RF TEST REPORT

Report No.:	20230917G12965X-W5
Product Name:	METAVERTU 2 5G digital mobile phone
Model No.:	VTL-202301
FCC ID:	2A6IQ-VTL202301
IC:	28629-VTL202301
Applicant:	VERTU INTERNATIONAL CORPORATION LIMITED
Address:	Chase Business Centre 39-41 Chase Side London England N14 5BP
Dates of Testing:	09/29/2023 - 11/23/2023
Issued by:	CCIC Southern Testing Co., Ltd.
Lab Location:	Electronic Testing Building, No. 43 Shahe Road, Xili Street, Nanshan District, Shenzhen, Guangdong, China. **Tel：** 86 755 26627338 **Fax：** 86 755 26627238

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Test Report

Product .....:	METAVERTU 2 5G digital mobile phone
Brand Name.....:	VERTU
Trade Name .....:	VERTU
Applicant.....:	VERTU INTERNATIONAL CORPORATION LIMITED
Applicant Address .....:	Chase Business Centre 39-41 Chase Side London England N14 5BP
Manufacturer .....:	Chengdu Vertu Business and Service Management Co., Ltd
Manufacturer Address .....:	1601,16th Floor, No. 1577 Middle Section of Tianfu Avenue, Chengdu High-tech Zone, China (Sichuan) Pilot Free Trade Zone
Test Standards .....:	47 CFR Part 15 Subpart C ANSI C63.10-2013 RSS-Gen Issue 5, Feb 2021 RSS-247 Issue 3, Ang 2023
Test Result.....:	Pass

Tested by .....: Kim Li 2023.11.27

Kim Li, Test Engineer

Reviewed by .....: Chris You 2023.11.27

Chris You, Senior Engineer

Approved by .....: Yang Fan 2023.11.27

Yang Fan, Manager

Table of Contents

1. GENERAL INFORMATION 5
1.1. EUT Description 5
1.2. Test Standards and Results 6
1.3. Channel List 7
1.4. Test environment and mode 7
1.5. Table for Supporting Units 7
1.6. EUT Operation Test Setup 8
1.7. Laboratory Facilities 8
2. TEST REQUIREMENTS 9
2.1. Antenna requirement 9
2.2. Maximum Conducted Output Power 10
2.3. 6dB and 99% Bandwidth 12
2.4. Power spectral density (PSD) 14
2.5. Conducted Band Edges and Spurious Emissions 16
2.6. Radiated Band Edge and Spurious Emission 18
2.7. AC Power Line Conducted Emission 26
3. LIST OF MEASURING EQUIPMENT 30
4. UNCERTAINTY OF EVALUATION 31
APPENDIX A 32

Change History		
Issue	Date	Reason for change
1.0	2023.11.27	First edition

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	METAVERTU 2 5G digital mobile phone
Model No.	VTL-202301
Hardware Version	P10
Software Version	13.0.0_6.01.01.01
EUT supports Radios application	WLAN2.4GHz 802.11b/g/n (HT20/HT40)/ax(HE20/HE40)
Frequency Range	802.11b/g/n/ax-20MHz: 2.412GHz - 2.462GHz 802.11n/ax-40MHz: 2.422GHz-2.452GHz
Channel Number	802.11b/g/n/ax-20MHz: 11 802.11n/ax-40MHz: 7
Transfer Rate	802.11b: 11/5.5/2/1 Mbps 802.11g: 54/48/36/24/18/12/9/6 Mbps 802.11n : up to 300Mbps (2×2MIMO) 802.11ax : up to 573.529Mbps (2×2MIMO)
Modulation Type	DSSS (802.11b), OFDM (802.11g/n), OFDMA (802.11ax)
Test Control Software	QRCT 4.0
Antenna Type	Internal Antenna
Antenna Gain	Antenna 7: -4.72dBi Antenna 9: -0.03dBi
Power supply	Rechargeable Li-ion Polymer Battery DC3.89V/5100mAh

Note 1: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

Note 2: The EUT was programmed to be in continuously transmitting mode and the transmit duty cycle is not less than 98%.

Note 3: The information of antenna gain and cable loss is provided by the manufacturer and our lab is not responsible for the accuracy of the antenna gain and cable loss information.

1.2. Test Standards and Results

The purpose of the report is to conduct testing according to the following FCC/IC certification standards:

No.	Identity	Document Title
1	47 CFR Part 15 Subpart C	Radio Frequency Devices
2	KDB 558074 D01 15.247 Meas Guidance v05r02	Cuidance for Compliance Measurement on Digital Transmission Systems, Frequency Hopping Spread Spectrum Systems, and Hybrid System Devices Operating under Section 15.247 of the FCC Rules
3	KDB 662911 D01 Multiple Transmitter Output v02r01	Emissions Testing of Transmitters with Multiple Outputs in the Same Band
4	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices
5	RSS-Gen Issue 5, Feb 2021	General Requirements for Compliance of Radio Apparatus
6	RSS-247 Issue 3, Aug 2023	Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices

Test detailed items/section required by FCC/IC rules and results are as below:

No.	Section in CFR 47	IC Rules	Description	Result
1	15.203 15.247(c)	RSS-GEN, 6.8 RSS-247, 5.4(f)	Antenna Requirement	PASS
2	15.247(b)(3)	RSS-247, 5.4(d)	Peak Conducted Output Power	PASS
3	15.247(a)(2)	RSS-GEN, 6.7 RSS-247, 5.2(a)	6dB and 99% Bandwidth	PASS
4	15.247(d)	RSS-GEN, 6.13 RSS-247, 5.5	Conducted Band Edges and Spurious Emission	PASS
5	15.247(e)	RSS-247, 5.2(b)	Power spectral density (PSD)	PASS
6	15.207	RSS-GEN, 8.8	AC Power Line Conducted Emission	PASS
7	15.209 15.205 15.247(d)	RSS-GEN, 8.9 RSS-GEN, 8.10 RSS-247, 5.5	Radiated Band Edges and Spurious Emission	PASS

Note 1: The tests of Conducted Emission and Radiated Emission were performed according to the method of measurements prescribed in ANSI C63.10-2013.

Note 2: These RF tests were performed according to the method of measurements prescribed in KDB 558074 D01 15.247 Meas Guidance v05r02.

1.3. Channel List

For 20MHz bandwidth systems, use Channel 1~ Channel 11.

Channel No.	Frequency	Channel No.	Frequency	Channel No.	Frequency
1	2412MHz	5	2432MHz	9	2452MHz
2	2417MHz	6	2437MHz	10	2457MHz
3	2422MHz	7	2442MHz	11	2462MHz
4	2427MHz	8	2447MHz		

Note: Channel 1, 6 & 11 selected for 802.11b/g/n-HT20/ax-HE20 as Lowest, Middle and Highest channel. Channel 3, 6 & 9 selected for 802.11n-HT40/ax-HE40 as Lowest, Middle and Highest Channel.

1.4. Test environment and mode

During the measurement, the environmental conditions were within the listed ranges:

Operating Environment	
Temperature	15°C - 35°C
Humidity	30% -60%
Atmospheric Pressure	86KPa-106KPa
Test mode:	
Continuously transmitting mode	Keeps the EUT in 100% duty cycle transmitting with modulation in SISO, duty cycle factor is not required.

Preliminary tests were performed in different data rate to find the worst radiated emission. The data rate shown in the table below is the worst-case rate with respect to the specific test item. Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

Test Items	Mode	Data Rate	Channel
Peak Conducted Output Power Power Spectral Density 6dB and 99% Bandwidth Conducted Spurious Emission Radiated Spurious Emission	11b/DSSS	1 Mbps	1/6/11
	11g/OFDM	6 Mbps	1/6/11
	11n-HT20/ax-HE20/OFDM	MCS 0	1/6/11
	11n-HT40/ax-HE40/OFDM	MCS 0	3/6/9
Band Edge	11b/DSSS	1 Mbps	1/11
	11g/OFDM	6 Mbps	1/11
	11n-HT20/ax-HE20/OFDM	MCS 0	1/11
	11n-HT40/ax-HE40/OFDM	MCS 0	3/6/9

1.5. Table for Supporting Units

No.	Equipment	Brand Name	Model Name	Manufacturer	Serial No.	Note
1	Laptop	HP	TPN-Q221	HP	5CD14347QB	FCC DOC

1.6. EUT Operation Test Setup

For RF test items, an engineering test program was provided and enable to make EUT transmitting.

1.7. Laboratory Facilities

FCC-Registration No.: 406086

CCIC Southern Testing Co., Ltd EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Designation Number: CN1283, valid time is until June 30, 2025.

ISED Registration: 11185A-1

CCIC Southern Testing Co., Ltd. EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 11185A-1 on Aug. 04, 2016, valid time is until June 30, 2025.

A2LA Code: 5721.01

CCIC-SET is a third party testing organization accredited by A2LA according to ISO/IEC 17025.

2. Test Requirements

2.1. Antenna requirement

2.1.1. Applicable Standard

According to FCC 15.203, 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 shall be considered sufficient to comply with the provisions of this section.

And according to FCC 47 CFR Section 15.247(c), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

According to RSSGEN 6.8, The applicant for equipment certification shall provide a list of all antenna types that may be used with the transmitter, where applicable (i.e. for transmitters with detachable antenna), indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna. The test report shall demonstrate the compliance of the transmitter with the limit for maximum equivalent isotropically radiated power (e.i.r.p.) specified in the applicable RSS, when the transmitter is equipped with any antenna type, selected from this list.

2.1.2. Antenna Information

Antenna Category: Internal Antenna

A internal Antenna was soldered to the antenna port of EUT via an adaptor cable, can't be removed.

Antenna General Information:

No.	EUT	Operating frequency range	Ant. Type	Number of antennas	Ant. Gain
1	METAVERTU 2 5G digital mobile phone	2412-2462MHz	Internal	2	Antenna 7: -4.72dBi
					Antenna 9: -0.03dBi

2.1.3. Result: comply

The EUT has two permanently and irreplaceable attached antenna. Please refer to the EUT internal photos.

2.2. Maximum Conducted Output Power

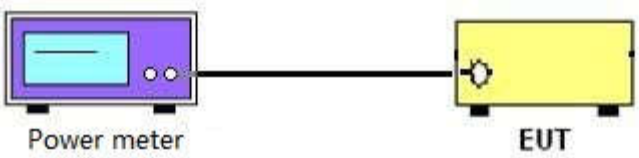
2.2.1. Limit of Maximum Conducted Output Power

For DTSs employing digital modulation techniques operating in the bands 2400-2483.5 MHz, the maximum peak conducted output power shall not exceed 1W. The e.i.r.p. shall not exceed 4 W.

2.2.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.2.3. Test Setup



2.2.4. Test Procedures

1. The testing follows the Measurement Procedure of ANSI C63.10-2013 Section 11.9.1.3.
2. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall use a fast-responding diode detector.
4. Set to the maximum power setting and enable the EUT transmit continuously.
5. Record the measurement results in the test report.

2.2.5. Test Result of Maximum Conducted Output Power

Please refer to Appendix A for detail.

2.3. 6dB and 99% Bandwidth

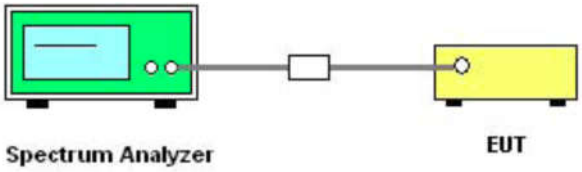
2.3.1. Limit of 6dB Bandwidth

The minimum 6 dB Occupied bandwidth shall be at least 500 kHz.

2.3.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.3.3. Test Setup



2.3.4. Test Procedures

1. The testing follows the Measurement Procedure of ANSI C63.10-2013 Section 11.8 and 6.9.3.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Use the spectrum analyzer “Channel Bandwidth” function to easurement the 6dB EBW and 99% OBW.
5. For 6dB EBW Use the following spectrum analyzer settings:
   RBW: 100kHz / VBW: 300kHz / Detector: Peak / Trace mode: Max hold / Sweep time: Auto couple / Allow trace to fully stabilize.
6. For 99% OBW Use the following spectrum analyzer settings:
   Set RBW = approximately 1% EBW or 1.5 times to 5.0 times the OBW, VBW ≥ 3 × RBW.
7. Record the measurement results in the test report.

2.3.5. Test Results of 6dB and 99% Bandwidth

Please refer to Appendix A for detail.

2.4. Power spectral density (PSD)

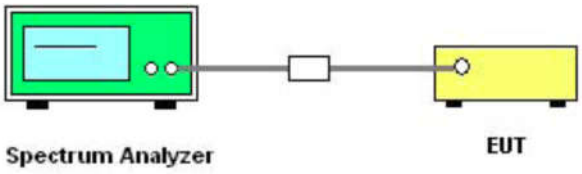
2.4.1. Limit of Power Spectral Density

The peak power spectral density shall not be greater than 8dBm in any 3kHz band at any time interval of continuous transmission.

2.4.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.4.3. Test Setup



2.4.4. Test Procedures

1. The testing follows the Measurement Procedure of ANSI C63.10-2013 Section 11.10.2.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Use the following spectrum analyzer settings:

   Set instrument center frequency to DTS channel center frequency / Set the span to 1.5 times the DTS bandwidth / RBW: 3kHz / VBW: 10kHz / Detector: Peak / Sweep time: Auto couple / Trace mode: Max hold / Allow trace to fully stabilize / Use the peak marker function to determine the maximum power level.
5. Record the measurement results in the test report.

2.4.5. Test Results of Power Spectral Density

Please refer to Appendix A for detail.

2.5. Conducted Band Edges and Spurious Emissions

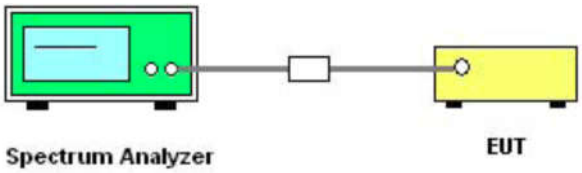
2.5.1. Limit of Conducted Band Edges and Spurious Emissions

In any 100 kHz bandwidth outside the frequency band in which the intentional radiator is perating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that.

2.5.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.5.3. Test Setup



2.5.4. Test Procedure

1. The testing follows the Measurement Procedure of ANSI C63.10-2013 Section 11.11 and 11.13.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Use the following spectrum analyzer settings:

   Reference level measurement: Set spectrum analyzer center frequency to DTS channel center frequency / Set the span to ≥1.5 times the DTS bandwidth / RBW: 100kHz / VBW: 300kHz / Detector: Peak / Sweep time: Auto couple / Trace mode: Max hold / Allow trace to fully stabilize / Use the peak marker function to determine the maximum PSD level and attenuate it by 20dB.

   Emission level measurement: Set the center frequency and span to encompass frequency range to be measured / RBW: 100kHz / VBW: 300kHz / Detector: Peak / Sweep time: Auto couple / Trace mode: Max hold / Allow trace to fully stabilize / Use the peak marker function to determine the maximum amplitude level.
6. Record the measurement results in the test report.

2.5.5. Test Results of Conducted Band Edges and Spurious Emissions

Please refer to Appendix A for detail.

2.6. Radiated Band Edge and Spurious Emission

2.6.1. Limit of Radiated Band Edges and Spurious Emission

In any 100 kHz bandwidth outside the frequency band in which the intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level. If the transmitter uses an RMS average conducted power limit, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the estricted bands, as defi ned in §15.205(a), must also comply with the radiated emission limits specifi ed in §15.209(a).

§15.209(a) Radiated emission limits:

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

Restricted bands of operation refer to §15.205 (a):

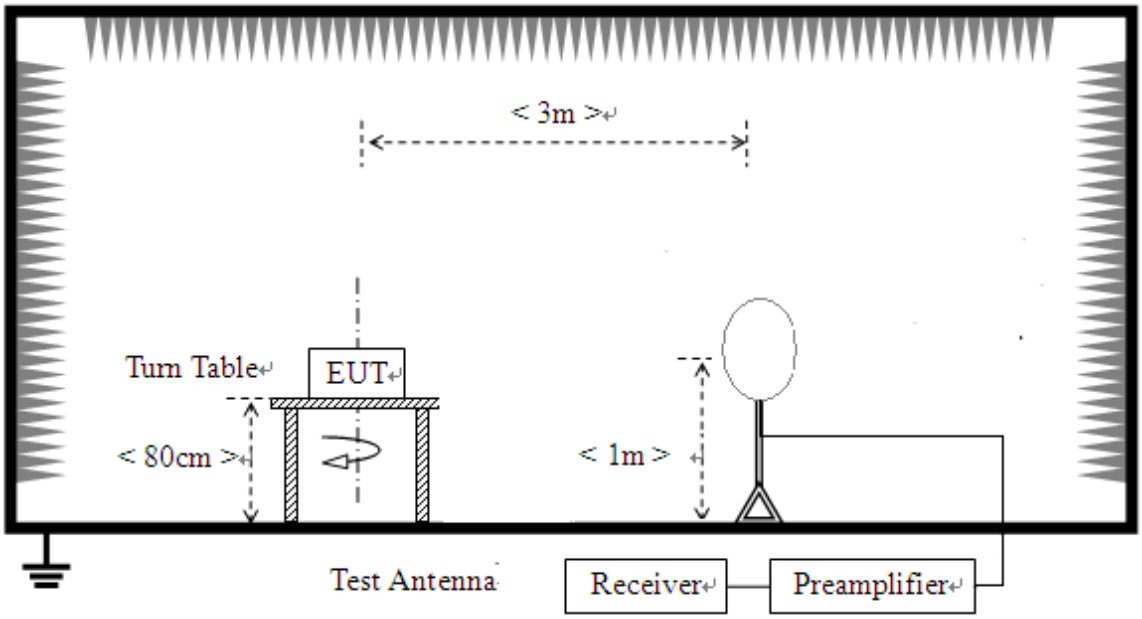
MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	([2])
13.36-13.41	/	/	/
Note: [1]Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz. [2]Above 38.6.			

2.6.2. Measuring Instruments

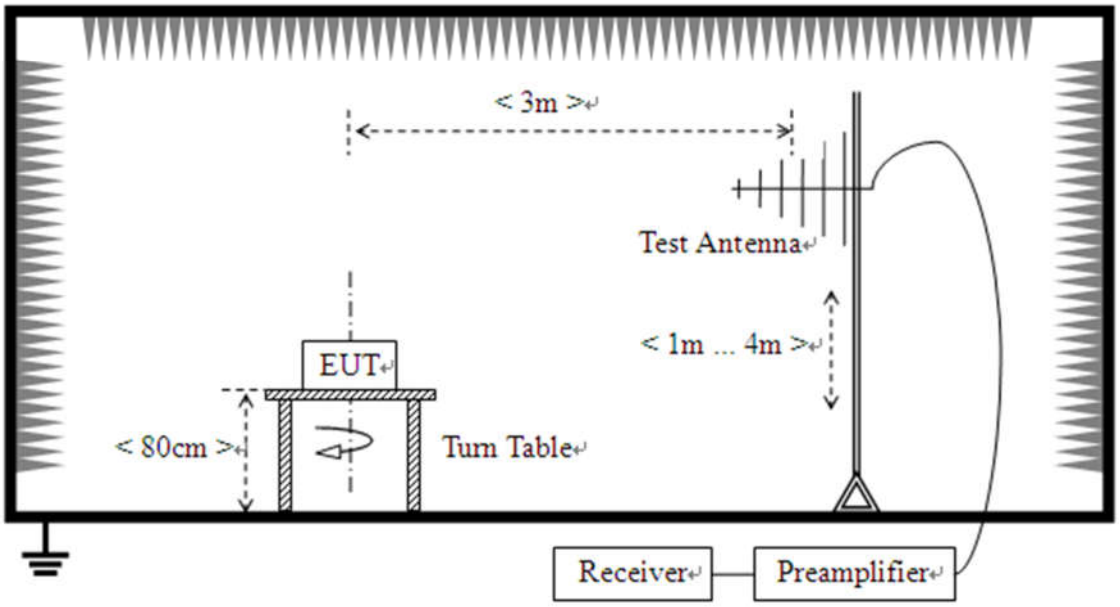
The measuring equipment is listed in the section 3 of this test report.

2.6.3. Test Setup

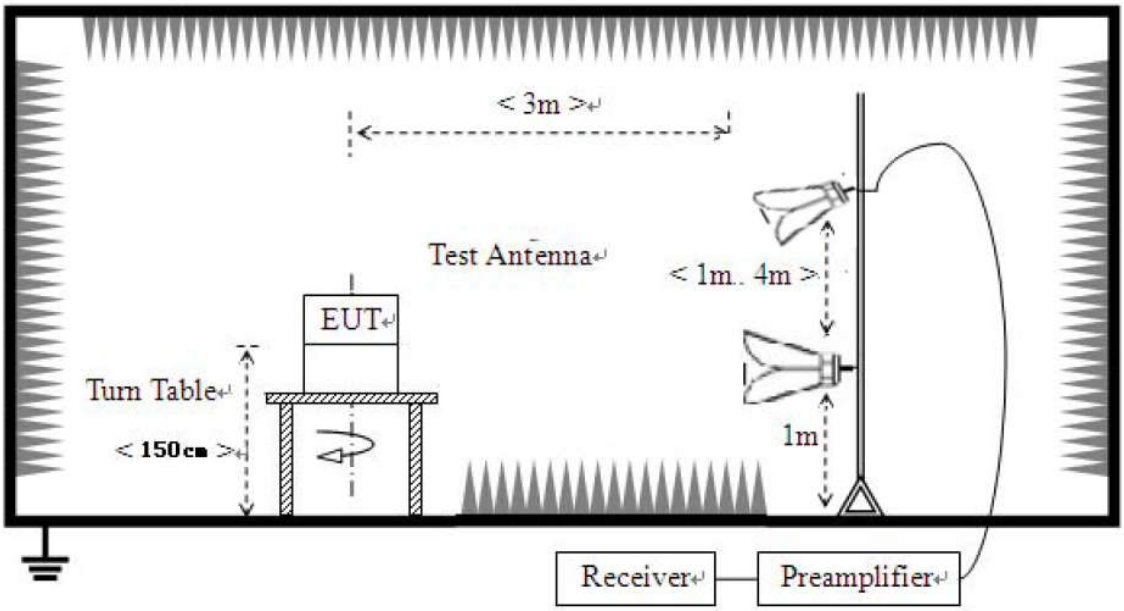
For radiated emissions from 9 kHz to 30 MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



2.6.4. Test Procedures

1. The EUT was placed on the top of a rotating table 0.8m for below 1GHz and 1.5m for above 1GHz above the ground at a 3 meters semi-anechoic chamber.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on thetop of a variable height antenna tower.
3. Height of receiving antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. If the emission level of the EUT in peak mode was lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported.Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
7. For the radiated emission test above 1GHz:
   Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at

the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is ≥ 1/T(Duty cycle < 98%) or 10Hz(Duty cycle > 98%) for Average detection (AV) at frequency above 1GHz.
4. All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

2.6.5. Test Results of Radiated Band Edge and Spurious Emission

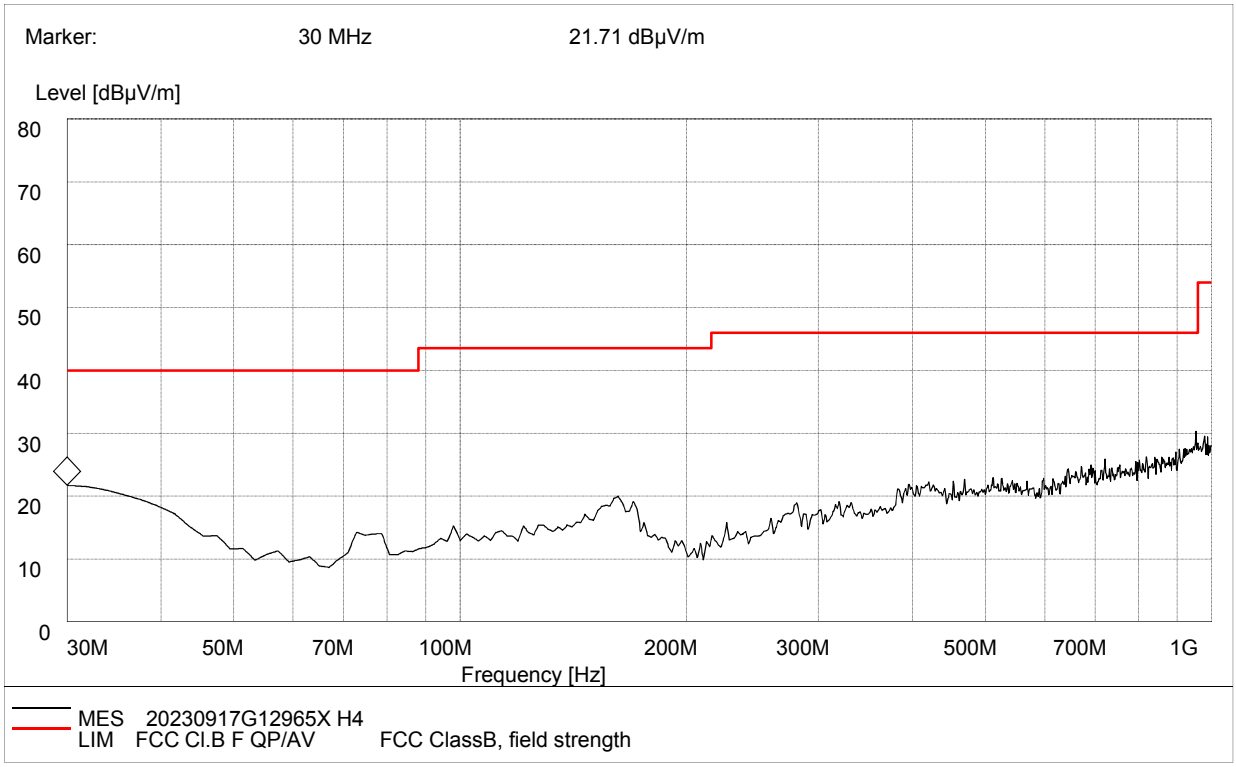
NOTE 1: For 9 kHz to 30MHz, The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

NOTE 2: For 30MHz to 1GHz, All of the EUT Configure mode were tested and found 802.11n20 2462MHz (ANT7) channel is the worst mode, the worst case is recorded in this report.

NOTE 3: For 1GHz to 25GHz, All EUT configuration modes were tested, and this report only reflects the worst mode low channel and high channel of 20M bandwidth and 40M bandwidth.

NOTE 4: Antenna height and turntable angle are the worst positions, the worst case is recorded in this report.

For 30MHz to 1000MHz

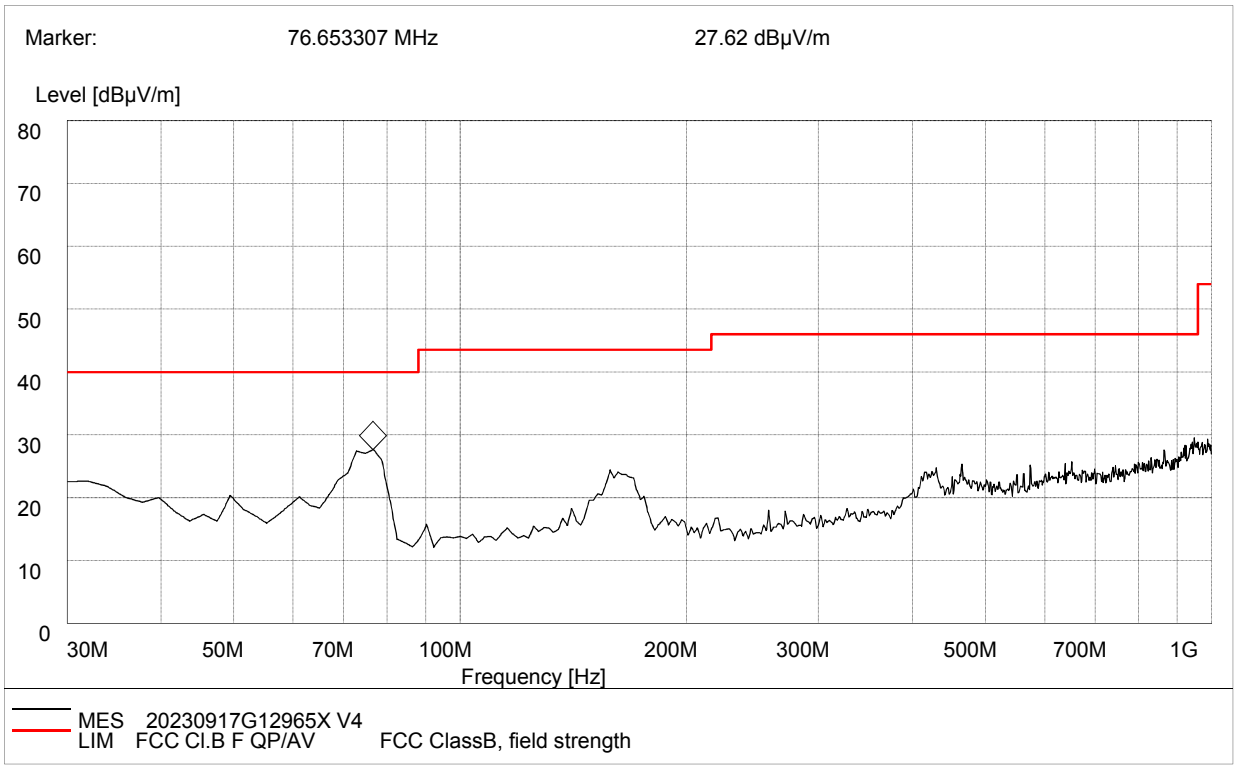


Frequency (MHz)	QuasiPeak (dB µ V/m)	Bandwidth (kHz)	Corr.Factor (dB/m)	Antenna height (cm)	Limit (dB µ V/m)	Margin (dB)	Polarity
30.320000	20.70	120.000	19.3	100.0	40.0	19.30	Horizontal
72.680000	13.25	120.000	6.8	100.0	40.0	26.75	Horizontal
162.180000	18.95	120.000	12.5	100.0	43.5	24.55	Horizontal
169.800000	18.08	120.000	12.5	100.0	43.5	25.42	Horizontal
469.310000	21.65	120.000	18.9	100.0	46.0	24.35	Horizontal
722.020000	24.89	120.000	21.9	100.0	46.0	21.11	Horizontal

Test Result : Pass

Remark:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m).
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB).
3. Margin value = Limit value - Emission Level.
4. The other emission levels were very low against the limit.



Frequency (MHz)	QuasiPeak (dB µ V/m)	Bandwidth (kHz)	Corr.Factor (dB/m)	Antenna height (cm)	Limit (dB µ V/m)	Margin (dB)	Polarity
32.010000	21.60	120.000	19.3	100.0	40.0	18.40	Vertical
76.890000	26.62	120.000	6.8	100.0	40.0	13.38	Vertical
158.260000	23.42	120.000	12.4	100.0	43.5	20.08	Vertical
166.230000	22.65	120.000	12.5	100.0	43.5	20.85	Vertical
465.430000	24.29	120.000	18.9	100.0	46.0	21.71	Vertical
652.040000	24.71	120.000	21.8	100.0	46.0	21.29	Vertical

Test Result : Pass

Remark:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m).
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB).
3. Margin value = Limit value - Emission Level.
4. The other emission levels were very low against the limit.

For 1GHz to 25GHz

2.4G Wi-Fi 802.11b_2412MHz – ANT7									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
2390.00	53.28	74.00	-20.72	1.50	230	56.37	-3.09	Horizontal	Peak
2390.00	44.26	54.00	-9.74	1.50	230	47.35	-3.09	Horizontal	Average
4824.00	47.34	74.00	-26.66	1.50	230	46.17	1.17	Horizontal	Peak
4824.00	36.97	54.00	-17.03	1.50	230	35.80	1.17	Horizontal	Average
7236.00	50.85	74.00	-23.15	1.50	230	44.90	5.95	Horizontal	Peak
7236.00	41.23	54.00	-12.77	1.50	230	35.28	5.95	Horizontal	Average
2390.00	53.19	74.00	-20.81	1.70	250	56.28	-3.09	Vertical	Peak
2390.00	43.84	54.00	-10.16	1.70	250	46.93	-3.09	Vertical	Average
4824.00	46.25	74.00	-27.75	1.70	250	45.08	1.17	Vertical	Peak
4824.00	37.09	54.00	-16.91	1.70	250	35.92	1.17	Vertical	Average
7236.00	51.42	74.00	-22.58	1.70	250	45.47	5.95	Vertical	Peak
7236.00	41.31	54.00	-12.69	1.70	250	35.36	5.95	Vertical	Average
2.4G Wi-Fi 802.11b_2462MHz – ANT7									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
2483.50	54.48	74.00	-19.52	1.50	230	59.23	-4.75	Horizontal	Peak
2483.50	44.48	54.00	-9.52	1.50	230	49.23	-4.75	Horizontal	Average
4924.00	45.28	74.00	-28.72	1.50	230	44.68	0.60	Horizontal	Peak
4924.00	36.19	54.00	-17.81	1.50	230	35.59	0.60	Horizontal	Average
7386.00	51.45	74.00	-22.55	1.50	230	45.52	5.93	Horizontal	Peak
7386.00	40.85	54.00	-13.15	1.50	230	34.92	5.93	Horizontal	Average
2483.50	53.89	74.00	-20.11	1.70	250	58.64	-4.75	Vertical	Peak
2483.50	44.40	54.00	-9.60	1.70	250	49.15	-4.75	Vertical	Average
4924.00	46.51	74.00	-27.49	1.70	250	45.91	0.60	Vertical	Peak
4924.00	36.01	54.00	-17.99	1.70	250	35.41	0.60	Vertical	Average
7386.00	50.54	74.00	-23.46	1.70	250	44.61	5.93	Vertical	Peak
7386.00	41.07	54.00	-12.93	1.70	250	35.14	5.93	Vertical	Average

Remark:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)

2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) - Pre-Amplifier Factor(dB)

3. Margin value = Emission Level – Limit value

4.The emission levels of other frequencies are very lower than the limit and not show in test report.

2.4G Wi-Fi 802.11n-HT40_2422MHz - MIMO									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
2390.00	53.00	74.00	-21.00	1.50	230	56.09	-3.09	Horizontal	Peak
2390.00	44.08	54.00	-9.92	1.50	230	47.17	-3.09	Horizontal	Average
4844.00	47.65	74.00	-26.35	1.50	230	46.57	1.08	Horizontal	Peak
4844.00	37.43	54.00	-16.57	1.50	230	36.35	1.08	Horizontal	Average
7266.00	50.85	74.00	-23.15	1.50	230	45.13	5.72	Horizontal	Peak
7266.00	40.98	54.00	-13.02	1.50	230	35.26	5.72	Horizontal	Average
2390.00	53.64	74.00	-20.36	1.70	250	56.73	-3.09	Vertical	Peak
2390.00	43.67	54.00	-10.33	1.70	250	46.76	-3.09	Vertical	Average
4844.00	46.38	74.00	-27.62	1.70	250	45.30	1.08	Vertical	Peak
4844.00	36.65	54.00	-17.35	1.70	250	35.57	1.08	Vertical	Average
7266.00	51.65	74.00	-22.35	1.70	250	45.93	5.72	Vertical	Peak
7266.00	41.21	54.00	-12.79	1.70	250	35.49	5.72	Vertical	Average
2.4G Wi-Fi 802.11n-HT40_2452MHz - MIMO									
Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)	Polarity	Detector
2483.50	54.77	74.00	-19.23	1.50	230	59.52	-4.75	Horizontal	Peak
2483.50	44.37	54.00	-9.63	1.50	230	49.12	-4.75	Horizontal	Average
4904.00	45.62	74.00	-28.38	1.50	230	44.81	0.81	Horizontal	Peak
4904.00	35.73	54.00	-18.27	1.50	230	34.92	0.81	Horizontal	Average
7356.00	51.83	74.00	-22.17	1.50	230	46.05	5.78	Horizontal	Peak
7356.00	40.99	54.00	-13.01	1.50	230	35.21	5.78	Horizontal	Average
2483.50	53.75	74.00	-20.25	1.70	250	58.50	-4.75	Vertical	Peak
2483.50	44.29	54.00	-9.71	1.70	250	49.04	-4.75	Vertical	Average
4904.00	46.82	74.00	-27.18	1.70	250	46.01	0.81	Vertical	Peak
4904.00	35.53	54.00	-18.47	1.70	250	34.72	0.81	Vertical	Average
7356.00	50.62	74.00	-23.38	1.70	250	44.84	5.78	Vertical	Peak
7356.00	41.24	54.00	-12.76	1.70	250	35.46	5.78	Vertical	Average

Remark:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)

2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) - Pre-Amplifier Factor(dB)

3. Margin value = Emission Level – Limit value

4.The emission levels of other frequencies are very lower than the limit and not show in test report.

2.7. AC Power Line Conducted Emission

2.7.1. Limit of AC Power Line Conducted Emission

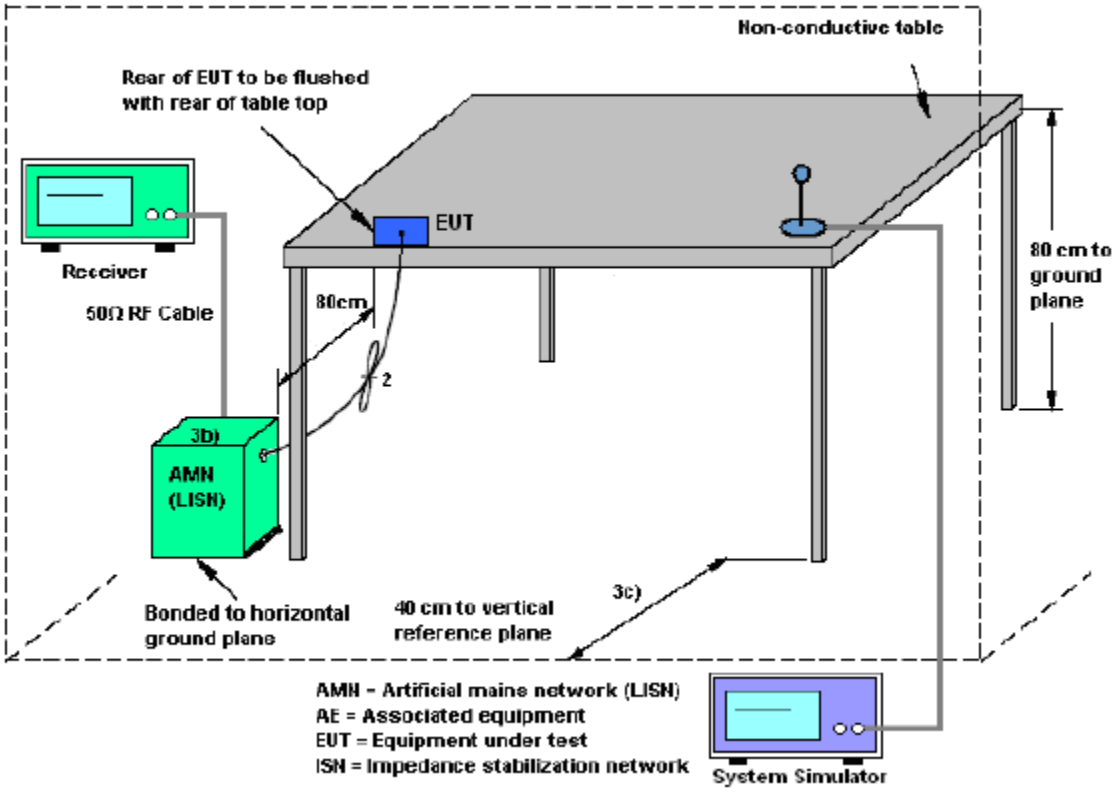
For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency range (MHz)	Conducted Limit (dBμV)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

2.7.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.7.3. Test Setup



2.7.4. Test Procedures

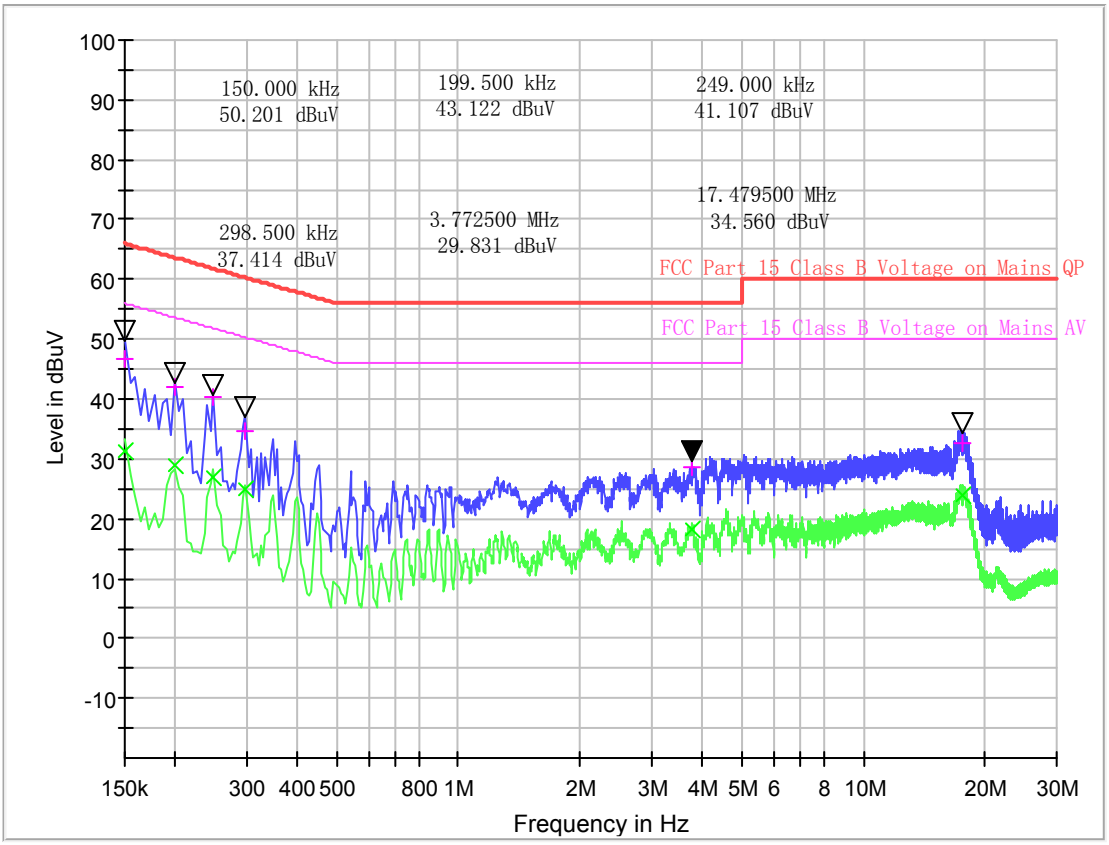
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 micrometry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

2.7.5. Test Results of Conducted Emission

NOTE 1: The EUT configuration of the emission tests is 2.4G WLAN Link + USB Cable (Charging from Adapter).

NOTE 2: All of the EUT Configure mode were tested and found 802.11b 2437MHz (ANT7) channel is the worst mode, the worst case is recorded in this report.

Line Phase

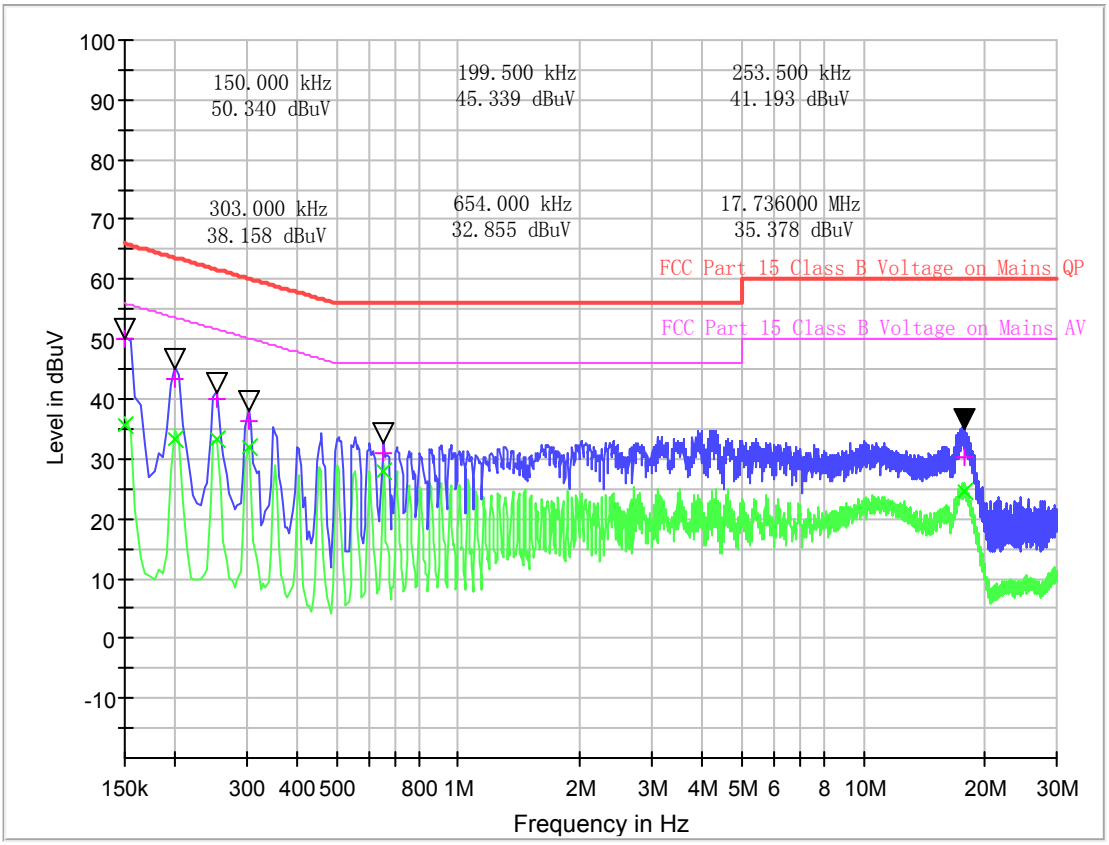


Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Corr.Factor (dB)	Margin - QPK	Limit - QPK	Margin - AV	Limit - AV (dBµV)
0.150000	46.71	31.33	10.4	19.29	66.0	24.67	56.0
0.199500	41.99	28.92	10.5	21.64	63.6	24.71	53.6
0.249000	40.19	26.79	10.5	21.60	61.8	25.00	51.8
0.298500	34.63	24.91	10.5	25.65	60.3	25.37	50.3
3.772500	28.68	18.28	10.3	27.32	56.0	27.72	46.0
17.479500	32.60	24.03	11.1	27.40	60.0	25.97	50.0

Test Result : Pass

Note: Final Level = Receiver Read level + Correction factor.

Neutral Phase



Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Corr.Factor (dB)	Margin - QPK	Limit - QPK	Margin - AV	Limit - AV (dBµV)
0.150000	50.01	35.72	10.6	15.99	66.0	20.28	56.0
0.199500	43.19	33.39	10.6	20.44	63.6	20.24	53.6
0.253500	39.93	33.41	10.6	21.71	61.6	18.23	51.6
0.303000	36.43	32.12	10.6	23.73	60.2	18.04	50.2
0.654000	30.92	27.78	10.5	25.08	56.0	18.22	46.0
17.736000	30.42	24.56	11.1	29.58	60.0	25.44	50.0

Test Result : Pass

Note: Final Level = Receiver Read level + Correction factor.

3. List of measuring equipment

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	Power Meter	R&S	NRP-Z31	A141001975	2023.03.17	2024.03.16
2	EMI Test Receiver	ROHDE&SCHWARZ	ESW26	A180502935	2023.06.08	2024.06.07
3	5M Anechoic Chamber	Albatross	SAC-5MAC 12.8x6.8x6.4m	A0304210	2022.06.09	2025.06.08
4	Loop Antenna	Schwarz beck	HFH2-Z2	A0304220	2022.05.02	2025.05.01
5	Broadband antenna (30MHz~1GHz)	R&S	HL562	A0304224	2023.06.08	2024.06.07
6	Broadband antenna (30MHz~1GHz)	R&S	HL562	A0304224	2023.06.08	2026.06.07
7	EMI Horn Ant. (1-18G)	ETC	1209	A150402241	2021.01.02	2024.01.01
8	Horn antenna (18GHz~26.5GHz)	AR	AT4510	A0804450	2023.06.01	2026.05.31
9	Amplifier 30M~1GHz	MILMEGA	80RF1000-1000	A140101634	2022.12.13	2023.12.12
10	Amplifier 1G~18GHz	MILMEGA	AS0104R-800/400	A160302517	2022.12.13	2023.12.12
11	Spectrum Analyzer	KEYSIGHT	N9030A	A160702554	2023.02.20	2024.02.19
12	Test Receiver	R&S	ESIB7	A0501375	2023.03.16	2024.03.15
13	Broadband Ant.	ETC	2786	A150402240	2021.09.16	2024.03.03
14	3M Anechoic Chamber	Albatross	SAC-3MAC 9*6*6m	A0412375	2019.03.26	2024.03.25
15	Test Receiver	KEYSIGHT	N9038A	A141202036	2023.06.12	2024.06.11
16	LISN	ROHDE&SCHWARZ	ENV216	A140701847	2023.06.08	2024.06.07

4. Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.10-2013. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence . The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of AC Power Line Conducted Emission Measurement (150kHz~30MHz)

Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	2.8dB

Uncertainty of Radiated Emission Measurement (9kHz~30MHz)

Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	3.5dB

Uncertainty of Radiated Emission Measurement (30MHz~1GHz)

Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	3.91dB

Uncertainty of Radiated Emission Measurement (1GHz~18GHz)

Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	4.5dB

Uncertainty of Radiated Emission Measurement (18GHz~40GHz)

Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	4.9dB

Uncertainty of RF Conducted Measurement (9kHz~40GHz)

Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	1.2dB

Appendix A

RF Output Power

Test Result and Data

Output Power (Peak)								
Mode	Frequency (MHz)	Ant	Power (dBm)	Total Power (dBm)	Total EIRP (dBm)	FCC&IC Power Limit (dBm)	IC EIRP Limit (dBm)	Result
802.11b	2412	Ant7	15.34	/	10.62	30	36	Pass
802.11b	2412	Ant9	15.14	/	15.11	30	36	Pass
802.11b	2437	Ant7	15.39	/	10.67	30	36	Pass
802.11b	2437	Ant9	15.33	/	15.30	30	36	Pass
802.11b	2462	Ant7	15.47	/	10.75	30	36	Pass
802.11b	2462	Ant9	15.04	/	15.01	30	36	Pass
802.11g	2412	Ant7	14.82	/	10.10	30	36	Pass
802.11g	2412	Ant9	15.65	/	15.62	30	36	Pass
802.11g	2437	Ant7	14.95	/	10.23	30	36	Pass
802.11g	2437	Ant9	15.94	/	15.91	30	36	Pass
802.11g	2462	Ant7	14.84	/	10.12	30	36	Pass
802.11g	2462	Ant9	15.66	/	15.63	30	36	Pass
802.11n (HT20)	2412	Ant7	10.67	13.69	14.93	30	36	Pass
802.11n (HT20)	2412	Ant9	10.68			30	36	Pass
802.11n (HT20)	2437	Ant7	10.92	13.87	15.11	30	36	Pass
802.11n (HT20)	2437	Ant9	10.79			30	36	Pass
802.11n (HT20)	2462	Ant7	10.65	13.61	14.85	30	36	Pass
802.11n (HT20)	2462	Ant9	10.54			30	36	Pass
802.11n (HT40)	2422	Ant7	10.83	13.27	14.51	30	36	Pass
802.11n (HT40)	2422	Ant9	9.61			30	36	Pass
802.11n (HT40)	2437	Ant7	10.15	13.06	14.30	30	36	Pass
802.11n (HT40)	2437	Ant9	9.95			30	36	Pass
802.11n (HT40)	2452	Ant7	10.70	13.26	14.50	30	36	Pass
802.11n (HT40)	2452	Ant9	9.74			30	36	Pass
802.11ax (HT20)	2412	Ant7	9.70	12.71	13.95	30	36	Pass
802.11ax (HT20)	2412	Ant9	9.70			30	36	Pass
802.11ax (HT20)	2437	Ant7	9.84	12.87	14.11	30	36	Pass

802.11ax (HT20)	2437	Ant9	9.87			30	36	Pass
802.11ax (HT20)	2462	Ant7	9.55	12.61	13.85	30	36	Pass
802.11ax (HT20)	2462	Ant9	9.65			30	36	Pass
802.11ax (HT40)	2422	Ant7	9.76	12.82	14.06	30	36	Pass
802.11ax (HT40)	2422	Ant9	9.86			30	36	Pass
802.11ax (HT40)	2437	Ant7	9.36	12.65	13.89	30	36	Pass
802.11ax (HT40)	2437	Ant9	9.91			30	36	Pass
802.11ax (HT40)	2452	Ant7	9.30	12.54	13.78	30	36	Pass
802.11ax (HT40)	2452	Ant9	9.75			30	36	Pass

Note:

1) ANT7 and ANT9 is 2*2MIMO.

2) Antenna Gain: Ant7: -4.72dBi; Ant9: -0.03dBi.

3) Directional Gain: 1.24dBi.

4) Total Power = $10*\log\{10^{(\text{Ant 7 Power}/10)} + 10^{(\text{Ant 9 Power}/10)}\}$.

5) Total EIRP = Total Power + Directional Gain.

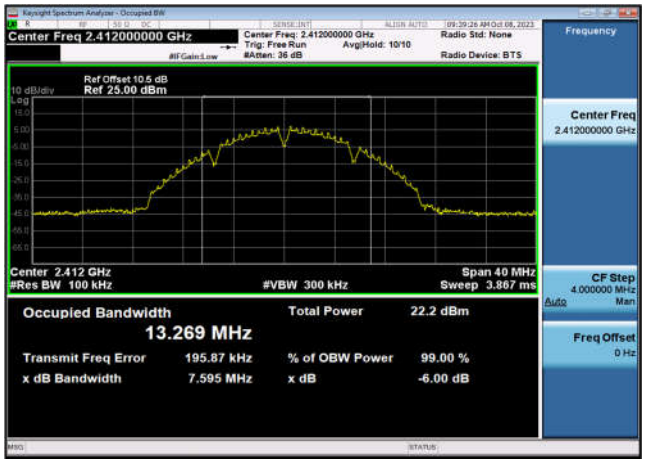
6dB Bandwidth

Test Result and Data

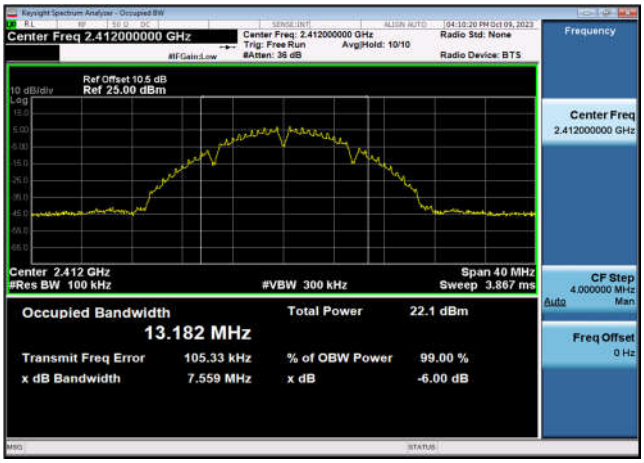
6dB Bandwidth				
Mode	Test Frequency (MHz)	Ant	Occupied Bandwidth (MHz)	Result
802.11b	2412	Ant7	7.59	Pass
802.11b	2412	Ant9	7.56	Pass
802.11b	2437	Ant7	8.09	Pass
802.11b	2437	Ant9	8.09	Pass
802.11b	2462	Ant7	7.58	Pass
802.11b	2462	Ant9	7.15	Pass
802.11g	2412	Ant7	16.40	Pass
802.11g	2412	Ant9	16.38	Pass
802.11g	2437	Ant7	16.40	Pass
802.11g	2437	Ant9	16.41	Pass
802.11g	2462	Ant7	16.38	Pass
802.11g	2462	Ant9	16.39	Pass
802.11n (HT20)	2412	Ant7	17.61	Pass
802.11n (HT20)	2412	Ant9	17.64	Pass
802.11n (HT20)	2437	Ant7	17.64	Pass
802.11n (HT20)	2437	Ant9	17.65	Pass
802.11n (HT20)	2462	Ant7	17.63	Pass
802.11n (HT20)	2462	Ant9	17.64	Pass
802.11n (HT40)	2422	Ant7	36.34	Pass
802.11n (HT40)	2422	Ant9	36.38	Pass
802.11n (HT40)	2437	Ant7	36.44	Pass
802.11n (HT40)	2437	Ant9	36.43	Pass
802.11n (HT40)	2452	Ant7	36.42	Pass
802.11n (HT40)	2452	Ant9	36.42	Pass
802.11ax (HT20)	2412	Ant7	18.99	Pass
802.11ax (HT20)	2412	Ant9	19.04	Pass
802.11ax (HT20)	2437	Ant7	19.08	Pass
802.11ax (HT20)	2437	Ant9	19.06	Pass
802.11ax (HT20)	2462	Ant7	18.98	Pass
802.11ax (HT20)	2462	Ant9	19.03	Pass

802.11ax (HT40)	2422	Ant7	38.00	Pass
802.11ax (HT40)	2422	Ant9	38.18	Pass
802.11ax (HT40)	2437	Ant7	38.27	Pass
802.11ax (HT40)	2437	Ant9	38.25	Pass
802.11ax (HT40)	2452	Ant7	38.15	Pass
802.11ax (HT40)	2452	Ant9	38.24	Pass

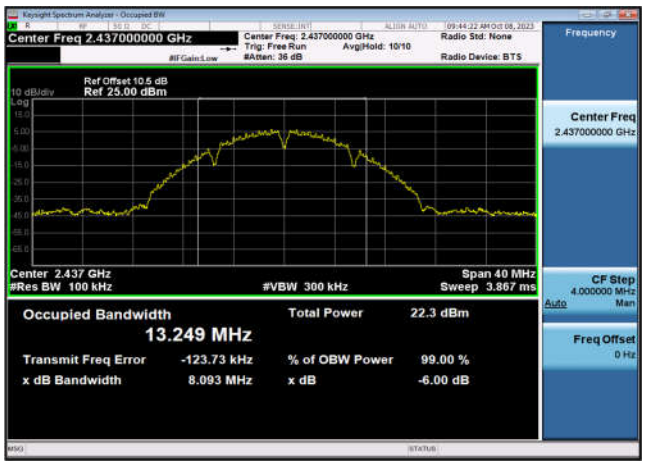
6dB Bandwidth-802.11b,2412MHz,Ant7



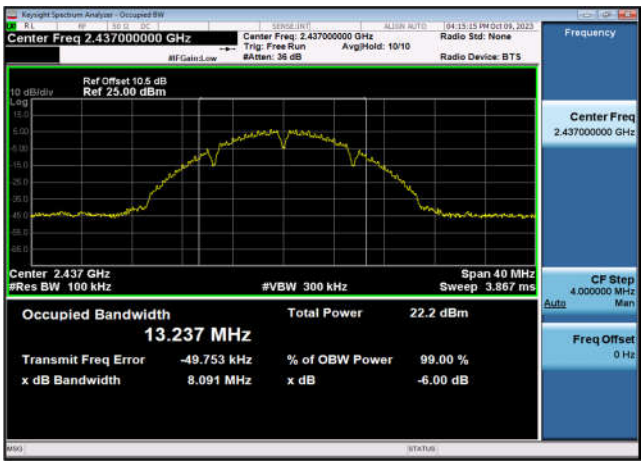
6dB Bandwidth-802.11b,2412MHz,Ant9



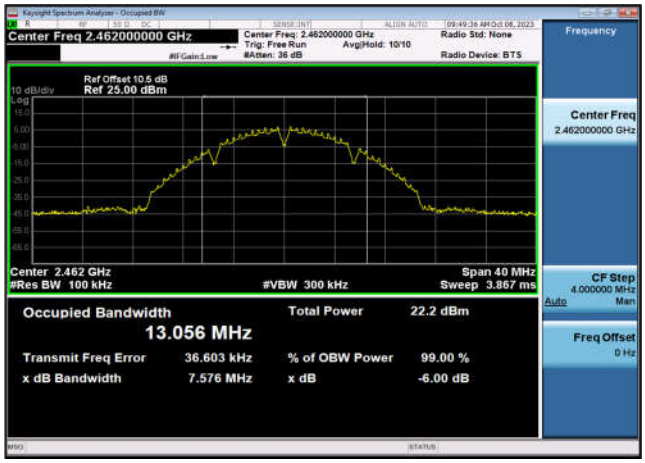
6dB Bandwidth-802.11b,2437MHz,Ant7



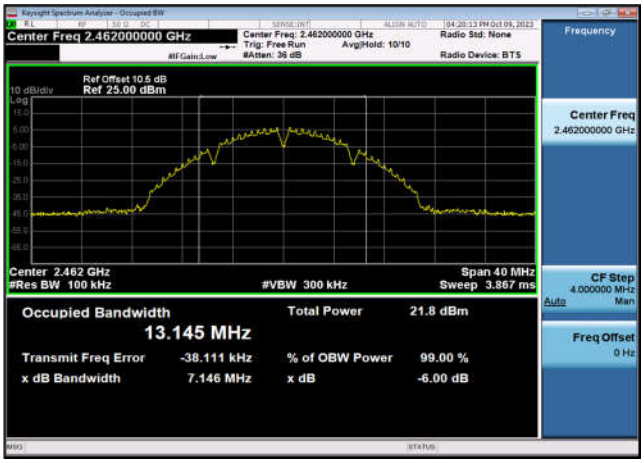
6dB Bandwidth-802.11b,2437MHz,Ant9



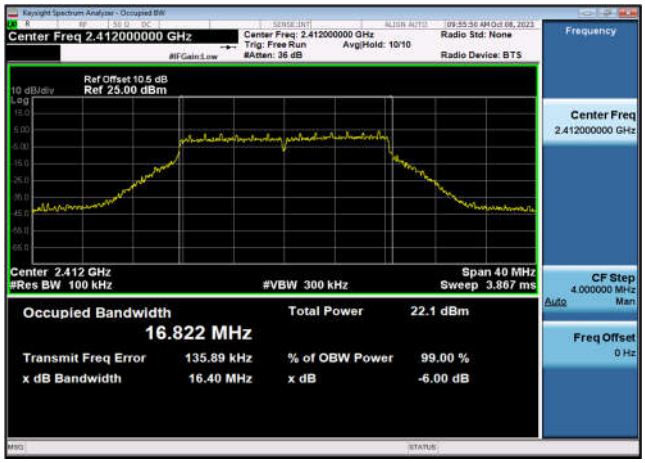
6dB Bandwidth-802.11b,2462MHz,Ant7



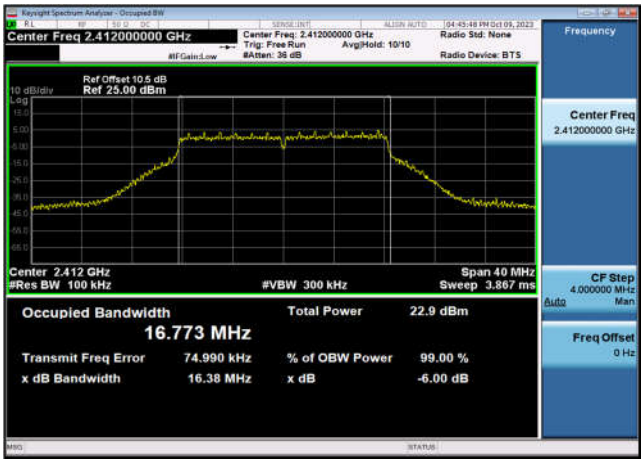
6dB Bandwidth-802.11b,2462MHz,Ant9



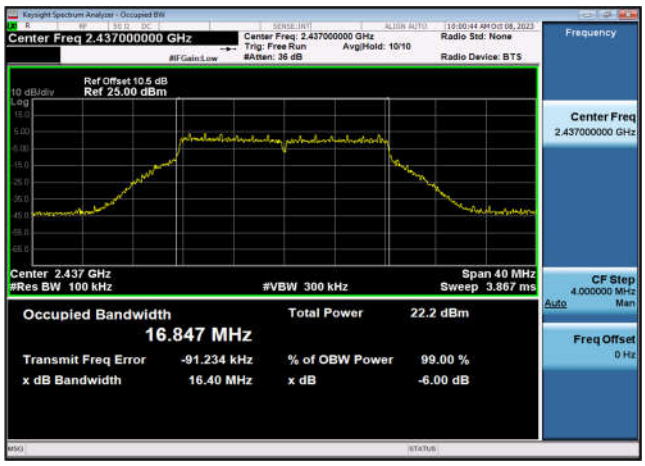
6dB Bandwidth-802.11g,2412MHz,Ant7



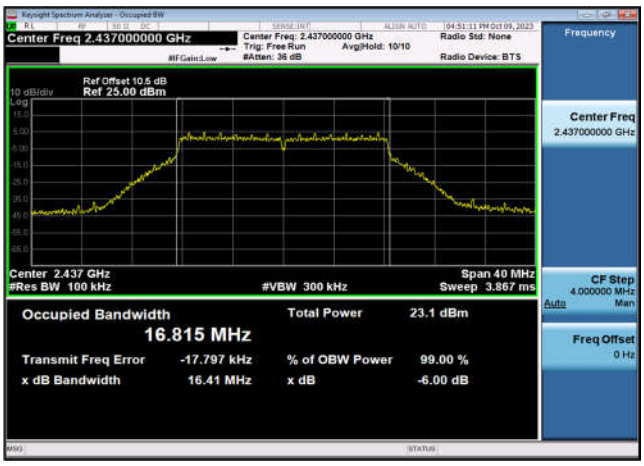
6dB Bandwidth-802.11g,2412MHz,Ant9



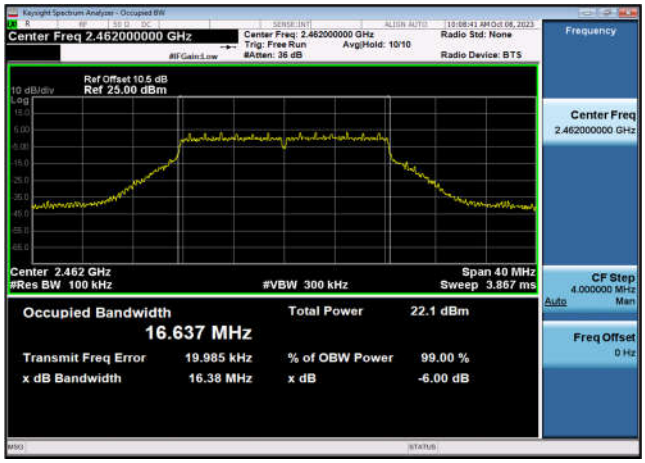
6dB Bandwidth-802.11g,2437MHz,Ant7



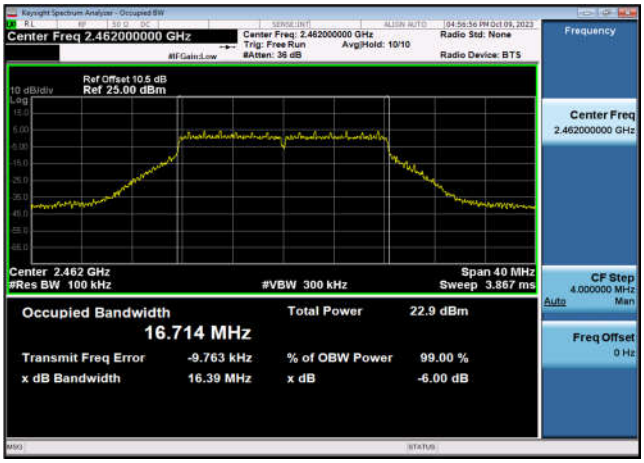
6dB Bandwidth-802.11g,2437MHz,Ant9



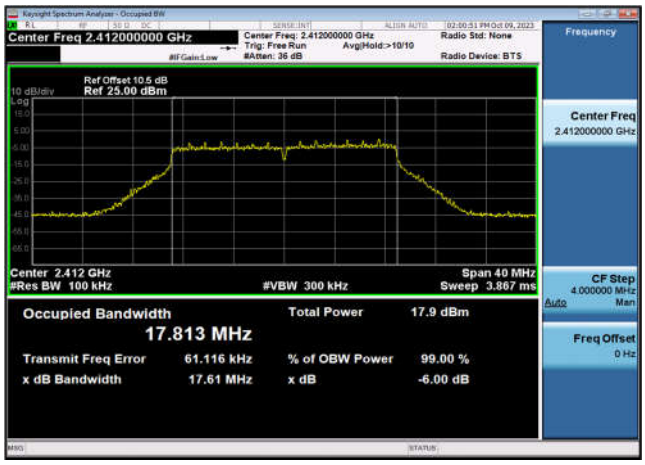
6dB Bandwidth-802.11g,2462MHz,Ant7



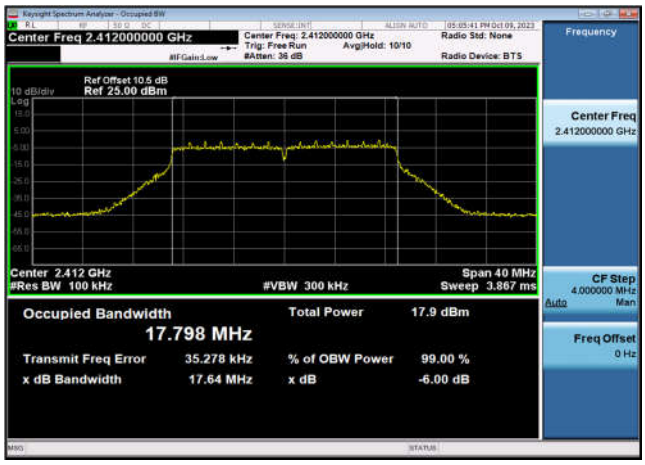
6dB Bandwidth-802.11g,2462MHz,Ant9



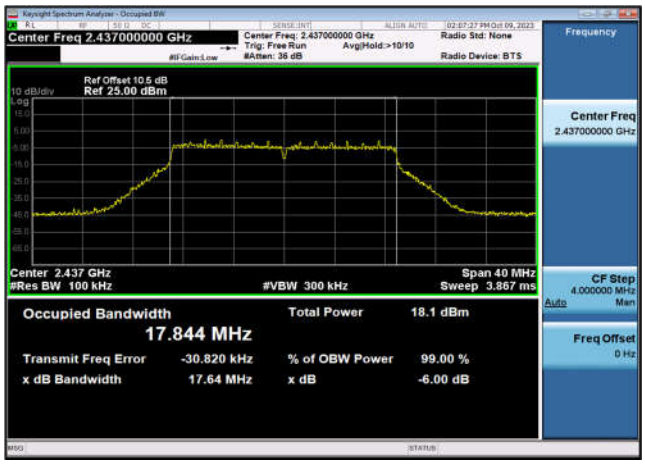
6dB Bandwidth-802.11n(HT20),2412MHz ,Ant7



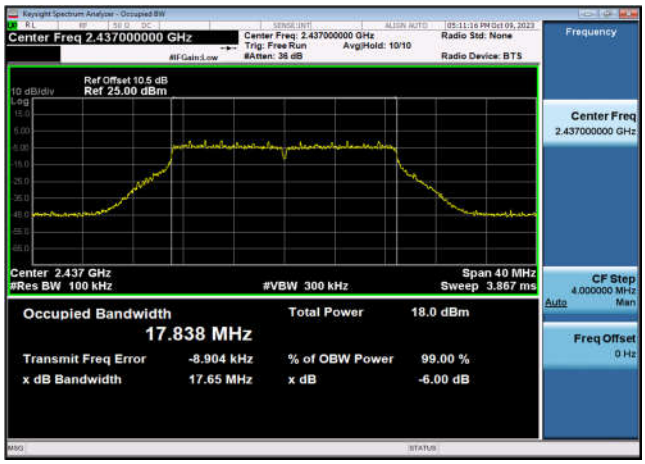
6dB Bandwidth-802.11n(HT20),2412MHz ,Ant9



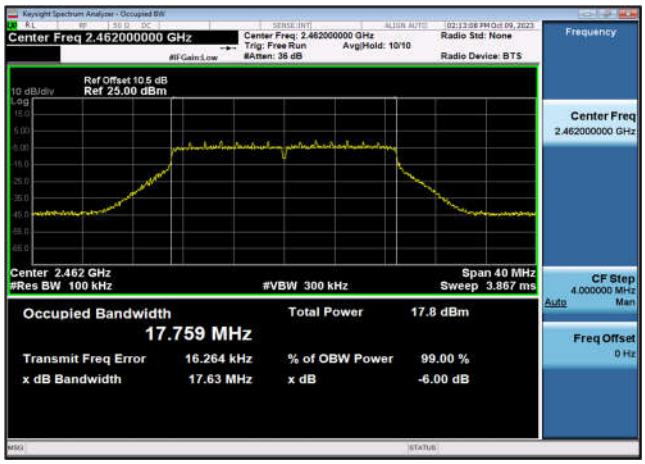
6dB Bandwidth-802.11n(HT20),2437MHz ,Ant7



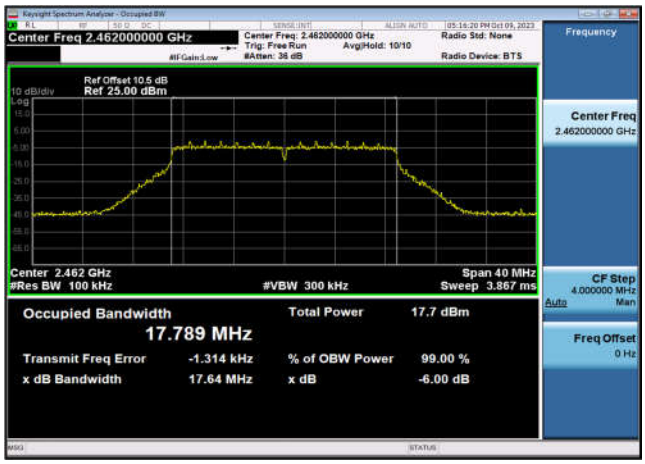
6dB Bandwidth-802.11n(HT20),2437MHz ,Ant9



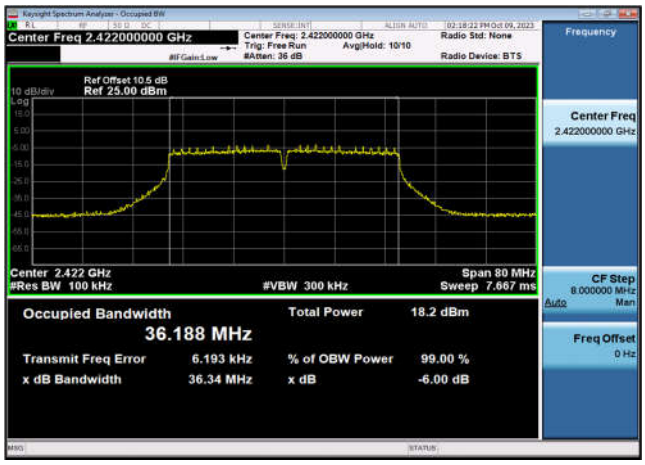
6dB Bandwidth-802.11n(HT20),2462MHz ,Ant7



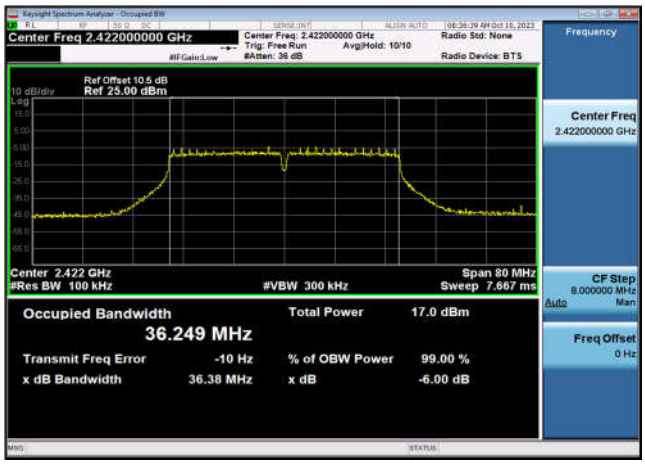
6dB Bandwidth-802.11n(HT20),2462MHz ,Ant9



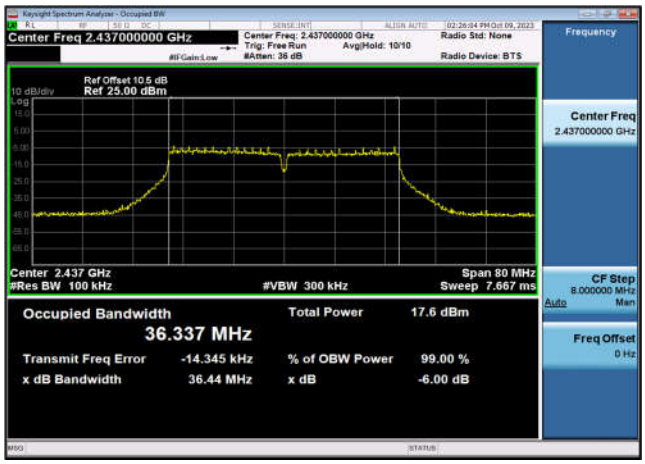
6dB Bandwidth-802.11n(HT40),2422MHz ,Ant7



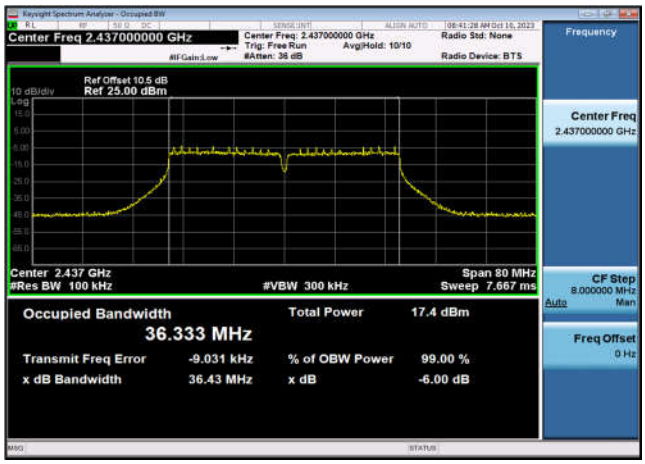
6dB Bandwidth-802.11n(HT40),2422MHz ,Ant9



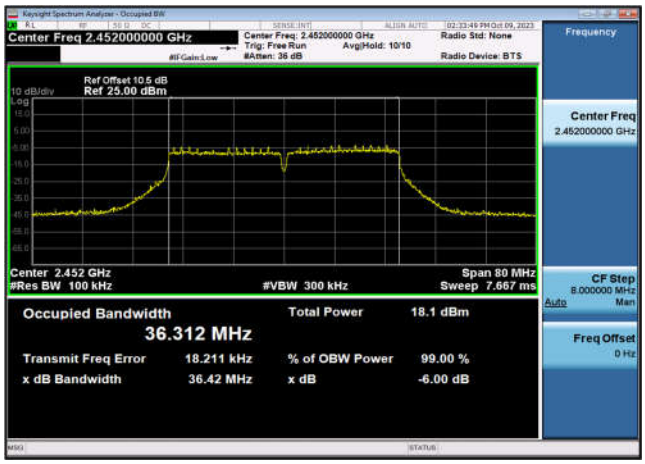
6dB Bandwidth-802.11n(HT40),2437MHz ,Ant7



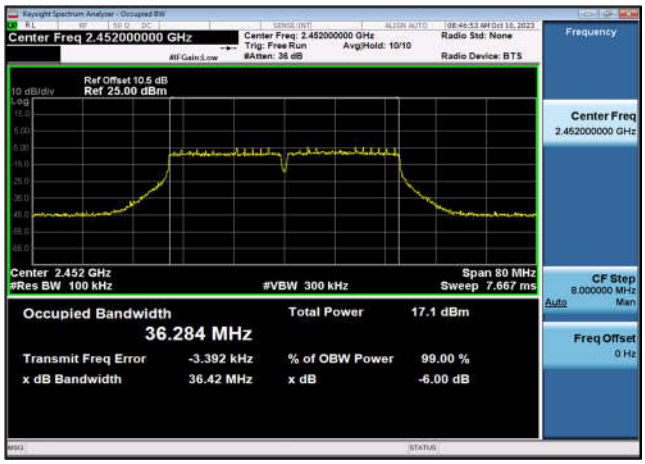
6dB Bandwidth-802.11n(HT40),2437MHz ,Ant9

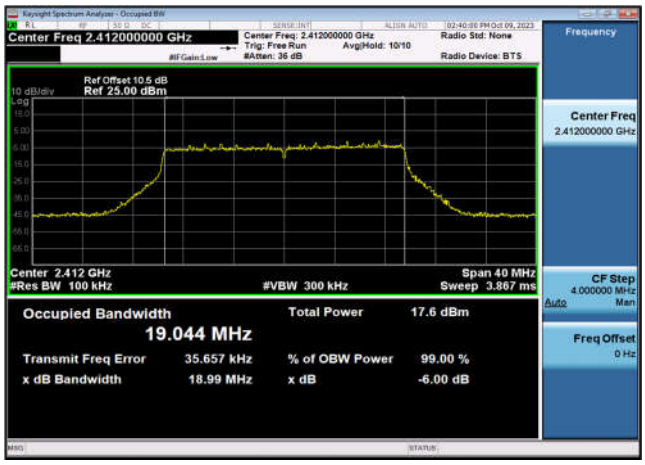
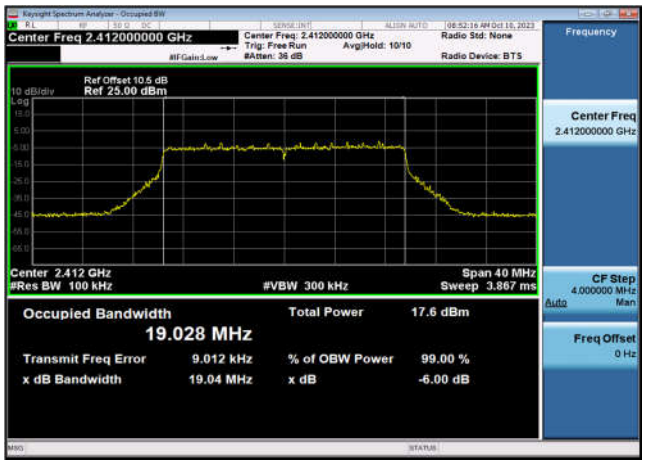
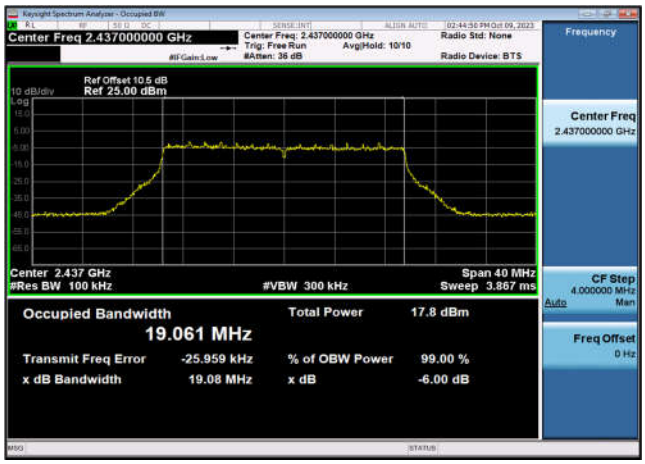
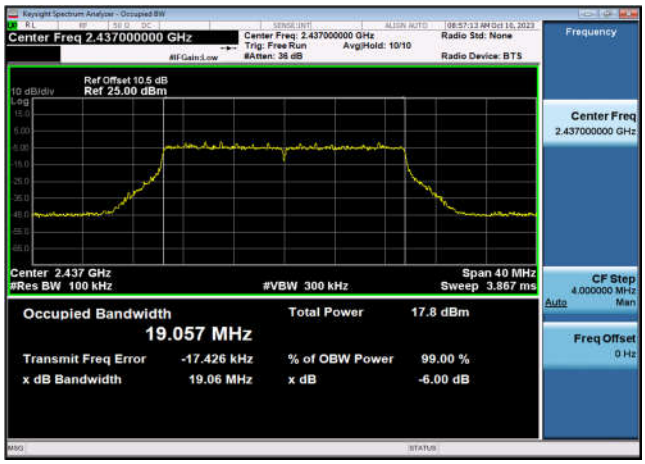
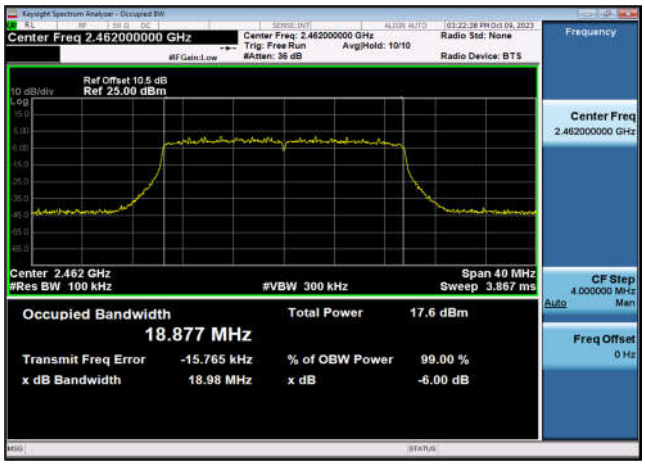
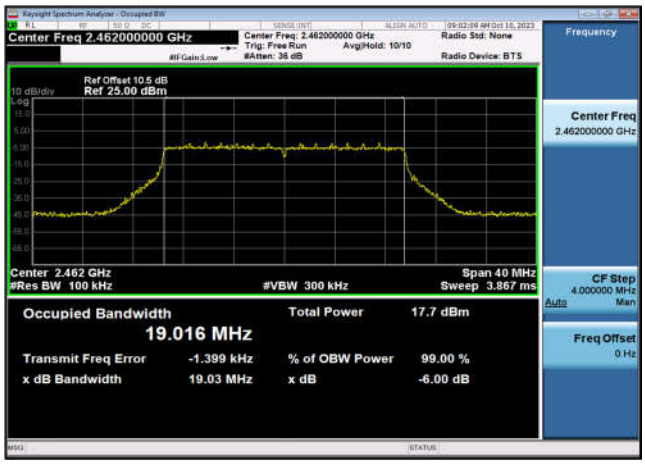


6dB Bandwidth-802.11n(HT40),2452MHz ,Ant7

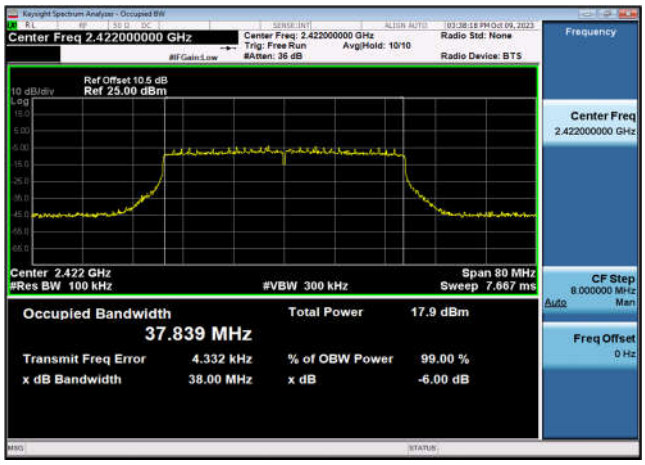


6dB Bandwidth-802.11n(HT40),2452MHz ,Ant9

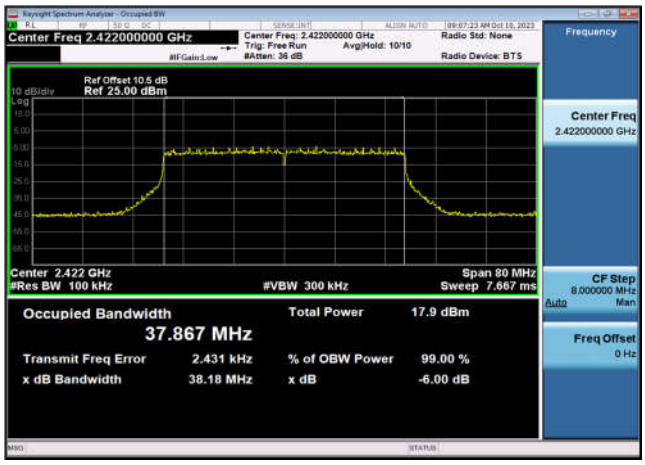


6dB Bandwidth-802.11ax(HT20),2412MHz ,Ant7	6dB Bandwidth-802.11ax(HT20),2412MHz ,Ant9
	
6dB Bandwidth-802.11ax(HT20),2437MHz ,Ant7	6dB Bandwidth-802.11ax(HT20),2437MHz ,Ant9
	
6dB Bandwidth-802.11ax(HT20),2462MHz ,Ant7	6dB Bandwidth-802.11ax(HT20),2462MHz ,Ant9
	

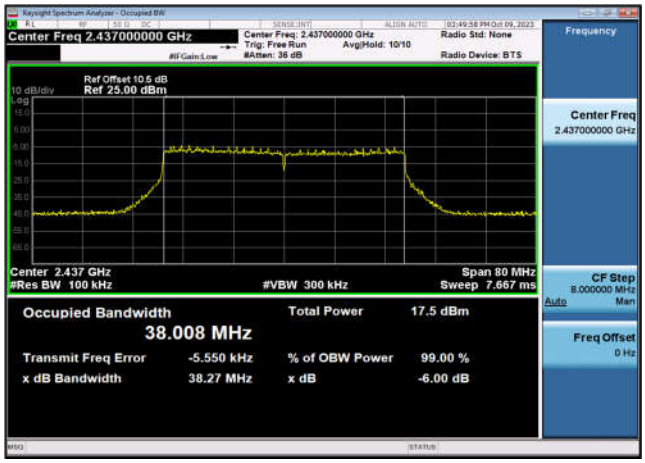
6dB Bandwidth-802.11ax(HT40),2422MHz ,Ant7



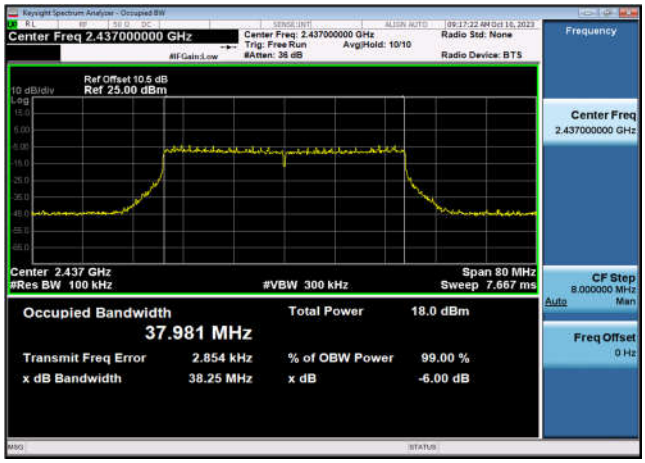
6dB Bandwidth-802.11ax(HT40),2422MHz ,Ant9



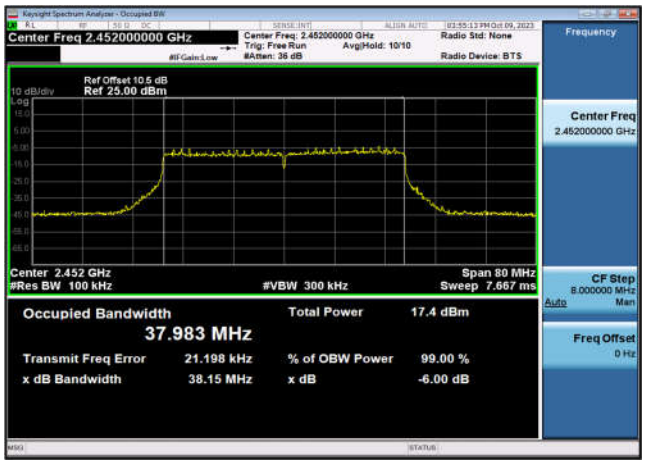
6dB Bandwidth-802.11ax(HT40),2437MHz ,Ant7



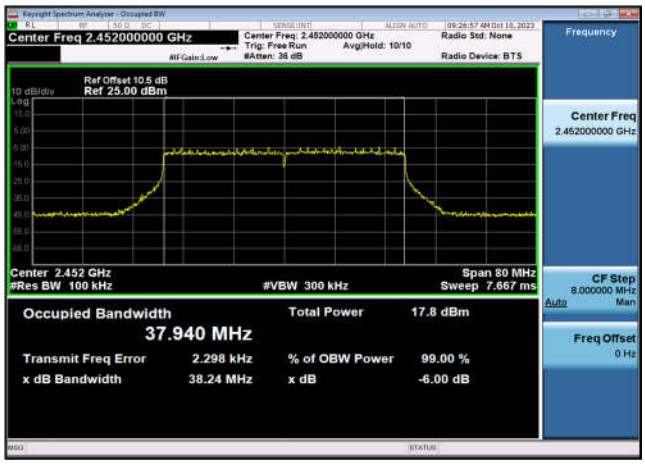
6dB Bandwidth-802.11ax(HT40),2437MHz ,Ant9



6dB Bandwidth-802.11ax(HT40),2452MHz ,Ant7



6dB Bandwidth-802.11ax(HT40),2452MHz ,Ant9



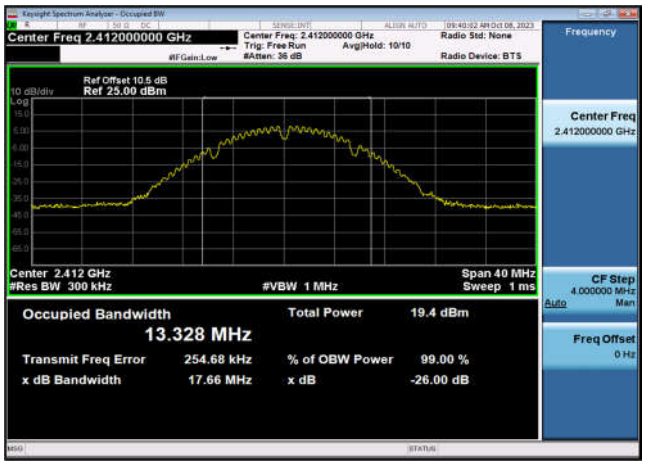
99% Occupied Bandwidth

Test Result and Data

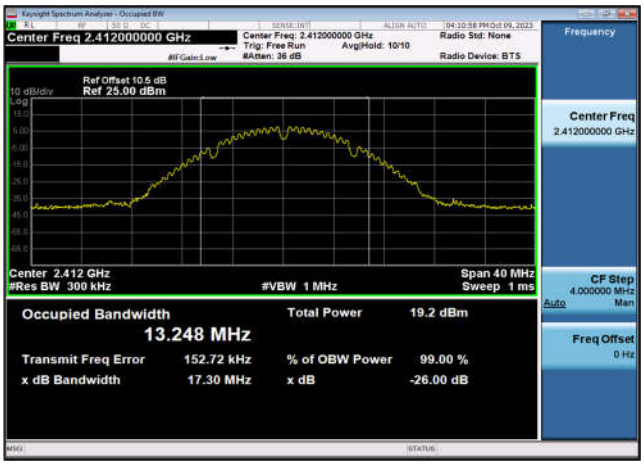
WLAN 99% Occupied Bandwidth				
Mode	Test Frequency (MHz)	Ant	99% Occupied Bandwidth (MHz)	Result
802.11b	2412	Ant7	13.328	Pass
802.11b	2412	Ant9	13.248	Pass
802.11b	2437	Ant7	13.305	Pass
802.11b	2437	Ant9	13.275	Pass
802.11b	2462	Ant7	13.126	Pass
802.11b	2462	Ant9	13.198	Pass
802.11g	2412	Ant7	17.319	Pass
802.11g	2412	Ant9	17.278	Pass
802.11g	2437	Ant7	17.327	Pass
802.11g	2437	Ant9	17.334	Pass
802.11g	2462	Ant7	17.113	Pass
802.11g	2462	Ant9	17.176	Pass
802.11n (HT20)	2412	Ant7	18.211	Pass
802.11n (HT20)	2412	Ant9	18.205	Pass
802.11n (HT20)	2437	Ant7	18.252	Pass
802.11n (HT20)	2437	Ant9	18.247	Pass
802.11n (HT20)	2462	Ant7	18.101	Pass
802.11n (HT20)	2462	Ant9	18.131	Pass
802.11n (HT40)	2422	Ant7	37.406	Pass
802.11n (HT40)	2422	Ant9	37.565	Pass
802.11n (HT40)	2437	Ant7	37.964	Pass
802.11n (HT40)	2437	Ant9	37.942	Pass
802.11n (HT40)	2452	Ant7	37.879	Pass
802.11n (HT40)	2452	Ant9	37.692	Pass
802.11ax (HT20)	2412	Ant7	19.150	Pass
802.11ax (HT20)	2412	Ant9	19.206	Pass
802.11ax (HT20)	2437	Ant7	19.223	Pass
802.11ax (HT20)	2437	Ant9	19.265	Pass
802.11ax (HT20)	2462	Ant7	18.917	Pass

802.11ax (HT20)	2462	Ant9	19.170	Pass
802.11ax (HT40)	2422	Ant7	38.331	Pass
802.11ax (HT40)	2422	Ant9	38.429	Pass
802.11ax (HT40)	2437	Ant7	38.798	Pass
802.11ax (HT40)	2437	Ant9	38.651	Pass
802.11ax (HT40)	2452	Ant7	38.733	Pass
802.11ax (HT40)	2452	Ant9	38.582	Pass

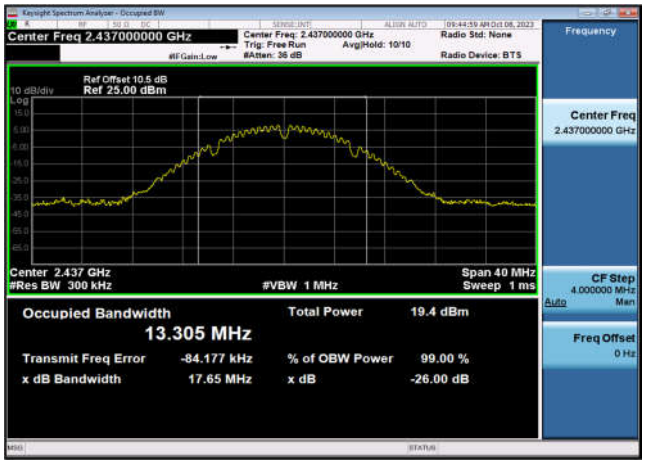
99% Bandwidth-802.11b,2412MHz,Ant7



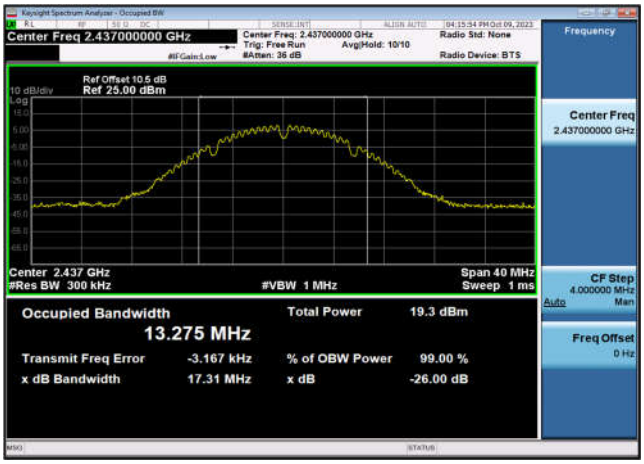
99% Bandwidth-802.11b,2412MHz,Ant9



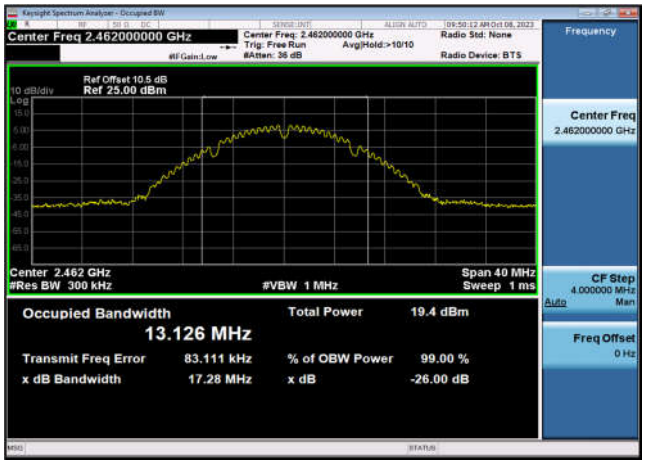
99% Bandwidth-802.11b,2437MHz,Ant7



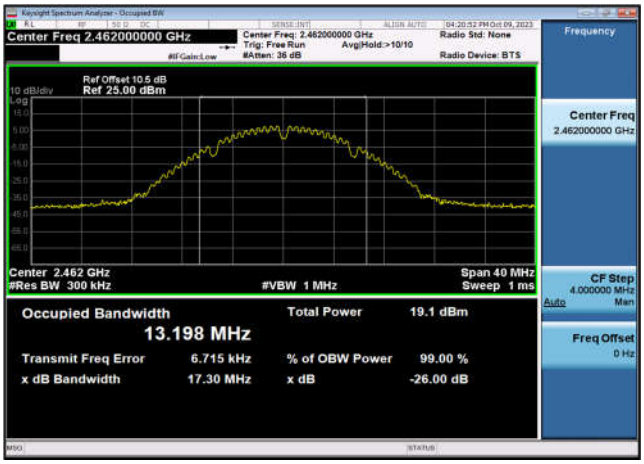
99% Bandwidth-802.11b,2437MHz,Ant9



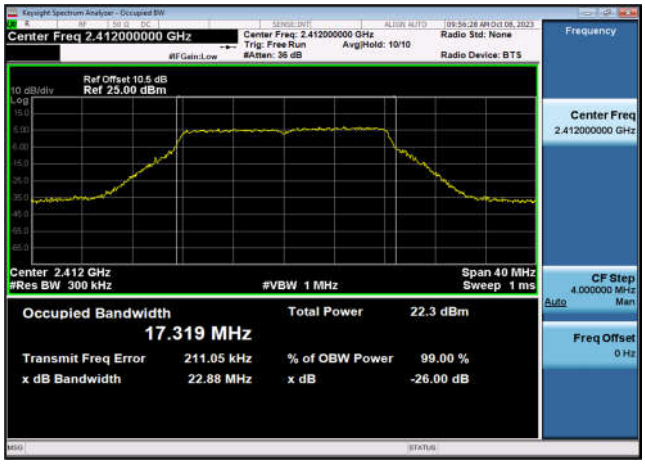
99% Bandwidth-802.11b,2462MHz,Ant7



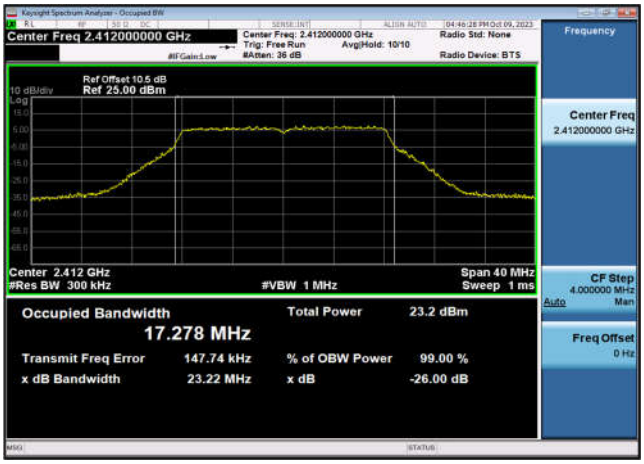
99% Bandwidth-802.11b,2462MHz,Ant9



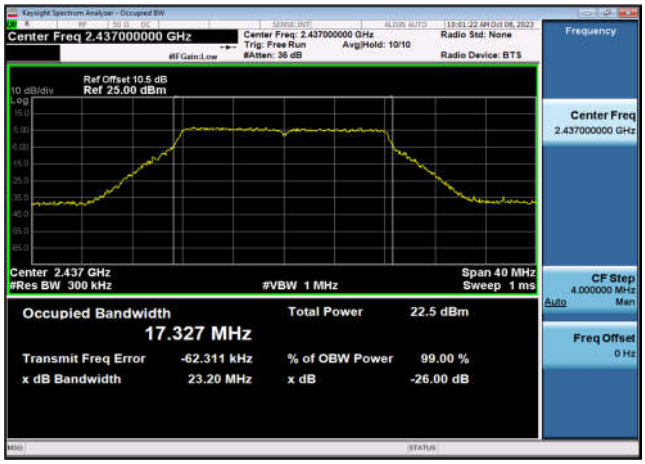
99% Bandwidth-802.11g,2412MHz,Ant7



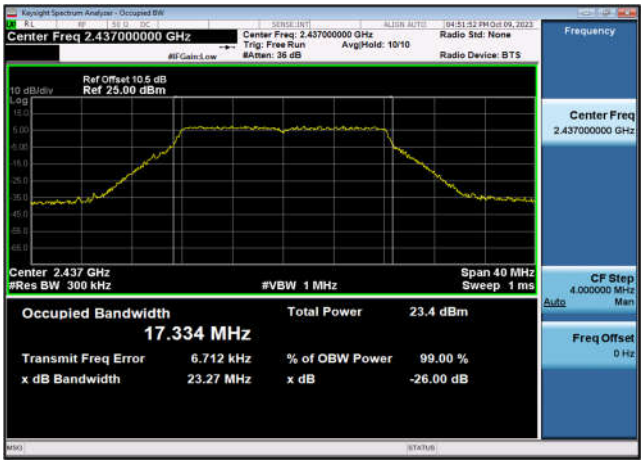
99% Bandwidth-802.11g,2412MHz,Ant9



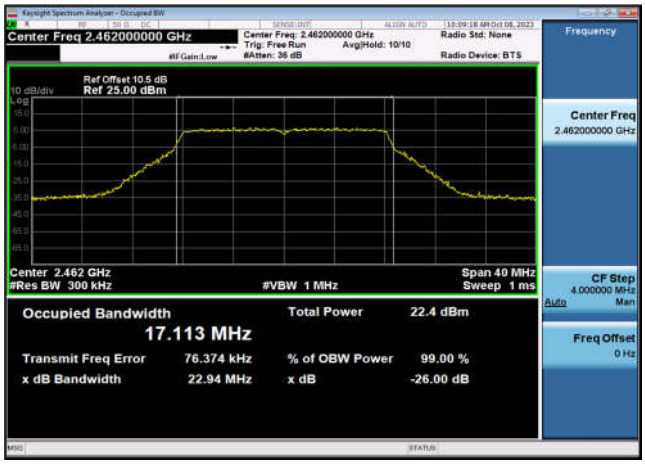
99% Bandwidth-802.11g,2437MHz,Ant7



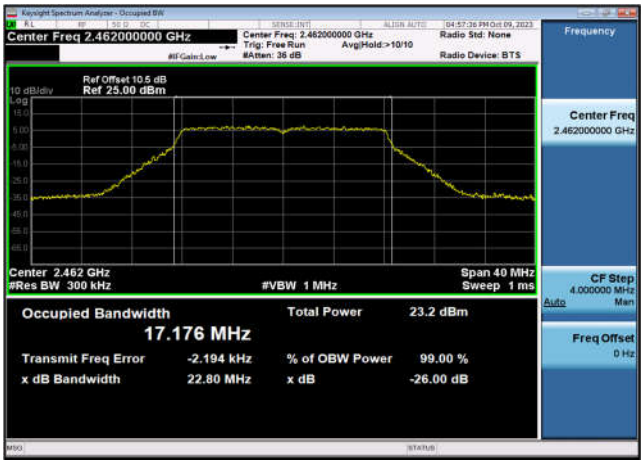
99% Bandwidth-802.11g,2437MHz,Ant9

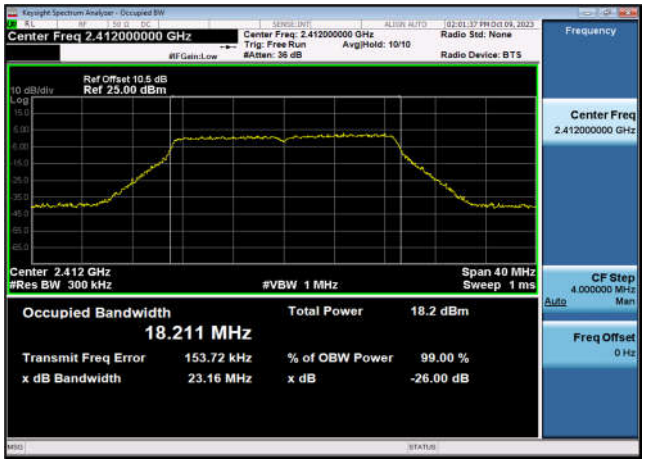
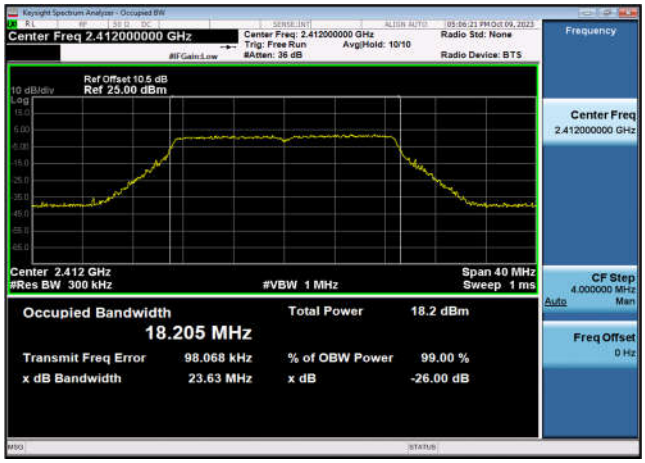
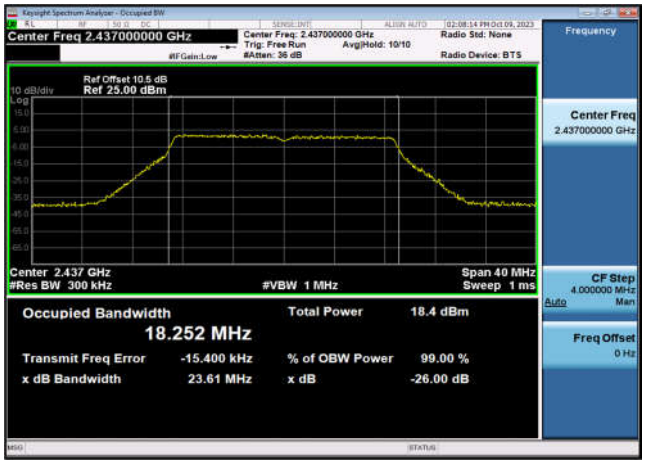
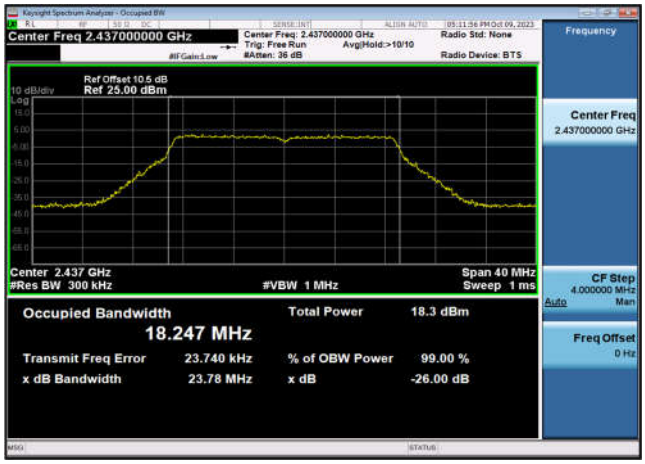
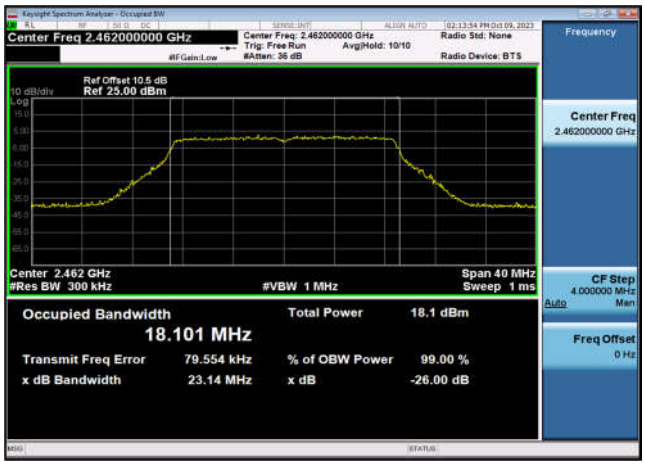
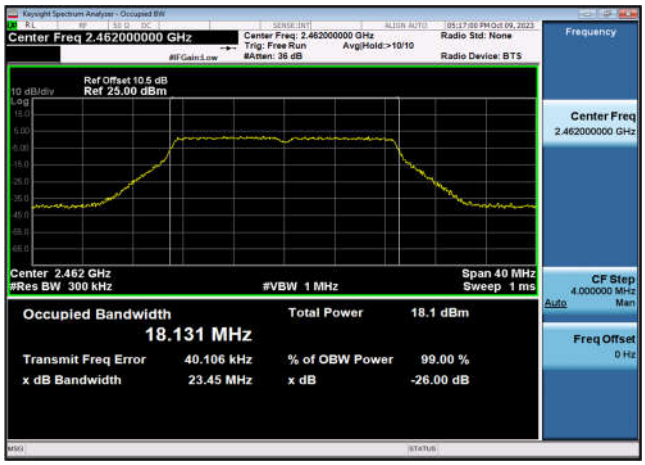


99% Bandwidth-802.11g,2462MHz,Ant7



99% Bandwidth-802.11g,2462MHz,Ant9



99% Bandwidth-802.11n(HT20),2412MHz ,Ant7	99% Bandwidth-802.11n(HT20),2412MHz ,Ant9
	
99% Bandwidth-802.11n(HT20),2437MHz ,Ant7	99% Bandwidth-802.11n(HT20),2437MHz ,Ant9
	
99% Bandwidth-802.11n(HT20),2462MHz ,Ant7	99% Bandwidth-802.11n(HT20),2462MHz ,Ant9
	

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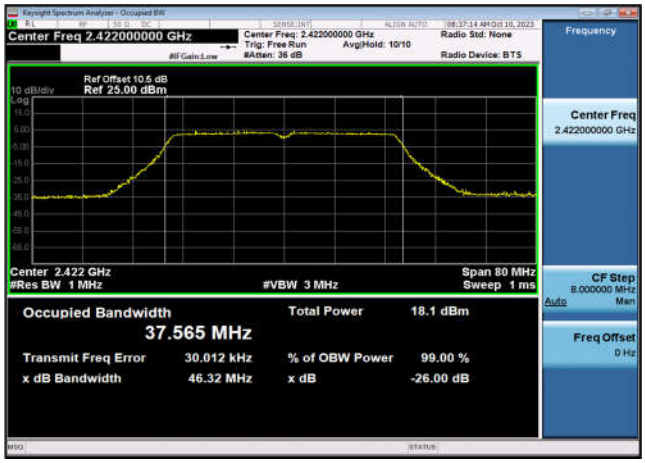
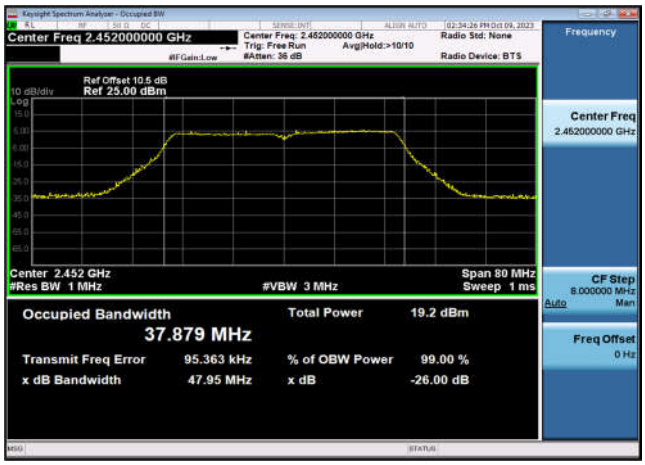
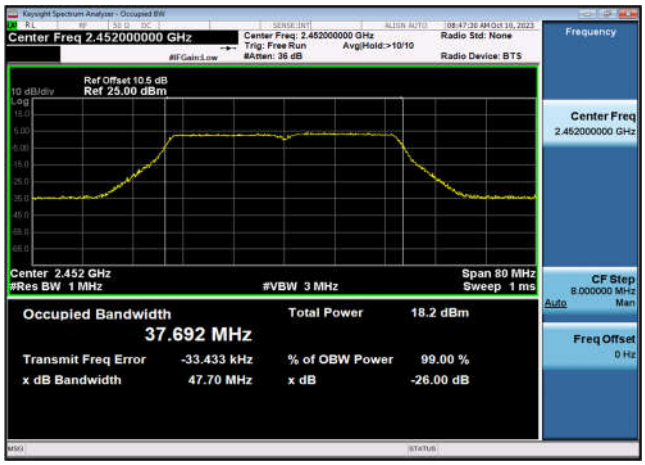
	
99% Bandwidth-802.11n(HT40),2437MHz ,Ant7	99% Bandwidth-802.11n(HT40),2437MHz ,Ant9
99% Bandwidth-802.11n(HT40),2452MHz ,Ant7	99% Bandwidth-802.11n(HT40),2452MHz ,Ant9
	

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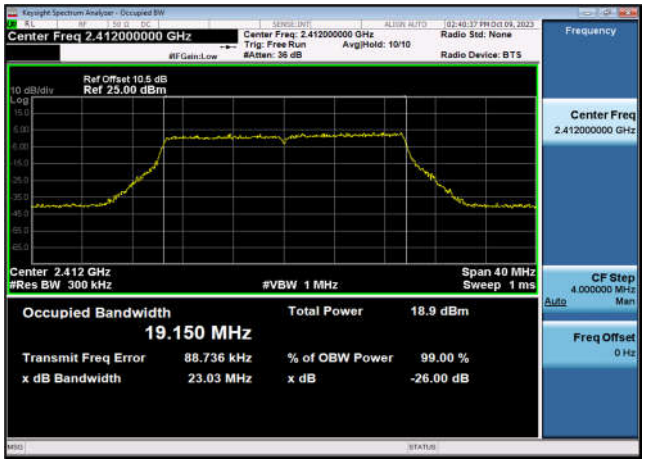
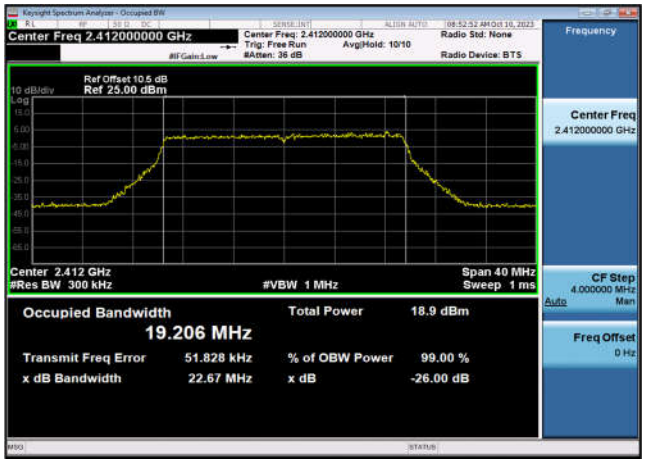
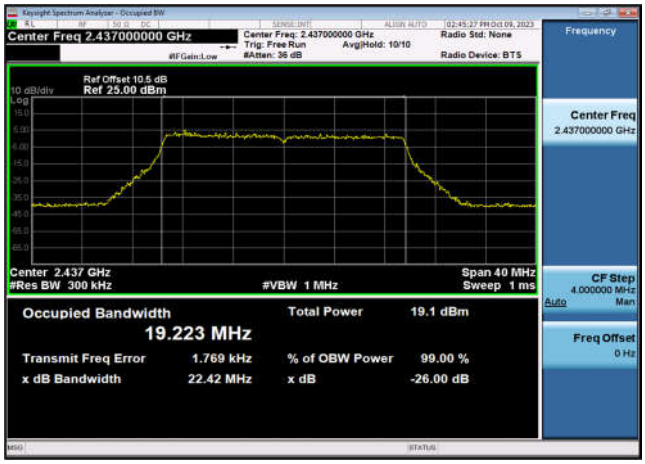
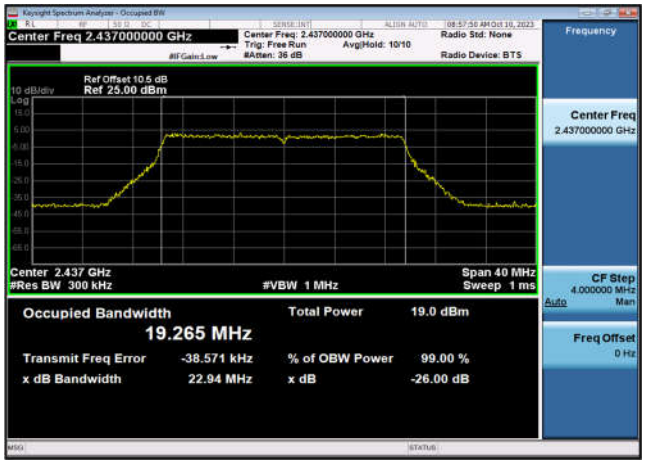
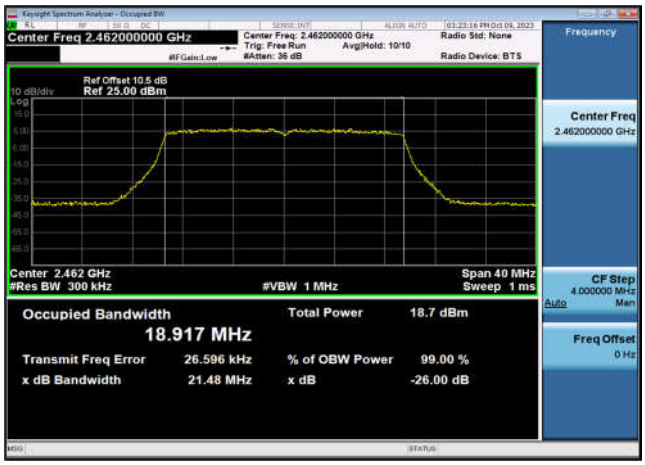
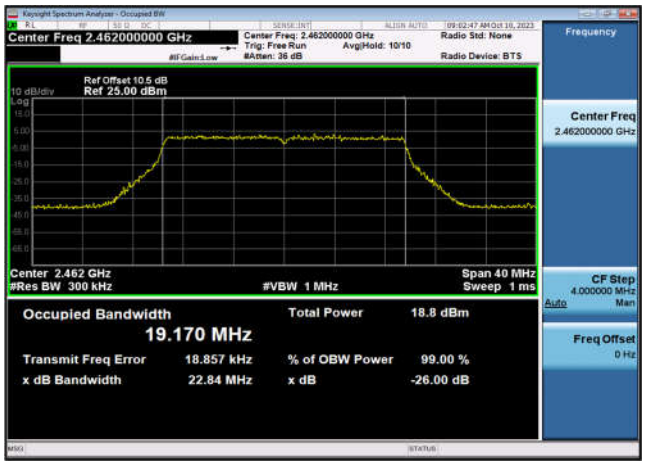
	
99% Bandwidth-802.11ax(HT20),2437MHz ,Ant7	99% Bandwidth-802.11ax(HT20),2437MHz ,Ant9
	
99% Bandwidth-802.11ax(HT20),2462MHz ,Ant7	99% Bandwidth-802.11ax(HT20),2462MHz ,Ant9
	

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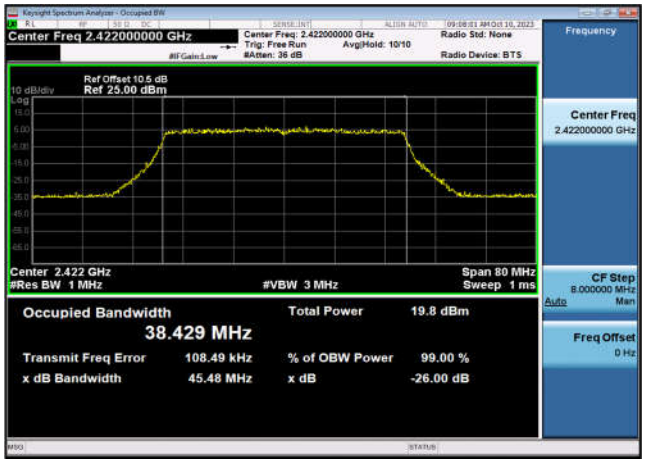
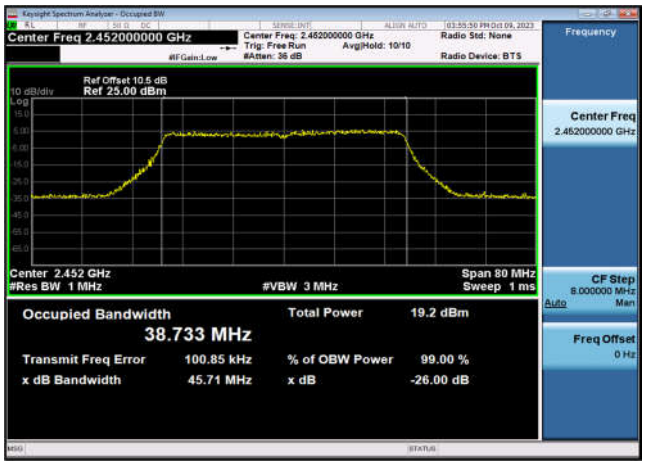
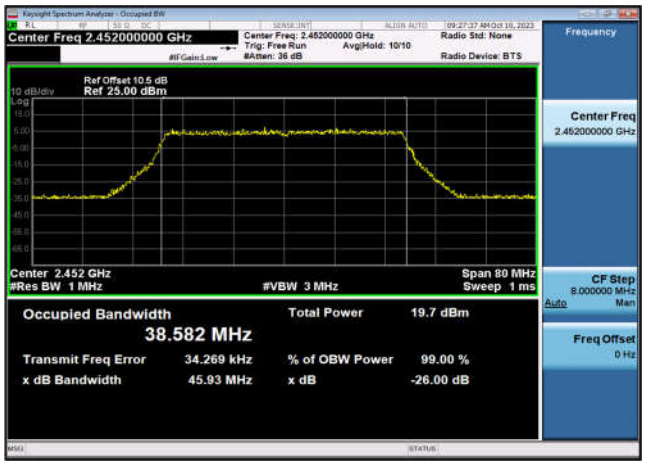
	
99% Bandwidth-802.11ax(HT40),2437MHz ,Ant7	99% Bandwidth-802.11ax(HT40),2437MHz ,Ant9
99% Bandwidth-802.11ax(HT40),2452MHz ,Ant7	99% Bandwidth-802.11ax(HT40),2452MHz ,Ant9
	

Power Spectral Density

Test Result and Data

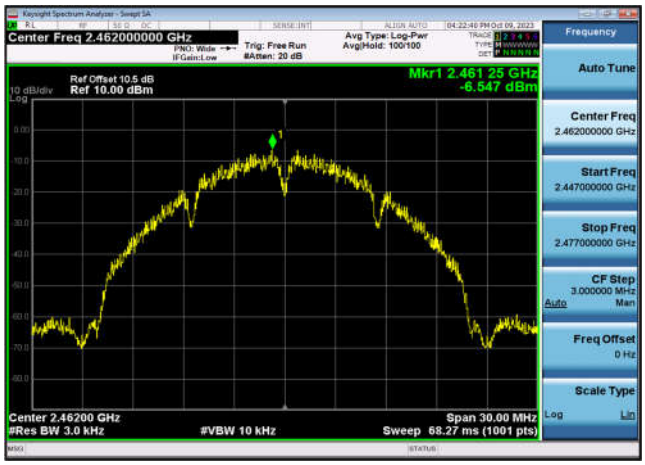
WLAN AVGSA Power Spectral Density							
Mode	Test Frequency (MHz)	Ant	PSD (dBm)	Total PSD (dBm)	RBW (kHz)	Limit (dBm)	Result
802.11b	2412	Ant7	-7.434	/	3	8	Pass
802.11b	2412	Ant9	-7.619	/	3	8	Pass
802.11b	2437	Ant7	-7.625	/	3	8	Pass
802.11b	2437	Ant9	-7.698	/	3	8	Pass
802.11b	2462	Ant7	-6.041	/	3	8	Pass
802.11b	2462	Ant9	-6.547	/	3	8	Pass
802.11g	2412	Ant7	-9.364	/	3	8	Pass
802.11g	2412	Ant9	-9.072	/	3	8	Pass
802.11g	2437	Ant7	-10.126	/	3	8	Pass
802.11g	2437	Ant9	-8.478	/	3	8	Pass
802.11g	2462	Ant7	-9.910	/	3	8	Pass
802.11g	2462	Ant9	-9.539	/	3	8	Pass
802.11n (HT20)	2412	Ant7	-13.417	-10.54	3	8	Pass
802.11n (HT20)	2412	Ant9	-13.685		3	8	Pass
802.11n (HT20)	2437	Ant7	-14.005	-10.83	3	8	Pass
802.11n (HT20)	2437	Ant9	-13.676		3	8	Pass
802.11n (HT20)	2462	Ant7	-14.695	-11.67	3	8	Pass
802.11n (HT20)	2462	Ant9	-14.669		3	8	Pass
802.11n (HT40)	2422	Ant7	-15.714	-13.67	3	8	Pass
802.11n (HT40)	2422	Ant9	-17.918		3	8	Pass
802.11n (HT40)	2437	Ant7	-16.950	-14.17	3	8	Pass
802.11n (HT40)	2437	Ant9	-17.419		3	8	Pass
802.11n (HT40)	2452	Ant7	-16.918	-14.35	3	8	Pass
802.11n (HT40)	2452	Ant9	-17.842		3	8	Pass
802.11ax (HT20)	2412	Ant7	-15.188	-12.29	3	8	Pass
802.11ax (HT20)	2412	Ant9	-15.413		3	8	Pass
802.11ax (HT20)	2437	Ant7	-15.298	-12.36	3	8	Pass
802.11ax (HT20)	2437	Ant9	-15.451		3	8	Pass

802.11ax (HT20)	2462	Ant7	-12.622	-10.94	3	8	Pass
802.11ax (HT20)	2462	Ant9	-15.868		3	8	Pass
802.11ax (HT40)	2422	Ant7	-16.826	-14.51	3	8	Pass
802.11ax (HT40)	2422	Ant9	-18.349		3	8	Pass
802.11ax (HT40)	2437	Ant7	-17.473	-14.68	3	8	Pass
802.11ax (HT40)	2437	Ant9	-17.924		3	8	Pass
802.11ax (HT40)	2452	Ant7	-18.315	-15.01	3	8	Pass
802.11ax (HT40)	2452	Ant9	-17.747		3	8	Pass

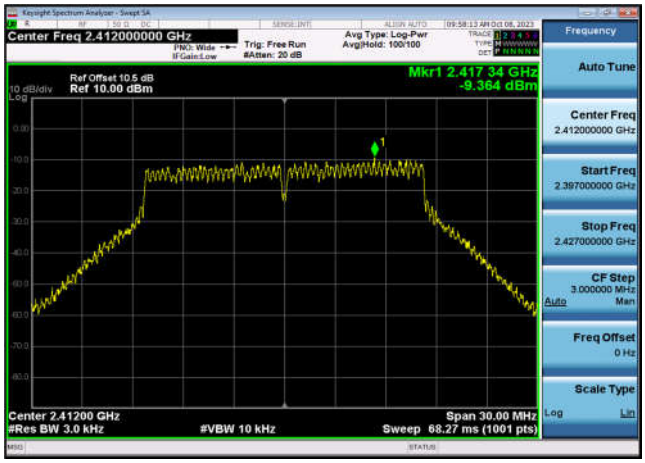
Note:

1) ANT7 and ANT9 is 2*2MIMO.

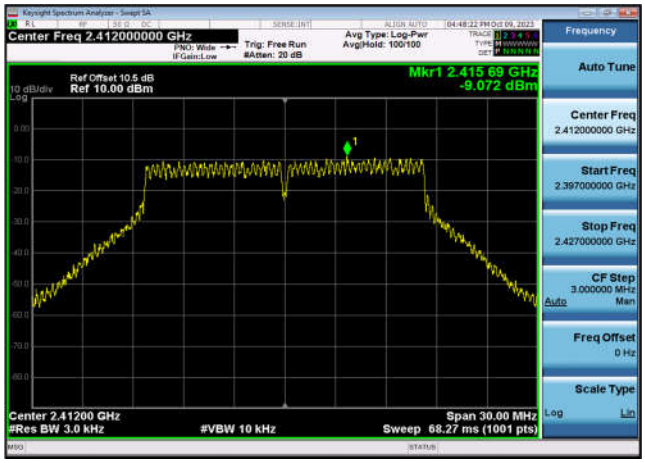
2) Total PSD = $10*\log \{10^{(\text{Ant 7 PSD}/10)} + 10^{(\text{Ant 9 PSD}/10)}\}$.

Power spectral density-802.11b ,2412MHz,Ant7	Power spectral density-802.11b ,2412MHz,Ant9
Power spectral density-802.11b ,2437MHz,Ant7	Power spectral density-802.11b ,2437MHz,Ant9
Power spectral density-802.11b ,2462MHz,Ant7	Power spectral density-802.11b ,2462MHz,Ant9
	

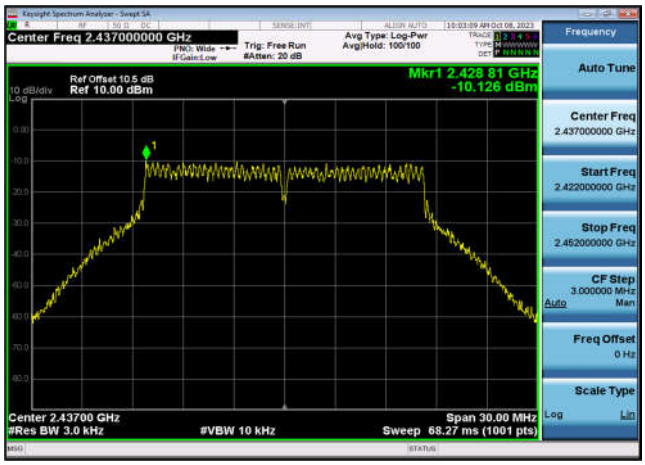
Power spectral density-802.11g ,2412MHz,Ant7



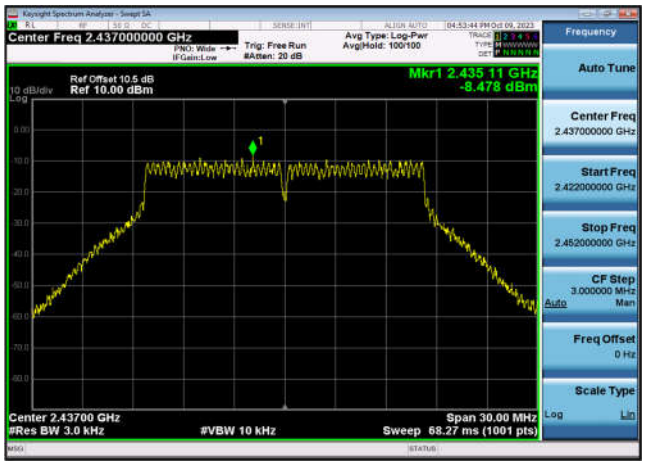
Power spectral density-802.11g ,2412MHz,Ant9



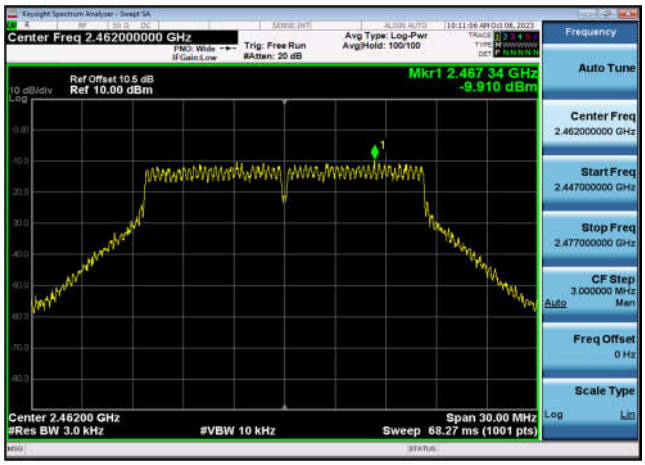
Power spectral density-802.11g ,2437MHz,Ant7



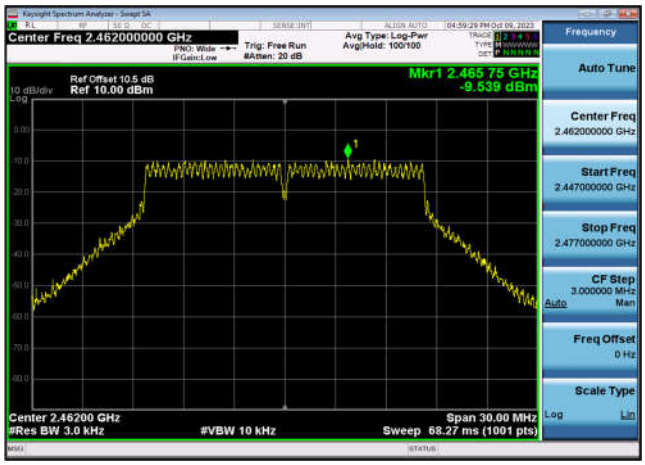
Power spectral density-802.11g ,2437MHz,Ant9

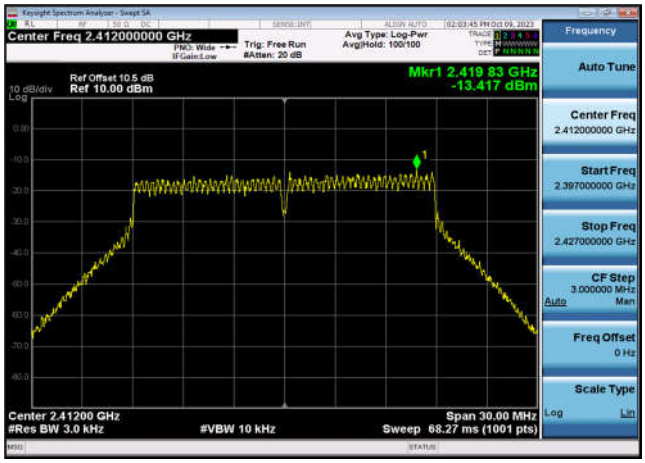
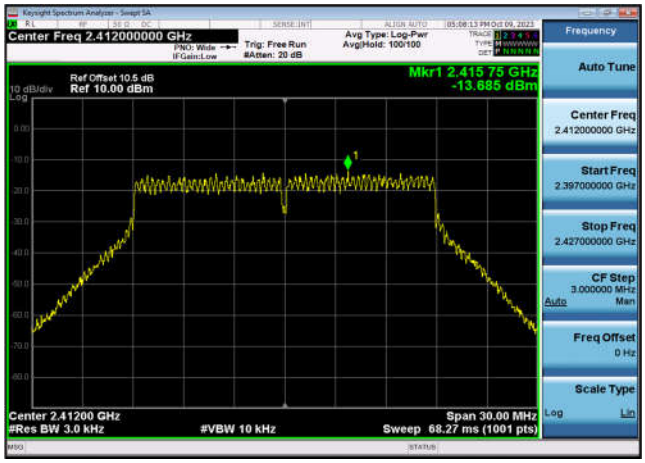
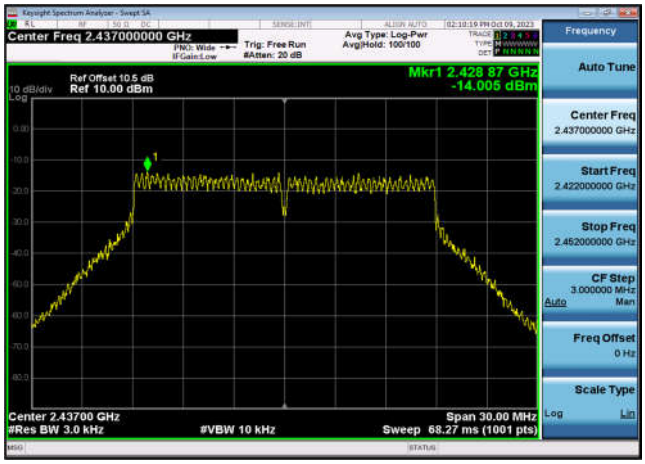
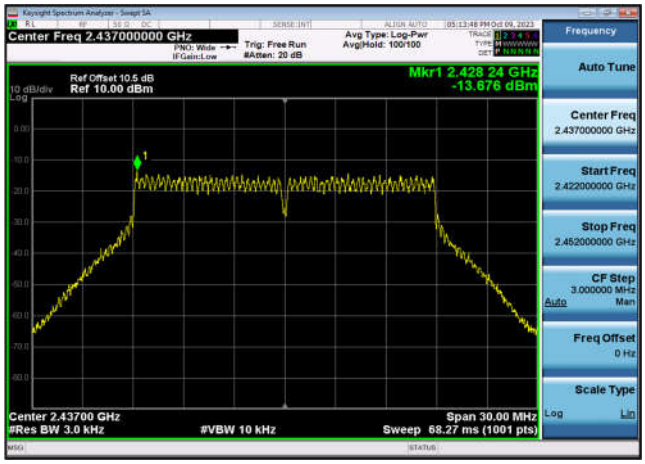
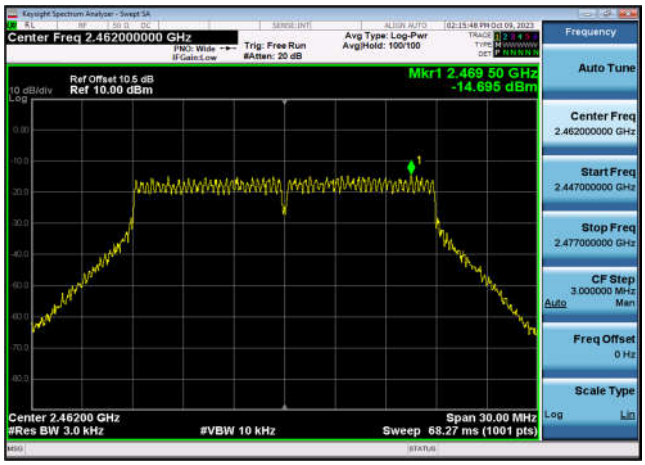
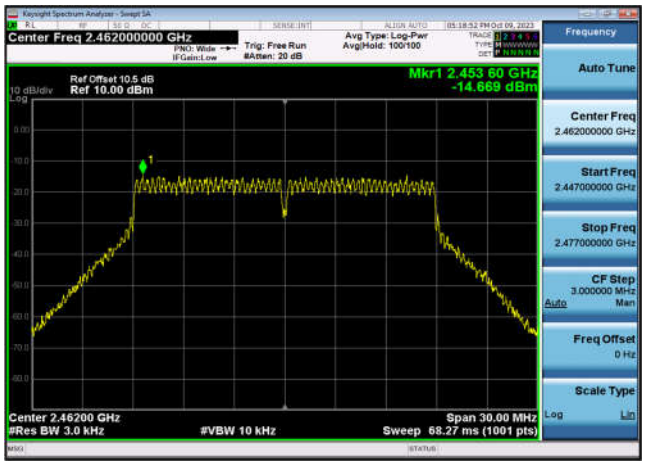


Power spectral density-802.11g ,2462MHz,Ant7

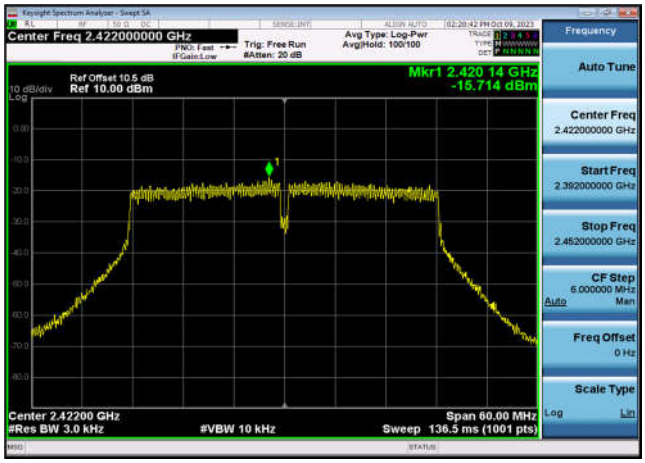


Power spectral density-802.11g ,2462MHz,Ant9

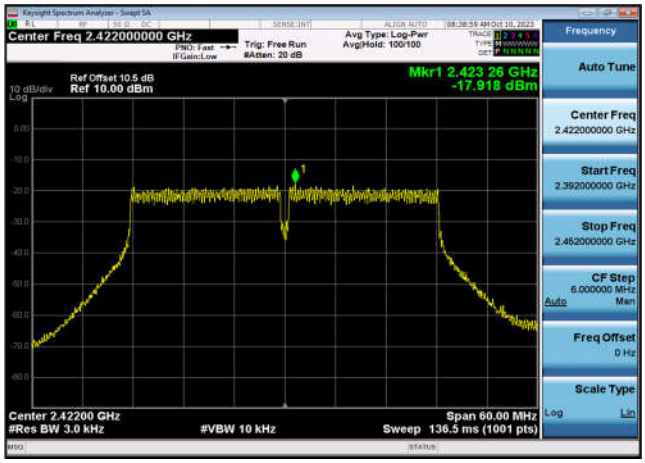


Power spectral density-802.11n(HT20) ,2412MHz,Ant7	Power spectral density-802.11n(HT20) ,2412MHz,Ant9
	
Power spectral density-802.11n(HT20) ,2437MHz,Ant7	Power spectral density-802.11n(HT20) ,2437MHz,Ant9
	
Power spectral density-802.11n(HT20) ,2462MHz,Ant7	Power spectral density-802.11n(HT20) ,2462MHz,Ant9
	

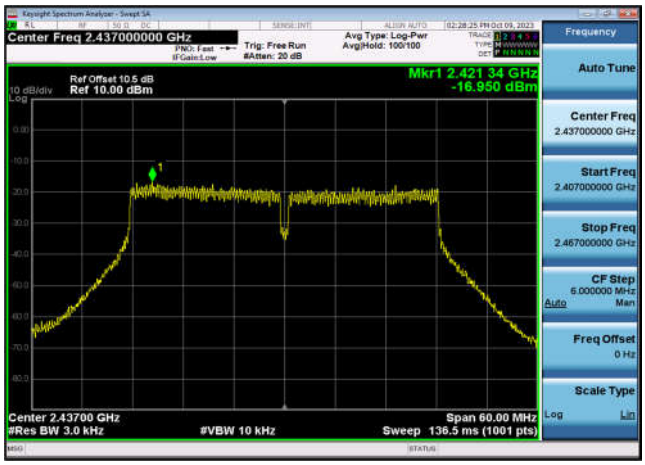
Power spectral density-802.11n(HT40) ,2422MHz,Ant7



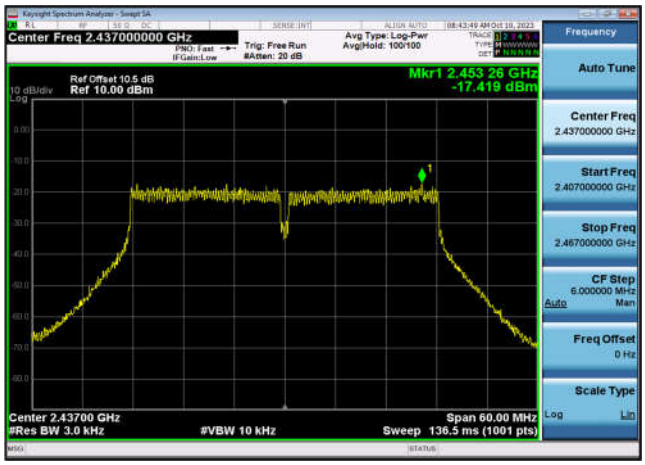
Power spectral density-802.11n(HT40) ,2422MHz,Ant9



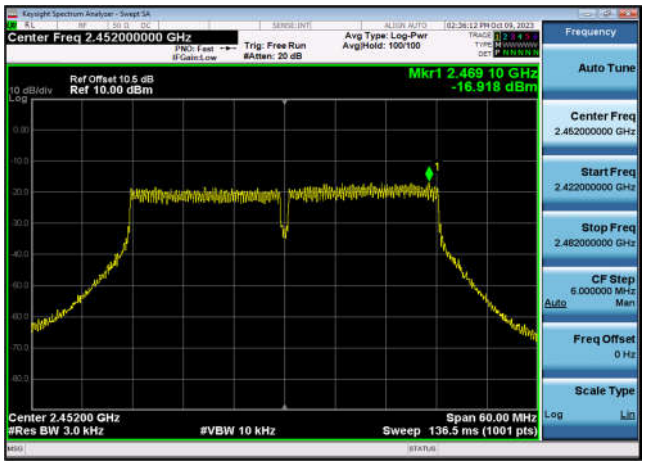
Power spectral density-802.11n(HT40) ,2437MHz,Ant7



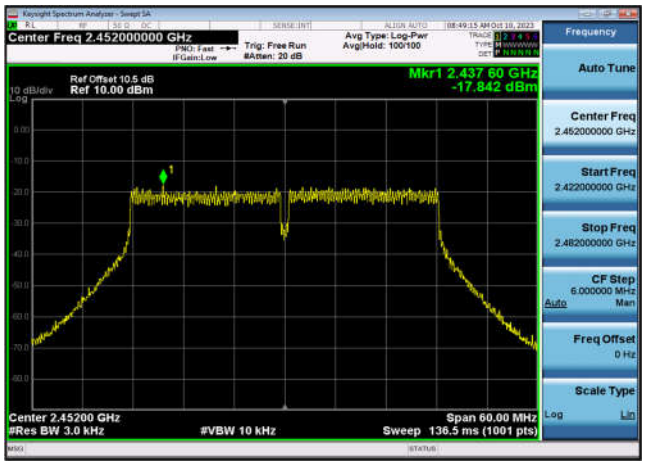
Power spectral density-802.11n(HT40) ,2437MHz,Ant9



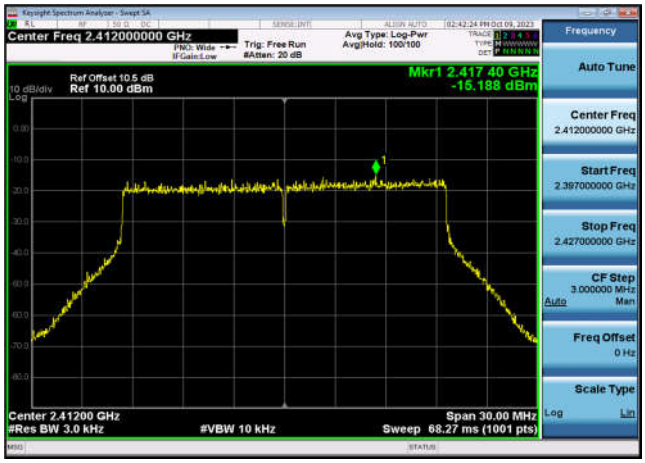
Power spectral density-802.11n(HT40) ,2452MHz,Ant7



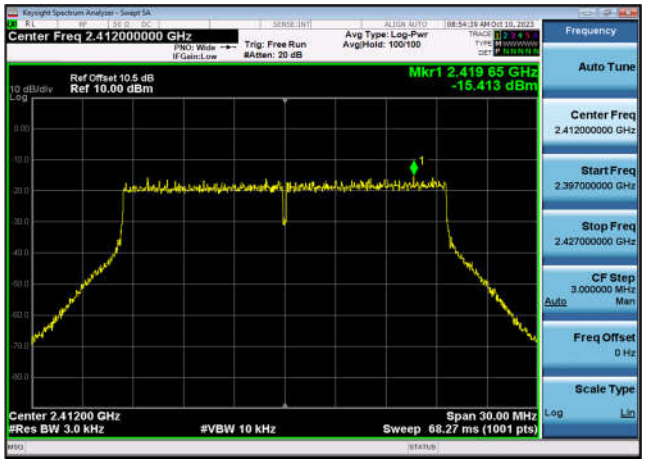
Power spectral density-802.11n(HT40) ,2452MHz,Ant9



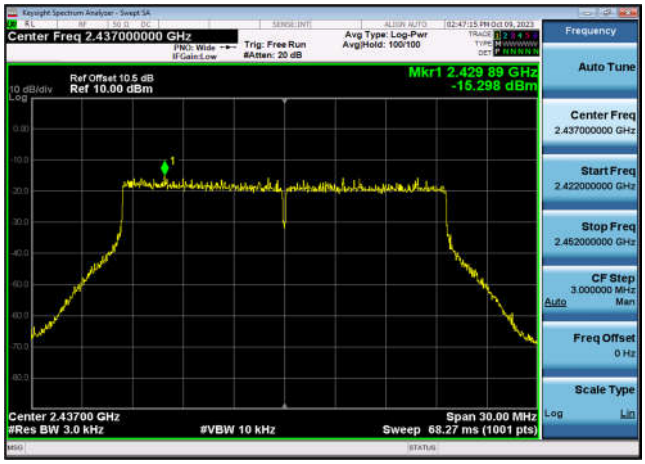
Power spectral density-802.11ax(HT20) ,2412MHz,Ant7



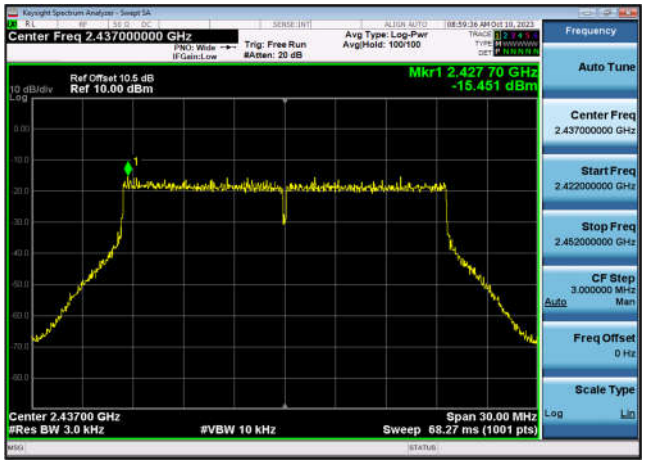
Power spectral density-802.11ax(HT20) ,2412MHz,Ant9



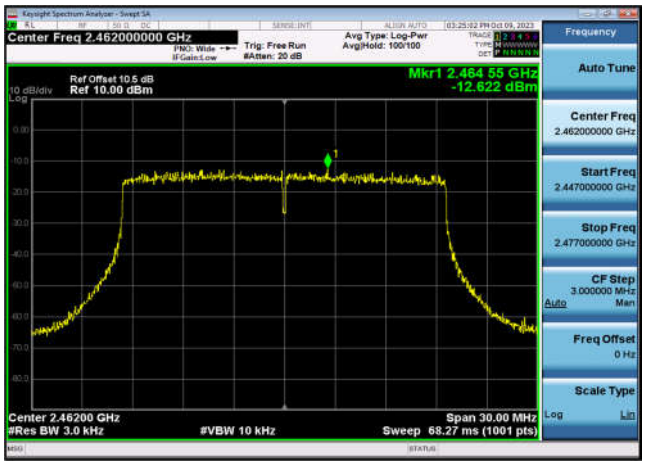
Power spectral density-802.11ax(HT20) ,2437MHz,Ant7



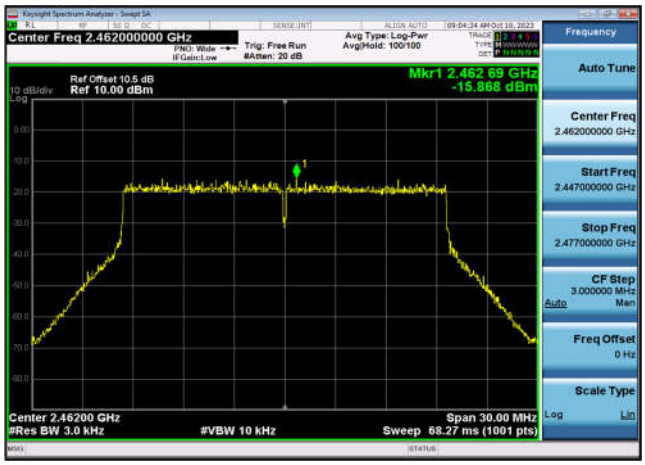
Power spectral density-802.11ax(HT20) ,2437MHz,Ant9



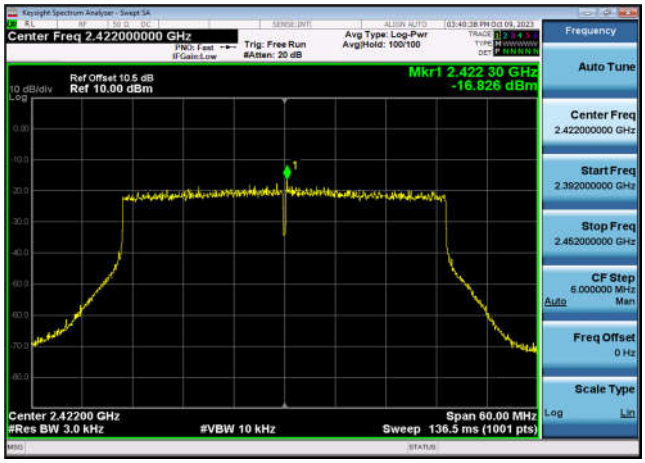
Power spectral density-802.11ax(HT20) ,2462MHz,Ant7



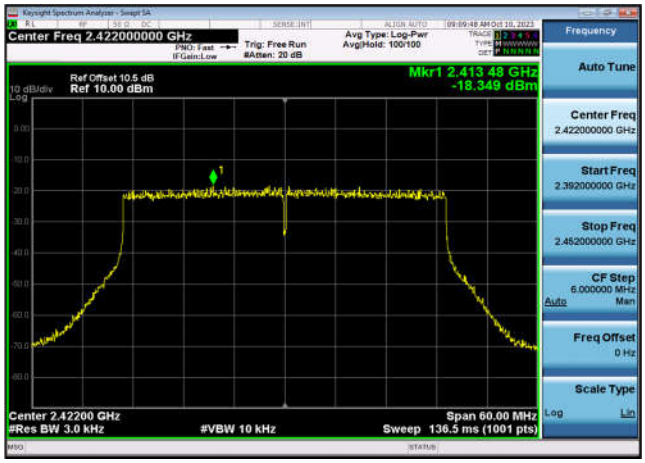
Power spectral density-802.11ax(HT20) ,2462MHz,Ant9



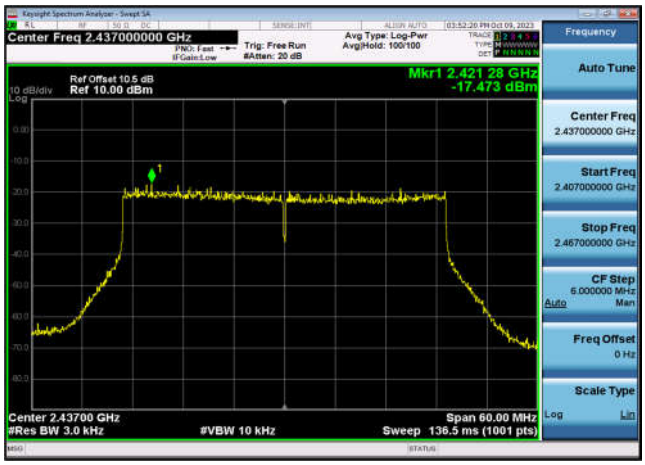
Power spectral density-802.11ax(HT40) ,2422MHz,Ant7



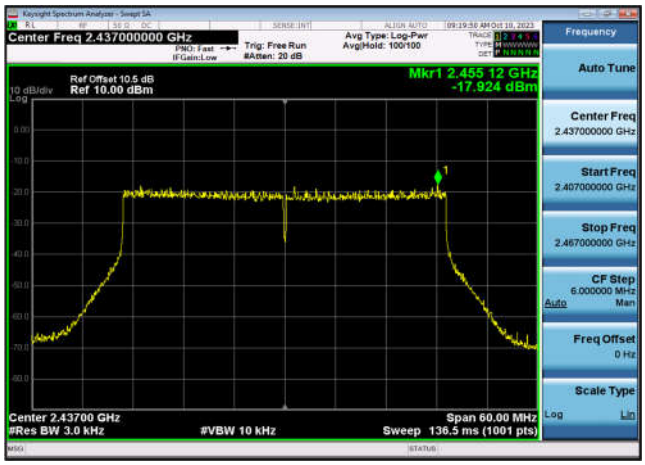
Power spectral density-802.11ax(HT40) ,2422MHz,Ant9



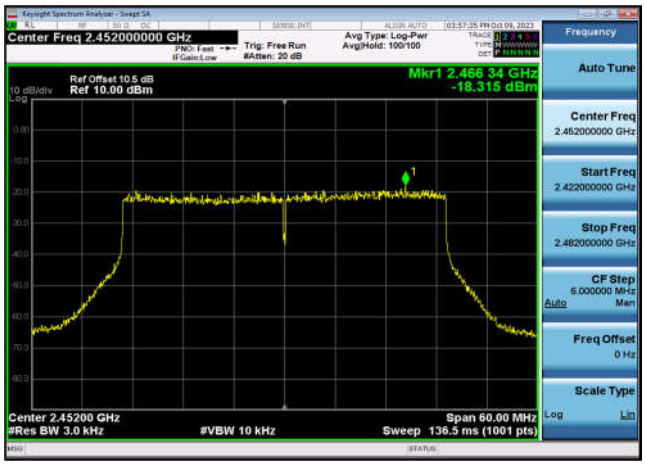
Power spectral density-802.11ax(HT40) ,2437MHz,Ant7



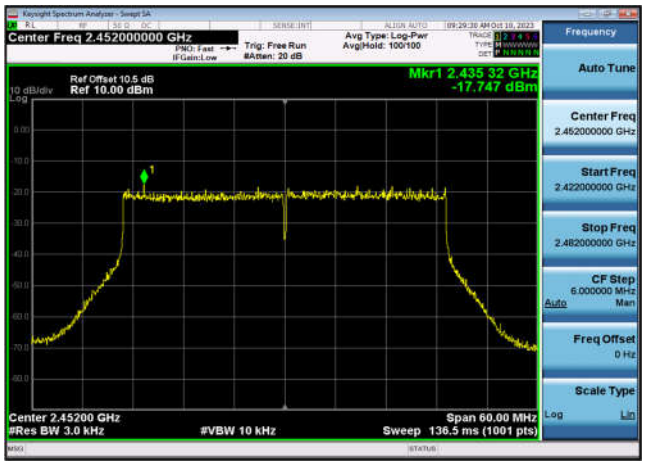
Power spectral density-802.11ax(HT40) ,2437MHz,Ant9



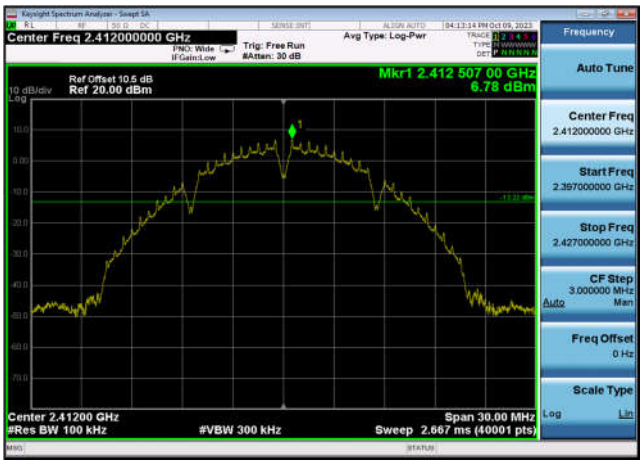
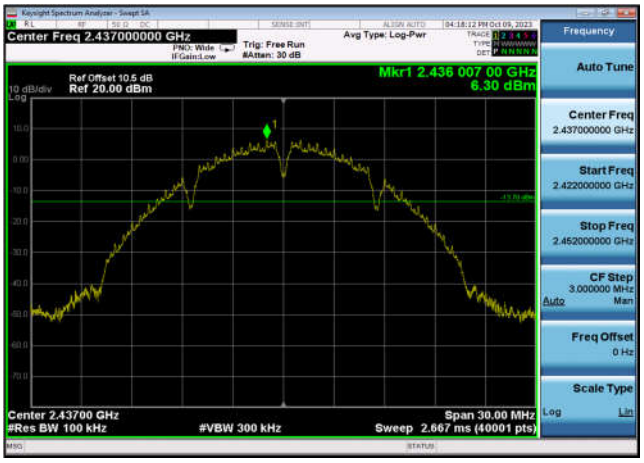
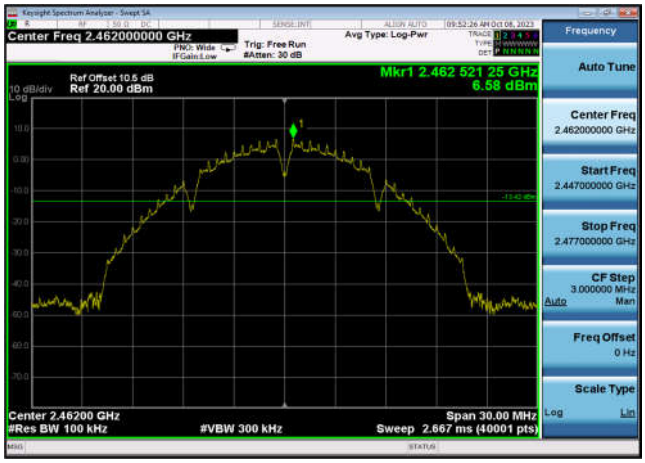
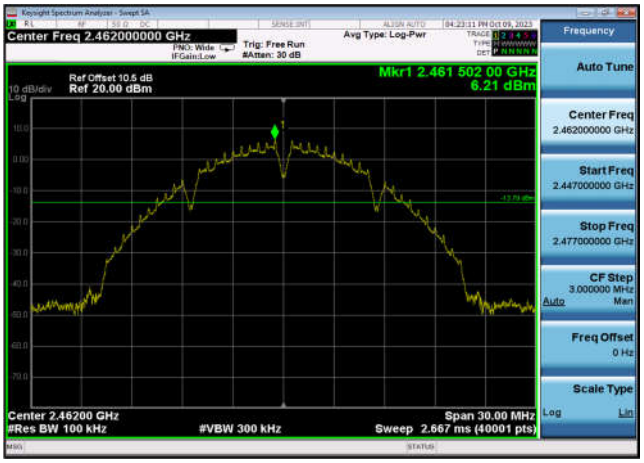
Power spectral density-802.11ax(HT40) ,2452MHz,Ant7

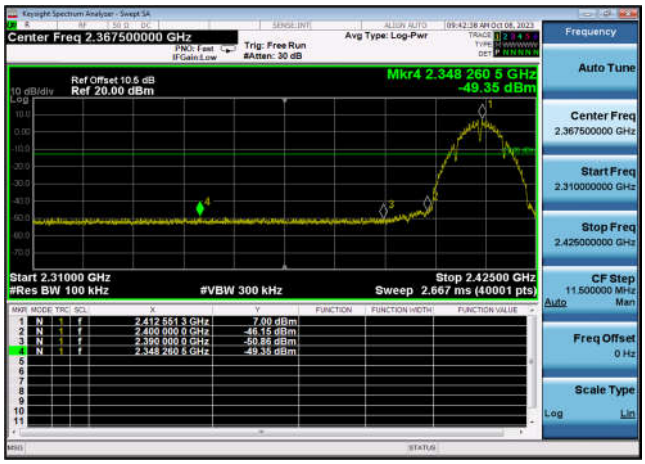
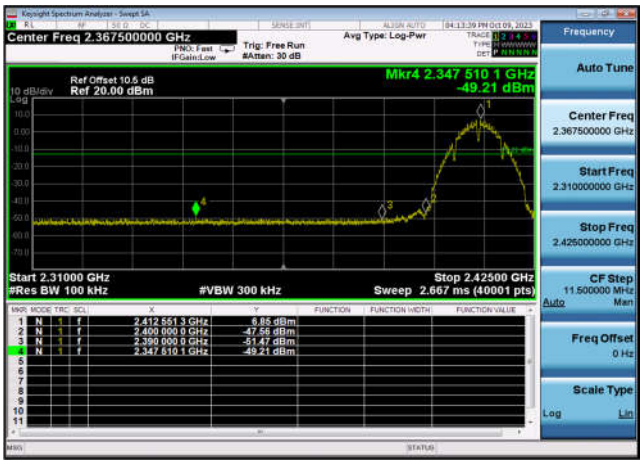
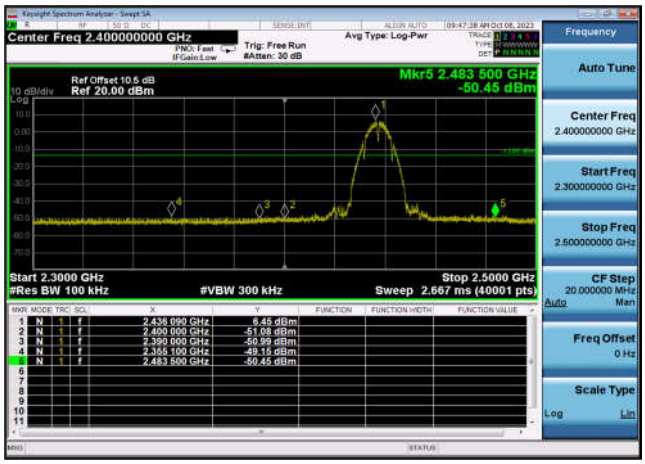
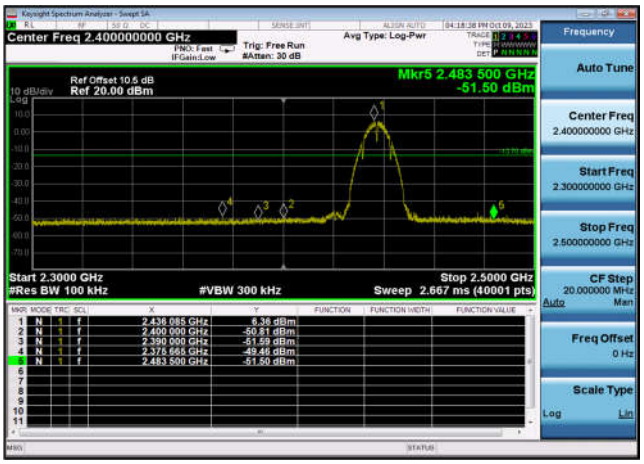
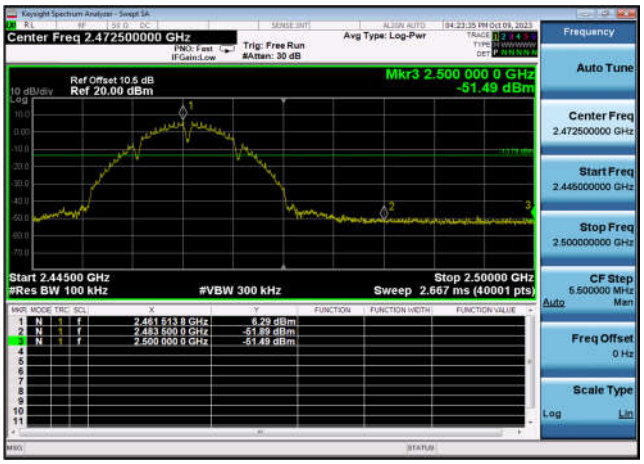


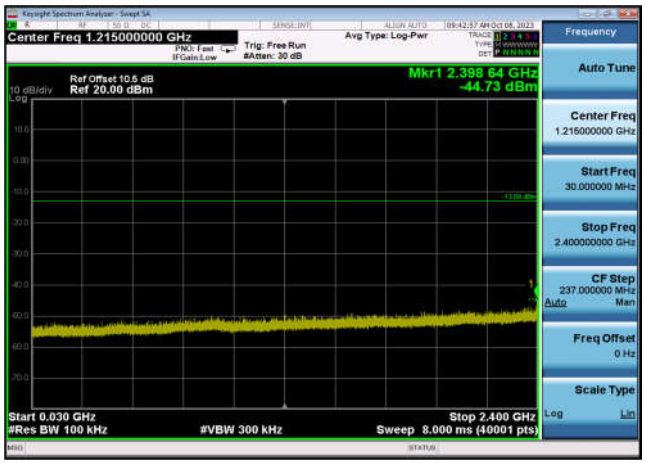
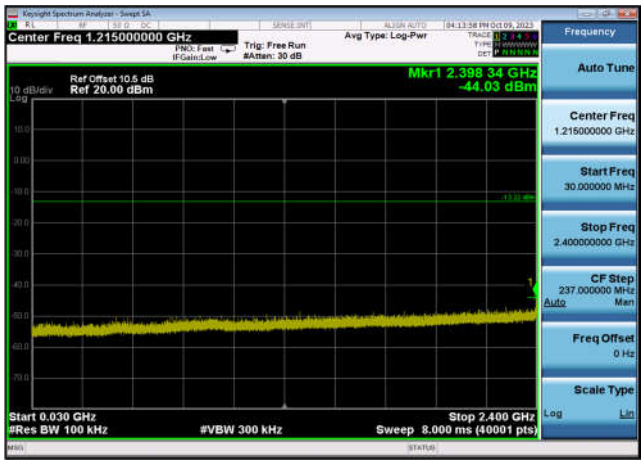
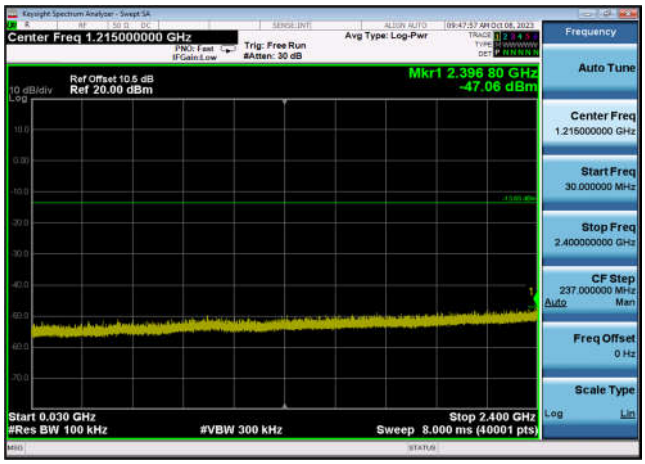
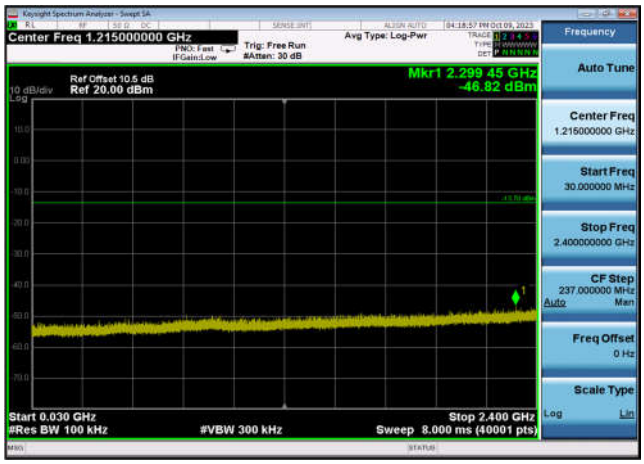
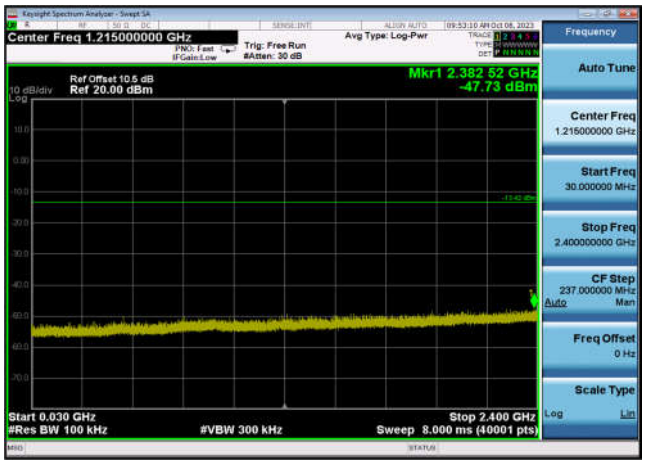
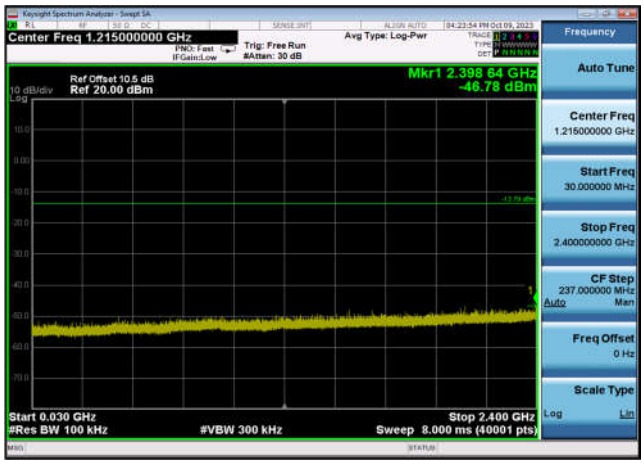
Power spectral density-802.11ax(HT40) ,2452MHz,Ant9

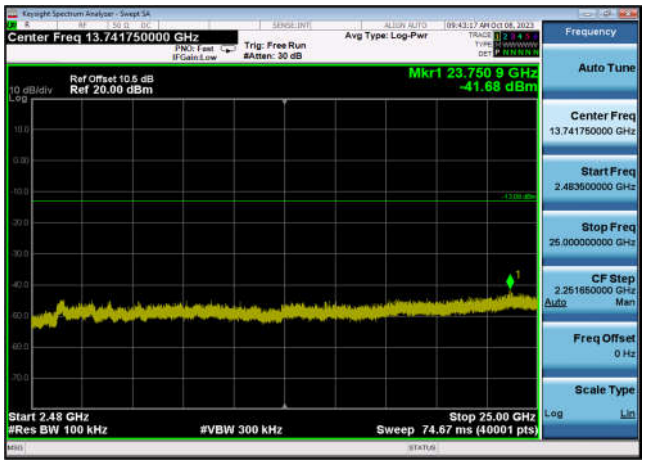
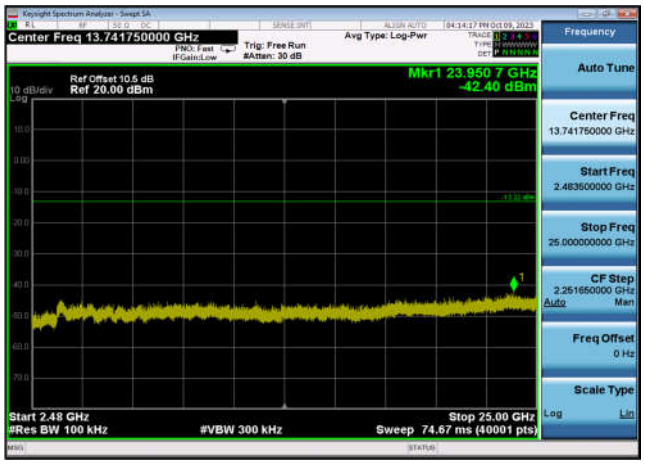
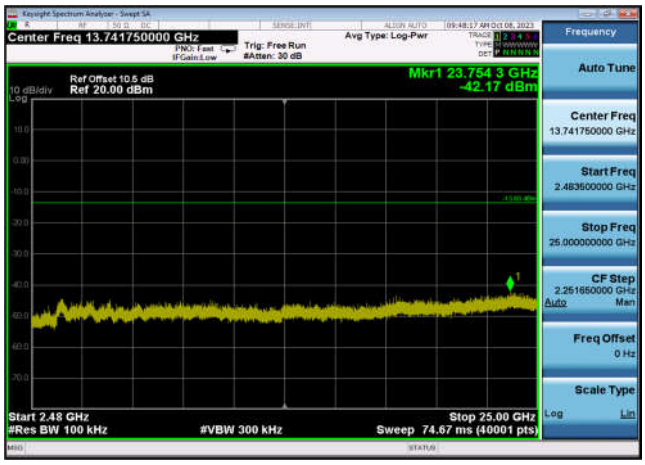
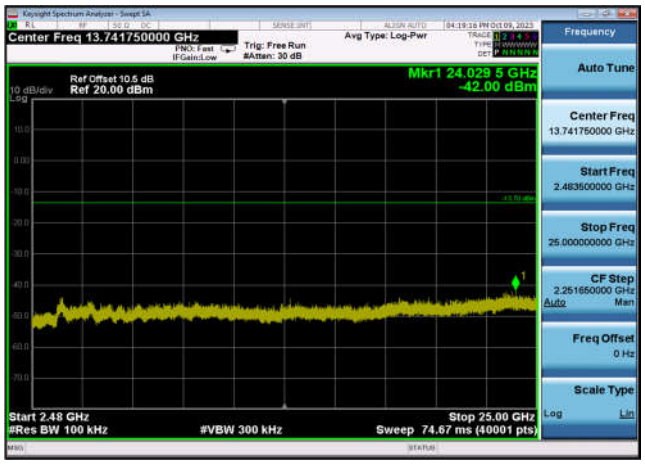
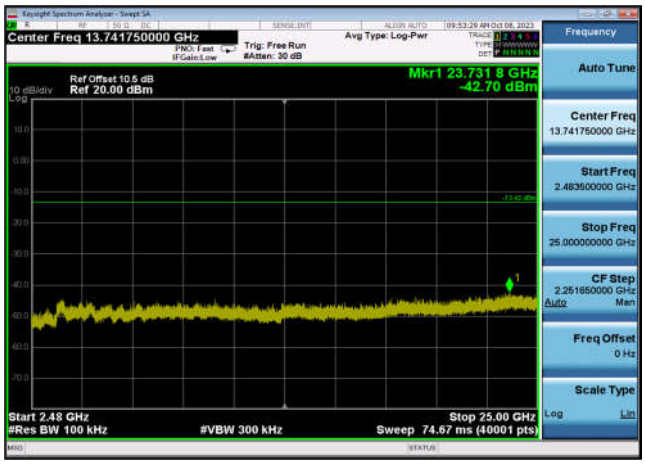
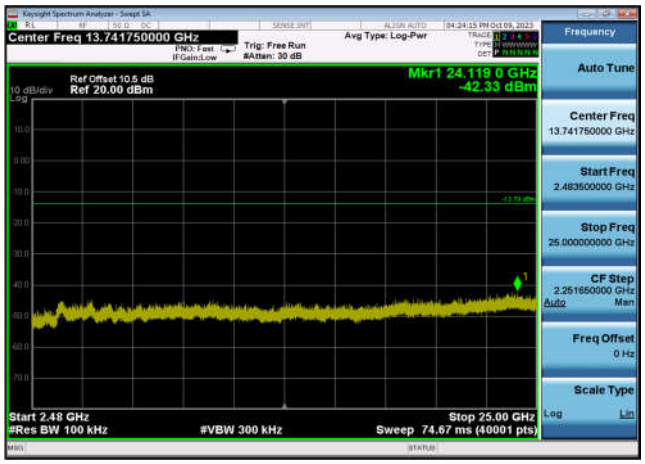


Conducted Band Edges and Spurious Emissions
Test Result and Data

,Plot 1,Reference Level-802.11b ,2412MHz,Ant7	,Plot 1,Reference Level-802.11b ,2412MHz,Ant9
	
,Plot 1,Reference Level-802.11b ,2437MHz,Ant7	,Plot 1,Reference Level-802.11b ,2437MHz,Ant9
	
,Plot 1,Reference Level-802.11b ,2462MHz,Ant7	,Plot 1,Reference Level-802.11b ,2462MHz,Ant9
	

,Plot 2,Band Edge-802.11b,2412MHz ,Ant7	,Plot 2,Band Edge-802.11b,2412MHz ,Ant9
	
,Plot 2,Band Edge-802.11b,2437MHz ,Ant7	,Plot 2,Band Edge-802.11b,2437MHz ,Ant9
	
,Plot 2,Band Edge-802.11b,2462MHz ,Ant7	,Plot 2,Band Edge-802.11b,2462MHz ,Ant9
	

,Plot 3,30MHz~2400MHz-802.11b,2412MHz ,Ant7	,Plot 3,30MHz~2400MHz-802.11b,2412MHz ,Ant9
	
,Plot 3,30MHz~2400MHz-802.11b,2437MHz ,Ant7	,Plot 3,30MHz~2400MHz-802.11b,2437MHz ,Ant9
	
,Plot 3,30MHz~2400MHz-802.11b,2462MHz ,Ant7	,Plot 3,30MHz~2400MHz-802.11b,2462MHz ,Ant9
	

,Plot 4,2483.5MHz~25000MHz-802.11b ,2412MHz,Ant7	,Plot 4,2483.5MHz~25000MHz-802.11b ,2412MHz,Ant9
	
,Plot 4,2483.5MHz~25000MHz-802.11b ,2437MHz,Ant7	,Plot 4,2483.5MHz~25000MHz-802.11b ,2437MHz,Ant9
	
,Plot 4,2483.5MHz~25000MHz-802.11b ,2462MHz,Ant7	,Plot 4,2483.5MHz~25000MHz-802.11b ,2462MHz,Ant9