

Test Report

Report No. : MTi251023015-0113E2
Date of issue : 2025-12-24
Applicant : Earfun Technology (HK) Limited
Product : Open-Ear Wireless Earbuds
Model(s) : CW200

Shenzhen Microtest Co., Ltd.

TEST REPORT

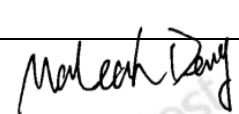
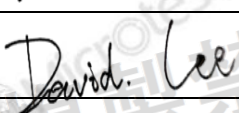
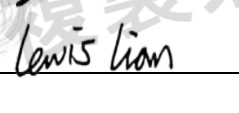
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Test Result Certification		
Applicant	Earfun Technology (HK) Limited	
Applicant Address	FLAT/RM A 9F, SILVERCORP INTERNATIONAL TOWER 707-713 NATHAN ROAD MONGKOK KL, HONG KONG	
Manufacturer	Earfun Technology (HK) Limited	
Manufacturer Address	FLAT/RM A 9F, SILVERCORP INTERNATIONAL TOWER 707-713 NATHAN ROAD MONGKOK KL, HONG KONG	
Factory	Dongguan SiliSound Technology Co., LTD	
Factory Address	Room 601, No. 26, Xinyang Road, Lin Village, Tangxia Town, Dongguan city, Guangdong Province	
Product description		
Product name	Open-Ear Wireless Earbuds	
Trademark	EarFun	
Model name	CW200	
Series Model(s)	N/A	
Standards	Article 2-1, Item 19-MIC Notice No. 88 Appendix No. 43	
Testing Information		
Date of test	2025-12-17 to 2025-12-19	
Test result	Pass	
Prepared by:	Maleah Deng	
Reviewed by:	David Lee	
Approved by:	Lewis Lian	

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1 General Description

1.1 Description of the EUT

Product name:	Open-Ear Wireless Earbuds
Model name:	CW200
Series Model(s):	N/A
Model difference:	N/A
Electrical rating:	Input: DC 5V, 1A Battery: Earbuds: DC 3.85V, 60mAh Charging case: DC 3.8V, 490mAh
Accessories:	Cable: USB-A to USB-C cable*1
Hardware version:	HP1200
Software version:	V0.0.6
Test sample(s) number:	MTi251023015-01-R008
RF specification	
Bluetooth version:	V6.0
Operating frequency range:	2402MHz - 2480MHz
Channel number:	40
Modulation type:	GFSK
Antenna(s) type:	PCB Antenna
Antenna(s) gain:	ANT1(Left): -1.23dBi; Ant2(Right): -0.38dBi

1.2 Description of test modes

No.	Emission test modes
Mode1	TX-GFSK-1Mbps(Left)
Mode2	TX-GFSK-2Mbps(Left)
Mode3	TX-GFSK-1Mbps(Right)
Mode4	TX-GFSK-2Mbps(Right)
Mode5	unmodulated carrier
Mode6	RX(Left)
Mode7	RX(Right)

1.2.1 Operation channel list

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	10	2422	20	2442	30	2462

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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 Channel List

Lowest Channel (LCH) (MHz)	Middle Channel (MCH) (MHz)	Highest Channel (HCH) (MHz)
2402	2440	2480

Note: The test software provided by manufacturer is used to control EUT for working in engineering mode, that enables selectable channel, and capable of continuous transmitting mode.

Test Software: BT_Tool

For power setting, refer to below table. (The power setting of the left and right ears are the same.)

Mode	2402MHz	2440MHz	2480MHz
1M	5	5	5
2M	5	5	5

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1.3 Environmental Conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15°C ~ 35°C
Humidity:	20% RH ~ 75% RH
Atmospheric pressure:	98 kPa ~ 101 kPa

Test Conditions		Power Supply (VDC)	Input Voltage to the circuit of RF unit (VDC)
NTNV (V_{normal})	/	3.85	3.3
NTHV ($V_{max.}$)	+10%	4.235	3.3
NTLV ($V_{min.}$)	-10%	3.465	3.3

Note: If the fluctuation of input voltage to the circuit of RF unit (except power supply) of test equipment is under $\pm 1\%$, when input voltage from external power supply to the test equipment is fluctuated by $\pm 10\%$: conduct the test with the rated voltage only

1.4 Description of support units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Support equipment list			
Description	Model	Serial No.	Manufacturer
Laptop	e485	/	Lenovo
Support cable list			
Description	Length (m)	From	To
/	/	/	/

1.5 Measurement uncertainty

Parameter	Measurement uncertainty
Frequency tolerance	± 10 ppm
Occupied channel bandwidth	± 3 %
RF output power, conducted	± 1 dB
Power Spectral Density, conducted	± 1 dB
Unwanted Emissions, conducted	± 1 dB
All emissions, radiated	± 4.7 dB
Temperature	± 1 °C
Supply voltages	± 1 %
Time	± 1 %

Note: the measurement uncertainty is calculated and correspond to a factor $k=2$ (which provide confidence levels of 95.45%)

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2 Summary of Test Result

No.	Item	Standard	Requirement	Result
1	Tolerance of Frequency	Article 2-1, Item 19-MIC Notice No. 88 Appendix No. 43	Article 2-1, Item 19	Pass
2	Occupied Bandwidth (99%)	Article 2-1, Item 19-MIC Notice No. 88 Appendix No. 43	Article 2-1, Item 19	Pass
3	Antenna Power and Tolerance	Article 2-1, Item 19-MIC Notice No. 88 Appendix No. 43	Article 2-1, Item 19	Pass
4	Spurious Emission Intensity	Article 2-1, Item 19-MIC Notice No. 88 Appendix No. 43	Article 2-1, Item 19	Pass
5	Secondary Radiated Emissions	Article 2-1, Item 19-MIC Notice No. 88 Appendix No. 43	Article 2-1, Item 19	Pass
6	Carrier Sensing 1	Article 2-1, Item 19-MIC Notice No. 88 Appendix No. 43	Article 2-1, Item 19	N/A
7	Interference Prevention Function	Article 2-1, Item 19-MIC Notice No. 88 Appendix No. 43	Article 2-1, Item 19	Pass
8	Transmission Antenna Absolute Gain	Article 2-1, Item 19-MIC Notice No. 88 Appendix No. 43	Article 2-1, Item 19	Pass
9	Half Power Beam Angle(Radiation angle of antenna)	Article 2-1, Item 19-MIC Notice No. 88 Appendix No. 43	Article 2-1, Item 19	N/A

Notes:

N/A means not applicable

Carrier Sensing 1: Application to transmitting devices which EIRP is less than $[2.14\text{dBi} + \text{antenna power limit}]$ and the shortage of EIRP is compensated by the antenna power. Not applicable to this product.

Transmitter antenna beam width: this requirement does not applicable to the EUT when its EIRP is under 12.14dBm.

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3 Test Facilities and accreditations

3.1 Test laboratory

Test laboratory:	Shenzhen Microtest Co., Ltd.
Test site location:	101, No.7, Zone 2, Xinxing Industrial Park, Fuhai Avenue, Xinhe Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
Telephone:	(86-755)88850135
Fax:	(86-755)88850136
CNAS Registration No.:	CNAS L5868
FCC Registration No.:	448573
IC Registration No.:	21760
CABID:	CN0093

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4 List of test equipment

No.	Equipment	Manufacturer	Model	Serial No.	Cal. date	Cal. Due	Calibration method
Tolerance of Frequency Occupied Bandwidth (99%) Antenna Power and Tolerance Spurious Emission Intensity Secondary Radiated Emissions							
1	Wideband Radio Communication Tester	Rohde&schwarz	CMW500	149155	2025-03-18	2026-03-17	C
2	ESG Series Analog Ssignal Generator	Agilent	E4421B	GB40051240	2025-03-14	2026-03-13	C
3	PXA Signal Analyzer	Agilent	N9030A	MY51350296	2025-03-14	2026-03-13	C
4	Synthesized Sweeper	Agilent	83752A	3610A01957	2025-03-14	2026-03-13	C
5	MXA Signal Analyzer	Agilent	N9020A	MY50143483	2025-03-14	2026-03-13	C
6	RF Control Unit	Tonscend	JS0806-1	19D8060152	2025-03-18	2026-03-17	C
7	Band Reject Filter Group	Tonscend	JS0806-F	19D8060160	2025-03-14	2026-03-13	C
8	ESG Vector Signal Generator	Agilent	N5182A	MY50143762	2025-03-14	2026-03-13	C
9	DC Power Supply	Agilent	E3632A	MY40027695	2025-03-18	2026-03-17	C
10	RF Test System	Tonscend	JS1120-3 Test System Ver. V3.5.39	/	/	/	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

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5 Evaluation Results (Evaluation)

5.1 Interference Prevention Function

Test Requirement:	The EUT shall support one of the following functions: - Automatic identification transmission - Automatic identification reception
Test Method:	Notification No.88 of MIC, 2004
Procedure:	(1) For EUTs capable of automatically transmitting identification data a. Transmit identification data from EUT to Demodulator b. Confirm identification data is correctly received by Demodulator (2) For EUTs capable of automatically receiving identification data a. Transmit identification data from Link Partner to EUT b. Confirm communication link is established c. Link Partner shall respond by transmitting different identification data back to the EUT d. Confirm EUT stops transmitting, or confirm EUT recognizes that the two identification data are different

5.1.1 Conclusion:

The detected ID of the device is below: 18:45:B3:3F:F0:7A

Test result: The device meet the requirements
PASS

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6 Radio Spectrum Matter Test Results (RF)

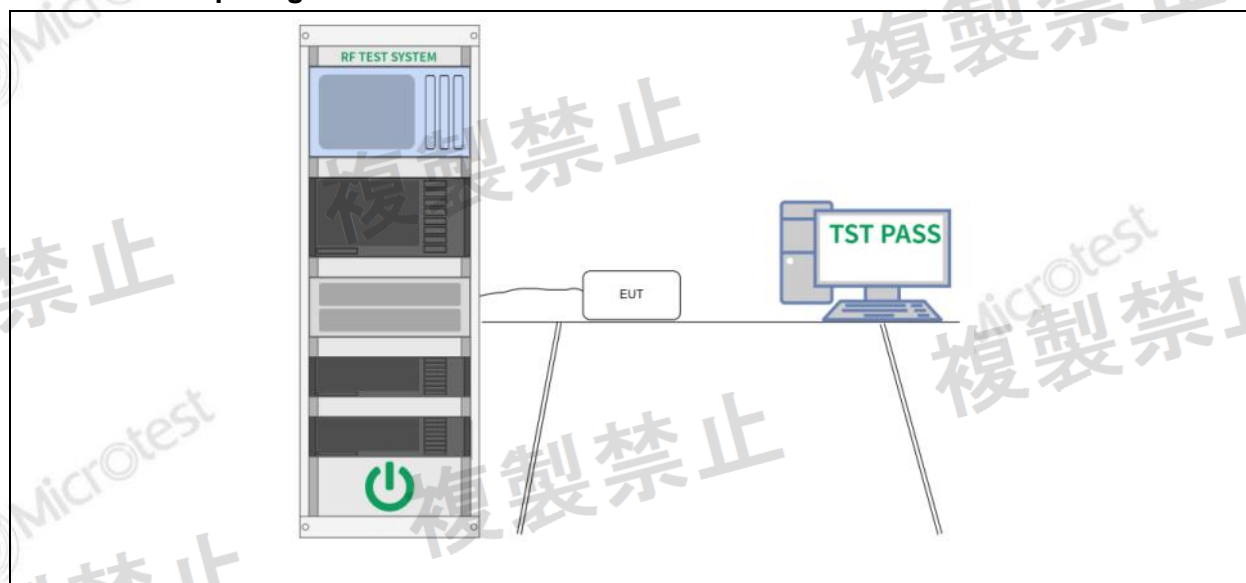
6.1 Tolerance of Frequency

Test Requirement:	Article 2-1, Item 19	
Test Limit:	±50ppm or less.	
Test Method:	Notification No.88 of MIC, 2004	
Procedure:	Center frequency:	Test frequency
	Span:	1 MHz
	RBW:	10 kHz (unmodulated)
	VBW:	10 kHz (unmodulated)
	Sweep data points:	1001 or greater
	Sweep time:	Auto
	Detector mode:	Positive peak
	Indication mode:	Max hold
	(1) Find the peak carrier signal and measure its frequency (2) For multiple antenna systems each antenna shall be measured (3) For an EUT with multiple antennas it is permissible to test a single antenna only, provided all the antenna measurement values are expected to be same for either of the following reasons: a) The frequency of all antenna transmissions are phase-synchronized to a common (fundamental) oscillator b) The antenna transmissions share a common clock signal	

6.1.1 E.U.T. Operation:

Operating Environment:					
Temperature:	24.2 °C	Humidity:	60 %	Atmospheric Pressure:	101 kPa
Pre test mode:	Mode5				
Final test mode:	Mode5				

6.1.2 Test Setup Diagram:



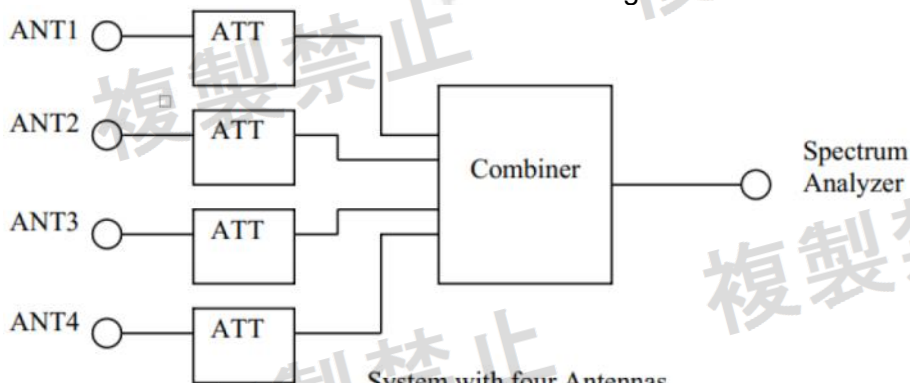
6.1.3 Test Data:

Please Refer to Appendix for Details.

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6.2 Occupied Bandwidth (99%)

Test Requirement:	Article 2-1, Item 19																		
Test Limit:	For DSSS or other modulation: The measured bandwidth at the low and high channels shall meet the following requirements: - The lowest frequency of the measured bandwidth shall not be less than 2400 MHz - The highest frequency of the measured bandwidth shall not be greater than 2483.5 MHz [Occupied Bandwidth] 26 MHz or less																		
Test Method:	Notification No.88 of MIC, 2004																		
Procedure:	<table border="1"> <tr> <td>Center Frequency:</td><td>Test frequency</td></tr> <tr> <td>Span:</td><td>2 - 3.5 times the technical standard</td></tr> <tr> <td>RBW:</td><td>Within 3% of the technical standard</td></tr> <tr> <td>VBW:</td><td>Same as RBW</td></tr> <tr> <td>Sweep time:</td><td>Auto</td></tr> <tr> <td>Sweep data points:</td><td>1001 or greater</td></tr> <tr> <td>Detector mode:</td><td>Positive peak</td></tr> <tr> <td>Indication mode:</td><td>Max hold</td></tr> <tr> <td>BW setting:</td><td>99%</td></tr> </table> (1) Measure the signal bandwidth using a spectrum analyzer (2) For multiple antenna systems: a) Each antenna shall be individually measured b) If the measured occupied bandwidth for any antenna exceeds [(Occupied Bandwidth Limit) – 100kHz] then, in addition, the occupied bandwidth shall be measured with all antennas combined – see diagram below:  System with four Antennas	Center Frequency:	Test frequency	Span:	2 - 3.5 times the technical standard	RBW:	Within 3% of the technical standard	VBW:	Same as RBW	Sweep time:	Auto	Sweep data points:	1001 or greater	Detector mode:	Positive peak	Indication mode:	Max hold	BW setting:	99%
Center Frequency:	Test frequency																		
Span:	2 - 3.5 times the technical standard																		
RBW:	Within 3% of the technical standard																		
VBW:	Same as RBW																		
Sweep time:	Auto																		
Sweep data points:	1001 or greater																		
Detector mode:	Positive peak																		
Indication mode:	Max hold																		
BW setting:	99%																		

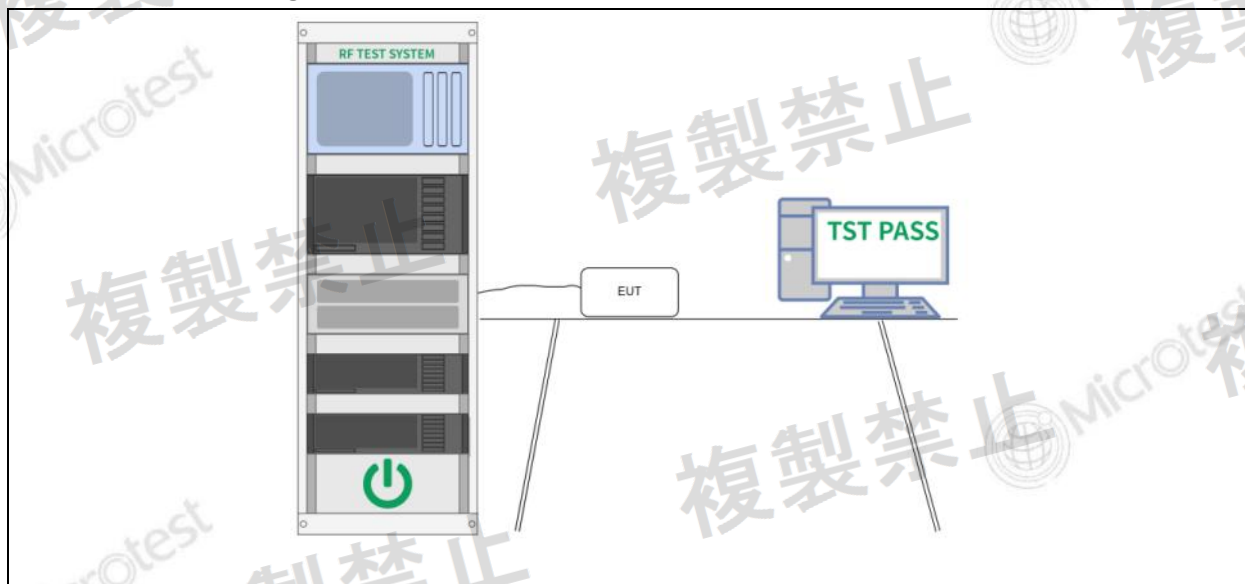
6.2.1 E.U.T. Operation:

Operating Environment:					
Temperature:	24.2 °C	Humidity:	60 %	Atmospheric Pressure:	101 kPa
Pre test mode:	Mode1, Mode2, Mode3, Mode4				
Final test mode:	Mode1, Mode2, Mode3, Mode4				

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6.2.2 Test Setup Diagram:



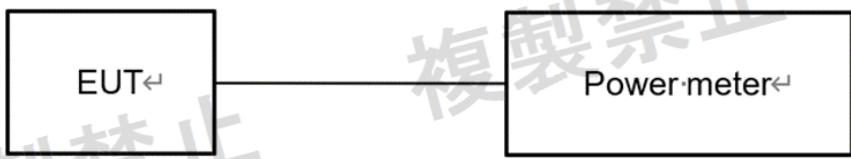
6.2.3 Test Data:

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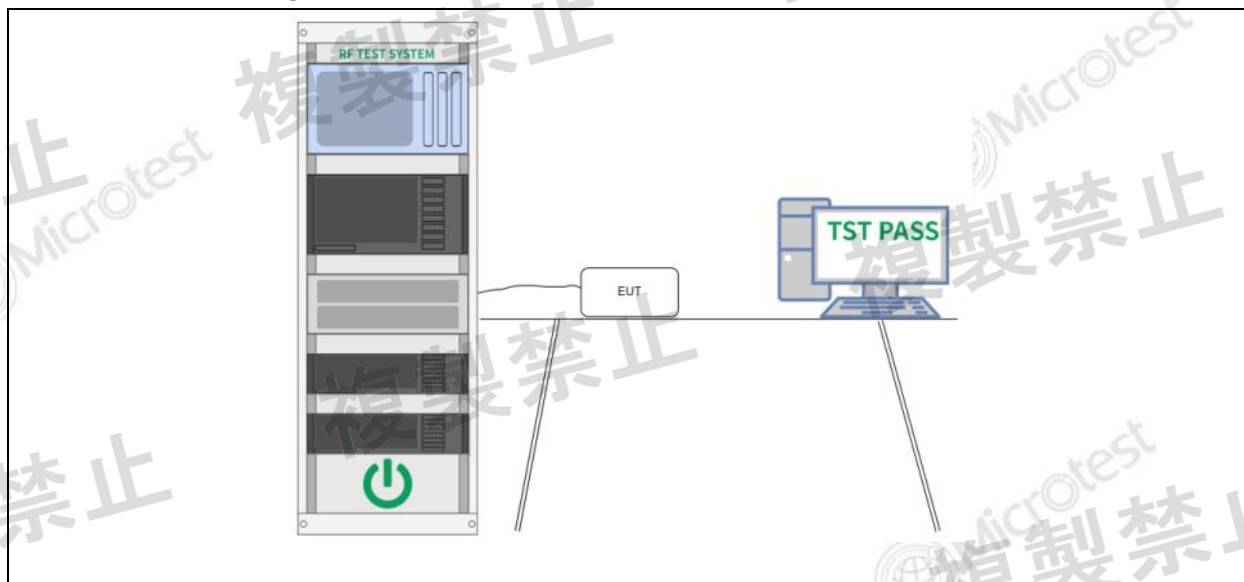
6.3 Antenna Power and Tolerance

Test Requirement:	Article 2-1, Item 19
Test Limit:	Antenna Power: 10 mW or less Tolerance: +20% or less EIRP: 12.14dBm
Test Method:	Notification No.88 of MIC, 2004
Procedure:	Connect high frequency power meter to the RF output of the EUT with a suitable attenuator and measure the total electric power. 

6.3.1 E.U.T. Operation:

Operating Environment:					
Temperature:	24.2 °C	Humidity:	60 %	Atmospheric Pressure:	101 kPa
Pre test mode:	Mode1, Mode2, Mode3, Mode4				
Final test mode:	Mode1, Mode2, Mode3, Mode4				

6.3.2 Test Setup Diagram:



6.3.3 Test Data:

Please Refer to Appendix for Details.

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6.4 Spurious Emission Intensity

Test Requirement:	Article 2-1, Item 19	
Test Limit:	(1) Below 2387 MHz: 2.5 μ W (-26 dBm)/MHz or less (2) 2387 to 2400 MHz: 25.0 μ W (-16 dBm)/MHz or less (3) 2483.5 to 2496.5 MHz: 25.0 μ W (-16 dBm)/MHz or less (4) Over 2496.5 MHz: 2.5 μ W (-26 dBm)/MHz or less	
Test Method:	Notification No.88 of MIC, 2004	
Procedure:	[Setting 1] Frequency range: (see Note 1) RBW: 1 MHz VBW: 1 MHz Sweep time: Minimum time required to make an accurate measurement Sweep Data Points: 1001 or greater Detector mode: Positive peak Indication mode: Max hold (see Note 2) Note 1: Measurement range shall be 30 MHz to 12.5 GHz, except for the following cases: -FHSS, FHSS+DSSS, FHSS+OFDM:2374 MHz to 2509.5 MHz -Other than FHSS, FHSS+DSSS, FHSS+OFDM: 2400 MHz to 2483.5 MHz Note 2: Sweep shall be repeated until the max hold waveform is stable.	
	[Setting 2] Center frequency: Frequency of spurious emission found using [Setting 1] Span: 0 Hz RBW: 1 MHz VBW: 1 MHz Sweep time: Minimum time required to make an accurate measurement. For burst type (intermittent) spurious emissions, sweep time shall be greater than one burst interval Sweep Data Points: 1001 or greater Detector mode: Sample	
	[Setting 3] Frequency range: 2374 MHz to 2400 MHz 2483.5 MHz to 2509.5 MHz RBW: 30 kHz VBW: 30 kHz Sweep time: Minimum time required to make an accurate measurement.	

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Sweep data points:	1001 or greater
Detector mode:	Positive peak
Indication mode:	Max hold

(1) After configuring the spectrum analyzer to [Setting 1], search for spurious emissions from 30 MHz to 12.5 GHz. If the sweep range does not cover the required measurement frequency range then the measurement range will need to be divided into sufficient sections of size [RBW x Sweep Data Points]. If spurious emissions greater than [Limit - 3dB] are found, then more detailed measurements are required, go to step (2)

(2) Configure the spectrum analyzer using [Setting 2] and measure the average signal amplitude.

If the spurious emission is burst type (intermittent), then the average value shall not include signal OFF time.

If spurious emissions ranging from 30 MHz to 2374 MHz and from 2509.5MHz to 12.5GHz are over the limit, then the test result is Fail.

If spurious emissions ranging from 2374 MHz to 2400 MHz and from 2483.5 MHz to 2509.5 MHz are over the limit, then further detailed measurements are required, go to step (3)

(3) In the following cases, measure the spurious emissions using [Setting 3]

- Case1: FHSS, FHSS+DSSS, FHSS+OFDM

- Case2: Other than FHSS, FHSS+DSSS, FHSS+OFDM, and the spurious emissions in step (2) are over the limit

(4) Calculate the spurious emission value (Calculated Value) using following the formula below:

Calculated Value = (Measured Value using (3) + 15.2dB)

Note: 15.2dB adjustment is derived from the Conversion Factor of RBW

Conversion Factor of RBW = 10 x Log (Reference Bandwidth / RBW of measurement) = 15.2 [dB] Where: Reference Bandwidth = 1 MHz

RBW of measurement = 30 kHz

(5) If the calculated value using (4) is over the Limit (section 6.7), go to (6)

(6) Configure the spectrum analyzer to [Setting 3] then make the following changes: Frequency: Frequency of spurious emission

Span: 1 MHz

(7) After sweep, send the span data set to the PC

(8) Convert measured data from dBm to Watts

(9) Sum all the data using the formula below. If the sum is within the limit, the test result is Pass, otherwise, Fail

$$P_s = \left(\sum_{i=1}^n E_i \right) \times \frac{S_w}{RBW \times k \times n}$$

Ps: Sum (Watts)

Ei: Measured value at each point in the Span (Watts) Sw: Span (1MHz)

n: Number of measurement points in the Span

k: Correction factor for Equivalent Noise Bandwidth, specific to each spectrum analyzer, check the instrument user guide

RBW: Resolution Bandwidth (MHz).

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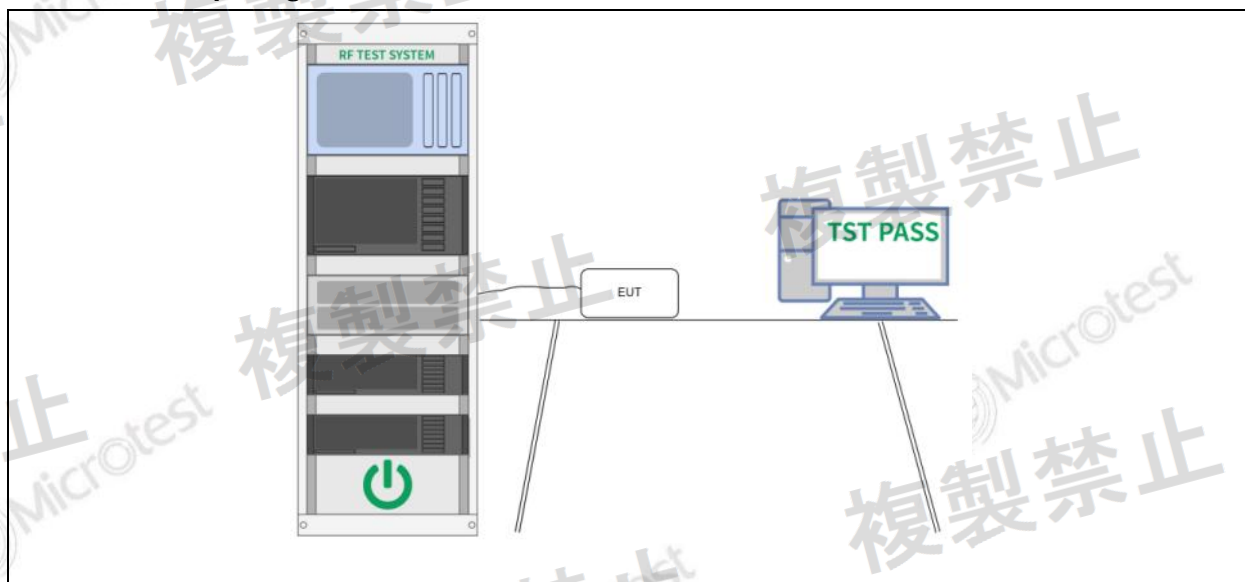
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(10) If the EUT has multiple antennas, measure the spurious emission from each individual antenna using steps (1) through (9)
(11) Convert the individual antenna spurious level measurements (step (10)) from dB to absolute values
(12) Combine (sum) the absolute values of the spurious measurements at each frequency for each antenna (to create a single composite spectrum of spurious emissions)
(13) Ensure that the composite spectrum does not exceed the Limit defined in 6.7 (Technical Standard)
(14) Configuring the spectrum analyzer using [Setting 3] and measure the spurious emissions with all the antennas electrically combined

6.4.1 E.U.T. Operation:

Operating Environment:					
Temperature:	24.2 °C	Humidity:	60 %	Atmospheric Pressure:	101 kPa
Pre test mode:	Mode1, Mode2, Mode3, Mode4				
Final test mode:	Mode1, Mode2, Mode3, Mode4				

6.4.2 Test Setup Diagram:



6.4.3 Test Data:

Please Refer to Appendix for Details.

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6.5 Secondary Radiated Emissions

Test Requirement:	Article 2-1, Item 19			
Test Limit:	(1) Below 1 GHz: 4 nW (-54dBm) or less (2) Above 1 GHz: 20 nW (-47dBm) or less			
Test Method:	Notification No.88 of MIC, 2004			
Procedure:	[Setting 1]			
	Frequency range:	30 MHz ~ 12.5 GHz		
	RBW:	Below 1 GHz:100 kHz		
		Above 1 GHz:1 MHz		
	VBW:	Below 1 GHz:100 kHz		
		Above 1 GHz:1 MHz		
	Sweep time:	Auto		
	Sweep data points:	1001 or greater		
	Detector mode:	Positive peak		
	Indication mode:	Max hold		
	[Setting 2]			
	Center Frequency:	Frequency of spurious emission found using [Setting 1]		
	Span:	0 Hz		
	RBW:	Below 1 GHz:100 kHz		
		Above 1 GHz:1 MHz		
	VBW:	Below 1 GHz:100 kHz		
		Above 1 GHz:1 MHz		
	Sweep time:	Auto		
	Sweep data points:	1001 or greater		
	Detector mode:	Sample		
	(1) Configure the spectrum analyzer to [Setting 1] and then search for spurious emissions in the range 30 MHz to 12.5GHz. If the sweep range does not cover the required measurement frequency range then the measurement range will need to be divided into sufficient sections of size [RBW x Sweep Data Points].			
	(2) If spurious emissions are found with an amplitude greater than [Limit - 10dB] then perform further detailed measurements as described in (3)			
	(3) Configure the spectrum analyzer using [Setting 2] and measure the average signal amplitude.			
	If the spurious emission is burst type (intermittent), then the average value shall not include signal OFF time Multiple Antenna Systems			
	If the EUT has multiple antennas then emissions from each antenna shall be measured individually, as described below			
	(4) For each antenna repeat steps (1) through (3). Convert all spurious level measurements from dB to absolute value			
(5) Combine (sum) the absolute values of the spurious measurements at each frequency for each antenna (to create a single composite spectrum of spurious emissions)				
(6) Ensure that the composite spectrum does not exceed the Limit				

6.5.1 E.U.T. Operation:

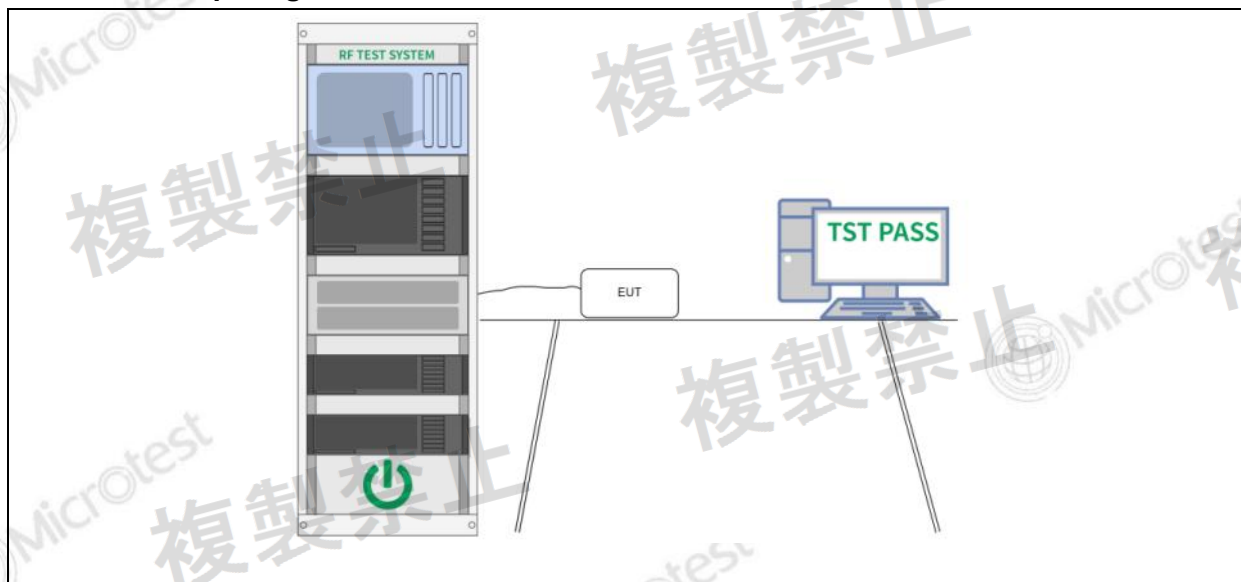
Operating Environment:				
Temperature:	24.2 °C	Humidity:	60 %	Atmospheric Pressure: 101 kPa

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Pre test mode:	Mode6, Mode7
Final test mode:	Mode6, Mode7

6.5.2 Test Setup Diagram:



6.5.3 Test Data:

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Photographs of the test setup

Refer to Appendix - Test Setup Photos

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Photographs of the EUT

Refer to Appendix - EUT Photos

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Appendix A: Deviation of frequency

Test Result

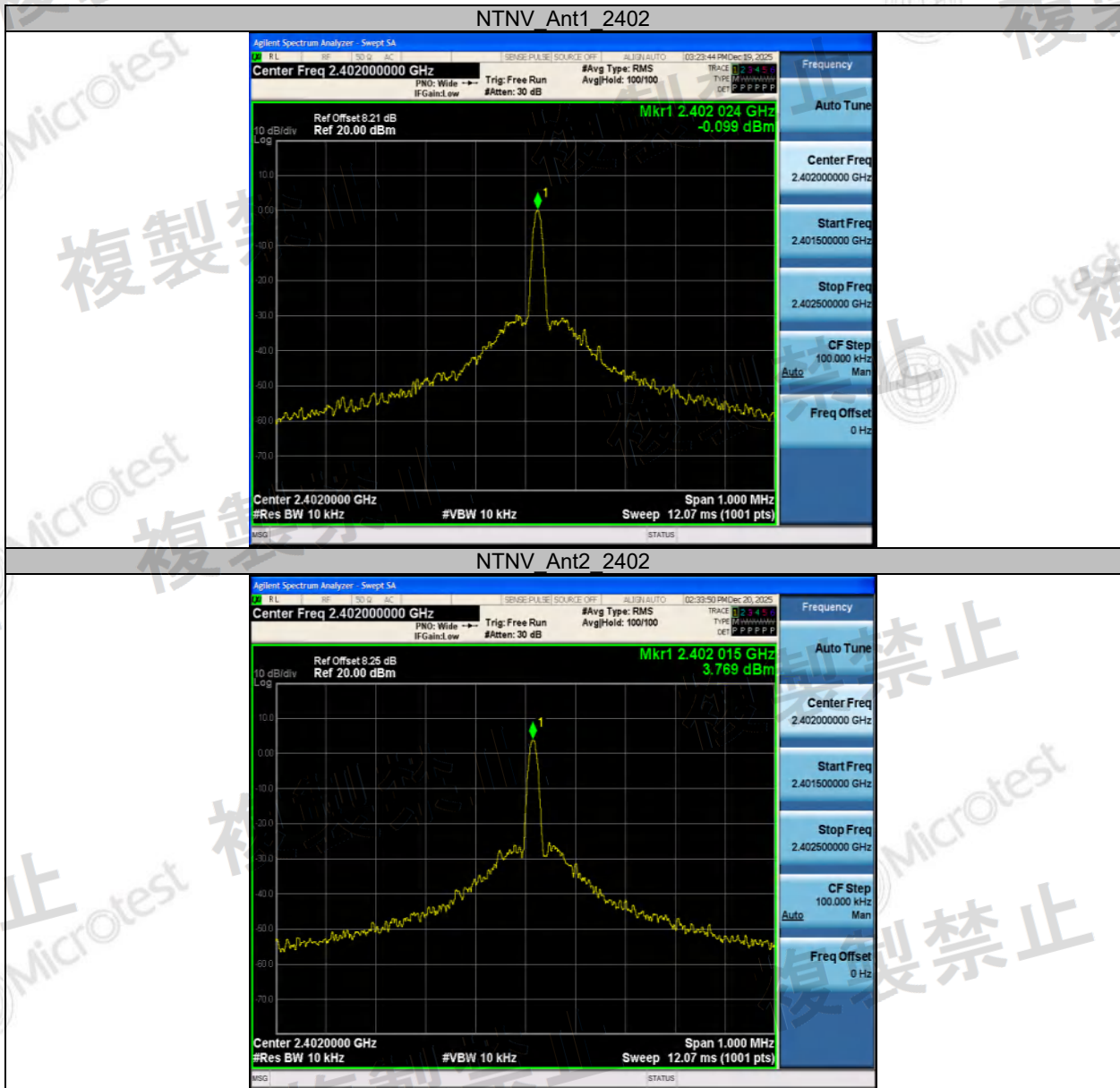
Test Condition	Test Mode	Antenna	Freq. [MHz]	CenterFreq [MHz]	Result [ppm]	Limit [ppm]	Verdict
unmodulated carrier	BLE_1M	Ant1	2402	2402.024	9.99167	±50	PASS
		Ant2	2402	2402.015	6.24480	±50	PASS
		Ant1	2440	2440.025	10.24590	±50	PASS
		Ant2	2440	2440.015	6.14754	±50	PASS
		Ant1	2480	2480.025	10.08065	±50	PASS
		Ant2	2480	2480.014	5.64516	±50	PASS

Note: Result [ppm] = (CenterFreq [MHz] – Freq. [MHz]) / Freq. [MHz] * 1000000

TEST REPORT

Report No.: MTi251023015-0113E2

Test Graphs



TEST REPORT

Report No.: MTi251023015-0113E2

NTNV Ant1 2440



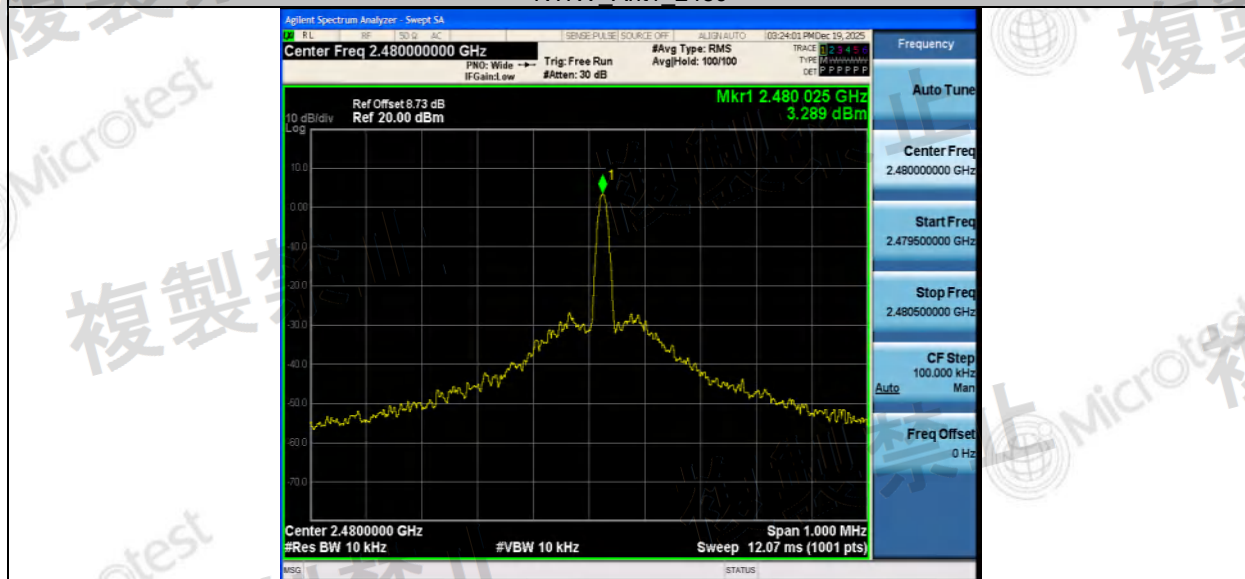
NTNV Ant2 2440



TEST REPORT

Report No.: MTi251023015-0113E2

NTNV Ant1 2480



NTNV Ant2 2480



TEST REPORT

Report No.: MTi251023015-0113E2

Appendix B: Deviation of antenna power

Test Result

Antenna Power							
Test Condition	Test Mode	Antenna	Freq. [MHz]	Result [dBm]	Result [mW]	Limit [mW]	Verdict
NTNV	BLE_1M	Ant1	2402	-4.26	0.3750	≤10	PASS
		Ant2	2402	-2.51	0.5610	≤10	PASS
		Ant1	2440	-3.51	0.4457	≤10	PASS
		Ant2	2440	-1.79	0.6622	≤10	PASS
		Ant1	2480	-2.35	0.5821	≤10	PASS
		Ant2	2480	-0.83	0.8260	≤10	PASS
	BLE_2M	Ant1	2402	-5.43	0.2864	≤10	PASS
		Ant2	2402	-3.34	0.4634	≤10	PASS
		Ant1	2440	-4.38	0.3648	≤10	PASS
		Ant2	2440	-2.66	0.5420	≤10	PASS
		Ant1	2480	-3.37	0.4603	≤10	PASS
		Ant2	2480	-1.57	0.6966	≤10	PASS

Note:

The EUT is set to be in continuously transmitting mode.

Tolerance								
Test Condition	Test Mode	Antenna	Freq. [MHz]	Power [mW]	RatedPower [mW]	Result [%]	Limit [%]	Verdict
NTNV	BLE_1M	Ant1	2402	0.3750	1	-62.50	≤20	PASS
		Ant2	2402	0.5610	1	-43.90	≤20	PASS
		Ant1	2440	0.4457	1	-55.43	≤20	PASS
		Ant2	2440	0.6622	1	-33.78	≤20	PASS
		Ant1	2480	0.5821	1	-41.79	≤20	PASS
		Ant2	2480	0.8260	1	-17.40	≤20	PASS
	BLE_2M	Ant1	2402	0.2864	1	-71.36	≤20	PASS
		Ant2	2402	0.4634	1	-53.66	≤20	PASS
		Ant1	2440	0.3648	1	-63.52	≤20	PASS
		Ant2	2440	0.5420	1	-45.80	≤20	PASS
		Ant1	2480	0.4603	1	-53.97	≤20	PASS
		Ant2	2480	0.6966	1	-30.34	≤20	PASS

Notes:

$$\text{Result} = (\text{Power [mW]} - \text{RatedPower [mW]}) / \text{RatedPower [mW]} * 100$$

The rated power is 1 mW for BLE_1M, which is declared by the manufacturer.

The rated power is 1 mW for BLE_2M, which is declared by the manufacturer.

EIRP							
Test Condition	Test Mode	Antenna	Freq. [MHz]	Result [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
NTNV	BLE_1M	Ant1	2402	-4.26	-5.49	≤12.14	PASS
		Ant2	2402	-2.51	-2.89	≤12.14	PASS
		Ant1	2440	-3.51	-4.74	≤12.14	PASS
		Ant2	2440	-1.79	-2.17	≤12.14	PASS
		Ant1	2480	-2.35	-3.58	≤12.14	PASS
		Ant2	2480	-0.83	-1.21	≤12.14	PASS
	BLE_2M	Ant1	2402	-5.43	-6.66	≤12.14	PASS
		Ant2	2402	-3.34	-3.72	≤12.14	PASS
		Ant1	2440	-4.38	-5.61	≤12.14	PASS
		Ant2	2440	-2.66	-3.04	≤12.14	PASS
		Ant1	2480	-3.37	-4.60	≤12.14	PASS
		Ant2	2480	-1.57	-1.95	≤12.14	PASS

Notes:

The ANT1 antenna gain is -1.23 dBi, ANT2 antenna gain is -0.38 dBi.

EIRP= Conducted Peak Power+ antenna gain.

TEST REPORT

Report No.: MTi251023015-0113E2

Appendix C: Occupied Bandwidth

Test Result

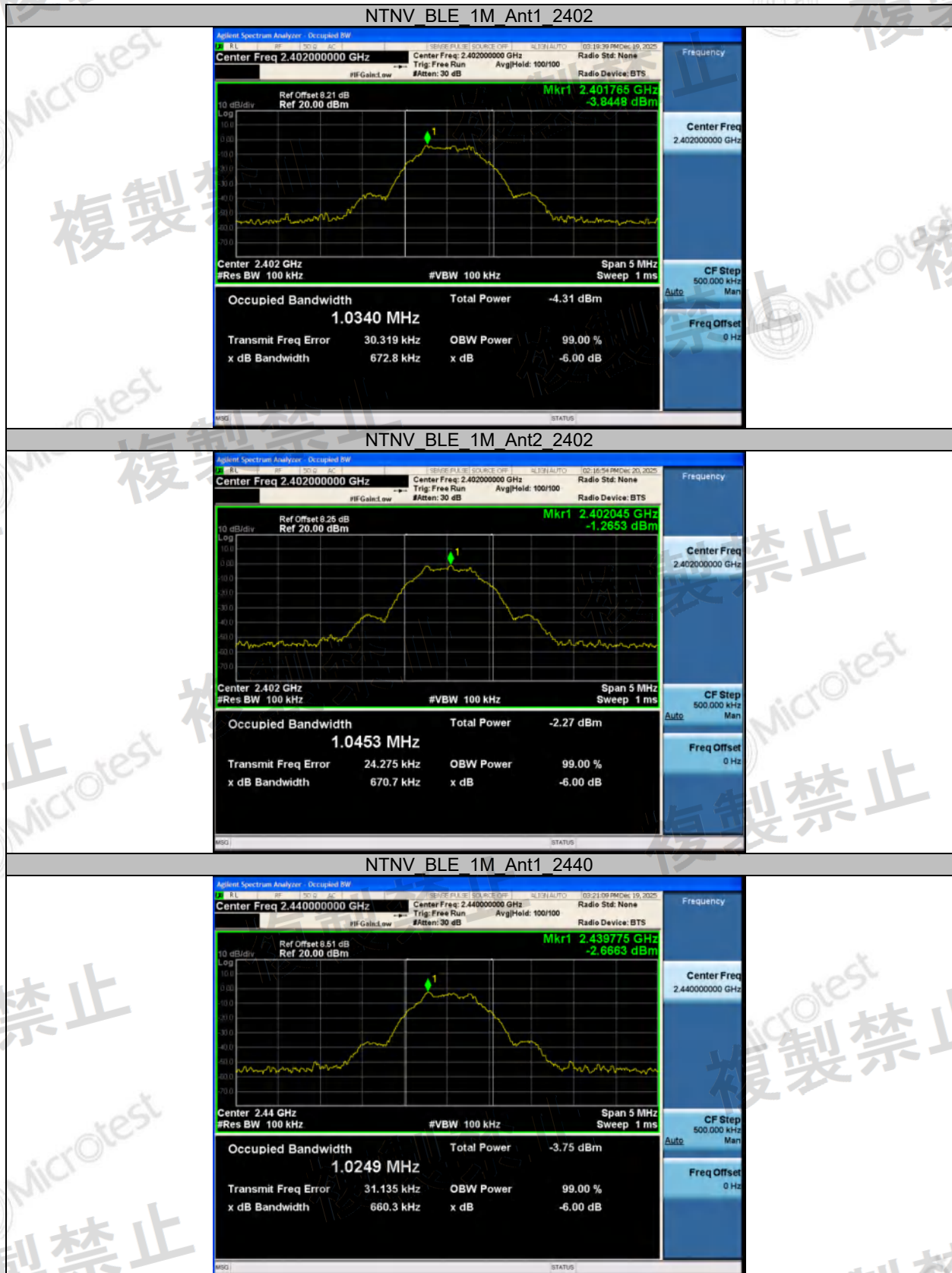
Test Condition	Test Mode	Antenna	Freq. [MHz]	Result [MHz]	Limit [MHz]	Verdict
NTNV	BLE_1M	Ant1	2402	1.034	≤26	PASS
		Ant2	2402	1.045	≤26	PASS
		Ant1	2440	1.025	≤26	PASS
		Ant2	2440	1.033	≤26	PASS
		Ant1	2480	1.031	≤26	PASS
		Ant2	2480	1.027	≤26	PASS
	BLE_2M	Ant1	2402	2.060	≤26	PASS
		Ant2	2402	2.034	≤26	PASS
		Ant1	2440	2.186	≤26	PASS
		Ant2	2440	2.022	≤26	PASS
		Ant1	2480	2.052	≤26	PASS
		Ant2	2480	2.039	≤26	PASS



TEST REPORT

Report No.: MTi251023015-0113E2

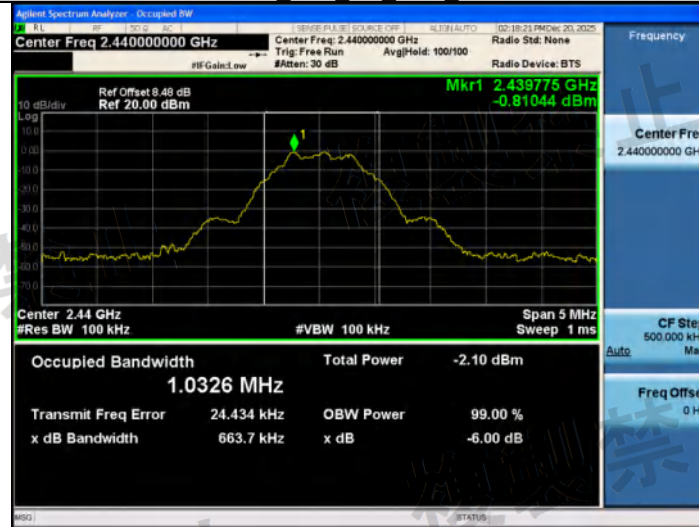
Test Graphs



TEST REPORT

Report No.: MTi251023015-0113E2

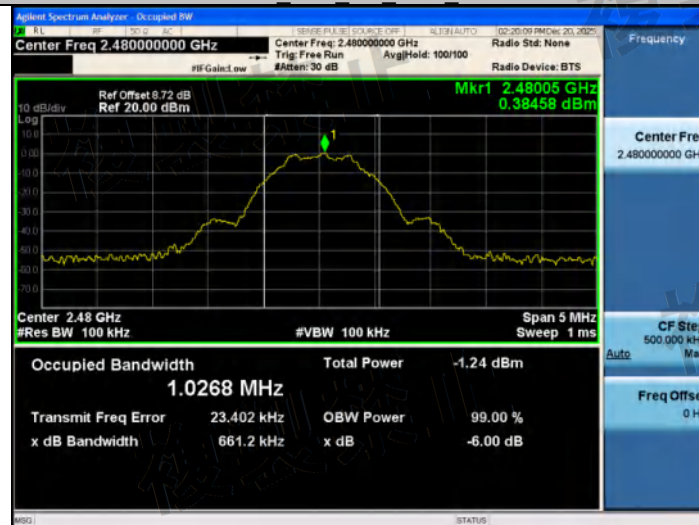
NTNV BLE 1M Ant2 2440



NTNV BLE 1M Ant1 2480



NTNV BLE 1M Ant2 2480



TEST REPORT

Report No.: MTi251023015-0113E2

NTNV BLE 2M Ant1 2402



NTNV BLE 2M Ant2 2402



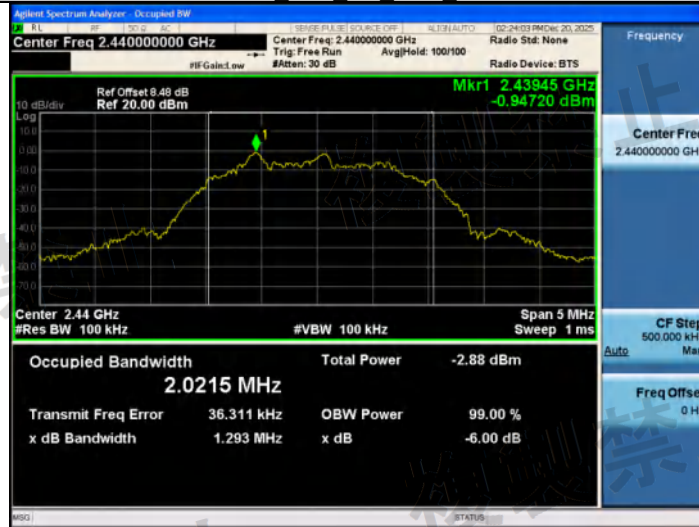
NTNV BLE 2M Ant1 2440



TEST REPORT

Report No.: MTi251023015-0113E2

NTNV BLE 2M Ant2 2440



NTNV BLE 2M Ant1 2480



NTNV BLE 2M Ant2 2480



TEST REPORT

Report No.: MTi251023015-0113E2

Appendix D: Spurious Emission of TX

Test Result

Test Condition	Test Mode	Antenna	Freq. [MHz]	Freq.Range [MHz]	Result [dBm/MHz]	Limit [dBm/MHz]	Result [μW/MHz]	Limit [μW/MHz]	Verdict
NTNV	BLE_1 M	Ant1	2402	30~1000	-51.85	≤-26	0.00653	≤2.5	PASS
				1000~2387	-51.31	≤-26	0.00740	≤2.5	PASS
				2387~2400	-35.96	≤-16	0.25351	≤25	PASS
				2483.5~2496.5	-41.57	≤-16	0.06966	≤25	PASS
				2496.5~13000	-34.77	≤-26	0.33343	≤2.5	PASS
		Ant2	2402	30~1000	-52.13	≤-26	0.00612	≤2.5	PASS
				1000~2387	-51.09	≤-26	0.00778	≤2.5	PASS
				2387~2400	-36.41	≤-16	0.22856	≤25	PASS
				2483.5~2496.5	-40.28	≤-16	0.09376	≤25	PASS
				2496.5~13000	-31.82	≤-26	0.65766	≤2.5	PASS
		Ant1	2440	30~1000	-51.62	≤-26	0.00689	≤2.5	PASS
				1000~2387	-50.73	≤-26	0.00845	≤2.5	PASS
				2387~2400	-40.96	≤-16	0.08017	≤25	PASS
				2483.5~2496.5	-41.17	≤-16	0.07638	≤25	PASS
				2496.5~13000	-35.50	≤-26	0.28184	≤2.5	PASS
		Ant2	2440	30~1000	-51.07	≤-26	0.00782	≤2.5	PASS
				1000~2387	-51.20	≤-26	0.00759	≤2.5	PASS
				2387~2400	-41.52	≤-16	0.07047	≤25	PASS
				2483.5~2496.5	-40.35	≤-16	0.09226	≤25	PASS
				2496.5~13000	-32.76	≤-26	0.52966	≤2.5	PASS
		Ant1	2480	30~1000	-51.70	≤-26	0.00676	≤2.5	PASS
				1000~2387	-50.78	≤-26	0.00836	≤2.5	PASS
				2387~2400	-40.84	≤-16	0.08241	≤25	PASS
				2483.5~2496.5	-40.72	≤-16	0.08472	≤25	PASS
				2496.5~13000	-32.54	≤-26	0.55719	≤2.5	PASS
		Ant2	2480	30~1000	-51.28	≤-26	0.00745	≤2.5	PASS
				1000~2387	-50.67	≤-26	0.00857	≤2.5	PASS
				2387~2400	-41.22	≤-16	0.07551	≤25	PASS
				2483.5~2496.5	-39.88	≤-16	0.10280	≤25	PASS
				2496.5~13000	-30.03	≤-26	0.99312	≤2.5	PASS
	BLE_2 M	Ant1	2402	30~1000	-52.03	≤-26	0.00627	≤2.5	PASS
				1000~2387	-50.21	≤-26	0.00953	≤2.5	PASS
				2387~2400	-26.86	≤-16	2.06063	≤25	PASS
				2483.5~2496.5	-41.25	≤-16	0.07499	≤25	PASS
				2496.5~13000	-35.25	≤-26	0.29854	≤2.5	PASS
		Ant2	2402	30~1000	-51.84	≤-26	0.00655	≤2.5	PASS
				1000~2387	-50.81	≤-26	0.00830	≤2.5	PASS
				2387~2400	-24.63	≤-16	3.44350	≤25	PASS
				2483.5~2496.5	-40.66	≤-16	0.08590	≤25	PASS
				2496.5~13000	-32.65	≤-26	0.54325	≤2.5	PASS
		Ant1	2440	30~1000	-52.16	≤-26	0.00608	≤2.5	PASS
				1000~2387	-51.06	≤-26	0.00783	≤2.5	PASS
				2387~2400	-41.55	≤-16	0.06998	≤25	PASS
				2483.5~2496.5	-41.10	≤-16	0.07762	≤25	PASS
				2496.5~13000	-36.46	≤-26	0.22594	≤2.5	PASS
		Ant2	2440	30~1000	-51.76	≤-26	0.00667	≤2.5	PASS
				1000~2387	-50.96	≤-26	0.00802	≤2.5	PASS
				2387~2400	-41.15	≤-16	0.07674	≤25	PASS
				2483.5~2496.5	-40.73	≤-16	0.08453	≤25	PASS
				2496.5~13000	-32.65	≤-26	0.54325	≤2.5	PASS
		Ant1	2480	30~1000	-47.15	≤-26	0.01928	≤2.5	PASS
				1000~2387	-50.59	≤-26	0.00873	≤2.5	PASS
				2387~2400	-40.32	≤-16	0.09290	≤25	PASS
				2483.5~2496.5	-40.57	≤-16	0.08770	≤25	PASS
				2496.5~13000	-33.14	≤-26	0.48529	≤2.5	PASS

TEST REPORT

Report No.: MTi251023015-0113E2

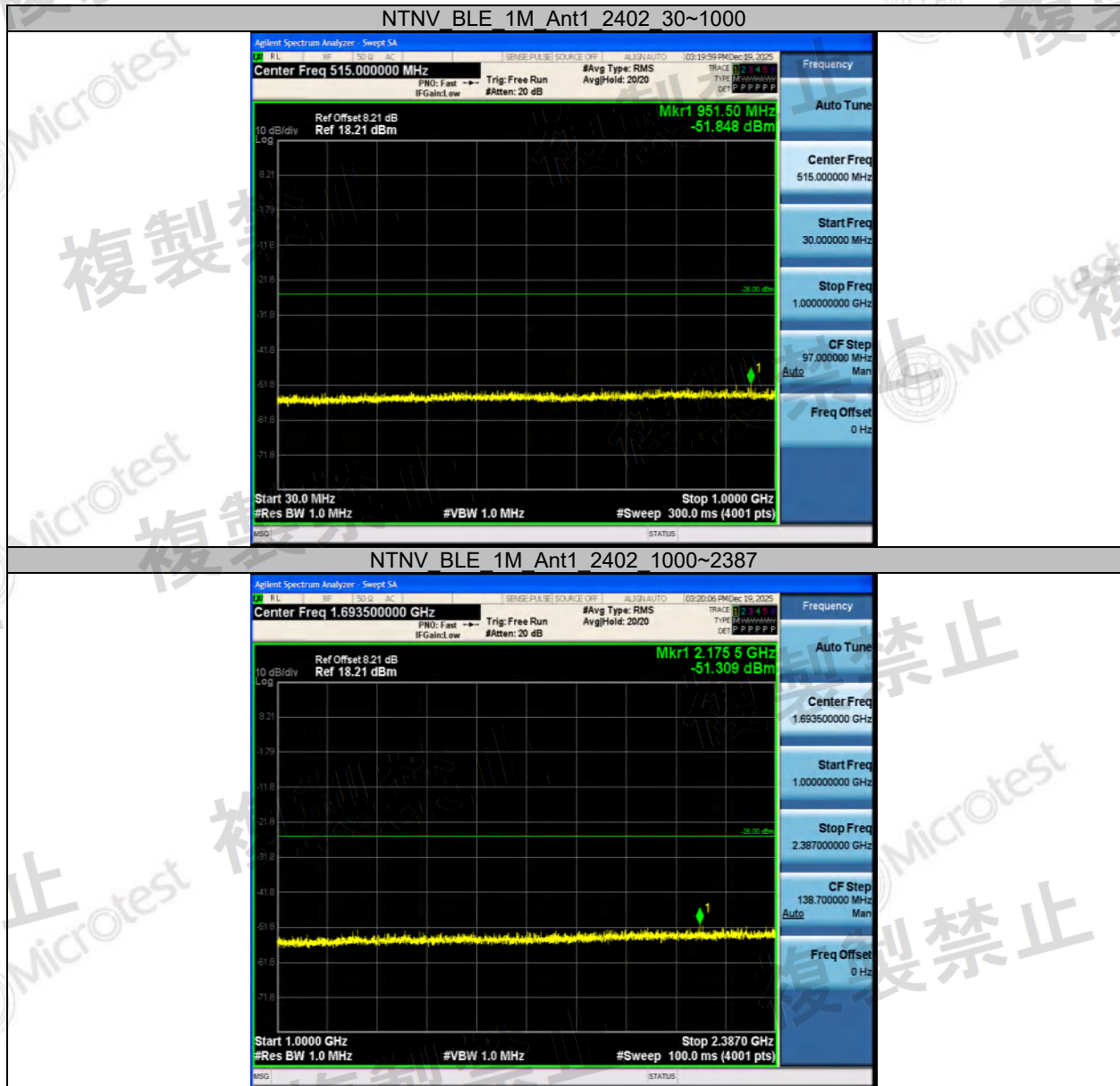
		Ant2	2480	30~1000	-51.58	≤-26	0.00695	≤2.5	PASS
				1000~2387	-50.92	≤-26	0.00809	≤2.5	PASS
				2387~2400	-41.25	≤-16	0.07499	≤25	PASS
				2483.5~2496.5	-40.85	≤-16	0.08222	≤25	PASS
				2496.5~13000	-30.65	≤-26	0.86099	≤2.5	PASS



TEST REPORT

Report No.: MTi251023015-0113E2

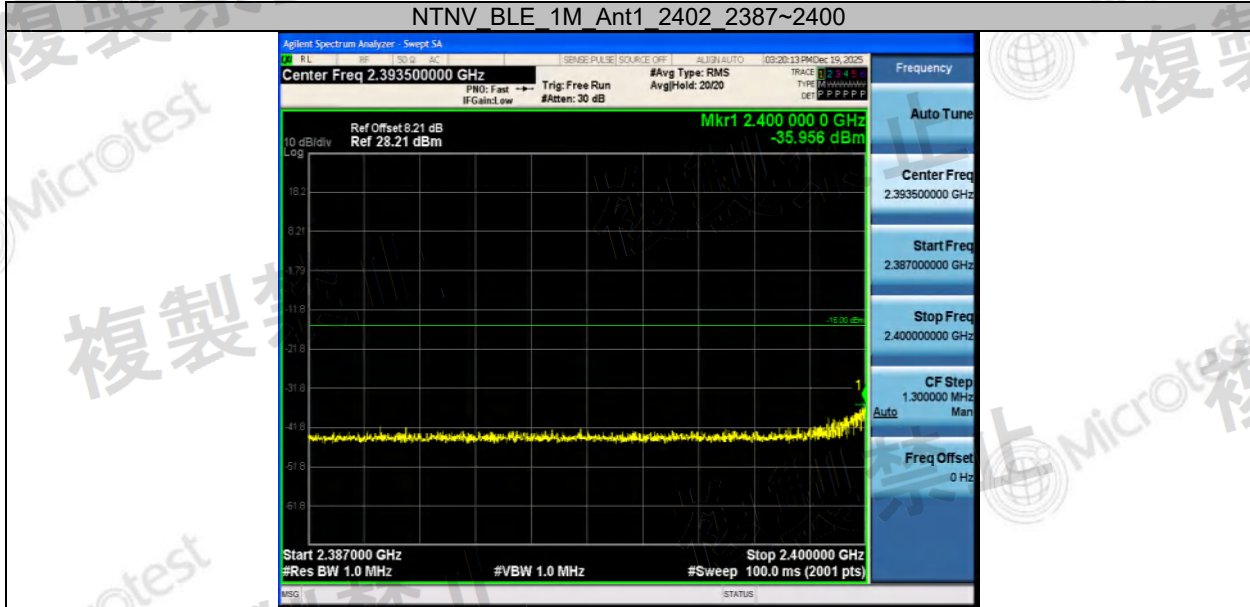
Test Graphs



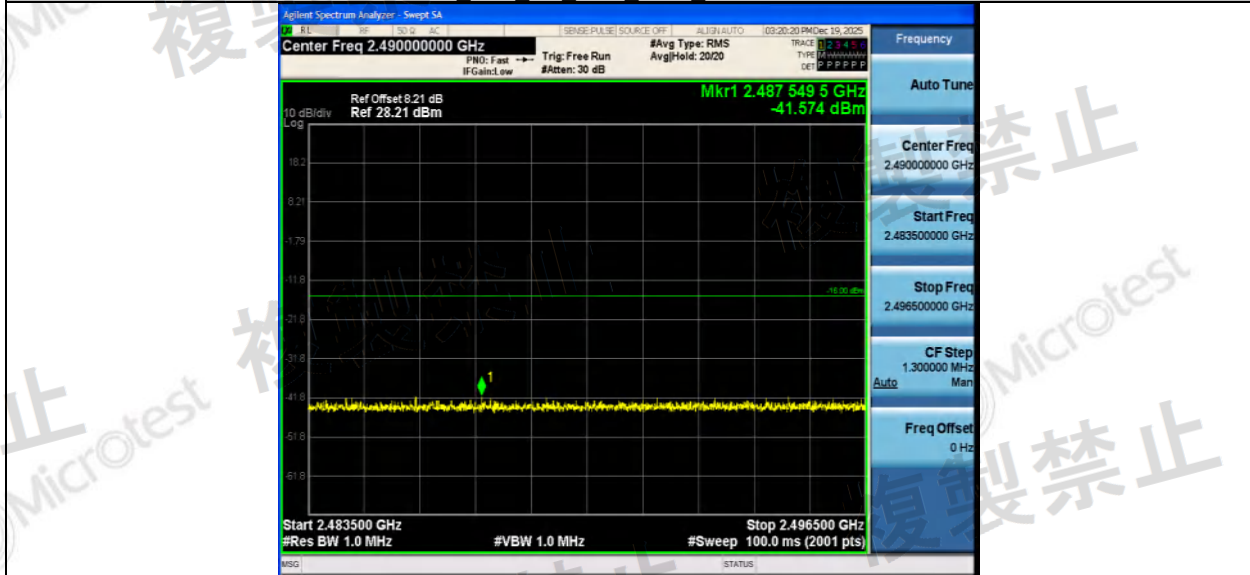
TEST REPORT

Report No.: MTi251023015-0113E2

NTNV BLE 1M Ant1 2402 2387~2400



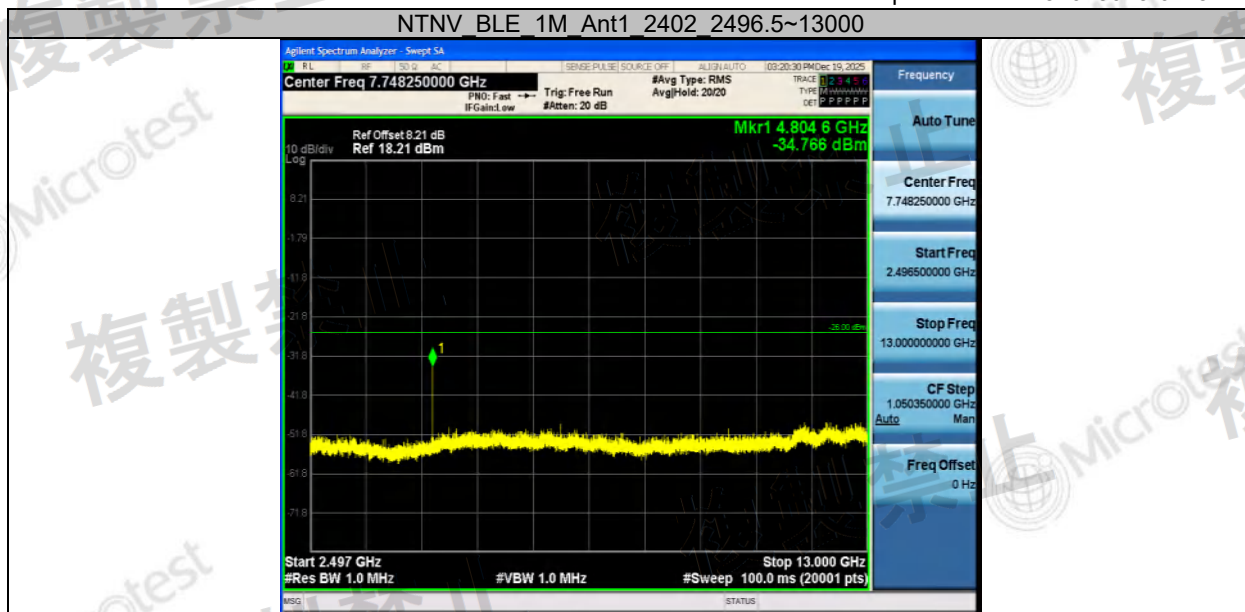
NTNV BLE 1M Ant1 2402 2483.5~2496.5



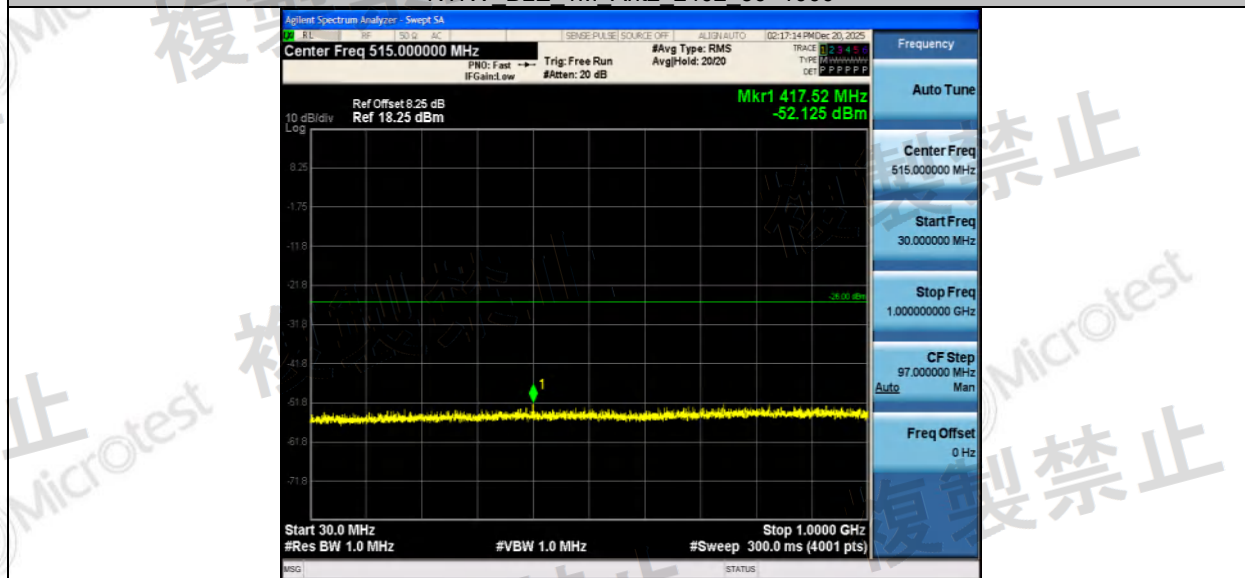
TEST REPORT

Report No.: MTi251023015-0113E2

NTNV BLE 1M Ant1 2402 2496.5~13000



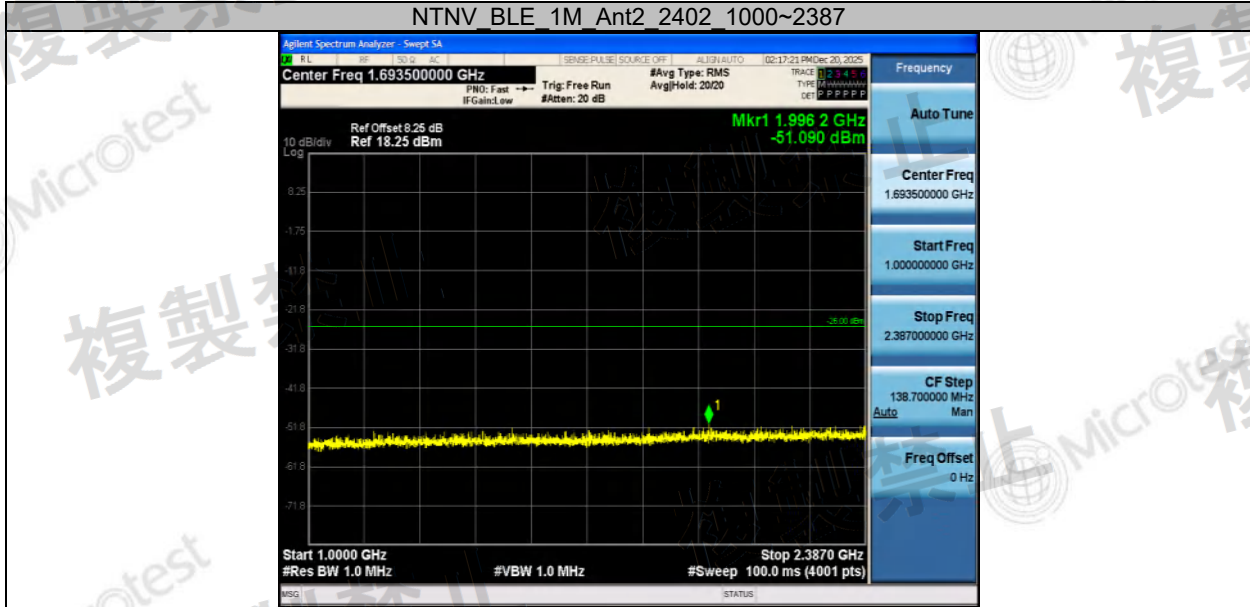
NTNV BLE 1M Ant2 2402 30~1000



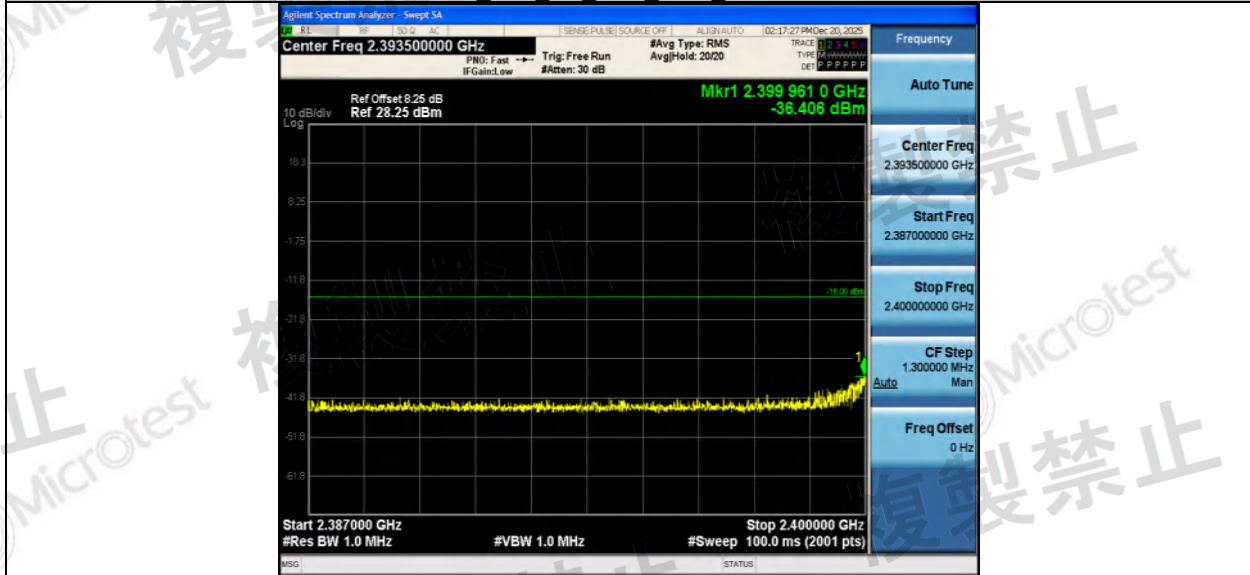
TEST REPORT

Report No.: MTi251023015-0113E2

NTNV BLE 1M Ant2 2402 1000~2387



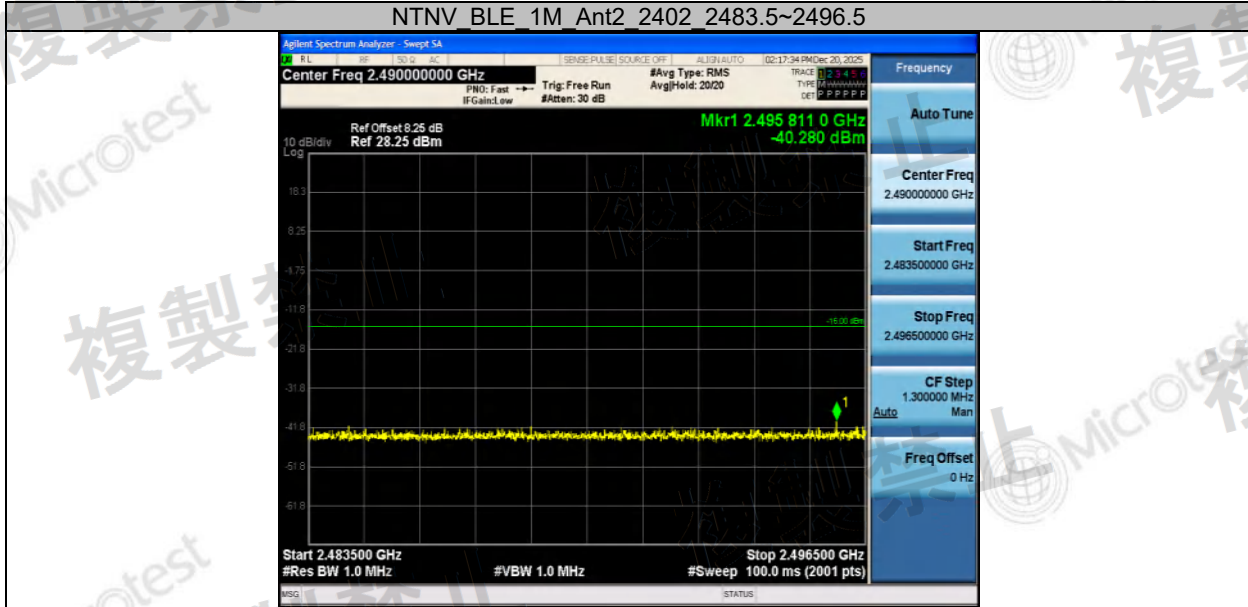
NTNV BLE 1M Ant2 2402 2387~2400



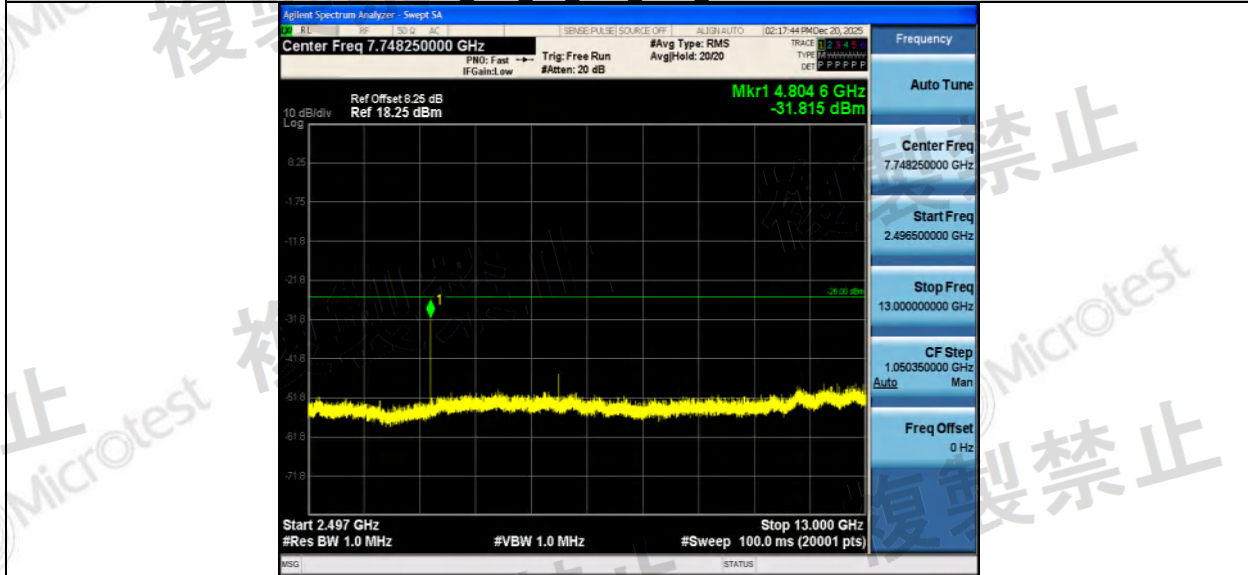
TEST REPORT

Report No.: MTi251023015-0113E2

NTNV BLE 1M Ant2 2402 2483.5~2496.5

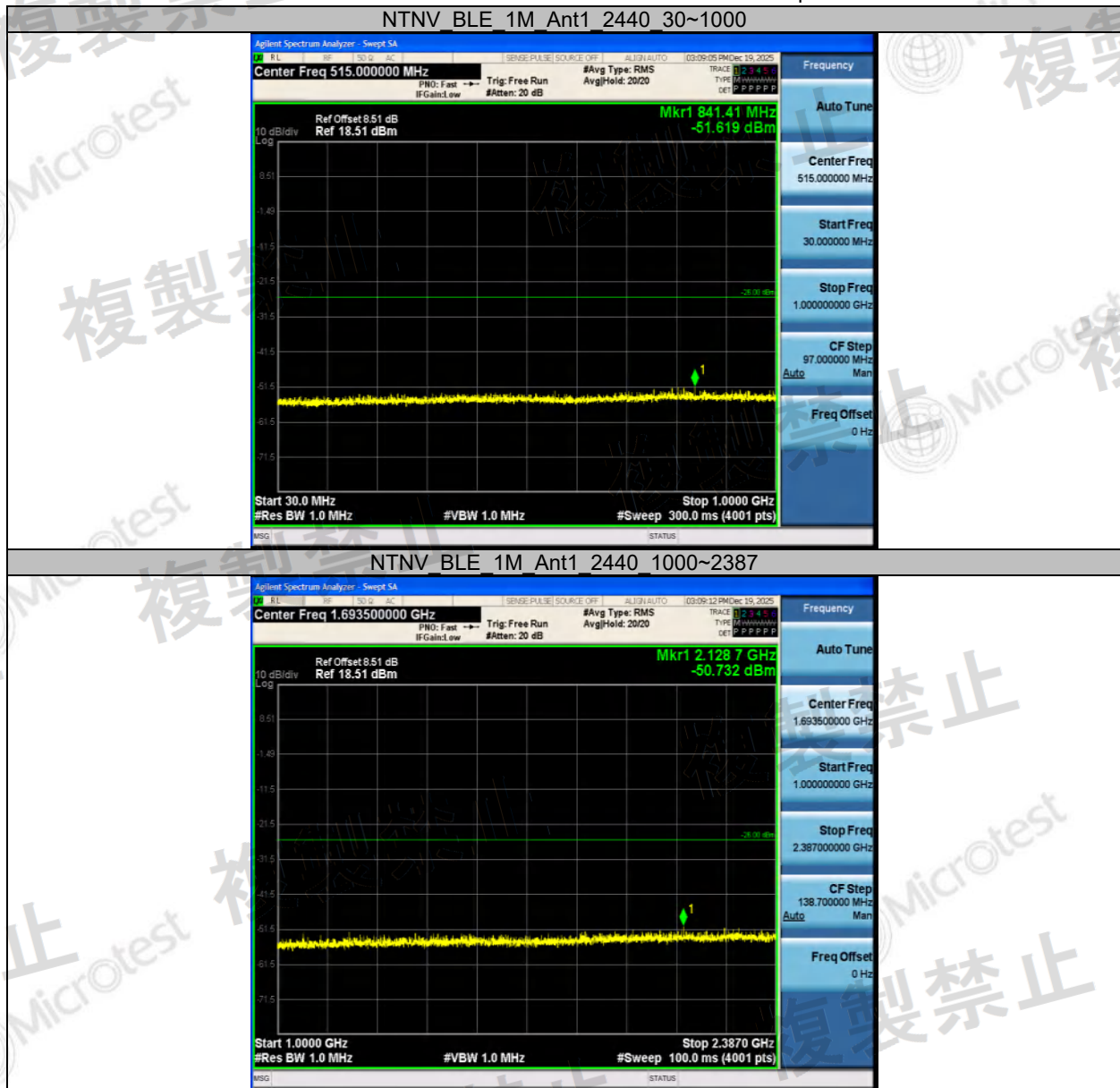


NTNV BLE 1M Ant2 2402 2496.5~13000



TEST REPORT

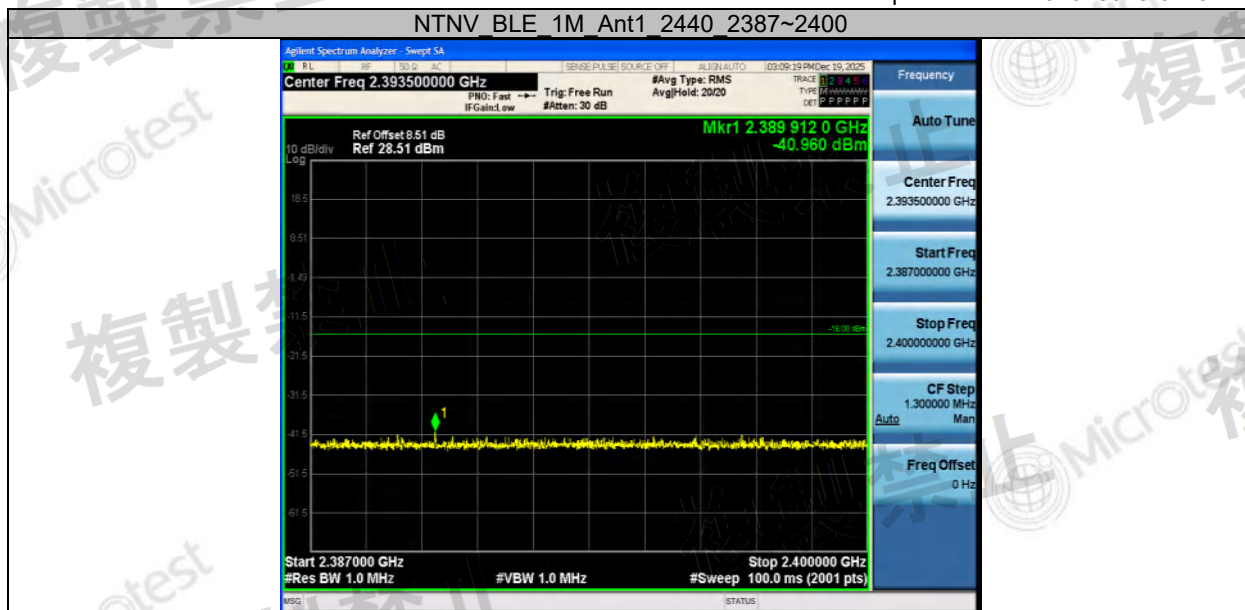
Report No.: MTi251023015-0113E2



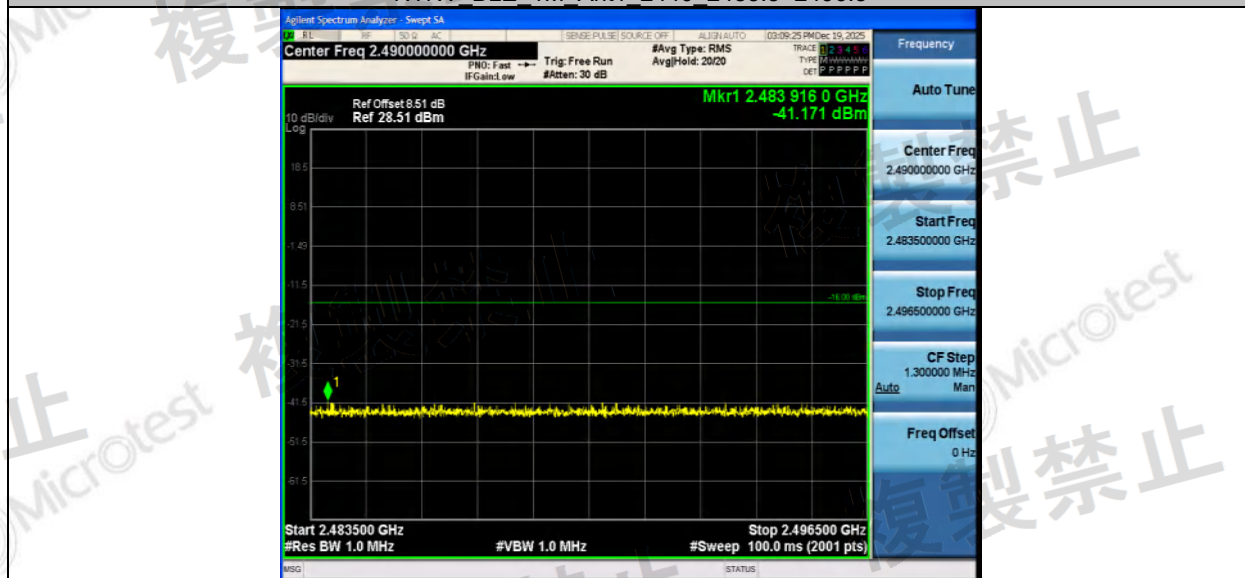
TEST REPORT

Report No.: MTi251023015-0113E2

NTNV BLE 1M Ant1 2440 2387~2400



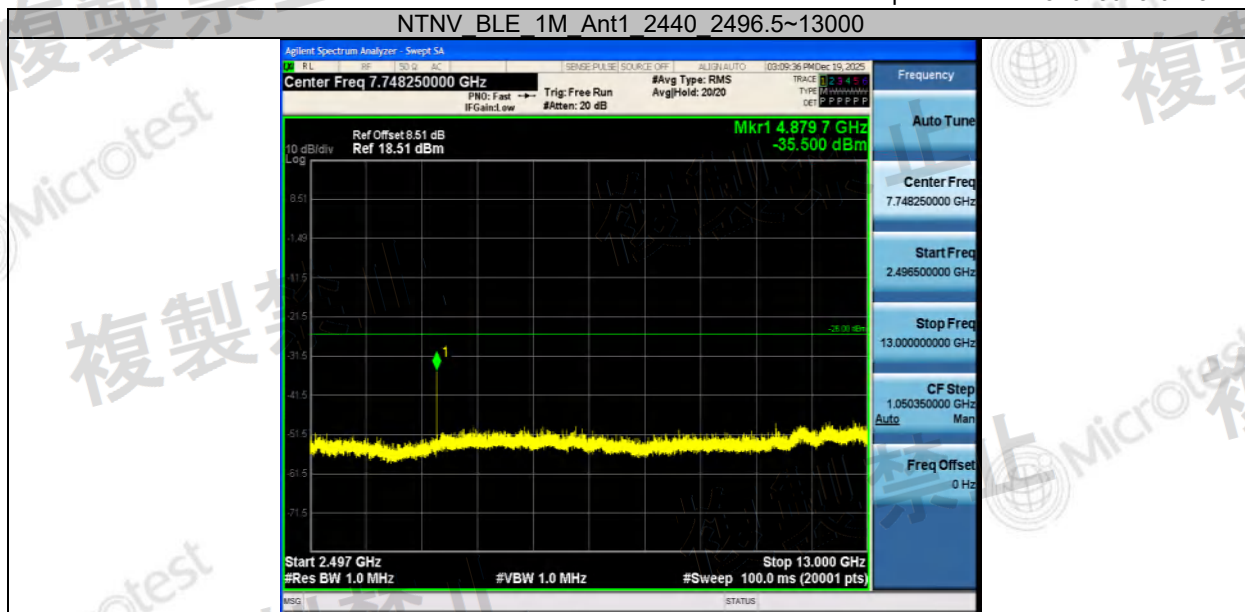
NTNV BLE 1M Ant1 2440 2483.5~2496.5



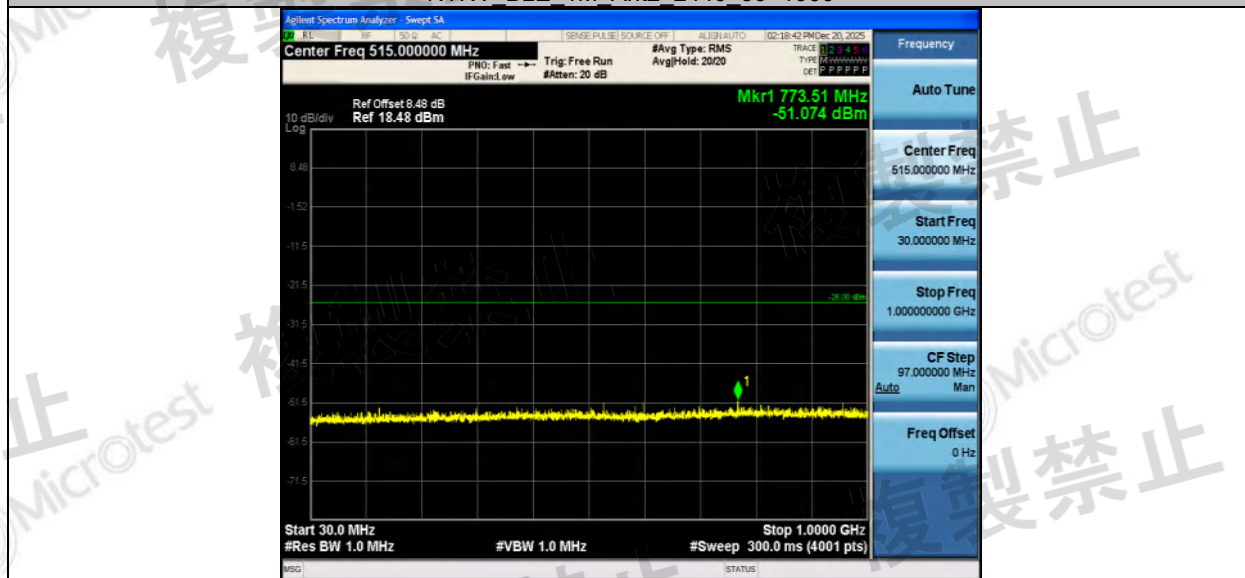
TEST REPORT

Report No.: MTi251023015-0113E2

NTNV BLE 1M Ant1 2440 2496.5~13000



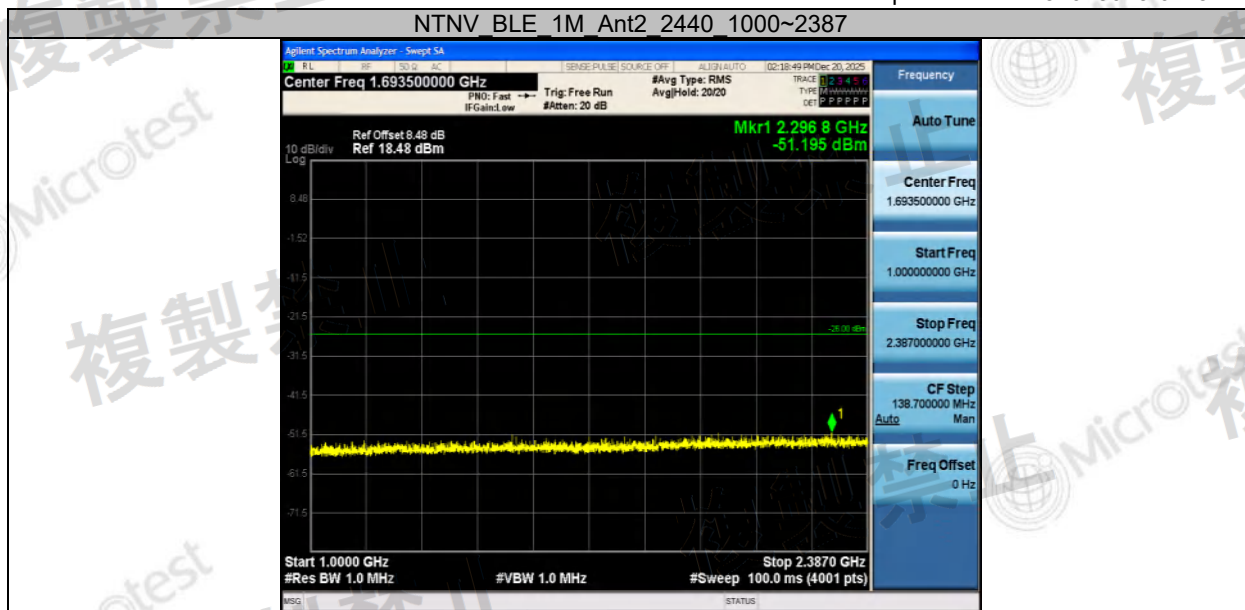
NTNV BLE 1M Ant2 2440 30~1000



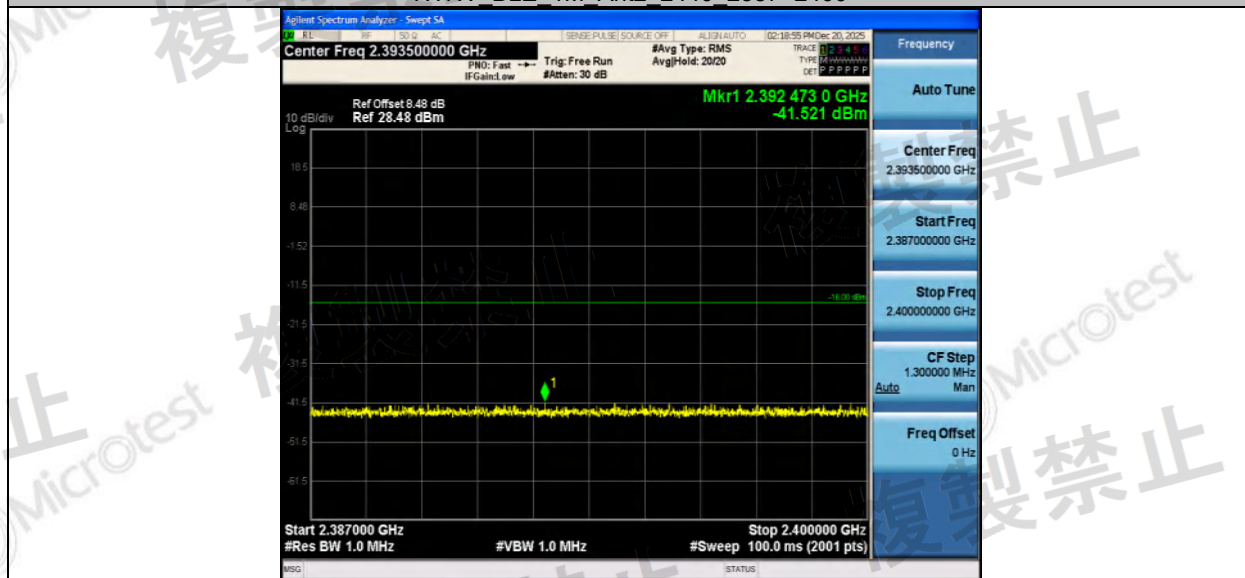
TEST REPORT

Report No.: MTi251023015-0113E2

NTNV BLE 1M Ant2 2440 1000~2387



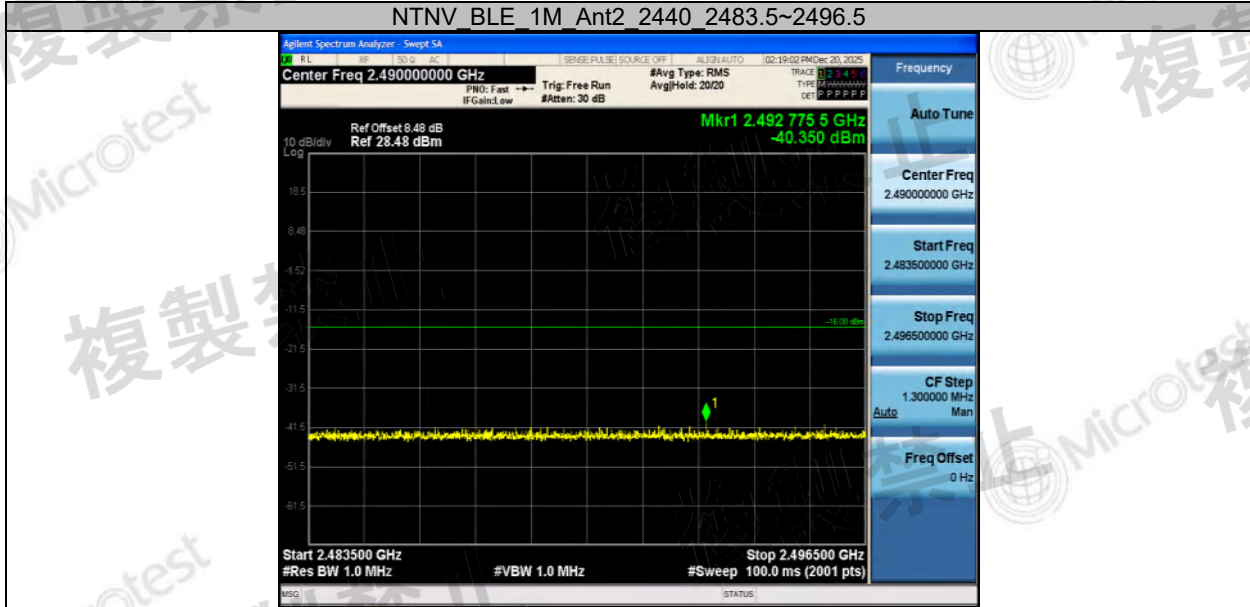
NTNV BLE 1M Ant2 2440 2387~2400



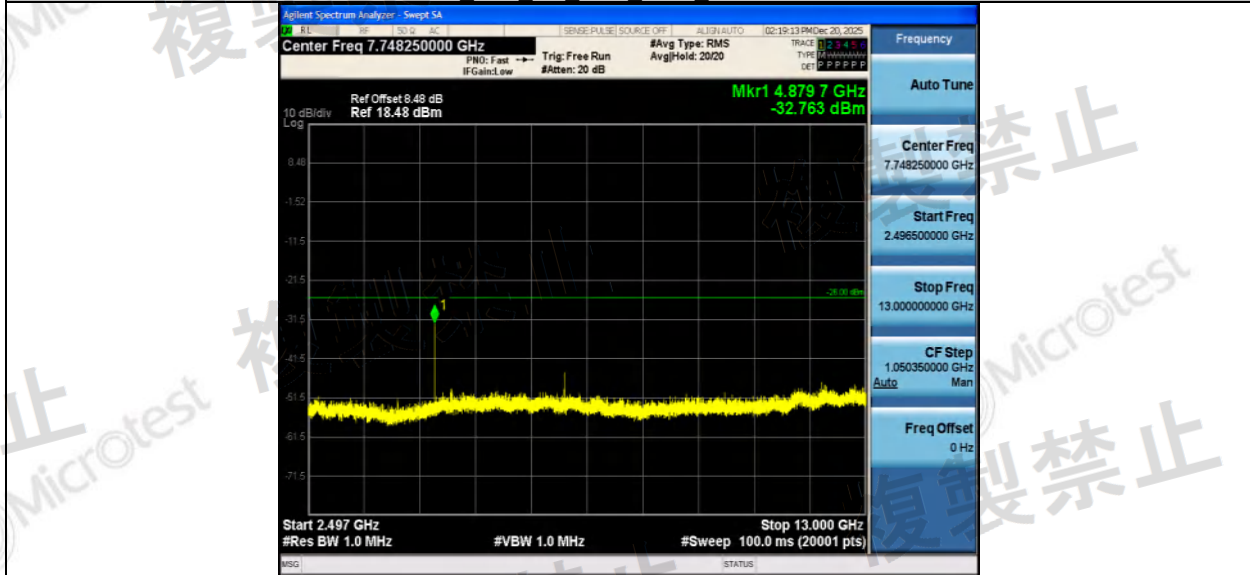
TEST REPORT

Report No.: MTi251023015-0113E2

NTNV BLE 1M Ant2 2440 2483.5~2496.5

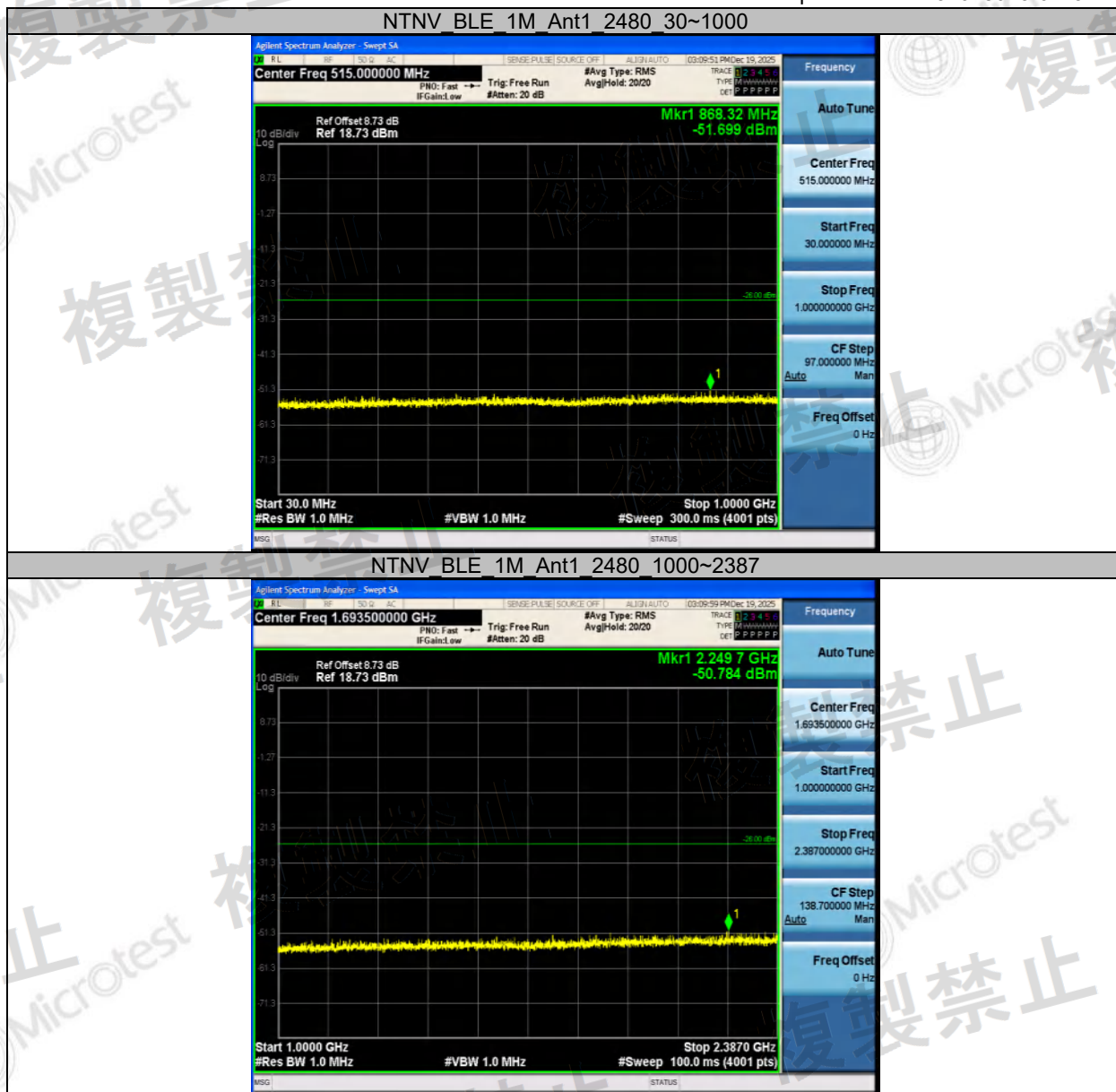


NTNV BLE 1M Ant2 2440 2496.5~13000



TEST REPORT

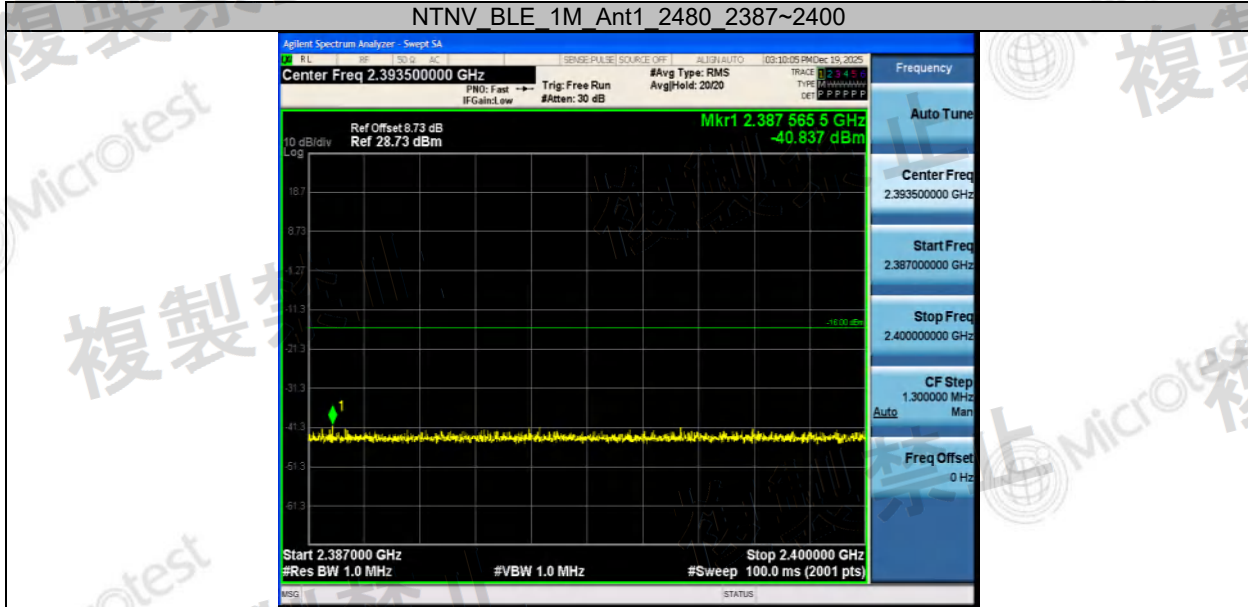
Report No.: MTi251023015-0113E2



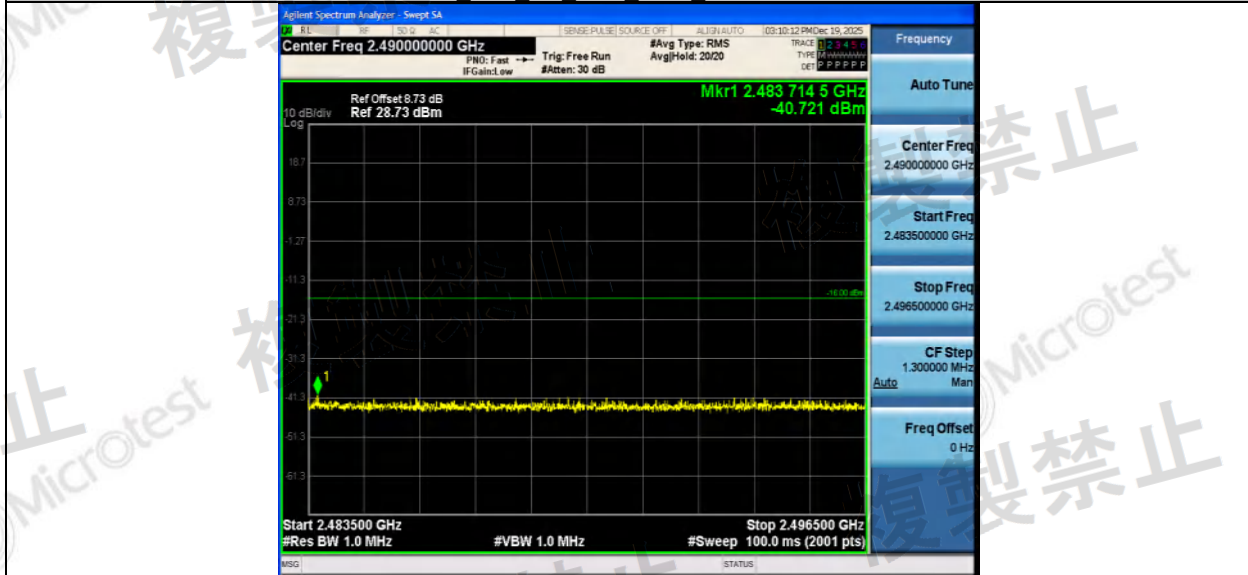
TEST REPORT

Report No.: MTi251023015-0113E2

NTNV BLE 1M Ant1 2480 2387~2400

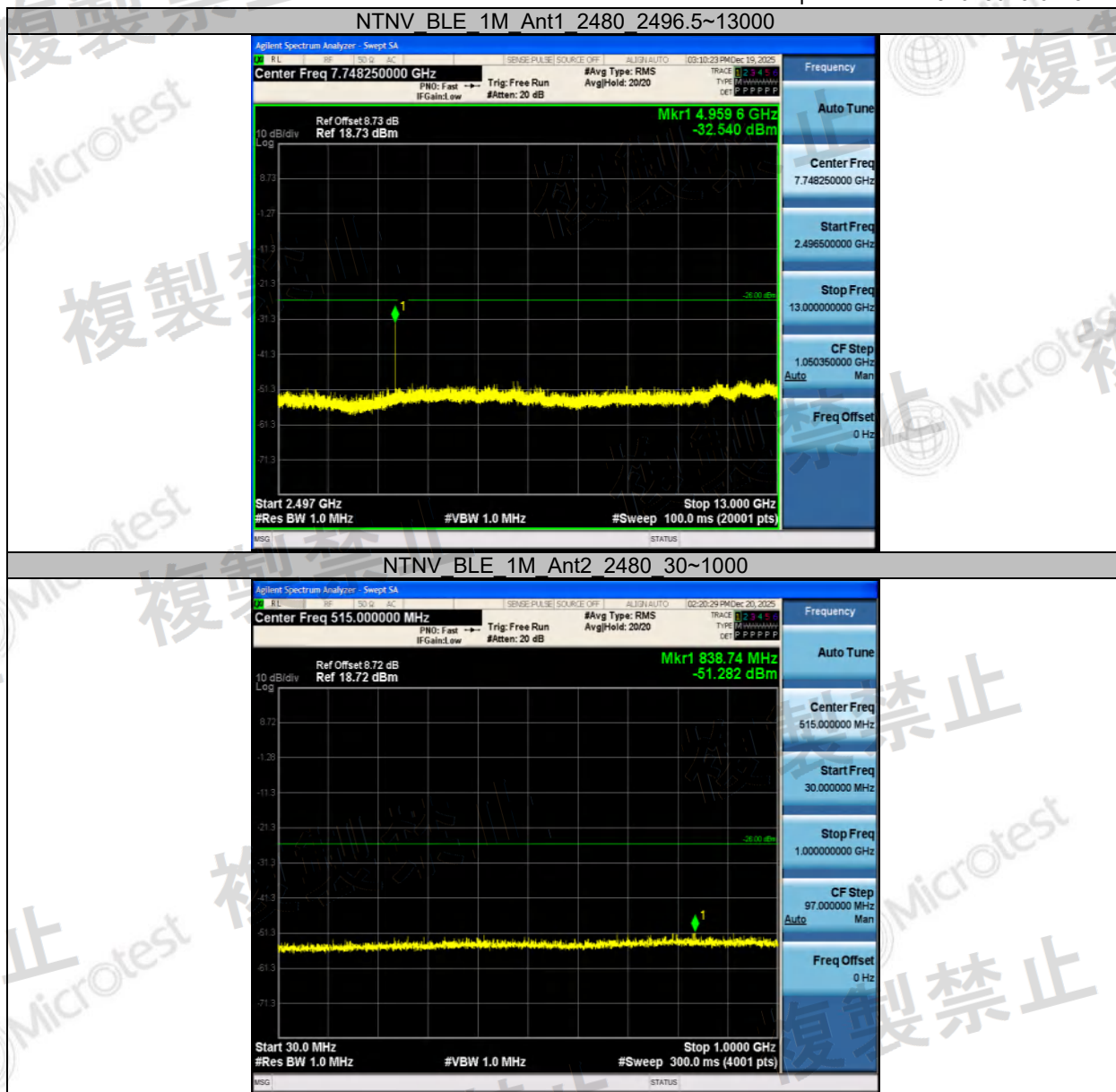


NTNV BLE 1M Ant1 2480 2483.5~2496.5



TEST REPORT

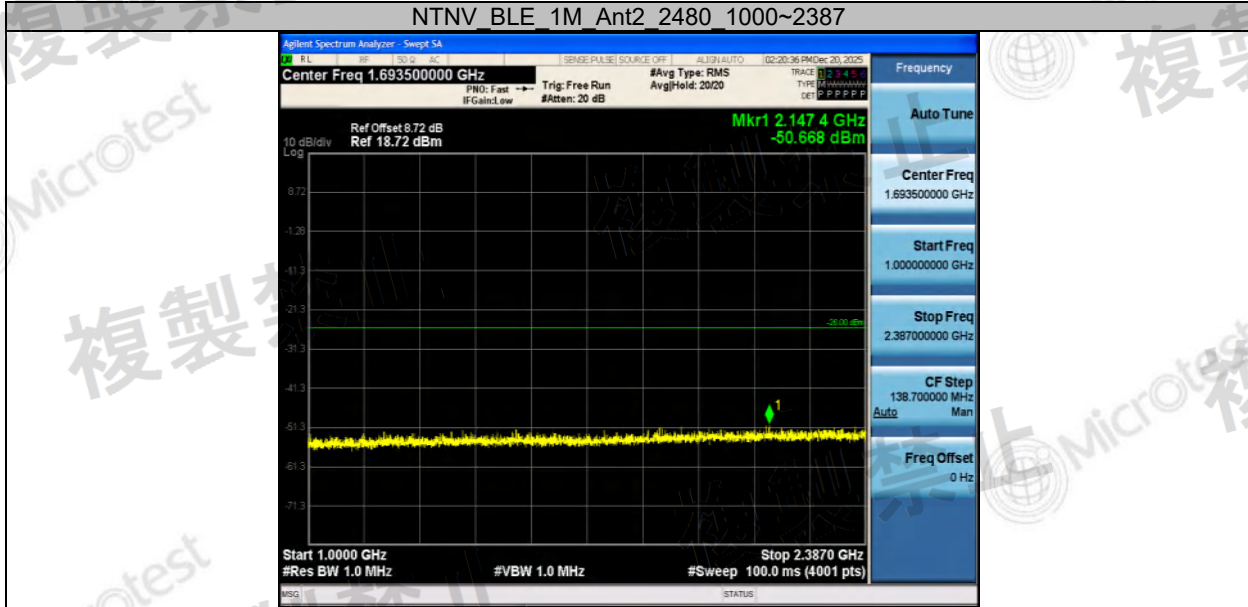
Report No.: MTi251023015-0113E2



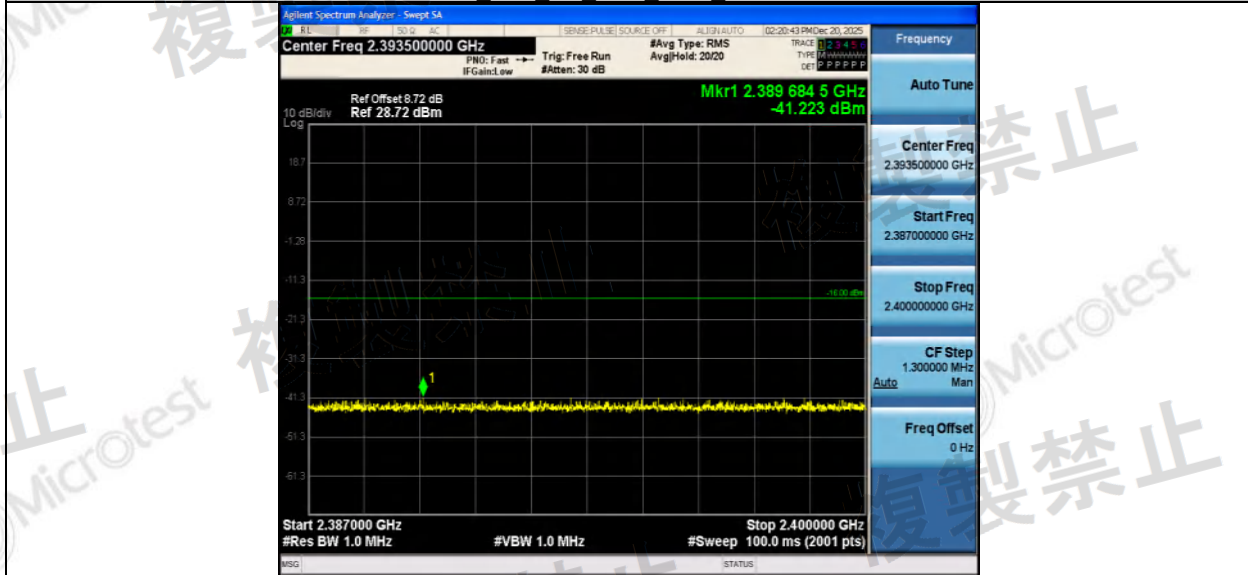
TEST REPORT

Report No.: MTi251023015-0113E2

NTNV BLE 1M Ant2 2480 1000~2387



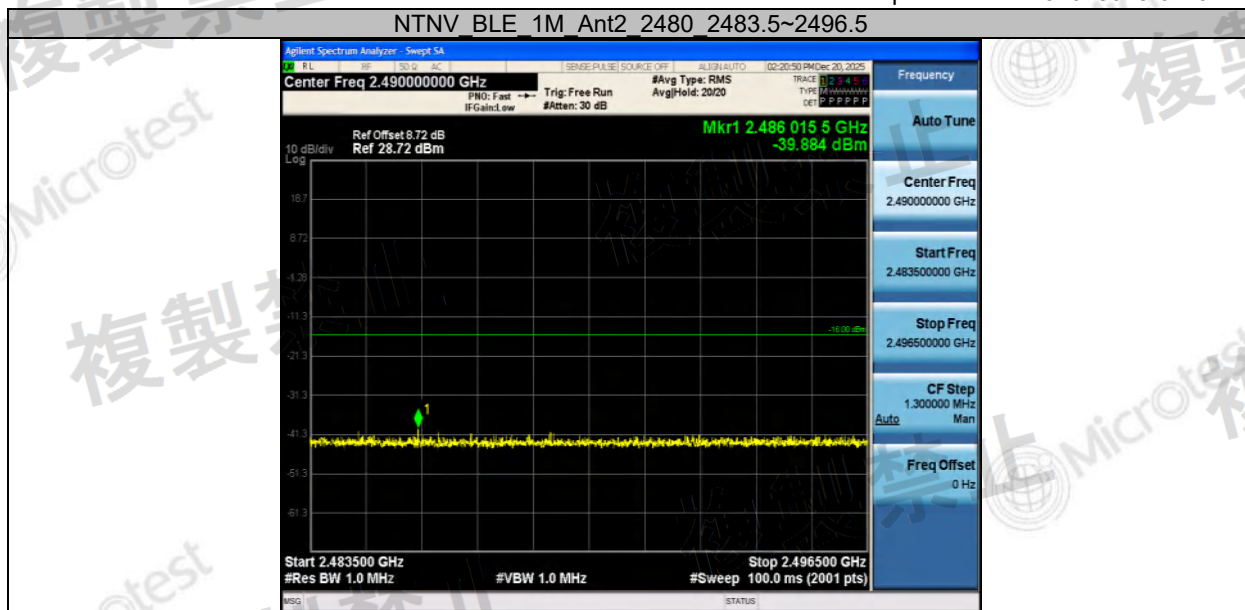
NTNV BLE 1M Ant2 2480 2387~2400



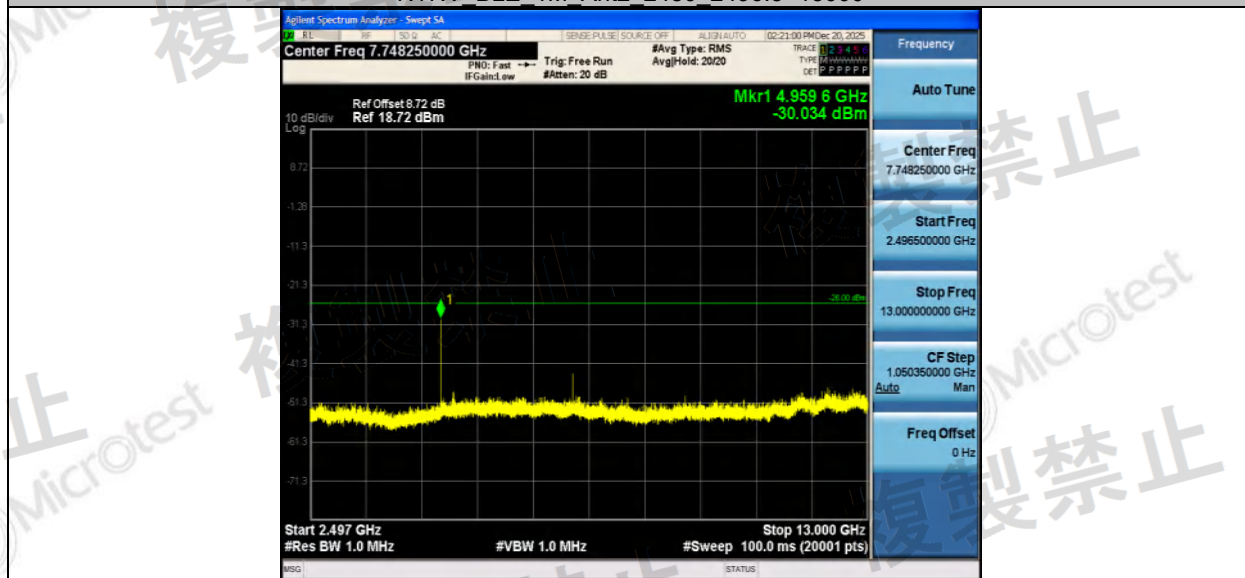
TEST REPORT

Report No.: MTi251023015-0113E2

NTNV BLE 1M Ant2 2480 2483.5~2496.5

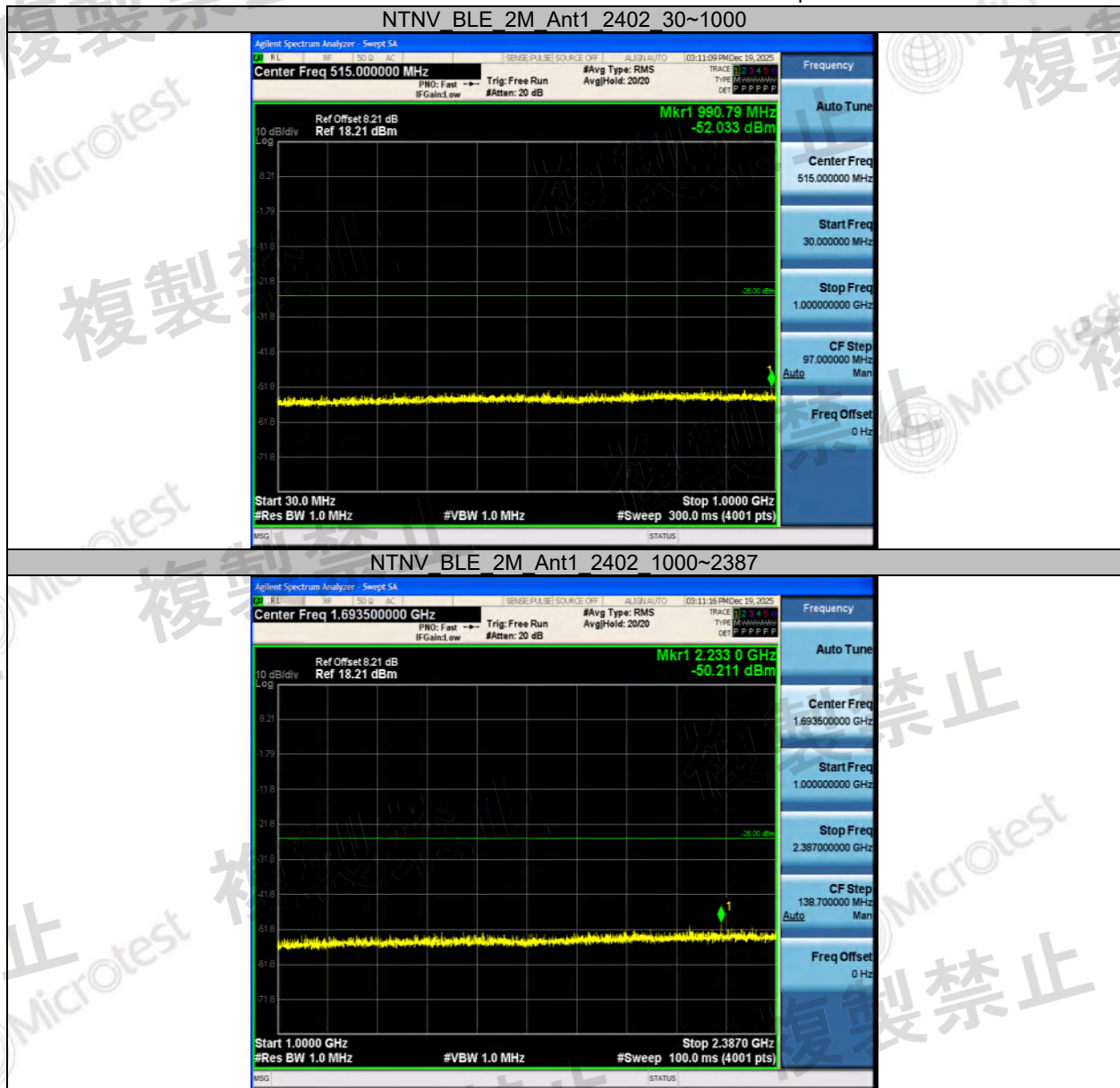


NTNV BLE 1M Ant2 2480 2496.5~13000



TEST REPORT

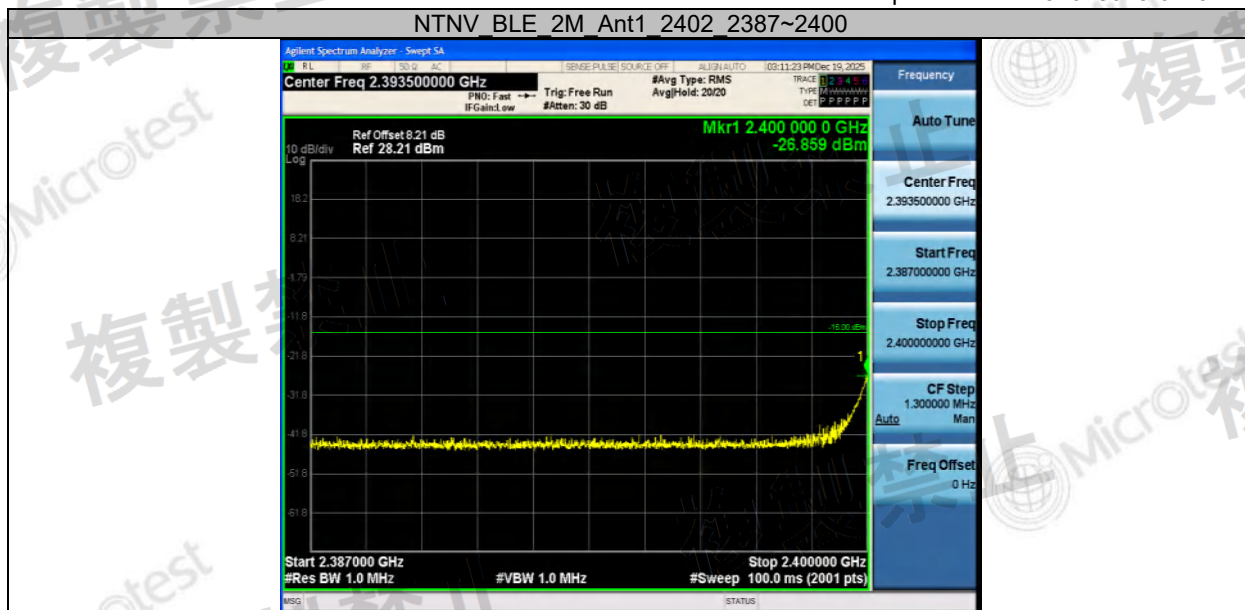
Report No.: MTi251023015-0113E2



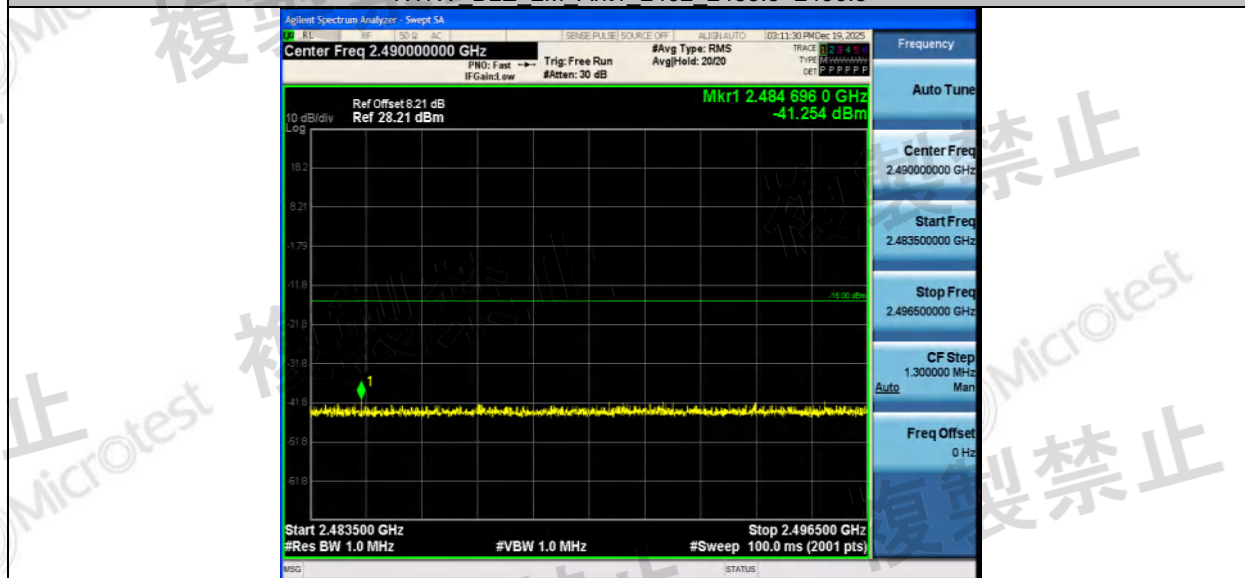
TEST REPORT

Report No.: MTi251023015-0113E2

NTNV BLE 2M Ant1 2402 2387~2400



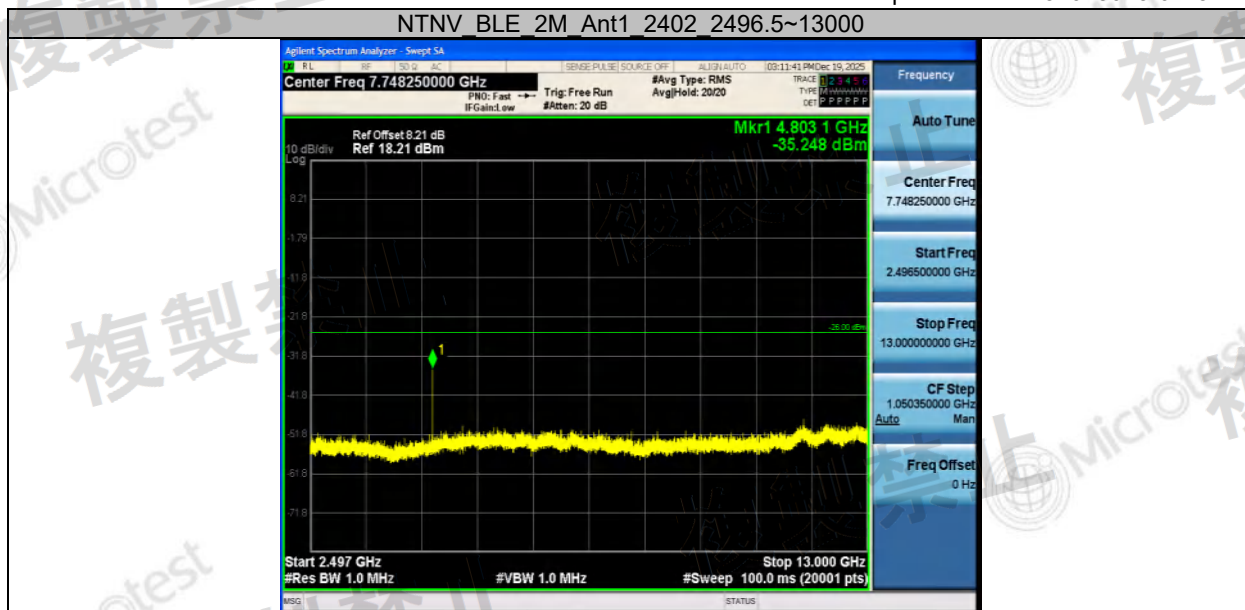
NTNV BLE 2M Ant1 2402 2483.5~2496.5



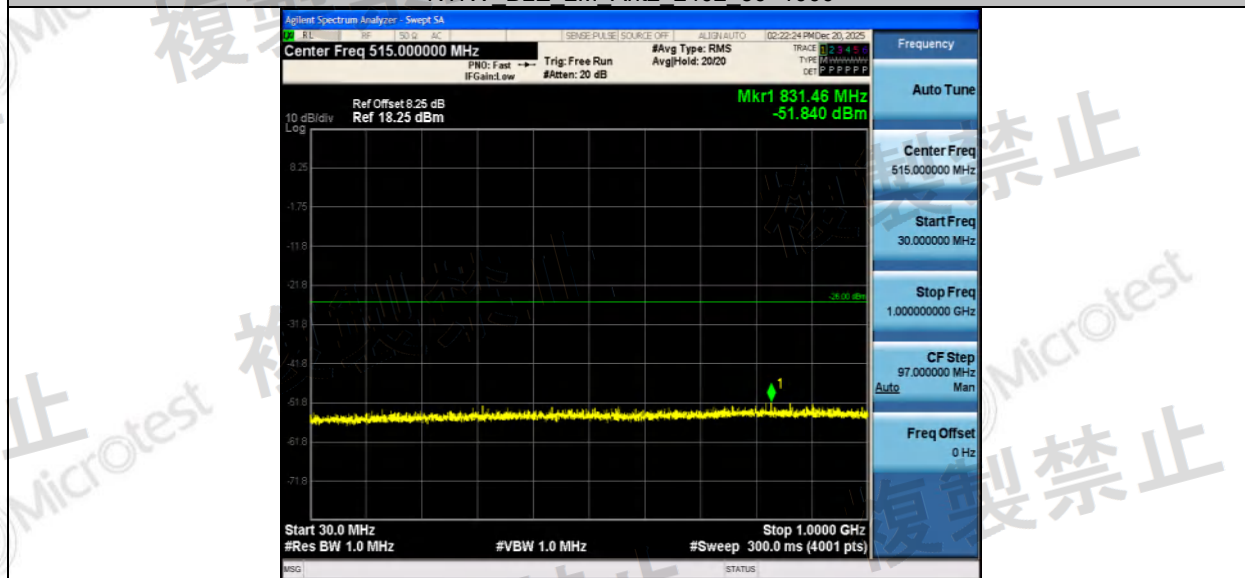
TEST REPORT

Report No.: MTi251023015-0113E2

NTNV BLE 2M Ant1 2402 2496.5~13000



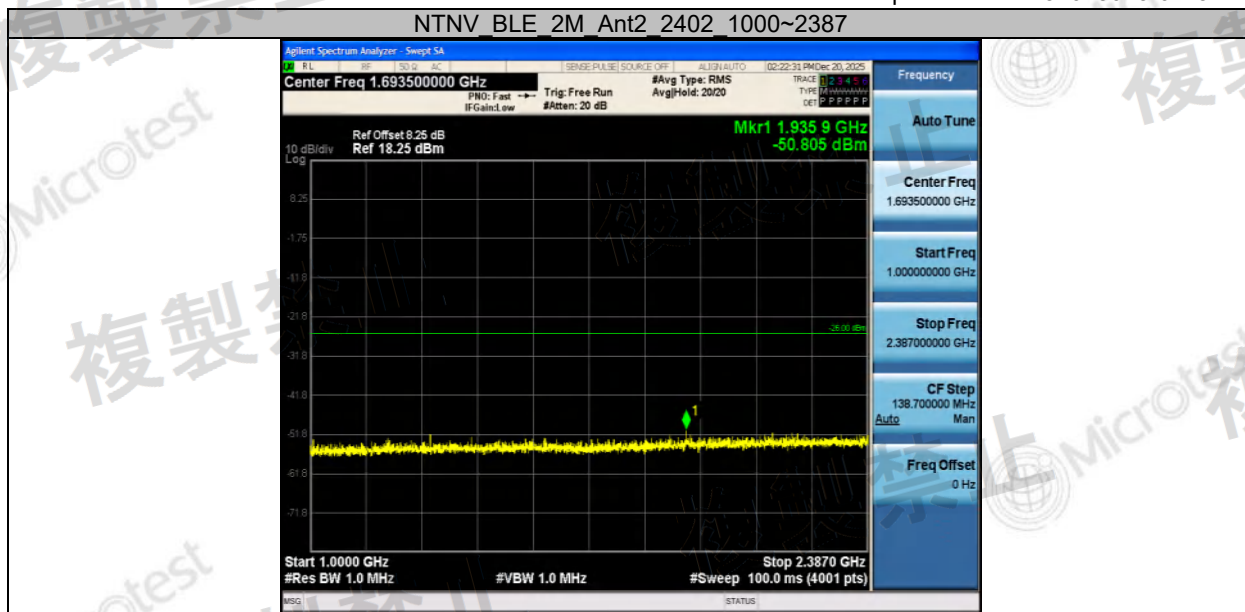
NTNV BLE 2M Ant2 2402 30~1000



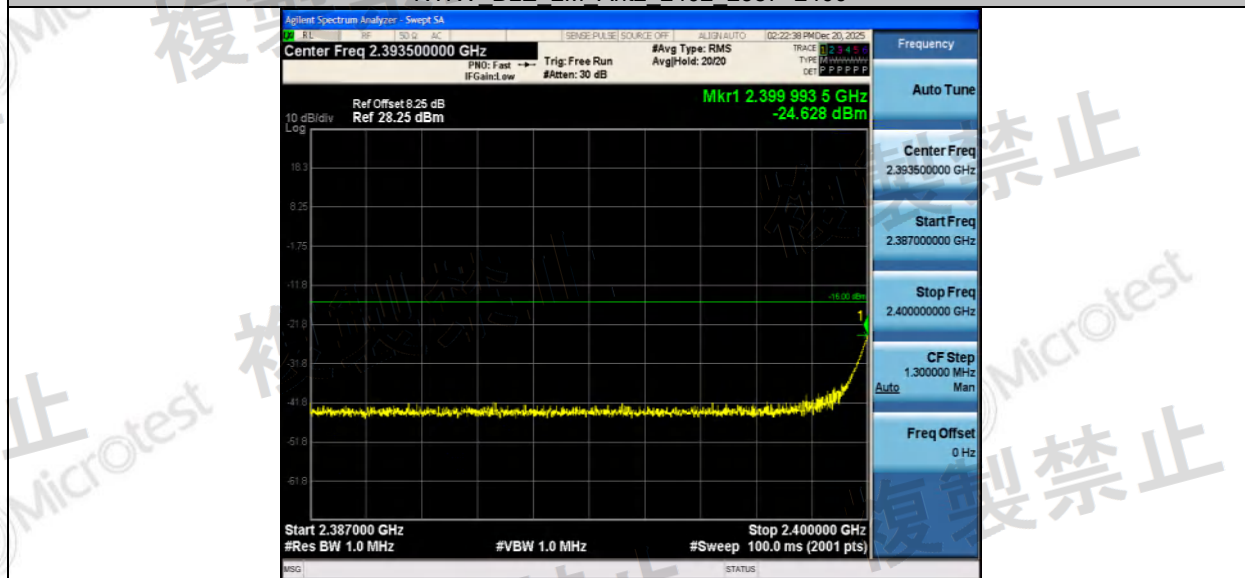
TEST REPORT

Report No.: MTi251023015-0113E2

NTNV BLE 2M Ant2 2402 1000~2387



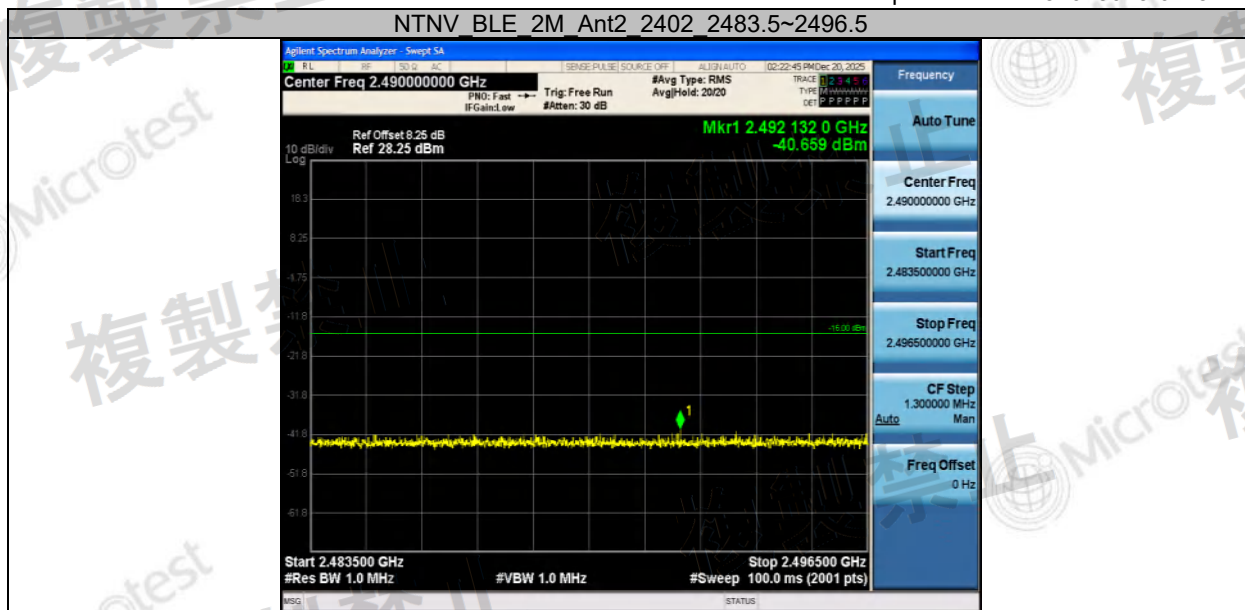
NTNV BLE 2M Ant2 2402 2387~2400



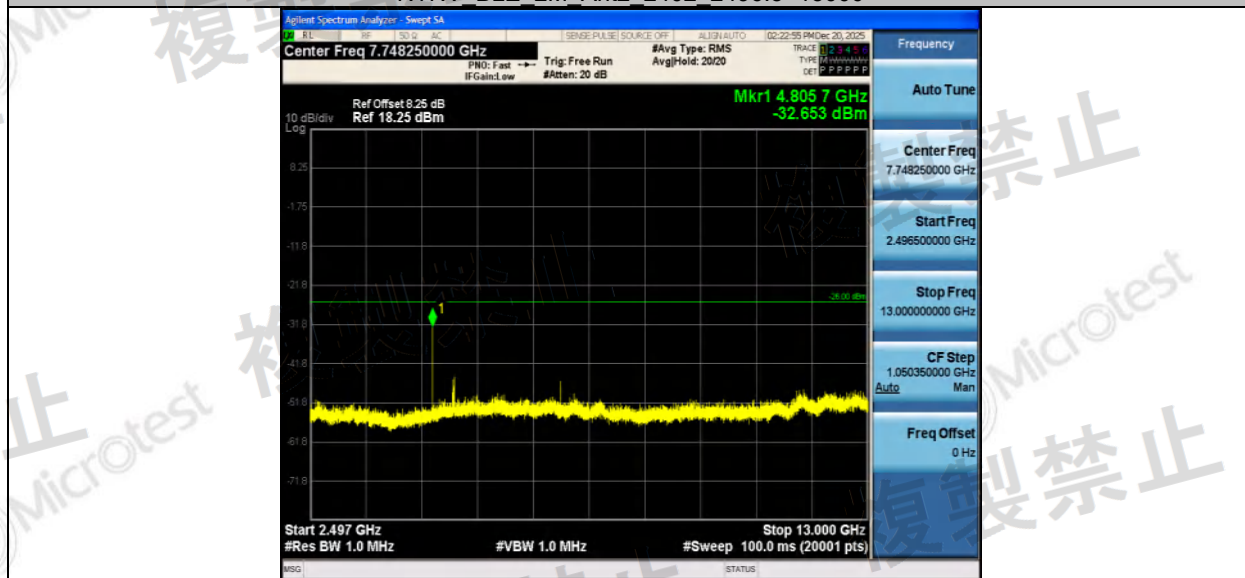
TEST REPORT

Report No.: MTi251023015-0113E2

NTNV BLE 2M Ant2 2402 2483.5~2496.5

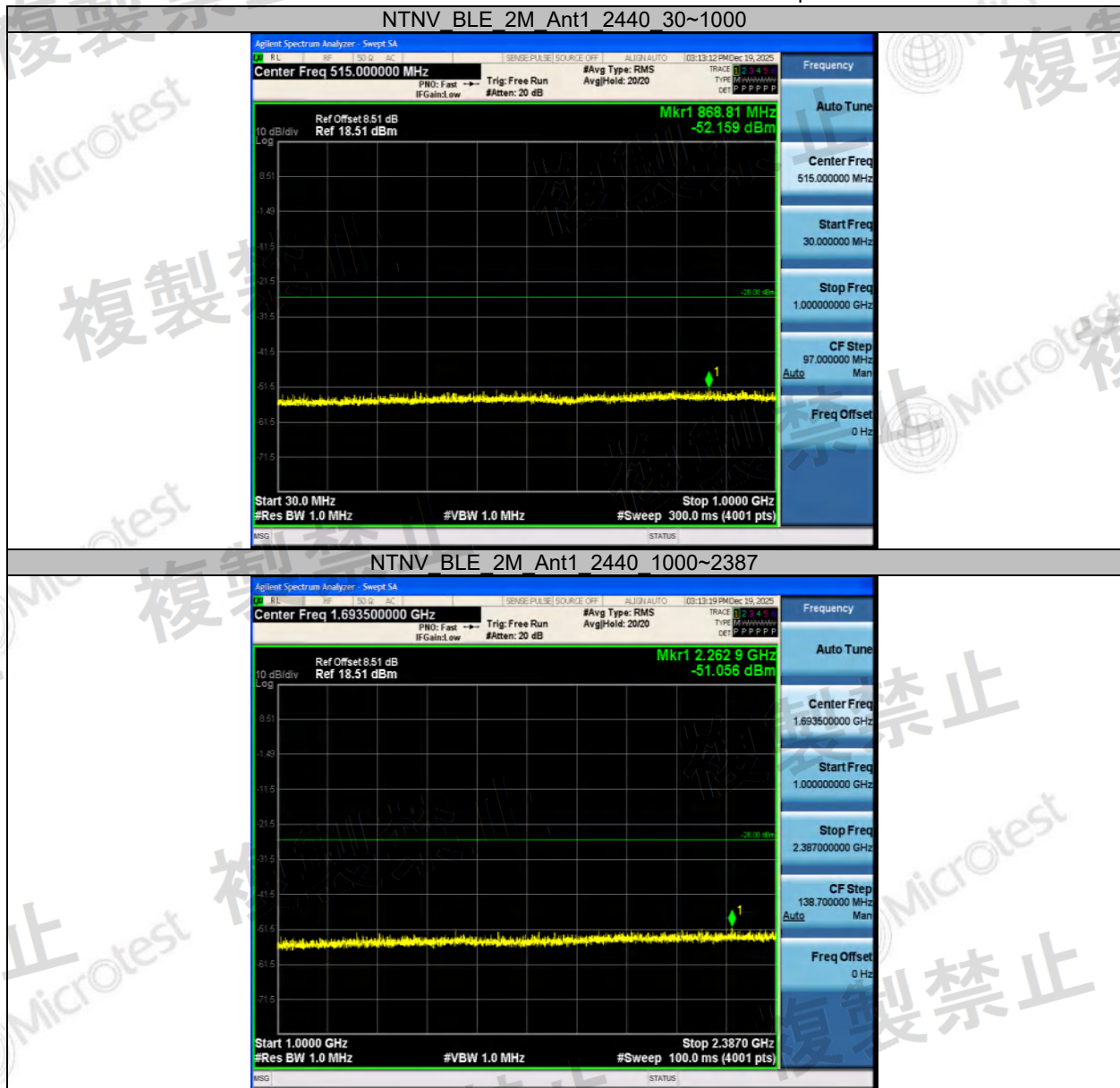


NTNV BLE 2M Ant2 2402 2496.5~13000



TEST REPORT

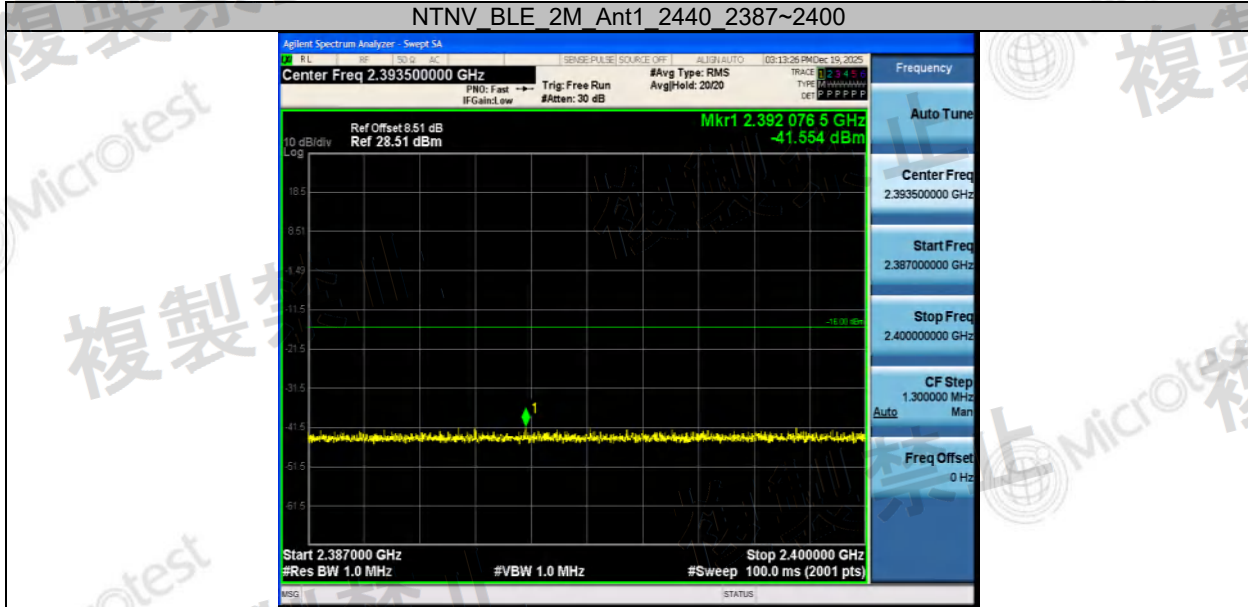
Report No.: MTi251023015-0113E2



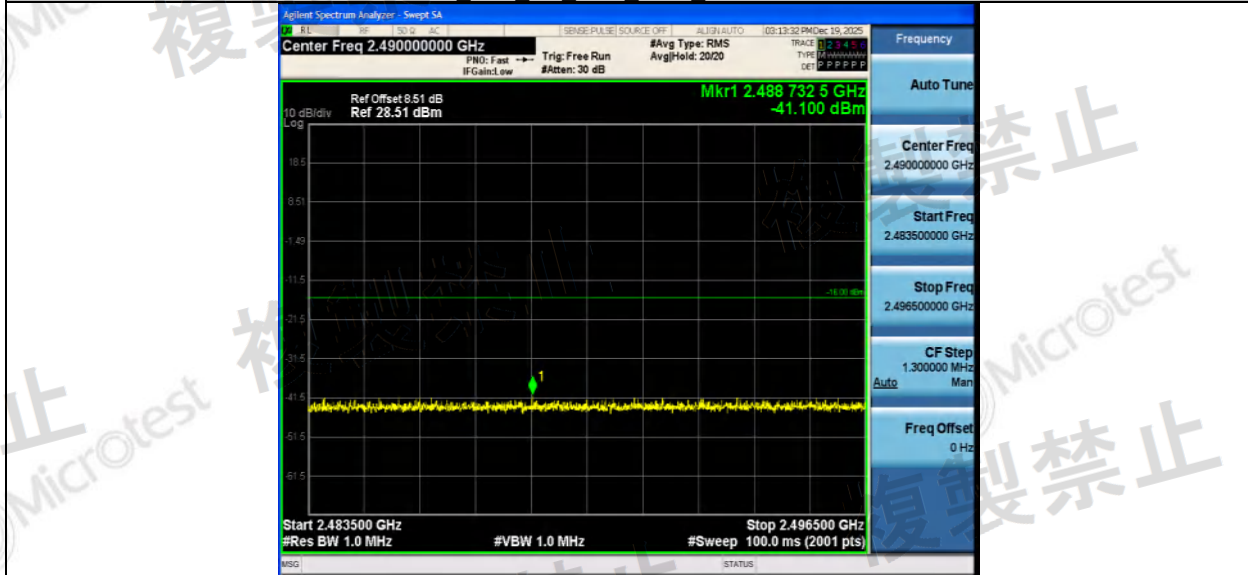
TEST REPORT

Report No.: MTi251023015-0113E2

NTNV BLE 2M Ant1 2440 2387~2400



NTNV BLE 2M Ant1 2440 2483.5~2496.5



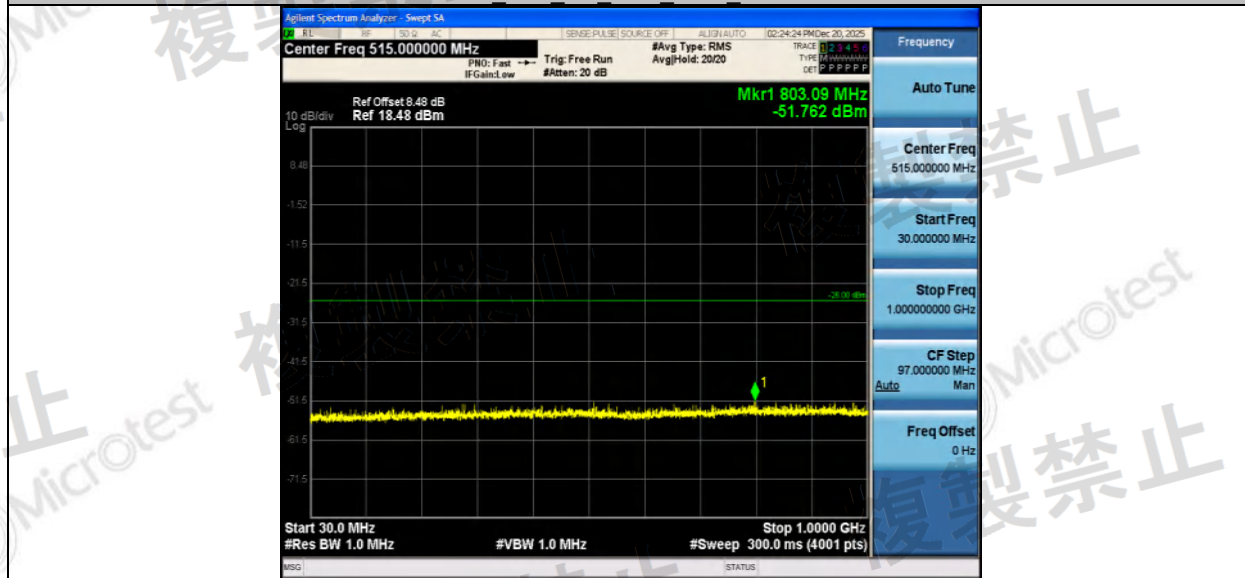
TEST REPORT

Report No.: MTi251023015-0113E2

NTNV BLE 2M Ant1 2440 2496.5~13000



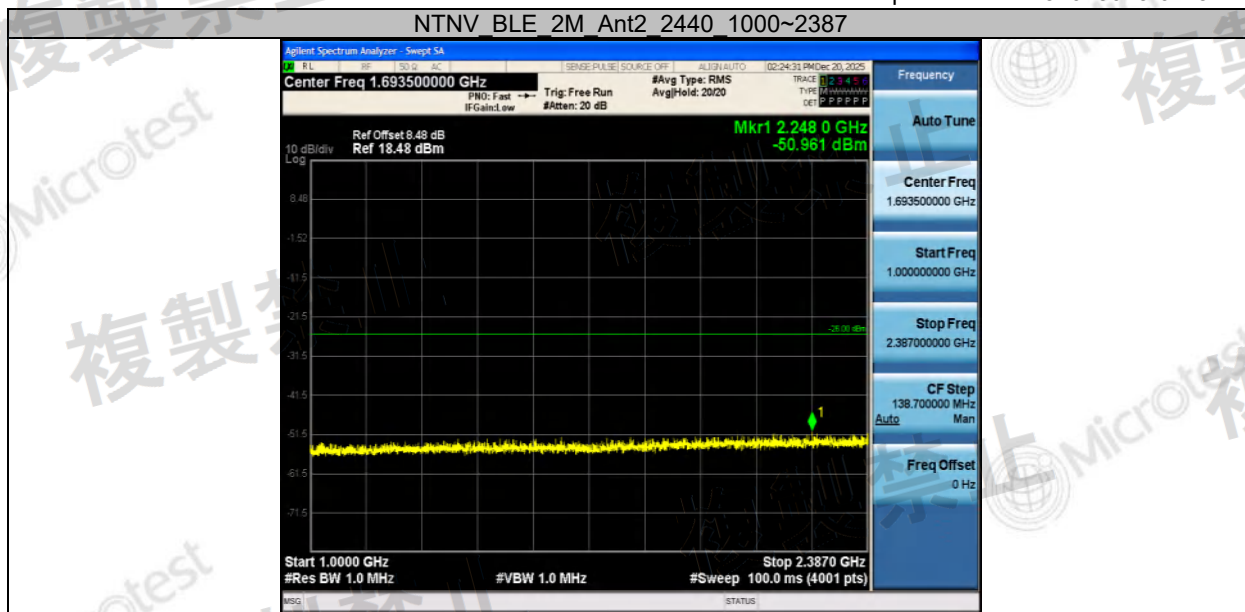
NTNV BLE 2M Ant2 2440 30~1000



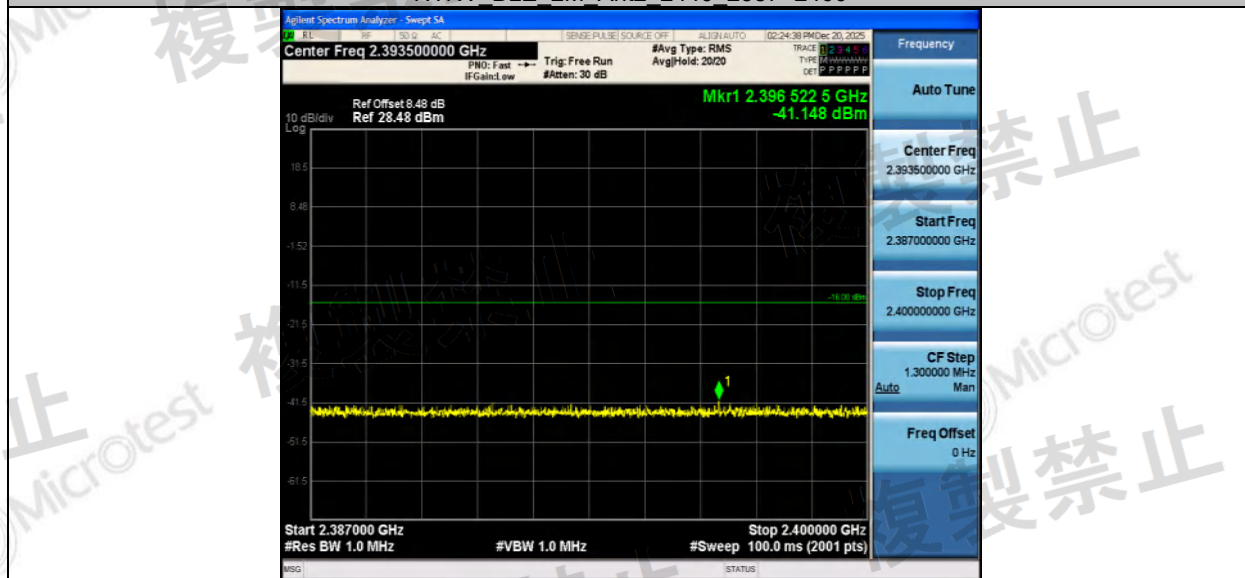
TEST REPORT

Report No.: MTi251023015-0113E2

NTNV BLE 2M Ant2 2440 1000~2387



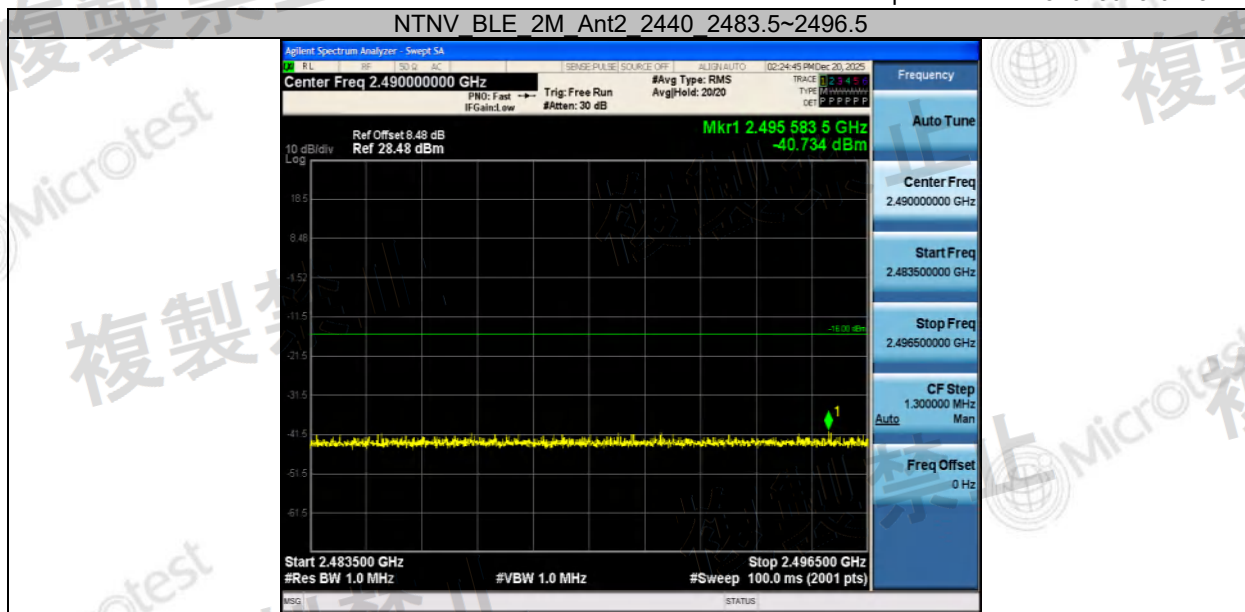
NTNV BLE 2M Ant2 2440 2387~2400



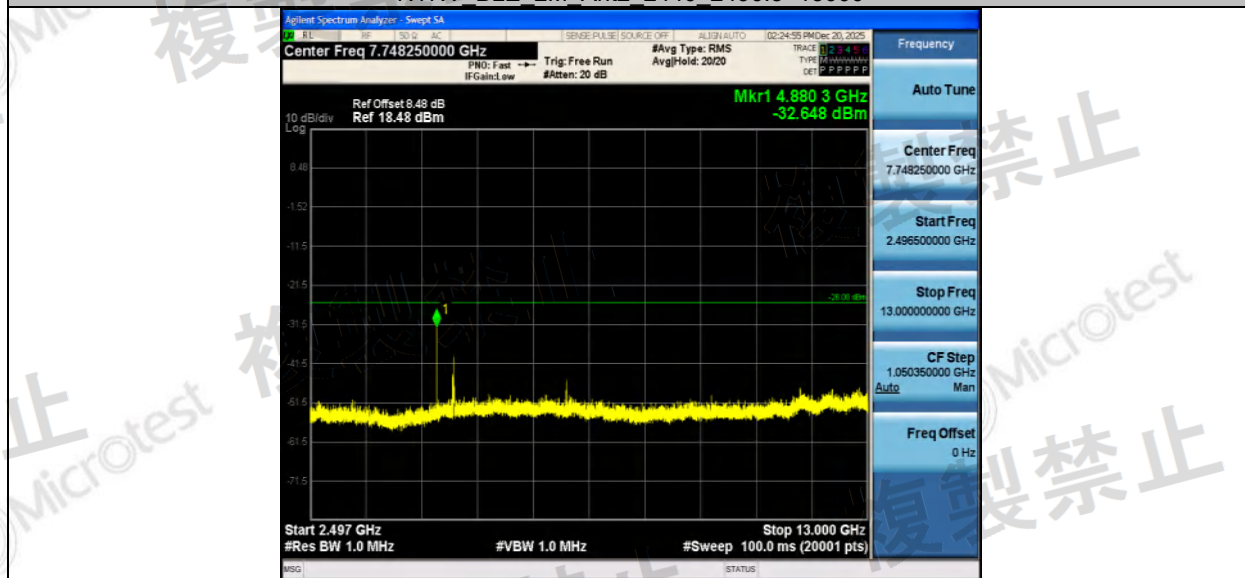
TEST REPORT

Report No.: MTi251023015-0113E2

NTNV BLE 2M Ant2 2440 2483.5~2496.5

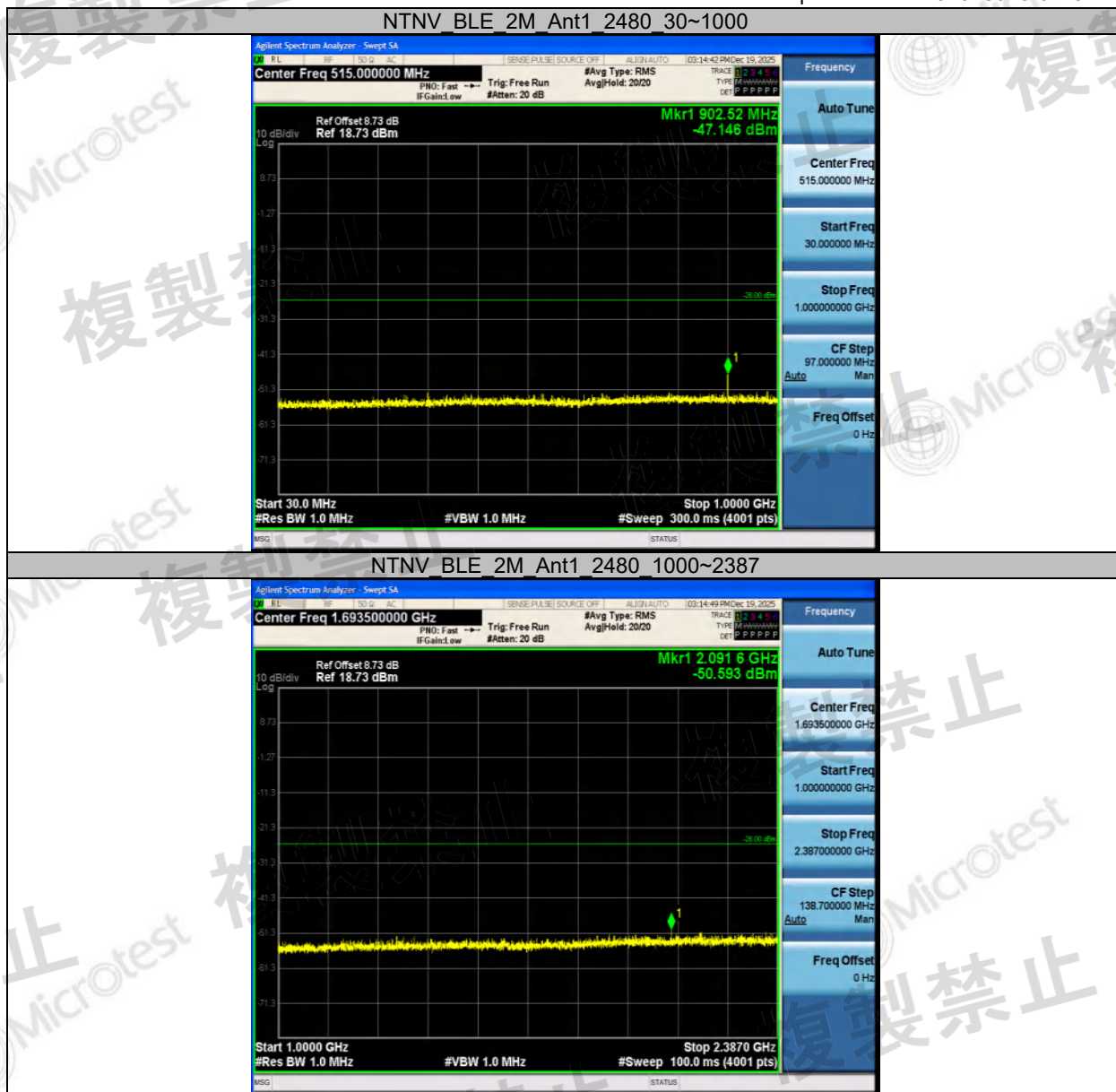


NTNV BLE 2M Ant2 2440 2496.5~13000



TEST REPORT

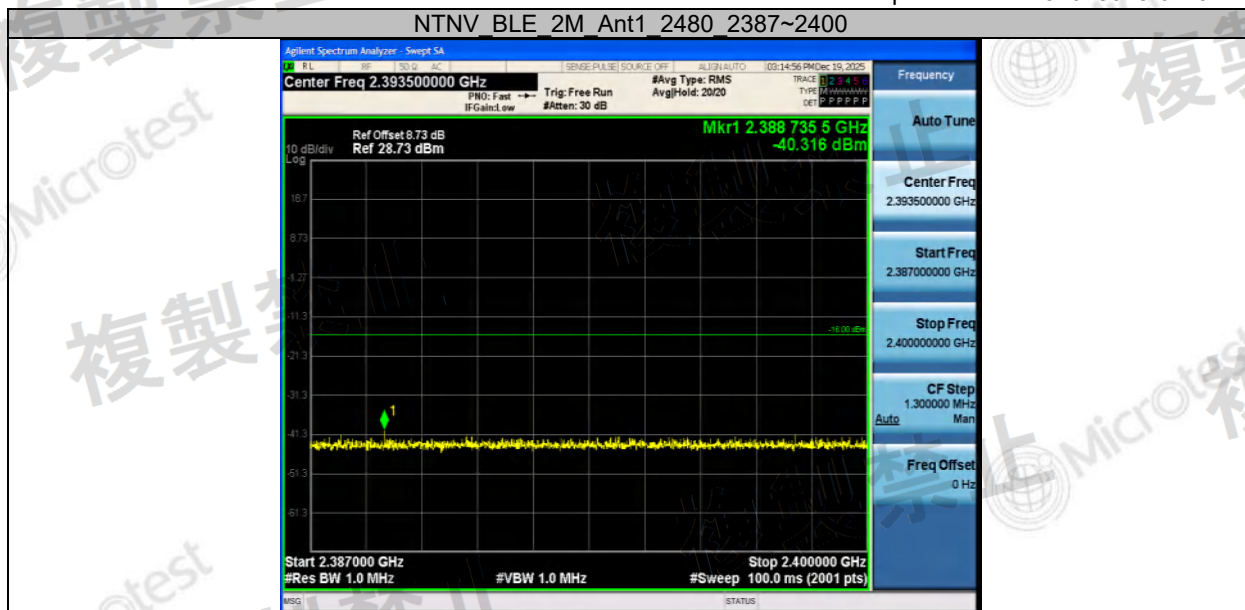
Report No.: MTi251023015-0113E2



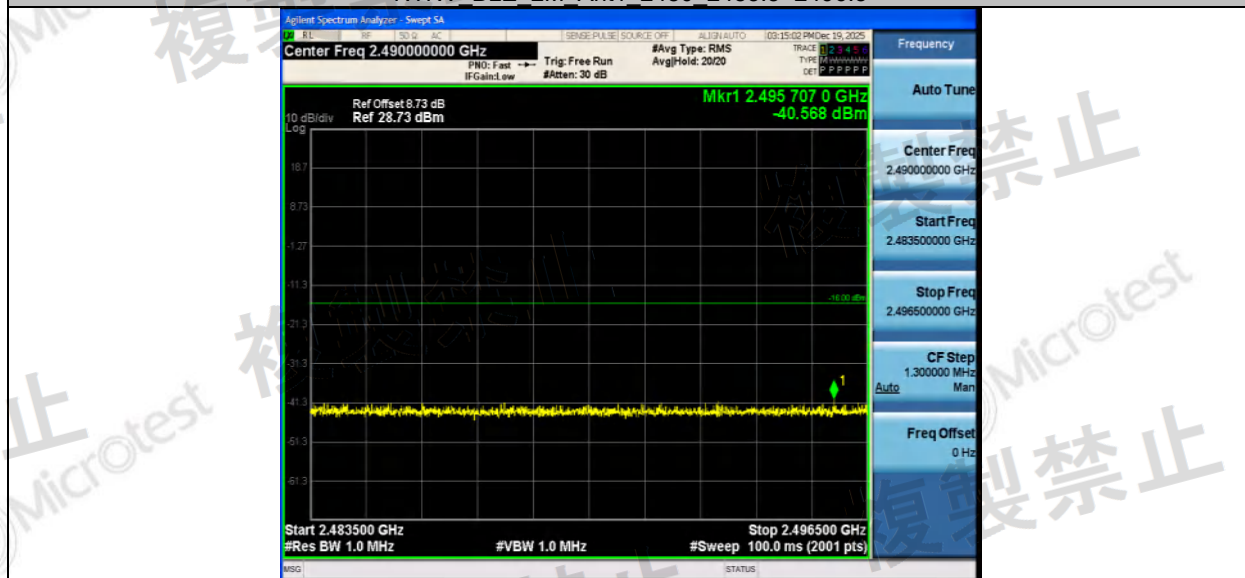
TEST REPORT

Report No.: MTi251023015-0113E2

NTNV BLE 2M Ant1 2480 2387~2400



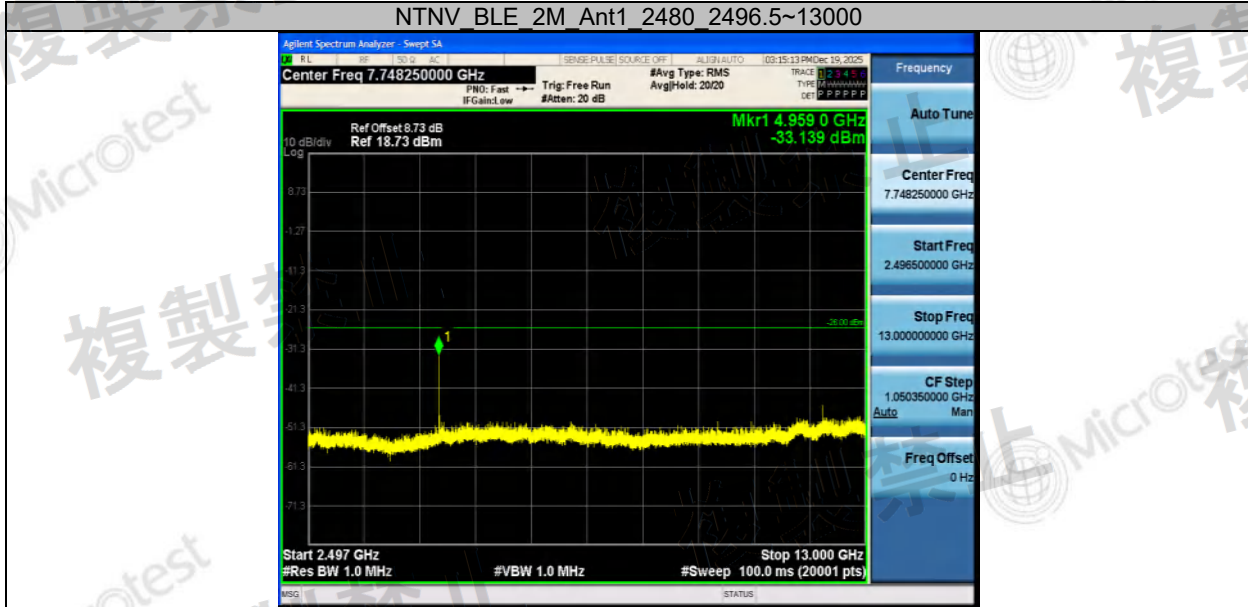
NTNV BLE 2M Ant1 2480 2483.5~2496.5



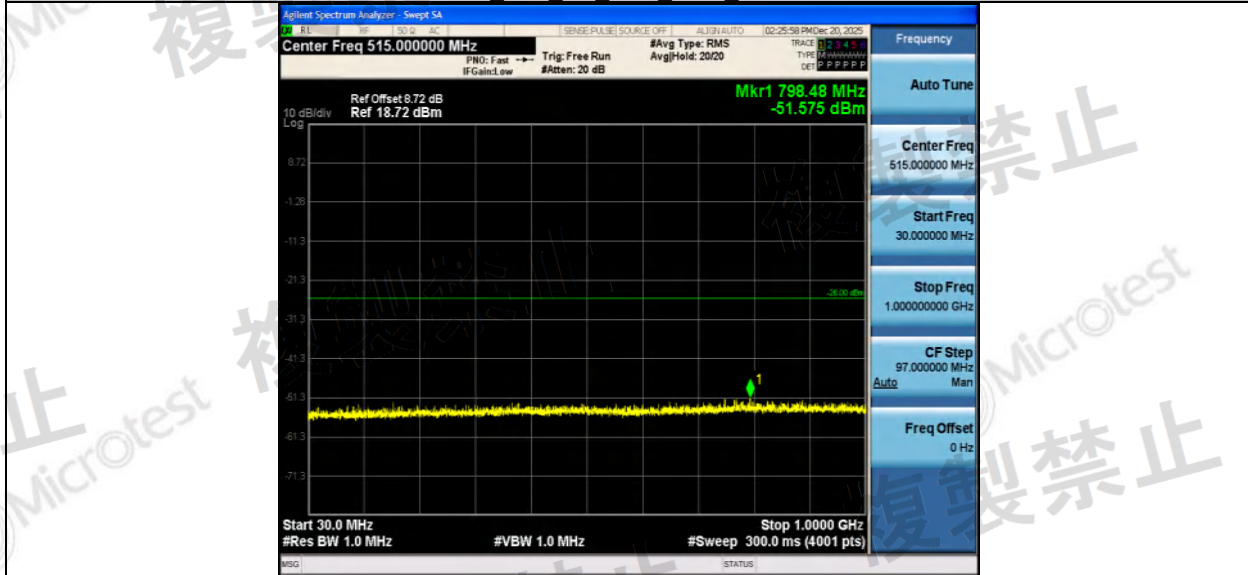
TEST REPORT

Report No.: MTi251023015-0113E2

NTNV BLE 2M Ant1 2480 2496.5~13000



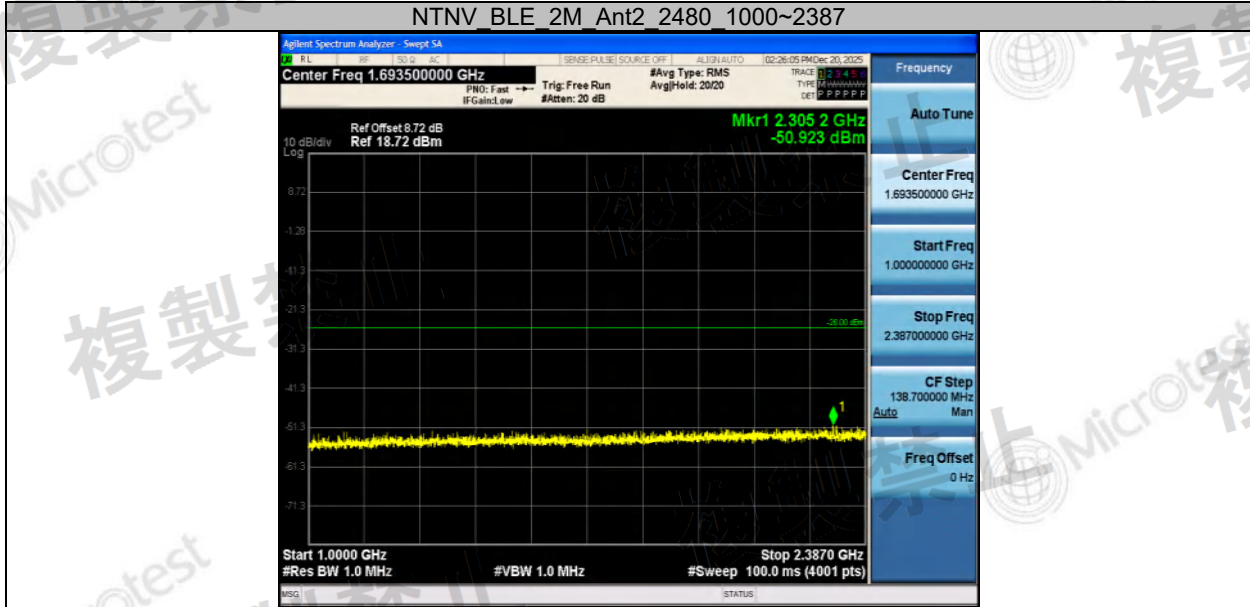
NTNV BLE 2M Ant2 2480 30~1000



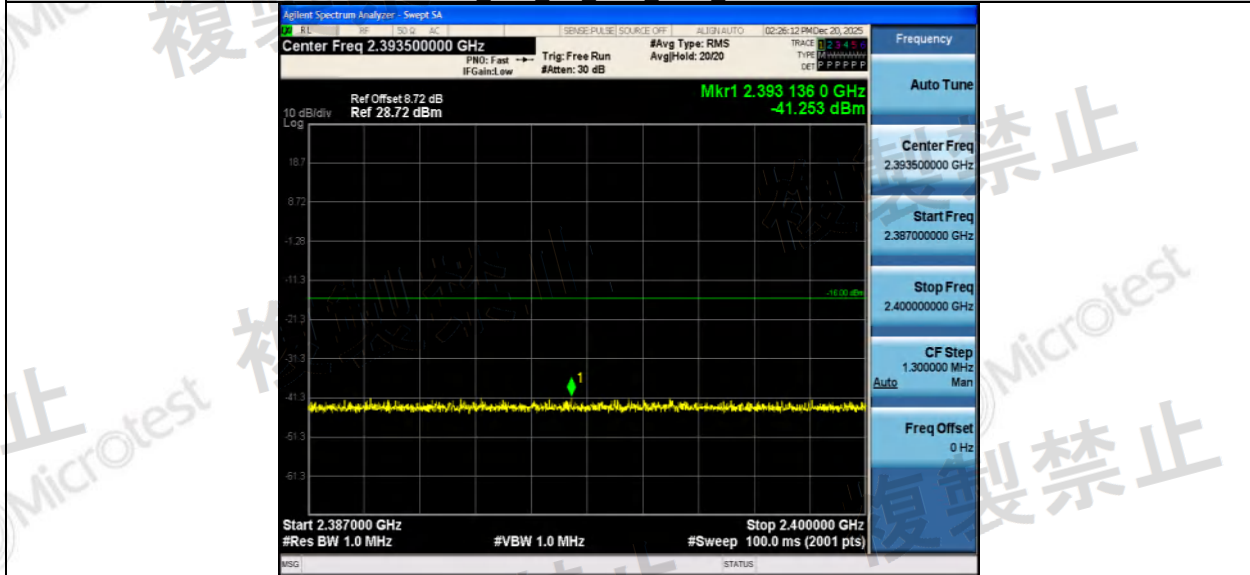
TEST REPORT

Report No.: MTi251023015-0113E2

NTNV BLE 2M Ant2 2480 1000~2387



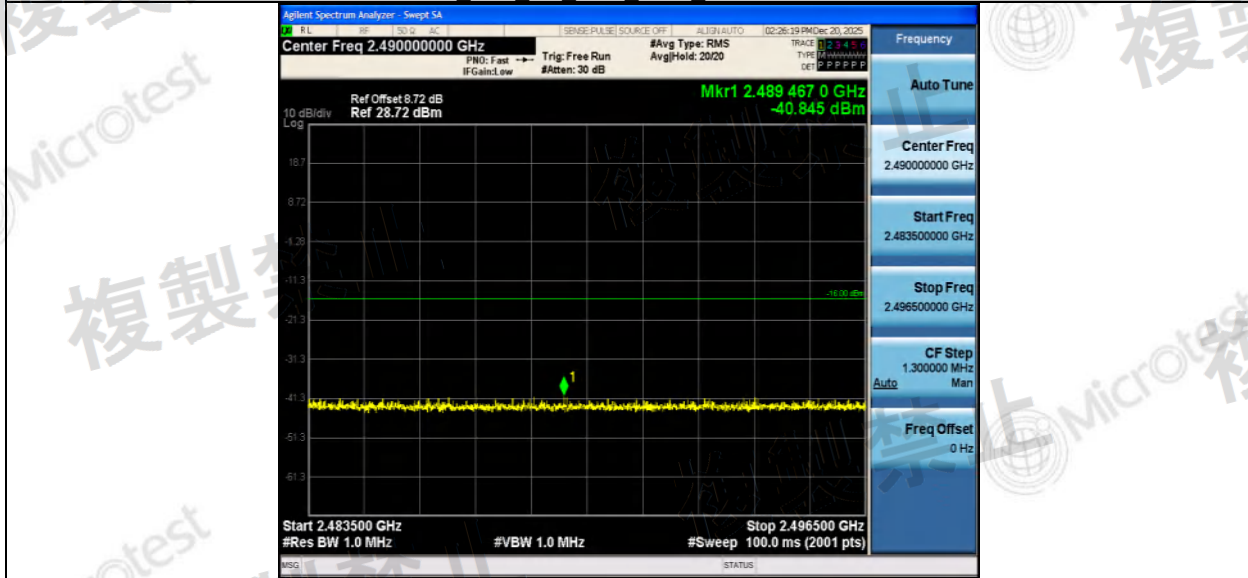
NTNV BLE 2M Ant2 2480 2387~2400



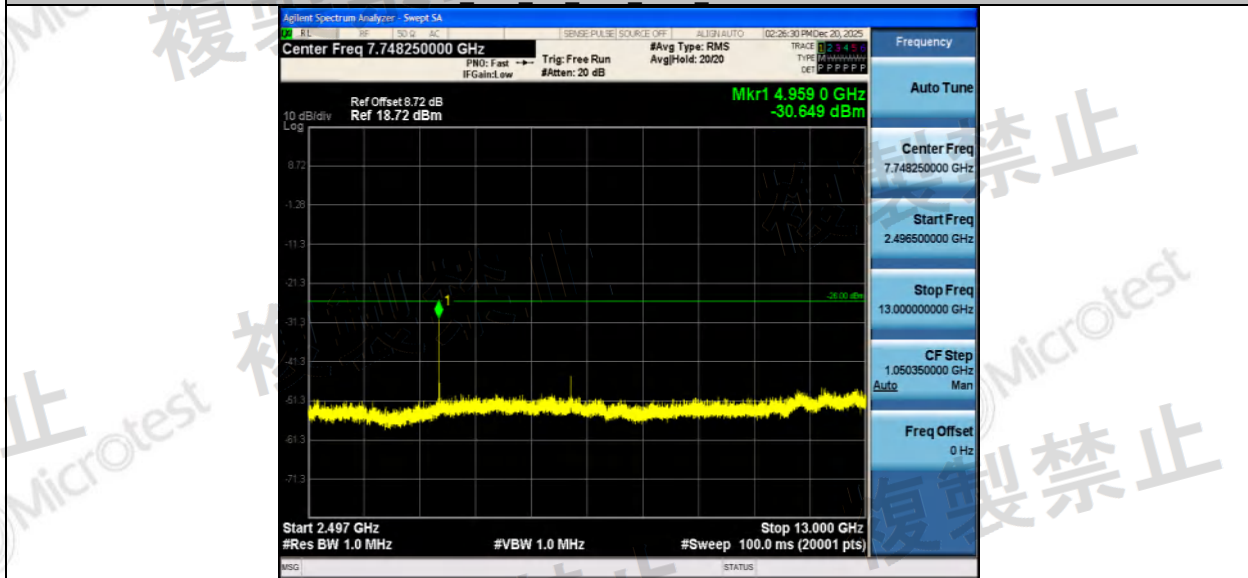
TEST REPORT

Report No.: MTi251023015-0113E2

NTNV BLE 2M Ant2 2480 2483.5~2496.5



NTNV BLE 2M Ant2 2480 2496.5~13000



TEST REPORT

Report No.: MTi251023015-0113E2

Appendix E: Spurious Emission of RX

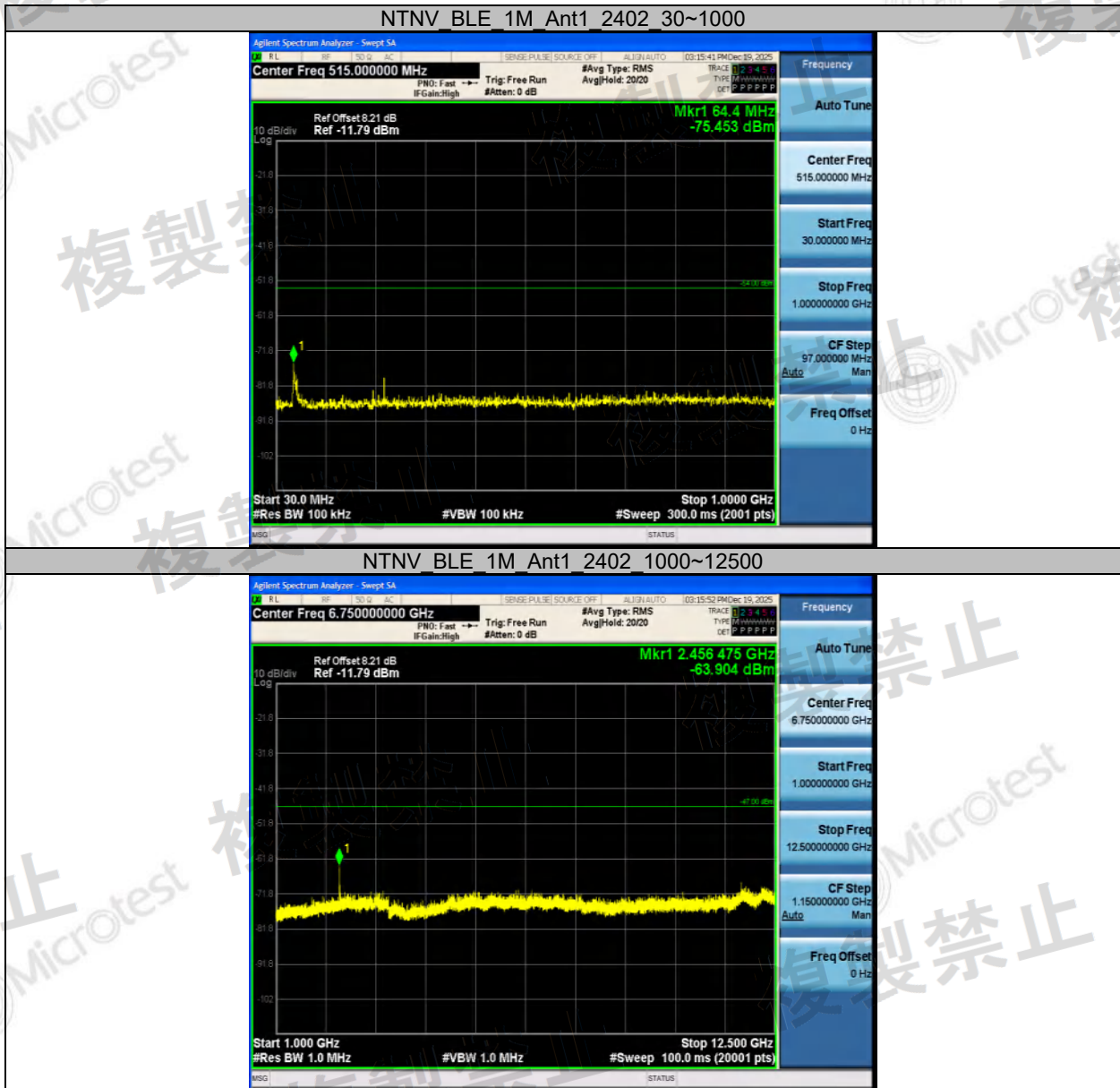
Test Result

Test Condition	Test Mode	Antenna	Freq. [MHz]	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
NTNV	BLE_1M	Ant1	2402	30~1000	-75.45	≤-54	0.02851	≤4	PASS
				1000~12500	-63.9	≤-47	0.40738	≤20	PASS
		Ant2	2402	30~1000	-79.51	≤-54	0.01119	≤4	PASS
				1000~12500	-68.43	≤-47	0.14355	≤20	PASS
		Ant1	2440	30~1000	-78.12	≤-54	0.01542	≤4	PASS
				1000~12500	-69.29	≤-47	0.11776	≤20	PASS
		Ant2	2440	30~1000	-80.98	≤-54	0.00798	≤4	PASS
				1000~12500	-67.77	≤-47	0.16711	≤20	PASS
		Ant1	2480	30~1000	-77.23	≤-54	0.01892	≤4	PASS
				1000~12500	-68.58	≤-47	0.13868	≤20	PASS
		Ant2	2480	30~1000	-80.16	≤-54	0.00964	≤4	PASS
				1000~12500	-67.62	≤-47	0.17298	≤20	PASS
	BLE_2M	Ant1	2402	30~1000	-78.15	≤-54	0.01531	≤4	PASS
				1000~12500	-60.7	≤-47	0.85114	≤20	PASS
		Ant2	2402	30~1000	-81.08	≤-54	0.00780	≤4	PASS
				1000~12500	-69.02	≤-47	0.12531	≤20	PASS
		Ant1	2440	30~1000	-76.82	≤-54	0.02080	≤4	PASS
				1000~12500	-58.75	≤-47	1.33352	≤20	PASS
		Ant2	2440	30~1000	-79.55	≤-54	0.01109	≤4	PASS
				1000~12500	-68.66	≤-47	0.13614	≤20	PASS
		Ant1	2480	30~1000	-77.19	≤-54	0.01910	≤4	PASS
				1000~12500	-68.34	≤-47	0.14655	≤20	PASS
		Ant2	2480	30~1000	-80.85	≤-54	0.00822	≤4	PASS
				1000~12500	-68.24	≤-47	0.14997	≤20	PASS

TEST REPORT

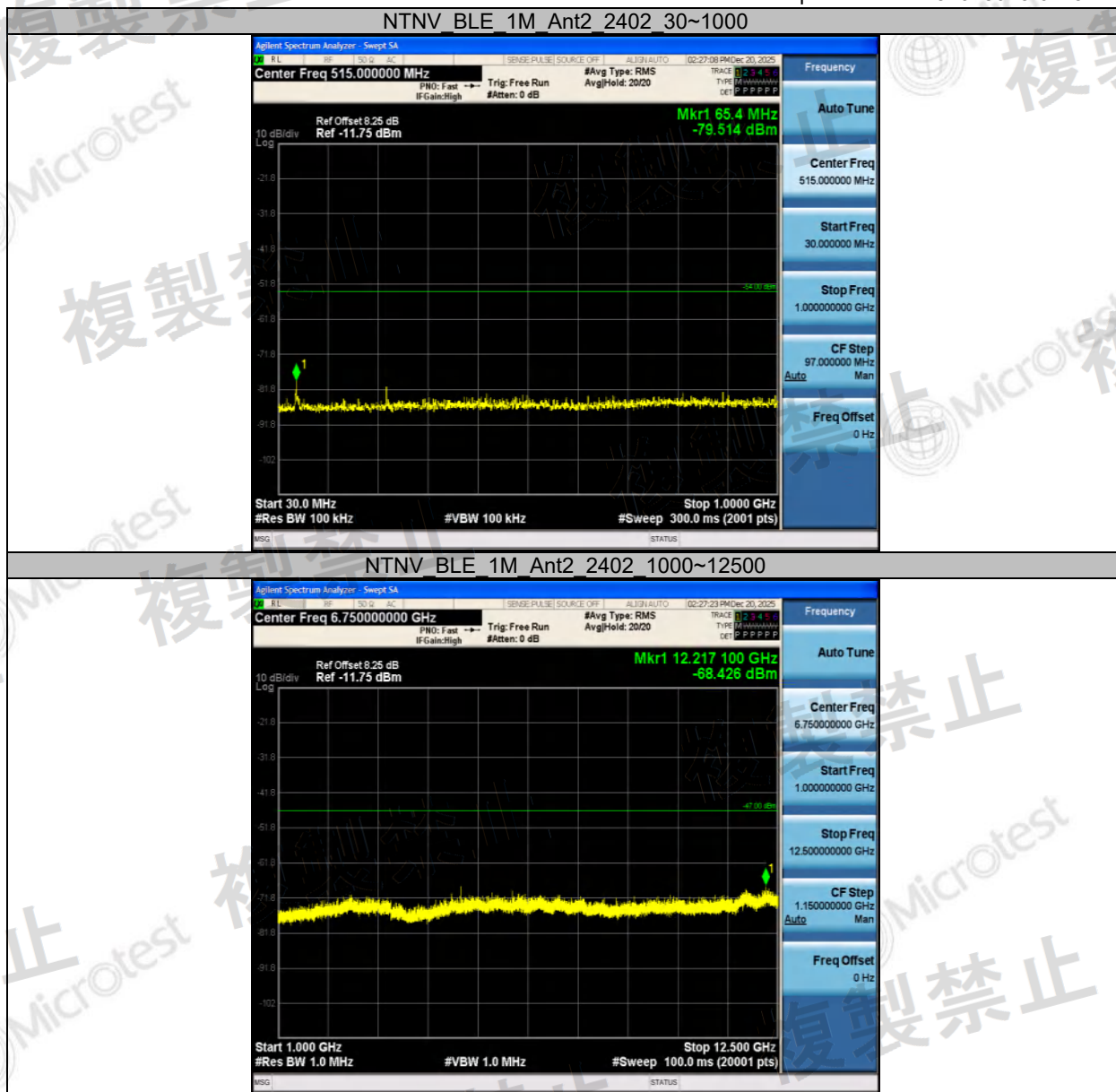
Report No.: MTi251023015-0113E2

Test Graphs



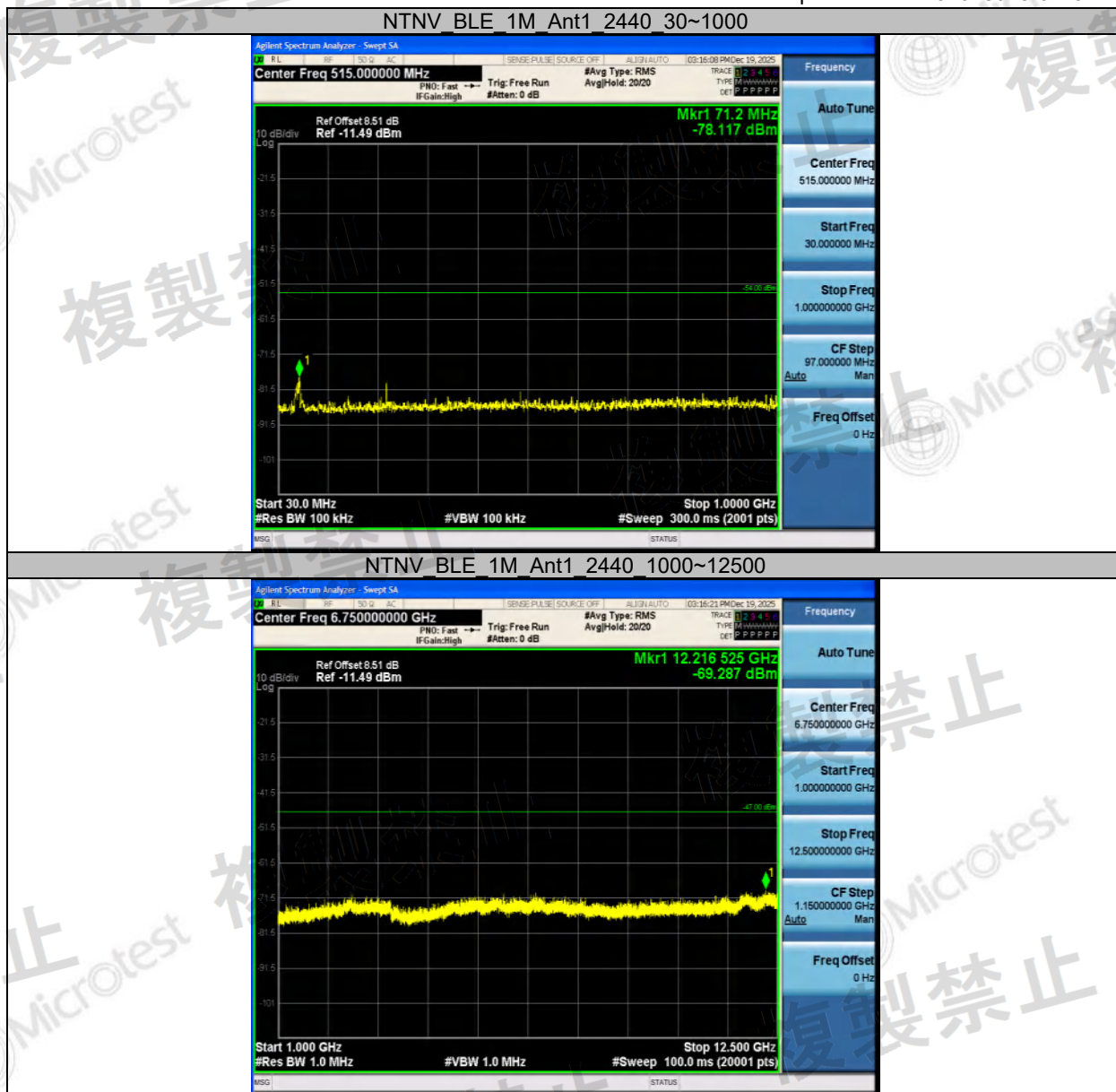
TEST REPORT

Report No.: MTi251023015-0113E2



TEST REPORT

Report No.: MTi251023015-0113E2

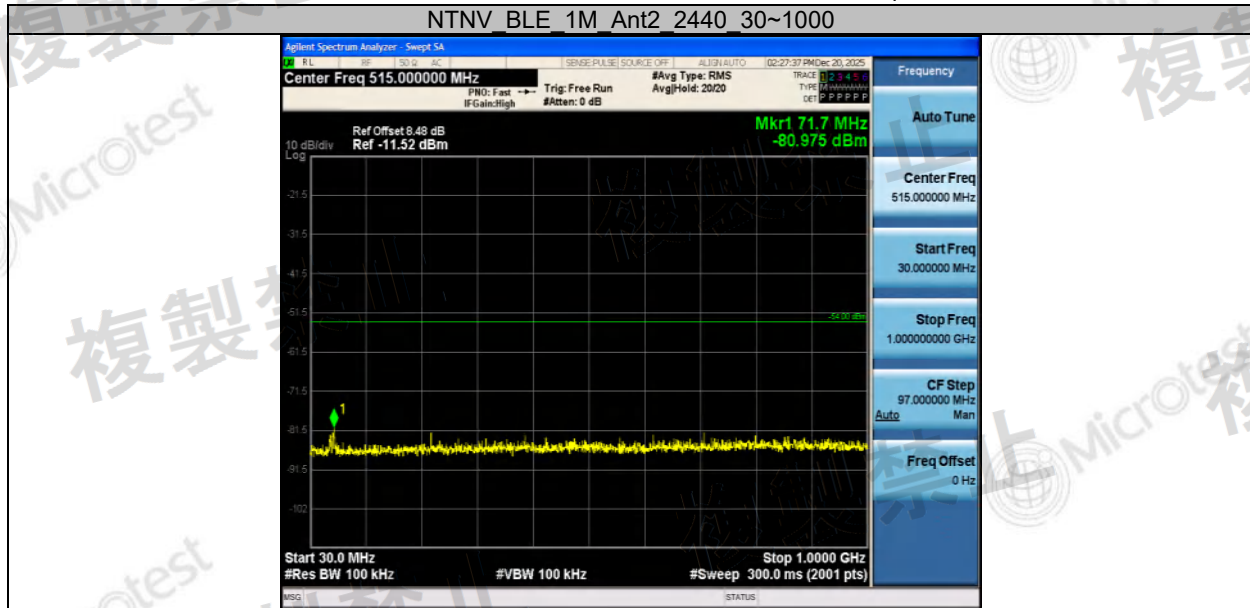




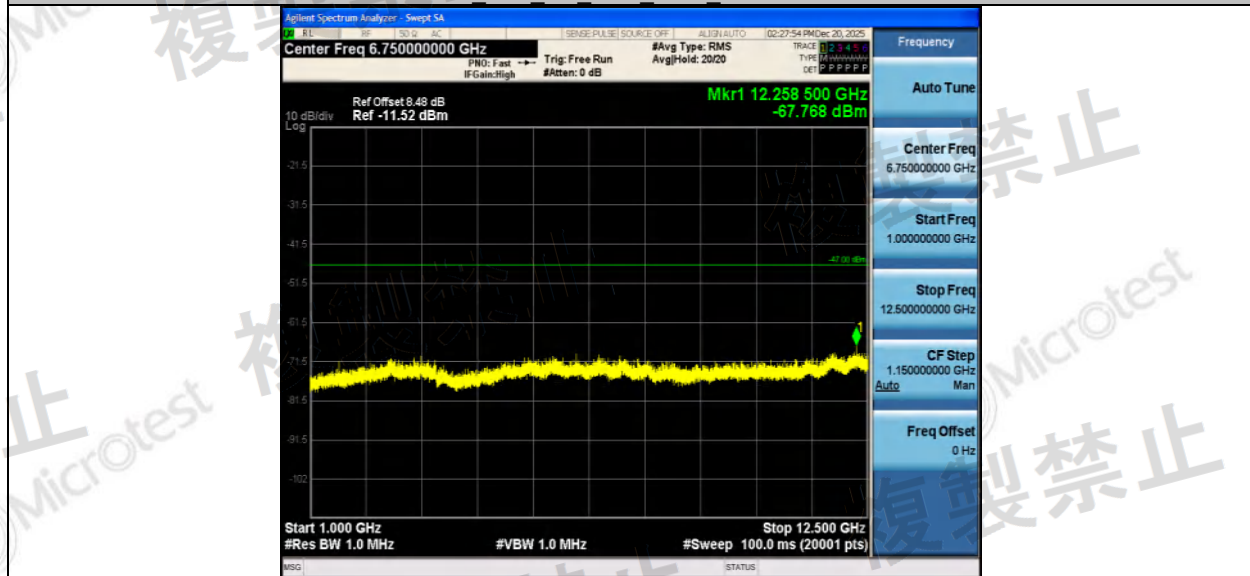
TEST REPORT

Report No.: MTi251023015-0113E2

NTNV BLE 1M Ant2 2440 30~1000

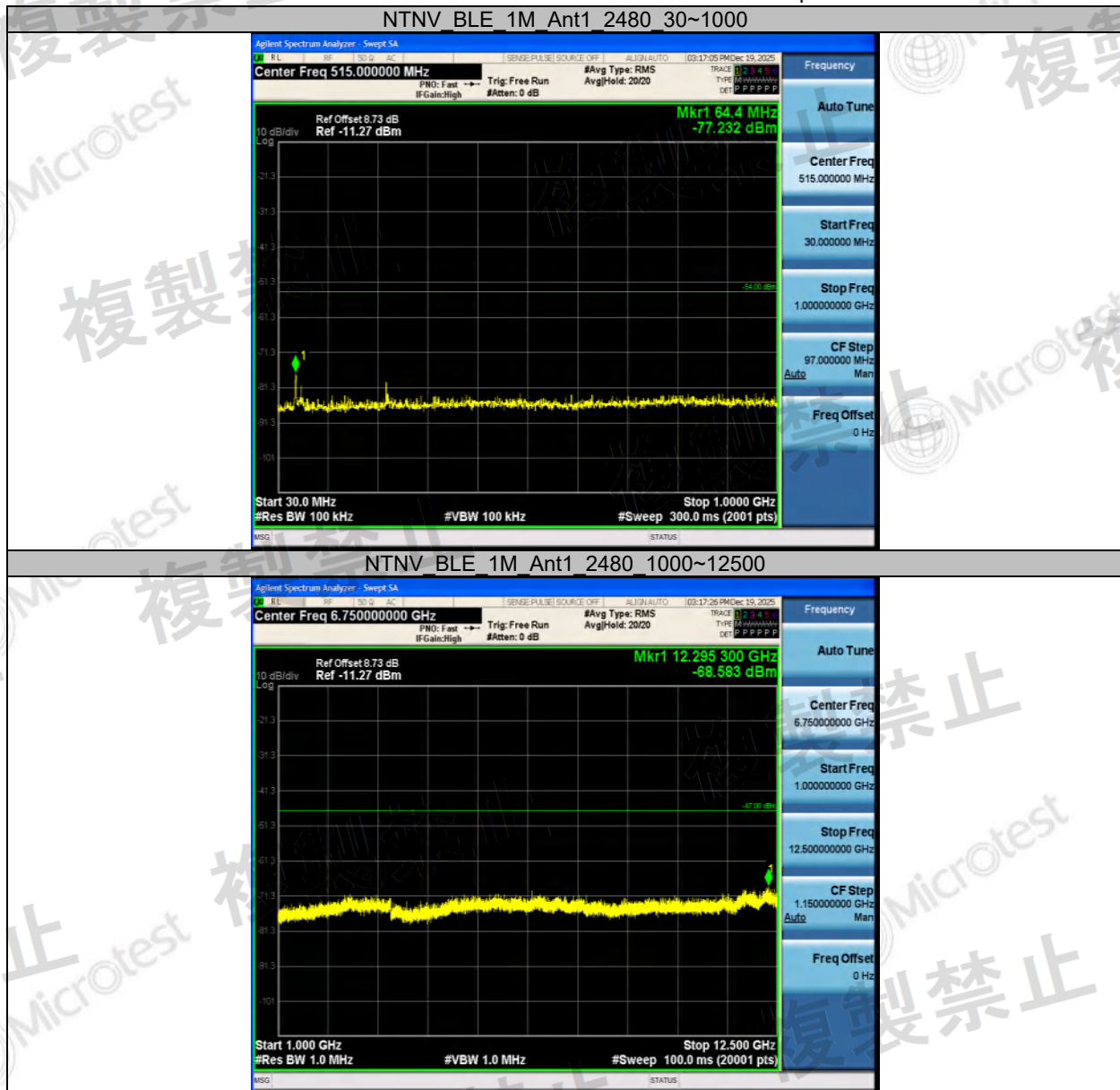


NTNV BLE 1M Ant2 2440 1000~12500



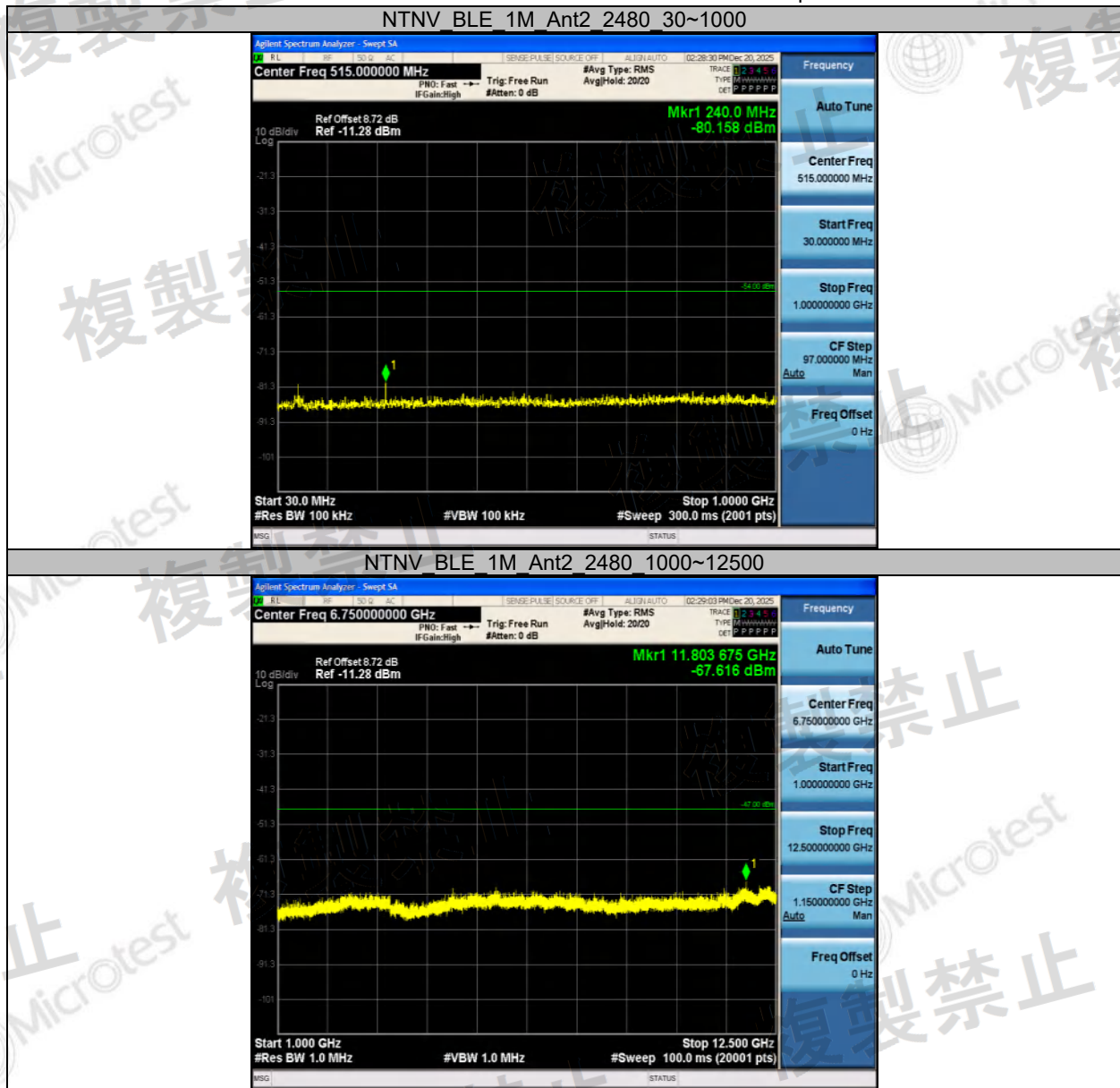
TEST REPORT

Report No.: MTi251023015-0113E2



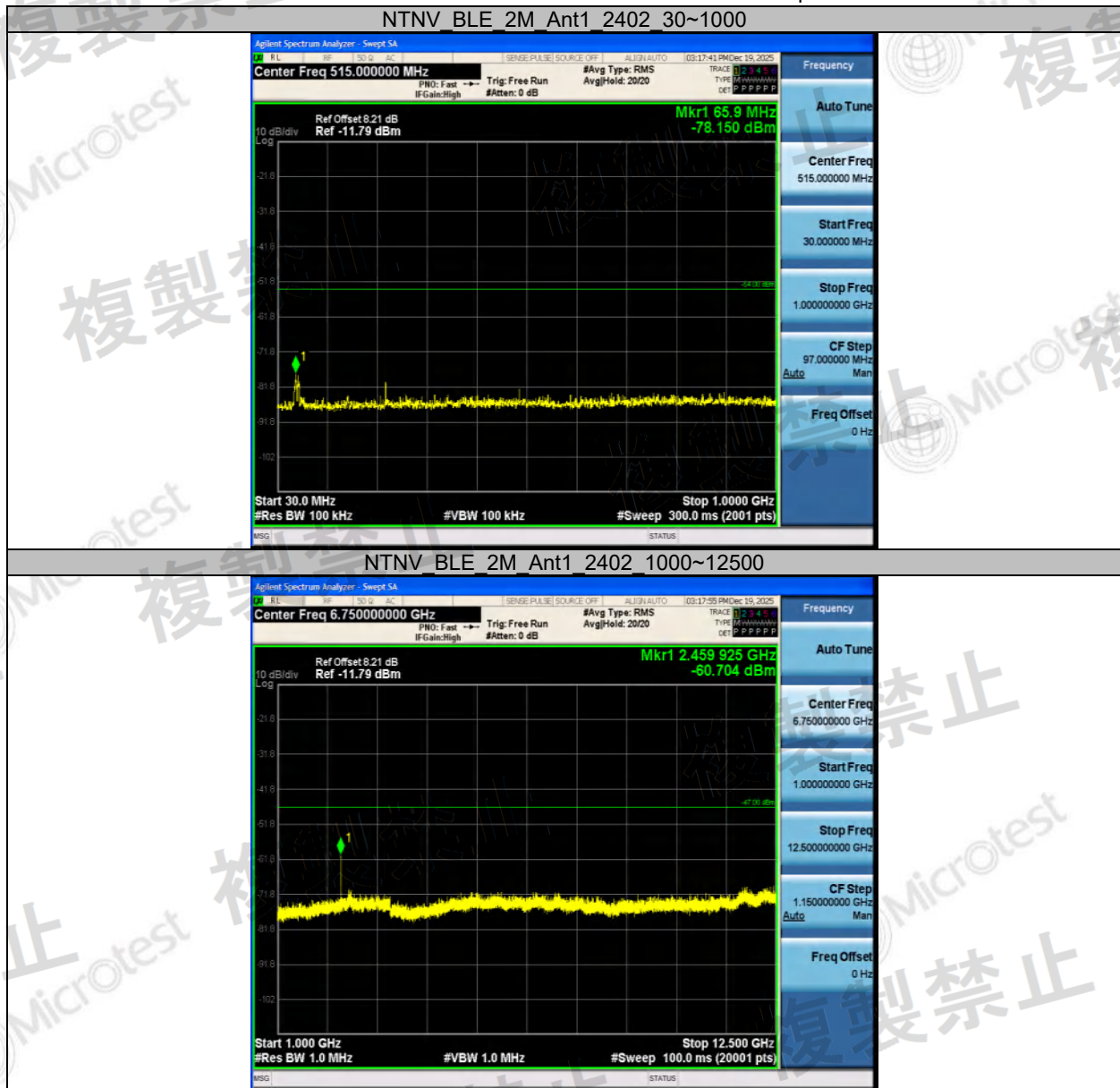
TEST REPORT

Report No.: MTi251023015-0113E2



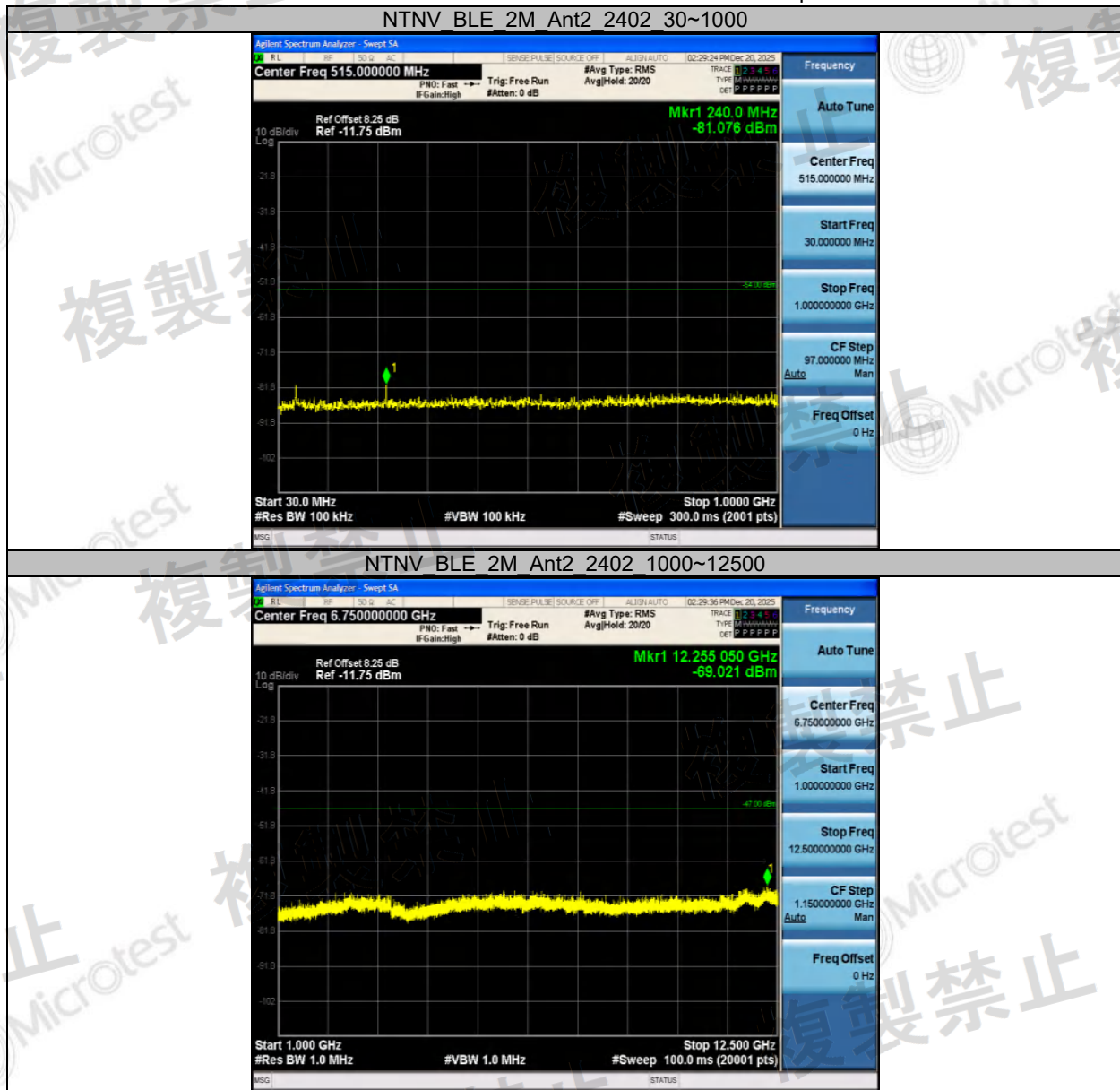
TEST REPORT

Report No.: MTi251023015-0113E2



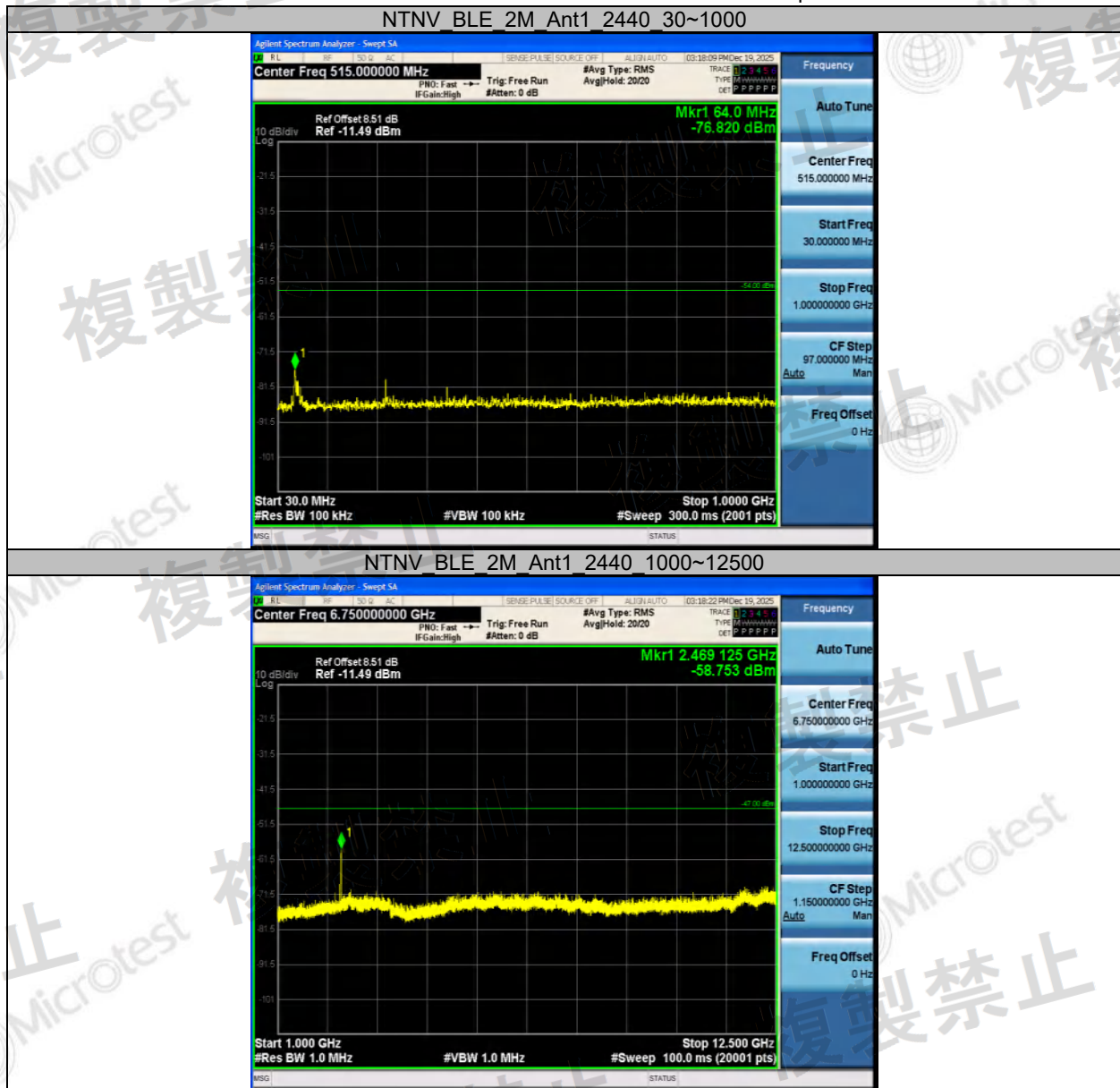
TEST REPORT

Report No.: MTi251023015-0113E2



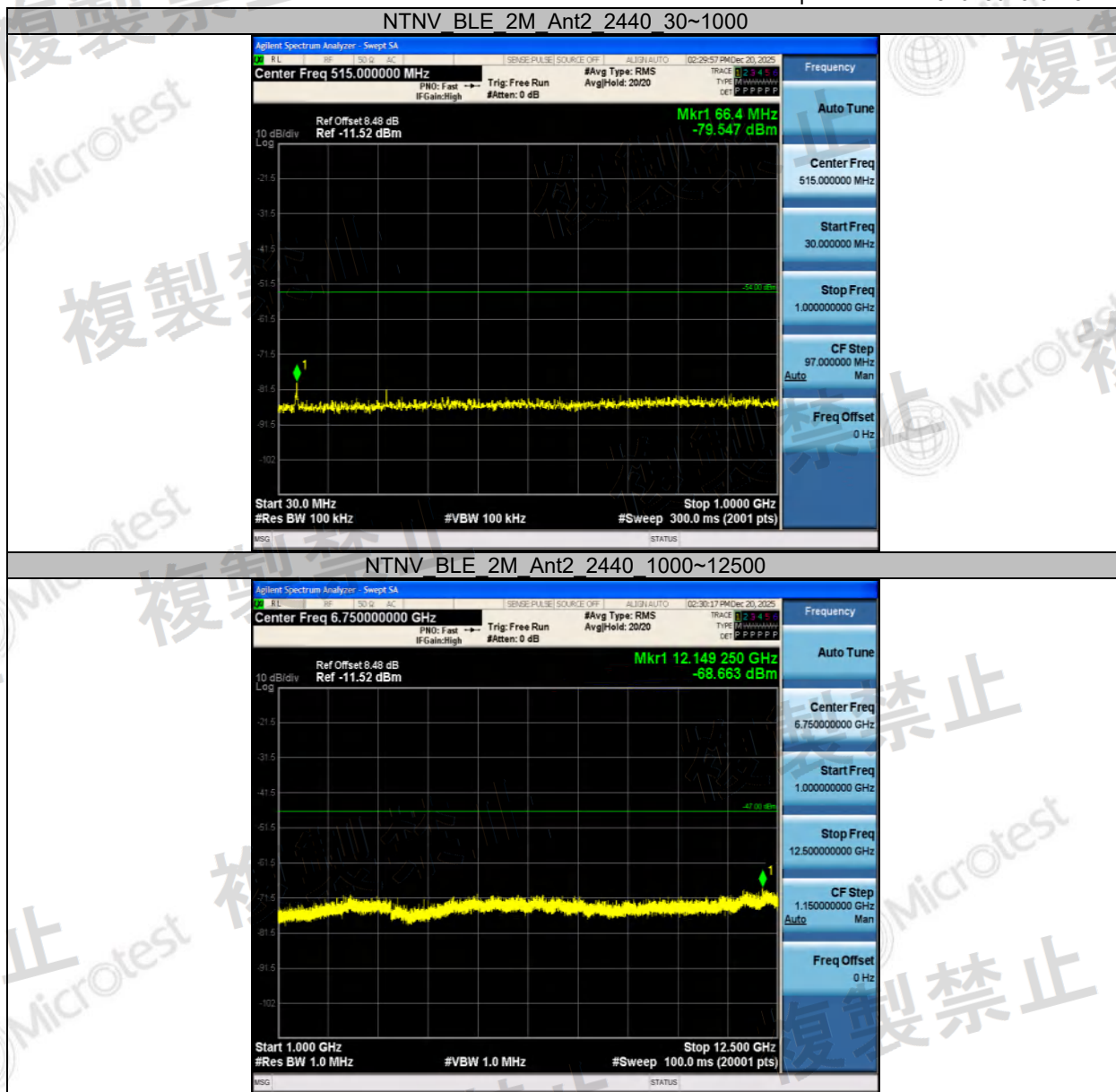
TEST REPORT

Report No.: MTi251023015-0113E2



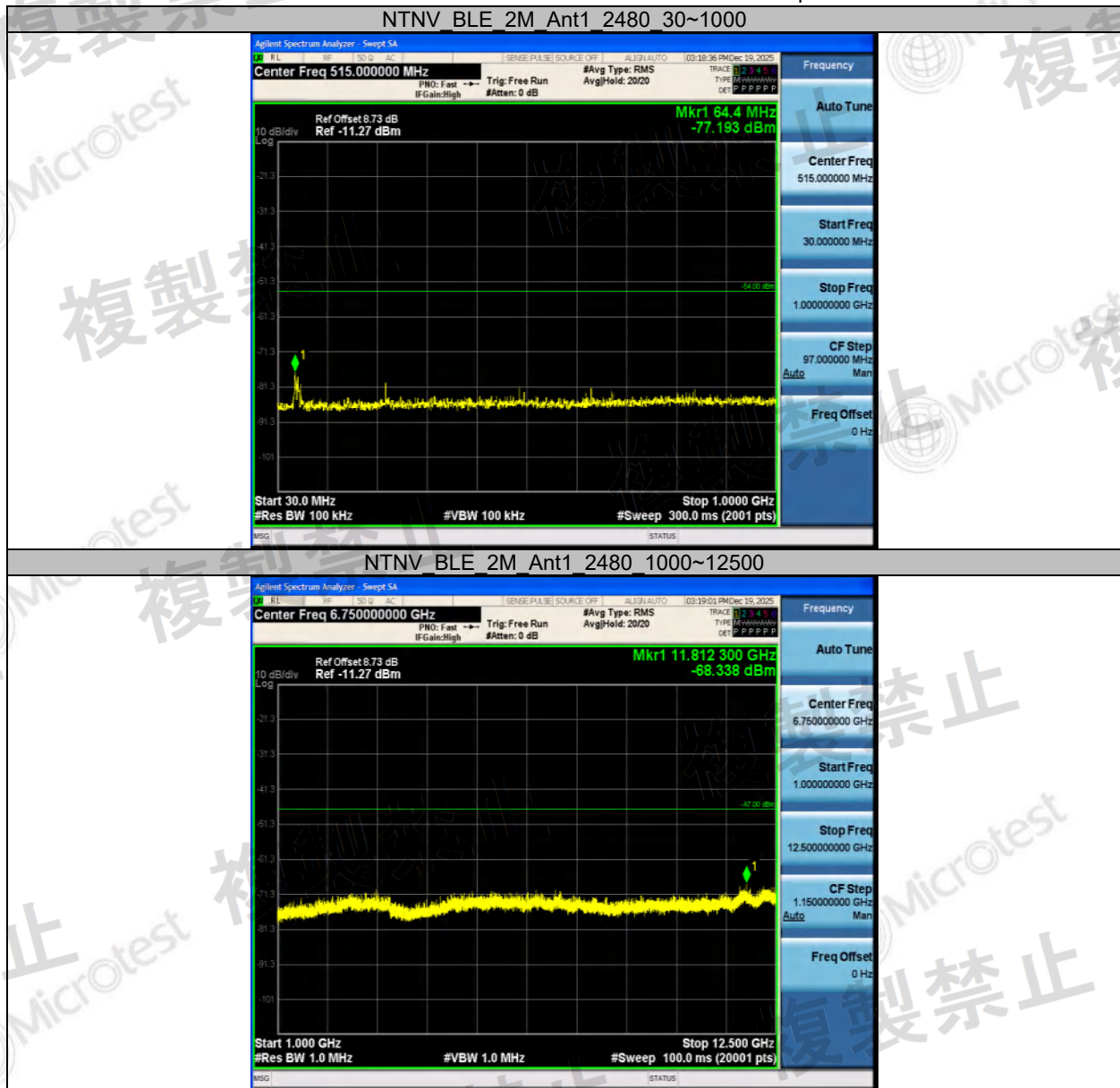
TEST REPORT

Report No.: MTi251023015-0113E2



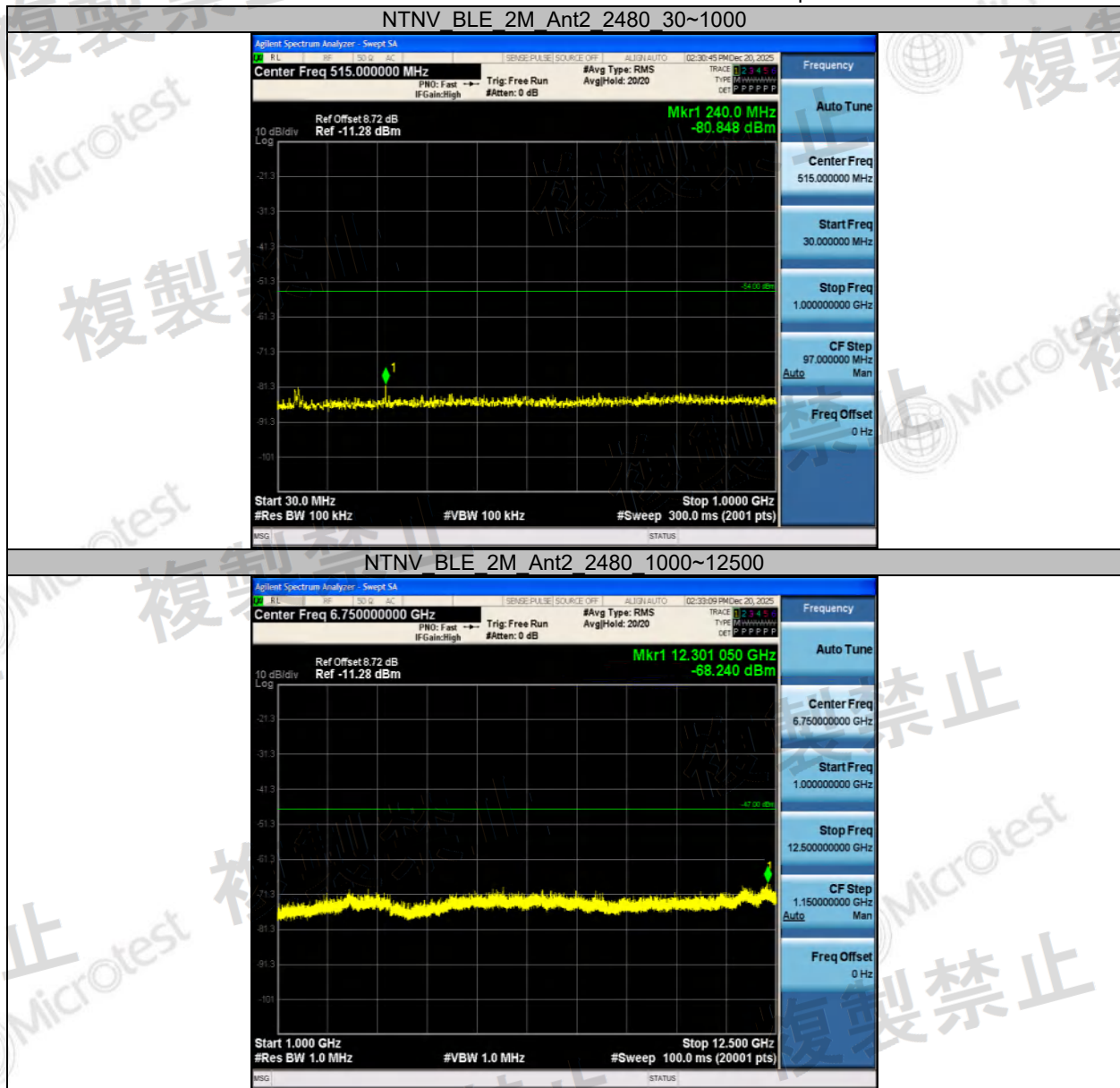
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Statement

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6. Any objection to this report shall be submitted to the laboratory within 15 days from the date of receipt of the report.

***** END OF REPORT *****