



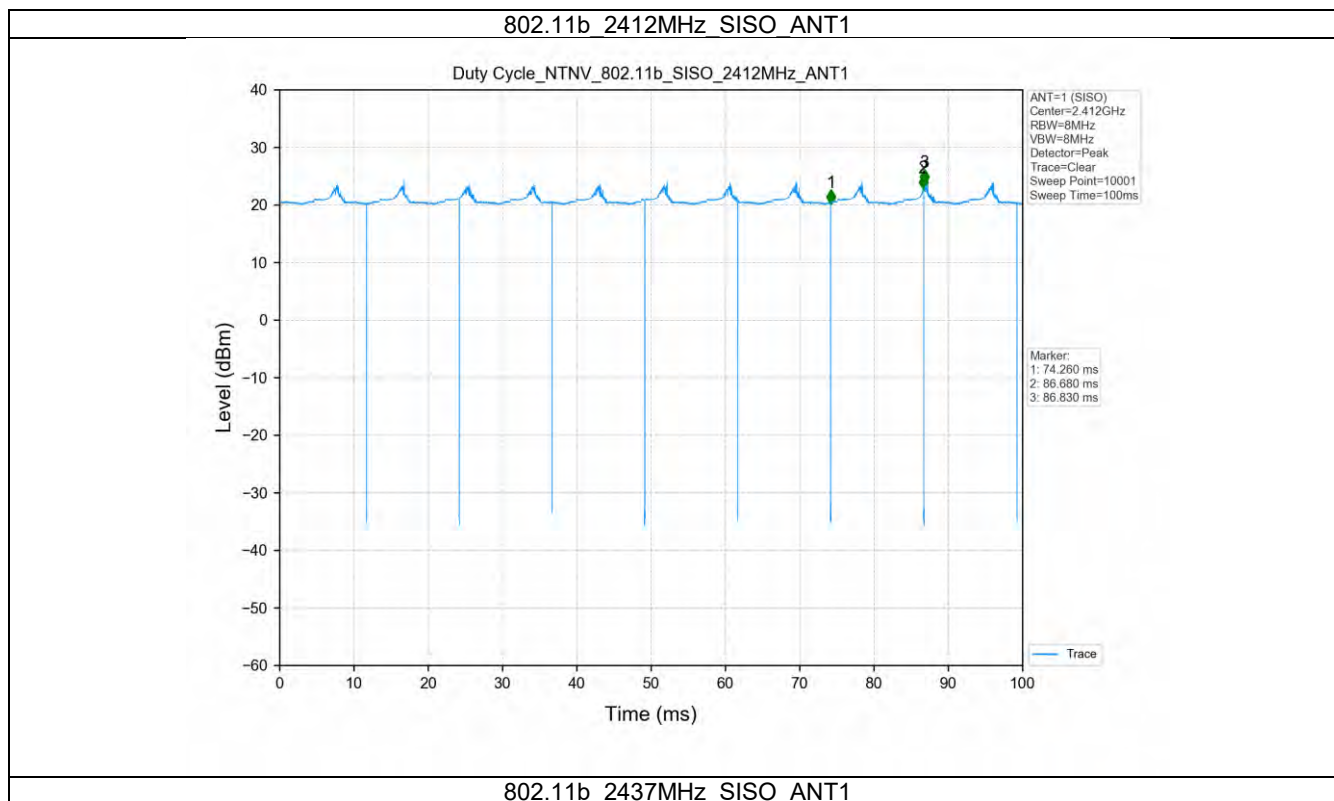
## Appendix A for SHEM191201999501

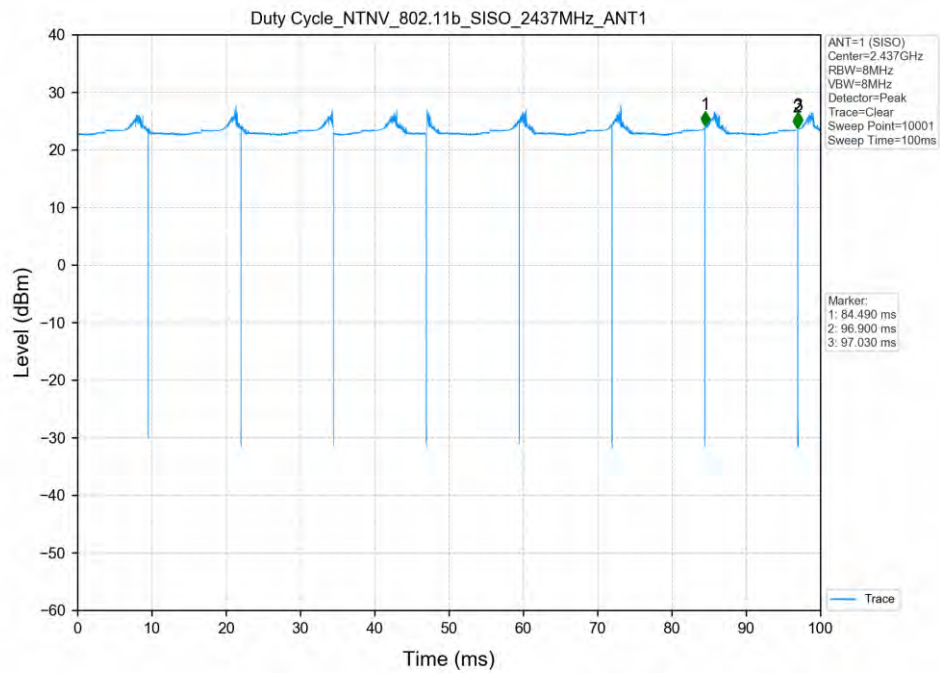
### 1. Duty Cycle

#### 1.1 Test Result

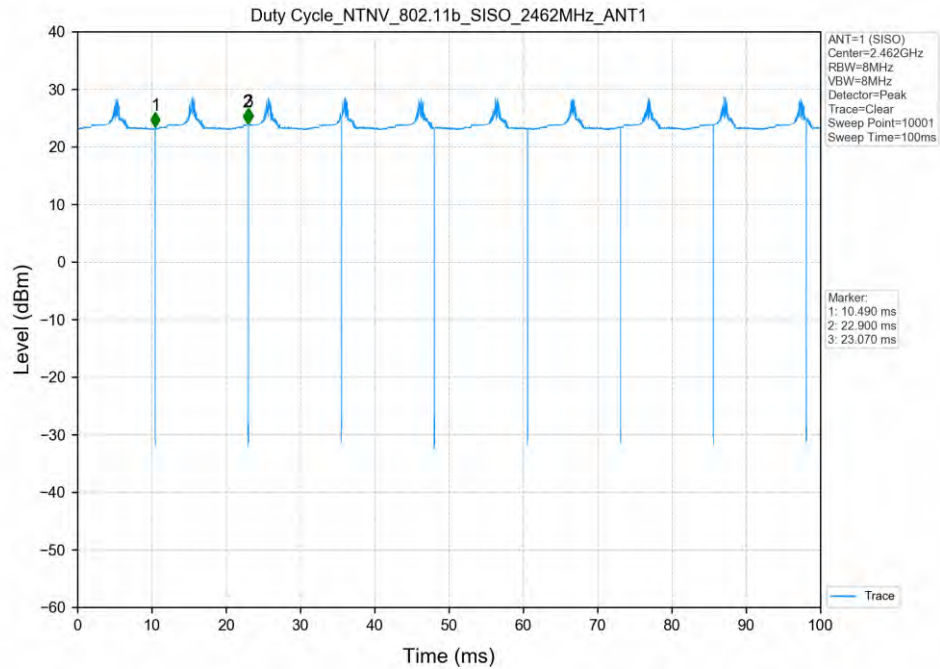
Test Mode	Channel Frequency(MHz)	TX Type	ANT No.	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
802.11b	2412	SISO	1	12.420	12.570	98.81	0.05
	2437	SISO	1	12.410	12.540	98.96	0.05
	2462	SISO	1	12.410	12.580	98.65	0.06
802.11g	2412	SISO	1	2.063	2.235	92.30	0.35
	2437	SISO	1	2.064	2.215	93.18	0.31
	2462	SISO	1	2.063	2.235	92.30	0.35
802.11n(HT20)	2412	SISO	1	1.890	2.058	91.84	0.37
	2437	SISO	1	1.890	2.041	92.60	0.33
	2462	SISO	1	1.890	2.050	92.20	0.35
802.11n(HT40)	2422	SISO	1	0.916	1.073	85.37	0.69
	2437	SISO	1	0.916	1.082	84.66	0.72
	2452	SISO	1	0.916	1.073	85.37	0.69

#### 1.2 Test Graph

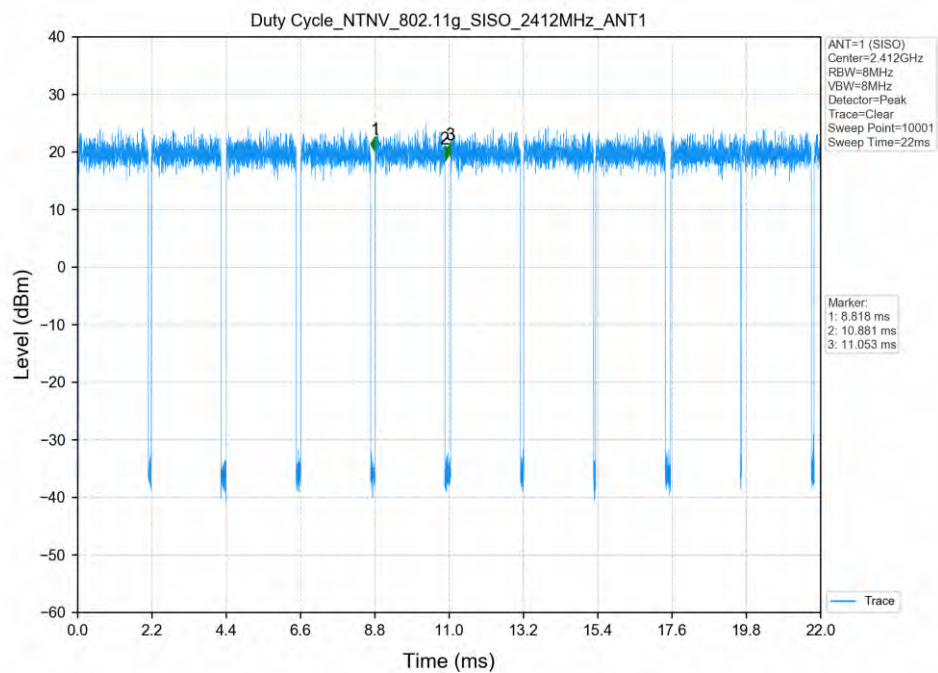




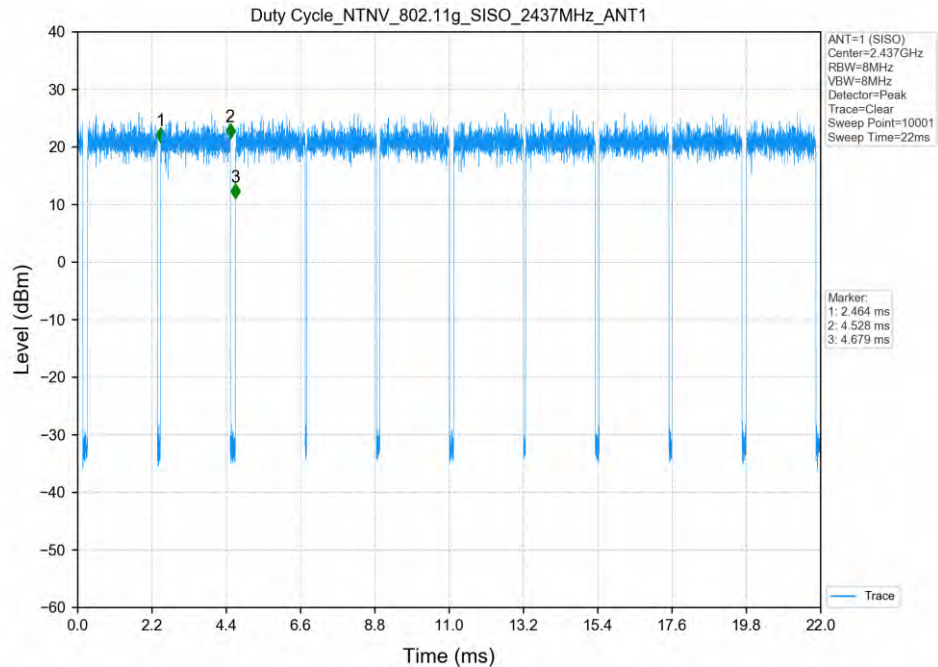
802.11b 2462MHz SISO ANT1



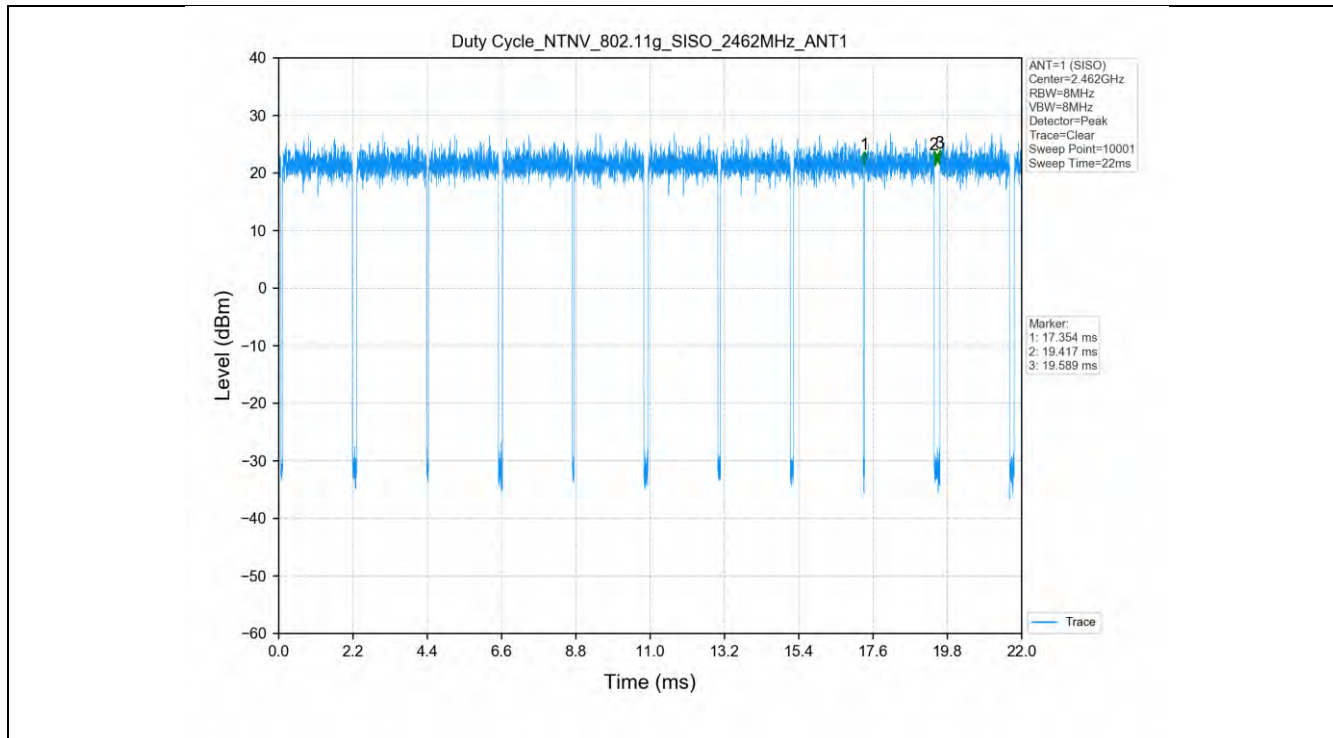
802.11g 2412MHz SISO ANT1



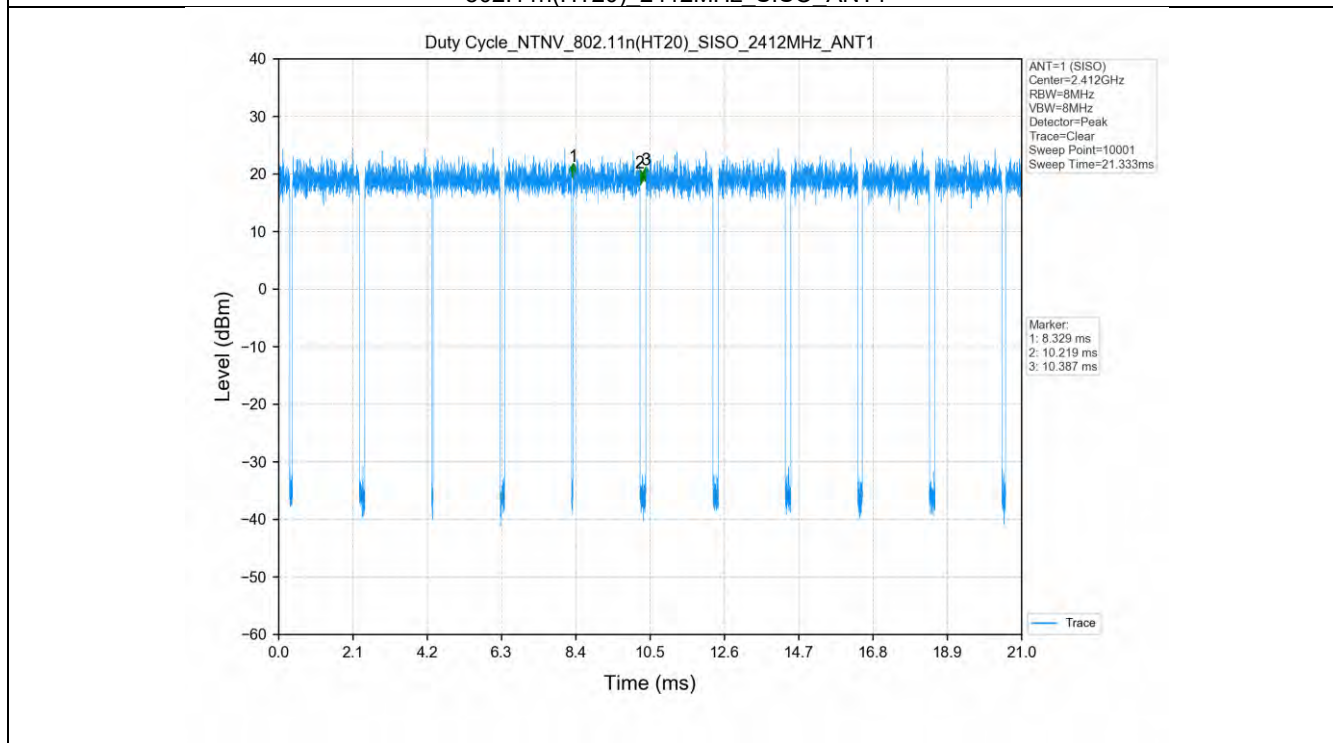
802.11g\_2437MHz SISO ANT1



802.11g\_2462MHz SISO ANT1

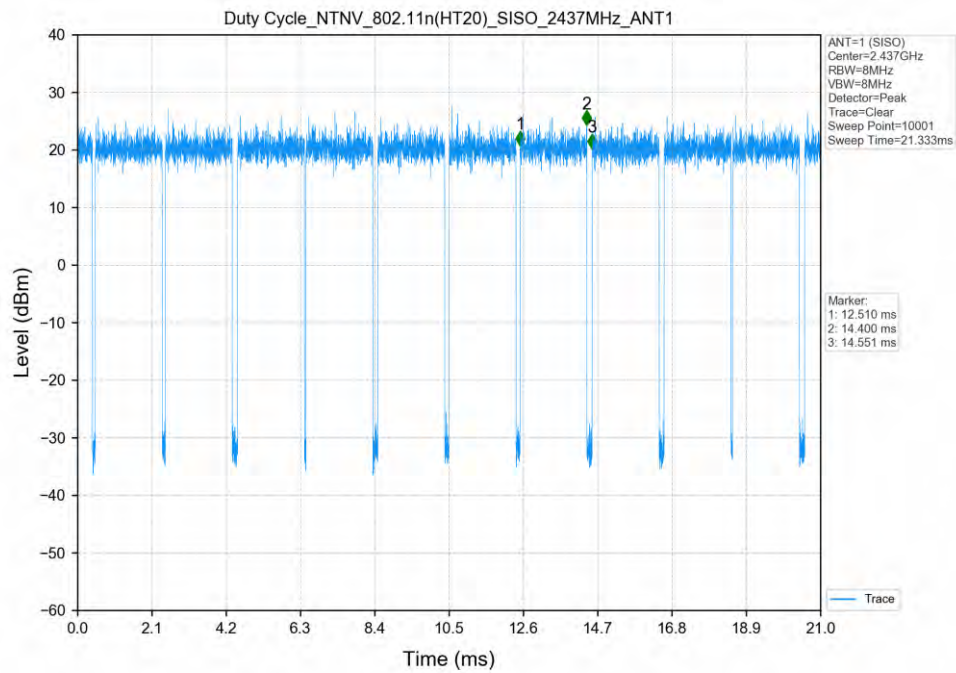


802.11n(HT20) 2412MHz SISO ANT1

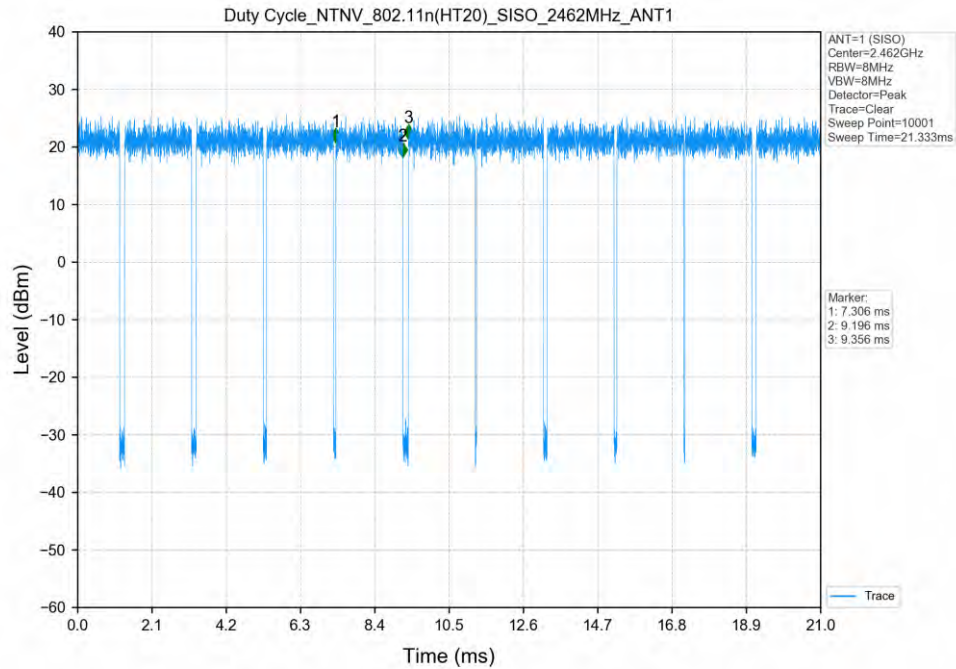


802.11n(HT20) 2437MHz SISO ANT1

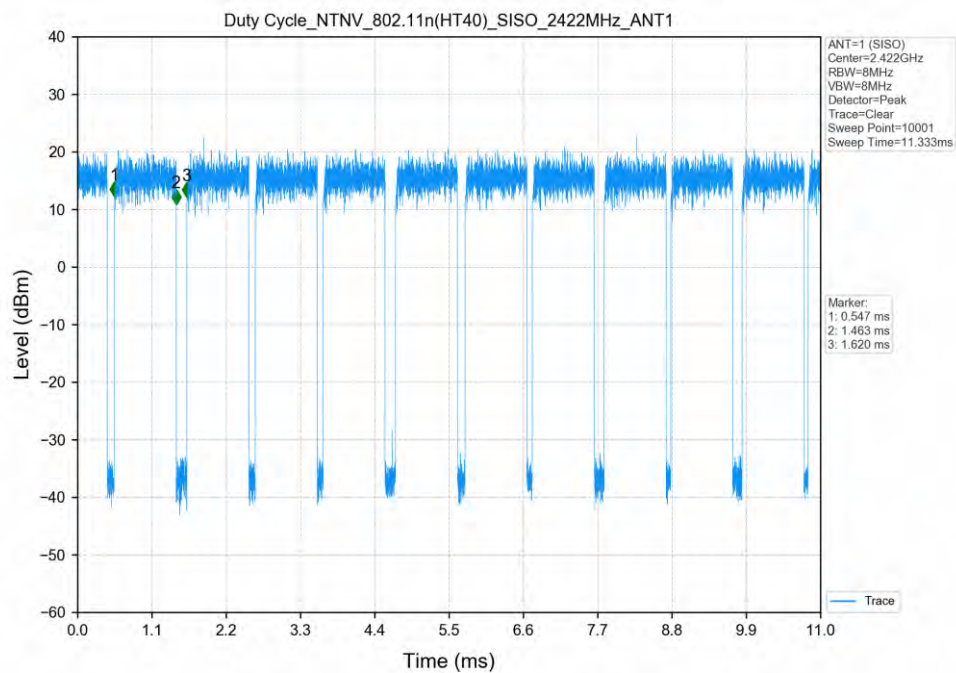




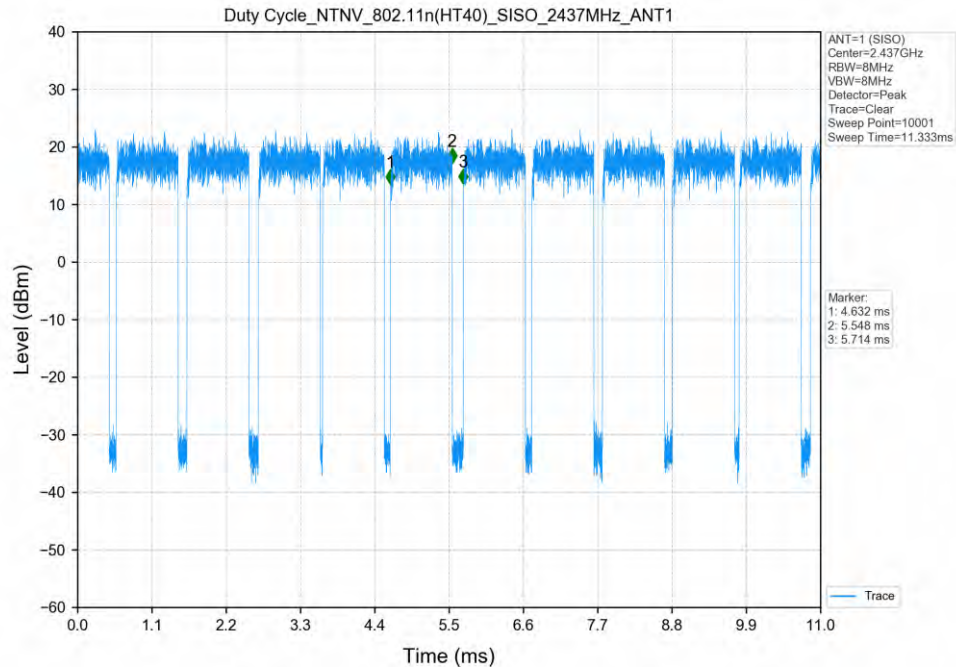
802.11n(HT20) 2462MHz SISO ANT1



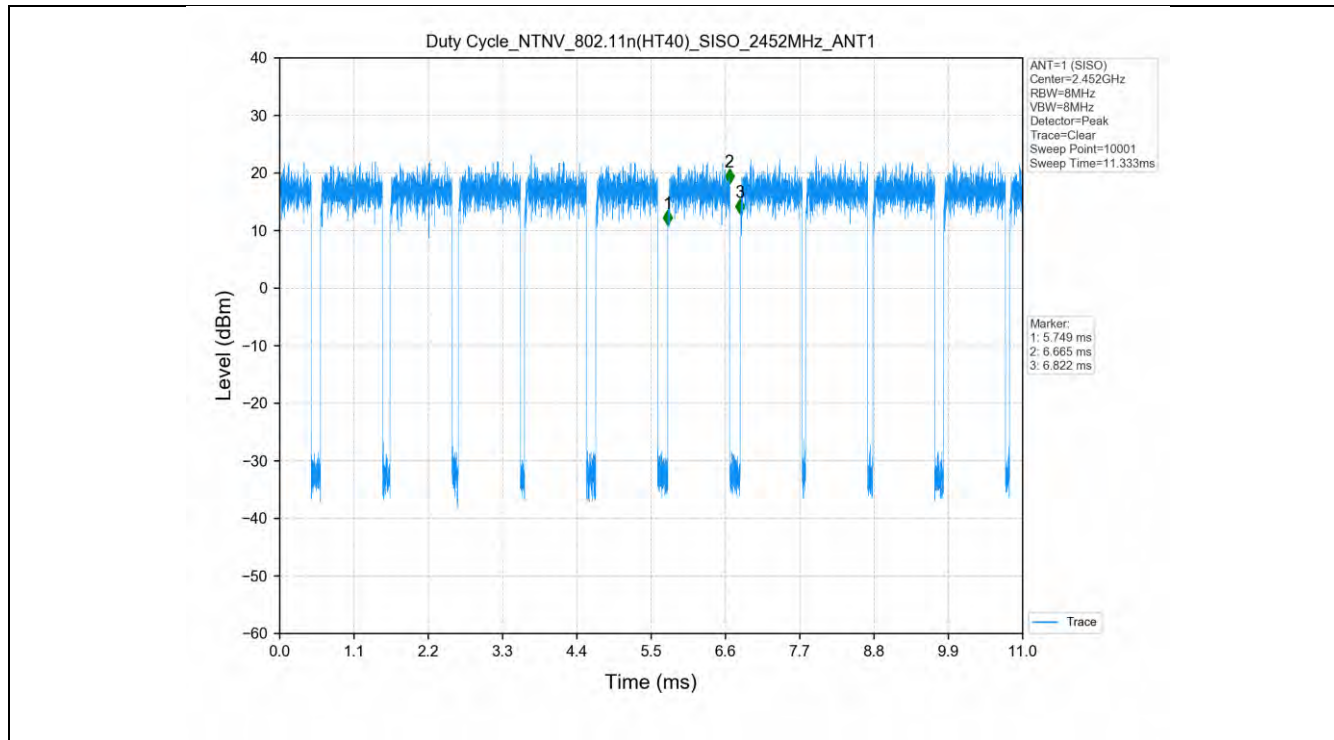
802.11n(HT40) 2422MHz SISO ANT1



802.11n(HT40) 2437MHz SISO ANT1



802.11n(HT40) 2452MHz SISO ANT1



## 2. Bandwidth

### 2.1 Test Result

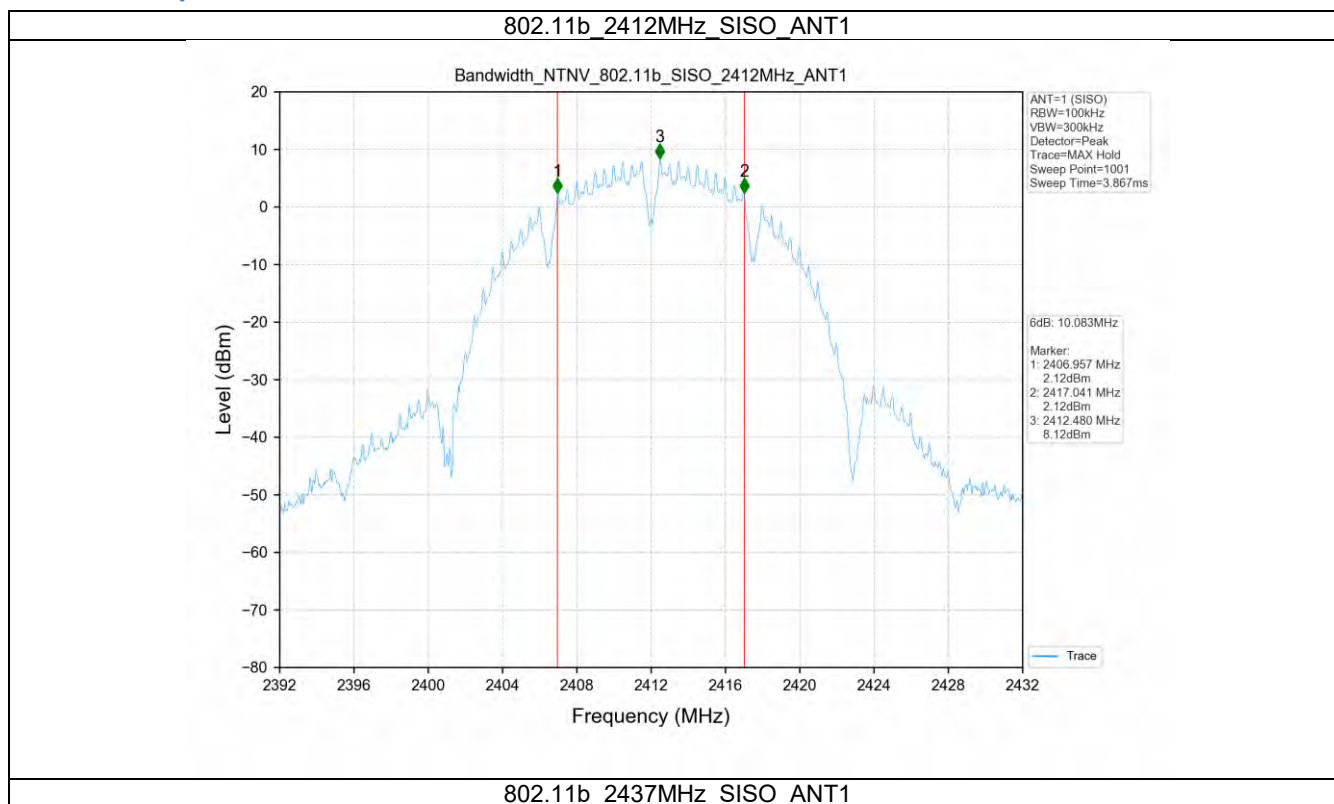
Test Mode	Frequency (MHz)	TX Type	ANT No.	6dB Bandwidth		Verdict
				Test Result (MHz)	Limits (MHz)	
802.11b	2412	SISO	1	10.083	$\geq 0.5$	PASS
	2437	SISO	1	10.042	$\geq 0.5$	PASS
	2462	SISO	1	10.004	$\geq 0.5$	PASS
802.11g	2412	SISO	1	16.398	$\geq 0.5$	PASS
	2437	SISO	1	16.413	$\geq 0.5$	PASS
	2462	SISO	1	16.402	$\geq 0.5$	PASS
802.11n(HT20)	2412	SISO	1	17.582	$\geq 0.5$	PASS
	2437	SISO	1	17.399	$\geq 0.5$	PASS
	2462	SISO	1	17.607	$\geq 0.5$	PASS
802.11n(HT40)	2422	SISO	1	34.209	$\geq 0.5$	PASS
	2437	SISO	1	35.191	$\geq 0.5$	PASS
	2452	SISO	1	35.251	$\geq 0.5$	PASS

Test Mode	Frequency (MHz)	TX Type	ANT No.	99% Occupied Bandwidth	
				Test Result (MHz)	
802.11b	2412	SISO	1	15.019	Only for Report Use
	2437	SISO	1	14.981	Only for Report Use
	2462	SISO	1	14.978	Only for Report Use
802.11g	2412	SISO	1	16.898	Only for Report Use
	2437	SISO	1	16.945	Only for Report Use
	2462	SISO	1	16.932	Only for Report Use

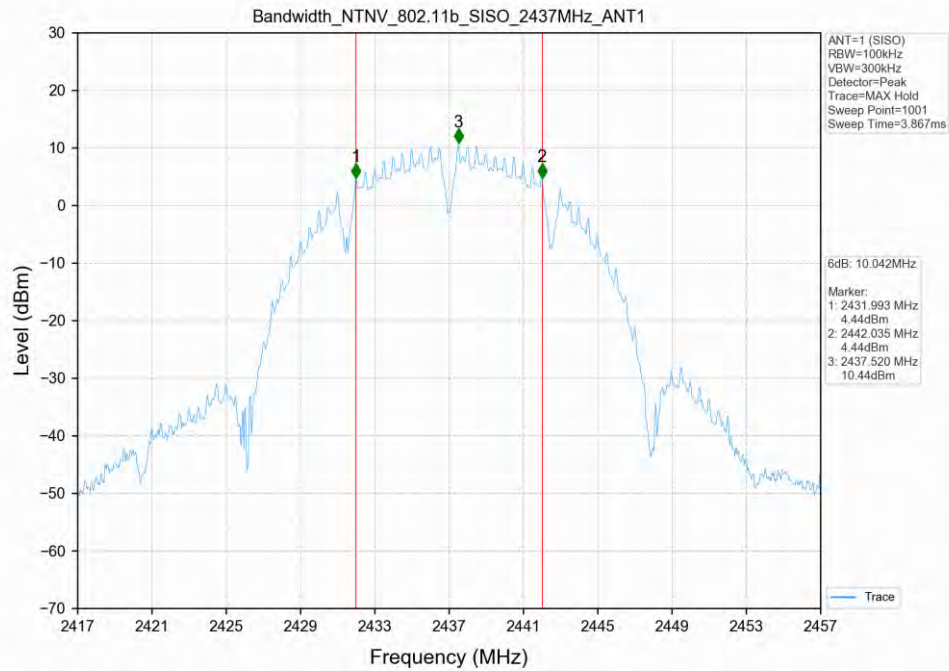


802.11n(HT20)	2412	SISO	1	17.924	Only for Report Use
	2437	SISO	1	18.032	Only for Report Use
	2462	SISO	1	18.087	Only for Report Use
802.11n(HT40)	2422	SISO	1	36.717	Only for Report Use
	2437	SISO	1	36.505	Only for Report Use
	2452	SISO	1	36.367	Only for Report Use

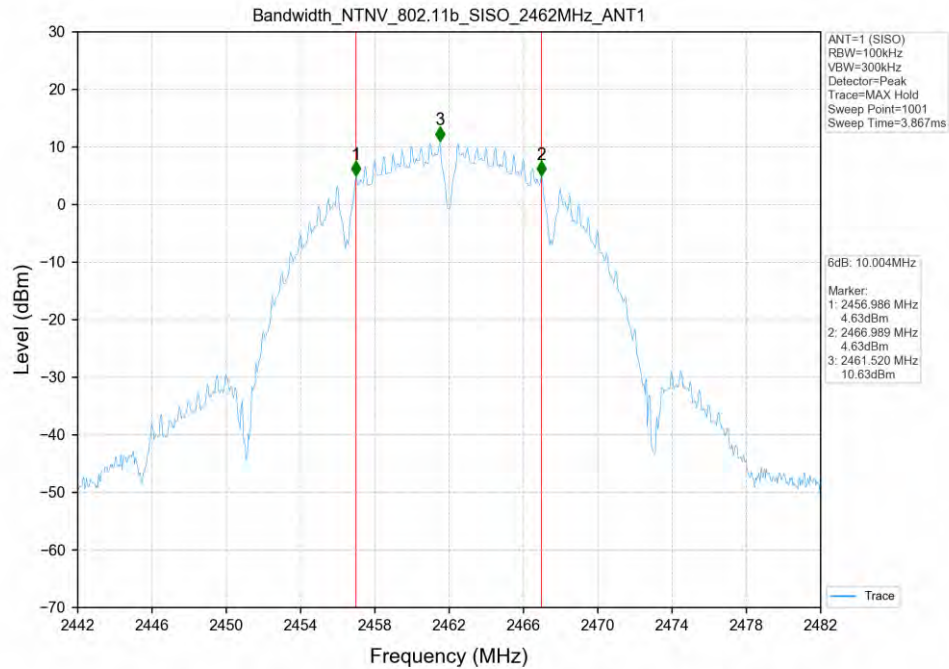
## 2.2 Test Graph - 6dB Bandwidth



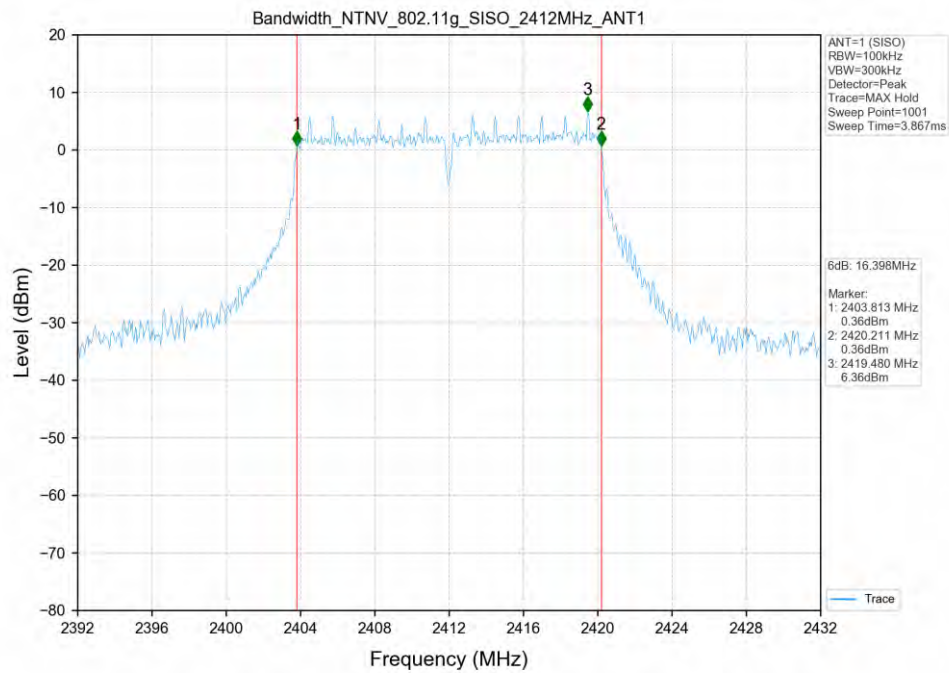




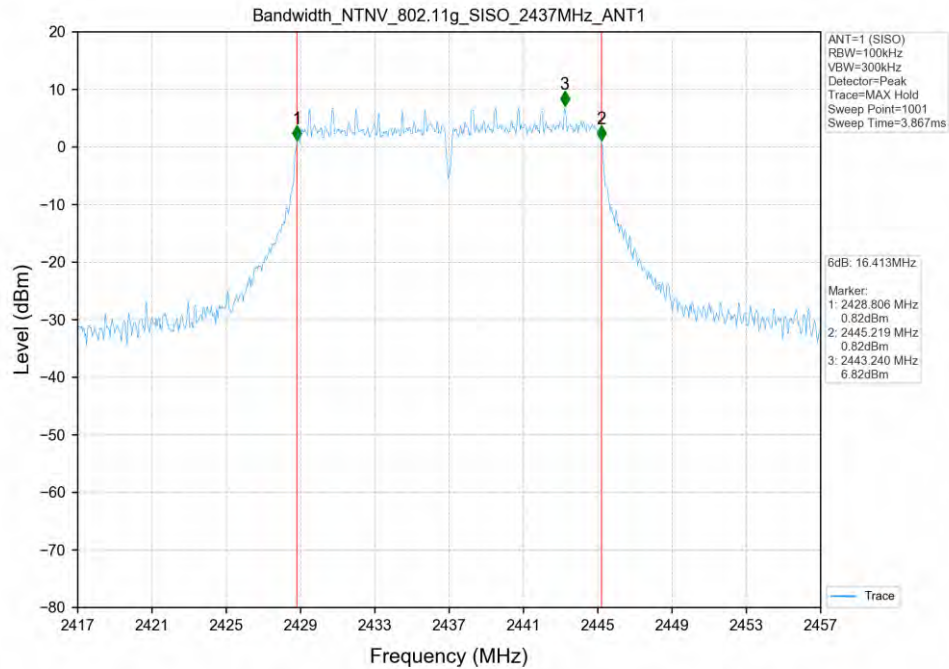
802.11b 2462MHz SISO ANT1



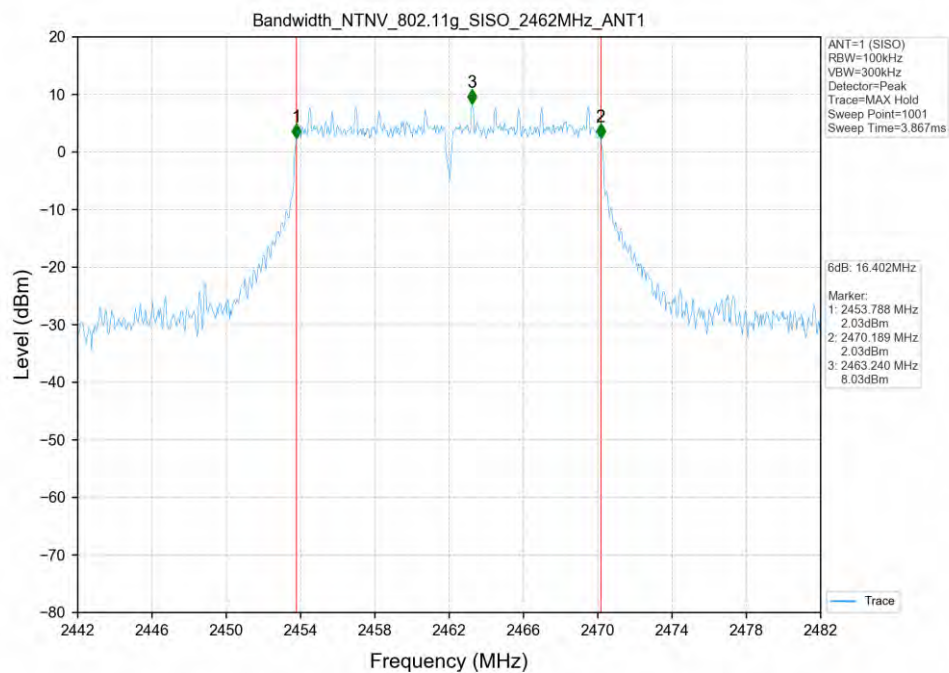
802.11g 2412MHz SISO ANT1



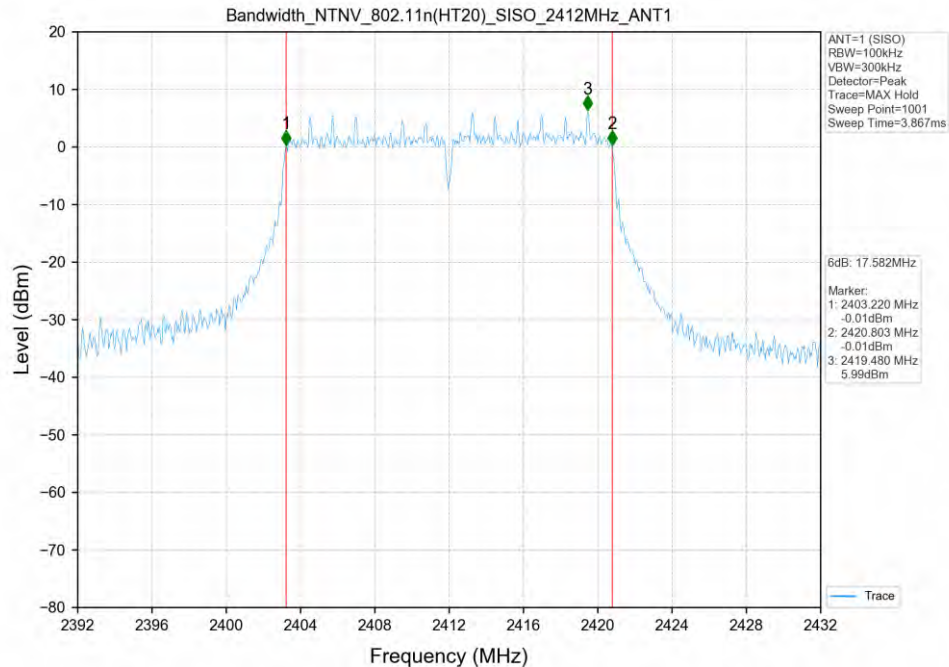
802.11g\_2437MHz\_SISO\_ANT1



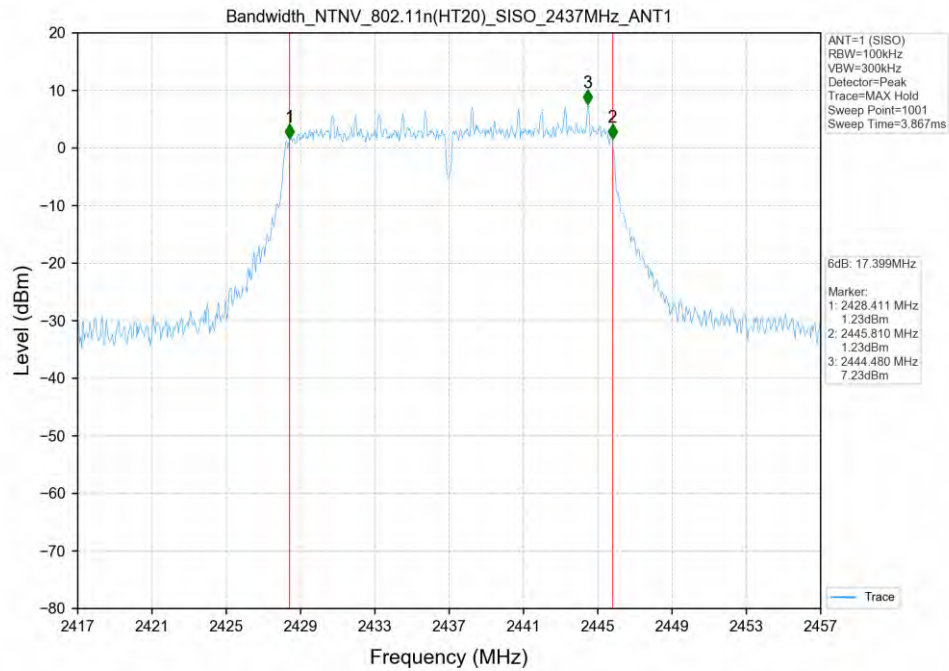
802.11g\_2462MHz\_SISO\_ANT1



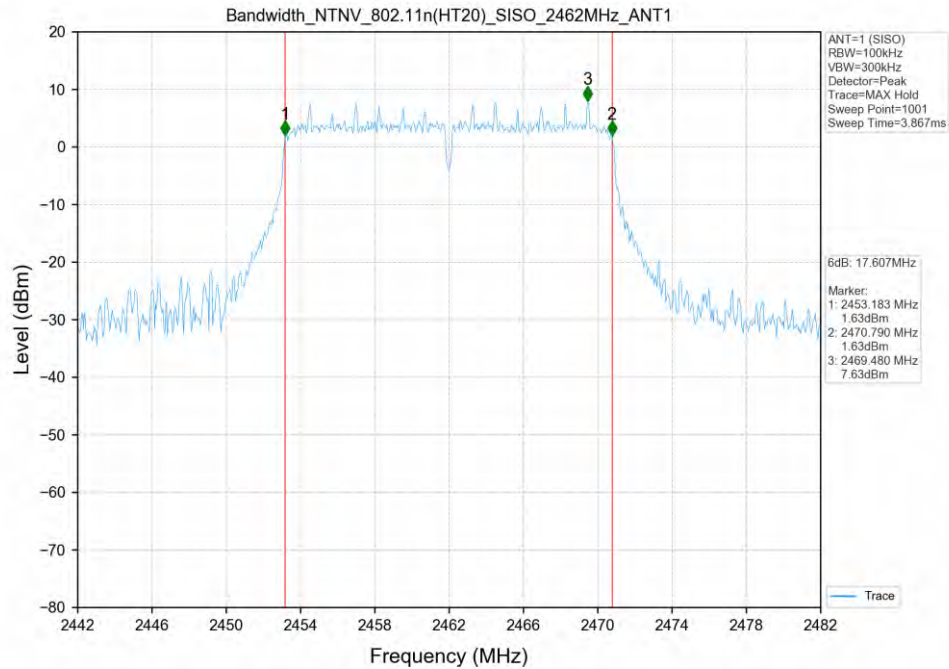
802.11n(HT20) 2412MHz SISO ANT1



802.11n(HT20) 2437MHz SISO ANT1

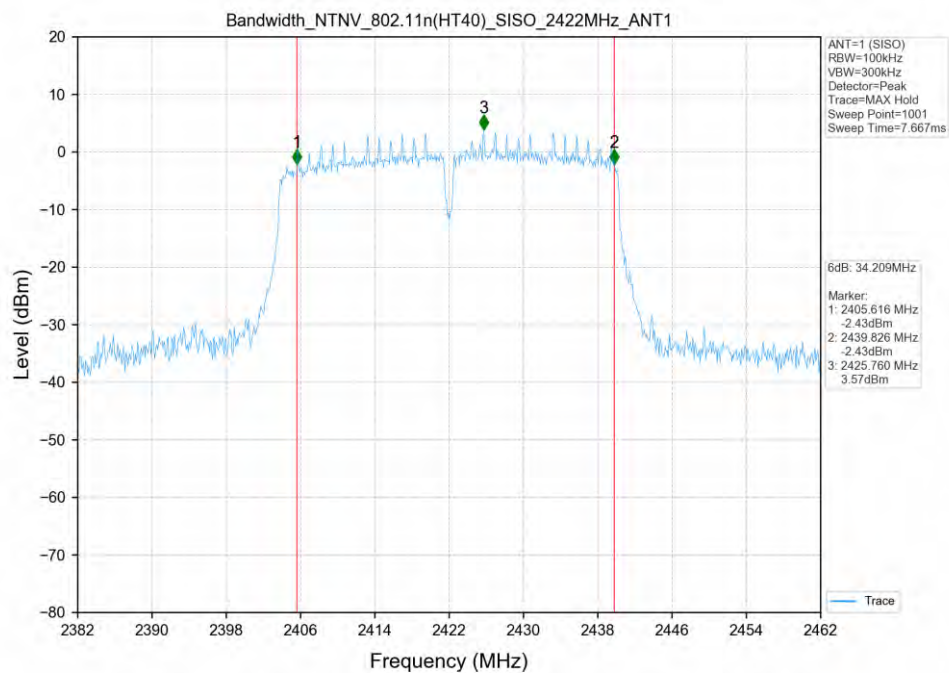


802.11n(HT20) 2462MHz SISO ANT1

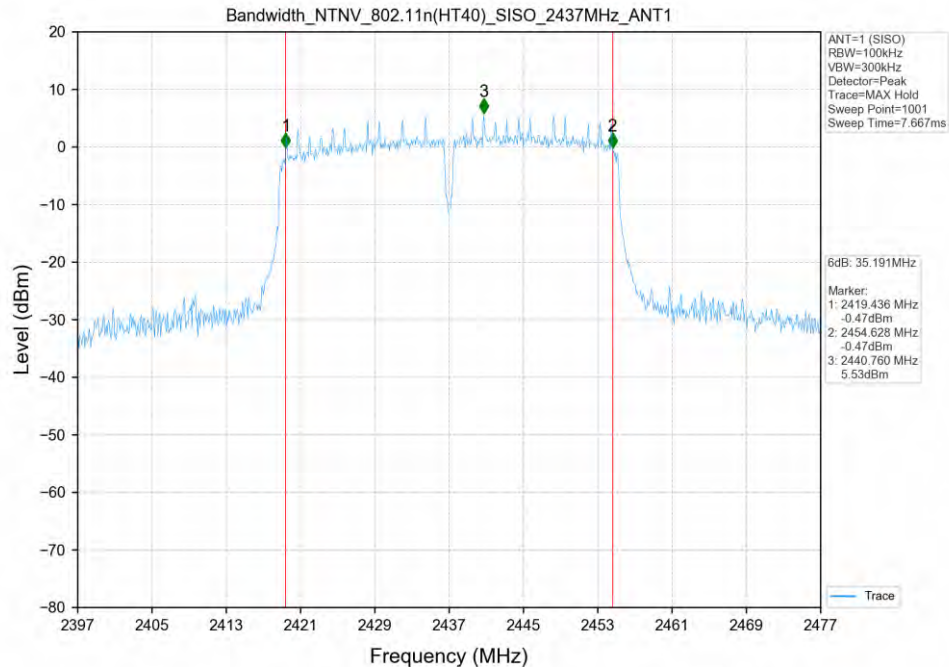


802.11n(HT40) 2422MHz SISO ANT1



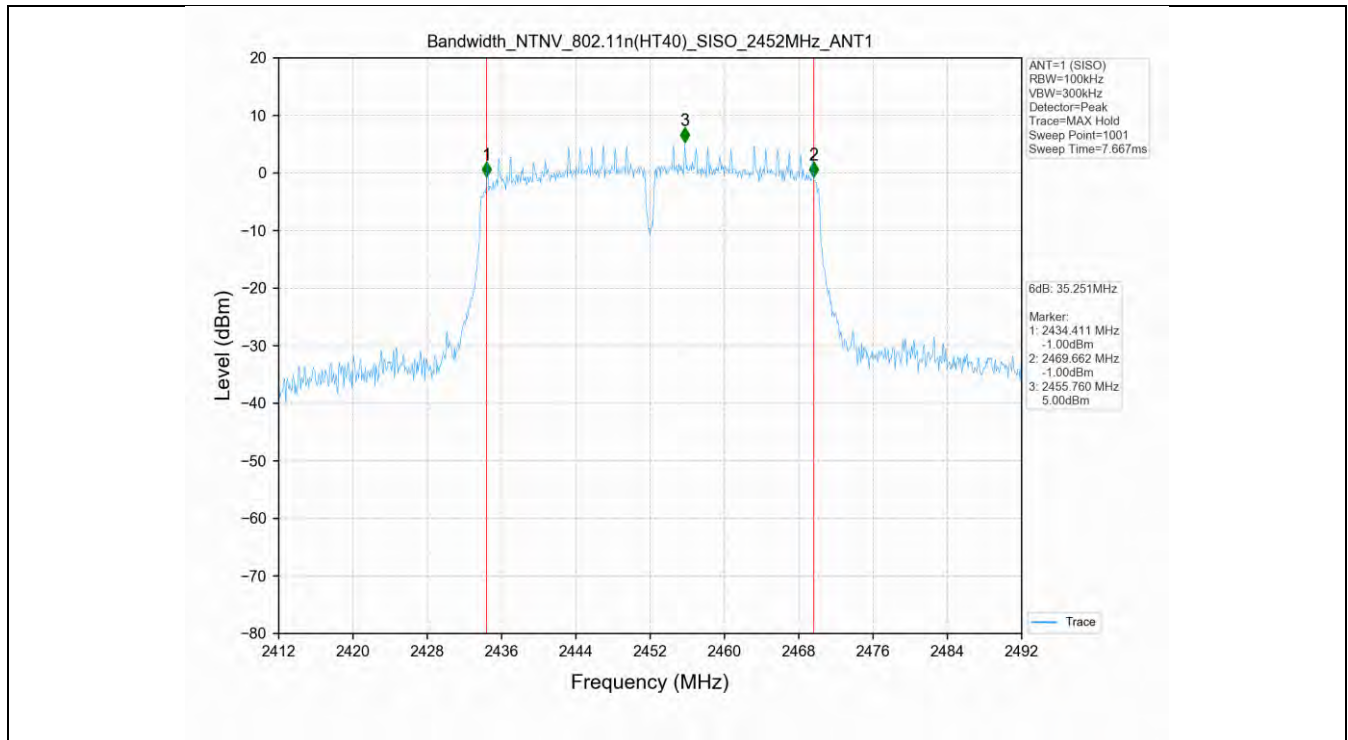


802.11n(HT40) 2437MHz SISO ANT1

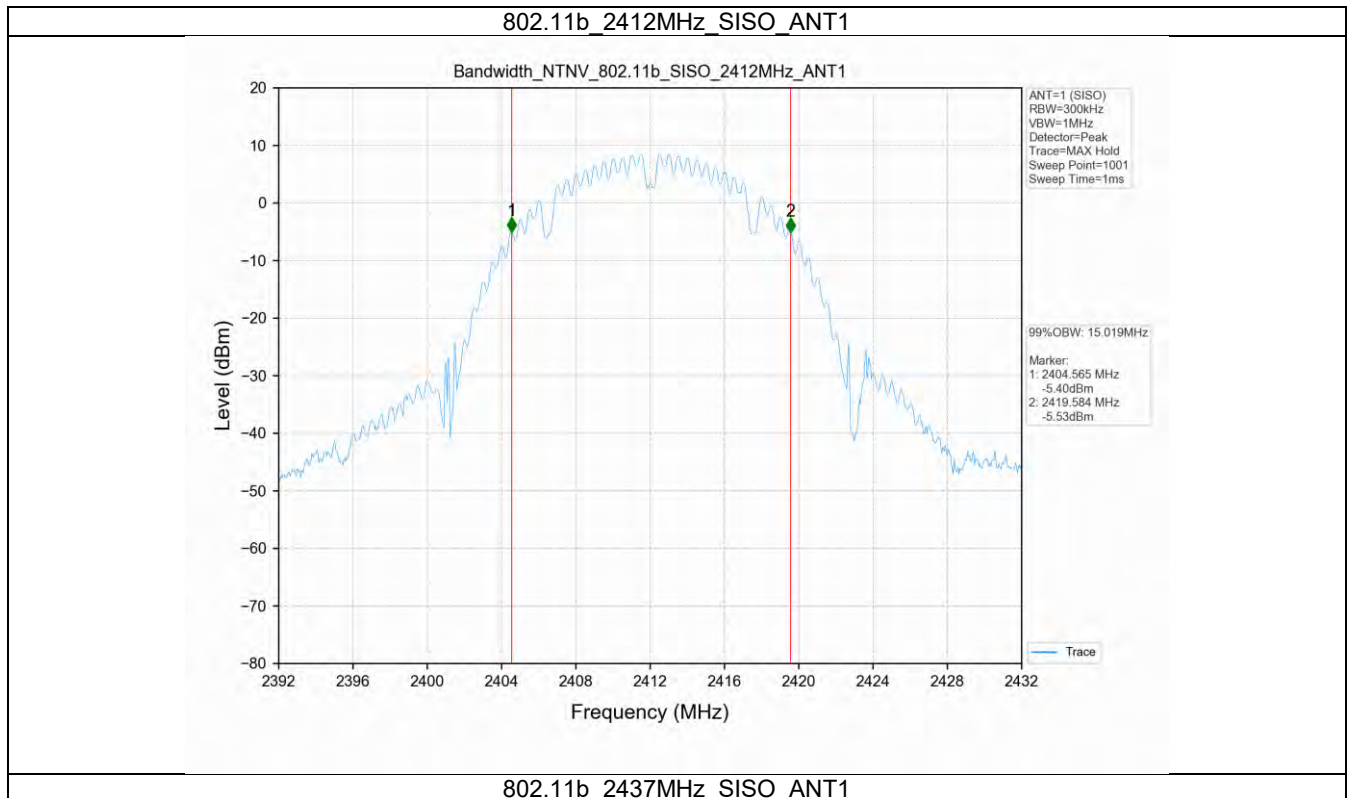


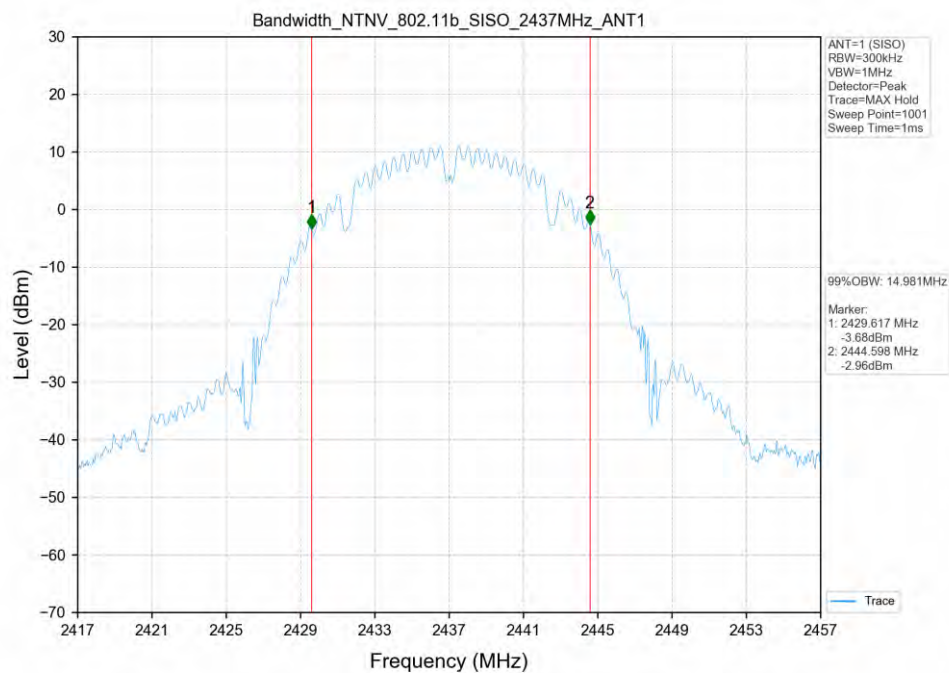
802.11n(HT40) 2452MHz SISO ANT1



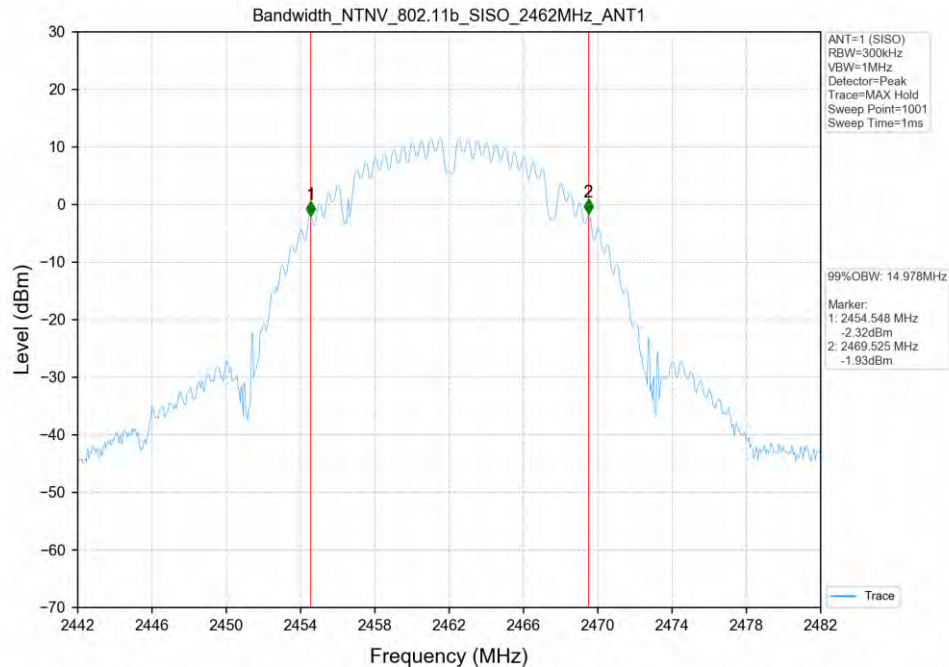


## 2.3 Test Graph - 99% Occupied Bandwidth

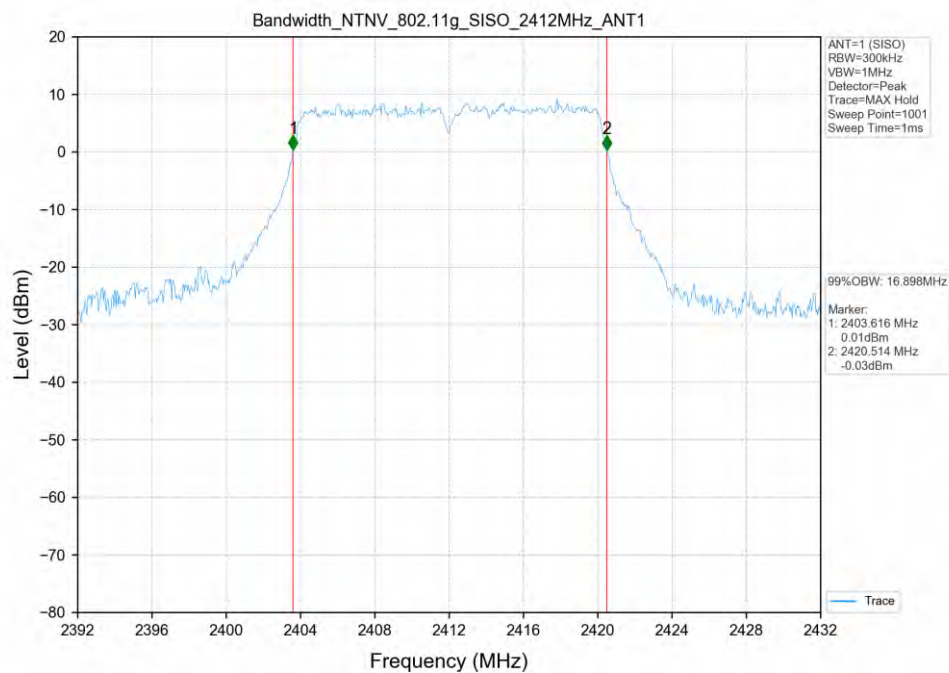




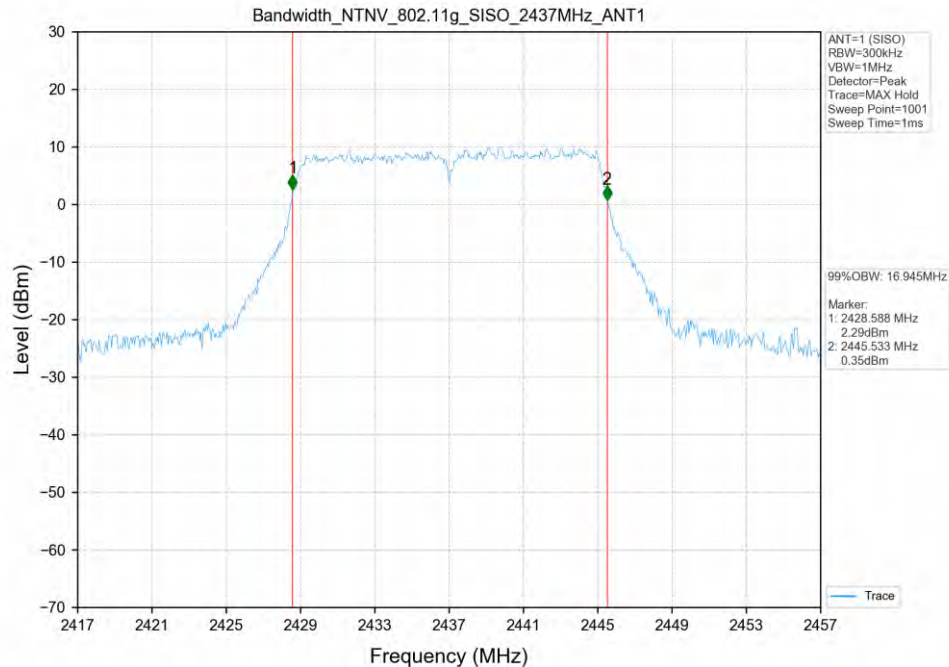
802.11b 2462MHz SISO ANT1



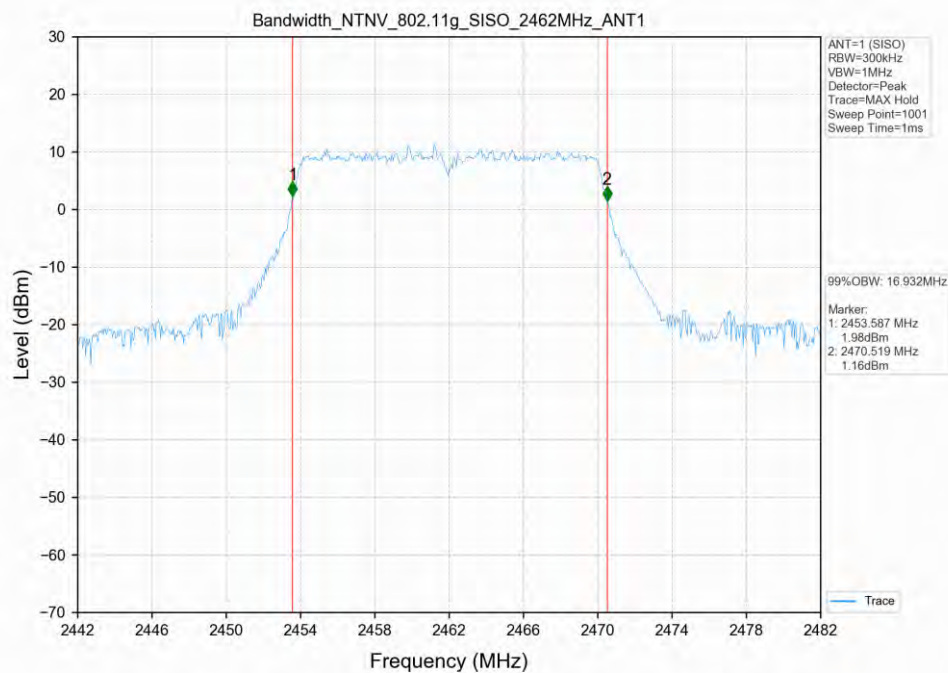
802.11g 2412MHz SISO ANT1



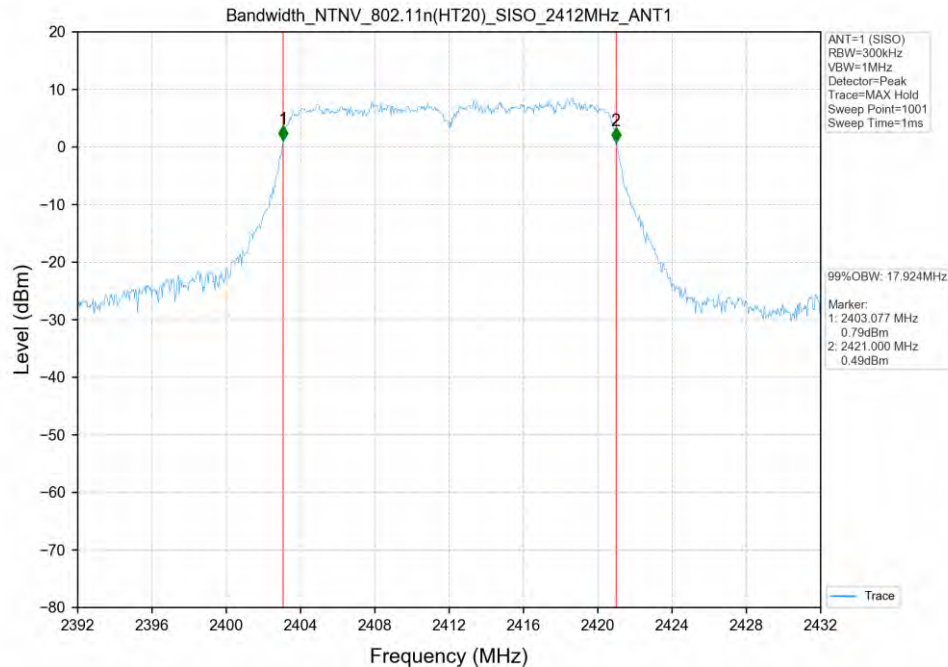
802.11g\_2437MHz SISO ANT1



802.11g\_2462MHz SISO ANT1

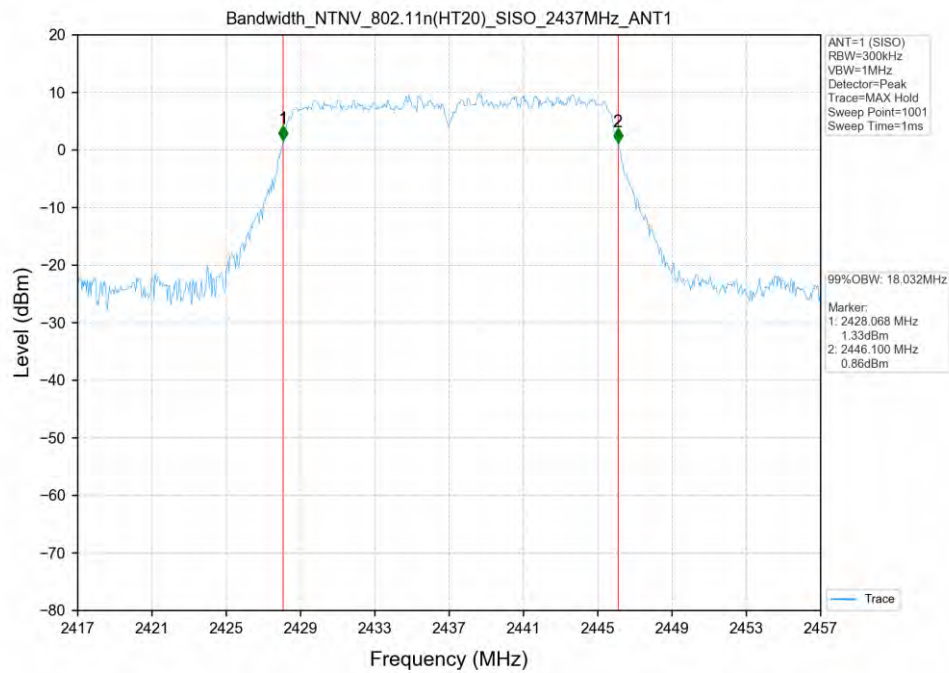


802.11n(HT20) 2412MHz SISO ANT1

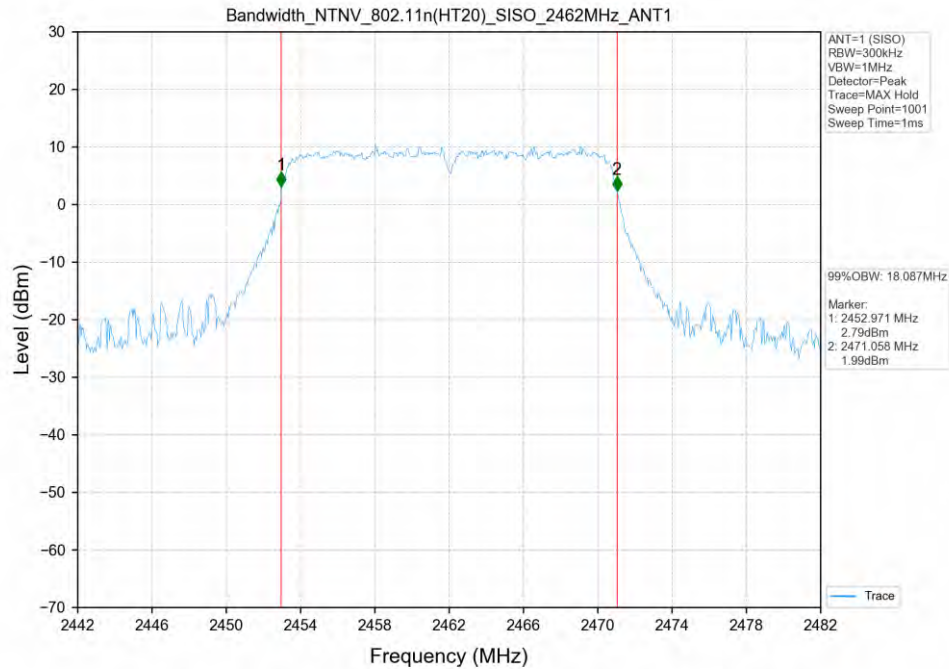


802.11n(HT20) 2437MHz SISO ANT1



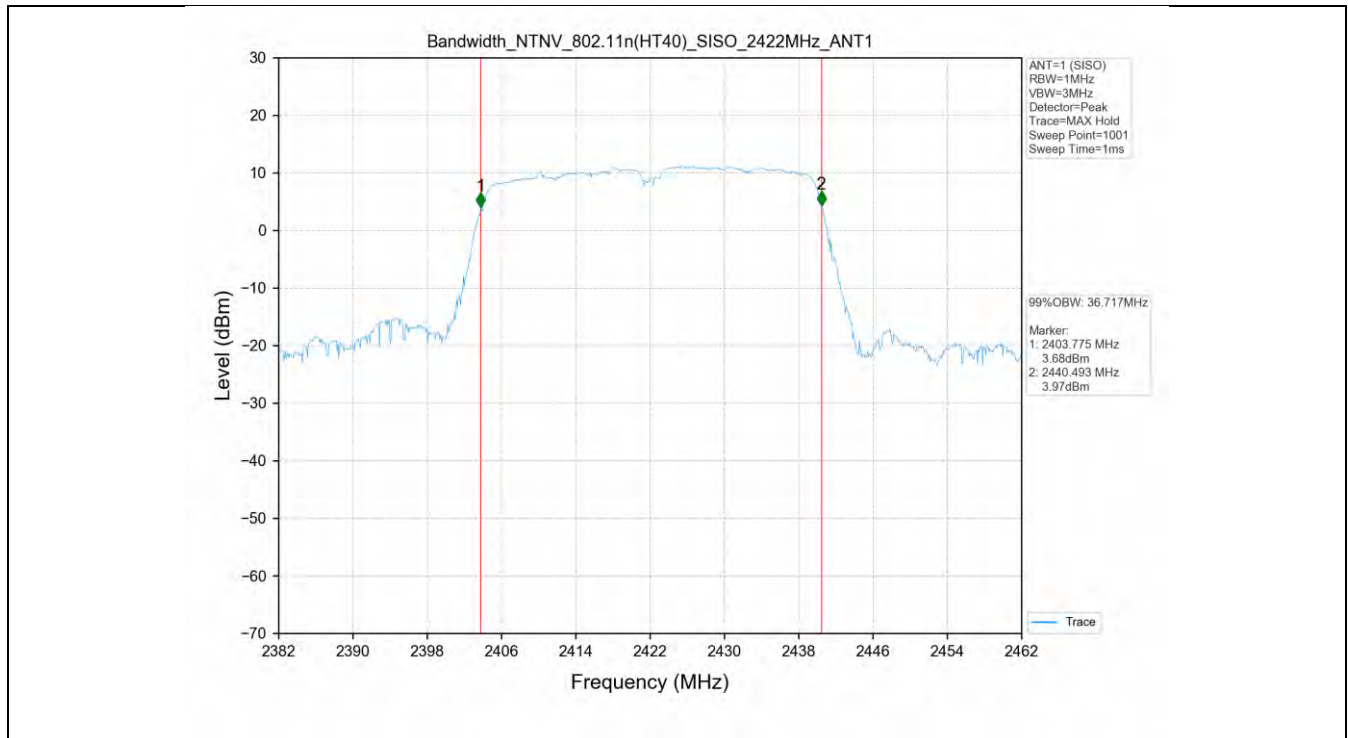


802.11n(HT20) 2462MHz SISO ANT1

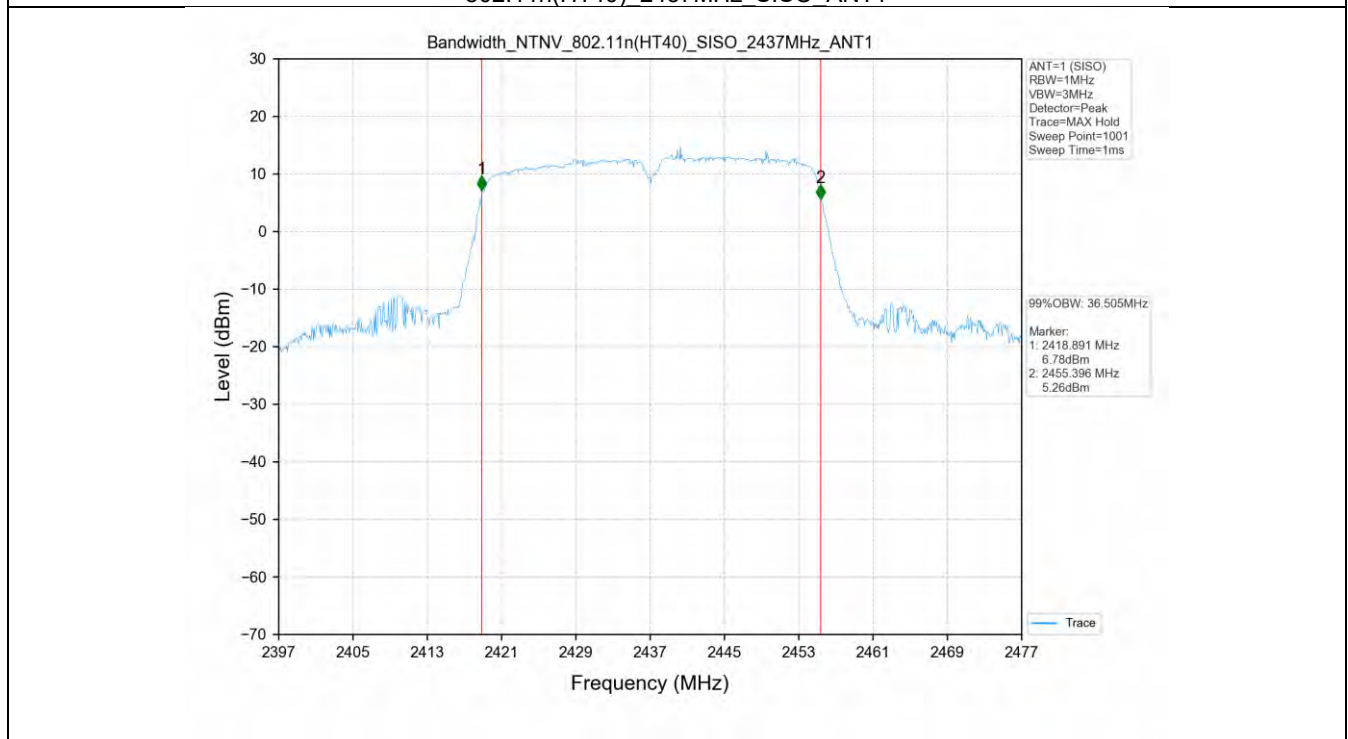


802.11n(HT40) 2422MHz SISO ANT1

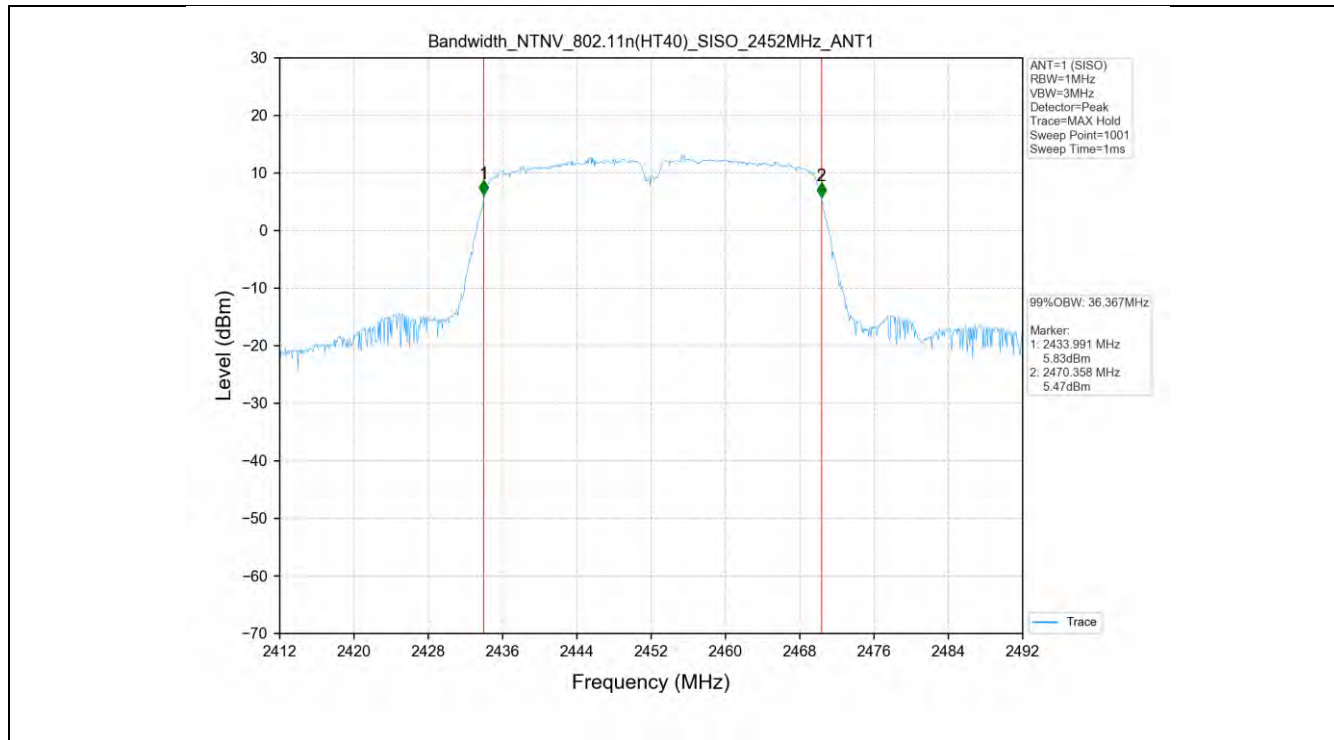




802.11n(HT40) 2437MHz SISO ANT1



802.11n(HT40) 2452MHz SISO ANT1



### 3. Maximum Conducted Output Power

#### 3.1 Test Result

Test Mode	Frequency (MHz)	Tx Type	Measured Output Power (dBm)	Limits (dBm)	Verdict
			Ant 1		
802.11b	2412	SISO	16.60	30	PASS
	2437	SISO	18.96	30	PASS
	2462	SISO	19.59	30	PASS
802.11g	2412	SISO	17.26	30	PASS
	2437	SISO	18.40	30	PASS
	2462	SISO	19.15	30	PASS
802.11n(HT20)	2412	SISO	16.93	30	PASS
	2437	SISO	18.24	30	PASS
	2462	SISO	19.06	30	PASS
802.11n(HT40)	2422	SISO	16.95	30	PASS
	2437	SISO	18.77	30	PASS
	2452	SISO	18.49	30	PASS

### 4. Maximum Power Spectral Density (PSD)

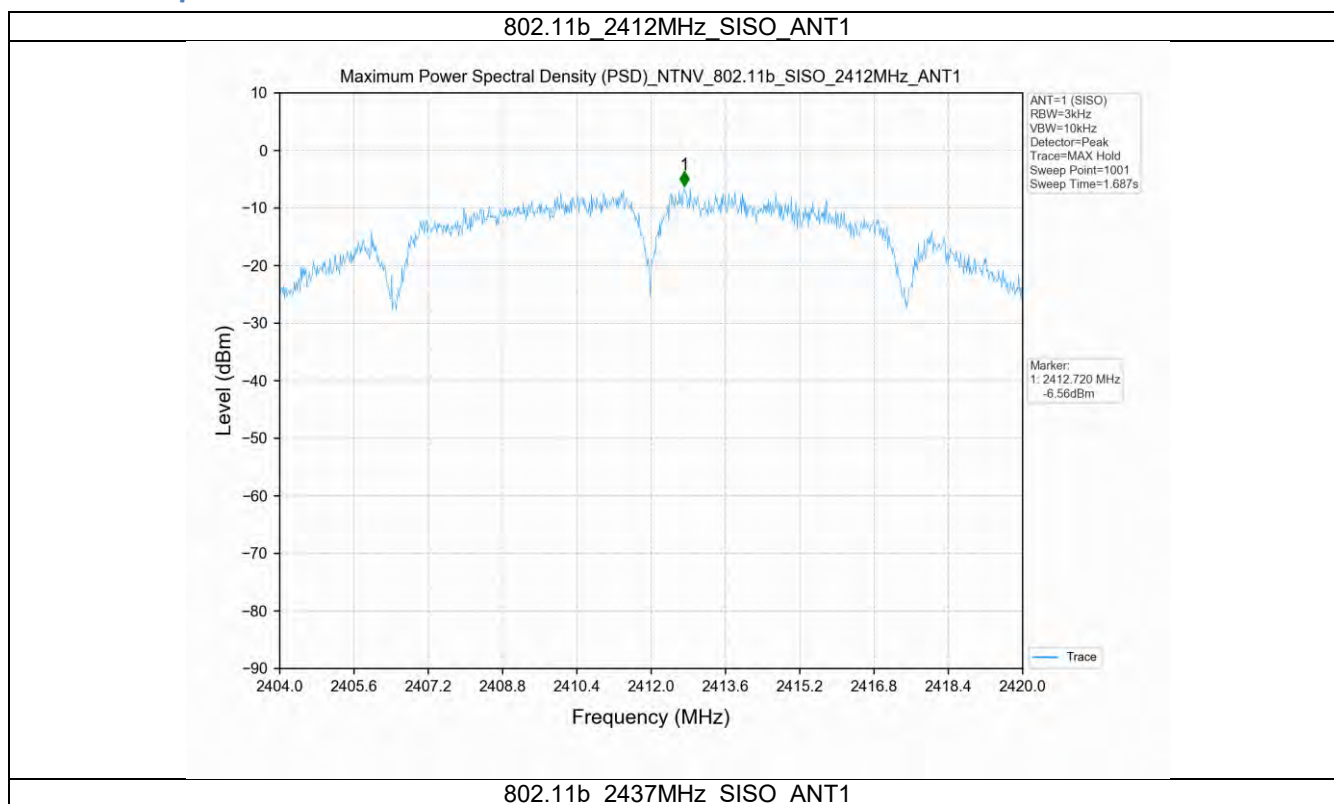
#### 4.1 Test Result

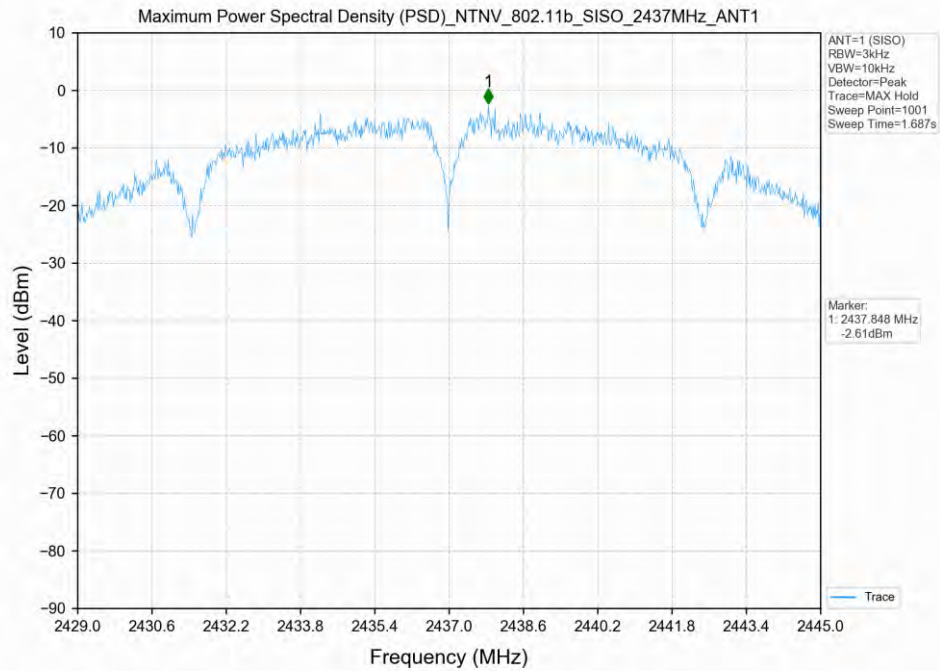
Test Mode	Frequency (MHz)	Tx Type	Maximum Power Spectral Density (dBm/3KHz)	Limits (dBm/3kHz)	Verdict
			Ant 1		



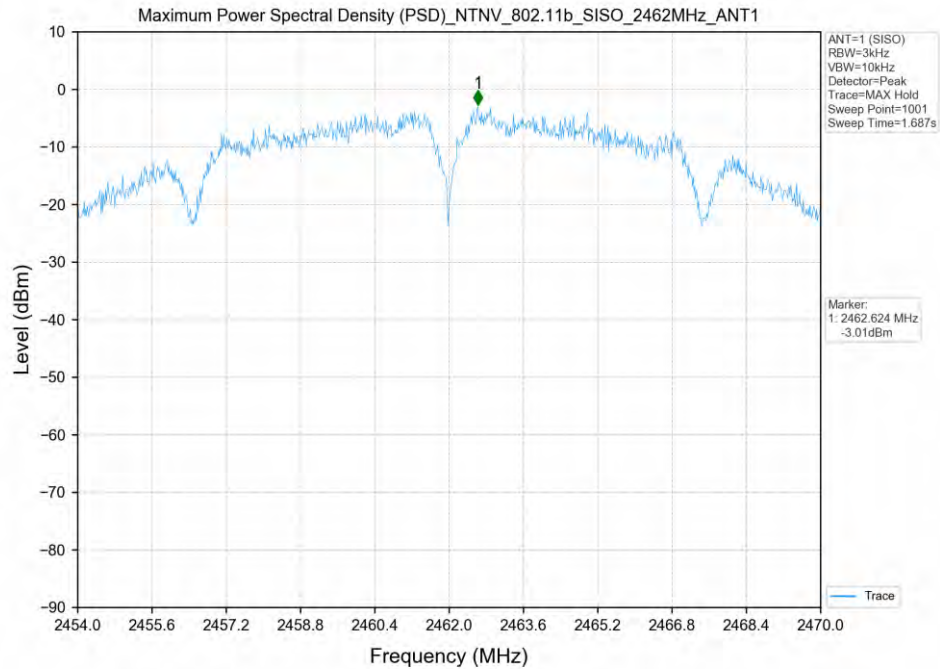
802.11b	2412	SISO	-6.56	≤8	PASS
	2437	SISO	-2.61	≤8	PASS
	2462	SISO	-3.01	≤8	PASS
802.11g	2412	SISO	-8.47	≤8	PASS
	2437	SISO	-6.42	≤8	PASS
	2462	SISO	-5.64	≤8	PASS
802.11n(HT20)	2412	SISO	-8.13	≤8	PASS
	2437	SISO	-6.89	≤8	PASS
	2462	SISO	-6.36	≤8	PASS
802.11n(HT40)	2422	SISO	-11.06	≤8	PASS
	2437	SISO	-9.25	≤8	PASS
	2452	SISO	-10.07	≤8	PASS

## 4.2 Test Graph

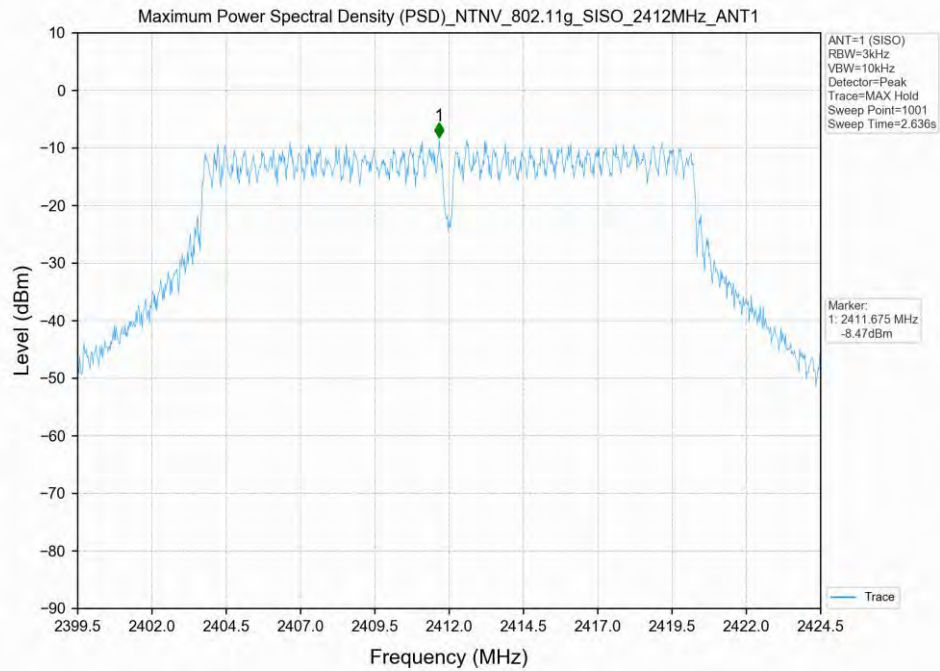




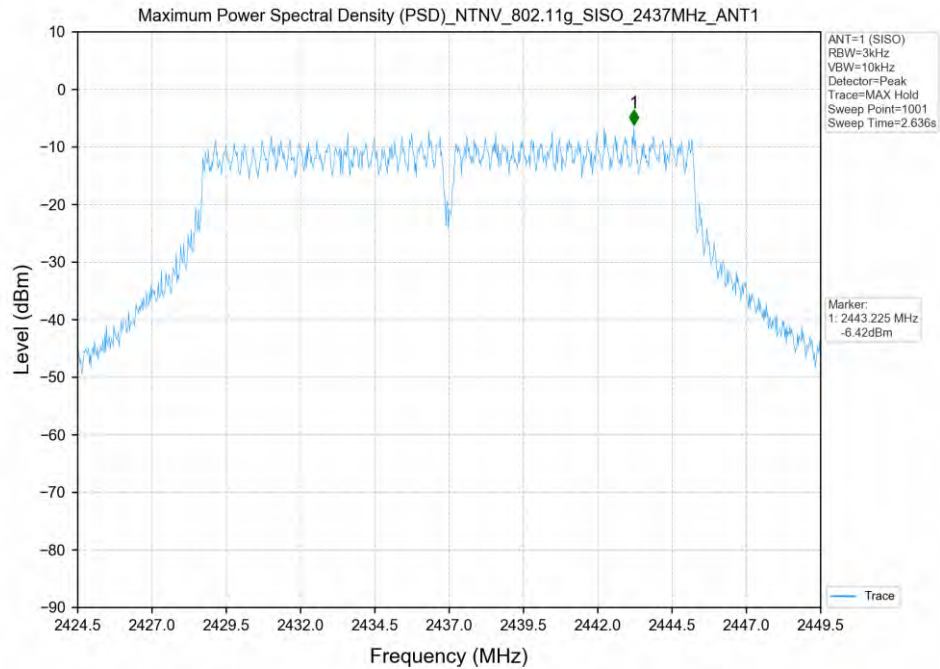
802.11b 2462MHz SISO ANT1



802.11g 2412MHz SISO ANT1

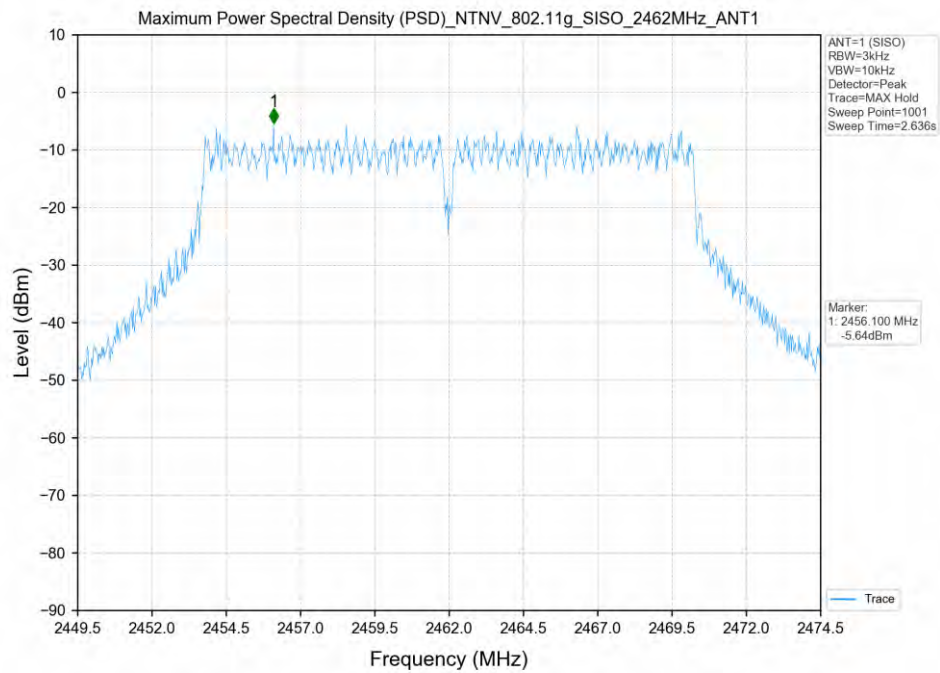


802.11g\_2437MHz\_SISO\_ANT1

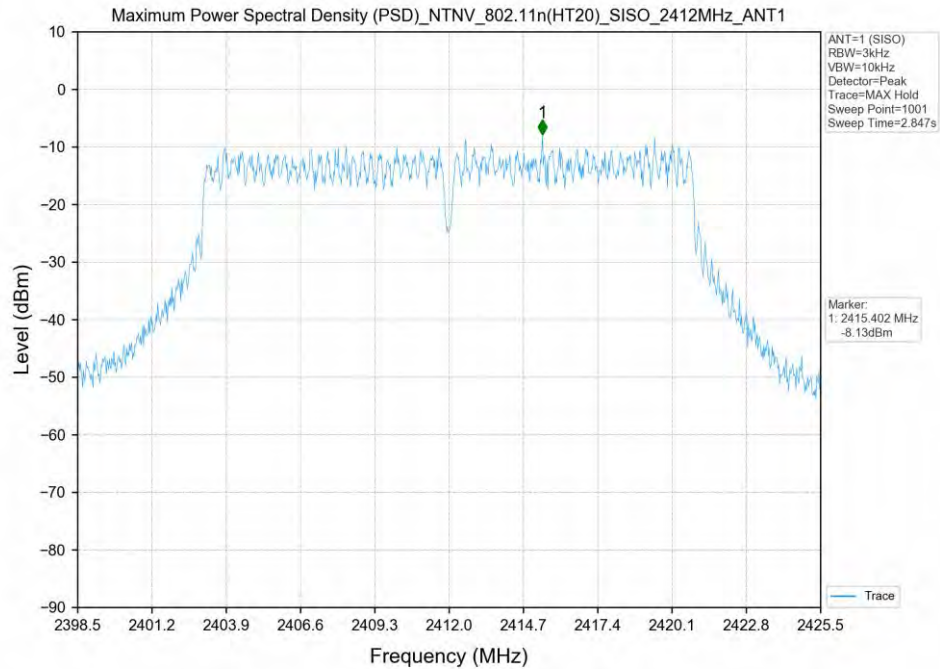


802.11g\_2462MHz\_SISO\_ANT1

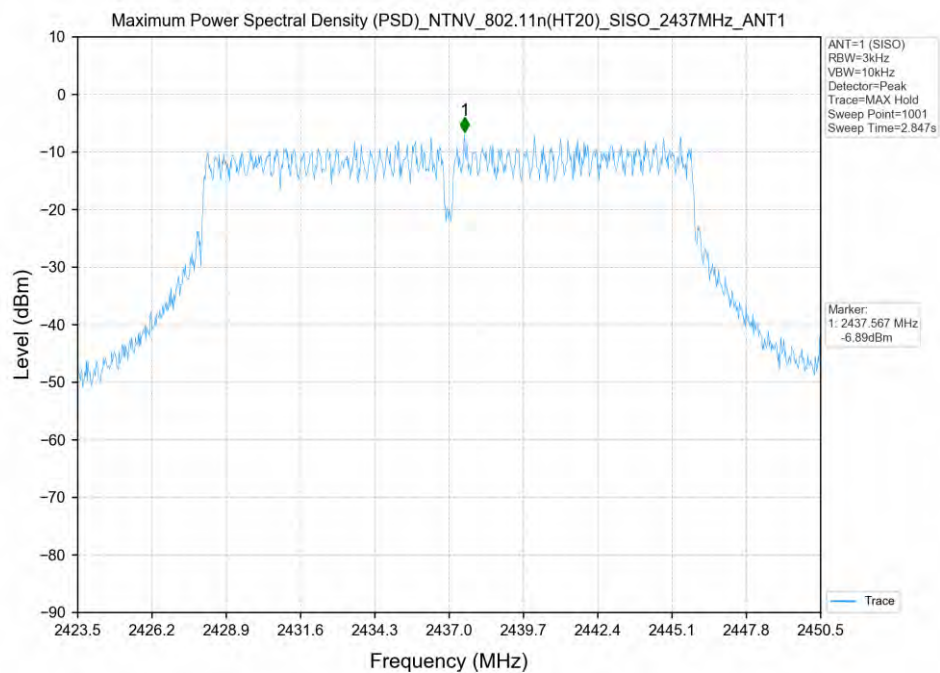




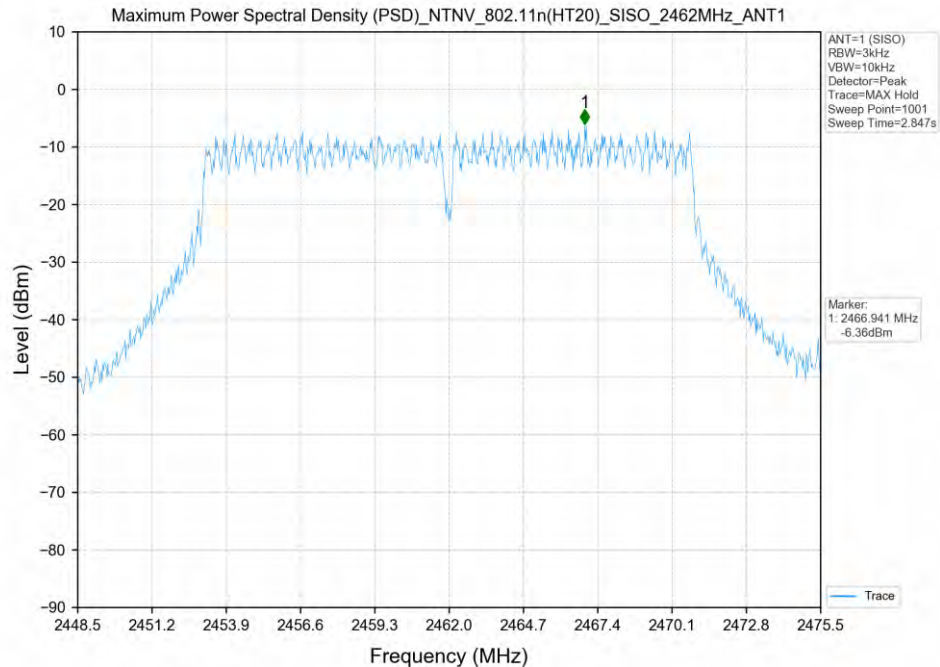
802.11n(HT20) 2412MHz SISO ANT1



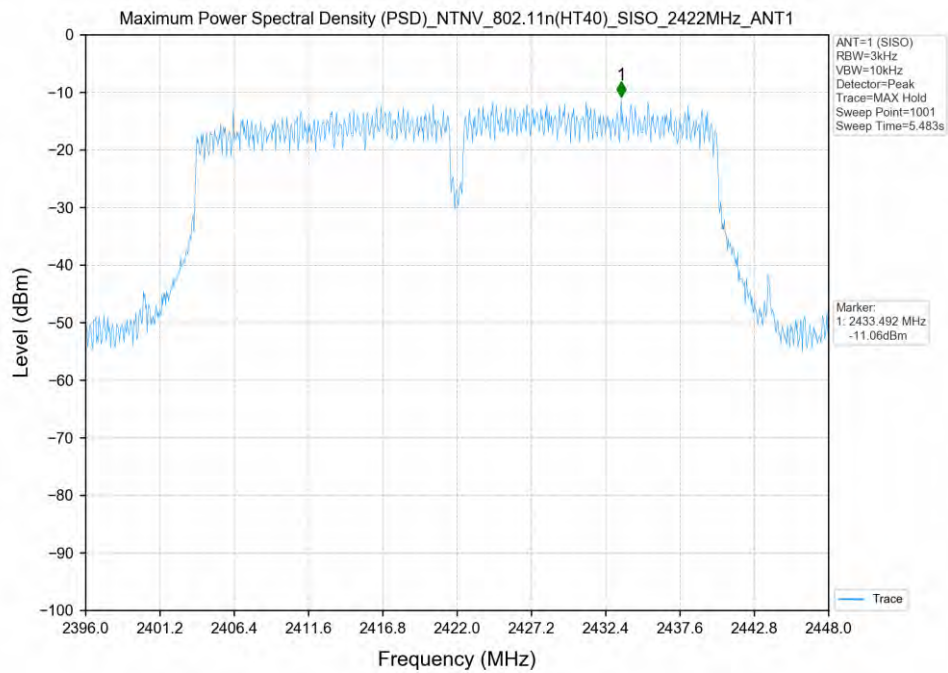
802.11n(HT20) 2437MHz SISO ANT1



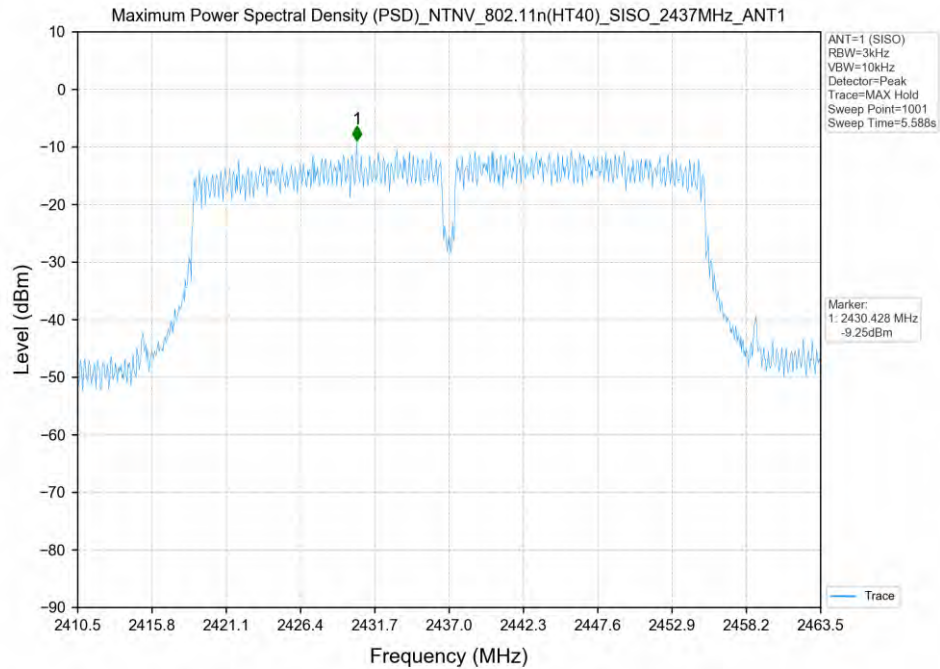
802.11n(HT20) 2462MHz SISO ANT1



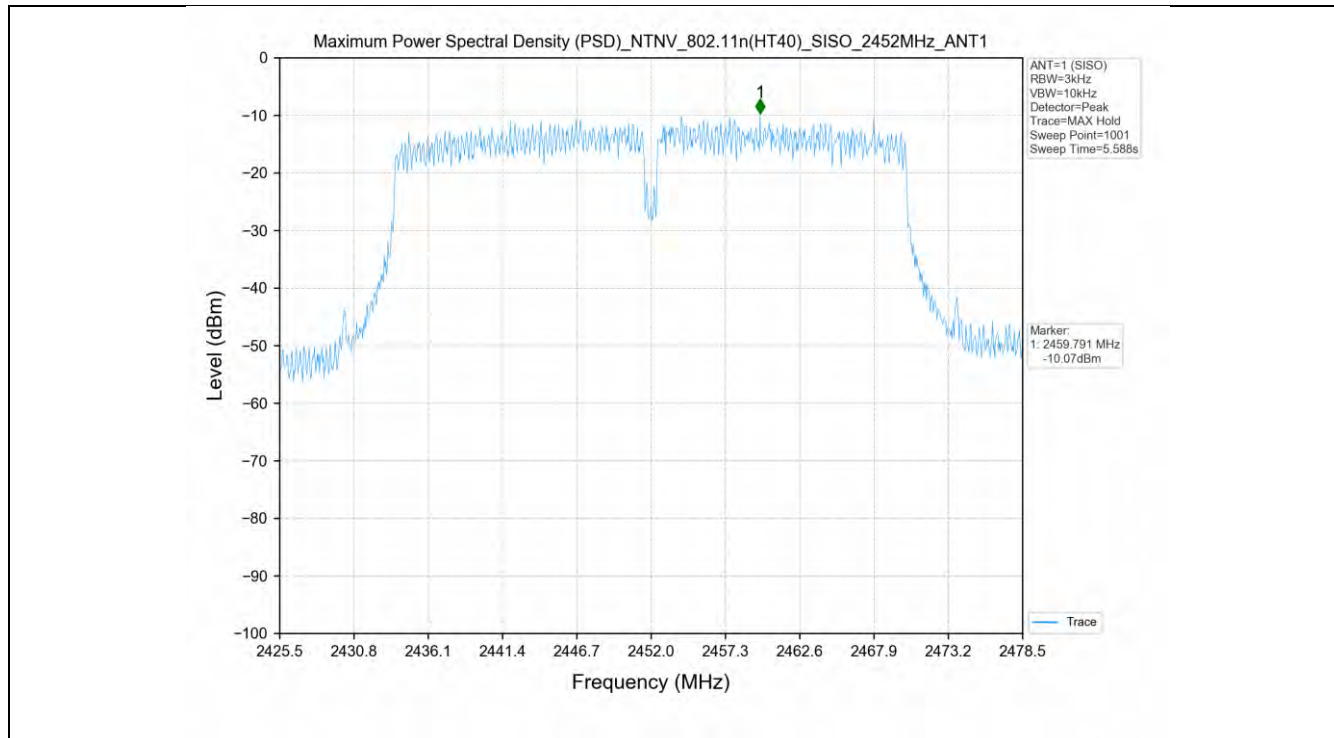
802.11n(HT40) 2422MHz SISO ANT1



802.11n(HT40) 2437MHz SISO ANT1



802.11n(HT40) 2452MHz SISO ANT1



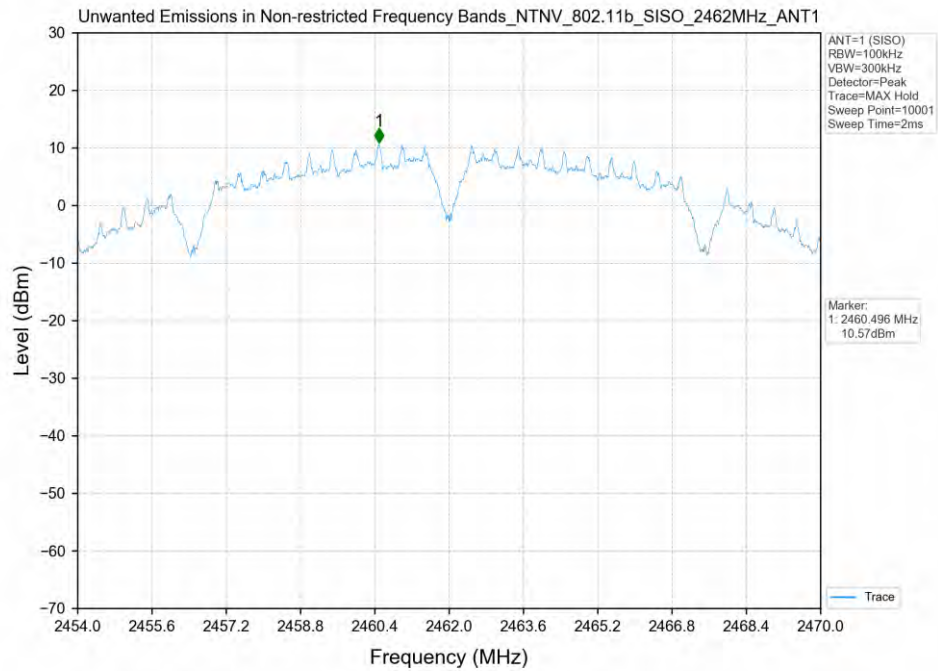
## 5. Unwanted Emissions in Non-restricted Frequency Bands

### 5.1 Test Result

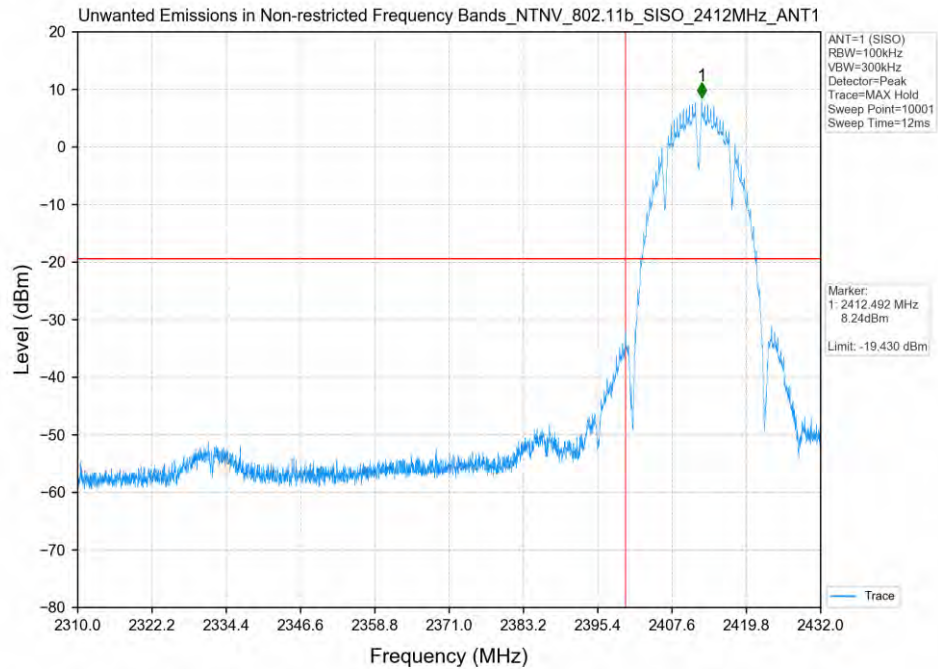
Test Mode	Frequency (MHz)	TX Type	ANT No.	Spurious Conducted Emission (dBm)	Limits (dBm)	Verdict
802.11b	2412	SISO	1	Refer to test graph	-19.43	PASS
	2437	SISO	1	Refer to test graph	-19.43	PASS
	2462	SISO	1	Refer to test graph	-19.43	PASS
802.11g	2412	SISO	1	Refer to test graph	-22.08	PASS
	2437	SISO	1	Refer to test graph	-22.08	PASS
	2462	SISO	1	Refer to test graph	-22.08	PASS
802.11n(HT20)	2412	SISO	1	Refer to test graph	-22.08	PASS
	2437	SISO	1	Refer to test graph	-22.08	PASS
	2462	SISO	1	Refer to test graph	-22.08	PASS
802.11n(HT40)	2422	SISO	1	Refer to test graph	-26.83	PASS
	2437	SISO	1	Refer to test graph	-26.83	PASS
	2452	SISO	1	Refer to test graph	-26.83	PASS

### 5.2 Test Graph

802.11b_SISO_ANT1_REF
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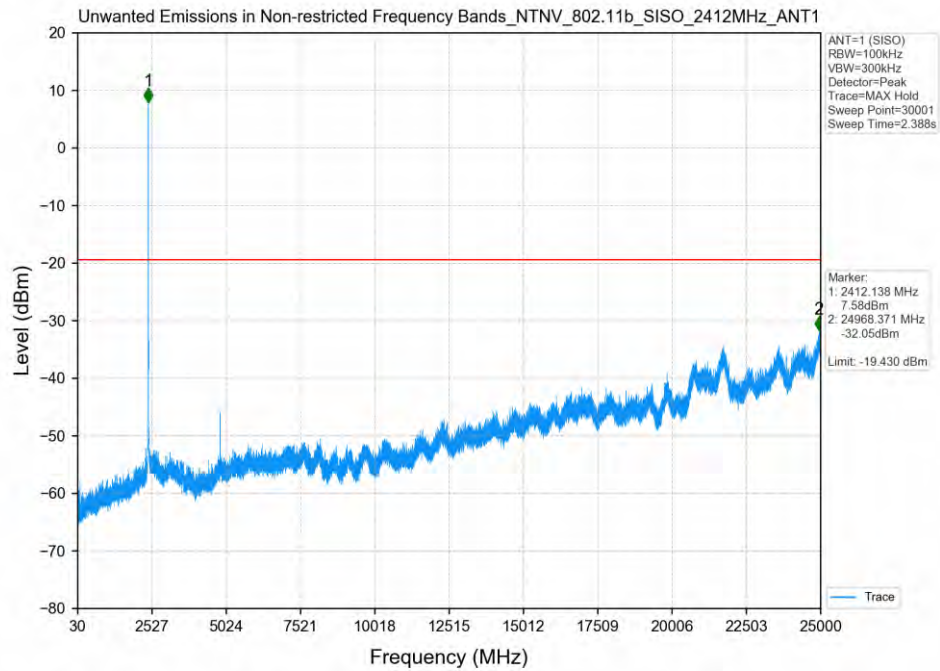


802.11b 2412MHz SISO ANT1

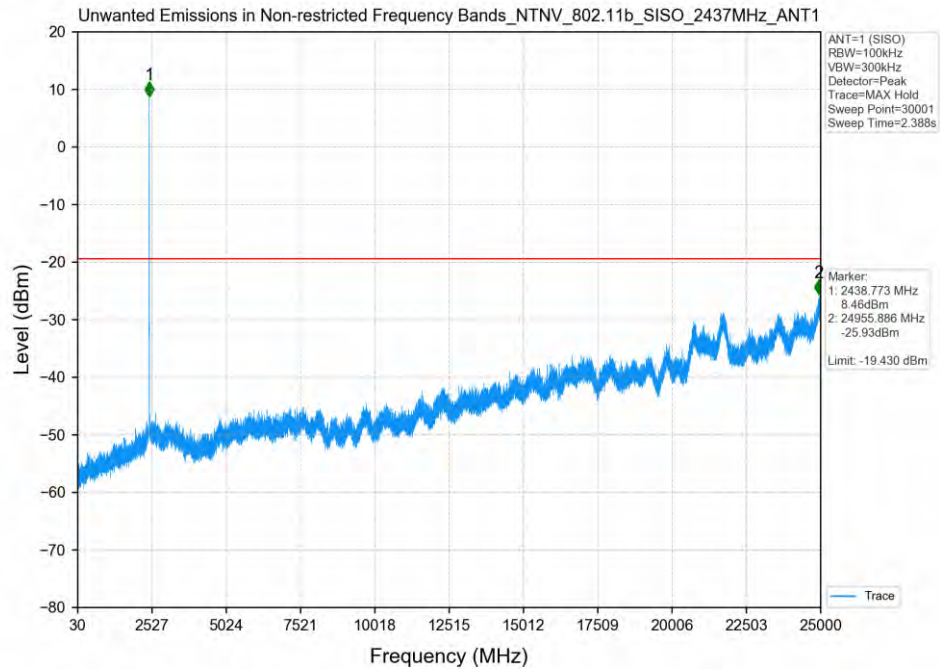


802.11b 2412MHz SISO ANT1

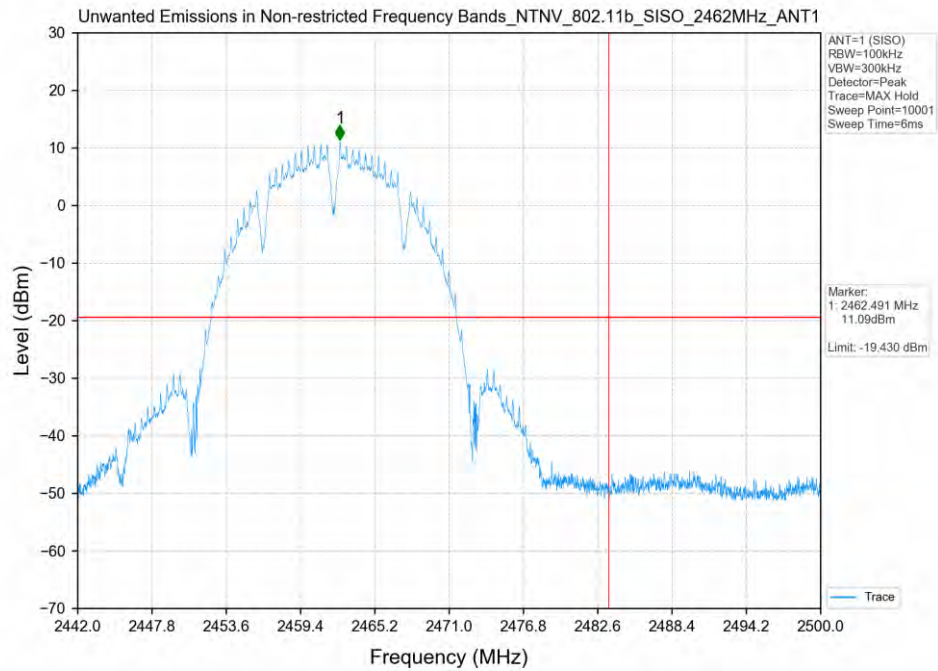




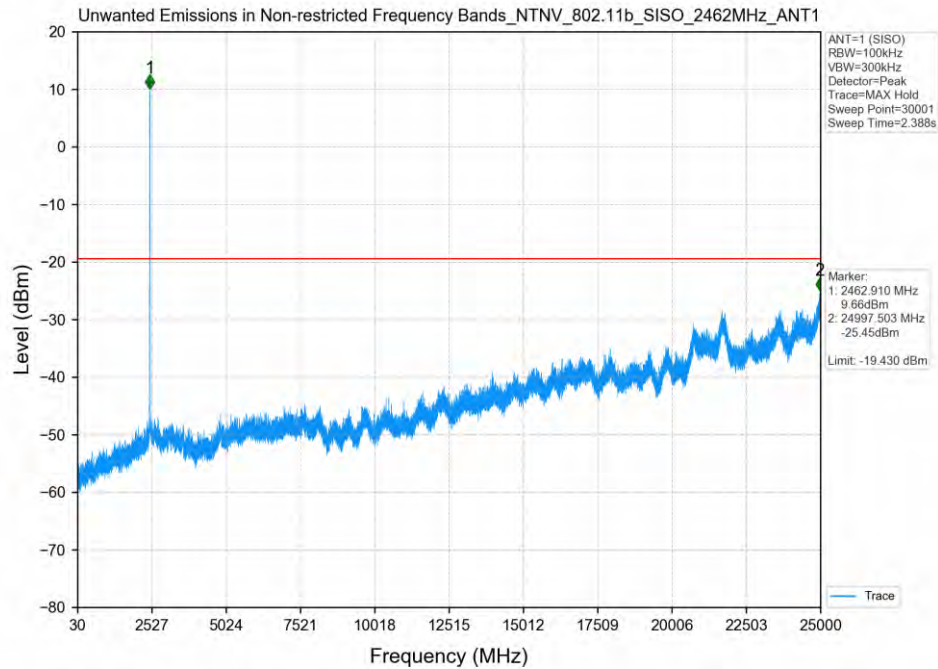
802.11b 2437MHz SISO ANT1



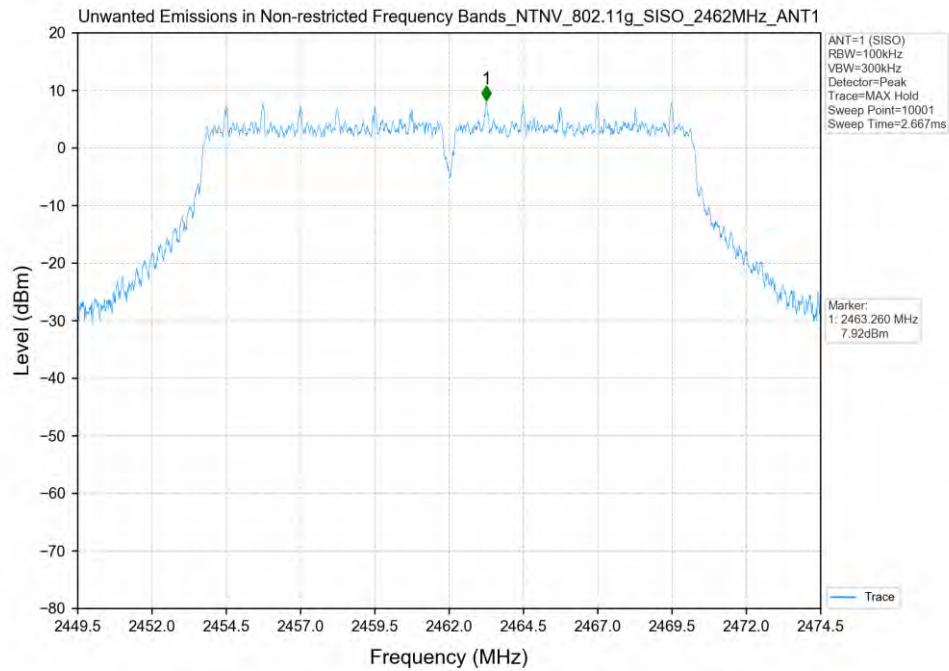
802.11b 2462MHz SISO ANT1



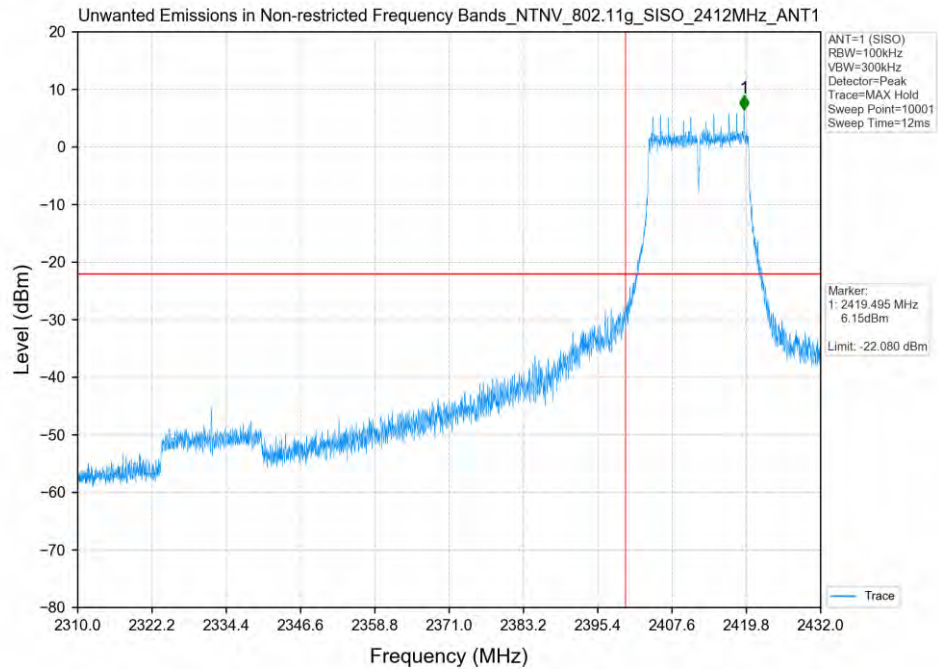
802.11b 2462MHz SISO ANT1



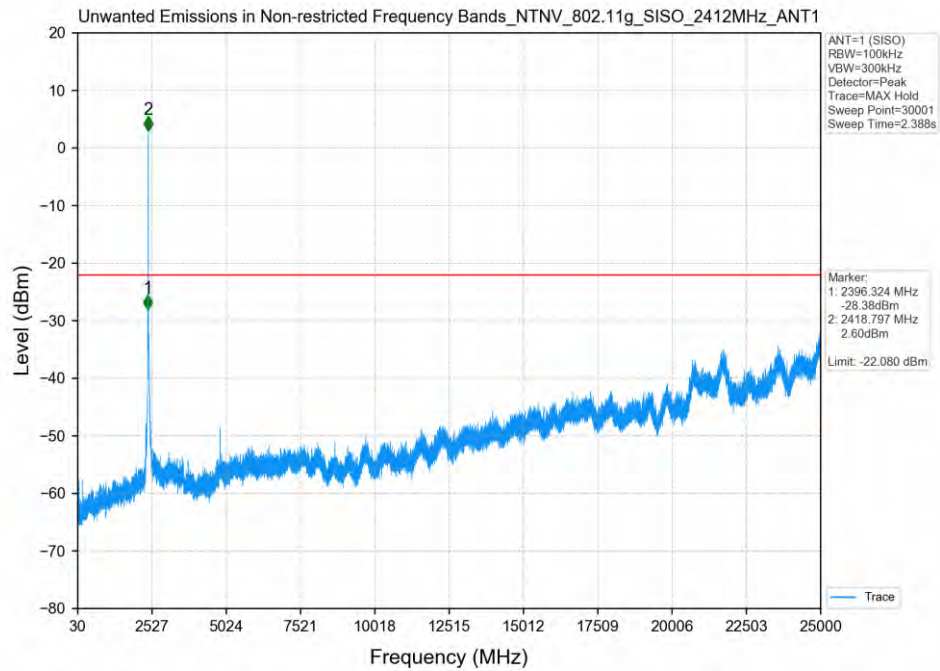
802.11g SISO ANT1 REF



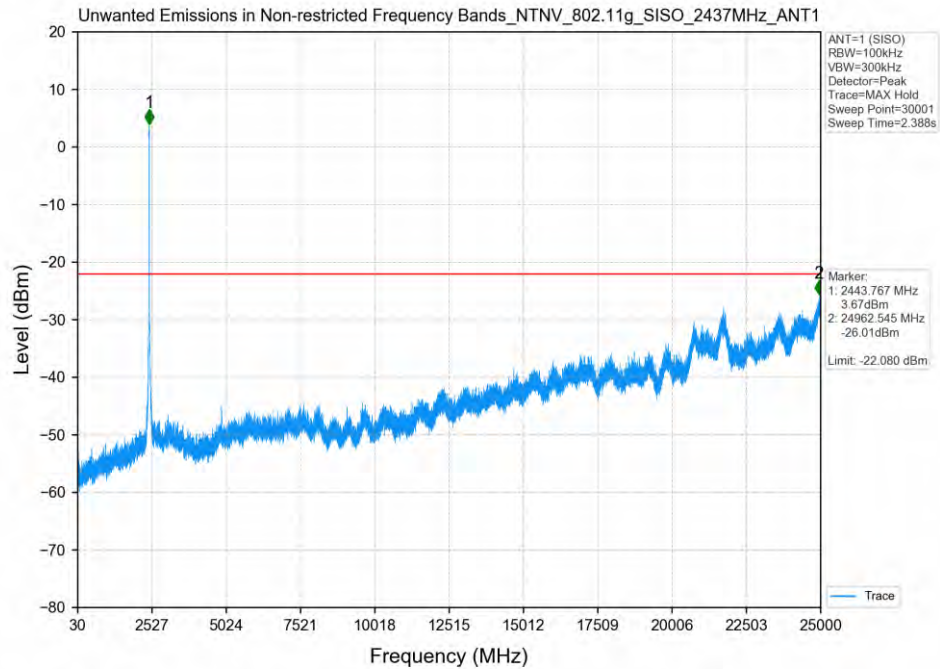
802.11g\_2412MHz\_SISO\_ANT1



802.11g\_2412MHz\_SISO\_ANT1

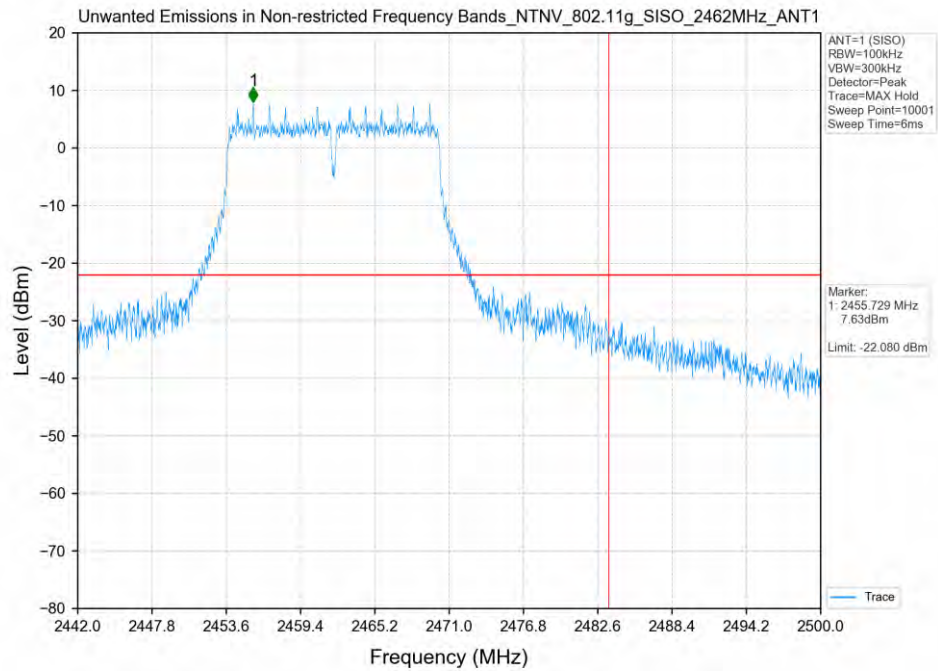


802.11g\_2437MHz\_SISO\_ANT1

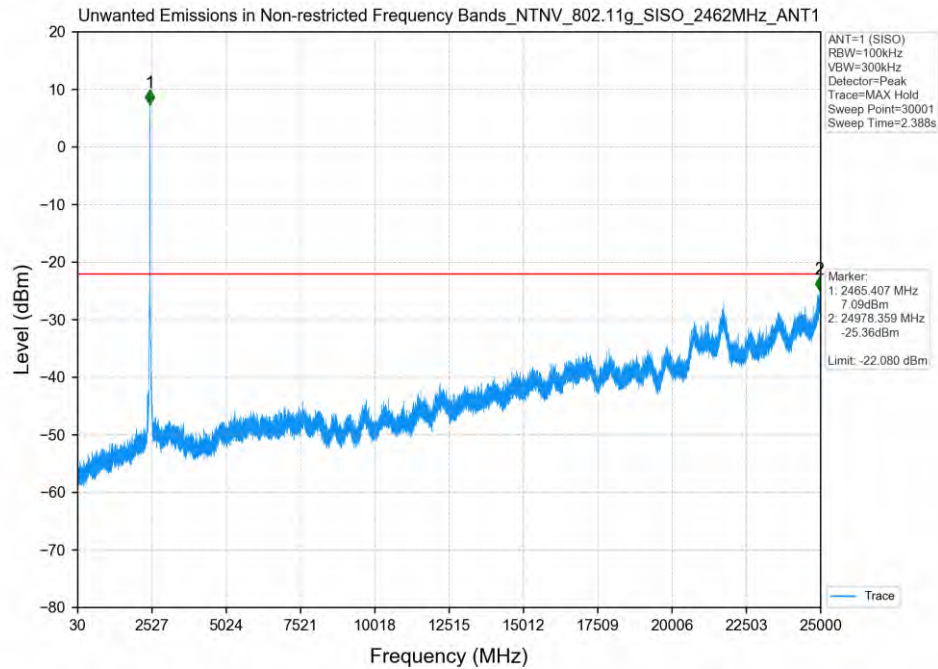


802.11g\_2462MHz\_SISO\_ANT1



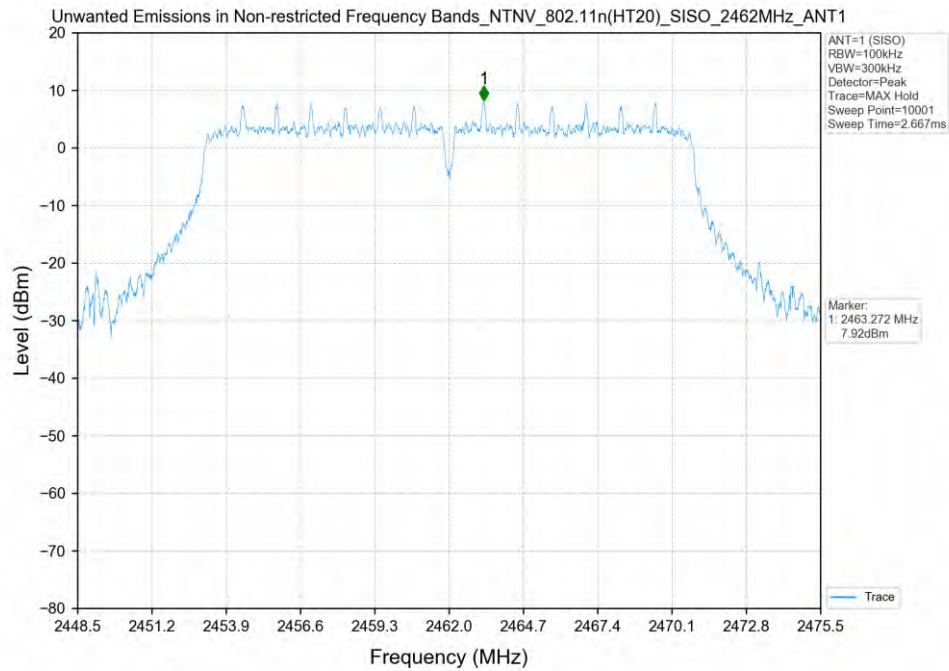


802.11g\_2462MHz\_SISO\_ANT1

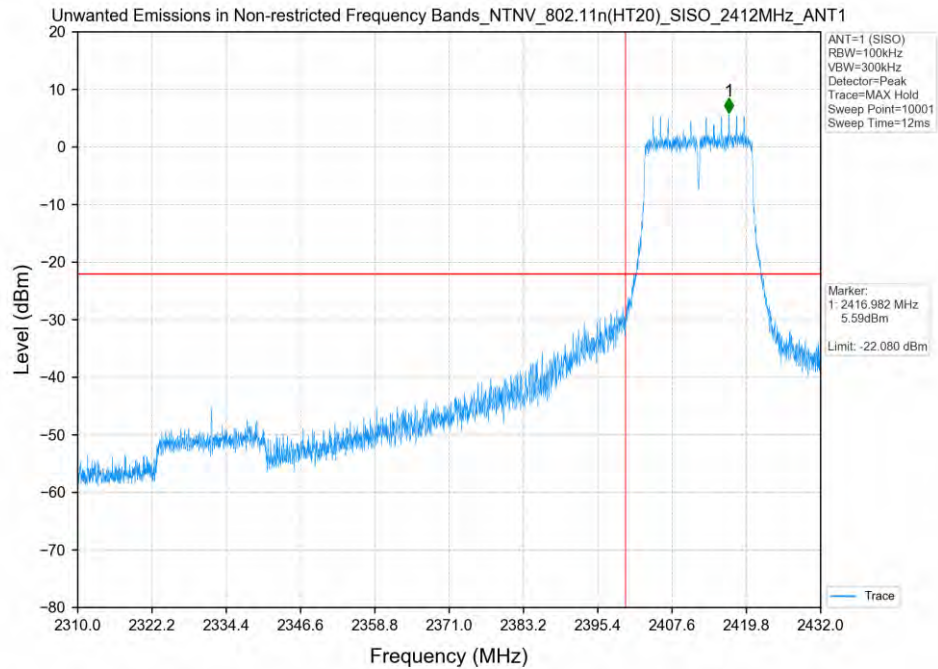


802.11n(HT20)\_SISO\_ANT1\_REF

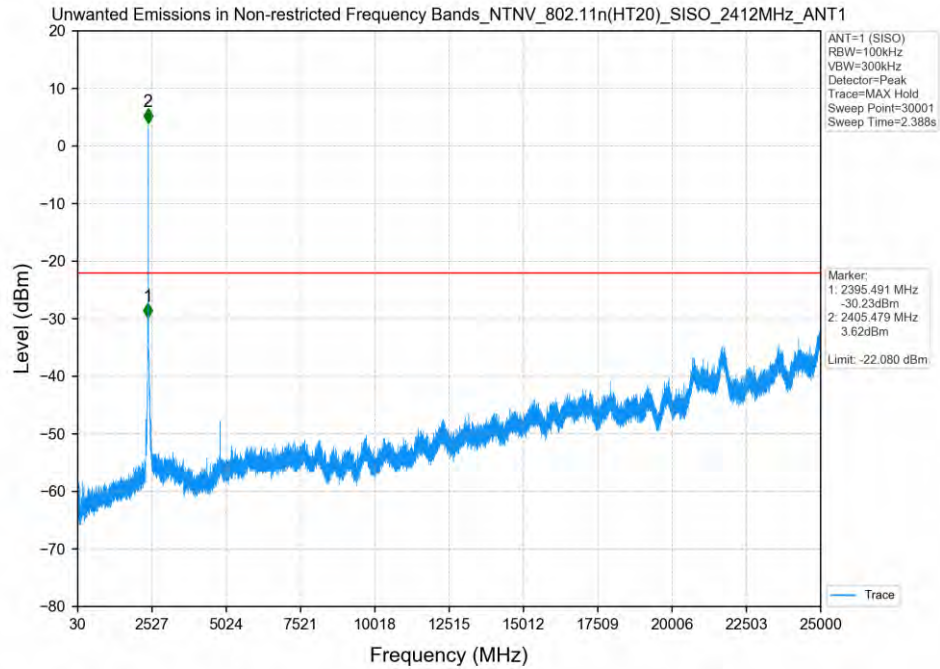




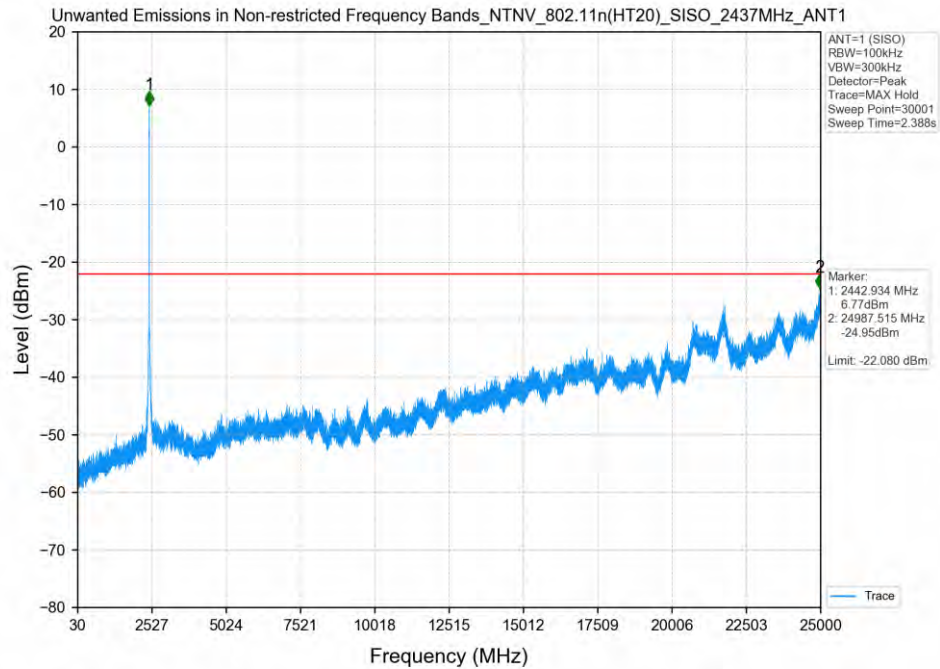
802.11n(HT20) 2412MHz SISO ANT1



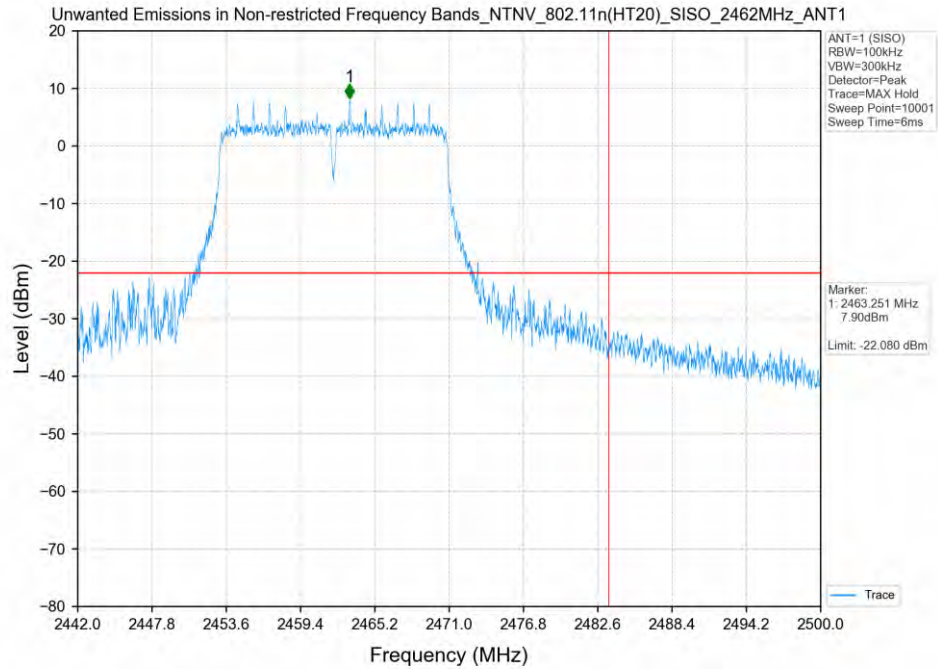
802.11n(HT20) 2412MHz SISO ANT1



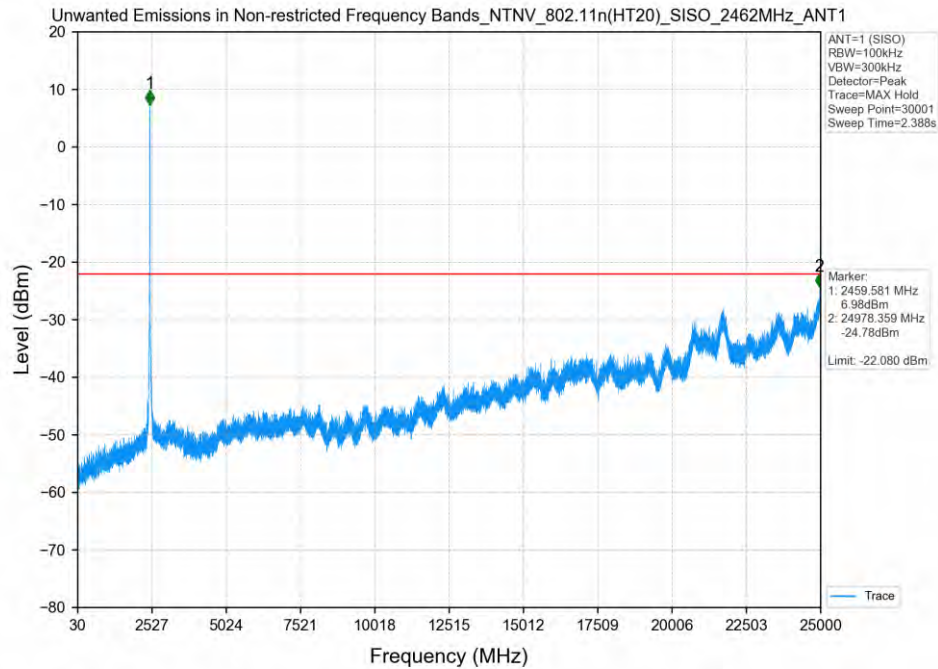
802.11n(HT20) 2437MHz SISO ANT1



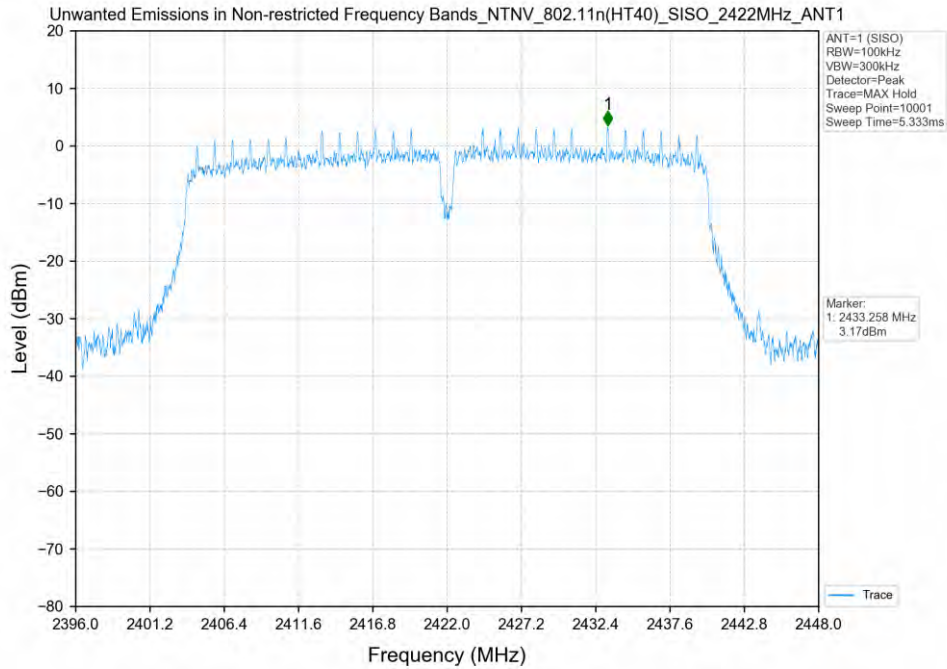
802.11n(HT20) 2462MHz SISO ANT1



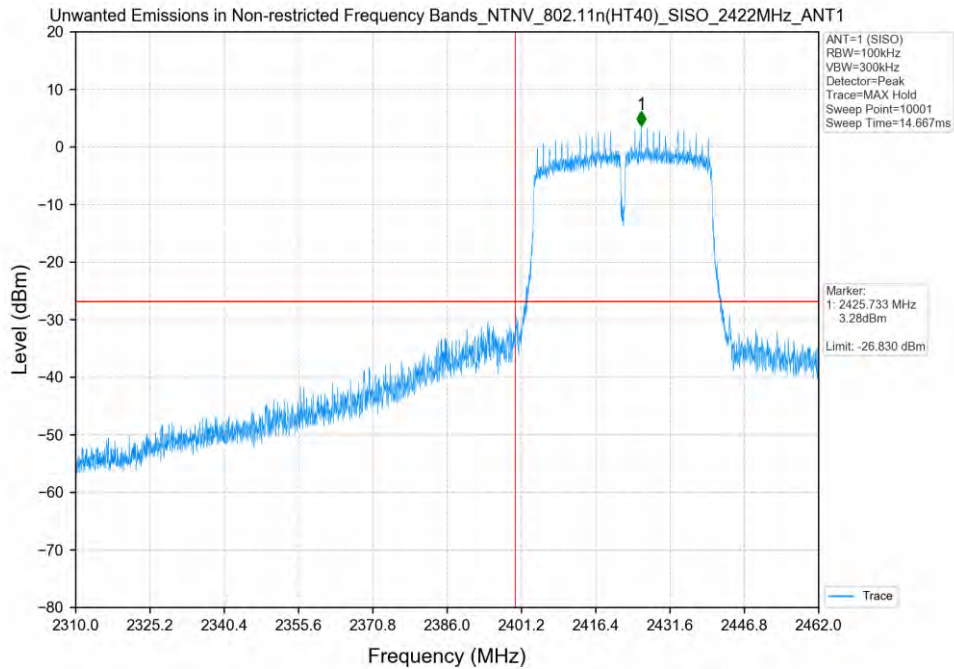
802.11n(HT20) 2462MHz SISO ANT1



802.11n(HT40) SISO ANT1\_REF

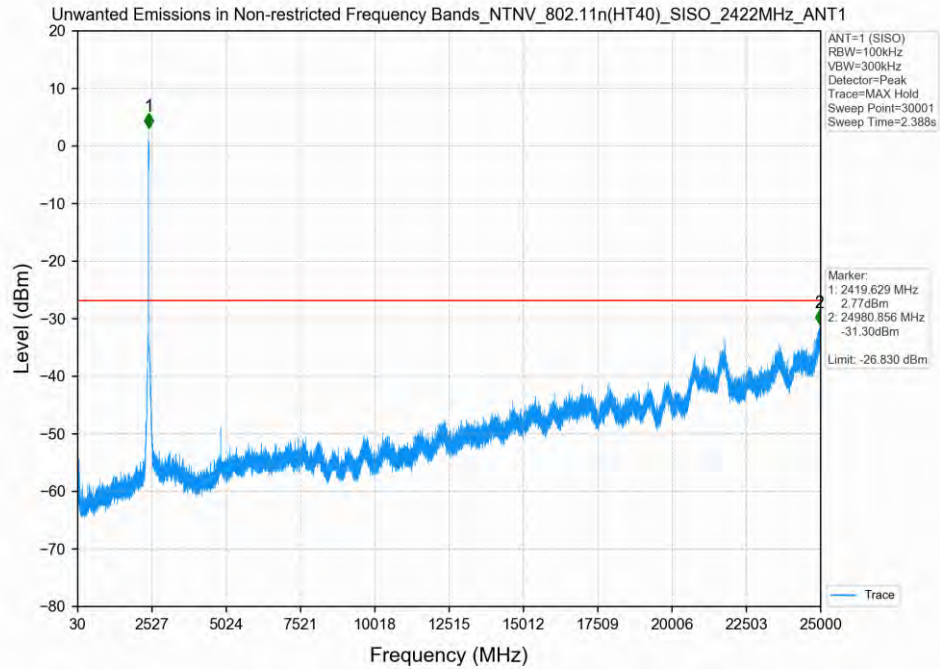


802.11n(HT40) 2422MHz SISO ANT1

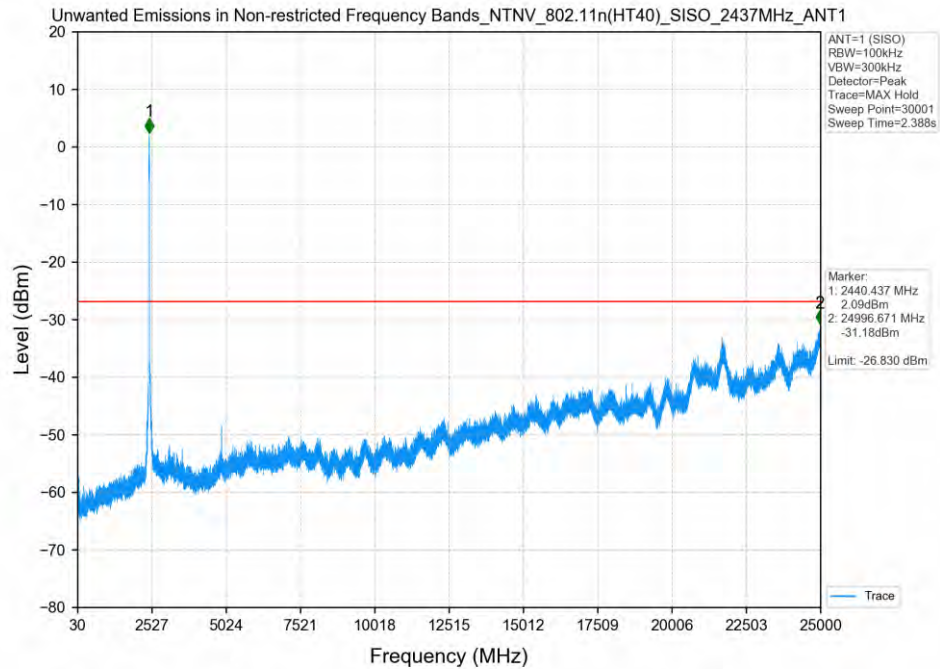


802.11n(HT40) 2422MHz SISO ANT1



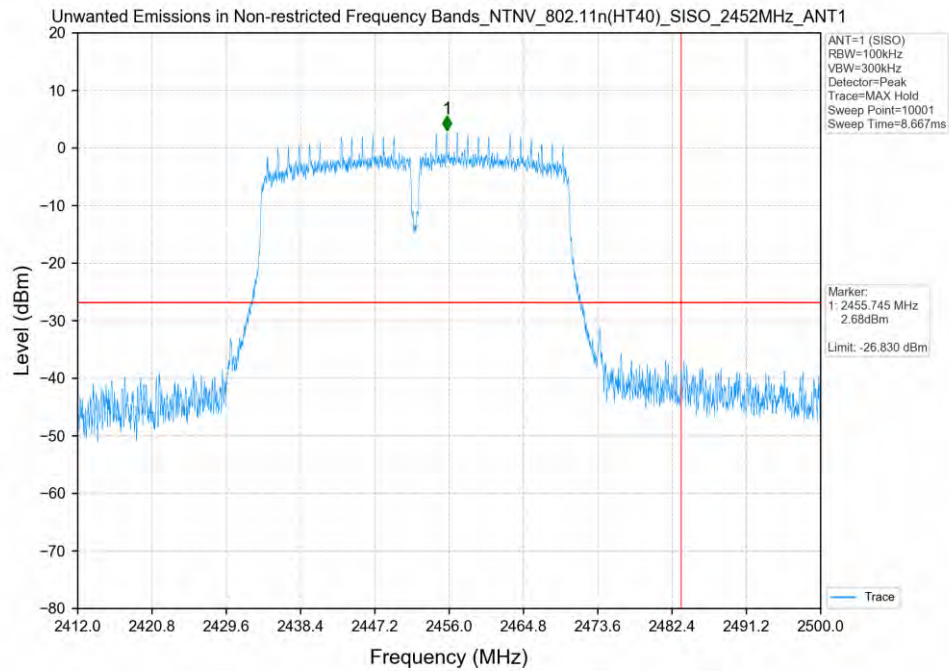


802.11n(HT40) 2437MHz SISO ANT1



802.11n(HT40) 2452MHz SISO ANT1





802.11n(HT40) 2452MHz SISO ANT1

