TX CH06

TX CH09

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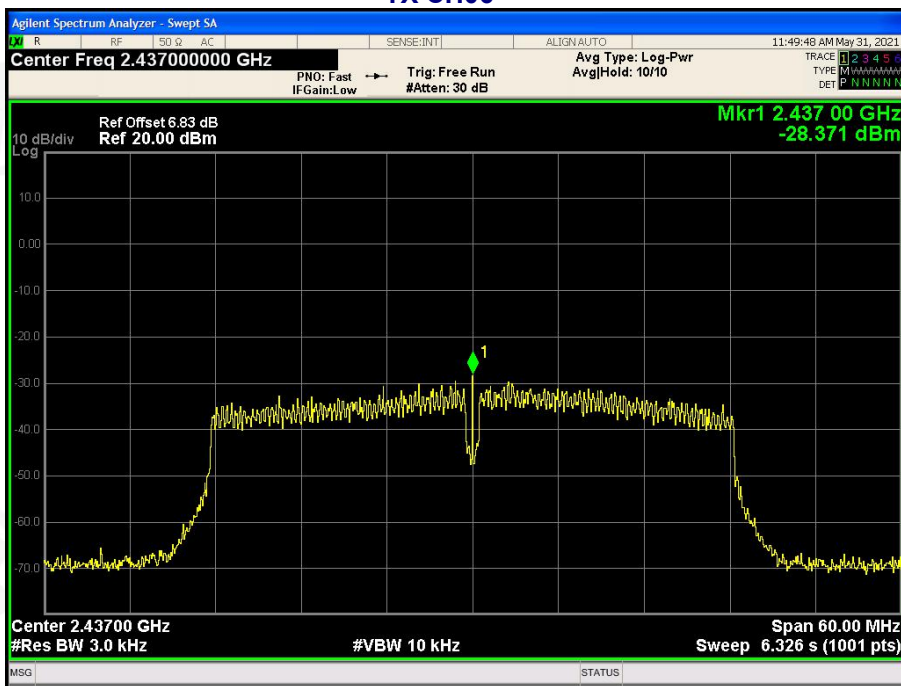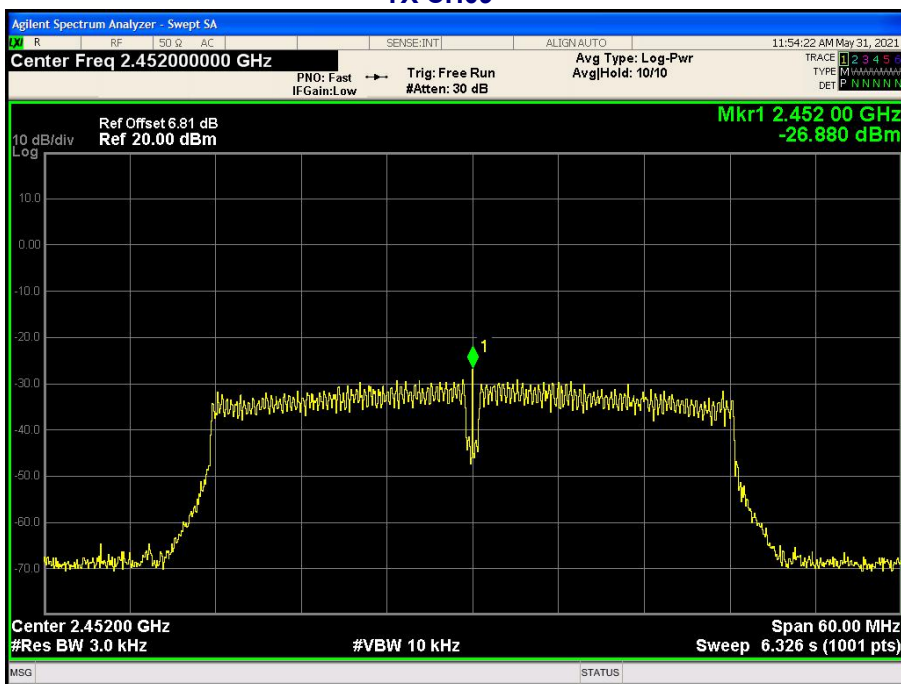
7. CHANNEL BANDWIDTH& 99% OCCUPY BANDWIDTH

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	>= 500KHz (6dB bandwidth)	2400-2483.5	PASS

7.2 TEST PROCEDURE

1. Set RBW = 100 kHz.

2. Set the video bandwidth (VBW) ≥ 3 xRBW.

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℃	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	DC 5V
Test Mode :	TX b Mode		

Test CH	-6dB Occupy Bandwidth (MHz)				Limit(KHz)	Result
	802.11b	802.11g	802.11n(HT20)	802.11n(HT 40)		
Lowest	7.239	16.040	13.834	32.573	>500	Pass
Middle	8.575	15.093	15.087	35.047		
Highest	7.041	15.247	15.590	35.066		

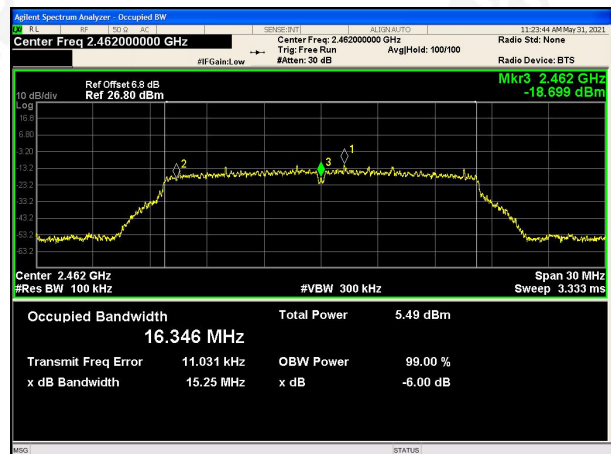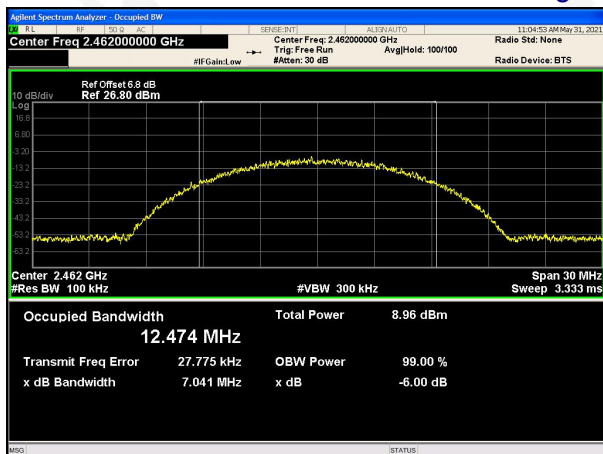| Test CH	99% Occupy Bandwidth (MHz)				Result
	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)	
Lowest	12.605	16.367	17.535	35.871	Pass
Middle	12.537	16.337	17.528	35.813	
Highest	12.474	16.346	17.550	35.858	

Test plot as follows:

802.11b	802.11g

Lowest channel

Middle channel

Highest channel

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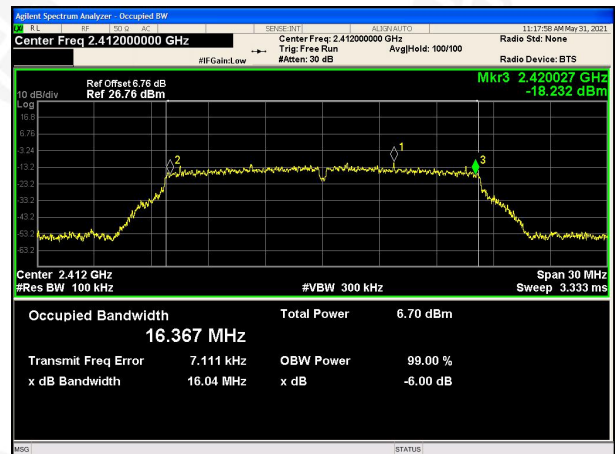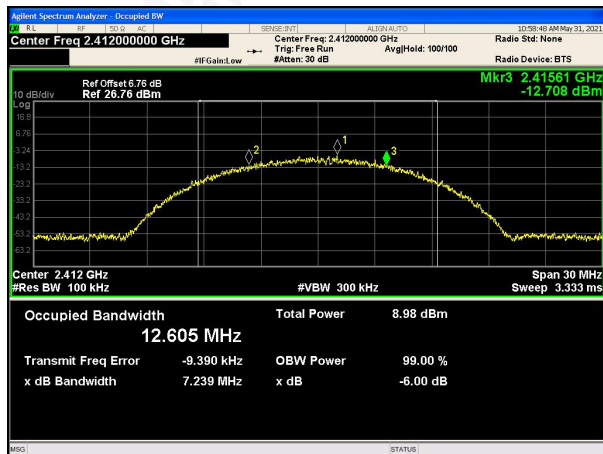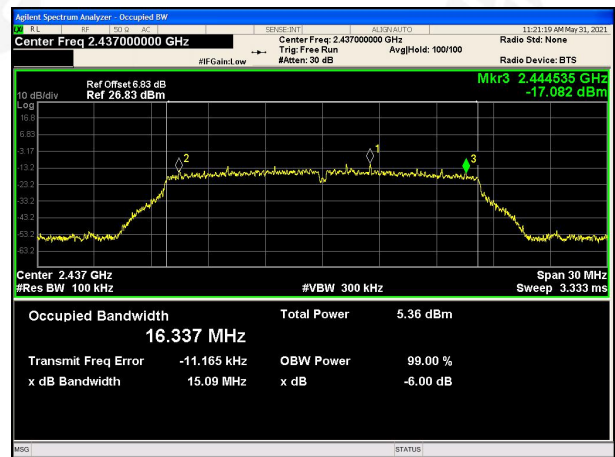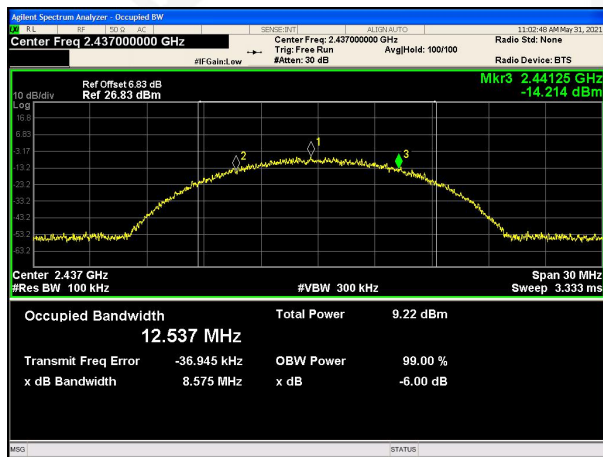
802.11n20　　　　　　　　　　　　　　802.11n40

Lowest channel

Occupied Bandwidth	**Total Power** 4.89 dBm
17.535 MHz	
Transmit Freq Error 12.208 kHz	OBW Power 99.00 %
x dB Bandwidth 13.83 MHz	x dB -6.00 dB

Occupied Bandwidth	**Total Power** 4.79 dBm
35.871 MHz	
Transmit Freq Error 10.535 kHz	OBW Power 99.00 %
x dB Bandwidth 32.57 MHz	x dB -6.00 dB

Middle channel

Occupied Bandwidth	**Total Power** 4.58 dBm
17.528 MHz	
Transmit Freq Error 6.905 kHz	OBW Power 99.00 %
x dB Bandwidth 15.09 MHz	x dB -6.00 dB

Occupied Bandwidth	**Total Power** 2.28 dBm
35.813 MHz	
Transmit Freq Error -26.815 kHz	OBW Power 99.00 %
x dB Bandwidth 35.05 MHz	x dB -6.00 dB

Highest channel

Occupied Bandwidth	**Total Power** 4.38 dBm
17.550 MHz	
Transmit Freq Error 20.082 kHz	OBW Power 99.00 %
x dB Bandwidth 15.59 MHz	x dB -6.00 dB

Occupied Bandwidth	**Total Power** 4.82 dBm
35.858 MHz	
Transmit Freq Error -7.063 kHz	OBW Power 99.00 %
x dB Bandwidth 35.07 MHz	x dB -6.00 dB

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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

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┌──────────┐                    ┌──────────────────┐
│   EUT    │────────────────────│  POWER  METER    │
└──────────┘                    └──────────────────┘
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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 5V

Test CH	Peak Output Power (dBm)				Limit(dBm)	Result
	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)		
Lowest	9.211	8.455	8.514	7.925		
Middle	9.101	8.287	8.522	7.452	30.00	Pass
Highest	9.121	8.197	8.339	7.713		

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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 in 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

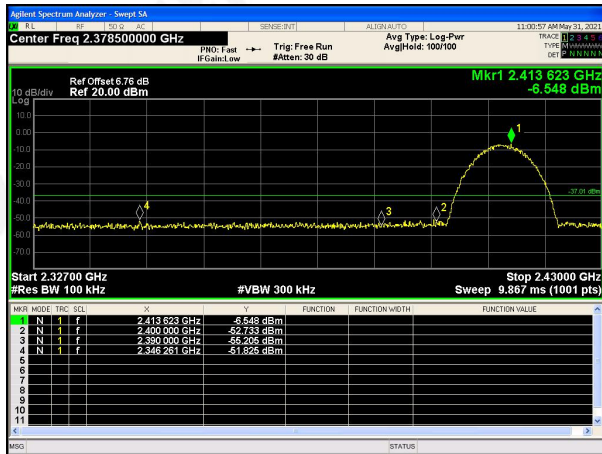### 9.5 EUT OPERATION CONDITIONS

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.
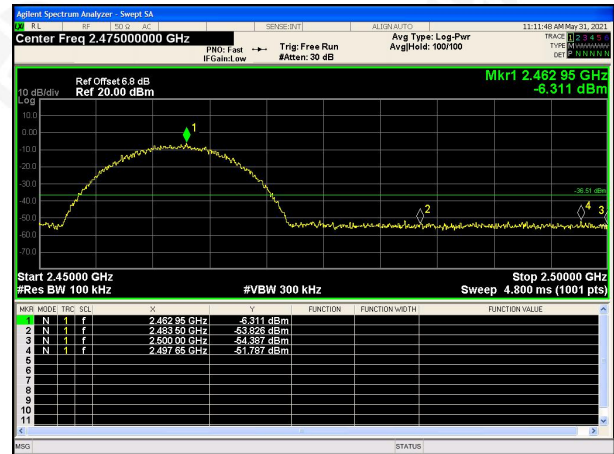
9.6 TEST RESULTS

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Test plot as follows:

Test mode:	802.11b

Lowest channel

Highest channel

Test mode:	802.11g

Lowest channel

Highest channel

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Test mode:	802.11n(HT20)
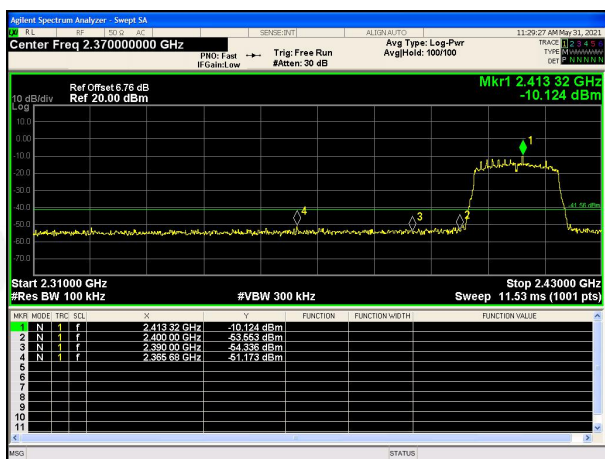
Lowest channel
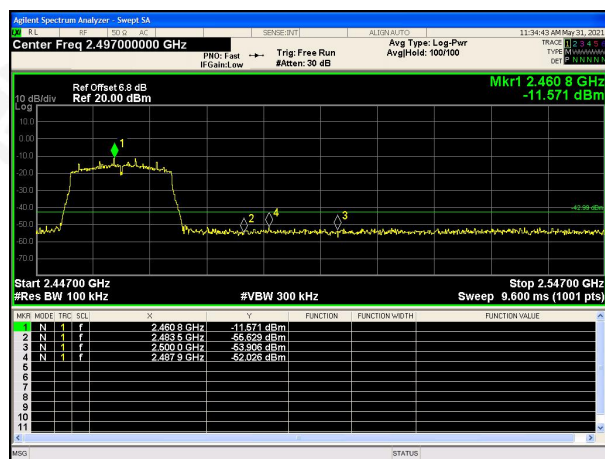
Highest channel

Test mode:	802.11n(HT40)

Lowest channel

Highest channel

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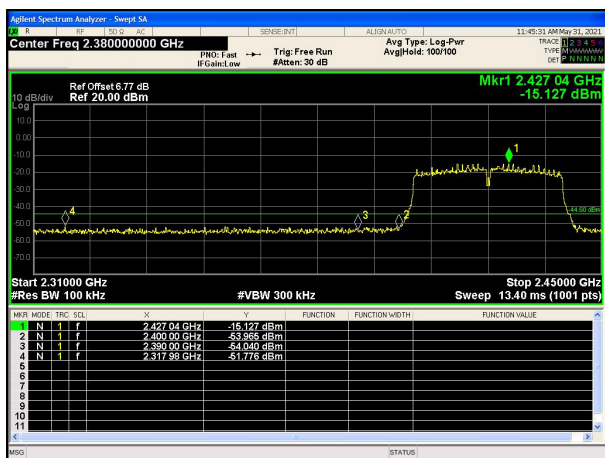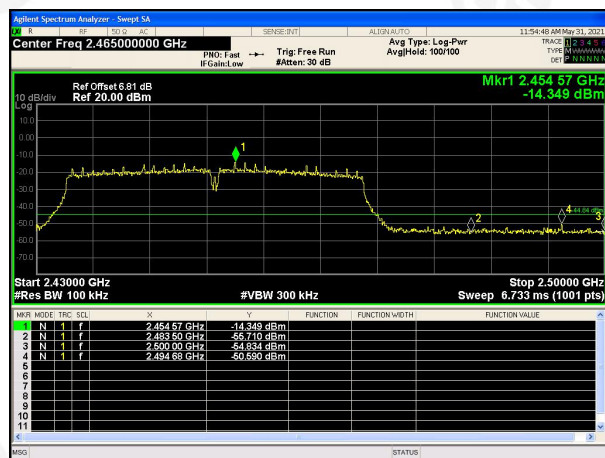
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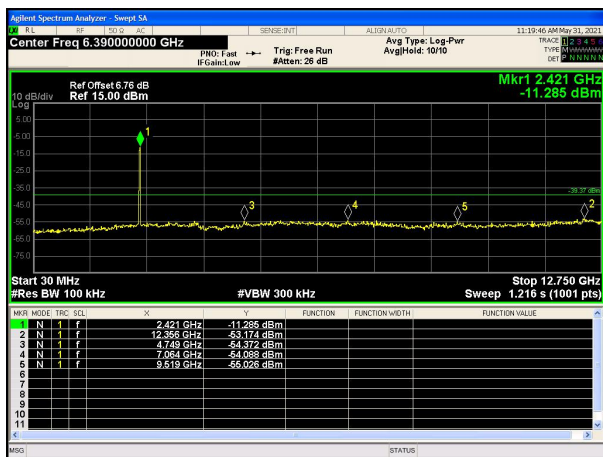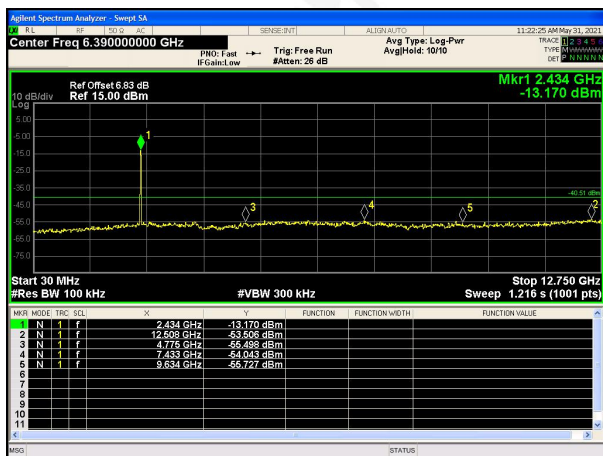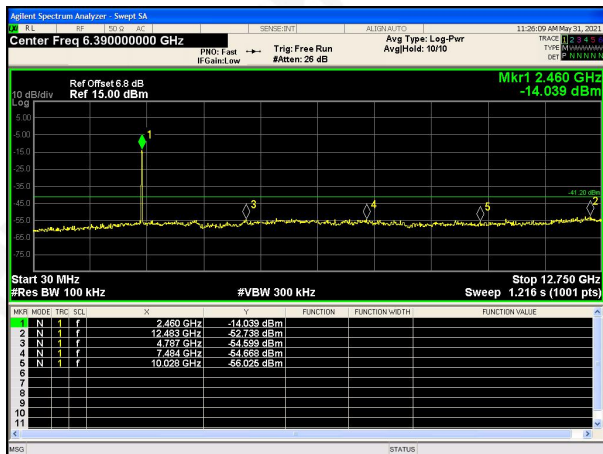
802.11b

Lowest channel
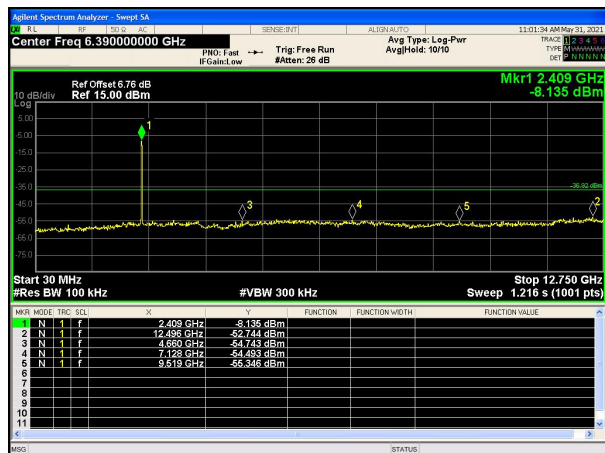
Middle channel
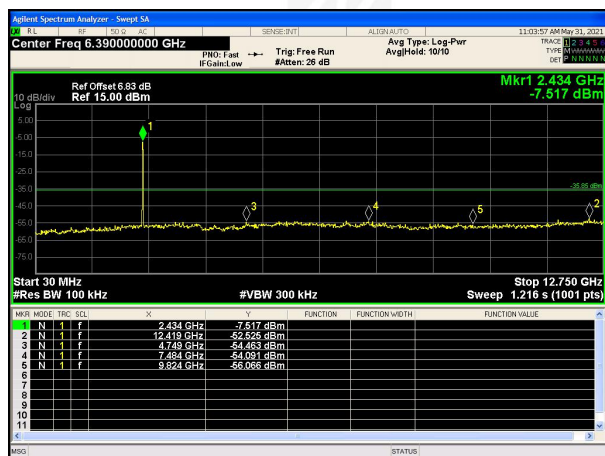
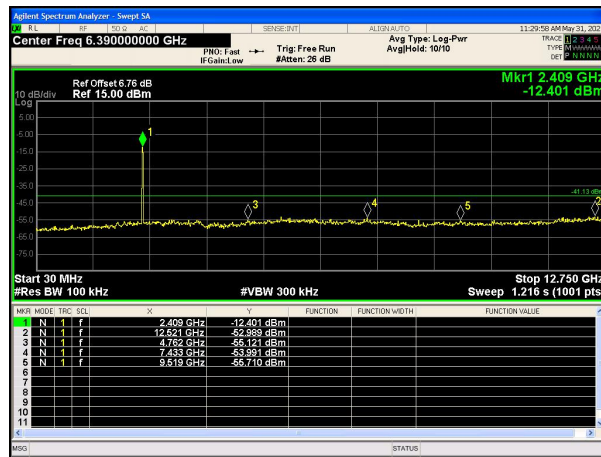
Highest channel
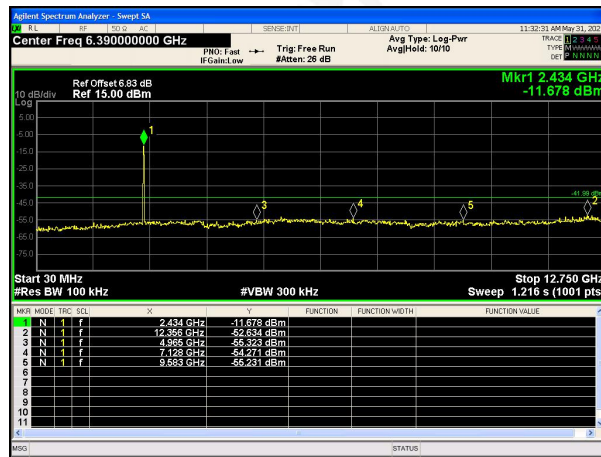
802.11g

Lowest channel

Middle channel

Highest channel

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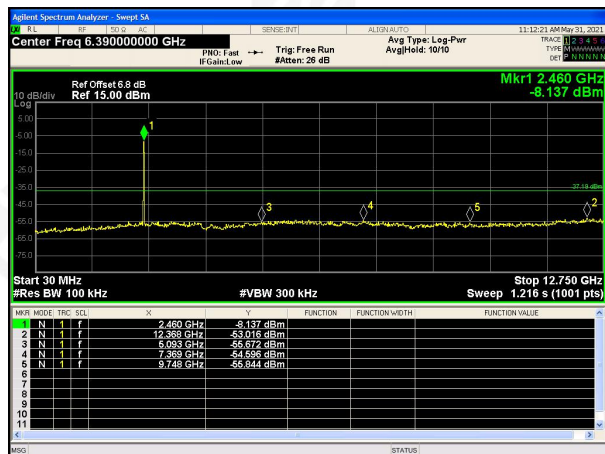
802.11n(HT20)

Lowest channel
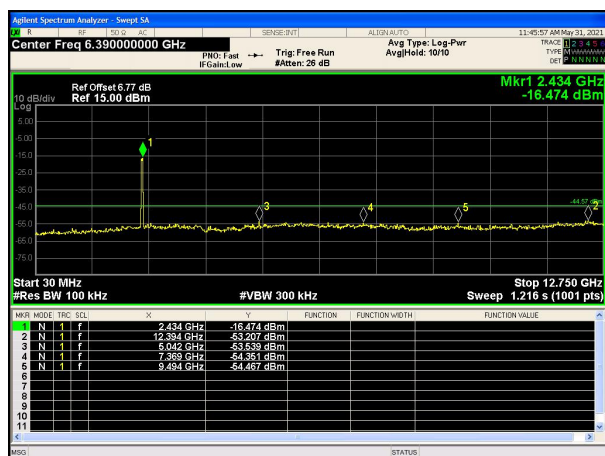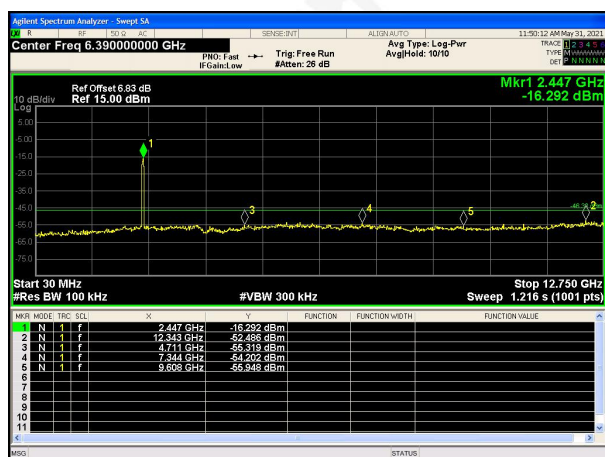

Middle channel
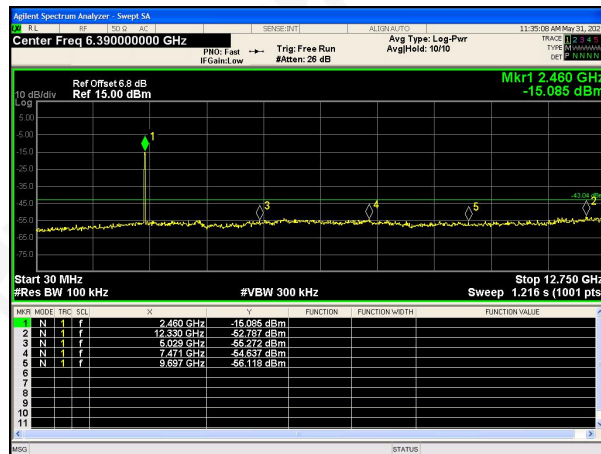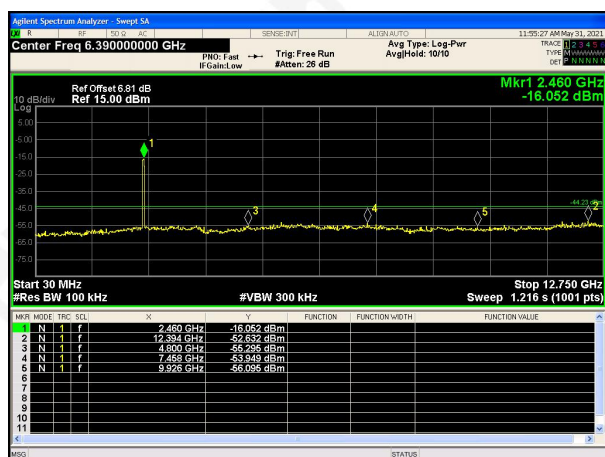

Highest channel

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	

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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 ※※※※※

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