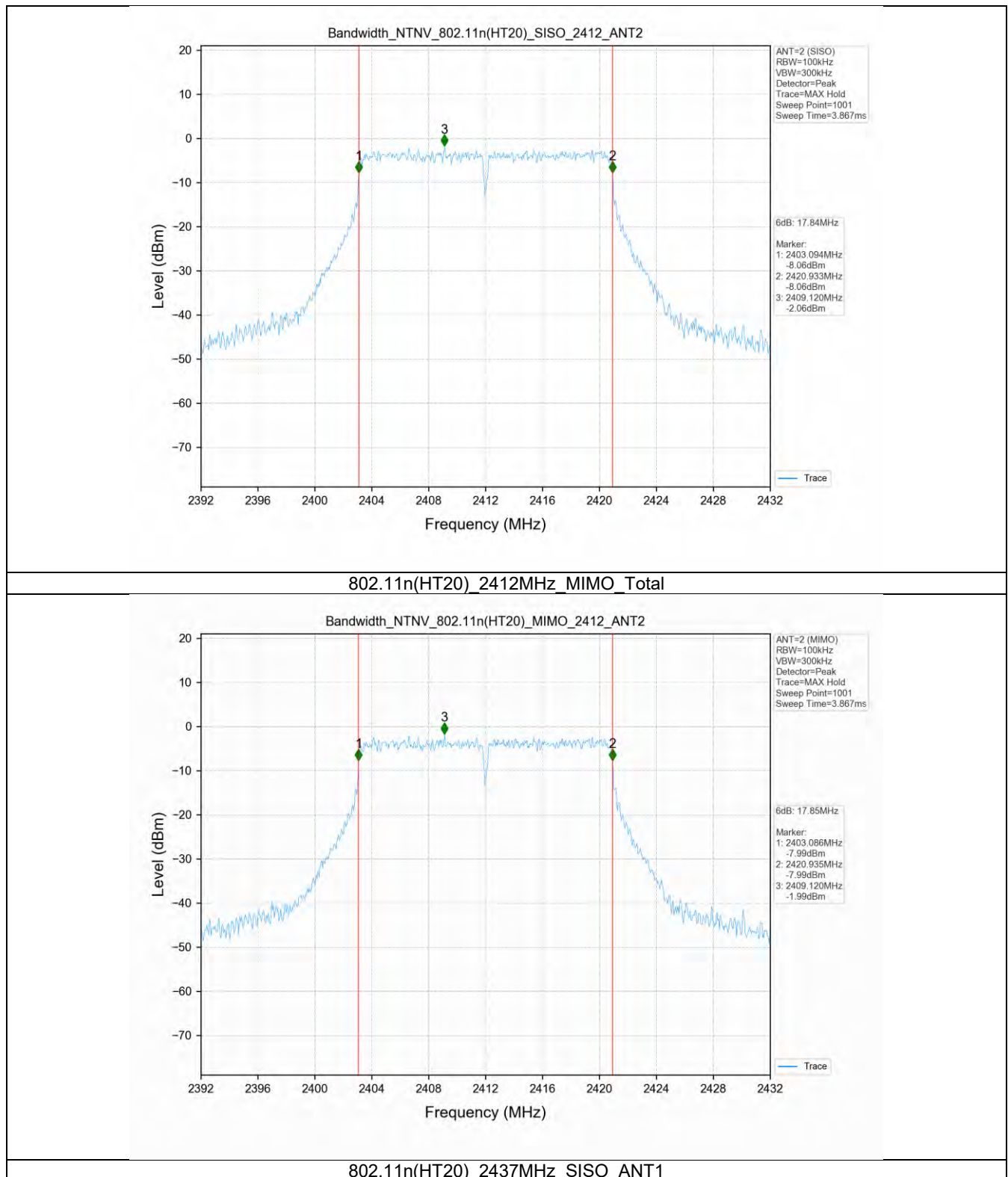


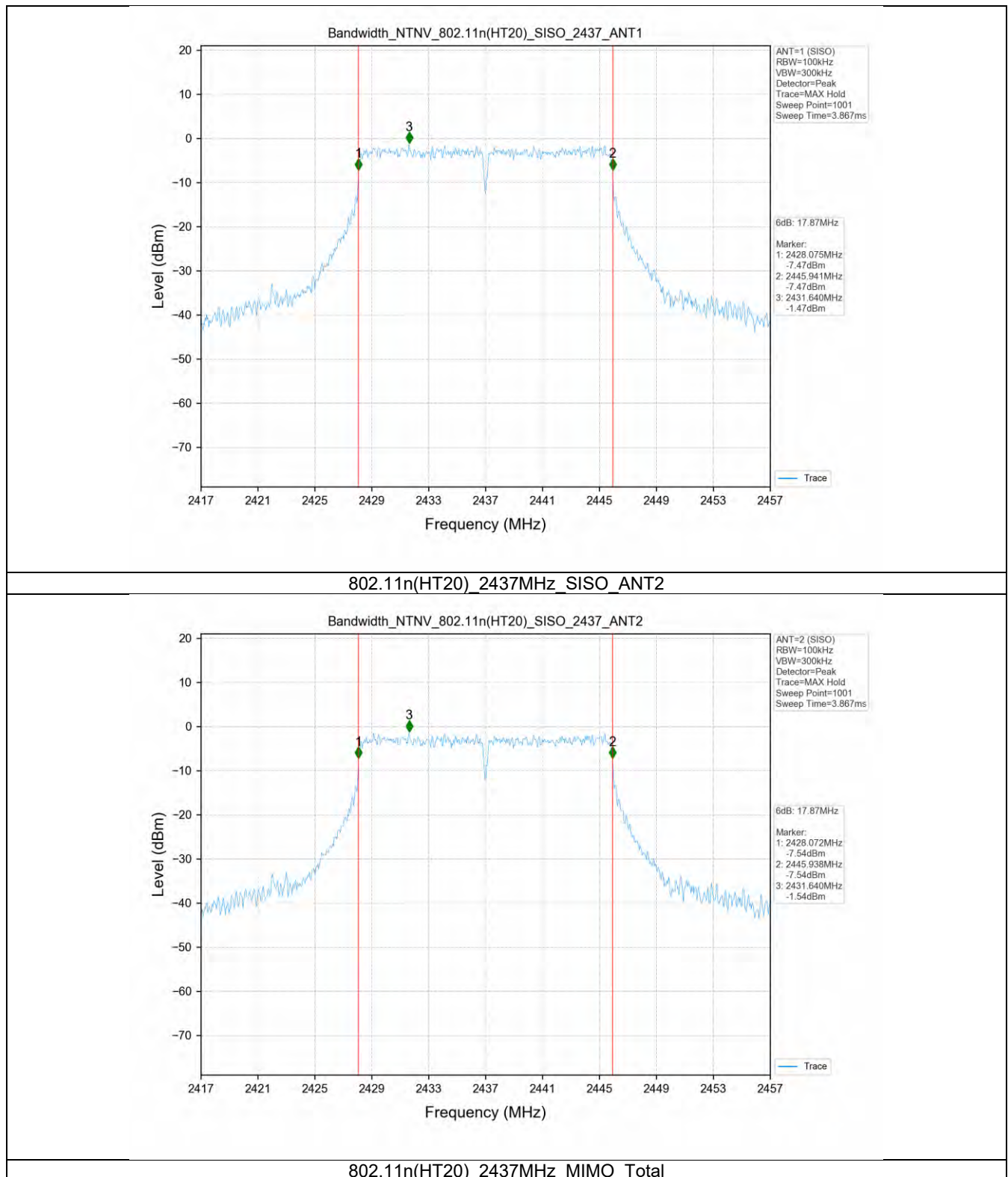


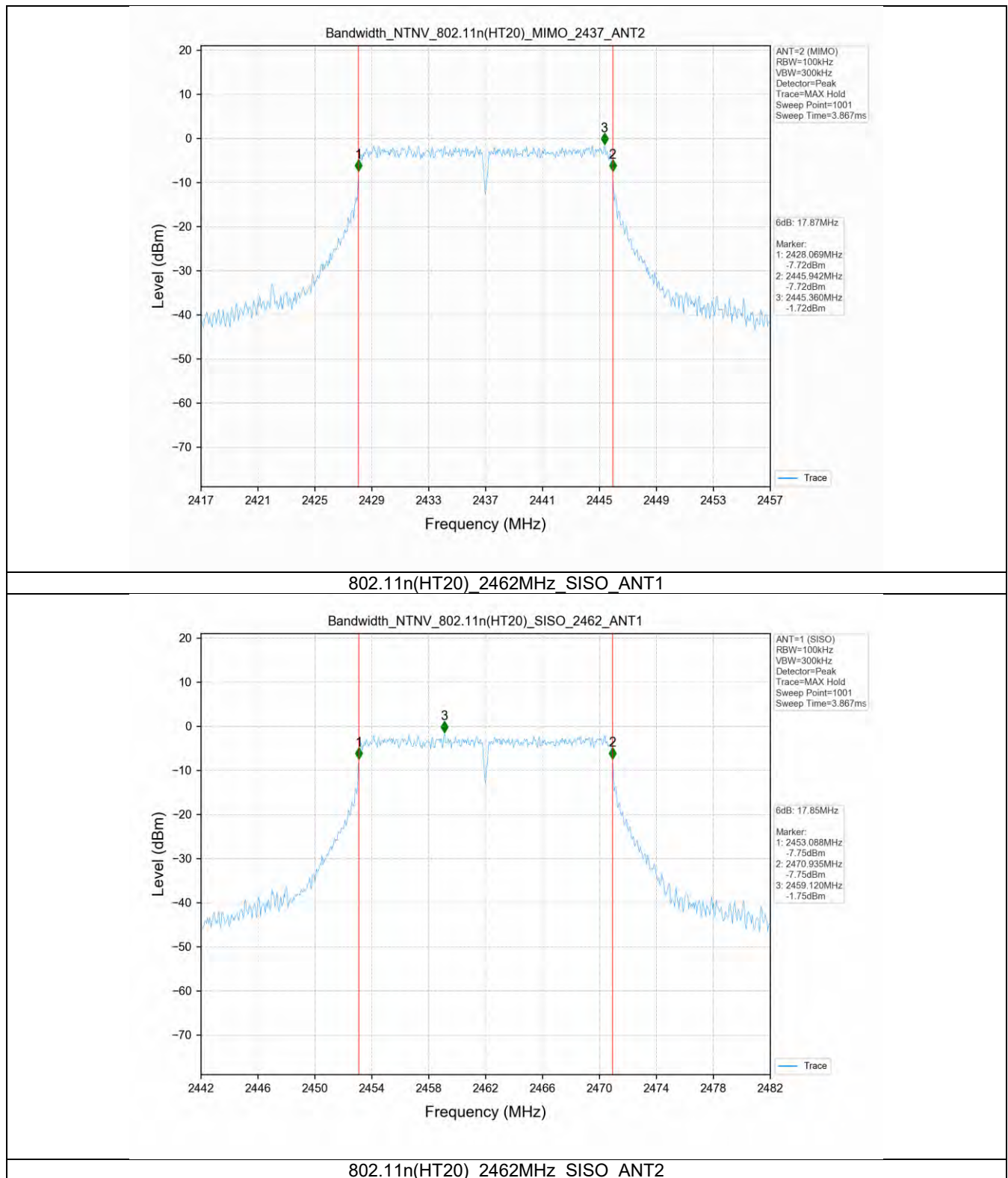




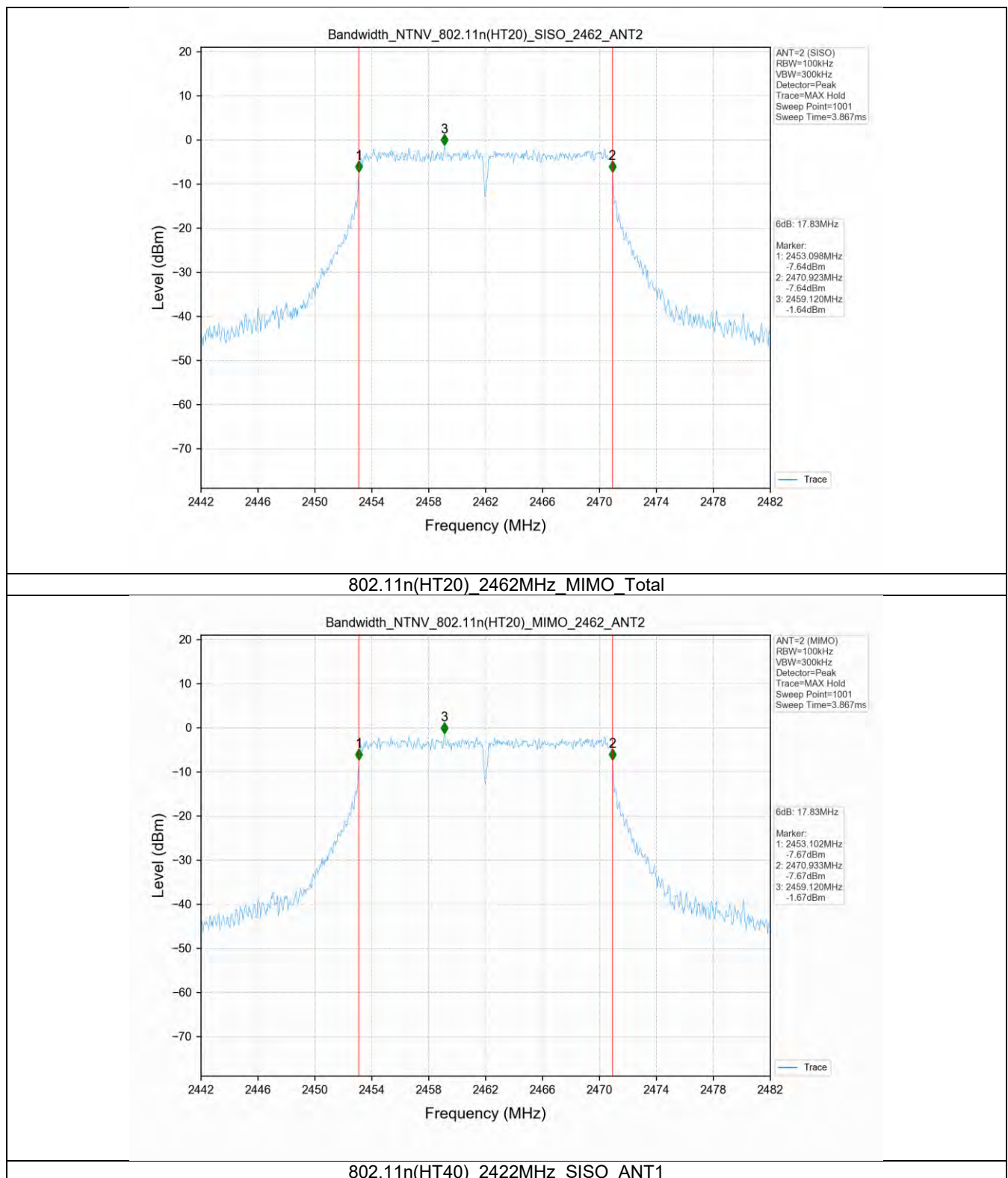


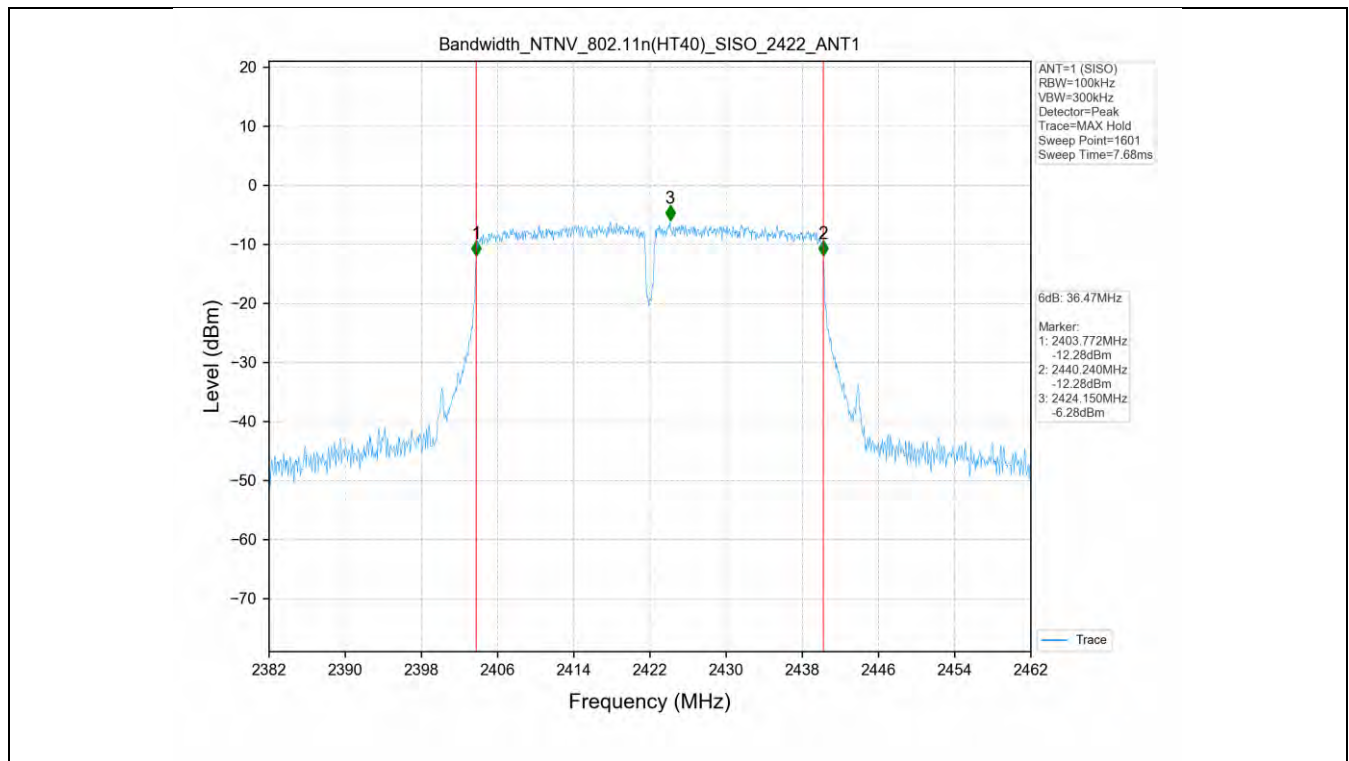




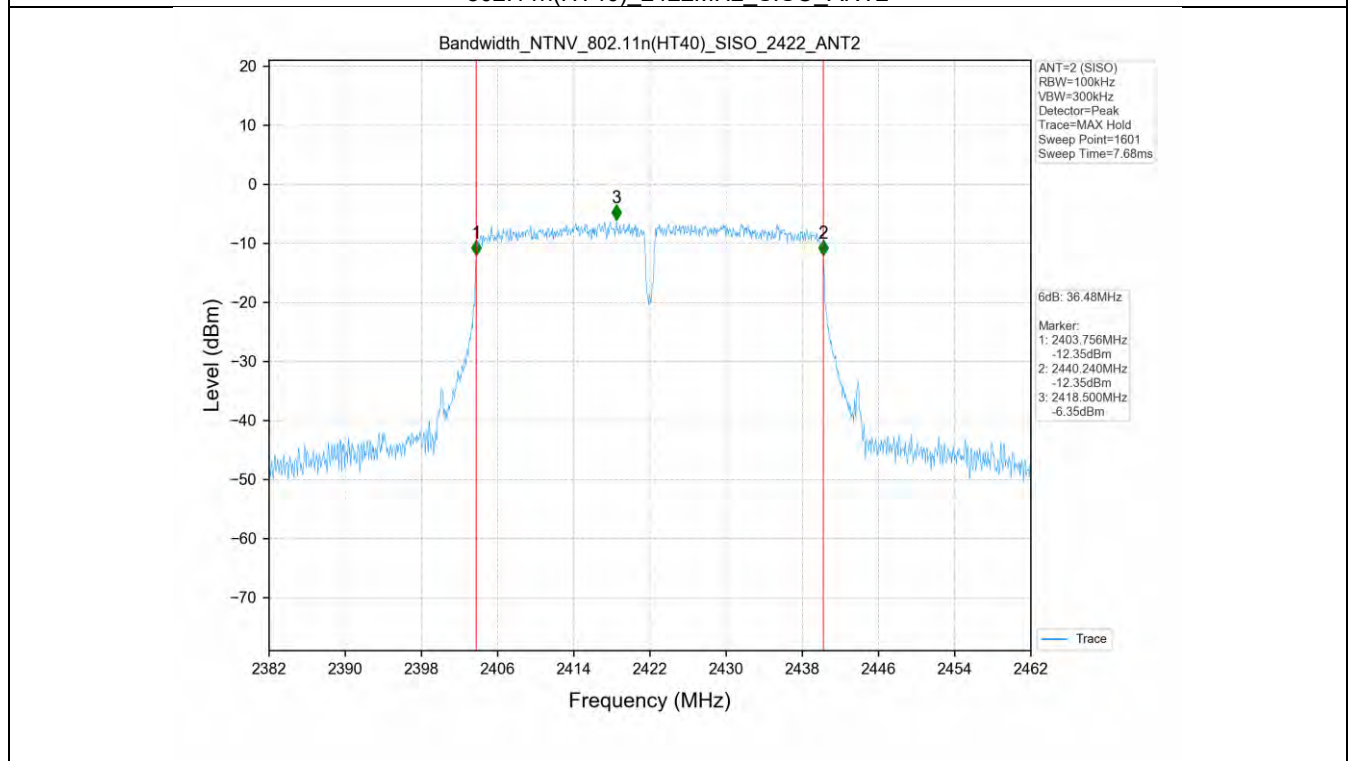






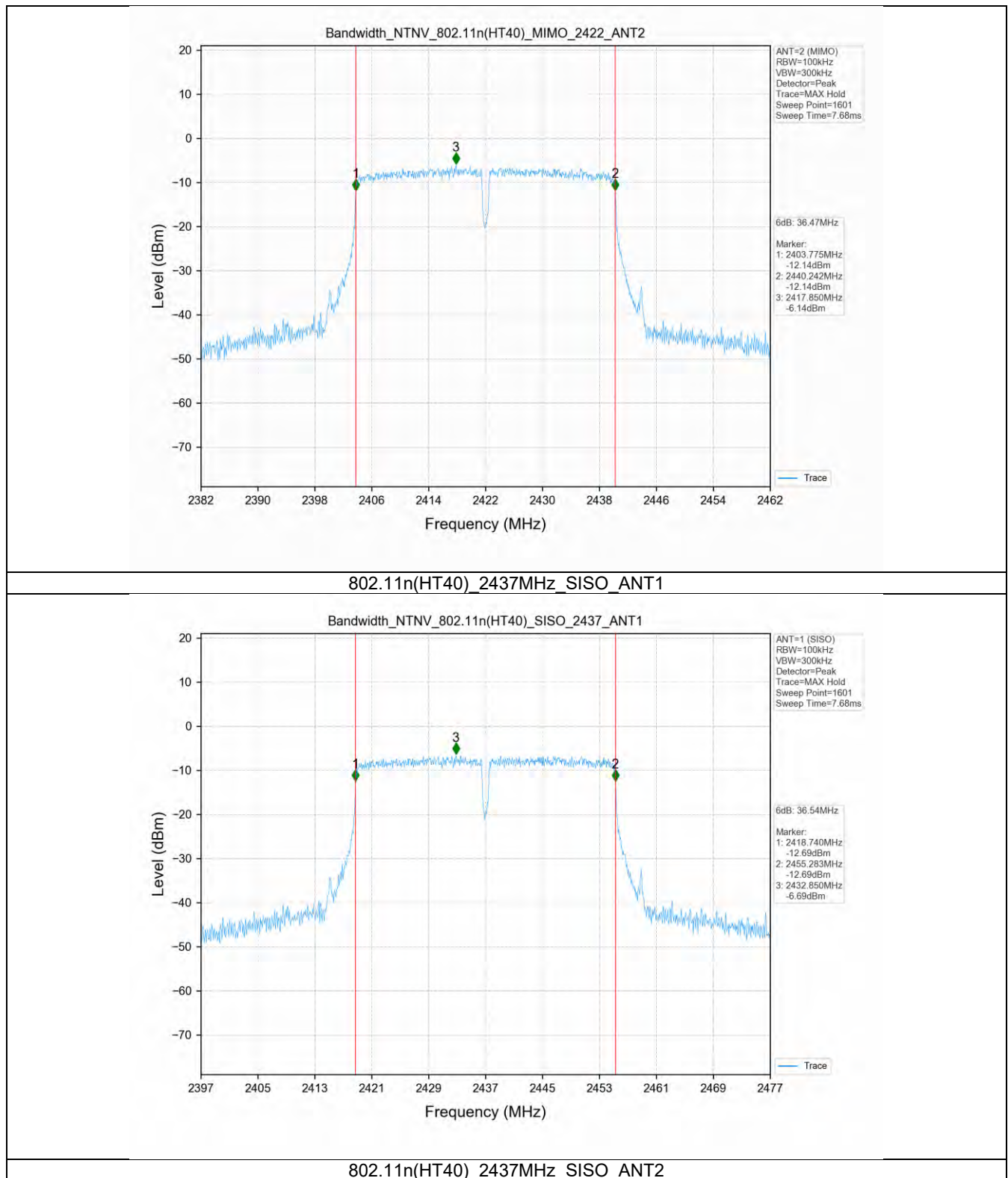


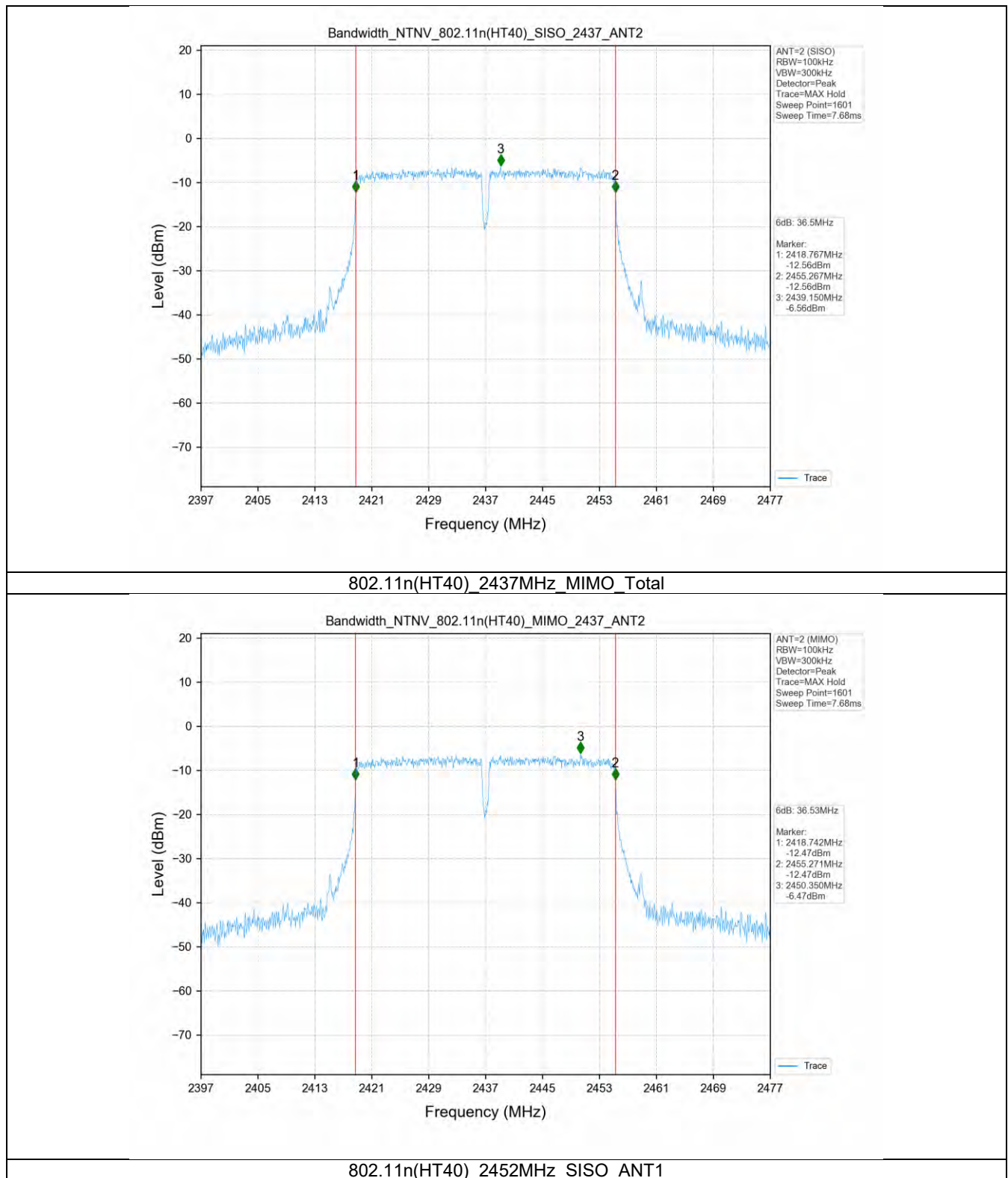
802.11n(HT40)\_2422MHz\_SISO\_ANT2

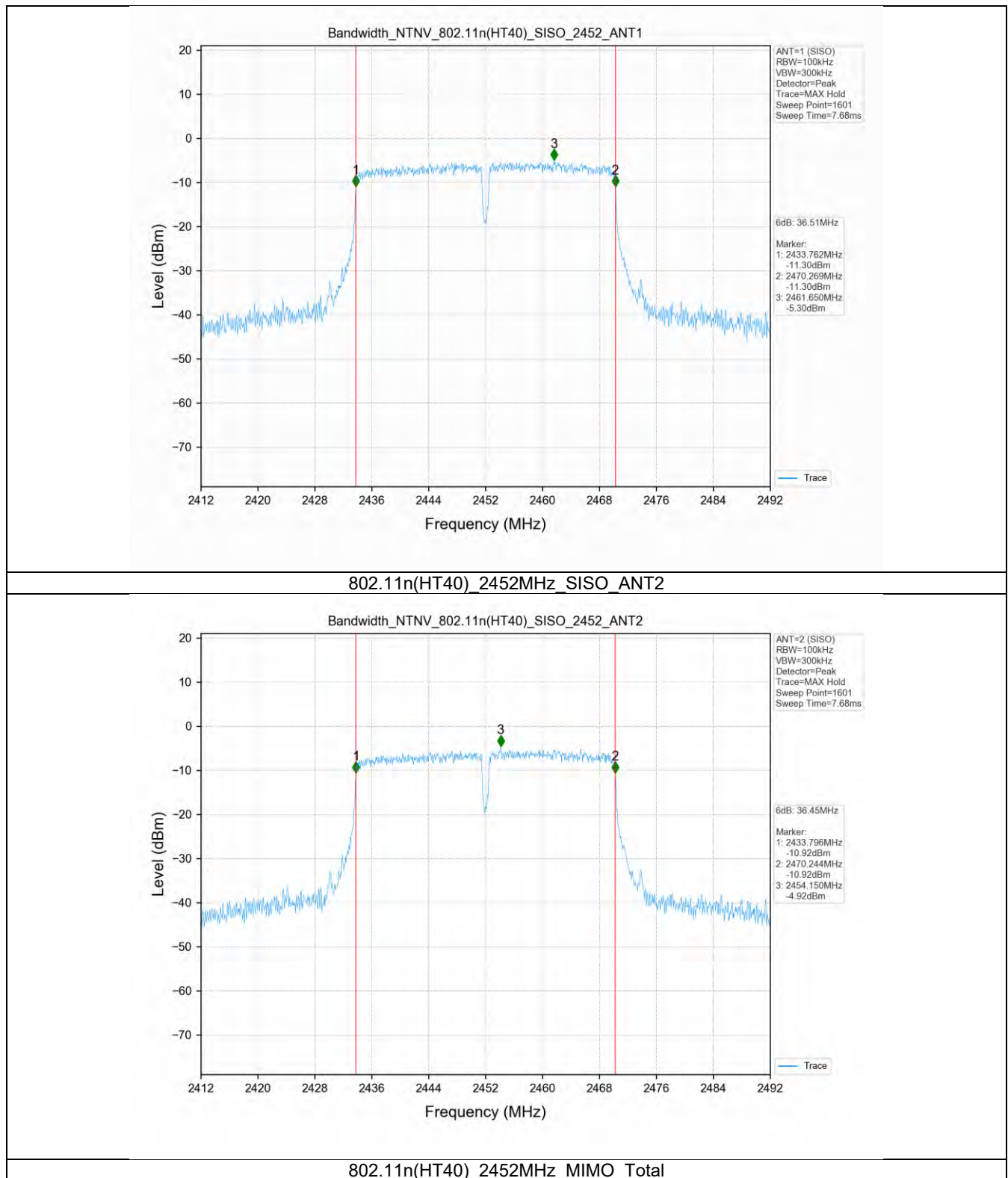


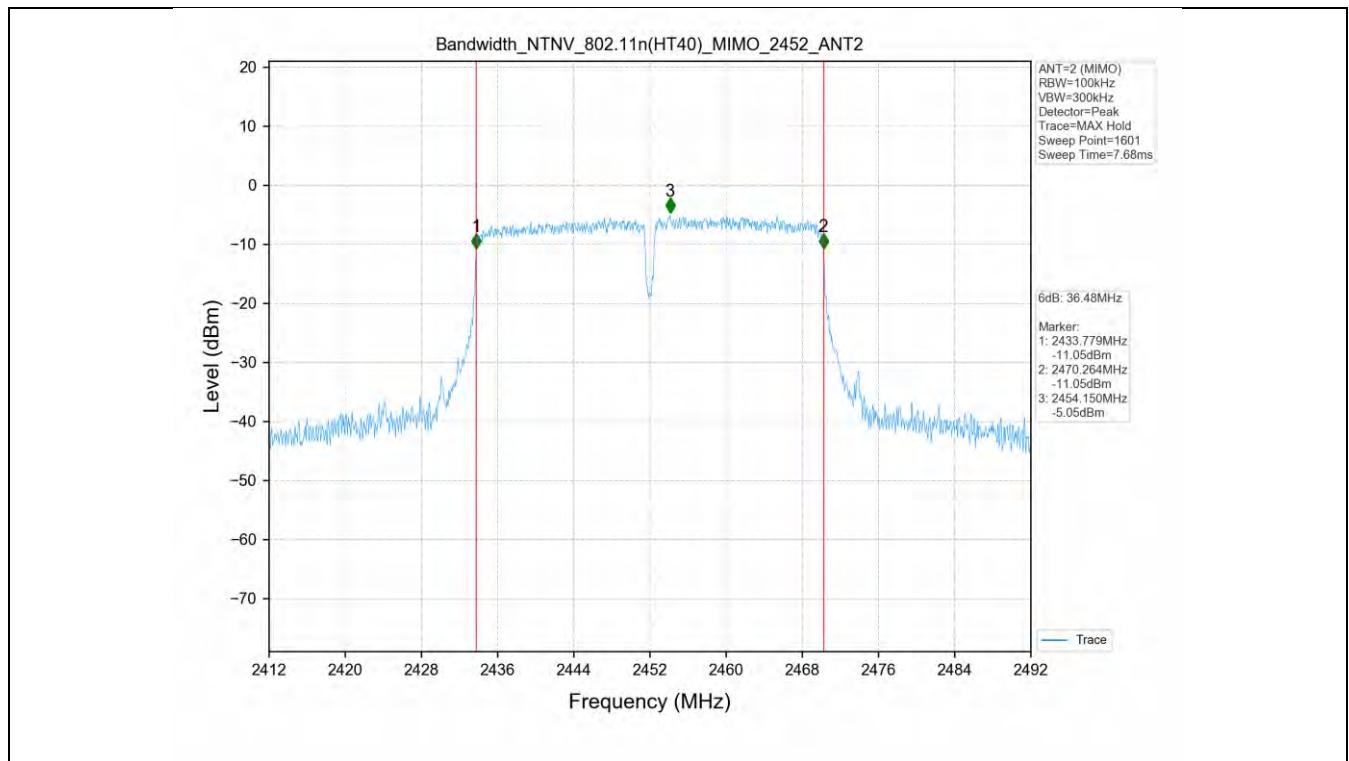
802.11n(HT40)\_2422MHz\_MIMO\_Total



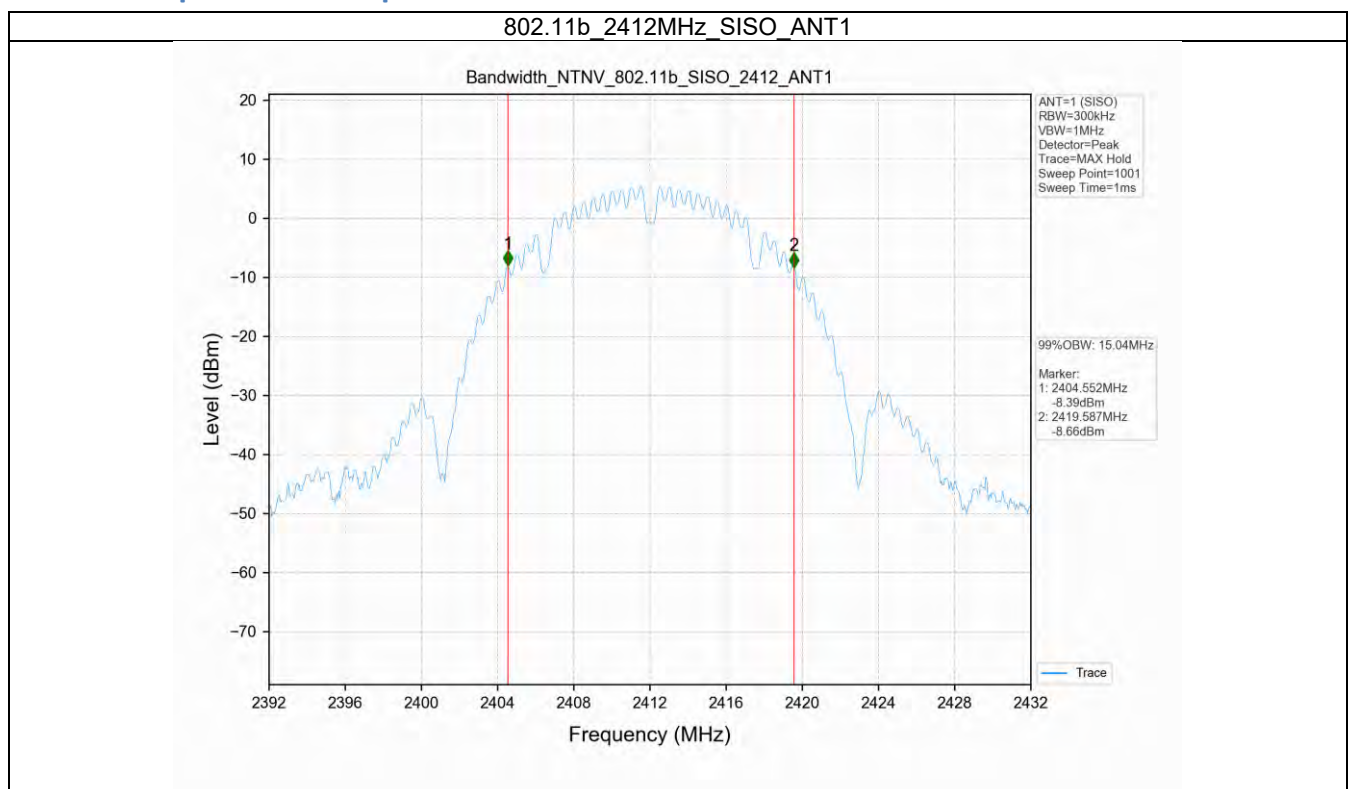








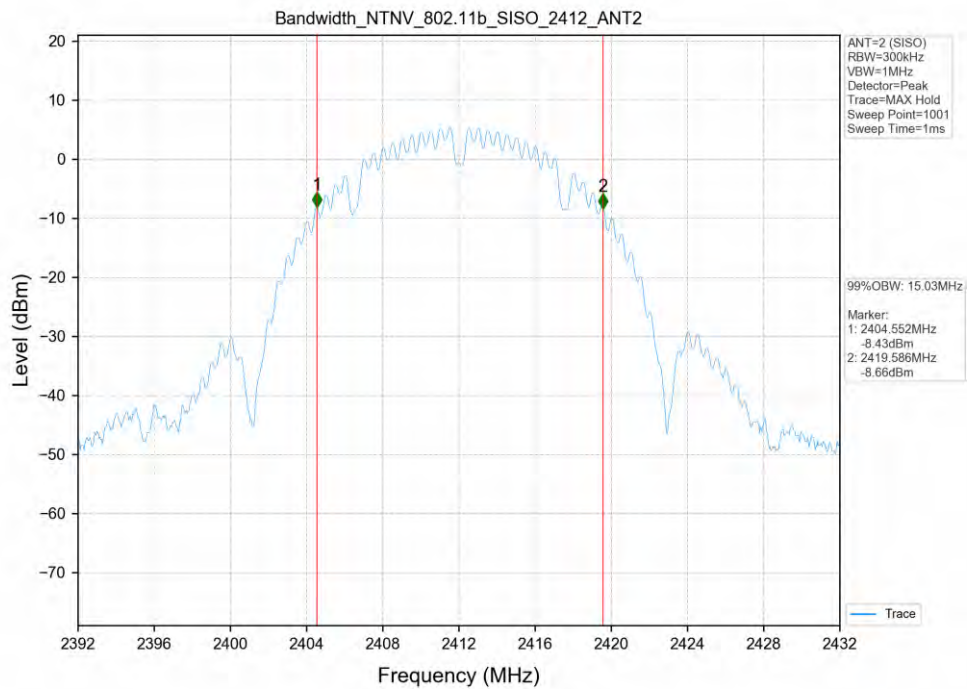
## 2.3 Test Graph - 99% Occupied Bandwidth



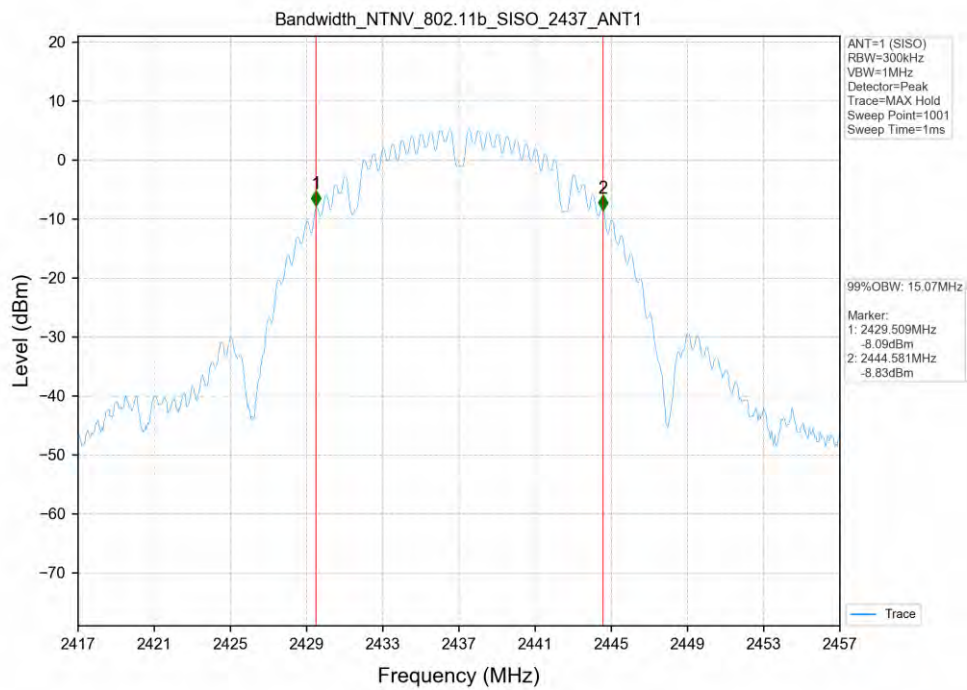




802.11b\_2412MHz\_SISO\_ANT2

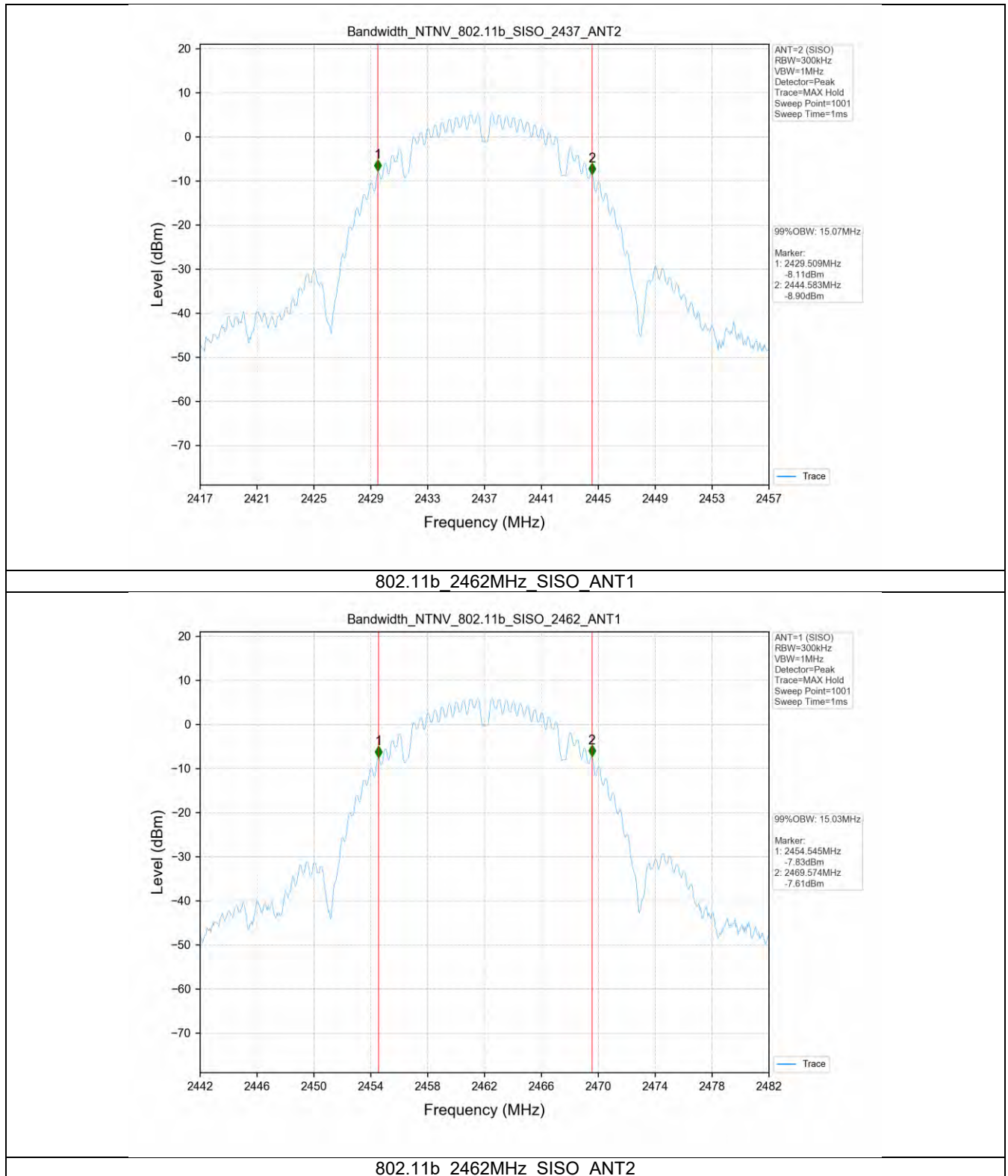


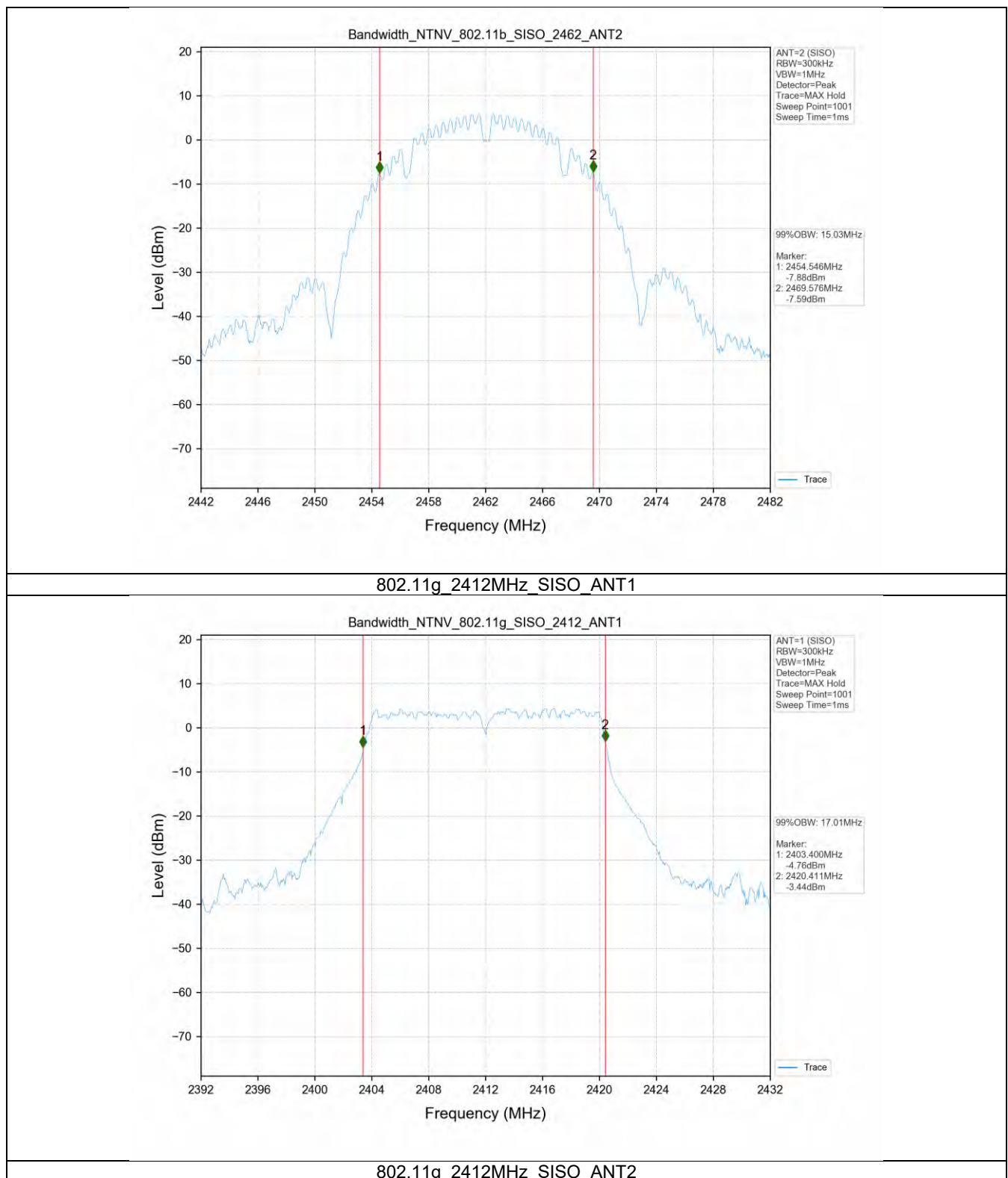
802.11b\_2437MHz\_SISO\_ANT1

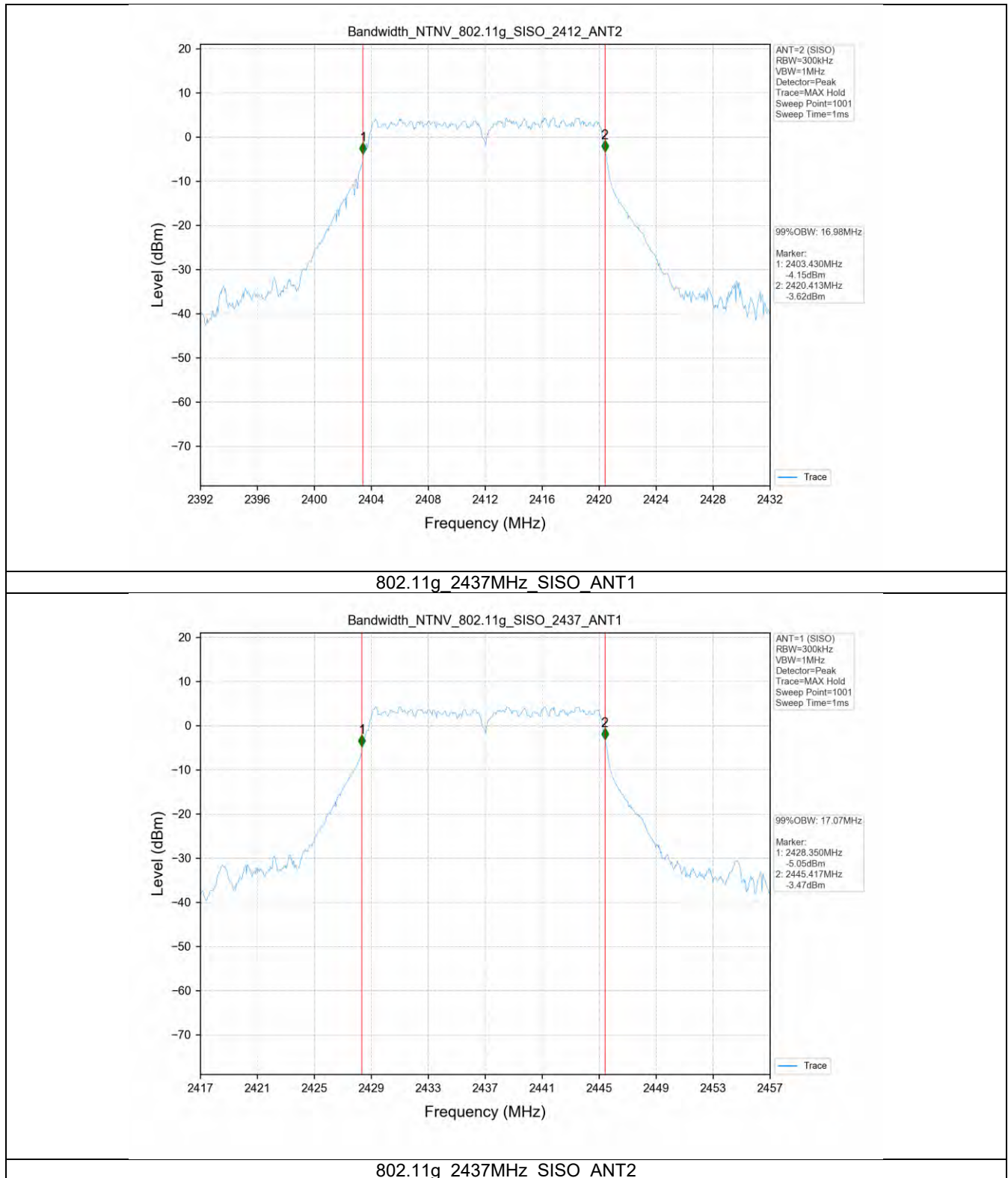


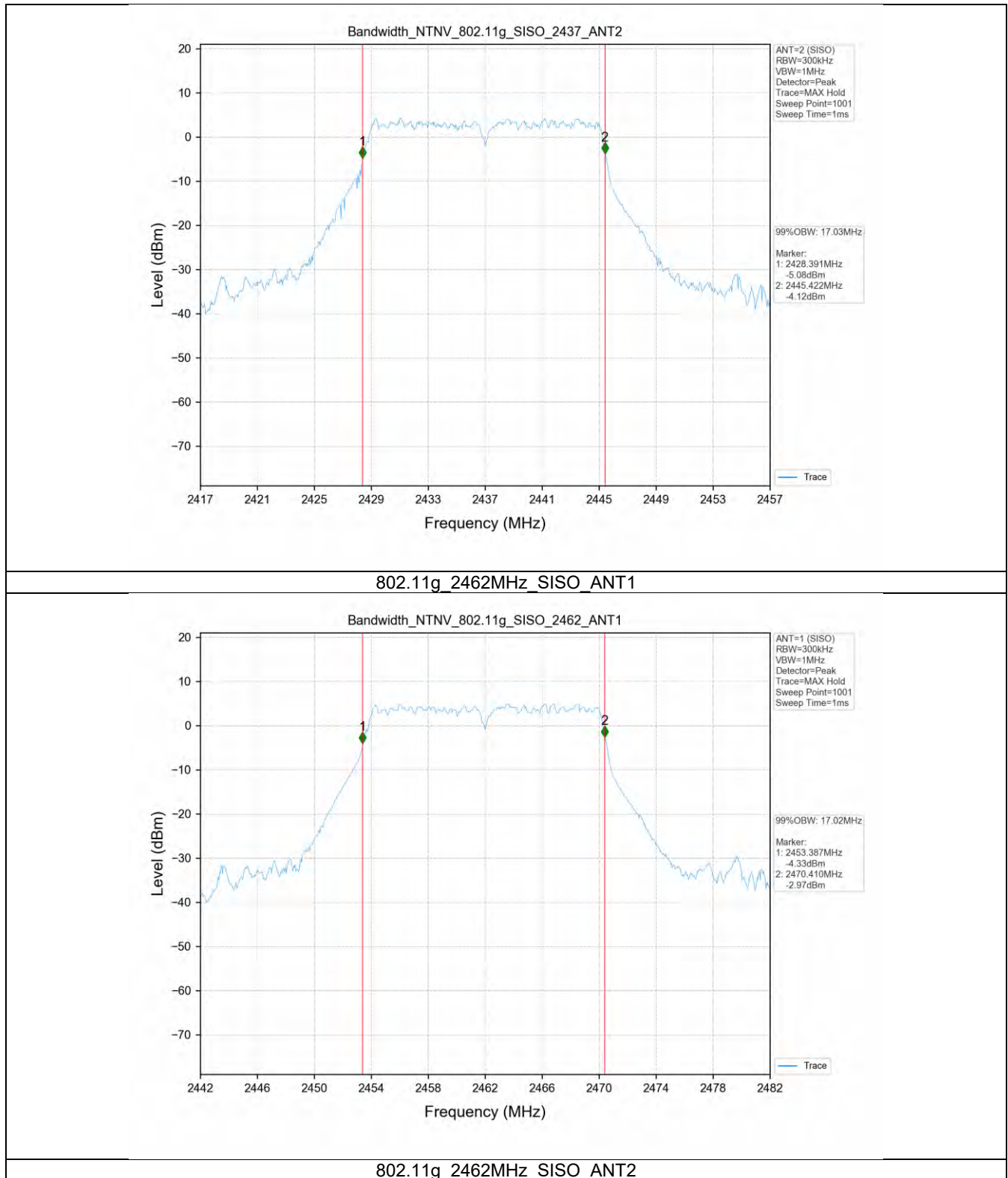
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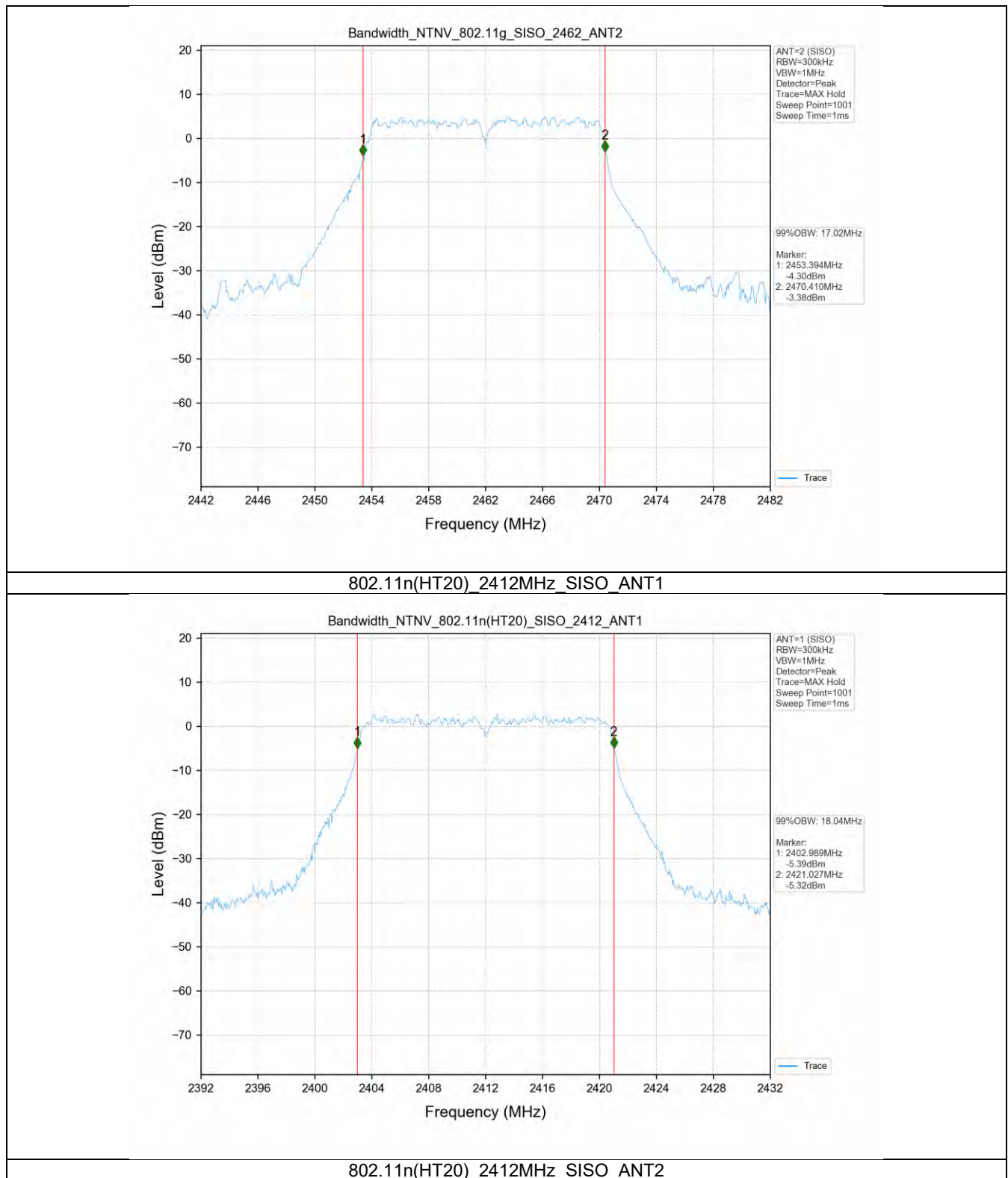




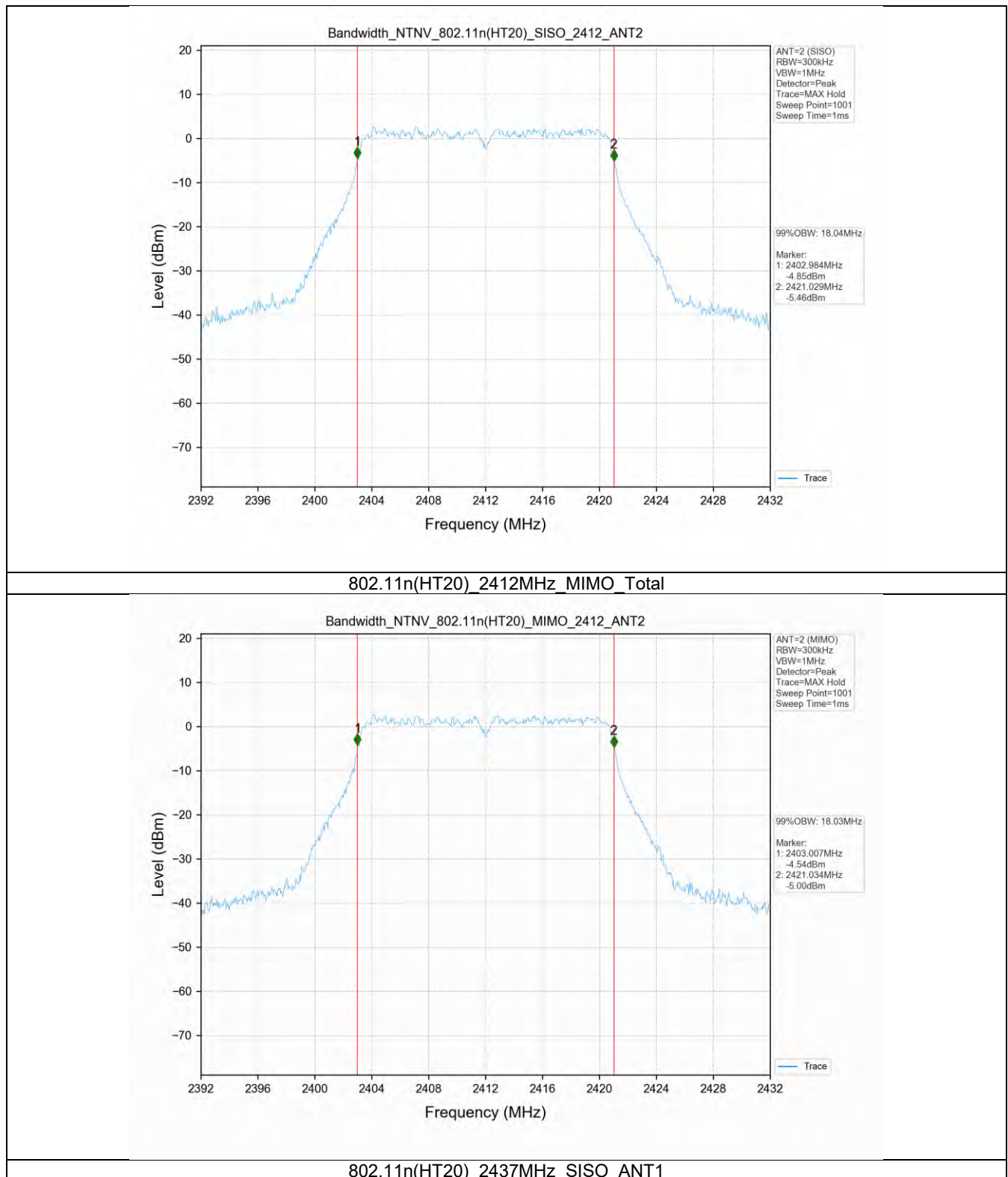


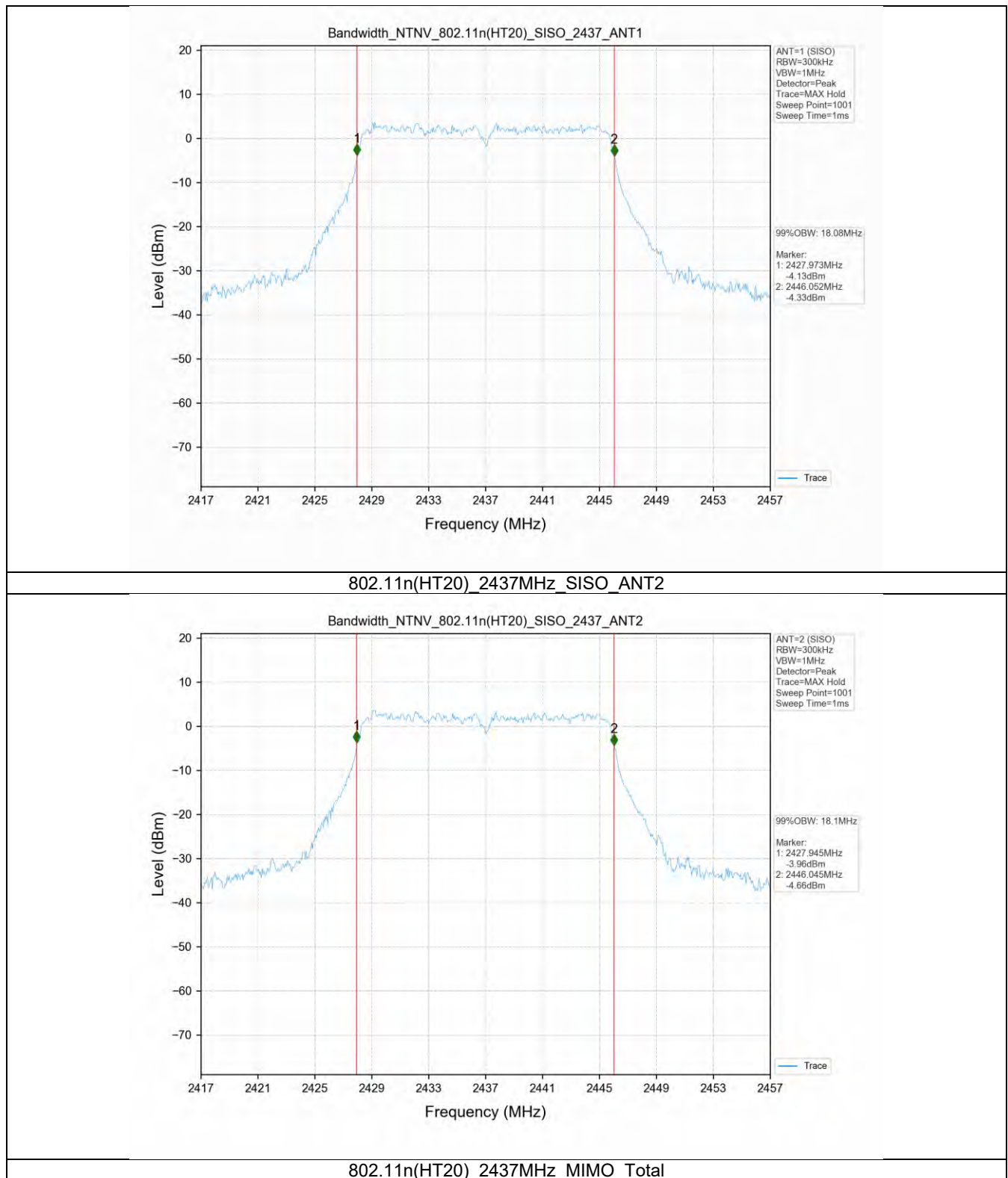


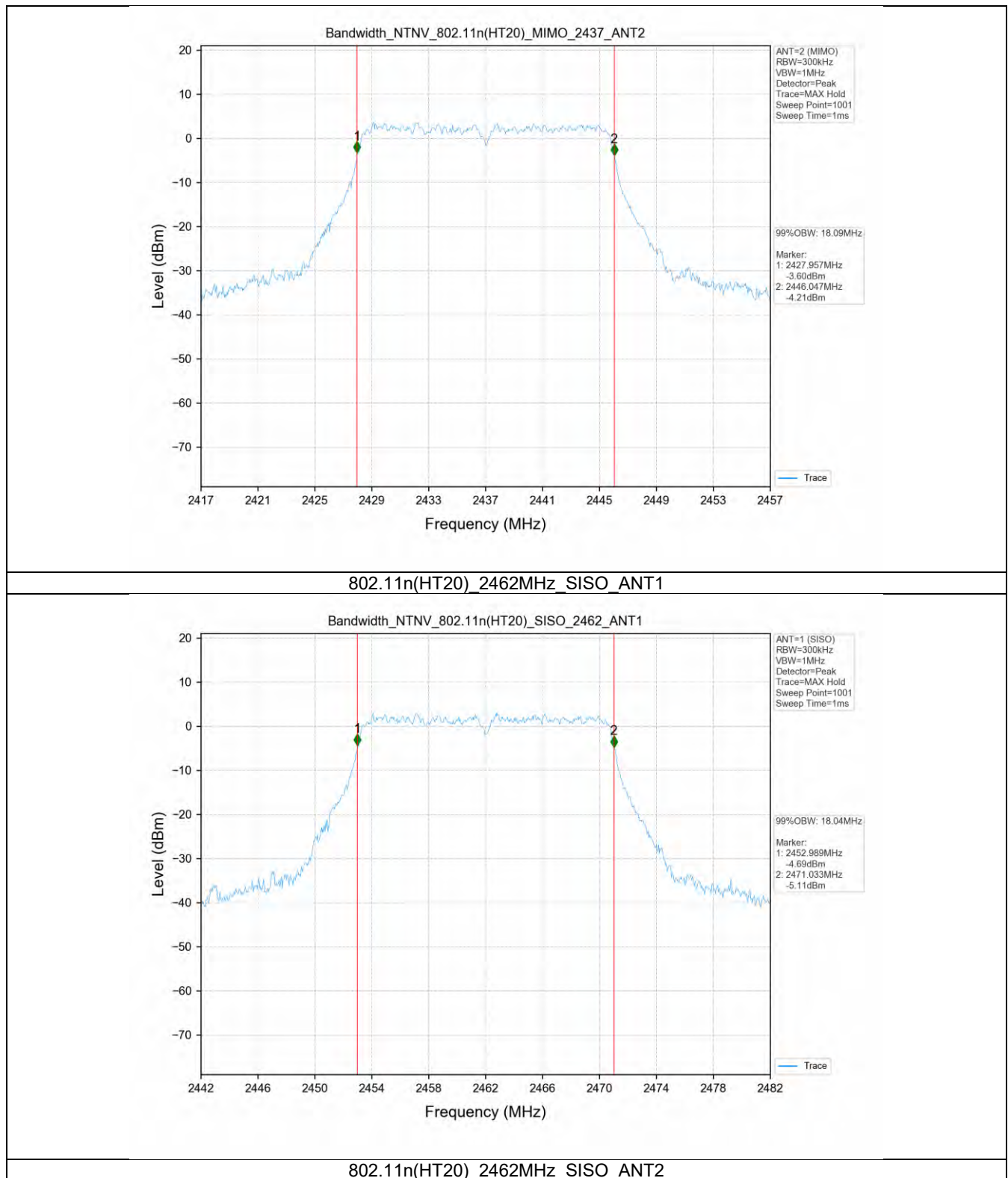


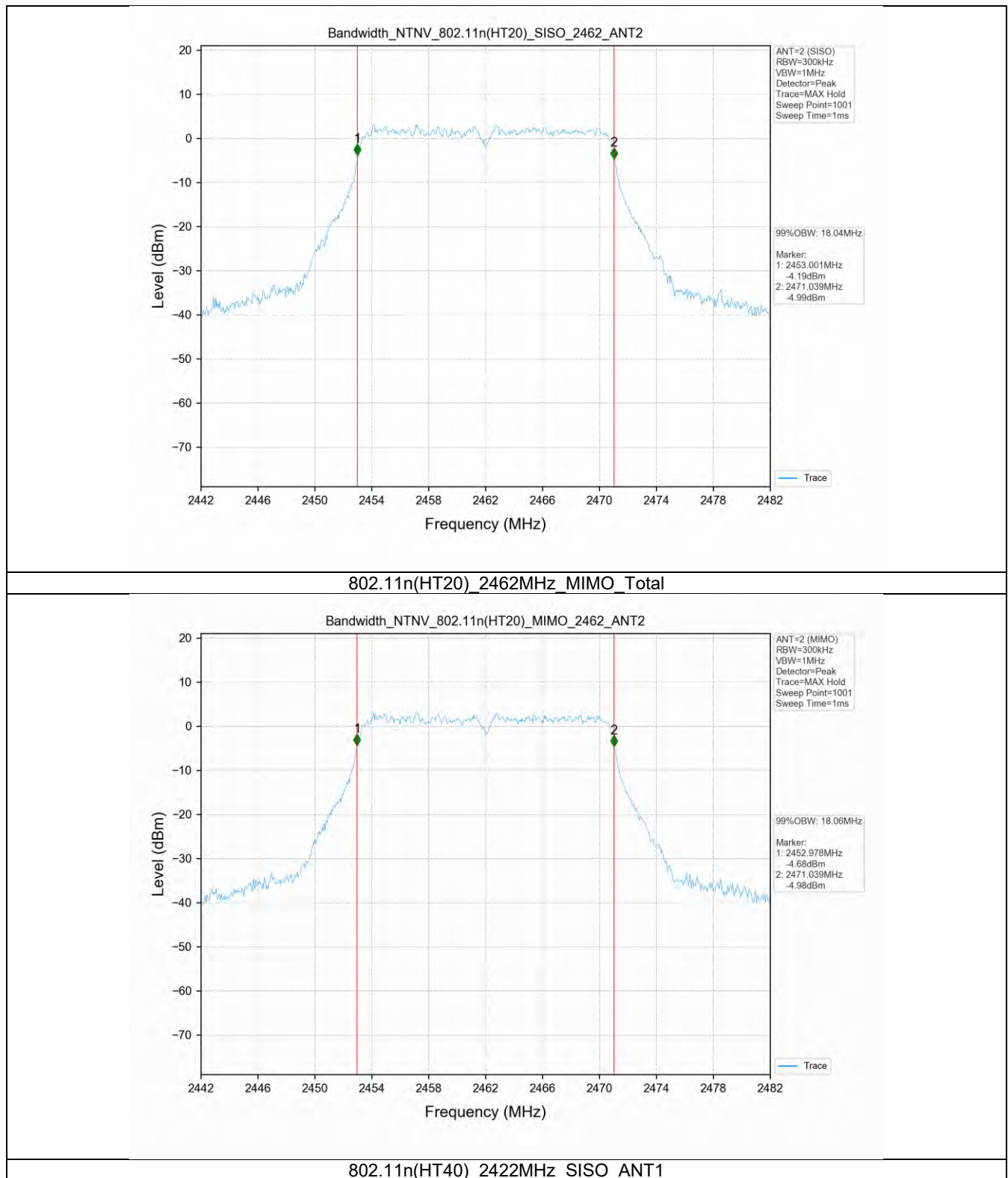




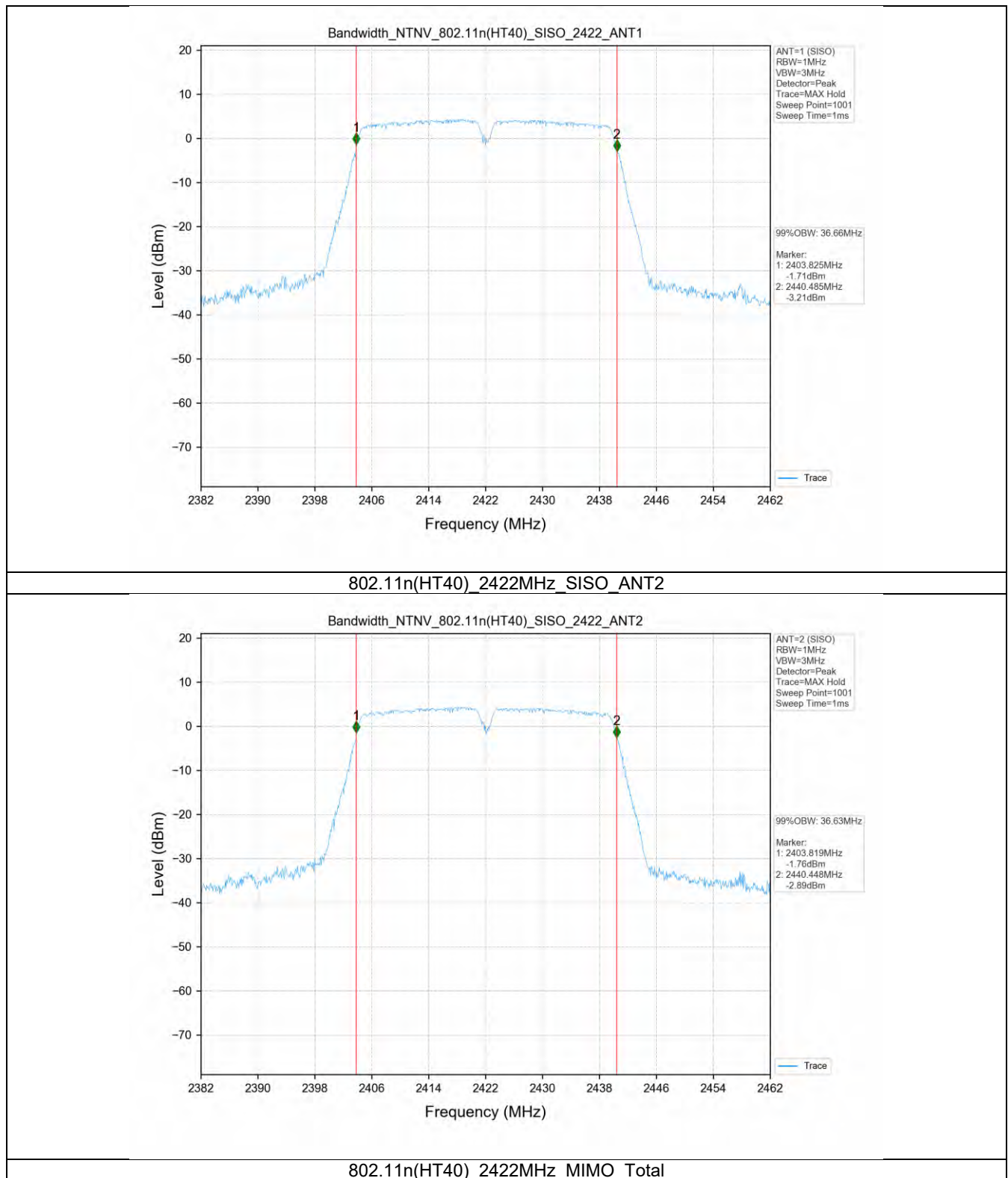




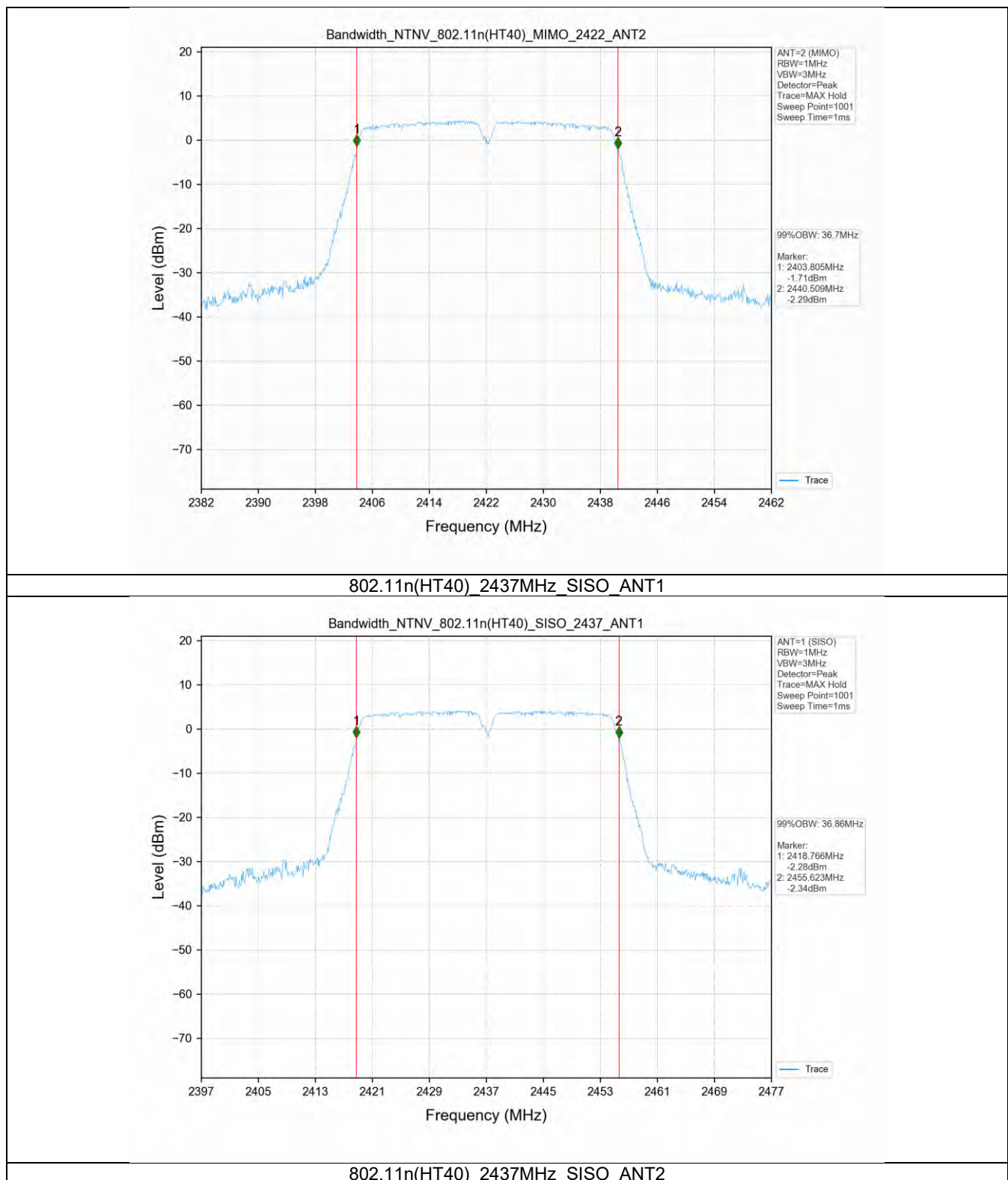


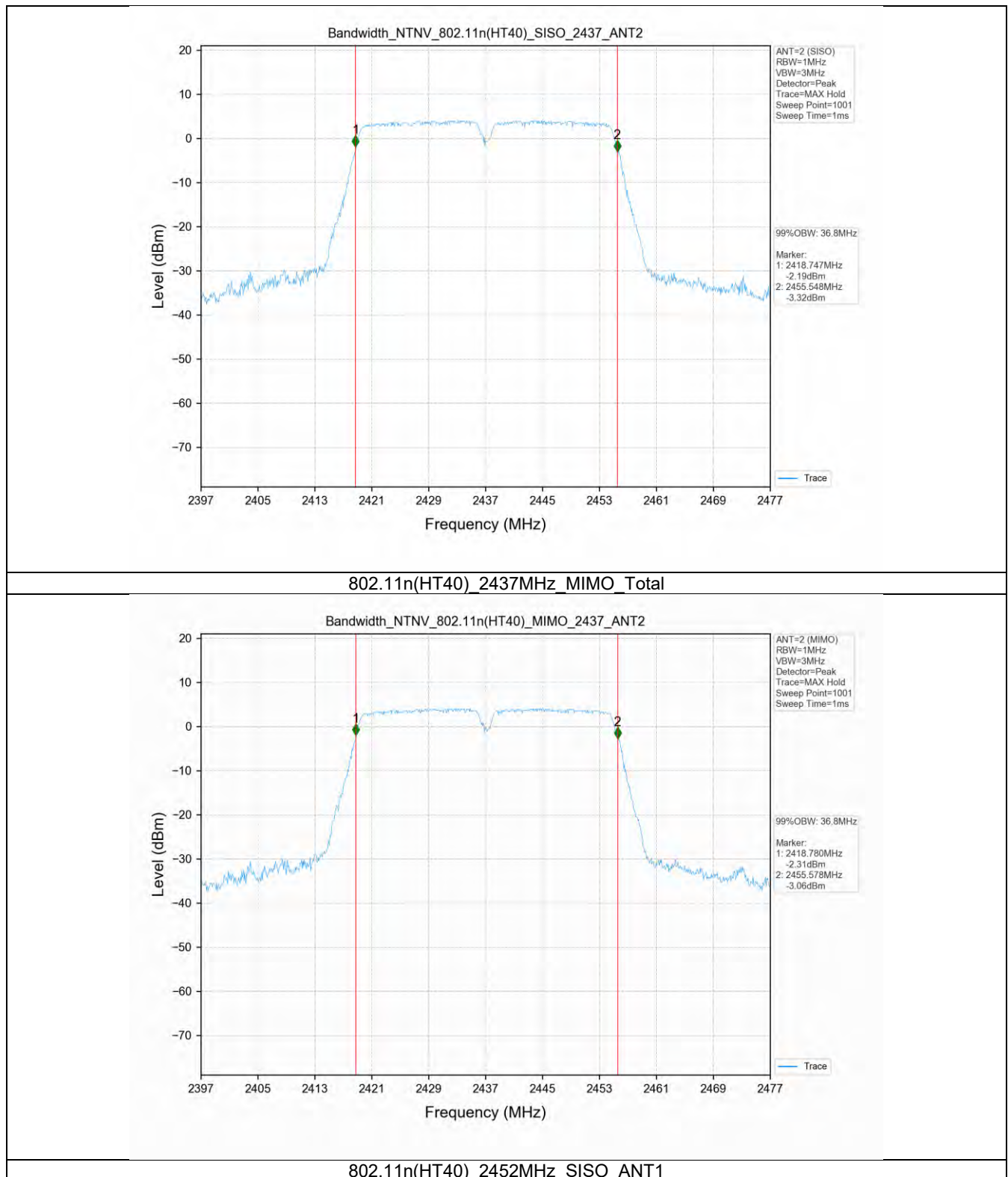


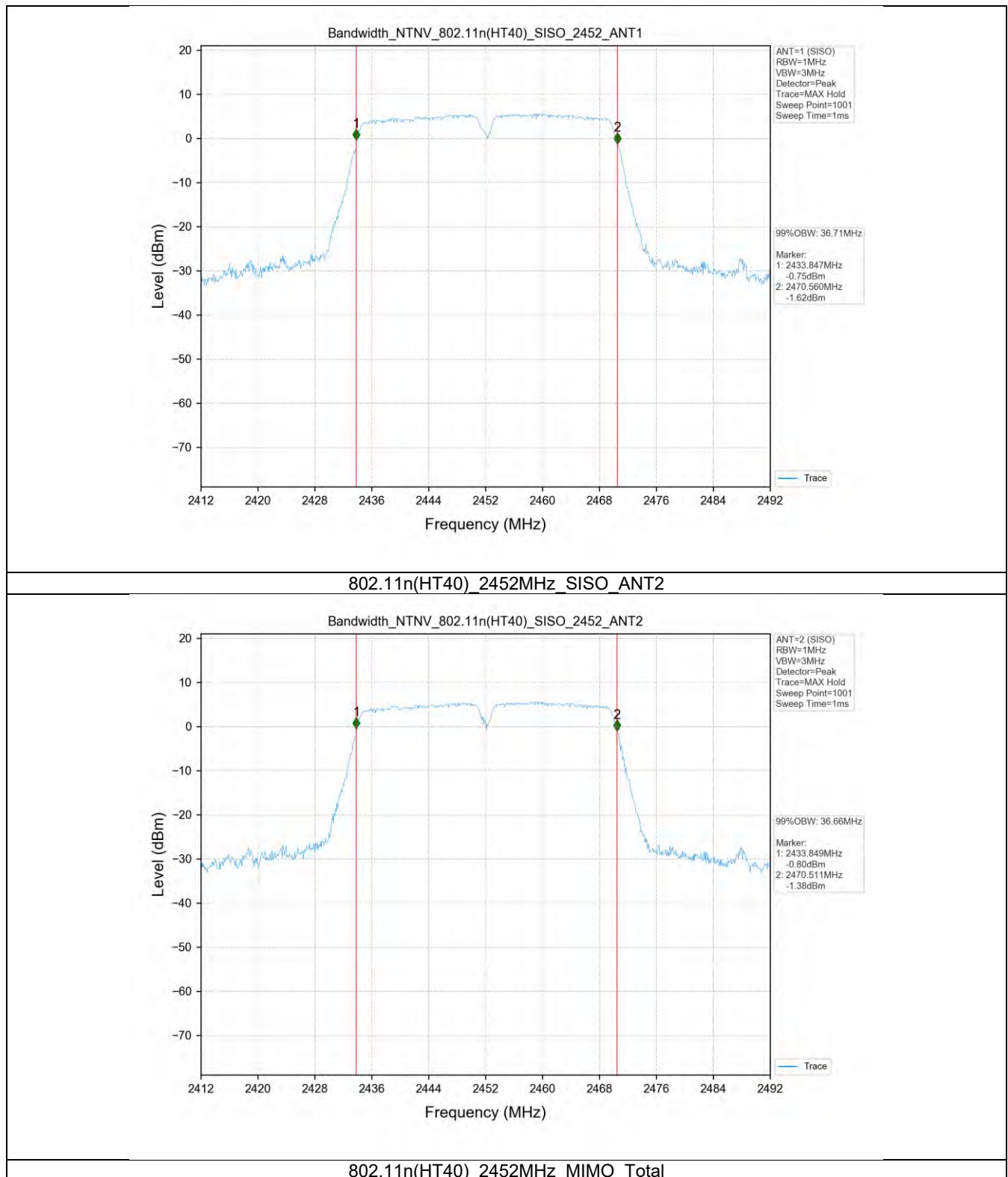


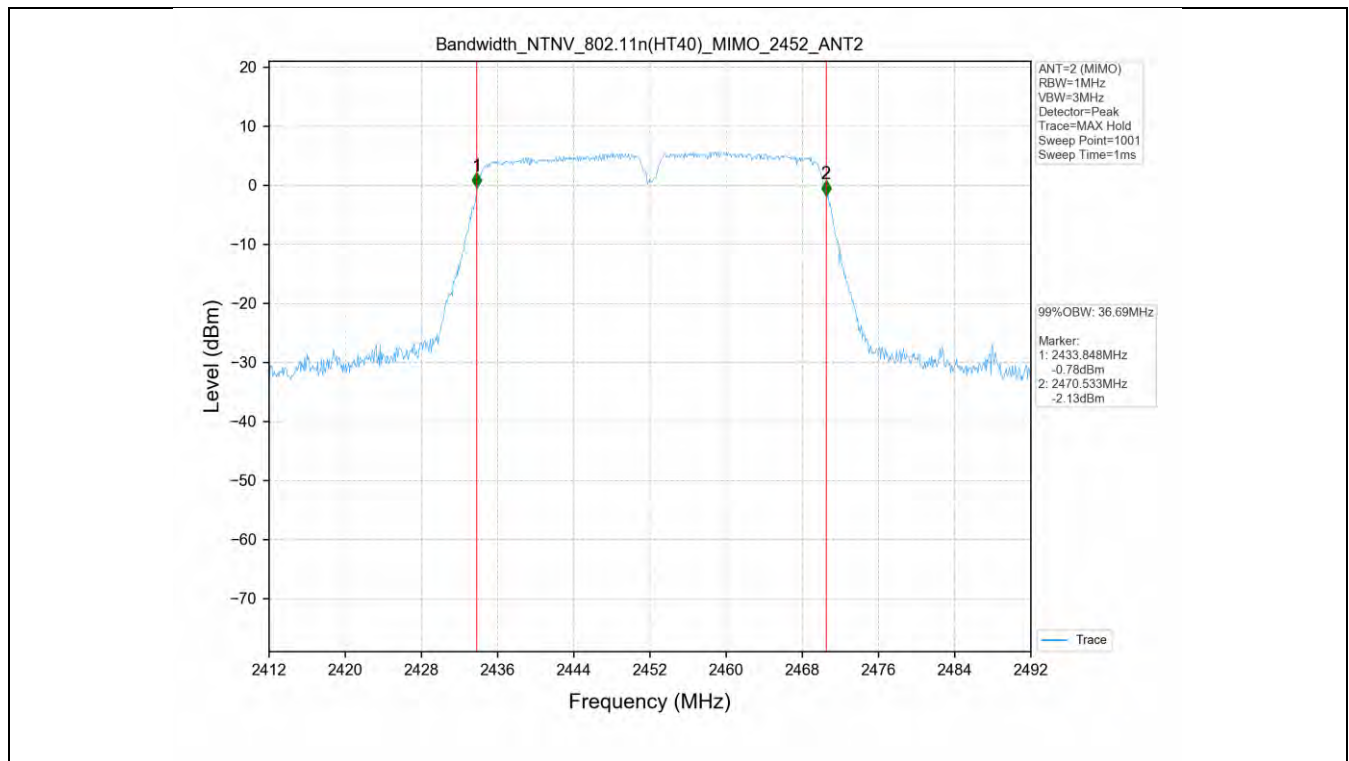












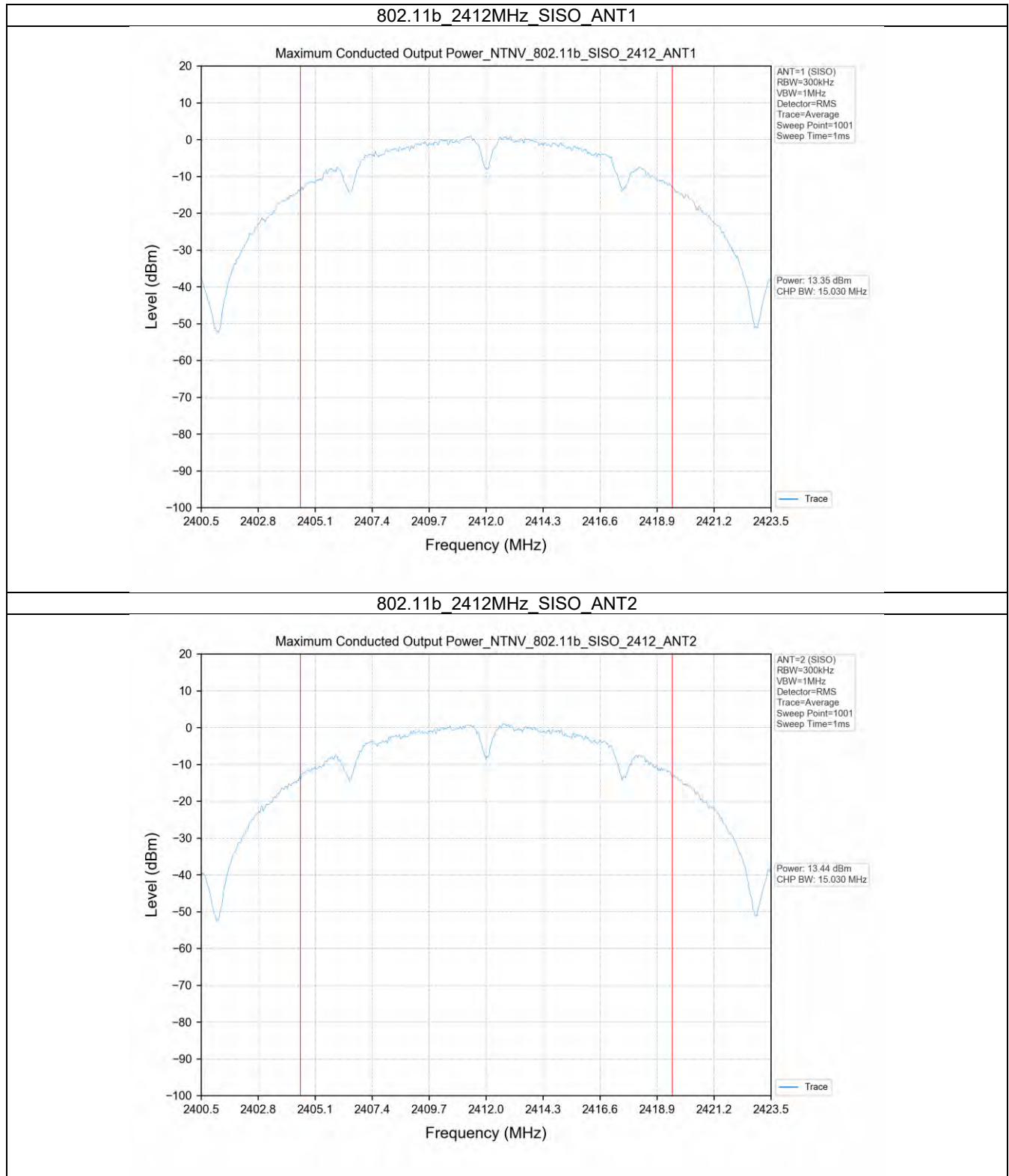
### 3. Maximum Conducted Output Power

#### 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	13.35	13.44	/	≤30	PASS
	2437	SISO	13.91	13.74	/	≤30	PASS
	2462	SISO	14.35	14.28	/	≤30	PASS
802.11g	2412	SISO	13.61	13.52	/	≤30	PASS
	2437	SISO	14.22	13.96	/	≤30	PASS
	2462	SISO	14.42	14.33	/	≤30	PASS
802.11n(HT20)	2412	SISO	12.01	11.93	/	≤30	PASS
		MIMO	12.50	12.16	15.34	≤30	PASS
	2437	SISO	12.65	12.65	/	≤30	PASS
		MIMO	12.91	12.73	15.83	≤30	PASS
	2462	SISO	13.18	13.18	/	≤30	PASS
		MIMO	13.19	13.20	16.21	≤30	PASS
802.11n(HT40)	2422	SISO	10.76	10.77	/	≤30	PASS
		MIMO	10.80	10.76	13.79	≤30	PASS
	2437	SISO	11.76	11.76	/	≤30	PASS
		MIMO	11.87	11.79	14.84	≤30	PASS
	2452	SISO	11.03	11.04	/	≤30	PASS
		MIMO	11.12	11.03	14.09	≤30	PASS



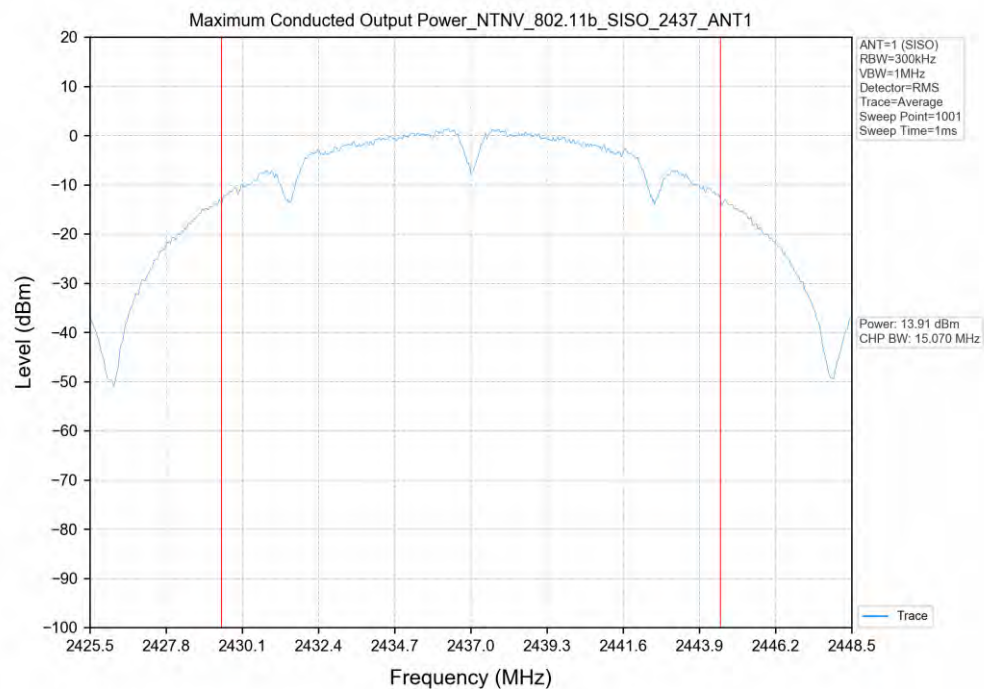
### 3.2 Test Graph



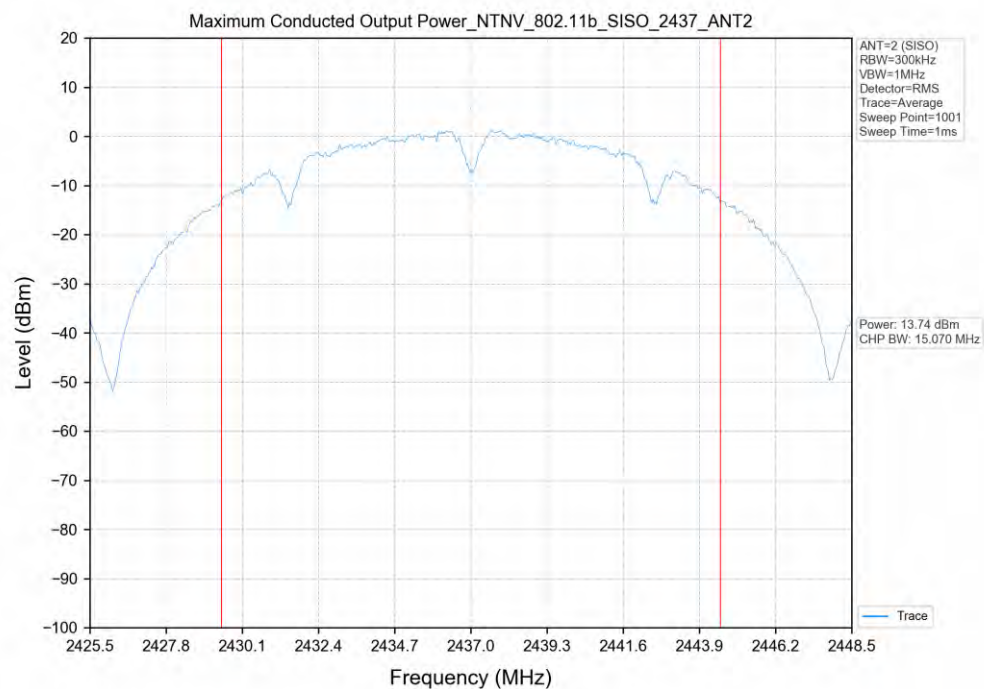




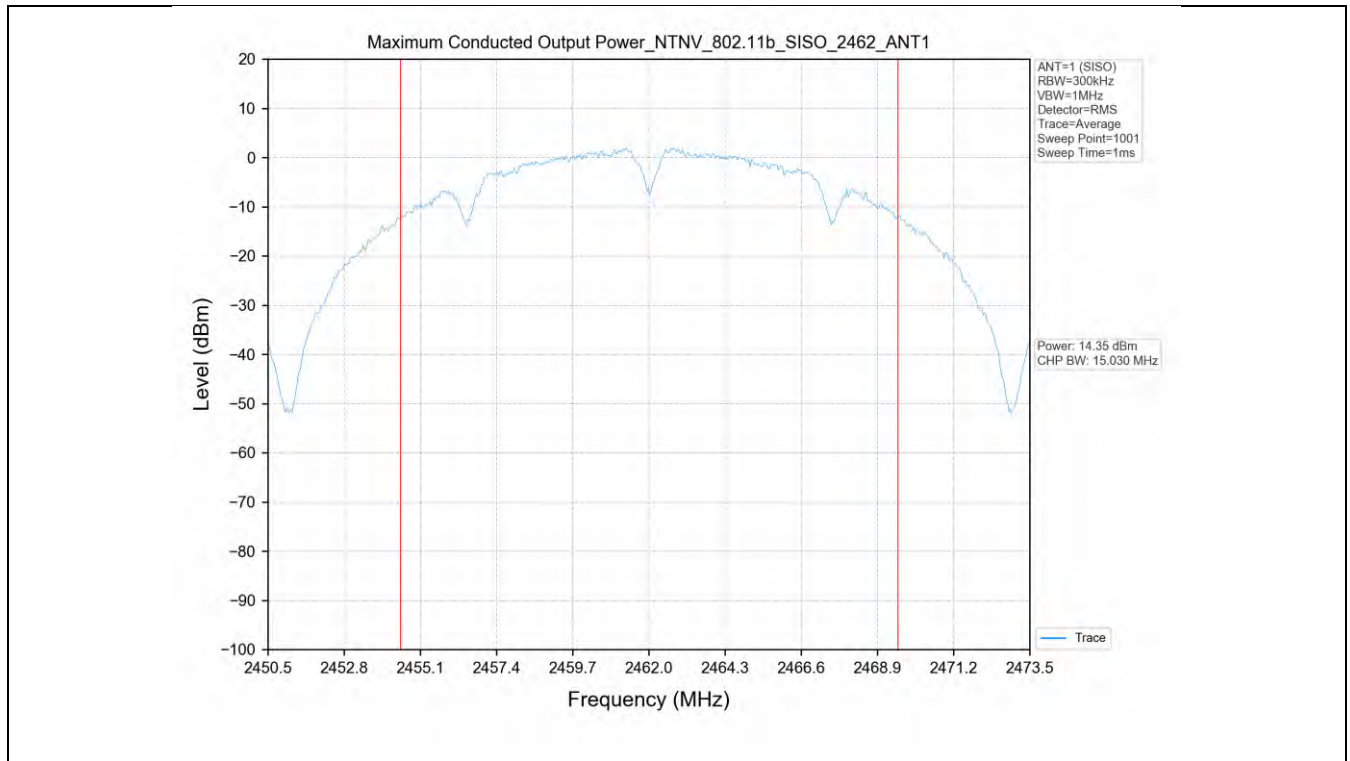
802.11b\_2437MHz\_SISO\_ANT1



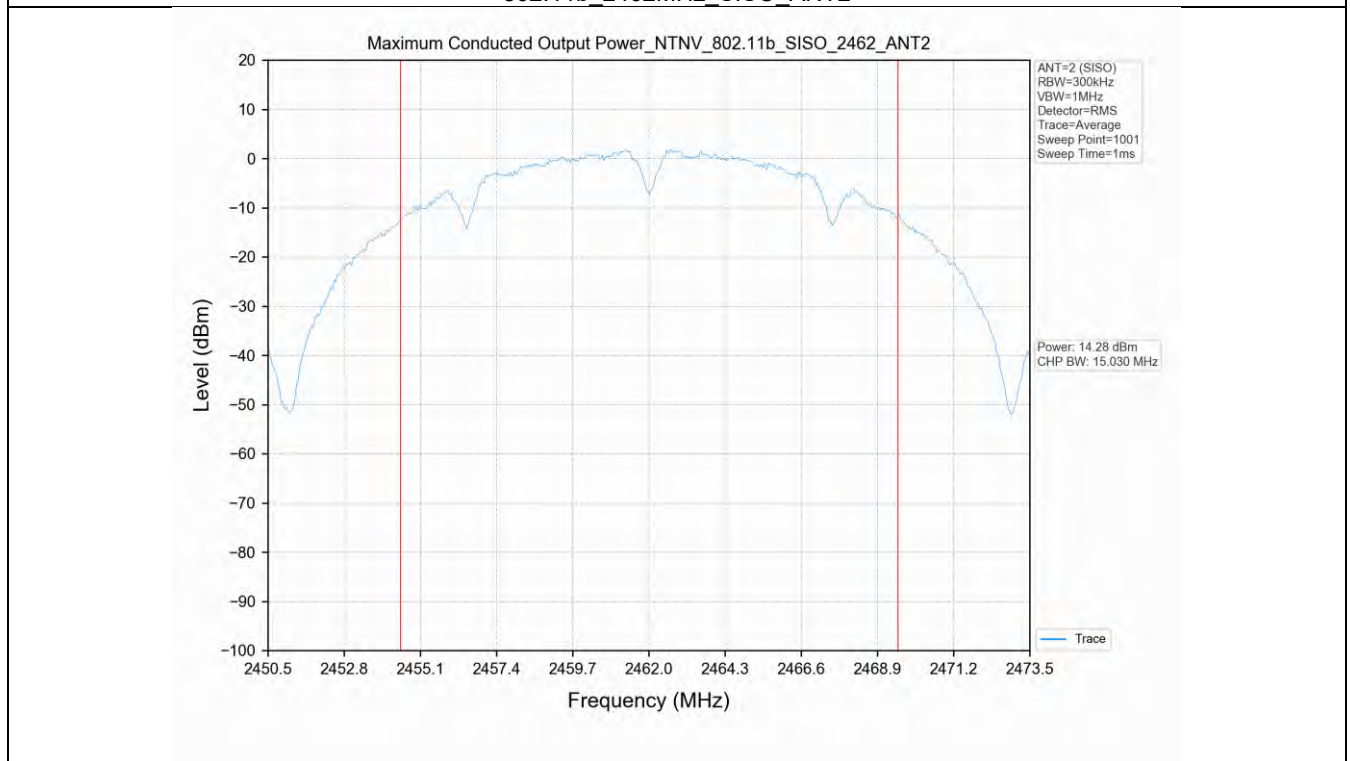
802.11b\_2437MHz\_SISO\_ANT2



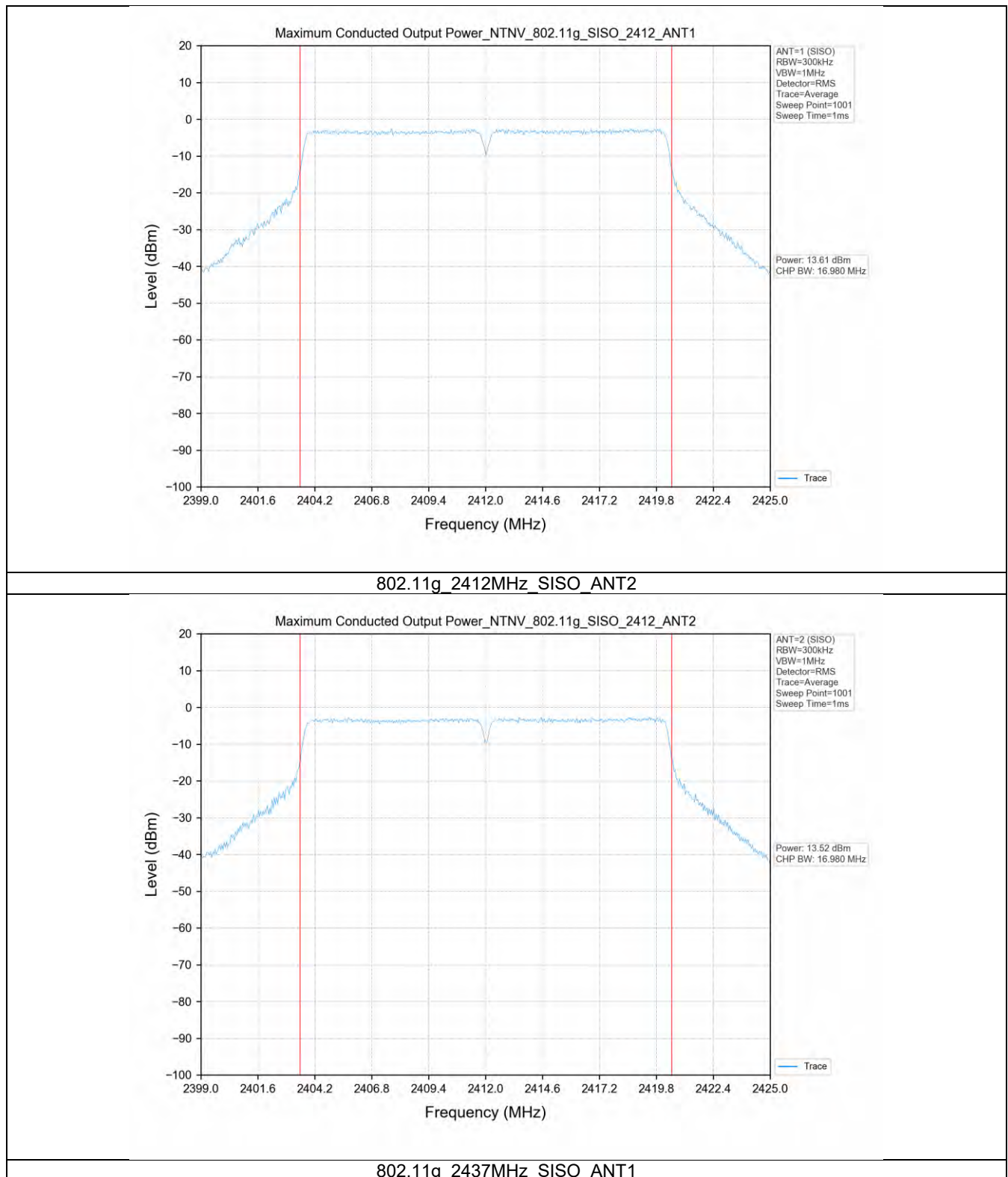
802.11b\_2462MHz\_SISO\_ANT1

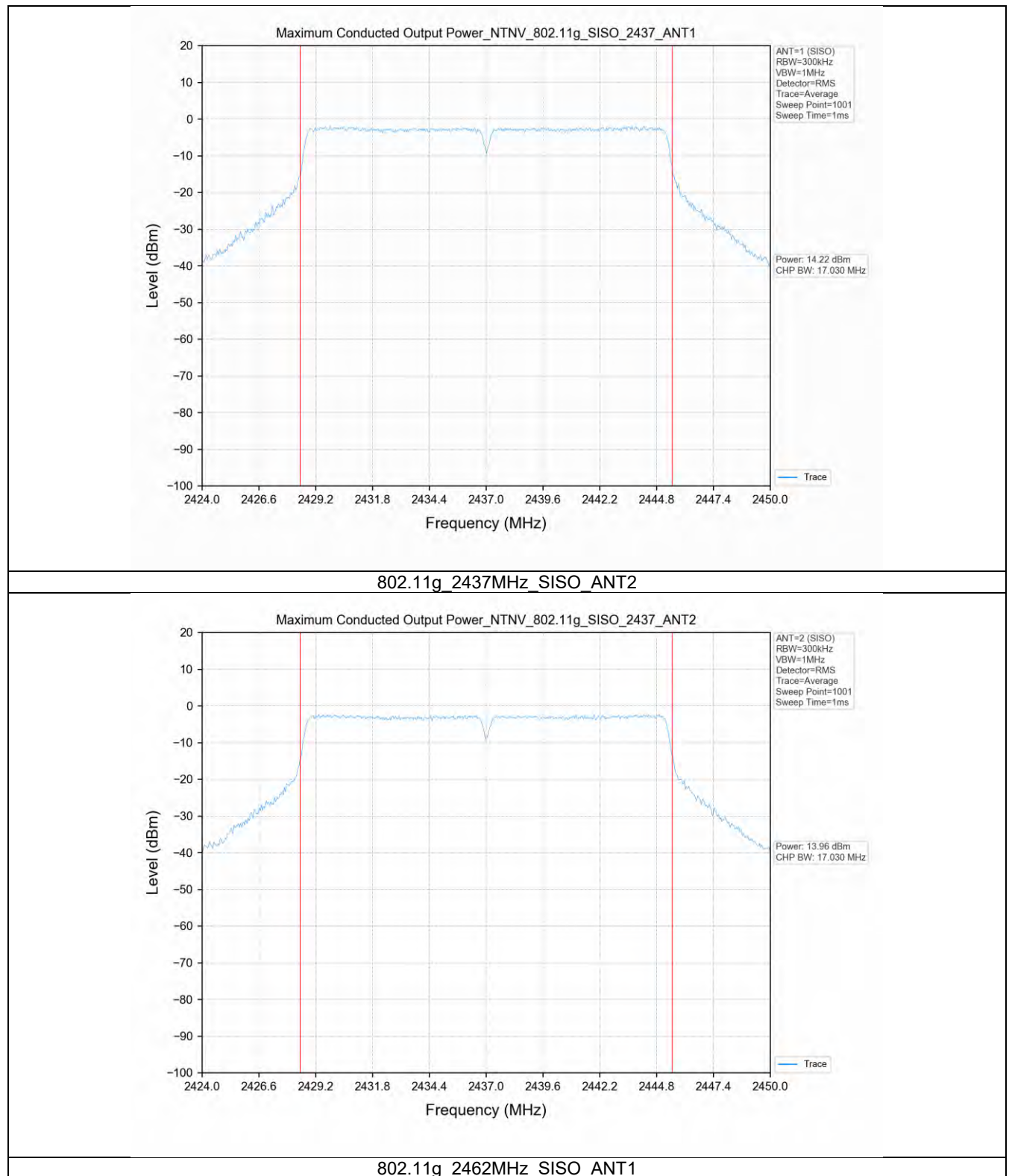


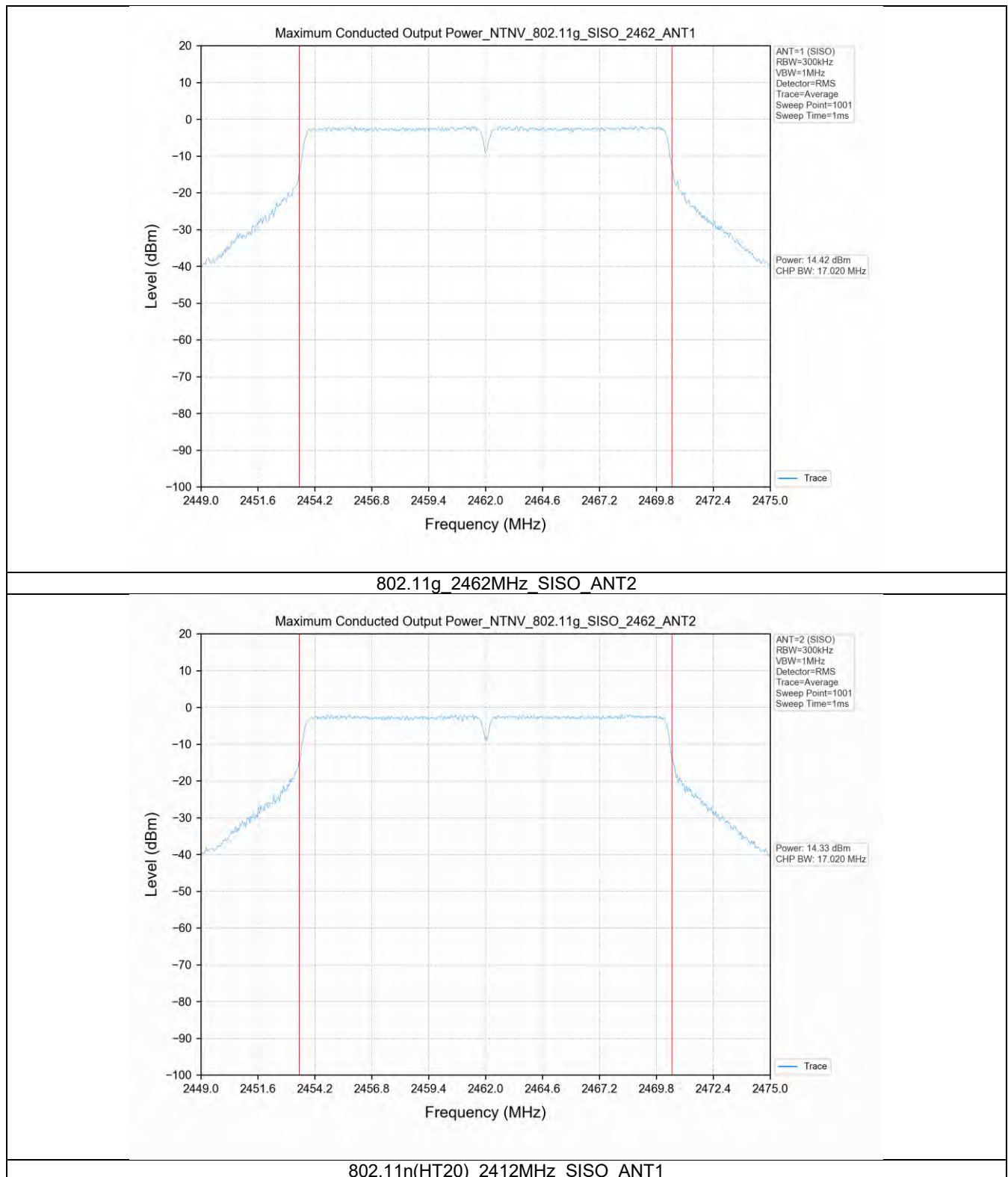
802.11b\_2462MHz\_SISO\_ANT2



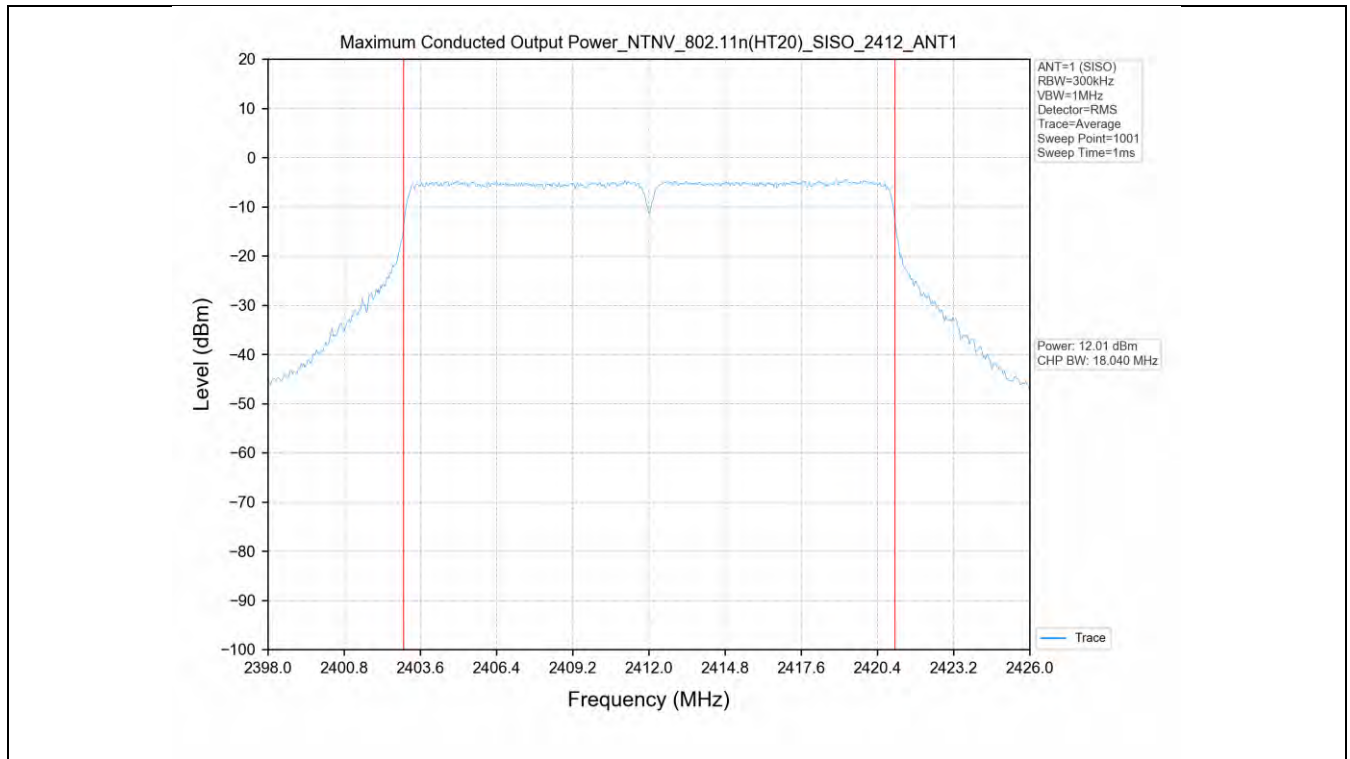
802.11g\_2412MHz\_SISO\_ANT1



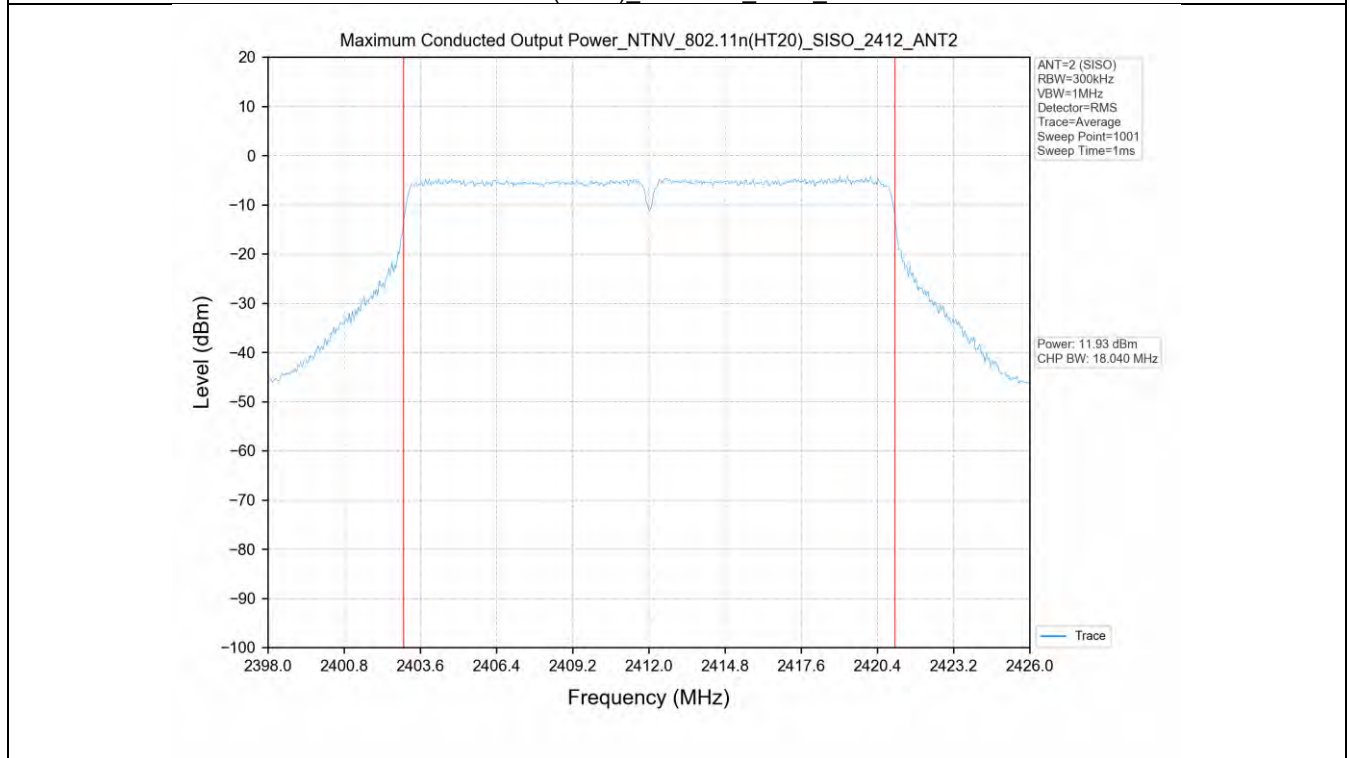




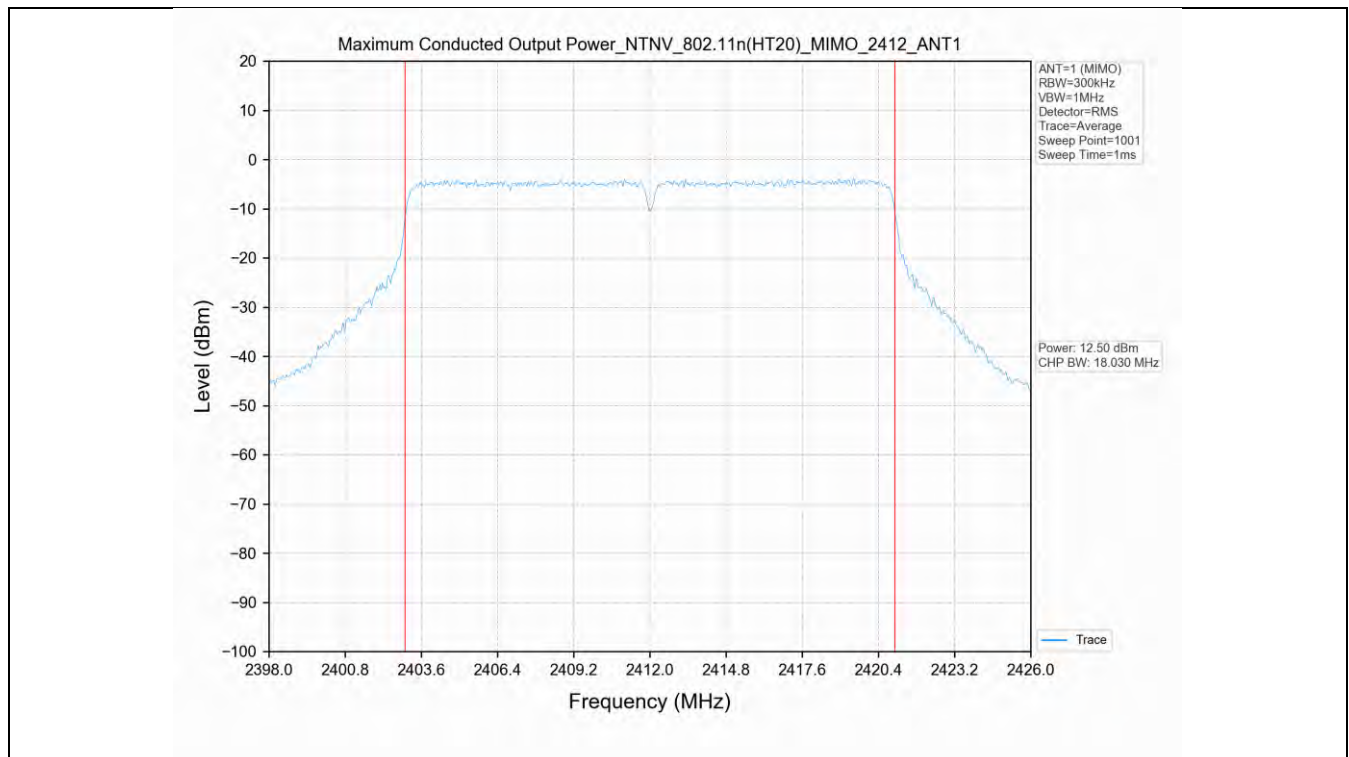




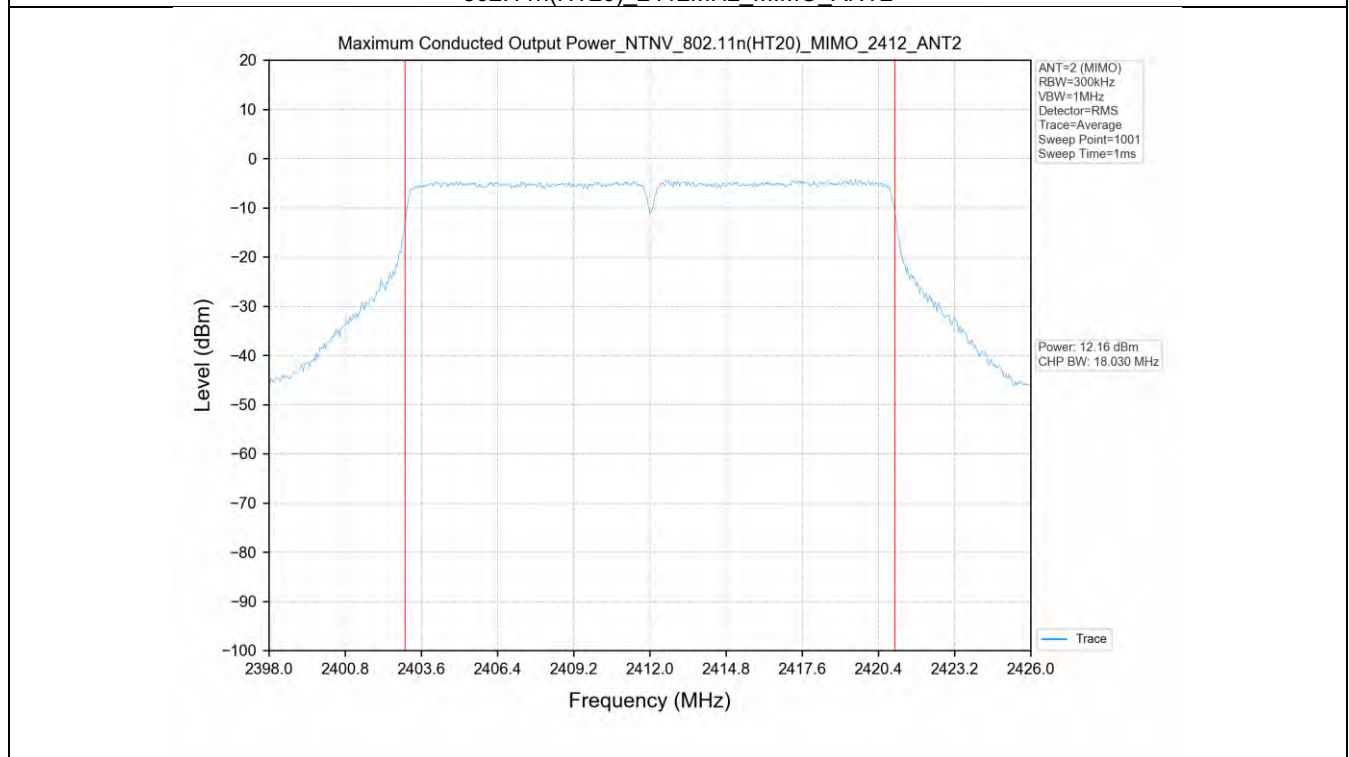
802.11n(HT20)\_2412MHz\_SISO\_ANT2



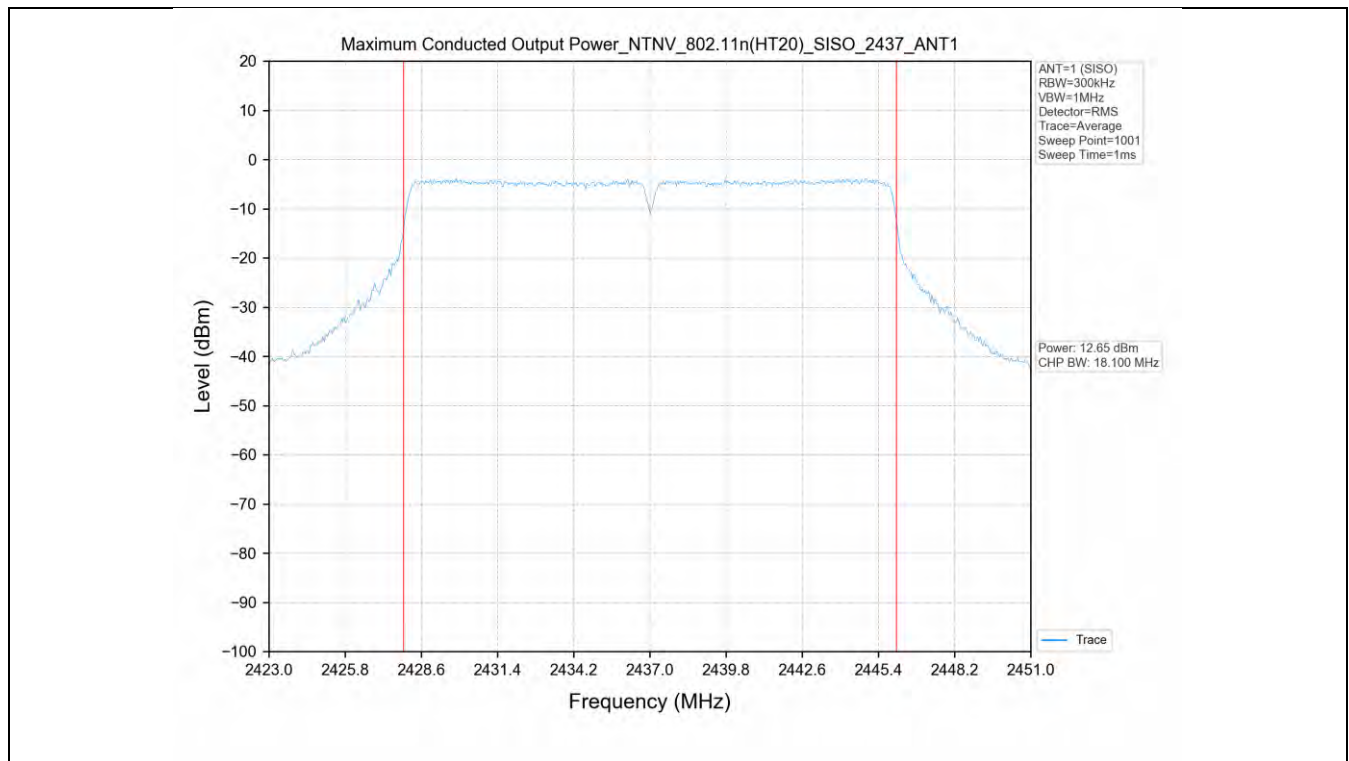
802.11n(HT20)\_2412MHz\_MIMO\_ANT1



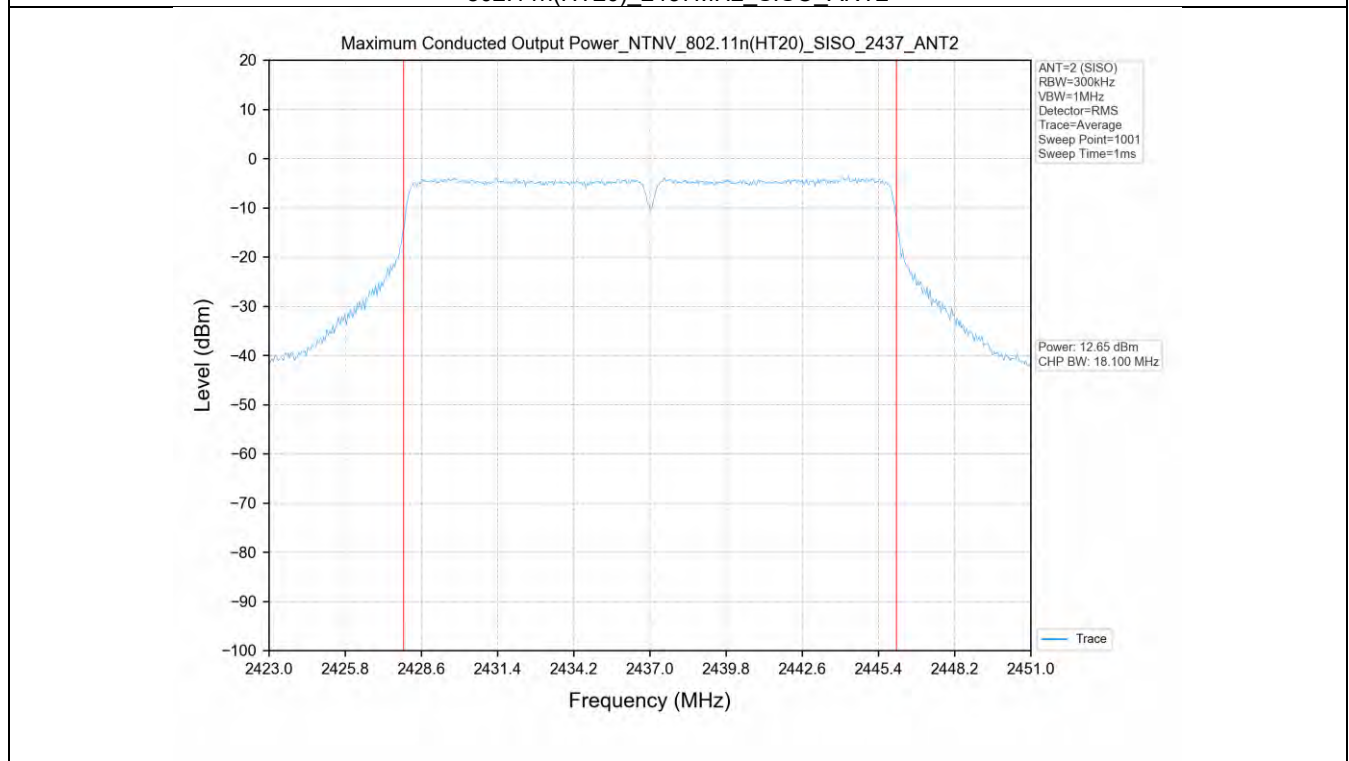
802.11n(HT20)\_2412MHz\_MIMO\_ANT2



802.11n(HT20)\_2437MHz\_SISO\_ANT1



802.11n(HT20)\_2437MHz\_SISO\_ANT2



802.11n(HT20)\_2437MHz\_MIMO\_ANT1