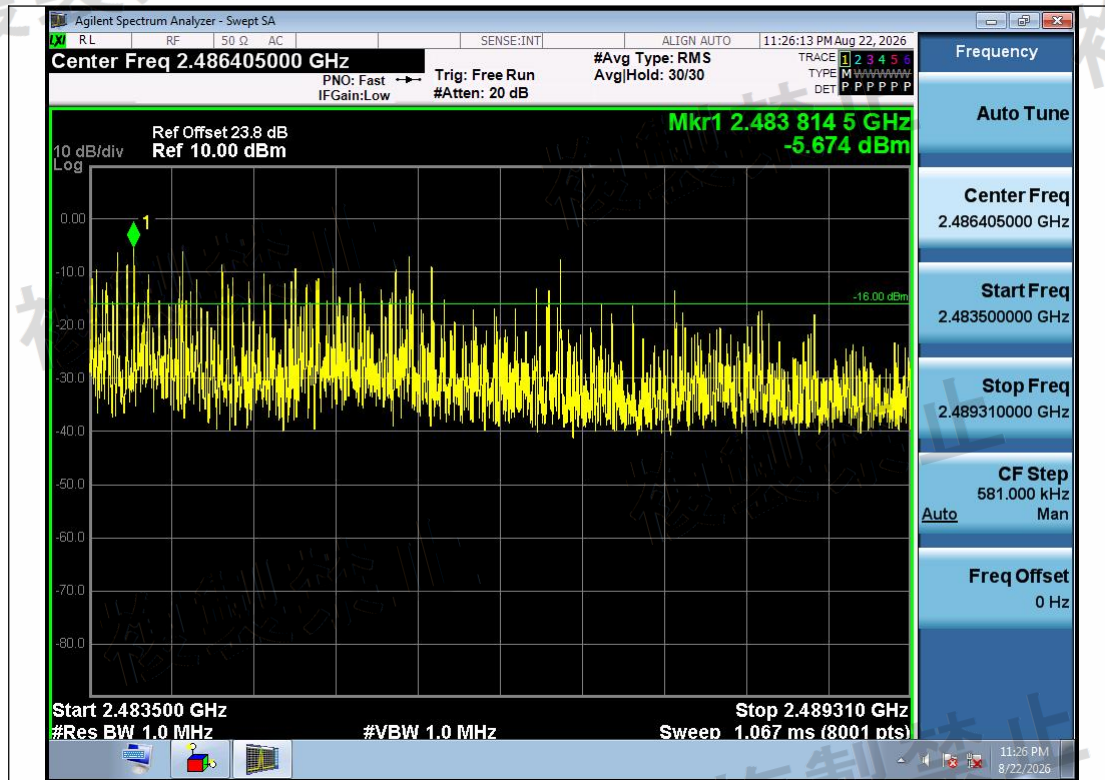
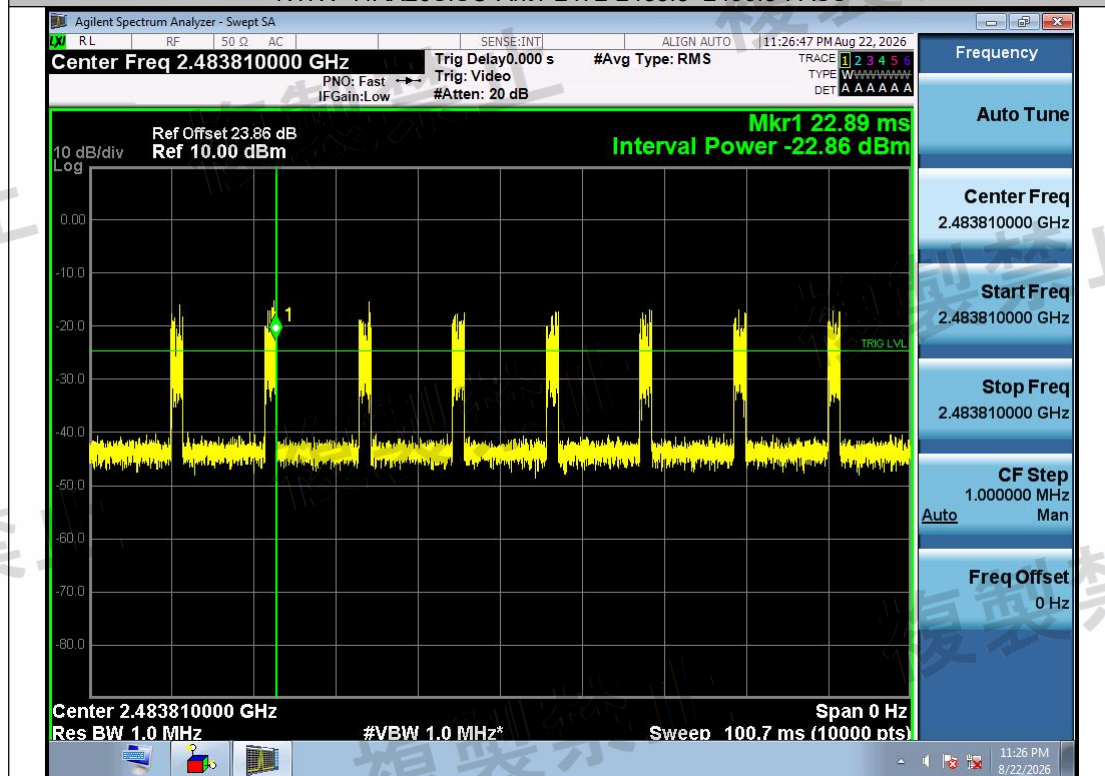
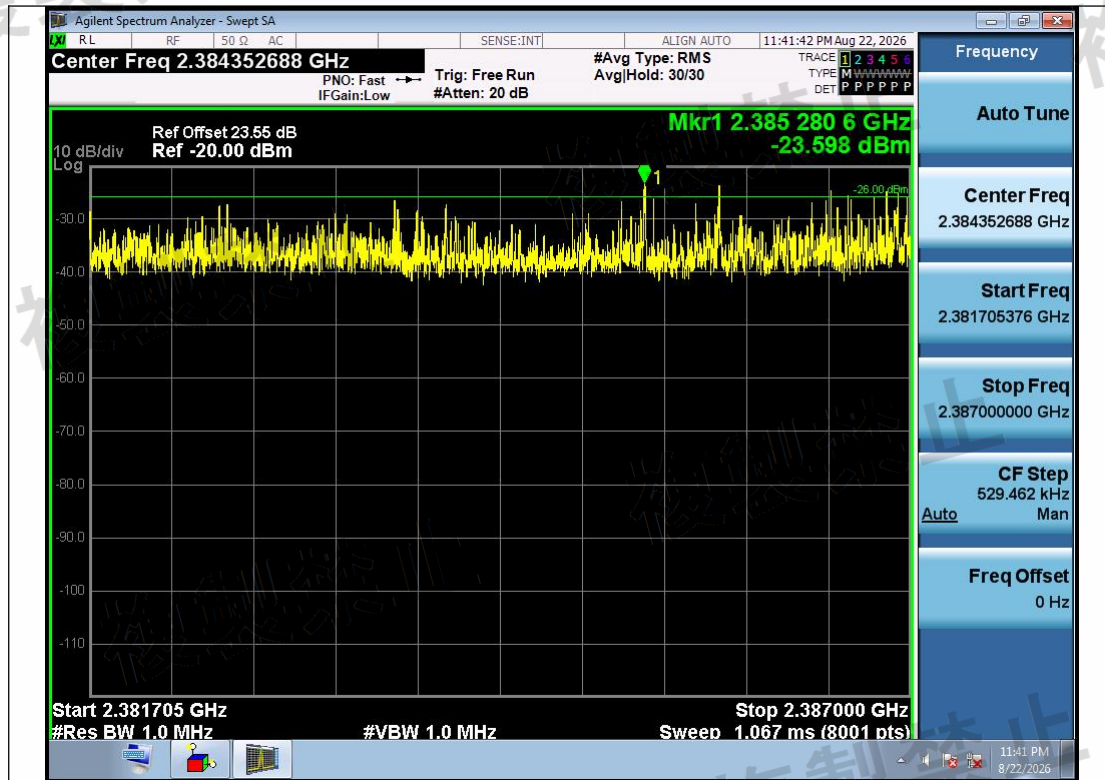


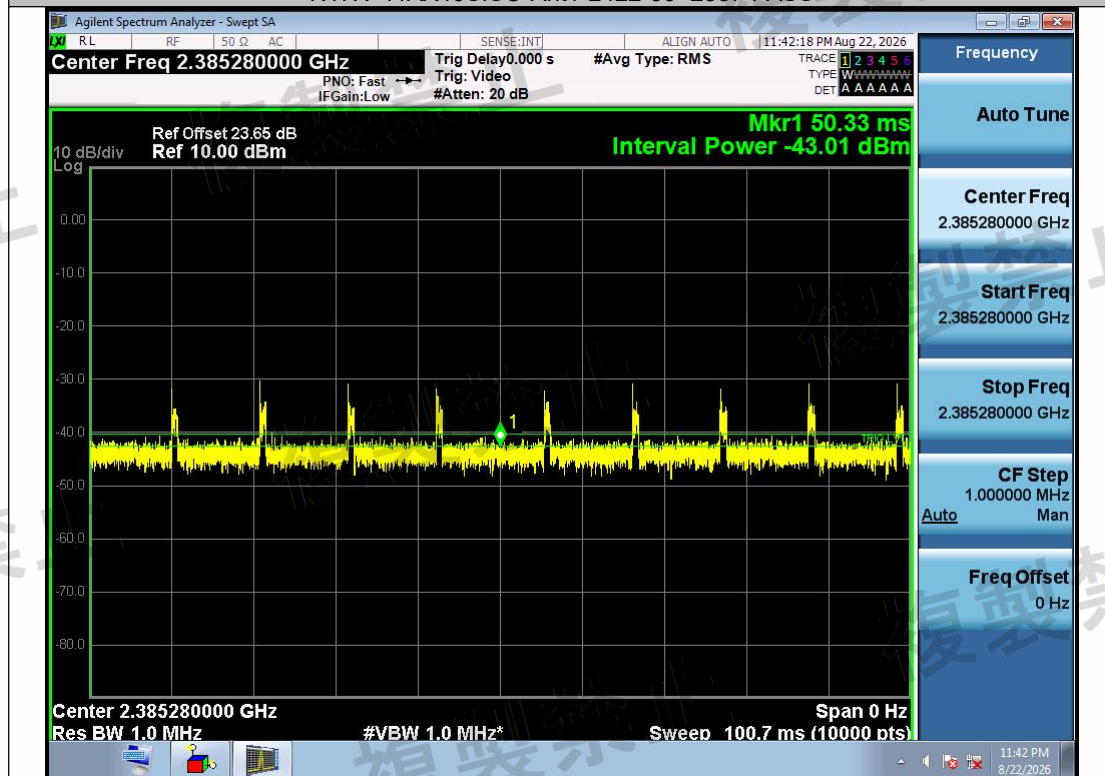


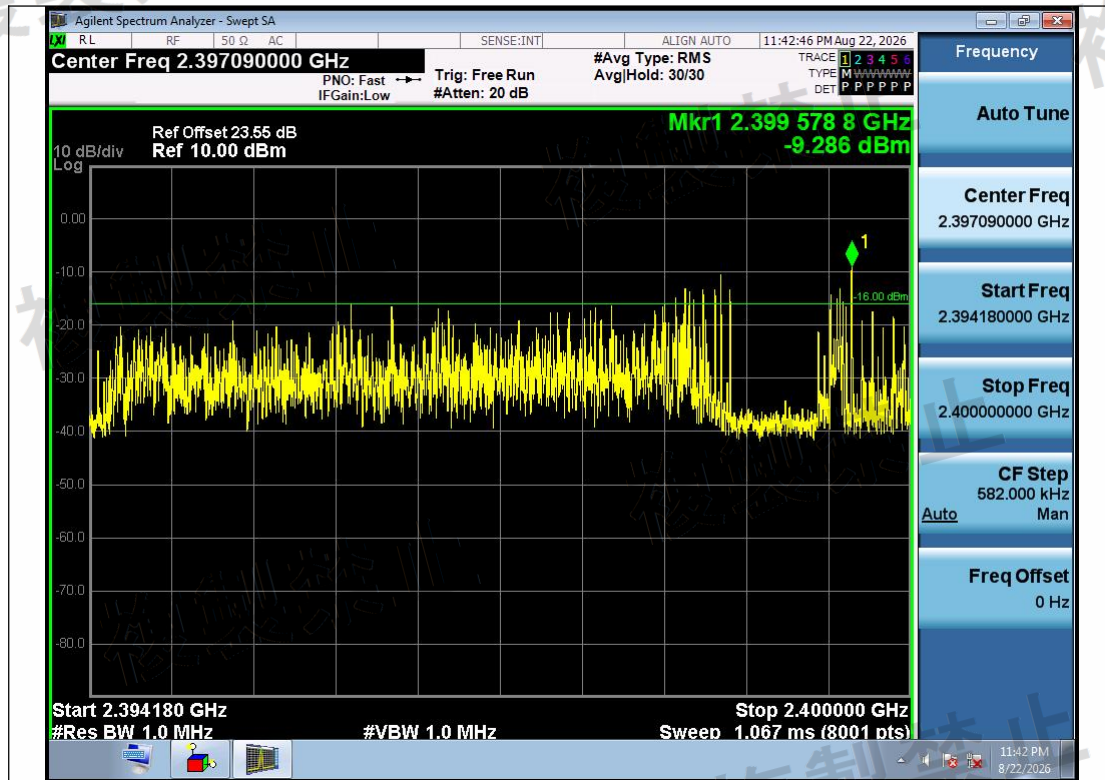
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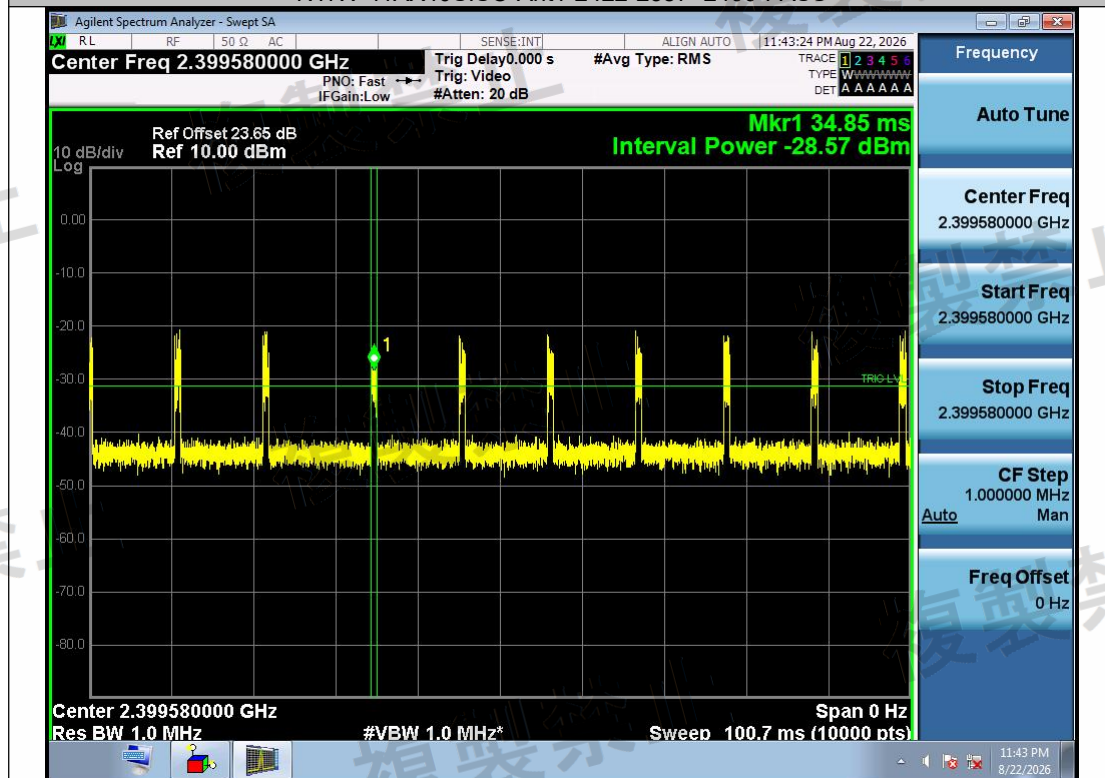


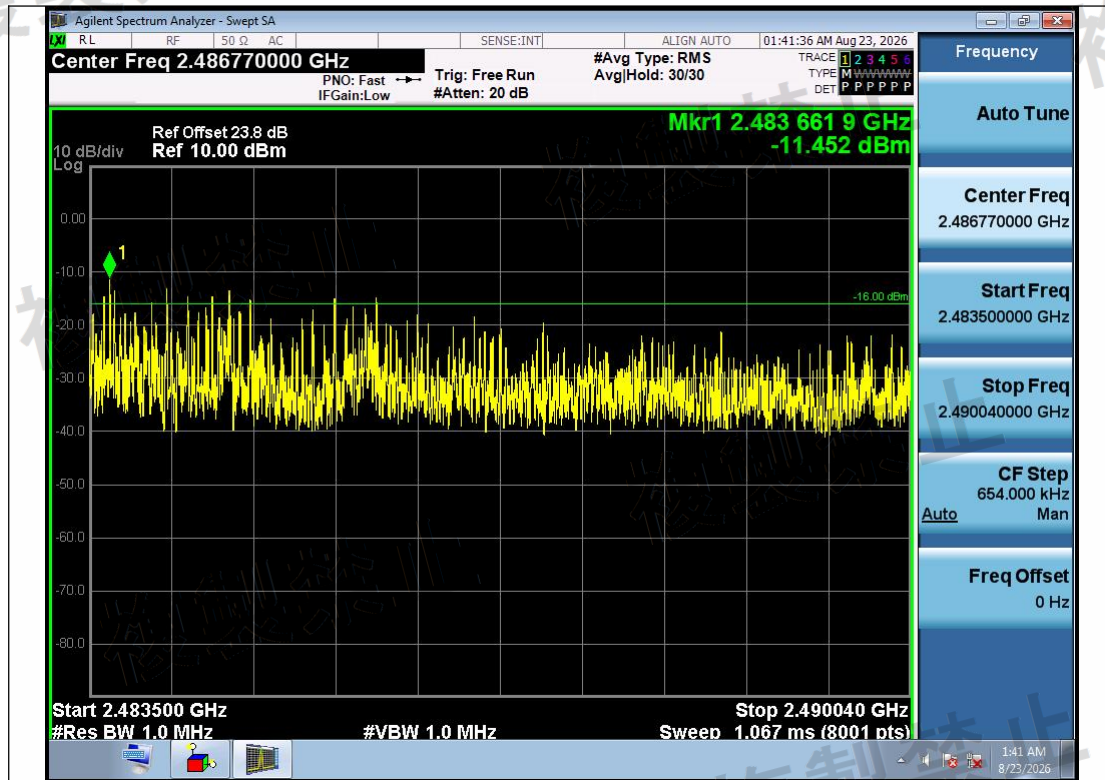
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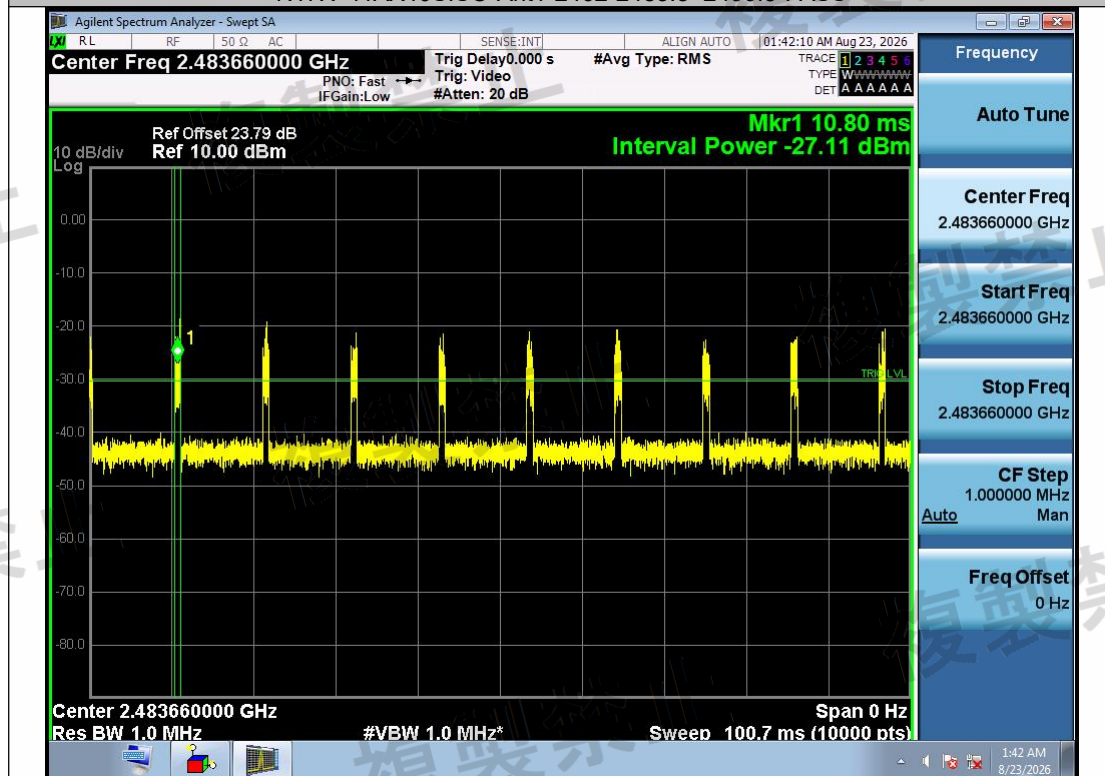


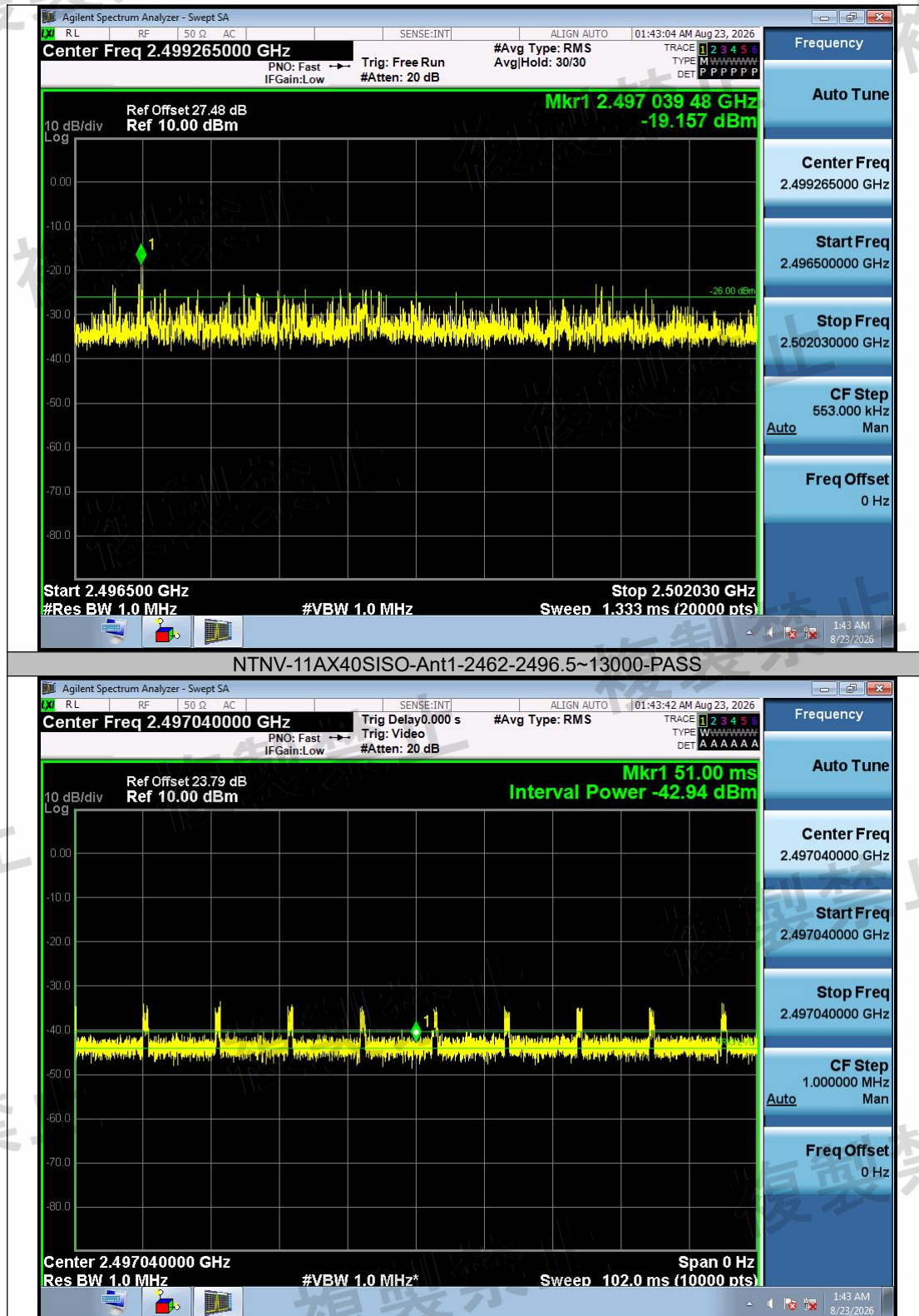
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NTNV-11AX40SISO-Ant1-2462-2483.5~2496.5-PASS





7.5 SPURIOUS EMISSIONS OF RX

7.5.1 Applicable Standard

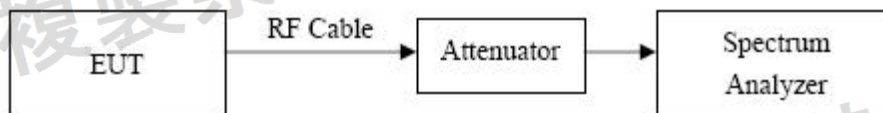
According to Item 19 of Article 2 Paragraph 1.

7.5.2 Conformance Limit

The limit on secondary emissions radiated from the receiving equipment within which the function of other radio equipment will not be impaired shall be, in terms of the power of a dummy antenna circuit that has the same electrical constant as the receiving antenna, 4nW (-54dBm) or less at a frequency below 1 GHz and 20 nW(-47dBm) or less at a frequency of 1 GHz or higher as measured using the circuit.

- | | |
|----------------------|-----------------------|
| a. 30 MHz - 1000 MHz | 4 nW (-54dBm) or less |
| b. 1GHz – 12.5 GHz | 20 nW(-47dBm) or less |

7.5.3 Test Setup Block Diagram



7.5.4 Test Procedure

Set the EUT so that the test frequency is can be measured receipt consecutively all the time.

(1) Set the attenuation value of the dummy load lowest as possible, due to low level of the measured object.

(2) Set Spectrum analyzer for seeking the collateral emission is set as below.

Sweeping Bandwidth	30MHz to 5 times of carrier frequency
Resolution Bandwidth	In case of frequency lower than 1 GHz, 100 kHz In case of frequency higher than 1 MHz
Video Bandwidth	Same level as the resolution bandwidth
Sweep Time	Minimum time to assure the measurement accuracy
Y-Axis Scale	10 dB/Div
Sweep Mode	Single sweep
Phase-Detection Mode	Positive peak

(3) Spectrum analyzer for measuring the collateral emission is set as below.

Central Frequency	Collateral emission frequency
Sweeping Bandwidth	0 Hz
Resolution Bandwidth	In case of frequency lower than 1 GHz, 100 kHz In case of frequency higher than 1 MHz
Video Bandwidth	Same level as the resolution bandwidth
Sweep Mode	Single sweep
Detection Mode	Sample

Set the spectrum analyzer as (2), seek the maximum amplitude of the collateral emission.

In case of sought result lower than 1/10 limit value, employ the sought value as the measured value.

In case the sought value exceeds 1/10 limit value, seek the collateral emission frequency by narrowing the sweeping band sequentially to 1/10 for the purpose of higher accuracy of the spectrum analyzer. Set the spectrum analyzer as (3).

7.5.5 Environmental Conditions

Temperature:	21.4℃
Relative Humidity:	46%
ATM Pressure:	1011 mbar

7.5.6 Test Results

TestCondition	TestMode	Antenna	Frequen cy[MHz]	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
NTNV	11B	Ant1	2412	30~1000	917.43	-80.09	≤-54	0.0097 9	≤4	PASS
NTNV	11B	Ant1	2412	1000~13000	2440.6 7	-63.82	≤-47	0.4149 5	≤20	PASS
NTNV	11B	Ant1	2442	30~1000	952.23	-79.65	≤-54	0.0108 4	≤4	PASS
NTNV	11B	Ant1	2442	1000~13000	2437.6 7	-65.13	≤-47	0.3069 0	≤20	PASS
NTNV	11B	Ant1	2472	30~1000	915.85	-79.68	≤-54	0.0107 6	≤4	PASS
NTNV	11B	Ant1	2472	1000~13000	2439.4 7	-64.73	≤-47	0.3365 1	≤20	PASS
NTNV	11G	Ant1	2412	30~1000	874.02	-80.02	≤-54	0.0099 5	≤4	PASS
NTNV	11G	Ant1	2412	1000~13000	3053.3 0	-66.05	≤-47	0.2483 1	≤20	PASS
NTNV	11G	Ant1	2442	30~1000	796.42	-80.07	≤-54	0.0098 4	≤4	PASS
NTNV	11G	Ant1	2442	1000~13000	2440.6 7	-64.12	≤-47	0.3872 6	≤20	PASS
NTNV	11G	Ant1	2472	30~1000	794.00	-79.06	≤-54	0.0124 2	≤4	PASS
NTNV	11G	Ant1	2472	1000~13000	6032.4 5	-65.96	≤-47	0.2535 1	≤20	PASS
NTNV	11N20SI SO	Ant1	2412	30~1000	505.91	-79.90	≤-54	0.0102 3	≤4	PASS
NTNV	11N20SI SO	Ant1	2412	1000~13000	5929.2 5	-66.08	≤-47	0.2466 0	≤20	PASS
NTNV	11N20SI SO	Ant1	2442	30~1000	835.34	-78.99	≤-54	0.0126 2	≤4	PASS
NTNV	11N20SI SO	Ant1	2442	1000~13000	12926. 80	-66.45	≤-47	0.2264 6	≤20	PASS
NTNV	11N20SI SO	Ant1	2472	30~1000	913.43	-79.22	≤-54	0.01197	≤4	PASS
NTNV	11N20SI SO	Ant1	2472	1000~13000	2439.4 7	-65.59	≤-47	0.2760 6	≤20	PASS
NTNV	11N40SI SO	Ant1	2422	30~1000	896.09	-79.25	≤-54	0.01189	≤4	PASS
NTNV	11N40SI SO	Ant1	2422	1000~13000	7127.5 1	-65.76	≤-47	0.2654 6	≤20	PASS
NTNV	11N40SI SO	Ant1	2442	30~1000	368.05	-79.65	≤-54	0.0108 4	≤4	PASS
NTNV	11N40SI SO	Ant1	2442	1000~13000	3061.7 0	-65.87	≤-47	0.2588 2	≤20	PASS
NTNV	11N40SI SO	Ant1	2462	30~1000	994.79	-79.41	≤-54	0.01146	≤4	PASS
NTNV	11N40SI SO	Ant1	2462	1000~13000	2440.0 7	-65.60	≤-47	0.2754 2	≤20	PASS

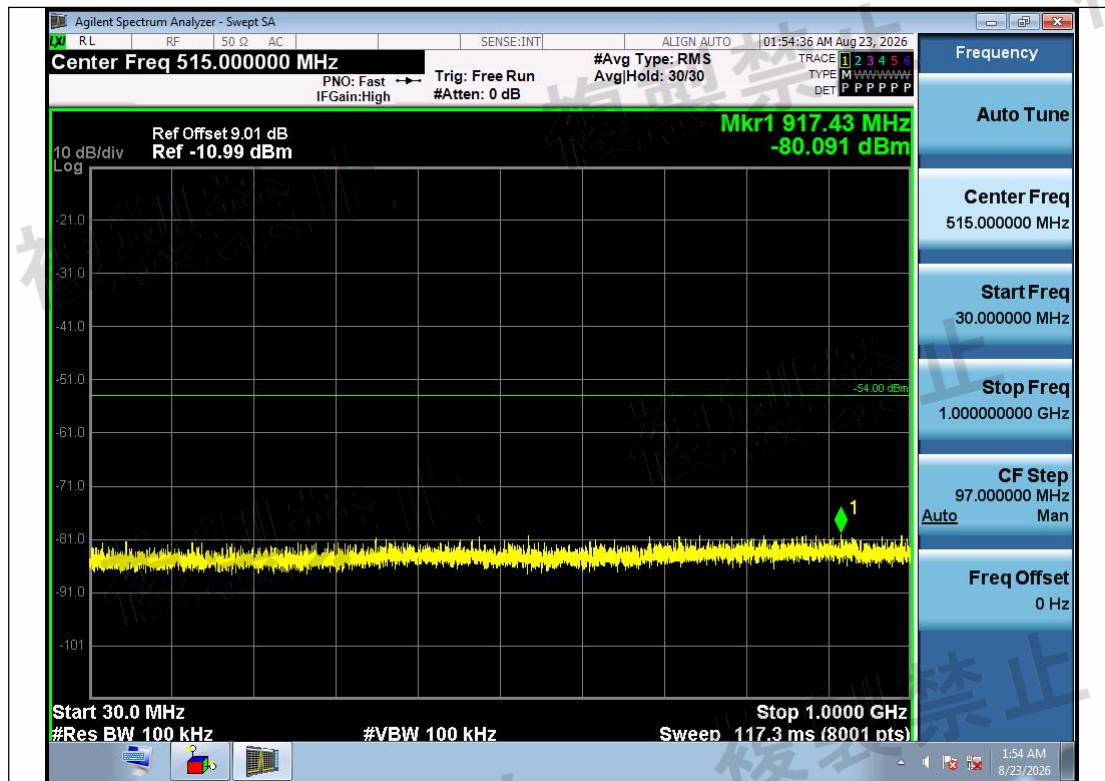
NTNV	11AX20S ISO	Ant1	2412	30~1000	798.12	-79.44	≤-54	0.01138	≤4	PASS
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NTNV	11AX20S ISO	Ant1	2442	30~1000	735.92	-79.69	≤-54	0.0107 4	≤4	PASS
NTNV	11AX20S ISO	Ant1	2442	1000~13000	6441.6 7	-66.25	≤-47	0.2371 4	≤20	PASS
NTNV	11AX20S ISO	Ant1	2472	30~1000	876.45	-79.51	≤-54	0.01119	≤4	PASS
NTNV	11AX20S ISO	Ant1	2472	1000~13000	12980. 20	-65.26	≤-47	0.2978 5	≤20	PASS
NTNV	11AX40S ISO	Ant1	2422	30~1000	829.77	-79.57	≤-54	0.01104	≤4	PASS
NTNV	11AX40S ISO	Ant1	2422	1000~13000	6189.6 6	-66.72	≤-47	0.2128 1	≤20	PASS
NTNV	11AX40S ISO	Ant1	2442	30~1000	870.38	-80.42	≤-54	0.0090 8	≤4	PASS
NTNV	11AX40S ISO	Ant1	2442	1000~13000	12544. 58	-65.51	≤-47	0.28119	≤20	PASS
NTNV	11AX40S ISO	Ant1	2462	30~1000	890.03	-79.63	≤-54	0.0108 9	≤4	PASS
NTNV	11AX40S ISO	Ant1	2462	1000~13000	3147.5 1	-65.94	≤-47	0.2546 8	≤20	PASS

複製禁止

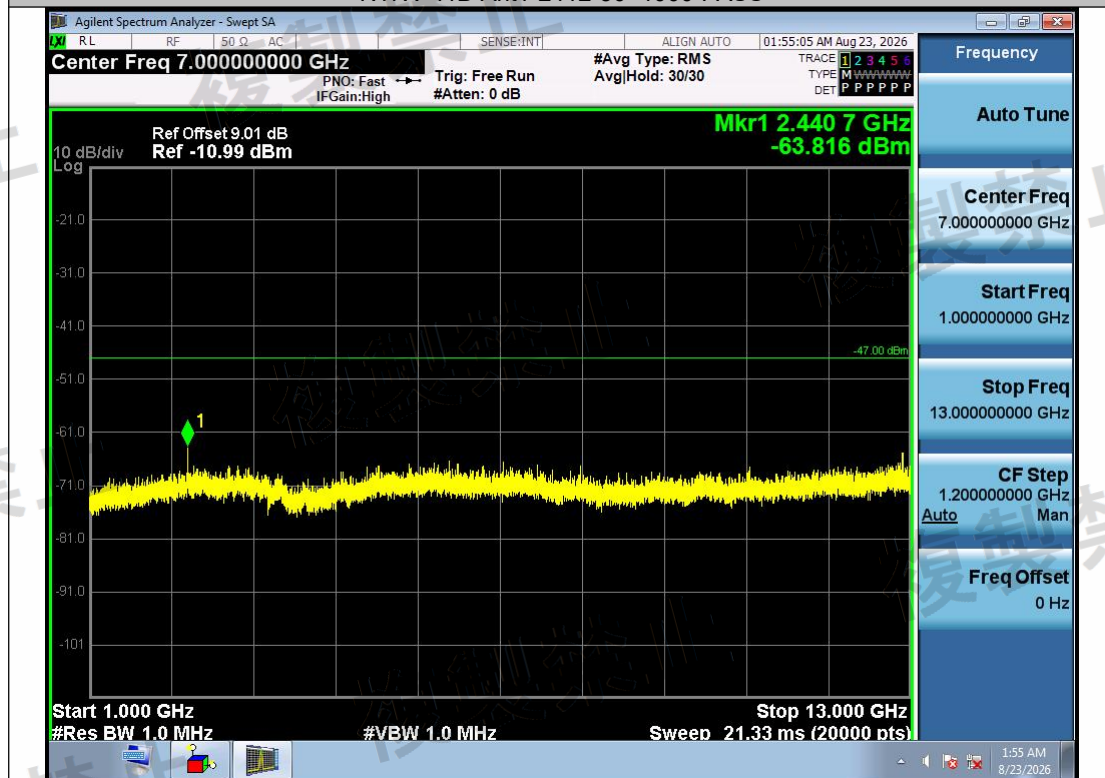


Access to the World

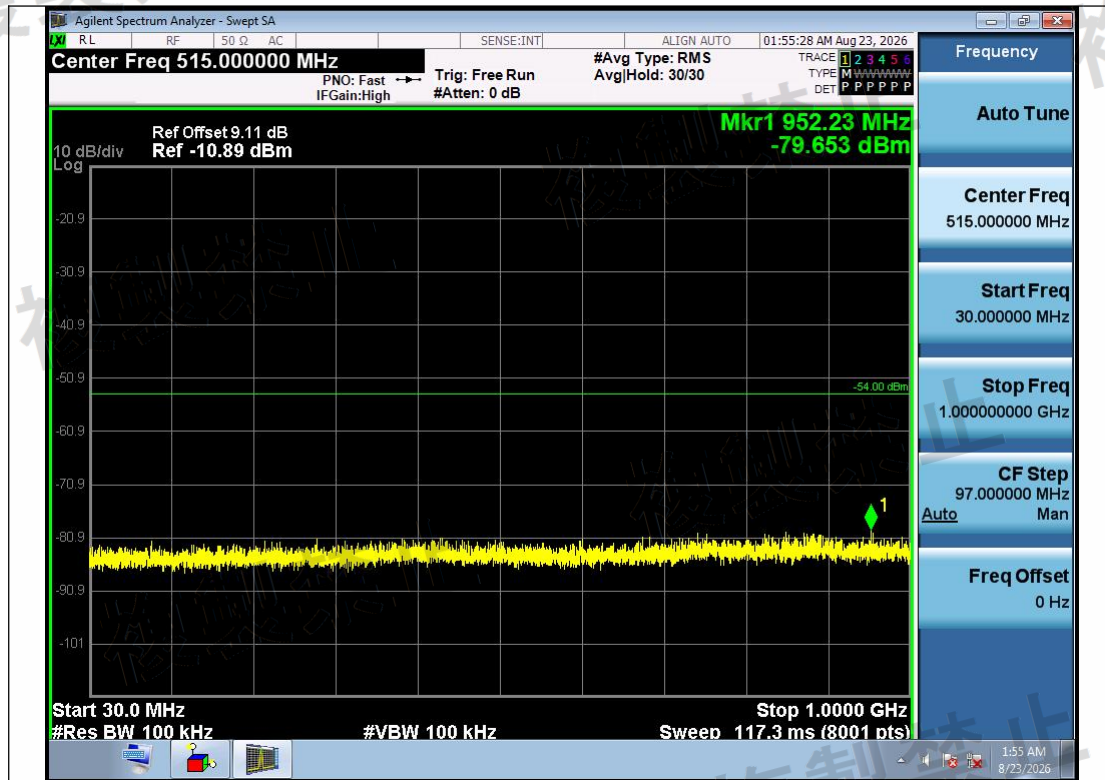
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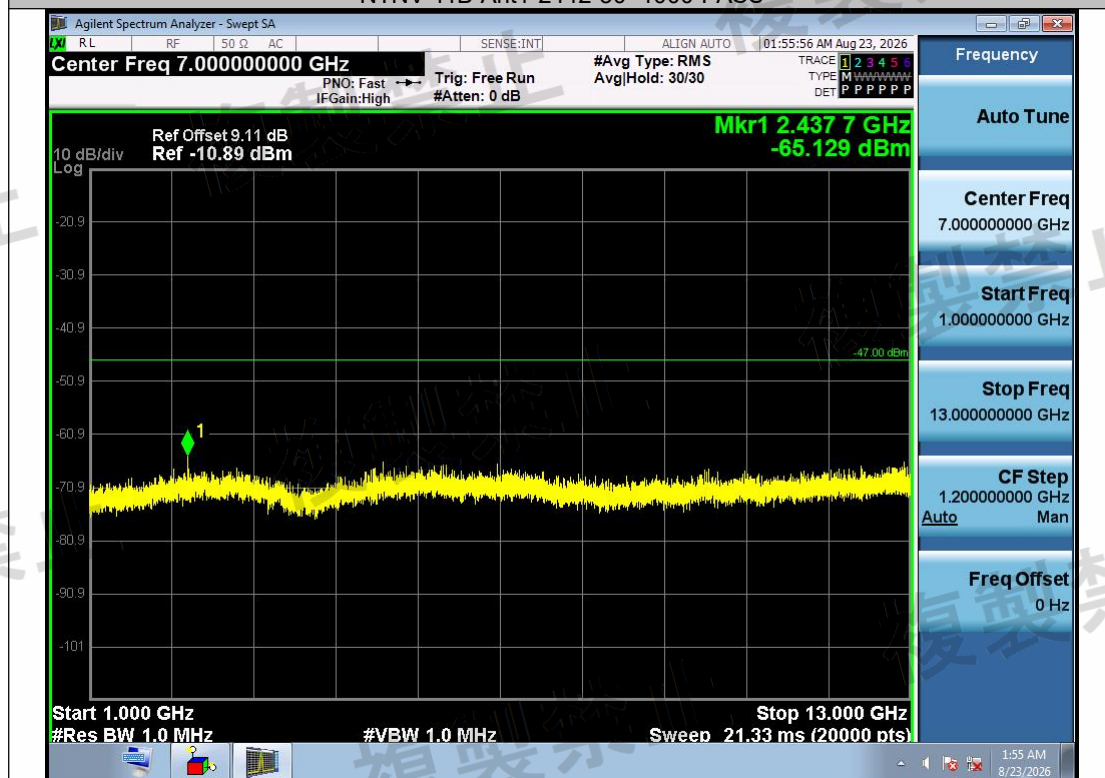
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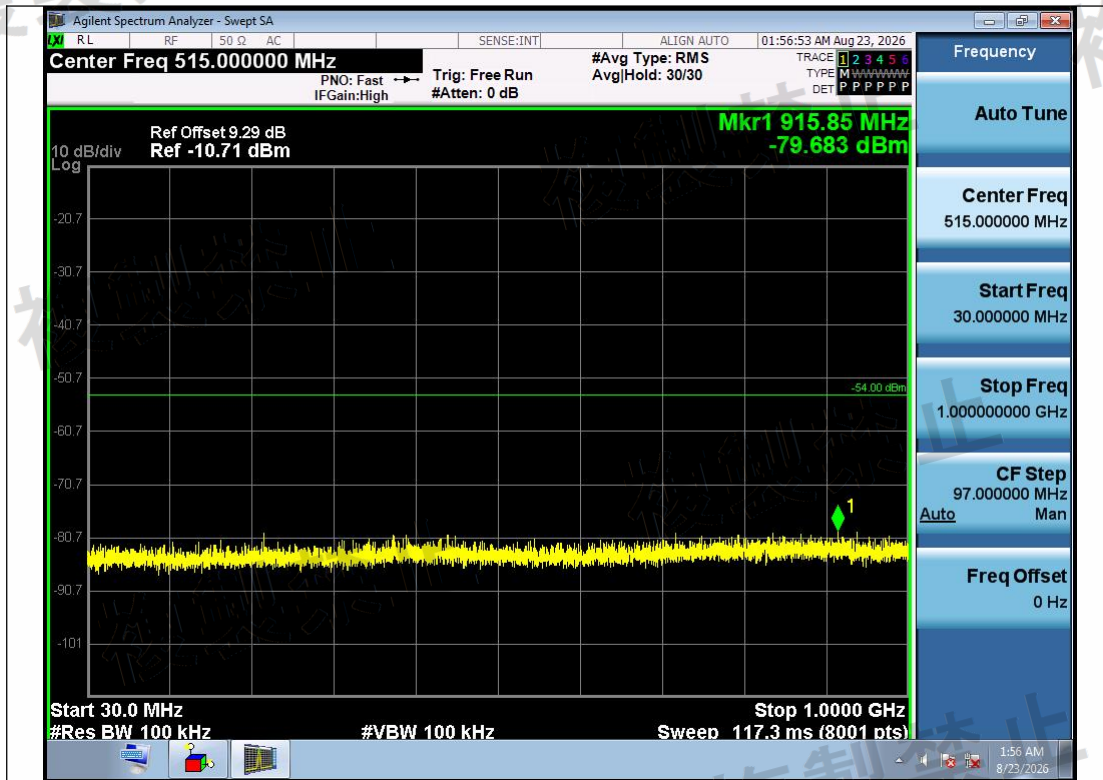
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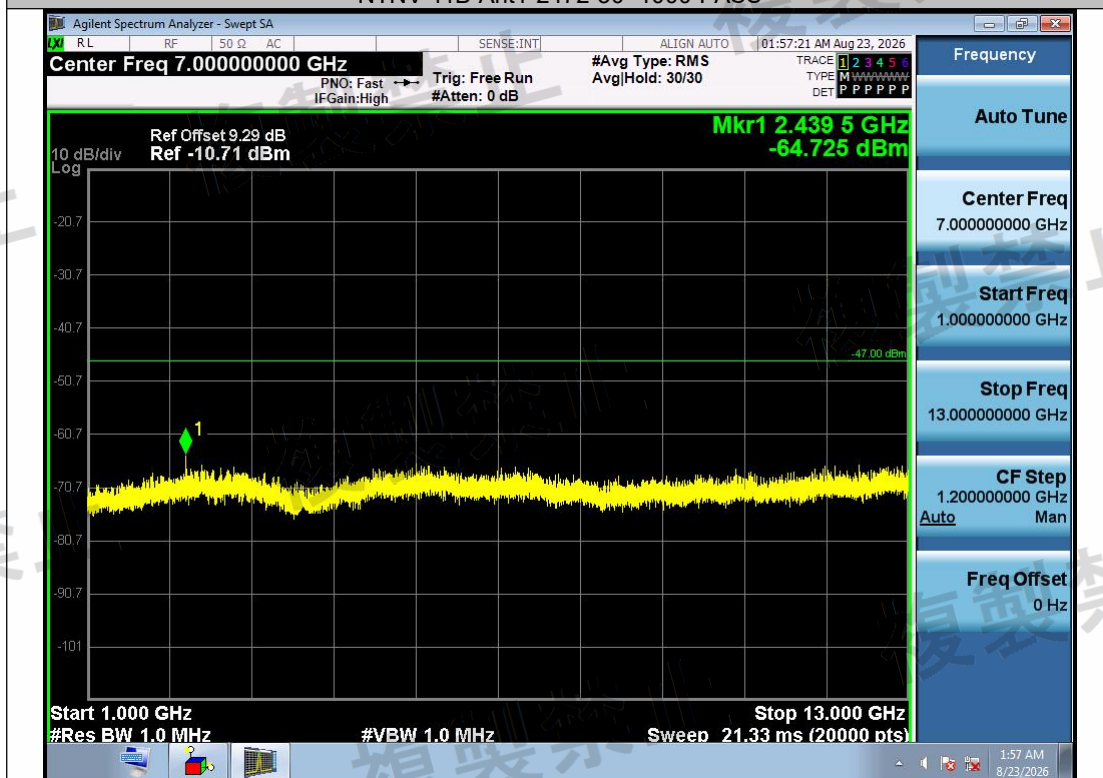
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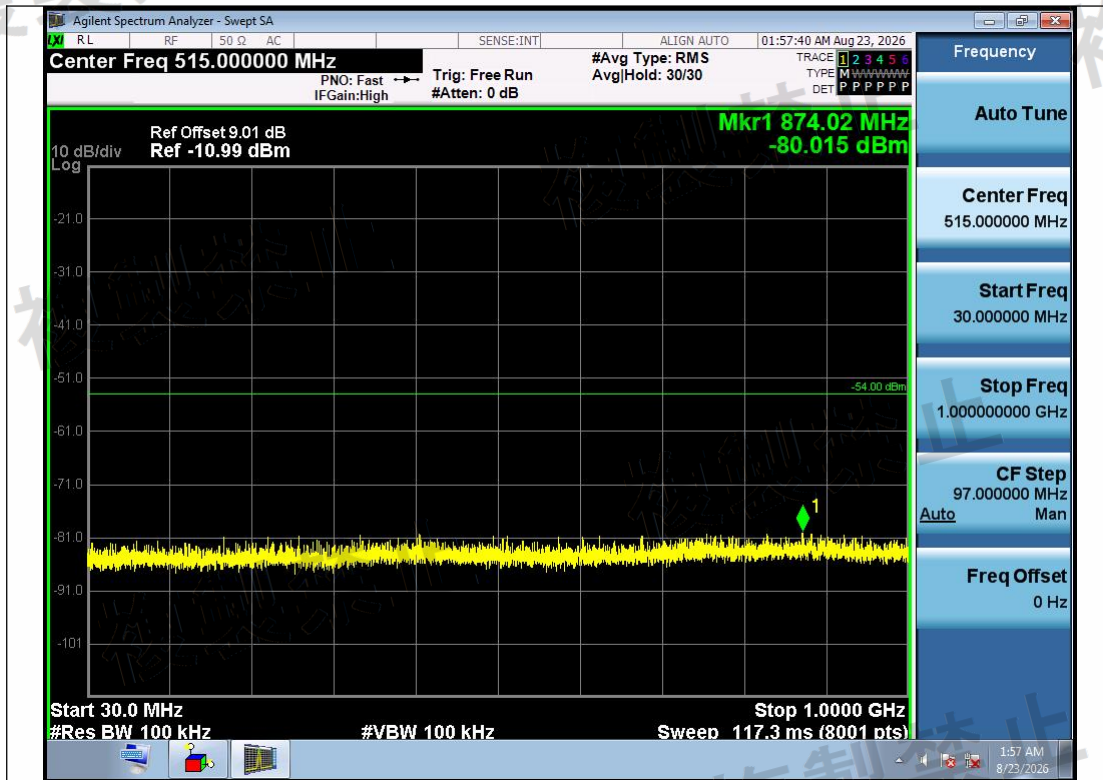
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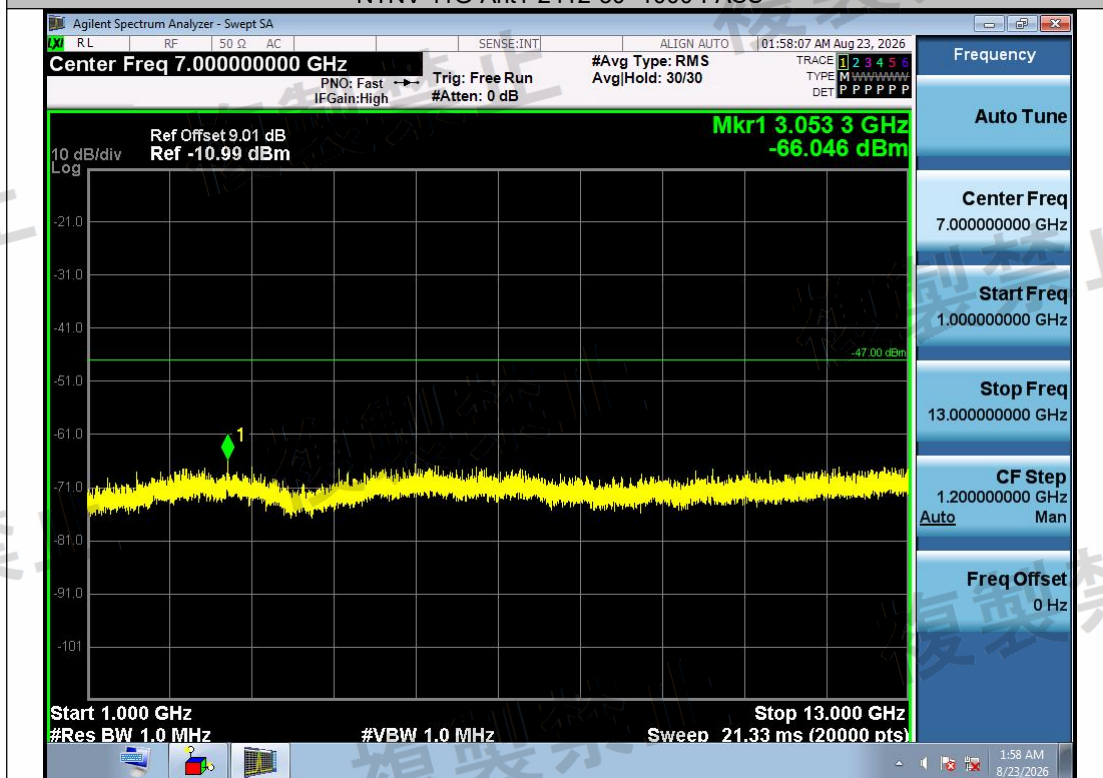
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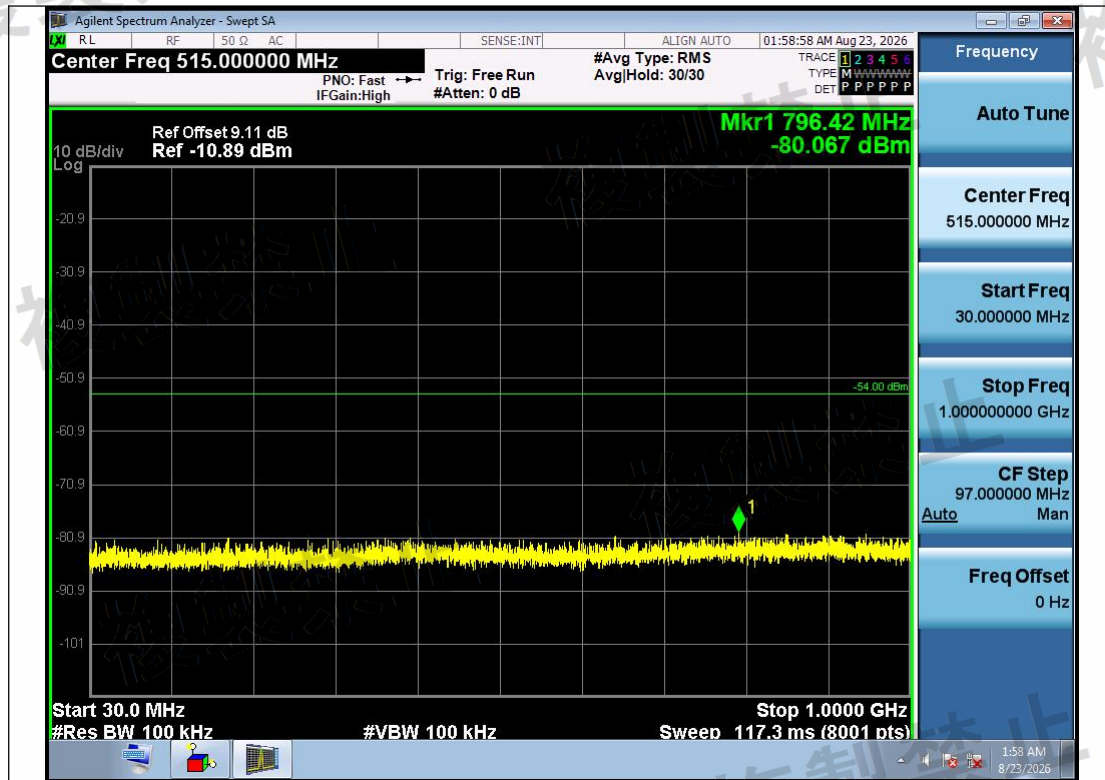
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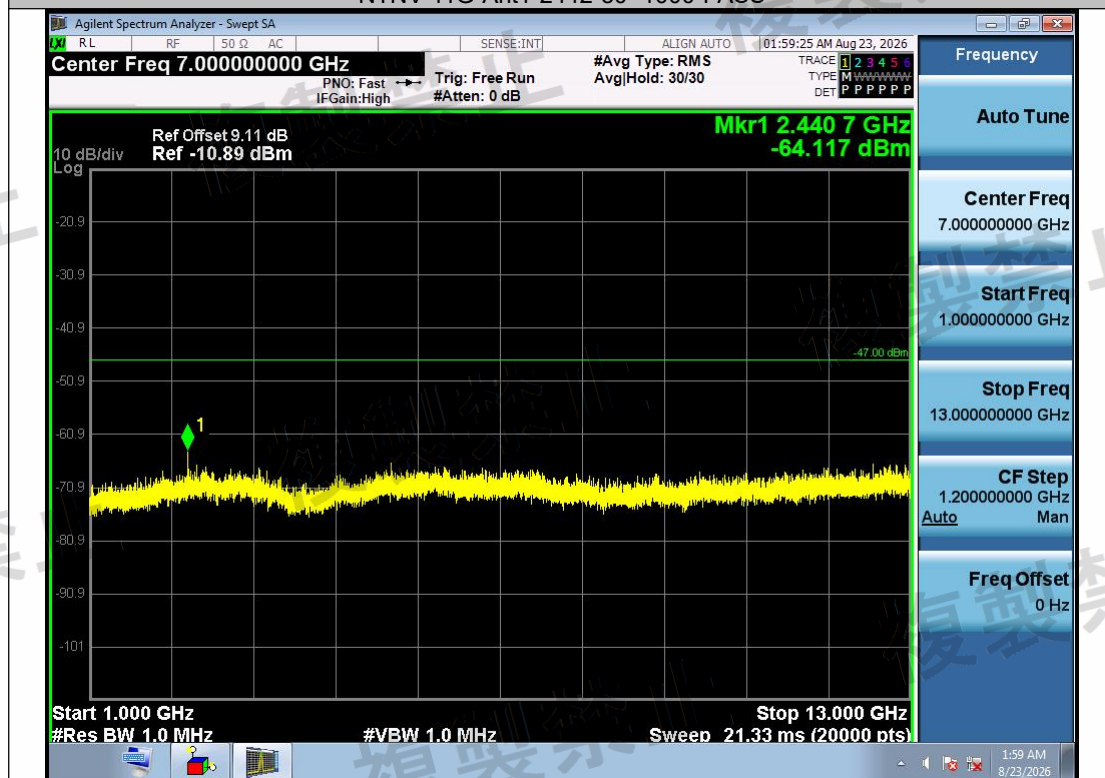
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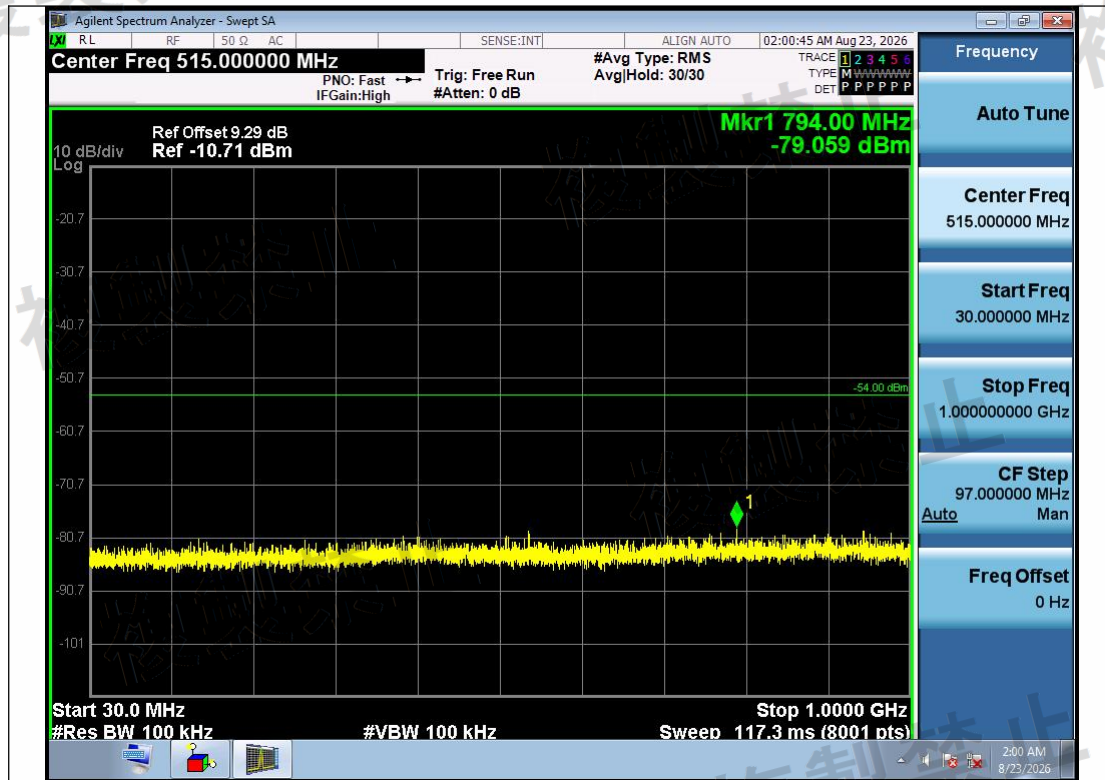
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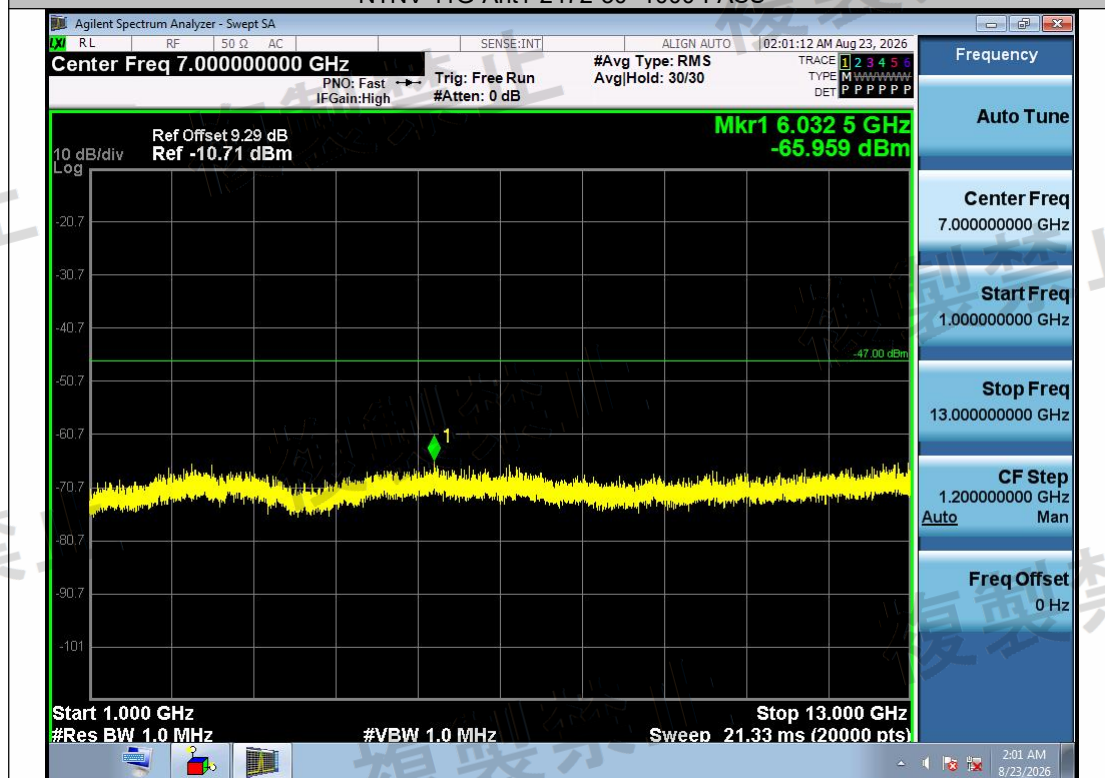
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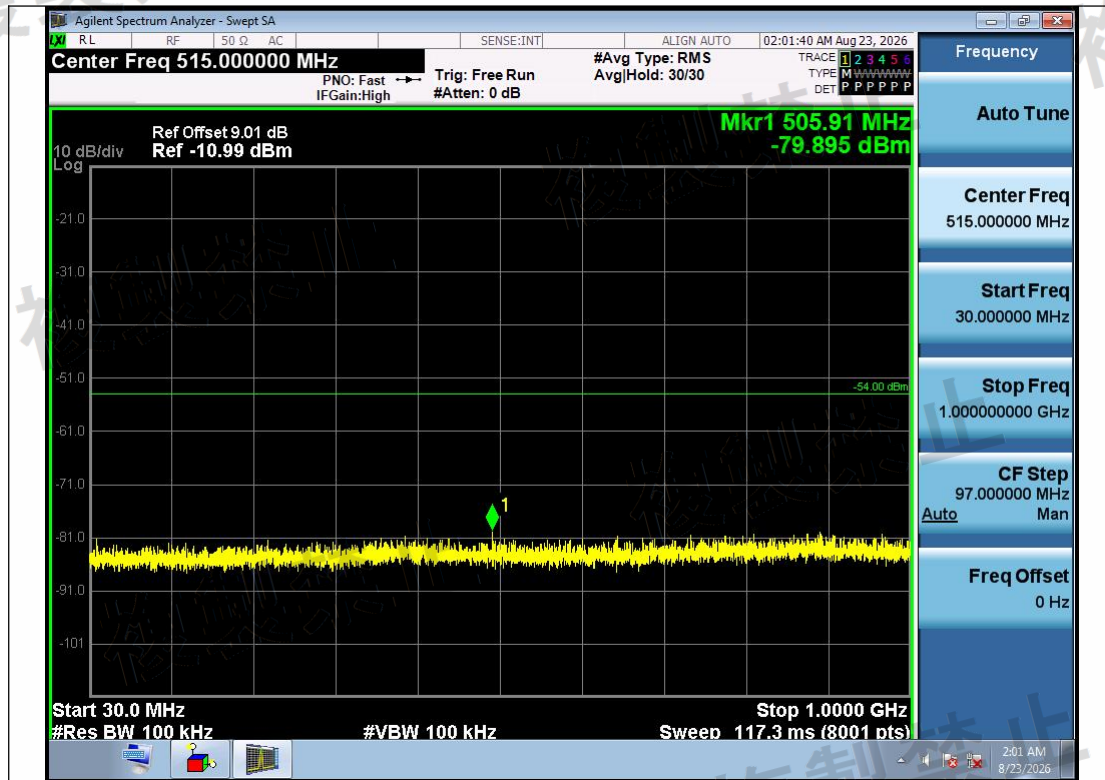
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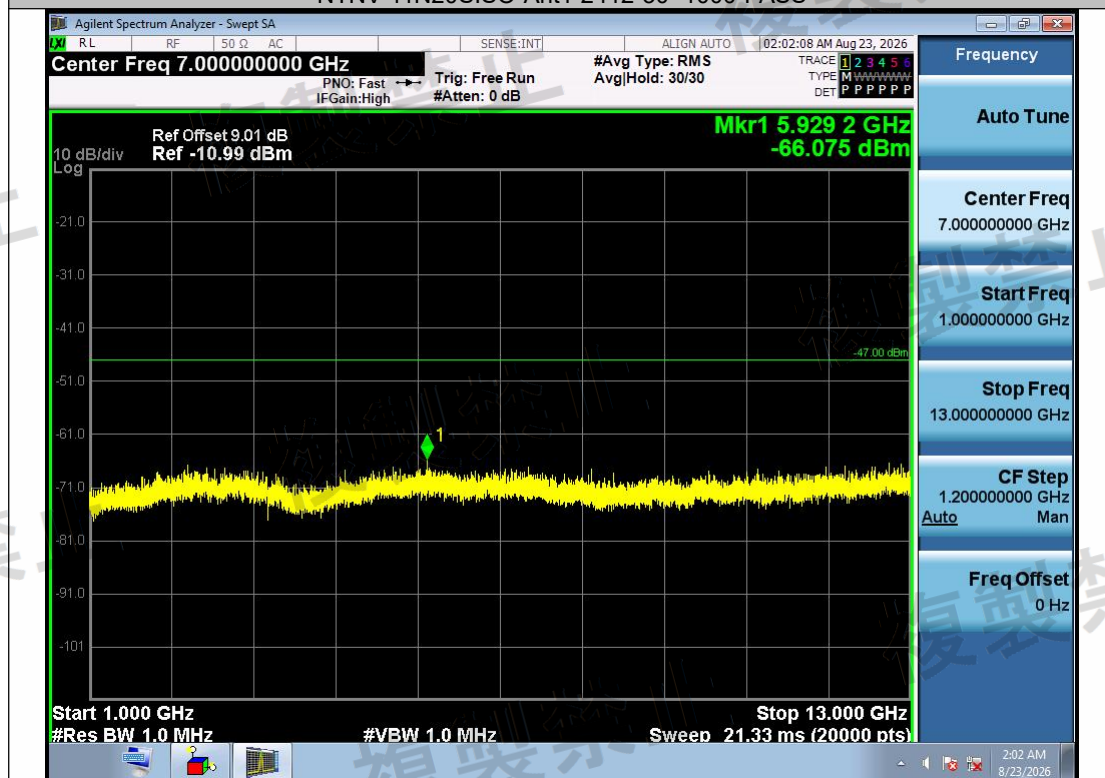
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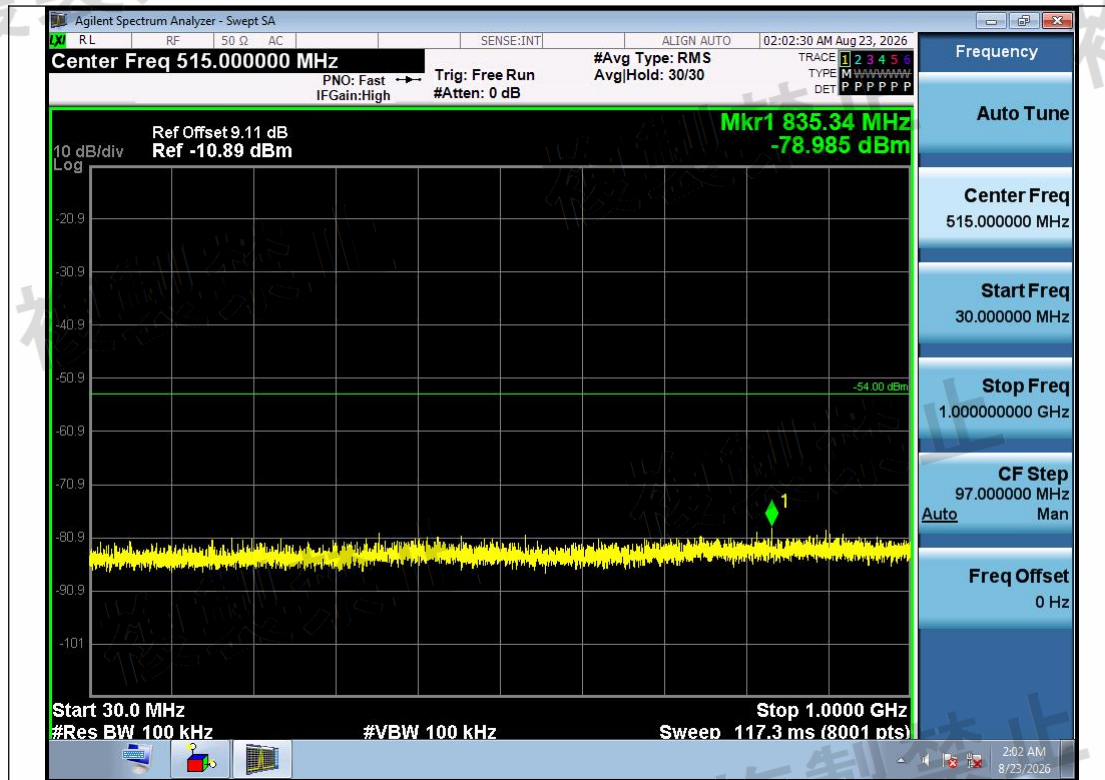
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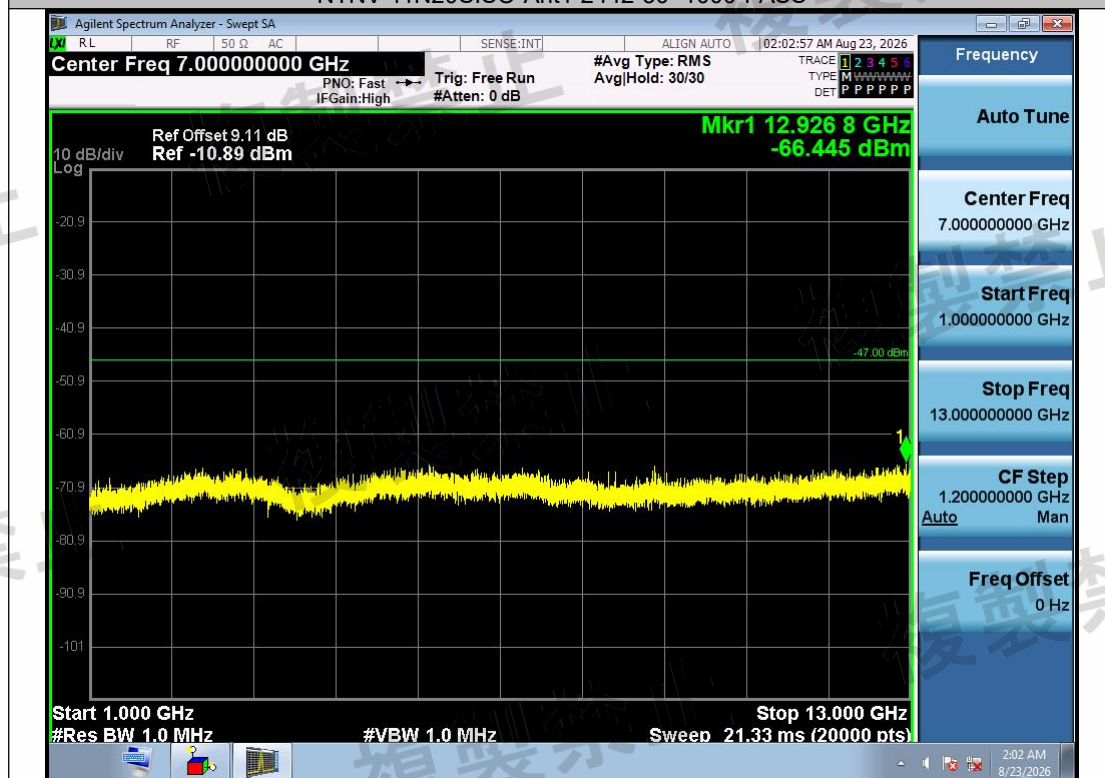
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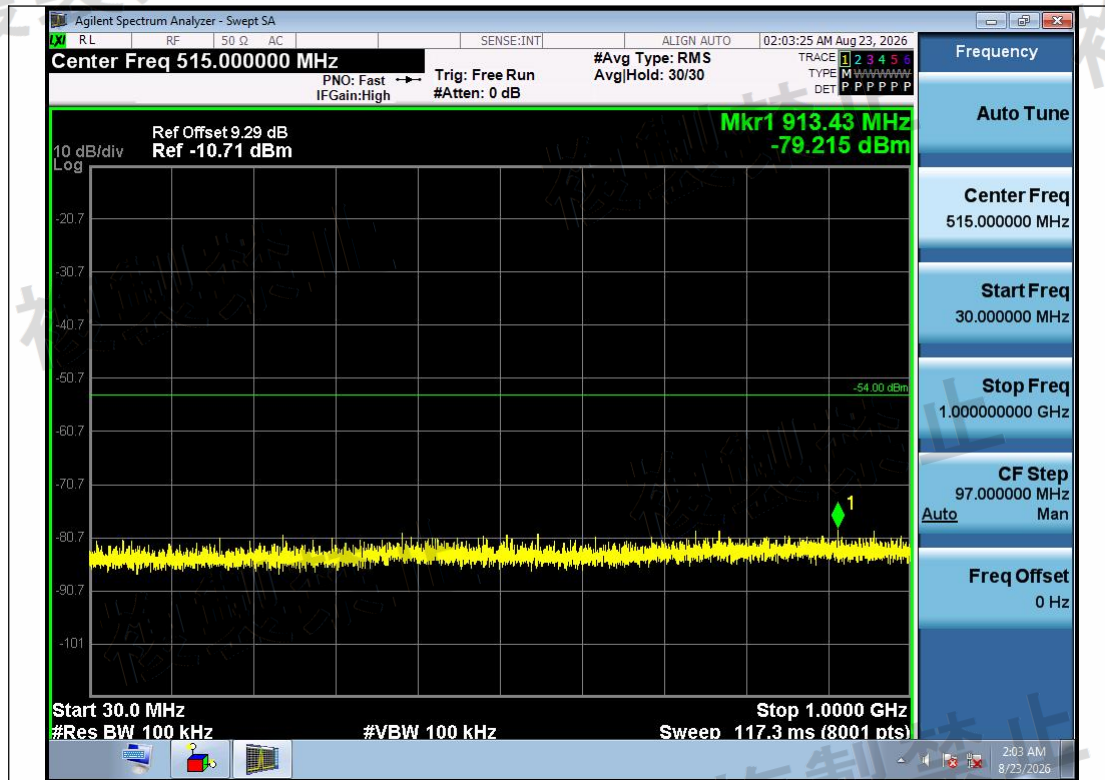
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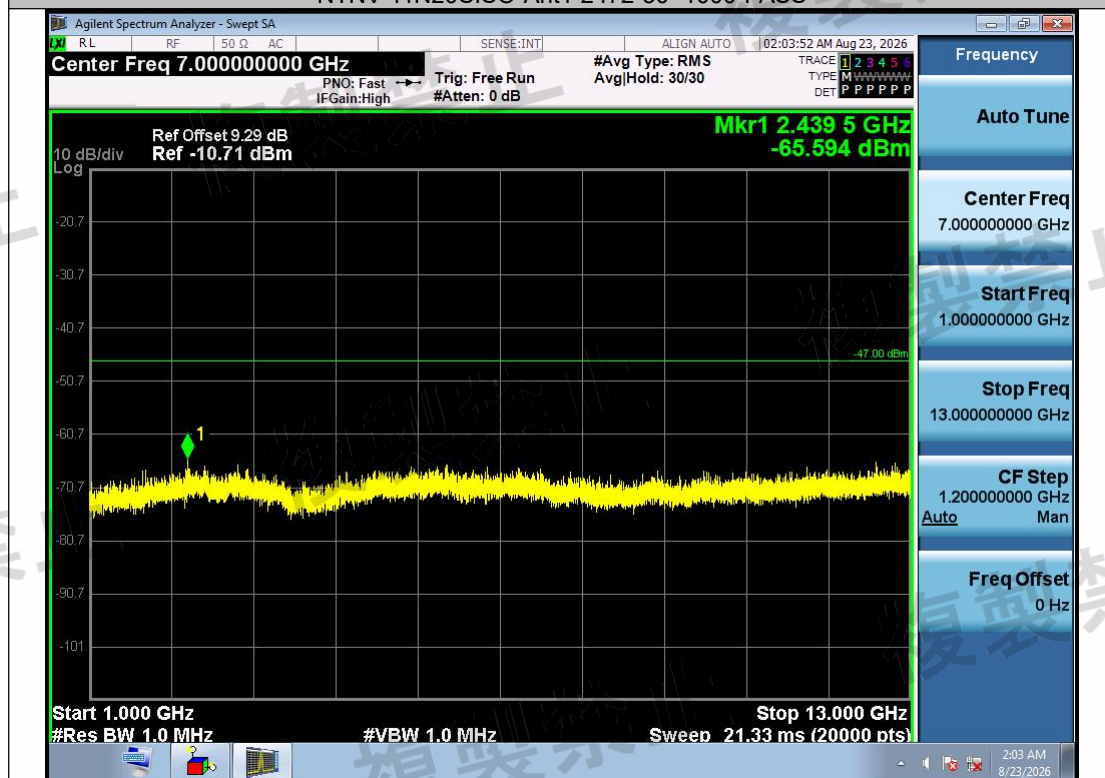
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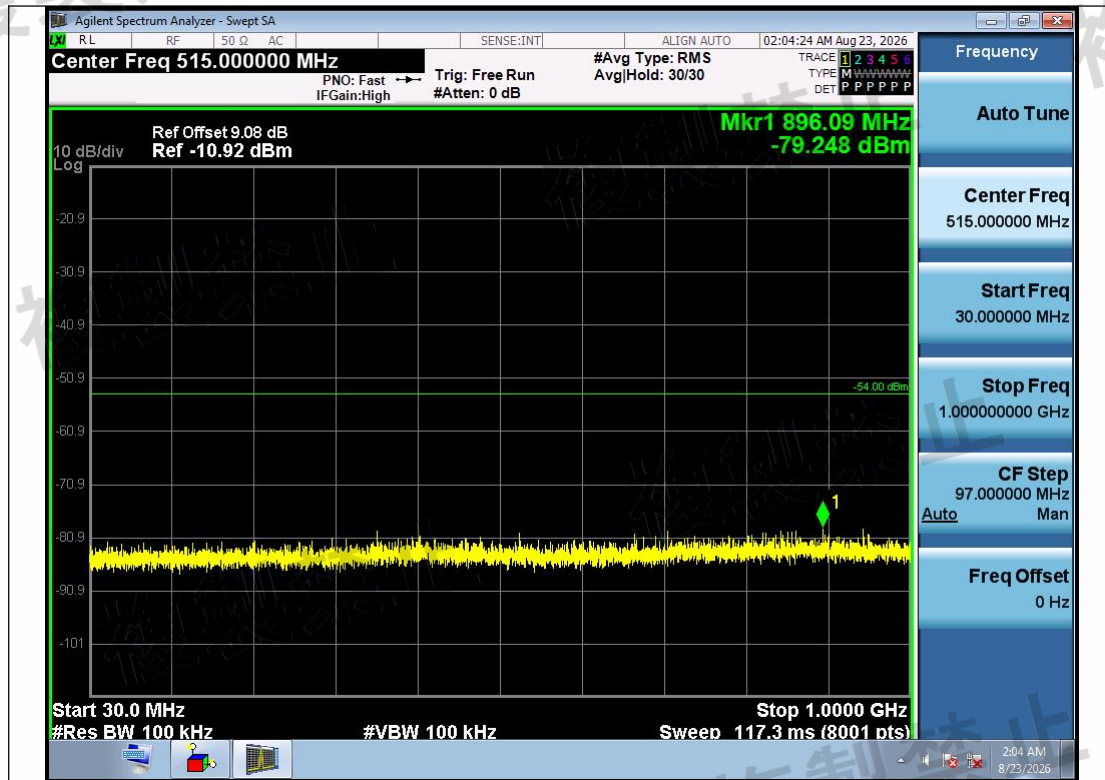
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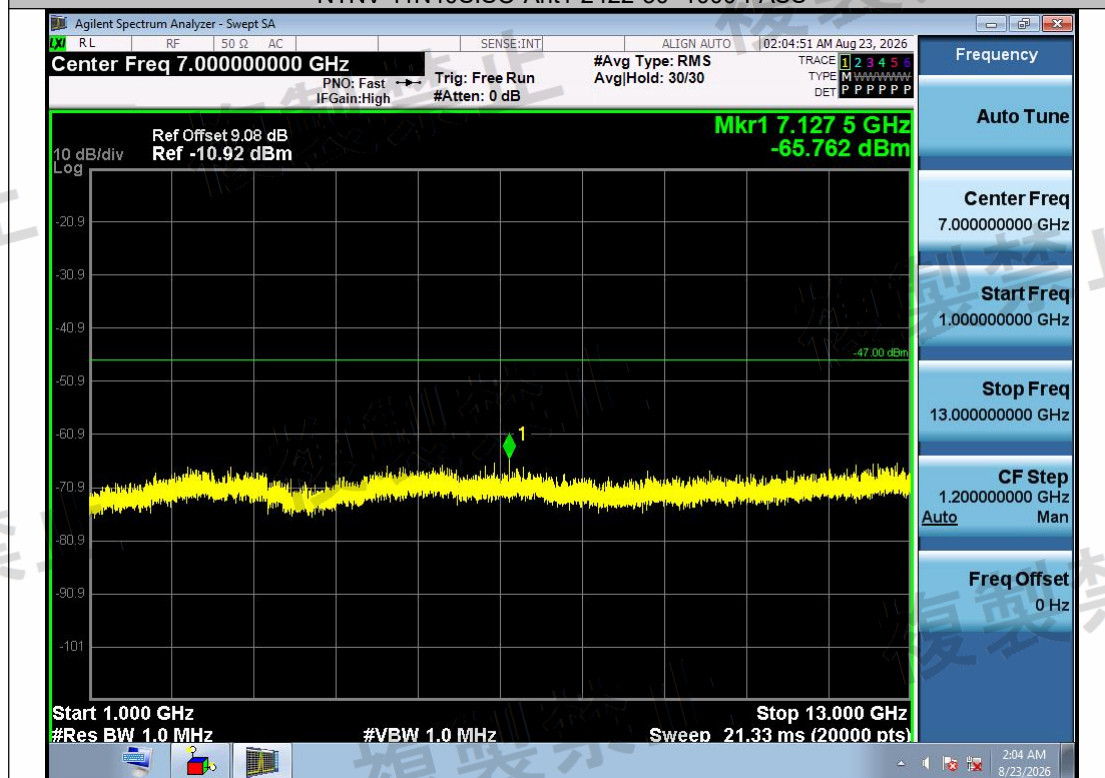
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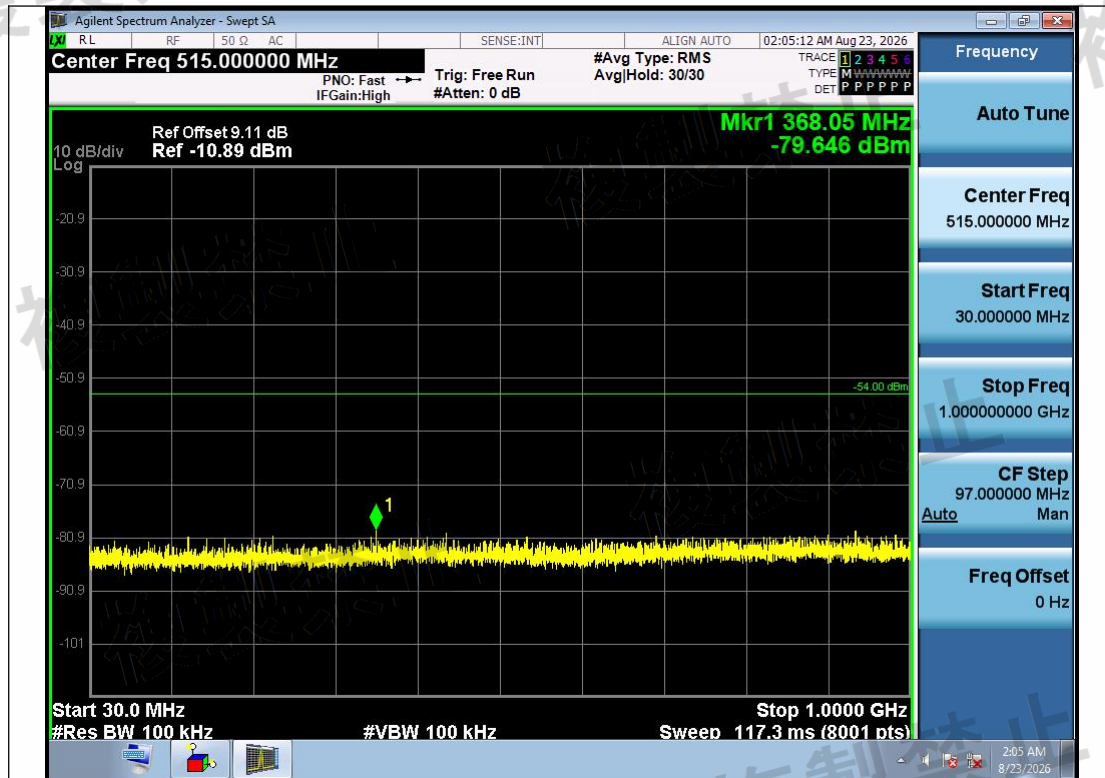
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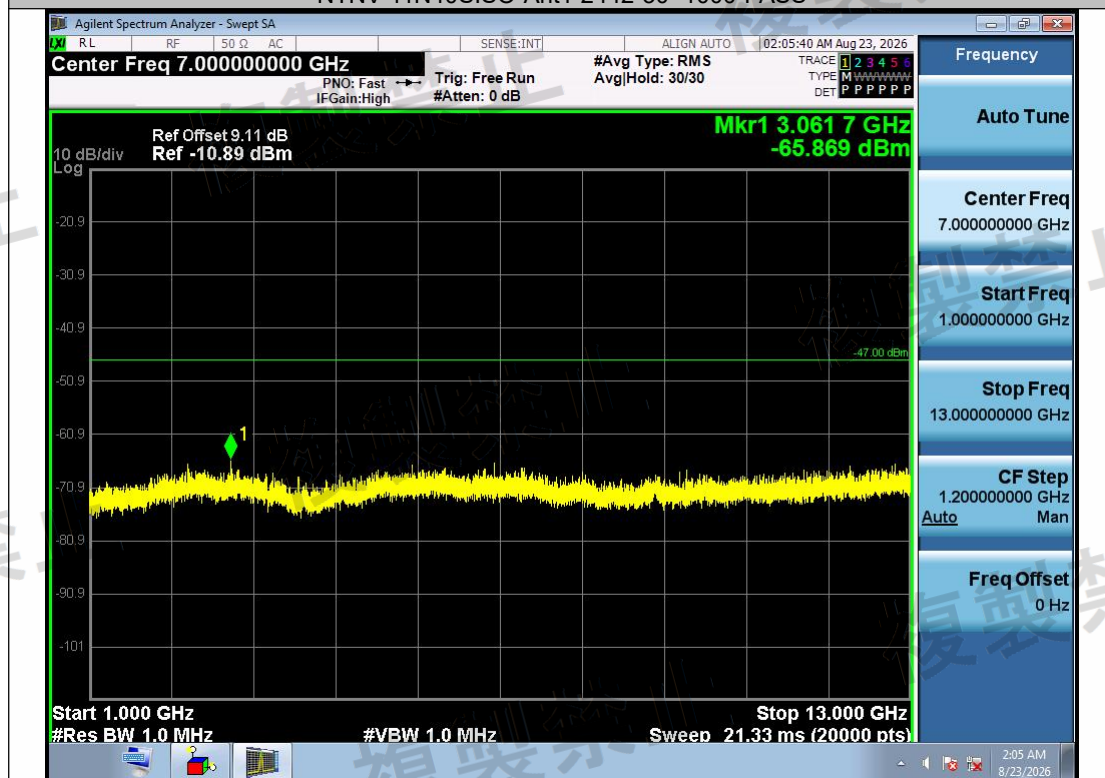
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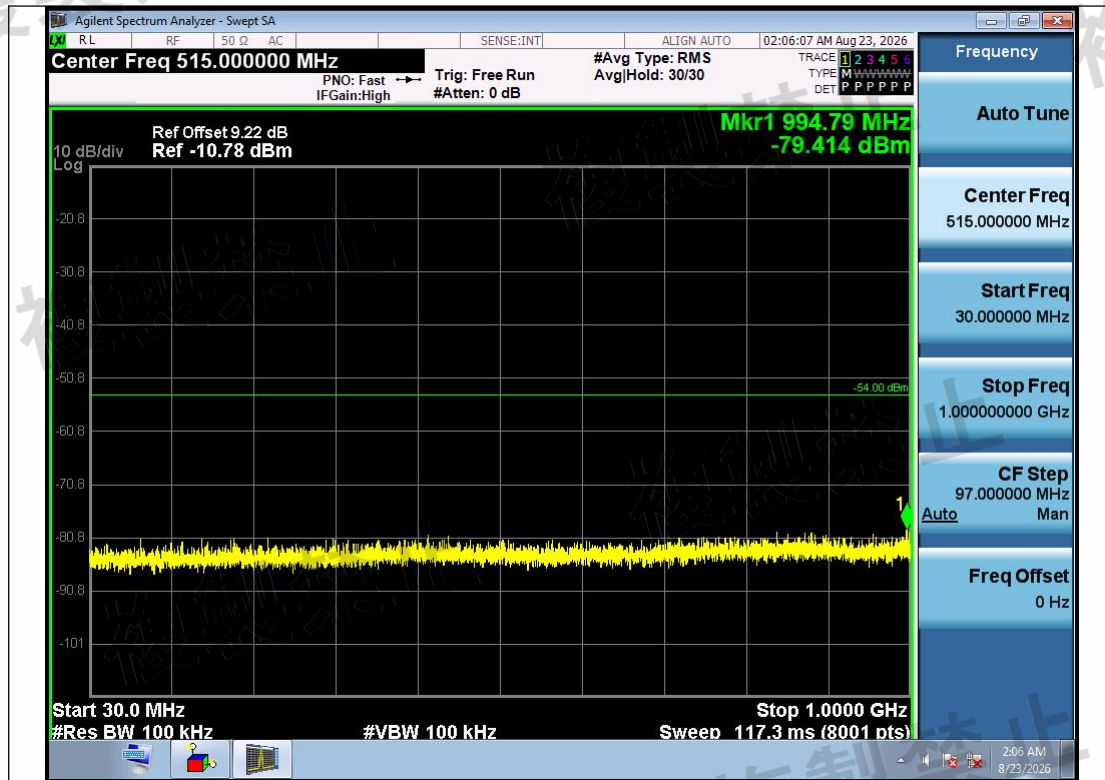
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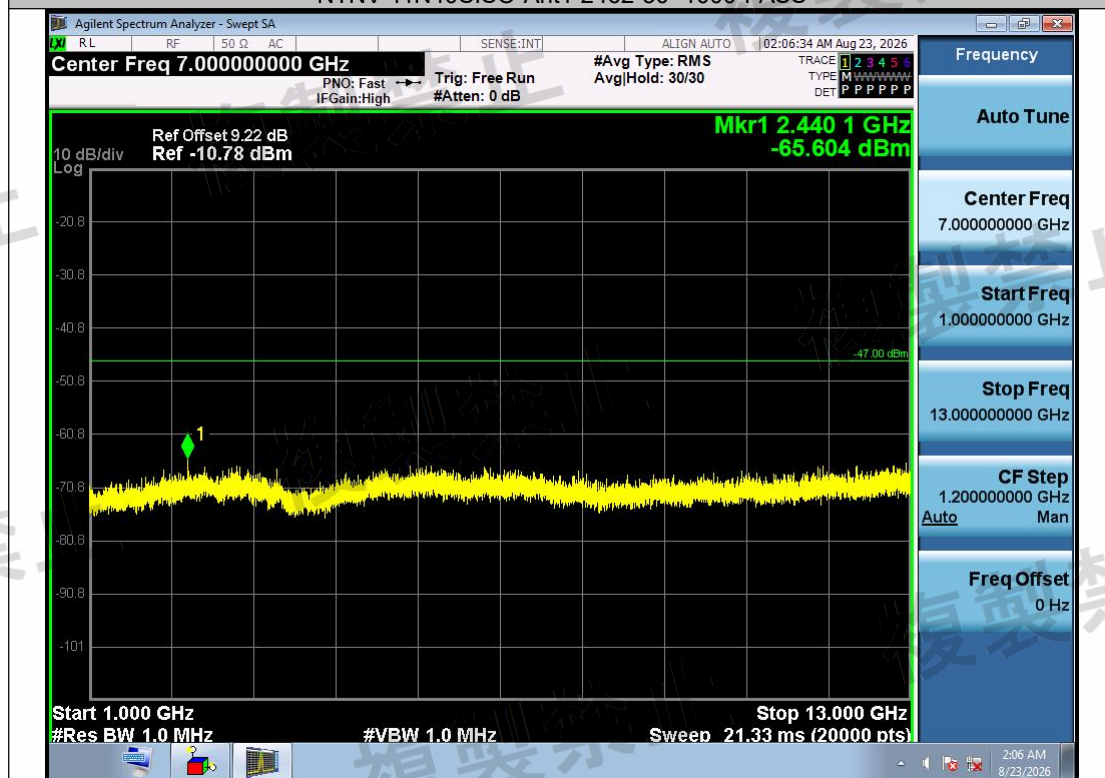
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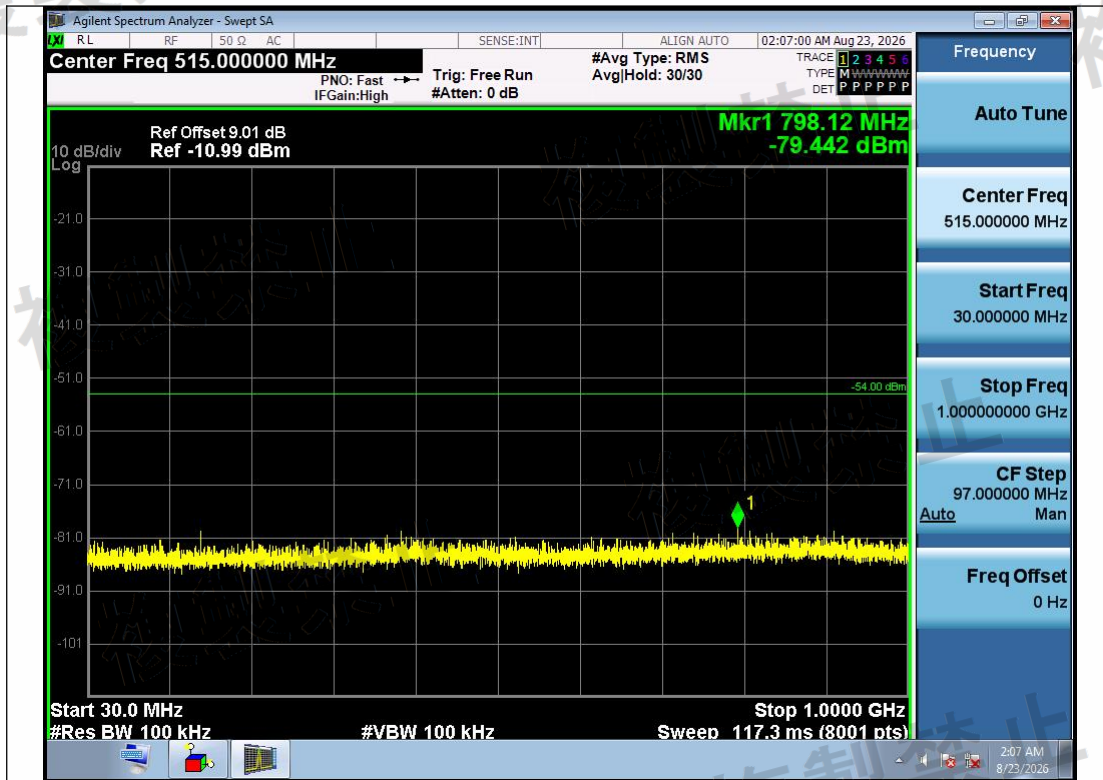
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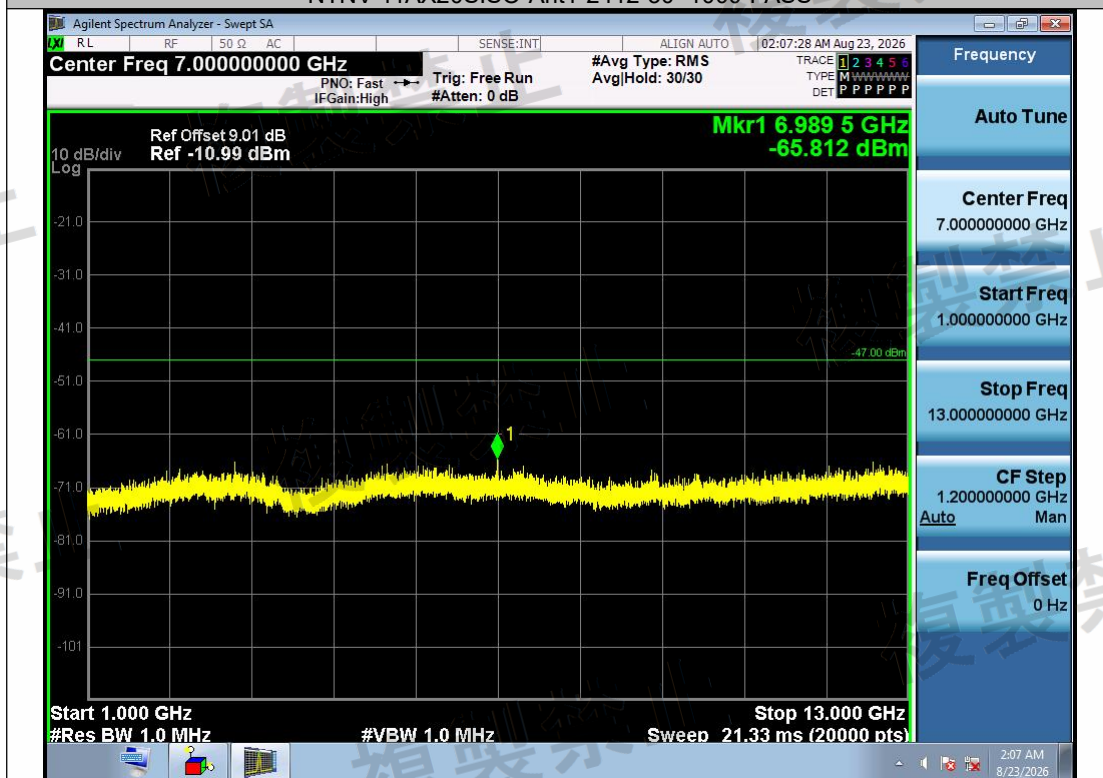
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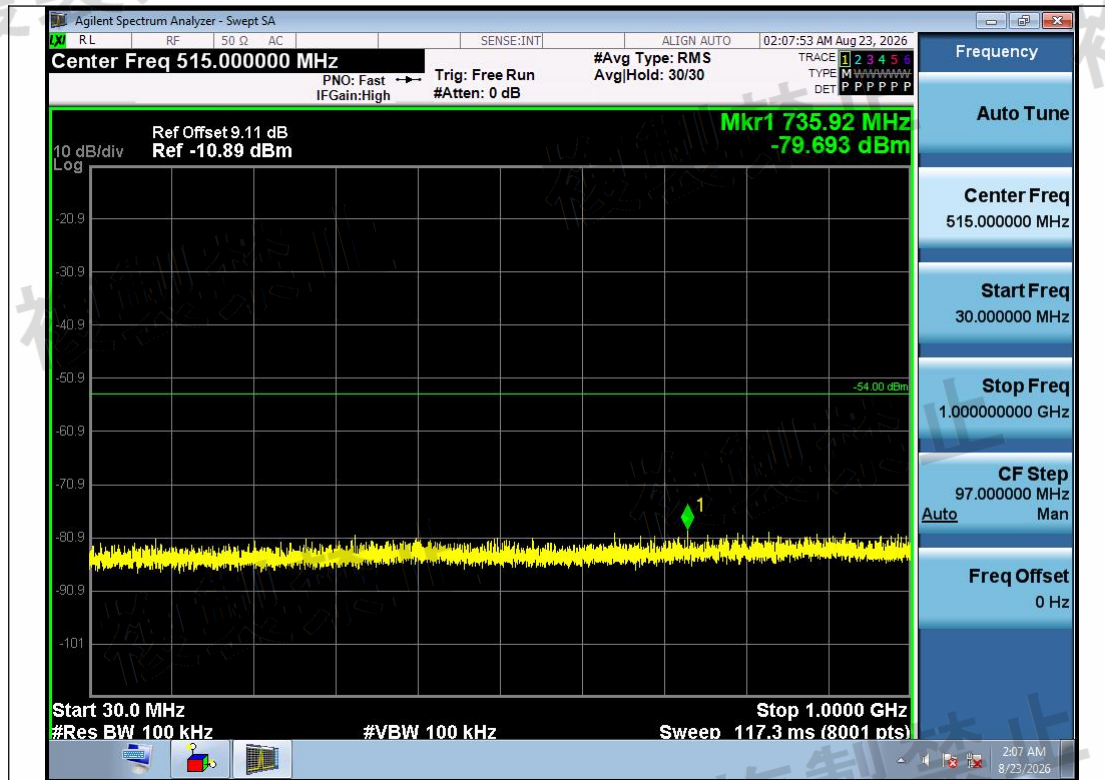
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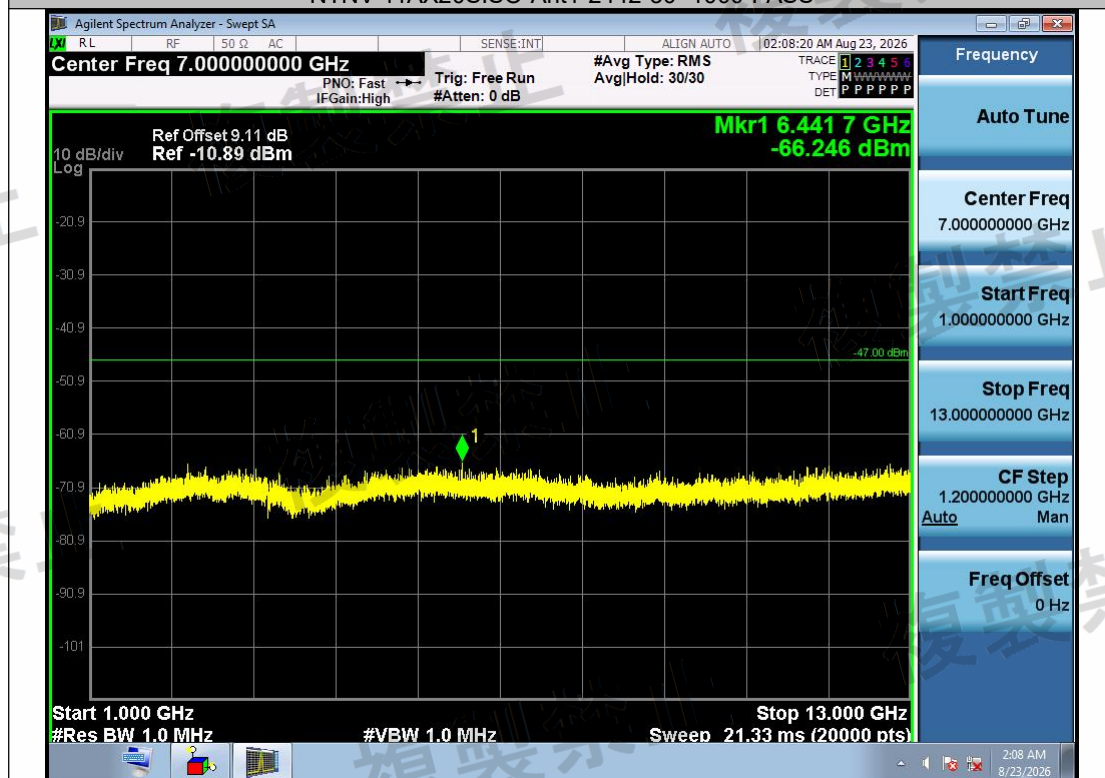
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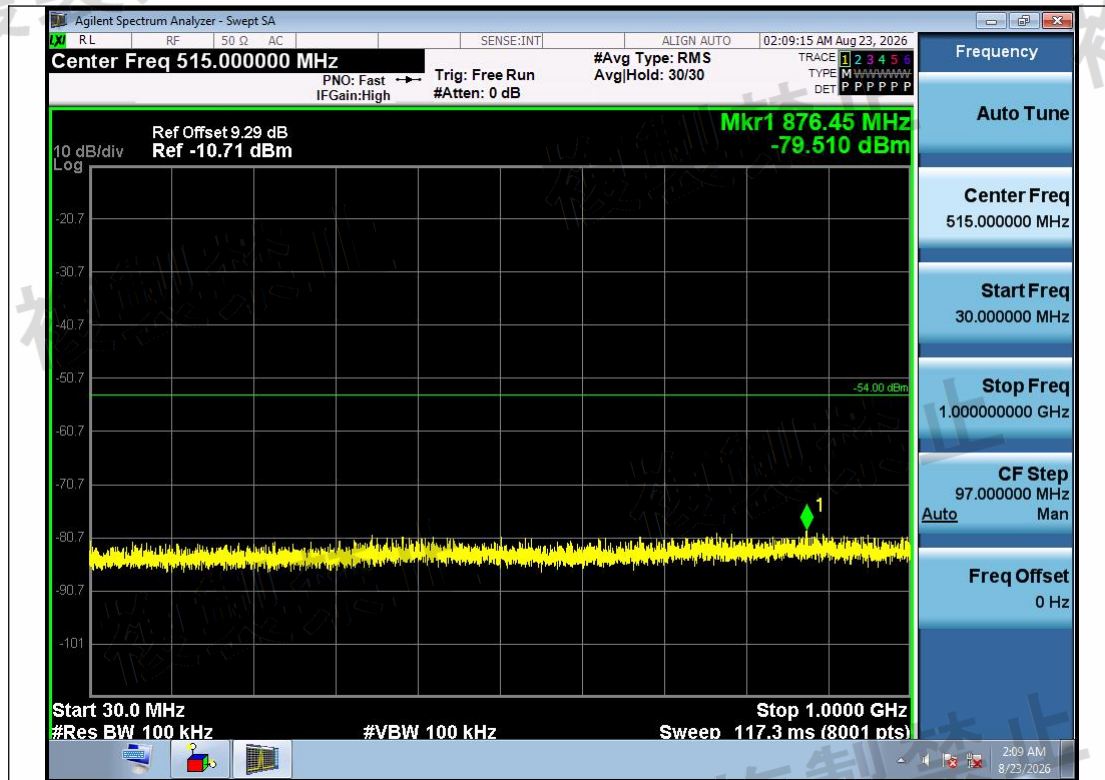
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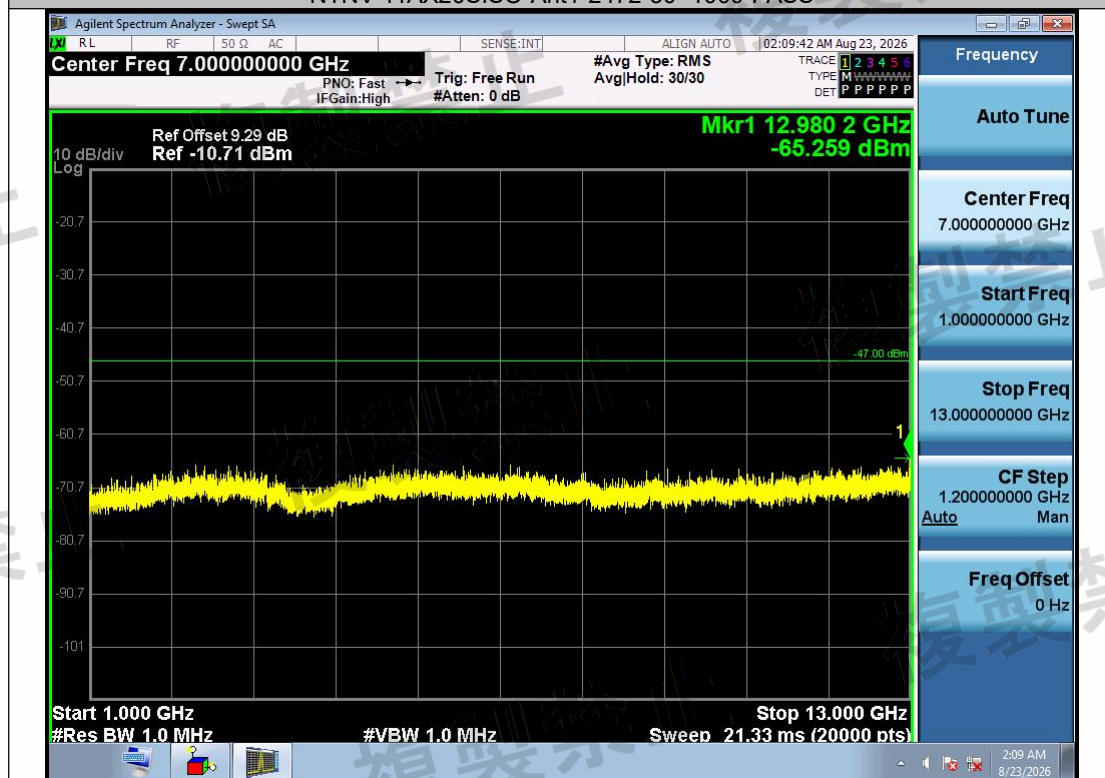
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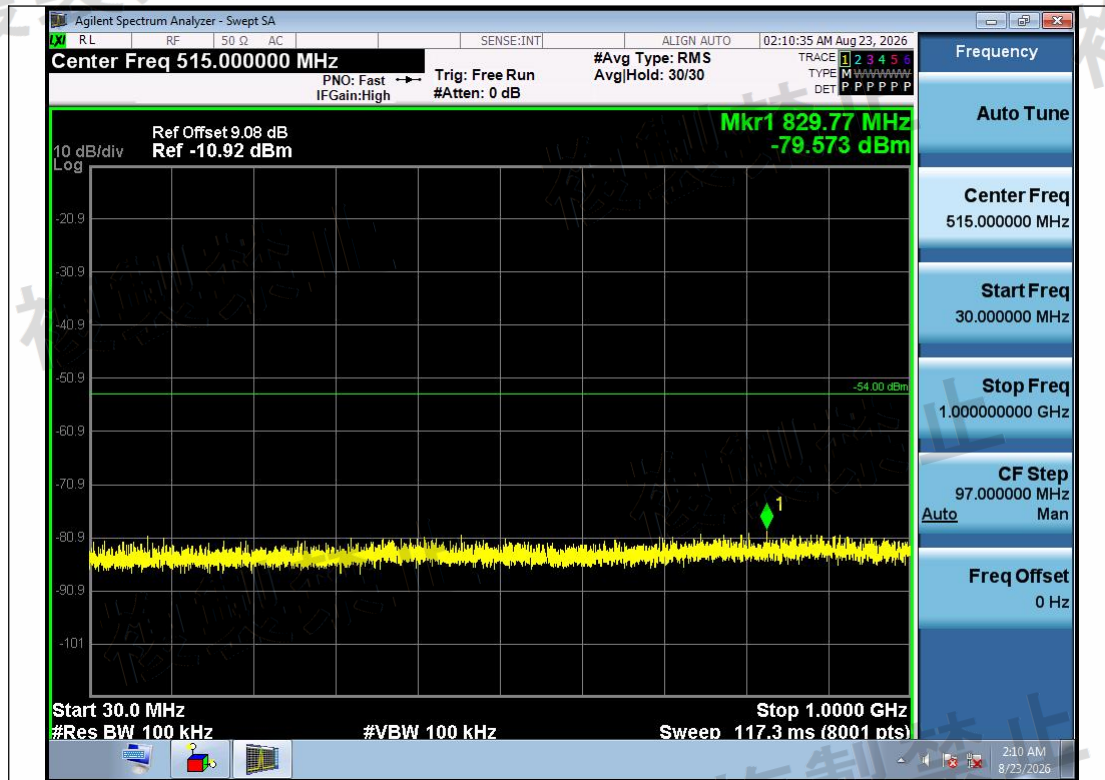
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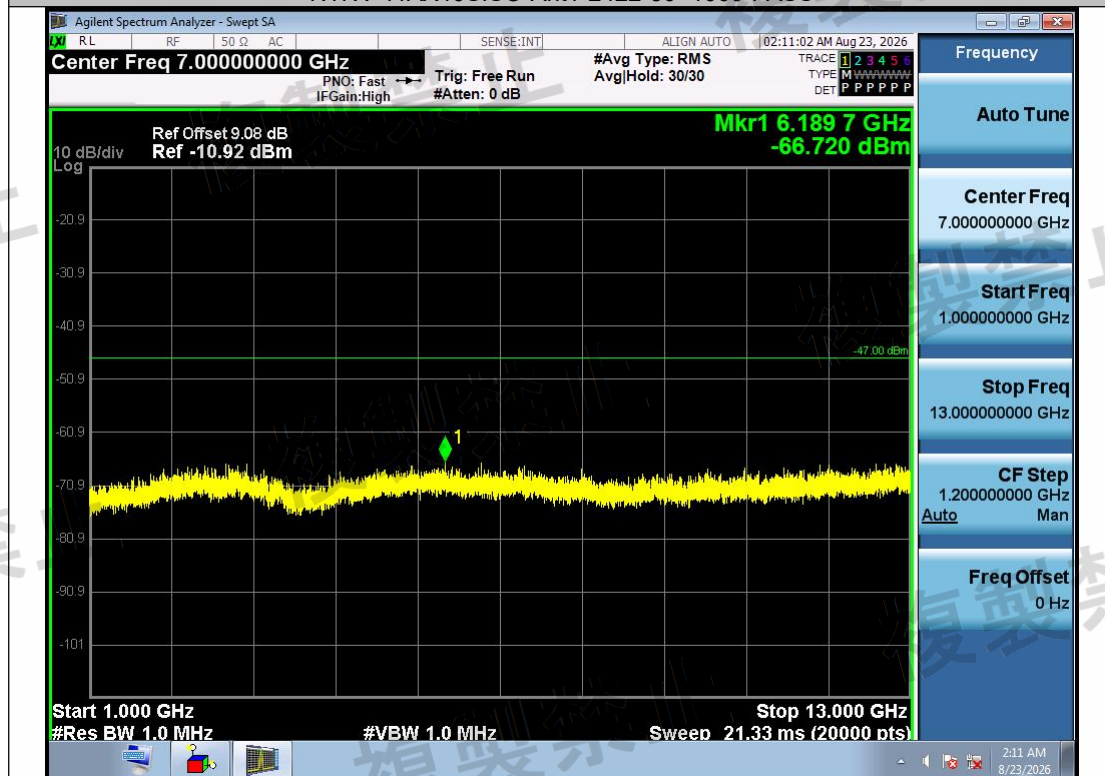
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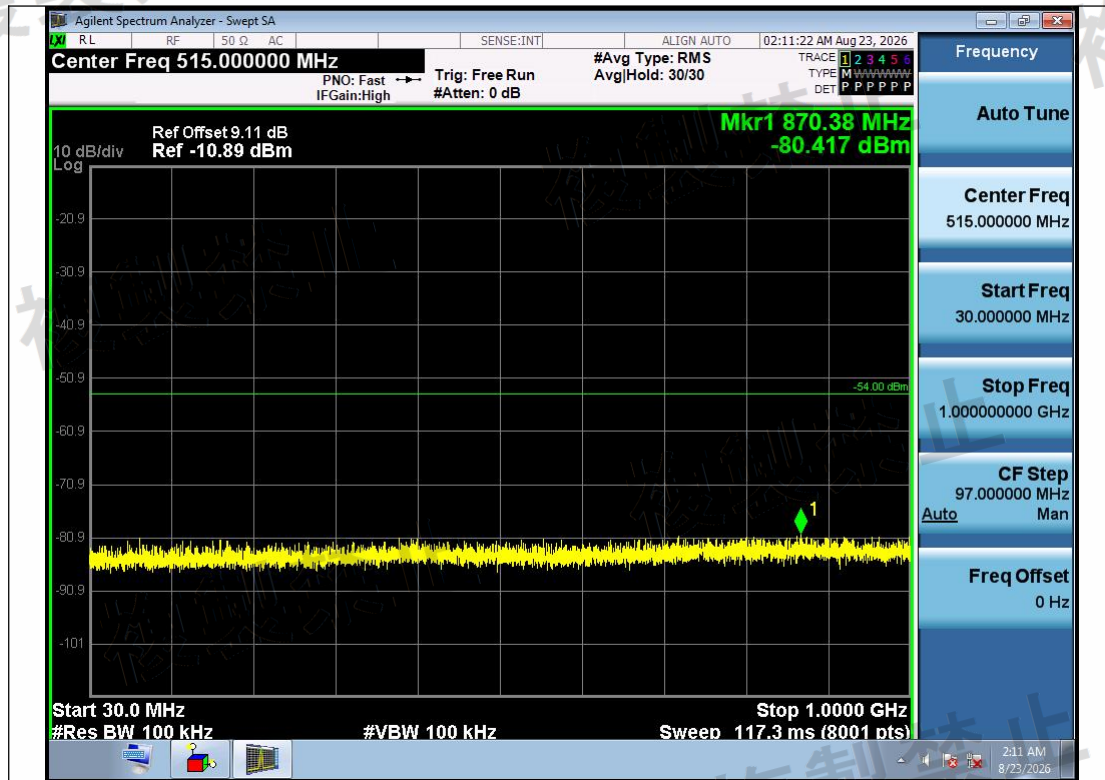
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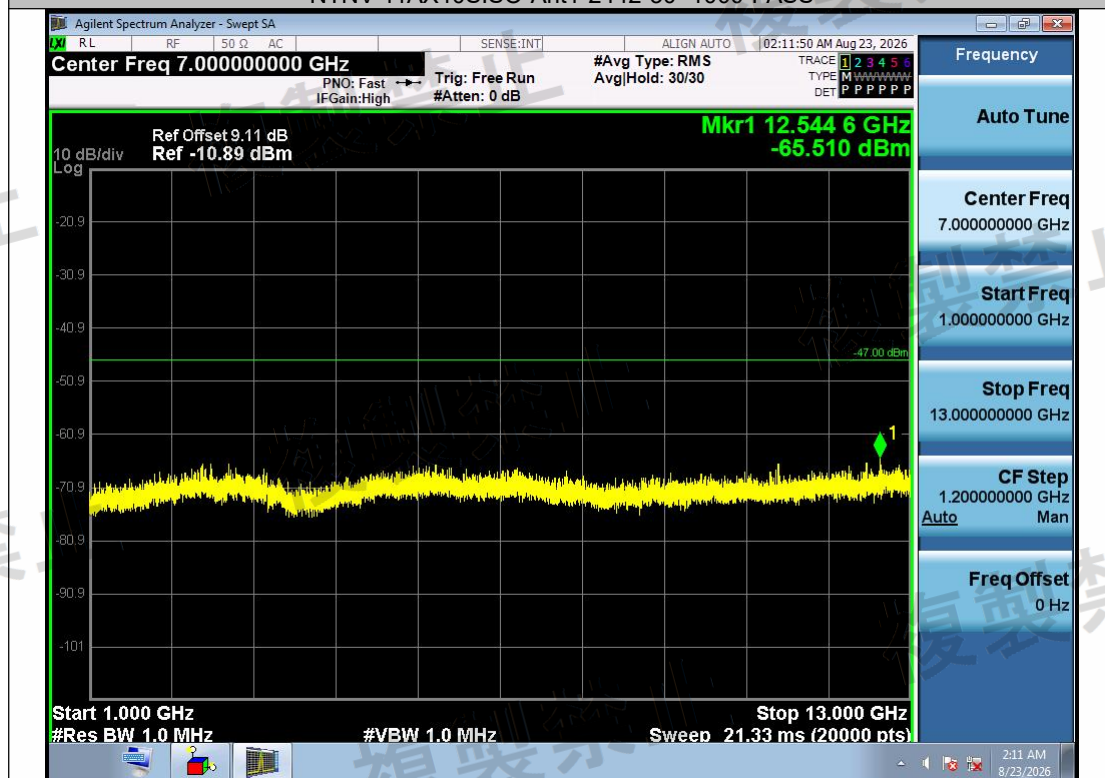
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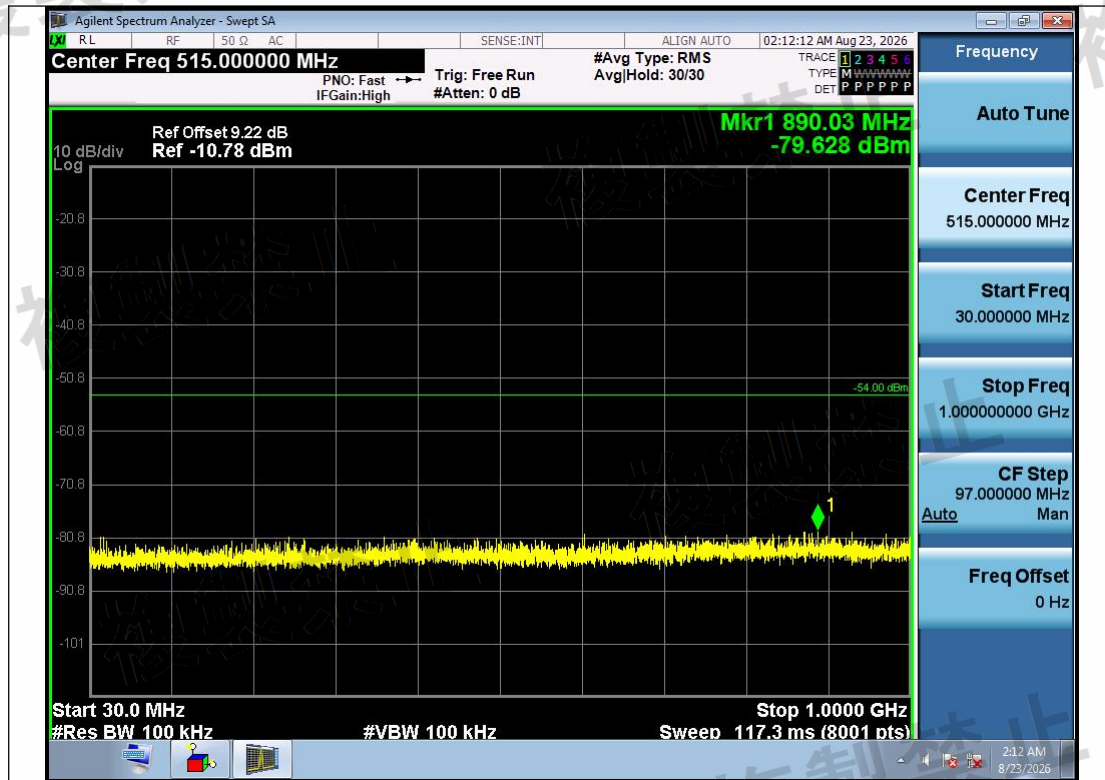
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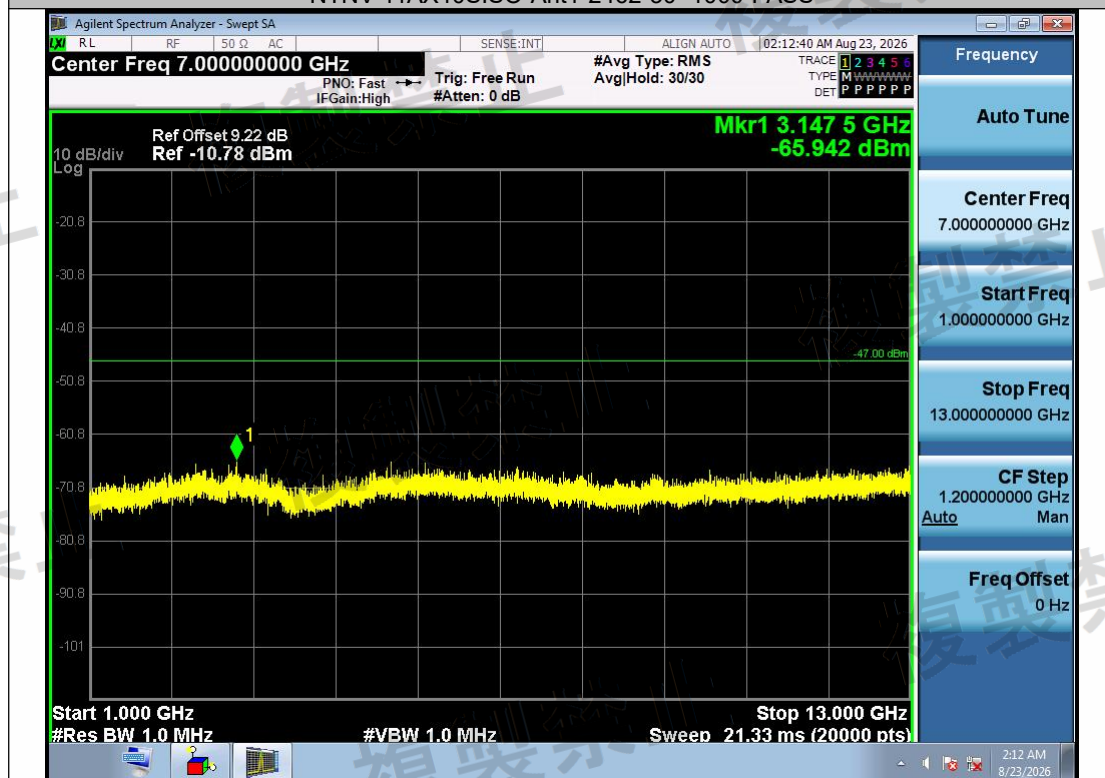
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NTNV-11AX40SISO-Ant1-2442-1000~13000-PASS



NTNV-11AX40SISO-Ant1-2462-30~1000-PASS



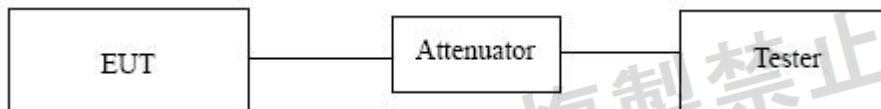
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7.6 INTERFERENCE PREVENTION FUNCTION

7.6.1 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.

7.6.2 Test Setup Block Diagram



7.6.3 Test Procedure

1. Set the EUT in the usual operation condition
2. The radio equipment with automatic transmitting function of identification code
 - A. Transmit the assigned identification code from the radio equipment.
 - B. Confirm the identification code received by the demodulator.
3. The radio equipment with automatic receiving function of identification code
 - A. Transmit the assigned identification code from the opposite equipment.
 - B. Confirm that the usual communication is available.
 - C. Transmit the identification code distinct from the assigned one from the opposite equipment.
 - D. Confirm that the radio equipment is stopped or an indication is displayed as the identification code is different.
4. The identification function shall be recorded with "Good" or "No".

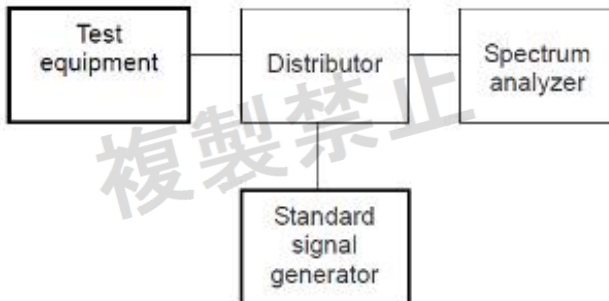
7.6.4 Summary of Test Results/Plots

Pass

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

7.7 CARRIER SENSE CAPABILITY

7.7.1 Measurement system diagram



7.7.2 Condition of measuring instrument

(1) Set the standard signal generator as follows:

Carrier frequency: Center frequency of receiving frequency band of test equipment

Modulation: No modulation.(note1)

Output level: regulated level on antenna input of test equipment

Note 1: The un-modulated carrier in the center frequency, when the carrier sense function of test equipment is not worked, if necessary, change the frequency or modulate it.

(2) Set the spectrum analyzer as follows:

Center frequency: Center frequency of the bandwidth used.(note2)

Sweep frequency band: 50MHz(note2)

Resolution bandwidth: Approximately 1 MHz

Video bandwidth: Comparable level with resolution bandwidth

Trigger condition: Free-run

Detective mode: Positive peak

Note 2: Under 26MHz of OFDM or other modulated method that with transmit function, set sweep frequency band as 0Hz, detective mode as sample, center frequency as the carrier frequency from 13MHz to 19MHz.

7.7.3 Condition of test equipment

Set the test equipment at the test frequency and the test spread code, and set it to the receiving mode in the beginning. When using external test device, connect with the test equipment by line connection.

7.7.4 Measuring operation procedure

(1) Test with test equipment only:

A) Set the spectrum analyzer according to above (2).

B) Set the test equipment to the transmitting operation with the output of standard signal generator OFF, and confirm that it emits over 26MHz occupied frequency bandwidth OFDM radio wave, by using spectrum analyzer.

C) Set the test equipment to the receiving mode.

D) With the output of standard signal generator ON, set the test equipment to the transmitting operation, and confirm that it does not emit over 26MHz occupied frequency bandwidth OFDM radio wave, by using spectrum analyzer.

7.7.5 Test result

The unit does meet the requirements (Good).

Test Condition	Test Mode	Antenna	Frequency[MHz]	Result
NTNV	11B	Ant1	2412	Pass
		Ant1	2442	Pass
		Ant1	2472	Pass
	11G	Ant1	2412	Pass
		Ant1	2442	Pass
		Ant1	2472	Pass
	11N20	Ant1	2412	Pass
		Ant1	2442	Pass
		Ant1	2472	Pass
	11N40	Ant1	2422	Pass
		Ant1	2442	Pass
		Ant1	2462	Pass
	11AX20	Ant1	2412	Pass
		Ant1	2442	Pass
		Ant1	2472	Pass
	11AX40	Ant1	2422	Pass
		Ant1	2442	Pass
		Ant1	2462	Pass

7.8 RF ACCESSIBILITY

Standard requirement

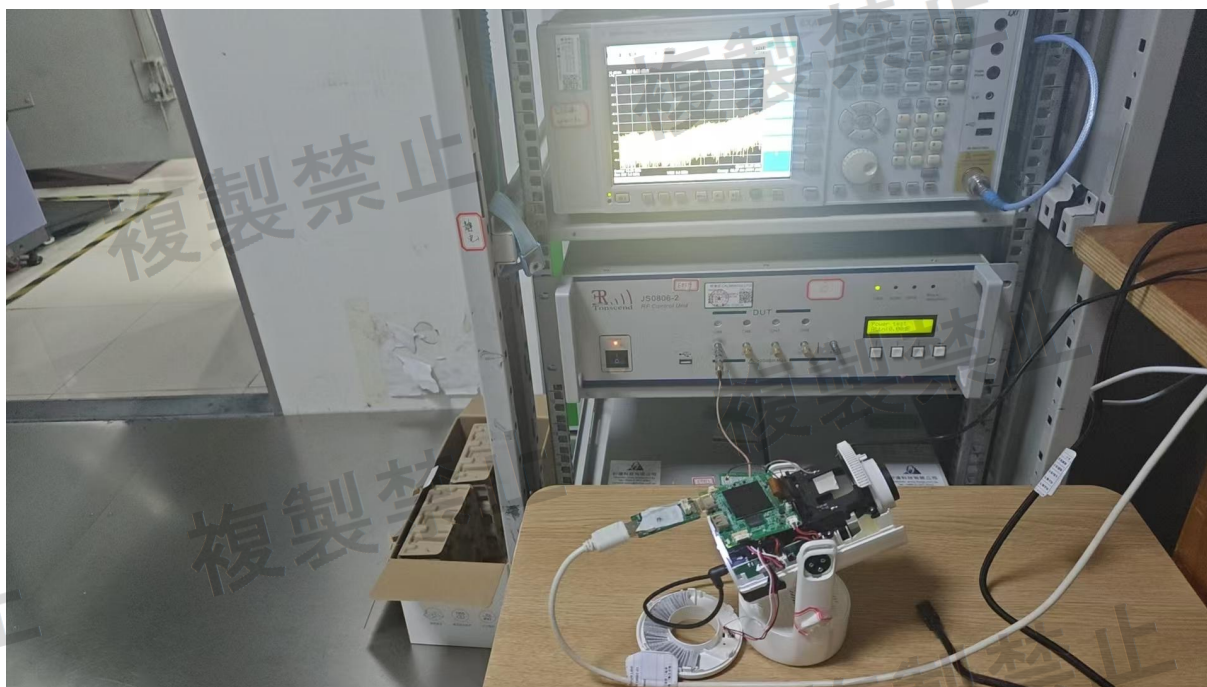
Article 49-20, paragraph 1 (a)

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.

☐	Sealed with special screws.
☐	Plastic chassis is being welded using ultrasonic waves.
☐	Chassis is glued using a special adhesive.
☐	Metal covers are spot-fused.
☐	Cover is specially interlocked.
☒	RF and Modulation components are covered with shielding case and this shielding case is soldered.
☐	Shield case is welded at RF and modulation parts, and ID-ROM is welded using the BGA Method.
☐	Shield case is welded at RF and modulation parts, and ID-ROM is glued at its lead with a special adhesive.
☐	Shield case is welded at RF and modulation parts, and ID-ROM is glued with anon-transparent laminating agent.
☐	RF and Modulation parts are mounted on PCB with surface mount technology, and there is no any adjustable parts on PCB or adjustable parts are not exposed.

Test result: Pass

8 APPENDIX PHOTOGRAPHS OF TEST SETUP



--- End of Report ---

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