



## 7. Test of Conducted Spurious Emission

### 7.1 Test Limit

According to the methods defined in ANSI C63.10-2013 Section 11.11.1

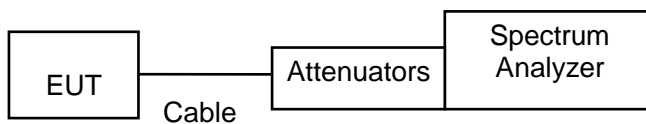
Below -30dB of the highest emission level of operating band (In 100 kHz Resolution Bandwidth)

### 7.2 Test Procedure

According to the methods defined in ANSI C63.10-2013 Section 11.11.2 & 11.11.3

- a. The transmitter output was connected to the spectrum analyzer via a low loss cable.
- b. Set RBW of spectrum analyzer to 100 KHz and VBW of spectrum analyzer to 300 KHz with convenient frequency span including 100 KHz bandwidth from band edge.
- c. Peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 30dB relative to the maximum measured in-band peak PSD level.
- d. The band edges was measured and recorded.

### 7.3 Test Setup Layout



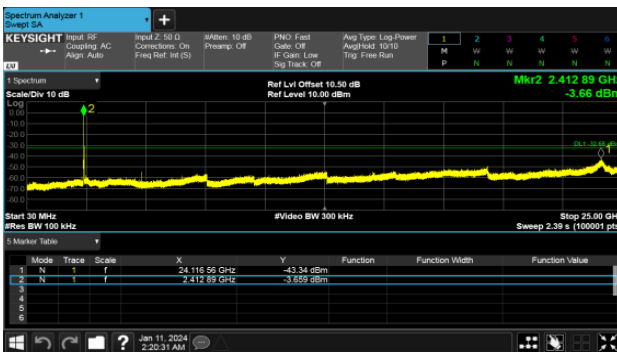
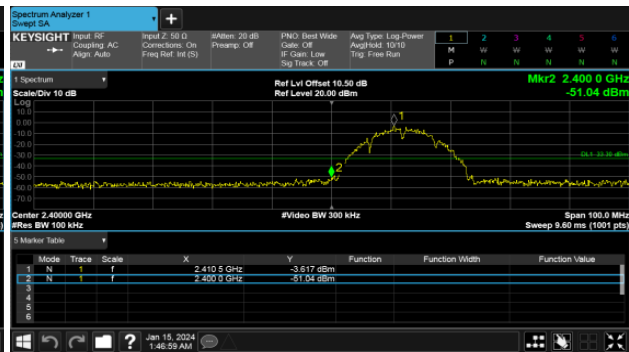
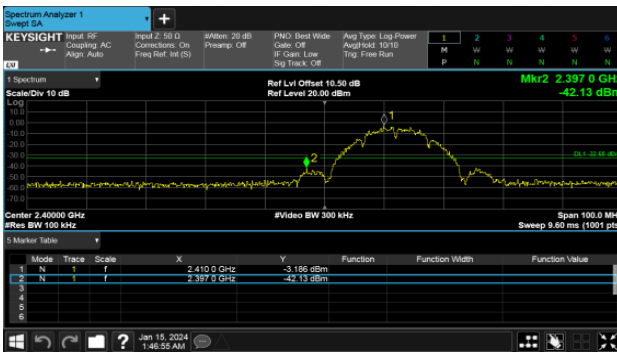
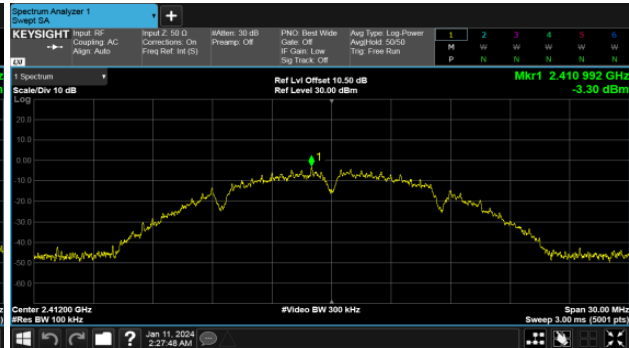
### 7.4 Test Result and Data

Note: Test plots refers to the following pages.



Modulation Type: 802.11b CH01  
ANT A

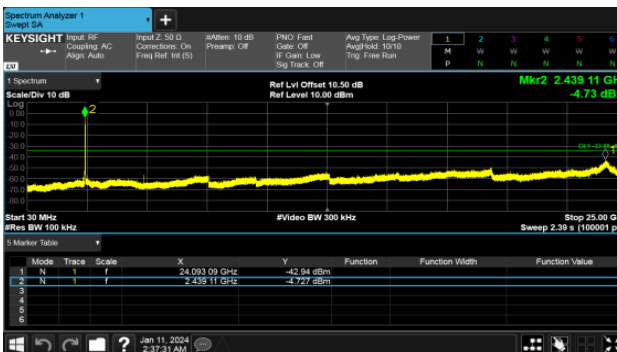
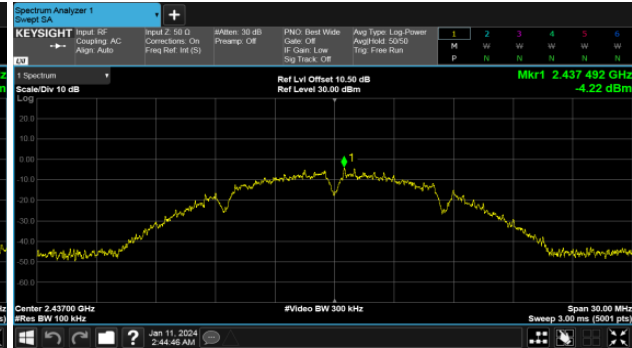
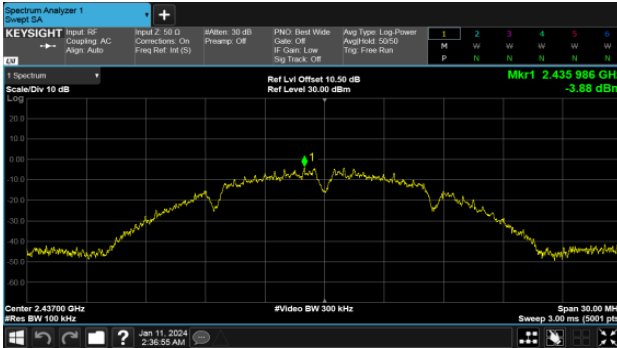
ANT B





Modulation Type: 802.11b CH06  
ANT A

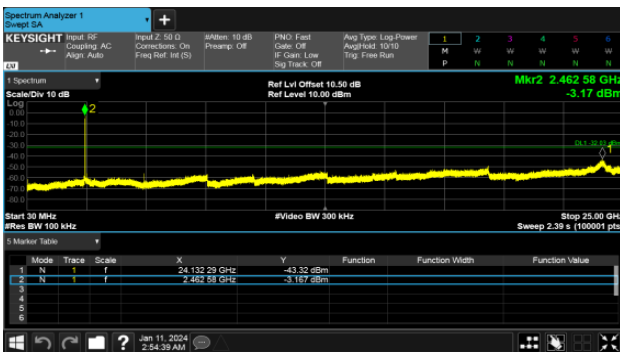
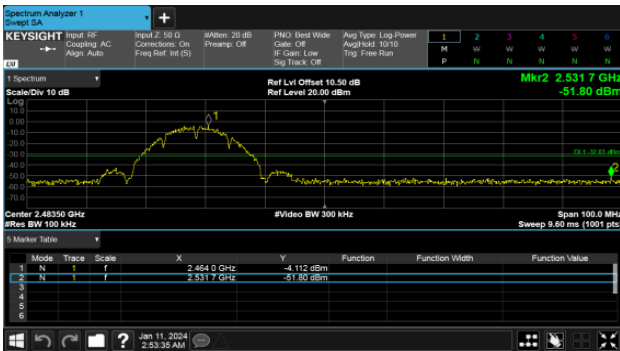
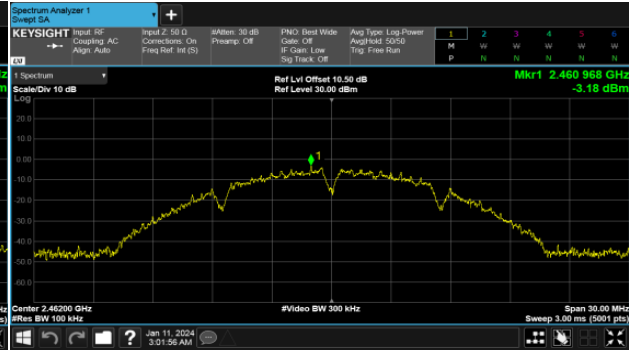
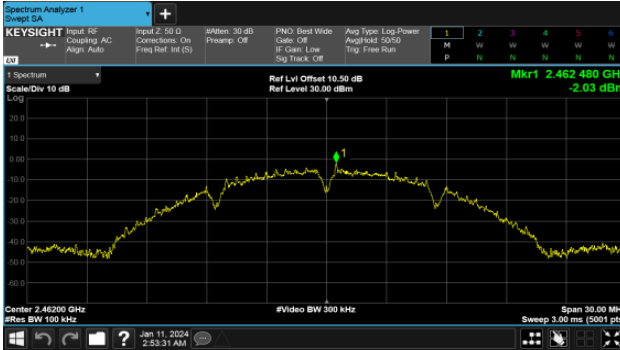
ANT B





Modulation Type: 802.11b CH11  
ANT A

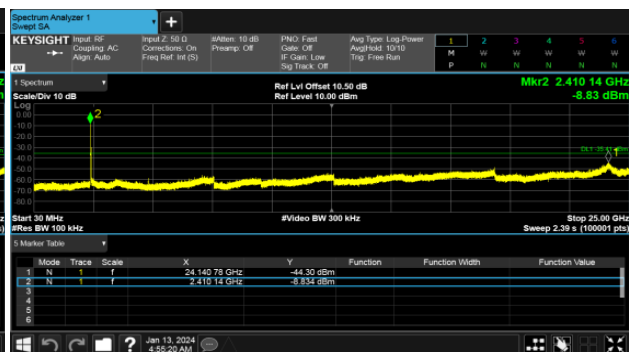
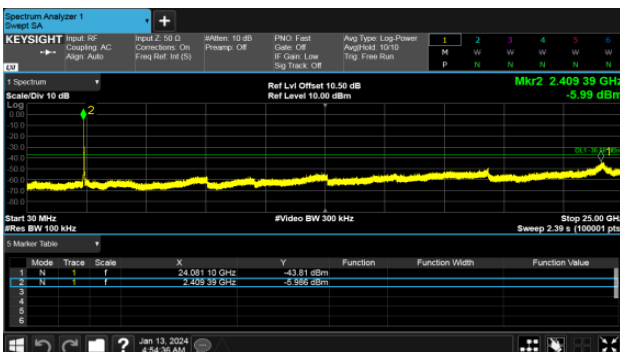
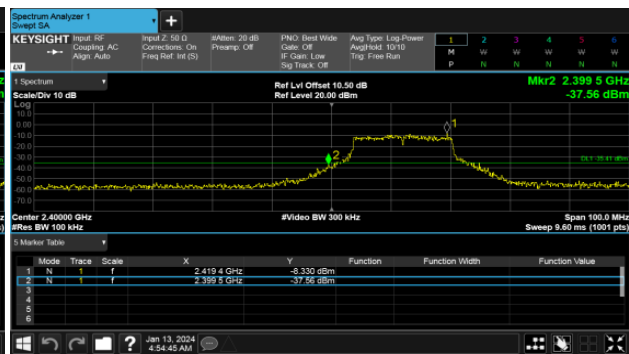
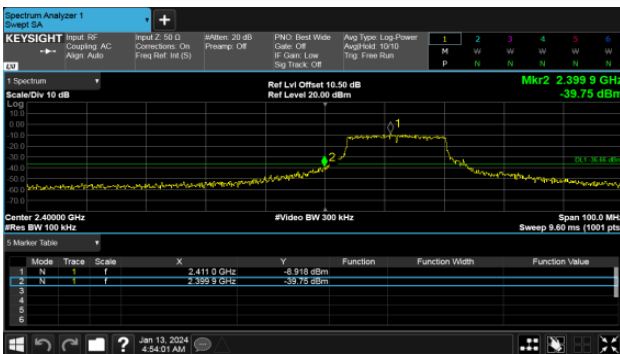
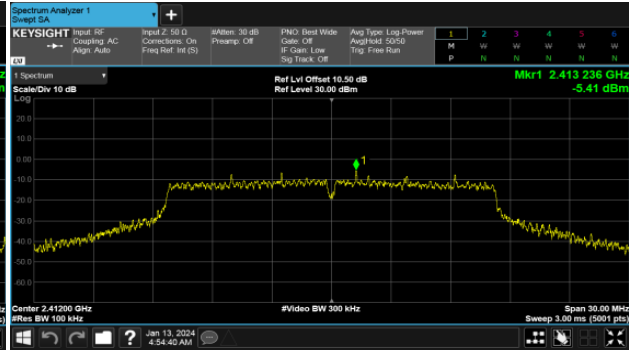
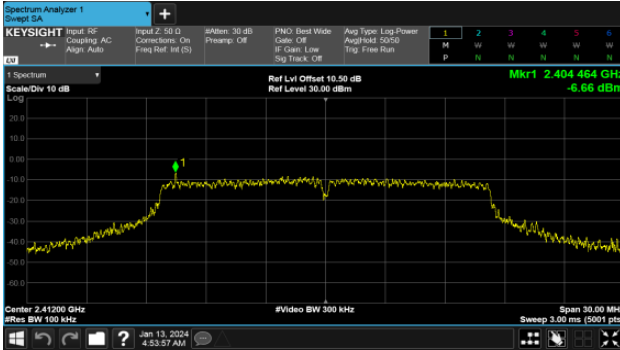
ANT B





Modulation Type: 802.11g CH01  
ANT A

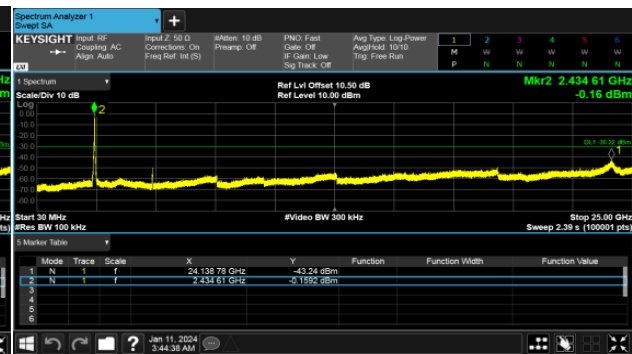
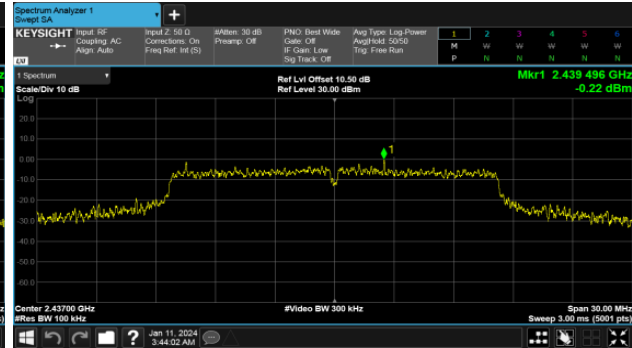
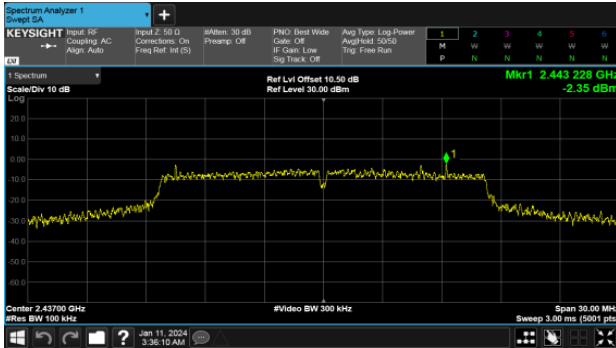
ANT B





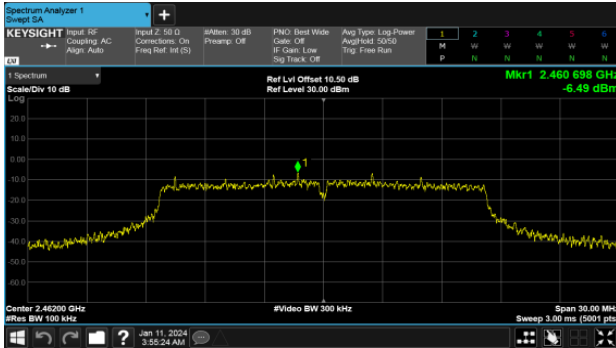
Modulation Type: 802.11g CH06  
ANT A

ANT B

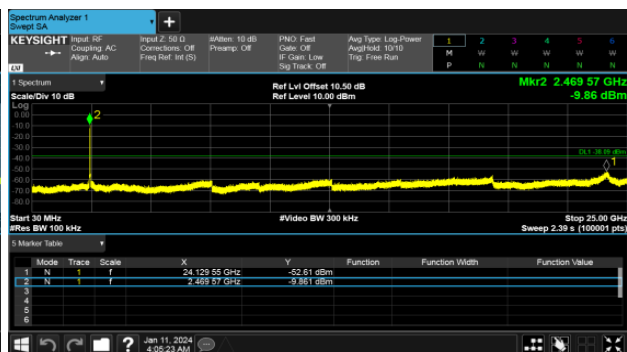
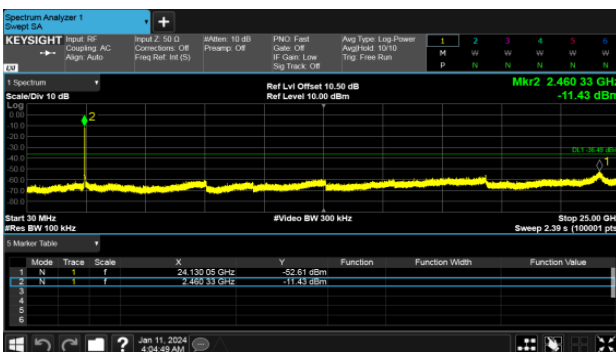
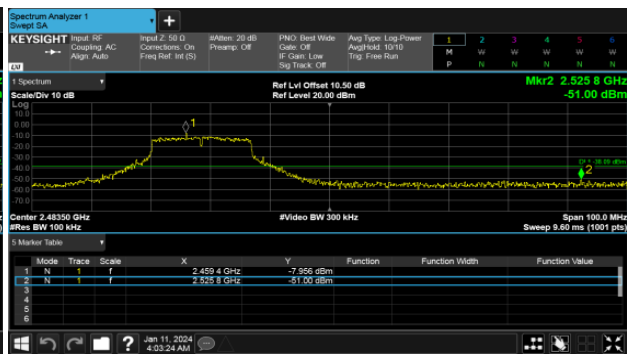
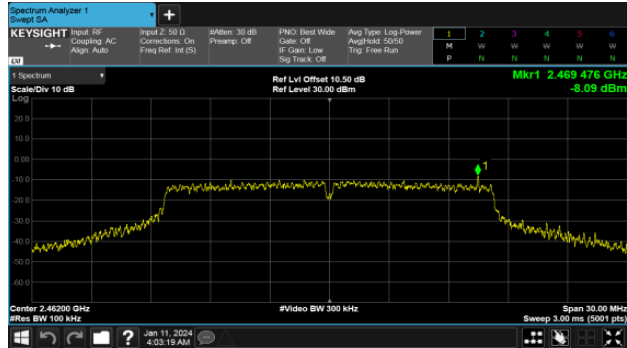




Modulation Type: 802.11g CH11  
ANT A



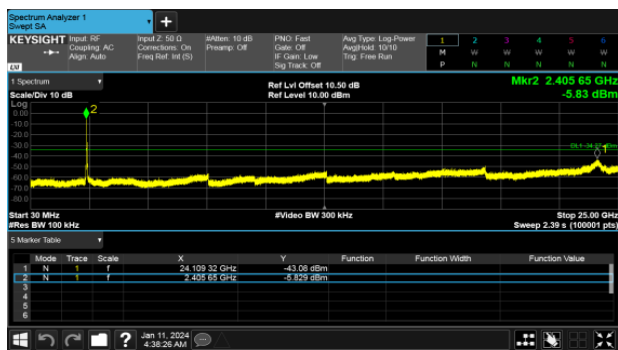
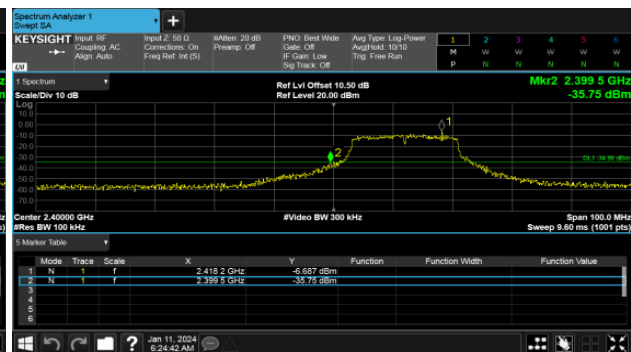
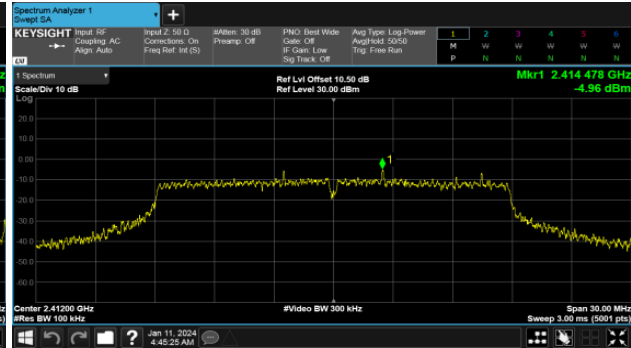
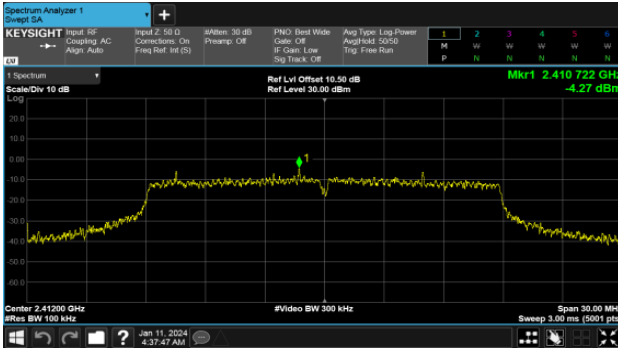
ANT B





Modulation Type: 802.11n HT20 CH01  
ANT A

ANT B

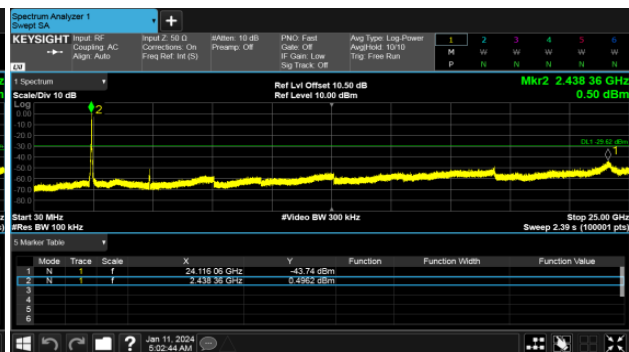
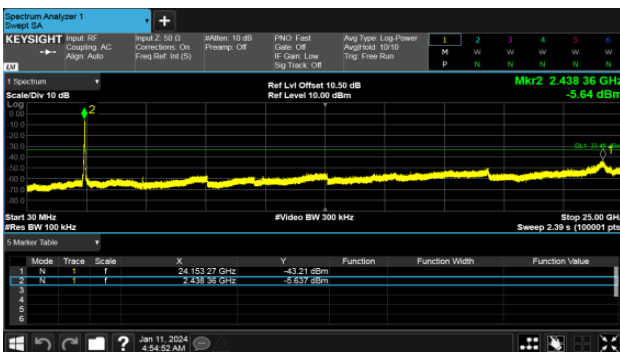
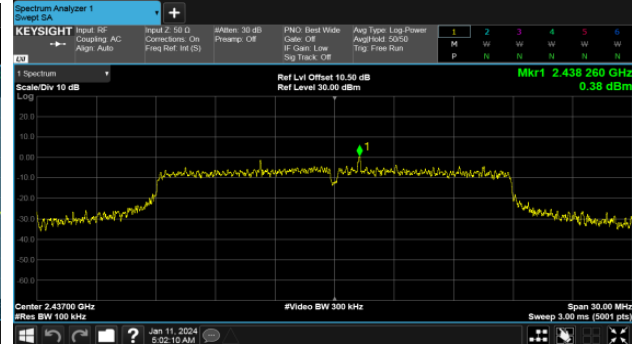
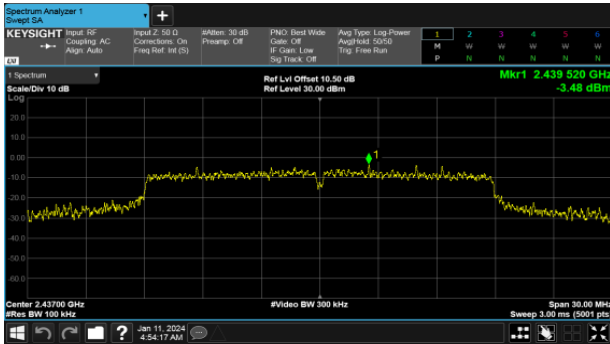






Modulation Type: 802.11n HT20 CH06  
ANT A

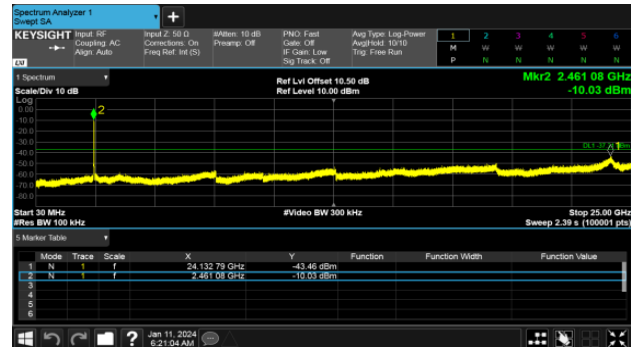
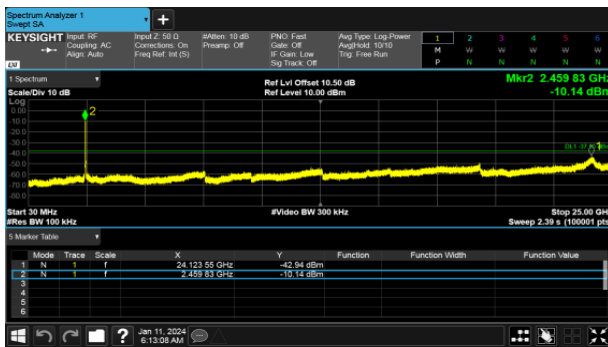
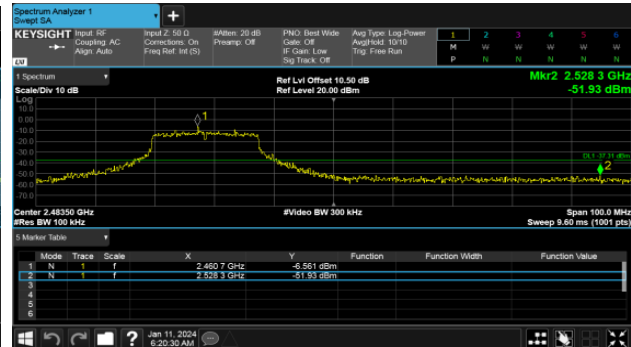
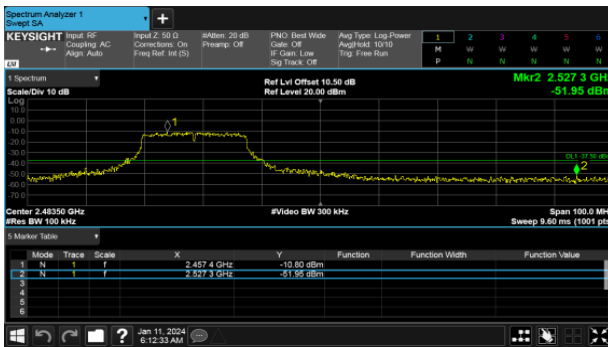
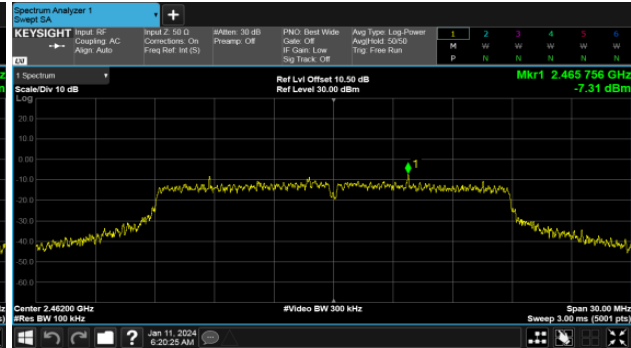
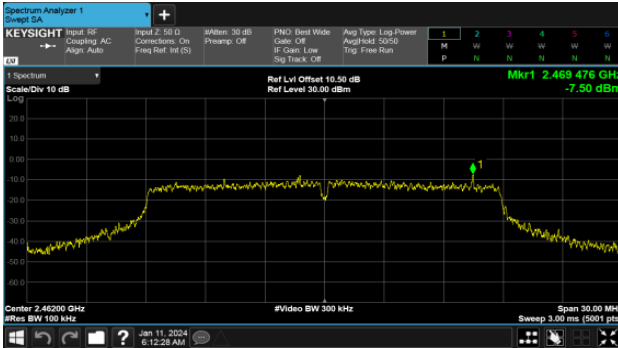
ANT B





Modulation Type: 802.11n HT20 CH11  
ANT A

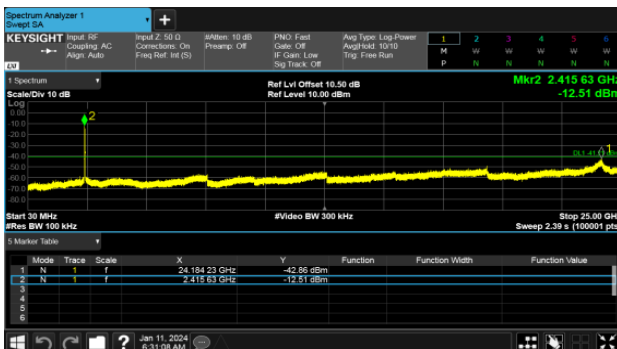
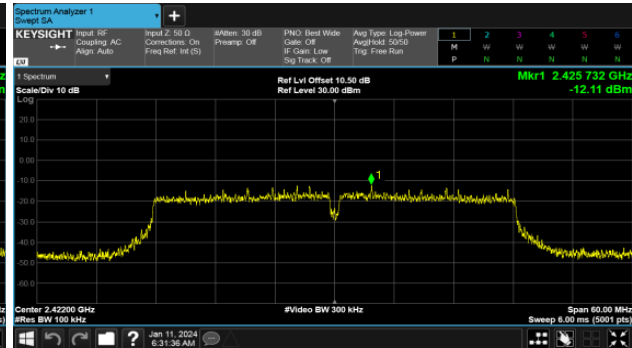
ANT B





Modulation Type: 802.11n HT40 CH03  
ANT A

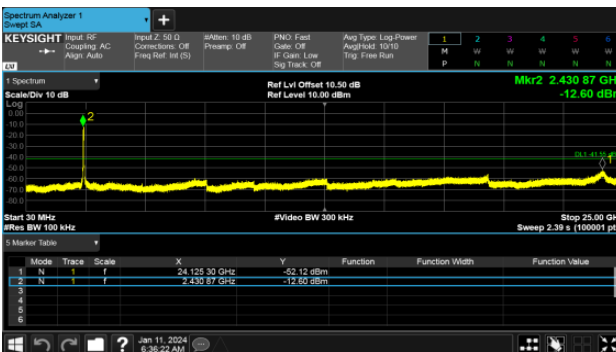
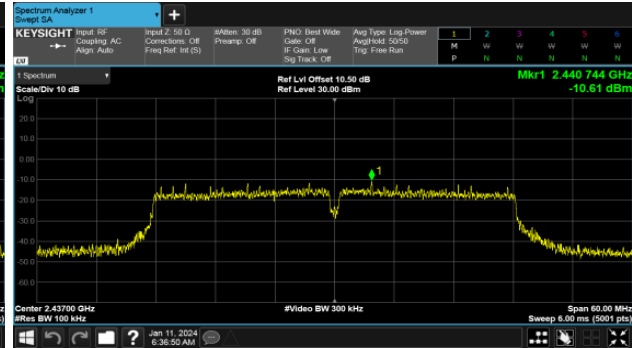
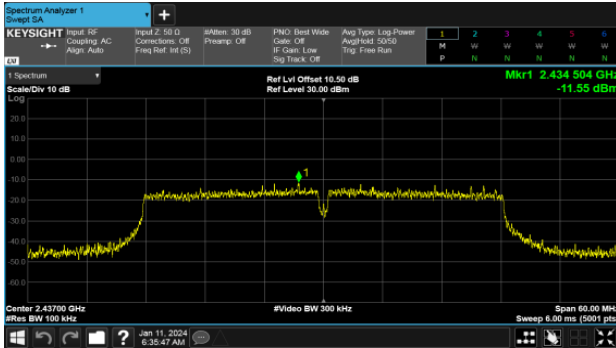
ANT B





Modulation Type: 802.11n HT40 CH06  
ANT A

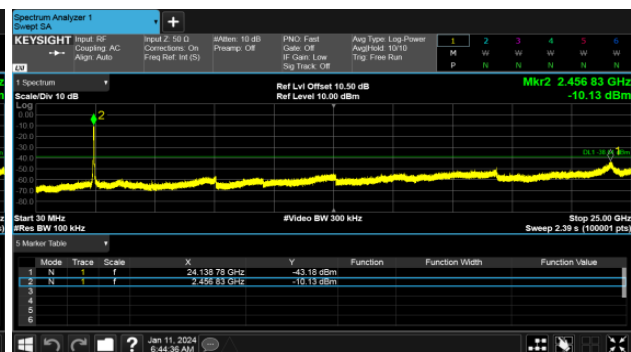
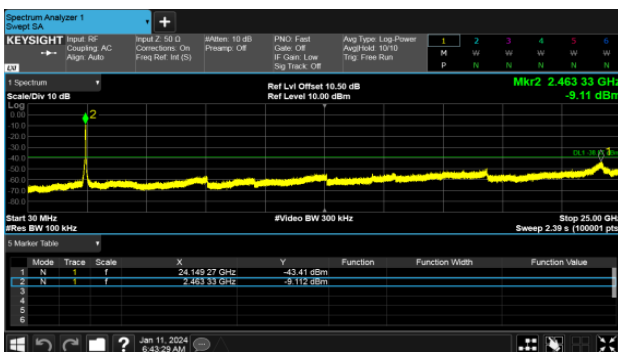
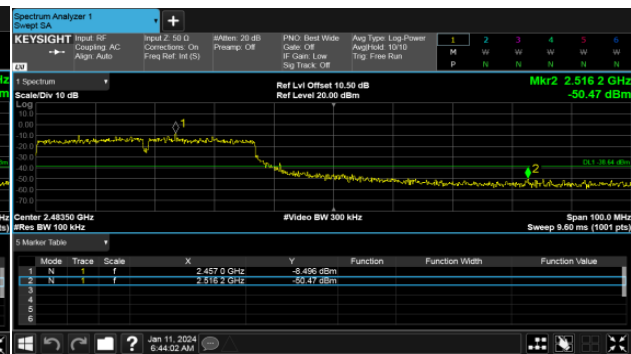
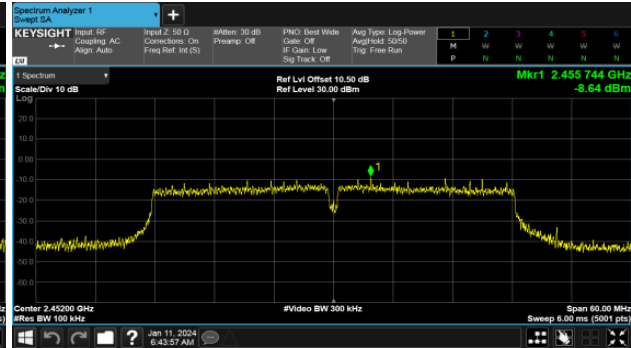
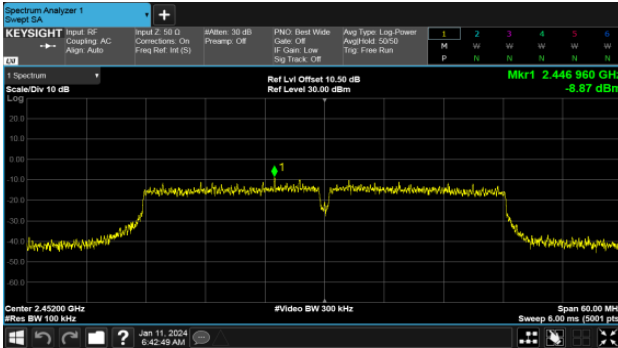
ANT B





Modulation Type: 802.11n HT40 CH09  
ANT A

ANT B





## 8. On Time, Duty Cycle and Measurement methods

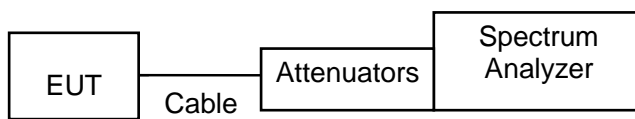
### 8.1 Test Limit

None; for reporting purposes only.

### 8.2 Test Procedure

According to the methods defined in ANSI C63.10-2013 Section 11.6  
Zero-Span Spectrum Analyzer Method.

### 8.3 Test Setup Layout

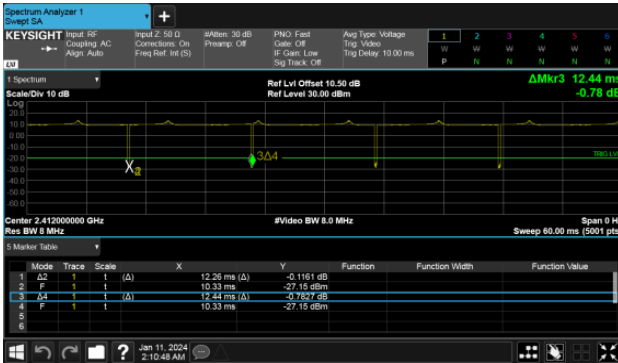


### 8.4 Test Result and Data

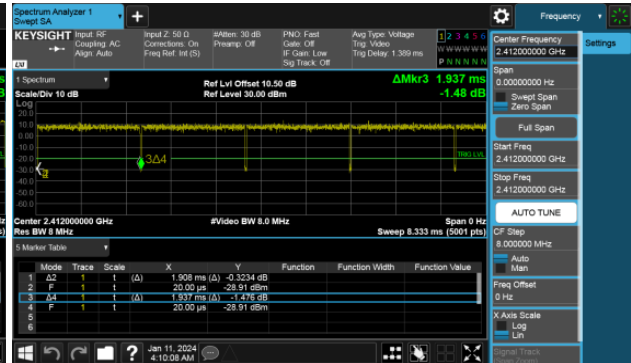
Modulation Type	On Time (ms)	Period Time (ms)	Duty Cycle (%)
11b,1M	12.26	12.44	98.55%
11g,6M	2.04	2.07	98.69%
11n HT20	1.91	1.94	98.50%
11n HT40	0.94	0.99	95.25%



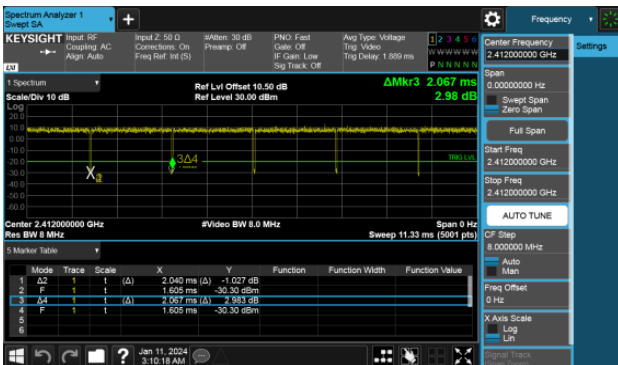
Modulation Type: 802.11b(1Mbps)



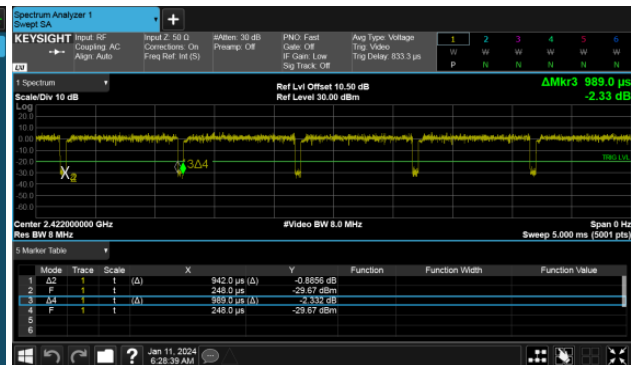
Modulation Type: 802.11n HT20 (6.5Mbps)



Modulation Type: 802.11g(6Mbps)



Modulation Type: 802.11n HT40 (13.5Mbps)





### 9. 6dB Bandwidth Measurement Data

#### 9.1 Test Limit

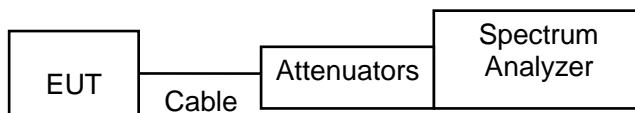
The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

#### 9.2 Test Procedures

According to the methods defined in ANSI C63.10-2013 Section 11.8

- a. The transmitter output was connected to the spectrum analyzer.
- b. Set RBW of spectrum analyzer to 100 KHz and VBW to 300 KHz.
- c. The 6 dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6 dB.
- d. The 6dB Bandwidth was measured and recorded.

#### 9.3 Test Setup Layout



#### 9.4 Test Result and Data

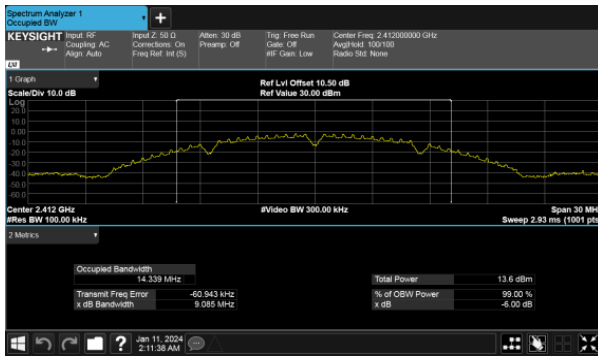
Modulation Type	Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Limit (MHz)
			ANT A	ANT B	
11b	1	2412	9.09	8.58	0.5
	6	2437	9.06	8.57	0.5
	11	2462	9.05	9.03	0.5
11g	1	2412	15.55	16.04	0.5
	6	2437	15.35	16.30	0.5
	11	2462	15.47	15.92	0.5
11n HT20	1	2412	16.78	16.67	0.5
	6	2437	16.04	17.06	0.5
	11	2462	15.38	15.90	0.5
11n HT40	3	2422	36.05	35.82	0.5
	6	2437	35.46	35.66	0.5
	9	2452	35.59	35.56	0.5





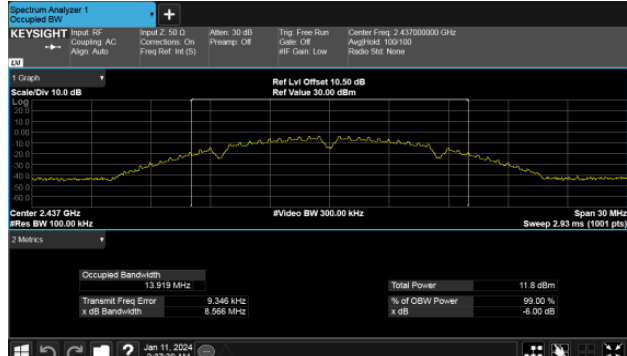
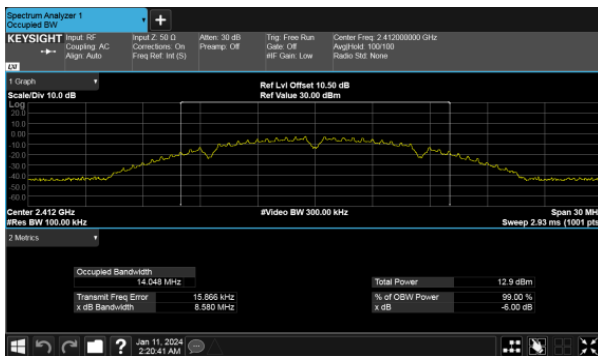
Modulation Type: 802.11b CH01  
ANT A

Modulation Type: 802.11b CH06  
ANT A



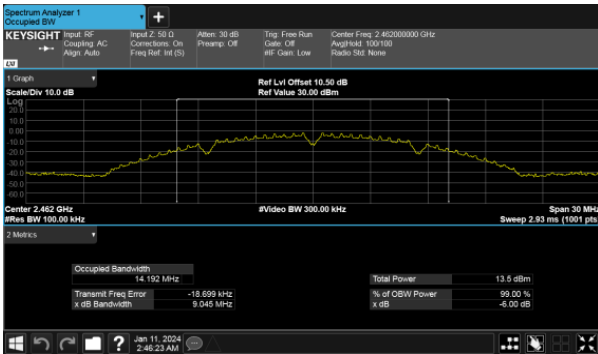
ANT B

ANT B





Modulation Type: 802.11b CH11  
ANT A



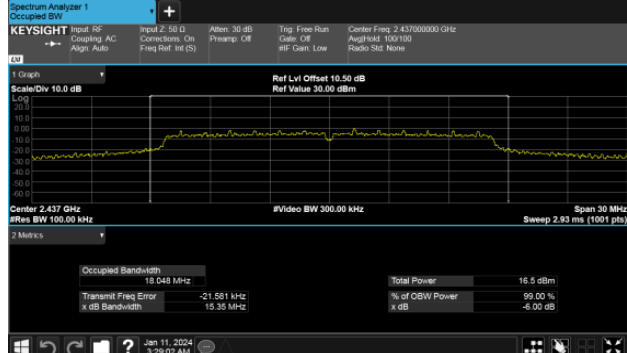
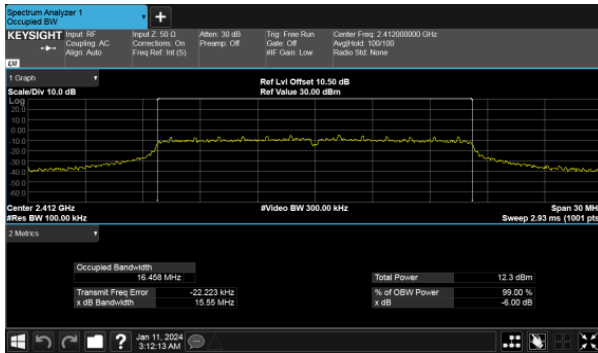
ANT B





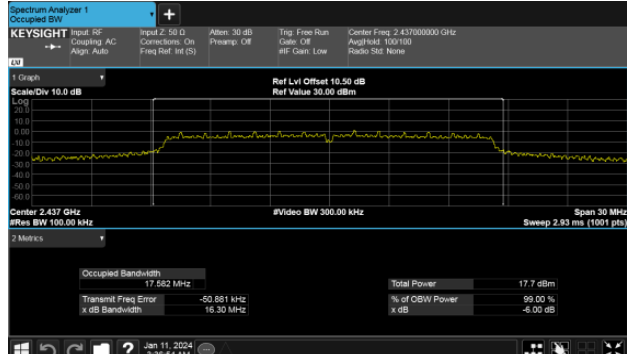
Modulation Type: 802.11g CH01  
ANT A

Modulation Type: 802.11g CH06  
ANT A



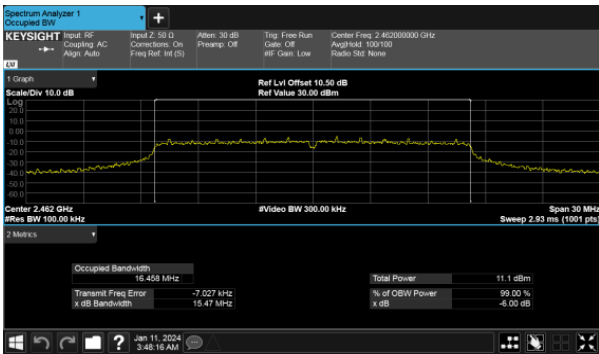
ANT B

ANT B





Modulation Type: 802.11g CH11  
ANT A



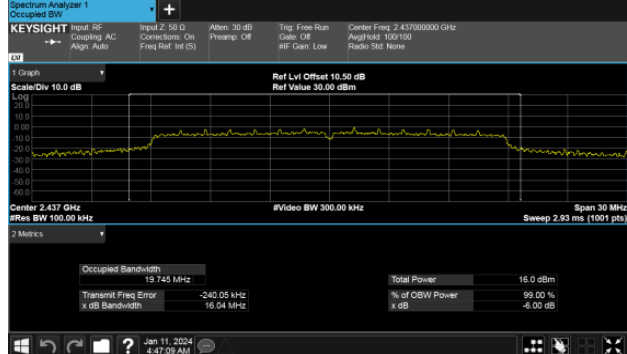
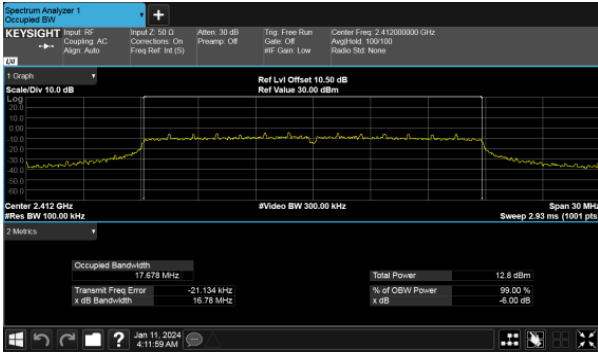
ANT B





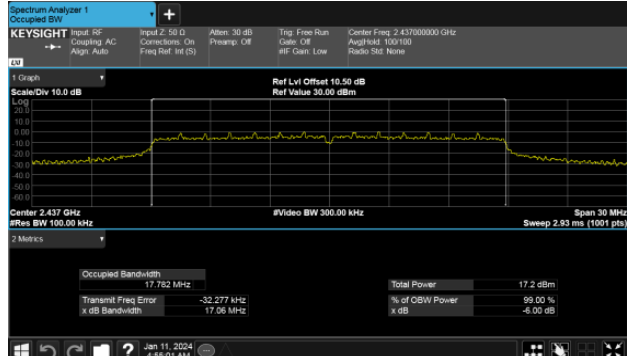
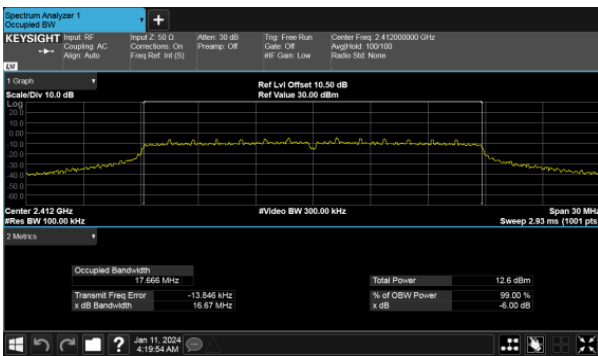
Modulation Type: 802.11n HT20 CH01  
ANT A

Modulation Type: 802.11n HT20 CH06  
ANT A



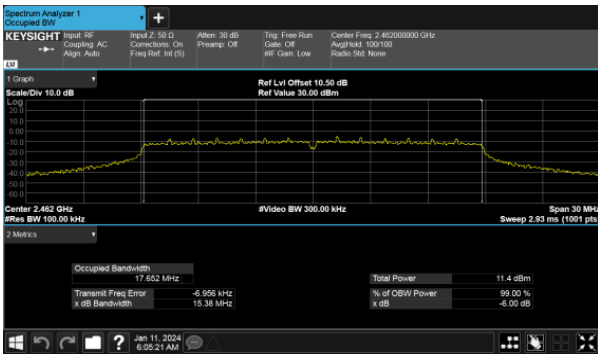
ANT B

ANT B

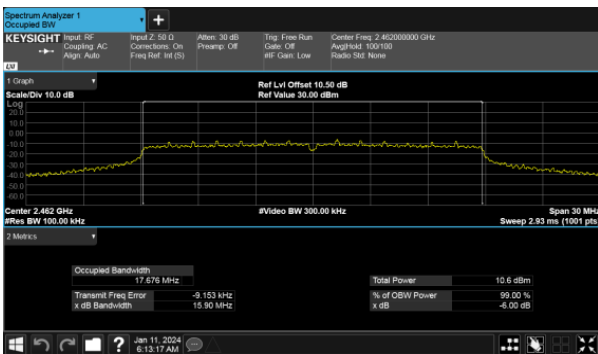




Modulation Type: 802.11n HT20 CH11  
ANT A



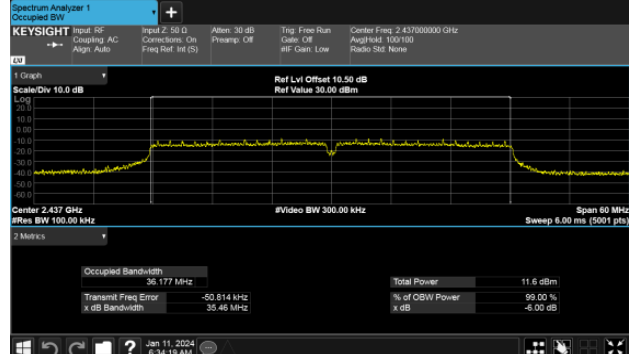
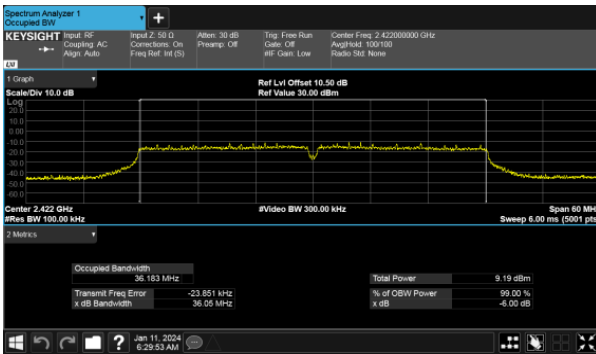
ANT B





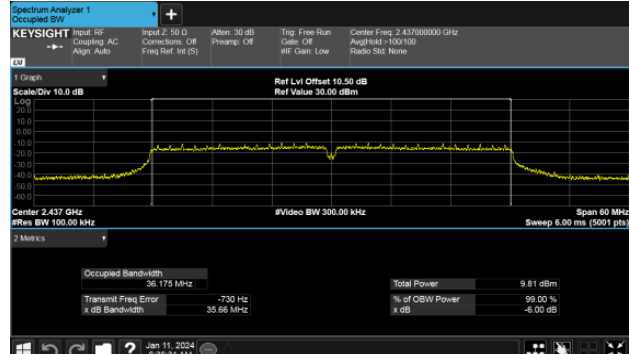
Modulation Type: 802.11n HT40 CH03  
ANT A

Modulation Type: 802.11n HT40 CH06  
ANT A



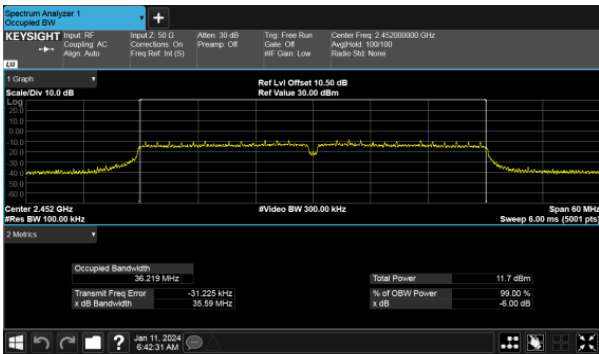
ANT B

ANT B

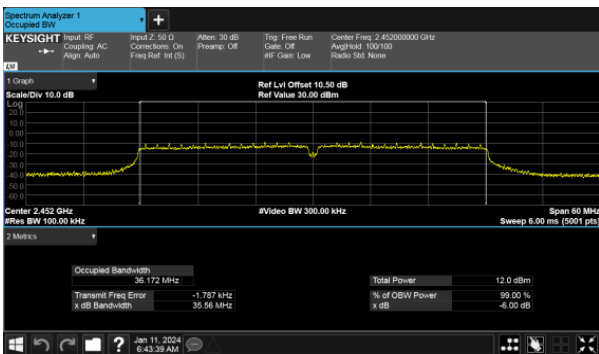




Modulation Type: 802.11n HT40 CH09  
ANT A



ANT B







### 10. Maximum Average Output Power

#### 10.1 Test Limit

The Maximum Average Output Power Measurement is 30dBm.

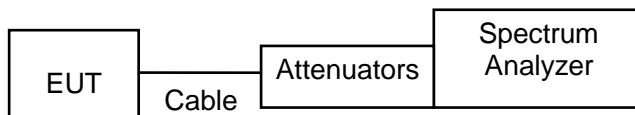
If transmitting antennas of directional gain greater than 6 dBi are used, the average output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi

#### 10.2 Test Procedures

According to the methods defined in ANSI C63.10-2013 Section 11.9.2.3.2

The antenna port (RF output) of the EUT was connected to the input (RF input) of a power meter. Power was read directly from the meter and cable loss connection was added to the reading to obtain power at the EUT antenna terminal. The EUT Output Power was set to maximum to produce the worse case test result.

#### 10.3 Test Setup Layout



#### 10.4 Test Result and Data

Setting	Modulation Mode	CH	Frequency (MHz)	Conducted (AV) output power (dBm)		Total AV power (dBm)	Total AV power (mW)	Power Limit (dBm)
				ANT A	ANT B			
15	11b	1	2412	16.10	15.40	18.77	75.412	30.00
14		6	2437	15.03	14.31	17.70	58.819	30.00
15		11	2462	15.58	15.36	18.48	70.497	30.00
14	11g	1	2412	14.63	14.32	17.49	56.080	30.00
22		6	2437	19.27	20.01	22.67	184.758	30.00
13		11	2462	13.50	13.27	16.40	43.620	30.00
15	11n HT20	1	2412	14.84	15.02	17.94	62.248	30.00
21		6	2437	18.29	20.39	22.48	176.848	30.00
13		11	2462	13.34	12.84	16.11	40.808	30.00
11	11n HT40	3	2422	12.23	11.40	14.85	30.515	30.00
14		6	2437	14.12	14.51	17.33	54.071	30.00
12		9	2452	13.08	12.64	15.88	38.689	30.00



### 11. Power Spectral Density

#### 11.1 Test Limit

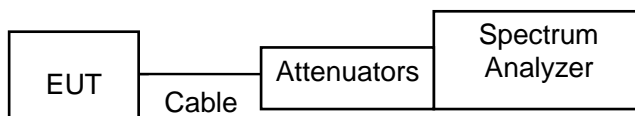
The Maximum of Power Spectral Density Measurement is 8dBm.

If transmitting antennas of directional gain greater than 6 dBi are used, the power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi

#### 11.2 Test Procedures

According to the methods defined in ANSI C63.10-2013 Section 11.10.1.

#### 11.3 Test Setup Layout



#### 11.4 Test Result and Data

Modulation Type	CH	Frequency (MHz)	Maximum Power Density of 3KHz Bandwidth(dBm)		Sum chain (dBm)	Duty Cycle CF(dB)	Total PSD (dBm)	Limit (dBm)
			ANT A	ANT B				
11b	1	2412	-25.425	-26.058	-22.72	0.00	-22.72	7.99
	6	2437	-26.581	-27.100	-23.82	0.00	-23.82	7.99
	11	2462	-25.065	-25.604	-22.32	0.00	-22.32	7.99
11g	1	2412	-27.543	-28.167	-24.83	0.00	-24.83	7.99
	6	2437	-24.551	-23.81	-21.15	0.00	-21.15	7.99
	11	2462	-28.252	-29.034	-25.62	0.00	-25.62	7.99
11n HT20	1	2412	-27.359	-27.287	-24.31	0.00	-24.31	7.99
	6	2437	-24.741	-24.229	-21.47	0.00	-21.47	7.99
	11	2462	-29.85	-27.611	-25.58	0.00	-25.58	7.99
11n HT40	3	2422	-20.599	-21.501	-18.02	0.21	-17.81	7.99
	6	2437	-17.665	-19.911	-15.63	0.21	-15.42	7.99
	9	2452	-17.824	-18.032	-14.92	0.21	-14.71	7.99



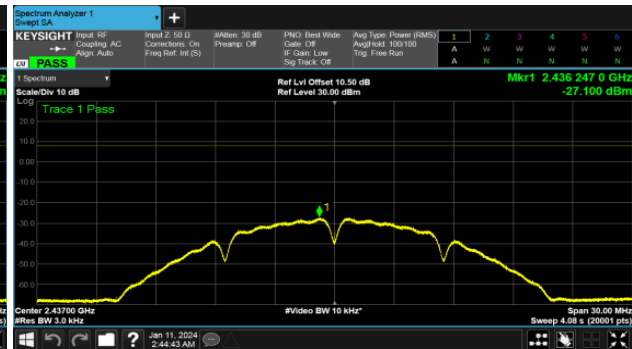
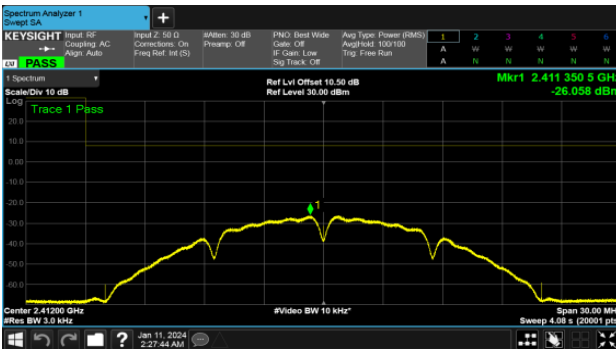
Modulation Type: 802.11b CH01  
ANT A

Modulation Type: 802.11b CH06  
ANT A



ANT B

ANT B

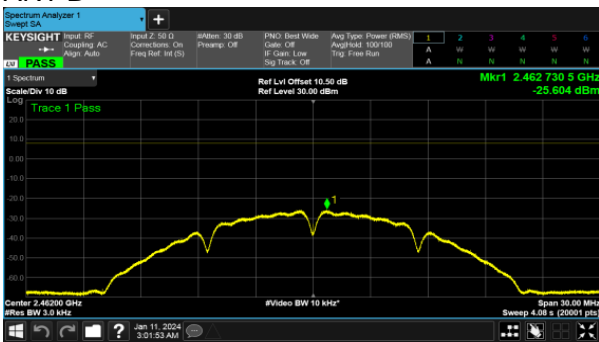




Modulation Type: 802.11b CH11  
ANT A

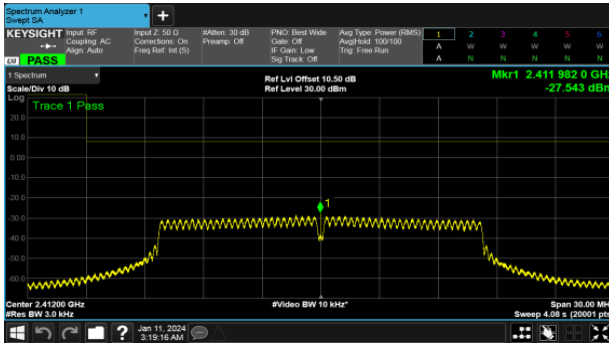


ANT B

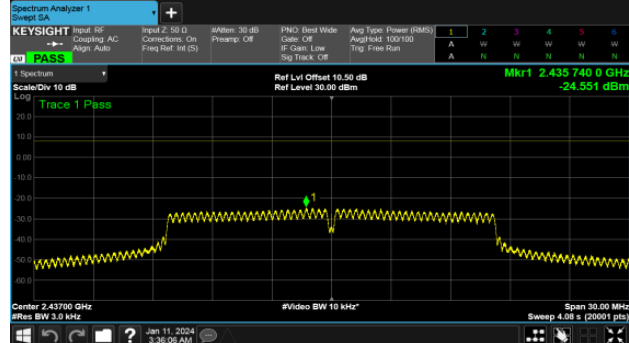




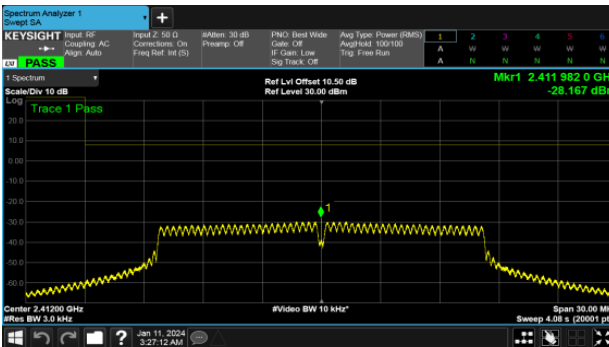
Modulation Type: 802.11g CH01  
ANT A



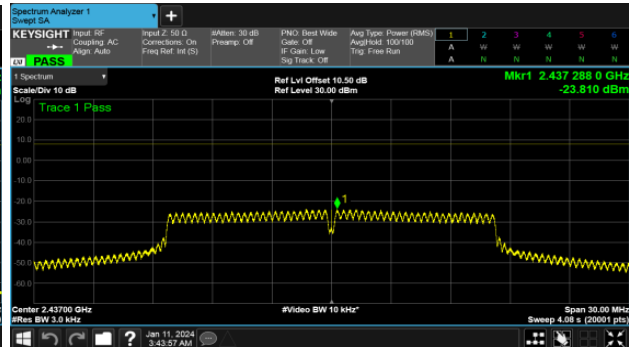
Modulation Type: 802.11g CH06  
ANT A



ANT B

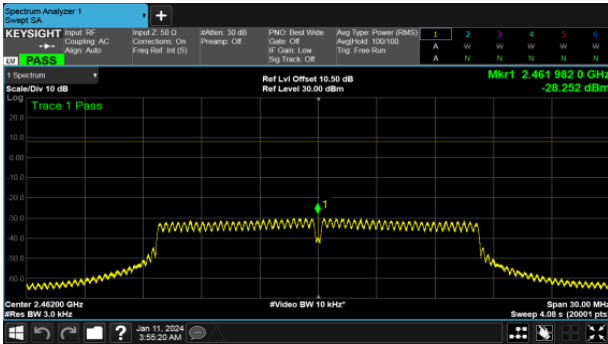


ANT B

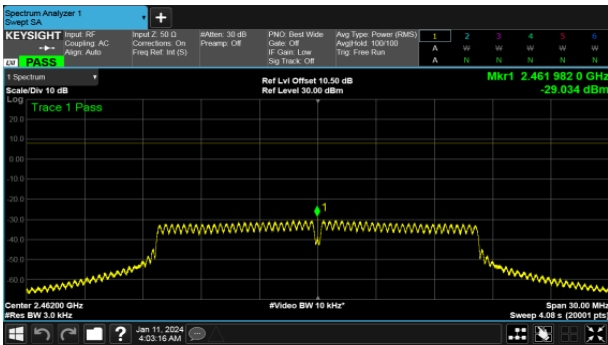




Modulation Type: 802.11g CH11  
ANT A



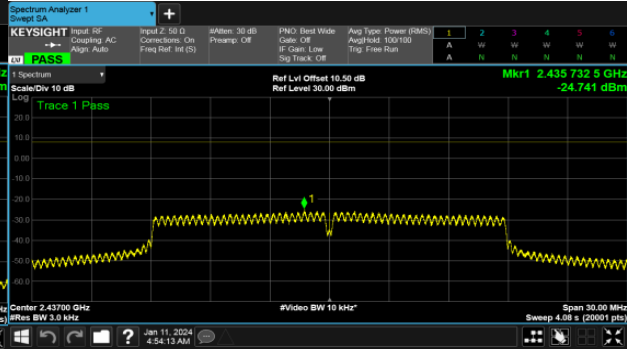
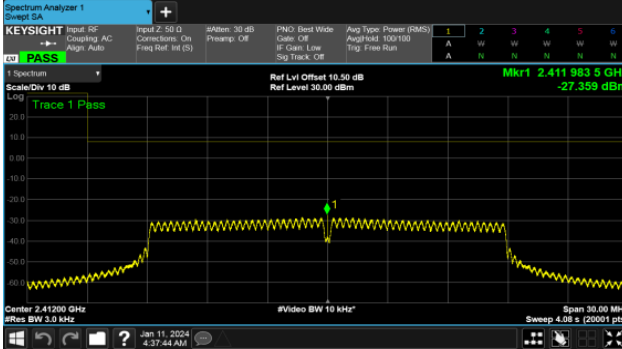
ANT B





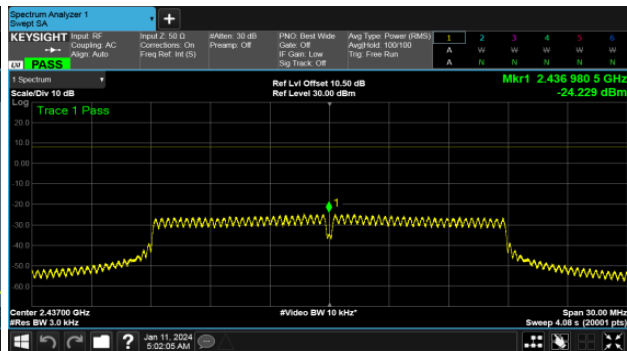
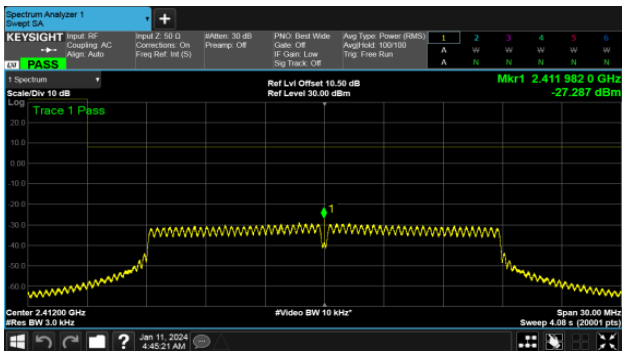
Modulation Type: 802.11n HT20 CH01  
ANT A

Modulation Type: 802.11n HT20 CH06  
ANT A



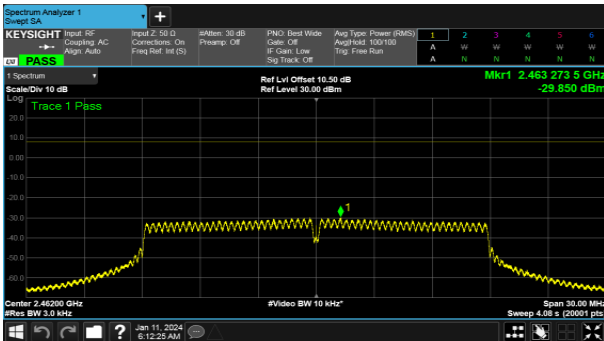
ANT B

ANT B

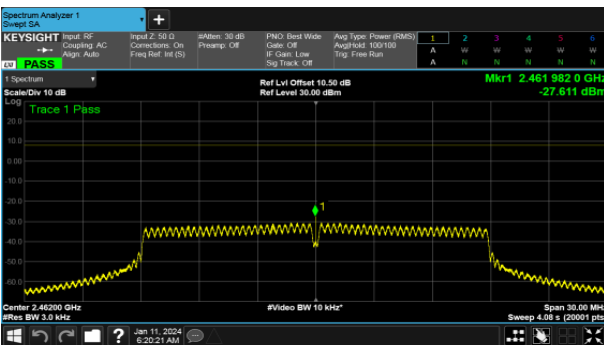




Modulation Type: 802.11n HT20 CH11  
ANT A



ANT B

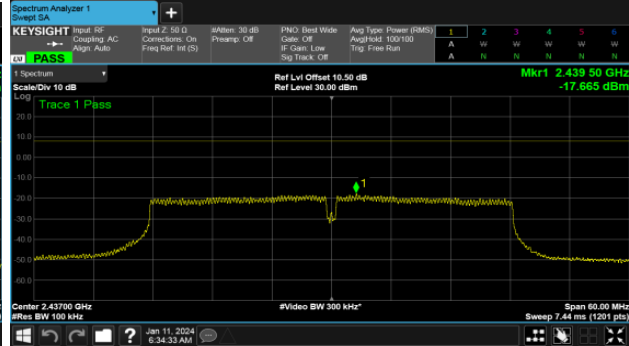
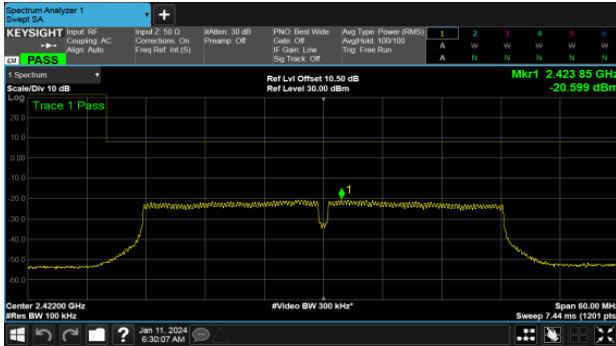




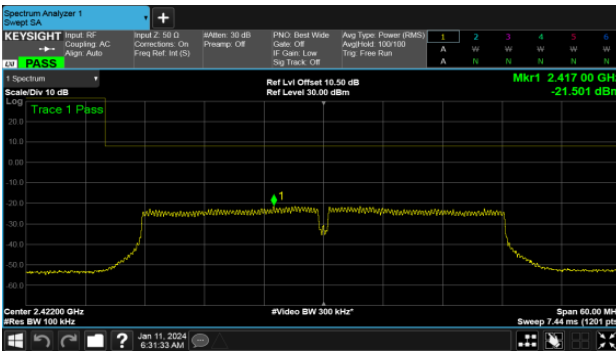


Modulation Type: 802.11n HT40 CH03  
ANT A

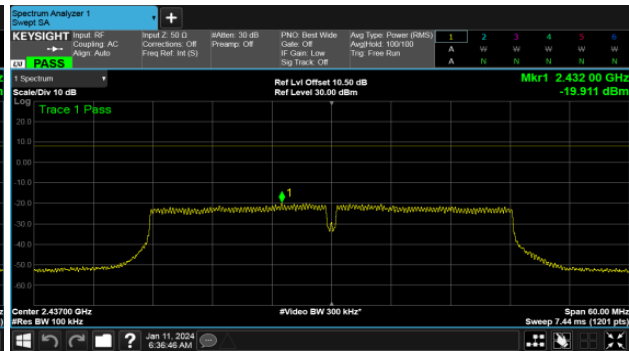
Modulation Type: 802.11n HT40 CH06  
ANT A



ANT B

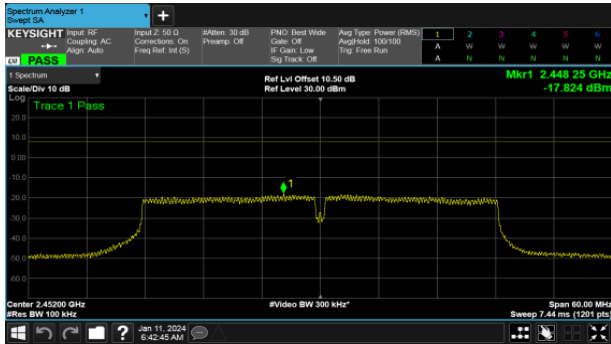


ANT B





Modulation Type: 802.11n HT40 CH09  
ANT A



ANT B

