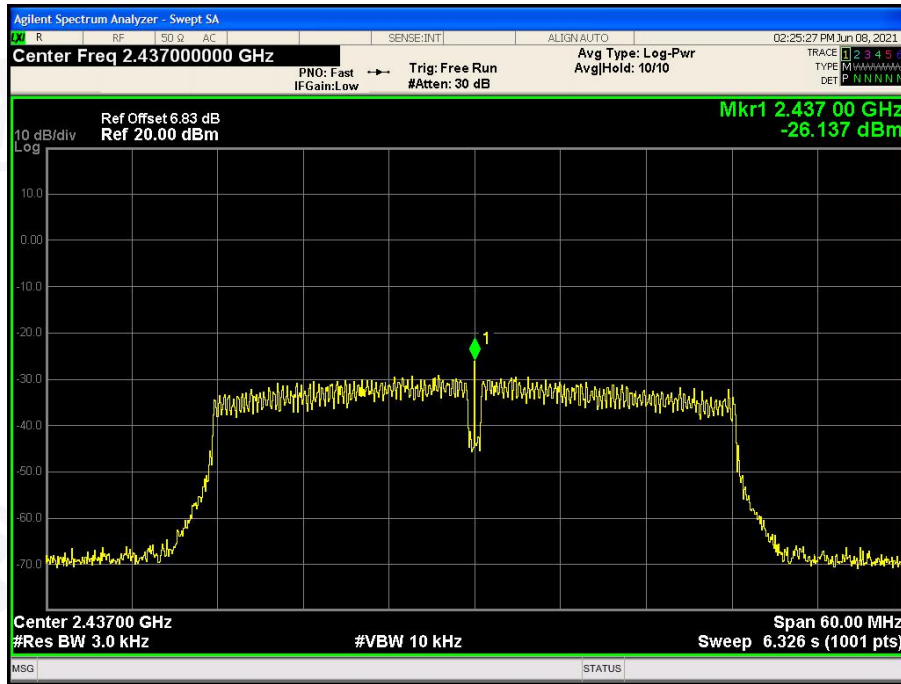
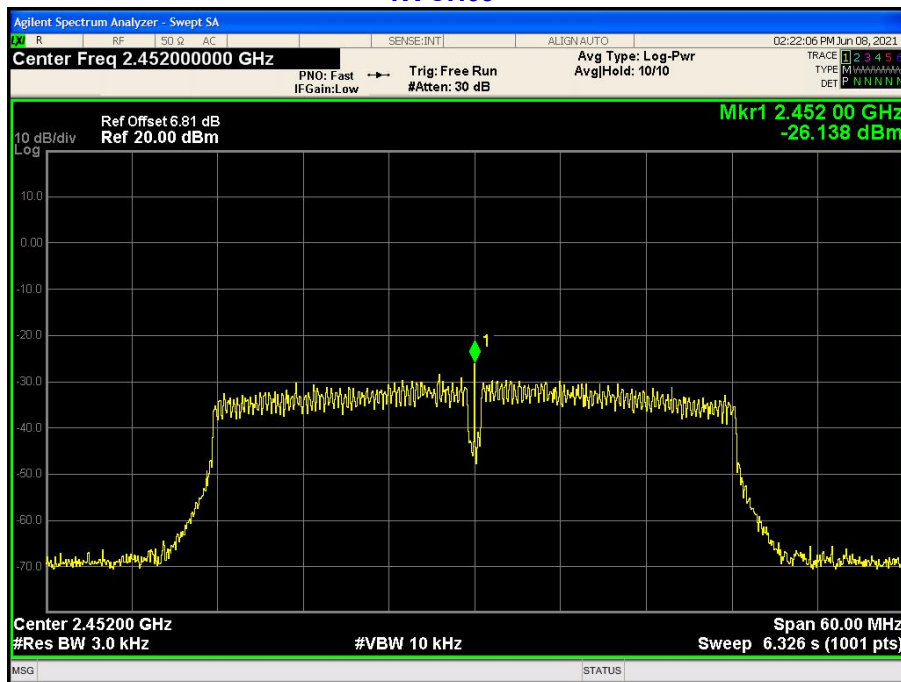


**TX CH06**



**TX CH09**



## 7. CHANNEL BANDWIDTH& 99% OCCUPY BANDWIDTH

Test Requirement:	FCC Part15 C Section 15.247 (a)(2)
Test Method:	KDB558074 D0115.247 Meas Guidancev05r02

### 7.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(a)(2)	Bandwidth	$\geq 500\text{KHz}$ (6dB bandwidth)	2400-2483.5	PASS

### 7.2 TEST PROCEDURE

1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW)  $\geq 3 \times \text{RBW}$ .
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

### 7.3 DEVIATION FROM STANDARD

No deviation.

### 7.4 TEST SETUP



### 7.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

7.6 TEST RESULT

Temperature :	26°C	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	DC 12V
Test Mode :	TX b Mode		

Test CH	-6dB Occupy Bandwidth (MHz)				Limit(KHz)	Result
	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)		
Lowest	8.224	16.290	15.020	35.060	>500	Pass
Middle	7.688	15.340	13.450	35.080		
Highest	7.770	15.150	16.090	35.070		

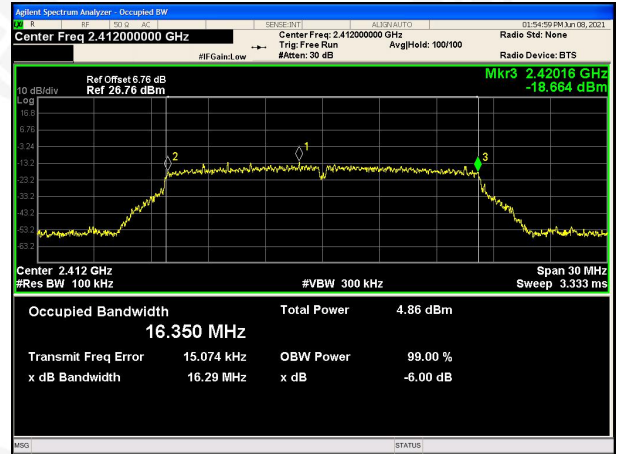
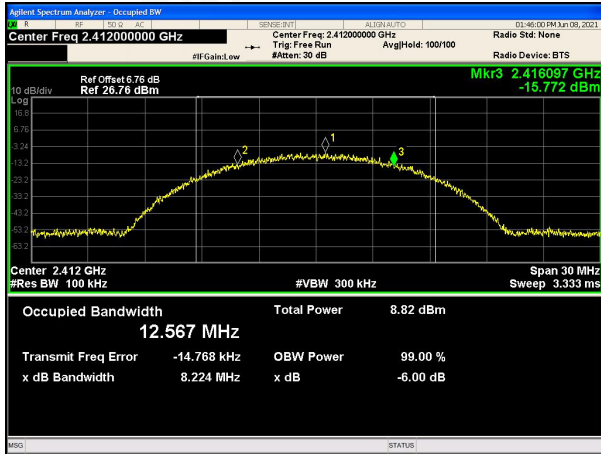
Test CH	99% Occupy Bandwidth (MHz)				Result
	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)	
Lowest	12.567	16.350	17.543	35.790	Pass
Middle	12.458	16.338	17.542	35.852	
Highest	12.492	16.359	17.540	35.896	

Test plot as follows:

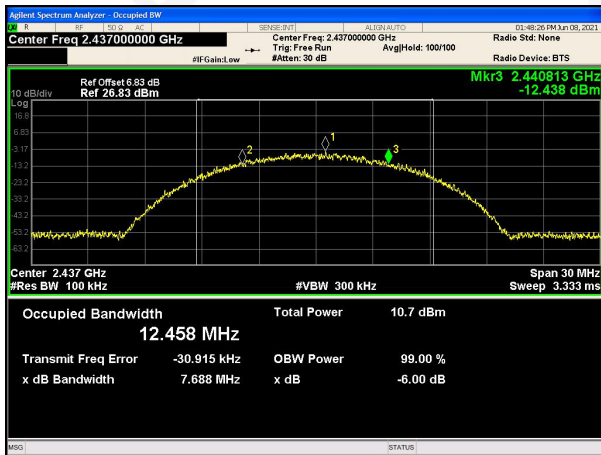
802.11b

802.11g

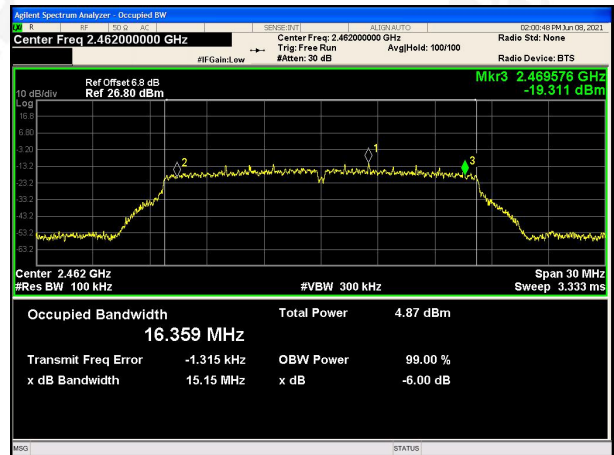
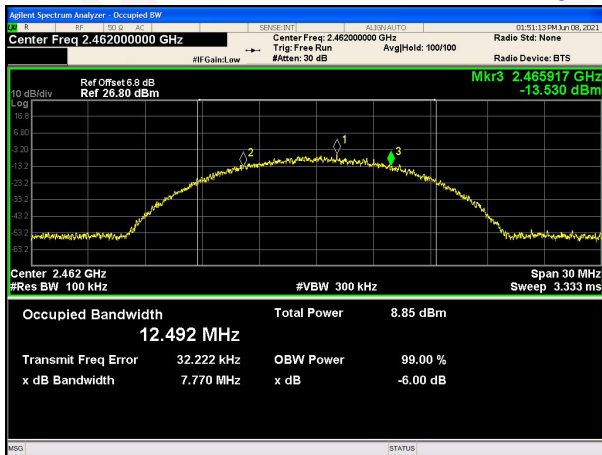
Lowest channel



Middle channel



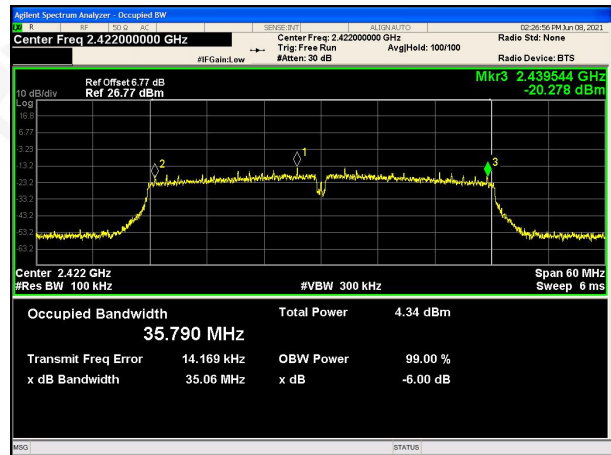
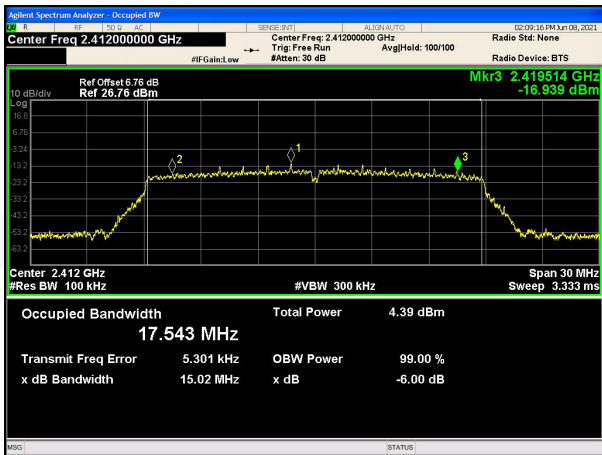
Highest channel



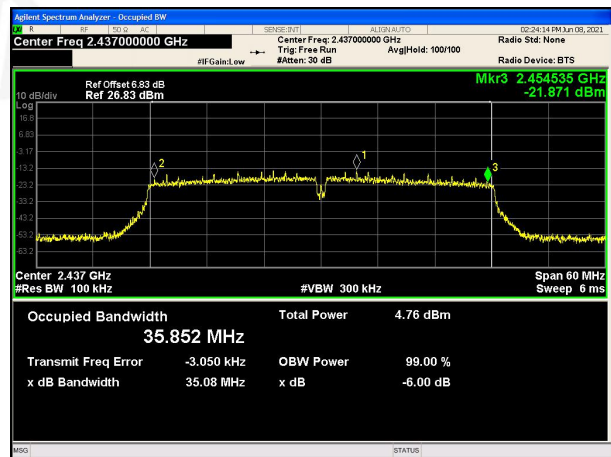
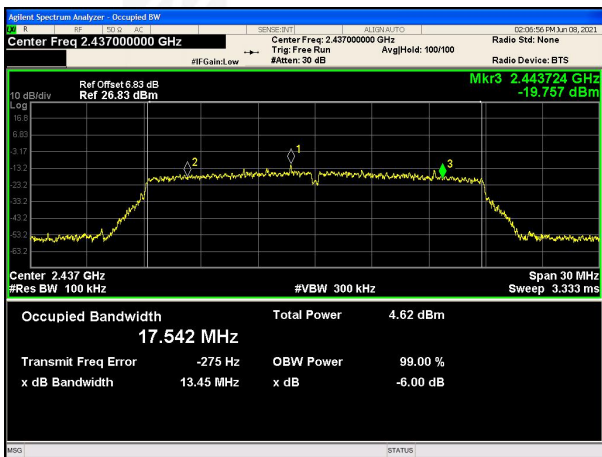
802.11n20

802.11n40

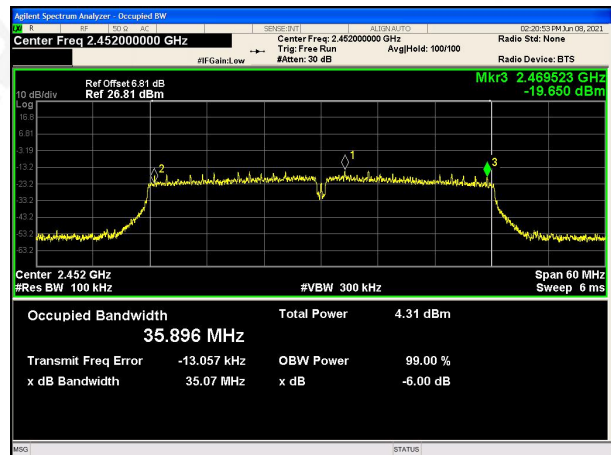
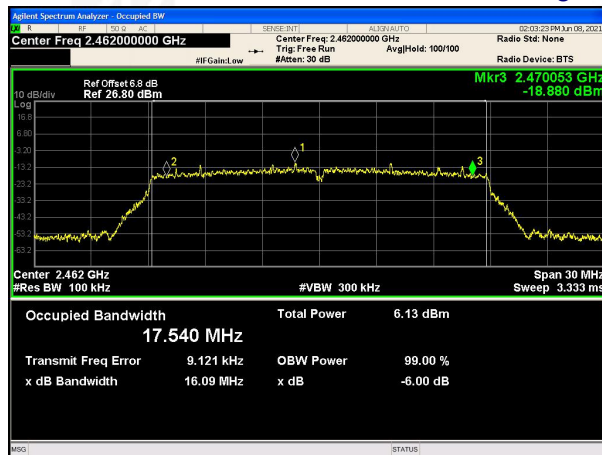
Lowest channel



Middle channel



Highest channel



**8. PEAK OUTPUT POWER TEST**

Test Requirement:	FCC Part15 C Section 15.247 (b)(3)
Test Method:	KDB558074 D0115.247 Meas Guidancev05r02

**8.1 APPLIED PROCEDURES/LIMIT**

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS

**8.2 TEST PROCEDURE**

- a. The EUT was directly connected to the Power meter

**8.3 DEVIATION FROM STANDARD**

No deviation.

**8.4 TEST SETUP**



**8.5 EUT OPERATION CONDITIONS**

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

8.6 TEST RESULT

Temperature :	26℃	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	DC 12V

Test CH	Peak Output Power (dBm)				Limit(dBm)	Result
	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)		
Lowest	9.252	8.451	8.505	7.825	30.00	Pass
Middle	9.135	8.287	8.521	7.433		
Highest	9.122	8.193	8.332	7.728		

## 9. CONDUCTED BAND EDGE AND SPURIOUS EMISSION

Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	KDB558074 D0115.247 Meas Guidancev05r02

### 9.1 APPLICABLE STANDARD

in any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, In addition, radiated emissions which fall in the restricted bands, as defined in§15.205(a), must also comply with the radiated emission limits specified in15.209(a).

### 9.2 TEST PROCEDURE

Using the following spectrum analyzer setting:

- A) Set the RBW = 100KHz.
- B) Set the VBW = 300KHz.
- C) Sweep time = auto couple.
- D) Detector function = peak.
- E) Trace mode = max hold.
- F) Allow trace to fully stabilize.

### 9.3 DEVIATION FROM STANDARD

No deviation.

### 9.4 TEST SETUP



### 9.5 EUT OPERATION CONDITIONS

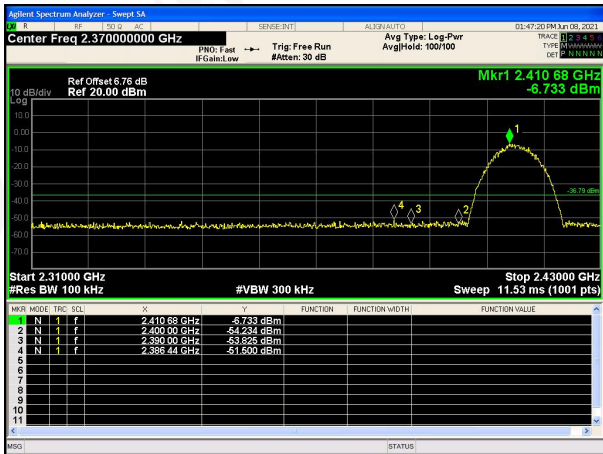
The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

### 9.6 TEST RESULTS

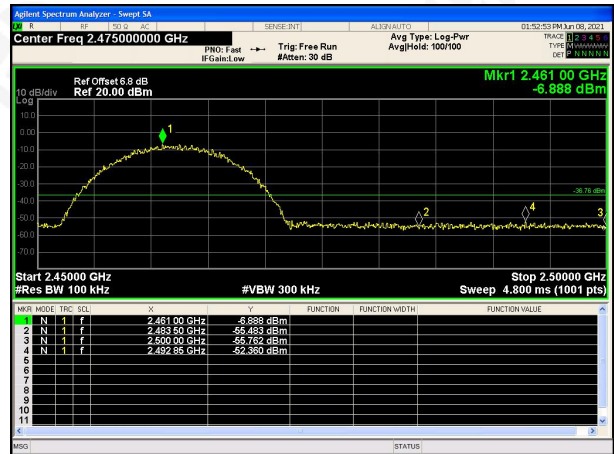


Test plot as follows:

Test mode: 802.11b

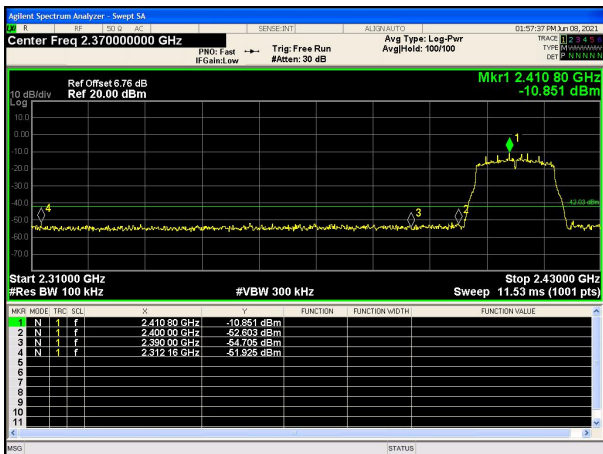


Lowest channel

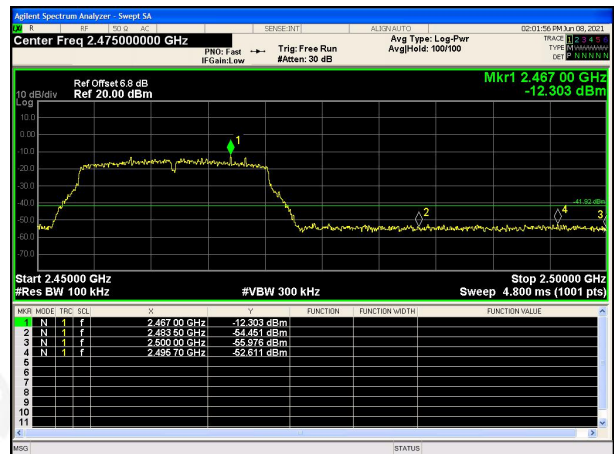


Highest channel

Test mode: 802.11g

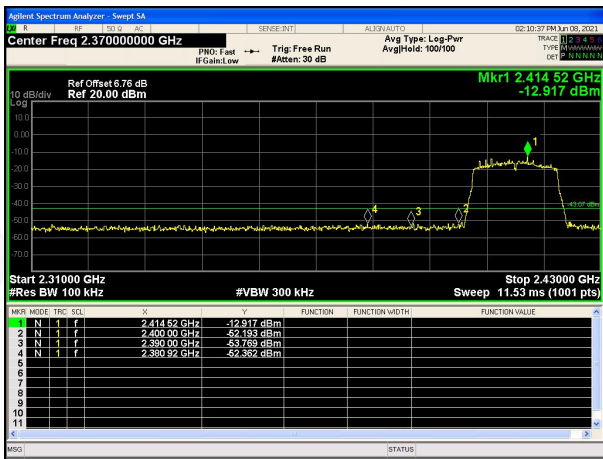


Lowest channel

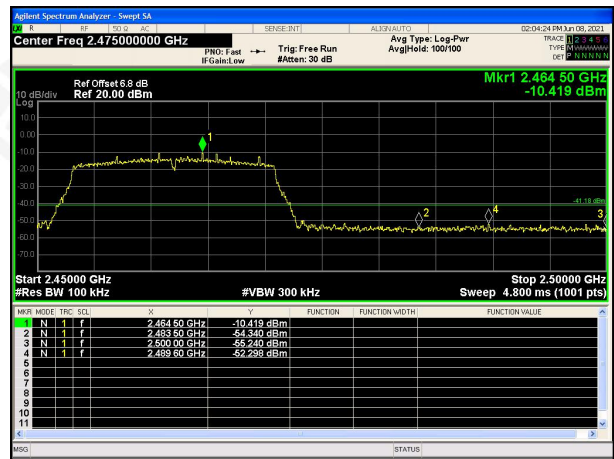


Highest channel

Test mode: 802.11n(HT20)

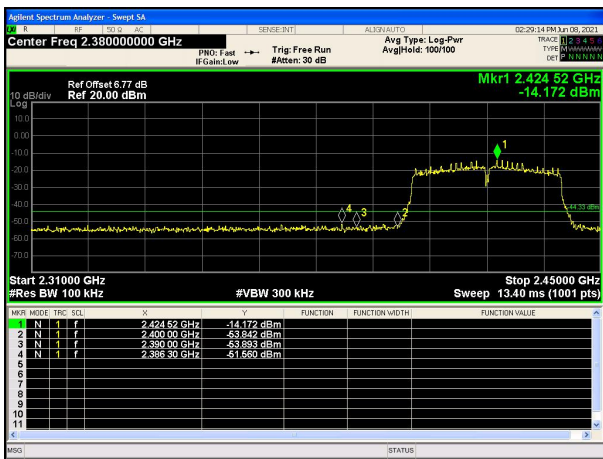


Lowest channel

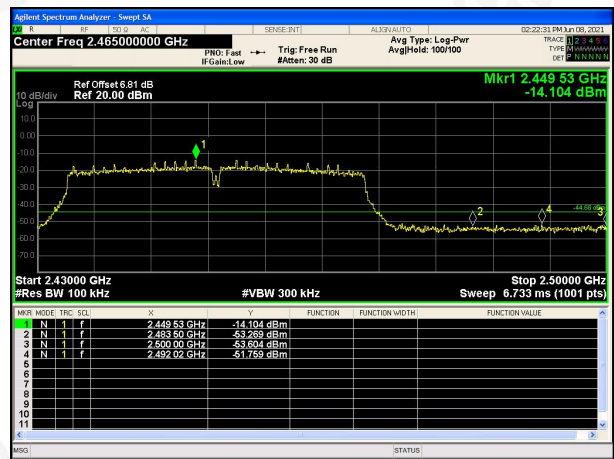


Highest channel

Test mode: 802.11n(HT40)



Lowest channel

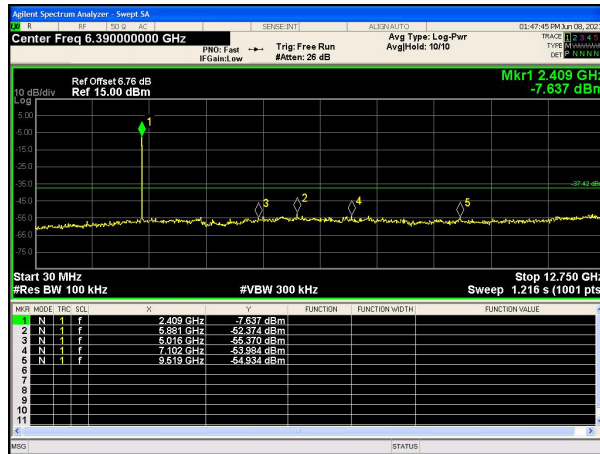


Highest channel

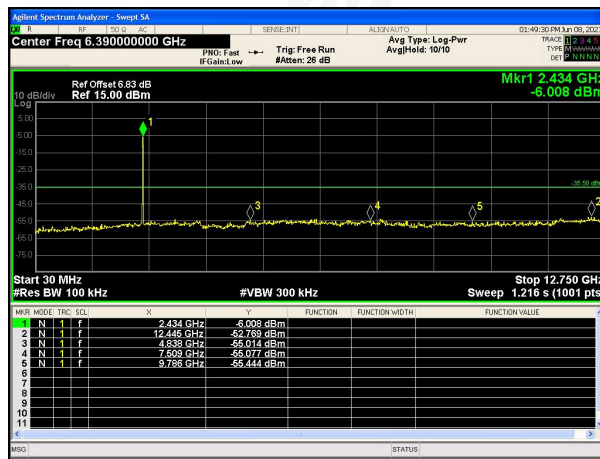
Test plot as follows:

802.11b

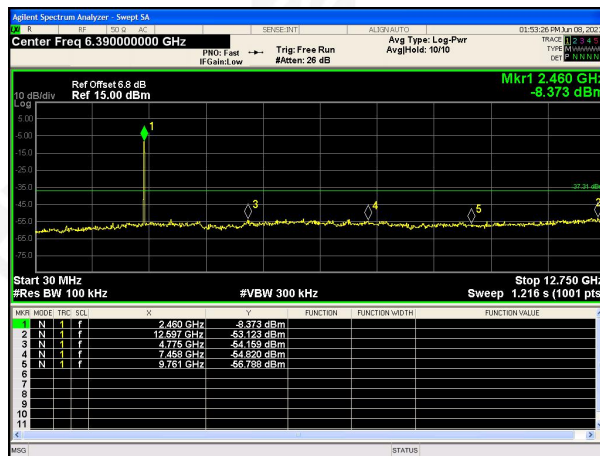
Lowest channel



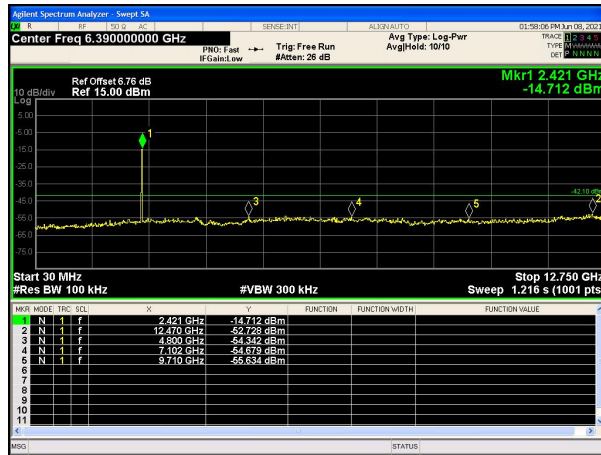
Middle channel



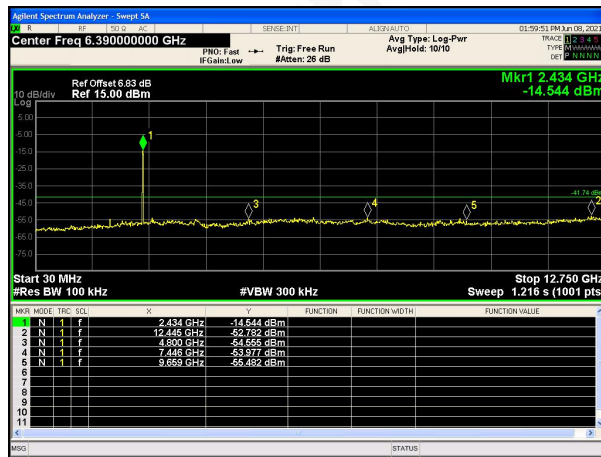
Highest channel



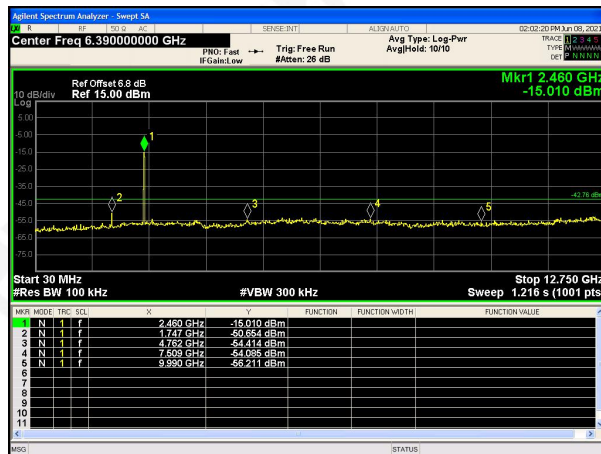
802.11g  
Lowest channel



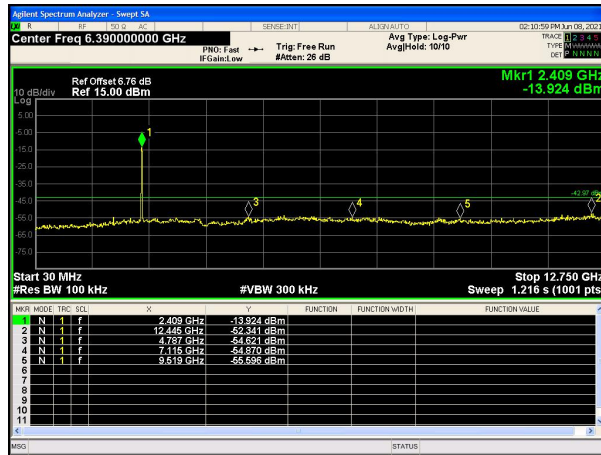
Middle channel



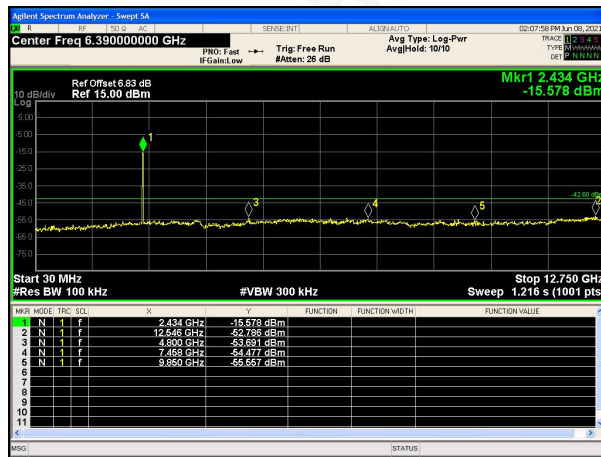
Highest channel



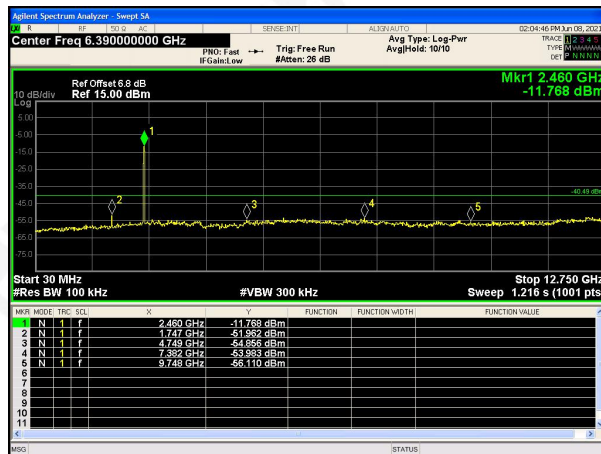
802.11n(HT20)  
Lowest channel



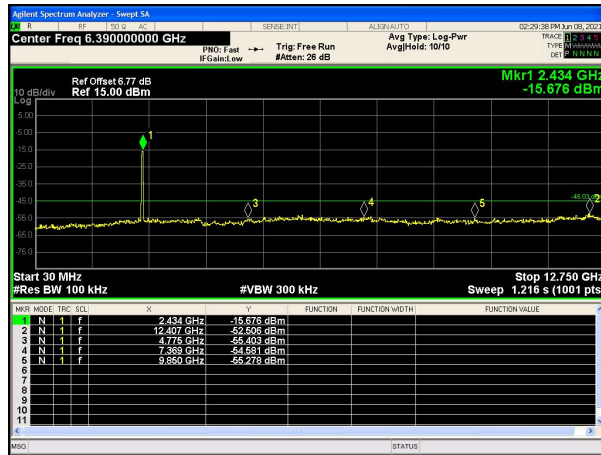
Middle channel



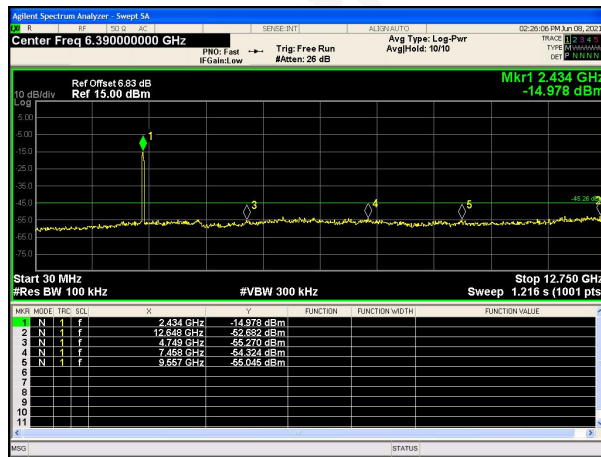
Highest channel



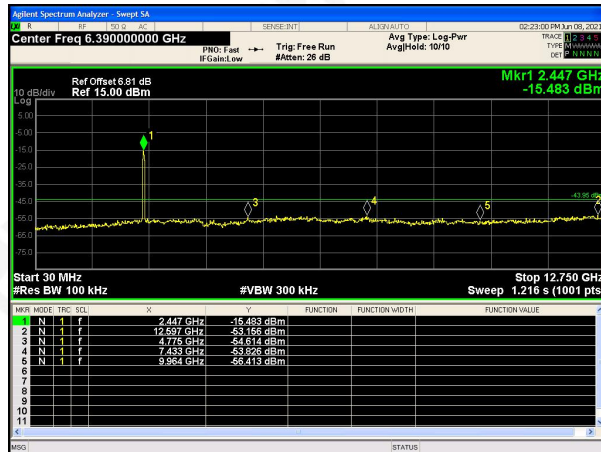
802.11n(HT40)  
Lowest channel



Middle channel



Highest channel



## 10. ANTENNA REQUIREMENT

Standard requirement:	FCC Part15 C Section 15.203 /247(c)
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.	
15.247(c) (1)(i) requirement: (i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.	
EUT Antenna:	
The antenna is PCB Antenna, the best case gain of the antenna is 0dBi, reference to the appendix II for details	

## 11. TEST SETUP PHOTO

Reference to the appendix I for details.

## 12. EUT CONSTRUCTIONAL DETAILS

Reference to the appendix II for details.

\*\*\*\*\* END OF REPORT \*\*\*\*\*