



Test Report

Application No.: DNT2511210586R13414-15972
Applicant: Dr.JOY Co., Ltd.
Address of Applicant: 17F, Toranomon Hills Station Tower, 2-6-1 Toranomon, Minato-ku, Tokyo, Japan
EUT Description: WIFI Sound and Light Alarm
Model No.: DJP01
Trade Mark: /
Standards: MIC Notice No.88 Appendix No.43
Item 19 of Article 2 Paragraph 1
Date of Receipt: 2025/11/21
Date of Test: 2025/11/22 to 2025/12/10
Date of Issue: 2025/12/22
Test Result: **PASS ***

Prepared By: Wayne Lin (Testing Engineer)

Reviewed By: Pencils Chen (Project Engineer)

Approved By: Heise Shon (Manager)



Note: If there is any objection to the results in this report, please submit a written inquiry to the company within 15 days from the date of receiving the report. The test report is effective only with both signature and specialized stamp, and is issued by the company in accordance with the requirements of the "Conditions of Issuance of Test Reports" printed in the attached page. Unless otherwise stated, the results presented in this report only apply to the samples tested this time. Partial reproduction of this report is not allowed unless approved by the company in writing.

Dongguan DN Testing Co., Ltd.

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Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V2.0	/	Dec.22, 2025	Valid	Original Report



1 Test Summary

Test	Limit/Severity		Result
Antenna Requirement	Notice 88 Appendix 43, B-1 (1) & (2)		PASS
Number of Carrier	The number of the subcarriers per MHz is1 or more		PASS
Test frequency	Notice 88 Appendix 43, A-3		PASS
Frequency Error	≤ ±50 ppm		PASS
Occupied Bandwidth	OFDM: 40 MHz or less DSSS: 26 MHz or less		PASS
	Other: ≤26MHz		
Spread-spectrum Bandwidth	≥ 500 kHz (Only Spread Spectrum)		PASS
Antenna Power and Tolerance	DSSS: 20MHz systems	≤ 10mW/MHz	PASS
	OFDM: 40MHz systems	≤ 5mW/MHz	
	Tolerance:	+20%	
Spurious Emission of Tx	< 2387MHz	≤ 2.5μW/MHz	PASS
	2387 ~ 2400MHz	≤ 25μW/MHz	
	2483.5 ~ 2496.5MHz	≤ 25μW/MHz	
	>2496.5MHz	≤ 2.5μW/MHz	
Interference prevention capability	Notice 88 Appendix 43, 44, 45		PASS
Carrier Sense	Notice 88 Appendix 43, 44, 45		N/A
RF accessibility	Notice 88 Appendix 43, 44, 45		PASS
Spurious Emission of Rx	(1) Below 1 GHz: ≤ 4 nW (2) Above 1 GHz: ≤ 20 nW		PASS



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2 General Information

2.1 General Description of E.U.T.

Manufacturer:	Dr.JOY Co., Ltd.		
Address of Manufacture:	17F, Toranomon Hills Station Tower, 2-6-1 Toranomon, Minato-ku, Tokyo, Japan		
Product Name:	WIFI Sound and Light Alarm		
Model No.:	DJP01		
Additional Model:	/		
Trade Mark:	/		
Hardware Version:	V1.0		
Software Version:	V1.0		
Operating Frequency:	IEEE 802.11b/g/n(HT20): 2412-2472MHz;		
Declared Antenna Power:	IEEE 802.11b/g/n(HT20): 5mW/MHz		
Type of Modulation:	IEEE 802.11b mode: DSSS IEEE 802.11g/n mode: OFDM		
Antenna Type:	☐ External, ☒ Integrated		
Antenna Gain*:	☒ Provided by client		
	0.38dBi (ANT1)		
RF Cable*:	☒ Provided by client		
	0.5dB(0.6~1GHz)	0.8dB(1.4~2GHz)	1.0dB(2.1~2.7GHz)
	1.5dB(3~4GHz)	1.8dB(4.4~6GHz)	
power supply:	Input:DC 5V		
Note:			
*Since the above data and/or information is provided by the client relevant results or conclusions of this report are only made for these data and/or information, DNT is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.			



2.2 Description of Support Units

The EUT has been tested independently.

2.3 Test Location

Company:	Dongguan DN Testing Co., Ltd
Address:	No. 1, West Fourth Street, South Xinfu Road, Wusha Liwu, Chang'an Town, Dongguan City, Guangdong P.R.China
Test engineer:	Wayne Lin

Remark: Our test report is under the quality assurance system according to ISO17025.

- **FCC, USA**

Designation Number: CN1348

- **A2LA (Certificate No. 7050.01)**

DONGGUAN DN TESTING CO., LTD. is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 7050.01.

- **Innovation, Science and Economic Development Canada**

DONGGUAN DN TESTING CO., LTD. EMC Laboratory has been recognized by ISED as an accredited testing laboratory. CAB identifier is CN0149.

IC#: 30755.

2.4 Channel List

Operation Frequency of each channel (802.11b/g/n HT20)							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2412MHz	5	2432MHz	9	2452MHz	13	2472MHz
2	2417MHz	6	2437MHz	10	2457MHz		
3	2422MHz	7	2442MHz	11	2462MHz		
4	2427MHz	8	2447MHz	12	2467MHz		

2.5 Test Environment and Mode

Operating Environment:	
Temperature:	20~25.0 °C
Humidity:	45~56 % RH
Atmospheric Pressure:	101.0~101.30 KPa
Test mode:	
Transmitting mode:	Keep the EUT in transmitting mode with all kind of modulation and all kind of data rate.



2.6 Power Setting of Test Software

Software Name	EspRFTTestTool		
Frequency(MHz)	2412	2442	2472
IEEE 802.11b Setting	Default	Default	Default
IEEE 802.11g Setting	Default	Default	Default
IEEE 802.11n HT20 Setting	Default	Default	Default

2.7 Test Mode

The test mode was selected for the final test as listed below.

Test Item	Mode	Date Rate	Test Channel
Frequency Tolerance	IEEE 802.11b	1Mbps	Low/Middle/High
	IEEE 802.11g	6Mbps	Low/Middle/High
	IEEE 802.11n HT20	MCS0	Low/Middle/High
Occupied Bandwidth&Spread Bandwidth&Spreading Rate	IEEE 802.11b	1Mbps	Low/Middle/High
	IEEE 802.11g	6Mbps	Low/Middle/High
	IEEE 802.11n HT20	MCS0	Low/Middle/High
Spurious Emission Intensity	IEEE 802.11b	1Mbps	Low/Middle/High
	IEEE 802.11g	6Mbps	Low/Middle/High
	IEEE 802.11n HT20	MCS0	Low/Middle/High
Antenna Power&Antenna Power Tolerance& EIRP Power	IEEE 802.11b	1Mbps	Low/Middle/High
	IEEE 802.11g	6Mbps	Low/Middle/High
	IEEE 802.11n HT20	MCS0	Low/Middle/High
Secondary Radiated Emissions	Receive	-	-
Interference Prevention Function	Normal Use	-	-

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

No.	Item	Measurement Uncertainty
1	DTS Bandwidth	±0.0196%
2	Maximum Conducted Output Power	±0.686 dB
3	Maximum Power Spectral Density Level	±0.743 dB
4	Band-edge Compliance	±1.328 dB
5	Unwanted Emissions In Non-restricted Freq Bands	9KHz-1GHz:±0.746dB 1GHz-26GHz: ±1.328dB



2.9 Equipment List

For Connect EUT Antenna Terminal Test						
Description	Manufacturer	Model	Serial Number	Cal date	Due date	correcting mechanism
Signal Generator	Keysight	N5181A-6G	MY48180415	2025-10-21	2026-10-20	Dongguan DN Testing Co.,Ltd.
Signal Generator	Keysight	N5182B	MY57300617	2025-10-21	2026-10-20	Dongguan DN Testing Co.,Ltd.
Power supply	Keysight	E3640A	ZB2022656	2025-10-21	2026-10-20	Dongguan DN Testing Co.,Ltd.
Radio Communication Tester	R&S	CMW500	105082	2025-10-21	2026-10-20	Dongguan DN Testing Co.,Ltd.
Spectrum Analyzer	Aglient	N9010A	MY52221458	2025-10-21	2026-10-20	Dongguan DN Testing Co.,Ltd.
BT/WIFI Test Software	Tonscend	JS1120 V3.1.83	NA	NA	NA	NA
RF Control Unit	Tonscend	JS0806-2	22F8060581	NA	NA	NA
Power Sensor	Anritsu	ML2495A	2129005	2025-10-21	2026-10-20	Dongguan DN Testing Co.,Ltd.
Pulse Power Sensor	Anritsu	MA2411B	1911397	2025-10-21	2026-10-20	Dongguan DN Testing Co.,Ltd.
temperature and humidity box	SCOTEK	SCD-C40-80PRO	6866682020008	2025-10-21	2026-10-20	Dongguan DN Testing Co.,Ltd.
Voltmetre	FLUKE	F15B PRO	59755315WS	2025-10-21	2026-10-20	Dongguan DN Testing Co.,Ltd.

Note:

1. Calibration by the calibration agencies listed in the table correspond to paragraph 4 (ii) (c) of Article 24-2 in the Radio Law.

☐ (a) Calibration conducted by the National Institute of Information and Communications Technology (NICT) or a designated calibration agency under Article 102-18-1 of the Radio Act.

☐ (b) Calibration conducted based on the regulations of Article 135 or 144 of the Measurement Act.

☒ (c) Calibration conducted in foreign countries, which is equivalent to calibration conducted by the NICT or a designated calibration agency under Article 102-18-1 of the Radio Act.

☐ (d) Calibration, etc. conducted by using measuring instruments and other facilities listed at the bottom of appended table 3 of the Radio Act, which is to have been calibrated as described in (a) through (c) above.



3 Test Results

3.1 Radio Technical Requirements Specification

Table 1: Radio Technical Requirements Specification for 2.4 GHz band wide-band low-power data communication system (Item 19 of Article 2-1)

Items	Technical standard
Assigned frequency or designated frequency	2400-2483.5MHz
Communication method	One-way communication, simplex, semi-duplex, or duplex operation of digital signal transmission including spread spectrum
Tolerance of frequency ($\times 10^{-6}$)	$\leq \pm 50$ ppm
Tolerance of occupied bandwidth	Others: 26MHz or less
Antenna Gain	12.14dBi or less
Antenna power	(1) FH,FH+DS,FH+OFDM (using 2427MHz~2470.75MHz) : ≤ 3 mW/MHz (2) Spread spectrum system,but other than (1): ≤ 10 mW/MHz (3) OFDM, but other than (1) When occupied bandwidth ≤ 26 MHz: ≤ 10 mW/MHz When $26\text{MHz} < \text{occupied bandwidth} \leq 40\text{MHz}$: ≤ 5 mW/MHz (4) other than (1),(2),(3): ≤ 10 mW (1) DSSS& OFDM When occupied bandwidth ≤ 26 MHz: ≤ 12.14 dBm/MHz (For Omni-directional antenna) (2) OFDM When $26\text{MHz} < \text{occupied bandwidth} \leq 40\text{MHz}$: ≤ 9.13 dBm/MHz (For Omni-directional antenna)
Tolerance of spurious emission intensity	(< 2387 MHz: $2.5\mu\text{W/MHz}$ 2387 to 2400 MHz: $25\mu\text{W/MHz}$ 2483.5 through 2496.5 MHz: $25\mu\text{W/MHz}$ > 2496.5 MHz: $2.5\mu\text{W/MHz}$
Spreading bandwidth	DS, FH, FH+DS, FH+OFDM: 500kHz or more
Spreading rate of spectrum	For DS system; (Spreading bandwidth) / (Frequency corresponding to transmission rate) ≥ 5
Limit of secondary radiated emissions	(1) Below 1 GHz: 4nW (2) 1 GHz or higher: 20nW
Interference prevention function	Shall have the function of automatic transmission and reception of identification sign.
Structure	Shall be of the structure that the RF and modulator sections excluding antenna cannot easily be opened.
Note	DS: Direct spread FH: Frequency hopping OFDM: Orthogonal frequency division multiplexing



3.2 E.U.T. test conditions

Power Supply:	DC 5V		
	During the input supply voltage to the EUT from the external power source is varied by $\pm 10\%$, the fluctuation of input voltage to the circuit of RF unit of test equipment is exceed $\pm 1\%$. So, all measurement has been conducted by normal and limit voltage.		
	The measurement result of the voltage fluctuation at RF circuit when DC 5V +/- 10%.		
	DC Input		input voltage to the circuit
			Deviation
	High Voltage	5.5V	3.4V
	Normal Voltage	5V	3.3V
	Low Voltage	4.5V	3.2V
			3%
Test Frequencies:	If the EUT can be set to 3 of more different (carrier) frequencies in 1 allocated band, testing shall be performed using the Lowest, Middle and the Highest frequency (L, M and H). If there are 2 or fewer frequencies, testing shall be performed with the available frequencies.		



3.3 Antenna Requirement

Standard requirement

Applicable for equipment with an antenna terminal, including testing terminals) If an antenna connector is available, all relevant tests will be carried out conducted. If not, tests will be carried out in an anechoic room or with a suitable test-fixture.

The antenna is sheet antenna welded to the main PCB and no consideration of replacement. The best case gain of the antenna is 0.38dBi.

Result: An antenna connector is available, all relevant tests will be carried out conducted.



3.4 Carrier Sense

3.4.1 Limit

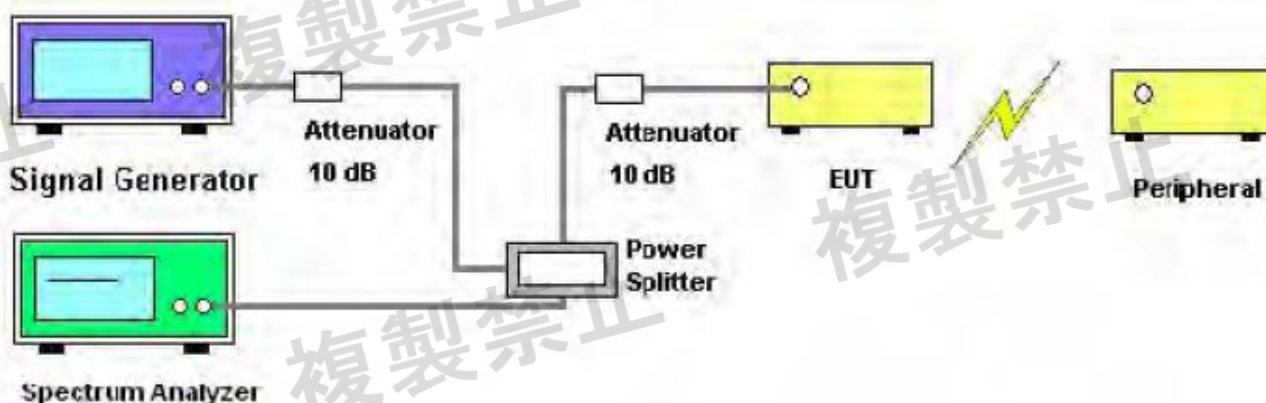
Radio equipment using OFDM method shall provide a carrier sensing function when the occupied bandwidth of its transmitting device is over 26MHz and 40Mhz or less. The equipment shall be capable to detect any regular carrier frequency with a field strength of 100mV/meter or less.

Note:

Consider 100 mV / meter for E as the starting point ,the corresponding antenna voltage for the receiver can be found by:

$$\text{Antenna Voltage (in dBm)} = 22.79 + \text{Max Antenna Gain} - 20 \times \log f \quad (f \text{ in MHz})$$

3.4.2 Test Setup



3.4.3 Spectrum Analyzer and Signal Generator Setting

Spectrum Analyzer Setting :

Spectrum Parameters	Setting
RBW	1MHz
VBW	Approximately same as the resolution bandwidth
Span	50MHz
Trigger condition	Free run
Detector	Positive peak
Trace Mode	Max Hold

Signal Generator Setting

Parameters	Setting
Center Frequency	Test frequency
Modulation	Unmodulation
Output Level	$22.79 + \text{Max Antenna Gain} - 20 \times \log f \quad (f \text{ in MHz})$



3.4.4 Test Procedure

- Connect the test equipment and EUT according to the test setup.
- Spectrum analyzer setting parameters in accordance with section 8.3.
- Turn off the signal generator, set the EUT to transmission state with Peripheral equipment.
- Turn on the signal generator, using spectrum analyzer to observe whether EUT does not transmit radio waves.
- Repeat above procedures until all channel were measured.
- Record the results in the test report.

3.4.5 Environment Conditions of Test Site

Temperature	24.3℃	Relative Humidity	51%
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3.4.6 Test Result

N/A

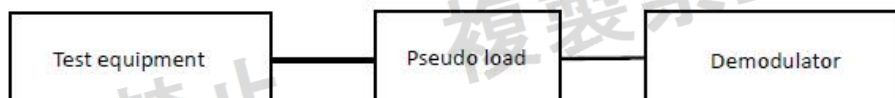


3.5 Interference prevention function

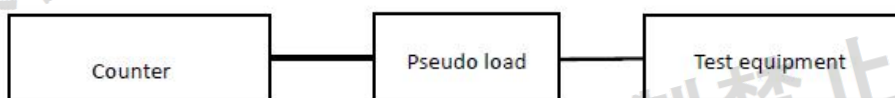
1) Measurement system diagram

(a) When transmitting identification code

If an identification code is transmitted



An identification code is received



2) Condition of measuring instrument

(b) Demodulator must be able to demodulate the transmitting signal emitted by test equipment and to indicate the identification code.

3) Condition of test equipment The mode of normal use.

4) Measuring operation procedure

(a) When test equipment has the function to transmit identification code automatically:

A) Transmit the predetermined identification code from test equipment.

B) Confirm the transmitted identification code by demodulator.

4E:22:D1:E0:BA:DC

5) Test result: The unit does meet the requirements (Good).

PASS



3.6 RF accessibility

Standard requirement

Article 49-20, paragraph 1 (a)

The EUT shall be constructed in such a way that sensitive RF parts, (like modulation and oscillator parts) cannot be reached easily by the user. These parts shall be covered by soldered metal caps or glue or by other mechanical covers. If the covers are fixed with screws, these shall be not the common type(s) like a Phillips, but special versions like Torx, so that the user cannot open the device with common tools.

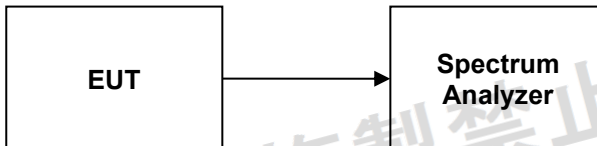
Test Result



RF and Modulation parts are mounted on PCB with surface mount technology.



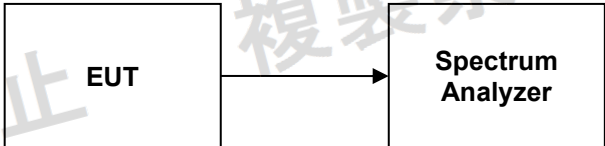
3.7 Frequency Error

Limit:	Tolerance of frequency: $\pm 50 \times 10^{-6}$
Text Method:	MIC Notice No.88 Appendix No.43
Test Status:	Test the EUT in transmitting mode without modulation.
Temperature:	23.5 °C
Humidity:	47.1 % RH
Atmospheric Pressure:	101.0kPa -101.3 kPa
Test Configuration:	 <pre>graph LR; EUT[EUT] --> SA[Spectrum Analyzer]</pre>
Test Procedure:	<ol style="list-style-type: none">1. Test Conditions: Spectrum Analyzer is used for measurement.2. EUT conditions: Modulation/Spread/Hopping OFF, CW Tx3. Spectrum Analyzer conditions: Frequency: Test Frequency Span 1MHz RBW 10 kHz (Modulation OFF), VBW 10 kHz (Modulation OFF), Sweep Time Auto Detector mode Positive peak Indication mode Max hold

Test Result: Refer to section 4: Appendix A



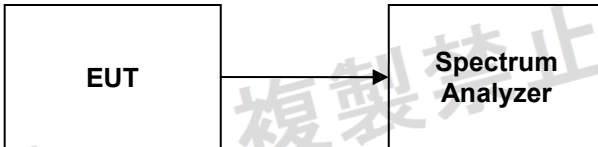
3.8 Occupied Bandwidth (99%)

Limit:	OFDM: 40 MHz or less DSSS: 26 MHz or less
Text Method:	MIC Notice No.88 Appendix No.43
Test Status:	Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.
Temperature:	23.5 °C
Humidity:	48.2 % RH
Atmospheric Pressure:	101.0kPa -101.3 kPa
Test Configuration:	 <pre>graph LR; EUT[EUT] --> SA[Spectrum Analyzer]</pre>
Test Procedure:	<ol style="list-style-type: none">1. Test Conditions: Spectrum Analyzer is used for measurement.2. EUT conditions: Modulation/Spread/Hopping ON For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.3. Spectrum Analyzer conditions: Frequency: Test Frequency Span:2-3.5 times the acceptable value RBW 300 KHz VBW 300 KHz Sweep Time Auto detector mode Sample Indication mode Max hold OBW 99%

Test Result: Refer to section 4: Appendix B



3.9 Spread Bandwidth(90%)

Limit:	≥0.5MHz
Text Method:	MIC Notice No.88 Appendix No.43
Test Status:	Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.
Temperature:	23.5 °C
Humidity:	48.2 % RH
Atmospheric Pressure:	101.0kPa -101.3 kPa
Test Configuration:	 <pre>graph LR; EUT[EUT] --> SA[Spectrum Analyzer]</pre>
Test Procedure:	<ol style="list-style-type: none">4. Test Conditions: Spectrum Analyzer is used for measurement.5. EUT conditions: Modulation/Spread/Hopping ON For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.6. Spectrum Analyzer conditions: Frequency: Test Frequency Span:2-3.5 times the acceptable value RBW 300 KHz VBW 300 KHz Sweep Time Auto detector mode Sample Indication mode Max hold OBW 90%

Test Result: Refer to section 4: Appendix C



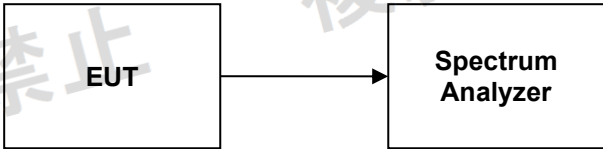
3.10 Antenna Power

Limit:	20MHz system:10mW/MHz or less, EIRP≤ 12.14dBm/MHz 40MHz system: 5mW/MHz or less, EIRP≤ 9.13dBm/MHz																																		
Text Method:	MIC Notice No.88 Appendix No.43																																		
Test Status:	Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.																																		
Temperature:	23.5 °C																																		
Humidity:	51 % RH																																		
Atmospheric Pressure:	101.0kPa -101.3 kPa																																		
Test Configuration:	<div><div>EUT</div><div>Spectrum Analyzer</div></div>																																		
Test Procedure:	<p>Step1 :</p> <table><tr><th>Spectrum Parameters</th><th>Setting</th></tr><tr><td>Center Frequency</td><td>Test Frequency</td></tr><tr><td>RBW</td><td>1MHz</td></tr><tr><td>VBW</td><td>About 3 times the resolution bandwidth</td></tr><tr><td>Span</td><td>Approximately twice wider than the occupied bandwidth</td></tr><tr><td>Sweep Time</td><td>Minimum amount of time to ensure measurement accuracy (in the case of burst waves, one burst per sample)</td></tr><tr><td>Trigger Conditions</td><td>Free run</td></tr><tr><td>Data Points</td><td>Over 400 points</td></tr><tr><td>Sweep Mode</td><td>Continuous sweep</td></tr><tr><td>Detector</td><td>Positive peak</td></tr><tr><td>Trace Mode</td><td>Max hold</td></tr></table> <p>Step2 :</p> <table><tr><th>Spectrum Parameters</th><th>Setting</th></tr><tr><td>Center Frequency</td><td>Frequencies providing maximum power density (acquired frequencies during search)</td></tr><tr><td>RBW</td><td>1MHz</td></tr><tr><td>VBW</td><td>Comparable to resolution bandwidth.</td></tr><tr><td>Span</td><td>Zero</td></tr><tr><td>Sweep Mode</td><td>Continuous sweep</td></tr></table>	Spectrum Parameters	Setting	Center Frequency	Test Frequency	RBW	1MHz	VBW	About 3 times the resolution bandwidth	Span	Approximately twice wider than the occupied bandwidth	Sweep Time	Minimum amount of time to ensure measurement accuracy (in the case of burst waves, one burst per sample)	Trigger Conditions	Free run	Data Points	Over 400 points	Sweep Mode	Continuous sweep	Detector	Positive peak	Trace Mode	Max hold	Spectrum Parameters	Setting	Center Frequency	Frequencies providing maximum power density (acquired frequencies during search)	RBW	1MHz	VBW	Comparable to resolution bandwidth.	Span	Zero	Sweep Mode	Continuous sweep
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RBW	1MHz																																		
VBW	Comparable to resolution bandwidth.																																		
Span	Zero																																		
Sweep Mode	Continuous sweep																																		

Test Result: Refer to section 4: Appendix D



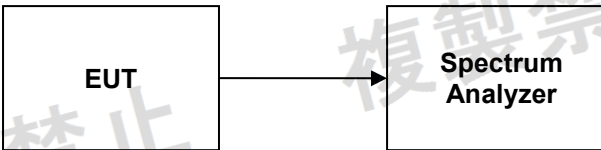
3.11 Spurious Emissions of Tx

Limit:	<table><tr><td>< 2387MHz</td><td>$\leq 2.5\mu\text{W/MHz}$</td></tr><tr><td>2387 ~ 2400MHz</td><td>$\leq 25\mu\text{W/MHz}$</td></tr><tr><td>2483.5 ~ 2496.5MHz</td><td>$\leq 25\mu\text{W/MHz}$</td></tr><tr><td>>2496.5MHz</td><td>$\leq 2.5\mu\text{W/MHz}$</td></tr></table>	< 2387MHz	$\leq 2.5\mu\text{W/MHz}$	2387 ~ 2400MHz	$\leq 25\mu\text{W/MHz}$	2483.5 ~ 2496.5MHz	$\leq 25\mu\text{W/MHz}$	>2496.5MHz	$\leq 2.5\mu\text{W/MHz}$
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Text Method:	MIC Notice No.88 Appendix No.43								
Test Status:	Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.								
Temperature:	23.5°C								
Humidity:	51 % RH								
Atmospheric Pressure:	101.0kPa -101.3 kPa								
Test Configuration:	 <pre>graph LR; EUT[EUT] --> SA[Spectrum Analyzer]</pre>								
Test Procedure:	<ol style="list-style-type: none">Test Conditions: Spectrum Analyzer is used for measurement.EUT conditions: Modulation/Spread/Hopping ON For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.Spectrum Analyzer conditions: Step 1: All spurious are measured from 30 MHz to 13 GHz by peak mode. Step 2: IF the value measured by Step1 is 2 dB or less, measure in average mode. Test setup for Step 1: Frequency: 30MHz~2400MHz, 2483.5MHz~13GHz RBW 1 MHz VBW 1 MHz Sweep Time Auto detector mode Positive peak Indication mode Max hold Test setup for Step 2: Frequency: Spurious Frequency RBW 1 MHz VBW 1 MHz Sweep Time Auto detector mode Sample Indication mode Max hold								

Test Result: Refer to section 4: Appendix E



3.12 Spurious Emissions of Rx

Text Method:	MIC Notice No.88 Appendix No.43
Limit:	(1) Below 1 GHz: ≤ 4 nW (2) Above 1 GHz: ≤ 20 nW
Test Status:	Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.
Temperature:	23.5 °C
Humidity:	56 % RH
Atmospheric Pressure:	101.0kPa -101.3 kPa
Test Configuration:	 <pre>graph LR; EUT[EUT] --> SA[Spectrum Analyzer]</pre>
Test Procedure:	<ol style="list-style-type: none">Test Conditions: Spectrum Analyzer is used for measurement.EUT conditions: Modulation/Spread/Hopping ON For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signalSpectrum Analyzer conditions: Step 1: All spurious are measured from 30 MHz to 13 GHz by peak mode. Step 2: IF the value measured by Step1 is 2 dB or less, measure in average mode. Test setup for Step 1: Frequency: 30 MHz –13 GHz RBW 100 kHz (30 – 1GHz) , 1 MHz (over 1GHz) VBW 100 kHz (30 – 1GHz) , 1 MHz (over 1GHz) Sweep Time Auto detector mode Positive peak Indication mode Max hold Test setup for Step 2: Frequency: Spurious Frequency Span 0 Hz RBW 100 kHz (30 – 1GHz) , 1 MHz (over 1GHz) VBW 100 kHz (30 – 1GHz) , 1 MHz (over 1GHz) Sweep Time Auto detector mode Sample Indication mode Max hold

Test Result: Refer to section 4: Appendix F



4 Appendix

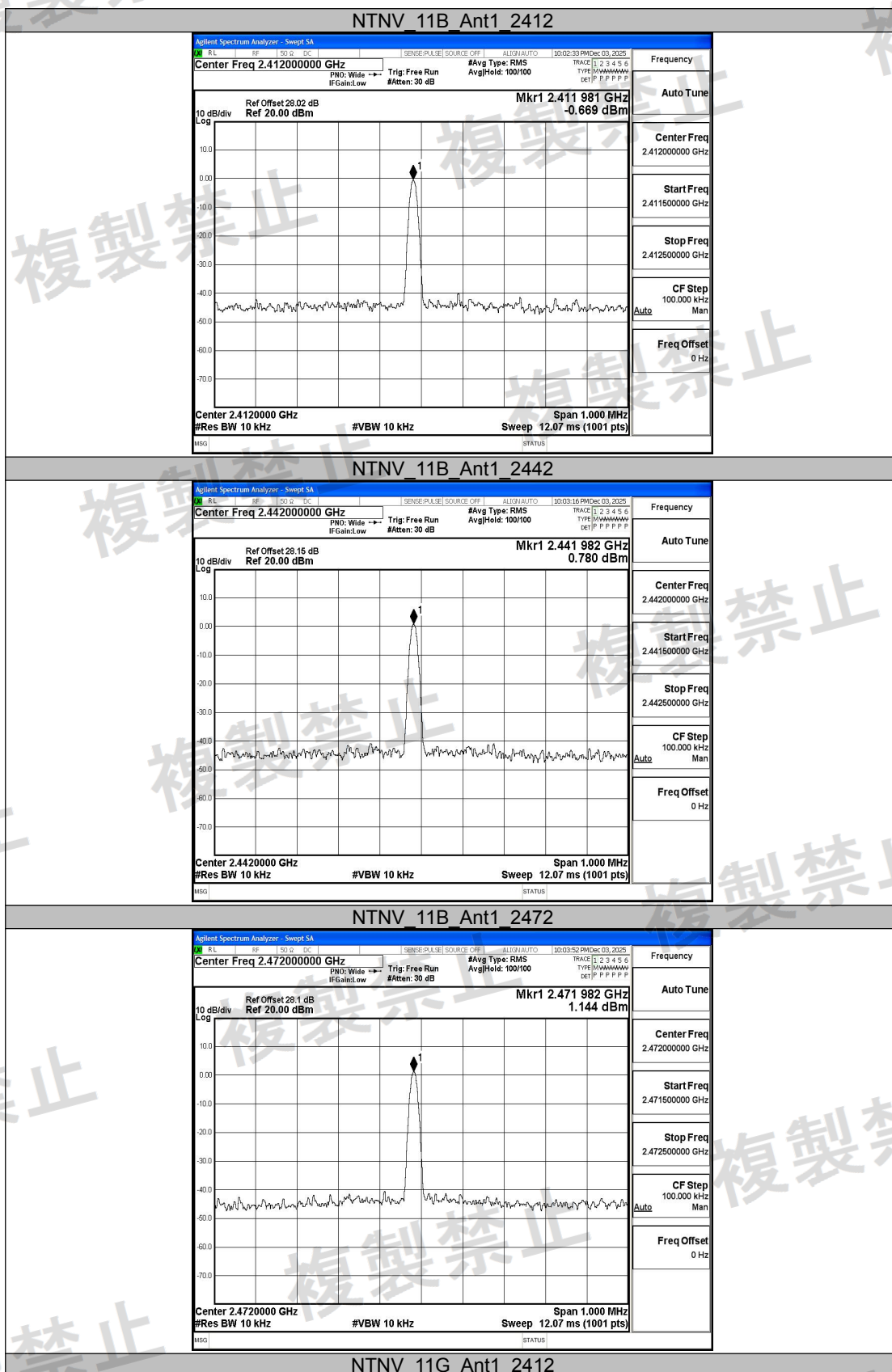
Appendix A: Frequency Error

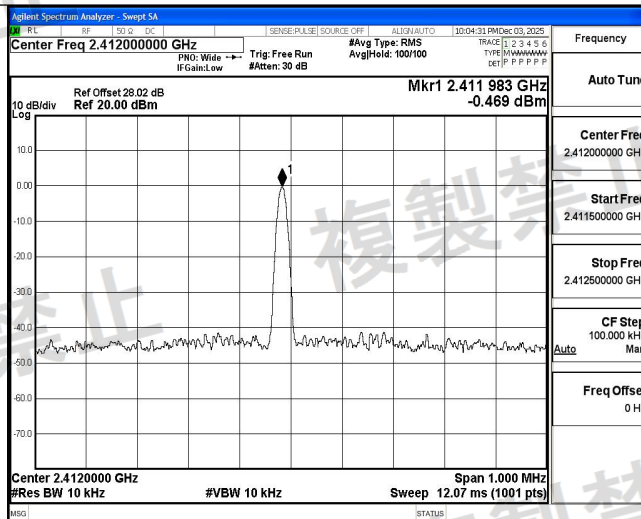
Test Result

TestCondition	TestMode	Antenna	Freq(MHz)	CenterFreq [MHz]	Result[ppm]	Limit[ppm]	Verdict
NTNV	11B	Ant1	2412	2411.981	-7.87728	±50	PASS
			2442	2441.982	-7.37101	±50	PASS
			2472	2471.982	-7.28155	±50	PASS
	11G	Ant1	2412	2411.983	-7.04809	±50	PASS
			2442	2441.982	-7.37101	±50	PASS
			2472	2471.983	-6.87702	±50	PASS
	11N20SISO	Ant1	2412	2411.984	-6.63350	±50	PASS
			2442	2441.983	-6.96151	±50	PASS
			2472	2471.983	-6.87702	±50	PASS
NTLV	11B	Ant1	2412	2411.981	-7.87728	±50	PASS
			2442	2441.981	-7.78051	±50	PASS
			2472	2471.981	-7.68608	±50	PASS
	11G	Ant1	2412	2411.982	-7.46269	±50	PASS
			2442	2441.982	-7.37101	±50	PASS
			2472	2471.982	-7.28155	±50	PASS
	11N20SISO	Ant1	2412	2411.983	-7.04809	±50	PASS
			2442	2441.982	-7.37101	±50	PASS
			2472	2471.983	-6.87702	±50	PASS
NTHV	11B	Ant1	2412	2411.981	-7.87728	±50	PASS
			2442	2441.981	-7.78051	±50	PASS
			2472	2471.981	-7.68608	±50	PASS
	11G	Ant1	2412	2411.982	-7.46269	±50	PASS
			2442	2441.982	-7.37101	±50	PASS
			2472	2471.982	-7.28155	±50	PASS
	11N20SISO	Ant1	2412	2411.983	-7.04809	±50	PASS
			2442	2441.982	-7.37101	±50	PASS
			2472	2471.982	-7.28155	±50	PASS

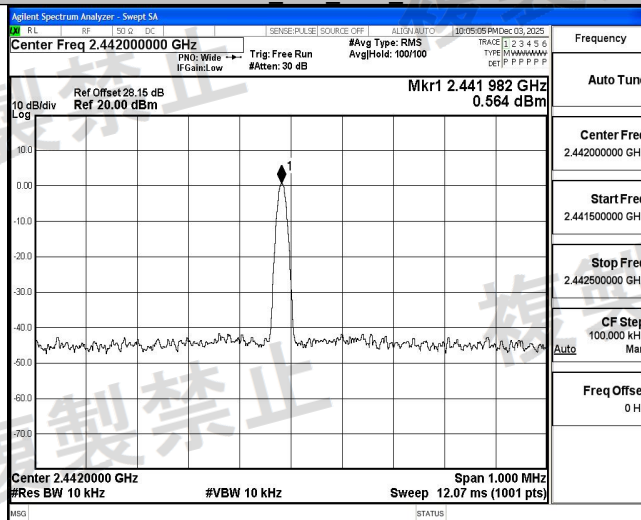


Test Graphs

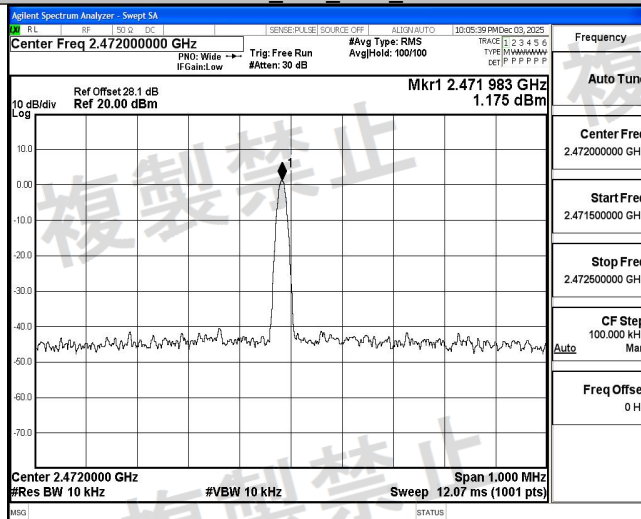




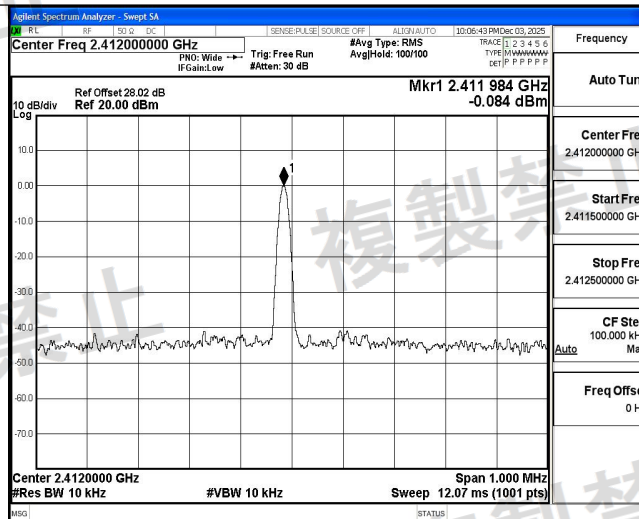
NTNV_11G_Ant1_2442



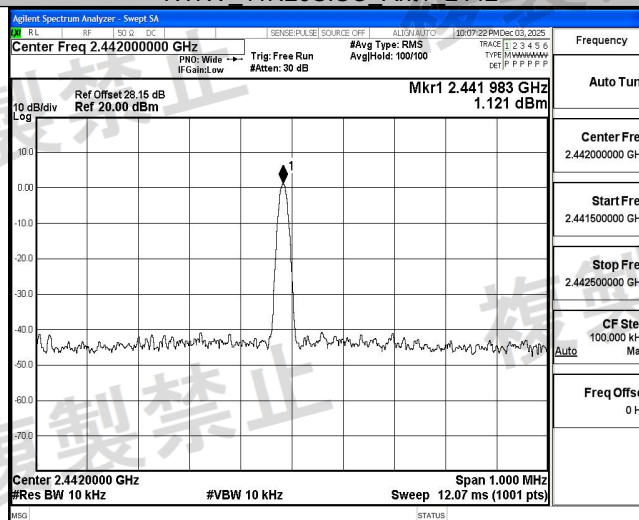
NTNV_11G_Ant1_2472



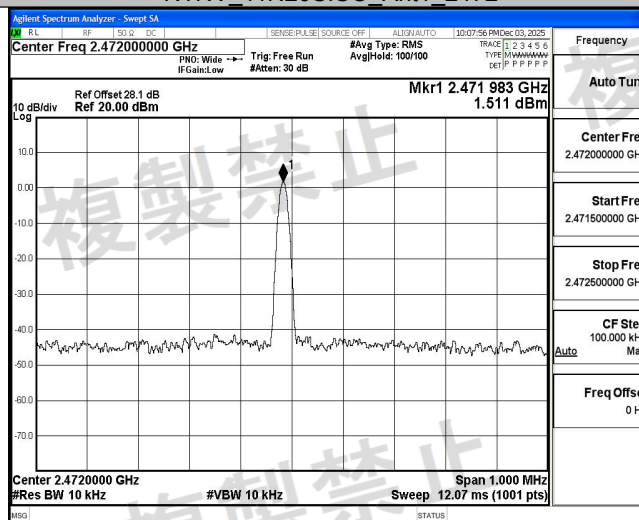
NTNV_11N20SISO_Ant1_2412



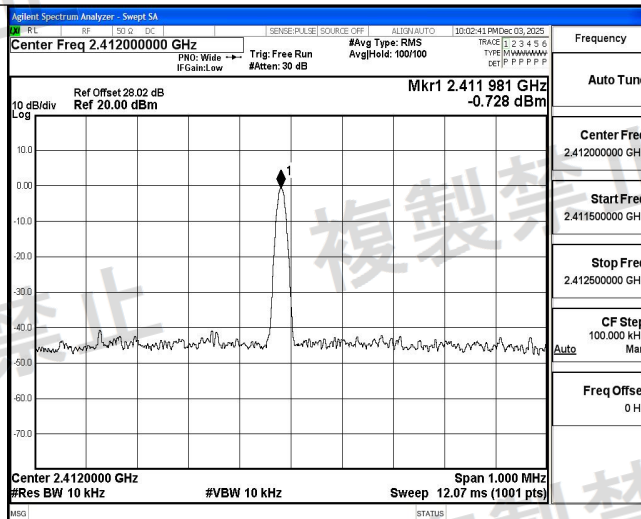
NTNV_11N20SISO_Ant1_2442



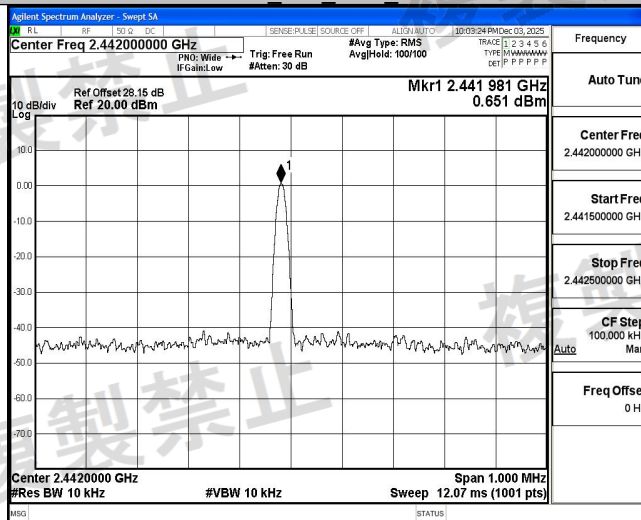
NTNV_11N20SISO_Ant1_2472



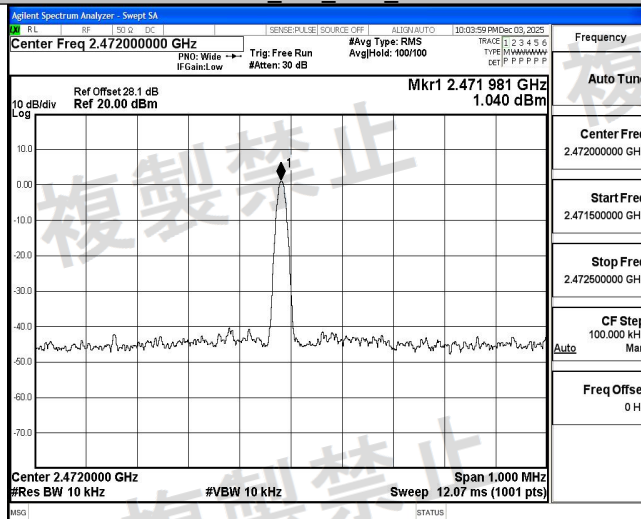
NTLV_11B_Ant1_2412



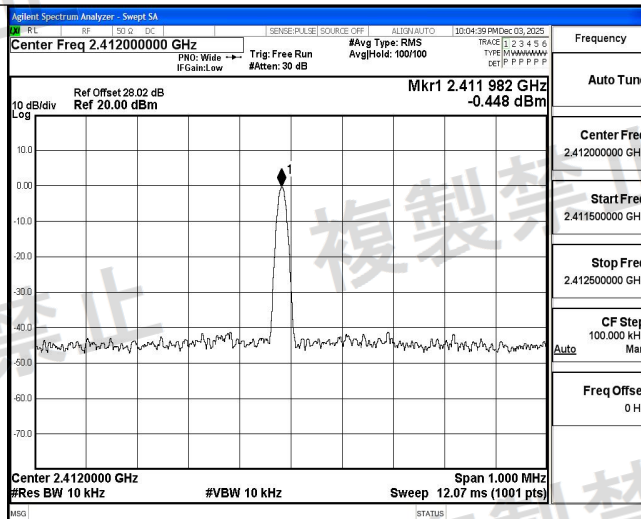
NTLV_11B_Ant1_2442



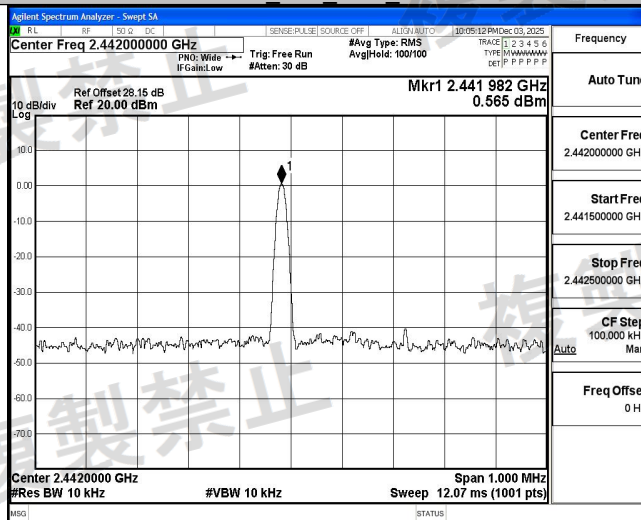
NTLV_11B_Ant1_2472



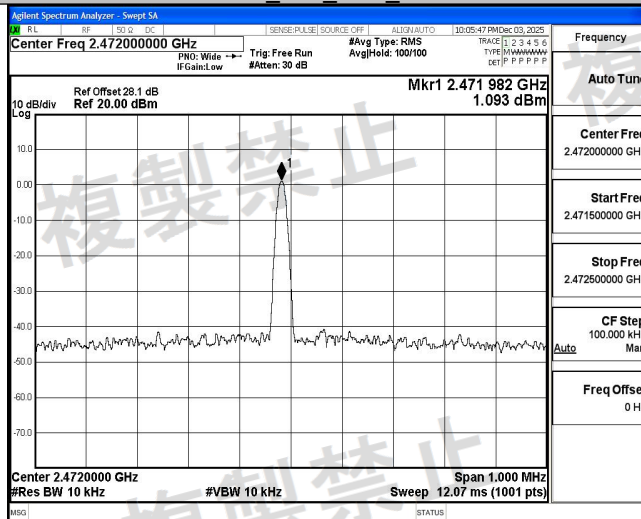
NTLV_11G_Ant1_2412



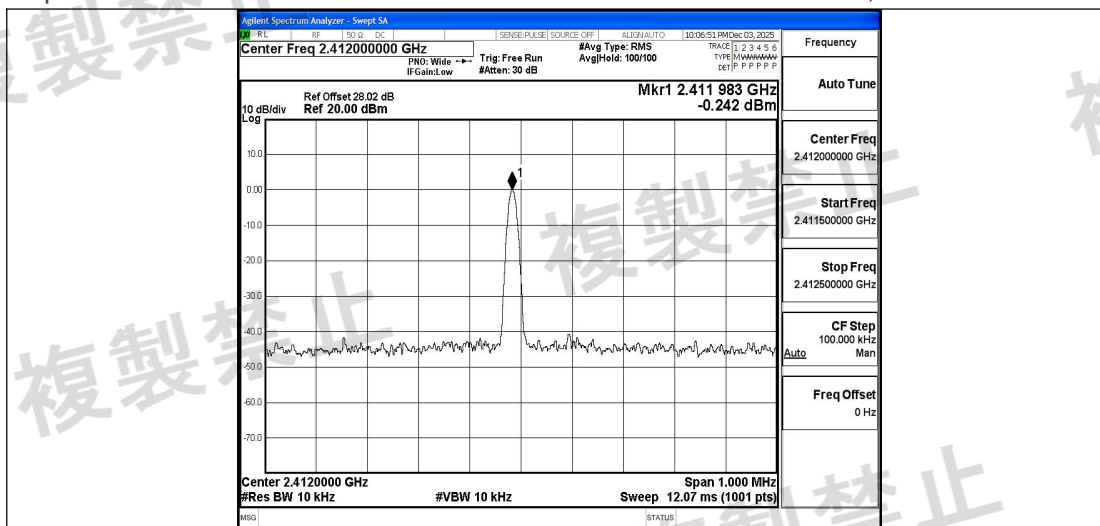
NTLV_11G_Ant1_2442



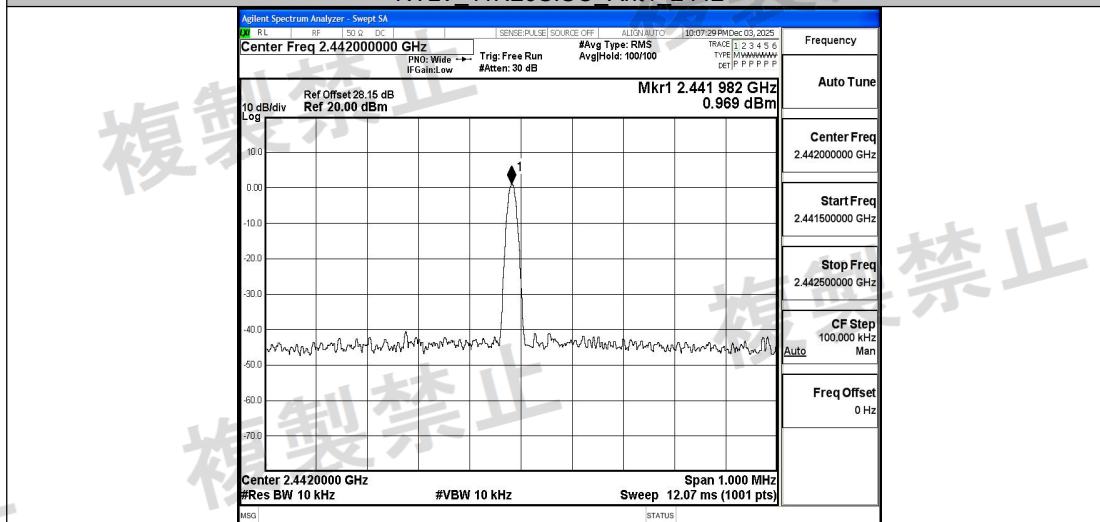
NTLV_11G_Ant1_2472



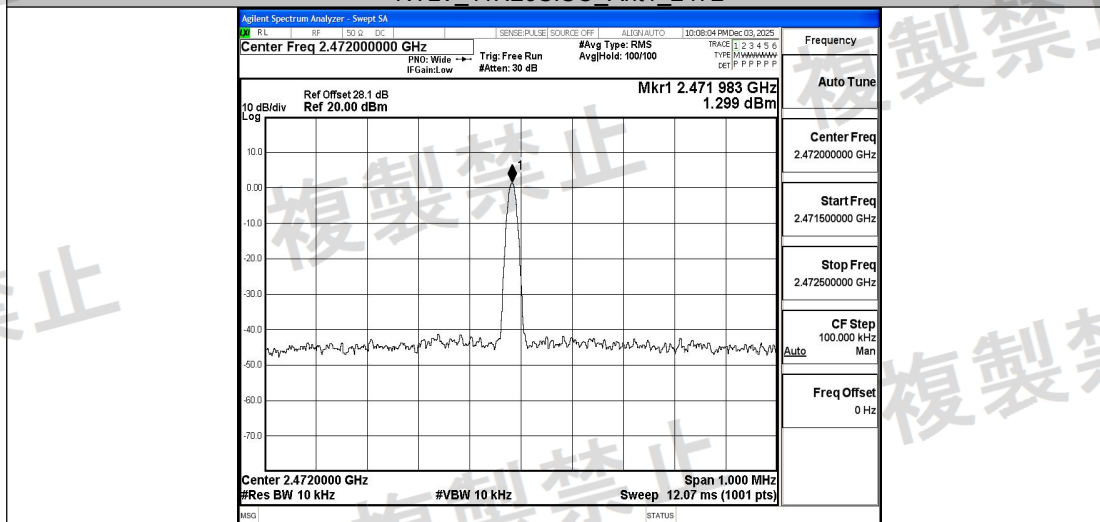
NTLV_11N20SISO_Ant1_2412



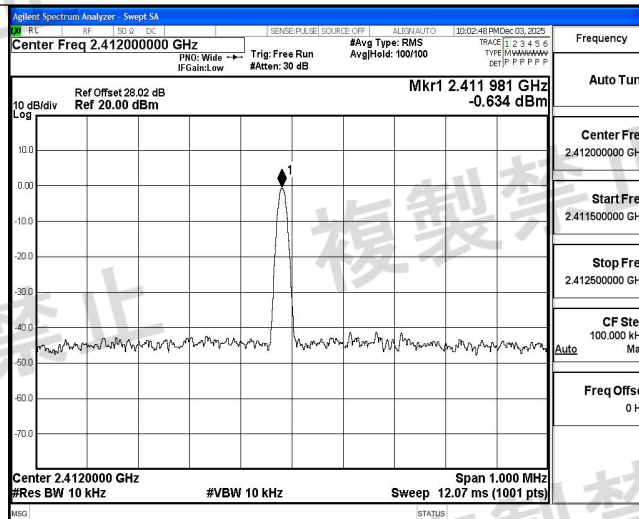
NTLV 11N20SISO Ant1 2442



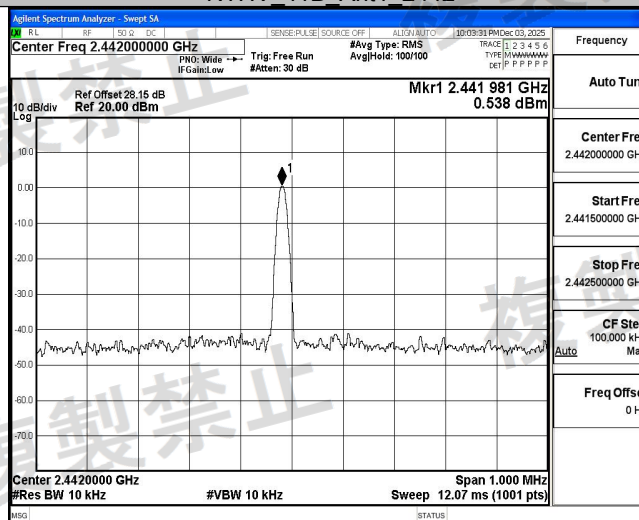
NTLV 11N20SISO Ant1 2472



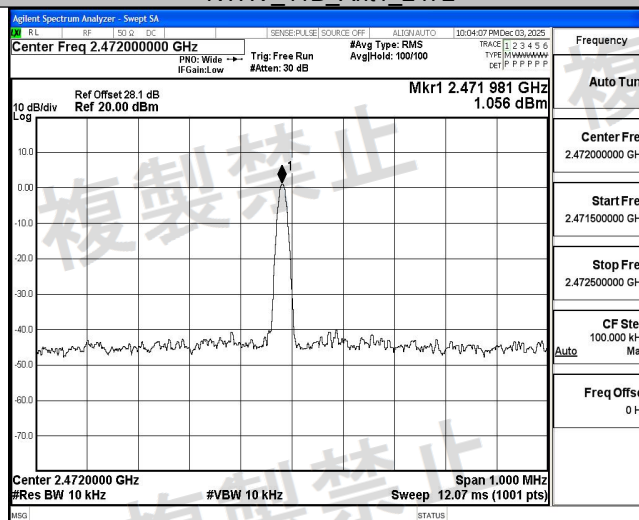
NTHV 11B Ant1 2412



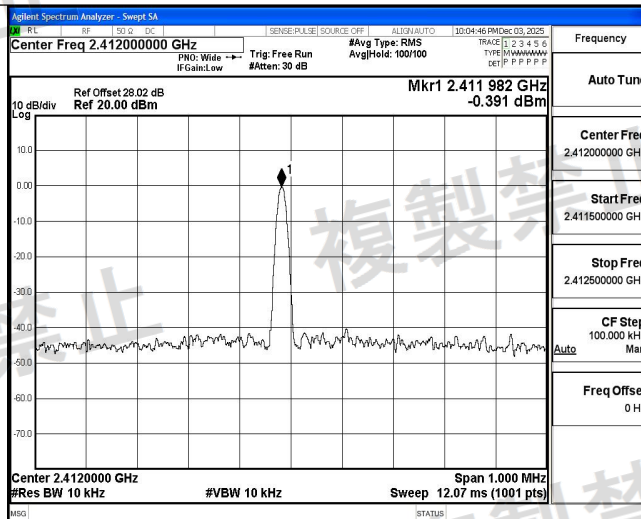
NTHV_11B Ant1 2442



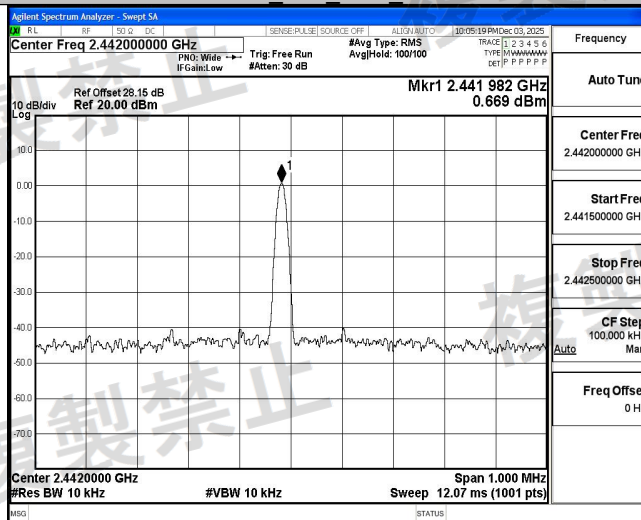
NTHV_11B Ant1 2472



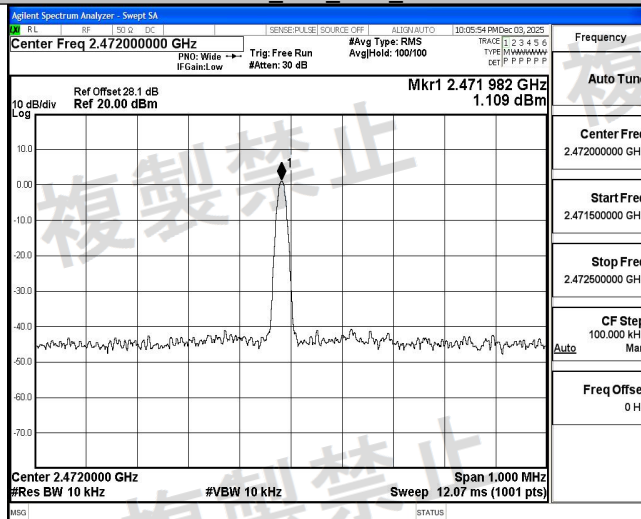
NTHV_11G Ant1 2412



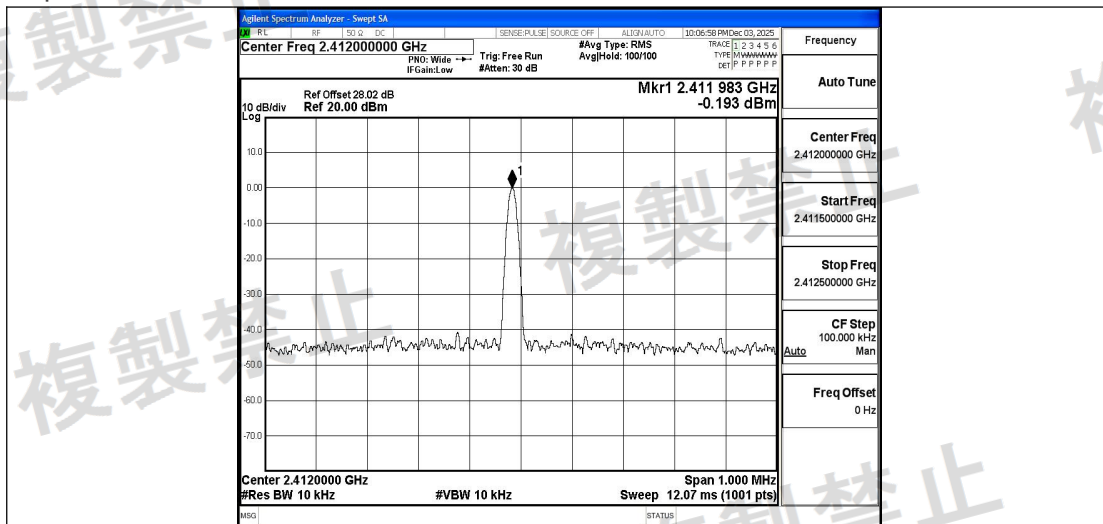
NTHV_11G_Ant1_2442



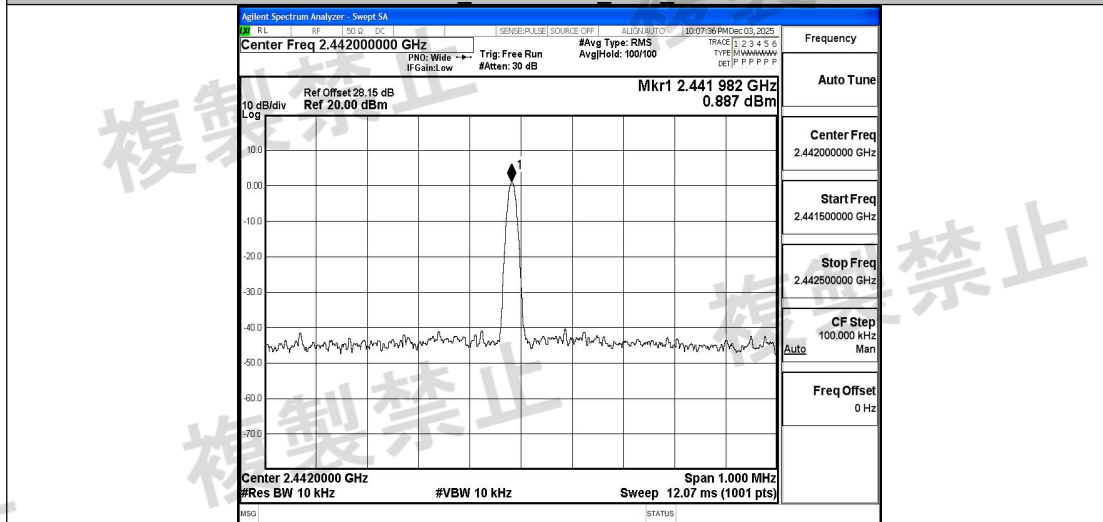
NTHV_11G_Ant1_2472



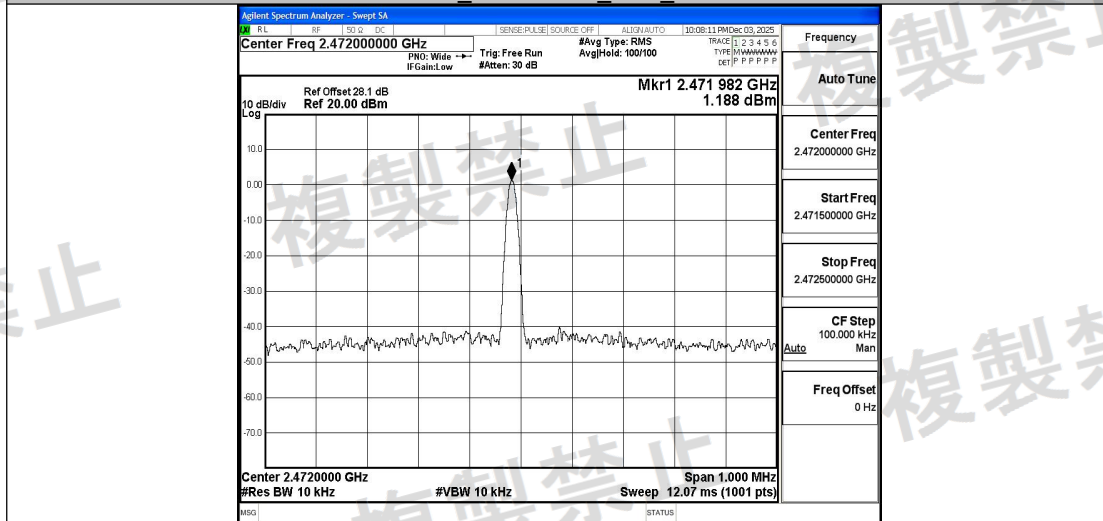
NTHV_11N20SISO_Ant1_2412



NTHV_11N20SISO_Ant1_2442



NTHV_11N20SISO_Ant1_2472



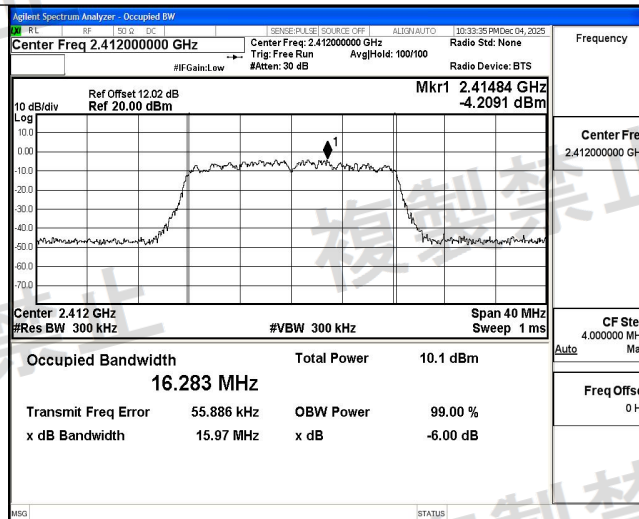
**Appendix B: Occupied Bandwidth****Test Result**

TestCondition	TestMode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Verdict
NTNV	11B	Ant1	2412	13.695	≤26	PASS
			2442	13.723	≤26	PASS
			2472	13.614	≤26	PASS
	11G	Ant1	2412	16.283	≤26	PASS
			2442	16.258	≤26	PASS
			2472	16.219	≤26	PASS
	11N20SI SO	Ant1	2412	17.364	≤26	PASS
			2442	17.376	≤26	PASS
			2472	17.339	≤26	PASS
NTLV	11B	Ant1	2412	13.688	≤26	PASS
			2442	13.693	≤26	PASS
			2472	13.617	≤26	PASS
	11G	Ant1	2412	16.272	≤26	PASS
			2442	16.210	≤26	PASS
			2472	16.263	≤26	PASS
	11N20SI SO	Ant1	2412	17.379	≤26	PASS
			2442	17.395	≤26	PASS
			2472	17.380	≤26	PASS
NTHV	11B	Ant1	2412	13.712	≤26	PASS
			2442	13.725	≤26	PASS
			2472	13.595	≤26	PASS
	11G	Ant1	2412	16.287	≤26	PASS
			2442	16.256	≤26	PASS
			2472	16.279	≤26	PASS
	11N20SI SO	Ant1	2412	17.370	≤26	PASS
			2442	17.387	≤26	PASS
			2472	17.354	≤26	PASS

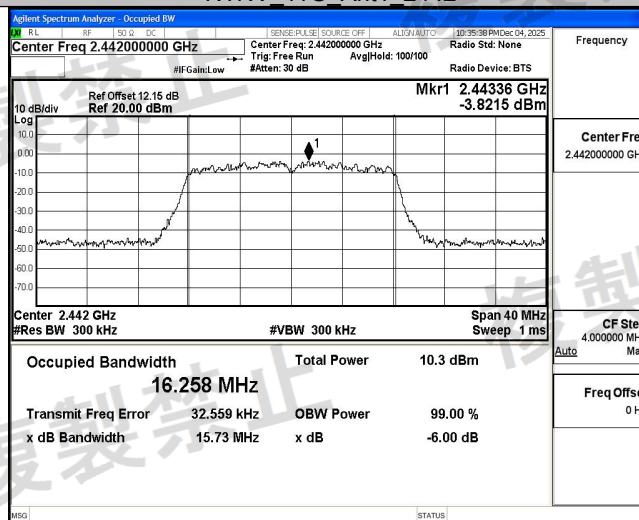


Test Graphs

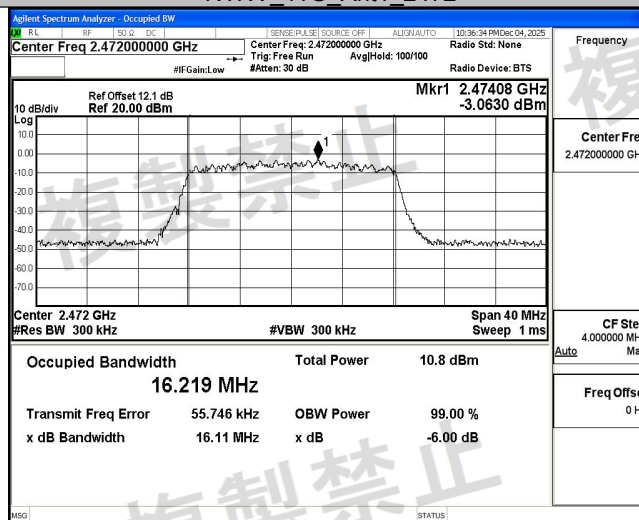




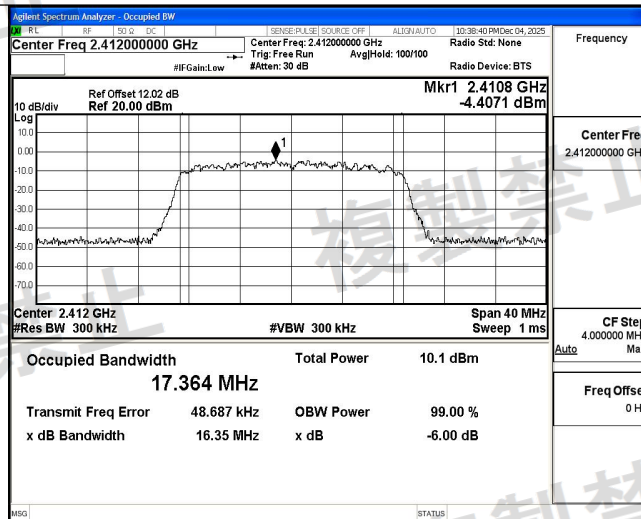
NTNV_11G_Ant1_2442



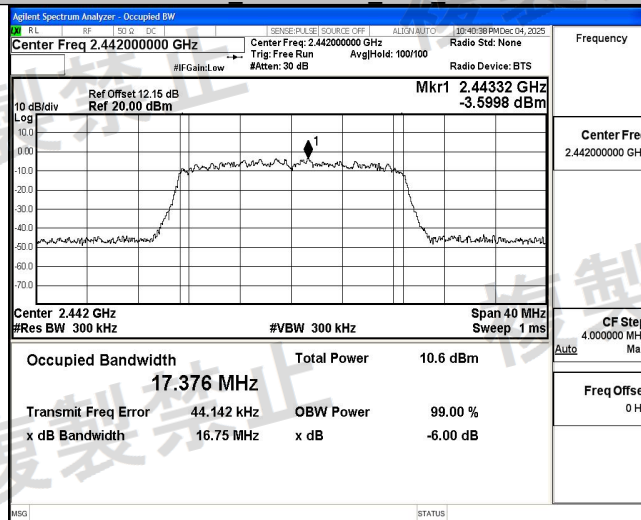
NTNV_11G_Ant1_2472



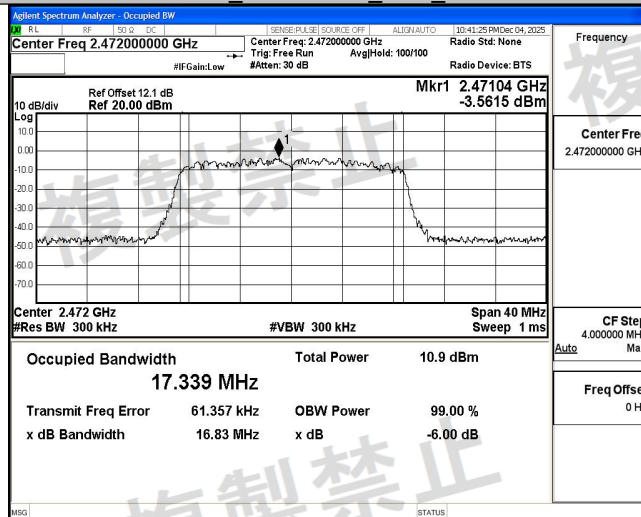
NTNV_11N20SISO_Ant1_2412



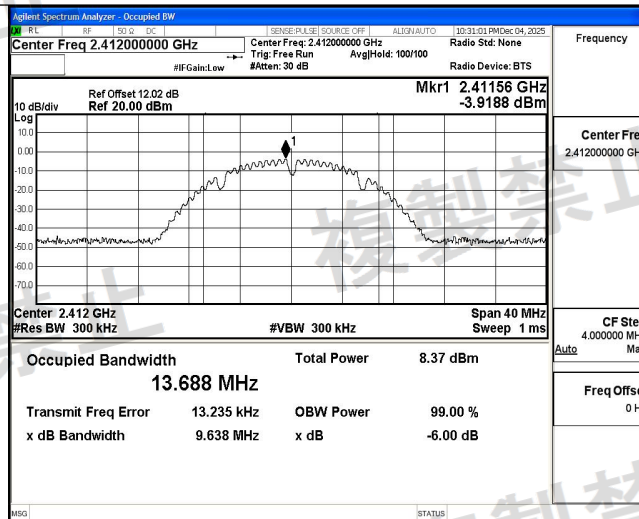
NTNV_11N20SISO_Ant1_2442



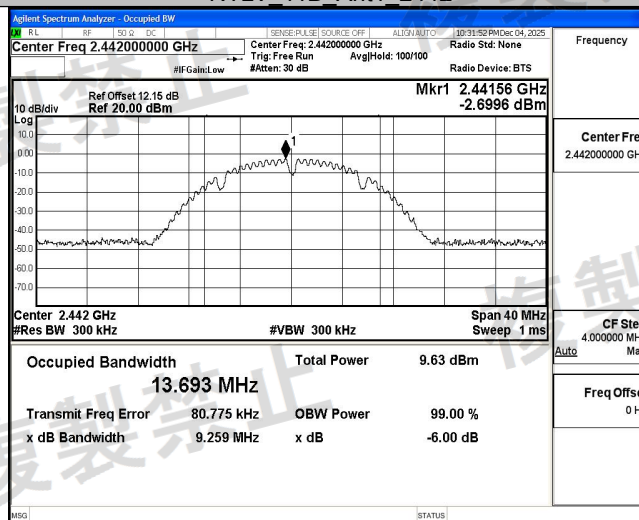
NTNV_11N20SISO_Ant1_2472



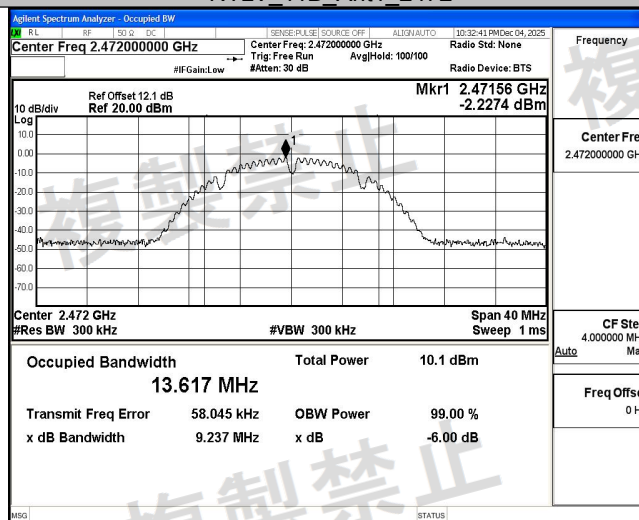
NTLV_11B_Ant1_2412



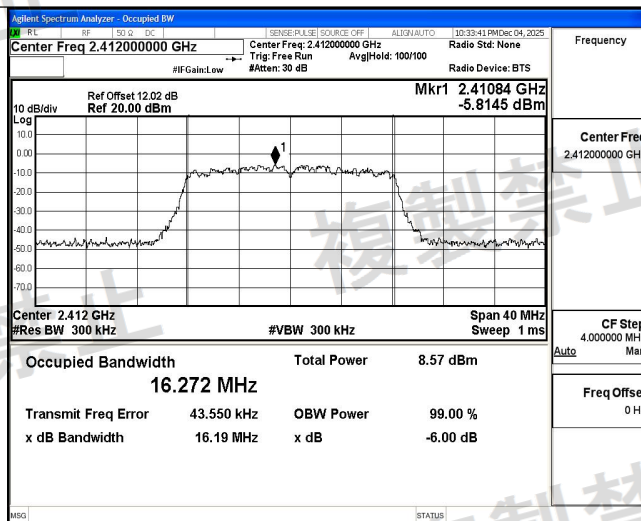
NTLV_11B_Ant1_2442



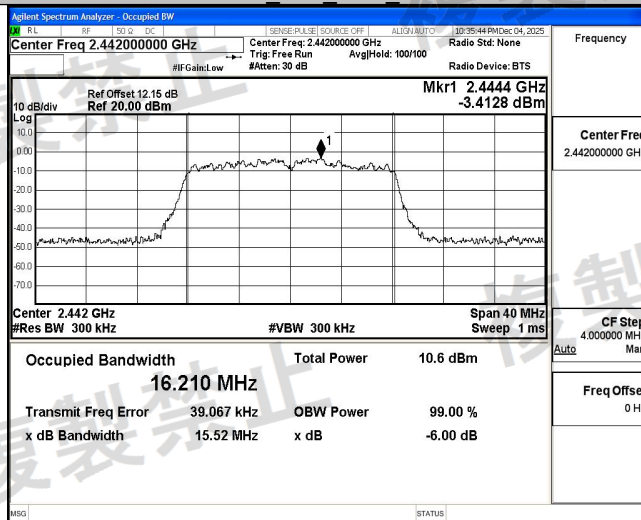
NTLV_11B_Ant1_2472



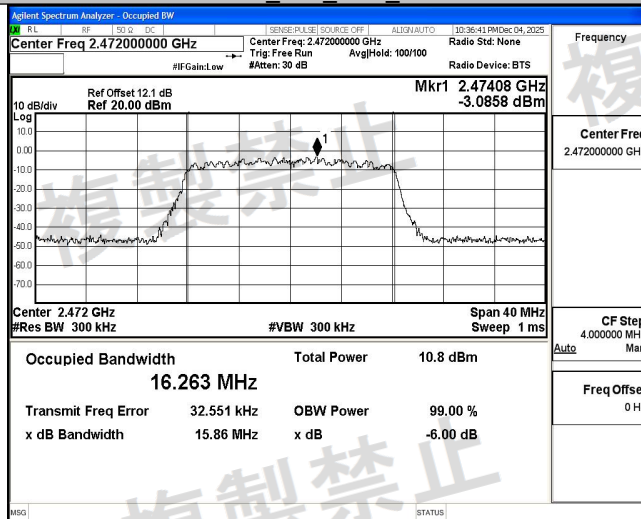
NTLV_11G_Ant1_2412



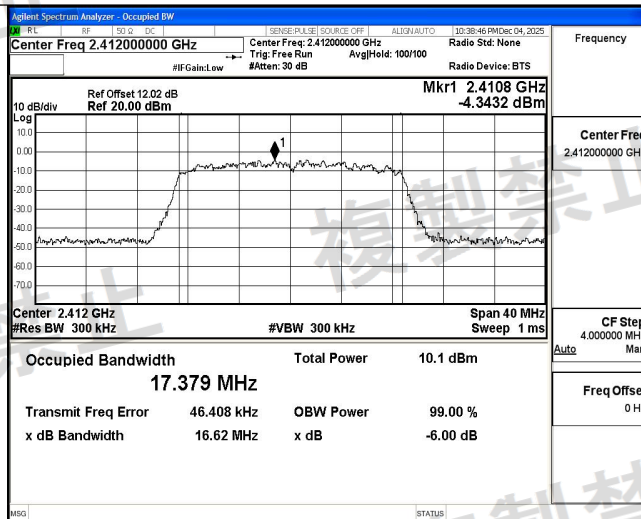
NTLV 11G Ant1 2442



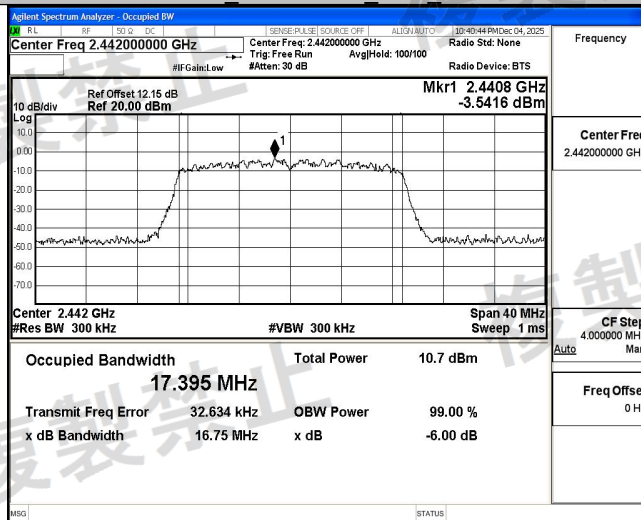
NTLV 11G Ant1 2472



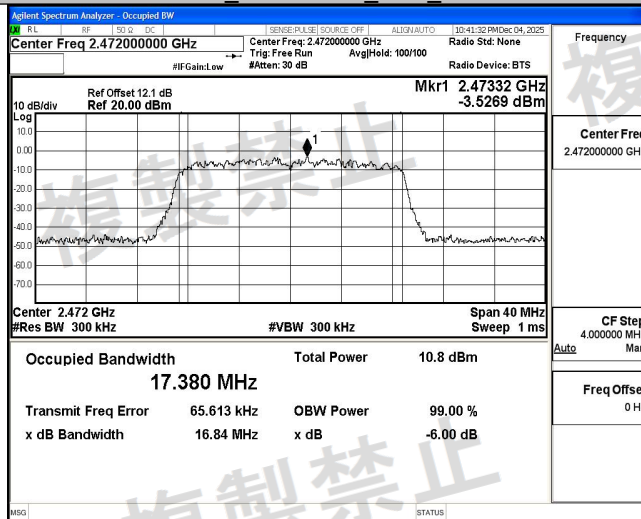
NTLV 11N20SISO Ant1 2412



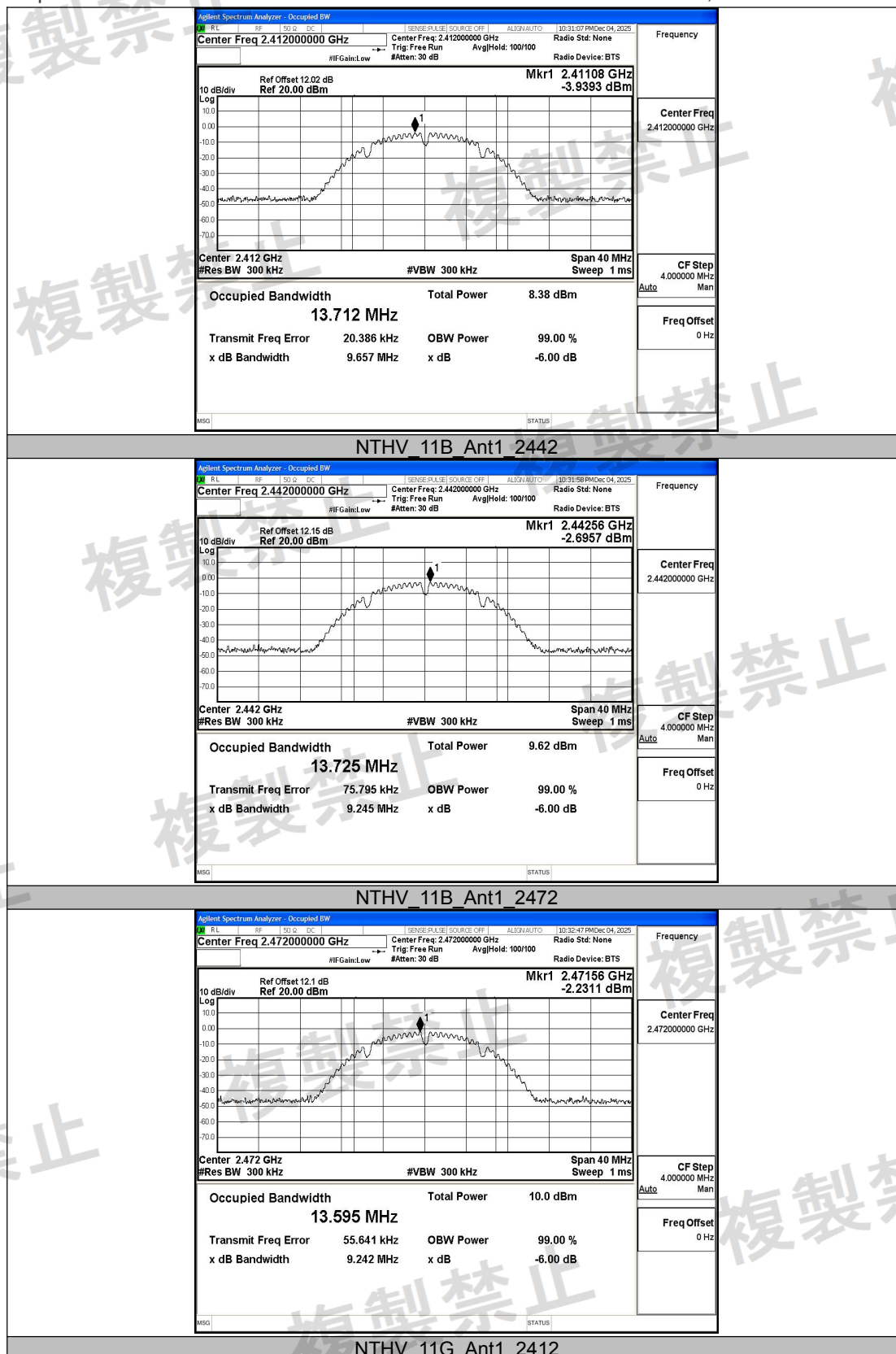
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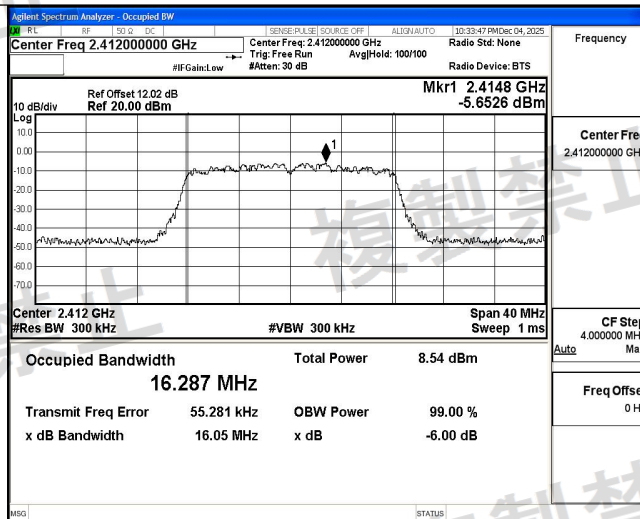


NTLV_11N20SISO Ant1_2472

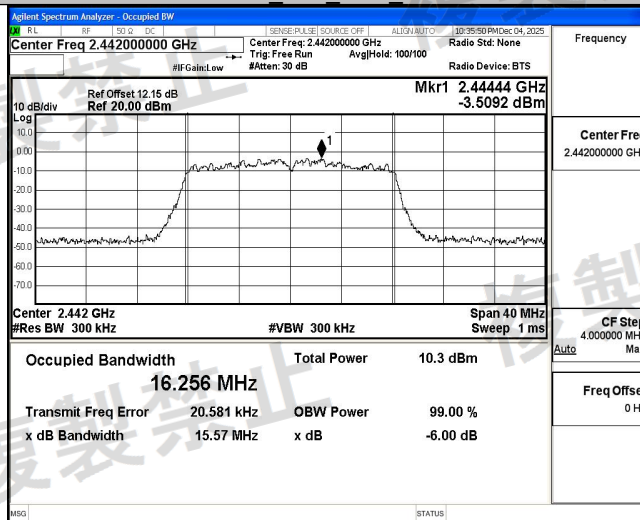


NTHV_11B Ant1_2412

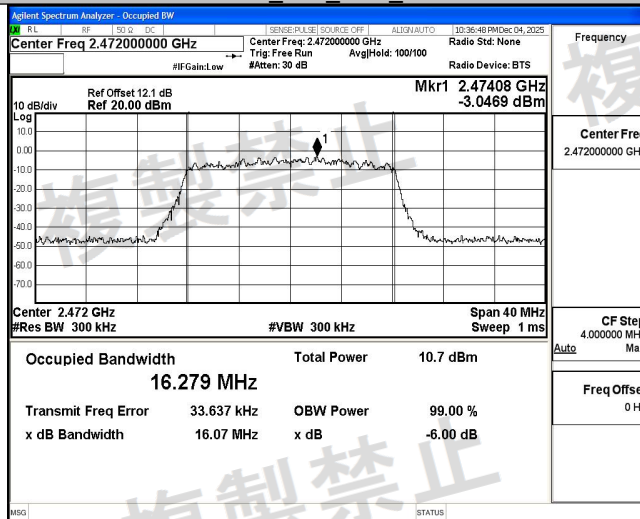




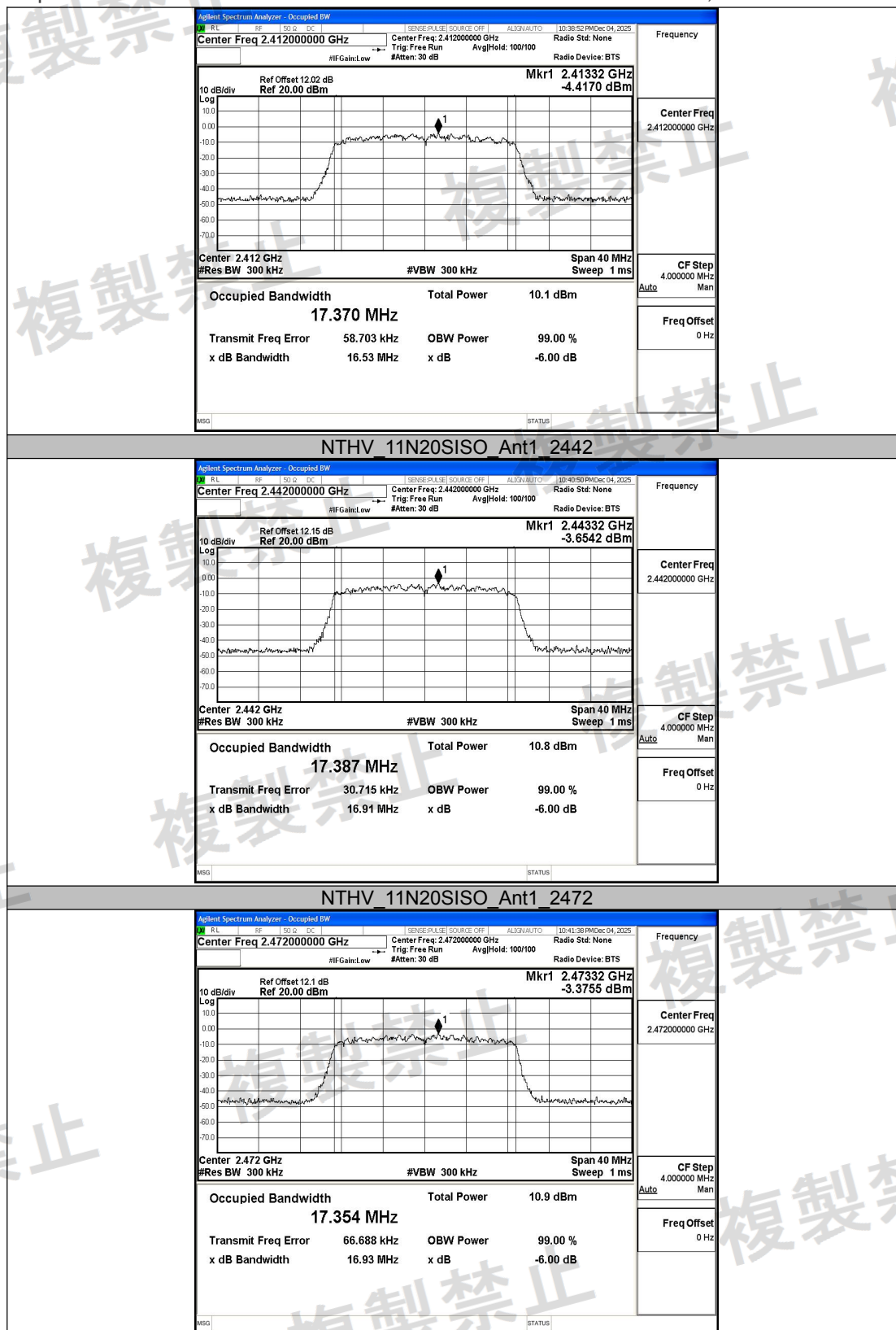
NTHV_11G_Ant1_2442



NTHV_11G_Ant1_2472



NTHV_11N20SISO_Ant1_2412



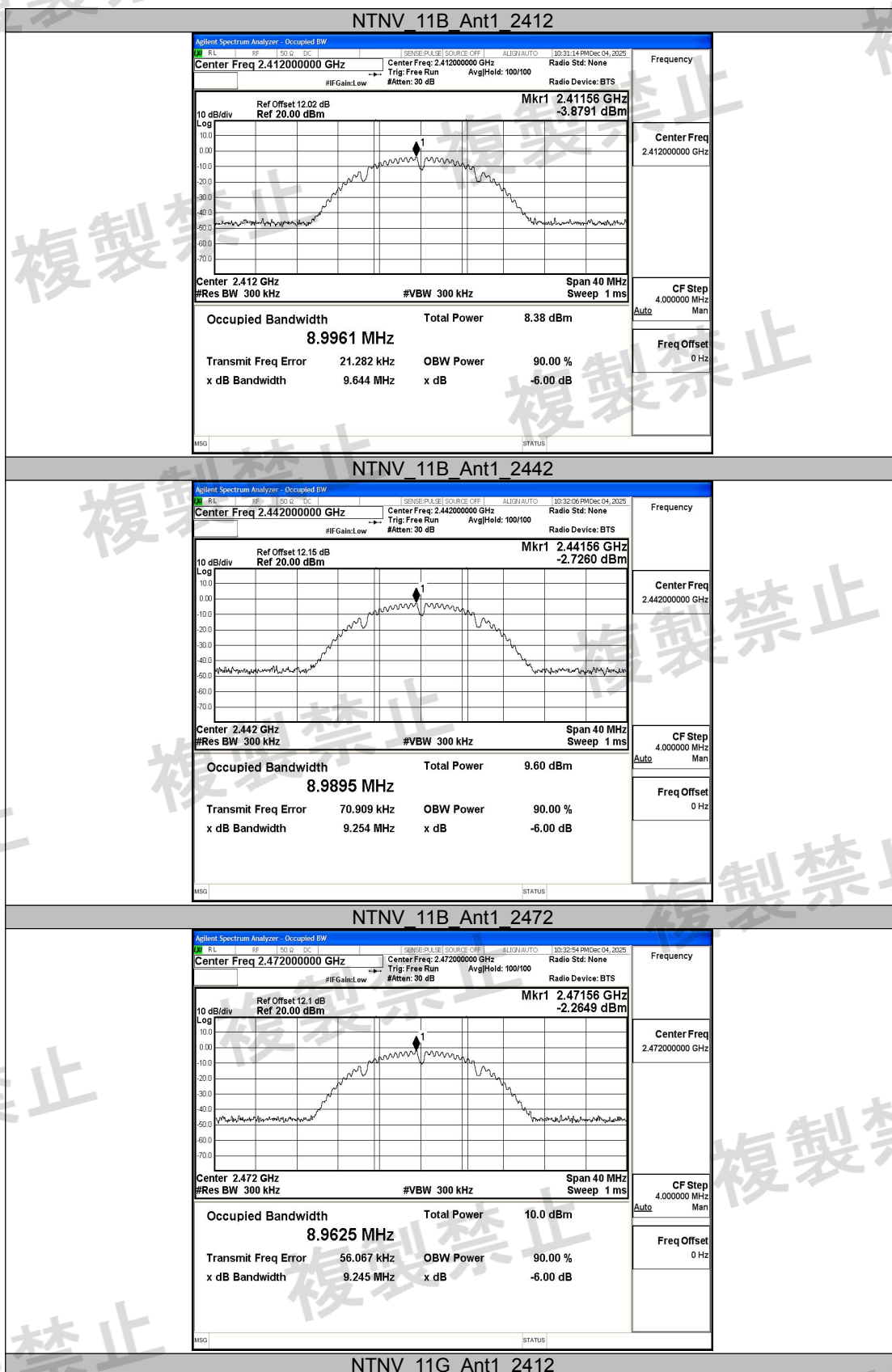


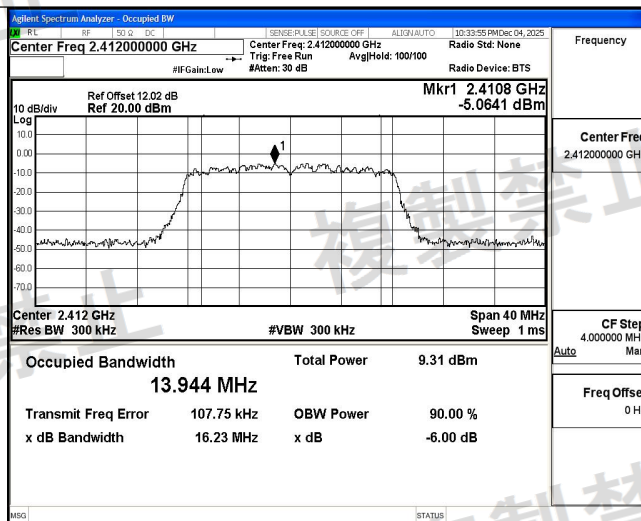
Appendix C: Spread Bandwidth Test Result

TestCondition	TestMode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Spread Factor	Limit	Verdict
NTNV	11B	Ant1	2412	8.996	≥0.5	6.543	>5	PASS
			2442	8.990	≥0.5	6.538	>5	PASS
			2472	8.963	≥0.5	6.519	>5	PASS
	11G	Ant1	2412	13.944	≥0.5	---	---	PASS
			2442	13.892	≥0.5	---	---	PASS
			2472	13.841	≥0.5	---	---	PASS
	11N20SI SO	Ant1	2412	14.600	≥0.5	---	---	PASS
			2442	14.720	≥0.5	---	---	PASS
			2472	14.794	≥0.5	---	---	PASS
NTLV	11B	Ant1	2412	8.991	≥0.5	6.539	>5	PASS
			2442	8.985	≥0.5	6.535	>5	PASS
			2472	8.961	≥0.5	6.517	>5	PASS
	11G	Ant1	2412	13.996	≥0.5	---	---	PASS
			2442	13.872	≥0.5	---	---	PASS
			2472	13.861	≥0.5	---	---	PASS
	11N20SI SO	Ant1	2412	14.691	≥0.5	---	---	PASS
			2442	14.728	≥0.5	---	---	PASS
			2472	14.795	≥0.5	---	---	PASS
NTHV	11B	Ant1	2412	8.998	≥0.5	6.544	>5	PASS
			2442	8.987	≥0.5	6.536	>5	PASS
			2472	8.961	≥0.5	6.517	>5	PASS
	11G	Ant1	2412	14.115	≥0.5	---	---	PASS
			2442	13.841	≥0.5	---	---	PASS
			2472	13.918	≥0.5	---	---	PASS
	11N20SI SO	Ant1	2412	14.625	≥0.5	---	---	PASS
			2442	14.773	≥0.5	---	---	PASS
			2472	14.776	≥0.5	---	---	PASS

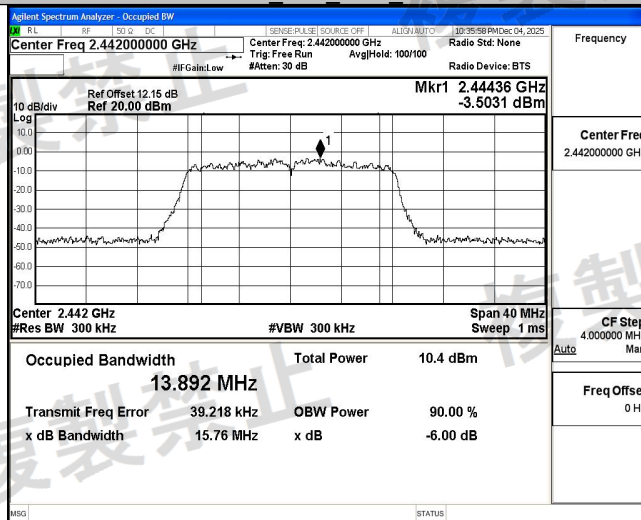


Test Graphs

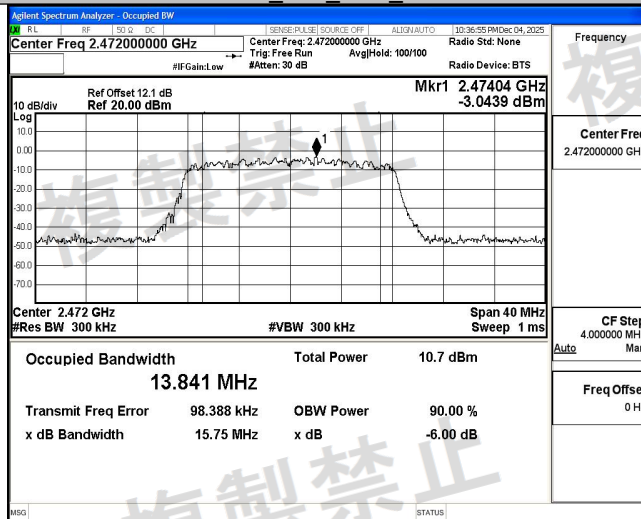




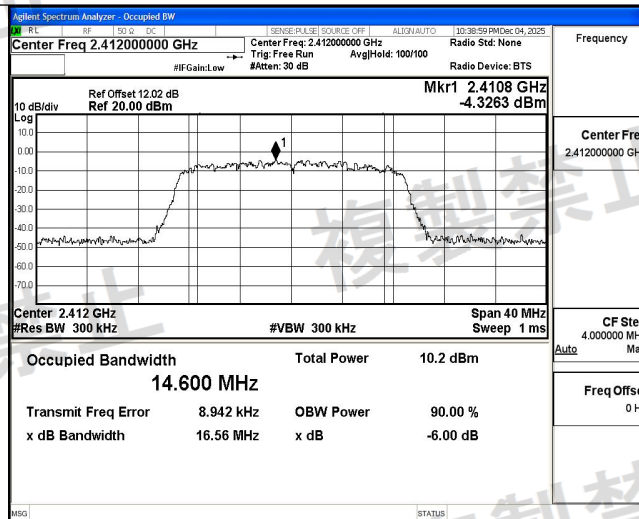
NTNV_11G_Ant1_2442



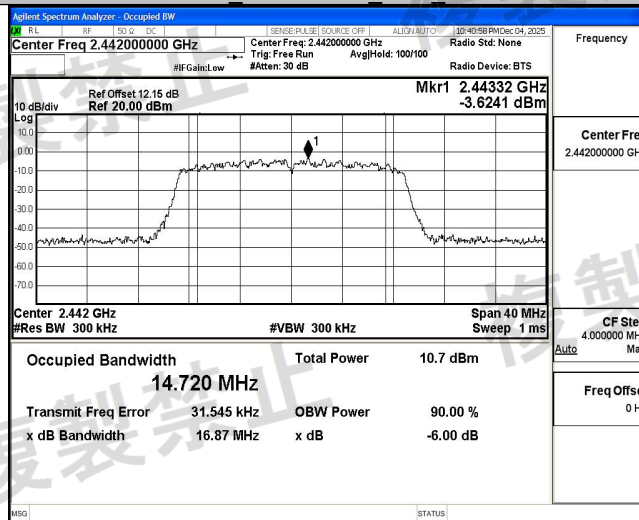
NTNV_11G_Ant1_2472



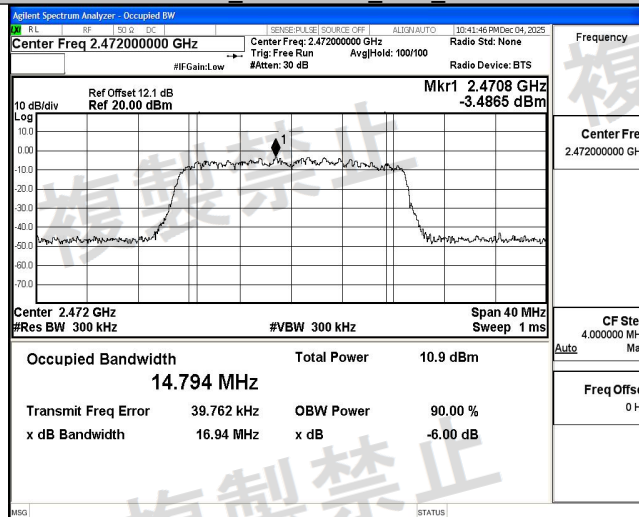
NTNV_11N20SISO_Ant1_2412



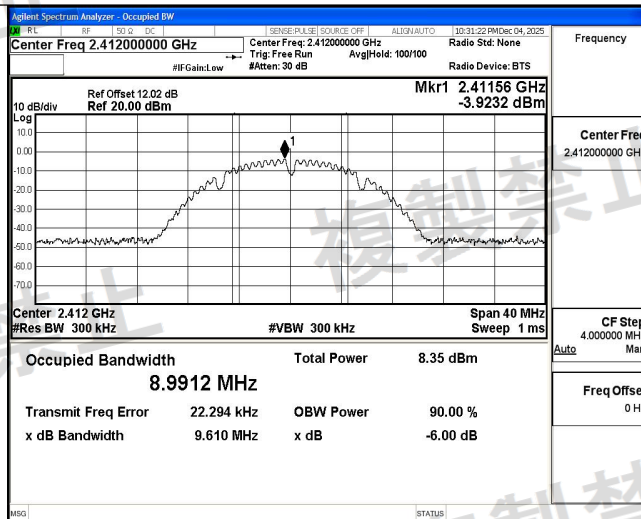
NTNV_11N20SISO_Ant1_2442



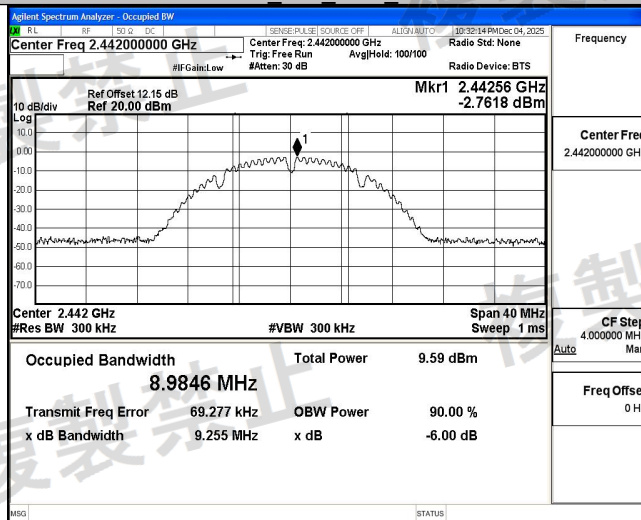
NTNV_11N20SISO_Ant1_2472



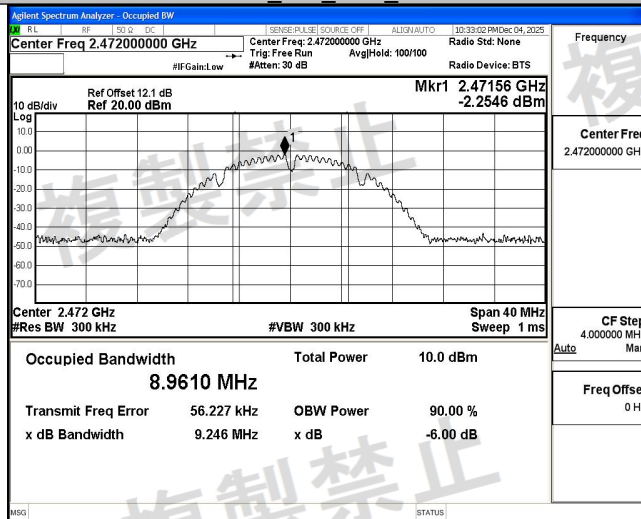
NTLV_11B_Ant1_2412



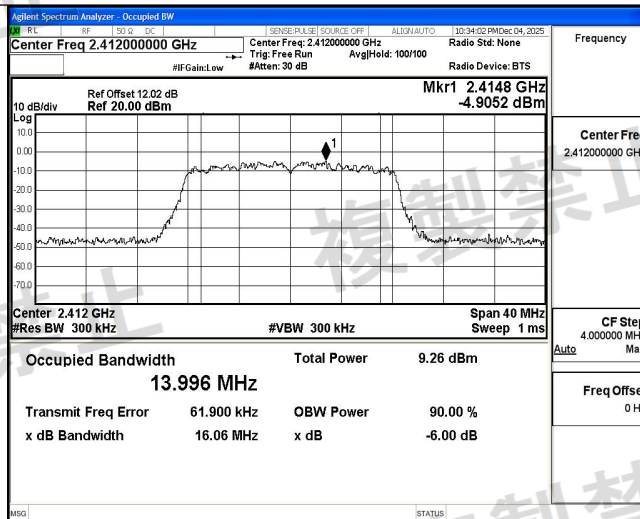
NTLV_11B_Ant1_2442



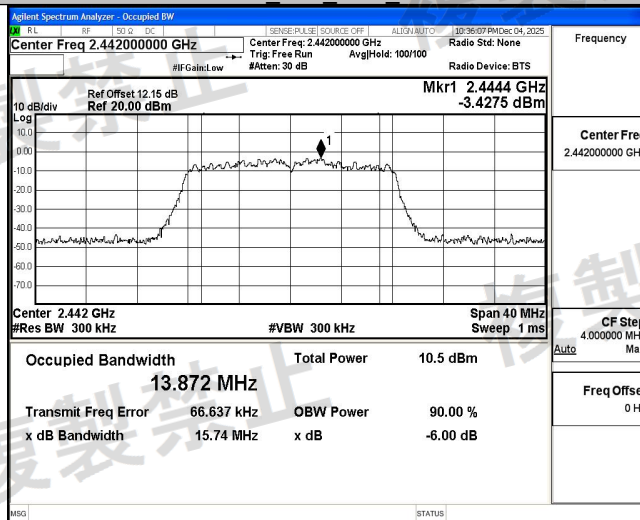
NTLV_11B_Ant1_2472



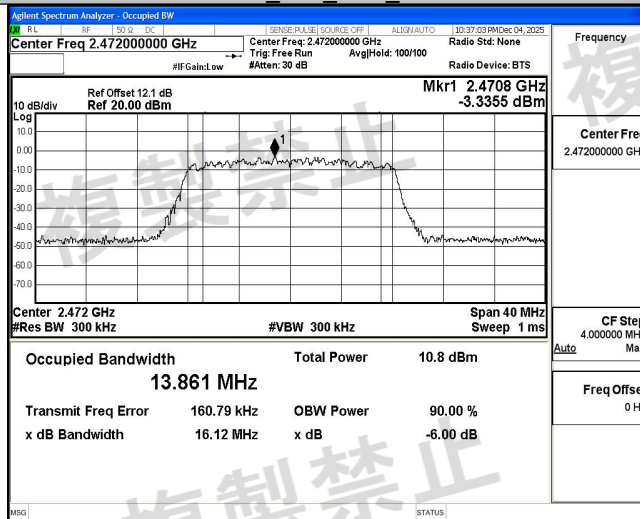
NTLV_11G_Ant1_2412



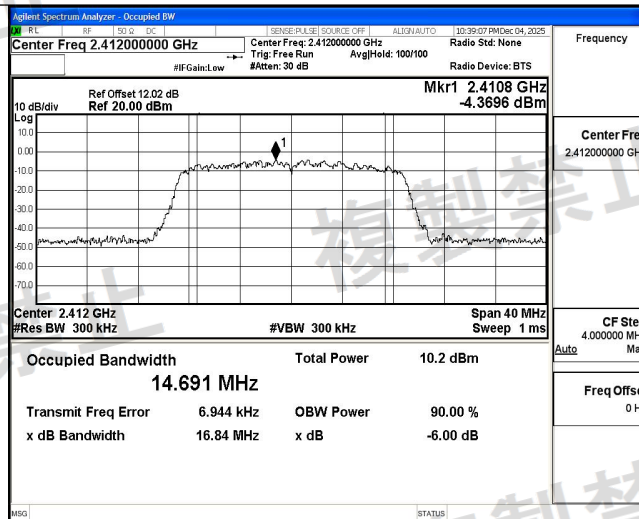
NTLV_11G_Ant1_2442



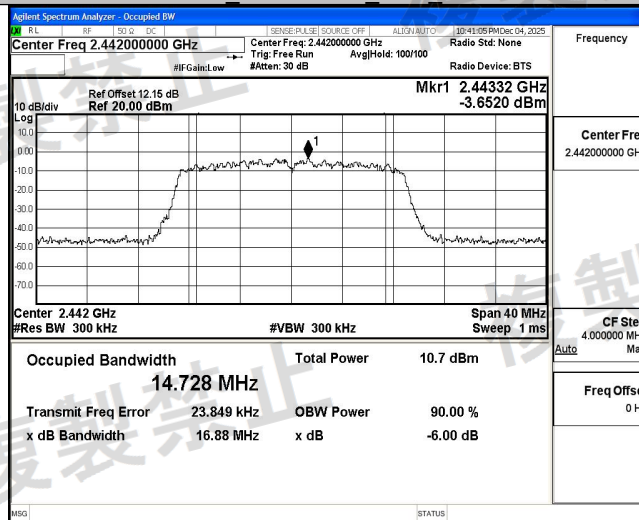
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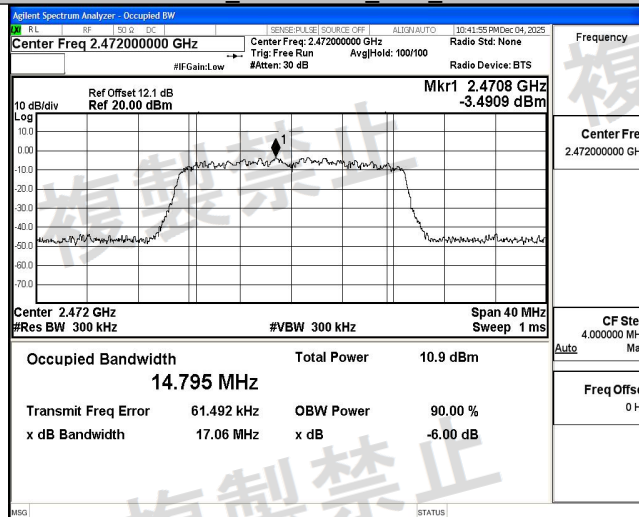
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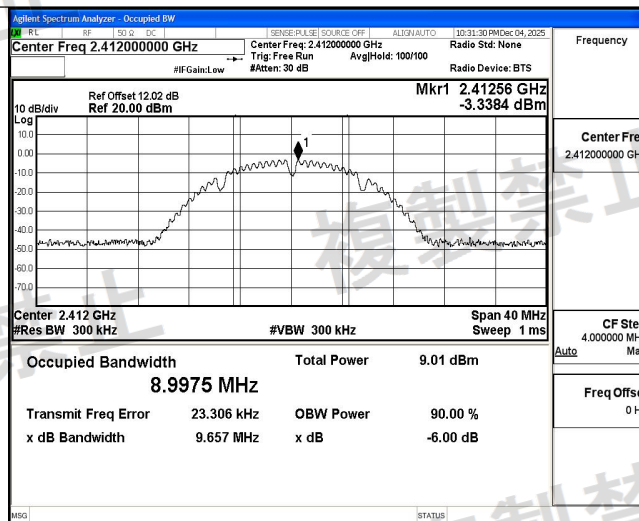
NTLV 11N20SISO Ant1 2442



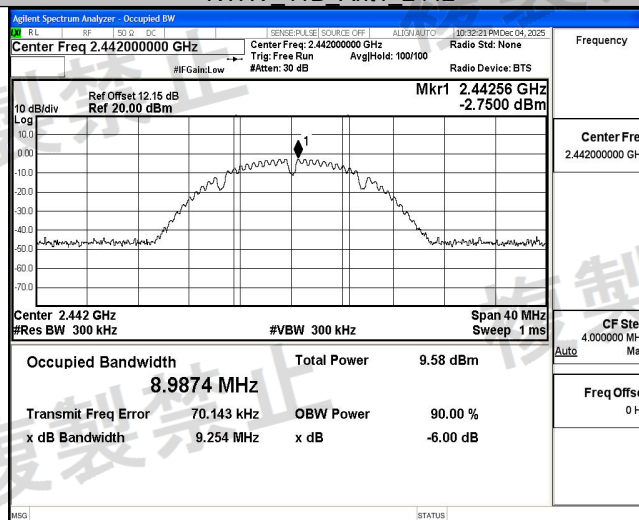
NTLV 11N20SISO Ant1 2472



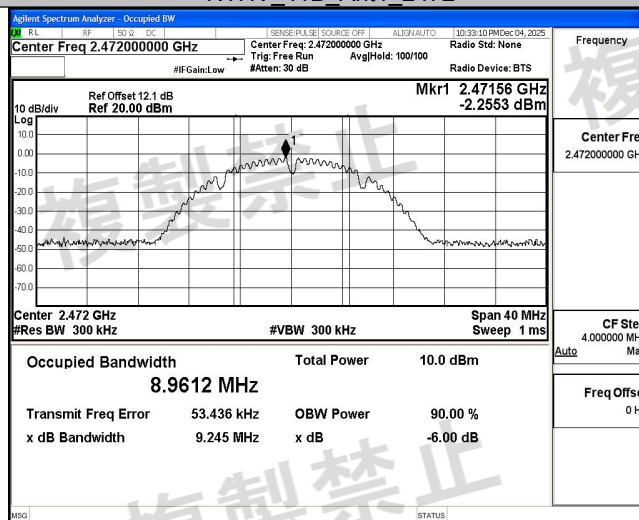
NTHV 11B Ant1 2412



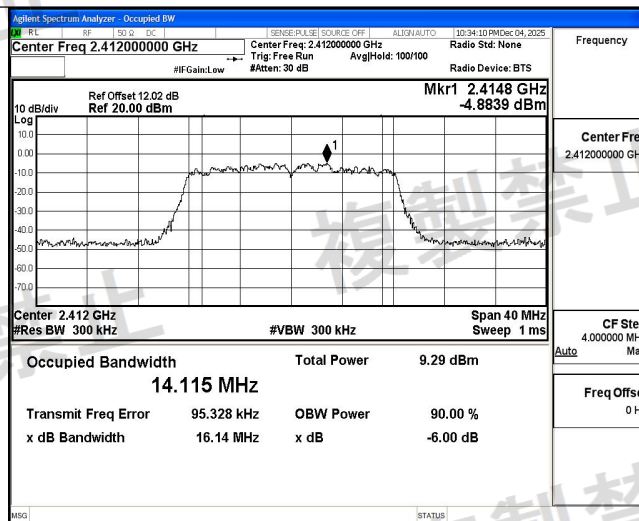
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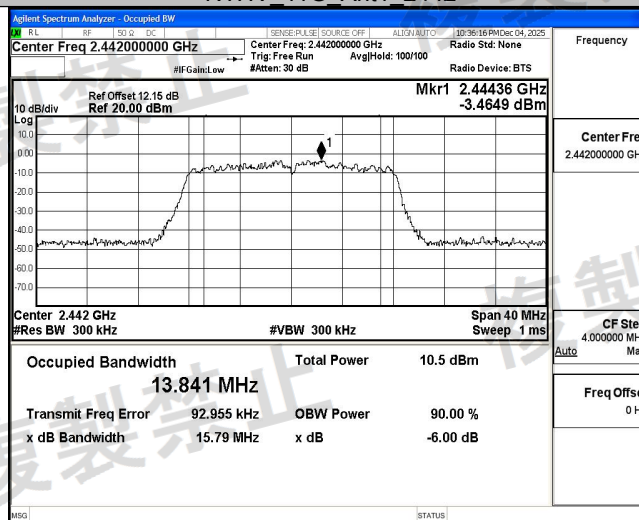
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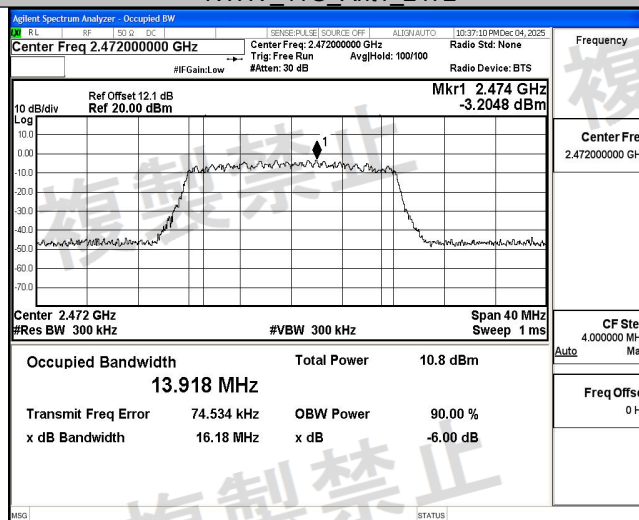
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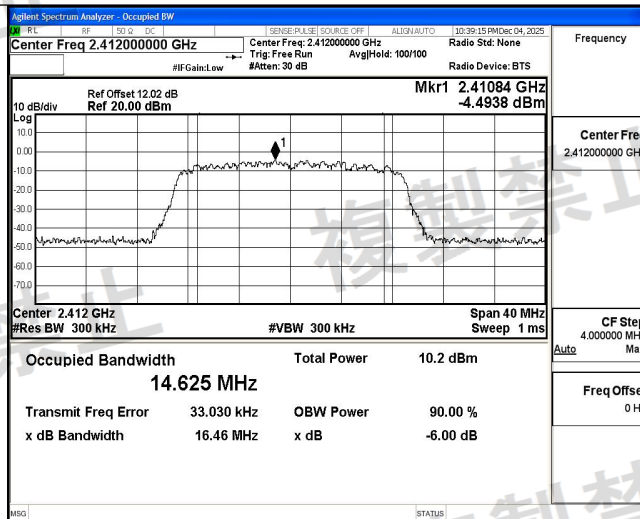
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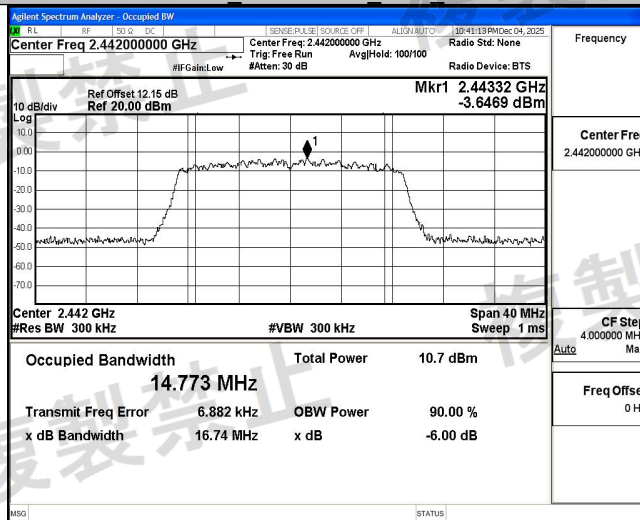
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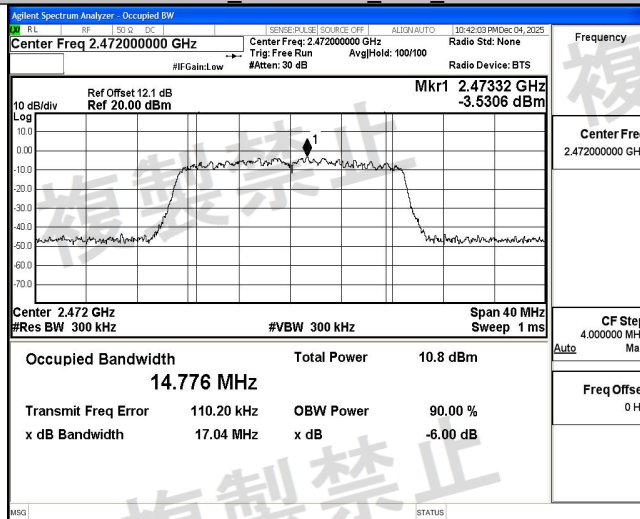
NTHV_11N20SISO_Ant1_2412



NTHV_11N20SISO_Ant1_2442



NTHV_11N20SISO_Ant1_2472



**Appendix D: Antenna Power****Test Result**

Antenna Power							
Test Condition	Test Mode	Antenna	Freq(MHz)	Result(dBm/MHz)	Result(mW/MHz)	Limit(mW/MHz)	Verdict
NTNV	11B	Ant1	2412	1.68	1.4723	≤10	PASS
			2442	1.18	1.3122	≤10	PASS
			2472	2.41	1.7418	≤10	PASS
	11G	Ant1	2412	3.50	2.2387	≤10	PASS
			2442	5.31	3.3963	≤10	PASS
			2472	2.75	1.8836	≤10	PASS
	11N20SI SO	Ant1	2412	1.52	1.4191	≤10	PASS
			2442	1.96	1.5704	≤10	PASS
			2472	2.31	1.7022	≤10	PASS
NTLV	11B	Ant1	2412	1.71	1.4825	≤10	PASS
			2442	1.11	1.2912	≤10	PASS
			2472	2.47	1.7660	≤10	PASS
	11G	Ant1	2412	3.55	2.2646	≤10	PASS
			2442	5.31	3.3963	≤10	PASS
			2472	2.51	1.7824	≤10	PASS
	11N20SI SO	Ant1	2412	1.54	1.4256	≤10	PASS
			2442	2.15	1.6406	≤10	PASS
			2472	2.29	1.6943	≤10	PASS
NTHV	11B	Ant1	2412	1.76	1.4997	≤10	PASS
			2442	0.95	1.2445	≤10	PASS
			2472	2.45	1.7579	≤10	PASS
	11G	Ant1	2412	3.51	2.2439	≤10	PASS
			2442	5.30	3.3884	≤10	PASS
			2472	2.88	1.9409	≤10	PASS
	11N20SI SO	Ant1	2412	1.65	1.4622	≤10	PASS
			2442	2.20	1.6596	≤10	PASS
			2472	2.54	1.7947	≤10	PASS



Tolerance								
Test Condition	Test Mode	Antenna	Freq(MHz)	Power (mW/MHz)	RatedPower (mW/MHz)	Result (%)	Limit (%)	Verdict
NTNV	11B	Ant1	2412	1.4723	5	-70.55	+20	PASS
			2442	1.3122	5	-73.76	+20	PASS
			2472	1.7418	5	-65.16	+20	PASS
	11G	Ant1	2412	2.2387	5	-55.23	+20	PASS
			2442	3.3963	5	-32.07	+20	PASS
			2472	1.8836	5	-62.33	+20	PASS
	11N20SI SO	Ant1	2412	1.4191	5	-71.62	+20	PASS
			2442	1.5704	5	-68.59	+20	PASS
			2472	1.7022	5	-65.96	+20	PASS
NTLV	11B	Ant1	2412	1.4825	5	-70.35	+20	PASS
			2442	1.2912	5	-74.18	+20	PASS
			2472	1.7660	5	-64.68	+20	PASS
	11G	Ant1	2412	2.2646	5	-54.71	+20	PASS
			2442	3.3963	5	-32.07	+20	PASS
			2472	1.7824	5	-64.35	+20	PASS
	11N20SI SO	Ant1	2412	1.4256	5	-71.49	+20	PASS
			2442	1.6406	5	-67.19	+20	PASS
			2472	1.6943	5	-66.11	+20	PASS
NTHV	11B	Ant1	2412	1.4997	5	-70.01	+20	PASS
			2442	1.2445	5	-75.11	+20	PASS
			2472	1.7579	5	-64.84	+20	PASS
	11G	Ant1	2412	2.2439	5	-55.12	+20	PASS
			2442	3.3884	5	-32.23	+20	PASS
			2472	1.9409	5	-61.18	+20	PASS
	11N20SI SO	Ant1	2412	1.4622	5	-70.76	+20	PASS
			2442	1.6596	5	-66.81	+20	PASS
			2472	1.7947	5	-64.11	+20	PASS



Appendix E: Spurious Emission of TX

Test Result 1

TestCondition	TestMode	Antenna	Channel (MHz)	Freq.Range [MHz]	Freq (MHz)	Result [dBm]	Limit [dBm]	Result [μW/MHz]	Limit [μW/MHz]	Verdict
NTNV	11B	Ant1	2412	30~1000	695.91	-48.93	≤-26	0.01279	≤2.5	PASS
				1000~2387	2305.86	-46.37	≤-26	0.02307	≤2.5	PASS
				2387~2400	2390.40	-37.10	≤-16	0.19498	≤25	PASS
				2483.5~2496.5	2488.45	-36.73	≤-16	0.21232	≤25	PASS
				2496.5~13000	4082.00	-43.18	≤-26	0.04808	≤2.5	PASS
			2442	30~1000	845.53	-48.54	≤-26	0.01400	≤2.5	PASS
				1000~2387	1939.00	-43.74	≤-26	0.04227	≤2.5	PASS
				2387~2400	2399.88	-36.91	≤-16	0.20370	≤25	PASS
				2483.5~2496.5	2490.19	-37.32	≤-16	0.18535	≤25	PASS
				2496.5~13000	3666.06	-42.60	≤-26	0.05495	≤2.5	PASS
			2472	30~1000	912.70	-49.28	≤-26	0.01180	≤2.5	PASS
				1000~2387	2354.75	-46.02	≤-26	0.02500	≤2.5	PASS
				2387~2400	2388.65	-37.42	≤-16	0.18113	≤25	PASS
				2483.5~2496.5	2494.39	-36.09	≤-16	0.24604	≤25	PASS
				2496.5~13000	4712.74	-42.96	≤-26	0.05058	≤2.5	PASS
	11G	Ant1	2412	30~1000	858.62	-48.94	≤-26	0.01276	≤2.5	PASS
				1000~2387	2379.72	-45.95	≤-26	0.02541	≤2.5	PASS
				2387~2400	2393.49	-36.53	≤-16	0.22233	≤25	PASS
				2483.5~2496.5	2493.69	-36.47	≤-16	0.22542	≤25	PASS
				2496.5~13000	3607.77	-41.73	≤-26	0.06714	≤2.5	PASS
			2442	30~1000	951.26	-49.05	≤-26	0.01245	≤2.5	PASS
				1000~2387	2324.59	-46.01	≤-26	0.02506	≤2.5	PASS
				2387~2400	2389.83	-37.38	≤-16	0.18281	≤25	PASS
				2483.5~2496.5	2487.74	-36.88	≤-16	0.20512	≤25	PASS
				2496.5~13000	5274.15	-42.73	≤-26	0.05333	≤2.5	PASS
			2472	30~1000	904.94	-49.51	≤-26	0.01119	≤2.5	PASS
				1000~2387	1922.70	-41.07	≤-26	0.07816	≤2.5	PASS
				2387~2400	2396.38	-36.89	≤-16	0.20464	≤25	PASS
				2483.5~2496.5	2484.88	-36.15	≤-16	0.24266	≤25	PASS
				2496.5~13000	4874.49	-42.17	≤-26	0.06067	≤2.5	PASS
	11N20SI SO	Ant1	2412	30~1000	837.53	-49.49	≤-26	0.01125	≤2.5	PASS
				1000~2387	2205.65	-46.55	≤-26	0.02213	≤2.5	PASS
				2387~2400	2391.16	-37.23	≤-16	0.18923	≤25	PASS
				2483.5~2496.5	2487.61	-37.21	≤-16	0.19011	≤25	PASS
				2496.5~13000	4042.62	-42.54	≤-26	0.05572	≤2.5	PASS
			2442	30~1000	893.06	-49.16	≤-26	0.01213	≤2.5	PASS
				1000~2387	2115.84	-46.68	≤-26	0.02148	≤2.5	PASS
				2387~2400	2394.82	-36.79	≤-16	0.20941	≤25	PASS
				2483.5~2496.5	2489.52	-36.91	≤-16	0.20370	≤25	PASS
				2496.5~13000	4881.32	-42.53	≤-26	0.05585	≤2.5	PASS
			2472	30~1000	961.20	-48.60	≤-26	0.01380	≤2.5	PASS
				1000~2387	2178.26	-46.66	≤-26	0.02158	≤2.5	PASS
				2387~2400	2396.26	-36.75	≤-16	0.21135	≤25	PASS
				2483.5~2496.5	2483.86	-34.32	≤-16	0.36983	≤25	PASS
				2496.5~13000	3607.25	-42.37	≤-26	0.05794	≤2.5	PASS
NTLV	11B	Ant1	2412	30~1000	929.19	-48.68	≤-26	0.01355	≤2.5	PASS
				1000~2387	2230.62	-46.02	≤-26	0.02500	≤2.5	PASS
				2387~2400	2396.82	-37.02	≤-16	0.19861	≤25	PASS
				2483.5~2496.5	2492.62	-36.34	≤-16	0.23227	≤25	PASS
				2496.5~13000	3617.75	-42.93	≤-26	0.05093	≤2.5	PASS
			2442	30~1000	933.80	-49.10	≤-26	0.01230	≤2.5	PASS
				1000~2387	2248.99	-46.61	≤-26	0.02183	≤2.5	PASS
				2387~2400	2399.20	-37.46	≤-16	0.17947	≤25	PASS
				2483.5~2496.5	2492.44	-36.59	≤-16	0.21928	≤25	PASS
				2496.5~13000	4893.40	-42.79	≤-26	0.05260	≤2.5	PASS
			2472	30~1000	886.27	-49.11	≤-26	0.01227	≤2.5	PASS
				1000~2387	2362.03	-45.94	≤-26	0.02547	≤2.5	PASS



NTHV	11G	Ant1	2412	2387~2400	2398.10	-37.07	≤-16	0.19634	≤25	PASS	
				2483.5~2496.5	2490.44	-37.29	≤-16	0.18664	≤25	PASS	
				2496.5~13000	4864.51	-42.68	≤-26	0.05395	≤2.5	PASS	
				30~1000	788.78	-49.42	≤-26	0.01143	≤2.5	PASS	
				1000~2387	2082.55	-45.91	≤-26	0.02564	≤2.5	PASS	
				2387~2400	2397.99	-36.01	≤-16	0.25061	≤25	PASS	
			2442	2483.5~2496.5	2491.69	-36.39	≤-16	0.22961	≤25	PASS	
				2496.5~13000	4103.54	-43.17	≤-26	0.04819	≤2.5	PASS	
				30~1000	861.53	-49.16	≤-26	0.01213	≤2.5	PASS	
				1000~2387	2278.12	-46.07	≤-26	0.02472	≤2.5	PASS	
				2387~2400	2391.72	-37.43	≤-16	0.18072	≤25	PASS	
				2483.5~2496.5	2492.65	-36.98	≤-16	0.20045	≤25	PASS	
	2472	2496.5~13000	6074.52	-42.27	≤-26	0.05929	≤2.5	PASS			
		30~1000	937.68	-49.25	≤-26	0.01189	≤2.5	PASS			
		1000~2387	1923.05	-41.58	≤-26	0.06950	≤2.5	PASS			
		2387~2400	2395.95	-36.36	≤-16	0.23121	≤25	PASS			
		2483.5~2496.5	2483.75	-35.83	≤-16	0.26122	≤25	PASS			
		2496.5~13000	3620.90	-43.01	≤-26	0.05000	≤2.5	PASS			
	11N20SI SO	Ant1	2412	30~1000	890.15	-49.45	≤-26	0.01135	≤2.5	PASS	
				1000~2387	2339.50	-46.23	≤-26	0.02382	≤2.5	PASS	
				2387~2400	2394.29	-37.63	≤-16	0.17258	≤25	PASS	
				2483.5~2496.5	2483.78	-37.53	≤-16	0.17660	≤25	PASS	
			2442	2496.5~13000	4762.63	-42.37	≤-26	0.05794	≤2.5	PASS	
				30~1000	822.73	-48.41	≤-26	0.01442	≤2.5	PASS	
1000~2387				2356.83	-45.92	≤-26	0.02559	≤2.5	PASS		
2387~2400				2388.25	-37.25	≤-16	0.18836	≤25	PASS		
2472			2483.5~2496.5	2494.28	-37.03	≤-16	0.19815	≤25	PASS		
			2496.5~13000	3618.27	-42.75	≤-26	0.05309	≤2.5	PASS		
			30~1000	942.29	-49.24	≤-26	0.01191	≤2.5	PASS		
			1000~2387	2373.82	-46.83	≤-26	0.02075	≤2.5	PASS		
11B	Ant1	2412	2387~2400	2396.24	-37.19	≤-16	0.19099	≤25	PASS		
			2483.5~2496.5	2483.94	-34.38	≤-16	0.36475	≤25	PASS		
			2496.5~13000	5302.51	-42.50	≤-26	0.05623	≤2.5	PASS		
			30~1000	868.57	-48.76	≤-26	0.01330	≤2.5	PASS		
			1000~2387	2340.54	-46.28	≤-26	0.02355	≤2.5	PASS		
		2442	2387~2400	2399.36	-37.02	≤-16	0.19861	≤25	PASS		
			2483.5~2496.5	2492.91	-36.34	≤-16	0.23227	≤25	PASS		
			2496.5~13000	3676.57	-41.55	≤-26	0.06998	≤2.5	PASS		
			30~1000	954.65	-49.49	≤-26	0.01125	≤2.5	PASS		
			1000~2387	2113.41	-46.48	≤-26	0.02249	≤2.5	PASS		
		2472	2387~2400	2389.07	-37.53	≤-16	0.17660	≤25	PASS		
			2483.5~2496.5	2490.63	-36.77	≤-16	0.21038	≤25	PASS		
			2496.5~13000	4869.77	-42.66	≤-26	0.05420	≤2.5	PASS		
			30~1000	880.69	-48.99	≤-26	0.01262	≤2.5	PASS		
			1000~2387	2372.44	-46.10	≤-26	0.02455	≤2.5	PASS		
		11G	Ant1	2412	2387~2400	2392.76	-37.11	≤-16	0.19454	≤25	PASS
					2483.5~2496.5	2485.58	-37.16	≤-16	0.19231	≤25	PASS
					2496.5~13000	4859.79	-42.95	≤-26	0.05070	≤2.5	PASS
					30~1000	752.41	-49.46	≤-26	0.01132	≤2.5	PASS
				2442	1000~2387	2356.14	-44.59	≤-26	0.03475	≤2.5	PASS
					2387~2400	2394.39	-36.31	≤-16	0.23388	≤25	PASS
					2483.5~2496.5	2485.62	-37.15	≤-16	0.19275	≤25	PASS
					2496.5~13000	5324.57	-42.65	≤-26	0.05433	≤2.5	PASS
				2472	30~1000	865.66	-48.47	≤-26	0.01422	≤2.5	PASS
1000~2387	2264.94				-46.30	≤-26	0.02344	≤2.5	PASS		
2387~2400	2393.92				-36.83	≤-16	0.20749	≤25	PASS		
2483.5~2496.5	2492.50				-37.17	≤-16	0.19187	≤25	PASS		
11N20SI	Ant1	2412	2496.5~13000	3645.58	-42.19	≤-26	0.06039	≤2.5	PASS		
			30~1000	923.37	-49.69	≤-26	0.01074	≤2.5	PASS		
			1000~2387	2272.92	-45.73	≤-26	0.02673	≤2.5	PASS		
			2387~2400	2399.60	-37.10	≤-16	0.19498	≤25	PASS		
		2442	2483.5~2496.5	2485.88	-35.48	≤-16	0.28314	≤25	PASS		
			2496.5~13000	3617.75	-42.98	≤-26	0.05035	≤2.5	PASS		
			30~1000	885.06	-49.57	≤-26	0.01104	≤2.5	PASS		



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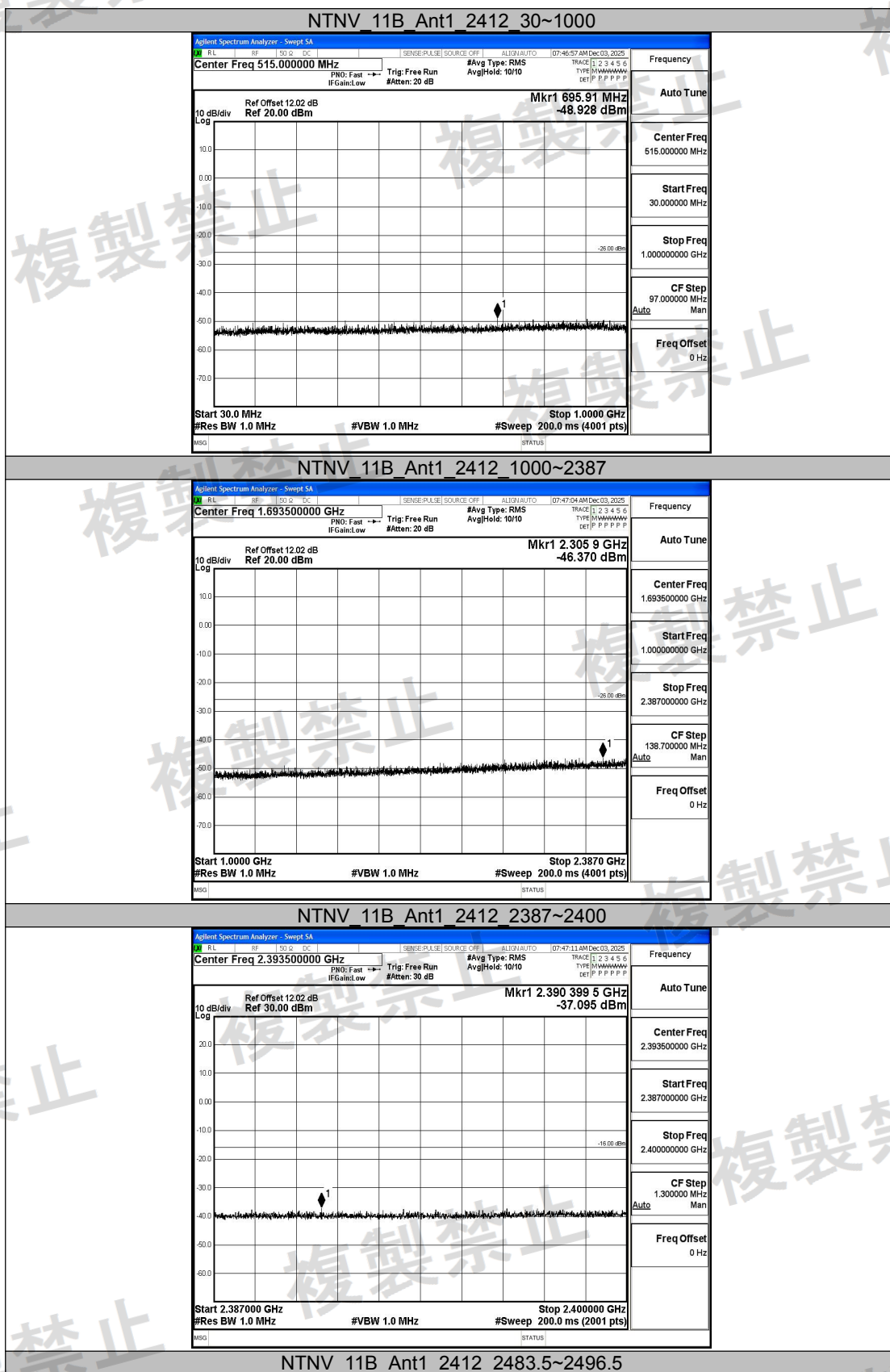
Date: December 22, 2025

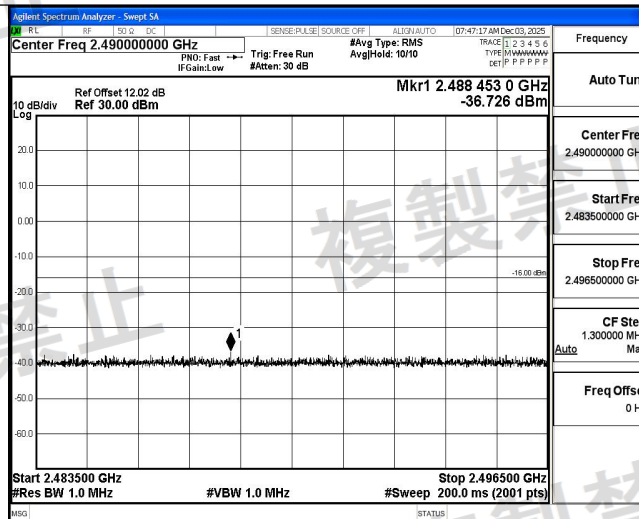
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	SO		1000~2387	2380.76	-45.92	≤-26	0.02559	≤2.5	PASS
			2387~2400	2397.38	-37.52	≤-16	0.17701	≤25	PASS
			2483.5~2496.5	2488.59	-37.34	≤-16	0.18450	≤25	PASS
			2496.5~13000	3693.90	-42.45	≤-26	0.05689	≤2.5	PASS
		2442	30~1000	932.59	-49.10	≤-26	0.01230	≤2.5	PASS
			1000~2387	2357.53	-46.14	≤-26	0.02432	≤2.5	PASS
			2387~2400	2398.78	-36.76	≤-16	0.21086	≤25	PASS
			2483.5~2496.5	2489.03	-37.25	≤-16	0.18836	≤25	PASS
			2496.5~13000	5367.11	-42.19	≤-26	0.06039	≤2.5	PASS
		2472	30~1000	883.36	-48.77	≤-26	0.01327	≤2.5	PASS
			1000~2387	2331.87	-46.47	≤-26	0.02254	≤2.5	PASS
			2387~2400	2393.39	-37.16	≤-16	0.19231	≤25	PASS
			2483.5~2496.5	2484.01	-34.74	≤-16	0.33574	≤25	PASS
			2496.5~13000	3618.27	-43.10	≤-26	0.04898	≤2.5	PASS

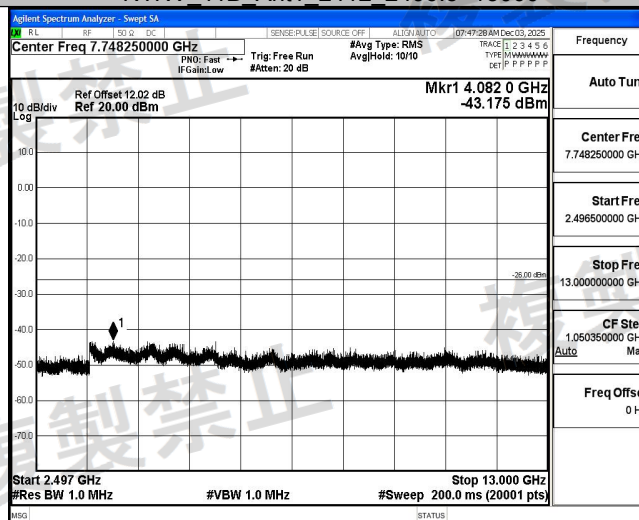


Test Graphs

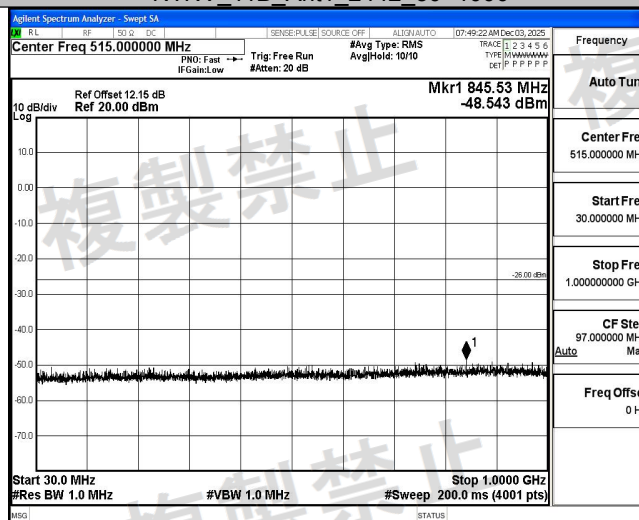




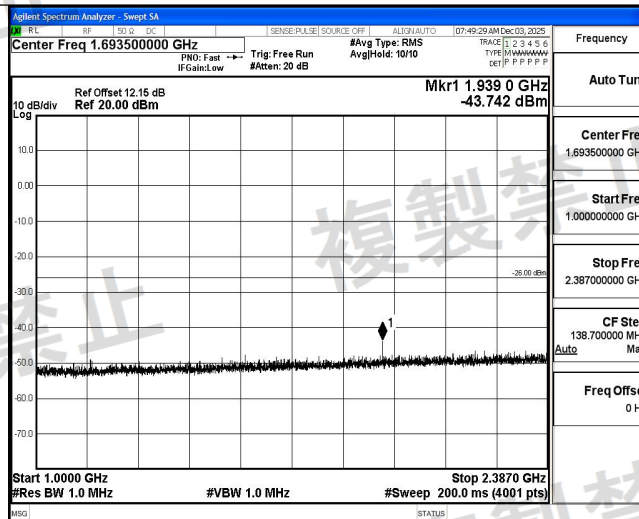
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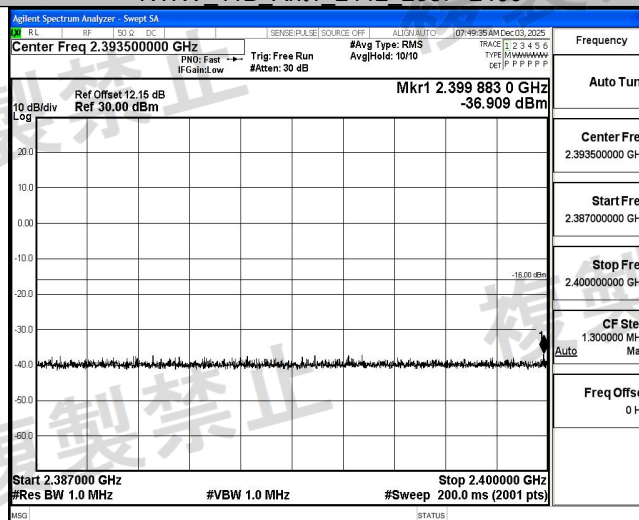
NTNV 11B Ant1 2442 30~1000



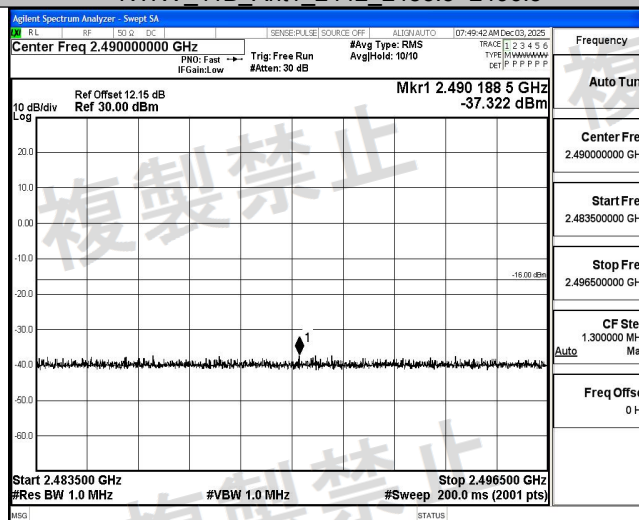
NTNV 11B Ant1 2442 1000~2387



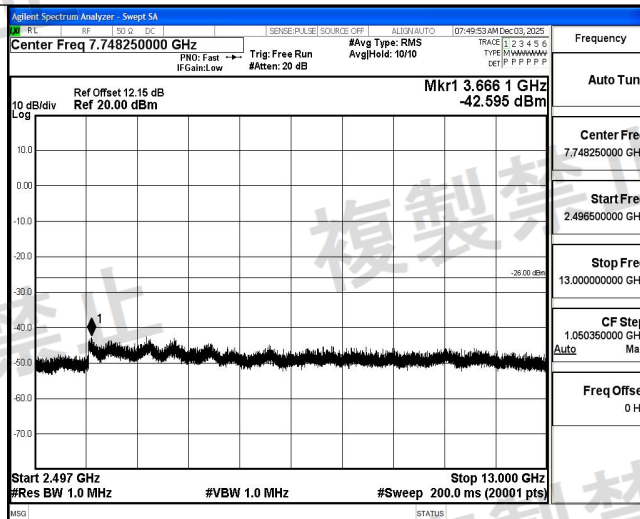
NTNV 11B Ant1 2442 2387~2400



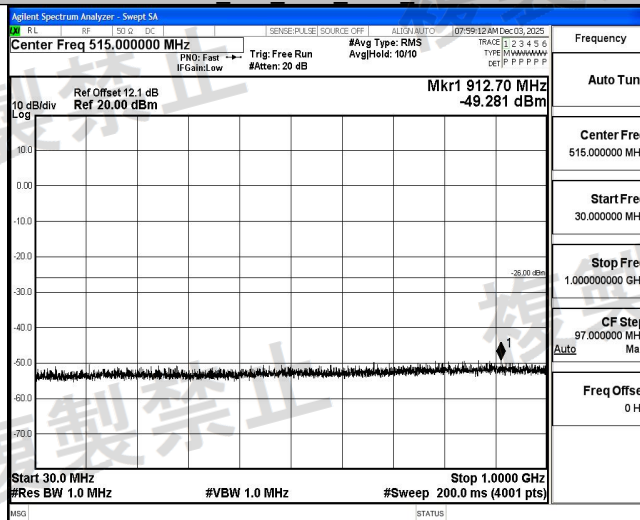
NTNV 11B Ant1 2442 2483.5~2496.5



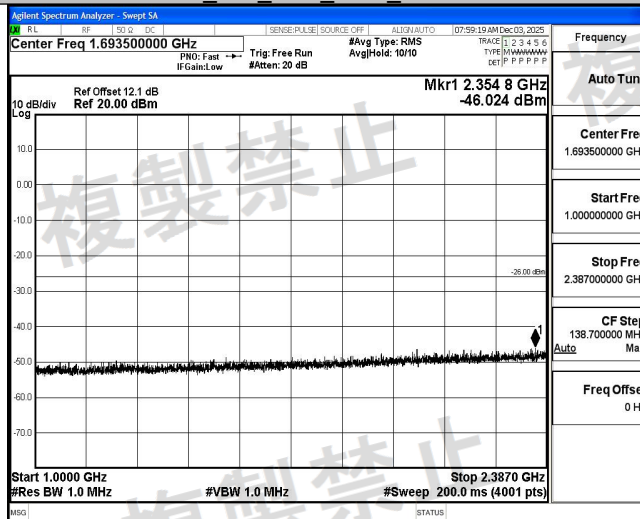
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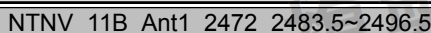
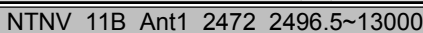
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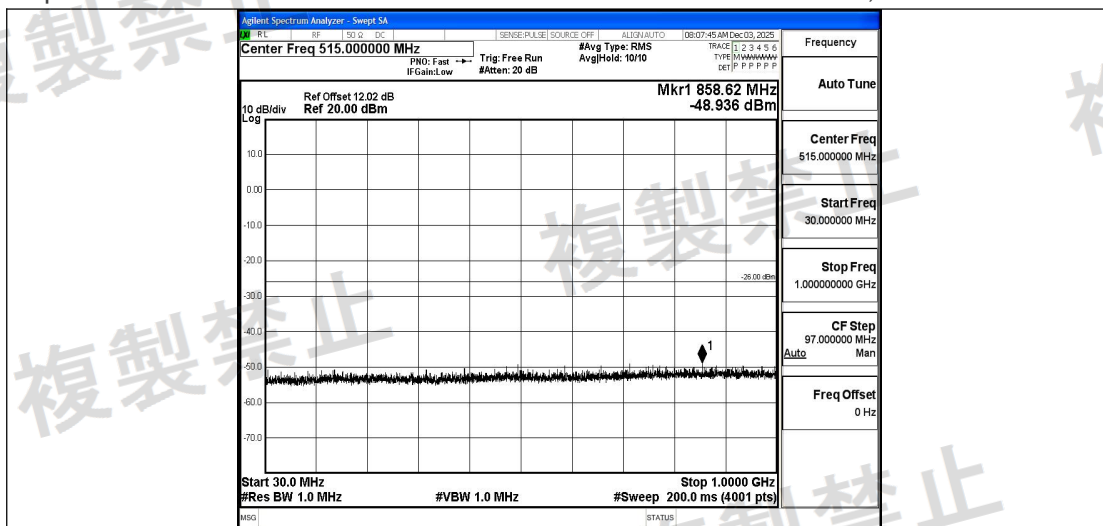


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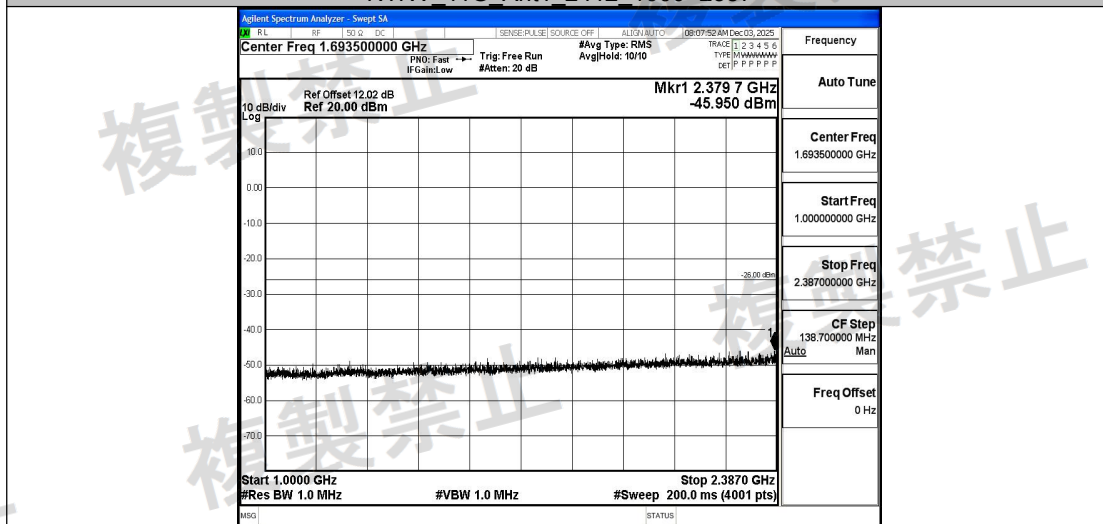


NTNV 11B Ant1 2472 2387~2400

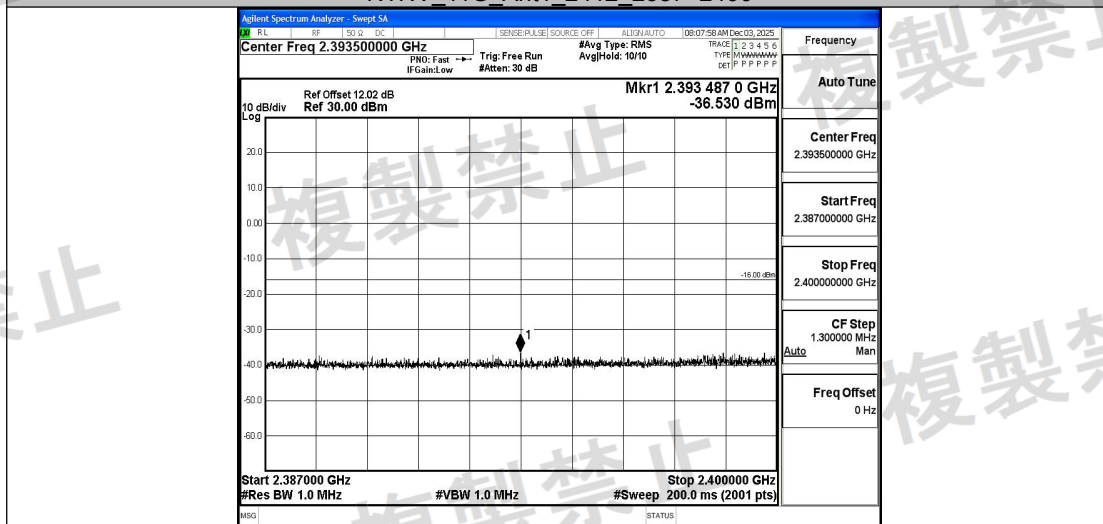




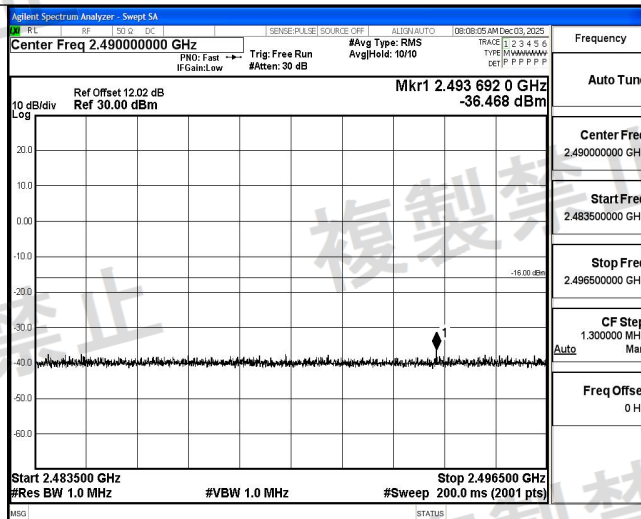
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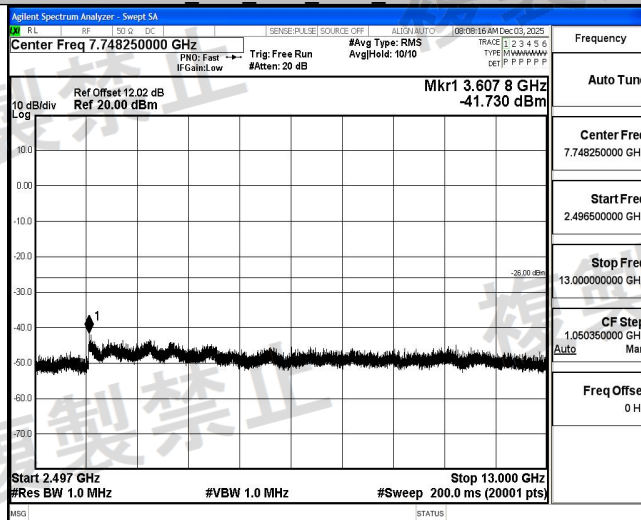
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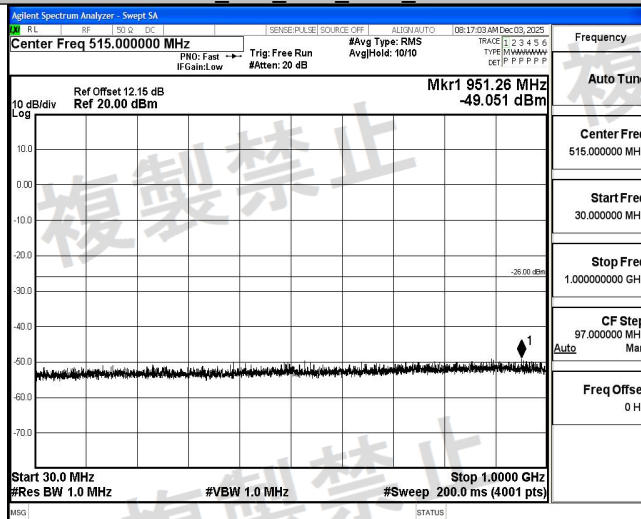
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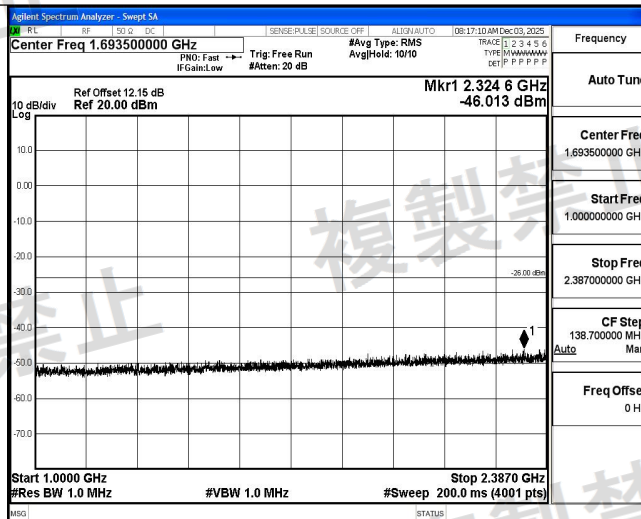
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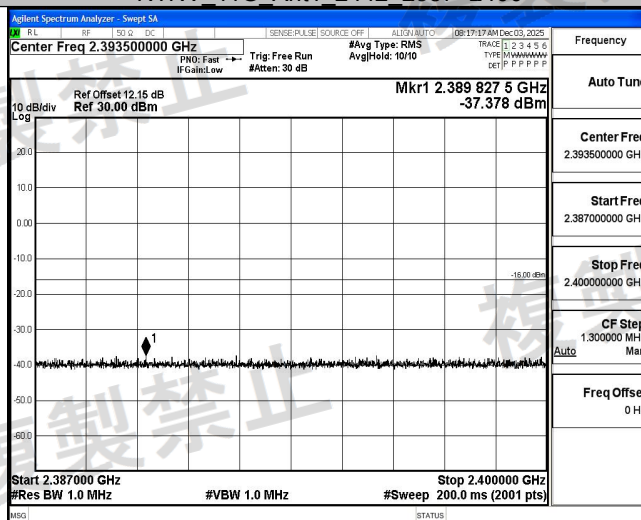
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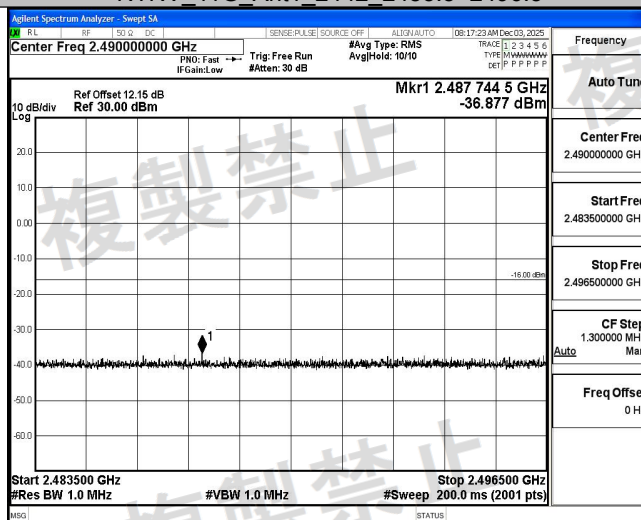
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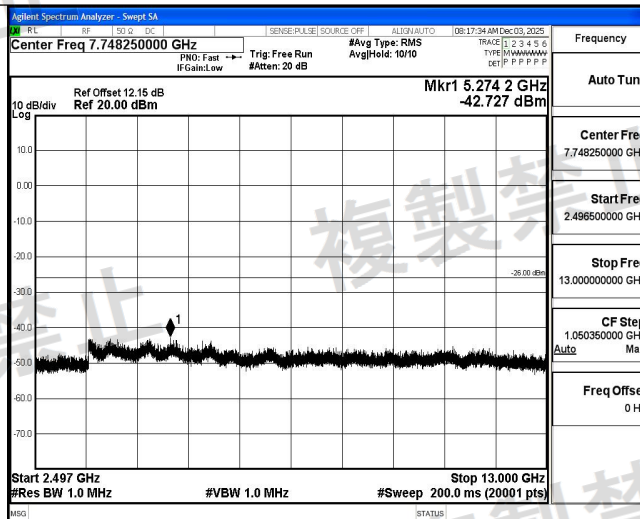
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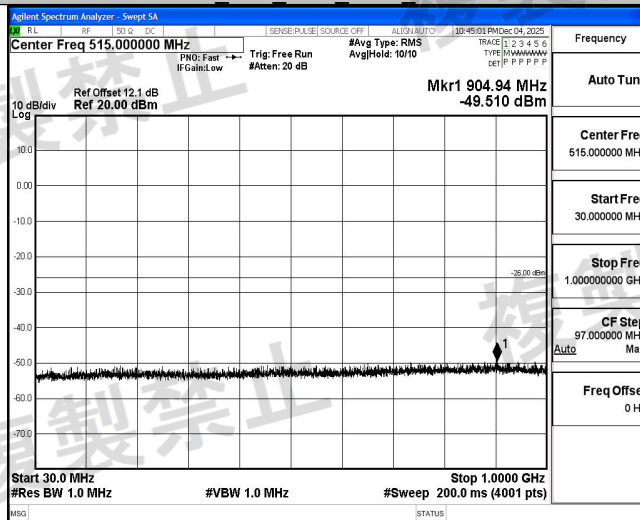
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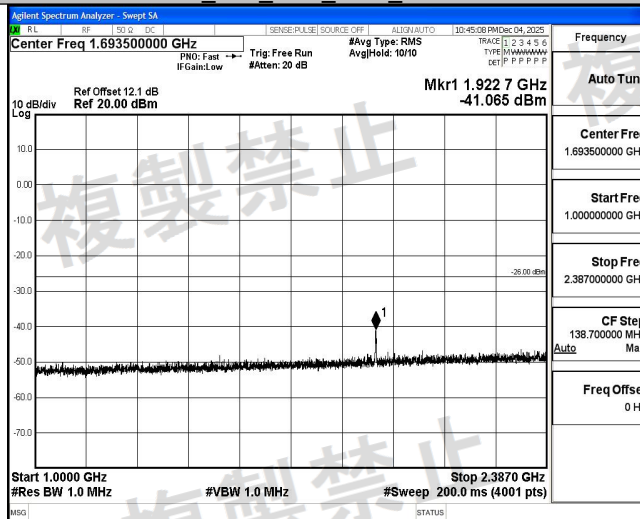
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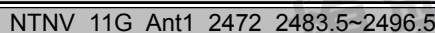
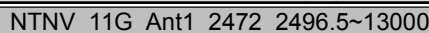
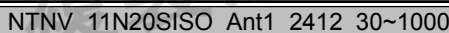
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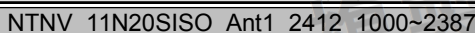
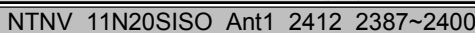
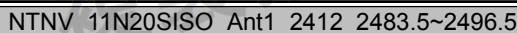


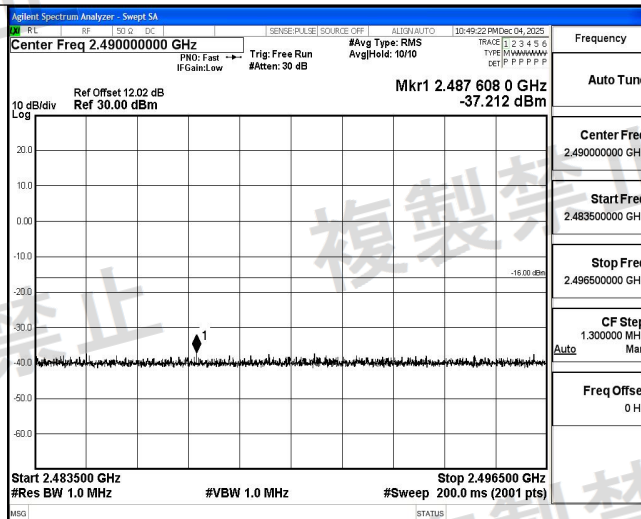
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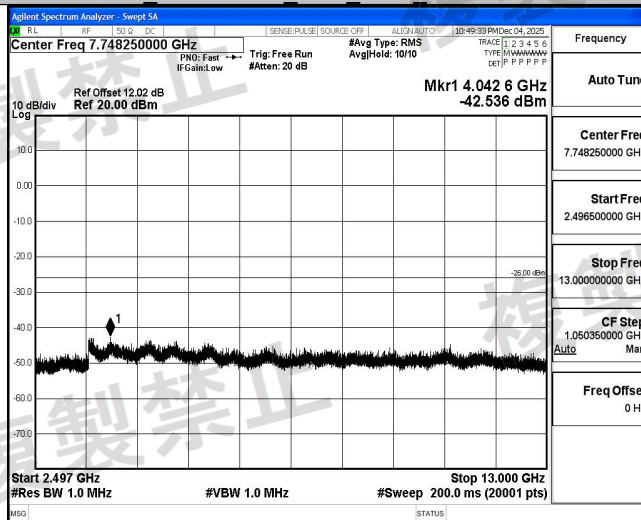
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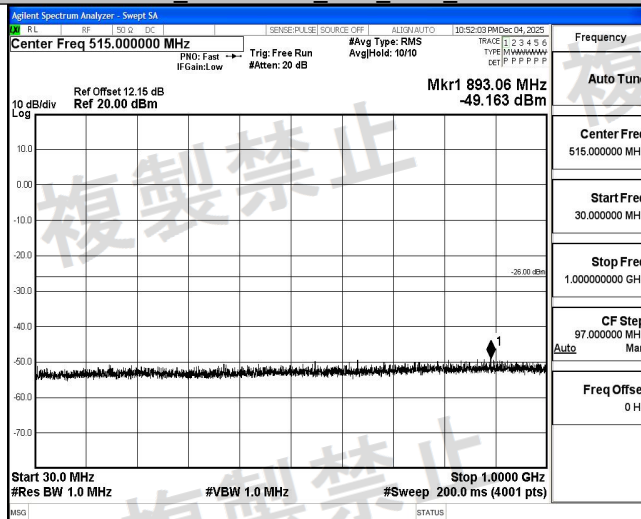




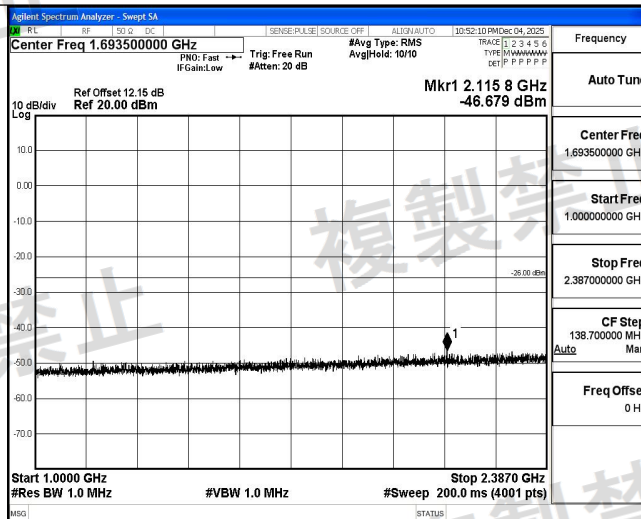
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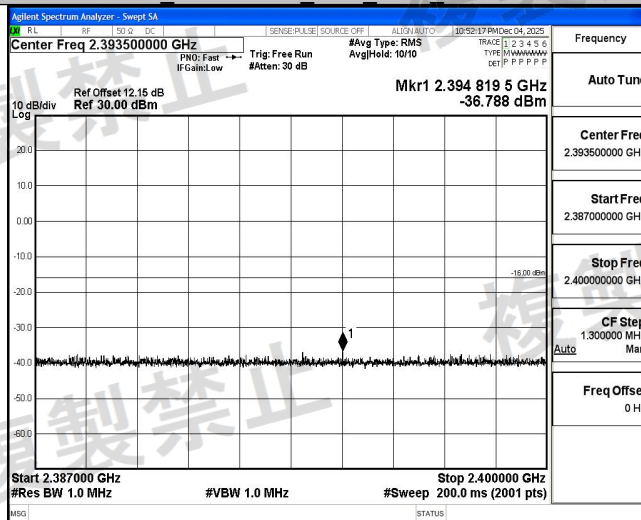
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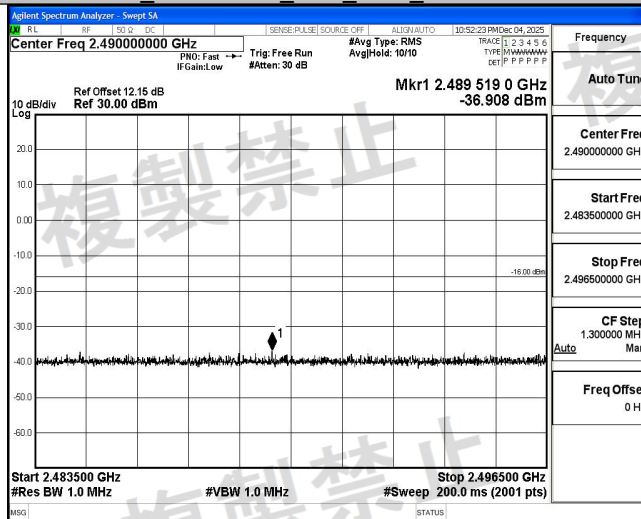
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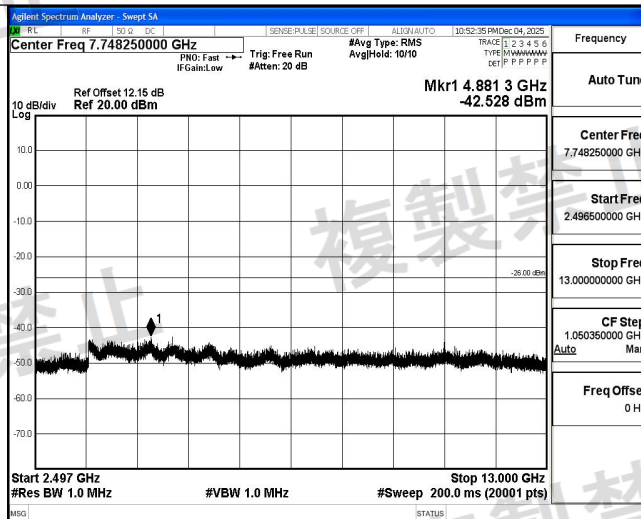
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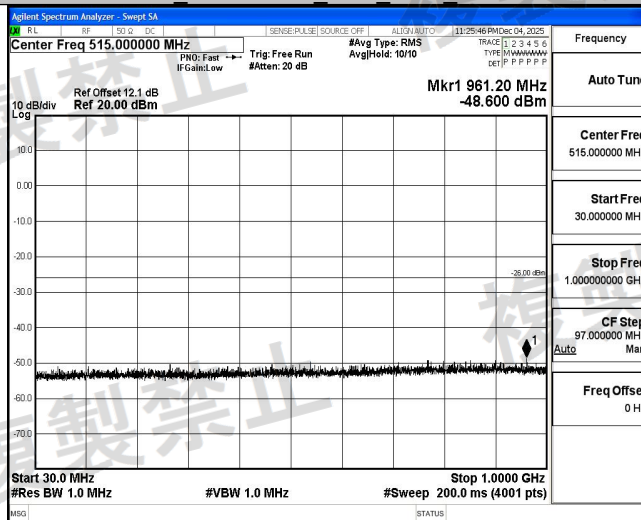
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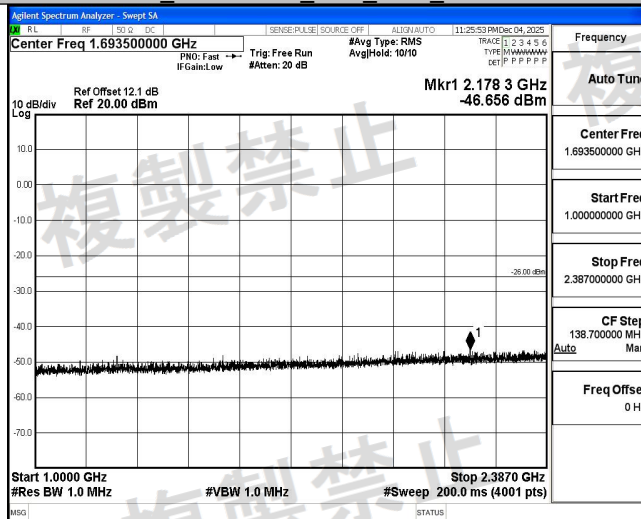
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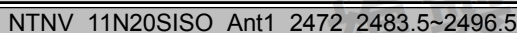
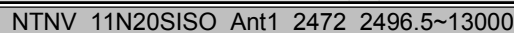
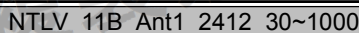
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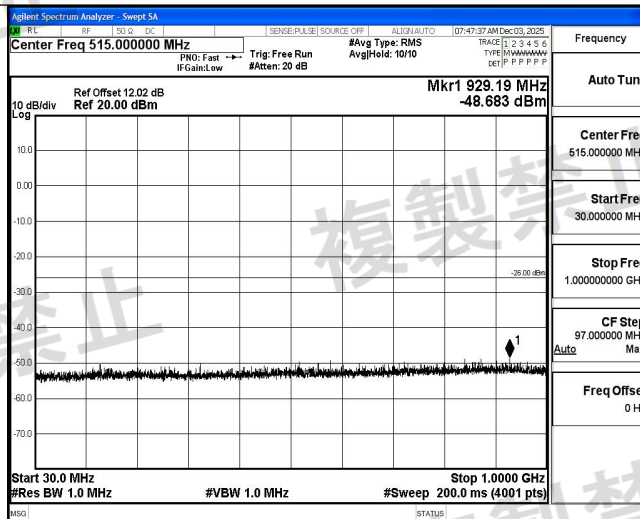


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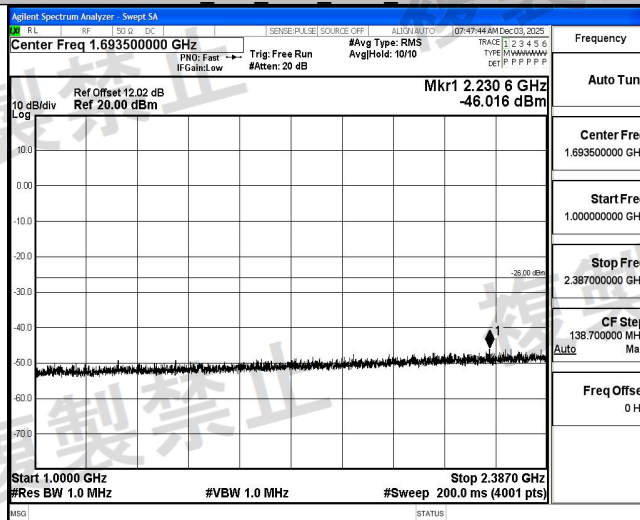


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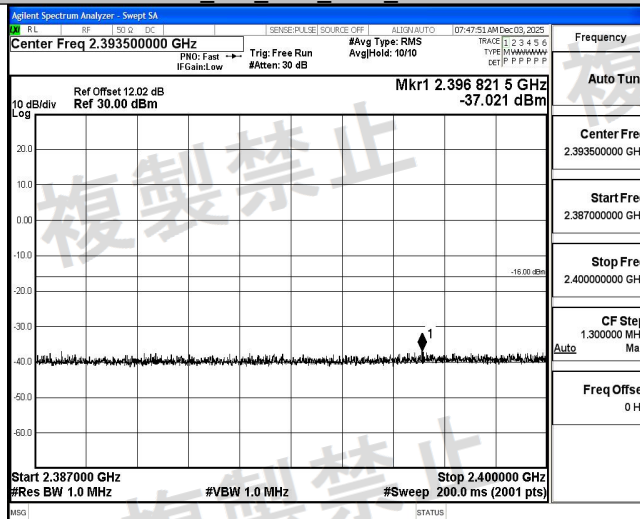




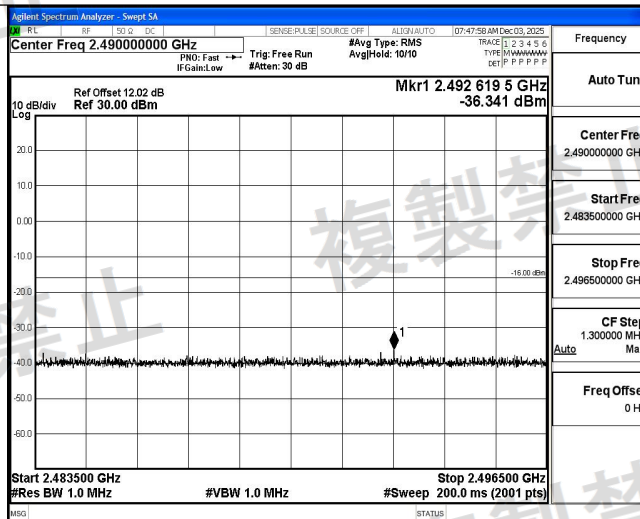
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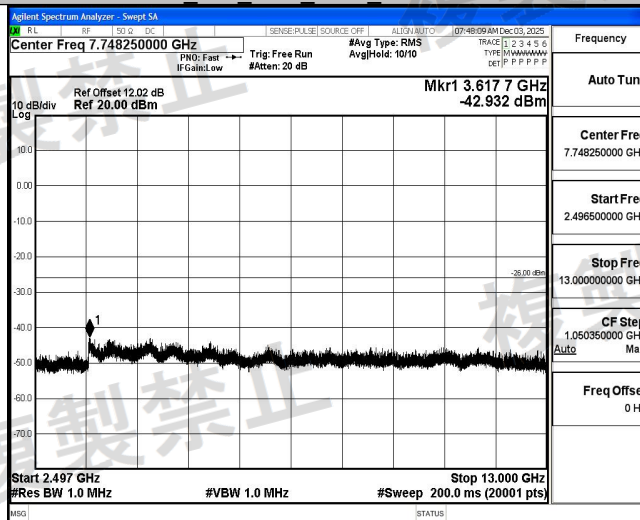
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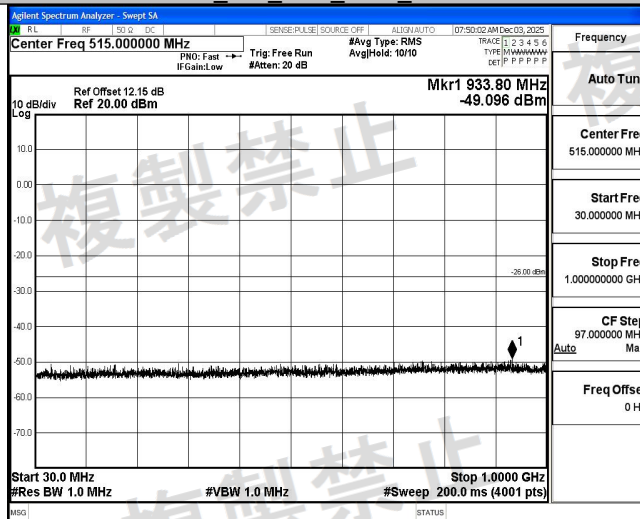
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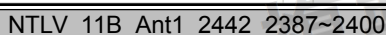
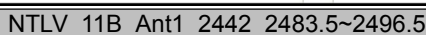
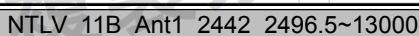
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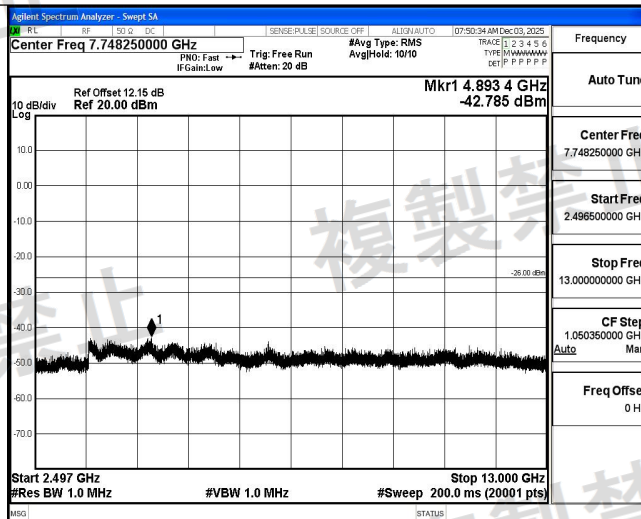


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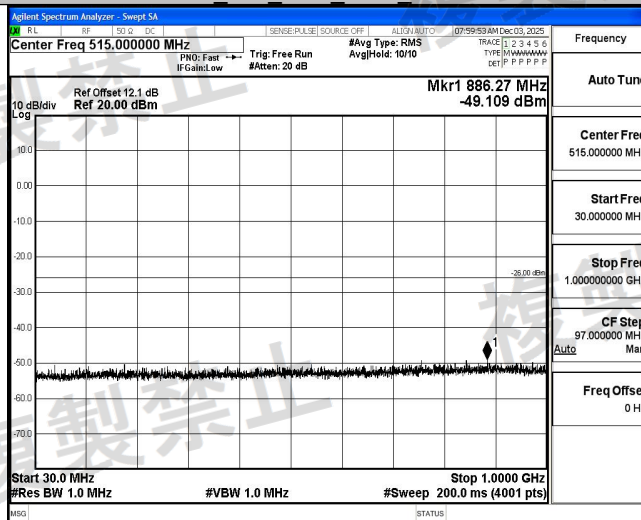


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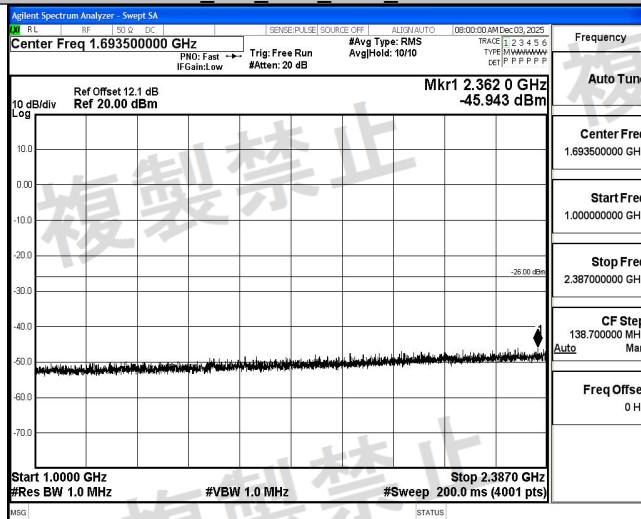




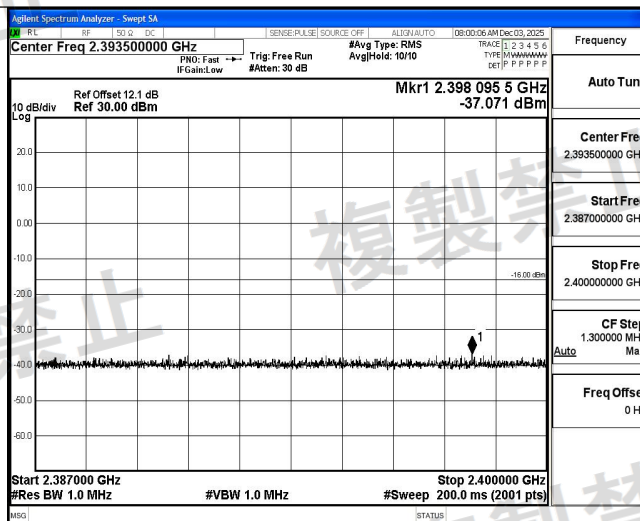
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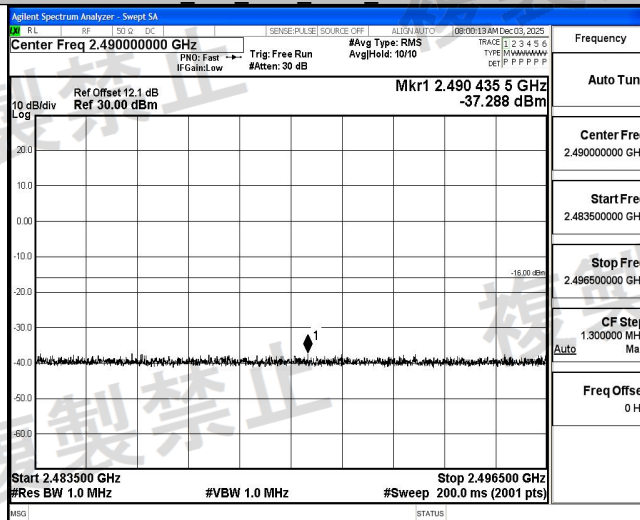
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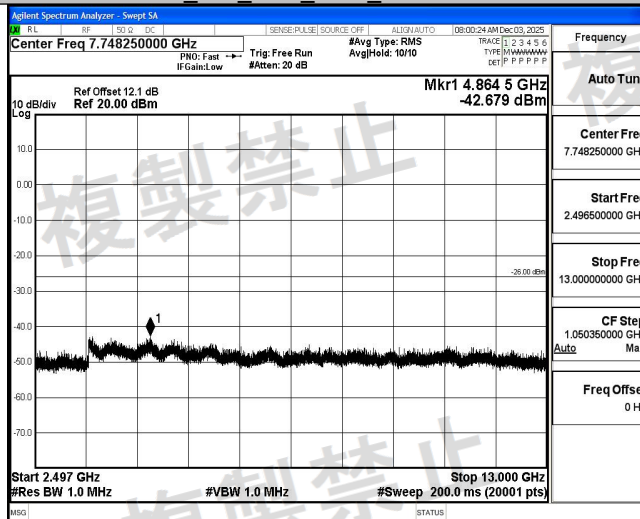
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NTLV 11B Ant1 2472 2483.5~2496.5



NTLV 11B Ant1 2472 2496.5~13000



NTLV 11G Ant1 2412 30~1000