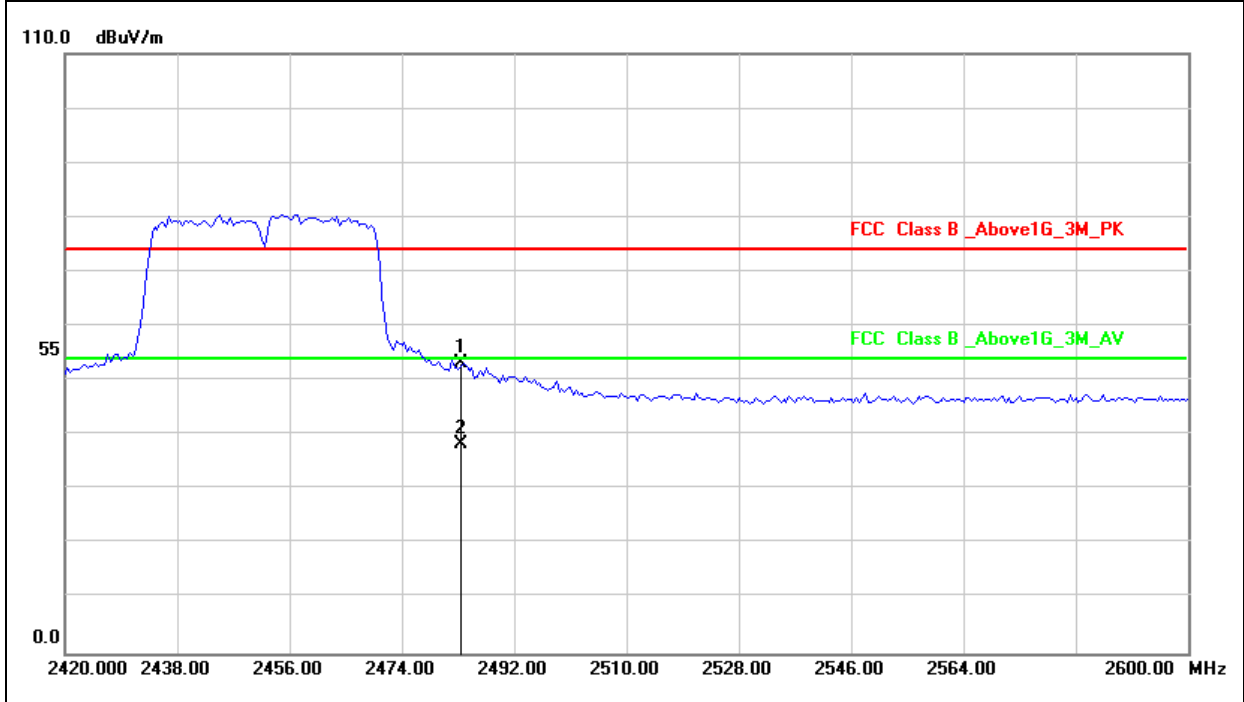




Power	: AC 120V/60Hz	Pol/Phase	: VERTICAL
Test Mode	: 802.11n HT40, CH09		



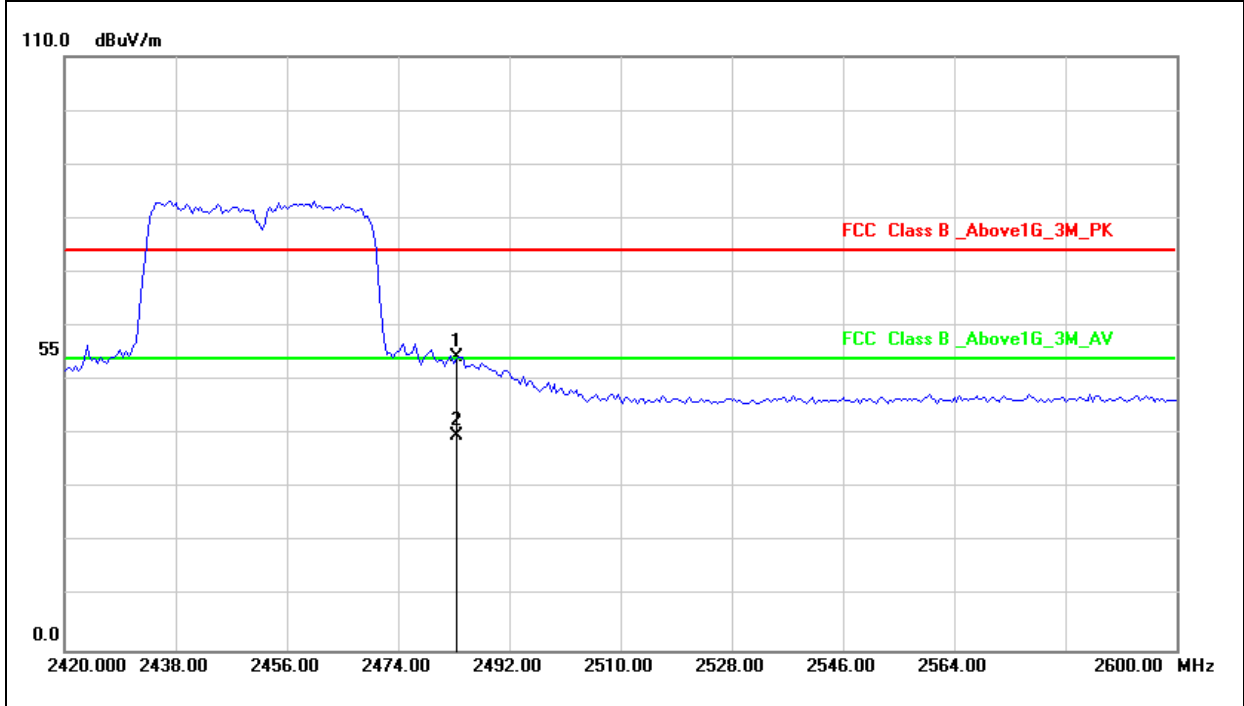
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	-2.48	55.77	53.29	74.00	-20.71	peak
2	2483.500	-2.48	40.91	38.43	54.00	-15.57	AVG

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor



Power	: AC 120V/60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: 802.11n HT40, CH09		



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	-2.48	56.90	54.42	74.00	-19.58	peak
2	2483.500	-2.48	42.15	39.67	54.00	-14.33	AVG

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor



## 7. Test of Conducted Spurious Emission

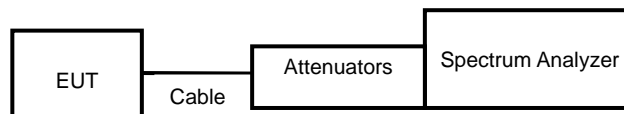
### 7.1 Test Limit

Below  $-20\text{dB}$  of the highest emission level of operating band (In 100 kHz Resolution Bandwidth)

### 7.2 Test Procedure

- 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 20dB 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

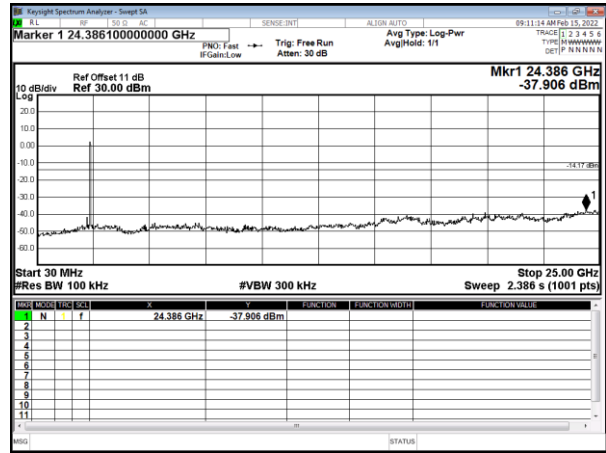
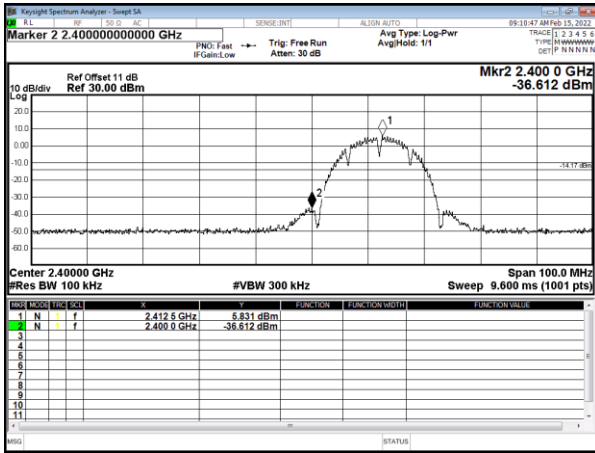
Note: Test plots refers to the following pages.



ANT A

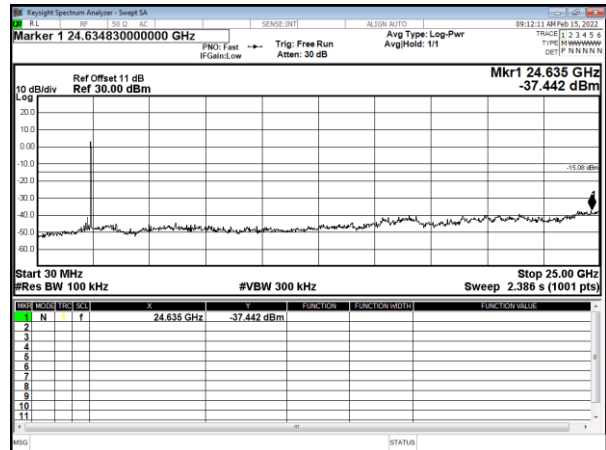
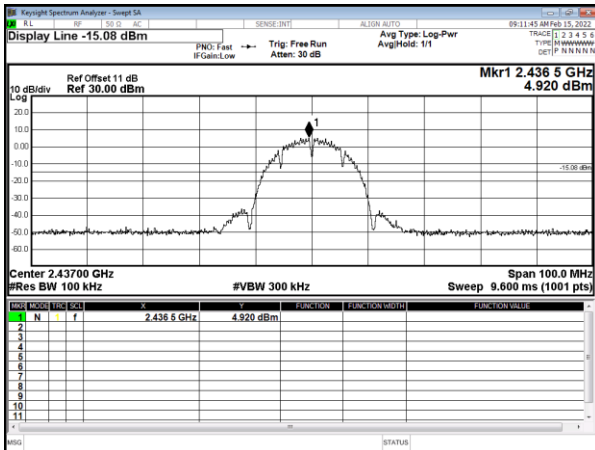
Modulation Standard: 802.11b

Channel: 01



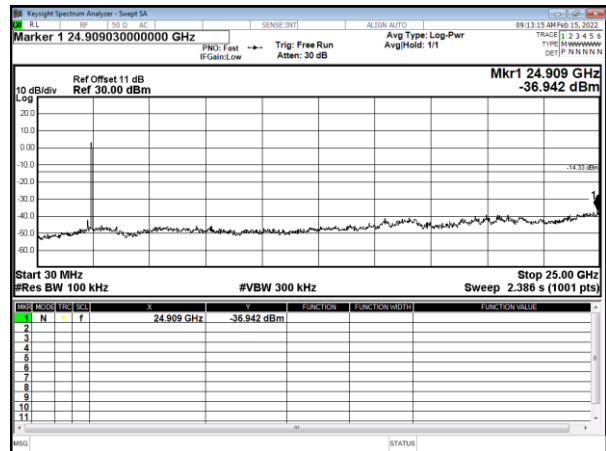
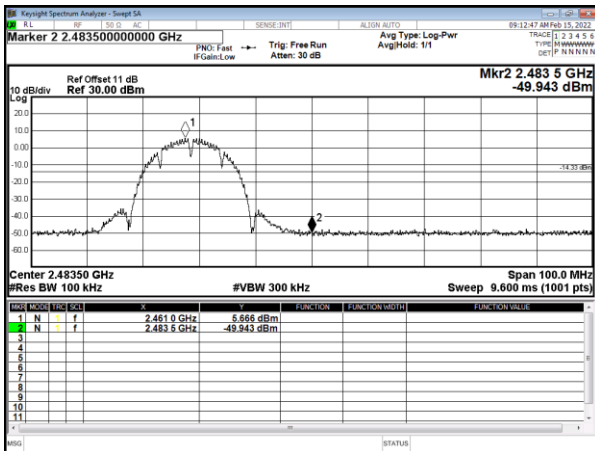
Modulation Standard: 802.11b

Channel: 06



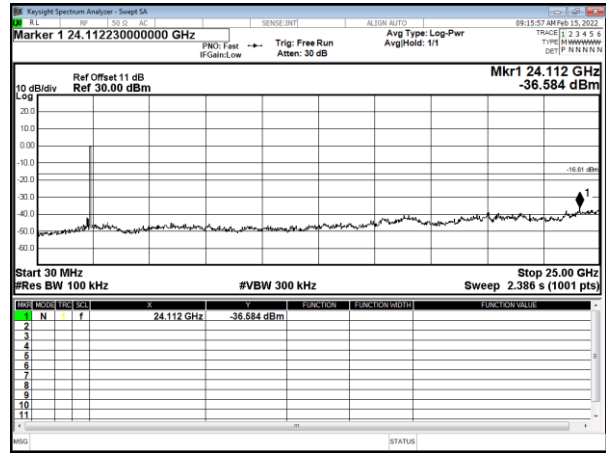
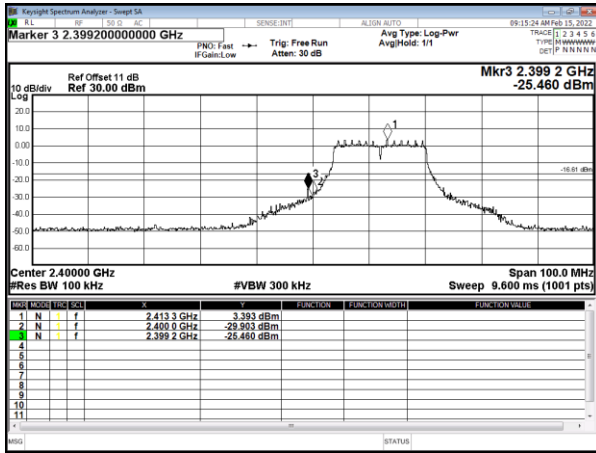
Modulation Standard: 802.11b

Channel: 11

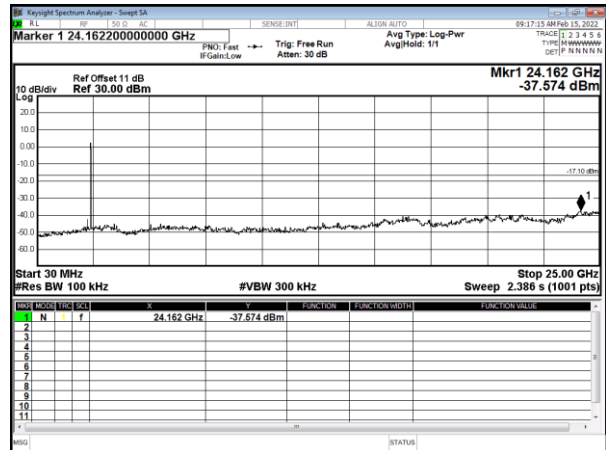
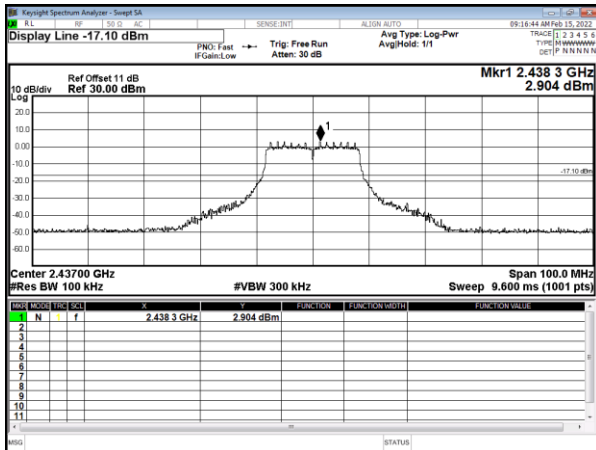




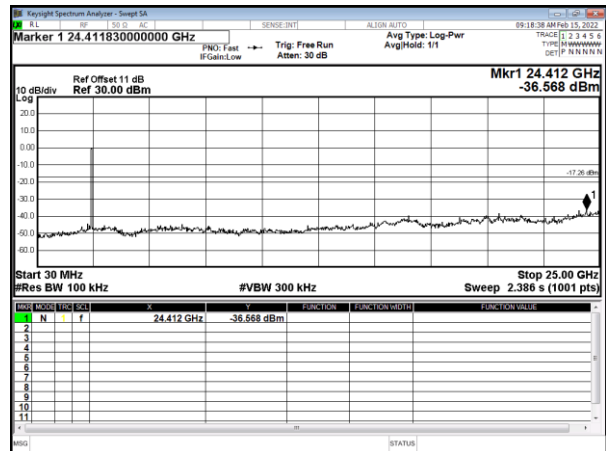
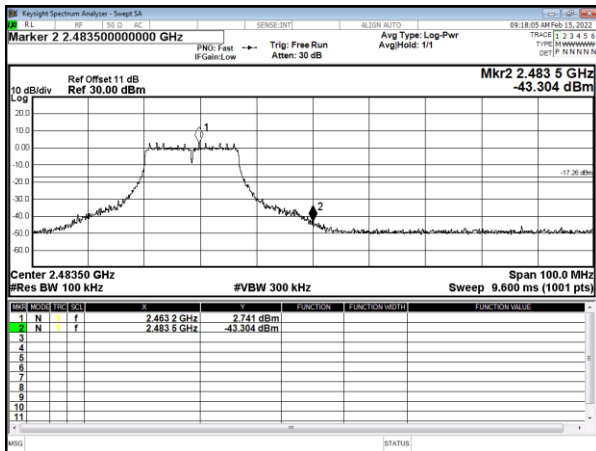
Modulation Standard: 802.11g  
Channel: 01



Modulation Standard: 802.11g  
Channel: 06

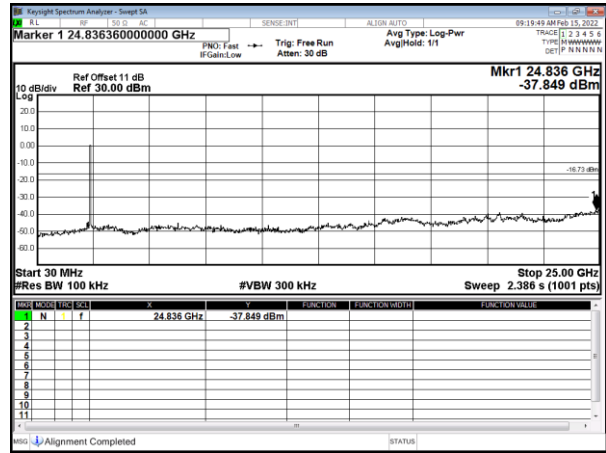
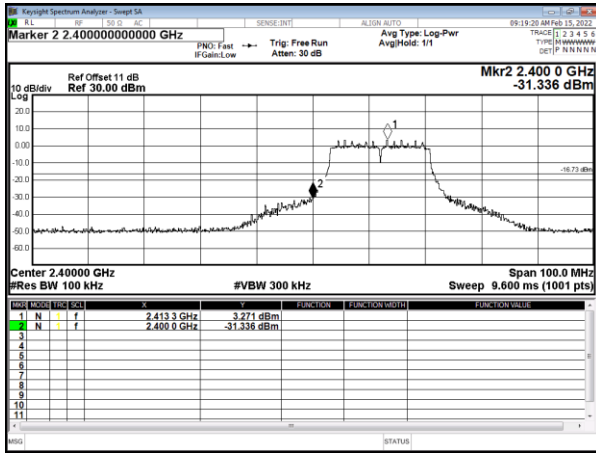


Modulation Standard: 802.11g  
Channel -: 11

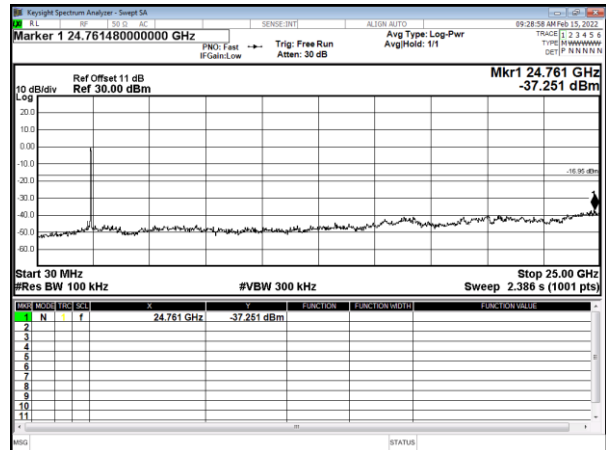
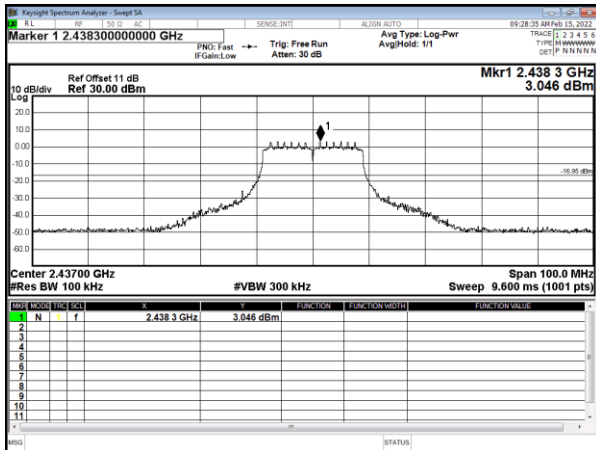




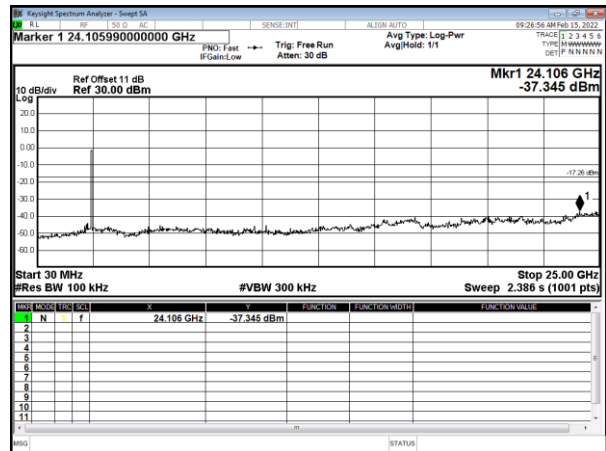
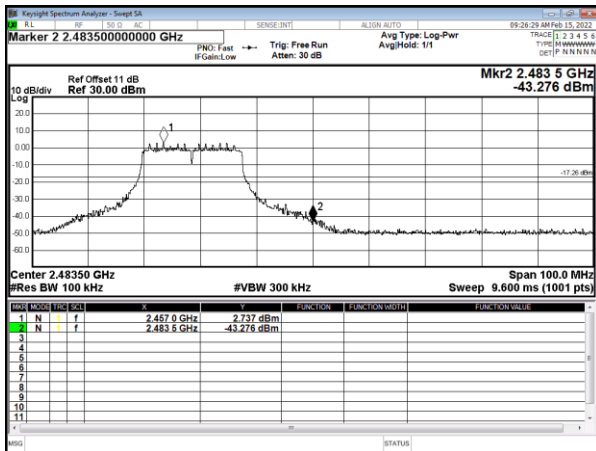
Modulation Standard: 802.11n HT20  
Channel: 01



Modulation Standard: 802.11n HT20  
Channel: 06

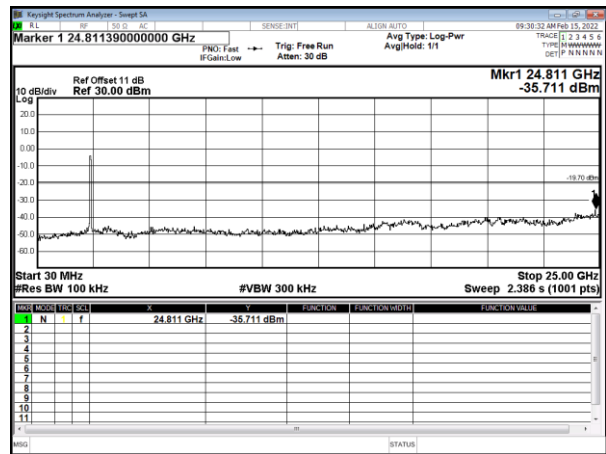
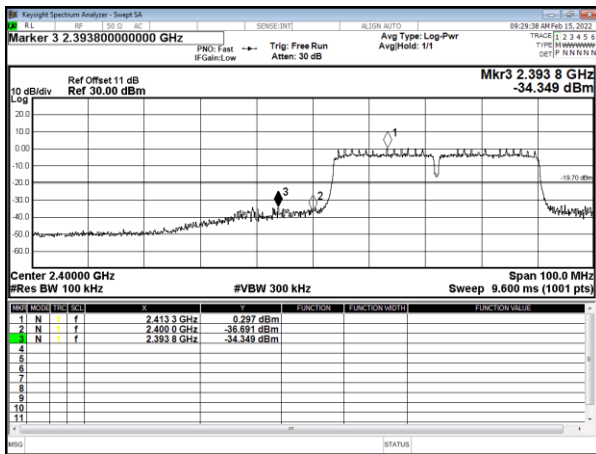


Modulation Standard: 802.11n HT20  
Channel: 11

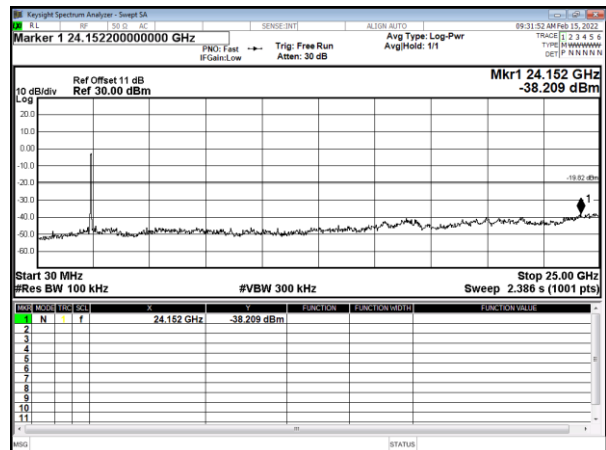
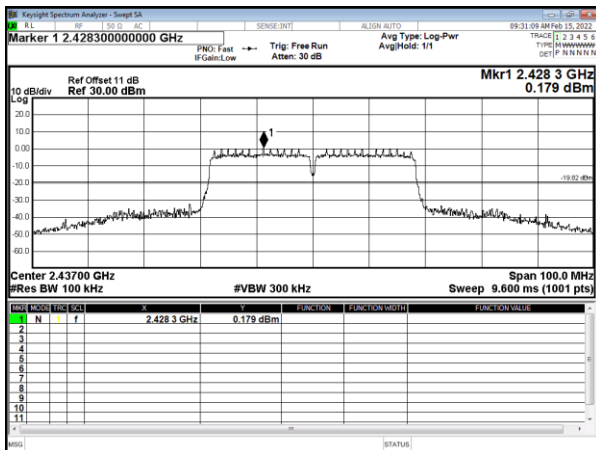




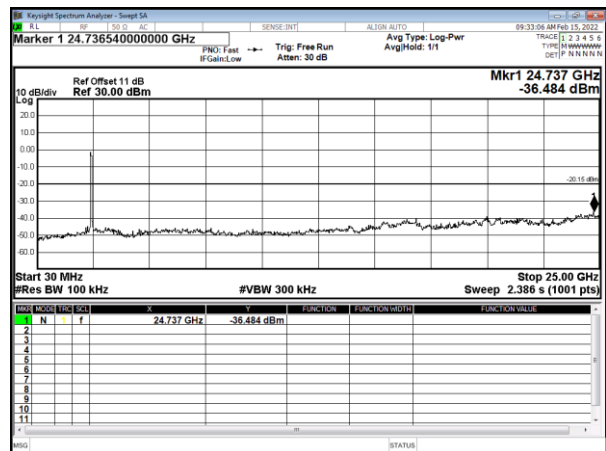
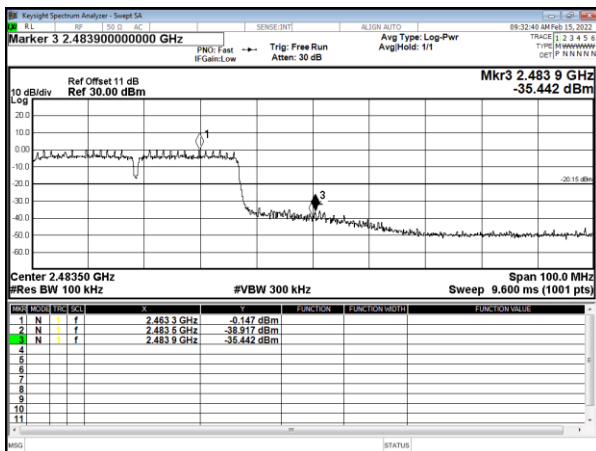
Modulation Standard: 802.11n HT40  
Channel: 03



Modulation Standard: 802.11n HT40  
Channel: 06



Modulation Standard: 802.11n HT40  
Channel: 09

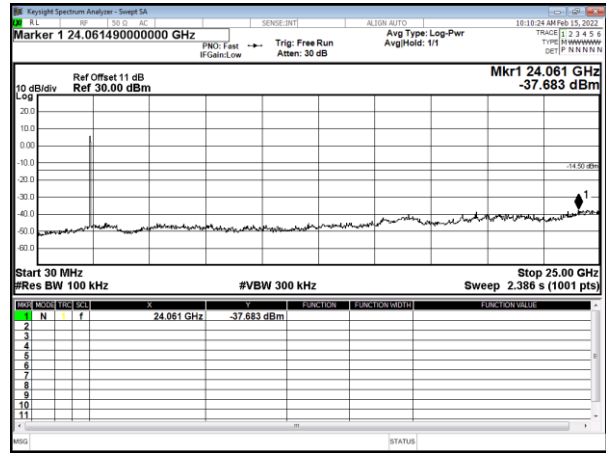
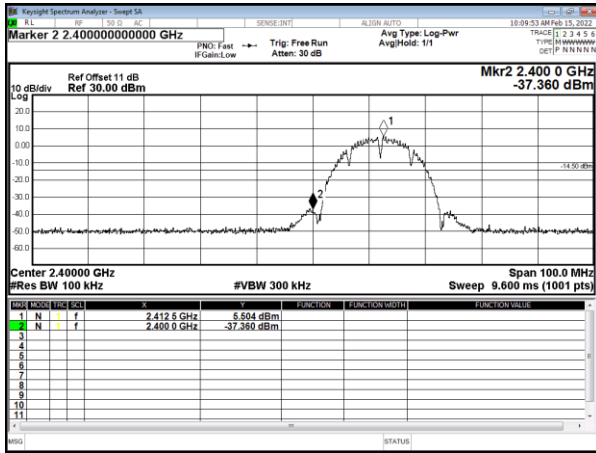




ANT B

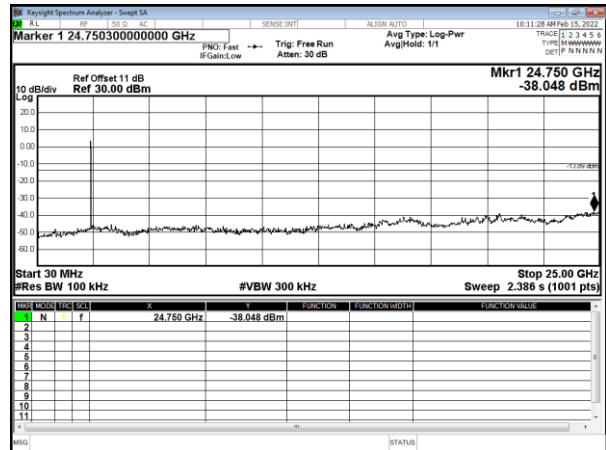
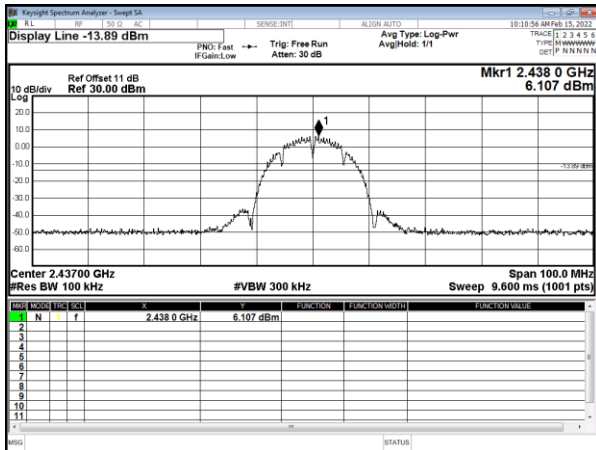
Modulation Standard: 802.11b

Channel: 01



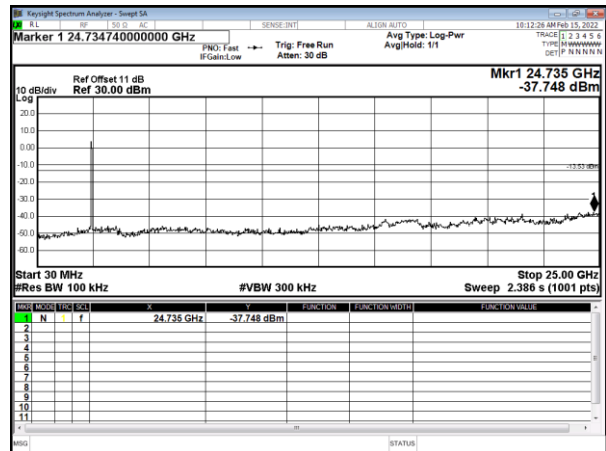
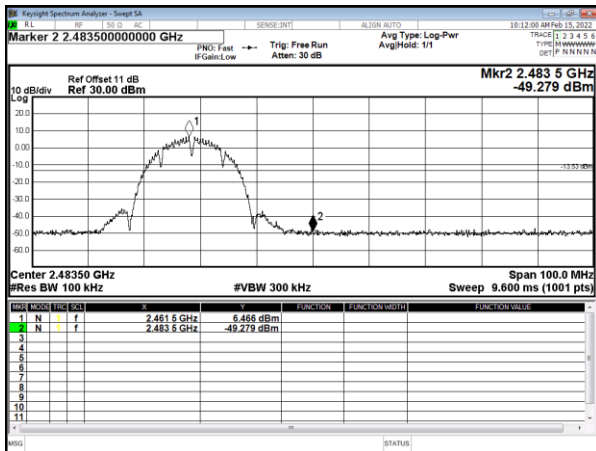
Modulation Standard: 802.11b

Channel: 06



Modulation Standard: 802.11b

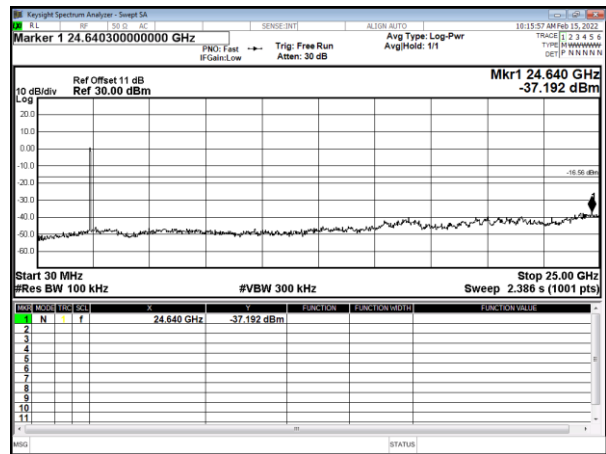
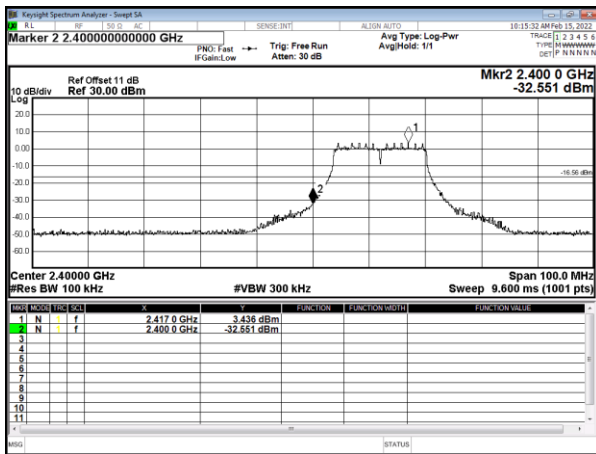
Channel: 11



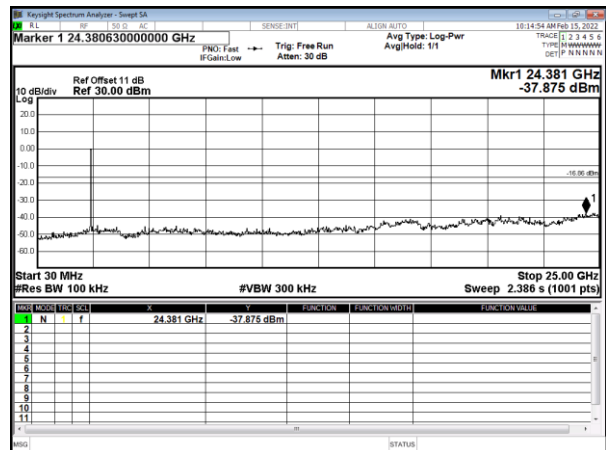
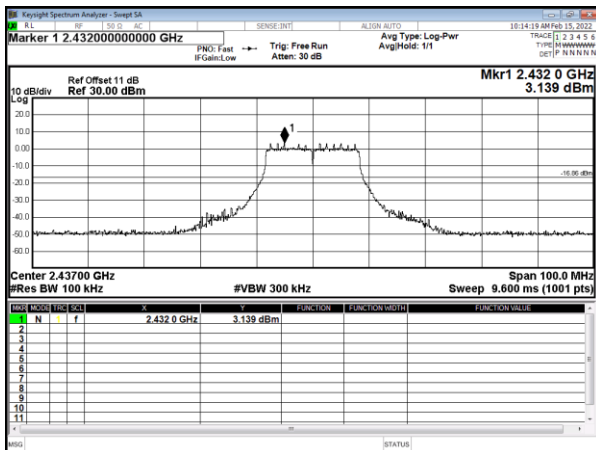




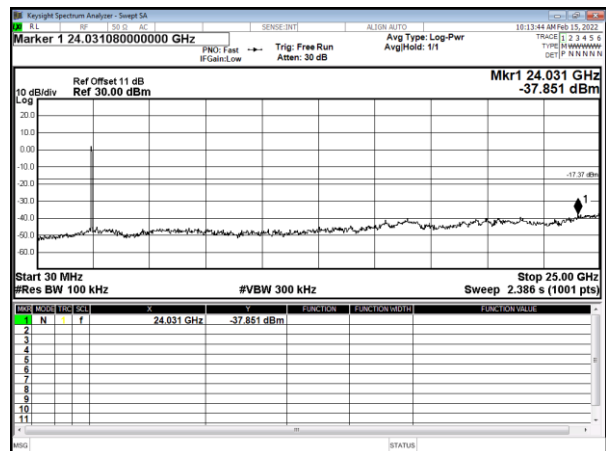
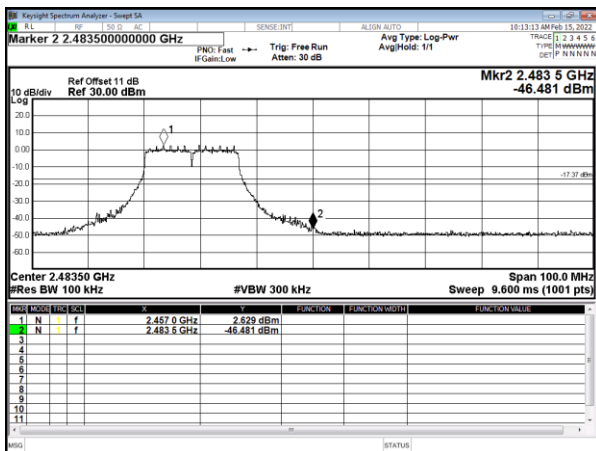
Modulation Standard: 802.11g  
Channel: 01



Modulation Standard: 802.11g  
Channel: 06

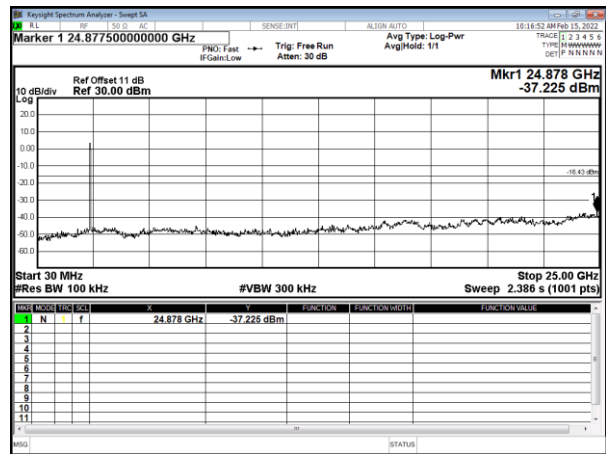
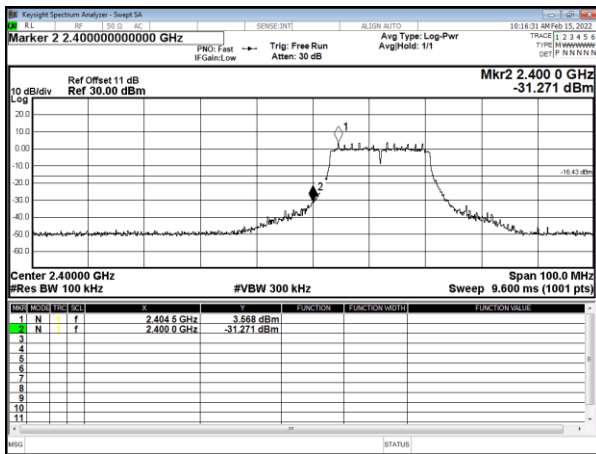


Modulation Standard: 802.11g  
Channel: 11

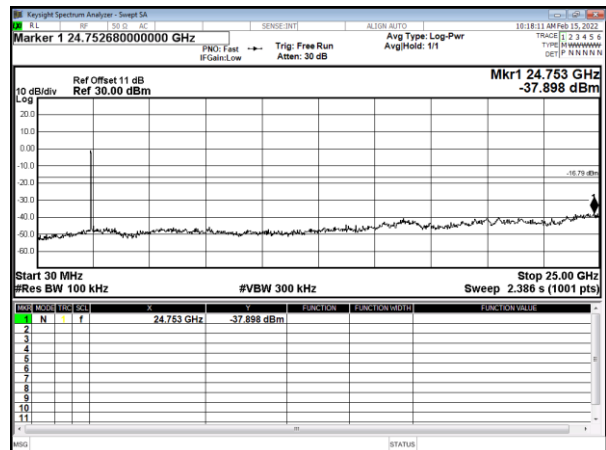
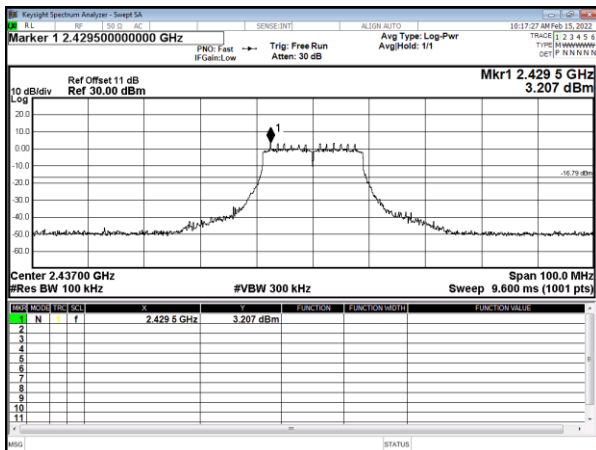




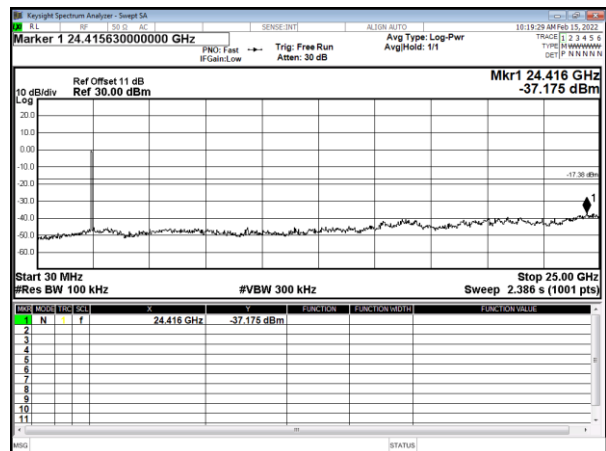
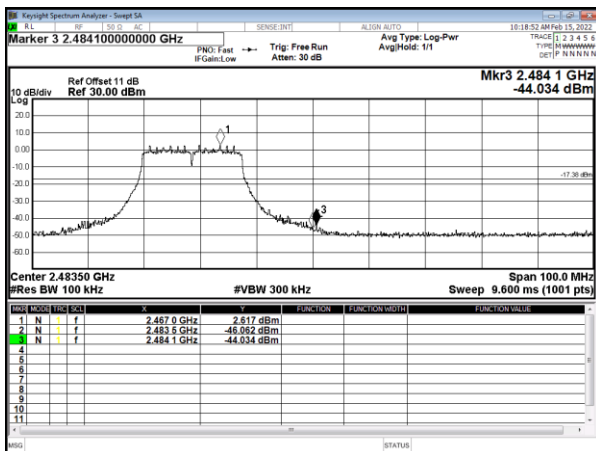
Modulation Standard: 802.11n HT20  
Channel: 01



Modulation Standard: 802.11n HT20  
Channel: 06

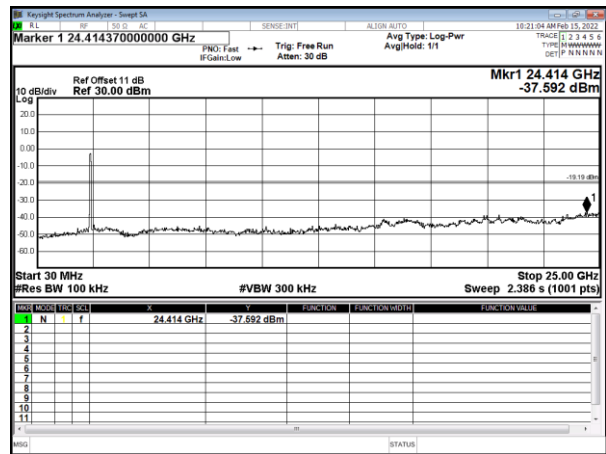
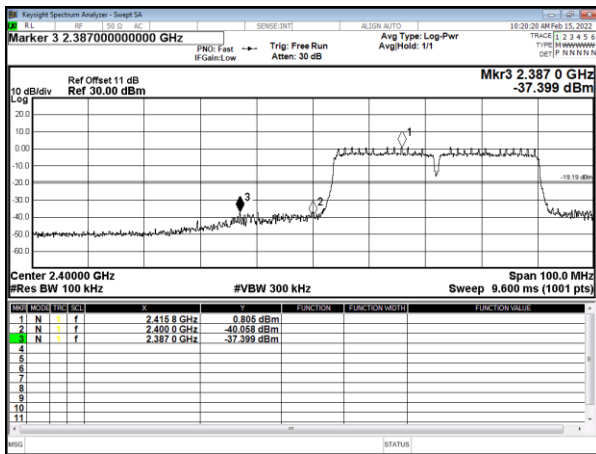


Modulation Standard: 802.11n HT20  
Channel: 11

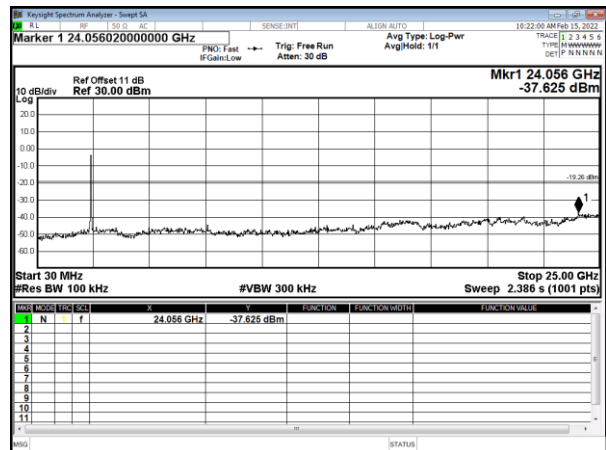
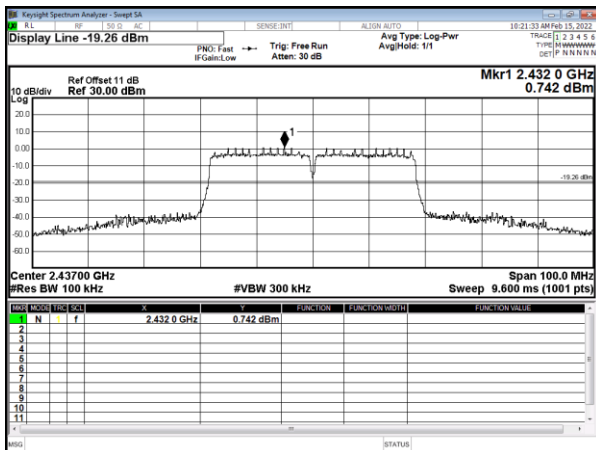




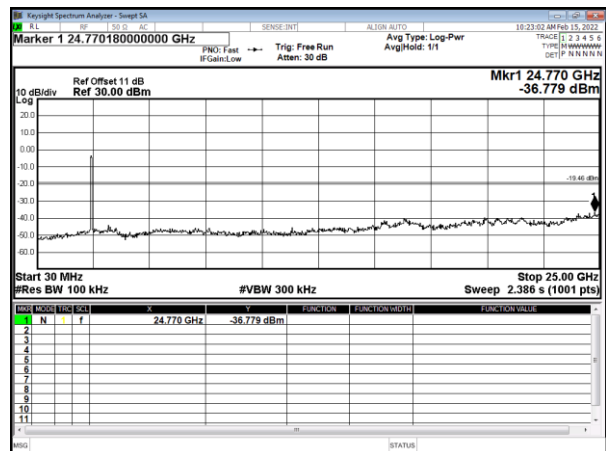
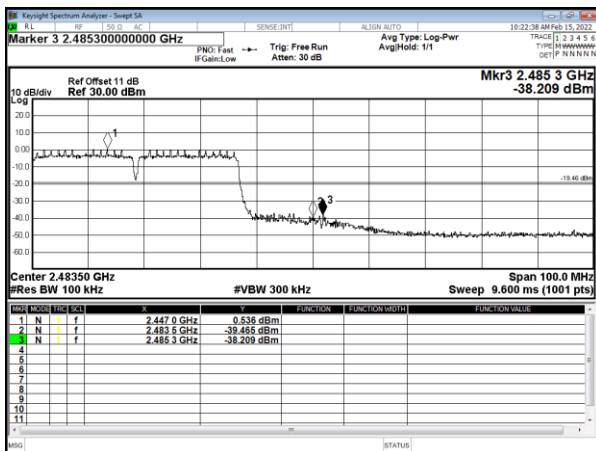
Modulation Standard: 802.11n HT40  
Channel: 03



Modulation Standard: 802.11n HT40  
Channel: 06



Modulation Standard: 802.11n HT40  
Channel: 09





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

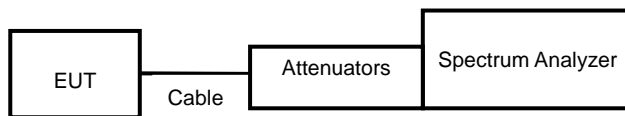
### 8.1 Test Limit

None; for reporting purposes only.

### 8.2 Test Procedure

Zero-Span Spectrum Analyzer Method.

### 8.3 Test Setup Layout

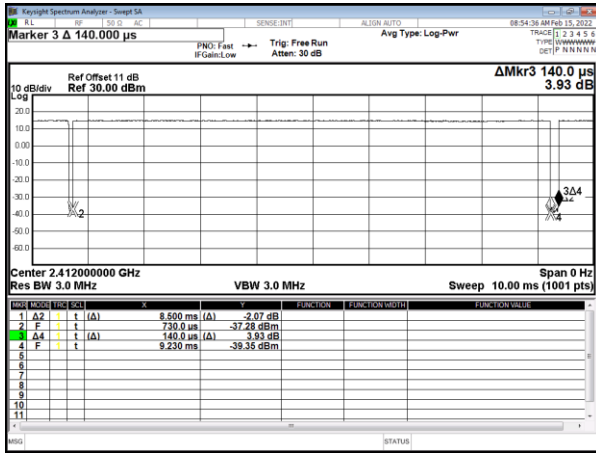


### 8.4 Test Result and Data

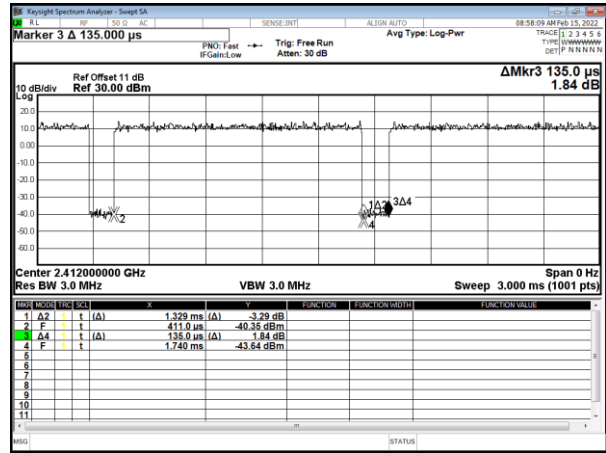
Modulation Type	On Time (ms)	Period Time (ms)	Duty Cycle (%)
11b	8.50	8.64	98.38%
11g	1.42	1.52	93.86%
11n HT20	1.33	1.46	90.78%
11n HT40	0.66	0.80	82.54%



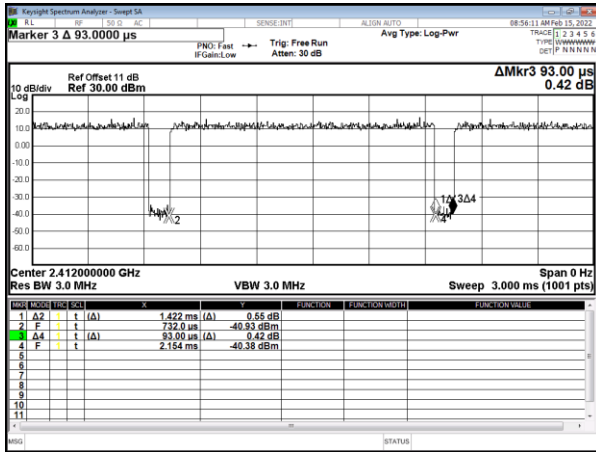
Modulation Type: 802.11b(1Mbps)



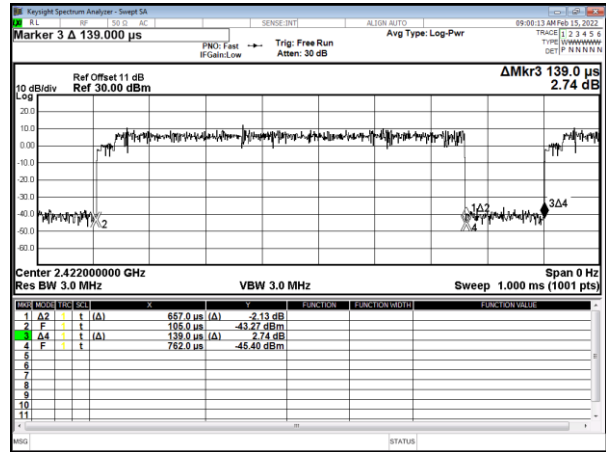
Modulation Type: 802.11n HT20(6.5Mbps)



Modulation Type: 802.11g(6Mbps)



Modulation Type: 802.11n HT40(13.5Mbps)





## 9. 6dB Bandwidth Measurement Data

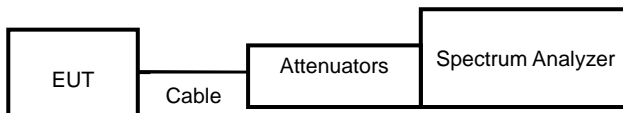
### 9.1 Test Limit

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

### 9.2 Test Procedures

- 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. Set spectrum analyzer X dB to 6 dB.
- d. Set spectrum analyzer peak detector with maximum hold.

### 9.3 Test Setup Layout





9.4 Test Result and Data

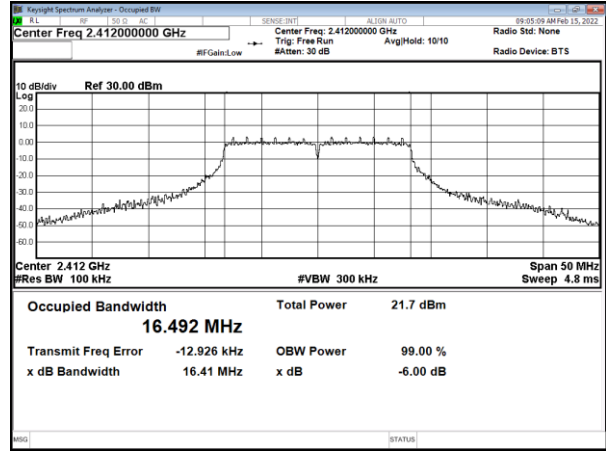
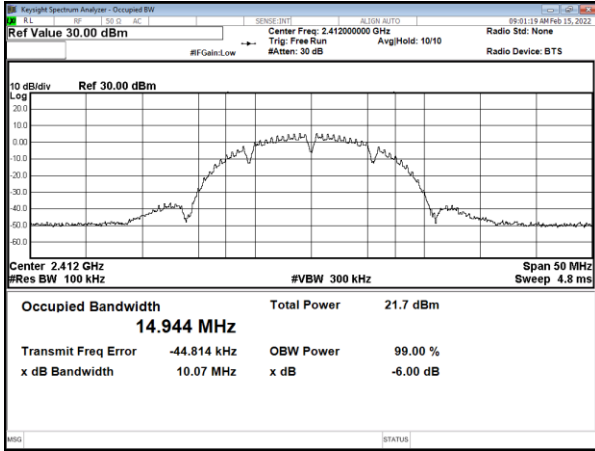
Modulation Type	Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Limit (MHz)
			ANT A	ANT B	
IEEE 802.11b	01	2412	10.07	9.61	0.5
	06	2437	10.03	10.11	0.5
	11	2462	10.11	9.62	0.5
IEEE 802.11g	01	2412	16.41	16.39	0.5
	06	2437	16.40	16.41	0.5
	11	2462	16.43	16.40	0.5
IEEE 802.11n HT20	01	2412	17.62	17.60	0.5
	06	2437	17.60	17.61	0.5
	11	2462	17.60	17.62	0.5
IEEE 802.11n HT40	03	2422	35.77	35.71	0.5
	06	2437	35.82	35.69	0.5
	09	2452	35.81	35.70	0.5



ANT A

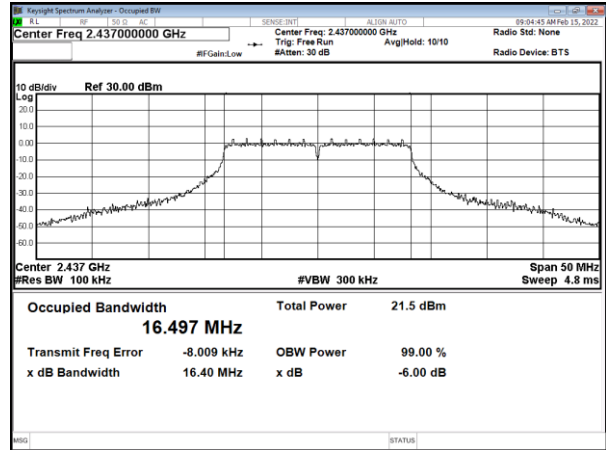
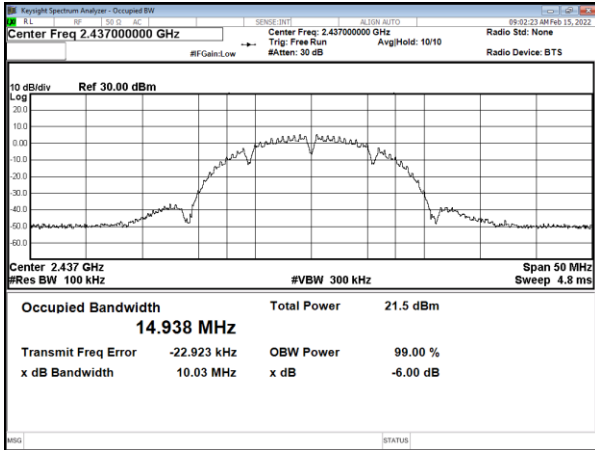
Modulation Type: 802.11b  
CH01

Modulation Type: 802.11g  
CH01



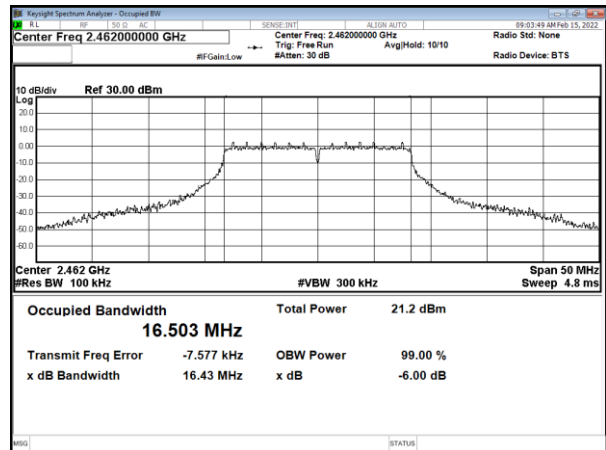
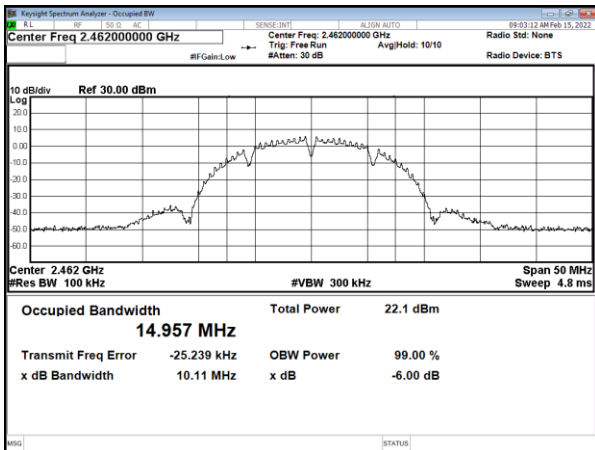
CH06

CH06



CH11

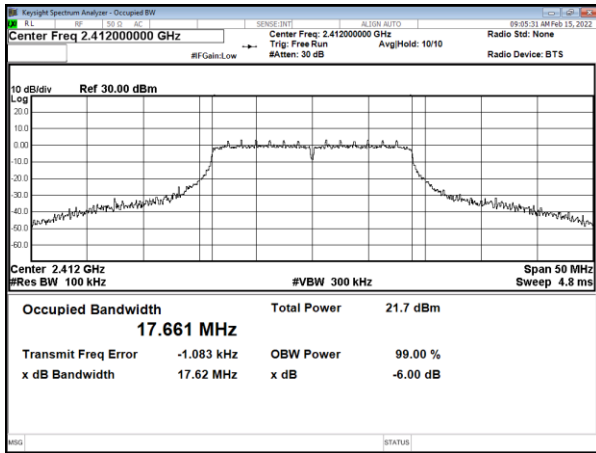
CH11



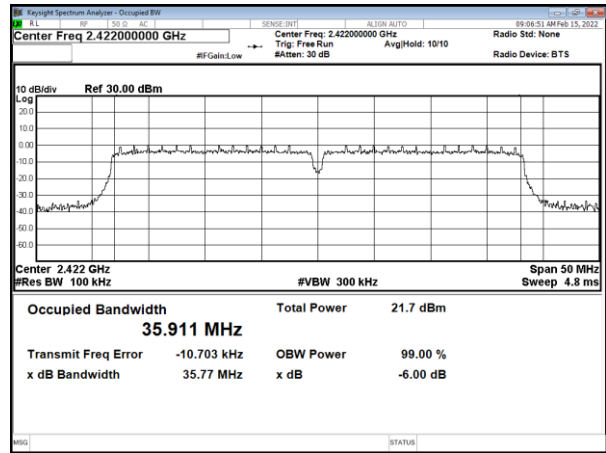




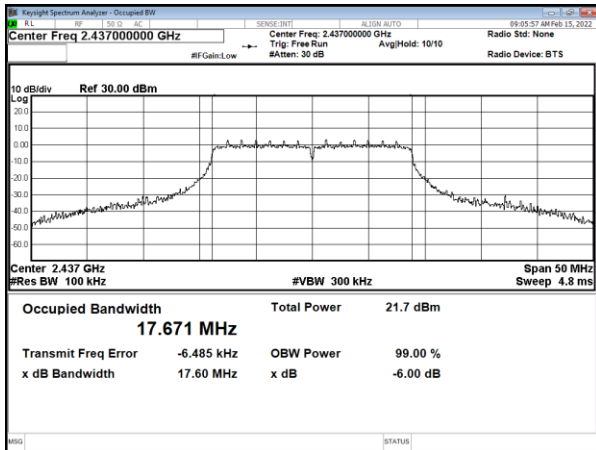
Modulation Type: 802.11n HT20  
CH01



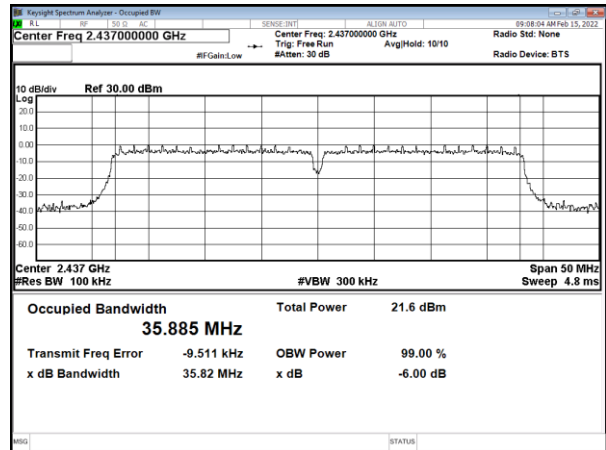
Modulation Type: 802.11n HT40  
CH03



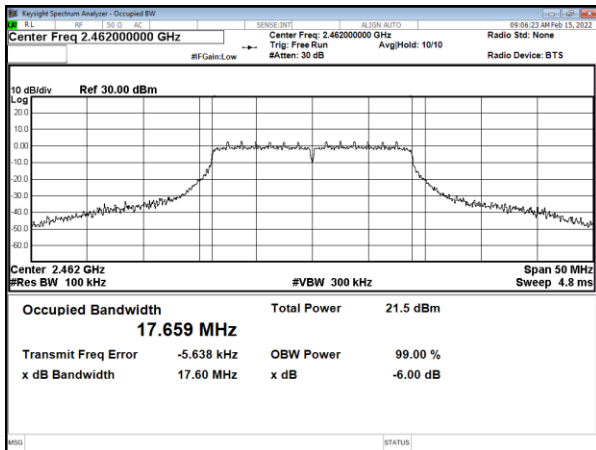
CH06



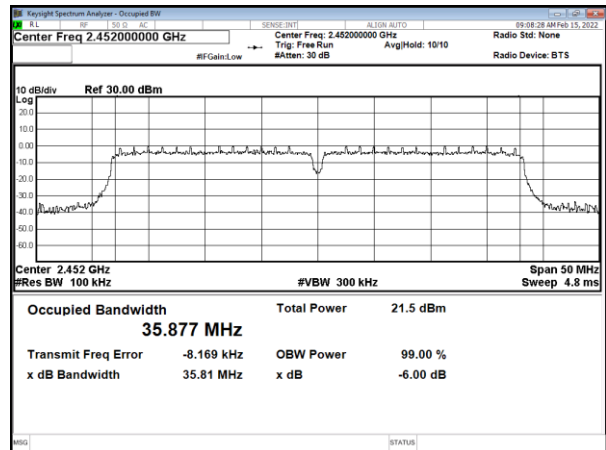
CH06



CH11



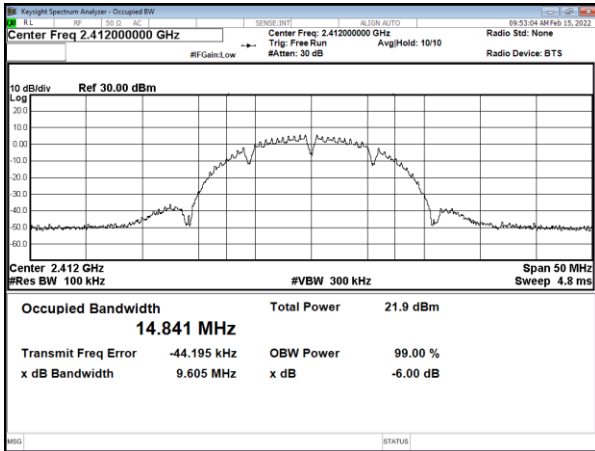
CH09



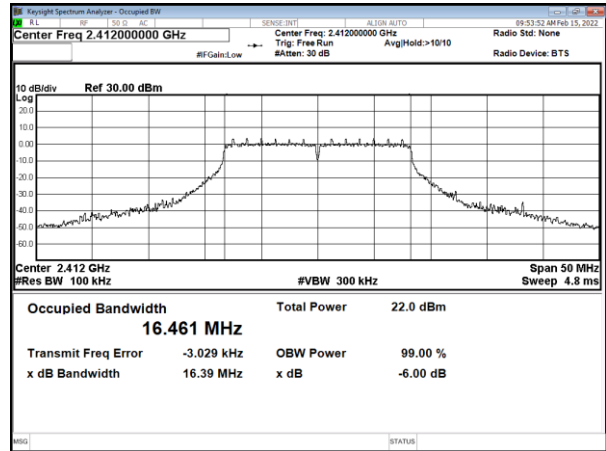


ANT2

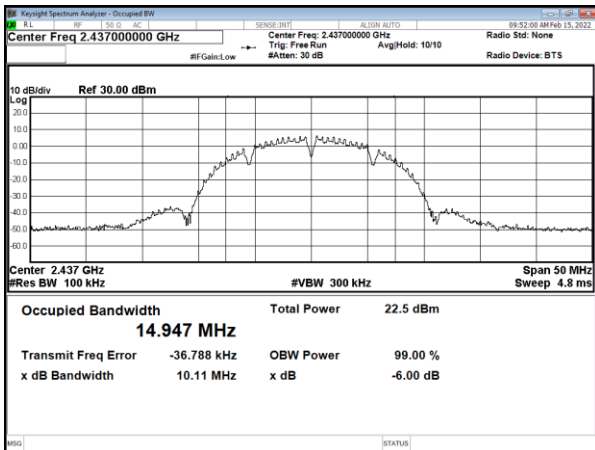
Modulation Type: 802.11b  
CH01



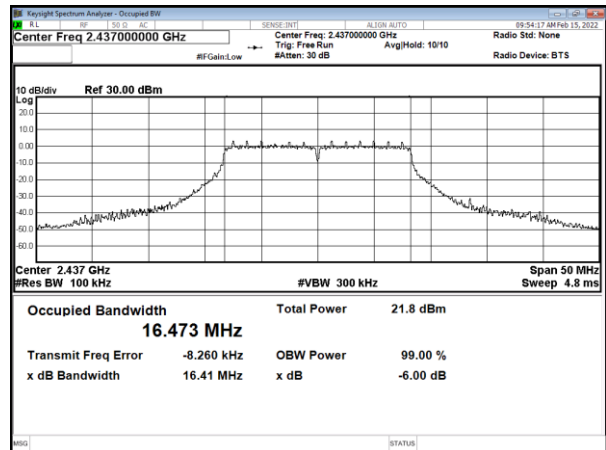
Modulation Type: 802.11g  
CH01



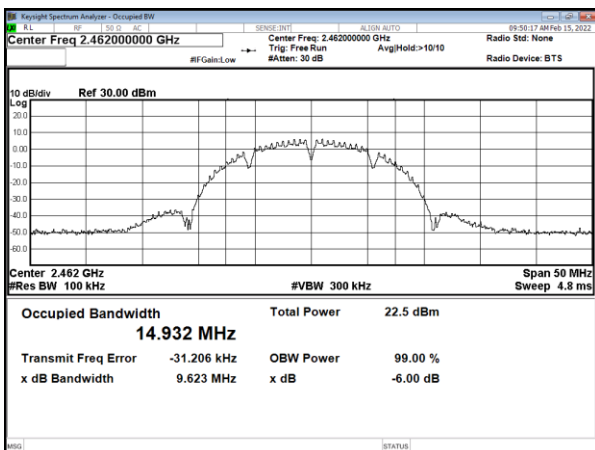
CH06



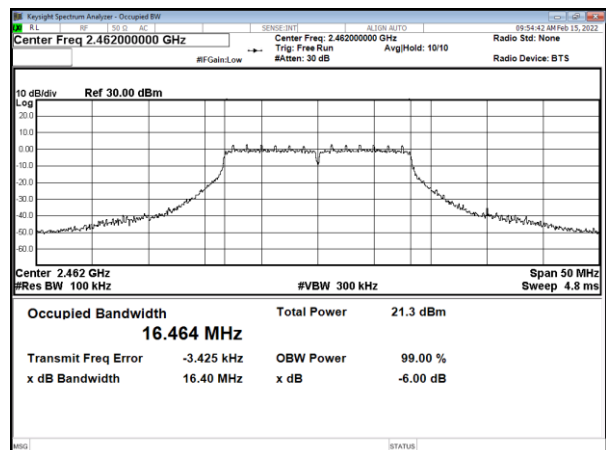
CH06



CH11

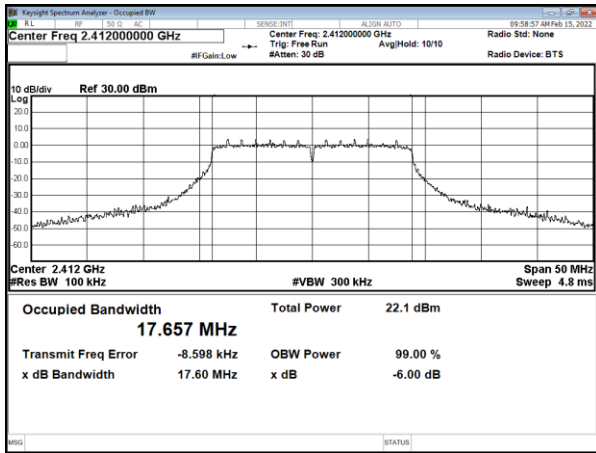


CH11

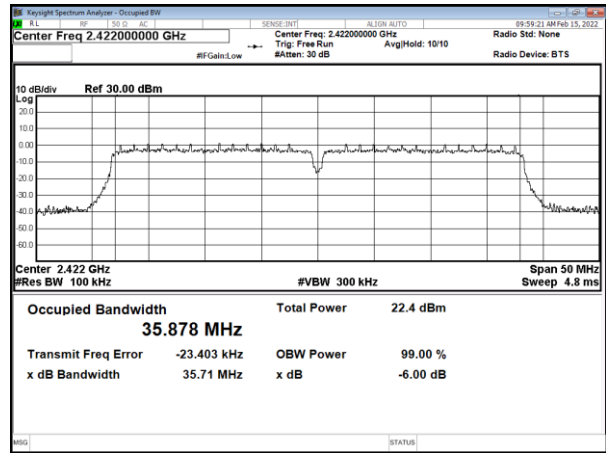




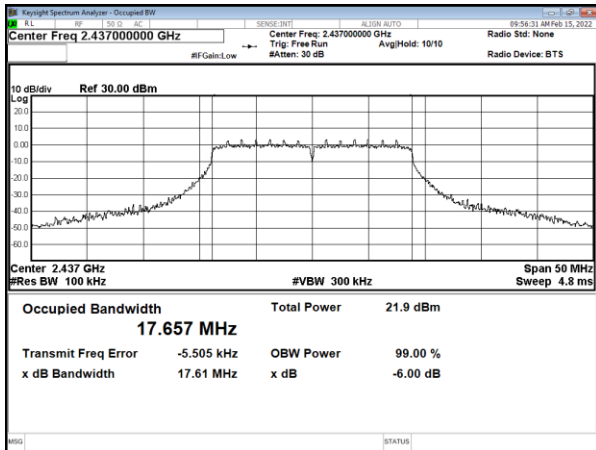
Modulation Type: 802.11n HT20  
CH01



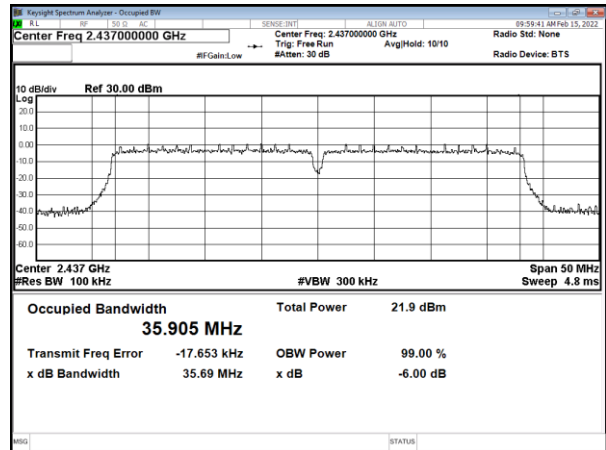
Modulation Type: 802.11n HT40  
CH03



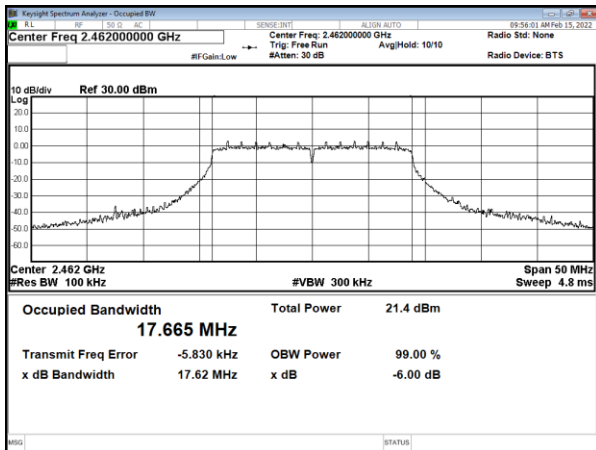
CH06



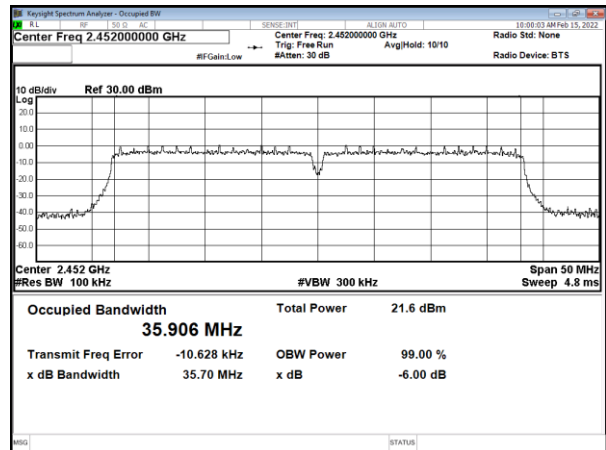
CH06



CH11



CH09





## 10. Maximum Peak Output Power

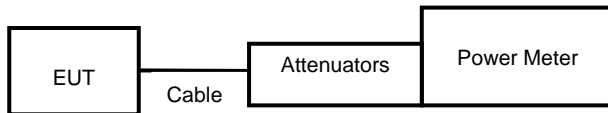
### 10.1 Test Limit

The Maximum Peak Output Power Measurement is 30dBm.

### 10.2 Test Procedures

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

Modulation Type	Channel	Frequency (MHz)	Conducted(peak) output power (dBm)		Total peak power (dBm)	Total peak power (mW)	Power Limit (dBm)
			ANT A	ANT B			
11b	1	2412	17.48	17.86	20.68	117.070	30.00
	6	2437	17.45	18.28	20.90	122.888	30.00
	11	2462	17.39	18.24	20.85	121.508	30.00
11g	1	2412	21.71	22.65	25.22	332.329	30.00
	6	2437	21.23	22.46	24.90	308.937	30.00
	11	2462	21.36	21.87	24.63	290.588	30.00
11n HT20	1	2412	21.67	22.49	25.11	324.312	30.00
	6	2437	21.25	22.15	24.73	297.411	30.00
	11	2462	21.21	21.98	24.62	289.891	30.00
11n HT40	3	2422	21.56	23.00	25.35	342.745	30.00
	6	2437	21.37	22.70	25.10	323.297	30.00
	9	2452	21.42	22.31	24.90	308.891	30.00



## 11. Power Spectral Density

### 11.1 Test Limit

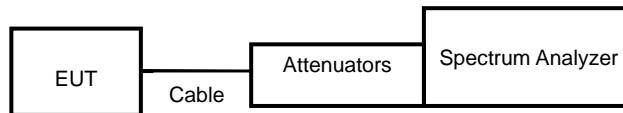
The Maximum of Power Spectral Density Measurement is 8dBm.

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

- a. The transmitter output was connected to spectrum analyzer.
- b. The spectrum analyzer's resolution bandwidth were set at 3kHz RBW and 10KHz VBW as that of the fundamental frequency. Set the sweep time=auto couple.
- c. The power spectral density was measured and recorded.

### 11.3 Test Setup Layout





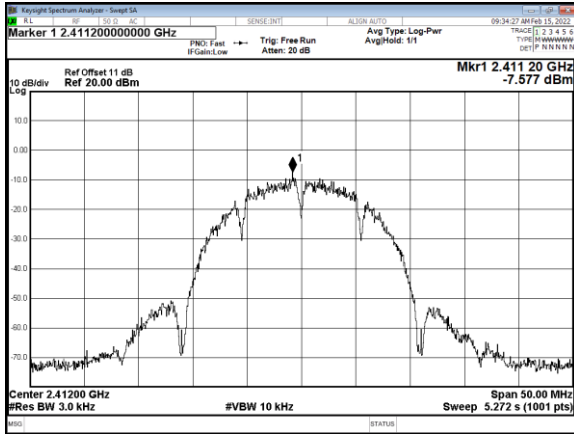
11.4 Test Result and Data

Modulation Type	Channel	Frequency (MHz)	Maximum Power Density of 3KHz Bandwidth(dBm)		Sum chain (dBm)	Limit (dBm)
			ANT A	ANT B		
11b	1	2412	-7.577	-8.792	-5.13	6.32
	6	2437	-9.077	-7.651	-5.30	6.32
	11	2462	-8.881	-8.461	-5.66	6.32
11g	1	2412	-12.004	-10.396	-8.12	6.32
	6	2437	-11.481	-11.401	-8.43	6.32
	11	2462	-11.441	-11.876	-8.64	6.32
11n HT20	1	2412	-10.308	-11.781	-7.97	6.32
	6	2437	-11.758	-12.804	-9.24	6.32
	11	2462	-11.904	-11.218	-8.54	6.32
11n HT40	3	2422	-13.457	-14.707	-11.03	6.32
	6	2437	-14.86	-13.695	-11.23	6.32
	9	2452	-15.143	-13.389	-11.17	6.32

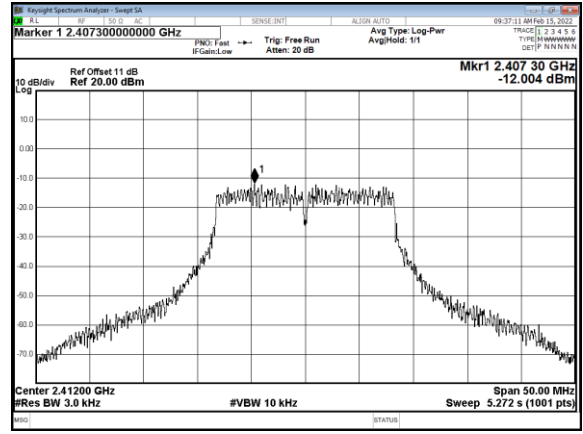


ANT A

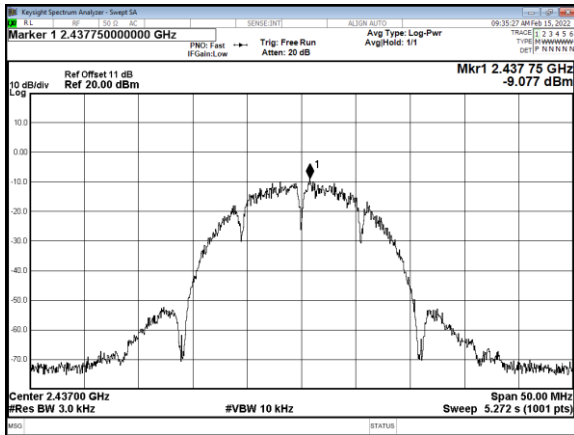
Modulation Type: 802.11b  
CH01



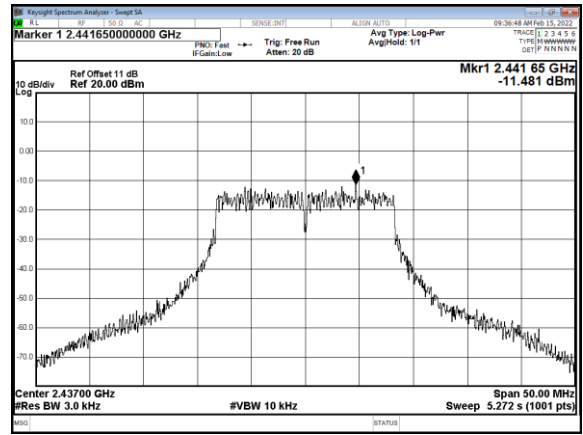
Modulation Type: 802.11g  
CH01



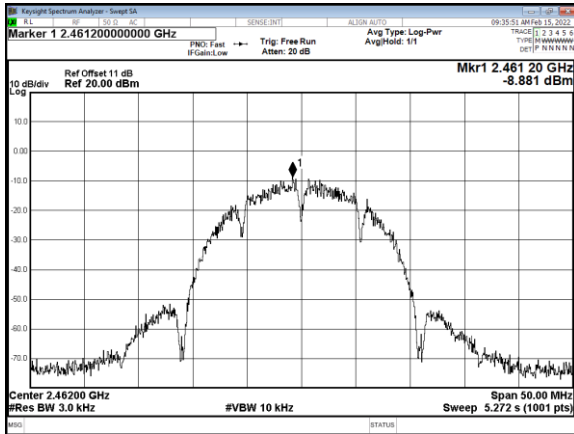
CH06



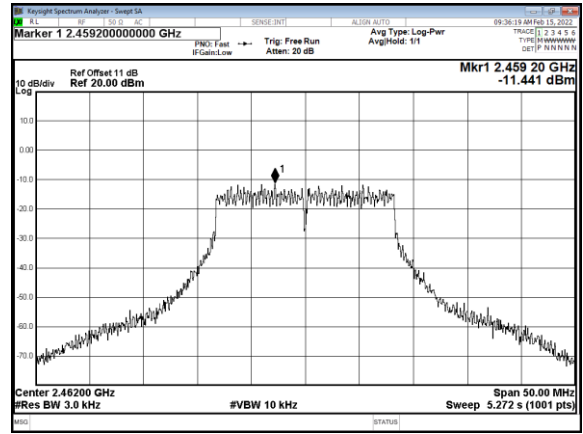
CH06



CH11



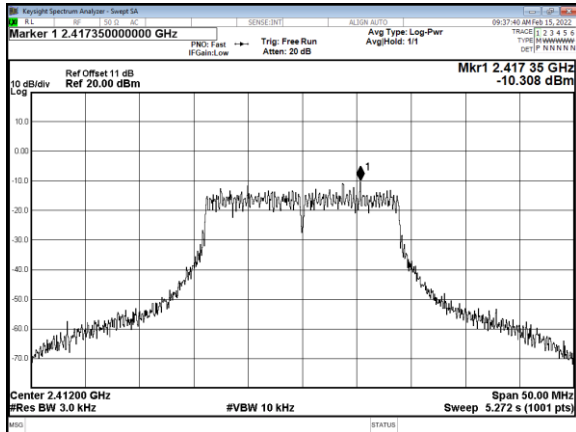
CH11



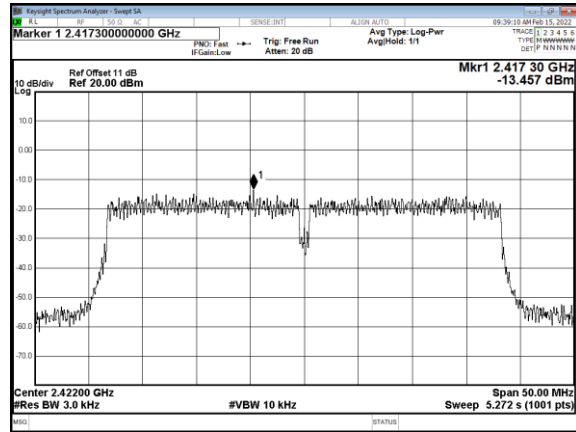




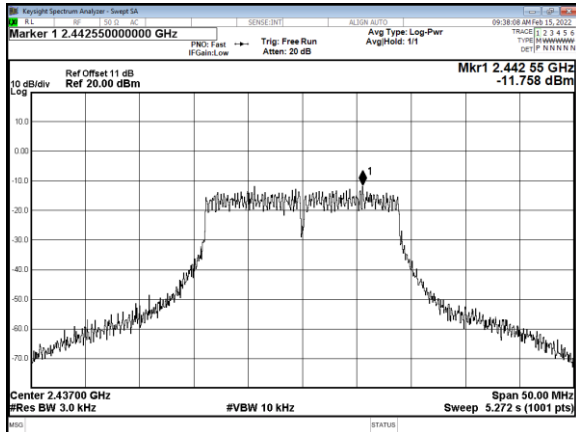
Modulation Type: 802.11n HT20  
CH01



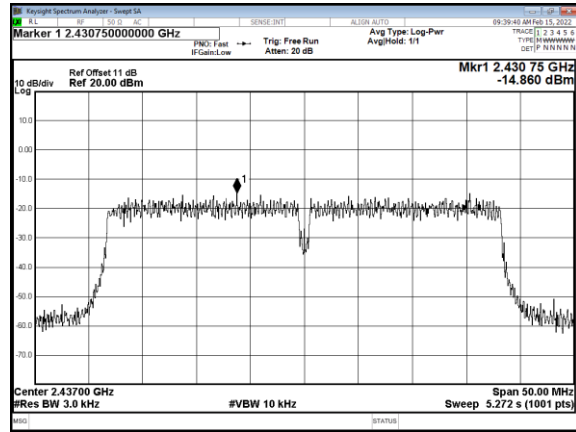
Modulation Type: 802.11n HT40  
CH03



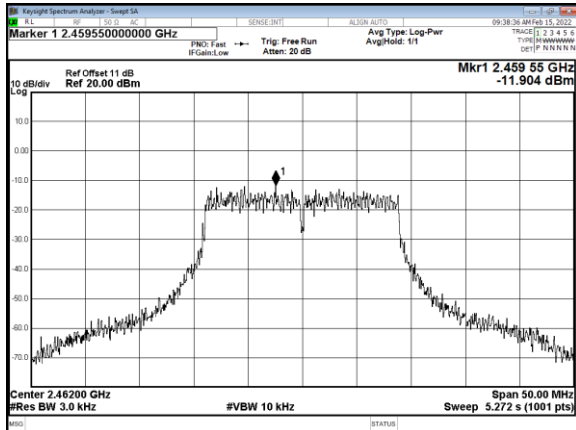
CH06



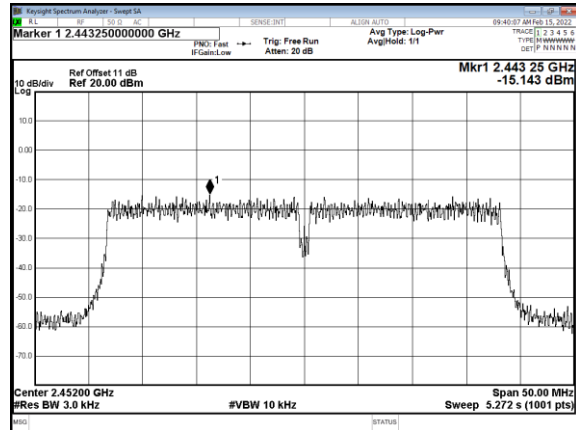
CH06



CH11



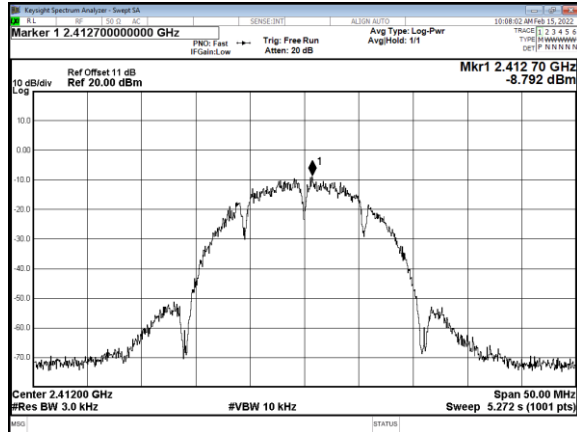
CH09



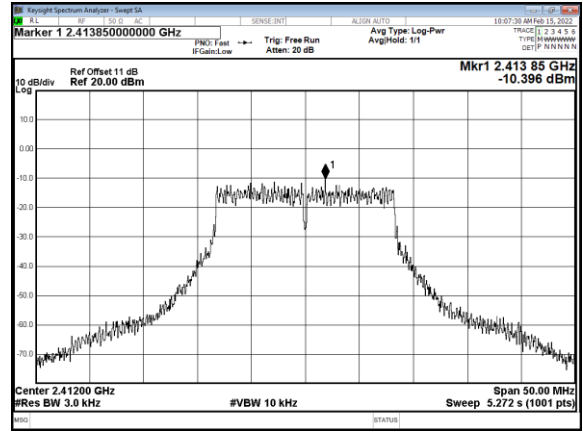


ANT B

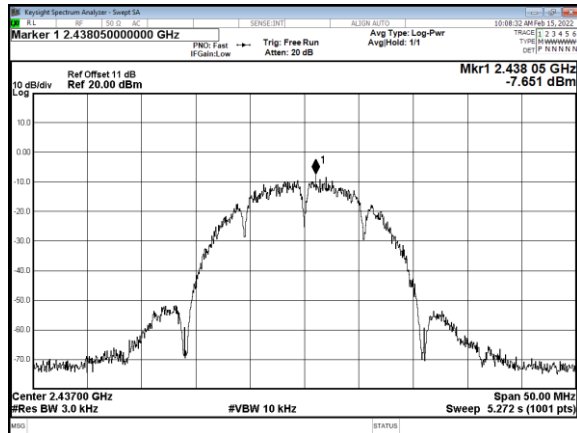
Modulation Type: 802.11b  
CH01



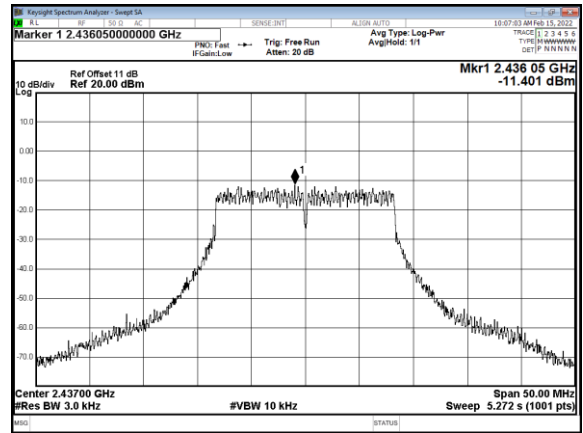
Modulation Type: 802.11g  
CH01



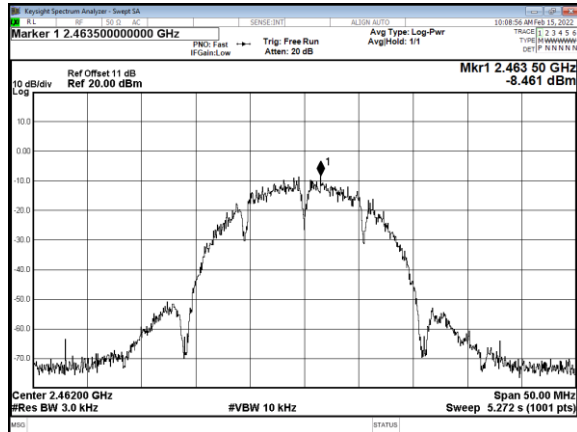
CH06



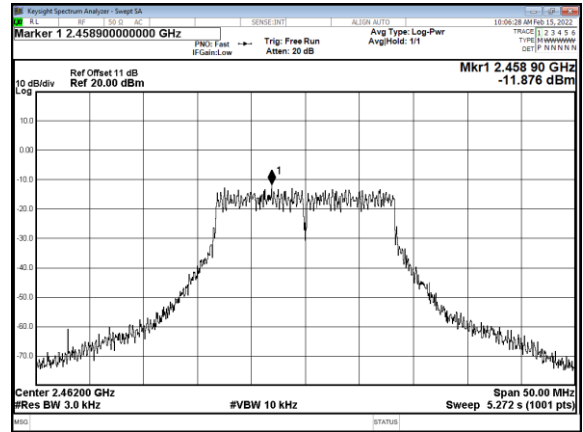
CH06



CH11

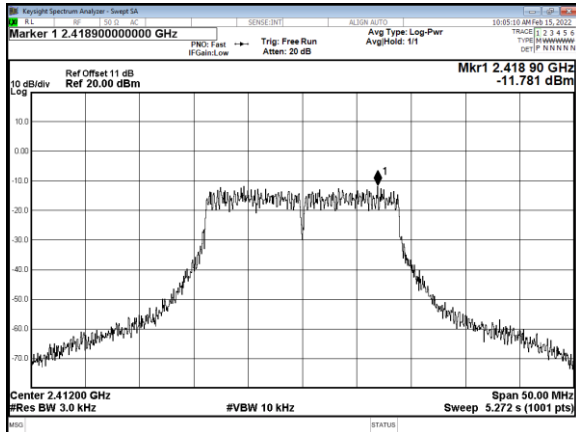


CH11

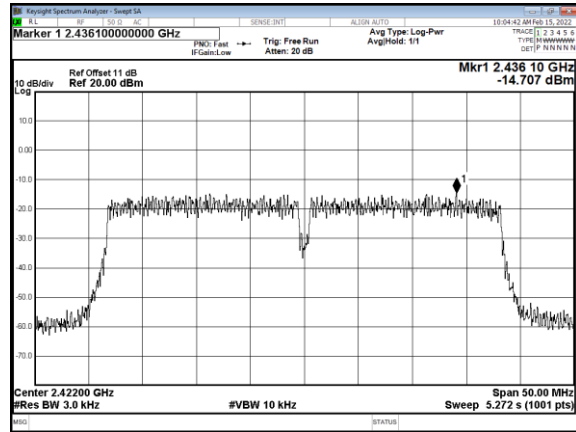




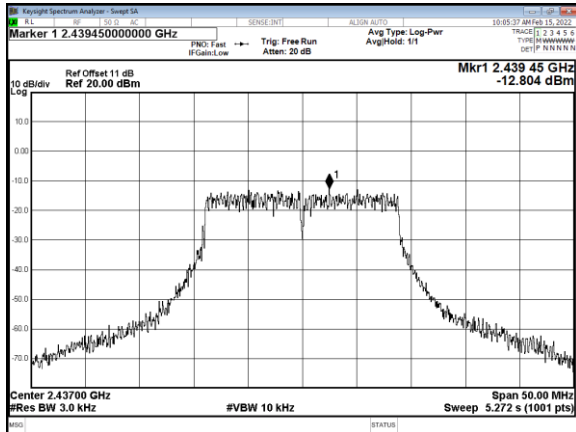
Modulation Type: 802.11n HT20  
CH01



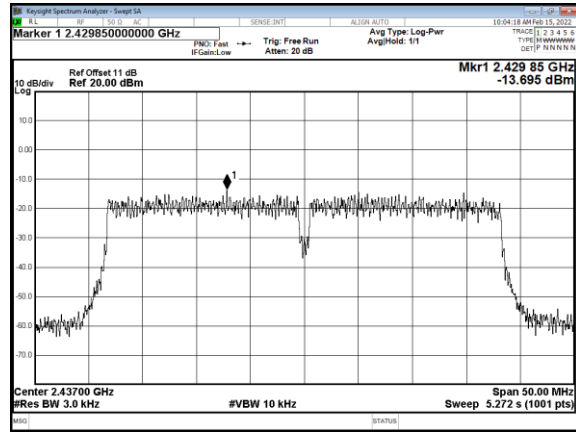
Modulation Type: 802.11n HT40  
CH03



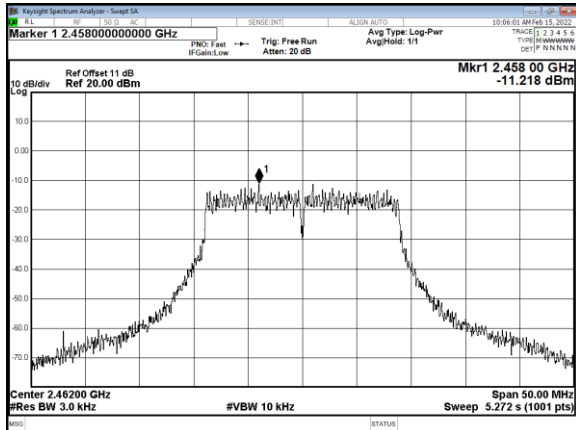
CH06



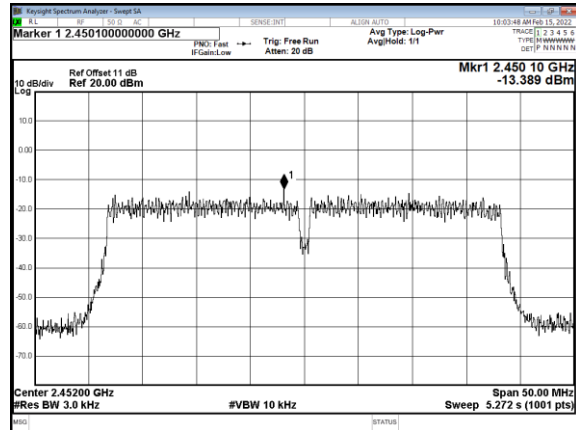
CH06



CH11



CH09



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