

RF Test Report

Applicant : Centron Design Co., Ltd.

Product Name : OnCollab

Trade Name : AVA

Model Number : A10

Applicable Standard : MIC notification. No.88 of 2004, Annex 43
2.4 GHz band wide-band low-power data communication system
(Item 19 of Article 2 Paragraph 1)

Received Date : Mar. 14, 2025

Test Period : Mar. 26, 2025

Issued Date : Apr. 08, 2025

Issued by

Eurofins E&E Wireless Taiwan Co., Ltd.
No. 140-1, Changan Street, Bade District,
Taoyuan City, Taiwan (R.O.C)
Tel : +886-3-2710188 / Fax : +886-3-2710190

Note:

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- 3.The relevant information is provided by customers in this test report. According to the correctness, appropriateness or completeness of the information provided by the customer, if there is any doubt or error in the information which affects the validity of the test results, the laboratory does not take the responsibility.

Revision History

Rev.	Issued Date	Description	Revised by
00	Apr. 08, 2025	Initial Issue	Rowan Hsieh

Verification of Compliance

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(Item 19 of Article 2 Paragraph 1)

Test Result : Complied

Performing Lab. : Eurofins E&E Wireless Taiwan Co., Ltd.
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The above equipment has been tested by Eurofins E&E Wireless Taiwan Co., Ltd., and found compliance with the requirements set forth in the 2.4 GHz band wide-band low-power data communication system (Item 19 of Article 2 Paragraph 1) and technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Approved By

: Kai Yu Yang

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1 General Information

1.1. EUT Description

The product specifications of the EUT presented in the report are declared by the manufacturer who shall take full responsibility for the authenticity(except Declared Rated Power , E.I.R.P.).

Applicant	Centron Design Co., Ltd. 2F-3, No. 15, Ln 360, Sec. 1, Neihu Rd., Neihu Dist. 11493 Taipei City
Product Name	OnCollab
Trade Name	AVA
Model Number	A10
Hardware Version	CT1292 REV.C
Software Version	1.0.73.Matrix
Antenna Information	Trade Name: ZCONN Model Number: 2901-01110003506 Antenna Type: FPC Antenna Max. Gain: 2.87 dBi
Radio Equipment	2.4 GHz Band Wide-Band Low-Power Data Communication System
Classification of Specified Radio Equipment	Article 2 Clause 1 Item 19
Modulation Type	802.11b: DSSS
	802.11g: OFDM
	802.11n HT20 : OFDM
	802.11ax HE20 : OFDMA
Type of Emissions	802.11b: G1D 2412 MHz-2472 MHz (Interval of 5 MHz 13ch)
	802.11g: D1D, G1D 2412 MHz-2472 MHz (Interval of 5 MHz 13ch)
	802.11n HT20 : D1D, G1D 2412 MHz-2472 MHz (Interval of 5 MHz 13ch)
	802.11ax HE20 : D1D, G1D 2412 MHz-2472 MHz (Interval of 5 MHz 13ch)
Operate Temp. Range	0 ~ +60 °C
EUT Power Rating	DC 12 V, 2 A

Declared Rated Power	SISO (1TX)		
	802.11b	7.94 mW/MHz	9.00 dBm/MHz
	802.11g	8.07 mW/ MHz	9.07 dBm/MHz
	MIMO (2TX)		
E.I.R.P.	802.11ax HE20	7.82 mW/MHz	8.93 dBm/MHz
	SISO (1TX)		
	802.11b	11.87 dBm/MHz	
	802.11g	11.94 dBm/MHz	
	MIMO (2TX)		
	802.11ax HE20	11.80 dBm/MHz	

1.2. Testing Location

Lab Name: Eurofins E&E Wireless Taiwan Co., Ltd.

Site Address: ☒ No. 140-1, Changan Street, Bade District, Taoyuan City, Taiwan (R.O.C.)

Site Address: ☐ No. 2, Wuquan 5th Rd. Wugu Dist., New Taipei City, Taiwan (R.O.C.)

1.3. Summary of Test Result

Item	Result	Remark
Frequency Error	PASS	-----
Occupied Bandwidth	PASS	-----
Antenna Power Error	PASS	-----
Unwanted Emission Strength	PASS	-----
Secondarily Emitted Radio Wave Strength	PASS	-----
Carrier Sense	PASS	-----
Radio Interference Prevention Capability Measurement	PASS	-----

Decision Rule

☒ Uncertainty is not included.

☐ Uncertainty is included.

2 Test Methodology

2.1. Mode of Operation

Test Category

2.4 GHz Band Wideband Low-Power Data Communication System

Pre-Test Mode	Final-Test Mode
802.11b	V
802.11g	V
802.11n HT20	
802.11ax HE20	V

Note 1: 802.11b with only one antenna.

Note 2: ANT-0 is the worst case in 802.11g.

Note 3: Investigation has been done on all the possible configurations for searching the worst cases (HE covers HT). The table is a list of the test modes show in this test report.

Note 4: The test result of IEEE 802.11ax only supports Full RU.

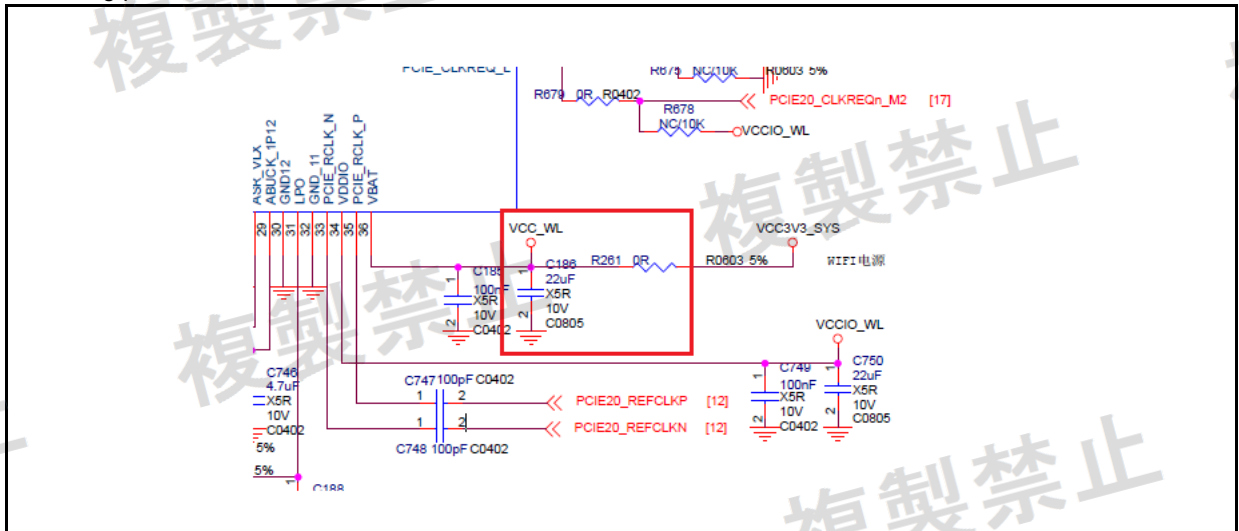
Comprehensive operation test

The normal voltage settings are respectively adopted during the test. Because the voltage error are less than 1 %.

Constant voltage check

EUT and Module Power tables				
EUT Setup Value (Vdc)		Normal	Hight(+10 %)	Low(-10 %)
		12	13.2	10.8
Module Vdd Power Measurement Value (Vdc)		Normal	Hight(+10 %)	Low(-10 %)
		3.35	3.35	3.35
Voltage error (%)	Result	Ref. level	0.0000	0.0000
	Limit	---	± 1	
Judgment		---	PASS	PASS

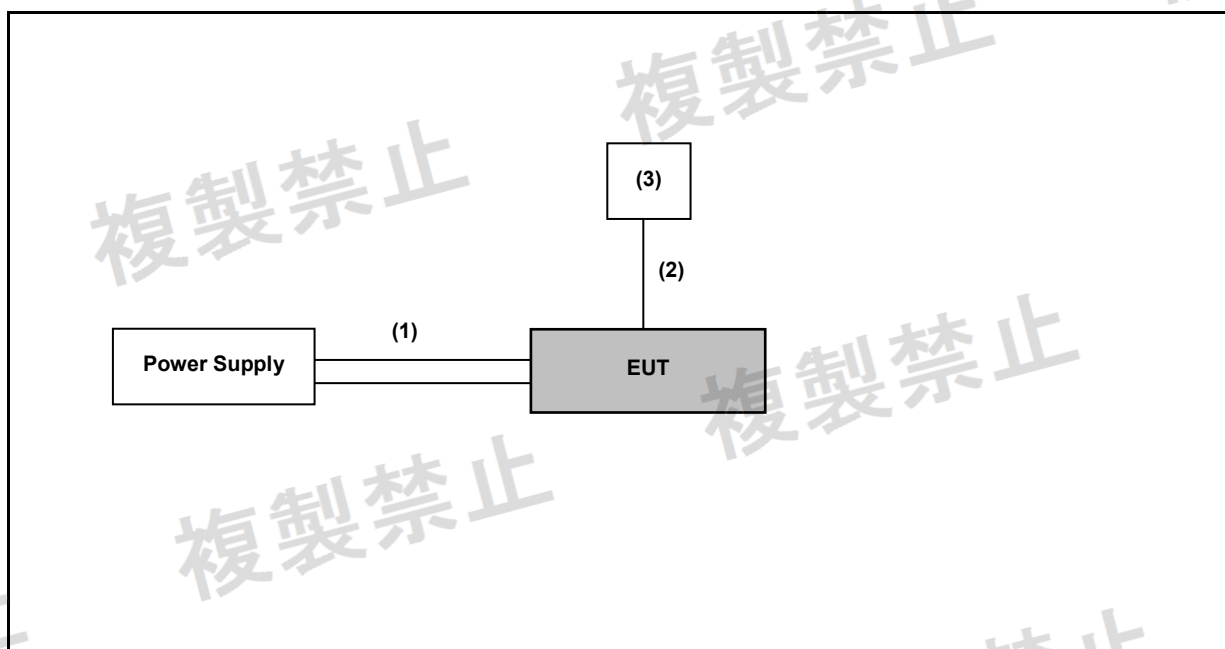
Measuring point



2.2. EUT Test Step

1.	Setup the EUT shown on "Configuration of Test System Details".
2.	Turn on Wi-Fi function.
3.	EUT run test program.

2.3. Configuration of Test System Details



Devices Description					
	Product	Manufacturer	Model Number	Serial Number	Power Cord
(1)	DC Power Cable	Eurofins	001	---	---
(2)	Fixture	Centron	DB01	---	---
(3)	Notebook	ASUS	P1448U	---	---

2.4. Test Instruments

For Conducted

Test Period: Mar. 26, 2025

Testing Engineer: Peter Shui

Test Site			RF01-BD					
Use	Equipment	Manufacturer	Model Number	Serial Number	Calibration Authority	Cal. Date	Cal. Period	Cal. Method
☒	Power Sensor	Anritsu	MA24208A	2326014	ETC	Dec. 02, 2024	1 year	(C)
☒	Spectrum Analyzer (20 Hz~26.5 GHz)	Agilent	N9020A	US47520902	ETC	Aug. 28, 2024	1 year	(C)
☒	Power Supply	KEITHLEY	2303	4045290	OCL	Jan. 03, 2025	1 year	(C)
Remark : (a) Calibration conducted by the National Institute of Information and Communications Technology (NICT) in Japan (hereinafter referred to as "NICT") or a designated calibration agency under Article 102-18 paragraph (1) in JRL. (b) Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Act (Act No. 51 of 1992). (c) Calibration conducted in countries except Japan, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1). (d) Calibration, etc. conducted by using measuring instruments and other equipment listed in the right column of appended table No. 3, which shall have been given any type of calibration, etc. listed above from (a) to (c) From JRL Article 24-2, paragraph 4, Item 2								

2.5. Uncertainty of Measured Value

Test Item	Uncertainty	
	BD	WG
Frequency Error	4.8×10^{-7}	4.9×10^{-7}
Occupied Bandwidth	4.4%	4.4%
Spread Bandwidth	4.4%	4.4%
Antenna Power Error	1.1 dB	1.1 dB
Unwanted Emission Strength	1.0 dB	1.0 dB
Secondarily Emitted Radio Wave Strength	1.0 dB	1.0 dB
Carrier Sense	1.2 dB	1.2 dB

2.6. Test Site Environment

Items	Test Item	Required	Interval(*)
Temperature (°C)	Conducted	5-35	20-30
Humidity (%RH)		45-85	45-75

(*)The measurement ambient temperature is within this range.

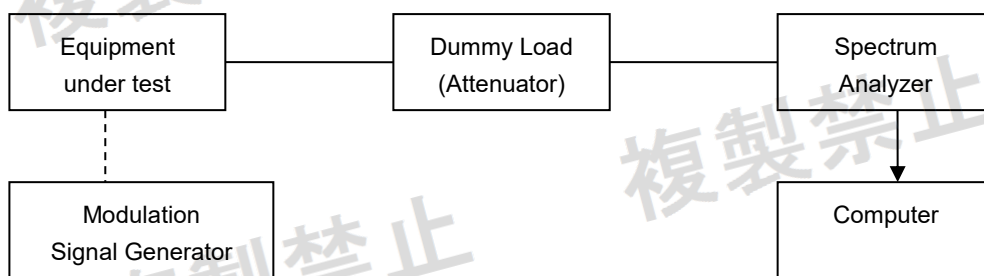
3 Measurement Procedure

3.1. Frequency Error Measurement

■ Limit

Frequency Tolerance ≤ 50 ppm.

■ Test Setup



■ Measuring Equipment Conditions

Spectrum Analyzer Setting

SPAN : 300 kHz

RBW : 1 KH

VBW : 30 kHz

Sweep Time : AUTO (Minimum time to ensure measurement accuracy.)

Data Points : 401 points or more

Sweep Mode : Single Sweep

Detection Mode : Positive Peak

Storage Mode : Normal

Y-axis Scale : 10 dB/Div.

Reference Level : Enough level for maximum dynamic range

■ Conditions of Equipment under Test

- (1) Set the EUT to the test frequency and transmit RF signal.
- (2) The modulation state is "continuous wave without modulation" by stopping spread spectrum in principle. But, if it is not possible, it shall be "continuous burst wave without modulation".

■ Measuring Operation Procedures

In case of burst waves, the measurement shall be done for enough time (e.g. covering 20 or more of burst waves) in order to obtain the enough measuring accuracy, and the average of the measured values becomes the final value.

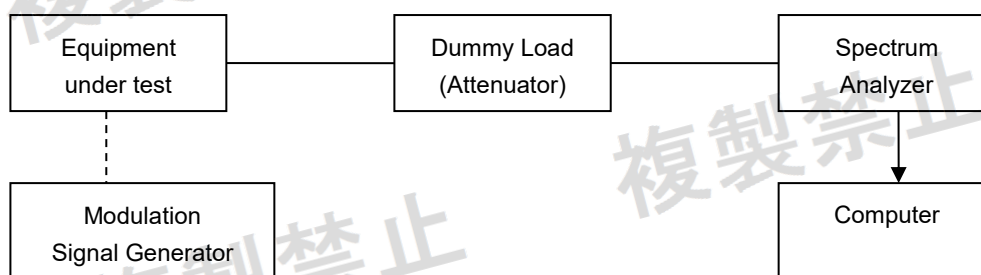
3.2. Occupied Bandwidth Measurement

■ Limit

Others: Occupied Bandwidth ≤ 26 MHz.

OFDM: Occupied Bandwidth ≤ 40 MHz.

■ Test Setup



■ Measuring Equipment Conditions

Spectrum Analyzer Setting

SPAN : 40 MHz(BW=20) or 80 MHz(BW=40) or 160 MHz(BW=80) or 320 MHz(BW=160)

RBW : 300 kHz

VBW : 300 kHz

Sweep Time : AUTO (Minimum time to ensure measurement accuracy.)

Data Points : 401 points or more

Indication mode : Max hold

Detection Mode : Positive Peak

Storage Mode : Normal

Y-axis Scale : 10 dB/Div.

Reference Level : Enough level for maximum dynamic range

■ Conditions of Equipment under Test

Set to testing frequency and modulate using standard encoding test signals.

■ Measuring Operation Procedures

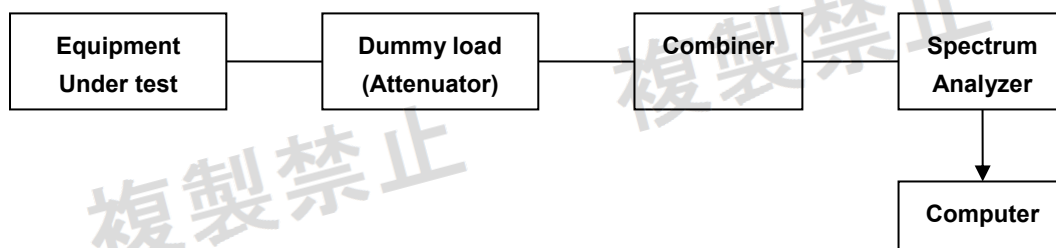
The 99 % Occupied Bandwidth of Total Power.

3.3. Antenna Power (Conducted) Measurement

■ Limit

- (1) OFDM BW<26 MHz:RF Output Power ≤ 10 mW/MHz
- (2) OFDM BW=26 MHz~38 MHz:RF Output Power ≤ 5 mW/MHz
- (3) Other than (1) & (2) :RF Output Power ≤ 10 mW RF Output Power Tolerance ≤ 20 %

■ Test Setup



■ Measuring Equipment Conditions

Spectrum Analyzer Setting

Mode : Channel power

SPAN : 40 MHz(BW=20) or 80 MHz(BW=40) or 160 MHz(BW=80) or 160 MHz(BW=80)

RBW : 30 kHz

VBW : 300 kHz

Sweep Time : AUTO (Minimum time to ensure measurement accuracy.)

Data Points : 401 points or more

Indication mode : Max hold

Detection Mode : Positive Peak

Storage Mode : Normal

Y-axis Scale : 10 dB/Div.

Reference Level : Enough level for maximum dynamic range

■ Conditions of Equipment under Test

Set to the test frequency and spread-spectrum code. Modulate it with standard coded test signal.

■ Measuring Operation Procedures

I- in case of direct sequence spread-spectrum system, operate the EUT as follows:

- (1) Setting the spectrum analyzer according to 6.3.
- (2) Find the frequency of maximum power and then point to the center frequency
- (3) Detection Mode change to Avg.
- (4) Channel Power change to 1 MHz and record the result.

II- In the case of the frequency hopping system or the combination of the system and the direct sequence spread-spectrum system, operate the EUT as follows:

- (1) Connect the power meter to the output of the attenuator and measure the total power.
- (2) Divide the total power with the spread-spectrum bandwidth and determine the mean power pre 1 MHz.
- (3) Check and see if the hopping frequencies are uniformly distributed according to the submitted document. If not uniformity distributed, the measuring method should be considered particularly according to the submitted document.
- (4) Antenna power shall be as follows:
 - a. In case of continuous waves: Value in step (2).
 - b. In case of burst waves: Calculated value from the value in step (2) and ratio of transmission time.

III- In the case of other modulation mode, operate the equipment under the test as follows:

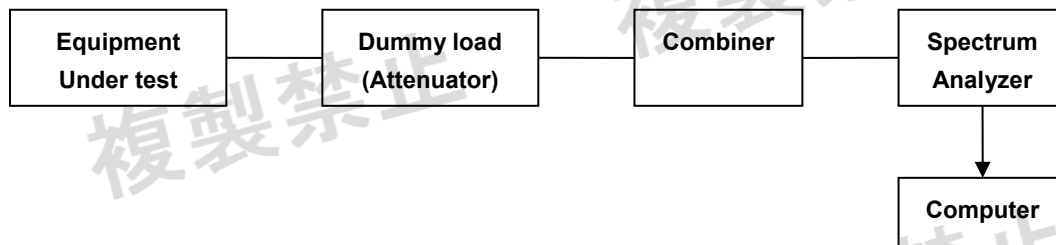
- (1) Connect the power meter to the output of the attenuator and measure the total power.
 - (2) Antenna power shall be as follows:
 - a. In case of continuous waves: Value in step (1).
 - b. In case of burst waves: Calculated value from the value in step (2) and the transmission time ratio.
- Sections where data is not transmitted shall be treated as same as in case direct sequence spread-spectrum system

3.4. Unwanted Emission Strength Measurement

■ Limit

Frequency (MHz)	Limit (μW/MHz)
Under 2387 MHz	≤ 2.5
2387-2400 MHz	≤ 25
2483.5-2496.5 MHz	≤ 25
2496.5-12.5 GHz	≤ 2.5

■ Test Setup



■ Measuring Equipment Conditions

Step-1 (Search Mode)

Spectrum Analyzer Setting

SPAN : Measuring Frequency Range (Refer to the 4.7 of the page 18)

RBW : 1 MHz

VBW : Same as RBW

Sweep Time : AUTO (Minimum time to ensure measurement accuracy.

*In case of burst wave, one burst shall be included per data point)

Data Points : 401 points or more

Sweep Mode : Single Sweep

Detection Mode : Positive Peak

Y-axis Scale : 10 dB/Div.

Reference Level : Enough level for maximum dynamic range

Step-2 (Measuring Mode *Normal)

Spectrum Analyzer Setting

Center Frequency : Searched Frequency

SPAN : 1 MHz – 10 MHz (The SPAN that keeps accuracy of the frequency.)

RBW : 1 MHz

VBW : Same as RBW

Sweep Time : AUTO (Minimum time to ensure measurement accuracy.

*In case of burst wave, one burst shall be included per data point)

Data Points : 401 points or more

Sweep Mode : Single Sweep

Detection Mode : Positive Peak

Y-axis Scale : 10 dB/Div.

Reference Level : Enough level for maximum dynamic range

Step-3 (Measuring Mode *Zero Span)

Spectrum Analyzer Setting

Center Frequency : Searched Frequency

SPAN : 0 Hz (ZERO SPAN)

RBW : 1 MHz

VBW : Same as RBW

Sweep Time : AUTO (Minimum time to ensure measurement accuracy.

*In case of burst wave, one burst shall be included per data point)

Data Points : 401 points or more

Sweep Mode : Single Sweep

Detection Mode : Sample

Y-axis Scale : 10 dB/Div.

Reference Level : Enough level for maximum dynamic range

■ Conditions of Equipment under Test

Set the test frequency and test spread-spectrum code, and modulate it with a standard code test signal.

■ Measuring Operation Procedures

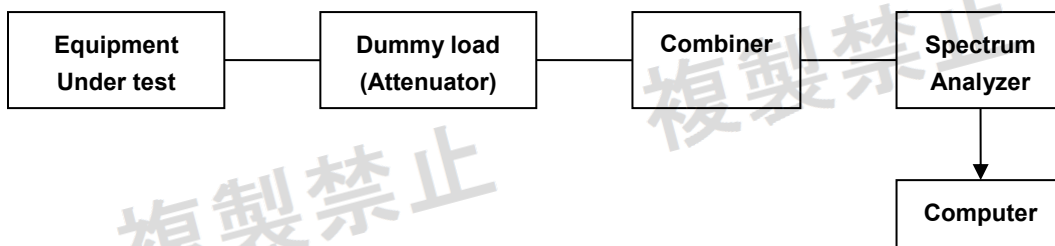
Set the spectrum analyzer according to (Step 1) and search for spurious emissions. If searched value is under the technical standard value, do not need to measure by (Step 2). In this case, it reports the searched value and measured frequency. We measure by (Step 2) to keep the accuracy, and then it reports the more detail value.

3.5. Secondarily Emitted Radio Wave Strength Measurement

■ Limit

Frequency (MHz)	Limit (nW)
Under 1 GHz	≤ 4
1 - 12.5 GHz	≤ 20

■ Test Setup



■ Measuring Equipment Conditions

Step-1 (Search Mode)

Spectrum Analyzer Setting

SPAN : Measuring Frequency Range (Refer to the 4.7 of the page 18)

RBW : 1 MHz (frequency range; 1 GHz over), 100 kHz (frequency range; 30 MHz to 1 GHz)

VBW : Same as RBW (1 MHz or 100 kHz)

Sweep Time : AUTO (Minimum time to ensure measurement accuracy.

*In case of burst wave, one burst shall be included per data point)

Data Points : 401 points or more

Sweep Mode : Single Sweep

Detection Mode : Positive Peak

Y-axis Scale : 10 dB/Div.

Reference Level : Enough level for maximum dynamic range

Step-2 (Measuring Mode *Normal)

Spectrum Analyzer Setting

Center Frequency : Searched Frequency

SPAN : 1 MHz – 10 MHz (The SPAN that keeps accuracy of the frequency.)

RBW : 1 MHz (frequency range; 1 GHz over), 100 kHz (frequency range; 30 MHz to 1 GHz)

VBW : Same as RBW (1 MHz or 100 kHz)

Sweep Time : AUTO (Minimum time to ensure measurement accuracy.

*In case of burst wave, one burst shall be included per data point)

Data Points : 401 points or more

Sweep Mode : Single Sweep

Detection Mode : Positive Peak

Y-axis Scale : 10 dB/Div.

Reference Level : Enough level for maximum dynamic range

Step-3 (Measuring Mode *Zero Span)

Spectrum Analyzer Setting

Center Frequency : Searched Frequency

SPAN : 0 Hz (ZERO SPAN)

RBW : 1 MHz (frequency range; 1 GHz over), 100 kHz (frequency range; 30 MHz to 1 GHz)

VBW : Same as RBW (1 MHz or 100 kHz)

Sweep Time : AUTO (Minimum time to ensure measurement accuracy.

*In case of burst wave, one burst shall be included per data point)

Data Points : 401 points or more

Sweep Mode : Single Sweep

Detection Mode : Sample

Y-axis Scale : 10 dB/Div.

Reference Level : Enough level for maximum dynamic range

■ Conditions of Equipment under Test

Set the EUT to receiver the test frequency with forced continuous receiving control.

■ Measuring Operation Procedures

Set the spectrum analyzer according to (Step 1) and search for spurious emissions. If searched value is under the technical standard value, do not need to measure by (Step 2). In this case, it reports the searched value and measured frequency. We measure by (Step 2) to keep the accuracy, and then it reports the more detail value.

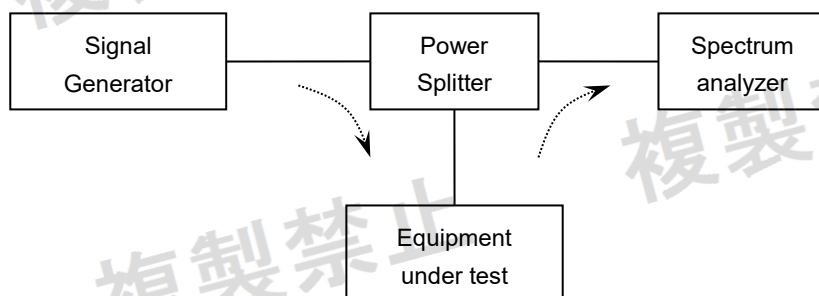
3.6. Carrier Sense Measurement

■ Limit

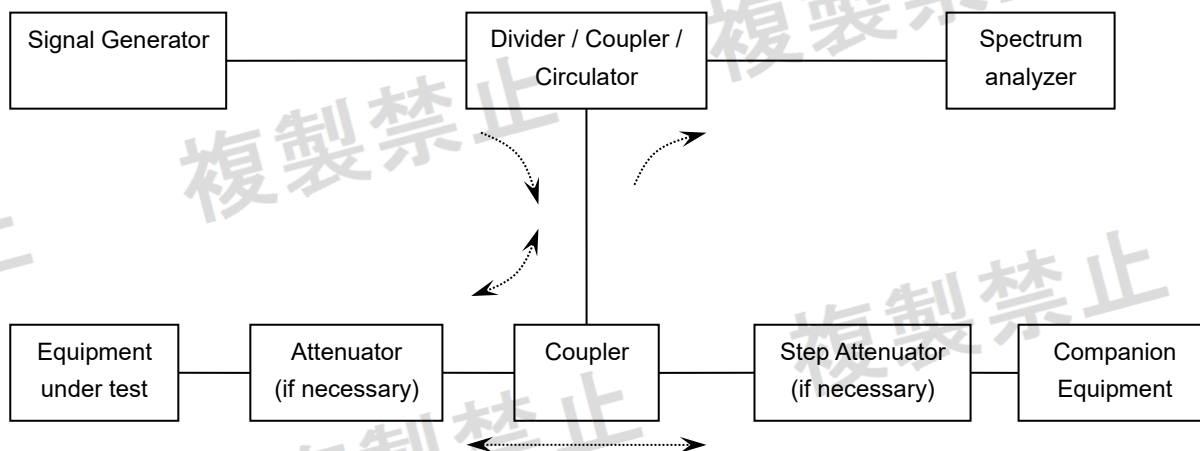
During outputting Carrier Wave by Signal Generator, check the EUT does not transmit any waves (include the Beacon).

■ Test Setup

Carry out the test by Equipment under Test only (Necessary a Test Mode)



Carry out the test by using a companion equipment (Necessary actual communication)



■ Measuring Equipment Conditions

(1) Set the spectrum analyzer as follow:

Resolution bandwidth:	1 MHz
Video bandwidth:	1 MHz
Sweep Time:	AUTO (Minimum time to ensure measurement accuracy.)
Sweep mode:	Continuous Sweep
Detection mode:	Positive peak
Storage Mode:	Normal
Y-axis scale:	10 dB/Div
Trigger:	Free Run

■ Conditions of Equipment under Test

Required normal mode of the applicable equipment (EUT)

3.7. Radio Interference Prevention Capability Measurement

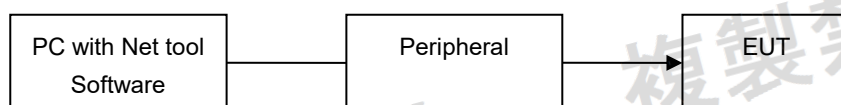
■ Limit

Identification code $\geq$ 48 bits

■ Measuring Id Code Software

MAC IP List: MAC Scan

■ Test Setup



■ Measuring Operation Procedures

1. In the case that the EUT has the function of automatically transmitting the identification code: a. Transmit the predetermined identification codes from EUT. b. Check the transmitted identification codes with the demodulator.
2. In the case of receiving the identification code: a. Transmit the predetermined identification codes from the counterpart. b. Check if 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 identification codes are different from the predetermined ones.

3.8. Construction Protection Confirmation Method

■ Limit

The high-frequency section and modulation section of the radio equipment except for the antenna system shall not be capable of being opened easily.

4 Test Results

802.11b

TEST RESULTS DATA FOR JAPANESE CERTIFICATION 11b mode NV

Peak Antenna Gain	2.87	dBi
Declaration Output Power	7.94	mW/MHz
Declaration Output Power	9.00	dBm/MHz
EIRP	11.87	dBm/MHz
Input Power Voltage	12	Vdc

Tested Circit Insertion Loss		10.8	dB
Burst	ON TIME	-Not applicable-	sec
	OFF TIME	-Not applicable-	sec
	Ratio	-Not applicable-	%
Packet Type (Mode)		1Mbps	mode

Frequency equal to the transmission rate
of the modulation
signal (5.5 Mbps)
1.375 MHz

Test Category ; 2.4GHz Band Wideband Low-Power Data Communication System

2.1 TEST Results (Normal Voltage)

Measurement Frequency			MHz	2412	2442	2472	Result	Limit
Channel Number			Ch.	1	7	13	-----	-----
Reading Frequency (TX0)			MHz	2411.9778	2441.9814	2471.9808	-----	-----
Frequency Tolerance (TX0)			ppm	-9.20	-7.62	-7.77	PASS	-50≤x≤+50
Occupied Bandwidth (TX0)			MHz	12.3890	12.5190	12.3870	PASS	≤26 MHz
Antenna Power (Density)(TX0)			mW/MHz	7.38	7.69	7.94	PASS	≤10 mW/MHz
Antenna Power Tolerance(TX0)			%	-7.05	-3.15	0.00	PASS	-80≤x≤+20
E.I.R.P (Density)(TX0)			dBm/MHz	11.55	11.73	11.87	PASS	≤12.14 dBm/MHz
Real Total Output Power (TX0)			dBm	16.49	16.65	16.94	-----	-----
Unwanted Emission Strength (TX0)	Under 2387MHz	μW/MHz	0.39	0.26	0.08	PASS	≤2.5uW/MHz	
		MHz	2328.10	2372.90	2384.60	-----	-----	
	2387-2400MHz	μW/MHz	8.61	4.72	0.74	PASS	≤25uW/MHz	
		MHz	2391.81	2394.62	2387.95	-----	-----	
	2483.5-2496.5MHz	μW/MHz	7.96	23.32	16.03	PASS	≤25uW/MHz	
		MHz	2489.51	2484.11	2483.76	-----	-----	
	2496.5 - 12.5GHz	μW/MHz	0.13	2.17	2.39	PASS	≤2.5uW/MHz	
		MHz	2517.00	2496.50	2507.00	-----	-----	
Secondarily Emitted Radio Wave Strength (RX Spurious) (RX0)	Under 1GHz	nW	0.055	0.017	0.052	PASS	≤ 4 nW	
		MHz	769.140	760.410	744.890	-----	-----	
	1 - 12.5GHz	nW	1.561	0.500	0.795	PASS	≤ 20 nW	
		MHz	1955.000	3381.000	2530.000	-----	-----	
Spread Factor			MHz	5.59	5.62	5.60	PASS	≥5
Interference Prevention Function			-----	good			PASS	-----

802.11g

TEST RESULTS DATA FOR JAPANESE CERTIFICATION 11g mode NV

Peak Antenna Gain	2.87	dBi
Declaration Output Power	8.07	mW/MHz
Declaration Output Power	9.07	dBm/MHz
EIRP	11.94	dBm/MHz
Input Power Voltage	12	Vdc

Tested Circuit Insertion Loss		10.8	dB
Burst	ON TIME	-Not applicable-	sec
	OFF TIME	-Not applicable-	sec
	Ratio	-Not applicable-	%
Packet Type (Mode)		6Mbps	mode

Test Category ; 2.4GHz Band Wideband Low-Power Data Communication System

2.1 TEST Results (Normal Voltage)

Measurement Frequency		MHz	2412	2442	2472	Result	Limit
Channel Number		Ch.	1	7	13	-----	-----
Reading Frequency (TX0)		MHz	2411.9808	2441.9841	2471.9835	-----	-----
Frequency Tolerance (TX0)		ppm	-7.96	-6.51	-6.67	PASS	-50≤x≤+50
Occupied Bandwidth (TX0)		MHz	18.0330	17.7050	17.4890	PASS	≤26 MHz
Antenna Power (Density)(TX0)		mW/MHz	8.07	7.10	7.76	PASS	≤10 mW/MHz
Antenna Power (Density)(TX1)		mW/MHz	6.04	5.65	5.74	PASS	≤10 mW/MHz
Antenna Power Tolerance(TX0)		%	0.00	-12.02	-3.84	PASS	-80≤x≤+20
E.I.R.P (Density)(TX0)		dBm/MHz	11.94	11.38	11.77	PASS	≤12.14 dBm/MHz
Real Total Output Power (TX0)		dBm	19.96	19.43	19.73	-----	-----
Real Total Output Power (TX1)		dBm	18.48	18.19	18.61	-----	-----
Unwanted Emission Strength (TX0)	Under 2387MHz	μW/MHz	0.44	0.67	0.05	PASS	≤2.5uW/MHz
		MHz	2387.00	2384.60	2384.60	-----	-----
	2387-2400MHz	μW/MHz	3.15	2.12	0.13	PASS	≤25uW/MHz
		MHz	2398.97	2398.41	2399.31	-----	-----
	2483.5-2496.5MHz	μW/MHz	0.42	1.87	6.68	PASS	≤25uW/MHz
		MHz	2484.09	2484.61	2484.81	-----	-----
	2496.5 - 12.5GHz	μW/MHz	0.12	0.58	0.22	PASS	≤2.5uW/MHz
		MHz	2496.50	2496.50	2496.50	-----	-----
Secondarily Emitted Radio Wave Strength (RX Spurious) (RX0)	Under 1GHz	nW	0.028	0.027	0.021	PASS	≤ 4 nW
		MHz	733.250	731.310	767.200	-----	-----
	1 - 12.5GHz	nW	0.257	1.303	0.975	PASS	≤ 20 nW
		MHz	2426.000	1943.000	3381.000	-----	-----
Interference Prevention Function		-----	good			PASS	-----

802.11ax HE20

TEST RESULTS DATA FOR JAPANESE CERTIFICATION 11ax20 mode NV

Peak Antenna Gain	2.87	dBi
Declaration Output Power	7.82	mW/MHz
Declaration Output Power	8.93	dBm/MHz
EIRP	11.80	dBm/MHz
Input Power Voltage	12	Vdc

Tested Circuit Insertion Loss		10.8	dB
Burst	ON TIME	-Not applicable-	sec
	OFF TIME	-Not applicable-	sec
	Ratio	-Not applicable-	%
Packet Type (Mode)		MCS 0	mode

Test Category ; 2.4GHz Band Wideband Low-Power Data Communication System

2.1 TEST Results (Normal Voltage)

Measurement Frequency		MHz	2412	2442	2472	Result	Limit
Channel Number		Ch.	1	7	13	----	----
Reading Frequency (TX0)		MHz	2411.9823	2441.9853	2471.9781	----	----
Frequency Tolerance (TX0)		ppm	-7.34	-6.02	-8.86	PASS	-50≤x≤+50
Reading Frequency (TX1)		MHz	2411.9781	2441.9799	2471.9868	----	----
Frequency Tolerance (TX1)		ppm	-9.08	-8.23	-5.34	PASS	-50≤x≤+50
Occupied Bandwidth (TX0)		MHz	19.0530	19.0120	19.0250	PASS	≤26 MHz
Occupied Bandwidth (TX1)		MHz	19.0610	18.9730	18.9460	PASS	≤26 MHz
Antenna Power (Density)(TX0)		mW/MHz	4.45	4.04	4.43	----	----
Antenna Power (Density)(TX1)		mW/MHz	3.37	2.83	3.37	----	----
Antenna Power (Density)(TX0+1)		mW/MHz	7.82	6.87	7.80	PASS	≤10 mW/MHz
Antenna Power Tolerance(TX0+1)		%	0.00	-12.15	-0.26	PASS	-80≤x≤+20
E.I.R.P (Density)		dBm/MHz	11.80	11.24	11.79	PASS	≤12.14 dBm/MHz
Real Total Output Power (TX0)		dBm	17.43	17.27	17.53	----	----
Real Total Output Power (TX1)		dBm	16.41	15.77	16.15	----	----
Real Total Output Power (TX0+1)		dBm	19.96	19.59	19.90	----	----
Unwanted Emission Strength (TX0)	Under 2387MHz	μW/MHz	0.13	0.23	0.06	PASS	≤2.5uW/MHz
		MHz	2387.00	2382.30	2387.00	----	----
	2387-2400MHz	μW/MHz	0.39	1.48	0.12	PASS	≤25uW/MHz
		MHz	2399.74	2399.94	2399.69	----	----
	2483.5-2496.5MHz	μW/MHz	0.22	1.55	1.59	PASS	≤25uW/MHz
		MHz	2486.32	2483.68	2483.60	----	----
	2496.5 - 12.5GHz	μW/MHz	0.10	0.36	0.11	PASS	≤2.5uW/MHz
		MHz	2496.50	2496.50	2496.50	----	----
Unwanted Emission Strength (TX1)	Under 2387MHz	μW/MHz	0.08	0.08	0.05	PASS	≤2.5uW/MHz
		MHz	2387.00	2387.00	2384.60	----	----
	2387-2400MHz	μW/MHz	0.21	0.61	0.11	PASS	≤25uW/MHz
		MHz	2398.86	2399.43	2394.40	----	----
	2483.5-2496.5MHz	μW/MHz	0.10	0.51	0.40	PASS	≤25uW/MHz
		MHz	2488.78	2491.68	2483.57	----	----
	2496.5MHz-12.5GHz	μW/MHz	0.04	0.07	0.04	PASS	≤2.5uW/MHz
		MHz	2496.50	2507.00	2496.50	----	----
UnwantedEmissionStrength(TX0+1)	Under 2387MHz	μW/MHz	0.21	0.31	0.10	PASS	≤2.5uW/MHz
		MHz	----	----	----	----	----
	2387-2400MHz	μW/MHz	0.59	2.09	0.22	PASS	≤25uW/MHz
		MHz	----	----	----	----	----
	2483.5-2496.5MHz	μW/MHz	0.32	2.06	1.99	PASS	≤25uW/MHz
		MHz	----	----	----	----	----
	2496.5MHz-12.5GHz	μW/MHz	0.15	0.43	0.14	PASS	≤2.5uW/MHz
		MHz	----	----	----	----	----

Secondarily Emitted Radio Wave Strength (RX Spurious) (RX0)	Under 1GHz	nW	0.019	0.022	0.021	PASS	≤ 4 nW
		MHz	761.380	770.110	761.380	----	----
	1 - 12.5GHz	nW	0.300	0.382	0.638	PASS	≤ 20 nW
		MHz	2461.000	2449.000	2449.000	----	----
Secondarily Emitted Radio Wave Strength (RX Spurious) (RX1)	Under 1GHz	nW	0.050	0.044	0.066	PASS	≤ 4 nW
		MHz	95.960	497.540	769.140	----	----
	1 - 12.5GHz	nW	0.953	1.050	1.496	PASS	≤ 20 nW
		MHz	2461.000	2461.000	2461.000	----	----
Secondarily Emitted Radio Wave Strength (RX0+1)	Under 1GHz	nW	0.069	0.066	0.088	PASS	≤ 4 nW
		MHz	----	----	----	----	----
	1 - 12.5GHz	nW	1.254	1.432	2.134	PASS	≤ 20 nW
		MHz	----	----	----	----	----
Interference Prevention Function		----	good			PASS	----

■ Antenna List

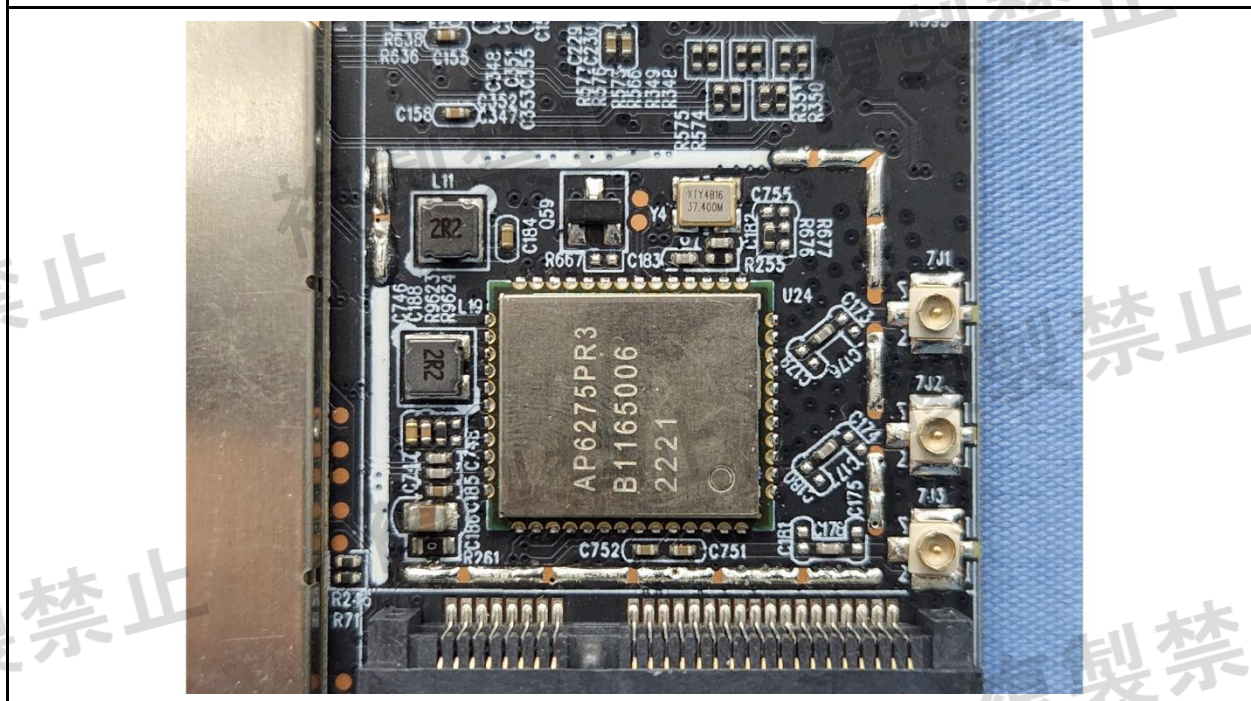
Antenna			Gain Specification			Notes (Cable or Others)
No.	Type	Model Name	Max Gain (dBi)	Attenuation (dB)	Net Gain (dBi)	
1	FPC Antenna	2901 01110003506	2.87	0	0	Horizontal + Vertical

■ Construction Protection Confirmation Method

Confirmation Method

☐	1. Sealed with special screws (indicate the special screws used in Exterior View Drawings, and also attach its technical drawings of such screws).
☐	2. Plastic chassis is being welded using ultrasonic waves.
☒	3. Chassis is glued using a special adhesive.
☐	4. Metal covers are spot-fused (indicate the fused points in Exterior View Drawings).
☐	5. Cover is specially interlocked (indicate the interlocked part in Exterior View Drawings).
☐	6. Shield case is welded at RF and modulation parts, and ID-ROM is welded using the BGA Method.
☐	7. Shield case is welded at RF and modulation parts, and ID-ROM is glued at its lead with a special adhesive.
☐	8. Shield case is welded at RF and modulation parts, and ID-ROM is glued with a non-transparent laminating agent.
☐	9. Other ()

Photo

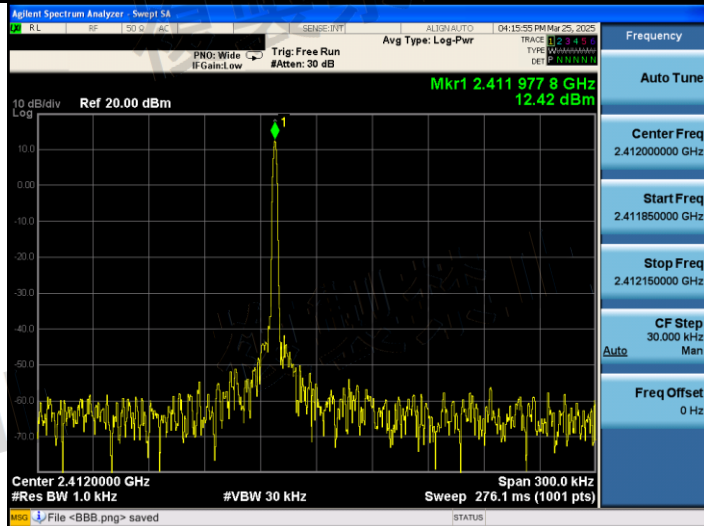


Test Graphs

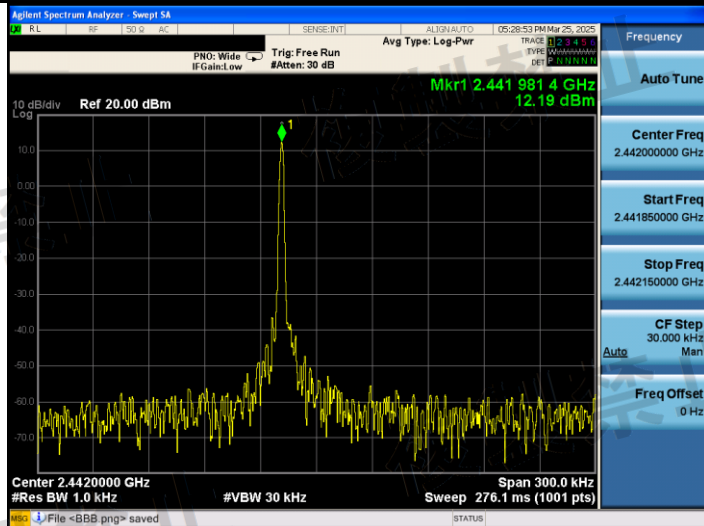
802.11b _ Normal Voltage _ TX0

Frequency Error Measurement

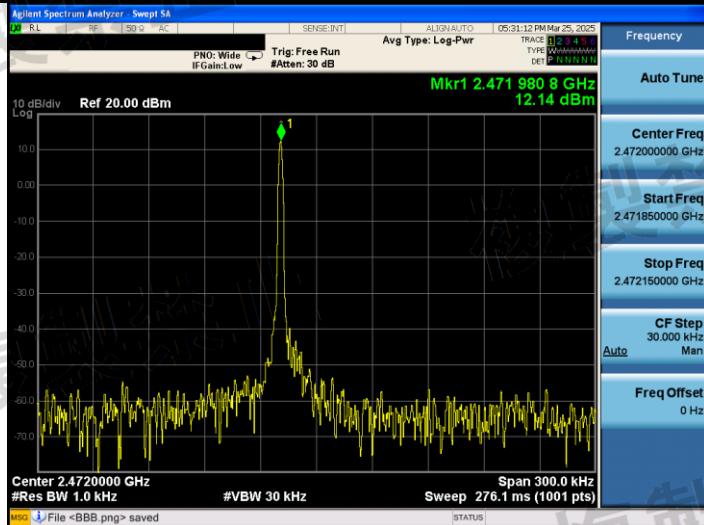
2412 MHz

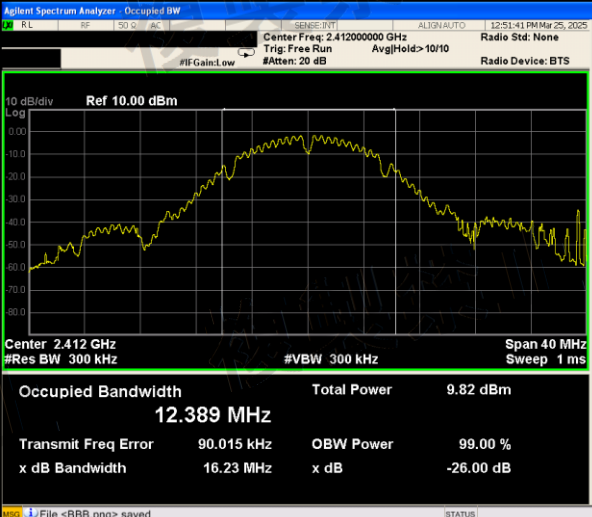
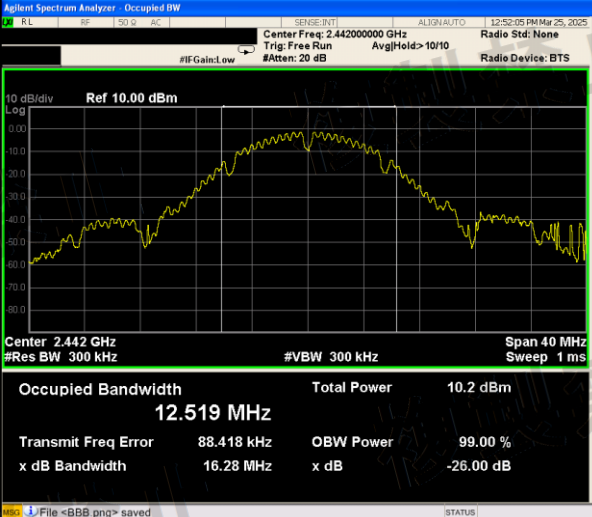
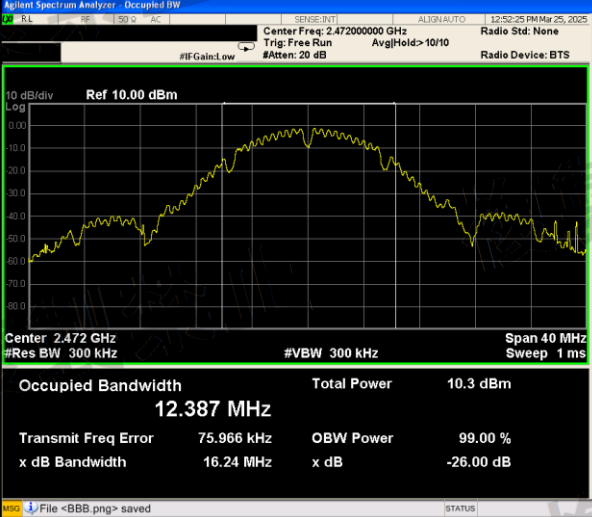


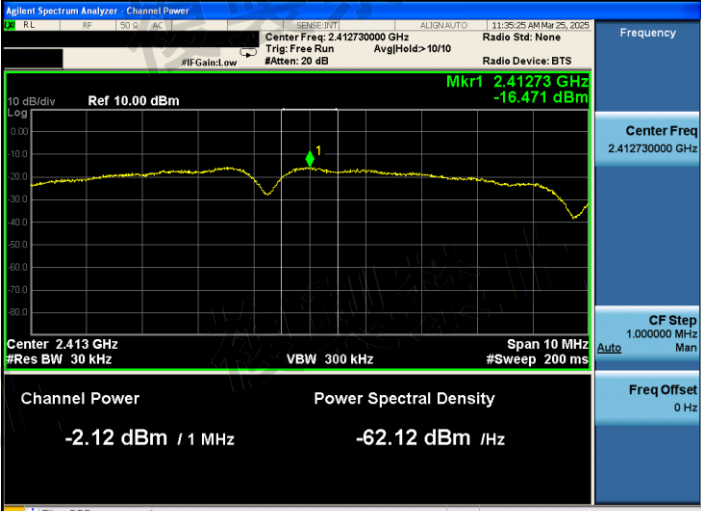
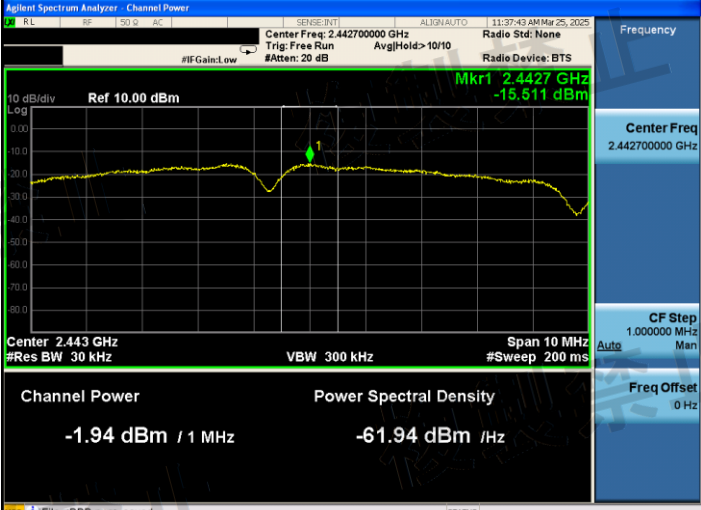
2442 MHz



2472 MHz



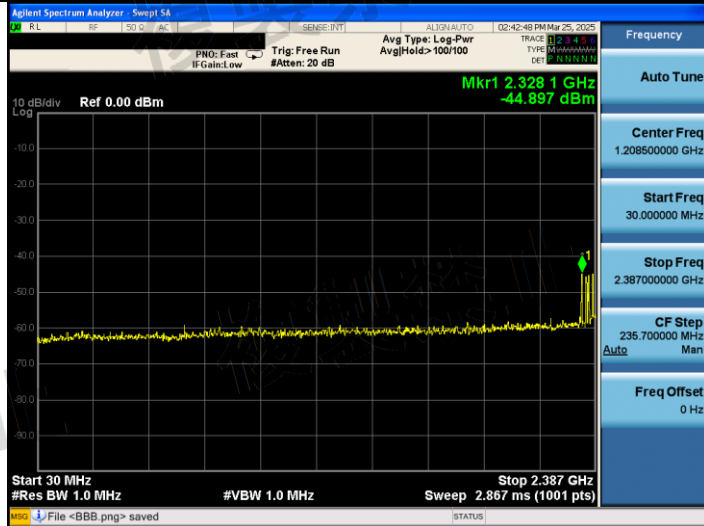
802.11b _ Normal Voltage _ TX0	
Occupied Bandwidth Measurement	
2412 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.412000000 GHz Trig: Free Run Ave/Hold: 10/10 Radio Std: None Radio Device: BTS Ref 10.00 dBm Center 2.412 GHz #Res BW 300 kHz #VBW 300 kHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 12.389 MHz Total Power 9.82 dBm Transmit Freq Error 90.015 kHz OBW Power 99.00 % x dB Bandwidth 16.23 MHz x dB -26.00 dB
2442 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.442000000 GHz Trig: Free Run Ave/Hold: 10/10 Radio Std: None Radio Device: BTS Ref 10.00 dBm Center 2.442 GHz #Res BW 300 kHz #VBW 300 kHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 12.519 MHz Total Power 10.2 dBm Transmit Freq Error 88.418 kHz OBW Power 99.00 % x dB Bandwidth 16.28 MHz x dB -26.00 dB
2472 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.472000000 GHz Trig: Free Run Ave/Hold: 10/10 Radio Std: None Radio Device: BTS Ref 10.00 dBm Center 2.472 GHz #Res BW 300 kHz #VBW 300 kHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 12.387 MHz Total Power 10.3 dBm Transmit Freq Error 75.966 kHz OBW Power 99.00 % x dB Bandwidth 16.24 MHz x dB -26.00 dB

802.11b _ Normal Voltage _ TX0		
Antenna Power (Conducted) Measurement_ Antenna Power		
2412 MHz		
2442 MHz		
2472 MHz		

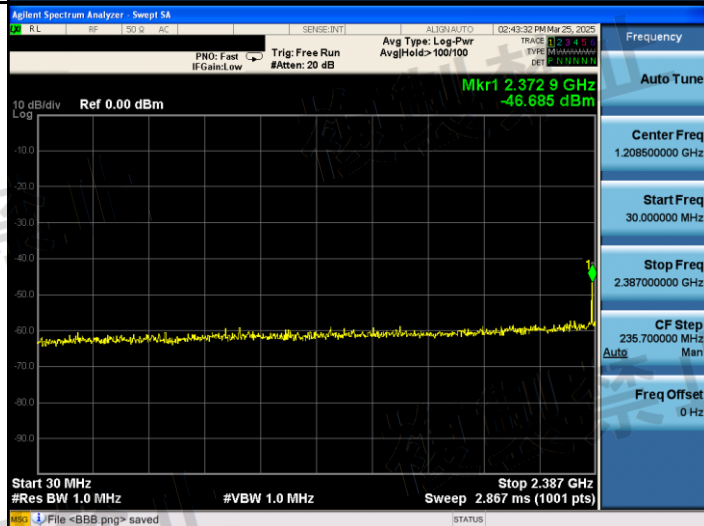
802.11b _ Normal Voltage_ Under 2387 MHz_TX0

Unwanted Emission Strength Measurement

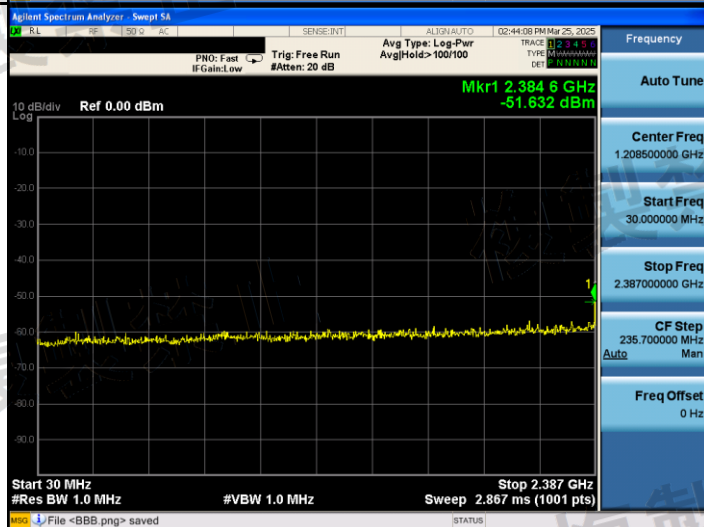
2412 MHz



2442 MHz



2472 MHz

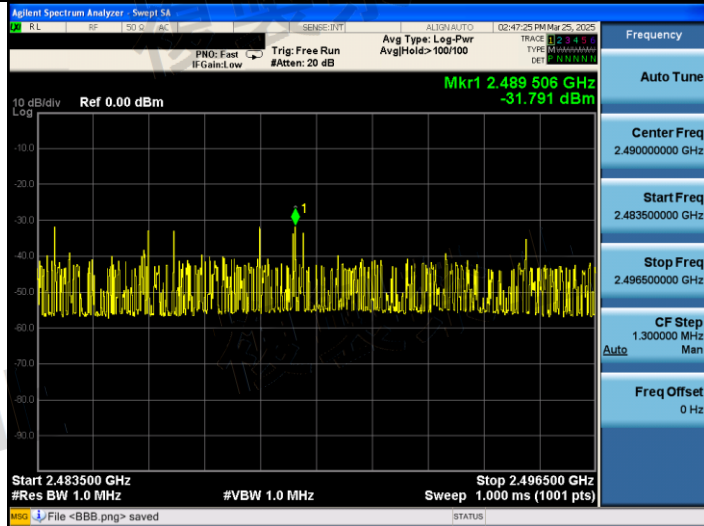


802.11b _ Normal Voltage_ 2387-2400 MHz_TX0			
Unwanted Emission Strength Measurement			
2412 MHz		Agilent Spectrum Analyzer - Sweep 5A RL RF 50 Ω AC SENSE:INT PN0: Fast IF Gain: Low Trig: Free Run #Atten: 20 dB Avg Type: Log-Pwr AvgHold: 100/100 TRACE 1: 3 4 5 6 TYPE: SMAXIMUM DET: P R N N N N 10 dB/div Log Ref 0.00 dBm Mkr1 2.391 810 GHz -31.448 dBm Start 2.387000 GHz #Res BW 1.0 MHz Stop 2.400000 GHz #VBW 1.0 MHz Sweep 1.000 ms (1001 pts) File <BBB.png> saved STATUS Frequency Auto Tune Center Freq 2.393500000 GHz Start Freq 2.387000000 GHz Stop Freq 2.400000000 GHz CF Step 1.300000 MHz Auto Freq Offset 0 Hz	
2442 MHz		Agilent Spectrum Analyzer - Sweep 5A RL RF 50 Ω AC SENSE:INT PN0: Fast IF Gain: Low Trig: Free Run #Atten: 20 dB Avg Type: Log-Pwr AvgHold: 100/100 TRACE 1: 3 4 5 6 TYPE: SMAXIMUM DET: P R N N N N 10 dB/div Log Ref 0.00 dBm Mkr1 2.394 618 GHz -34.059 dBm Start 2.387000 GHz #Res BW 1.0 MHz Stop 2.400000 GHz #VBW 1.0 MHz Sweep 1.000 ms (1001 pts) File <BBB.png> saved STATUS Frequency Auto Tune Center Freq 2.393500000 GHz Start Freq 2.387000000 GHz Stop Freq 2.400000000 GHz CF Step 1.300000 MHz Auto Freq Offset 0 Hz	
2472 MHz		Agilent Spectrum Analyzer - Sweep 5A RL RF 50 Ω AC SENSE:INT PN0: Fast IF Gain: Low Trig: Free Run #Atten: 20 dB Avg Type: Log-Pwr AvgHold: 100/100 TRACE 1: 3 4 5 6 TYPE: SMAXIMUM DET: P R N N N N 10 dB/div Log Ref 0.00 dBm Mkr1 2.387 949 GHz -42.082 dBm Start 2.387000 GHz #Res BW 1.0 MHz Stop 2.400000 GHz #VBW 1.0 MHz Sweep 1.000 ms (1001 pts) File <BBB.png> saved STATUS Frequency Auto Tune Center Freq 2.393500000 GHz Start Freq 2.387000000 GHz Stop Freq 2.400000000 GHz CF Step 1.300000 MHz Auto Freq Offset 0 Hz	

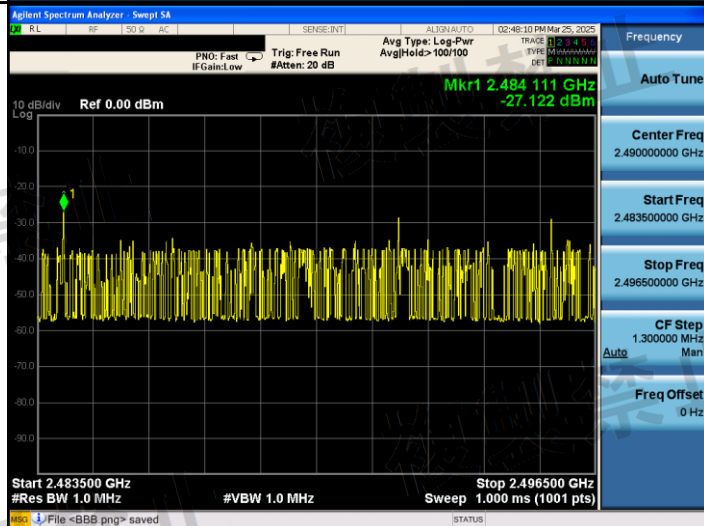
802.11b _ Normal Voltage_ 2483.5-2496.5 MHz_TX0

Unwanted Emission Strength Measurement

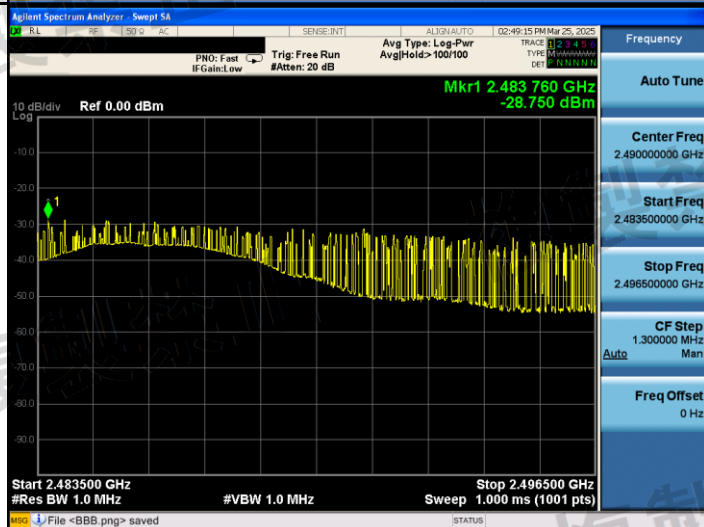
2412 MHz



2442 MHz



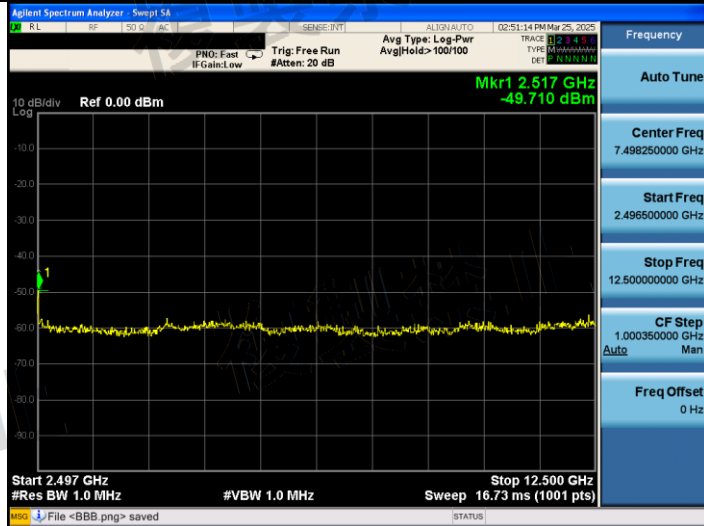
2472 MHz



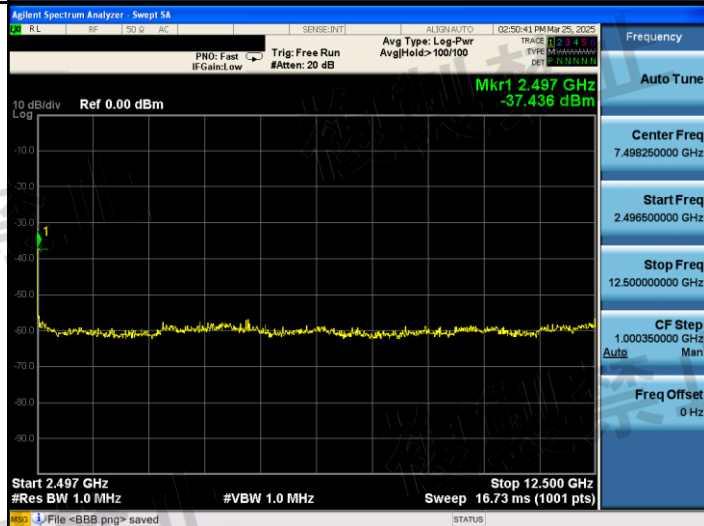
802.11b _ Normal Voltage_ 2496.5 - 12.5 GHz_TX0

Unwanted Emission Strength Measurement

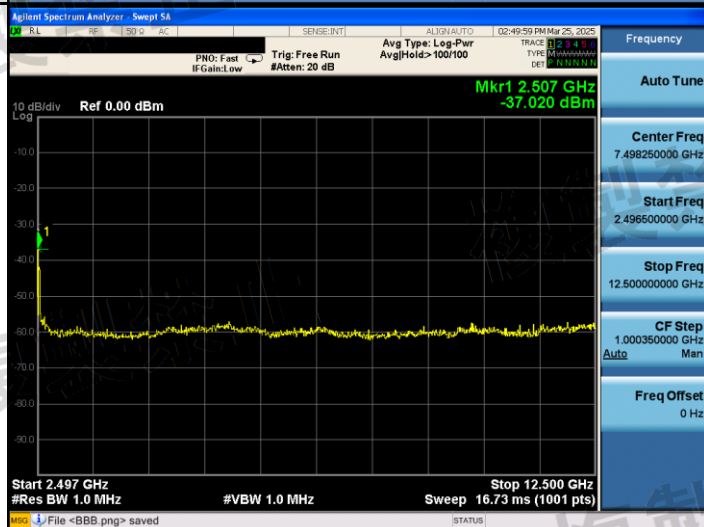
2412 MHz



2442 MHz



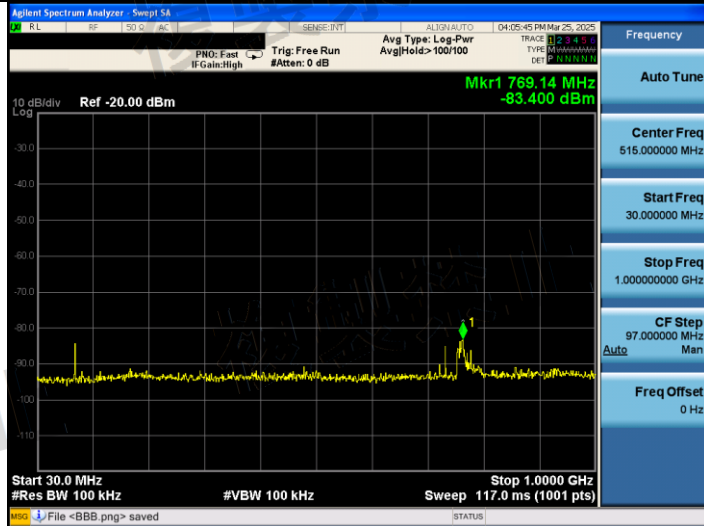
2472 MHz



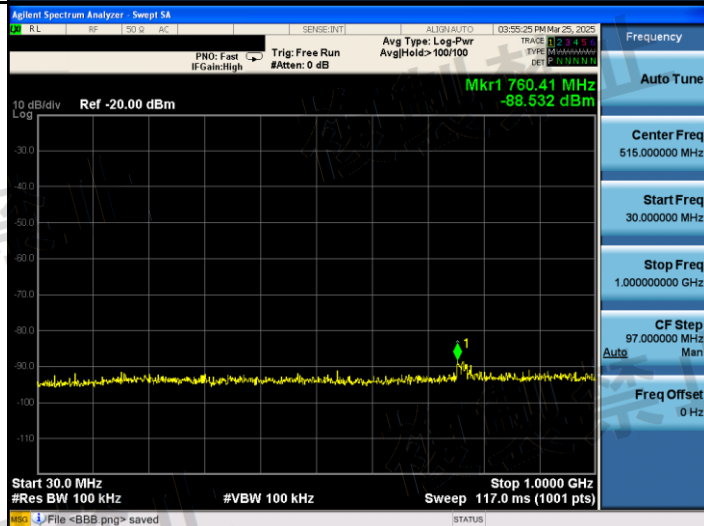
802.11b _ Normal Voltage_ Under 1 GHz_RX1

Secondarily Emitted Radio Wave Strength Measurement

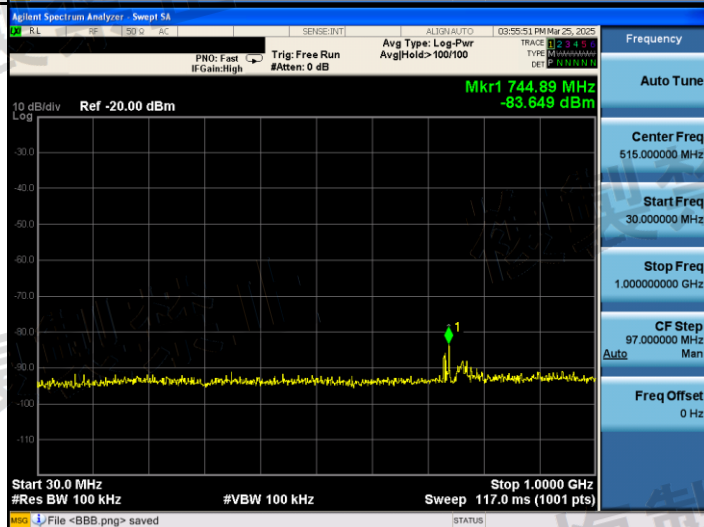
2412 MHz



2442 MHz



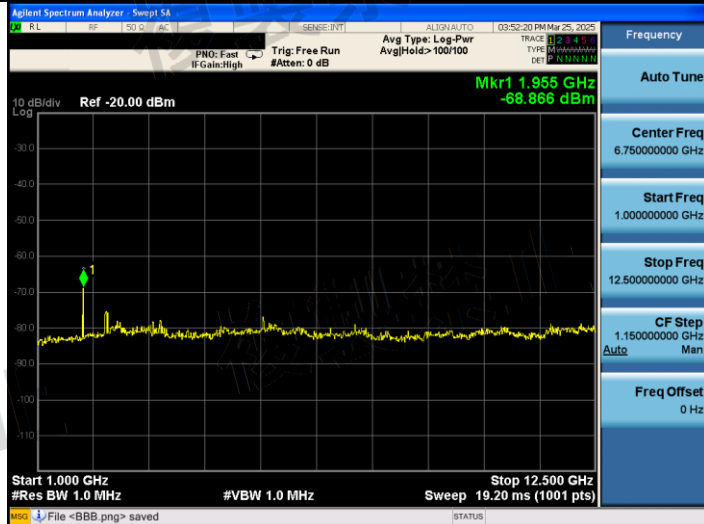
2472 MHz



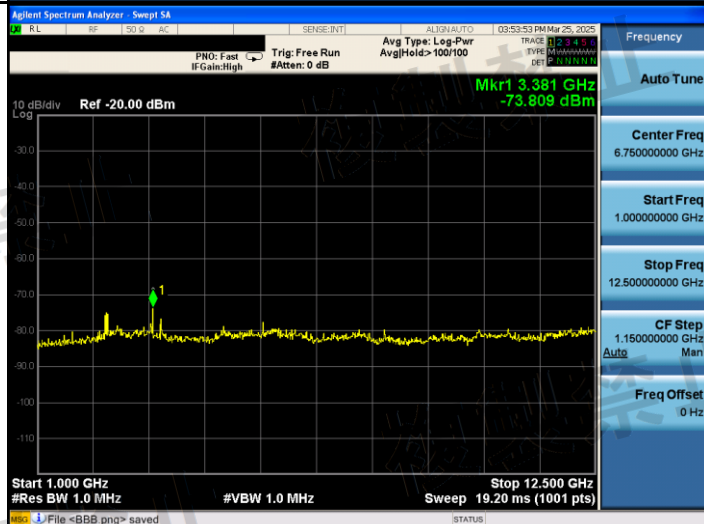
802.11b _ Normal Voltage_ 1 - 12.5 GHz_RX1

Secondarily Emitted Radio Wave Strength Measurement

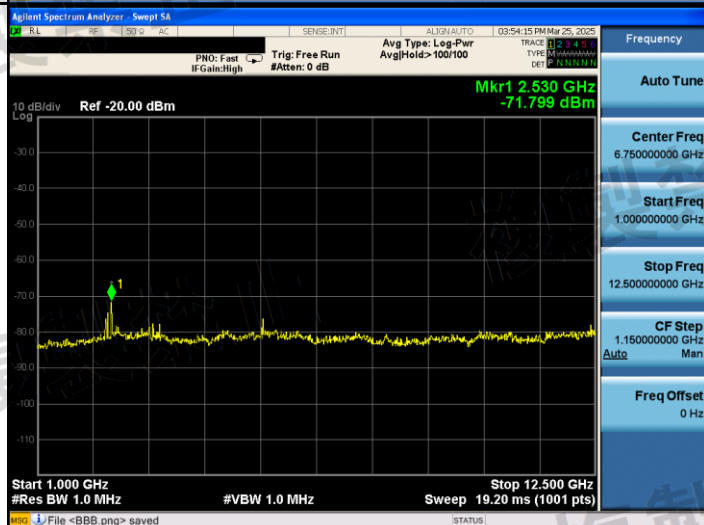
2412 MHz

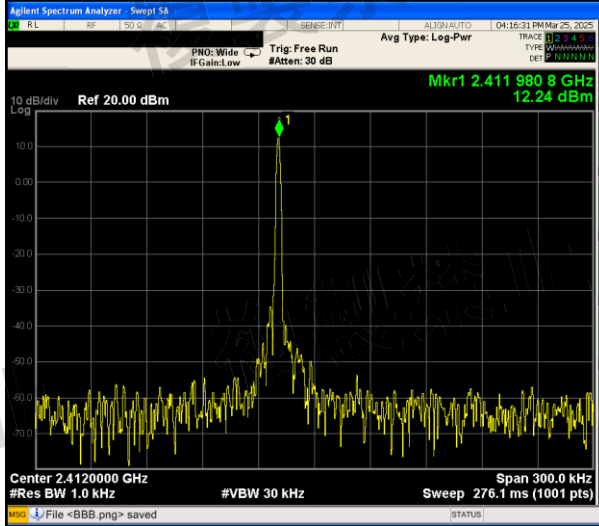
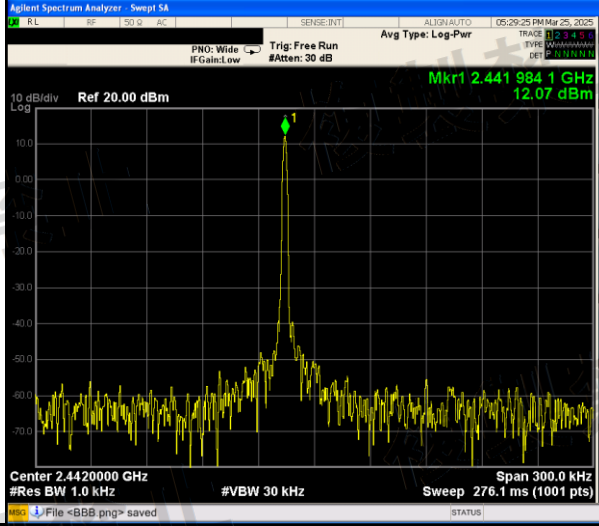
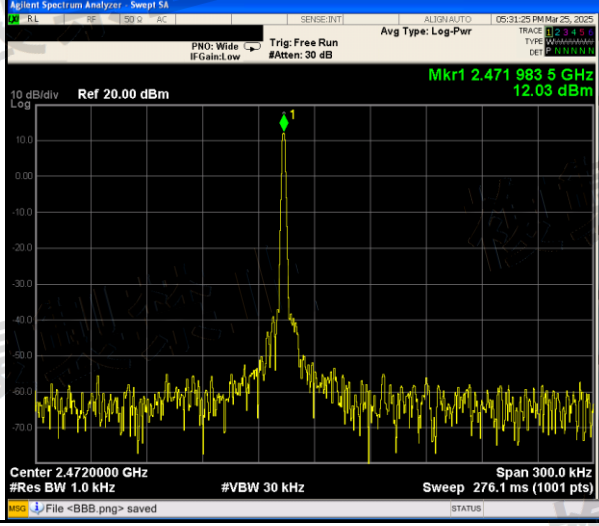


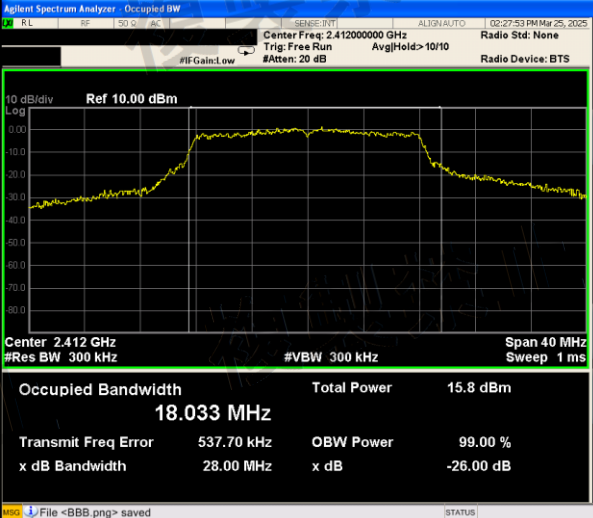
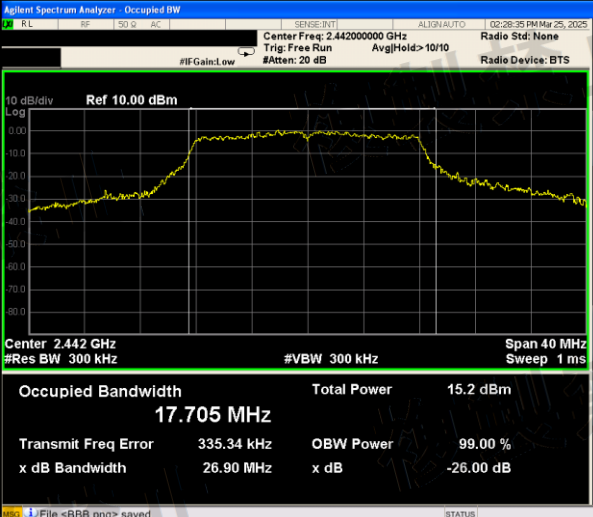
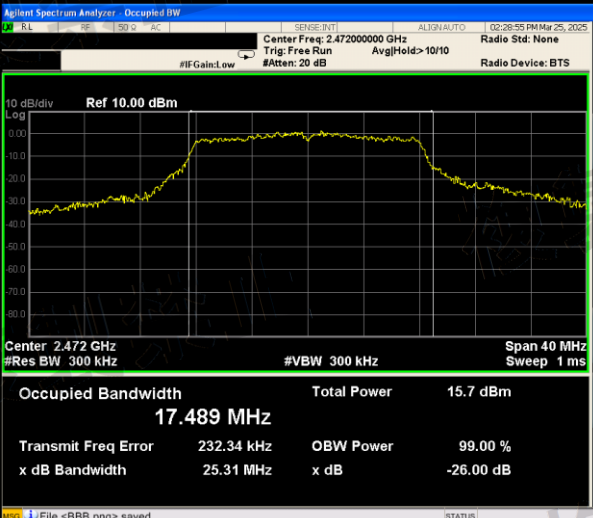
2442 MHz

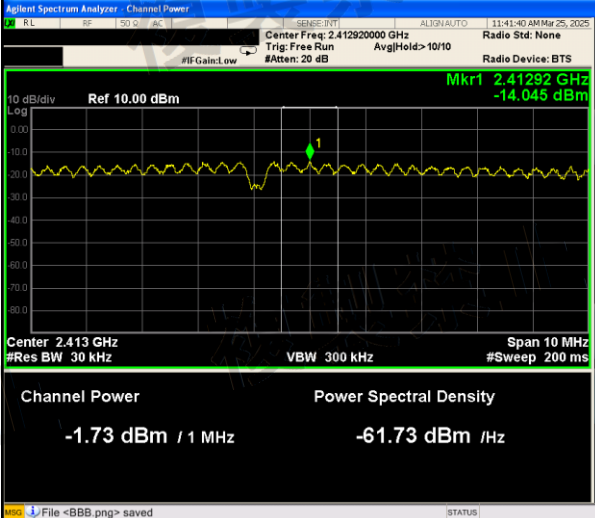
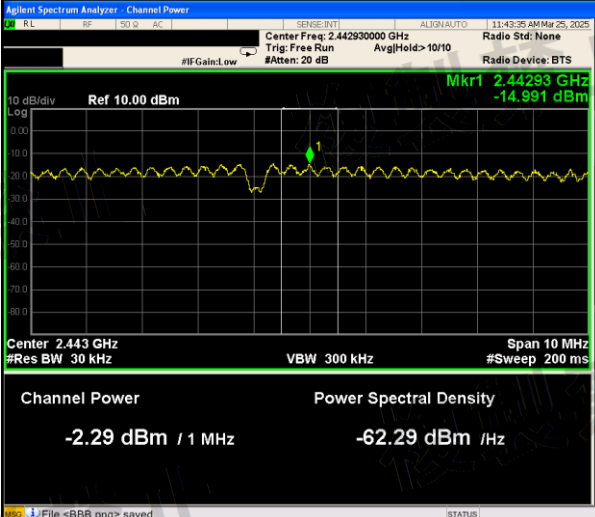
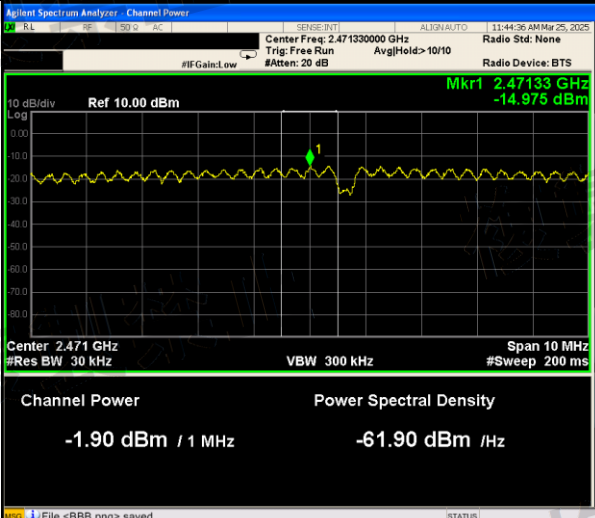


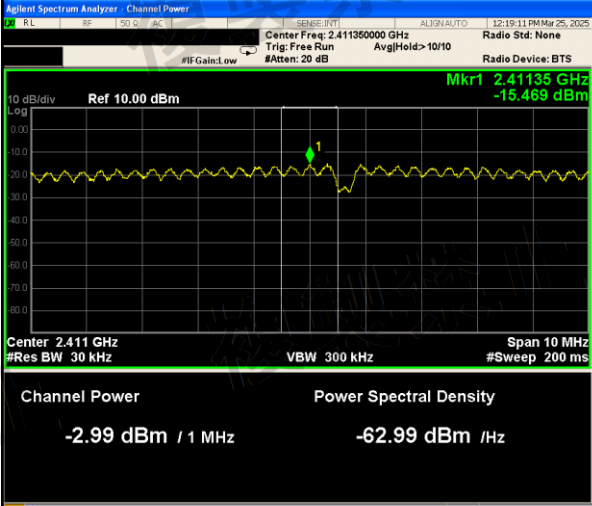
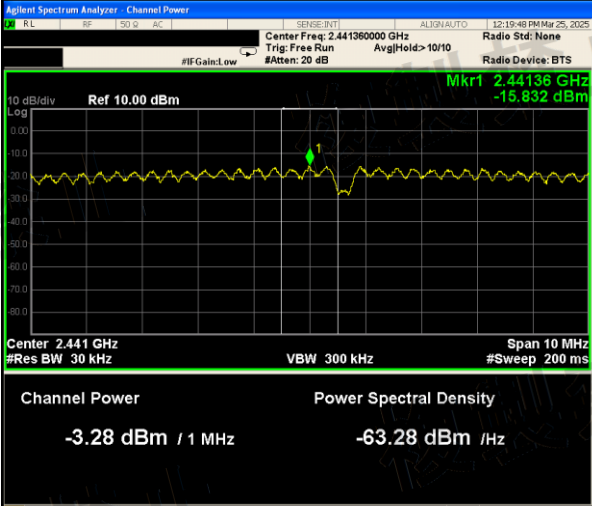
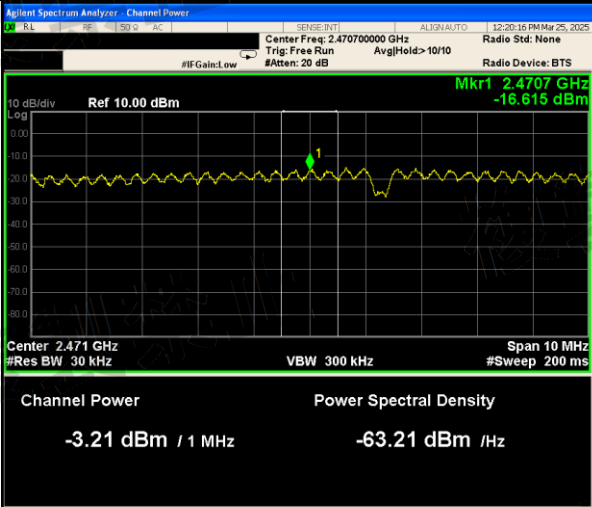
2472 MHz



802.11g _ Normal Voltage _ TX0		
Frequency Error Measurement		
2412 MHz		
2442 MHz		
2472 MHz		

802.11g _ Normal Voltage _ TX0			
Occupied Bandwidth Measurement			
2412 MHz		 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.412000000 GHz Trig: Free Run Ave/Hold: 10/10 Radio Std: None Radio Device: BTS Ref 10.00 dBm Center 2.412 GHz #Res BW 300 kHz #VBW 300 kHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 18.033 MHz Total Power 15.8 dBm Transmit Freq Error 537.70 kHz OBW Power 99.00 % x dB Bandwidth 28.00 MHz x dB -26.00 dB File <BBB.png> saved	Frequency Center Freq 2.412000000 GHz CF Step 4.000000 MHz Auto Man Freq Offset 0 Hz
2442 MHz		 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.442000000 GHz Trig: Free Run Ave/Hold: 10/10 Radio Std: None Radio Device: BTS Ref 10.00 dBm Center 2.442 GHz #Res BW 300 kHz #VBW 300 kHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 17.705 MHz Total Power 15.2 dBm Transmit Freq Error 335.34 kHz OBW Power 99.00 % x dB Bandwidth 26.90 MHz x dB -26.00 dB File <BBB.png> saved	Frequency Center Freq 2.442000000 GHz CF Step 4.000000 MHz Auto Man Freq Offset 0 Hz
2472 MHz		 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.472000000 GHz Trig: Free Run Ave/Hold: 10/10 Radio Std: None Radio Device: BTS Ref 10.00 dBm Center 2.472 GHz #Res BW 300 kHz #VBW 300 kHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 17.489 MHz Total Power 15.7 dBm Transmit Freq Error 232.34 kHz OBW Power 99.00 % x dB Bandwidth 25.31 MHz x dB -26.00 dB File <BBB.png> saved	Frequency Center Freq 2.472000000 GHz CF Step 4.000000 MHz Auto Man Freq Offset 0 Hz

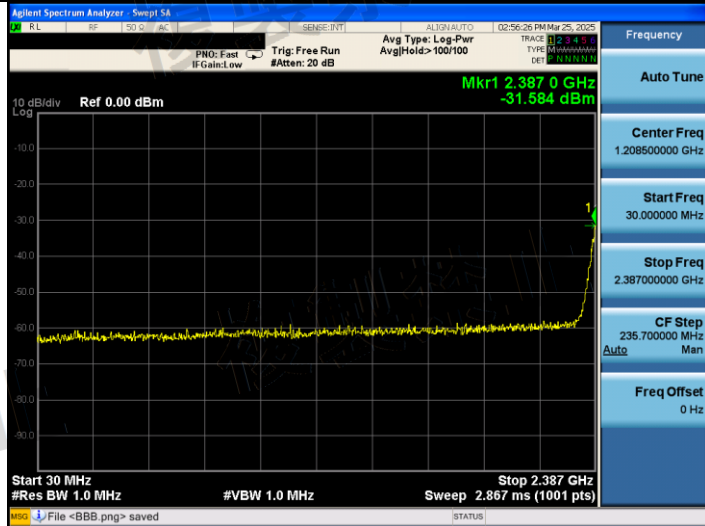
802.11g _ Normal Voltage _ TX0		
Antenna Power (Conducted) Measurement_ Antenna Power		
2412 MHz	 Agilent Spectrum Analyzer - Channel Power Center Freq: 2.41292000 GHz Trig: Free Run Ave/Hold: 10/10 Radio Std: None Radio Device: BTS Ref 10.00 dBm Mkr1 2.41292 GHz -14.045 dBm Center 2.413 GHz #Res BW 30 kHz VBW 300 kHz Span 10 MHz #Sweep 200 ms Channel Power -1.73 dBm / 1 MHz Power Spectral Density -61.73 dBm / Hz File <BBB.png> saved	Frequency Center Freq 2.41292000 GHz CF Step 1.000000 MHz Man Freq Offset 0 Hz
2442 MHz	 Agilent Spectrum Analyzer - Channel Power Center Freq: 2.44293000 GHz Trig: Free Run Ave/Hold: 10/10 Radio Std: None Radio Device: BTS Ref 10.00 dBm Mkr1 2.44293 GHz -14.991 dBm Center 2.443 GHz #Res BW 30 kHz VBW 300 kHz Span 10 MHz #Sweep 200 ms Channel Power -2.29 dBm / 1 MHz Power Spectral Density -62.29 dBm / Hz File <BBB.png> saved	Frequency Center Freq 2.44293000 GHz CF Step 1.000000 MHz Man Freq Offset 0 Hz
2472 MHz	 Agilent Spectrum Analyzer - Channel Power Center Freq: 2.47133000 GHz Trig: Free Run Ave/Hold: 10/10 Radio Std: None Radio Device: BTS Ref 10.00 dBm Mkr1 2.47133 GHz -14.975 dBm Center 2.471 GHz #Res BW 30 kHz VBW 300 kHz Span 10 MHz #Sweep 200 ms Channel Power -1.90 dBm / 1 MHz Power Spectral Density -61.90 dBm / Hz File <BBB.png> saved	Frequency Center Freq 2.47133000 GHz CF Step 1.000000 MHz Man Freq Offset 0 Hz

802.11g _ Normal Voltage _ TX1		
Antenna Power (Conducted) Measurement_ Antenna Power		
2412 MHz	 Agilent Spectrum Analyzer - Channel Power Center Freq: 2.411350000 GHz Trig: Free Run Ave/Hold: 10/10 Radio Std: None Radio Device: BTS Ref 10.00 dBm Mkr1 2.41135 GHz -15.469 dBm Center 2.411 GHz #Res BW 30 kHz VBW 300 kHz Span 10 MHz #Sweep 200 ms Channel Power -2.99 dBm / 1 MHz Power Spectral Density -62.99 dBm / Hz	Frequency Center Freq 2.411350000 GHz CF Step 1.000000 MHz Man Freq Offset 0 Hz
2442 MHz	 Agilent Spectrum Analyzer - Channel Power Center Freq: 2.441360000 GHz Trig: Free Run Ave/Hold: 10/10 Radio Std: None Radio Device: BTS Ref 10.00 dBm Mkr1 2.44136 GHz -15.832 dBm Center 2.441 GHz #Res BW 30 kHz VBW 300 kHz Span 10 MHz #Sweep 200 ms Channel Power -3.28 dBm / 1 MHz Power Spectral Density -63.28 dBm / Hz	Frequency Center Freq 2.441360000 GHz CF Step 1.000000 MHz Man Freq Offset 0 Hz
2472 MHz	 Agilent Spectrum Analyzer - Channel Power Center Freq: 2.470700000 GHz Trig: Free Run Ave/Hold: 10/10 Radio Std: None Radio Device: BTS Ref 10.00 dBm Mkr1 2.47070 GHz -16.615 dBm Center 2.471 GHz #Res BW 30 kHz VBW 300 kHz Span 10 MHz #Sweep 200 ms Channel Power -3.21 dBm / 1 MHz Power Spectral Density -63.21 dBm / Hz	Frequency Center Freq 2.470700000 GHz CF Step 1.000000 MHz Man Freq Offset 0 Hz

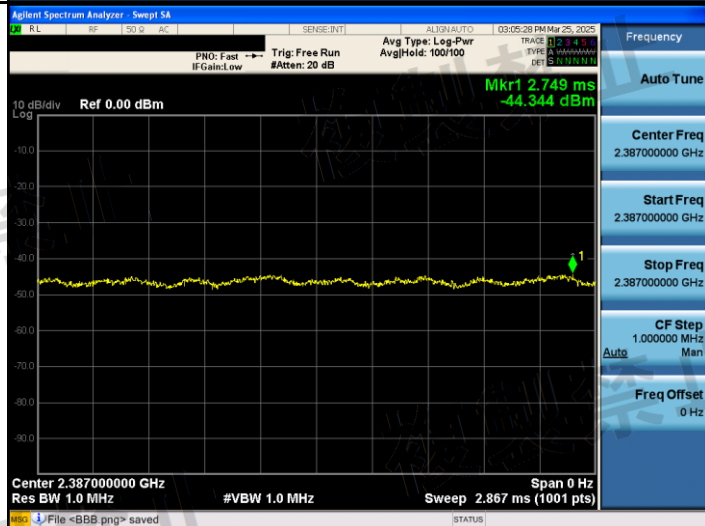
802.11g _ Normal Voltage_ Under 2387 MHz_TX0

Unwanted Emission Strength Measurement

2412 MHz



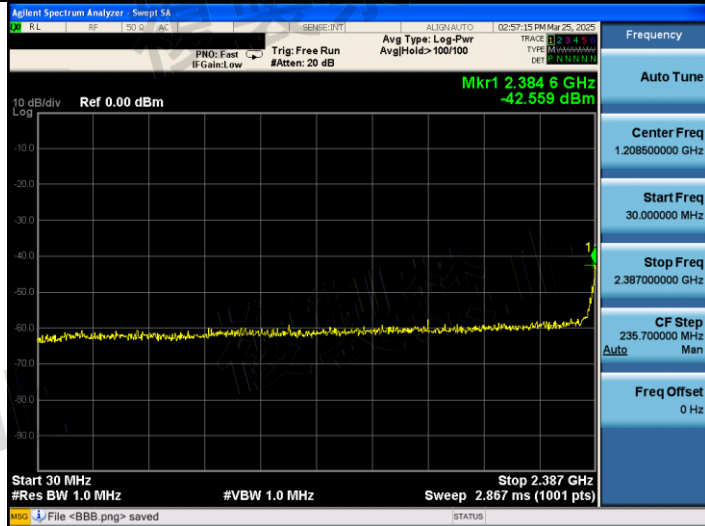
2412 MHz



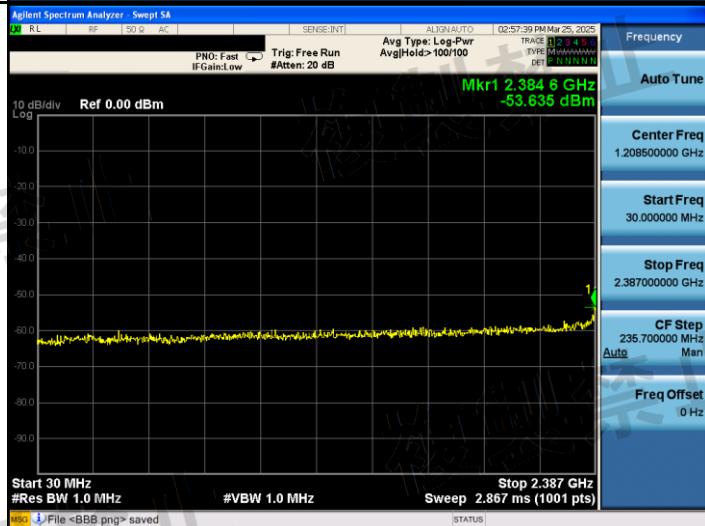
802.11g _ Normal Voltage_ Under 2387 MHz_TX0

Unwanted Emission Strength Measurement

2442 MHz



2472 MHz



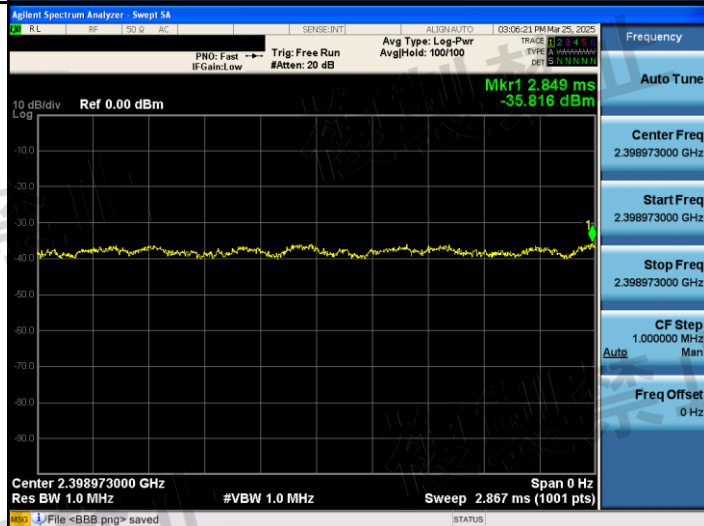
802.11g _ Normal Voltage_ 2387-2400 MHz_TX0

Unwanted Emission Strength Measurement

2412 MHz



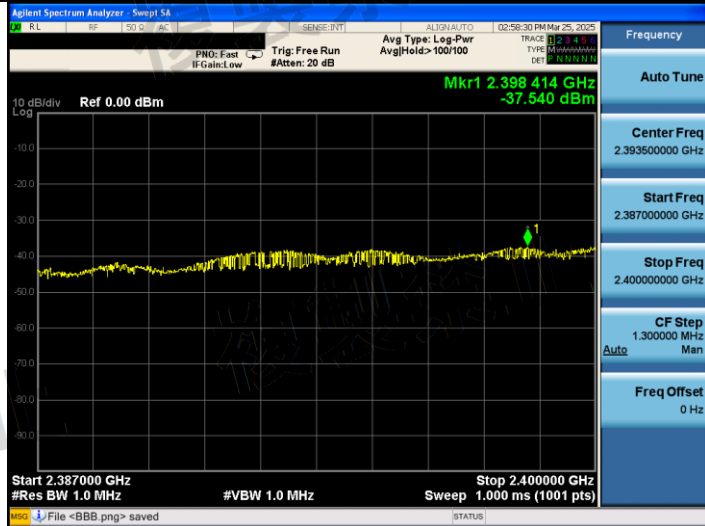
2412 MHz



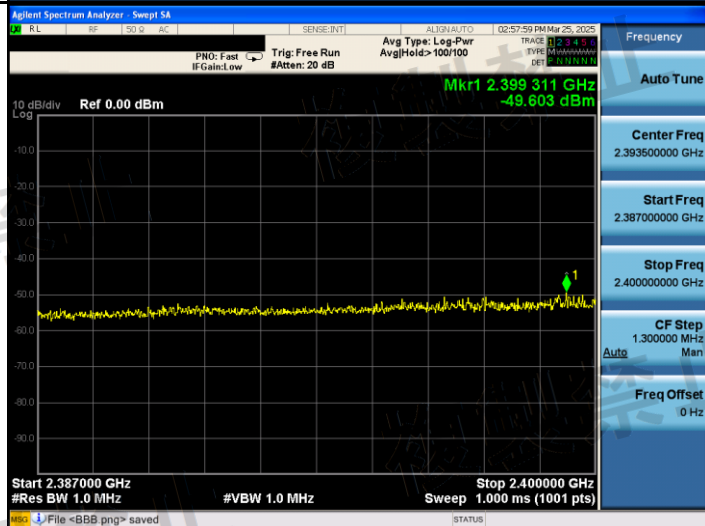
802.11g _ Normal Voltage_ 2387-2400 MHz_TX0

Unwanted Emission Strength Measurement

2442 MHz



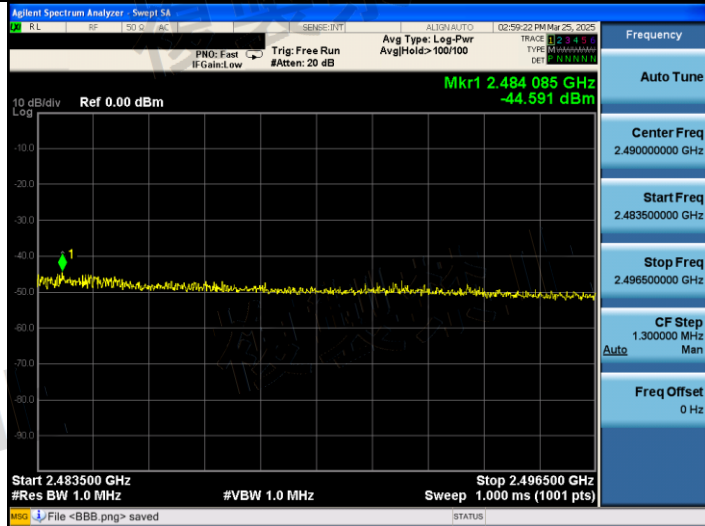
2472 MHz



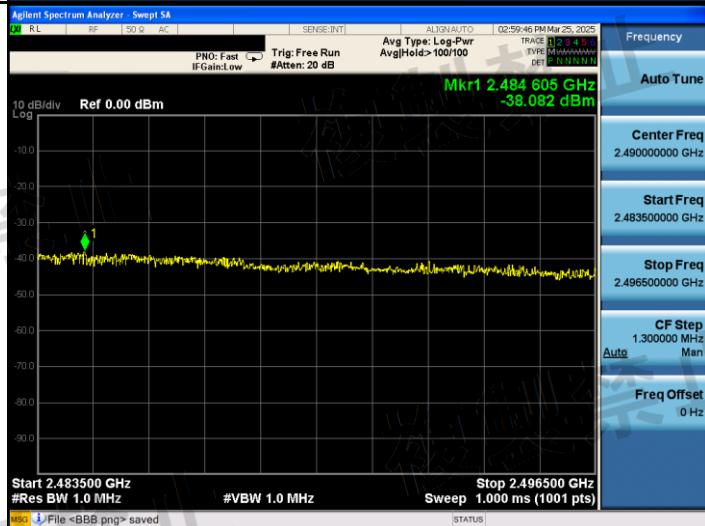
802.11g _ Normal Voltage_ 2483.5-2496.5 MHz_TX0

Unwanted Emission Strength Measurement

2412 MHz



2442 MHz



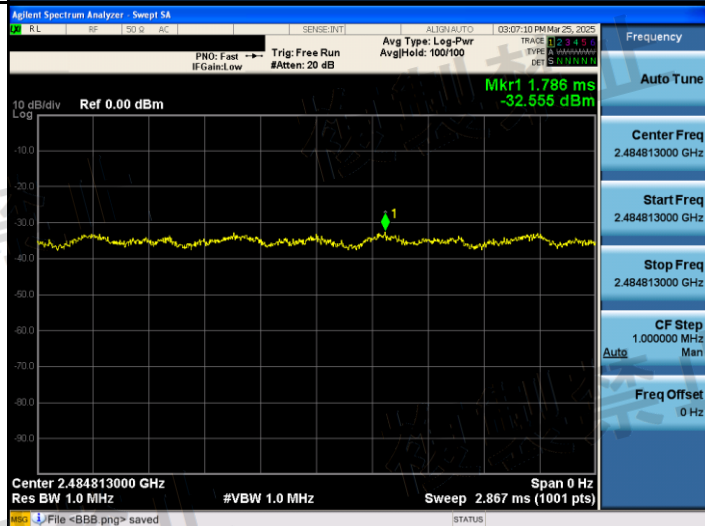
802.11g _ Normal Voltage_ 2483.5-2496.5 MHz_TX0

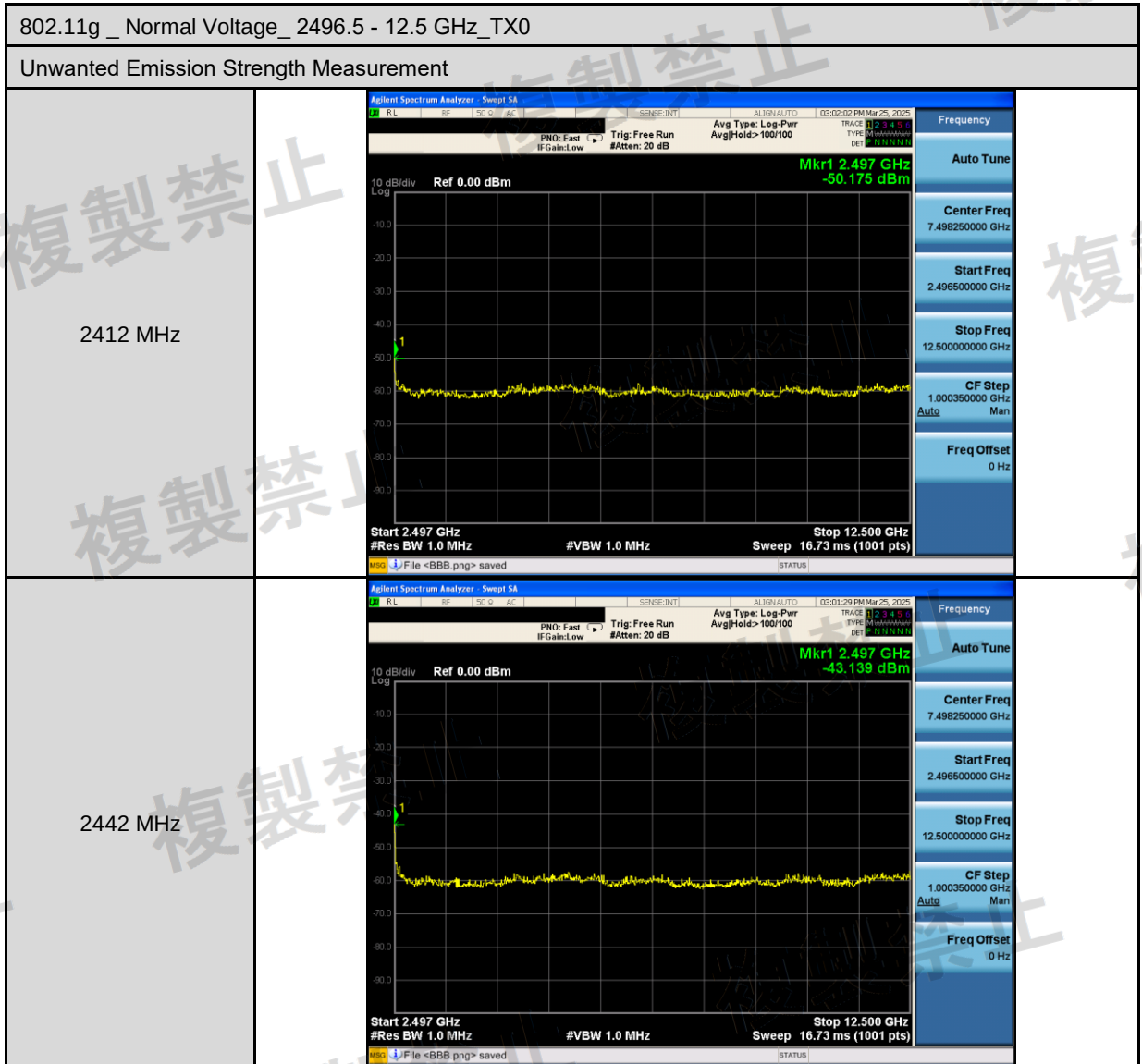
Unwanted Emission Strength Measurement

2472 MHz



2472 MHz

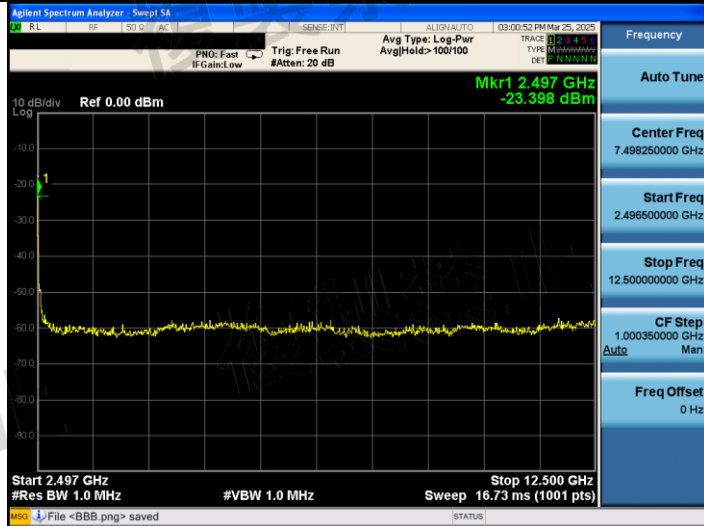




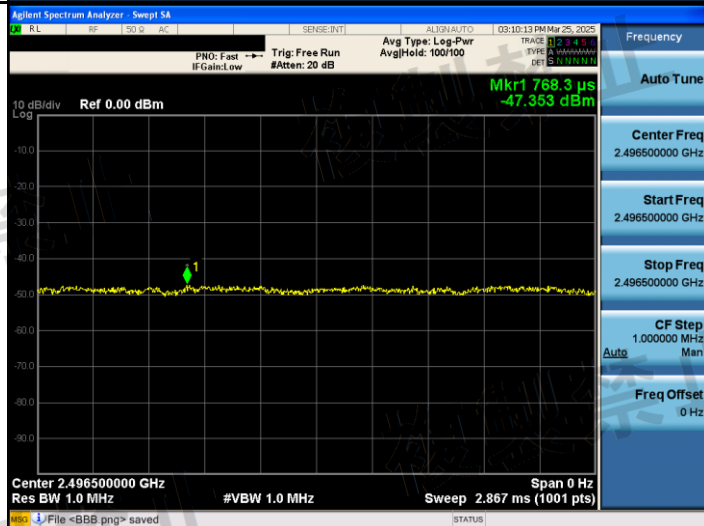
802.11g _ Normal Voltage_ 2496.5 - 12.5 GHz_TX0

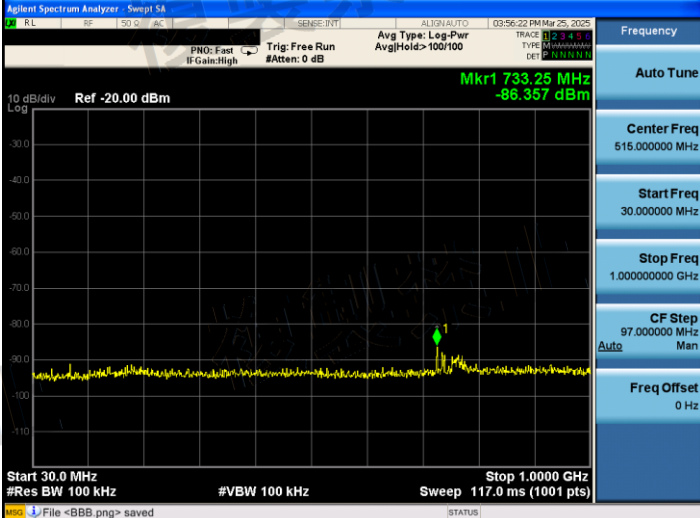
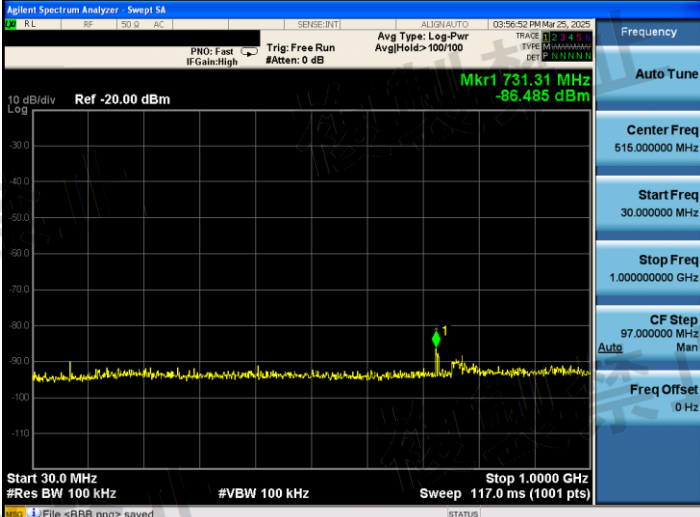
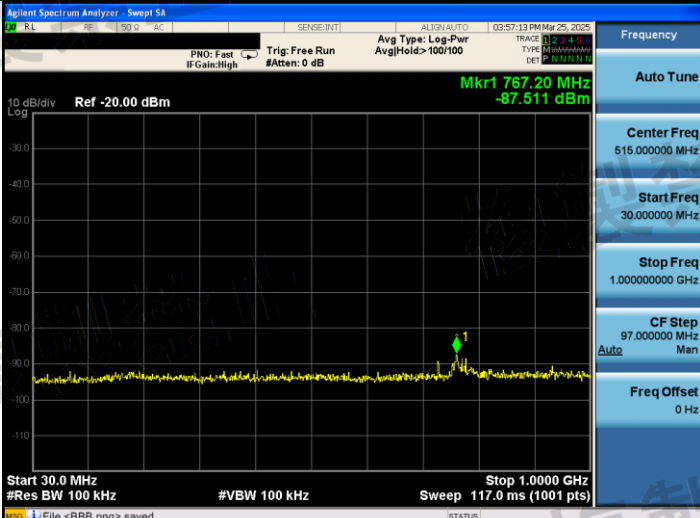
Unwanted Emission Strength Measurement

2472 MHz



2472 MHz

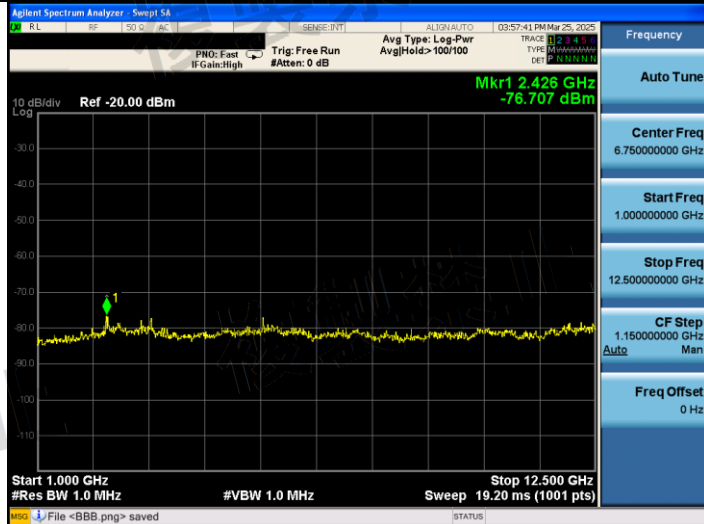


802.11g _ Normal Voltage_ RX0 _ Under 1 GHz		
Secondarily Emitted Radio Wave Strength Measurement		
2412 MHz		
2442 MHz		
2472 MHz		

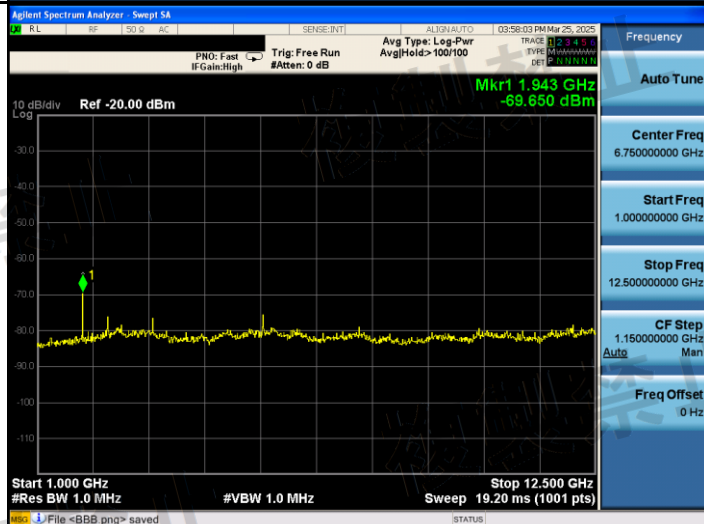
802.11g _ Normal Voltage_ RX0 _ 1 - 12.5 GHz

Secondarily Emitted Radio Wave Strength Measurement

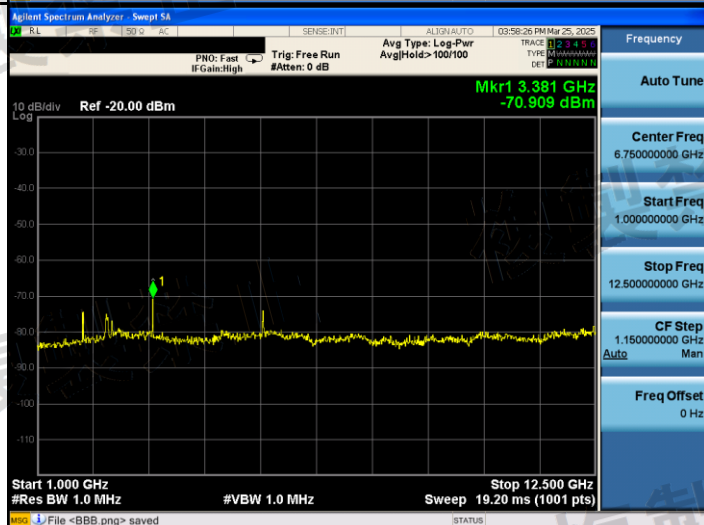
2412 MHz

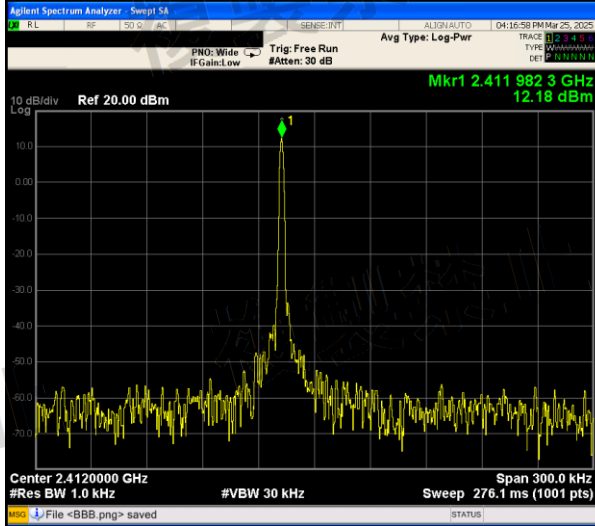
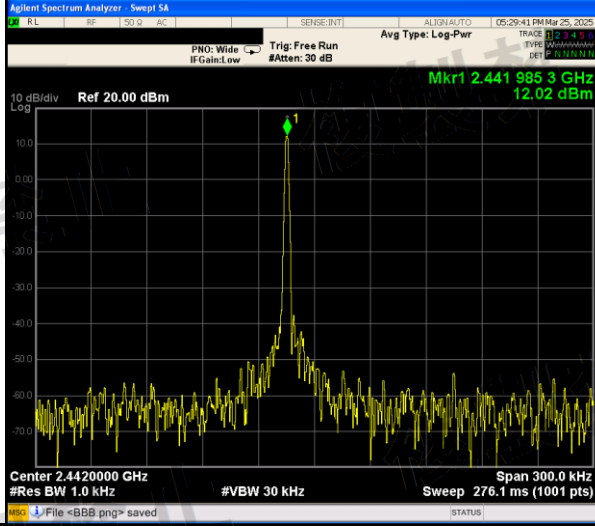
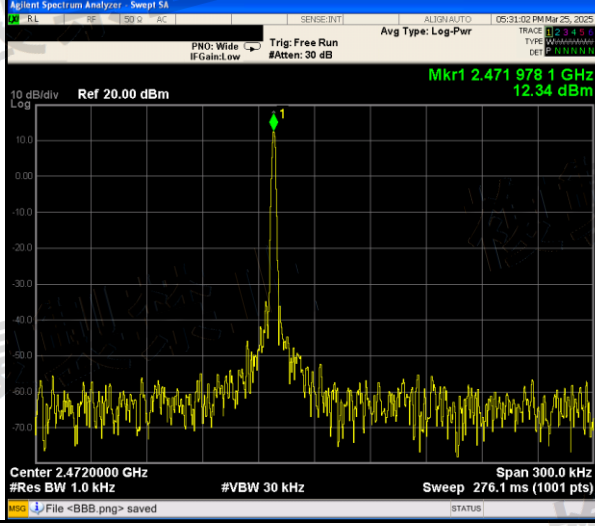


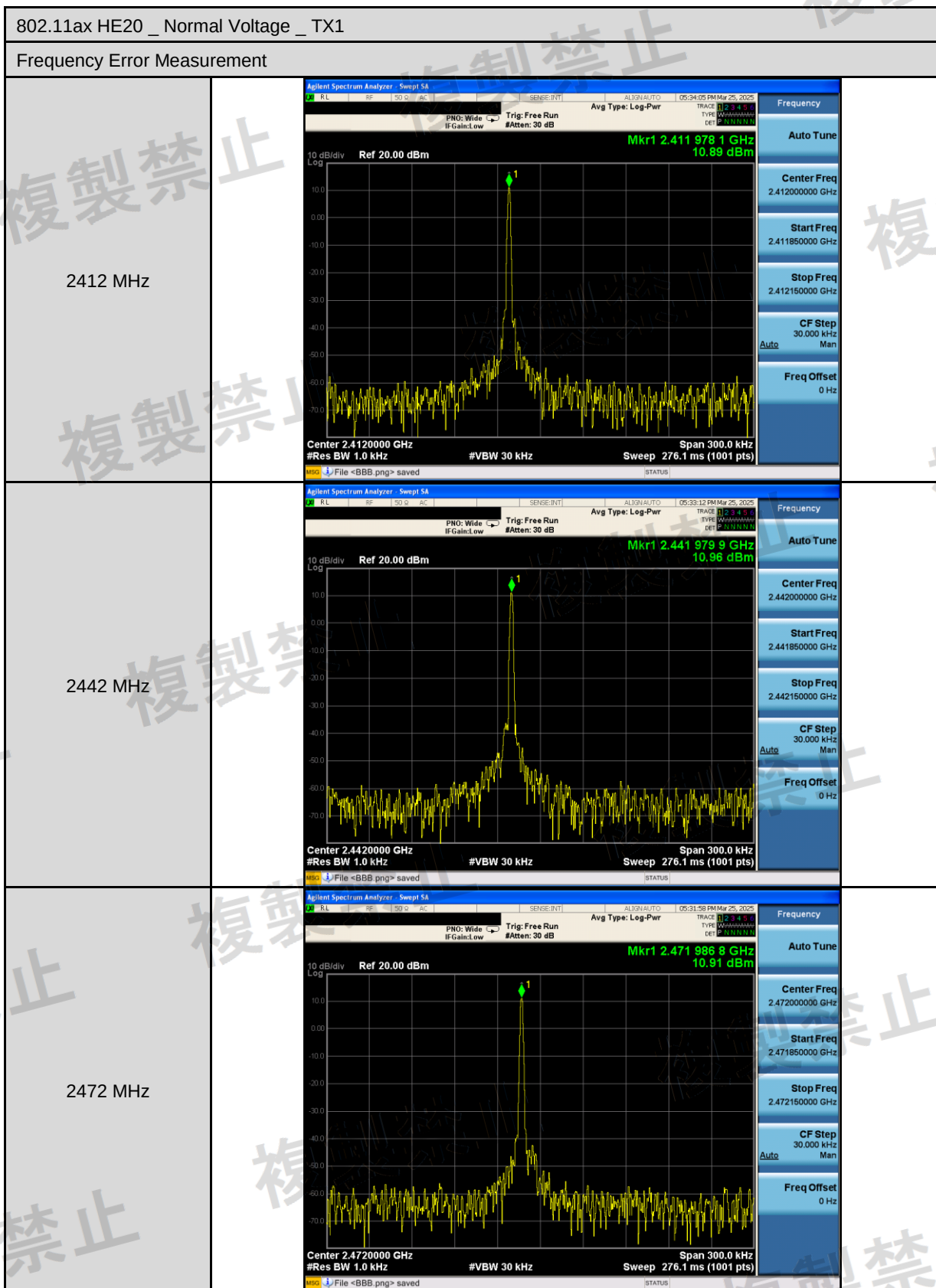
2442 MHz

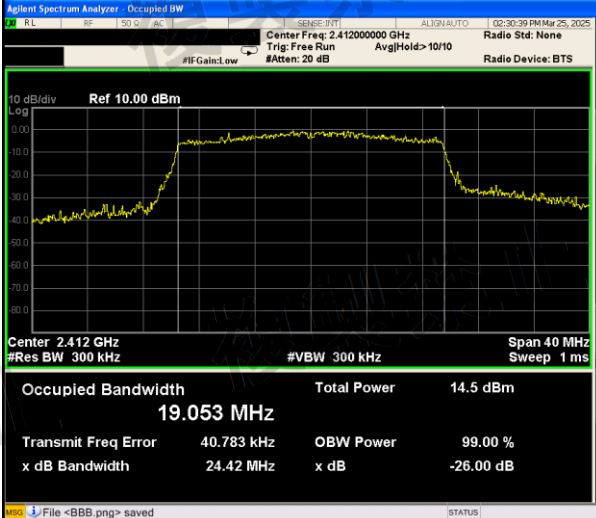
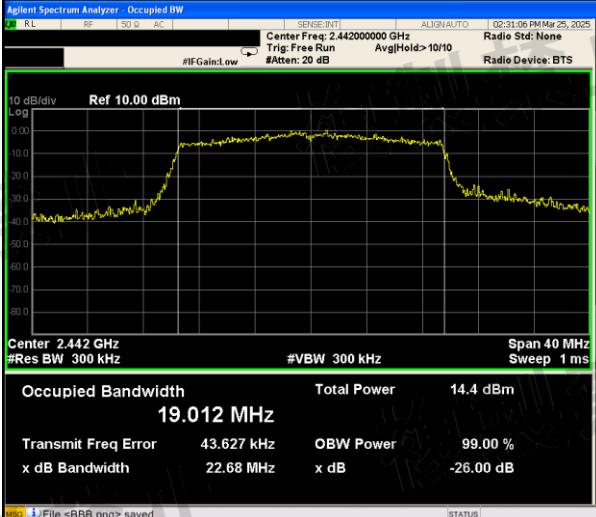
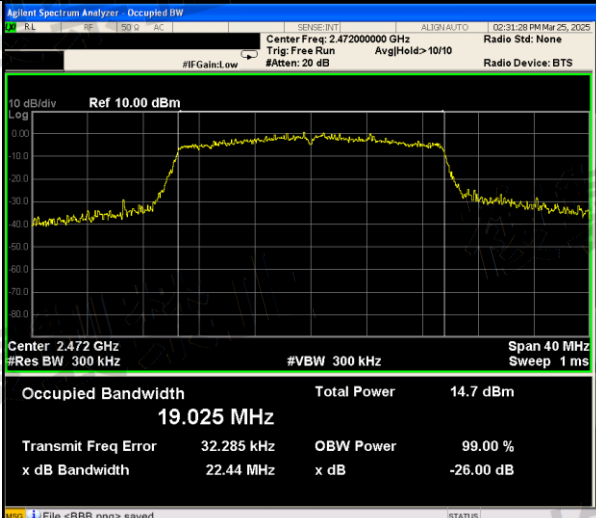


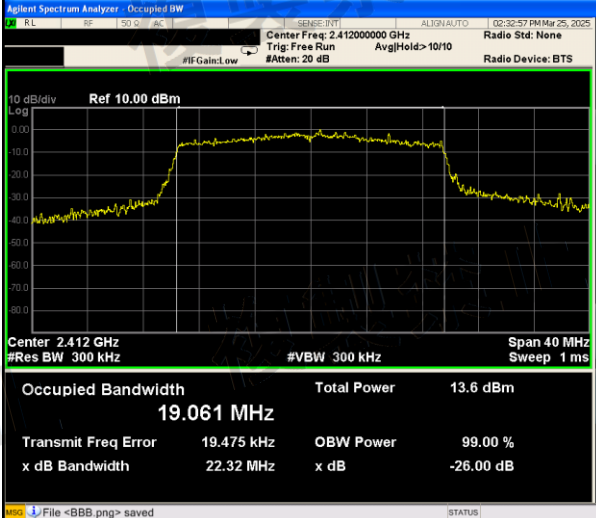
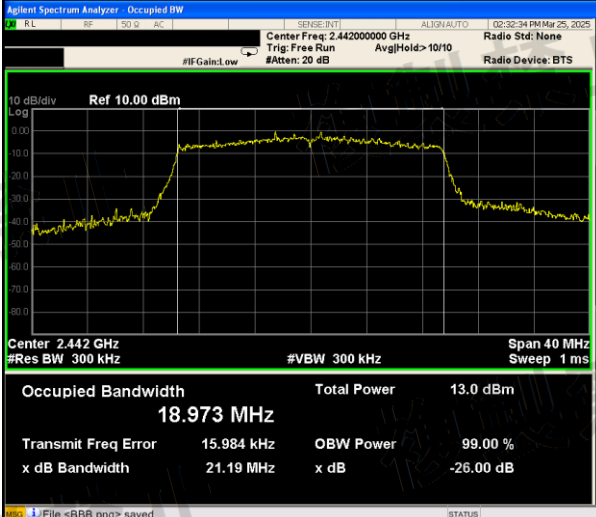
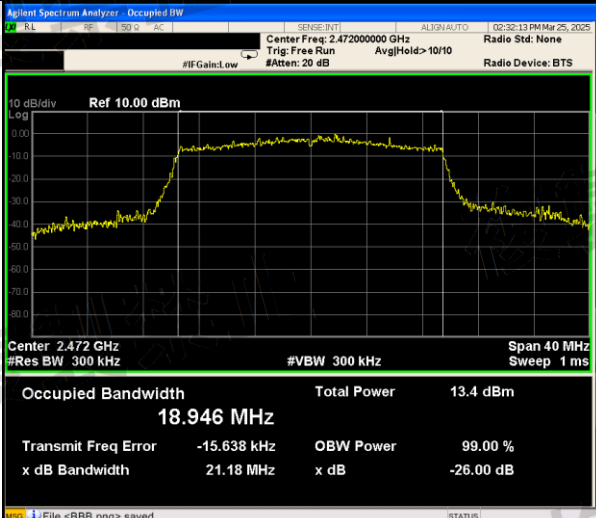
2472 MHz

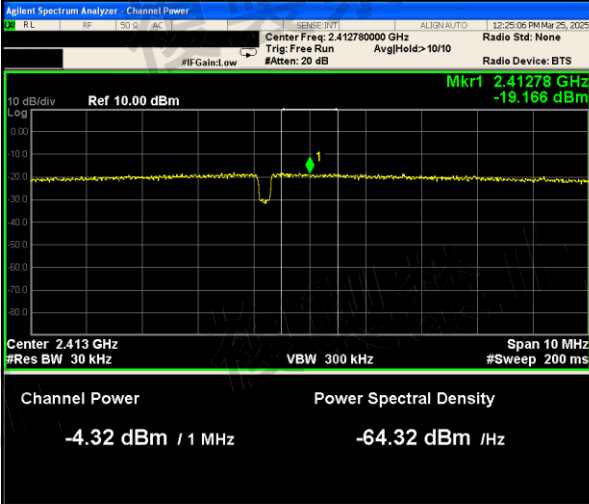
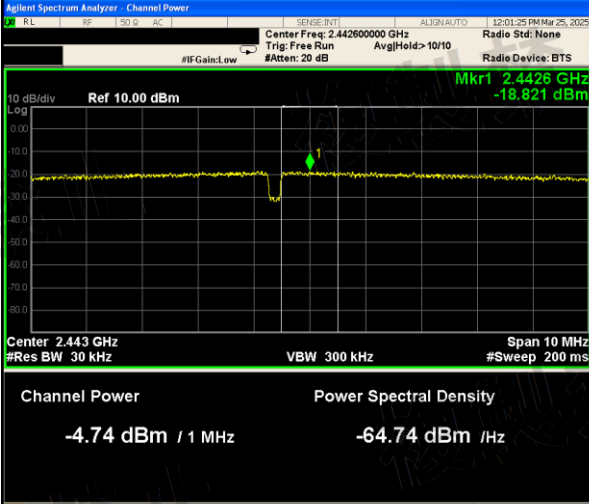
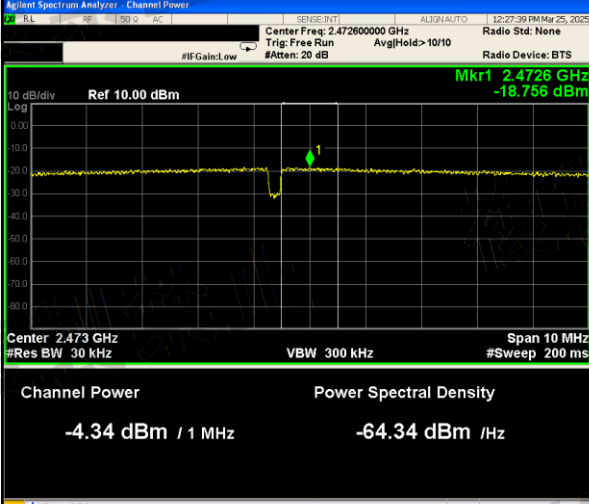


802.11ax HE20 _ Normal Voltage _ TX0		
Frequency Error Measurement		
2412 MHz	 Agilent Spectrum Analyzer - Sweep 5A RL RF 50 0 AC SENSE:INT PN0: Wide IF Gain: Low Trig: Free Run #Atten: 30 dB Avg Type: Log-Pwr 10 dB/div Log Ref 20.00 dBm Mkr1 2.411 982 3 GHz 12.18 dBm Center 2.4120000 GHz #Res BW 1.0 kHz Span 300.0 kHz #VBW 30 kHz Sweep 276.1 ms (1001 pts) File <BBB.png> saved STATUS Frequency: Auto Tune Center Freq: 2.41200000 GHz Start Freq: 2.411850000 GHz Stop Freq: 2.412150000 GHz CF Step: 30.000 kHz Auto Man Freq Offset: 0 Hz	
2442 MHz	 Agilent Spectrum Analyzer - Sweep 5A RL RF 50 0 AC SENSE:INT PN0: Wide IF Gain: Low Trig: Free Run #Atten: 30 dB Avg Type: Log-Pwr 10 dB/div Log Ref 20.00 dBm Mkr1 2.441 985 3 GHz 12.02 dBm Center 2.4420000 GHz #Res BW 1.0 kHz Span 300.0 kHz #VBW 30 kHz Sweep 276.1 ms (1001 pts) File <BBB.png> saved STATUS Frequency: Auto Tune Center Freq: 2.44200000 GHz Start Freq: 2.441850000 GHz Stop Freq: 2.442150000 GHz CF Step: 30.000 kHz Auto Man Freq Offset: 0 Hz	
2472 MHz	 Agilent Spectrum Analyzer - Sweep 5A RL RF 50 0 AC SENSE:INT PN0: Wide IF Gain: Low Trig: Free Run #Atten: 30 dB Avg Type: Log-Pwr 10 dB/div Log Ref 20.00 dBm Mkr1 2.471 978 1 GHz 12.34 dBm Center 2.4720000 GHz #Res BW 1.0 kHz Span 300.0 kHz #VBW 30 kHz Sweep 276.1 ms (1001 pts) File <BBB.png> saved STATUS Frequency: Auto Tune Center Freq: 2.47200000 GHz Start Freq: 2.471850000 GHz Stop Freq: 2.472150000 GHz CF Step: 30.000 kHz Auto Man Freq Offset: 0 Hz	



802.11ax HE20 _ Normal Voltage _ TX0			
Occupied Bandwidth Measurement			
2412 MHz		 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.412000000 GHz Trig: Free Run Ave/Hold: 10/10 Radio Std: None Radio Device: BTS Ref 10.00 dBm Center 2.412 GHz #Res BW 300 kHz #VBW 300 kHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 19.053 MHz Total Power 14.5 dBm Transmit Freq Error 40.783 kHz OBW Power 99.00 % x dB Bandwidth 24.42 MHz x dB -26.00 dB File <BBB.png> saved	Frequency Center Freq 2.412000000 GHz CF Step 4.000000 MHz Man Freq Offset 0 Hz
2442 MHz		 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.442000000 GHz Trig: Free Run Ave/Hold: 10/10 Radio Std: None Radio Device: BTS Ref 10.00 dBm Center 2.442 GHz #Res BW 300 kHz #VBW 300 kHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 19.012 MHz Total Power 14.4 dBm Transmit Freq Error 43.627 kHz OBW Power 99.00 % x dB Bandwidth 22.68 MHz x dB -26.00 dB File <BBB.png> saved	Frequency Center Freq 2.442000000 GHz CF Step 4.000000 MHz Man Freq Offset 0 Hz
2472 MHz		 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.472000000 GHz Trig: Free Run Ave/Hold: 10/10 Radio Std: None Radio Device: BTS Ref 10.00 dBm Center 2.472 GHz #Res BW 300 kHz #VBW 300 kHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 19.025 MHz Total Power 14.7 dBm Transmit Freq Error 32.285 kHz OBW Power 99.00 % x dB Bandwidth 22.44 MHz x dB -26.00 dB File <BBB.png> saved	Frequency Center Freq 2.472000000 GHz CF Step 4.000000 MHz Man Freq Offset 0 Hz

802.11ax HE20 _ Normal Voltage _ TX1			
Occupied Bandwidth Measurement			
2412 MHz		 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.412000000 GHz Trig: Free Run Ave/Hold: 10/10 Radio Std: None Radio Device: BTS Ref 10.00 dBm Center 2.412 GHz #Res BW 300 kHz #VBW 300 kHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 19.061 MHz Total Power 13.6 dBm Transmit Freq Error 19.475 kHz OBW Power 99.00 % x dB Bandwidth 22.32 MHz x dB -26.00 dB File <BBB.png> saved	
2442 MHz		 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.442000000 GHz Trig: Free Run Ave/Hold: 10/10 Radio Std: None Radio Device: BTS Ref 10.00 dBm Center 2.442 GHz #Res BW 300 kHz #VBW 300 kHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 18.973 MHz Total Power 13.0 dBm Transmit Freq Error 15.984 kHz OBW Power 99.00 % x dB Bandwidth 21.19 MHz x dB -26.00 dB File <BBB.png> saved	
2472 MHz		 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.472000000 GHz Trig: Free Run Ave/Hold: 10/10 Radio Std: None Radio Device: BTS Ref 10.00 dBm Center 2.472 GHz #Res BW 300 kHz #VBW 300 kHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 18.946 MHz Total Power 13.4 dBm Transmit Freq Error -15.638 kHz OBW Power 99.00 % x dB Bandwidth 21.18 MHz x dB -26.00 dB File <BBB.png> saved	

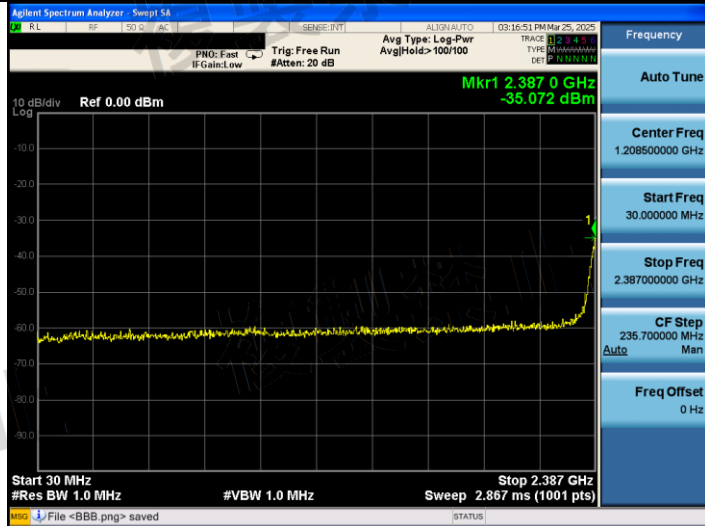
802.11ax HE20 _ Normal Voltage _ TX0			
Antenna Power (Conducted) Measurement_ Antenna Power			
2412 MHz			
2442 MHz			
2472 MHz			

802.11ax HE20 _ Normal Voltage _ TX1			
Antenna Power (Conducted) Measurement_ Antenna Power			
2412 MHz			
2442 MHz			
2472 MHz			

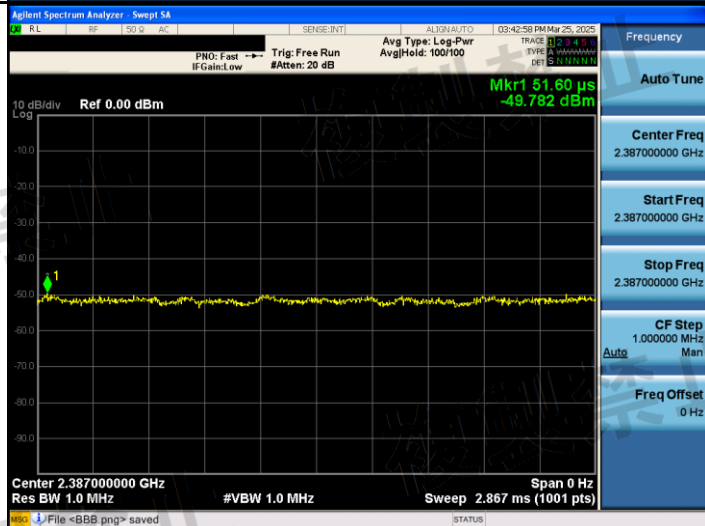
802.11ax HE20 _ Normal Voltage_ Under 2387 MHz_TX0

Unwanted Emission Strength Measurement

2412 MHz



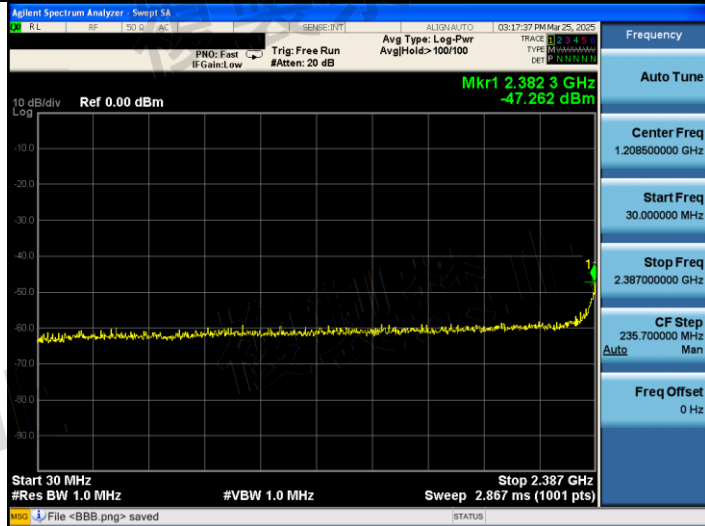
2412 MHz



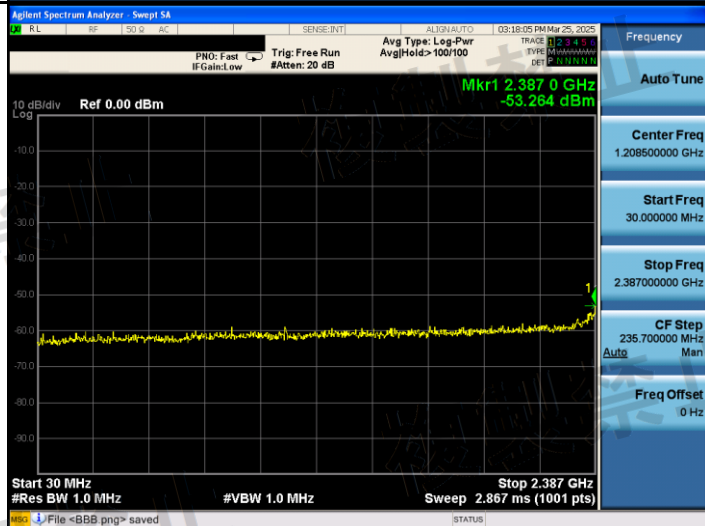
802.11ax HE20 _ Normal Voltage_ Under 2387 MHz_TX0

Unwanted Emission Strength Measurement

2442 MHz



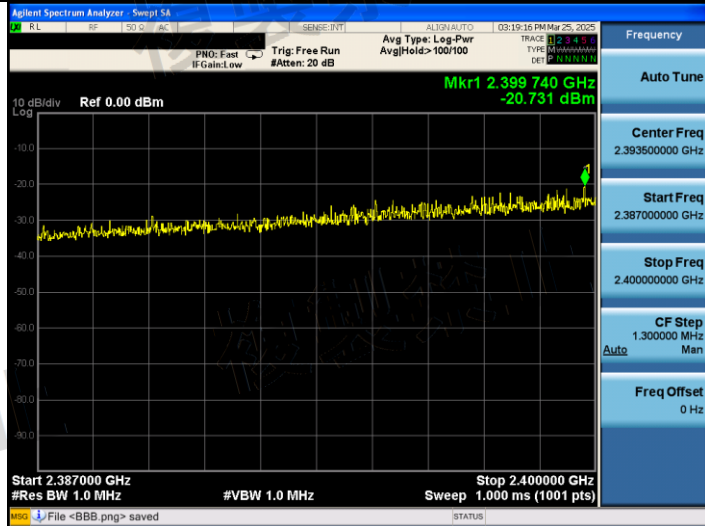
2472 MHz



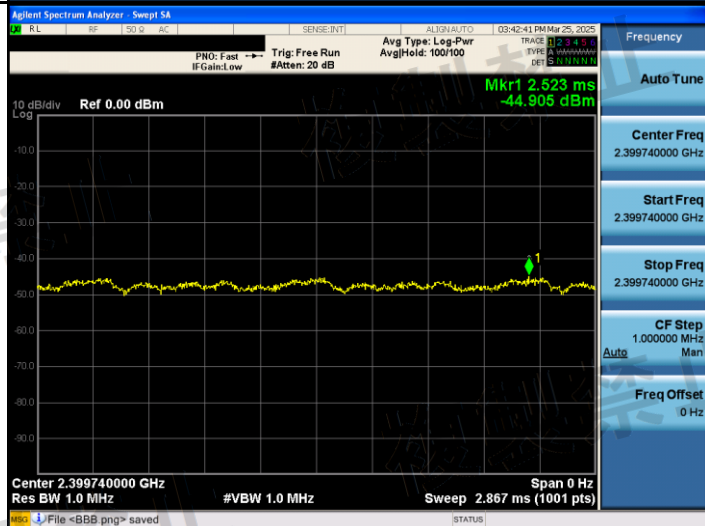
802.11ax HE20 _ Normal Voltage_ 2387-2400 MHz_TX0

Unwanted Emission Strength Measurement

2412 MHz



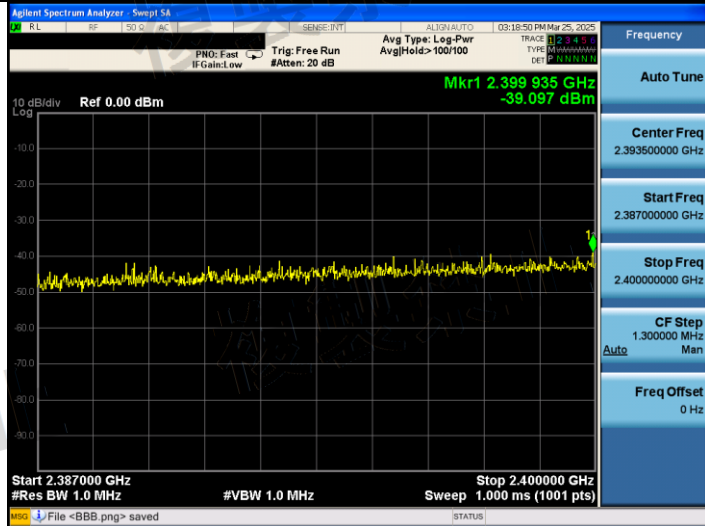
2412 MHz



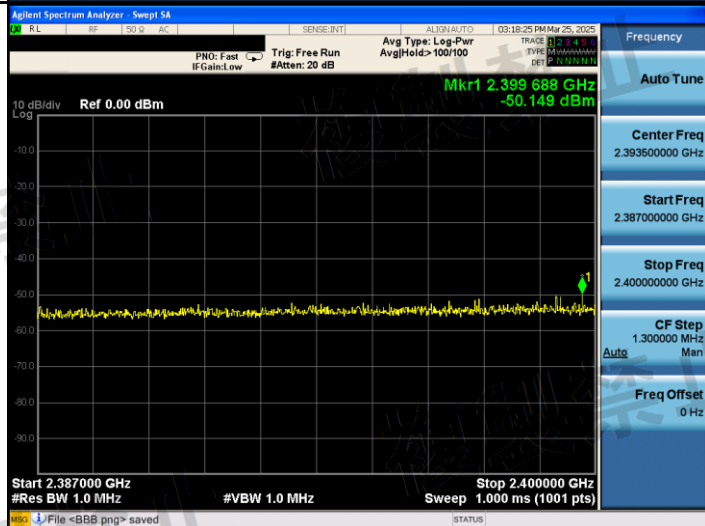
802.11ax HE20 _ Normal Voltage_ 2387-2400 MHz_TX0

Unwanted Emission Strength Measurement

2442 MHz



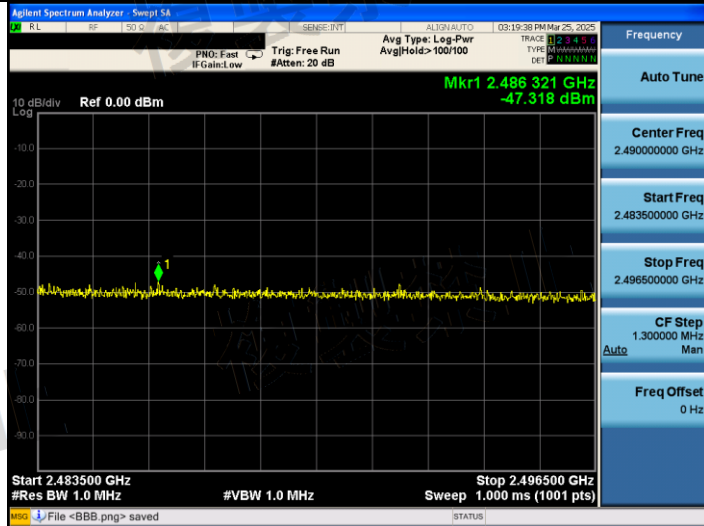
2472 MHz



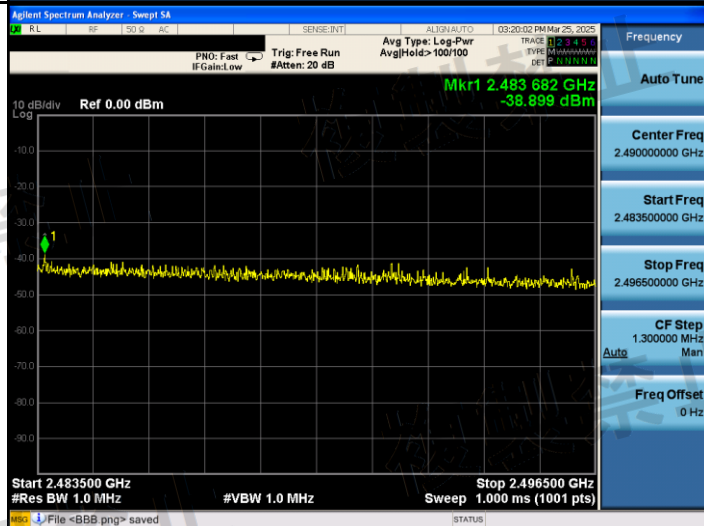
802.11ax HE20 _ Normal Voltage_ 2483.5-2496.5 MHz_TX0

Unwanted Emission Strength Measurement

2412 MHz



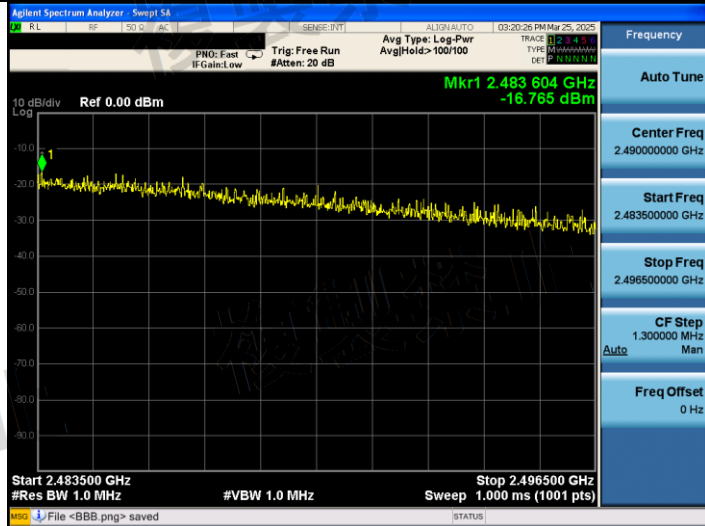
2442 MHz



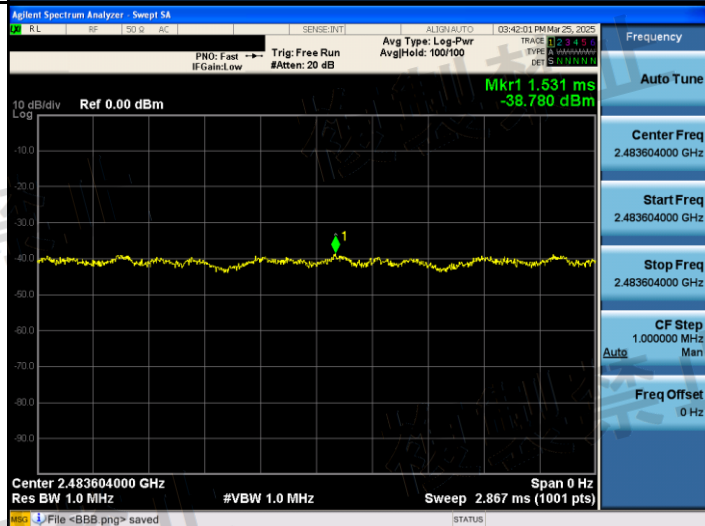
802.11ax HE20 _ Normal Voltage_ 2483.5-2496.5 MHz_TX0

Unwanted Emission Strength Measurement

2472 MHz



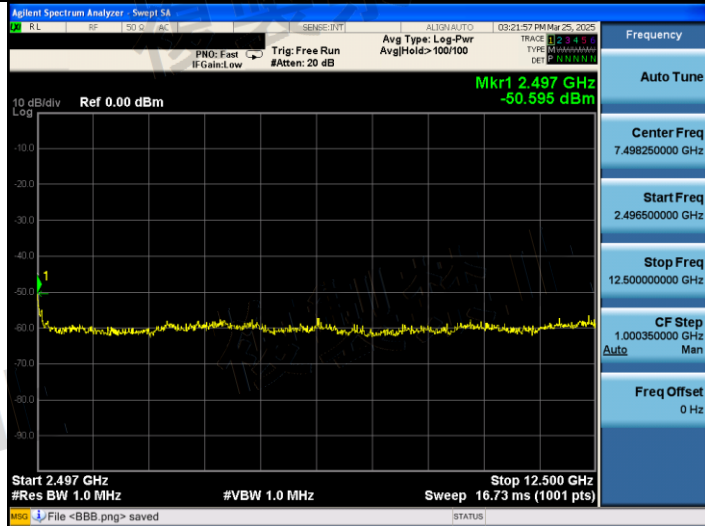
2472 MHz



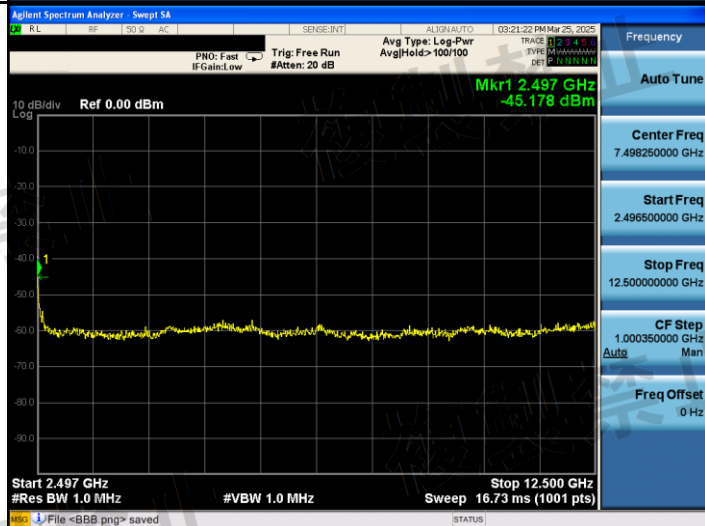
802.11ax HE20 _ Normal Voltage_ 2496.5 - 12.5 GHz_TX0

Unwanted Emission Strength Measurement

2412 MHz



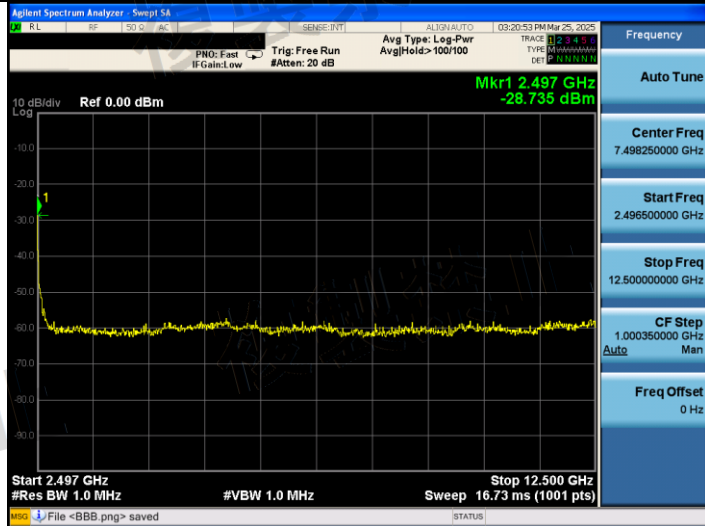
2442 MHz



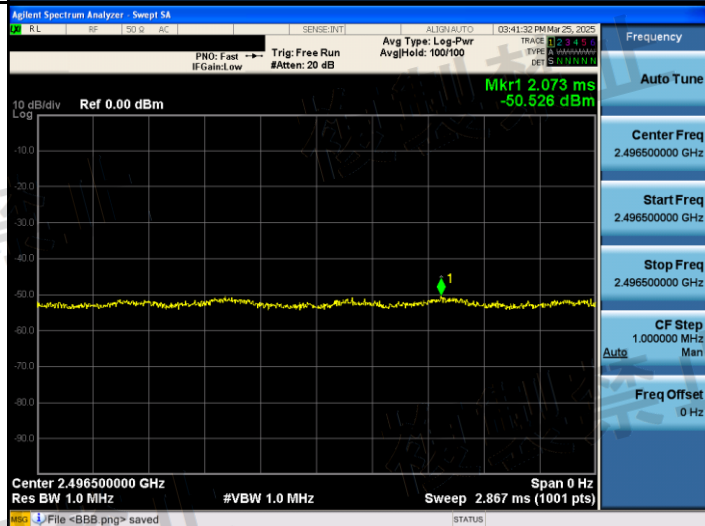
802.11ax HE20 _ Normal Voltage_ 2496.5 - 12.5 GHz_TX0

Unwanted Emission Strength Measurement

2472 MHz



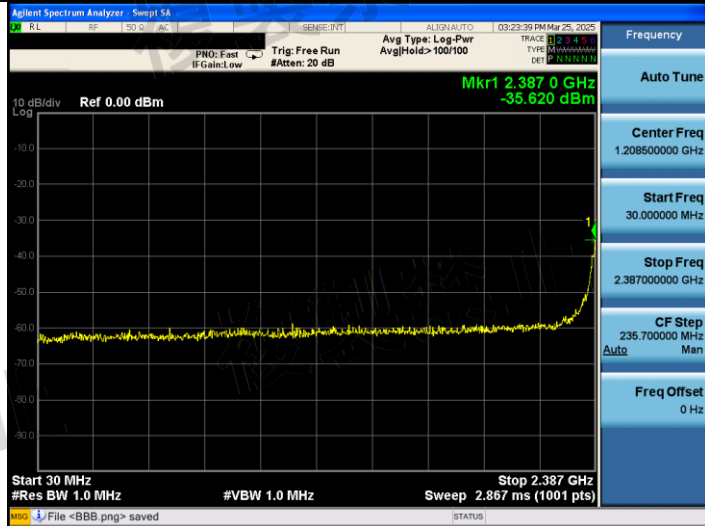
2472 MHz



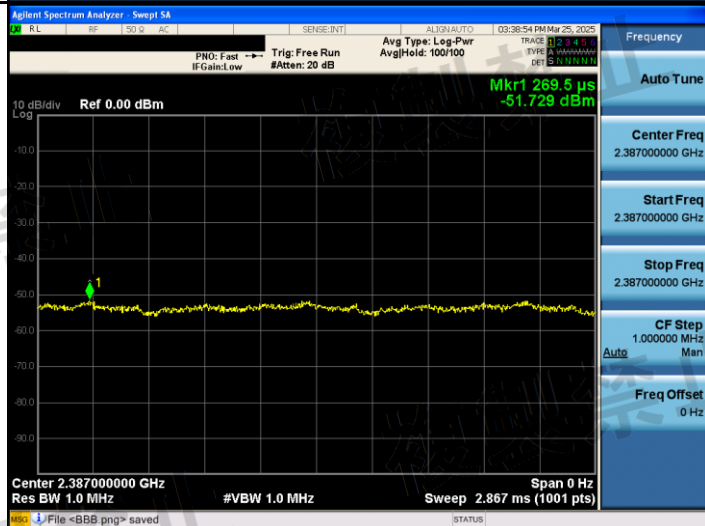
802.11ax HE20 _ Normal Voltage_ Under 2387 MHz_TX1

Unwanted Emission Strength Measurement

2412 MHz



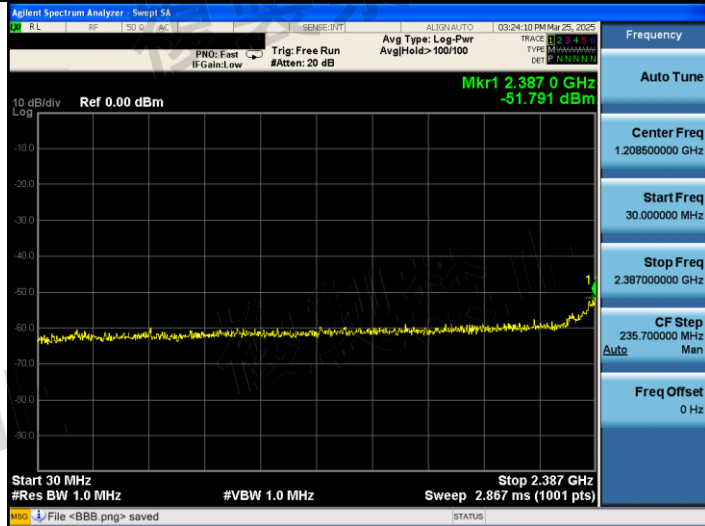
2412 MHz



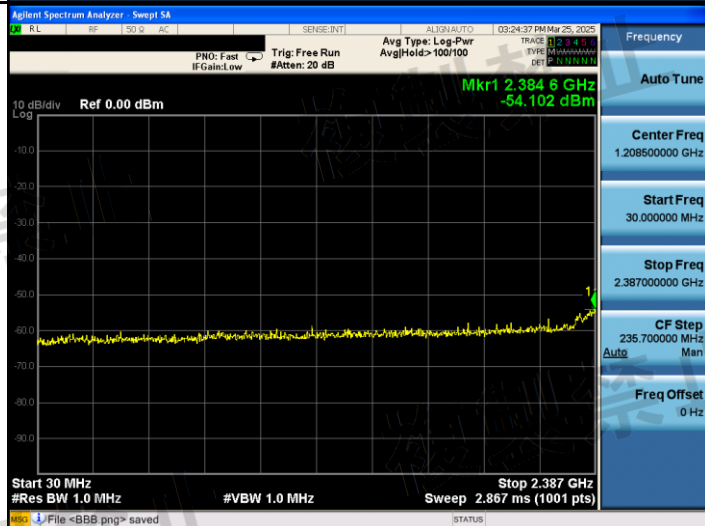
802.11ax HE20 _ Normal Voltage_ Under 2387 MHz_TX1

Unwanted Emission Strength Measurement

2442 MHz



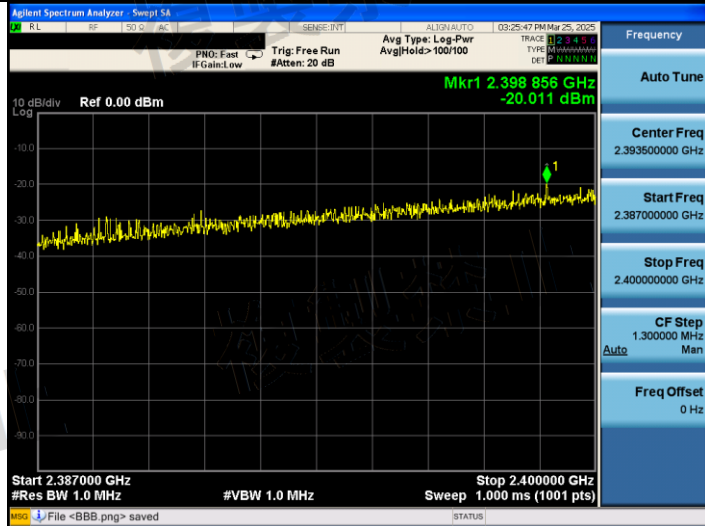
2472 MHz



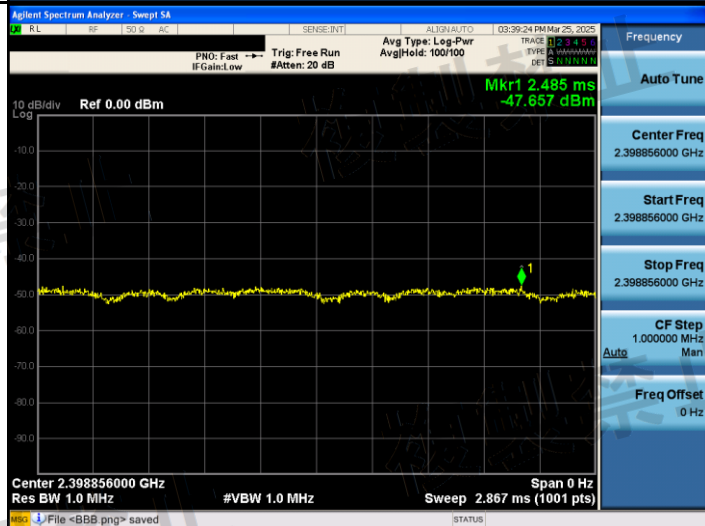
802.11ax HE20 _ Normal Voltage_ 2387-2400 MHz_TX1

Unwanted Emission Strength Measurement

2412 MHz



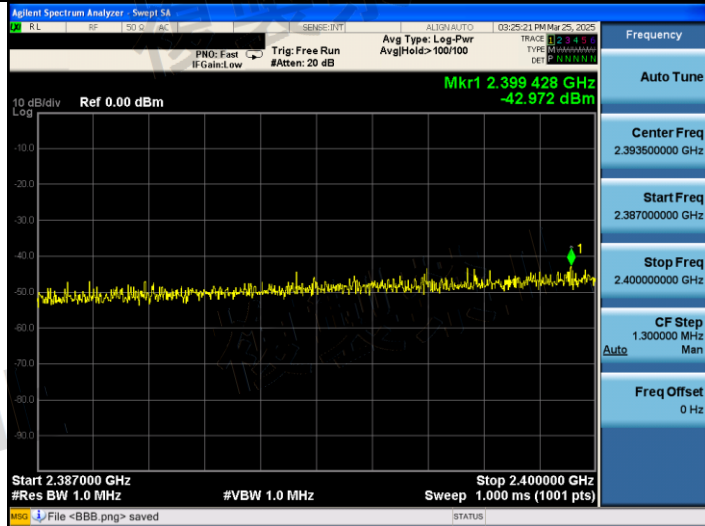
2412 MHz



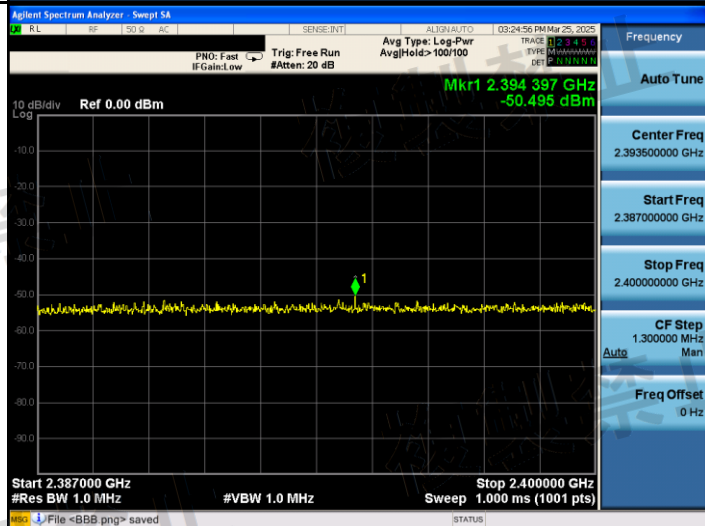
802.11ax HE20 _ Normal Voltage_ 2387-2400 MHz_TX1

Unwanted Emission Strength Measurement

2442 MHz



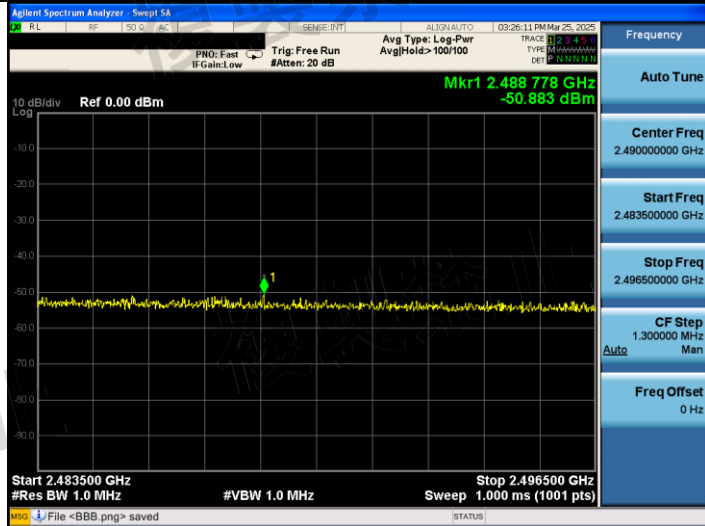
2472 MHz



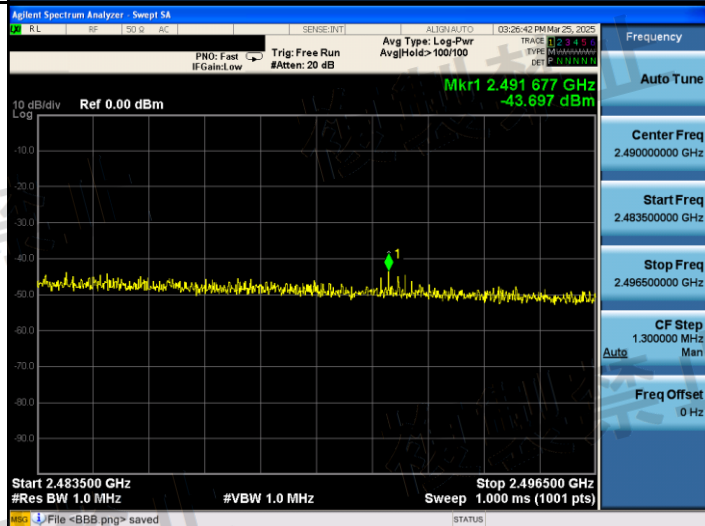
802.11ax HE20 _ Normal Voltage_ 2483.5-2496.5 MHz_TX1

Unwanted Emission Strength Measurement

2412 MHz



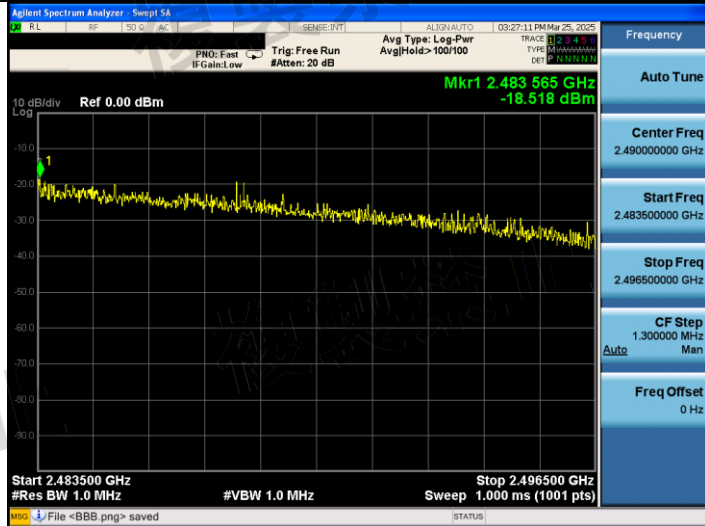
2442 MHz



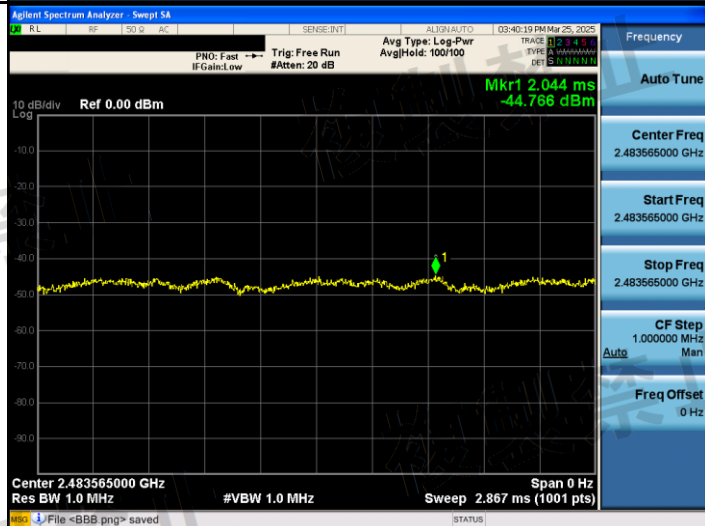
802.11ax HE20 _ Normal Voltage_ 2483.5-2496.5 MHz_TX1

Unwanted Emission Strength Measurement

2472 MHz



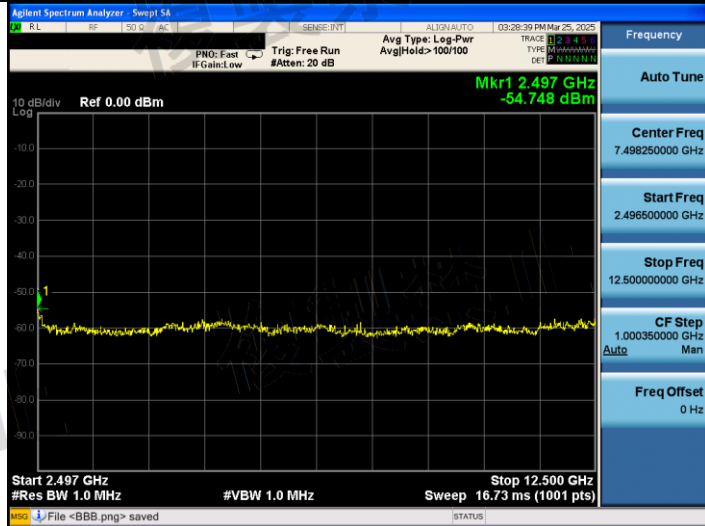
2472 MHz



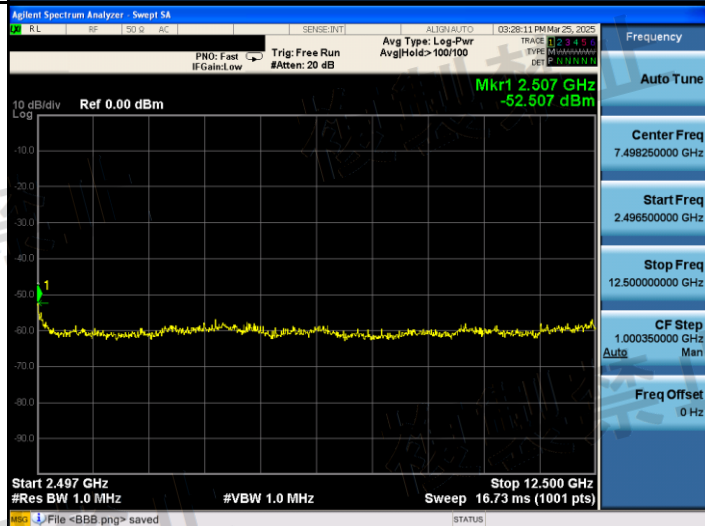
802.11ax HE20 _ Normal Voltage_ 2496.5 - 12.5 GHz_TX1

Unwanted Emission Strength Measurement

2412 MHz



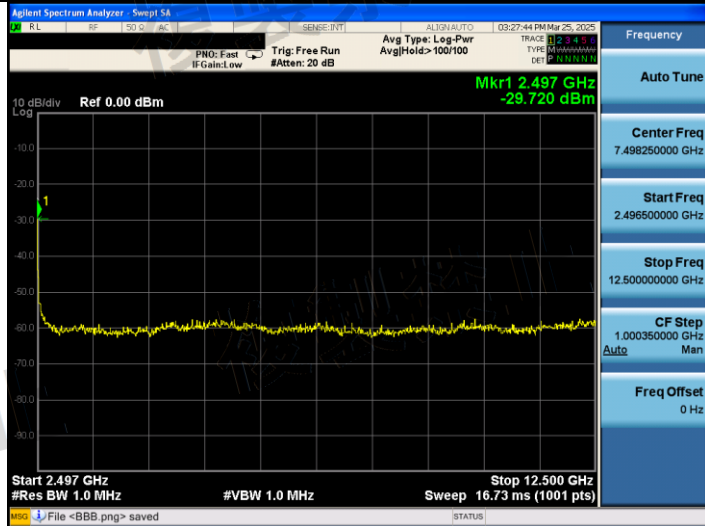
2442 MHz



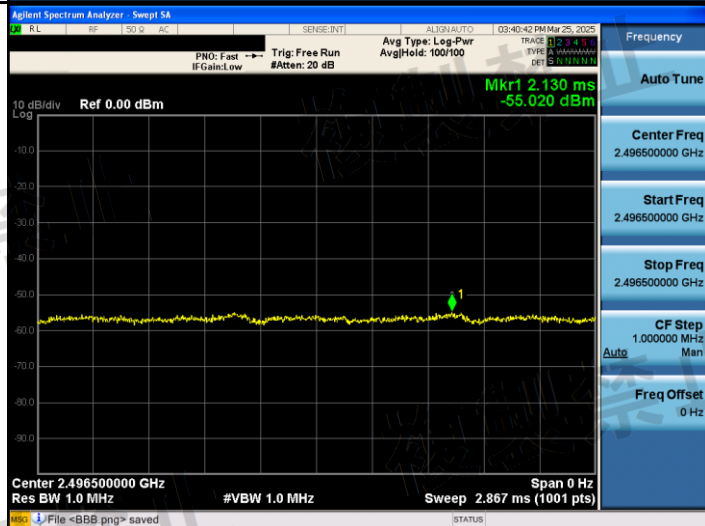
802.11ax HE20 _ Normal Voltage_ 2496.5 - 12.5 GHz_TX1

Unwanted Emission Strength Measurement

2472 MHz



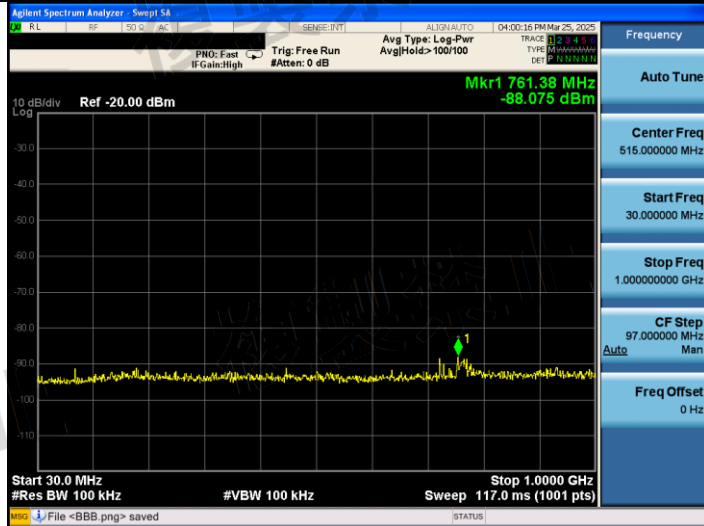
2472 MHz



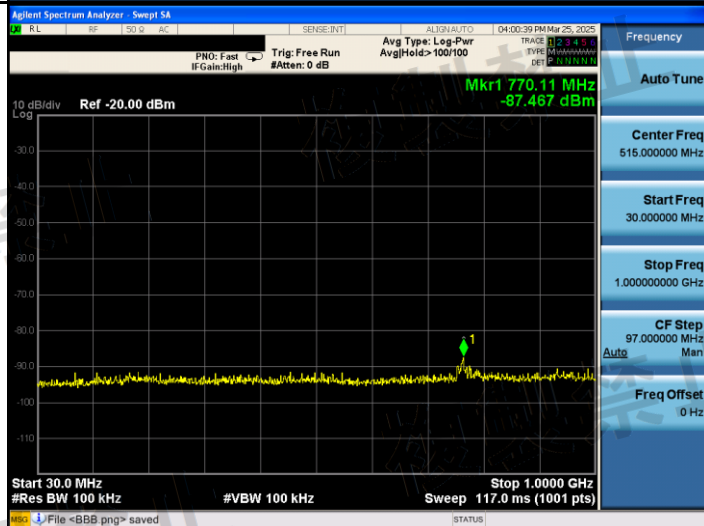
802.11ax HE20 _ Normal Voltage_ Under 1 GHz_RX0

Secondarily Emitted Radio Wave Strength Measurement

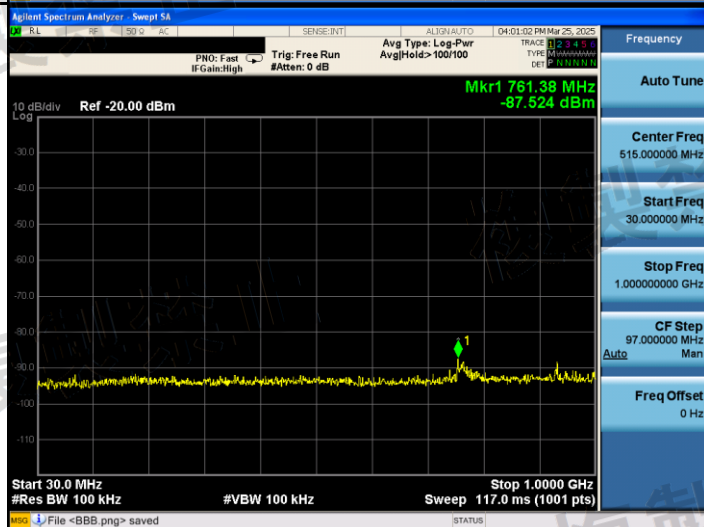
2412 MHz



2442 MHz



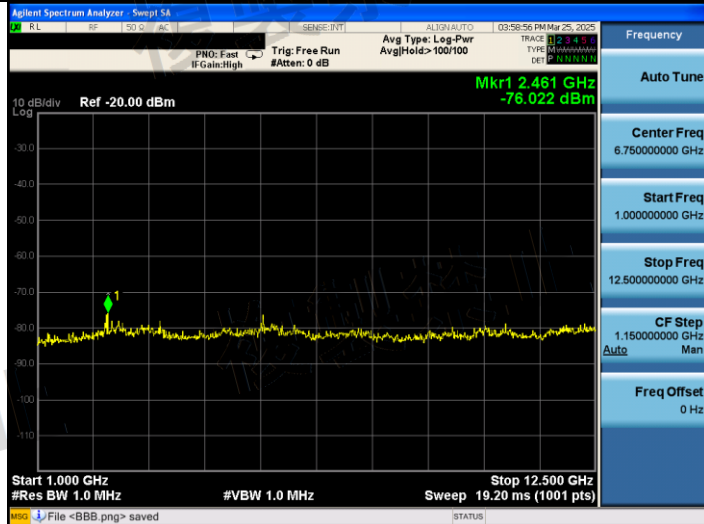
2472 MHz



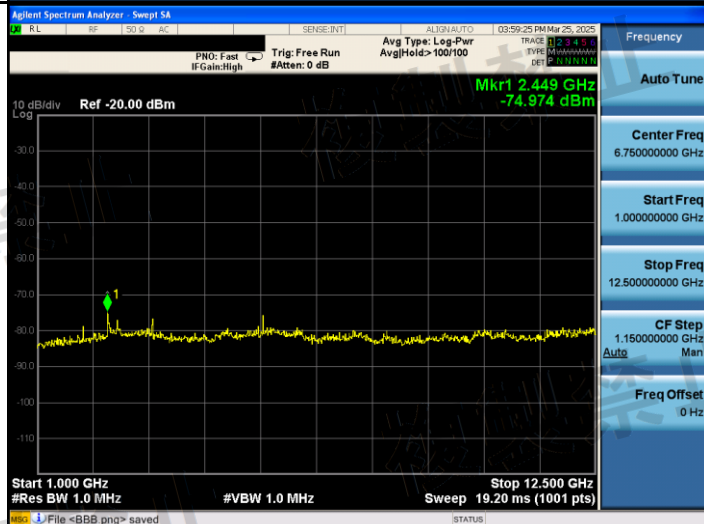
802.11ax HE20 _ Normal Voltage_ 1 - 12.5 GHz_RX0

Secondarily Emitted Radio Wave Strength Measurement

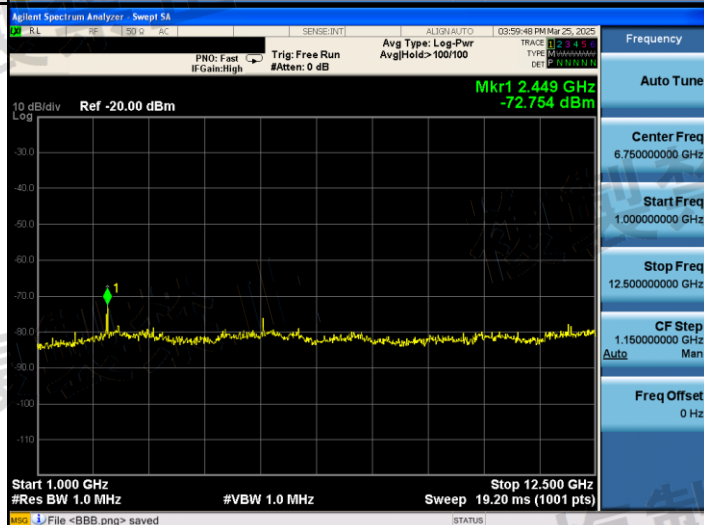
2412 MHz



2442 MHz



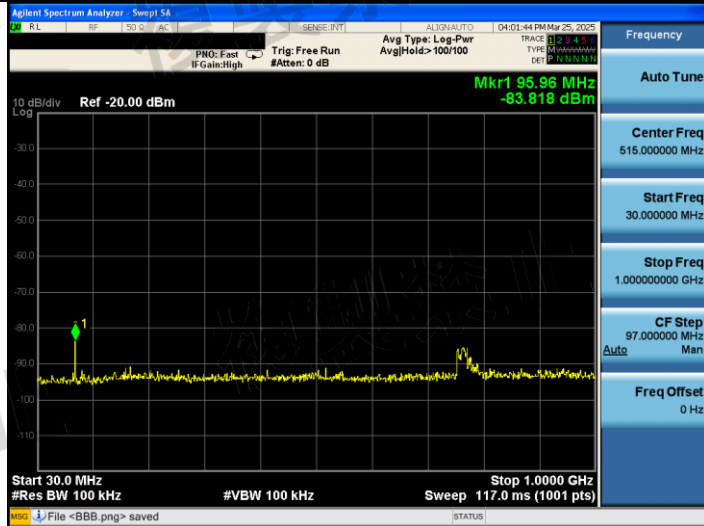
2472 MHz



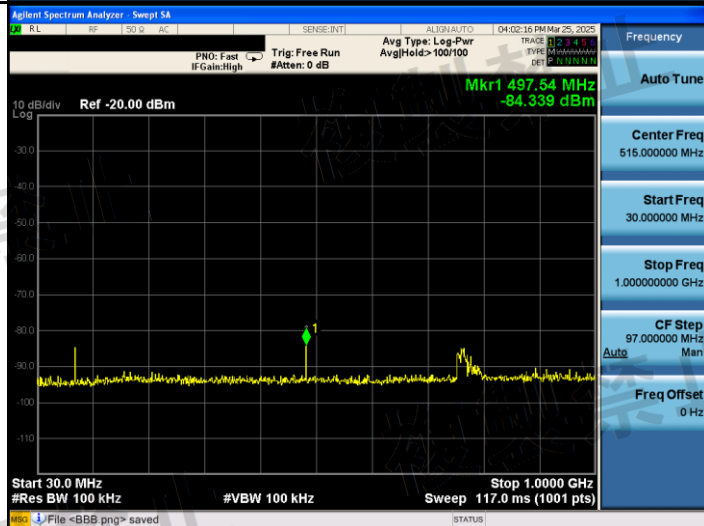
802.11ax HE20 _ Normal Voltage_ RX1 _ Under 1 GHz

Secondarily Emitted Radio Wave Strength Measurement

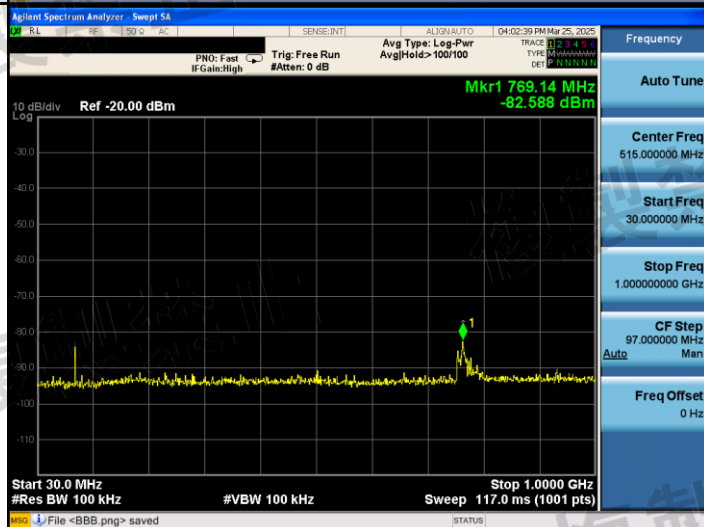
2412 MHz



2442 MHz



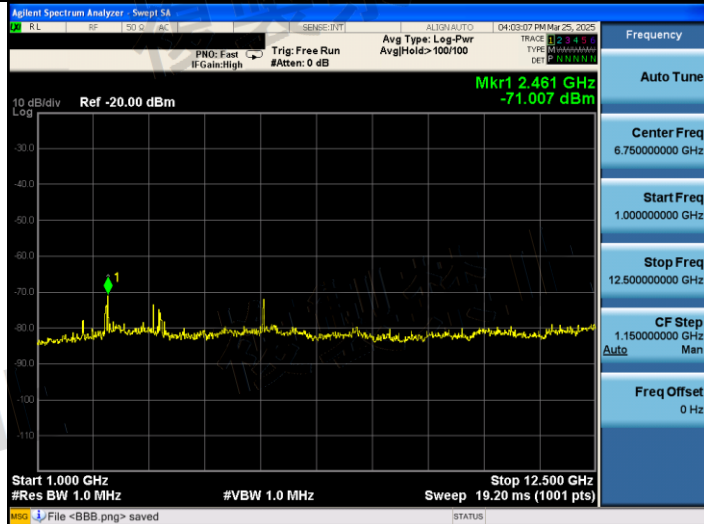
2472 MHz



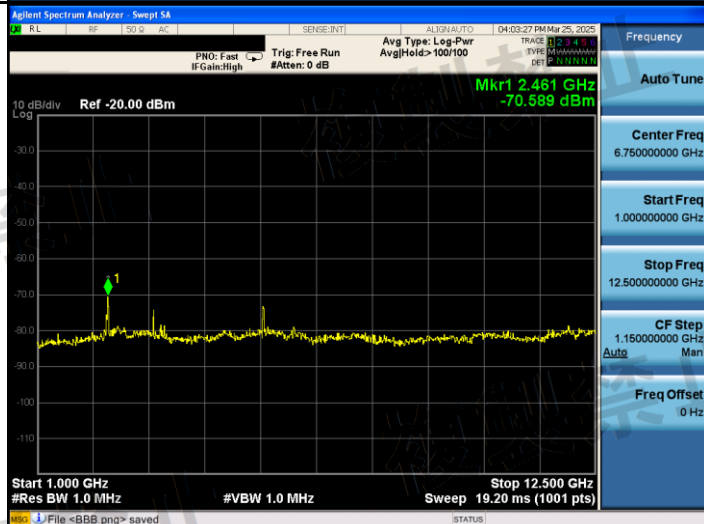
802.11ax HE20 _ Normal Voltage_ RX1 _ 1 - 12.5 GHz

Secondarily Emitted Radio Wave Strength Measurement

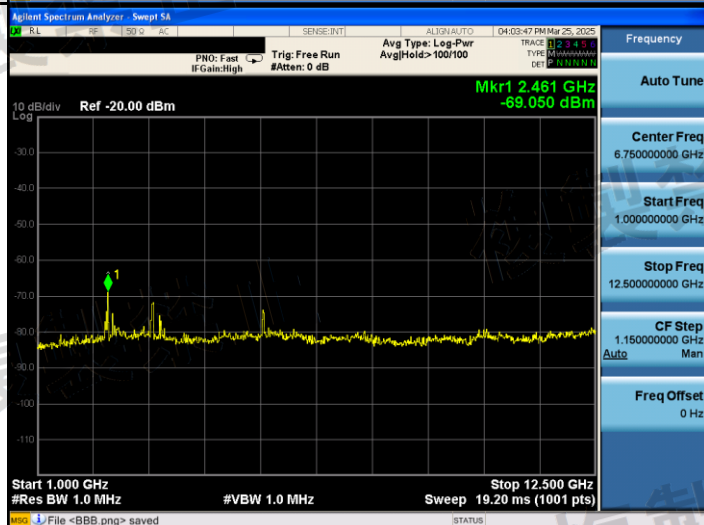
2412 MHz



2442 MHz



2472 MHz



Interference Prevention Function Measurement

Description: MAC Address



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