

RF TEST REPORT

Test Report No.....: RF260709006-01-004

Product(s) Name.....: Helmet Headset

Model(s).....: X8S, X6S, X6S Lite, M910, R19, R20, R6S, X5, X6, X8, X8 Lite

Trade Mark.....: N/A

Applicant.....: ShenZhen City Xingyaoda Technology Co., Limited

Address.....: Room 303, 3rd Floor, Xuchong Industrial Park, No. 8, Road 7, Yangyong
Industrial Zone, Songgang Street, Bao'an District, Shenzhen, China.

Receipt Date.....: 2026.06.25

Test Date.....: 2026.06.26 ~ 2026.08.04

Issued Date.....: 2026.08.05

Standards.....: MIC Notice No.88 Appendix No.43 Article 2, Paragraph 1, Item 19 Rules
Section

Testing Laboratory.....: Shenzhen Haiyun Standard Technical Co., Ltd.

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History of this test report

Original Report Issue Date: 2026.08.05

- ☒ No additional attachment
☐ Additional attachments were issued following record

Attachment No.	Issue Date	Description

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

Test sample no.	POC260709006-S001
Product name	Helmet Headset
Model name	X8S, X6S, X6S Lite, M910, R19, R20, R6S, X5, X6, X8, X8 Lite, X8S Lite
Test Model	X8S
Model difference	Multiple models are provided based on market needs, while the external appearance and internal circuitry of the product remain unchanged.
Trade Mark	N/A
Power supply	DC 3.7V from battery of DC 5V from adapter
Radio Type	BDR+EDR
Type of Modulation	GFSK, $\pi/4$ -DQPSK, 8-DPSK
Frequency Range	2402-2480MHz
Rated Power	0.02mW/MHz
Antenna Type	Metal Antenna
Antenna Gain	2.25dBi
Applicant	ShenZhen City Xingyaoda Technology Co., Limited
Address	Room 303, 3rd Floor, Xuchong Industrial Park, No. 8, Road 7, Yangyong Industrial Zone, Songgang Street, Bao'an District, Shenzhen, China.
Manufacturer	ShenZhen City Xingyaoda Technology Co., Limited
Address	Room 303, 3rd Floor, Xuchong Industrial Park, No. 8, Road 7, Yangyong Industrial Zone, Songgang Street, Bao'an District, Shenzhen, China.
Sample/EUT Status	Good condition

1.2 System Test Configuration

1.2.1 Channel List

EUT was tested with Channel 2402MHz, 2441MHz, 2480MHz.

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2402	27	2429	54	2456
01	2403	28	2430	55	2457
02	2404	29	2431	56	2458
03	2405	30	2432	57	2459
04	2406	31	2433	58	2460
05	2407	32	2434	59	2461
06	2408	33	2435	60	2462
07	2409	34	2436	61	2463
08	2410	35	2437	62	2464
09	2411	36	2438	63	2465
10	2412	37	2439	64	2466
11	2413	38	2440	65	2467
12	2414	39	2441	66	2468
13	2415	40	2442	67	2469
14	2416	41	2443	68	2470
15	2417	42	2444	69	2471
16	2418	43	2445	70	2472
17	2419	44	2446	71	2473
18	2420	45	2447	72	2474
19	2421	46	2448	73	2475
20	2422	47	2449	74	2476
21	2423	48	2450	75	2477
22	2424	49	2451	76	2478
23	2425	50	2452	77	2479
24	2426	51	2453	78	2480
25	2427	52	2454		
26	2428	53	2455		

The output power measurements were tested with DH1/3/5 during 1Mbps, 2Mbps, and 3Mbps, with the worst case being 1Mbps (DH5), 2Mbps (2DH5), and 3Mbps (3DH5), so the test project only recorded the worst case.

1.2.2 EUT Exercise Software

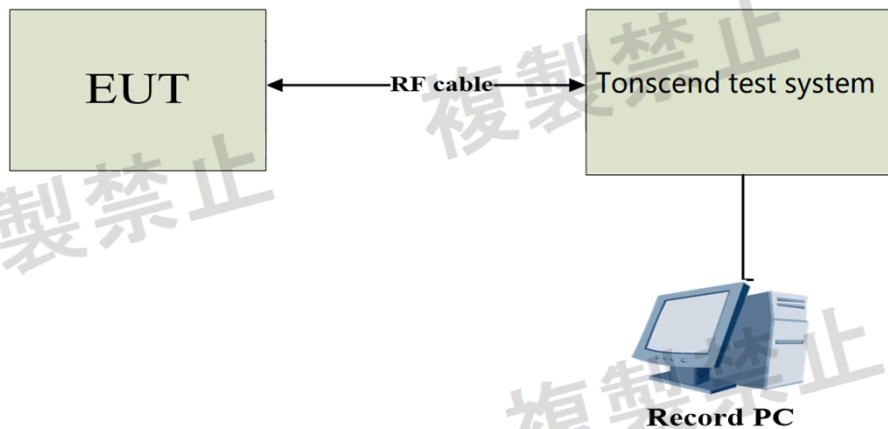
During testing, channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level.

Test Software Version	Bluetest3		
Frequency (MHz)	2402	2441	2480
1Mbps	Default	Default	Default
2Mbps	Default	Default	Default
3Mbps	Default	Default	Default

1.2.3 Support Equipment

No.	Equipment	Model	Manufacturer	Series No	Rating
1	PC	M4500T	Thinkpad	M032004854IT	/
2	adapter	SG-0502000AU	/	/	Input:100-240V~, 50-60Hz, 0.3A max Output: 5.0V---2.0A; 10.0W
3	/	/	/	/	/

1.2.4 Block Diagram of Configuration



1.2.5 Test Voltage

The EUT has its own voltage regulator principle to chip QCC3020, the output voltage of the chip is 3.3V and the fluctuation of power supply to the RF circuit of EUT is equal to or less than +/- 1%. So exempt extremely high and low supply voltage condition tests, EUT only operated in normal voltage to test all regulations.

When an extreme voltage is supplied to the Helmet Headset, the power deviation of the Helmet Headset 's output is less than 1%. Therefore, testing is only conducted under normal conditions.

Condition	Input (V/AC) from adapter	The input voltage of the chip (V/DC)
NV	100	3.3
LV	90	3.3
HV	110	3.3

Note: Changing the external input does not affect the power supply voltage of the chip.

1.2.6 Environmental Conditions

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

- Temperature: 15~35°C
- Humidity: 45~75%
- Atmospheric pressure: 86-106 kPa

1.2.7 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

1.3 Summary of Test Results

MIC Notice No.88 Appendix No.43 Article 2, Paragraph 1, Item 19 Rules Section	Description of Test	Test result
2	Frequency Error	Compliant
3	Occupied Bandwidth and Spreading Bandwidth	Compliant
4	Spurious emission intensity	Compliant
5	Antenna Output Power and Output Power Tolerance	Compliant
6	Limit Of Secondary Spurious Emissions	Compliant
7	Transmission Antenna Gain	Not Applicable
8	Transmission Radiation Angle Width	Not Applicable
9	Frequency Hopping Dwell Time	Compliant
10	Interference Prevention Function	Compliant

Not Applicable

– This test item was not required for the output power less than 6.91dBm/MHz (E.I.R.P)

1.4 List of Test and Measurement Instruments

Equipment	Manufacturer	Model No	Serial No.	Last Cal.	Cal Due Date	Calibration body	Classification
MXA Signal Analyzer	Keysight	N9010A	MY51440158	2025/9/15	2026/9/14	Guangzhou Lisai Metrology & Test co. ,Ltd.	(c)
VXG Signal Generator	Keysight	N5182B	MY59100855	2026/4/11	2027/4/10		
SPECTRUM ANALYZER	R/S	FSV40-N	101425	2026/4/11	2027/4/10		
RF Control Unit	dsusoft	JS0806-2	21G8060449	2026/2/27	2027/2/26	CCIC (Shenzhen) Metrology & Testing Service Co.,Ltd	
EXG Analog Signal Generator	Keysight	N5173B	MY59101282	2026/2/27	2027/2/26		
power supply unit	dsusoft	JS0806-4ADC	N/A	2026/2/27	2027/2/26		
Temp&Humidity Recorder	Meideshi	/	/	2026/4/8	2027/4/7		
10dB Attenuator	Tonscend	10dB	NA	Each Time			
Test software	dsusoft	JS1120-3 Ver.3.2.22.0					
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							

1.5 Measurement Uncertainty

Uncertainty	
Parameter	Uncertainty
Occupied Channel Bandwidth	±102kHz
Frequency Error	±6.5 x 10 ⁻⁸
RF power conducted	±0.243dB
Power Spectral Density	±0.743dB
Conducted Spurious Emission	±1.328dB
Time	±0.19%

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

2. Frequency Error Measurement

Limit

Standard	Item	Limit
Article 2-1 Item 19	Tolerance of Frequency	±50ppm or less

2.2 Test Procedures

- Connect EUT antenna terminal to the Spectrum Analyzer.
- Set Spectrum Analyzer as below:

Frequency : Test Frequency
SPAN : 200kHz
RBW : 10kHz
VBW : 10kHz
Sweep Time : Auto
Detector Mode : Peak
Display Mode : Max Hold

2.3 Test Data

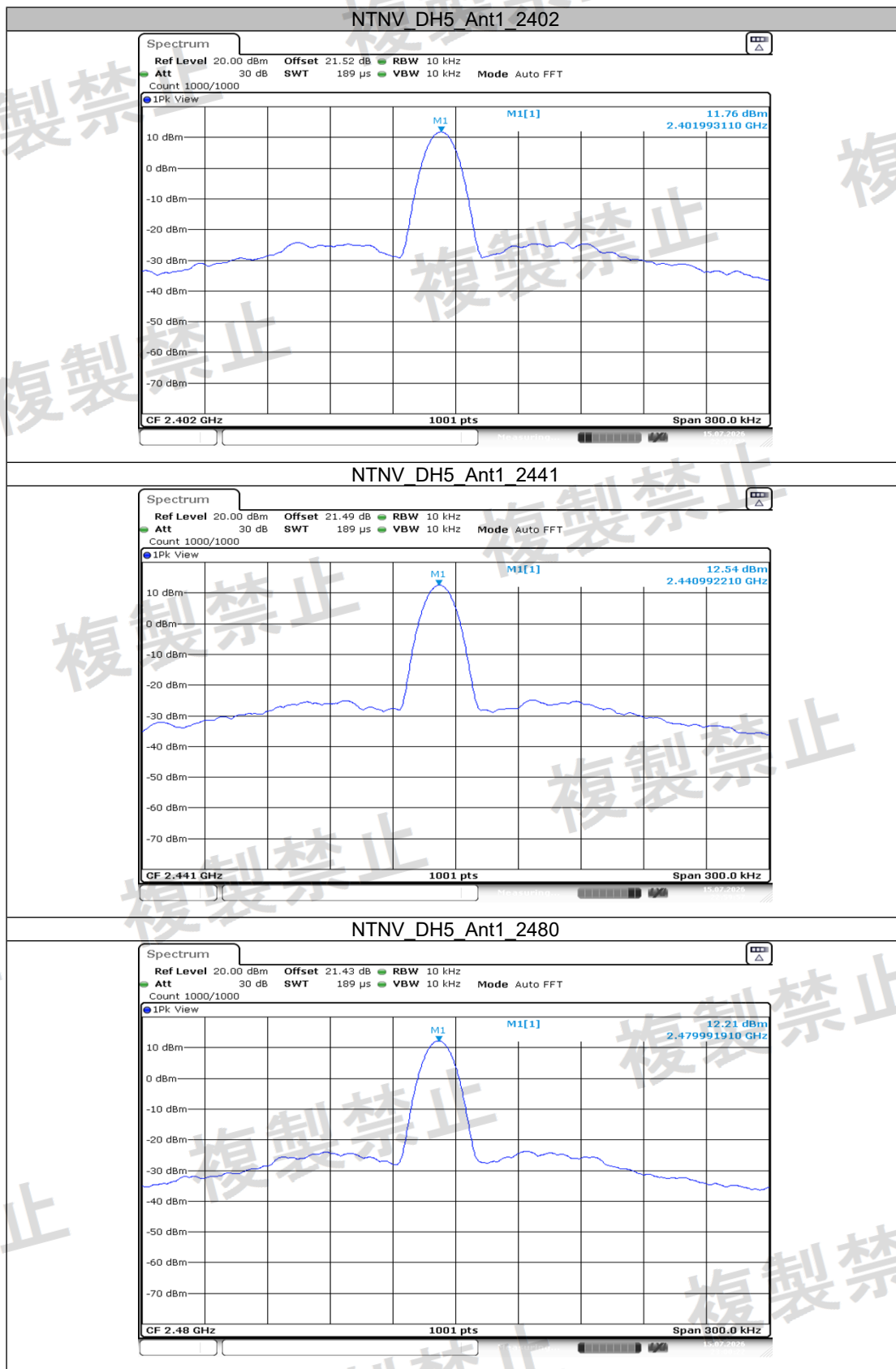
Temperature	22.6℃	Humidity	50%
ATM Pressure	101.1kPa	Time	2026.07.15
Test by	Elio Lin	Test result	PASS

Please refer to following tables.

Test Condition	Test Mode	Antenna	Freq(MHz)	Result[ppm]	Limit[ppm]	Verdict
NTNV	DH5	Ant1	2401.99311	-2.86844	±50	PASS
		Ant1	2440.99221	-3.19132	±50	PASS
		Ant1	2479.99191	-3.26210	±50	PASS

Note: The EUT was programmed in un-modulation function.

Please refer to recording the spectrum plots in the worst conditions



3. Occupied Bandwidth (99%)

Limit

Standard	Type	Limit
Article 2-1 Item 19	FHSS	$\leq 83.5\text{MHz}$
	DSSS	$\leq 26\text{MHz}$
	OFDM	$\leq 38\text{MHz}$
	others	$\leq 26\text{MHz}$

3.2 Measurement Procedure

- Connect EUT antenna terminal to the Spectrum Analyzer.
- Set Spectrum Analyzer as below:

Frequency : Test Frequency
SPAN : 200MHz
RBW : 1MHz
VBW : 1MHz
Sweep Time : Auto (Minimum time to ensure measurement accuracy.)
Detector Mode : Peak
Display Mode : Max Hold
Data points : 400 points or more
Reference level : Enough level for maximum dynamic range
OBW : 99%

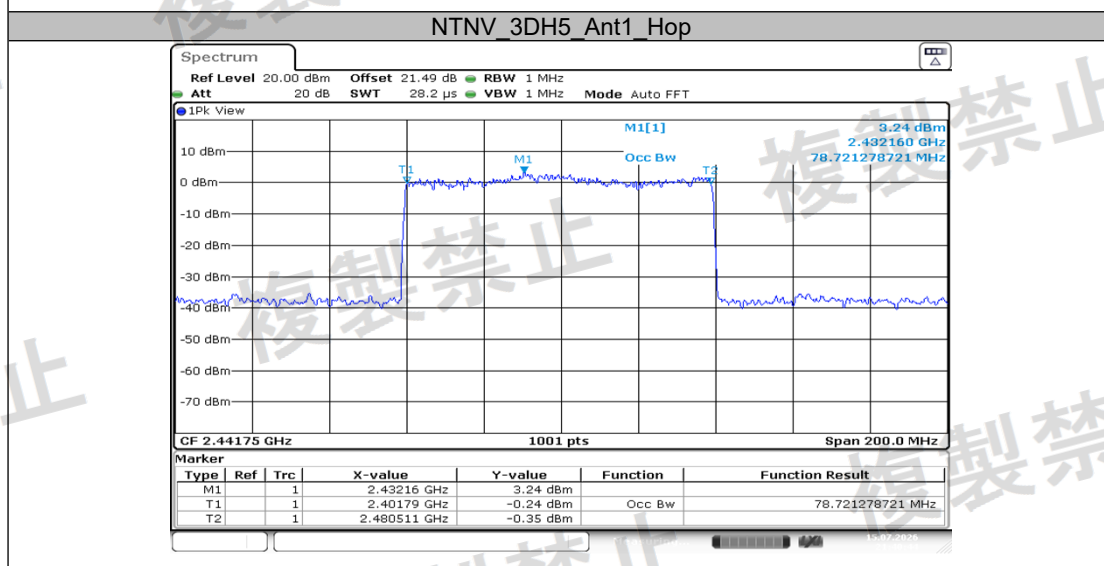
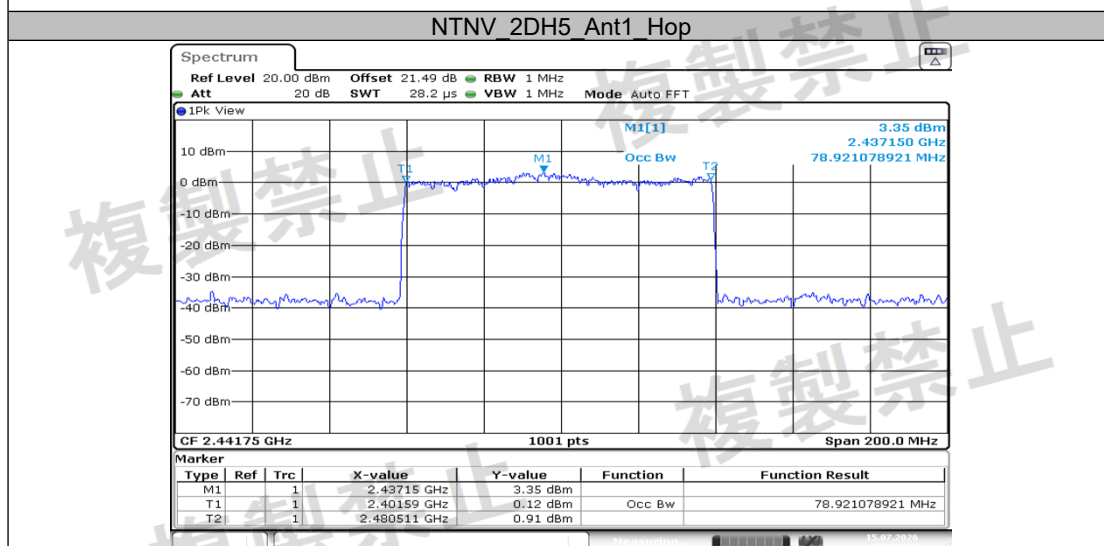
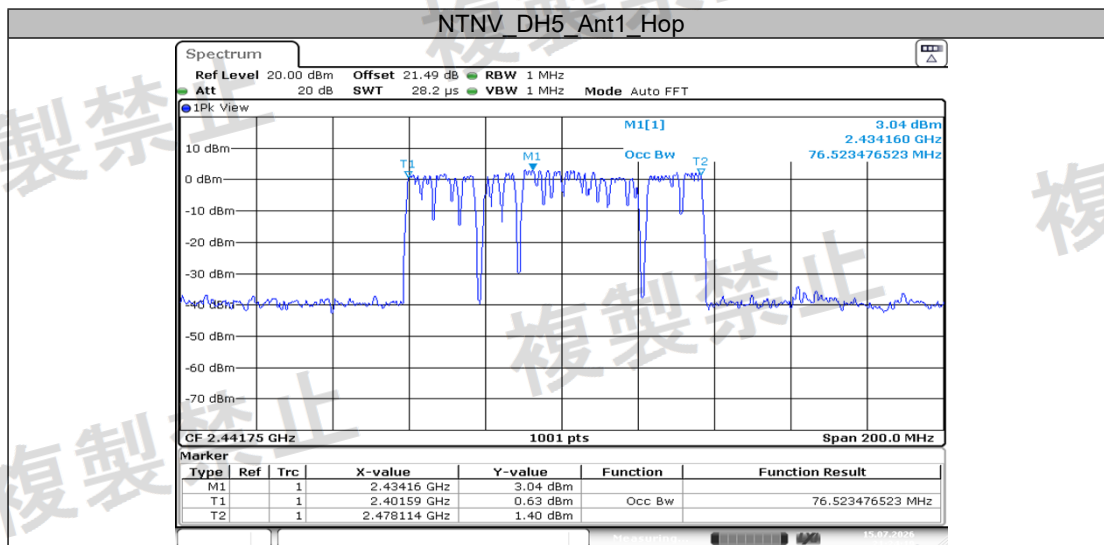
3.3 Test Data

Temperature	22.6°C	Humidity	50%
ATM Pressure	101.1kPa	Time	2026.07.15
Test by	Elio Lin	Test result	PASS

Please refer to following tables.

Condition	Modulation mode	99% OBW (MHz)	Limit (MHz)
NVNT	DH5	76.523	≤ 83.5
	2DH5	78.921	≤ 83.5
	3DH5	78.721	≤ 83.5

Please refer to recording the spectrum plots in the worst conditions



4. Spread-Spectrum Bandwidth (90%)/Spread Factor

Limit

Standard	Item
Article 2-1 Item 19	Spreading Bandwidth
Article 2-1 Item 19	Spread factor

4.2 Measurement Procedure

- Connect EUT antenna terminal to the Spectrum Analyzer.

- Set Spectrum Analyzer as below:

Frequency : Test Frequency
SPAN : 200MHz
RBW : 1MHz
VBW : 1MHz
Sweep Time : Auto (Minimum time to ensure measurement accuracy.)
Detector Mode : Peak
Display Mode : Max Hold
Data points : 400 points or more
Reference level : Enough level for maximum dynamic range
OBW : 90%

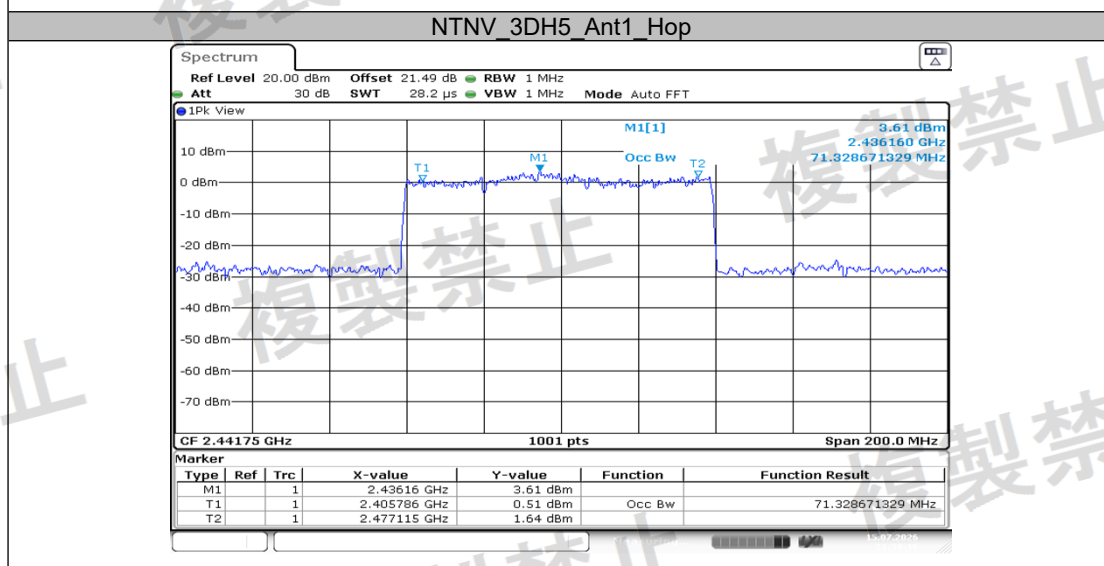
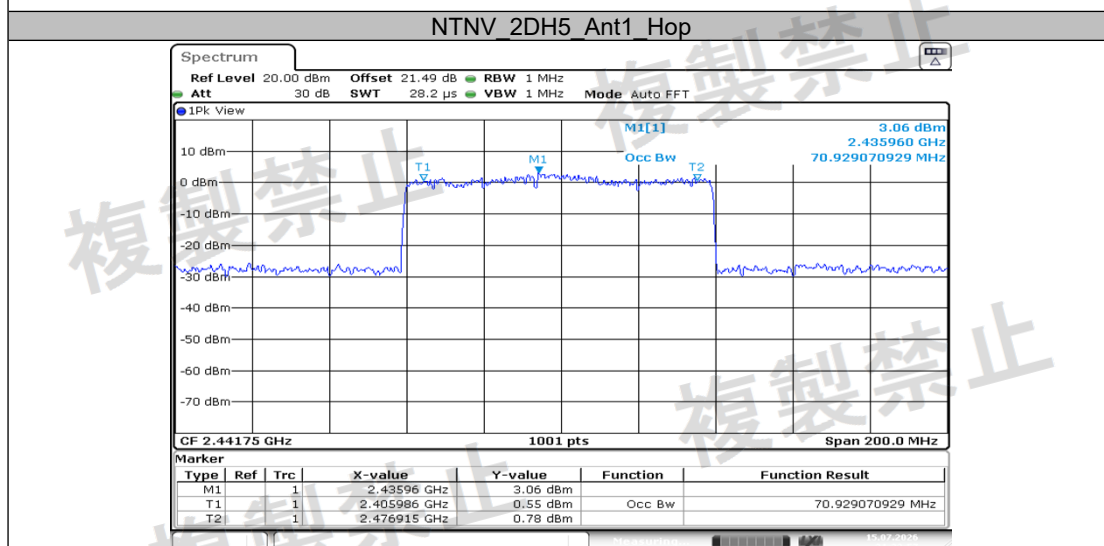
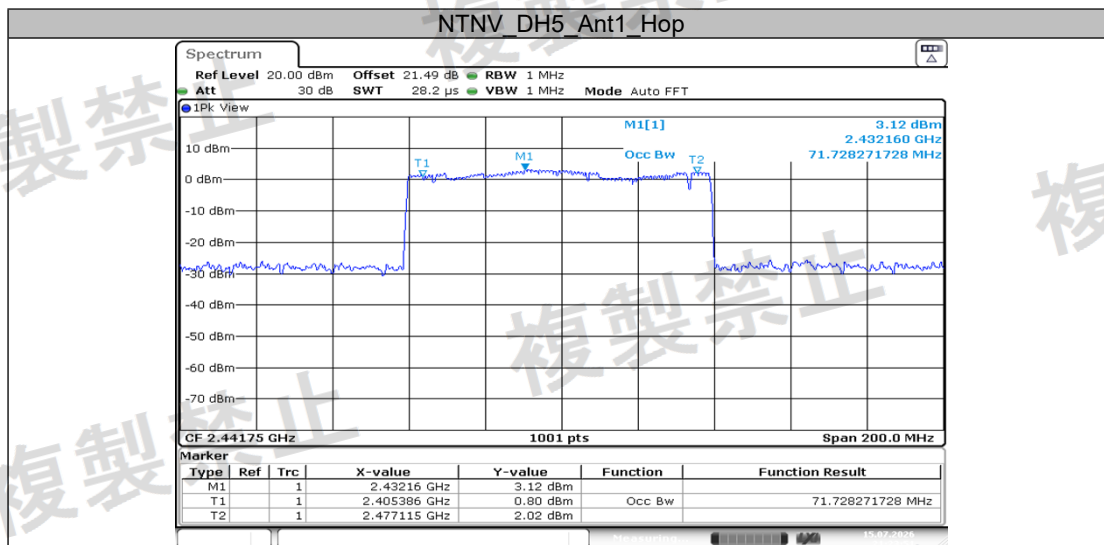
4.3 Test Data

Temperature	22.6°C	Humidity	50%
ATM Pressure	101.1kPa	Time	2026.07.15
Test by	Elio Lin	Test result	PASS

Please refer to following tables and plots.

Test Condition	Test Mode	Antenna	Freq (MHz)	Result [MHz]	Spread Factor	Verdict
NTNV	DH5	Ant1	Hop	71.728	71.728	PASS
	2DH5	Ant1	Hop	70.929	70.929	PASS
	3DH5	Ant1	Hop	71.329	71.329	PASS

Please refer to recording the spectrum plots in the worst conditions



5. Spurious Emission Intensity

Limit

Standard	Item	Frequency	Limit
Article 2-1 Item 19	TX Spurious Emission	30 - 1000MHz	2.5μW/MHz/-26dBm
		1000 - 2387MHz	2.5μW/MHz/-26dBm
		2387 - 2400MHz	25μW/MHz/-16dBm
		2483.5 - 2496.5MHz	25μW/MHz/-16dBm
		2496.5MHz - 12.5GHz	2.5μW/MHz/-26dBm

5.2 Measurement Procedure

- Connect EUT antenna terminal to the Spectrum Analyzer.
- Set Spectrum Analyzer as below:

Frequency : 30 - 1000MHz;
1000 - 2387MHz;
2387-2400MHz;
2483.5-2496.5MHz;
2496.5MHz-13GHz

RBW : 100kHz for Below 1GHz
1MHz for Above 1GHz

VBW : 100kHz for Below 1GHz
1MHz for Above 1GHz

Sweep Time : Auto (Minimum time to ensure measurement accuracy.)

Detector Mode : Peak

Display Mode : Max Hold

Data points : 400 points or more

Reference level : Enough level for maximum dynamic range

5.3 Test Data

Temperature	22.6℃	Humidity	50%
ATM Pressure	101.1kPa	Time	2026.07.15
Test by	Elio Lin	Test result	PASS

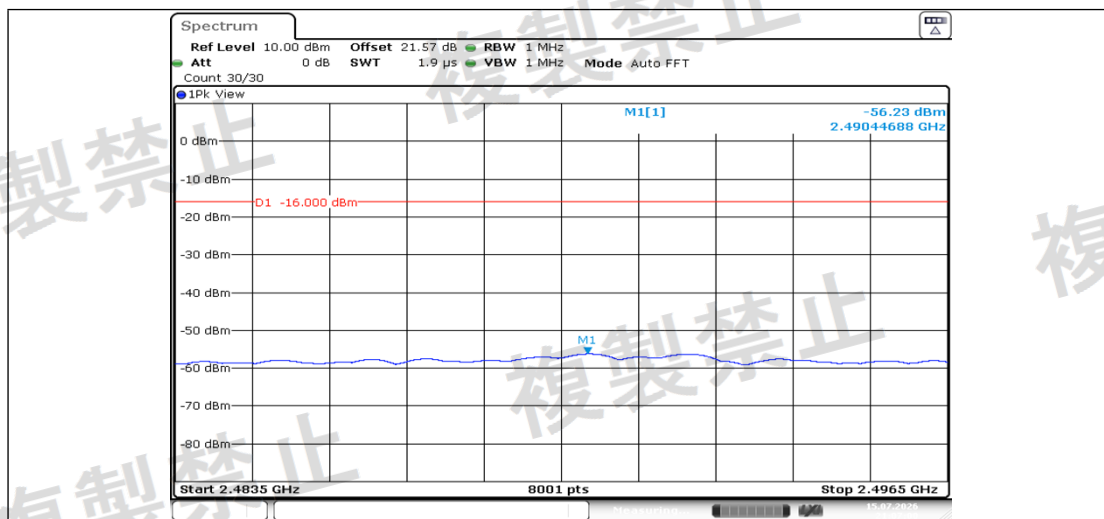
Please refer to following table and plots.

Test Condition	Test Mode	Antenna	Freq(M Hz)	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [μ W/MHz]	Limit [μ W/MHz]	Verdict
NTNV	DH5	Ant1	2402	30~1000	-49.05	≤ -26	0.01245	≤ 2.5	PASS
				1000~2387	-52.49	≤ -26	0.00564	≤ 2.5	PASS
				2387~2400	-41.00	≤ -16	0.07943	≤ 25	PASS
				2483.5~2496.5	-56.23	≤ -16	0.00238	≤ 25	PASS
				2496.5~13000	-40.31	≤ -26	0.09311	≤ 2.5	PASS
			2441	30~1000	-48.54	≤ -26	0.01400	≤ 2.5	PASS
				1000~2387	-52.50	≤ -26	0.00562	≤ 2.5	PASS
				2387~2400	-56.60	≤ -16	0.00219	≤ 25	PASS
				2483.5~2496.5	-55.03	≤ -16	0.00314	≤ 25	PASS
				2496.5~13000	-41.37	≤ -26	0.07295	≤ 2.5	PASS
			2480	30~1000	-48.29	≤ -26	0.01483	≤ 2.5	PASS
				1000~2387	-52.99	≤ -26	0.00502	≤ 2.5	PASS
				2387~2400	-57.33	≤ -16	0.00185	≤ 25	PASS
				2483.5~2496.5	-54.32	≤ -16	0.00370	≤ 25	PASS
				2496.5~13000	-39.54	≤ -26	0.11117	≤ 2.5	PASS
	2DH5	Ant1	2402	30~1000	-49.65	≤ -26	0.01084	≤ 2.5	PASS
				1000~2387	-52.49	≤ -26	0.00564	≤ 2.5	PASS
				2387~2400	-30.82	≤ -16	0.82794	≤ 25	PASS
				2483.5~2496.5	-55.62	≤ -16	0.00274	≤ 25	PASS
				2496.5~13000	-40.21	≤ -26	0.09528	≤ 2.5	PASS
			2441	30~1000	-49.45	≤ -26	0.01135	≤ 2.5	PASS
				1000~2387	-52.54	≤ -26	0.00557	≤ 2.5	PASS
				2387~2400	-56.39	≤ -16	0.00230	≤ 25	PASS
				2483.5~2496.5	-55.93	≤ -16	0.00255	≤ 25	PASS
				2496.5~13000	-41.36	≤ -26	0.07311	≤ 2.5	PASS
			2480	30~1000	-49.52	≤ -26	0.01117	≤ 2.5	PASS
				1000~2387	-52.69	≤ -26	0.00538	≤ 2.5	PASS
				2387~2400	-57.26	≤ -16	0.00188	≤ 25	PASS
				2483.5~2496.5	-48.21	≤ -16	0.01510	≤ 25	PASS
				2496.5~13000	-35.83	≤ -26	0.26122	≤ 2.5	PASS
	3DH5	Ant1	2402	30~1000	-47.60	≤ -26	0.01738	≤ 2.5	PASS
				1000~2387	-52.65	≤ -26	0.00543	≤ 2.5	PASS
				2387~2400	-30.50	≤ -16	0.89125	≤ 25	PASS
				2483.5~2496.5	-56.25	≤ -16	0.00237	≤ 25	PASS
				2496.5~13000	-41.63	≤ -26	0.06871	≤ 2.5	PASS
			2441	30~1000	-48.34	≤ -26	0.01466	≤ 2.5	PASS
				1000~2387	-51.84	≤ -26	0.00655	≤ 2.5	PASS
				2387~2400	-56.91	≤ -16	0.00204	≤ 25	PASS
				2483.5~2496.5	-56.80	≤ -16	0.00209	≤ 25	PASS
				2496.5~13000	-39.64	≤ -26	0.10864	≤ 2.5	PASS
			2480	30~1000	-48.99	≤ -26	0.01262	≤ 2.5	PASS
				1000~2387	-52.87	≤ -26	0.00516	≤ 2.5	PASS
				2387~2400	-56.80	≤ -16	0.00209	≤ 25	PASS
				2483.5~2496.5	-51.69	≤ -16	0.00678	≤ 25	PASS
				2496.5~13000	-41.16	≤ -26	0.07656	≤ 2.5	PASS

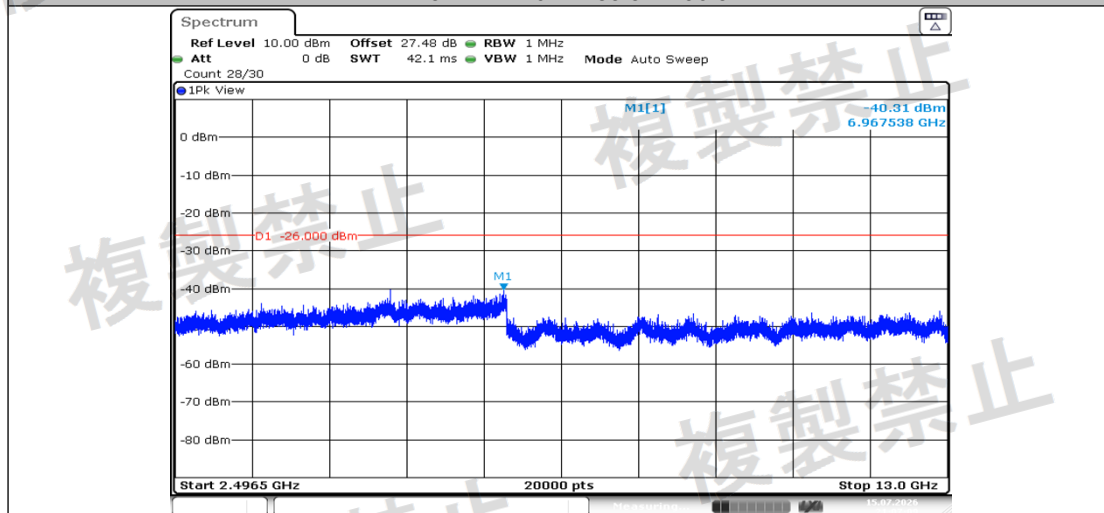
Note: For TX Spurious Emission(30MHz-1000MHz), When we test with RBW:100kHz and VBW:100kHz, since the limit unit is μ W/MHz, Therefore, compensate with 10dB at the offset.

Please refer to recording the spectrum plots in the worst conditions

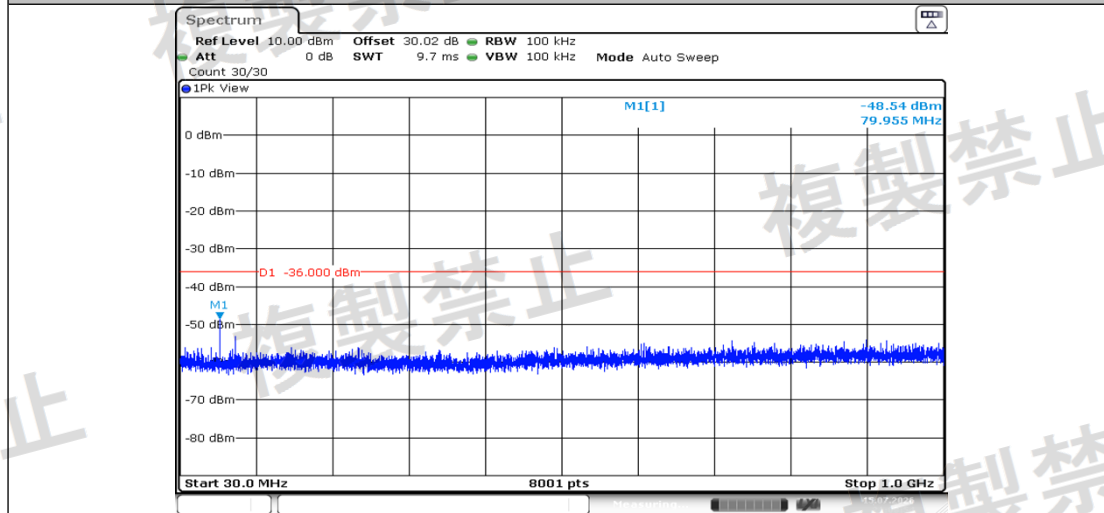




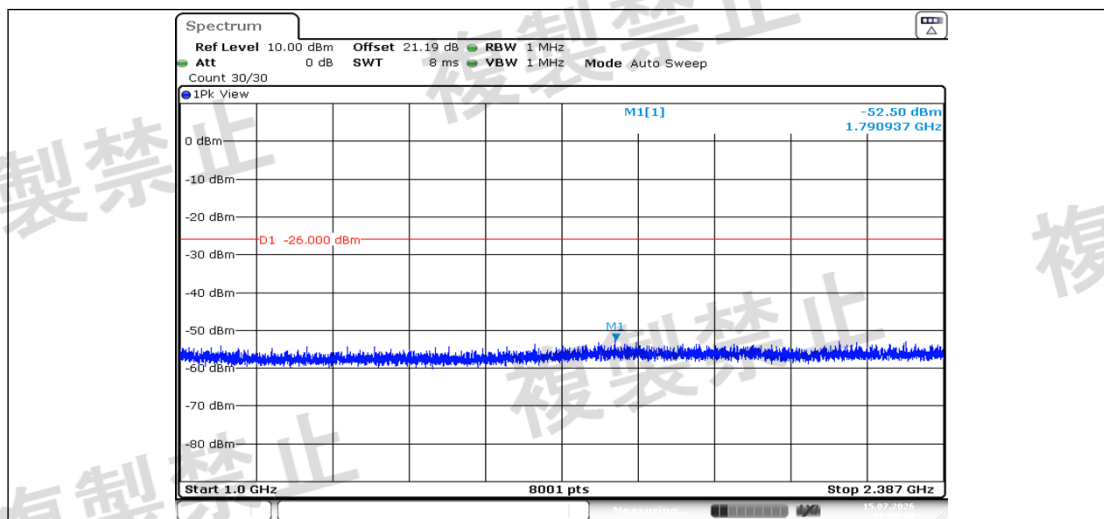
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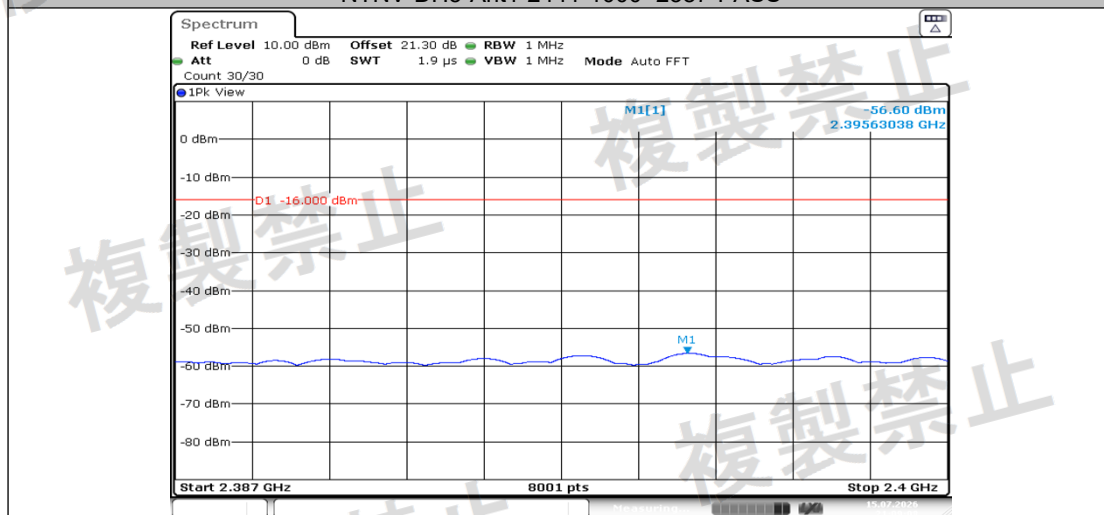
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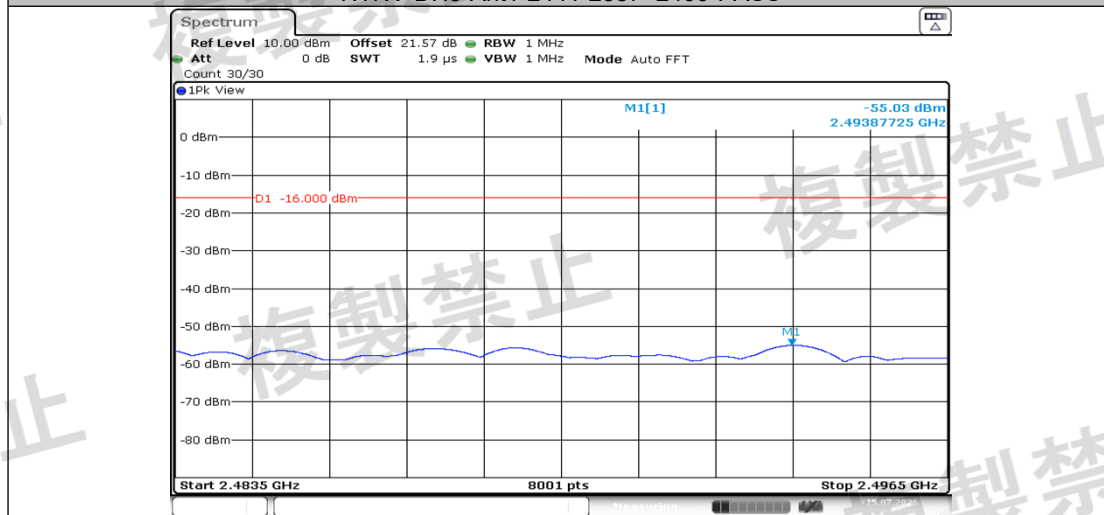
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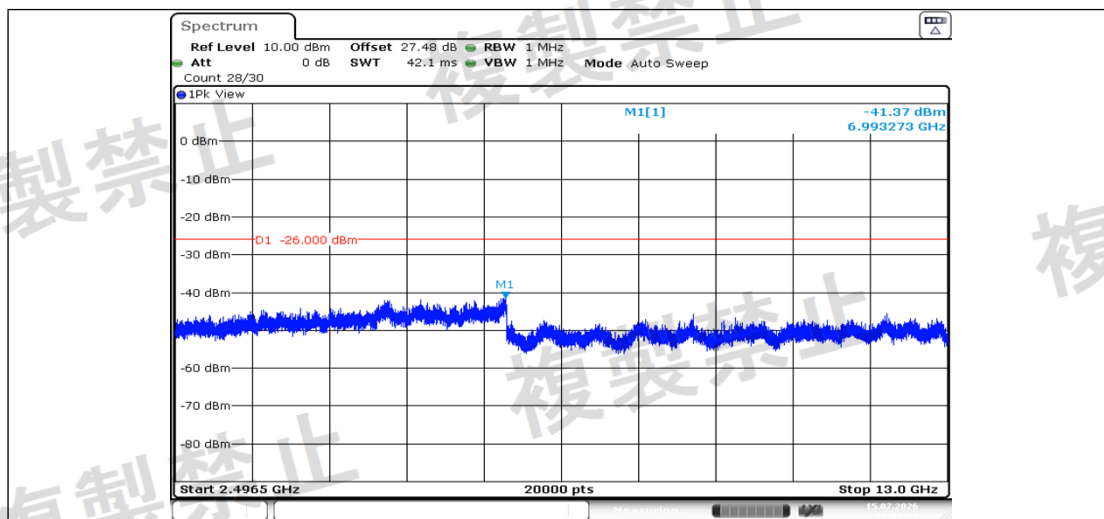
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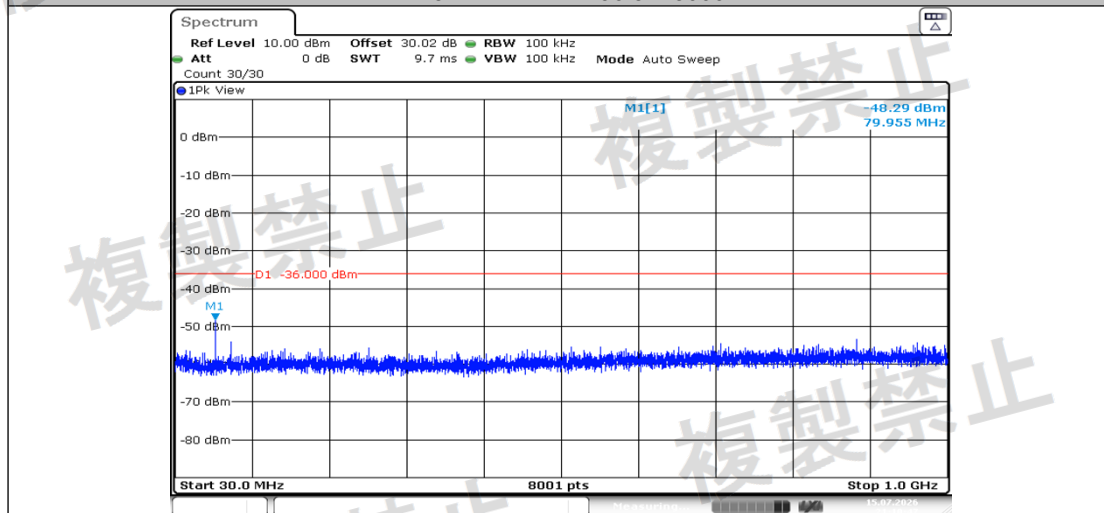
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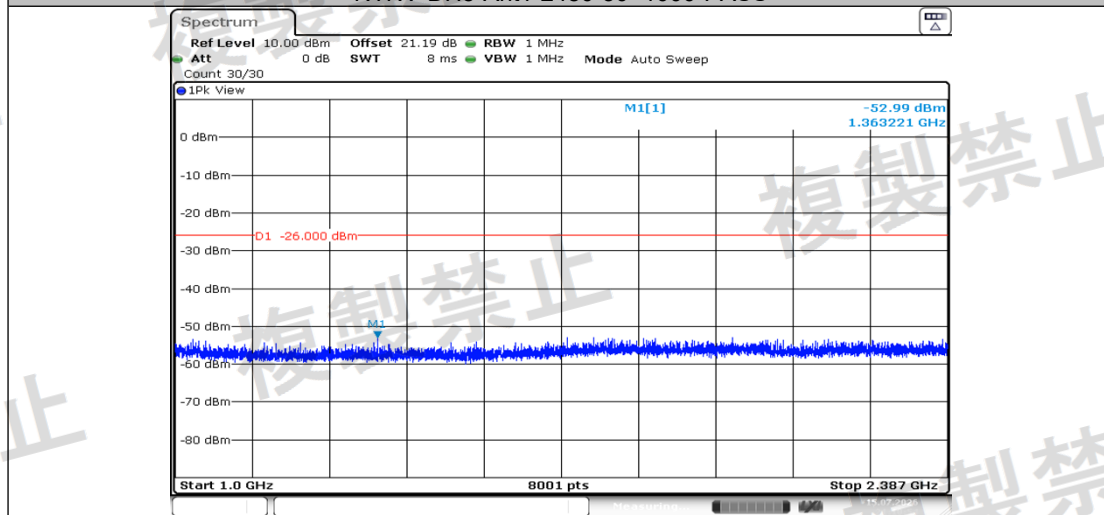
NTNV-DH5-Ant1-2441-2483.5~2496.5-PASS



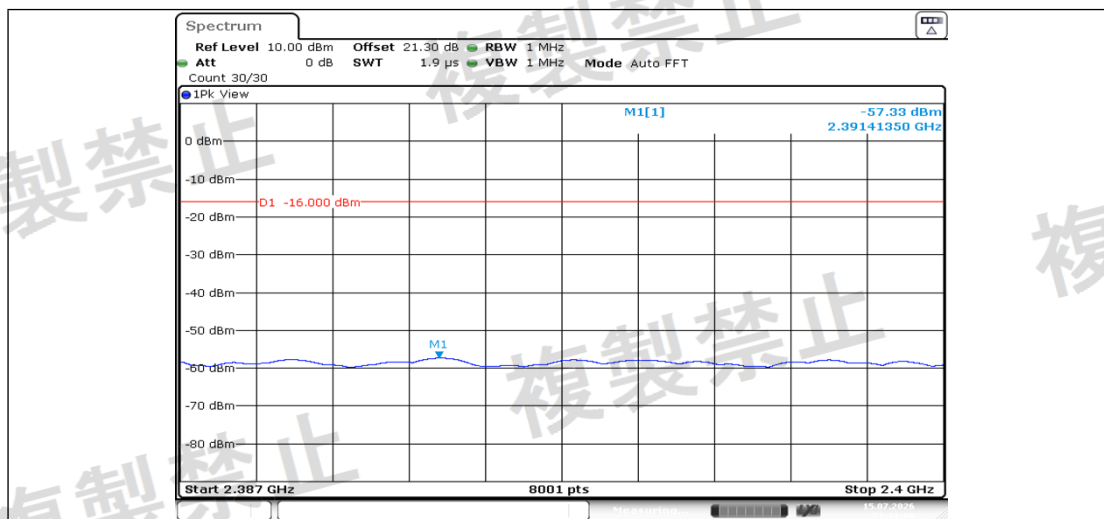
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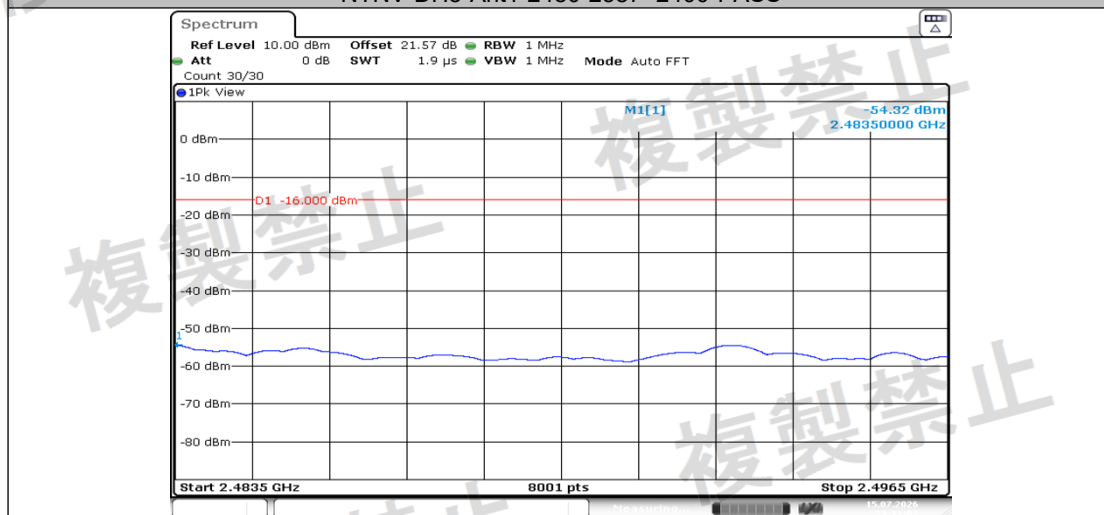
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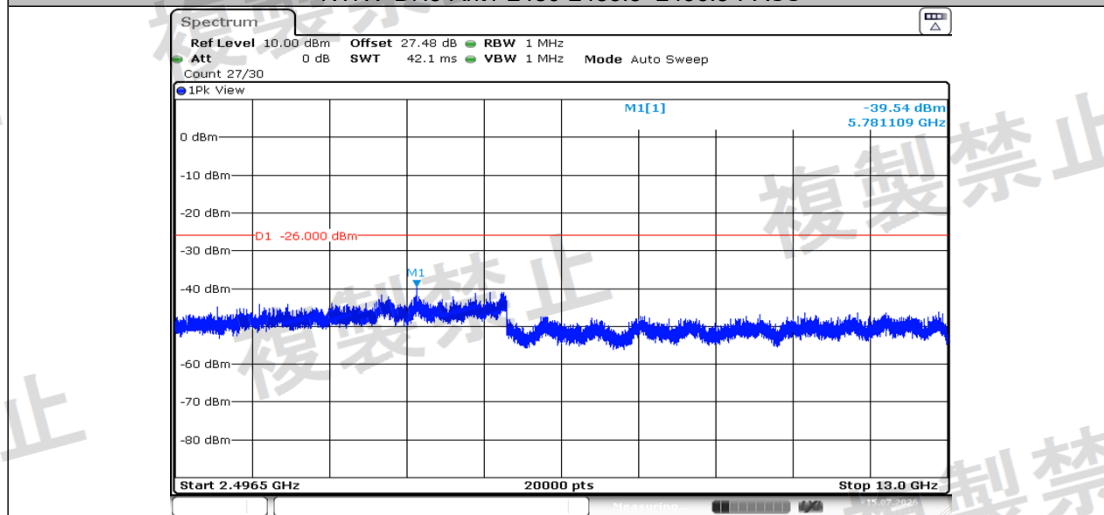
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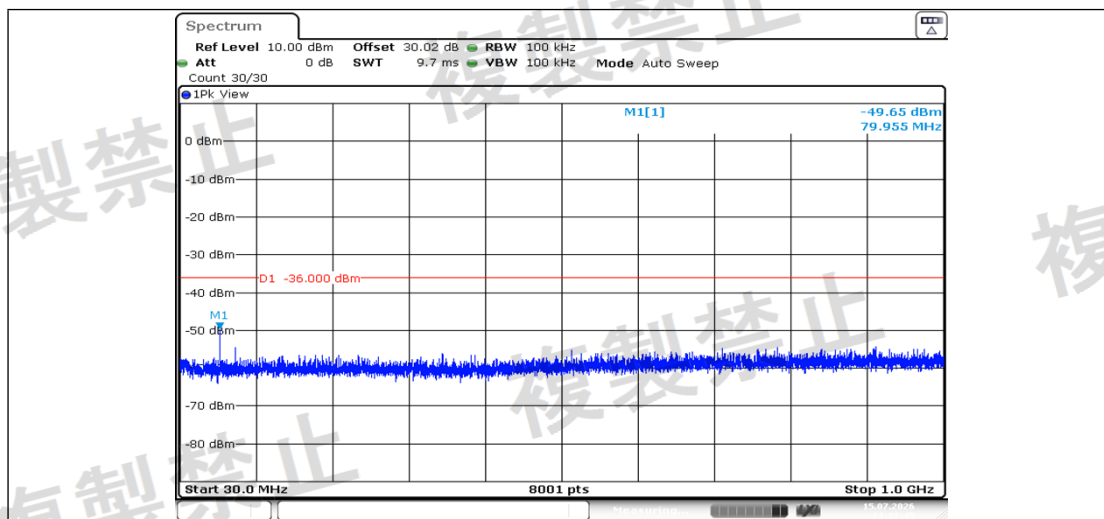
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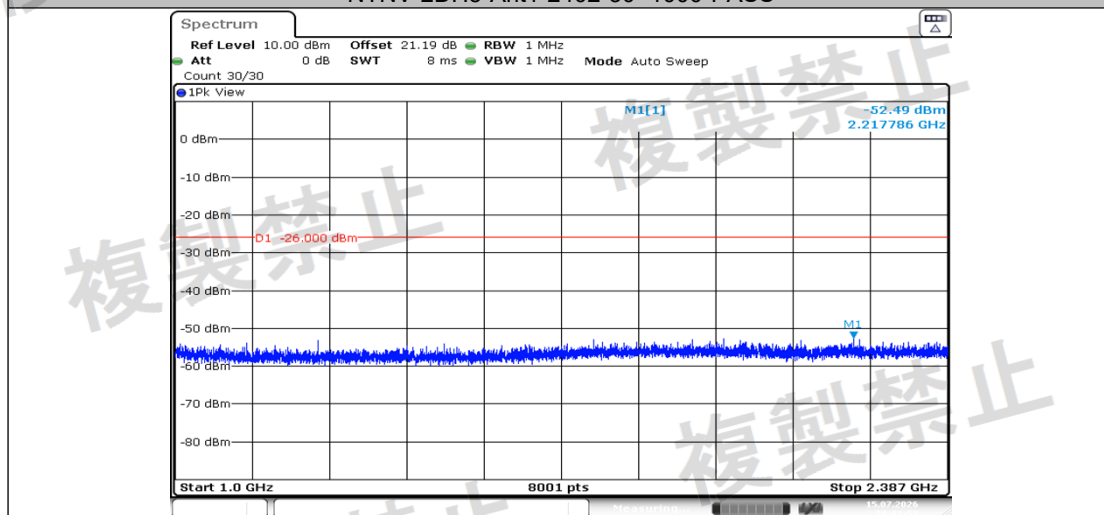
NTNV-DH5-Ant1-2480-2483.5~2496.5-PASS



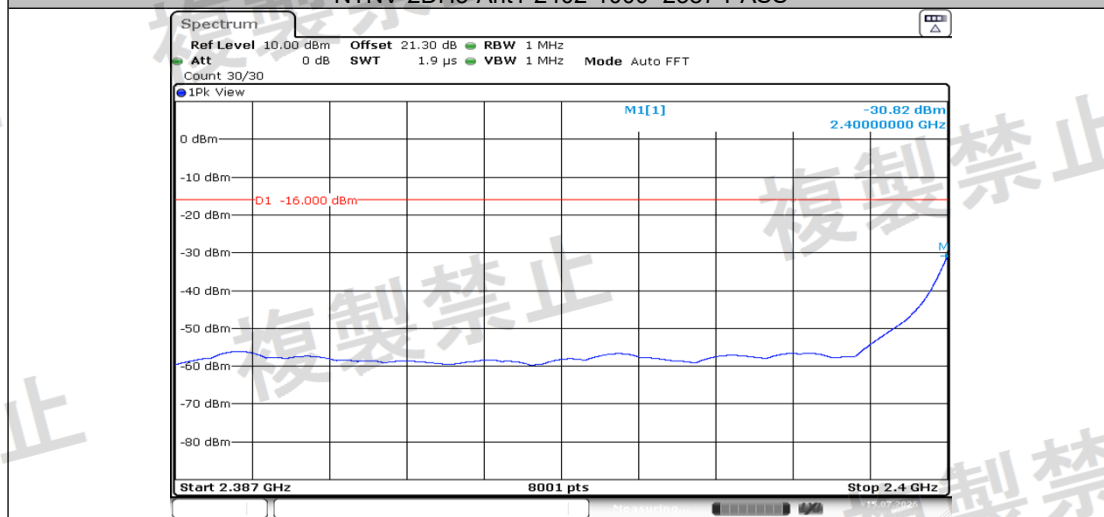
NTNV-DH5-Ant1-2480-2496.5~13000-PASS



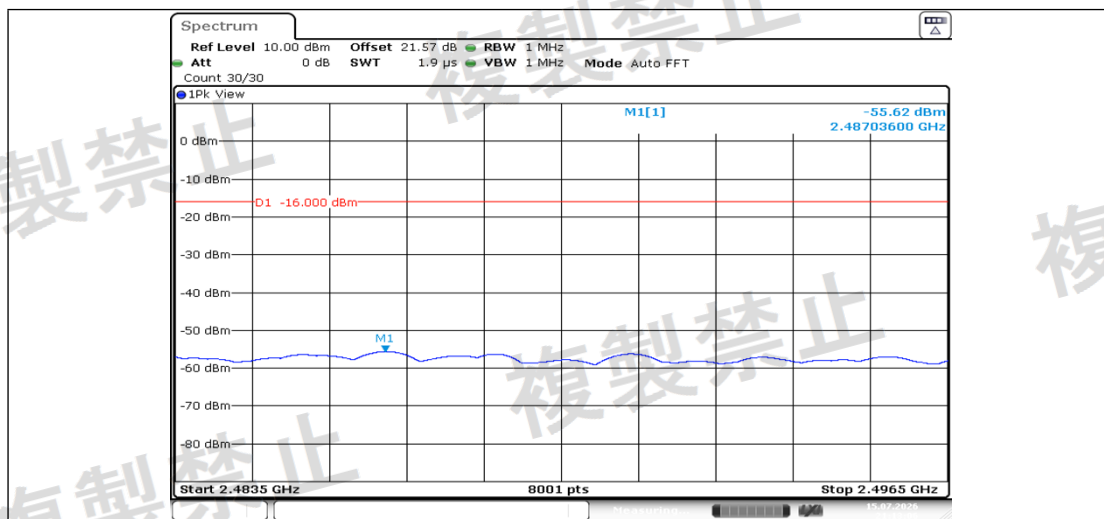
NTNV-2DH5-Ant1-2402-30~1000-PASS



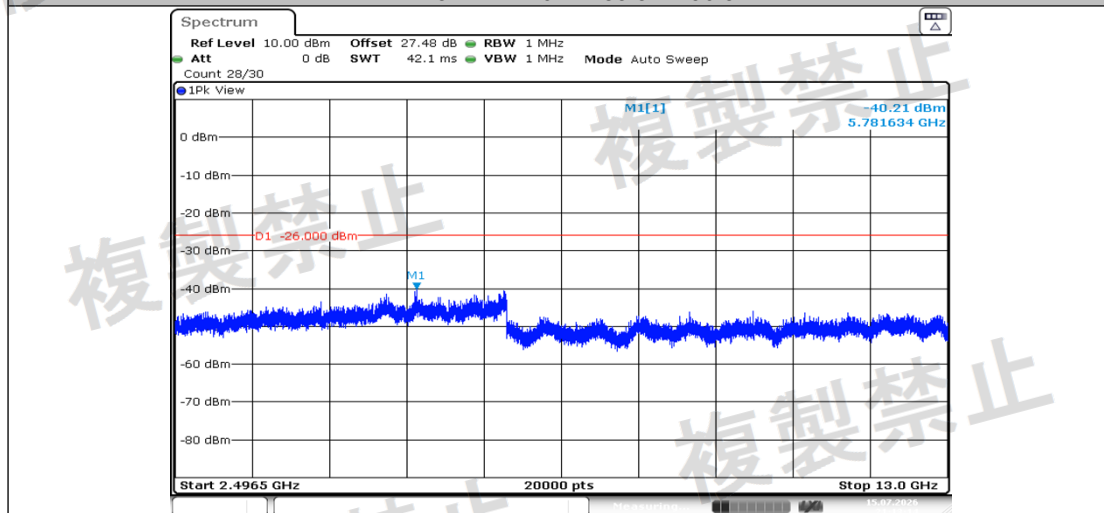
NTNV-2DH5-Ant1-2402-1000~2387-PASS



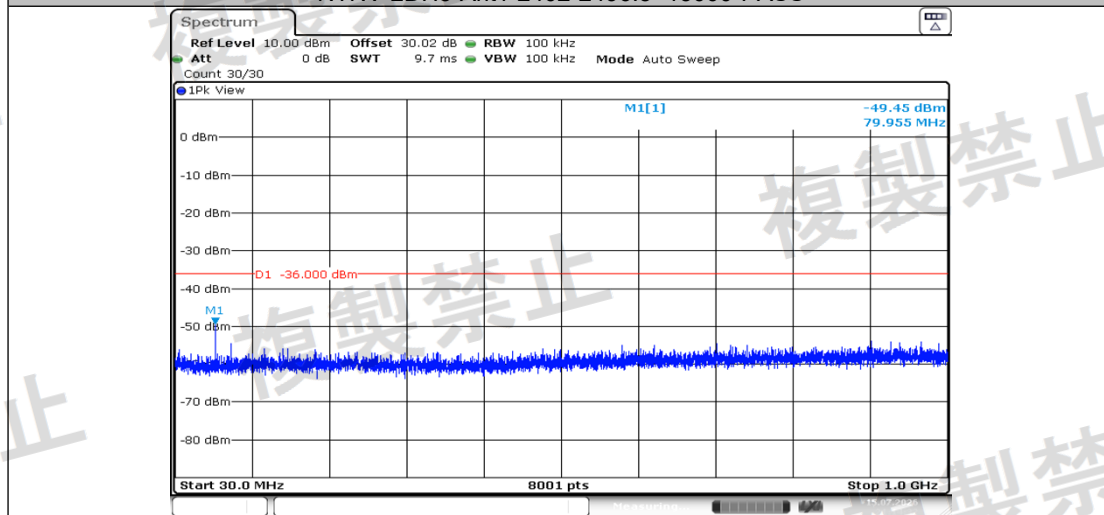
NTNV-2DH5-Ant1-2402-2387~2400-PASS



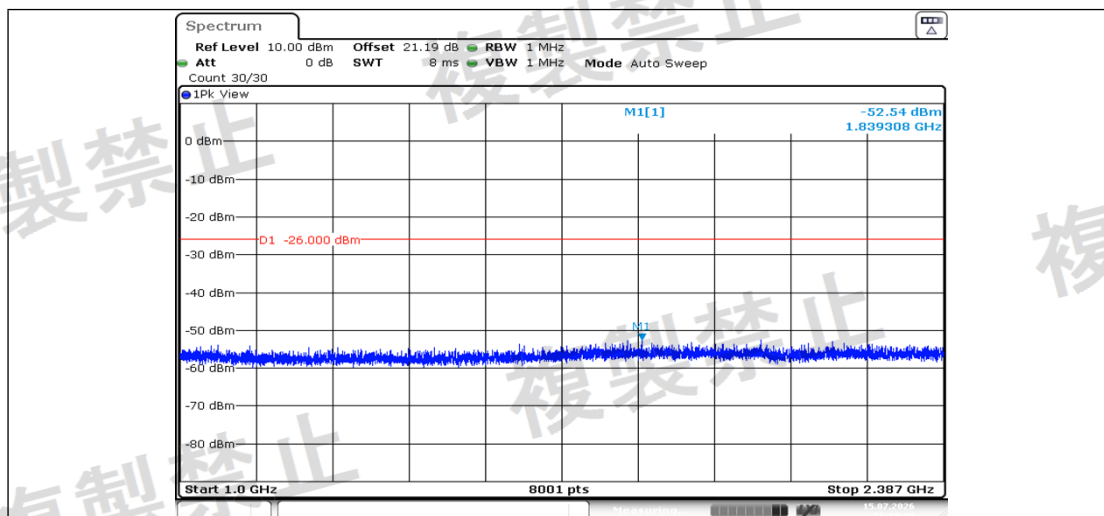
NTNV-2DH5-Ant1-2402-2483.5~2496.5-PASS



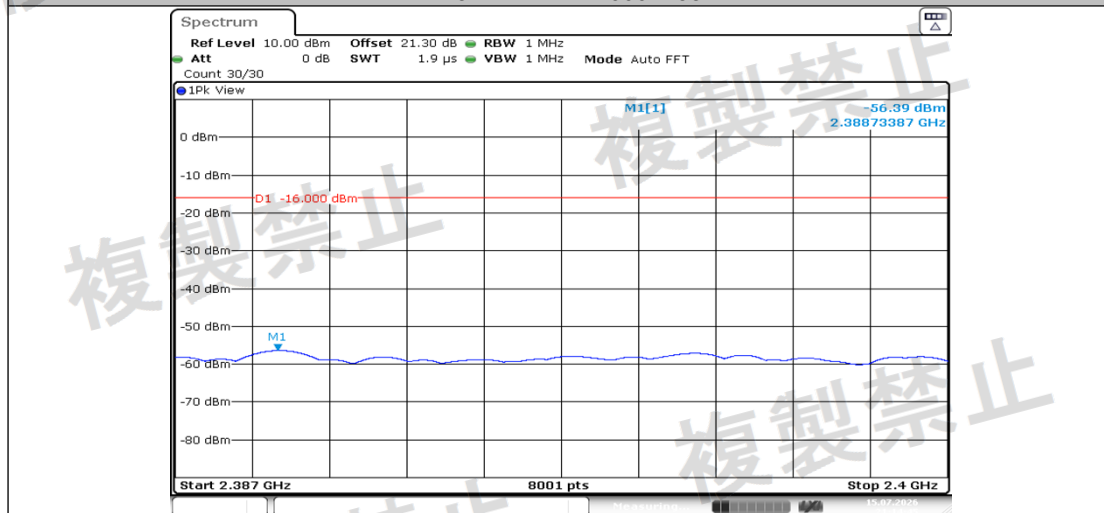
NTNV-2DH5-Ant1-2402-2496.5~13000-PASS



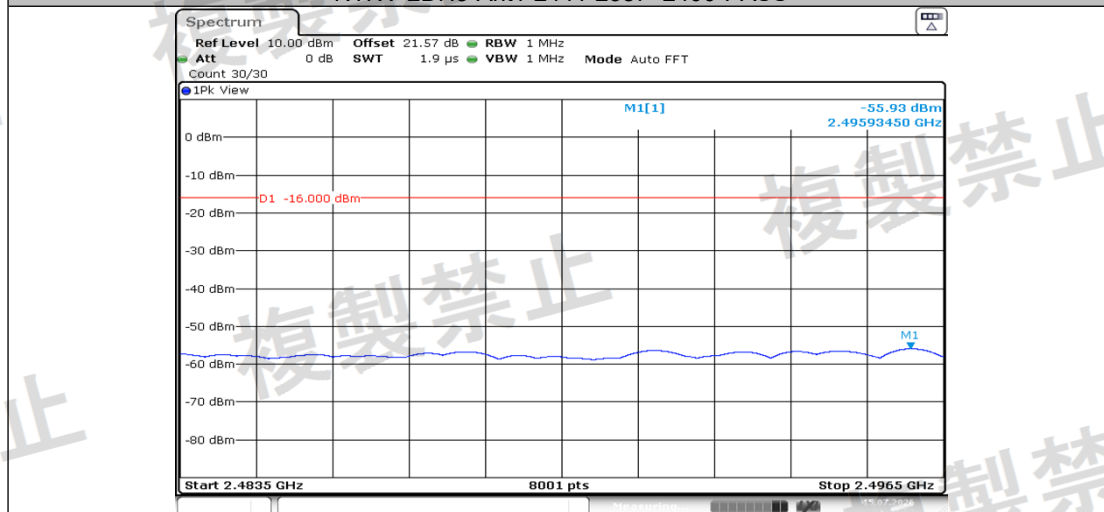
NTNV-2DH5-Ant1-2441-30~1000-PASS



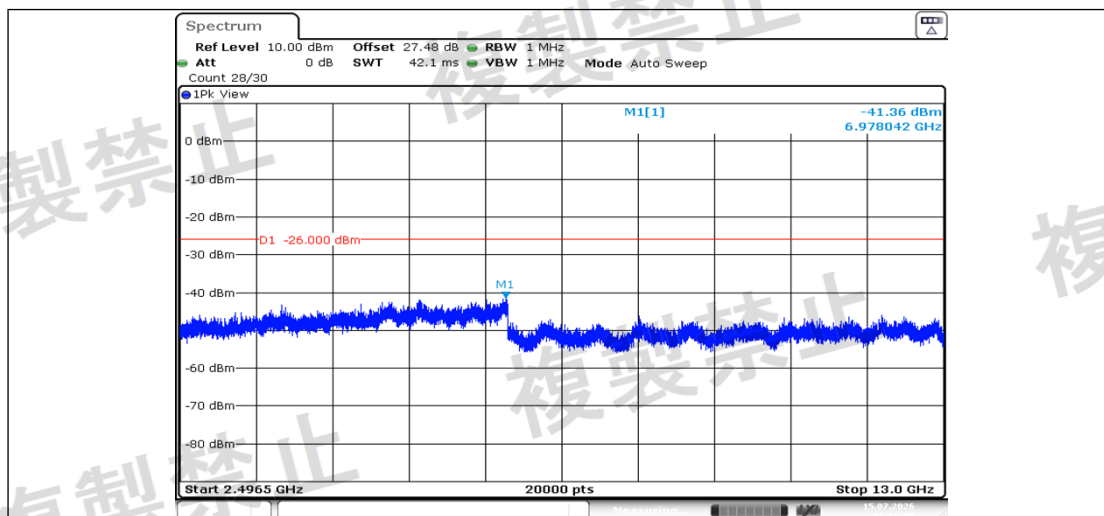
NTNV-2DH5-Ant1-2441-1000~2387-PASS



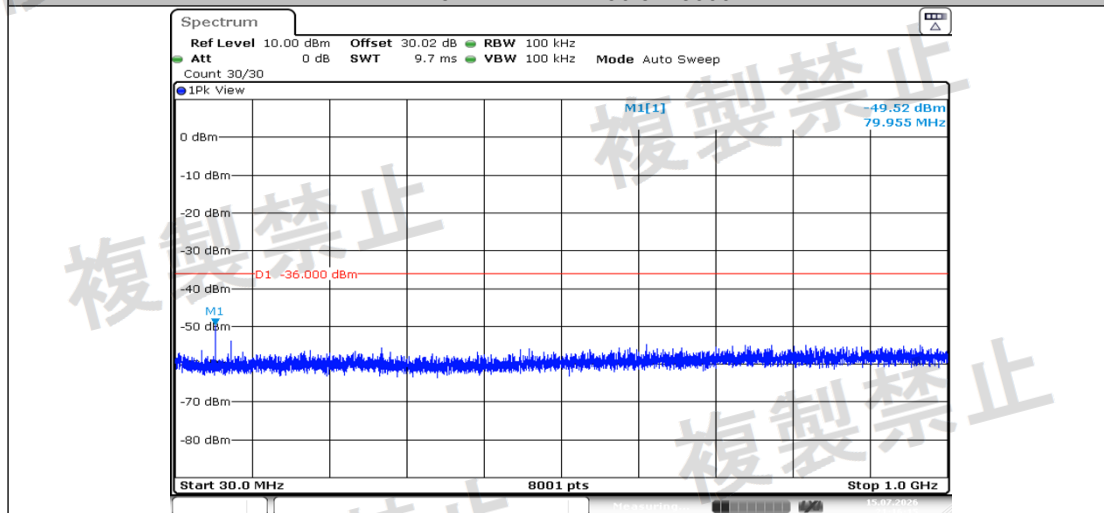
NTNV-2DH5-Ant1-2441-2387~2400-PASS



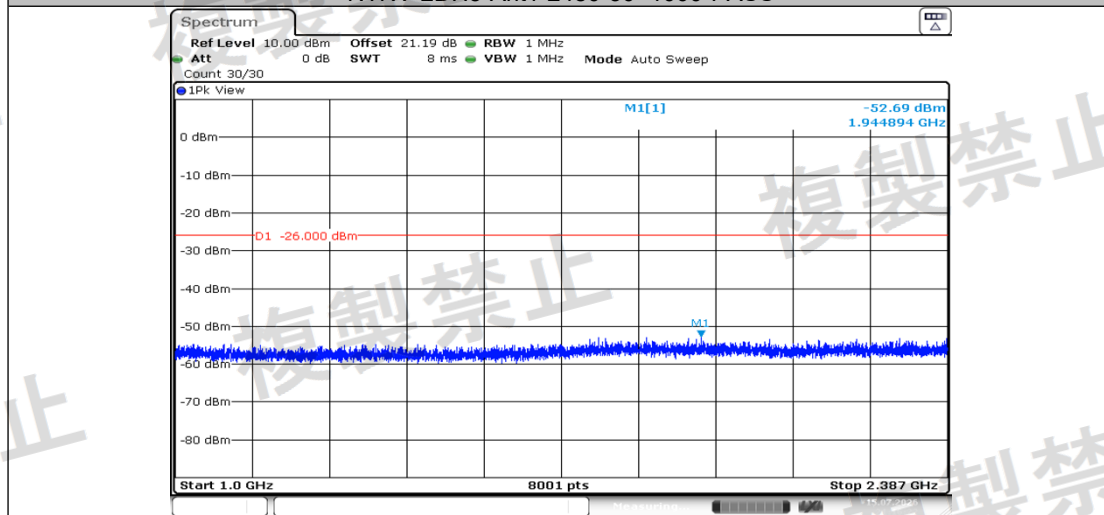
NTNV-2DH5-Ant1-2441-2483.5~2496.5-PASS



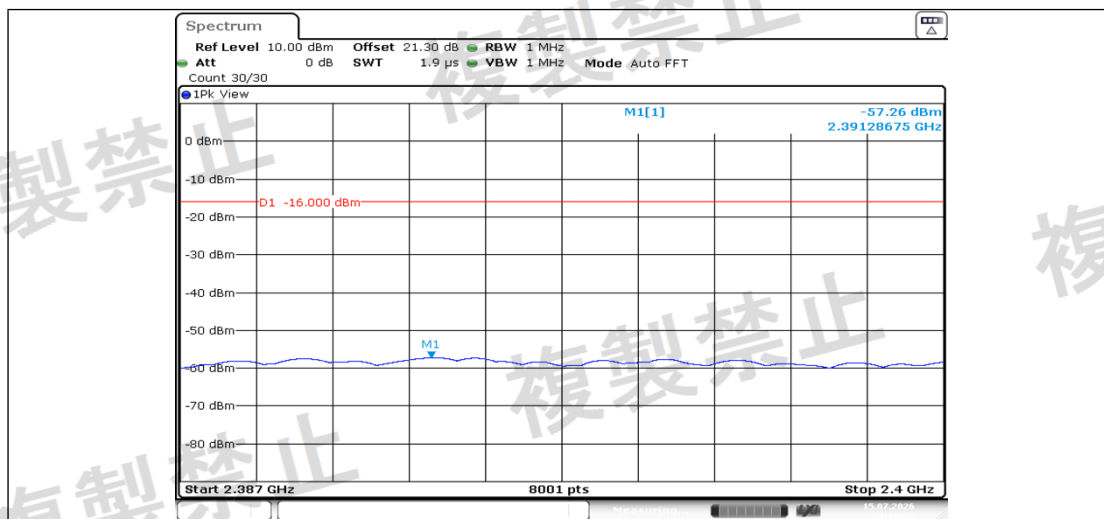
NTNV-2DH5-Ant1-2441-2496.5~13000-PASS



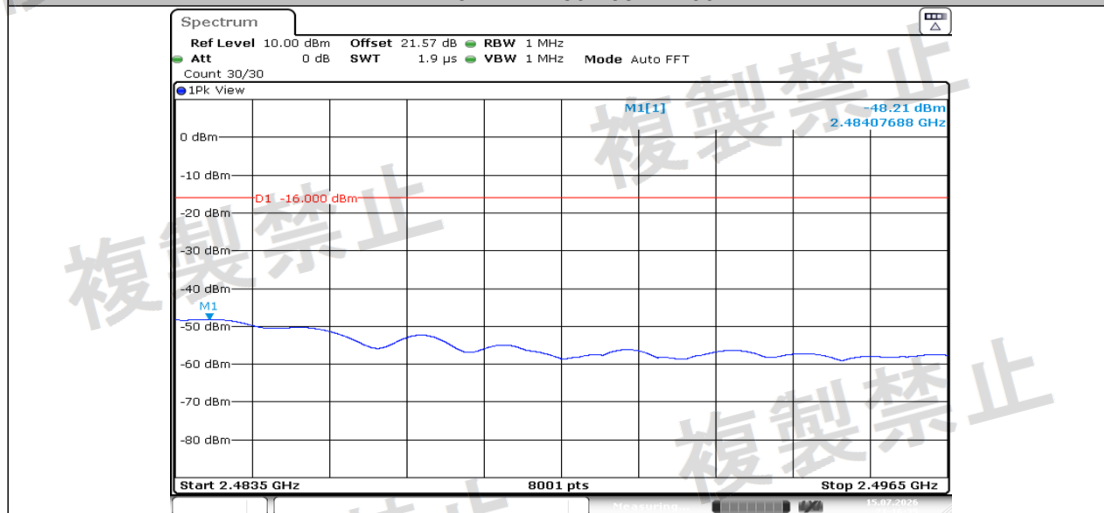
NTNV-2DH5-Ant1-2480-30~1000-PASS



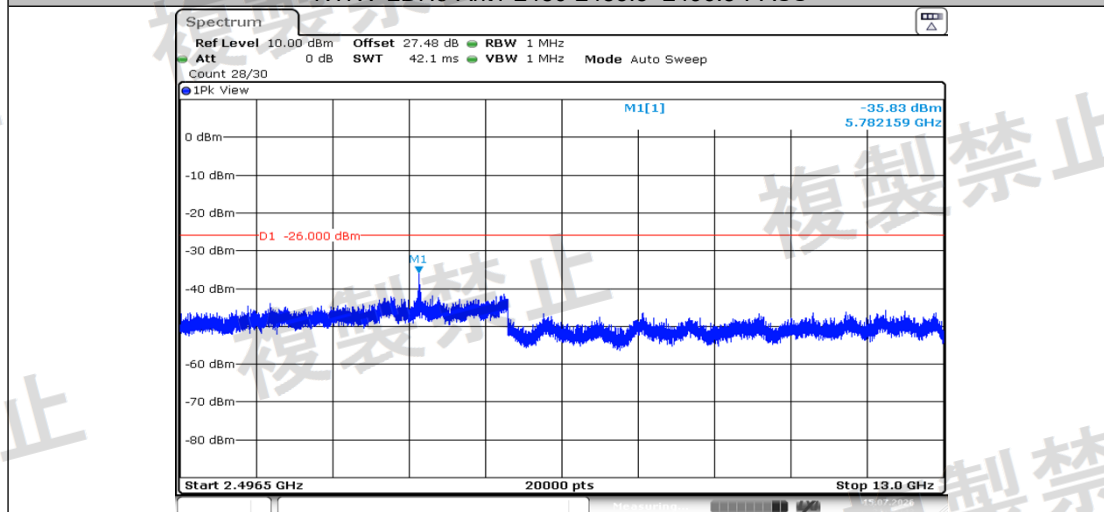
NTNV-2DH5-Ant1-2480-1000~2387-PASS



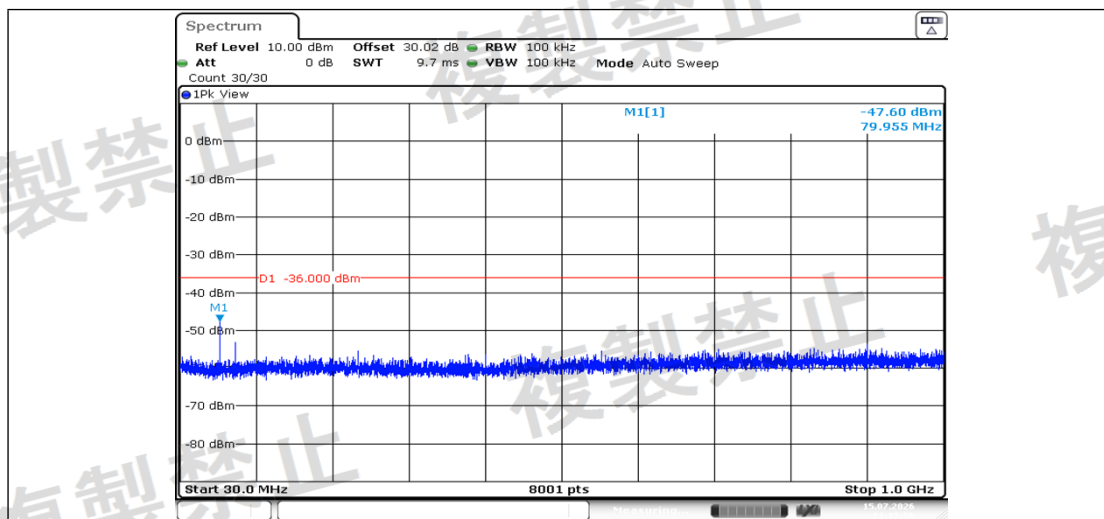
NTNV-2DH5-Ant1-2480-2387~2400-PASS



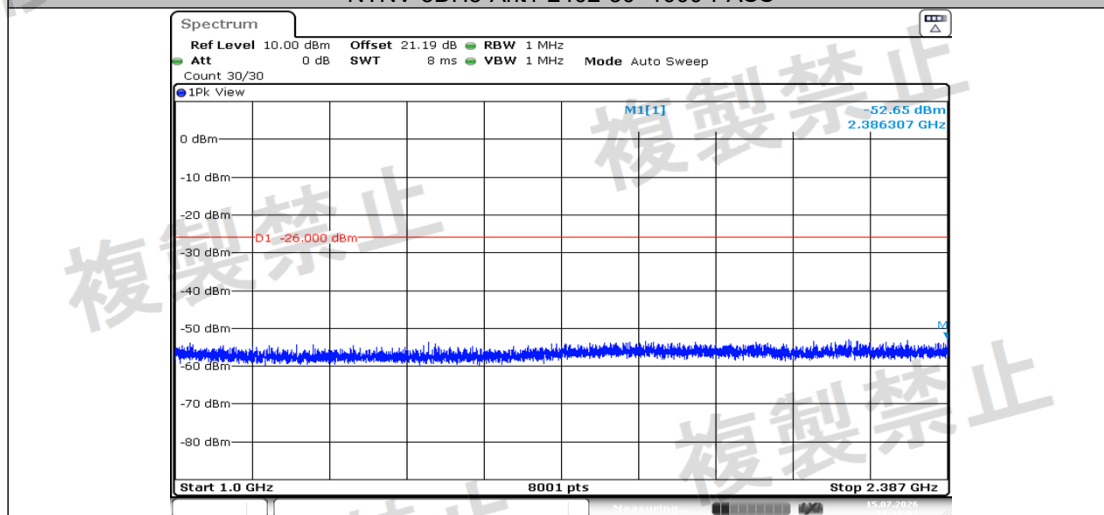
NTNV-2DH5-Ant1-2480-2483.5~2496.5-PASS



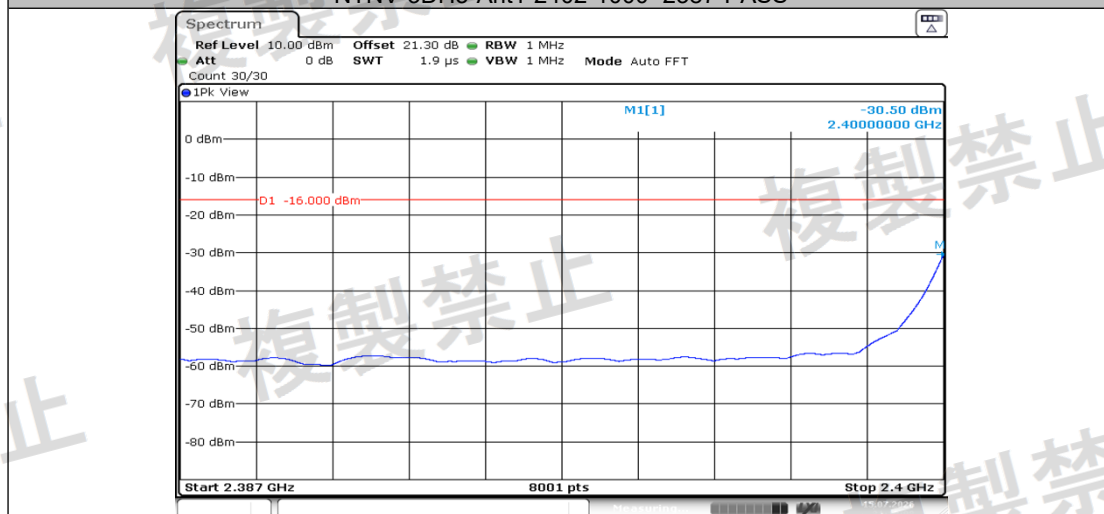
NTNV-2DH5-Ant1-2480-2496.5~13000-PASS



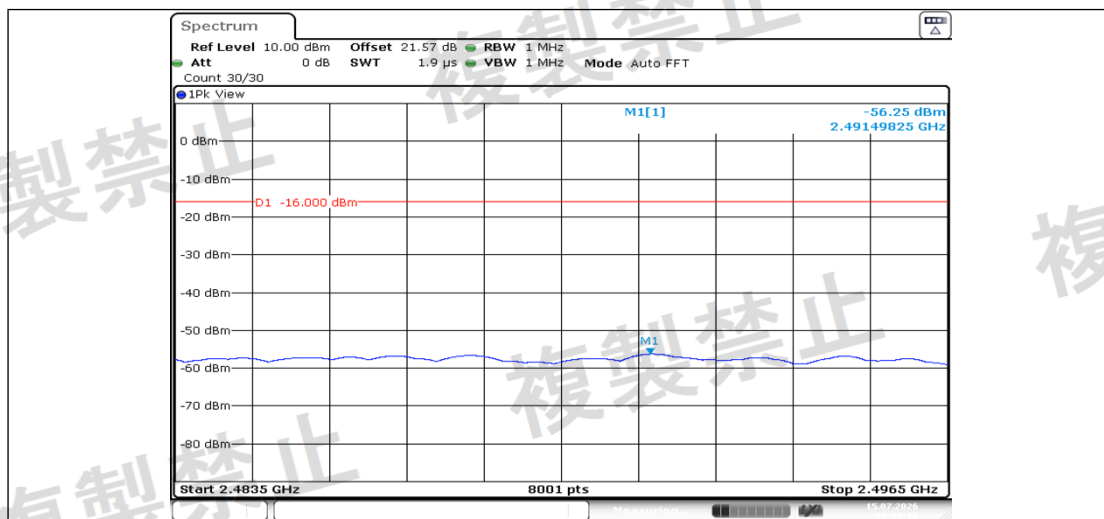
NTNV-3DH5-Ant1-2402-30~1000-PASS



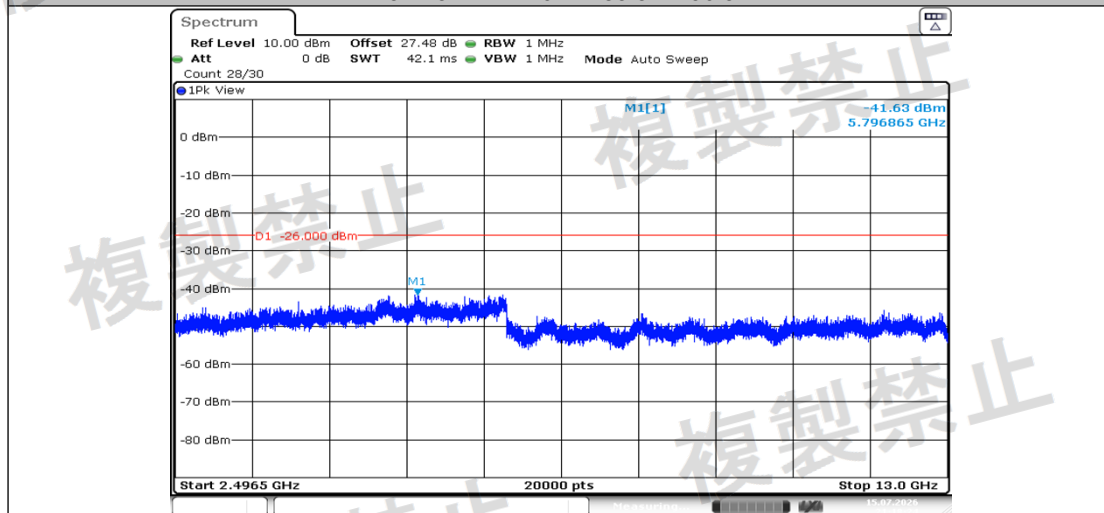
NTNV-3DH5-Ant1-2402-1000~2387-PASS



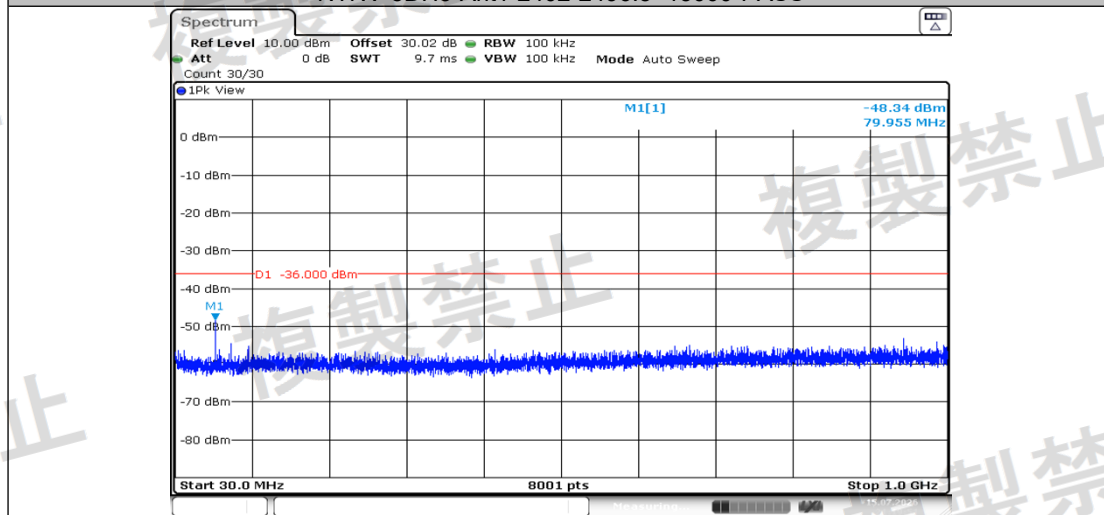
NTNV-3DH5-Ant1-2402-2387~2400-PASS



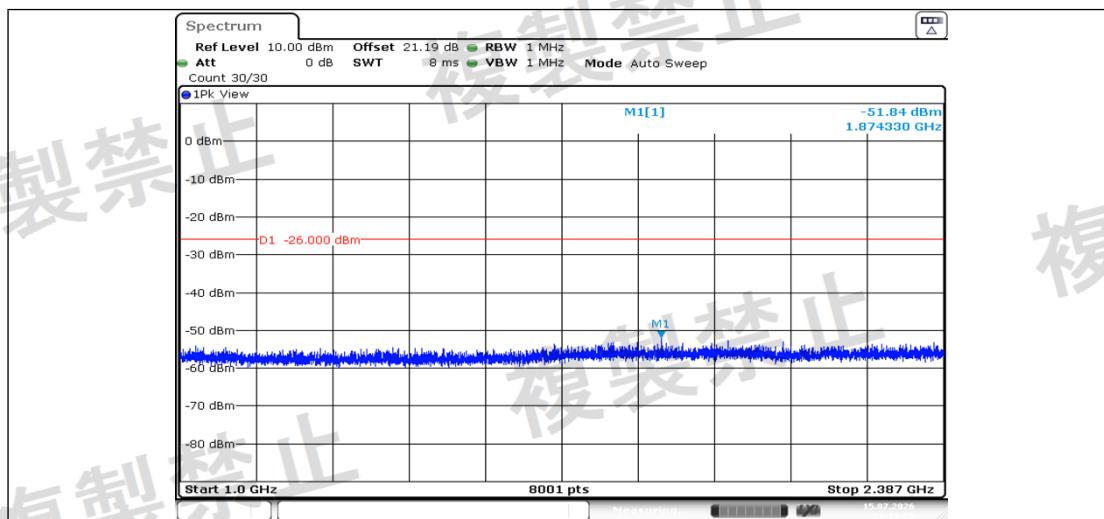
NTNV-3DH5-Ant1-2402-2483.5~2496.5-PASS



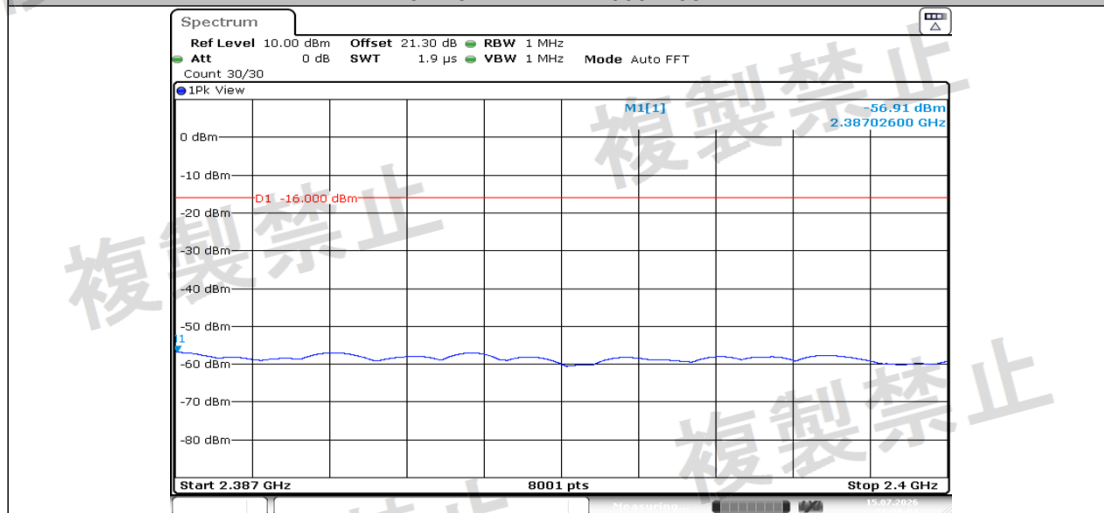
NTNV-3DH5-Ant1-2402-2496.5~13000-PASS



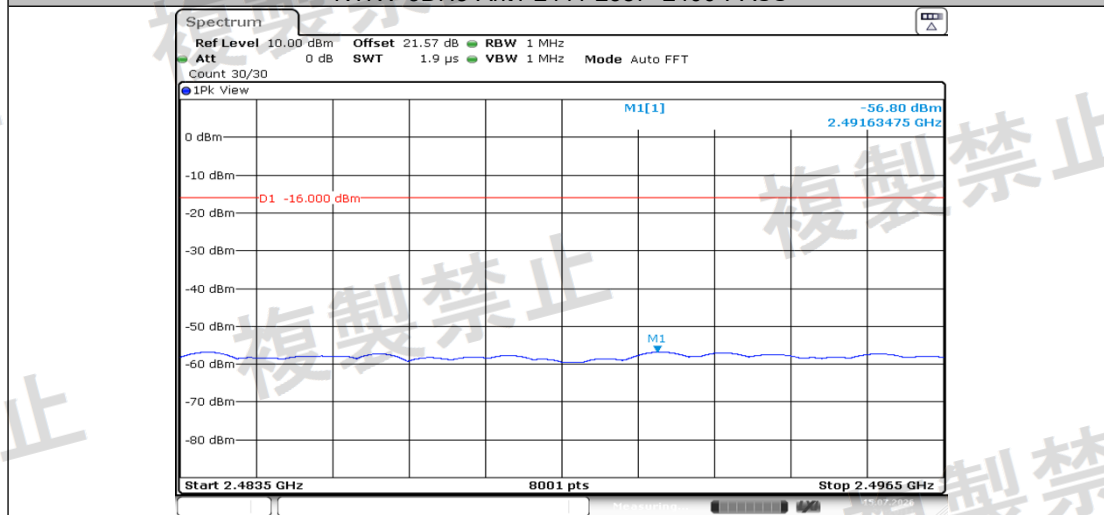
NTNV-3DH5-Ant1-2441-30~1000-PASS



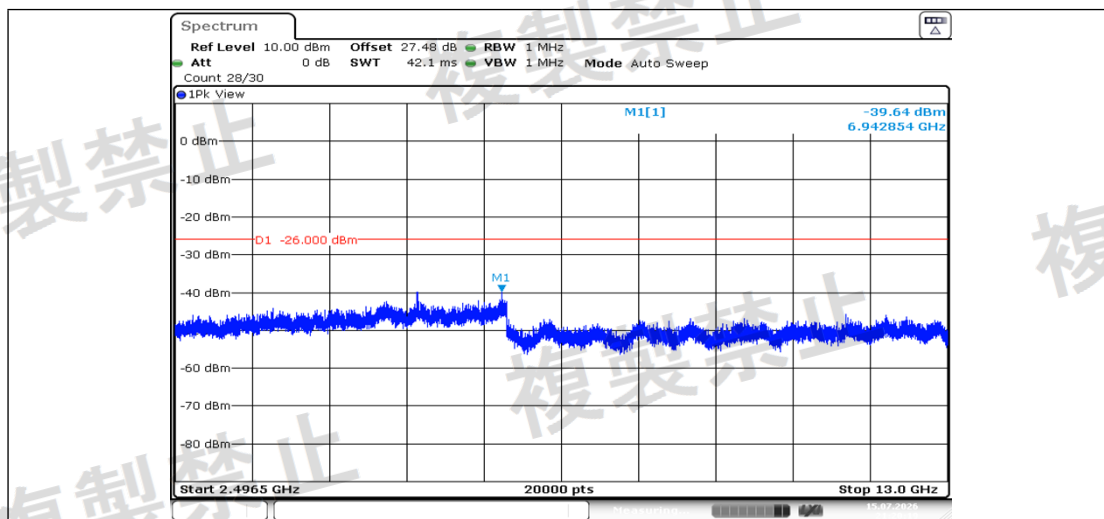
NTNV-3DH5-Ant1-2441-1000~2387-PASS



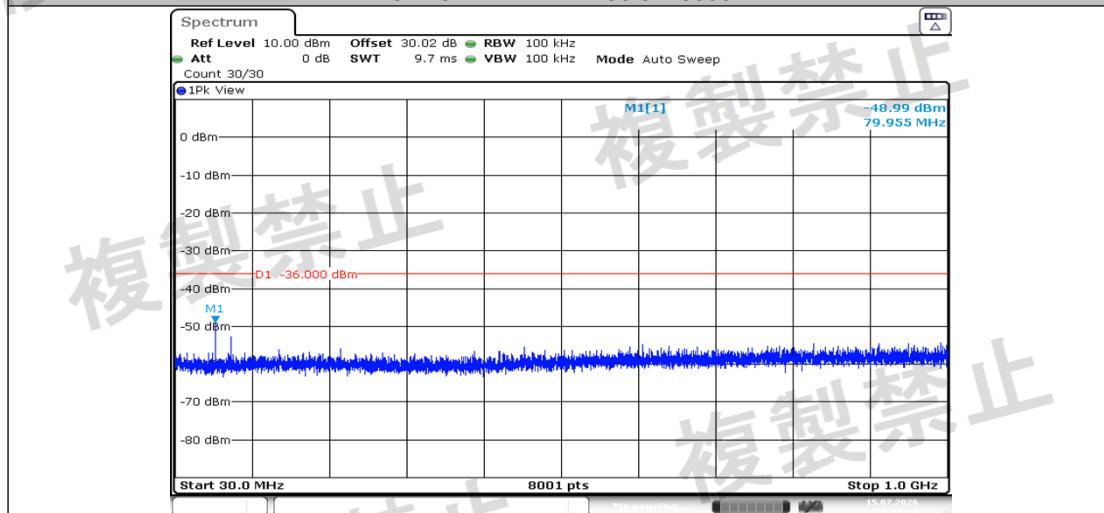
NTNV-3DH5-Ant1-2441-2387~2400-PASS



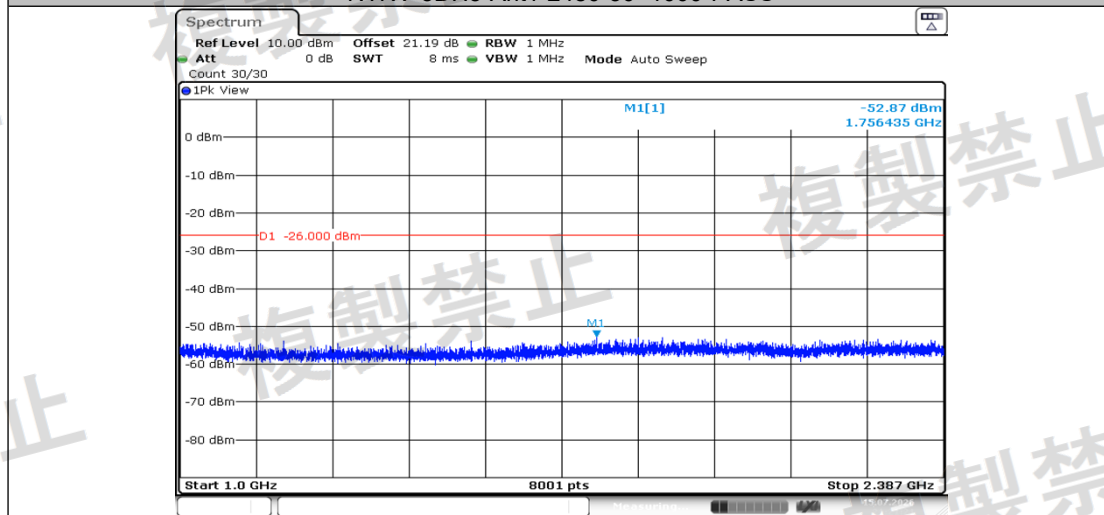
NTNV-3DH5-Ant1-2441-2483.5~2496.5-PASS



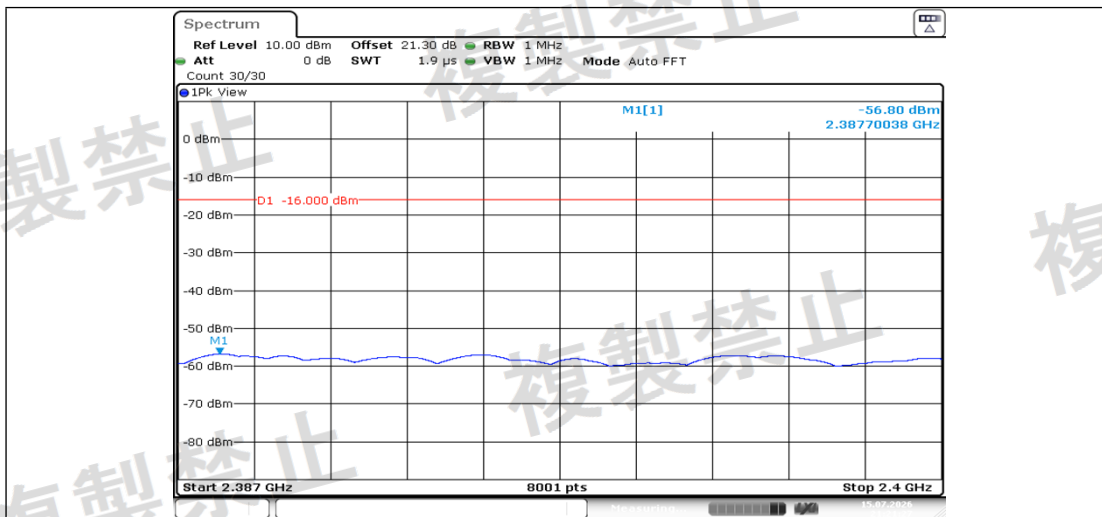
NTNV-3DH5-Ant1-2441-2496.5~13000-PASS



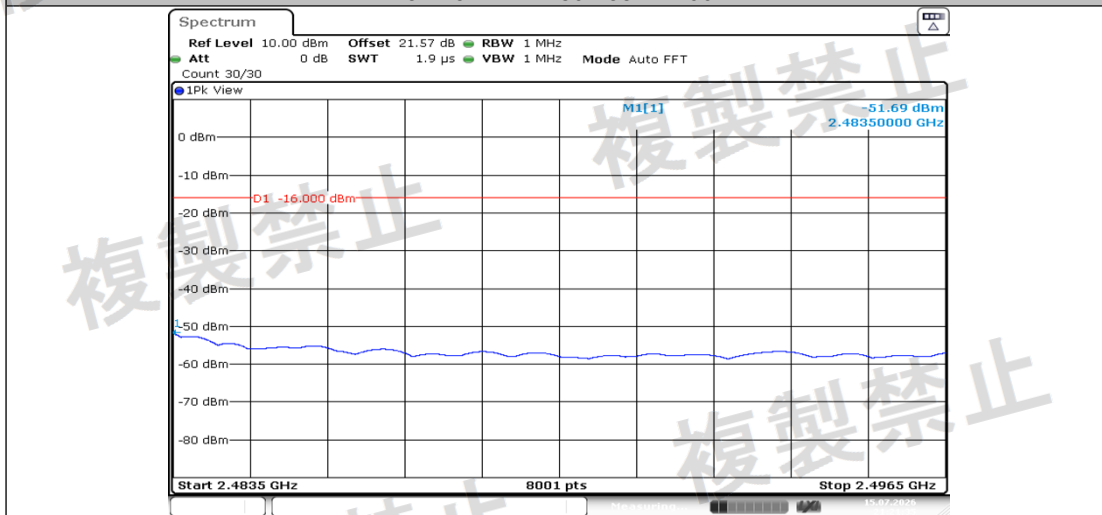
NTNV-3DH5-Ant1-2480-30~1000-PASS



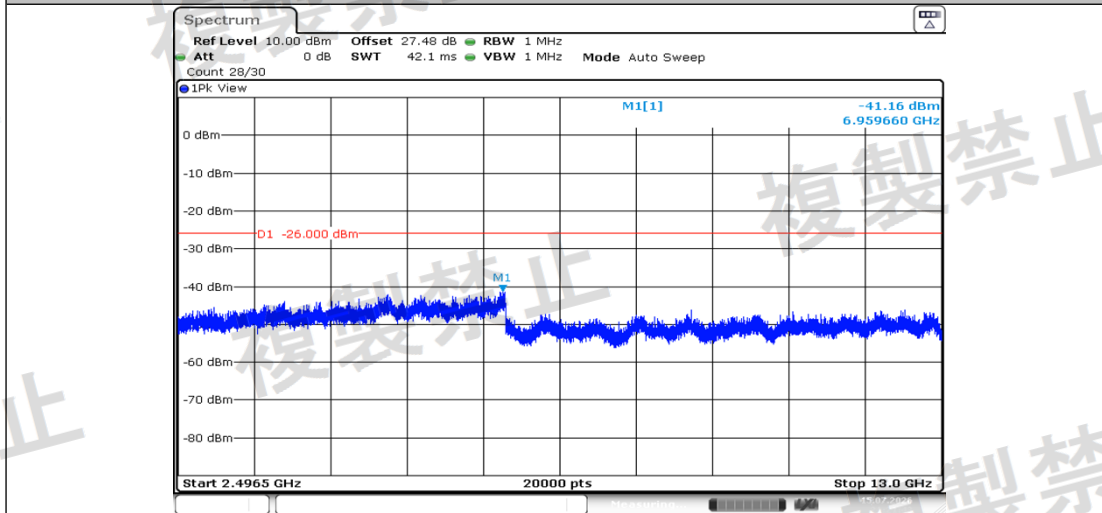
NTNV-3DH5-Ant1-2480-1000~2387-PASS



NTNV-3DH5-Ant1-2480-2387~2400-PASS



NTNV-3DH5-Ant1-2480-2483.5~2496.5-PASS



NTNV-3DH5-Ant1-2480-2496.5~13000-PASS

6. Limit of Secondary Spurious Emissions

Limit

Standard	Item	Frequency	Limit
Article 2-1 Item 19	Spurious Emission	Below 1GHz	4nW/-54dBm
		Above 1GHz	20nW/-47dBm

6.2 Measurement Procedure

- Connect EUT antenna terminal to the Spectrum Analyzer.
- Set Spectrum Analyzer as below:

Frequency : Below 1GHz(30MHz-1GHz)
Above 1GHz(1-13GHz)
RBW : 100kHz for Below 1GHz
1MHz for Above 1GHz
VBW : 100kHz for Below 1GHz
1MHz for Above 1GHz
Sweep Time : Auto
Detector Mode : Peak
Display Mode : Max Hold

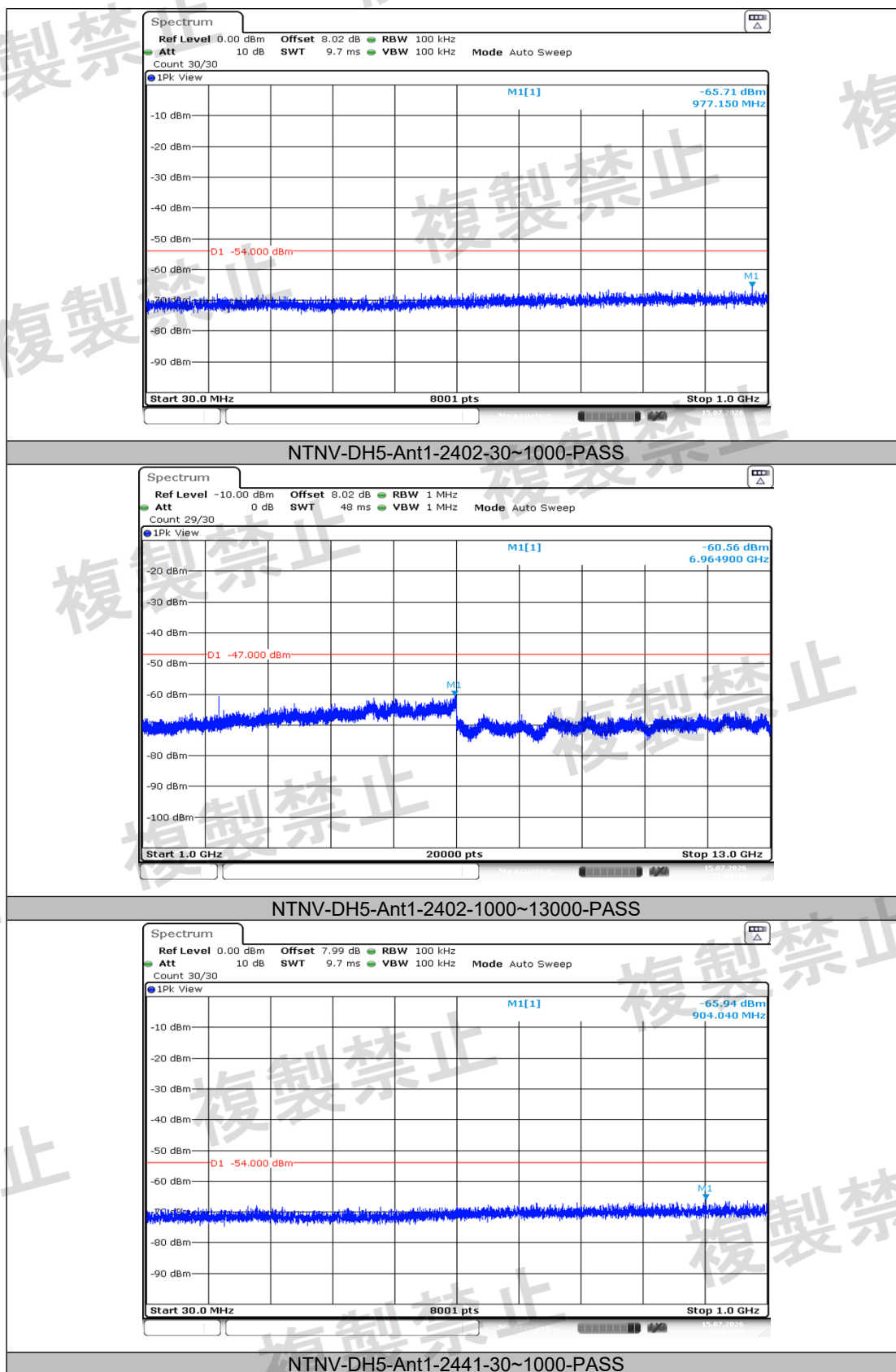
6.3 Test Data

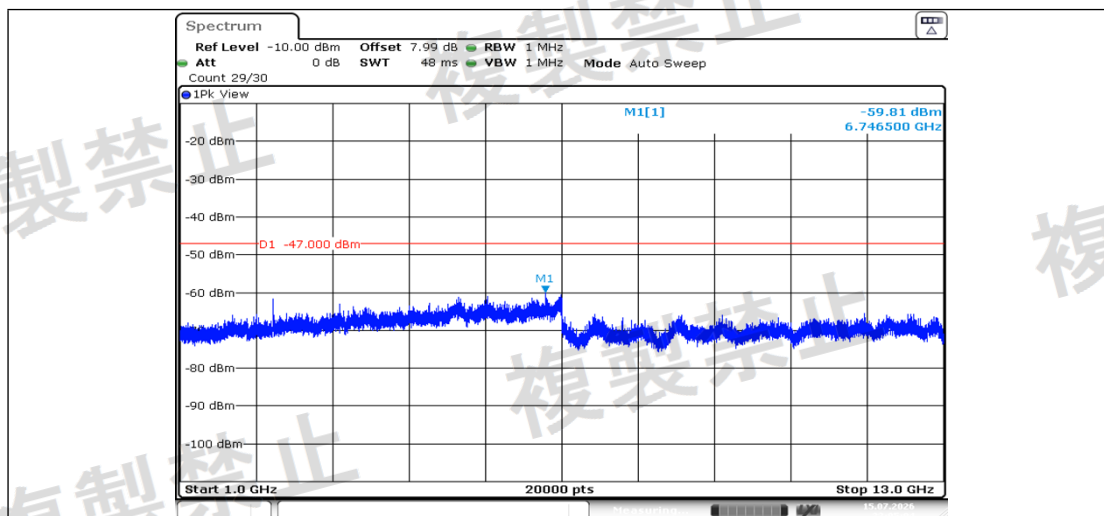
Temperature	22.7℃	Humidity	51%
ATM Pressure	101.1kPa	Time	2026.07.15
Test by	Elio Lin	Test result	PASS

Please refer to following table and plots.

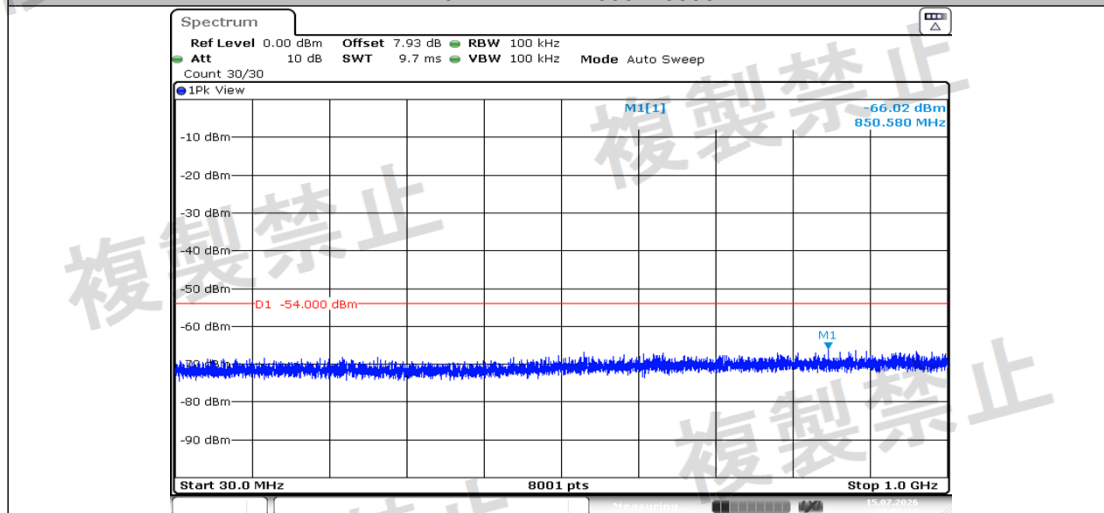
Test Condition	Test Mode	Antenna	Freq(MHz)	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
NTNV	DH5	Ant1	2402	30~1000	-65.71	≤-54	0.26853	≤4	PASS
				1000~13000	-60.56	≤-47	0.87902	≤20	PASS
			2441	30~1000	-65.94	≤-54	0.25468	≤4	PASS
				1000~13000	-59.81	≤-47	1.04472	≤20	PASS
	2DH5	Ant1	2480	30~1000	-66.02	≤-54	0.25003	≤4	PASS
				1000~13000	-58.73	≤-47	1.33968	≤20	PASS
			2402	30~1000	-66.35	≤-54	0.23174	≤4	PASS
				1000~13000	-61.01	≤-47	0.79250	≤20	PASS
			2441	30~1000	-65.45	≤-54	0.28510	≤4	PASS
				1000~13000	-60.7	≤-47	0.85114	≤20	PASS
			2480	30~1000	-66.25	≤-54	0.23714	≤4	PASS
				1000~13000	-59.48	≤-47	1.12720	≤20	PASS
	3DH5	Ant1	2402	30~1000	-66.11	≤-54	0.24491	≤4	PASS
				1000~13000	-59.79	≤-47	1.04954	≤20	PASS
			2441	30~1000	-66.26	≤-54	0.23659	≤4	PASS
				1000~13000	-61.16	≤-47	0.76560	≤20	PASS
			2480	30~1000	-66	≤-54	0.25119	≤4	PASS
				1000~13000	-60.71	≤-47	0.84918	≤20	PASS

Please refer to recording the spectrum plots in the worst conditions

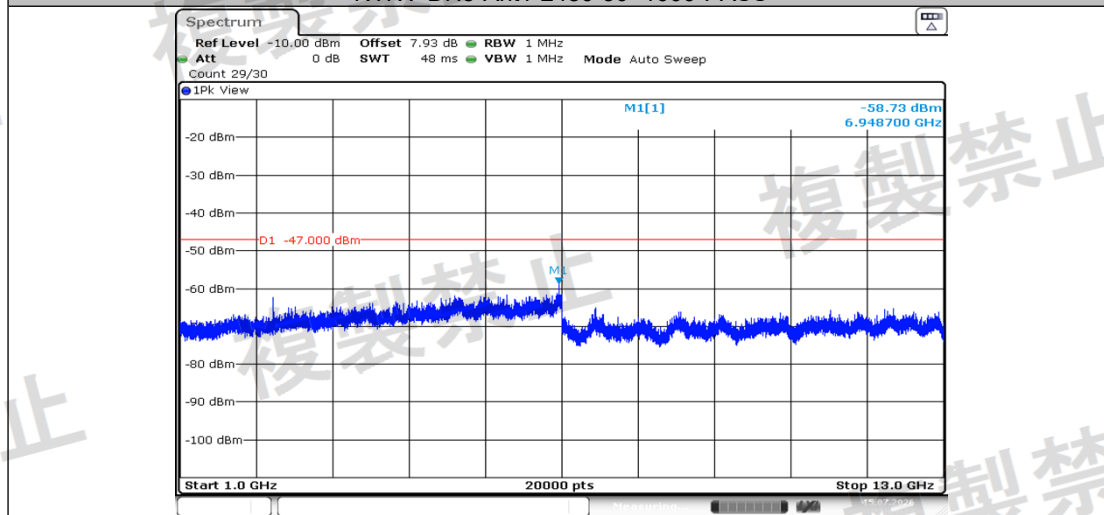




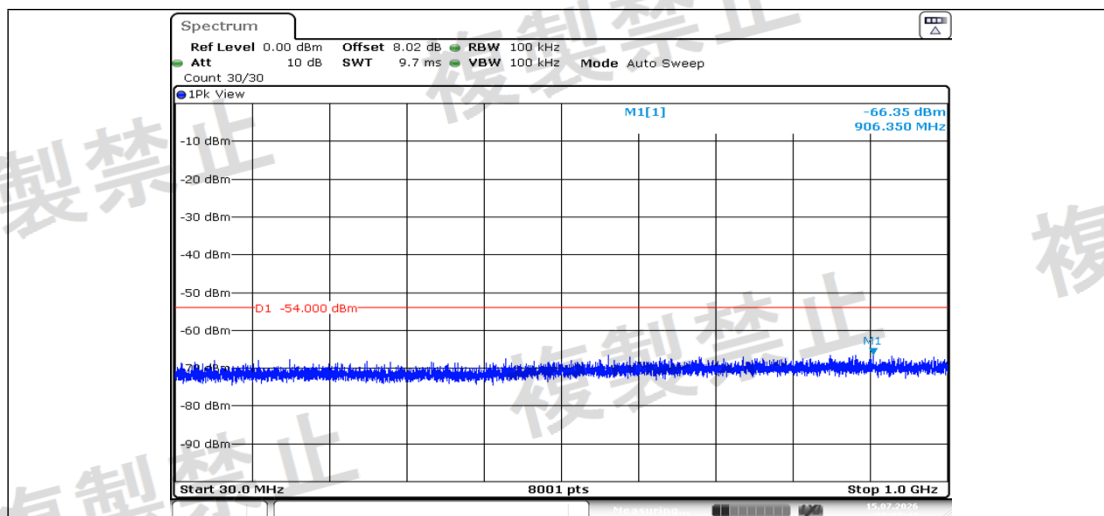
NTNV-DH5-Ant1-2441-1000~13000-PASS



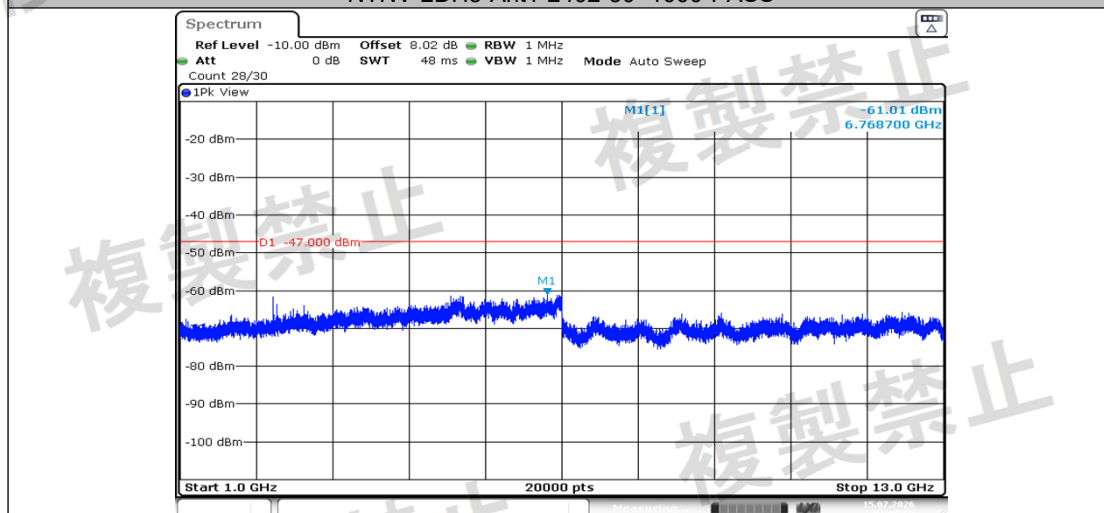
NTNV-DH5-Ant1-2480-30~1000-PASS



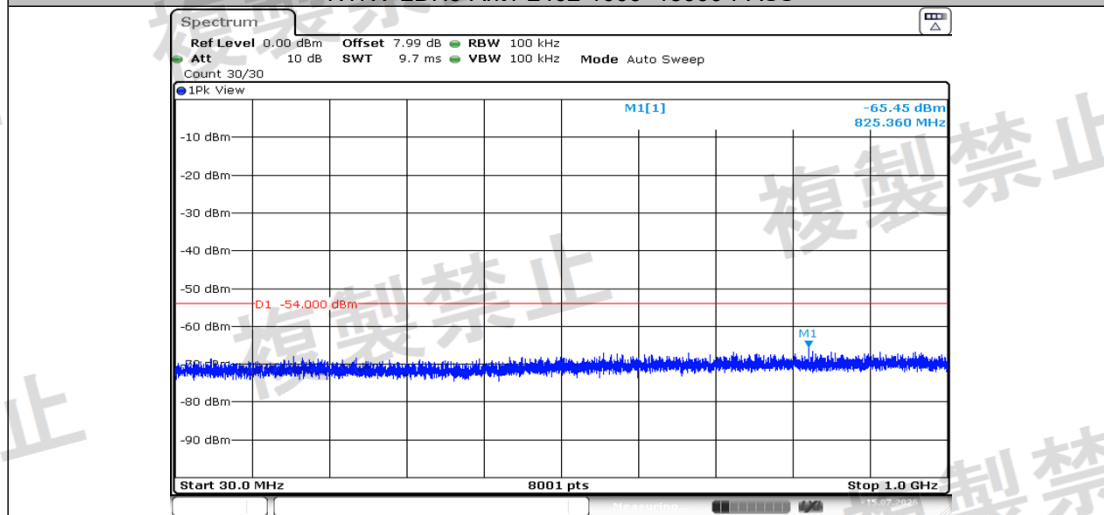
NTNV-DH5-Ant1-2480-1000~13000-PASS



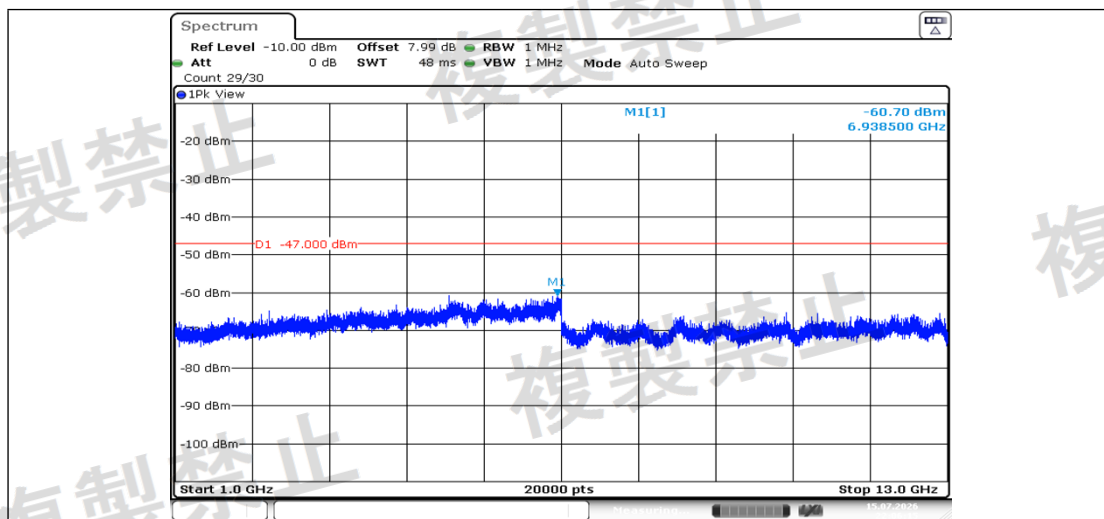
NTNV-2DH5-Ant1-2402-30~1000-PASS



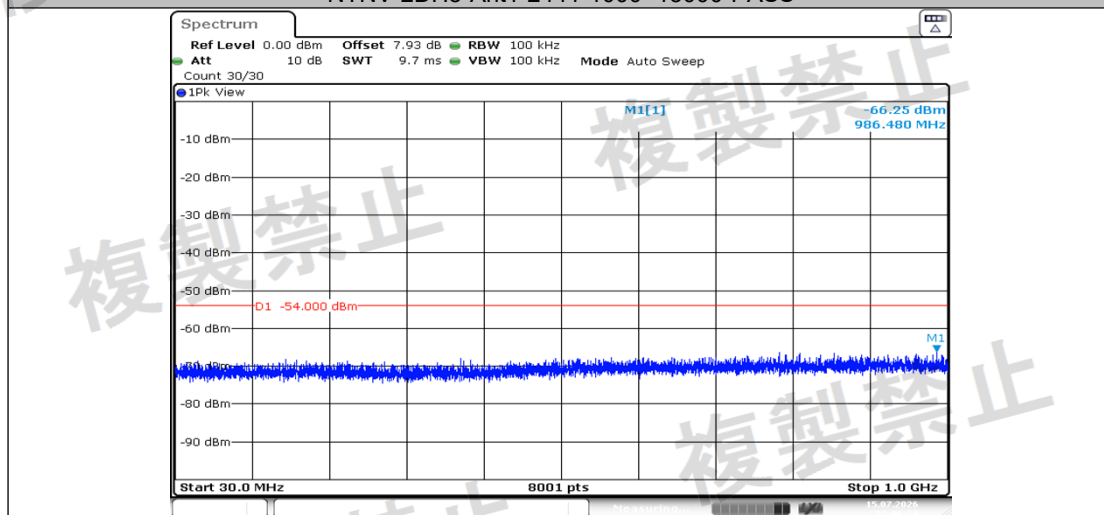
NTNV-2DH5-Ant1-2402-1000~13000-PASS



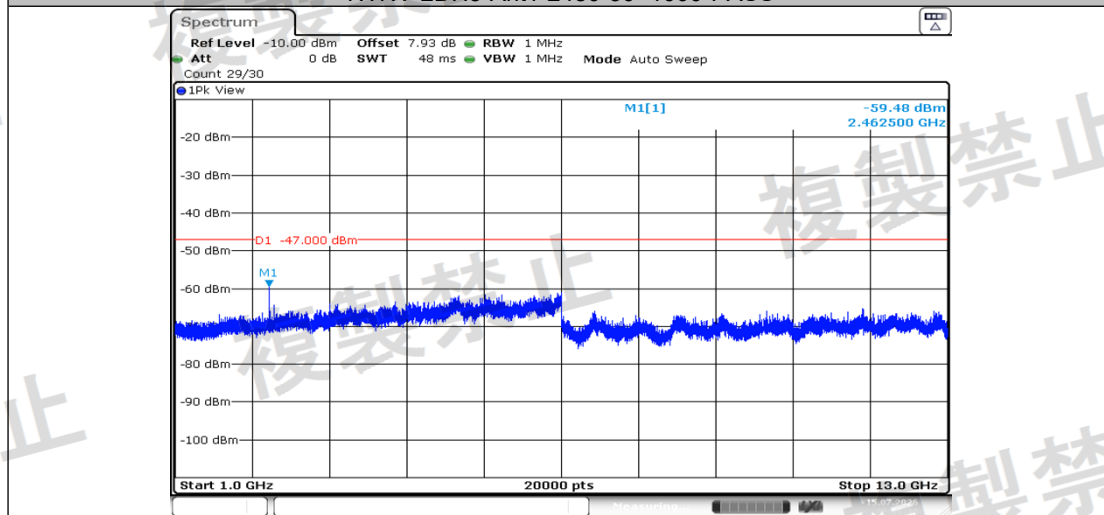
NTNV-2DH5-Ant1-2441-30~1000-PASS



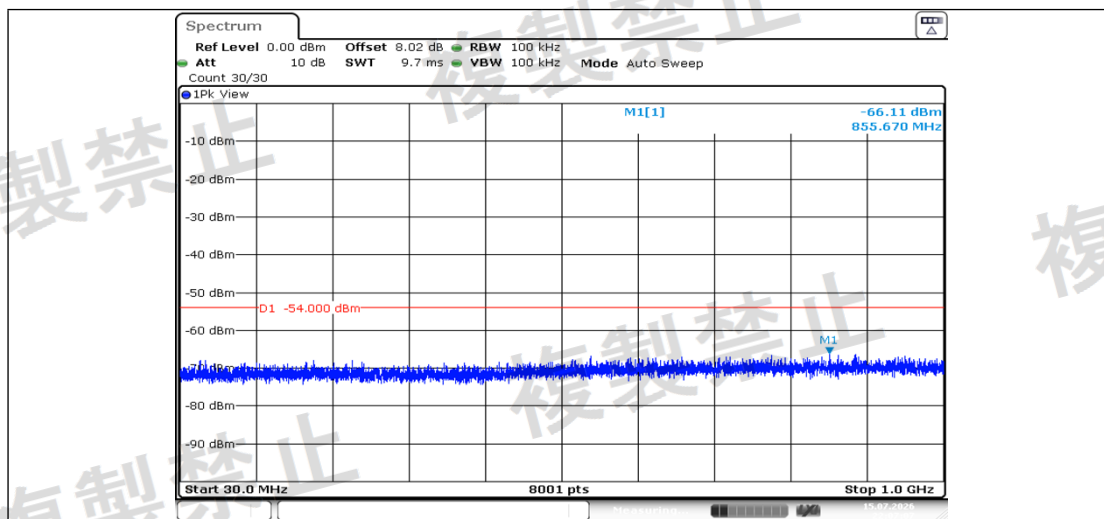
NTNV-2DH5-Ant1-2441-1000~13000-PASS



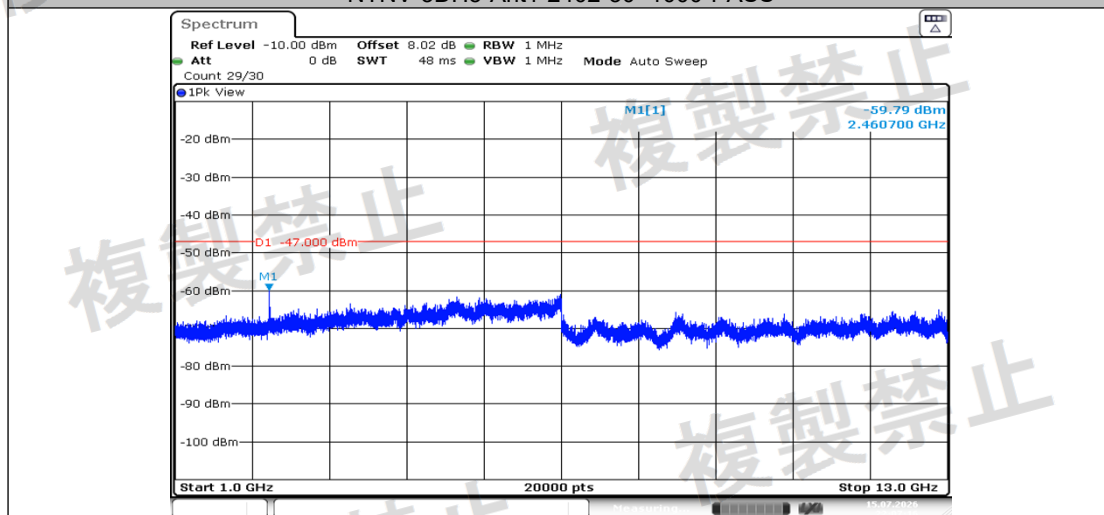
NTNV-2DH5-Ant1-2480-30~1000-PASS



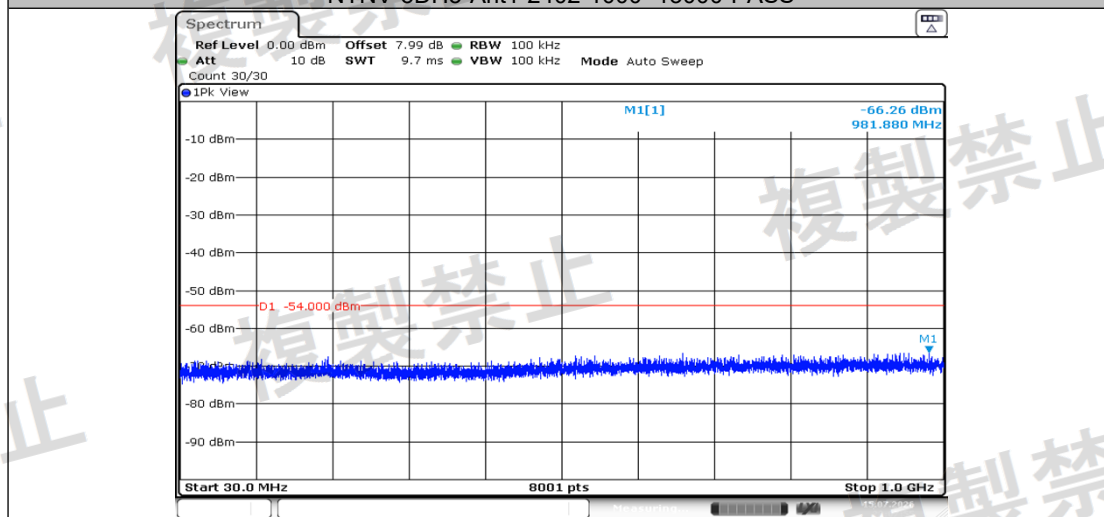
NTNV-2DH5-Ant1-2480-1000~13000-PASS



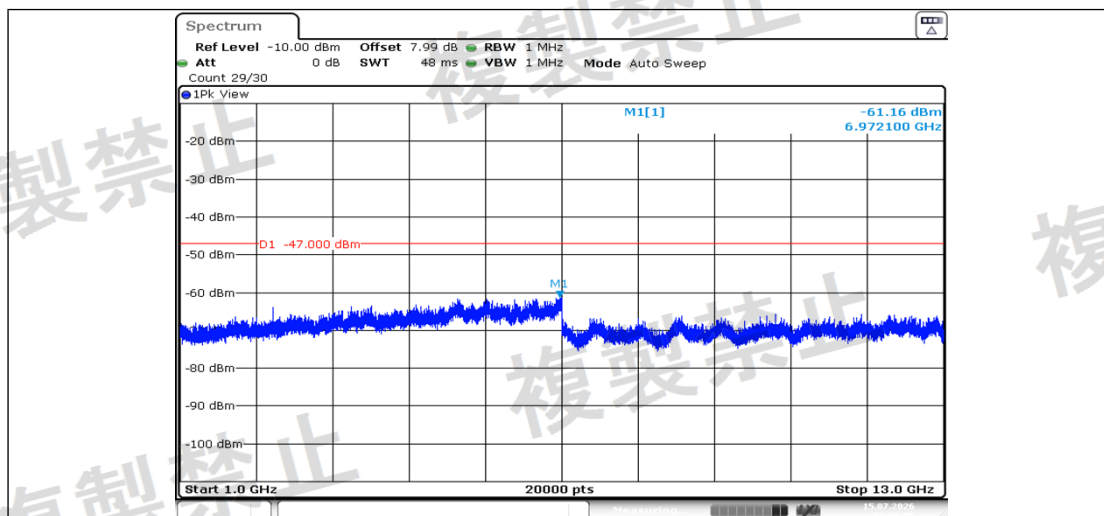
NTNV-3DH5-Ant1-2402-30~1000-PASS



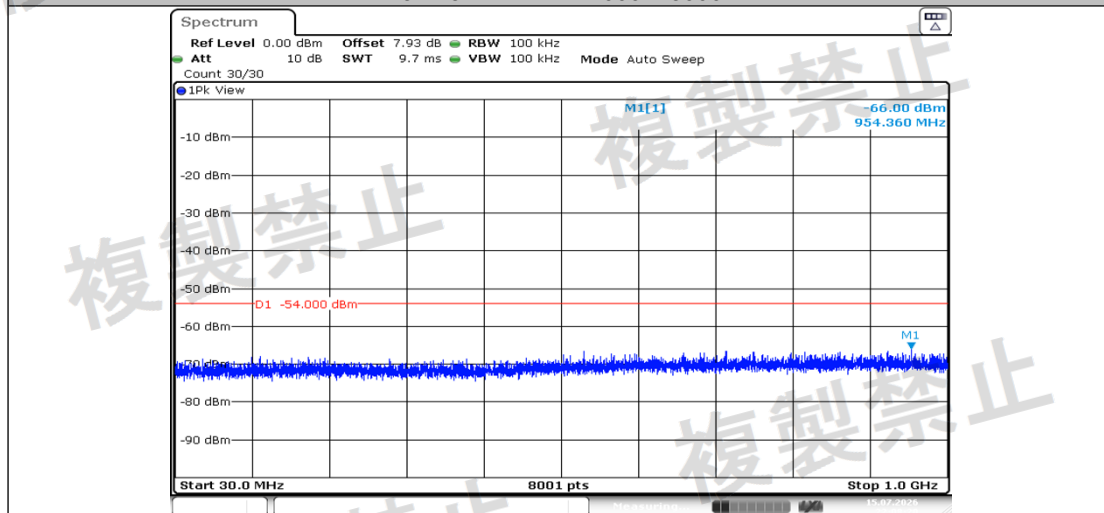
NTNV-3DH5-Ant1-2402-1000~13000-PASS



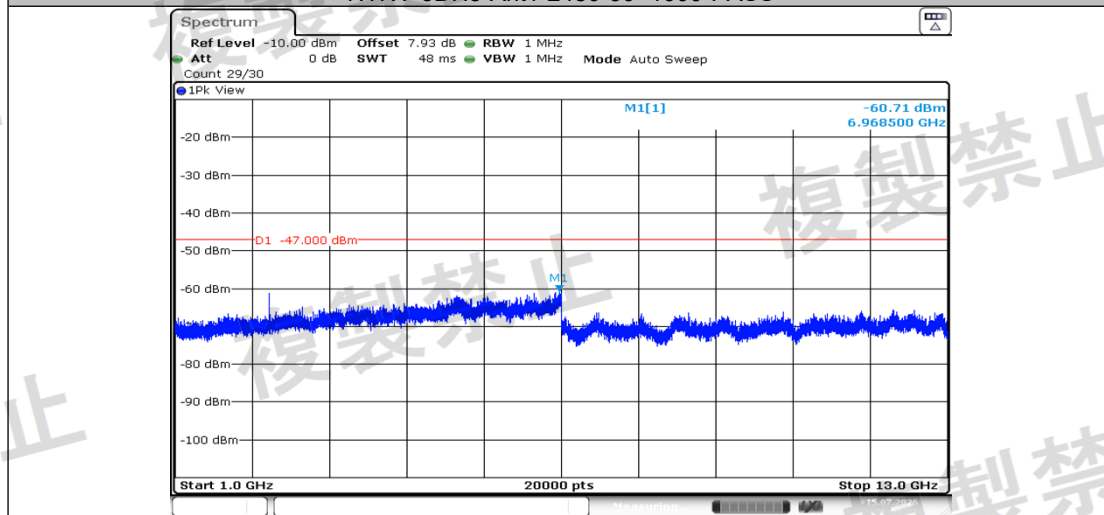
NTNV-3DH5-Ant1-2441-30~1000-PASS



NTNV-3DH5-Ant1-2441-1000~13000-PASS



NTNV-3DH5-Ant1-2480-30~1000-PASS



NTNV-3DH5-Ant1-2480-1000~13000-PASS

7. Antenna Power Measurement

Limit

Standard	Item	Limit
Article 2-1 Item 19	Antenna Power Density	3mW /MHz
	Antenna Power Error	20%

7.2 Measurement Procedure

For FHSS UUT:

Step 1: Measure the total power by Power Meter in a state of hopping mode (with Average Sensor)

Step 2: If it's the burst wave, please measure the burst ratio. Then calculate the real total power by burst ratio.

Step 3: Calculate the mean power per 1MHz by dividing the total power by spread bandwidth

Output Power Density (mW/MHz) = Total Output Power (mW) / Burst Ratio / Spread Bandwidth (MHz)

7.3 Test Data

Temperature	22.5℃	Humidity	50%
ATM Pressure	101.1kPa	Time	2026.07.15
Test by	Elio Lin	Test result	PASS

Please refer to following table.

Declared power=0.020mW/MHz
Normal Voltage

ITEM	GFSK	$\pi/4$ -DQPSK	8DPSK	Limit
Total Power (dBm)	2.28	0.42	0.20	/
Total Power (mW)	1.69	1.10	1.05	
Spread Bandwidth (MHz)	71.728	70.929	71.329	
Antenna Output Power (mW/MHz)	0.0236	0.0155	0.0147	3
Antenna Output Power Tolerance (%)	18.00	-22.50	-26.50	20
EIRP(dBm/MHz)	-14.02	-15.85	-16.08	6.91

Note:

1. Total Power: Test the total power of 79 channels
2. Declared Power is provided by the customer's declaration.
3. Antenna output power(mW/MHz) = Total Power (mW)/spread bandwidth (MHz)
4. Antenna output power tolerance = (Antenna output power - declared power)/declared power*100%
5. EIRP (dBm/MHz) = 10log*Antenna Output Power (mW/MHz)+Antenna Gain

8. FREQUENCY HOPPING DWELL TIME

8.1 Limit

According to Radio Law Radio Equipment Regulations Article 49-20, frequency dwell time is 0.4 seconds or below.

8.2 Measurement Procedure

Conditions of Application Equipment (EUT)

- Set the application equipment (EUT) to the measurement frequency.
- The modulation state shall be “continuous (burst) transmission mode”. If impossible, it shall be “continuous frequency-hopping mode”.

Spectrum Analyzer Conditions

Step 1:

- Center Frequency: 2441 MHz
- Span: ZERO SPAN
- RBW: 1MHz, VBW: 3MHz
- Log scale: 10dB/Div, Data points: 8000 points (400 points or more)
- Reference level: Enough level for maximum dynamic range
- Detection: Positive Peak
- Sweep mode: Continuous

Step 2:

- Center Frequency: 2441 MHz
- RBW: 0.51MHz, VBW: 3MHz
- Span: ZERO SPAN
- Reference level: Enough level for maximum dynamic range
- Detection: Positive Peak
- Sweep mode: Continuous
- Sweep time: 3.16s

Dwell time = Time per one hopping (On time) * hopping numbers

Note: because $0.4 * 72.246 = 28.90 < 3.16 * 10 = 31.6$, Therefore, the $3.16 * 10$ test will be more rigorous.

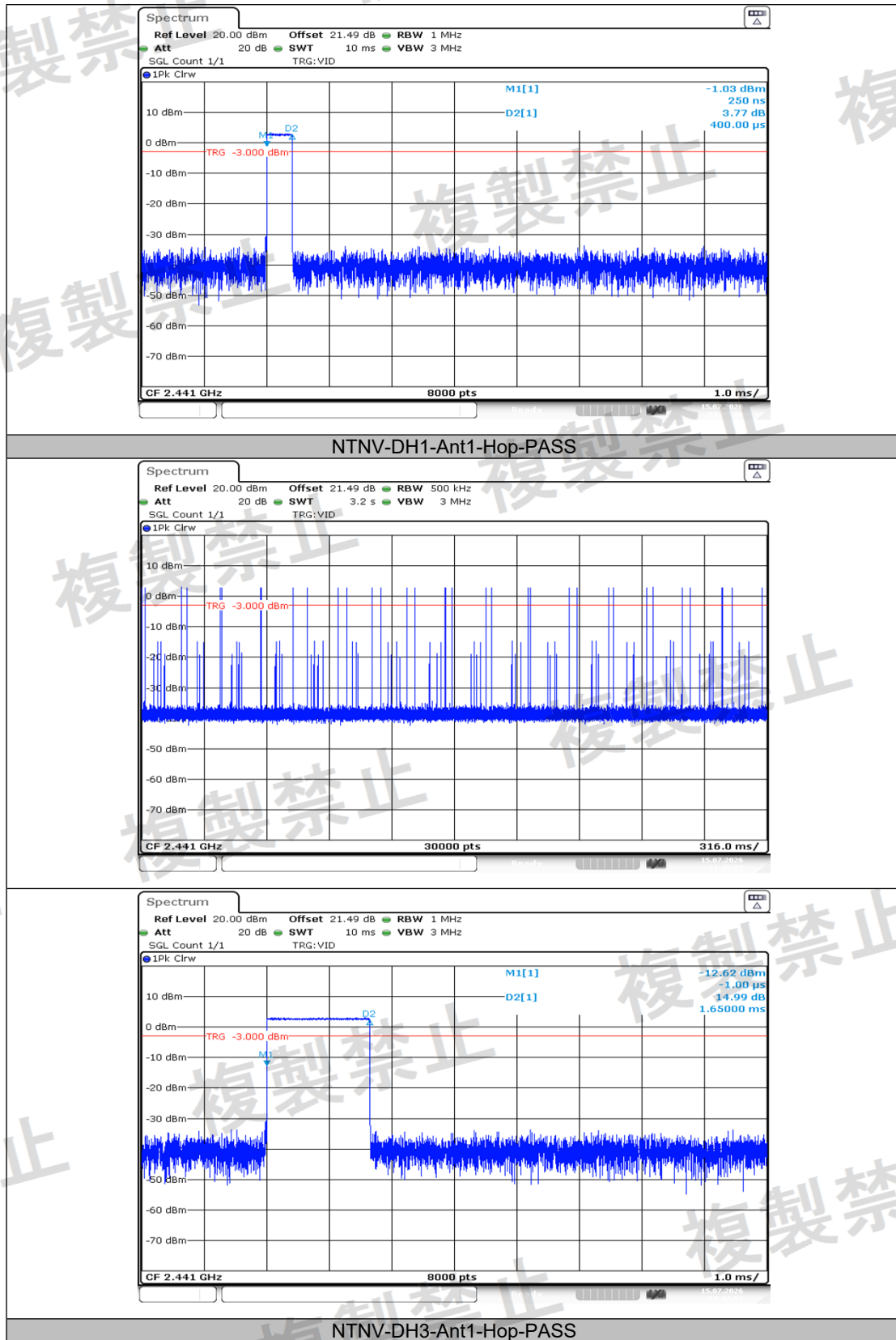
8.3 Test Data

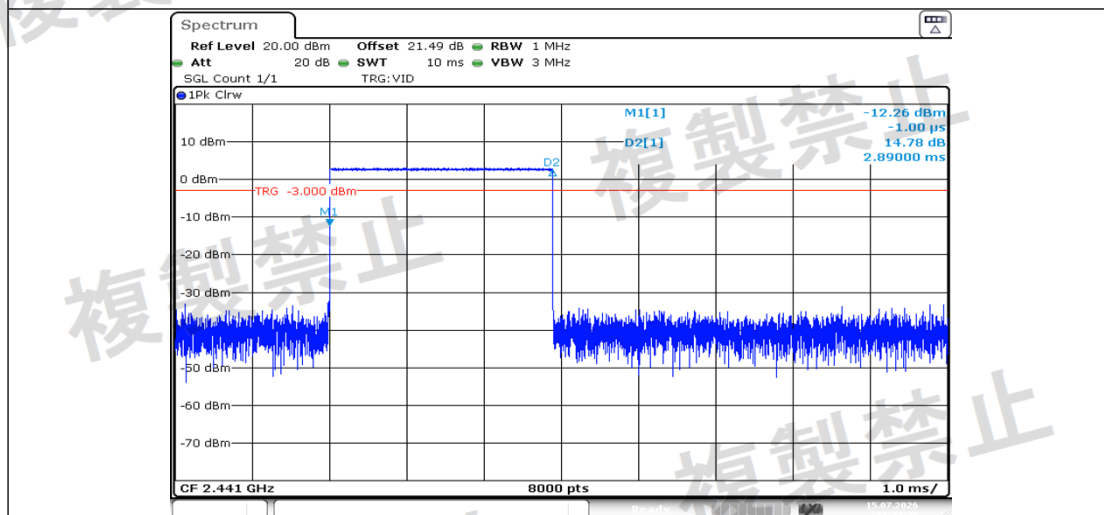
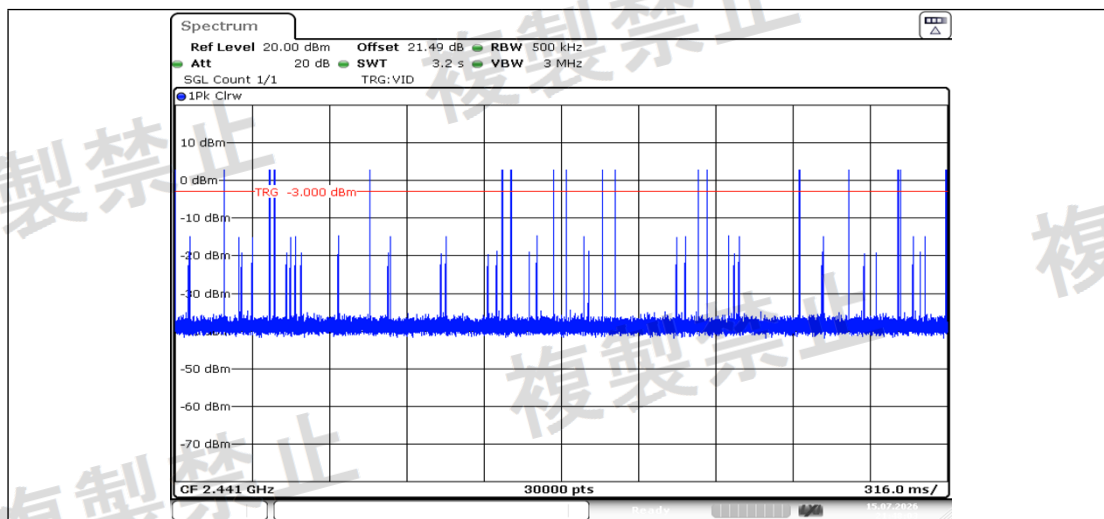
Temperature	22.3℃	Humidity	50%
ATM Pressure	101.1kPa	Time	2026.07.15
Test by	Elio Lin	Test result	PASS

Please refer to following table and plots.

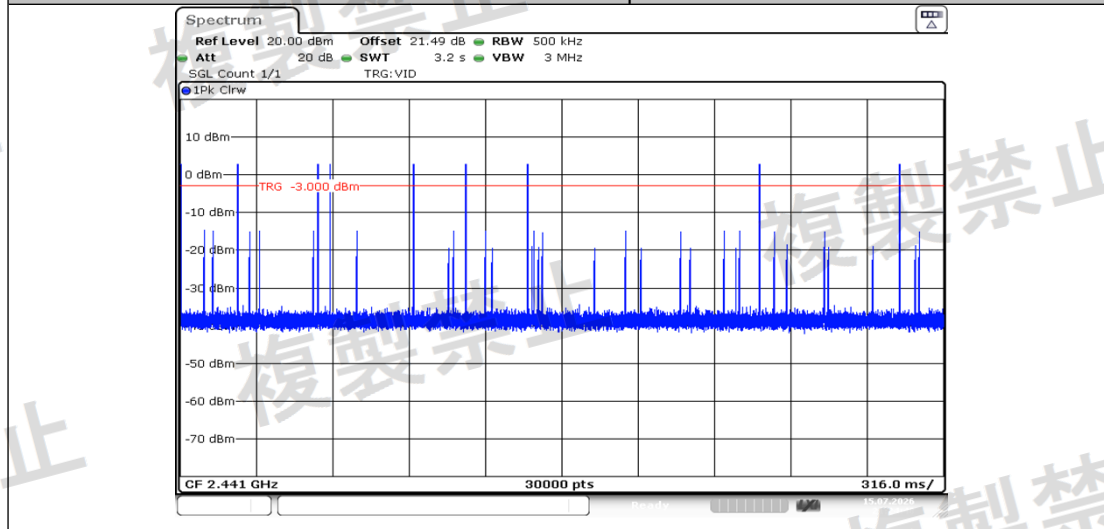
Test Condition	Test Mode	Antenna	Frequency [MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit [s]	Verdict
NTNV	DH1	Ant1	Hop	0.40	330	0.132	≤0.4	PASS
NTNV	DH3	Ant1	Hop	1.65	180	0.297	≤0.4	PASS
NTNV	DH5	Ant1	Hop	2.89	90	0.26	≤0.4	PASS
NTNV	2DH1	Ant1	Hop	0.39	320	0.125	≤0.4	PASS
NTNV	2DH3	Ant1	Hop	1.64	140	0.23	≤0.4	PASS
NTNV	2DH5	Ant1	Hop	2.80	110	0.308	≤0.4	PASS
NTNV	3DH1	Ant1	Hop	0.39	330	0.129	≤0.4	PASS
NTNV	3DH3	Ant1	Hop	1.64	150	0.246	≤0.4	PASS
NTNV	3DH5	Ant1	Hop	2.88	90	0.259	≤0.4	PASS

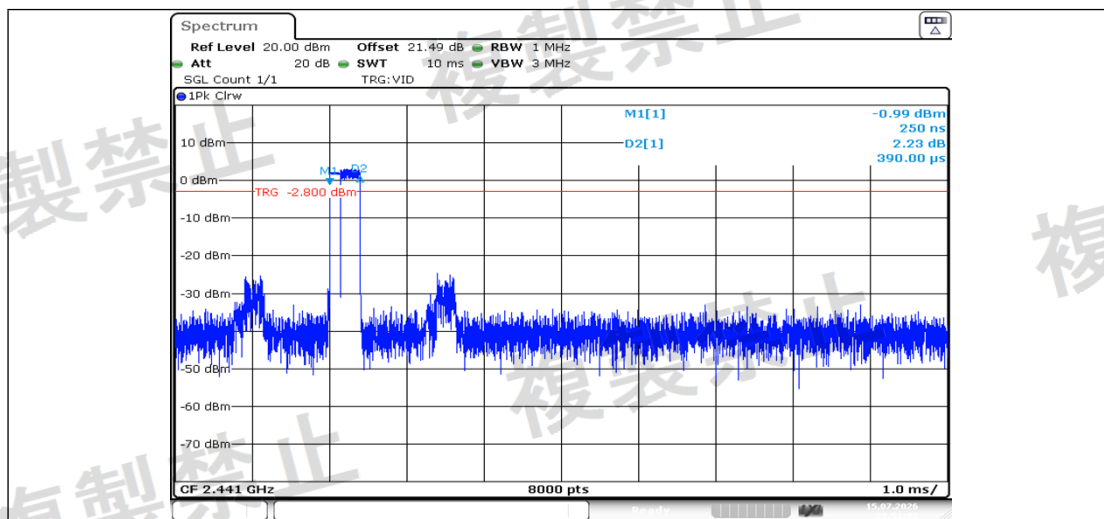
Please refer to recording the spectrum plots in the worst conditions



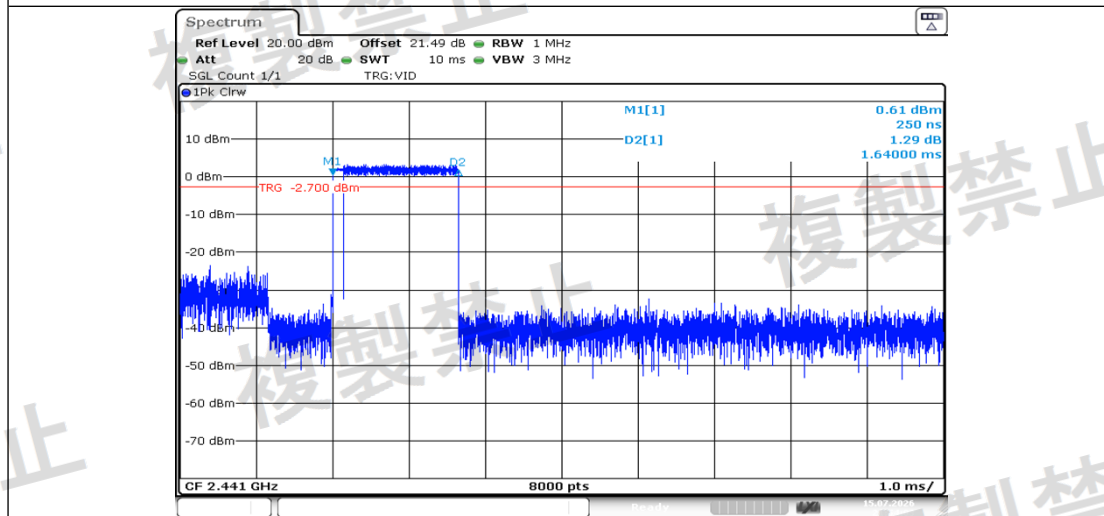
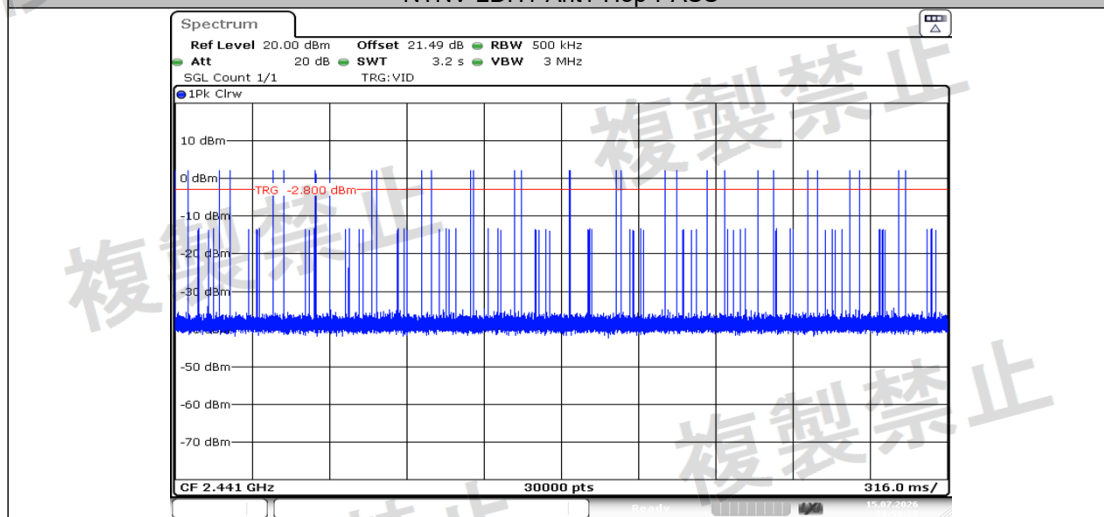


NTNV-DH5-Ant1-Hop-PASS

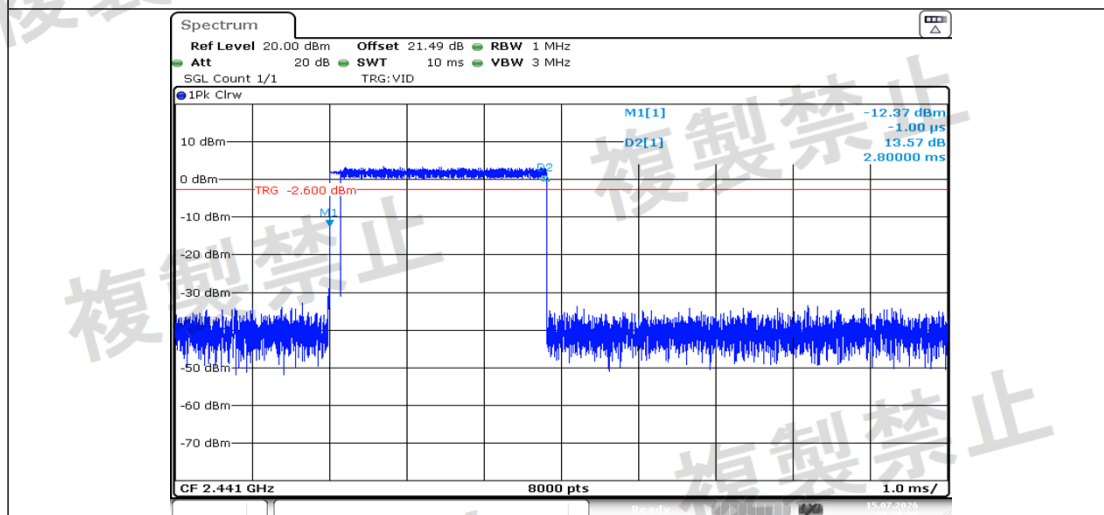
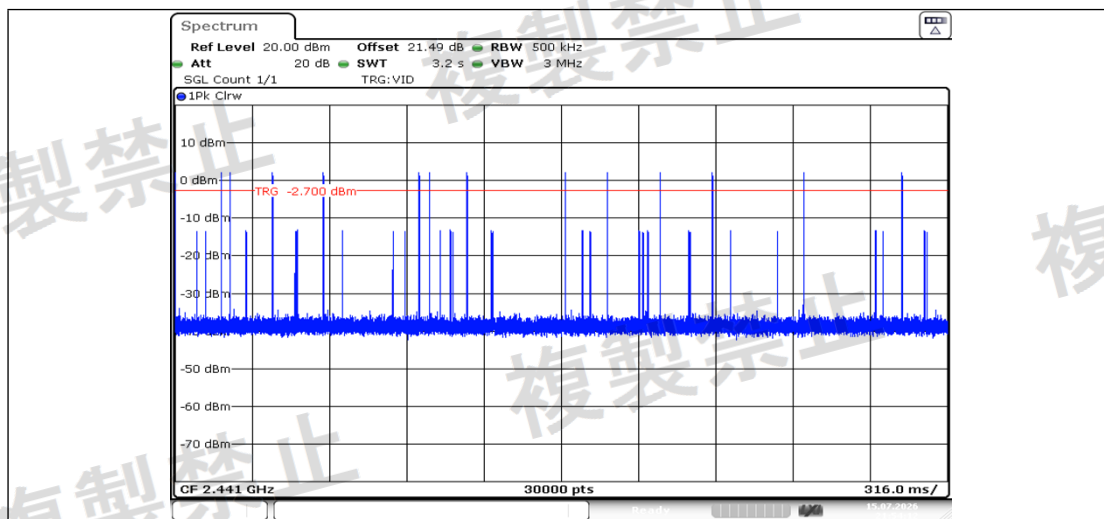




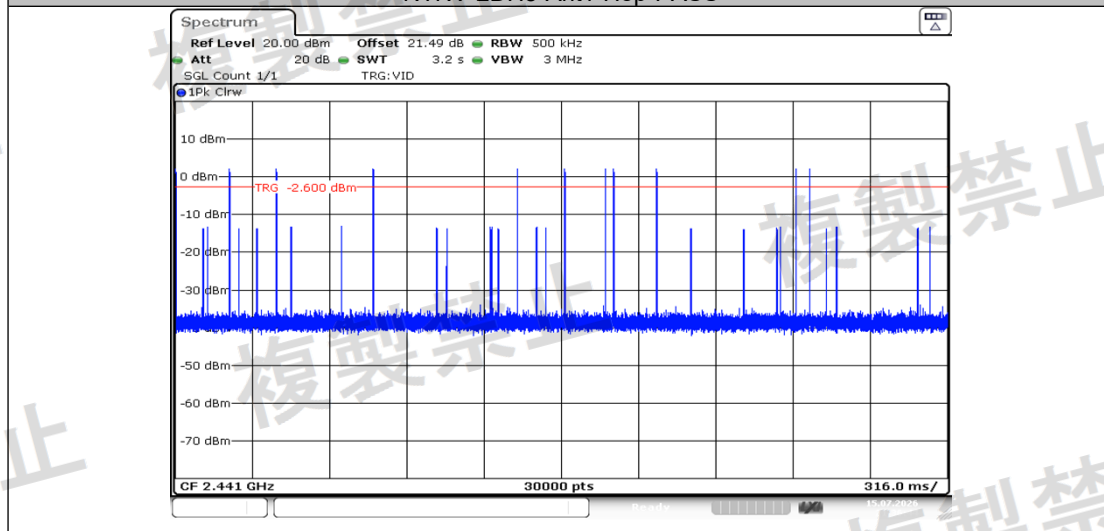
NTNV-2DH1-Ant1-Hop-PASS

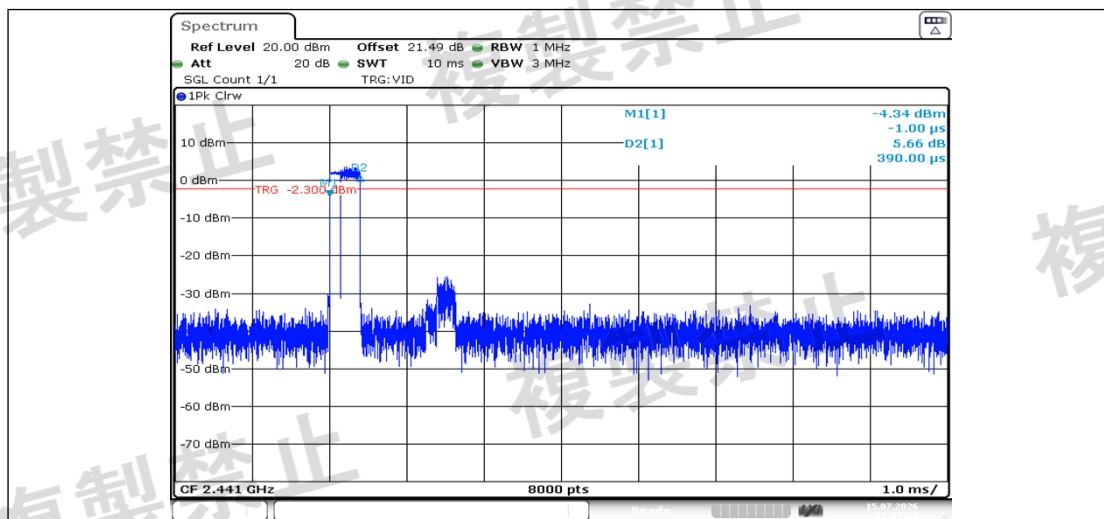


NTNV-2DH3-Ant1-Hop-PASS

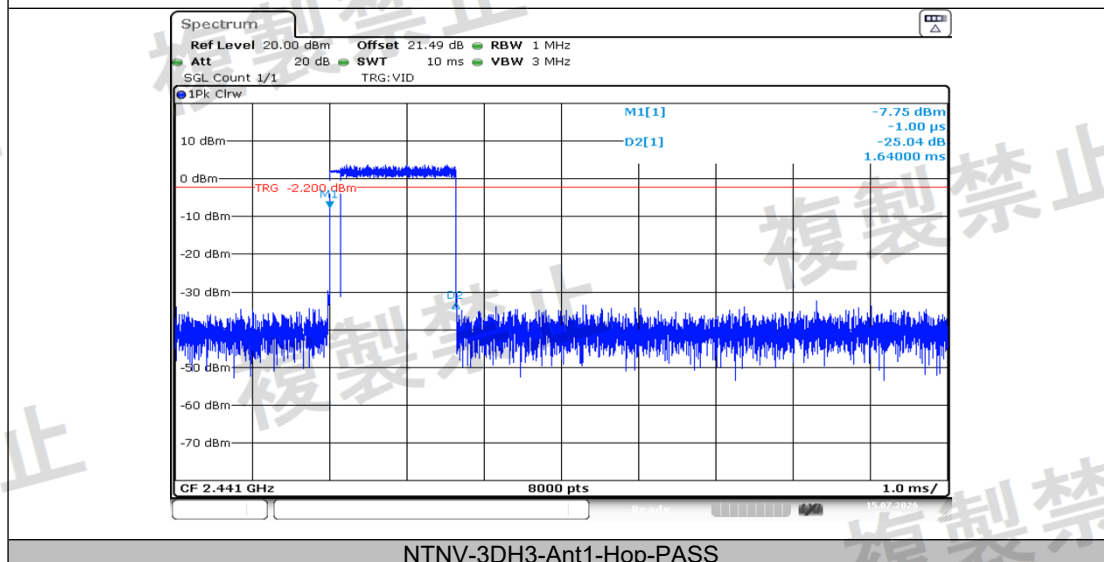
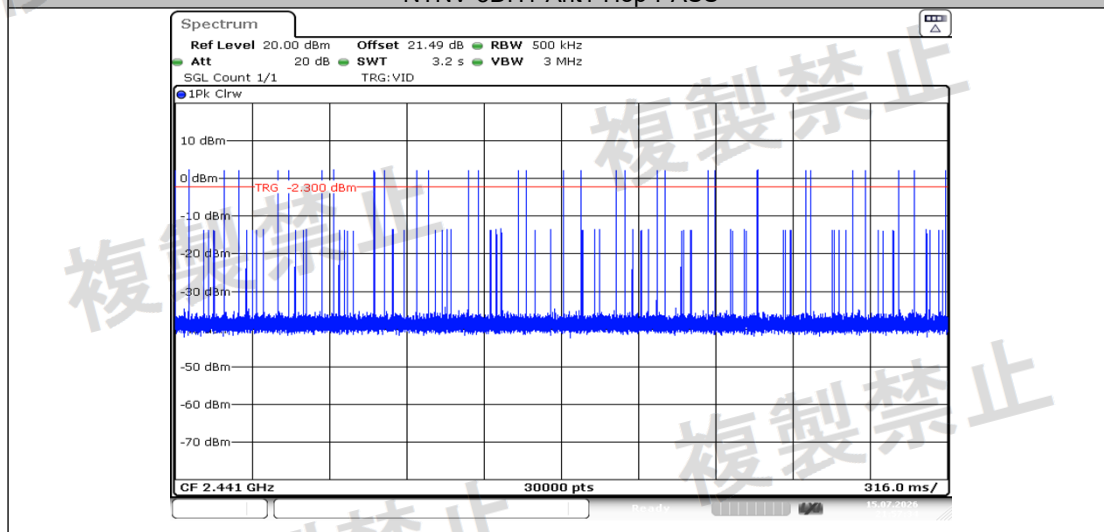


NTNV-2DH5-Ant1-Hop-PASS

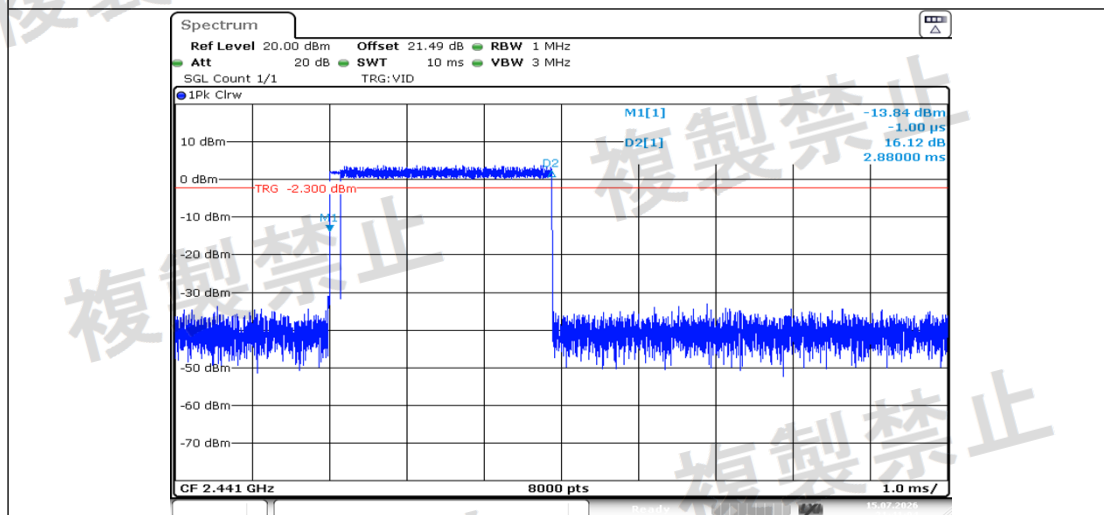
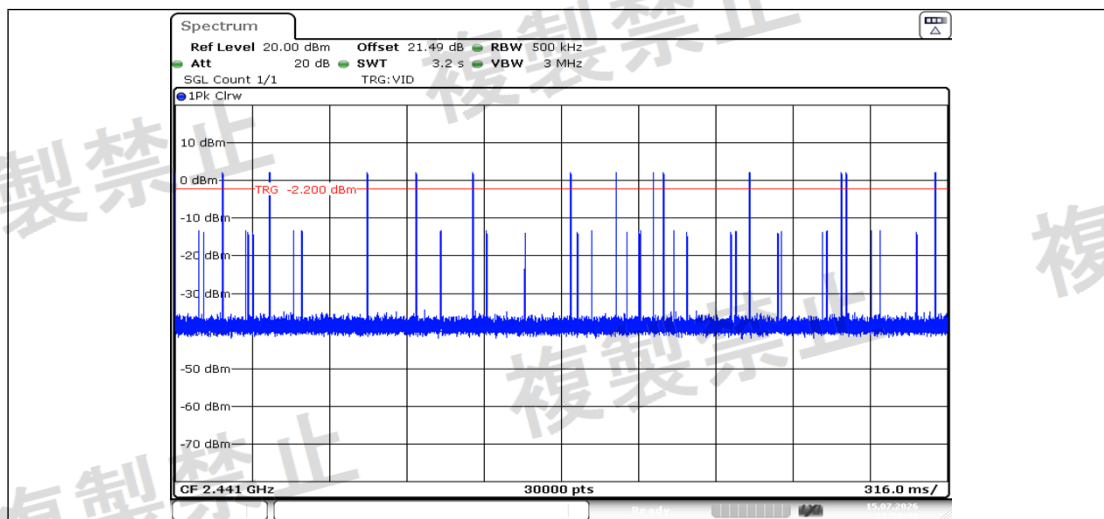




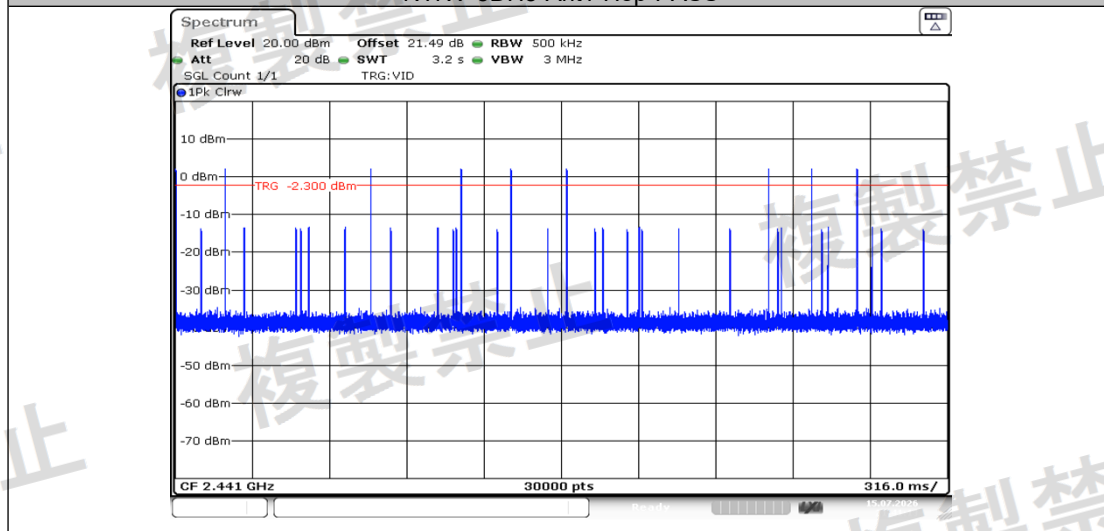
NTNV-3DH1-Ant1-Hop-PASS



NTNV-3DH3-Ant1-Hop-PASS



NTNV-3DH5-Ant1-Hop-PASS



9. INTERFERENCE PREVENTION FUNCTION

9.1 Standard Applicable

According to Item 19 of Article 2 Paragraph 1. The device shall have the function of automatic transmission or reception of identification code.

9.2 Test Procedure

In the case that the EUT has the function of automatically transmitting the identification code:

1. Transmit the predetermined identification codes from EUT
2. Check the transmitted identification codes with the demodulator.

In the case of receiving the identification codes:

1. Transmit the predetermined identification codes from the counterpart.
2. Check if communication is normal
3. Transmit the signal other than predetermined ID codes from the counterpart.
4. Check if the EUT stops the transmission, or if it displays that identification codes are different from the predetermined ones.

9.3 Summary of Test Results/Plots

Test Item	Test Result
Transmitting Function of Identification Code	The device have the function of automatic transmission or reception of identification code
Receiving Function of Identification Code	The device have the function of automatic transmission or reception of identification code

Note: The MAC address is: B8:B1:EA:C7:92:A1

Statement

1. The report is invalid without the official seal or special seal of Shenzhen Haiyun Standard Technical Co., Ltd. (hereinafter referred to as the unit).
2. The report is invalid without the signature of the approver.
3. The report is invalid if altered arbitrarily.
4. The report shall not be partially copied without the written approval of the unit.
5. The reported test results are only valid for the tested samples.
6. If there is any objection to the test report, it shall be submitted to the test unit within 15 days from the date of receiving the report, and the overdue shall not be accepted.

Shenzhen Haiyun Standard Technical Co., Ltd.

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