FCC RADIO TEST REPORT

FCC ID	:	**S9GT670SN**
Equipment	:	**T670sn Access Point**
Brand Name	:	**RUCKUS**
Model Name	:	**T670sn**
Applicant	:	**Ruckus Wireless LLC** **350 W. Java Dr., Sunnyvale CA 94089 USA**
Manufacturer	:	**Ruckus Wireless LLC** **350 W. Java Dr., Sunnyvale CA 94089 USA**
Standard	:	**FCC Part 15 Subpart C §15.247**

The product was received on Jun. 12, 2024 and testing was performed from Jul. 31, 2024 to Feb. 27, 2025. We, Sporton International (USA) Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval from Sporton International (USA) Inc., the test report shall not be reproduced except in full.

Neil Kao

Approved by: Neil Kao

Sporton International (USA) Inc.
1175 Montague Expressway, Milpitas, CA 95035

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History of this test report

Report No.	Version	Description	Issue Date
FR240524001A	01	Initial issue of report	Mar. 20, 2025
FR240524001A	02	Revise Summary of Test Result This report is an updated version, replacing the report issued on Mar. 20, 2025.	Mar. 25, 2025

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.247(a)(2)	6dB Bandwidth	Pass	-
3.1	2.1049	99% Occupied Bandwidth	Pass	-
3.2	15.247(b)	Power Output Measurement	Pass	-
3.3	15.247(e)	Power Spectral Density	Pass	-
3.4	15.247(d)	Conducted Band Edges	Pass	-
		Conducted Spurious Emission	Pass	-
3.5	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	Pass	-
3.6	15.207	AC Conducted Emission	Pass	-
3.7	15.203	Antenna Requirement	Pass	-

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section “Measurement Uncertainty”.

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature
General Specs Wi-Fi 2.4GHz 802.11b/g/n/ac/ax/be, Wi-Fi 5GHz 802.11a/n/ac/ax/be, Wi-Fi 6GHz 802.11a/n/ac/ax/be and GNSS. **Antenna Type** **WLAN:** <Ant. HDBS >: Sector Antenna <Ant. VDBS >: Sector Antenna

Antenna information (Sector Mode)			
2400 MHz ~ 2483.5 MHz	Peak Gain (dBi)	Horizontal	**<Ant. HDBS>:** 7.28
		Vertical	**<Ant. VDBS>:** 7.23

Remark:

1. The device is a special case of MIMO system with two outputs driving a cross-polarized pair of linearly polarized antennas which are vertically/horizontally mounted on the main board as indicated in equipment photo exhibits.
2. The EUT's information above is declared by manufacturer. Please refer to Disclaimer in report summary.

1.1.1 Antenna Directional Gain

Follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01 F)2)f)ii)

Directional gain = G_{ANT} + Array Gain, where Array Gain is as follows:

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$.

G_{ANT} is set equal to the gain of the antenna having the highest gain.

For PSD measurements, the directional gain calculation.

$$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

where

Each antenna is driven by no more than one spatial stream;

N_{SS} = the number of independent spatial streams of data;

N_{ANT} = the total number of antennas

$g_{j,k} = 10^{G_k / 20}$ if the kth antenna is being fed by spatial stream j, or zero if it is not;

G_k is the gain in dBi of the kth antenna.

As minimum N_{SS}=1 is supported by EUT, the formula can be simplified as:

Directional gain = $10*\log[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2 / N_{ANT}]$ dBi

Where G1, G2….GN denote single antenna gain.

The directional gain “DG” is calculated as following table.

	Vertical Ant 1 (dBi)	Horizontal Ant 3 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
2.4GHz	7.23	7.28	7.28	10.27	1.28	4.27

Calculation example:

If a device has two antenna, G_{ANT1}= 7.23dBi; G_{ANT3}=7.28dBi

Directional gain of power measurement = max(7.23, 7.28) + 0 = 7.28 dBi

Directional gain of PSD derived from formula which is

10 x log { { [10^ (7.23 dBi / 20) + 10^ (7.28 dBi / 20)] ^ 2 } / 2 }

= 10.28 dBi

Power and PSD limit reduction = Composite gain – 6dBi, (min = 0)

1.2 Modification of EUT

No modifications made to the EUT during the testing.

1.3 Testing Location

Test Site	Sporton International (USA) Inc.
Test Site Location	1175 Montague Expressway, Milpitas, CA 95035 TEL : 408 9043300
Test Site No.	**Sporton Site No.**
	TH01-CA, CO01-CA 03CH01-CA

Note: The test site complies with ANSI C63.4 2014 requirement.

FCC Designation No.: US1250

1.4 Applicable Standards

According to the specifications declared by the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart C §15.247
- FCC KDB Publication No. 558074 D01 15.247 Meas Guidance v05r02
- FCC KDB 414788 D01 Radiated Test Site v01r01.
- FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ANSI C63.10-2013

Remark: All the test items were validated and recorded in accordance with the standards without any modification during the testing.

2 Test Configuration of Equipment Under Test

a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape), and adjusting the measurement antenna orientation, following C63.10 exploratory test procedures and only the worst case emissions were reported in this report.

b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
2400-2483.5 MHz	1	2412	7	2442
	2	2417	8	2447
	3	2422	9	2452
	4	2427	10	2457
	5	2432	11	2462
	6	2437		

2.2 Test Mode

The final test modes include the worst data rates for each modulation shown in the table below.

MIMO Antenna

Modulation	Data Rate
802.11b	1 Mbps
802.11g	6 Mbps
802.11n HT20 (Covered by EHT20)	MCS0
802.11n HT40 (Covered by EHT40)	MCS0
802.11ac VHT20 (Covered by EHT20)	MCS0
802.11ac VHT40 (Covered by EHT40)	MCS0
802.11ax HE20 (Covered by EHT20)	MCS0
802.11ax HE40 (Covered by EHT40)	MCS0
802.11be EHT20	MCS0
802.11be EHT40	MCS0

Remark:

1 Based on the manufacturer's declaration, 802.11be covers the 802.11n, 11ac and 11ax due to the same modulation family scheme. For 802.11be, only full resource unit assignment mode is tested since the EUT does not support partial resource unit assignment mode.

2 Based on the manufacturer's declaration, RF power on each chain in MIMO mode is parameterized to be greater than the power in SISO mode, giving the condition that the SISO Mode is covered by MIMO Mode which is deemed the worst case selected for testing.

3 The EUT information mentioned or listed above is declared by the manufacturer.

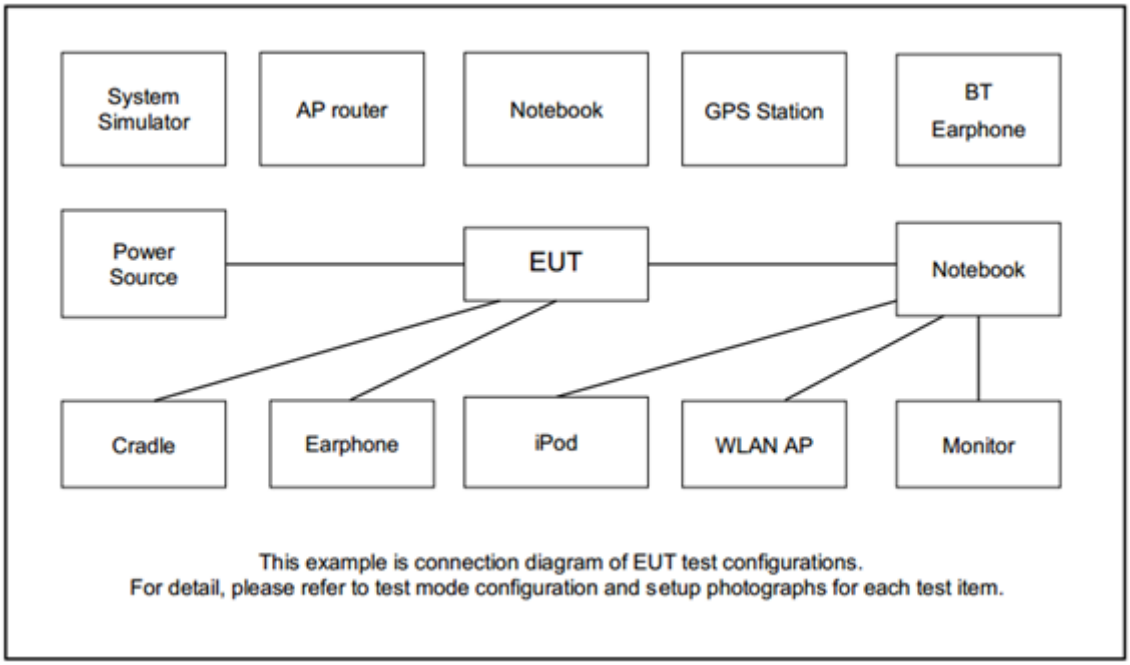
Test Cases	
AC Conducted Emission	Mode 1 ： WLAN (2.4GHz) Link + LAN port 1 + LAN port 2 + PoE Adapter

MIMO <Ant. 1+3>

Ch. #	2400-2483.5 MHz			
	802.11b	802.11g	802.11be EHT20	802.11be EHT40
Low	01	01	01	03
Middle	06	06	06	06
High	11	11	11	09

Remark: For radiation spurious emission, the modulation and the data rate picked for testing are determined by the Max. RF conducted power.

2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Notebook	DELL	Latitude 5410	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
2.	Notebook	DELL	Latitue E7470	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
3.	PoE Adapter	RUCKUS	740-64310-001	N/A	N/A	N/A

2.5 EUT Operation Test Setup

The RF test items, utility “Tera Term Version 4.95”, “QSPR Version 6.00.00143.1” and “QUTS Version 1.16.2.12” were installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

2.6 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example:
The spectrum analyzer offset is derived from RF cable loss and attenuator factor.
Offset = RF cable loss + attenuator factor.
Following shows an offset computation example with cable loss 4.2 dB and 10 dB attenuator.

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).
= 4.2 + 10 = 14.2 (dB)

3 Test Result

3.1 6dB and 99% Bandwidth Measurement

3.1.1 Limit of 6dB and 99% Bandwidth

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

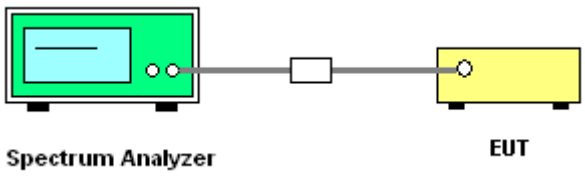
3.1.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.1.3 Test Procedures

1. The testing follows the ANSI C63.10 Section 6.9.3 (OBW) and 11.8.1 (6dB BW).
2. The RF output of EUT is connected to the spectrum analyzer by RF cable and attenuator. The path loss is compensated to the results for each measurement.
3. Set the maximum power setting and enable the EUT to transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6 dB bandwidth must be greater than 500 kHz.
5. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1-5% of the emission bandwidth and set the Video bandwidth (VBW) ≥ 3 * RBW.
6. Measure and record the results in the test report.

3.1.4 Test Setup



3.1.5 Test Result of 6dB and 99% Occupied Bandwidth

Please refer to Appendix A.

3.2 Output Power Measurement

3.2.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5 MHz, the limit for output power is 30 dBm. If transmitting antenna with directional gain greater than 6 dBi is used, the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

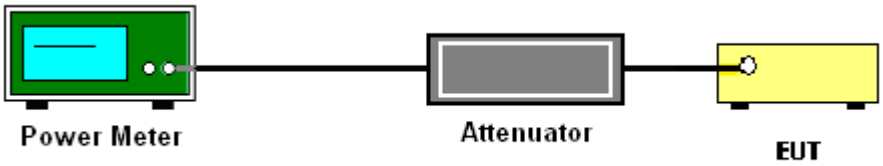
3.2.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.2.3 Test Procedures

1. For Average Power, the testing follows ANSI C63.10 Section 11.9.2.3.2 Method AVGPM-G
2. The RF output of EUT is connected to the power meter by RF cable and attenuator. The path loss is compensated to the results for each measurement.
3. Set the maximum power setting and enable the EUT to transmit continuously.
4. Measure the conducted output power and record the results in the test report.
5. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

3.2.4 Test Setup



3.2.5 Test Result of Average Output Power

Please refer to Appendix A.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

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

3.3.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

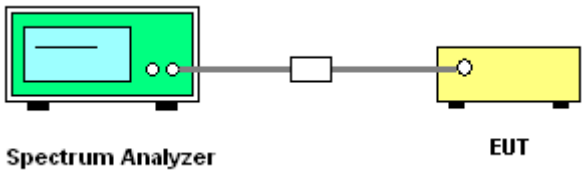
3.3.3 Test Procedures

1. The testing follows the ANSI C63.10 Section 11.10.2 Method PKPSD.
2. The RF output of EUT is connected to the spectrum analyzer by RF cable and attenuator. The path loss is compensated to the results for each measurement.
3. Set the maximum power setting and enable the EUT to transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz. Video bandwidth VBW = 10 kHz In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW)
5. 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.
6. Measure and record the results in the test report.
7. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

   Method (c): Measure and add 10 log(N_{ANT}) dB.

   With this technique, spectrum measurements are performed at each output of the device, but rather than summing the spectra or the spectral peaks across the outputs, the quantity 10 log(N_{ANT}) dB is added to each spectrum value before comparing to the emission limit. The addition of 10 log(N_{ANT}) dB serves to apportion the emission limit among the N_{ANT} outputs so that each output is permitted to contribute no more than 1/N_{ANT} th of the PSD limit .

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

3.4 Conducted Band Edges and Spurious Emission Measurement

3.4.1 Limit of Conducted Band Edges and Spurious Emission Measurement

In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB / 30dB relative to the maximum PSD level in 100 kHz by RF conducted measurement.

3.4.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.4.3 Test Procedures

1. The testing follows the ANSI C63.10 Section 11.11.3 Emission level measurement.
2. The RF output of EUT is connected to the spectrum analyzer by RF cable and attenuator. The path loss is compensated to the results for each measurement.
3. Set the maximum power setting and enable the EUT to transmit continuously.
4. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB per 15.247(d).
5. Measure and record the results in the test report.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

3.4.4 Test Setup

3.4.5 Test Result of Conducted Band Edges and Spurious Emission

Please refer to Appendix A.

3.5 Radiated Band Edges and Spurious Emission Measurement

3.5.1 Limit of Radiated band edge and Spurious Emission Measurement

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device is measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the limits as below.

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
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

3.5.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

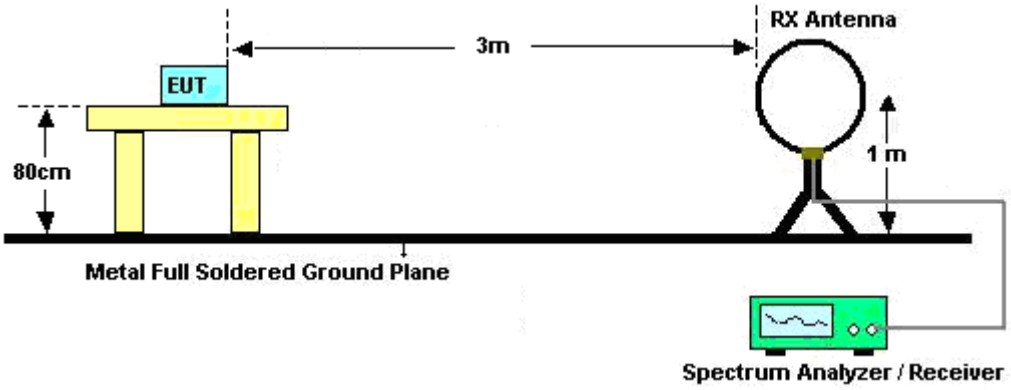
3.5.3 Test Procedures

1. The testing follows the ANSI C63.10 Section 11.12.1 Radiated emission measurements.
2. The EUT is arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT is placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
4. The EUT is set 3 meters away from the receiving antenna, which is mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. Radiated testing below 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading. When there is no suspected emission found and the emission level is with at least 6 dB margin against QP limit line, the position is marked as “-“.

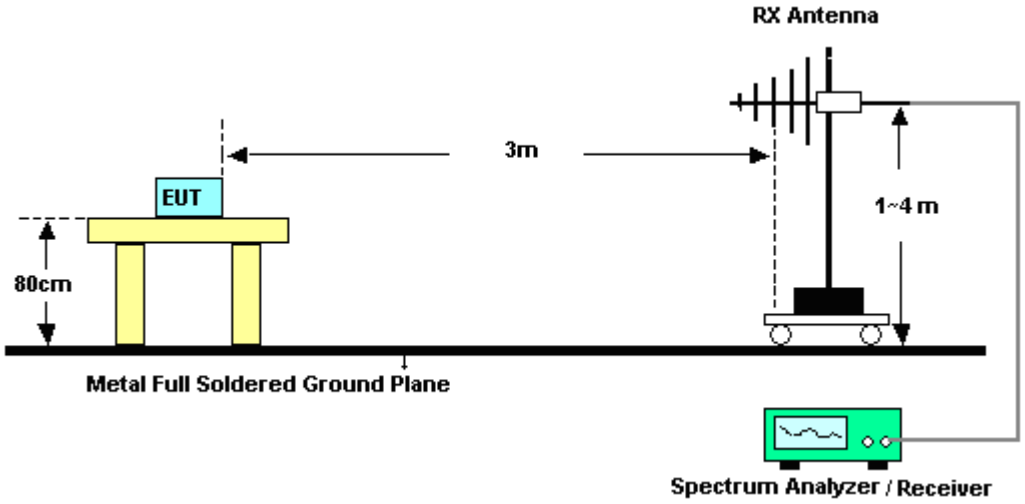
7. Radiated testing above 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading for scanning all frequencies. When there is no suspected emission found and the harmonic emission level is with at least 6 dB margin against average limit line, the position is marked as "-".
8. Use the following spectrum analyzer settings:
   (1) Span shall wide enough to fully capture the emission being measured;
   (2) Set RBW = 100 kHz for f < 1 GHz; VBW ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
   (3) Set RBW = 1 MHz, VBW= 3 MHz for f ≥ 1 GHz for peak measurement.
   For average measurement:
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

3.5.4 Test Setup

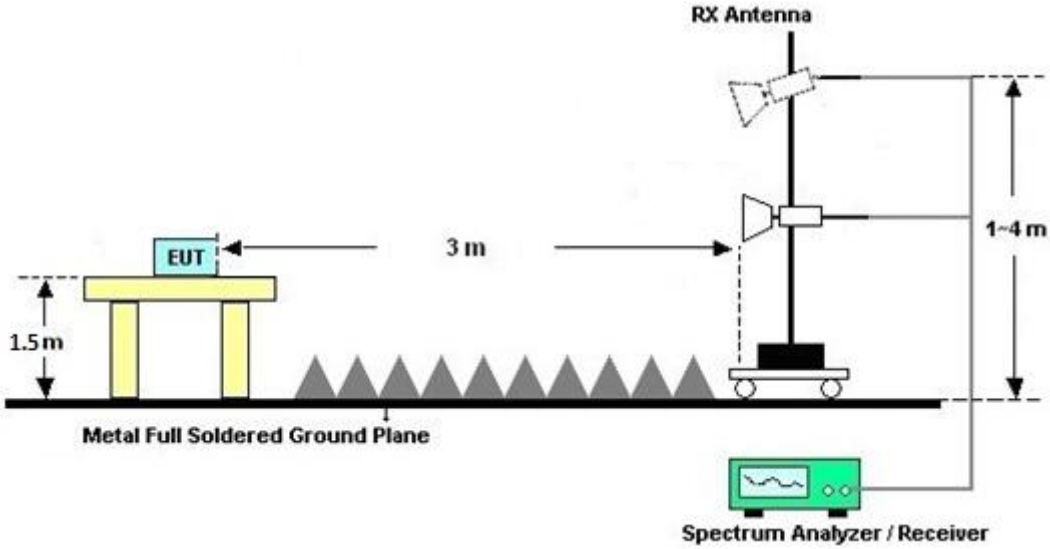
For radiated emissions below 30MHz



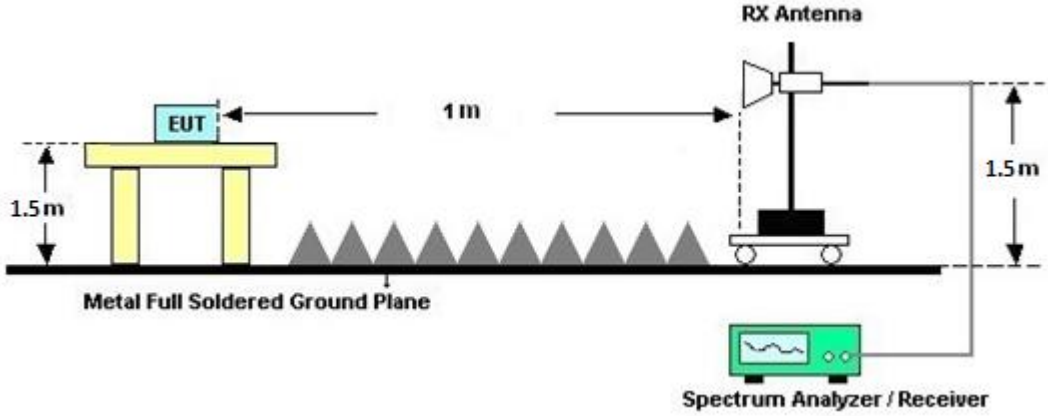
For radiated emissions from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



3.5.5 Test Results of Radiated Spurious Emissions (9kHz ~ 30MHz)

The low frequency, which starts from 9 kHz to 30 MHz, is pre-scanned and the result which is 20 dB lower than the limit line is not reported.

There is adequate comparison measurement of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result comes out very similar.

3.5.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C and D.

3.5.7 Duty Cycle

Please refer to Appendix E.

3.5.8 Test Result of Radiated Spurious Emission (30MHz ~ 10th Harmonic)

Please refer to Appendix C and D.

3.6 AC Conducted Emission Measurement

3.6.1 Limit of AC 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 of Emission (MHz)	Conducted Limit (dBμV)	
	Quasi-Peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

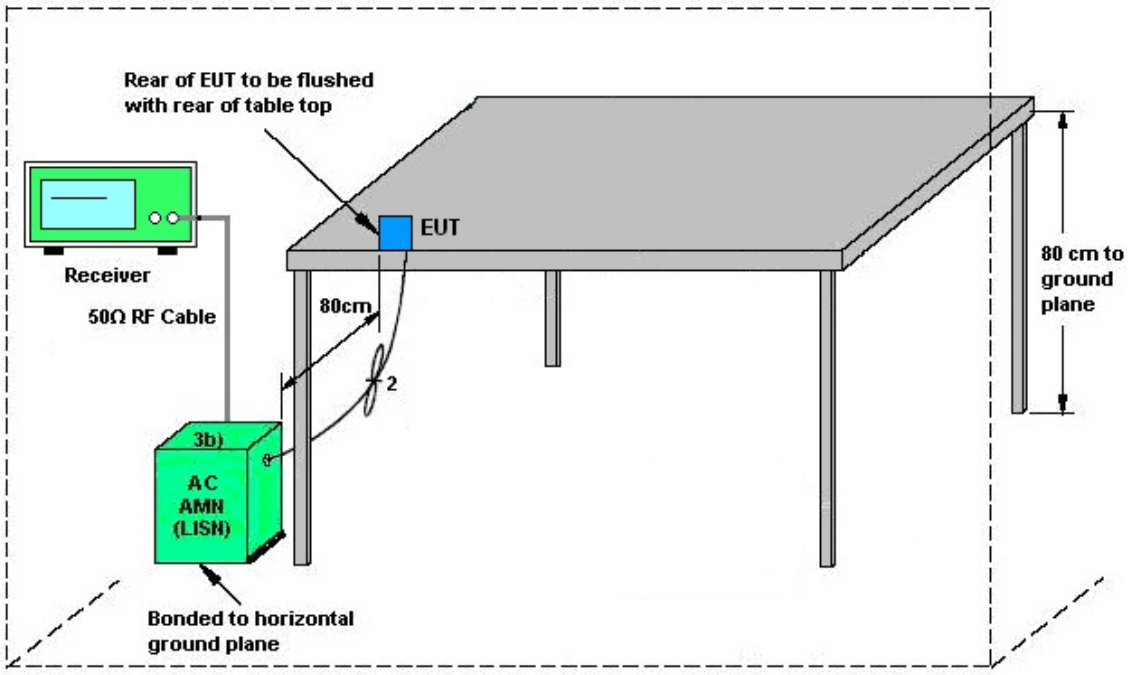
3.6.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.6.3 Test Procedures

1. The EUT is placed 0.4 meter away from the conducting wall of the shielding room, and is 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 microhenry LISN shall be used.
6. Both Line and Neutral shall be tested in order to find out the maximum conducted emission.
7. The frequency range from 150 kHz to 30 MHz is scanned.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF bandwidth = 9kHz) with Maximum Hold Mode.

3.6.4 Test Setup



AMN = Artificial mains network (LISN)
AE = Associated equipment
EUT = Equipment under test
ISN = Impedance stabilization network

3.6.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.7 Antenna Requirements

3.7.1 Standard Applicable

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. 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. This requirement does not apply to carrier current devices or to devices operated under the provisions of § 15.211, 15.213, 15.217, 15.219, 15.221, or § 15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

3.7.2 Antenna Anti-Replacement Construction

Antenna permanently attached.

4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
LISN	TESEQ	NNB51	47415	N/A	Aug. 14, 2024	Feb. 27, 2025	Aug. 13, 2025	Conduction (CO01-CA)
LISN	TESEQ	NNB51	47407	N/A	Apr. 23, 2024	Feb. 27, 2025	Apr. 22, 2025	Conduction (CO01-CA)
EMI Test Receiver	R&S	ESR7	102177	9kHz~7GHz	Apr. 23, 2024	Feb. 27, 2025	Apr. 22, 2025	Conduction (CO01-CA)
Pulse limiter with 10dB attenuation	R&S	VTSD 9561-F N	9561-F-N00412	N/A	Jun. 04, 2024	Feb. 27, 2025	Jun. 03, 2025	Conduction (CO01-CA)
LISN Cable	HUBER+SUHNER	RG-214/U	LISN cable -01	N/A	Jun. 04, 2024	Feb. 27, 2025	Jun. 03, 2025	Conduction (CO01-CA)
Test Software	R&S	EMC32 V10.30.0	N/A	N/A	N/A	Feb. 27, 2025	N/A	Conduction (CO01-CA)
Bilog Antenna	TESEQ	6111D	50392	30MHz~1GHz	Aug. 13, 2024	Nov. 27, 2024	Aug. 12, 2025	Radiation (03CH01-CA)
Loop Antenna	R&S	HFH2-Z2E	100840	9kHz~30MHz	May 02, 2024	Jul. 31, 2024~ Dec. 03, 2024	May 01, 2025	Radiation (03CH01-CA)
Horn Antenna	SCHWARZBECK	BBHA 9120D	02113	1GHz~18GHz	Apr. 26, 2024	Jul. 31, 2024~ Dec. 03, 2024	Apr. 25, 2025	Radiation (03CH01-CA)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA9170	00841	18GHz~40GHz	Aug. 07, 2024	Nov. 27, 2024	Aug. 06, 2025	Radiation (03CH01-CA)
Preamplifier	SONOMA	310N	372241	9kHz~1GHz	Apr. 24, 2024	Nov. 27, 2024	Apr. 23, 2025	Radiation (03CH01-CA)
Preamplifier	E-instrument	ERA-100M-18G-56-01-A70	EC1900252	1GHz~18GHz	Apr. 25, 2024	Jul. 31, 2024~ Dec. 03, 2024	Apr. 24, 2025	Radiation (03CH01-CA)
Preamplifier	Keysight	83017A	MY53270321	1GHz~26.5GHz	Apr. 25, 2024	Jul. 31, 2024~ Dec. 03, 2024	Apr. 24, 2025	Radiation (03CH01-CA)
Preamplifier	EMEC	EMC18G40G	060726	18G-40G	Apr. 04, 2024	Nov. 27, 2024	Apr. 03, 2025	Radiation (03CH01-CA)
Filter	Wainwright	WLK12-1200-12 72-11000-40SS	SN1	1.2GHz Low Pass Filter	Jun. 04, 2024	Jul. 31, 2024~ Dec. 03, 2024	Jun. 03, 2025	Radiation (03CH01-CA)
Filter	Wainwright	WHKX12-2700-3000-18000-60 ST	SN9	3GHz High Pass Filter	Jun. 04, 2024	Jul. 31, 2024~ Dec. 03, 2024	Jun. 03, 2025	Radiation (03CH01-CA)
Spectrum Analyzer	Keysight	N9010B	MY63440343	MY63440343	Jan. 16, 2024	Jul. 31, 2024~ Dec. 03, 2024	Jan. 15, 2025	Radiation (03CH01-CA)
RF Cable	HUBER+SUHNER	SUCOFLEX 102	8015932/2,80 15762/2, 804938/2	NA	Mar. 05, 2024	Jul. 31, 2024~ Dec. 03, 2024	Mar. 04, 2025	Radiation (03CH01-CA)
Hygrometer	TESTO	608-H1	45142559	NA	Aug. 30, 2023	Jul. 31, 2024~ Aug. 14, 2024	Aug. 29, 2024	Radiation (03CH01-CA)
Hygrometer	TESTO	608-H1	45142559	NA	Aug. 14, 2024	Aug. 15, 2024~ Dec. 03, 2024	Aug. 13, 2025	Radiation (03CH01-CA)
Controller	Chaintek	EM-1000	060881	Control Turn Table & Antenna Mast	N/A	Jul. 31, 2024~ Dec. 03, 2024	N/A	Radiation (03CH01-CA)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Jul. 31, 2024~ Dec. 03, 2024	N/A	Radiation (03CH01-CA)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Jul. 31, 2024~ Dec. 03, 2024	N/A	Radiation (03CH01-CA)
Test Software	Audix E3	E6.2009-8-24d	PK-002093	N/A	N/A	Jul. 31, 2024~ Dec. 03, 2024	N/A	Radiation (03CH01-CA)
Hygrometer	Testo	608-H1	45141354	N/A	Aug. 14, 2024	Oct. 21, 2024~ Jan. 08, 2025	Aug. 13, 2025	Conducted (TH01-CA)
Power Sensor	DARE!!	RPR3006W	RPR8W-2301 002	10MHz-8GHz	Apr. 25, 2024	Oct. 21, 2024~ Jan. 08, 2025	Apr. 24, 2025	Conducted (TH01-CA)
Switch Box	EM Electronics	EMSW18	SW1070901	N/A	Apr. 25, 2024	Oct. 21, 2024~ Jan. 08, 2025	Apr. 24, 2025	Conducted (TH01-CA)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101545	10Hz-40GHz	Apr. 25, 2024	Oct. 21, 2024~ Jan. 08, 2025	Apr. 24, 2025	Conducted (TH01-CA)

5 Measurement Uncertainty

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.2 dB**

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.7 dB**

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.5 dB**

Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.5 dB**

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Jesse Fan and Ju Chang	Temperature:	19.9-23	°C
Test Date:	2024/10/21-2025/01/08	Relative Humidity:	29-52.1	%

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

2.4GHz Band MIMO										
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	99% Occupied BW (MHz)		6dB BW (MHz)		6dB BW Limit (MHz)	Pass/Fail
					Ant1	Ant3	Ant1	Ant3		
11b	1Mbps	2	1	2412	12.75	13.07	8.030	6.570	0.50	Pass
11b	1Mbps	2	6	2437	12.97	13.25	8.038	7.042	0.50	Pass
11b	1Mbps	2	11	2462	12.85	13.45	8.040	5.554	0.50	Pass
11g	6Mbps	2	1	2412	16.74	16.66	15.032	15.058	0.50	Pass
11g	6Mbps	2	6	2437	16.91	16.73	15.020	15.072	0.50	Pass
11g	6Mbps	2	11	2462	16.81	16.83	15.068	15.024	0.50	Pass

Report Number : FR240524001A

TEST RESULTS DATA
Average Output Power

2.4GHz Band MIMO																
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Average Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
					Ant1	Ant3	SUM	Ant1	Ant3	Ant1	Ant3	Ant1	Ant3	Ant1	Ant3	
11b	1Mbps	2	1	2412	21.75	22.01	24.89	28.72		7.28		32.17		36.00		Pass
11b	1Mbps	2	6	2437	21.21	21.57	24.40	28.72		7.28		31.68		36.00		Pass
11b	1Mbps	2	11	2462	21.77	22.04	24.92	28.72		7.28		32.20		36.00		Pass
11g	6Mbps	2	1	2412	21.41	21.69	24.56	28.72		7.28		31.84		36.00		Pass
11g	6Mbps	2	6	2437	20.84	21.39	24.13	28.72		7.28		31.41		36.00		Pass
11g	6Mbps	2	11	2462	18.01	18.44	21.24	28.72		7.28		28.52		36.00		Pass
HT20	MCS0	2	1	2412	20.71	21.57	24.17	28.72		7.28		31.45		36.00		Pass
HT20	MCS0	2	6	2437	20.93	20.69	23.82	28.72		7.28		31.10		36.00		Pass
HT20	MCS0	2	11	2462	16.55	16.32	19.45	28.72		7.28		26.73		36.00		Pass
HT40	MCS0	2	3	2422	21.31	21.54	24.44	28.72		7.28		31.72		36.00		Pass
HT40	MCS0	2	6	2437	20.08	20.89	23.51	28.72		7.28		30.79		36.00		Pass
HT40	MCS0	2	9	2452	18.06	18.84	21.48	28.72		7.28		28.76		36.00		Pass
VHT20	MCS0	2	1	2412	20.81	21.67	24.27	28.72		7.28		31.55		36.00		Pass
VHT20	MCS0	2	6	2437	21.03	20.79	23.92	28.72		7.28		31.20		36.00		Pass
VHT20	MCS0	2	11	2462	16.65	16.42	19.55	28.72		7.28		26.83		36.00		Pass
VHT40	MCS0	2	3	2422	21.41	21.64	24.54	28.72		7.28		31.82		36.00		Pass
VHT40	MCS0	2	6	2437	20.34	20.68	23.52	28.72		7.28		30.80		36.00		Pass
VHT40	MCS0	2	9	2452	18.16	18.94	21.58	28.72		7.28		28.86		36.00		Pass

Note: Measured power (dBm) has offset with cable loss.

TEST RESULTS DATA
Peak Power Spectral Density

2.4GHz Band MIMO												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak PSD (dBm/3kHz)			DG (dBi)		Peak PSD Limit (dBm/3kHz)		Pass/Fail
					Ant1	Ant3	Worse + 3.01	Ant1	Ant3	Ant1	Ant3	
11b	1Mbps	2	1	2412	-1.38	0.86	3.87	7.28		6.72		Pass
11b	1Mbps	2	6	2437	-2.02	-1.14	1.87	7.28		6.72		Pass
11b	1Mbps	2	11	2462	-1.96	-0.38	2.63	7.28		6.72		Pass
11g	6Mbps	2	1	2412	-1.52	-1.49	1.52	7.28		6.72		Pass
11g	6Mbps	2	6	2437	-4.00	-2.57	0.44	7.28		6.72		Pass
11g	6Mbps	2	11	2462	-7.68	-5.47	-2.46	7.28		6.72		Pass

Measured power density (dBm) has offset with cable loss.

TEST RESULTS DATA
Average Output Power

2.4GHz Band MIMO																	
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
						Ant1	Ant3	SUM	Ant1	Ant3	Ant1	Ant3	Ant1	Ant3	Ant1	Ant3	
HE20	MCS0	2	1	2412	Full	20.91	21.77	24.37	28.72		7.28		31.65		36.00		Pass
HE20	MCS0	2	6	2437	Full	21.13	20.89	24.02	28.72		7.28		31.30		36.00		Pass
HE20	MCS0	2	11	2462	Full	16.75	16.52	19.65	28.72		7.28		26.93		36.00		Pass
HE40	MCS0	2	3	2422	Full	21.51	21.74	24.64	28.72		7.28		31.92		36.00		Pass
HE40	MCS0	2	6	2437	Full	20.13	20.86	23.52	28.72		7.28		30.80		36.00		Pass
HE40	MCS0	2	9	2452	Full	18.26	19.04	21.68	28.72		7.28		28.96		36.00		Pass

Note: Measured power (dBm) has offset with cable loss.

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

2.4GHz Band MIMO											
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	99% Occupied BW (MHz)		6dB BW (MHz)		6dB BW Limit (MHz)	Pass/Fail
						Ant1	Ant3	Ant1	Ant3		
EHT20	MCS0	2	1	2412	Full	18.97	18.79	15.020	15.808	0.50	Pass
EHT20	MCS0	2	6	2437	Full	18.80	19.05	15.053	16.125	0.50	Pass
EHT20	MCS0	2	11	2462	Full	18.80	19.06	13.805	15.585	0.50	Pass
EHT40	MCS0	2	3	2422	Full	37.75	38.03	32.524	33.776	0.50	Pass
EHT40	MCS0	2	6	2437	Full	38.06	37.96	36.680	33.480	0.50	Pass
EHT40	MCS0	2	9	2452	Full	37.86	38.28	30.028	35.224	0.50	Pass

TEST RESULTS DATA
Average Output Power

2.4GHz Band MIMO																	
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
						Ant1	Ant3	SUM	Ant1	Ant3	Ant1	Ant3	Ant1	Ant3	Ant1	Ant3	
EHT20	MCS0	2	1	2412	Full	21.01	21.87	24.47	28.72		7.28		31.75		36.00		Pass
EHT20	MCS0	2	6	2437	Full	21.23	20.99	24.12	28.72		7.28		31.40		36.00		Pass
EHT20	MCS0	2	11	2462	Full	16.85	16.62	19.75	28.72		7.28		27.03		36.00		Pass
EHT40	MCS0	2	3	2422	Full	21.61	21.84	24.74	28.72		7.28		32.02		36.00		Pass
EHT40	MCS0	2	6	2437	Full	19.97	20.73	23.38	28.72		7.28		30.66		36.00		Pass
EHT40	MCS0	2	9	2452	Full	18.36	19.14	21.78	28.72		7.28		29.06		36.00		Pass

Note: Measured power (dBm) has offset with cable loss.

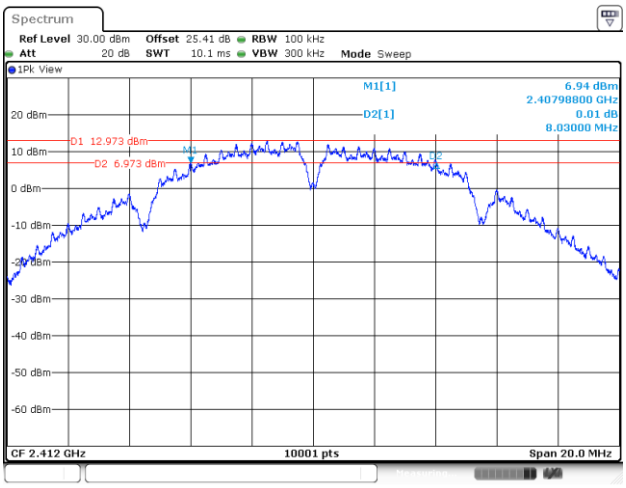
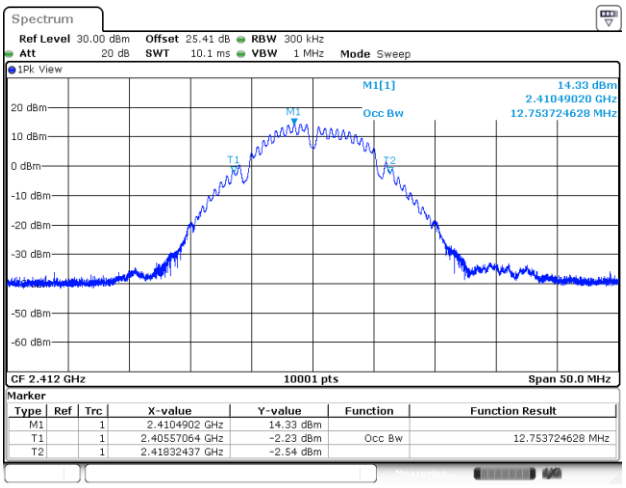
TEST RESULTS DATA
Peak Power Spectral Density

2.4GHz Band MIMO													
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config.	Peak PSD (dBm/3kHz)			DG (dBi)		Peak PSD Limit (dBm/3kHz)		Pass/Fail
						Ant1	Ant3	Worse + 3.01	Ant1	Ant3	Ant1	Ant3	
EHT20	MCS0	2	1	2412	Full	-2.73	-0.75	2.26	7.28		6.72		Pass
EHT20	MCS0	2	6	2437	Full	-1.40	-2.16	1.61	7.28		6.72		Pass
EHT20	MCS0	2	11	2462	Full	-6.82	-6.41	-3.40	7.28		6.72		Pass
EHT40	MCS0	2	3	2422	Full	-4.06	-2.84	0.17	7.28		6.72		Pass
EHT40	MCS0	2	6	2437	Full	-7.46	-5.78	-2.77	7.28		6.72		Pass
EHT40	MCS0	2	9	2452	Full	-7.80	-5.91	-2.90	7.28		6.72		Pass

Measured power density (dBm) has offset with cable loss.

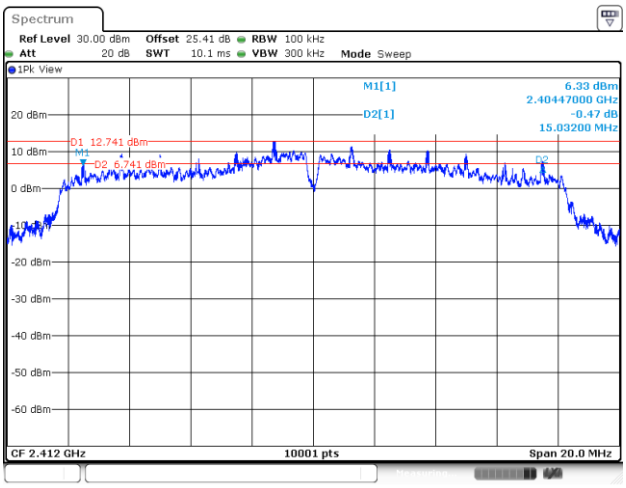
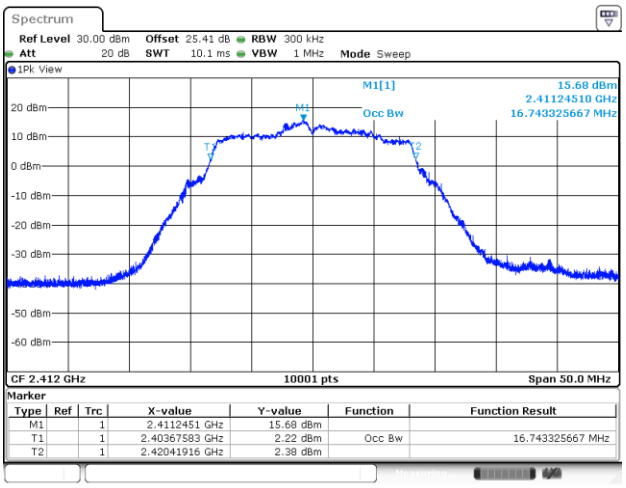
6dB and 99% Occupied Bandwidth

<802.11b>

6dB Bandwidth	99% Occupied Bandwidth
	

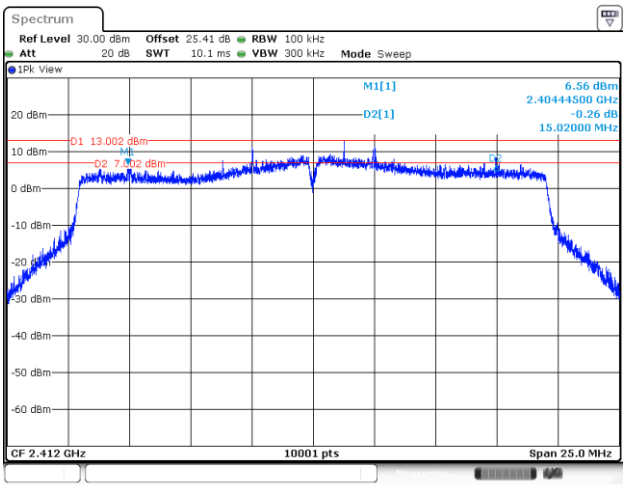
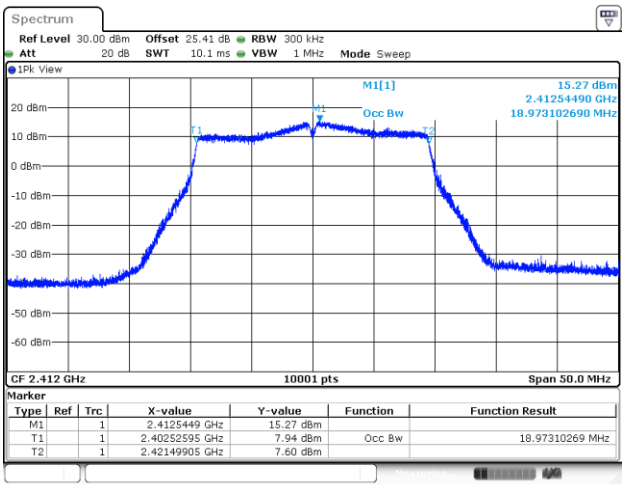
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

<802.11g>

6dB Bandwidth	99% Occupied Bandwidth
	

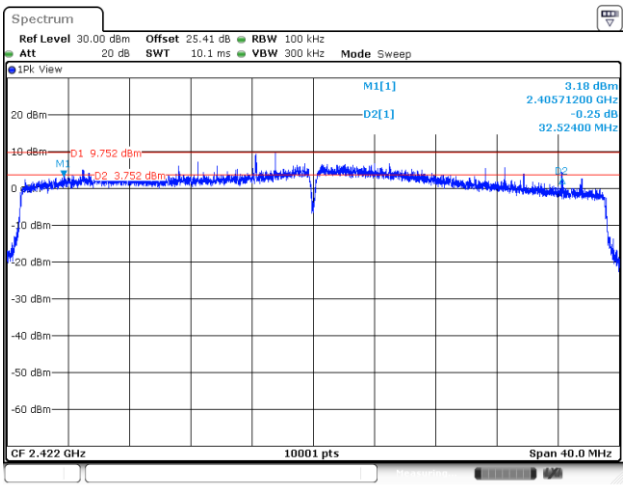
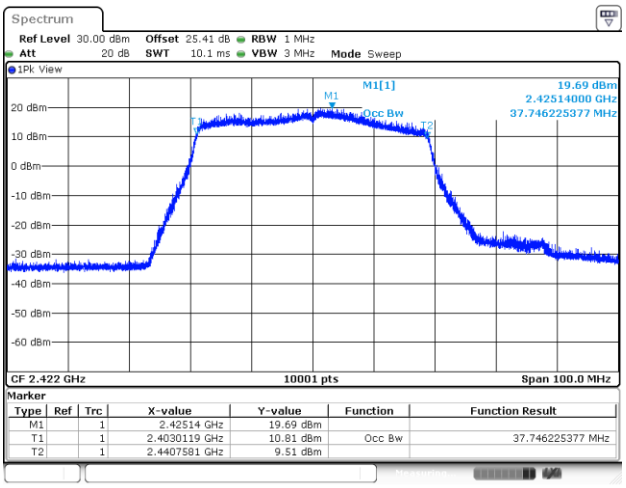
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

<802.11be EHT20>

6dB Bandwidth	99% Occupied Bandwidth
	

Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

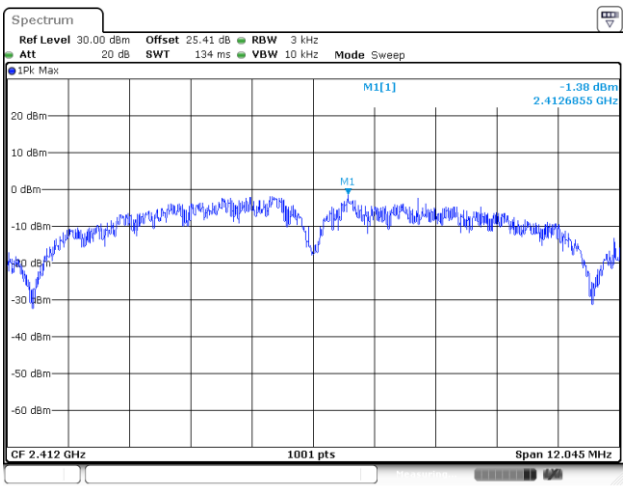
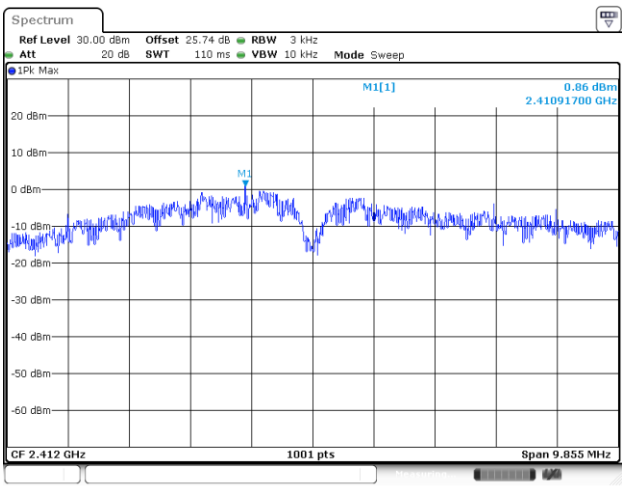
<802.11be EHT40>

6dB Bandwidth	99% Occupied Bandwidth
	

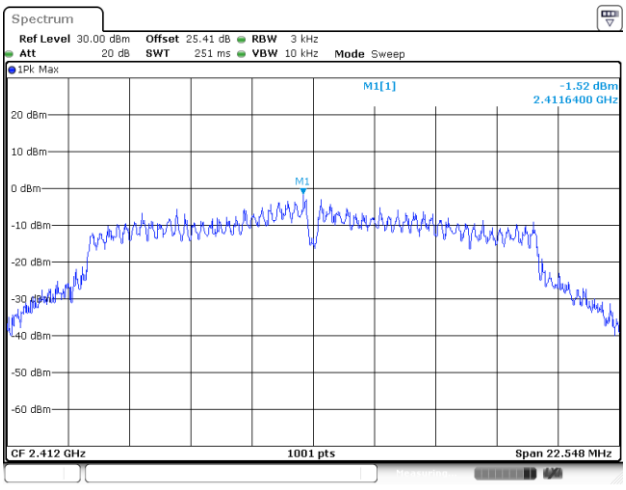
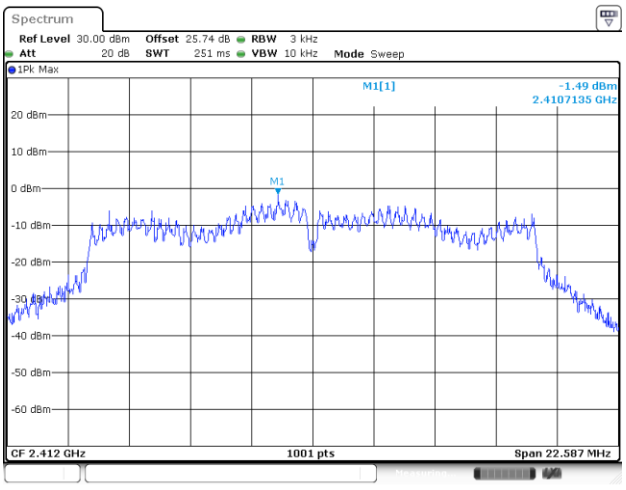
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

Power Spectral Density(dBm/3kHz)

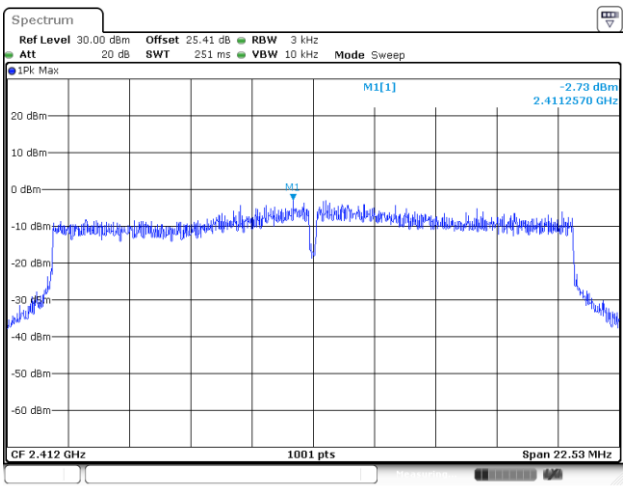
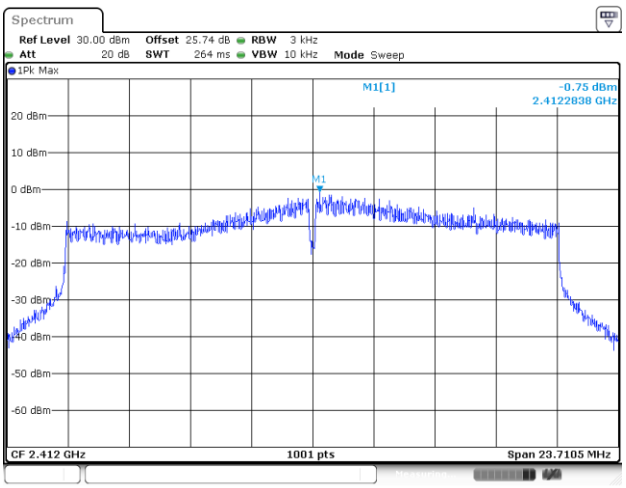
<802.11b>

Maximum Power Density Plot (dBm/3kHz)	
MIMO Ant. 1	**MIMO Ant. 3**
	

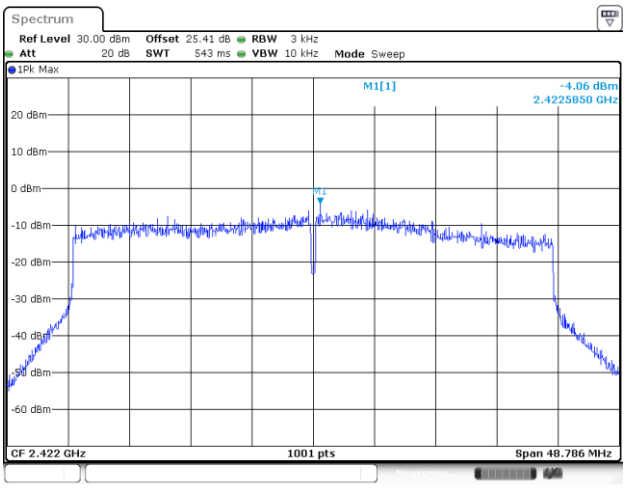
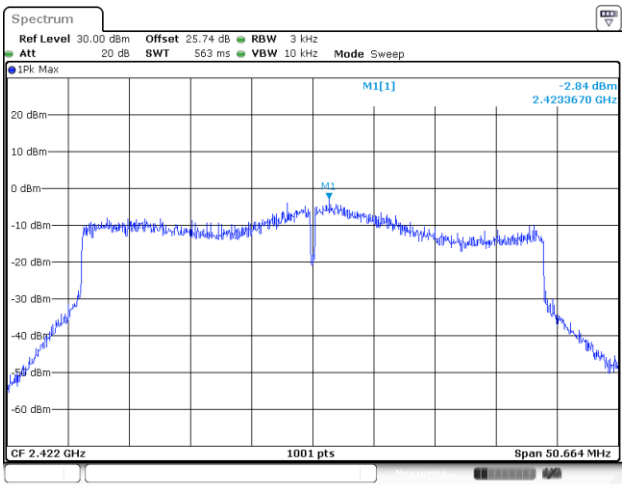
<802.11g>

Maximum Power Density Plot (dBm/3kHz)	
MIMO Ant. 1	**MIMO Ant. 3**
	

<802.11be EHT20>

Maximum Power Density Plot (dBm/3kHz)	
MIMO Ant. 1	**MIMO Ant. 3**
	

<802.11be EHT40>

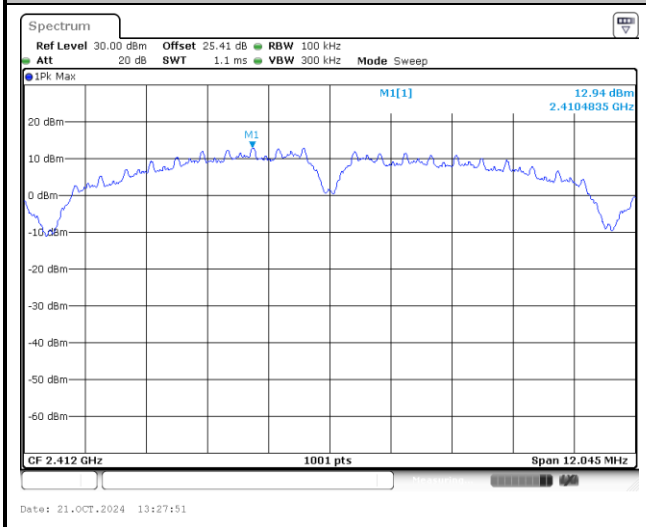
Maximum Power Density Plot (dBm/3kHz)	
MIMO Ant. 1	**MIMO Ant. 3**
	

Band Edges and Spurious Emission

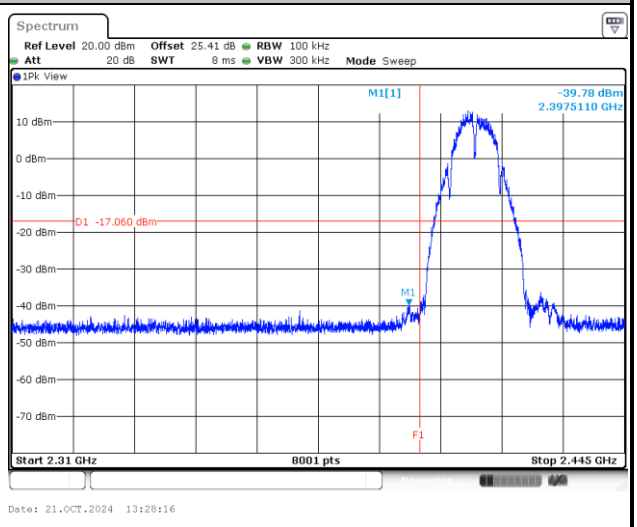
Number of TX = 2, Ant. 1 (Measured)

Test Mode :	802.11b	Test Channel :	01

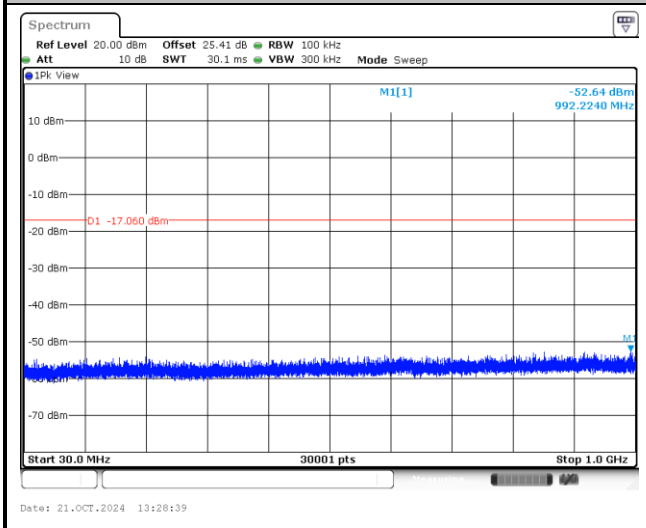
100kHz PSD reference Level



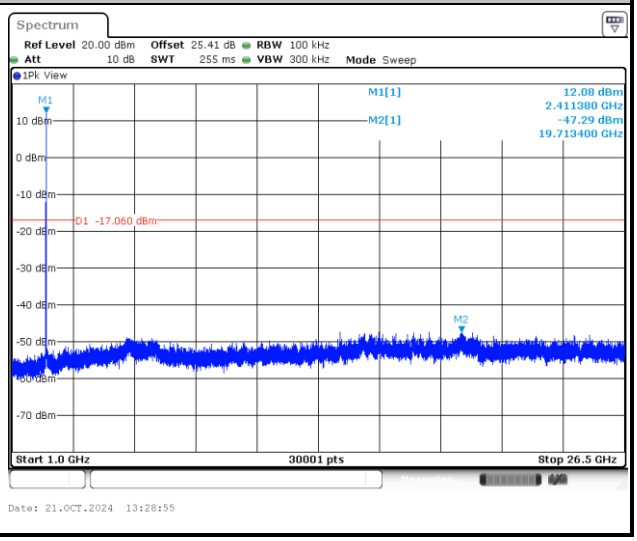
Low Channel Plot



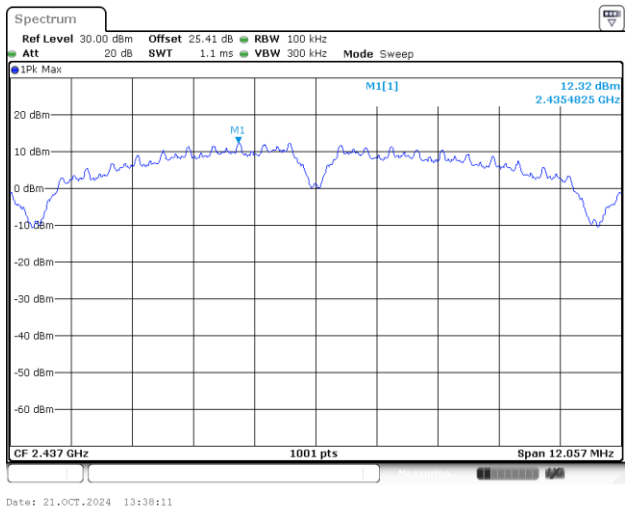
Spurious Emission 30MHz~1GHz

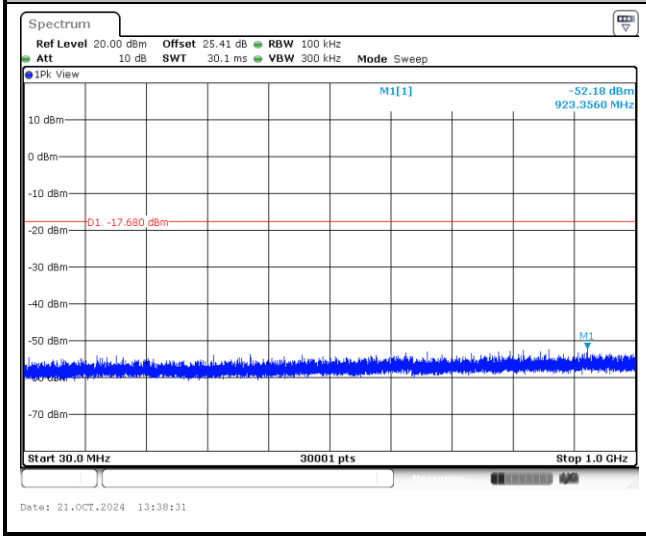
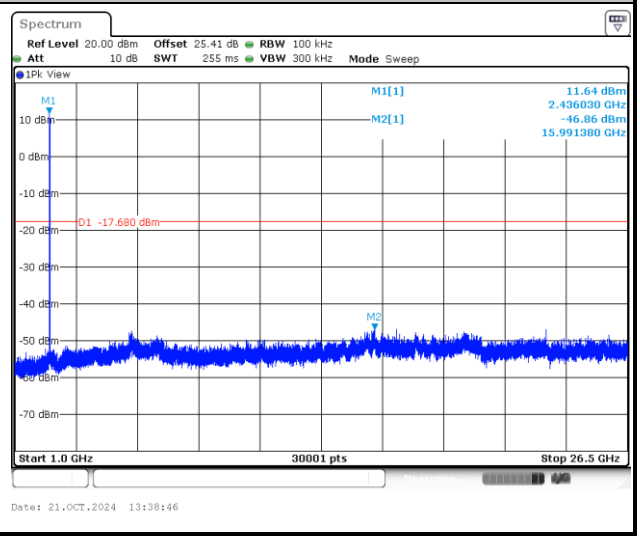


Spurious Emission 1GHz~26.5GHz

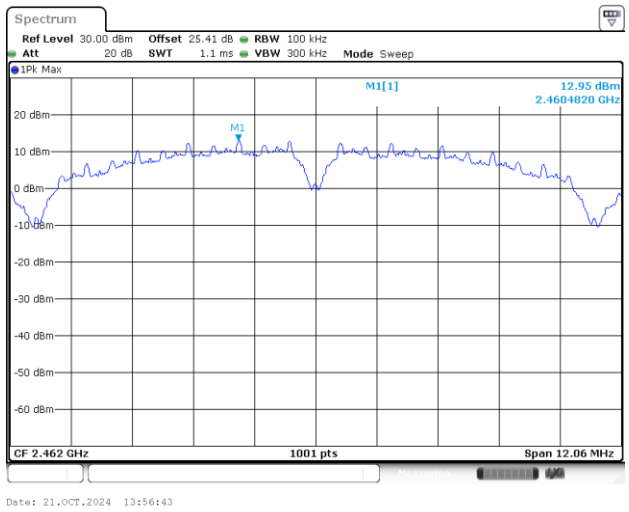
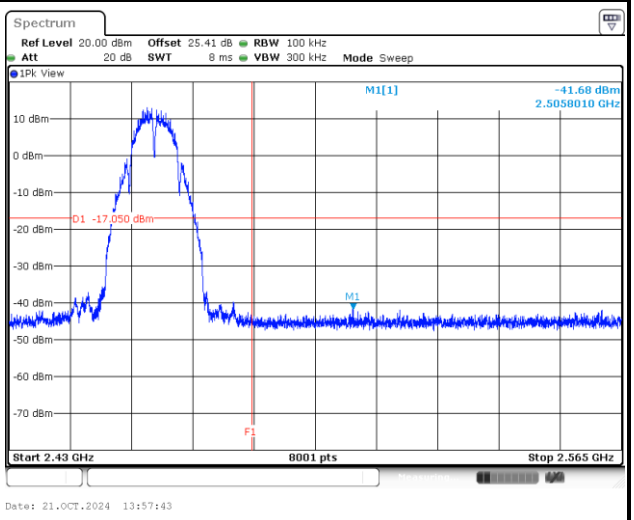
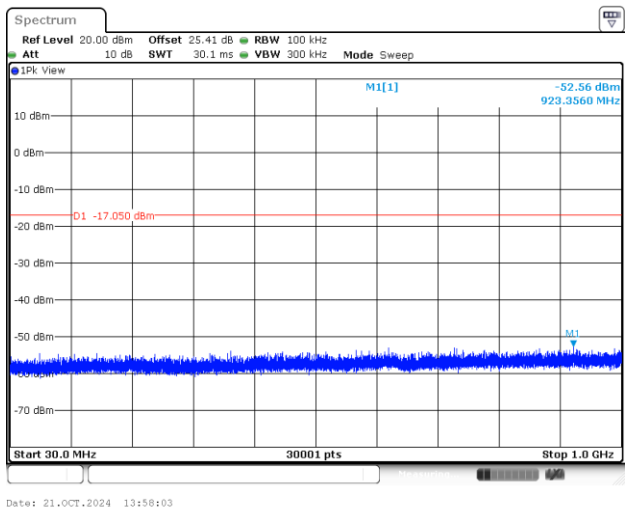
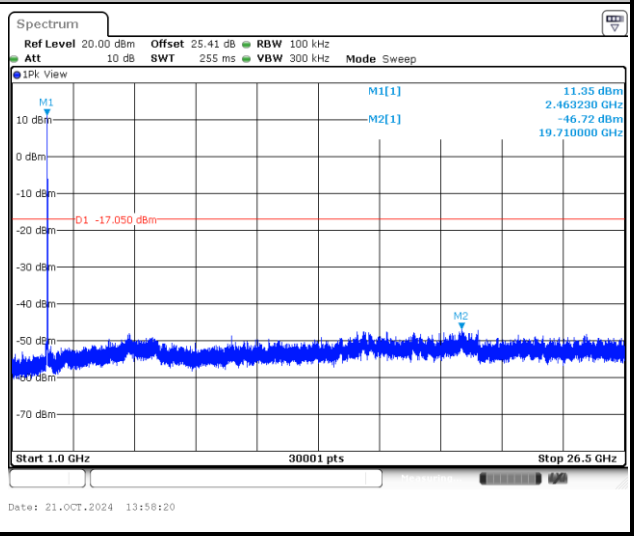


Test Mode :	802.11b	Test Channel :	06

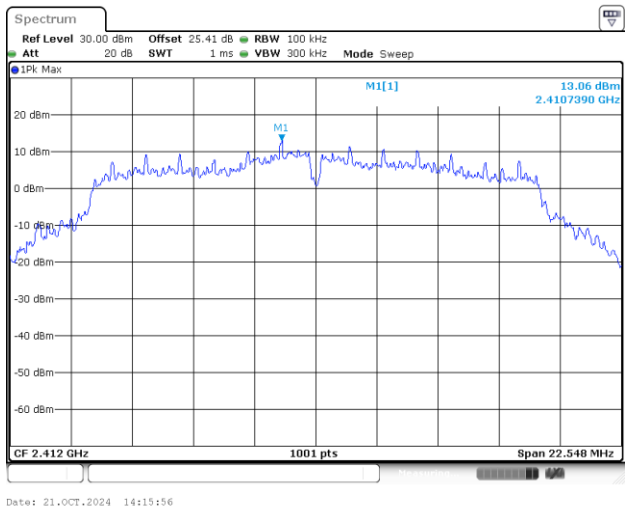
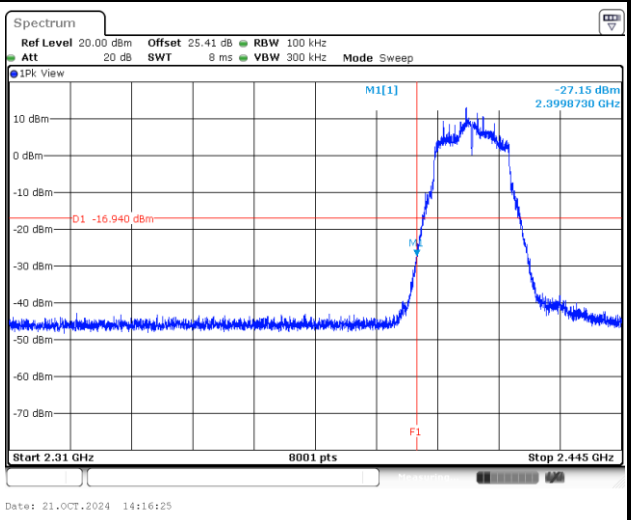
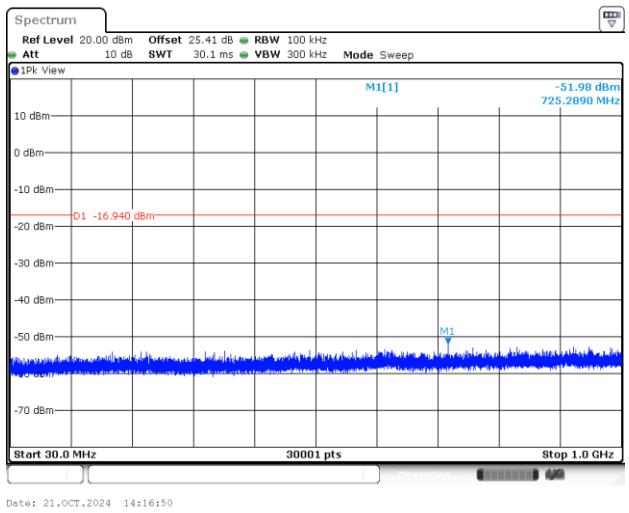
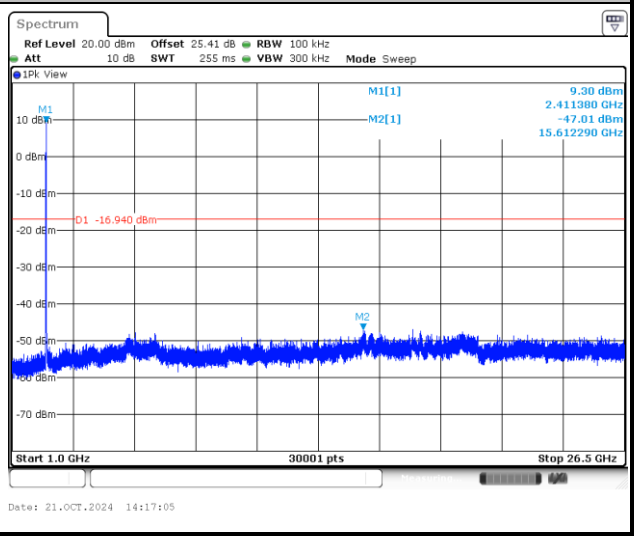
100kHz PSD reference Level	Middle Channel Plot
	

Spurious Emission 30MHz~1GHz	Spurious Emission 1GHz~26.5GHz
	

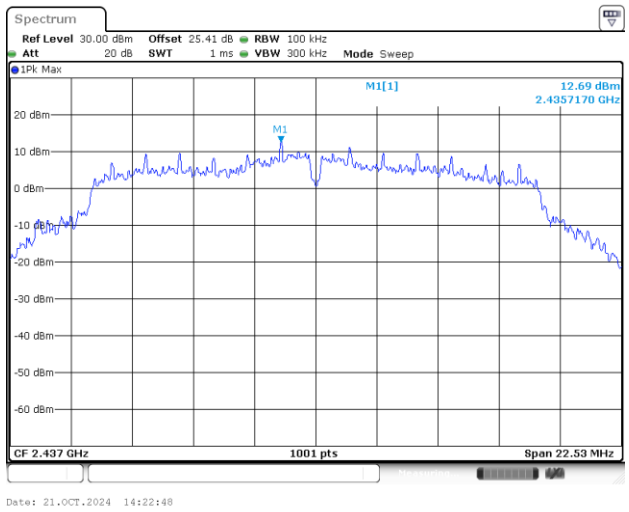
Test Mode :	802.11b	Test Channel :	11

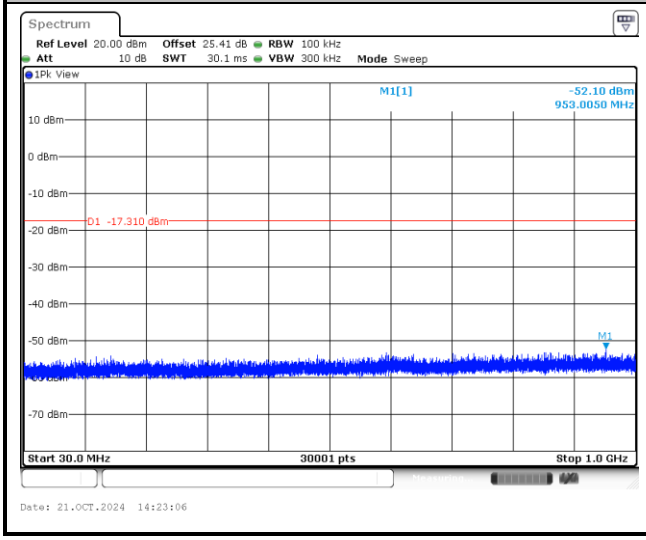
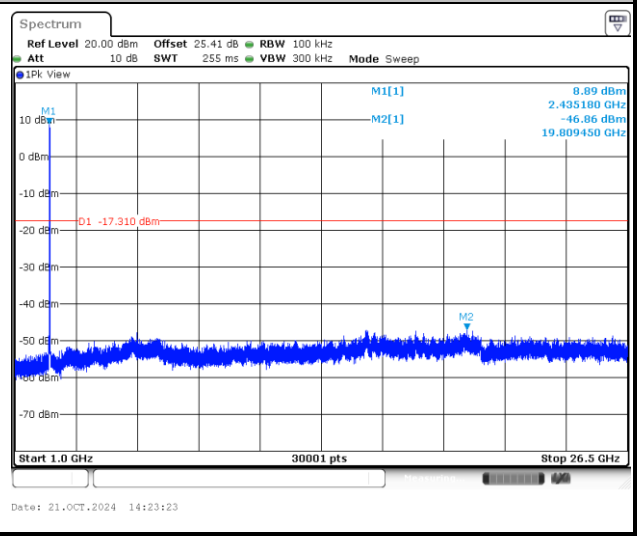
100kHz PSD reference Level	High Channel Plot
	
Spurious Emission 30MHz~1GHz	**Spurious Emission 1GHz~26.5GHz**
	

Test Mode :	802.11g	Test Channel :	01

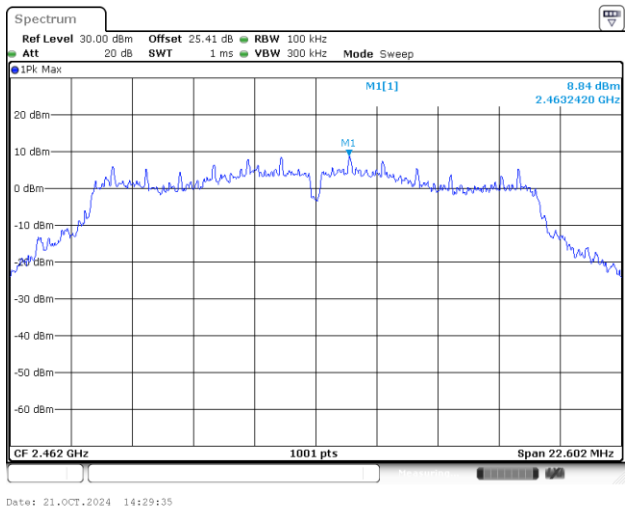
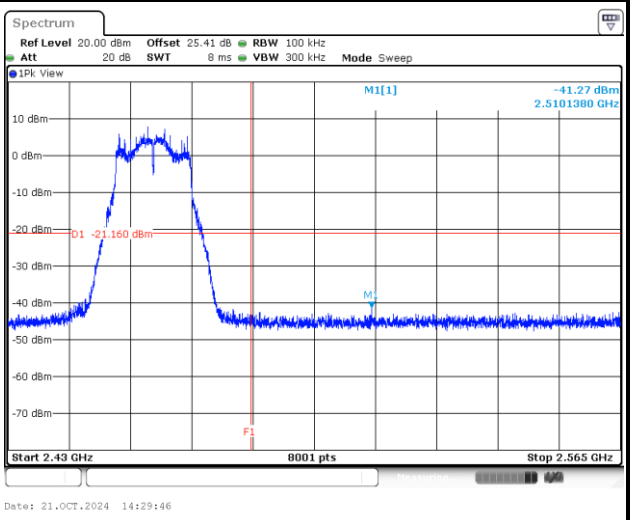
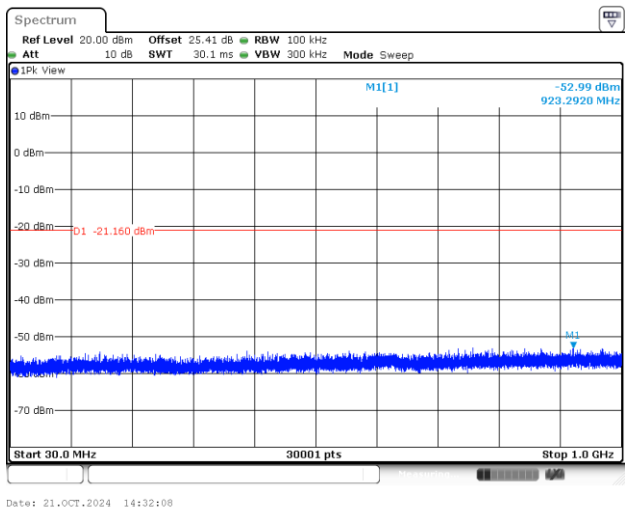
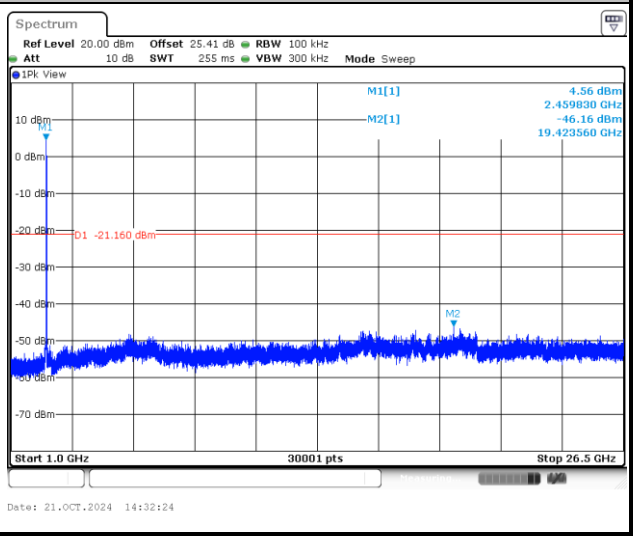
100kHz PSD reference Level	Low Channel Plot
	
Spurious Emission 30MHz~1GHz	**Spurious Emission 1GHz~26.5GHz**
	

Test Mode :	802.11g	Test Channel :	06

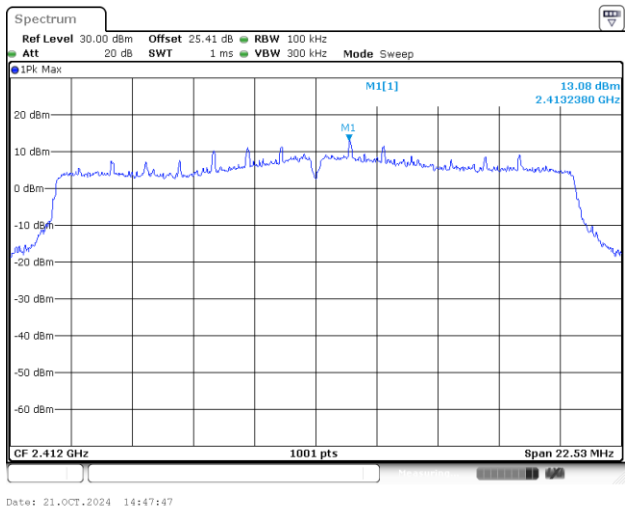
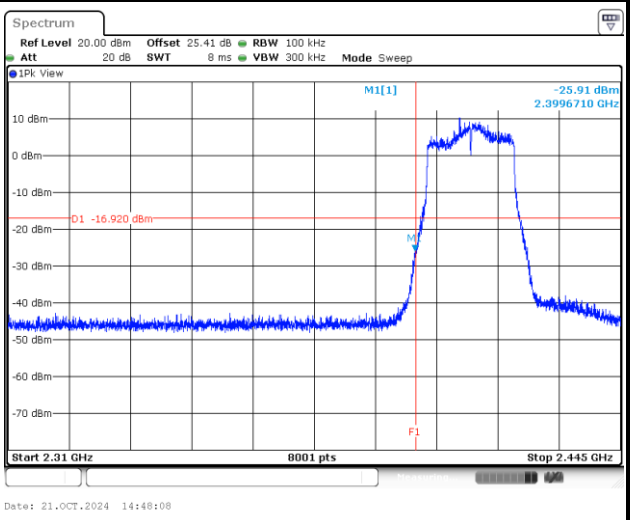
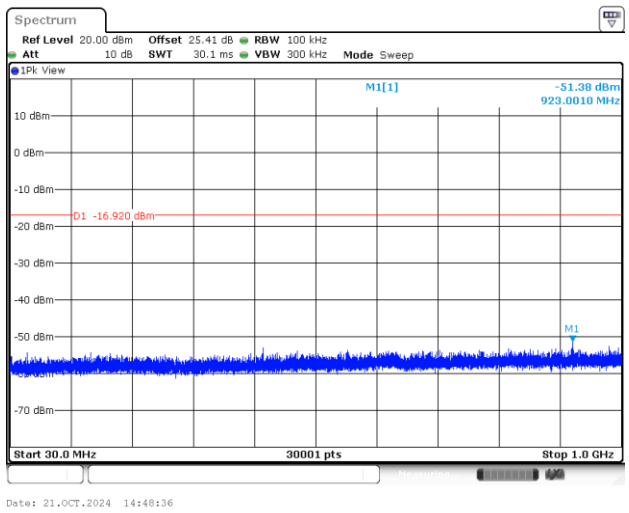
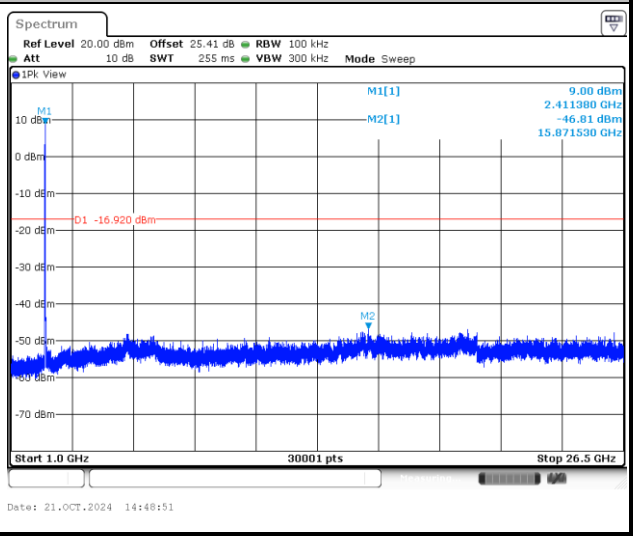
100kHz PSD reference Level	Middle Channel Plot
	

Spurious Emission 30MHz~1GHz	Spurious Emission 1GHz~26.5GHz
	

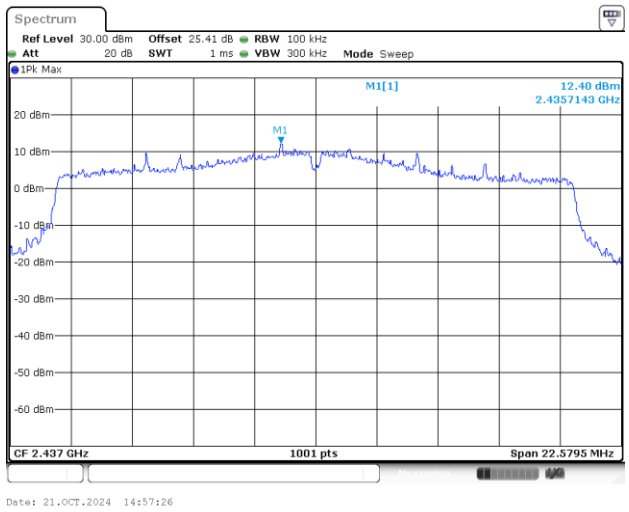
Test Mode :	802.11g	Test Channel :	11

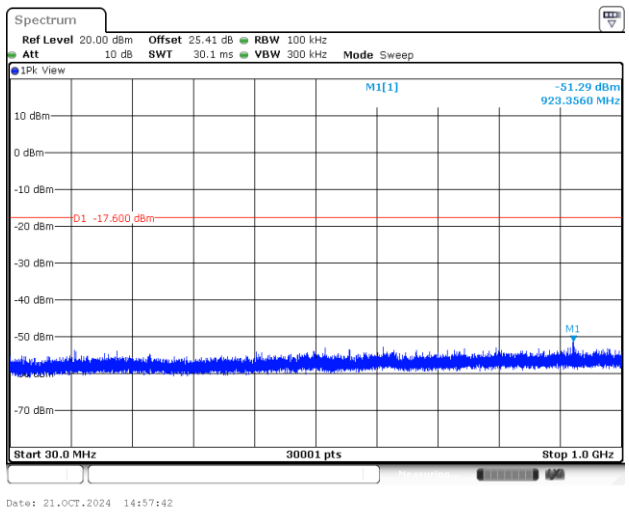
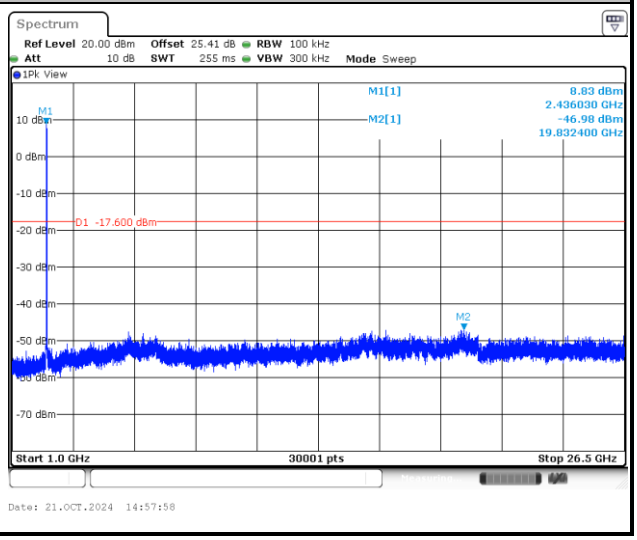
100kHz PSD reference Level	High Channel Plot
	
Spurious Emission 30MHz~1GHz	**Spurious Emission 1GHz~26.5GHz**
	

Test Mode :	802.11be EHT20	Test Channel :	01

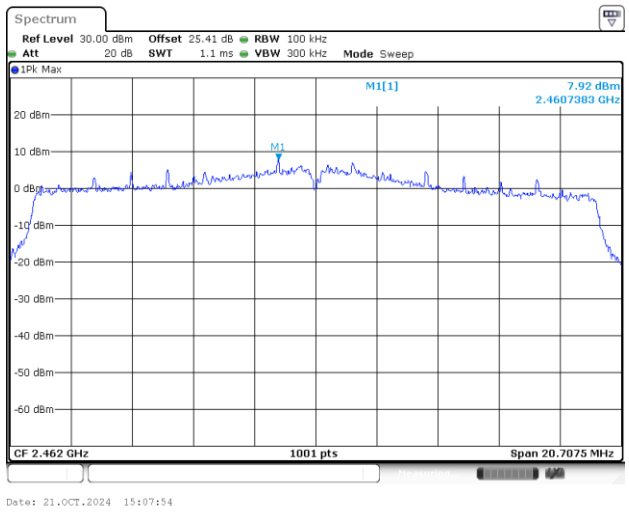
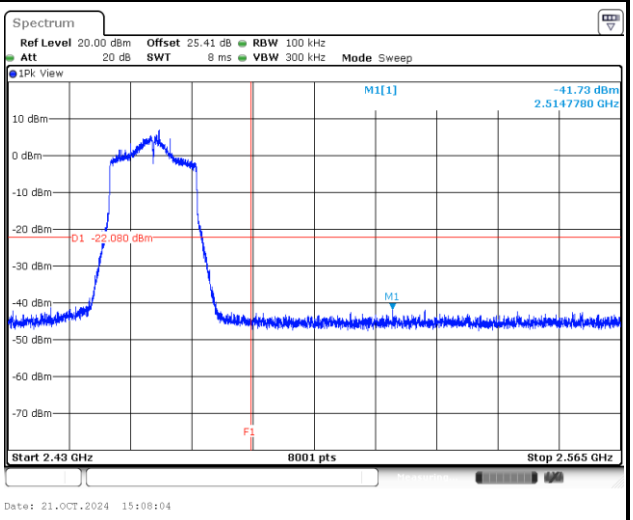
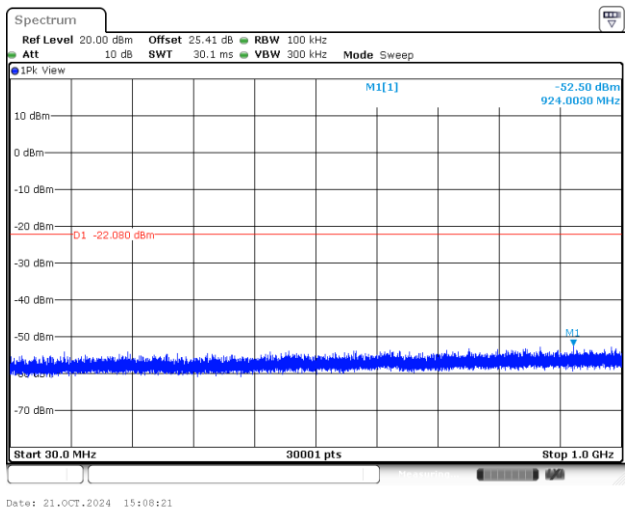
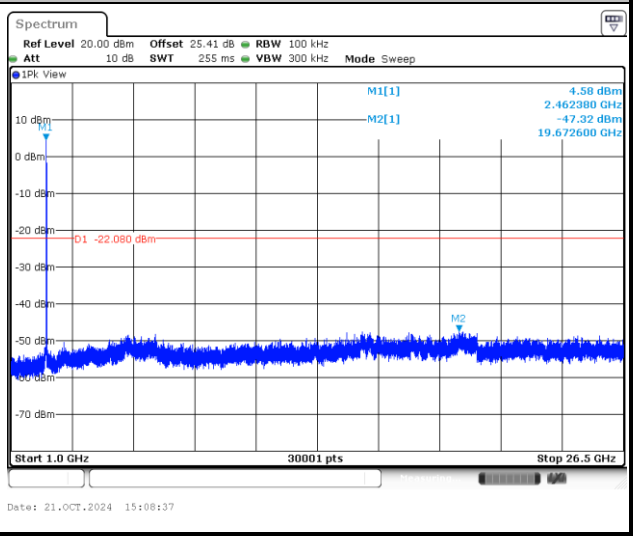
100kHz PSD reference Level	Low Channel Plot
	
Spurious Emission 30MHz~1GHz	**Spurious Emission 1GHz~26.5GHz**
	

Test Mode :	802.11be EHT20	Test Channel :	06

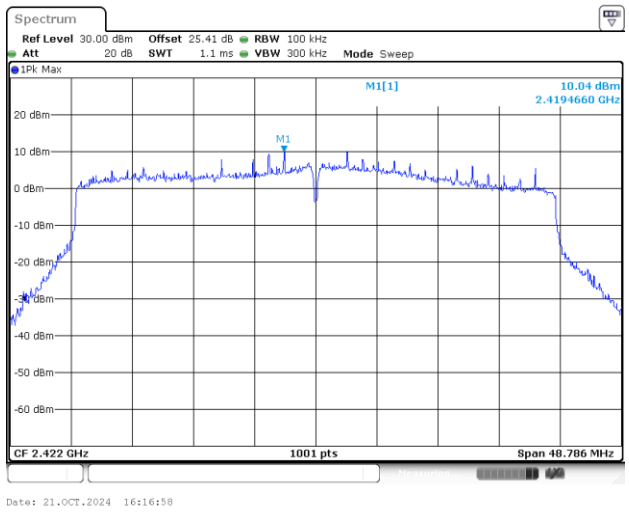
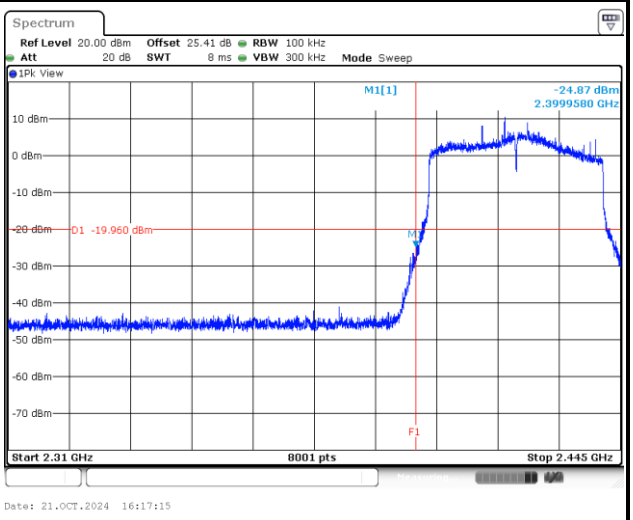
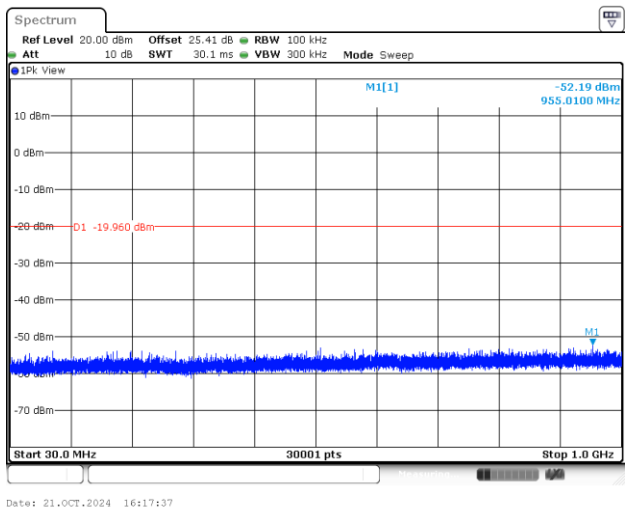
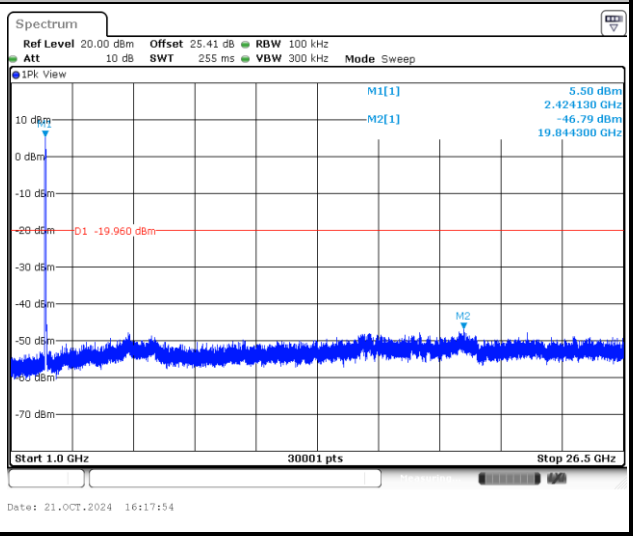
100kHz PSD reference Level	Middle Channel Plot
	

Spurious Emission 30MHz~1GHz	Spurious Emission 1GHz~26.5GHz
	

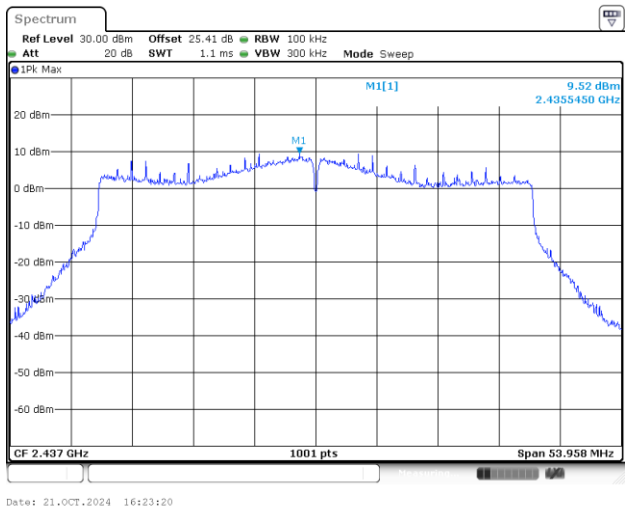
Test Mode :	802.11be EHT20	Test Channel :	11

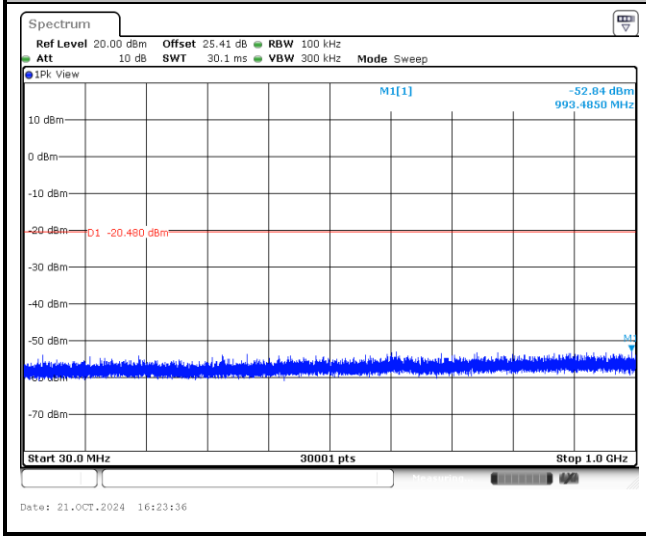
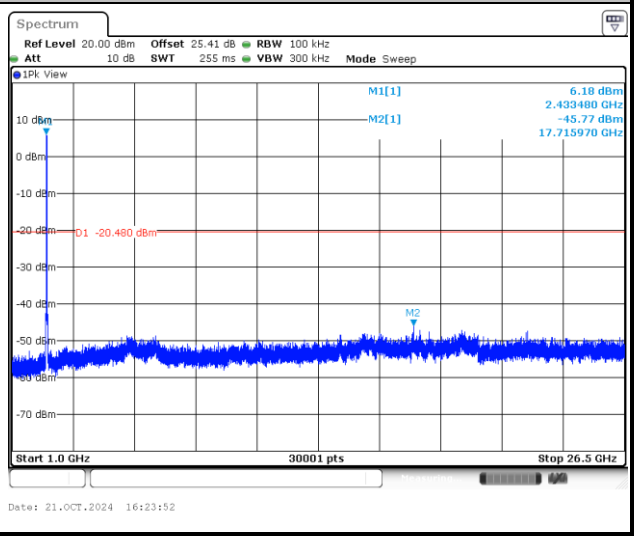
100kHz PSD reference Level	High Channel Plot
	
Spurious Emission 30MHz~1GHz	**Spurious Emission 1GHz~26.5GHz**
	

Test Mode :	802.11be EHT40	Test Channel :	03

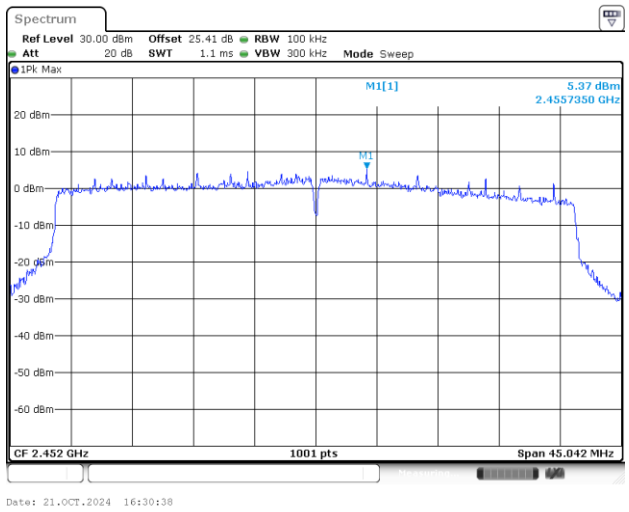
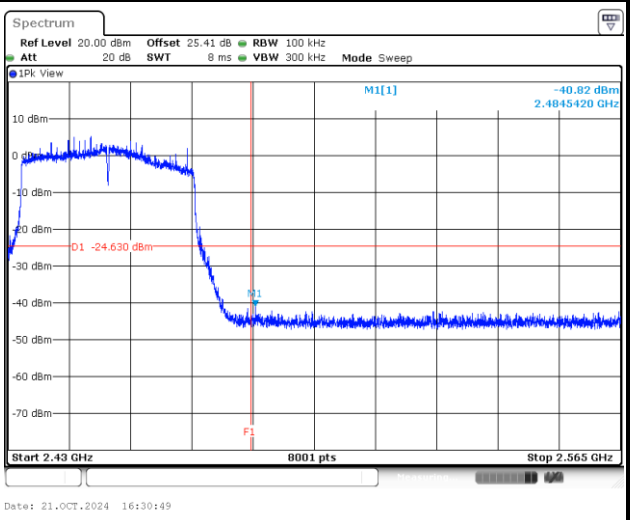
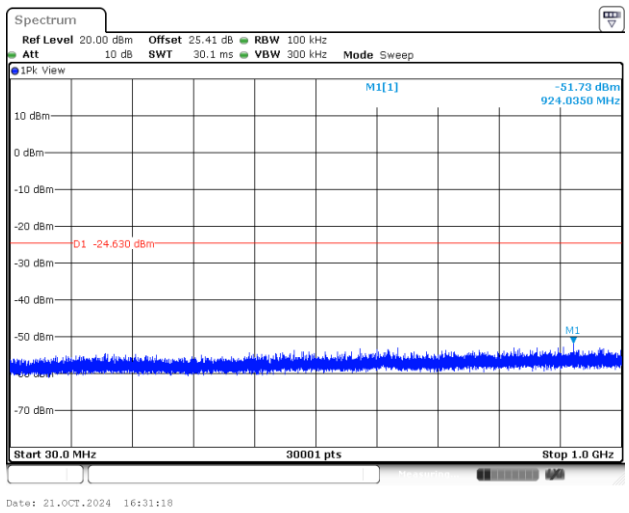
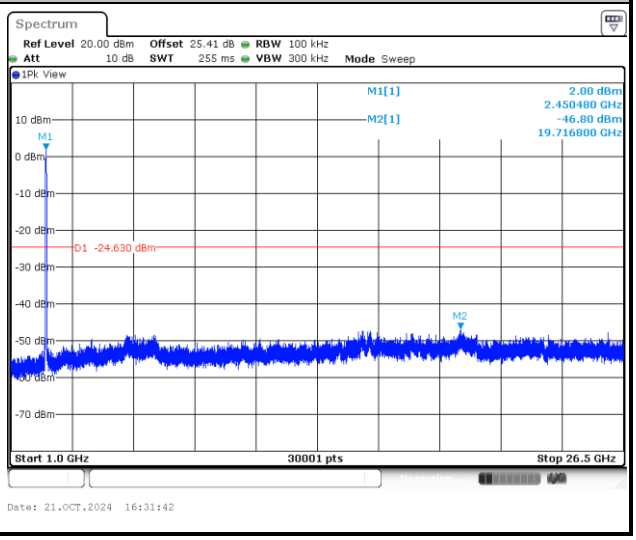
100kHz PSD reference Level	Low Channel Plot
	
Spurious Emission 30MHz~1GHz	**Spurious Emission 1GHz~26.5GHz**
	

Test Mode :	802.11be EHT40	Test Channel :	06

100kHz PSD reference Level	Middle Channel Plot
	

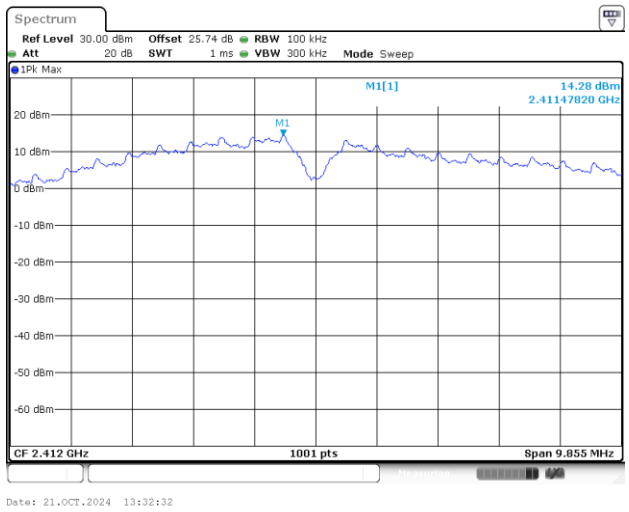
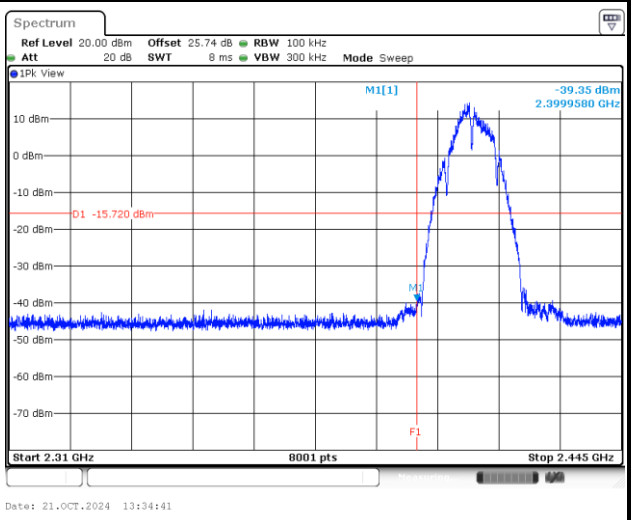
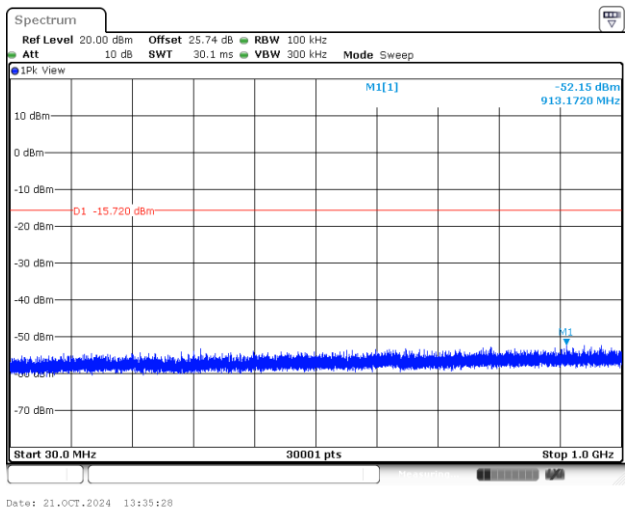
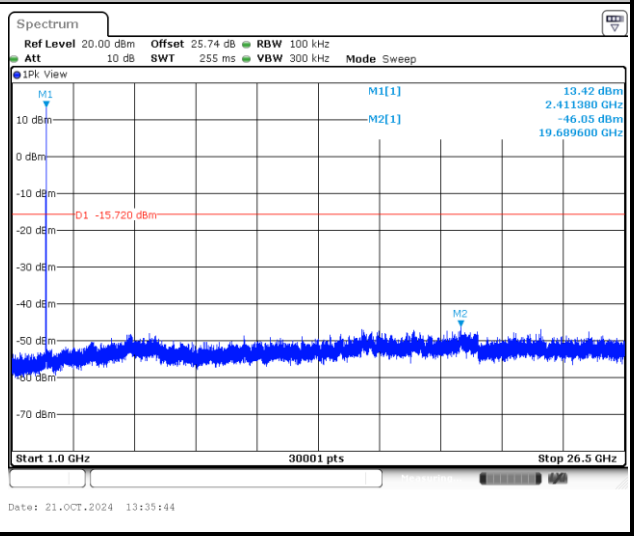
Spurious Emission 30MHz~1GHz	Spurious Emission 1GHz~26.5GHz
	

Test Mode :	802.11be EHT40	Test Channel :	09

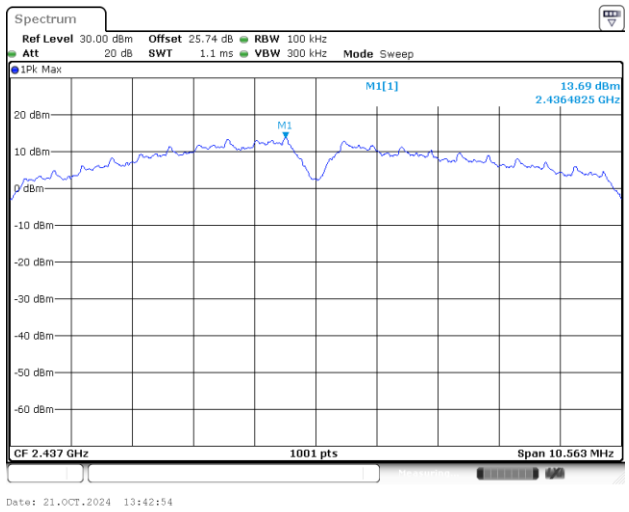
100kHz PSD reference Level	High Channel Plot
	
Spurious Emission 30MHz~1GHz	**Spurious Emission 1GHz~26.5GHz**
	

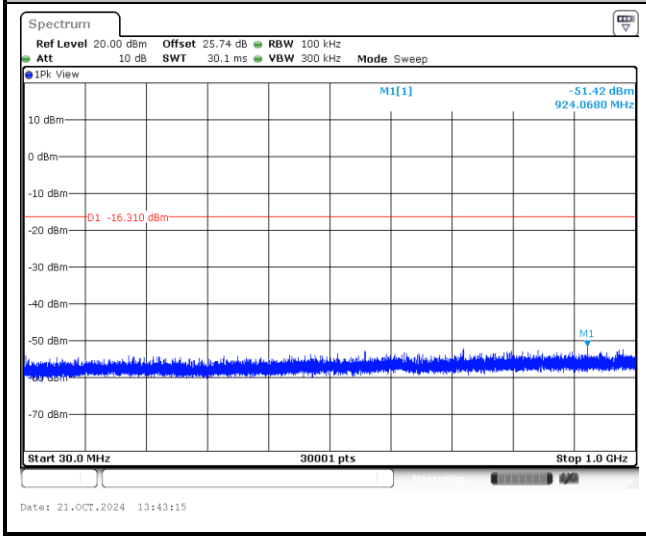
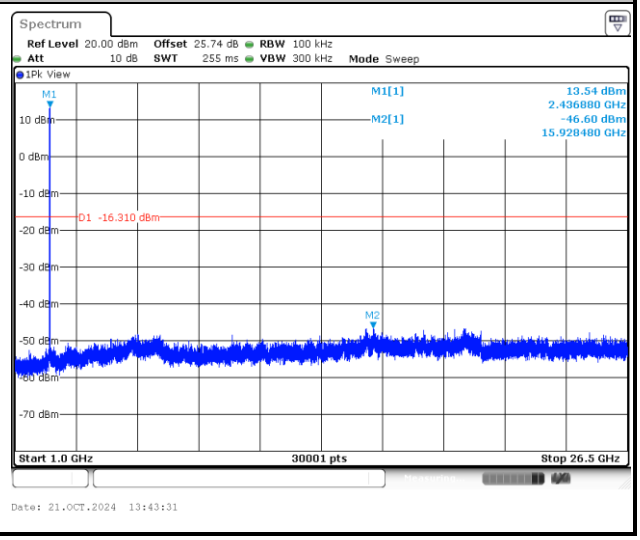
Number of TX = 2, Ant. 3 (Measured)

Test Mode :	802.11b	Test Channel :	01

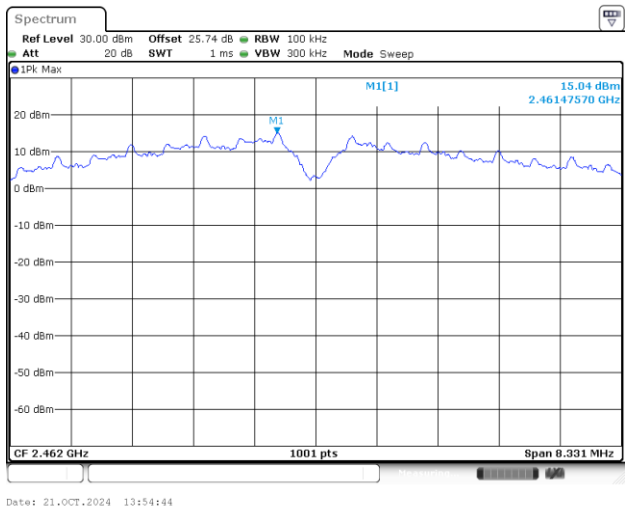
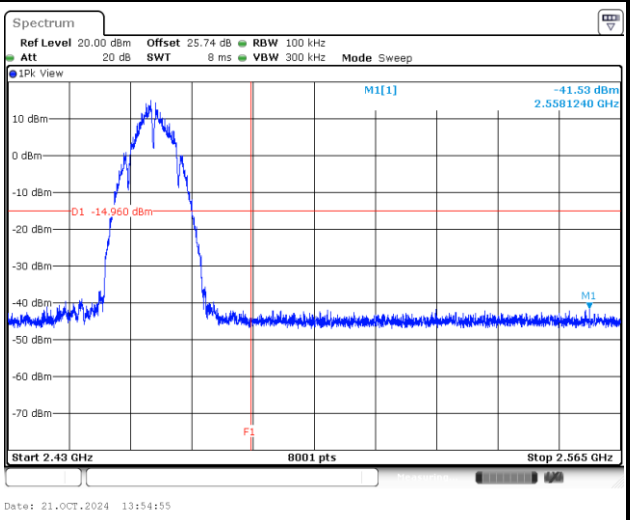
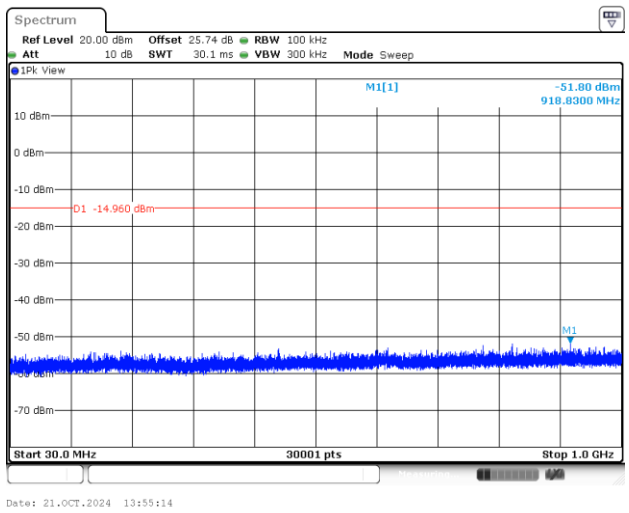
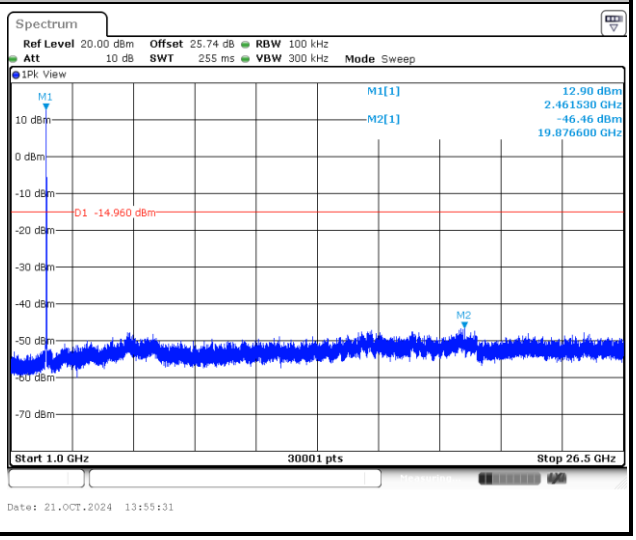
100kHz PSD reference Level	Low Channel Plot
	
Spurious Emission 30MHz~1GHz	**Spurious Emission 1GHz~26.5GHz**
	

Test Mode :	802.11b	Test Channel :	06

100kHz PSD reference Level	Middle Channel Plot
	

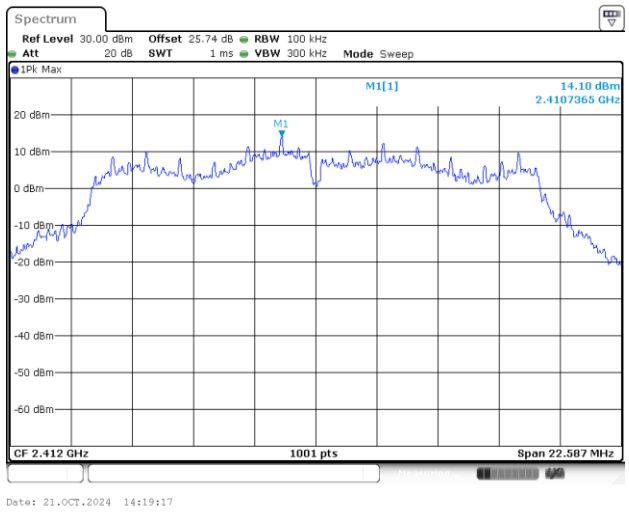
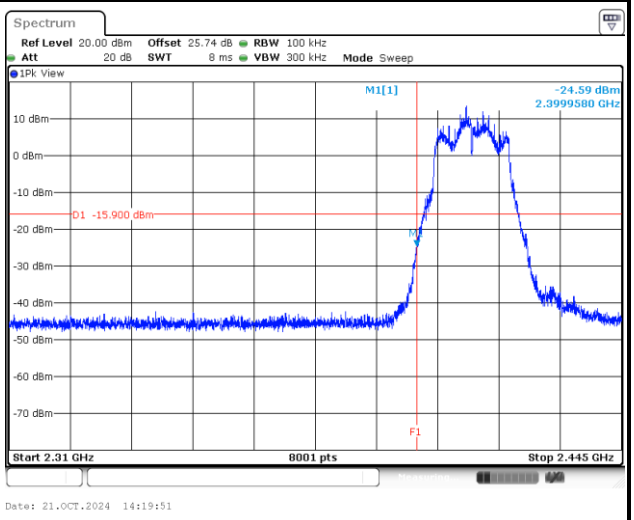
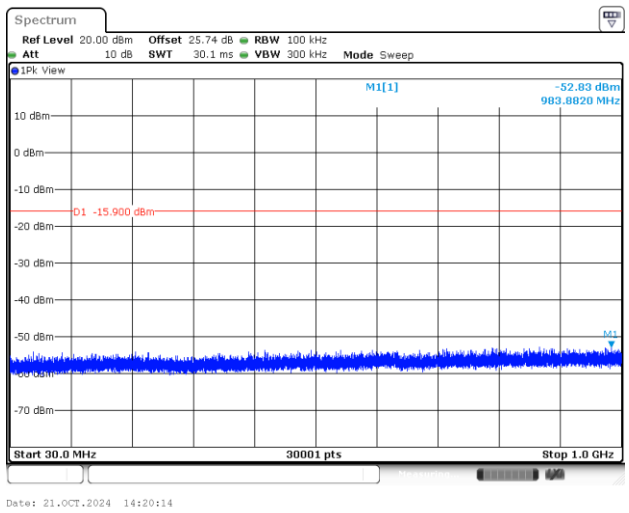
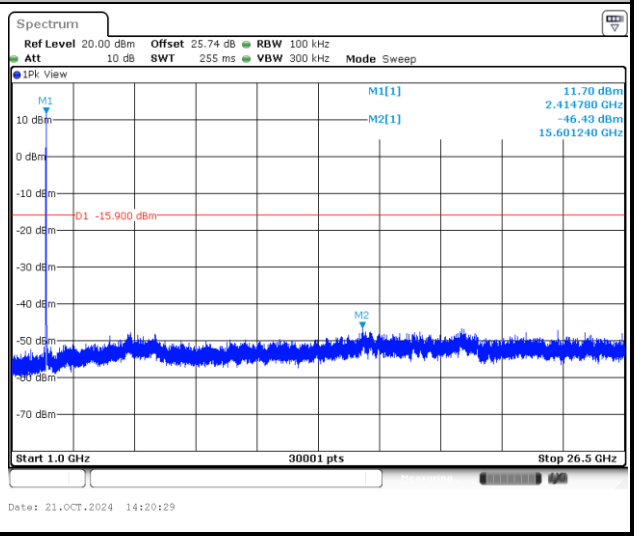
Spurious Emission 30MHz~1GHz	Spurious Emission 1GHz~26.5GHz
	

Test Mode :	802.11b	Test Channel :	11

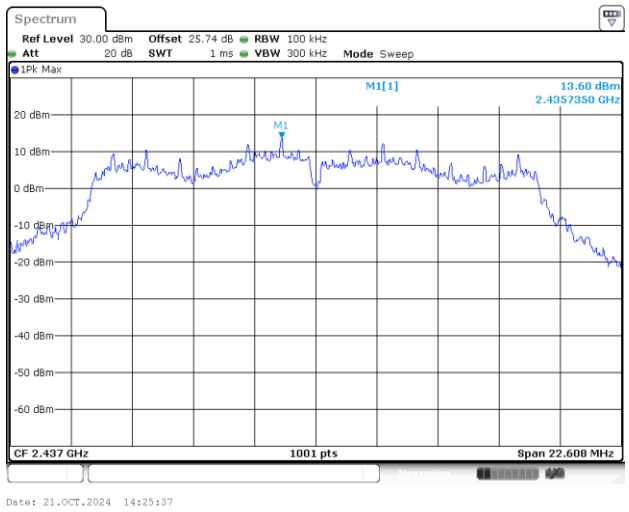
100kHz PSD reference Level	High Channel Plot
	
Spurious Emission 30MHz~1GHz	**Spurious Emission 1GHz~26.5GHz**
	

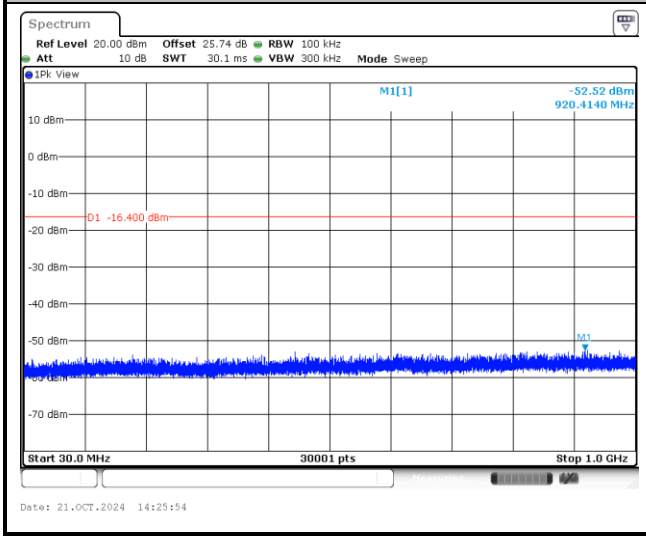
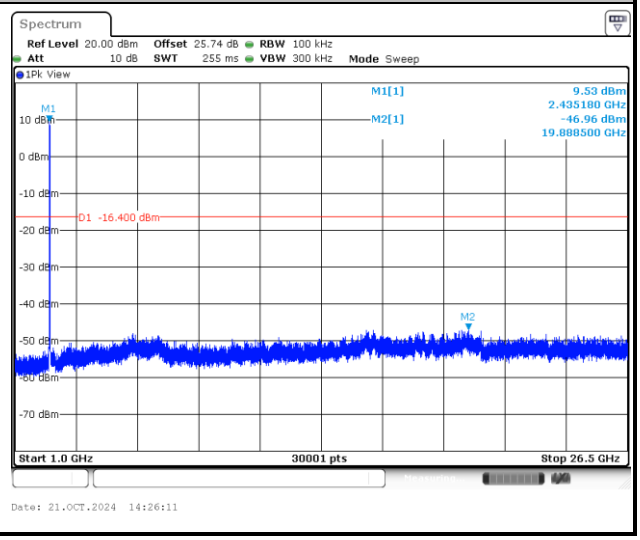
Number of TX = 2, Ant. 3 (Measured)

Test Mode :	802.11g	Test Channel :	01

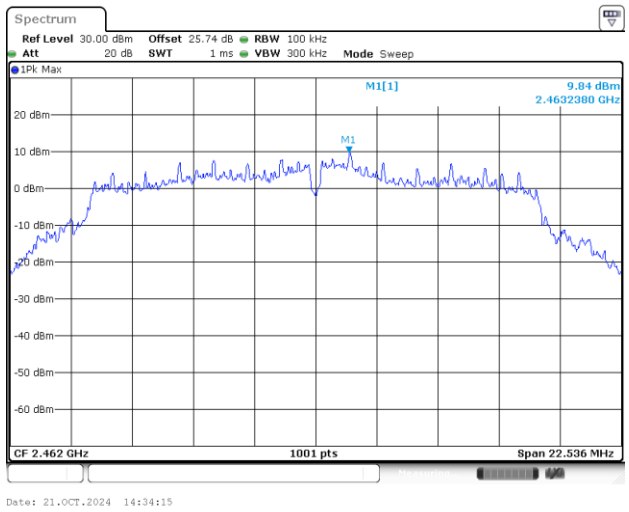
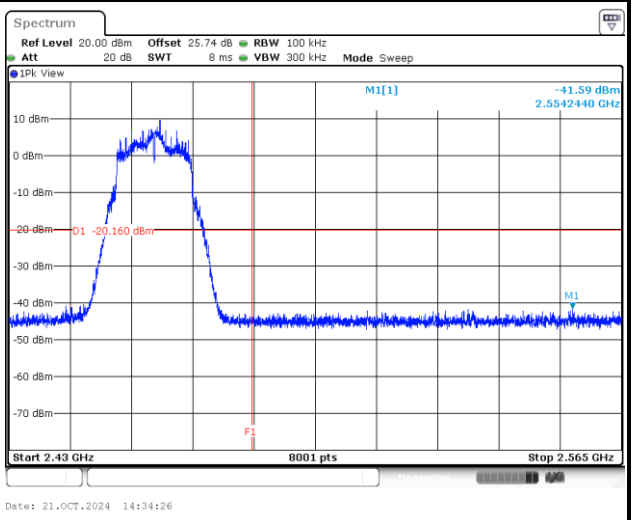
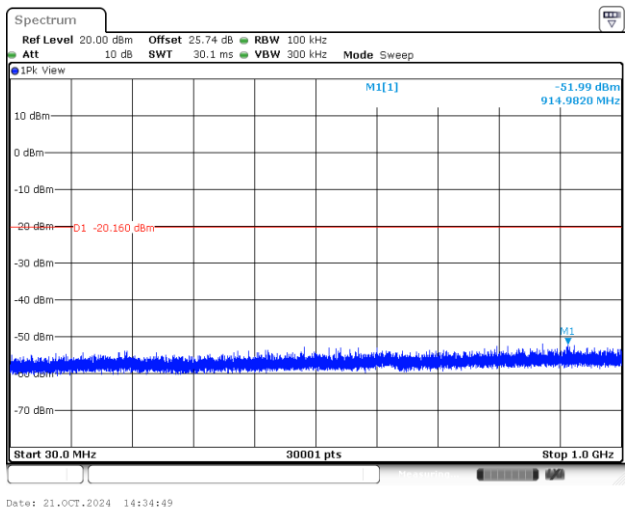
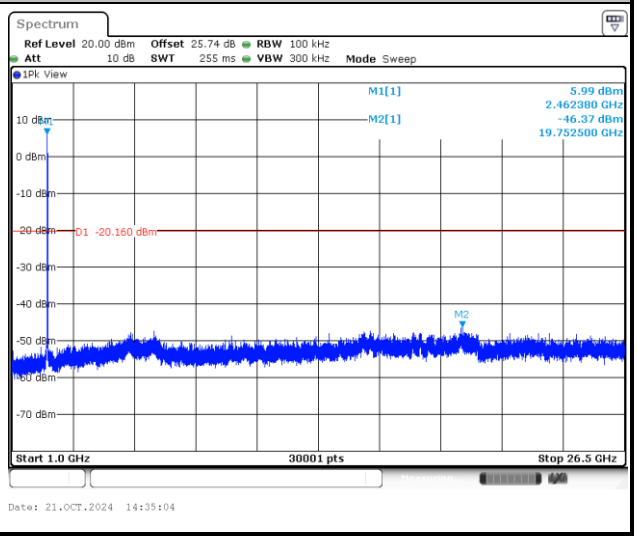
100kHz PSD reference Level	Low Channel Plot
	
Spurious Emission 30MHz~1GHz	**Spurious Emission 1GHz~26.5GHz**
	

Test Mode :	802.11g	Test Channel :	06

100kHz PSD reference Level	Middle Channel Plot
	

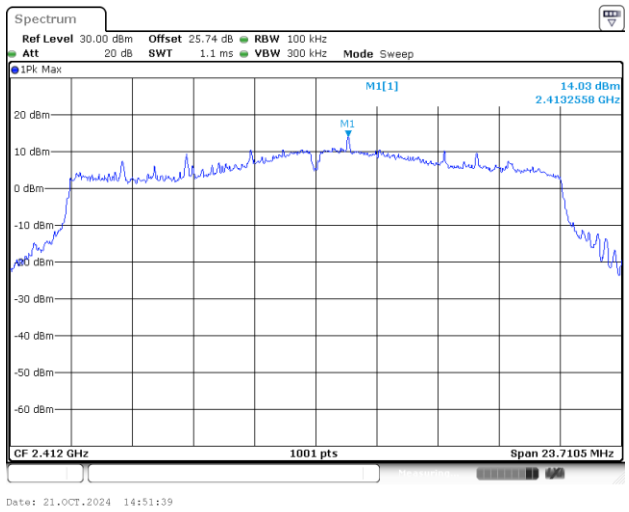
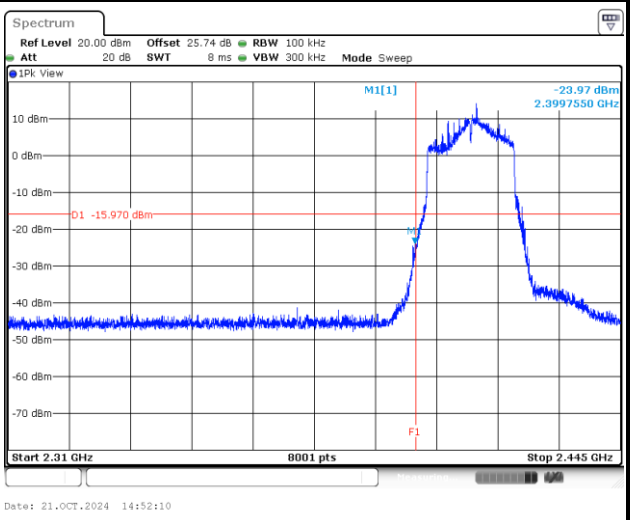
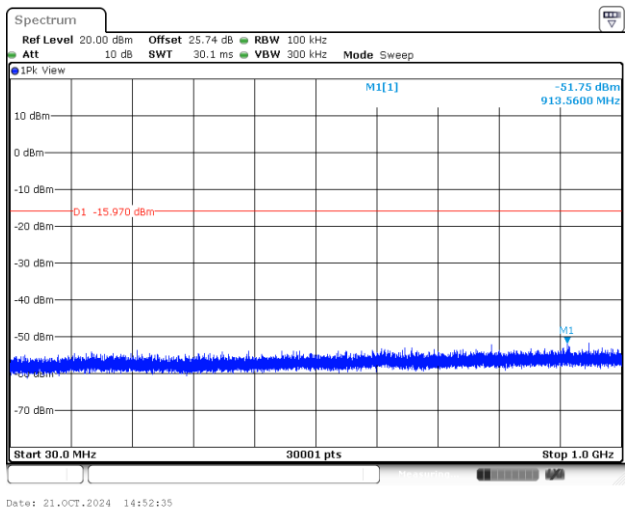
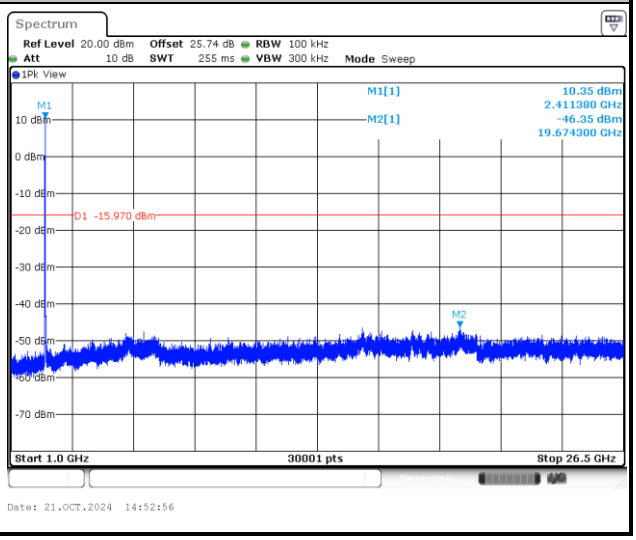
Spurious Emission 30MHz~1GHz	Spurious Emission 1GHz~26.5GHz
	

Test Mode :	802.11g	Test Channel :	11

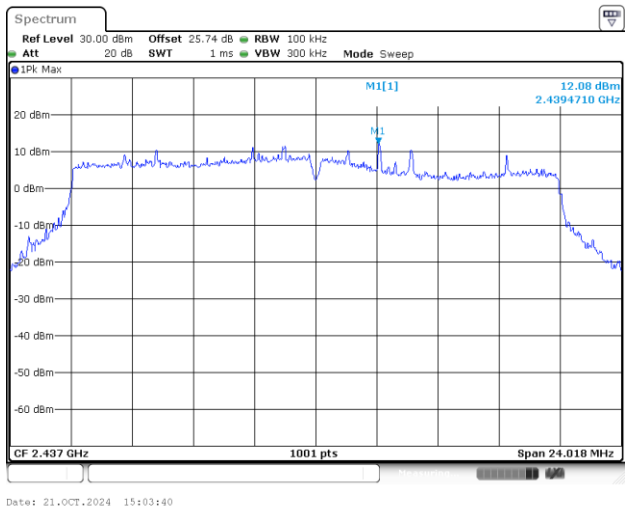
100kHz PSD reference Level	High Channel Plot
	
Spurious Emission 30MHz~1GHz	**Spurious Emission 1GHz~26.5GHz**
	

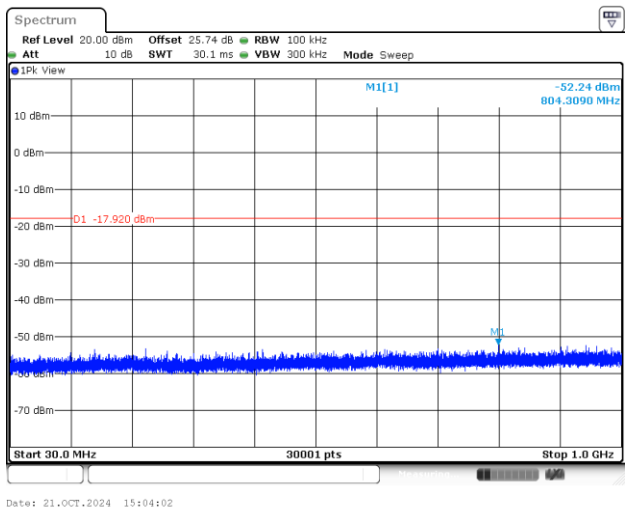
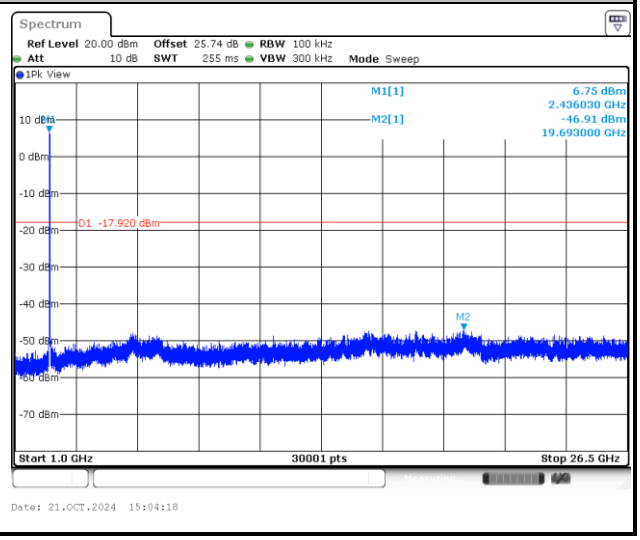
Number of TX = 2, Ant. 2 (Measured)

Test Mode :	802.11be EHT20	Test Channel :	01

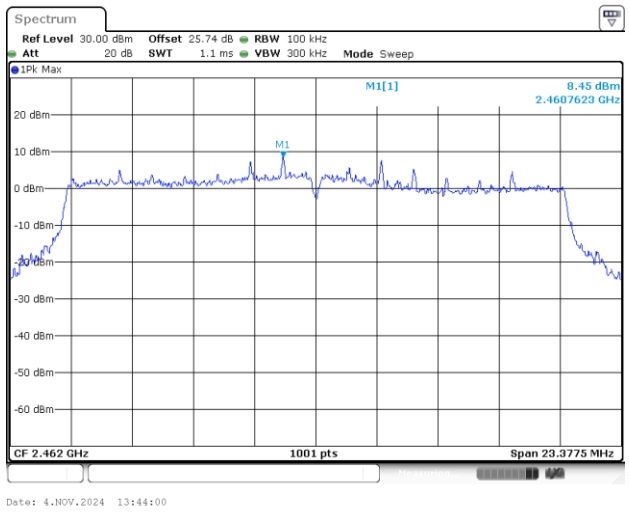
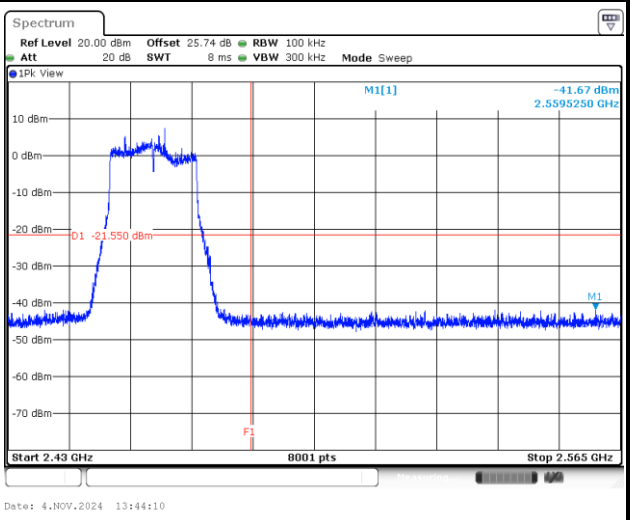
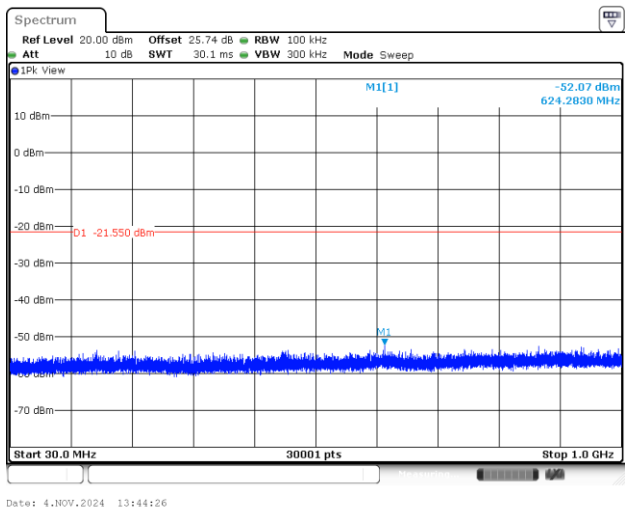
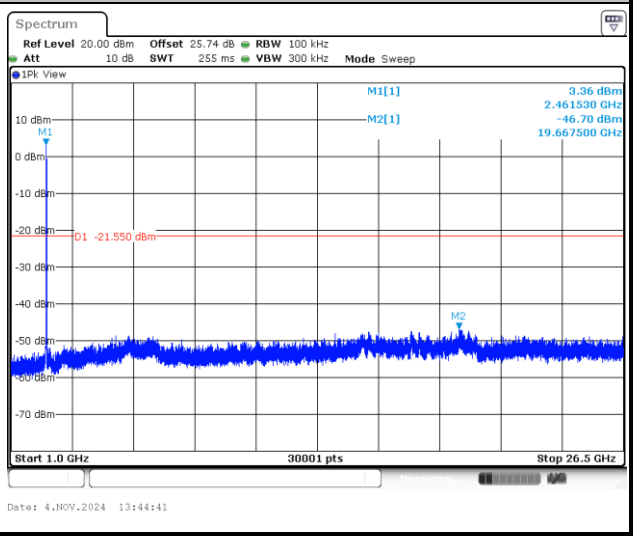
100kHz PSD reference Level	Low Channel Plot
	
Spurious Emission 30MHz~1GHz	**Spurious Emission 1GHz~26.5GHz**
	

Test Mode :	802.11be EHT20	Test Channel :	06

100kHz PSD reference Level	Middle Channel Plot
	

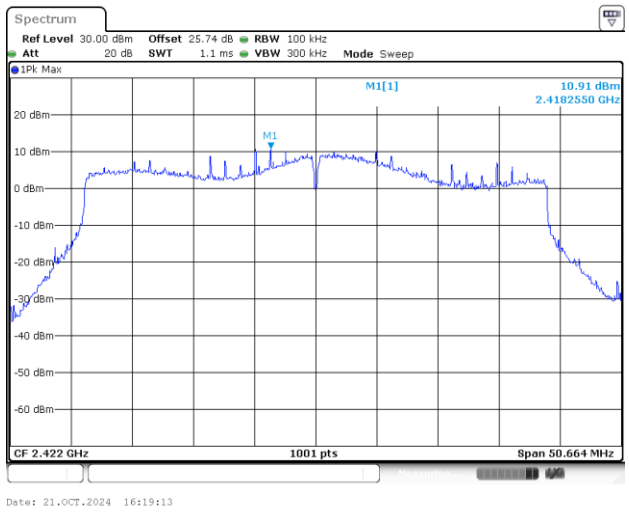
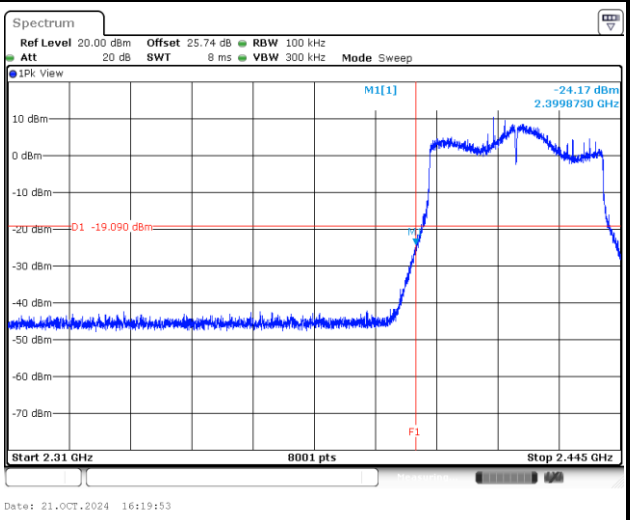
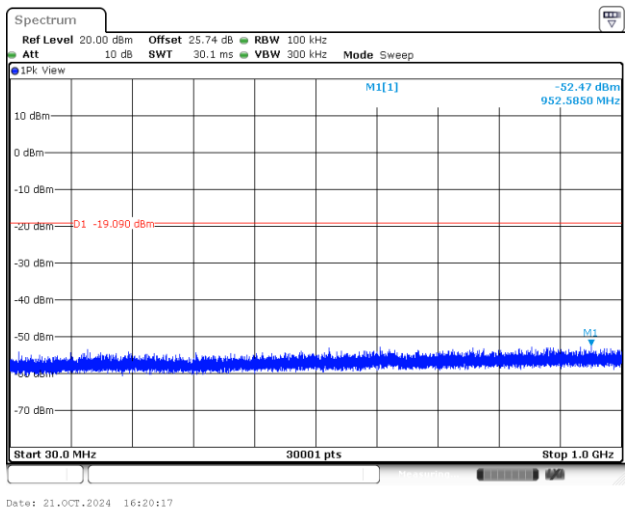
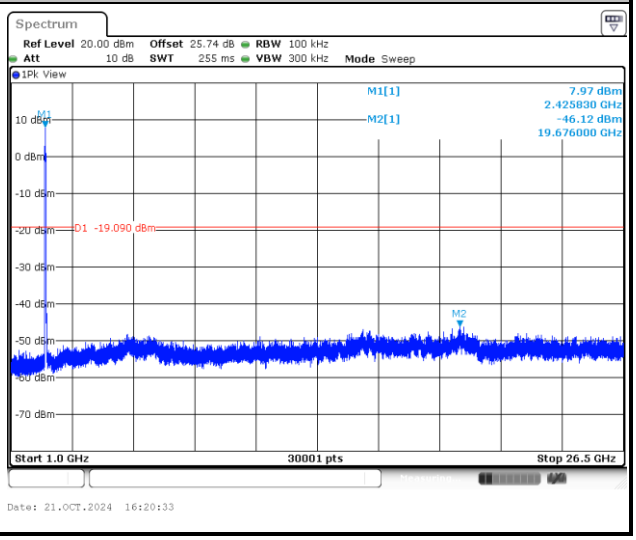
Spurious Emission 30MHz~1GHz	Spurious Emission 1GHz~26.5GHz
	

Test Mode :	802.11be EHT20	Test Channel :	11

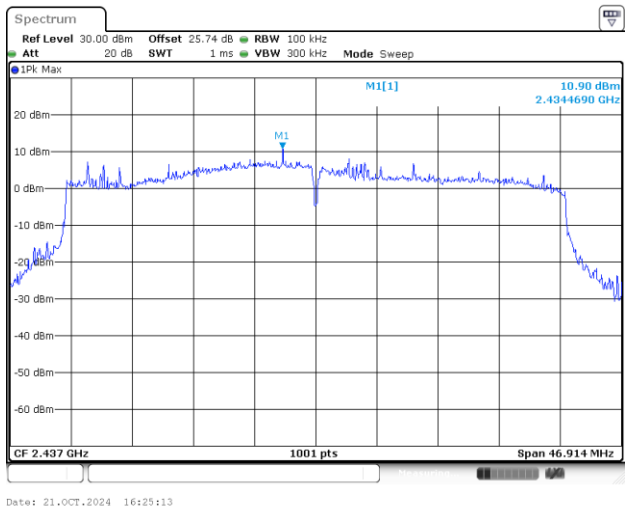
100kHz PSD reference Level	High Channel Plot
	
Spurious Emission 30MHz~1GHz	**Spurious Emission 1GHz~26.5GHz**
	

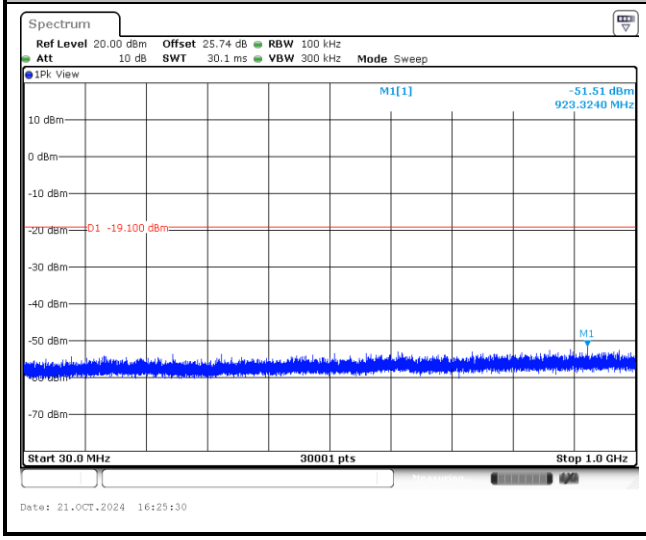
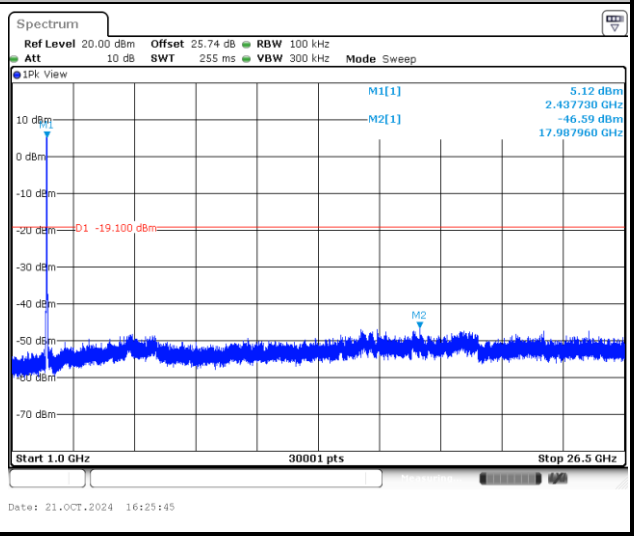
Number of TX = 2, Ant. 3 (Measured)

Test Mode :	802.11be EHT40	Test Channel :	03

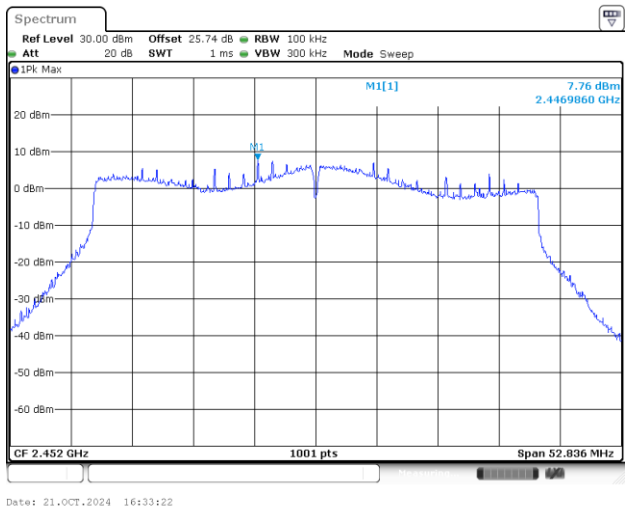
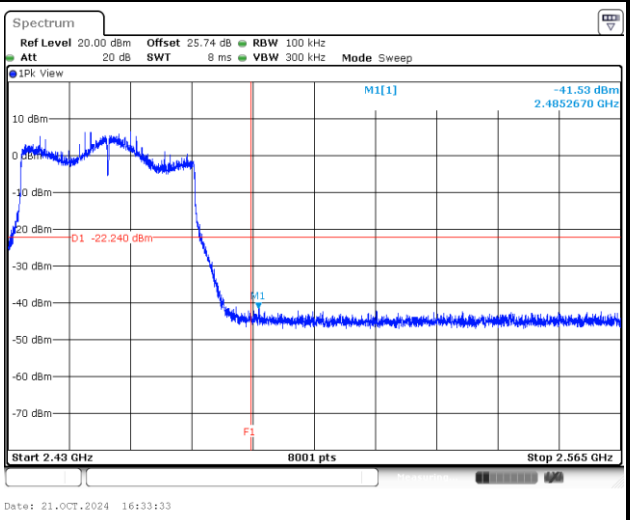
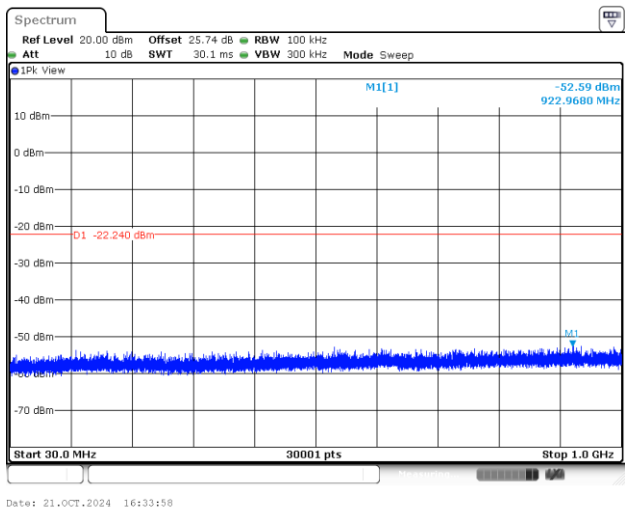
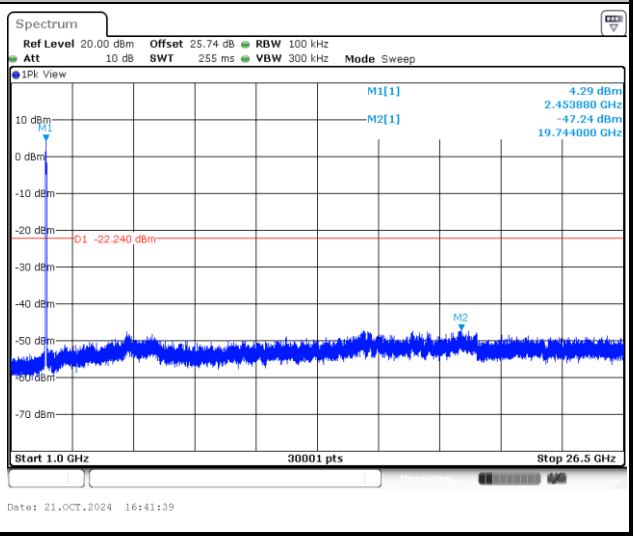
100kHz PSD reference Level	Low Channel Plot
	
Spurious Emission 30MHz~1GHz	**Spurious Emission 1GHz~26.5GHz**
	

Test Mode :	802.11be EHT40	Test Channel :	06

100kHz PSD reference Level	Middle Channel Plot
	

Spurious Emission 30MHz~1GHz	Spurious Emission 1GHz~26.5GHz
	

Test Mode :	802.11be EHT40	Test Channel :	09

100kHz PSD reference Level	High Channel Plot
	
Spurious Emission 30MHz~1GHz	**Spurious Emission 1GHz~26.5GHz**
	

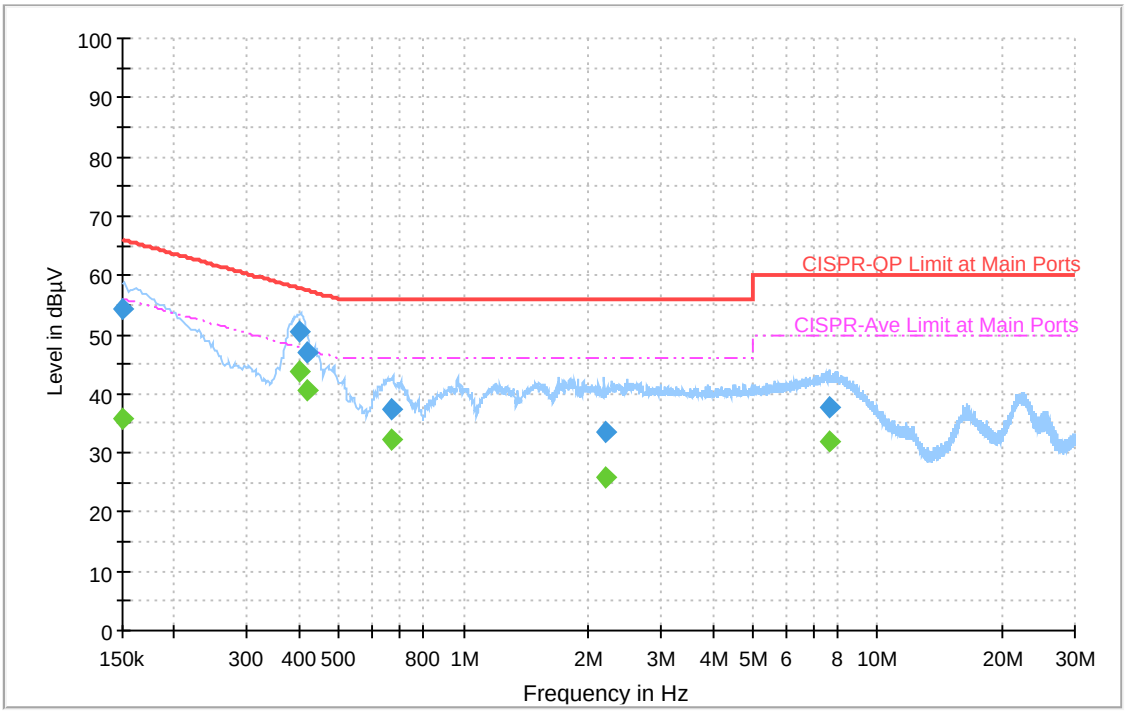
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Jin Peng	**Temperature :**	20.1~24.2℃
		Relative Humidity :	41.2~48.5%

EUT Information

Test Site Location :	CO01-CA
Project	240524001
Power:	120Vac/60Hz
Mode	1
	Line

Full Spectrum



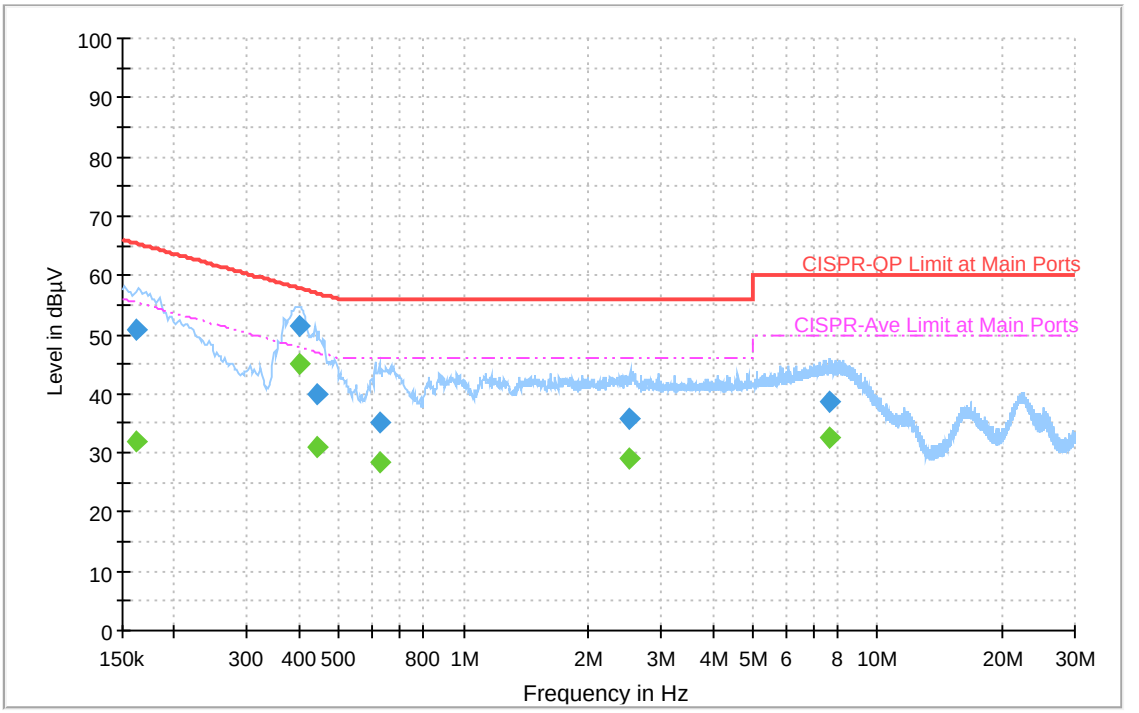
Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.150776	54.30	---	65.96	11.66	L1	OFF	20.4
0.150776	---	35.93	55.96	20.03	L1	OFF	20.4
0.399759	---	43.80	47.86	4.06	L1	OFF	20.3
0.399759	50.38	---	57.86	7.48	L1	OFF	20.3
0.418767	---	40.55	47.47	6.92	L1	OFF	20.3
0.418767	46.90	---	57.47	10.57	L1	OFF	20.3
0.671064	---	32.20	46.00	13.80	L1	OFF	20.3
0.671064	37.52	---	56.00	18.48	L1	OFF	20.3
2.192928	---	25.74	46.00	20.26	L1	OFF	20.4
2.192928	33.62	---	56.00	22.38	L1	OFF	20.4
7.684035	---	31.79	50.00	18.21	L1	OFF	21.2
7.684035	37.71	---	60.00	22.29	L1	OFF	21.2

EUT Information

Test Site Location :	CO01-CA
Project	240524001
Power:	120Vac/60Hz
Mode	1
	Neutral

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.161871	---	31.89	55.37	23.48	N	OFF	20.4
0.161871	50.85	---	65.37	14.52	N	OFF	20.4
0.401127	---	45.03	47.83	2.80	N	OFF	20.3
0.401127	51.54	---	57.83	6.29	N	OFF	20.3
0.441330	---	31.05	47.04	15.99	N	OFF	20.3
0.441330	39.80	---	57.04	17.24	N	OFF	20.3
0.626865	---	28.35	46.00	17.65	N	OFF	20.3
0.626865	35.11	---	56.00	20.89	N	OFF	20.3
2.524839	---	29.10	46.00	16.90	N	OFF	20.4
2.524839	35.64	---	56.00	20.36	N	OFF	20.4
7.669923	---	32.68	50.00	17.32	N	OFF	21.2
7.669923	38.52	---	60.00	21.48	N	OFF	21.2

Appendix C. Radiated Spurious Emission

Test Engineer :	Kevin Hsu, Leo Liu	Temperature :	15.4~21.2°C
		Relative Humidity :	37.2~49.3%

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Margin	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+3		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2356.725	56.3	-17.7	74	42.18	27.3	17.42	30.6	200	177	P	H
		2388.54	45.29	-8.71	54	30.98	27.42	17.47	30.58	200	177	A	H
	*	2412	123.68	-	-	109.24	27.5	17.51	30.57	200	177	P	H
	*	2412	120.37	-	-	105.93	27.5	17.51	30.57	200	177	A	H
													H
													H
		2376.255	56.74	-17.26	74	42.43	27.45	17.45	30.59	160	177	P	V
		2386.44	45.54	-8.46	54	31.16	27.49	17.47	30.58	160	177	A	V
	*	2412	122.64	-	-	108.13	27.57	17.51	30.57	160	177	P	V
	*	2412	119.3	-	-	104.79	27.57	17.51	30.57	160	177	A	V
													V
													V
802.11b CH 06 2437MHz		2377.04	55.26	-18.74	74	41.02	27.38	17.45	30.59	215	212	P	H
		2388.88	44.56	-9.44	54	30.25	27.42	17.47	30.58	215	212	A	H
	*	2437	120.4	-	-	105.84	27.59	17.55	30.58	215	212	P	H
	*	2437	117.49	-	-	102.93	27.59	17.55	30.58	215	212	A	H
		2492.24	56.61	-17.39	74	41.69	27.83	17.64	30.55	215	212	P	H
		2484	45.89	-8.11	54	31.02	27.79	17.63	30.55	215	212	A	H
		2325.2	55.78	-18.22	74	41.67	27.35	17.37	30.61	238	191	P	V
		2387.28	44.7	-9.3	54	30.32	27.49	17.47	30.58	238	191	A	V
	*	2437	122.07	-	-	107.44	27.66	17.55	30.58	238	191	P	V
	*	2437	119.2	-	-	104.57	27.66	17.55	30.58	238	191	A	V
		2496.96	56.89	-17.11	74	41.87	27.91	17.65	30.54	238	191	P	V
		2485.84	45.74	-8.26	54	30.8	27.86	17.63	30.55	238	191	A	V

802.11b CH 11 2462MHz	*	2462	124.09	-	-	109.38	27.69	17.59	30.57	200	175	P	H
	*	2462	120.58	-	-	105.87	27.69	17.59	30.57	200	175	A	H
		2484	64.53	-9.47	74	49.66	27.79	17.63	30.55	200	175	P	H
		2484.08	51.5	-2.5	54	36.63	27.79	17.63	30.55	200	175	A	H
													H
													H
	*	2462	121.92	-	-	107.14	27.76	17.59	30.57	188	172	P	V
	*	2462	118.59	-	-	103.81	27.76	17.59	30.57	188	172	A	V
		2483.76	60.9	-13.1	74	45.97	27.85	17.63	30.55	188	172	P	V
		2483.52	50.94	-3.06	54	36.01	27.85	17.63	30.55	188	172	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

WIFI Ant. 1+3	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b CH 01 2412MHz		4824	44.88	-29.12	74	68.47	32.67	11.3	67.56	-	-	P	H
		7236	45.65	-28.35	74	60.74	36.98	13.48	65.55	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		4824	42.26	-31.74	74	65.79	32.73	11.3	67.56	-	-	P	V
		7236	45.81	-28.19	74	60.82	37.06	13.48	65.55	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V

WIFI Ant. 1+3	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		4874	40.38	-33.62	74	63.81	32.73	11.35	67.51	-	-	P	H
		7311	43.63	-30.37	74	60.06	36.88	13.57	66.88	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
802.11b CH 06 2437MHz													H
		4874	40.2	-33.8	74	63.74	32.62	11.35	67.51	-	-	P	V
		7311	43.6	-30.4	74	59.99	36.92	13.57	66.88	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V

WIFI Ant. 1+3	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		4924	40.8	-33.2	74	63.92	33.06	11.4	67.58	-	-	P	H
		7386	44.04	-29.96	74	61.13	36.71	13.65	67.45	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
802.11b CH 11 2462MHz													H
		4924	41.72	-32.28	74	64.8	33.1	11.4	67.58	-	-	P	V
		7386	45.53	-28.47	74	62.52	36.81	13.65	67.45	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.
3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.

2.4GHz 2400~2483.5MHz

WIFI 802.11g (Band Edge @ 3m)

WIFI Ant. 1+3	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		2389.065	58.13	-15.87	74	43.82	27.42	17.47	30.58	168	177	P	H
		2388.54	46.69	-7.31	54	32.38	27.42	17.47	30.58	168	177	A	H
	*	2412	125.73	-	-	111.29	27.5	17.51	30.57	168	177	P	H
	*	2412	118.86	-	-	104.42	27.5	17.51	30.57	168	177	A	H
													H
													H
		2389.065	59.9	-14.1	74	45.51	27.5	17.47	30.58	200	178	P	V
		2390	47.39	-6.61	54	33	27.5	17.47	30.58	200	178	A	V
	*	2412	125.85	-	-	111.34	27.57	17.51	30.57	200	178	P	V
	*	2412	118.18	-	-	103.67	27.57	17.51	30.57	200	178	A	V
													V
													V
802.11g CH 06 2437MHz		2381.52	55.3	-18.7	74	41.03	27.39	17.46	30.58	216	210	P	H
		2388.56	44.66	-9.34	54	30.35	27.42	17.47	30.58	216	210	A	H
	*	2437	123.68	-	-	109.12	27.59	17.55	30.58	216	210	P	H
	*	2437	116.13	-	-	101.57	27.59	17.55	30.58	216	210	A	H
		2489.68	58.1	-15.9	74	43.2	27.81	17.64	30.55	216	210	P	H
		2483.76	47.36	-6.64	54	32.49	27.79	17.63	30.55	216	210	A	H
		2350.16	56.47	-17.53	74	42.3	27.37	17.41	30.61	218	193	P	V
		2386.32	44.86	-9.14	54	30.48	27.49	17.47	30.58	218	193	A	V
	*	2437	125.18	-	-	110.55	27.66	17.55	30.58	218	193	P	V
	*	2437	117.84	-	-	103.21	27.66	17.55	30.58	218	193	A	V
		2485.84	57.63	-16.37	74	42.69	27.86	17.63	30.55	218	193	P	V
		2483.6	47	-7	54	32.07	27.85	17.63	30.55	218	193	A	V

802.11g CH 11 2462MHz	*	2462	122.8	-	-	108.09	27.69	17.59	30.57	170	177	P	H
	*	2462	115.64	-	-	100.93	27.69	17.59	30.57	170	177	A	H
		2484.24	64.5	-9.5	74	49.63	27.79	17.63	30.55	170	177	P	H
		2483.52	53.84	-0.16	54	38.97	27.79	17.63	30.55	170	177	A	H
													H
													H
	*	2462	121.7	-	-	106.92	27.76	17.59	30.57	178	175	P	V
	*	2462	114.06	-	-	99.28	27.76	17.59	30.57	178	175	A	V
		2485.72	63.38	-10.62	74	48.44	27.86	17.63	30.55	178	175	P	V
		2484.52	51.37	-2.63	54	36.44	27.85	17.63	30.55	178	175	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

WIFI Ant. 1+3	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		4824	44.3	-29.7	74	67.89	32.67	11.3	67.56	-	-	P	H
		7236	45.89	-28.11	74	60.98	36.98	13.48	65.55	-	-	P	H
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													H
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													H
													H
													H
													H
													H
802.11g CH 01 2412MHz													H
		4824	43.25	-30.75	74	66.78	32.73	11.3	67.56	-	-	P	V
		7236	45.2	-28.8	74	60.21	37.06	13.48	65.55	-	-	P	V
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													V

WIFI Ant. 1+3	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		4874	40.28	-33.72	74	63.71	32.73	11.35	67.51	-	-	P	H
		7311	44.08	-29.92	74	60.51	36.88	13.57	66.88	-	-	P	H
													H
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													H
													H
													H
													H
802.11g CH 06 2437MHz													H
		4874	39.98	-34.02	74	63.52	32.62	11.35	67.51	-	-	P	V
		7311	44.35	-29.65	74	60.74	36.92	13.57	66.88	-	-	P	V
													V
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