



TX CH06



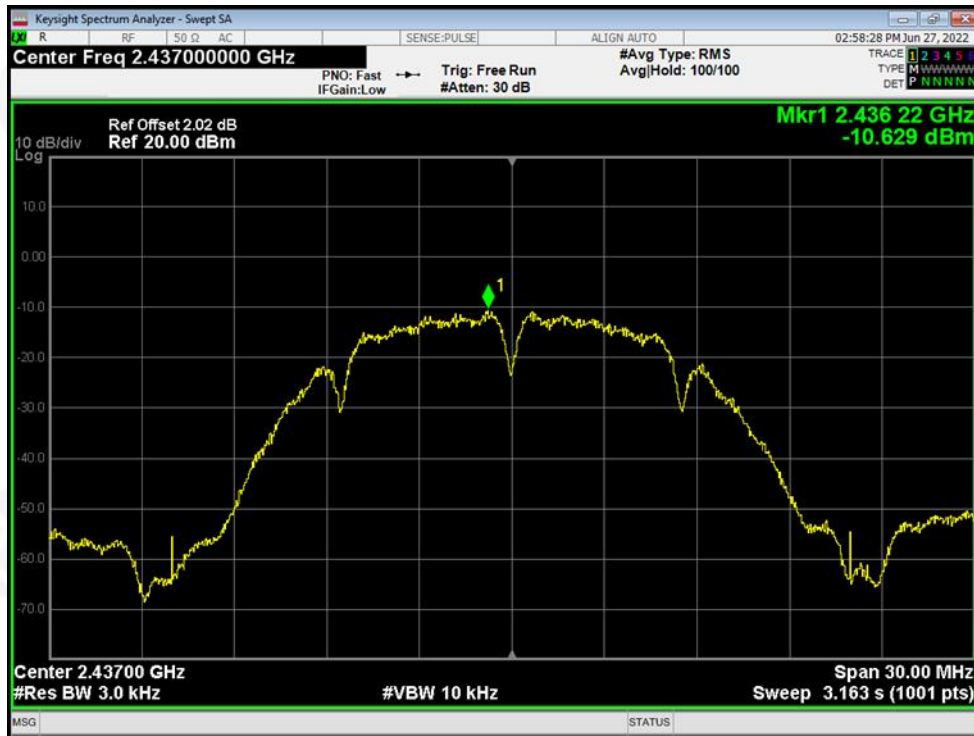
TX CH11







TX CH06



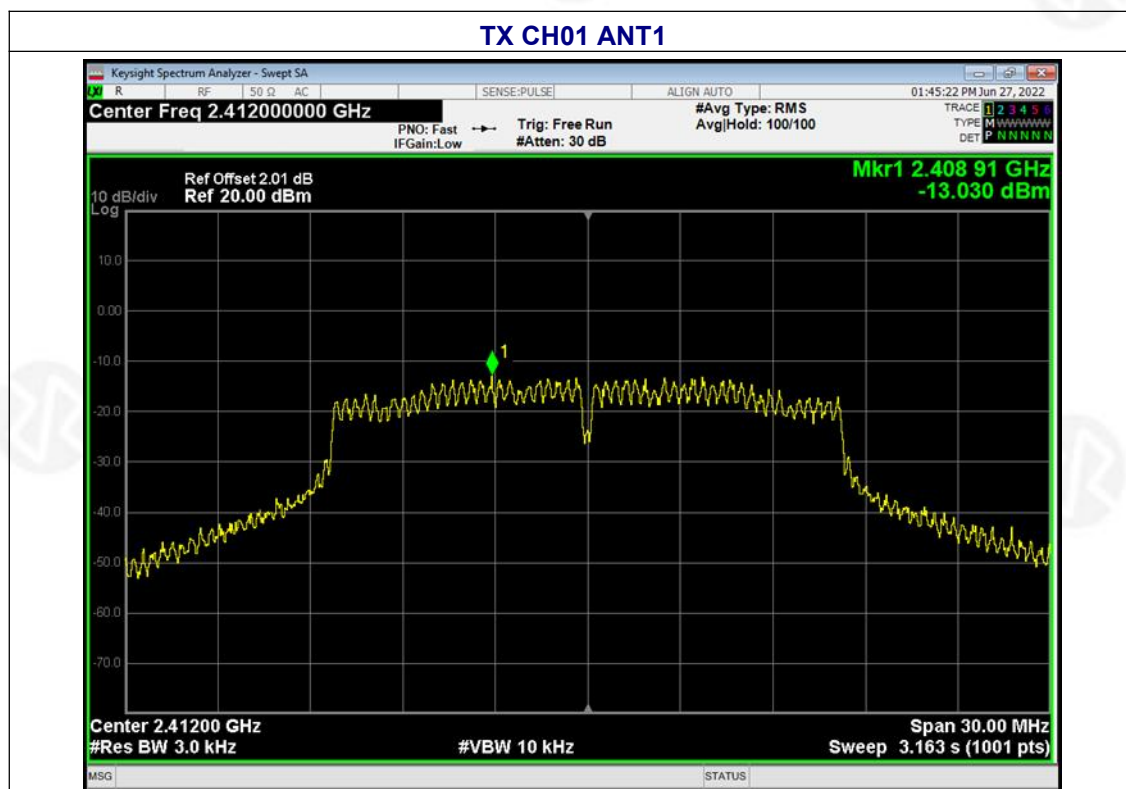
TX CH11





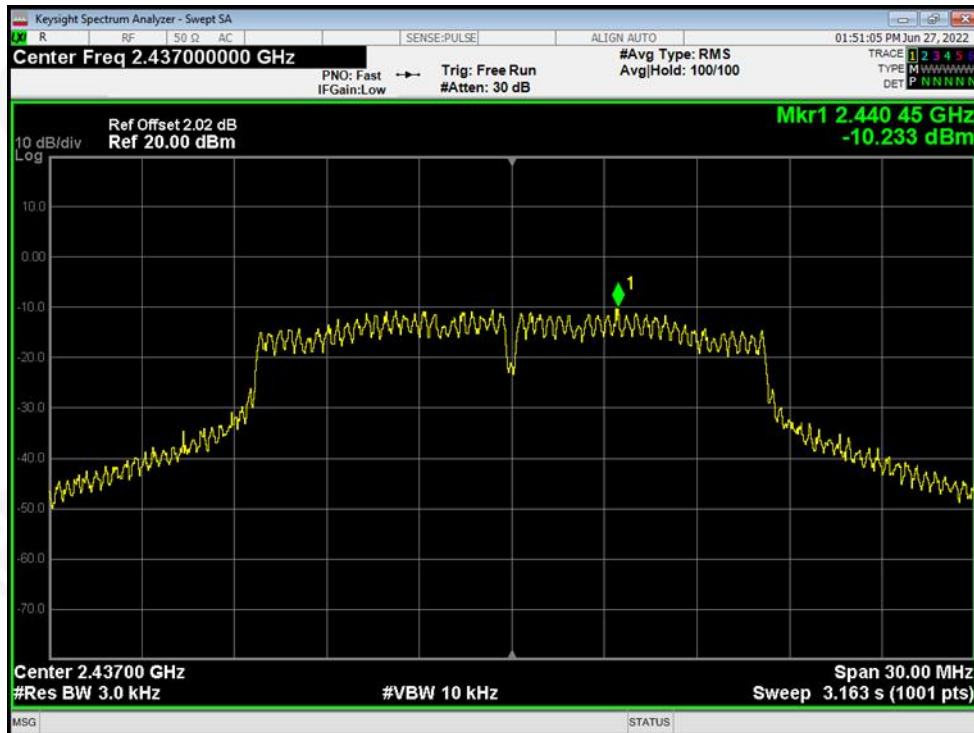
Temperature :	26℃	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX g Mode		

Frequency	Power Spectral Density (dBm/3kHz) ANT1	Power Spectral Density (dBm/3kHz) ANT2	Limit (dBm/3kHz)	Result
2412 MHz	-13.03	-23.558	8	PASS
2437 MHz	-10.233	-10.597	8	PASS
2462 MHz	-14.409	-13.963	8	PASS

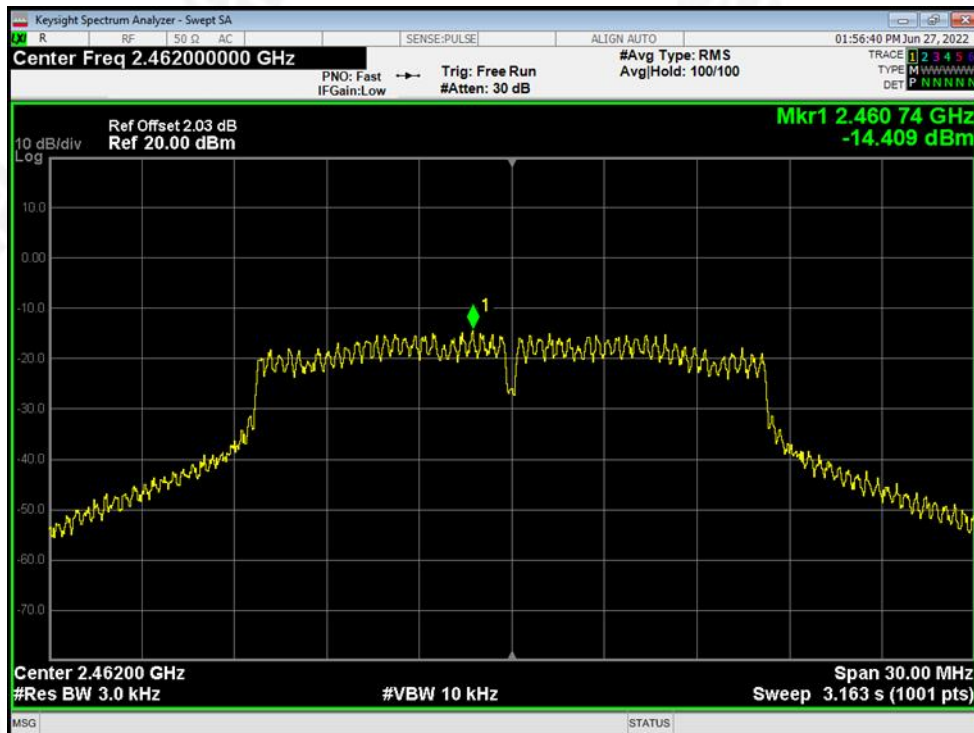




TX CH06

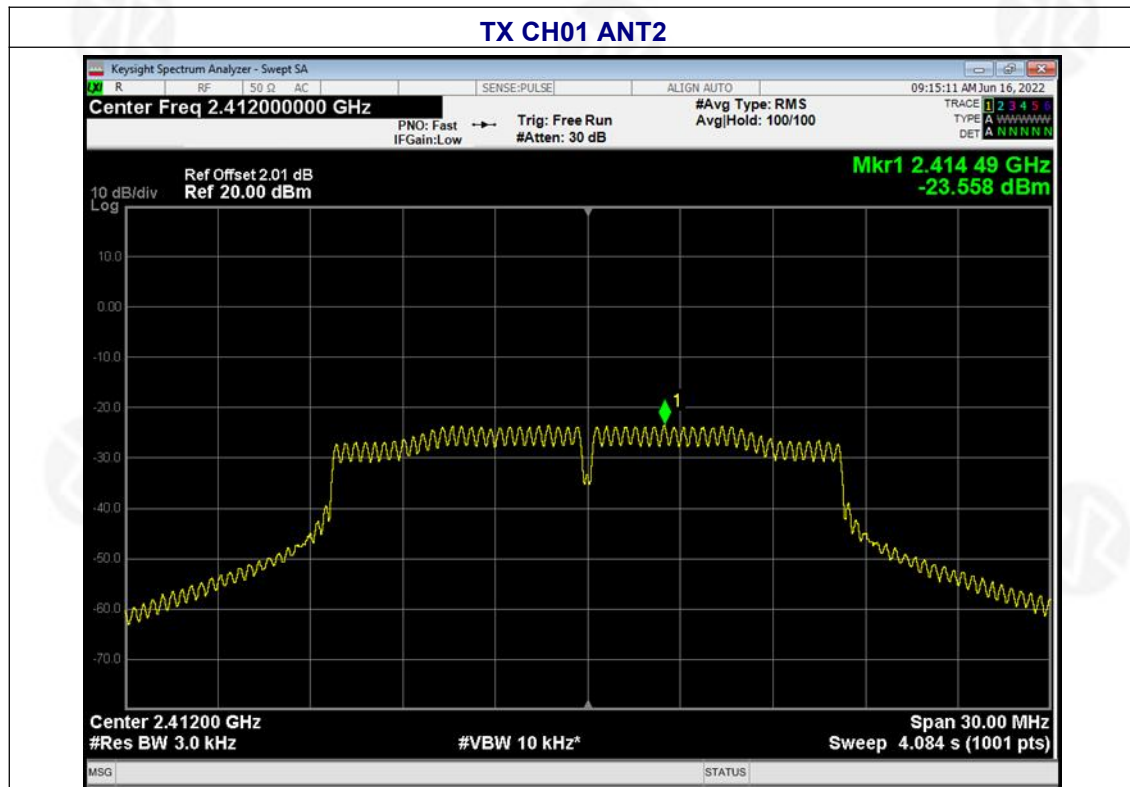


TX CH11



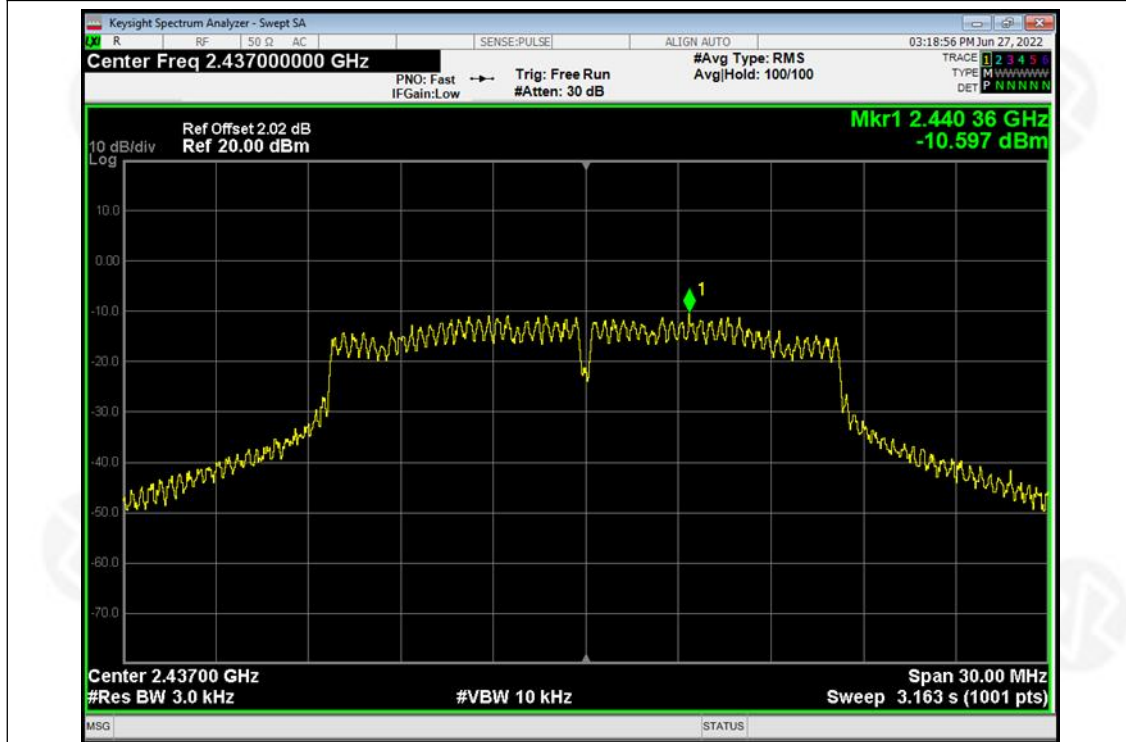


TX CH01 ANT2

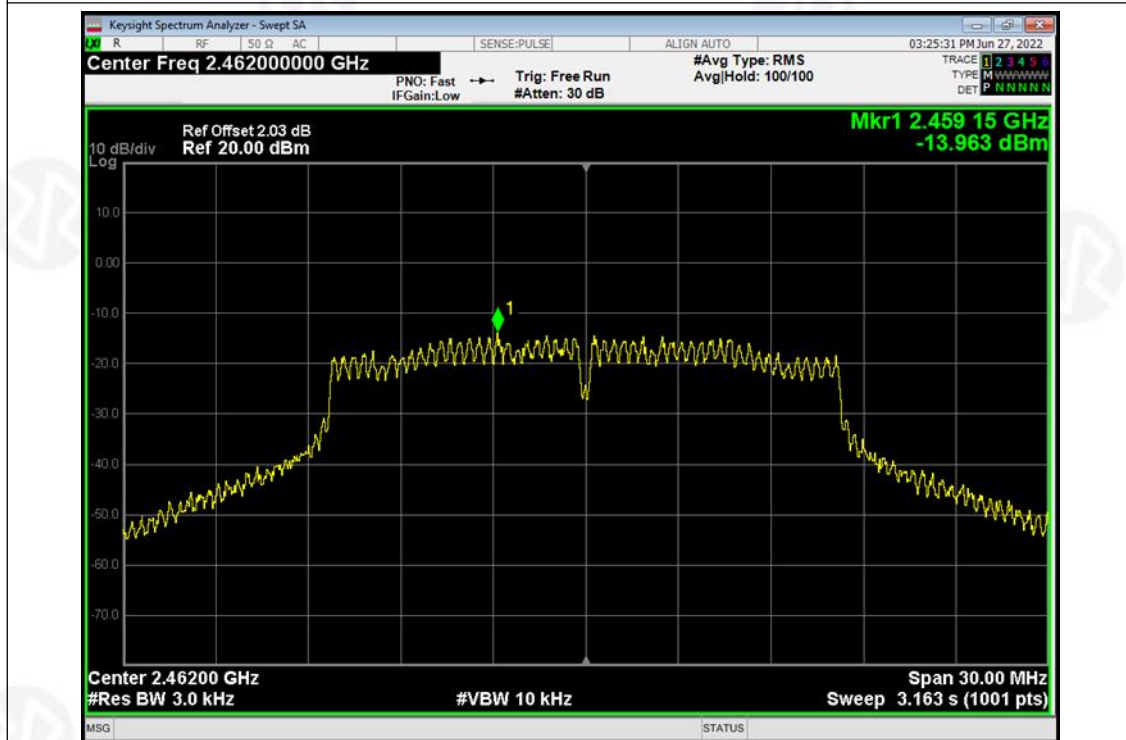




TX CH06



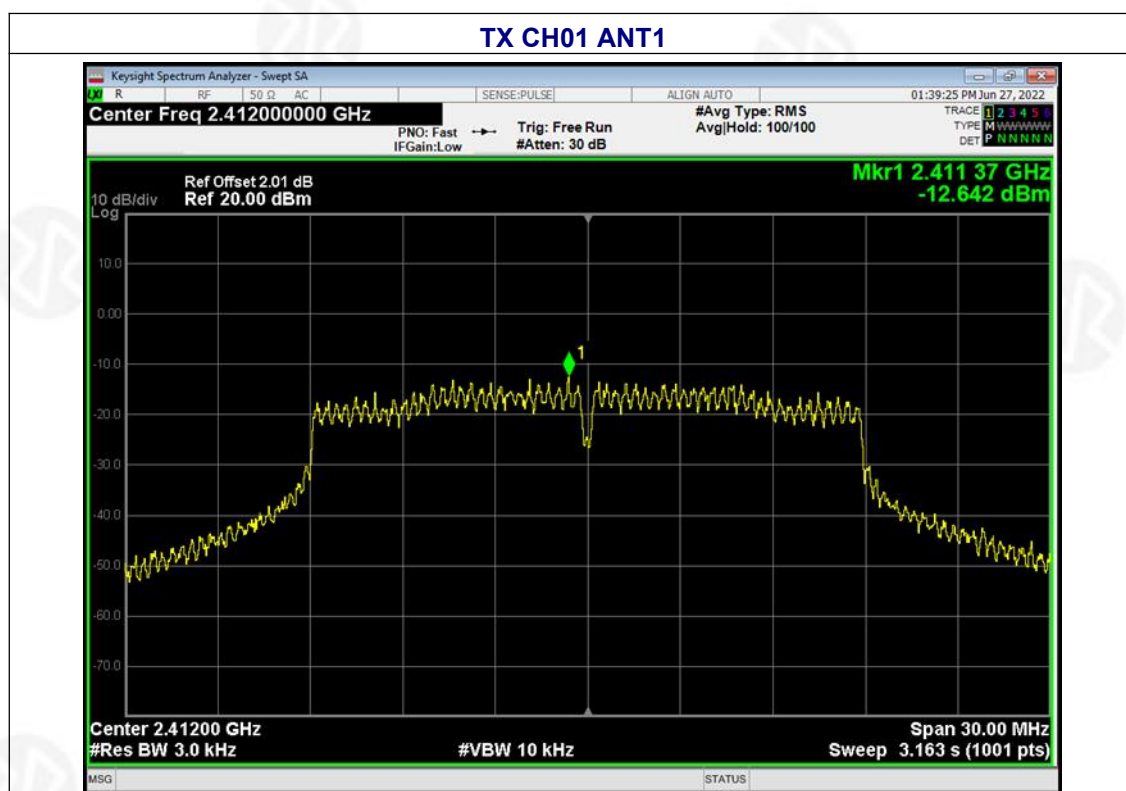
TX CH11





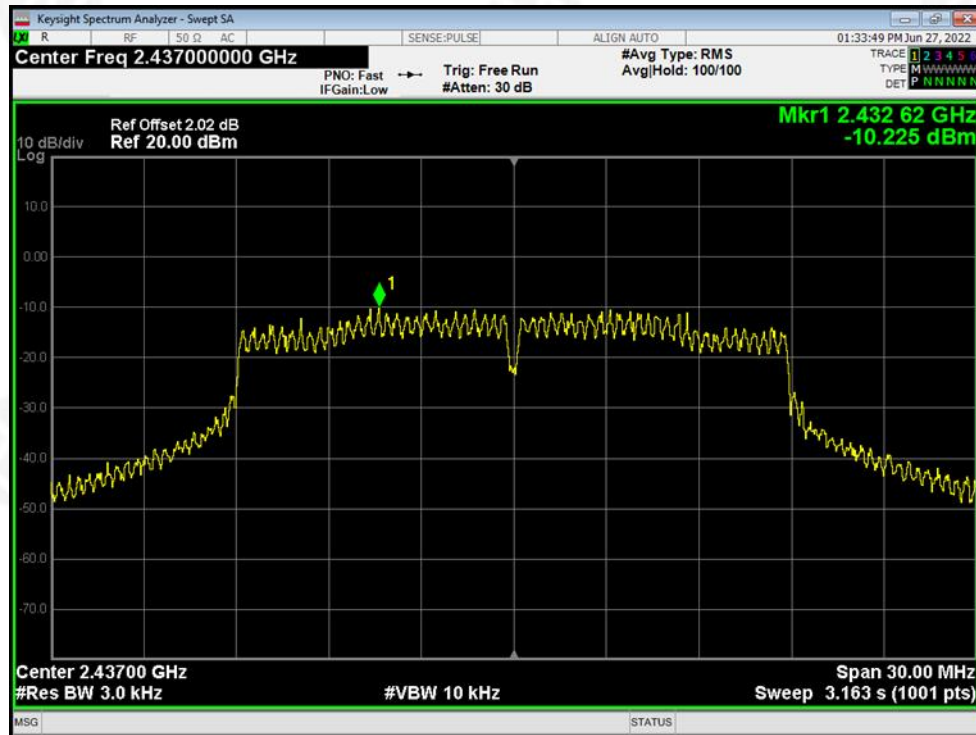
Temperature :	26°C	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX n Mode(20M)		

Frequency	Power Spectral Density (dBm/3kHz) Ant1	Power Spectral Density (dBm/3kHz) Ant2	Power Spectral Density (dBm/3kHz) Total	Limit (dBm/3kHz)	Result
2412 MHz	-12.642	-13.148	-9.877	8	PASS
2437 MHz	-10.225	-9.434	-6.801	8	PASS
2462 MHz	-14.320	-13.478	-10.868	8	PASS

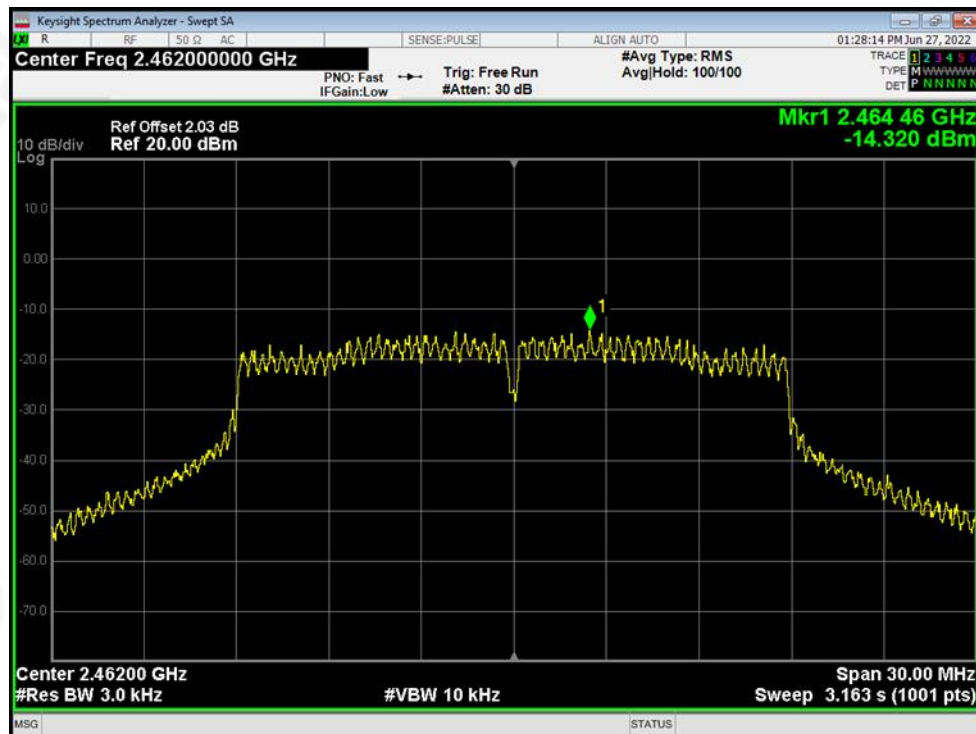


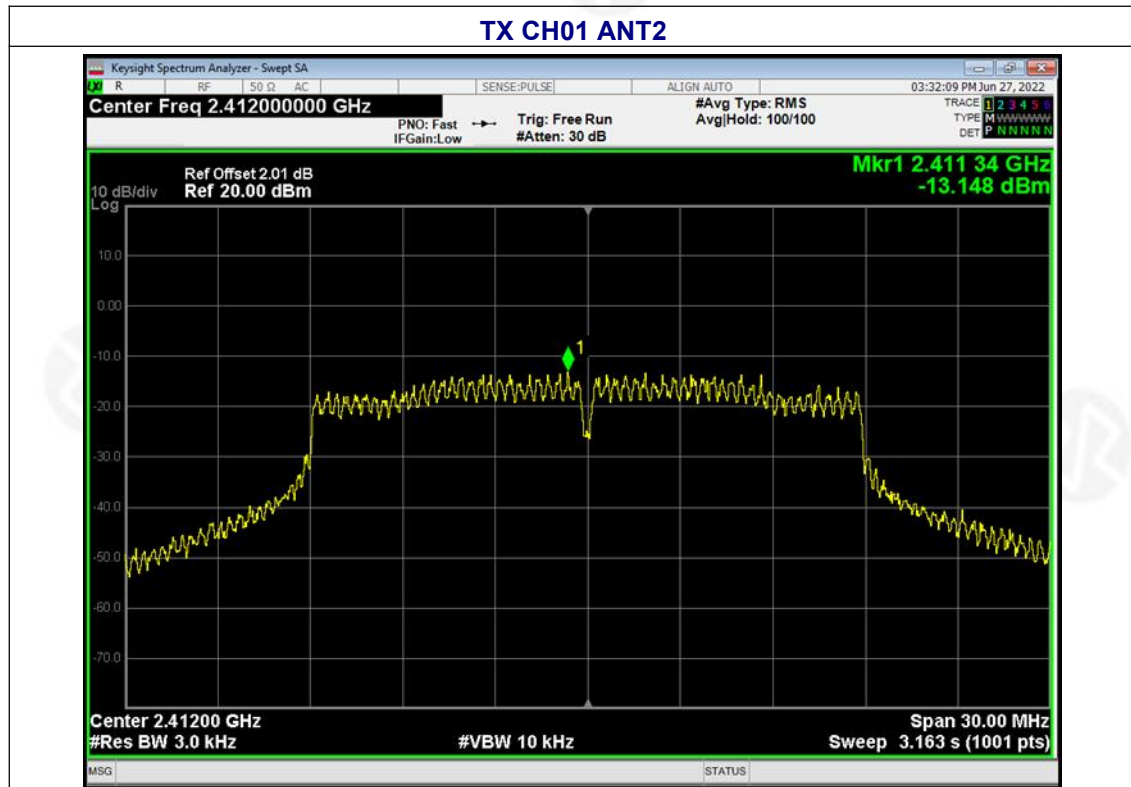


TX CH06



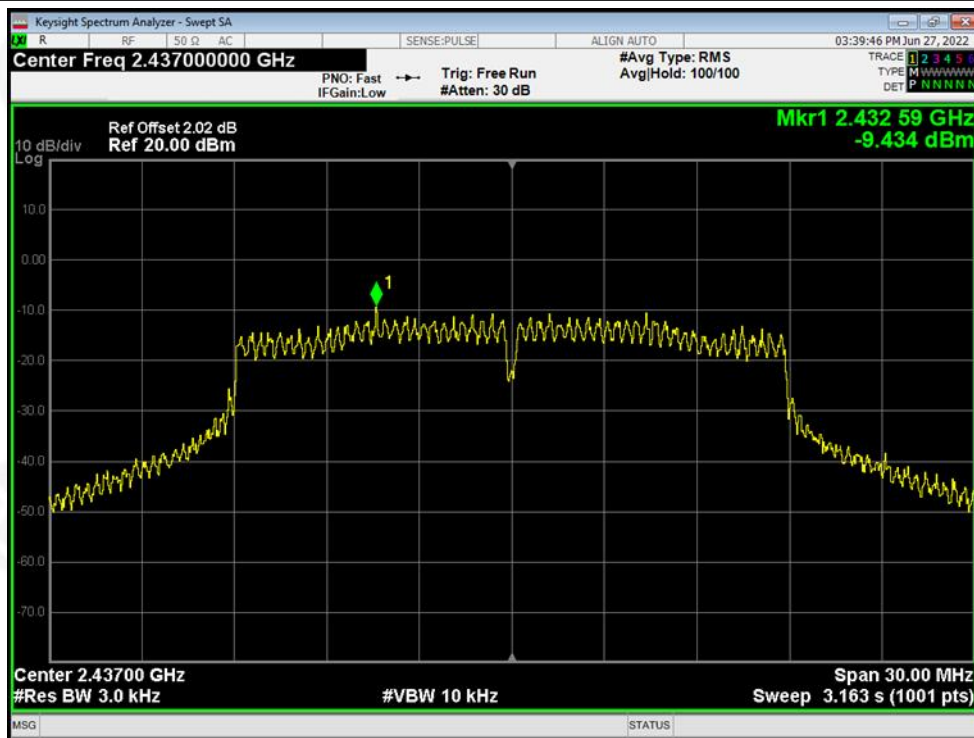
TX CH11



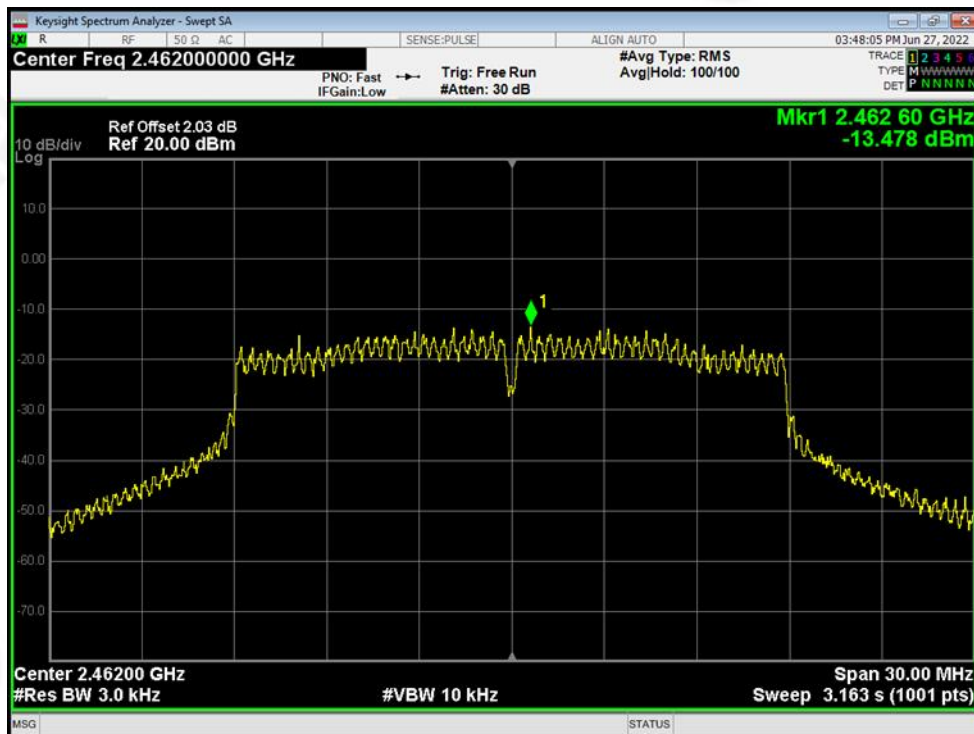




TX CH06



TX CH11

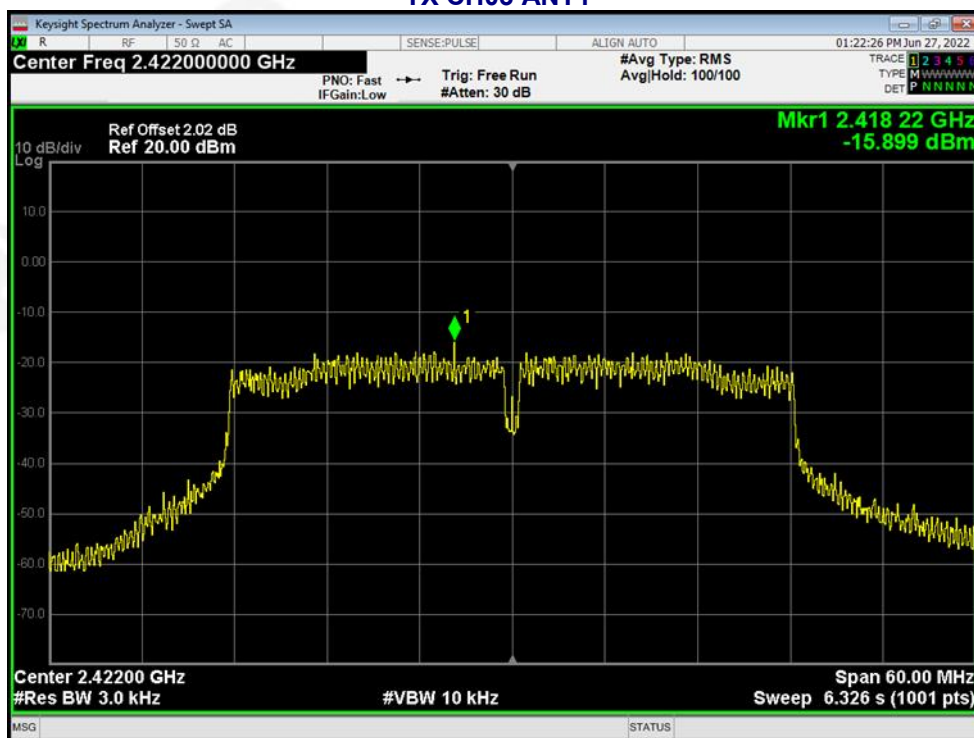




Temperature :	26℃	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX n Mode(40M)		

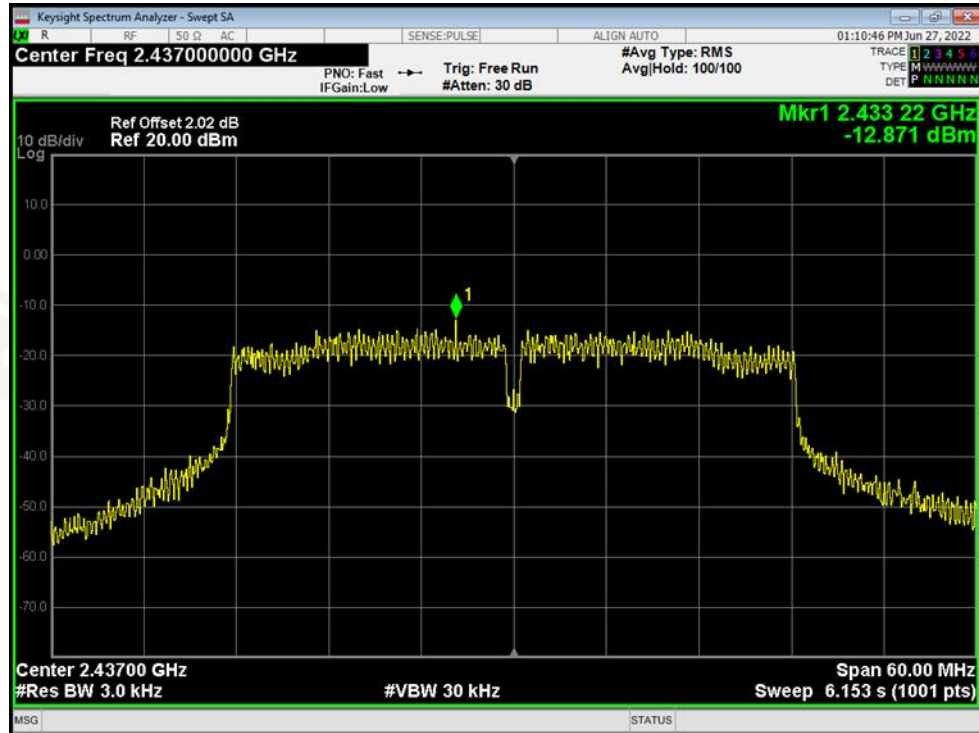
Frequency	Power Spectral Density (dBm/3kHz) Ant1	Power Spectral Density (dBm/3kHz) Ant2	Power Spectral Density (dBm/3kHz) Total	Limit (dBm/3kHz)	Result
2422 MHz	-15.899	-15.759	-12.818	8	PASS
2437 MHz	-12.871	-13.058	-9.953	8	PASS
2452 MHz	-17.012	-17.058	-14.025	8	PASS

TX CH03 ANT1

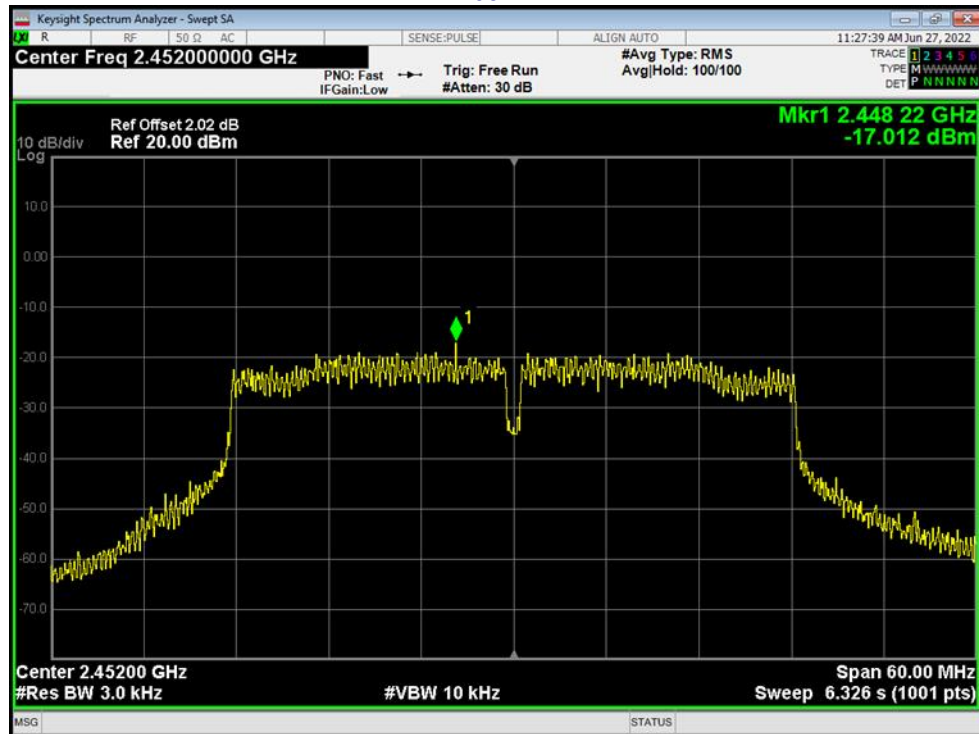




TX CH06

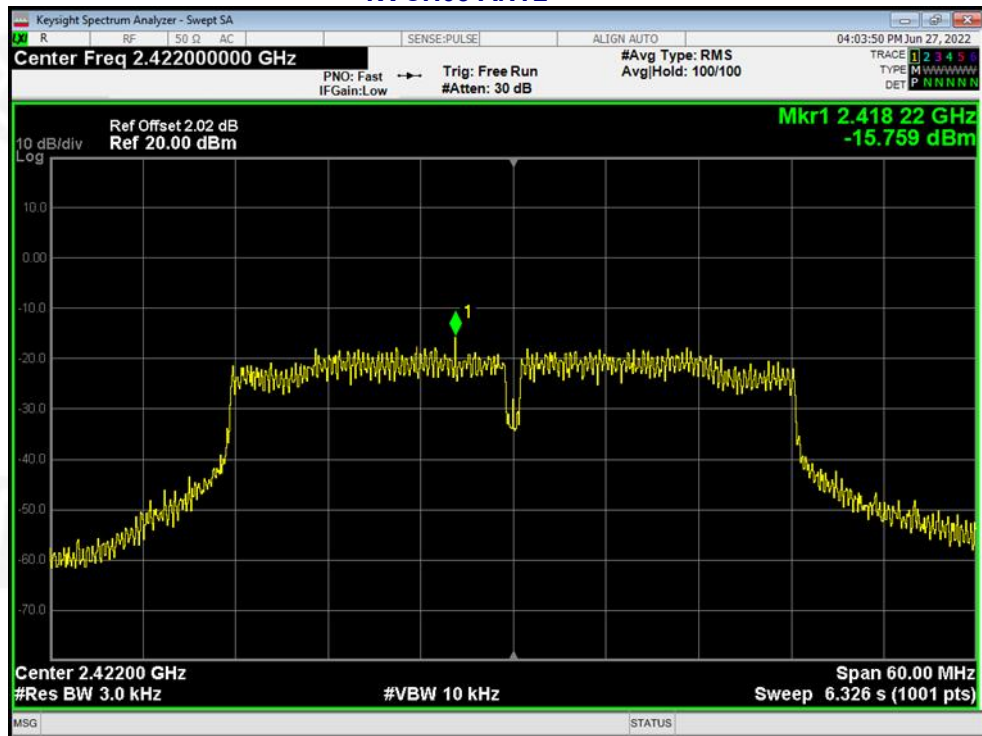


TX CH09

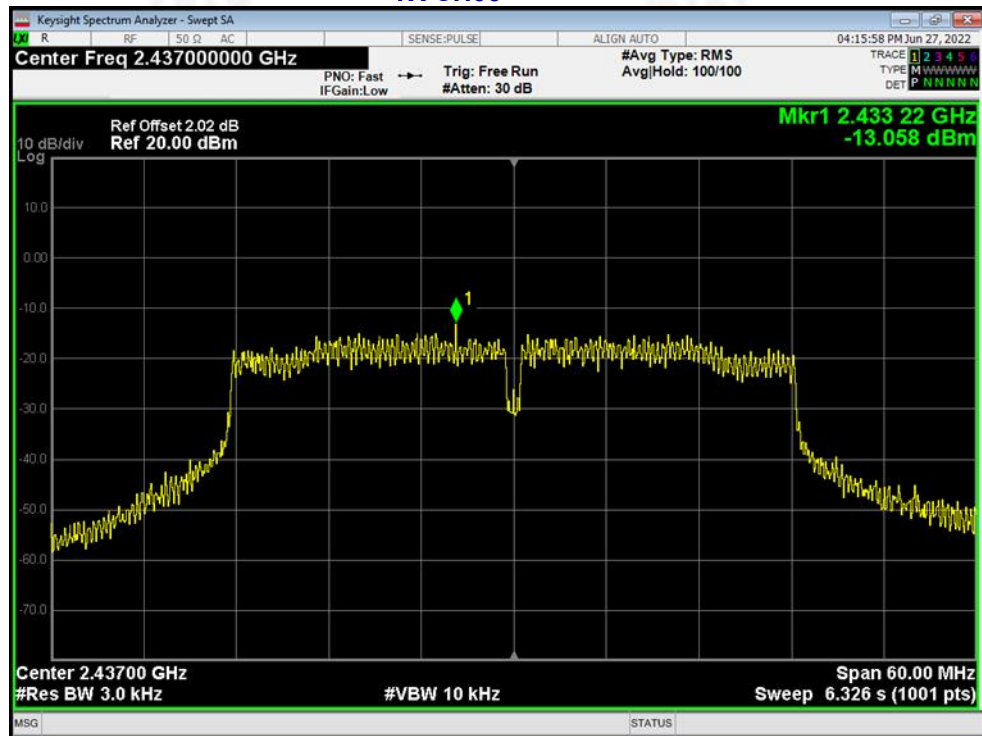




TX CH03 ANT2

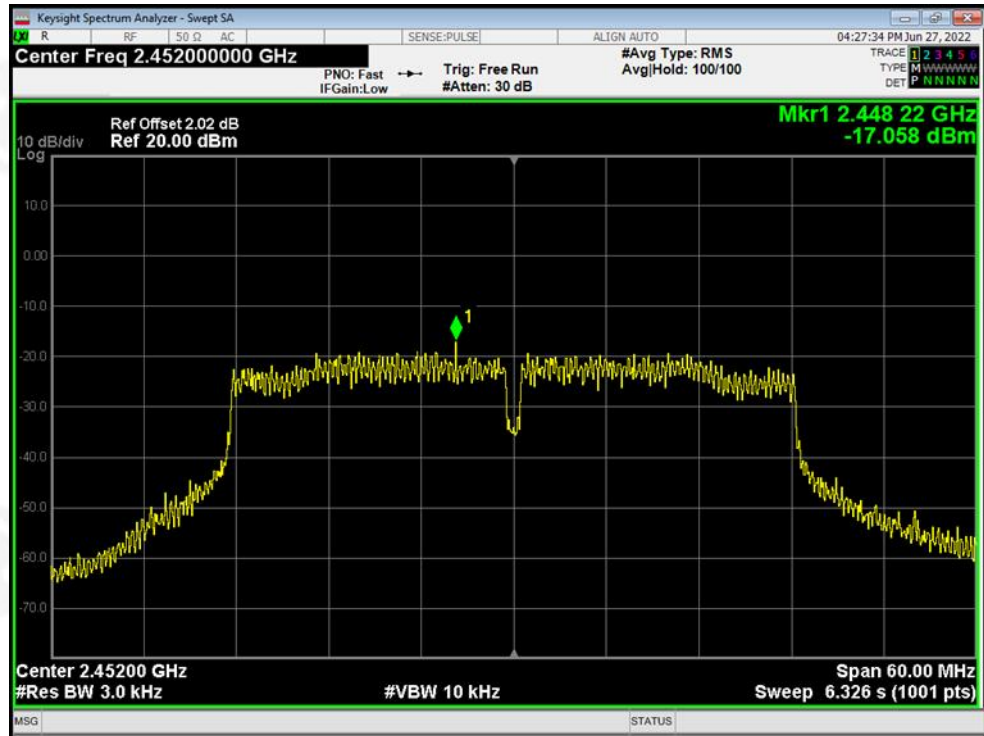


TX CH06





TX CH09





7. CHANNEL BANDWIDTH& 99% OCCUPY BANDWIDTH

Test Requirement:	FCC Part15 C Section 15.247 (a)(2)
Test Method:	ANSI C63.10:2013 and KDB558074 D01DTS 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℃	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX b Mode		

Test CH	-6dB Occupy Bandwidth (MHz) ANT1					Result
	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)	Limit(KHz)	
Lowest	9.313	14.730	13.860	35.050	>500	Pass
Middle	9.686	13.860	13.890	35.090		
Highest	9.115	15.870	15.910	32.580		

Test CH	-6dB Occupy Bandwidth (MHz) ANT2					Result
	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)	Limit(KHz)	
Lowest	9.571	15.052	16.520	35.110	>500	Pass
Middle	9.113	13.540	13.730	35.010		
Highest	9.105	15.260	15.410	33.810		



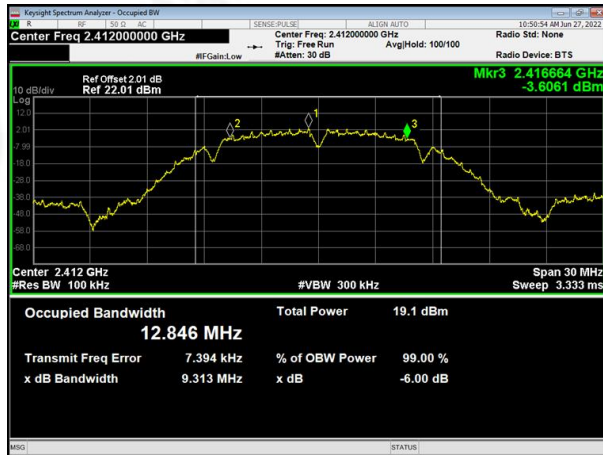
Test plot as follows:

802.11b

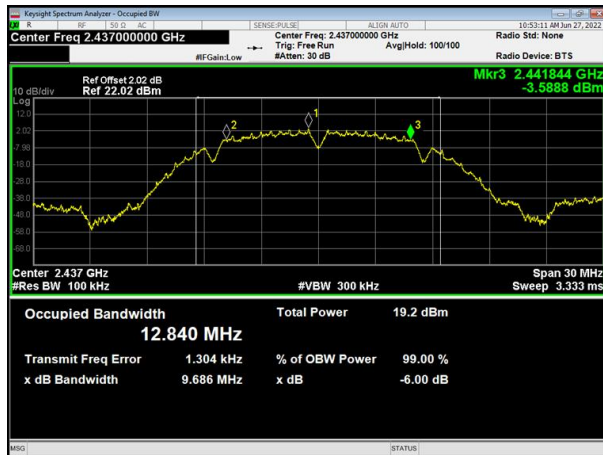
ANT1

802.11g

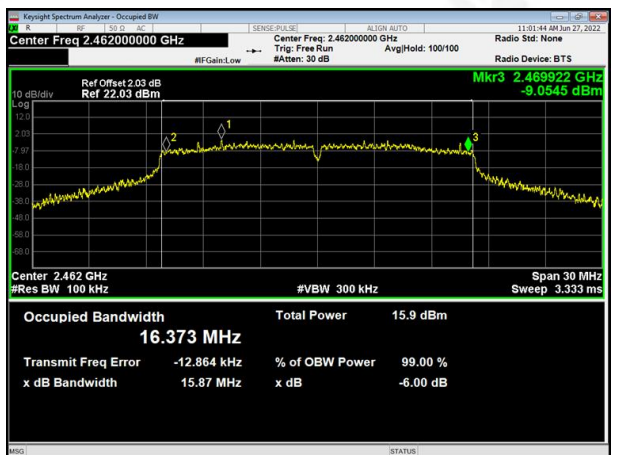
Lowest channel



Middle channel



Highest channel



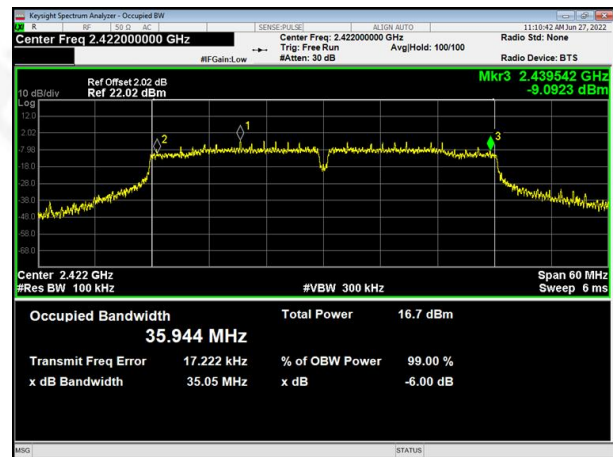


802.11n20

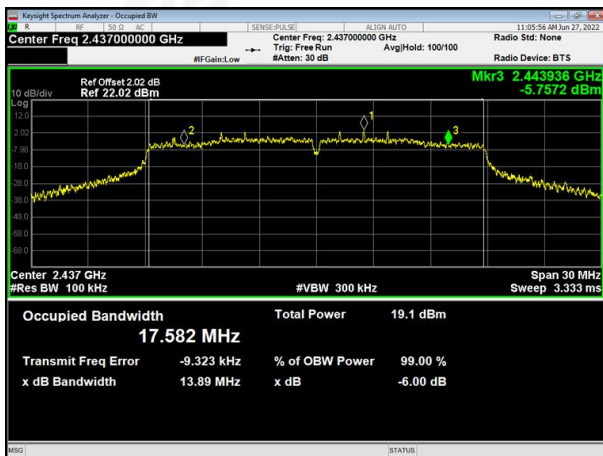
ANT1

802.11n40

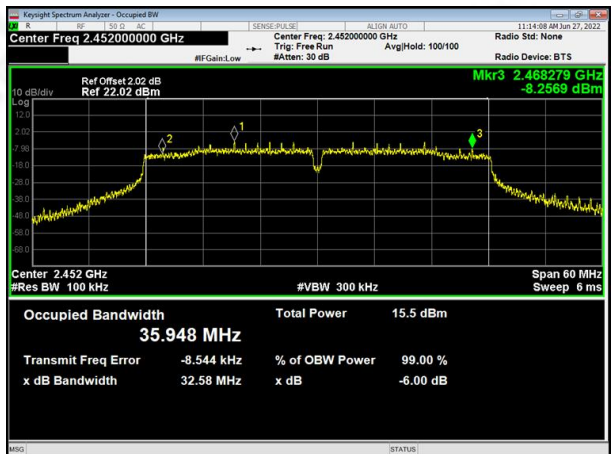
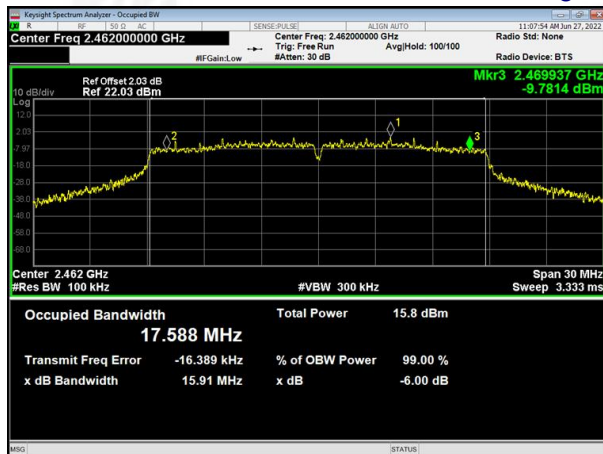
Lowest channel



Middle channel



Highest channel



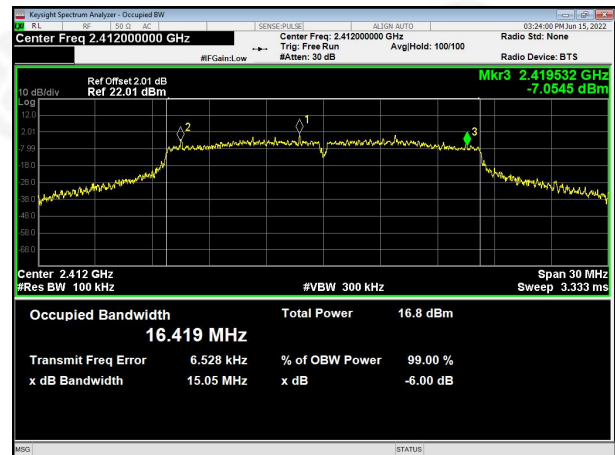
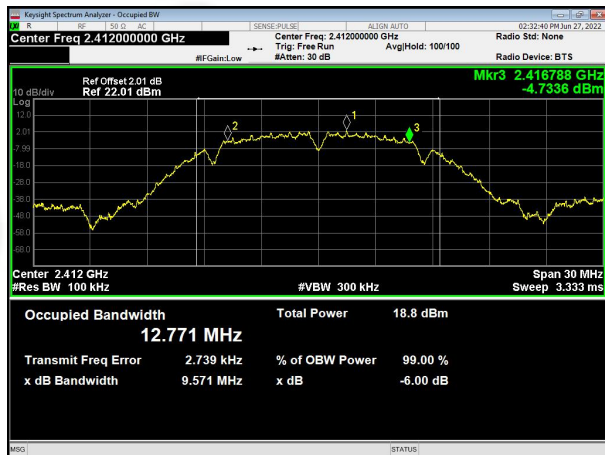


802.11b

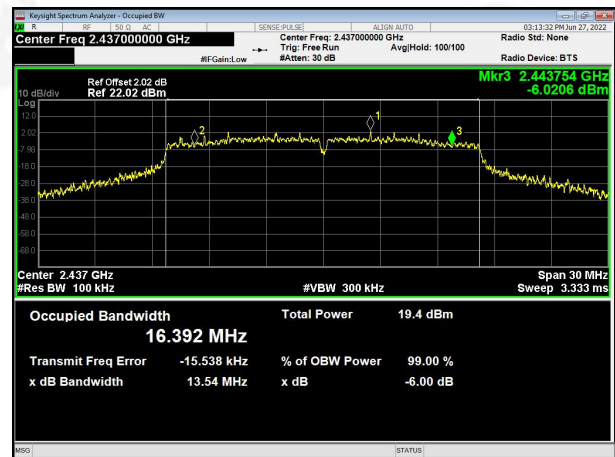
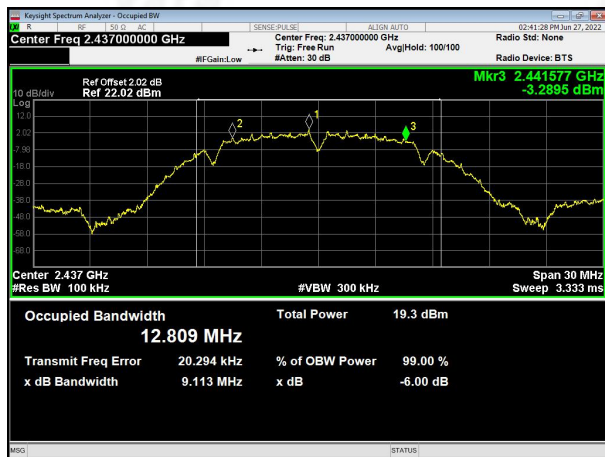
ANT2

802.11g

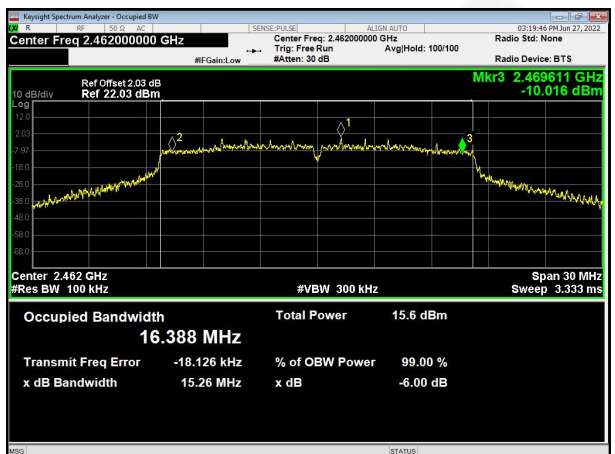
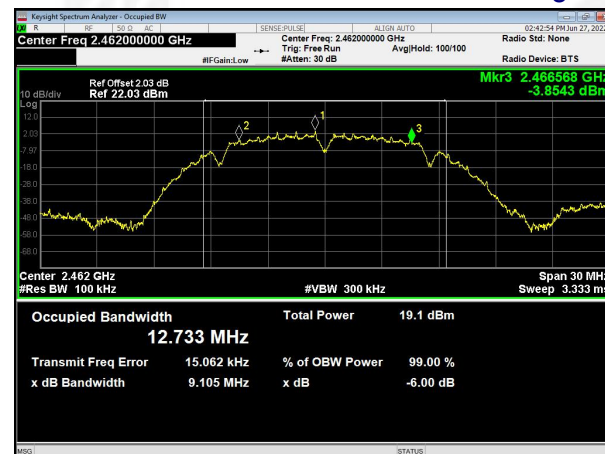
Lowest channel



Middle channel



Highest channel



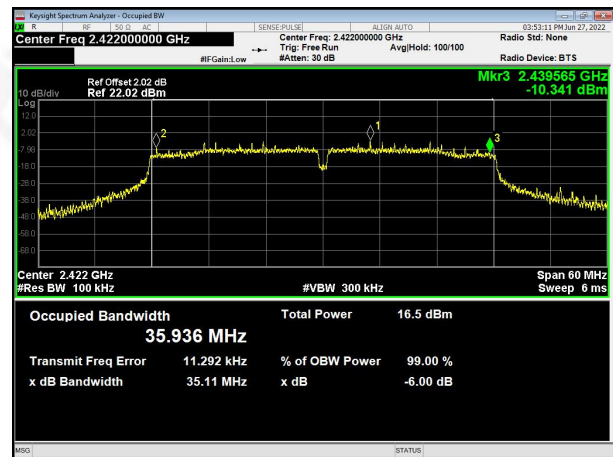
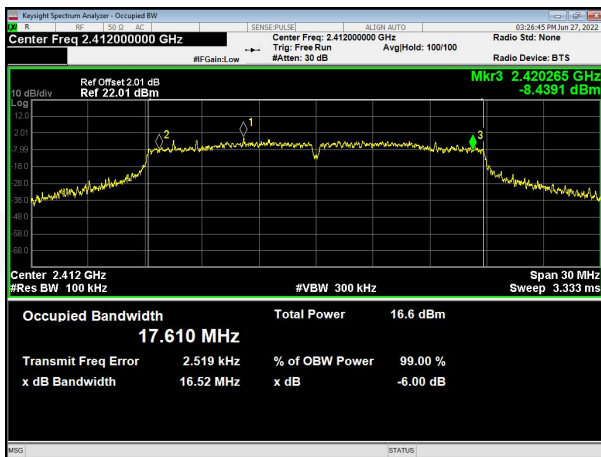


802.11n20

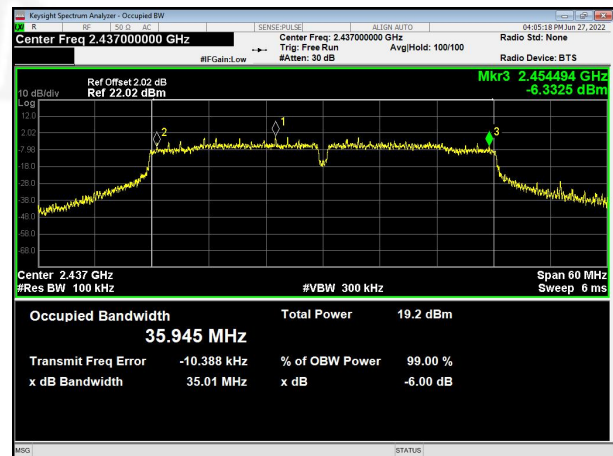
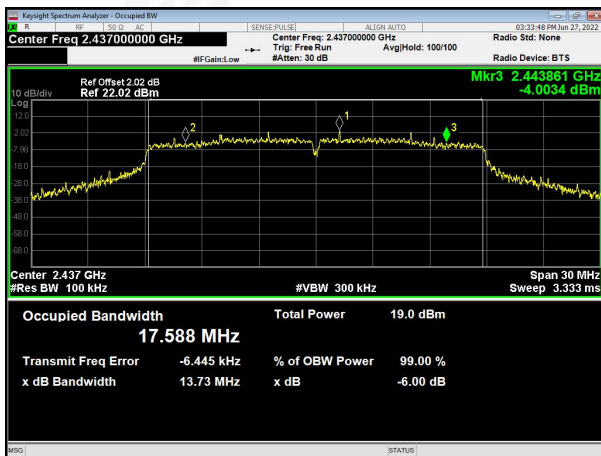
ANT2

802.11n40

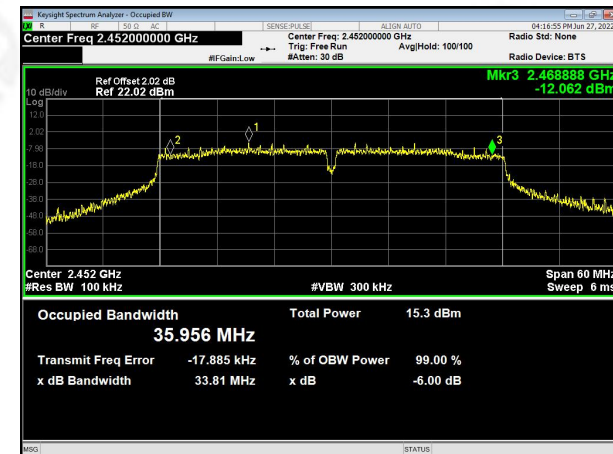
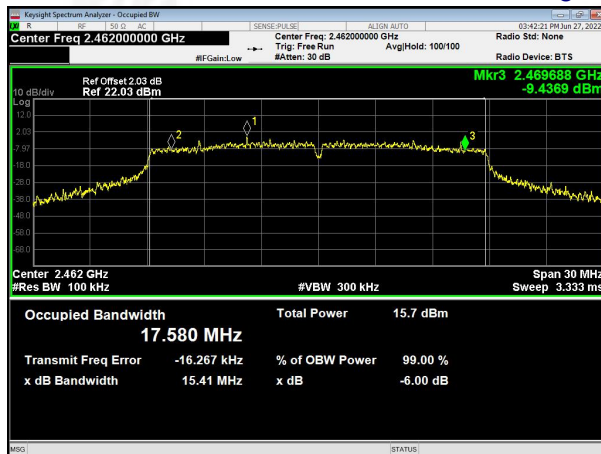
Lowest channel



Middle channel



Highest channel





8. PEAK OUTPUT POWER TEST

Test Requirement:	FCC Part15 C Section 15.247 (b)(3)
Test Method:	ANSI C63.10:2013 and KDB558074 D01DTS 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 :	AC 120V/60Hz

Test CH	Peak Output Power (dBm)				Limit(dBm)	Result
	802.11b Ant1	802.11b Ant2	802.11g Ant1	802.11g Ant2		
Lowest	14.411	14.052	15.470	10.903	30.00	Pass
Middle	14.453	13.084	17.837	13.465		
Highest	14.780	12.923	14.481	14.282		

Test CH	Peak Output Power (dBm)			Limit(dBm)	Result
	802.11n(HT20) Ant1	802.11n(HT20) Ant2	802.11n(HT20) Total		
Lowest	15.414	15.329	18.382	30.00	Pass
Middle	17.730	17.778	20.764		
Highest	14.452	14.425	17.449		

Test CH	Peak Output Power (dBm)			Limit(dBm)	Result
	802.11n(HT40) Ant1	802.11n(HT40) Ant2	802.11n(HT40) Total		
Lowest	15.048	15.015	18.042	30.00	Pass
Middle	18.116	17.834	20.988		
Highest	13.918	13.911	16.925		



9. CONDUCTED BAND EDGE AND SPURIOUS EMISSION

Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	ANSI C63.10:2013 and KDB558074 D01DTS 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.

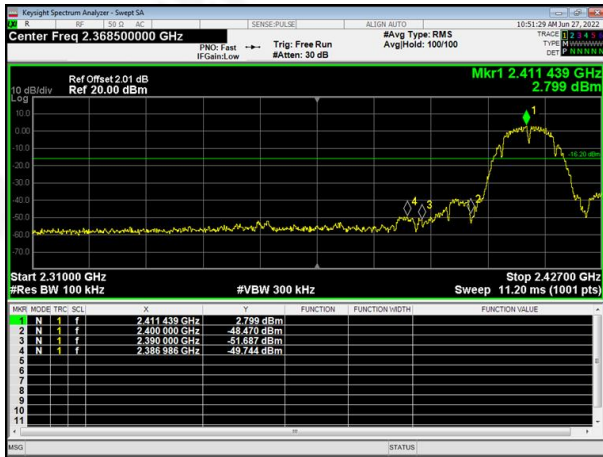
9.6 TEST RESULTS



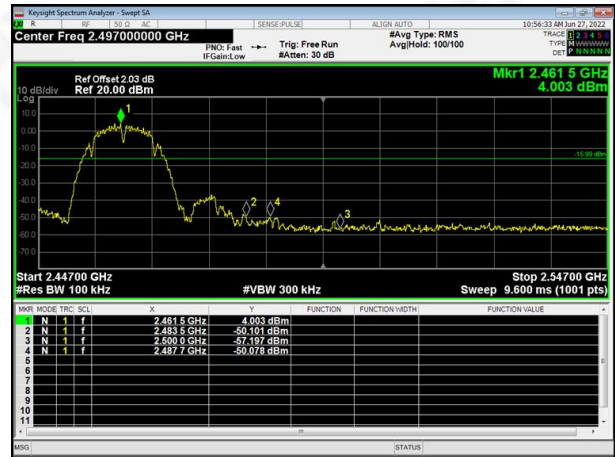
Test plot as follows:

Test mode:

802.11b



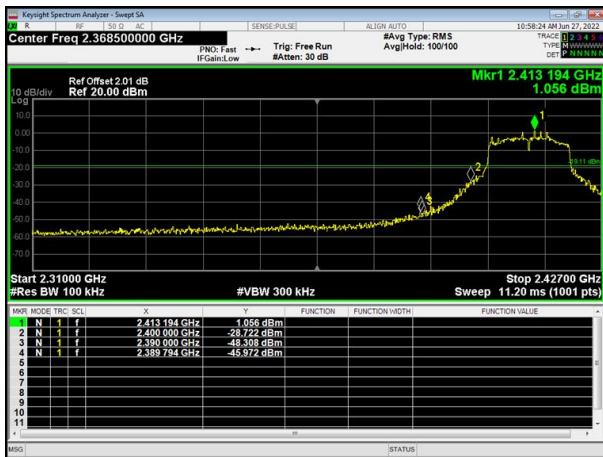
Lowest channel



Highest channel

Test mode:

802.11g



Lowest channel

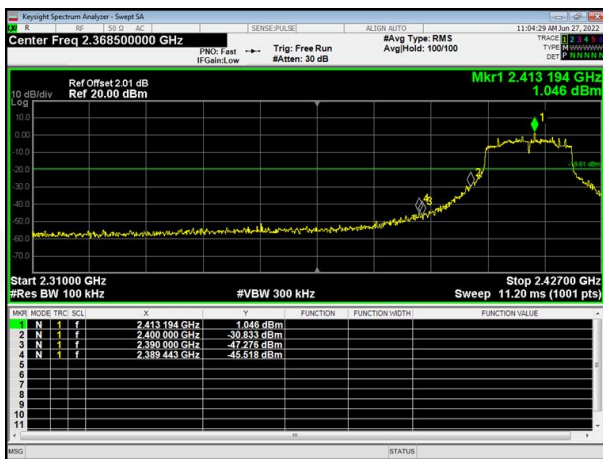


Highest channel

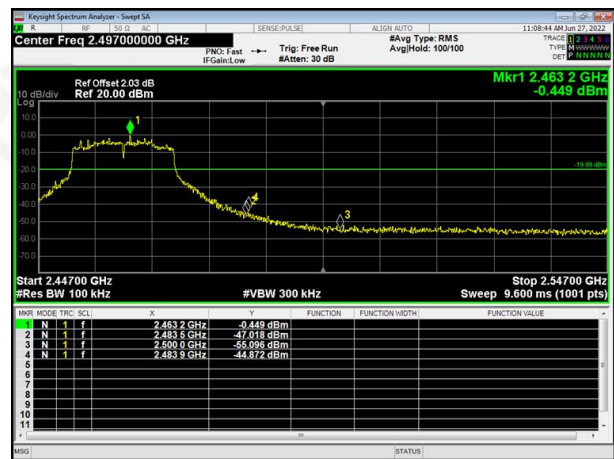


Test mode:

802.11n(HT20)



Lowest channel



Highest channel

Test mode:

802.11n(HT40)



Lowest channel



Highest channel

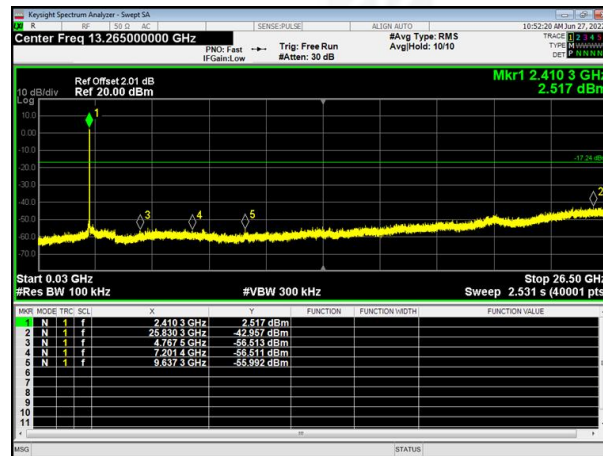
The test plot shows only the worst case ANT1.



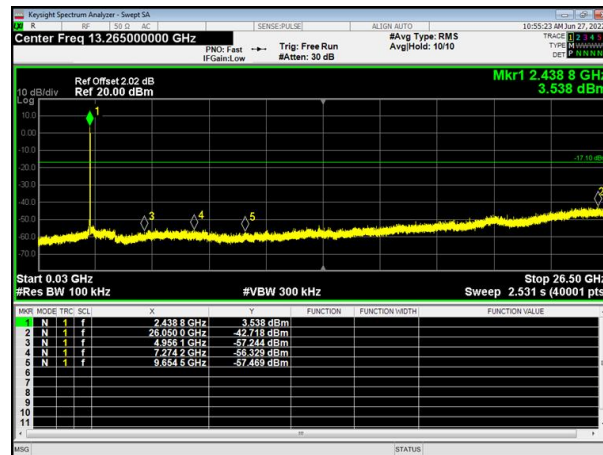
Test plot as follows:

802.11b

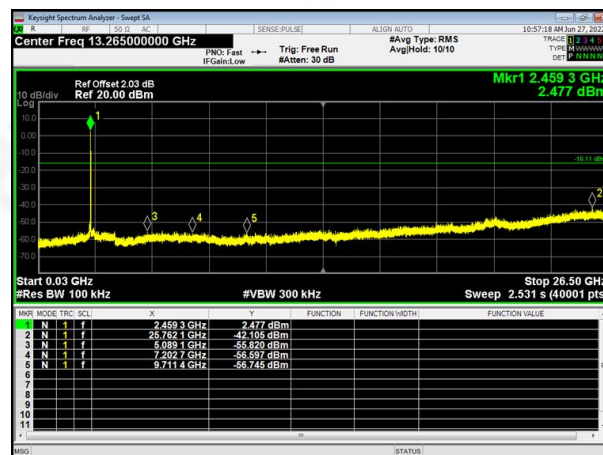
Lowest channel



Middle channel



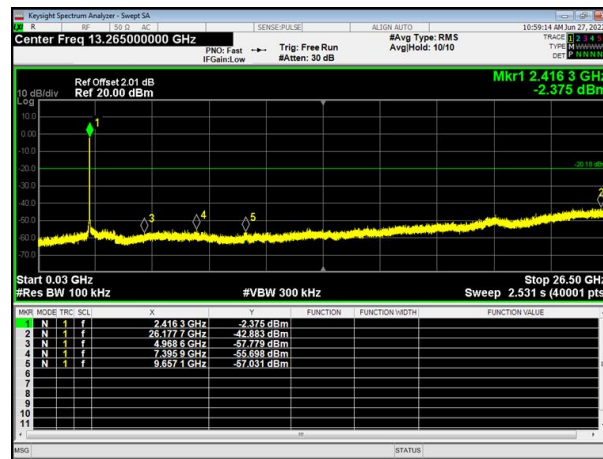
Highest channel



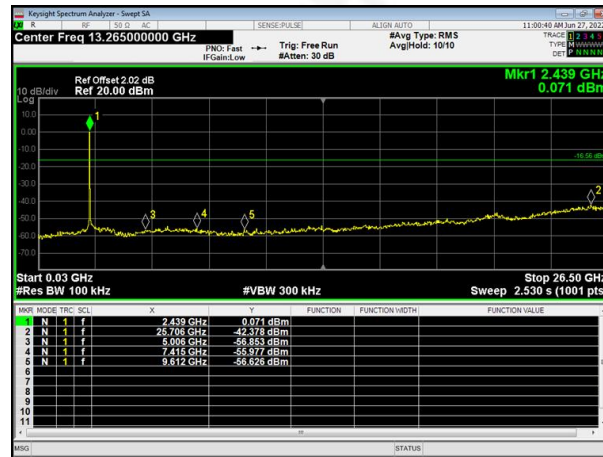


802.11g

Lowest channel



Middle channel



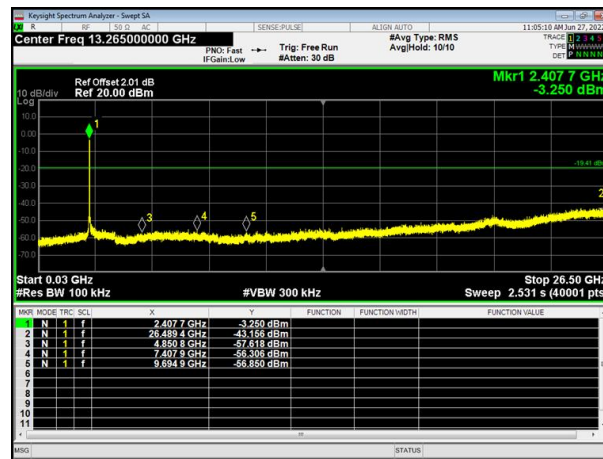
Highest channel



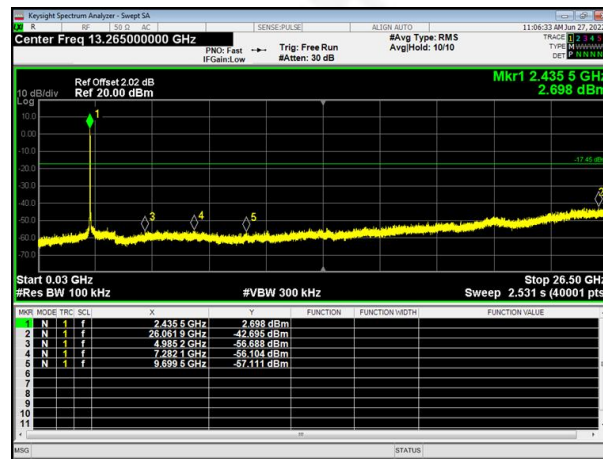


802.11n(HT20)

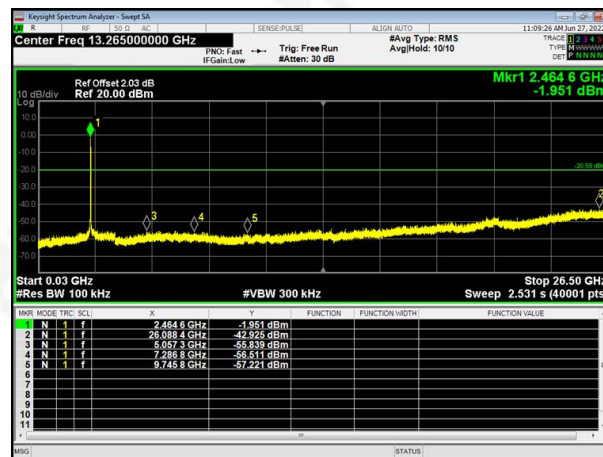
Lowest channel



Middle channel

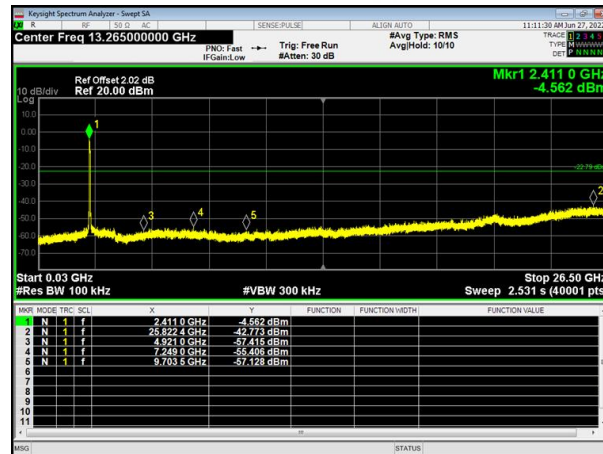


Highest channel

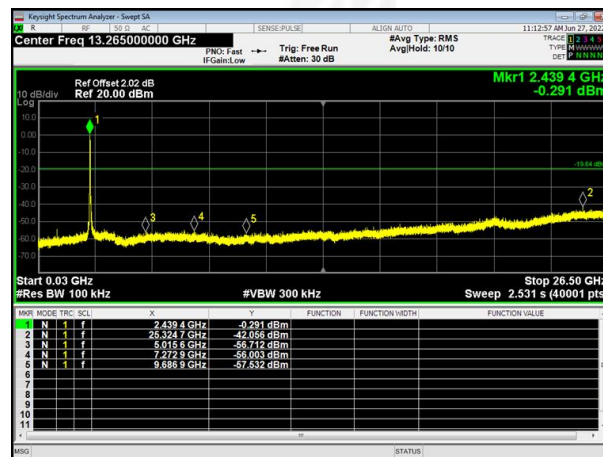




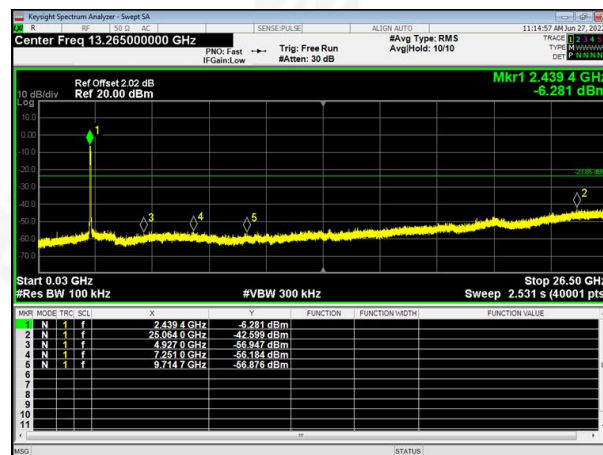
802.11n(HT40) Lowest channel



Middle channel



Highest channel



The test plot shows only the worst case ANT1.



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. A transmitter can only be sold or operated with antennas with which it was approved.	
EUT Antenna:	
The antenna is External 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 *****