FCC RF Test Report

APPLICANT	:	MTRLC LLC
EQUIPMENT	:	D3.1 Cable Modem plus AX3000 Router
BRAND NAME	:	Motorola
MODEL NAME	:	G11
FCC ID	:	2AF5PG11
STANDARD	:	FCC Part 15 Subpart C §15.247
CLASSIFICATION	:	(DTS) Digital Transmission System
TEST DATE(S)	:	Dec. 30, 2022 ~ Feb. 03, 2023

We, Sporton International Inc. (ShenZhen), 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 of Sporton International Inc. (ShenZhen), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia

ACCREDITED Cert #5145.01

Sporton International Inc. (ShenZhen)

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People's Republic of China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR2D1901A	Rev. 01	Initial issue of report	Feb. 20, 2023

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.247(a)(2)	6dB Bandwidth	≥ 0.5MHz	Pass	-
3.1	-	99% Bandwidth	-	Report Only	-
3.2	15.247(b)	Power Output Measurement	≤ 30dBm	Pass	-
3.3	15.247(e)	Power Spectral Density	≤ 8dBm/3kHz	Pass	-
3.4	15.247(d)	Conducted Band Edges	≤ 30dBc	Pass	-
		Conducted Spurious Emission		Pass	-
3.5	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	15.209(a) & 15.247(d)	Pass	Under limit 0.02 dB at 2388.225 MHz
3.6	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 11.56 dB at 12.920 MHz
3.7	15.203 & 15.247(b)	Antenna Requirement	15.203 & 15.247(b)	Pass	-

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1 General Description

1.1 Applicant

MTRLC LLC
275 Turnpike Street Suite 101 Canton, MA 02021

1.2 Manufacturer

MTRLC LLC
275 Turnpike Street Suite 101 Canton, MA 02021

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	D3.1 Cable Modem plus AX3000 Router
Brand Name	Motorola
Model Name	G11
FCC ID	2AF5PG11
HW Version	REV1.0
SW Version	G11-22.3.3 DAG
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Channel Frequency Range	2412 MHz ~ 2462 MHz
Maximum Output Power to antenna	**<CDD Mode>** 802.11b : 29.71 dBm (0.9354 W) 802.11g : 28.52 dBm (0.7112 W) 802.11n HT20 : 26.13 dBm (0.4102 W) 802.11n HT40 : 21.35 dBm (0.1365 W) 802.11ax HE20 : 26.34 dBm (0.4305 W) 802.11ax HE40 : 21.61 dBm (0.1449 W)
99% Occupied Bandwidth	802.11b : 11.63MHz 802.11g : 18.62MHz 802.11ax HE20 : 19.74MHz 802.11ax HE40 : 38.36MHz
Antenna Type / Gain	<Ant. 1/2>: Dipole Antenna with gain 2.50 dBi
Antenna Function Description	<table><tr><td></td><td>Ant. 1</td><td>Ant. 2</td></tr><tr><td>802.11 b/g/n/ax SISO</td><td>V</td><td>V</td></tr><tr><td>802.11 b/g/n/ax CDD/Beamforming</td><td colspan="2">V</td></tr></table>
Type of Modulation	802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ax: OFDM (BPSK / QPSK / 16QAM / 64QAM /

	256QAM / 1024QAM)

Note:

1. For WLAN SISO & MIMO mode, the whole testing has assessed only MIMO mode by referring to the higher normal conducted power.
2. For 802.11n HT20 / ax HE20 and 802.11n HT40 / ax HE40 mode, the whole testing have assessed 802.11ax HE20/HE40 by referring to their maximum output power.
3. The TxBF Power/EIRP of EUT will less than CDD mode power/EIRP when Beamforming mode is active. So we only evaluate CDD mode by referring to their maximum conducted power/EIRP.
4. The device does not support partial RU for 802.11ax mode.

1.5 Modification of EUT

No modifications are made to the EUT during all test items.

1.6 Testing Location

Sporton International Inc. (ShenZhen) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Test Firm	Sporton International Inc. (ShenZhen)		
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	CO01-SZ TH01-SZ	CN1256	421272

Test Firm	Sporton International Inc. (ShenZhen)		
Test Site Location	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City Guangdong Province China 518103 TEL: +86-755-33202398		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	03CH03-SZ	CN1256	421272

1.7 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH03-SZ	AUDIX	E3	6.2009-8-24
2.	CO01-SZ	AUDIX	E3	6.120613b

1.8 Applicable Standards

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

- 47 CFR Part 15 Subpart C §15.247
- FCC KDB 558074 D01 15.247 Meas Guidance v05r02
- FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ANSI C63.10-2013

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

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, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X plane) were recorded 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

Final test modes are considering the modulation and worse data rates as below table.

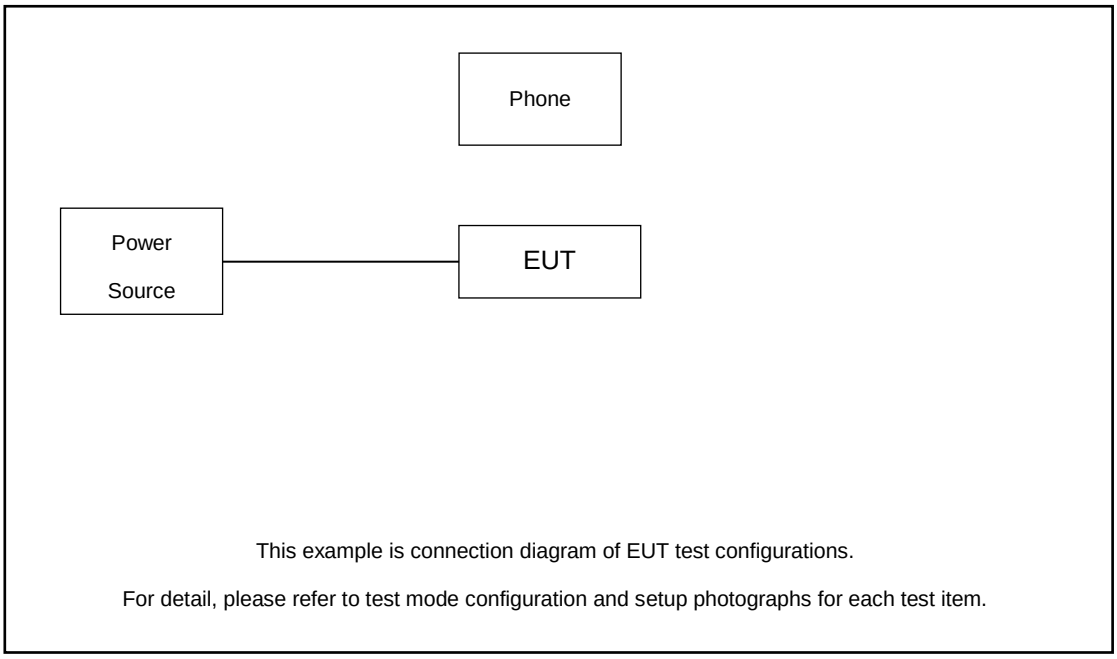
CDD Mode

Modulation	Data Rate
802.11b	**1 Mbps**
802.11g	**6 Mbps**
802.11ax HE20	**MCS0**
802.11ax HE40	**MCS0**

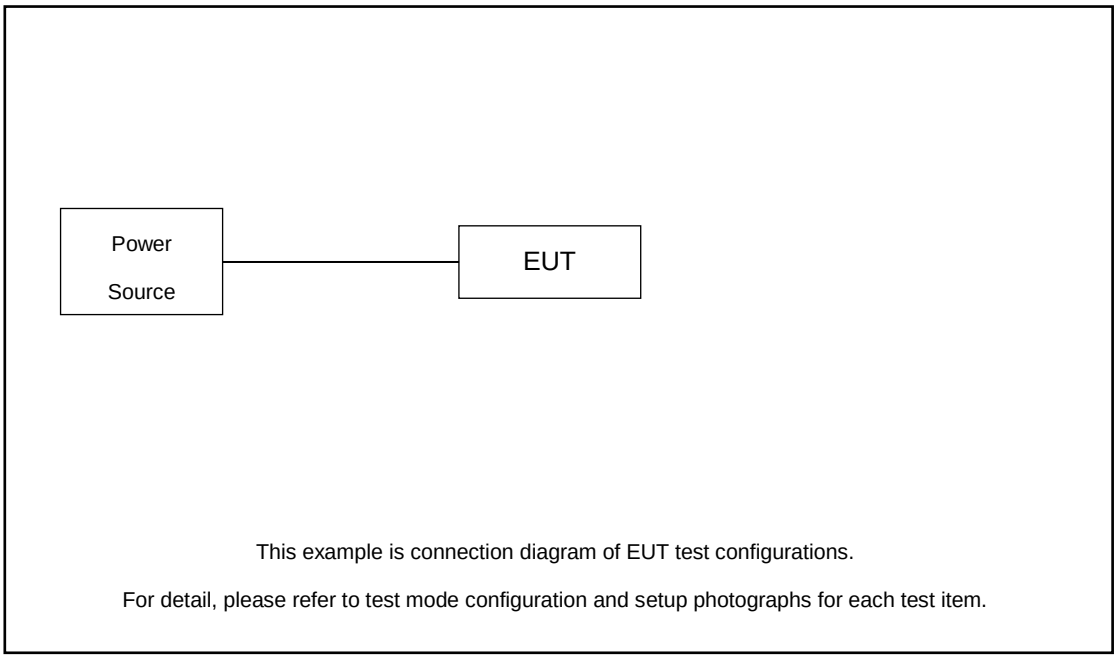
Test Cases	
AC Conducted Emission	Mode 1 :EUT + WLAN (2.4G) Link + Power from Adapter
Remark: For Radiated Test Cases, the tests were performance with Adapter.	

2.3 Connection Diagram of Test System

For Conducted Emission:



For Radiated Emission:



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Phone	Oneplus	NA	NA	NA	NA

2.5 EUT Operation Test Setup

For WLAN RF test items, an engineering test program was provided and enabled to make EUT continuous transmit.

For AC power line conducted emissions, the EUT was set to connect with the phone under large package sizes transmission.

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 1.62 dB and 20dB attenuator.

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).
= 1.62 + 20 = 1.62 (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

The measuring equipment is listed in the section 4 of this test report.

3.1.3 Test Procedures

1. The testing follows ANSI C63.10-2013 clause 11.8
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. 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) = 1%~5% of OBW and set the Video bandwidth (VBW) = 3MHz.
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 2400-2483.5MHz, the limit for output power is 30dBm. If transmitting antenna with directional gain greater than 6dBi is used, the 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 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

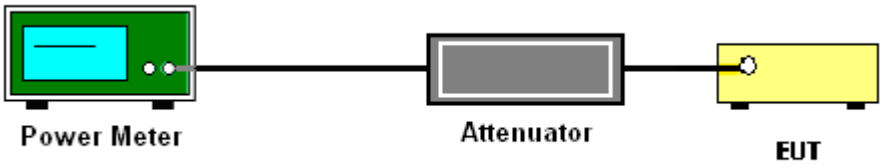
3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.2.3 Test Procedures

1. The testing follows the Measurement Procedure of ANSI C63.10-2013 clause 11.9.1.3 PKPM1 Peak power meter or ANSI C63.10-2013 clause 11.9.2.3.1 Method AVGPM method.
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. Set to the maximum power setting and enable the EUT 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 8dBm in any 3kHz band at any time interval of continuous transmission.

3.3.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.3.3 Test Procedures

1. The testing follows Measurement Procedure of ANSI C63.10-2013 clause 11.10.2 Method PKPSD.
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. 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.

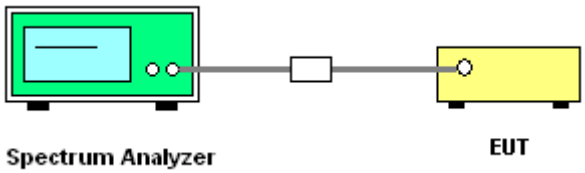
   If measurements performed using method (2) plus 10 log (N) exceeds the emission limit, the test should choose method (1) before declaring that the device fails the emission limit.

   Method (1): Measure and sum the spectra across the outputs.

   The total final Power Spectral Density is from a device with 2 transmitter outputs. The spectrum measurements of the individual outputs are all performed with the same span and number of points, the spectrum value in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 to obtain the value for the first frequency bin of the summed spectrum.

   Method (2): Measure and add 10 log (N) dB, where N is the number of outputs. (N=2)

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.

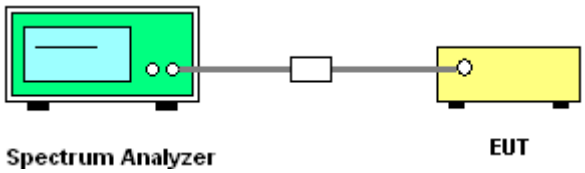
3.4.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.4.3 Test Procedures

1. The testing follows ANSI C63.10-2013 clause 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. 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 was 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

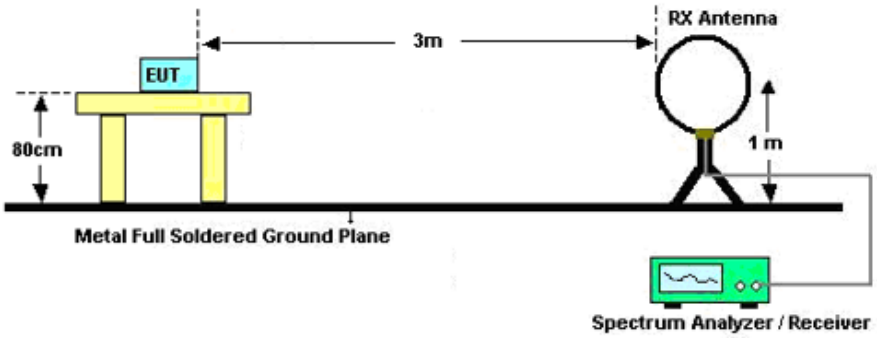
The measuring equipment is listed in the section 4 of this test report.

3.5.3 Test Procedures

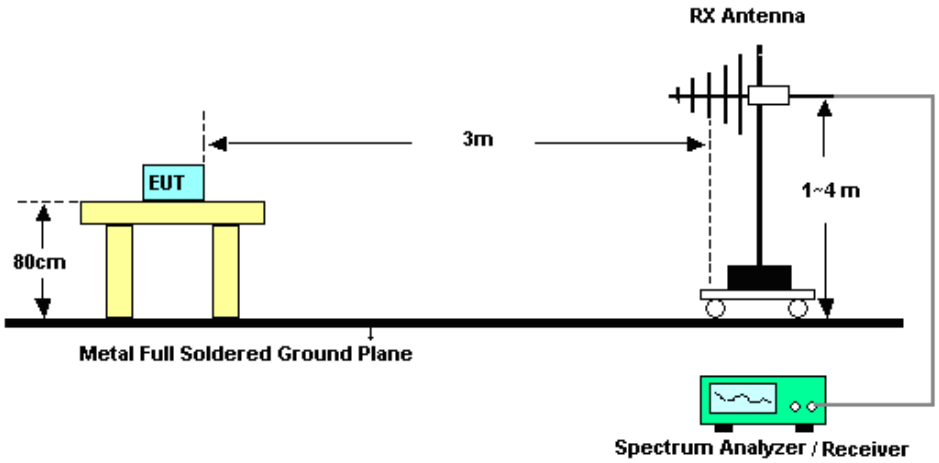
1. The testing follows ANSI C63.10-2013 clause 11.11 & 11.12
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than peak limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
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= 3MHz 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

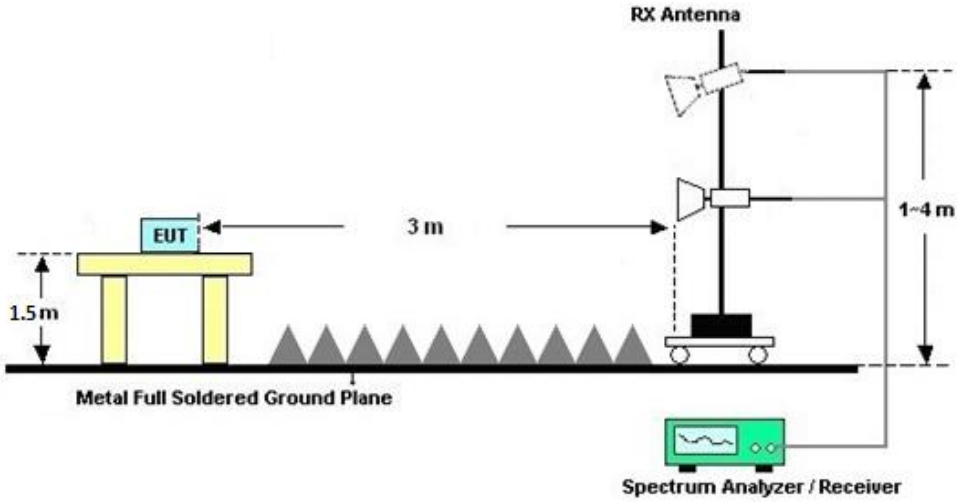
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

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

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

3.5.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C&D.

3.5.7 Duty Cycle

Please refer to Appendix E.

3.5.8 Test Result of Radiated Spurious Emission (30MHz ~ 10th Harmonic or 40GHz, whichever is lower)

Please refer to Appendix C&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.

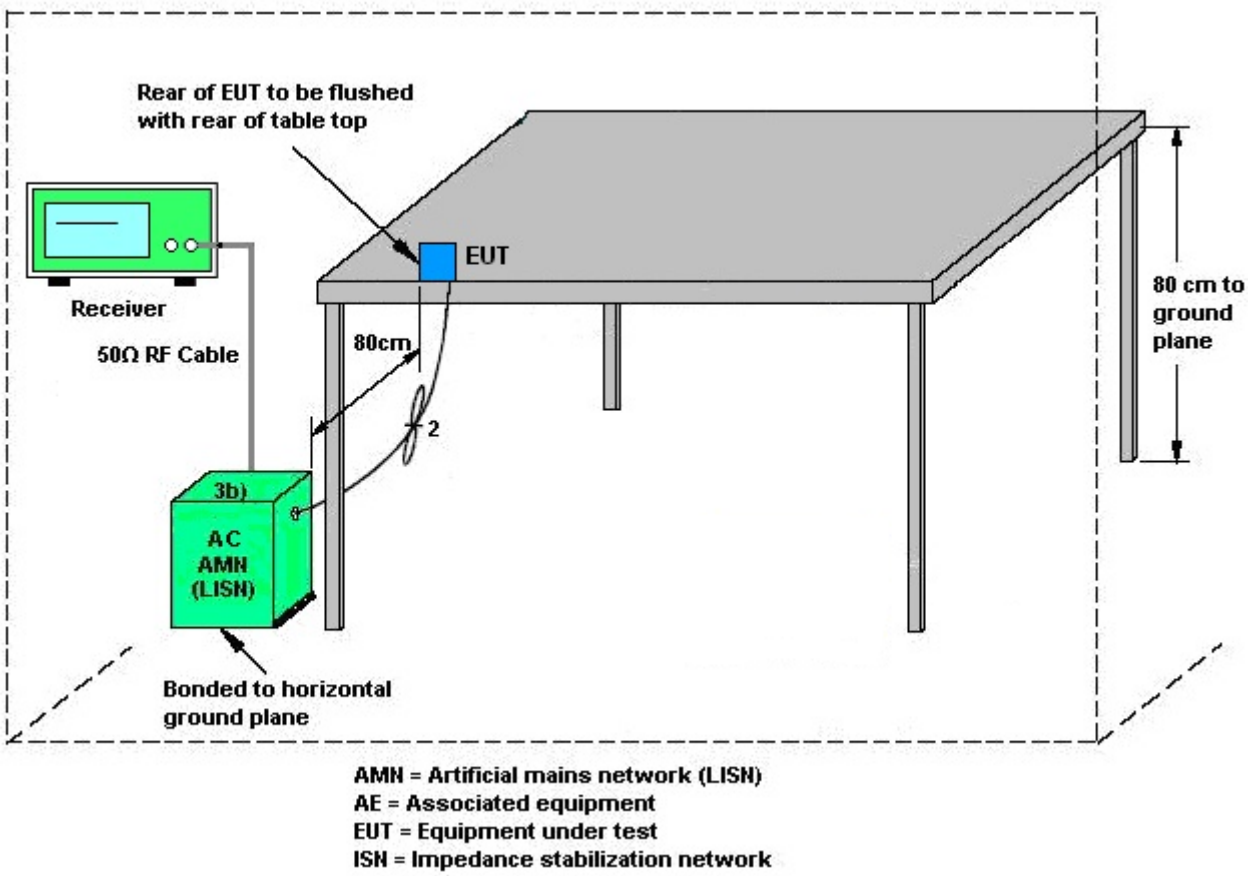
3.6.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.6.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it 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 microhenry 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.

3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.7 Antenna Requirements

3.7.1 Standard Applicable

If directional gain of transmitting Antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. 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 rule.

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

<CDD Modes >

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

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

For power spectral density (PSD) measurements on all devices,

Array Gain = 10 log(N_{ANT}/N_{SS}=1) dB.

For power measurements on IEEE 802.11 devices,

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

Directional gain may be calculated by using the formulas applicable to equal gain antennas with G_{ANT} set equal to the gain of the antenna having the highest gain;

The EUT supports CDD mode.

For power, the directional gain G_{ANT} is set equal to the antenna having the highest gain, i.e., F)2)f)i).

For PSD, the directional gain calculation is following F)2)f)ii) of KDB 662911 D01 v02r01.

The power and PSD limit should be modified if the directional gain of EUT is over 6 dBi,

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

<CDD Modes>

	Ant. 1 (dBi)	Ant. 2 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
2.4 GHz	2.50	2.50	2.50	5.51	0.00	0.00

Power Limit Reduction = DG(Power) – 6dBi, (min = 0)

PSD Limit Reduction = DG(PSD) – 6dBi, (min = 0)

TXBF modes

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

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

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.

The EUT supports beamforming for 802.11ac modes.

The directional gain calculation is following F)2)e)ii) of KDB 662911 D01 v02r01.

The power and PSD limit should be modified if the directional gain of EUT is over 6 dBi,

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

	Ant 1 (dBi)	Ant 2 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
2.4 GHz	2.50	2.50	5.51	5.51	0.00	0.00

Power Limit Reduction = DG(Power) – 6dBi, (min = 0)

PSD Limit Reduction = DG(PSD) – 6dBi, (min = 0)

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 07, 2022	Dec. 30, 2022~ Jan. 03, 2023	Apr. 08, 2023	Conducted (TH01-SZ)
Pulse Power Senor	Anritsu	MA2411B	1339473	30MHz~40GHz	Dec. 27, 2022	Dec. 30, 2022~ Jan. 03, 2023	Dec. 26, 2023	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1542004	50MHz Bandwidth	Dec. 27, 2022	Dec. 30, 2022~ Jan. 03, 2023	Dec. 26, 2023	Conducted (TH01-SZ)
EMI Test Receiver&SA	KEYSIGHT	N9038A	MY54450083	20Hz~8.4GHz	Apr. 06, 2022	Jan. 06, 2023~ Feb. 03, 2023	Apr. 05, 2023	Radiation (03CH03-SZ)
EXA Spectrum Anaiyzer	KEYSIGHT	N9010A	MY55150246	10Hz~44GHz;	Apr. 06, 2022	Jan. 06, 2023~ Feb. 03, 2023	Apr. 05, 2023	Radiation (03CH03-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jul. 28, 2022	Jan. 06, 2023~ Feb. 03, 2023	Jul. 27, 2023	Radiation (03CH03-SZ)
Bilog Antenna	TeseQ	CBL6112D	35408	30MHz-2GHz	Aug. 09, 2021	Jan. 06, 2023~ Feb. 03, 2023	Aug. 08, 2023	Radiation (03CH03-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1355	1GHz~18GHz	Apr. 08, 2022	Jan. 06, 2023~ Feb. 03, 2023	Apr. 07, 2023	Radiation (03CH03-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 06, 2022	Jan. 06, 2023~ Feb. 03, 2023	Jul. 05, 2023	Radiation (03CH03-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 10, 2022	Jan. 06, 2023~ Feb. 03, 2023	Apr. 09, 2023	Radiation (03CH03-SZ)
Amplifier	Burgeon	BPA-530	102211	0.01Hz ~3000MHz	Oct. 19, 2022	Jan. 06, 2023~ Feb. 03, 2023	Oct. 18, 2023	Radiation (03CH03-SZ)
HF Amplifier	MITEQ	AMF-7D-00101800-30-10P-R	1943528	1GHz~18GHz	Oct. 19, 2022	Jan. 06, 2023~ Feb. 03, 2023	Oct. 18, 2023	Radiation (03CH03-SZ)
Amplifier	Agilent Technologies	83017A	MY39501302	500MHz~26.5GHz	Dec. 26, 2022	Jan. 06, 2023~ Feb. 03, 2023	Dec. 25, 2023	Radiation (03CH03-SZ)
AC Power Source	Chroma	61601	616010002729	1 N/A	Nov. 10, 2022	Jan. 06, 2023~ Feb. 03, 2023	Nov. 09, 2023	Radiation (03CH03-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Jan. 06, 2023~ Feb. 03, 2023	NCR	Radiation (03CH03-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Jan. 06, 2023~ Feb. 03, 2023	NCR	Radiation (03CH03-SZ)
EMI Receiver	R&S	ESR7	101630	9kHz~7GHz;	Jul. 07, 2022	Jan. 10, 2023	Jul. 06, 2023	Conduction (CO01-SZ)
AC LISN	R&S	ENV216	100063	9kHz~30MHz	Sep. 15, 2022	Jan. 10, 2023	Sep. 14, 2023	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	EMCO	3816/2SH	00103892	9kHz~30MHz	Oct. 17, 2022	Jan. 10, 2023	Oct. 16, 2023	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000891	100Vac~250Vac	Jul. 07, 2022	Jan. 10, 2023	Jul. 06, 2023	Conduction (CO01-SZ)

NCR: No Calibration Required

5 Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.10-2013. 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 Conducted Measurement

Test Item	Uncertainty
Conducted Power	±1.34 dB
Conducted Emissions	±1.34 dB
Occupied Channel Bandwidth	±0.13 %
Conducted Power Spectral Density	±1.32 dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.2dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.0dB

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

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

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.0dB

---------- THE END ----------

Appendix A. Conducted Test Results

Report Number : FR2D1901A

Test Engineer:	Liu Qiu Qiu	Temperature:	21~25	°C
Test Date:	2022/12/30~2023/1/3	Relative Humidity:	51~54	%

CDD Mode

Report Number : FR2D1901A

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	Setting
					Ant1	Ant2	SUM	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2		Ant 1 / Ant 2
11b	1Mbps	2	1	2412	26.52	26.66	29.60	30.00		2.50		32.10		36.00		Pass	106
11b	1Mbps	2	6	2437	26.39	26.66	29.54	30.00		2.50		32.04		36.00		Pass	106
11b	1Mbps	2	11	2462	26.49	26.90	29.71	30.00		2.50		32.21		36.00		Pass	108
11g	6Mbps	2	1	2412	19.34	19.31	22.34	30.00		2.50		24.84		36.00		Pass	74
11g	6Mbps	2	2	2417	21.44	20.97	24.22	30.00		2.50		26.72		36.00		Pass	85
11g	6Mbps	2	3	2422	23.14	23.31	26.24	30.00		2.50		28.74		36.00		Pass	90
11g	6Mbps	2	4	2427	24.15	24.31	27.24	30.00		2.50		29.74		36.00		Pass	94
11g	6Mbps	2	5	2432	25.52	25.49	28.52	30.00		2.50		31.02		36.00		Pass	100
11g	6Mbps	2	6	2437	22.83	23.05	25.95	30.00		2.50		28.45		36.00		Pass	89
11g	6Mbps	2	7	2442	23.91	23.94	26.94	30.00		2.50		29.44		36.00		Pass	93
11g	6Mbps	2	8	2447	23.54	23.68	26.62	30.00		2.50		29.12		36.00		Pass	92
11g	6Mbps	2	9	2452	22.46	22.79	25.64	30.00		2.50		28.14		36.00		Pass	88
11g	6Mbps	2	10	2457	21.72	21.23	24.49	30.00		2.50		26.99		36.00		Pass	86
11g	6Mbps	2	11	2462	19.42	19.41	22.43	30.00		2.50		24.93		36.00		Pass	75
HT20	MCS0	2	1	2412	18.44	18.79	21.63	30.00		2.50		24.13		36.00		Pass	71
HT20	MCS0	2	2	2417	19.74	19.92	22.84	30.00		2.50		25.34		36.00		Pass	77
HT20	MCS0	2	3	2422	20.31	20.95	23.65	30.00		2.50		26.15		36.00		Pass	80
HT20	MCS0	2	4	2427	20.76	21.38	24.09	30.00		2.50		26.59		36.00		Pass	82
HT20	MCS0	2	5	2432	23.02	23.22	26.13	30.00		2.50		28.63		36.00		Pass	91
HT20	MCS0	2	6	2437	21.44	22.02	24.75	30.00		2.50		27.25		36.00		Pass	83
HT20	MCS0	2	7	2442	20.69	21.26	23.99	30.00		2.50		26.49		36.00		Pass	82
HT20	MCS0	2	8	2447	19.34	19.78	22.58	30.00		2.50		25.08		36.00		Pass	76
HT20	MCS0	2	9	2452	18.32	18.75	21.55	30.00		2.50		24.05		36.00		Pass	72
HT20	MCS0	2	10	2457	17.58	17.79	20.70	30.00		2.50		23.20		36.00		Pass	69
HT20	MCS0	2	11	2462	17.39	17.51	20.46	30.00		2.50		22.96		36.00		Pass	67
HT40	MCS0	2	3	2422	18.20	18.48	21.35	30.00		2.50		23.85		36.00		Pass	67
HT40	MCS0	2	4	2427	17.83	17.96	20.91	30.00		2.50		23.41		36.00		Pass	65
HT40	MCS0	2	5	2432	17.32	17.95	20.66	30.00		2.50		23.16		36.00		Pass	65
HT40	MCS0	2	6	2437	17.94	18.42	21.20	30.00		2.50		23.70		36.00		Pass	66
HT40	MCS0	2	7	2442	16.61	17.01	19.82	30.00		2.50		22.32		36.00		Pass	62
HT40	MCS0	2	8	2447	16.92	16.85	19.90	30.00		2.50		22.40		36.00		Pass	61
HT40	MCS0	2	9	2452	16.64	16.78	19.72	30.00		2.50		22.22		36.00		Pass	61

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

Report Number : FR2D1901A

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	Setting	
						Ant1	Ant2	SUM	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2		Ant 1	Ant 2
HE20	MCS0	2	1	2412	Full	18.74	19.04	21.90	30.00		2.50		24.40		36.00		Pass	71	
HE20	MCS0	2	2	2417	Full	19.97	20.22	23.11	30.00		2.50		25.61		36.00		Pass	77	
HE20	MCS0	2	3	2422	Full	20.53	21.09	23.83	30.00		2.50		26.33		36.00		Pass	80	
HE20	MCS0	2	4	2427	Full	20.94	21.59	24.29	30.00		2.50		26.79		36.00		Pass	82	
HE20	MCS0	2	5	2432	Full	23.12	23.53	26.34	30.00		2.50		28.84		36.00		Pass	91	
HE20	MCS0	2	6	2437	Full	21.64	22.22	24.95	30.00		2.50		27.45		36.00		Pass	83	
HE20	MCS0	2	7	2442	Full	20.89	21.46	24.19	30.00		2.50		26.69		36.00		Pass	82	
HE20	MCS0	2	8	2447	Full	19.47	19.97	22.74	30.00		2.50		25.24		36.00		Pass	76	
HE20	MCS0	2	9	2452	Full	18.52	18.98	21.77	30.00		2.50		24.27		36.00		Pass	72	
HE20	MCS0	2	10	2457	Full	17.96	18.15	21.07	30.00		2.50		23.57		36.00		Pass	69	
HE20	MCS0	2	11	2462	Full	17.53	17.85	20.70	30.00		2.50		23.20		36.00		Pass	67	
HE40	MCS0	2	3	2422	Full	18.48	18.72	21.61	30.00		2.50		24.11		36.00		Pass	67	
HE40	MCS0	2	4	2427	Full	18.02	18.33	21.19	30.00		2.50		23.69		36.00		Pass	65	
HE40	MCS0	2	5	2432	Full	17.52	18.06	20.81	30.00		2.50		23.31		36.00		Pass	65	
HE40	MCS0	2	6	2437	Full	18.09	18.61	21.37	30.00		2.50		23.87		36.00		Pass	66	
HE40	MCS0	2	7	2442	Full	16.82	17.19	20.02	30.00		2.50		22.52		36.00		Pass	62	
HE40	MCS0	2	8	2447	Full	17.13	17.18	20.17	30.00		2.50		22.67		36.00		Pass	61	
HE40	MCS0	2	9	2452	Full	16.93	17.05	20.00	30.00		2.50		22.50		36.00		Pass	61	

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

Beamforming Mode

Report Number : FR2D1901A

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	Setting
					Ant1	Ant2	SUM	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2		Ant 1 / Ant 2
11b	1Mbps	2	1	2412	23.08	23.27	26.19	30.00		5.51		31.70		36.00		Pass	90
11b	1Mbps	2	6	2437	23.01	23.28	26.16	30.00		5.51		31.67		36.00		Pass	90
11b	1Mbps	2	11	2462	23.19	23.55	26.38	30.00		5.51		31.89		36.00		Pass	92
11g	6Mbps	2	1	2412	15.86	15.92	18.90	30.00		5.51		24.41		36.00		Pass	58
11g	6Mbps	2	2	2417	17.96	17.58	20.78	30.00		5.51		26.29		36.00		Pass	69
11g	6Mbps	2	3	2422	19.73	19.90	22.83	30.00		5.51		28.34		36.00		Pass	76
11g	6Mbps	2	4	2427	20.75	20.91	23.84	30.00		5.51		29.35		36.00		Pass	80
11g	6Mbps	2	5	2432	22.12	22.09	25.12	30.00		5.51		30.63		36.00		Pass	86
11g	6Mbps	2	6	2437	19.24	19.70	22.49	30.00		5.51		28.00		36.00		Pass	73
11g	6Mbps	2	7	2442	20.44	20.47	23.47	30.00		5.51		28.98		36.00		Pass	79
11g	6Mbps	2	8	2447	20.08	20.22	23.16	30.00		5.51		28.67		36.00		Pass	78
11g	6Mbps	2	9	2452	19.00	19.34	22.18	30.00		5.51		27.69		36.00		Pass	74
11g	6Mbps	2	10	2457	18.20	17.79	21.01	30.00		5.51		26.52		36.00		Pass	70
11g	6Mbps	2	11	2462	15.90	15.97	18.95	30.00		5.51		24.46		36.00		Pass	59
HT20	MCS0	2	1	2412	15.19	15.76	18.49	30.00		5.51		24.00		36.00		Pass	55
HT20	MCS0	2	2	2417	16.49	16.70	19.61	30.00		5.51		25.12		36.00		Pass	61
HT20	MCS0	2	3	2422	16.93	17.57	20.27	30.00		5.51		25.78		36.00		Pass	66
HT20	MCS0	2	4	2427	17.37	17.99	20.70	30.00		5.51		26.21		36.00		Pass	68
HT20	MCS0	2	5	2432	19.65	19.85	22.76	30.00		5.51		28.27		36.00		Pass	77
HT20	MCS0	2	6	2437	18.06	18.64	21.37	30.00		5.51		26.88		36.00		Pass	69
HT20	MCS0	2	7	2442	17.31	17.88	20.61	30.00		5.51		26.12		36.00		Pass	68
HT20	MCS0	2	8	2447	15.95	16.39	19.19	30.00		5.51		24.70		36.00		Pass	62
HT20	MCS0	2	9	2452	14.95	15.38	18.18	30.00		5.51		23.69		36.00		Pass	58
HT20	MCS0	2	10	2457	14.18	14.62	17.42	30.00		5.51		22.93		36.00		Pass	53
HT20	MCS0	2	11	2462	13.99	14.34	17.18	30.00		5.51		22.69		36.00		Pass	51
HT40	MCS0	2	3	2422	14.92	15.42	18.19	30.00		5.51		23.70		36.00		Pass	53
HT40	MCS0	2	4	2427	14.55	14.90	17.74	30.00		5.51		23.25		36.00		Pass	51
HT40	MCS0	2	5	2432	13.94	14.58	17.28	30.00		5.51		22.79		36.00		Pass	51
HT40	MCS0	2	6	2437	14.55	15.03	17.81	30.00		5.51		23.32		36.00		Pass	52
HT40	MCS0	2	7	2442	13.22	13.62	16.43	30.00		5.51		21.95		36.00		Pass	48
HT40	MCS0	2	8	2447	13.74	13.72	16.74	30.00		5.51		22.25		36.00		Pass	47
HT40	MCS0	2	9	2452	13.54	13.65	16.61	30.00		5.51		22.12		36.00		Pass	47

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

Report Number : FR2D1901A

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	Setting
						Ant1	Ant2	SUM	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2		Ant 1 / Ant 2
HE20	MCS0	2	1	2412	Full	15.22	15.85	18.56	30.00		5.51		24.07		36.00		Pass	55
HE20	MCS0	2	2	2417	Full	16.45	17.03	19.76	30.00		5.51		25.27		36.00		Pass	61
HE20	MCS0	2	3	2422	Full	17.15	17.71	20.45	30.00		5.51		25.96		36.00		Pass	66
HE20	MCS0	2	4	2427	Full	17.55	18.20	20.90	30.00		5.51		26.41		36.00		Pass	68
HE20	MCS0	2	5	2432	Full	19.75	20.16	22.97	30.00		5.51		28.48		36.00		Pass	77
HE20	MCS0	2	6	2437	Full	18.26	18.84	21.57	30.00		5.51		27.08		36.00		Pass	69
HE20	MCS0	2	7	2442	Full	17.51	18.08	20.81	30.00		5.51		26.32		36.00		Pass	68
HE20	MCS0	2	8	2447	Full	16.08	16.58	19.35	30.00		5.51		24.86		36.00		Pass	62
HE20	MCS0	2	9	2452	Full	15.15	15.61	18.40	30.00		5.51		23.91		36.00		Pass	58
HE20	MCS0	2	10	2457	Full	14.56	14.95	17.77	30.00		5.51		23.28		36.00		Pass	53
HE20	MCS0	2	11	2462	Full	14.13	14.65	17.41	30.00		5.51		22.92		36.00		Pass	51
HE40	MCS0	2	3	2422	Full	15.10	15.50	18.31	30.00		5.51		23.83		36.00		Pass	53
HE40	MCS0	2	4	2427	Full	14.64	15.11	17.89	30.00		5.51		23.40		36.00		Pass	51
HE40	MCS0	2	5	2432	Full	14.14	14.68	17.43	30.00		5.51		22.94		36.00		Pass	51
HE40	MCS0	2	6	2437	Full	14.55	15.23	17.91	30.00		5.51		23.42		36.00		Pass	52
HE40	MCS0	2	7	2442	Full	13.43	13.87	16.67	30.00		5.51		22.18		36.00		Pass	48
HE40	MCS0	2	8	2447	Full	13.91	14.10	17.02	30.00		5.51		22.53		36.00		Pass	47
HE40	MCS0	2	9	2452	Full	13.75	13.97	16.87	30.00		5.51		22.38		36.00		Pass	47

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

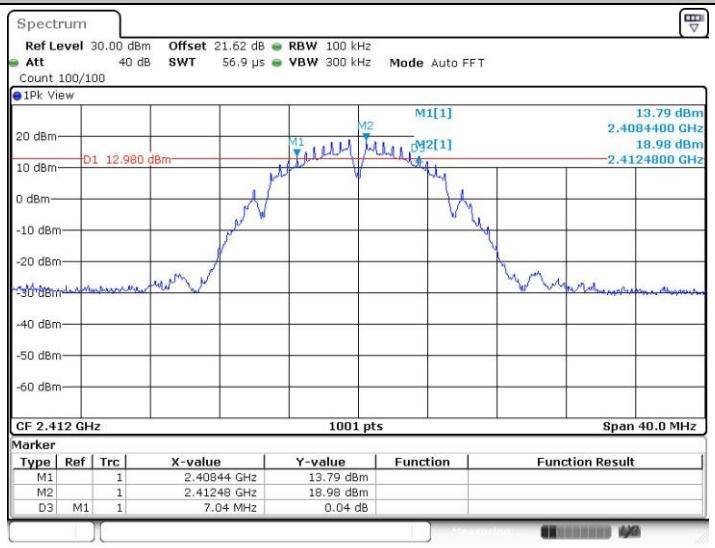
6dB Bandwidth

Test Result

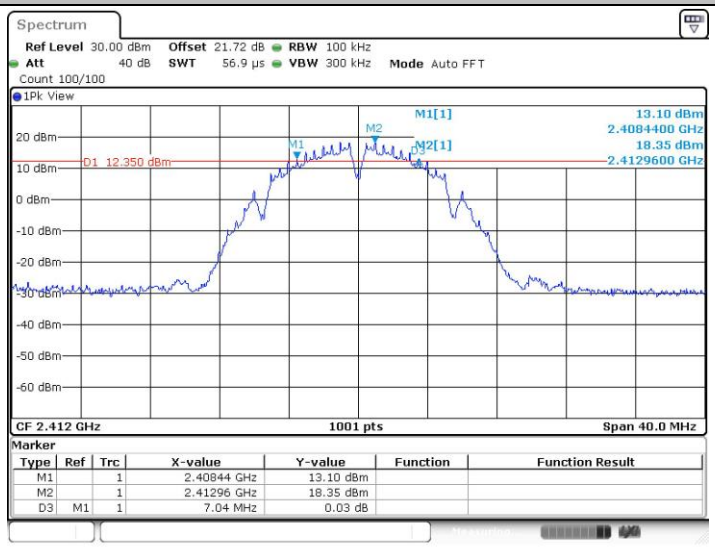
TestMode	Antenna	Freq(MHz)	6dB BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B-CDD	Ant1	2412	7.04	2408.44	2415.48	0.5	PASS
	Ant2	2412	7.04	2408.44	2415.48	0.5	PASS
	Ant1	2437	7.04	2433.44	2440.48	0.5	PASS
	Ant2	2437	7.04	2433.44	2440.48	0.5	PASS
	Ant1	2462	7.04	2458.44	2465.48	0.5	PASS
	Ant2	2462	7.04	2458.44	2465.48	0.5	PASS
11G-CDD	Ant1	2412	16.04	2404.08	2420.12	0.5	PASS
	Ant2	2412	16.32	2403.80	2420.12	0.5	PASS
	Ant1	2437	16.08	2429.04	2445.12	0.5	PASS
	Ant2	2437	16.28	2428.84	2445.12	0.5	PASS
	Ant1	2462	16.08	2454.04	2470.12	0.5	PASS
	Ant2	2462	16.28	2453.84	2470.12	0.5	PASS
11AX20MIMO	Ant1	2412	19.00	2402.48	2421.48	0.5	PASS
	Ant2	2412	18.72	2402.72	2421.44	0.5	PASS
	Ant1	2437	18.60	2427.84	2446.44	0.5	PASS
	Ant2	2437	18.64	2427.76	2446.40	0.5	PASS
	Ant1	2462	18.76	2452.68	2471.44	0.5	PASS
	Ant2	2462	18.64	2452.72	2471.36	0.5	PASS
11AX40MIMO	Ant1	2422	37.68	2403.12	2440.80	0.5	PASS
	Ant2	2422	37.20	2403.44	2440.64	0.5	PASS
	Ant1	2437	37.60	2418.12	2455.72	0.5	PASS
	Ant2	2437	37.44	2418.20	2455.64	0.5	PASS
	Ant1	2452	37.44	2433.12	2470.56	0.5	PASS
	Ant2	2452	36.96	2433.20	2470.16	0.5	PASS

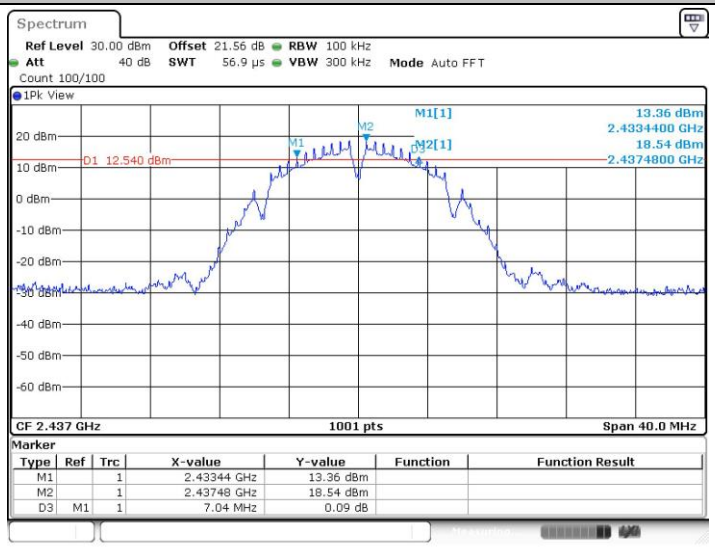
Test Graphs

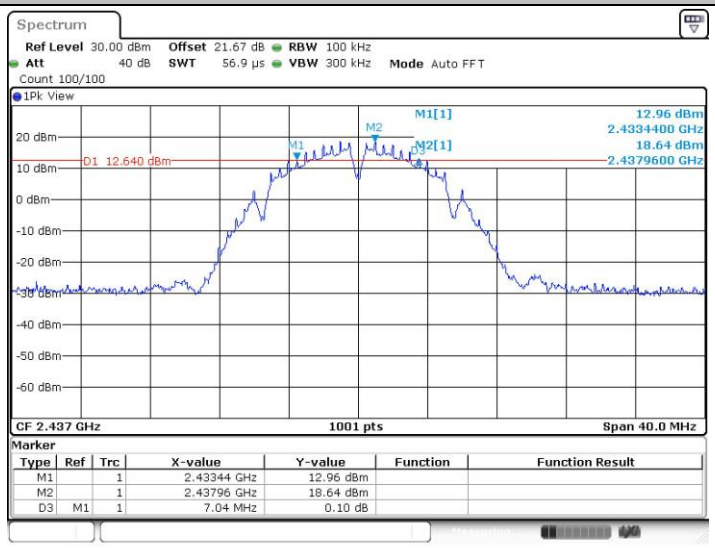
11B-CDD_Ant1_2412

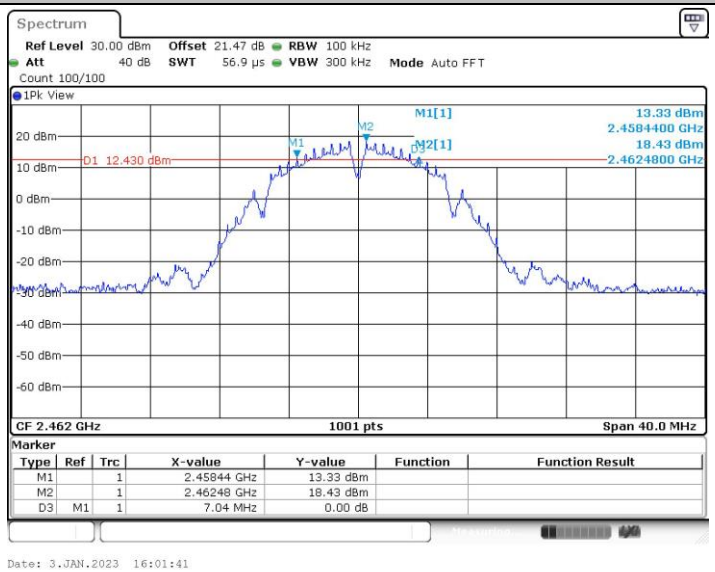


11B-CDD_Ant2_2412



11B-CDD_Ant1_2437


11B-CDD_Ant2_2437


11B-CDD_Ant1_2462


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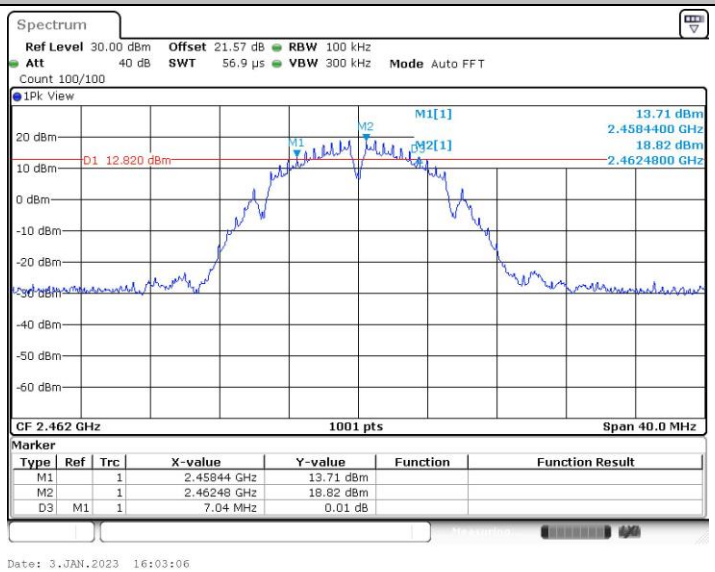
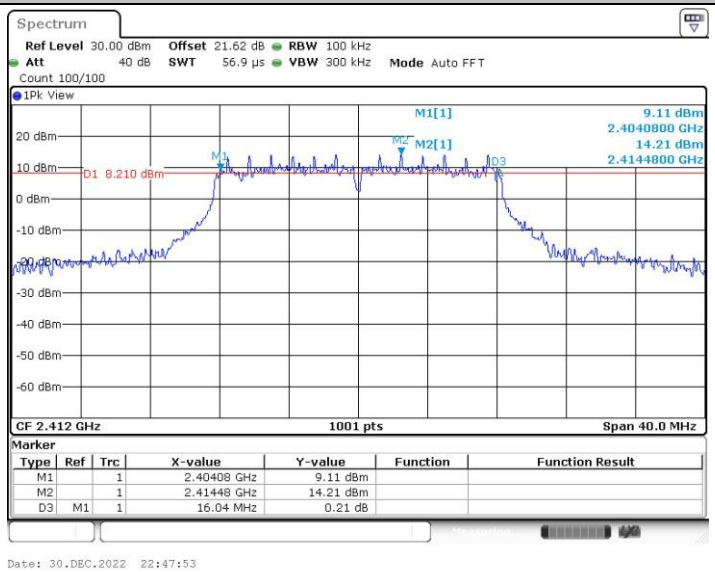
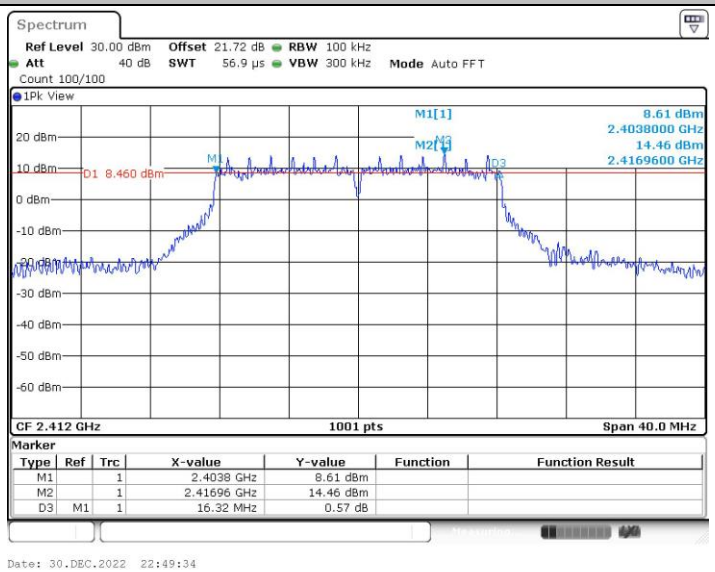
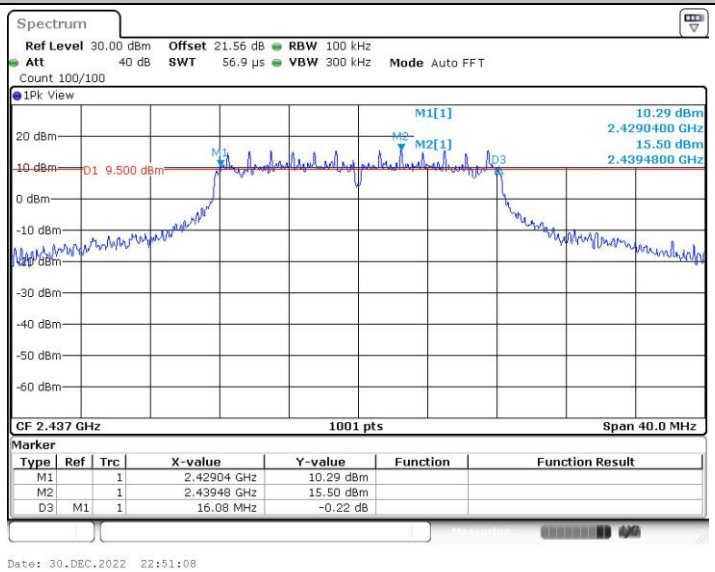
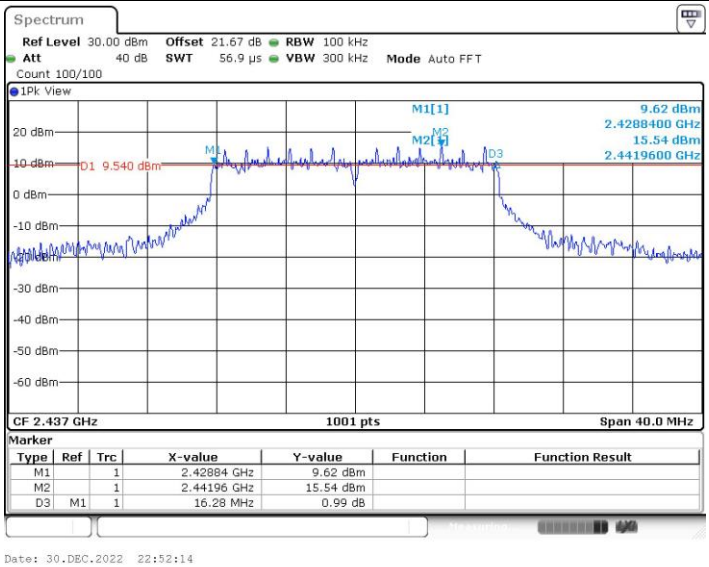


11G-CDD_Ant1_2412


11G-CDD_Ant2_2412


11G-CDD_Ant1_2437


11G-CDD_Ant2_2437


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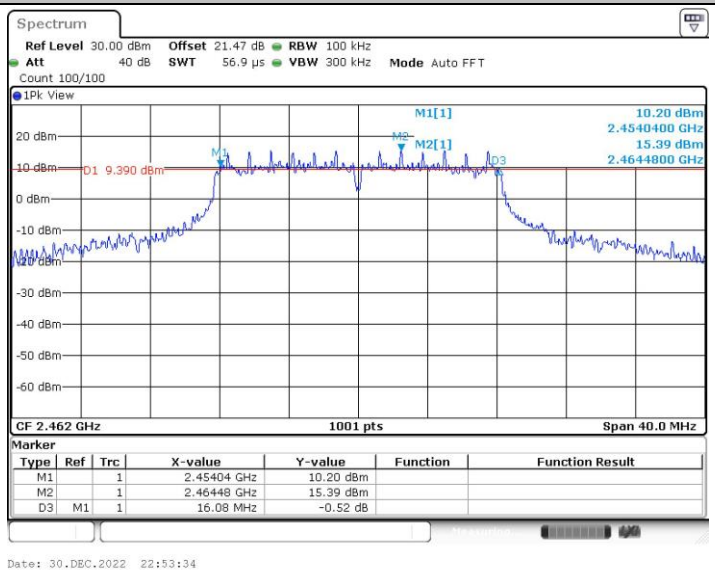

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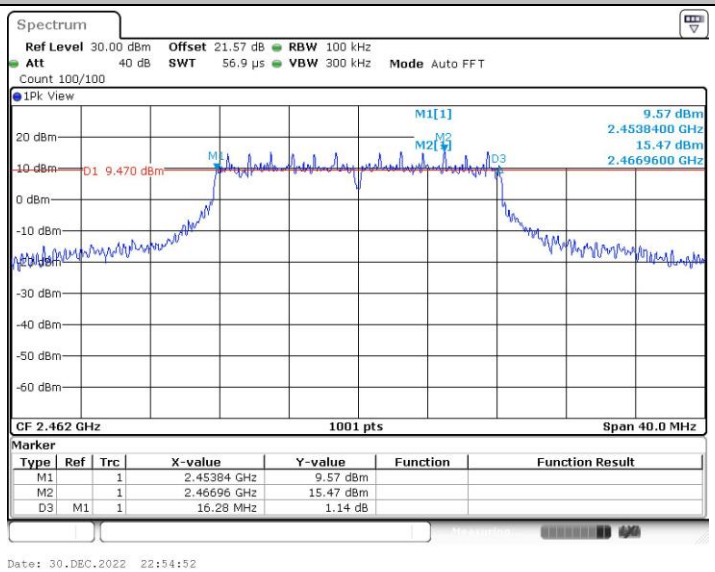
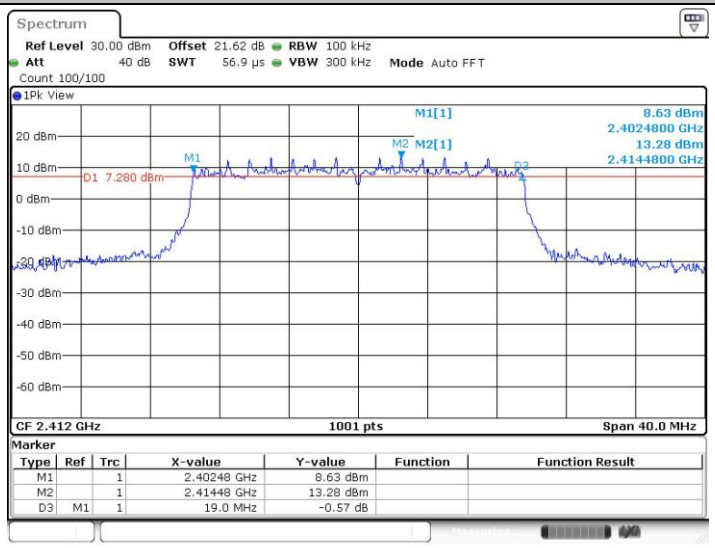
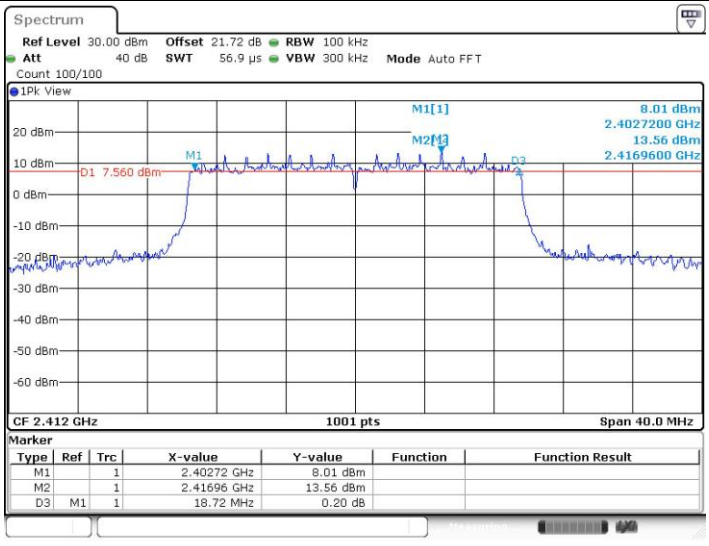
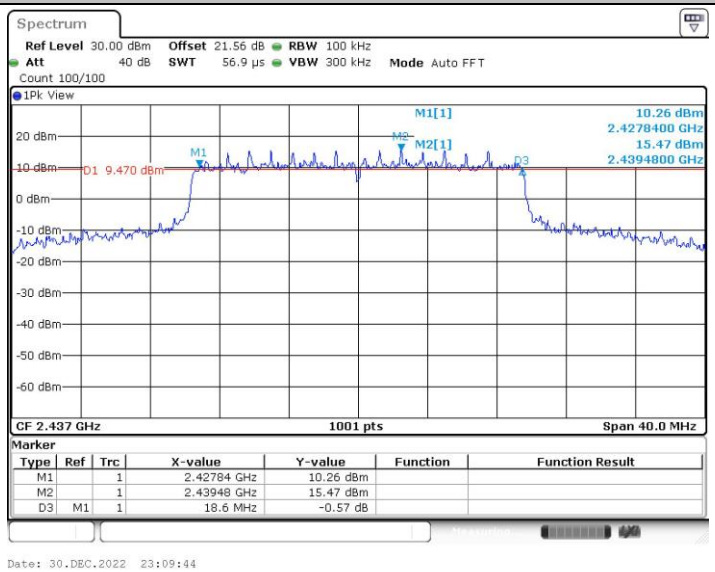


11AX20MIMO_Ant1_2412


11AX20MIMO_Ant2_2412


11AX20MIMO_Ant1_2437


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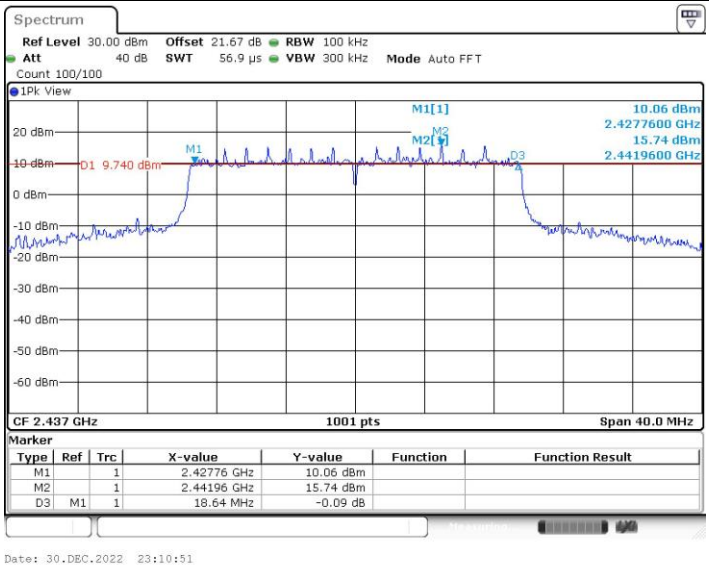

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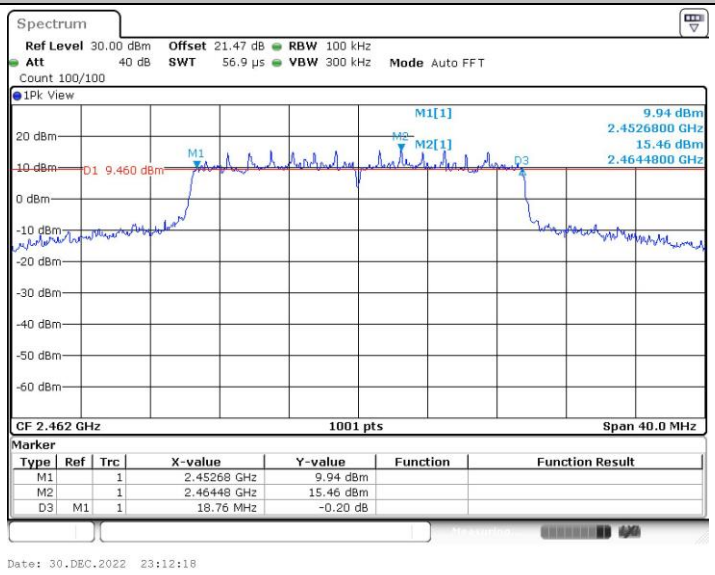

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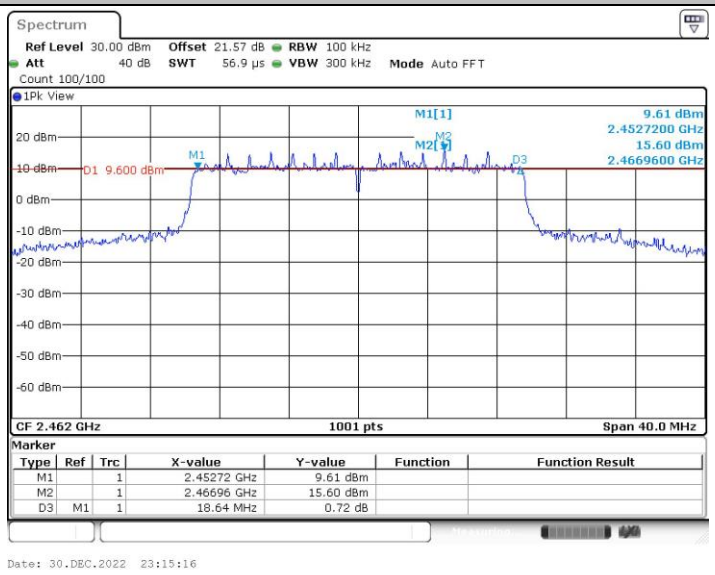
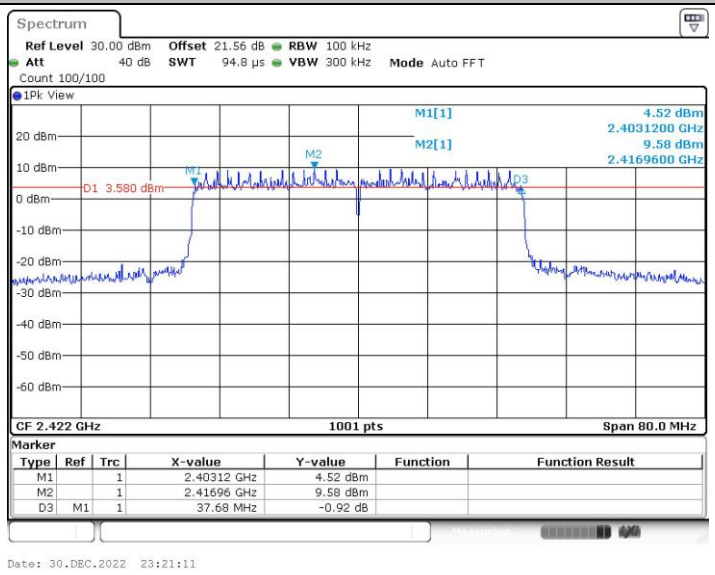
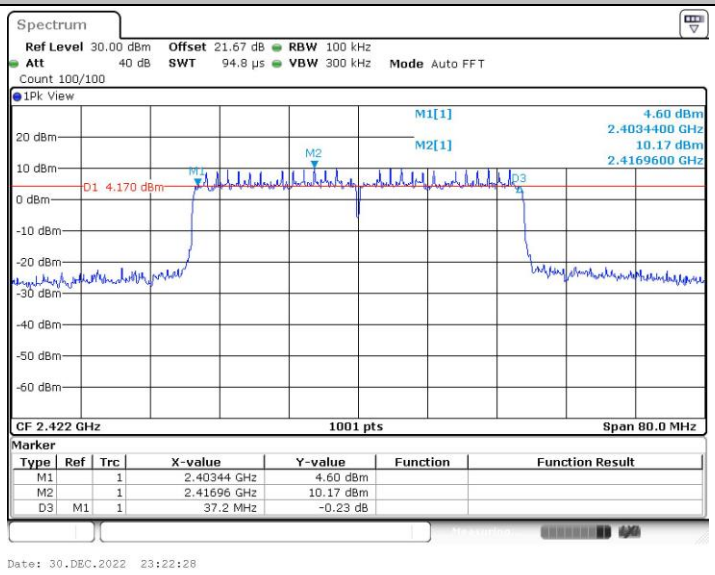


11AX40MIMO_Ant1_2422


11AX40MIMO_Ant2_2422


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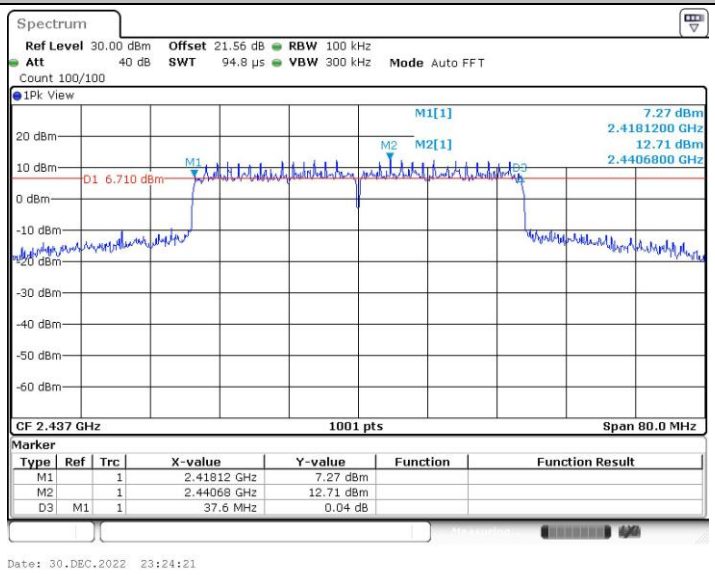

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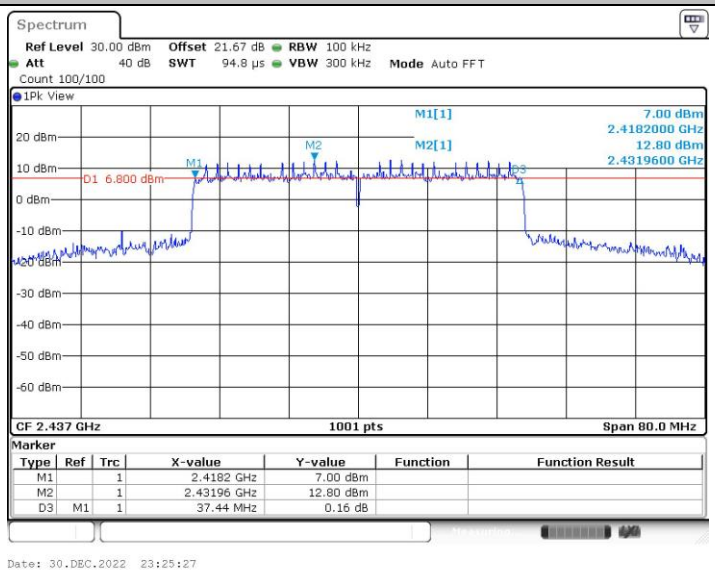
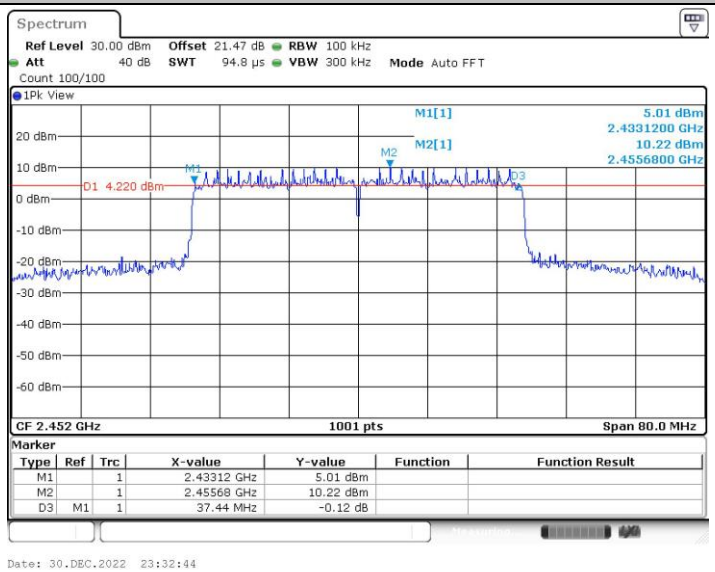
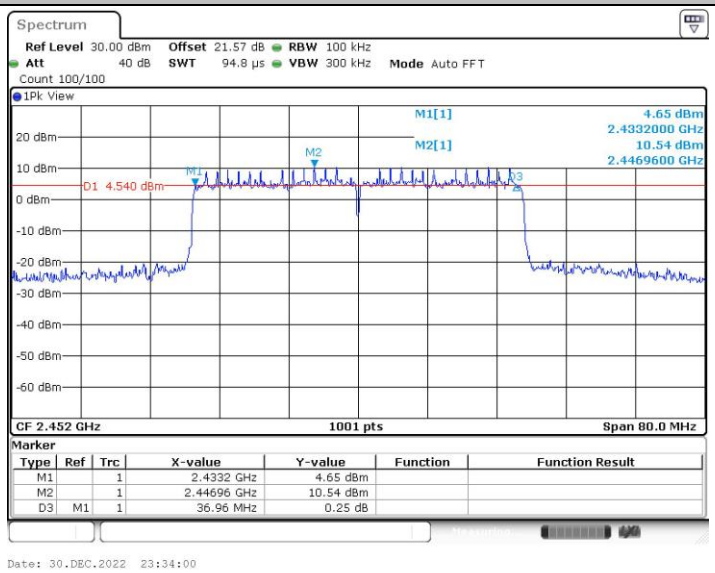


11AX40MIMO_Ant1_2452


11AX40MIMO_Ant2_2452


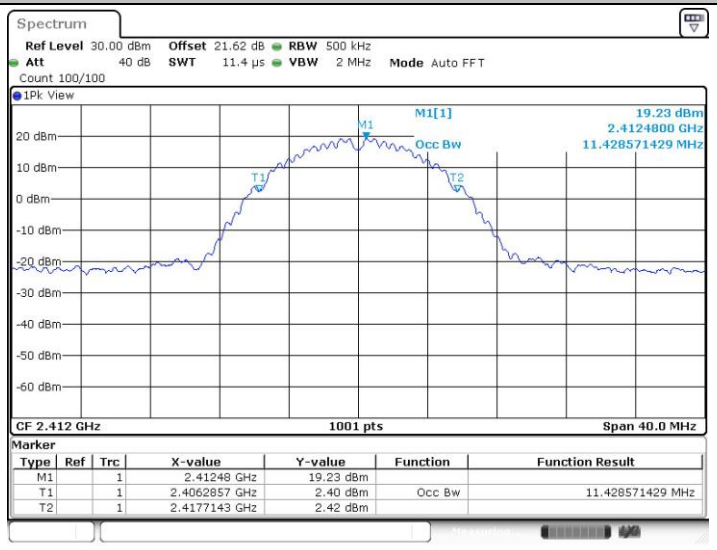
Occupied Channel Bandwidth

Test Result

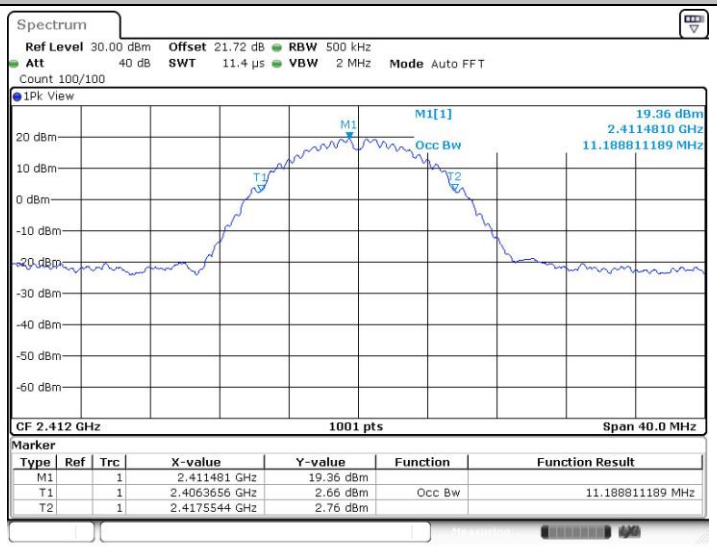
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B-CDD	Ant1	2412	11.429	2406.2857	2417.7143	---	---
	Ant2	2412	11.189	2406.3656	2417.5544	---	---
	Ant1	2437	11.429	2431.2857	2442.7143	---	---
	Ant2	2437	11.229	2431.3656	2442.5944	---	---
	Ant1	2462	11.628	2456.1658	2467.7942	---	---
	Ant2	2462	11.389	2456.2857	2467.6743	---	---
11G-CDD	Ant1	2412	17.822	2403.3287	2421.1508	---	---
	Ant2	2412	17.303	2403.2887	2420.5914	---	---
	Ant1	2437	18.621	2427.9291	2446.5504	---	---
	Ant2	2437	17.662	2428.0090	2445.6713	---	---
	Ant1	2462	18.182	2452.9291	2471.1109	---	---
	Ant2	2462	17.702	2453.0889	2470.7912	---	---
11AX20MIMO	Ant1	2412	19.421	2402.2897	2421.7103	---	---
	Ant2	2412	19.261	2402.3696	2421.6304	---	---
	Ant1	2437	19.74	2427.1299	2446.8701	---	---
	Ant2	2437	19.54	2427.2498	2446.7902	---	---
	Ant1	2462	19.7	2452.0899	2471.7902	---	---
	Ant2	2462	19.5	2452.2498	2471.7502	---	---
11AX40MIMO	Ant1	2422	37.802	2403.0589	2440.8611	---	---
	Ant2	2422	37.882	2403.0589	2440.9411	---	---
	Ant1	2437	38.362	2417.7393	2456.1009	---	---
	Ant2	2437	38.202	2417.8991	2456.1009	---	---
	Ant1	2452	37.882	2432.9790	2470.8611	---	---
	Ant2	2452	37.722	2433.1389	2470.8611	---	---

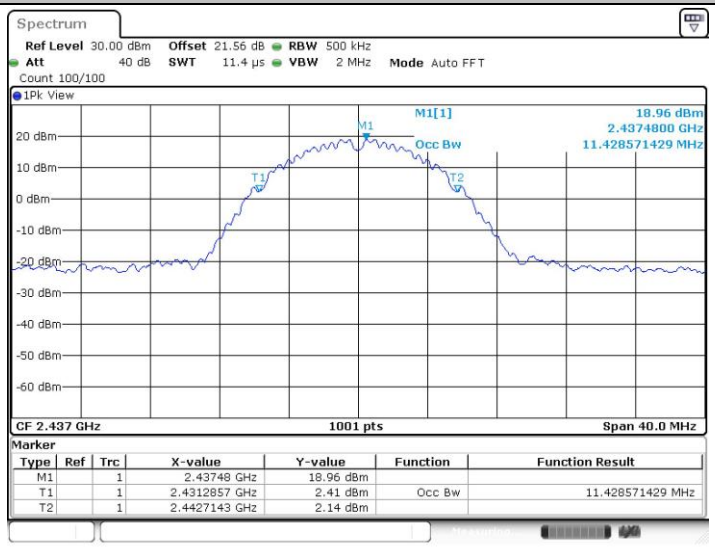
Test Graphs

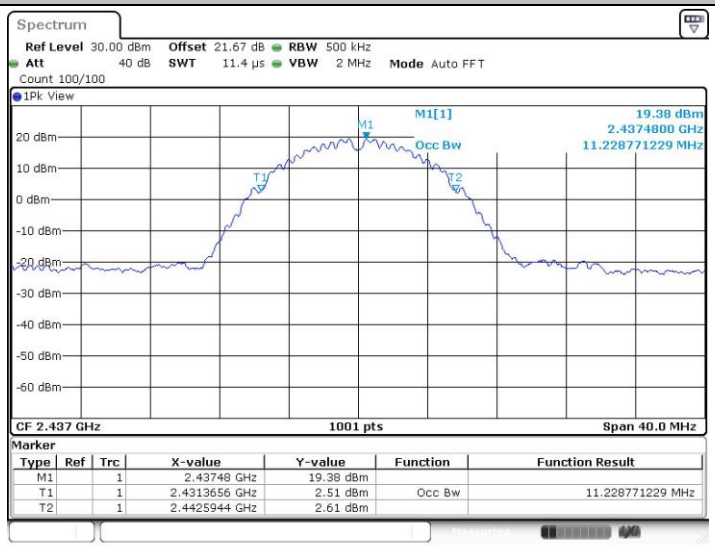
11B-CDD_Ant1_2412

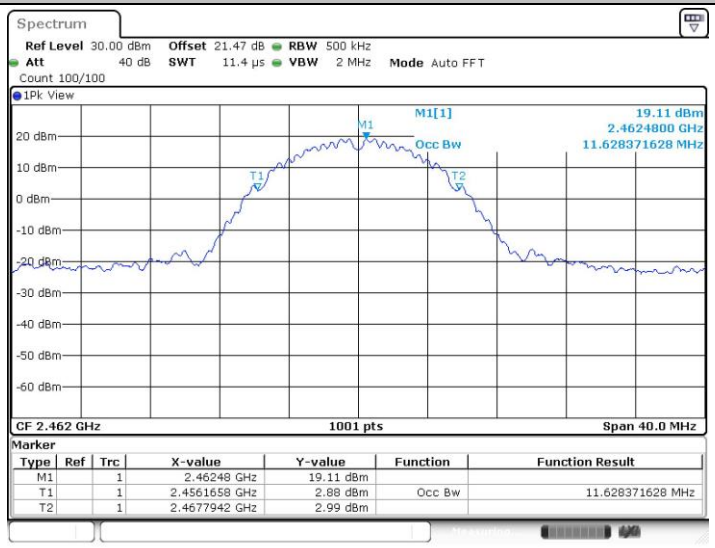


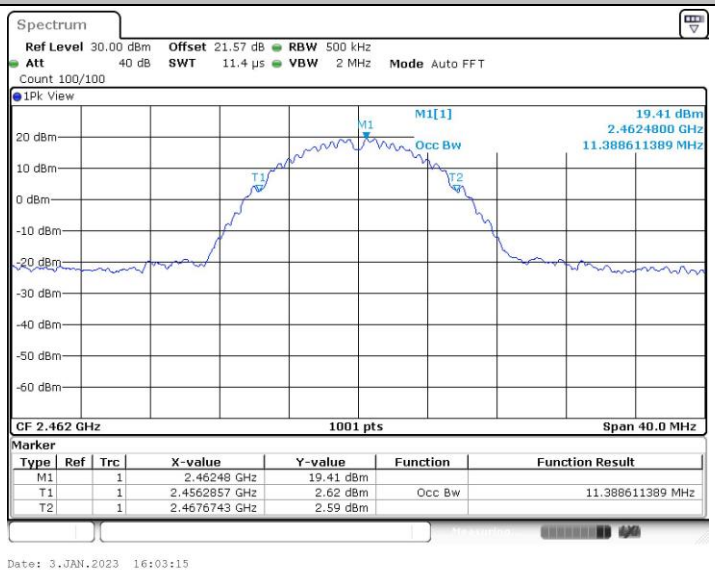
11B-CDD_Ant2_2412

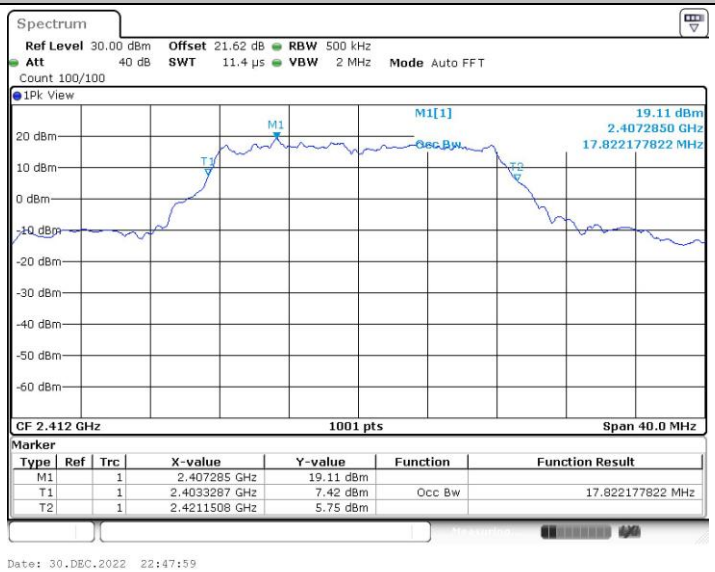


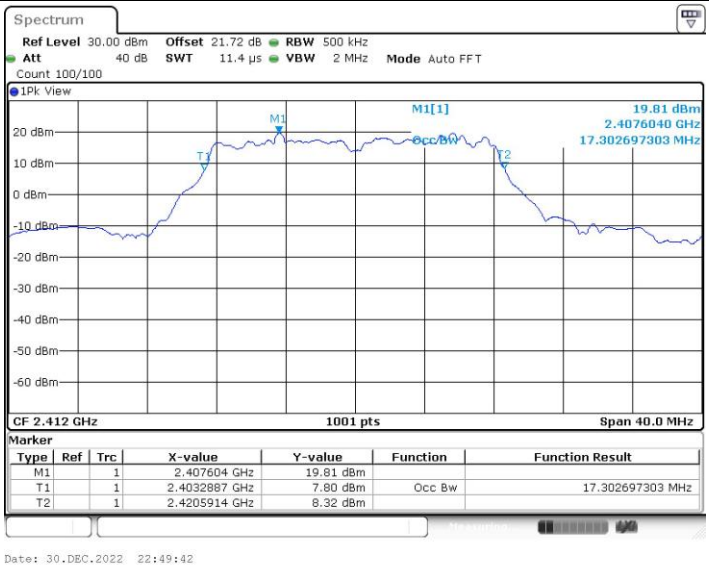
11B-CDD_Ant1_2437


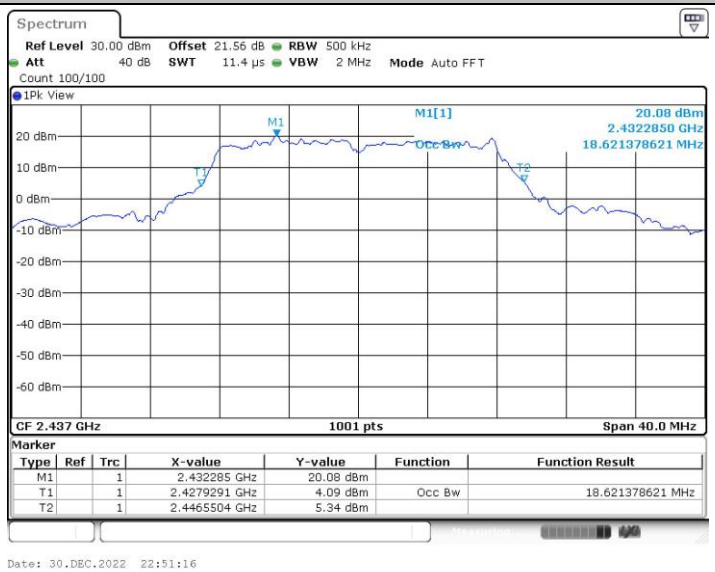
11B-CDD_Ant2_2437


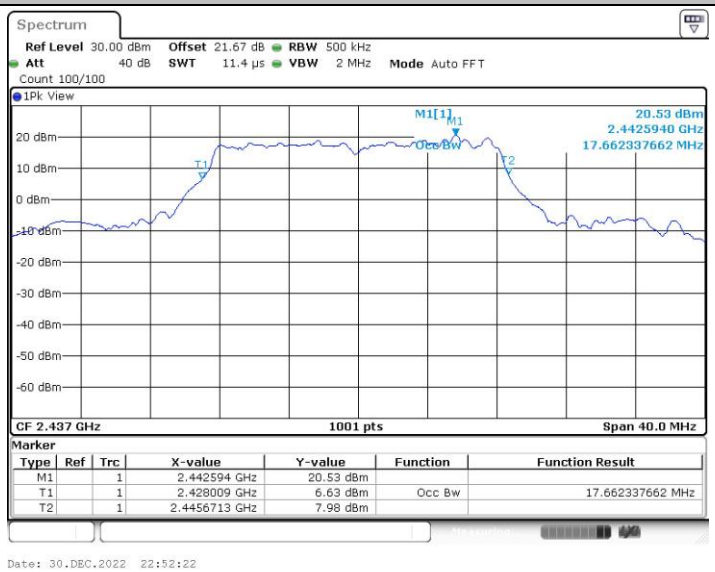
11B-CDD_Ant1_2462


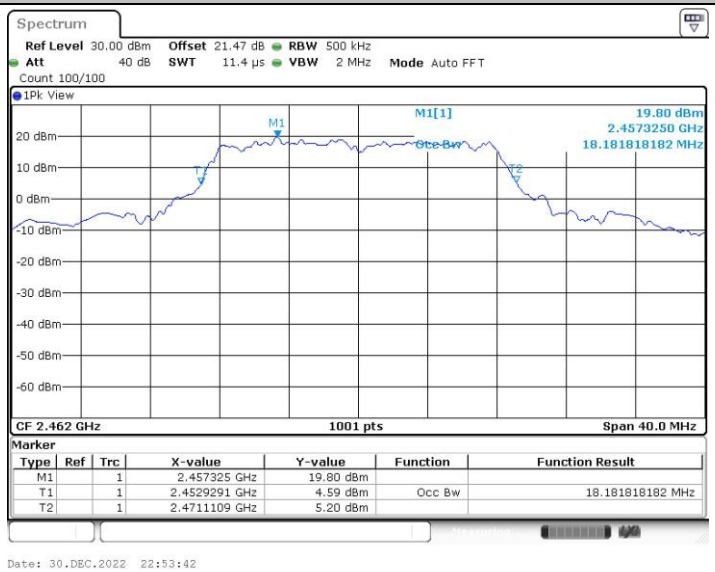
11B-CDD_Ant2_2462


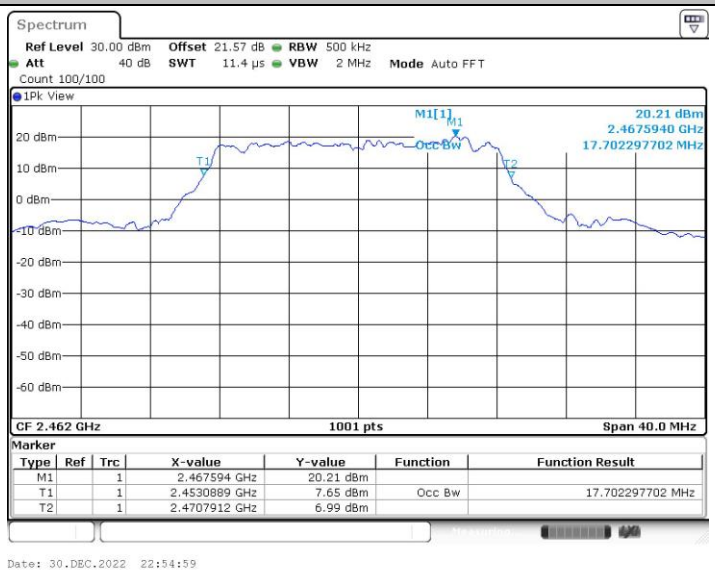
11G-CDD_Ant1_2412


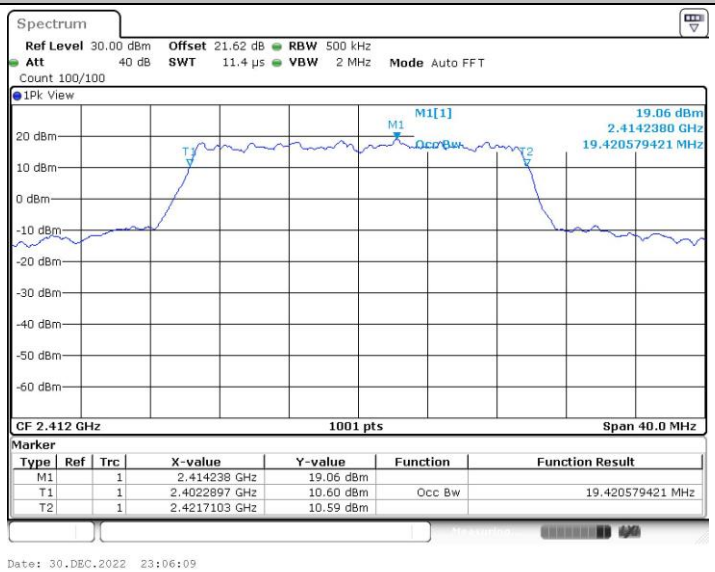
11G-CDD_Ant2_2412


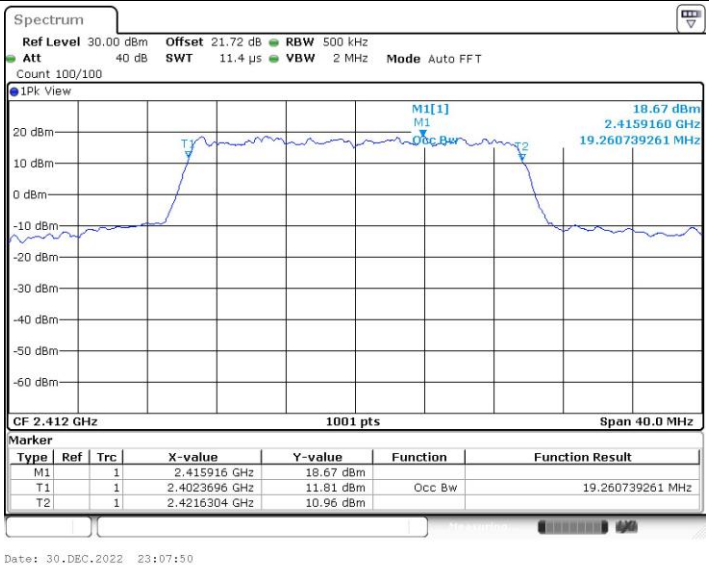
11G-CDD_Ant1_2437


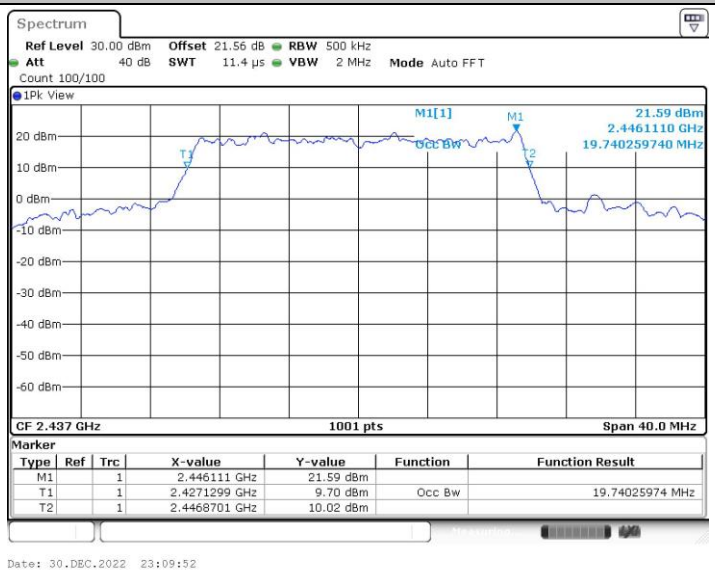
11G-CDD_Ant2_2437


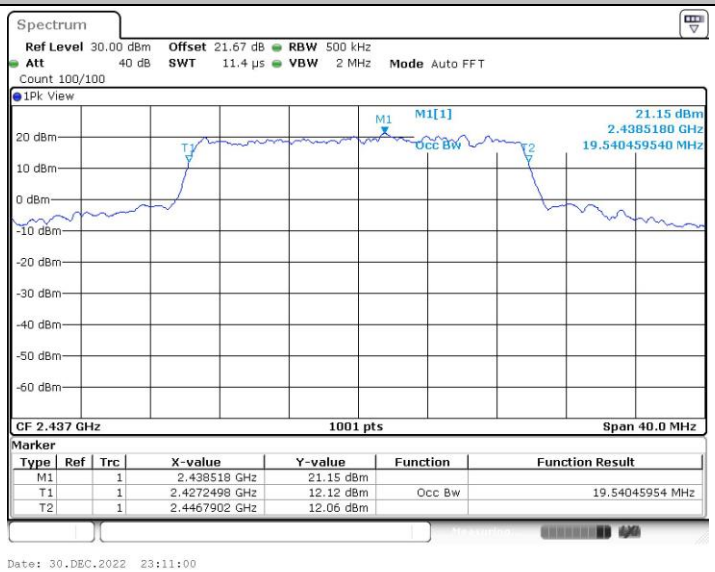
11G-CDD_Ant1_2462


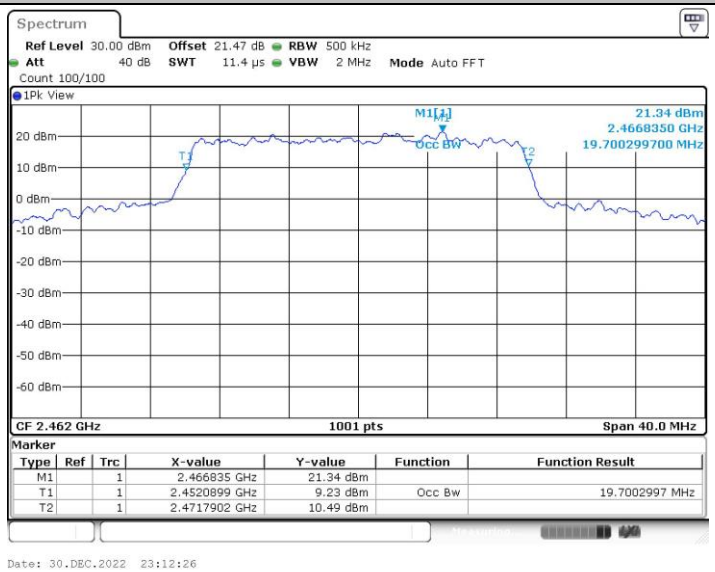
11G-CDD_Ant2_2462


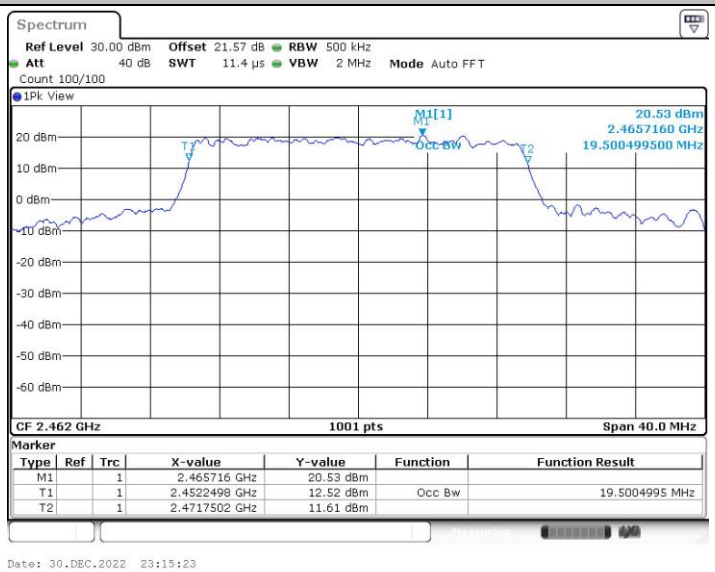
11AX20MIMO_Ant1_2412


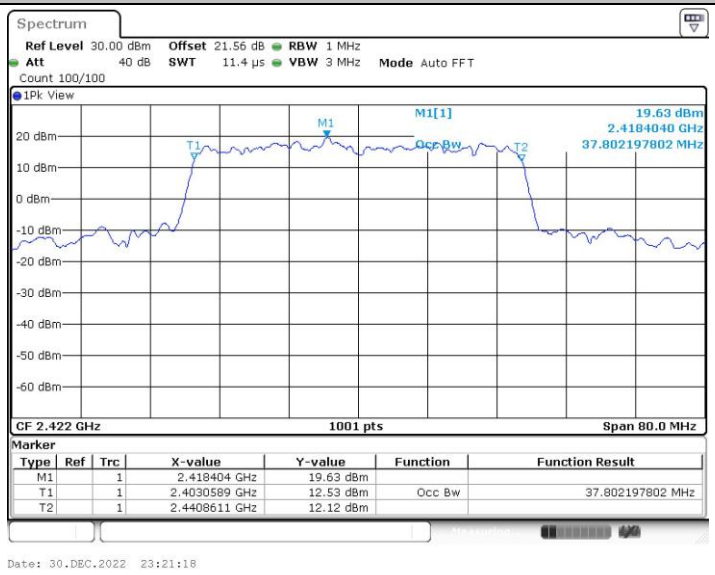
11AX20MIMO_Ant2_2412


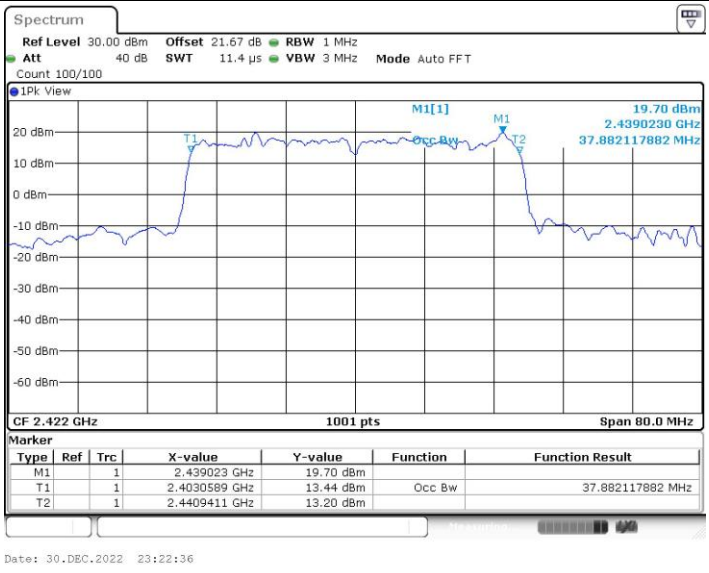
11AX20MIMO_Ant1_2437


11AX20MIMO_Ant2_2437


11AX20MIMO_Ant1_2462


11AX20MIMO_Ant2_2462


11AX40MIMO_Ant1_2422


11AX40MIMO_Ant2_2422


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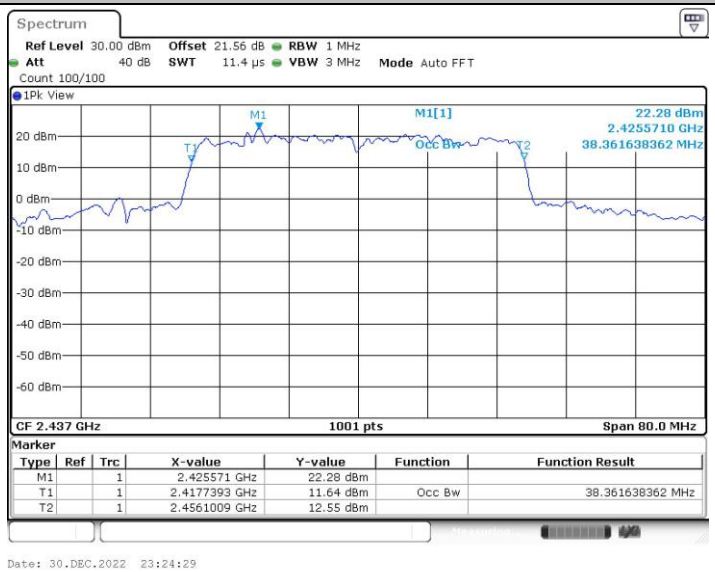
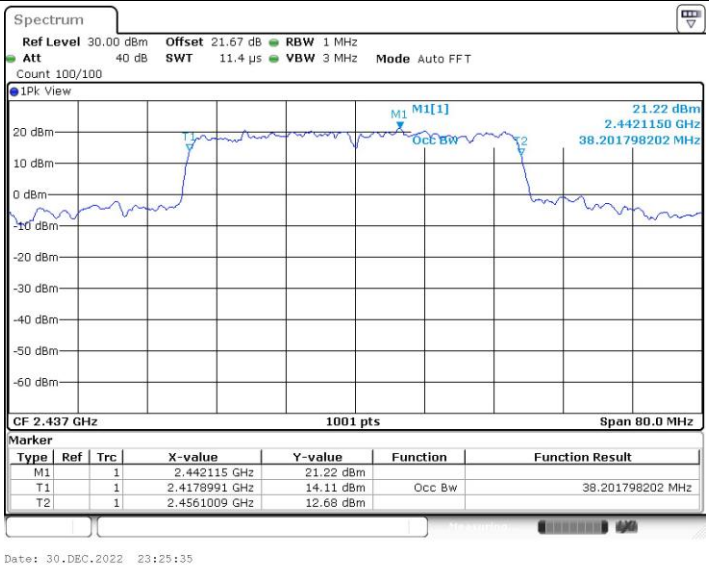
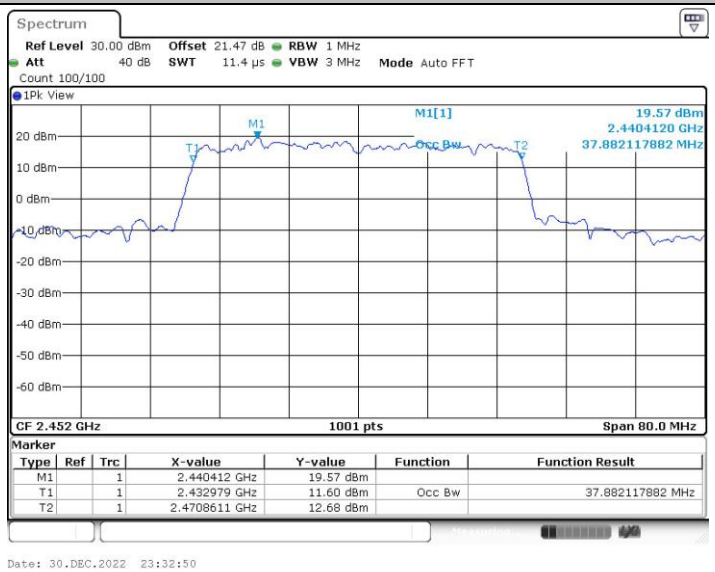
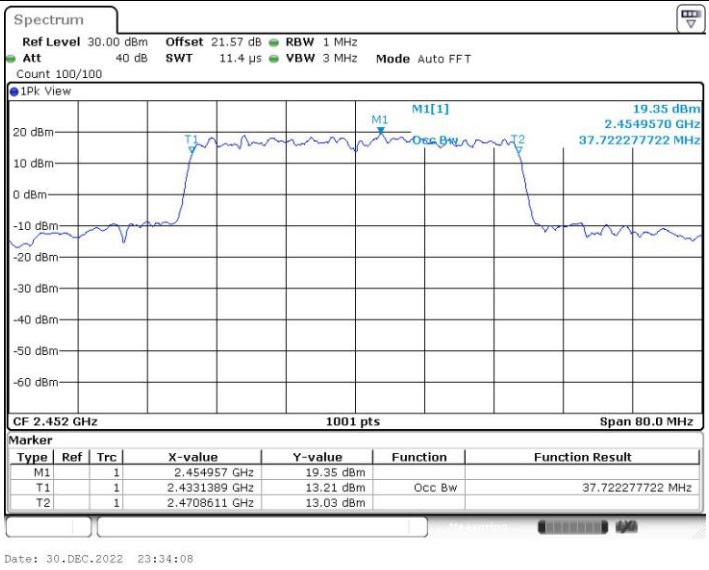


11AX40MIMO_Ant2_2437


11AX40MIMO_Ant1_2452


11AX40MIMO_Ant2_2452


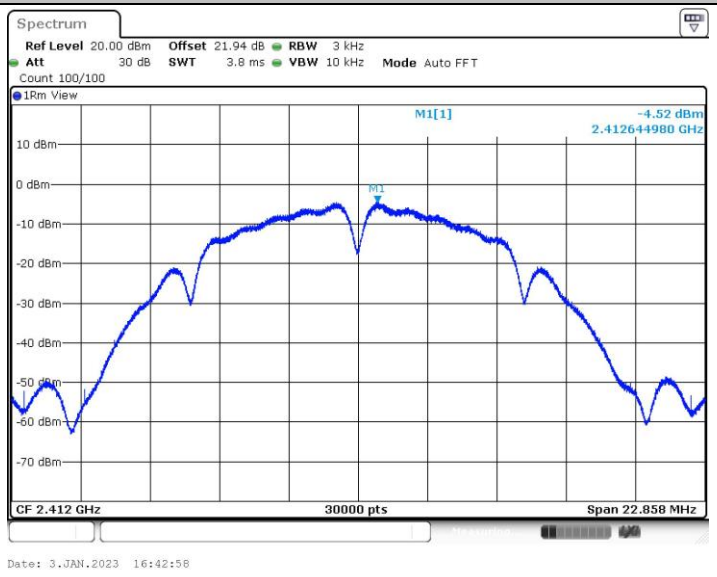
Maximum power spectral density

Test Result

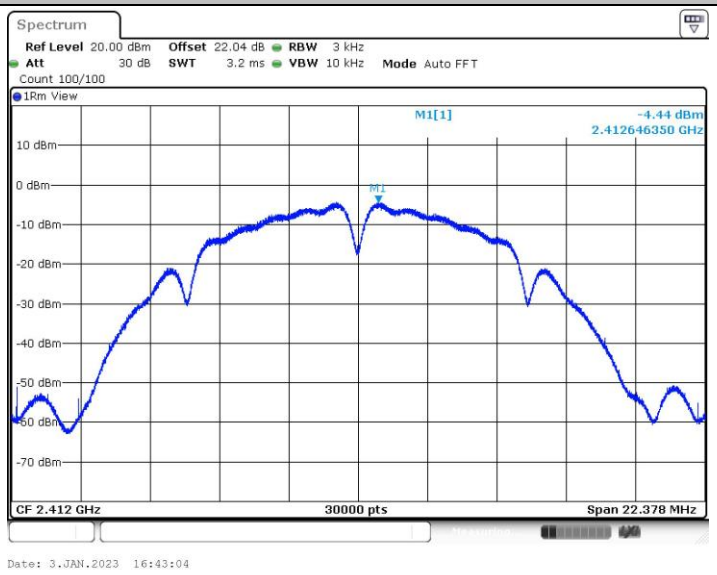
TestMode	Antenna	Freq(MHz)	Result [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
11B-CDD	Ant1	2412	-4.52	≤8.00	PASS
	Ant2	2412	-4.44	≤8.00	PASS
	total	2412	-1.47	≤8.00	PASS
	Ant1	2437	-4.63	≤8.00	PASS
	Ant2	2437	-4.5	≤8.00	PASS
	total	2437	-1.55	≤8.00	PASS
	Ant1	2462	-4.3	≤8.00	PASS
	Ant2	2462	-3.86	≤8.00	PASS
	total	2462	-1.06	≤8.00	PASS
11G-CDD	Ant1	2412	0.19	≤8.00	PASS
	Ant2	2412	-0.71	≤8.00	PASS
	total	2412	2.77	≤8.00	PASS
	Ant1	2437	0.99	≤8.00	PASS
	Ant2	2437	0.61	≤8.00	PASS
	total	2437	3.81	≤8.00	PASS
	Ant1	2462	0.83	≤8.00	PASS
	Ant2	2462	0.15	≤8.00	PASS
	total	2462	3.51	≤8.00	PASS
11AX20MIMO	Ant1	2412	-5.02	≤8.00	PASS
	Ant2	2412	-6.25	≤8.00	PASS
	total	2412	-2.58	≤8.00	PASS
	Ant1	2437	-3.29	≤8.00	PASS
	Ant2	2437	-4.42	≤8.00	PASS
	total	2437	-0.81	≤8.00	PASS
	Ant1	2462	-3.8	≤8.00	PASS
	Ant2	2462	-4.55	≤8.00	PASS
	total	2462	-1.15	≤8.00	PASS
11AX40MIMO	Ant1	2422	-8.6	≤8.00	PASS
	Ant2	2422	-8.81	≤8.00	PASS
	total	2422	-5.69	≤8.00	PASS
	Ant1	2437	-6.24	≤8.00	PASS
	Ant2	2437	-5.93	≤8.00	PASS
	total	2437	-3.07	≤8.00	PASS
	Ant1	2452	-8.6	≤8.00	PASS
	Ant2	2452	-8.33	≤8.00	PASS
	total	2452	-5.45	≤8.00	PASS

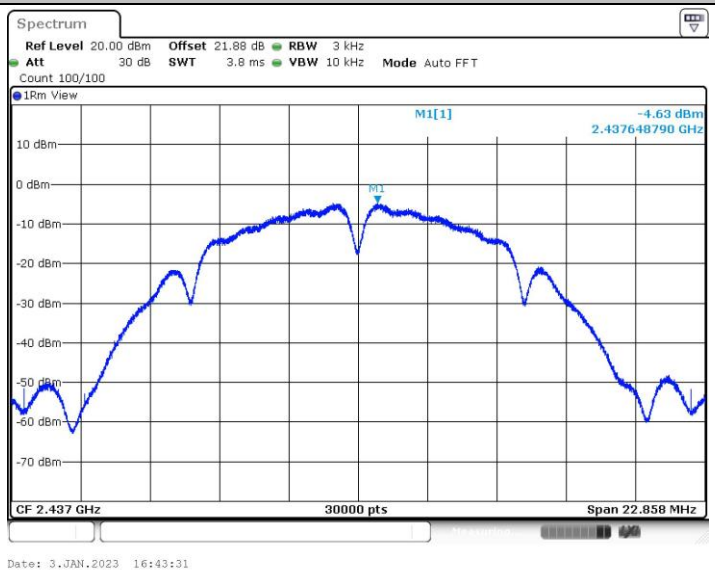
Test Graphs

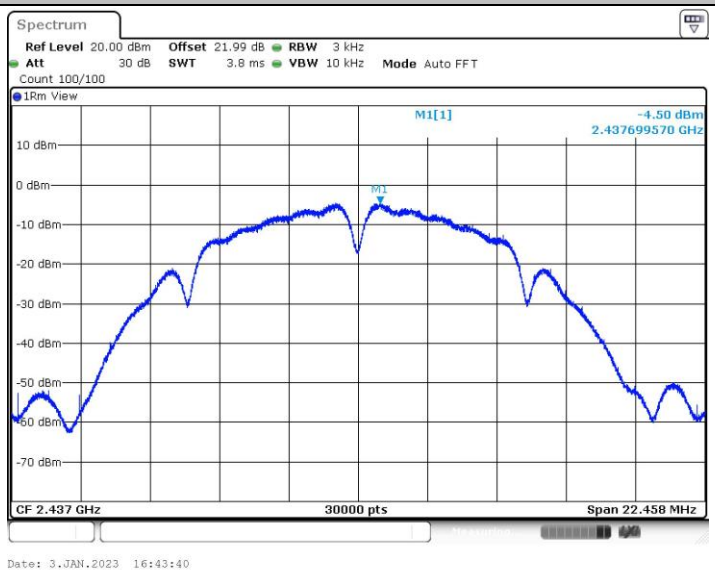
11B-CDD_Ant1_2412

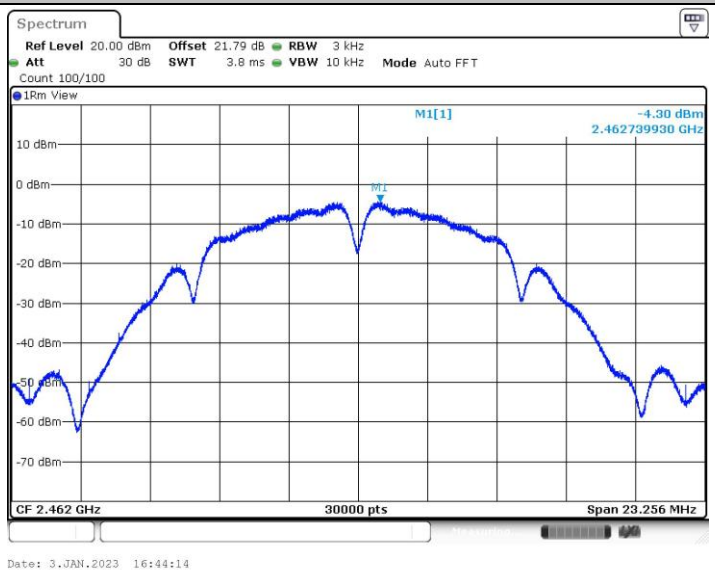


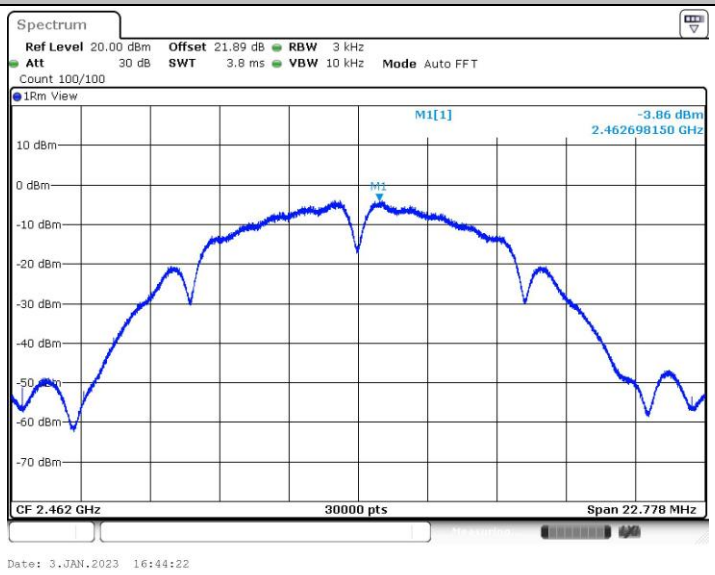
11B-CDD_Ant2_2412



11B-CDD_Ant1_2437


11B-CDD_Ant2_2437


11B-CDD_Ant1_2462


11B-CDD_Ant2_2462


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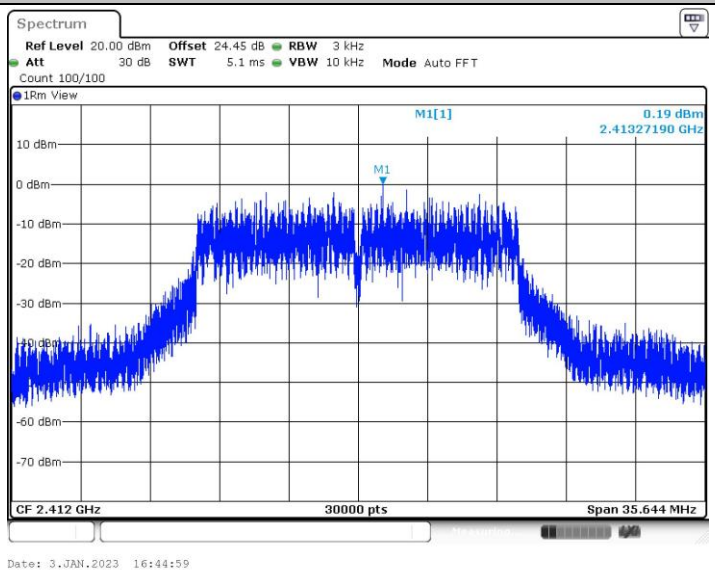

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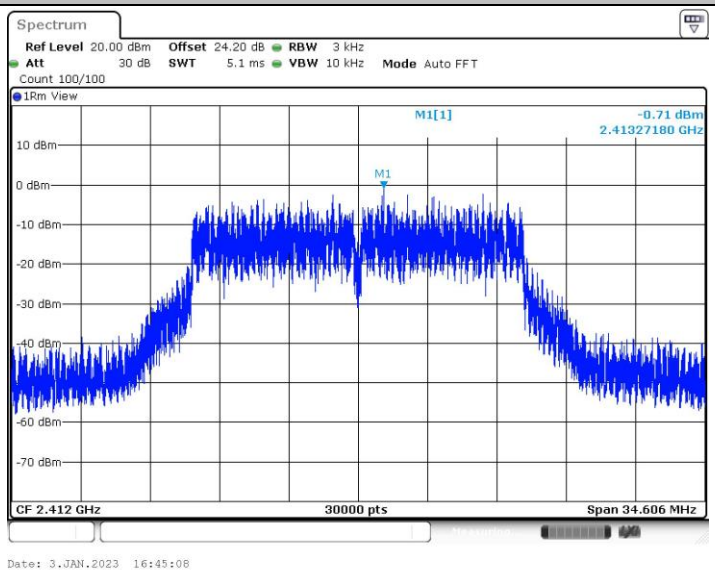

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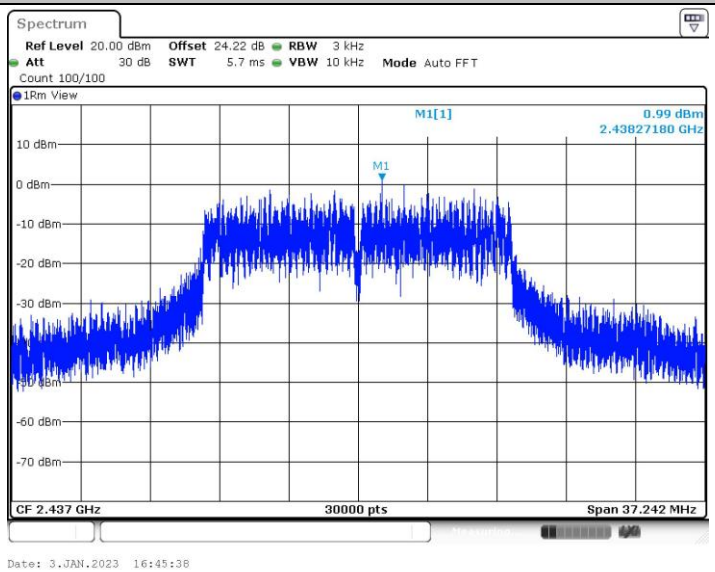

11G-CDD_Ant2_2437