



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.

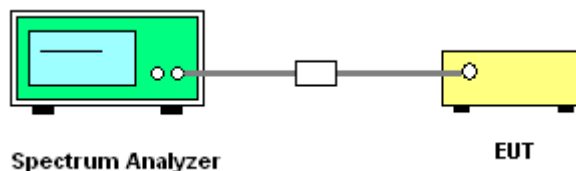
3.4.3 Test Procedures

The testing follows FCC KDB 987594 D02 U-NII 6GHz EMC Measurement v02r01.

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



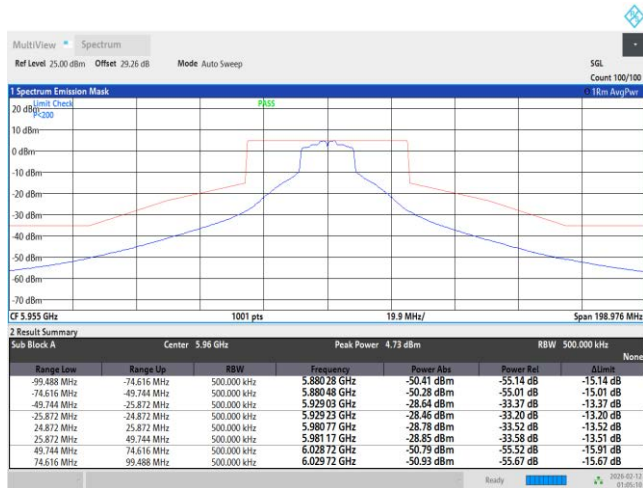


3.4.5 Test Result of In-Band Emissions (Channel Mask)

MIMO <Ant. 4+3 (4)>

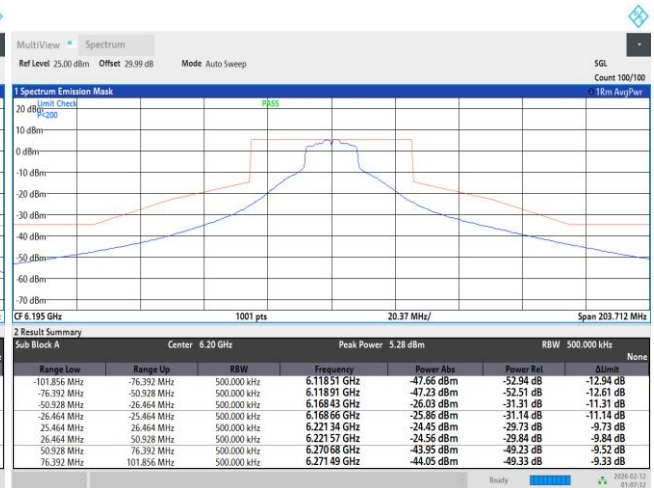
EUT Mode	802.11a
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Plot on 5955 MHz



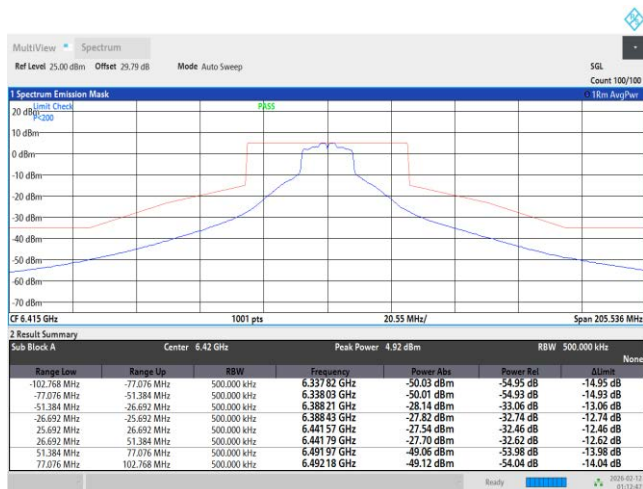
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Plot on 6195 MHz



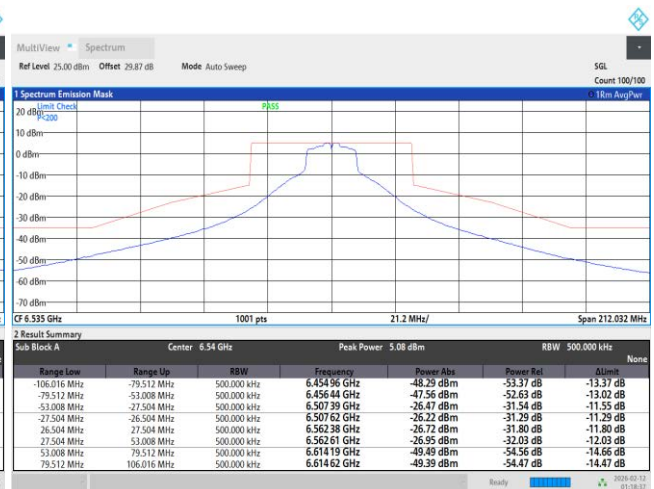
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Plot on 6415 MHz



01:12:48 AM 02/12/2026

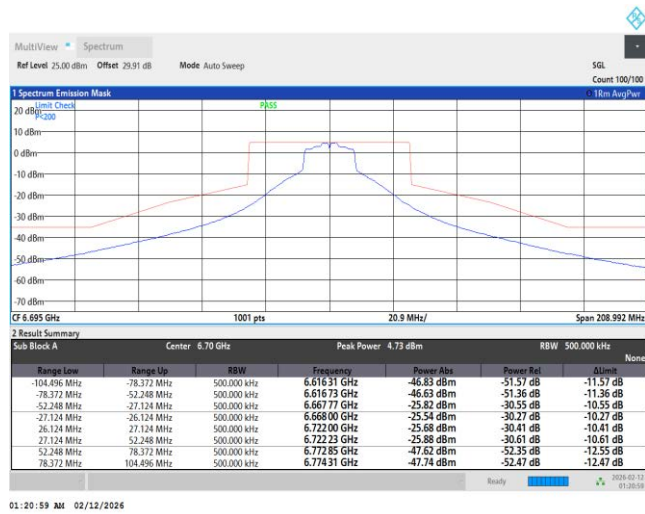
Plot on 6535 MHz



01:18:37 AM 02/12/2026

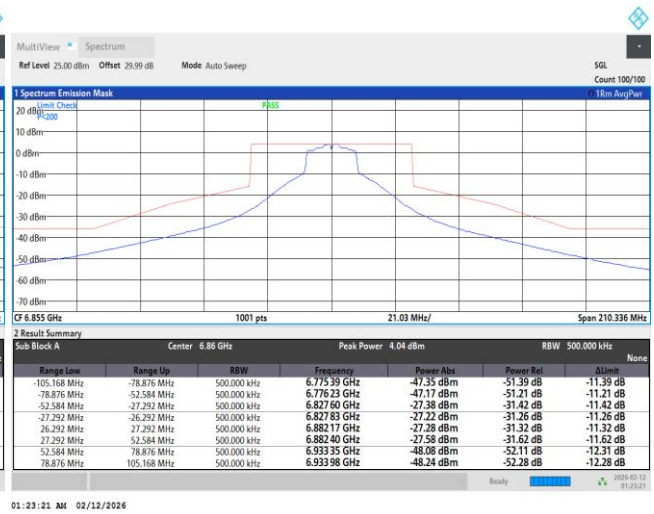


Plot on 6695 MHz

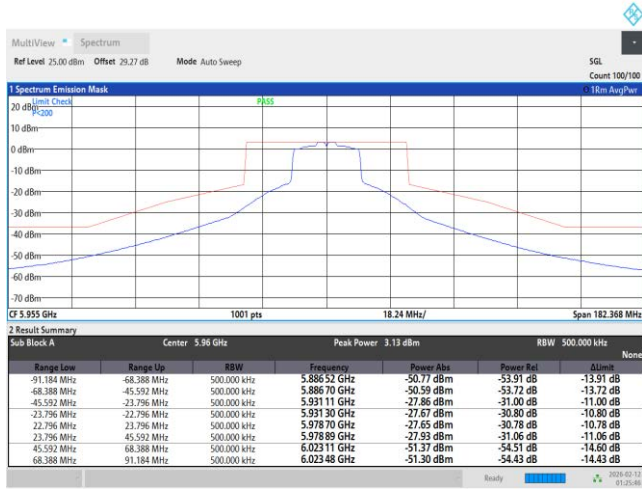


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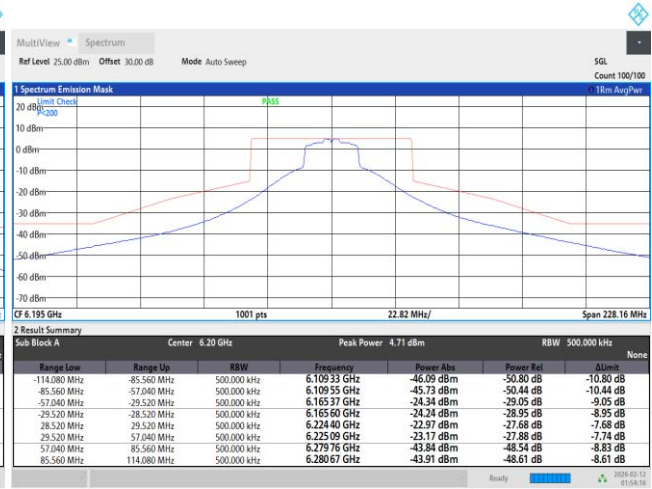
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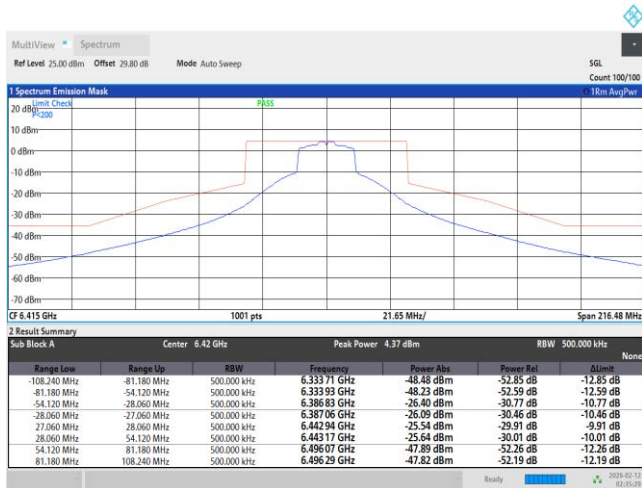
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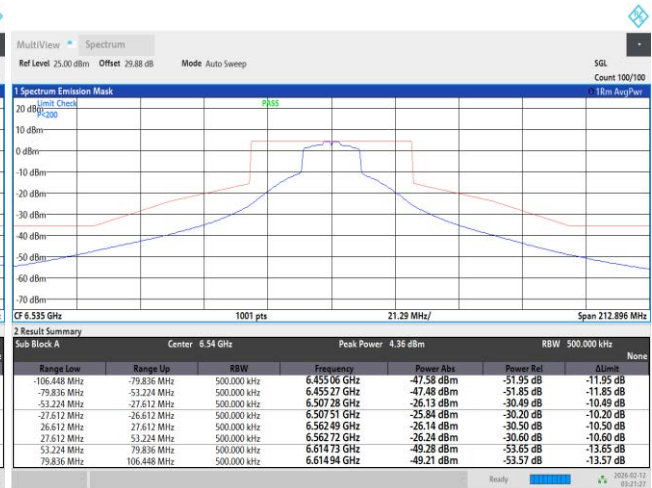
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Plot on 6195 MHz

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Plot on 6415 MHz

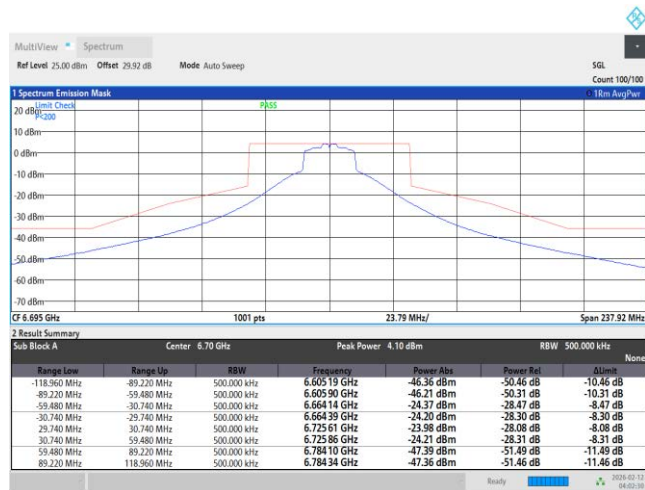
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Plot on 6535 MHz

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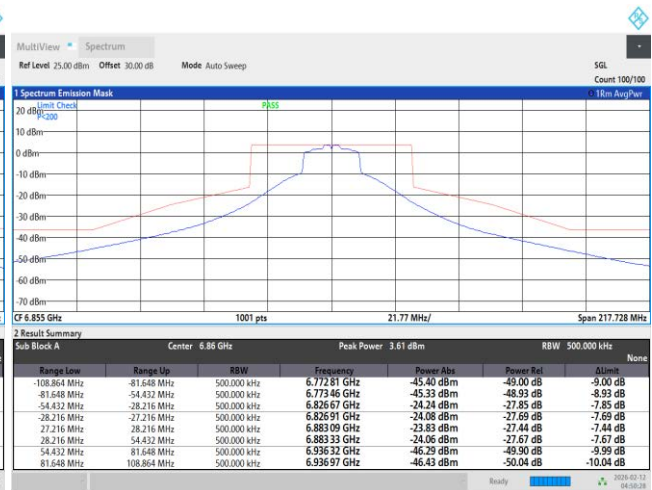


Plot on 6695 MHz



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Plot on 6855 MHz



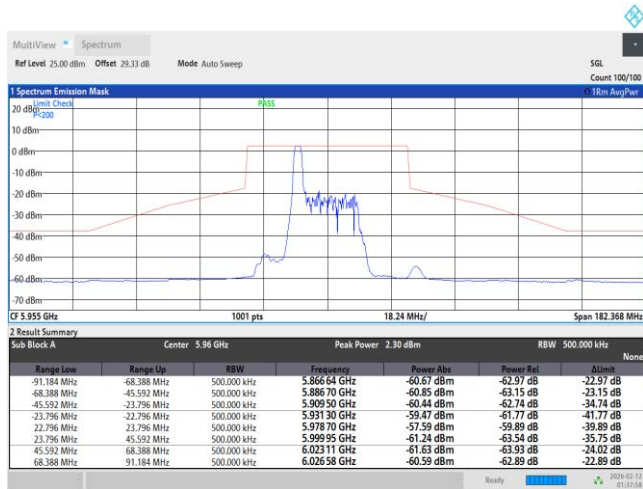
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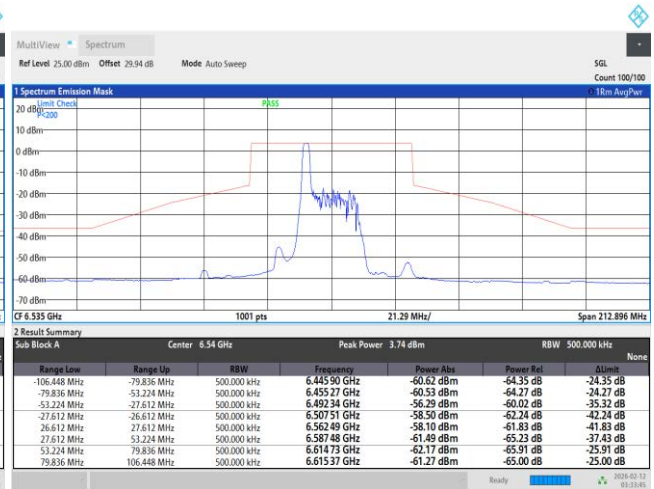
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Plot on 5955 MHz



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Plot on 6535 MHz

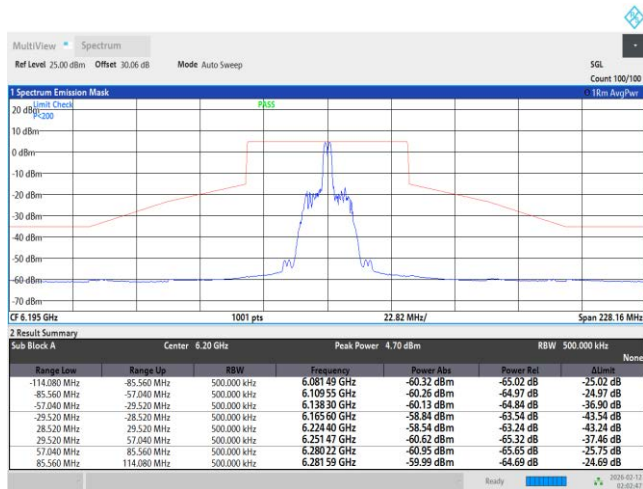


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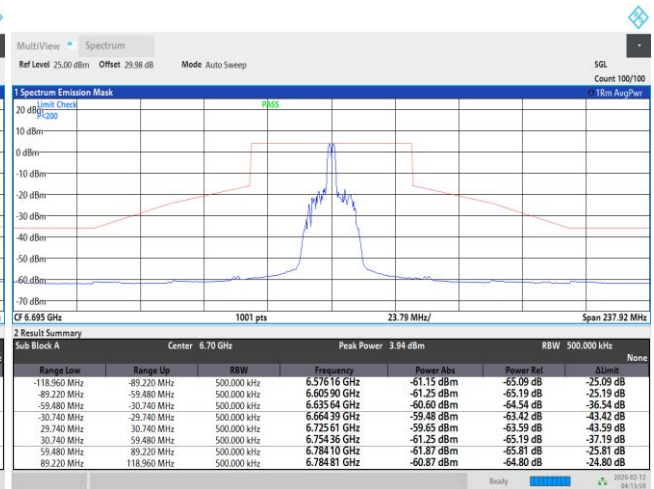
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Plot on 6695 MHz



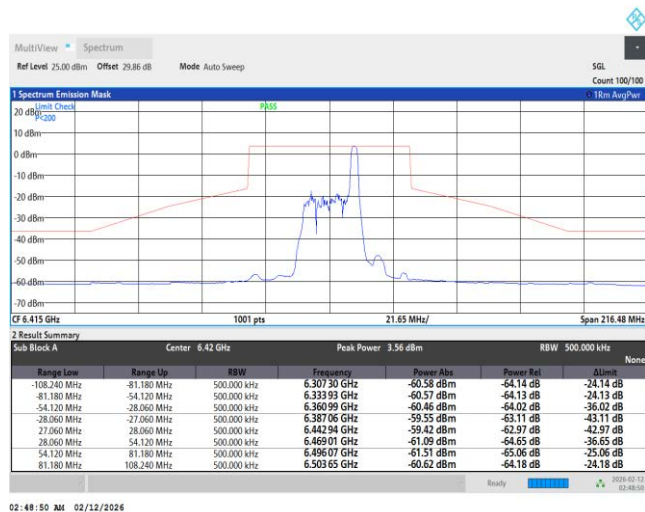
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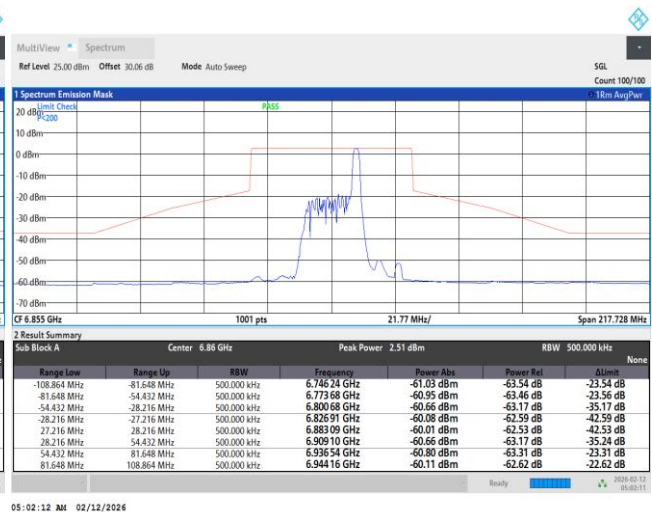
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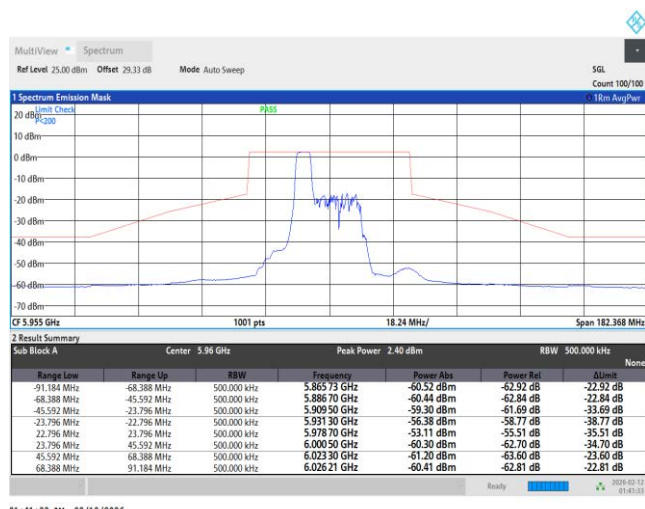


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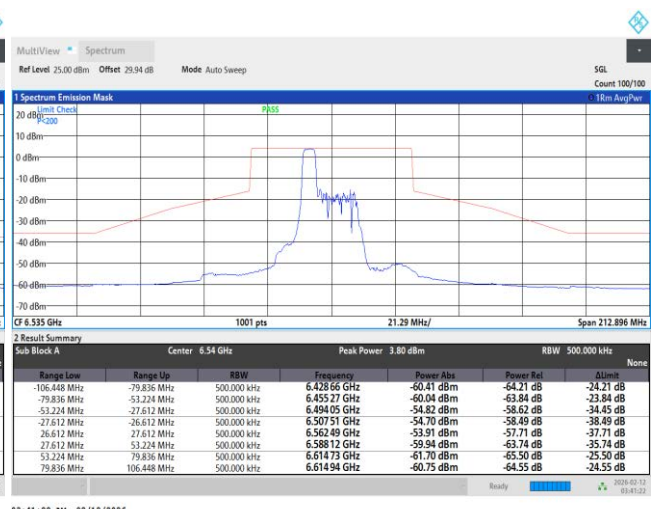
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Plot on 5955 MHz



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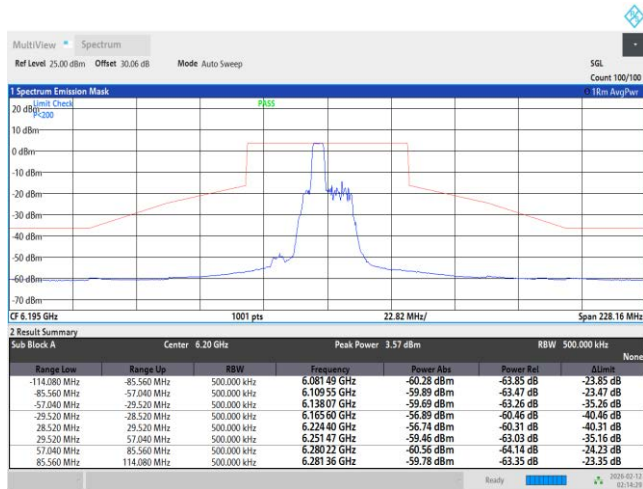
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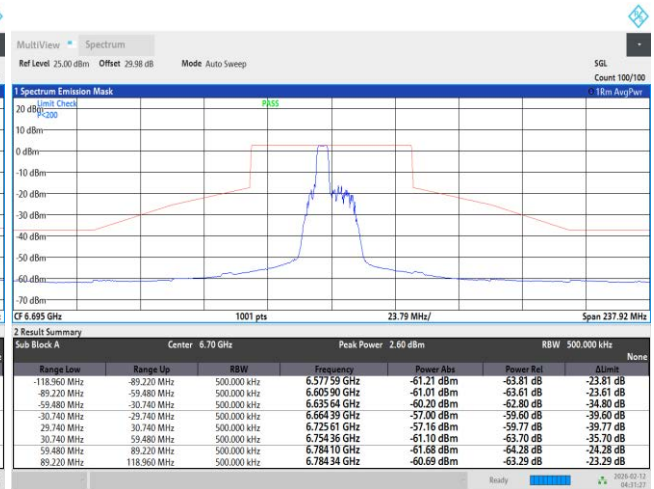
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Plot on 6195 MHz



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Plot on 6695 MHz

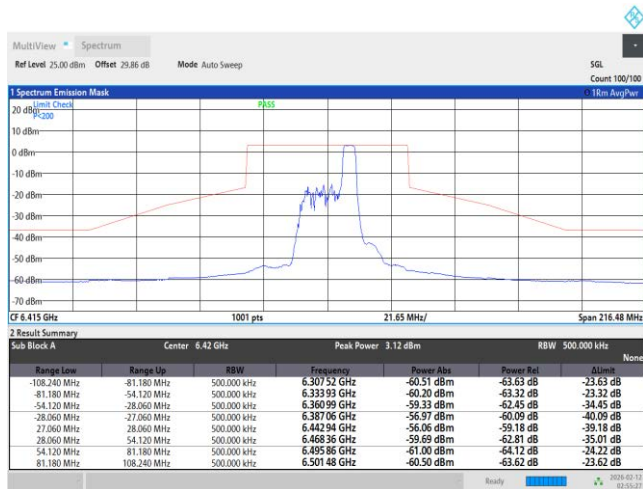


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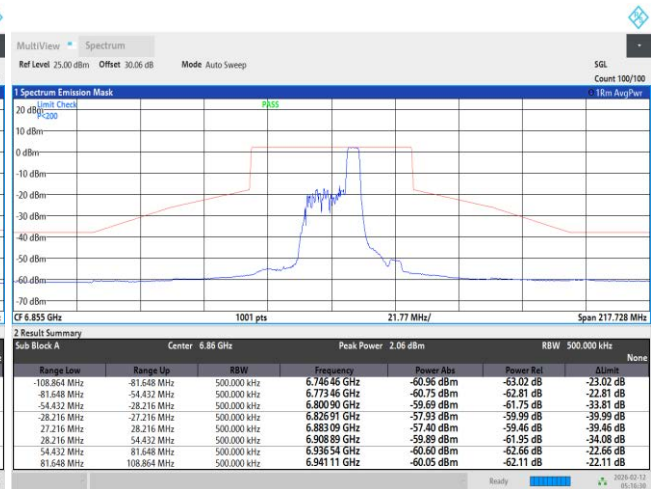
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Plot on 6415 MHz



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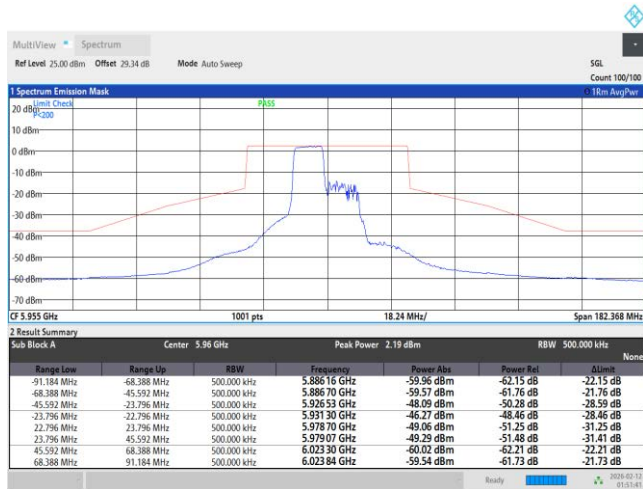
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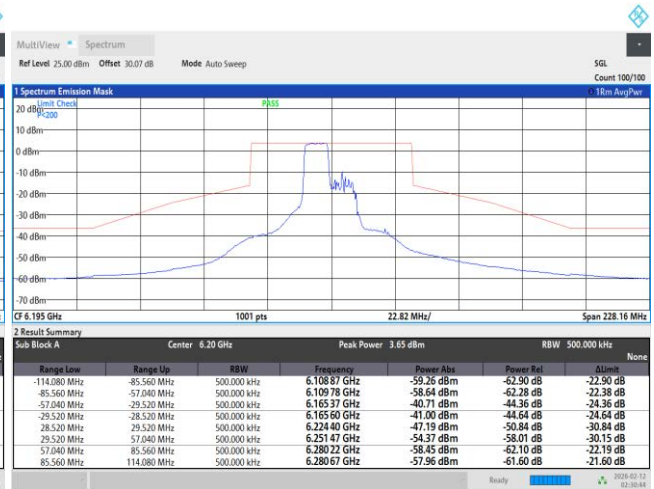
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Plot on 5955 MHz



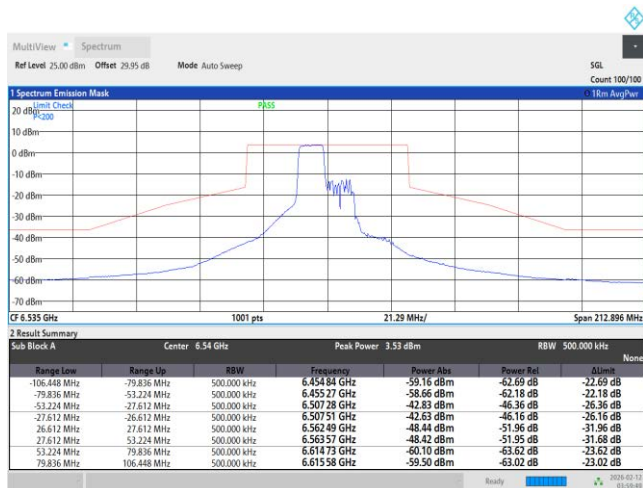
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Plot on 6195 MHz



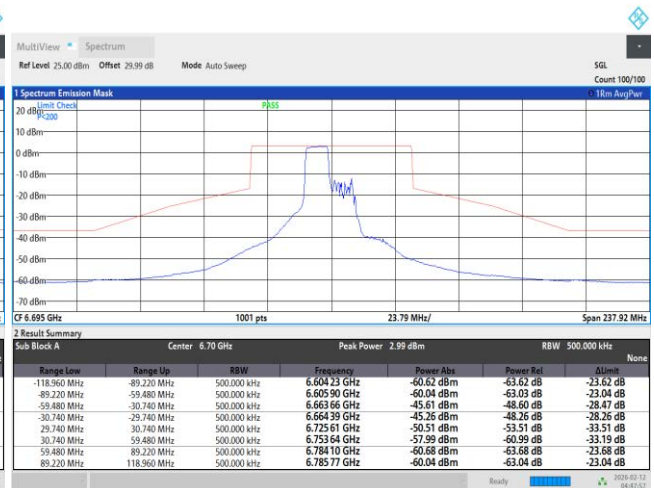
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Plot on 6535 MHz



03:59:49 AM 02/12/2026

Plot on 6695 MHz



04:47:58 AM 02/12/2026

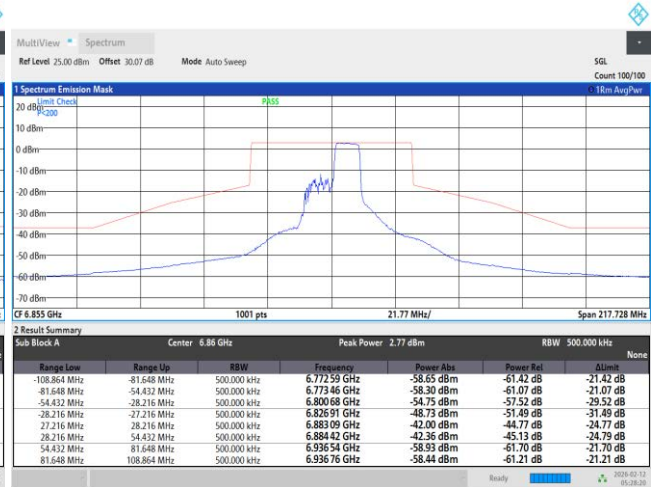
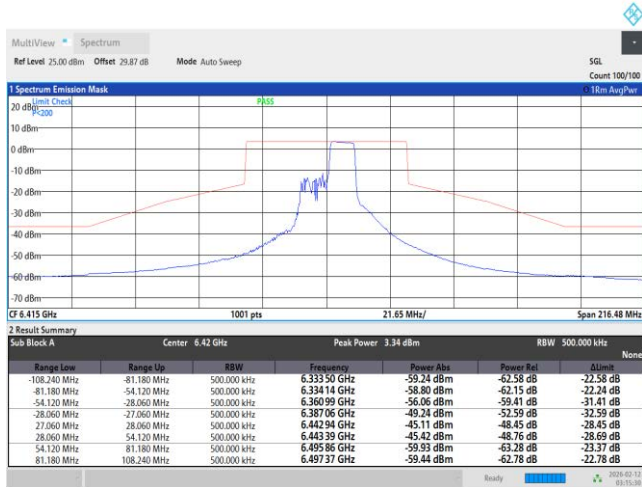


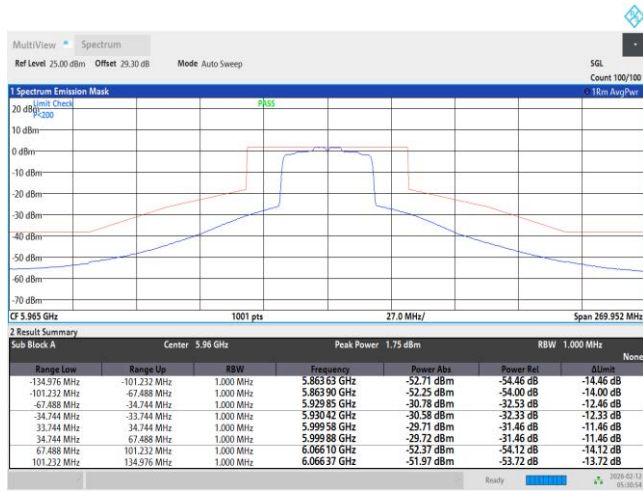
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802.11ax HE20 106RU54

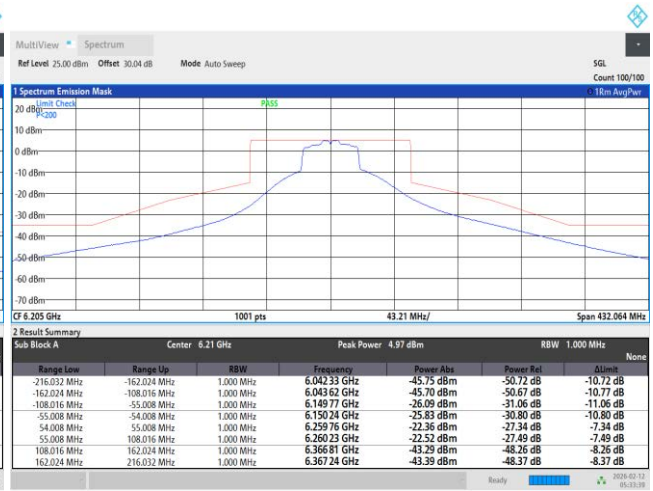
Plot on 6415 MHz

Plot on 6855 MHz

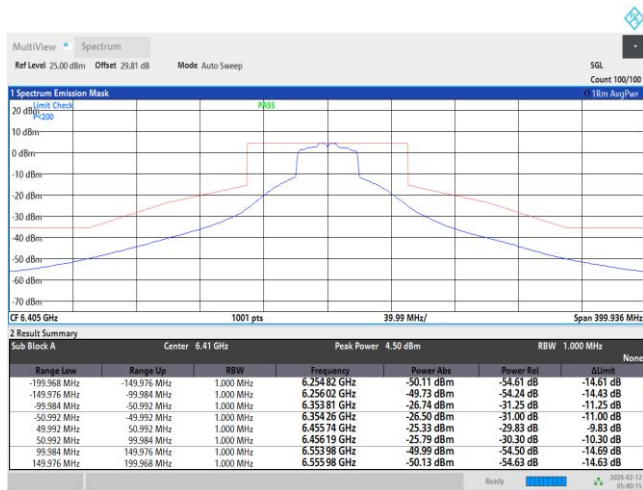


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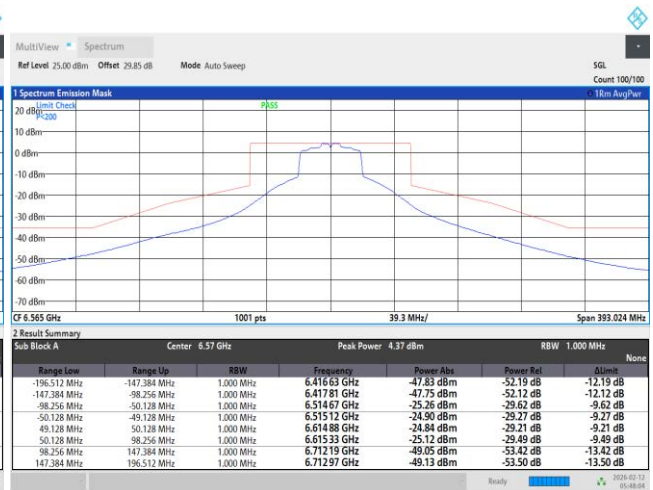
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Plot on 6205 MHz

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Plot on 6405 MHz

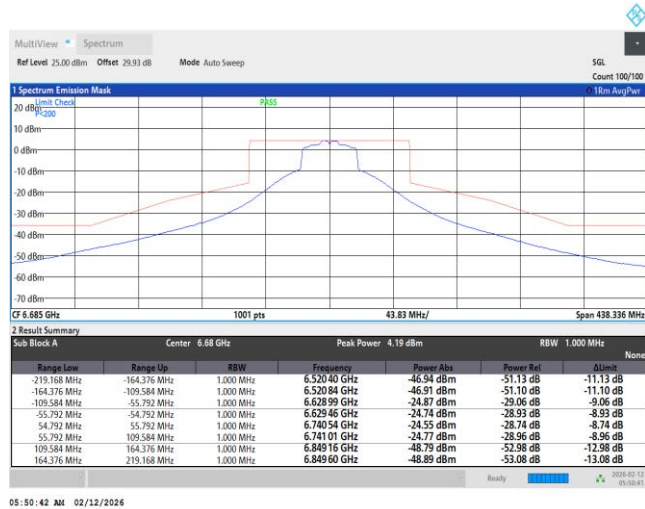
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Plot on 6565 MHz

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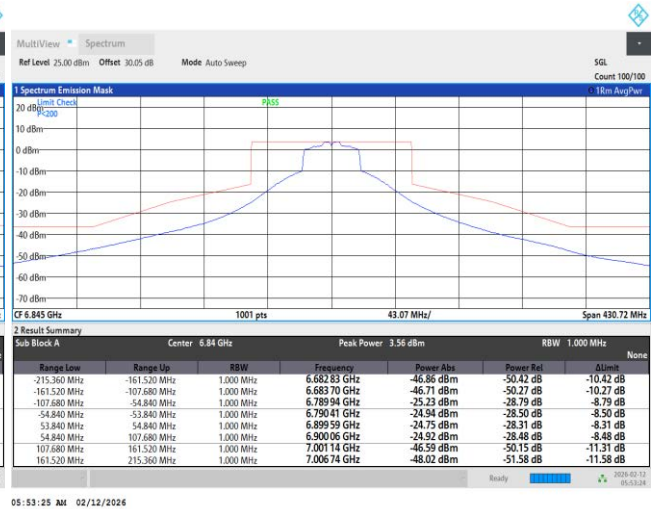


Plot on 6685 MHz

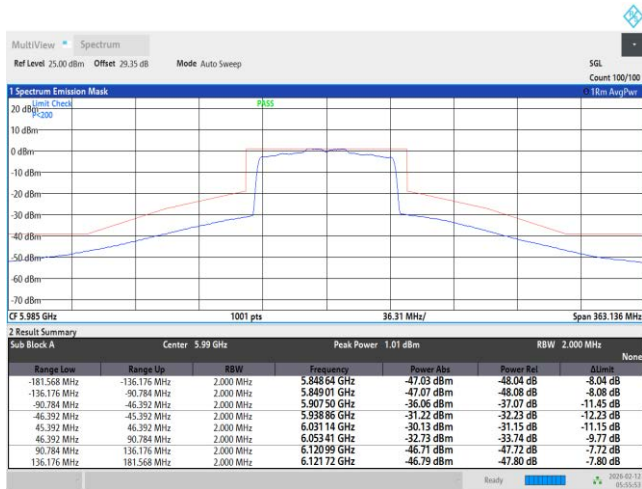


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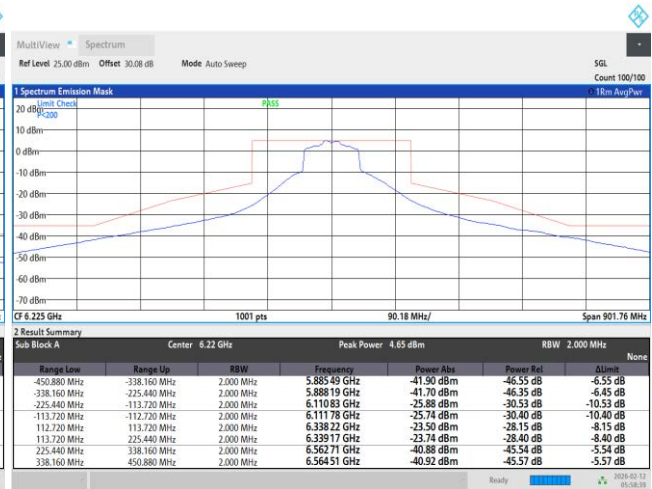
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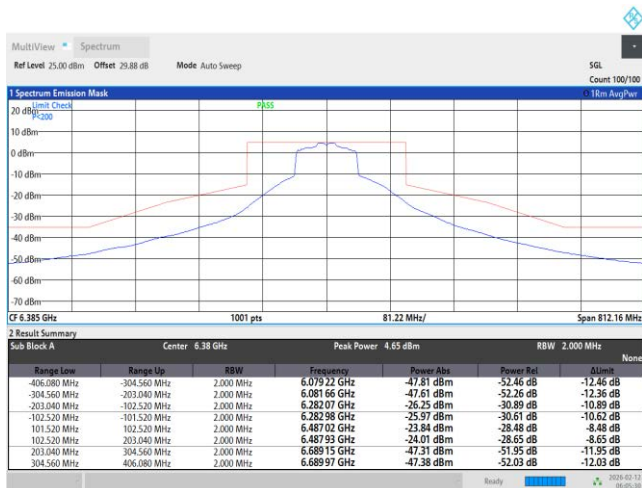
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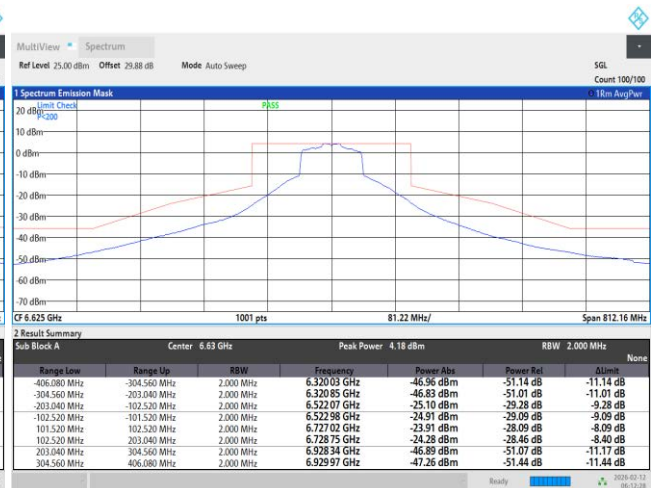
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Plot on 6225 MHz

05:58:39 AM 02/12/2026

Plot on 6385 MHz

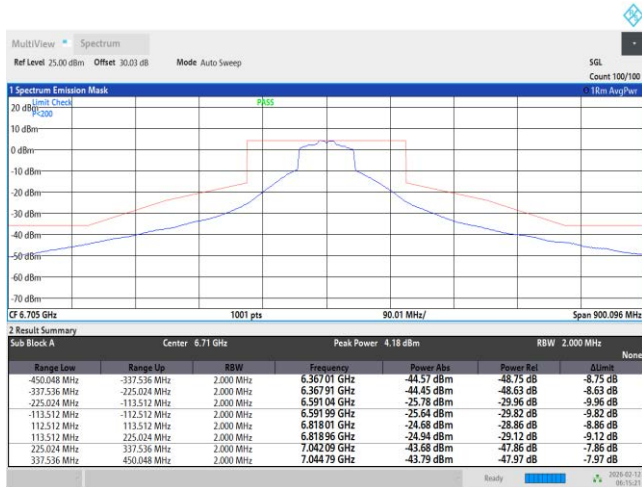
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Plot on 6625 MHz

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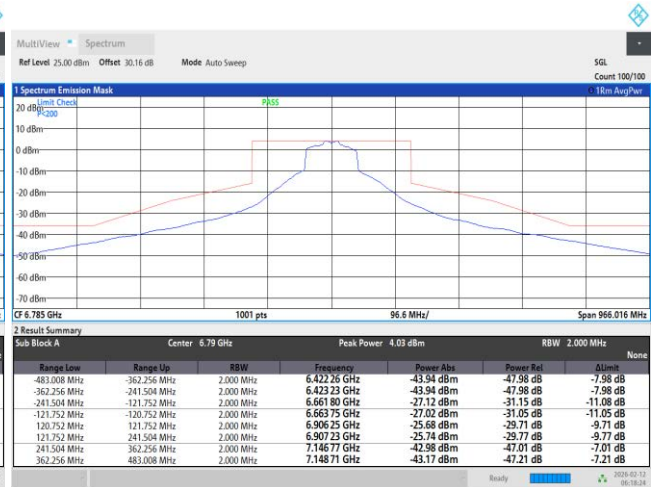


Plot on 6705 MHz



06:15:22 AM 02/12/2026

Plot on 6785 MHz



06:18:25 AM 02/12/2026

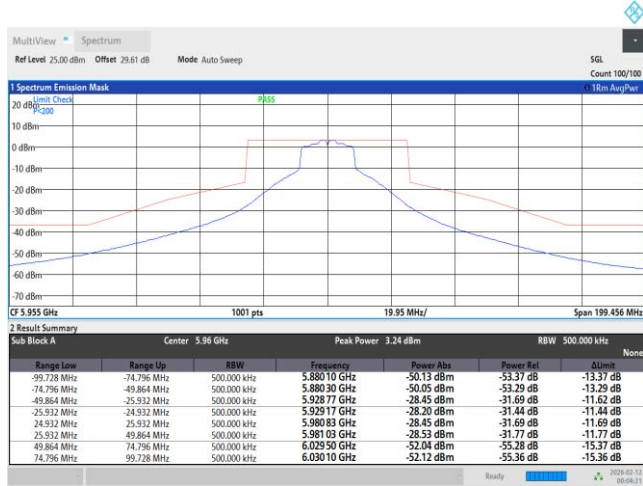


MIMO <Ant. 4+3 (3)>

EUT Mode

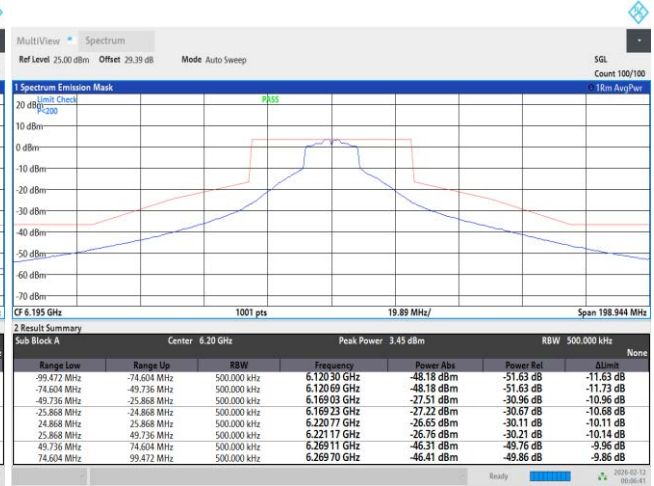
802.11a

Plot on 5955 MHz



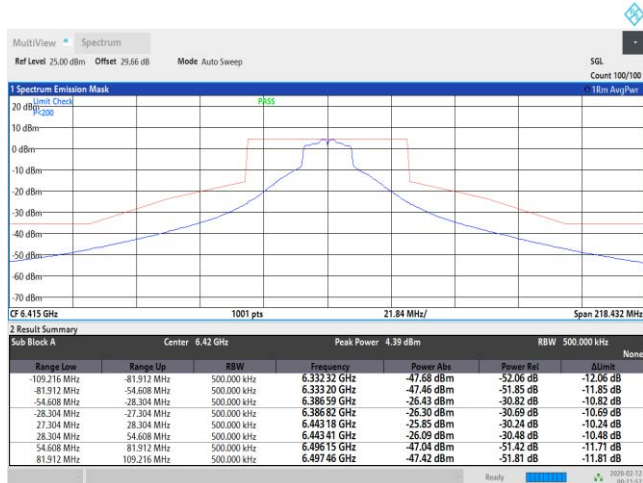
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Plot on 6195 MHz



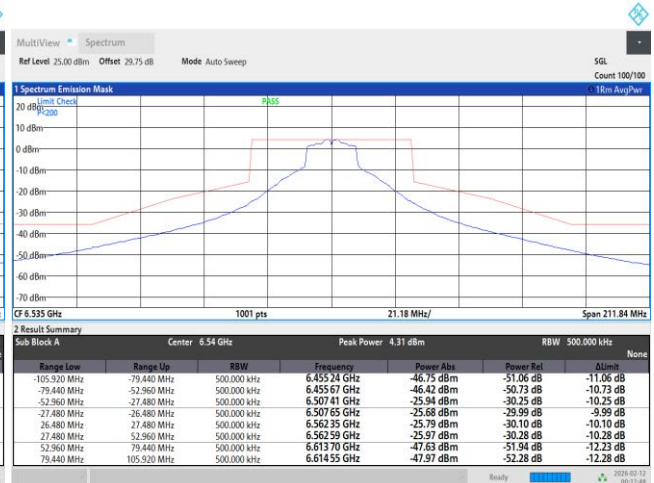
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Plot on 6415 MHz



12:11:58 AM 02/12/2026

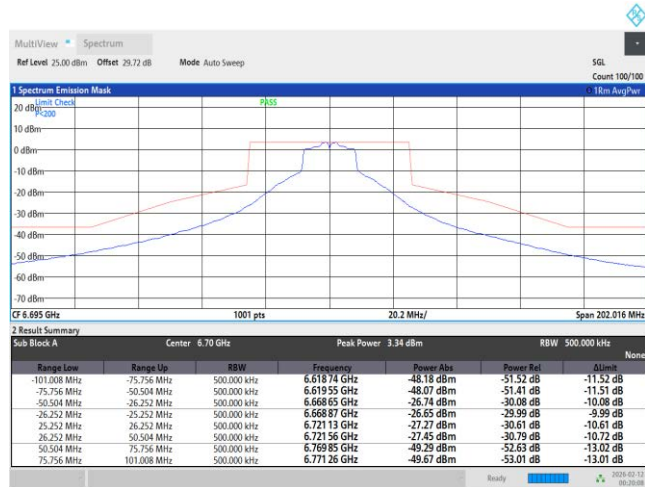
Plot on 6535 MHz



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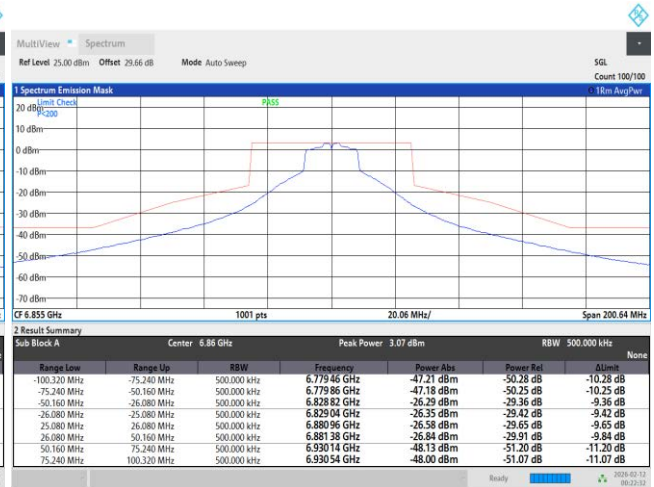


Plot on 6695 MHz



12:20:09 AM 02/12/2026

Plot on 6855 MHz



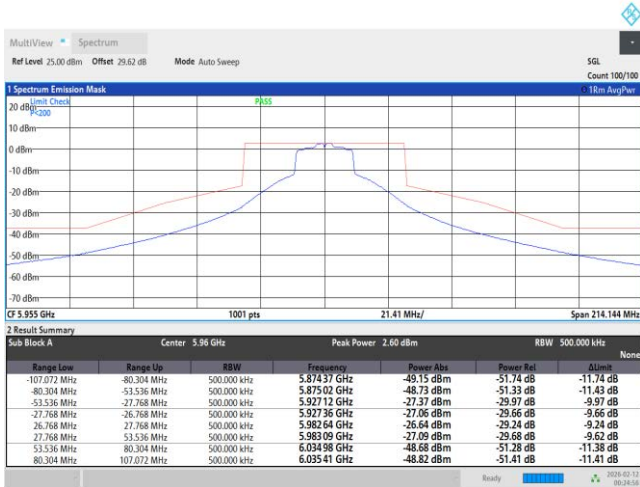
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EUT Mode

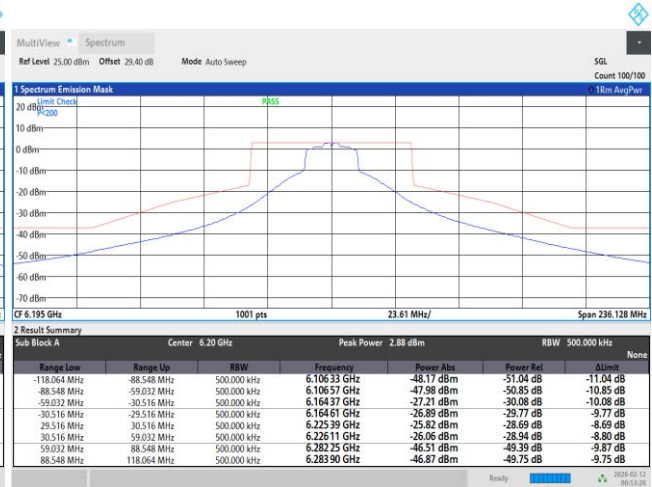
802.11ax HE20 FullIRU

Plot on 5955 MHz



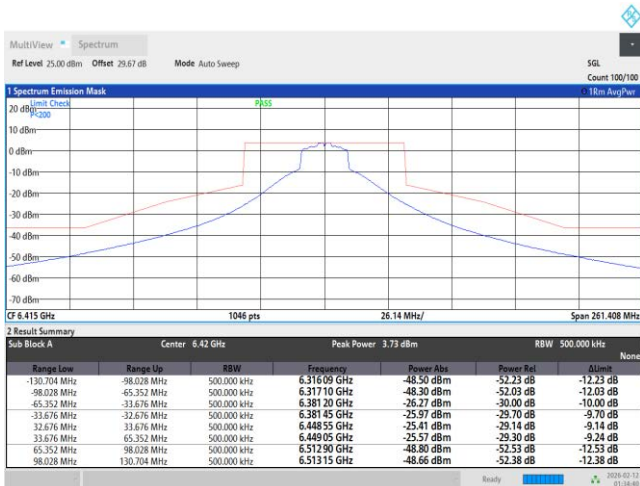
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Plot on 6195 MHz



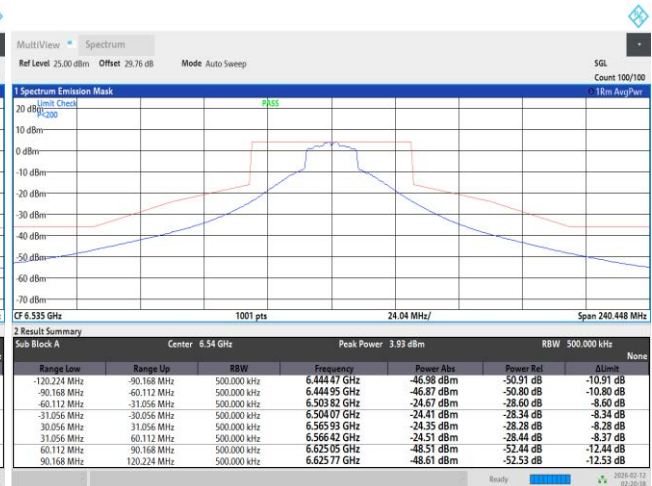
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Plot on 6415 MHz



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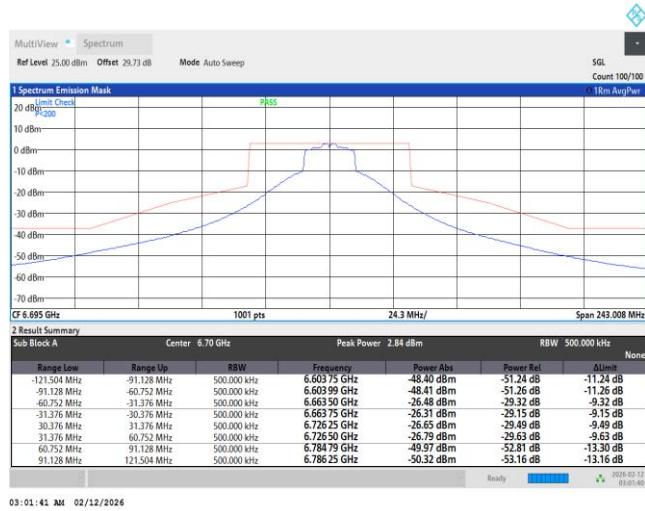
Plot on 6535 MHz



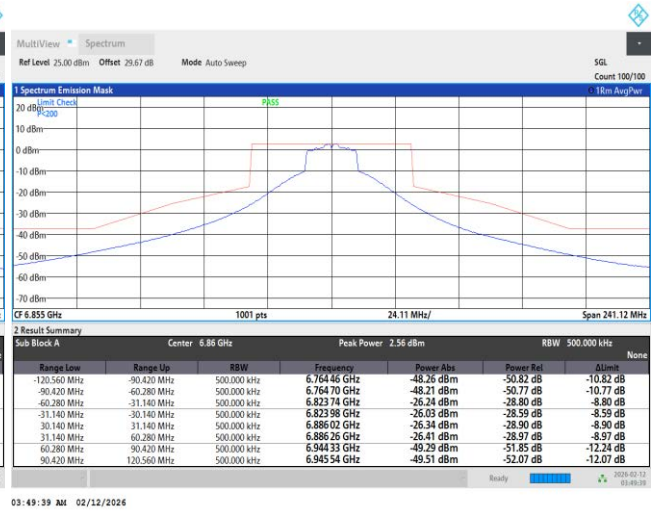
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Plot on 6695 MHz



Plot on 6855 MHz

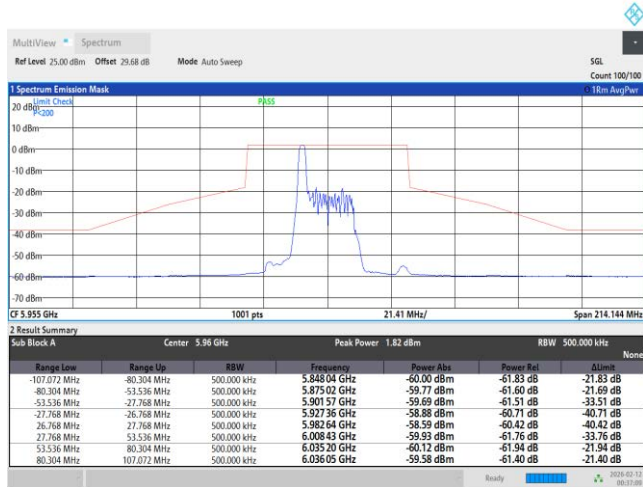




EUT Mode

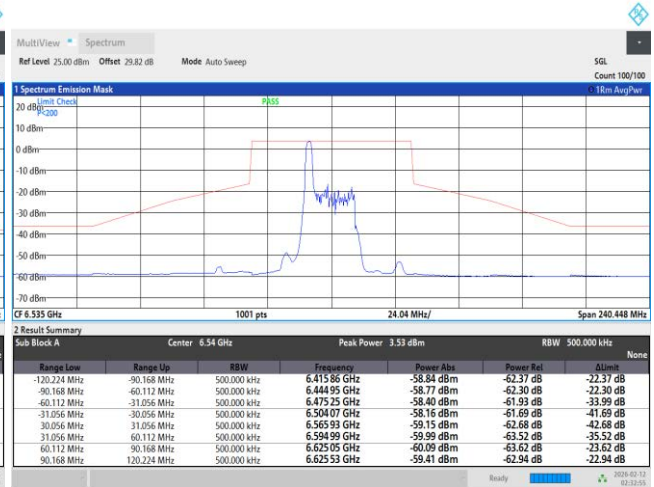
802.11ax HE20 26RU0

Plot on 5955 MHz



12:37:09 AM 02/12/2026

Plot on 6535 MHz

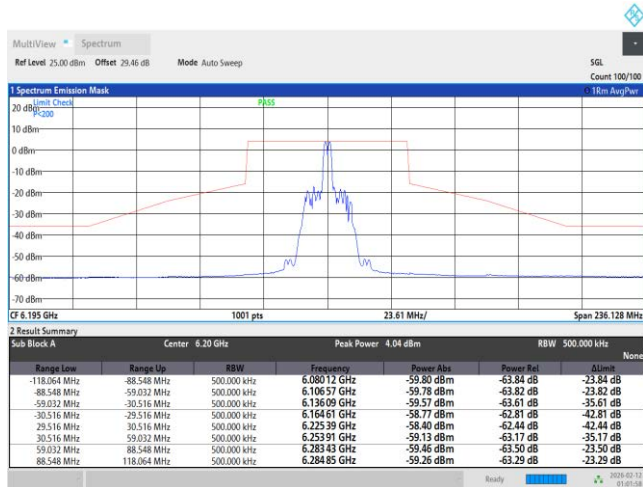


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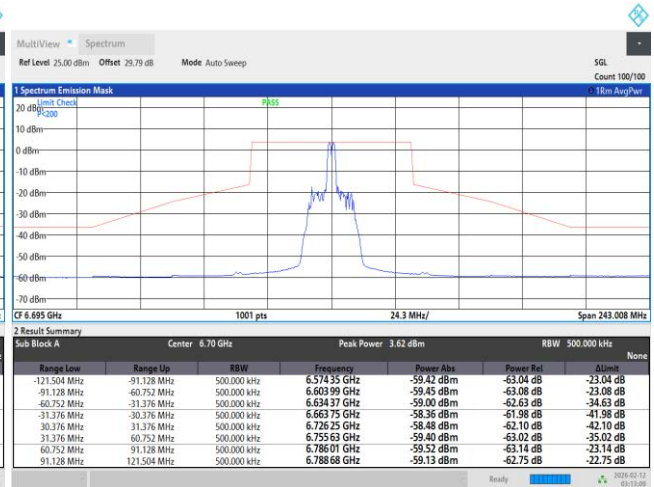
802.11ax HE20 26RU4

Plot on 6195 MHz



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Plot on 6695 MHz



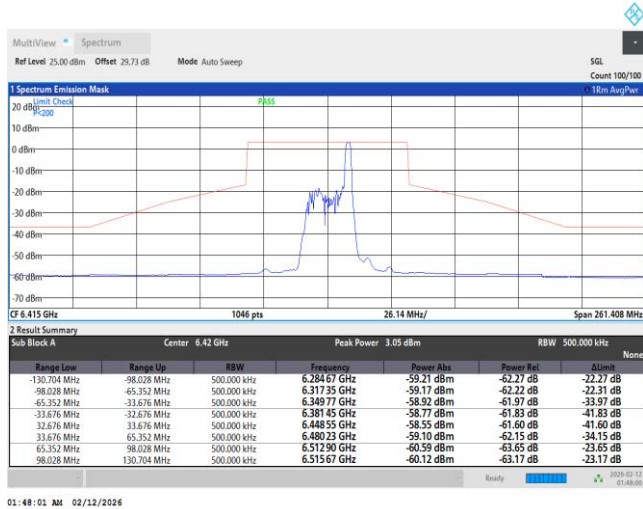
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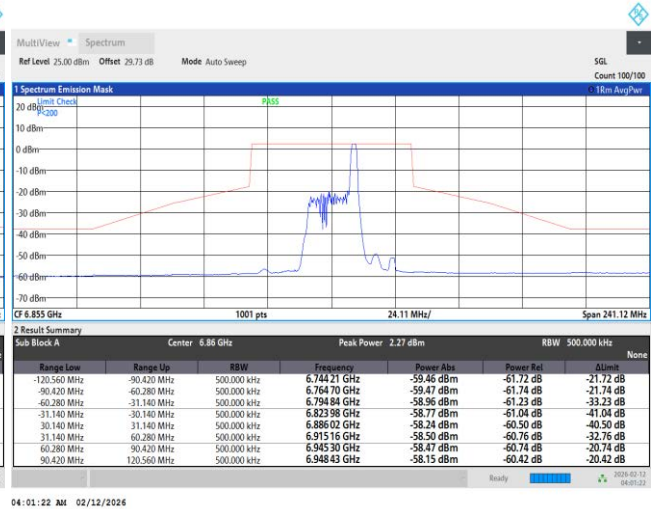
EUT Mode

802.11ax HE20 26RU8

Plot on 6415 MHz



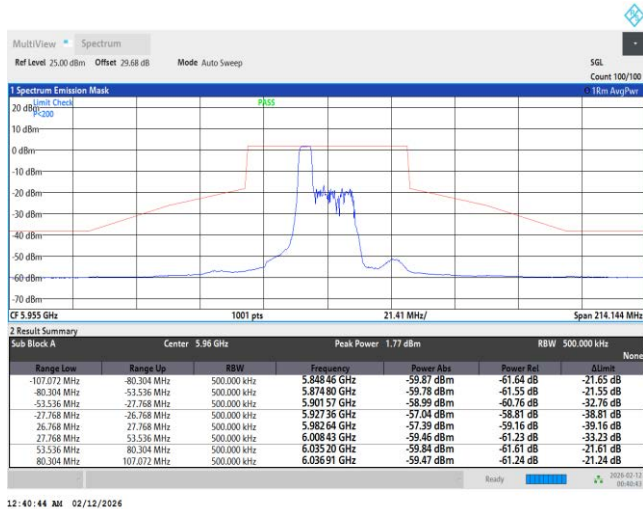
Plot on 6855 MHz



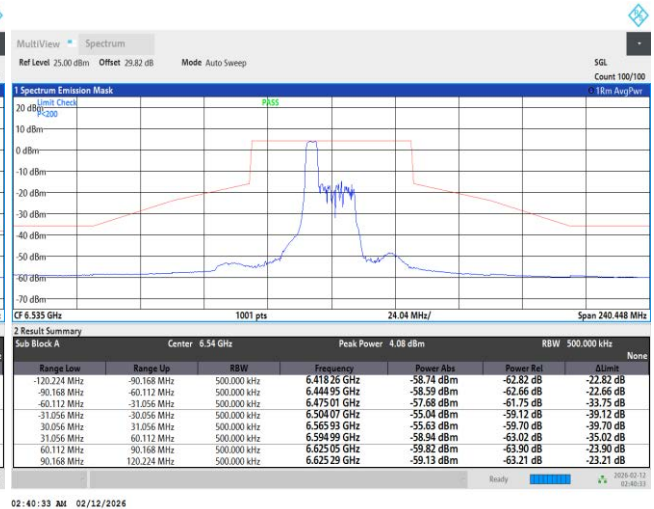
EUT Mode

802.11ax HE20 52RU37

Plot on 5955 MHz



Plot on 6535 MHz

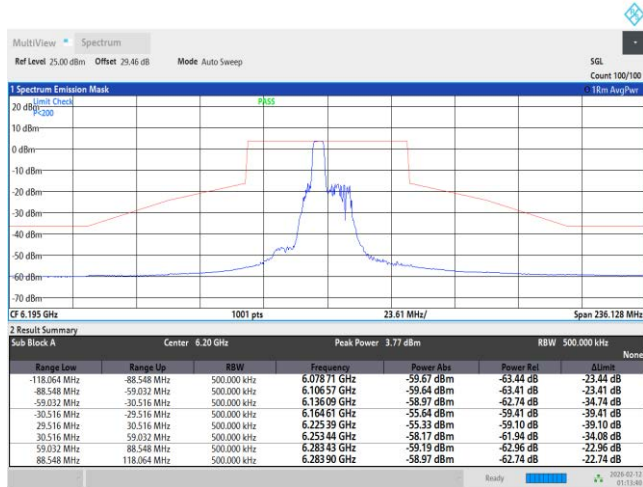




EUT Mode

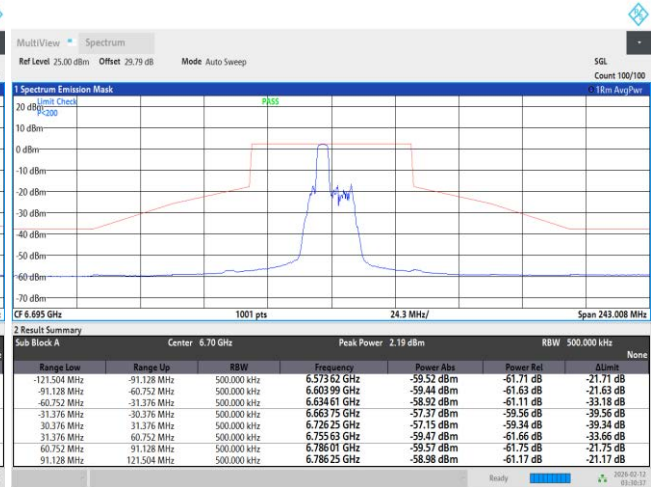
802.11ax HE20 52RU38

Plot on 6195 MHz



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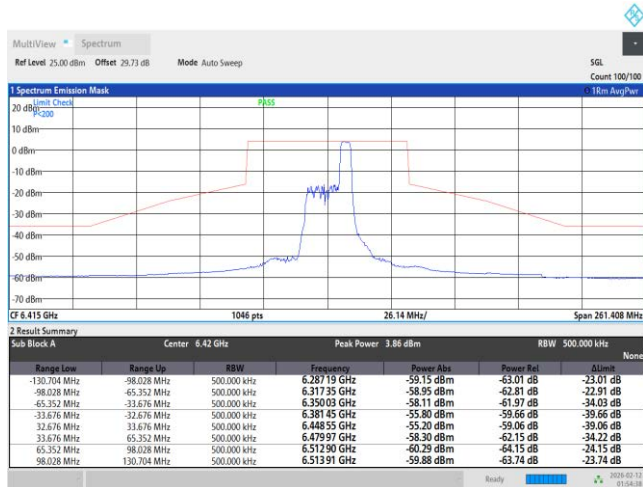


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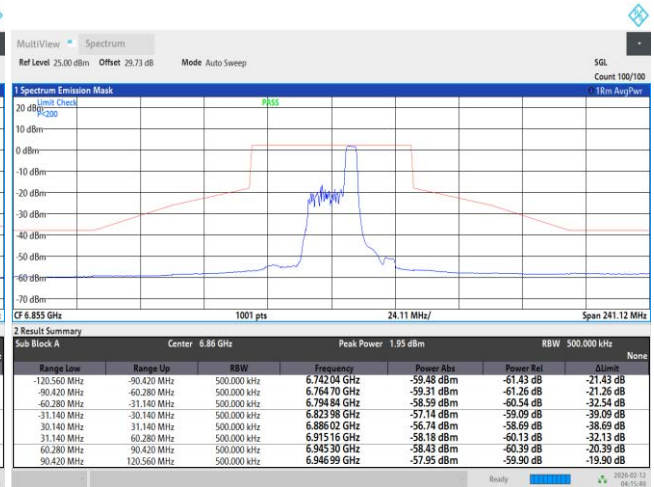
802.11ax HE20 52RU40

Plot on 6415 MHz



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04:15:41 AM 02/12/2026



EUT Mode

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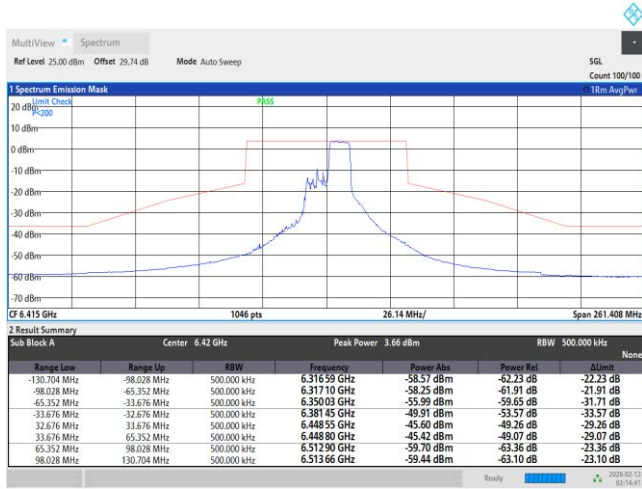


EUT Mode

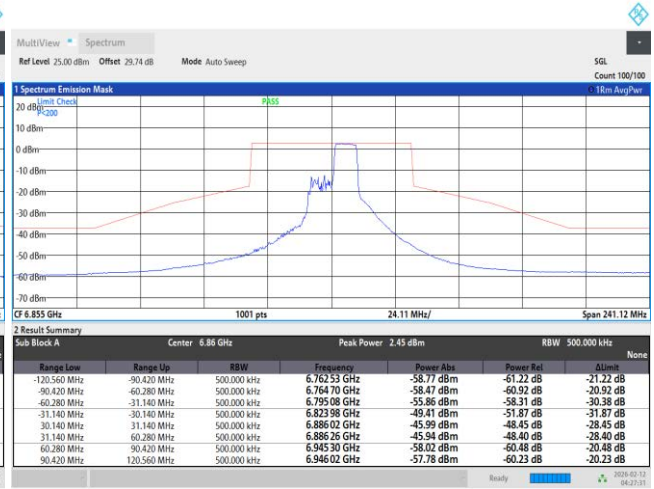
802.11ax HE20 106RU54

Plot on 6415 MHz

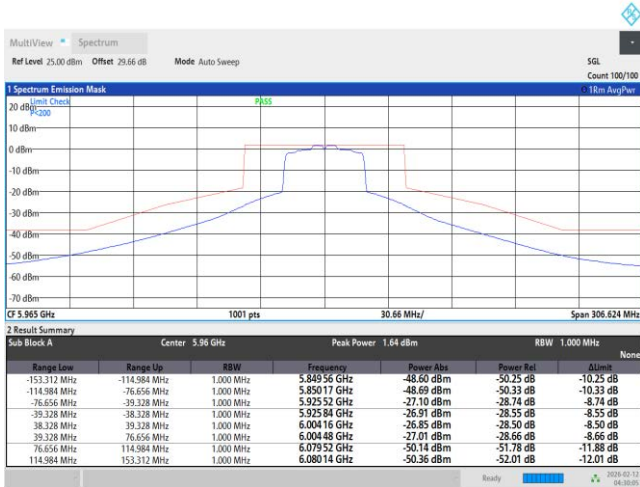
Plot on 6855 MHz



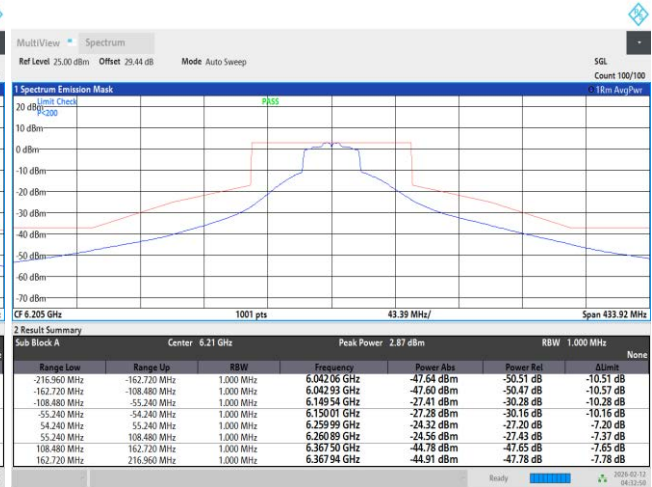
02:14:41 AM 02/12/2026



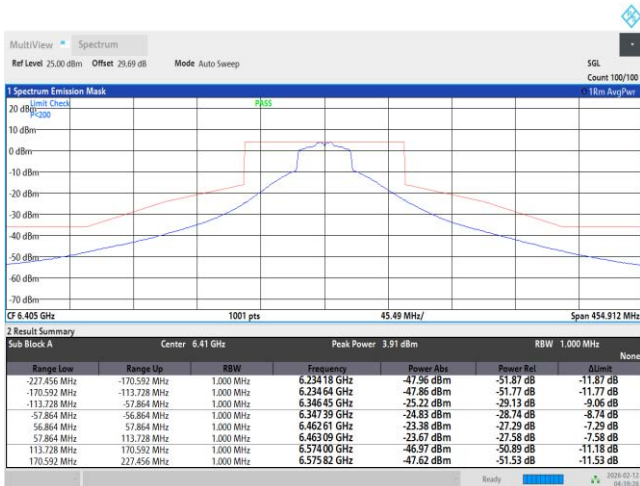
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**EUT Mode****802.11ax HE40 FullRU****Plot on 5965 MHz**

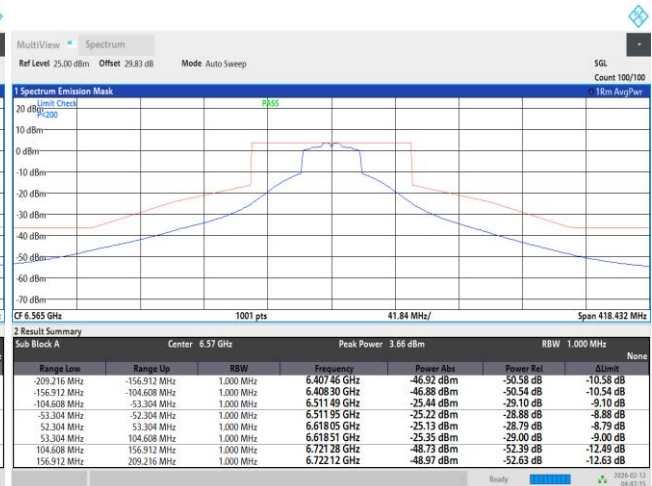
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Plot on 6205 MHz

04:32:50 AM 02/12/2026

Plot on 6405 MHz

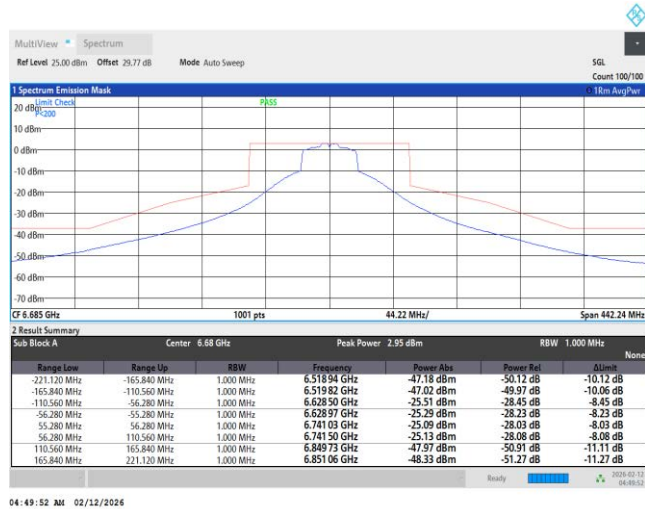
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Plot on 6565 MHz

04:47:15 AM 02/12/2026

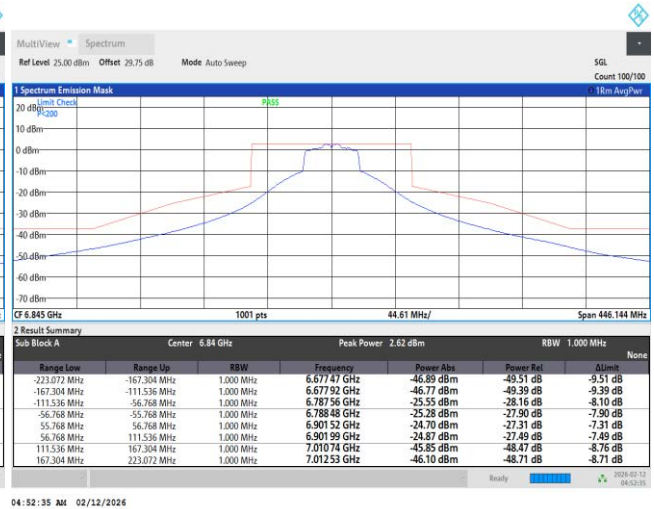


Plot on 6685 MHz



04:49:52 AM 02/12/2026

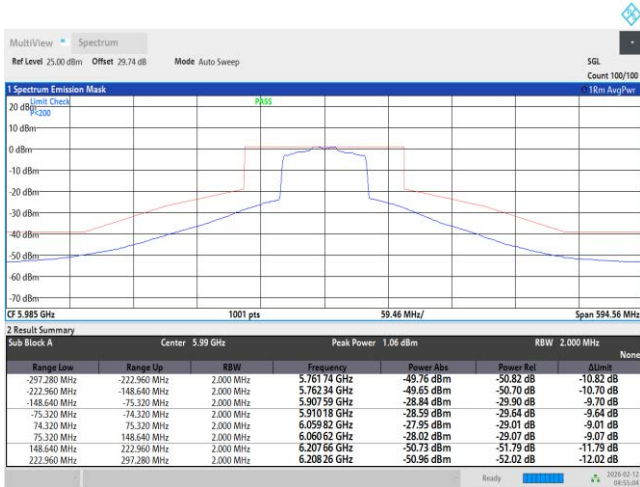
Plot on 6845 MHz



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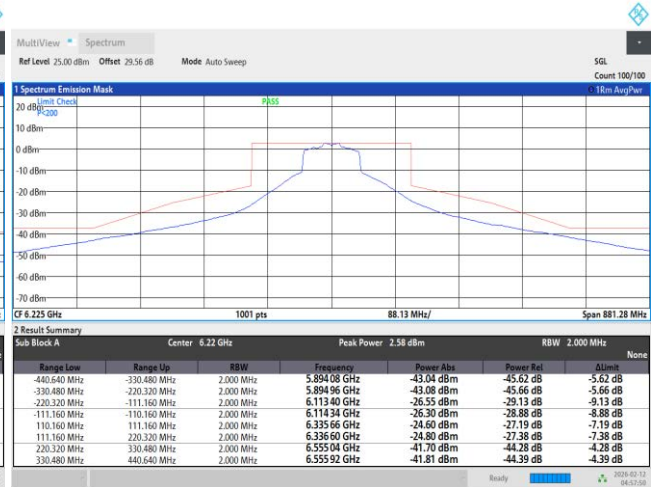
**EUT Mode****802.11ax HE80 FullIRU**

Plot on 5985 MHz



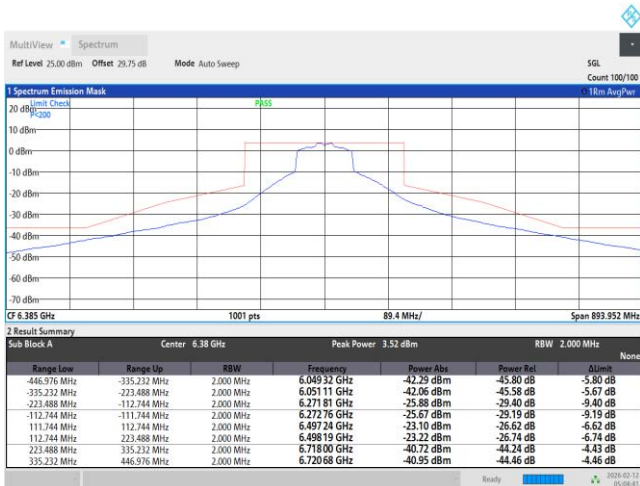
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Plot on 6225 MHz



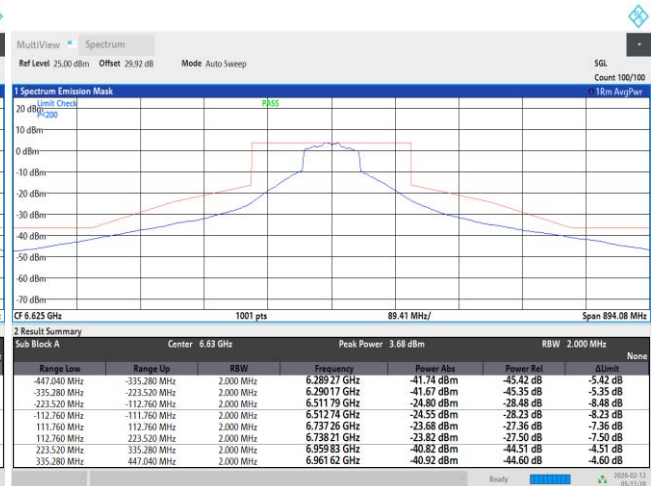
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Plot on 6385 MHz



05:04:41 AM 02/12/2026

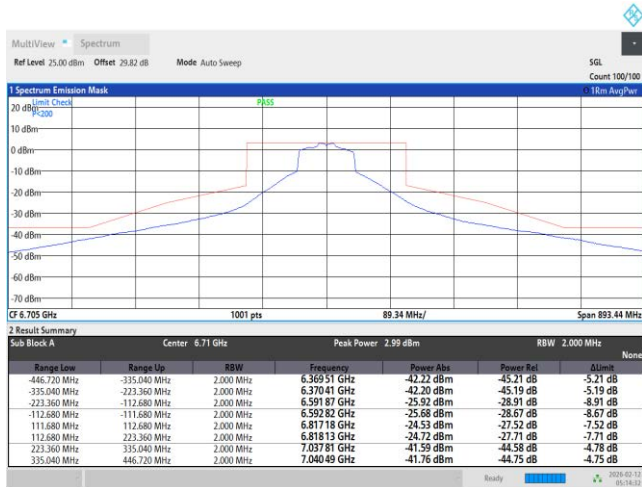
Plot on 6625 MHz



05:11:40 AM 02/12/2026

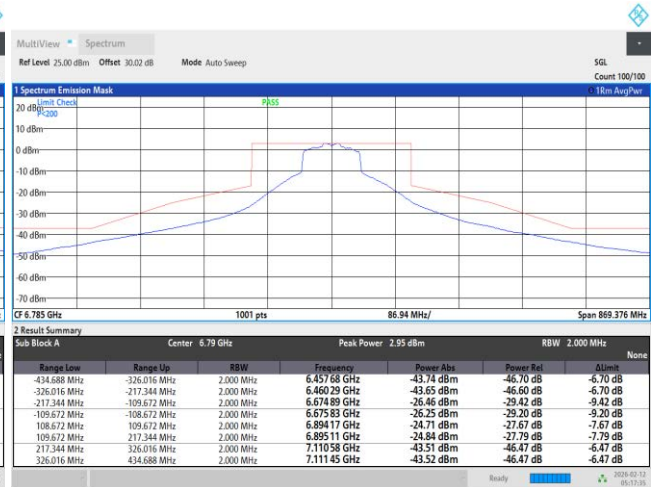


Plot on 6705 MHz



05:14:32 AM 02/12/2026

Plot on 6785 MHz



05:17:35 AM 02/12/2026



3.5 Proper Power Adjustment, Client Devices Connected to a Standard Power Access Point (APC)

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 v3.

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.

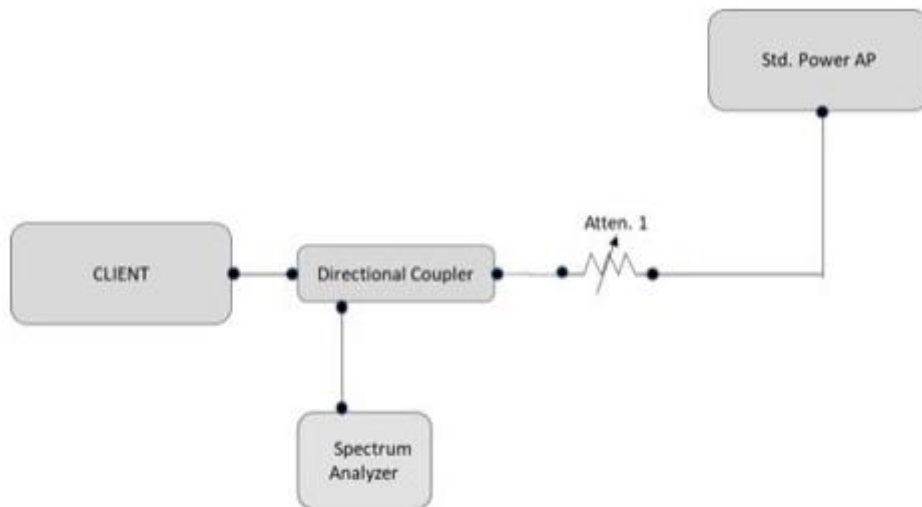


Figure 7. Test setup for conducted testing

3.5.5 Test Result Summary

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

802.11ax 20MHz bandwidth

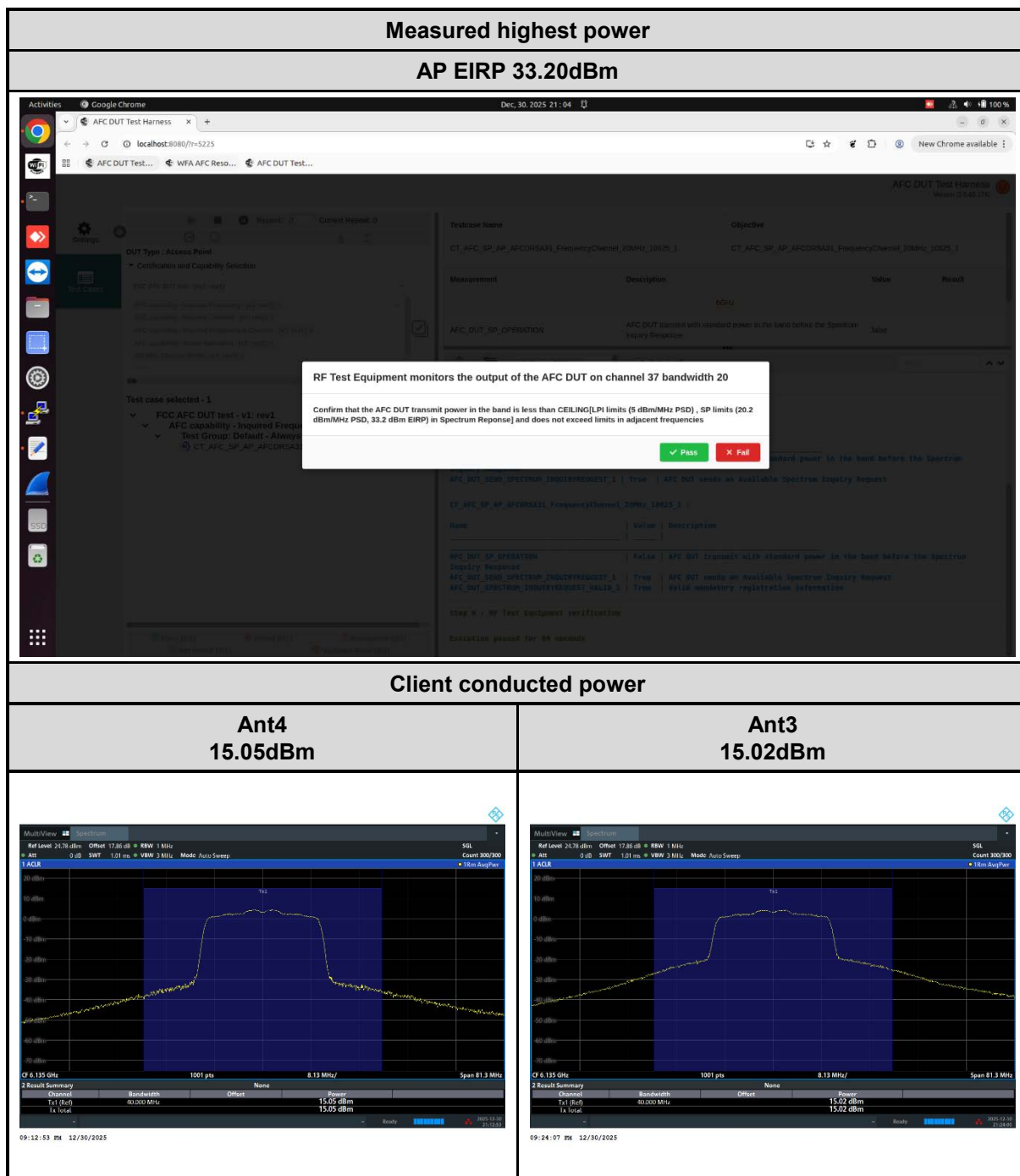
Test channel 37

	Client Conducted Power (dBm)			Client EIRP (dBm)	AP EIRP (dBm)	AP to client EIRP Delta (dB)
	Ant4	Ant3	MIMO			
Maximum EIRP	15.05	15.02	18.05	15.04	33.20	18.16
Midpoint EIRP	13.84	13.57	16.72	13.71	23.10	9.39
Lowest EIRP	12.55	11.65	15.13	12.12	21.60	9.48
Requirement						At least 6 dB
Result						Pass

Note: Client EIRP = Client MIMO conducted power + Antenna gain (-3.01dBi)



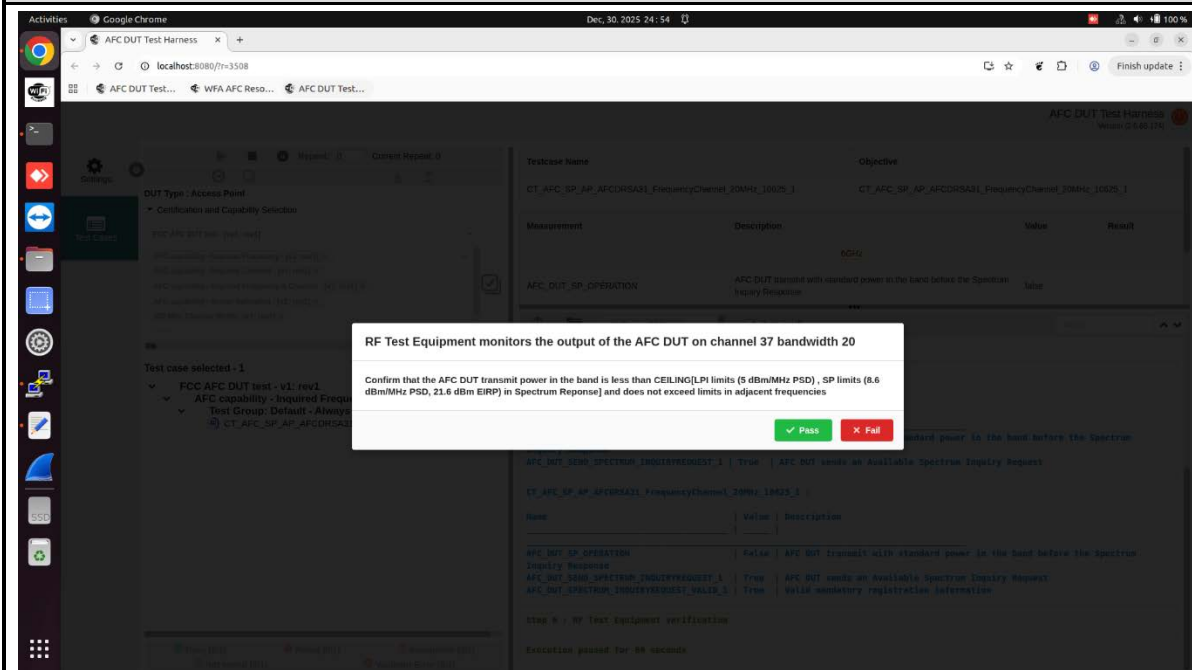
3.5.6 Test Result Plot



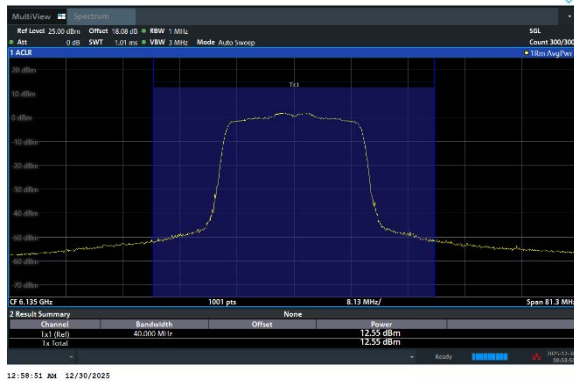
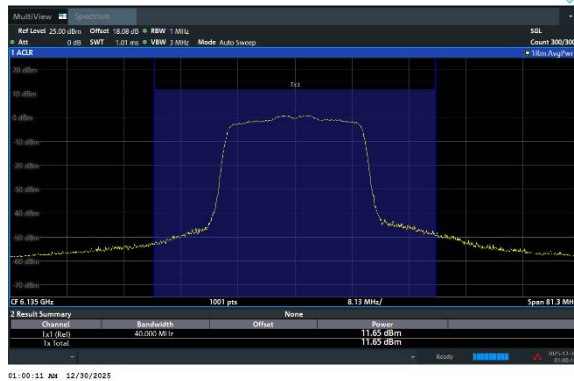


Measured lowest power

AP EIRP 21.60dBm



Client conducted power

Ant4
12.55dBmAnt3
11.65dBm



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

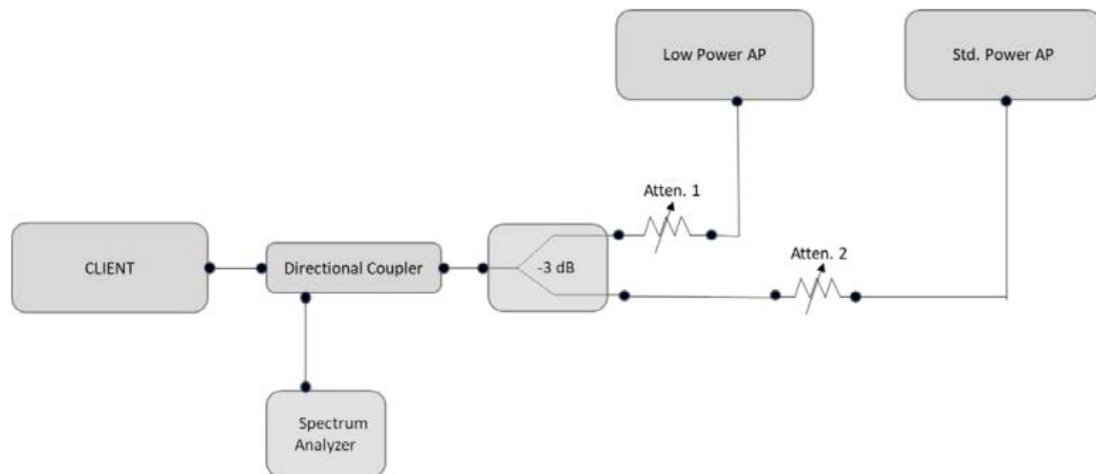


Figure 6. Test setup for conducted testing

3.6.4 Test Result Summary

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

Companion Low Power indoor AP: Brand name: ASUS, Model name: RT-BE92U

802.11ax 20MHz bandwidth

Test channel 37

	Client Conducted Power (dBm)			Client EIRP (dBm)	Limit EIRP (dBm)	Result
	Ant4	Ant3	MIMO			
Indoor EIRP	10.15	6.50	11.71	8.70	24	Pass
Standard EIRP	14.97	14.89	17.94	14.93	30	Pass

Note: Client EIRP = Client MIMO conducted power + Antenna gain (-3.01dBi)



3.6.5 Test Result Plot

