



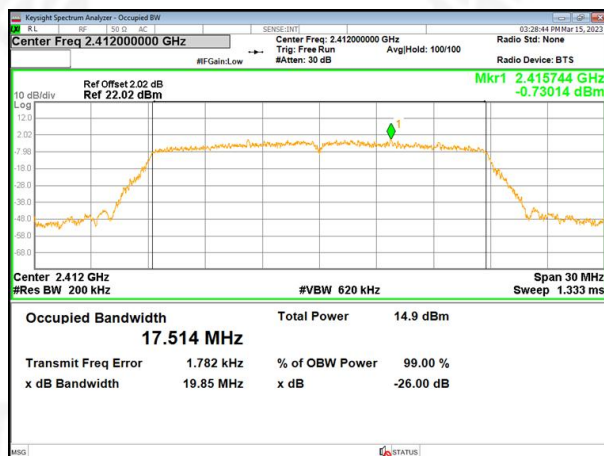
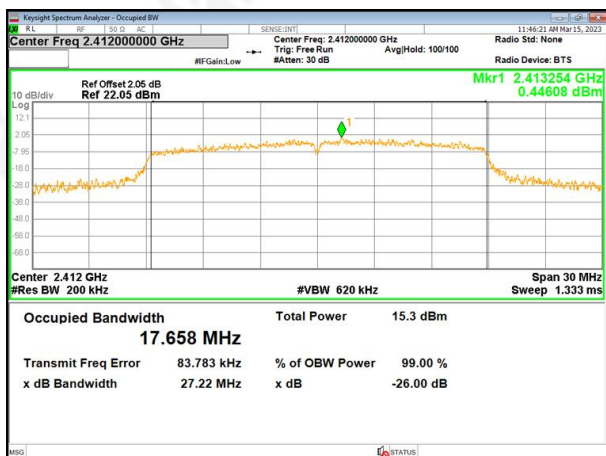
## 99% Occupy Bandwidth

ANT1

ANT2

802.11n20

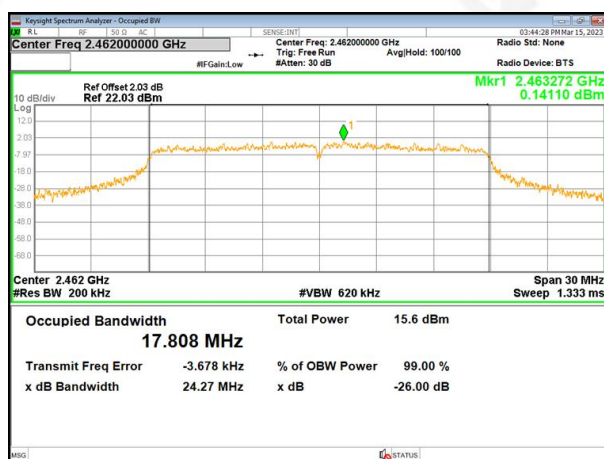
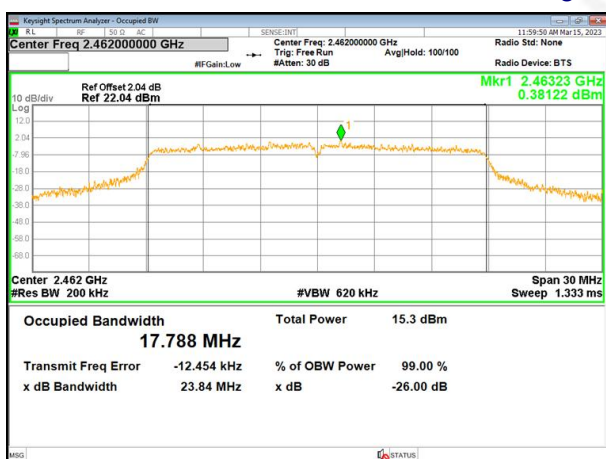
Lowest channel



Middle channel



Highest channel





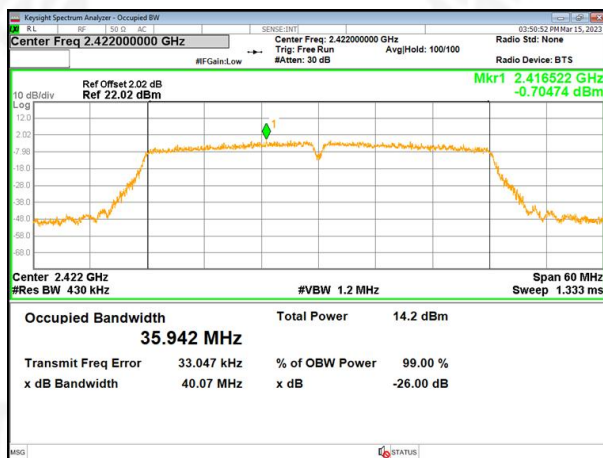
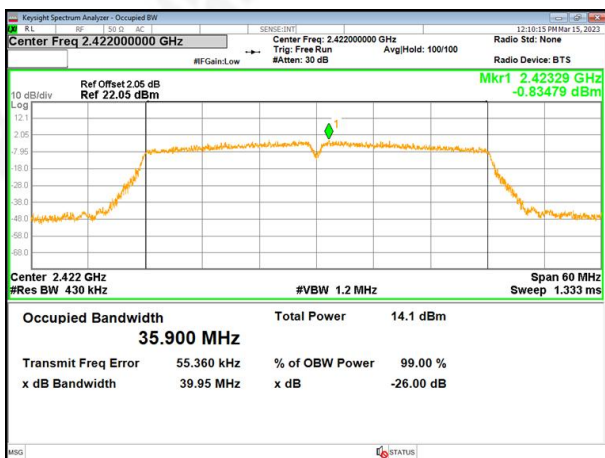
99% Occupy Bandwidth

ANT1

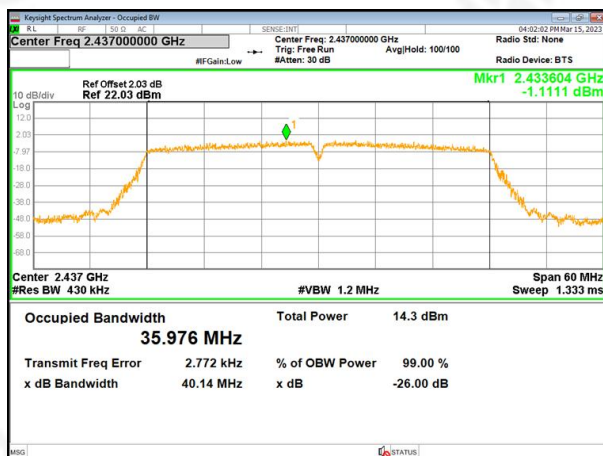
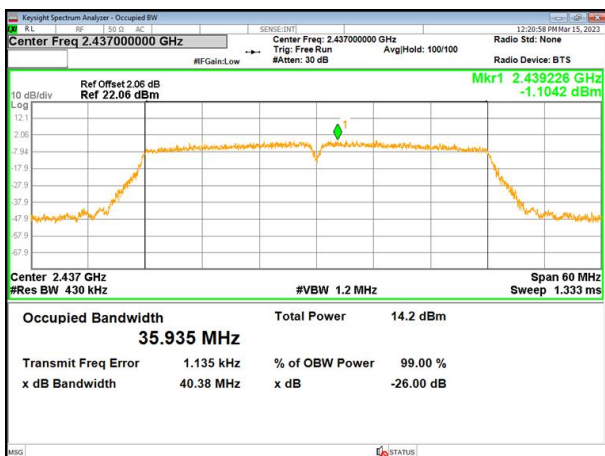
ANT2

802.11n40

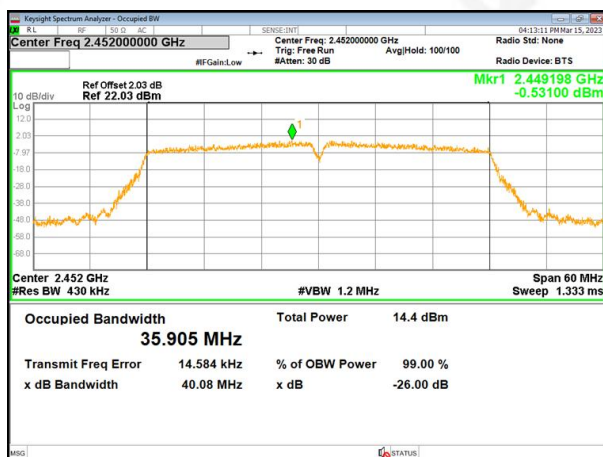
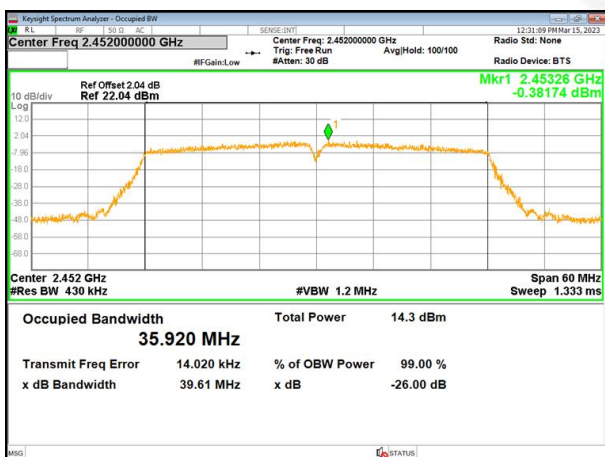
Lowest channel



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 :	25.2℃	Relative Humidity :	55%
Pressure :	101kPa	Test Voltage :	DC 12V

ANT1						
Test CH	Peak Output Power (dBm)				Limit(dBm)	Result
	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)		
Lowest	12.31	15.17	14.14	13.09	30.00	Pass
Middle	12.51	14.64	14.03	13.03		
Highest	12.73	14.81	14.24	13.18		

ANT2						
Test CH	Peak Output Power (dBm)				Limit(dBm)	Result
	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)		
Lowest	12.27	14.58	13.95	13.20	30.00	Pass
Middle	12.56	14.76	14.26	13.22		
Highest	12.79	14.99	14.30	13.42		

Directional Gain =  $G_{ANT} + 10 \cdot \log(N_{ANT})$  dBi =  $2.18 + 10 \cdot \log(2)$  dBi = 5.19 dBi

Test mode	Frequency	MIMO EIRP POWER (dBm)	Limit(dBm)	Result
802.11n20	Lowest	17.06	30.00	Pass
	Middle	17.16	30.00	Pass
	Highest	17.28	30.00	Pass
802.11n40	Lowest	16.16	30.00	Pass
	Middle	16.14	30.00	Pass
	Highest	16.31	30.00	Pass
MIMO EIRP POWER = ANT1 + ANT2				



## 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

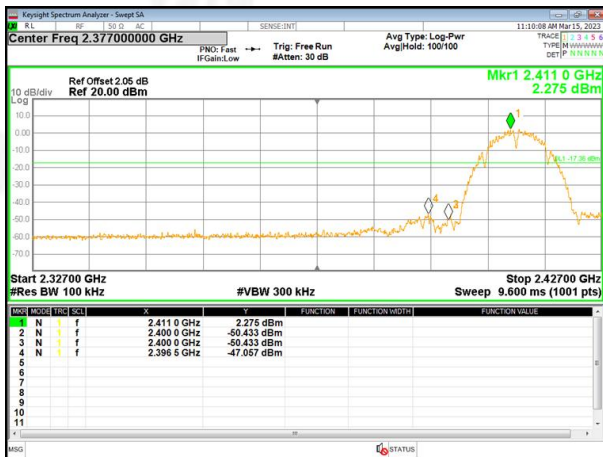
The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

### 9.6 TEST RESULTS



Test plot as follows:

ANT1	
Test mode:	802.11b

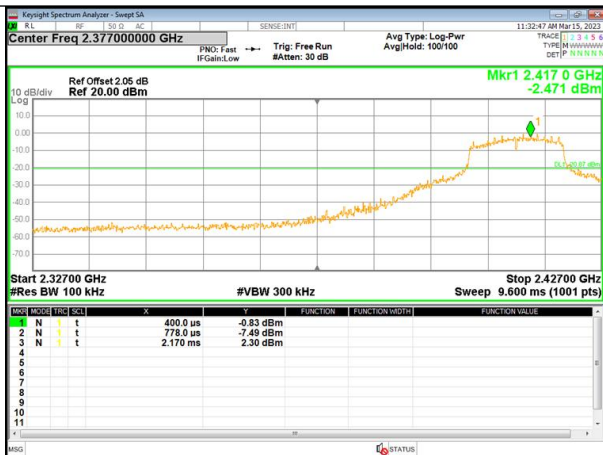


Lowest channel

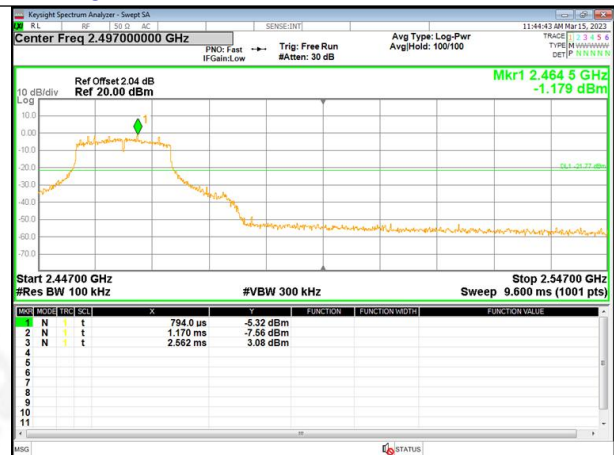


Highest channel

Test mode:	802.11g
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Lowest channel

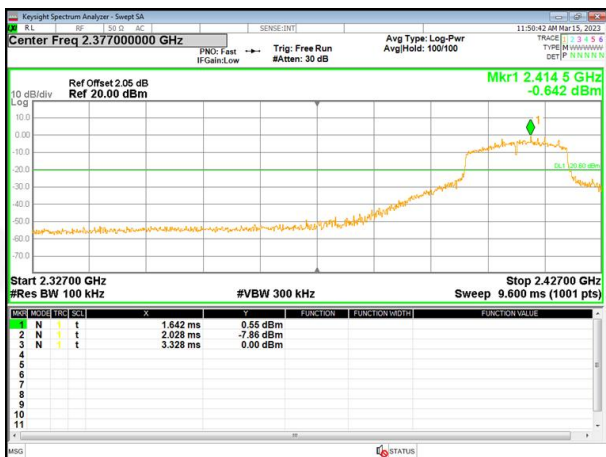


Highest channel



Test mode:

802.11n(HT20)



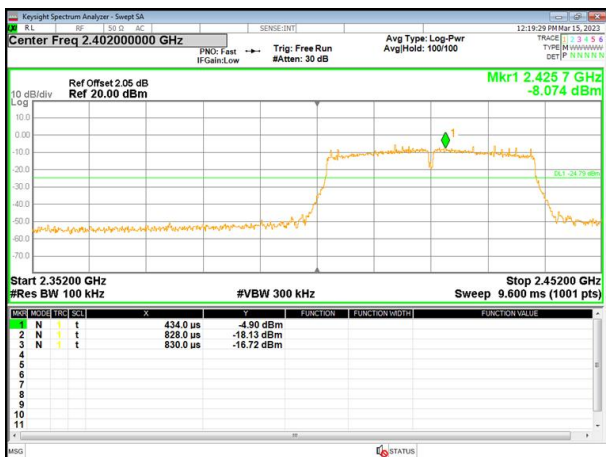
Lowest channel



Highest channel

Test mode:

802.11n(HT40)



Lowest channel

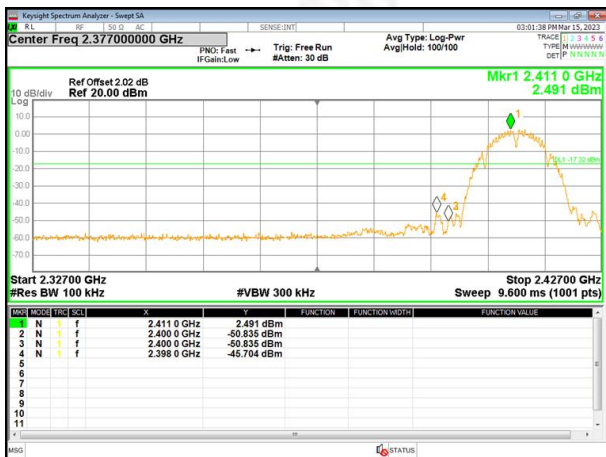


Highest channel

ANT2

Test mode:

802.11b



Lowest channel

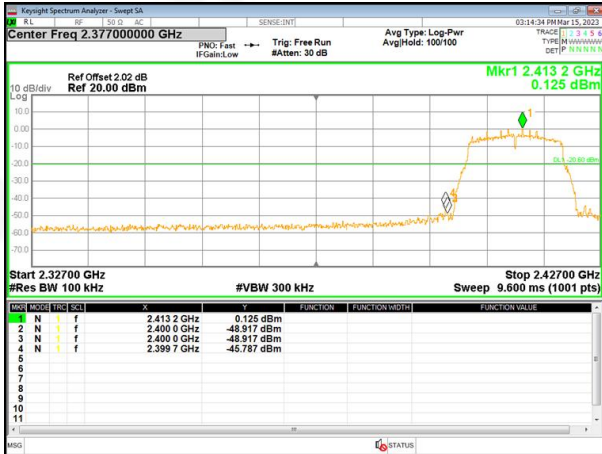


Highest channel

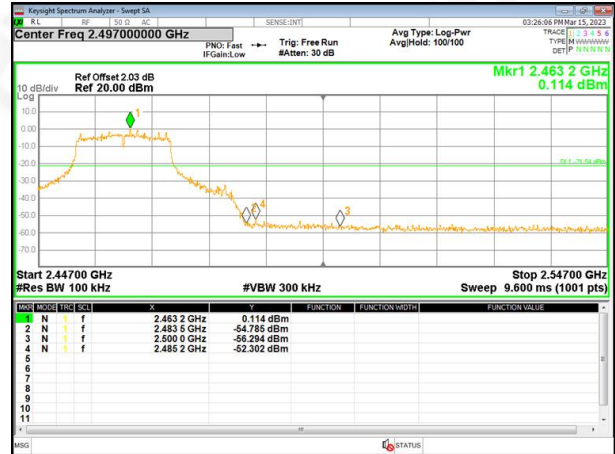


Test mode:

802.11g



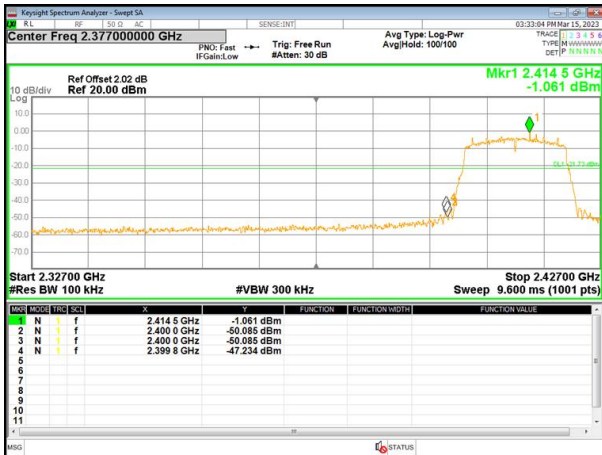
Lowest channel



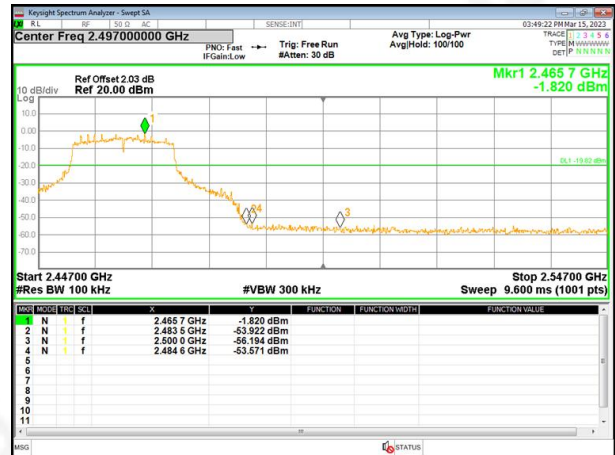
Highest channel

Test mode:

802.11n(HT20)



Lowest channel



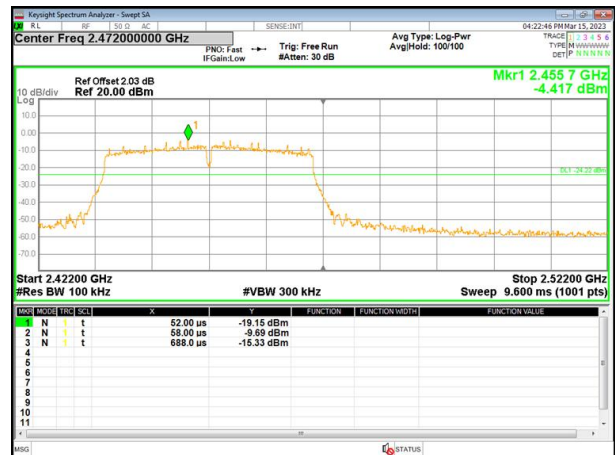
Highest channel

Test mode:

802.11n(HT40)



Lowest channel



Highest channel



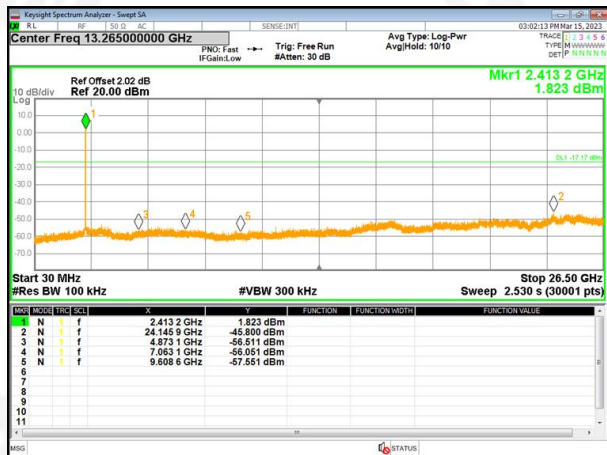
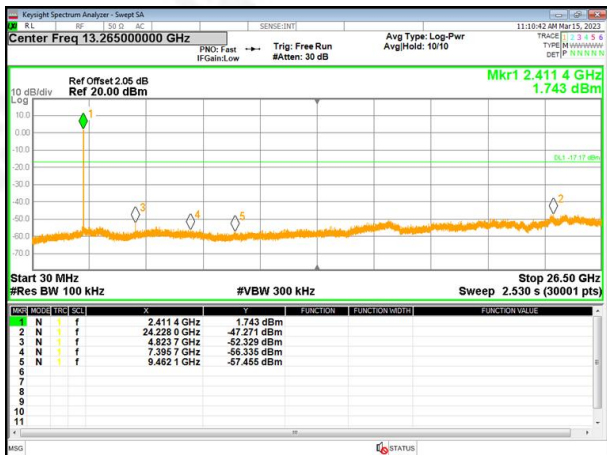
Test plot as follows:

802.11b

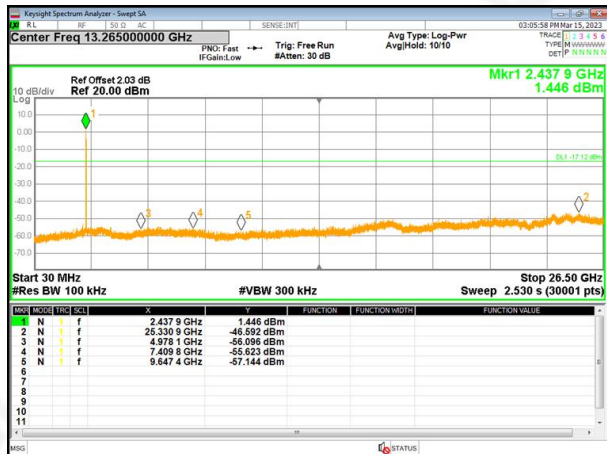
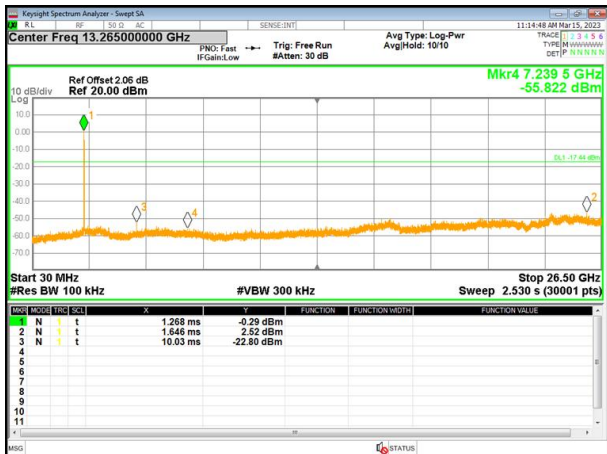
ANT1

ANT2

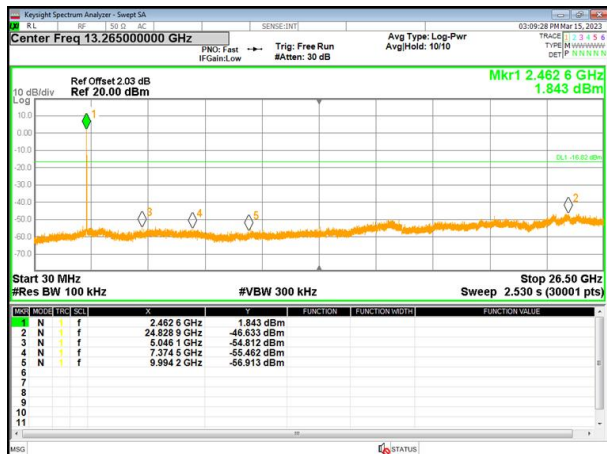
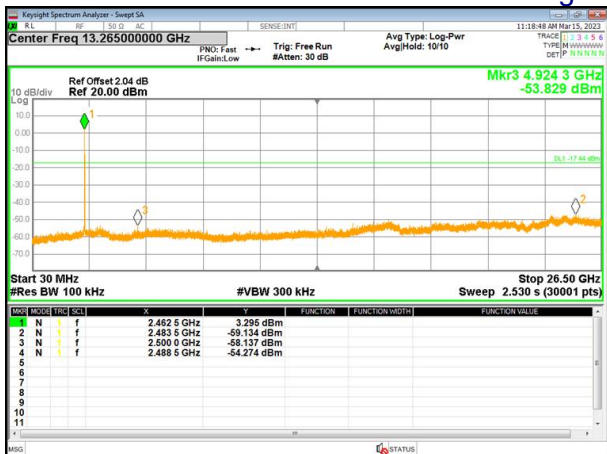
Lowest channel



Middle channel



Highest channel



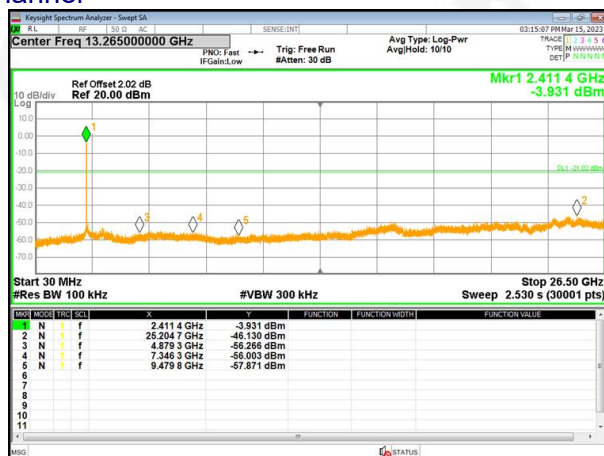
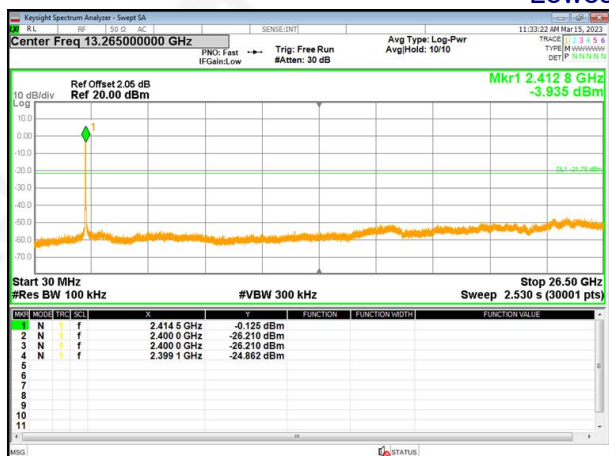


802.11g

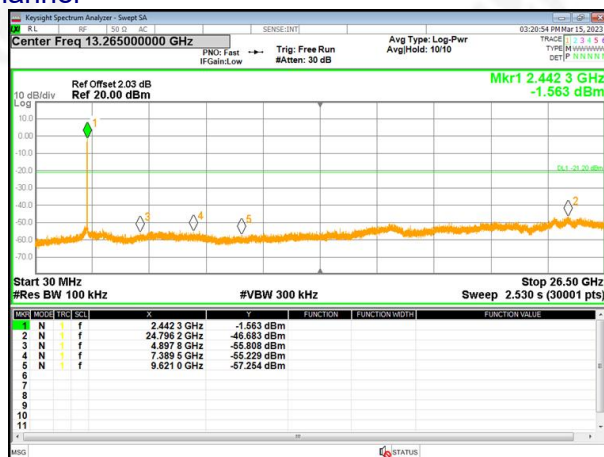
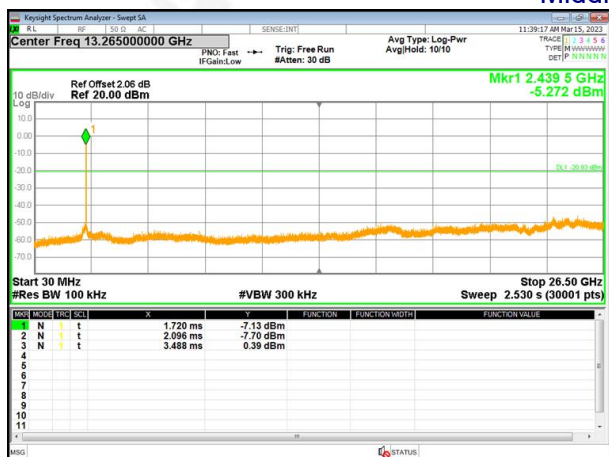
ANT1

ANT2

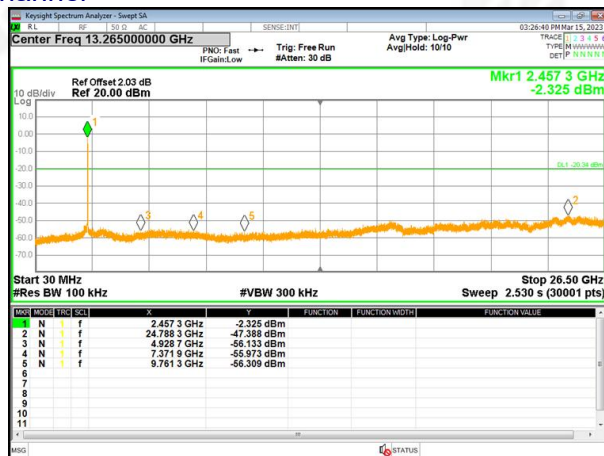
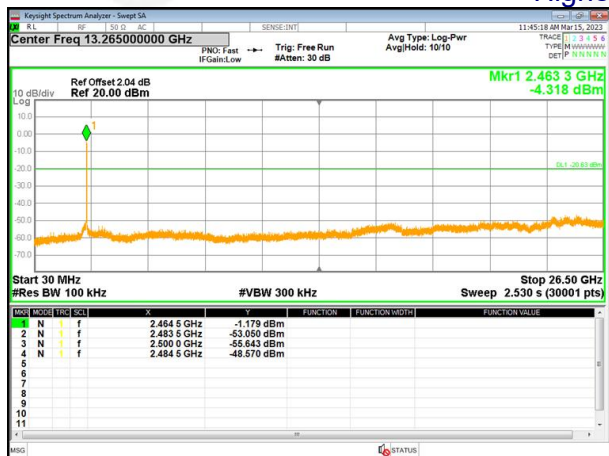
Lowest channel



Middle channel



Highest channel



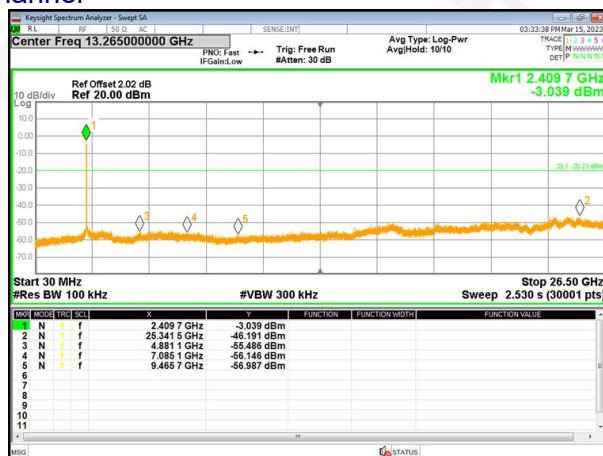
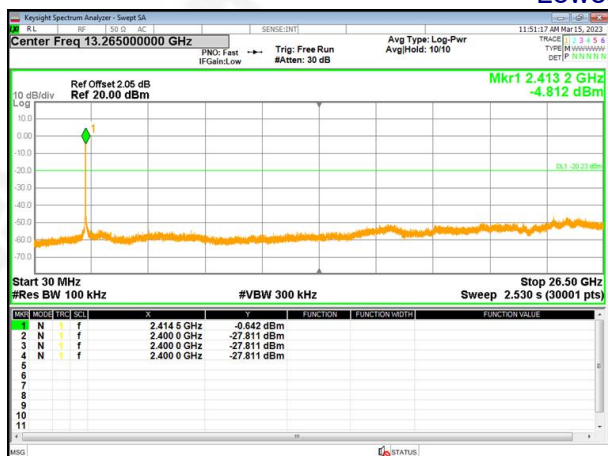


## 802.11n(HT20)

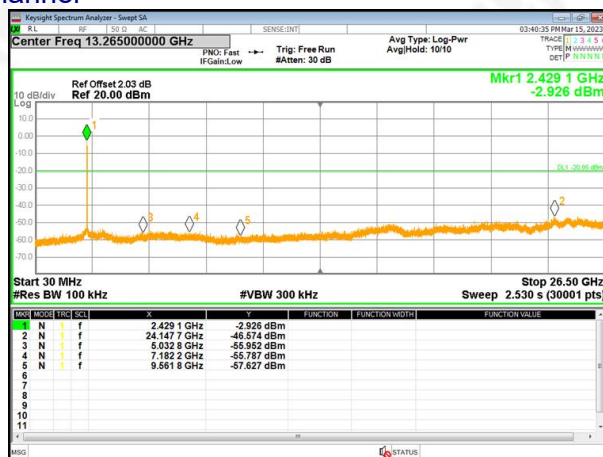
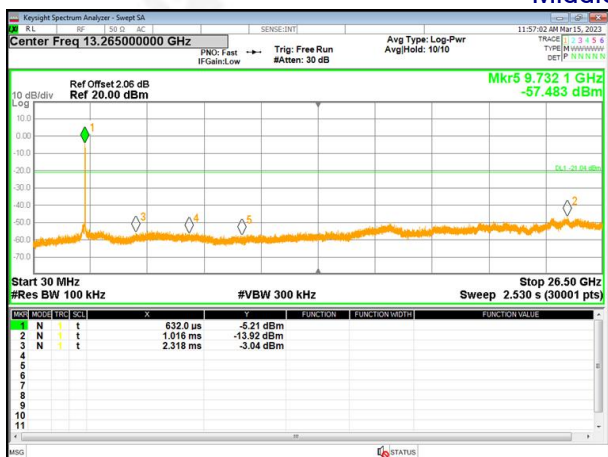
ANT1

ANT2

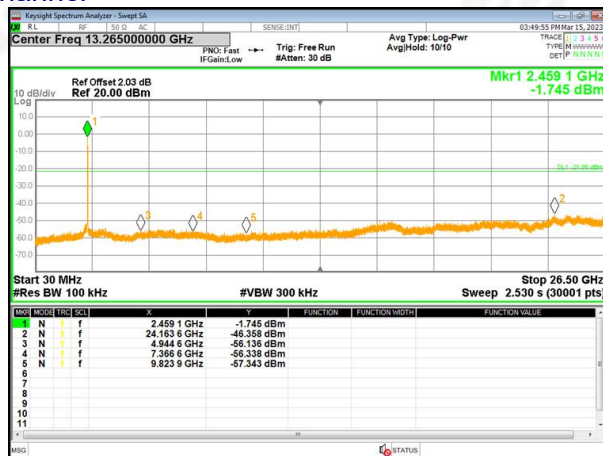
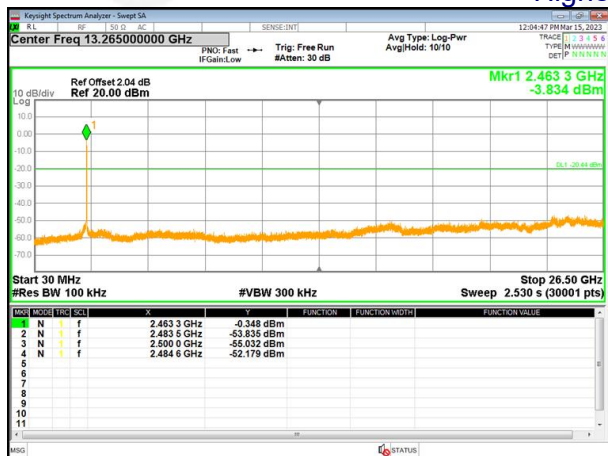
### Lowest channel



### Middle channel



### Highest channel



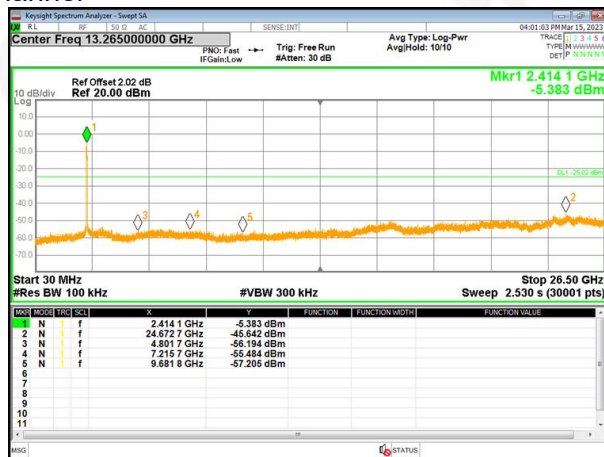
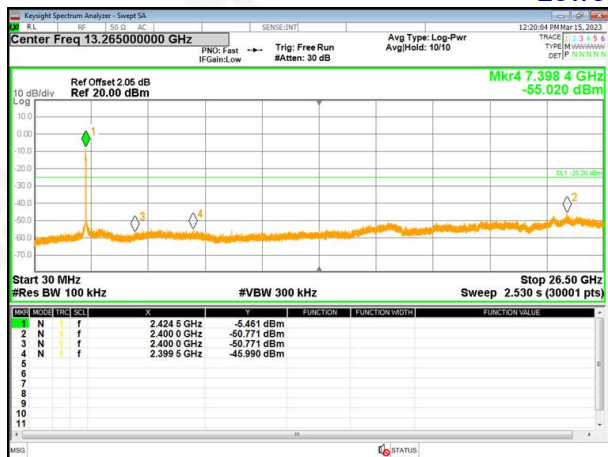


## 802.11n(HT40)

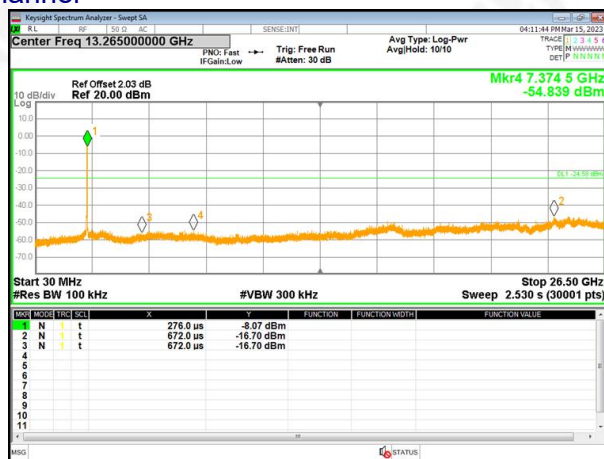
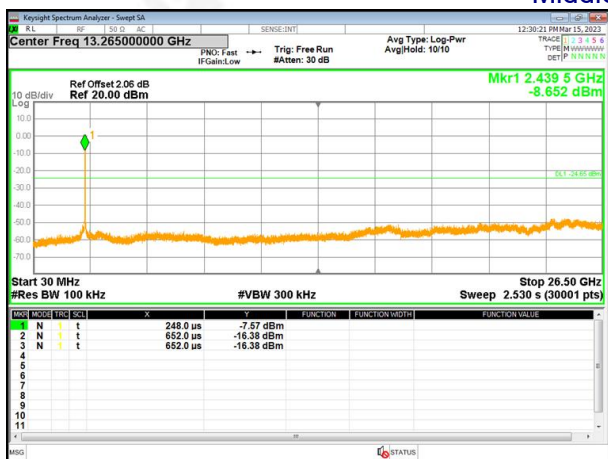
ANT1

ANT2

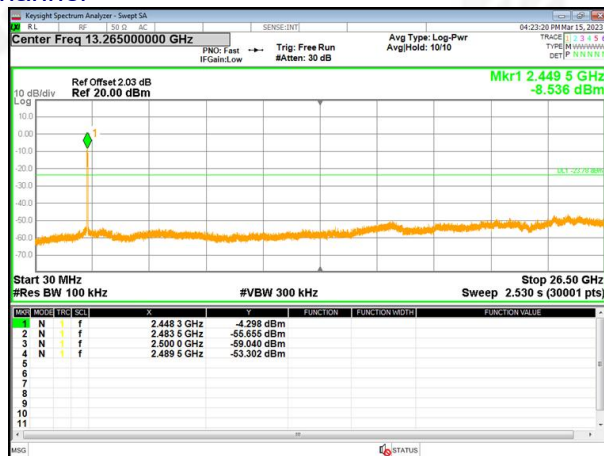
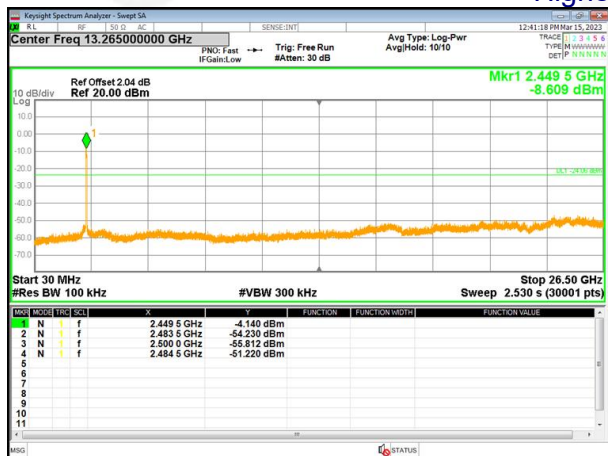
### Lowest channel



### Middle channel



### Highest channel





## 10. ANTENNA REQUIREMENT

Standard requirement:	FCC Part15 C Section 15.203 /247(b)(4)
<p>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.</p> <p>15.247(b) (4) requirement: (4) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.</p>	
<b>EUT Antenna:</b>	
The antenna is FPC Antenna, the best case gain of the antenna is 2.18dBi, 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 \*\*\*\*\*