



Test Report

Application No.: DNT2510280546R12146-14907
Applicant: Natural Sound Electronics (Shenzhen) CO.,Ltd
Address of Applicant: 2F, Building1, the New Art Park Plant,No. 21, Jiuwei Second Industrial Zone, Hangcheng Street, Baoan District, Shenzhen
EUT Description: Sam&Johnny HM10
Model No.: Sam&Johnny HM10
Additional Model: Sam&Johnny HB17, Sam&Johnny HM6, Sam&Johnny HM7, Sam&Johnny HM8, Sam&Johnny HM9, Sam&Johnny HM11+, Sam&Johnny HM12+, Sam&Johnny HMpro, Sam&Johnny HMPPro II, Sam&Johnny HMPPro Ultra
Trade Mark: /
Standards: MIC Notice No.88 Appendix No.43
Item 19 of Article 2 Paragraph 1
Date of Receipt: 2025/10/28
Date of Test: 2025/10/29 to 2025/11/18
Date of Issue: 2026/01/04
Test Result: **PASS ***

Prepared By: Galk. Lin (Testing Engineer)

Reviewed By: Wayne Lin (Project Engineer)

Approved By: Heise Shan (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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Date: January 4, 2026

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Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V2.0	/	Jan 4, 2026	Valid	Original Report



1 Test Summary

Test	Test Method	Limit/Severity	Result
Antenna Requirement	MIC Notice No.88 Appendix No.43	Notice 88 Appendix 43, B-1 (1) & (2)	PASS
Test frequency	MIC Notice No.88 Appendix No.43	Notice 88 Appendix 43, A-3	PASS
Frequency Error	MIC Notice No.88 Appendix No.43	$\leq \pm 50$ ppm	PASS
Occupied Bandwidth	MIC Notice No.88 Appendix No.43	Others: ≤ 26 MHz	PASS
Spread Bandwidth	MIC Notice No.88 Appendix No.43	≥ 0.5 MHz	PASS
Antenna Power and Tolerance	MIC Notice No.88 Appendix No.43 MIC Notice No.88 Appendix No.43	Others: ≤ 10 mW Tolerance: $+20\%$	PASS
Spurious Emission of Tx	MIC Notice No.88 Appendix No.43	< 2387MHz $\leq 2.5\mu$ W/MHz 2387 ~ 2400MHz $\leq 25\mu$ W/MHz 2483.5 ~ 2496.5MHz $\leq 25\mu$ W/MHz >2496.5MHz $\leq 2.5\mu$ W/MHz	PASS
Interference prevention capability	MIC Notice No.88 Appendix No.43	Notice 88 Appendix 43, 44, 45	PASS
Spurious Emission of Rx	MIC Notice No.88 Appendix No.43	(1) Below 1 GHz: ≤ 4 nW (2) Above 1 GHz: ≤ 20 nW	PASS

Remark:

EUT: In this whole report EUT means Equipment Under Test.

Tx: In this whole report Tx (or tx) means Transmitter.

Rx: In this whole report Rx (or rx) means Receiver.

RF: In this whole report RF means Radio Frequency.

Item 19 of Article 2 Paragraph 1



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2 General Information

2.1 General Description of E.U.T.

Manufacturer:	Natural Sound Electronics (Shenzhen) CO.,Ltd		
Address of Manufacture:	2F, Building1, the New Art Park Plant,No. 21, Jiuwei Second Industrial Zone, Hangcheng Street, Baoan District, Shenzhen		
Product Name:	Sam&Johnny HM10		
Model No.:	Sam&Johnny HM10		
Additional Model:	Sam&Johnny HB17, Sam&Johnny HM6, Sam&Johnny HM7, Sam&Johnny HM8, Sam&Johnny HM9, Sam&Johnny HM11+, Sam&Johnny HM12+, Sam&Johnny HMpro, Sam&Johnny HMPPro II, Sam&Johnny HMPPro Ultra		
Trade Mark:	/		
Hardware Version:	V1.0		
Software Version:	V1.0		
Operating Frequency:	2402MHz to 2480MHz		
Bluetooth version:	V5.4		
Declared Antenna Power:	3mW		
Type of Modulation:	GFSK		
Number of Channels:	40 Channels		
Antenna Type:	☐ External, ☒ Integrated		
Antenna Gain*:	☒ Provided by client		
	0.7dBi (ANT L); 0.85dBi (ANT R)		
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 (Charging Box):	Input:DC 5V;DC 3.7V from rechargeable lithium-ion battery		
Power Supply (Earphone):	DC 3.6V from rechargeable lithium-ion battery		
Note: *All models are just color and name differences, motherboard, PCB circuit board, chip, electronic components is all the same. *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:	Gali 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							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
0	2402MHz	10	2422MHz	20	2442MHz	30	2462MHz
1	2404MHz	11	2424MHz	21	2444MHz	31	2464MHz
2	2406MHz	12	2426MHz	22	2446MHz	32	2466MHz
3	2408MHz	13	2428MHz	23	2448MHz	33	2468MHz
4	2410MHz	14	2430MHz	24	2450MHz	34	2470MHz
5	2412MHz	15	2432MHz	25	2452MHz	35	2472MHz
6	2414MHz	16	2434MHz	26	2454MHz	36	2474MHz
7	2416MHz	17	2436MHz	27	2456MHz	37	2476MHz
8	2418MHz	18	2438MHz	28	2458MHz	38	2478MHz
9	2420MHz	19	2440MHz	29	2460MHz	39	2480MHz

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	BlueTest3		
Frequency(MHz)	2402	2440	2480
BLE 1M Setting	4	4	4
BLE 2M Setting	4	4	4

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

No.	Item	Measurement Uncertainty
1	Frequency Error	±1.9%
2	Antenna Power	±0.743dB
3	Occupied Bandwidth	±0.0196%
4	Spread Bandwidth	±0.0196%
5	Transmitter Spurious Emission Strength and Unwanted Emission Intensity	30MHz-1GHz:±0.746dB 1GHz-13GHz: ±1.328dB



2.8 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 power	Others: ≤ 10 mW Tolerance: +20%
Antenna gain	1) 12.14 dBi or less in principle
Tolerance of spurious emission intensity	(< 2387 MHz: 2.5 μ W/MHz 2387 to 2400 MHz: 25 μ W/MHz 2483.5 through 2496.5 MHz: 25 μ W/MHz > 2496.5 MHz: 2.5 μ 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:	Lithium Battery (DC 3.6V)		
	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 3.6V +/- 10%.		
	DC Input		input voltage to the circuit
			Deviation
	High Voltage	3.96V	3.4V
	Normal Voltage	3.6V	3.3V
	Low Voltage	3.24V	3.2V
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 integrated to the motherboard, The best case gain of the antenna is 0.7dBi (ANT L); 0.85dBi (ANT R).

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

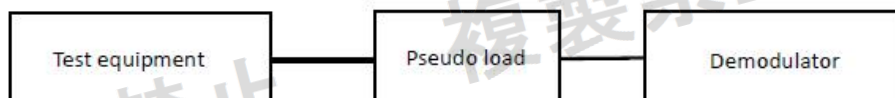


3.4 Interference prevention function

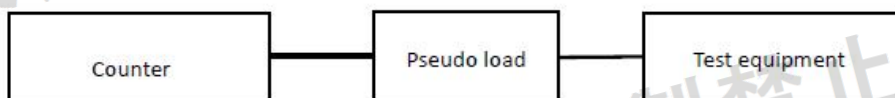
1) Measurement system diagram

(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.

FA:A8:9A:41:95:C3

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

PASS



3.5 RF accessibility

Standard requirement

Article 49-20, paragraph 1 (a)

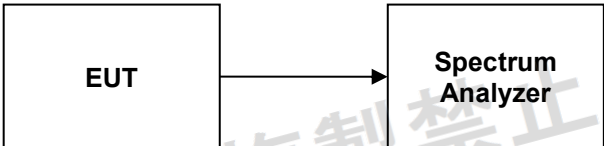
The EUT shall be constructed in such a way that sensitive RF parts, (like modulation and oscillator parts) cannot be reached easily by the user. These parts shall be covered by soldered metal caps or glue or by other mechanical covers. If the covers are fixed with screws, these shall be not the common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

RF and Modulation parts are mounted on PCB with surface mount technology, and there is no any adjustable parts on PCB or adjustable parts are not exposed.





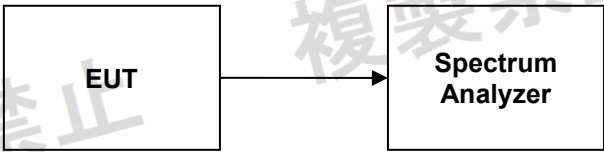
3.6 Frequency Error

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:	1. Test Conditions: Spectrum Analyzer is used for measurement. 2. EUT conditions: Modulation/Spread/Hopping OFF, CW Tx 3. 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 See: Appendix A



3.7 Occupied Bandwidth (99%)

Limit:	OFDM: 40 MHz or less DSSS: 26 MHz or less
Test 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:	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 4 MHz RBW 300 KHz VBW 300 KHz Sweep Time Auto detector mode Sample Indication mode Max hold OBW 99%

Test Result See: Appendix B



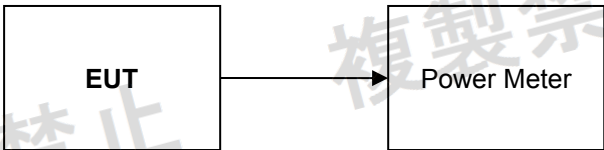
3.8 Spread Bandwidth(90%)

Limit:	DS,FH, FH+DS,FH+OFDM: $\geq 500\text{KHz}$
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:	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 4 MHz RBW 300 KHz VBW 300 KHz Sweep Time Auto detector mode Sample Indication mode Max hold OBW 90%

Test Result See: Appendix C



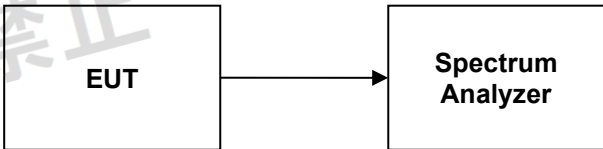
3.9 Antenna Power

Limit:	10mW or less; EIRP:12.14dBm 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:	50 % RH
Atmospheric Pressure:	101.0kPa -101.3 kPa
Test Configuration:	 <pre>graph LR; EUT[EUT] --> PM[Power Meter]</pre>
Test Procedure:	1. Test Conditions: Power meter is used for measurement. 2. EUT conditions: Modulation/Spread/Hopping ON, Modulation Tx For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.

Test Result See: Appendix D



3.10 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	$\leq 2.5\mu\text{W/MHz}$
< 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	$\leq 2.5\mu\text{W/MHz}$								
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:	- 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 See: Appendix E



3.11 Spurious Emissions of Rx

Test Requirement:	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:	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: 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 – 1000 MHz , 1000 MHz –12.5 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 See: Appendix F



4 Appendix

Appendix A: Frequency Error

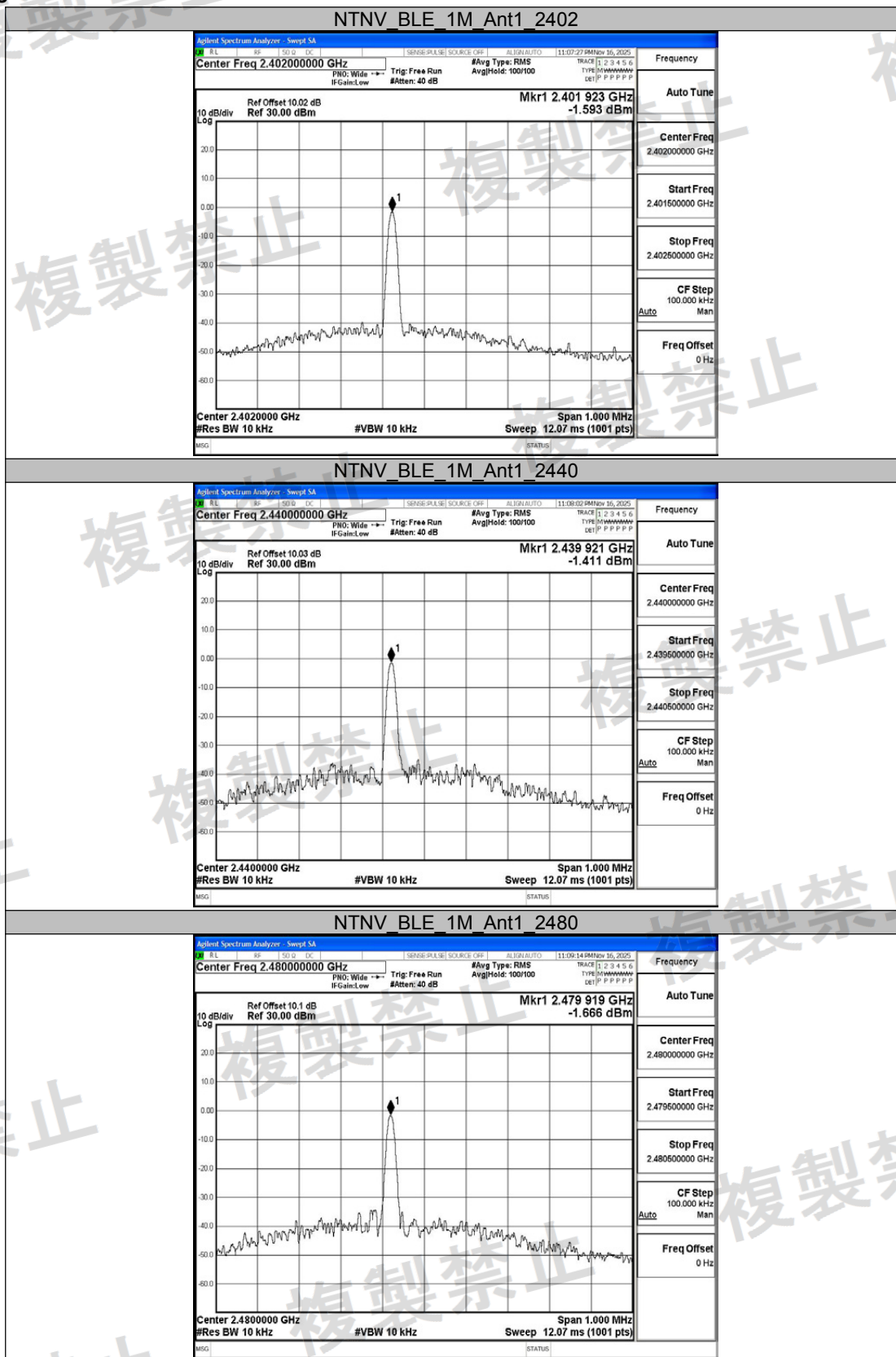
Test Result

TestCondition	TestMode	Antenna	Freq(MHz)	Result[ppm]	Limit[ppm]	Verdict
NTNV	BLE_1M	Ant1	2402	-32.05662	±50	PASS
			2440	-32.37705	±50	PASS
			2480	-32.66129	±50	PASS
	BLE_2M	Ant1	2402	-32.47294	±50	PASS
			2440	-32.37705	±50	PASS
			2480	-32.66129	±50	PASS
NTLV	BLE_1M	Ant1	2402	-32.05662	±50	PASS
			2440	-32.37705	±50	PASS
			2480	-32.66129	±50	PASS
	BLE_2M	Ant1	2402	-32.47294	±50	PASS
			2440	-32.37705	±50	PASS
			2480	-32.66129	±50	PASS
NTHV	BLE_1M	Ant1	2402	-32.05662	±50	PASS
			2440	-32.37705	±50	PASS
			2480	-32.66129	±50	PASS
	BLE_2M	Ant1	2402	-32.47294	±50	PASS
			2440	-32.37705	±50	PASS
			2480	-32.66129	±50	PASS

Note: Both left and right earphone have tested, The right earphone is the worst, only the worse case was reported.

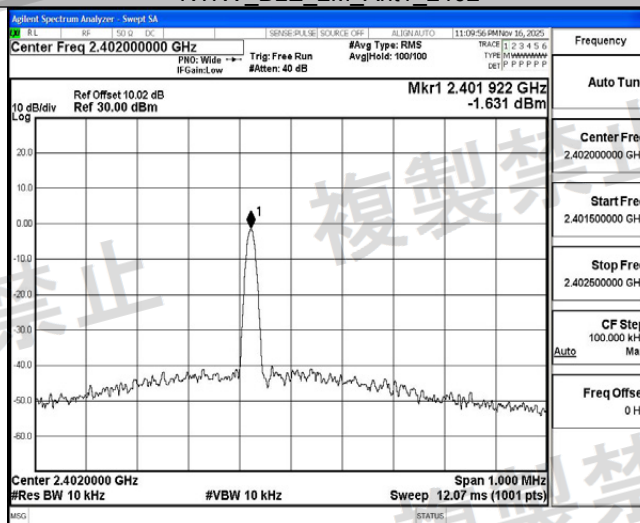


Test Graphs

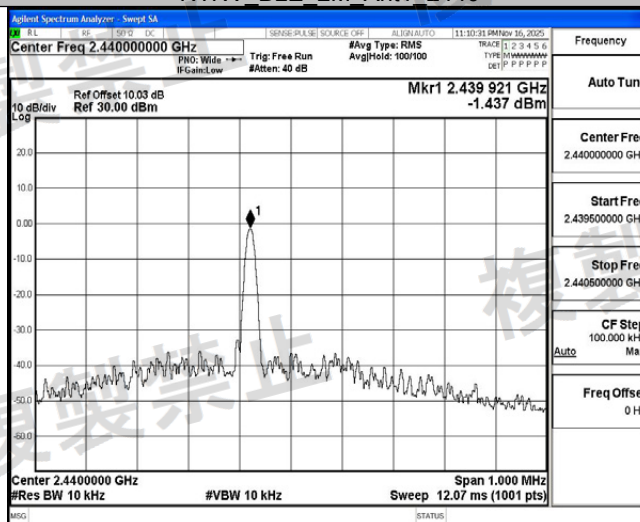




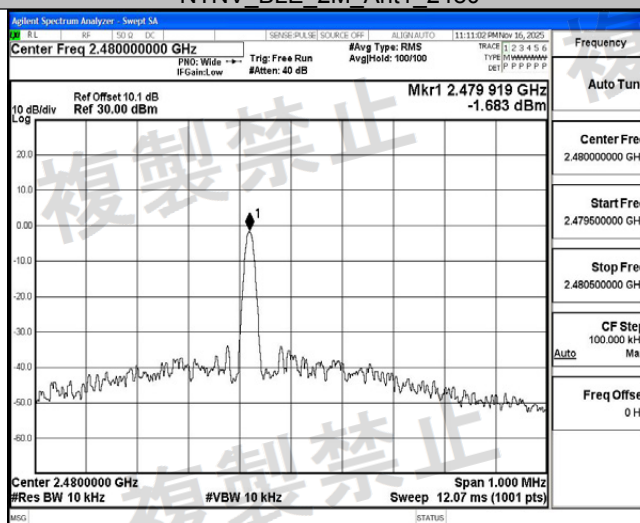
NTNV_BLE_2M_Ant1_2402

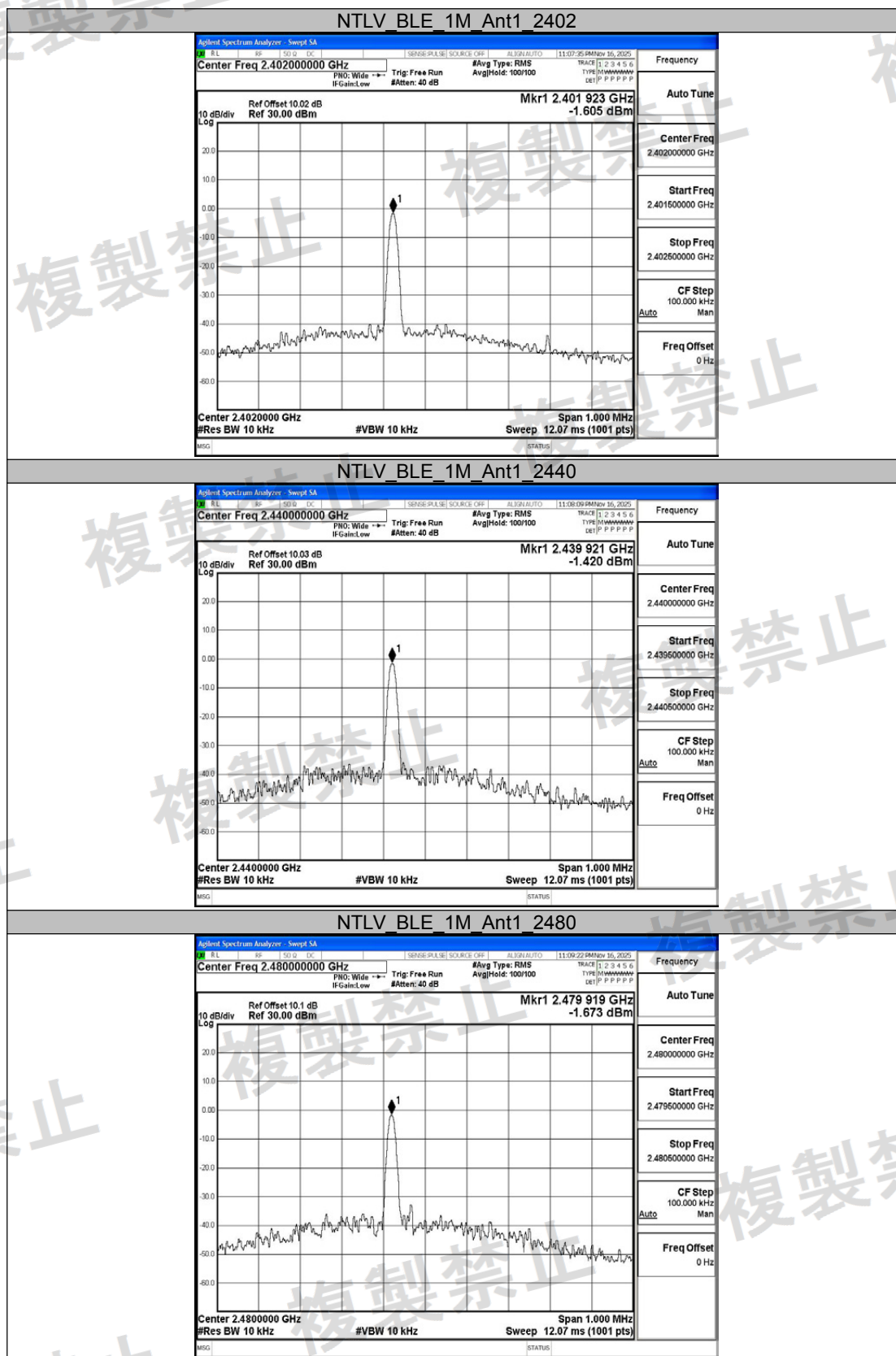


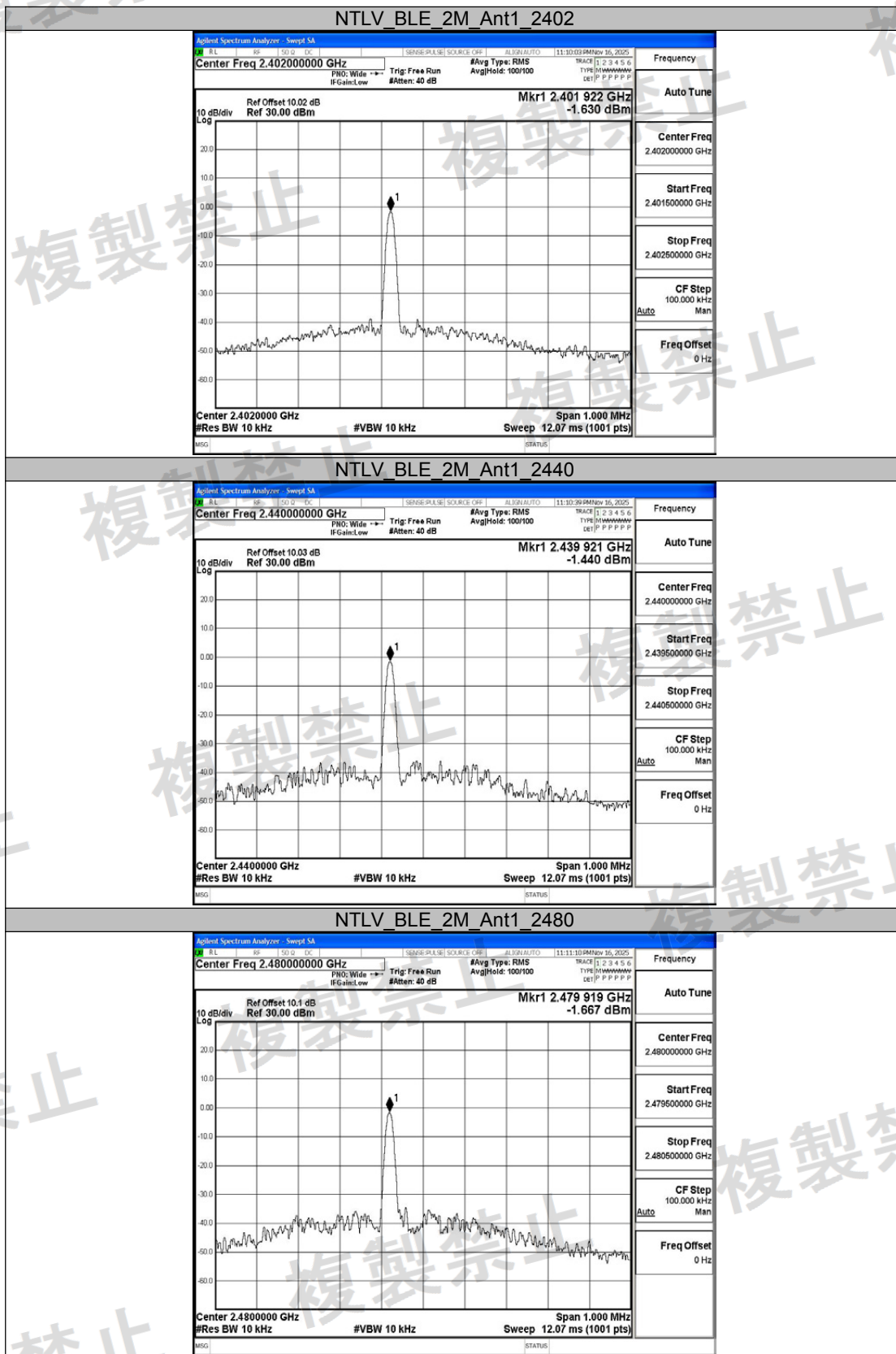
NTNV_BLE_2M_Ant1_2440

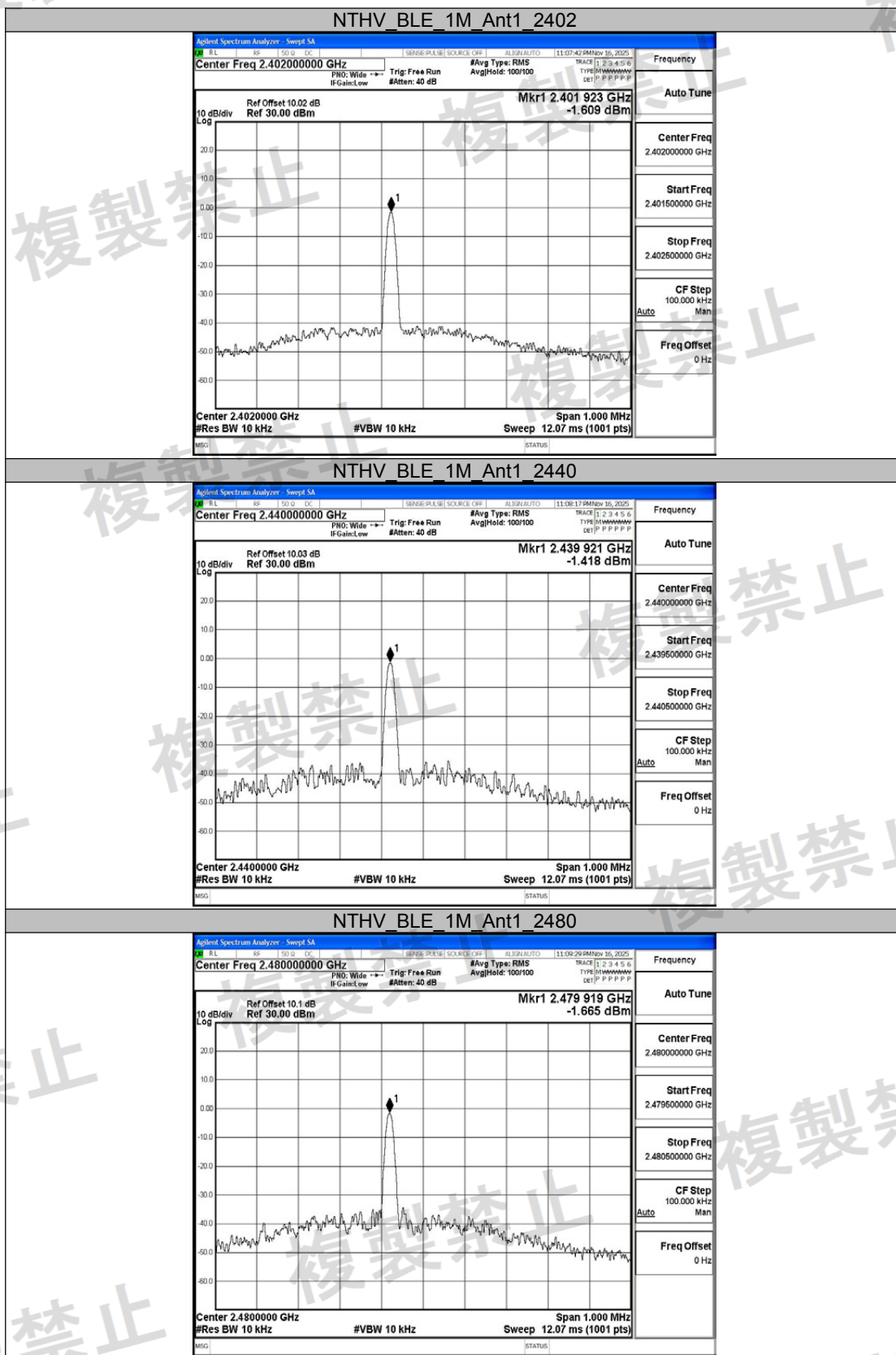


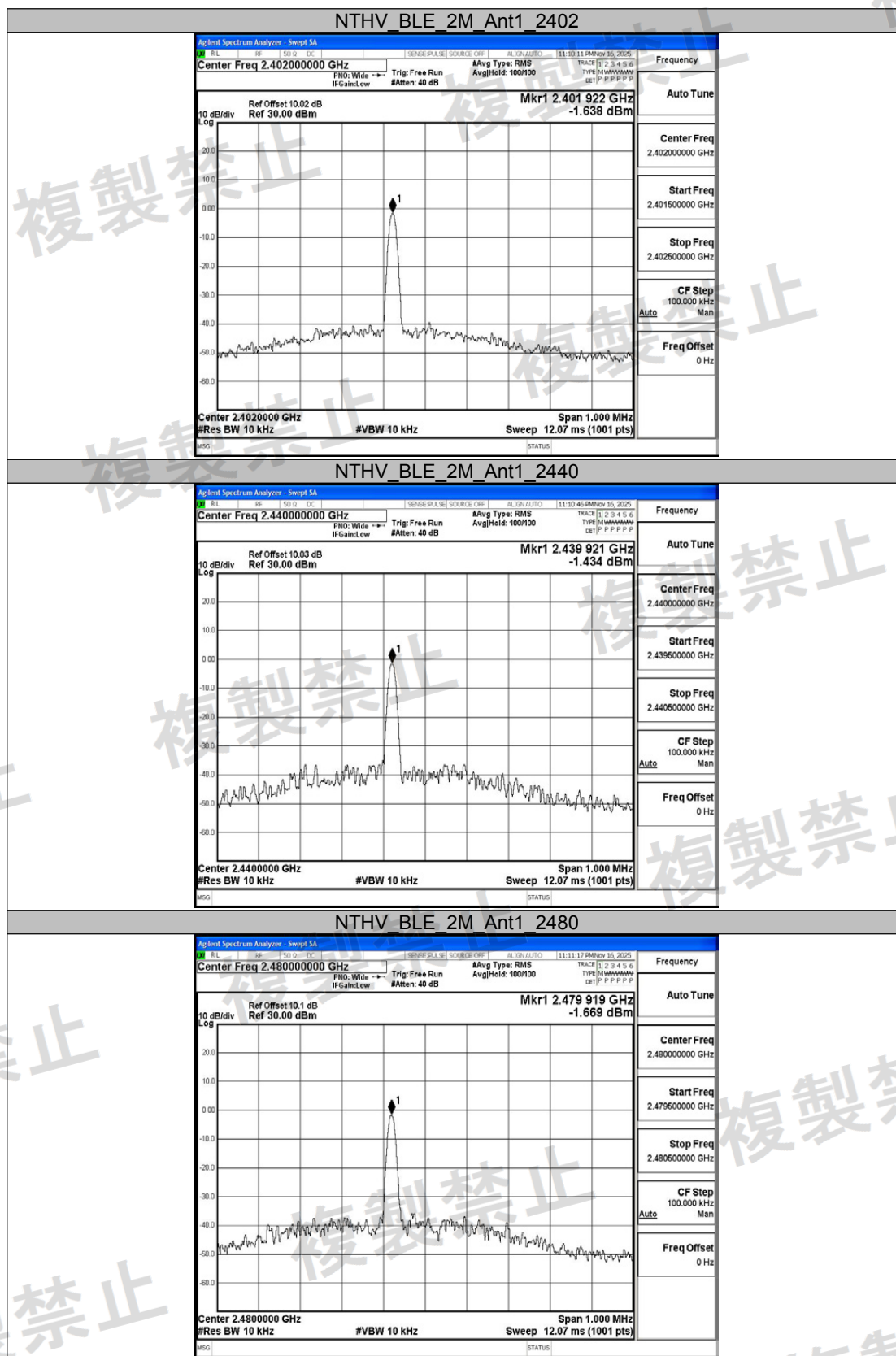
NTNV_BLE_2M_Ant1_2480











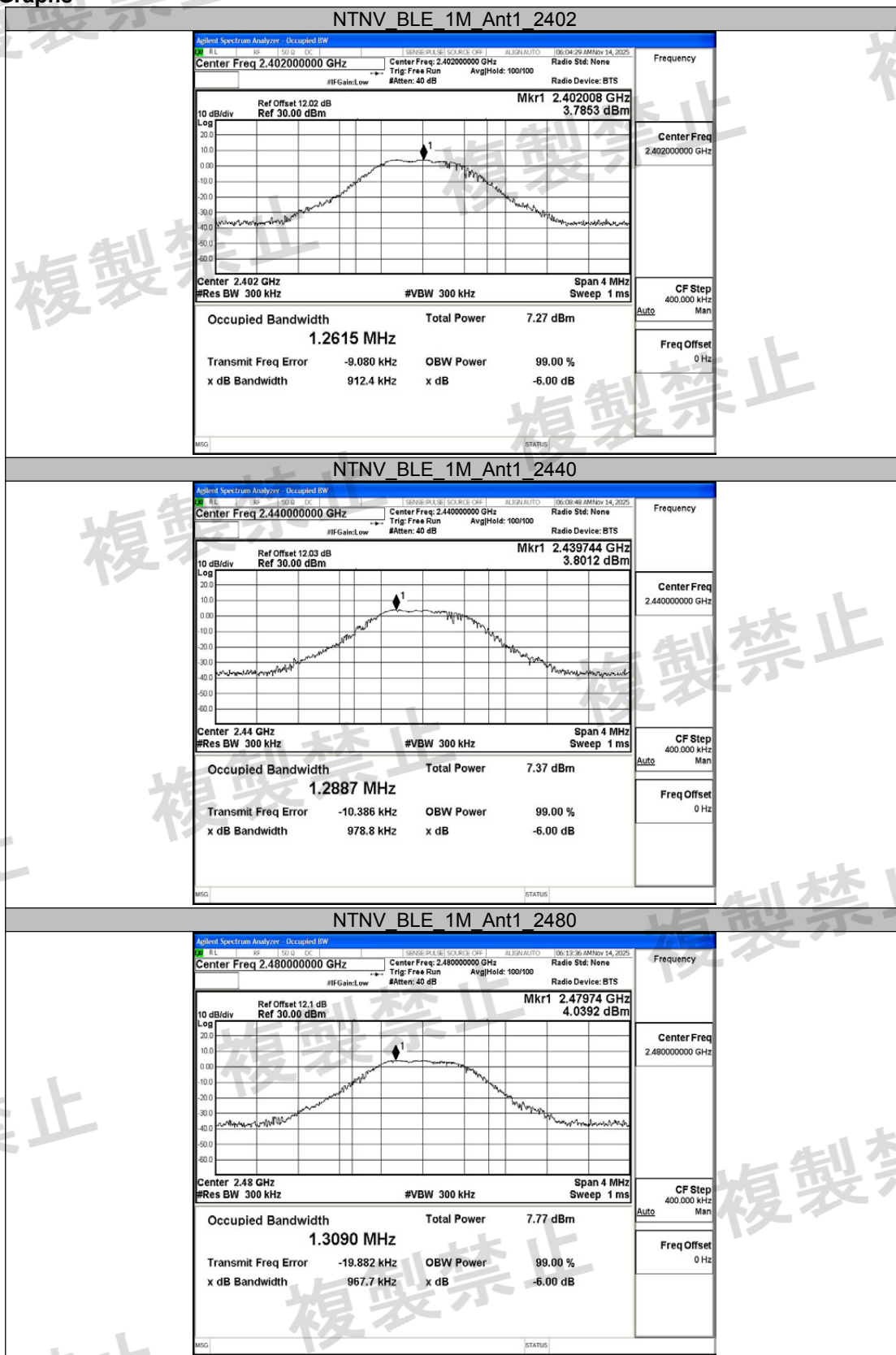
**Appendix B: Occupied Bandwidth****Test Result**

TestCondition	TestMode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Verdict
NTNV	BLE_1M	Ant1	2402	1.262	≤26	PASS
			2440	1.289	≤26	PASS
			2480	1.309	≤26	PASS
	BLE_2M	Ant1	2402	2.176	≤26	PASS
			2440	2.190	≤26	PASS
			2480	2.214	≤26	PASS
NTLV	BLE_1M	Ant1	2402	1.268	≤26	PASS
			2440	1.311	≤26	PASS
			2480	1.318	≤26	PASS
	BLE_2M	Ant1	2402	2.174	≤26	PASS
			2440	2.182	≤26	PASS
			2480	2.149	≤26	PASS
NTHV	BLE_1M	Ant1	2402	1.265	≤26	PASS
			2440	1.299	≤26	PASS
			2480	1.314	≤26	PASS
	BLE_2M	Ant1	2402	2.165	≤26	PASS
			2440	2.188	≤26	PASS
			2480	2.201	≤26	PASS

Note: Both left and right earphone have tested, The right earphone is the worst, only the worse case was reported.

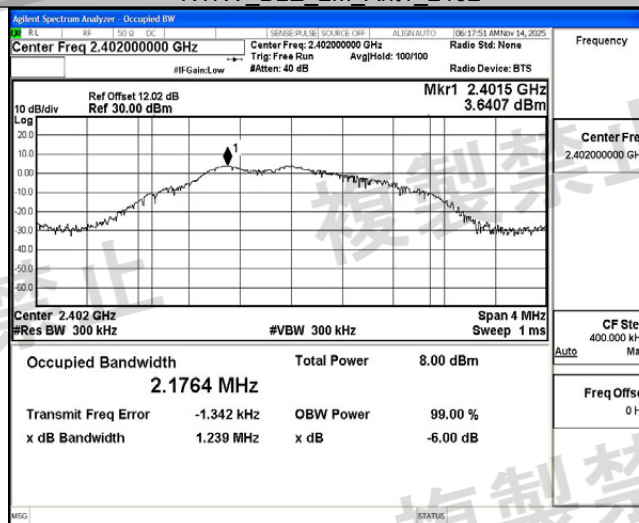


Test Graphs

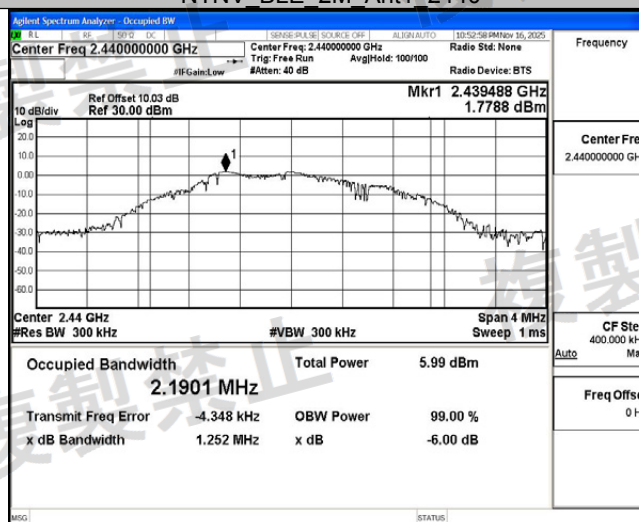




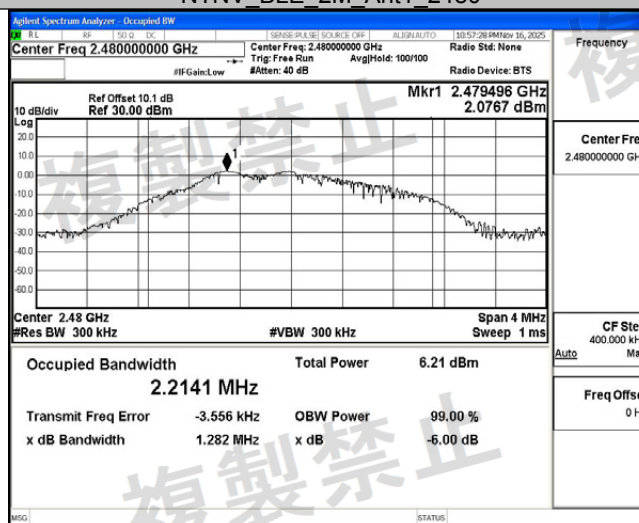
NTNV_BLE_2M_Ant1_2402

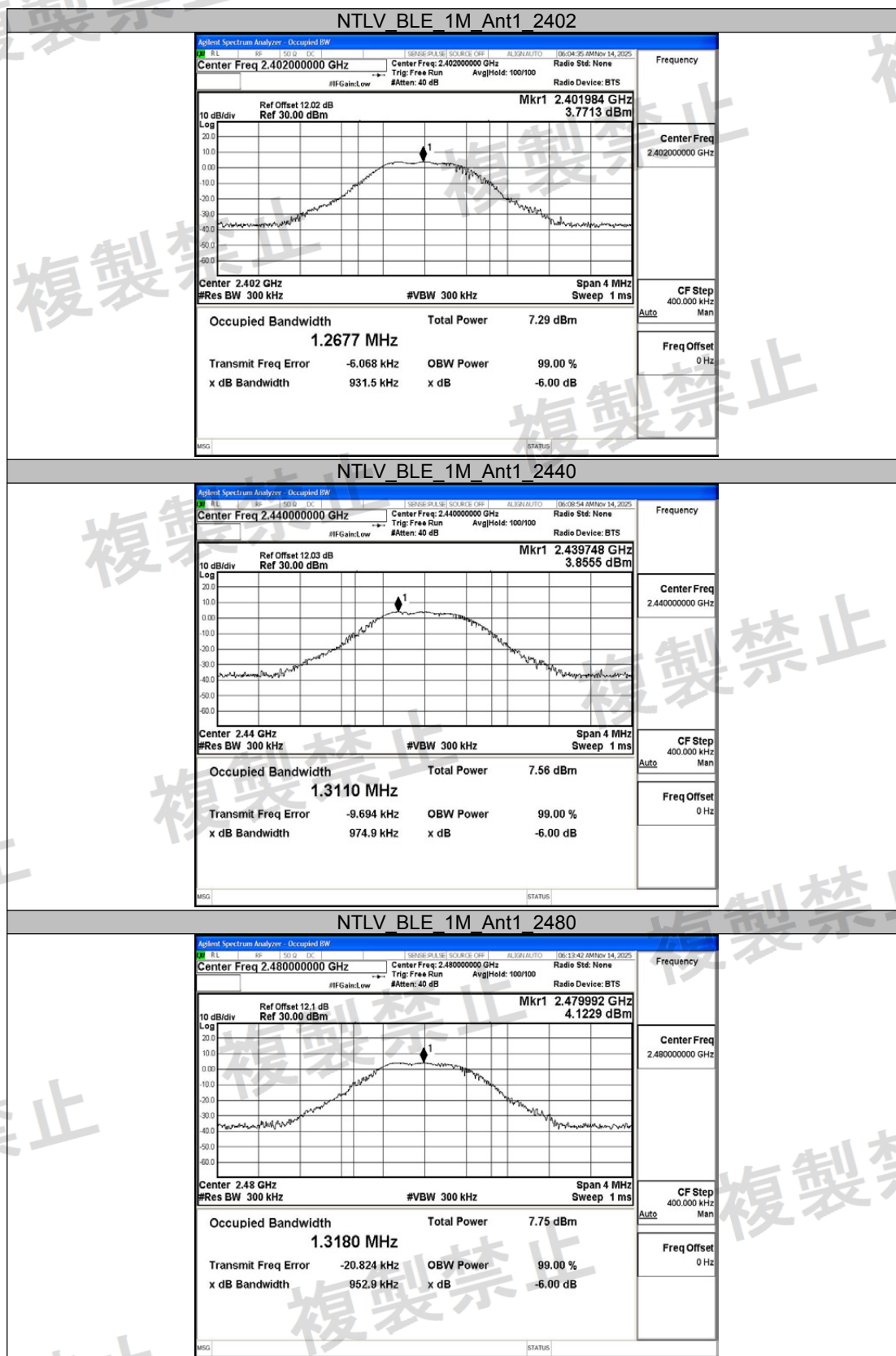


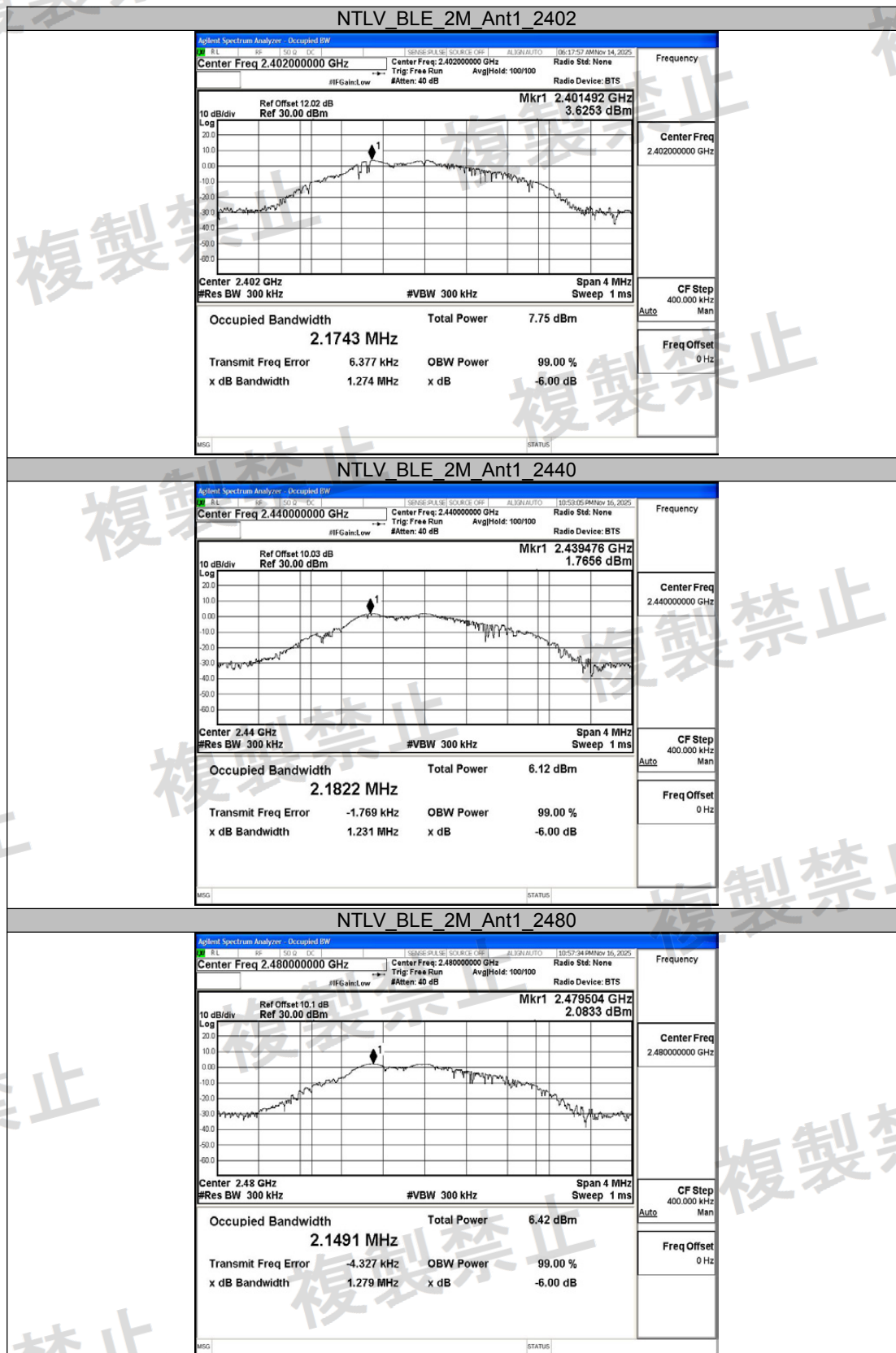
NTNV_BLE_2M_Ant1_2440

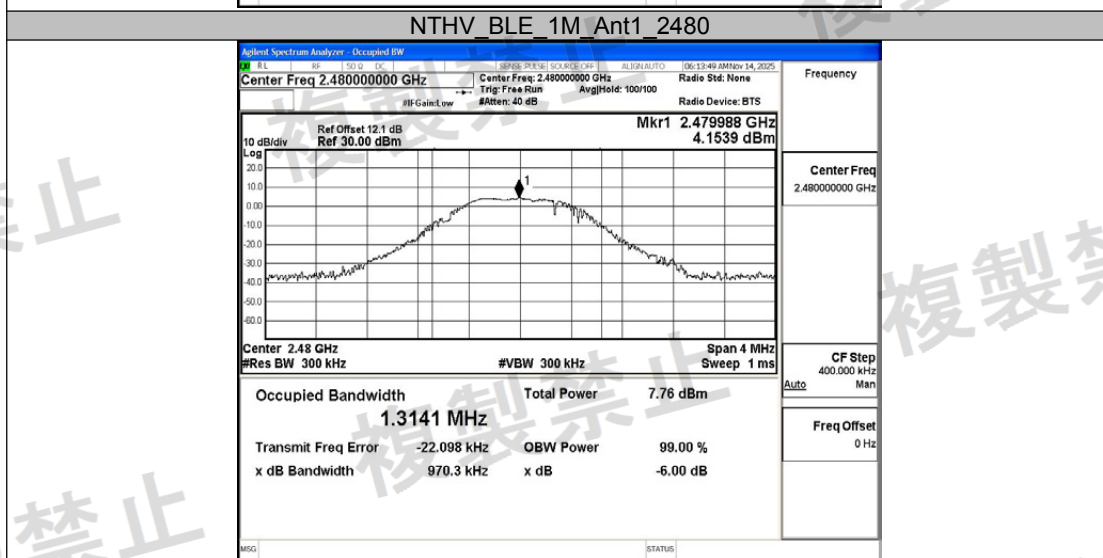
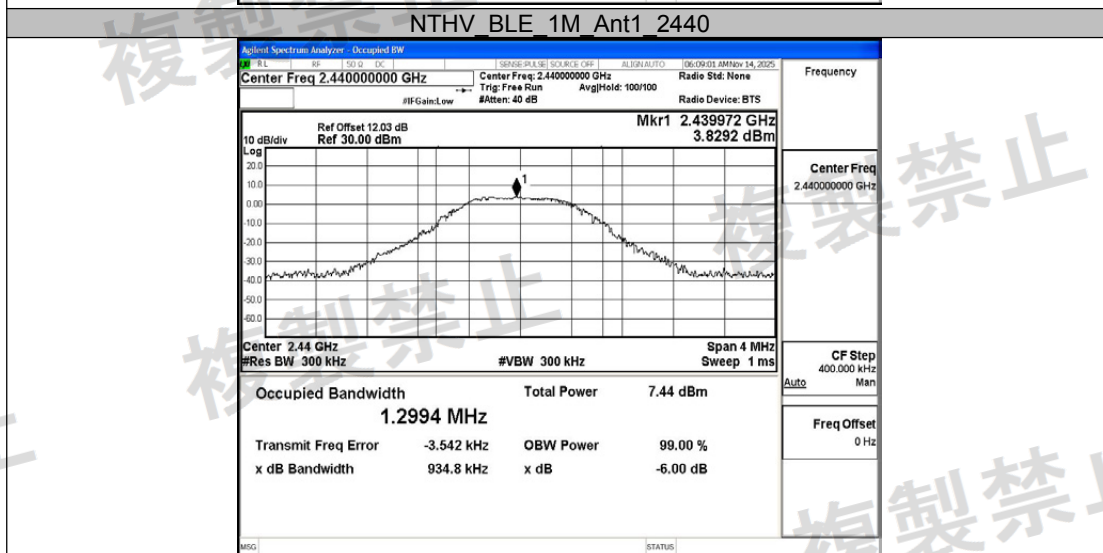
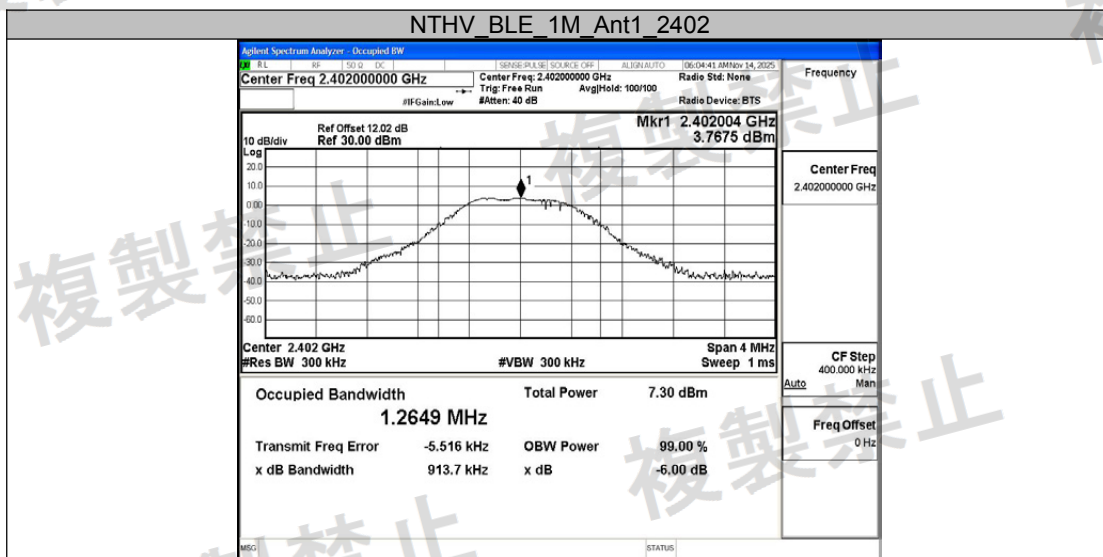


NTNV_BLE_2M_Ant1_2480











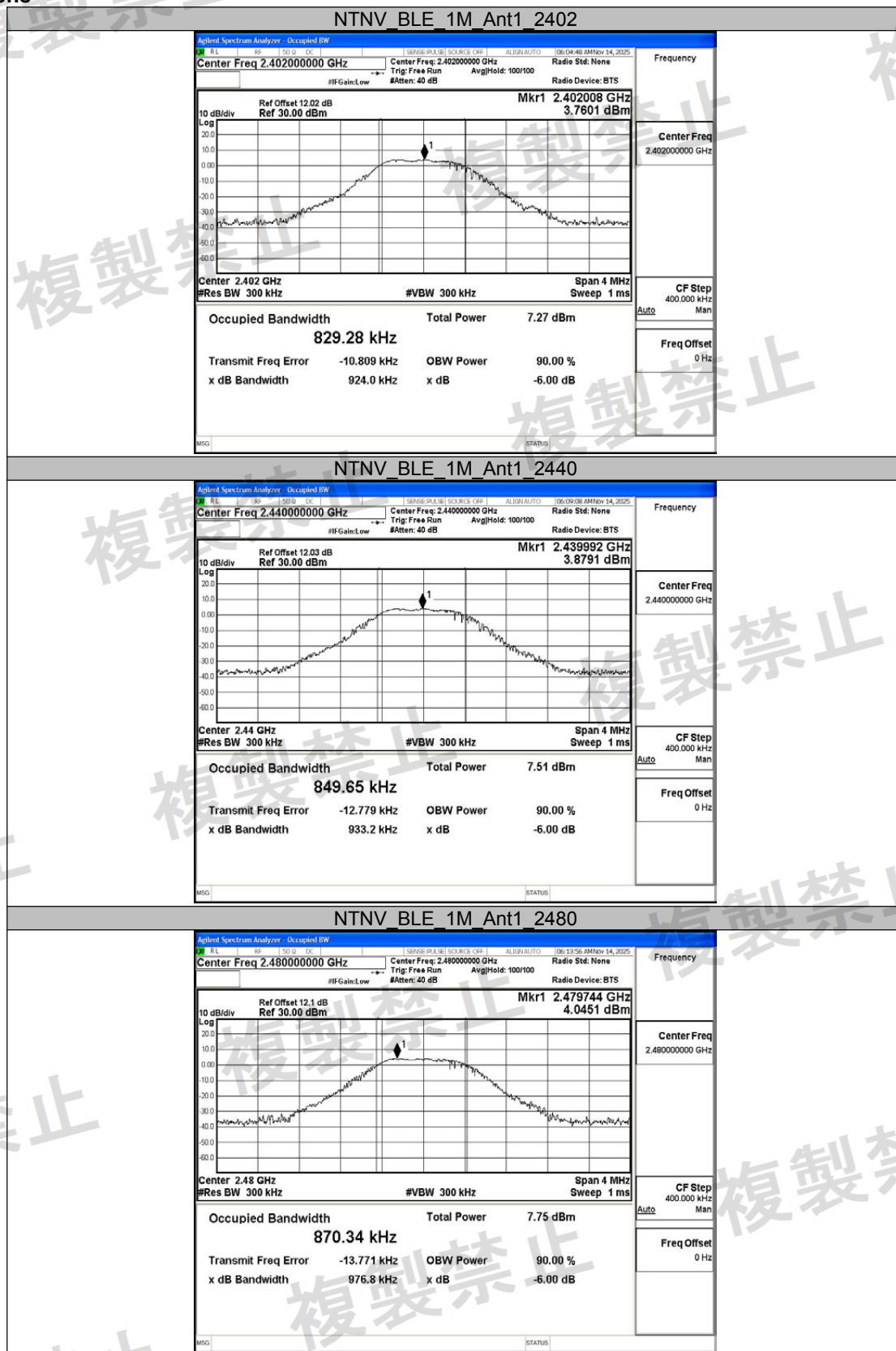
**Appendix C: Spread Bandwidth****Test Result**

TestCondition	TestMode	Antenna	Freq(MHz)	Result [MHz]	Limit [MHz]	Verdict
NTNV	BLE_1M	Ant1	2402	0.829	≥ 0.5	PASS
			2440	0.850	≥ 0.5	PASS
			2480	0.870	≥ 0.5	PASS
	BLE_2M	Ant1	2402	1.340	≥ 0.5	PASS
			2440	1.374	≥ 0.5	PASS
			2480	1.352	≥ 0.5	PASS
NTLV	BLE_1M	Ant1	2402	0.837	≥ 0.5	PASS
			2440	0.865	≥ 0.5	PASS
			2480	0.863	≥ 0.5	PASS
	BLE_2M	Ant1	2402	1.313	≥ 0.5	PASS
			2440	1.342	≥ 0.5	PASS
			2480	1.364	≥ 0.5	PASS
NTHV	BLE_1M	Ant1	2402	0.832	≥ 0.5	PASS
			2440	0.871	≥ 0.5	PASS
			2480	0.866	≥ 0.5	PASS
	BLE_2M	Ant1	2402	1.347	≥ 0.5	PASS
			2440	1.367	≥ 0.5	PASS
			2480	1.328	≥ 0.5	PASS

Note: Both left and right earphone have tested, The right earphone is the worst, only the worse case was reported.

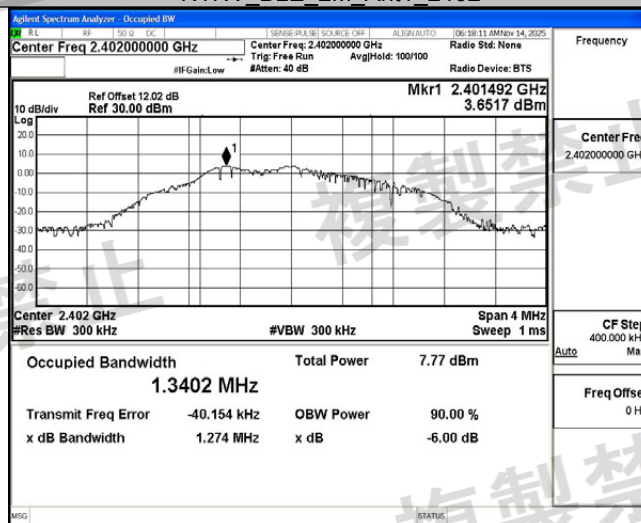


Test Graphs

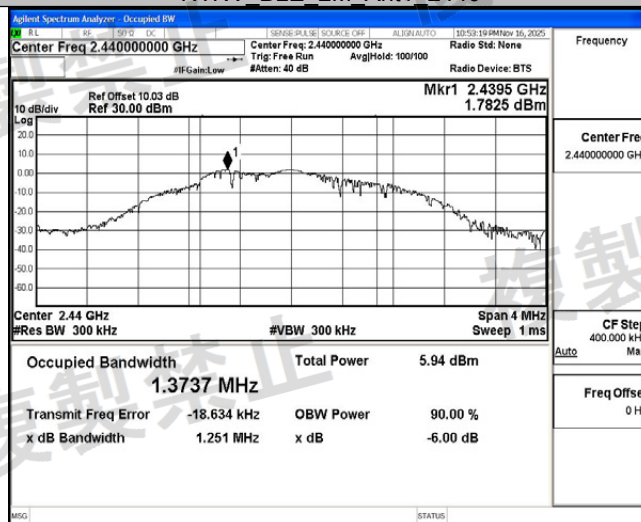




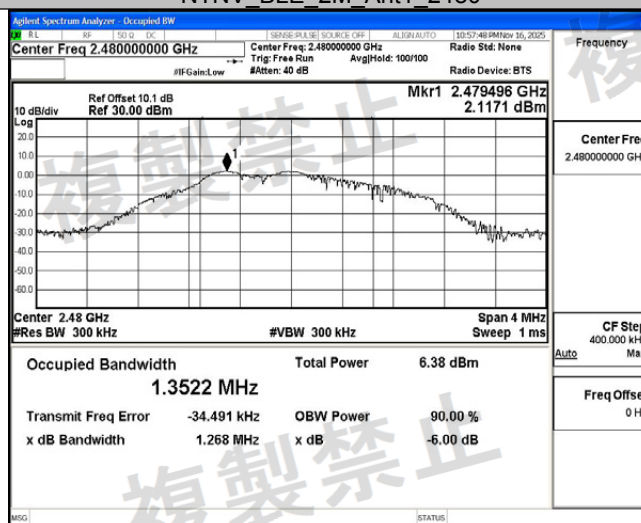
NTNV_BLE_2M_Ant1_2402



NTNV_BLE_2M_Ant1_2440

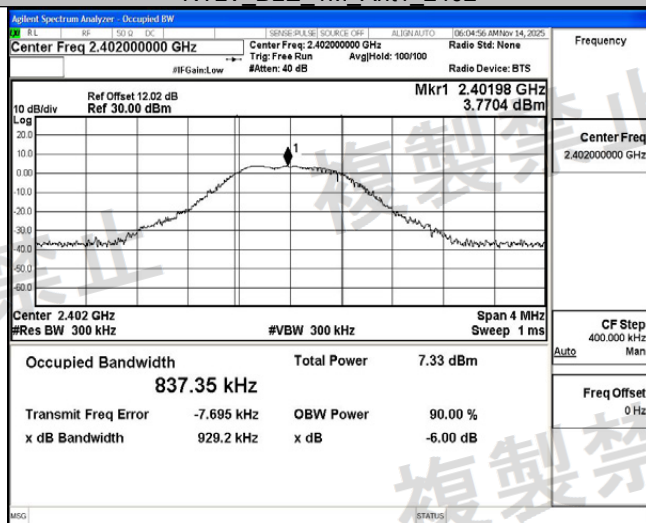


NTNV_BLE_2M_Ant1_2480

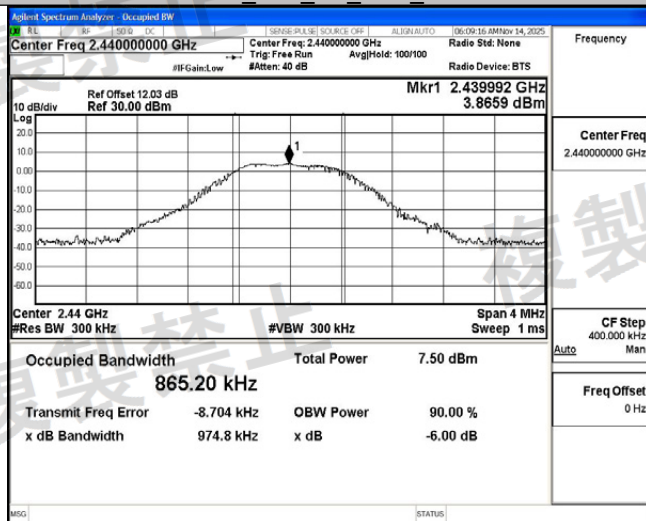




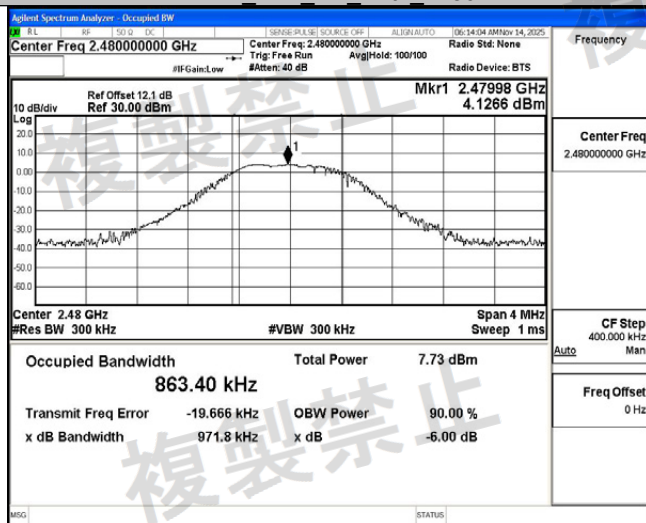
NTLV BLE 1M Ant1 2402

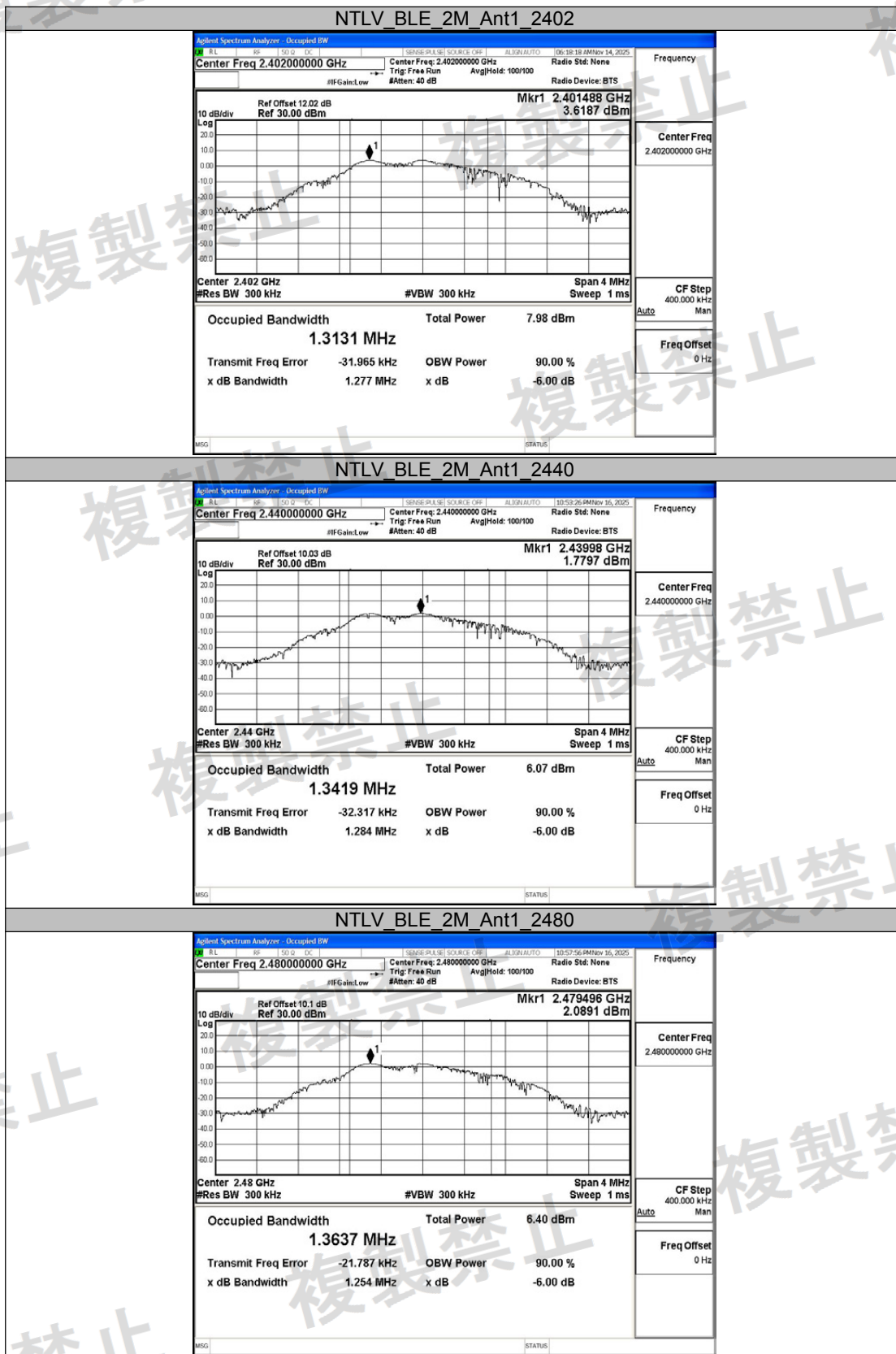


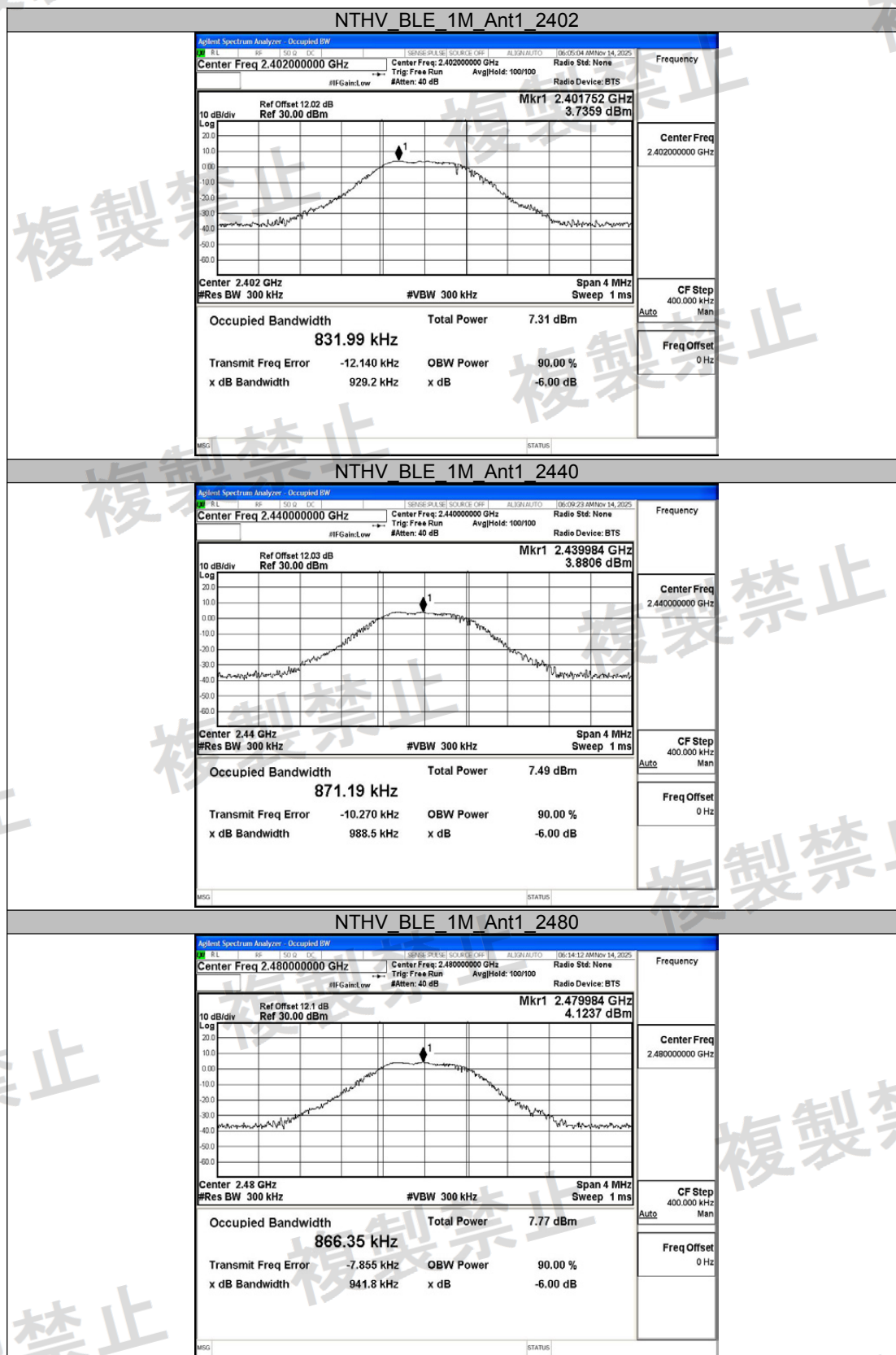
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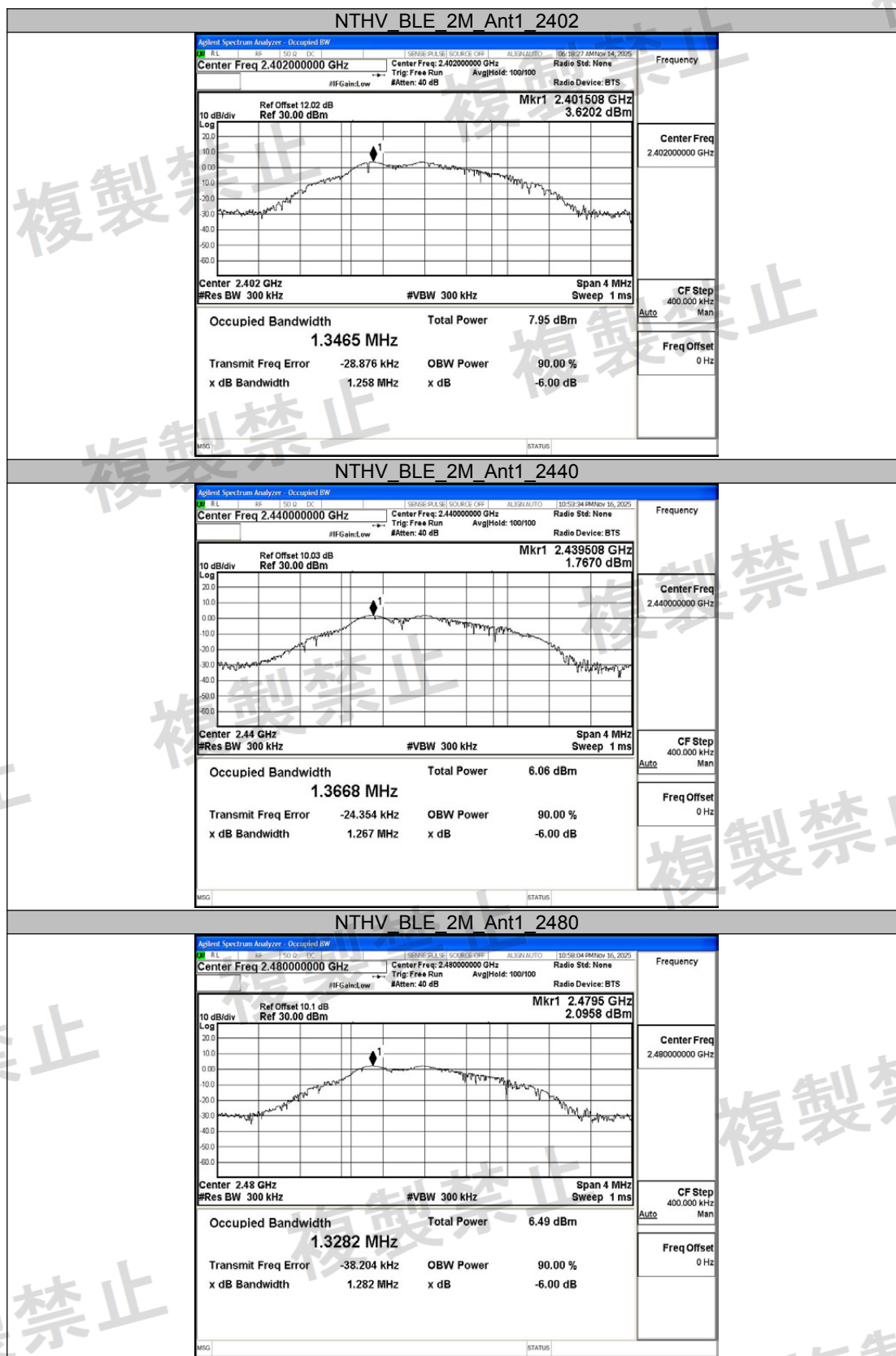


NTLV BLE 1M Ant1 2480









**Appendix D: Antenna Power****Test Result(Right earphone)**

Antenna Power							
TestCondition	TestMode	Antenna	Freq(MHz)	Result(dBm)	Result(mW)	Limit(mW)	Verdict
NTNV	BLE_1M	Ant1	2402	1.91	1.5524	≤10	PASS
			2440	2.97	1.9815	≤10	PASS
			2480	3.25	2.1135	≤10	PASS
	BLE_2M	Ant1	2402	2.34	1.7140	≤10	PASS
			2440	0.24	1.0568	≤10	PASS
			2480	0.57	1.1402	≤10	PASS
NTLV	BLE_1M	Ant1	2402	3.01	1.9999	≤10	PASS
			2440	3.16	2.0701	≤10	PASS
			2480	3.27	2.1232	≤10	PASS
	BLE_2M	Ant1	2402	2.40	1.7378	≤10	PASS
			2440	0.37	1.0889	≤10	PASS
			2480	0.57	1.1402	≤10	PASS
NTHV	BLE_1M	Ant1	2402	3.00	1.9953	≤10	PASS
			2440	3.15	2.0654	≤10	PASS
			2480	3.32	2.1478	≤10	PASS
	BLE_2M	Ant1	2402	2.41	1.7418	≤10	PASS
			2440	0.26	1.0617	≤10	PASS
			2480	0.61	1.1508	≤10	PASS

Tolerance								
Test Condition	Test Mode	Antenna	Freq(MHz)	Power (mW)	RatedPower (mW)	Result (%)	Limit (%)	Verdict
NTNV	BLE_1M	Ant1	2402	1.5524	3	-48.25	+20	PASS
			2440	1.9815	3	-33.95	+20	PASS
			2480	2.1135	3	-29.55	+20	PASS
	BLE_2M	Ant1	2402	1.7140	3	-42.87	+20	PASS
			2440	1.0568	3	-64.77	+20	PASS
			2480	1.1402	3	-61.99	+20	PASS
NTLV	BLE_1M	Ant1	2402	1.9999	3	-33.34	+20	PASS
			2440	2.0701	3	-31.00	+20	PASS
			2480	2.1232	3	-29.23	+20	PASS
	BLE_2M	Ant1	2402	1.7378	3	-42.07	+20	PASS
			2440	1.0889	3	-63.70	+20	PASS
			2480	1.1402	3	-61.99	+20	PASS
NTHV	BLE_1M	Ant1	2402	1.9953	3	-33.49	+20	PASS
			2440	2.0654	3	-31.15	+20	PASS
			2480	2.1478	3	-28.41	+20	PASS
	BLE_2M	Ant1	2402	1.7418	3	-41.94	+20	PASS
			2440	1.0617	3	-64.61	+20	PASS
			2480	1.1508	3	-61.64	+20	PASS

**Test Result(Left earphone)**

Antenna Power							
TestCondition	TestMode	Antenna	Freq(MHz)	Result(dBm)	Result(mW)	Limit(mW)	Verdict
NTNV	BLE_1M	Ant1	2402	3.04	2.0137	≤10	PASS
			2440	3.09	2.0370	≤10	PASS
			2480	3.12	2.0512	≤10	PASS
	BLE_2M	Ant1	2402	2.72	1.8707	≤10	PASS
			2440	0.72	1.1803	≤10	PASS
			2480	0.77	1.1940	≤10	PASS
NTLV	BLE_1M	Ant1	2402	3.05	2.0184	≤10	PASS
			2440	3.06	2.0230	≤10	PASS
			2480	3.24	2.1086	≤10	PASS
	BLE_2M	Ant1	2402	2.78	1.8967	≤10	PASS
			2440	0.75	1.1885	≤10	PASS
			2480	0.71	1.1776	≤10	PASS
NTHV	BLE_1M	Ant1	2402	3.06	2.0230	≤10	PASS
			2440	3.08	2.0324	≤10	PASS
			2480	3.20	2.0893	≤10	PASS
	BLE_2M	Ant1	2402	2.78	1.8967	≤10	PASS
			2440	0.75	1.1885	≤10	PASS
			2480	0.65	1.1614	≤10	PASS

Tolerance								
Test Condition	Test Mode	Antenna	Freq(MHz)	Power (mW)	RatedPower (mW)	Result (%)	Limit (%)	Verdict
NTNV	BLE_1M	Ant1	2402	2.0137	3	-32.88	+20	PASS
			2440	2.0370	3	-32.10	+20	PASS
			2480	2.0512	3	-31.63	+20	PASS
	BLE_2M	Ant1	2402	1.8707	3	-37.64	+20	PASS
			2440	1.1803	3	-60.66	+20	PASS
			2480	1.1940	3	-60.20	+20	PASS
NTLV	BLE_1M	Ant1	2402	2.0184	3	-32.72	+20	PASS
			2440	2.0230	3	-32.57	+20	PASS
			2480	2.1086	3	-29.71	+20	PASS
	BLE_2M	Ant1	2402	1.8967	3	-36.78	+20	PASS
			2440	1.1885	3	-60.38	+20	PASS
			2480	1.1776	3	-60.75	+20	PASS
NTHV	BLE_1M	Ant1	2402	2.0230	3	-32.57	+20	PASS
			2440	2.0324	3	-32.25	+20	PASS
			2480	2.0893	3	-30.36	+20	PASS
	BLE_2M	Ant1	2402	1.8967	3	-36.78	+20	PASS
			2440	1.1885	3	-60.38	+20	PASS
			2480	1.1614	3	-61.29	+20	PASS

**Appendix E: Spurious Emission of TX****Test Result 1**

TestCondition	TestMode	Antenna	Freq(M Hz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [μ W/MHz]	Limit [μ W/MHz]	Verdict
NTNV	BLE_1M	Ant1	2402	30~1000	892.82	-49.30	≤ -26	0.01175	≤ 2.5	PASS
				1000~2387	2384.23	-42.83	≤ -26	0.05212	≤ 2.5	PASS
				2387~2400	2400.00	-30.23	≤ -16	0.94842	≤ 25	PASS
				2483.5~2496.5	2495.01	-37.00	≤ -16	0.19953	≤ 25	PASS
				2496.5~13000	4803.59	-40.99	≤ -26	0.07962	≤ 2.5	PASS
			2440	30~1000	828.07	-48.75	≤ -26	0.01334	≤ 2.5	PASS
				1000~2387	2356.83	-47.22	≤ -26	0.01897	≤ 2.5	PASS
				2387~2400	2398.26	-37.04	≤ -16	0.19770	≤ 25	PASS
				2483.5~2496.5	2483.75	-37.18	≤ -16	0.19143	≤ 25	PASS
				2496.5~13000	3653.99	-42.34	≤ -26	0.05834	≤ 2.5	PASS
			2480	30~1000	917.79	-49.11	≤ -26	0.01227	≤ 2.5	PASS
				1000~2387	2369.32	-45.87	≤ -26	0.02588	≤ 2.5	PASS
				2387~2400	2391.37	-37.17	≤ -16	0.19187	≤ 25	PASS
				2483.5~2496.5	2489.50	-36.34	≤ -16	0.23227	≤ 25	PASS
				2496.5~13000	2499.13	-41.77	≤ -26	0.06653	≤ 2.5	PASS
	BLE_2M	Ant1	2402	30~1000	979.15	-49.15	≤ -26	0.01216	≤ 2.5	PASS
				1000~2387	2385.27	-40.62	≤ -26	0.08670	≤ 2.5	PASS
				2387~2400	2400	-18.35	≤ -16	14.6217 7	≤ 25	See table below
				2483.5~2496.5	2496.39	-37.71	≤ -16	0.16943	≤ 25	PASS
				2496.5~13000	4803.59	-42.02	≤ -26	0.06281	≤ 2.5	PASS
			2440	30~1000	951.99	-51.15	≤ -26	0.00767	≤ 2.5	PASS
				1000~2387	2374.86	-47.37	≤ -26	0.01832	≤ 2.5	PASS
				2387~2400	2396.62	-39.17	≤ -16	0.12106	≤ 25	PASS
				2483.5~2496.5	2487.00	-39.47	≤ -16	0.11298	≤ 25	PASS
				2496.5~13000	3466.50	-34.43	≤ -26	0.36058	≤ 2.5	PASS
			2480	30~1000	934.28	-50.42	≤ -26	0.00908	≤ 2.5	PASS
				1000~2387	2383.53	-48.44	≤ -26	0.01432	≤ 2.5	PASS
				2387~2400	2389.85	-38.92	≤ -16	0.12823	≤ 25	PASS
				2483.5~2496.5	2485.44	-32.24	≤ -16	0.59704	≤ 25	PASS
				2496.5~13000	4961.15	-41.66	≤ -26	0.06823	≤ 2.5	PASS
NTLV	BLE_1M	Ant1	2402	30~1000	900.58	-49.49	≤ -26	0.01125	≤ 2.5	PASS
				1000~2387	2379.02	-41.59	≤ -26	0.06934	≤ 2.5	PASS
				2387~2400	2400.00	-30.26	≤ -16	0.94189	≤ 25	PASS
				2483.5~2496.5	2495.25	-37.59	≤ -16	0.17418	≤ 25	PASS
				2496.5~13000	4803.59	-40.68	≤ -26	0.08551	≤ 2.5	PASS
			2440	30~1000	891.36	-49.31	≤ -26	0.01172	≤ 2.5	PASS
				1000~2387	2143.58	-46.26	≤ -26	0.02366	≤ 2.5	PASS
				2387~2400	2394.70	-37.60	≤ -16	0.17378	≤ 25	PASS
				2483.5~2496.5	2493.72	-37.14	≤ -16	0.19320	≤ 25	PASS
				2496.5~13000	4880.27	-38.64	≤ -26	0.13677	≤ 2.5	PASS
			2480	30~1000	900.33	-49.27	≤ -26	0.01183	≤ 2.5	PASS
				1000~2387	2075.97	-46.76	≤ -26	0.02109	≤ 2.5	PASS
				2387~2400	2388.67	-36.37	≤ -16	0.23067	≤ 25	PASS
				2483.5~2496.5	2495.93	-36.61	≤ -16	0.21827	≤ 25	PASS
				2496.5~13000	4959.57	-39.01	≤ -26	0.12560	≤ 2.5	PASS
	BLE_2M	Ant1	2402	30~1000	950.29	-49.47	≤ -26	0.01130	≤ 2.5	PASS
				1000~2387	2384.92	-40.68	≤ -26	0.08551	≤ 2.5	PASS
				2387~2400	2399.98	-18.11	≤ -16	15.4525 4	≤ 25	See table below
				2483.5~2496.5	2486.27	-37.44	≤ -16	0.18030	≤ 25	PASS
				2496.5~13000	3418.71	-28.44	≤ -26	1.43219	≤ 2.5	See table below
			2440	30~1000	933.80	-51.37	≤ -26	0.00729	≤ 2.5	PASS
				1000~2387	2376.94	-48.65	≤ -26	0.01365	≤ 2.5	PASS
				2387~2400	2395.63	-39.24	≤ -16	0.11912	≤ 25	PASS

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NTHV	BLE_1M	Ant1	2480	2483.5~2496.5	2492.72	-39.24	≤-16	0.11912	≤25	PASS
				2496.5~13000	4879.22	-42.39	≤-26	0.05768	≤2.5	PASS
				30~1000	836.56	-51.41	≤-26	0.00723	≤2.5	PASS
				1000~2387	2342.27	-48.80	≤-26	0.01318	≤2.5	PASS
				2387~2400	2396.08	-39.56	≤-16	0.11066	≤25	PASS
				2483.5~2496.5	2485.36	-32.65	≤-16	0.54325	≤25	PASS
				2496.5~13000	4960.10	-43.04	≤-26	0.04966	≤2.5	PASS
	BLE_2M	Ant1	2402	30~1000	989.09	-49.65	≤-26	0.01084	≤2.5	PASS
				1000~2387	2379.02	-42.57	≤-26	0.05534	≤2.5	PASS
				2387~2400	2400.00	-29.97	≤-16	1.00693	≤25	PASS
				2483.5~2496.5	2493.46	-37.36	≤-16	0.18365	≤25	PASS
				2496.5~13000	4804.64	-41.56	≤-26	0.06982	≤2.5	PASS
			2440	30~1000	913.67	-48.88	≤-26	0.01294	≤2.5	PASS
				1000~2387	2165.43	-46.74	≤-26	0.02118	≤2.5	PASS
				2387~2400	2388.26	-37.17	≤-16	0.19187	≤25	PASS
				2483.5~2496.5	2494.92	-36.86	≤-16	0.20606	≤25	PASS
				2496.5~13000	4879.74	-39.22	≤-26	0.11967	≤2.5	PASS
			2480	30~1000	950.05	-48.98	≤-26	0.01265	≤2.5	PASS
				1000~2387	2243.79	-46.84	≤-26	0.02070	≤2.5	PASS
				2387~2400	2399.77	-37.30	≤-16	0.18621	≤25	PASS
				2483.5~2496.5	2485.11	-36.60	≤-16	0.21878	≤25	PASS
				2496.5~13000	4960.10	-39.26	≤-26	0.11858	≤2.5	PASS
		Ant1	2402	30~1000	762.59	-48.68	≤-26	0.01355	≤2.5	PASS
				1000~2387	2384.57	-39.87	≤-26	0.10304	≤2.5	PASS
				2387~2400	2400	-18.33	≤-16	14.6892 6	≤25	See table below
				2483.5~2496.5	2485.98	-37.52	≤-16	0.17701	≤25	PASS
			2440	2496.5~13000	4803.07	-40.92	≤-26	0.08091	≤2.5	PASS
				30~1000	542.89	-51.39	≤-26	0.00726	≤2.5	PASS
				1000~2387	2188.31	-48.87	≤-26	0.01297	≤2.5	PASS
				2387~2400	2397.67	-39.46	≤-16	0.11324	≤25	PASS
				2483.5~2496.5	2490.57	-39.45	≤-16	0.11350	≤25	PASS
				2496.5~13000	4879.22	-41.48	≤-26	0.07112	≤2.5	PASS
				30~1000	745.86	-50.51	≤-26	0.00889	≤2.5	PASS
				1000~2387	2271.53	-48.60	≤-26	0.01380	≤2.5	PASS
				2387~2400	2390.70	-39.30	≤-16	0.11749	≤25	PASS
				2483.5~2496.5	2485.49	-32.66	≤-16	0.54200	≤25	PASS
				2496.5~13000	3427.11	-37.56	≤-26	0.17539	≤2.5	PASS

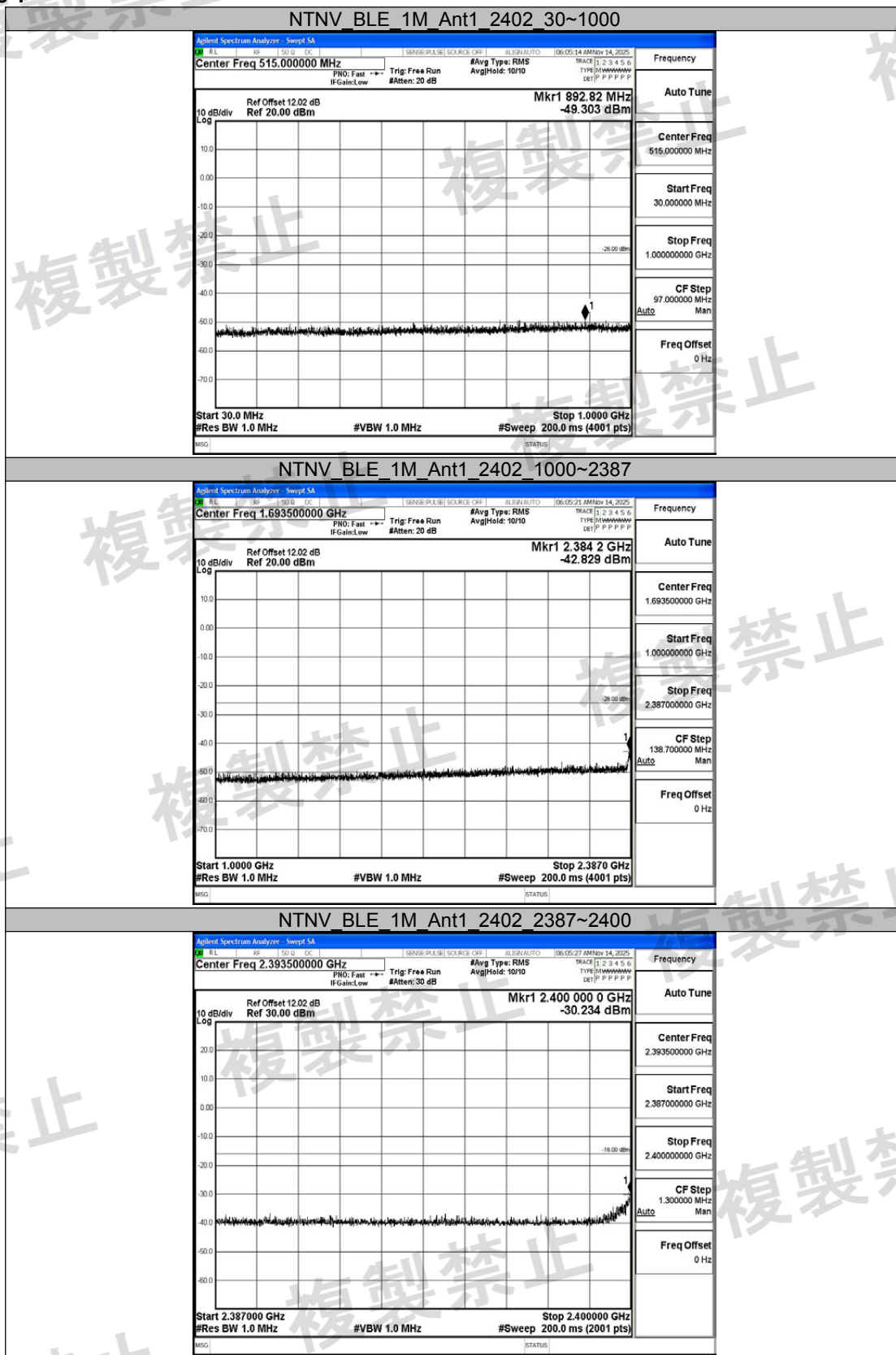
Test Result 2

TestCondition	TestMode	Antenna	Freq(M Hz)	Freq.[MHz]	Result [dBm]	Limit [dBm]	Result [μW/MHz]	Limit [μW/MHz]	Verdict
NTNV	BLE_2M	Ant1	2402	2400.00	-23.46	≤-16	4.50817	≤25	PASS
NTLV	BLE_2M	Ant1	2402	2399.98	-23.56	≤-16	4.40555	≤25	PASS
				3418.71	-27.83	≤-26	1.64816	≤2.5	PASS
NTHV	BLE_2M	Ant1	2402	2400.00	-23.56	≤-16	4.40555	≤25	PASS

Note: Both left and right earphone have tested, The right earphone is the worst, only the worse case was reported.

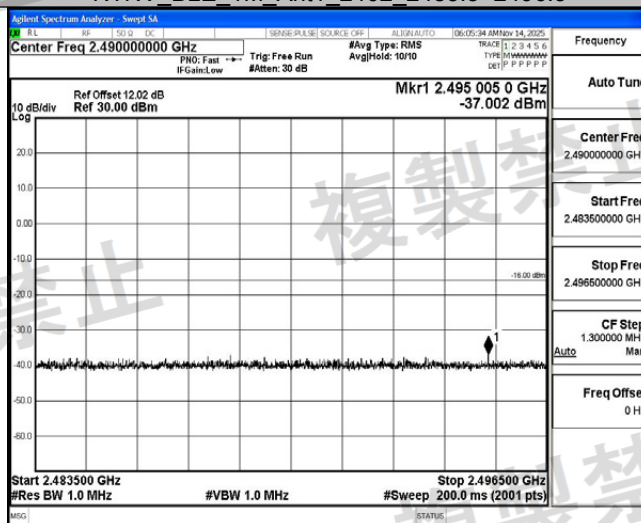


Test Graphs 1

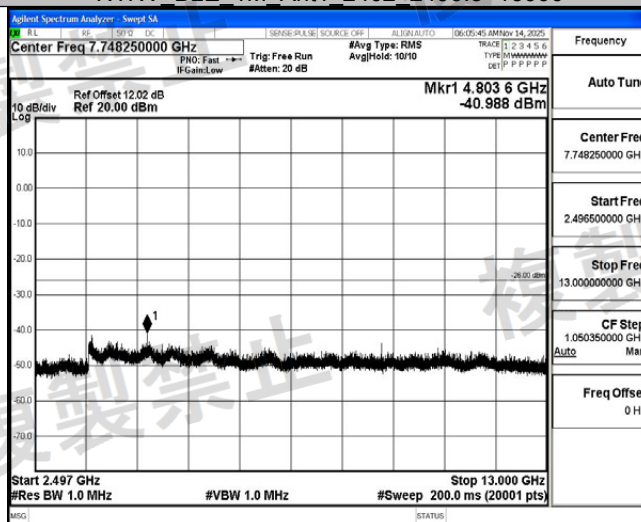




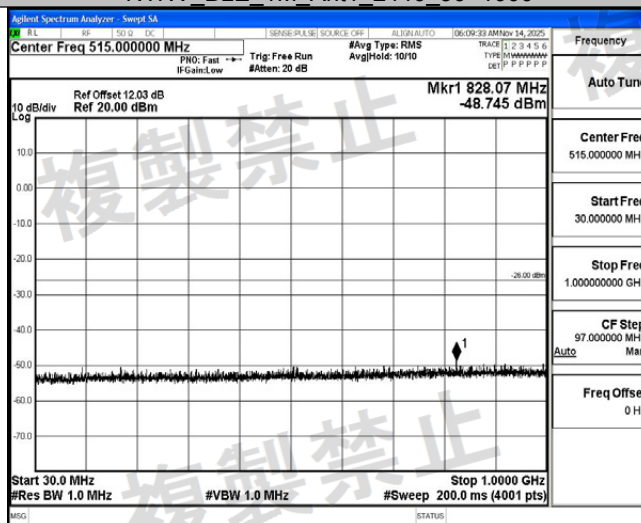
NTNV BLE 1M Ant1 2402 2483.5~2496.5



NTNV BLE 1M Ant1 2402 2496.5~13000

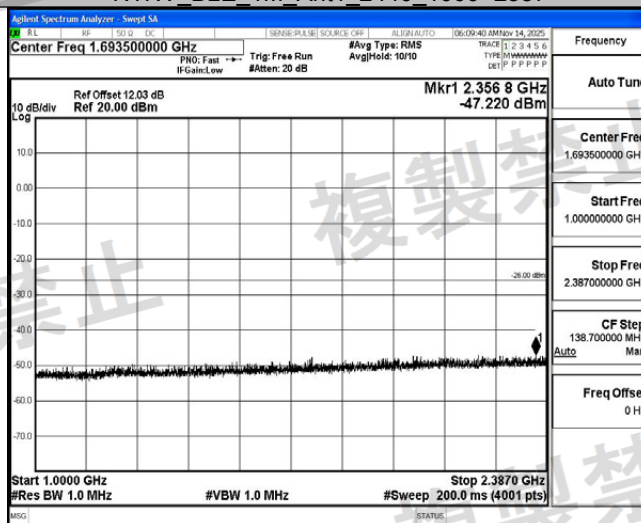


NTNV BLE 1M Ant1 2440 30~1000

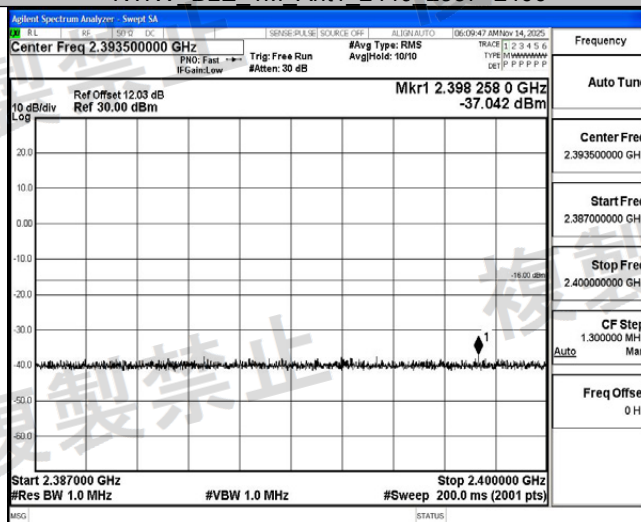




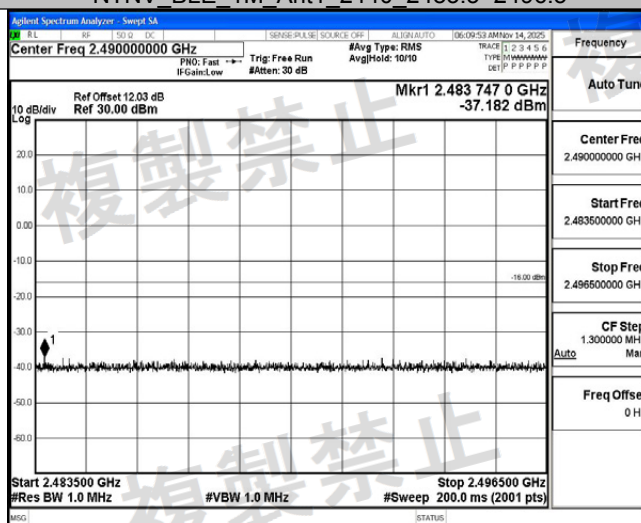
NTNV BLE 1M Ant1 2440 1000~2387



NTNV BLE 1M Ant1 2440 2387~2400

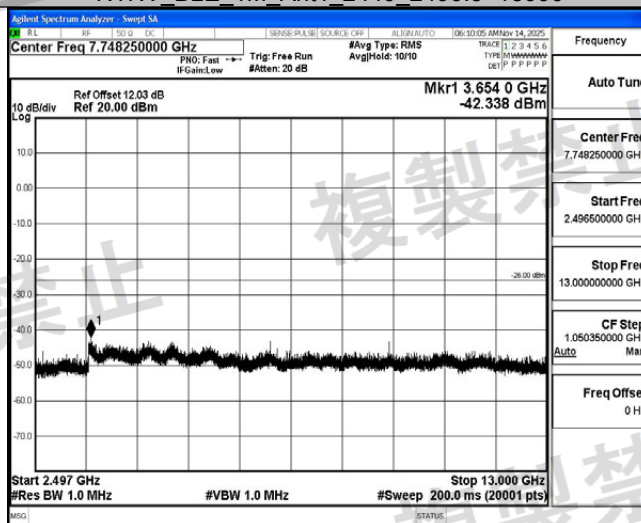


NTNV BLE 1M Ant1 2440 2483.5~2496.5

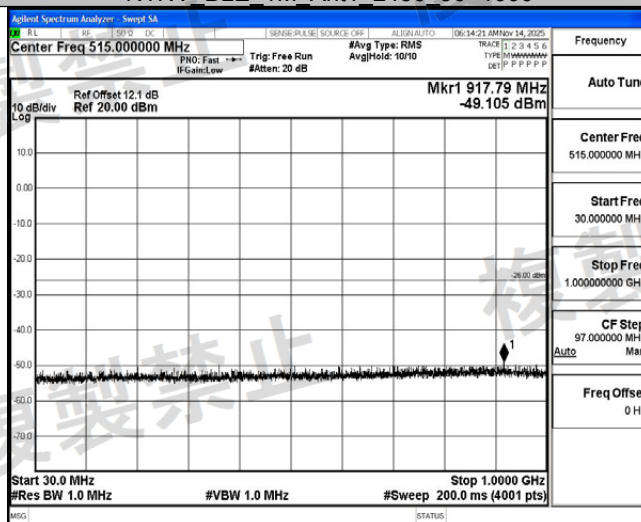




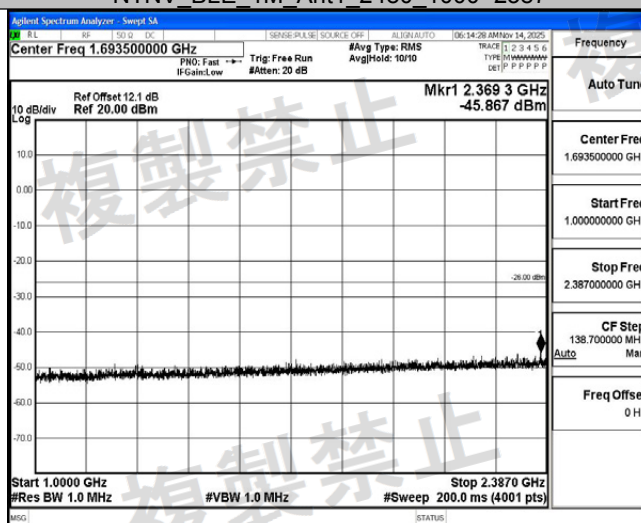
NTNV BLE 1M Ant1 2440 2496.5~13000



NTNV BLE 1M Ant1 2480 30~1000

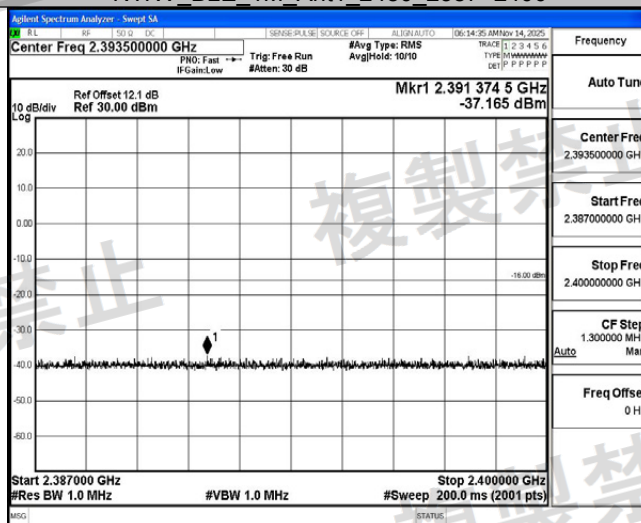


NTNV BLE 1M Ant1 2480 1000~2387

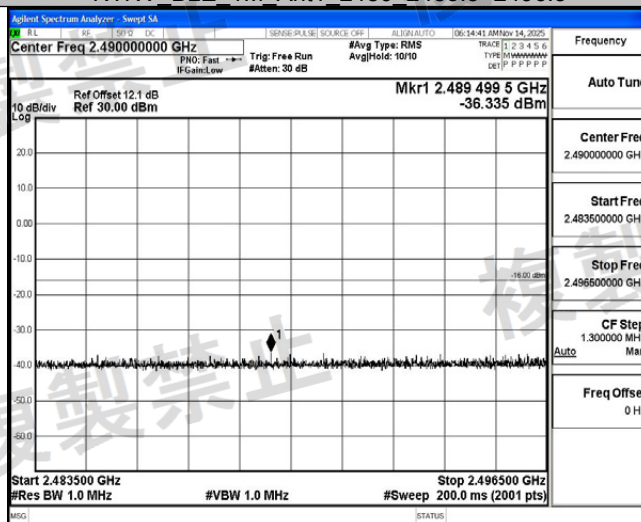




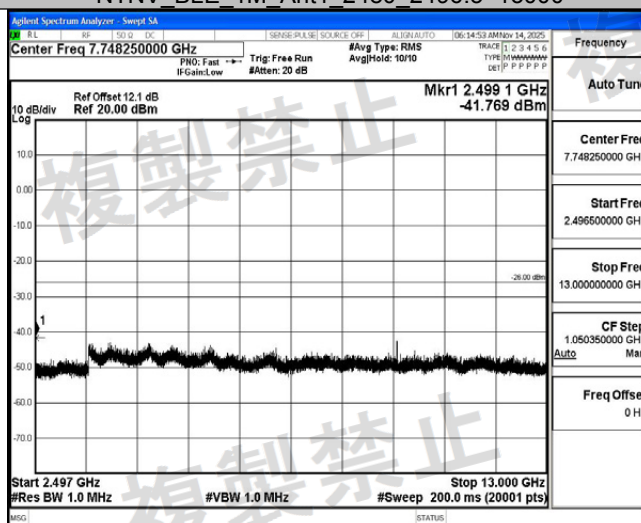
NTNV BLE 1M Ant1 2480 2387~2400



NTNV BLE 1M Ant1 2480 2483.5~2496.5

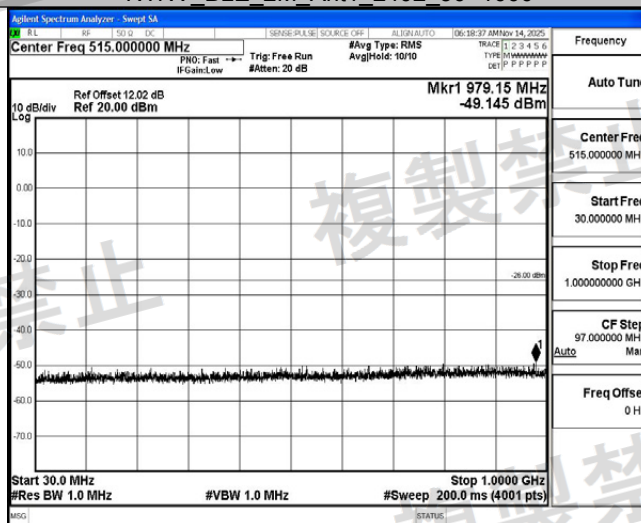


NTNV BLE 1M Ant1 2480 2496.5~13000

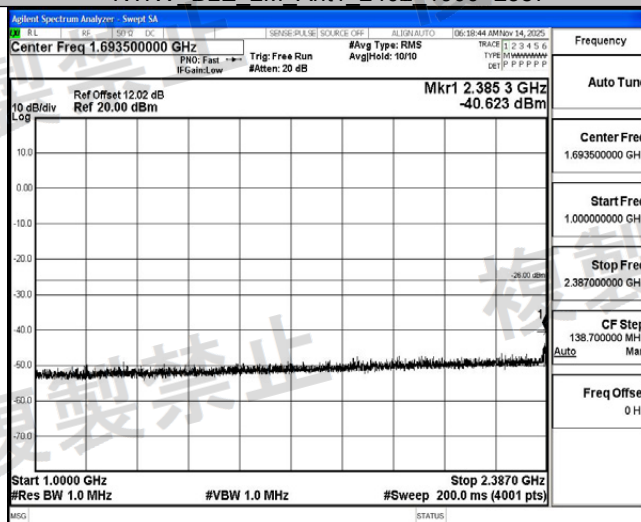




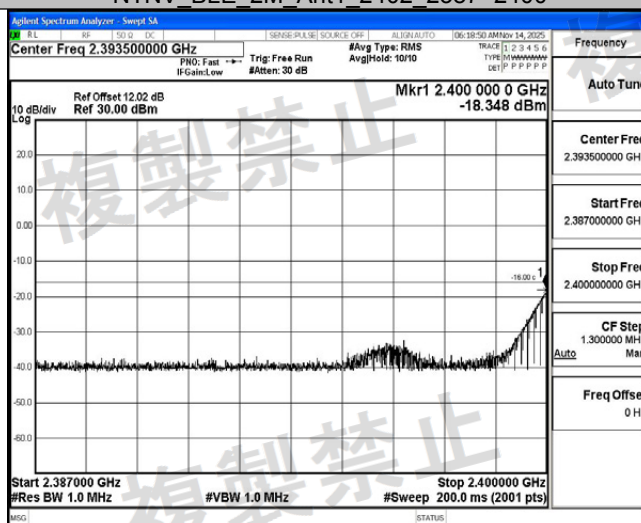
NTNV BLE 2M Ant1 2402 30~1000



NTNV BLE 2M Ant1 2402 1000~2387

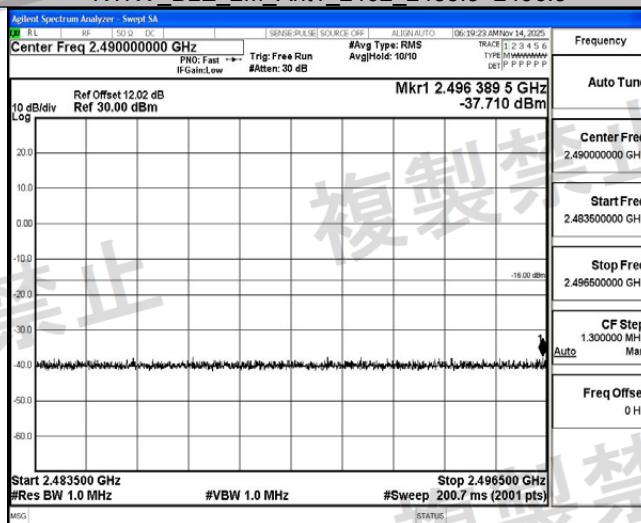


NTNV BLE 2M Ant1 2402 2387~2400

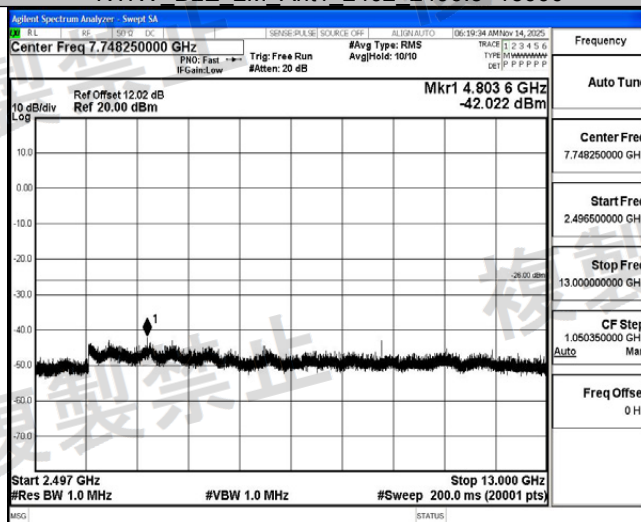




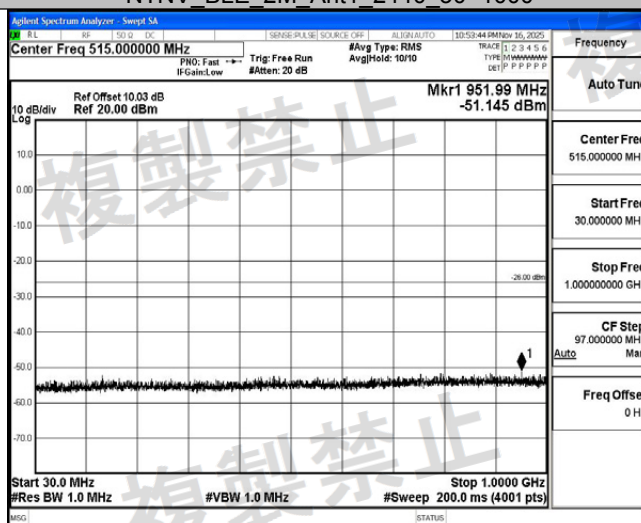
NTNV BLE 2M Ant1 2402 2483.5~2496.5



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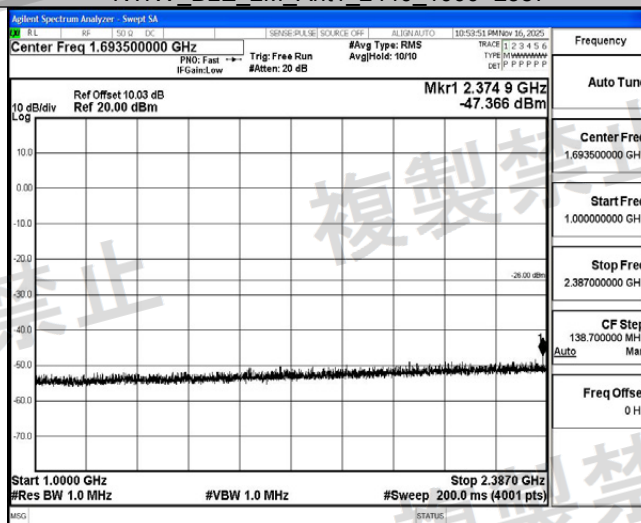


NTNV BLE 2M Ant1 2440 30~1000

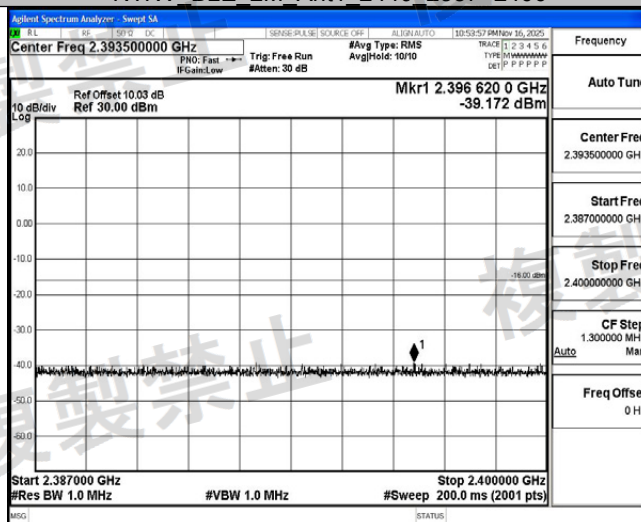




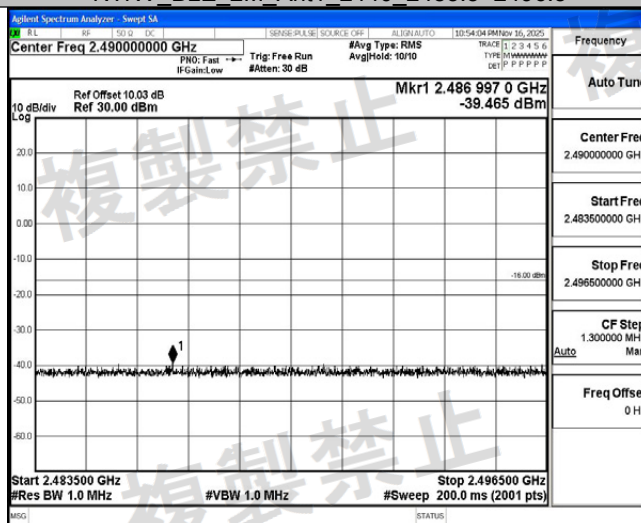
NTNV BLE 2M Ant1 2440 1000~2387



NTNV BLE 2M Ant1 2440 2387~2400

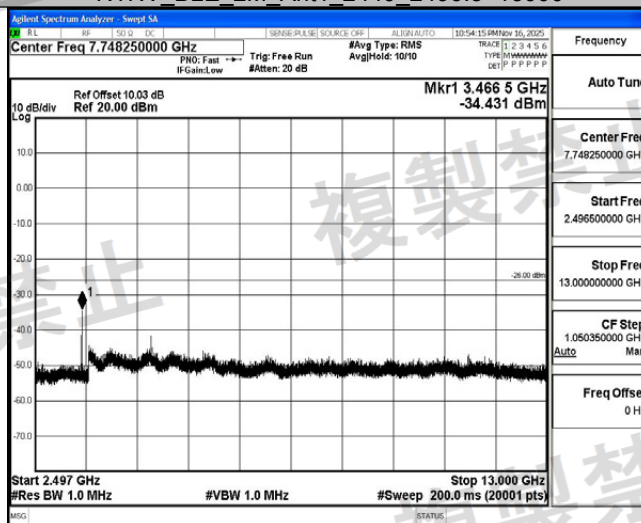


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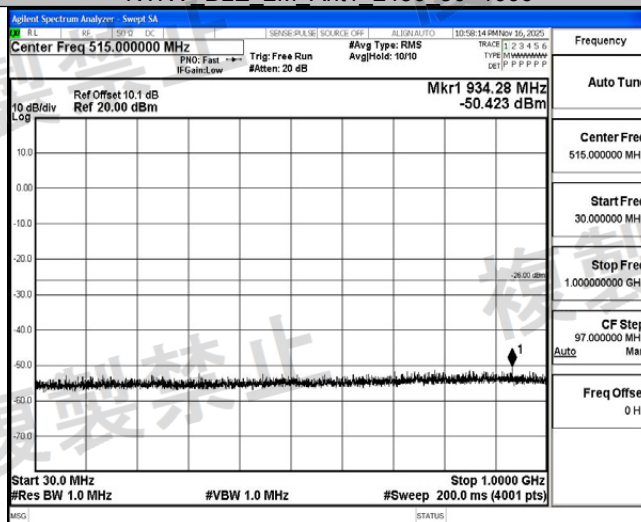




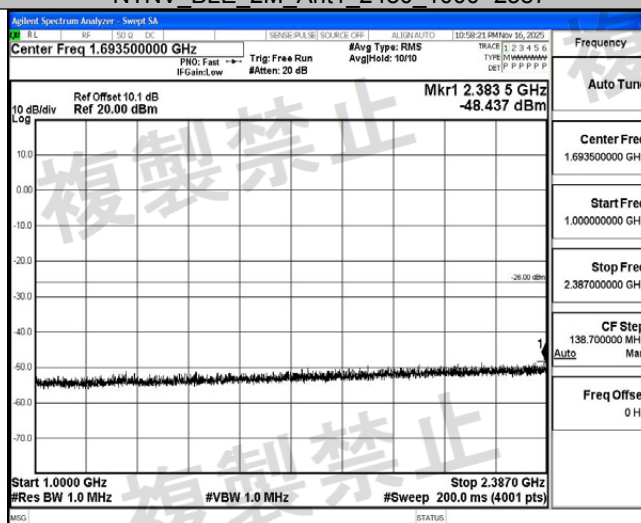
NTNV BLE 2M Ant1 2440 2496.5~13000



NTNV BLE 2M Ant1 2480 30~1000

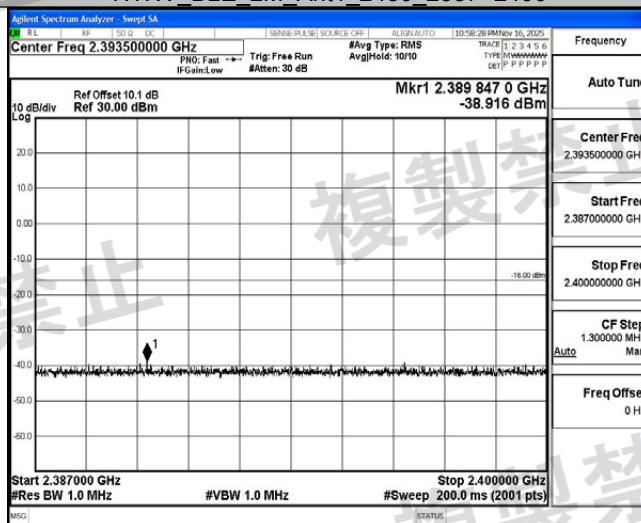


NTNV BLE 2M Ant1 2480 1000~2387

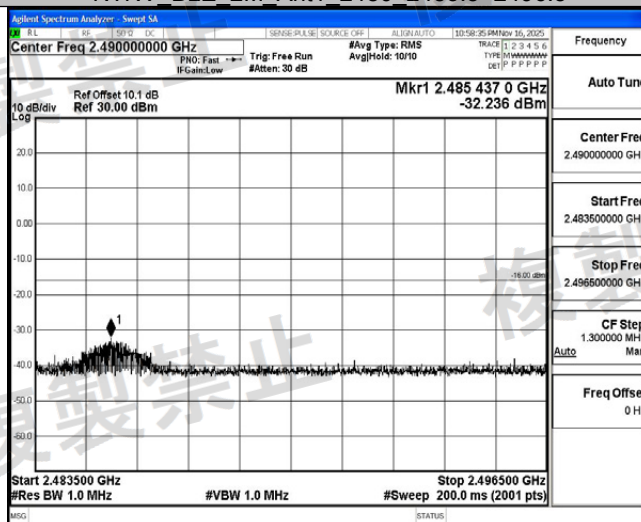




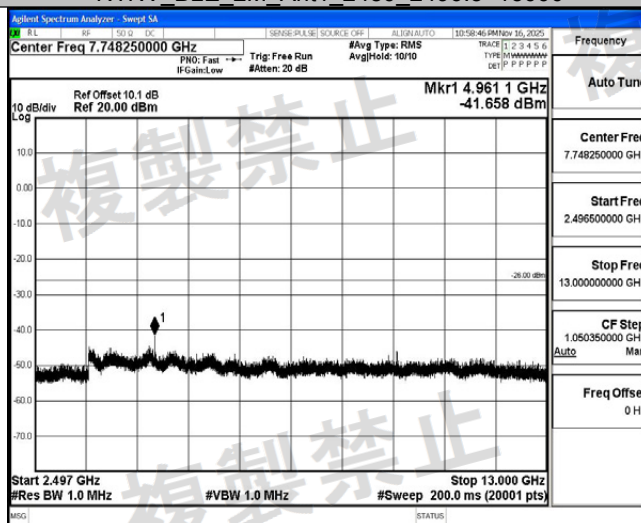
NTNV BLE 2M Ant1 2480 2387~2400



NTNV BLE 2M Ant1 2480 2483.5~2496.5

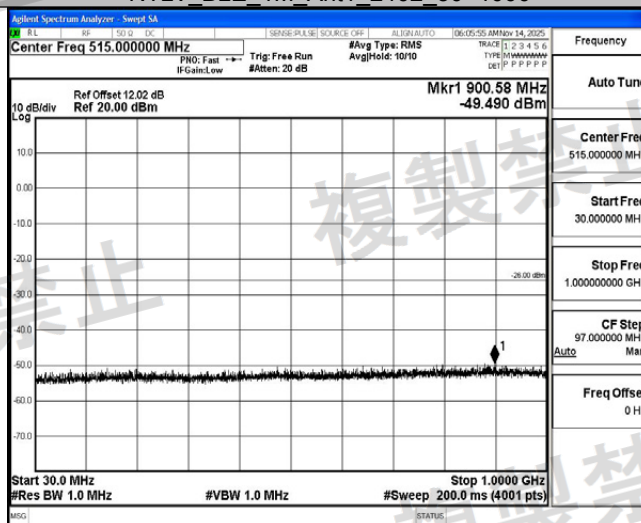


NTNV BLE 2M Ant1 2480 2496.5~13000

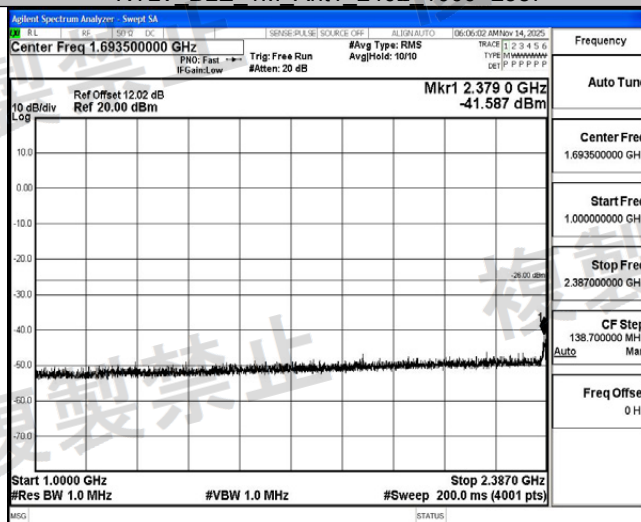




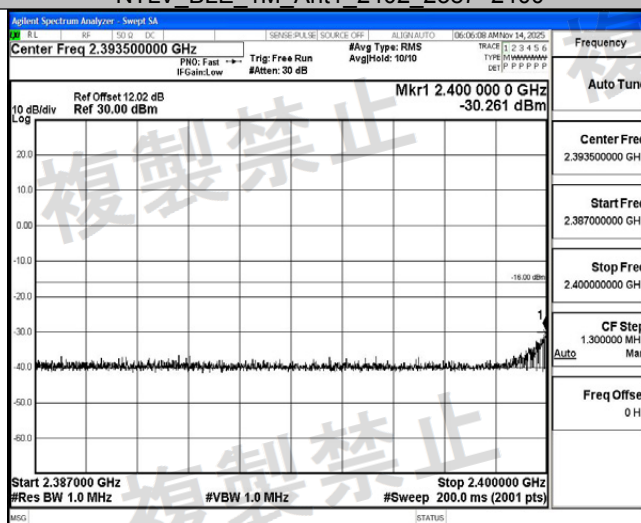
NTLV BLE 1M Ant1 2402 30~1000



NTLV BLE 1M Ant1 2402 1000~2387

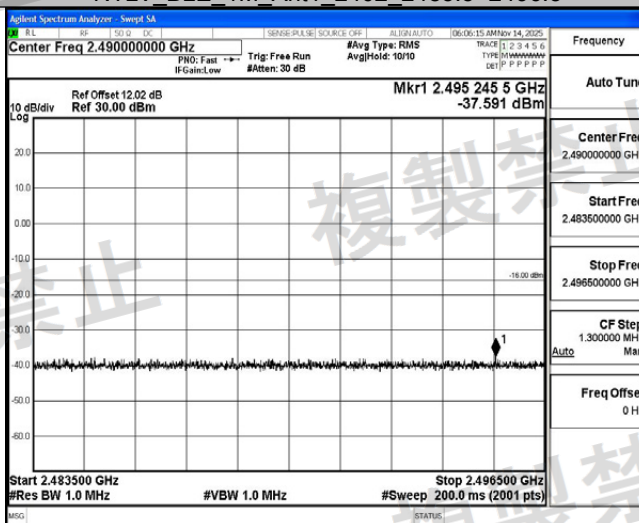


NTLV BLE 1M Ant1 2402 2387~2400

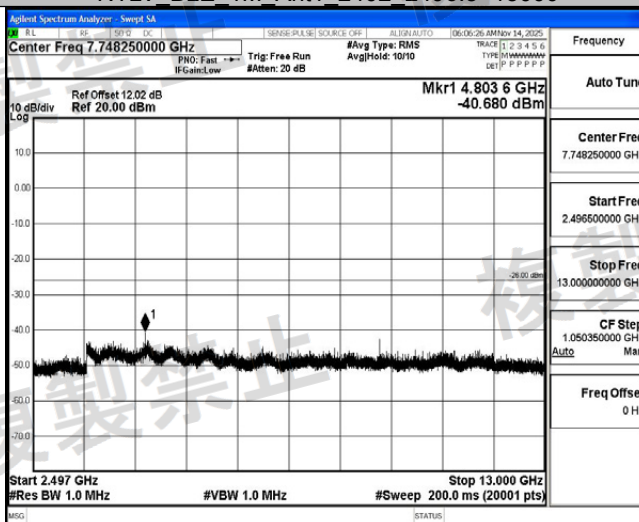




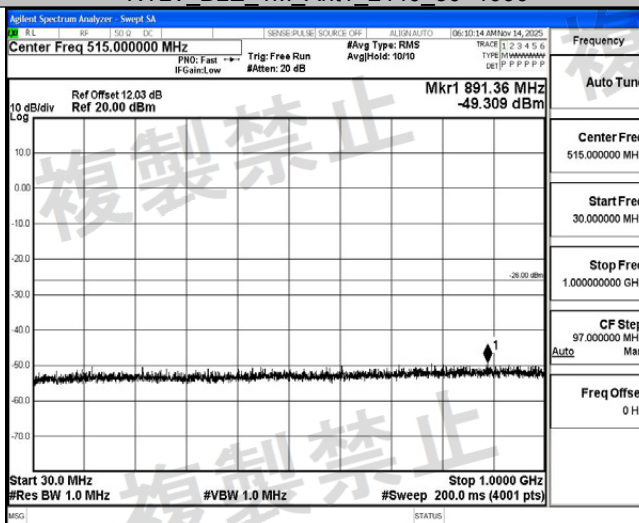
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NTLV BLE 1M Ant1 2402 2496.5~13000

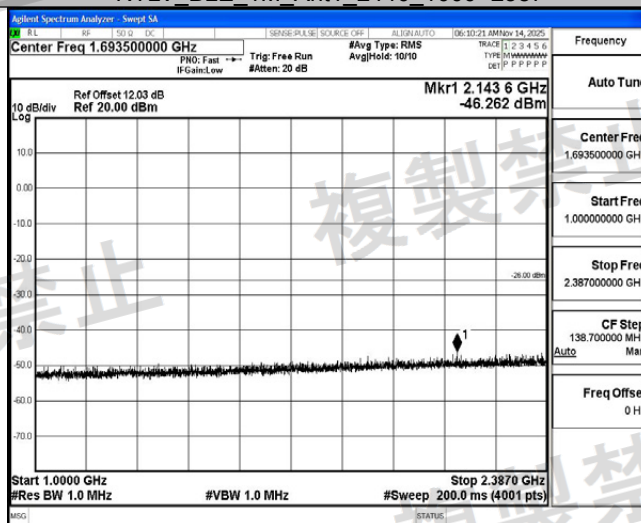


NTLV BLE 1M Ant1 2440 30~1000

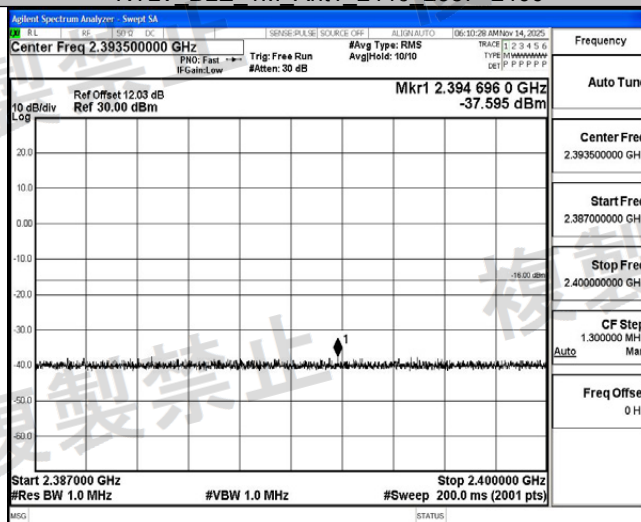




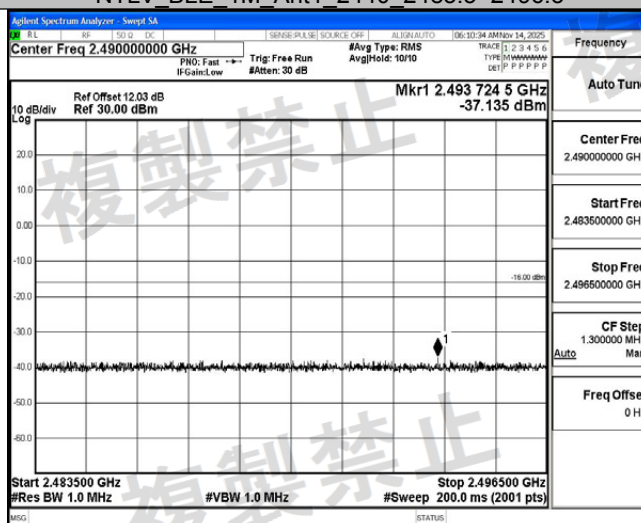
NTLV BLE 1M Ant1 2440 1000~2387



NTLV BLE 1M Ant1 2440 2387~2400

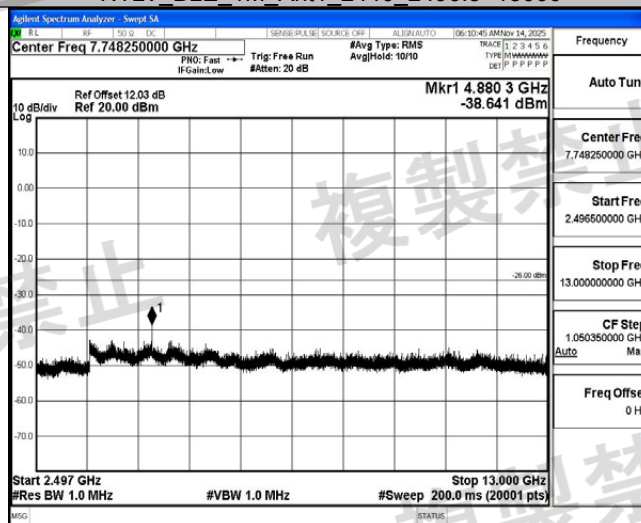


NTLV BLE 1M Ant1 2440 2483.5~2496.5

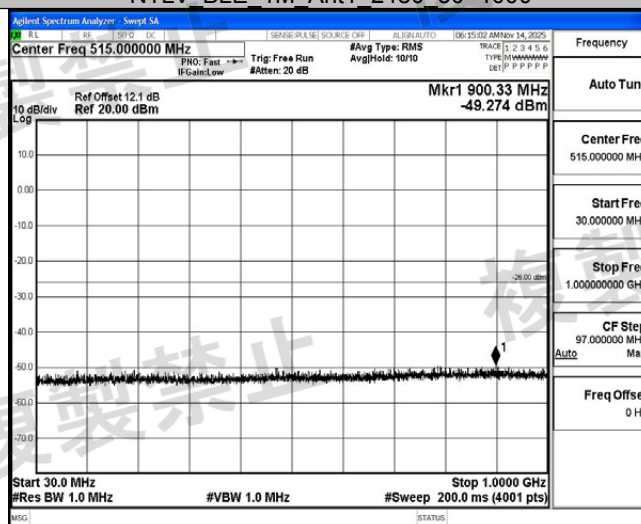




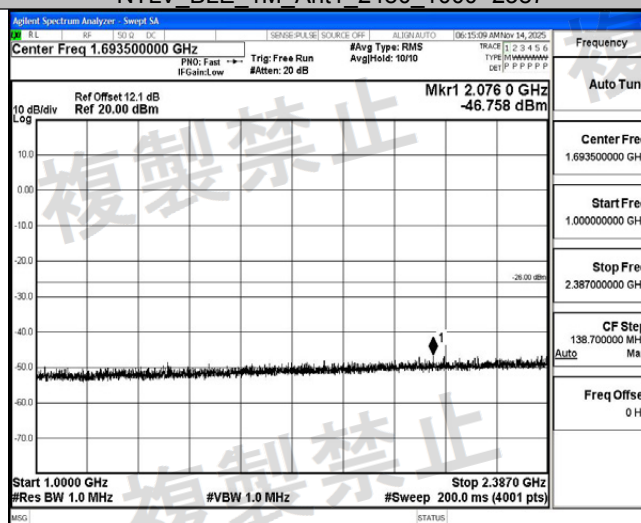
NTLV BLE 1M Ant1 2440 2496.5~13000



NTLV BLE 1M Ant1 2480 30~1000

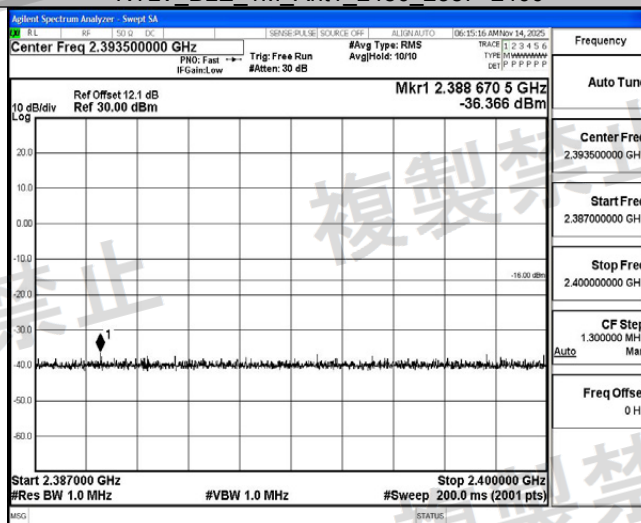


NTLV BLE 1M Ant1 2480 1000~2387

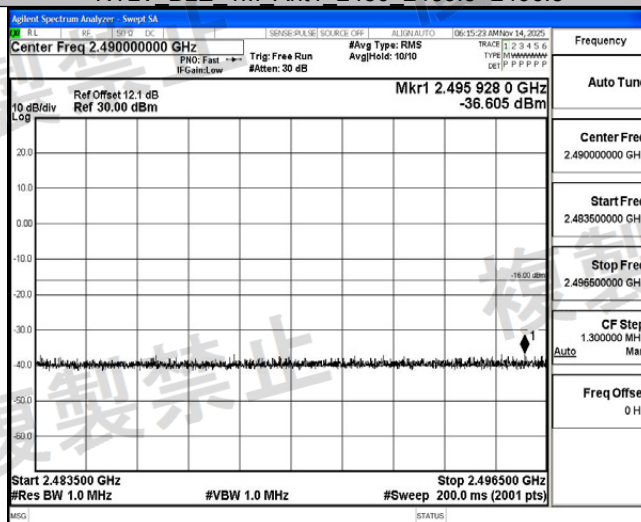




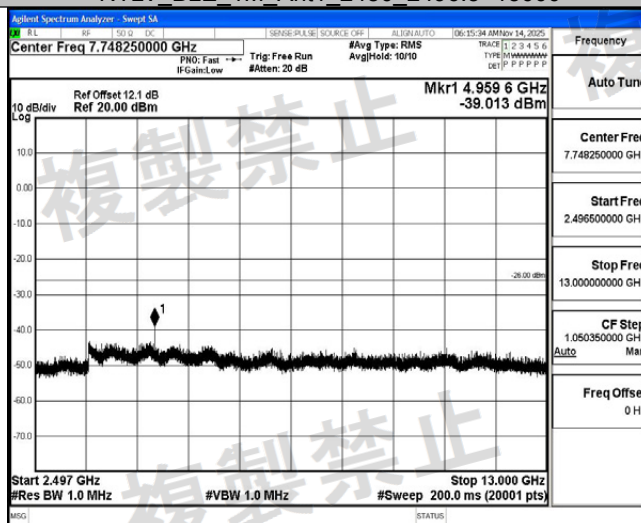
NTLV BLE 1M Ant1 2480 2387~2400



NTLV BLE 1M Ant1 2480 2483.5~2496.5

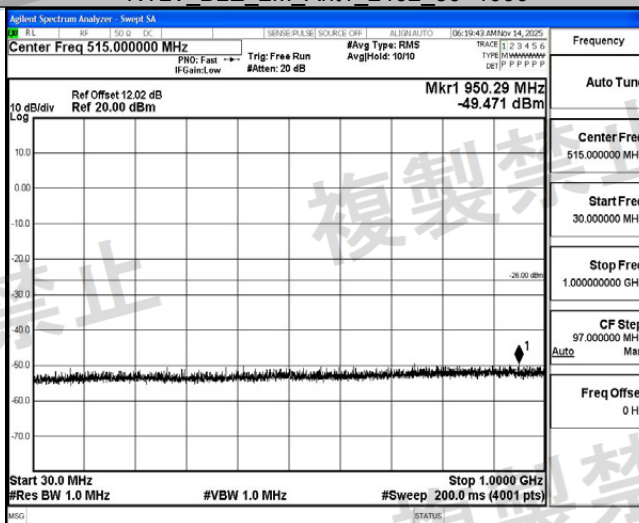


NTLV BLE 1M Ant1 2480 2496.5~13000

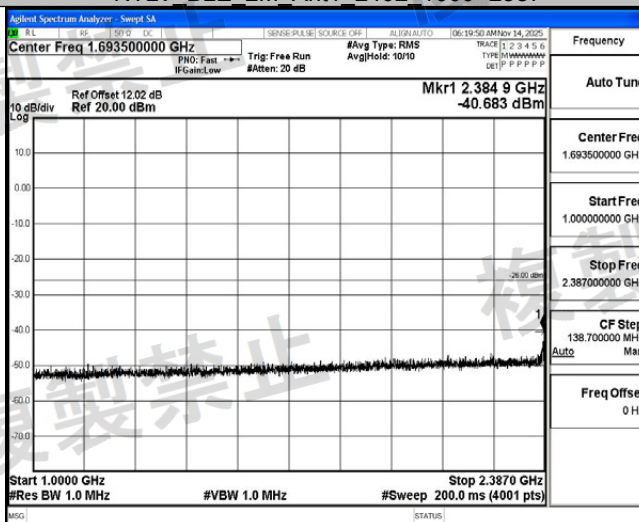




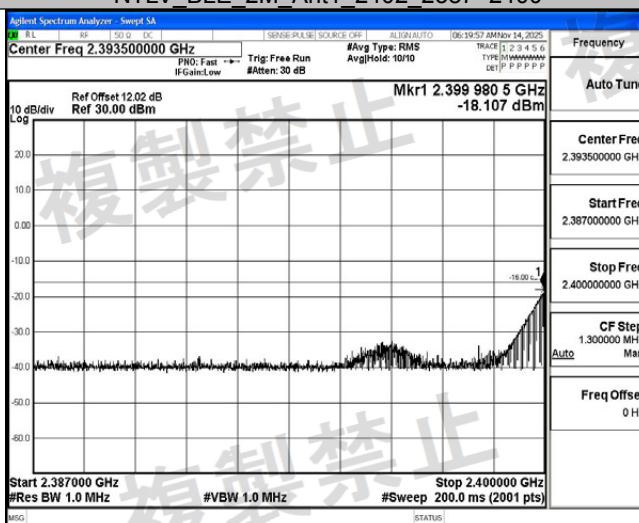
NTLV BLE 2M Ant1 2402 30~1000



NTLV BLE 2M Ant1 2402 1000~2387

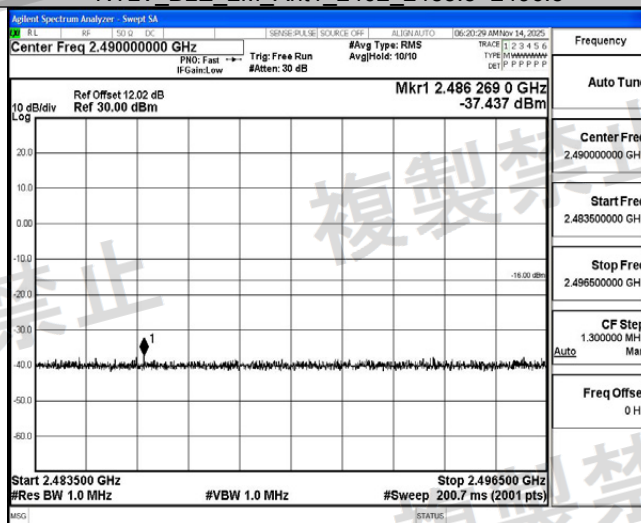


NTLV BLE 2M Ant1 2402 2387~2400

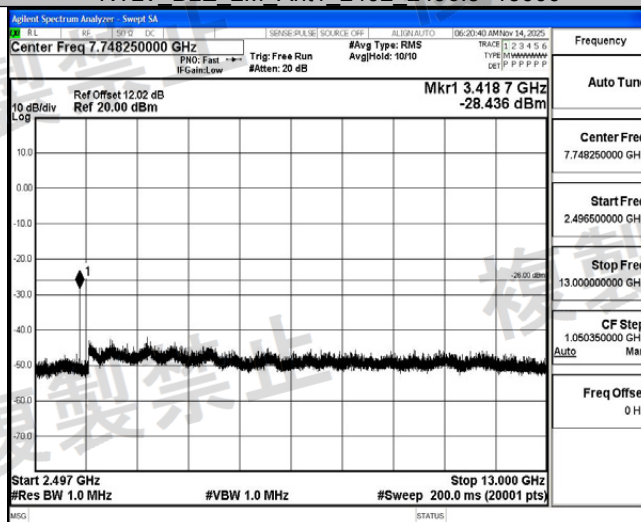




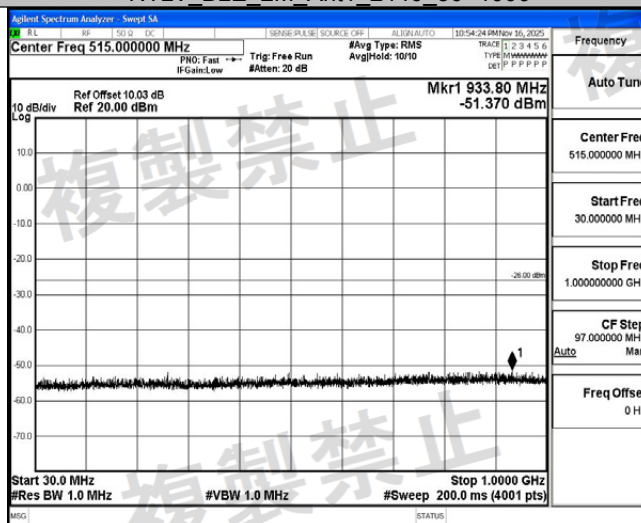
NTLV BLE 2M Ant1 2402 2483.5~2496.5



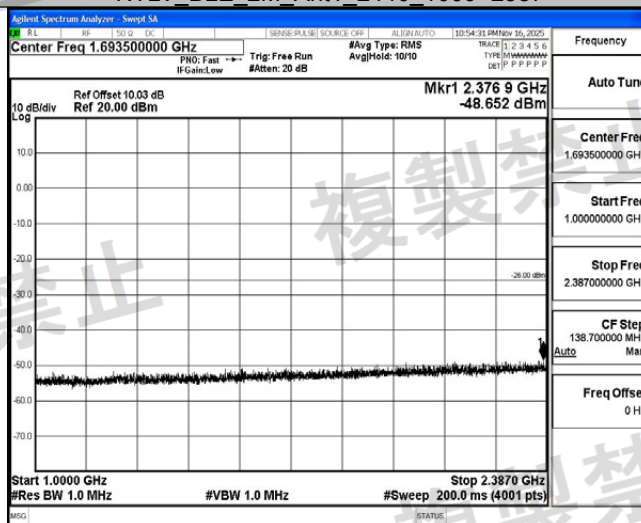
NTLV BLE 2M Ant1 2402 2496.5~13000



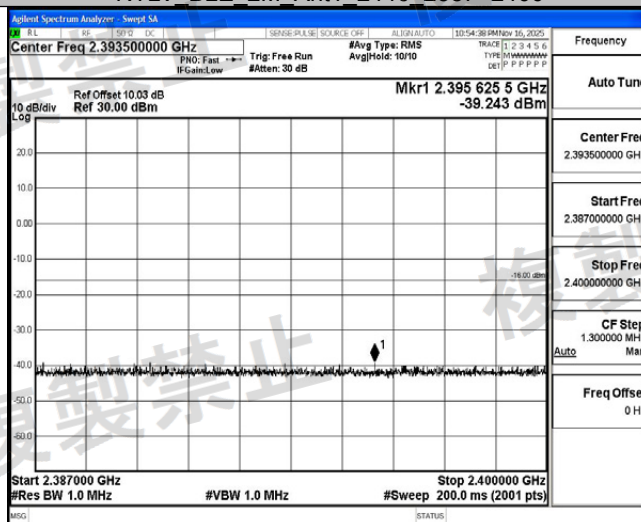
NTLV BLE 2M Ant1 2440 30~1000



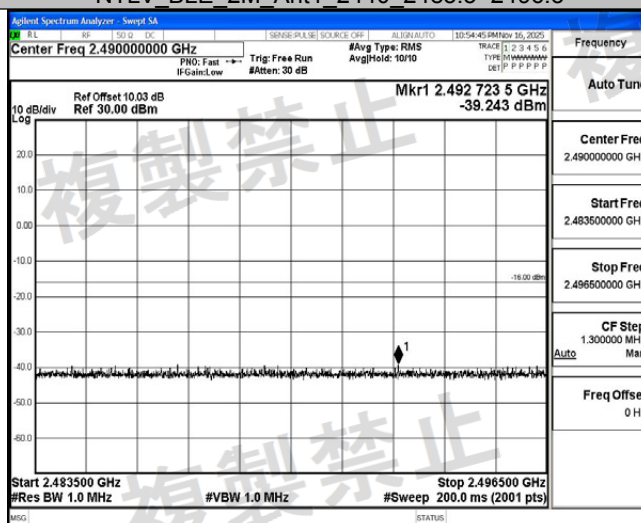
NTLV BLE 2M Ant1 2440 1000~2387



NTLV BLE 2M Ant1 2440 2387~2400

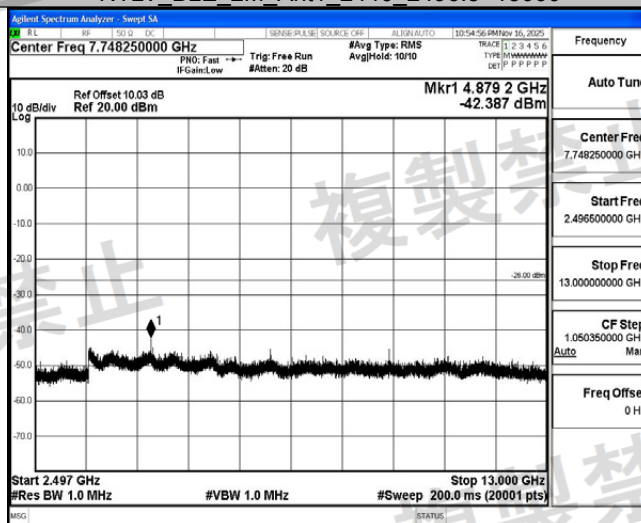


NTLV	BLE	2M	Ant1	2440	2483.5~2496.5
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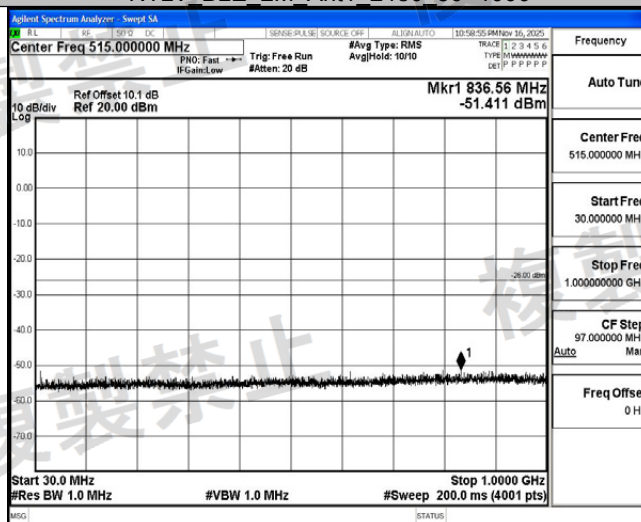




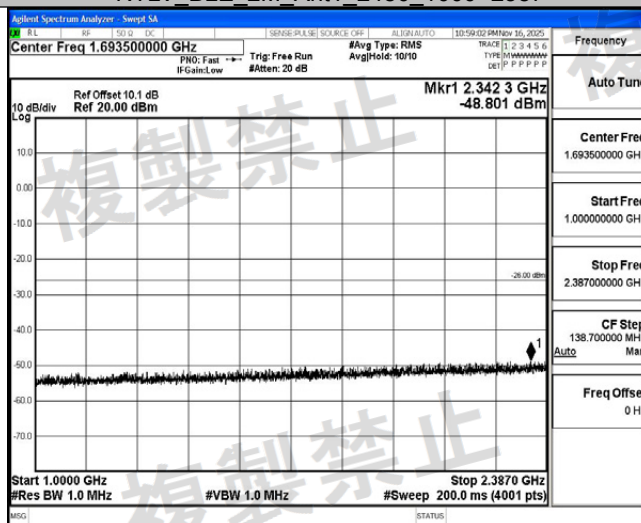
NTLV BLE 2M Ant1 2440 2496.5~13000



NTLV BLE 2M Ant1 2480 30~1000

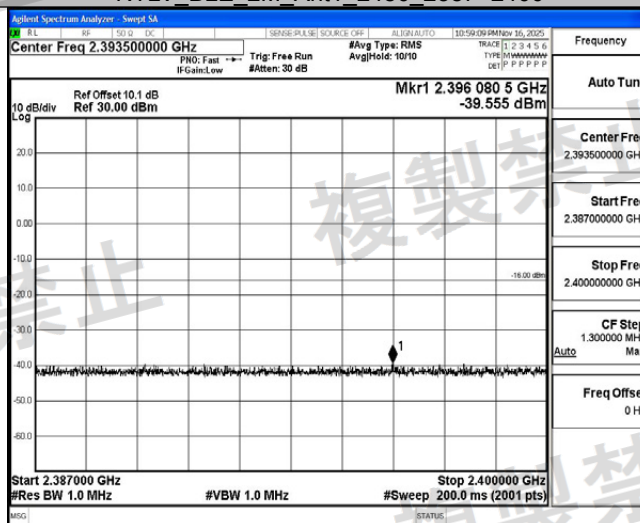


NTLV BLE 2M Ant1 2480 1000~2387

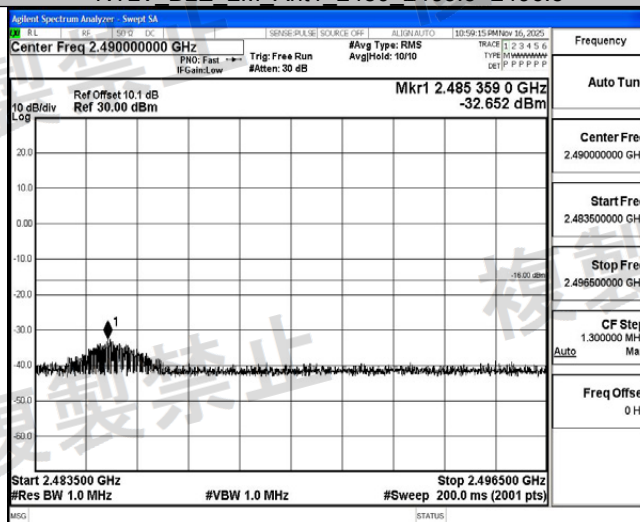




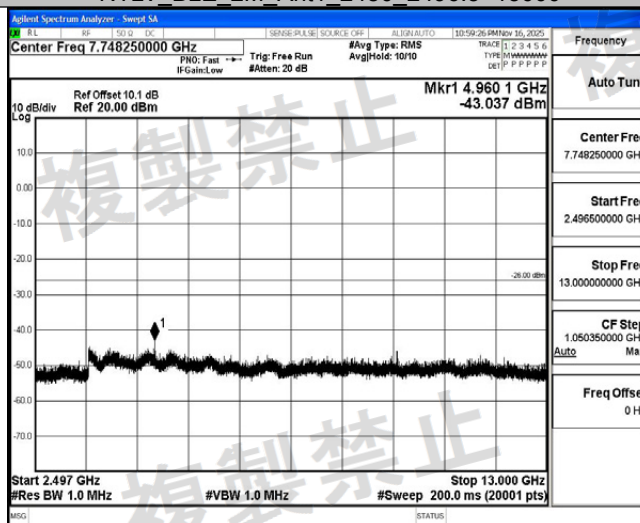
NTLV BLE 2M Ant1 2480 2387~2400



NTLV BLE 2M Ant1 2480 2483.5~2496.5

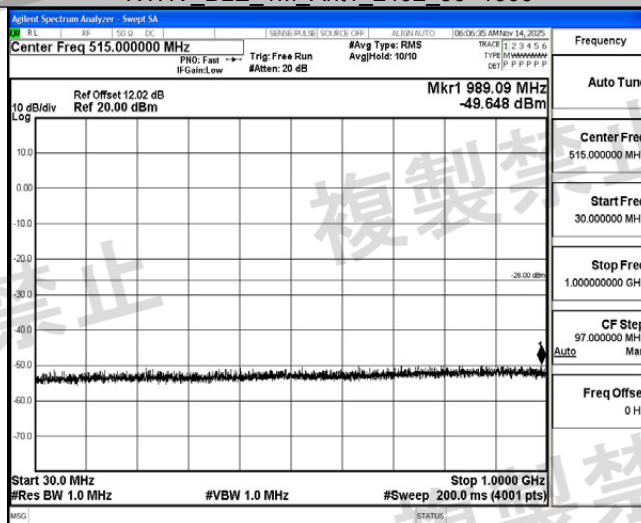


NTLV BLE 2M Ant1 2480 2496.5~13000

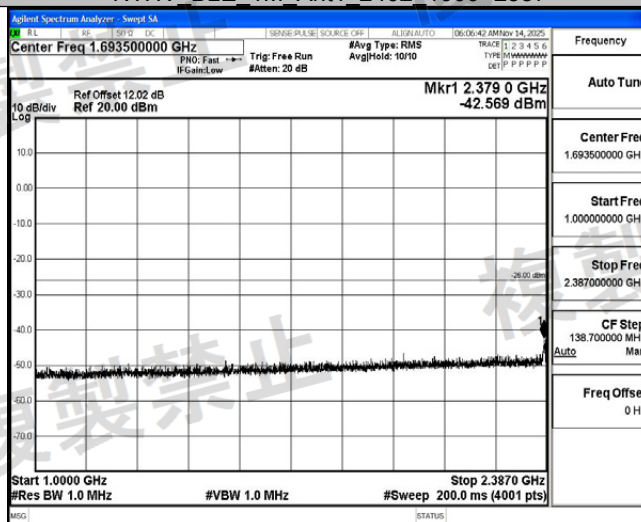




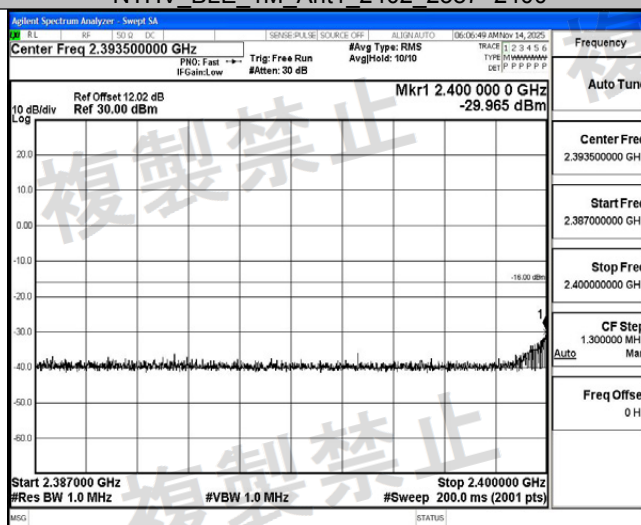
NTHV BLE 1M Ant1 2402 30~1000



NTHV BLE 1M Ant1 2402 1000~2387

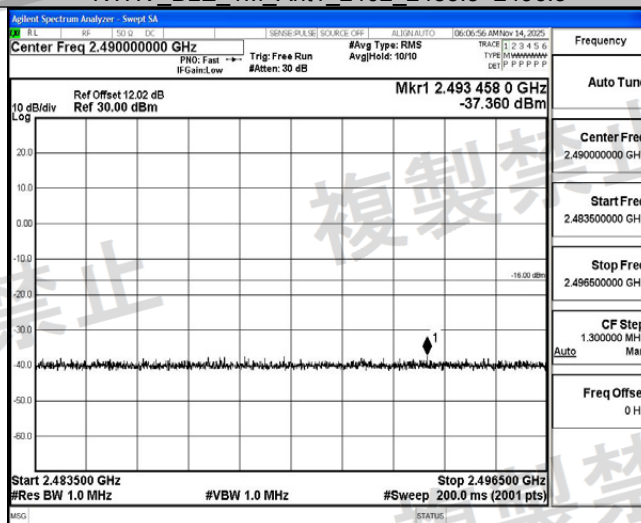


NTHV BLE 1M Ant1 2402 2387~2400

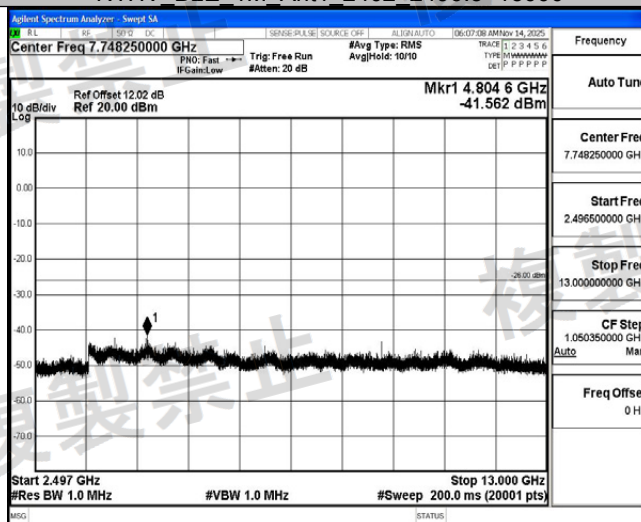




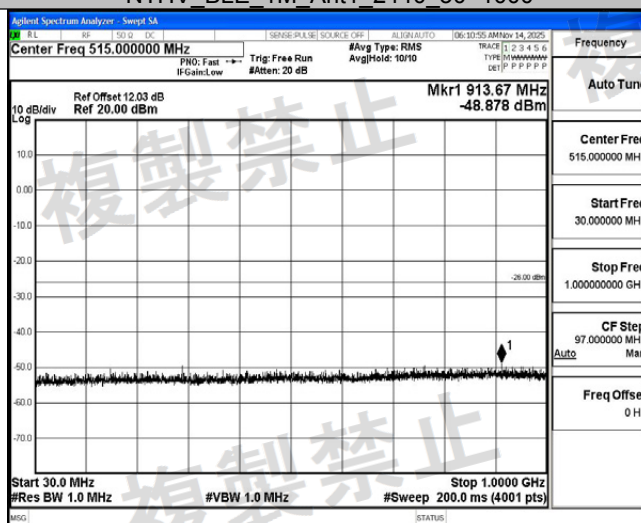
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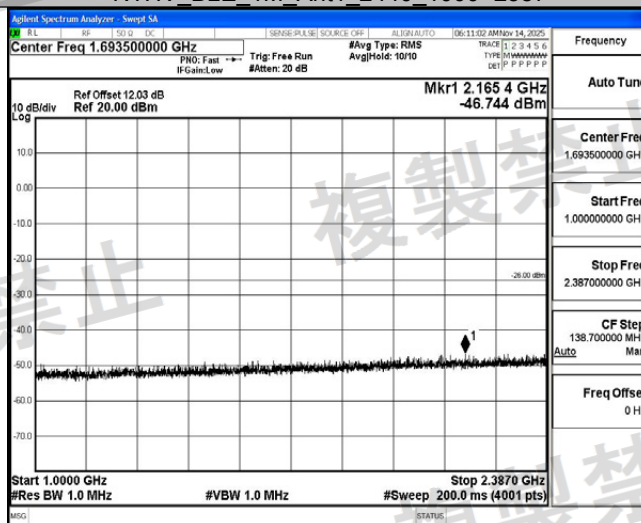


NTHV BLE 1M Ant1 2440 30~1000

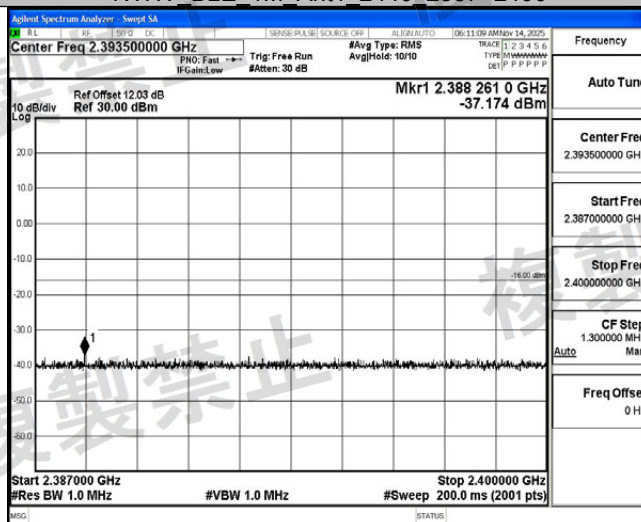




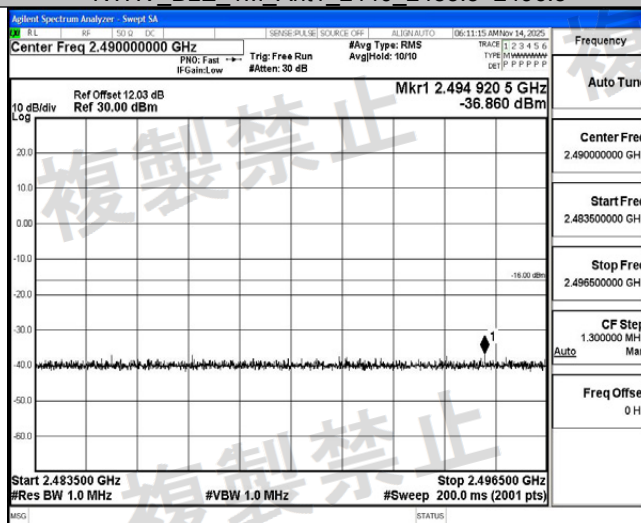
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NTHV BLE 1M Ant1 2440 2387~2400

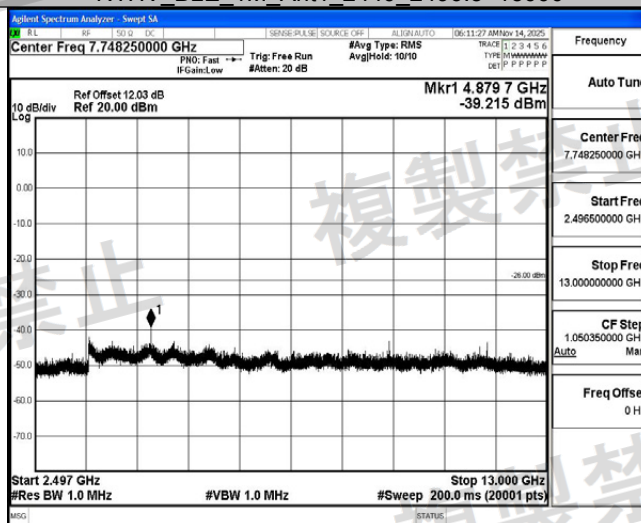


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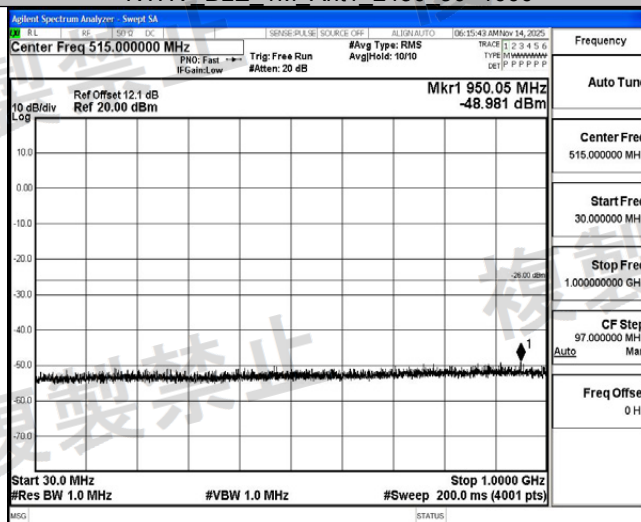




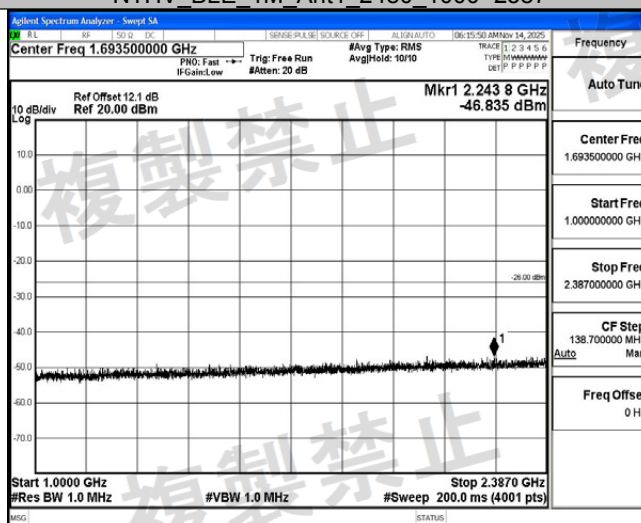
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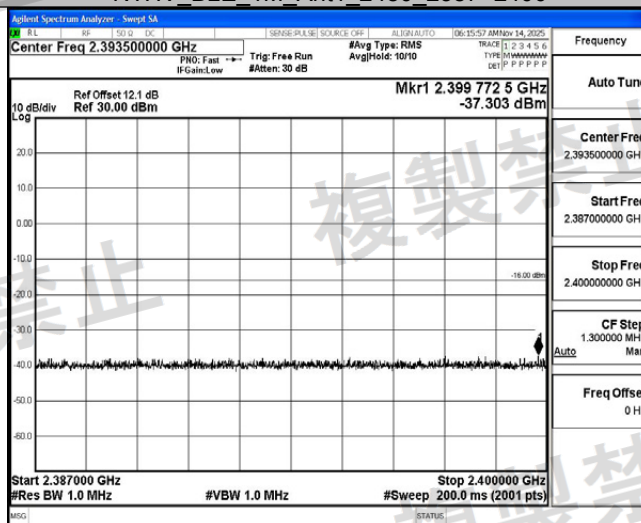


NTHV BLE 1M Ant1 2480 1000~2387

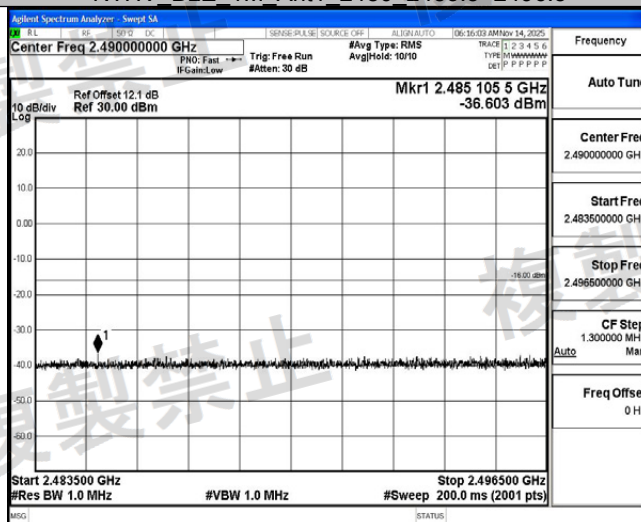




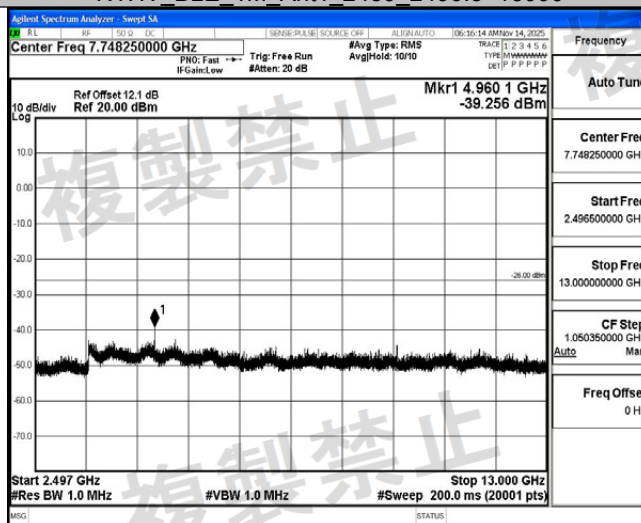
NTHV BLE 1M Ant1 2480 2387~2400



NTHV BLE 1M Ant1 2480 2483.5~2496.5

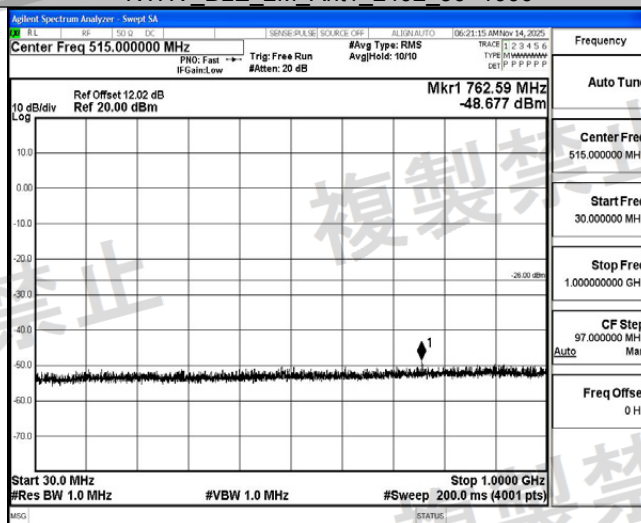


NTHV BLE 1M Ant1 2480 2496.5~13000

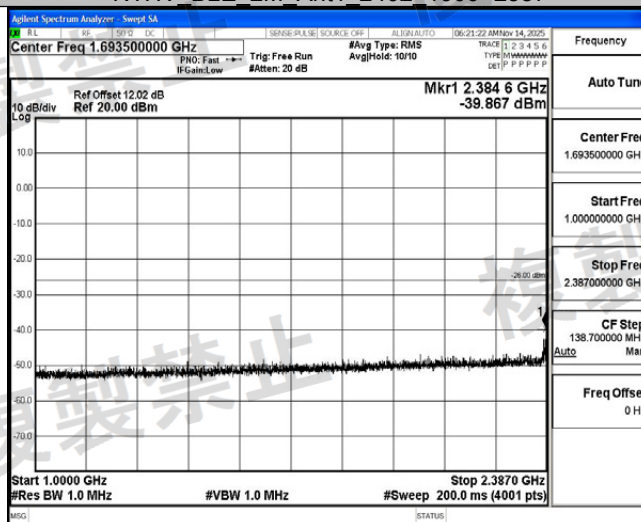




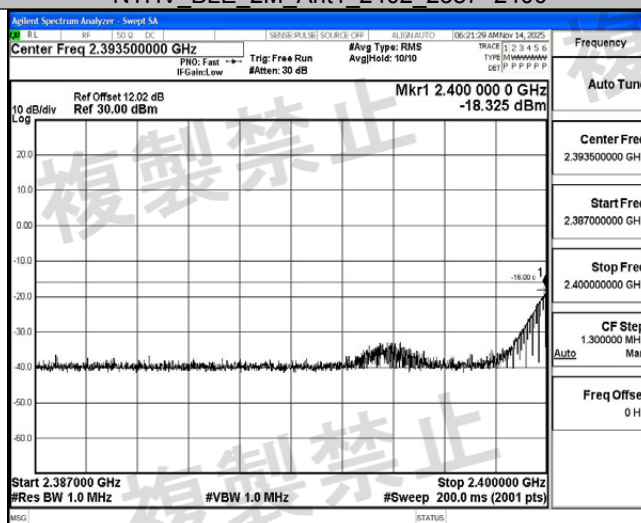
NTHV BLE 2M Ant1 2402 30~1000



NTHV BLE 2M Ant1 2402 1000~2387

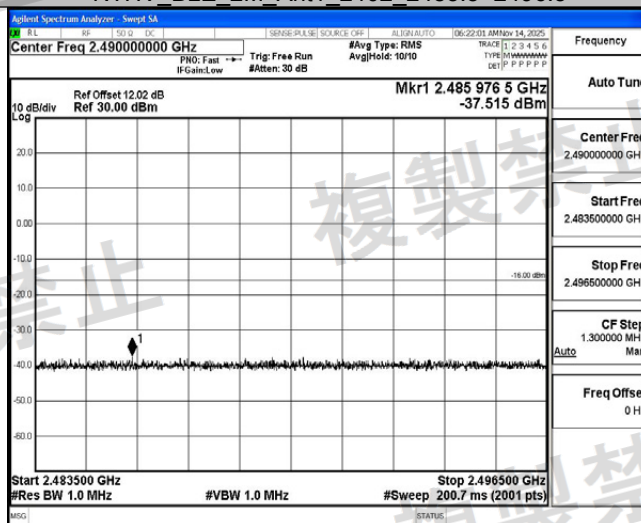


NTHV BLE 2M Ant1 2402 2387~2400

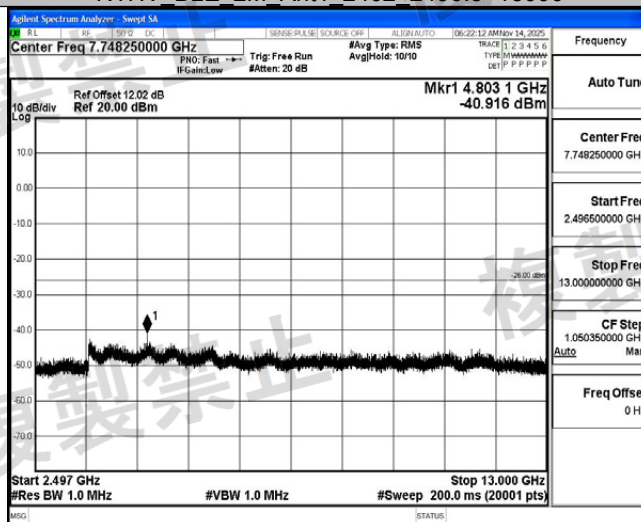




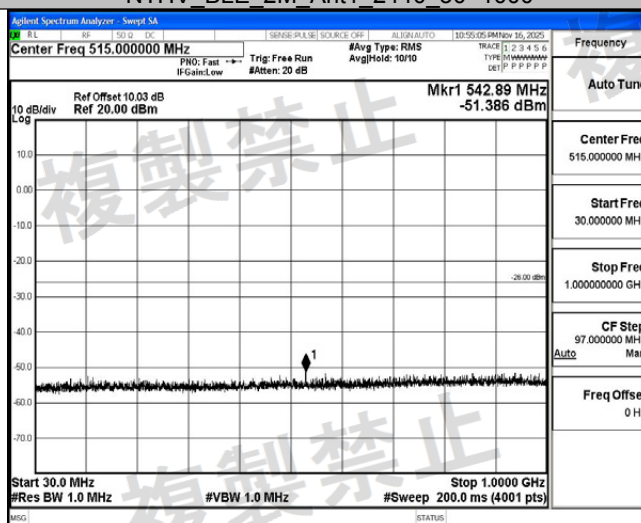
NTHV BLE 2M Ant1 2402 2483.5~2496.5



NTHV BLE 2M Ant1 2402 2496.5~13000

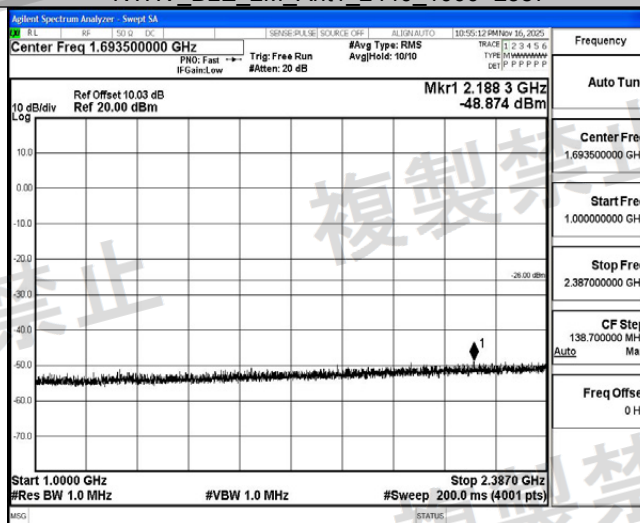


NTHV BLE 2M Ant1 2440 30~1000

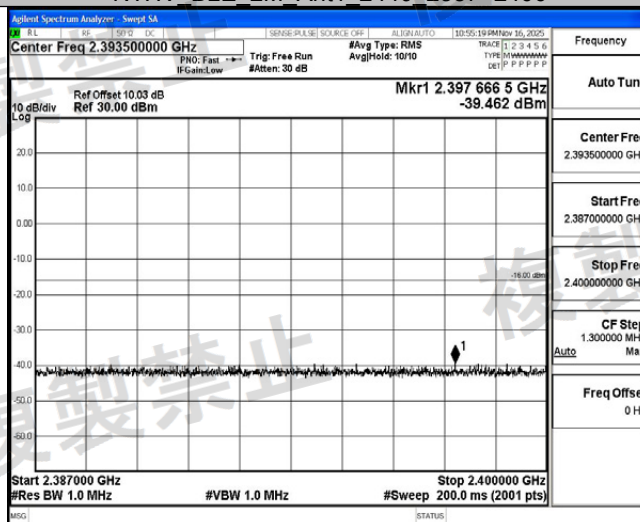




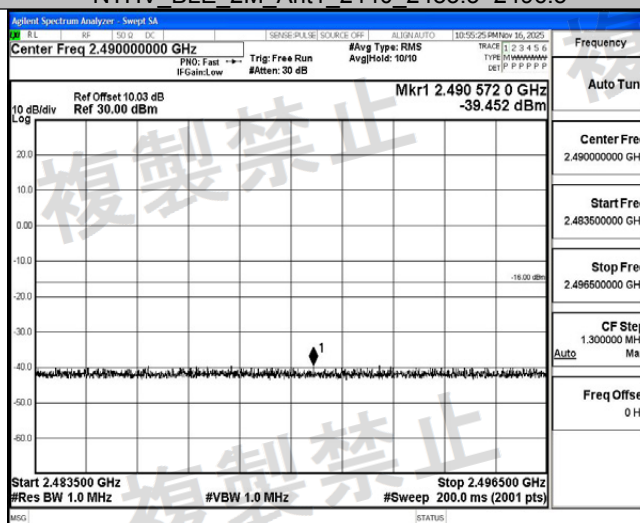
NTHV BLE 2M Ant1 2440 1000~2387



NTHV BLE 2M Ant1 2440 2387~2400

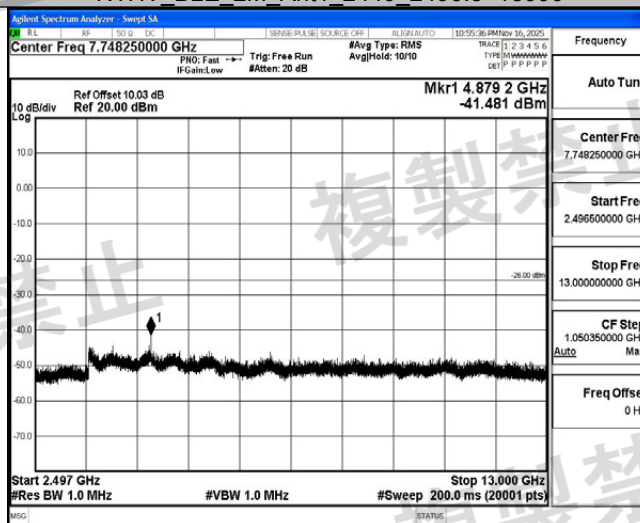


NTHV BLE 2M Ant1 2440 2483.5~2496.5

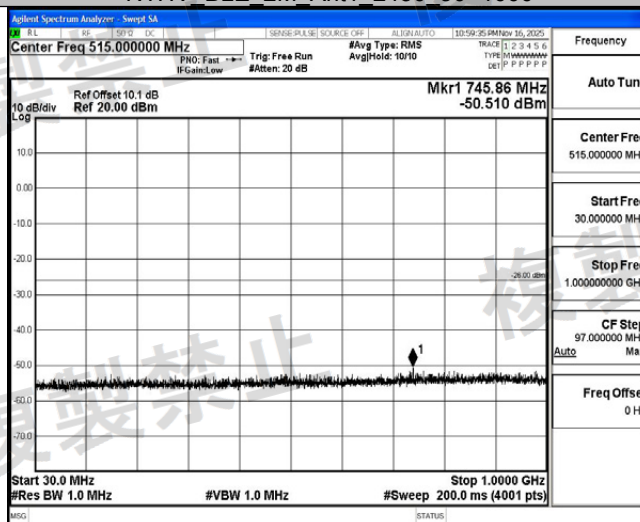




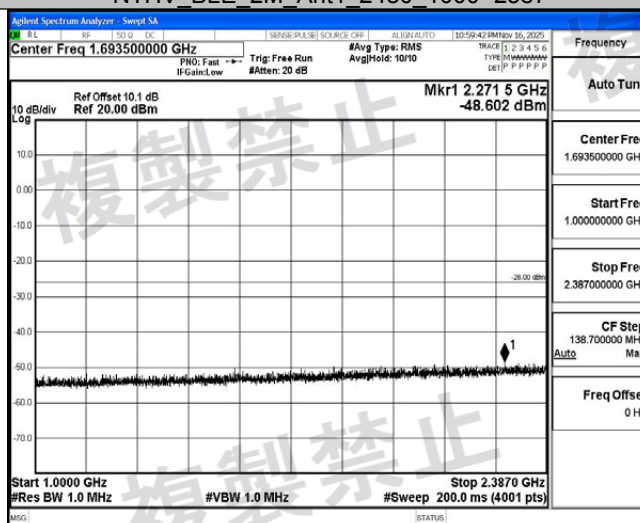
NTHV BLE 2M Ant1 2440 2496.5~13000



NTHV BLE 2M Ant1 2480 30~1000

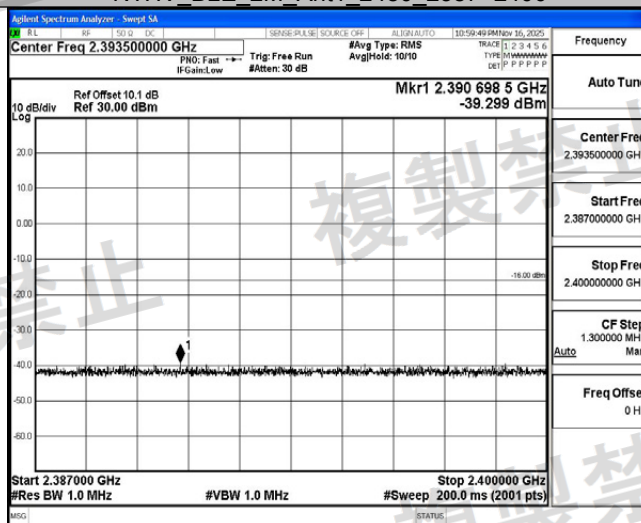


NTHV BLE 2M Ant1 2480 1000~2387

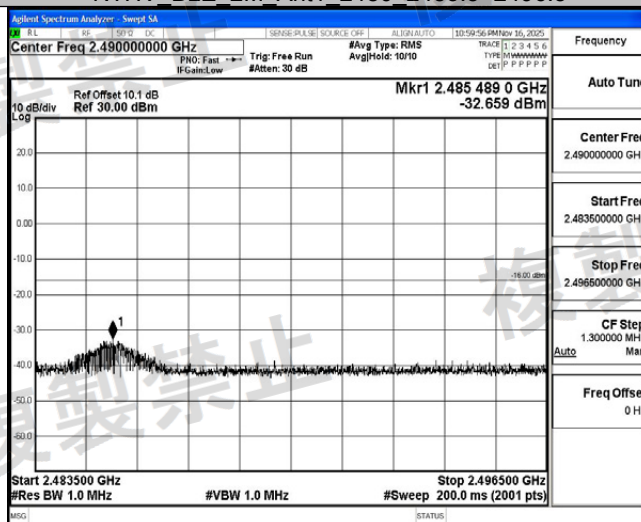




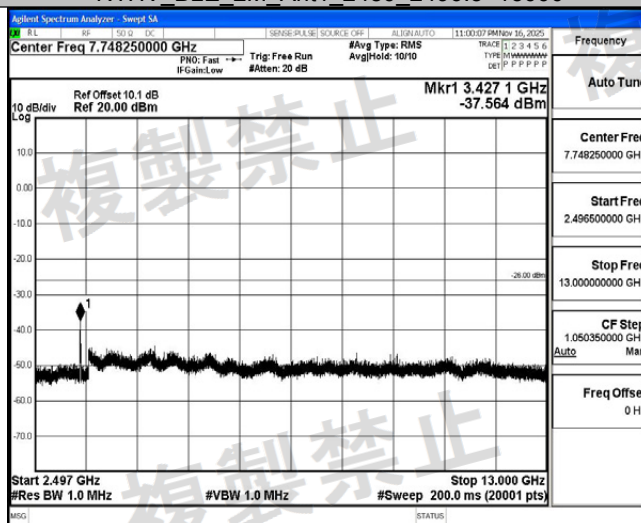
NTHV BLE 2M Ant1 2480 2387~2400



NTHV BLE 2M Ant1 2480 2483.5~2496.5

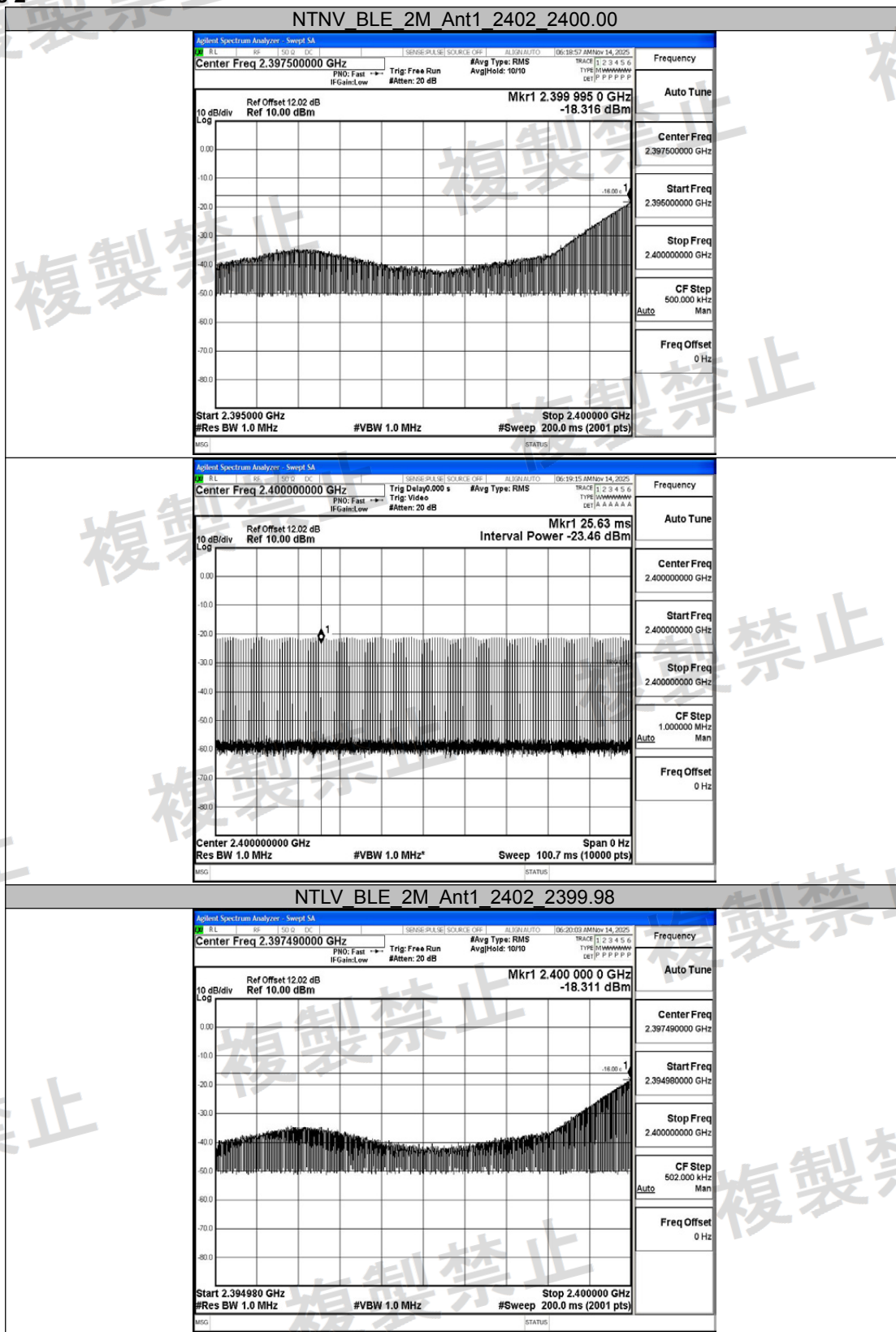


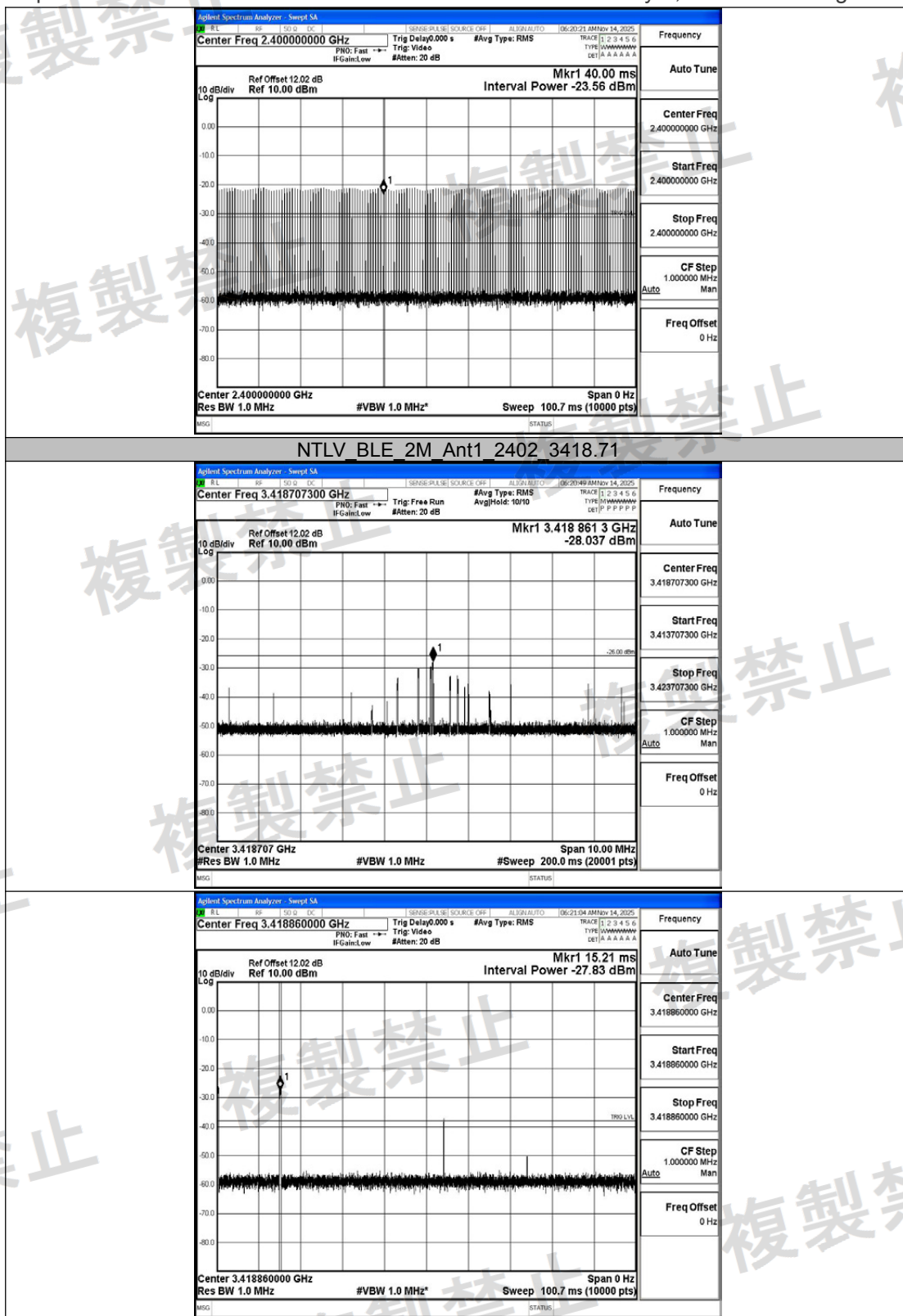
NTHV BLE 2M Ant1 2480 2496.5~13000





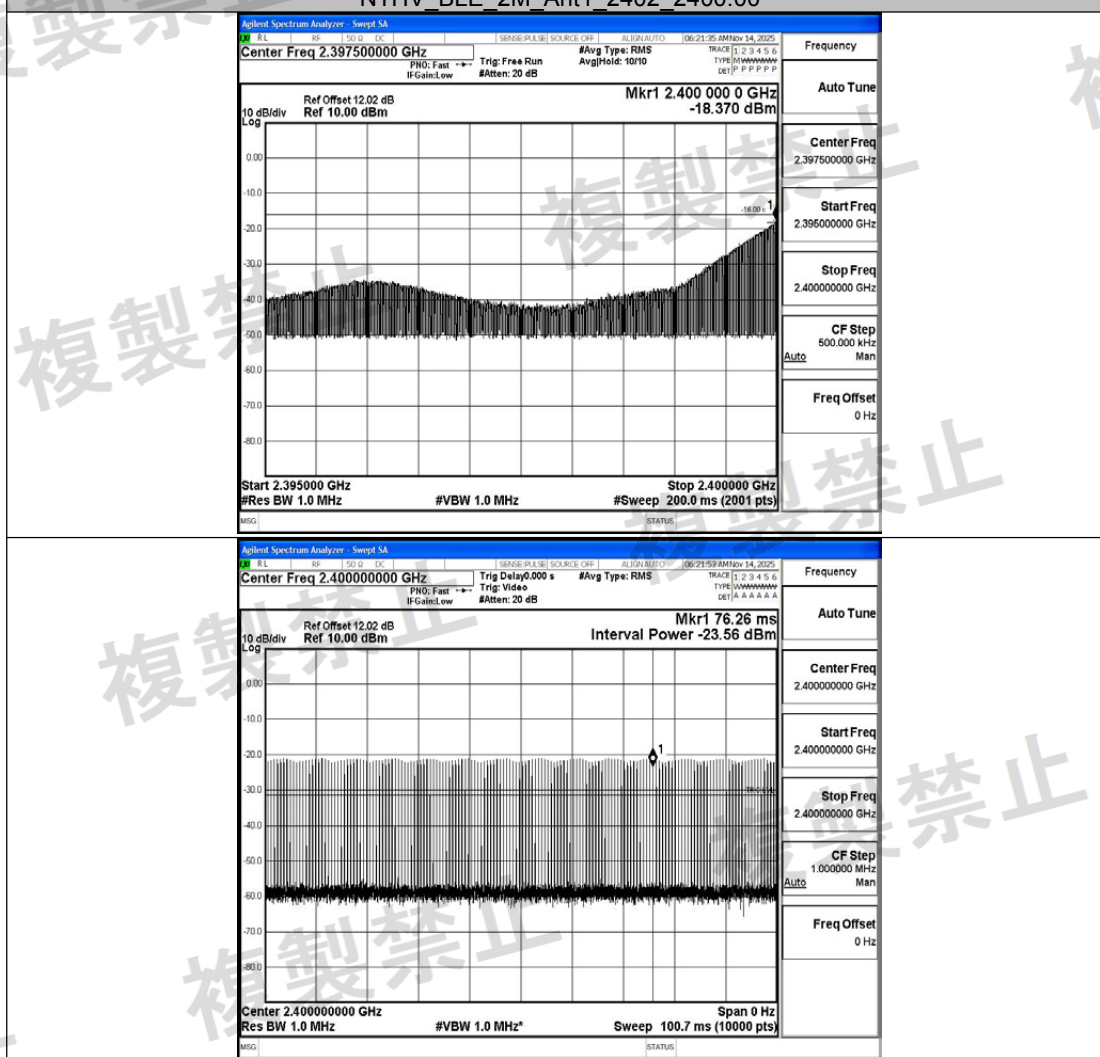
Test Graphs 2







NTHV_BLE_2M_Ant1_2402_2400.00



Note: SA set to from 2.4965GHz to 13GHz, plot shows from 2.497GHz to 13GHz as of SA's default format.

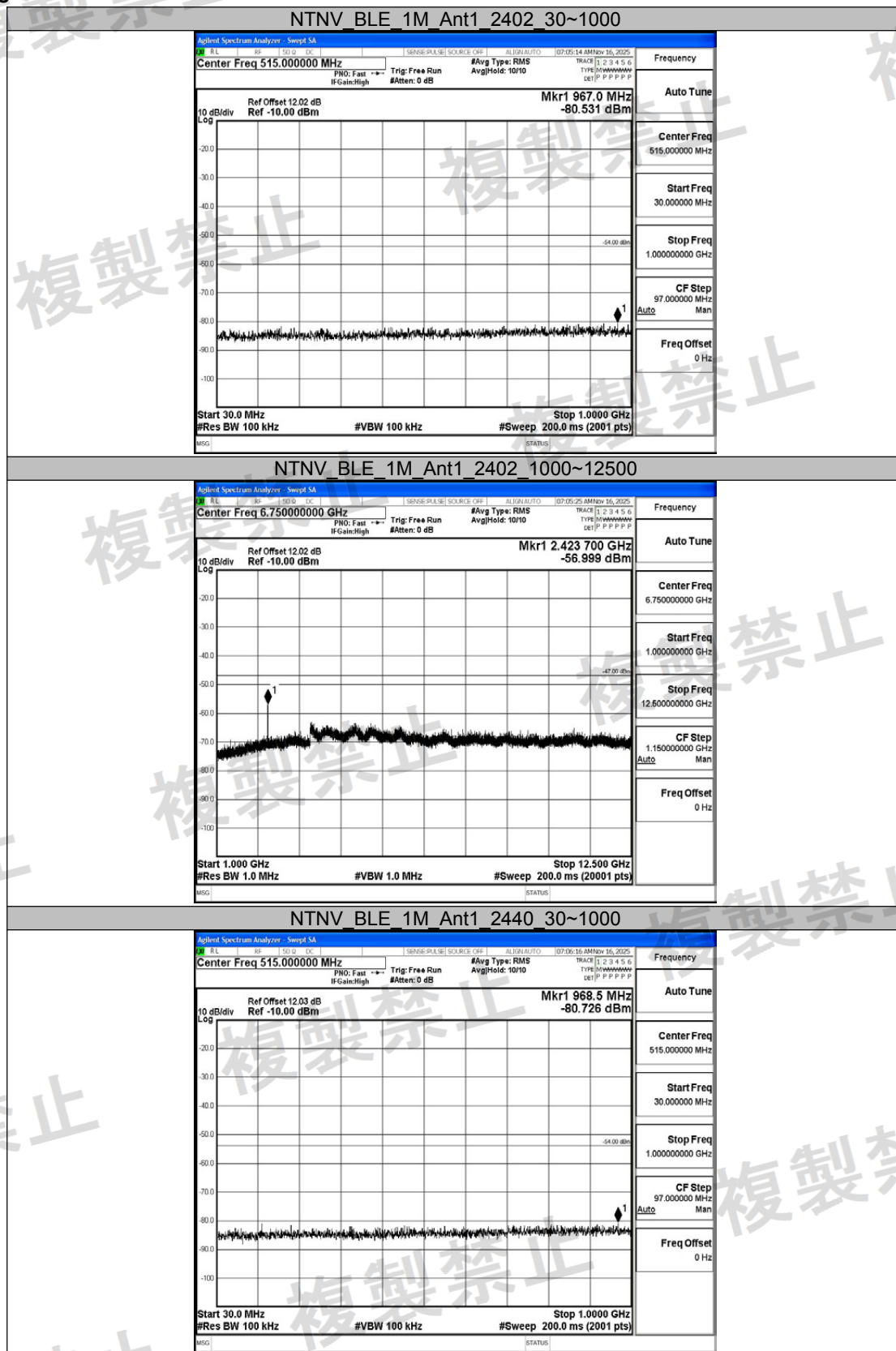
**Appendix F: Spurious Emission of RX****Test Result**

TestCondition	TestMode	Antenna	Freq(MHz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
NTNV	BLE_1M	Ant1	2402	30~1000	967.02	-80.53	≤-54	0.00885	≤4	PASS
				1000~12500	2423.70	-57.00	≤-47	1.99526	≤20	PASS
			2440	30~1000	968.48	-80.73	≤-54	0.00845	≤4	PASS
				1000~12500	4076.25	-62.92	≤-47	0.51050	≤20	PASS
			2480	30~1000	882.15	-80.80	≤-54	0.00832	≤4	PASS
				1000~12500	5298.70	-62.05	≤-47	0.62373	≤20	PASS
	BLE_2M	Ant1	2402	30~1000	968.48	-80.89	≤-54	0.00815	≤4	PASS
				1000~12500	4854.80	-62.62	≤-47	0.54702	≤20	PASS
			2440	30~1000	778.36	-80.54	≤-54	0.00883	≤4	PASS
				1000~12500	4790.40	-62.70	≤-47	0.53703	≤20	PASS
			2480	30~1000	574.66	-79.42	≤-54	0.01143	≤4	PASS
				1000~12500	3616.25	-62.88	≤-47	0.51523	≤20	PASS
NTLV	BLE_1M	Ant1	2402	30~1000	940.35	-80.69	≤-54	0.00853	≤4	PASS
				1000~12500	3644.43	-63.00	≤-47	0.50119	≤20	PASS
			2440	30~1000	948.11	-80.33	≤-54	0.00927	≤4	PASS
				1000~12500	3600.73	-63.05	≤-47	0.49545	≤20	PASS
			2480	30~1000	758.96	-80.29	≤-54	0.00935	≤4	PASS
				1000~12500	3617.40	-63.01	≤-47	0.50003	≤20	PASS
	BLE_2M	Ant1	2402	30~1000	339.92	-80.86	≤-54	0.00820	≤4	PASS
				1000~12500	4804.20	-62.92	≤-47	0.51050	≤20	PASS
			2440	30~1000	714.34	-80.43	≤-54	0.00906	≤4	PASS
				1000~12500	3608.20	-63.03	≤-47	0.49774	≤20	PASS
			2480	30~1000	692.03	-80.13	≤-54	0.00971	≤4	PASS
				1000~12500	4847.90	-62.69	≤-47	0.53827	≤20	PASS
NTHV	BLE_1M	Ant1	2402	30~1000	695.42	-80.99	≤-54	0.00796	≤4	PASS
				1000~12500	4006.10	-63.10	≤-47	0.48978	≤20	PASS
			2440	30~1000	933.56	-81.01	≤-54	0.00793	≤4	PASS
				1000~12500	5255.58	-63.04	≤-47	0.49659	≤20	PASS
			2480	30~1000	992.73	-80.01	≤-54	0.00998	≤4	PASS
				1000~12500	4860.55	-63.24	≤-47	0.47424	≤20	PASS
	BLE_2M	Ant1	2402	30~1000	878.27	-80.43	≤-54	0.00906	≤4	PASS
				1000~12500	5346.43	-62.87	≤-47	0.51642	≤20	PASS
			2440	30~1000	635.77	-79.86	≤-54	0.01033	≤4	PASS
				1000~12500	3608.20	-62.63	≤-47	0.54576	≤20	PASS
			2480	30~1000	734.71	-80.24	≤-54	0.00946	≤4	PASS
				1000~12500	5359.08	-62.03	≤-47	0.62661	≤20	PASS

Note: Both left and right earphone have tested, The right earphone is the worst, only the worse case was reported.

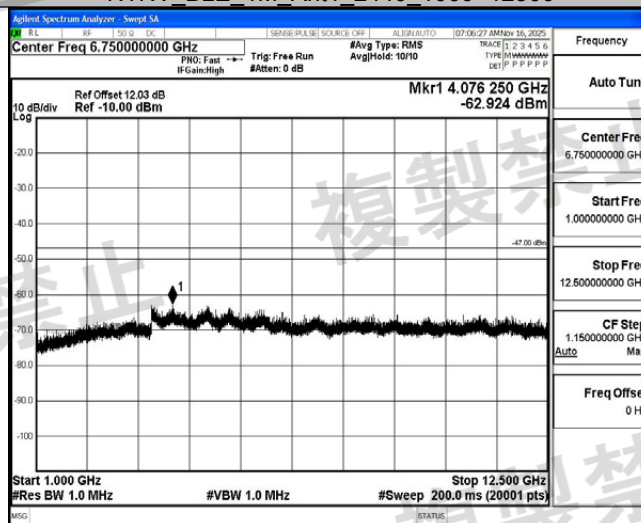


Test Graphs

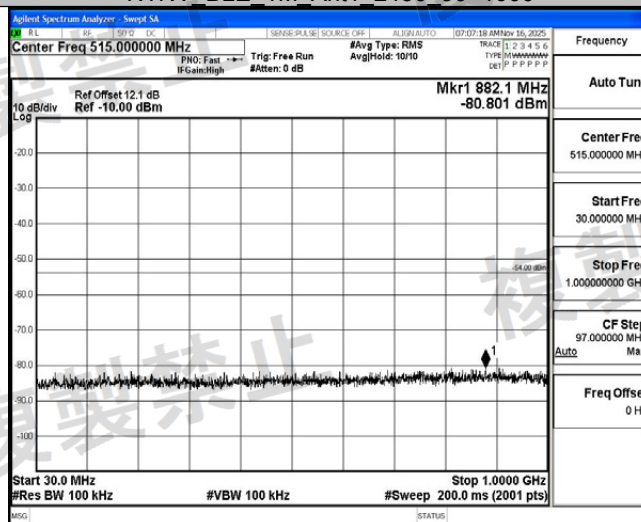




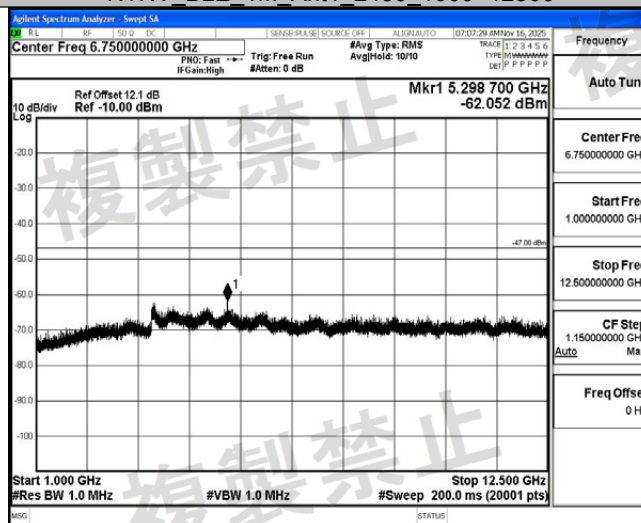
NTNV BLE 1M Ant1 2440 1000~12500



NTNV BLE 1M Ant1 2480 30~1000

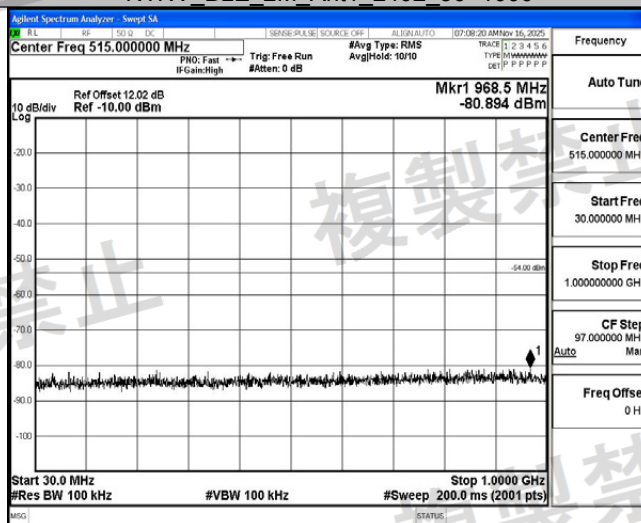


NTNV BLE 1M Ant1 2480 1000~12500

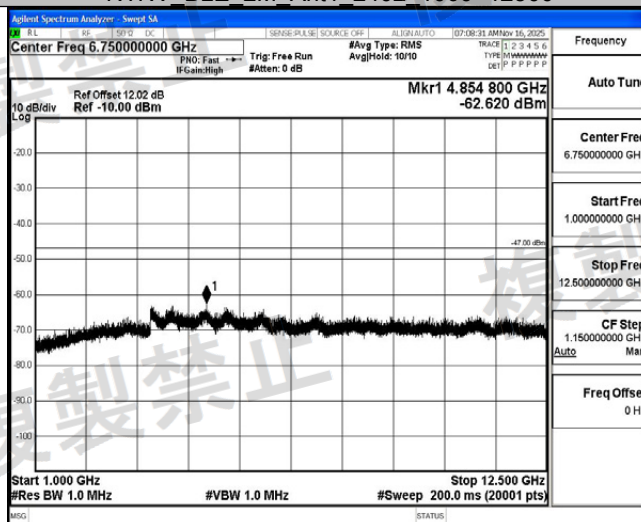




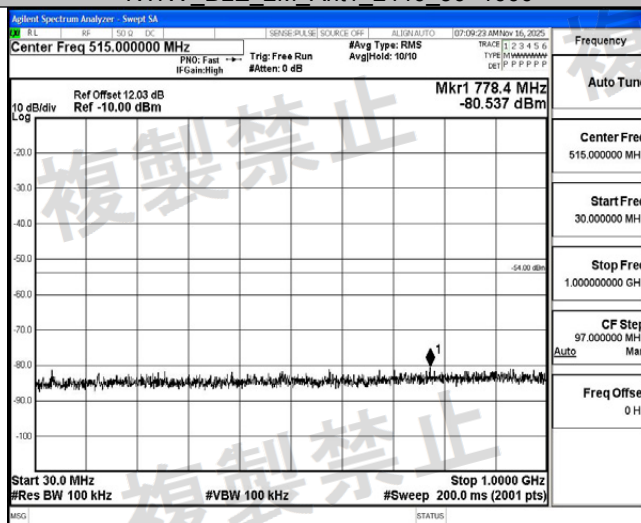
NTNV BLE 2M Ant1 2402 30~1000



NTNV BLE 2M Ant1 2402 1000~12500

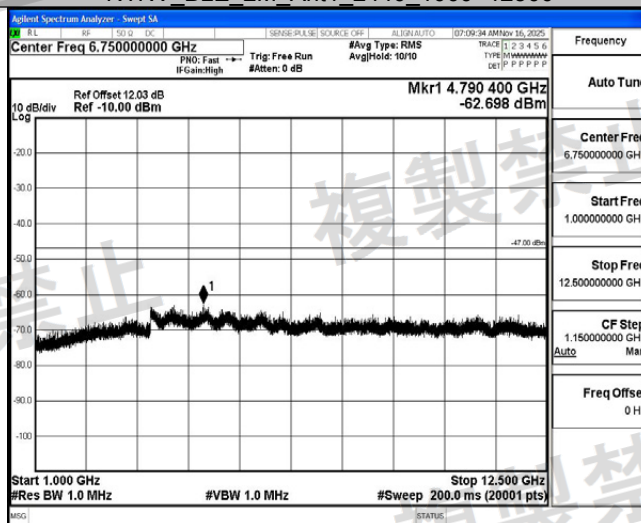


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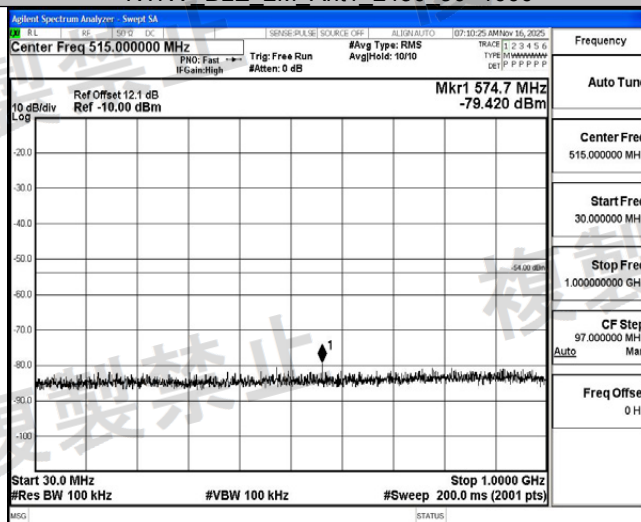




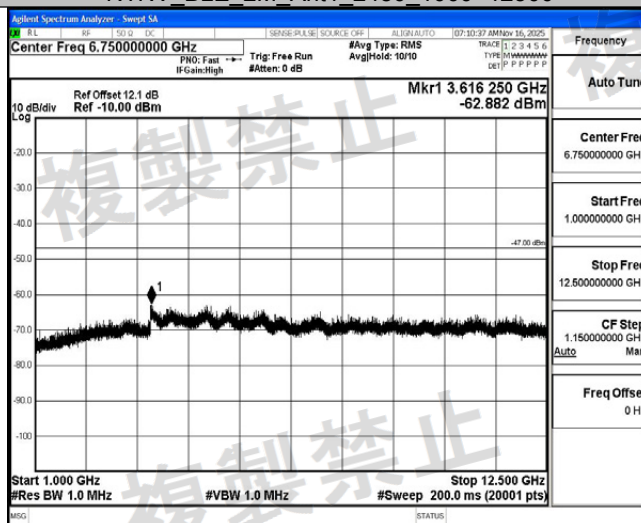
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NTNV BLE 2M Ant1 2480 30~1000

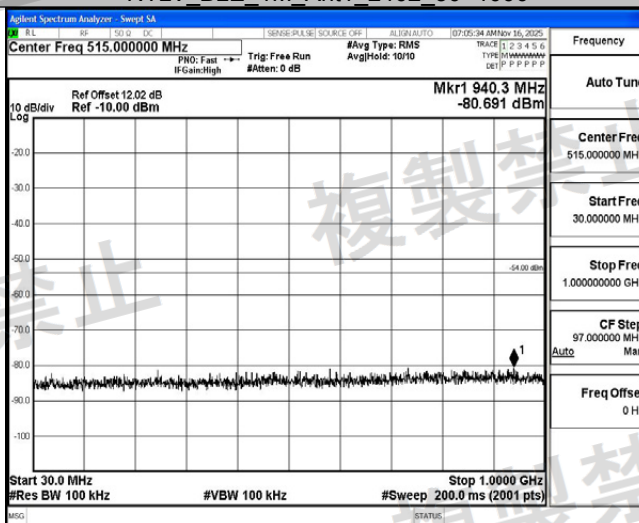


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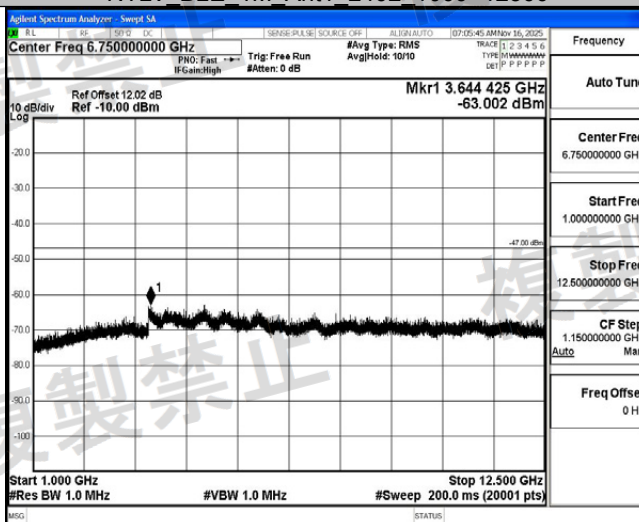




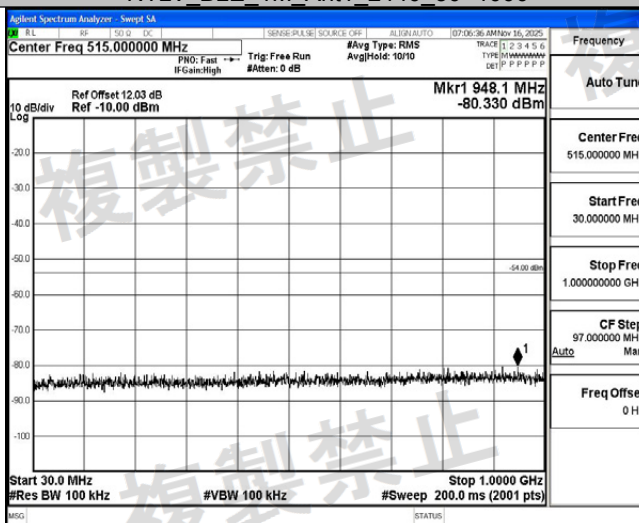
NTLV BLE 1M Ant1 2402 30~1000



NTLV BLE 1M Ant1 2402 1000~12500

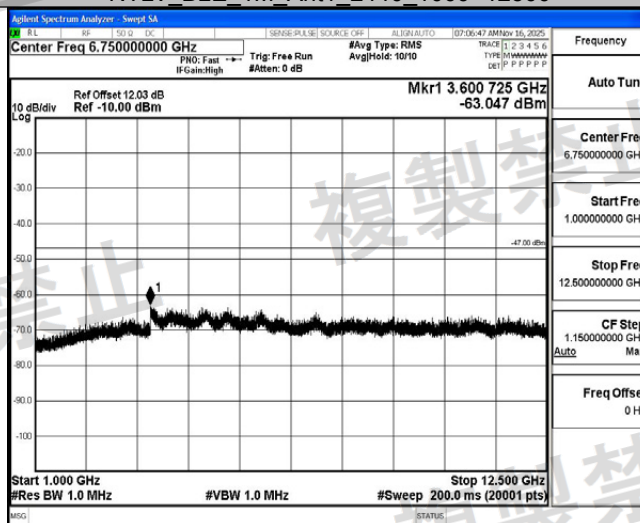


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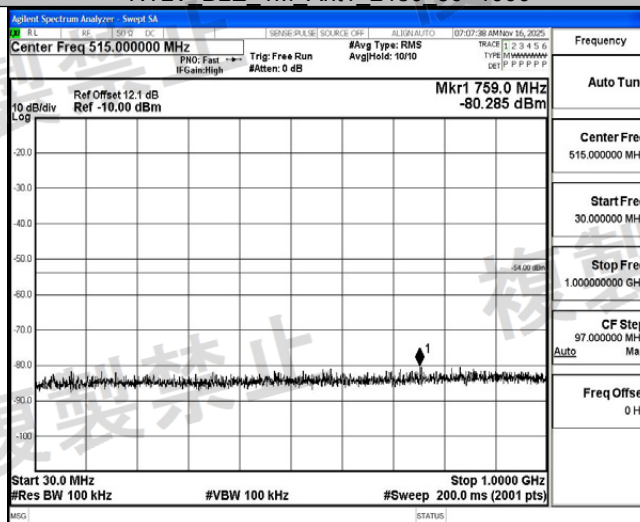




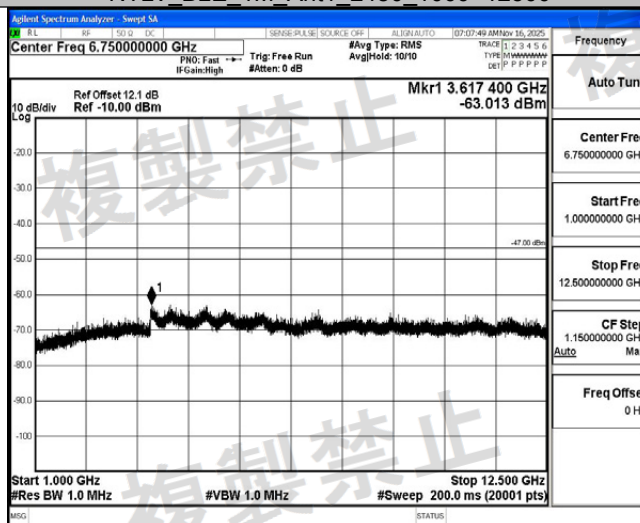
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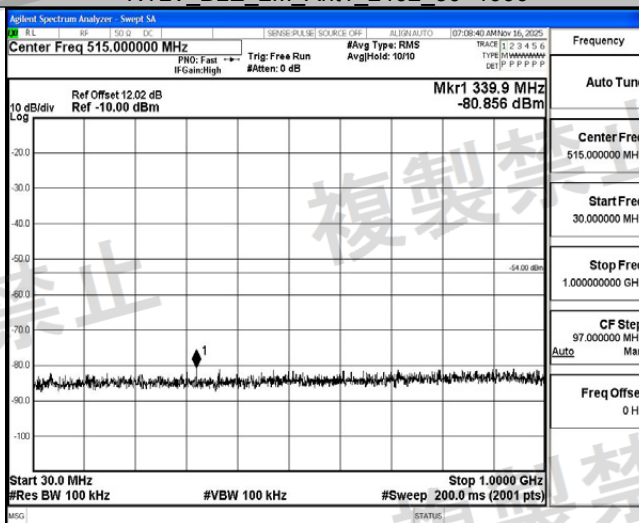


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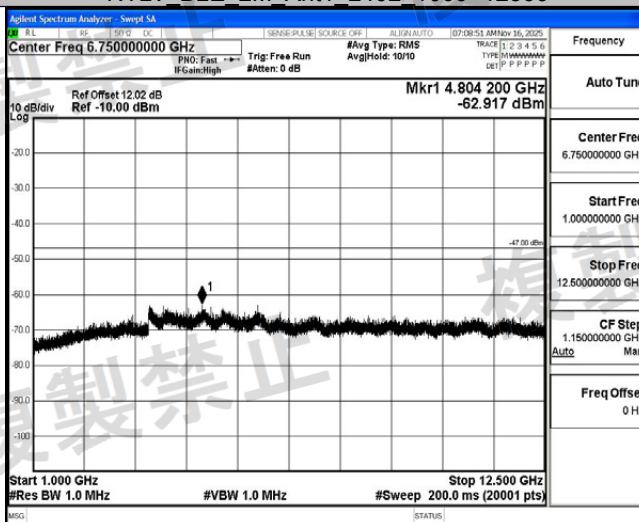




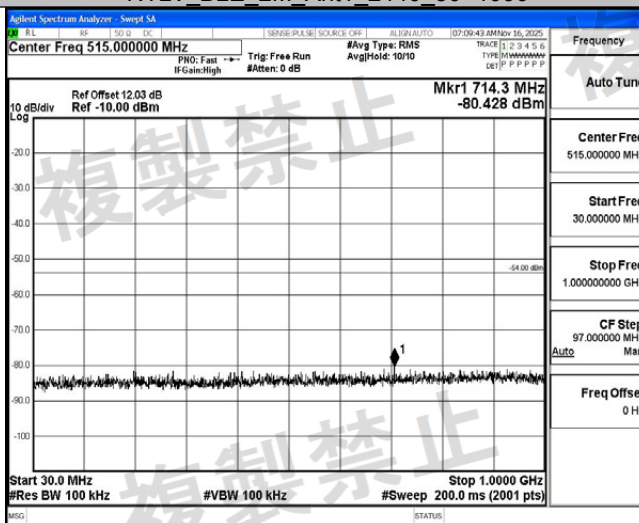
NTLV BLE 2M Ant1 2402 30~1000



NTLV BLE 2M Ant1 2402 1000~12500

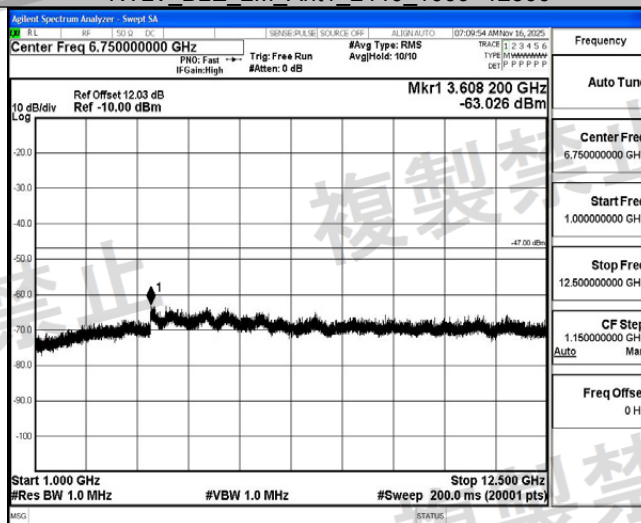


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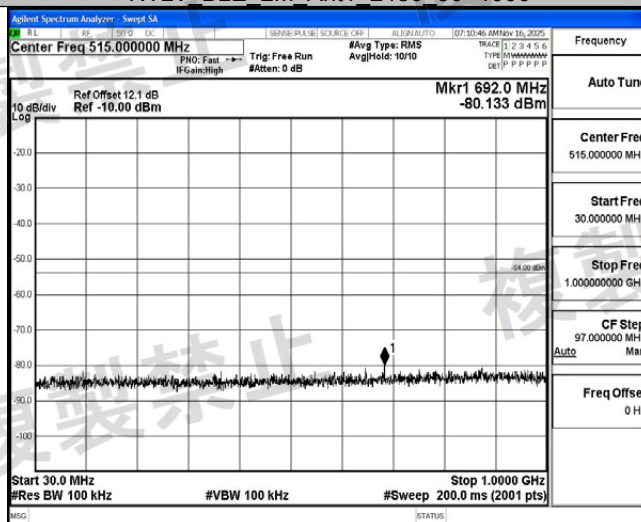




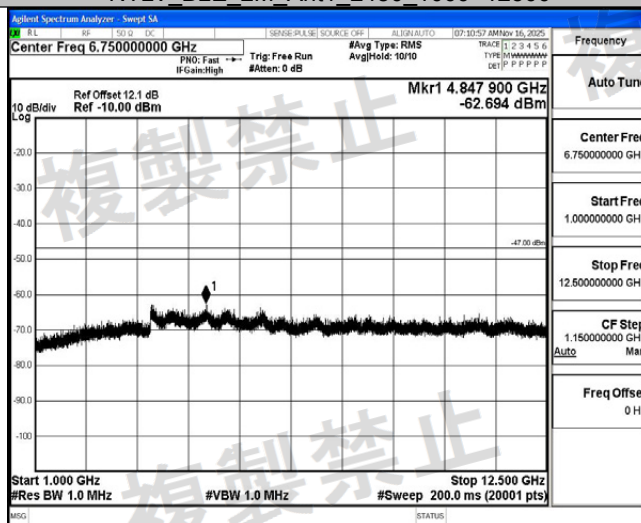
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NTLV BLE 2M Ant1 2480 30~1000

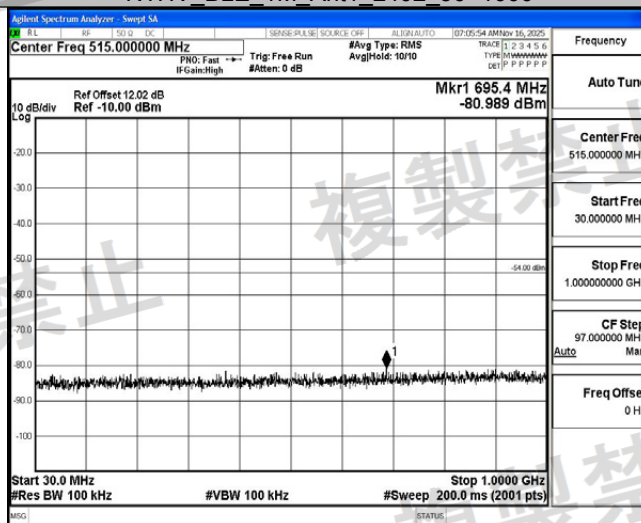


NTLV BLE 2M Ant1 2480 1000~12500

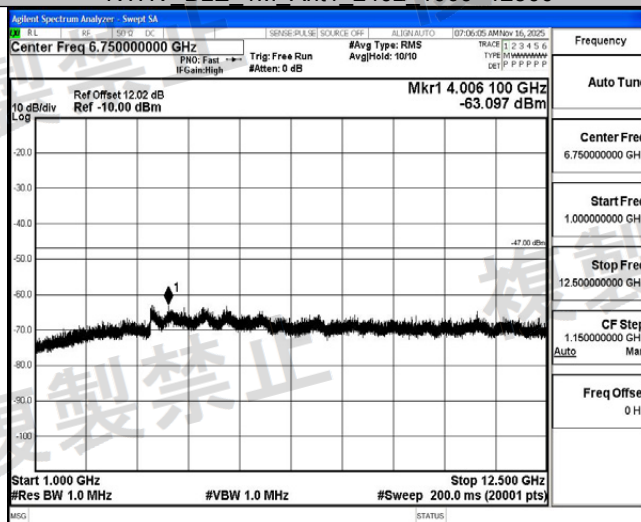




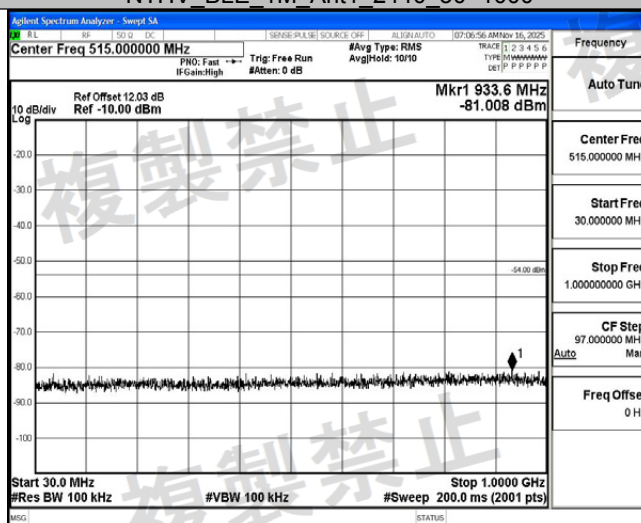
NTHV BLE 1M Ant1 2402 30~1000



NTHV BLE 1M Ant1 2402 1000~12500

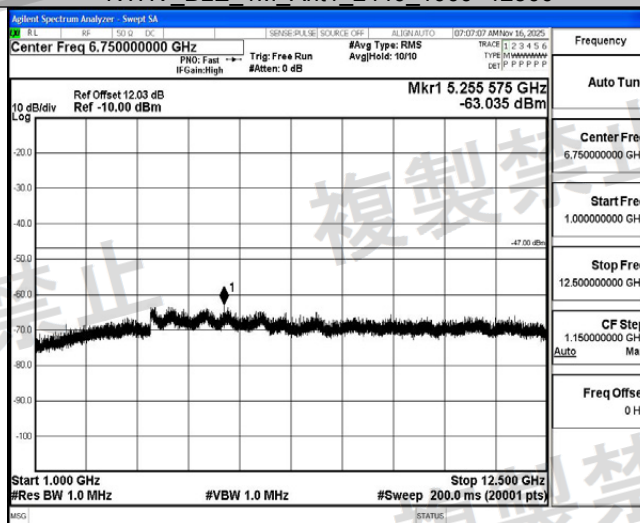


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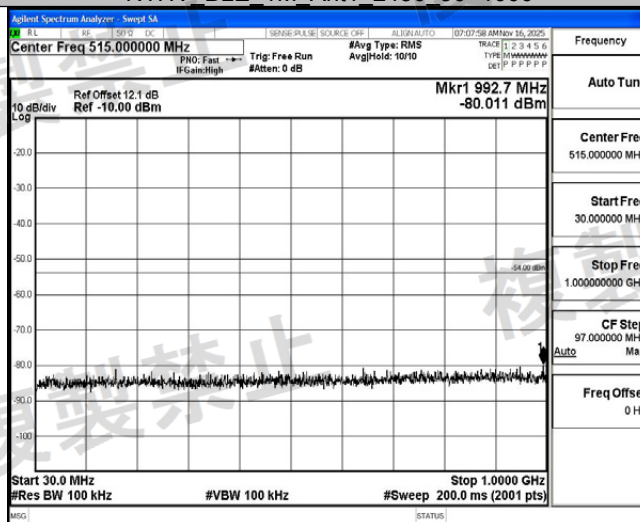




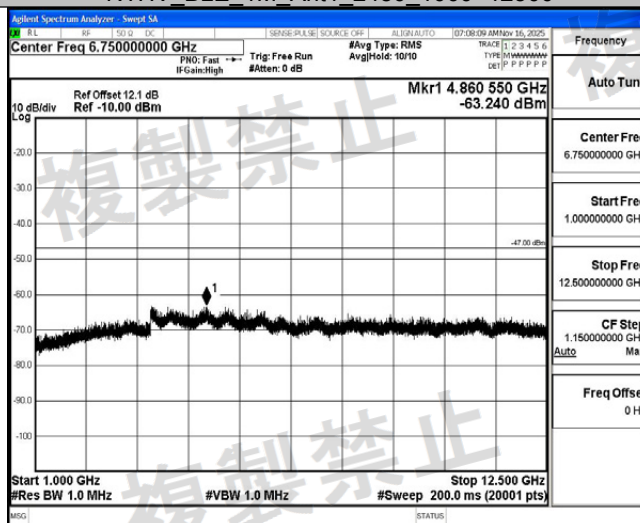
NTHV BLE 1M Ant1 2440 1000~12500



NTHV BLE 1M Ant1 2480 30~1000

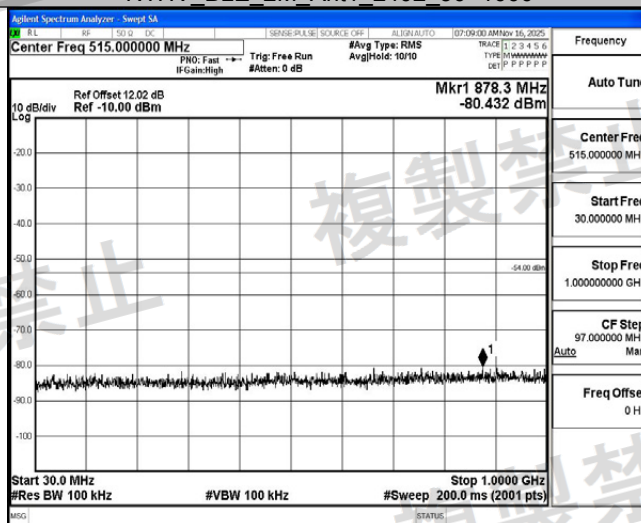


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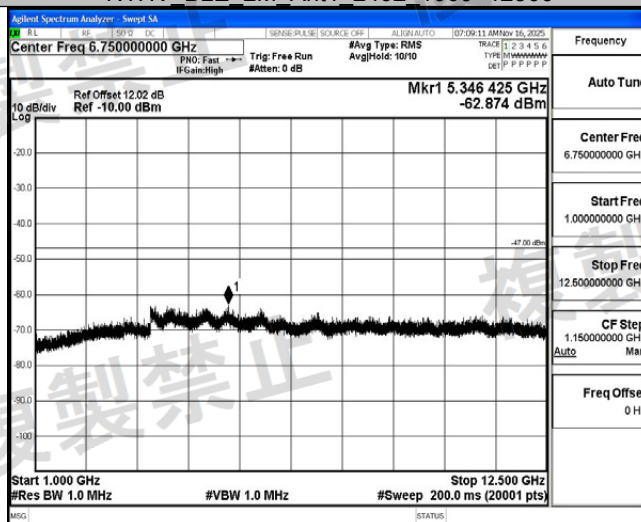




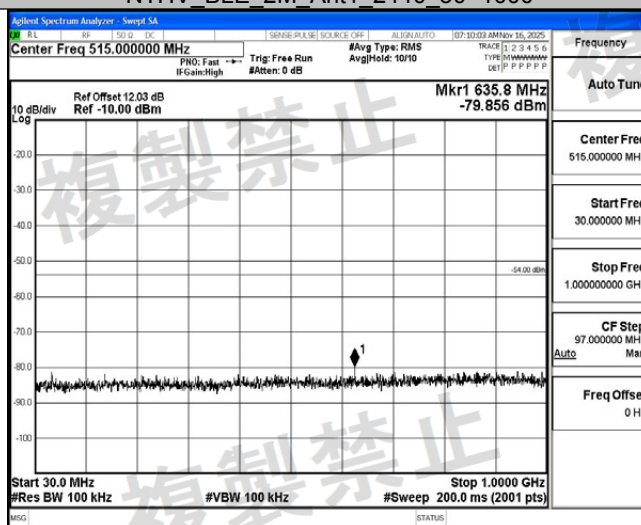
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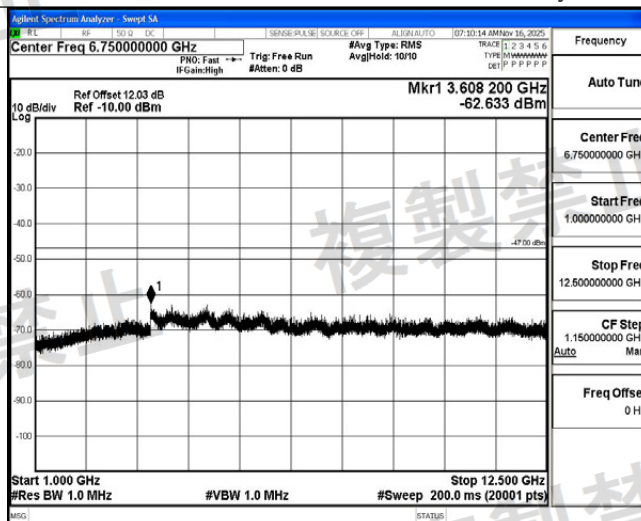
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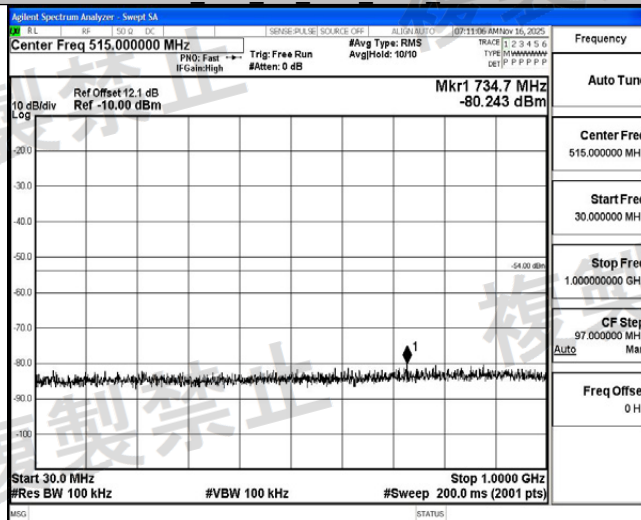
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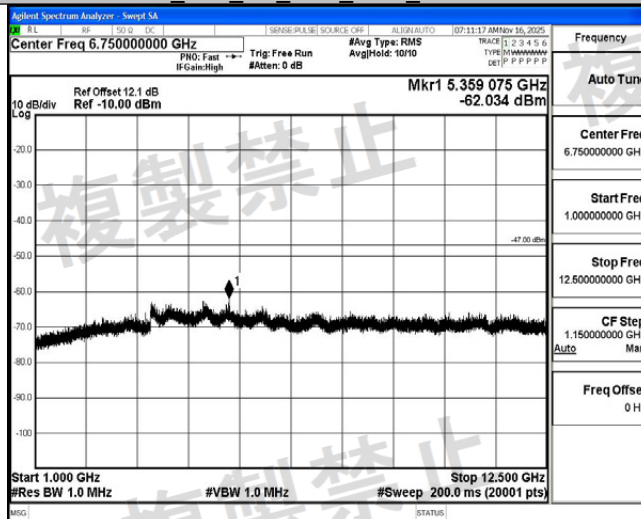
NTHV BLE 2M Ant1_2440_1000~12500



NTHV BLE 2M Ant1 2480 30~1000



NTHV BLE 2M Ant1 2480 1000~12500



--- END REPORT ---