



RF MEASUREMENT REPORT

Applicant: TP-Link Systems Inc.
Address: 10 Mauchly, Irvine, CA 92618
Product: BE6500 Dual-Band Wi-Fi 7 Gaming Router
Model No.: Archer GE400
Brand Name: tp-link
Product Category: Article 2, Paragraph 1, Item 19
Test Procedure: MIC Notice No.88 Annex 43
Result: Complies
Received Date: 2025-04-21
Test Date: 2025-04-23 ~ 2025-05-19

Reviewed By:



Kevin Guo

Approved By:



Robin Wu

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.

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Revision History

Report No.	Version	Description	Issue Date	Note
R25S1033049-J201	V01	Initial Report	2025-06-18	Valid

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1. General Information

1.1. Applicant

TP-Link Systems Inc.

10 Mauchly, Irvine, CA 92618

1.2. Manufacturer

TP-Link Systems Inc.

10 Mauchly, Irvine, CA 92618

1.3. Testing Facility

☒	Test Site – MRT Suzhou Laboratory Laboratory Location (Suzhou - Wuzhong) D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China Laboratory Location (Suzhou - SIP) 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China Laboratory Location (Suzhou - Wujiang) Building 1, No.1 Xingdong Road, Wujiang, Suzhou, Jiangsu, People's Republic of China Laboratory Accreditations A2LA: 3628.01 CNAS: L10551 FCC: CN1166 ISED: CN0001 VCCI: ☐ R-20025 ☐ G-20034 ☐ C-20020 ☐ T-20020 ☐ R-20141 ☐ G-20134 ☐ C-20103 ☐ T-20104
☐	Test Site – MRT Shenzhen Laboratory Laboratory Location (Shenzhen) 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China Laboratory Accreditations A2LA: 3628.02 CNAS: L10551 FCC: CN1284 ISED: CN0105
☐	Test Site – MRT Taiwan Laboratory Laboratory Location (Taiwan) No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) Laboratory Accreditations TAF: 3261 FCC: 291082, TW3261 ISED: TW3261

1.4. Product Information

Product Name	BE6500 Dual-Band Wi-Fi 7 Gaming Router
Model No.	Archer GE400
Brand Name	tp-link
EUT Identification No.	20250421Sample#07 (Conducted) 20250421Sample#06 (Carrier Sensing)
Wi-Fi Specification	802.11a/b/g/n/ac/ax/be
Antenna Specification	Refer to Section 1.7
Operating Temperature	0 ~ 40 °C
Power Type	AC/DC Adapter
Accessory	
AC/DC Adapter	Model No.: ADS-30DN-12N 12030EPCU ADS-30DN-12N 12030EPC Input: 100-240V ~ 50/60Hz, MAX.0.8A Output: 12.0VDC 2.5A
Note: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

1.5. Radio Specification under Test

Frequency Range	802.11b/g/n-HT20/ax-HE20/be-EHT20: 2412 ~ 2472MHz 802.11n-HT40/ax-HE40/be-EHT40: 2422 ~ 2462MHz	
Channel Number	802.11b/g/n-HT20/ax-HE20/be-EHT20: 13 802.11n-HT40/ax-HE40/be-EHT40: 9	
Type of Modulation	802.11b: DSSS 802.11g/n: OFDM 802.11ax/be: OFDMA	
Data Rate	802.11b: 1/2/5.5/11Mbps 802.11g: 6/9/12/18/24/36/48/54Mbps 802.11n: up to 300Mbps 802.11ax: up to 573.6Mbps 802.11be: up to 688Mbps	
Declared Output Power	802.11b/g/n-HT20/ax-HE20/be-EHT20: 4.0mW/MHz 802.11n-HT40/ax-HE40/be-EHT40: 2.0mW/MHz	
Channel Puncturing Function	☐ Supported	☒ Unsupported
Support RU	☒ Full RU	☐ Partial RU

1.6. Working Frequencies

802.11b/g/n-HT20/ax-HE20/be-EHT20

Channel	Frequency	Channel	Frequency	Channel	Frequency
01	2412 MHz	02	2417 MHz	03	2422 MHz
04	2427 MHz	05	2432 MHz	06	2437 MHz
07	2442 MHz	08	2447 MHz	09	2452 MHz
10	2457 MHz	11	2462 MHz	12	2467 MHz
13	2472 MHz	--	--	--	--

802.11n-HT40/ax-HE40/be-EHT40

Channel	Frequency	Channel	Frequency	Channel	Frequency
03	2422 MHz	04	2427 MHz	05	2432 MHz
06	2437 MHz	07	2442 MHz	08	2447 MHz
09	2452 MHz	10	2457 MHz	11	2462 MHz

1.7. Antenna Details

Antenna Type	Frequency Band (MHz)	Antenna Gain (dBi)			
		Ant 0	Ant 1	Ant 2	Ant 3
Wi-Fi Antenna (2.4GHz: 2T2R, 5GHz: 4T4R)					
Dipole Antenna	2400 ~ 2483.5	6.00	6.33	--	--
	5150 ~ 5250	6.54	7.22	7.05	7.06
	5250 ~ 5350	7.20	7.48	7.87	7.58
	5470 ~ 5725	8.18	8.36	7.69	8.61

Notes:

1. The EUT supports Cyclic Delay Diversity (CDD) mode for 802.11a/b/g/n/ac/ax/be.
2. The EUT also supports Beamforming mode for 802.11n/ac/ax/be, not include 802.11a/b/g.
3. For Beamforming operation, the software backs power down based on CDD power.
4. All antenna information is provided by the manufacturer.

2. Test Configuration

2.1. Test Mode

Mode 1: Transmit by 802.11b (1Mbps)
Mode 2: Transmit by 802.11g (6Mbps)
Mode 3: Transmit by 802.11n-HT20 (MCS0)
Mode 4: Transmit by 802.11n-HT40 (MCS0)
Mode 5: Transmit by 802.11ax-HE20 (MCS0)
Mode 6: Transmit by 802.11ax-HE40 (MCS0)
Mode 7: Transmit by 802.11be-EHT20 (MCS0)
Mode 8: Transmit by 802.11be-EHT40 (MCS0)
Mode 9: Receive by 802.11b
Mode 10: Receive by 802.11g
Mode 11: Receive by 802.11n-HT20
Mode 12: Receive by 802.11n-HT40
Mode 13: Receive by 802.11ax-HE20
Mode 14: Receive by 802.11ax-HE40
Mode 15: Receive by 802.11be-EHT20
Mode 16: Receive by 802.11be-EHT40
Note: All modes of operation and data rates were investigated, so all RF test requirements shall be executed at the worst data rate which power is the greatest.

2.2. Test Software

The test utility software used during testing was “accessMTool”, and the version was 3.3.0.6.

2.3. Test Condition

The change of the measured voltage at the radio part of the EUT is below $\pm 1\%$, when input voltage from external power supply to the equipment under test is varied by $\pm 10\%$, thus the RF test is tested at rated voltage only.

Test Site	WJ-SR2	Temperature	26.1 °C
Test Engineer	Simon Lu	Humidity	60.3 %RH
Test Date	2025-05-19		

Extreme Voltage	100V	90V	110V
Measure Voltage (A)	1.051V	1.051V	1.052V
Tolerance (A)	-	0.00%	0.10%
Measure Voltage (B)	0.736V	0.737V	0.736V
Tolerance (B)	-	0.14%	0.00%
Measure Voltage (C)	3.261V	3.260V	3.262V
Tolerance (C)	-	-0.03%	0.03%
Measure Voltage (D)	1.817V	1.816V	1.817V
Tolerance (D)	-	-0.06%	0.00%

2.4. Applied Standards

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

- MIC Notice No.88 Annex 43
- Article 49-20 and the relevant articles of the Ordinance Regulating Radio Equipment
- ARIB STD-T66 v3.8

3. Measuring Instrument

Conducted Test Equipment (WJ-SR2)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Date	Cali. Due Date	Cali. Body	Cali. Method
USB Power Sensor	Keysight	U2021XA	MRTSUE07141	1 year	2025-03-16	2026-03-15	Ceprei	c
EXA Signal Analyzer	Keysight	N9010B	MRTSUE07147	1 year	2024-11-07	2025-11-06	Ceprei	c
Digital Multimeter	Fluke	18B+	MRTSUE11351	1 year	2024-06-25	2025-06-24	Ceprei	c
Thermohygrometer	testo	608-H1	MRTSUE11330	1 year	2024-06-25	2025-06-24	Ceprei	c
Shielding Room	TDK	WJ-SR2	MRTSUE07124	N/A	N/A	N/A	N/A	N/A

Conducted Test Equipment (WJ-SR8)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Date	Cali. Due Date	Cali. Body	Cali. Method
Signal Analyzer	Keysight	N9042B	MRTSUE07260	1 year	2024-11-13	2025-11-12	Ceprei	c
Signal Generator	Keysight	N5186A	MRTSUE07259	1 year	2024-11-13	2025-11-12	Ceprei	c
Thermohygrometer	testo	608-H1	MRTSUE11334	1 year	2024-06-25	2025-06-24	Ceprei	c
Shielding Room	TDK	WJ-SR8	MRTSUE07130	N/A	N/A	N/A	N/A	N/A

Note: All the above test equipment was used and kept valid calibration period during the testing.

Calibration Method:

- Calibration conducted by the National Institute of Information and Communications Technology (NICT) or a designated calibration agency under Article 102-18 paragraph.
- Correction conducted pursuant to the previous of Article 135 or Article 144 of the measurement Law (Law No. 51 of 1992), Japan calibration Service System
- Calibration conducted in foreign countries, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph.

4. Decision Rules and Measurement Uncertainty

4.1. Decision Rules

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4: 2012 Clause 8.2.
(Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

4.2. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Spurious Emissions, Conducted
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 2.5dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 2.5dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 3.2%

5. Test Result

5.1. Summary

ORRE Reference	Test Description	Test Condition	Test Result
Article 49-20	Antenna Power	Conducted	Pass
Article 14	Antenna Power Tolerance		Pass
Article 49-20	EIRP		Pass
Article 6	Occupied Bandwidth		Pass
Article 5	Frequency Tolerance		Pass
Article 7	Unwanted Emission Strength		Pass
Article 24.2	Secondary Radiated Emissions Strength		Pass
Article 49-20	Carrier Sensing		Pass
Article 9-4 5	Interference Prevention Function	Radiated	Pass

Notes:

- 1) The analyzer plots shown in this section were captured using a correction table to account for cable and attenuator losses in the system connecting the EUT to the analyzer across relevant frequencies.
- 2) For test items "Unwanted Emission Strength" & "Secondary Radiated Emissions Strength", we used the combiner to perform testing. For test items "Occupied Bandwidth" & "Frequency Tolerance", we selected Ant 0 port to perform testing.
- 3) ORRE: Ordinance Regulating Radio Equipment.

5.2. Antenna Power, Antenna Power Tolerance and EIRP Measurement

5.2.1. Test Limit

Antenna Power for 20MHz BW $\leq 10\text{mW/MHz}$

Antenna power for 40MHz BW $\leq 5\text{mW/MHz}$

Antenna Power Tolerance: $\leq +20\%$

EIRP for 20MHz BW $\leq 12.14\text{dBm/MHz}$

EIRP for 40MHz BW $\leq 9.13\text{dBm/MHz}$

5.2.2. Test Procedure

Option A

a) Set the spectrum analyzer as follows when searching for the frequency that gives the maximum antenna power

1. Set instrument center frequency to the channel center frequency
2. Set span to about 2 times the OBW
3. RBW = 1MHz
4. VBW = 3MHz
5. Set sweep time to minimum time for guaranteed measurement accuracy
6. Trigger condition = free run
7. Sweep mode = continuous sweep
8. Detection mode = positive peak
9. Display mode = max hold

b) Set the spectrum analyzer as follows when measuring the antenna power

1. Set center frequency to the frequency that gives the maximum power
2. Set span to 0Hz
3. RBW = 1MHz
4. VBW = 1MHz
5. Sweep mode = continuous sweep

c) Connect the high frequency power meter to the IF output terminal of the spectrum analyzer and then record the result

Option B

a) When searching for the frequency that gives the maximum antenna power, the setting is same as Annex 43.

b) Set the spectrum analyzer as follows when measuring the antenna power

1. Make the spectrum analyzer into channel power function mode
2. Set center frequency to the frequency that gives the maximum antenna power
3. Set span to about 2 times the OBW
4. RBW = 1MHz
5. VBW = 1MHz
6. Set integral bandwidth = 1MHz
7. Sweep mode = continuous sweep
8. Detection mode = RMS
9. Display mode = Trace Average

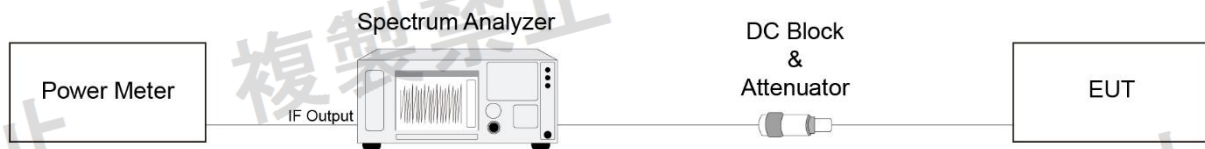
c) Record the channel power of integral bandwidth

Note: The two test methods (Option A and Option B) are compared, the measured values are close.

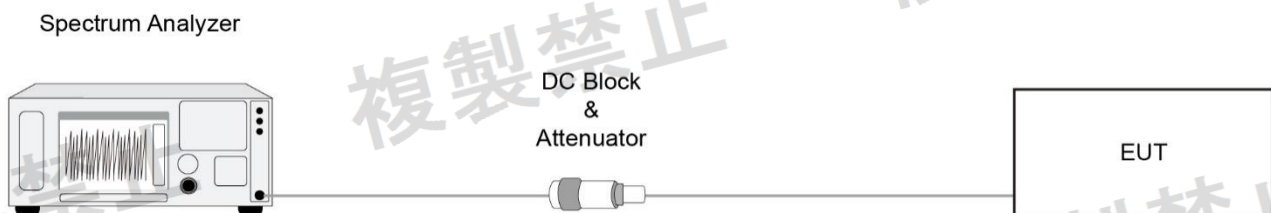
We choose option B for power testing

5.2.3. Test Setup

Option A



Option B



5.2.4. Test Result

Test Site	WJ-SR2	Temperature	22.3 ~ 24.7 °C
Test Engineer	Layla Gui	Humidity	46.2 ~ 55.0 %RH
Test Date	2025-04-23 ~ 2025-05-07	Test Item	Output Power

Test Mode	Frequency (MHz)	Output Power (dBm/MHz)		Total Output Power (dBm/MHz)	Total Output Power (mW/MHz)	Limit (mW/MHz)	Result
		Ant 0	Ant 1				
802.11b	2412	2.64	2.02	5.35	3.43	≤ 10.00	Pass
	2442	2.55	2.13	5.36	3.43	≤ 10.00	Pass
	2472	3.10	2.28	5.72	3.73	≤ 10.00	Pass
802.11g	2412	2.42	2.45	5.45	3.50	≤ 10.00	Pass
	2442	2.38	2.68	5.54	3.58	≤ 10.00	Pass
	2472	2.38	2.37	5.39	3.46	≤ 10.00	Pass
802.11n-HT20	2412	2.83	2.60	5.73	3.74	≤ 10.00	Pass
	2442	2.80	2.56	5.69	3.71	≤ 10.00	Pass
	2472	2.58	2.41	5.51	3.55	≤ 10.00	Pass
802.11n-HT40	2422	-0.20	-1.18	2.35	1.72	≤ 5.00	Pass
	2442	-0.43	-0.92	2.34	1.71	≤ 5.00	Pass
	2462	-0.42	-0.79	2.41	1.74	≤ 5.00	Pass
802.11ax-HE20	2412	2.66	2.51	5.60	3.63	≤ 10.00	Pass
	2442	2.59	2.72	5.67	3.69	≤ 10.00	Pass
	2472	2.46	2.24	5.36	3.44	≤ 10.00	Pass
802.11ax-HE40	2422	-0.14	-0.65	2.62	1.83	≤ 5.00	Pass
	2442	-0.30	-0.88	2.43	1.75	≤ 5.00	Pass
	2462	-0.16	-0.72	2.58	1.81	≤ 5.00	Pass
802.11be-EHT20	2412	2.65	2.25	5.46	3.52	≤ 10.00	Pass
	2442	2.47	2.57	5.53	3.57	≤ 10.00	Pass
	2472	2.54	2.23	5.40	3.47	≤ 10.00	Pass
802.11be-EHT40	2422	-0.16	-0.80	2.54	1.80	≤ 5.00	Pass
	2442	-0.14	-0.53	2.68	1.85	≤ 5.00	Pass
	2462	-0.13	-0.68	2.61	1.83	≤ 5.00	Pass

Note 1: Total Output Power (dBm/MHz) = $10 \cdot \log \{10^{(\text{Ant 0 Output Power (dBm/MHz)})/10} + 10^{(\text{Ant 1 Output Power (dBm/MHz)})/10}\}$.

Note 2: Total Output Power (mW/MHz) = $10^{[\text{Total Output Power (dBm/MHz)}/10]}$.

Test Site	WJ-SR2	Temperature	22.3 ~ 24.7 °C
Test Engineer	Layla Gui	Humidity	46.2 ~ 55.0 %RH
Test Date	2025-04-23 ~ 2025-05-07	Test Item	Output Power Tolerance

Test Mode	Frequency (MHz)	Output Power (mW/MHz)	Declared Output Power (mW/MHz)	Tolerance (%)	Limit (%)	Result
802.11b	2412	3.43	4.00	-14.25	≤ +20	Pass
	2442	3.43	4.00	-14.25	≤ +20	Pass
	2472	3.73	4.00	-6.75	≤ +20	Pass
802.11g	2412	3.50	4.00	-12.50	≤ +20	Pass
	2442	3.58	4.00	-10.50	≤ +20	Pass
	2472	3.46	4.00	-13.50	≤ +20	Pass
802.11n-HT20	2412	3.74	4.00	-6.50	≤ +20	Pass
	2442	3.71	4.00	-7.25	≤ +20	Pass
	2472	3.55	4.00	-11.25	≤ +20	Pass
802.11n-HT40	2422	1.72	2.00	-14.00	≤ +20	Pass
	2442	1.71	2.00	-14.50	≤ +20	Pass
	2462	1.74	2.00	-13.00	≤ +20	Pass
802.11ax-HE20	2412	3.63	4.00	-9.25	≤ +20	Pass
	2442	3.69	4.00	-7.75	≤ +20	Pass
	2472	3.44	4.00	-14.00	≤ +20	Pass
802.11ax-HE40	2422	1.83	2.00	-8.50	≤ +20	Pass
	2442	1.75	2.00	-12.50	≤ +20	Pass
	2462	1.81	2.00	-9.50	≤ +20	Pass
802.11be-EHT20	2412	3.52	4.00	-12.00	≤ +20	Pass
	2442	3.57	4.00	-10.75	≤ +20	Pass
	2472	3.47	4.00	-13.25	≤ +20	Pass
802.11be-EHT40	2422	1.80	2.00	-10.00	≤ +20	Pass
	2442	1.85	2.00	-7.50	≤ +20	Pass
	2462	1.83	2.00	-8.50	≤ +20	Pass

Note: Tolerance (%) = (Total Output Power (mW/MHz) - Declared Output Power (mW/MHz)) / Declared Output Power (mW/MHz) * 100%.

Test Site	WJ-SR2	Temperature	22.3 ~ 24.7 °C
Test Engineer	Layla Gui	Humidity	46.2 ~ 55.0 %RH
Test Date	2025-04-23 ~ 2025-05-07	Test Item	EIRP

Test Mode	Frequency (MHz)	Total Output Power (dBm/MHz)	EIRP (dBm/MHz)	Limit (dBm/MHz)	Result
802.11b	2412	5.35	11.68	≤ 12.14	Pass
	2442	5.36	11.69	≤ 12.14	Pass
	2472	5.72	12.05	≤ 12.14	Pass
802.11g	2412	5.45	11.78	≤ 12.14	Pass
	2442	5.54	11.87	≤ 12.14	Pass
	2472	5.39	11.72	≤ 12.14	Pass
802.11n-HT20	2412	5.73	12.06	≤ 12.14	Pass
	2442	5.69	12.02	≤ 12.14	Pass
	2472	5.51	11.84	≤ 12.14	Pass
802.11n-HT40	2422	2.35	8.68	≤ 9.13	Pass
	2442	2.34	8.67	≤ 9.13	Pass
	2462	2.41	8.74	≤ 9.13	Pass
802.11ax-HE20	2412	5.60	11.93	≤ 12.14	Pass
	2442	5.67	12.00	≤ 12.14	Pass
	2472	5.36	11.69	≤ 12.14	Pass
802.11ax-HE40	2422	2.62	8.95	≤ 9.13	Pass
	2442	2.43	8.76	≤ 9.13	Pass
	2462	2.58	8.91	≤ 9.13	Pass
802.11be-EHT20	2412	5.46	11.79	≤ 12.14	Pass
	2442	5.53	11.86	≤ 12.14	Pass
	2472	5.40	11.73	≤ 12.14	Pass
802.11be-EHT40	2422	2.54	8.87	≤ 9.13	Pass
	2442	2.68	9.01	≤ 9.13	Pass
	2462	2.61	8.94	≤ 9.13	Pass

Note: EIRP (dBm/MHz) = Total Output Power (dBm/MHz) + Ant Gain (dBi).

5.3. Occupied Bandwidth Measurement

5.3.1. Test Limit

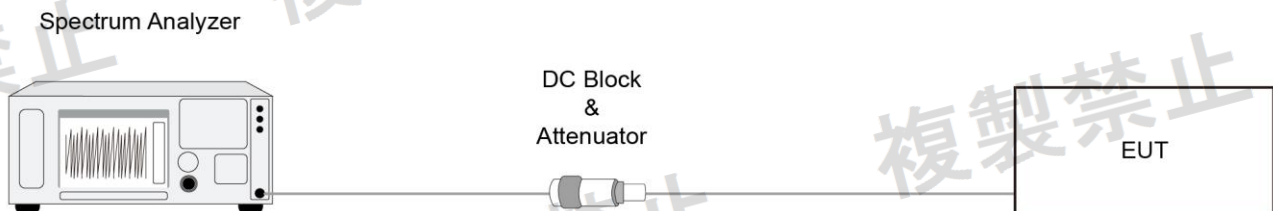
Within 26 MHz for DSSS & OFDM (Narrow-band)

Within 26 ~ 40 MHz for OFDM (Wide-band)

5.3.2. Test Procedure

1. A spectrum analyzer or similar device shall be used to observe a sample of the modulated transmitter's radio frequency power output.
2. A positive peak detector function must be used.
3. A measurement instrument with an integrated 99% power bandwidth function may be used to automate the test process.
4. The measurement instrument bandwidth and span must be set sufficiently with, and, the scan time set sufficiently slowly, to ensure all major modulation products are captured. Note that the measurement bandwidth should also be set sufficiently narrow to avoid adding significant error to the test result.
5. 'Maximum Hold' mode may be used to accumulate the measurement result over several scans provided the emission is repetitive in nature.

5.3.3. Test Setup



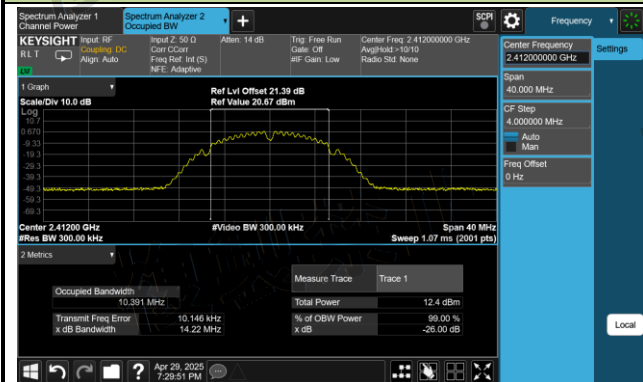
5.3.4. Test Result

Test Site	WJ-SR2	Temperature	22.8 ~ 23.8 °C
Test Engineer	Layla Gui	Humidity	46.4 ~ 47.6 %RH
Test Date	2025-04-29 ~ 2025-04-30		

Test Mode	Frequency (MHz)	Occupied Bandwidth (MHz)	Limit (MHz)	Result
802.11b	2412	10.391	≤ 26.00	Pass
	2442	10.381	≤ 26.00	Pass
	2472	10.380	≤ 26.00	Pass
802.11g	2412	17.339	≤ 26.00	Pass
	2442	16.892	≤ 26.00	Pass
	2472	16.885	≤ 26.00	Pass
802.11n-HT20	2412	18.205	≤ 26.00	Pass
	2442	17.952	≤ 26.00	Pass
	2472	17.904	≤ 26.00	Pass
802.11n-HT40	2422	36.324	26.00 ~ 40.00	Pass
	2442	36.200	26.00 ~ 40.00	Pass
	2462	36.202	26.00 ~ 40.00	Pass
802.11ax-HE20	2412	19.236	≤ 26.00	Pass
	2442	19.133	≤ 26.00	Pass
	2472	19.118	≤ 26.00	Pass
802.11ax-HE40	2422	37.795	26.00 ~ 40.00	Pass
	2442	37.700	26.00 ~ 40.00	Pass
	2462	37.683	26.00 ~ 40.00	Pass
802.11be-EHT20	2412	19.244	≤ 26.00	Pass
	2442	19.124	≤ 26.00	Pass
	2472	19.092	≤ 26.00	Pass
802.11be-EHT40	2422	37.782	26.00 ~ 40.00	Pass
	2442	37.708	26.00 ~ 40.00	Pass
	2462	37.726	26.00 ~ 40.00	Pass

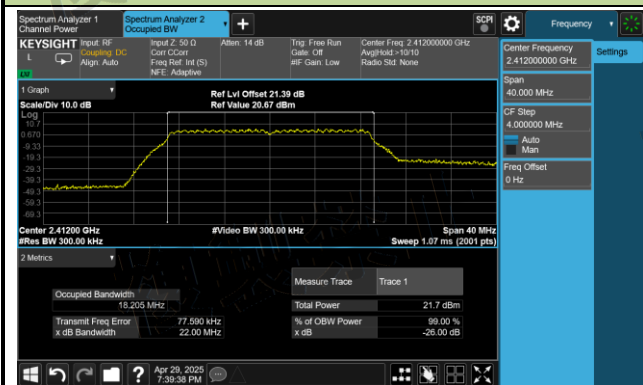
802.11b Occupied Bandwidth

2412MHz

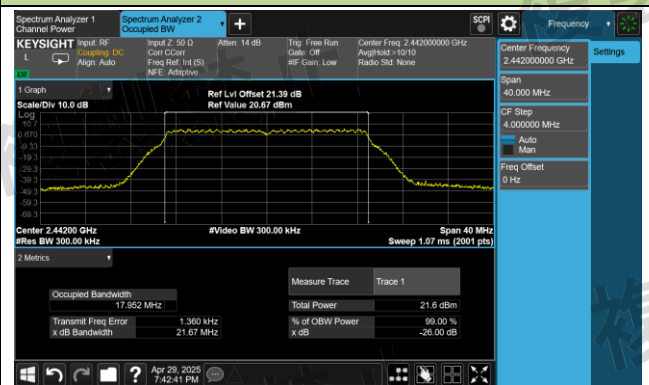


802.11n-HT20 Occupied Bandwidth

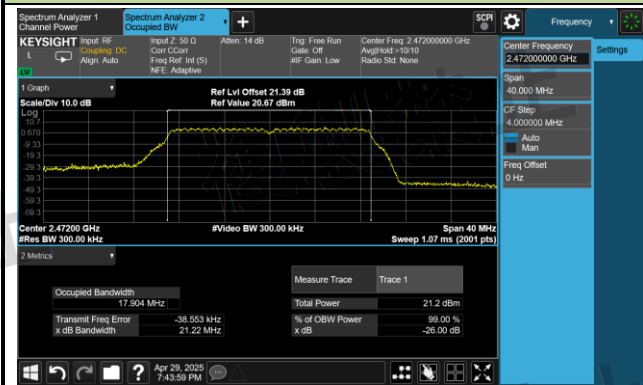
2412MHz



2442MHz

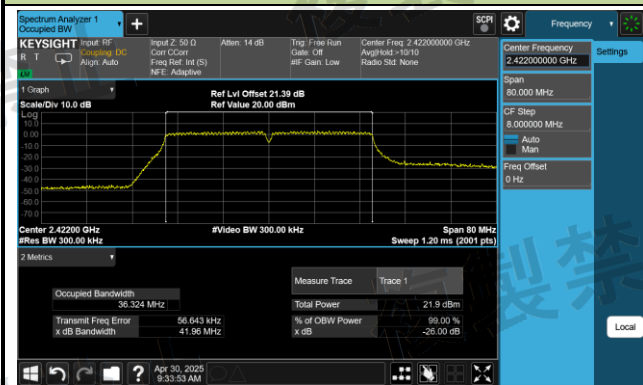


2472MHz

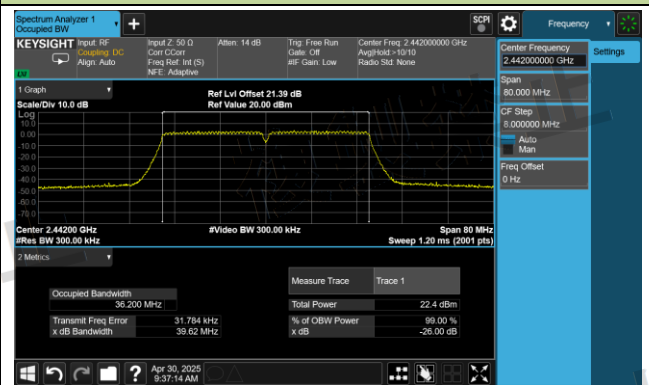


802.11n-HT40 Occupied Bandwidth

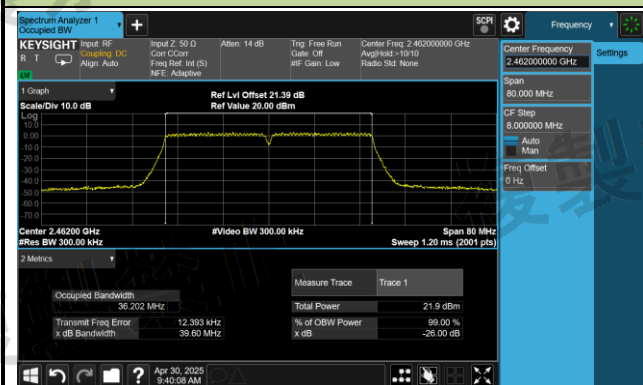
2422MHz



2442MHz

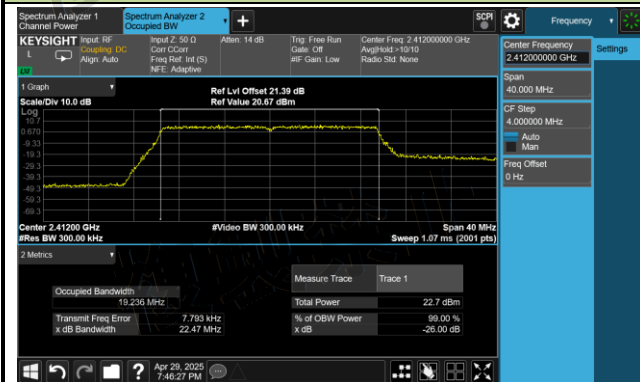


2462MHz

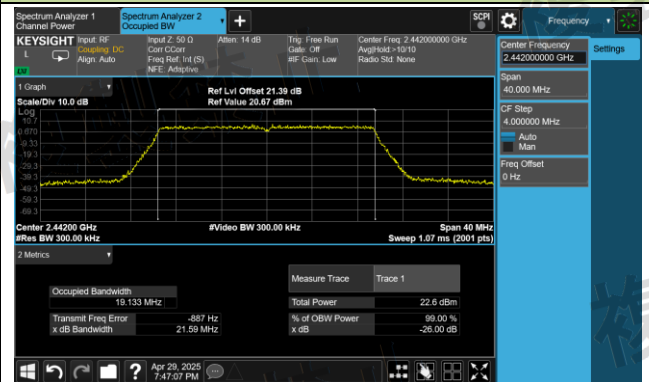


802.11ax-HE20 Occupied Bandwidth

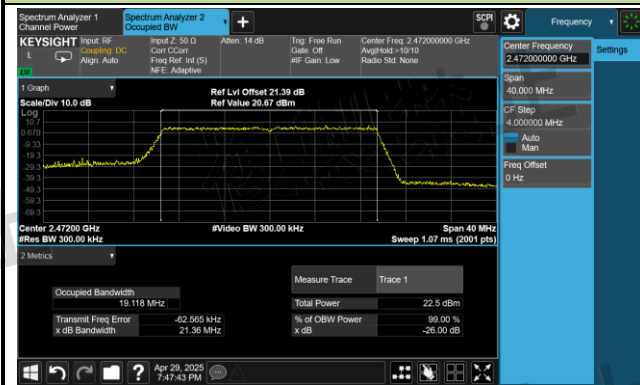
2412MHz



2442MHz

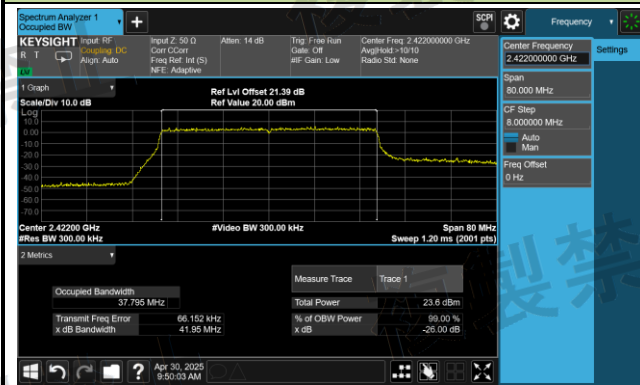


2472MHz

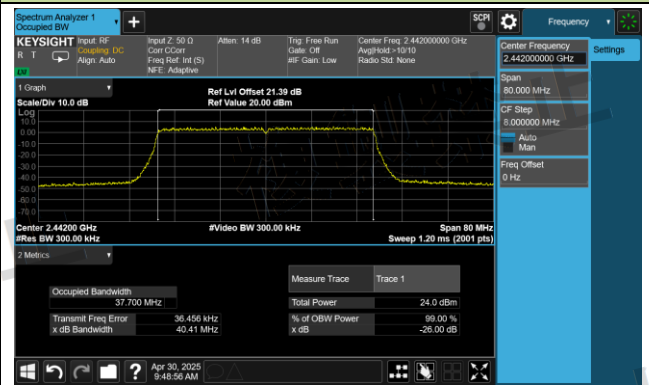


802.11ax-HE40 Occupied Bandwidth

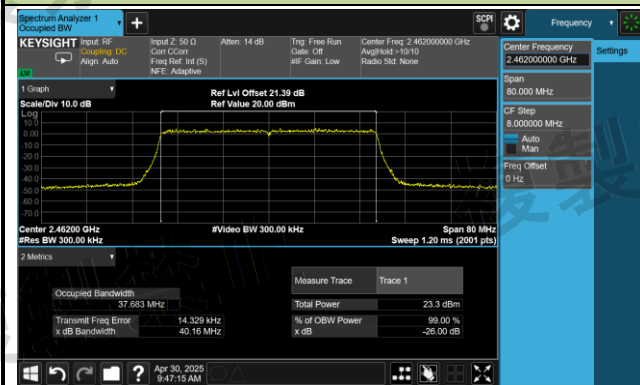
2422MHz



2442MHz

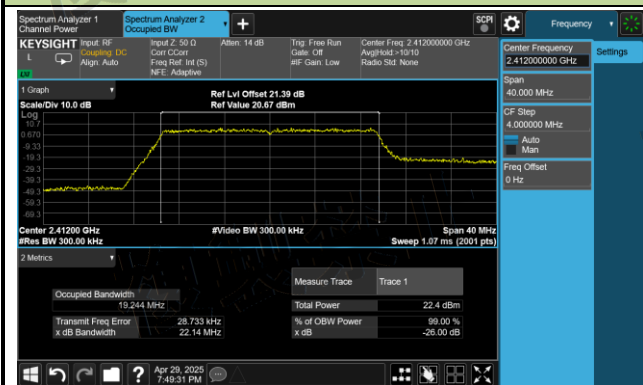


2462MHz

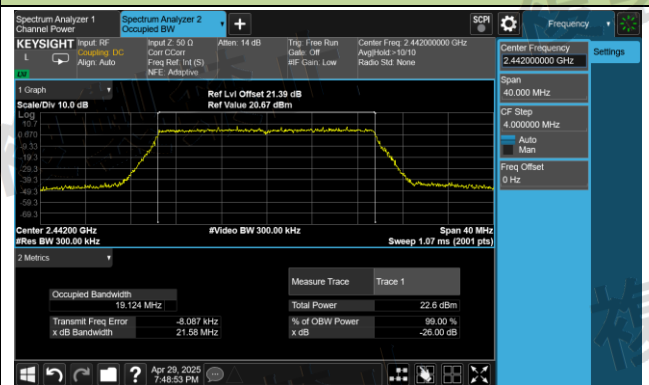


802.11be-EHT20 Occupied Bandwidth

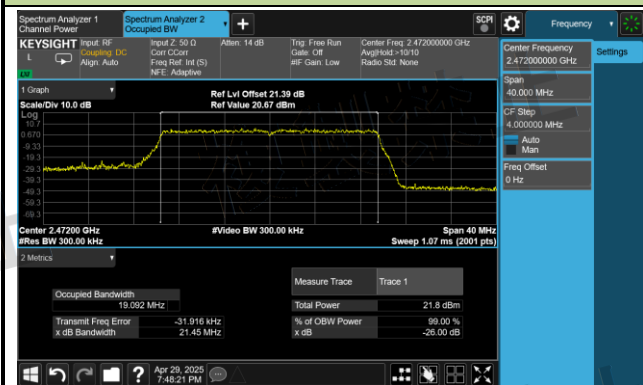
2412MHz



2442MHz

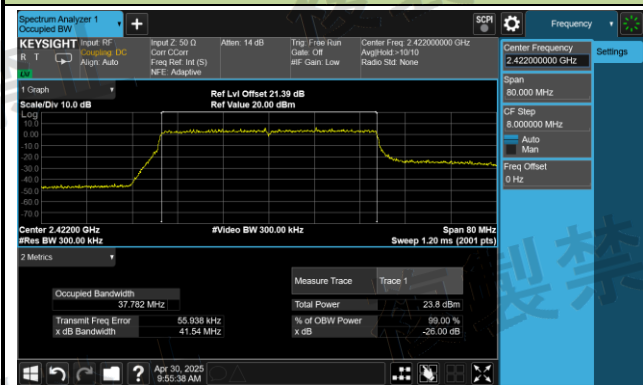


2472MHz

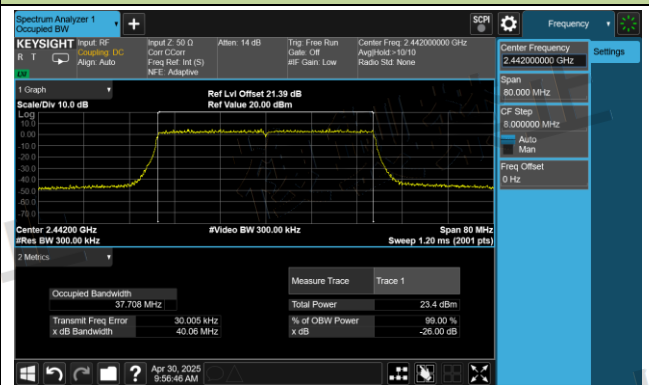


802.11be-EHT40 Occupied Bandwidth

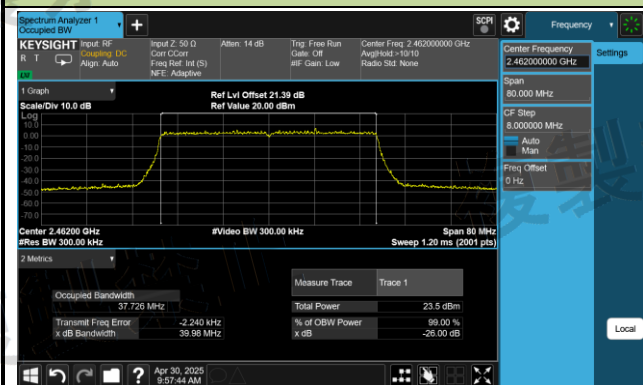
2422MHz



2442MHz



2462MHz



5.4. Frequency Tolerance Measurement

5.4.1. Test Limit

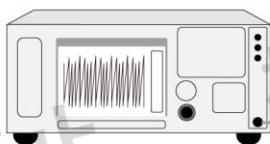
-50 ~ +50 ppm

5.4.2. Test Procedure

1. A spectrum analyzer or similar device shall be used to observe a sample of the unmodulated transmitter's radio frequency power output.
2. A positive peak detector function must be used.
3. The measurement instrument bandwidth and span must be set sufficiently with, and, the scan time set sufficiently slowly, to ensure all major modulation products are captured. Note that the measurement bandwidth should also be set sufficiently narrow to avoid adding significant error to the test result.
4. 'Maximum Hold' mode may be used to accumulate the measurement result over several scans provided the emission is repetitive in nature.

5.4.3. Test Setup

Spectrum Analyzer



DC Block
&
Attenuator



EUT



5.4.4. Test Result

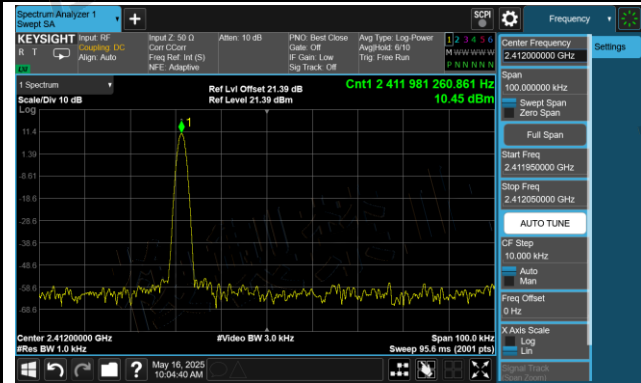
Test Site	WJ-SR2	Temperature	26.2 °C
Test Engineer	Layla Gui	Humidity	62.8 %RH
Test Date	2025-05-16		

Test Mode	Measurement Frequency (MHz)	Reading Frequency (MHz)	Frequency Tolerance (ppm)	Limit (ppm)	Result
Carrier Wave BW-20MHz	2412	2411.981261	-7.77	-50 ~ +50	Pass
	2442	2441.980604	-7.94	-50 ~ +50	Pass
	2472	2471.980107	-8.05	-50 ~ +50	Pass
Carrier Wave BW-40MHz	2422	2421.980151	-8.20	-50 ~ +50	Pass
	2462	2461.978517	-8.73	-50 ~ +50	Pass

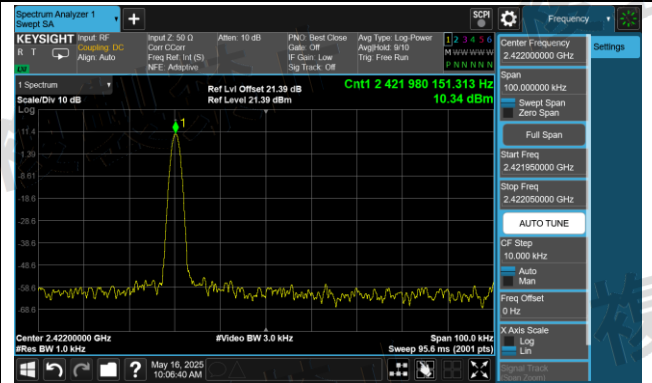
Note: Frequency Tolerance (ppm) = [Reading Frequency (MHz) - Measurement Frequency (MHz)] / Measurement Frequency * 10⁶.

Carrier Wave

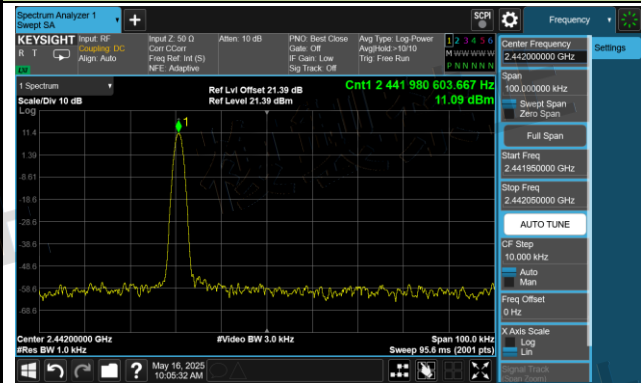
2412MHz



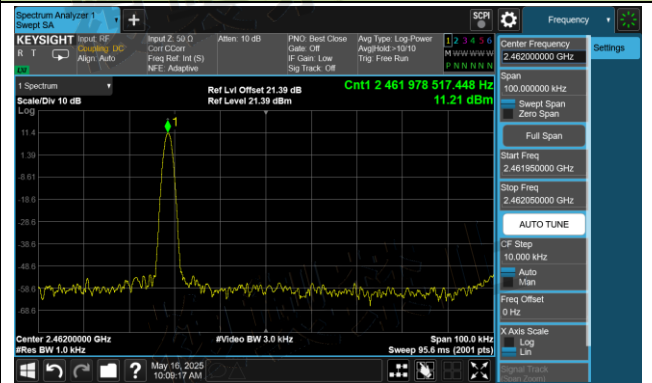
2422MHz



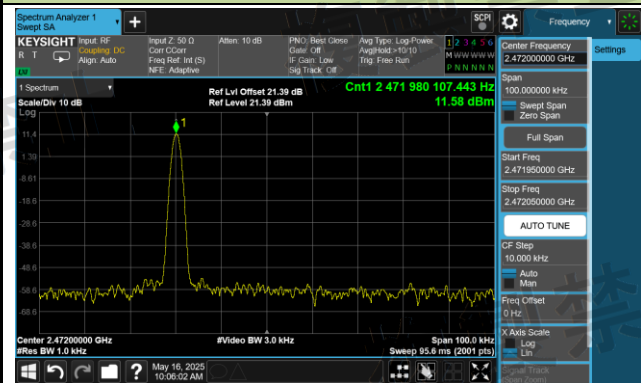
2442MHz



2462MHz



2472MHz



5.5. Unwanted Emission Strength Measurement

5.5.1. Test Limit

$\leq 2.5\mu\text{W}/\text{MHz}$ for 30 ~ 2387MHz

$\leq 25\mu\text{W}/\text{MHz}$ for 2387 ~ 2400MHz

$\leq 25\mu\text{W}/\text{MHz}$ for 2483.5 ~ 2496.5MHz

$\leq 2.5\mu\text{W}/\text{MHz}$ for 2496.5 ~ 12500MHz

5.5.2. Test Procedure

1. A spectrum analyzer or similar device shall be used to observe a sample of the modulated transmitter's radio frequency power output.
2. A positive peak detector function must be used.
3. The measurement instrument bandwidth and span must be set sufficiently with, and, the scan time set sufficiently slowly, to ensure all major modulation products are captured. Note that the measurement bandwidth should also be set sufficiently narrow to avoid adding significant error to the test result.
4. 'Maximum Hold' mode may be used to accumulate the measurement result over several scans provided the emission is repetitive in nature.

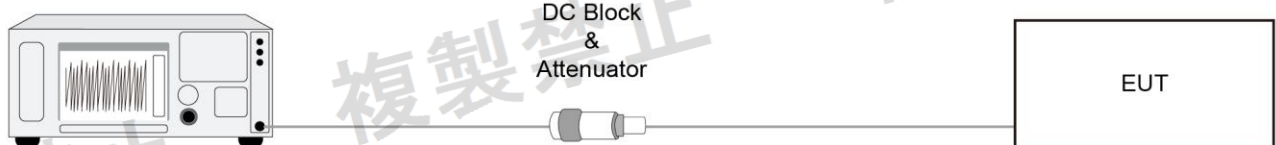
If the peak power is over the limit, the follow procedure as below shall be used.

Spectrum analyzer setting as below

1. Center Frequency: Searched Frequency
2. Span: 0Hz (Zero Span)
3. RBW: 1MHz
4. VBW: Same as RBW
5. Sweep Time: Auto (Minimum time to ensure measurement accuracy.
In case of burst wave, one burst shall be included per data point)
6. Data Points: 400 points or more
7. Sweep Mode: Single Sweep
8. Detection Mode: Sample
9. Y-axis Scale: 10dB/Div
10. Reference Level: Enough level for maximum dynamic range
11. Set the spectrum analyzer as above, and it takes in a value of all data point. Regarding the all data value, it transforms the “dBm” value into “mW” value.
12. It adds the all values and calculates a grand total. <- Define a grand total as “P”. It divides “P” by sample data point (ex. 401, 501) and calculates the mean value. It reports the mean value.

5.5.3. Test Setup

Spectrum Analyzer



5.5.4. Test Result

Test Site	WJ-SR2	Temperature	23.8 °C
Test Engineer	Layla Gui	Humidity	46.4 %RH
Test Date	2025-04-30		

Test Channel	Frequency Range (MHz)	Measurement Freq. (MHz)	Max Measurement Level		Limit (μW/MHz)	Result
			(dBm/MHz)	(μW/MHz)		
802.11b						
2412MHz	30 ~ 1000	99.4	-40.69	0.0853	≤ 2.50	Pass
	1000 ~ 2387	2339.1	-40.76	0.0839	≤ 2.50	Pass
	2387 ~ 2400	2399.0185	-41.39	0.0726	≤ 25.00	Pass
	2483.5 ~ 2496.5	2488.9470	-41.11	0.0774	≤ 25.00	Pass
	2496.5 ~ 8000	3767.8	-37.79	0.1663	≤ 2.50	Pass
	8000 ~ 12500	11465.00	-35.96	0.2535	≤ 2.50	Pass
2442MHz	30 ~ 1000	100.3	-39.99	0.1002	≤ 2.50	Pass
	1000 ~ 2387	2329.4	-40.32	0.0929	≤ 2.50	Pass
	2387 ~ 2400	2394.2215	-40.97	0.0800	≤ 25.00	Pass
	2483.5 ~ 2496.5	2484.6960	-40.29	0.0935	≤ 25.00	Pass
	2496.5 ~ 8000	3853.1	-37.94	0.1607	≤ 2.50	Pass
	8000 ~ 12500	10990.25	-35.60	0.2754	≤ 2.50	Pass
2472MHz	30 ~ 1000	36.3	-43.19	0.0480	≤ 2.50	Pass
	1000 ~ 2387	2337.8	-40.96	0.0802	≤ 2.50	Pass
	2387 ~ 2400	2394.1890	-41.42	0.0721	≤ 25.00	Pass
	2483.5 ~ 2496.5	2486.5940	-40.87	0.0818	≤ 25.00	Pass
	2496.5 ~ 8000	6362.7	-37.58	0.1746	≤ 2.50	Pass
	8000 ~ 12500	11543.75	-36.24	0.2377	≤ 2.50	Pass

Test Channel	Frequency Range (MHz)	Measurement Freq. (MHz)	Max Measurement Level		Limit (μW/MHz)	Result
			(dBm/MHz)	(μW/MHz)		
802.11g						
2412MHz	30 ~ 1000	32.9	-44.24	0.0377	≤ 2.50	Pass
	1000 ~ 2387	2328.7	-29.88	1.0280	≤ 2.50	Pass
	2387 ~ 2400	2399.8700	-20.93	8.0724	≤ 25.00	Pass
	2483.5 ~ 2496.5	2484.7415	-39.71	0.1069	≤ 25.00	Pass
	2496.5 ~ 8000	7755.1	-37.54	0.1762	≤ 2.50	Pass
	8000 ~ 12500	12410.00	-35.59	0.2761	≤ 2.50	Pass
2442MHz	30 ~ 1000	38.7	-43.49	0.0448	≤ 2.50	Pass
	1000 ~ 2387	2350.9	-40.48	0.0895	≤ 2.50	Pass
	2387 ~ 2400	2396.4185	-39.56	0.1107	≤ 25.00	Pass
	2483.5 ~ 2496.5	2483.9550	-39.10	0.1230	≤ 25.00	Pass
	2496.5 ~ 8000	7281.8	-37.74	0.1683	≤ 2.50	Pass
	8000 ~ 12500	11494.25	-35.14	0.3062	≤ 2.50	Pass
2472MHz	30 ~ 1000	93.5	-41.92	0.0643	≤ 2.50	Pass
	1000 ~ 2387	2310.7	-39.08	0.1236	≤ 2.50	Pass
	2387 ~ 2400	2397.3285	-40.43	0.0906	≤ 25.00	Pass
	2483.5 ~ 2496.5	2483.5065	-26.36	2.3121	≤ 25.00	Pass
	2496.5 ~ 8000	7989.0	-37.82	0.1652	≤ 2.50	Pass
	8000 ~ 12500	11849.75	-35.95	0.2541	≤ 2.50	Pass

Test Channel	Frequency Range (MHz)	Measurement Freq. (MHz)	Max Measurement Level		Limit (μW/MHz)	Result
			(dBm/MHz)	(μW/MHz)		
802.11n-HT20						
2412MHz	30 ~ 1000	93.1	-41.85	0.0653	≤ 2.50	Pass
	1000 ~ 2387	2326.0	-30.06	0.9863	≤ 2.50	Pass
	2387 ~ 2400	2399.9740	-21.53	7.0307	≤ 25.00	Pass
	2483.5 ~ 2496.5	2483.9095	-39.63	0.1089	≤ 25.00	Pass
	2496.5 ~ 8000	6959.8	-37.99	0.1589	≤ 2.50	Pass
	8000 ~ 12500	11802.50	-36.37	0.2307	≤ 2.50	Pass
2442MHz	30 ~ 1000	873.4	-44.51	0.0354	≤ 2.50	Pass
	1000 ~ 2387	2365.5	-39.71	0.1069	≤ 2.50	Pass
	2387 ~ 2400	2397.4260	-39.02	0.1253	≤ 25.00	Pass
	2483.5 ~ 2496.5	2487.1855	-38.91	0.1285	≤ 25.00	Pass
	2496.5 ~ 8000	7876.2	-38.93	0.1279	≤ 2.50	Pass
	8000 ~ 12500	11647.25	-36.21	0.2393	≤ 2.50	Pass
2472MHz	30 ~ 1000	697.4	-43.91	0.0406	≤ 2.50	Pass
	1000 ~ 2387	2346.1	-39.43	0.1140	≤ 2.50	Pass
	2387 ~ 2400	2388.5665	-37.78	0.1667	≤ 25.00	Pass
	2483.5 ~ 2496.5	2483.5260	-21.08	7.7983	≤ 25.00	Pass
	2496.5 ~ 8000	7342.3	-38.70	0.1349	≤ 2.50	Pass
	8000 ~ 12500	11024.00	-34.33	0.3690	≤ 2.50	Pass

Test Channel	Frequency Range (MHz)	Measurement Freq. (MHz)	Max Measurement Level		Limit (μW/MHz)	Result
			(dBm/MHz)	(μW/MHz)		
802.11n-HT40						
2422MHz	30 ~ 1000	42.1	-44.41	0.0362	≤ 2.50	Pass
	1000 ~ 2387	2387.0	-37.63	0.1726	≤ 2.50	Pass
	2387 ~ 2400	2399.9935	-18.02	15.7761	≤ 25.00	Pass
	2483.5 ~ 2496.5	2490.7410	-39.07	0.1239	≤ 25.00	Pass
	2496.5 ~ 8000	7091.9	-38.60	0.1380	≤ 2.50	Pass
	8000 ~ 12500	10985.75	-35.87	0.2588	≤ 2.50	Pass
2442MHz	30 ~ 1000	897.7	-44.50	0.0355	≤ 2.50	Pass
	1000 ~ 2387	2337.1	-38.89	0.1291	≤ 2.50	Pass
	2387 ~ 2400	2399.9155	-36.40	0.2291	≤ 25.00	Pass
	2483.5 ~ 2496.5	2485.5020	-37.91	0.1618	≤ 25.00	Pass
	2496.5 ~ 8000	7350.6	-38.49	0.1416	≤ 2.50	Pass
	8000 ~ 12500	10666.25	-35.68	0.2704	≤ 2.50	Pass
2462MHz	30 ~ 1000	825.9	-44.67	0.0341	≤ 2.50	Pass
	1000 ~ 2387	2362.0	-38.89	0.1291	≤ 2.50	Pass
	2387 ~ 2400	2396.5745	-39.01	0.1256	≤ 25.00	Pass
	2483.5 ~ 2496.5	2483.5910	-25.29	2.9580	≤ 25.00	Pass
	2496.5 ~ 8000	7116.7	-37.73	0.1687	≤ 2.50	Pass
	8000 ~ 12500	12342.50	-35.65	0.2723	≤ 2.50	Pass

Test Channel	Frequency Range (MHz)	Measurement Freq. (MHz)	Max Measurement Level		Limit (μW/MHz)	Result
			(dBm/MHz)	(μW/MHz)		
802.11ax-HE20						
2412MHz	30 ~ 1000	819.6	-44.12	0.0387	≤ 2.50	Pass
	1000 ~ 2387	2357.2	-38.04	0.1570	≤ 2.50	Pass
	2387 ~ 2400	2399.9805	-18.39	14.4877	≤ 25.00	Pass
	2483.5 ~ 2496.5	2487.9980	-39.27	0.1183	≤ 25.00	Pass
	2496.5 ~ 8000	7160.7	-36.63	0.2173	≤ 2.50	Pass
	8000 ~ 12500	12153.50	-35.97	0.2529	≤ 2.50	Pass
2442MHz	30 ~ 1000	819.1	-44.37	0.0366	≤ 2.50	Pass
	1000 ~ 2387	2380.1	-39.65	0.1084	≤ 2.50	Pass
	2387 ~ 2400	2394.2150	-39.23	0.1194	≤ 25.00	Pass
	2483.5 ~ 2496.5	2492.1840	-39.15	0.1216	≤ 25.00	Pass
	2496.5 ~ 8000	7997.2	-37.79	0.1663	≤ 2.50	Pass
	8000 ~ 12500	10749.50	-35.96	0.2535	≤ 2.50	Pass
2472MHz	30 ~ 1000	43.1	-44.33	0.0369	≤ 2.50	Pass
	1000 ~ 2387	2317.7	-40.03	0.0993	≤ 2.50	Pass
	2387 ~ 2400	2394.4880	-40.39	0.0914	≤ 25.00	Pass
	2483.5 ~ 2496.5	2483.5520	-22.19	6.0395	≤ 25.00	Pass
	2496.5 ~ 8000	7067.2	-37.59	0.1742	≤ 2.50	Pass
	8000 ~ 12500	11460.50	-36.15	0.2427	≤ 2.50	Pass

Test Channel	Frequency Range (MHz)	Measurement Freq. (MHz)	Max Measurement Level		Limit (μW/MHz)	Result
			(dBm/MHz)	(μW/MHz)		
802.11ax-HE40						
2422MHz	30 ~ 1000	32.4	-44.10	0.0389	≤ 2.50	Pass
	1000 ~ 2387	2380.8	-36.86	0.2061	≤ 2.50	Pass
	2387 ~ 2400	2399.9350	-17.91	16.1808	≤ 25.00	Pass
	2483.5 ~ 2496.5	2494.7320	-38.31	0.1476	≤ 25.00	Pass
	2496.5 ~ 8000	6354.5	-38.52	0.1406	≤ 2.50	Pass
	8000 ~ 12500	11759.75	-35.47	0.2838	≤ 2.50	Pass
2442MHz	30 ~ 1000	972.4	-43.76	0.0421	≤ 2.50	Pass
	1000 ~ 2387	2378.0	-39.02	0.1253	≤ 2.50	Pass
	2387 ~ 2400	2399.8115	-37.50	0.1778	≤ 25.00	Pass
	2483.5 ~ 2496.5	2485.9115	-37.57	0.1750	≤ 25.00	Pass
	2496.5 ~ 8000	3726.5	-38.52	0.1406	≤ 2.50	Pass
	8000 ~ 12500	11024.00	-36.02	0.2500	≤ 2.50	Pass
2462MHz	30 ~ 1000	889.4	-42.75	0.0531	≤ 2.50	Pass
	1000 ~ 2387	2379.4	-39.28	0.1180	≤ 2.50	Pass
	2387 ~ 2400	2398.7585	-38.58	0.1387	≤ 25.00	Pass
	2483.5 ~ 2496.5	2483.5845	-20.28	9.3756	≤ 25.00	Pass
	2496.5 ~ 8000	3828.3	-37.20	0.1905	≤ 2.50	Pass
	8000 ~ 12500	11136.50	-35.47	0.2838	≤ 2.50	Pass

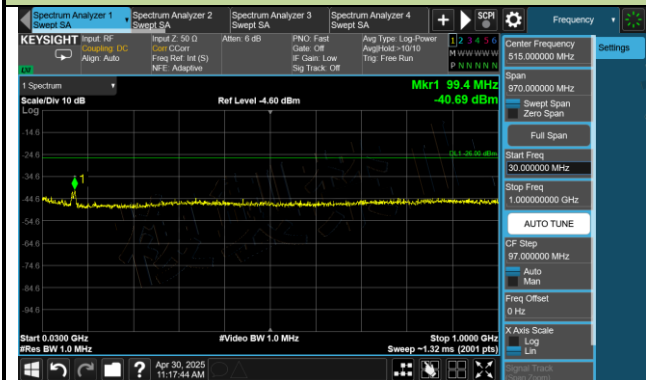
Test Channel	Frequency Range (MHz)	Measurement Freq. (MHz)	Max Measurement Level		Limit (μW/MHz)	Result
			(dBm/MHz)	(μW/MHz)		
802.11be-EHT20						
2412MHz	30 ~ 1000	757.0	-44.11	0.0388	≤ 2.50	Pass
	1000 ~ 2387	2332.2	-37.66	0.1714	≤ 2.50	Pass
	2387 ~ 2400	2399.9870	-17.45	17.9887	≤ 25.00	Pass
	2483.5 ~ 2496.5	2485.5215	-39.94	0.1014	≤ 25.00	Pass
	2496.5 ~ 8000	3919.2	-37.23	0.1892	≤ 2.50	Pass
	8000 ~ 12500	10148.75	-36.38	0.2301	≤ 2.50	Pass
2442MHz	30 ~ 1000	320.0	-44.58	0.0348	≤ 2.50	Pass
	1000 ~ 2387	2312.1	-38.68	0.1355	≤ 2.50	Pass
	2387 ~ 2400	2399.3305	-38.95	0.1274	≤ 25.00	Pass
	2483.5 ~ 2496.5	2487.9525	-38.65	0.1365	≤ 25.00	Pass
	2496.5 ~ 8000	7196.5	-37.82	0.1652	≤ 2.50	Pass
	8000 ~ 12500	10605.50	-36.84	0.2070	≤ 2.50	Pass
2472MHz	30 ~ 1000	40.2	-44.95	0.0320	≤ 2.50	Pass
	1000 ~ 2387	2307.2	-39.90	0.1023	≤ 2.50	Pass
	2387 ~ 2400	2399.4215	-40.10	0.0977	≤ 25.00	Pass
	2483.5 ~ 2496.5	2483.5585	-23.21	4.7753	≤ 25.00	Pass
	2496.5 ~ 8000	7328.6	-38.37	0.1455	≤ 2.50	Pass
	8000 ~ 12500	11897.00	-36.21	0.2393	≤ 2.50	Pass

Test Channel	Frequency Range (MHz)	Measurement Freq. (MHz)	Max Measurement Level		Limit (μW/MHz)	Result
			(dBm/MHz)	(μW/MHz)		
802.11be-EHT40						
2422MHz	30 ~ 1000	889.9	-43.38	0.0459	≤ 2.50	Pass
	1000 ~ 2387	2385.6	-36.57	0.2203	≤ 2.50	Pass
	2387 ~ 2400	2399.9870	-19.83	10.3992	≤ 25.00	Pass
	2483.5 ~ 2496.5	2488.2255	-38.07	0.1560	≤ 25.00	Pass
	2496.5 ~ 8000	7978.0	-38.48	0.1419	≤ 2.50	Pass
	8000 ~ 12500	10691.00	-36.89	0.2046	≤ 2.50	Pass
2442MHz	30 ~ 1000	985.0	-44.48	0.0356	≤ 2.50	Pass
	1000 ~ 2387	2381.5	-38.22	0.1507	≤ 2.50	Pass
	2387 ~ 2400	2399.1420	-37.76	0.1675	≤ 25.00	Pass
	2483.5 ~ 2496.5	2485.4955	-38.22	0.1507	≤ 25.00	Pass
	2496.5 ~ 8000	7204.7	-37.21	0.1901	≤ 2.50	Pass
	8000 ~ 12500	11588.75	-35.28	0.2965	≤ 2.50	Pass
2462MHz	30 ~ 1000	943.3	-44.34	0.0368	≤ 2.50	Pass
	1000 ~ 2387	2386.3	-39.49	0.1125	≤ 2.50	Pass
	2387 ~ 2400	2387.5265	-38.89	0.1291	≤ 25.00	Pass
	2483.5 ~ 2496.5	2483.6755	-19.52	11.1686	≤ 25.00	Pass
	2496.5 ~ 8000	7793.6	-38.89	0.1291	≤ 2.50	Pass
	8000 ~ 12500	10828.25	-35.84	0.2606	≤ 2.50	Pass

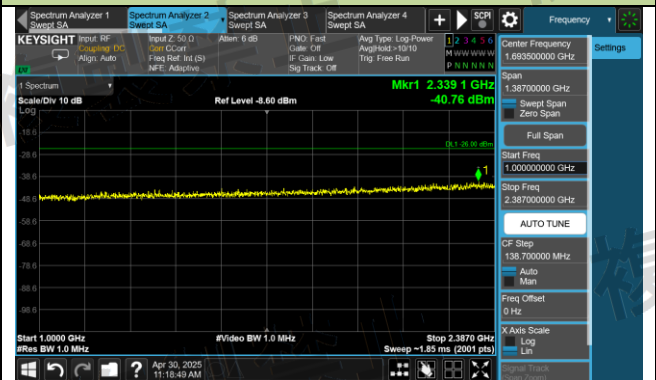
Unwanted Emission Strength

802.11b - 2412MHz

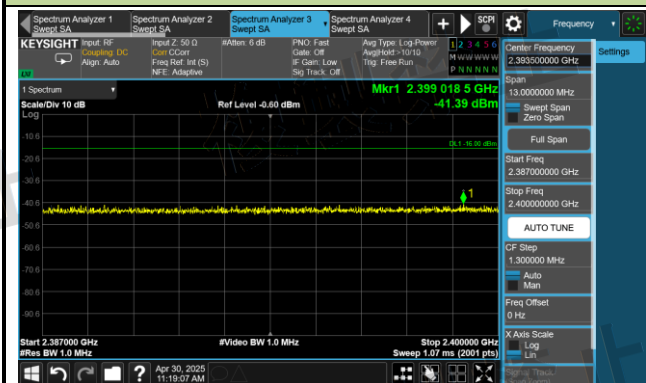
30 ~ 1000MHz



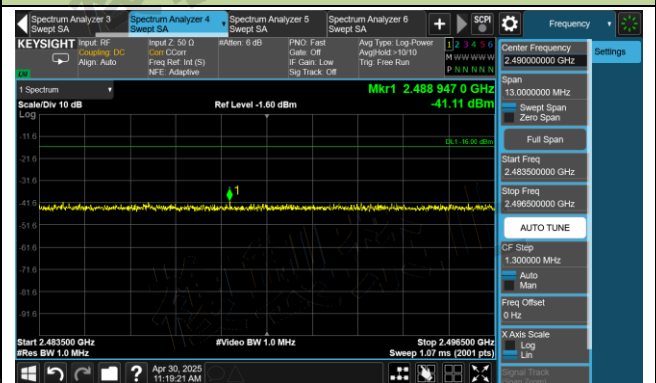
1000 ~ 2387MHz



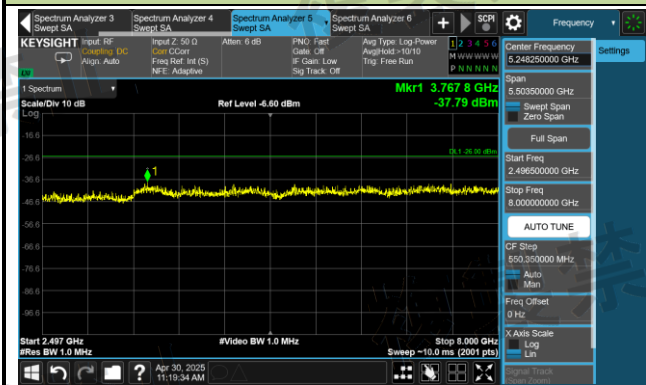
2387 ~ 2400MHz



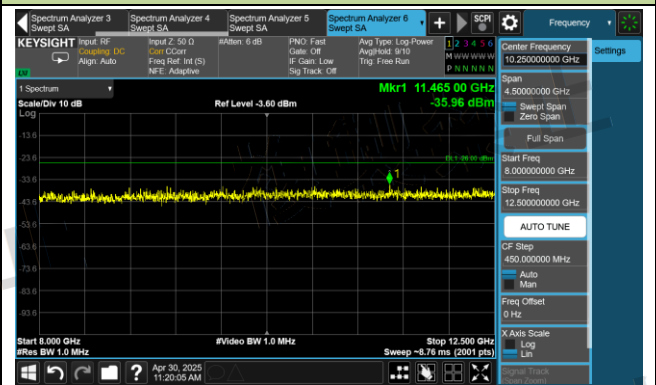
2483.5 ~ 2496.5MHz



2496.5 ~ 8000MHz



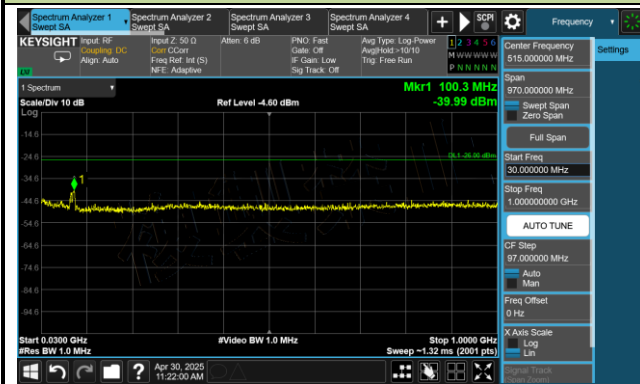
8000 ~ 12500MHz



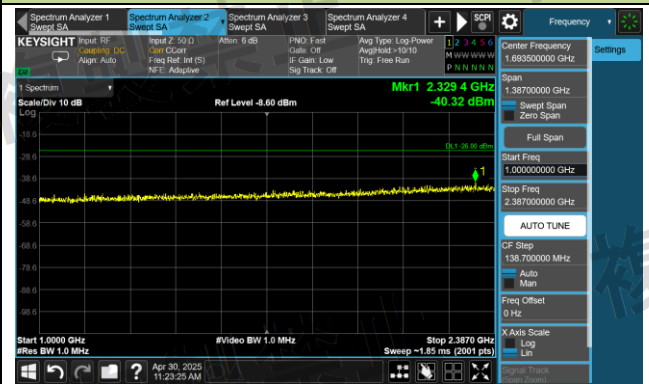
Unwanted Emission Strength

802.11b - 2442MHz

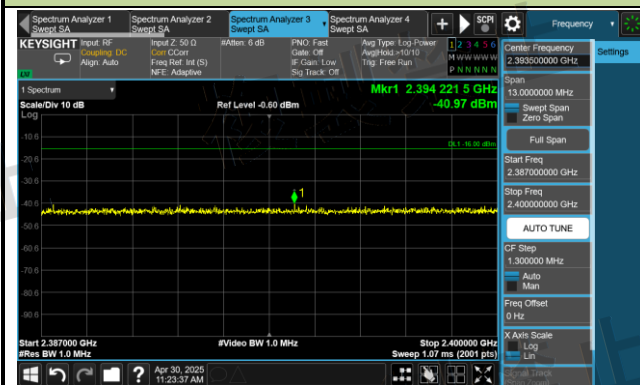
30 ~ 1000MHz



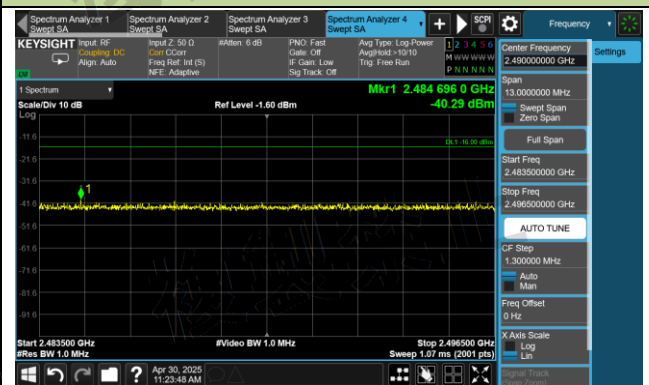
1000 ~ 2387MHz



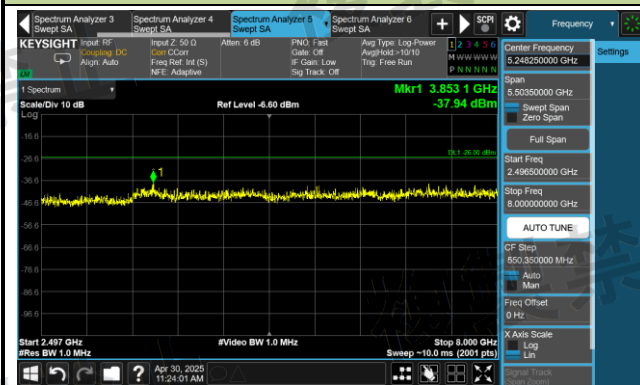
2387 ~ 2400MHz



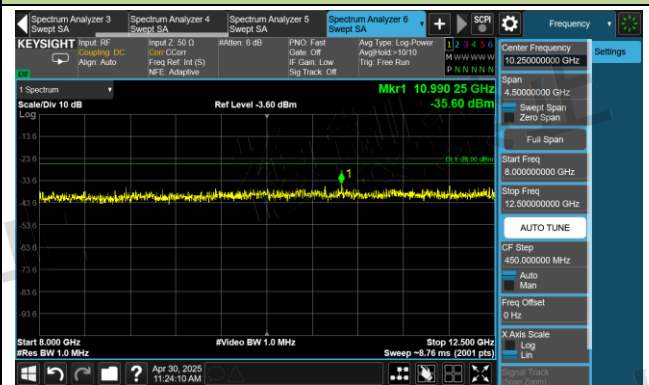
2483.5 ~ 2496.5MHz



2496.5 ~ 8000MHz



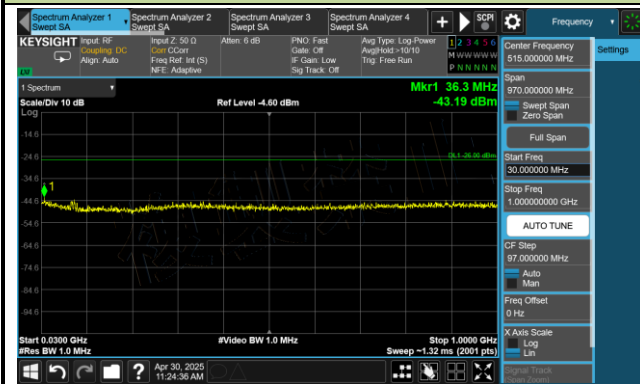
8000 ~ 12500MHz



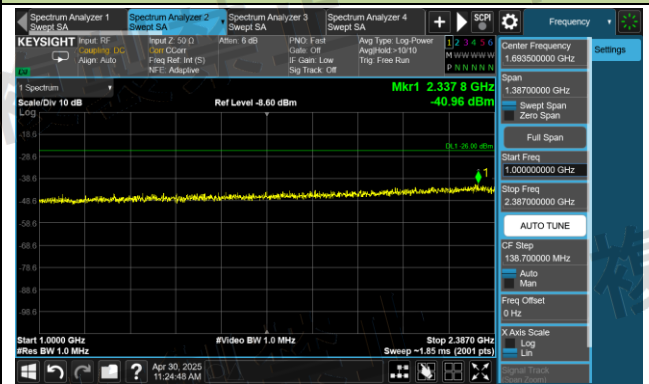
Unwanted Emission Strength

802.11b - 2472MHz

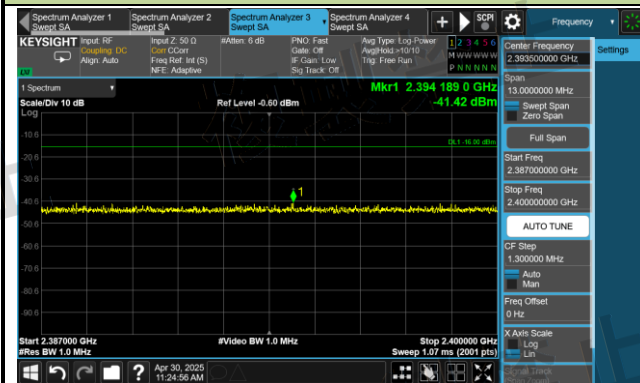
30 ~ 1000MHz



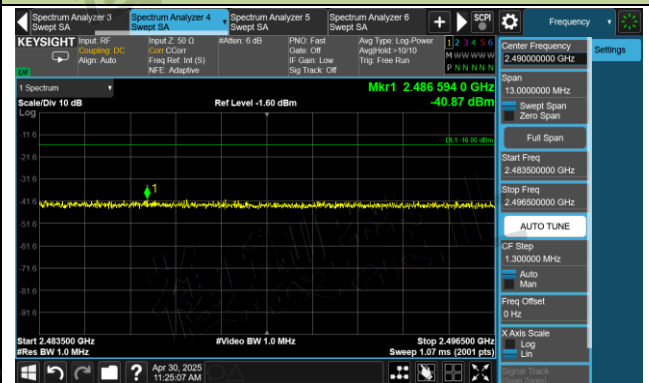
1000 ~ 2387MHz



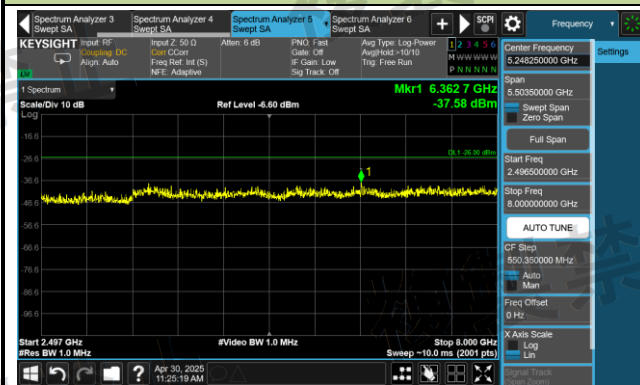
2387 ~ 2400MHz



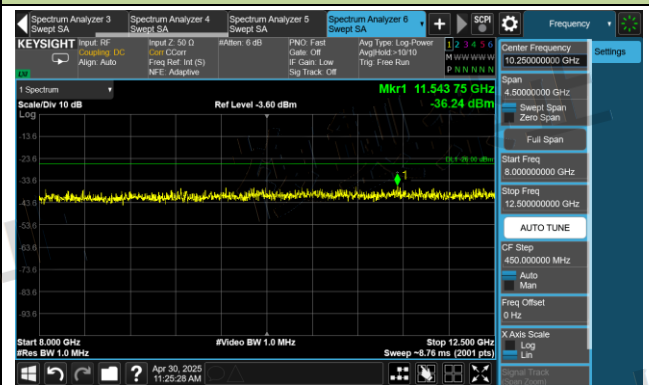
2483.5 ~ 2496.5MHz



2496.5 ~ 8000MHz



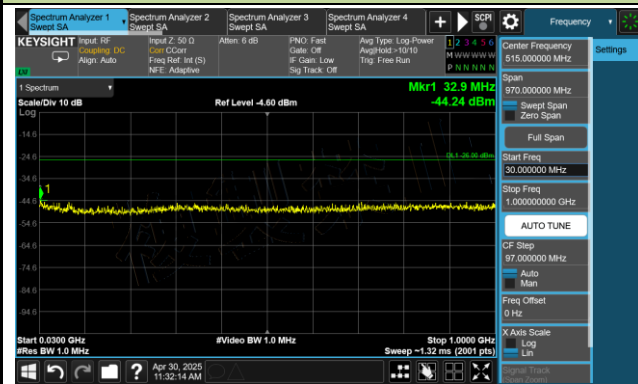
8000 ~ 12500MHz



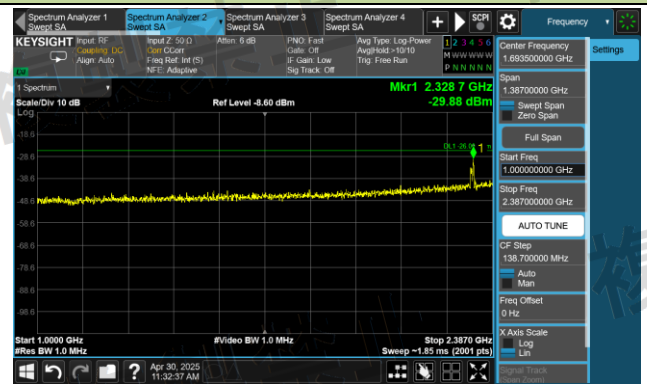
Unwanted Emission Strength

802.11g - 2412MHz

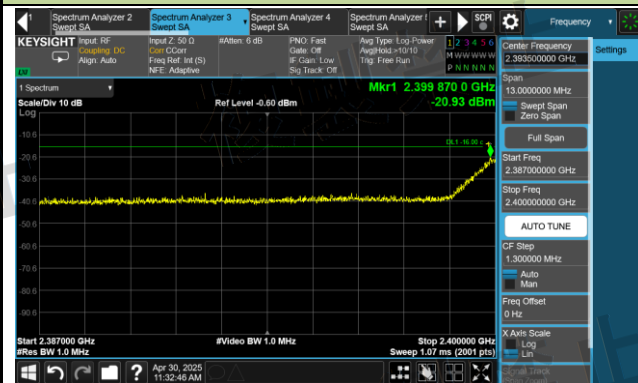
30 ~ 1000MHz



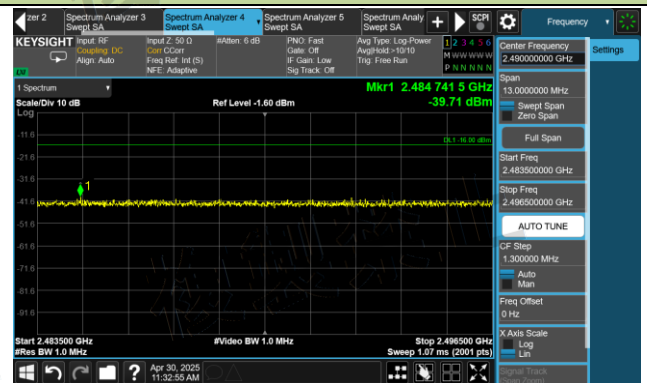
1000 ~ 2387MHz



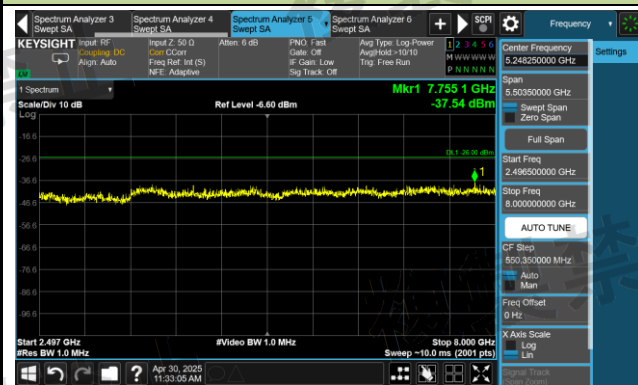
2387 ~ 2400MHz



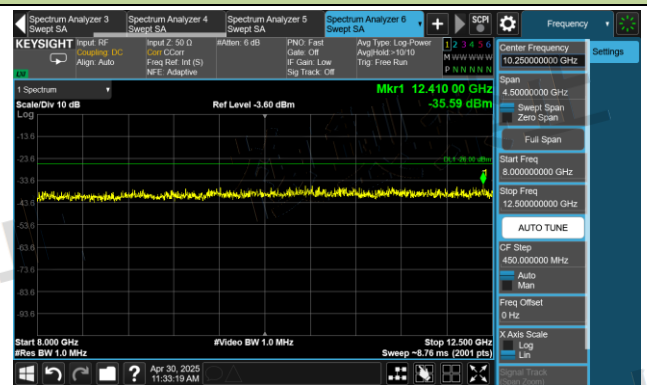
2483.5 ~ 2496.5MHz



2496.5 ~ 8000MHz



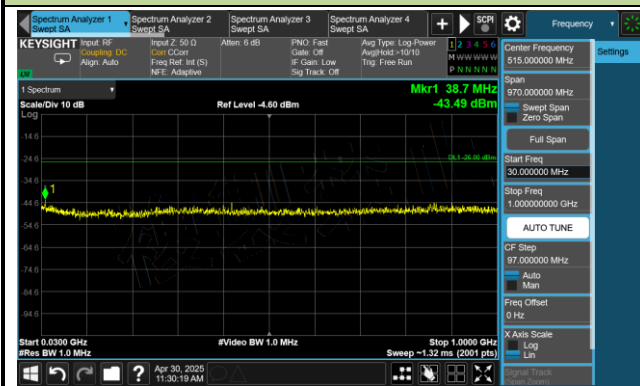
8000 ~ 12500MHz



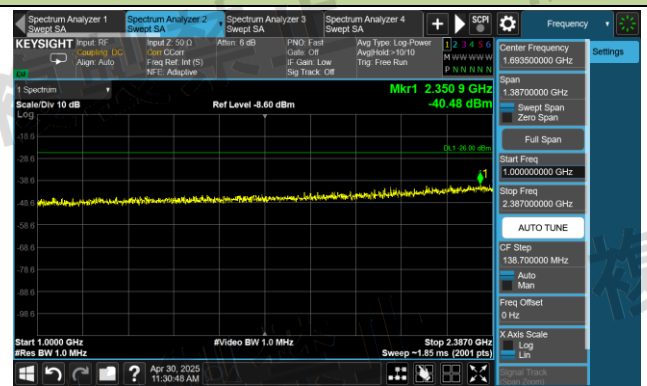
Unwanted Emission Strength

802.11g - 2442MHz

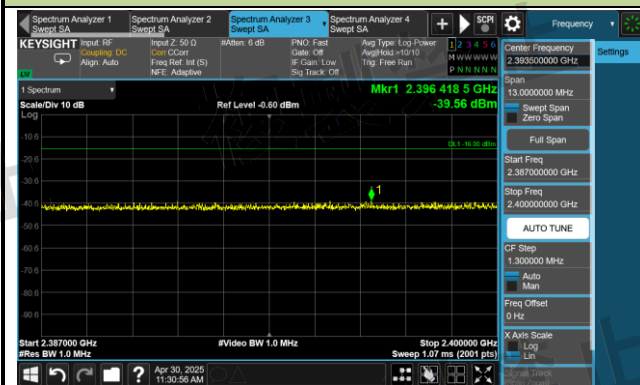
30 ~ 1000MHz



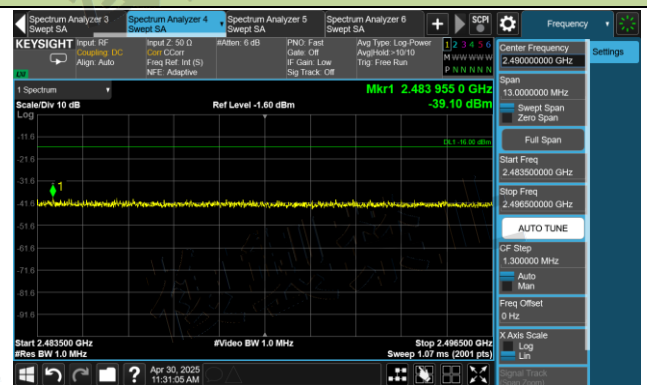
1000 ~ 2387MHz



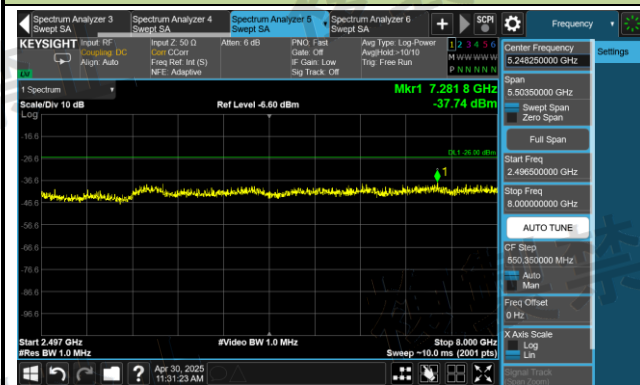
2387 ~ 2400MHz



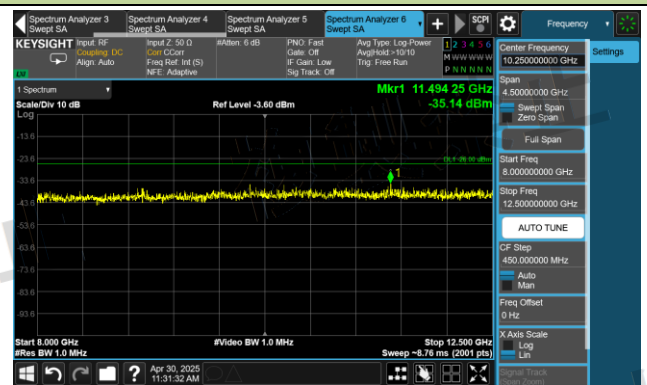
2483.5 ~ 2496.5MHz



2496.5 ~ 8000MHz



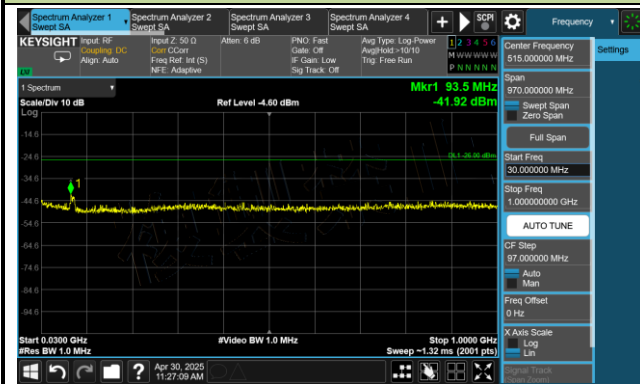
8000 ~ 12500MHz



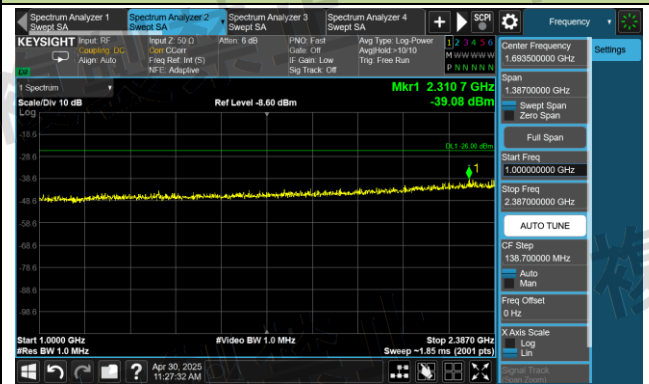
Unwanted Emission Strength

802.11g - 2472MHz

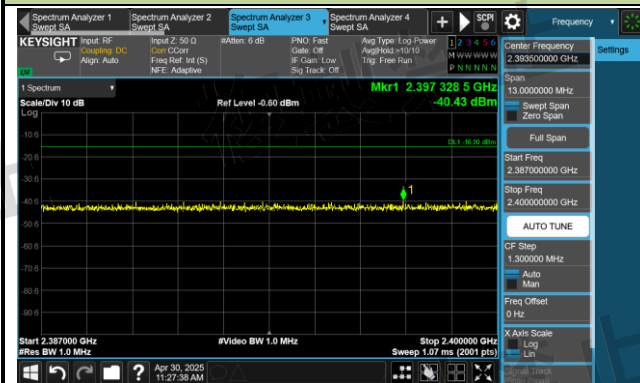
30 ~ 1000MHz



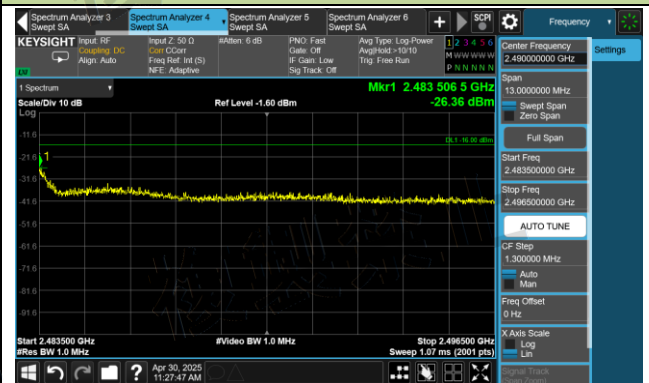
1000 ~ 2387MHz



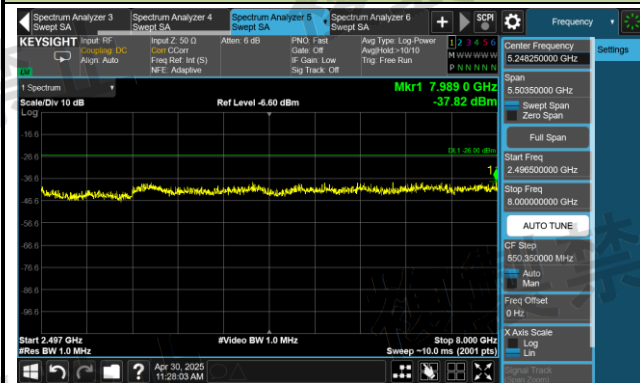
2387 ~ 2400MHz



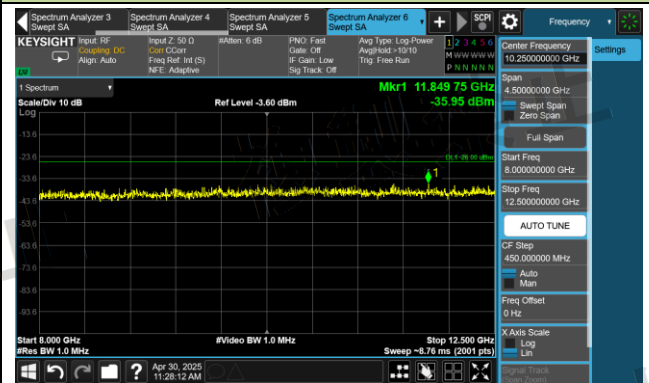
2483.5 ~ 2496.5MHz



2496.5 ~ 8000MHz



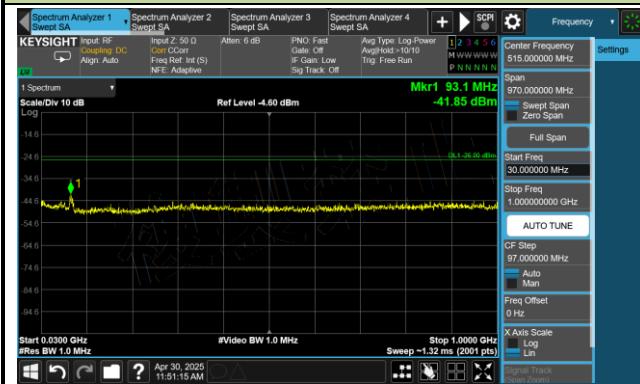
8000 ~ 12500MHz



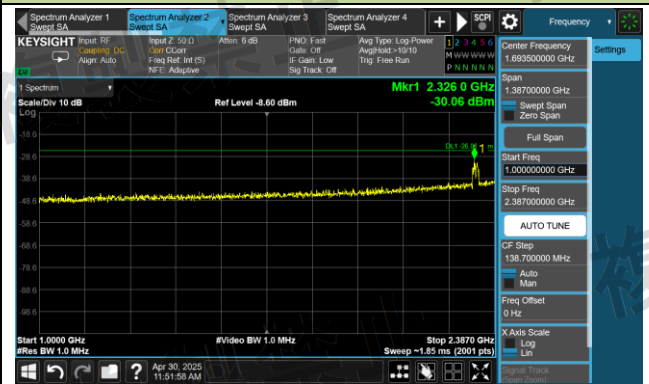
Unwanted Emission Strength

802.11n-HT20 - 2412MHz

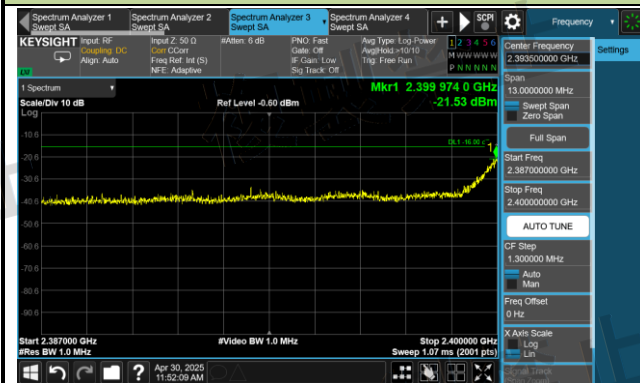
30 ~ 1000MHz



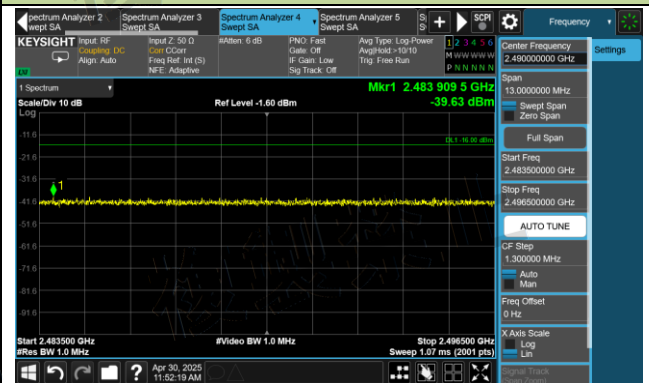
1000 ~ 2387MHz



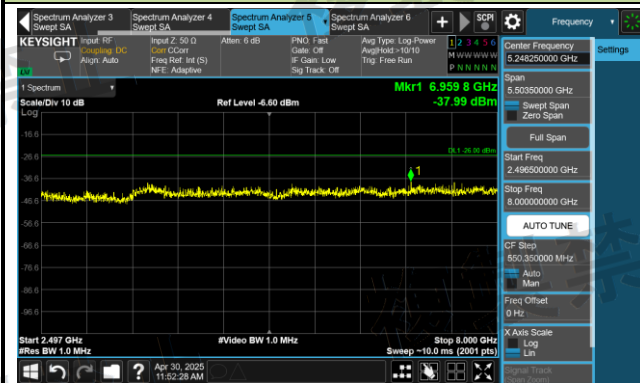
2387 ~ 2400MHz



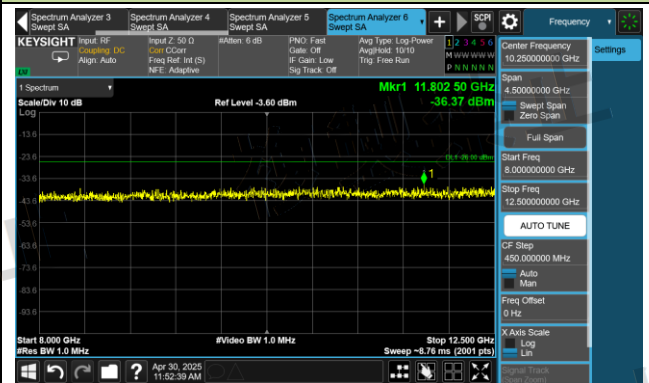
2483.5 ~ 2496.5MHz



2496.5 ~ 8000MHz



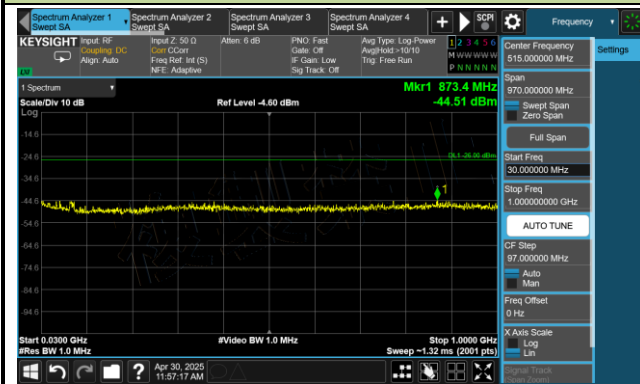
8000 ~ 12500MHz



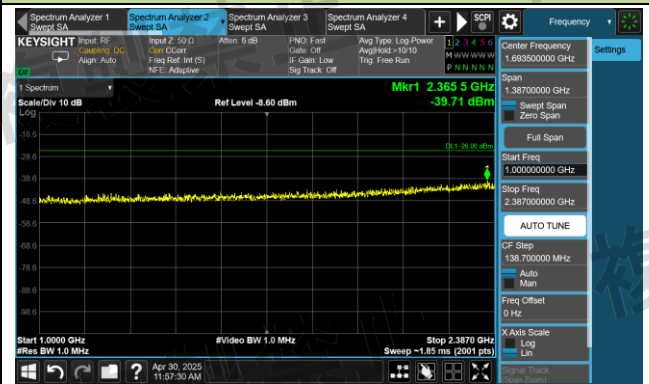
Unwanted Emission Strength

802.11n-HT20 - 2442MHz

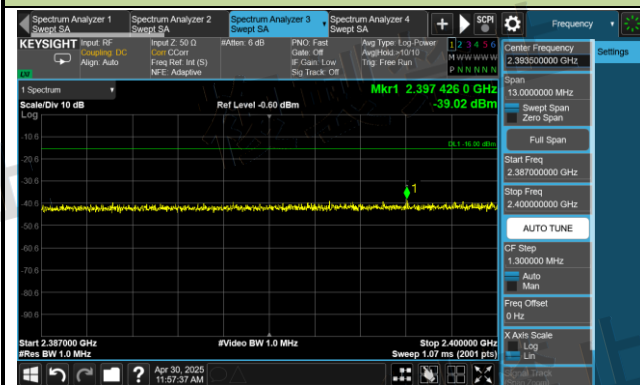
30 ~ 1000MHz



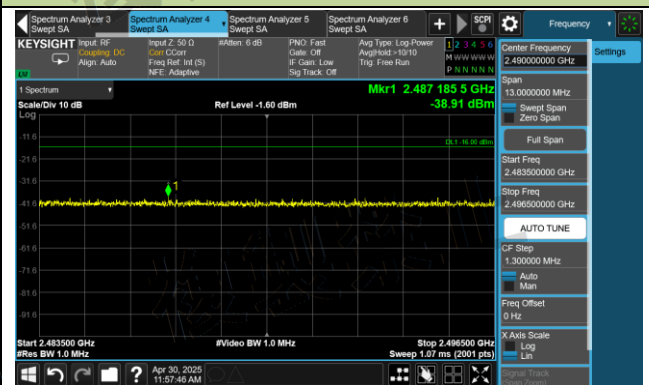
1000 ~ 2387MHz



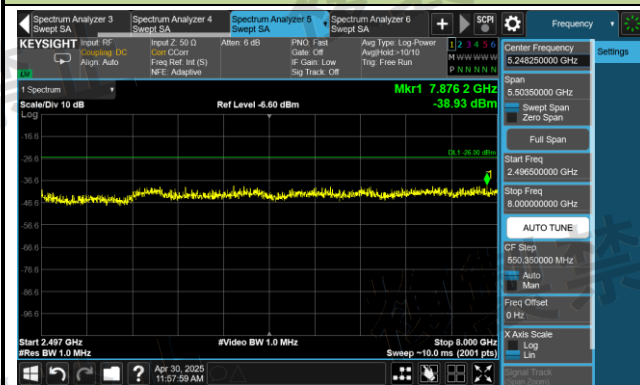
2387 ~ 2400MHz



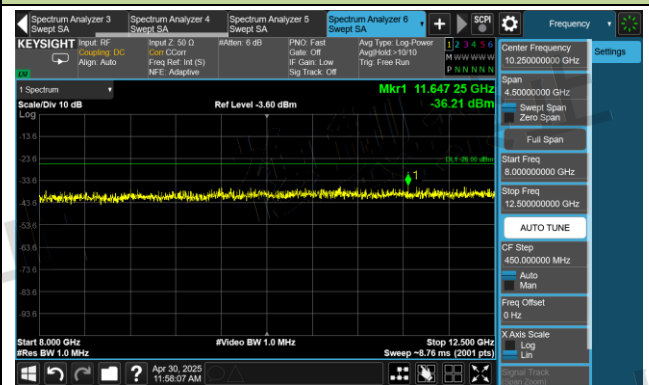
2483.5 ~ 2496.5MHz



2496.5 ~ 8000MHz



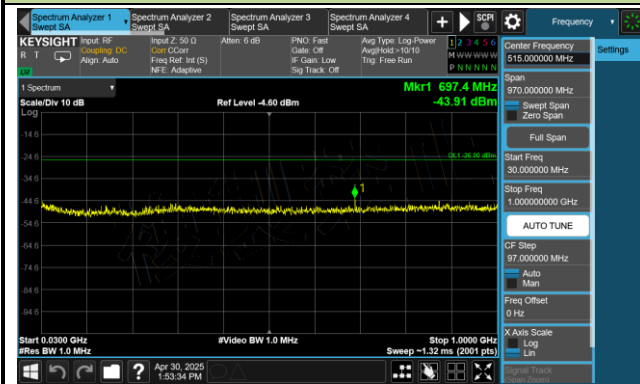
8000 ~ 12500MHz



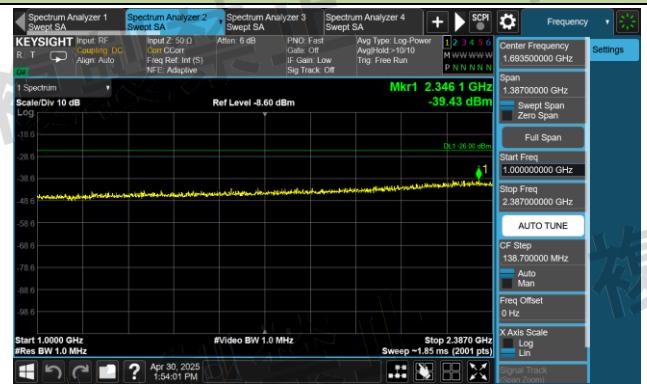
Unwanted Emission Strength

802.11n-HT20 - 2472MHz

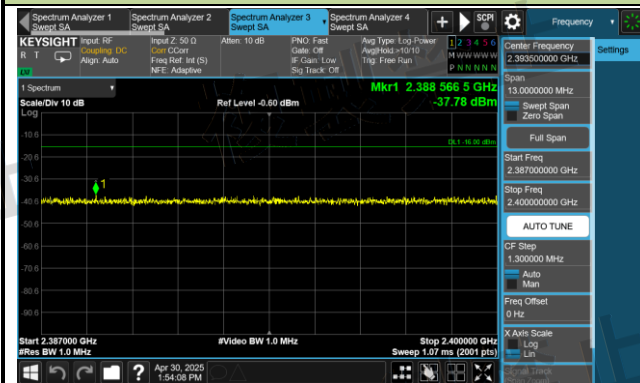
30 ~ 1000MHz



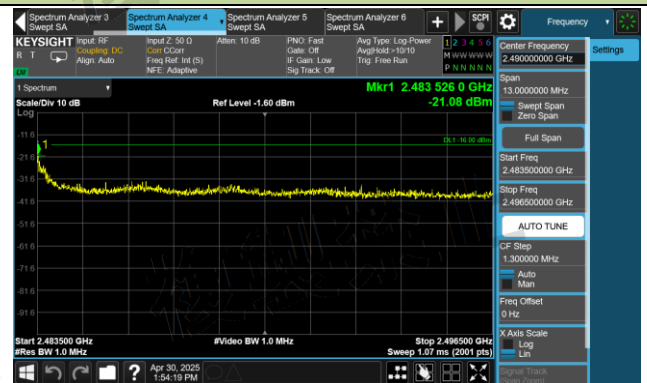
1000 ~ 2387MHz



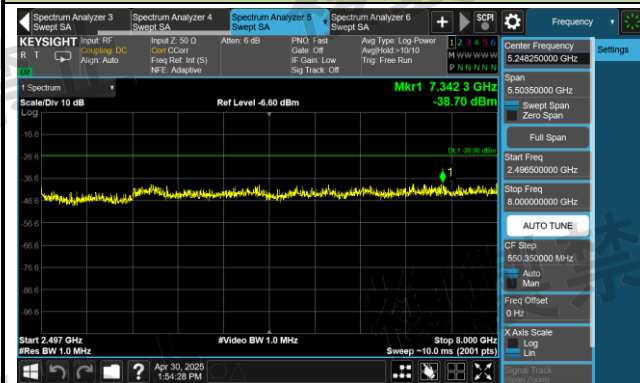
2387 ~ 2400MHz



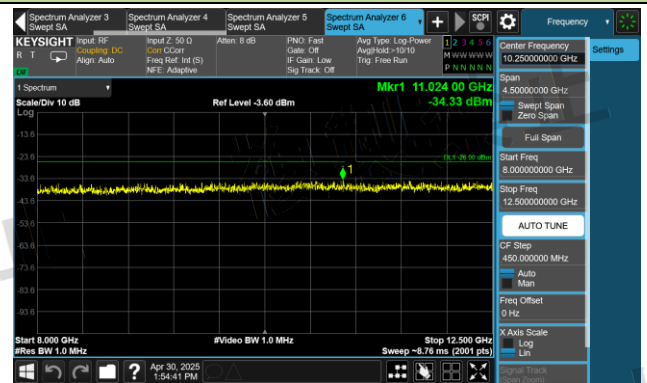
2483.5 ~ 2496.5MHz



2496.5 ~ 8000MHz



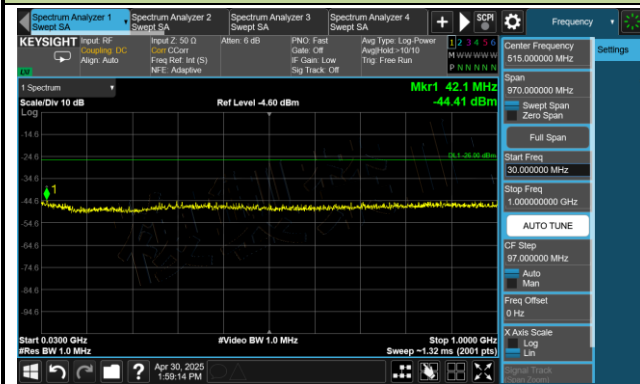
8000 ~ 12500MHz



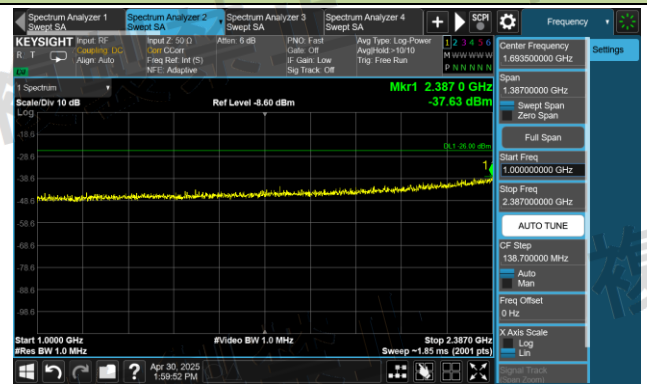
Unwanted Emission Strength

802.11n-HT40 - 2422MHz

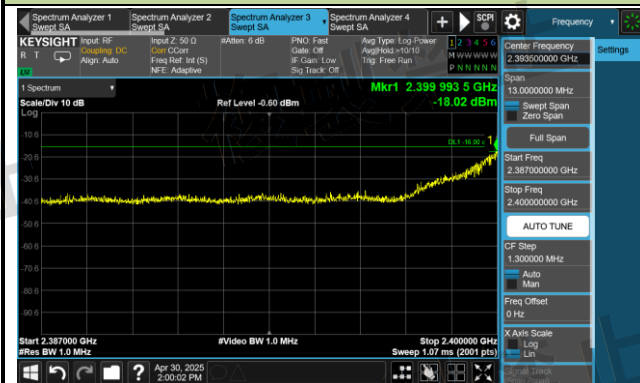
30 ~ 1000MHz



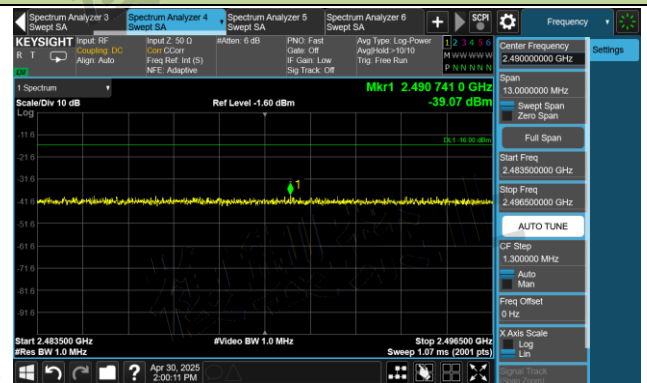
1000 ~ 2387MHz



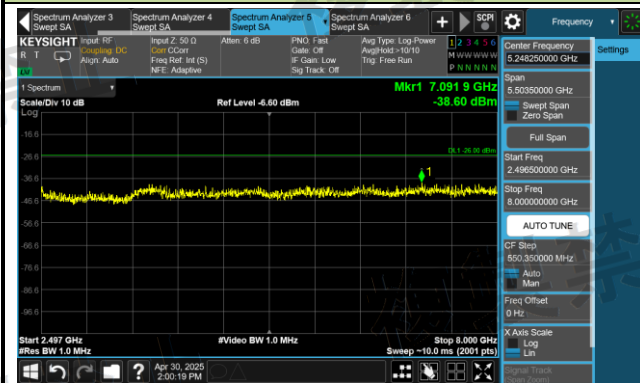
2387 ~ 2400MHz



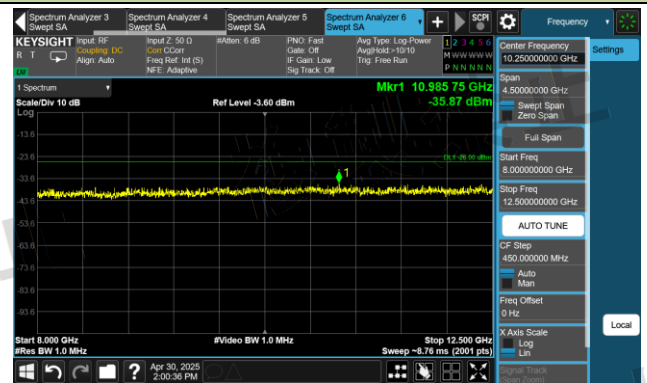
2483.5 ~ 2496.5MHz



2496.5 ~ 8000MHz



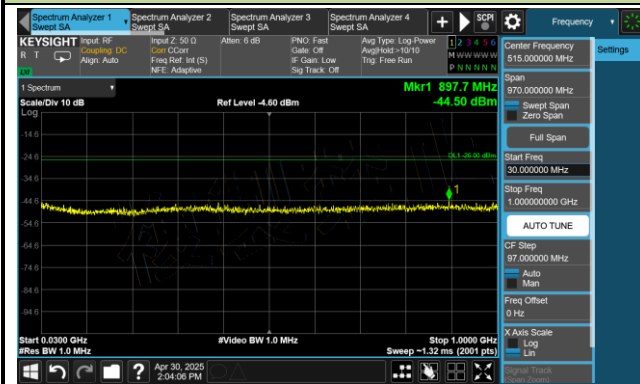
8000 ~ 12500MHz



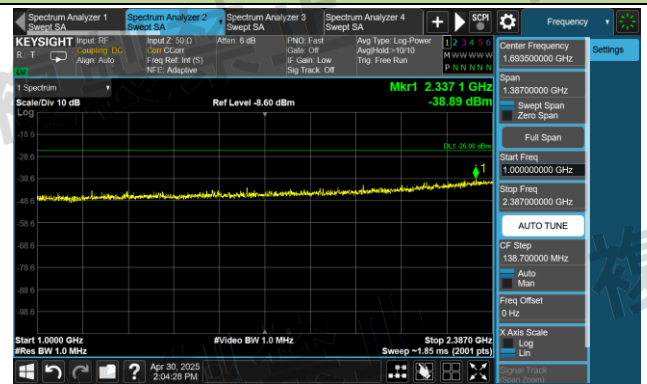
Unwanted Emission Strength

802.11n-HT40 - 2442MHz

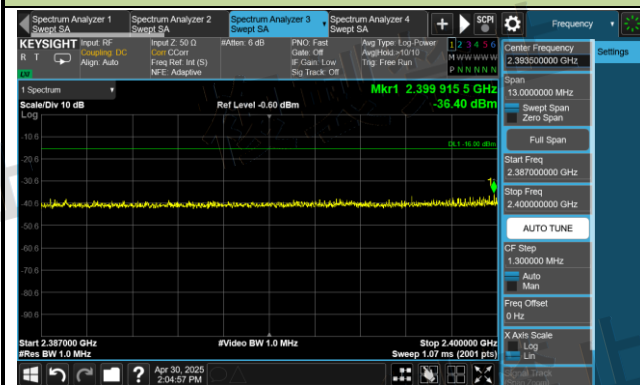
30 ~ 1000MHz



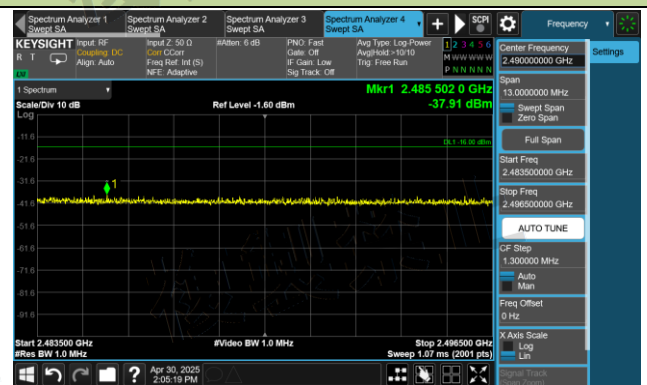
1000 ~ 2387MHz



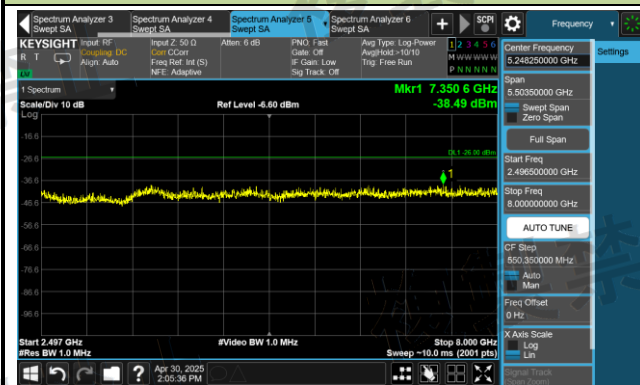
2387 ~ 2400MHz



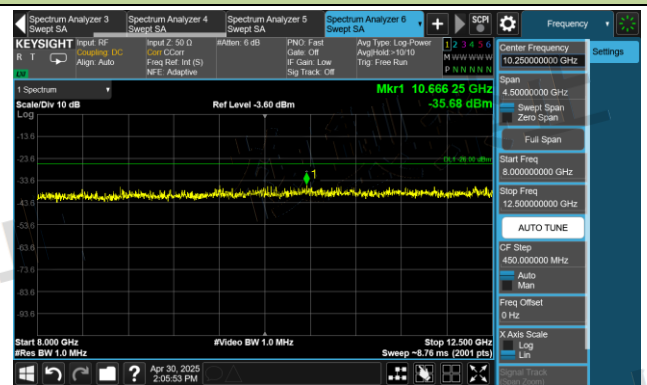
2483.5 ~ 2496.5MHz



2496.5 ~ 8000MHz



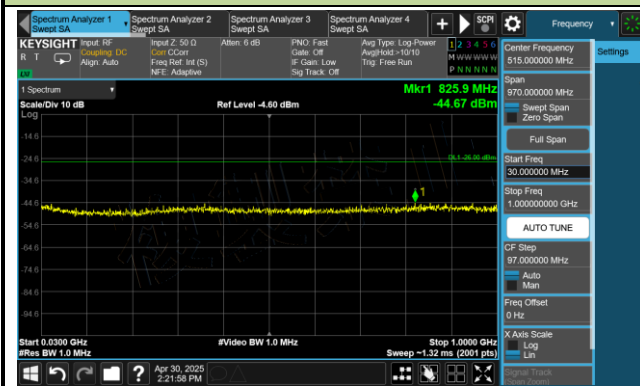
8000 ~ 12500MHz



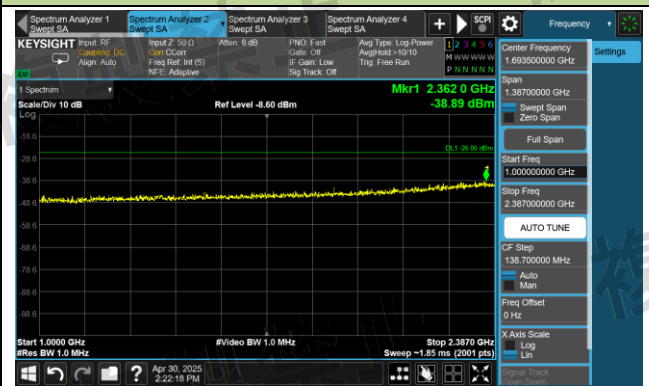
Unwanted Emission Strength

802.11n-HT40 - 2462MHz

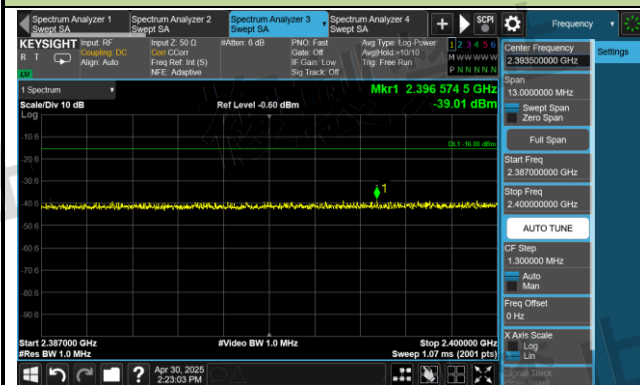
30 ~ 1000MHz



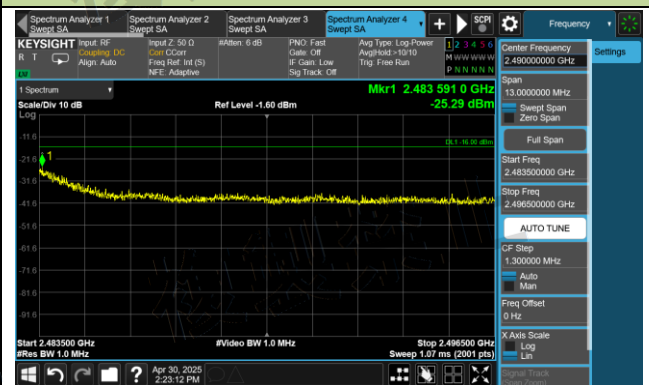
1000 ~ 2387MHz



2387 ~ 2400MHz



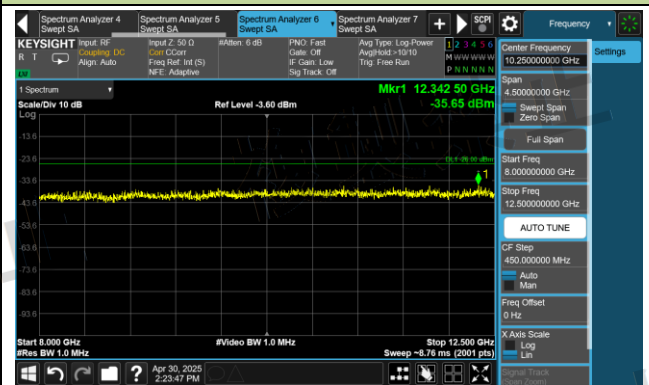
2483.5 ~ 2496.5MHz



2496.5 ~ 8000MHz



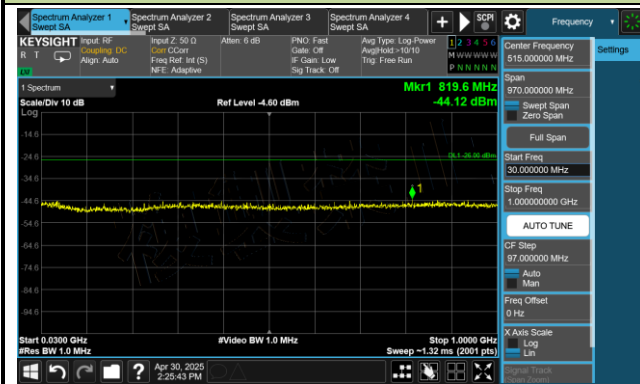
8000 ~ 12500MHz



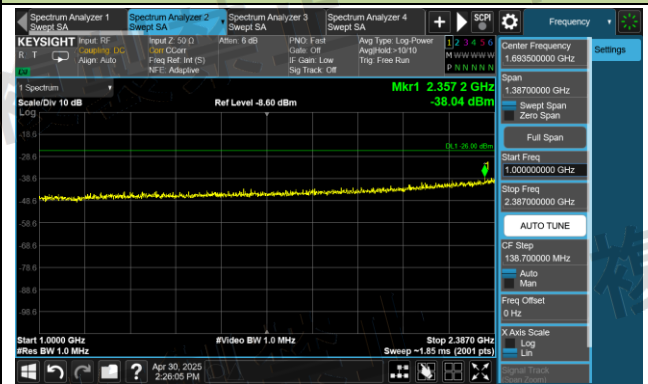
Unwanted Emission Strength

802.11 ax-HE20 - 2412MHz

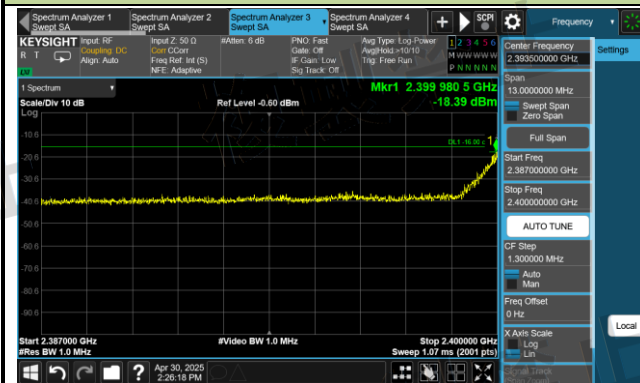
30 ~ 1000MHz



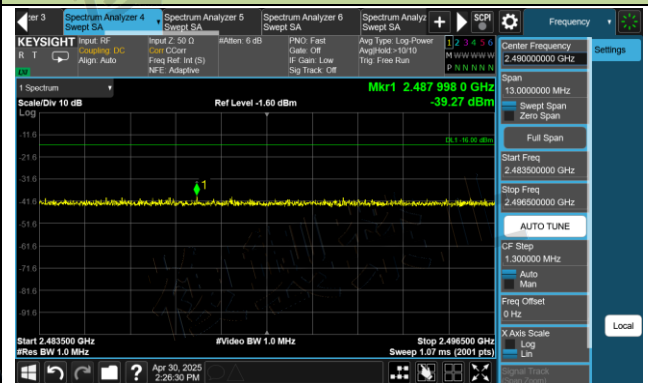
1000 ~ 2387MHz



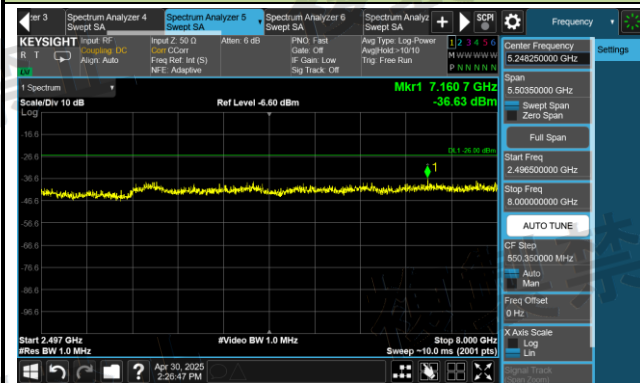
2387 ~ 2400MHz



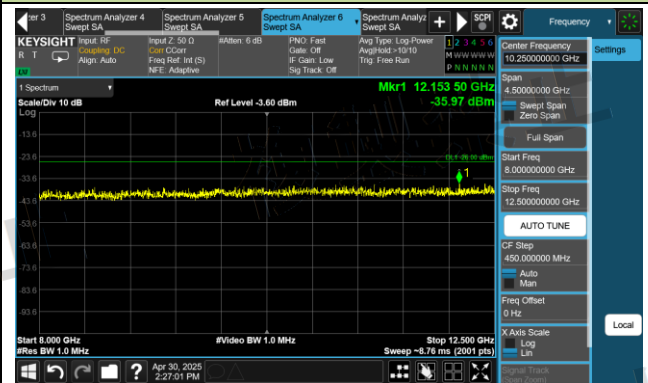
2483.5 ~ 2496.5MHz



2496.5 ~ 8000MHz



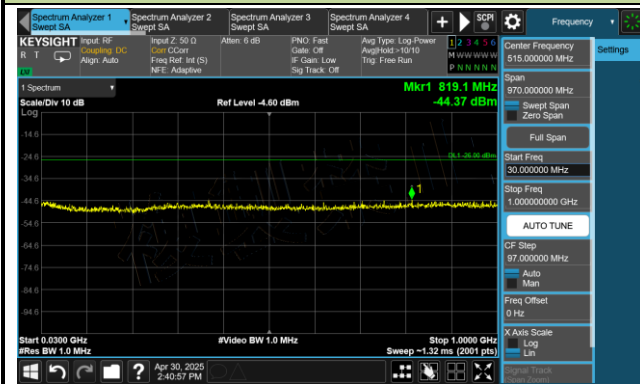
8000 ~ 12500MHz



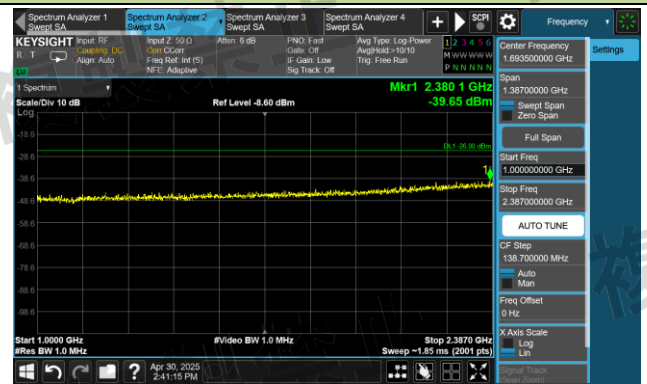
Unwanted Emission Strength

802.11 ax-HE20 - 2442MHz

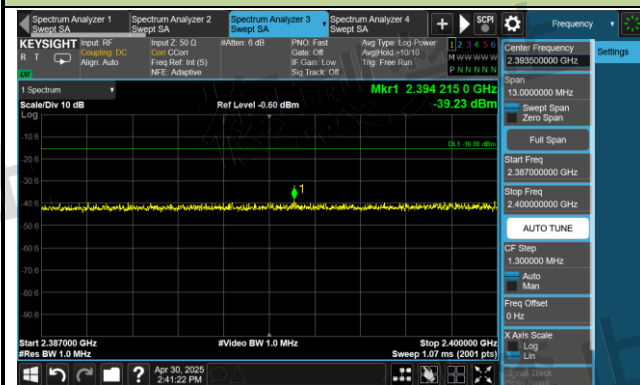
30 ~ 1000MHz



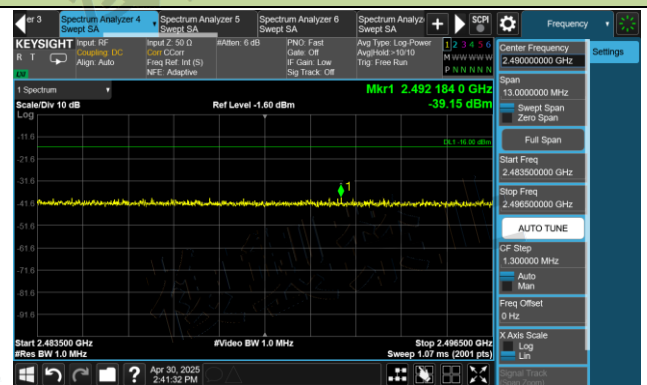
1000 ~ 2387MHz



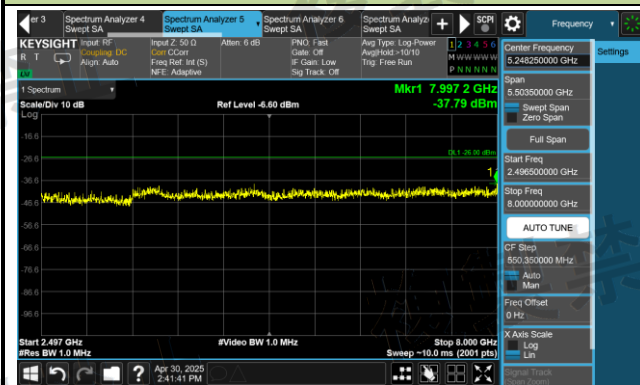
2387 ~ 2400MHz



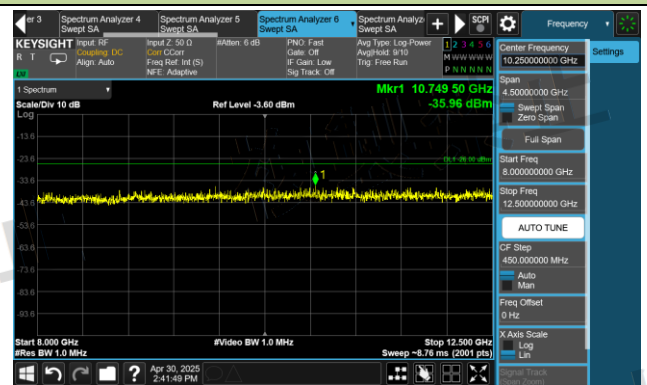
2483.5 ~ 2496.5MHz



2496.5 ~ 8000MHz



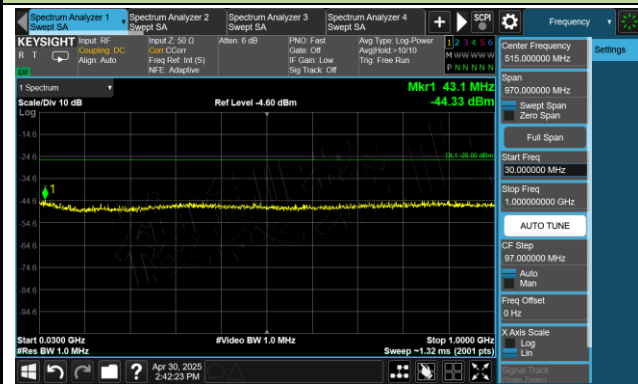
8000 ~ 12500MHz



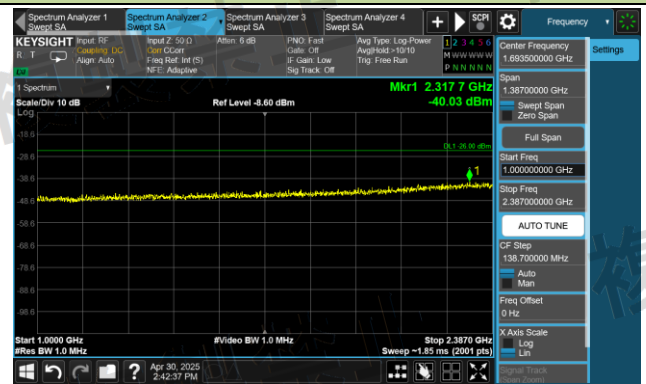
Unwanted Emission Strength

802.11 ax-HE20 - 2472MHz

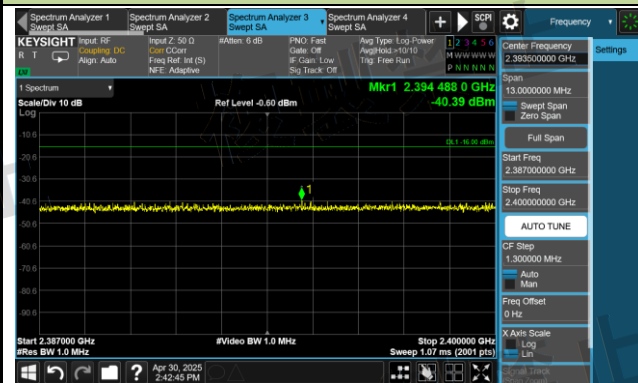
30 ~ 1000MHz



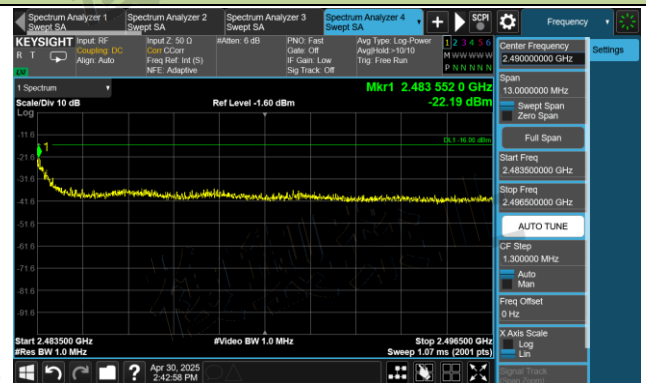
1000 ~ 2387MHz



2387 ~ 2400MHz



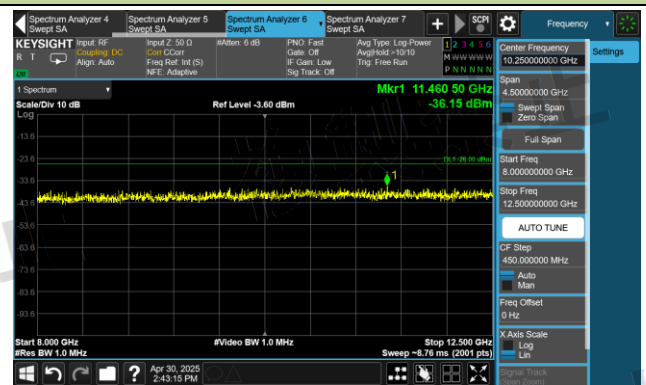
2483.5 ~ 2496.5MHz



2496.5 ~ 8000MHz



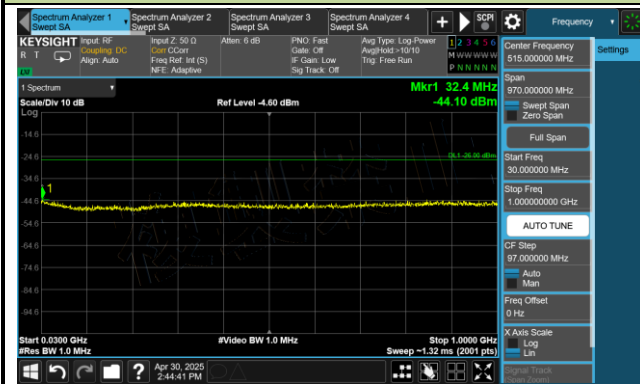
8000 ~ 12500MHz



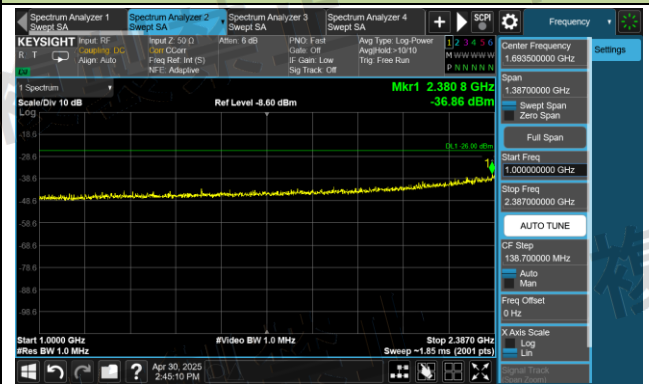
Unwanted Emission Strength

802.11 ax-HE40 - 2422MHz

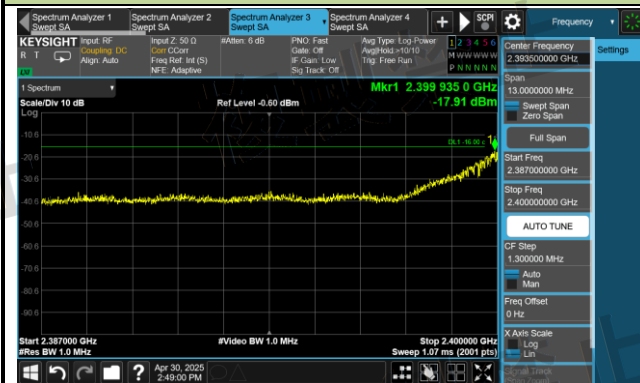
30 ~ 1000MHz



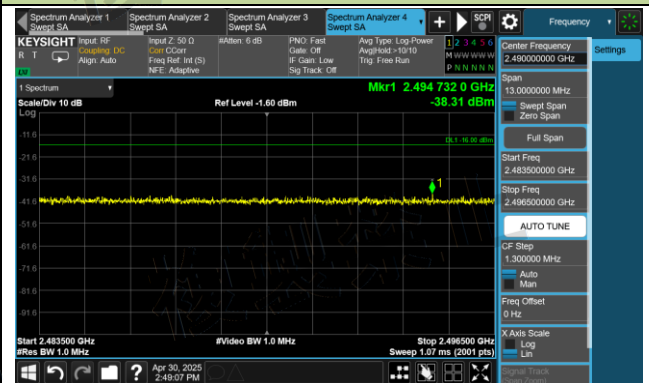
1000 ~ 2387MHz



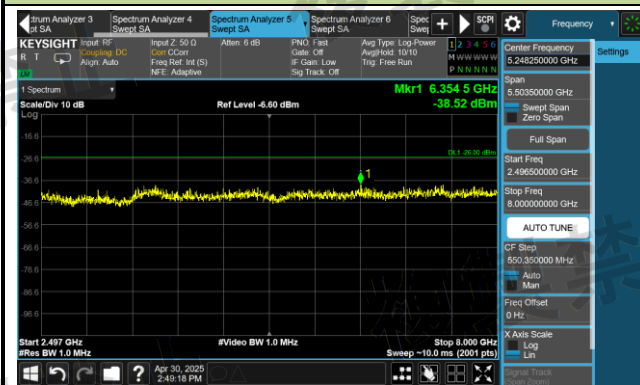
2387 ~ 2400MHz



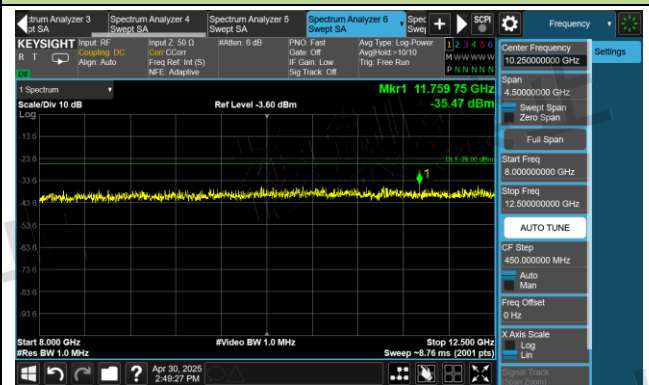
2483.5 ~ 2496.5MHz



2496.5 ~ 8000MHz



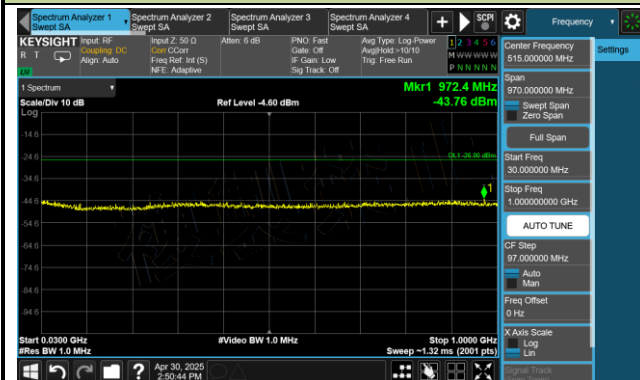
8000 ~ 12500MHz



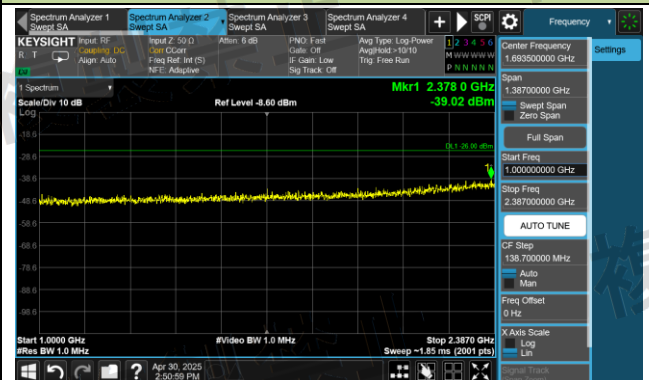
Unwanted Emission Strength

802.11 ax-HE40 - 2442MHz

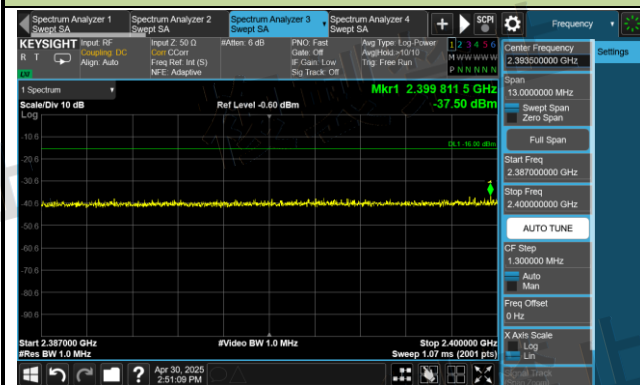
30 ~ 1000MHz



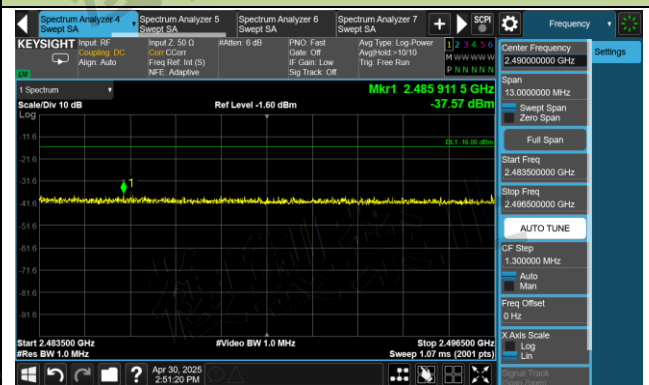
1000 ~ 2387MHz



2387 ~ 2400MHz



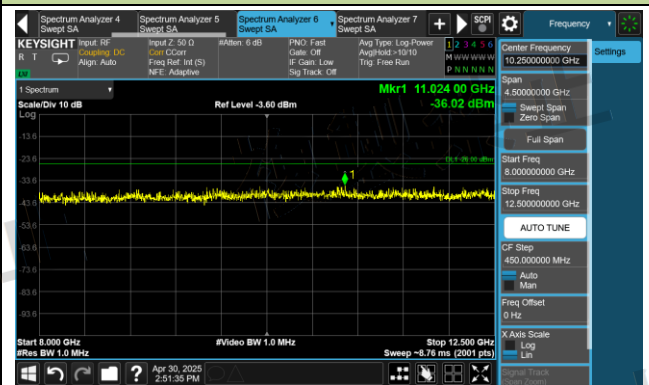
2483.5 ~ 2496.5MHz



2496.5 ~ 8000MHz



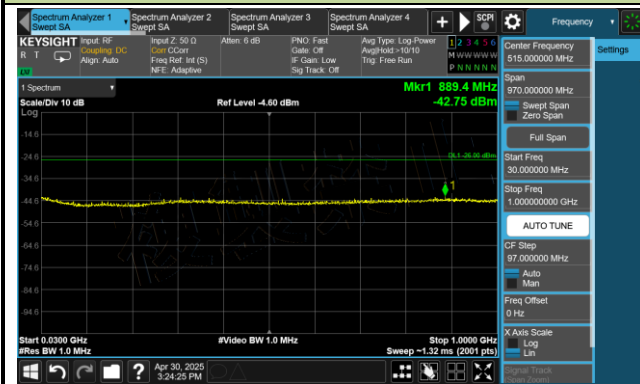
8000 ~ 12500MHz



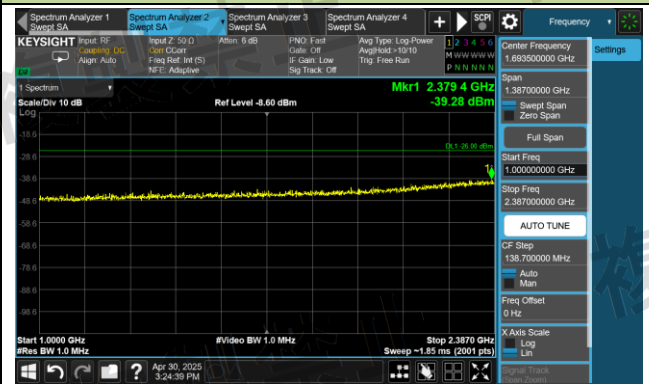
Unwanted Emission Strength

802.11ax-HE40 - 2462MHz

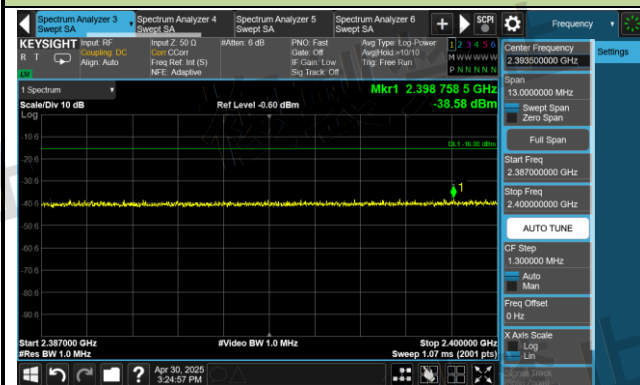
30 ~ 1000MHz



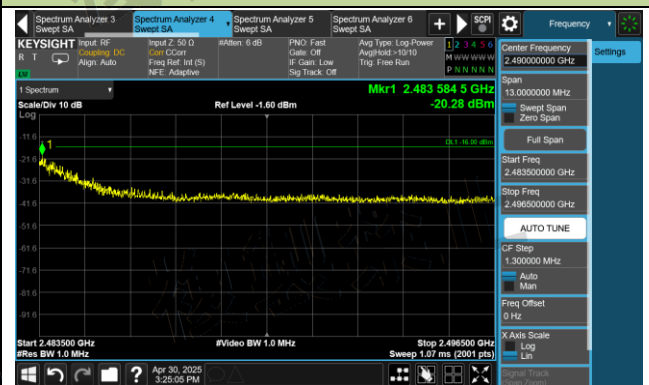
1000 ~ 2387MHz



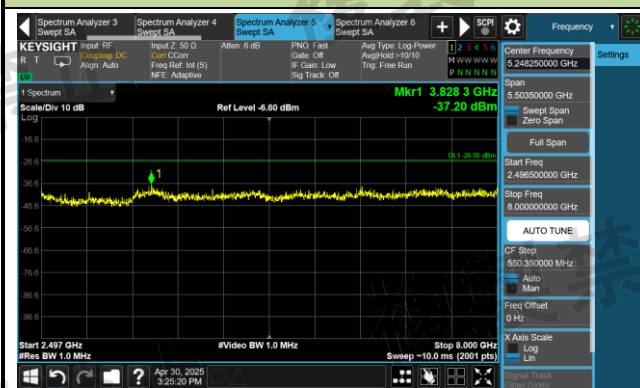
2387 ~ 2400MHz



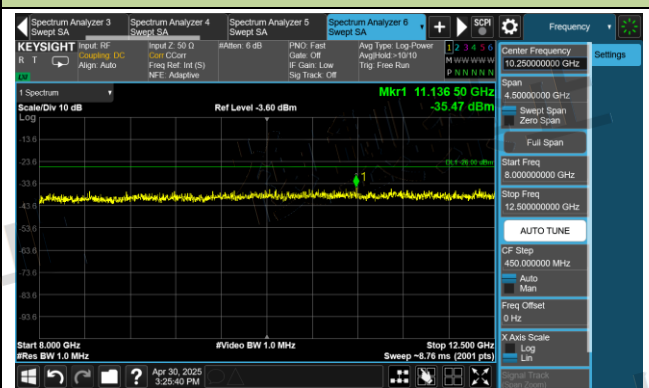
2483.5 ~ 2496.5MHz



2496.5 ~ 8000MHz



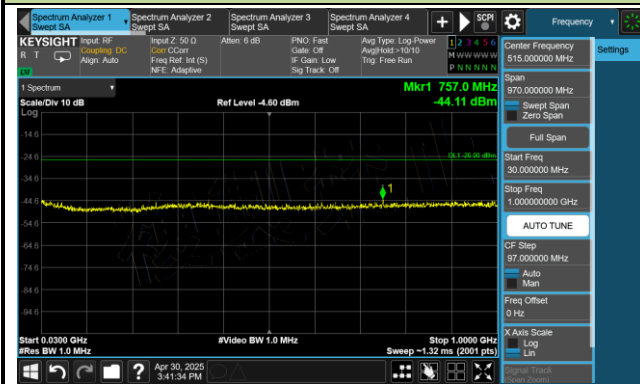
8000 ~ 12500MHz



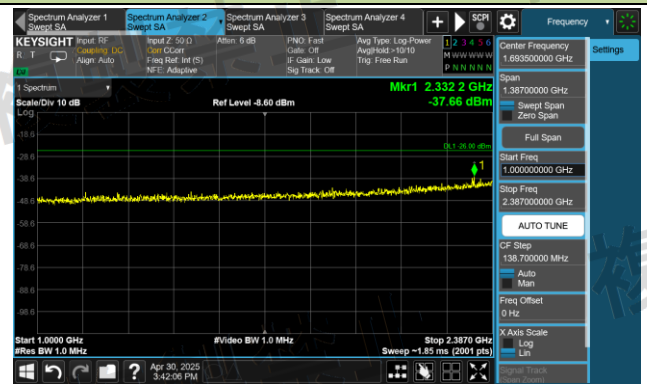
Unwanted Emission Strength

802.11 be-EHT20 - 2412MHz

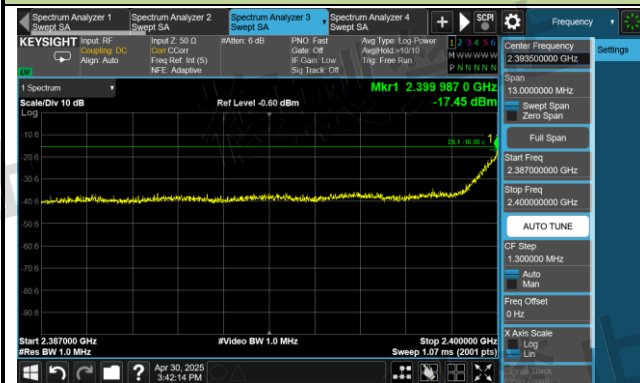
30 ~ 1000MHz



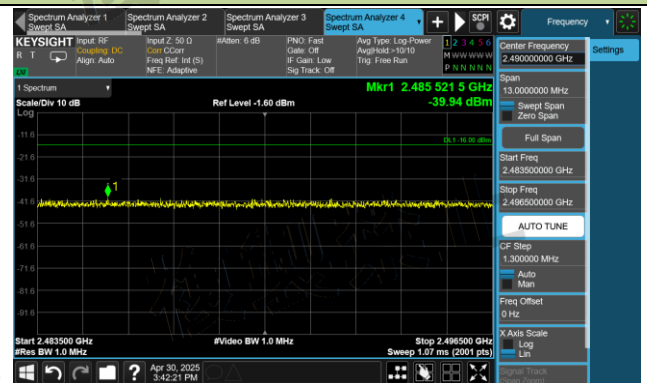
1000 ~ 2387MHz



2387 ~ 2400MHz



2483.5 ~ 2496.5MHz



2496.5 ~ 8000MHz



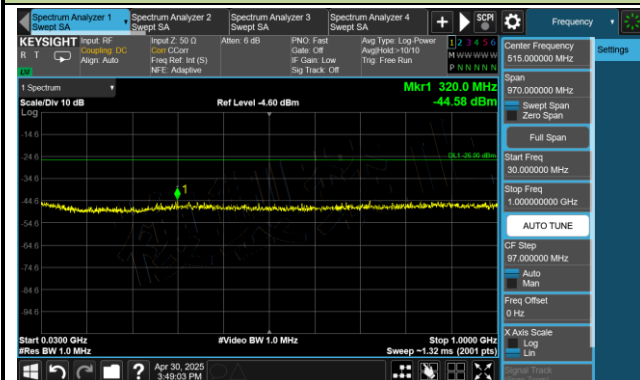
8000 ~ 12500MHz



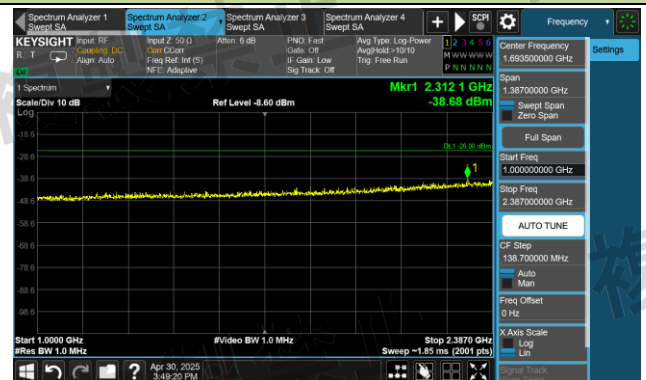
Unwanted Emission Strength

802.11 be-EHT20 - 2442MHz

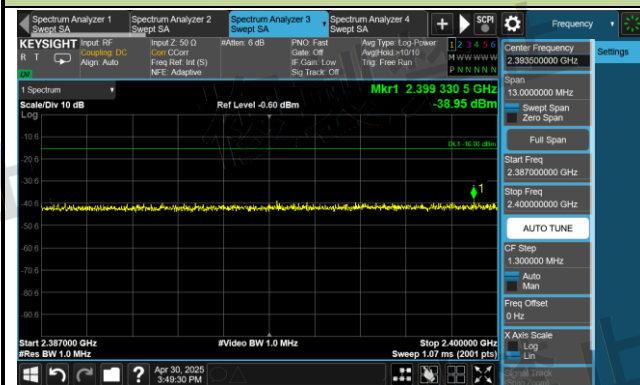
30 ~ 1000MHz



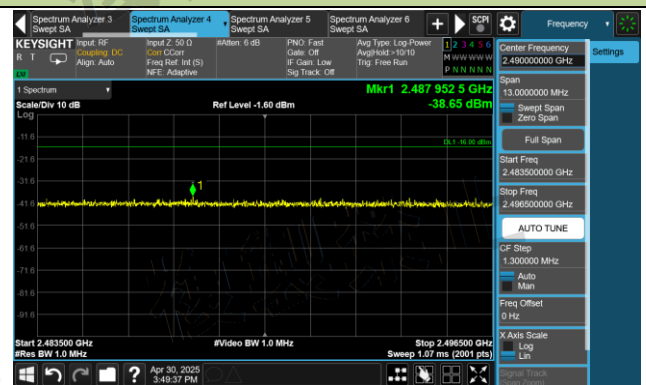
1000 ~ 2387MHz



2387 ~ 2400MHz



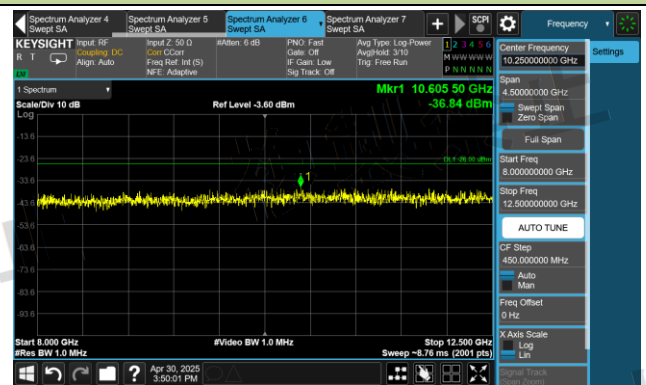
2483.5 ~ 2496.5MHz



2496.5 ~ 8000MHz



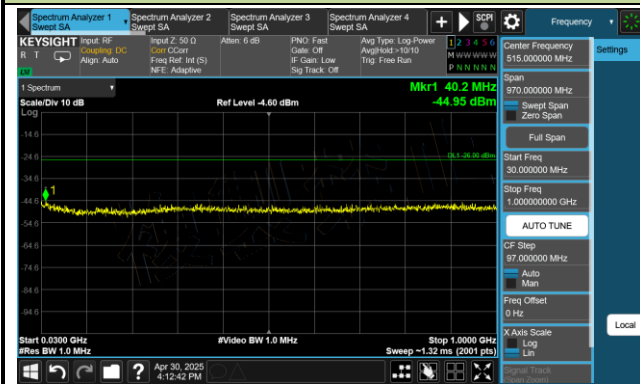
8000 ~ 12500MHz



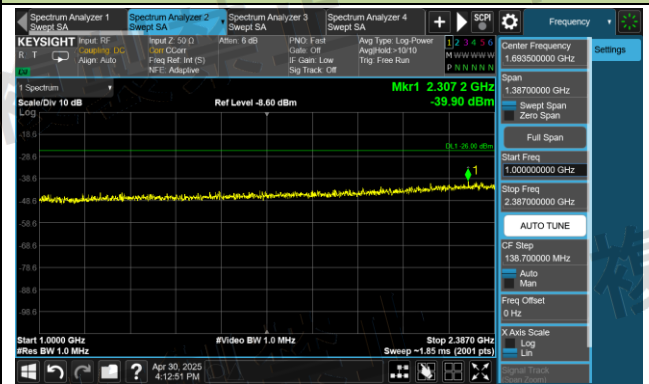
Unwanted Emission Strength

802.11 be-EHT20 - 2472MHz

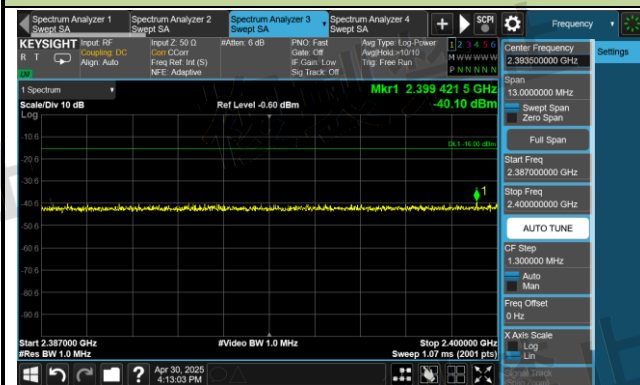
30 ~ 1000MHz



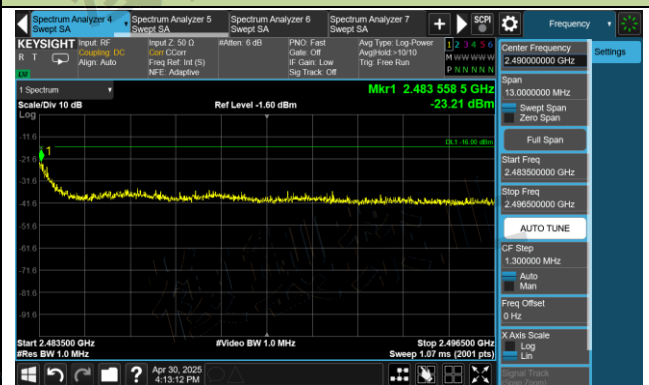
1000 ~ 2387MHz



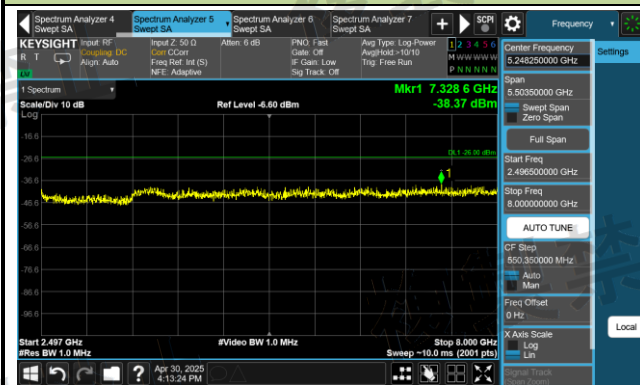
2387 ~ 2400MHz



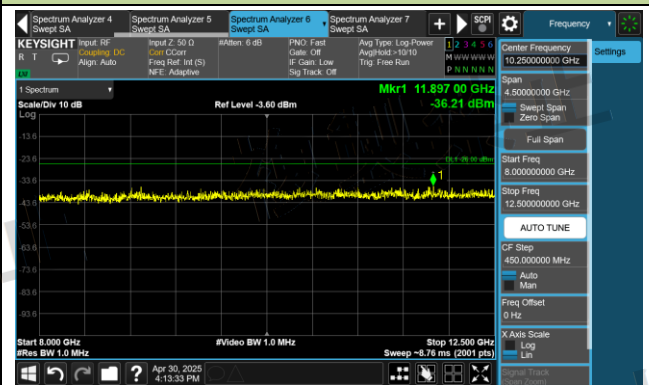
2483.5 ~ 2496.5MHz



2496.5 ~ 8000MHz



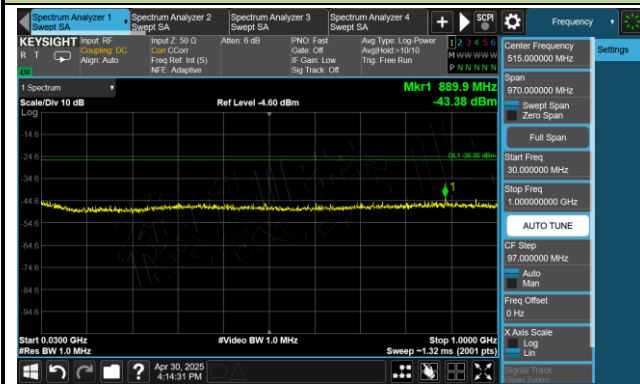
8000 ~ 12500MHz



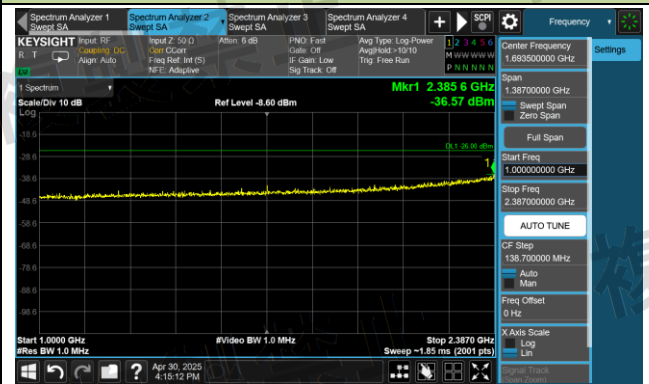
Unwanted Emission Strength

802.11 be-EHT40 - 2422MHz

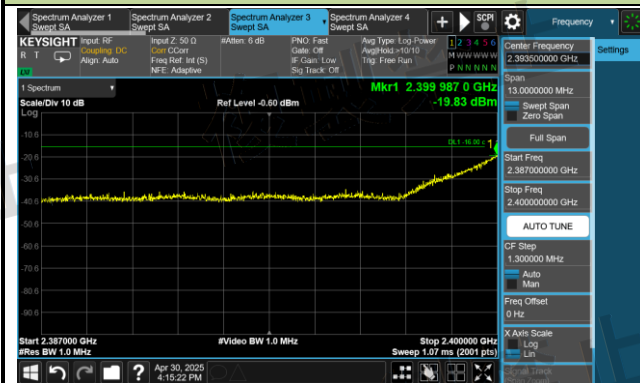
30 ~ 1000MHz



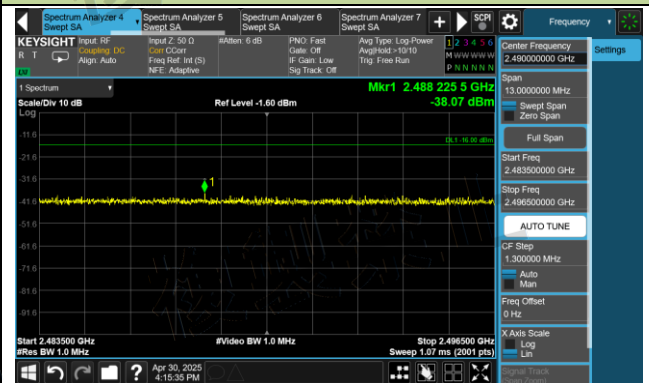
1000 ~ 2387MHz



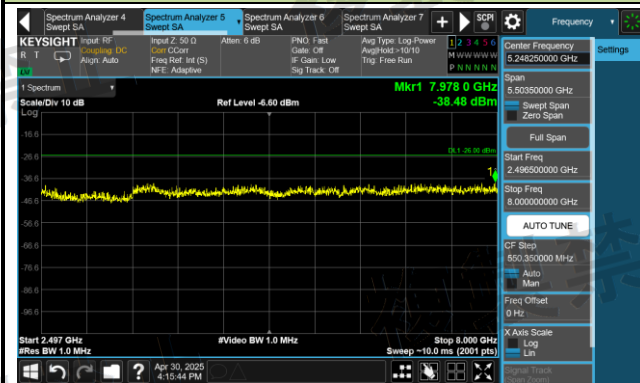
2387 ~ 2400MHz



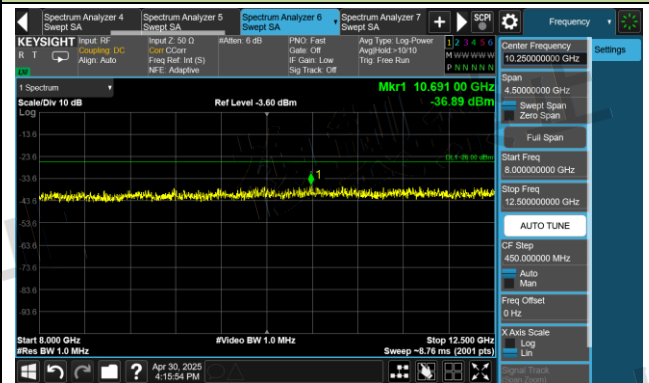
2483.5 ~ 2496.5MHz



2496.5 ~ 8000MHz



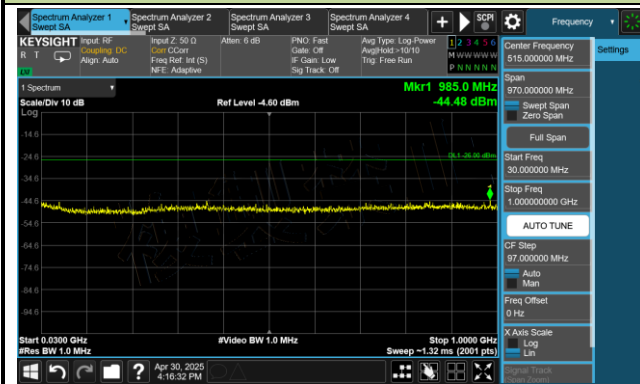
8000 ~ 12500MHz



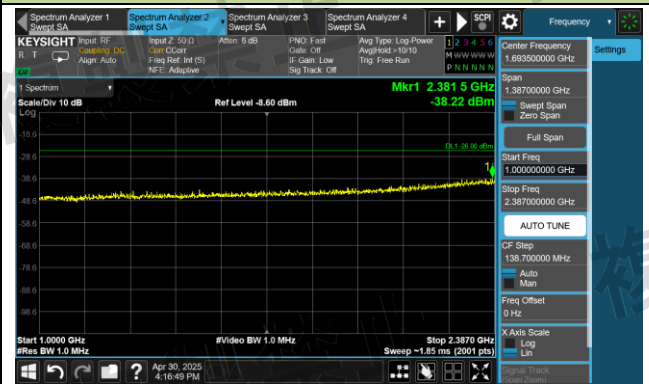
Unwanted Emission Strength

802.11 be-EHT40 - 2442MHz

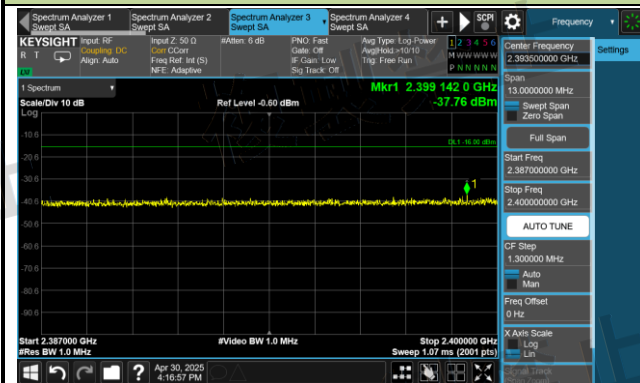
30 ~ 1000MHz



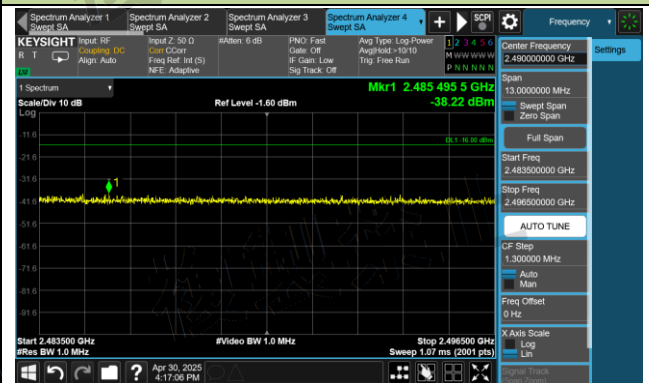
1000 ~ 2387MHz



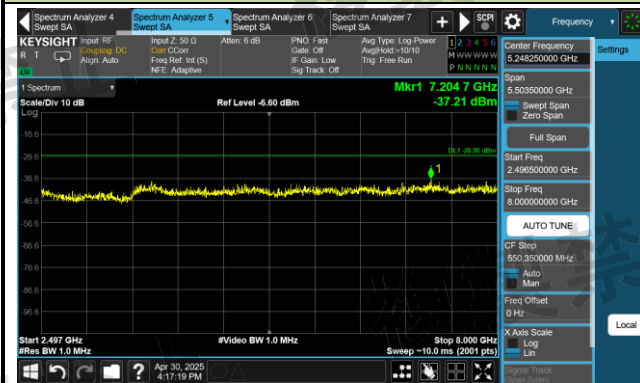
2387 ~ 2400MHz



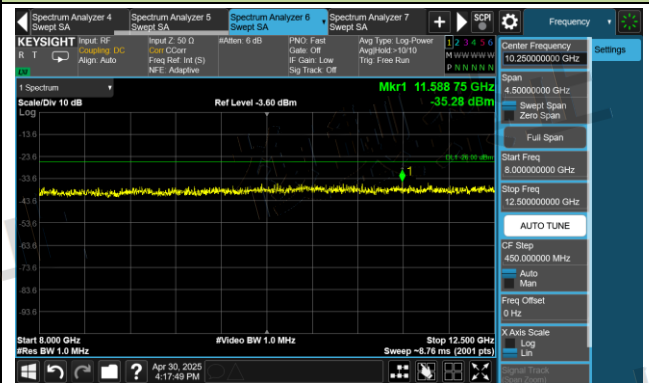
2483.5 ~ 2496.5MHz



2496.5 ~ 8000MHz



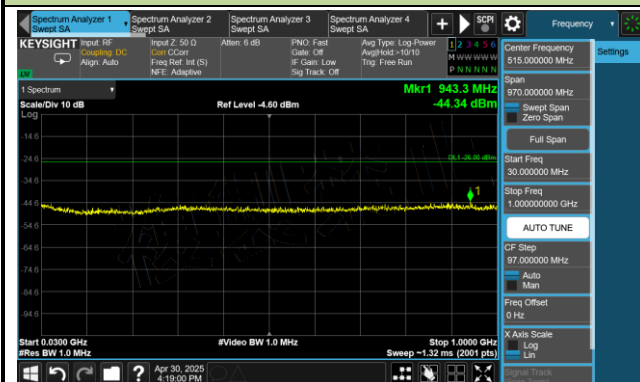
8000 ~ 12500MHz



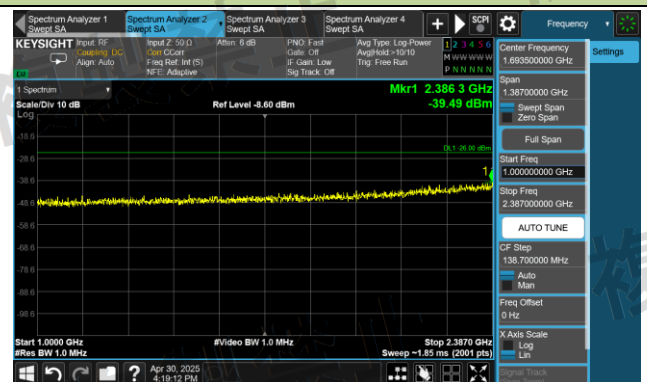
Unwanted Emission Strength

802.11be-EHT40 - 2462MHz

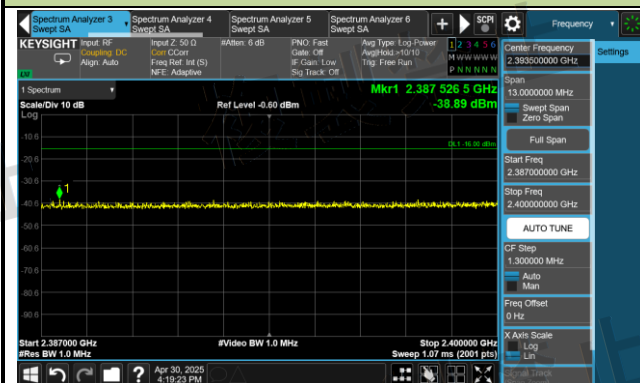
30 ~ 1000MHz



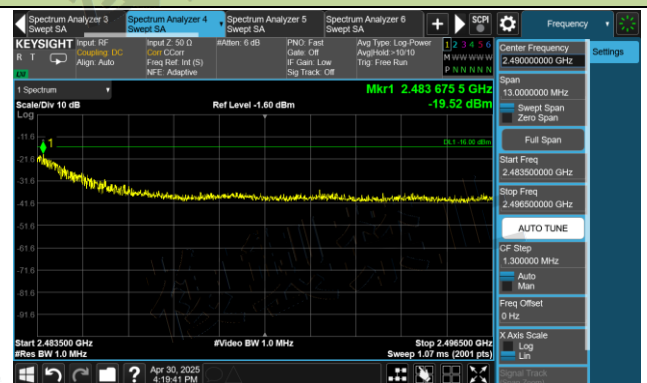
1000 ~ 2387MHz



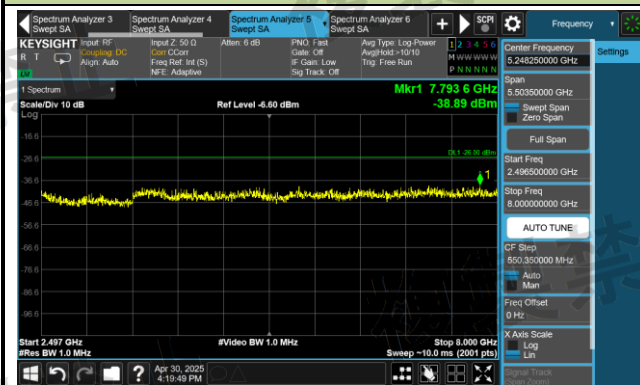
2387 ~ 2400MHz



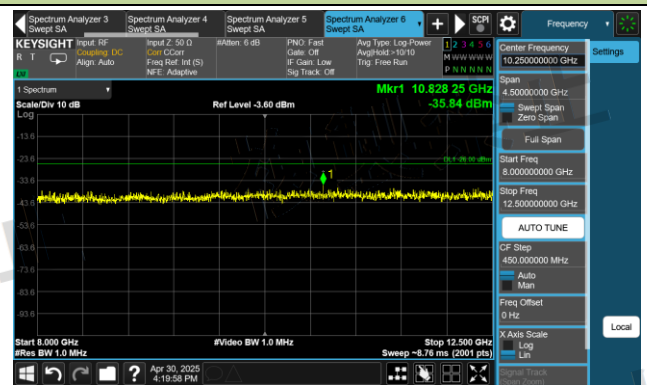
2483.5 ~ 2496.5MHz



2496.5 ~ 8000MHz



8000 ~ 12500MHz



5.6. Secondary Radiated Emissions Strength Measurement

5.6.1. Test Limit

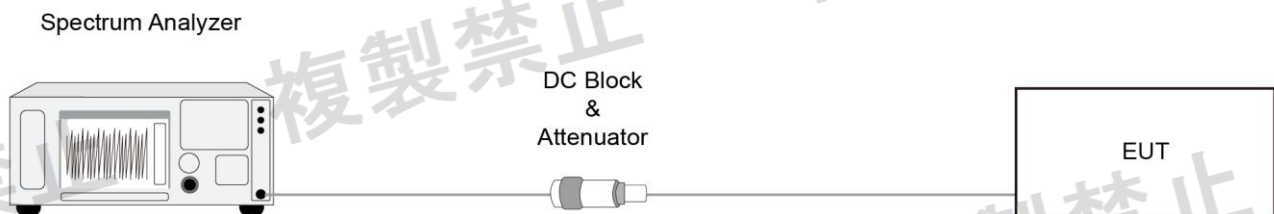
$\leq 4\text{nW}$ for 30 ~ 1000 MHz,

$\leq 20\text{nW}$ for 1000 ~ 12500 MHz

5.6.2. Test Procedure

1. A spectrum analyzer or similar device shall be used to observe a sample of the modulated transmitter's radio frequency power output.
2. A positive peak detector function must be used.
3. The measurement instrument bandwidth and span must be set sufficiently with, and, the scan time set sufficiently slowly, to ensure all major modulation products are captured. Note that the measurement bandwidth should also be set sufficiently narrow to avoid adding significant error to the test result.
4. 'Maximum Hold' mode may be used to accumulate the measurement result over several scans provided the emission is repetitive in nature.

5.6.3. Test Setup



5.6.4. Test Result

Test Site	WJ-SR2	Temperature	24.7 °C
Test Engineer	Layla Gui	Humidity	52.4 %RH
Test Date	2025-05-01		

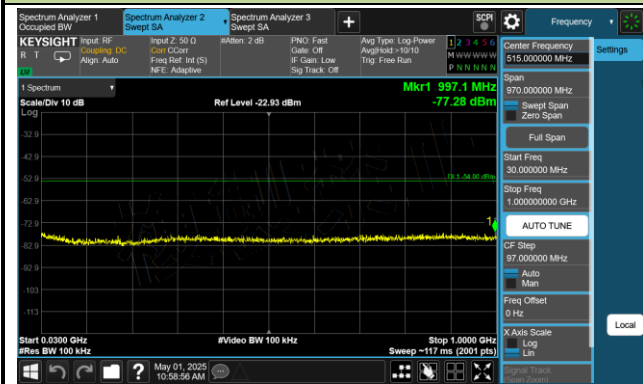
Test Frequency (MHz)	Frequency Range (MHz)	Measured Freq. (MHz)	Max Measurement Level		Limit (nW)	Result
			(dBm)	(nW)		
802.11b						
2412	30 ~ 1000	997.1	-77.28	0.0187	≤ 4.00	Pass
	1000 ~ 12500	12373.50	-60.38	0.9162	≤ 20.00	Pass
2442	30 ~ 1000	905.4	-77.86	0.0164	≤ 4.00	Pass
	1000 ~ 12500	11666.25	-60.39	0.9141	≤ 20.00	Pass
2472	30 ~ 1000	827.8	-78.23	0.0150	≤ 4.00	Pass
	1000 ~ 12500	10769.25	-59.70	1.0715	≤ 20.00	Pass
802.11g						
2412	30 ~ 1000	943.3	-77.29	0.0187	≤ 4.00	Pass
	1000 ~ 12500	12339.00	-60.10	0.9772	≤ 20.00	Pass
2442	30 ~ 1000	869.1	-78.04	0.0157	≤ 4.00	Pass
	1000 ~ 12500	10556.50	-60.53	0.8851	≤ 20.00	Pass
2472	30 ~ 1000	989.8	-78.76	0.0133	≤ 4.00	Pass
	1000 ~ 12500	10159.75	-59.95	1.0116	≤ 20.00	Pass
802.11n-HT20						
2412	30 ~ 1000	920.0	-77.44	0.0180	≤ 4.00	Pass
	1000 ~ 12500	12373.50	-59.99	1.0023	≤ 20.00	Pass
2442	30 ~ 1000	38.2	-77.67	0.0171	≤ 4.00	Pass
	1000 ~ 12500	11493.75	-59.74	1.0617	≤ 20.00	Pass
2472	30 ~ 1000	975.3	-77.62	0.0173	≤ 4.00	Pass
	1000 ~ 12500	11505.25	-58.83	1.3092	≤ 20.00	Pass
802.11n-HT40						
2422	30 ~ 1000	883.6	-78.05	0.0157	≤ 4.00	Pass
	1000 ~ 12500	10125.25	-60.00	1.0000	≤ 20.00	Pass
2442	30 ~ 1000	863.7	-77.44	0.0180	≤ 4.00	Pass
	1000 ~ 12500	10924.50	-60.32	0.9290	≤ 20.00	Pass
2462	30 ~ 1000	31.5	-77.97	0.0160	≤ 4.00	Pass
	1000 ~ 12500	10970.50	-60.17	0.9616	≤ 20.00	Pass

Test Frequency (MHz)	Frequency Range (MHz)	Measured Freq. (MHz)	Max Measurement Level		Limit (nW)	Result
			(dBm)	(nW)		
802.11ax-HE20						
2412	30 ~ 1000	708.0	-78.28	0.0149	≤ 4.00	Pass
	1000 ~ 12500	10982.00	-59.75	1.0593	≤ 20.00	Pass
2442	30 ~ 1000	32.9	-78.54	0.0140	≤ 4.00	Pass
	1000 ~ 12500	12011.25	-59.65	1.0839	≤ 20.00	Pass
2472	30 ~ 1000	35.8	-78.75	0.0133	≤ 4.00	Pass
	1000 ~ 12500	9832.00	-60.00	1.0000	≤ 20.00	Pass
802.11ax-HE40						
2422	30 ~ 1000	39.2	-78.50	0.0141	≤ 4.00	Pass
	1000 ~ 12500	10343.75	-59.97	1.0069	≤ 20.00	Pass
2442	30 ~ 1000	48.4	-78.58	0.0139	≤ 4.00	Pass
	1000 ~ 12500	10953.25	-60.46	0.8995	≤ 20.00	Pass
2462	30 ~ 1000	58.1	-78.64	0.0137	≤ 4.00	Pass
	1000 ~ 12500	11585.75	-59.74	1.0617	≤ 20.00	Pass
802.11be-EHT20						
2412	30 ~ 1000	910.3	-78.79	0.0132	≤ 4.00	Pass
	1000 ~ 12500	10895.75	-60.17	0.9616	≤ 20.00	Pass
2442	30 ~ 1000	901.5	-78.82	0.0131	≤ 4.00	Pass
	1000 ~ 12500	11677.75	-60.05	0.9886	≤ 20.00	Pass
2472	30 ~ 1000	30.5	-77.82	0.0165	≤ 4.00	Pass
	1000 ~ 12500	10706.00	-58.31	1.4757	≤ 20.00	Pass
802.11be-EHT40						
2422	30 ~ 1000	872.9	-78.02	0.0158	≤ 4.00	Pass
	1000 ~ 12500	10292.00	-59.82	1.0423	≤ 20.00	Pass
2442	30 ~ 1000	871.5	-78.57	0.0139	≤ 4.00	Pass
	1000 ~ 12500	10205.75	-60.59	0.8730	≤ 20.00	Pass
2462	30 ~ 1000	989.8	-79.01	0.0126	≤ 4.00	Pass
	1000 ~ 12500	10953.25	-60.50	0.8913	≤ 20.00	Pass

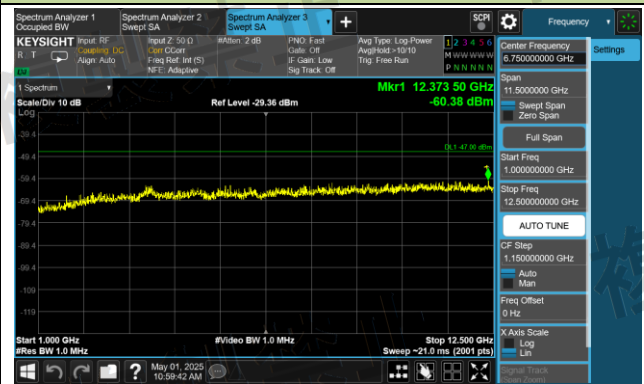
Secondary Radiated Emissions Strength - 802.11b

2412MHz

30 ~ 1000MHz

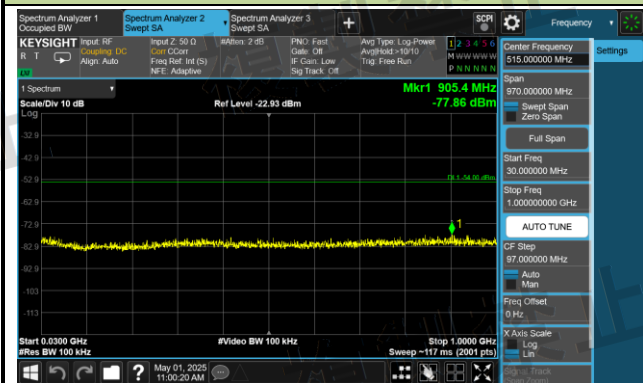


1000 ~ 12500MHz

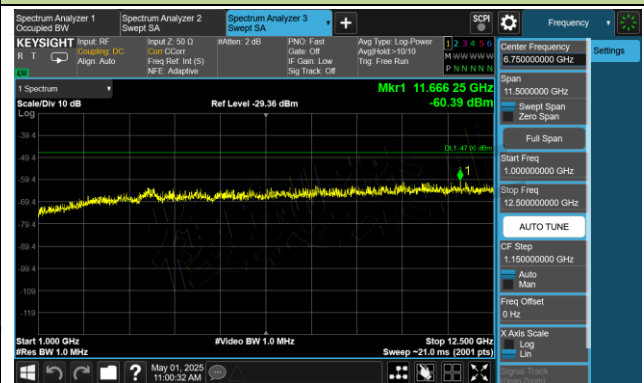


2442MHz

30 ~ 1000MHz

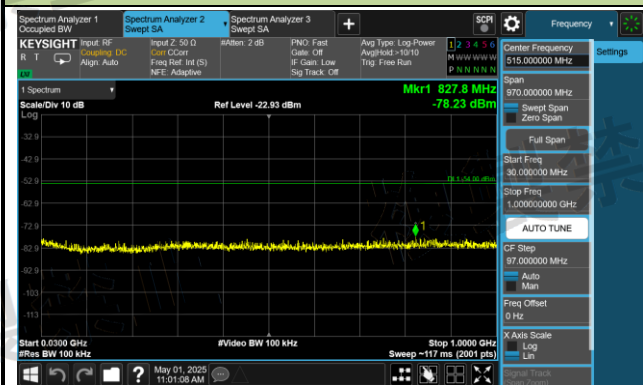


1000 ~ 12500MHz

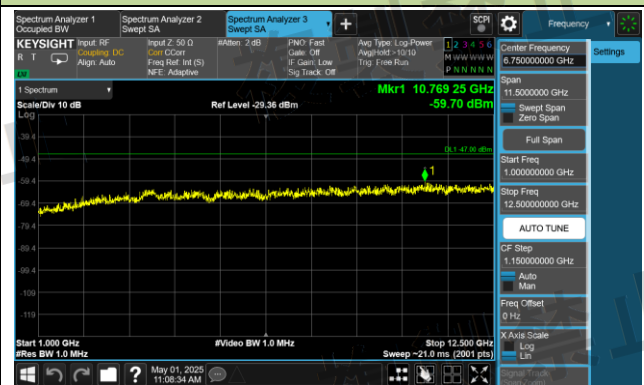


2472MHz

30 ~ 1000MHz



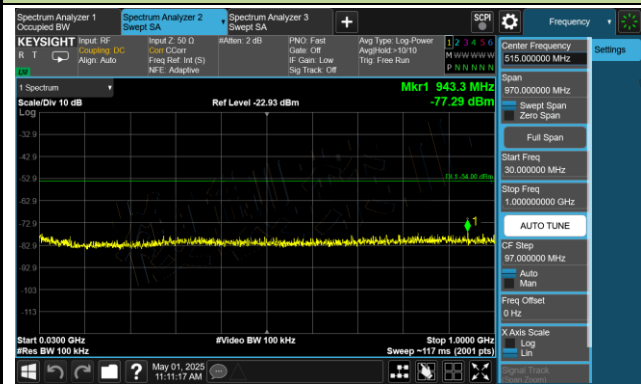
1000 ~ 12500MHz



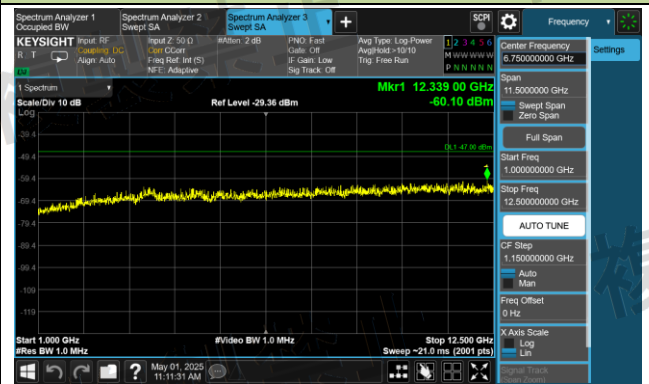
Secondary Radiated Emissions Strength - 802.11g

2412MHz

30 ~ 1000MHz

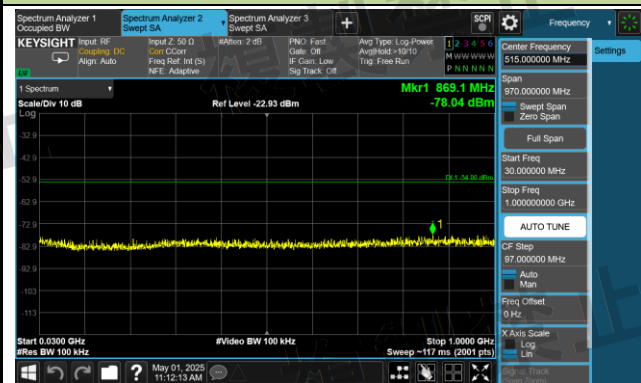


1000 ~ 12500MHz

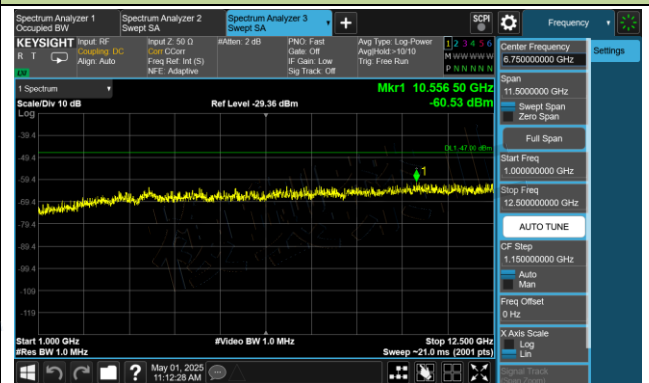


2442MHz

30 ~ 1000MHz

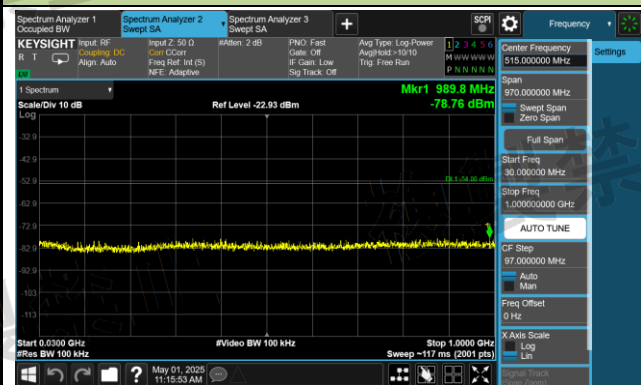


1000 ~ 12500MHz

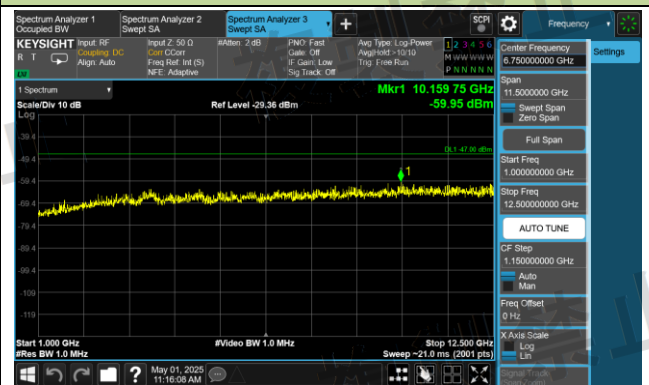


2472MHz

30 ~ 1000MHz



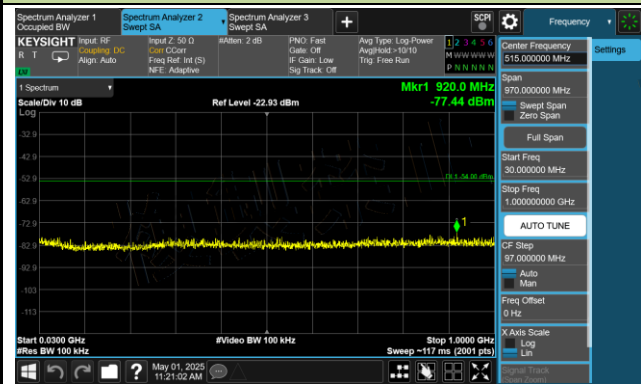
1000 ~ 12500MHz



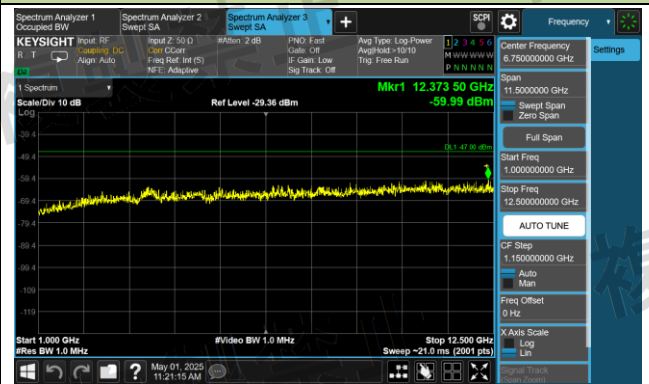
Secondary Radiated Emissions Strength - 802.11n-HT20

2412MHz

30 ~ 1000MHz

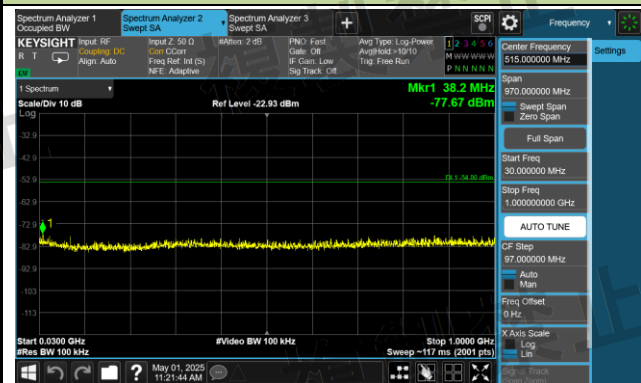


1000 ~ 12500MHz

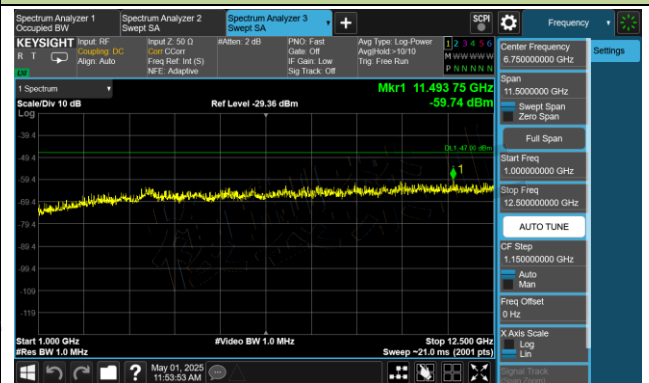


2442MHz

30 ~ 1000MHz

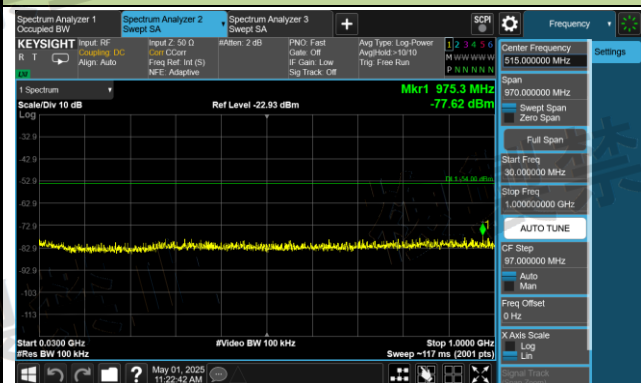


1000 ~ 12500MHz

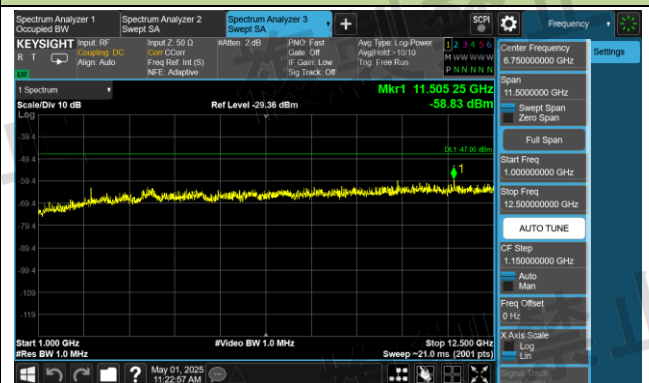


2472MHz

30 ~ 1000MHz



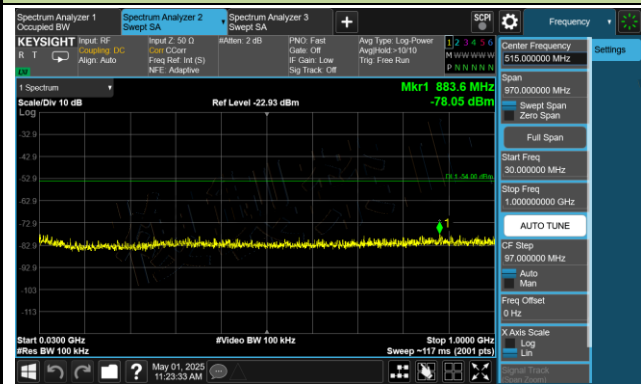
1000 ~ 12500MHz



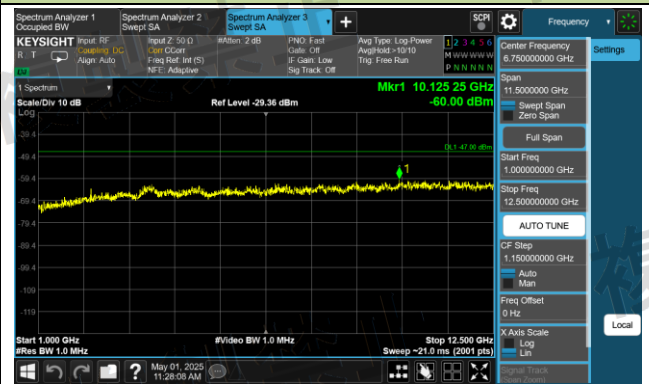
Secondary Radiated Emissions Strength - 802.11n-HT40

2422MHz

30 ~ 1000MHz

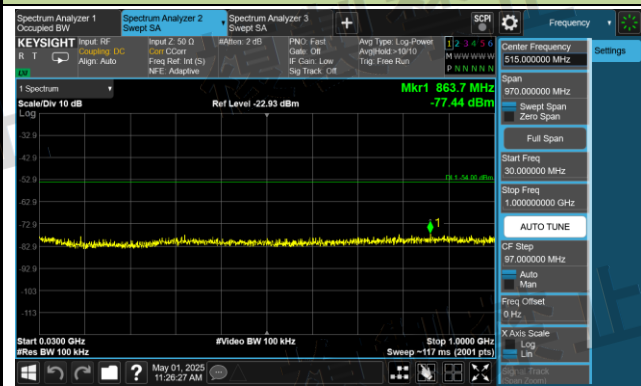


1000 ~ 12500MHz

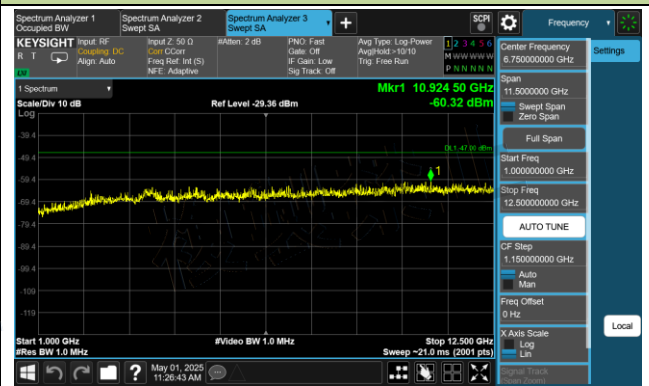


2442MHz

30 ~ 1000MHz

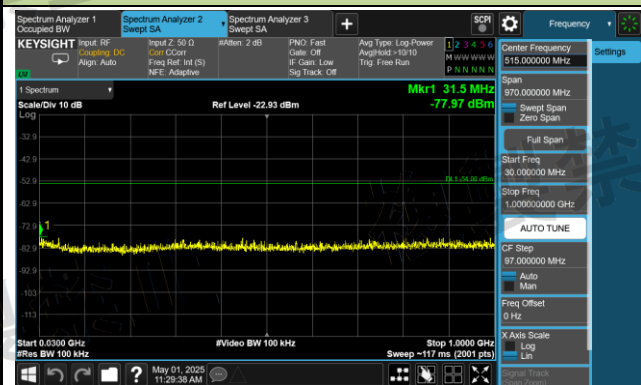


1000 ~ 12500MHz

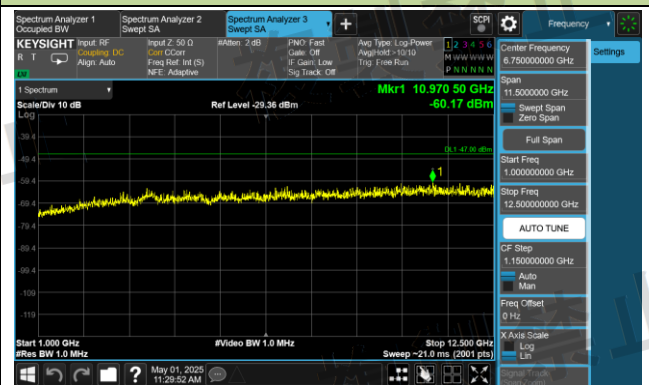


2462MHz

30 ~ 1000MHz



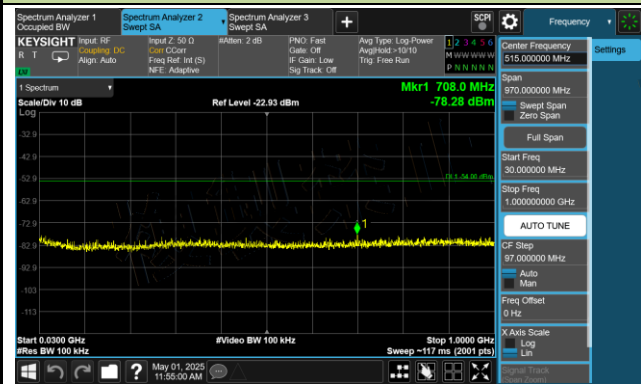
1000 ~ 12500MHz



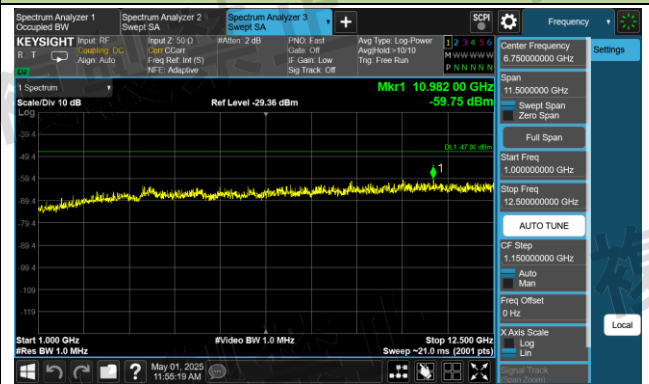
Secondary Radiated Emissions Strength - 802.11ax-HE20

2412MHz

30 ~ 1000MHz

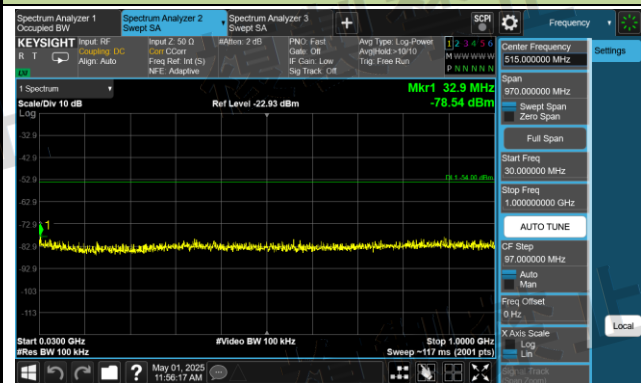


1000 ~ 12500MHz

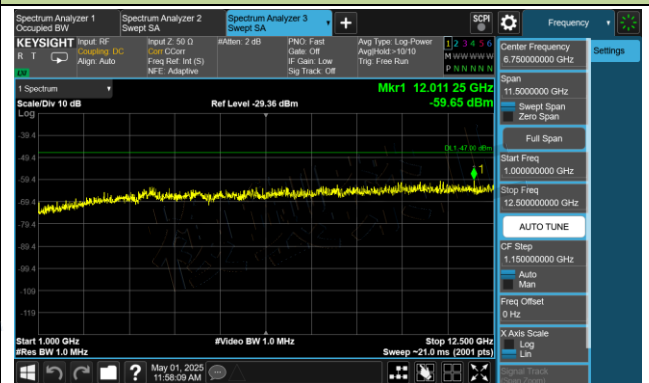


2442MHz

30 ~ 1000MHz

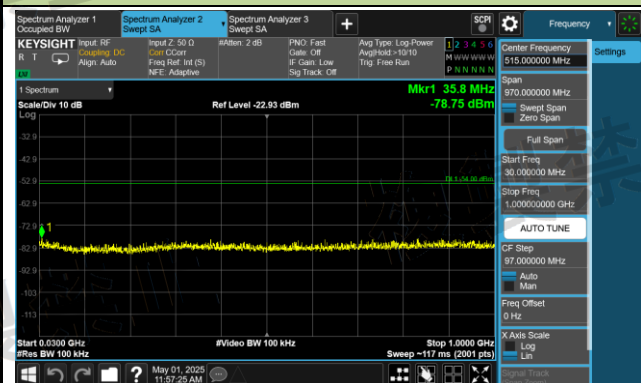


1000 ~ 12500MHz

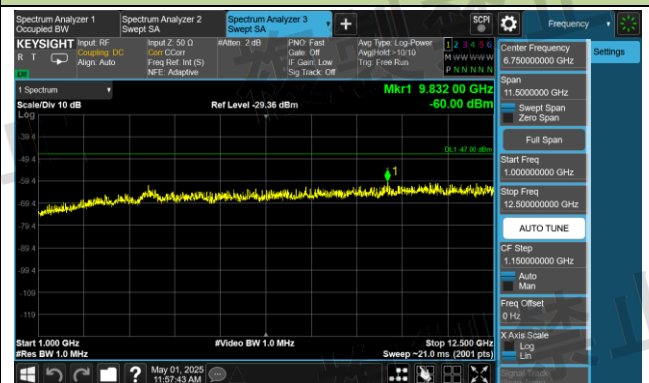


2472MHz

30 ~ 1000MHz



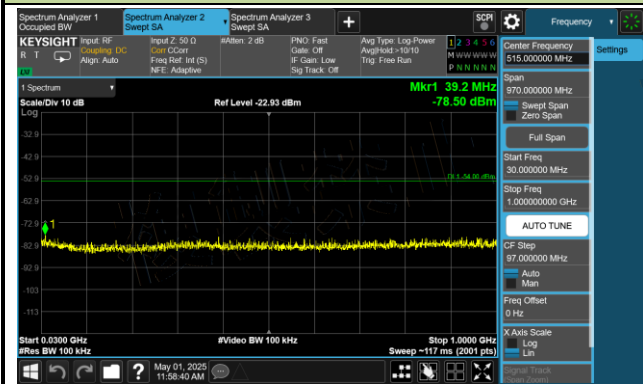
1000 ~ 12500MHz



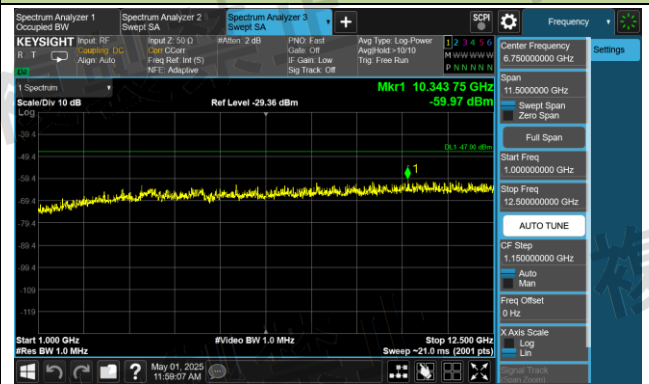
Secondary Radiated Emissions Strength - 802.11ax-HE40

2422MHz

30 ~ 1000MHz

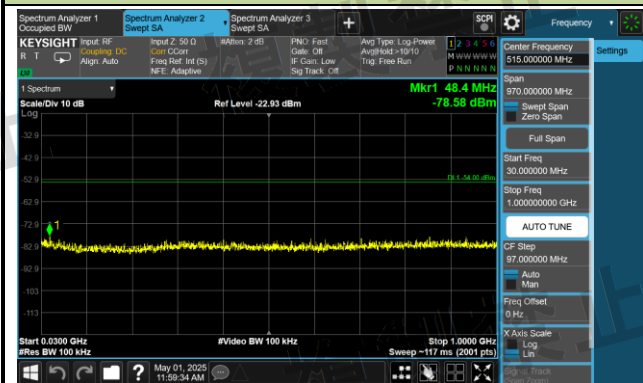


1000 ~ 12500MHz

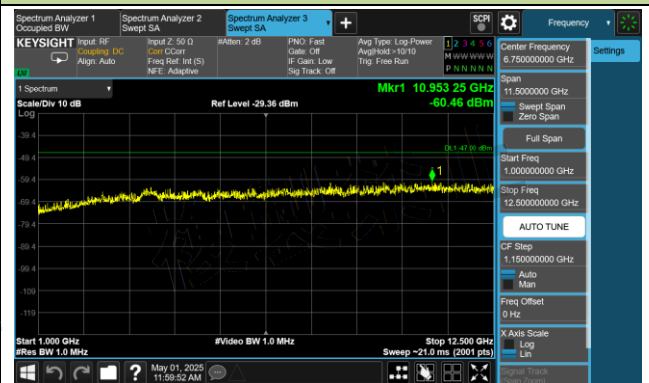


2442MHz

30 ~ 1000MHz

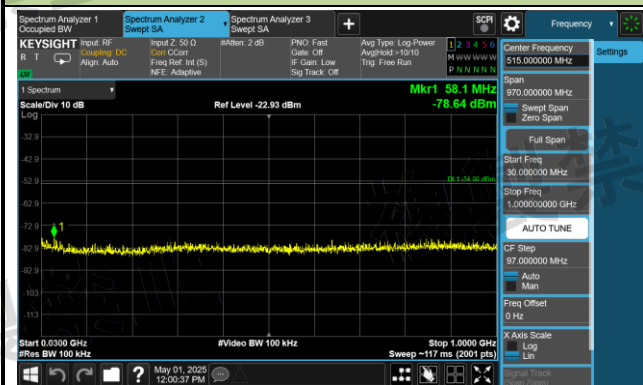


1000 ~ 12500MHz

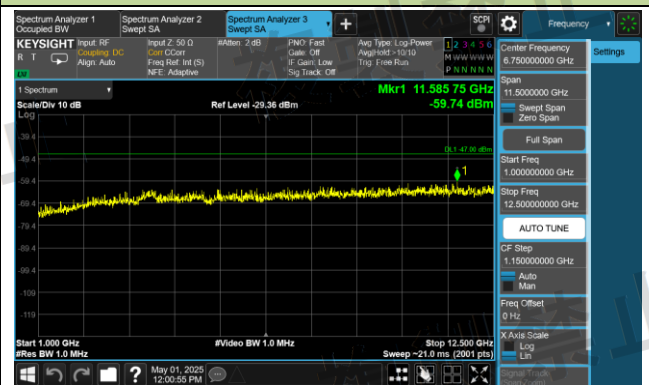


2462MHz

30 ~ 1000MHz



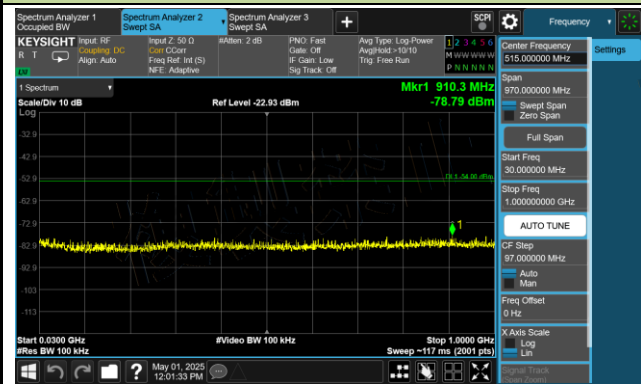
1000 ~ 12500MHz



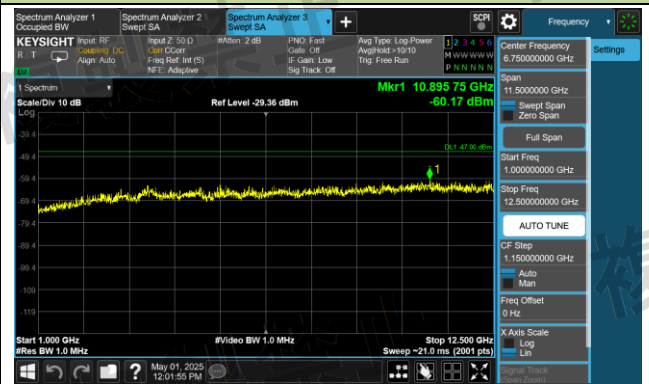
Secondary Radiated Emissions Strength - 802.11be-EHT20

2412MHz

30 ~ 1000MHz

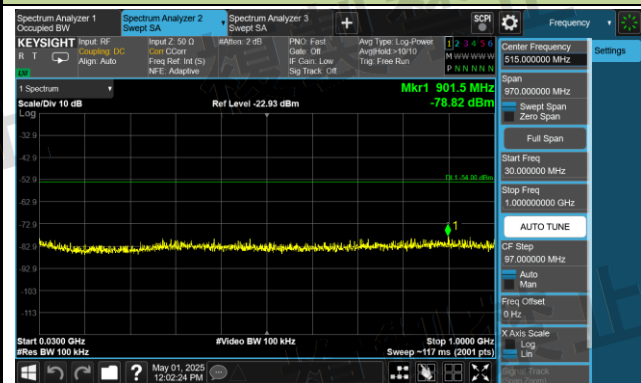


1000 ~ 12500MHz

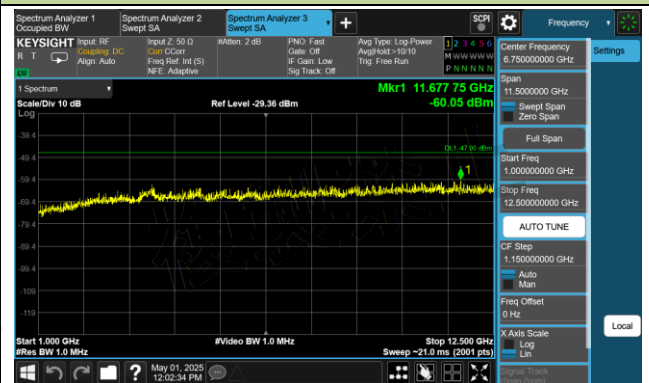


2442MHz

30 ~ 1000MHz

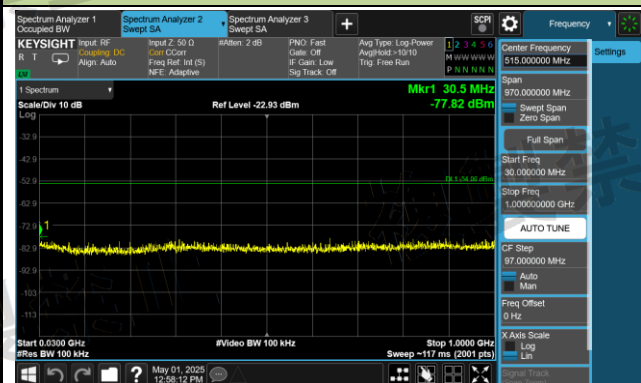


1000 ~ 12500MHz

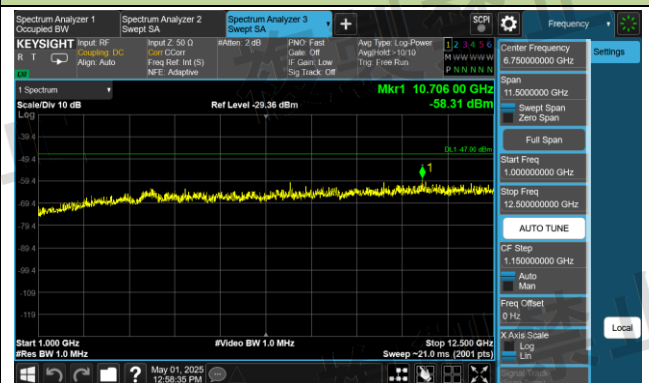


2472MHz

30 ~ 1000MHz



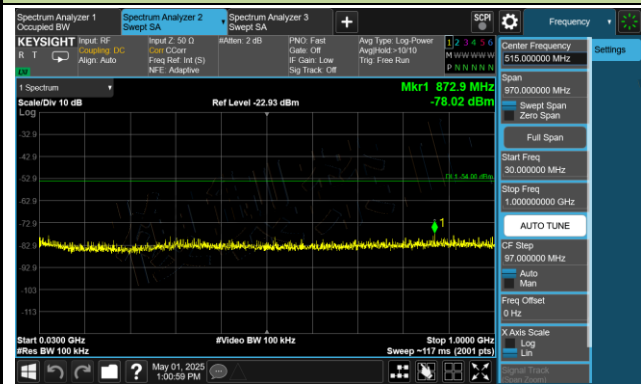
1000 ~ 12500MHz



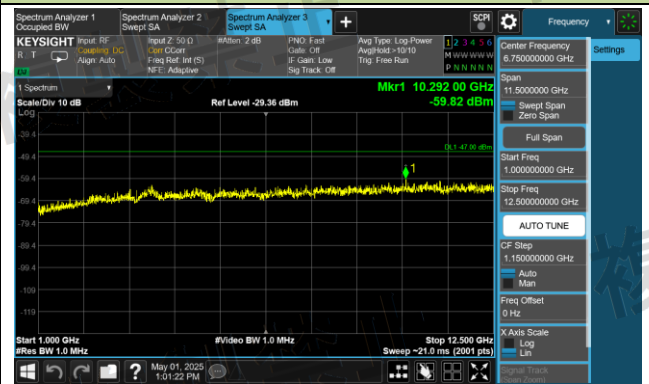
Secondary Radiated Emissions Strength - 802.11be-EHT40

2422MHz

30 ~ 1000MHz

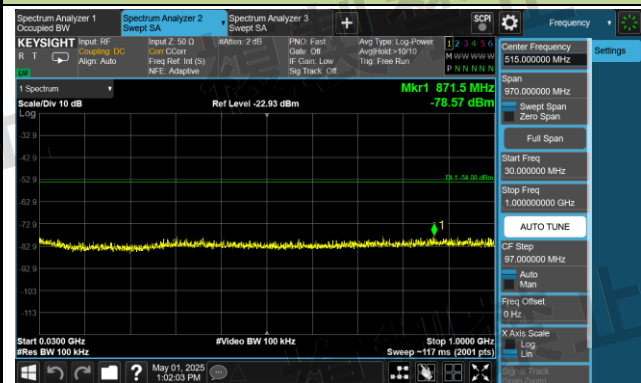


1000 ~ 12500MHz

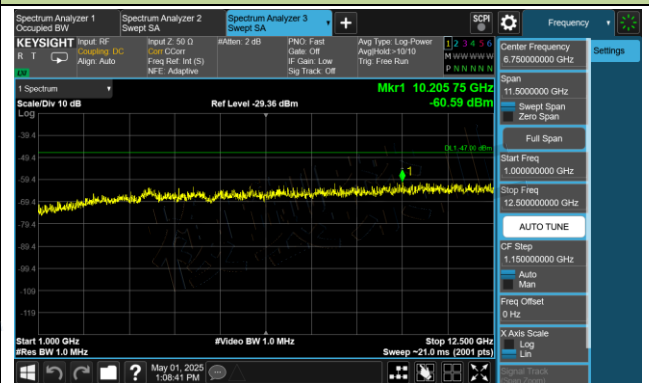


2442MHz

30 ~ 1000MHz

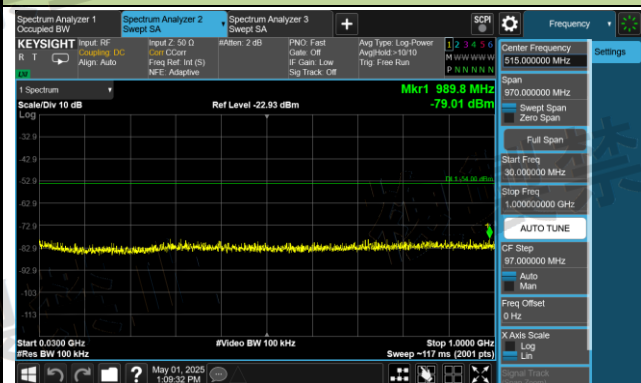


1000 ~ 12500MHz

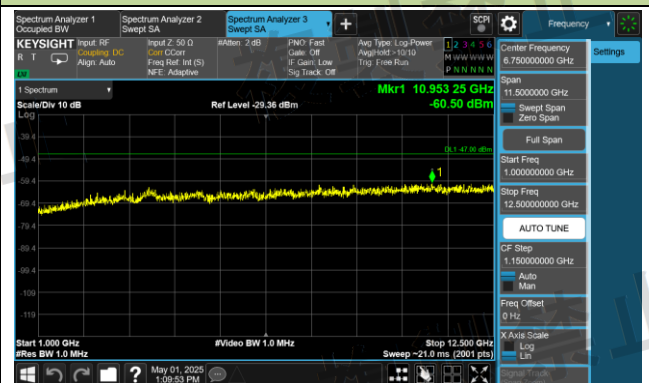


2462MHz

30 ~ 1000MHz



1000 ~ 12500MHz



5.7. Carrier Sensing Measurement

5.7.1. Test Limit

Stop transmission while carrier detecting.

Field intensity in the direction of the maximum gain of a receiving antenna: 100mV/m (It's a radiated testing detection threshold level).

The conducted detection threshold level shows as below:

(6)式の電界強度 E を既定値の 100mV/m (100dB μ V/m) とし、 λ (m)を F (MHz) に変換し、 P を dBm 単位で表すと (7) 式を得る。

$$P[\text{dBm}] = 22.79 + G - 20\log F \quad (7)$$

P : 受信機のアンテナ端子に入力される受信電力 [dBm]

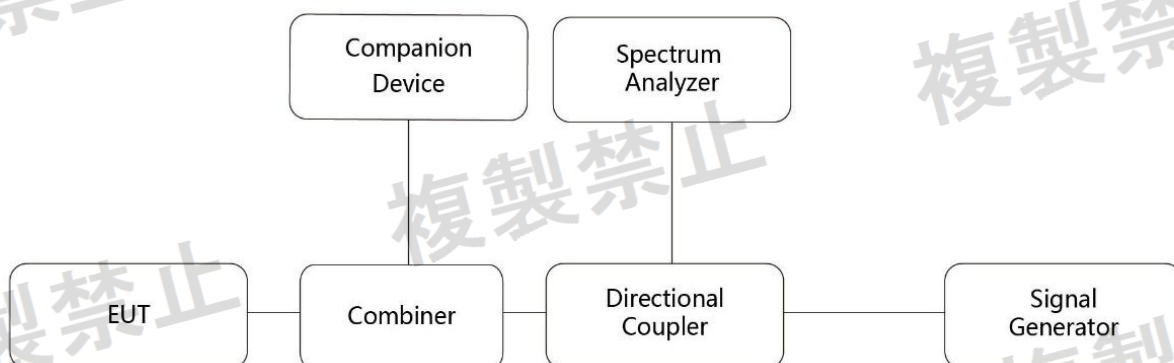
G : 受信アンテナの絶対利得 [dBi]

F : キャリア周波数 [MHz]

5.7.2. Test Procedure

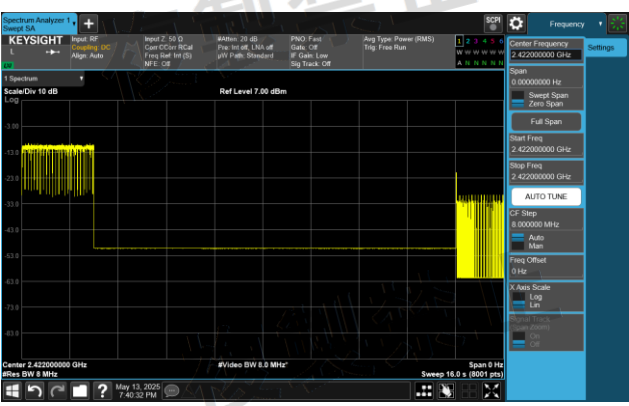
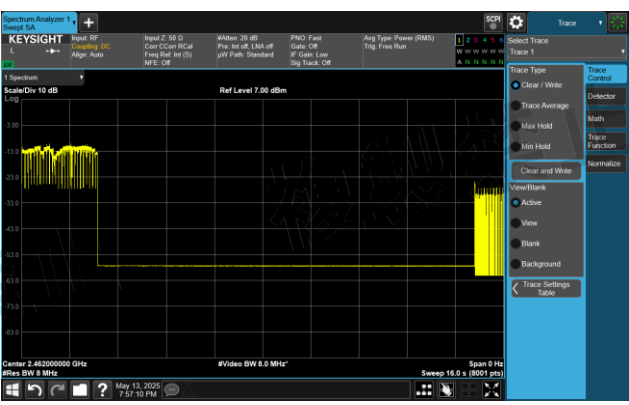
1. A spectrum analyzer or similar device shall be used to observe a sample of the modulated transmitter's radio frequency power output.
2. Link EUT and Access Point to Directional Coupler input port.
3. Link Signal Generator and Spectrum Analyzer to test port and output port in the Directional Coupler separately.
4. A positive Peak Detector function in Spectrum Analyzer must be used.
5. Set the Span to Zero.
6. Press the Signal Generator on and it will output the Carrier Signal. When the Link breaks off, wait a minute and press the Signal Generator off. After a while, reset the Link and done the test.

5.7.3. Test Setup



5.7.4. Test Result

Test Site	WJ-SR8	Temperature	25.1 °C
Test Engineer	Jake Lan	Humidity	46.3 %RH
Test Date	2025-05-13		

Carrier Sensing (802.11be-EHT40 - 2422MHz)	
	Signal Generator Power Level (dBm) = $22.79 + G - 20\log_{10}(F)$ G: Antenna Gain F: Operation Frequency $\text{Power Level} = 22.79 + 6.00 - 20 \cdot \log_{10}(2422\text{MHz}) = -38.89\text{dBm}$ Test Result: Pass
Carrier Sensing (802.11be-EHT40 - 2462MHz)	
	Signal Generator Power Level (dBm) = $22.79 + G - 20\log_{10}(F)$ G: Antenna Gain F: Operation Frequency $\text{Power Level} = 22.79 + 6.00 - 20 \cdot \log_{10}(2462\text{MHz}) = -39.04\text{dBm}$ Test Result: Pass

5.8. Interference Prevention Function Measurement

5.8.1. Test Limit

Chiefly, the one automatically to transmit and to receive identification code with the wireless equipment of the wireless station used in the same premises.

5.8.2. Test Procedure

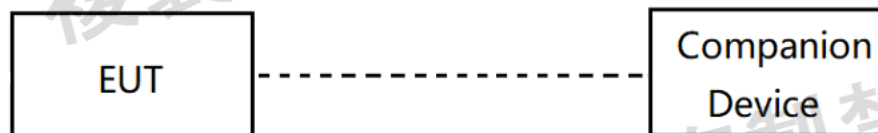
(1) In the case that the EUT has the function of automatically transmitting the identification codes:

- a. Transmit the predetermined identification codes from the EUT.
- b. Check the transmitted identification codes with the demodulator.

(2) In the case of receiving the identification codes:

- a. Transmit the predetermined identification codes from the counterpart.
- b. Check if the communication is normal.
- c. Transmit the signals other than predetermined ID codes from the counterpart.
- d. Check if the EUT stops the transmission, or if it displays that the identification codes are different from the predetermined ones.

5.8.3. Test Setup



5.8.4. Test Result

Test Site	WJ-SR2	Temperature	26.2 °C
Test Engineer	Layla Gui	Humidity	62.8 %RH
Test Date	2025-05-16		

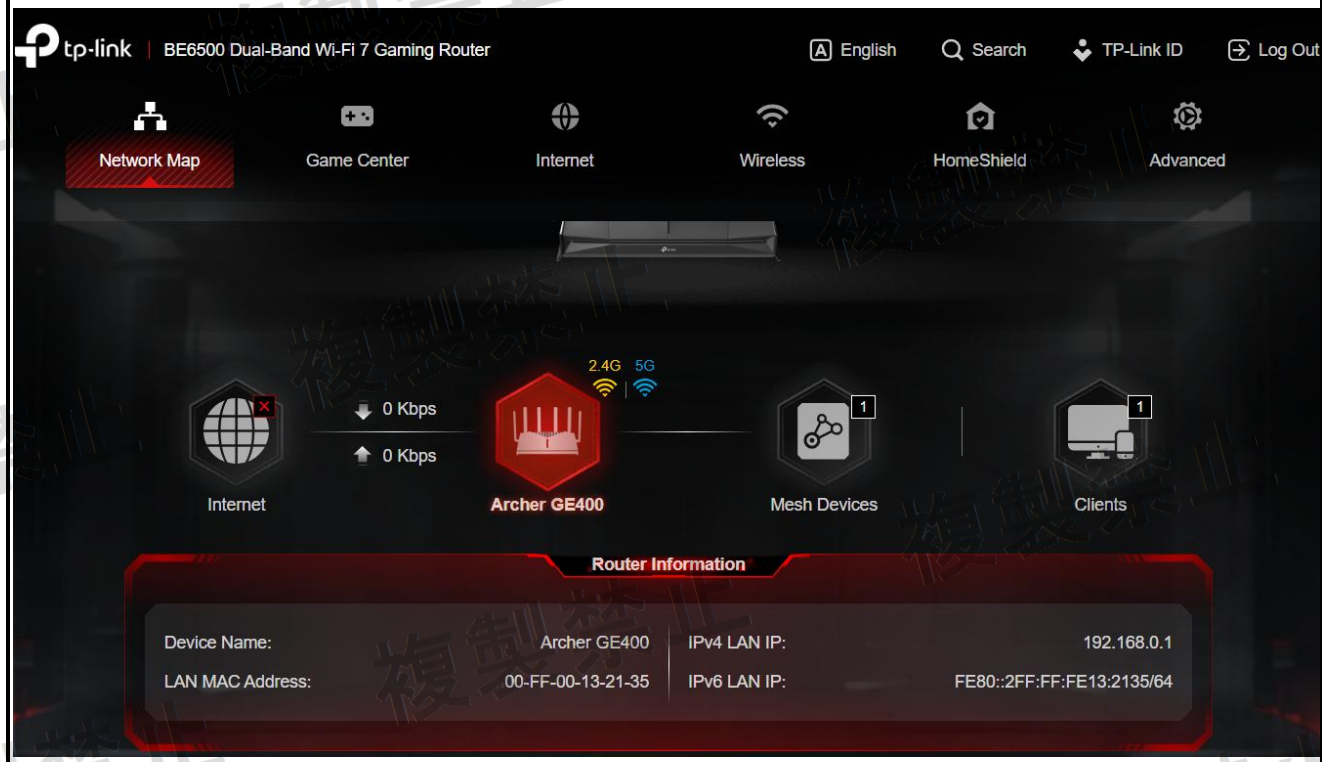
The Result of Interference Prevention Function

☒ Good

☐ NG

Notes:

1. NG means not good.
2. When the EUT work on normal operation, we can use accessory equipment to communicate with EUT to obtain this EUT MAC address. So the EUT can have Interference Prevention Function.



The screenshot displays the TP-Link Archer GE400 web management interface. At the top, the header shows 'tp-link | BE6500 Dual-Band Wi-Fi 7 Gaming Router' along with language, search, and user options. The main navigation bar includes icons for Network Map, Game Center, Internet, Wireless, HomeShield, and Advanced. The central dashboard features a network map with 'Internet' (0 Kbps), 'Archer GE400' (2.4G/5G), 'Mesh Devices' (1), and 'Clients' (1). A red-bordered 'Router Information' box at the bottom provides the following details:

Router Information	
Device Name:	Archer GE400
IPv4 LAN IP:	192.168.0.1
LAN MAC Address:	00-FF-00-13-21-35
IPv6 LAN IP:	FE80::2FF:FE:FE13:2135/64

Appendix A - EUT Photograph

Refer to "R25S1033049-JE" file.

Appendix B - Test Setup Photograph

Refer to “R25S1033049-JT” file.