



FCC RADIO TEST REPORT

FCC ID : 2AF3K-SPD3
Equipment : Square Handheld
Brand Name : Square
Model Name : SPD3-01
Applicant : Block, Inc.
1955 Broadway, Suite 600 Oakland, CA 94612 United States
Manufacturer : Block, Inc.
1955 Broadway, Suite 600 Oakland, CA 94612 United States
Standard : FCC Part 15 Subpart E §15.407

The product was received on Dec. 04, 2024 and testing was performed from Dec. 20, 2024 to Mar. 05, 2025. We, Sporton International Inc. Wensan Laboratory, 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 Inc. Wensan Laboratory, the test report shall not be reproduced except in full.

Approved by: Louis Wu

Sportun International Inc. Wensan Laboratory

No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)



Table of Contents

History of this test report	3
Summary of Test Result	4
1 General Description	5
1.1 Product Feature of Equipment Under Test.....	5
1.2 Modification of EUT	7
1.3 Testing Location	7
1.4 Applicable Standards.....	7
2 Test Configuration of Equipment Under Test	8
2.1 Carrier Frequency and Channel	8
2.2 Test Mode	10
2.3 Connection Diagram of Test System.....	11
2.4 Support Unit used in test configuration and system	11
2.5 EUT Operation Test Setup	11
2.6 Measurement Results Explanation Example.....	12
3 Test Result	13
3.1 26dB & 99% Occupied Bandwidth Measurement	13
3.2 Fundamental Maximum EIRP Measurement	14
3.3 Fundamental Power Spectral Density Measurement	15
3.4 In-Band Emissions (Channel Mask)	17
3.5 Standard Client Proper Power Adjustment Measurement.....	19
3.6 Dual Client Test, Demonstration of Proper Power Adjustment based on Associated AP	24
3.7 Unwanted Emissions Measurement	27
3.8 AC Conducted Emission Measurement.....	31
3.9 Antenna Requirements	33
4 List of Measuring Equipment	34
5 Measurement Uncertainty	36
Appendix A. Conducted Test Results	
Appendix B. AC Conducted Emission Test Result	
Appendix C. Radiated Spurious Emission Test Data	
Appendix D. Duty Cycle Plots	
Appendix E. Setup Photographs	



History of this test report



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.407(a)(10)	26dB Emission Bandwidth	Pass	-
3.1	2.1049	99% Occupied Bandwidth	Pass	-
3.2	15.407(a)(7)	Fundamental Maximum EIRP	Pass	-
3.3	15.407(a)(7)	Fundamental Power Spectral Density	Pass	-
3.4	15.407(b)(6)	In-Band Emissions (Channel Mask)	Pass	-
-	15.407(d)(6)	Contention Based Protocol	Pass	Please refer to report number FR4N2203H
3.5	15.407 KDB 987594 D02 Section II. L.	Standard Client Proper Power Adjustment Measurement	Pass	-
3.6	15.407 KDB 987594 D02 Section II. K.	Dual Client Test, Demonstration of Proper Power Adjustment based on Associated AP	Pass	-
3.7	15.407(b)	Unwanted Emissions	Pass	-
3.8	15.207	AC Conducted Emission	Pass	-
3.9	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.

Reviewed by: Keven Cheng**Report Producer: Clio Lo**



1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature
<p>General Specs</p> <p>Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n/ac/ax, Wi-Fi 5GHz 802.11a/n/ac/ax, Wi-Fi 6GHz 802.11a/ax and NFC.</p> <p>Antenna Type</p> <p>WLAN:</p> <p><Ant. 1>: PIFA Antenna</p> <p><Ant. 2>: PIFA Antenna</p>

Antenna information		
5925 MHz ~ 6425 MHz	Peak Gain (dBi)	Ant. 1: 4.0 Ant. 2: 4.2
6525 MHz ~ 6875 MHz	Peak Gain (dBi)	Ant. 1: 4.1 Ant. 2: 4.0

Remark: 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.

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

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 k th antenna is being fed by spatial stream j , or zero if it is not;
 G_k is the gain in dBi of the k th antenna.

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

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

Where $G1, G2, \dots, GN$ denote single antenna gain.

The directional gain "DG" is calculated as following table.

	Ant 1 (dBi)	Ant 2 (dBi)	DG for Power (dBi)	DG for PSD (dBi)
5925 MHz ~ 6425 MHz	4.00	4.20	4.20	7.11
6525 MHz ~ 6875 MHz	4.10	4.00	4.10	7.06

Calculation example:

If a device has two antenna, $G_{ANT1}= 4.00$ dBi; $G_{ANT2}= 4.20$ dBi

Directional gain of power measurement = $\max(4.00, 4.20) + 0 = 4.20$ dBi

Directional gain of PSD derived from formula which is

$10 \cdot \log \{ \{ [10^{(4.00 \text{ dBi} / 20)} + 10^{(4.20 \text{ dBi} / 20)}]^2 \} / 2 \}$

= 7.11 dBi



1.2 Modification of EUT

No modifications made to the EUT during the testing.

1.3 Testing Location

Test Site	Sportun International Inc. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sportun Site No. DF02-HY (TAF Code: 1190)
Remark	The Standard Client Proper Power Adjustment Measurement and Dual Client Test, Demonstration of Proper Power Adjustment based on Associated AP test item subcontracted to Sporton International Inc. EMC & Wireless Communications Laboratory.

Test Site	Sportun International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sportun Site No. CO07-HY, 03CH23-HY, TH05-HY

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

FCC designation No.: TW1190 and TW3786

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 E
- FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- FCC KDB 987594 D02 U-NII 6 GHz EMC Measurement v03
- FCC KDB 414788 D01 Radiated Test Site v01r01.
- FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ANSI C63.10-2013

Remark:

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. The TAF code is not including all the FCC KDB listed without accreditation.
3. 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, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the 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

BW 20M	Channel	2						
	Freq. (MHz)	5935						

BW 20M	Channel	1	5	9	13	17	21	25	29				
	Freq. (MHz)	5955	5975	5995	6015	6035	6055	6075	6095				
BW 40M	Channel	3		11		19		27					
	Freq. (MHz)	5965		6005		6045		6085					
BW 80M	Channel	7				23							
	Freq. (MHz)	5985				6065							
BW 160M	Channel	15											
	Freq. (MHz)	6025											

BW 20M	Channel	33	37	41	45	49	53	57	61				
	Freq. (MHz)	6115	6135	6155	6175	6195	6215	6235	6255				
BW 40M	Channel	35		43		51		59					
	Freq. (MHz)	6125		6165		6205		6245					
BW 80M	Channel	39				55							
	Freq. (MHz)	6145				6225							
BW 160M	Channel	47											
	Freq. (MHz)	6185											



BW 20M	Channel	65	69	73	77	81	85	89	93
	Freq. (MHz)	6275	6295	6315	6335	6355	6375	6395	6415
BW 40M	Channel	67		75		83		91	
	Freq. (MHz)	6285		6325		6365		6405	
BW 80M	Channel	71		87					
	Freq. (MHz)	6305		6385					
BW 160M	Channel	79							
	Freq. (MHz)	6345							
BW 20M	Channel	117		121		125			
	Freq. (MHz)	6535		6555		6575			
BW 40M	Channel	115		123					
	Freq. (MHz)	6525		6565					
BW 20M	Channel	129	133	137	141	145	149	153	157
	Freq. (MHz)	6595	6615	6635	6655	6675	6695	6715	6735
BW 40M	Channel	131		139		147		155	
	Freq. (MHz)	6605		6645		6685		6725	
BW 80M	Channel	135		151					
	Freq. (MHz)	6625		6705					
BW 160M	Channel	143							
	Freq. (MHz)	6665							
BW 20M	Channel	161	165	169	173	177	181		
	Freq. (MHz)	6755	6775	6795	6815	6835	6855		
BW 40M	Channel	163		171		179			
	Freq. (MHz)	6765		6805		6845			
BW 80M	Channel	167							
	Freq. (MHz)	6785							



2.2 Test Mode

This device support 26/52/106/242/484/996-tone RU but does not support 2x996-tone RU on 160MHz channel.

The PSD of partial RU is reduced to be smaller than full RU according to TCB workshop interim guidance Oct. 2022.

The 802.11ax mode is investigated among different tones, full resource units (RU), partial resource units. The partial RU has no higher power than full RU's, thus the full RU is chosen as main test configuration.

The 242-tone RU is covered by 20MHz channel, 484-tone RU is covered by 40MHz channel and 996-tone RU is covered by 80MHz channel.

The SISO mode conducted power is covered by MIMO mode per chain, so only the MIMO mode is tested.

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

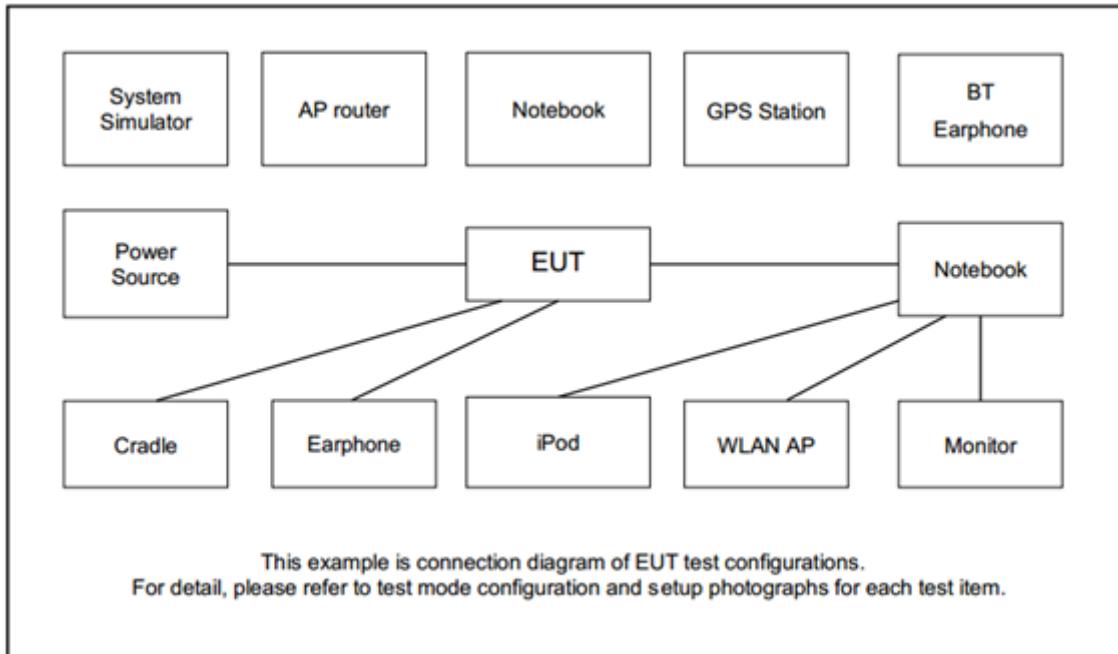
MIMO Mode

Modulation	Data Rate
802.11a	6 Mbps
802.11ax HE20	MCS0
802.11ax HE40	MCS0
802.11ax HE80	MCS0
802.11ax HE160	MCS0

Remark: The conducted power level of each chain in MIMO mode is equal or higher than SISO mode.

Test Cases	
AC Conducted Emission	Mode 1 : Bluetooth Link + WLAN (6GHz) Link + Camera On + USB Cable (Charging from AC Adapter) + EMV Slot (Smart Card)(Load)
Remark: 1. The detailed Radiated test modes are shown in Appendix C. 2. Based on ANSI C63.10 clause 5.6.2.2, b) Spurious emissions, measure the mode with the highest output power and the mode with highest output power spectral density for each modulation family.	

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.	WLAN AP	Netgear	RAXE500	PY320300508	N/A	Unshielded, 1.8m
2.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
3.	Notebook	Dell	Latitude 3400	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m

2.5 EUT Operation Test Setup

The RF test items, utility “QRCT 4.0.00206.0” was 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 10dB attenuator.

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

$$= 4.2 + 10 = 14.2 \text{ (dB)}$$

3 Test Result

3.1 26dB & 99% Occupied Bandwidth Measurement

3.1.1 Limit of 26dB & 99% Occupied Bandwidth

<FCC 14-30 CFR 15.407>

(a)(10) The maximum transmitter channel bandwidth for U-NII devices in the 5.925-7.125 GHz band is 320 megahertz.

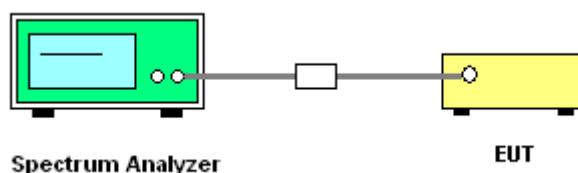
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
7. 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) $\geq 3 * \text{RBW}$.
8. Measure and record the results in the test report.

3.1.4 Test Setup



3.1.5 Test Result of 26dB & 99% Occupied Bandwidth

Please refer to Appendix A.

3.2 Fundamental Maximum EIRP Measurement

3.2.1 Limit of Fundamental Maximum EIRP

<FCC 14-30 CFR 15.407>

(a)(7) For client devices, except for fixed client devices as defined in this subpart, operating under the control of a standard power access

point in 5.925-6.425 GHz and 6.525-6.875 GHz bands, the maximum power spectral density must not exceed 17 dBm e.i.r.p. in any 1-megahertz band, and the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm and the device must limit its power to no more than 6 dB below its associated standard power access point's authorized transmit power.

3.2.2 Measuring Instruments

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

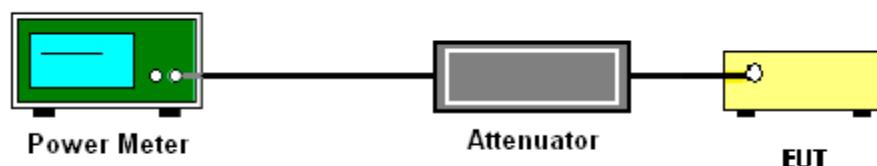
3.2.3 Test Procedures

The testing follows Method PM-G of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Method PM-G (Measurement using a gated RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit at its maximum power control level.
3. Measure the average power of the transmitter.
4. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.
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 Fundamental Maximum EIRP

Please refer to Appendix A.



3.3 Fundamental Power Spectral Density Measurement

3.3.1 Limit of Fundamental Power Spectral Density

<FCC 14-30 CFR 15.407>

(a)(7) For client devices, except for fixed client devices as defined in this subpart, operating under the control of a standard power access point in 5.925-6.425 GHz and 6.525-6.875 GHz bands, the maximum power spectral density must not exceed 17 dBm e.i.r.p. in any 1-megahertz band.

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Section F) Maximum power spectral density.

Method SA-1

(trace averaging with the EUT transmitting at full power throughout each sweep).

- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz.
- Set VBW \geq 3 MHz.
- Number of points in sweep \geq 2 Span / RBW.
- Sweep time = auto.
- Detector = RMS
- Trace average at least 100 traces in power averaging mode.
- The EUT transmits continuously (duty cycle \geq 98%).

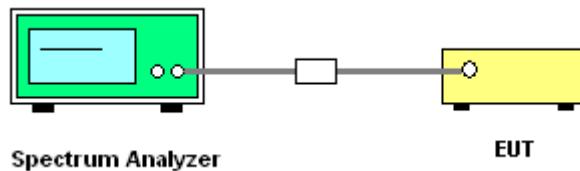
1. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.
3. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

Method (a): 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.



3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.



3.4 In-Band Emissions (Channel Mask)

3.4.1 Limit of Unwanted Emissions

<FCC 14-30 CFR 15.407>

(a)(6) For transmitters operating within the 5.925-7.125 GHz bands: Power spectral density must be suppressed by 20 dB at 1 MHz outside of channel edge, by 28 dB at one channel bandwidth from the channel center, and by 40 dB at one- and one-half times the channel bandwidth away from channel center. At frequencies between one megahertz outside an unlicensed device's channel edge and one channel bandwidth from the center of the channel, the limits must be linearly interpolated between 20 dB and 28 dB suppression, and at frequencies between one and one- and one-half times an unlicensed device's channel bandwidth, the limits must be linearly interpolated between 28 dB and 40 dB suppression. Emissions removed from the channel center by more than one- and one-half times the channel bandwidth must be suppressed by at least 40 dB.

3.4.2 Measuring Instruments

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

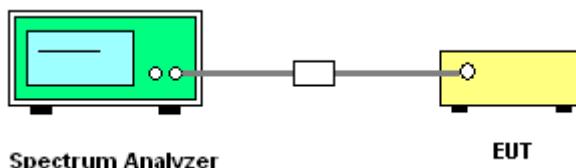
3.4.3 Test Procedures

The testing follows FCC KDB 987594 D02 U-NII 6GHz EMC Measurement v03.

Section J) In-Band Emissions.

1. Take nominal bandwidth as reference channel bandwidth provided that 26 dB emission bandwidth is always larger than nominal bandwidth
2. Measure the power spectral density (which will be used for emissions mask reference) using the following procedure:
 - a) Set the span to encompass the entire 26 dB EBW of the signal.
 - b) Set RBW = same RBW used for 26 dB EBW measurement.
 - c) Set VBW $\geq 3 \times$ RBW
 - d) Number of points in sweep $\geq [2 \times \text{span} / \text{RBW}]$.
 - e) Sweep time = auto.
 - f) Detector = RMS (i.e., power averaging)
 - g) Trace average at least 100 traces in power averaging (rms) mode.
 - h) Use the peak search function on the instrument to find the peak of the spectrum.
3. Using the measuring equipment limit line function, develop the emissions mask based on the following requirements. The emissions power spectral density must be reduced below the peak power spectral density (in dB) as follows:
 - a. Suppressed by 20 dB at 1 MHz outside of the channel edge.
 - b. Suppressed by 28 dB at one channel bandwidth from the channel center.
 - c. Suppressed by 40 dB at one- and one-half times the channel bandwidth from the channel center.
4. Adjust the span to encompass the entire mask as necessary.
5. Clear trace.
6. Trace average at least 100 traces in power averaging (rms) mode.
7. Adjust the reference level as necessary so that the crest of the channel touches the top of the emission mask.

3.4.4 Test Setup



3.4.5 Test Result of In-Band Emissions (Channel Mask)

Please refer to Appendix A.



3.5 Standard Client Proper Power Adjustment Measurement

3.5.1 Limit of Standard Client Proper Power Adjustment

15.407 KDB 987594 D02 Section II. L. Power limits for standard client devices

c) The maximum power limits shall remain at least 6 dB below the power levels authorized for the associated standard-power access point

3.5.2 Test Procedures of Standard Client Proper Power Adjustment

The testing follows FCC KDB 987594 D02 U-NII 6 GHz EMC Measurement v03.

Section L. Proper Power Adjustment

3.5.3 Proper Power Adjustment, Client Devices Connected to a Standard Power Access Point

A client device that connects to a Standard Power AP must limit its power to a minimum of 6 dB lower than its associated Standard Power access point's authorized transmit power. The term "authorized" means the AFC-approved power level for the AP to use on a particular channel.

Test procedure to show that the client device can lower its power accordingly.

3.5.4 Test Procedure:

1. Connect equipment as shown in Figure 7 below.
2. Adjust Atten 1 to Std Power AP so as to facilitate error free communication with the Client but protect the Client receiver from overload or damage.
3. Configure the Client and AP so that they associate and start sending data (stream data). The AP should be configured such that its registered power is 36 dBm EIRP.
4. Verify transmission between Client and Std Power AP. Additional attenuators may be required to protect measurement equipment. Measure the Client RF power using any of the methods in C63.10 for NII devices.
5. Use this power, along with its antenna gain, to calculate the Client EIRP.
6. The Client EIRP should be minimally 6 dB lower than that of the AP.
7. Repeat Steps 2 through 5 at two other selected measurement points – the first at the midpoint and the second at the lowest rated power of the client as declared by the manufacturer.

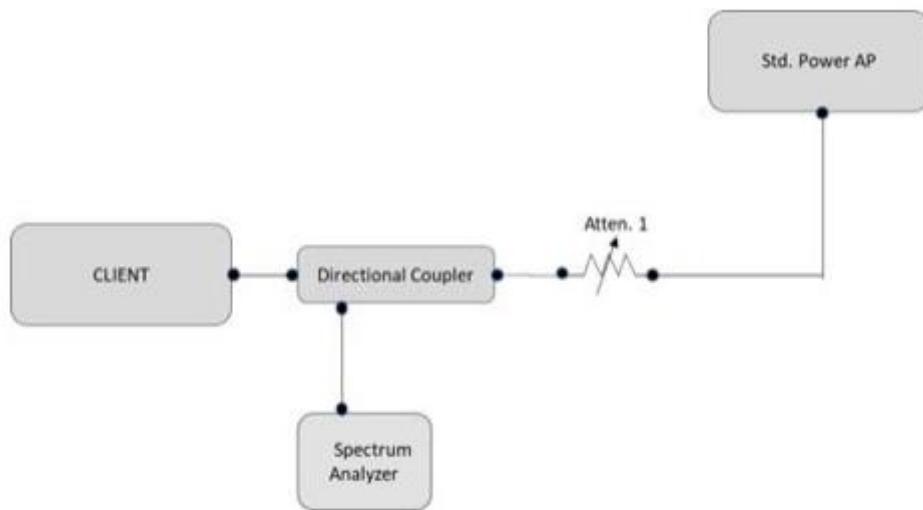


Figure 7. Test setup for conducted testing

3.5.5 Test Result Summary

Companion Standard Power AP: Brand name: Qualcomm, Model name: Wakiki

802.11ax 20MHz bandwidth

Test channel 53

	Client Conducted Power (dBm)			Client EIRP (dBm)	AP EIRP (dBm)	AP to client EIRP Delta (dB)
	Ant 1	Ant 2	MIMO			
Maximum EIRP	14.75	14.41	17.59	21.79	34.1	12.31
Midpoint EIRP	12.65	12.62	15.65	19.85	26.1	6.25
Lowest EIRP	8.56	8.92	11.75	15.95	22.3	6.35
Requirement						At least 6 dB
Result						Pass

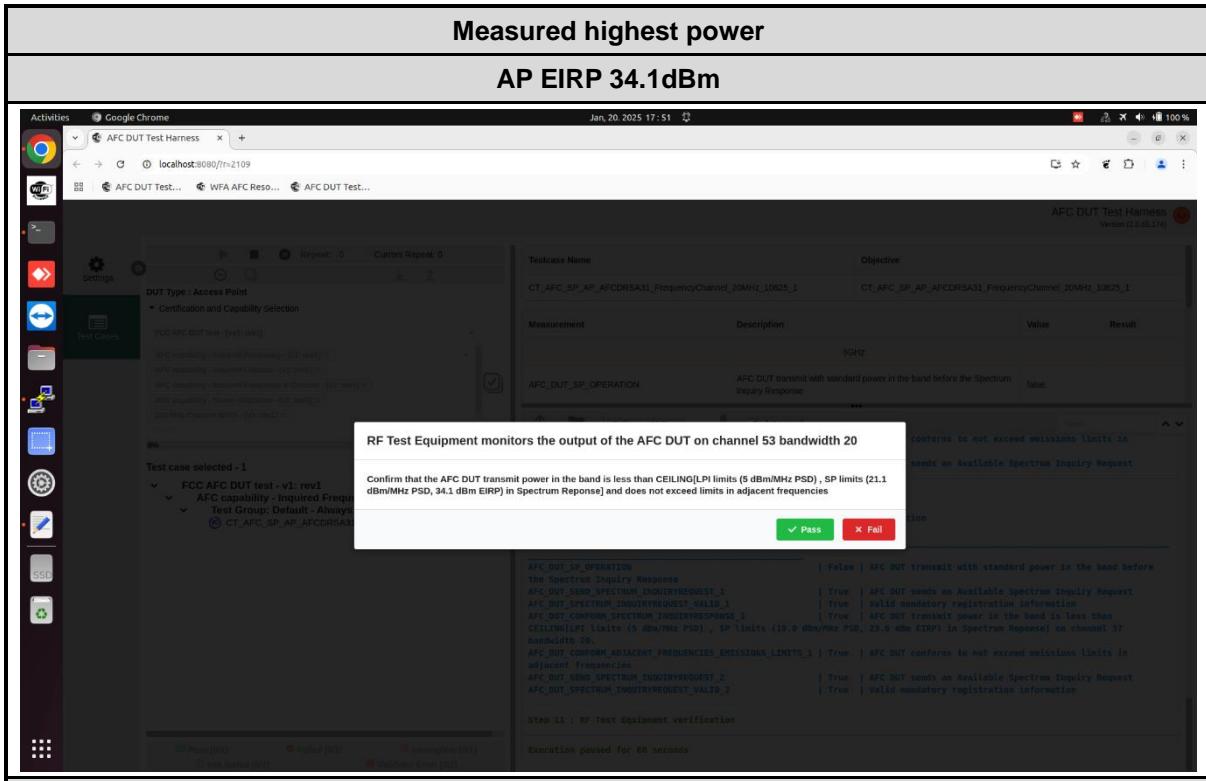
Note: Client EIRP = Client MIMO conducted power + antenna gain (4.2dBi)



3.5.6 Test Result Plot

Measured highest power

AP EIRP 34.1dBm



Testcase Name: CT_AFC_SP_AP_AFCDR5A31_FrequencyChannel_20MHz_IS025_1

Objective: CT_AFC_SP_AP_AFCDR5A31_FrequencyChannel_20MHz_IS025_1

Measurement: AFC_DUT_SP_OPERATION

Description: AFC DUT transmit with standard power in the band before the Spectrum Inquiry Response

Value: 34.1

Result: false

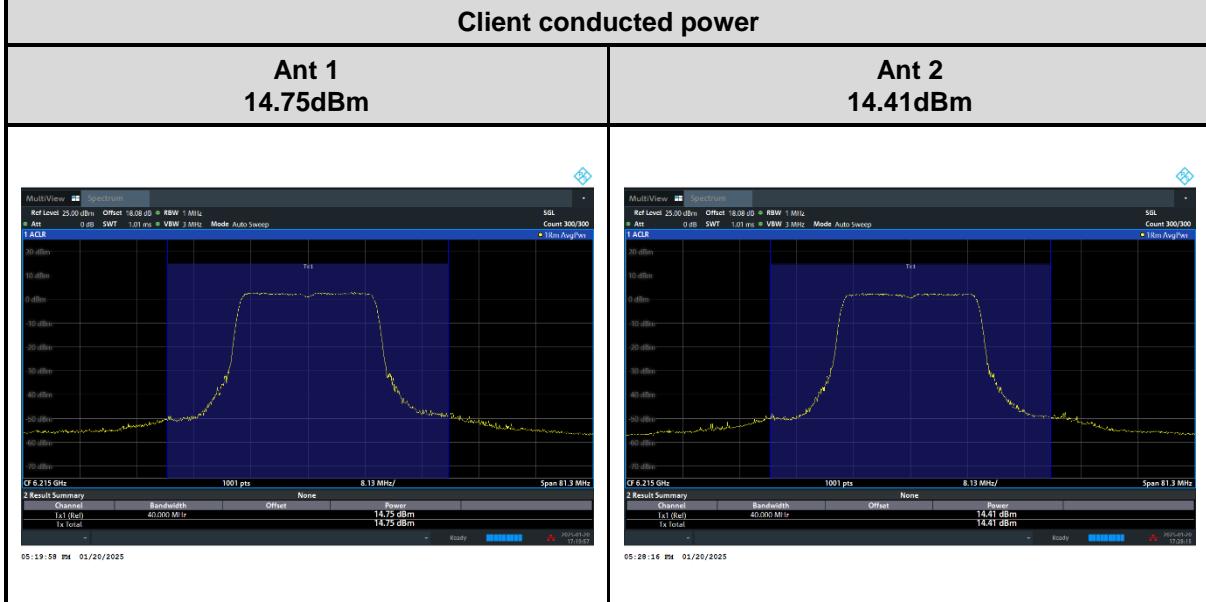
RF Test Equipment monitors the output of the AFC DUT on channel 53 bandwidth 20

Confirm that the AFC DUT transmit power in the band is less than CEILING[LPI limits (5 dBm/MHz PSD), SP limits (21.1 dBm/MHz PSD, 34.1 dBm EIRP) in Spectrum Response] and does not exceed limits in adjacent frequencies

Pass

Client conducted power

Ant 1	Ant 2
14.75dBm	14.41dBm



Ant 1: 14.75dBm

Ant 2: 14.41dBm

Result Summary (Ant 1):

Result	Bandwidth	Offset	Power
Tx (Ref)	40.000 MHz	None	14.75 dBm
Tx Total			14.75 dBm

Result Summary (Ant 2):

Result	Bandwidth	Offset	Power
Tx (Ref)	40.000 MHz	None	14.41 dBm
Tx Total			14.41 dBm



Measured mid-point power

AP EIRP 26.1dBm

Activities Google Chrome AFC DUT Test Harness Jan. 20, 2025 18:15 localhost:8080/rtr5847 AFC DUT Test... WFA AFC Reso... AFC DUT Test...

AFC DUT Test Harness Version 1.0.0.174

DUT Type : Access Point
- Certification and Capability Selection
FCC AFC DUT test - [v1: rev1]
AFC capability - Required Frequency - [v1: rev1]
AFC capability - Required Channel - [v1: rev1]
AFC capability - Required Frequency & Channel - [v1: rev1]
AFC capability - Device Validation - [v1: rev1]
2.4 GHz Channel Width - [v1: rev1]

Test case selected - 1
FCC AFC DUT test - v1: rev1
AFC capability - Required Frequency & Channel - v1: rev1
Test Group: Default - Always
CT_AFC_SP_AP_AFCDRSA31

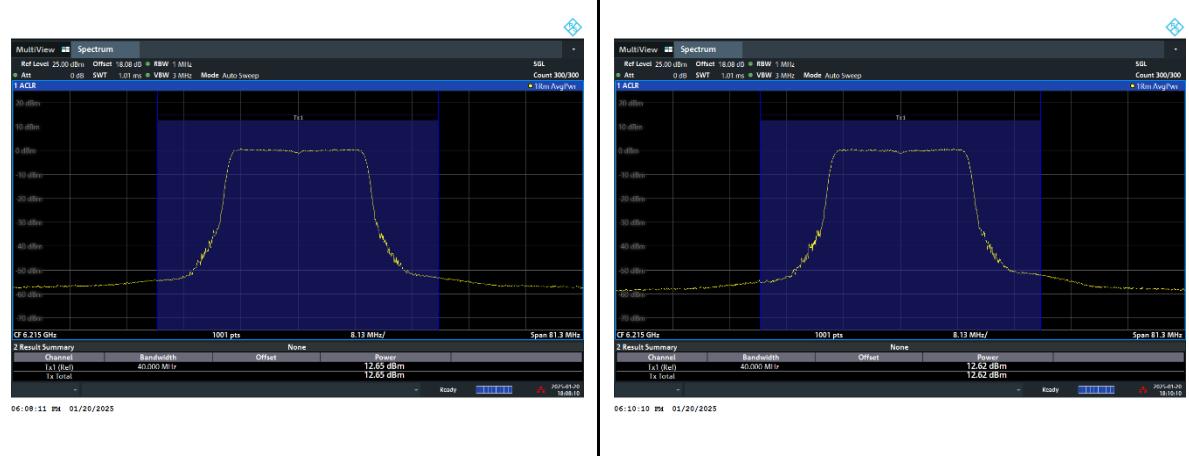
RF Test Equipment monitors the output of the AFC DUT on channel 53 bandwidth 20
Confirm that the AFC DUT transmit power in the band is less than CEILING[LPI limits (5 dBm/MHz PSD) , SP limits (13.1 dBm/MHz PSD, 26.1 dBm EIRP) in Spectrum Response] and does not exceed limits in adjacent frequencies

APC_DUT_SP_OPERATION | True | APC DUT sends an available Spectrum Inquiry Request
CT_AFC_SP_AP_AFCDRSA31_FrequencyChannel_20MHz_10625_1 :
Name | Value | Description
APC_DUT_SP_OPERATION | False | APC DUT transmit with standard power in the band before the Spectrum Inquiry Response
APC_DUT_SEND_SPECTRUM_INQUIRYREQUEST_1 | True | APC DUT sends an Available Spectrum Inquiry Request
APC_DUT_SPECTRUM_INQUIRYREQUEST_VALID_1 | True | Valid mandatory registration information

Step 6 : RF Test Equipment verification
Execution paused for 60 seconds

Pass (0) Failed (0) Incomplete (0)

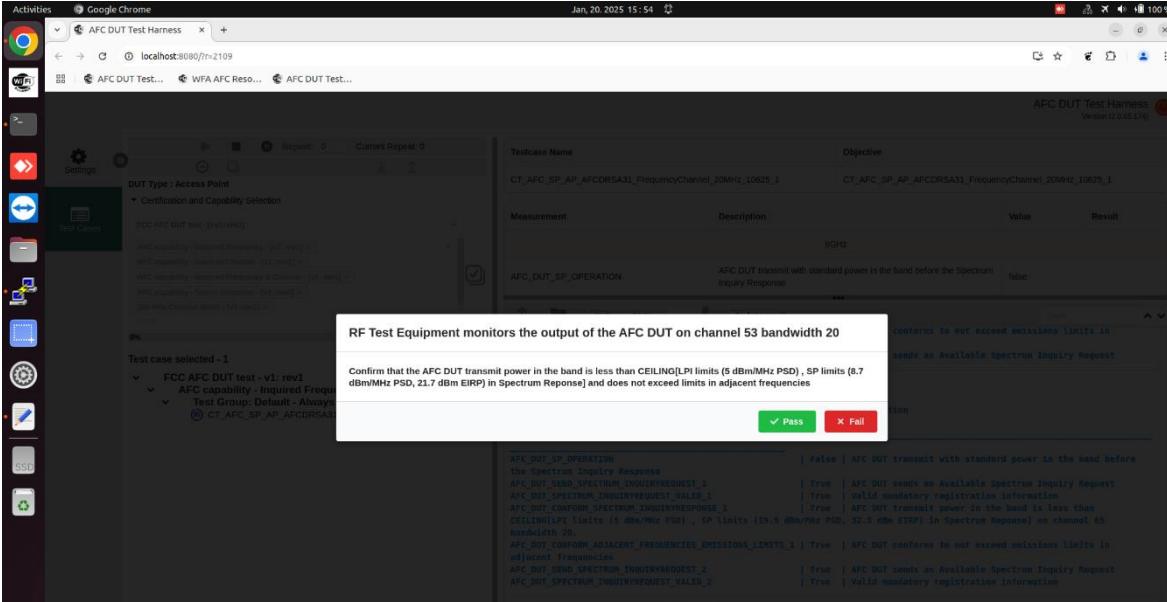
Client conducted power

Ant 1
12.65dBmAnt 2
12.62dBm



Measured lowest power

AP EIRP 22.3dBm



Activities Google Chrome Jan. 20, 2025 15:54

localhost:8080/rtr=Z109

AFC DUT Test Harness

AFC DUT Test... WFA AFC Reso... AFC DUT Test...

AFC DUT Test Harness Version 2.0.0.104

DUT Type : Access Point

Certification and Capability Selection

AFC DUT test (rev1 rev2)

AFC capability - required Frequency (0.1 MHz)

AFC capability - required Channel (0.1 MHz)

AFC capability - required Frequency & Channel (0.1 MHz)

AFC capability - Power Selection (0.1 dBm)

2.4 GHz Channel Width (0.1 MHz)

Settings

Report: 0 Current Report: 0

Testcase Name: CT_AFC_SP_AP_AFCDRSA31_FrequencyChannel_20MHz_10925_1

Objective: CT_AFC_SP_AP_AFCDRSA31_FrequencyChannel_20MHz_10925_1

Measurement	Description	Value	Result
AFC_DUT_SP_OPERATION	AFC DUT transmit with standard power in the band before the Spectrum Inquiry Response	0dBm2	false

RF Test Equipment monitors the output of the AFC DUT on channel 53 bandwidth 20

Confirm that the AFC DUT transmit power in the band is less than CEILING[LPI limits (5 dBm/MHz PSD) , SP limits (8.7 dBm/MHz PSD, 21.7 dBm EIRP) in Spectrum Response] and does not exceed limits in adjacent frequencies

Conforms to NOT exceed emissions limits in

Conforms to Available Spectrum Inquiry Request

Conforms to

Pass Fail

AFC_DUT_SP_OPERATION | False | AFC DUT transmit with standard power in the band before the Spectrum Inquiry Response

AFC_DUT_SEND_SPECTRUM_INQUIRYREQUEST_1 | True | AFC DUT sends an Available Spectrum Inquiry Request

AFC_DUT_SPECTRUM_INQUIRYREQUEST_VALID_1 | True | Valid mandatory registration information

AFC_DUT_CONFIRM_SPECTRUM_INQUIRYREQUEST_1 | True | AFC DUT transmit power in the band is less than CEILING[LPI limits (5 dBm/MHz PSD) , SP limits (18.5 dBm/MHz PSD, 22.5 dBm EIRP) in Spectrum Response] on channel 65 bandwidth 20.

AFC_DUT_CONFIRM_ADJACENT_FREQUENCIES_EMISSIONS_LIMITS_1 | True | AFC DUT conforms to not exceed emissions limits in adjacent frequencies

AFC_DUT_SEND_SPECTRUM_INQUIRYREQUEST_2 | True | AFC DUT sends an Available Spectrum Inquiry Request

AFC_DUT_SPECTRUM_INQUIRYREQUEST_VALID_2 | True | Valid mandatory registration information

Step 1 : RF Test Equipment verification

Execution paused for 60 seconds

Client conducted power

2 Result Summary			
	Bandwidth	Offset	None
Ix (Total)	40,000 MHz	Offset	8.56 dBm
Ix Total			8.56 dBm

03:42:32 01/20/2025

2 Result Summary			
	Bandwidth	Offset	None
Ix (Total)	40,000 MHz	Offset	8.92 dBm
Ix Total			8.92 dBm

03:44:49 01/20/2025



3.6 Dual Client Test, Demonstration of Proper Power Adjustment based on Associated AP

3.6.1 Limit of Proper Power Adjustment

15.407 KDB 987594 D02 Section II. K. Power limits for standard client devices

A client device may connect to a Standard Power AP with a maximum power level of 30 dBm EIRP. A client may also connect to a Low Power indoor AP, but the power level is limited to a maximum of 24 dBm EIRP.

3.6.2 Test Procedures of Standard Client Proper Power Adjustment

The testing follows FCC KDB 987594 D02 U-NII 6 GHz EMC Measurement v03.

Section K. Dual Client Test, Demonstration of Proper Power Adjustment based on Associated AP

3.6.3 Test Procedure:

1. Connect equipment as shown in Figure 6 below..
2. Adjust Atten 2 to Std Power AP so as to facilitate error free communication with the Client (Atten 1 should be set to High on the RF path to the Low Power AP)
3. Configure the Client and APs so that they associate and start sending data (stream data). It is important that the client is configured to transmit at its highest power level. Initially, because the attenuation on Atten 1 is set high, the Client will only associate with the Std Power AP.
4. Verify transmission between Client and Std Power AP. Additional attenuators may be required to protect measurement equipment. Measure the Client RF power using any of the methods in C63.10 for NII devices.
5. Gradually increase Atten 2 while at the same time decreasing Atten 1. This simulates the Client moving from outdoors to indoors. At some level of attenuation the Client should associate with the Low Power indoor AP.
6. Verify transmission between Client and Low Power AP.
7. Measure the RF power of the Client device using the same method as in step 4. Verify the power is no more than 24 dBm EIRP

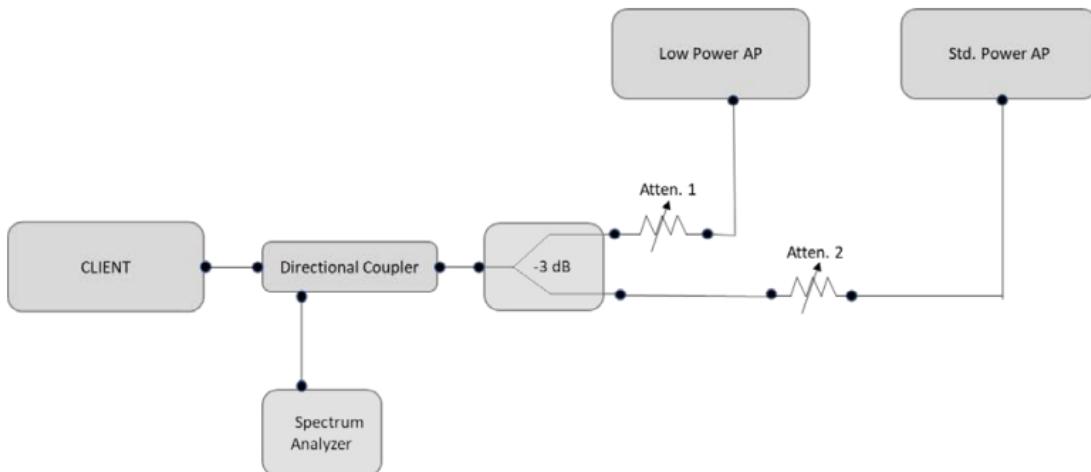


Figure 6. Test setup for conducted testing

3.6.4 Test Result Summary

Companion Standard Power AP: Brand name: Qualcomm, Model name: Wakiki

Companion Indoor Power AP: Brand name: ASUS, Model name: GT-AXE11000

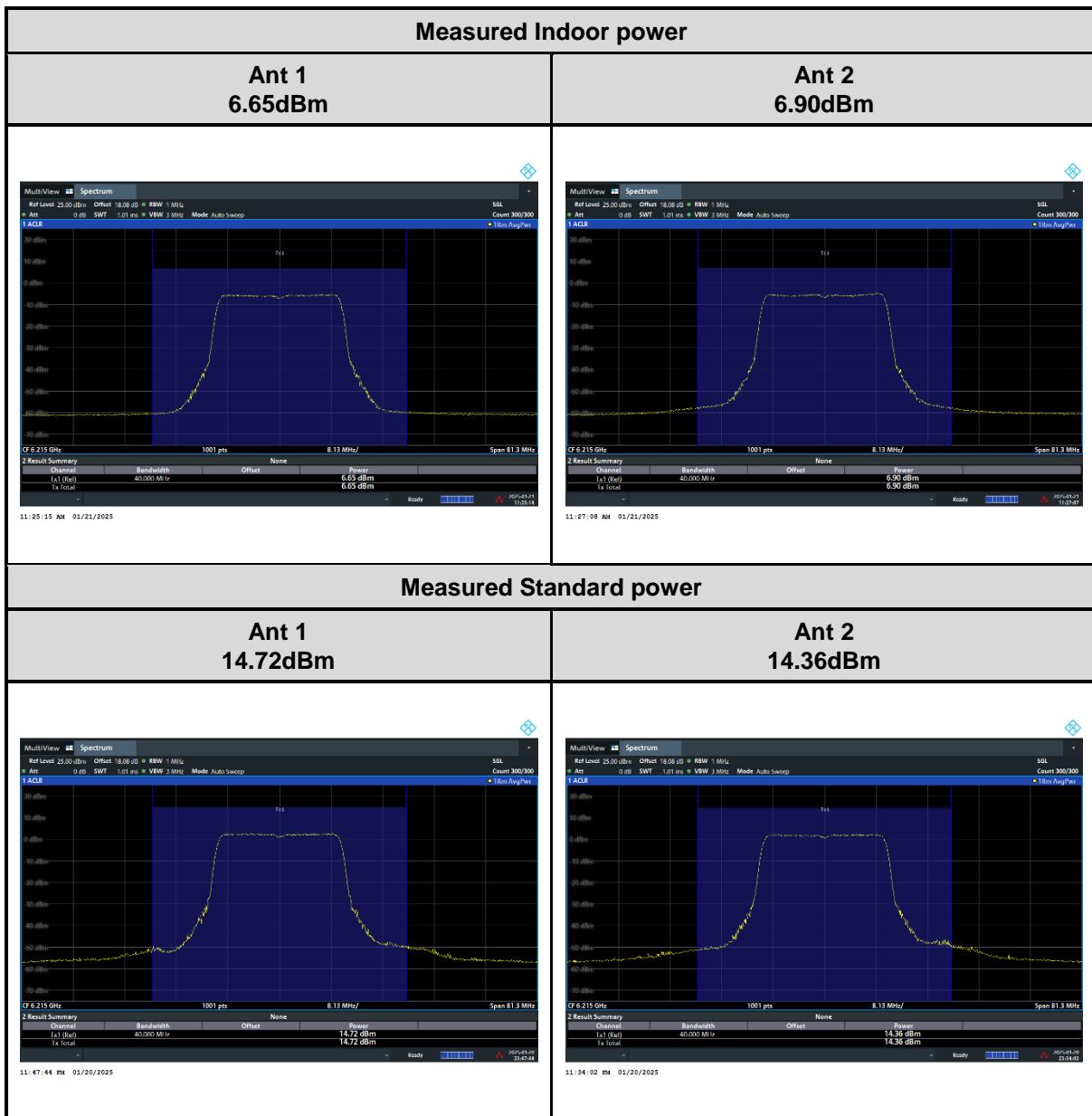
802.11ax 20MHz bandwidth

Test channel 53

	Client Conducted Power (dBm)			Client EIRP (dBm)	Limit EIRP (dBm)	Result
	Ant 1	Ant 2	MIMO			
Indoor EIRP	6.65	6.90	9.79	13.99	24	Pass
Standard EIRP	14.72	14.36	17.55	21.75	30	Pass

Note: Client EIRP = Client MIMO conducted power + antenna gain (4.2dBi)

3.6.5 Test Result Plot





3.7 Unwanted Emissions Measurement

This section is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement.

3.7.1 Limit of Unwanted Emissions

- (1) For transmitters operating within the 5.925-7.125 GHz band: Any emissions outside of the 5.925-7.125 GHz band must not exceed an e.i.r.p. of -27 dBm/MHz.

EIRP (dBm)	Field Strength at 3m (dB μ V/m)
- 27 (RMS)	68.3
- 7 (Peak)	88.3

According 987594 D02 U-NII 6GHz EMC Measurement v03 section G:

Unwanted emissions outside of restricted bands are measured with a RMS detector.

In addition, 15.35(b) applies where the peak emissions must be limited to no more than 20 dB above the average limit

- (2) Unwanted spurious emissions fallen in restricted bands shall comply with the general field strength limits as below table:

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

Note: The following formula is used to convert the EIRP to field strength.

$$E = \frac{1000000\sqrt{30P}}{3} \mu\text{V/m}, \text{ where } P \text{ is the eirp (Watts)}$$

3.7.2 Measuring Instruments

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

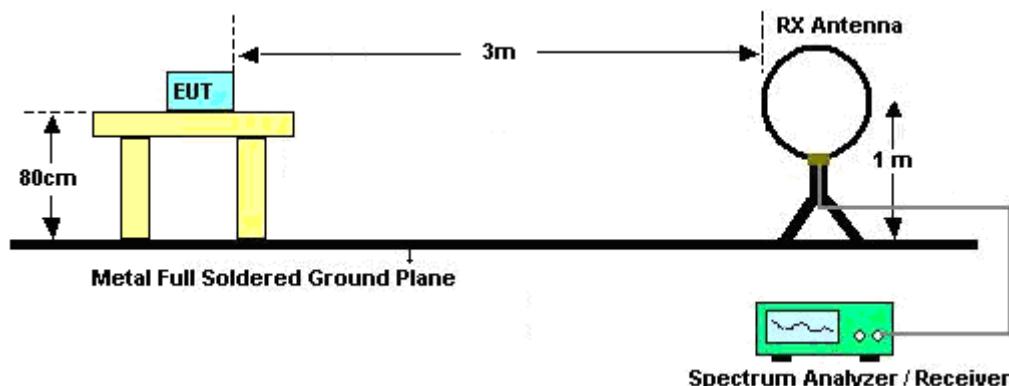


3.7.3 Test Procedures

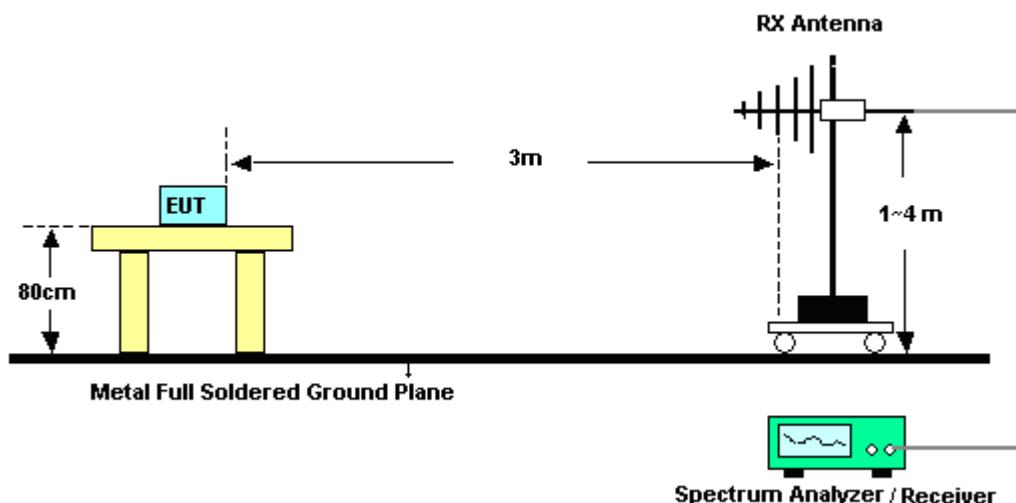
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section G) Unwanted emissions measurement.
 - (1) Procedure for Unwanted Emissions Measurements Below 1000MHz
 - RBW = 120 kHz
 - VBW = 300 kHz
 - Detector = Peak
 - Trace mode = max hold
 - (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz
 - RBW = 1 MHz
 - VBW \geq 3 MHz
 - Detector = Peak
 - Sweep time = auto
 - Trace mode = max hold
 - (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz
 - RBW = 1 MHz
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW \geq 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.
2. 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.
3. The EUT is set 3 meters away from the receiving antenna which is mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT is arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
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 “-”.

3.7.4 Test Setup

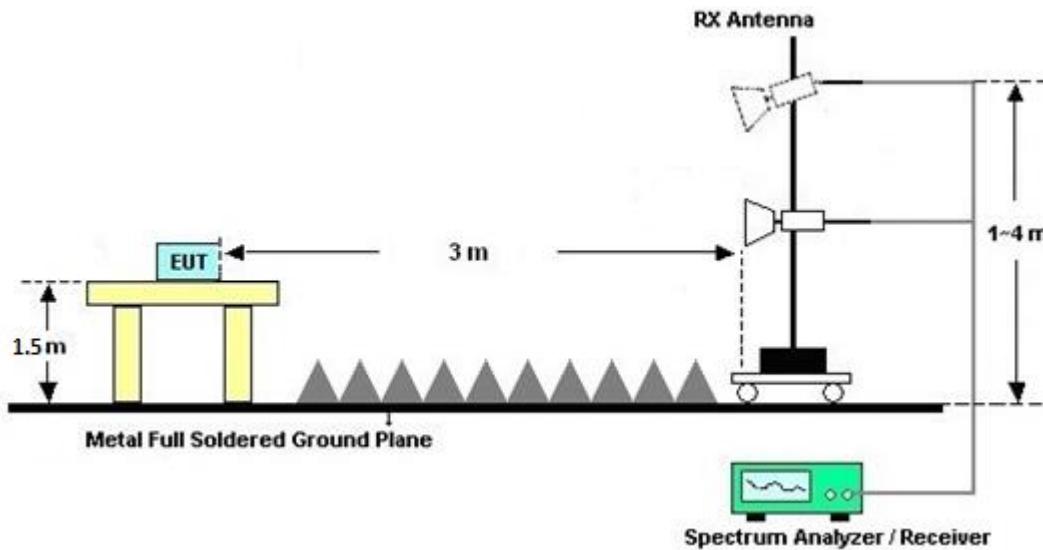
For radiated emissions below 30MHz



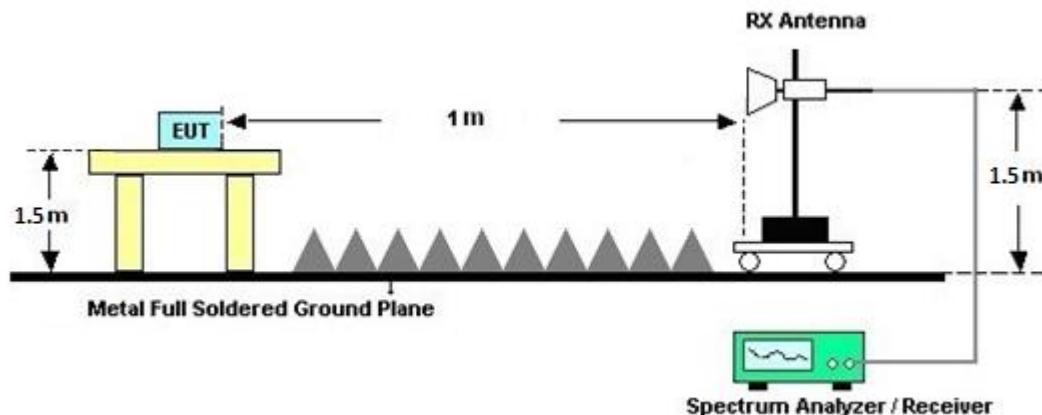
For radiated emissions from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



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

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 came out very similar.

3.7.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C.

3.7.7 Duty Cycle

Please refer to Appendix D.

3.7.8 Test Result of Radiated Spurious Emissions (30MHz ~ 10th Harmonic)

Please refer to Appendix C.



3.8 AC Conducted Emission Measurement

3.8.1 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 (dB μ V)	
	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.

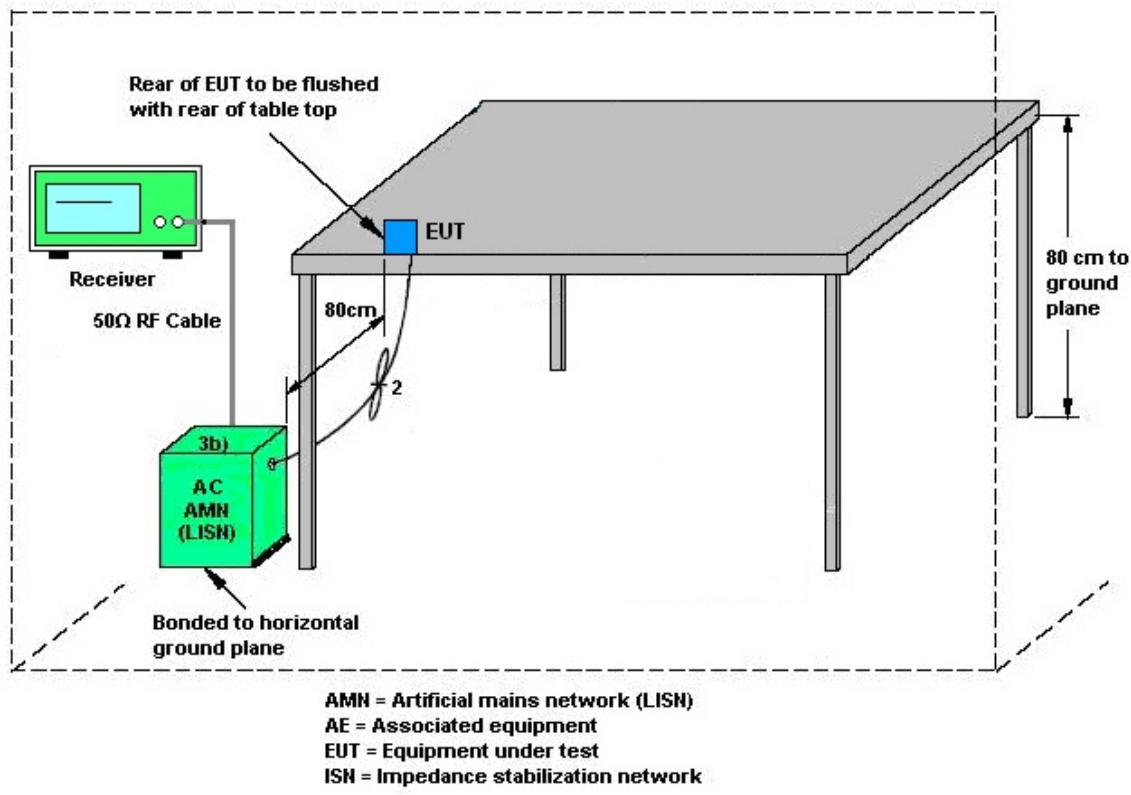
3.8.2 Measuring Instruments

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

3.8.3 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 should 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 with Maximum Hold Mode.

3.8.4 Test Setup



3.8.5 Test Result of AC Conducted Emission

Please refer to Appendix B.



3.9 Antenna Requirements

3.9.1 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.

3.9.2 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
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Aug. 29, 2024	Jan. 14, 2025~Feb. 19, 2025	Aug. 28, 2025	Radiation (03CH23-HY)
Bilog Antenna	TESEQ & WOKEN	CBL 6111D & 00802N1D-06	62028 & 003	30MHz~1GHz	Nov. 27, 2024	Jan. 14, 2025~Feb. 19, 2025	Nov. 26, 2025	Radiation (03CH23-HY)
Amplifier	SONOMA	310N	421582	9kHz~1GHz	Jul. 14, 2024	Jan. 14, 2025~Feb. 19, 2025	Jul. 13, 2025	Radiation (03CH23-HY)
Amplifier	EMEC	EM01G18GA	060878	N/A	Sep. 27, 2024	Jan. 14, 2025~Feb. 19, 2025	Sep. 26, 2025	Radiation (03CH23-HY)
Double Ridged Guide Horn Antenna	RFSPIN	DRH18-E	LE2C05A18EN	1GHz~18GHz	Jun. 20, 2024	Jan. 14, 2025~Feb. 19, 2025	Jun. 19, 2025	Radiation (03CH23-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	1225	18GHz-40GHz	Jun. 24, 2024	Jan. 14, 2025~Feb. 19, 2025	Jun. 23, 2025	Radiation (03CH23-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 02, 2024	Jan. 14, 2025~Feb. 19, 2025	Dec. 01, 2025	Radiation (03CH23-HY)
Signal Analyzer	Keysight	N9010B	MY62170337	N/A	Aug. 21, 2024	Jan. 14, 2025~Feb. 19, 2025	Aug. 20, 2025	Radiation (03CH23-HY)
Hygrometer	TECPEL	DTM-303B	TP211542	N/A	Oct. 24, 2024	Jan. 14, 2025~Feb. 19, 2025	Oct. 23, 2025	Radiation (03CH23-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Jan. 14, 2025~Feb. 19, 2025	N/A	Radiation (03CH23-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Jan. 14, 2025~Feb. 19, 2025	N/A	Radiation (03CH23-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Jan. 14, 2025~Feb. 19, 2025	N/A	Radiation (03CH23-HY)
Software	Audix	E3 6.09824_2019122	RK-002348	N/A	N/A	Jan. 14, 2025~Feb. 19, 2025	N/A	Radiation (03CH23-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	9kHz~30MHz	Mar. 06, 2024	Jan. 14, 2025~Feb. 19, 2025	Mar. 05, 2025	Radiation (03CH23-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	804395/2	N/A	Nov. 26, 2024	Jan. 14, 2025~Feb. 19, 2025	Nov. 25, 2025	Radiation (03CH23-HY)
RF Cable	EMC	EMC101Y	231115/231119/231122	N/A	Nov. 26, 2024	Jan. 14, 2025~Feb. 19, 2025	Nov. 25, 2025	Radiation (03CH23-HY)
Hygrometer	TECPEL	DTM-303A	TP201996	N/A	Nov. 01, 2024	Dec. 31, 2024~Mar. 05, 2025	Oct. 31, 2025	Conducted (TH05-HY)
USB Power Sensor	DARE	RPR3008W	RPR8W-23010013 (NO:100)	10MHz~8GHz	Jul. 26, 2024	Dec. 31, 2024~Mar. 05, 2025	Jul. 25, 2025	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101566	10Hz~40GHz	Aug. 23, 2024	Dec. 31, 2024~Mar. 05, 2025	Aug. 22, 2025	Conducted (TH05-HY)
Switch Control Mainframe	Burgeon	ETF-058	EC1300484 (BOX3)	N/A	May 20, 2024	Dec. 31, 2024~Mar. 05, 2025	May 19, 2025	Conducted (TH05-HY)
Software	Sportun	BTWIFI_Final_version_240513	N/A	Conducted Other Test Item	N/A	Dec. 31, 2024~Mar. 05, 2025	N/A	Conducted (TH05-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ACPOWER	AFC-11003G	F317040033	N/A	N/A	Dec. 20, 2024	N/A	Conduction (CO07-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Dec. 20, 2024	N/A	Conduction (CO07-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-F N	9561-F N00373	9kHz-200MHz	Oct. 23, 2024	Dec. 20, 2024	Oct. 22, 2025	Conduction (CO07-HY)
RF Cable	HUBER + SUHNER	RG 214/U	1358175	9kHz~30MHz	Mar. 14, 2024	Dec. 20, 2024	Mar. 13, 2025	Conduction (CO07-HY)
Two-Line V-Network	TESEQ	NNB 51	45051	N/A	Mar. 10, 2024	Dec. 20, 2024	Mar. 09, 2025	Conduction (CO07-HY)
Four-Line V-Network	TESEQ	NNB 52	36122	N/A	Mar. 07, 2024	Dec. 20, 2024	Mar. 06, 2025	Conduction (CO07-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102317	9kHz~3.6GHz	Sep. 23, 2024	Dec. 20, 2024	Sep. 22, 2025	Conduction (CO07-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV3013	101699	10Hz~13.6GHz	Oct. 07, 2024	Jan. 20, 2025~Jan. 21, 2025	Oct. 06, 2025	AFC (DF02-HY)
Power Divider	MTJ	SMA 2Way Power Divider	MD10003	0.5GHz-6GHz	Calibration from System	Jan. 20, 2025~Jan. 21, 2025	Calibration from System	AFC (DF02-HY)
Power Divider	MTJ	SMA 2Way Power Divider	MD10016	0.5GHz-6GHz	Calibration from System	Jan. 20, 2025~Jan. 21, 2025	Calibration from System	AFC (DF02-HY)
Power Divider	Woken	3Way SMA Power Divder Rated to 20W	STI08-0010(#2)	2GHz-8GHz	Calibration from System	Jan. 20, 2025~Jan. 21, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	EM	SFL402	SFL402-30cm-#9	30 kHz~18GHz	Calibration from System	Jan. 20, 2025~Jan. 21, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	MTJ Cooperstion	SBF405-105FL EX	MTJ-30cm-02	30 kHz~18GHz	Calibration from System	Jan. 20, 2025~Jan. 21, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	MTJ Cooperstion	SBF405-105FL EX	MTJ-30cm-06	30 kHz~18GHz	Calibration from System	Jan. 20, 2025~Jan. 21, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	MVE	SPF141	SPF141-100cm-#13	30 kHz~18GHz	Calibration from System	Jan. 20, 2025~Jan. 21, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	MVE	SPF141	SPF141-100cm-#14	30 kHz~18GHz	Calibration from System	Jan. 20, 2025~Jan. 21, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	MVE	SPF141	SPF141-100cm-#15	30 kHz~18GHz	Calibration from System	Jan. 20, 2025~Jan. 21, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	EC	SLF405	EC-SFL405-100cm-#7	30 kHz~18GHz	Calibration from System	Jan. 20, 2025~Jan. 21, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	EC	SLF405	EC-SFL405-100cm-#11	30 kHz~18GHz	Calibration from System	Jan. 20, 2025~Jan. 21, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	EC	SS405	SS405-100cm-#13	30 kHz~18GHz	Calibration from System	Jan. 20, 2025~Jan. 21, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	EC	SS405	SS405-150cm-#6	30 kHz~18GHz	Calibration from System	Jan. 20, 2025~Jan. 21, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	EC	SS405	SS405-150cm-#13	30 kHz~18GHz	Calibration from System	Jan. 20, 2025~Jan. 21, 2025	Calibration from System	AFC (DF02-HY)



5 Measurement Uncertainty

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_{C(y)}$)	3.7 dB
---	--------

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_{C(y)}$)	6.6 dB
---	--------

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 6000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_{C(y)}$)	5.4 dB
---	--------

Uncertainty of Radiated Emission Measurement (6000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_{C(y)}$)	4.8 dB
---	--------

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_{C(y)}$)	5.7 dB
---	--------

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Junyu Jhou	Temperature:	21~25	°C
Test Date:	2024/12/31~2025/3/5	Relative Humidity:	51~54	%

TEST RESULTS DATA
26dB and 99% OBW

U-NII-5 MIMO										
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		Emission Bandwidth Limit (MHz)	Pass /Fail
					Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	001	5955	16.41	16.39	19.84	19.86	320.00	Pass
11a	6Mbps	2	002	5935	16.43	16.39	20.42	20.32	320.00	Pass
11a	6Mbps	2	049	6195	16.41	16.37	20.00	20.35	320.00	Pass
11a	6Mbps	2	093	6415	16.40	16.38	20.47	20.16	320.00	Pass

TEST RESULTS DATA
EIRP Power Table

U-NII-5 MIMO												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Conducted Power (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2			
11a	6Mbps	2	001	5955	12.10	11.73	14.93	4.20	4.20	19.13	30.00	Pass
11a	6Mbps	2	002	5935	12.30	12.20	15.26	4.20	4.20	19.46	30.00	Pass
11a	6Mbps	2	049	6195	12.48	12.25	15.38	4.20	4.20	19.58	30.00	Pass
11a	6Mbps	2	093	6415	12.00	12.49	15.26	4.20	4.20	19.46	30.00	Pass

TEST RESULTS DATA
EIRP Power Spectral Density

U-NII-5 MIMO												
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Conducted Power Density (dBm/MHz)			DG (dBi)		EIRP Power Density (dBm/MHz)	EIRP Power Density Limit (dBm/MHz)	Pass /Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2			
11a	6Mbps	2	001	5955		3.24	7.11	10.35	17.00	Pass		
11a	6Mbps	2	002	5935		3.38	7.11	10.49	17.00	Pass		
11a	6Mbps	2	049	6195		3.91	7.11	11.02	17.00	Pass		
11a	6Mbps	2	093	6415		3.55	7.11	10.66	17.00	Pass		

TEST RESULTS DATA
26dB and 99% OBW

U-NII-7 MIMO										
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		Emission Bandwidth Limit (MHz)	Pass /Fail
					Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	117	6535	16.41	16.39	20.06	19.99	320.00	Pass
11a	6Mbps	2	149	6695	16.41	16.40	20.00	20.02	320.00	Pass
11a	6Mbps	2	181	6855	16.41	16.41	20.40	19.58	320.00	Pass

TEST RESULTS DATA
EIRP Power Table

U-NII-7 MIMO												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Conducted Power (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2			
11a	6Mbps	2	117	6535	11.60	12.49	15.08	4.10	19.18	30.00	Pass	
11a	6Mbps	2	149	6695	11.28	12.10	14.72	4.10	18.82	30.00	Pass	
11a	6Mbps	2	181	6855	11.61	12.24	14.95	4.10	19.05	30.00	Pass	

TEST RESULTS DATA
EIRP Power Spectral Density

U-NII-7 MIMO											
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Conducted Power Density (dBm/MHz)			DG (dBi)	EIRP Power Density (dBm/MHz)	EIRP Power Density Limit (dBm/MHz)	Pass /Fail
					Ant 1	Ant 2	SUM				
11a	6Mbps	2	117	6535			4.00	7.06	11.06	17.00	Pass
11a	6Mbps	2	149	6695			3.02	7.06	10.08	17.00	Pass
11a	6Mbps	2	181	6855			2.95	7.06	10.01	17.00	Pass

TEST RESULTS DATA
26dB and 99% OBW

U-NII-5 MIMO												
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	RU Config.	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		Emission Bandwidth Limit (MHz)	Pass /Fail	
						Ant 1	Ant 2	Ant 1	Ant 2			
HE20	MCS0	2	001	5955	Full	18.94	18.95	21.62	21.29	320.00	Pass	
HE20	MCS0	2	002	5935	Full	18.94	18.96	21.82	21.65	320.00	Pass	
HE20	MCS0	2	049	6195	Full	18.93	18.96	21.69	21.58	320.00	Pass	
HE20	MCS0	2	093	6415	Full	18.93	18.96	21.46	21.35	320.00	Pass	
HE40	MCS0	2	003	5965	Full	37.87	37.90	41.36	41.70	320.00	Pass	
HE40	MCS0	2	051	6205	Full	37.89	37.94	41.46	41.65	320.00	Pass	
HE40	MCS0	2	091	6405	Full	37.88	37.93	41.46	41.44	320.00	Pass	
HE80	MCS0	2	007	5985	Full	77.14	77.14	82.50	82.66	320.00	Pass	
HE80	MCS0	2	055	6225	Full	77.10	77.20	82.50	82.27	320.00	Pass	
HE80	MCS0	2	087	6385	Full	77.27	77.14	82.85	82.30	320.00	Pass	
HE160	MCS0	2	015	6025	Full	156.34	156.44	165.79	166.85	320.00	Pass	
HE160	MCS0	2	047	6185	Full	156.22	156.39	165.60	165.36	320.00	Pass	
HE160	MCS0	2	079	6345	Full	156.56	156.42	165.70	166.08	320.00	Pass	

TEST RESULTS DATA
EIRP Power Table

U-NII-5 MIMO													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Conducted Power (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2			
HE20	MCS0	2	001	5955	Full	12.10	11.64	14.89	4.20		19.09	30.00	Pass
HE20	MCS0	2	001	5955	26/0	2.25	2.20	5.24	4.20		9.44	30.00	Pass
HE20	MCS0	2	001	5955	52/37	5.23	5.05	8.15	4.20		12.35	30.00	Pass
HE20	MCS0	2	001	5955	106/53	8.60	8.40	11.51	4.20		15.71	30.00	Pass
HE20	MCS0	2	002	5935	Full	9.30	9.33	12.33	4.20		16.53	30.00	Pass
HE20	MCS0	2	002	5935	26/0	-0.26	-0.50	2.63	4.20		6.83	30.00	Pass
HE20	MCS0	2	002	5935	52/37	2.70	2.57	5.65	4.20		9.85	30.00	Pass
HE20	MCS0	2	002	5935	106/53	5.80	5.40	8.61	4.20		12.81	30.00	Pass
HE20	MCS0	2	049	6195	Full	12.30	12.20	15.26	4.20	19.46	30.00	Pass	
HE20	MCS0	2	049	6195	26/4	3.73	4.06	6.91	4.20		11.11	30.00	Pass
HE20	MCS0	2	049	6195	52/38	5.64	5.64	8.65	4.20		12.85	30.00	Pass
HE20	MCS0	2	049	6195	106/53	8.64	8.90	11.78	4.20		15.98	30.00	Pass
HE20	MCS0	2	093	6415	Full	12.00	12.38	15.20	4.20		19.40	30.00	Pass
HE20	MCS0	2	093	6415	26/8	2.48	2.25	5.38	4.20		9.58	30.00	Pass
HE20	MCS0	2	093	6415	52/40	5.73	5.08	8.43	4.20		12.63	30.00	Pass
HE20	MCS0	2	093	6415	106/54	8.25	8.44	11.36	4.20		15.56	30.00	Pass
HE40	MCS0	2	003	5965	Full	12.46	12.02	15.26	4.20		19.46	30.00	Pass
HE40	MCS0	2	003	5965	242/61	9.71	9.19	12.47	4.20		16.67	30.00	Pass
HE40	MCS0	2	051	6205	Full	12.04	12.24	15.15	4.20		19.35	30.00	Pass
HE40	MCS0	2	051	6205	242/61	9.51	9.44	12.49	4.20		16.69	30.00	Pass
HE40	MCS0	2	091	6405	Full	11.48	12.18	14.85	4.20		19.05	30.00	Pass
HE40	MCS0	2	091	6405	242/62	8.82	9.03	11.94	4.20		16.14	30.00	Pass
HE80	MCS0	2	007	5985	Full	12.08	11.87	14.99	4.20		19.19	30.00	Pass
HE80	MCS0	2	007	5985	484/65	9.55	9.30	12.44	4.20		16.64	30.00	Pass
HE80	MCS0	2	055	6225	Full	11.74	12.38	15.08	4.20		19.28	30.00	Pass
HE80	MCS0	2	055	6225	484/65	9.50	9.65	12.59	4.20		16.79	30.00	Pass
HE80	MCS0	2	087	6385	Full	11.40	12.28	14.87	4.20		19.07	30.00	Pass
HE80	MCS0	2	087	6385	484/66	8.40	9.15	11.80	4.20		16.00	30.00	Pass
HE160	MCS0	2	015	6025	Full	12.20	11.76	15.00	4.20		19.20	30.00	Pass
HE160	MCS0	2	015	6025	996/67	9.43	9.00	12.23	4.20		16.43	30.00	Pass
HE160	MCS0	2	047	6185	Full	12.18	12.10	15.15	4.20		19.35	30.00	Pass
HE160	MCS0	2	047	6185	996/67	9.52	9.30	12.42	4.20		16.62	30.00	Pass
HE160	MCS0	2	079	6345	Full	11.70	12.48	15.12	4.20		19.32	30.00	Pass
HE160	MCS0	2	079	6345	996/S67	8.55	9.37	11.99	4.20		16.19	30.00	Pass

TEST RESULTS DATA
EIRP Power Spectral Density

U-NII-5 MIMO												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Conducted Power Density (dBm/MHz)		DG (dBi)		EIRP Power Density (dBm/MHz)	EIRP Power Density Limit (dBm/MHz)	Pass /Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2		
HE20	MCS0	2	001	5955	Full			2.75	7.11	9.86	17.00	Pass
HE20	MCS0	2	001	5955	26/0			2.41	7.11	9.52	17.00	Pass
HE20	MCS0	2	001	5955	52/37			2.39	7.11	9.50	17.00	Pass
HE20	MCS0	2	001	5955	106/53			2.52	7.11	9.63	17.00	Pass
HE20	MCS0	2	002	5935	Full			0.29	7.11	7.40	17.00	Pass
HE20	MCS0	2	002	5935	26/0			-0.17	7.11	6.94	17.00	Pass
HE20	MCS0	2	002	5935	52/37			-0.11	7.11	7.00	17.00	Pass
HE20	MCS0	2	002	5935	106/53			-0.04	7.11	7.07	17.00	Pass
HE20	MCS0	2	049	6195	Full			3.50	7.11	10.61	17.00	Pass
HE20	MCS0	2	049	6195	26/4			3.25	7.11	10.36	17.00	Pass
HE20	MCS0	2	049	6195	52/38			3.01	7.11	10.12	17.00	Pass
HE20	MCS0	2	049	6195	106/53			3.02	7.11	10.13	17.00	Pass
HE20	MCS0	2	093	6415	Full			3.05	7.11	10.16	17.00	Pass
HE20	MCS0	2	093	6415	26/8			2.62	7.11	9.73	17.00	Pass
HE20	MCS0	2	093	6415	52/40			2.84	7.11	9.95	17.00	Pass
HE20	MCS0	2	093	6415	106/54			2.73	7.11	9.84	17.00	Pass
HE40	MCS0	2	003	5965	Full			0.46	7.11	7.57	17.00	Pass
HE40	MCS0	2	003	5965	242/61			-0.02	7.11	7.09	17.00	Pass
HE40	MCS0	2	051	6205	Full			0.54	7.11	7.65	17.00	Pass
HE40	MCS0	2	051	6205	242/61			0.18	7.11	7.29	17.00	Pass
HE40	MCS0	2	091	6405	Full			-0.14	7.11	6.97	17.00	Pass
HE40	MCS0	2	091	6405	242/62			-0.46	7.11	6.66	17.00	Pass
HE80	MCS0	2	007	5985	Full			-2.79	7.11	4.32	17.00	Pass
HE80	MCS0	2	007	5985	484/65			-2.86	7.11	4.25	17.00	Pass
HE80	MCS0	2	055	6225	Full			-2.51	7.11	4.60	17.00	Pass
HE80	MCS0	2	055	6225	484/65			-2.78	7.11	4.33	17.00	Pass
HE80	MCS0	2	087	6385	Full			-2.63	7.11	4.48	17.00	Pass
HE80	MCS0	2	087	6385	484/66			-3.00	7.11	4.11	17.00	Pass
HE160	MCS0	2	015	6025	Full			-5.91	7.11	1.20	17.00	Pass
HE160	MCS0	2	015	6025	996/67			-6.39	7.11	0.72	17.00	Pass
HE160	MCS0	2	047	6185	Full			-5.40	7.11	1.71	17.00	Pass
HE160	MCS0	2	047	6185	996/67			-5.88	7.11	1.23	17.00	Pass
HE160	MCS0	2	079	6345	Full			-5.89	7.11	1.22	17.00	Pass
HE160	MCS0	2	079	6345	996/S67			-6.24	7.11	0.88	17.00	Pass

TEST RESULTS DATA
26dB and 99% OBW

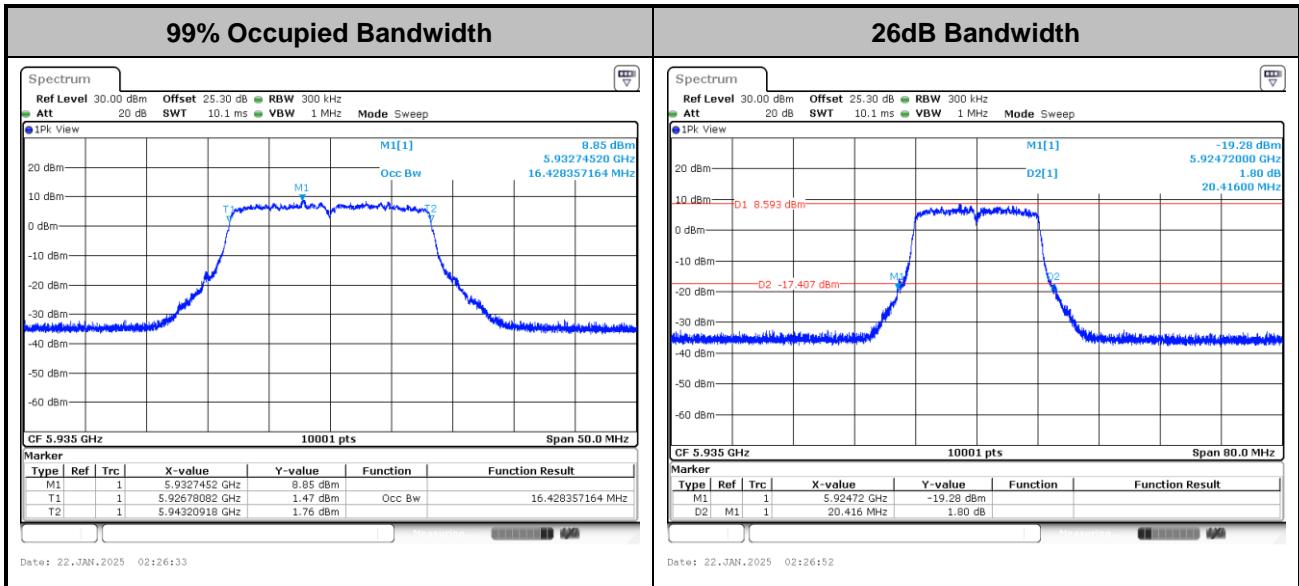
U-NII-7 MIMO												
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	RU Config.	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		Emission Bandwidth Limit (MHz)	Pass /Fail	
						Ant 1	Ant 2	Ant 1	Ant 2			
HE20	MCS0	2	117	6535	Full	18.95	18.93	21.62	21.42	320.00	Pass	
HE20	MCS0	2	149	6695	Full	18.94	18.92	21.37	21.59	320.00	Pass	
HE20	MCS0	2	181	6855	Full	18.94	18.90	21.65	21.37	320.00	Pass	
HE40	MCS0	2	123	6565	Full	37.88	37.90	41.42	41.71	320.00	Pass	
HE40	MCS0	2	147	6685	Full	37.88	37.85	41.58	41.07	320.00	Pass	
HE40	MCS0	2	179	6845	Full	37.89	37.83	41.22	41.57	320.00	Pass	
HE80	MCS0	2	135	6625	Full	77.21	77.10	82.82	82.53	320.00	Pass	
HE80	MCS0	2	151	6705	Full	77.21	77.12	82.40	82.78	320.00	Pass	
HE80	MCS0	2	167	6785	Full	77.18	77.07	82.43	82.46	320.00	Pass	
HE160	MCS0	2	143	6665	Full	156.51	156.32	167.38	166.03	320.00	Pass	

TEST RESULTS DATA
EIRP Power Table

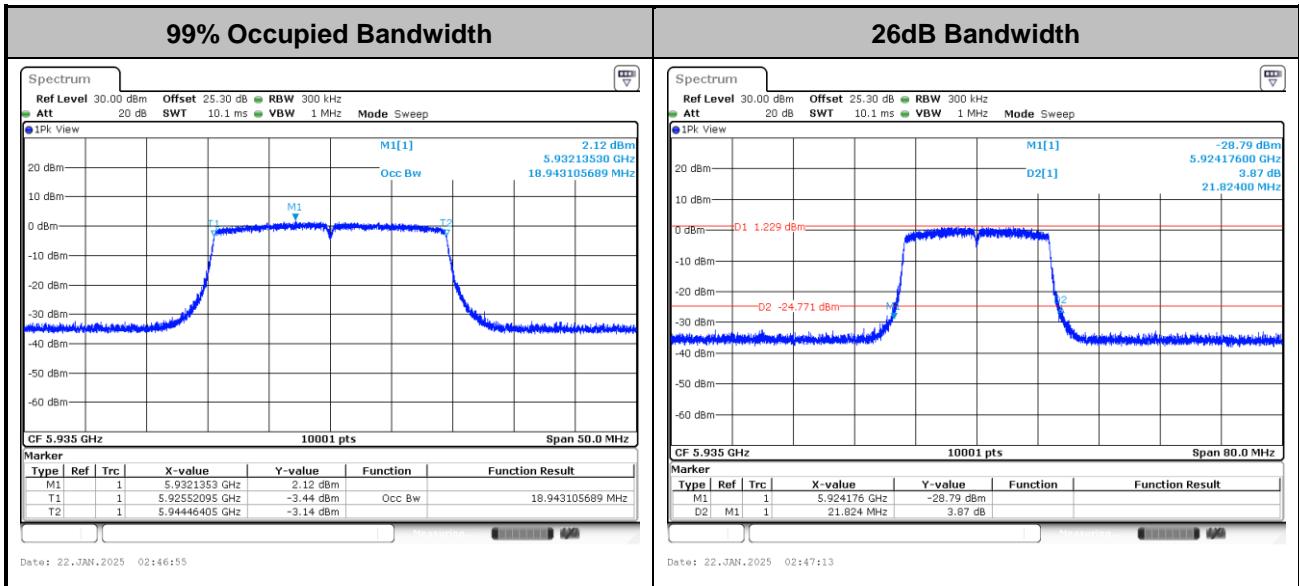
U-NII-7 MIMO													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Conducted Power (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2			
HE20	MCS0	2	117	6535	Full	11.52	12.46	15.03	4.10	19.13	30.00	Pass	
HE20	MCS0	2	117	6535	26/0	2.50	2.56	5.54	4.10	9.64	30.00	Pass	
HE20	MCS0	2	117	6535	52/37	5.34	5.32	8.34	4.10	12.44	30.00	Pass	
HE20	MCS0	2	117	6535	106/53	8.40	9.23	11.85	4.10	15.95	30.00	Pass	
HE20	MCS0	2	149	6695	Full	11.20	12.10	14.68	4.10	18.78	30.00	Pass	
HE20	MCS0	2	149	6695	26/4	2.89	3.20	6.06	4.10	10.16	30.00	Pass	
HE20	MCS0	2	149	6695	52/38	4.68	5.70	8.23	4.10	12.33	30.00	Pass	
HE20	MCS0	2	149	6695	106/53	8.16	8.90	11.56	4.10	15.66	30.00	Pass	
HE20	MCS0	2	181	6855	Full	11.33	12.15	14.77	4.10	18.87	30.00	Pass	
HE20	MCS0	2	181	6855	26/8	1.68	2.23	4.97	4.10	9.07	30.00	Pass	
HE20	MCS0	2	181	6855	52/40	4.59	5.31	7.98	4.10	12.08	30.00	Pass	
HE20	MCS0	2	181	6855	106/54	8.02	8.45	11.25	4.10	15.35	30.00	Pass	
HE40	MCS0	2	123	6565	Full	11.69	12.22	14.97	4.10	19.07	30.00	Pass	
HE40	MCS0	2	123	6565	242/61	8.96	9.48	12.24	4.10	16.34	30.00	Pass	
HE40	MCS0	2	147	6685	Full	11.64	12.20	14.94	4.10	19.04	30.00	Pass	
HE40	MCS0	2	147	6685	242/61	8.96	9.43	12.21	4.10	16.31	30.00	Pass	
HE40	MCS0	2	179	6845	Full	11.85	12.20	15.04	4.10	19.14	30.00	Pass	
HE40	MCS0	2	179	6845	242/62	8.82	9.14	11.99	4.10	16.09	30.00	Pass	
HE80	MCS0	2	135	6625	Full	11.04	12.00	14.56	4.10	18.66	30.00	Pass	
HE80	MCS0	2	135	6625	484/65	8.10	9.01	11.59	4.10	15.69	30.00	Pass	
HE80	MCS0	2	151	6705	Full	11.68	12.48	15.11	4.10	19.21	30.00	Pass	
HE80	MCS0	2	151	6705	484/65	8.75	9.44	12.12	4.10	16.22	30.00	Pass	
HE80	MCS0	2	167	6785	Full	11.83	12.48	15.18	4.10	19.28	30.00	Pass	
HE80	MCS0	2	167	6785	484/66	9.10	9.54	12.34	4.10	16.44	30.00	Pass	
HE160	MCS0	2	143	6665	Full	11.90	12.20	15.06	4.10	19.16	30.00	Pass	
HE160	MCS0	2	143	6665	996/67	9.04	9.38	12.22	4.10	16.32	30.00	Pass	

TEST RESULTS DATA
EIRP Power Spectral Density

U-NII-7 MIMO												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Conducted Power Density (dBm/MHz)		DG (dBi)		EIRP Power Density (dBm/MHz)	EIRP Power Density Limit (dBm/MHz)	Pass /Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2		
HE20	MCS0	2	117	6535	Full			3.16	7.06	10.22	17.00	Pass
HE20	MCS0	2	117	6535	26/0			2.95	7.06	10.01	17.00	Pass
HE20	MCS0	2	117	6535	52/37			2.80	7.06	9.86	17.00	Pass
HE20	MCS0	2	117	6535	106/53			2.96	7.06	10.02	17.00	Pass
HE20	MCS0	2	149	6695	Full			2.53	7.06	9.59	17.00	Pass
HE20	MCS0	2	149	6695	26/4			2.23	7.06	9.29	17.00	Pass
HE20	MCS0	2	149	6695	52/38			2.48	7.06	9.54	17.00	Pass
HE20	MCS0	2	149	6695	106/53			2.46	7.06	9.52	17.00	Pass
HE20	MCS0	2	181	6855	Full			2.33	7.06	9.39	17.00	Pass
HE20	MCS0	2	181	6855	26/8			2.05	7.06	9.11	17.00	Pass
HE20	MCS0	2	181	6855	52/40			2.07	7.06	9.13	17.00	Pass
HE20	MCS0	2	181	6855	106/54			2.17	7.06	9.23	17.00	Pass
HE40	MCS0	2	123	6565	Full			0.19	7.06	7.25	17.00	Pass
HE40	MCS0	2	123	6565	242/61			-0.22	7.06	6.85	17.00	Pass
HE40	MCS0	2	147	6685	Full			-0.07	7.06	6.99	17.00	Pass
HE40	MCS0	2	147	6685	242/61			-0.46	7.06	6.60	17.00	Pass
HE40	MCS0	2	179	6845	Full			-0.27	7.06	6.79	17.00	Pass
HE40	MCS0	2	179	6845	242/62			-0.81	7.06	6.25	17.00	Pass
HE80	MCS0	2	135	6625	Full			-3.42	7.06	3.64	17.00	Pass
HE80	MCS0	2	135	6625	484/65			-3.74	7.06	3.32	17.00	Pass
HE80	MCS0	2	151	6705	Full			-2.81	7.06	4.25	17.00	Pass
HE80	MCS0	2	151	6705	484/65			-3.25	7.06	3.81	17.00	Pass
HE80	MCS0	2	167	6785	Full			-2.62	7.06	4.44	17.00	Pass
HE80	MCS0	2	167	6785	484/66			-2.91	7.06	4.16	17.00	Pass
HE160	MCS0	2	143	6665	Full			-6.08	7.06	0.98	17.00	Pass
HE160	MCS0	2	143	6665	996/67			-6.37	7.06	0.69	17.00	Pass

**Test Result of 26dB & 99% Occupied Bandwidth****MIMO <Ant. 1+2>****<802.11a>**

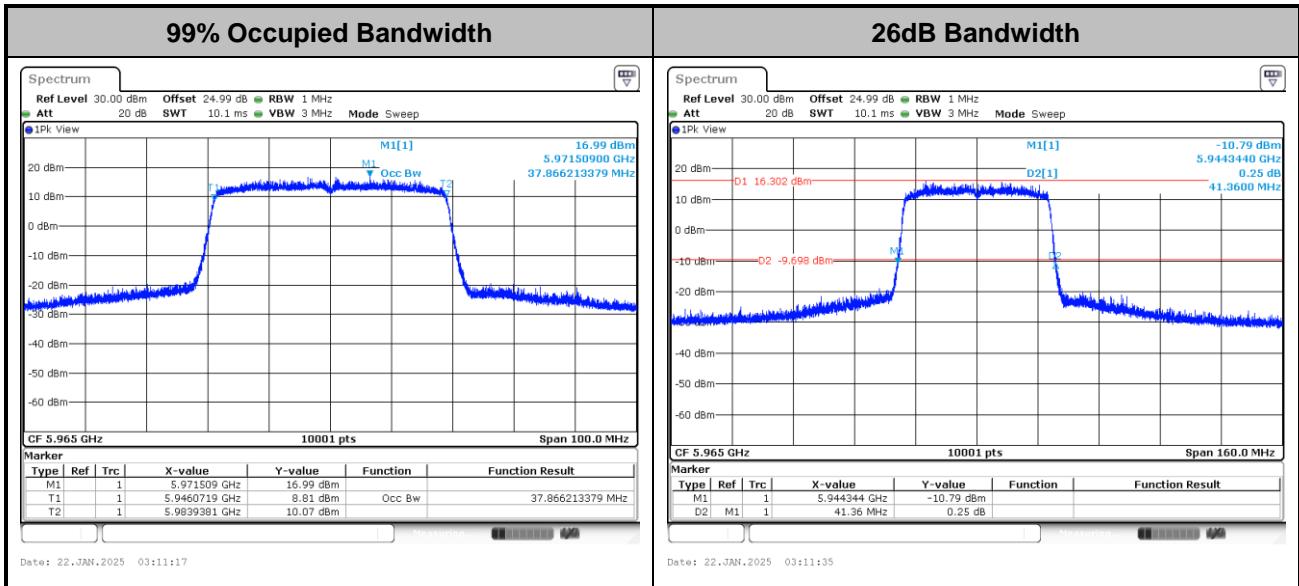
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

<802.11ax HE20>

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

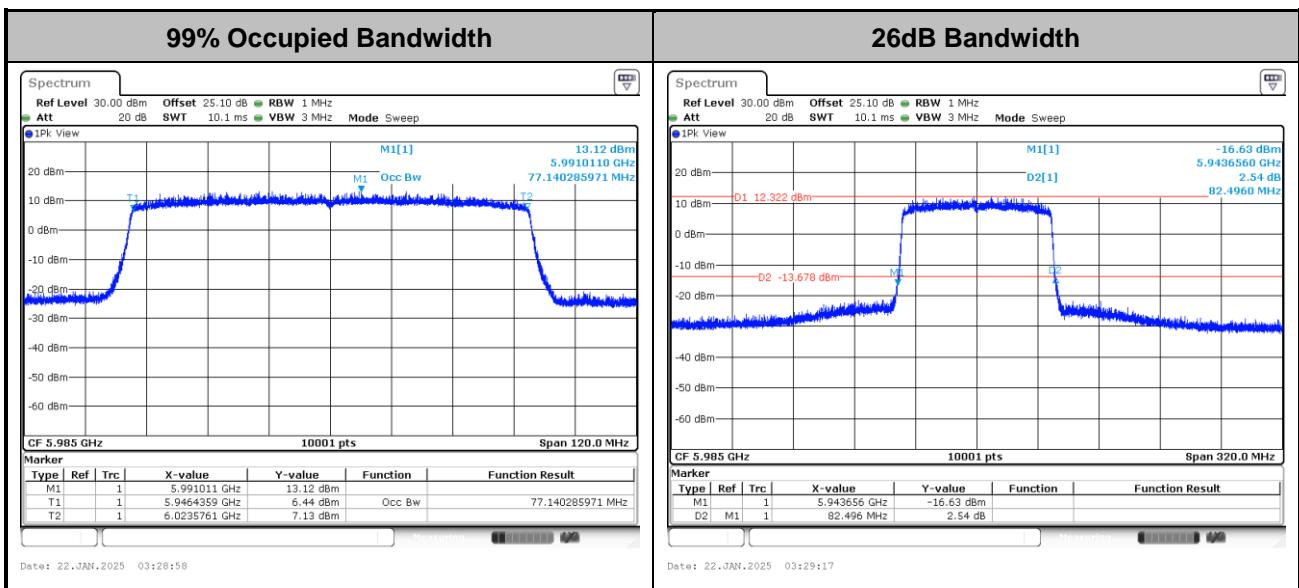


<802.11ax HE40>



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

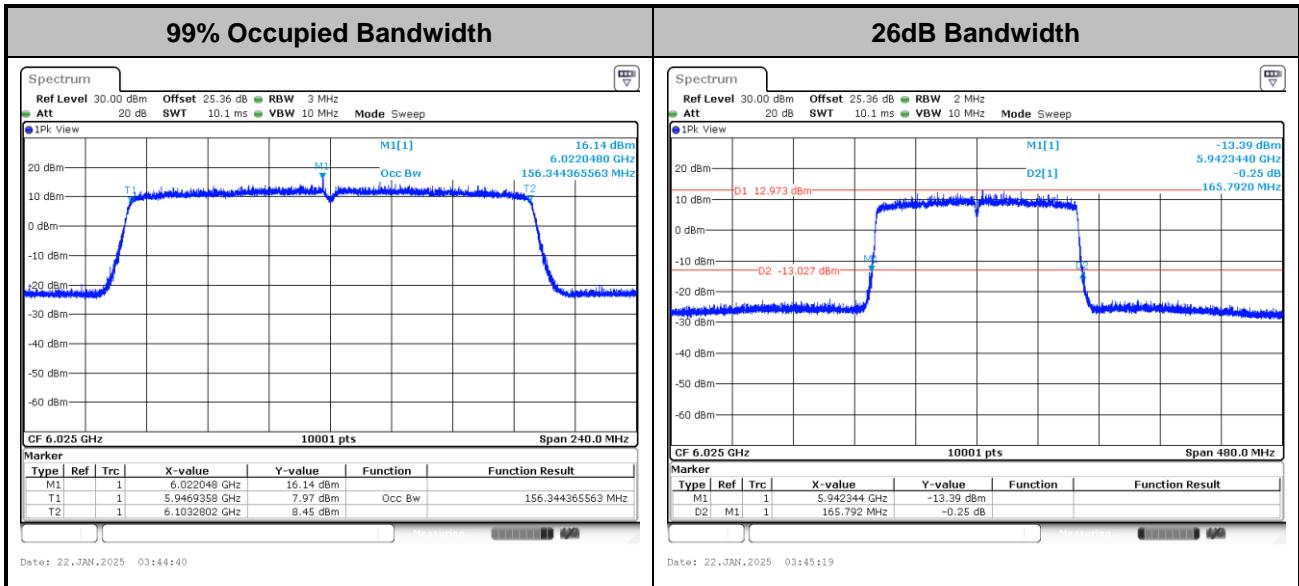
<802.11ax HE80>



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



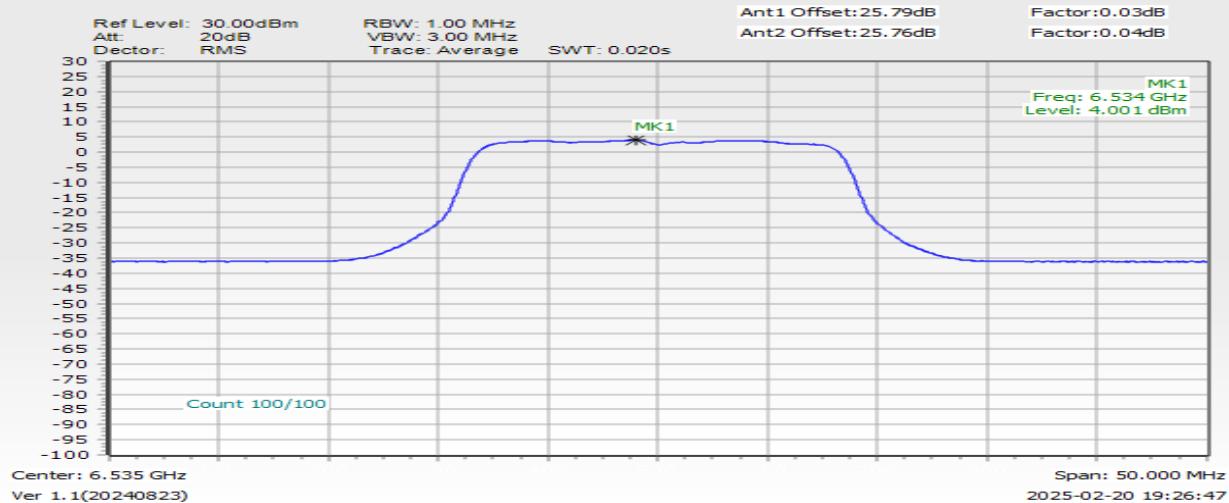
<802.11ax HE160>



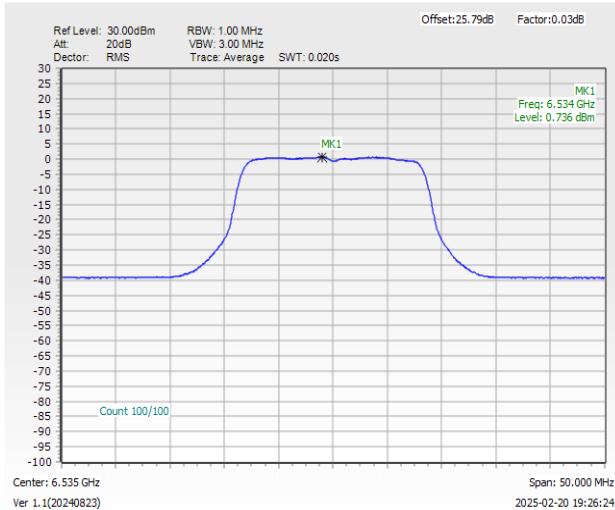
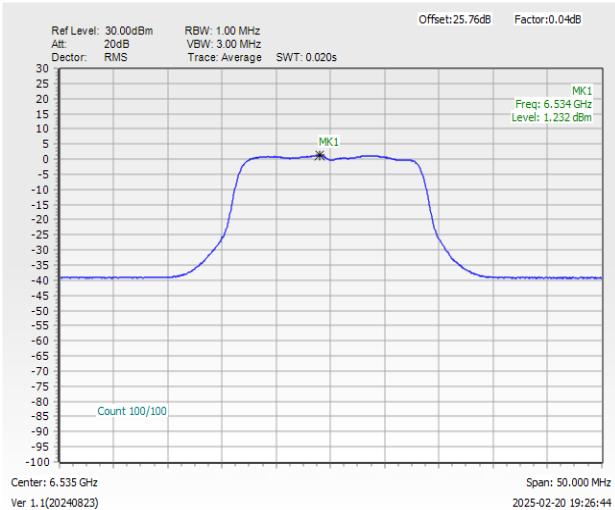
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

**Test Result of Power Spectral Density**

<802.11a>

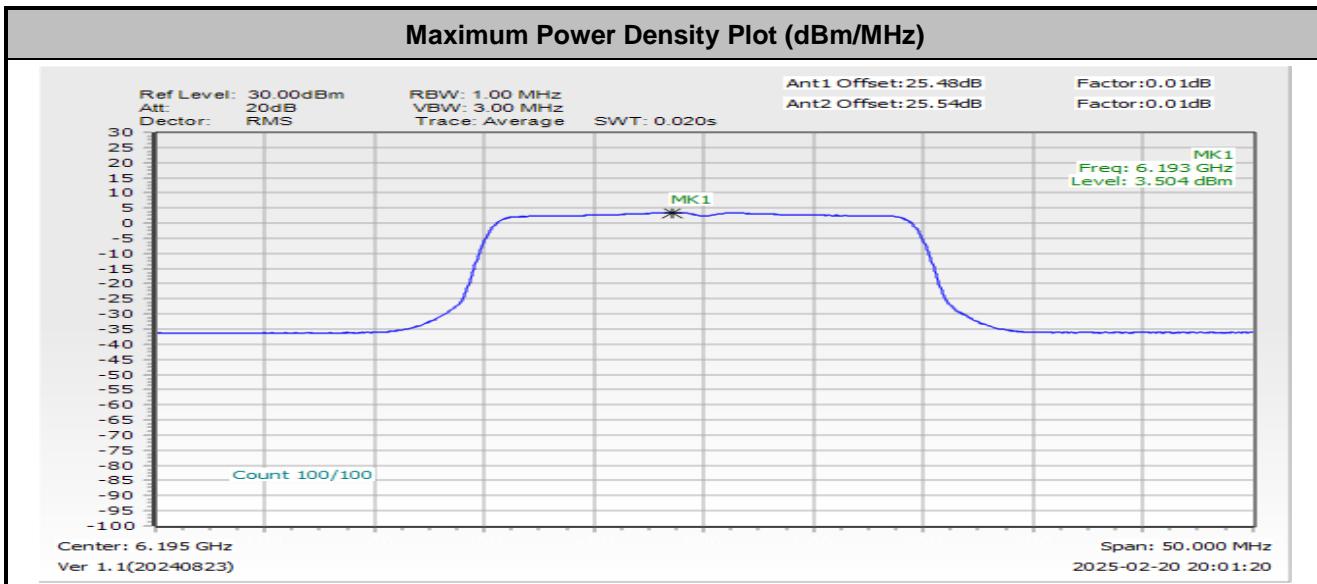
Maximum Power Density Plot (dBm/MHz)**Note:**

1. EIRP Power Density (dBm/MHz) = Measured value + Duty Factor + Directional Gain
2. The test plot is showing a bin by bin combined result mathematically adds two traces.

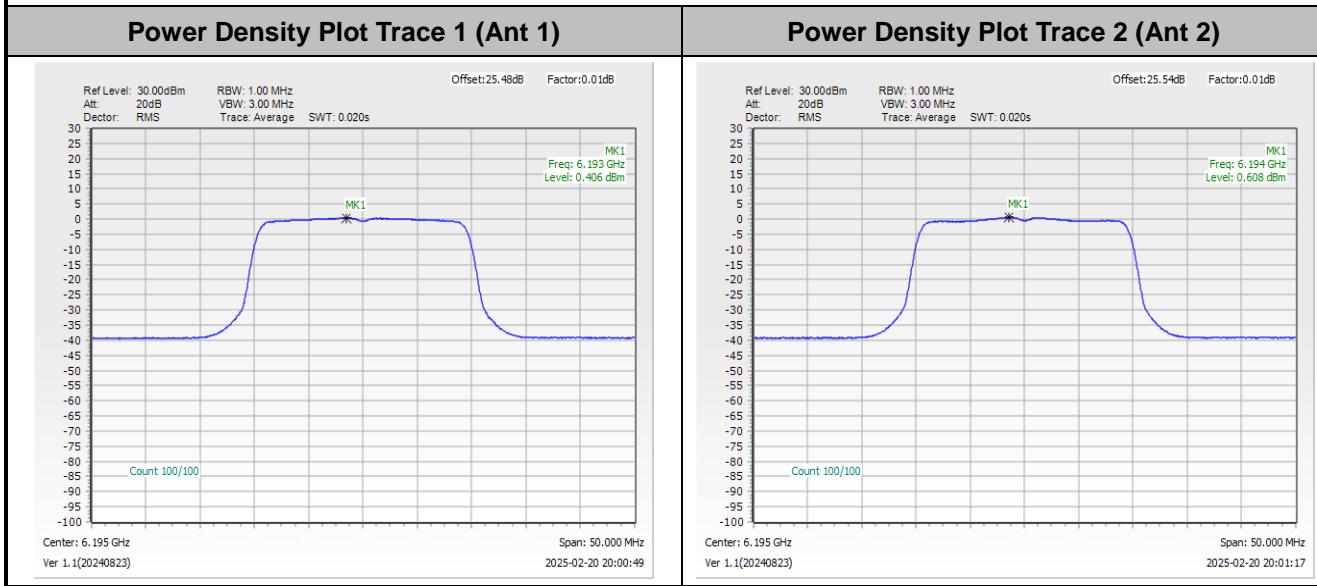
Power Density Plot Trace 1 (Ant 1)**Power Density Plot Trace 2 (Ant 2)**



<802.11ax HE20>

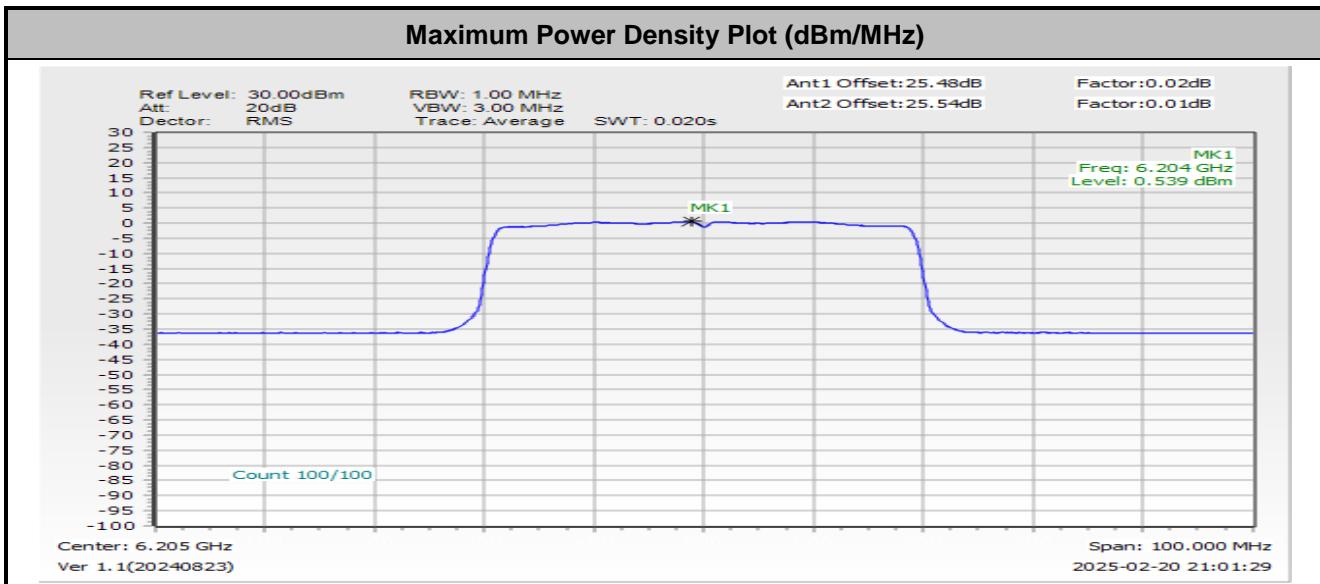
**Note:**

1. EIRP Power Density (dBm/MHz) = Measured value + Duty Factor + Directional Gain
2. The test plot is showing a bin by bin combined result mathematically adds two traces.

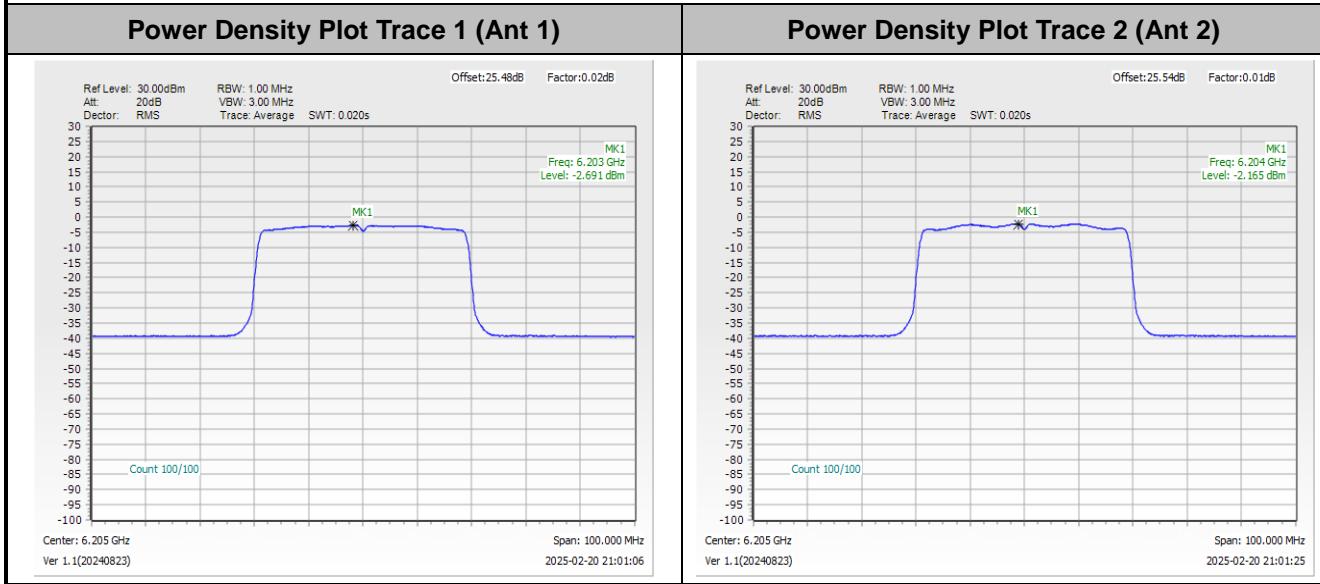




<802.11ax HE40>

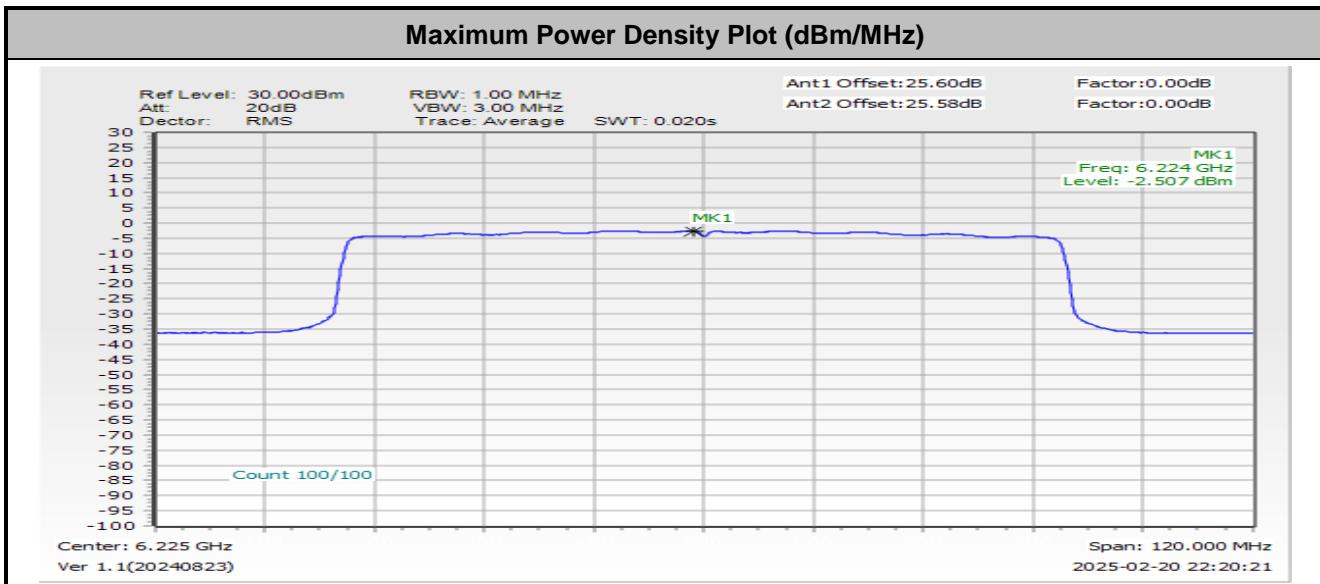
**Note:**

1. EIRP Power Density (dBm/MHz) = Measured value + Duty Factor + Directional Gain
2. The test plot is showing a bin by bin combined result mathematically adds two traces.

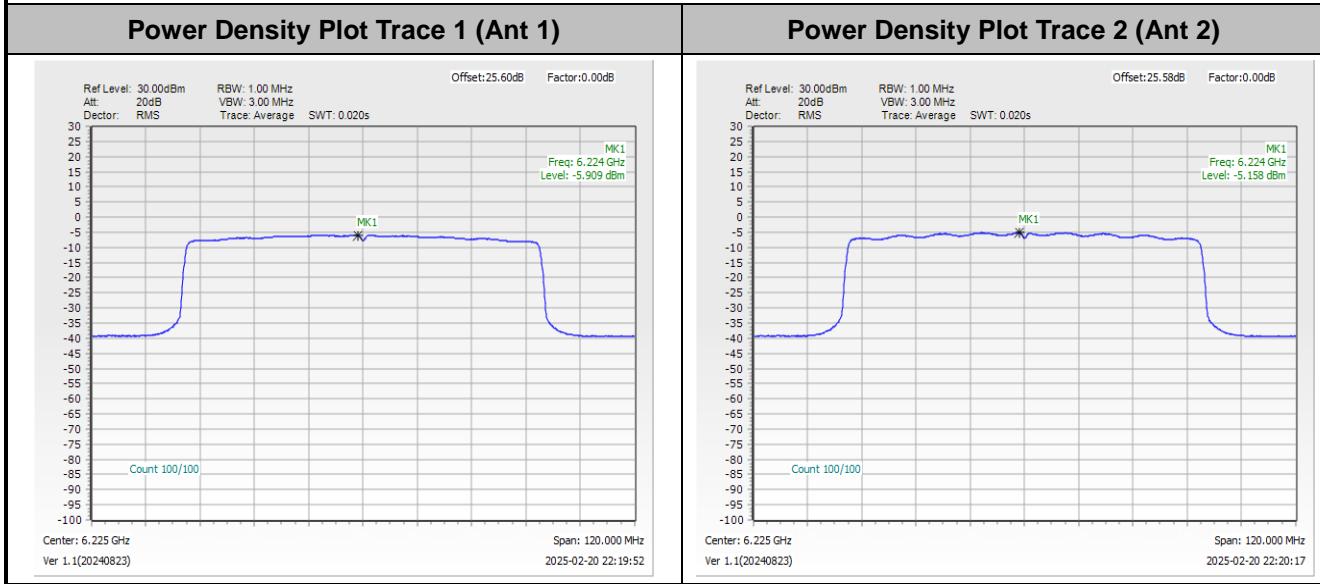




<802.11ax HE80>

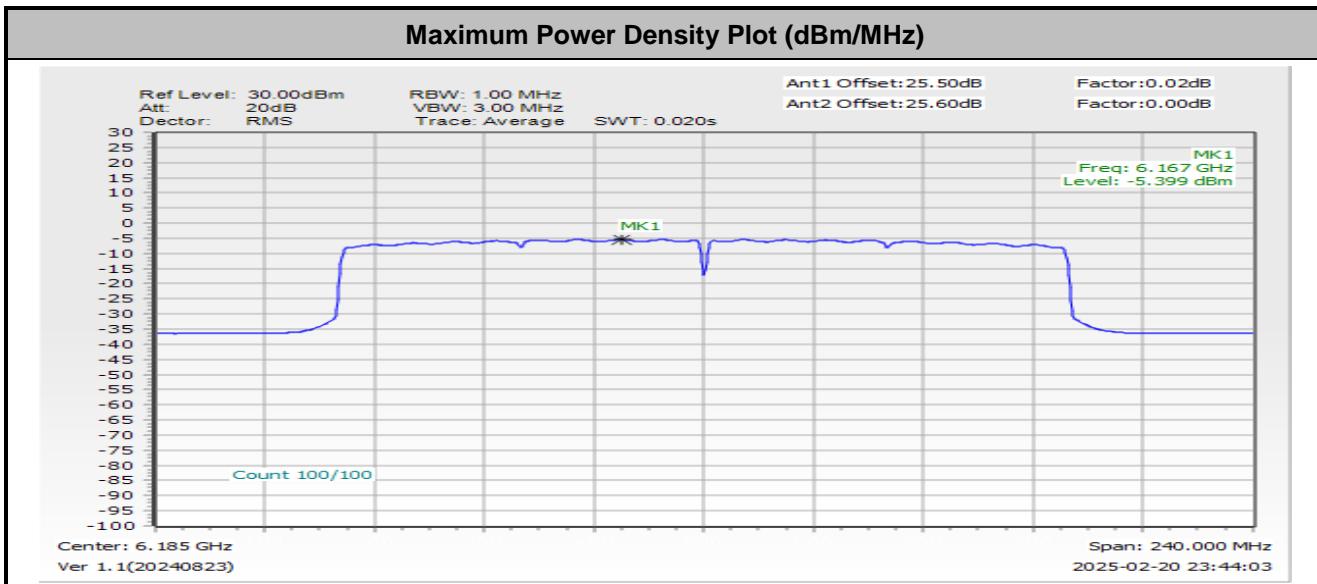
**Note:**

1. EIRP Power Density (dBm/MHz) = Measured value + Duty Factor + Directional Gain
2. The test plot is showing a bin by bin combined result mathematically adds two traces.

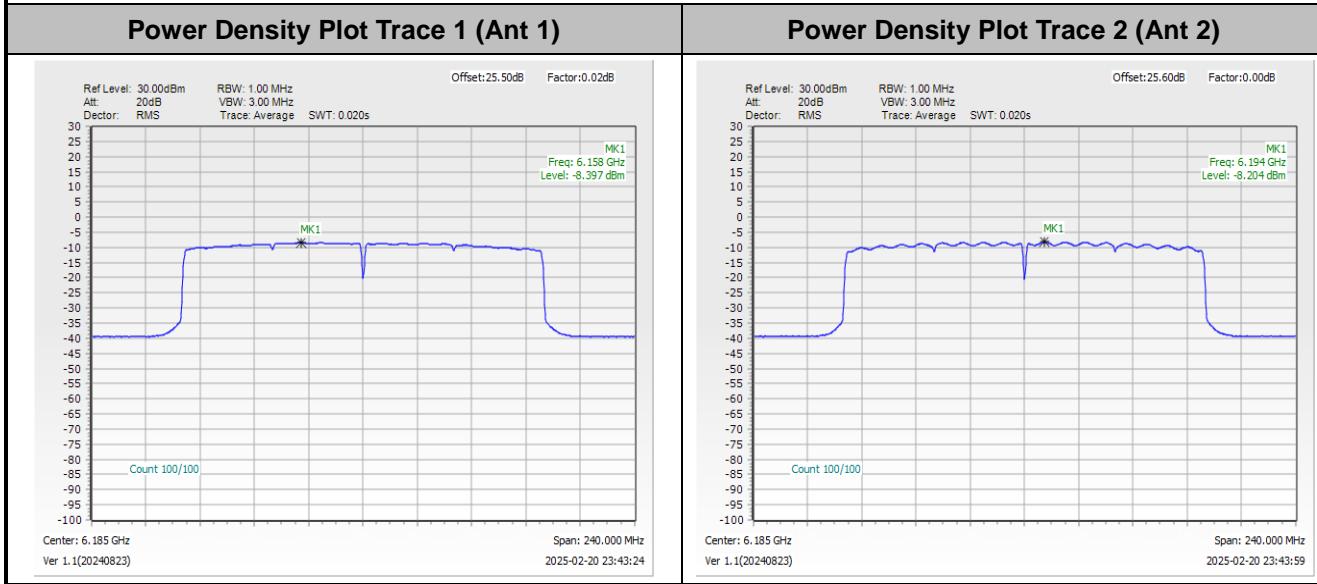




<802.11ax HE160>

**Note:**

1. EIRP Power Density (dBm/MHz) = Measured value + Duty Factor + Directional Gain
2. The test plot is showing a bin by bin combined result mathematically adds two traces.

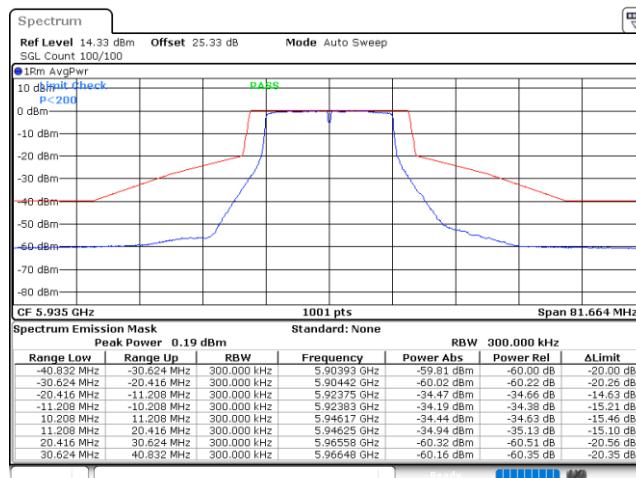




In-Band Emissions (Channel Mask)

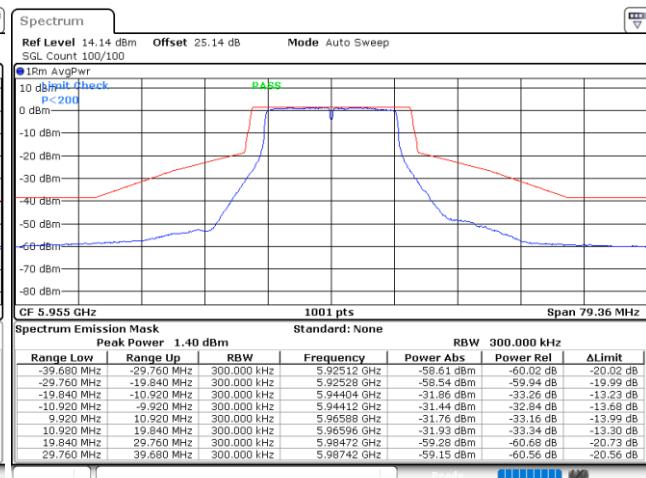
MIMO <Ant. 1+2(1)>**EUT Mode** 802.11a

Plot on Channel 5935 MHz



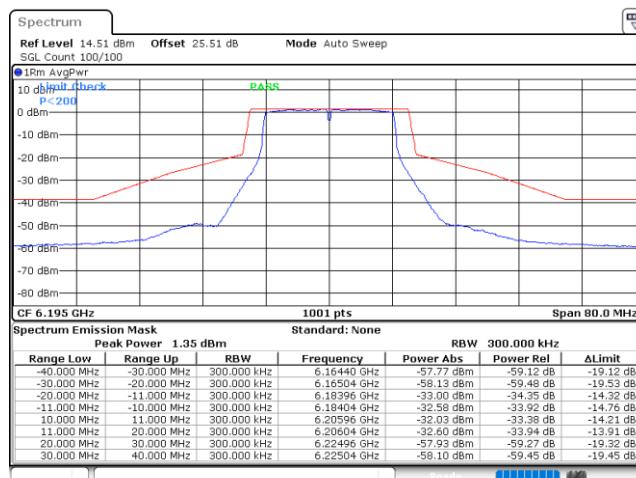
Date: 22.JAN.2025 02:27:13

Plot on Channel 5955 MHz



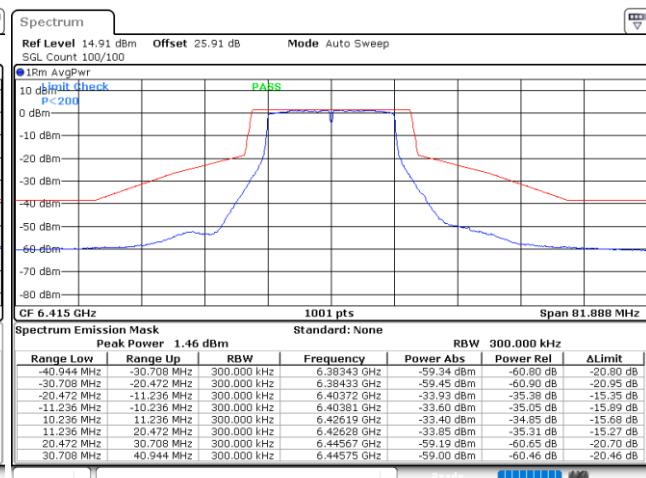
Date: 22.JAN.2025 02:24:20

Plot on Channel 6195 MHz



Date: 22.JAN.2025 02:30:05

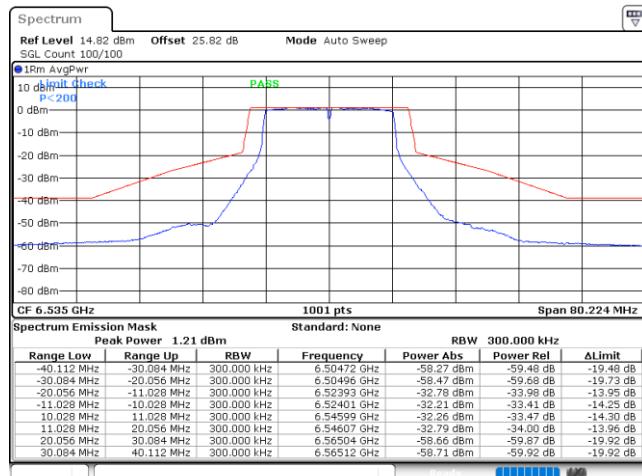
Plot on Channel 6415 MHz



Date: 22.JAN.2025 02:32:28

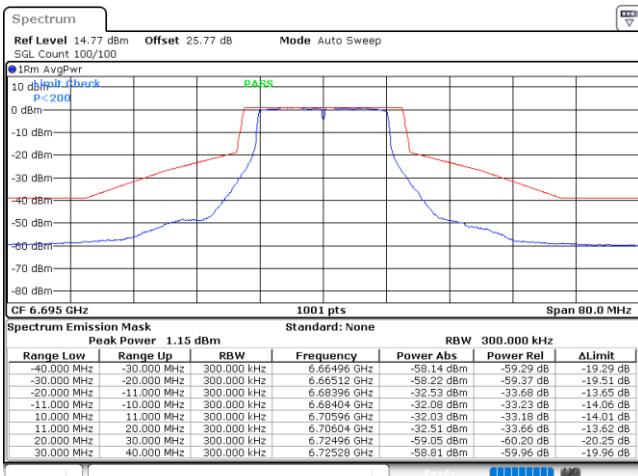


Plot on Channel 6535 MHz



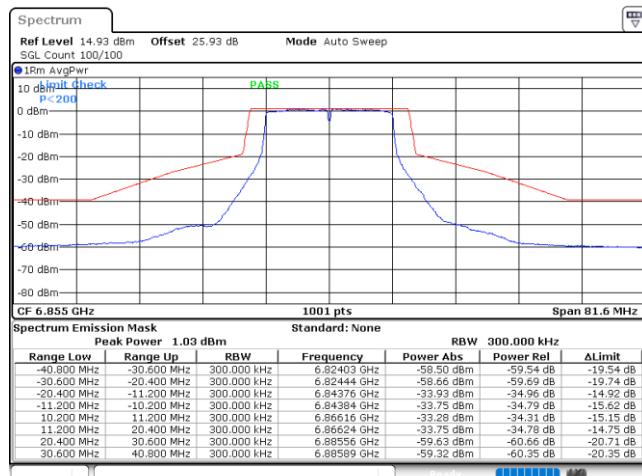
Date: 22.JAN.2025 02:35:50

Plot on Channel 6695 MHz



Date: 22.JAN.2025 02:38:30

Plot on Channel 6855 MHz



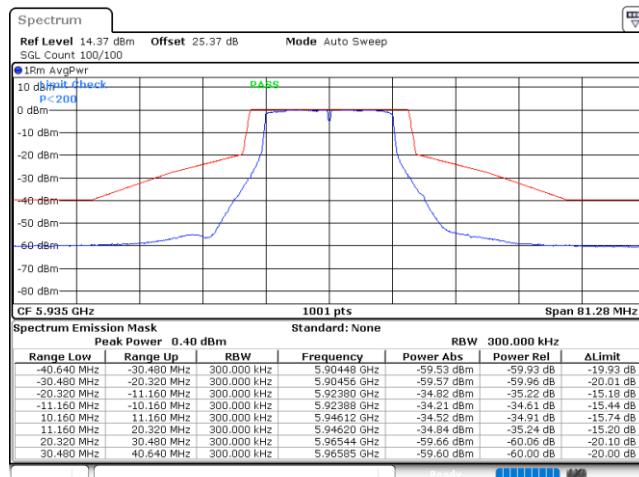
Date: 22.JAN.2025 02:41:17



MIMO <Ant. 1+2(2)>

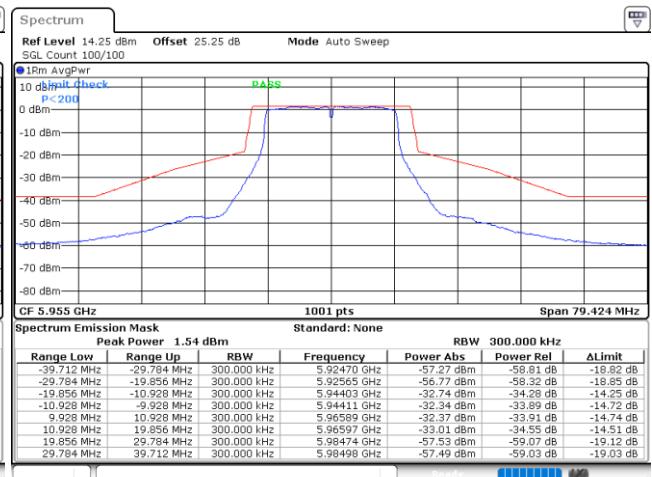
EUT Mode 802.11a

Plot on Channel 5935 MHz



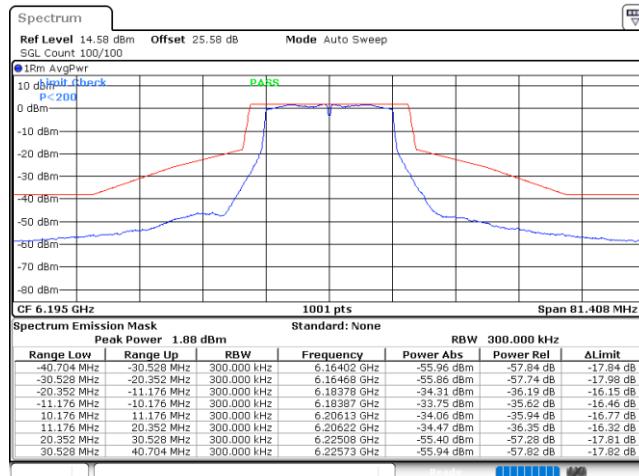
Date: 22.JAN.2025 02:20:12

Plot on Channel 5955 MHz



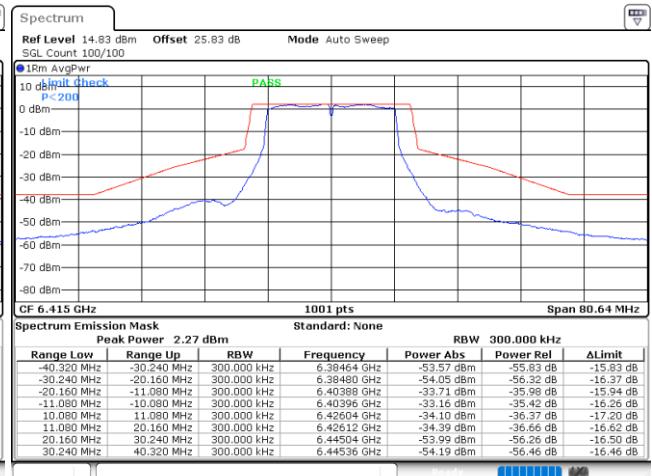
Date: 22.JAN.2025 02:25:22

Plot on Channel 6195 MHz



Date: 22.JAN.2025 02:31:00

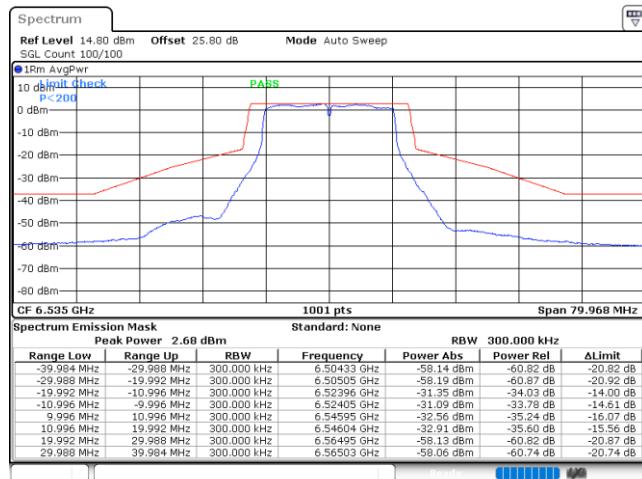
Plot on Channel 6415 MHz



Date: 22.JAN.2025 02:33:45

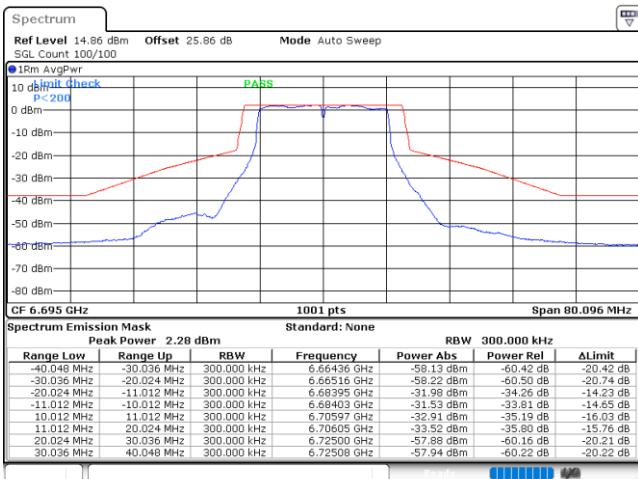


Plot on Channel 6535 MHz



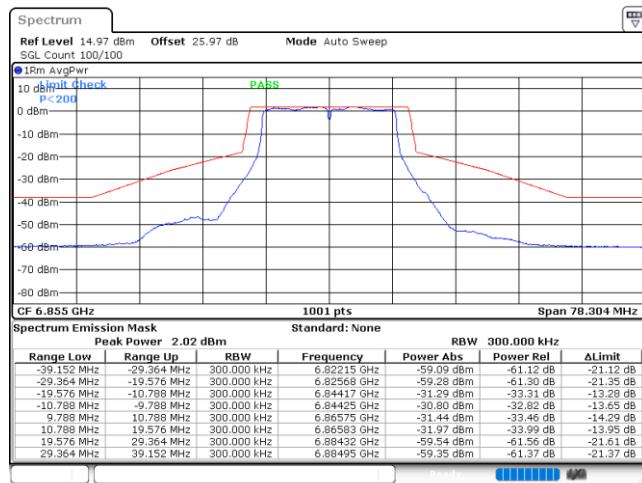
Date: 22.JAN.2025 02:36:57

Plot on Channel 6695 MHz



Date: 22.JAN.2025 02:39:28

Plot on Channel 6855 MHz



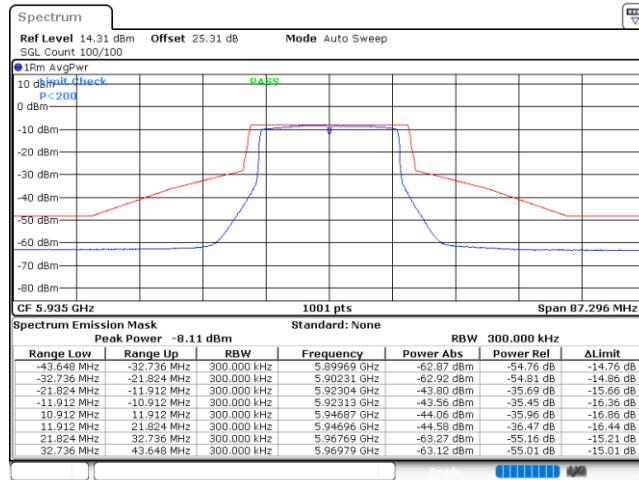
Date: 22.JAN.2025 02:42:31



MIMO <Ant. 1+2(1)>

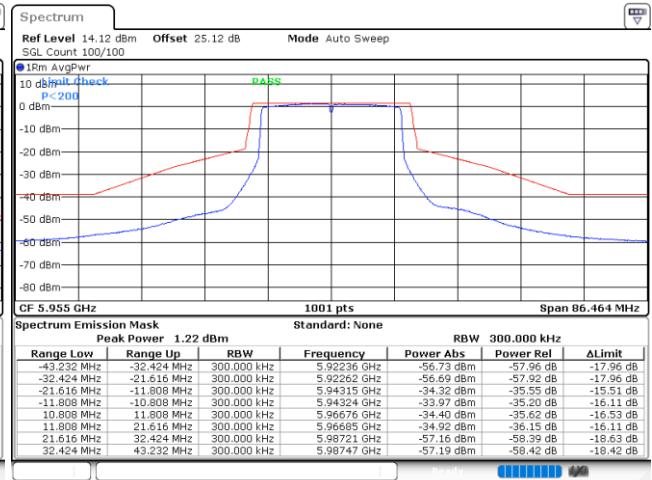
EUT Mode 802.11ax HE20 FullIRU

Plot on Channel 5935 MHz



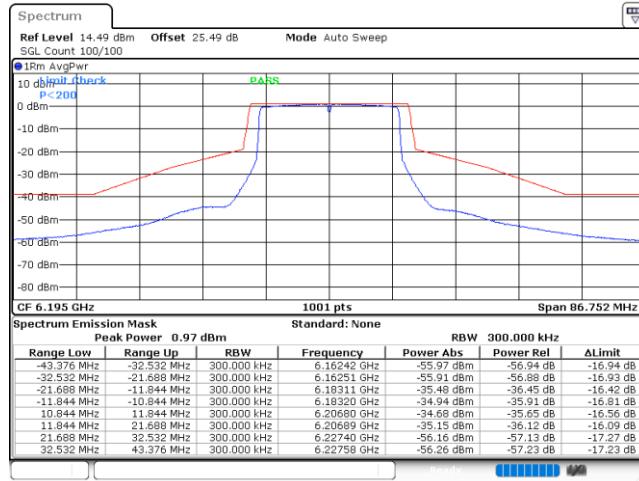
Date: 22.JAN.2025 02:47:33

Plot on Channel 5955 MHz



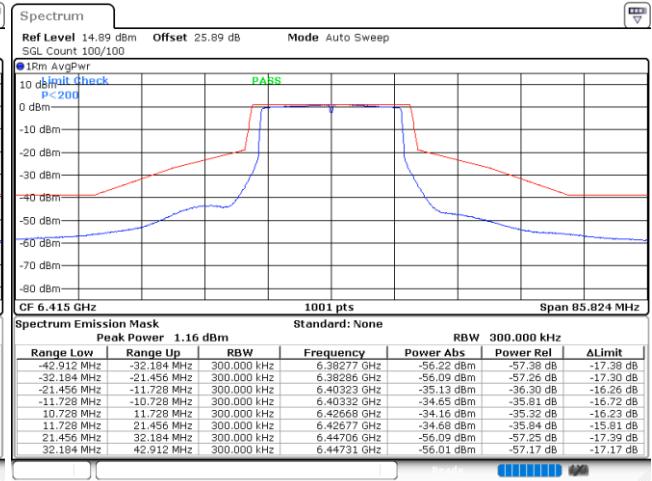
Date: 22.JAN.2025 02:44:56

Plot on Channel 6195 MHz



Date: 22.JAN.2025 02:50:25

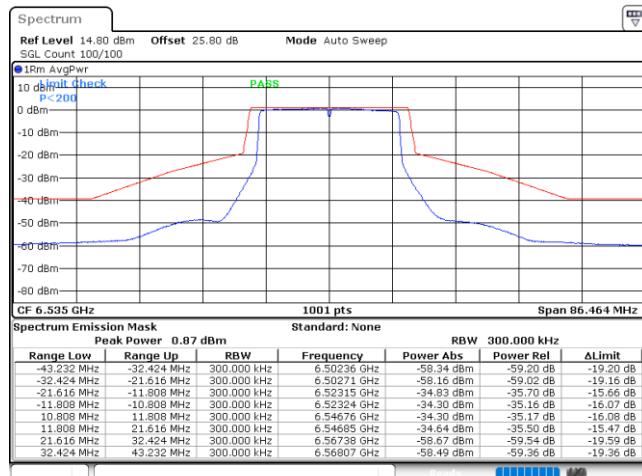
Plot on Channel 6415 MHz



Date: 22.JAN.2025 02:55:48

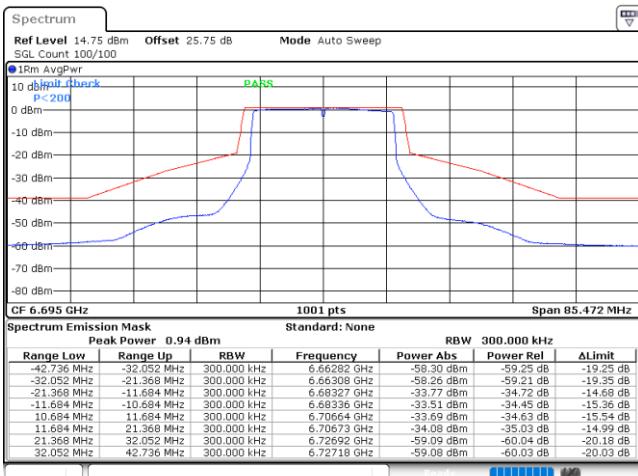


Plot on Channel 6535 MHz



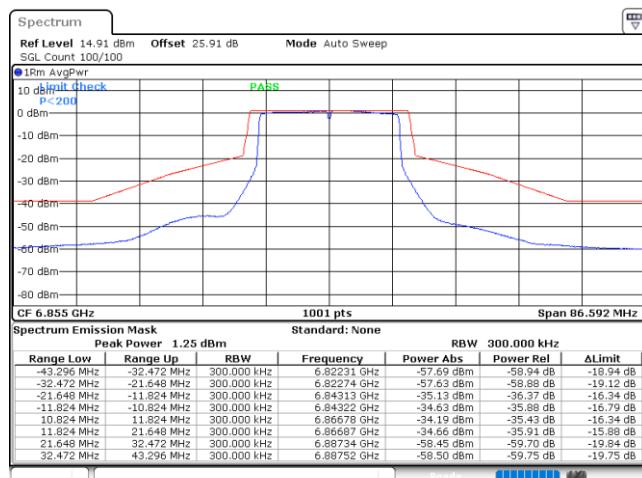
Date: 22.JAN.2025 03:03:39

Plot on Channel 6695 MHz



Date: 22.JAN.2025 03:06:26

Plot on Channel 6855 MHz



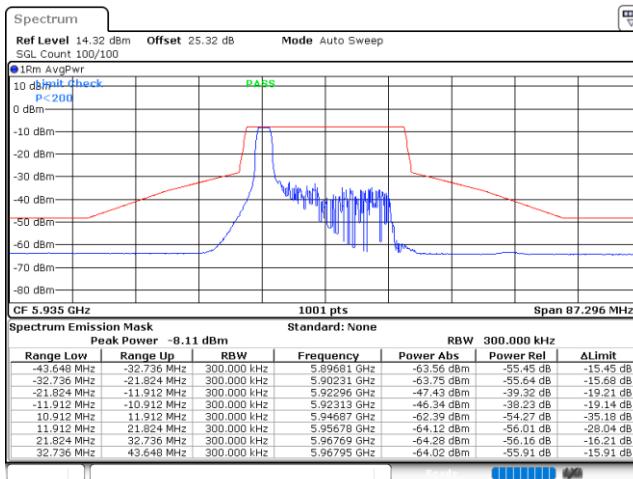
Date: 22.JAN.2025 03:09:00



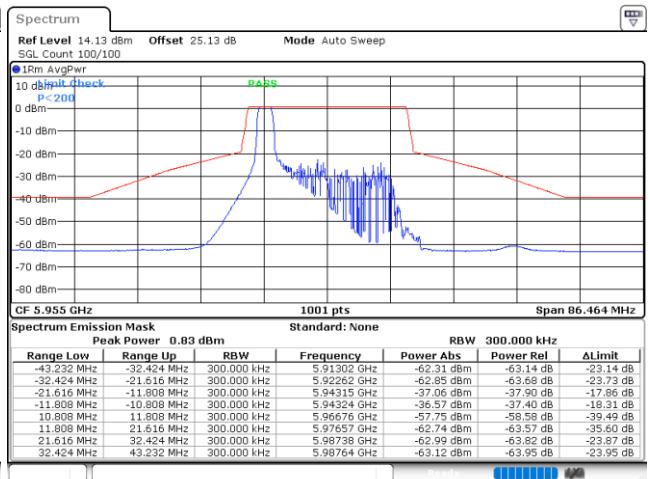
EUT Mode

802.11ax HE20 26RU0

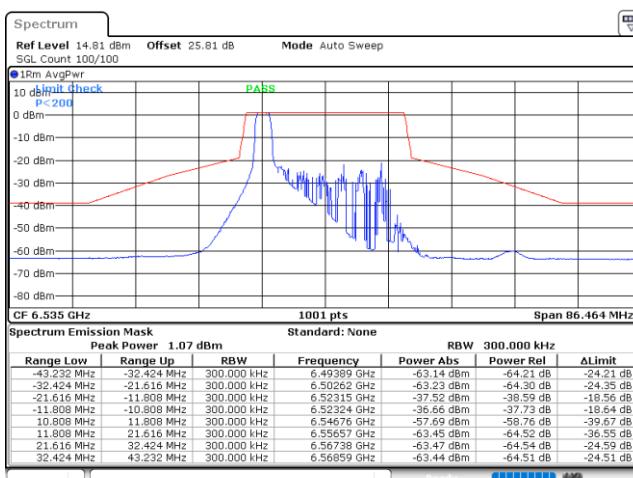
Plot on Channel 5935 MHz



Plot on Channel 5955 MHz



Plot on Channel 6535 MHz

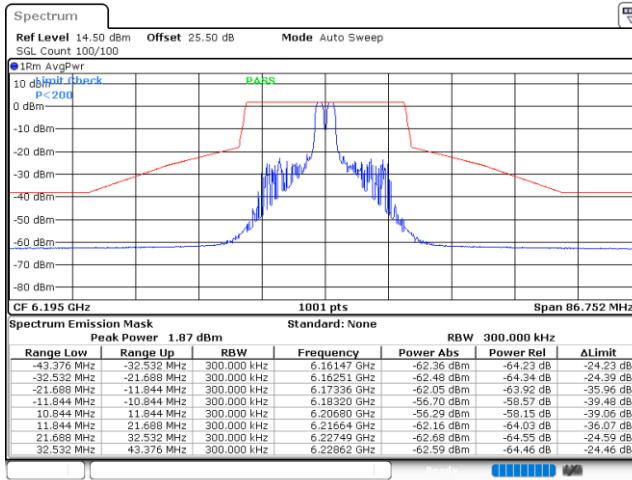




EUT Mode

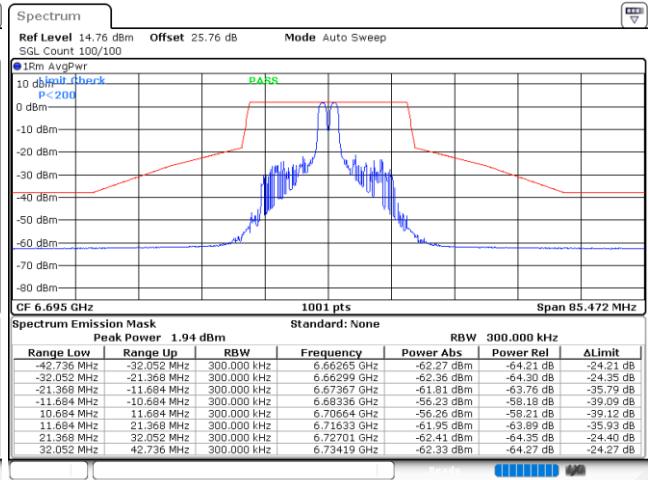
802.11ax HE20 26RU4

Plot on Channel 6195 MHz



Date: 22.JAN.2025 05:07:15

Plot on Channel 6695 MHz



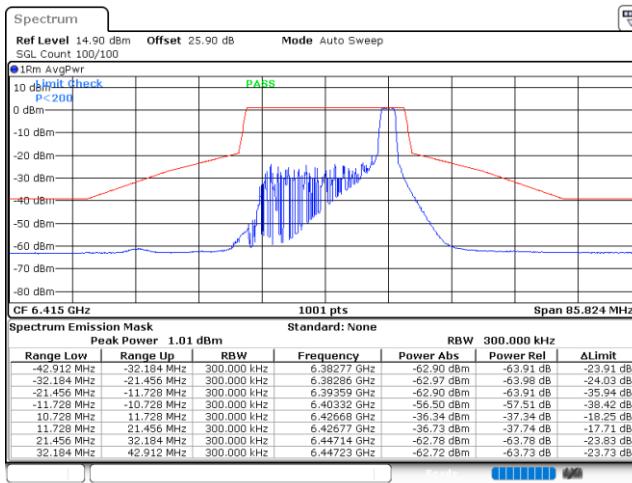
Date: 22.JAN.2025 05:27:17



EUT Mode

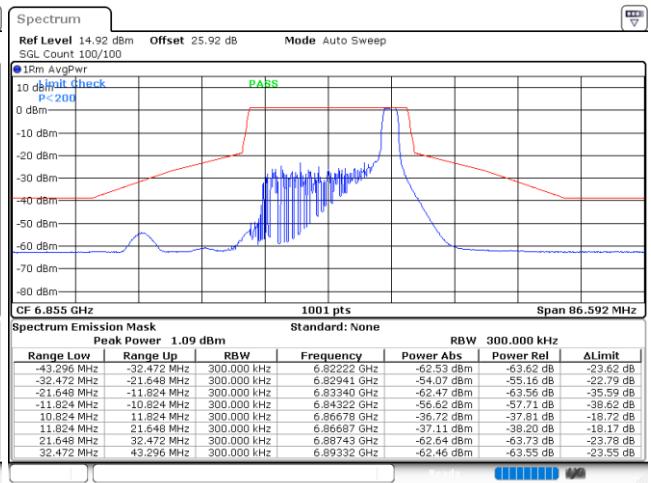
802.11ax HE20 26RU8

Plot on Channel 6415 MHz



Date: 22.JAN.2025 05:13:01

Plot on Channel 6855 MHz



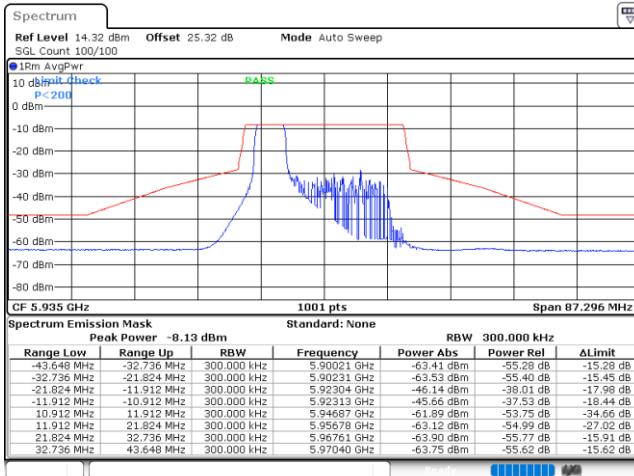
Date: 22.JAN.2025 05:36:10



EUT Mode

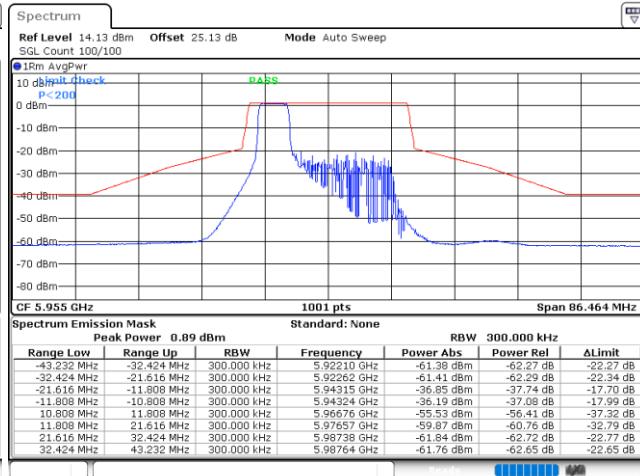
802.11ax HE20 52RU37

Plot on Channel 5935 MHz



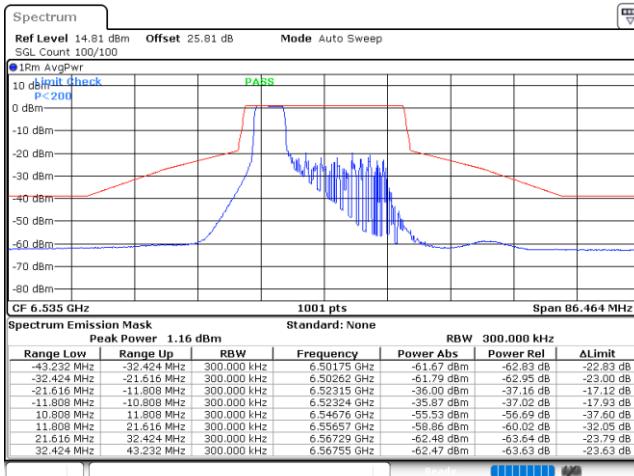
Date: 22.JAN.2025 05:02:32

Plot on Channel 5955 MHz



Date: 22.JAN.2025 04:56:03

Plot on Channel 6535 MHz



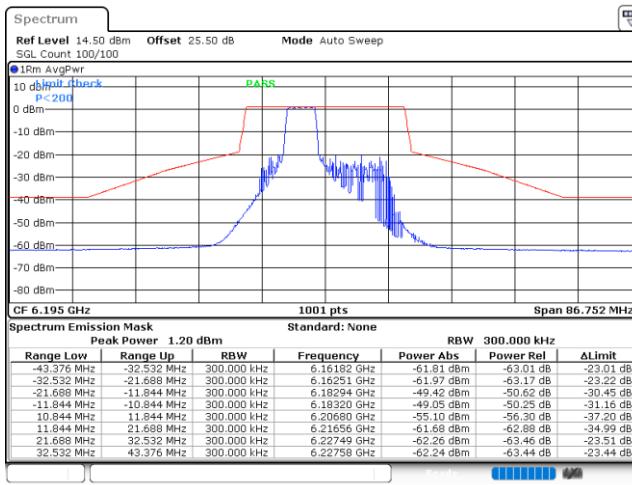
Date: 22.JAN.2025 05:21:29



EUT Mode

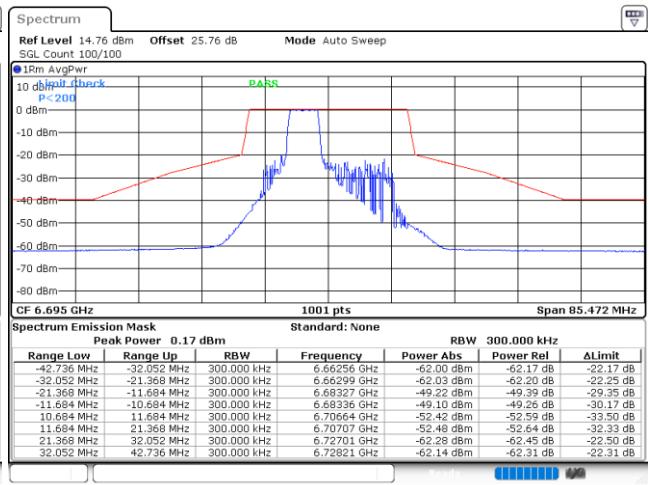
802.11ax HE20 52RU38

Plot on Channel 6195 MHz



Date: 22.JAN.2025 05:08:54

Plot on Channel 6695 MHz



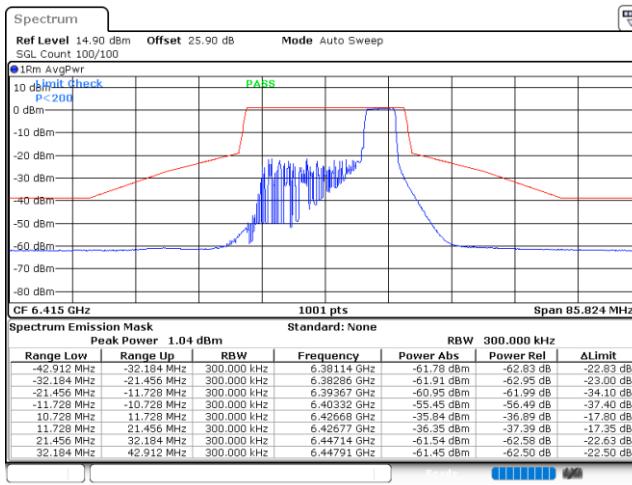
Date: 22.JAN.2025 05:29:33



EUT Mode

802.11ax HE20 52RU40

Plot on Channel 6415 MHz



Date: 22.JAN.2025 05:16:03

Plot on Channel 6855 MHz



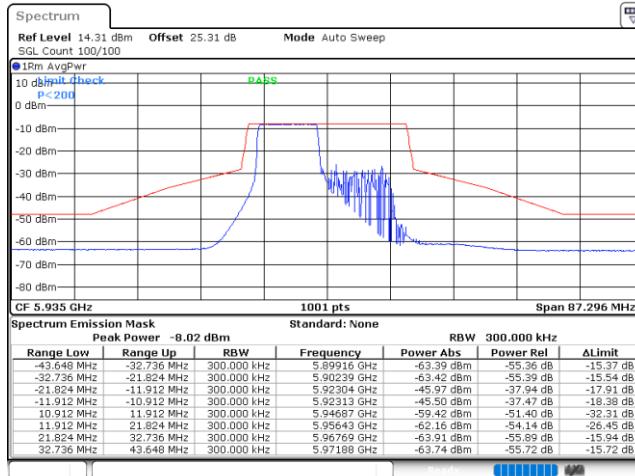
Date: 22.JAN.2025 05:39:30



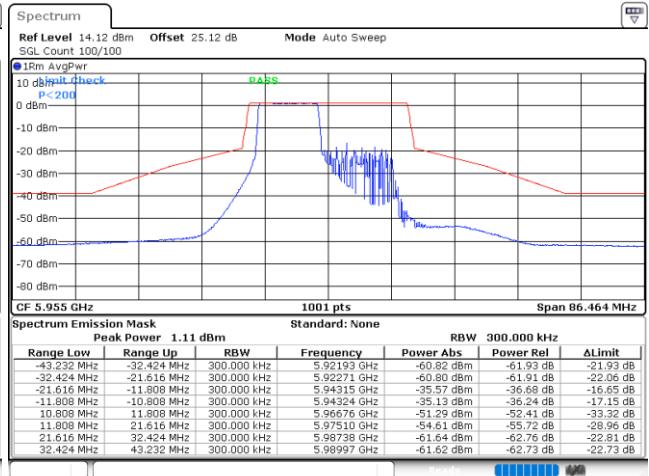
EUT Mode

802.11ax HE20 106RU53

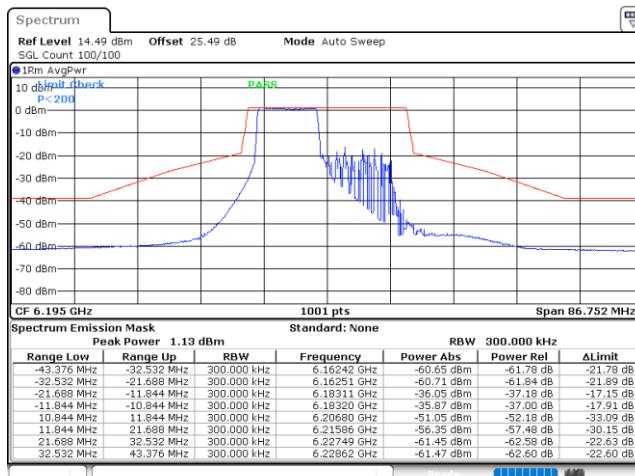
Plot on Channel 5935 MHz



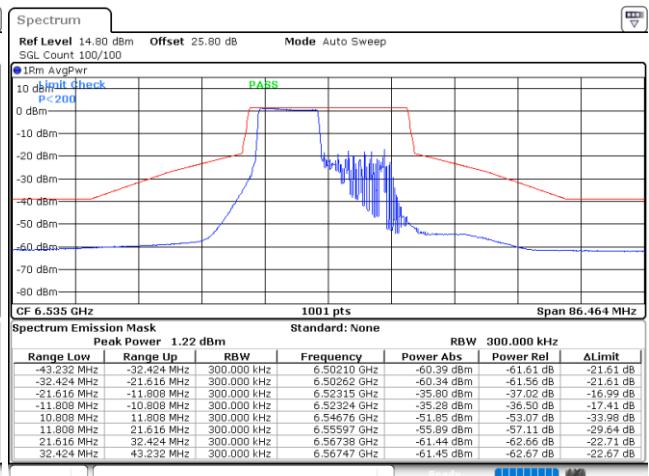
Plot on Channel 5955 MHz



Plot on Channel 6195 MHz

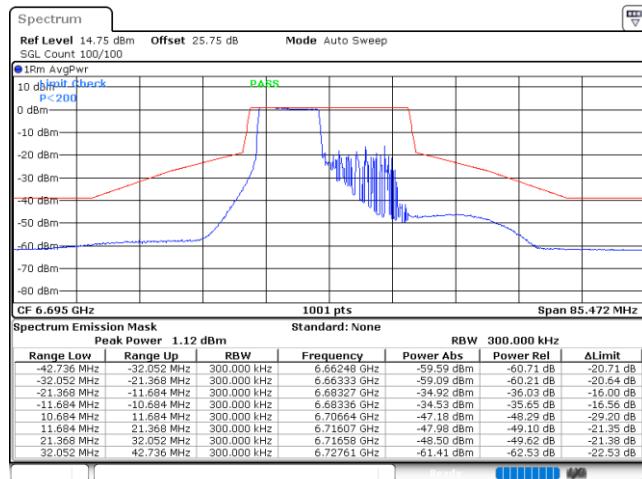


Plot on Channel 6535 MHz





Plot on Channel 6695 MHz



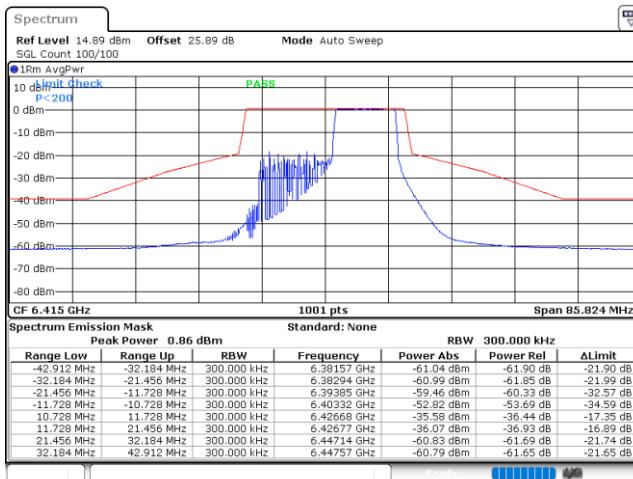
Date: 22.JAN.2025 05:32:09



EUT Mode

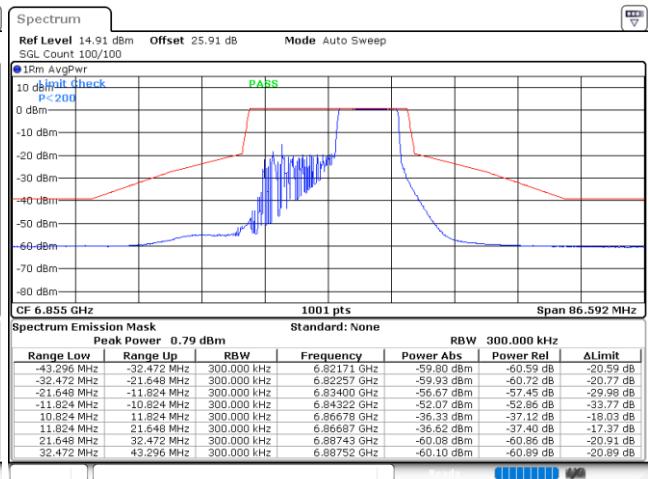
802.11ax HE20 106RU54

Plot on Channel 6415 MHz



Date: 22.JAN.2025 05:17:38

Plot on Channel 6855 MHz



Date: 22.JAN.2025 05:43:01