

Japan Radio Law TEST REPORT

Urocomm International Limited

Macaroon LTE Mobile Router

Model No.: SE2; Macaroon SE2

Brand Name: macaroon

Prepared for : Urocomm International Limited
SUITE 1601,16TH FLOOR CHINACHEM HOLLYWOOD
CENTRE 1-13 HOLLYWOOD ROAD CENTRAL HK

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Report Number : ACS-P26016-1
Date of Test : Jan.28~Feb.24, 2026
Date of Report : Jun.24, 2026

TABLE OF CONTENTS

DESCRIPTION	Page
TEST REPORT VERIFICATION	3
1. SUMMARY OF MEASUREMENTS AND RESULTS	5
1.1. Summary of test result	5
2. GENERAL INFORMATION	6
2.1. Description of Equipment Under Test	6
2.2. Feature of Equipment Under Test	7
2.3. Tested Supporting System Details	8
2.4. Block Diagram of Test Setup	8
2.5. Test Information	9
2.6. Test Equipments	10
2.7. Description of Test Facility	11
2.8. Measurement Uncertainty (95% confidence levels, k=2)	11
3. MEASUREMENTS OF TRANSMITTER PARAMETERS	12
3.1. Antenna Power	12
3.2. Frequency Tolerance	14
3.3. Occupied Bandwidth and Spread-spectrum Bandwidth / Spread Factor Measurement	15
3.4. Transmitter Spurious Emissions (Conducted)	16
3.5. Carrier sense function	17
4. MEASUREMENTS OF RECEIVER PARAMETERS	18
4.1. Secondary Radiated Emissions (Conducted)	18
5. MEASUREMENT OF OTHER PARAMETERS	19
5.1. Interference Prevention Function	19
5.2. Construction Protection	20
Appendix A. Setup Photographs	
Appendix B. Test Results	
Appendix C. Test Plots	

TEST REPORT VERIFICATION

Applicant : Urocomm International Limited
Manufacturer : Guangzhou Shirui Electronics Co., Ltd.
Product : Macaroon LTE Mobile Router
Model No. : SE2; Macaroon SE2
Brand Name : macaroon
Test Voltage : DC 5V from Notebook
DC 3.7V from battery

Measurement Standards Used:

証明規則第2条第1項第19号に掲げる無線設備 別表第四十三
2.4GHz 帯高度化小電力データ通信システム(2,400~2,483.5MHz)

The device described above is tested by Audix Technology (Shenzhen) Co., Ltd. The measurement results were contained in this test report and Audix Technology (Shenzhen) Co., Ltd. was assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliance with. Article 49-20 and the relevant Articles in Ordinance Regulating Radio Equipment, and the device has been measured in accordance with the test method given in MIC notice No.88 Appendix No.43, or surpasses or is equal to the test method.

This report applies to single evaluation of one sample of above mentioned product and shall not be reproduced in part without written approval of Audix Technology (Shenzhen) Co., Ltd.

Date of Test : Jan.28~Feb.24, 2026 Date of Report: Jun.24, 2026

Prepared by : Crush Liu
Crush Liu / Assistant

Reviewed by : Thomas Chen
Thomas Chen / Assistant Manager

Approved & Authorized Signer :

Stamp only for EMC Dept. Report

Signature: Sunny Lu
Sunny Lu / Manager

REPORT REVISION HISTORY

Edition No.	Revision	Issue Date	Report No.
Original	Initial issue of report	Mar.18, 2026	ACS-P26016
Rev.01	Add Model: Macaroon SE2	Jun.24, 2026	ACS-P26016-1

Remark:

1. This report is an additional version with original report number ACS-P26016.
The differences with original report please see the above table.
2. Through evaluation of the above difference, all tests items didn't need to be re-performed.
3. This report is based on report of ACS-P26016.

1. SUMMARY OF MEASUREMENTS AND RESULTS

1.1. Summary of test result

CLAUSE	TEST PARAMETER	RESULTS
Transmitter Parameters		
3.2 (2)	Antenna Power	PASS
3.2 (3)	Tolerances for Antenna Power	PASS
3.2 (4)	Frequency Tolerance	PASS
3.2 (5)	Transmission Rate	N/A
3.2 (6)	Spurious Emissions	PASS
3.2 (7)	Occupied Frequency Bandwidth	PASS
3.2 (8)	Spread-spectrum Bandwidth / Spread Factor	PASS ^{Note 1}
3.2 (9)	Number of Carriers	N/A
3.2 (10)	Dwell Time	N/A
Receiver Parameters		
3.3 (1)	Secondary Radiated Emissions	PASS
Other Parameters		
3.4.1	Interference Prevention Function	PASS
3.4.2	Construction Protection	PASS
3.4.3	Carrier sense function	PASS
Note 1: Only Applicable for DSSS. Note 2: Applicable for OFDM(For OBW $\geq$ 26MHz) or Rated Power>10dBm/MHz Note 3: N/A is an abbreviation for Not Applicable. Note 4: Measurement uncertainty affection to the result is not considered, the EUT is technically compliant with standard requirements.		

2. GENERAL INFORMATION

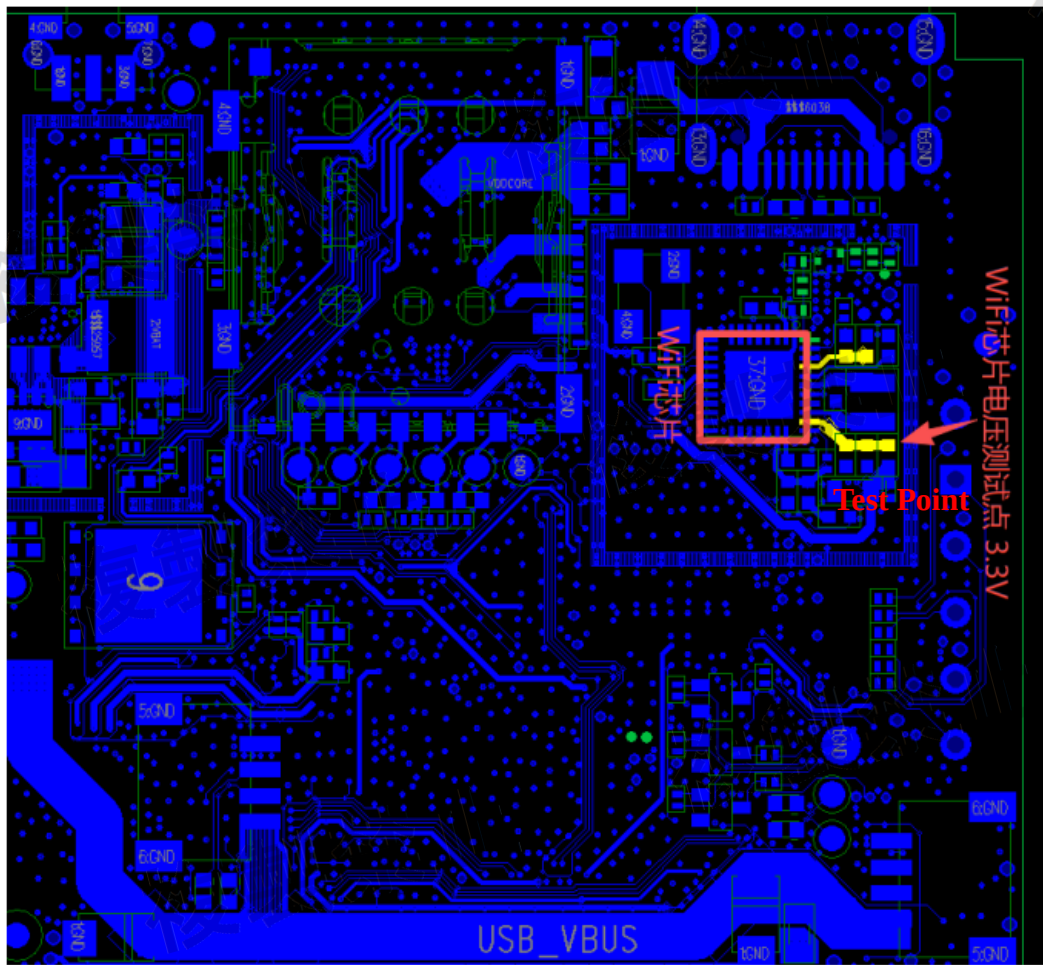
2.1. Description of Equipment Under Test

Applicant	Urocomm International Limited
Applicant Address	SUITE 1601,16TH FLOOR CHINACHEM HOLLYWOOD CENTRE 1-13 HOLLYWOOD ROAD CENTRAL HK
Manufacturer	Urocomm International Limited
Manufacturer Address	SUITE 1601,16TH FLOOR CHINACHEM HOLLYWOOD CENTRE 1-13 HOLLYWOOD ROAD CENTRAL HK
Factory	Shenzhen Sailin Electronic Technology Co., Ltd
Factory Address	4th and 6th floors, Building B7, Yintian Industrial Zone, Yantian Community, Xixiang Street, Bao'an District, Shenzhen
Product	Macaroon LTE Mobile Router
Model No.	SE2; Macaroon SE2 Model differences (Declared by the Applicant): Only model name different.
Test Model	SE2
Brand	macaroon
Sample Type	Prototype production
Date of Receipt	Dec.25, 2025
Date of Test	Jan.28~Feb.24, 2026

2.2.Feature of Equipment Under Test

Product Feature & Specification			
Product	Macaroon LTE Mobile Router		
Model No.	SE2		
Power Source	☐ Commercial Power	AC V	
	☒ External Power Source	DC 5V	
	☒ Li-ion polymer Battery	DC 3.7V	
	☐ UM battery	DC V	
WLAN			
WLAN Support Category/ Frequency Range	☒ Article 2-1-19 /2400MHz ~ 2483.5MHz		
	☐ Article 2-1-19-2 /2471MHz ~ 2497MHz		
	☐ Article 2-1-19-3 /5150MHz ~ 5250MHz		
	☐ Article 2-1-19-3 /5250MHz ~ 5350MHz		
	☐ Article 2-1-19-3 /5470MHz ~ 5730MHz		
Type of Modulation	☒ Direct Spreading (DS) ☒ Orthogonal frequency-division multiplexing (OFDM) ☐ Frequency Hopping (FH)		
RF Technology	☐ 802.11a	☒ 802.11b	☒ 802.11g
	☒ 802.11n-HT20	☐ 802.11ac-VHT20	☒ 802.11ax-HE20
	☒ 802.11n-HT40	☐ 802.11ac-VHT40	☒ 802.11ax-HE40
	☐ 802.11ac-VHT80	☐ 802.11ax-HE80	
	☐ 802.11ac-VHT160	☐ 802.11ax-HE160	
RU Mode	Not Support		
Antenna Information	Antenna Type: PIFA Antenna		
	Peak Gain: -0.25dBi Max		

Operating Voltage	5V	5.5V	4.5V
Measuring Voltage	3.3V	3.301V	3.3V
Tolerance	-	0.03%	0.00%



NOTE: When EUT be operated at $\pm 10\%$ from the normal supply voltage, the supply voltage of RF part was varied within $\pm 1\%$. All test cases were done under the normal supply voltage.

2.3. Tested Supporting System Details

N/A

2.4. Block Diagram of Test Setup



(EUT: Macaroon LTE Mobile Router)

2.5. Test Information

A special test software was used to control EUT work in Continuous TX/RX mode, and select test channel, mode and data rate.

Tested mode, channel, and data rate information			
Mode	data rate (Mbps) (see Note)	Channel	Frequency (MHz)
IEEE 802.11b	1	Low :CH1	2412
	1	Middle: CH7	2442
	1	High: CH13	2472
IEEE 802.11g	6	Low :CH1	2412
	6	Middle: CH7	2442
	6	High: CH13	2472
IEEE 802.11n HT20	6.5	Low :CH1	2412
	6.5	Middle: CH7	2442
	6.5	High: CH13	2472
IEEE 802.11n HT40	13.5	Low :CH3	2422
	13.5	Middle: CH7	2442
	13.5	High: CH11	2462
IEEE 802.11ax HE20	MCS0	Low :CH1	2412
	MCS0	Middle: CH7	2442
	MCS0	High: CH13	2472
IEEE 802.11ax HE40	MCS0	Low :CH3	2422
	MCS0	Middle: CH7	2442
	MCS0	High: CH11	2462
Note: After exploratory test, EUT will have maximum output power in those data rate, so those data rate were used for all test.			

2.6. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Due Date	Calibration Body	Cal Method (Note)
1.	Spectrum Analyzer	Agilent	N9030A	MY53311015	Sep.15,25	Sep.14,26	CCIC	c)
2.	Attenuator(10dB)	Agilent	8491B	MY39269201	Mar.10,25	Mar.09,26	CCIC	c)
3.	Voltage & Current Meter	FLUKE	15B PRO	60665932WS	Sep.17,25	Sep.18,26	CCIC	d)

Note 1: Calibration Method

- a):** Calibration conducted by the National Institute of Information and Communications Technology ~ NICT ~ or a designated calibration agency under Article 102-18 paragraph (1) ~ TELEC Engineering Center, Intertek Japan K.K., Keysight Technologies, Inc ~.
- b):** Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Law (Law No. 51 of 1992) ~ Japan Calibration Service System ~
- c):** 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 (1) ~ TELEC Engineering Center, Intertek Japan K.K., Keysight Technologies, Inc ~.
- d):** Calibration conducted by using other equipment that listed above from **a)** to **c)**

Note 2: CCIC (Shenzhen) Metrology & Testing Service Co., Ltd

Addr : ShengHui Hongxing Chuangzhi Square, Tongren Road, Tianliao Community, Yutang Street, Guangming District, Shenzhen

2.7. Description of Test Facility

Site Description

Name of Firm : Audix Technology (Shenzhen) Co., Ltd.
No. 6, Kefeng Road, Science & Technology
Park, Nanshan District, Shenzhen,
Guangdong, China

RF Anechoic Chamber : Dimensions are:
[L]10m × [W]5.5m × [H]5m

EMC Lab. : Accredited by NVLAP, USA
NVLAP Code: 200372-0
Valid Date: Mar.31, 2027

Certificated by FCC, USA
Designation No: CN5022
Valid Date: Mar.31, 2027

Accredited by TAF, Taiwan
Registration No: 1418
Valid Date: Nov.30, 2026

2.8. Measurement Uncertainty (95% confidence levels, k=2)

Test Item	Uncertainty
Uncertainty for Radiated Spurious Emission test	±3.7dB(30MHz-1000MHz)
	±3.3dB(1GHz-26.5GHz)
Uncertainty for Conduction Spurious emission test	±2.0dB
Uncertainty for Output power test	±0.8dB
Uncertainty for Frequency range test	±2.0×10 ⁻⁷
Uncertainty for Bandwidth test	±4.6 %
Uncertainty for DC power test	±0.1%
Uncertainty for test site temperature and humidity	±0.6°C
	±3%

3. MEASUREMENTS OF TRANSMITTER PARAMETERS

3.1. Antenna Power

3.1.1. Limit

Item	Limits
Antenna Power Density	$\leq 10\text{mW/MHz}$ when $\text{OBW} \leq 26\text{MHz}$ (OFDM, DS from 2400~2483.5MHz)
	$\leq 5\text{mW/MHz}$ when $26\text{MHz} < \text{OBW} \leq 40\text{MHz}$ (OFDM, DS from 2400~2483.5MHz)
	$\leq 10\text{mW}$ (Other from 2400~2483.5MHz)
Antenna Power Error	$\leq 20\%$ (Base on manufacturer declare antenna power density)
Antenna Gain	Gain > 2.14dBi Transmitting Angle Width $\leq (360/A)$ a. FH, FH+DS, FH+OFDM $A = \text{EIRP}(\text{mW/MHz}) / (4.91\text{mW/MHz})$ b. DS, OFDM with $\text{OBW} \leq 26\text{MHz}$ $A = \text{EIRP}(\text{mW/MHz}) / (16.37\text{mW/MHz})$ c. OFDM with $\text{OBW} > 26\text{MHz}$ $A = \text{EIRP}(\text{mW/MHz}) / (8.18\text{mW/MHz})$

3.1.2. Measuring Instruments

See list of measuring instruments of the 2.6 section.

3.1.3. Test Procedures

1. Connect the UUT to the spectrum analyser and use the following settings:
 - Centre Frequency: The centre frequency of the channel under test
 - RBW: 1 MHz
 - VBW: 3 MHz
 - Frequency Span: $2 \times$ Nominal Bandwidth (e.g. 40 MHz for a 20 MHz channel)
 - Detector Mode: Peak
 - Trace Mode: Max Hold
2. When the trace is complete, find the peak value of the power envelope and record the frequency.
3. Make the following changes to the settings of the spectrum analyser:
 - Centre Frequency: Equal to the frequency recorded in step 2
 - Frequency Span: 3 MHz
 - RBW: 1MHz
 - VBW: 1MHz
 - Sweep Time: 1 minute
 - Detector Mode: RMS
 - Trace Mode: Max Hold
4. ① When the trace is complete, the trace shall be captured using the "Hold" or "View" option on the spectrum analyser.
② Find the peak value of the trace and place the analyser marker on this peak. This level is recorded as the highest mean power (Power Density) D in a 1 MHz band.
③ Alternatively, where a spectrum analyser is equipped with a function to measure spectral Power Density, this function may be used to display the Power Density D in dBm / MHz.
④ In case of conducted measurements on smart antenna systems operating in a mode with multiple transmit chains active simultaneously, the Power Density of each transmit chain shall be measured separately to calculate the total Power Density (value D in dBm / MHz) for the UUT.

3.1.4. Test Results

Please refer to Appendix B and C.

3.2.Frequency Tolerance

3.2.1. Limit

Item	Limits
Frequency Tolerance	±50ppm

3.2.2. Measuring Instruments

See list of measuring instruments of the 2.6 section.

3.2.3. Test Procedure

☒ WLAN 2.4GHz	☐ WLAN 2.4GHz
a.Frequency accuracy of instrument shall be less than 10% of limits tolerance (5ppm). b.Setting of SA is following as: RBW: 10kHz / VBW: 10kHz. c.The frequency tolerance test case is directly measured using spectrum analyzer. Then the frequency error formula is $(f_c - f)/f \times 10^{-6}$ ppm and the limit is less than ±50ppm.	a.Let the DUT transmit at Low/ Mid/ High channel with wave. b.Setting of SA is following as: RBW: 100kHz/ VBW: 300kHz. c.Use the peak search function of the SA get the max peak point. d. Down 10dB from the max peak point get the display level. e. The display level cross with the trace at Lowest Frequency f_a and Highest Frequency f_b. f. Get the test Result $F_c = (f_a + f_b)/2$. error formula is $(f_c - f)/f \times 10^{-6}$ ppm and the limit is less than ±50ppm.

3.2.4. Test Setup

See clause 2.4 for block diagram of test setup.

3.2.5. Test Results

Please refer to Appendix B and C.

3.3. Occupied Bandwidth and Spread-spectrum Bandwidth / Spread Factor Measurement

3.3.1. Limit

Item	Limits
Occupied Bandwidth	DS $\leq$ 26MHz; Others $\leq$ 26MHz OFDM (For BW=20MHz) $\leq$ 40MHz OFDM (For BW=40MHz) $\leq$ 40MHz

3.3.2. Measuring Instruments

See list of measuring instruments of the 2.6 section.

3.3.3. Test Procedure

1. Setting of SA is following as: RBW: 100KHz / VBW: 300kHz
Sweep Mode: Continuous sweep
Detect mode: Positive peak
Trace mode: Max hold.
2. EUT have transmitted each modulation signal and fixed channelize (For DSSS or OFDM Device).
3. SA set to 99% of occupied bandwidth to measure occupied bandwidth. The limit is less than 26MHz(For DSSS Device) or 40MHz (For OFDM Device).

3.3.4. Test Setup

See clause 2.4 for block diagram of test setup.

3.3.5. Test Results

Please refer to Appendix B and C.

3.4. Transmitter Spurious Emissions (Conducted)

3.4.1. Limit

Item	Limits
Tx Spurious Emission	$\leq 2.5\mu\text{W}(-26\text{dBm/MHz})$ ($2387\text{MHz} > f$; $2496.5\text{MHz} < f$)
	$\leq 25\mu\text{W}(-16\text{dBm/MHz})$ ($2387\text{MHz} \leq f < 2400\text{MHz}$) and ($2483.5\text{MHz} < f \leq 2496.5\text{MHz}$)
	For Channel 14 Transmitter Operating Below 2458MHz: $2.5\mu\text{W}(-26\text{dBm/MHz})$ or less (-26dBm)
	Transmitter Operating Between 2458 to 2471MHz: $25\mu\text{W}(-16\text{dBm/MHz})$ or less (-16dBm) Transmitter Operating 2497 through 2510: $25\mu\text{W}(-16\text{dBm/MHz})$ or less (-16dBm) Transmitter Operating Above 2510: $2.5\mu\text{W}(-26\text{dBm/MHz})$ or less (-26dBm)

3.4.2. Measuring Instruments

See list of measuring instruments of the 2.6 section.

3.4.3. Test Procedures

1. EUT have transmitted the maximum power and fixed channelize.
2. Setting of SA is following as: RBW: 1MHz / VBW:1MHz, Sweep time : Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold.
3. Setting of SA is following as: start frequency 30MHz and stop frequency 2387MHz Then to mark peak reading Value + cable loss shall be less than $2.5\mu\text{W}(-26\text{dBm/MHz})$.
4. SA adjusted to start frequency 2387MHz and stop frequency 2400MHz. Then to mark peak reading Value + cable loss shall be less than $25\mu\text{W}(-16\text{dBm/MHz})$.
5. SA adjusted to start frequency 2483.5MHz and stop frequency 2496.5MHz. Then to mark peak reading Value + cable loss shall be less than $25\mu\text{W}(-16\text{dBm/MHz})$.
6. SA adjusted to start frequency 2496.5MHz and stop frequency 13000MHz. Then to mark peak reading Value + cable loss shall be less than $25\mu\text{W}(-16\text{dBm/MHz})$.
7. If the Result_Value is over the requirement, take total sum of 1MHz band centered at the spur frequency like ACLP measurement as Result_Value.

3.4.4. Test Setup

See clause 2.4 for block diagram of test setup.

3.4.5. Test Results of Conducted Spurious Emissions – TX Operating

Please refer to Appendix B and C.

3.5. Carrier sense function

3.5.1. Limit

The radio equipment connected to telecommunication circuit equipment shall be equipped with a device which detects emissions radiated from another radio station and prevents interference, or a device which prevents interference by operation on a receive signal and a signal for diffusion for signal level detection.

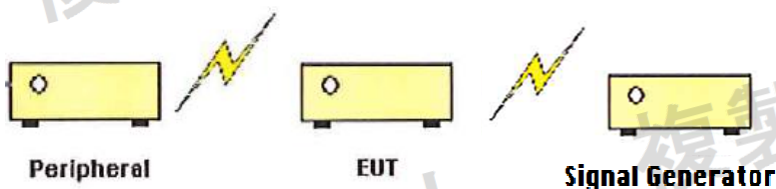
3.5.2. Measuring Instruments

No.	Description	Manufacturer	Model	Serial Number	Approved type
1	Wireless Router	TP-LINK	Archer C9	2158161000011	☒ TBL ID: D16-0002018

3.5.3. Test Procedures

1. Control the wireless Router work at 11n HT40 mode (For $OBW \geq 26\text{MHz}$) by software.
2. Link EUT with wireless Router Via Wireless ,Let EUT work in normal transmitting mode.
3. Set the signal generator at same frequency channel with a proper signal level output to act as interference signal.
4. Monitor the signal transmission between EUT and wireless Router, when interference signal presents, the EUT would stop transmitting once it detects interference signal over their, then it pass. Otherwise the Result is fail.

3.5.4. Test Setup



Peripheral: Wireless Router

3.5.5. Test result

Please refer to Appendix B and C.

4. MEASUREMENTS OF RECEIVER PARAMETERS

4.1. Secondary Radiated Emissions (Conducted)

4.1.1. Limit

Item	Limits
Rx Spurious Emission	$\leq 4\text{nW}(-54\text{dBm}/100\text{kHz})$ ($f < 1\text{GHz}$)
	$\leq 20\text{nW}(-47\text{dBm}/\text{MHz})$ ($1\text{GHz} \leq f$)

4.1.2. Measuring Instruments

See list of measuring instruments of 2.6 section.

4.1.3. Test Procedures

1. EUT have the continuous reception mode and fixed only one channelize.
2. SA set RBW: 100KHz and VBW: 300KHz. Then adjust to start frequency 30MHz and stop frequency 1000MHz. Search to mark peak reading value + cable loss shall be less than $4\text{nW}(-54\text{dBm}/100\text{kHz})$.
3. SA set RBW: 1MHz and VBW: 3MHz. Then adjust to start frequency 1000MHz and stop frequency 13000MHz. Search to mark peak reading value + cable loss shall be less than $20\text{nW}(-47\text{dBm}/\text{MHz})$.
4. If power level of lower emissions are more than 1/10 of limit ($0.4\text{nW}(-64\text{dBm}/100\text{kHz})$ for $f < 1\text{GHz}$, $2\text{nW}(-57\text{dBm}/\text{MHz})$ for $f \geq 1\text{GHz}$), all those are to be indicated in the 2nd and 3rd lines. If others are 1/10 or less more of the limit, no necessary to be indicated.

4.1.4. Test Setup

See clause 2.4 for block diagram of test setup.

4.1.5. Test Results of Conducted Spurious Emissions – RX Operating

Please refer to Appendix B and C.

5. MEASUREMENT OF OTHER PARAMETERS

5.1. Interference Prevention Function

5.1.1. Limit

Item	Limits
Identification	≥48bits

5.1.2. Measuring Instruments

No.	Description	ACS No.	Manufacturer	Model	Serial Number	Approved type
1.	Wireless Router	---	D-Link	DI-624+A	NI624+AC EUA1	☒ FCC ID: KA2DI524 ☐ BSMI ID

5.1.3. Test Procedures

1. In the case that the EUT has the function of automatically transmitting the identification code:
 - a. Transmit the predetermined identification codes form 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 form the counterpart.
 - b. Check if communication is normal.
 - c. Transmit the signals other than predetermined ID codes form the counterpart.
 - d. check if the EUT stops the transmission, or if it displays that identification codes are different from the predetermined ones.

5.1.4. Test Results

TX: The transmitting mode of EUT is on normal operating, the interference prevention function is okay.

RX: The receiving mode of EUT is on normal operating, the interference prevention function is okay.

The ID Code of this WiFi device is 3C:9F:CD:57:94:DF as below list :

3C:9F:CD:57:94:DF

5.2. Construction Protection

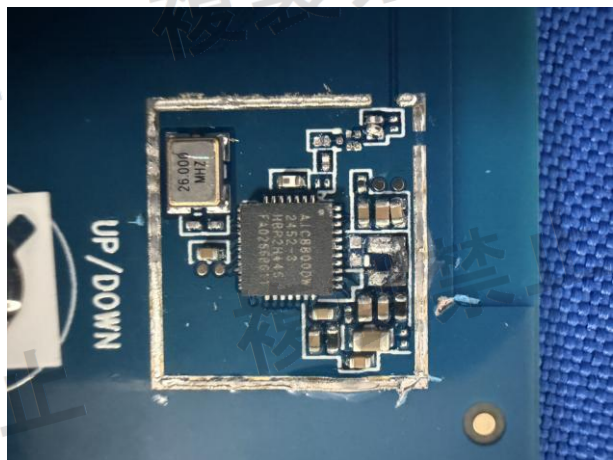
5.2.1. Limit

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

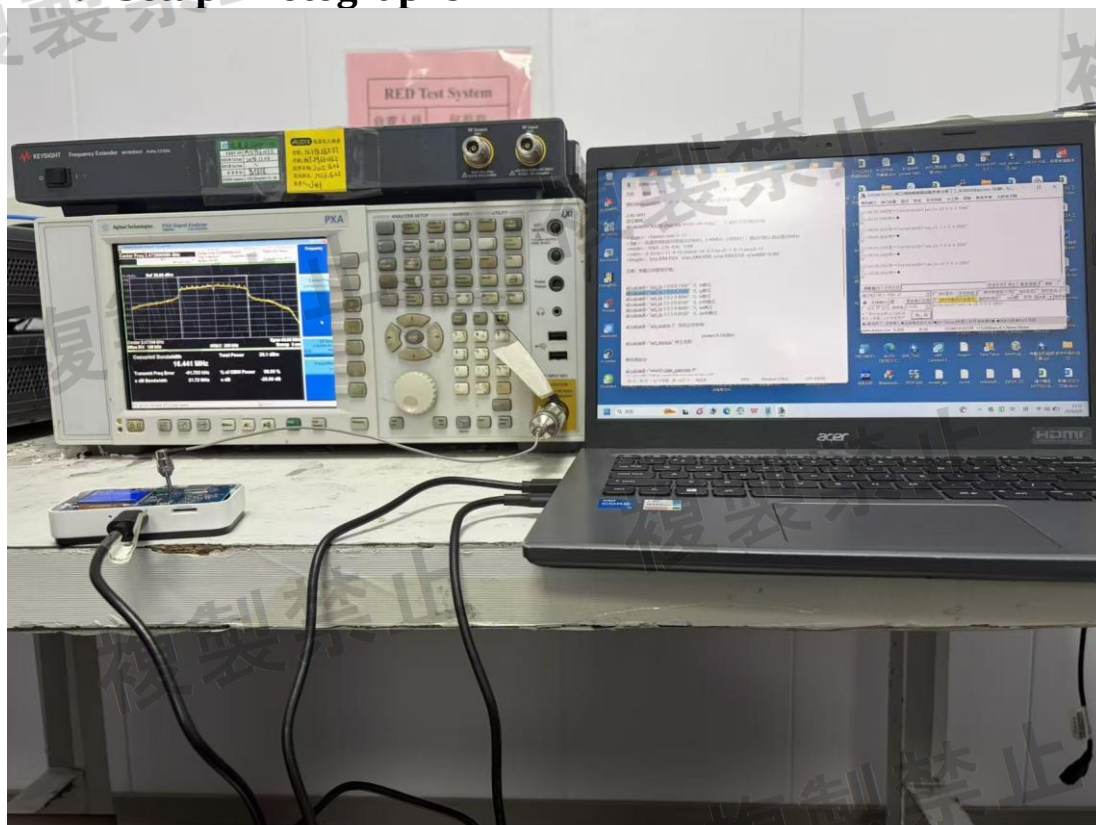
5.2.2. Confirmation Method

☐	Sealed with special screws.
☐	Plastic chassis is being welded using ultrasonic waves.
☐	Chassis is glued using a special adhesive.
☐	Metal covers are spot-fused.
☐	Cover is specially interlocked.
☒	RF and Modulation components are covered with shielding case and this shielding case is soldered.
☐	RF modulation parts and ID-ROM be welded using the BGA Method.
☐	Shield case is welded at RF and modulation parts and ID-ROM is glued at its lead with a special adhesive.
☐	Shield case is welded at RF and modulation parts, and ID-ROM is glued with a non-transparent laminating agent.
☐	Other:

5.2.3. The Photos of Construction Protection



Appendix A. Setup Photographs



Appendix B Test Results

B.1 Antenna Power

EUT: Macaroon LTE Mobile Router		
M/N: SE2		
Date: 2026-01-28	Pressure: 102.1 kpa	Humidity: 52.2%
Tested by: Epoch	Test Site: RF site	Temperature: 23.3°C

Mode	CH	power set (dBm)	Antenna Power (mW/MHz)	Tolerance (%)	Limit (mW/MHz)
11b	CH1	17	8.5979	-9.50	10 or less Tolerance ≤+20%
	CH7		7.4319	-21.77	
	CH13		9.5003	0.00	
11g	CH1	16	2.9932	-25.17	10 or less Tolerance ≤+20%
	CH7		3.1205	-21.99	
	CH13		4.0318	0.80	
11n HT20	CH1	15	2.3431	-21.90	10 or less Tolerance ≤+20%
	CH7		1.9915	-33.62	
	CH13		2.8009	-6.64	
11n HT40	CH3	15	0.8679	-42.14	5 or less Tolerance ≤+20%
	CH7		0.9449	-37.01	
	CH11		1.2301	-18.00	
11ax HE20	CH1	15	2.4386	-18.71	10 or less Tolerance ≤+20%
	CH7		1.9794	-34.02	
	CH13		2.8307	-5.64	
11ax HE40	CH3	15	0.8717	-41.89	5 or less Tolerance ≤+20%
	CH7		0.9829	-34.48	
	CH11		1.2250	-18.34	

Rated Power:

11b: 9.5 mW/MHz

11g: 4 mW/MHz

11nHT20: 3 mW/MHz

11nHT40: 1.5 mW/MHz

11axHE20: 3mW/MHz

11axHE40: 1.5mW/MHz

Duty cycle:

11b: 55.660%

11g: 25.333%

11nHT20: 33.792%

11nHT40: 33.202%

11axHE20: 28.085%

11axHE40: 28.178%

Conclusion: PASS

B.2 Frequency Tolerance

EUT: Macaroon LTE Mobile Router

M/N: SE2

Date: 2026-02-06

Pressure: 102.3 kpa

Humidity: 52.4%

Tested by: Epoch

Test Site: RF site

Temperature: 23.3°C

CH	Reading (MHz)	Target Frequency (MHz)	Result (ppm)	Limit (ppm)
CH1	2411.97323	2412	-11.10	$\leq \pm 50$
CH3	2421.97353	2422	-10.93	$\leq \pm 50$
CH7	2441.97273	2442	-11.17	$\leq \pm 50$
CH11	2461.97358	2462	-10.73	$\leq \pm 50$
CH13	2471.97248	2472	-11.13	$\leq \pm 50$

Conclusion : PASS

B.3 Occupied Bandwidth and Spread-spectrum Bandwidth Measurement

(99% BW)

EUT: Macaroon LTE Mobile Router		
M/N: SE2		
Date: 2026-02-05~09	Pressure: 102.3 kpa	Humidity: 52.3%
Tested by: Epoch	Test Site: RF site	Temperature: 23.3°C

Test Mode	CH	99% Bandwidth (MHz)	Limit (MHz)
11b	CH1	14.377	≤26MHz
	CH7	14.597	≤26MHz
	CH13	14.347	≤26MHz
11g	CH1	16.401	≤40MHz
	CH7	16.485	≤40MHz
	CH13	16.416	≤40MHz
11n HT20	CH1	17.538	≤40MHz
	CH7	17.630	≤40MHz
	CH13	17.564	≤40MHz
11n HT40	CH3	35.927	≤40MHz
	CH7	36.077	≤40MHz
	CH11	35.931	≤40MHz
11ax HE20	CH1	18.797	≤40MHz
	CH7	18.920	≤40MHz
	CH13	18.748	≤40MHz
11ax HE40	CH3	37.466	≤40MHz
	CH7	37.612	≤40MHz
	CH11	37.361	≤40MHz

Conclusion: Pass

B.4 Transmitter Spurious Emissions (Conducted)

EUT: Macaroon LTE Mobile Router		
M/N: SE2		
Test date: 2026-02-06~24	Pressure: 102.1 kpa	Humidity: 52.2%
Tested by: Epoch	Test Site: RF Site	Temperature: 23.3 °C

Test Mode	11b/CH1,CH7,CH13			Limit	Results
	2412	2442	2472		
30~1000MHz	-61.676	-61.366	-61.347	$\leq 2.5\mu\text{W/MHz}$ (-26dBm/MHz)	PASS
1000~2387MHz	-48.182	-56.822	-58.301	$\leq 2.5\mu\text{W/MHz}$ (-26dBm/MHz)	PASS
2387~2400MHz	-31.014	-52.478	-49.290	$\leq 25\mu\text{W/MHz}$ (-16dBm/MHz)	PASS
2483.5~2496.5MHz	-56.133	-52.584	-28.436	$\leq 25\mu\text{W/MHz}$ (-16dBm/MHz)	PASS
2496.5~13000MHz	-53.900	-49.923	-46.051	$\leq 2.5\mu\text{W/MHz}$ (-26dBm/MHz)	PASS
Test Mode	11g/ CH1,CH7,CH13			Limit	Results
	2412	2442	2472		
30~1000MHz	-61.125	-60.366	-61.095	$\leq 2.5\mu\text{W/MHz}$ (-26dBm/MHz)	PASS
1000~2387MHz	-40.231	-45.751	-57.229	$\leq 2.5\mu\text{W/MHz}$ (-26dBm/MHz)	PASS
2387~2400MHz	-34.938	-29.903	-41.859	$\leq 25\mu\text{W/MHz}$ (-16dBm/MHz)	PASS
2483.5~2496.5MHz	-46.228	-31.916	-30.206	$\leq 25\mu\text{W/MHz}$ (-16dBm/MHz)	PASS
2496.5~13000MHz	-57.195	-56.690	-48.218	$\leq 2.5\mu\text{W/MHz}$ (-26dBm/MHz)	PASS
Test Mode	11n HT20/ CH1,CH7,CH13			Limit	Results
	2412	2442	2472		
30~1000MHz	-60.814	-60.997	-60.502	$\leq 2.5\mu\text{W/MHz}$ (-26dBm/MHz)	PASS
1000~2387MHz	-34.326	-43.927	-58.082	$\leq 2.5\mu\text{W/MHz}$ (-26dBm/MHz)	PASS
2387~2400MHz	-24.560	-31.553	-44.426	$\leq 25\mu\text{W/MHz}$ (-16dBm/MHz)	PASS
2483.5~2496.5MHz	-43.333	-29.916	-24.348	$\leq 25\mu\text{W/MHz}$ (-16dBm/MHz)	PASS
2496.5~13000MHz	-56.905	-57.320	-48.938	$\leq 2.5\mu\text{W/MHz}$ (-26dBm/MHz)	PASS

Test Mode	11n HT40/ CH3,CH7,CH11			Limit	Results
	2422	2442	2462		
30~1000MHz	-60.758	-60.847	-60.916	$\leq 2.5\mu\text{W/MHz}$ (-26dBm/MHz)	PASS
1000~2387MHz	-30.769	-37.371	-46.996	$\leq 2.5\mu\text{W/MHz}$ (-26dBm/MHz)	PASS
2387~2400MHz	-28.382	-26.081	-30.935	$\leq 25\mu\text{W/MHz}$ (-16dBm/MHz)	PASS
2483.5~2496.5MHz	-35.688	-24.944	-25.150	$\leq 25\mu\text{W/MHz}$ (-16dBm/MHz)	PASS
2496.5~13000MHz	-57.266	-56.885	-56.098	$\leq 2.5\mu\text{W/MHz}$ (-26dBm/MHz)	PASS
Test Mode	11ax HE20/ CH1,CH7,CH13			Limit	Results
	2412	2442	2472		
30~1000MHz	-61.584	-60.640	-59.687	$\leq 2.5\mu\text{W/MHz}$ (-26dBm/MHz)	PASS
1000~2387MHz	-31.936	-57.221	-57.516	$\leq 2.5\mu\text{W/MHz}$ (-26dBm/MHz)	PASS
2387~2400MHz	-24.872	-31.593	-45.033	$\leq 25\mu\text{W/MHz}$ (-16dBm/MHz)	PASS
2483.5~2496.5MHz	-47.636	-31.666	-22.443	$\leq 25\mu\text{W/MHz}$ (-16dBm/MHz)	PASS
2496.5~13000MHz	-56.471	-54.391	-51.005	$\leq 2.5\mu\text{W/MHz}$ (-26dBm/MHz)	PASS
Test Mode	11ax HE40/ CH3,CH7,CH11			Limit	Results
	2422	2442	2462		
30~1000MHz	-59.771	-61.474	-58.847	$\leq 2.5\mu\text{W/MHz}$ (-26dBm/MHz)	PASS
1000~2387MHz	-33.264	-45.642	-46.998	$\leq 2.5\mu\text{W/MHz}$ (-26dBm/MHz)	PASS
2387~2400MHz	-28.936	-25.044	-30.193	$\leq 25\mu\text{W/MHz}$ (-16dBm/MHz)	PASS
2483.5~2496.5MHz	-35.876	-26.839	-25.107	$\leq 25\mu\text{W/MHz}$ (-16dBm/MHz)	PASS
2496.5~13000MHz	-57.244	-57.296	-57.089	$\leq 2.5\mu\text{W/MHz}$ (-26dBm/MHz)	PASS

B.5 Carrier Sense Function

EUT: Macaroon LTE Mobile Router		
M/N: SE2		
Test date: 2026-02-03	Pressure: 102.1 kpa	Humidity: 52.2%
Tested by: Epoch	Test Site: RF Site	Temperature: 23.3 °C

Test Mode	Type of the interference Signal	Interference Singnal Level(mV/m)	Does the EUT stop transmitting
WIFI2.4G 2422	Unmodulated	100	Yes
Conclusion: PASS			
Note: After the pre test, all modes are meet the requirements, and the data record is in 11ax mode.			

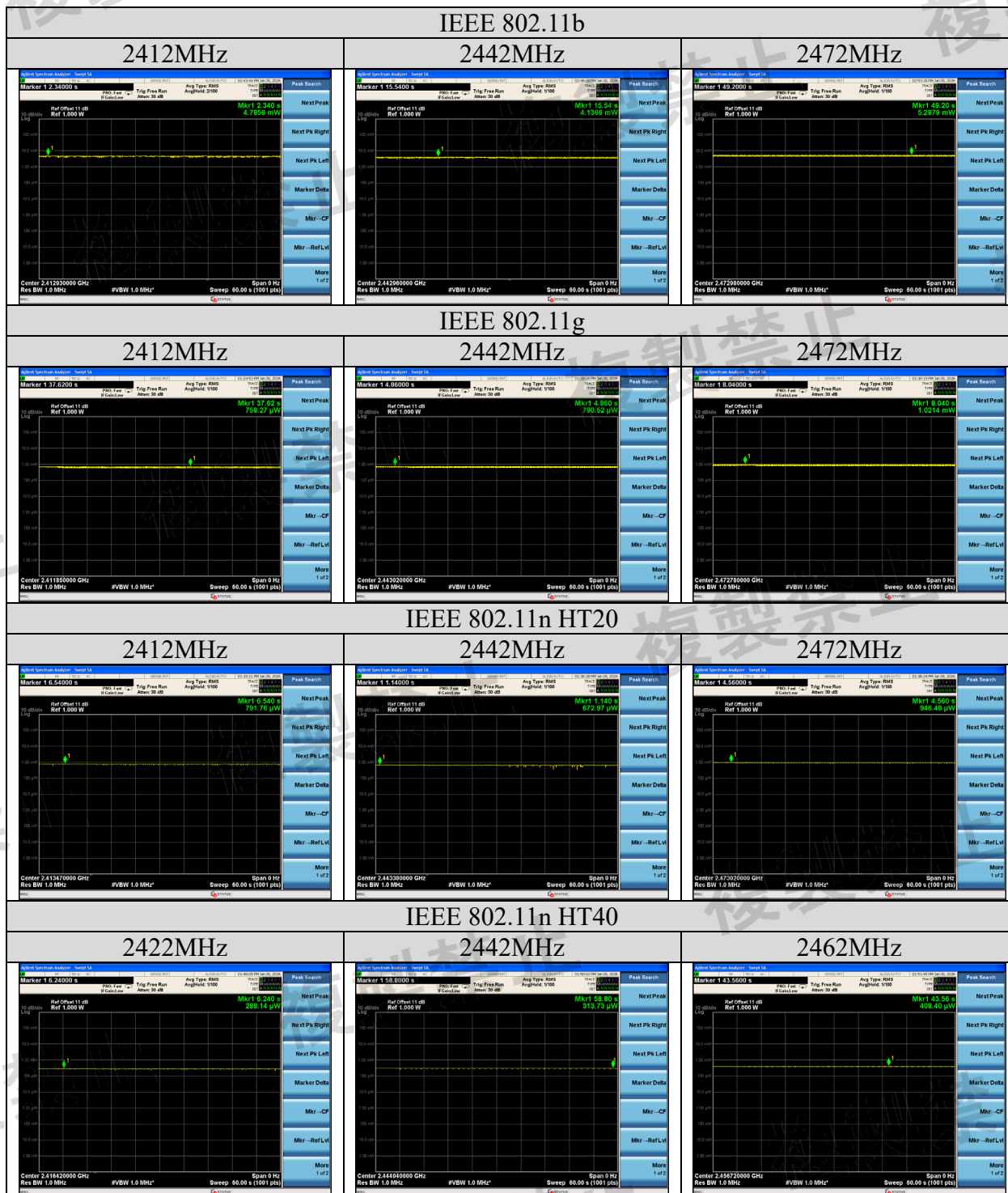
B.6 Secondary Radiated Emissions (Conducted)

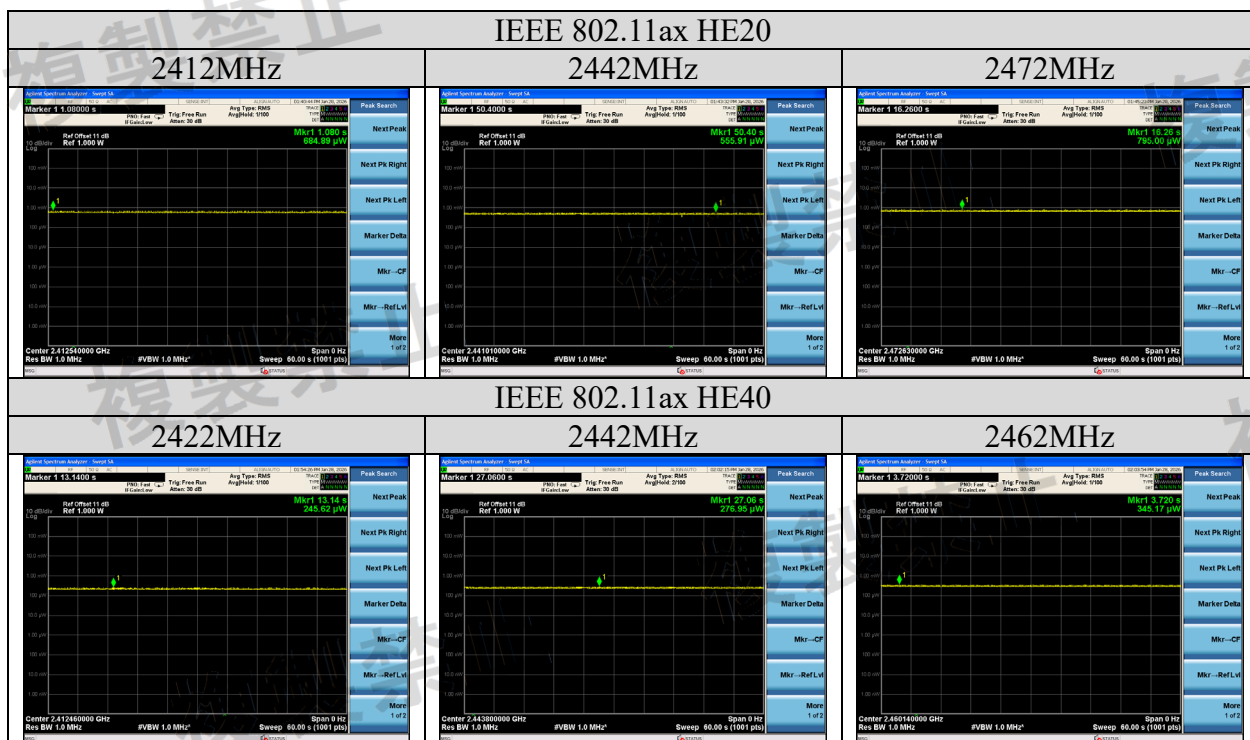
EUT: Macaroon LTE Mobile Router		
M/N: SE2		
Test date: 2026-02-06	Pressure: 102.1 kpa	Humidity: 52.2%
Tested by: Epoch	Test Site: RF Site	Temperature: 23.3 °C

Test Mode	11b/CH1,CH7,CH13			Limit	Results
	2412	2442	2472		
30~1000MHz	-76.045	-73.660	-79.380	$\leq 4\text{nW}$ (-54dBm/100kHz)	PASS
1000 ~13000MHz	-66.102	-61.852	-66.674	$\leq 20\text{n W}$ (-47dBm/MHz)	PASS
Test Mode	11g/CH1,CH7,CH13			Limit	Results
	2412	2442	2472		
30~1000MHz	-80.847	-78.274	-75.103	$\leq 4\text{nW}$ (-54dBm/100kHz)	PASS
1000 ~13000MHz	-65.458	-66.366	-64.396	$\leq 20\text{n W}$ (-47dBm/MHz)	PASS
Test Mode	11n HT20/CH1,CH7,CH13			Limit	Results
	2412	2442	2472		
30~1000MHz	-79.949	-79.372	-78.808	$\leq 4\text{nW}$ (-54dBm/100kHz)	PASS
1000 ~13000MHz	-63.106	-64.242	-66.147	$\leq 20\text{n W}$ (-47dBm/MHz)	PASS
Test Mode	11n HT40/CH3,CH7,CH11			Limit	Results
	2422	2442	2462		
30~1000MHz	-80.448	-80.378	-80.829	$\leq 4\text{nW}$ (-54dBm/100kHz)	PASS
1000 ~13000MHz	-66.679	-65.889	-65.926	$\leq 20\text{n W}$ (-47dBm/MHz)	PASS
Test Mode	11ax HE20/CH1,CH7,CH13			Limit	Results
	2412	2442	2472		
30~1000MHz	-76.721	-77.423	-80.362	$\leq 4\text{nW}$ (-54dBm/100kHz)	PASS
1000 ~13000MHz	-66.771	-65.930	-66.954	$\leq 20\text{n W}$ (-47dBm/MHz)	PASS
Test Mode	11ax HE40/CH3,CH7,CH11			Limit	Results
	2422	2442	2462		
30~1000MHz	-80.576	-80.368	-80.926	$\leq 4\text{nW}$ (-54dBm/100kHz)	PASS
1000 ~13000MHz	-66.143	-65.614	-65.639	$\leq 20\text{n W}$ (-47dBm/MHz)	PASS

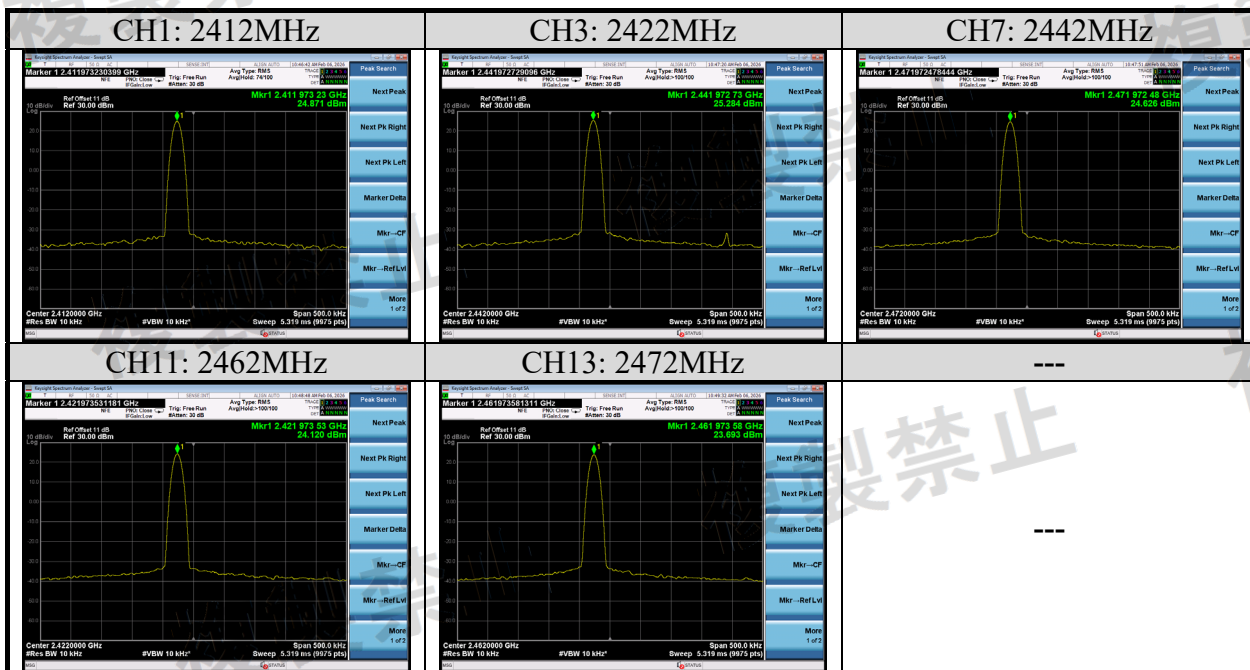
Appendix C Test Plots

C.1 Antenna Power

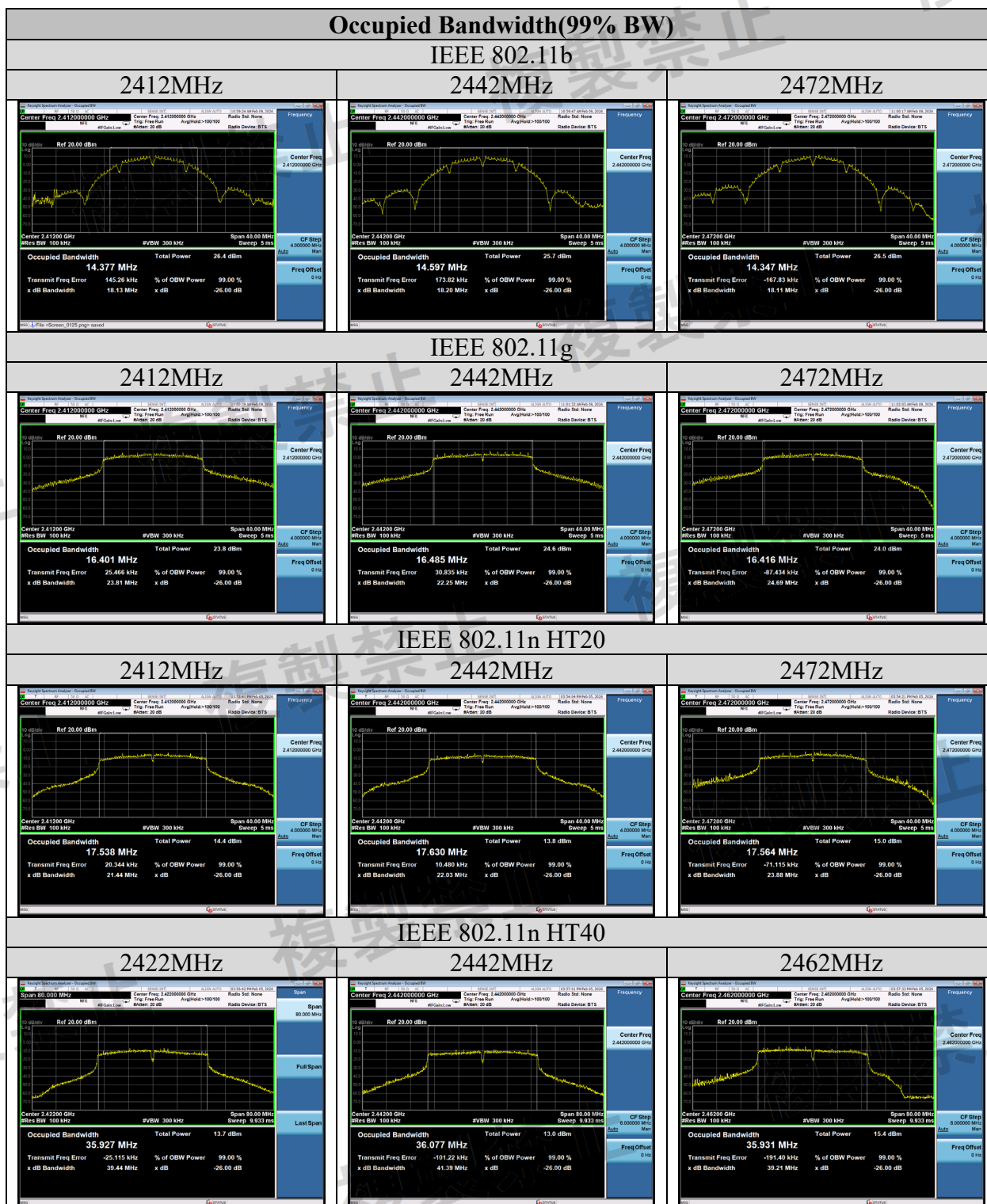


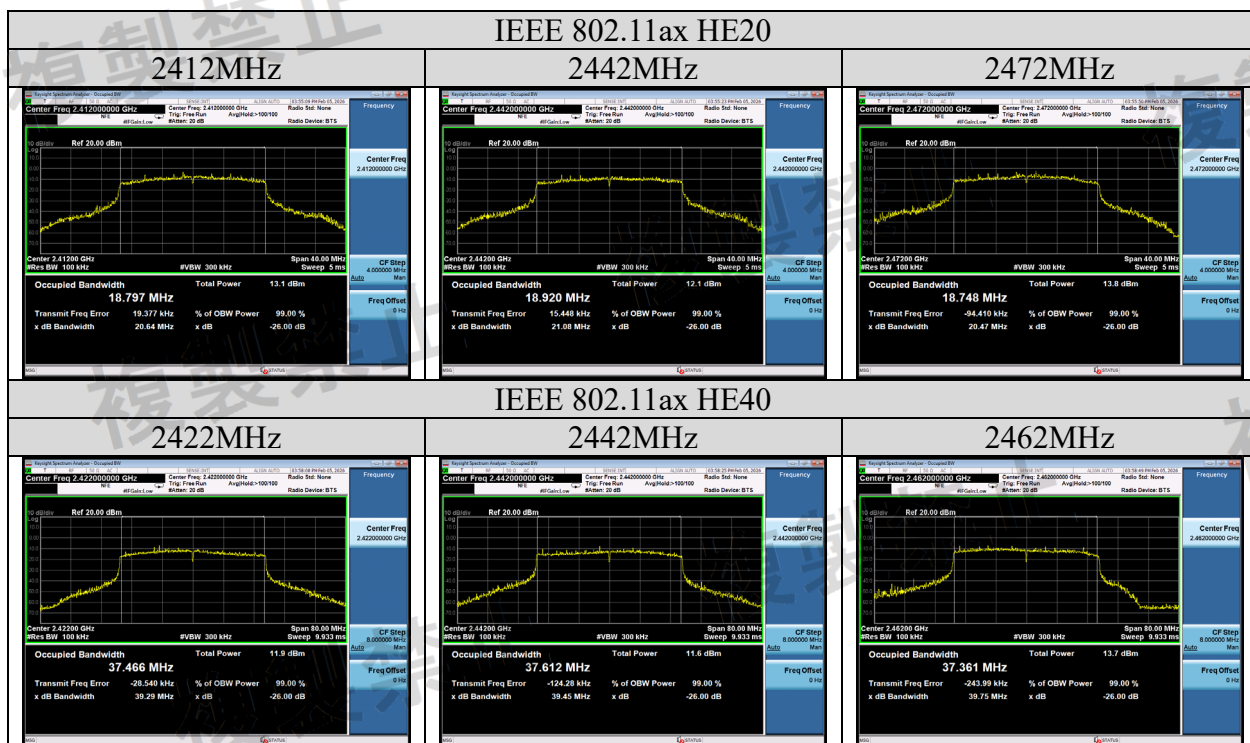


C.2 Frequency Tolerance

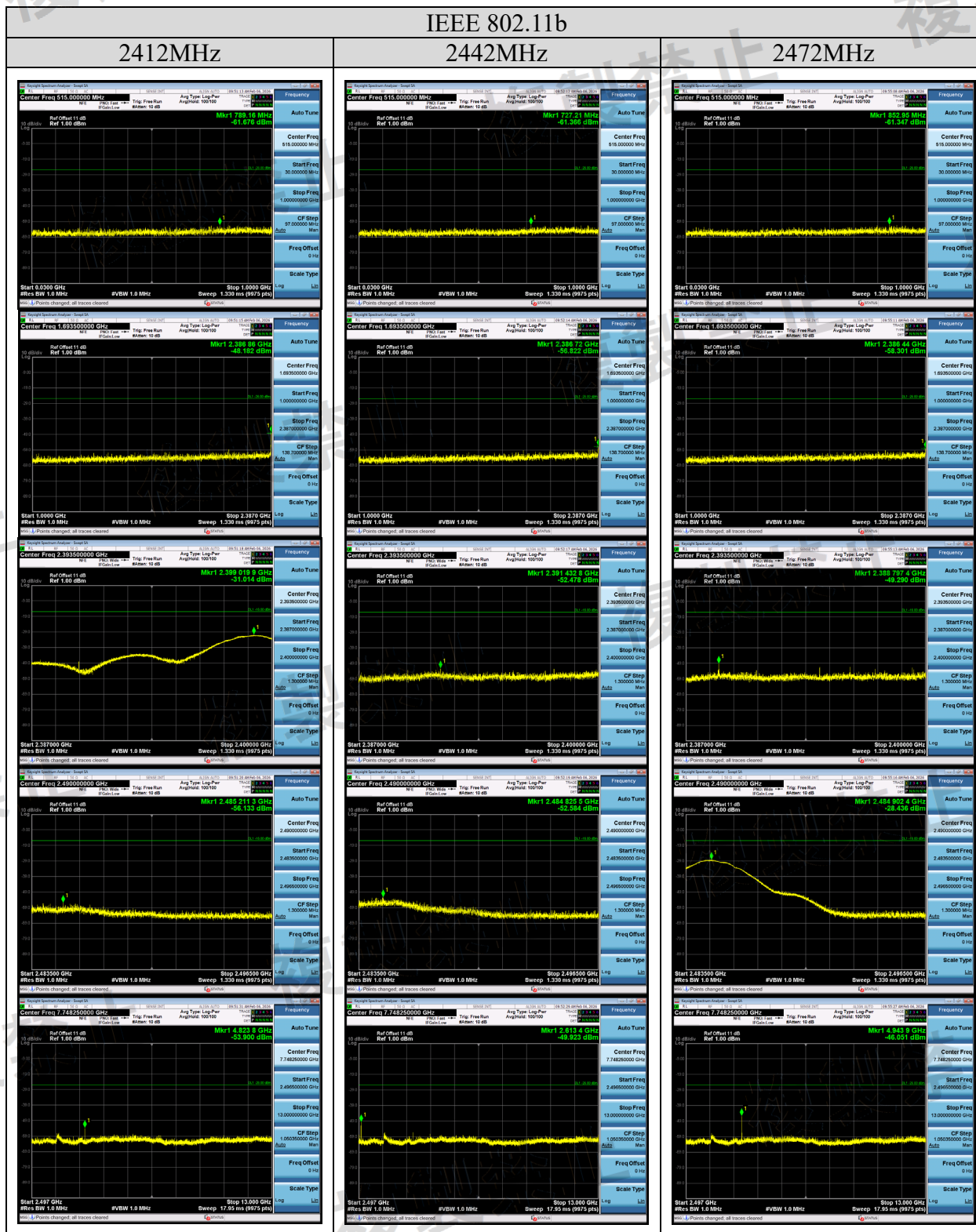


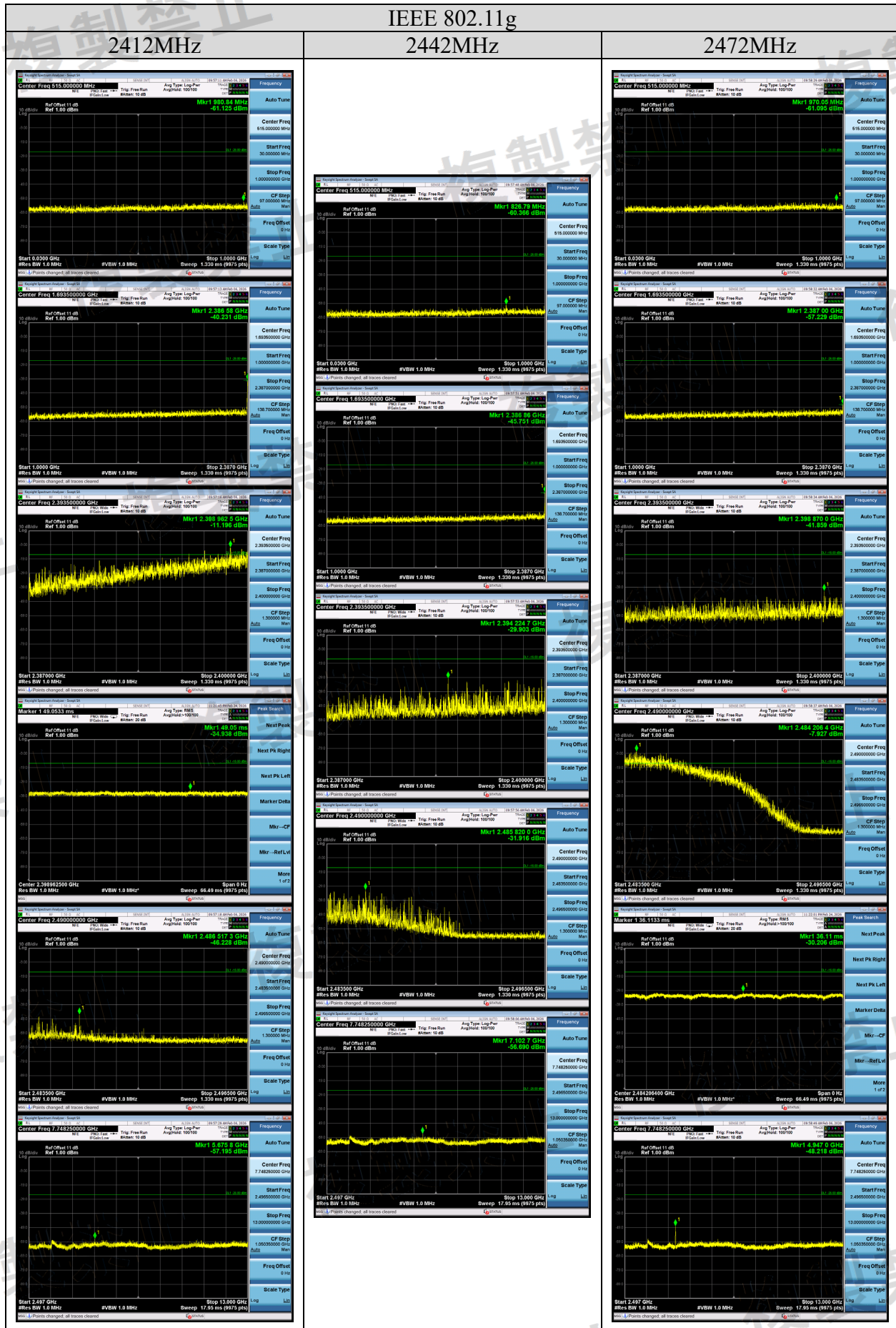
C.3 Occupied Bandwidth and Spread-spectrum Bandwidth / Spread Factor Measurement

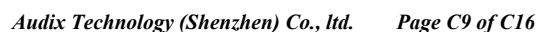




C.4 Transmitter Spurious Emissions (Conducted)

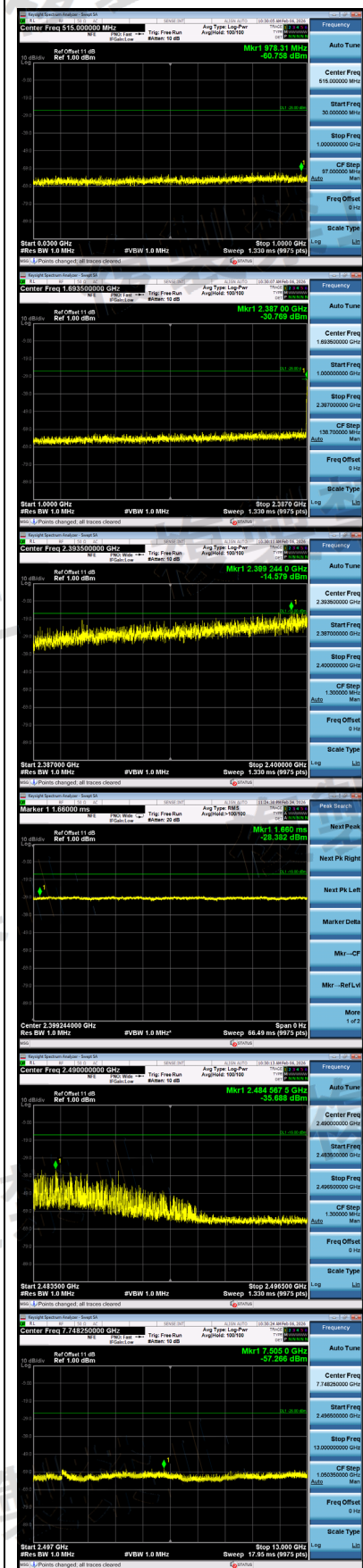




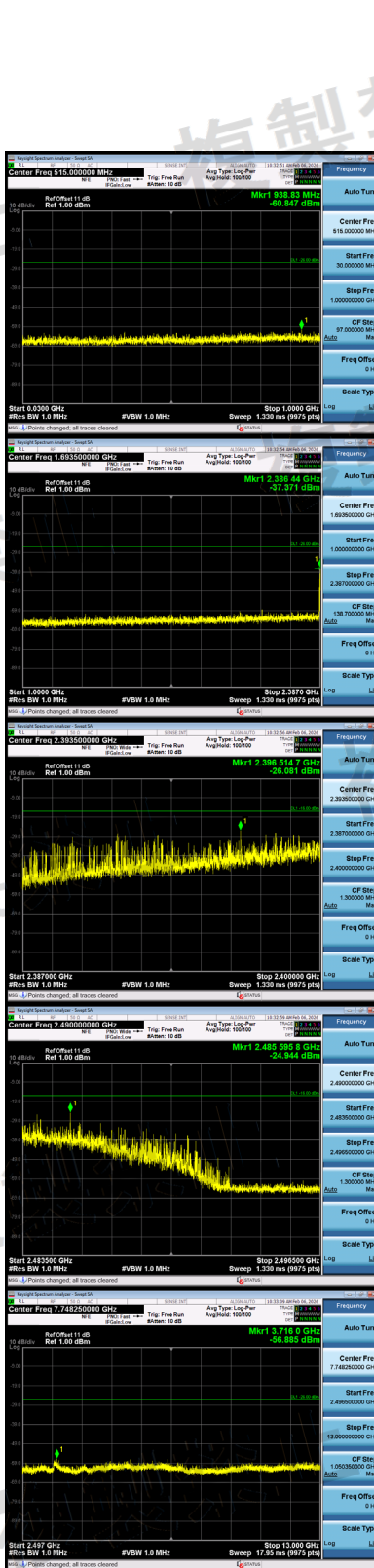


IEEE 802.11n HT40

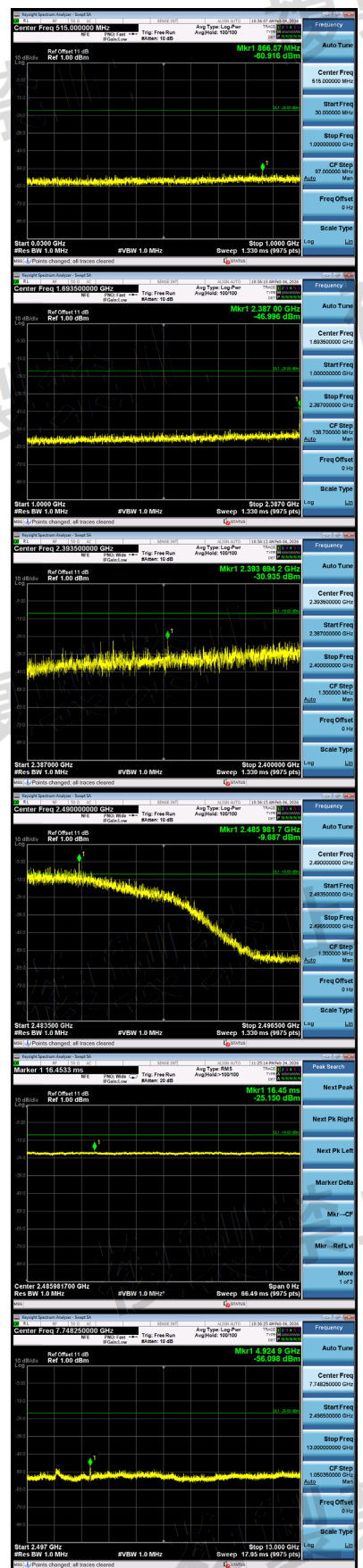
2422MHz



2442MHz

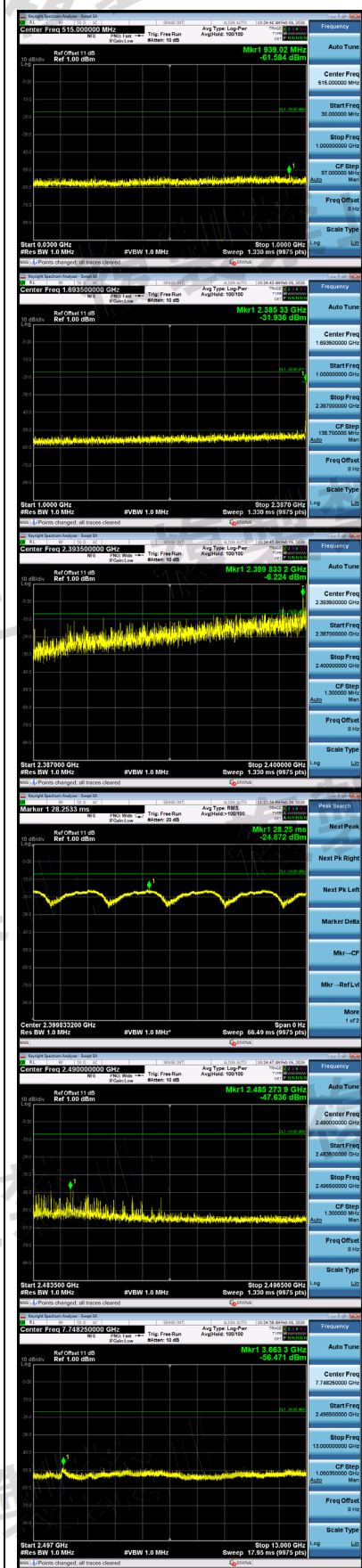


2462MHz

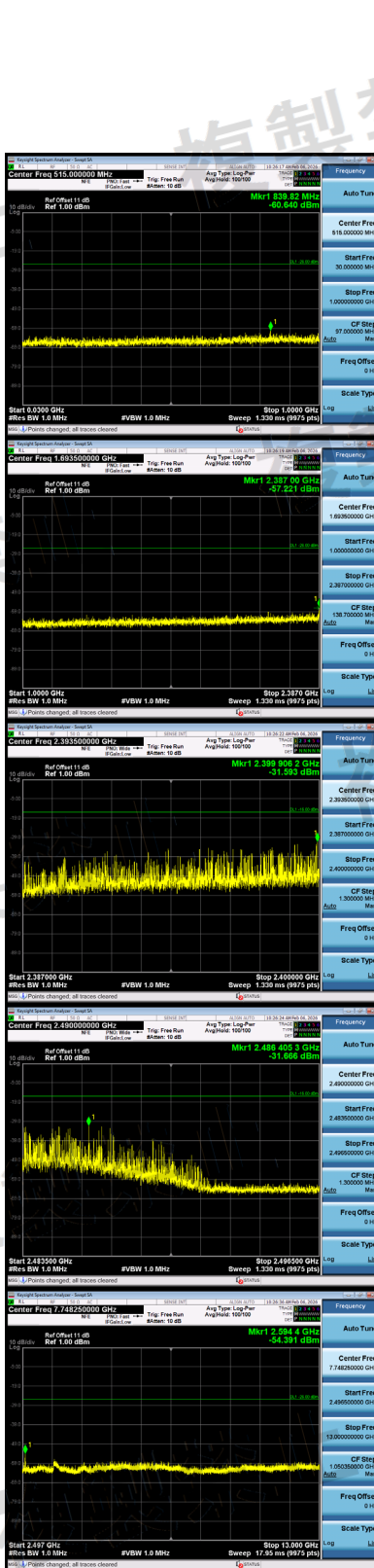


IEEE 802.11ax HE 20

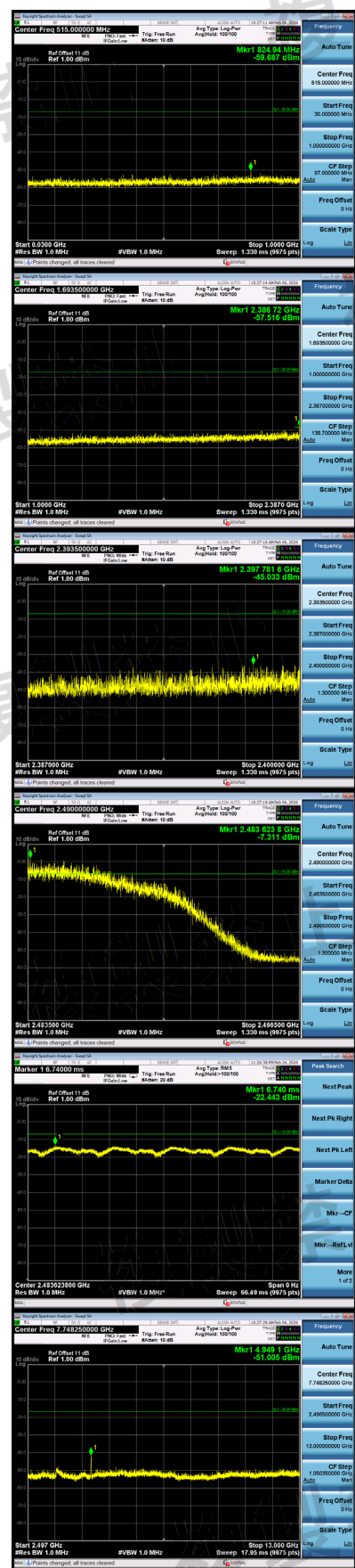
2412MHz

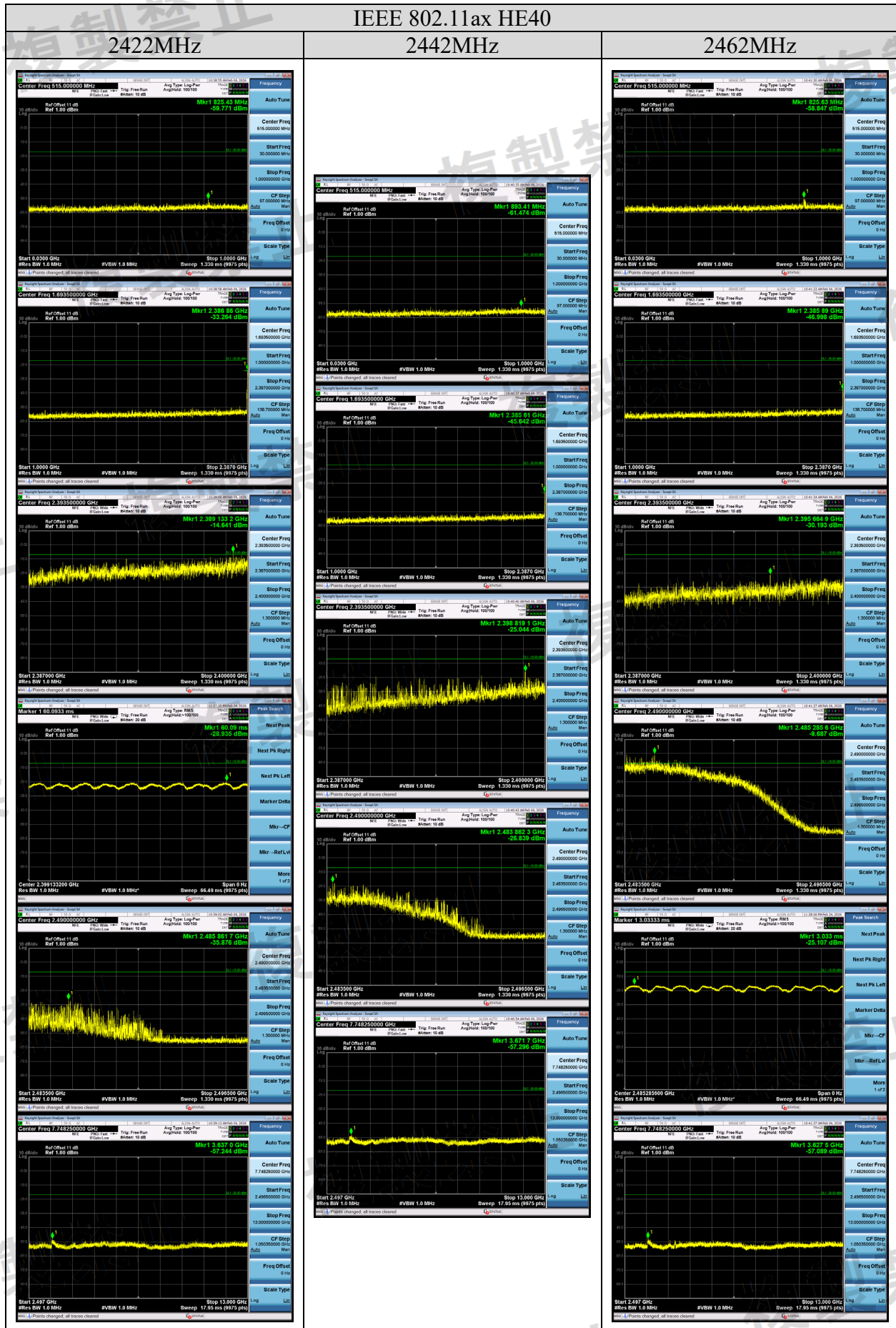


2442MHz

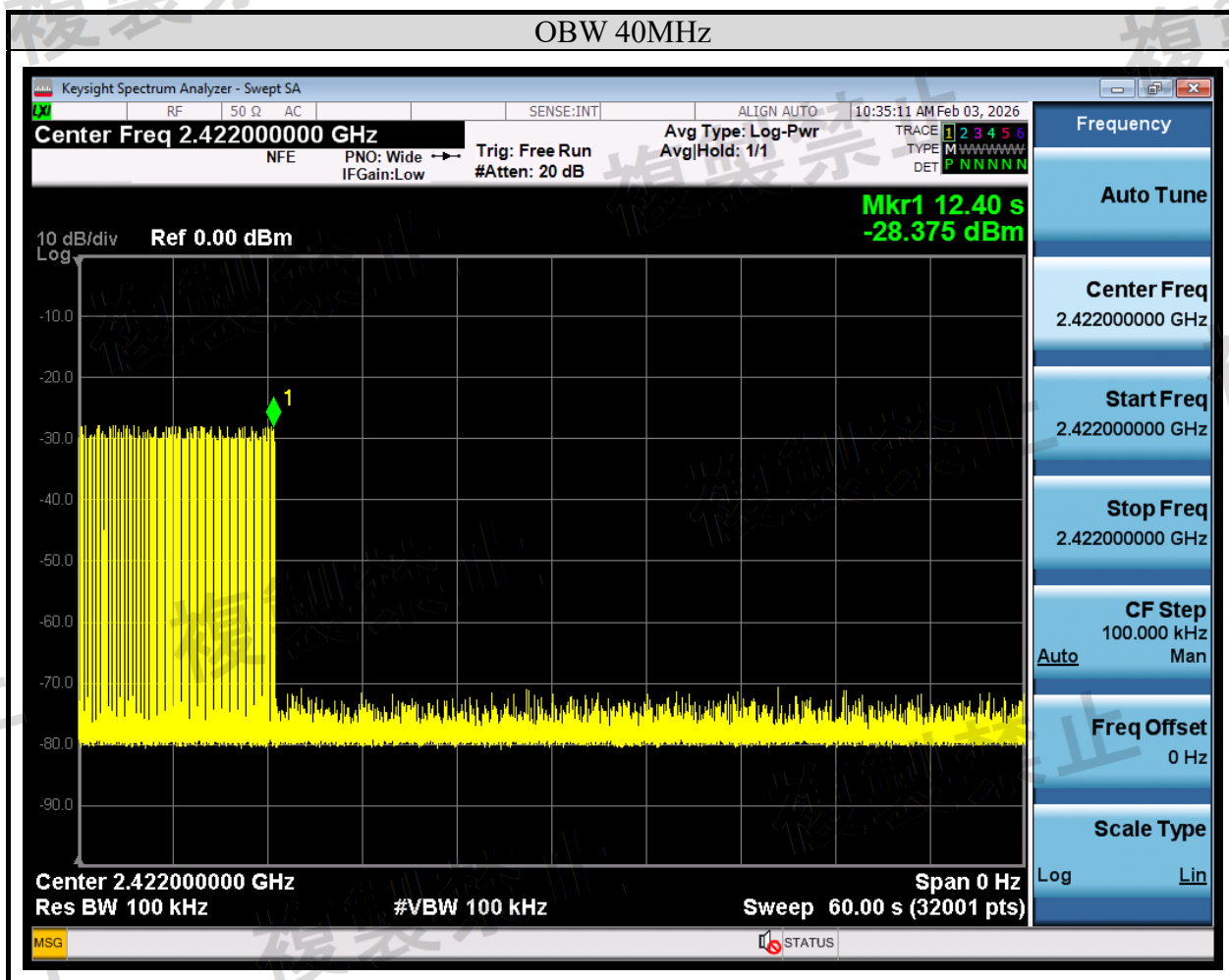


2472MHz





C.5 Carrier Sense Function

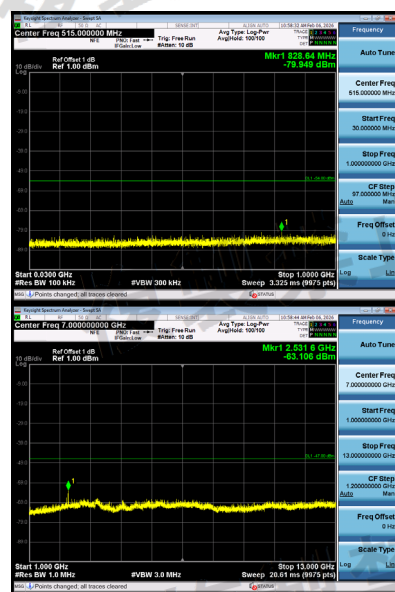


C.6 Secondary Radiated Emissions (Conducted)

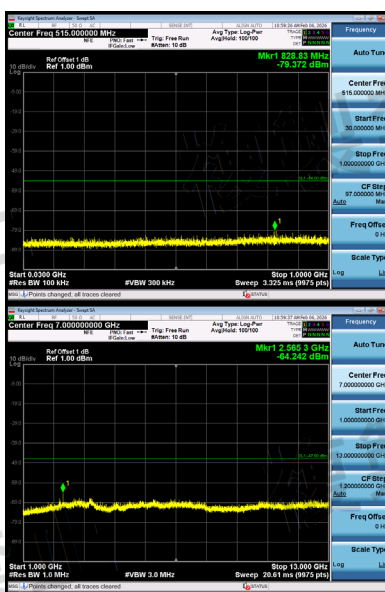


IEEE 802.11n HT20

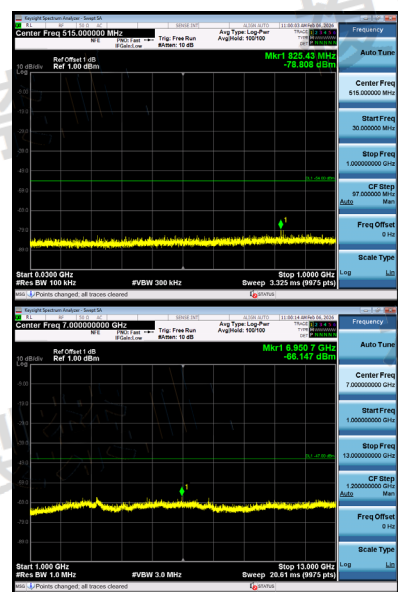
2412MHz



2442MHz

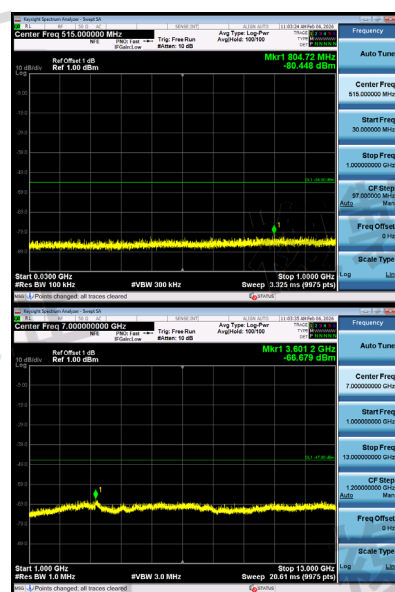


2472MHz

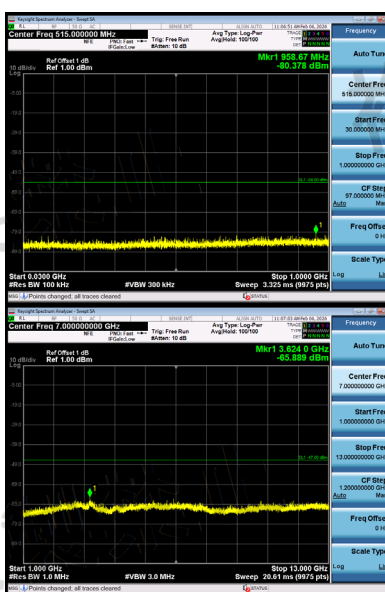


IEEE 802.11n HT40

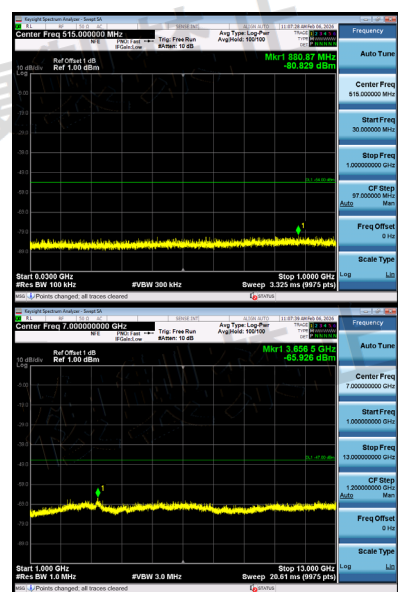
2422MHz



2442MHz



2462MHz

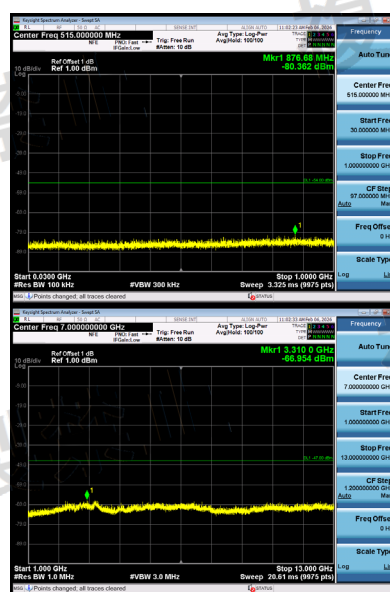
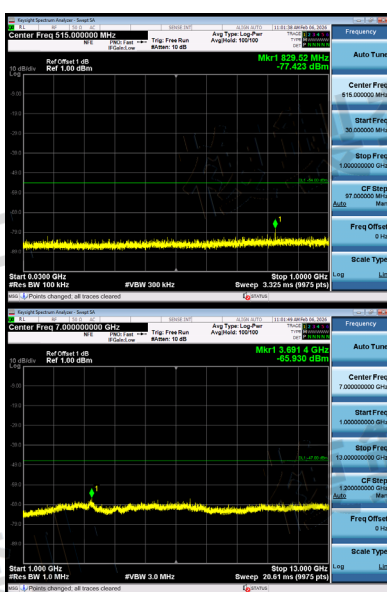
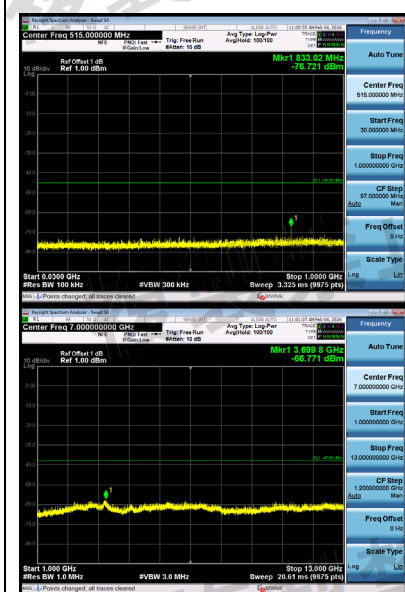


IEEE 802.11ax HE20

2412MHz

2442MHz

2472MHz



IEEE 802.11ax HE40

2422MHz

2442MHz

2462MHz

