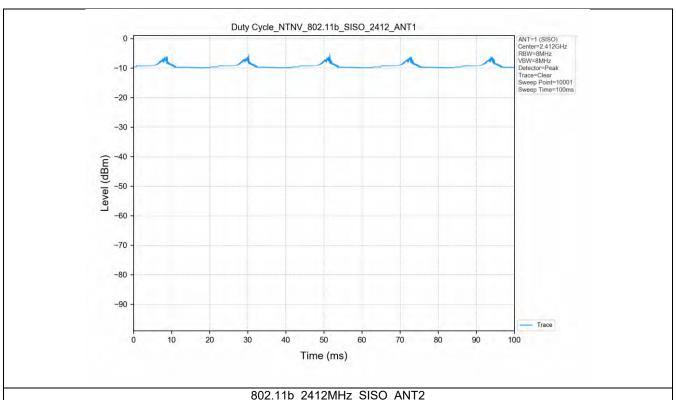
#### **Appendix A for SHEM190901758601**

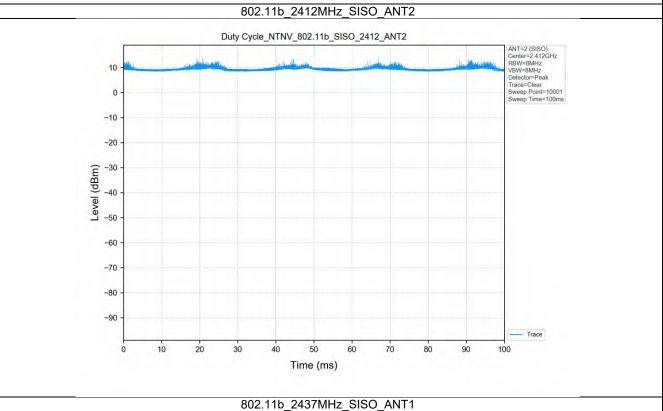
#### 1. Duty Cycle

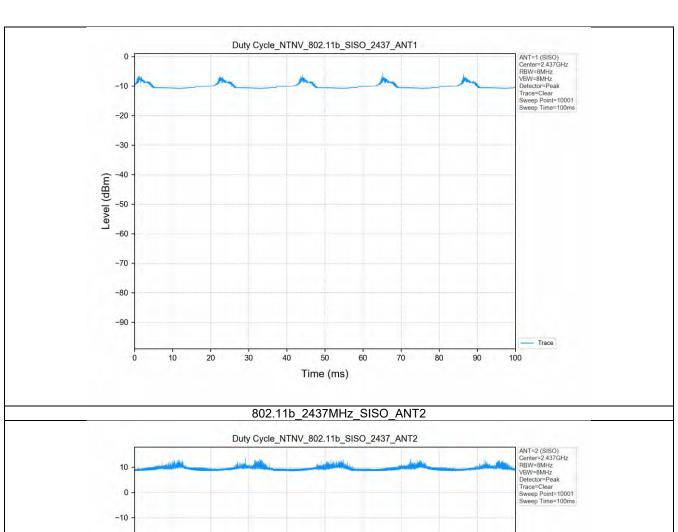
#### 1.1 Test Result

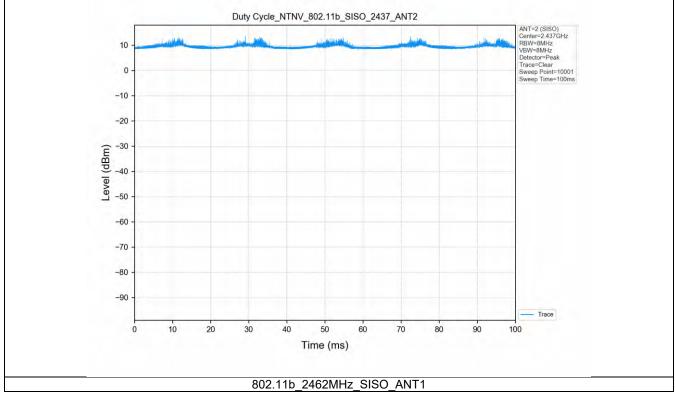
Test Mode	Channel Frequency( MHz)	ТХ Туре	ANT No.	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
802.11b	2412	SISO	1	100.000	100.000	100.00	0.00
			2	100.000	100.000	100.00	0.00
	2437	SISO	1	100.000	100.000	100.00	0.00
			2	100.000	100.000	100.00	0.00
	2462	SISO	1	100.000	100.000	100.00	0.00
			2	100.000	100.000	100.00	0.00
	2412	SISO	1	100.000	100.000	100.00	0.00
	2412		2	100.000	100.000	100.00	0.00
000 44=	0407	CICO	1	100.000	100.000	100.00	0.00
802.11g	2437	SISO	2	100.000	100.000	100.00	0.00
	2462	SISO	1	100.000	100.000	100.00	0.00
	2402	3130	2	100.000	100.000	100.00	0.00
		SISO	1	100.000	100.000	100.00	0.00
	2412	5150	2	100.000	100.000	100.00	0.00
	2412	141140	1	100.000	100.000	100.00	0.00
		MIMO	2	100.000	100.000	100.00	0.00
		CICO	1	100.000	100.000	100.00	0.00
000 44 ~ (LITOO)	2437	SISO	2	100.000	100.000	100.00	0.00
802.11n(HT20)		141140	1	100.000	100.000	100.00	0.00
		MIMO	2	100.000	100.000	100.00	0.00
		SISO	1	100.000	100.000	100.00	0.00
	2462		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









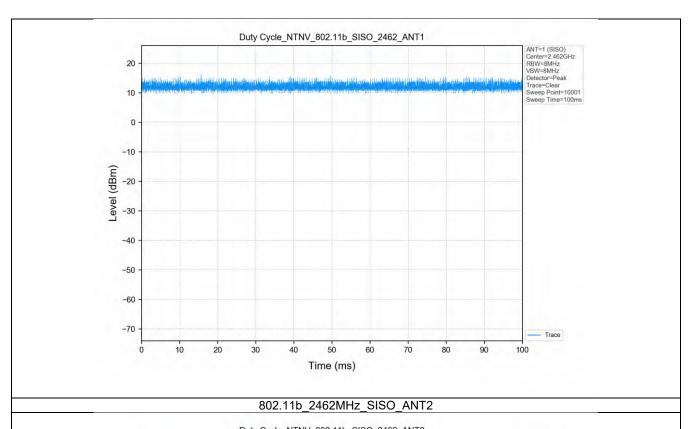
-60

-70

0

10

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50

Time (ms)

802.11g\_2412MHz\_SISO\_ANT1

30

40

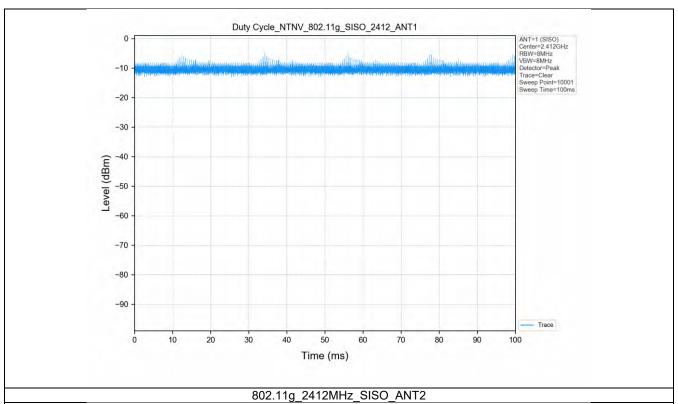
60

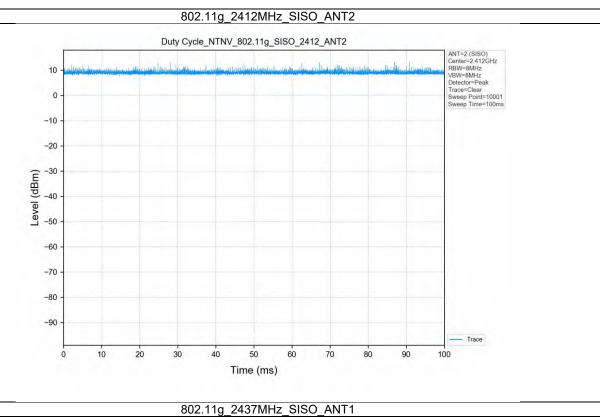
70

- Trace

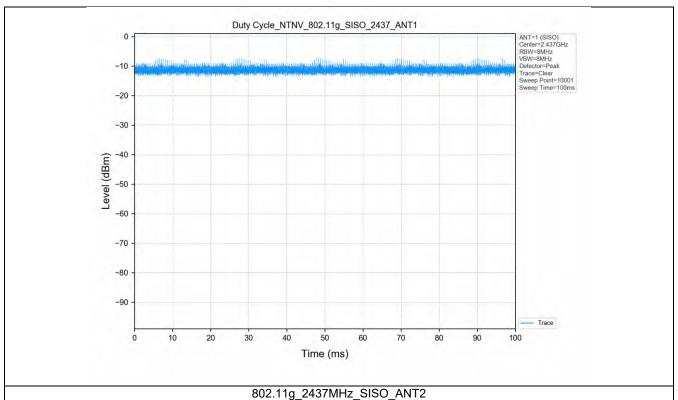
90



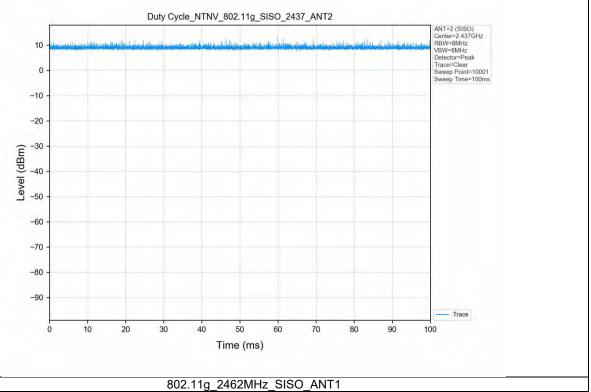




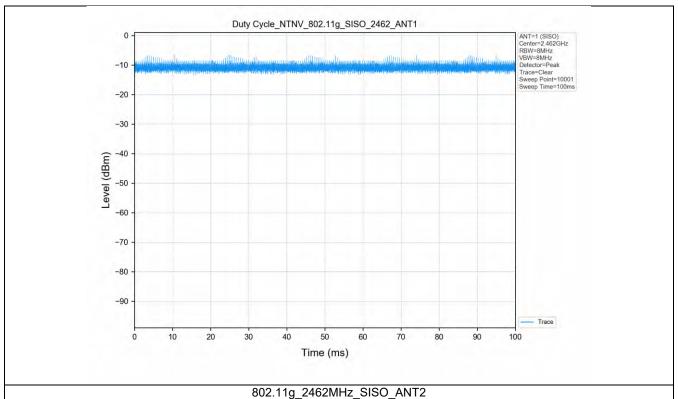




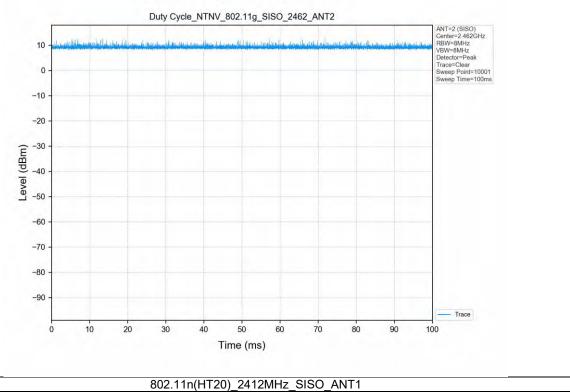


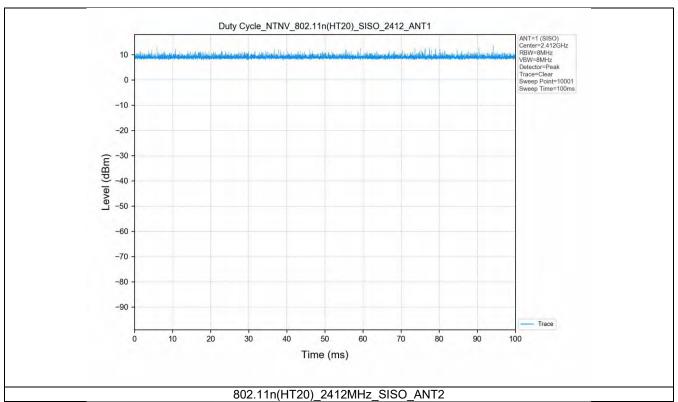


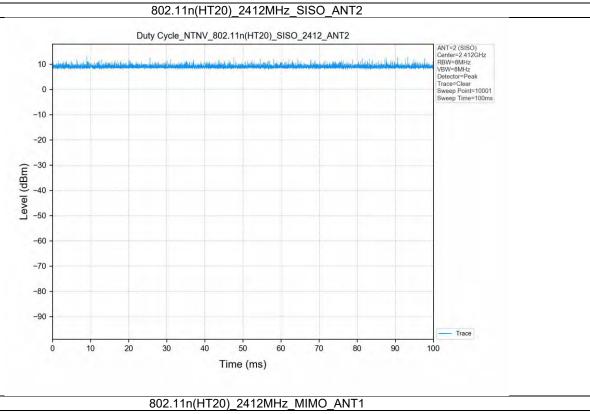


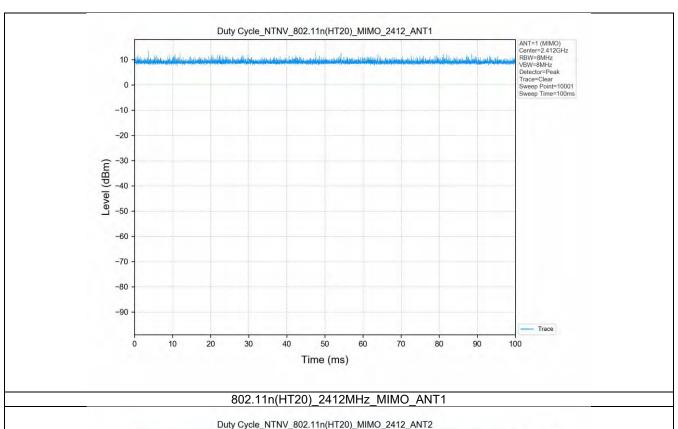


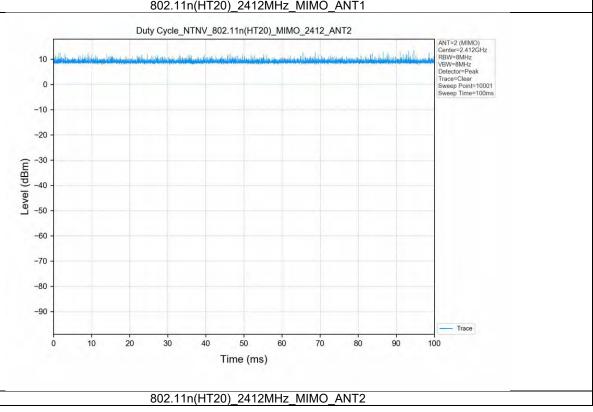


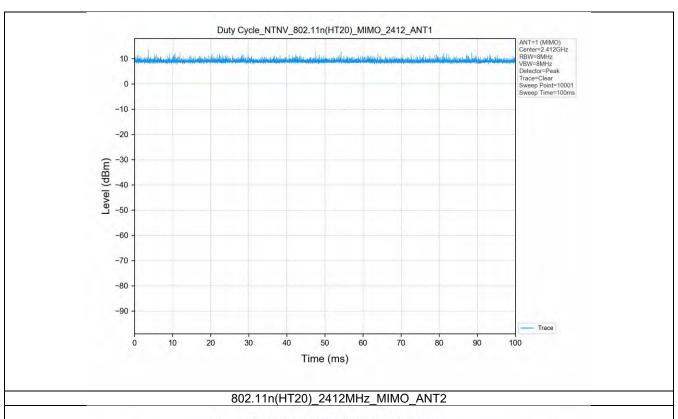


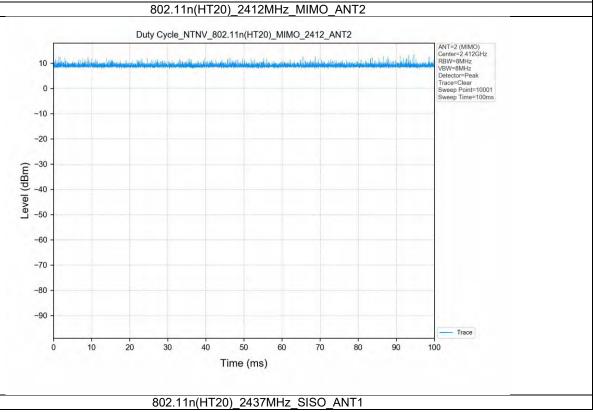


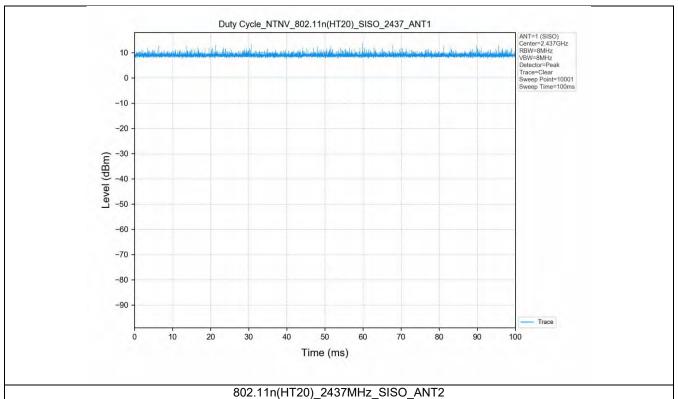


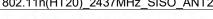


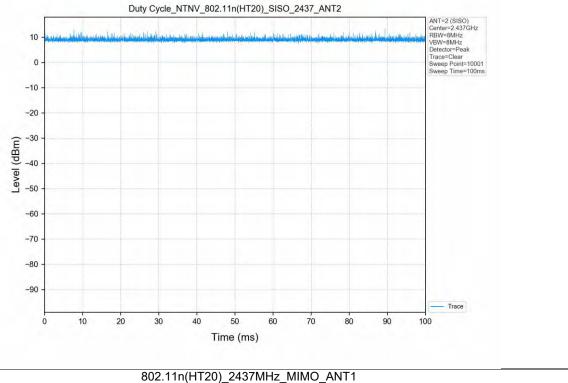




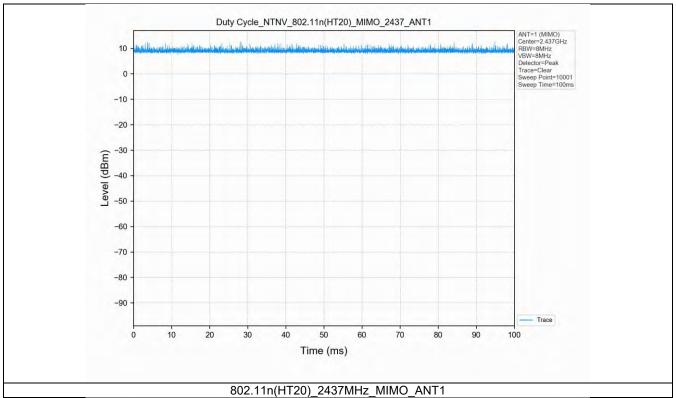


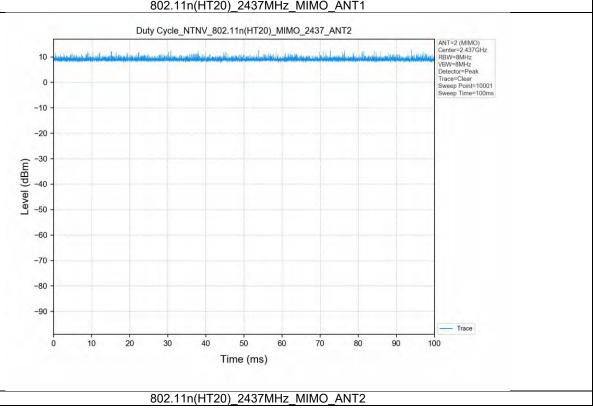


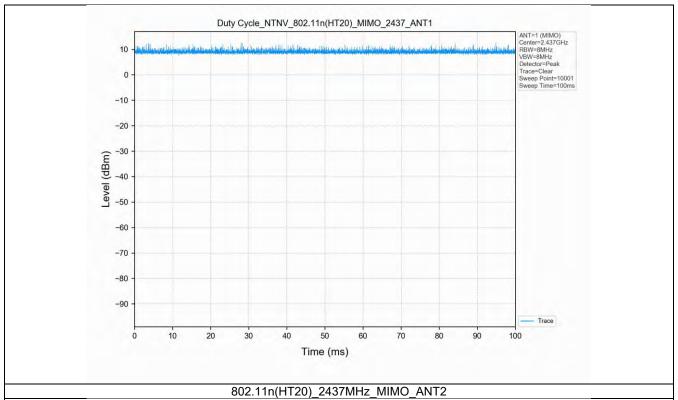


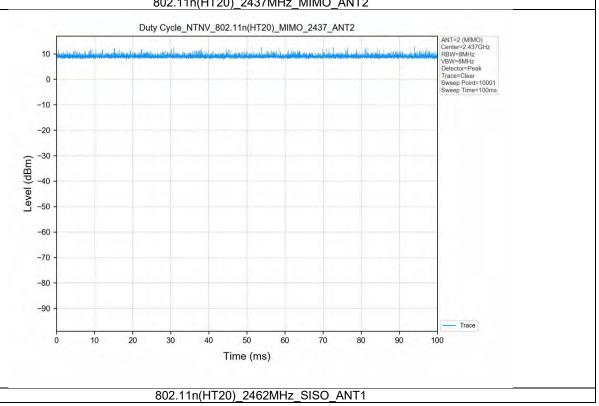


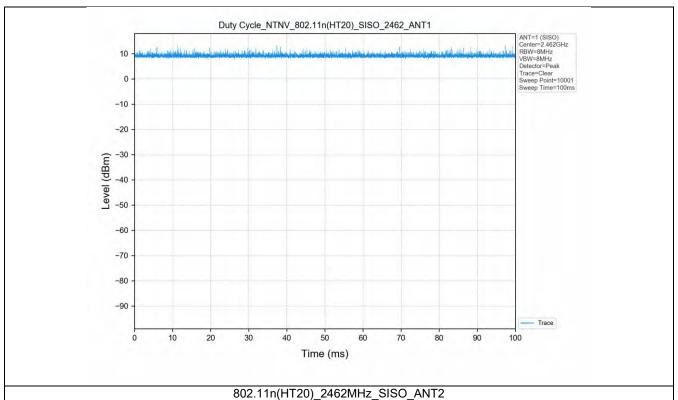


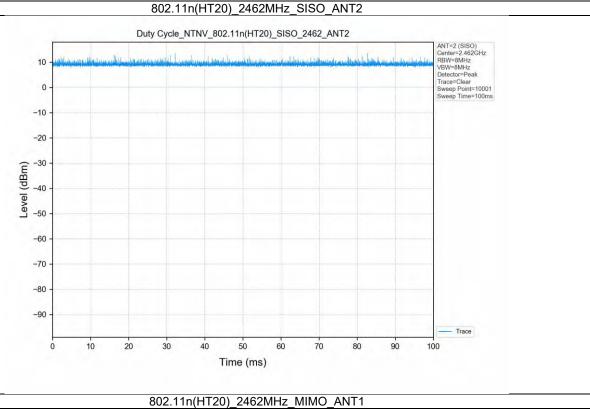


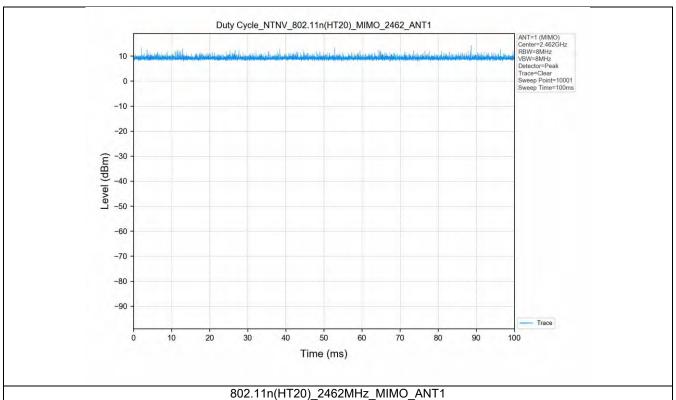


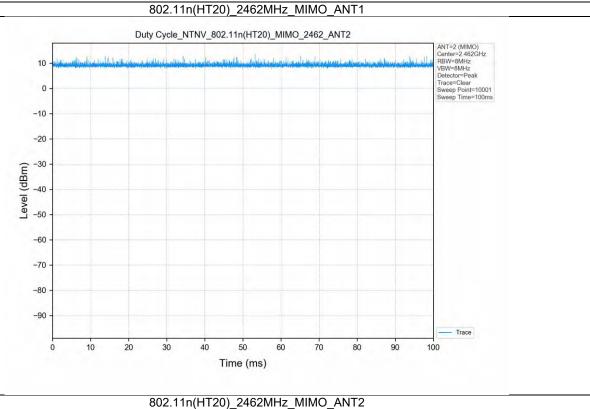


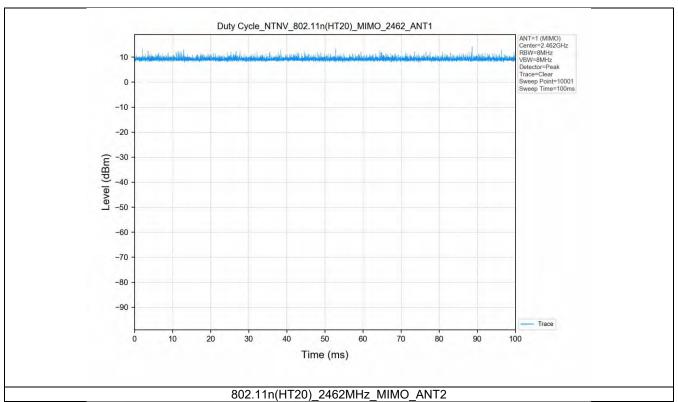


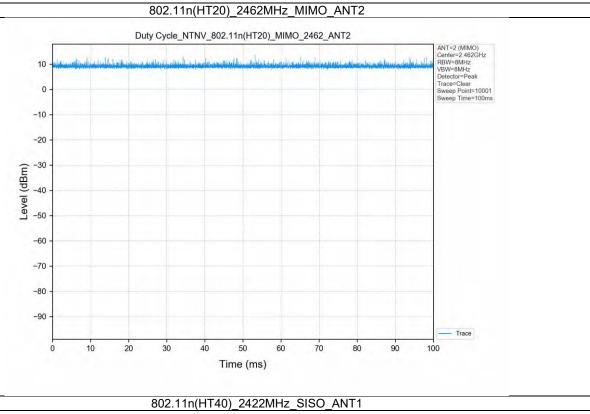


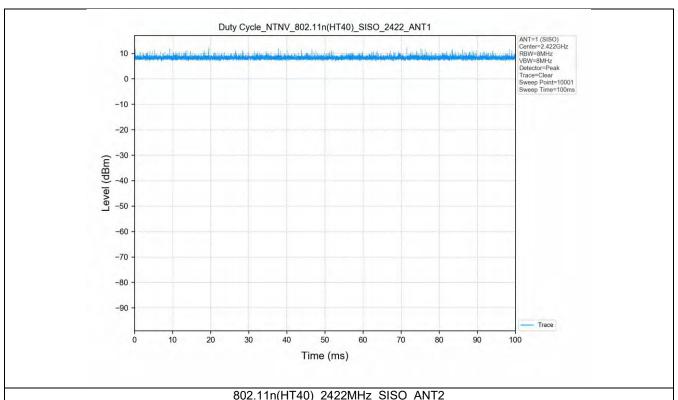


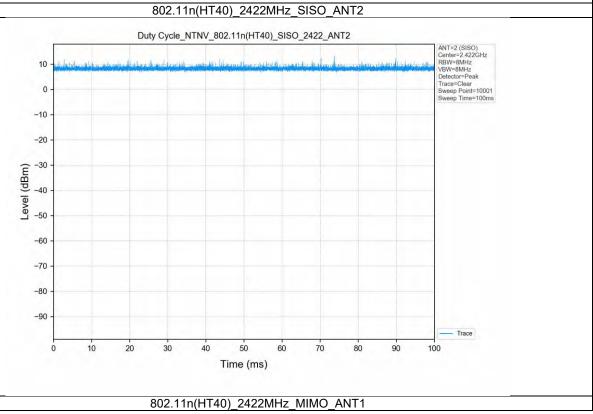


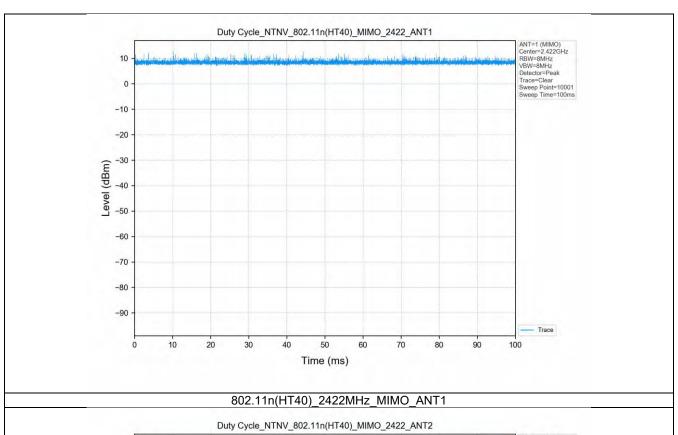


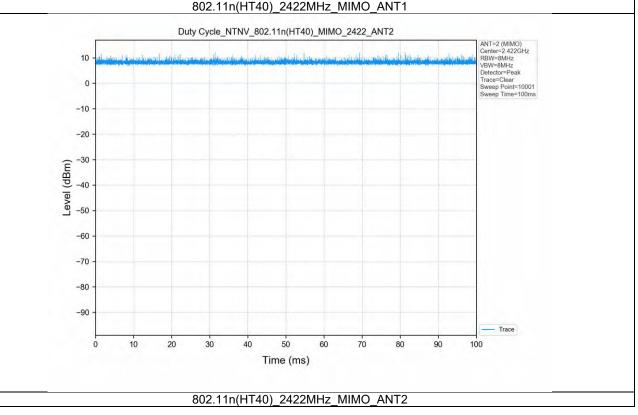


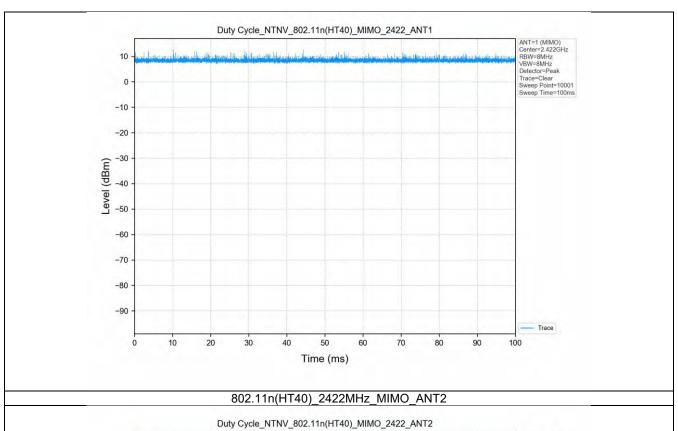


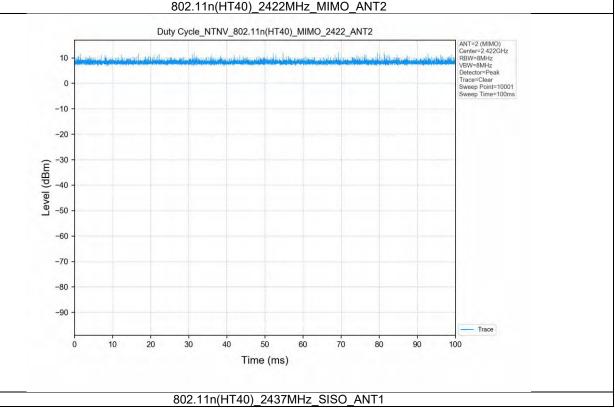


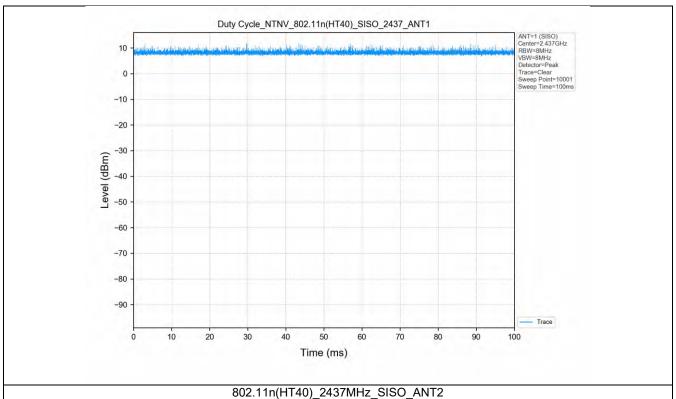


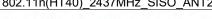


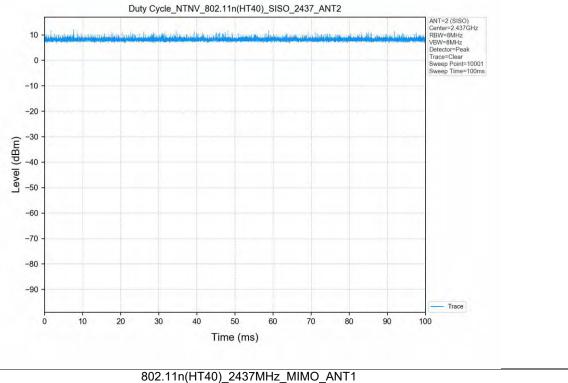


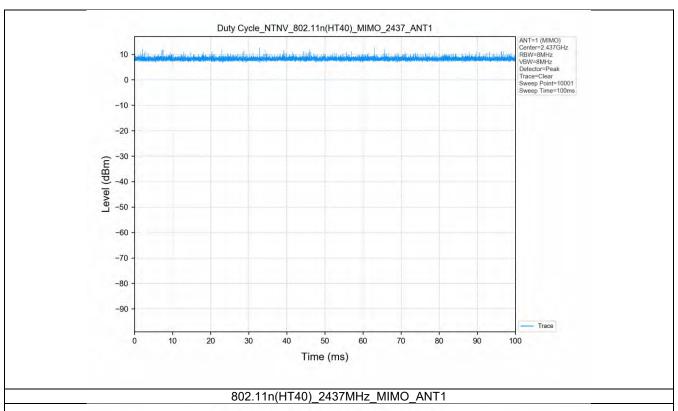


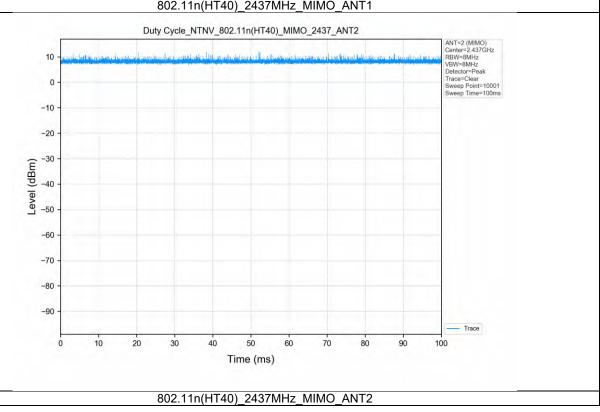


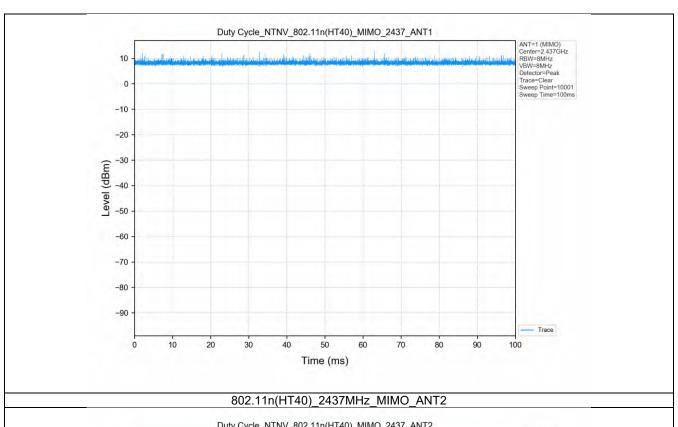


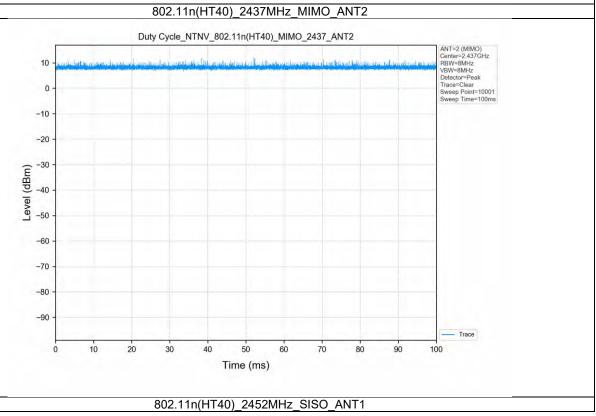


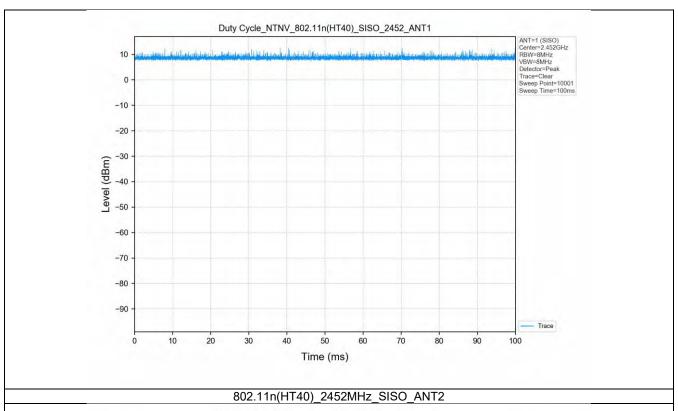


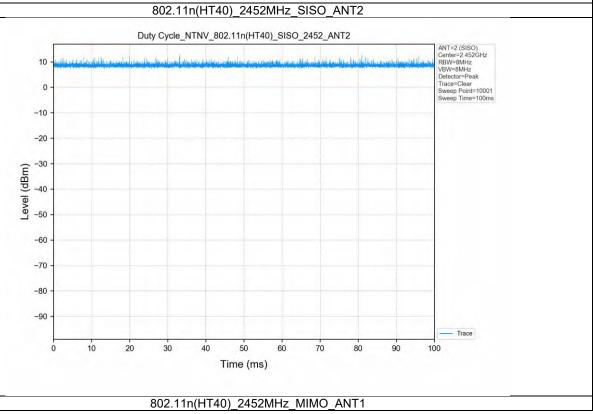


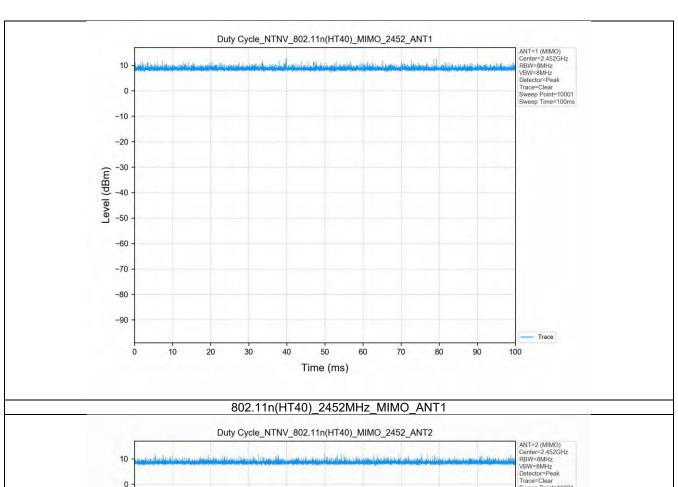


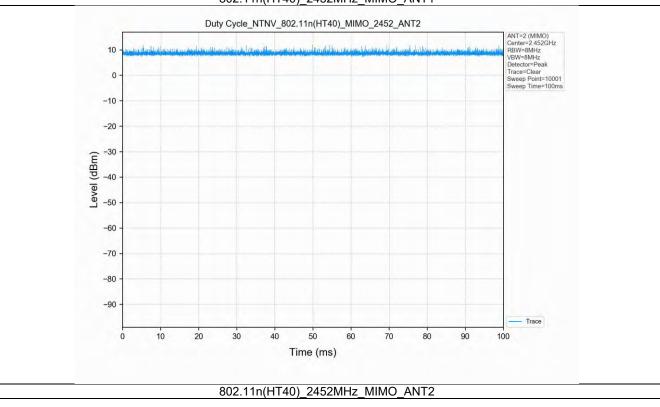


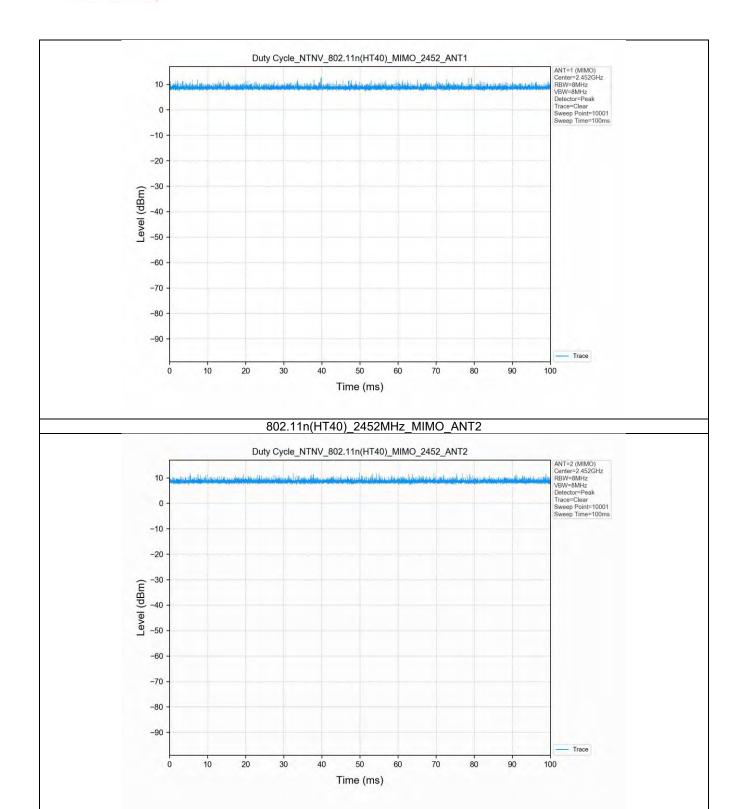












#### 2. Bandwidth

#### 2.1 Test Result

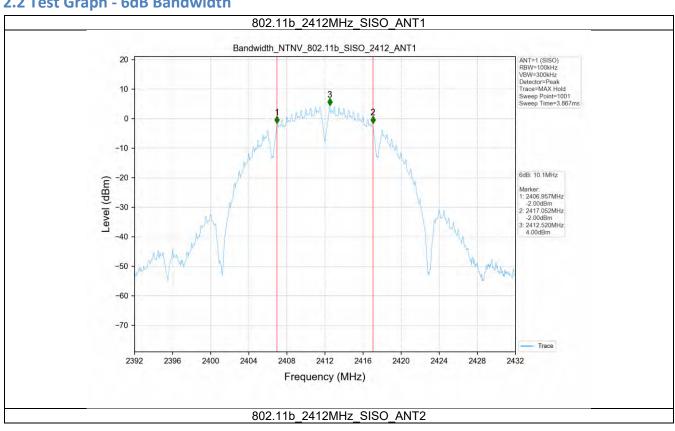
Test Mode	Frequency (MHz)	ТХ Туре	ANT No.	6dB Bar	Verdict	
				Test Result (MHz)	Limits (MHz)	verdict
802.11b	2412	SISO	1	10.100	≥0.5	PASS
			2	10.090	≥0.5	PASS
	2437	SISO	1	10.100	≥0.5	PASS
			2	10.100	≥0.5	PASS
	2462	SISO	1	10.060	≥0.5	PASS
			2	10.100	≥0.5	PASS
	2412	SISO	1	16.620	≥0.5	PASS
			2	16.620	≥0.5	PASS
902 11a	2437	SISO	1	16.630	≥0.5	PASS
802.11g	2437		2	16.620	≥0.5	PASS
	2462	SISO	1	16.610	≥0.5	PASS
	2462		2	16.610	≥0.5	PASS
	2412	SISO	1	17.860	≥0.5	PASS
			2	17.840	≥0.5	PASS
		MIMO	0	17.850	≥0.5	PASS
		SISO	1	17.870	≥0.5	PASS
802.11n(HT20)	2437		2	17.870	≥0.5	PASS
		MIMO	0	17.870	≥0.5	PASS
	2462	SISO	1	17.850	≥0.5	PASS
			2	17.830	≥0.5	PASS
		MIMO	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

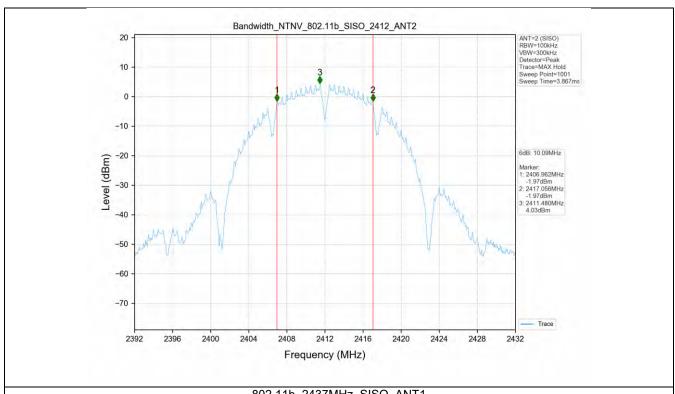
Test Mode	Frequency	TX Type	ANT No.	99% Occupied Bandwidth		
I EST INIONE	(MHz)	17 Type		Test Res	ult (MHz)	
802.11b	2412	SISO	1	15.040	Only for Report Use	
			2	15.030	Only for Report Use	
	2437	SISO	1	15.070	Only for Report Use	
			2	15.070	Only for Report Use	
	2462	SISO	1	15.030	Only for Report Use	
			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	
			0	18.030	Only for Report Use	



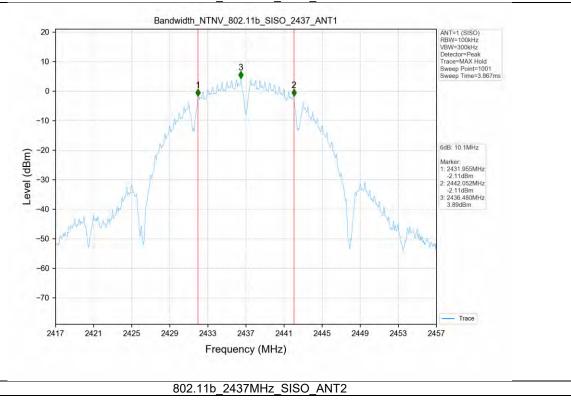
	2437	SISO	1	18.080	Only for Report Use
			2	18.100	Only for Report Use
		MIMO	0	18.090	Only for Report Use
	2462	SISO	1	18.040	Only for Report Use
			2	18.040	Only for Report Use
		MIMO	0	18.060	Only for Report Use
802.11n(HT40)	2422	SISO	1	36.660	Only for Report Use
			2	36.630	Only for Report Use
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

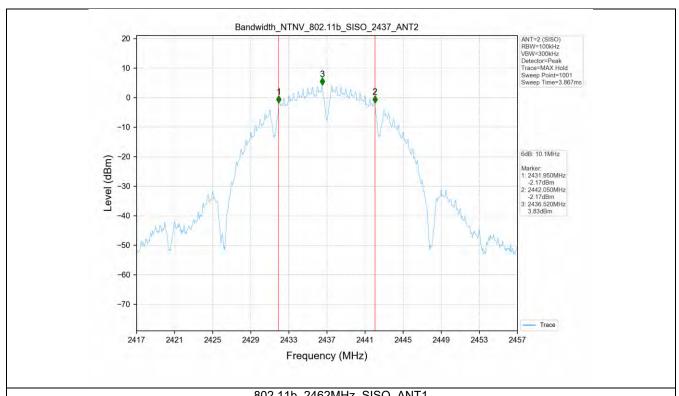
#### 2.2 Test Graph - 6dB Bandwidth



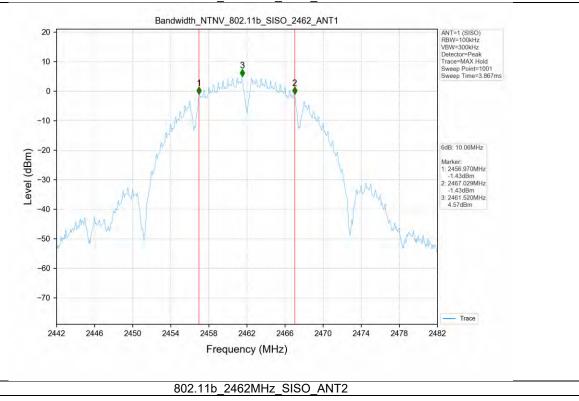


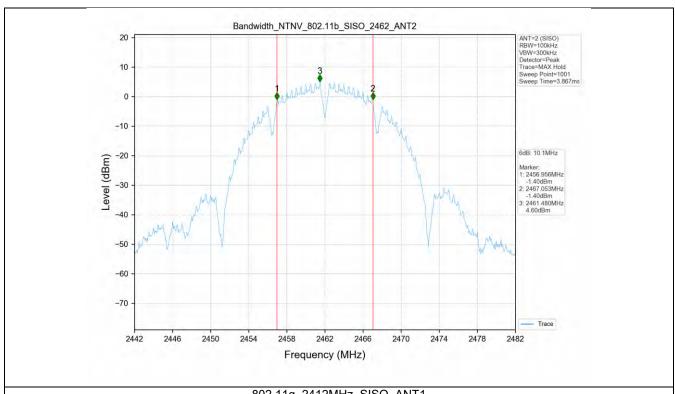




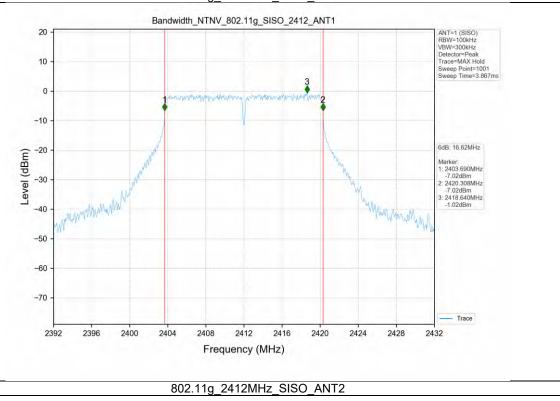


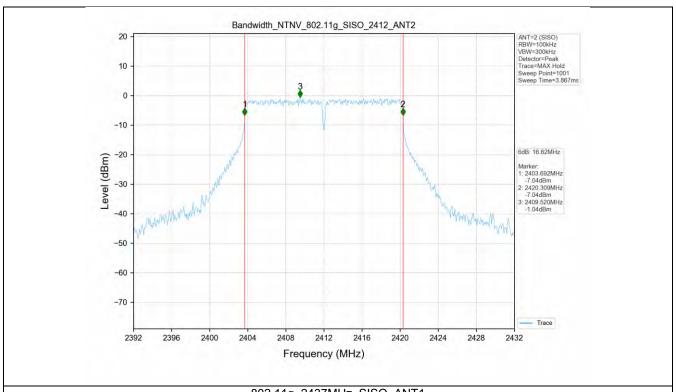




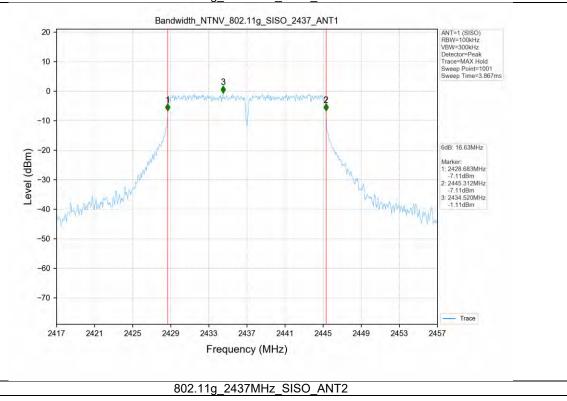


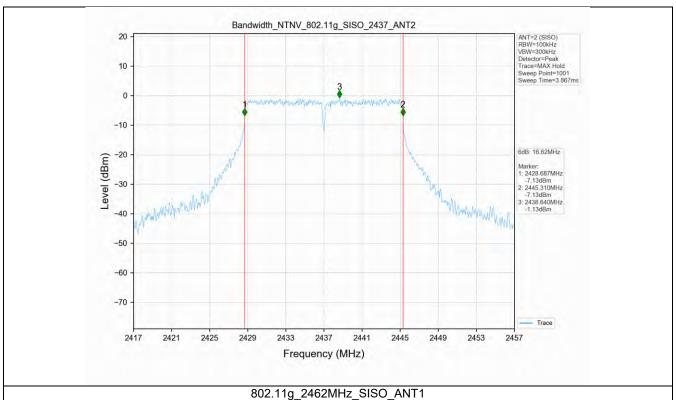




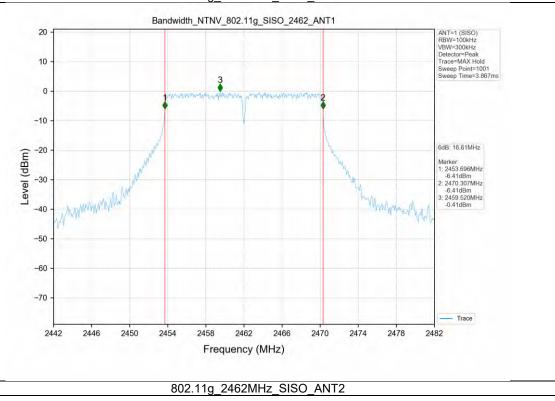


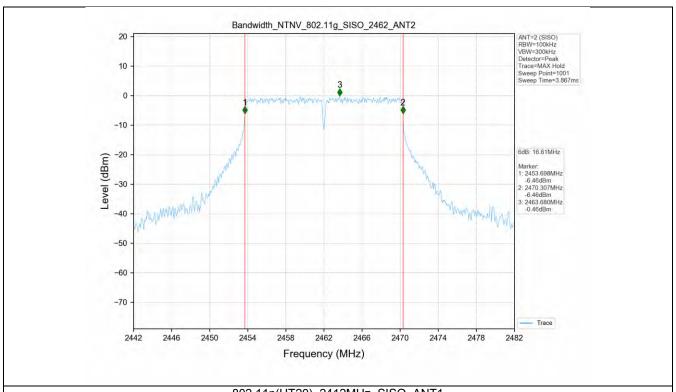




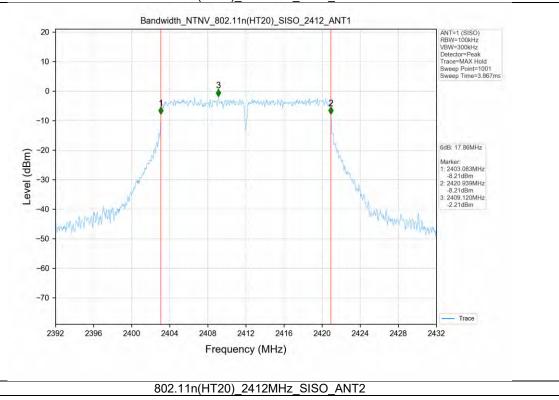


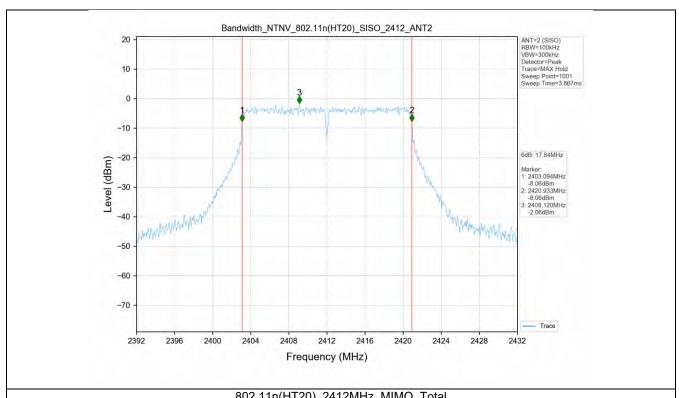


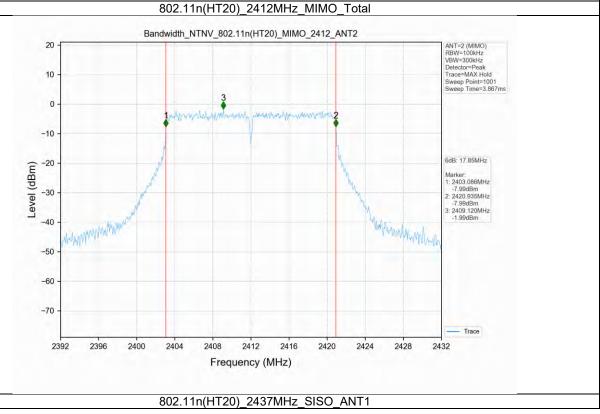


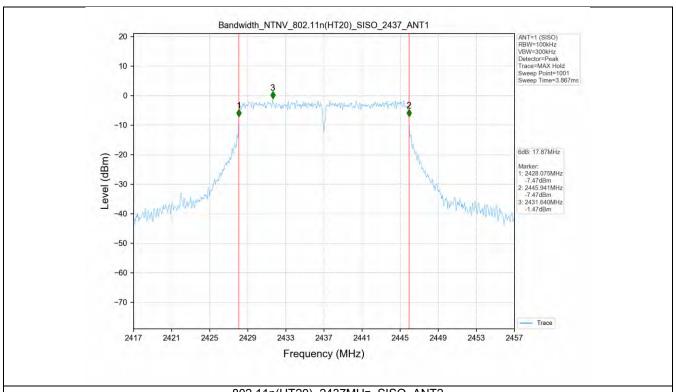


#### 802.11n(HT20)\_2412MHz\_SISO\_ANT1

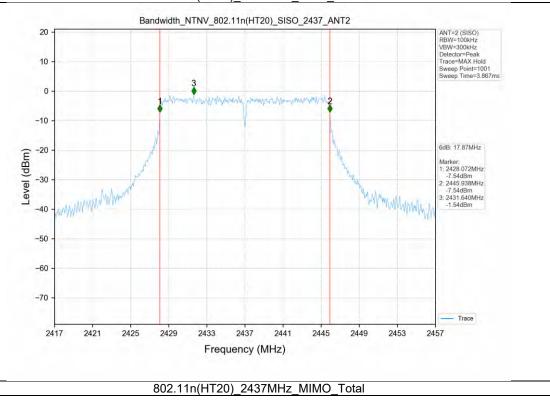


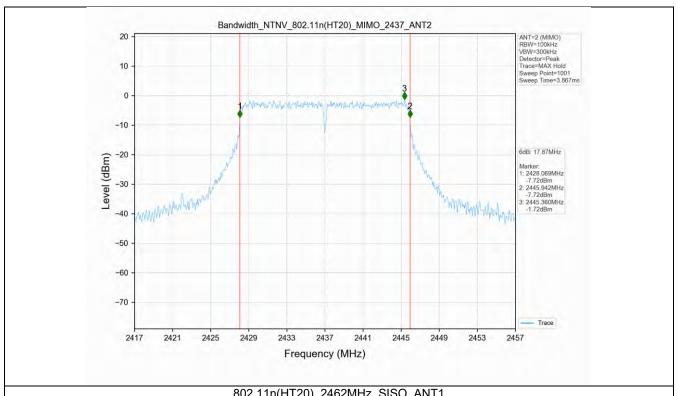


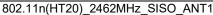


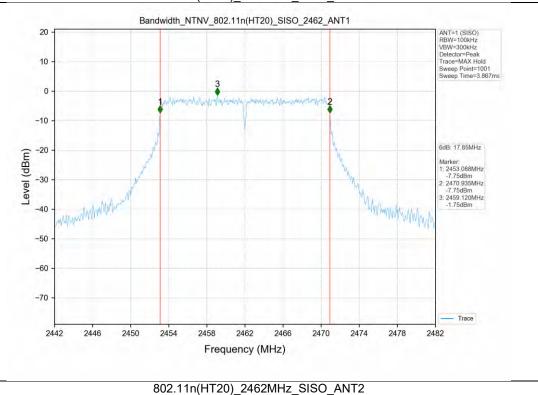


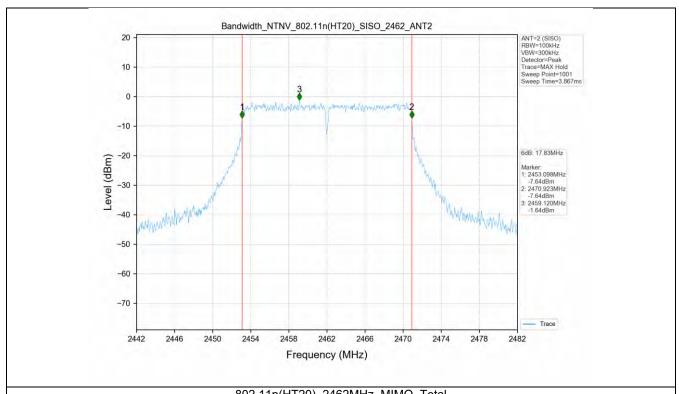
#### 802.11n(HT20)\_2437MHz\_SISO\_ANT2

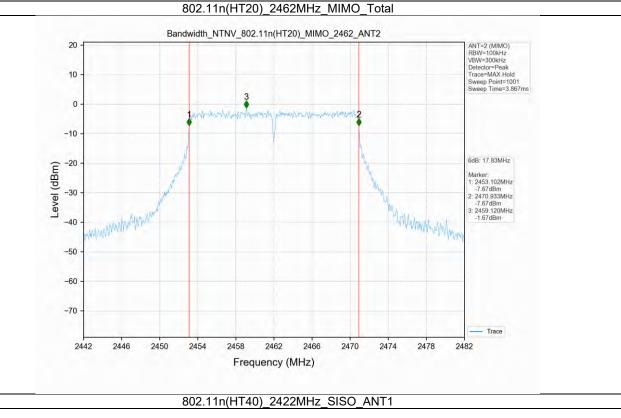


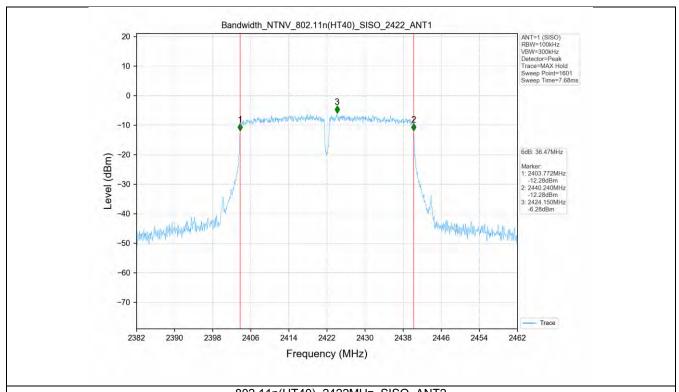


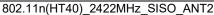


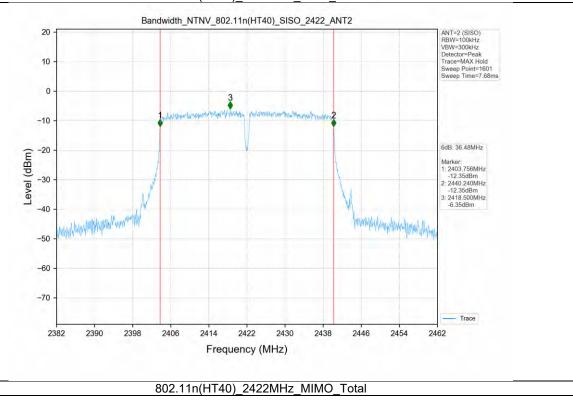


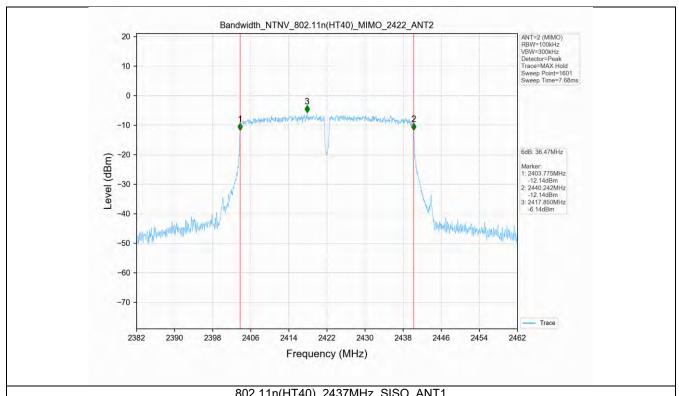


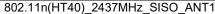


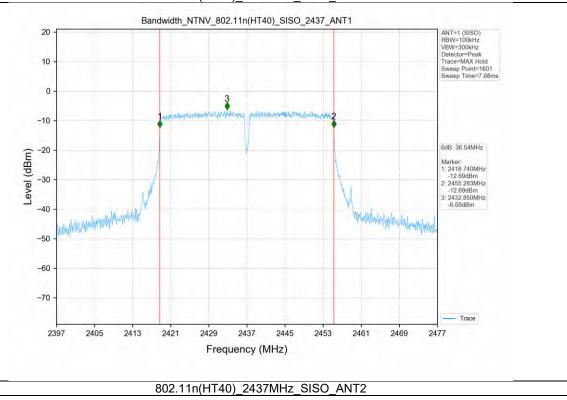


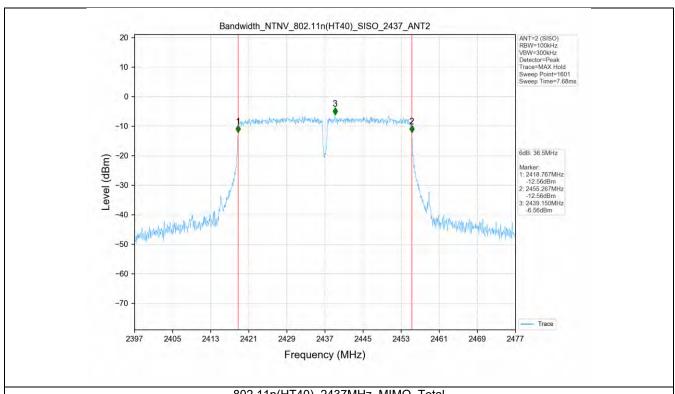


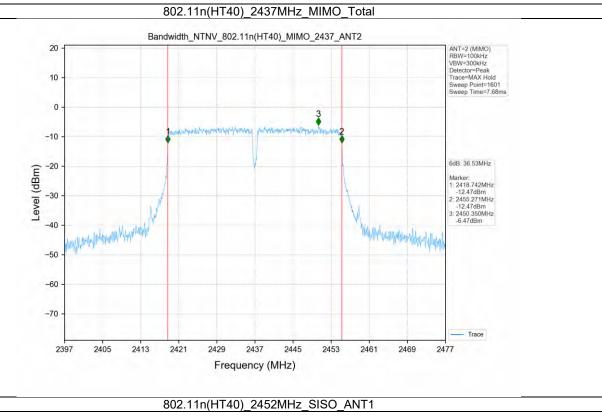




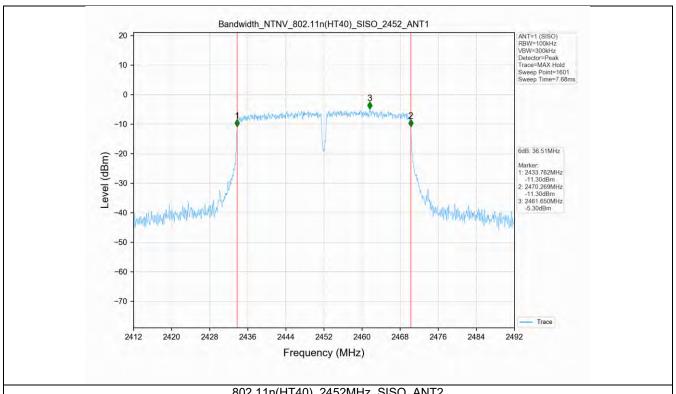


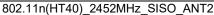


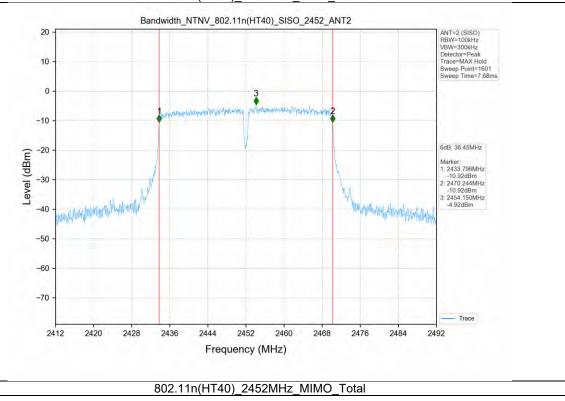


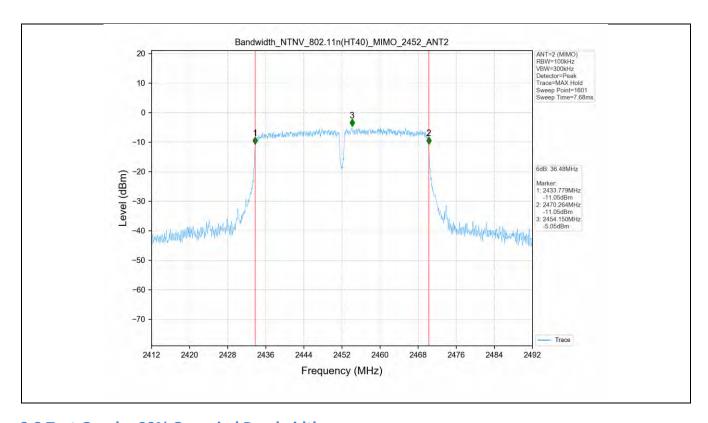




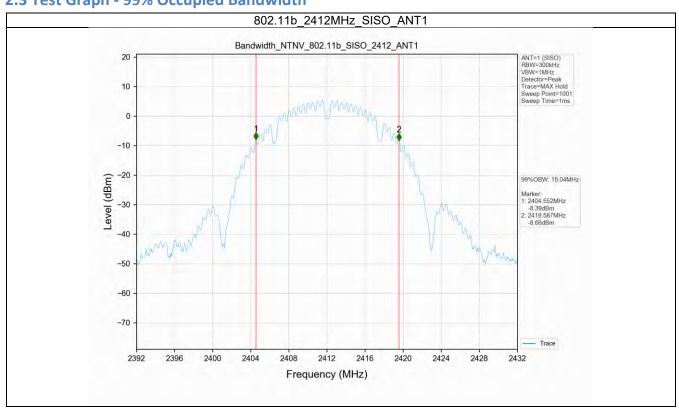


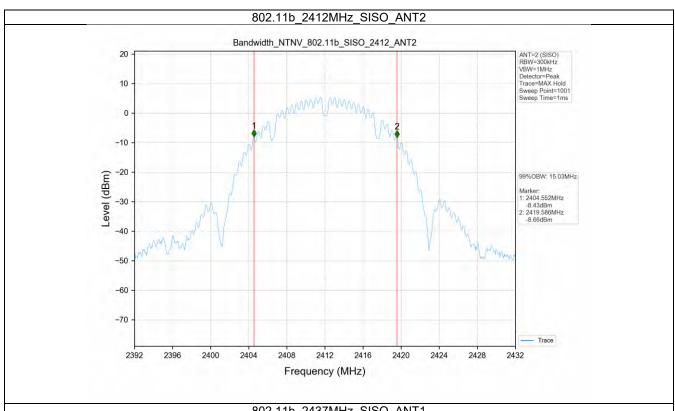




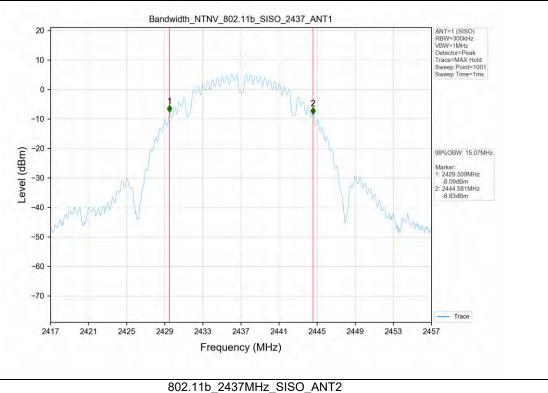


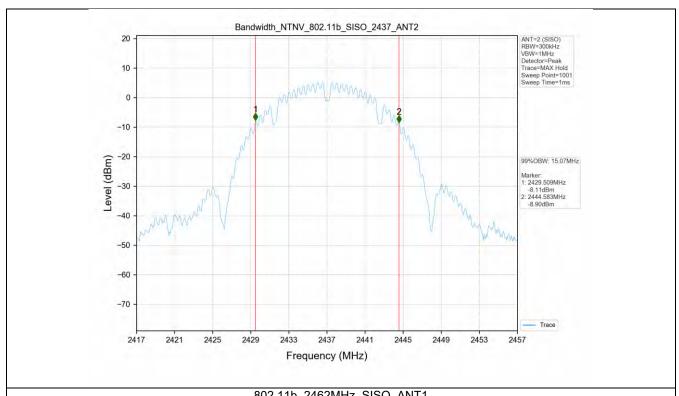
#### 2.3 Test Graph - 99% Occupied Bandwidth



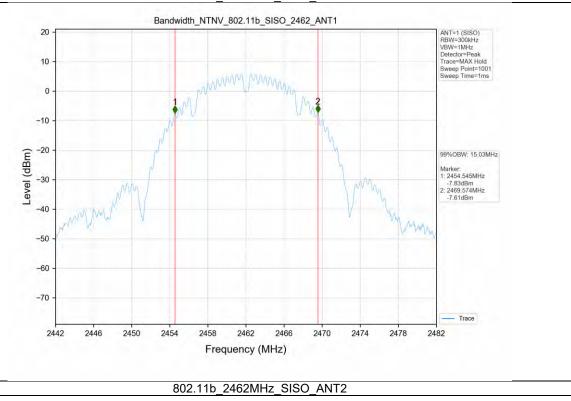








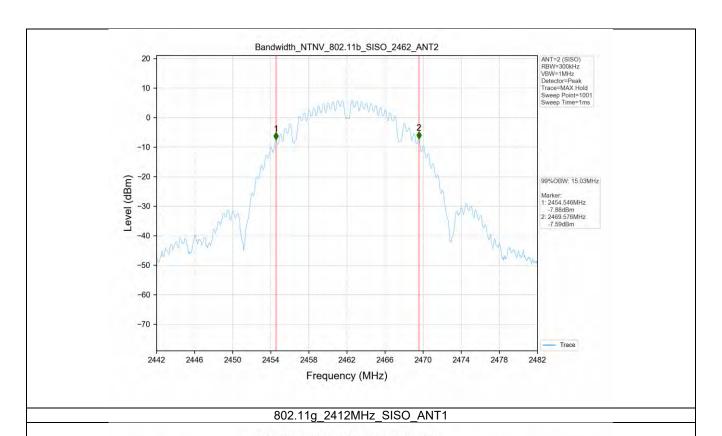
#### 802.11b\_2462MHz\_SISO\_ANT1

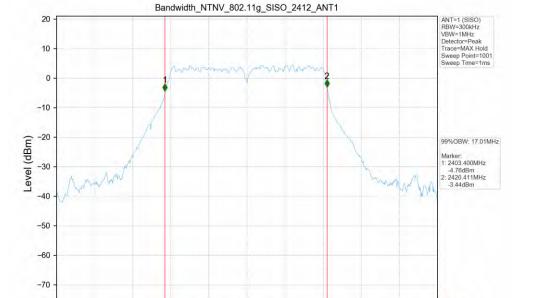


Frequency (MHz)

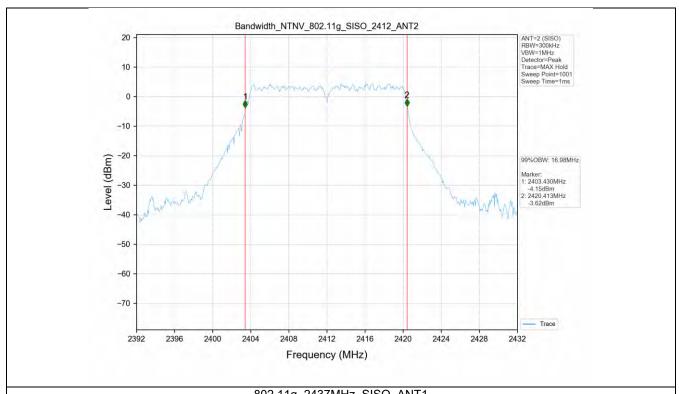
802.11g\_2412MHz\_SISO\_ANT2

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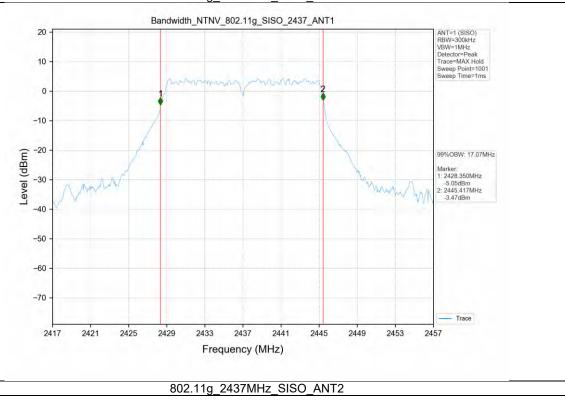


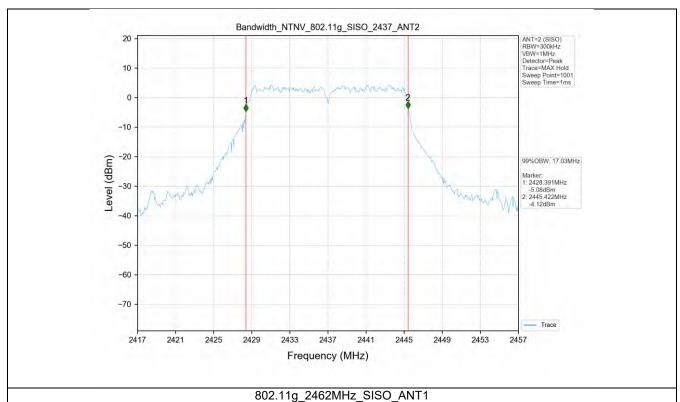


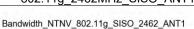
Trace

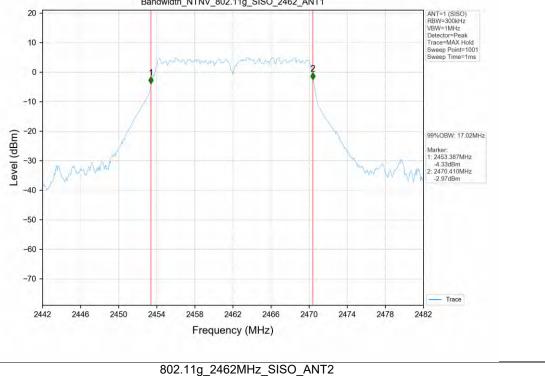


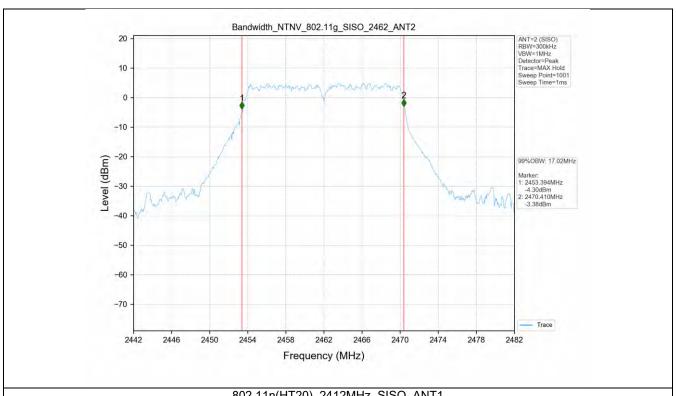




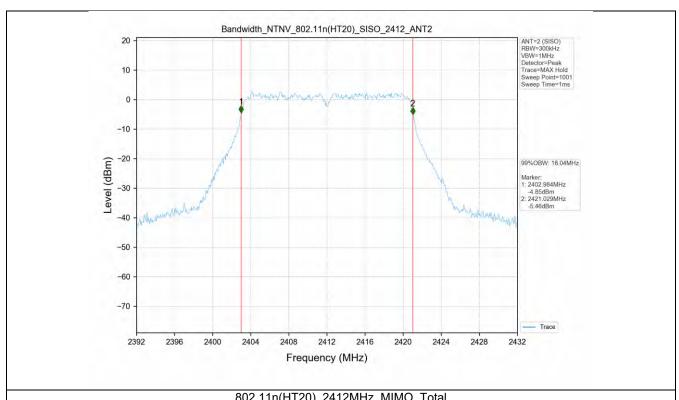


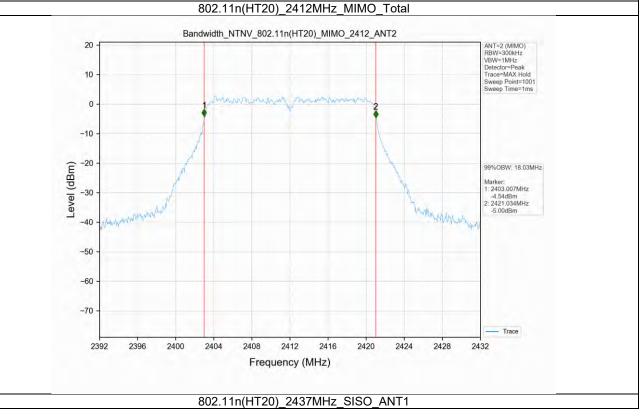


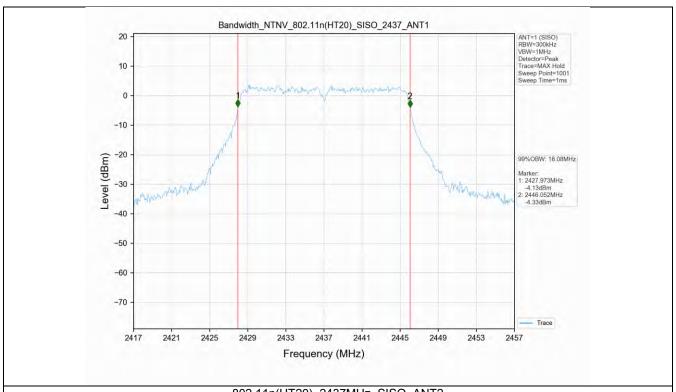




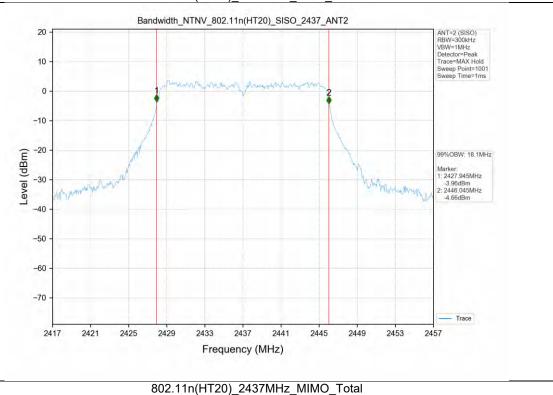
#### 802.11n(HT20)\_2412MHz\_SISO\_ANT1 Bandwidth\_NTNV\_802.11n(HT20)\_SISO\_2412\_ANT1 ANT=1 (SISO) RBW=300kHz VBW=1MHz Detector=Peak Trace=MAX Hold Sweep Point=1001 Sweep Time=1ms 20 10 0 -10 -20 Level (dBm) 99%OBW: 18.04MHz Marker: 1: 2402.989MHz -5.39dBm 2: 2421.027MHz -5.32dBm -30 -40 -50 -60 -70 Trace 2392 2396 2400 2404 2408 2412 2416 2420 2424 2428 2432 Frequency (MHz) 802.11n(HT20)\_2412MHz\_SISO\_ANT2

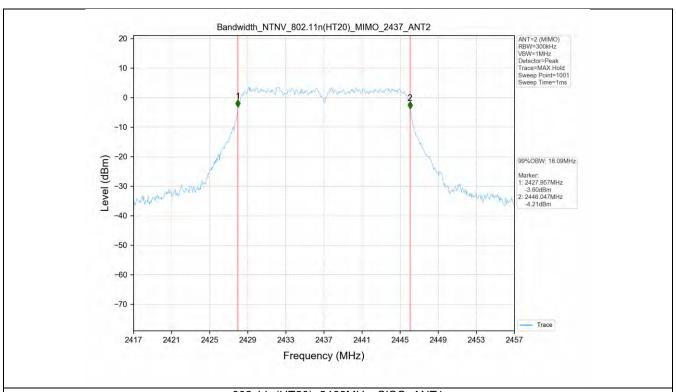


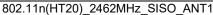


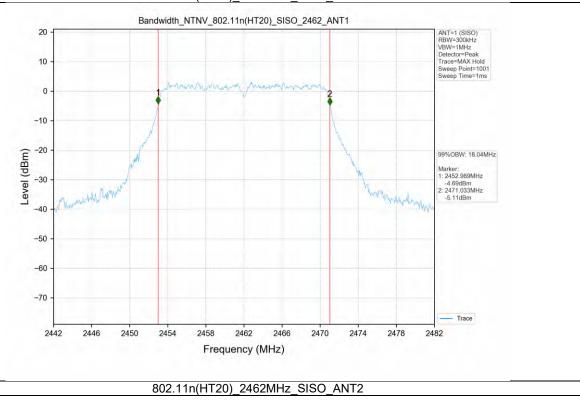


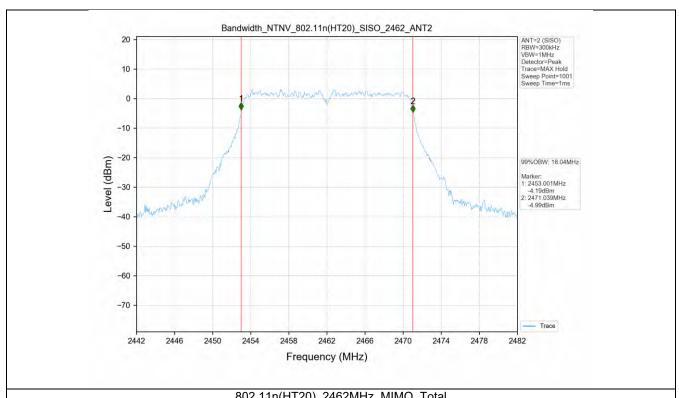
#### 802.11n(HT20)\_2437MHz\_SISO\_ANT2

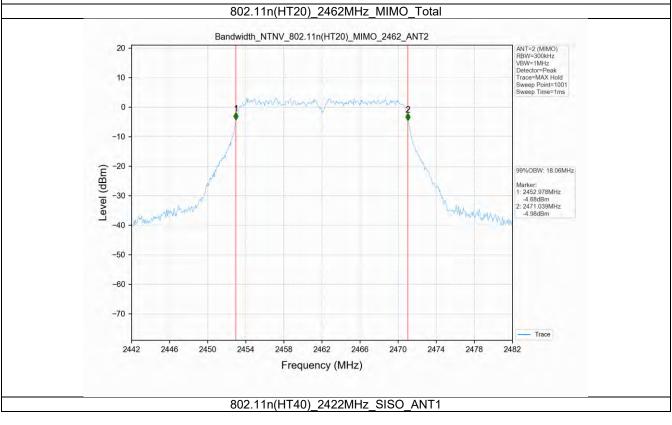


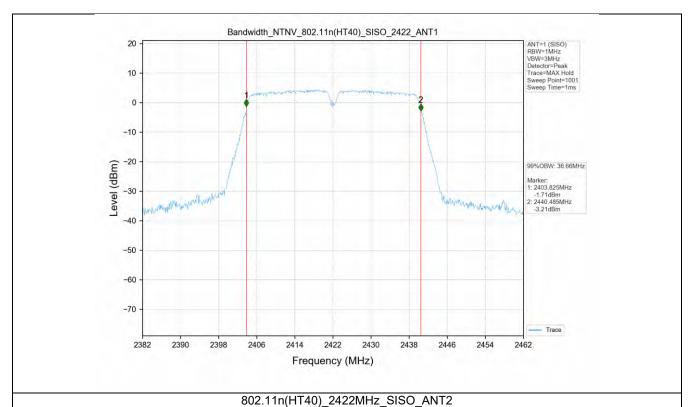






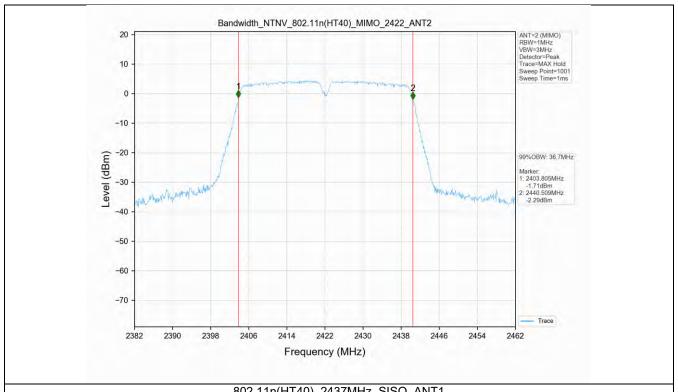


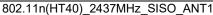


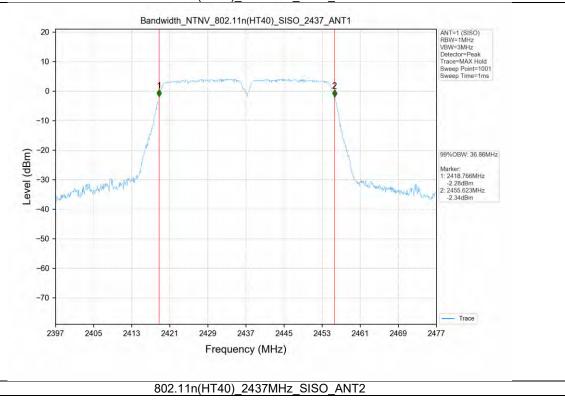


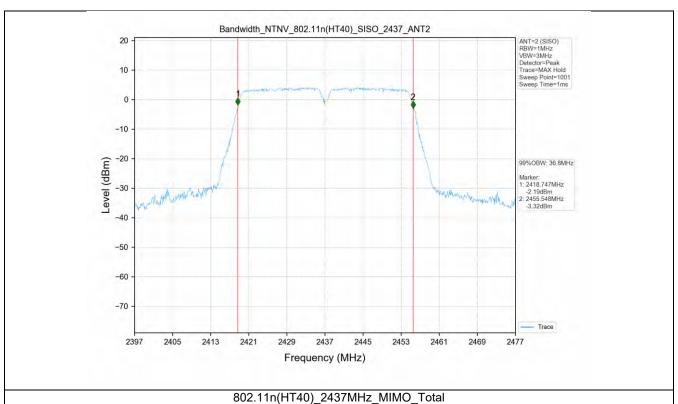
#### Bandwidth\_NTNV\_802.11n(HT40)\_SISO\_2422\_ANT2 ANT=2 (SISO) RBW=1MHz VBW=3MHz Detector=Peak Trace=MAX Hold Sweep Point=1001 Sweep Time=1ms 20 10 0 -10 -20 Level (dBm) 99%OBW: 36.63MHz Marker: 1: 2403.819MHz -1.76dBm 2: 2440.448MHz -2.89dBm -30 -40 -50 -60 -70 Trace 2382 2390 2398 2406 2422 2430 2438 2446 2454 2462 Frequency (MHz) 802.11n(HT40)\_2422MHz\_MIMO\_Total

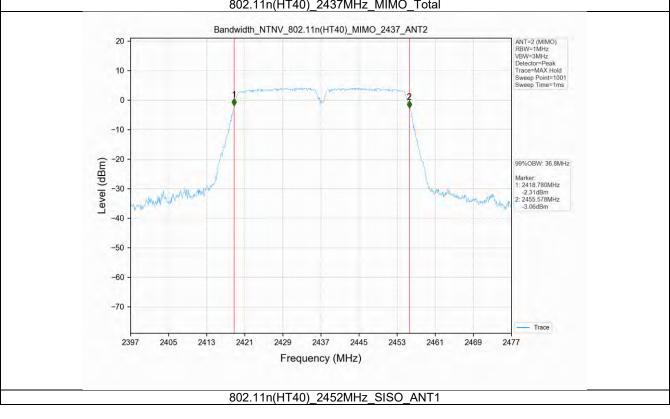


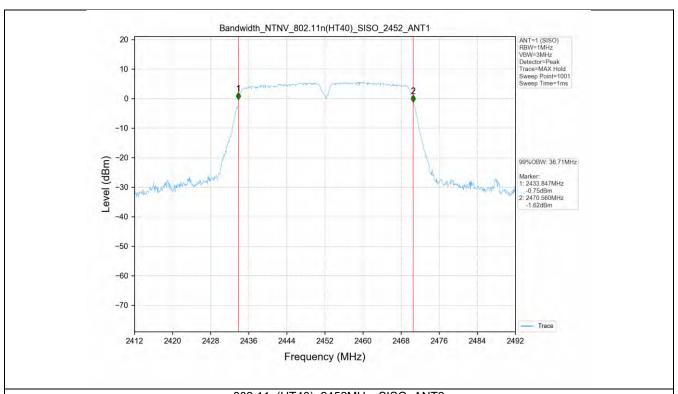


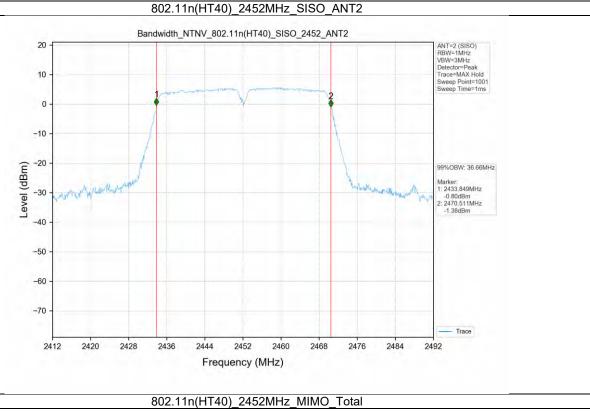




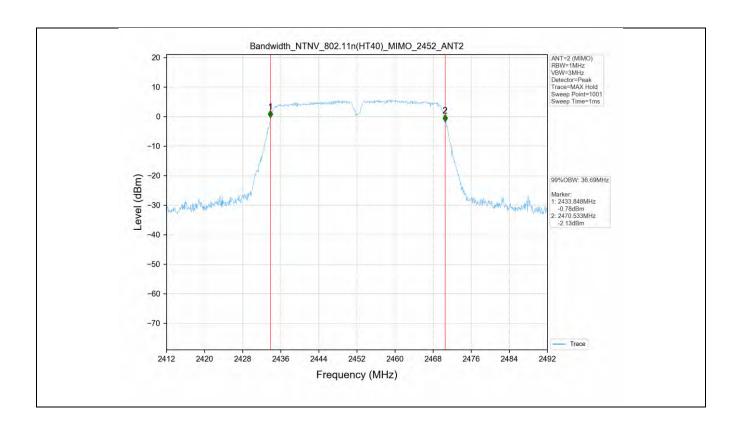








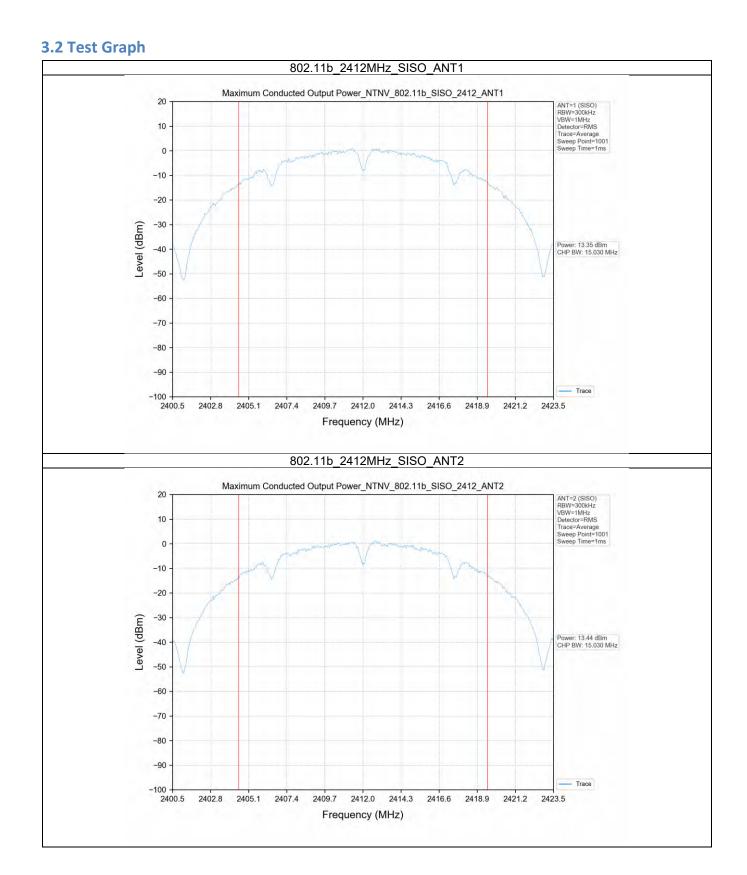


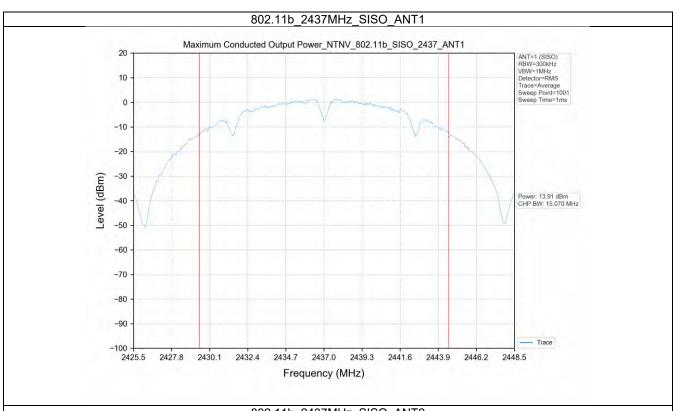


#### 3. Maximum Conducted Output Power

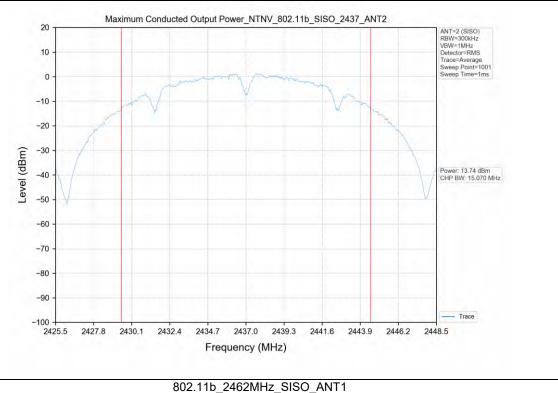
#### 3.1 Test Result

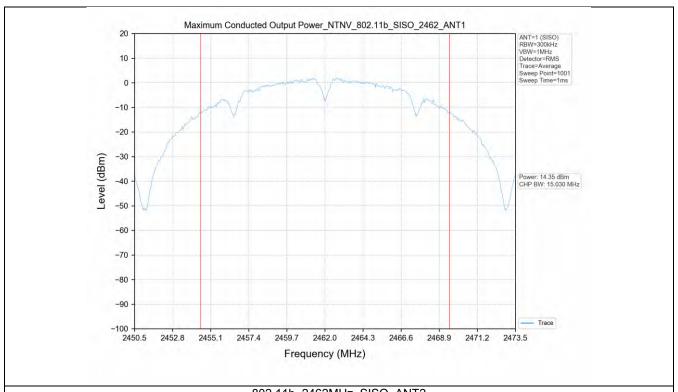
Test Mode	Frequency (MHz)	Тх Туре	Measured Average Output Power (dBm)			Limits (dBm)	Verdict
			Ant 1	Ant 2	Total	LIIIIIIS (UDIII)	verdict
802.11b	2412	SISO	13.35	13.44	1	≤30	PASS
	2437	SISO	13.91	13.74	/	≤30	PASS
	2462	SISO	14.35	14.28	1	≤30	PASS
802.11g	2412	SISO	13.61	13.52	1	≤30	PASS
	2437	SISO	14.22	13.96	/	≤30	PASS
	2462	SISO	14.42	14.33	/	≤30	PASS
802.11n(HT20)	2412	SISO	12.01	11.93	1	≤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	1	≤30	PASS
		MIMO	13.19	13.20	16.21	≤30	PASS
802.11n(HT40)	2422	SISO	10.76	10.77	1	≤30	PASS
		MIMO	10.80	10.76	13.79	≤30	PASS
	2437	SISO	11.76	11.76	1	≤30	PASS
		MIMO	11.87	11.79	14.84	≤30	PASS
	2452	SISO	11.03	11.04	1	≤30	PASS
		MIMO	11.12	11.03	14.09	≤30	PASS



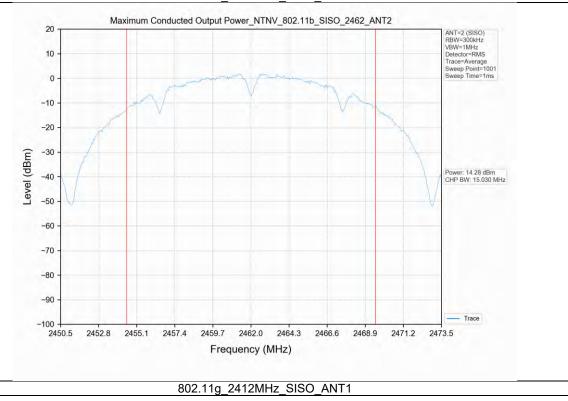


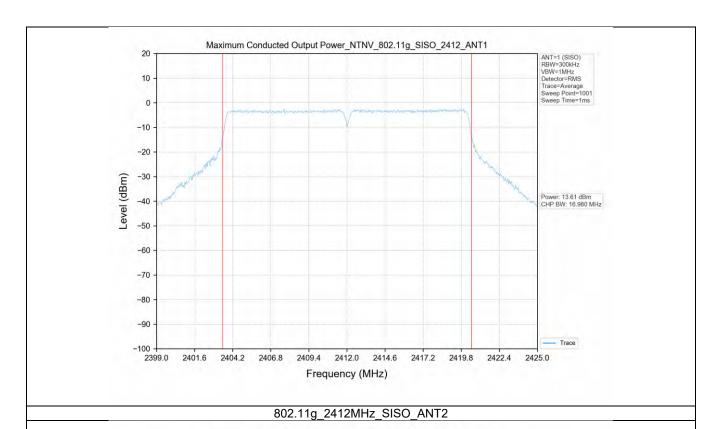
#### 802.11b\_2437MHz\_SISO\_ANT2

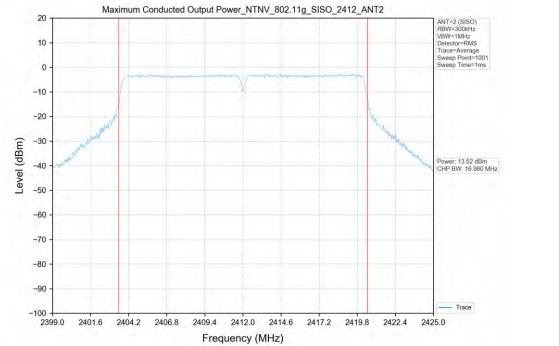












802.11g\_2437MHz\_SISO\_ANT1

