

Test Report

Applicant : Shenzhen SonoCycle Technology Co., Ltd.
Room 803, Building 6, Digital Intelligent
Address : Manufacturing Center, No. 238 Longsheng Road,
Longsheng Community, Dalang Street, Longhua
District, Shenzhen, China
Product Name : Wireless Headphones
Brand Mark : SOUNDPEATS
Model : Aura Nebula
Capsule5 Pro, Capsule5 Pro+, Lite30, C50, Q3 Pro,
Series model : Aura Stellar, Aura Orion, Aura Cosmos, FluxClip,
ZenClip
Report Number : BLA-RF-202609-A05-02
Date of Receipt : Sep. 1, 2026
Date of Test : Sep. 1, 2026 to Sep. 18, 2026
Test standard : Item 19 of Article 2 Paragraph 1
Test Result : Pass

Compiled by: *Hugh*Review by: *Xavier*Approved by: *Blue Zheng*

Issued Date: Sep. 18, 2026

BlueAsia Technical Services (Shenzhen) Co., LtdAddress: No.41, South of Beihuan Road, Shangwu Community, Shiyan
Subdistrict, Bao'an District, Shenzhen, Guangdong, China

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Revise Record

Version No.	Date	Description
01	Sep. 18, 2026	Original

1 General information

1.1 General information

Applicant	Shenzhen SonoCycle Technology Co., Ltd.
Address	Room 803, Building 6, Digital Intelligent Manufacturing Center, No. 238 Longsheng Road, Longsheng Community, Dalang Street, Longhua District, Shenzhen, China
Manufacturer	Shenzhen SonoCycle Technology Co., Ltd.
Address	Room 803, Building 6, Digital Intelligent Manufacturing Center, No. 238 Longsheng Road, Longsheng Community, Dalang Street, Longhua District, Shenzhen, China
Factory	Dongguan Roker Intelligent Technology Co., Ltd.
Address	Building 3, No. 35, Dongping Road Changping Section, Changping Town, Dongguan, Guangdong, China

1.2 General description of EUT

Product name	Wireless Headphones
Model no.	Aura Nebula
Series model	Capsule5 Pro, Capsule5 Pro+, Lite30, C50, Q3 Pro, Aura Stellar, Aura Orion, Aura Cosmos, FluxClip, ZenClip
Desc of series model	The above models have the same Circuit diagram, PCB layout and all electrical construction, assets and security mechanisms. The difference lies only model name and color.
Test engineer sample no.	BLA-RF-202609-A05-left BLA-RF-202609-A05-right
Operating Frequency	2402 MHz to 2480 MHz
Conducted rated power	F1D: 2.0mW
Number of Channels	40 Channels
Type of Modulation	GFSK
Rate data	1Mbps, 2Mbps
Channel Separation	2 MHz
Antenna Type	FPC antenna
Antenna gain	Left: 0.82dBi from 2402~2480MHz Right: 0.40dBi from 2402~2480MHz
Power supply or adapter information	Battery: DC3.6V
Hardware Version	V1.0

Software Version	V0.4.1
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Note: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

2 Test summary

Test	Test Requirement	Limit/Severity	Result
Antenna Requirement	Item 19 of Article 2 Paragraph 1	Notice 88 Appendix 43,B-1 (1)&(2)	PASS
Test frequency	Item 19 of Article 2 Paragraph 1	Notice 88 Appendix 43, A-3	PASS
Frequency Error	Item 19 of Article 2 Paragraph 1	±50 PPM or less	PASS
Occupied Bandwidth	Item 19 of Article 2 Paragraph 1	Within 26MHz	PASS
Antenna Power	Item 19 of Article 2 Paragraph 1	Designated value: a. FH, FH+ DS, FH+OFDM 3mW/MHz (Used in the range of 2427-2470.75MHz) b. OFDM, DS other than (1): 10mW/MHz c. Other than (1) & (2) 10mW Tolerance: +20%	PASS
E.I.R.P	Item 19 of Article 2 Paragraph 1	Designated value: a. FH, DS+FH, FH+OFDM: 6.91-16.91 dBm (Used in the range of 2427-2470.75MHz) b. OFDM, DS other than (1): 12.14dBm-22.14 dBm c. Other than (1) & (2): 12.14dBm-22.14 dBm	PASS
Half Power Beam Angel	Item 19 of Article 2 Paragraph 1	N/A ^{Note1}	N/A
Spurious Emission of Tx	Item 19 of Article 2 Paragraph 1	a. Below 2387 MHz: -26dBm/MHz b. 2387 to 2400 MHz: -16dBm/MHz c. 2483.5 through 2496.5 MHz: -16dBm/MHz d. Over 2496.5 MHz: -26dBm/MHz	PASS
Dwell Time	Item 19 of Article 2 Paragraph 1	N/A	N/A
Pseudorandom Frequency Hopping Sequence	Item 19 of Article 2 Paragraph 1	Notice 88 Appendix 43	N/A
Interference prevention capability	Item 19 of Article 2 Paragraph 1	Notice 88 Appendix 43	PASS
RF accessibility	Item 19 of Article 2 Paragraph 1	Notice 88 Appendix 43	PASS
Spurious Emission of Rx	Item 19 of Article 2 Paragraph 1	a. Below 1 GHz: -54dBm b. 1GHz or higher: -47dBm	PASS

Remark:

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

Tx:In this whole report Tx (or tx) means the product in transmitting status.

Rx: In this whole report Rx (or rx) means the product in receiving status.

RF:In this whole report RF means Radiated Frequency.

Note1: Max EIRP power is less than 12.14dBm, so this test item is not applicable.

Note2: The BOM and SCH of both left ear and right ear are identical, but the PCB layout and part placement differ. In the report, full test data of left ear are reported and for right ear, verification test data of antenna power and spurious emission of Tx are reported to show compliance with the requirements.

3 Description of Support Units

The EUT has been tested stand-alone.

4 Auxiliary equipment

Device Type	Manufacturer	Model Name	Serial No.	Remark
PC	Lenovo	E460C	N/A	From lab (No.BLA-ZC-BS-2022005)
USB TO TTL	N/A	V287	N/A	By laboratory
Note: "--" mean no any auxiliary device during testing.				

5 Laboratory information

The test facility is recognized, certified, or accredited by the following organizations:

Company name:	BlueAsia Technical Services (Shenzhen) Co.,Ltd.
Address:	No.41, South of Beihuan Road, Shangwu Community, Shiyan Subdistrict, Bao'an District, Shenzhen, Guangdong, China
Registration No.:	L9788
Telephone:	+86-755-28682673
FAX:	+86-755-28682673

6 Equipment List

Equipment	Manufacturer	Model	Serial No.	Cal Date	Due Date	Calibration body	Classification
Communication test set test set	Anritsu	MT8852B	06262047872	2025/9/7 2026/9/6	2026/9/6 2027/9/5	GRGT	(c)
Spectrum Analyzer	Keysight	N9030A	MY52350152	2025/9/7 2026/9/6	2026/9/6 2027/9/5	GRGT	(c)
Signal Generator	Agilent	E4438C	MY45092582	2025/9/7 2026/9/6	2026/9/6 2027/9/5	GRGT	(c)
DC regulated power supply	ZHAOXIN	KXN-305D	BLA-EMC-027	2025/9/24	2026/9/23	GRGT	(c)
Power sensor	DARE	RPR3006 W	BLA-EMC-042	2026/08/05	2027/08/04	GRGT	(c)

Remark:

- (a) Calibration conducted by the National Institute of Information and Communications Technology (NICT) in Japan (hereinafter referred to as "NICT") or a designated calibration agency under Article 102-18 paragraph (1) in JRL.
- (b) Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Act (Act No. 51 of 1992) .
- (c) Calibration conducted in countries except Japan, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1).
- (d) Calibration, etc. conducted by using measuring instruments and other equipment listed in the right column of appended table No. 3, which shall have been given any type of calibration, etc. listed above from (a) to (C)

From JRL Article 24-2, paragraph 4, Item 2

Notice: Calibration duration for above equipments is 1 year.

7 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 Paragraph 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 ($\times 10^{-6}$)	± 50 PPM
Tolerance of occupied bandwidth	FH: 83.5MHz or less FH + OFDM: 83.5MHz or less Others: 26MHz or less FH + DS: 83.5MHz or less OFDM: 40MHz or less
Antenna power	Designated value a. FH, FH+ DS, FH+OFDM: 3mW/MHz (used in the range of 2427 - 2470.75 MHz) b. OFDM, DS other than (1): 10mW/MHz c. Other than (1) & (2): 10mW Tolerance : +20%
Antenna gain	1) 12.14 dBi or less in principle 2) In case of directional antenna a. FH, FH+DS or FH+OFDM using 2427-2470.75 MHz EIRP $\leq$ 16.91 dBm/MHz b. OFDM or DS other than (1) EIRP $\leq$ 22.14 dBm/MHz c. Other than (1) and (2): 22.14 dBm or less d. OFDM OBW 26 - 40MHz: 19.14dBm/MHz e. Half-power angle of directional antenna (e) in case of the item 2):e $\leq$ 360/A (The A is 10 in maximum.)
Tolerance of spurious emission intensity	a. Below 2387 MHz: 2.5 μ W/MHz; b. 2387 to 2400 MHz: 25 μ W/MHz; c. 2483.5 through 2496.5 MHz: 25 μ W/MHz; d. Over 2496.5 MHz: 2.5 μ W/MHz
Spreading bandwidth	N/A
Limit of secondary radiated emissions	a. Below 1 GHz: 4nW b. 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

Note: The Technical Standards described here do not cover all of the regulated items.

8 Transmitter Requirements

8.1 EUT test voltage and Frequency

EUT test voltage																																																																																																													
Power Supply:	DC 3.6V																																																																																																												
Test voltage require:	The power supply is DC 3.6V by battery. The supply voltage of RF part is varied within +/-1% when DC 3.6V +/- 10%, so DC 3.6V is shown in the test report.																																																																																																												
Power Supply view:	A DC 3.6V Conv. B RF DC 1.8V Test below: 1:The fluctuation of B point is under ±1%,when input voltage from A point to the test equipment is fluctuated by ±10%. <table><tr><td>Ball 9: NC - Ground on PCB</td><td>Ball 16: VDD_AUDIO _HP_SPK</td><td>Ball 27: AUDIO_MIC _BIAS</td><td>Ball 36: VDD_AUDIO _TV8</td><td>Ball 44: AUDIO _MIC2_P LINEIN2_P</td><td>Ball 51: AUDIO _MIC2_N LINEIN2_N</td><td>Ball 58: AUDIO _MIC4_P LINEIN4_P</td><td>Ball 65: AUDIO _MIC4_N LINEIN4_N</td><td>Ball 72: XTAL_ CLKOUT</td><td>Ball 81: XTAL_IN</td><td>Ball 90: XTAL_OUT</td><td>Ball 99: VSS_AUX</td></tr><tr><td>Ball 8: NC - Ground on PCB</td><td>Ball 17: NC - Ground on PCB</td><td>Ball 26: VSS_AUDIO</td><td>Ball 35: VSS_AUDIO _REF</td><td>Ball 43: AUDIO _MIC1_P LINEIN1_P</td><td>Ball 50: AUDIO _MIC1_N LINEIN1_N</td><td>Ball 57: AUDIO _MIC3_P LINEIN3_P</td><td>Ball 64: AUDIO _MIC3_N LINEIN3_N</td><td>Ball 71: VSS_AUDIO</td><td>Ball 80: VDD_AUX</td><td>Ball 89: VSS_AUX</td><td>Ball 98: VSS_BT</td></tr><tr><td>Ball 7: Reserved Use (NC - Do Not GND)</td><td>Ball 15: AUDIO_ HP_NF SPK_N</td><td>Ball 25: VSS_AUDIO _HP_SPK</td><td>Ball 34: PIO[1]</td><td>Ball 42: AUDIO_ SGBYP</td><td>Ball 49: PIO[8]</td><td>Ball 56: VSS_AUDIO</td><td>Ball 63: PIO[21]</td><td>Ball 70: PIO[34]</td><td>Ball 79: VDD_XTAL _TV8</td><td>Ball 88: VSS_BT</td><td>Ball 97: VSS_BT</td></tr><tr><td>Ball 6: Reserved Use (NC - Do Not GND)</td><td>Ball 15: AUDIO_ HP_BT SPK_P</td><td>Ball 24: PIO[2]</td><td>Ball 33: PIO[5]</td><td>Ball 41: PIO[3]</td><td></td><td></td><td></td><td>Ball 78: PIO[36]</td><td>Ball 87: VSS_BT</td><td>Ball 96: BT_RF</td><td></td></tr><tr><td>Ball 5: VSS_DG _PADS</td><td>Ball 14: VDD_PADS1</td><td>Ball 23: PIO[4]</td><td>Ball 32: PIO[7]</td><td></td><td></td><td></td><td></td><td>Ball 77: PIO[37]</td><td>Ball 86: VDD_BT _TV8</td><td>Ball 95: VDD_BT _RADIO</td><td></td></tr><tr><td>Ball 4: VDD_PADS2</td><td>Ball 13: SMPS_VCHG</td><td>Ball 22: AOQ[2]LED[2]</td><td>Ball 31: AOQ[1]LED[1]</td><td>Ball 40: PIO[6]</td><td>Ball 48: PIO[17]</td><td>Ball 55: PIO[18]</td><td>Ball 62: PIO[20]</td><td>Ball 69: PIO[35]</td><td>Ball 78: PIO[39]</td><td>Ball 87: PIO[38]</td><td>Ball 96: VDD_PADS2</td></tr><tr><td>Ball 3: LX_TV8</td><td>Ball 12: AOQ[3]LED[3]</td><td>Ball 21: AOQ[0]LED[0]</td><td>Ball 30: VBAT _SENSE</td><td>Ball 39: SVS_CTRL</td><td>Ball 47: PIO[16]</td><td>Ball 54: PIO[19]</td><td>Ball 61: QSPI1_O[1]</td><td>Ball 68: QSPI1_O[2]</td><td>Ball 77: QSPI1_O[3]</td><td>Ball 86: QSPI1_CLK</td><td>Ball 95: VSS_DG _PADS</td></tr><tr><td>Ball 2: VSS_SMPS _DG</td><td>Ball 11: LX_DG</td><td>Ball 20: SMPS_VBAT</td><td>Ball 29: VDD_BYP</td><td>Ball 38: Reserved Use (NC - 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Power Supply result:	The measurement result of the voltage fluctuation at RF circuit when DC 3.6V +/- 10%.																																																																																																												
DC INPUT																																																																																																													
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Test condition	Ambient		
	Temperature(°C)	Humidity(%)	Voltage(V)
NTNV	24	48	3.6
NTLV	N/A	N/A	N/A
NTHV	N/A	N/A	N/A

8.2 Test frequency

Test frequencies:	If the EUT can be set to 3 or 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.	
Frequency range over which device operates	Number of frequencies	Location in the range of operation
1 MHz or less	1	Middle
1 to 10 MHz	2	1 near top and 1 near bottom
More than 10 MHz	3	1 near top, 1 near middle and 1 near bottom

EUT channels and frequencies list:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480

Test frequencies are the lowest channel: 0 channel (2402 MHz), Middle channel, 19 channel (2440 MHz) and highest channel: 39channel (2480 MHz).

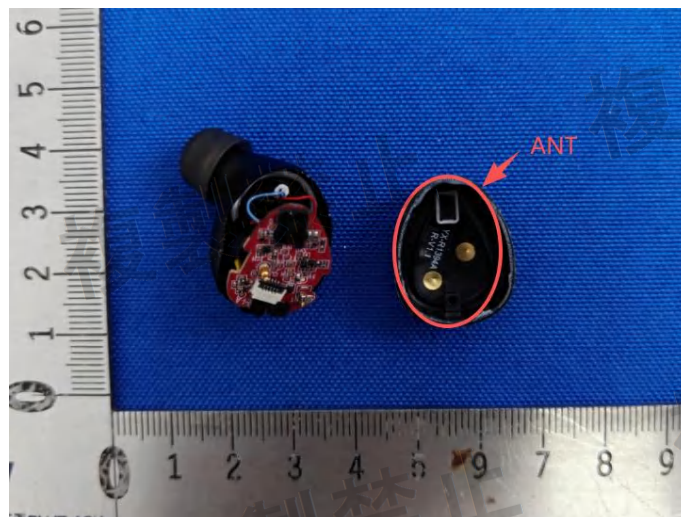
8.3 Antenna Requirement

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.
EUT Antenna
The antenna is FPC Antenna. The best case gain of the antenna is left: 0.82dBi, right: 0.40 dBi from 2402~2480MHz.

Left



Right



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

8.4 Interference prevention function

Measurement system diagram	When transmitting identification code  <pre> graph LR TE[Test equipment] -.-> wireless D[Demodulator] </pre>
Condition of measuring instrument	Demodulator must be able to demodulate the transmitting signal emitted by test equipment and to indicate the identification code.
Condition of test equipment	--
The mode of normal use.	
Measuring operation procedure	When test equipment has the function to transmit identification code automatically: - Transmit the predetermined identification code from test equipment. - Confirm the transmitted identification code by demodulator. SOUNDPEATS Aura Nebula 98:80:BB:40:C9:87 MAC Address: 98:80:BB:40:C9:87
Test result	The unit does meet the requirements (Good).

8.5 RF accessibility

Standard requirement

Article 49-20, paragraph 1 (a)

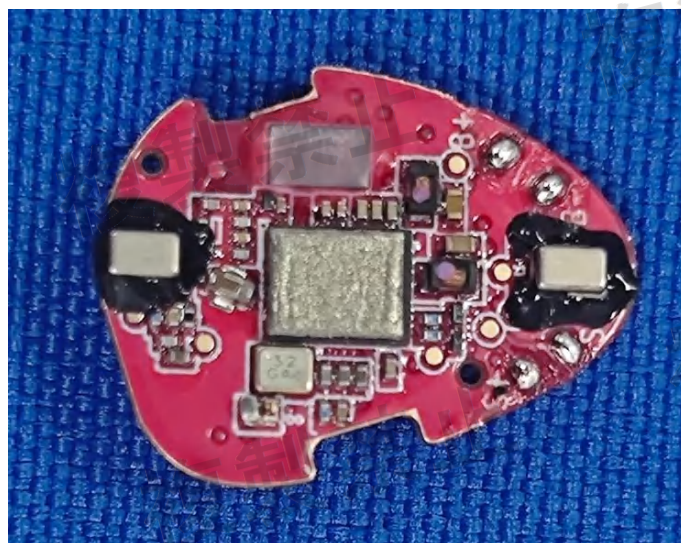
The EUT shall be constructed in such a way that sensitive RF parts, (like modulation and oscillator parts) cannot be reached easily by the user. These parts shall be covered by soldered metal caps or glue or by other mechanical covers. If the covers are fixed with screws, these shall be not the common 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 The product cannot be modified and once disassembled, it will not be usable. The IC packaging type is BGA. All pins are soldered under the packaging and are not accessible to the user.

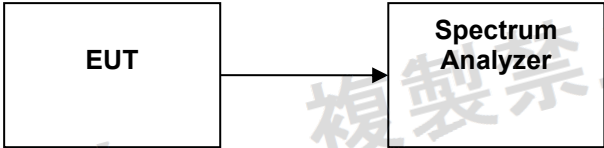
Left



Right



8.6 Frequency Error

Test Requirement:	Item 19 of Article 2 Paragraph 1		
Test Method:	MIC Notice No.88 Appendix No.43		
Ambient:	Temp.: 24°C	Humid.: 50%	Press.: 1010 mbar
Test Status:	Test the EUT in transmitting mode without modulation. Test in Channel lowest (2402MHz), middle (2440MHz) and highest (2480MHz), keep in continuously transmitting status.		
Test Configuration:	 <pre> graph LR EUT[EUT] --> SA[Spectrum Analyzer] </pre>		
Test Conditions:	Frequency Counter or Spectrum Analyzer is used for measurement.		
EUT conditions:	Modulation/Spread/Hopping off, CW Tx If EUT does not accept "Modulation OFF" mode in the measurement, you may use "Modulation ON" mode. In that case you can use the Max power Frequency as the measuring results.		
Spectrum Analyzer conditions:	Frequency: Test Frequency Span 1MHz RBW 10KHz VBW 10KHz Sweep Time Auto Detector mode Positive peak Indication mode Max hold		
Technical standard:	Tolerance of frequency: $\pm 50 \times 10^{-6}$		
Test result:	PASS		

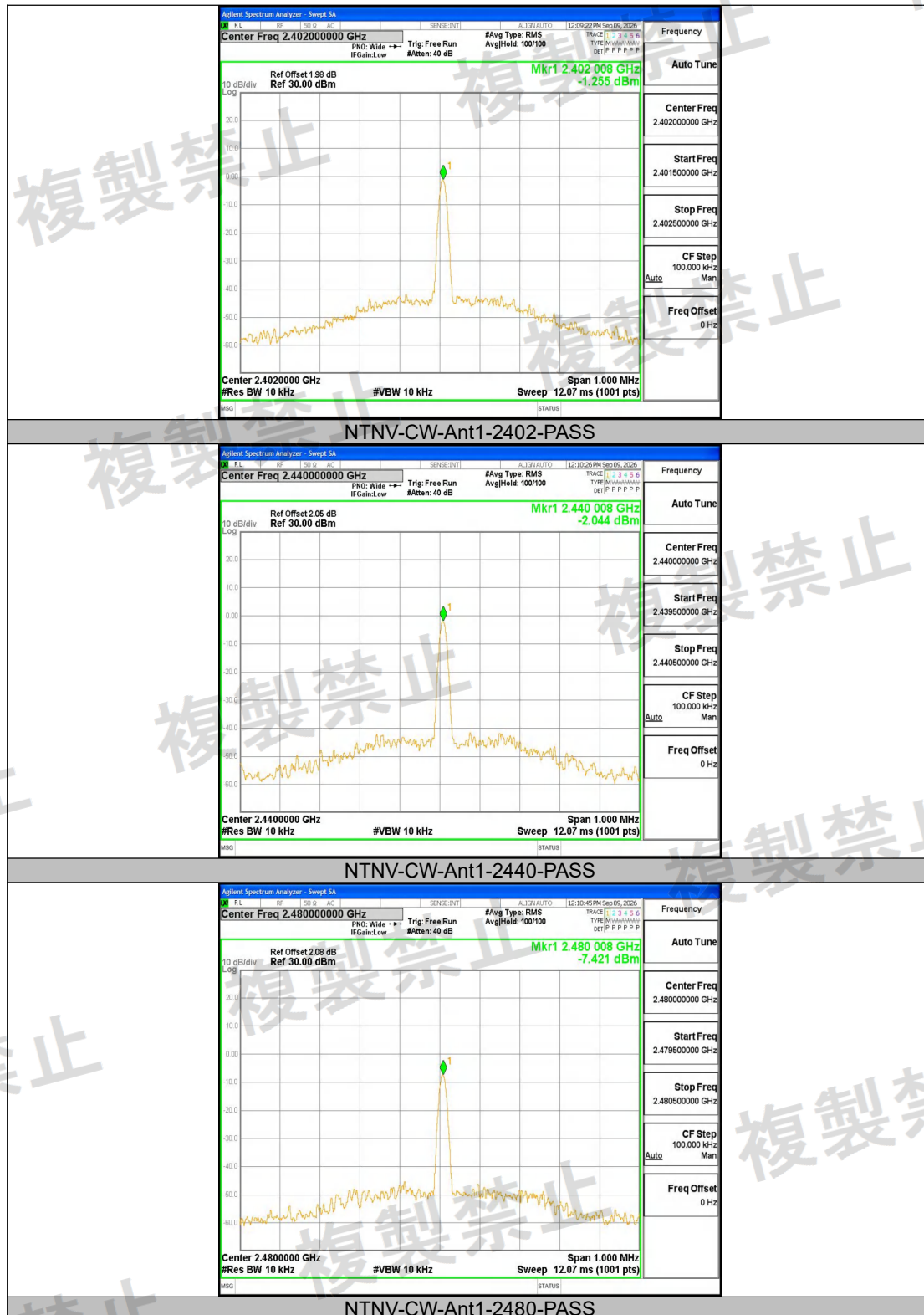
Measurement Record: **Uncertainty: $\pm 10\text{Hz}$** **8.6.1 Test Result**

TestCondition	TestMode	Antenna	Channel	CenterFreq [MHz]	Result[ppm]	Limit[ppm]	Verdict
NTNV	CW	Ant1	2402	2402.008	3.33056	± 50	PASS
			2440	2440.008	3.27869	± 50	PASS
			2480	2480.008	3.22581	± 50	PASS

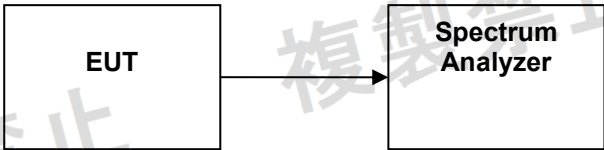
Note: The nominal frequency shall be confirmed by the applicant and test lab.

Result plot as follows:

8.6.2 Test Graphs:



8.7 Occupied Bandwidth (99%)

Test Requirement:	Item 19 of Article 2 Paragraph 1
Test Method:	MIC Notice No.88 Appendix No.43
Ambient:	Temp.: 24°C Humid.: 50% Press.: 1010 mbar
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.
Test Configuration:	 <pre> graph LR EUT[EUT] --> SA[Spectrum Analyzer] </pre>
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.
Spectrum Analyzer conditions:	Frequency: Test Frequency Span 3MHz or 6MHz RBW 100KHz VBW 300KHz Sweep Time Auto detector mode Positive peak Indication mode Max hold OBW 99%
Technical standard:	26MHz or less
Test result:	PASS

Measurement Record: **Uncertainty: $\pm 10\text{KHz}$** **8.7.1 Test Result**

TestCondition	TestMode	Antenna	Channel	Result [MHz]	Limit [MHz]	Verdict
NTNV	BLE_1M	Ant1	2402	1.070	≤ 26	PASS
			2440	1.070	≤ 26	PASS
			2480	1.067	≤ 26	PASS
	BLE_2M	Ant1	2402	2.092	≤ 26	PASS
			2440	2.085	≤ 26	PASS
			2480	2.104	≤ 26	PASS

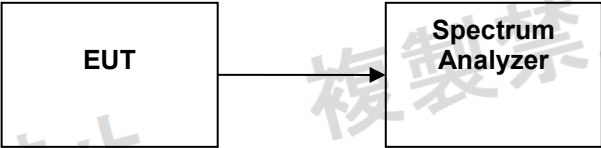
Result plot as follows:

8.7.2 Test Graphs





8.8 Antenna Power

Test Requirement:	Item 19 of Article 2 Paragraph 1		
Test Method:	MIC Notice No.88 Appendix No.43		
Ambient:	Temp.: 24°C	Humid.: 50%	Press.: 1010 mbar
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.		
Test Configuration:	 <pre> graph LR EUT[EUT] --> SA[Spectrum Analyzer] </pre>		
EUT conditions:	Modulation/Spread/Hopping on, PN9 Modulation Tx For equipment using diffusion code, set to the test diffusion code and modulate with standard coding testsignal.		
Spectrum Analyzer conditions(FHSS):	Frequency: Test Frequency Span 10MHz RBW 2MHz/3MHz VBW 2MHz/3MHz Sweep Time Auto Detector mode Positive peak Indication mode Max hold		
Technical standard:	Antenna Power (1) FH, FH+DS , FH+OFDM 3mW/MHz or less (used in the range of 2427- 2470.75 MHz) (2) OFDM , DS other than (1) 10mW/MHz or less (3) Other than (1) & (2) 10mW or less Tolerance: +20%		
Test result:	PASS		

Measurement Record: **Uncertainty: ± 10 kHz / ± 1 dB**

8.8.1 Test Result

Left

AntennaPower						
TestCondition	TestMode	Antenna	Channel	Result(mW)	Limit(mW)	Verdict
NTNV	BLE_1M	Ant1	2402	0.738	≤ 10	PASS
			2440	0.638	≤ 10	PASS
			2480	1.754	≤ 10	PASS
	BLE_2M	Ant1	2402	0.750	≤ 10	PASS
			2440	0.638	≤ 10	PASS
			2480	1.786	≤ 10	PASS

Tolerance								
Test Condition	Test Mode	Antenna	Channel	Power (mW)	RatedPower (mW)	Result(%)	Limit(%)	Verdict
NTNV	BLE_1M	Ant1	2402	0.738	2.0	-63.1	+20	PASS
			2440	0.638	2.0	-68.1	+20	PASS
			2480	1.754	2.0	-12.3	+20	PASS
	BLE_2M	Ant1	2402	0.750	2.0	-62.5	+20	PASS
			2440	0.638	2.0	-68.1	+20	PASS
			2480	1.786	2.0	-10.7	+20	PASS

Remark:

Conducted rated power:F1D: 2.0mW

Tolerance (%) :[(test value- rate power)/rater power]*100

EIRP							
Test Condition	Test Mode	Antenna	Channel	Antenna conducted Power (dBm)	EIRP(dBm)	Limit(dBm)	Verdict
NTNV	BLE_1M	Ant1	2402	-1.319	-0.499	≤ 12.14	PASS
			2440	-1.949	-1.129	≤ 12.14	PASS
			2480	2.440	3.260	≤ 12.14	PASS
	BLE_2M	Ant1	2402	-1.247	-0.427	≤ 12.14	PASS
			2440	-1.955	-1.135	≤ 12.14	PASS
			2480	2.519	3.339	≤ 12.14	PASS

Right

AntennaPower						
TestCondition	TestMode	Antenna	Channel	Result(mW)	Limit(mW)	Verdict
NTNV	BLE_1M	Ant1	2402	1.010	<=10	PASS
			2440	0.873	<=10	PASS
			2480	0.963	<=10	PASS
	BLE_2M	Ant1	2402	0.997	<=10	PASS
			2440	0.912	<=10	PASS
			2480	1.005	<=10	PASS

Tolerance								
Test Condition	Test Mode	Antenna	Channel	Power (mW)	RatedPower (mW)	Result(%)	Limit(%)	Verdict
NTNV	BLE_1M	Ant1	2402	1.010	2.0	-49.50	+20	PASS
			2440	0.873	2.0	-56.35	+20	PASS
			2480	0.963	2.0	-51.85	+20	PASS
	BLE_2M	Ant1	2402	0.997	2.0	-50.15	+20	PASS
			2440	0.912	2.0	-54.40	+20	PASS
			2480	1.005	2.0	-49.75	+20	PASS

Remark:

Conducted rated power:F1D: 2.0mW

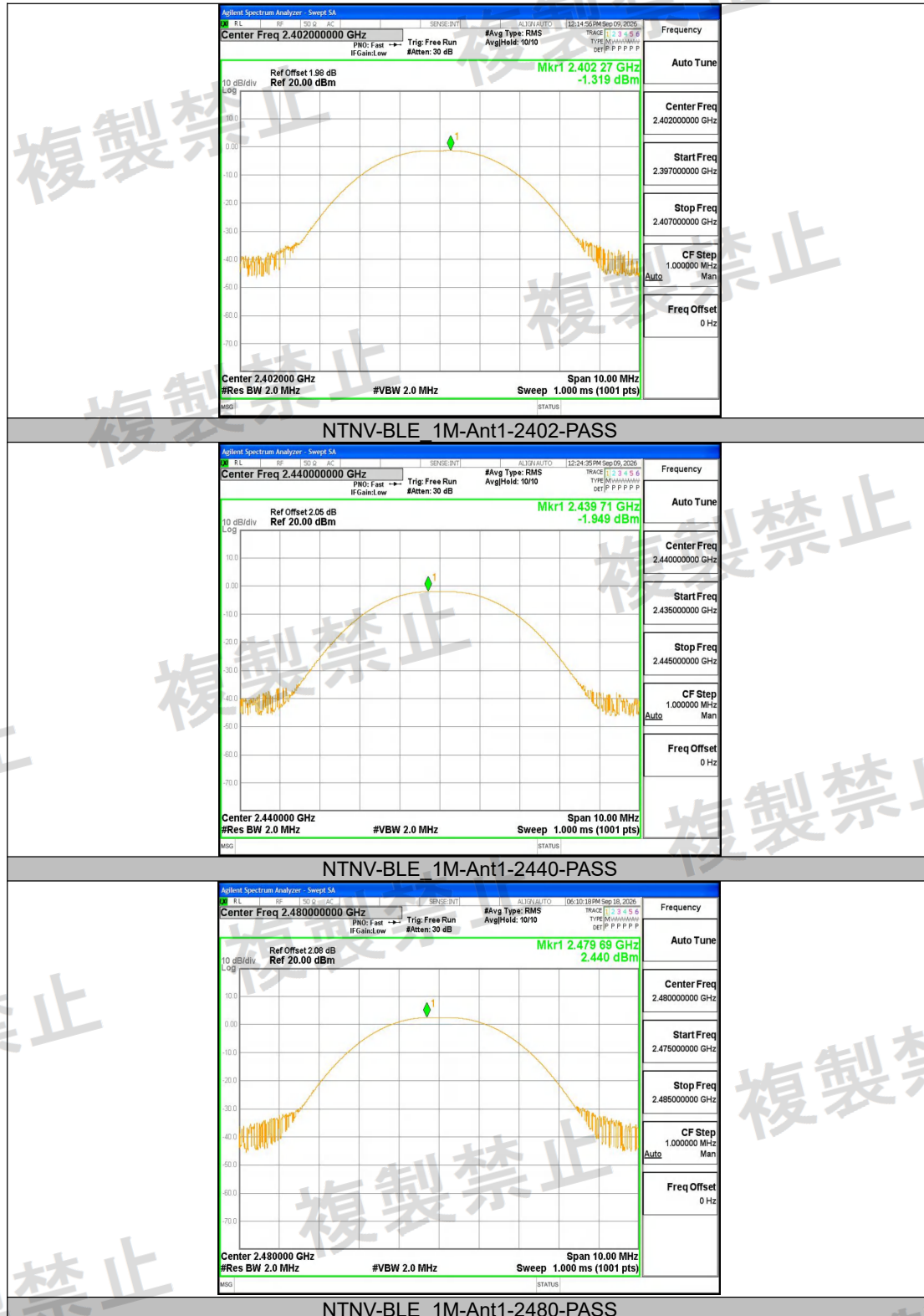
Tolerance (%) :[(test value- rate power)/rater power]*100

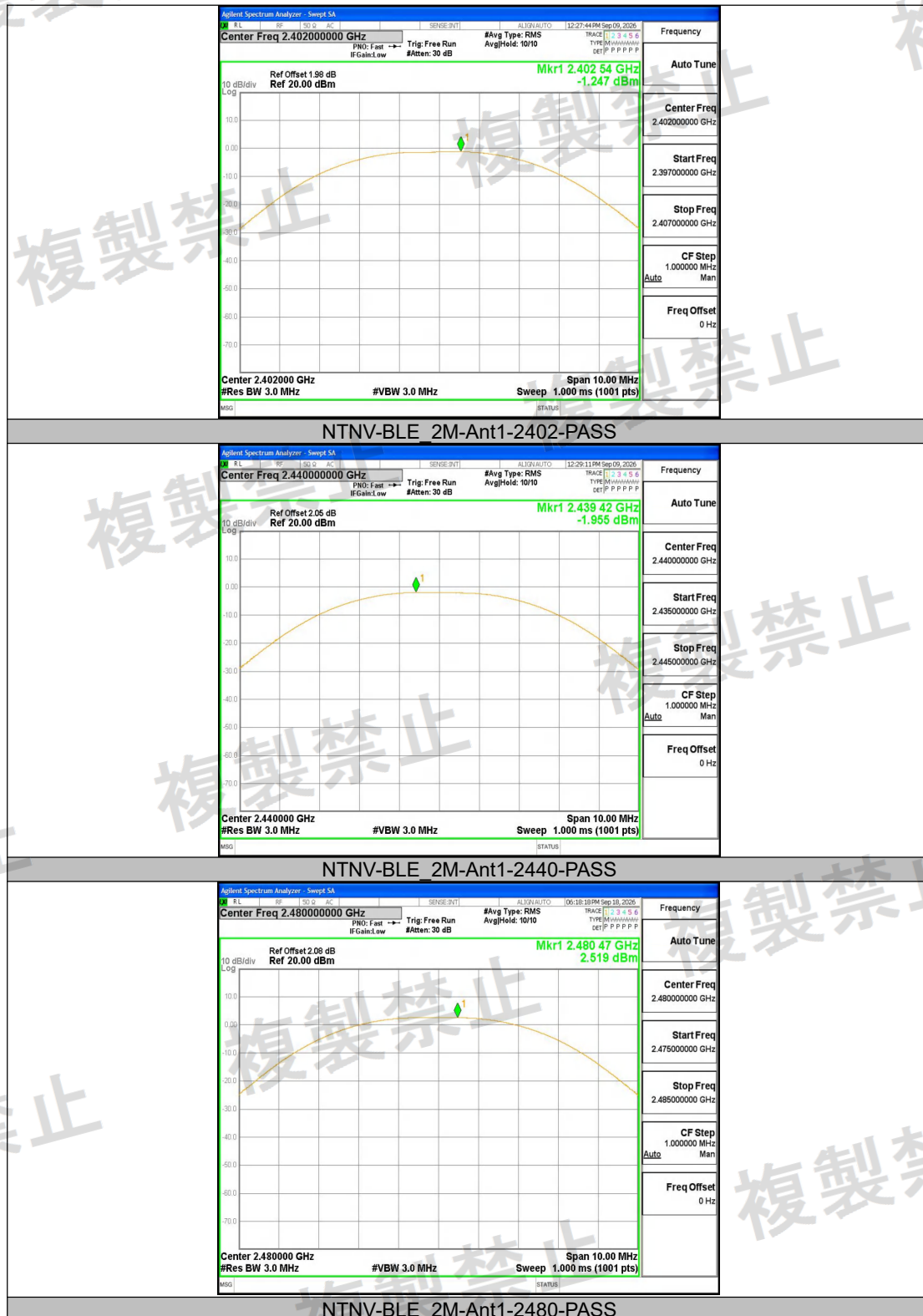
EIRP							
Test Condition	Test Mode	Antenna	Channel	Antenna conducted Power (dBm)	EIRP(dBm)	Limit(dBm)	Verdict
NTNV	BLE_1M	Ant1	2402	0.044	0.444	<=12.14	PASS
			2440	-0.588	-0.188	<=12.14	PASS
			2480	-0.164	0.236	<=12.14	PASS
	BLE_2M	Ant1	2402	-0.015	0.385	<=12.14	PASS
			2440	-0.402	-0.002	<=12.14	PASS
			2480	0.022	0.422	<=12.14	PASS

Result plot as follows:

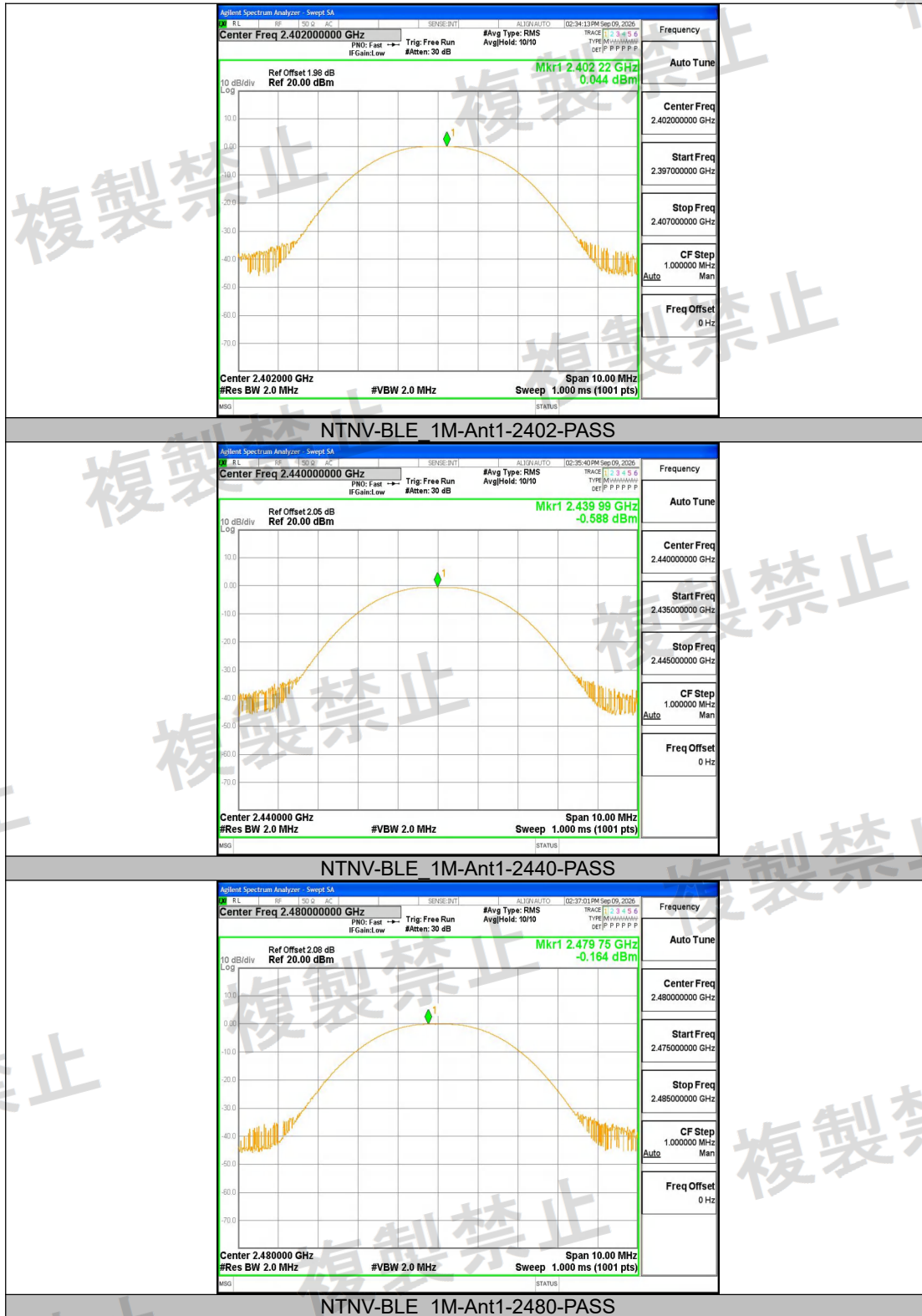
8.8.2 Test Graphs

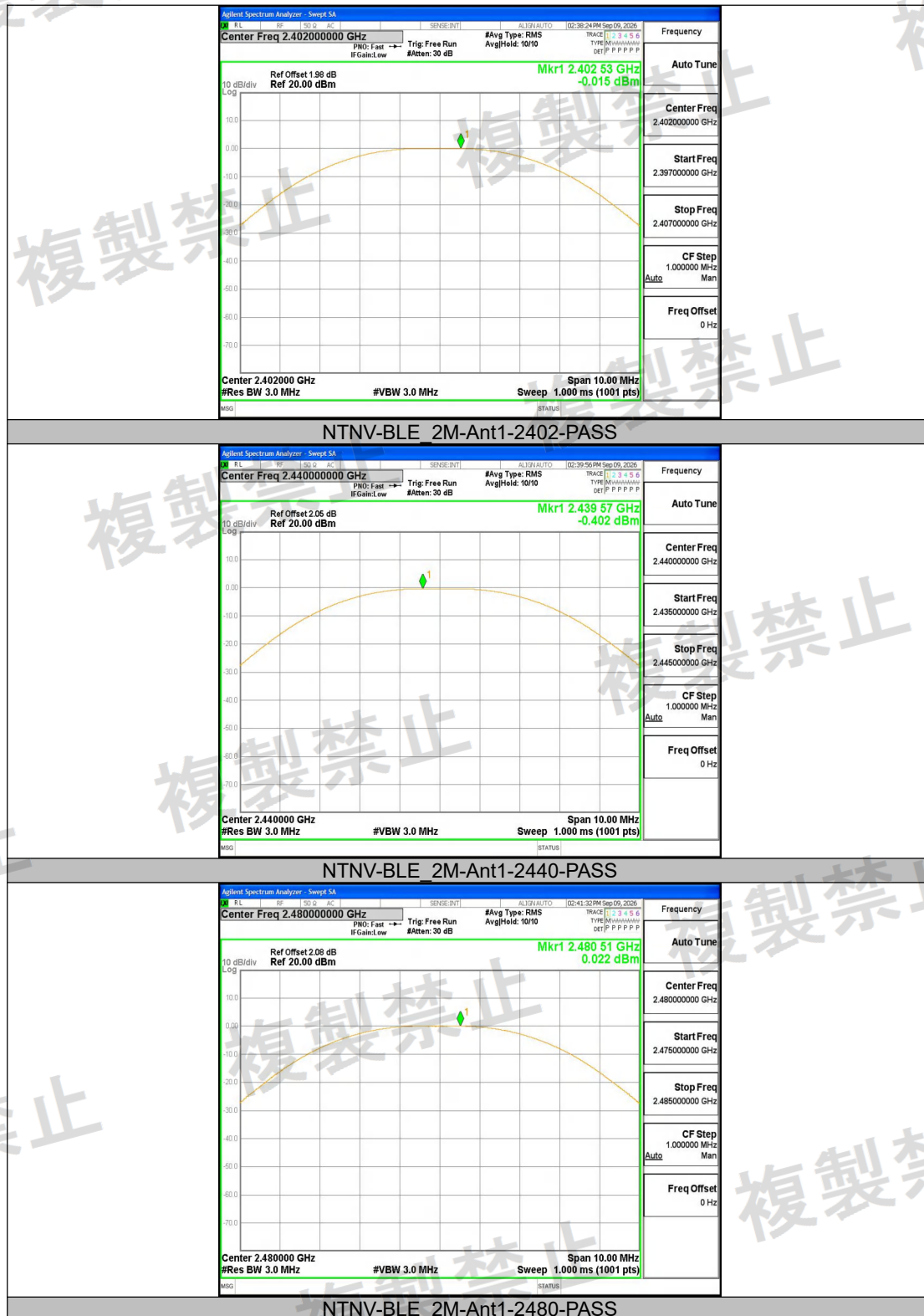
Left



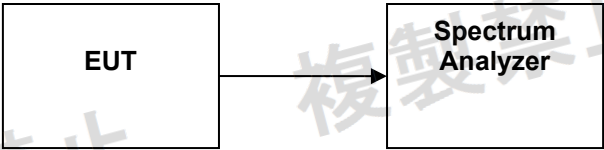


Right





8.9 Spurious Emissions of Tx

Test Requirement:	Item 19 of Article 2 Paragraph 1		
Test Method:	MIC Notice No.88 Appendix No.43		
Ambient:	Temp.: 24°C	Humid.: 50%	Press.: 1010 mbar
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.		
Test Configuration:	 <pre> graph LR EUT[EUT] --> SA[Spectrum Analyzer] </pre>		
EUT conditions:	Modulation/Spread/Hopping on, PN9 Modulation Tx For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.		
Measurement Procedure:	Step1 All spurious are measured from 30MHz to 13GHz by peak mode.		
Spectrum Analyzer conditions(Step 1):	Frequency: 30MHz – 2400MHz , 2483.5MHz –13GHz RBW 1000kHz (30 – 1GHz) , 1000kHz (over 1GHz) VBW 1000kHz (30 – 1GHz) , 1000kHz (over 1GHz) Sweep Time Auto detector mode Positive peak Indication mode Max hold		
Spectrum Analyzer conditions(Step 2):	Frequency: Spurious Frequency Span 0Hz RBW 1MHz VBW 1MHz Sweep Time Auto Detector mode Sample Indication mode Max hold		
Technical standard:	(1) Below 2387 MHz : 2.5μW/MHz (2) 2387 to 2400 MHz : 25μW/MHz (3) 2483.5 through 2496.5 MHz : 25μW/MHz (4) Over 2496.5 MHz : 2.5μW/MHz		
Test result:	PASS		

Measurement Record: Uncertainty: $\pm 1\text{dB}$

8.9.1 Test Result

Left

Test Condition	Test Mode	Channel	Freq.Range [MHz]	Freq [MHz]	Result [dBm/ MHz]	Limit [dBm/MHz]	Verdict
NTNV	BLE_1M	2402	30~2387	2386.71	-65.02	≤ -26	PASS
			2387~2400	2399.92	-34.43	≤ -16	PASS
			2483.5~2496.5	2491.65	-67.02	≤ -16	PASS
			2496.5~13000	5173.45	-55.83	≤ -26	PASS
		2440	30~2387	2065.27	-66.17	≤ -26	PASS
			2387~2400	2395.32	-65.89	≤ -16	PASS
			2483.5~2496.5	2487.42	-67.00	≤ -16	PASS
			2496.5~13000	5181.85	-61.82	≤ -26	PASS
		2480	30~2387	2102.69	-66.16	≤ -26	PASS
			2387~2400	2395.48	-65.07	≤ -16	PASS
			2483.5~2496.5	2483.50	-49.08	≤ -16	PASS
			2496.5~13000	5186.58	-63.77	≤ -26	PASS
	BLE_2M	2402	30~2387	2386.12	-63.79	≤ -26	PASS
			2387~2400	2399.99	-23.30	≤ -16	PASS
			2483.5~2496.5	2493.08	-66.91	≤ -16	PASS
			2496.5~13000	5798.44	-63.76	≤ -26	PASS
		2440	30~2387	1818.37	-65.53	≤ -26	PASS
			2387~2400	2399.09	-66.06	≤ -16	PASS
			2483.5~2496.5	2486.03	-66.74	≤ -16	PASS
			2496.5~13000	11545.19	-63.24	≤ -26	PASS
		2480	30~2387	2230.26	-65.92	≤ -26	PASS
			2387~2400	2398.97	-65.60	≤ -16	PASS
			2483.5~2496.5	2483.50	-48.51	≤ -16	PASS
			2496.5~13000	11847.18	-63.75	≤ -26	PASS

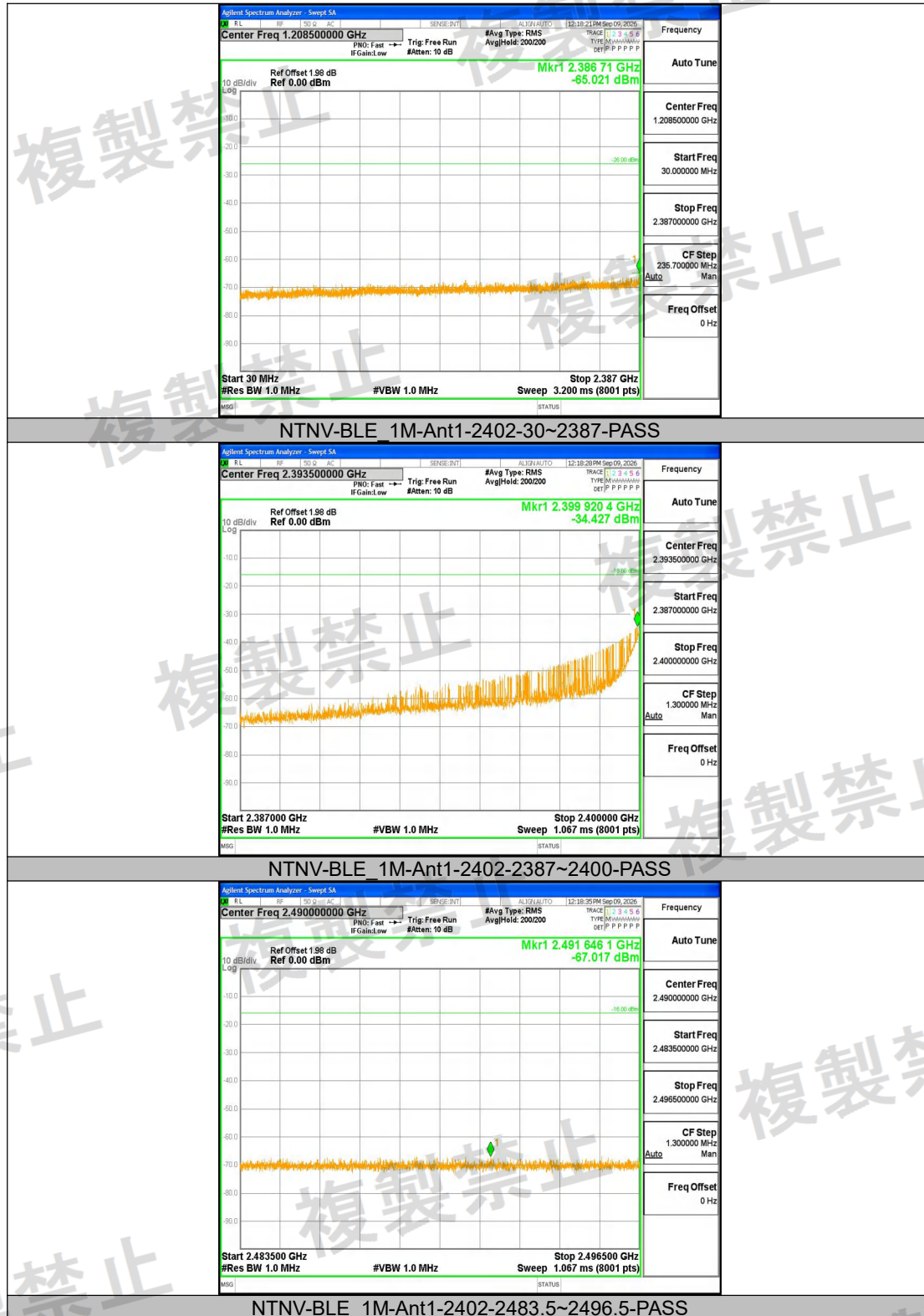
Right

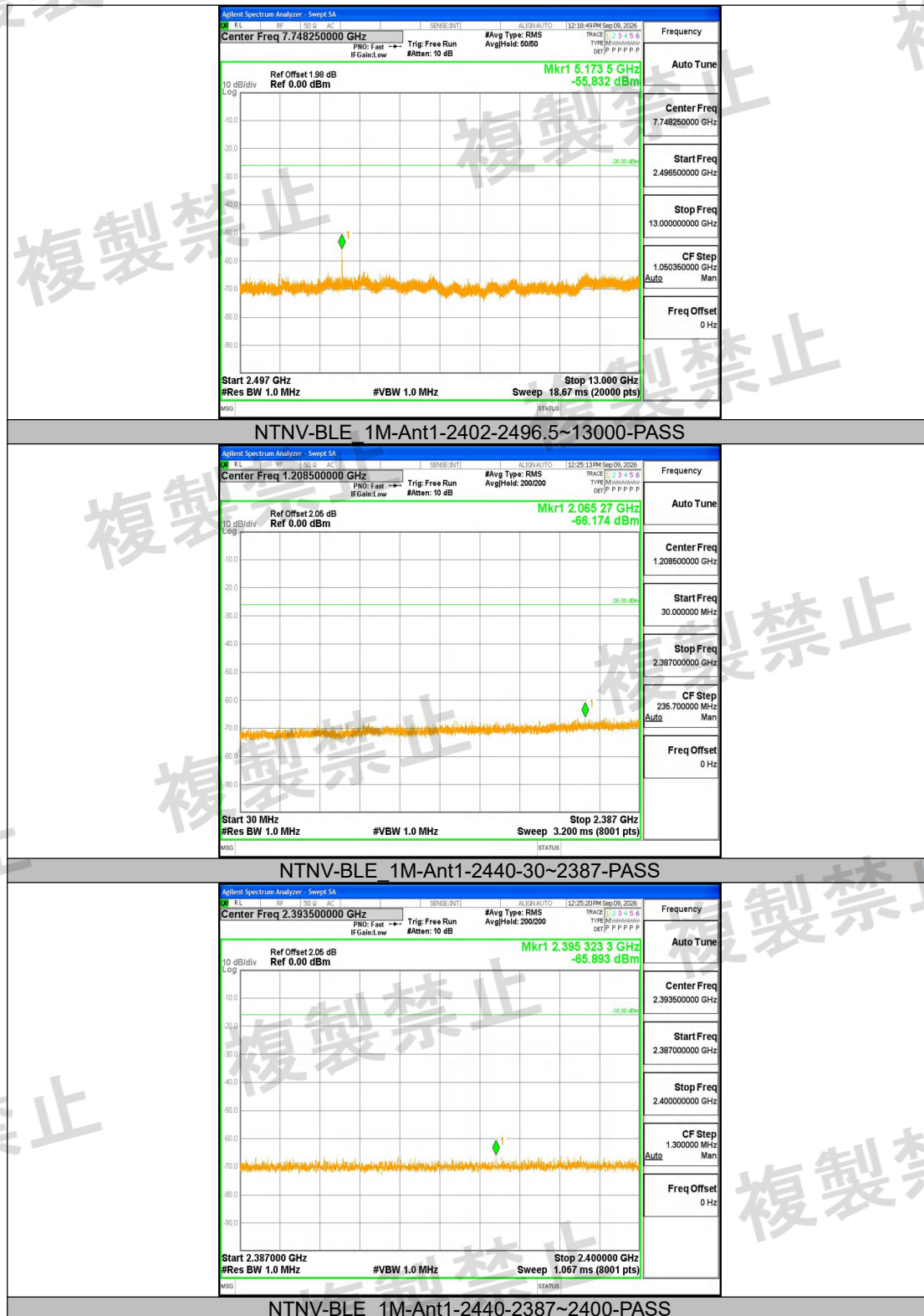
Test Condition	Test Mode	Channel	Freq.Range [MHz]	Freq [MHz]	Result [dBm/ MHz]	Limit [dBm/MHz]	Verdict
NTNV	BLE_1M	2402	30~2387	2387.00	-61.52	<=-26	PASS
			2387~2400	2399.93	-32.34	<=-16	PASS
			2483.5~2496.5	2486.68	-65.33	<=-16	PASS
			2496.5~13000	5173.45	-57.94	<=-26	PASS
		2440	30~2387	2307.75	-64.43	<=-26	PASS
			2387~2400	2396.17	-65.14	<=-16	PASS
			2483.5~2496.5	2488.66	-65.49	<=-16	PASS
			2496.5~13000	5753.27	-63.66	<=-26	PASS
		2480	30~2387	2306.86	-64.83	<=-26	PASS
			2387~2400	2393.15	-65.93	<=-16	PASS
			2483.5~2496.5	2483.67	-41.25	<=-16	PASS
			2496.5~13000	2496.50	-63.72	<=-26	PASS
	BLE_2M	2402	30~2387	2378.75	-63.35	<=-26	PASS
			2387~2400	2400.00	-21.75	<=-16	PASS
			2483.5~2496.5	2491.76	-65.35	<=-16	PASS
			2496.5~13000	3546.90	-56.67	<=-26	PASS
		2440	30~2387	2351.65	-64.78	<=-26	PASS
			2387~2400	2399.95	-65.06	<=-16	PASS
			2483.5~2496.5	2495.89	-65.39	<=-16	PASS
			2496.5~13000	3549.00	-55.24	<=-26	PASS
		2480	30~2387	1930.33	-58.64	<=-26	PASS
			2387~2400	2394.95	-64.87	<=-16	PASS
			2483.5~2496.5	2483.55	-41.08	<=-16	PASS
			2496.5~13000	2496.50	-63.27	<=-26	PASS

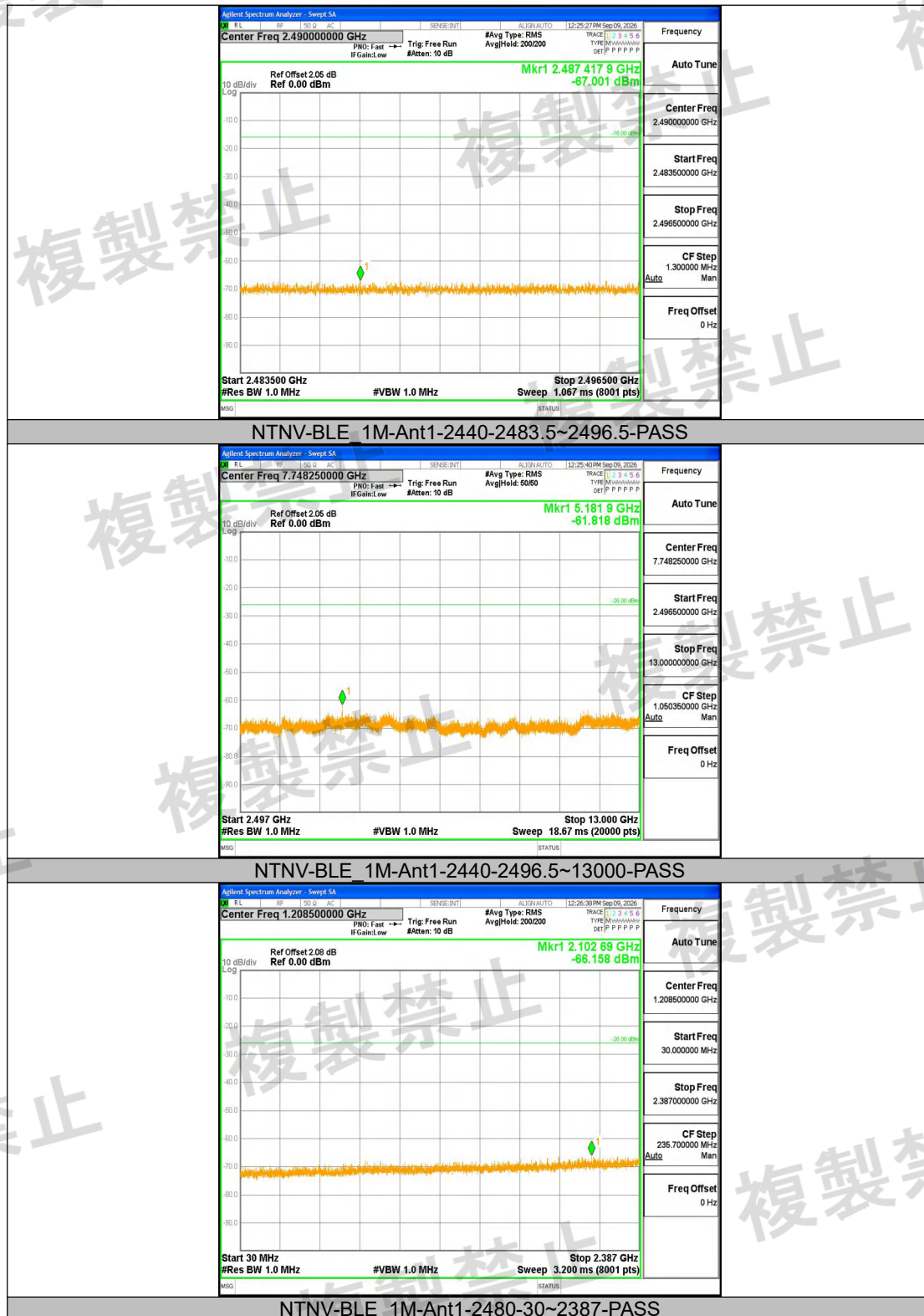
Result plot as follows:

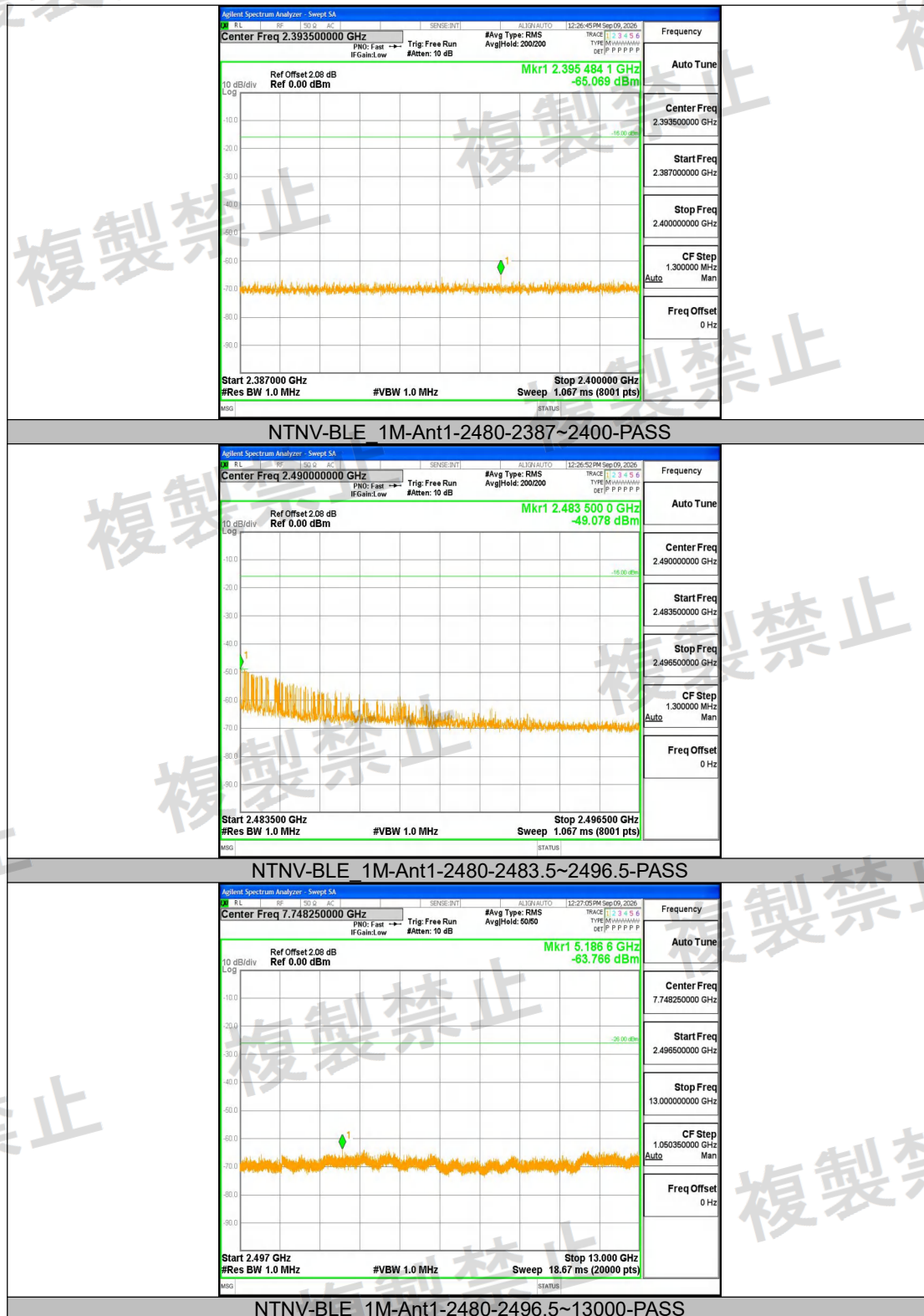
8.9.2 Test Graphs

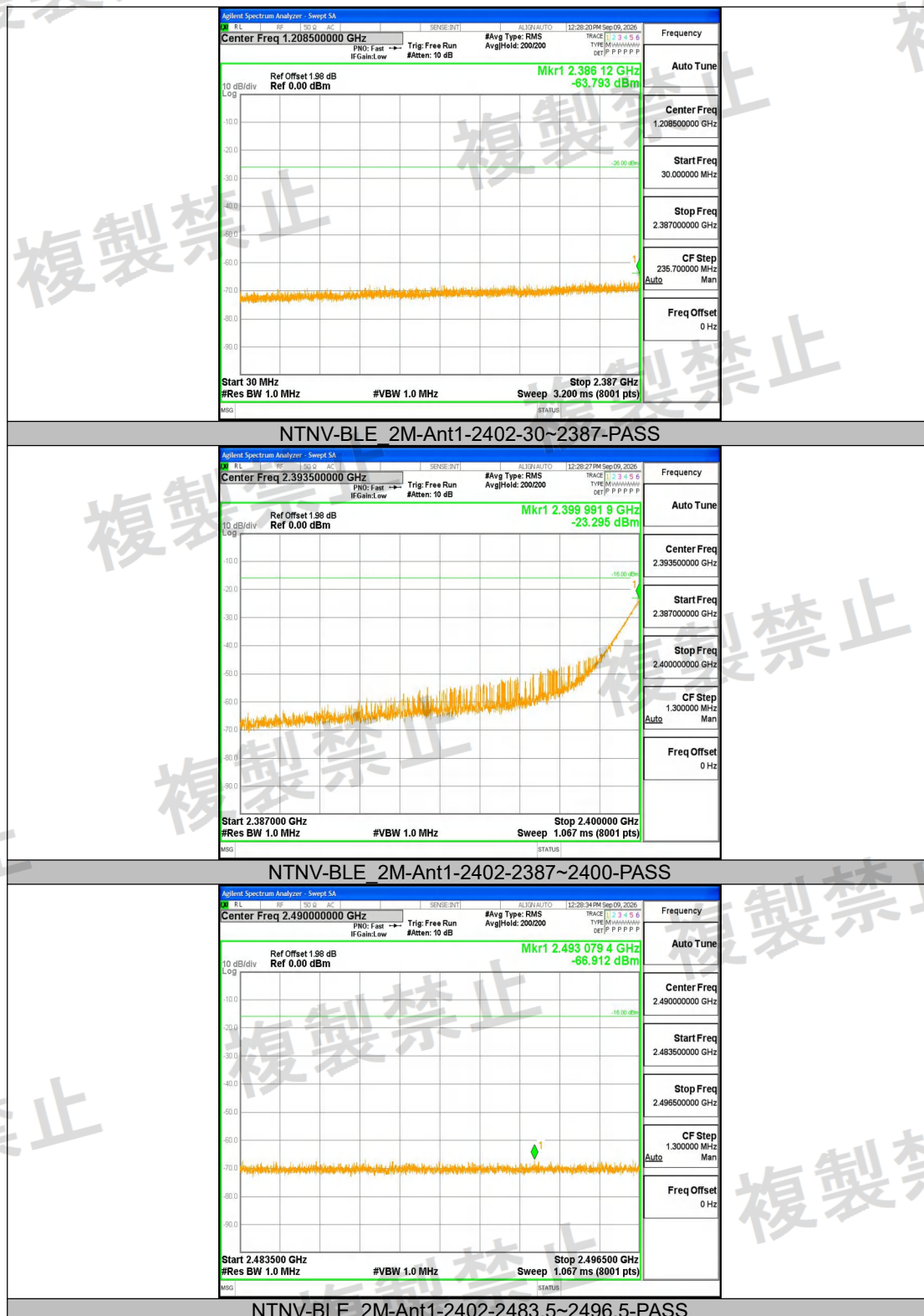
Left

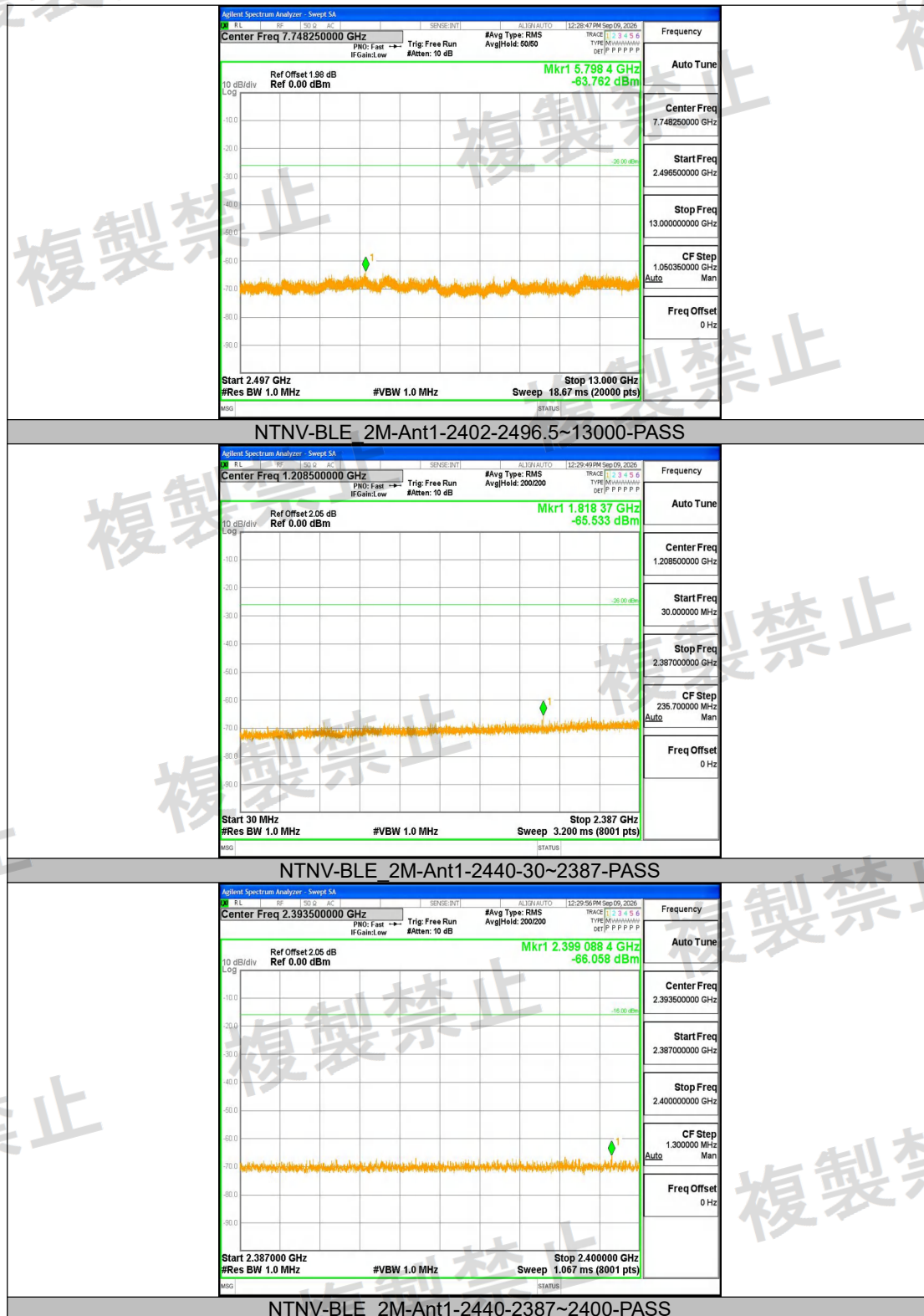


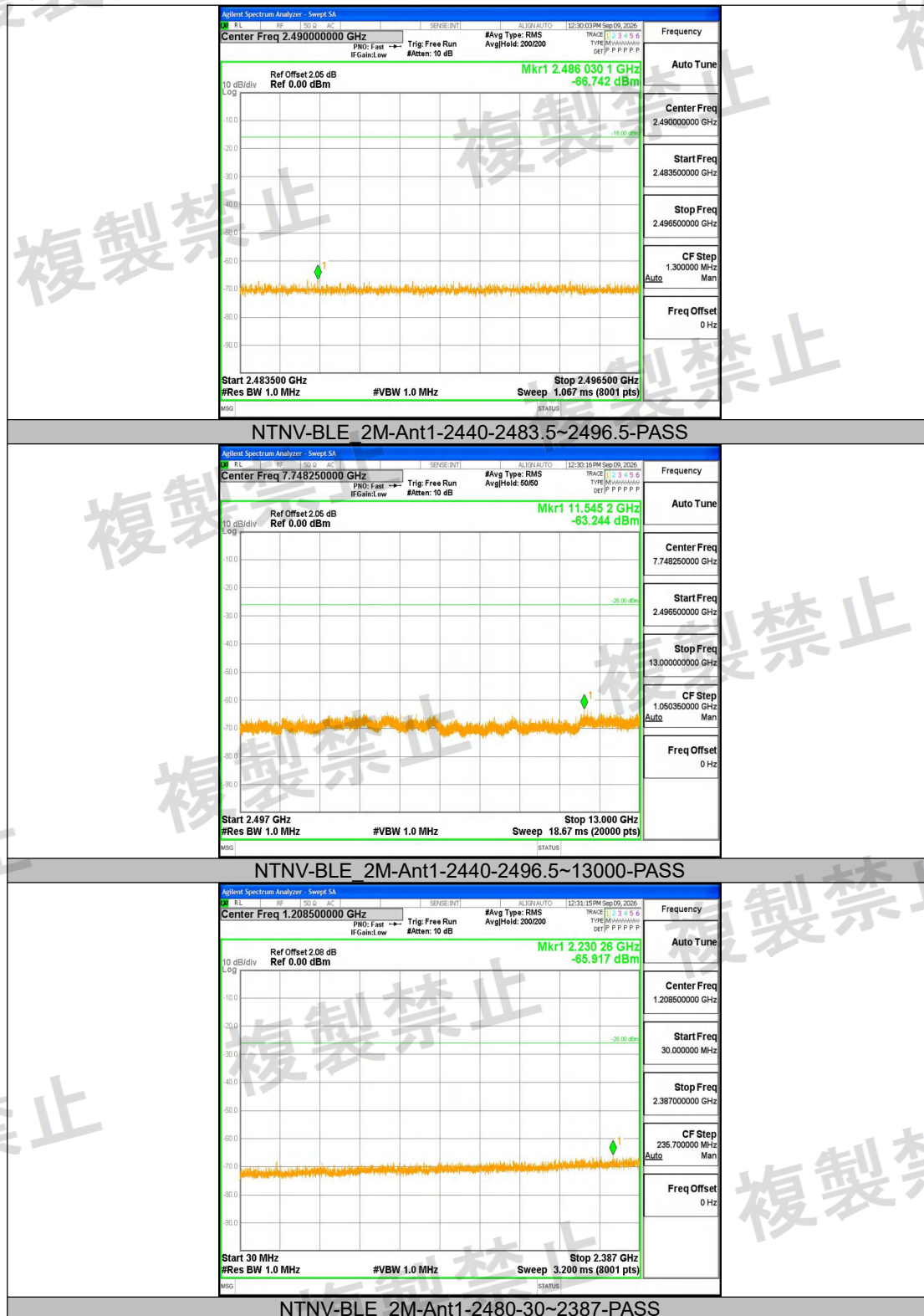


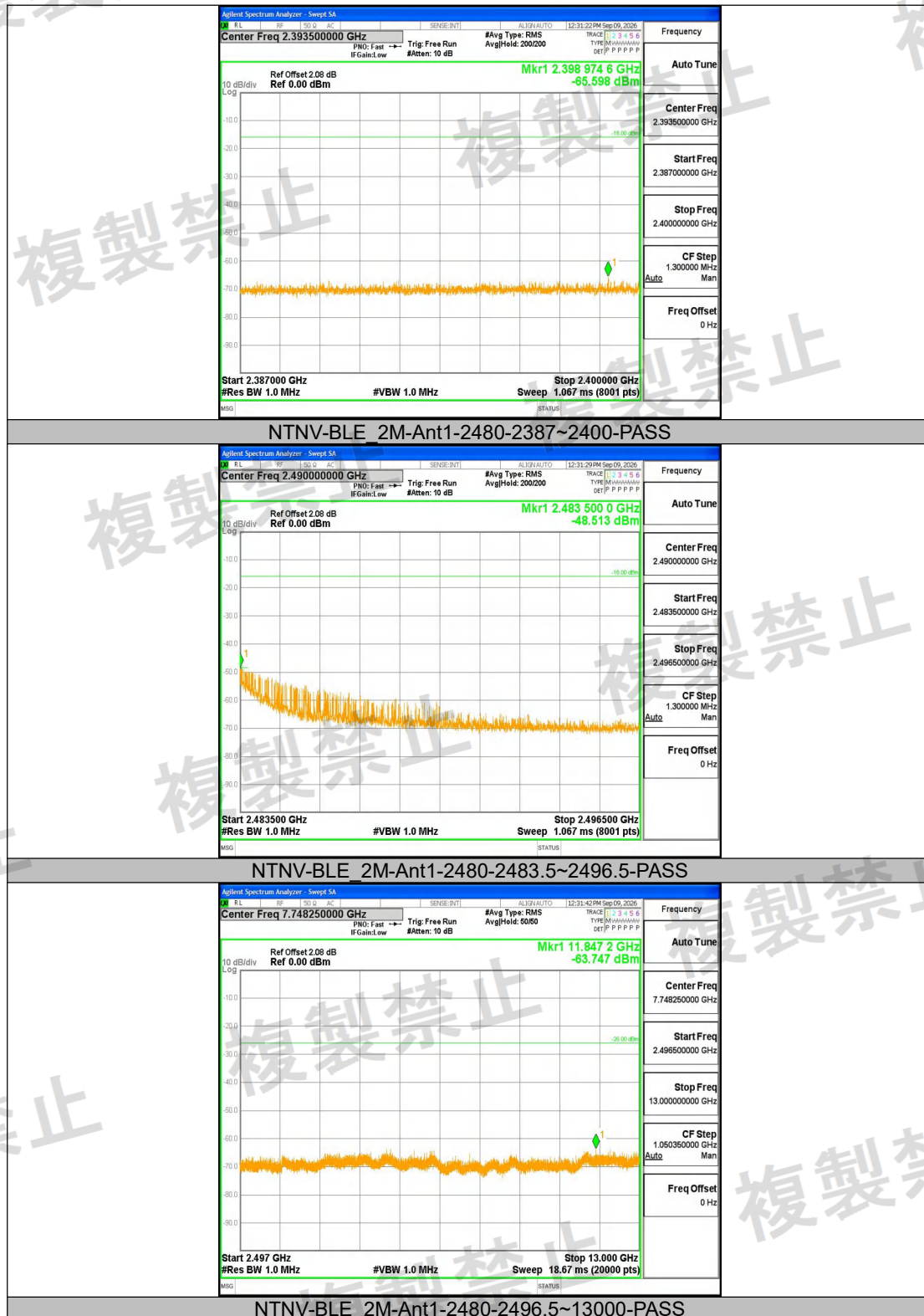




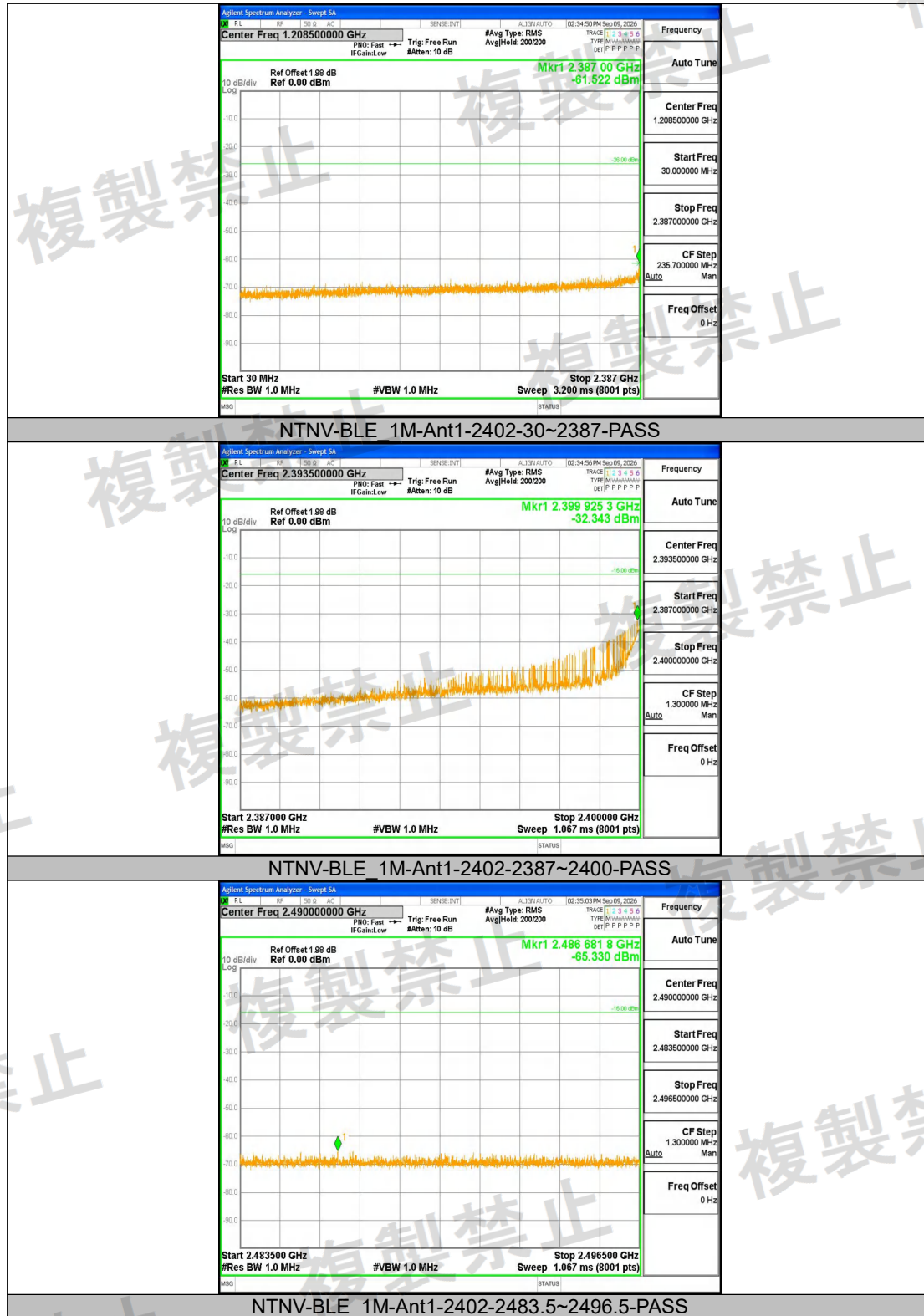


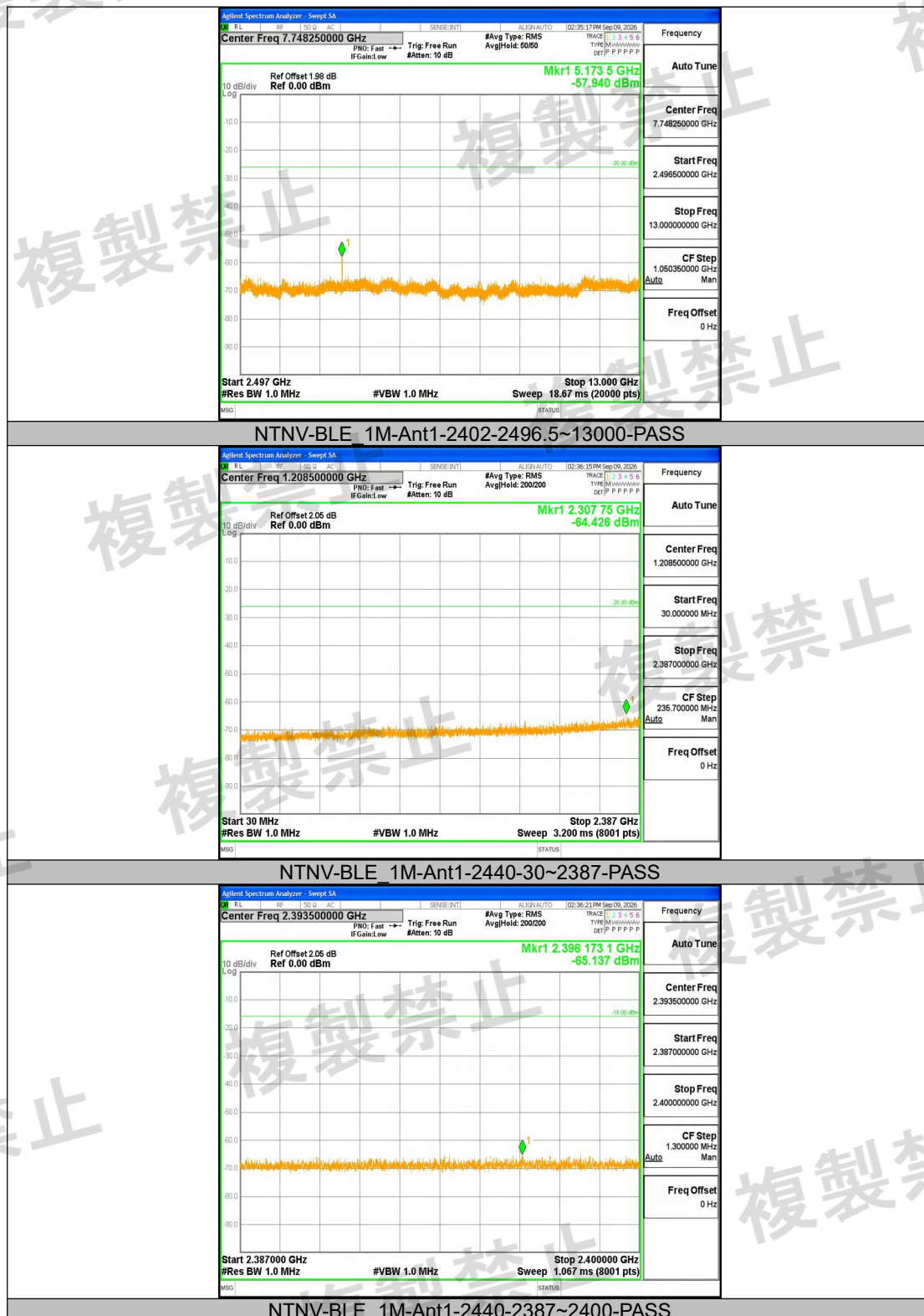


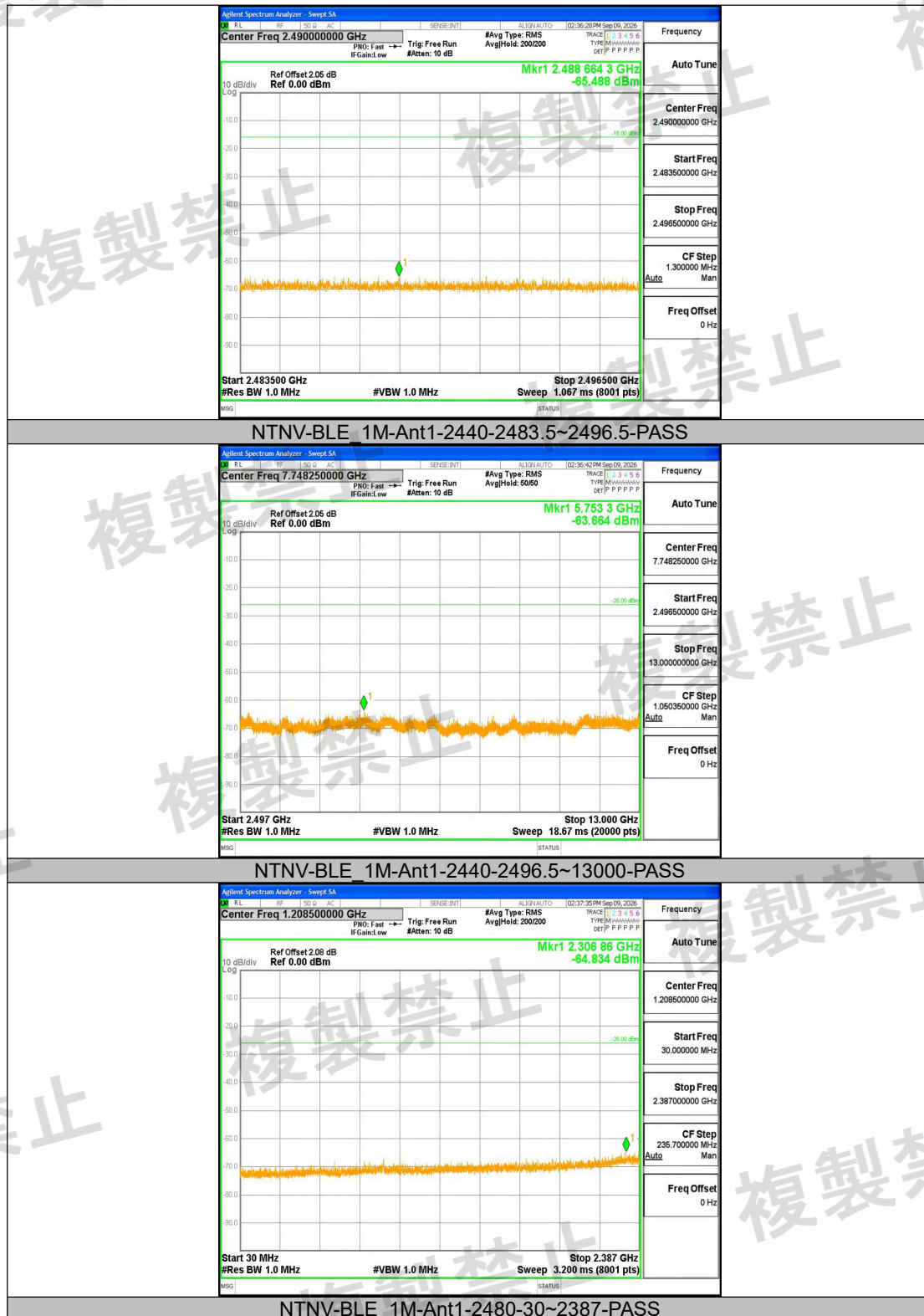


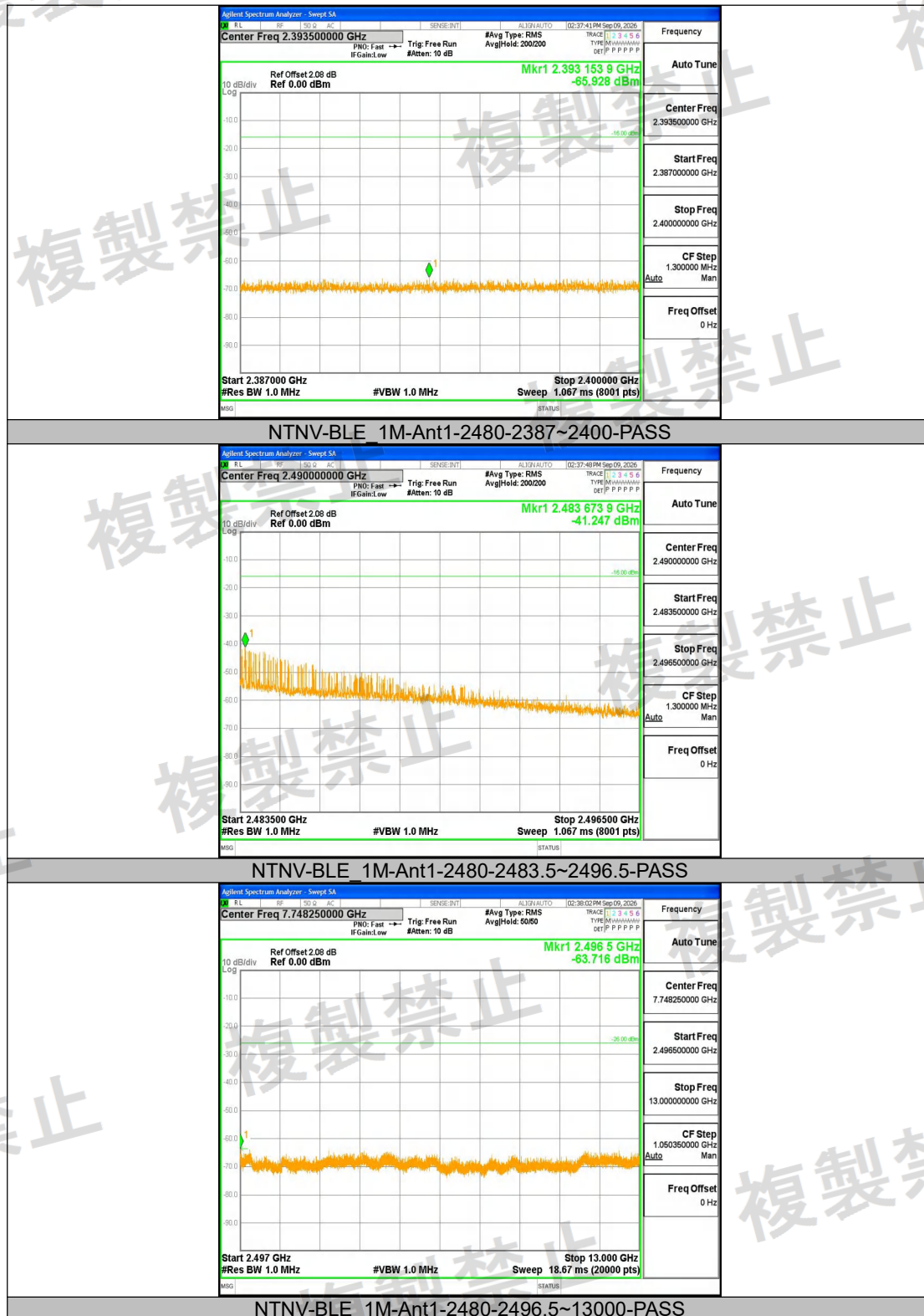


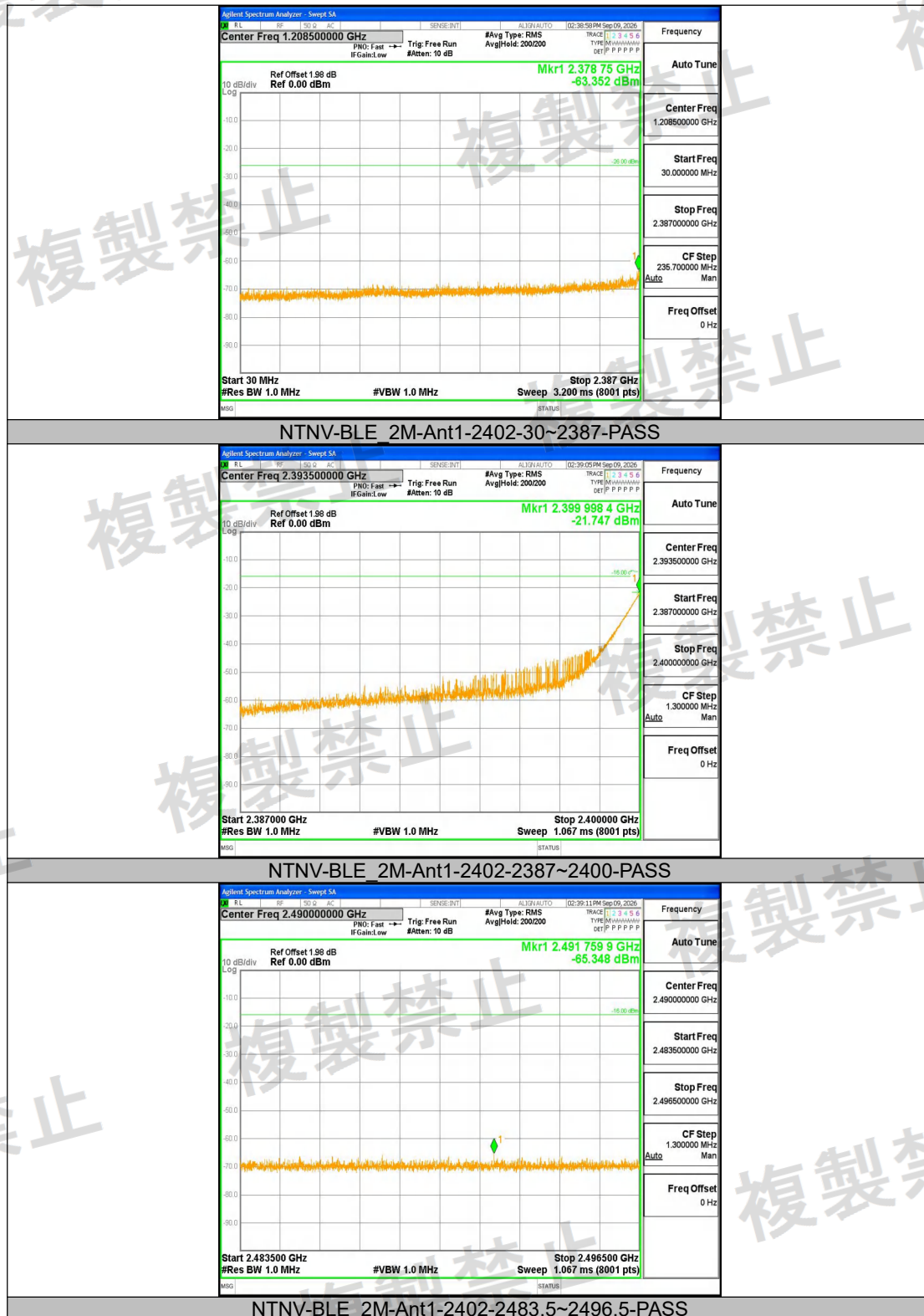
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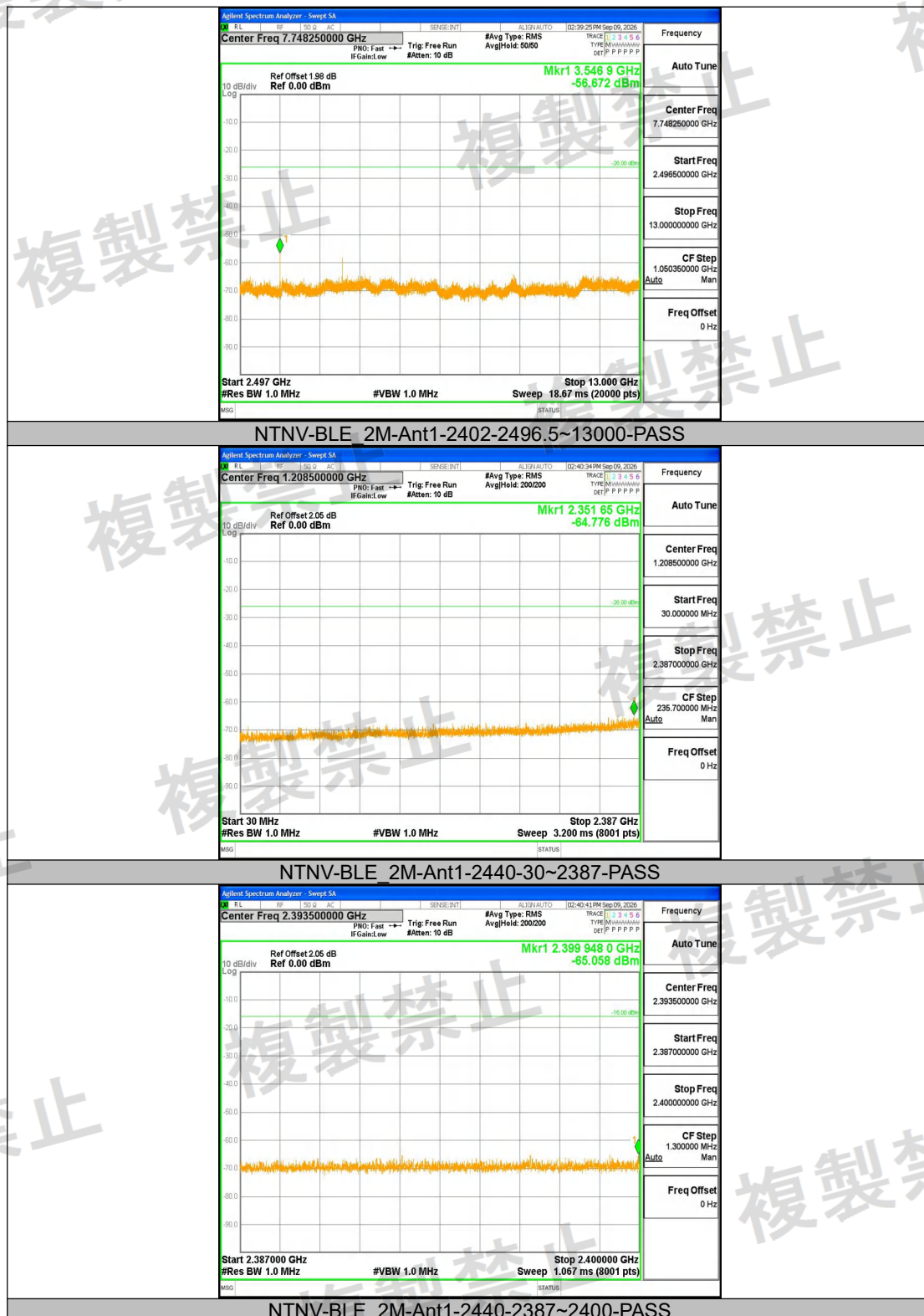


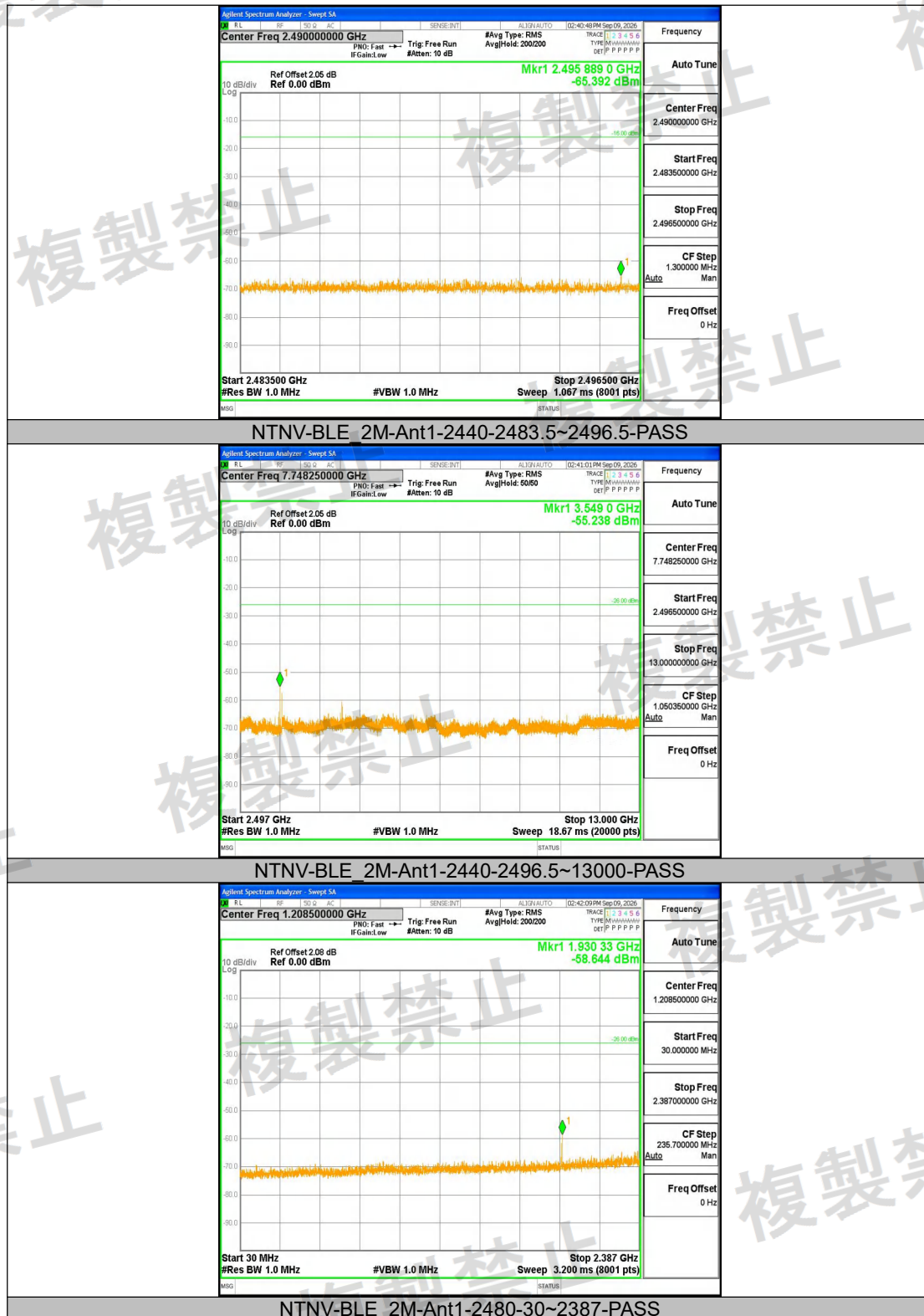


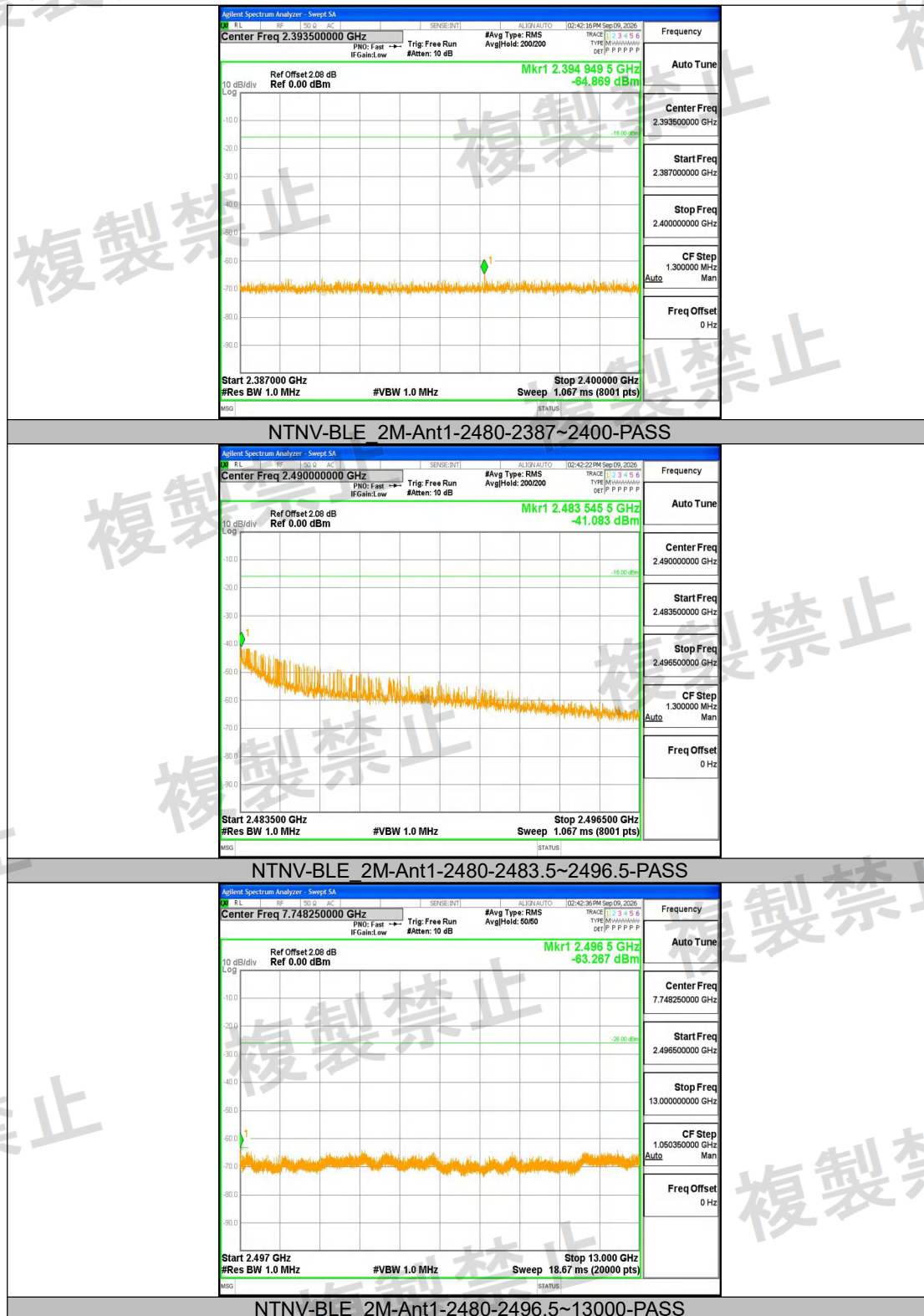






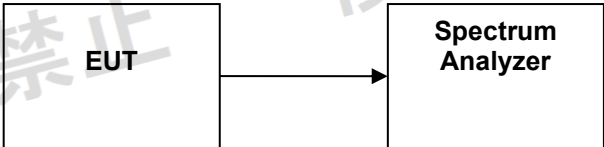






9 Receiver Requirements

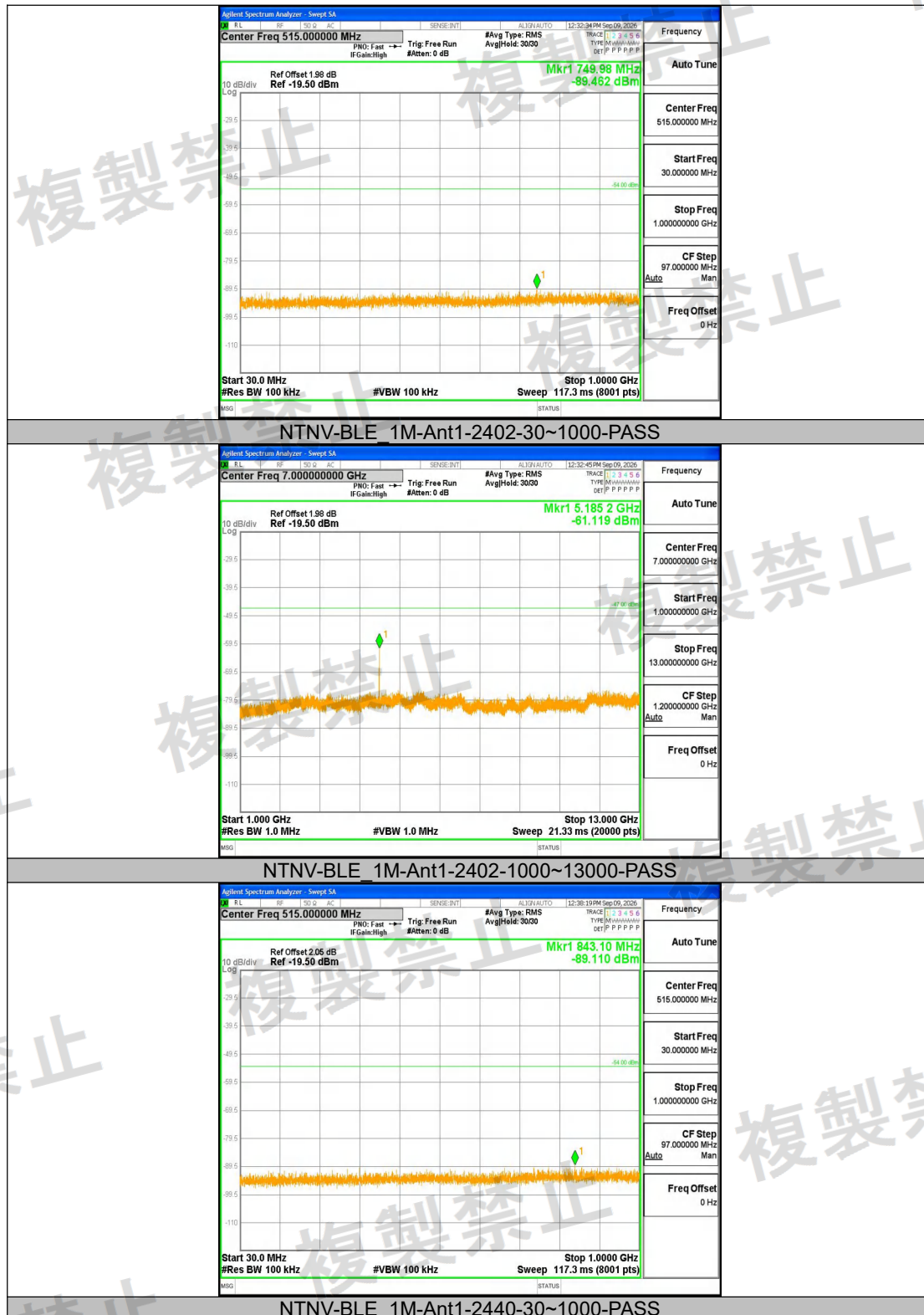
9.1 Spurious Emissions of Rx

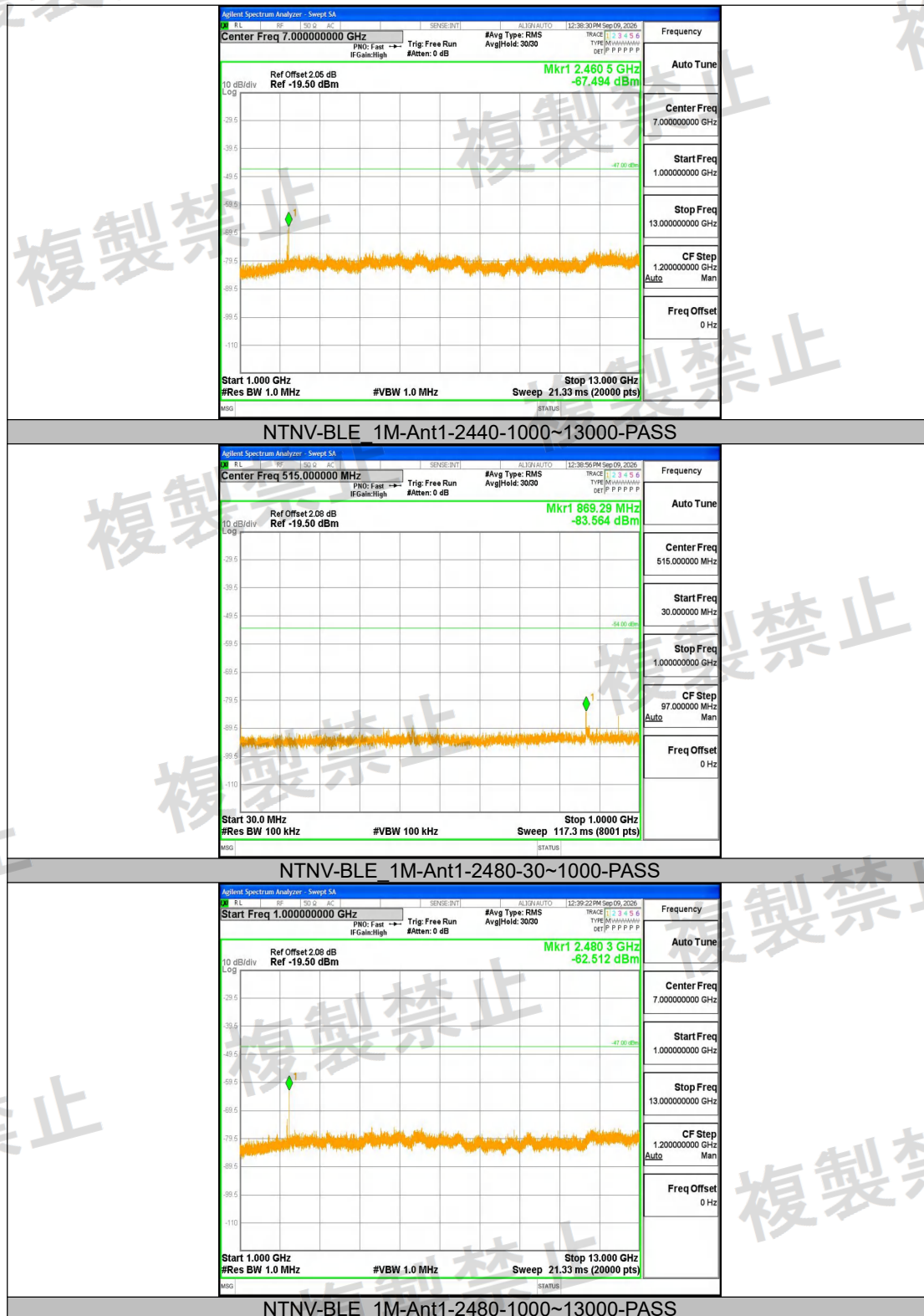
Test Requirement:	Item 19 of Article 2 Paragraph 1		
Test Method:	MIC Notice No.88 Appendix No.43		
Ambient:	Temp.: 24°C	Humid.: 50%	Press.: 1010 mbar
Test Status:	Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.		
Test Configuration:			
EUT conditions:	Rx		
Measurement Procedure:	Step1 All spurious are measured from 30MHz to 13 GHz by peak mode. Step2 IF the value measured by Step1 is exceed the limit of 1/10, measure in average mode.		
Spectrum Analyzer conditions(Step 1):	Frequency: 30MHz – 1000MHz , 1000MHz –13GHz 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		
Spectrum Analyzer Conditions(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		
Technical standard:	(1) Below 1 GHz : 4 nW or less (2) 1 GHz and over : 20 nW or less		
Test result:	PASS		

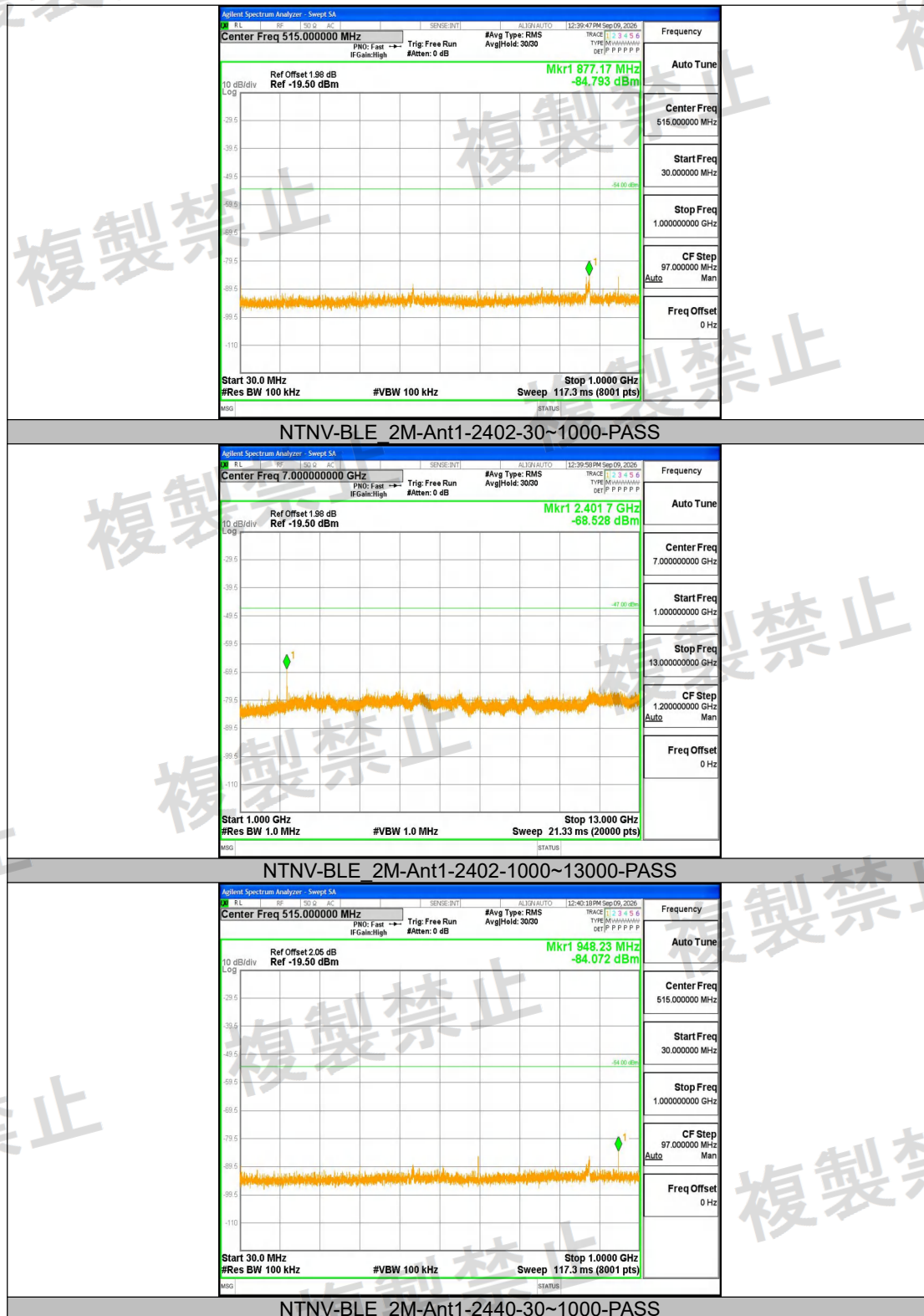
9.1.1 Test Result

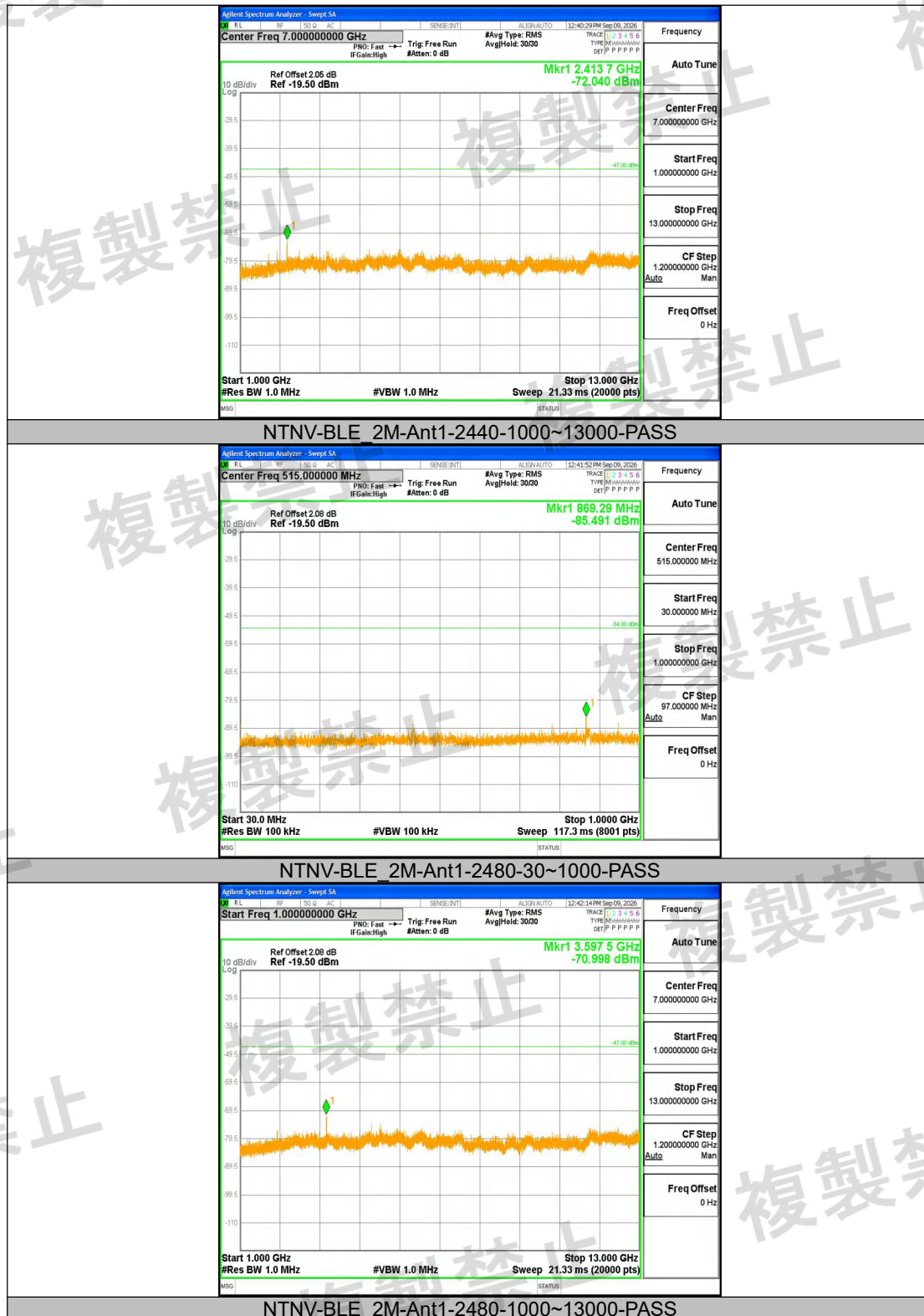
TestCondition	TestMode	Channel	Freq.Range [MHz]	Freq [MHz]	Result [dBm]	Limit [dBm]	Verdict
NTNV	BLE_1M	2402	30~1000	749.98	-89.46	<=-54	PASS
			1000~13000	5185.21	-61.12	<=-47	PASS
		2440	30~1000	843.10	-89.11	<=-54	PASS
			1000~13000	2460.47	-67.49	<=-47	PASS
		2480	30~1000	869.29	-83.56	<=-54	PASS
			1000~13000	2480.27	-62.51	<=-47	PASS
	BLE_2M	2402	30~1000	877.17	-84.79	<=-54	PASS
			1000~13000	2401.67	-68.53	<=-47	PASS
		2440	30~1000	948.23	-84.07	<=-54	PASS
			1000~13000	2413.67	-72.04	<=-47	PASS
		2480	30~1000	869.29	-85.49	<=-54	PASS
			1000~13000	3597.53	-71.00	<=-47	PASS

9.1.2 Test Graphs





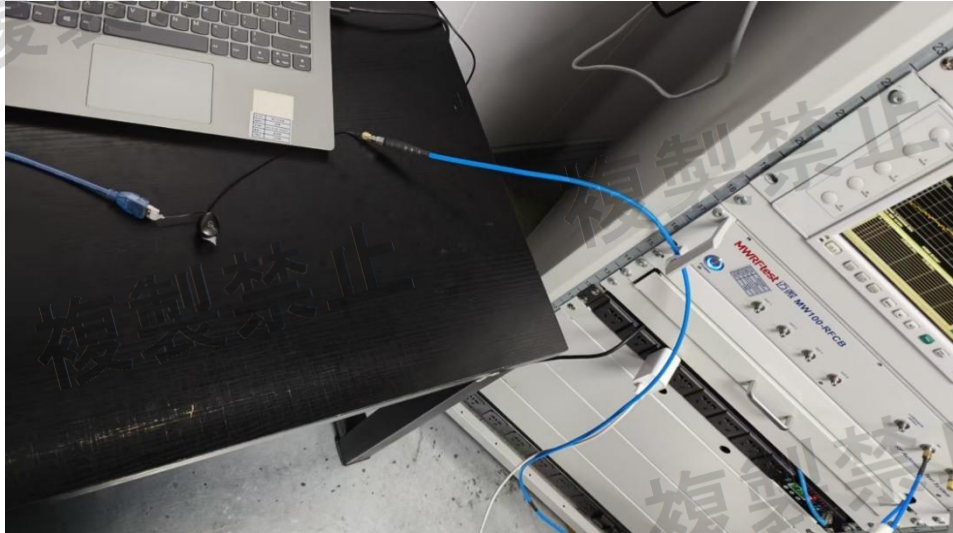




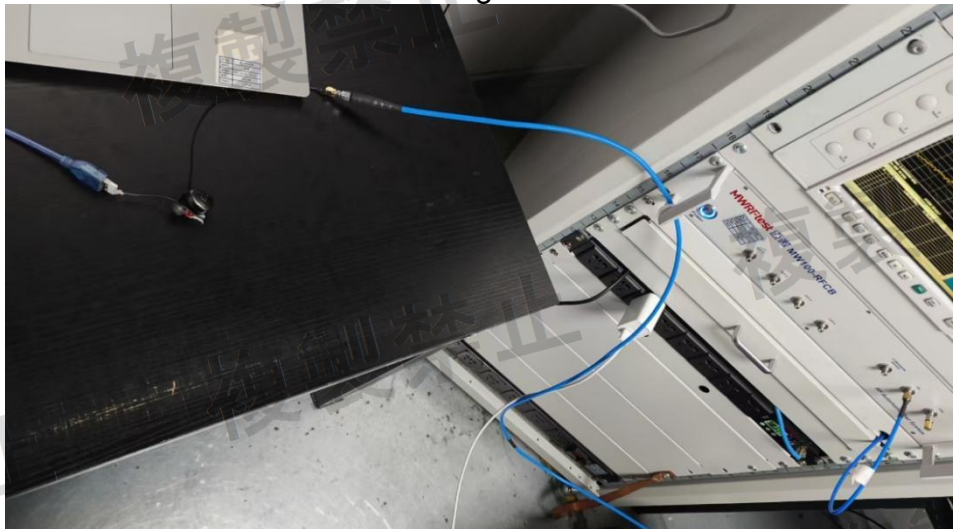
Appendix A: Photographs of test setup

RF Test

Left



Right



Appendix B Photographs of EUT

Reference to the test report no. BLA-RF-202609-A05-01

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