



CTC Laboratories, Inc.

TEST REPORT

Report No. : **CTC2026084002**

Applicant : **EVELAB INSIGHT(SINGAPORE)PTE.LTD**

Address : Raffles Place, #26-01 Republic Plaza, Singapore 048619

Manufacturer : Xiamen MeituEve Technology Co., Ltd.

Address : Room 568, No.942, Tonglong 2nd Road, Gaoxin District
(Xiang'an) Industries, Xiamen, China

Product Name : **EveLab Insight Eve Key**

Trade Mark : EveLab Insight

Model/Type reference : MS2201

Listed Model(s) : /

Standard : **Article 2, Paragraph 1, Item 19**

Test Report Form No : CTC-TR-074_A3

Master TRF : Dated 2026-01-01

Date of receipt of test sample : Feb. 11, 2026

Date of testing : Feb. 11, 2026 ~ Mar. 12, 2026

Date of issue : Mar. 30, 2026

Result : **PASS**

Compiled by:

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Aicia Liu

Supervised by:

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Eric Zhang

Eric Zhang

Approved by:

(Printed name + signature)

Totti Zhao

Totti Zhao

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TRF No: CTC-TR-074_A2



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1. SUMMARY

1.1. Test Standards

The tests were performed according to following standards:

[Test method which is equal to Appendix No.43 of MIC Notification No 88.](#)

1.2. Report version

Revised No.	Report No.	Date of issue	Description
01	CTC2026084002	Mar. 30, 2026	Original

1.3. Test Description

MIC Notice No.88 Appendix No.43 Article 2, Paragraph 1, Item 19 Rules Section	Test Item	Result	Note
3	Frequency Error	Pass	/
4	Occupied Bandwidth and Spreading Bandwidth	Pass	/
5	Transmitter Spurious Emission and Unwanted Emission Intensity	Pass	/
6	Antenna Output Power and Output Power Tolerance	Pass	/
7	Receiver Spurious Emission and Unwanted Emission Intensity	Pass	/
8	Radio Interference Prevention Capability	Pass	/
9	Frequency Hopping Dwell Time	Pass	/
12	Transmission Radiation Angle Width (3dB Beamwidth)	N/A ^{Note 2}	NA
Note 1	Carrier Sense Capability	N/A ^{Note 1}	N/A
Note 2	Construction Protection Confirmation	Pass	/

N/A^{Note 1}: Testing is only required OFDM system with occupied frequency bandwidth below 38MHz and exceed 26MHz.

N/A^{Note 2}: Required when the design value of Rated +Antenna gain exceeds 12.14 dBm.



1.4. Test Facility

Address of the report laboratory

CTC Laboratories, Inc.

Add: Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhuhu Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China

Laboratory accreditation

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

A2LA-Lab Cert. No.: 4340.01

CTC Laboratories, Inc. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

Industry Canada (Registration No.: 9783A, CAB Identifier: CN0029)

CTC Laboratories, Inc. EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: 9783A on Jan, 2016.

FCC (Registration No.: 951311, Designation Number CN1208)

CTC Laboratories, Inc. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 951311, Aug 26, 2017.



1.5. Measurement Uncertainty

For the test methods, according to the present document, the measurement uncertainty figures shall be calculated in accordance with TR100028-1 [2] and shall correspond to an expansion factor (coverage factor) $K=1.96$ or $K=2$ (which provide confidence levels of respectively 95% and 95.5% in the case where the distributions characterizing the actual measurement uncertainties are normal).

Parameter	Uncertainty
Frequency Error	$\pm 1.9\%$
Antenna Power	$\pm 0.743\text{dB}$
Occupied Bandwidth	$\pm 0.0196\%$
Spread Bandwidth	$\pm 0.0196\%$
Transmitter Spurious Emission Strength and Unwanted Emission Intensity	30MHz-1GHz: $\pm 0.746\text{dB}$ 1GHz-13GHz: $\pm 1.328\text{dB}$
Receiver Spurious Emission and Unwanted Emission Intensity	30MHz-1GHz: $\pm 0.746\text{dB}$ 1GHz-26GHz: $\pm 1.328\text{dB}$
Dwell Time	$\pm 0.028\%$



2. GENERAL INFORMATION

2.1. Environmental conditions

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

Voltage	Normal Voltage	DC 3.70V
	High Voltage	DC 4.07V
	Low Voltage	DC 3.33V
Other	Normal Temperature/T _{nor}	23°C
	Relative Humidity	57 %
	Air Pressure	1001 hPa

2.2. Client Information

Applicant:	EVELAB INSIGHT(SINGAPORE)PTE.LTD
Address:	Raffles Place, #26-01 Republic Plaza, Singapore 048619
Manufacturer:	Xiamen MeituEve Technology Co., Ltd.
Address:	Room 568, No.942, Tonglong 2nd Road, Gaoxin District (Xiang'an) Industries, Xiamen, China
Factory	Kingtronics Smart Industrial Interconnection Networking (Fujian) Co.,Ltd.
Address:	NO.20 Longchi Avenue, Longchi Industrial Park, Taiwanese Investment Zone, Zhangzhou, Fujian, 363107, China



2.3. General Description of EUT

Product Name:	EveLab Insight Eve Key
Trade Mark:	EveLab Insight
Model/Type reference:	MS2201
Listed Model(s):	/
Model Difference:	/
Sample ID:	CTC-GC260127-006-S057
Power supply:	Type-C Input: 5V $\overline{\text{---}}$ 1A Battery: 3.7V, 1000mAh
Hardware version:	1.0
Firmware version:	1.0
Bluetooth 5.0+BR/EDR	
Modulation:	GFSK, $\pi/4$ -DQPSK, 8-DPSK
Operation frequency:	2402MHz~2480MHz
Channel number:	79
Channel separation:	1MHz
Antenna type:	FPC Antenna
Antenna gain:	2dBi



2.4. Description of Test Modes

The EUT has been tested under typical operating condition. The Applicant provides communication tools software to control the EUT for staying in continuous transmitting and receiving mode for testing. BT EDR, 79 channels are provided to the EUT. Channels 00/39/78 were selected for testing.

Operation Frequency List:

Channel	Frequency (MHz)
00	2402
01	2403
⋮	⋮
38	2440
39	2441
40	2442
⋮	⋮
77	2479
78	2480

Note: The line display in grey were the channel selected for testing



2.5. Measurement Instruments List

RF Test System - SRD							
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until	Calibrated By
1	Spectrum Analyzer	R&S	FSV40-N	101654	Dec. 13, 2025	Dec. 12, 2026	CCIC
2	Test Software	JS1120-3	Tonscend	V3.3.38	/	/	/
3	Multimeter	FLUKE	15B+	58631762WS	Oct. 12, 2025	Oct. 11, 2026	CCIC
4	DC source	Agilent	E3642A	MY40005783	Oct. 12, 2025	Oct. 11, 2026	CCIC
5	USB Wideband Power Sensor	Keysight	U2021XA	MY55130006	Mar. 25, 2025	Mar. 24, 2026	CCIC
6	6dB Attenuator	N/A	100W/6dB	N/A	Dec. 13, 2025	Dec. 12, 2026	CCIC

Remark:

Note: 1. Calibration conducted in foreign countries, which is equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1)

2. Full name of CCIC: CCIC (Shenzhen) Metrology & Testing Service Co.,Ltd



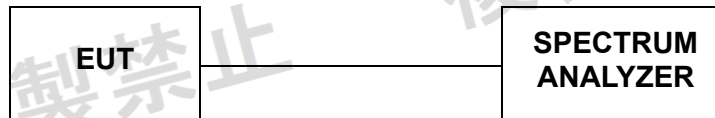
3. TEST CONDITIONS AND RESULTS

3.1. Frequency Error

LIMIT

±50ppm

TEST CONFIGURATION



TEST PROCEDURE

The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram as TEST CONFIGURATION shows.

EUT Condition: Modulation

Spectrum Condition:

Frequency: Test frequency

Span: Show the entire waveform

RBW: 10 KHz

VBW: 10 KHz

Sweep time: Auto

Detector mode: Positive peak

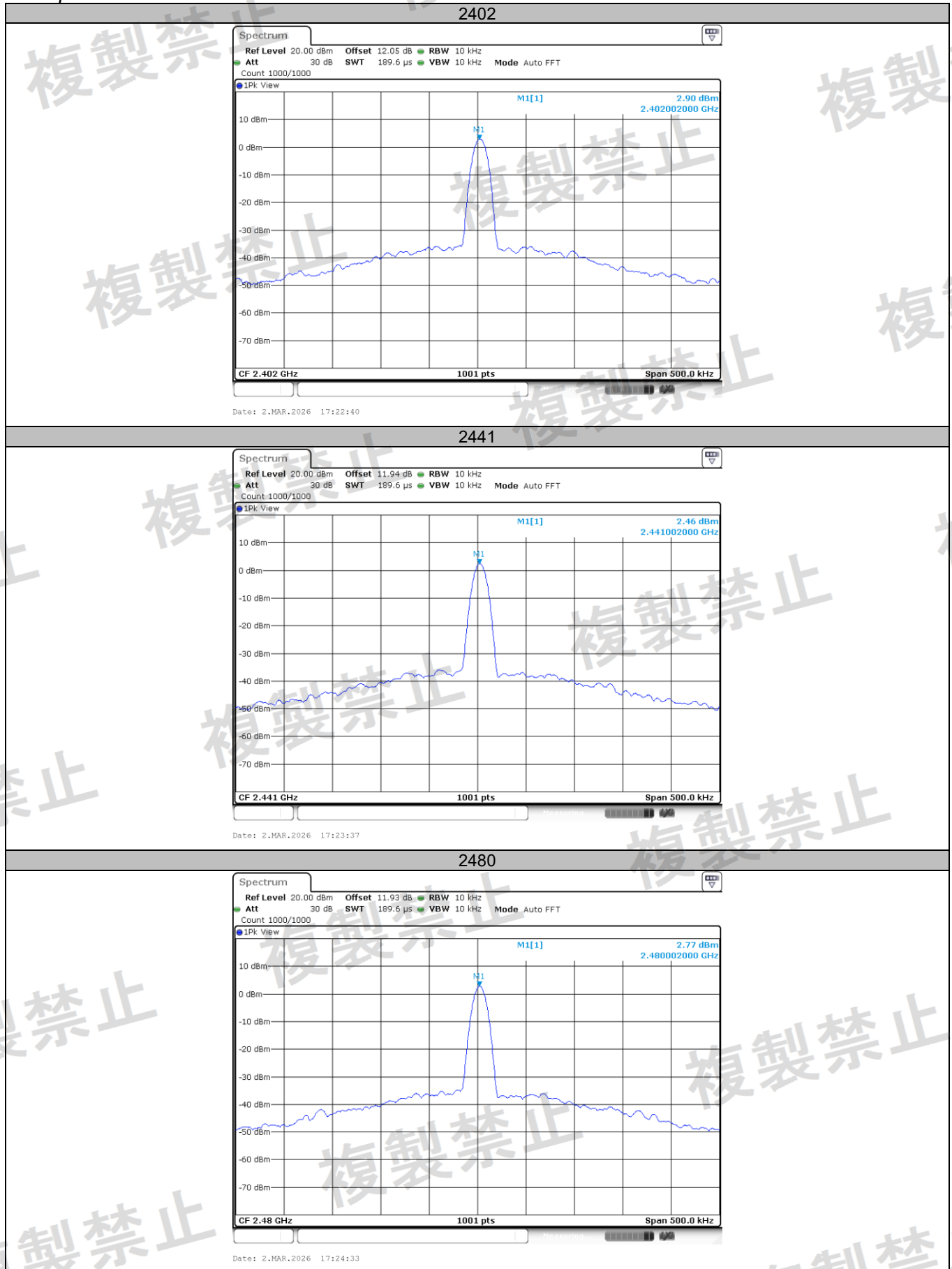
Indication mode: Max hold

TEST RESULTS

DC 3.7V				
Channel	Read (MHz)	Result[ppm]	Limit[ppm]	Verdict
2402	2402.002	0.83264	±50	PASS
2441	2441.002	0.81934		
2480	2480.002	0.80645		



Test plot as follows:



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3.2. Antenna Power

LIMIT

Spread Spectrum Method	FHSS (Compound method with DSSS or OFDM)		DSSS	OFDM		Other method (Except SS & OFDM)
Frequency Range	2427 - 2470.75 MHz	2400 – 2483.5 MHz (except 2427 - 2470.75MHz)	2400 - 2483.5 MHz			
Frequency Tolerance	± 50ppm					
Antenna Power	3mW/MHz or less	10mW/MHz or less	10mW/MHz or less	10mW/MHz or less	5mW/MHz or less	10mW or less
	When an E.I.R.P. is less than 2.14dBi + antenna power limit, the shortage can be compensated for by the antenna power. (Application to transmitting devices using "Other method" is limited to "GFSK")					

The Output Power Tolerance must be within < +20%.

TEST CONFIGURATION



TEST PROCEDURE

1. The maximum conducted output power may be measured using a broadband Peak RF power meter.
2. Peak power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor.
3. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.
4. Record the measurement data.

TEST RESULT

DC 3.7V									
Test Mode	Channel	Power (mW)	Limit (mW)	EIRP Power (dBm)	Limit (dBm)	RatedPower (mW)	Tolerance (%)	Limit (%)	Verdict
DH5	HOP	0.0222	3	-14.54	12.14	0.02	10.91	< +20	PASS
2DH5		0.0191	3	-15.19	12.14	0.02	-4.51		
3DH5		0.0139	3	-16.58	12.14	0.02	-30.66		

Remark:

- For GFSK, $\pi/4$ -DQPSK, 8-DPSK modulation, Pre-scan all kind of packet type DH1, DH3, DH5, 2DH1, 2DH3, 2DH5, 3DH1, 3DH3, 3DH5 found the DH5, 2DH5, 3DH5 which is worse case mode.
- Antenna Gain=2dBi
- $A=(10^{(Power[dBm]/10)})$
Power(mW/MHz)=(A/ Spreading Bandwidth)*(Burst cycle/ Transmission time of 1 burst)
- The EIRP limit is 12.14dBm(16.37mW).



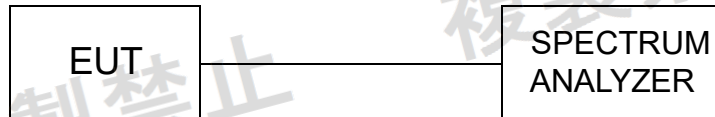
3.3. Occupied Bandwidth and Spreading Bandwidth

LIMIT

Occupied bandwidth: FH $\leq$ 83.5 MHz; OFDM $\leq$ 40MHz; DS $\leq$ 26 MHz

Spread Bandwidth: $\geq$ 500KHz (FH, DS), Spread factor $>$ 5.

TEST CONFIGURATION



TEST PROCEDURE

The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram as TEST CONFIGURATION shows.

EUT Condition: Modulation

1. Spectrum Condition:
Frequency: Start 2.4GHz stop 2483.5MHz, RBW: 1MHz, VBW: 1MHz, Sweep time: Auto
Detector mode: Positive peak, Indication mode: Max hold
2. EUT have transmitted the maximum modulation signal and fixed channelize. SA set to 99% of occupied bandwidth to measure occupied bandwidth.
3. EUT have transmitted the maximum modulation signal and fixed channelize. SA set to 90% of occupied bandwidth to measure spread bandwidth.
4. Spread Factor=Spread Bandwidth/modulation rate, the modulation rate is 1MHz for GFSK, 1MHz for $\pi/4$ -DQPSK and 1MHz for 8-DPSK

TEST RESULTS

DC 3.7V			
TestMode	Occupied Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	78.921	$\leq$ 83.5	PASS
$\pi/4$ -DQPSK	78.721		
8-DPSK	79.121		

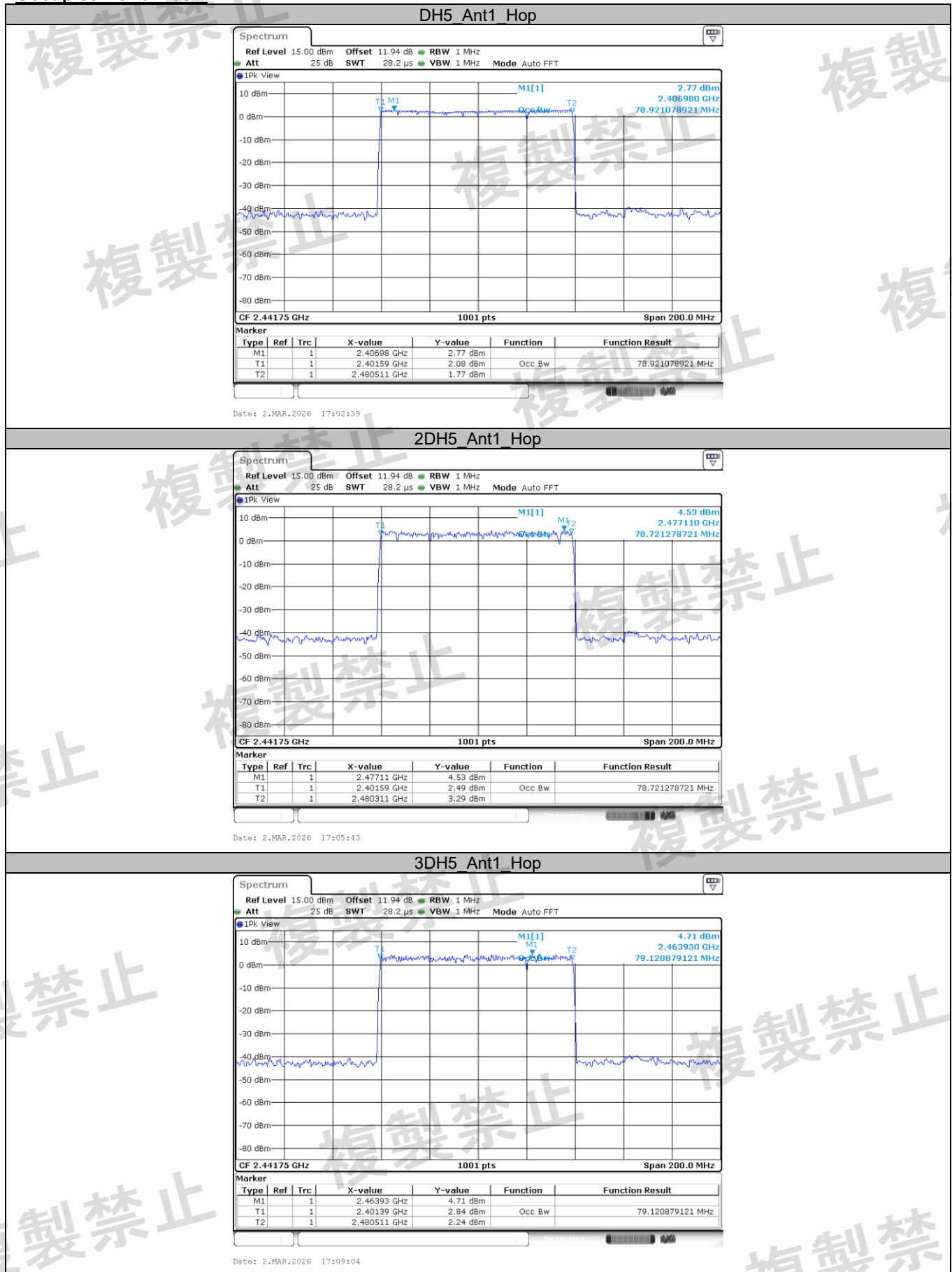
DC 3.7V					
TestMode	Spread Bandwidth [MHz]	Limit [MHz]	Spread Factor	Limit	Verdict
GFSK	71.928	$\geq$ 0.5	71.928	$\geq$ 5	PASS
$\pi/4$ -DQPSK	72.527		72.527		
8-DPSK	71.928		71.928		

Remark:

1. Spreading Factor = [spread bandwidth (actual measurement value)]/ transmission rate.
2. Transmission rate: GFSK-1MHz, $\pi/4$ -DQPSK-1MHz, 8-DPSK-1MHz.



Test plot as follows:
Occupied Bandwidth:



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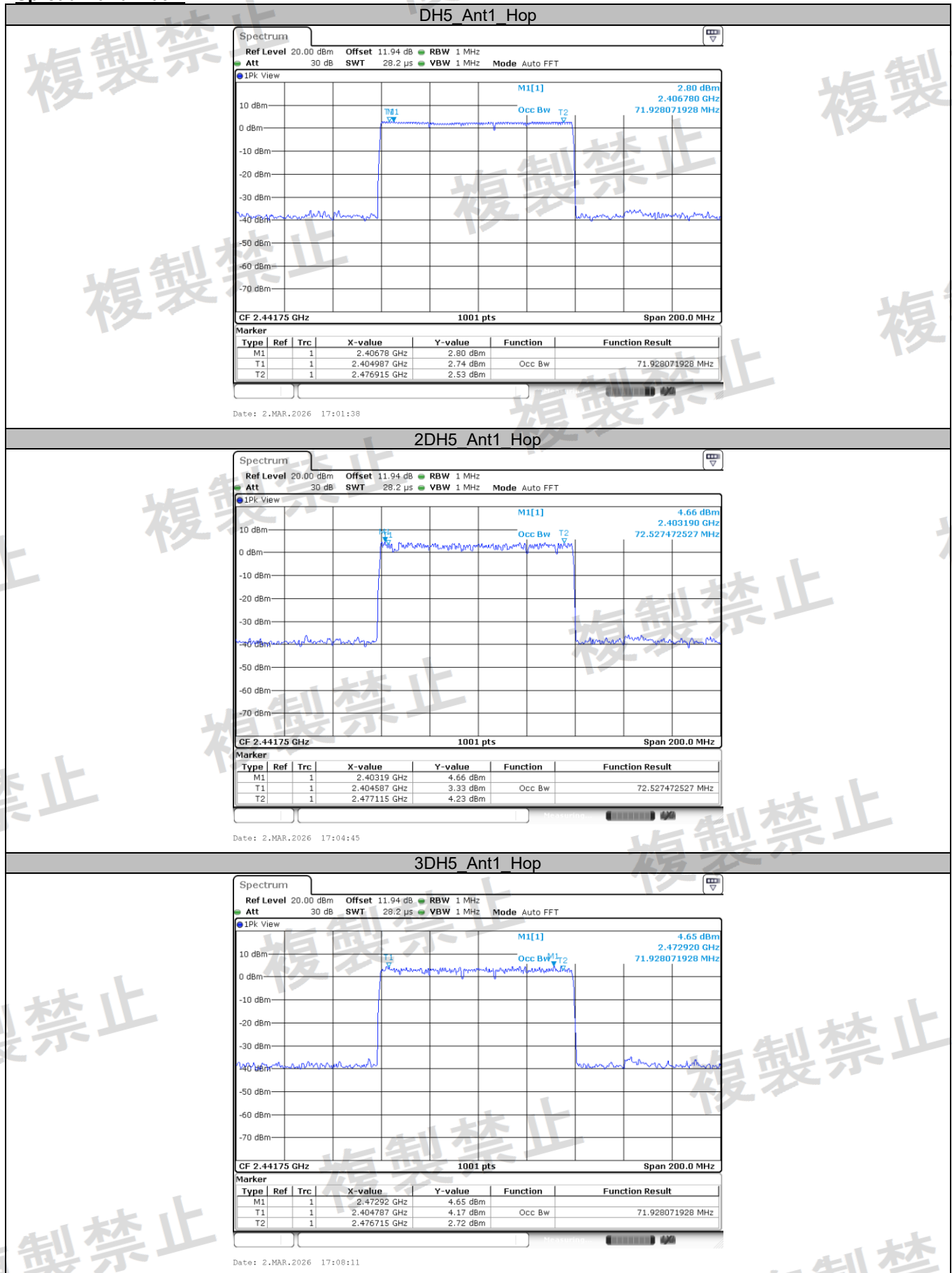
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Spread Bandwidth:



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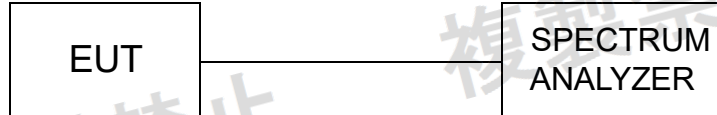


3.4. Dwell time

LIMIT

0.4 second or less

TEST CONFIGURATION



TEST PROCEDURE

The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram as TEST CONFIGURATION shows.

EUT Condition: Modulation

Spectrum Condition:

Frequency: test channel, Span=0MHz, RBW: 1MHz, VBW: 1MHz, Sweep time: Auto

Detector mode: Positive peak

TEST RESULTS

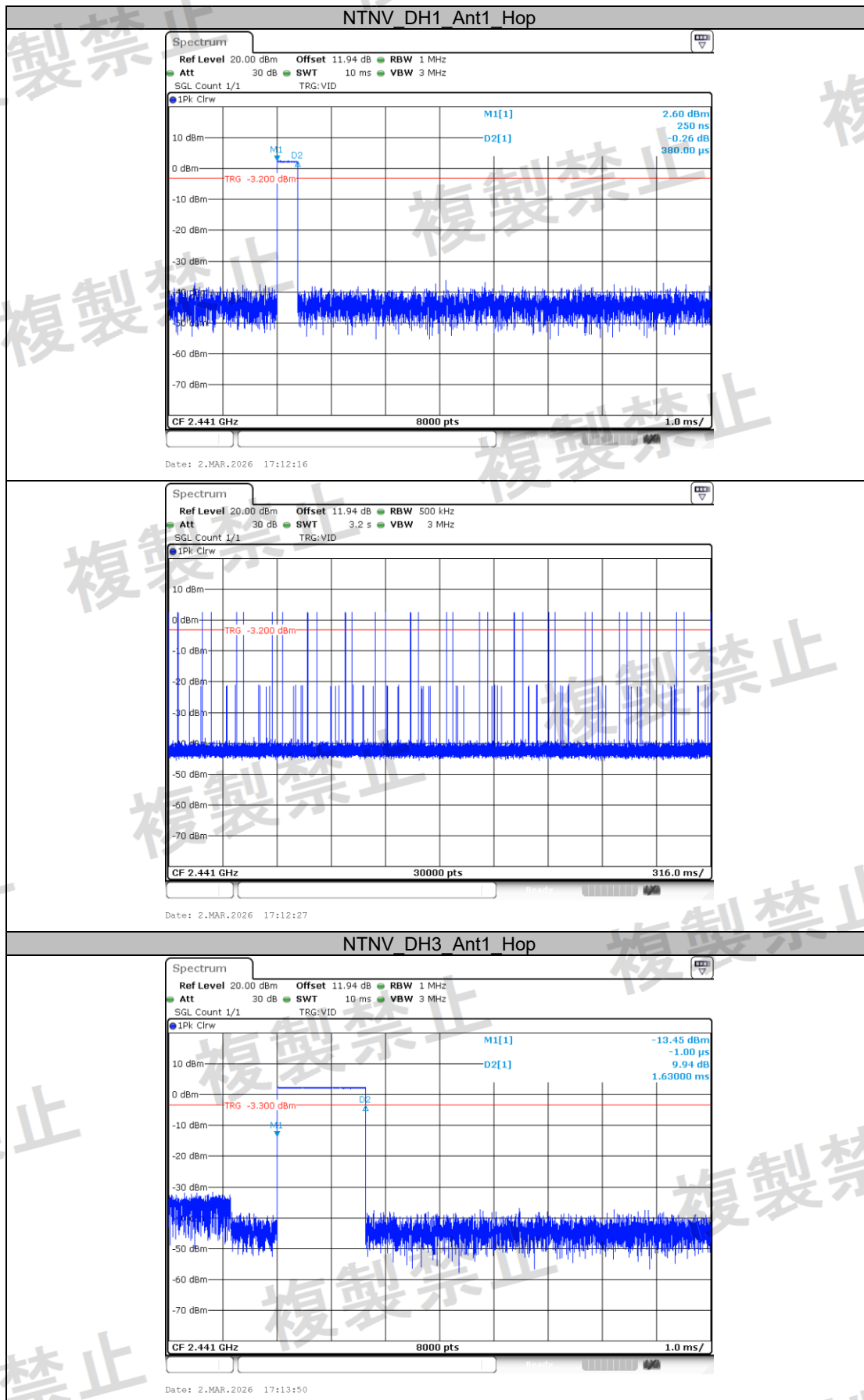
Test Mode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit [s]	Verdict
DH1	Ant1	Hop	0.38	320	0.122	≤0.4	PASS
DH3	Ant1	Hop	1.63	140	0.228	≤0.4	PASS
DH5	Ant1	Hop	2.87	130	0.373	≤0.4	PASS
2DH1	Ant1	Hop	0.39	320	0.125	≤0.4	PASS
2DH3	Ant1	Hop	1.63	150	0.245	≤0.4	PASS
2DH5	Ant1	Hop	2.87	110	0.316	≤0.4	PASS
3DH1	Ant1	Hop	0.39	330	0.129	≤0.4	PASS
3DH3	Ant1	Hop	1.63	150	0.245	≤0.4	PASS
3DH5	Ant1	Hop	2.87	120	0.344	≤0.4	PASS

Remark:

1. Dwell time=[0.4 x (spread factor)x(transmission time of 1 burst)]/[(burst cycle)x(No. of hopping channels)]
2. Spread Factor for see section 3.3.



Test plot as follows:



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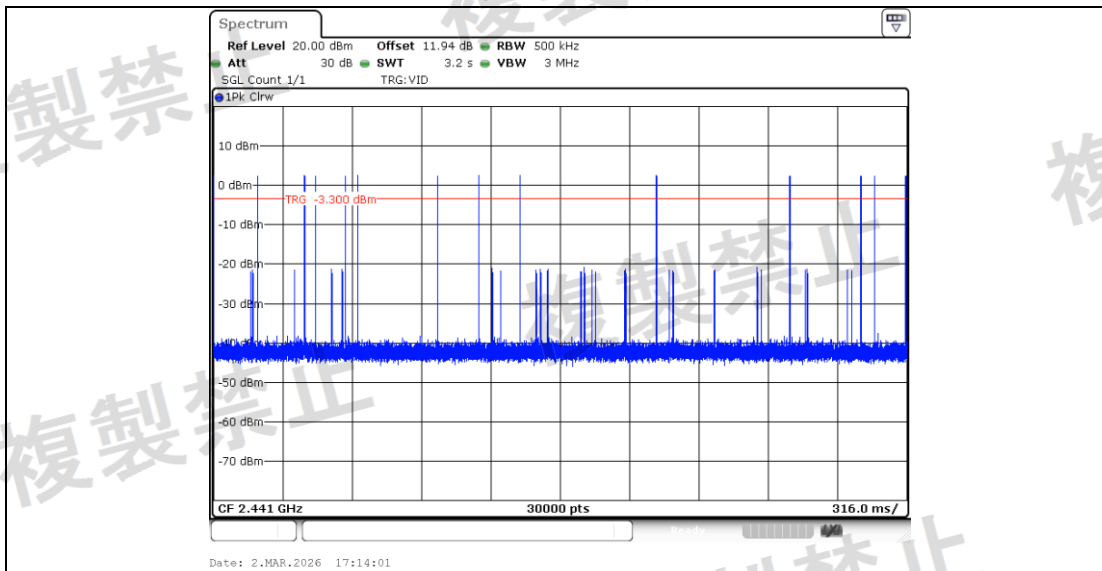
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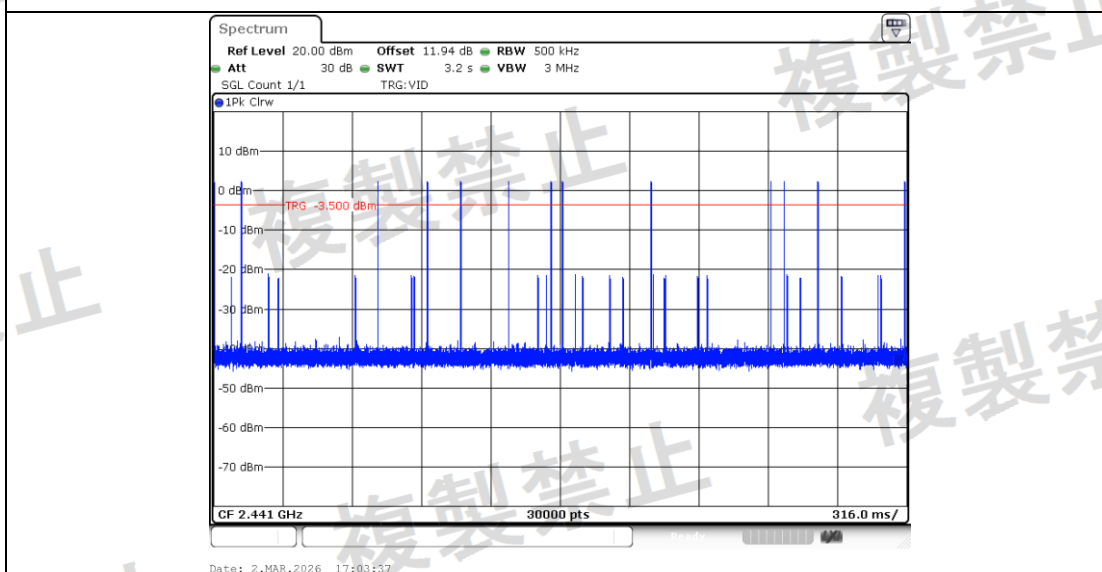
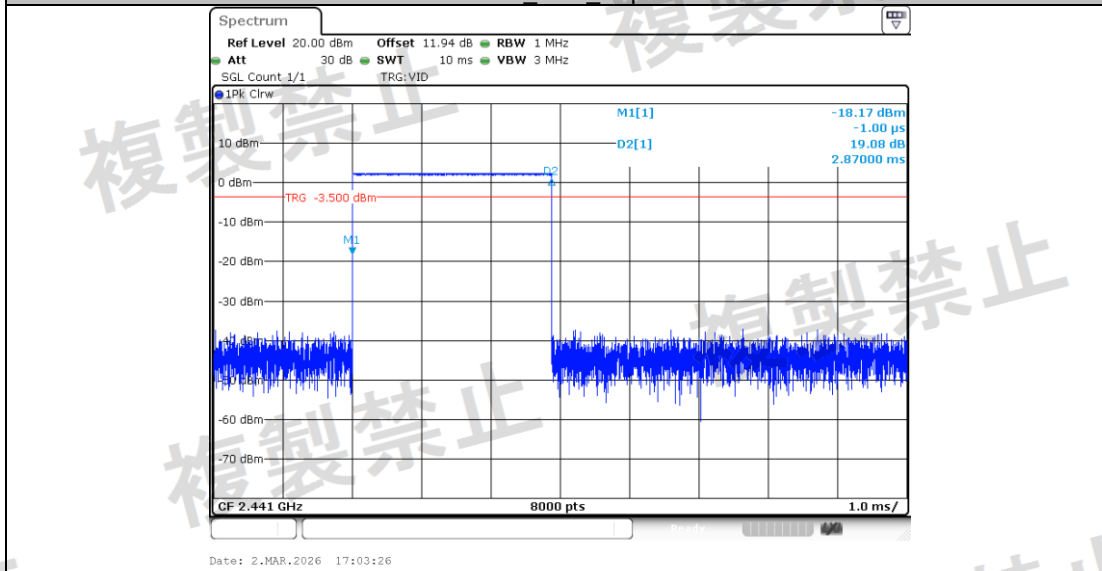
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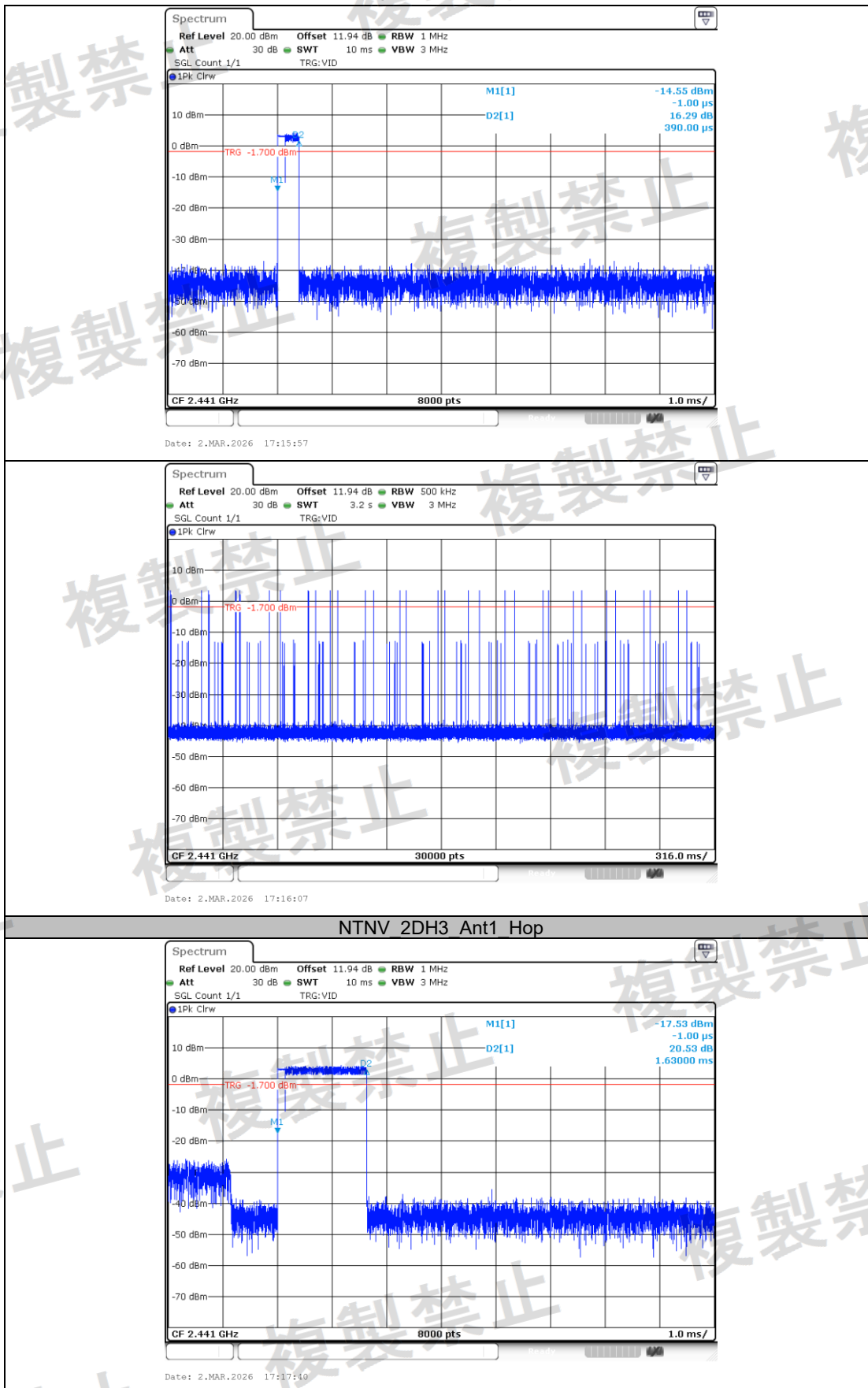
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DH5_Ant1_Hop



NTNV_2DH1_Ant1_Hop



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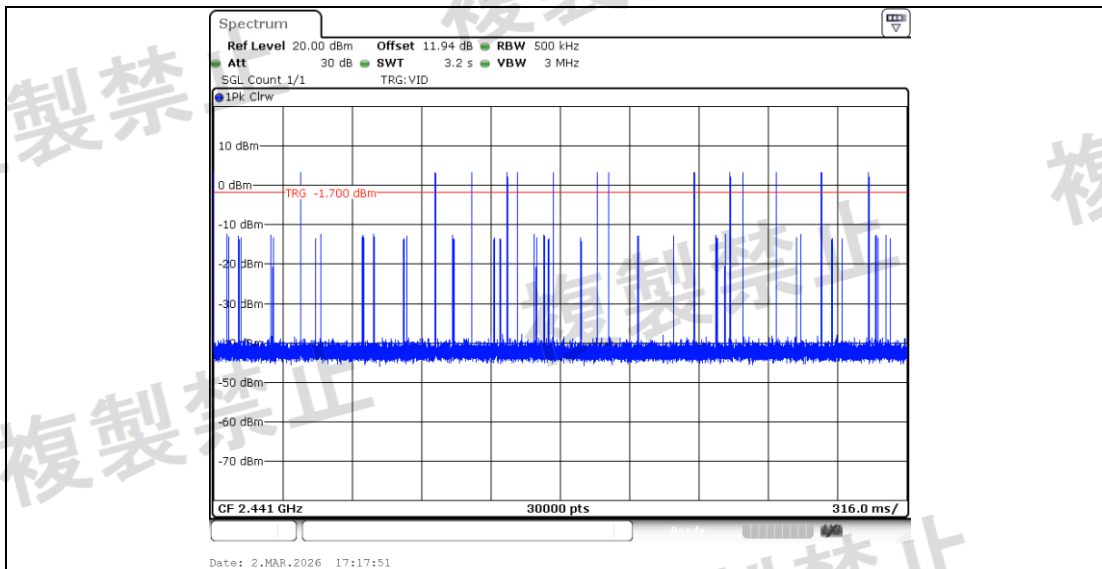
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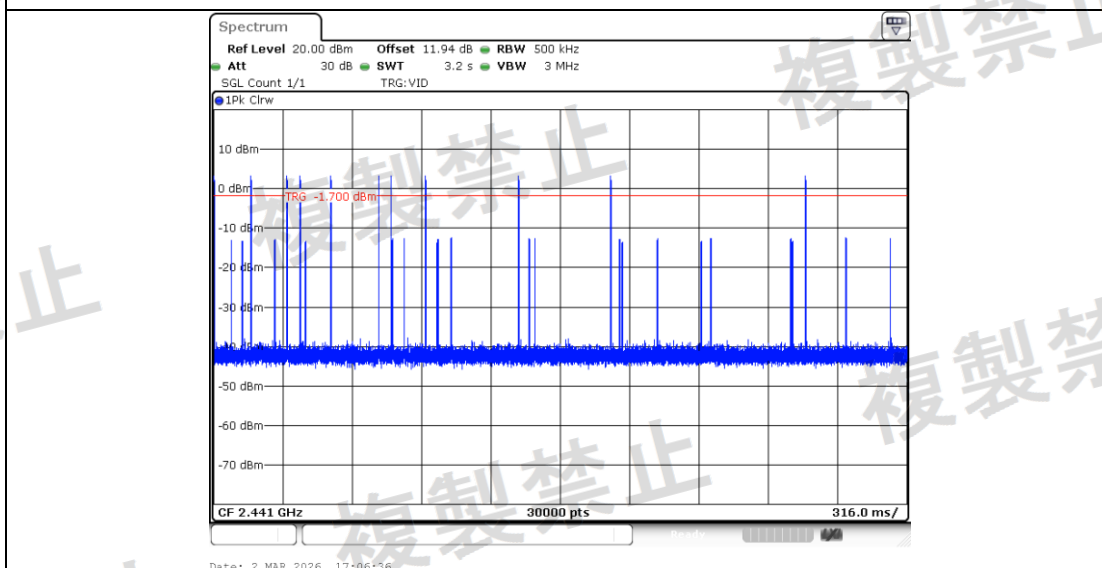
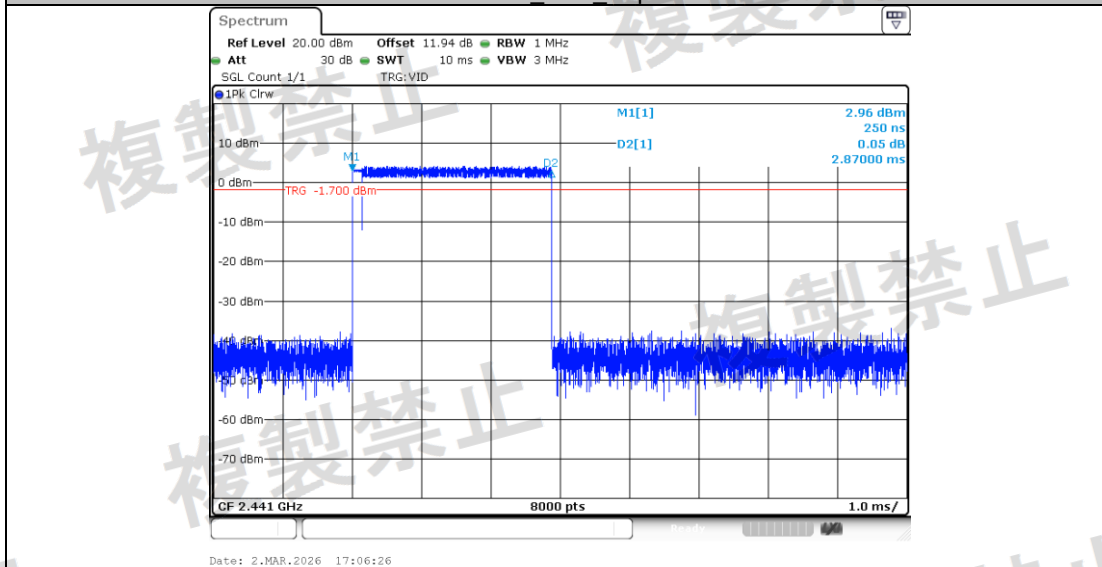
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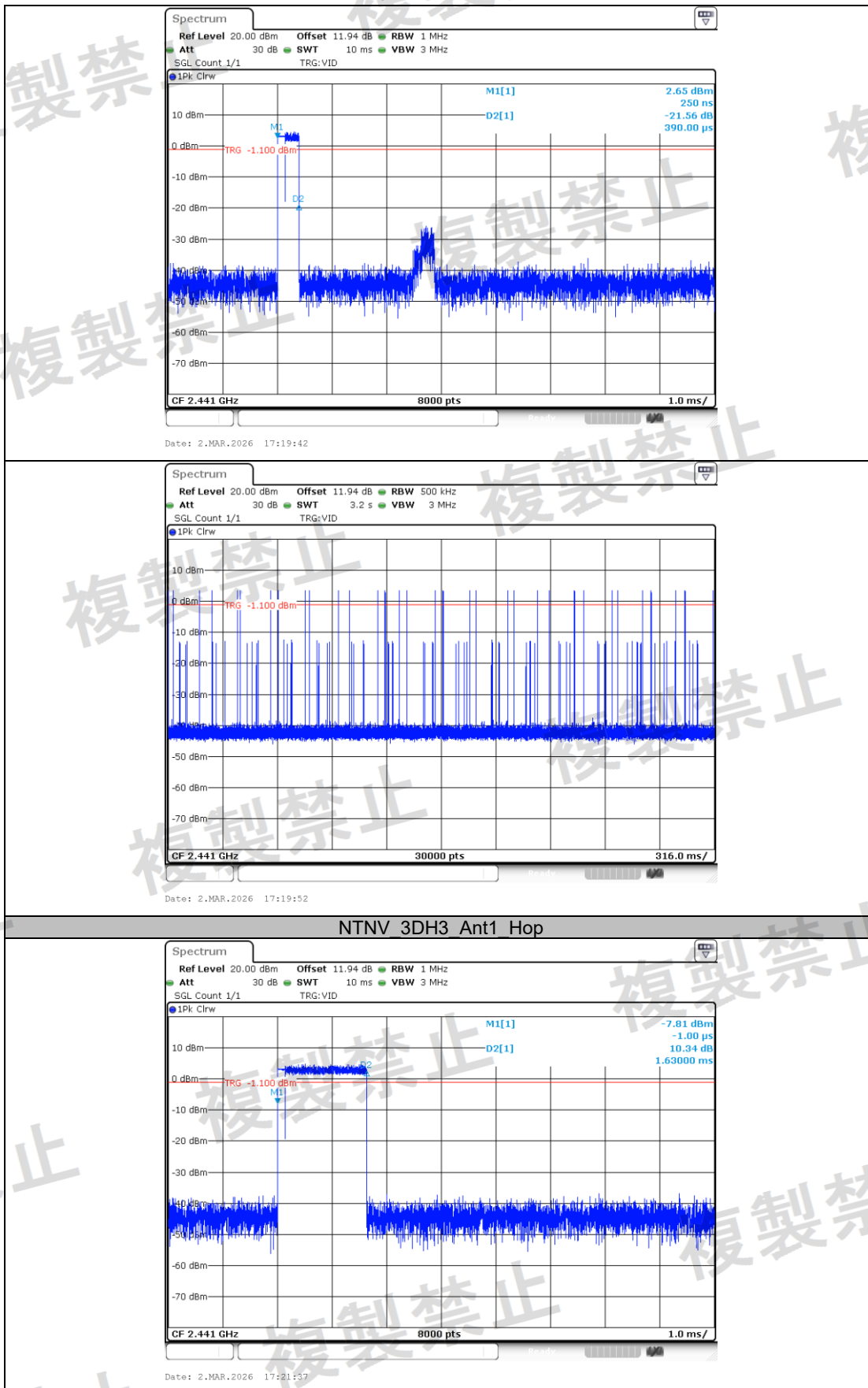
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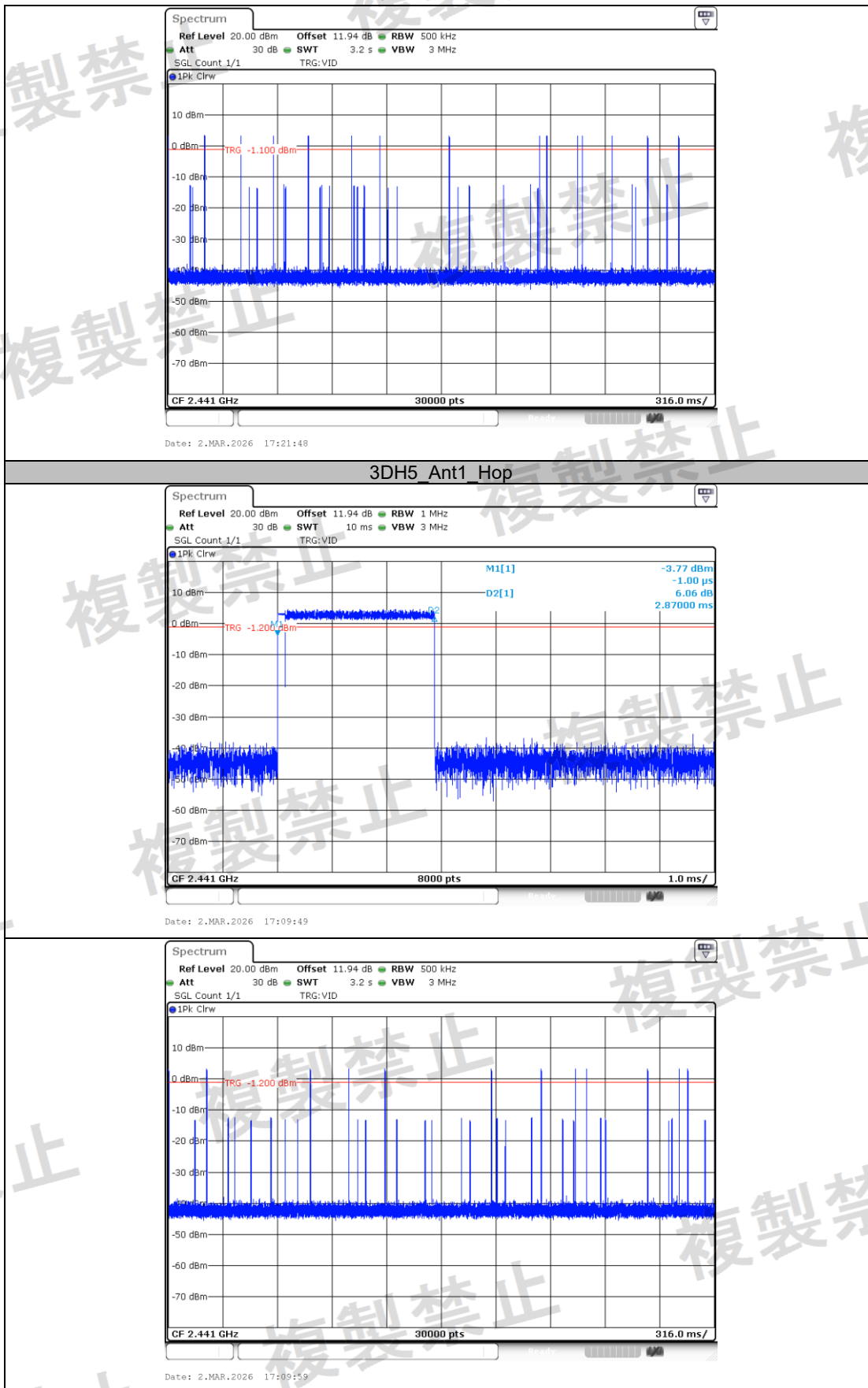


2DH5_Ant1_Hop



NTNV_3DH1_Ant1_Hop







3.5. Spurious emission intensity

LIMIT

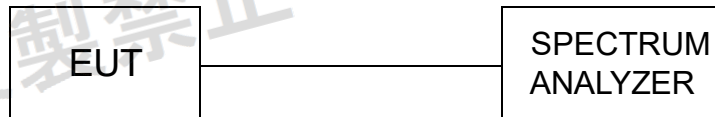
30MHz to 2387MHz: 2.5 μ W/MHz (-26dBm) or less

2387MH to 2400MHz: 25 μ W/MHz (-16dBm) or less

2483.5MH to 2496.5MHz: 25 μ W/MHz (-16dBm) or less

Over 2496.5 MHz: 2.5 μ W/MHz (-26dBm) or less

TEST CONFIGURATION



TEST PROCEDURE

The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram as TEST CONFIGURATION shows.

EUT Condition: Modulation

Spectrum Condition:

Frequency: 30MHz-12.5GHz

RBW: 1MHz (30MHz-1GHz), 1MHz (1GHz-12.5GHz)

VBW: 1MHz (30MHz-1GHz), 1MHz (1GHz-12.5GHz)

Sweep time: Auto

Detector mode: Positive peak

Indication mode: Max hold

TEST RESULTS



Measurement Data:

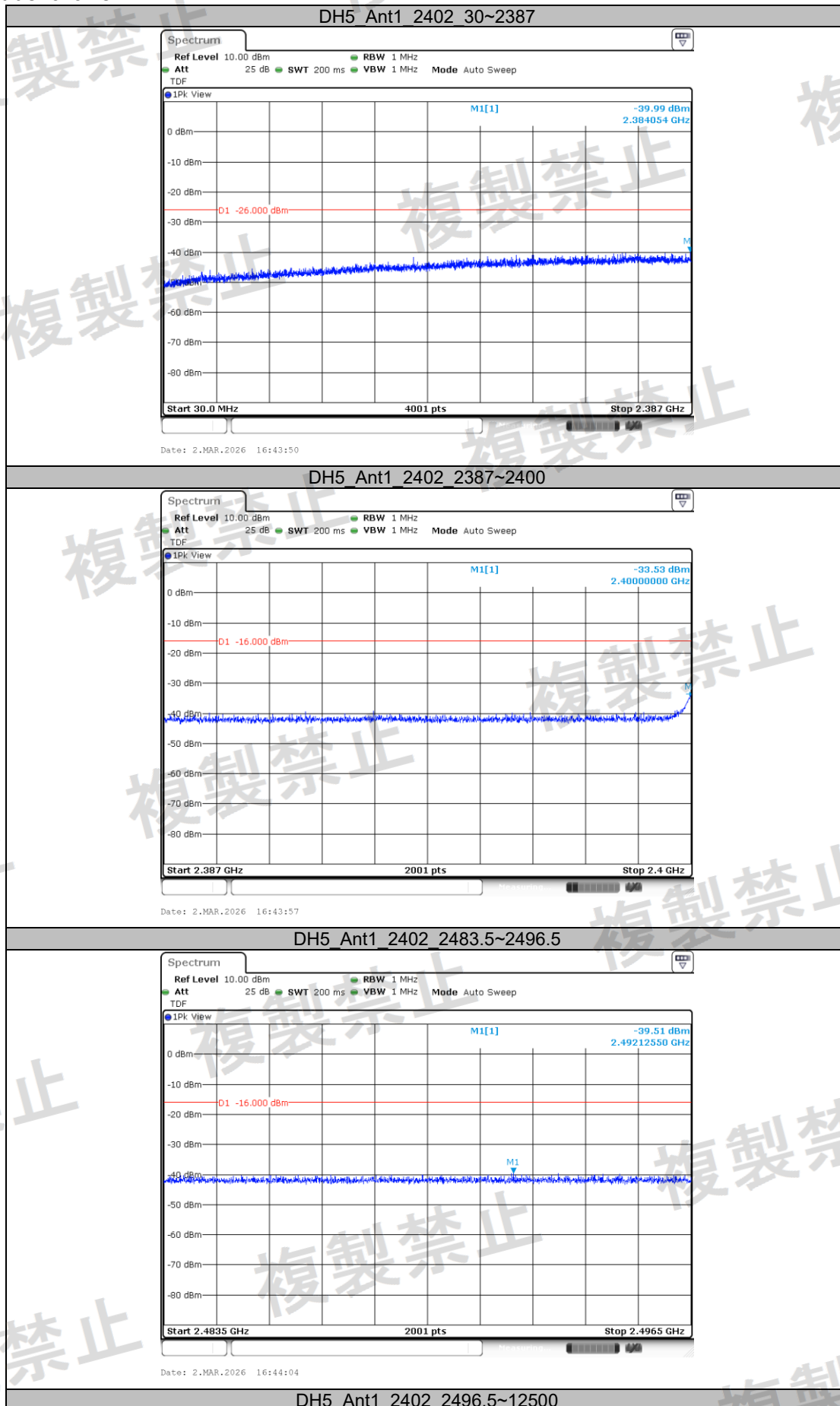
Test Mode	Antenna	Freq(MHz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm/MHz]	Limit [dBm/MHz]	Result [μW/MHz]	Limit [μW/MHz]	Verdict
DH5	Ant1	2402	30~2387	2384.05	-39.99	≤-26	0.10023	≤2.5	PASS
			2387~2400	2400.00	-33.53	≤-16	0.44361	≤25	PASS
			2483.5~2496.5	2492.13	-39.51	≤-16	0.11194	≤25	PASS
			2496.5~12500	6999.08	-29.08	≤-26	1.23595	≤2.5	PASS
		2441	30~2387	2088.25	-39.73	≤-26	0.10641	≤2.5	PASS
			2387~2400	2395.98	-39.30	≤-16	0.11749	≤25	PASS
			2483.5~2496.5	2492.64	-38.62	≤-16	0.13740	≤25	PASS
			2496.5~12500	6951.06	-29.79	≤-26	1.04954	≤2.5	PASS
		2480	30~2387	2151.89	-39.96	≤-26	0.10093	≤2.5	PASS
			2387~2400	2387.91	-39.36	≤-16	0.11588	≤25	PASS
			2483.5~2496.5	2492.87	-38.89	≤-16	0.12912	≤25	PASS
			2496.5~12500	6952.06	-28.68	≤-26	1.35519	≤2.5	See table below
2DH5	Ant1	2402	30~2387	2247.35	-39.90	≤-26	0.10233	≤2.5	PASS
			2387~2400	2400.00	-26.39	≤-16	2.29615	≤25	PASS
			2483.5~2496.5	2490.92	-39.52	≤-16	0.11169	≤25	PASS
			2496.5~12500	6983.57	-28.33	≤-26	1.46893	≤2.5	See table below
		2441	30~2387	2014.59	-40.39	≤-26	0.09141	≤2.5	PASS
			2387~2400	2391.92	-39.88	≤-16	0.10280	≤25	PASS
			2483.5~2496.5	2490.62	-39.16	≤-16	0.12134	≤25	PASS
			2496.5~12500	6972.57	-29.41	≤-26	1.14551	≤2.5	PASS
		2480	30~2387	2146.00	-39.69	≤-26	0.10740	≤2.5	PASS
			2387~2400	2392.33	-39.62	≤-16	0.10914	≤25	PASS
			2483.5~2496.5	2489.53	-39.03	≤-16	0.12503	≤25	PASS
			2496.5~12500	6942.56	-29.19	≤-26	1.20504	≤2.5	PASS
3DH5	Ant1	2402	30~2387	2130.68	-39.79	≤-26	0.10495	≤2.5	PASS
			2387~2400	2399.99	-26.26	≤-16	2.36592	≤25	PASS
			2483.5~2496.5	2490.64	-38.96	≤-16	0.12706	≤25	PASS
			2496.5~12500	6979.57	-28.75	≤-26	1.33352	≤2.5	See table below
		2441	30~2387	2084.71	-40.03	≤-26	0.09931	≤2.5	PASS
			2387~2400	2396.00	-39.66	≤-16	0.10814	≤25	PASS
			2483.5~2496.5	2485.93	-39.33	≤-16	0.11668	≤25	PASS
			2496.5~12500	6941.06	-28.43	≤-26	1.43549	≤2.5	See table below
		2480	30~2387	2156.01	-40.47	≤-26	0.08974	≤2.5	PASS
			2387~2400	2391.19	-39.85	≤-16	0.10351	≤25	PASS
			2483.5~2496.5	2486.30	-38.93	≤-16	0.12794	≤25	PASS
			2496.5~12500	6985.57	-29.33	≤-26	1.16681	≤2.5	PASS

Test Result Step2

Test Mode	Antenna	Freq(MHz)	Freq. [MHz]	Result [dBm/MHz]	Limit [dBm/MHz]	Result [μW/MHz]	Limit [μW/MHz]	Verdict
DH5	Ant1	2480	6952.06	-55.74	≤-26	0.00267	≤2.5	PASS
2DH5	Ant1	2402	6983.57	-55.17	≤-26	0.00304	≤2.5	PASS
3DH5	Ant1	2402	6979.57	-55.24	≤-26	0.00299	≤2.5	PASS
		2441	6941.06	-55.94	≤-26	0.00255	≤2.5	PASS
			6951.06	-55.77	≤-26	0.00265	≤2.5	PASS



Test plot as follows:



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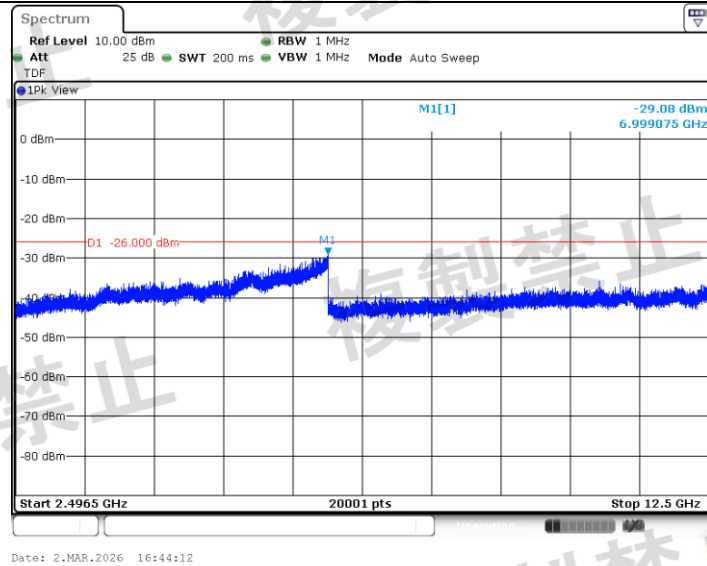
Tel.: (86)755-27521059

Fax: (86)755-27521011

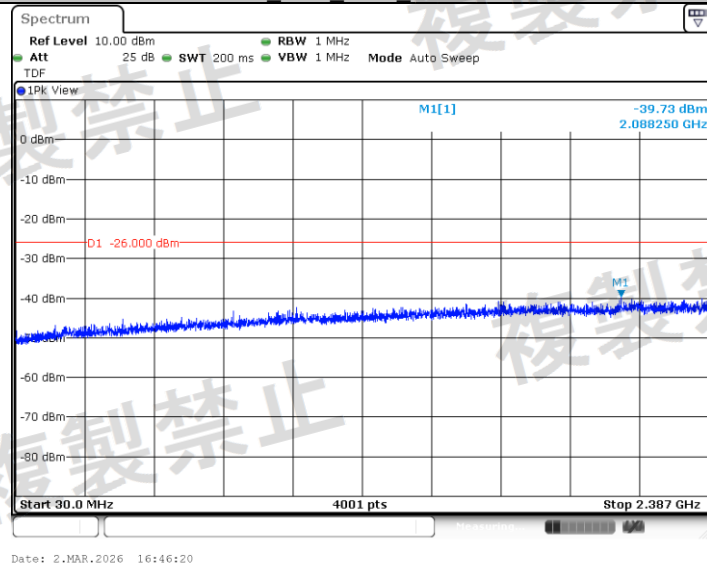
Http://www.sz-ctc.org.cn

TRF No: CTC-TR-074_A3

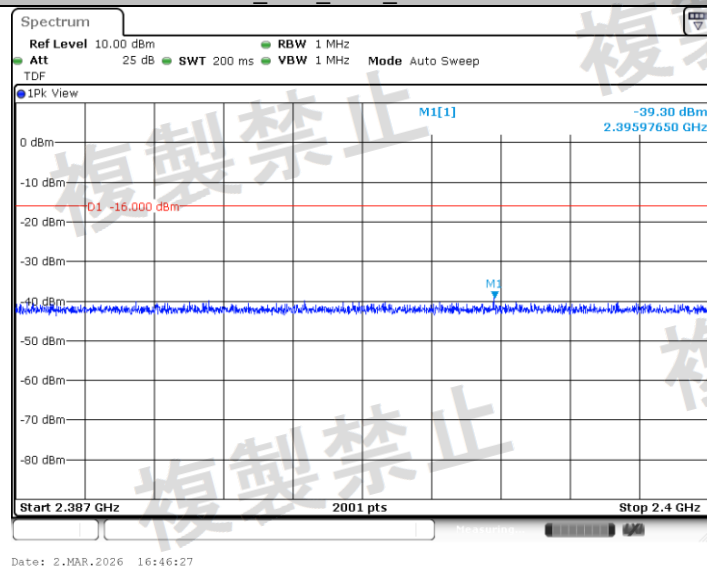
Master TRF : Dated 2026-01-01



DH5_Ant1_2441_30~2387



DH5_Ant1_2441_2387~2400



DH5_Ant1_2441_2483.5~2496.5

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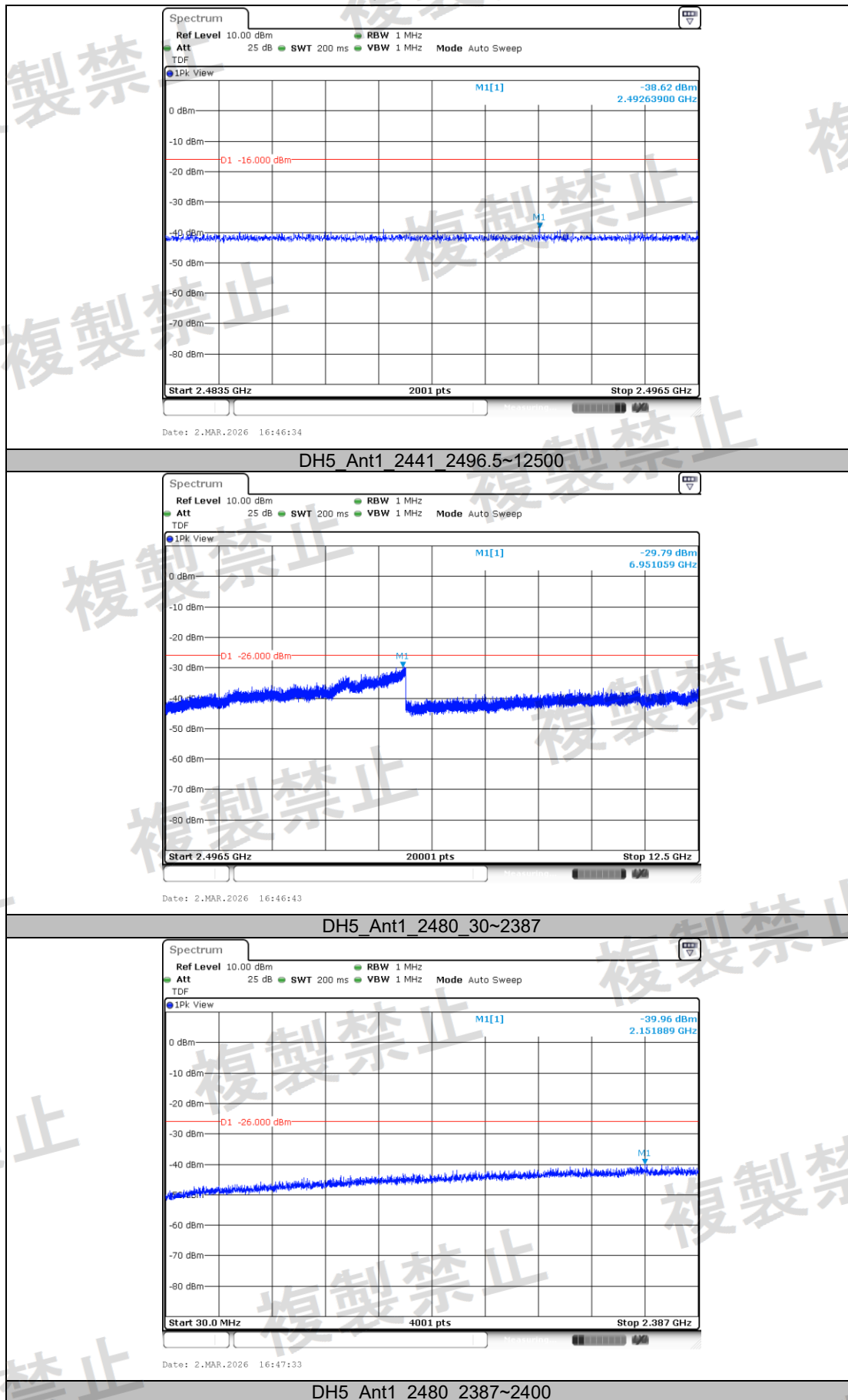
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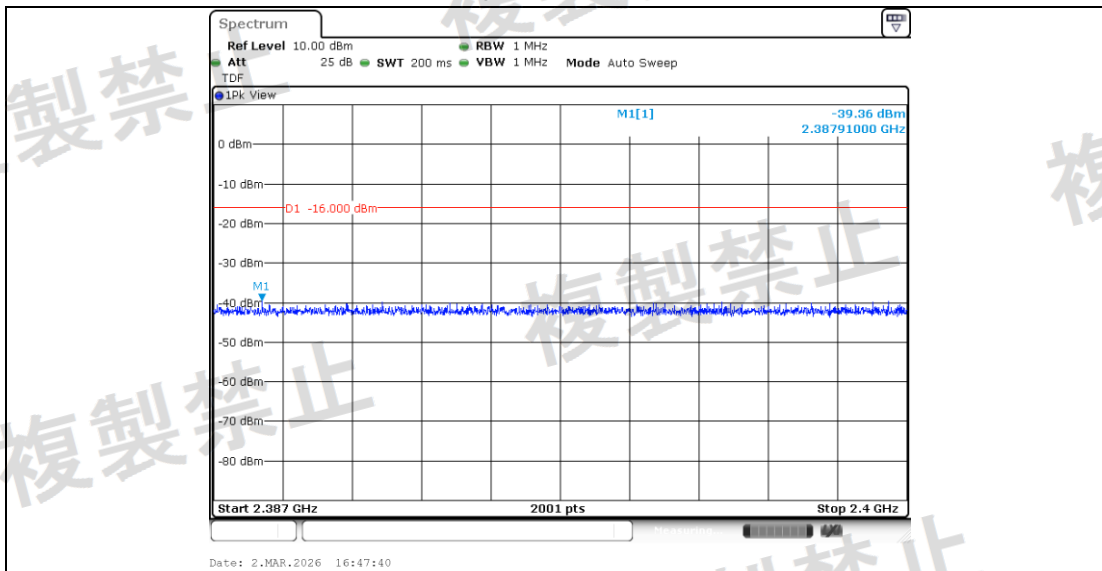
Tel.: (86)755-27521059

Fax: (86)755-27521011

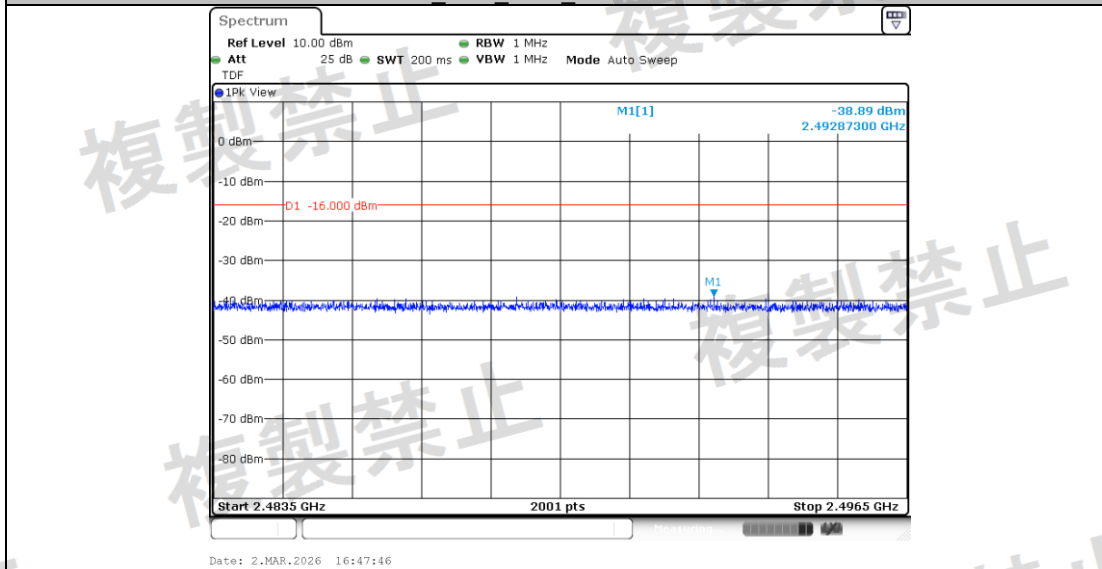
Http://www.sz-ctc.org.cn

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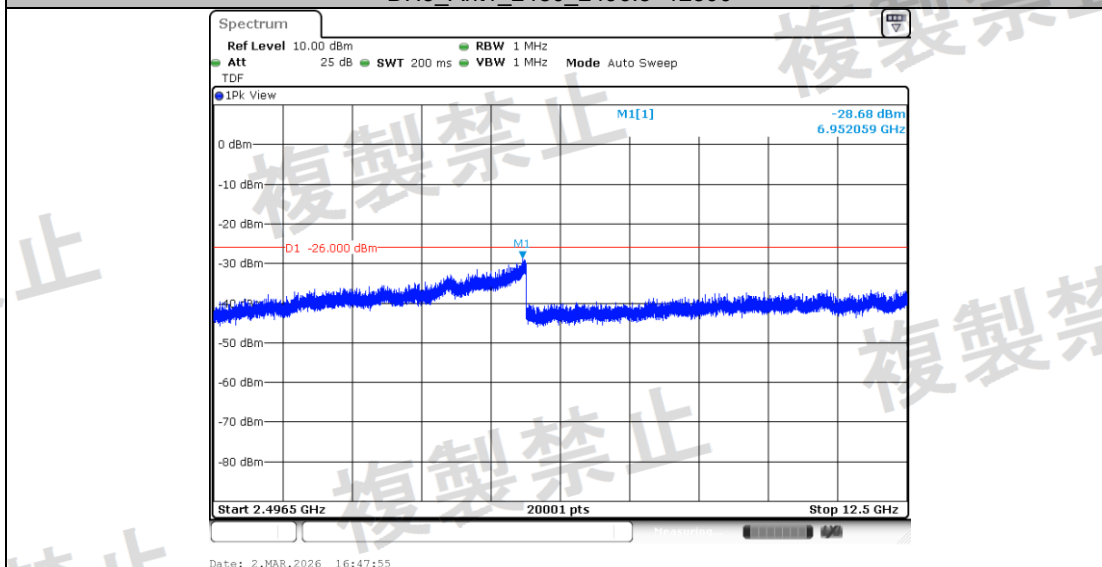
Master TRF : Dated 2026-01-01



DH5_Ant1_2480_2483.5~2496.5



DH5_Ant1_2480_2496.5~12500



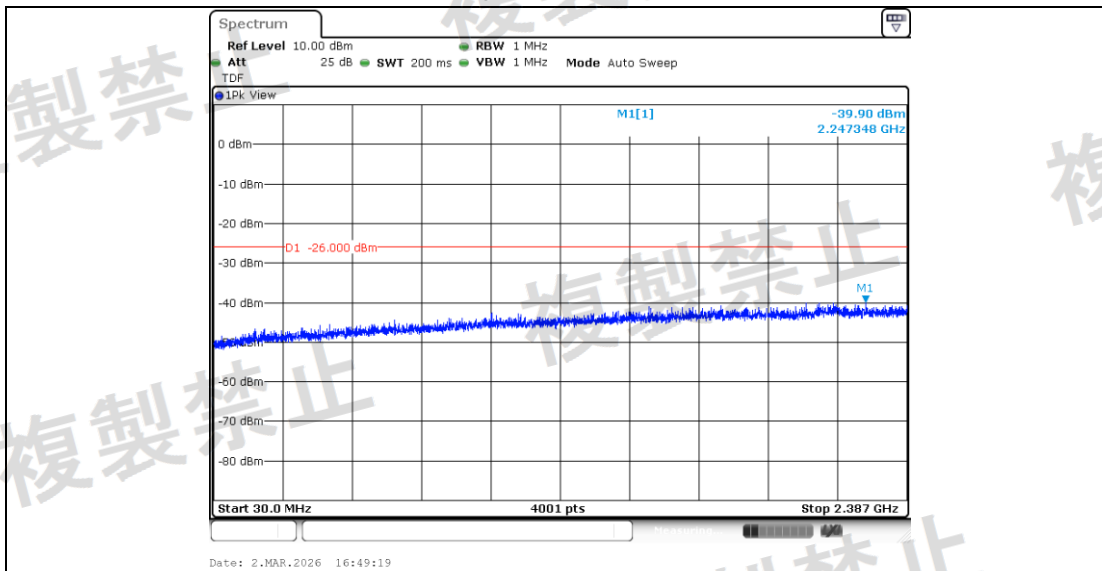
2DH5_Ant1_2402_30~2387

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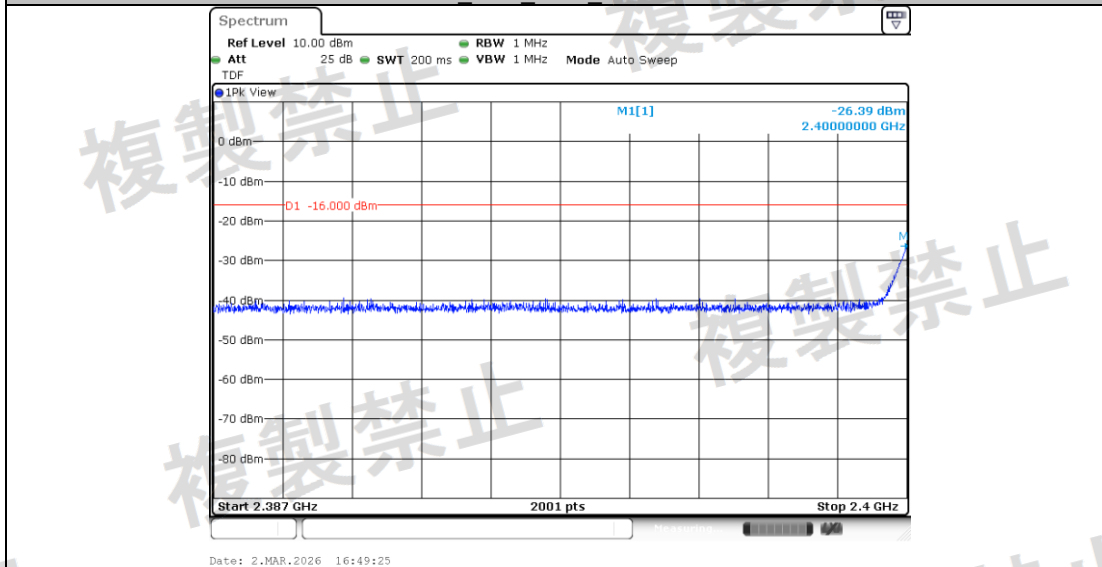
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Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn

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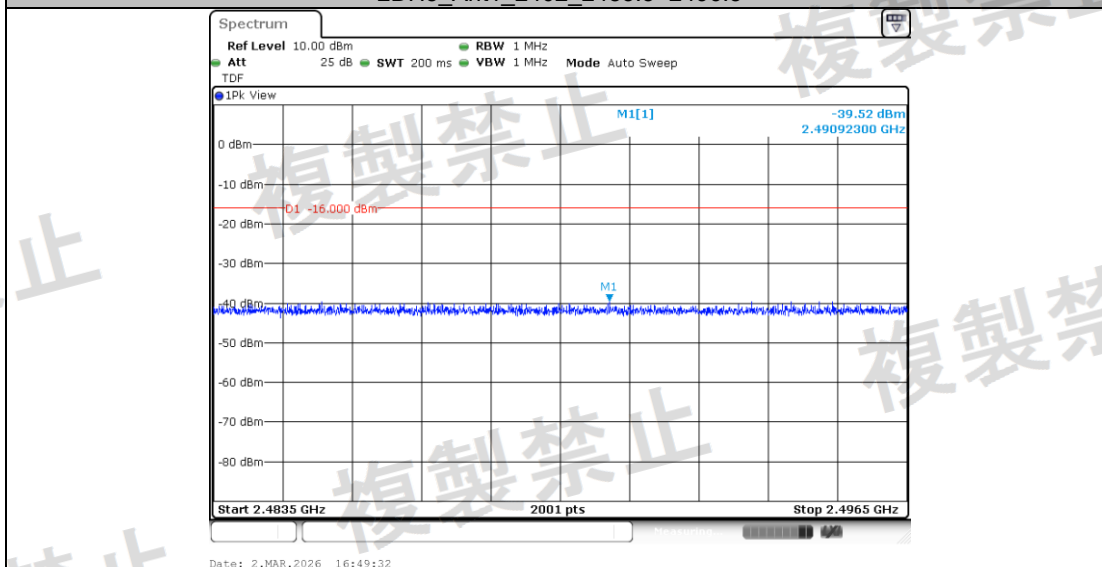
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2DH5_Ant1_2402_2387~2400



2DH5_Ant1_2402_2483.5~2496.5



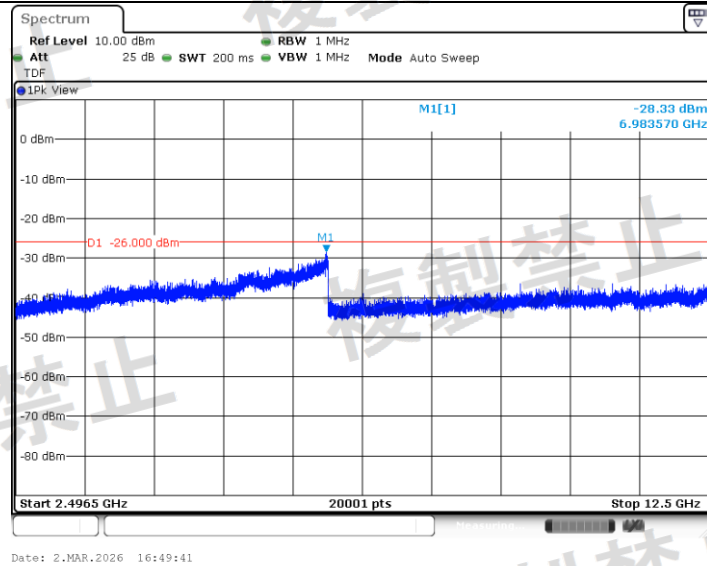
2DH5_Ant1_2402_2496.5~12500

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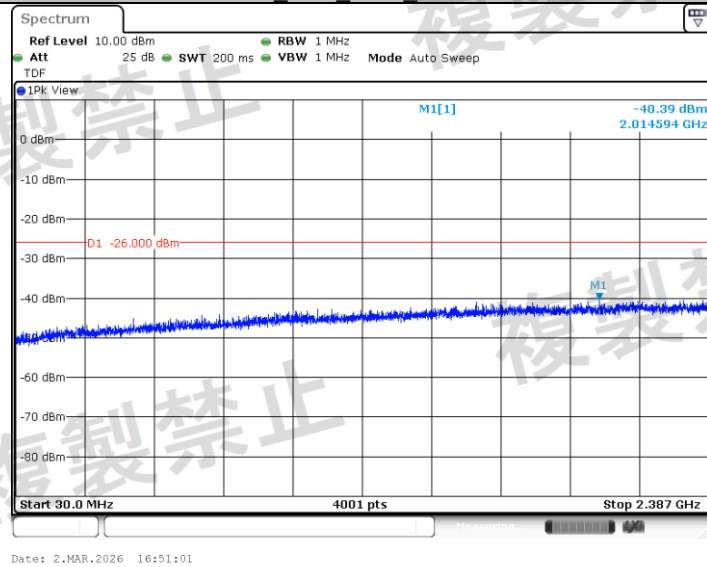
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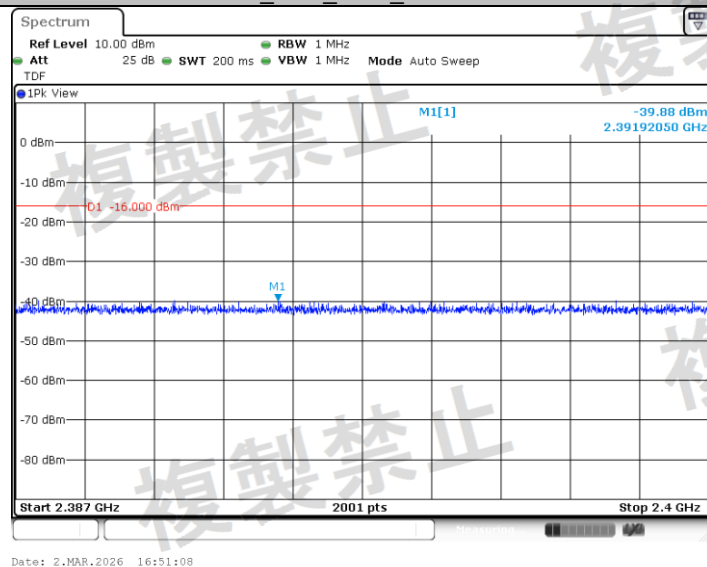
Master TRF : Dated 2026-01-01



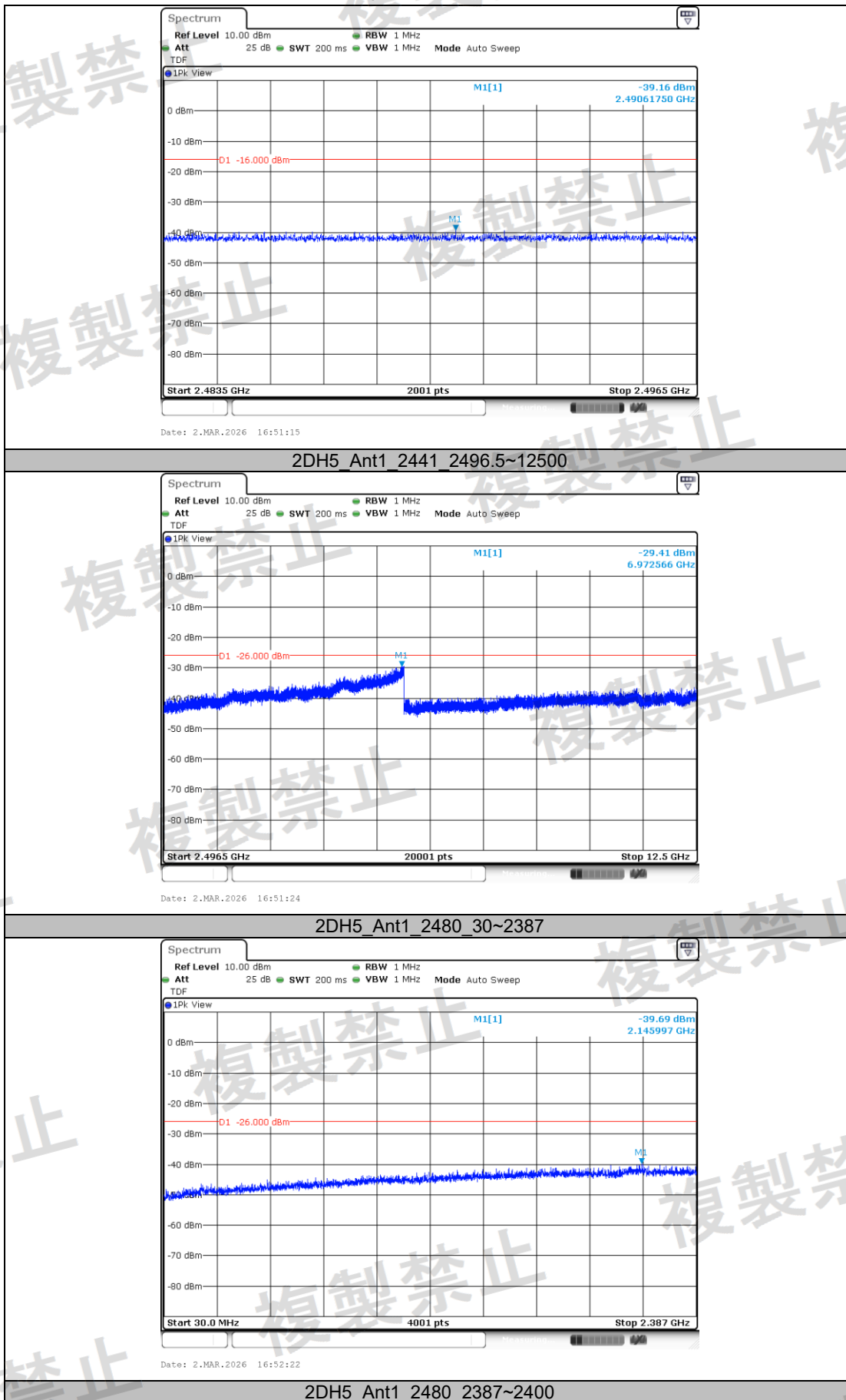
2DH5_Ant1_2441_30~2387



2DH5_Ant1_2441_2387~2400



2DH5_Ant1_2441_2483.5~2496.5



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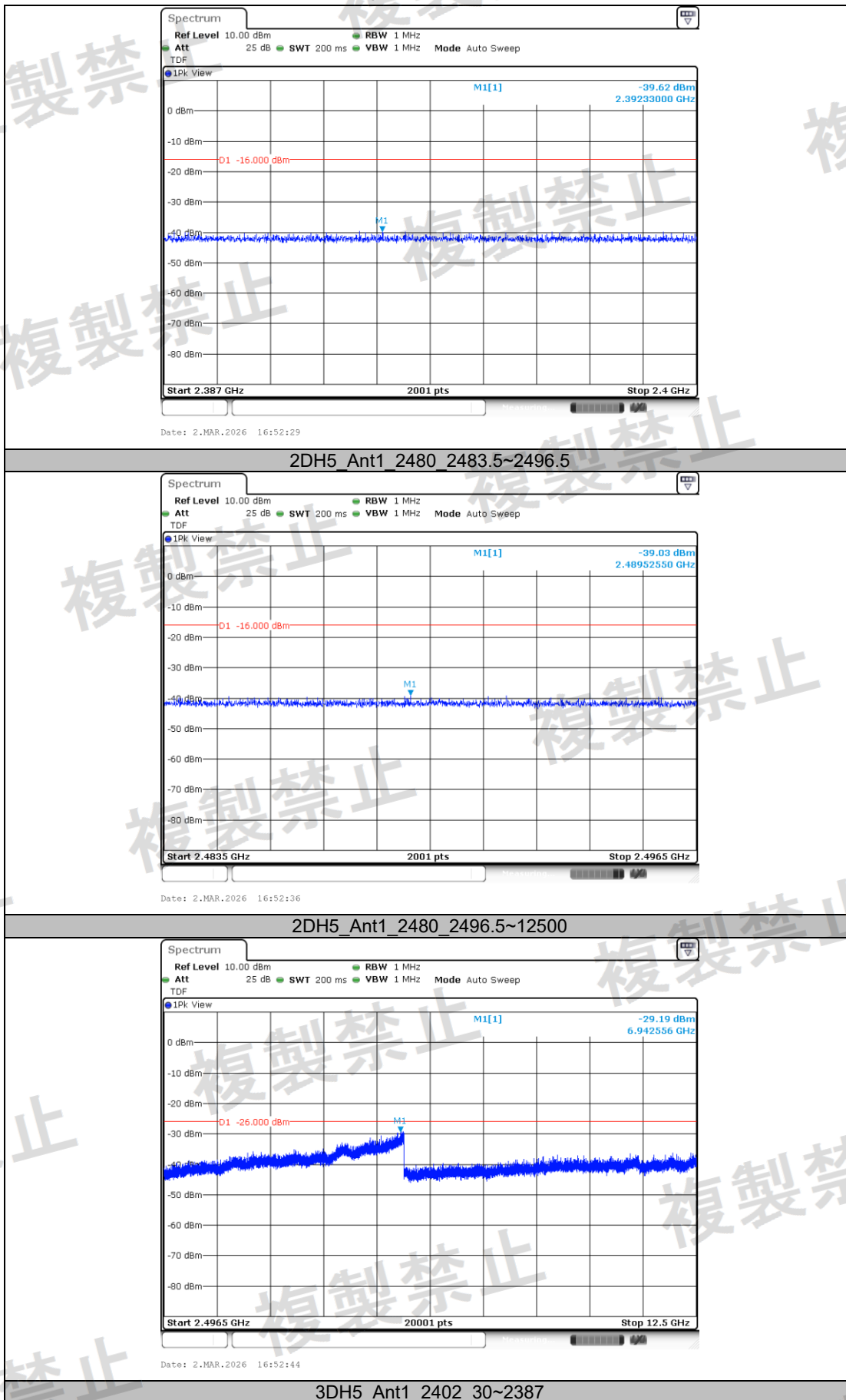
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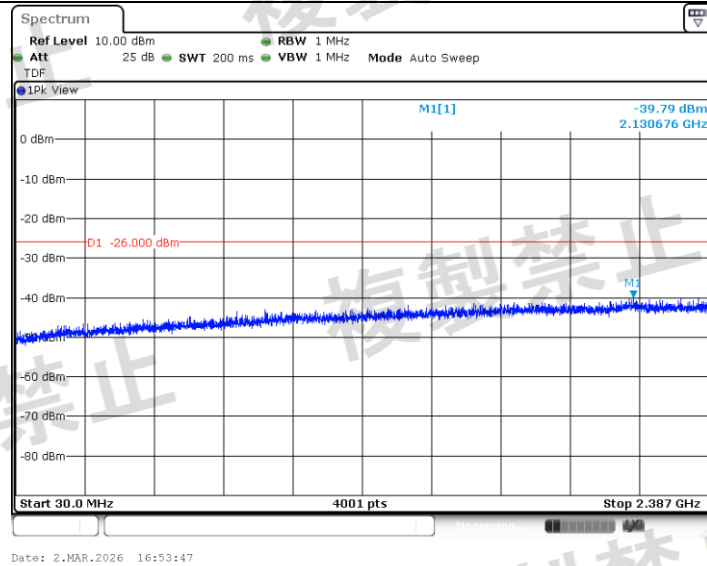
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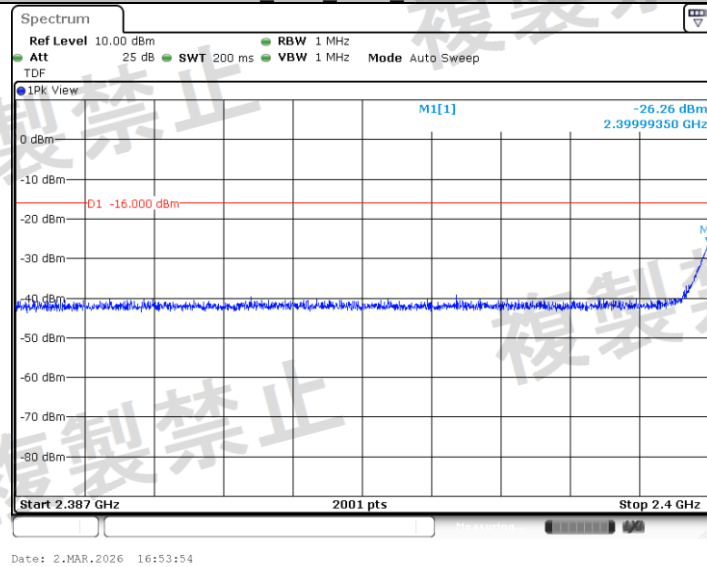
Http://www.sz-ctc.org.cn

TRF No: CTC-TR-074_A3

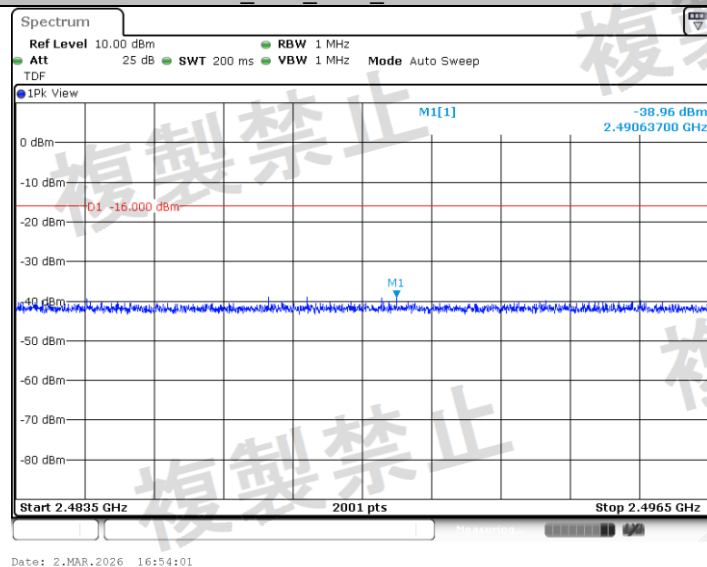
Master TRF : Dated 2026-01-01



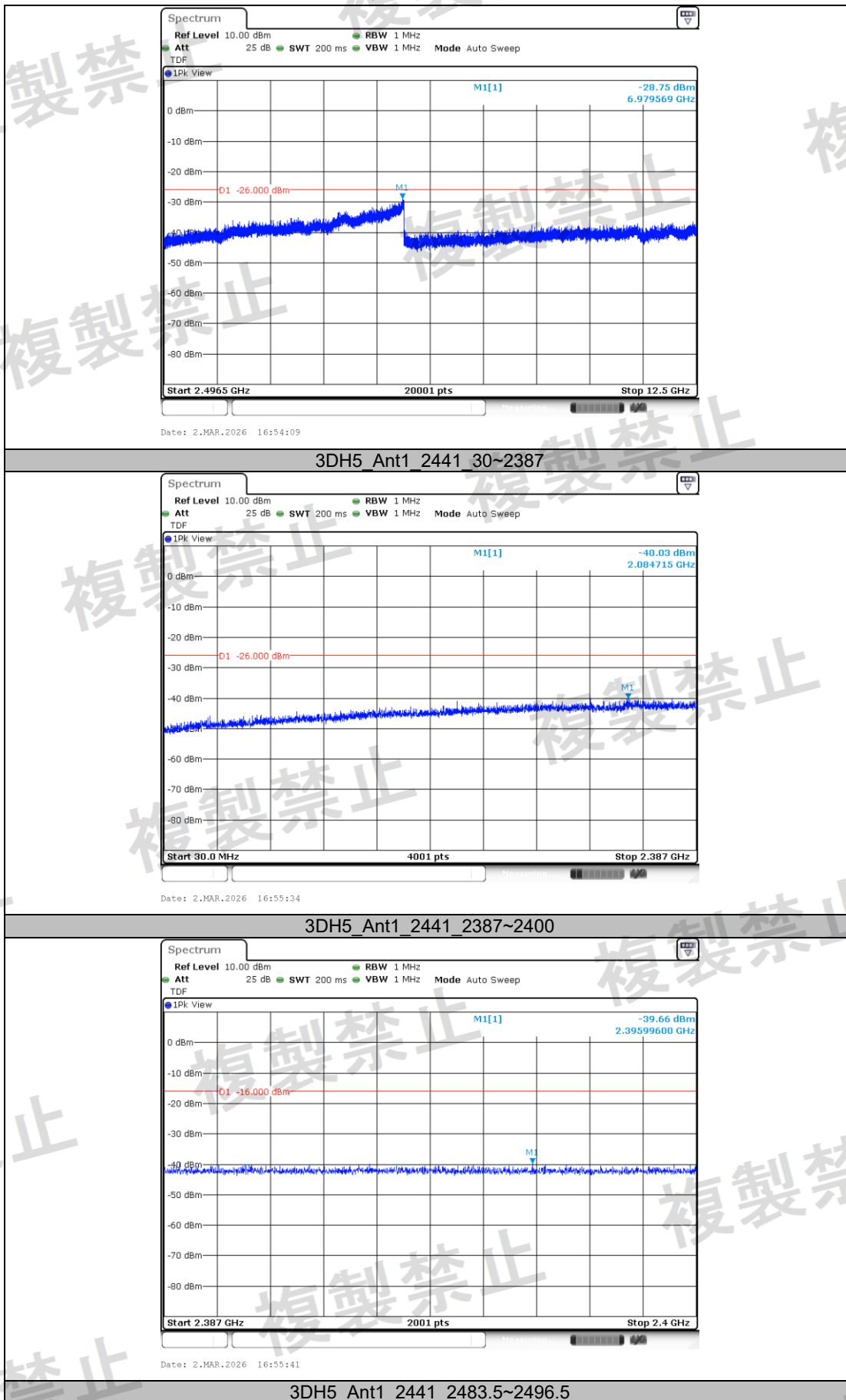
3DH5_Ant1_2402_2387~2400



3DH5_Ant1_2402_2483.5~2496.5



3DH5_Ant1_2402_2496.5~12500



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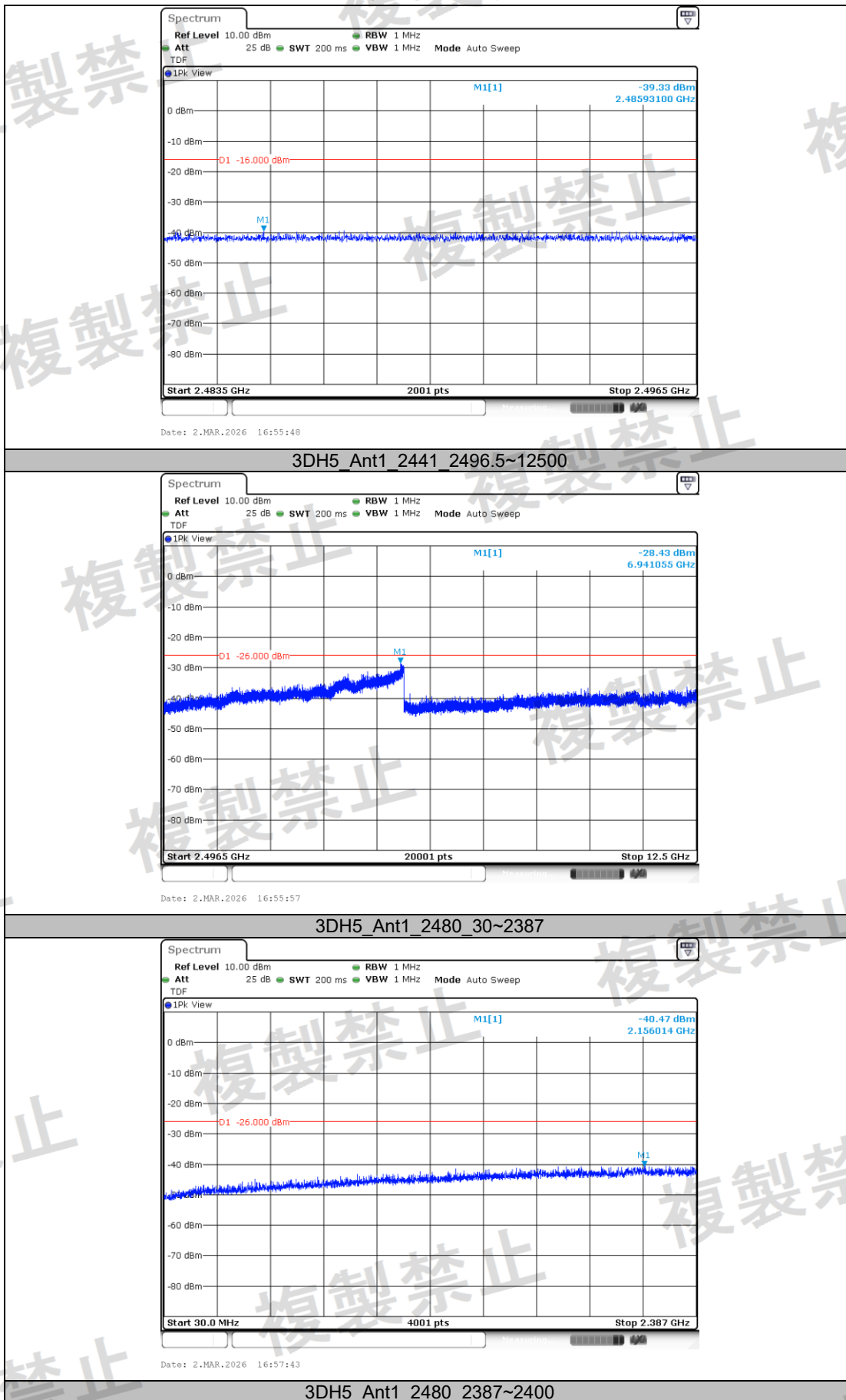
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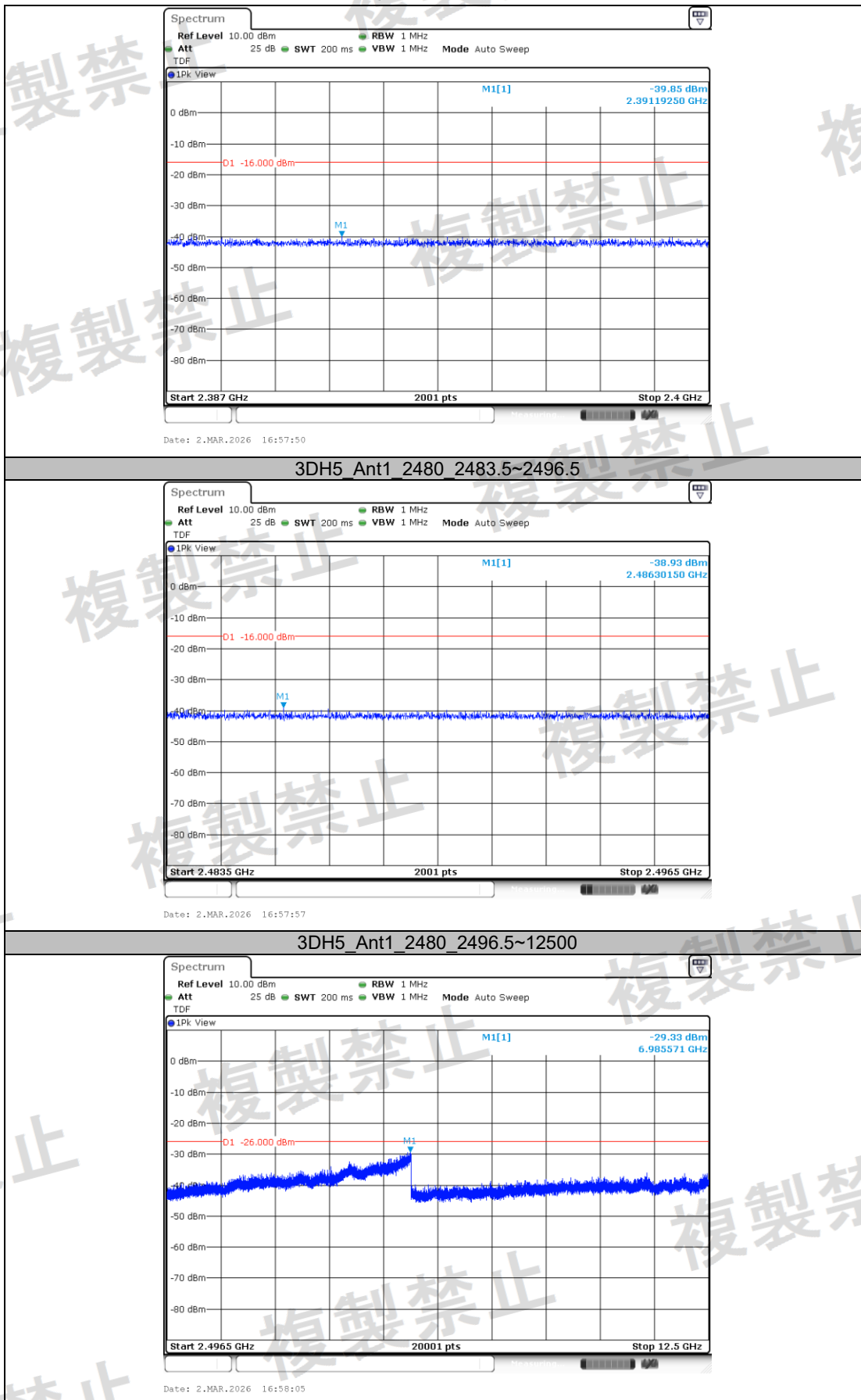
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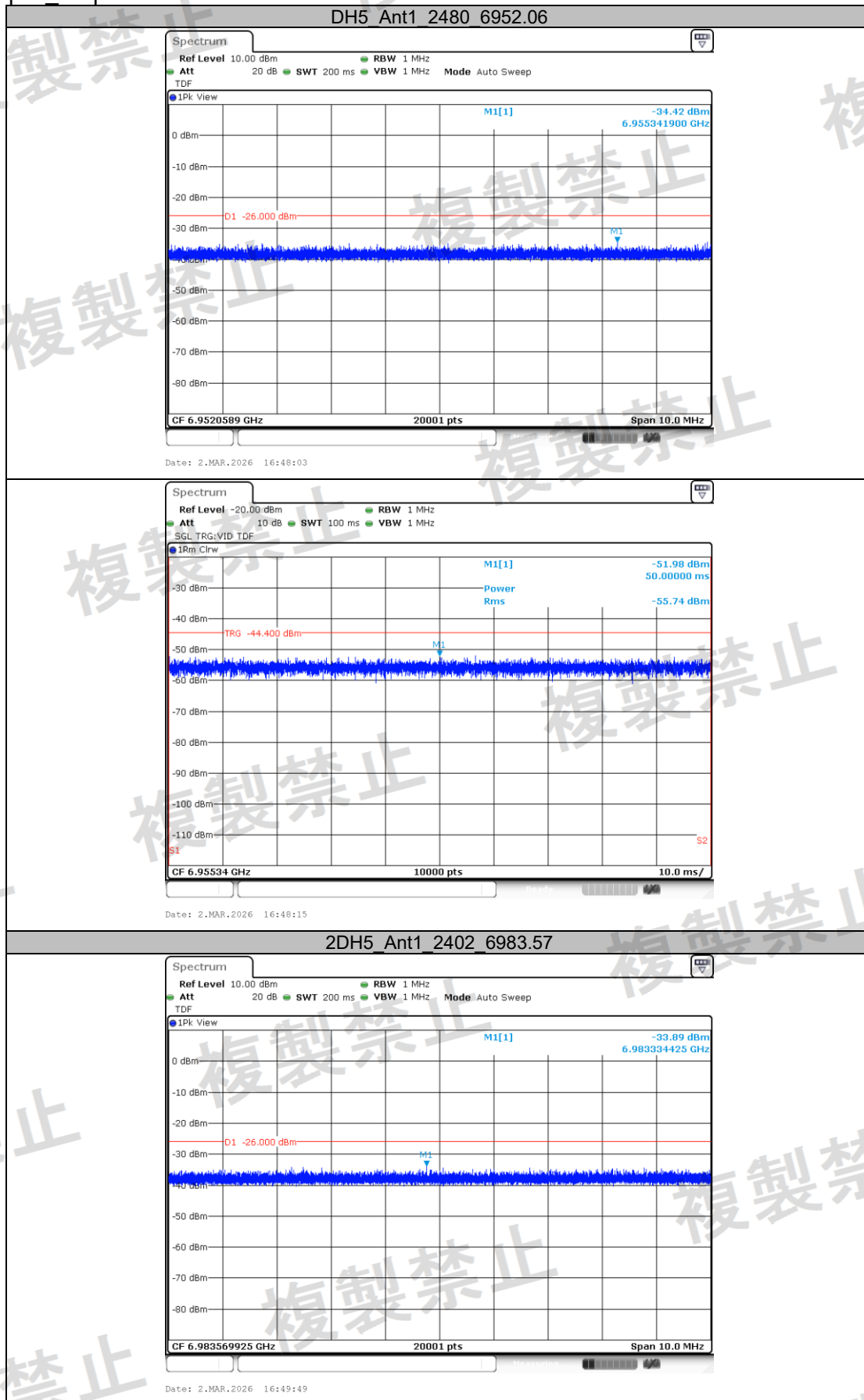
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Master TRF : Dated 2026-01-01



Test Graphs Step2

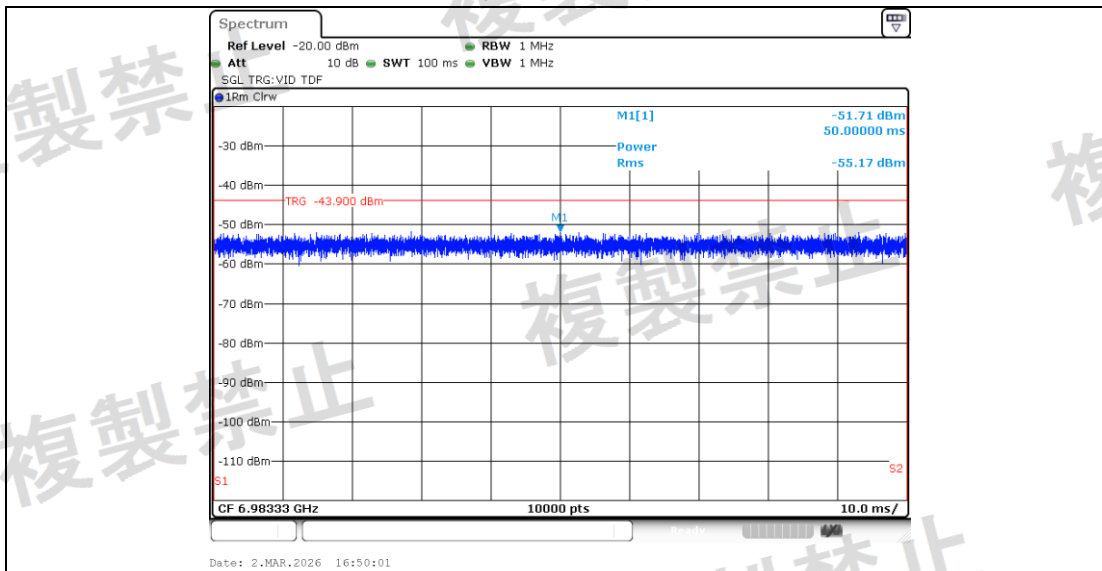


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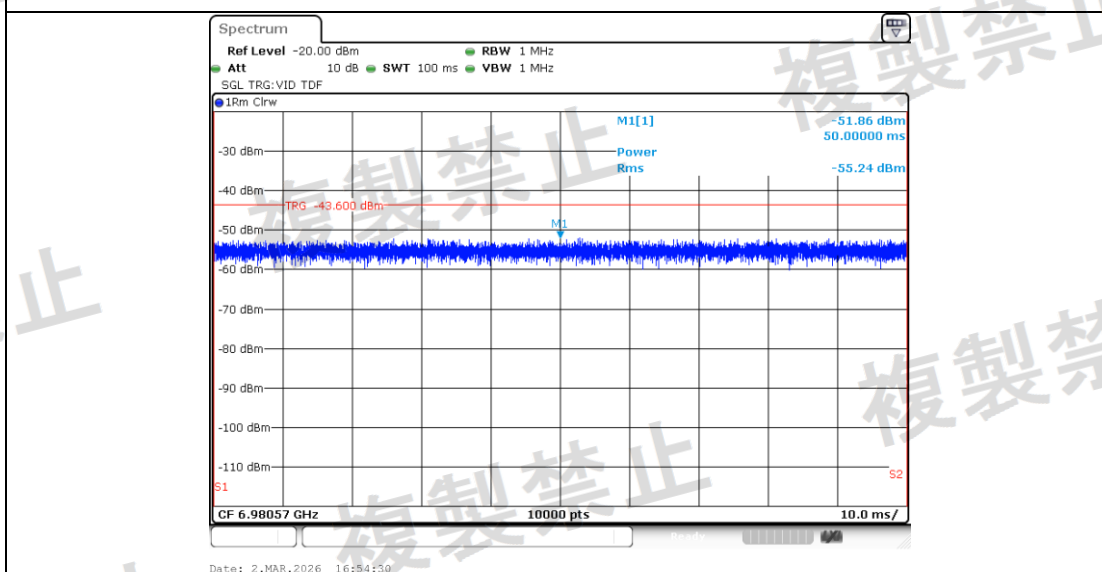
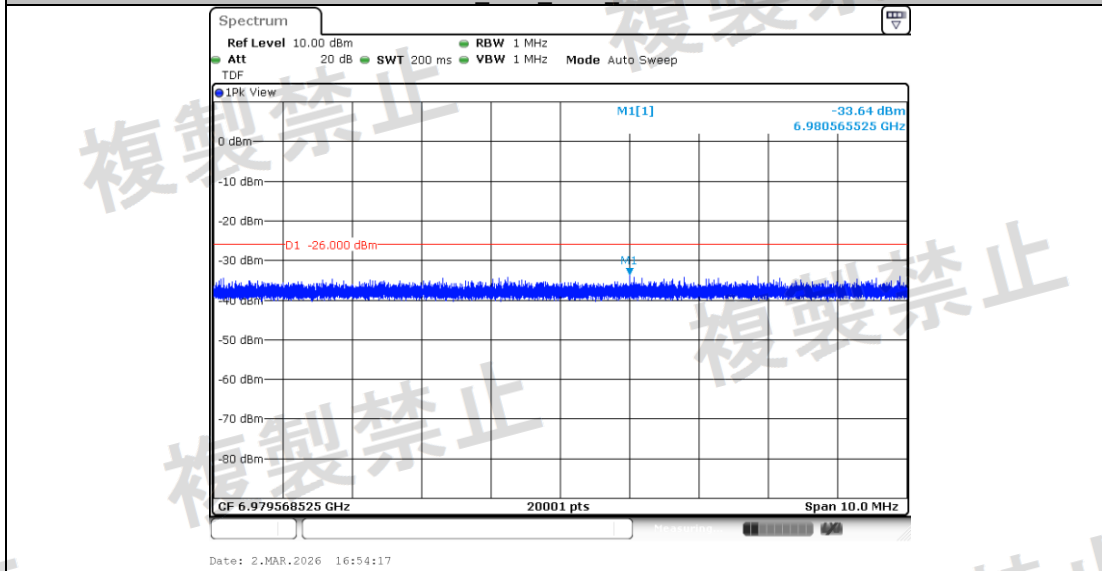
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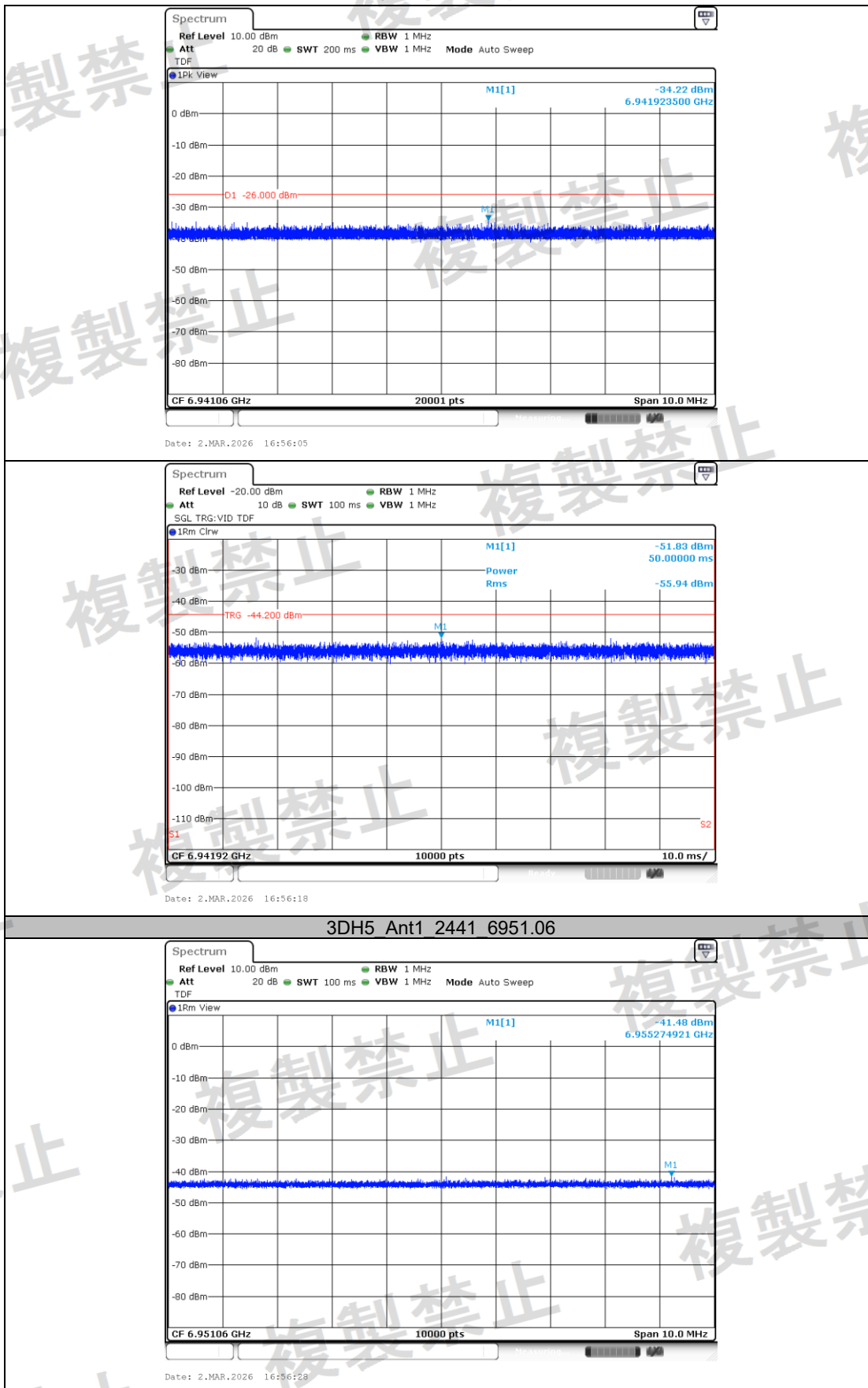
Master TRF : Dated 2026-01-01

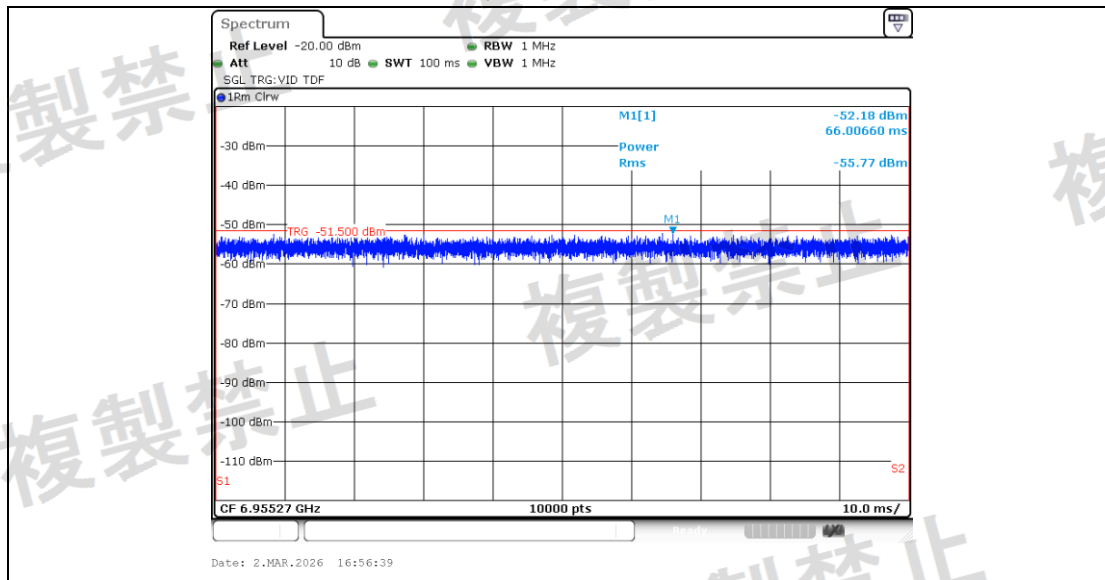


3DH5_Ant1_2402_6979.57



3DH5_Ant1_2441_6941.06







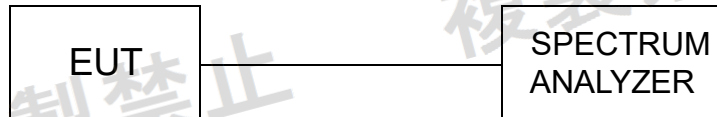
3.6. Limit of secondary radiated emissions

LIMIT

Below 1GHz: 4.0nW (-54dBm) or less

Above 1GHz: 20nW (-47dBm) or less

TEST CONFIGURATION



TEST PROCEDURE

The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram as TEST CONFIGURATION shows.

EUT Condition: modulation

Spectrum Condition:

Frequency: 30MHz-12.5GHz

Below 1GHz, RBW=VBW=100KHz;

Above 1GHz, RBW=VBW=1MHz,

Sweep time: Auto

Detector mode: Positive peak

Indication mode: Max hold

TEST RESULTS



Measurement Data:

Test Mode	Antenna	Freq(MHz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
DH5	Ant1	2402	30~1000	949.56	-63.54	≤-54	0.44259	≤4	See table below
			1000~12500	6986.9	-55.38	≤-47	2.89734	≤20	See table below
		2441	30~1000	911.53	-64.00	≤-54	0.39811	≤4	PASS
			1000~12500	6917.33	-55.58	≤-47	2.76694	≤20	See table below
		2480	30~1000	872.45	-63.28	≤-54	0.46989	≤4	See table below
			1000~12500	3406.38	-48.65	≤-47	13.64583	≤20	See table below
2DH5	Ant1	2402	30~1000	969.45	-63.97	≤-54	0.40087	≤4	See table below
			1000~12500	6975.98	-54.94	≤-47	3.20627	≤20	See table below
		2441	30~1000	996.61	-63.91	≤-54	0.40644	≤4	See table below
			1000~12500	6917.9	-55.40	≤-47	2.88403	≤20	See table below
		2480	30~1000	918.52	-63.57	≤-54	0.43954	≤4	See table below
			1000~12500	6948.95	-55.58	≤-47	2.76694	≤20	See table below
3DH5	Ant1	2402	30~1000	984.97	-63.92	≤-54	0.40551	≤4	See table below
			1000~12500	6950.1	-55.31	≤-47	2.94442	≤20	See table below
		2441	30~1000	848.68	-63.07	≤-54	0.49317	≤4	See table below
			1000~12500	6979.43	-55.31	≤-47	2.94442	≤20	See table below
		2480	30~1000	877.78	-62.78	≤-54	0.52723	≤4	See table below
			1000~12500	6971.95	-55.37	≤-47	2.90402	≤20	See table below

Test Result Step2

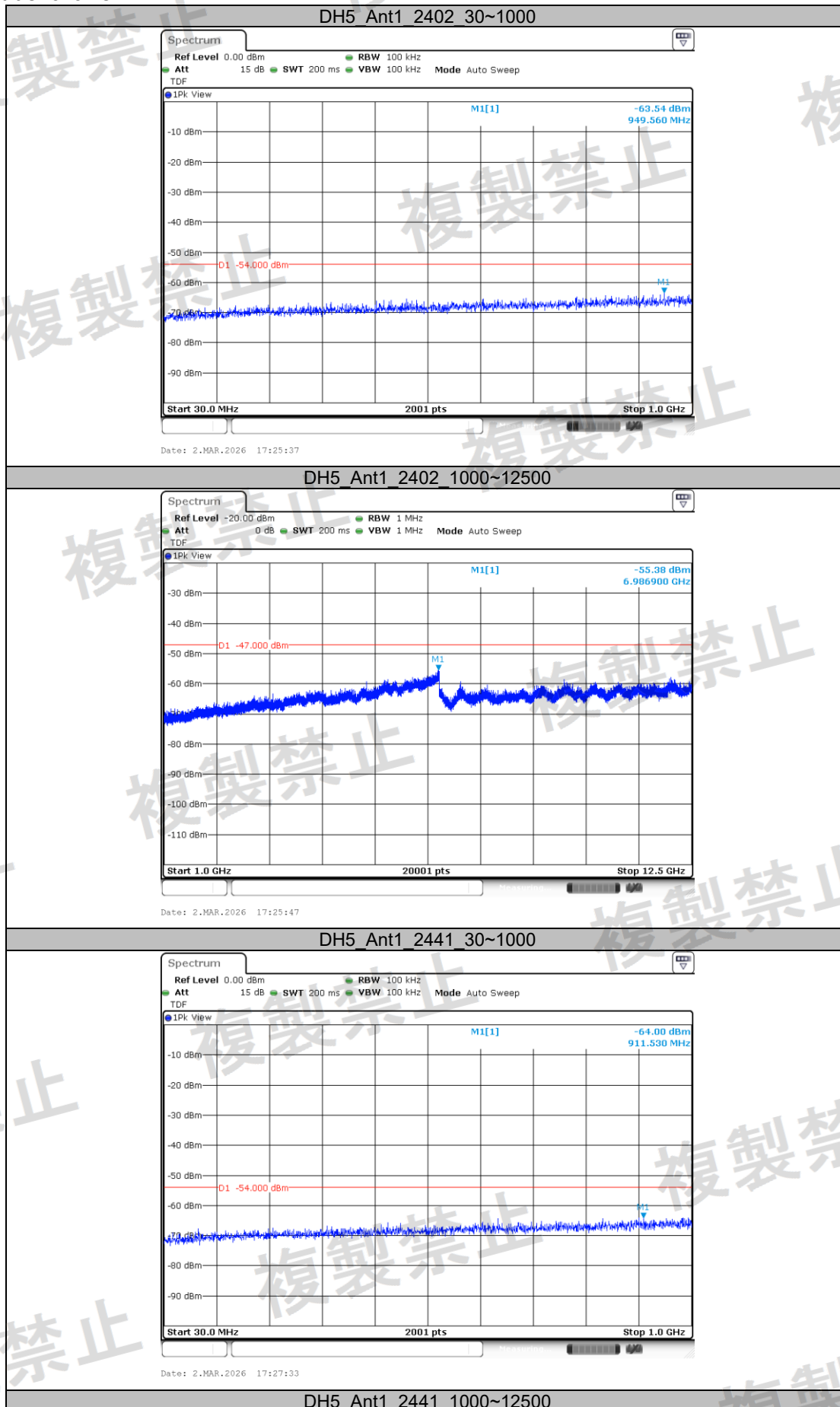
Test Mode	Antenna	Freq(MHz)	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
DH5	Ant1	2402	6855.80	-67.38	≤-47	0.18281	≤20	PASS
			6929.40	-66.15	≤-47	0.24266	≤20	PASS
			6986.90	-65.01	≤-47	0.31550	≤20	PASS
		2441	6783.35	-67.63	≤-47	0.17258	≤20	PASS
			6866.73	-67.10	≤-47	0.19498	≤20	PASS
			6881.10	-66.96	≤-47	0.20137	≤20	PASS
			6917.33	-66.27	≤-47	0.23605	≤20	PASS



		2480	6951.25	-65.70	≤ -47	0.26915	≤ 20	PASS
			872.45	-89.91	≤ -54	0.00102	≤ 4	PASS
			971.87	-89.32	≤ -54	0.00117	≤ 4	PASS
			1772.23	-77.48	≤ -47	0.01786	≤ 20	PASS
			3406.38	-74.93	≤ -47	0.03214	≤ 20	PASS
			6881.10	-66.98	≤ -47	0.20045	≤ 20	PASS
			6903.53	-66.56	≤ -47	0.22080	≤ 20	PASS
			6920.20	-66.28	≤ -47	0.23550	≤ 20	PASS
2DH5	Ant1	2402	6950.10	-65.70	≤ -47	0.26915	≤ 20	PASS
			6705.15	-68.04	≤ -47	0.15704	≤ 20	PASS
			6825.33	-67.61	≤ -47	0.17338	≤ 20	PASS
			6848.33	-67.50	≤ -47	0.17783	≤ 20	PASS
			6881.10	-66.89	≤ -47	0.20464	≤ 20	PASS
			6899.50	-66.51	≤ -47	0.22336	≤ 20	PASS
		2441	6975.98	-65.24	≤ -47	0.29923	≤ 20	PASS
			932.10	-89.39	≤ -54	0.00115	≤ 4	PASS
			996.61	-89.30	≤ -54	0.00117	≤ 4	PASS
			6800.60	-67.68	≤ -47	0.17061	≤ 20	PASS
			6917.90	-66.30	≤ -47	0.23442	≤ 20	PASS
			6999.55	-70.77	≤ -47	0.08375	≤ 20	PASS
		2480	885.06	-89.79	≤ -54	0.00105	≤ 4	PASS
			918.52	-89.75	≤ -54	0.00106	≤ 4	PASS
			6865.58	-67.13	≤ -47	0.19364	≤ 20	PASS
			6888.58	-66.81	≤ -47	0.20845	≤ 20	PASS
			6904.10	-66.46	≤ -47	0.22594	≤ 20	PASS
			6948.95	-65.69	≤ -47	0.26977	≤ 20	PASS
			6965.63	-65.55	≤ -47	0.27861	≤ 20	PASS
			6993.23	-64.87	≤ -47	0.32584	≤ 20	PASS
3DH5	Ant1	2402	6821.30	-67.58	≤ -47	0.17458	≤ 20	PASS
			6876.50	-66.90	≤ -47	0.20417	≤ 20	PASS
			6917.33	-66.25	≤ -47	0.23714	≤ 20	PASS
			6933.43	-66.13	≤ -47	0.24378	≤ 20	PASS
			6950.10	-65.68	≤ -47	0.27040	≤ 20	PASS
		2441	6821.88	-67.60	≤ -47	0.17378	≤ 20	PASS
			6912.15	-66.41	≤ -47	0.22856	≤ 20	PASS
			6979.43	-65.22	≤ -47	0.30061	≤ 20	PASS
		2480	801.64	-90.37	≤ -54	0.00092	≤ 4	PASS
			877.78	-89.96	≤ -54	0.00101	≤ 4	PASS
			951.02	-89.06	≤ -54	0.00124	≤ 4	PASS
			6719.53	-67.87	≤ -47	0.16331	≤ 20	PASS
			6804.63	-67.64	≤ -47	0.17219	≤ 20	PASS
			6823.03	-67.58	≤ -47	0.17458	≤ 20	PASS
			6870.75	-67.15	≤ -47	0.19275	≤ 20	PASS
			6901.80	-66.47	≤ -47	0.22542	≤ 20	PASS
			6931.70	-66.00	≤ -47	0.25119	≤ 20	PASS
			6971.95	-65.30	≤ -47	0.29512	≤ 20	PASS



Test plot as follows:



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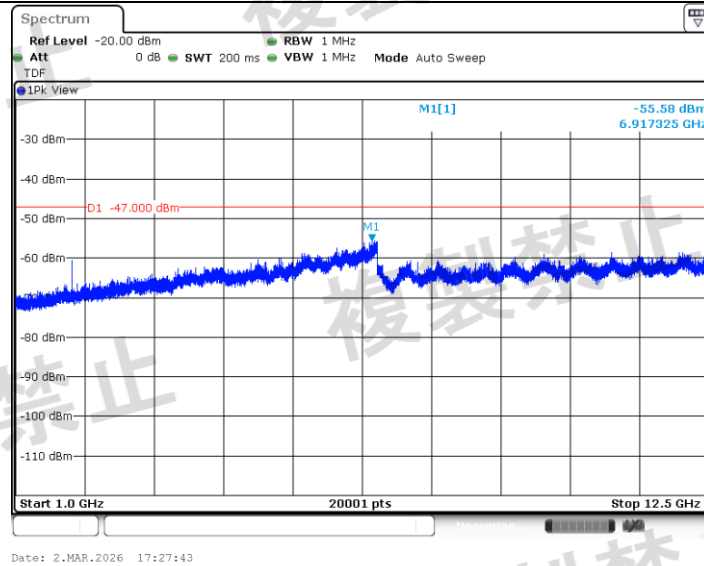
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Fax: (86)755-27521011

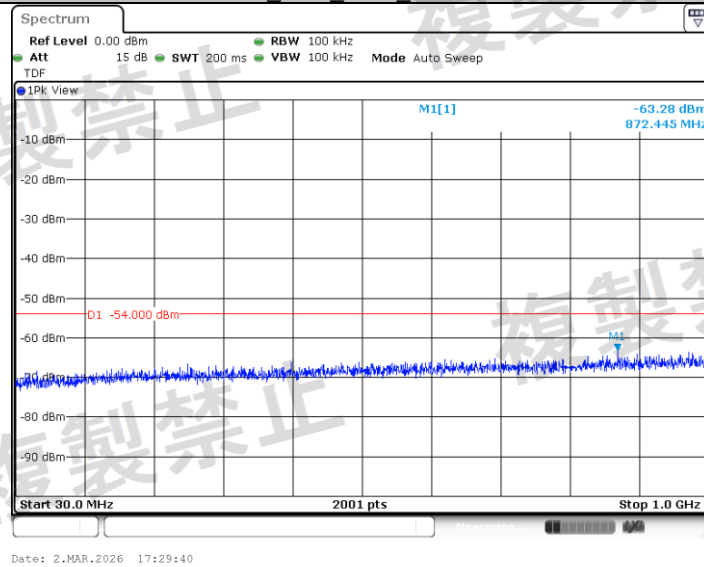
Http://www.sz-ctc.org.cn

TRF No: CTC-TR-074_A3

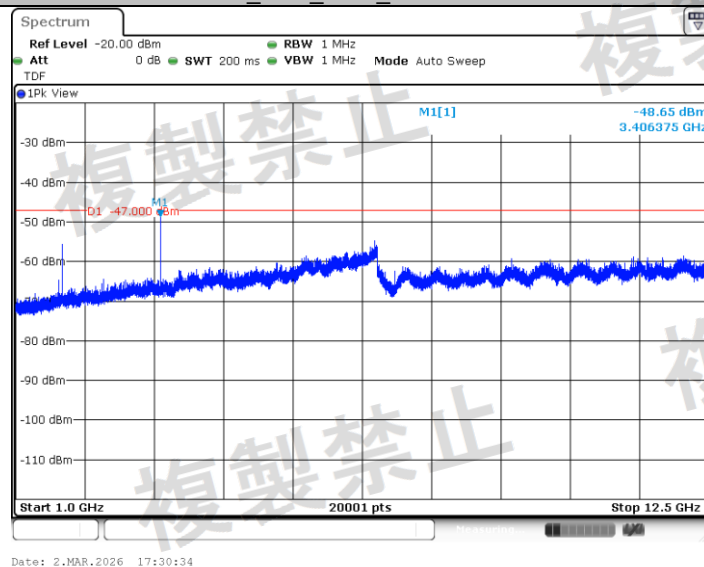
Master TRF : Dated 2026-01-01



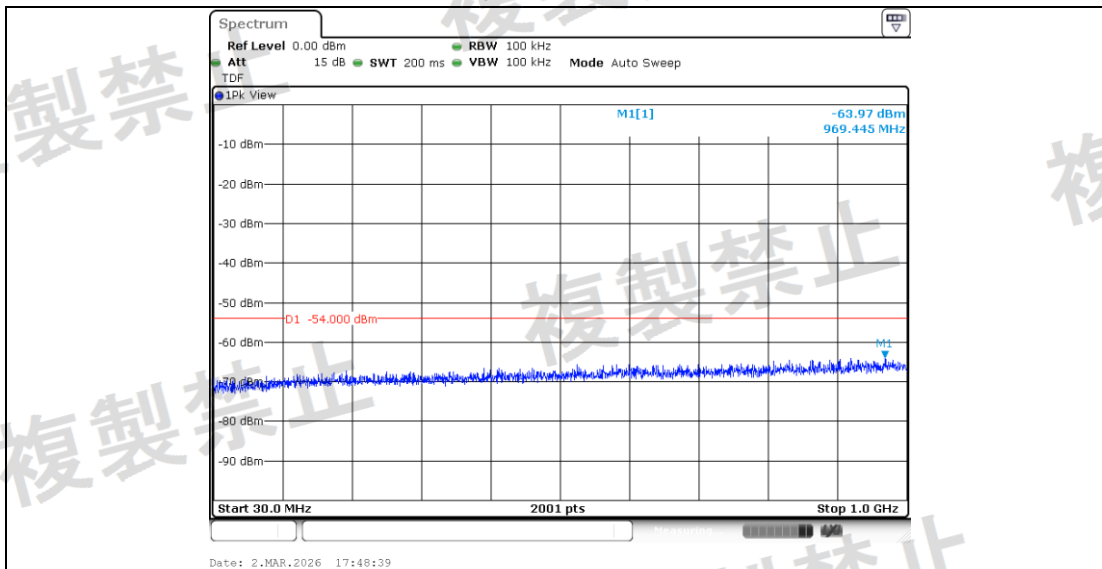
DH5_Ant1_2480_30~1000



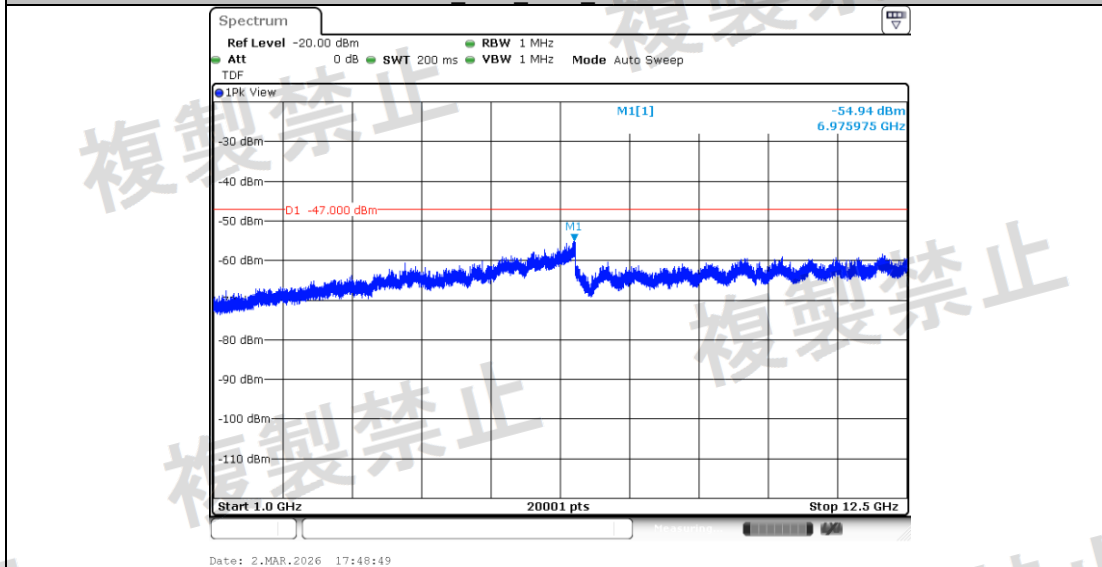
DH5_Ant1_2480_1000~12500



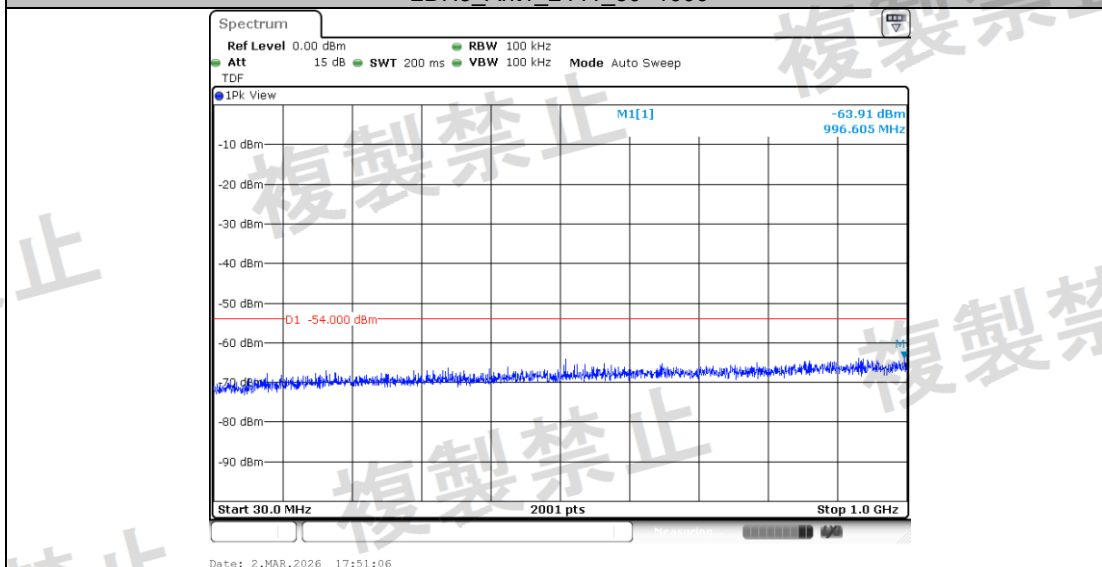
2DH5_Ant1_2402_30~1000



2DH5_Ant1_2402_1000~12500



2DH5_Ant1_2441_30~1000



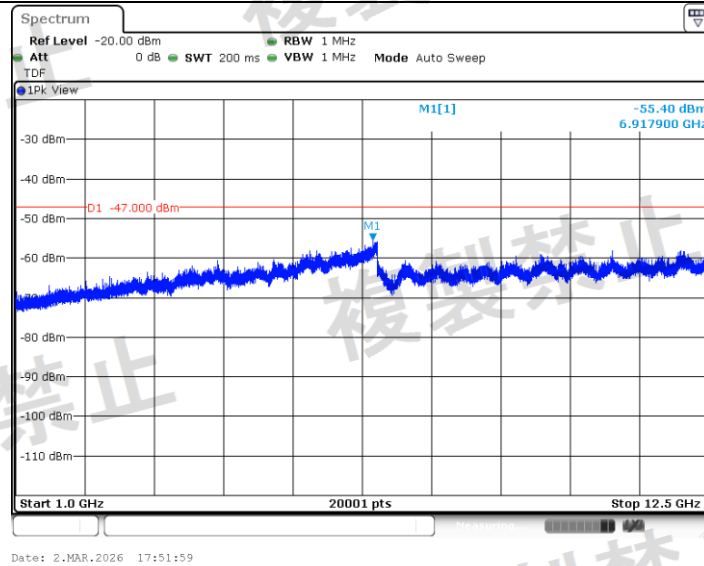
2DH5_Ant1_2441_1000~12500

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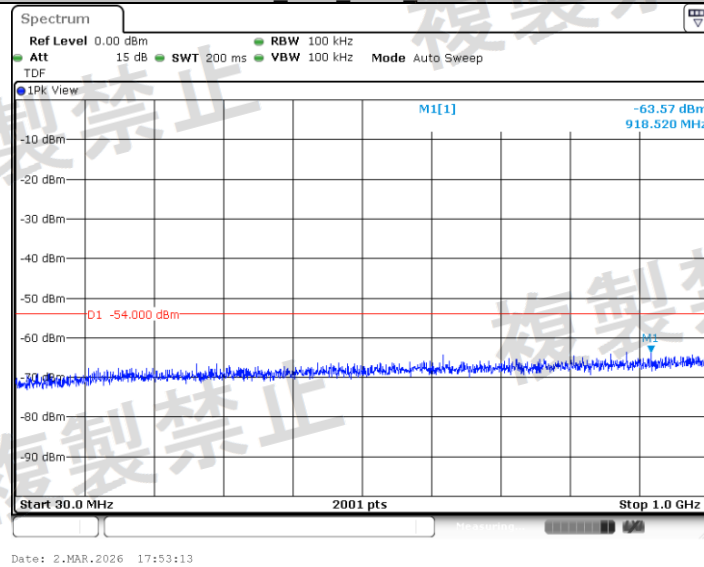
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Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn

TRF No: CTC-TR-074_A3

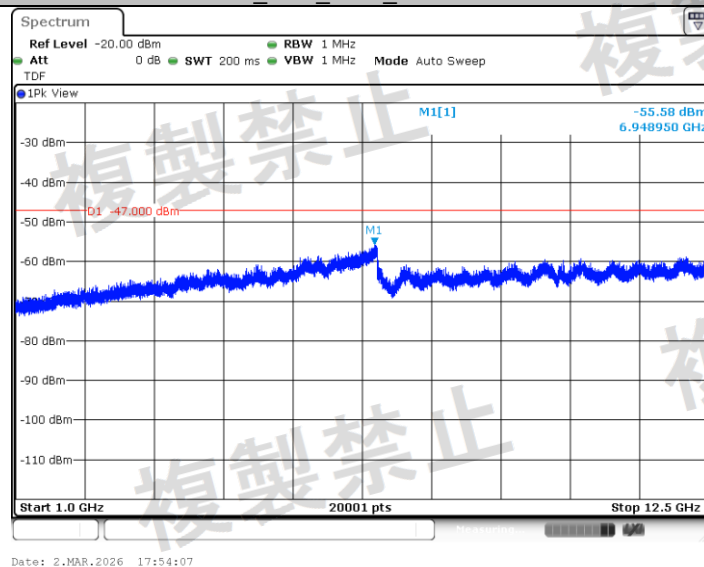
Master TRF : Dated 2026-01-01



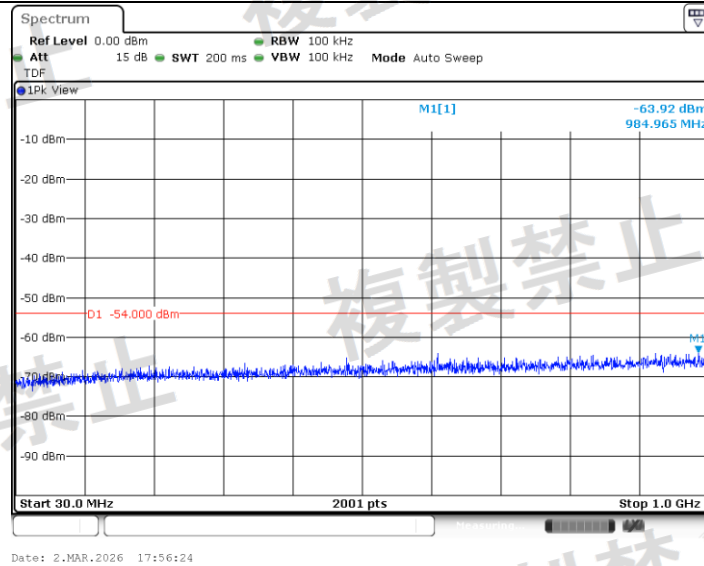
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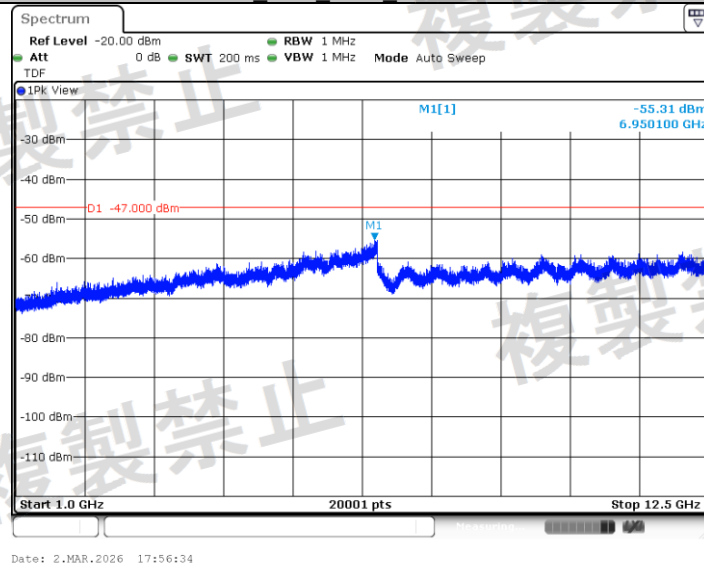
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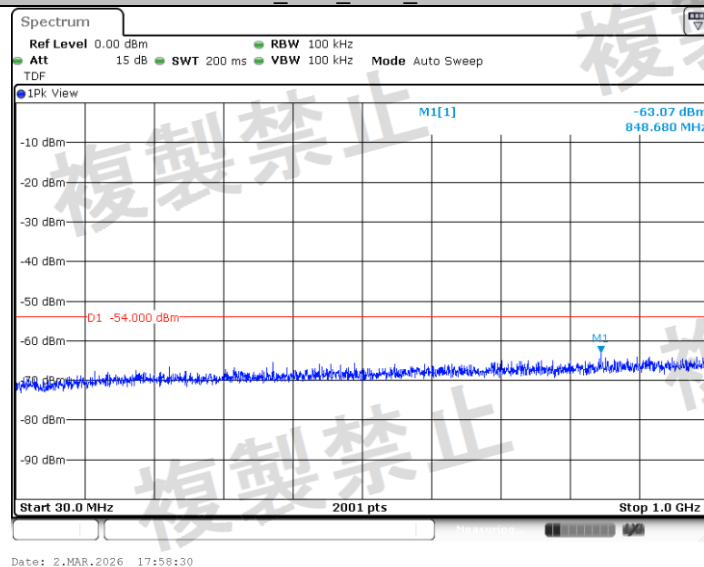
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3DH5_Ant1_2402_1000~12500



3DH5_Ant1_2441_30~1000



3DH5_Ant1_2441_1000~12500

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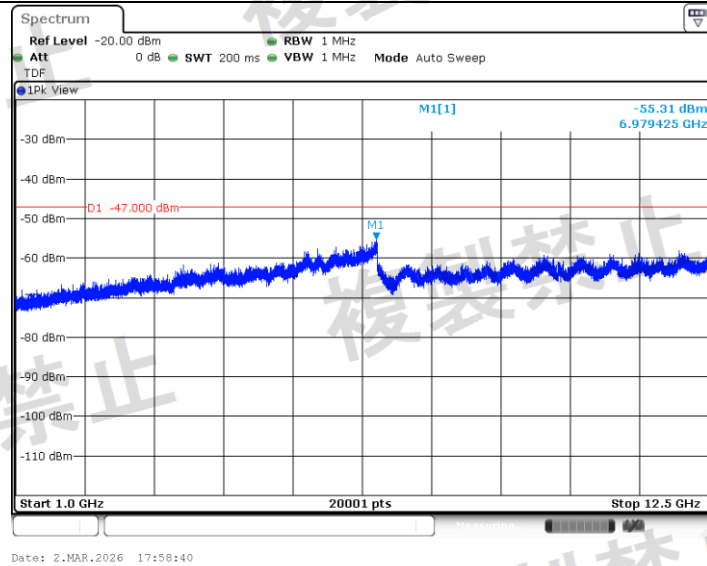
Tel.: (86)755-27521059

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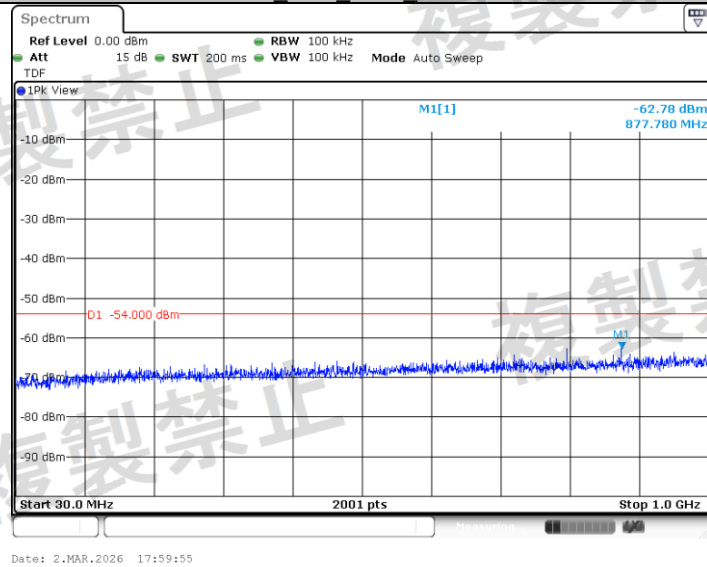
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TRF No: CTC-TR-074_A3

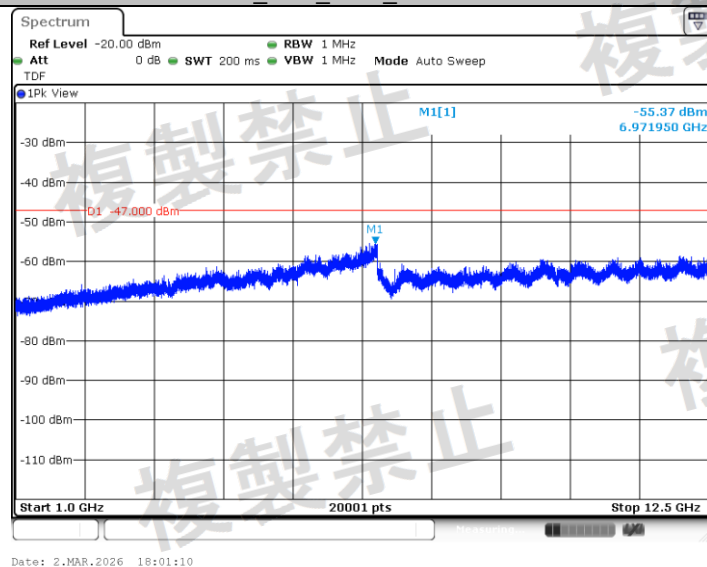
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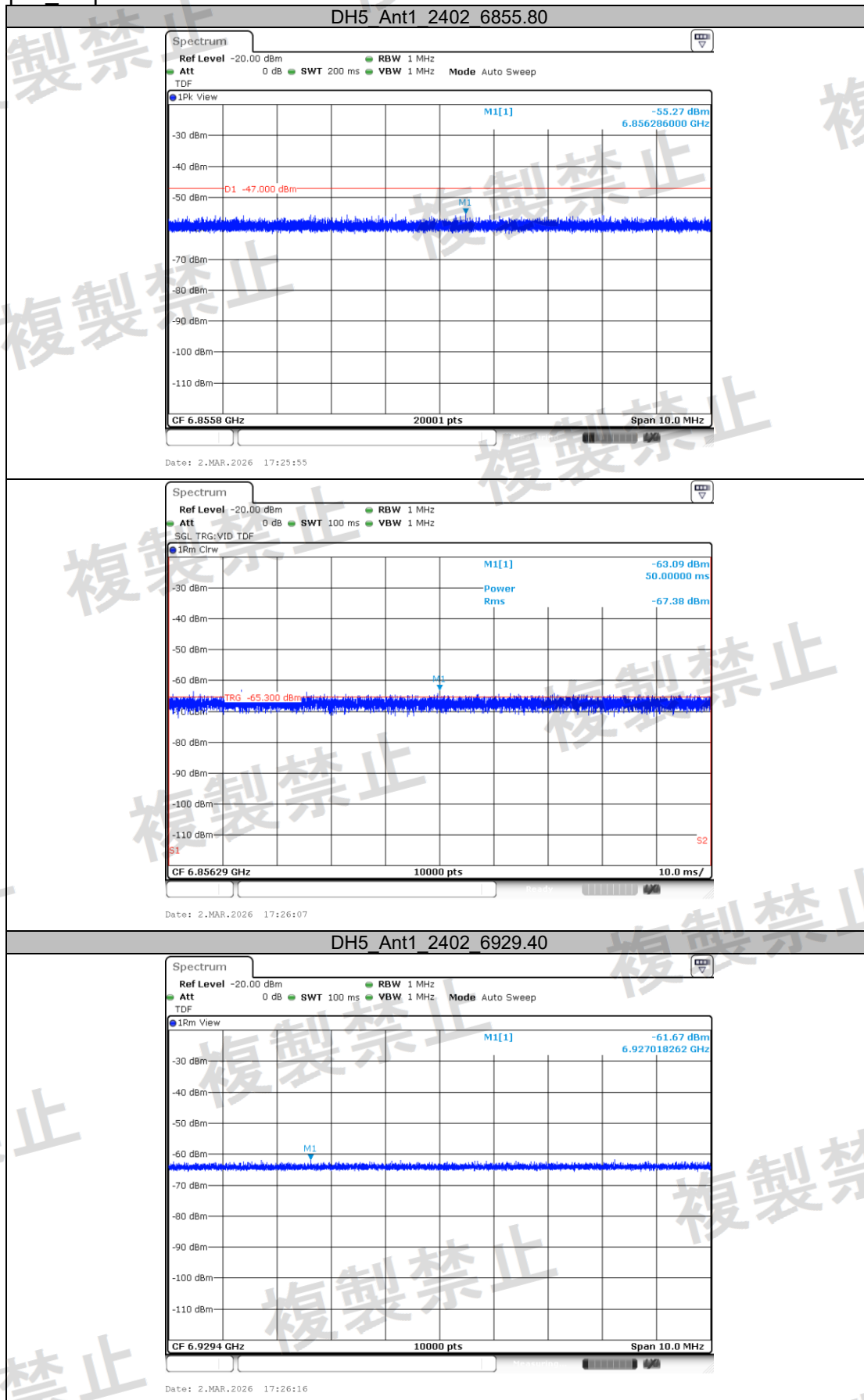


3DH5_Ant1_2480_1000~12500





Test Graphs Step2



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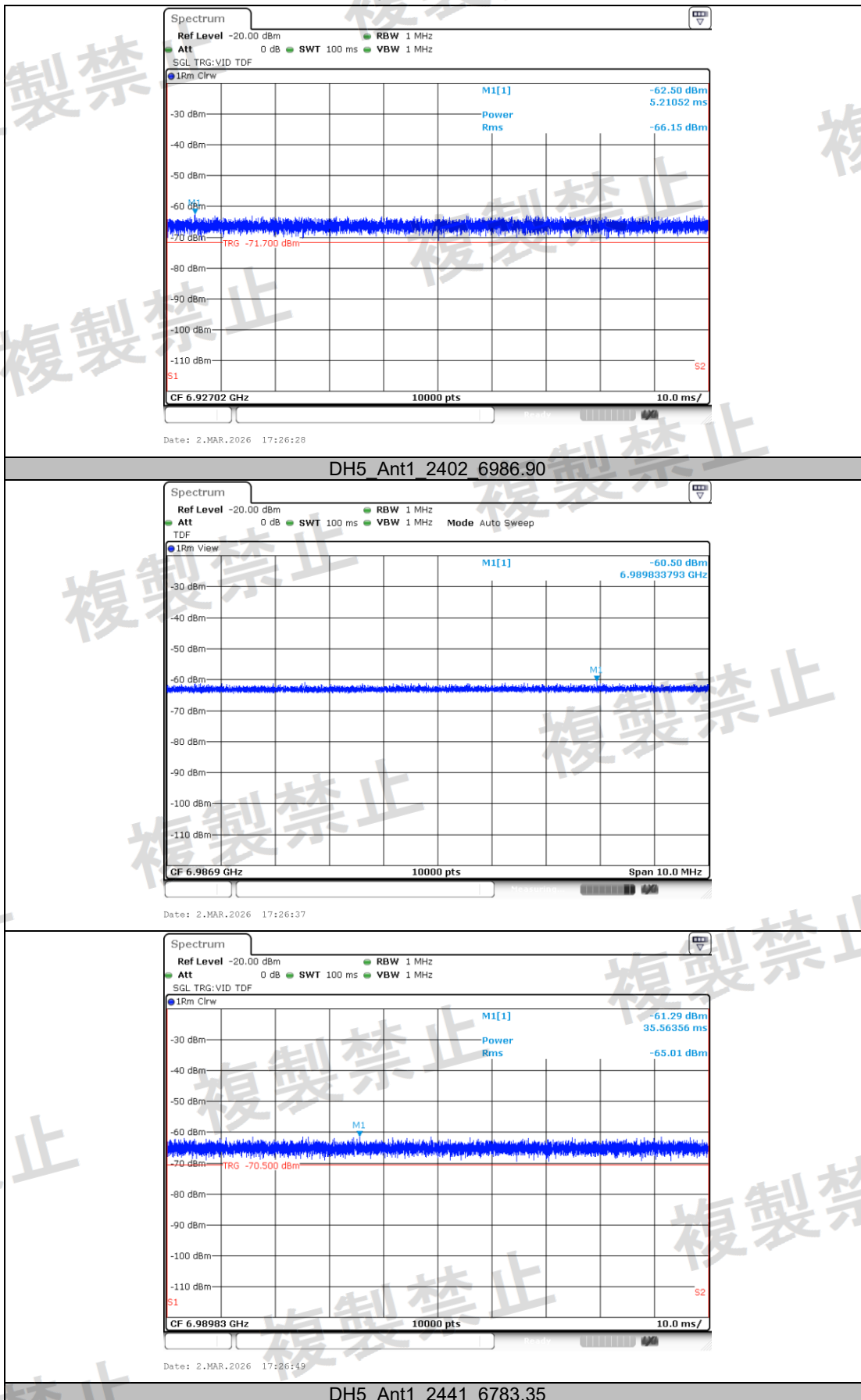
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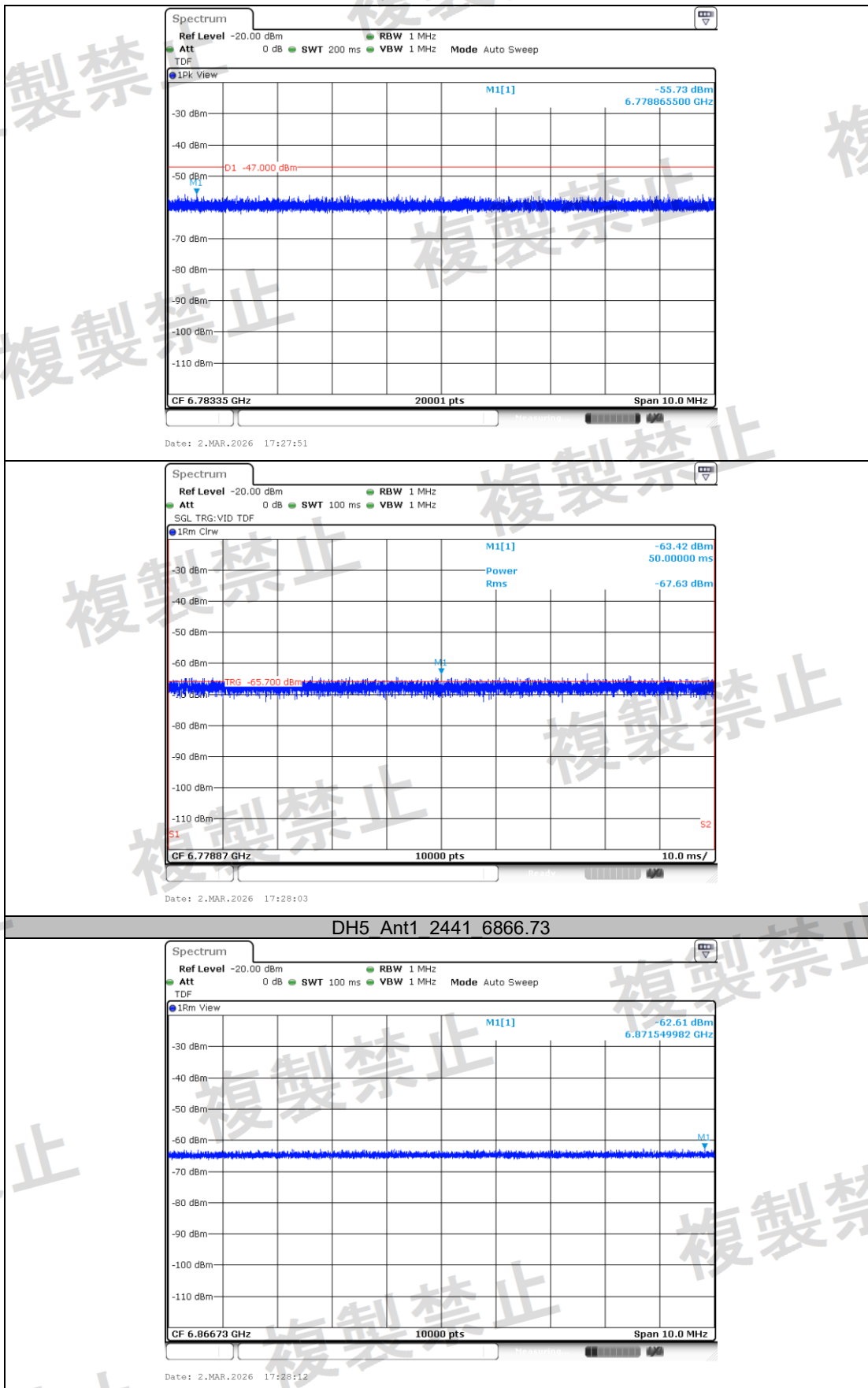
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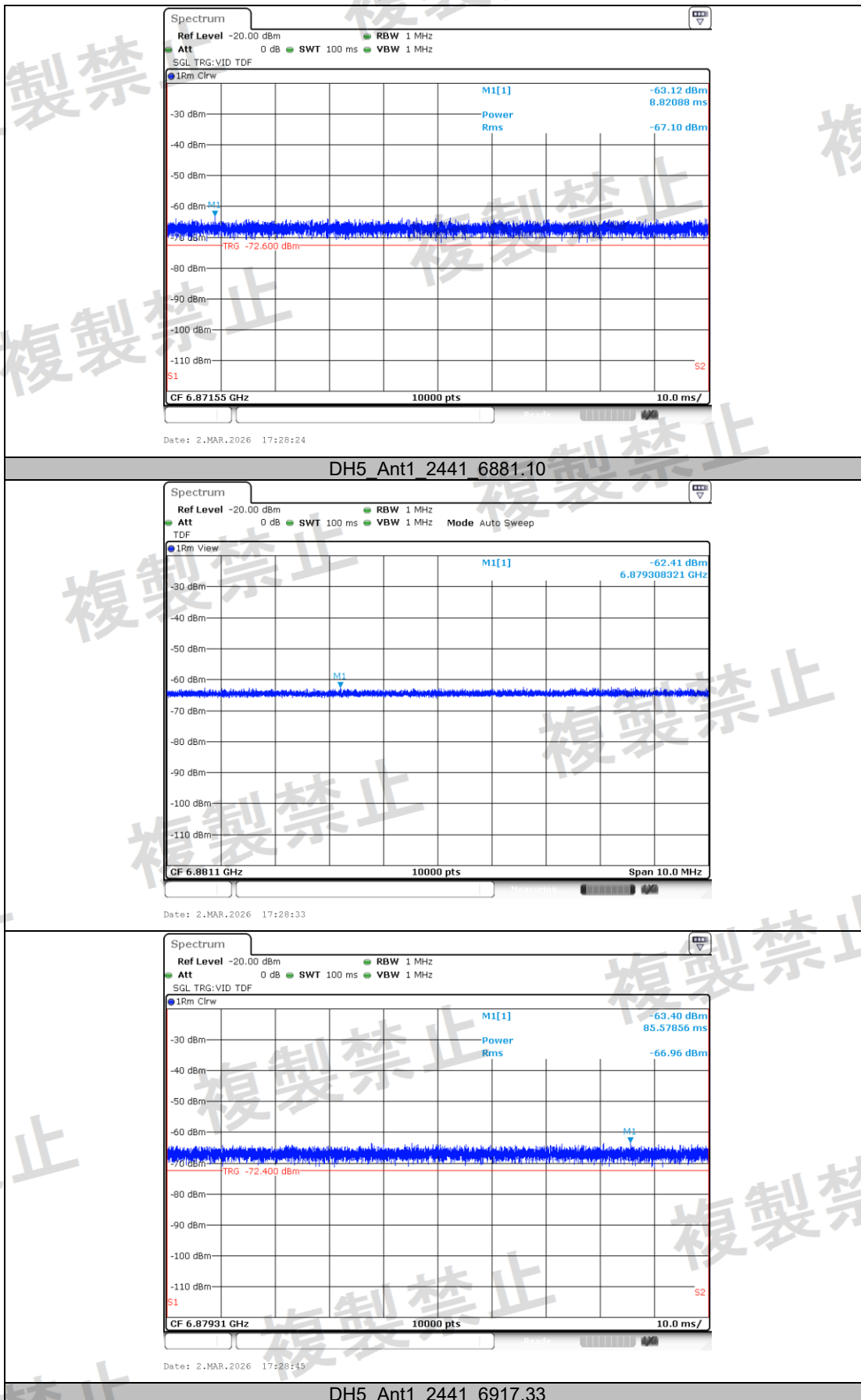
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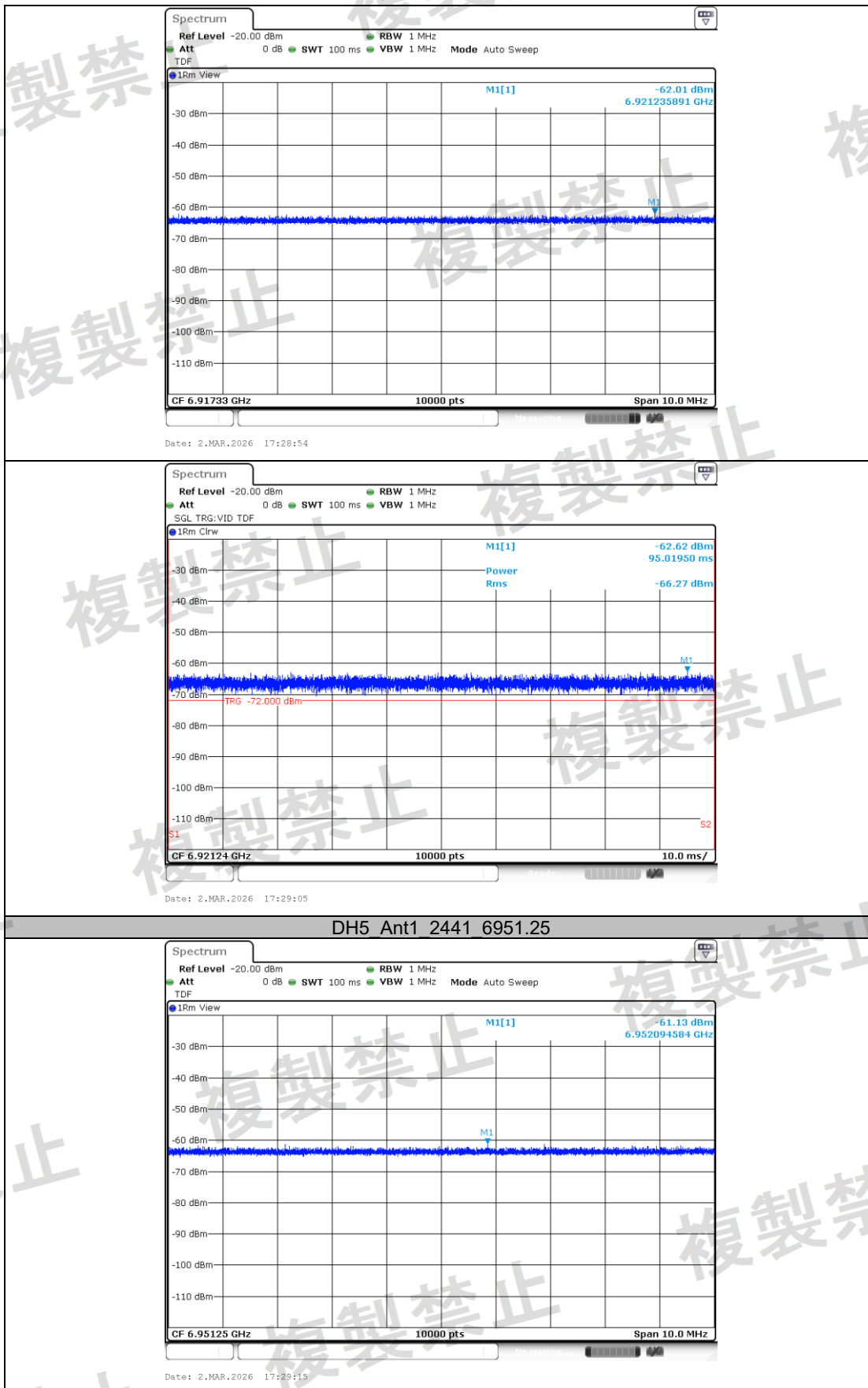
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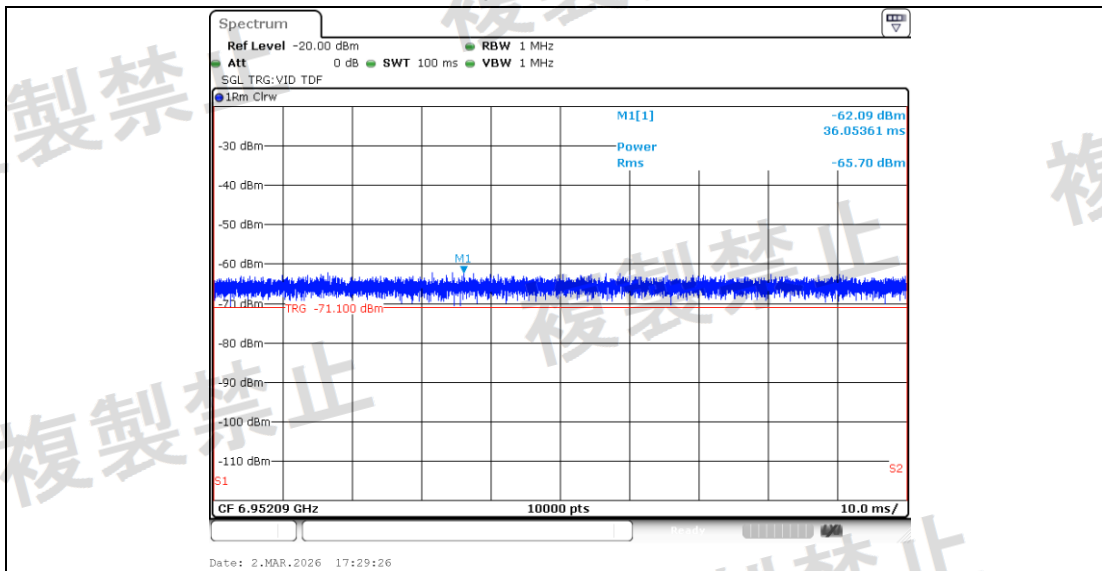




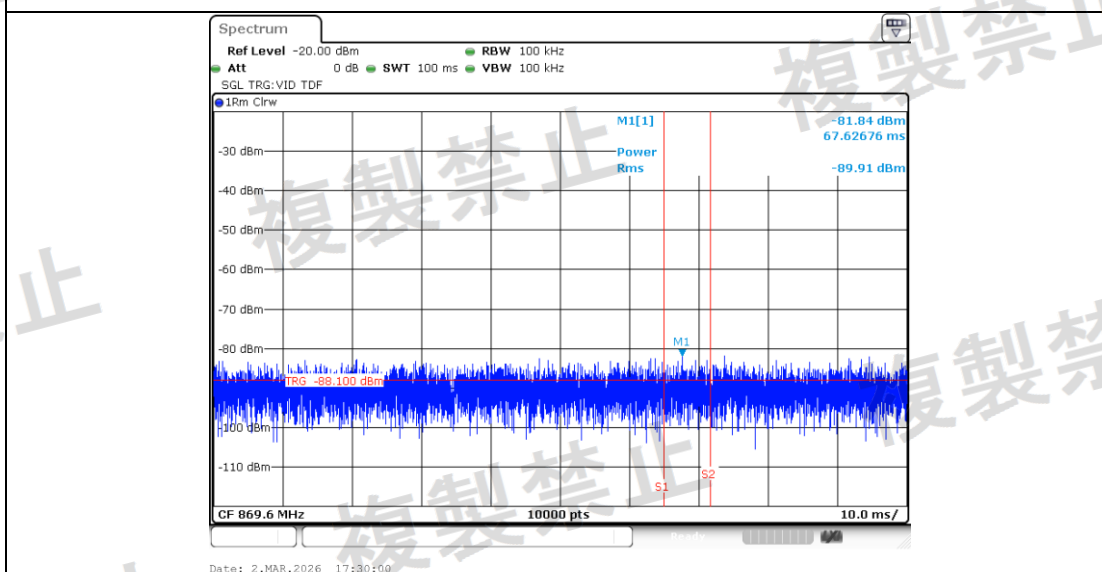
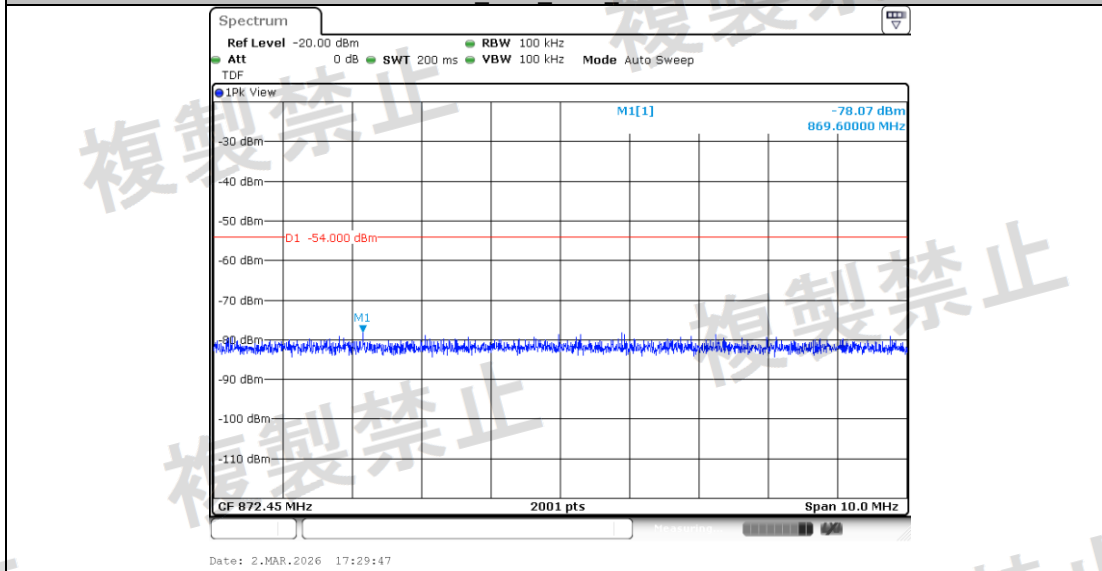




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DH5_Ant1_2480_872.45



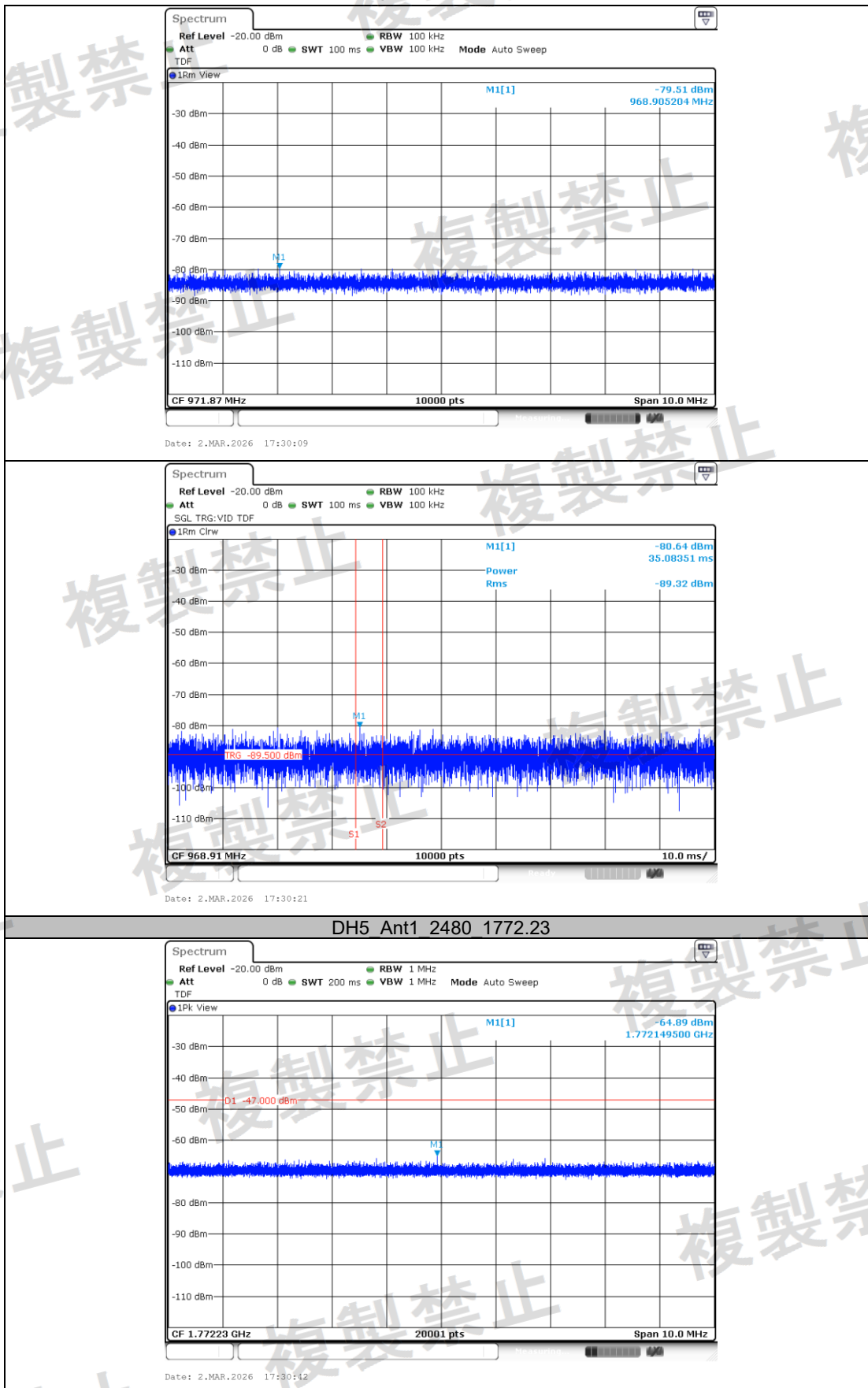
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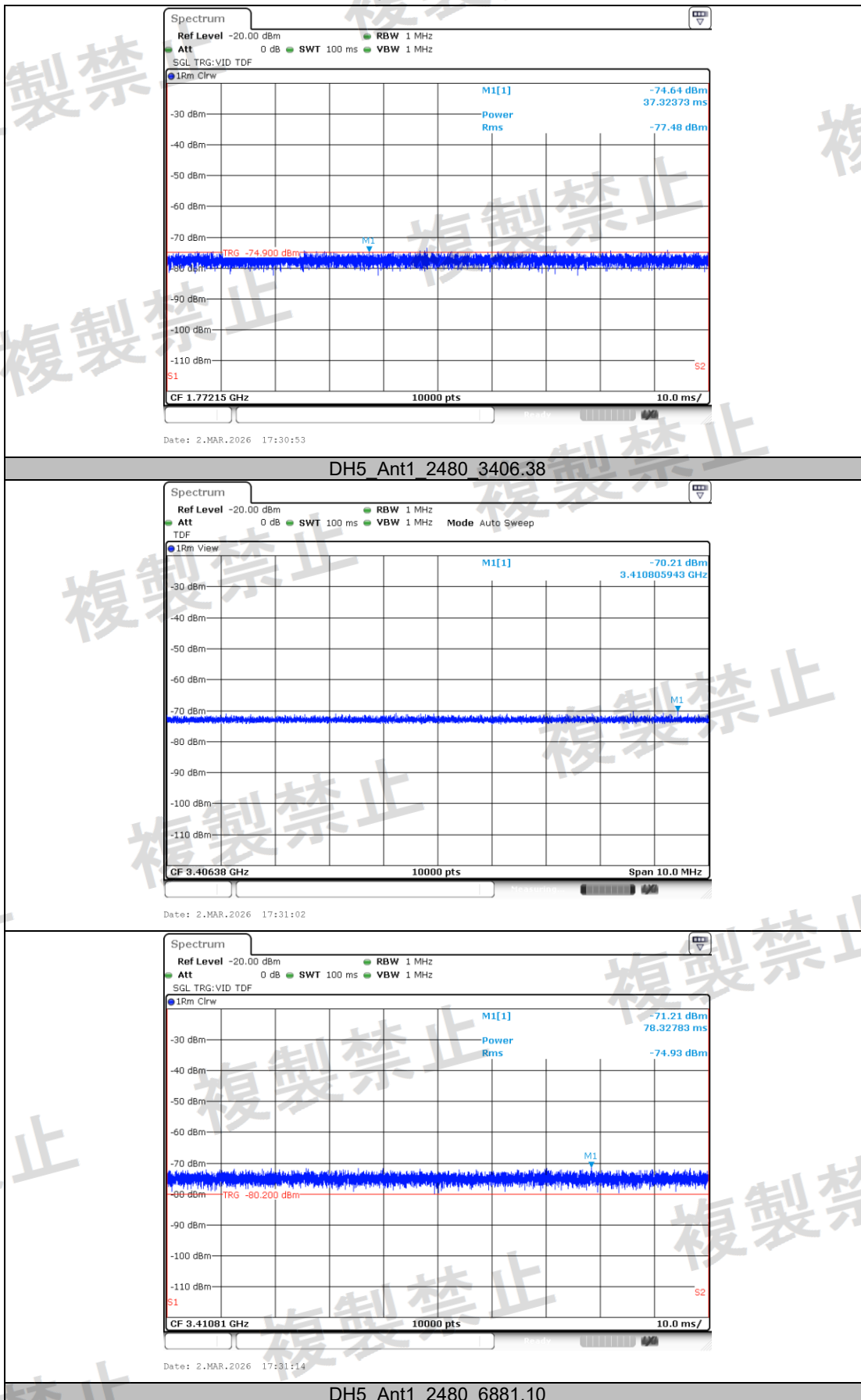
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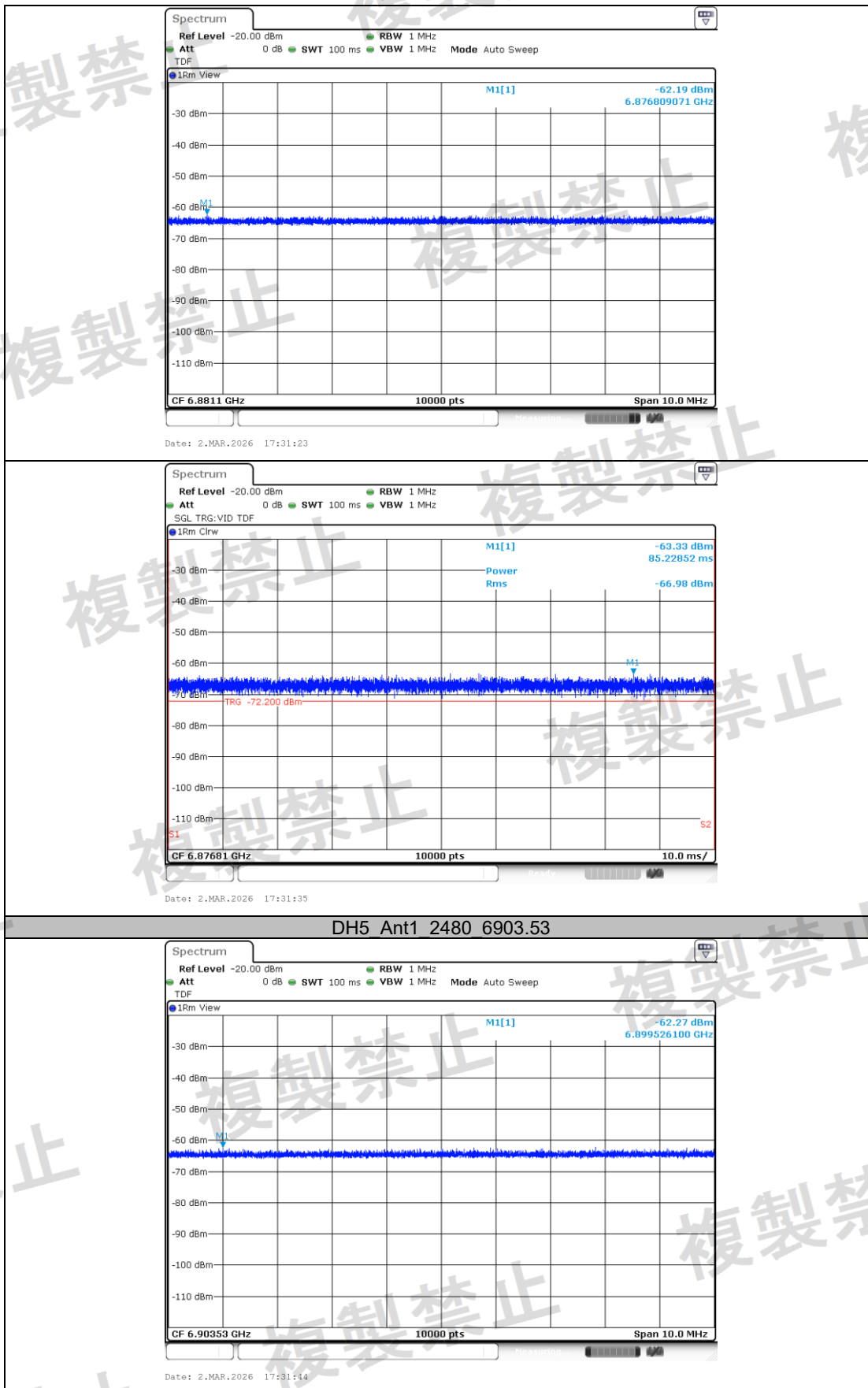
Tel.: (86)755-27521059

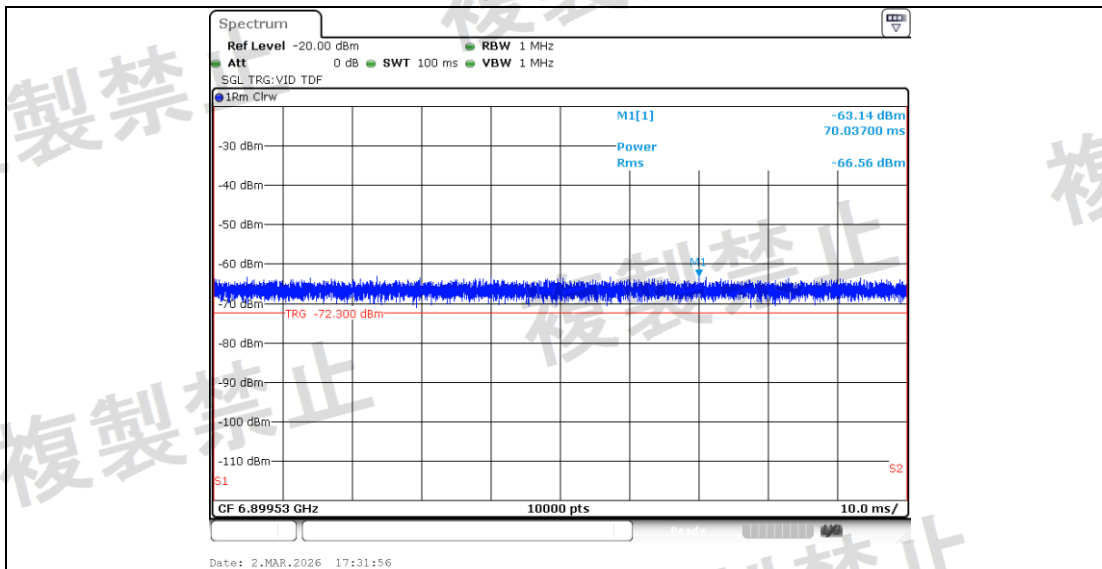
Fax: (86)755-27521011

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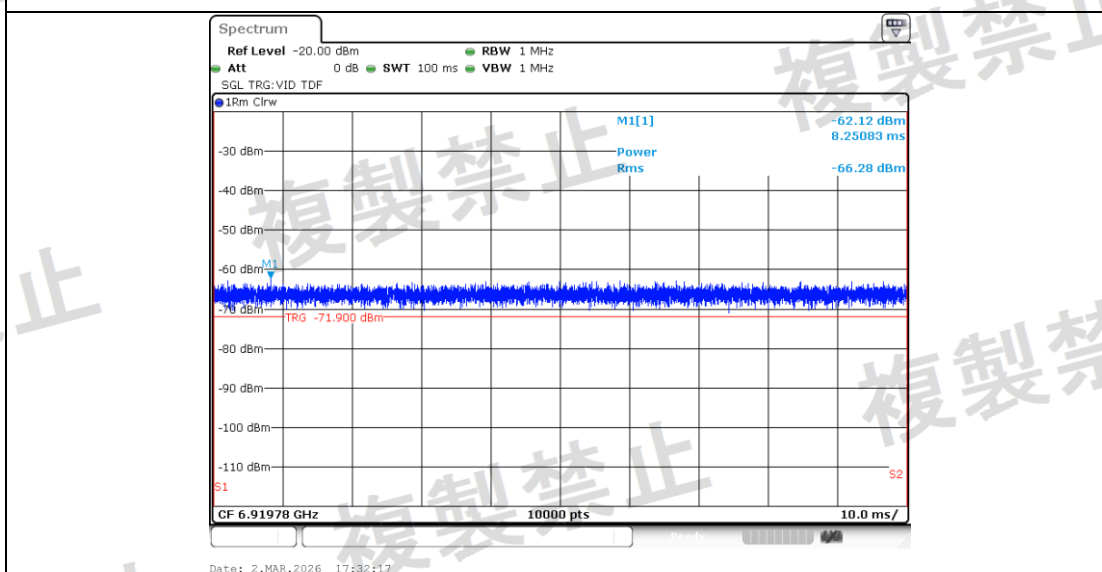
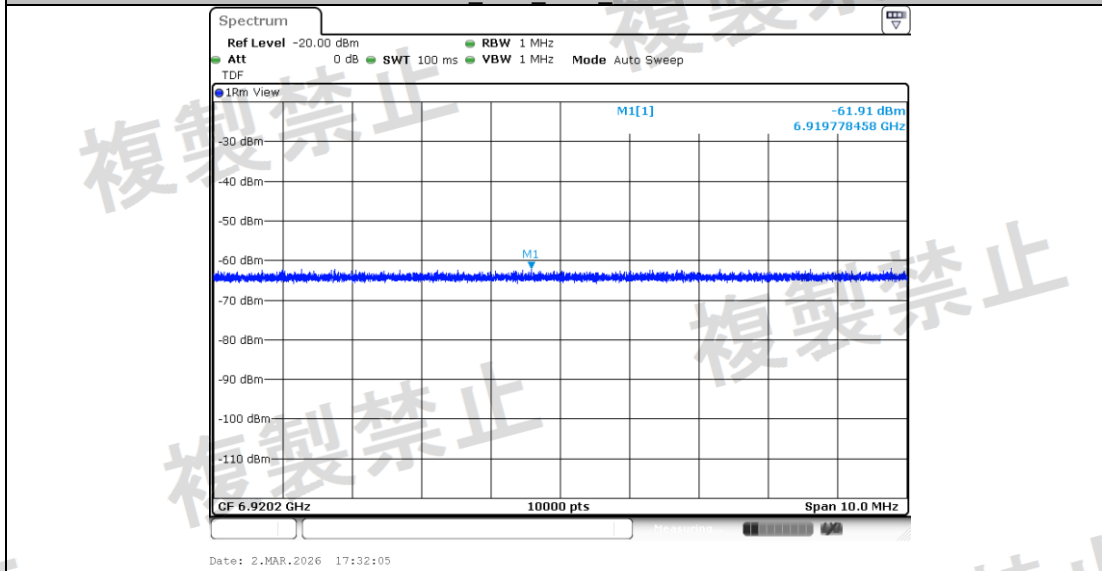
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DH5_Ant1_2480_6920.20



DH5_Ant1_2480_6950.10

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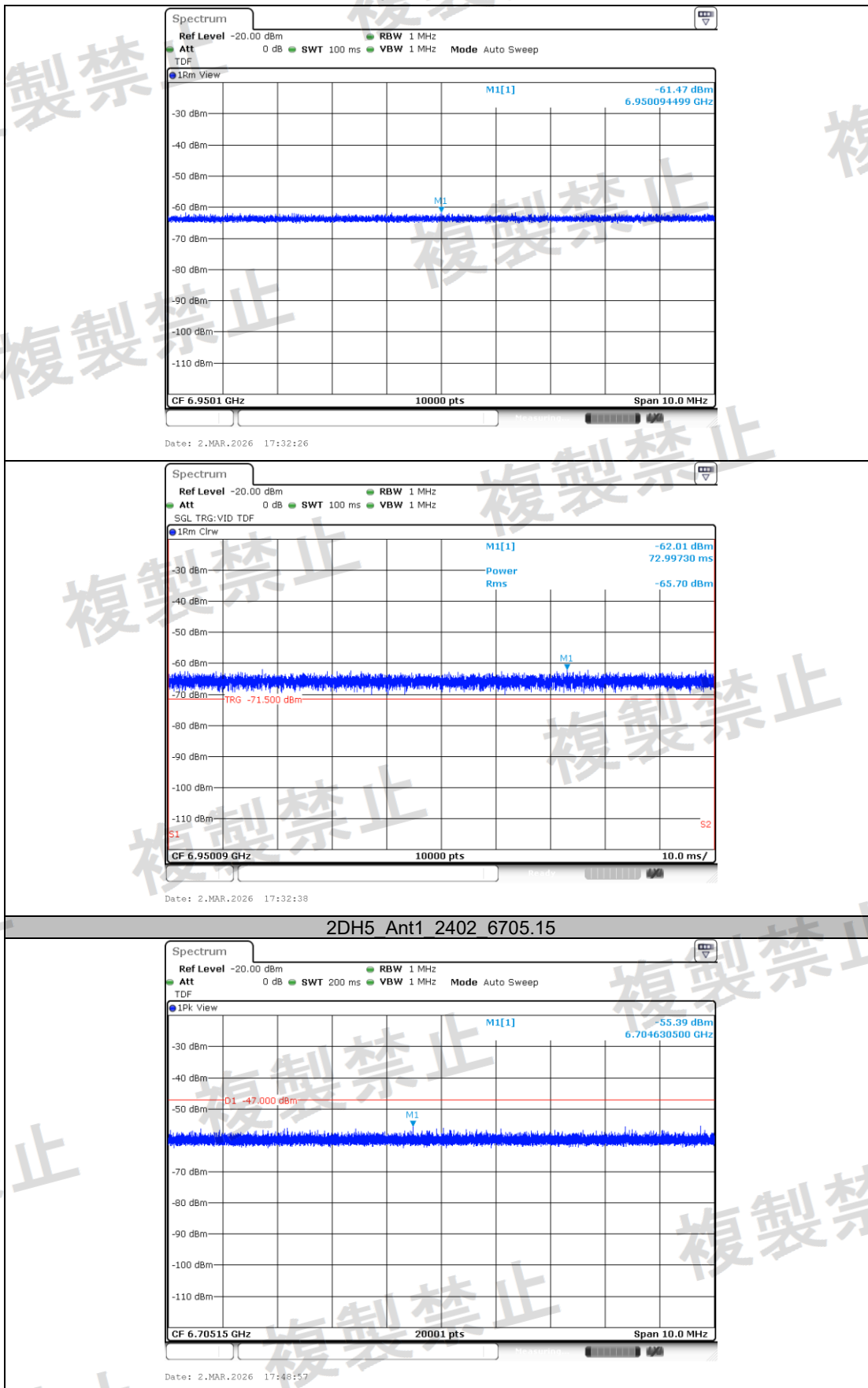
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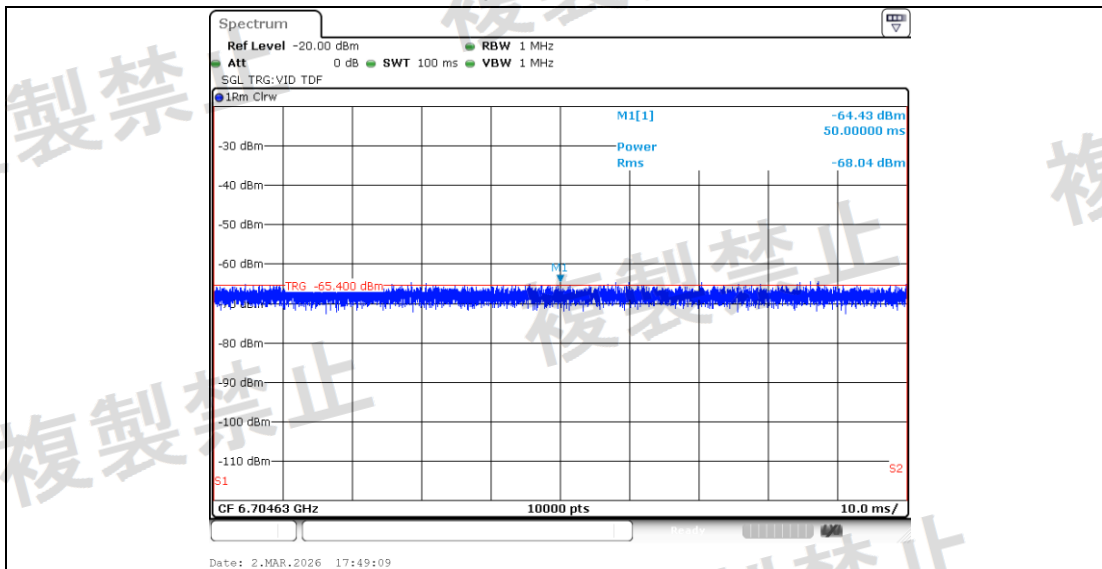
Fax: (86)755-27521011

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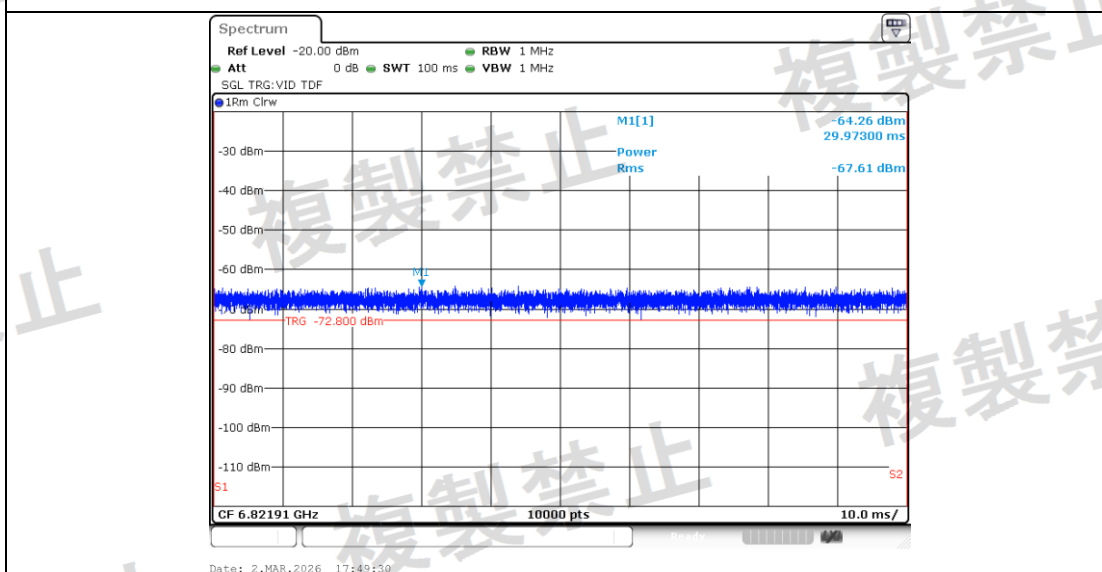
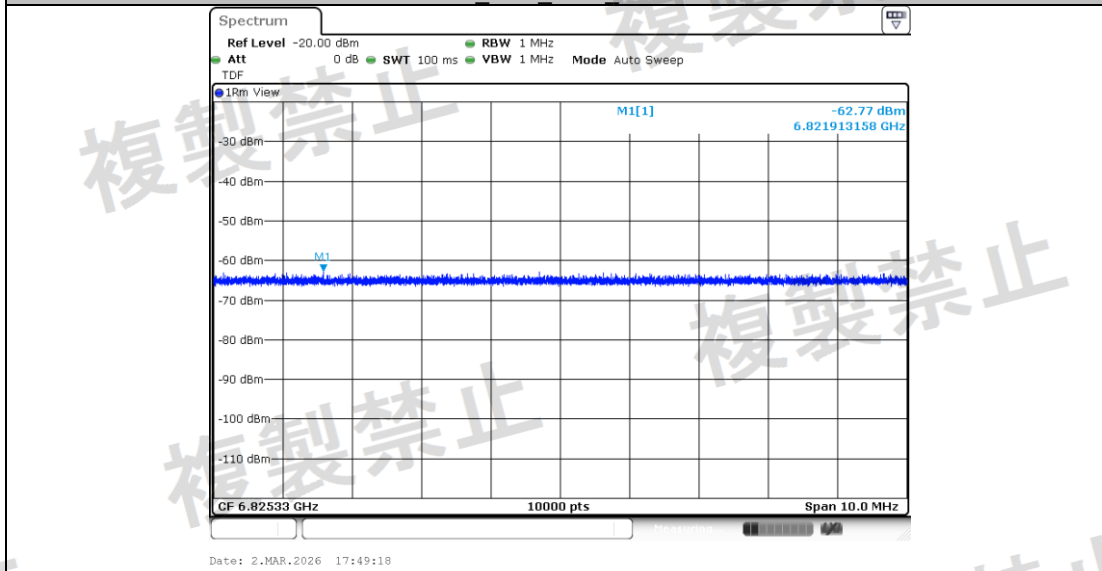
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2DH5_Ant1_2402_6848.33

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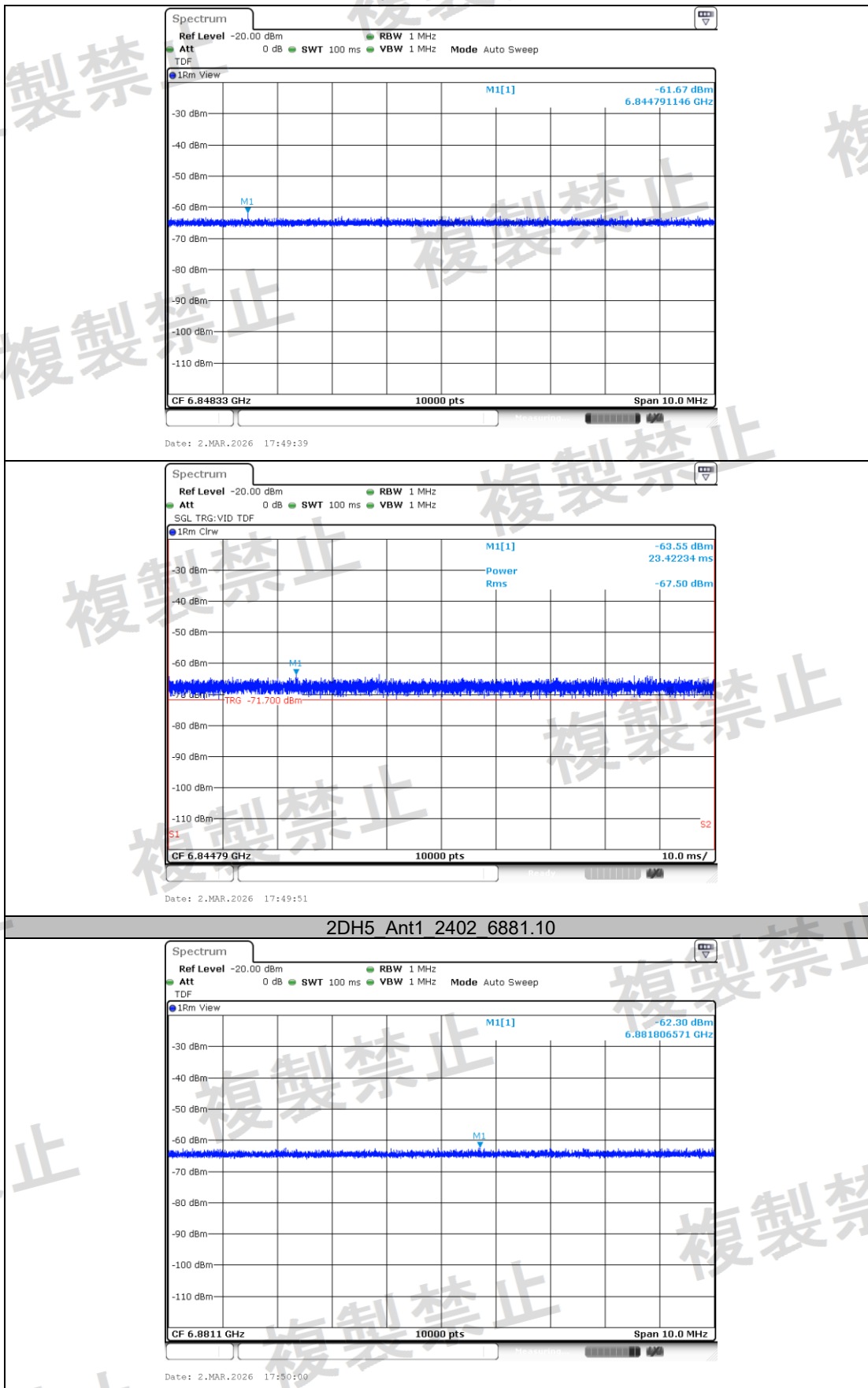
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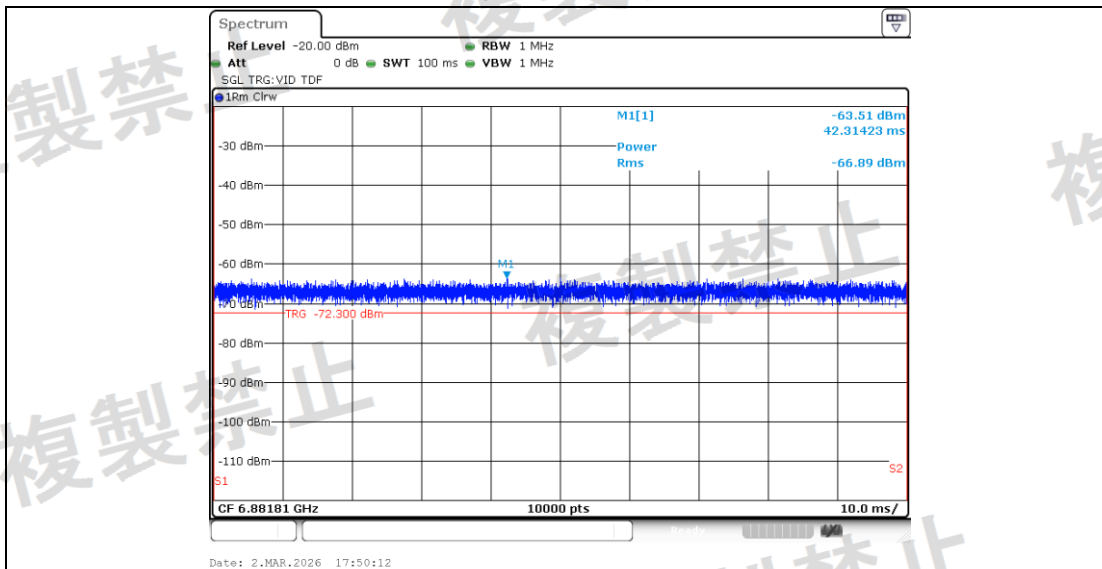
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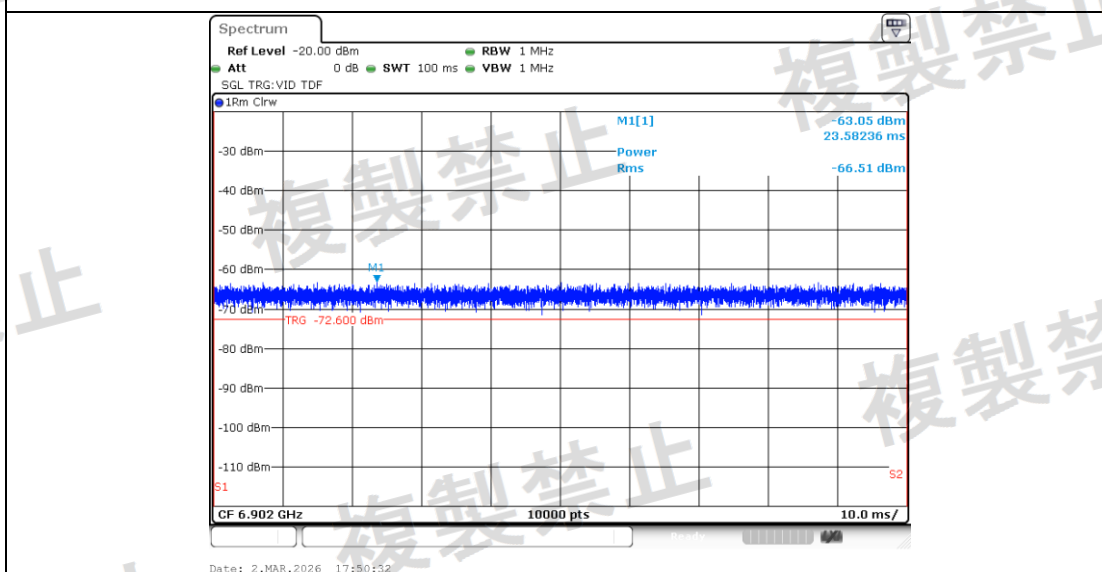
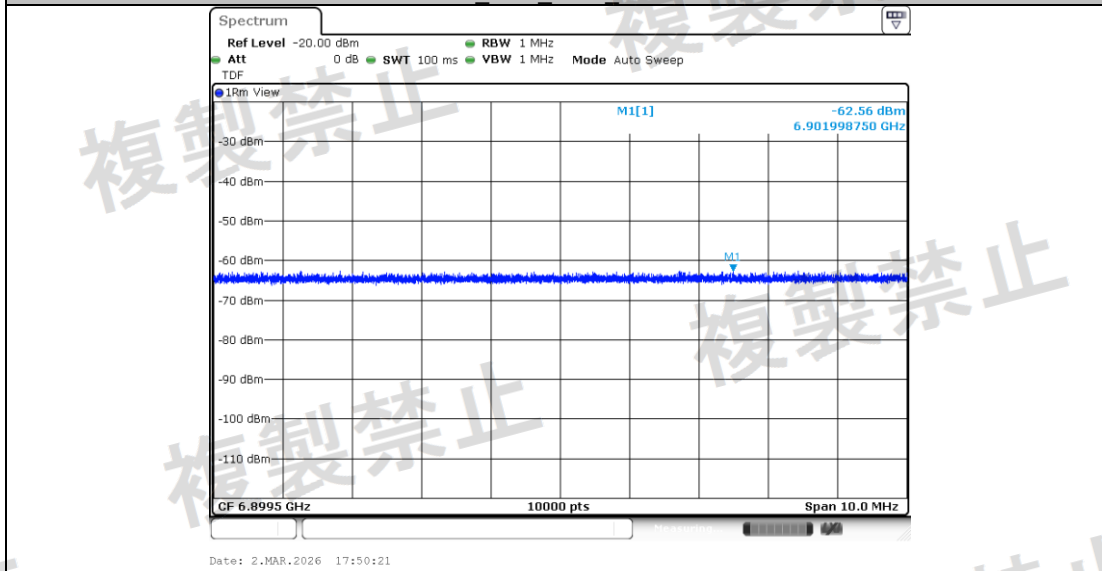
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2DH5_Ant1_2402_6899.50



2DH5_Ant1_2402_6975.98

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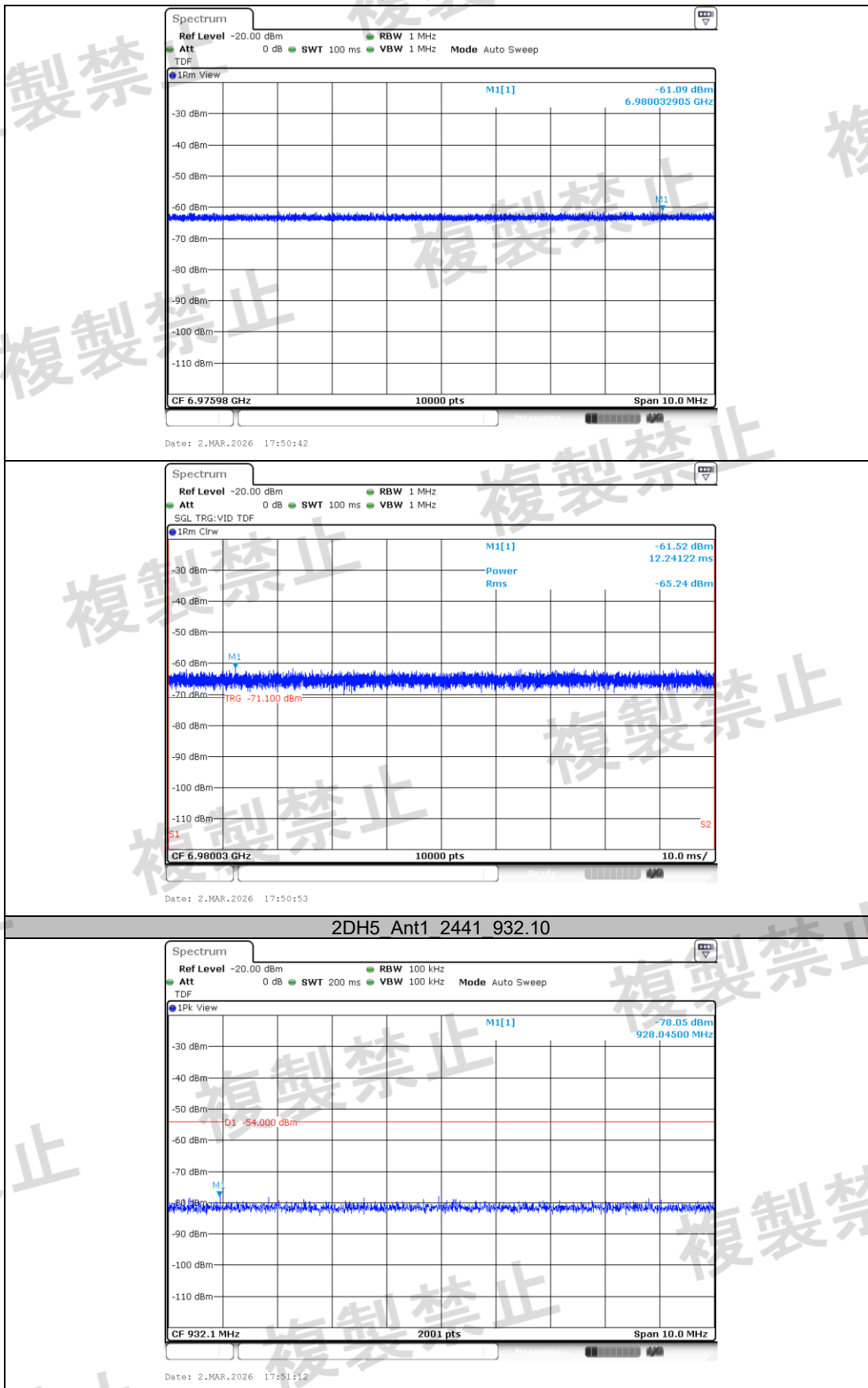
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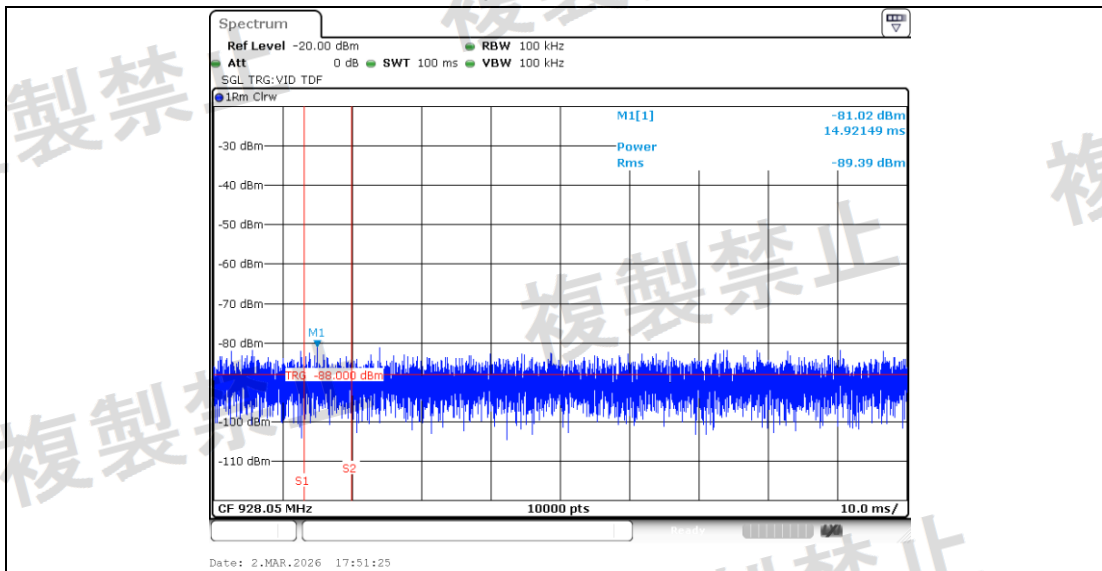
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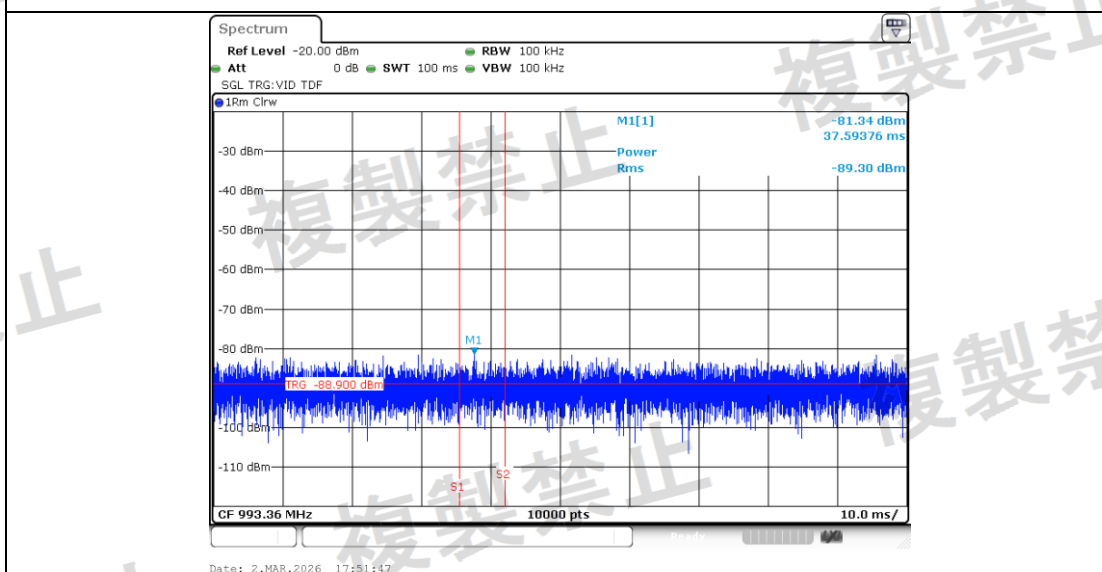
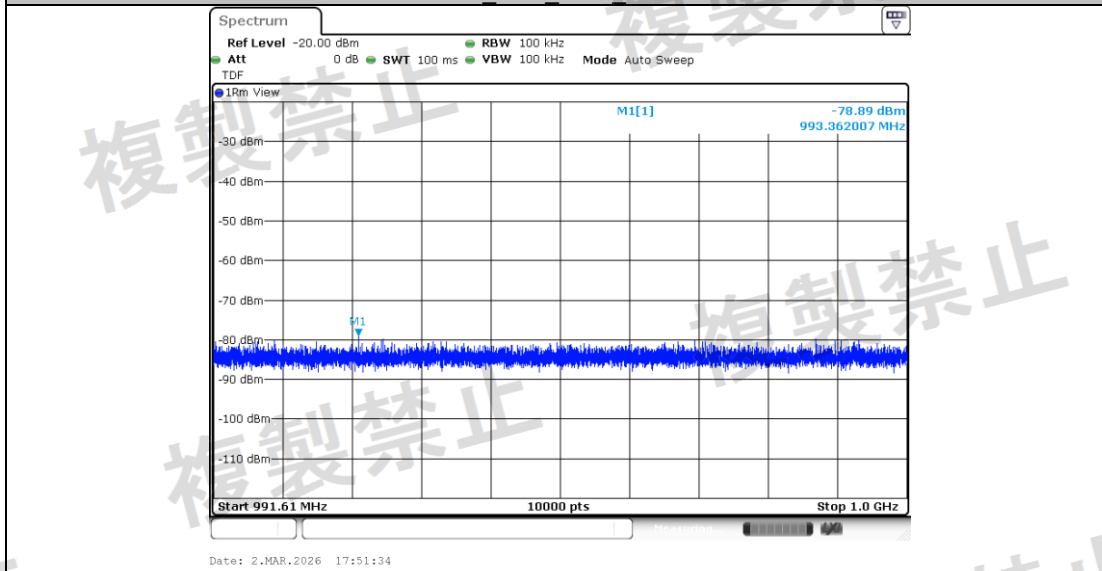
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2DH5_Ant1_2441_6800.60

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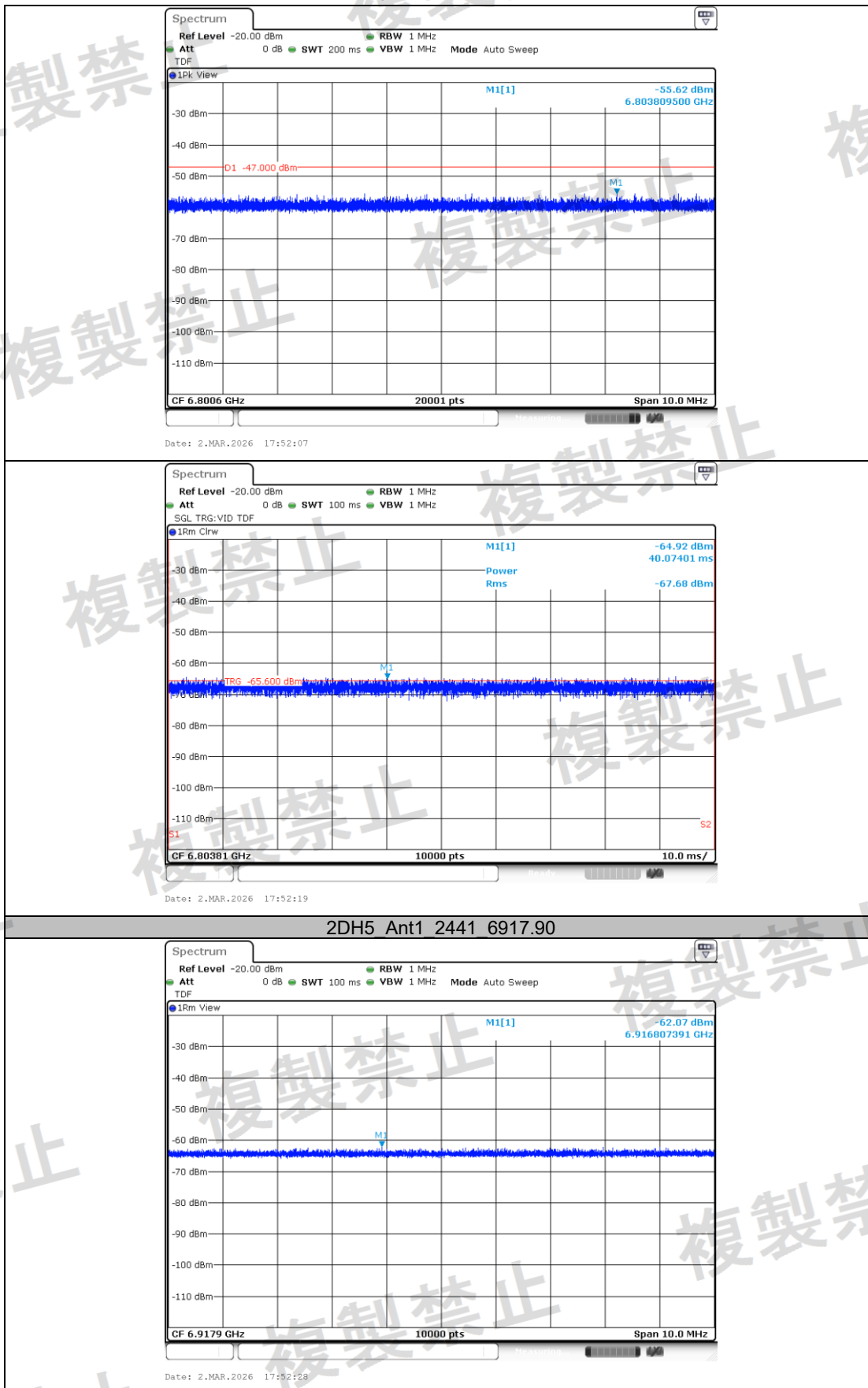
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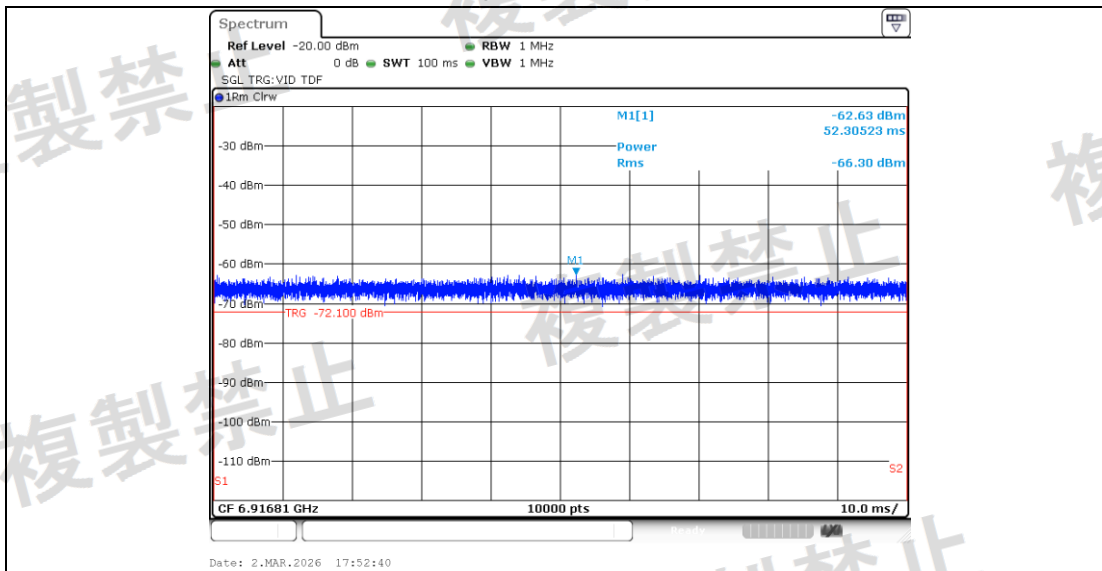
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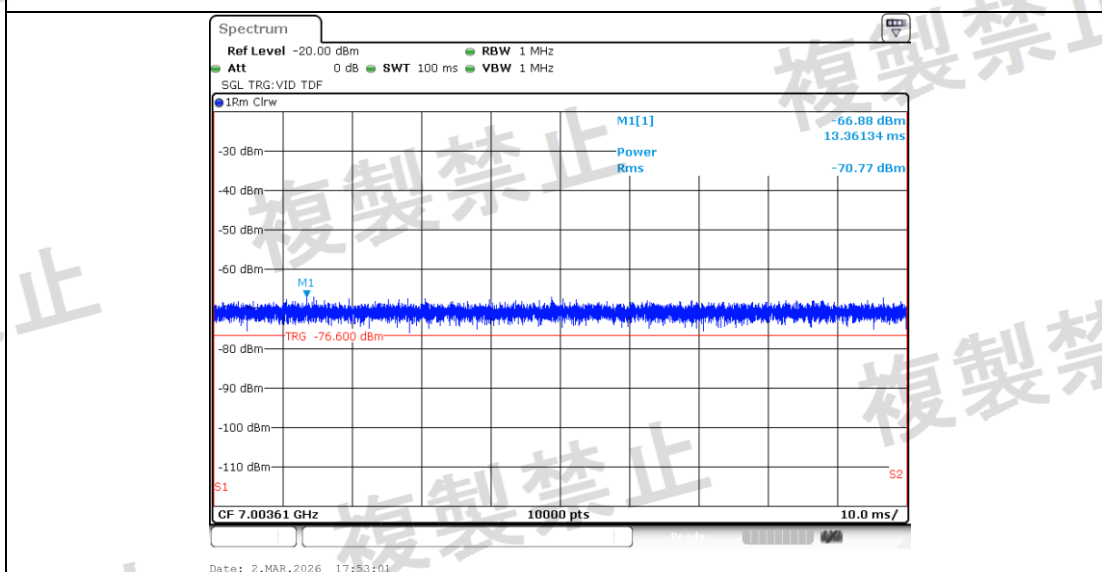
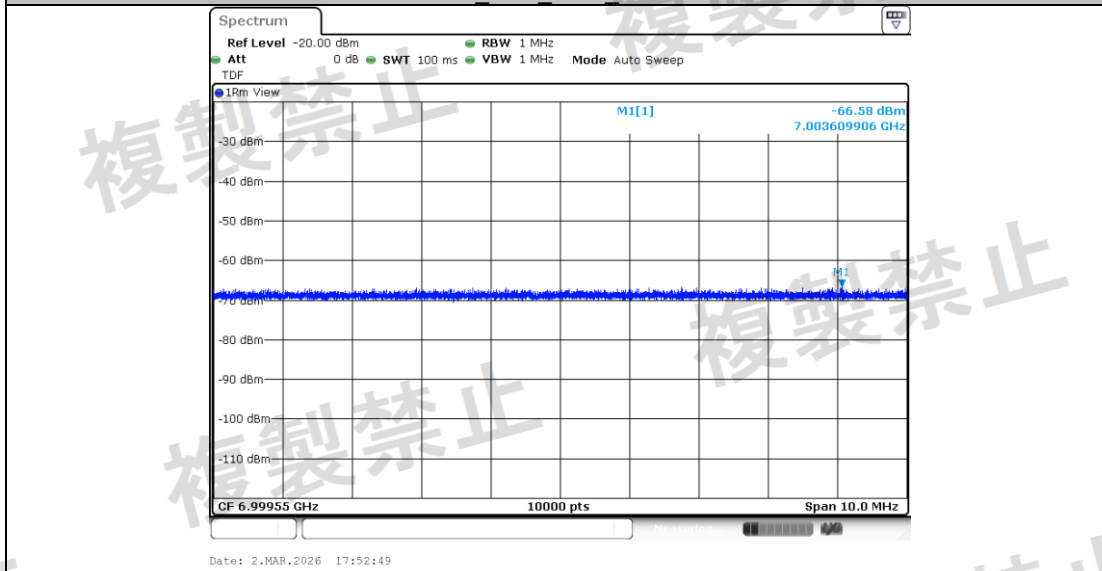
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2DH5_Ant1_2480_885.06

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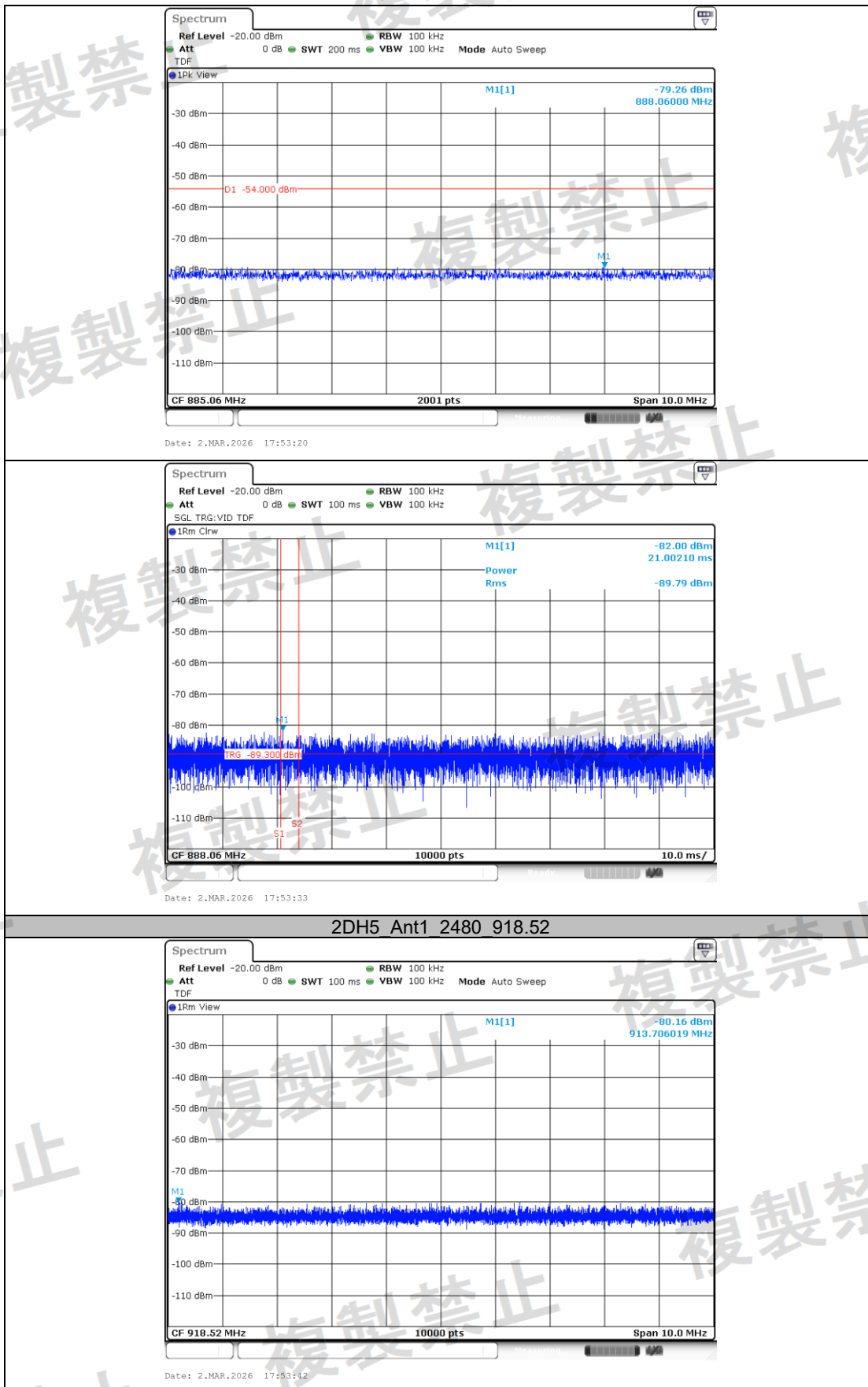
Tel.: (86)755-27521059

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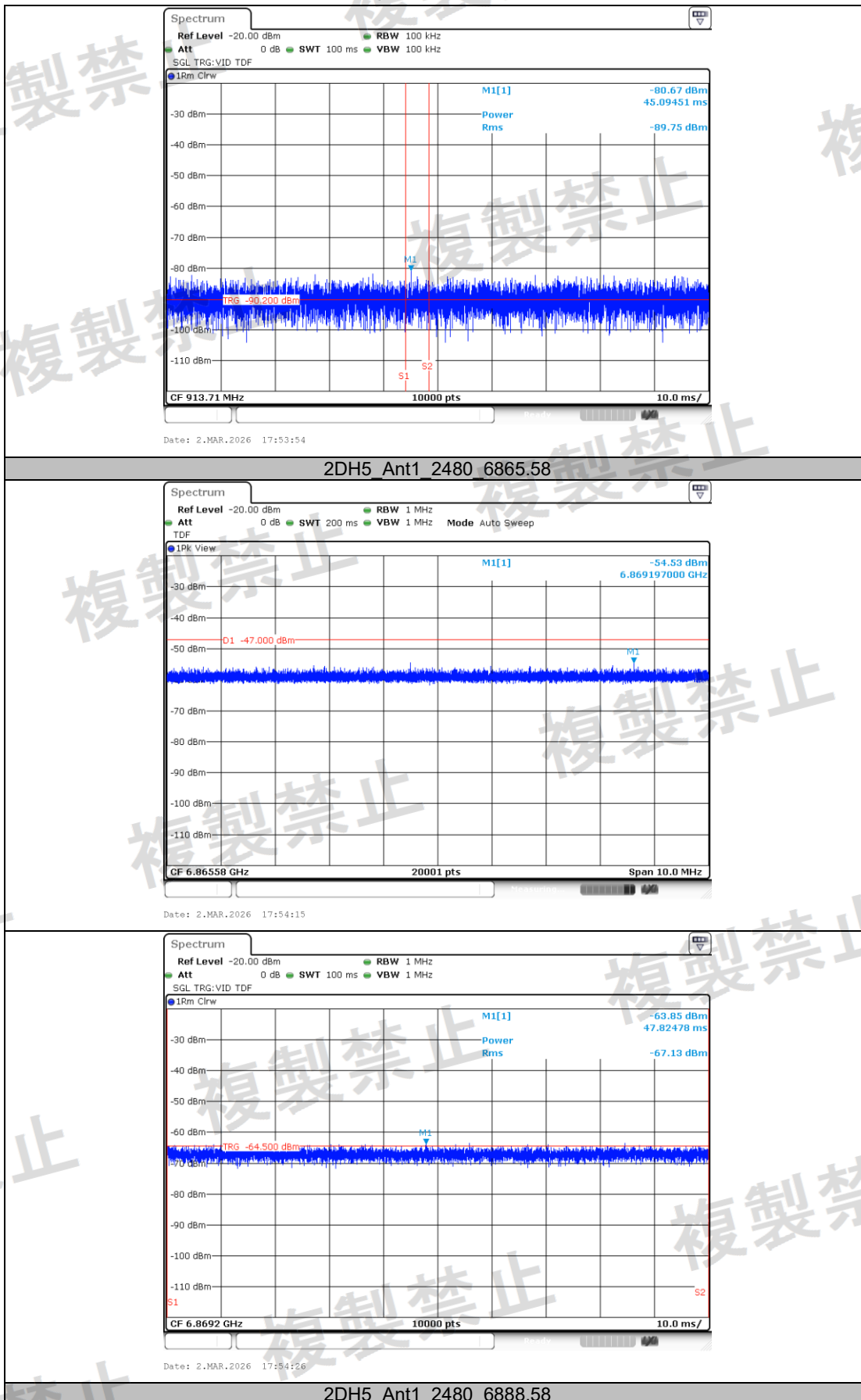


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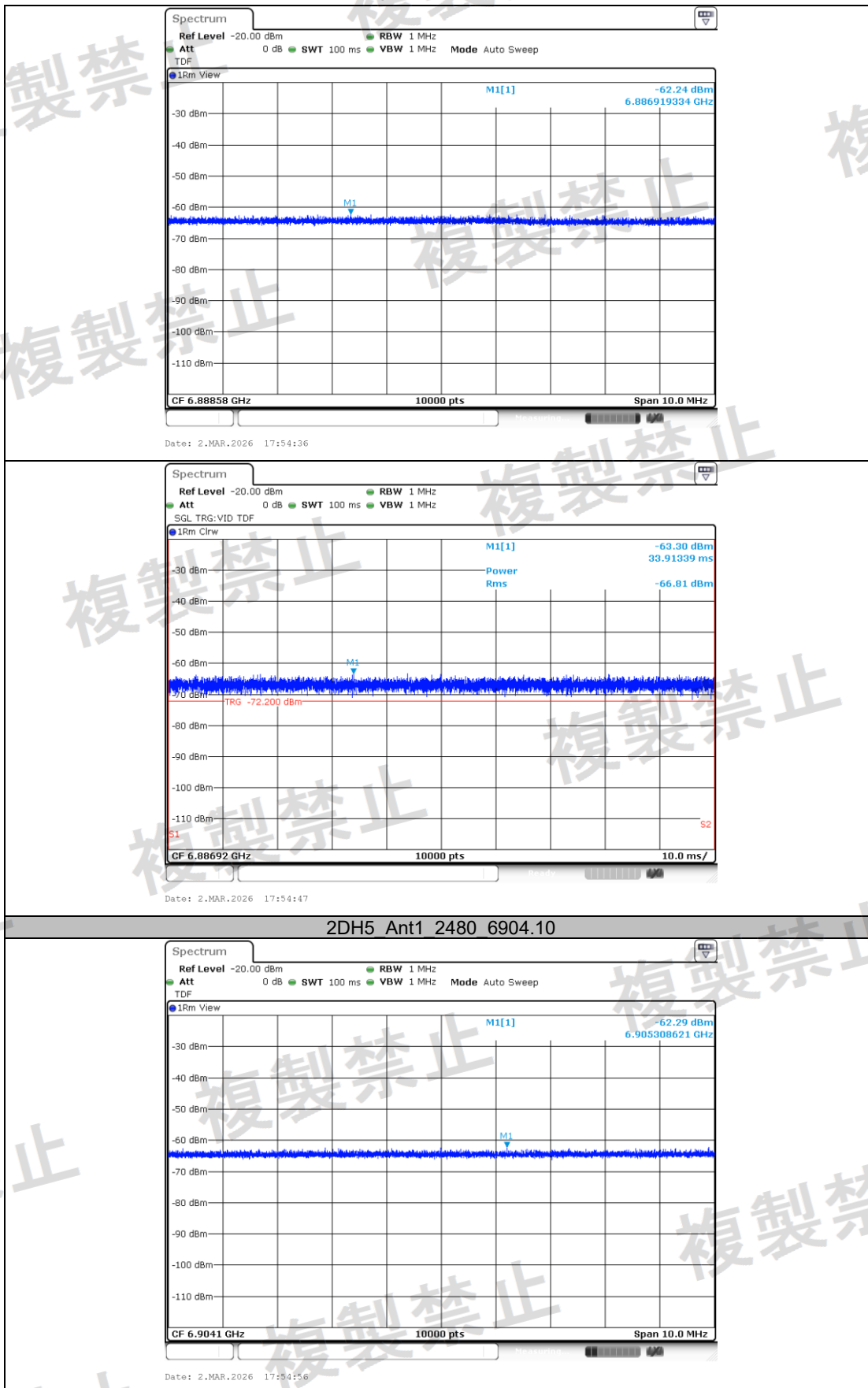
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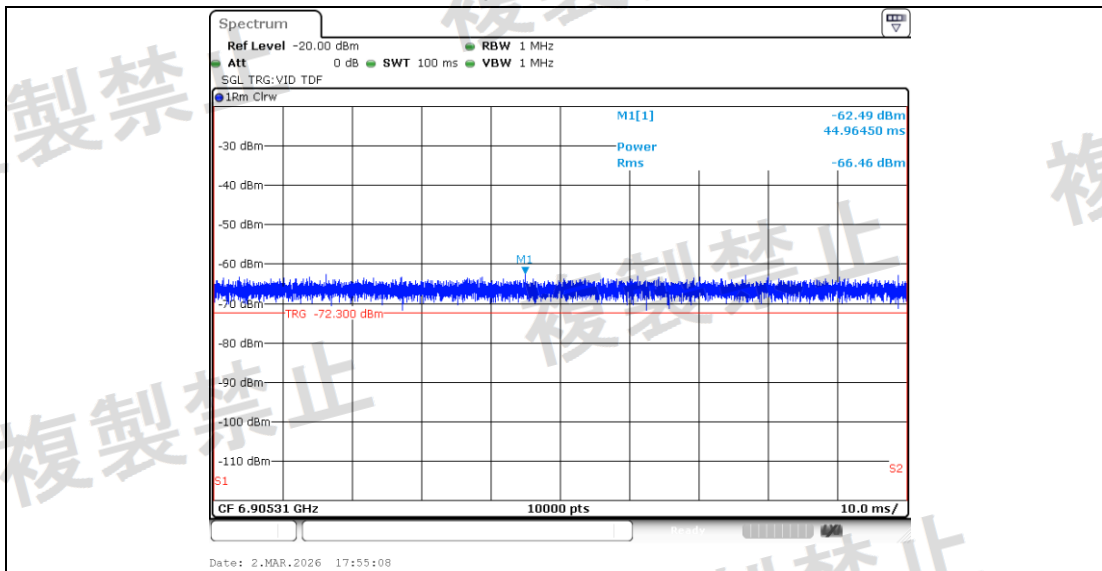
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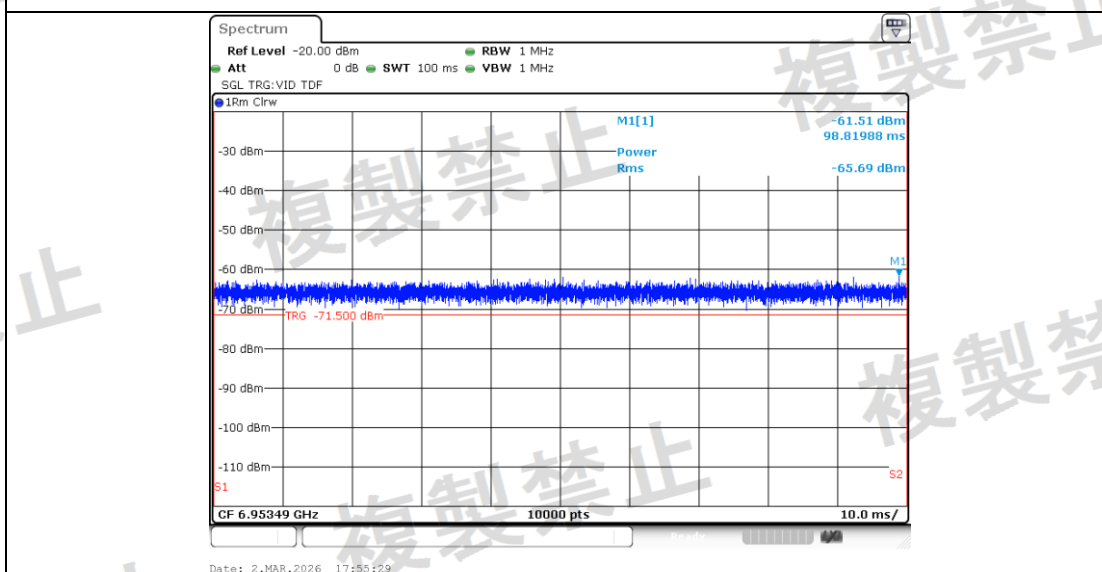
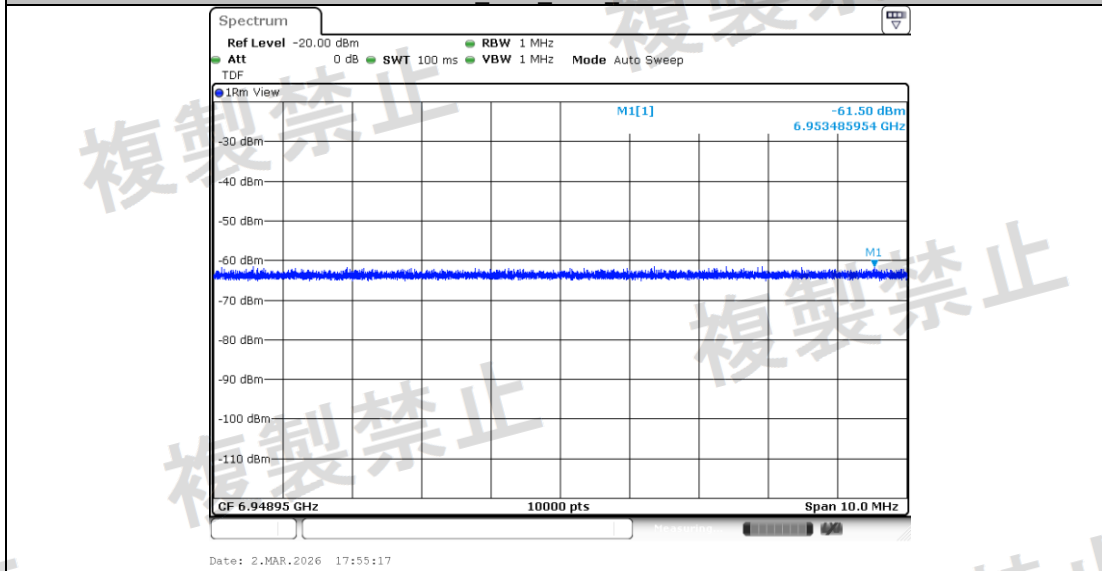
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2DH5_Ant1_2480_6948.95



2DH5_Ant1_2480_6965.63

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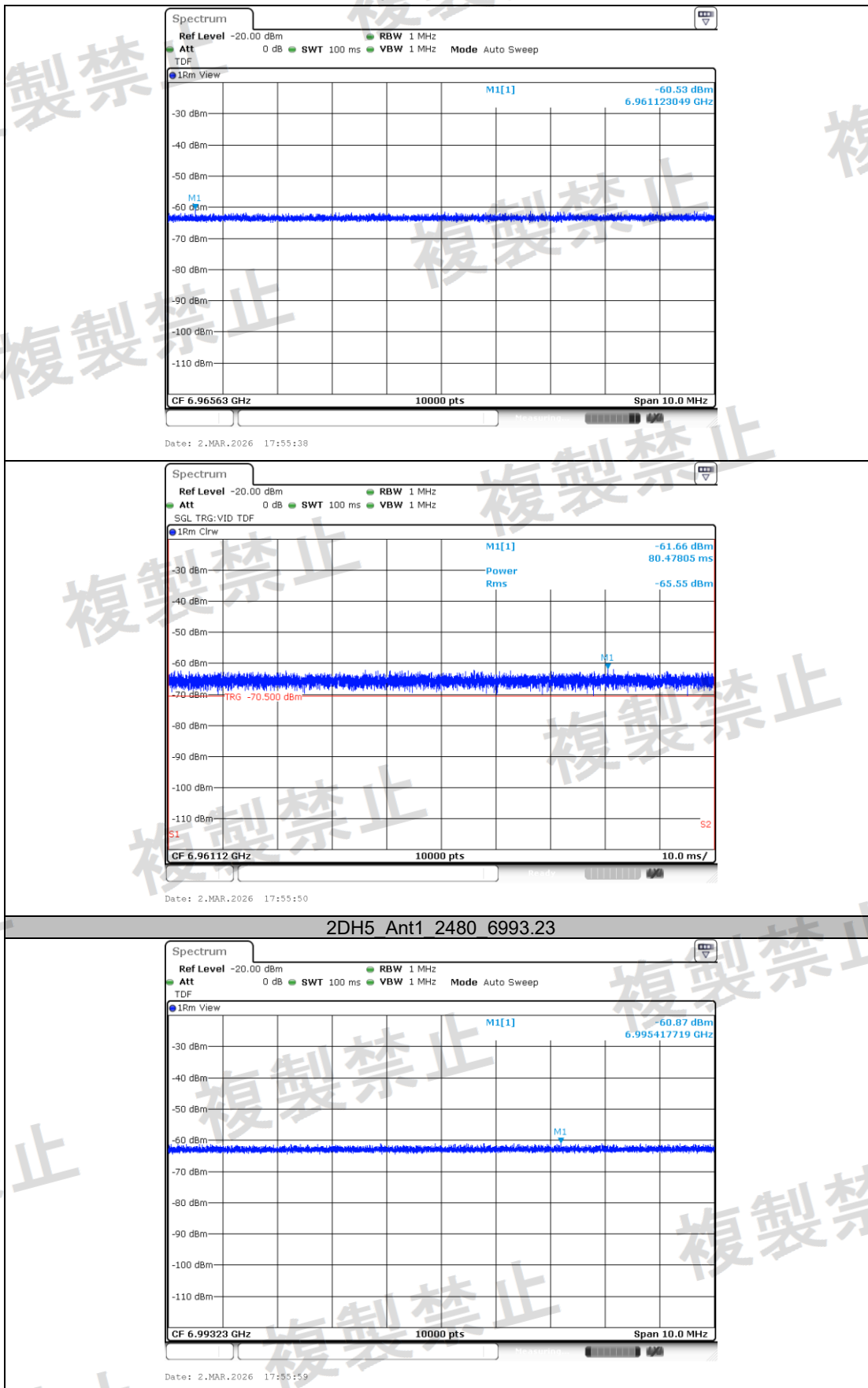
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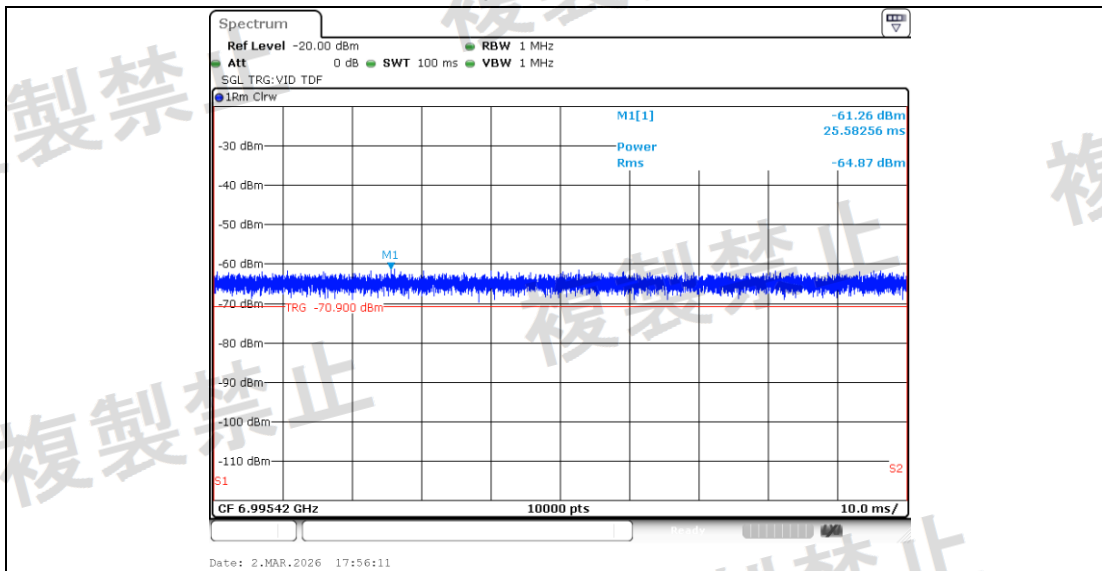


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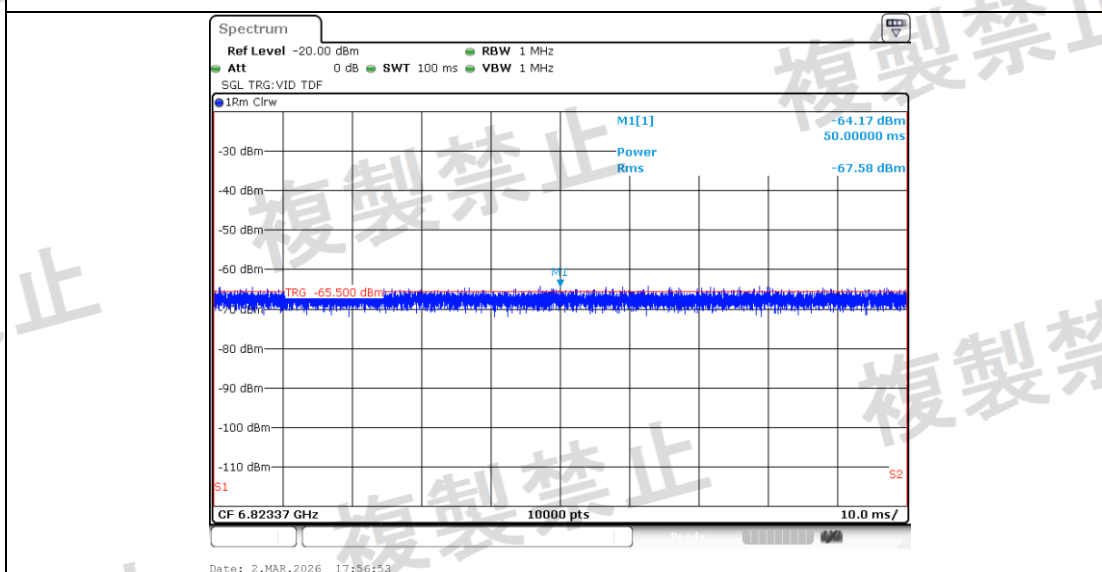
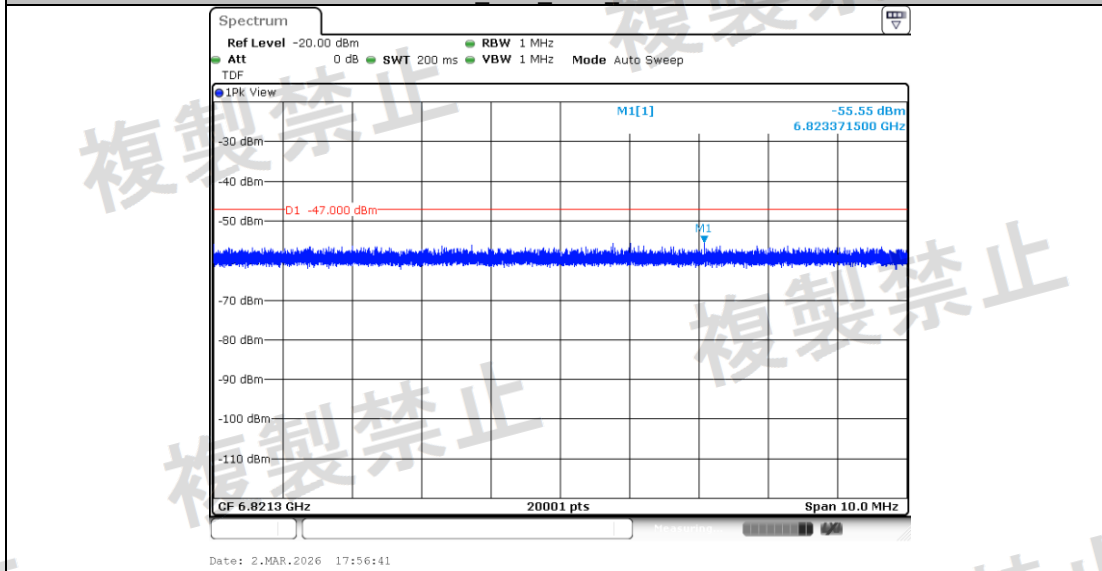
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3DH5_Ant1_2402_6821.30



3DH5_Ant1_2402_6876.50

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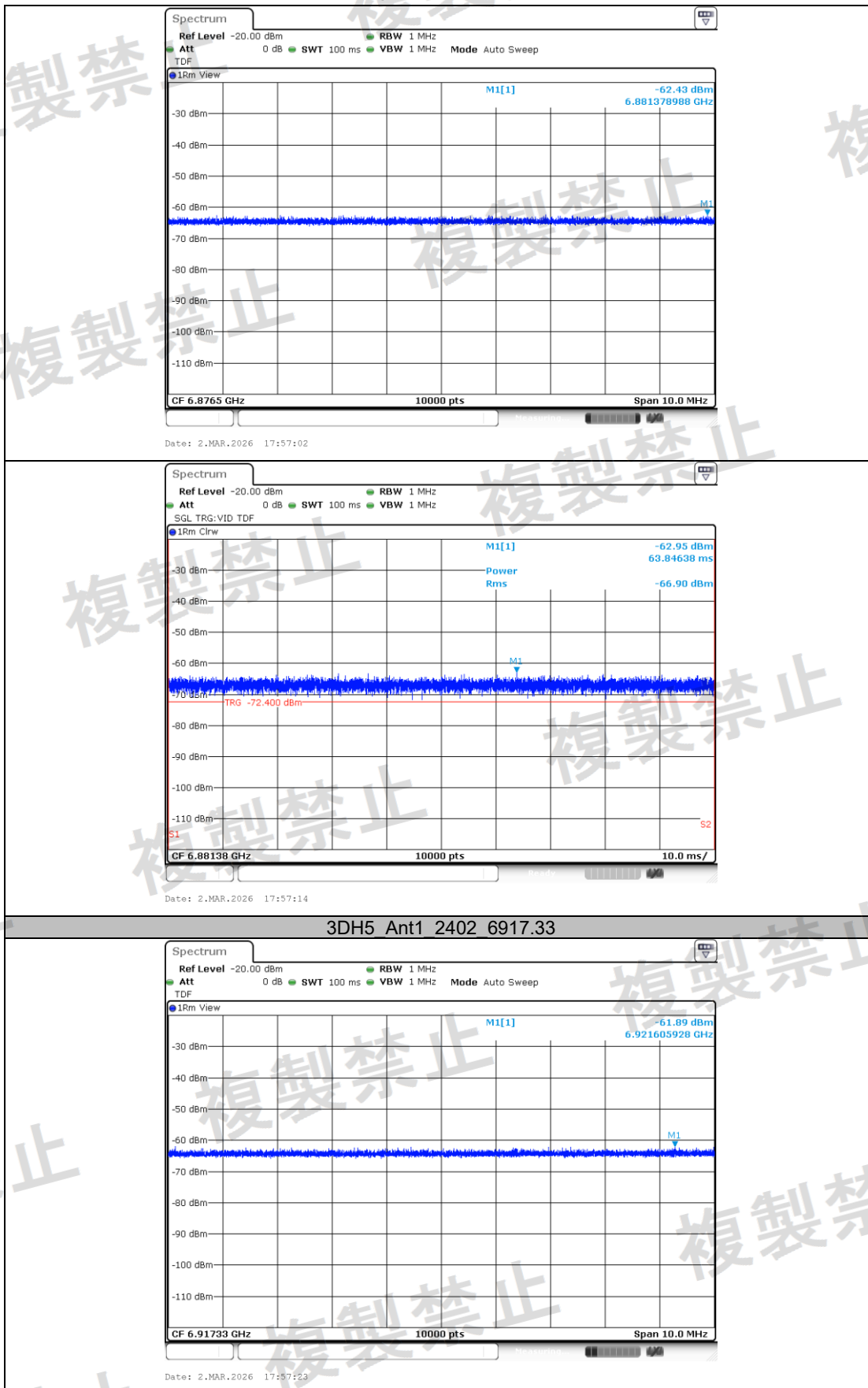
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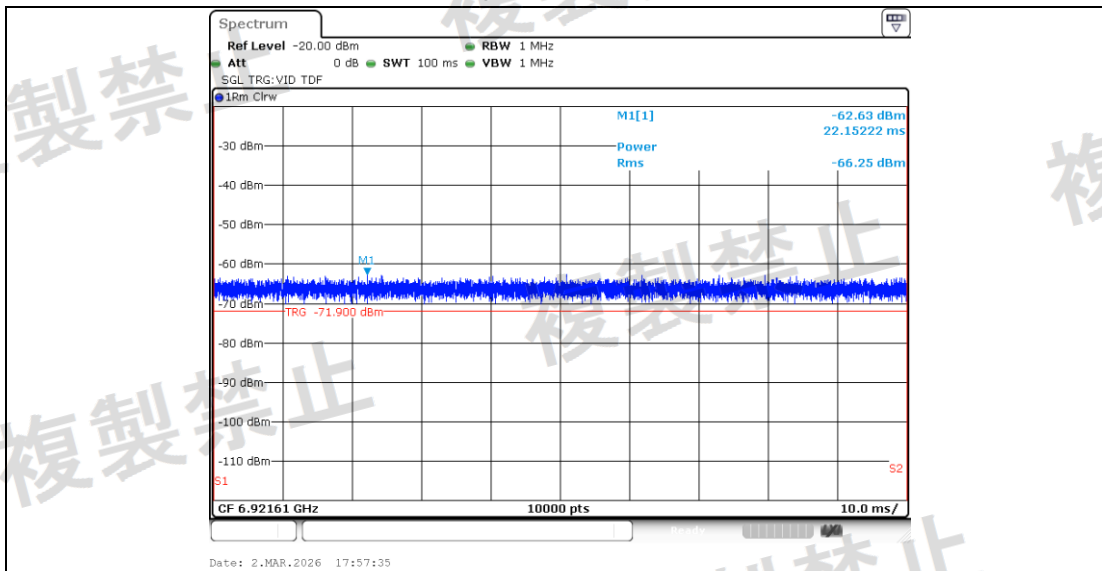
Tel.: (86)755-27521059 Fax: (86)755-27521011

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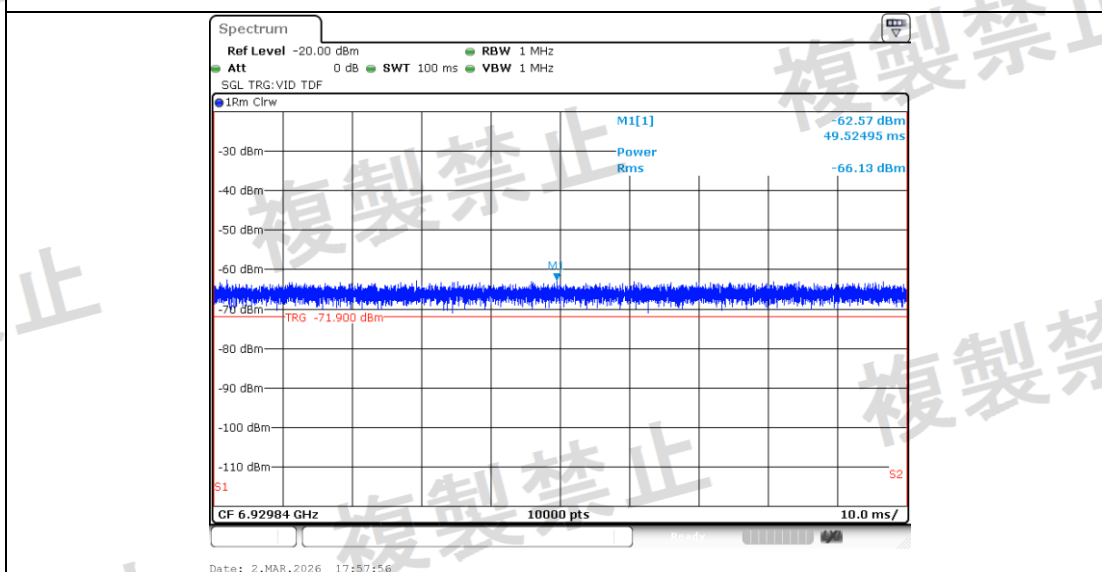
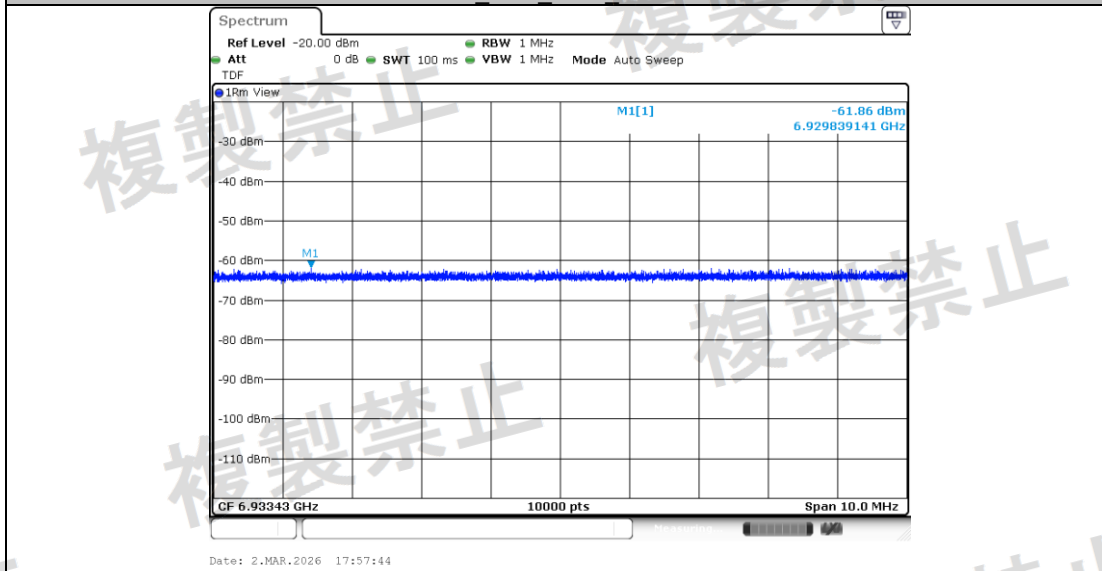
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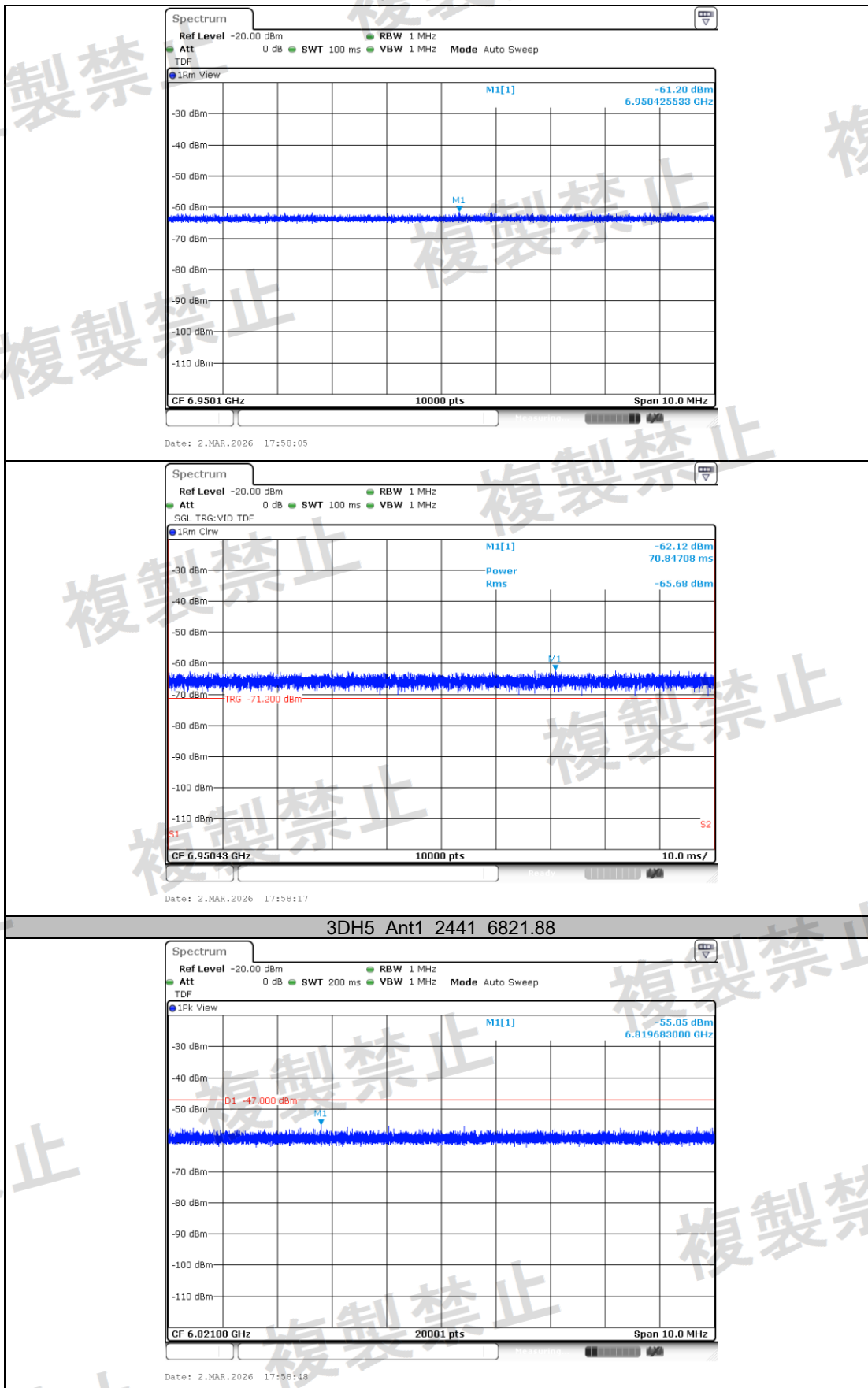
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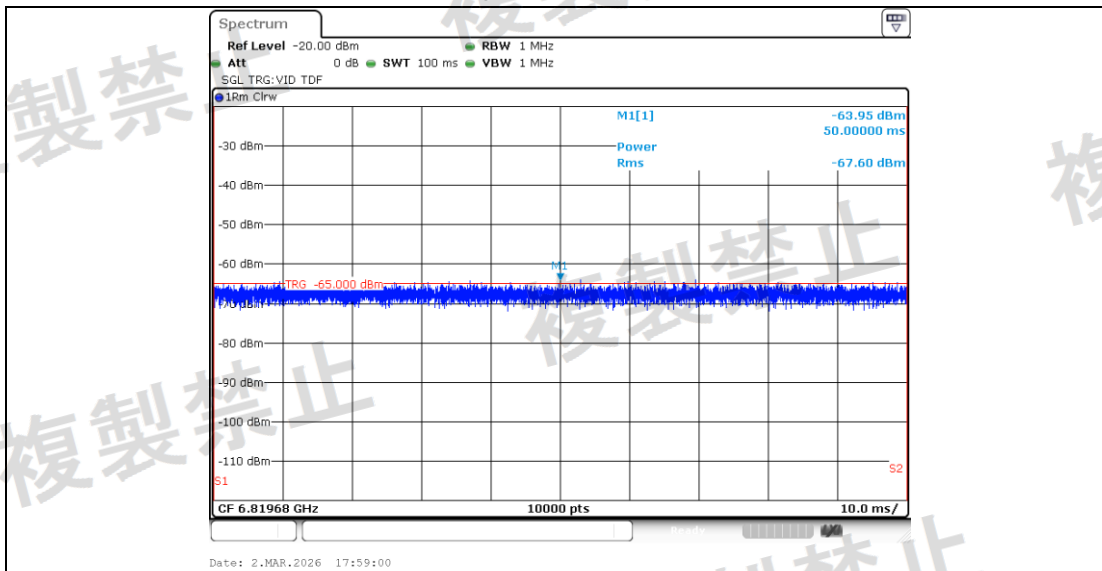
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Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn

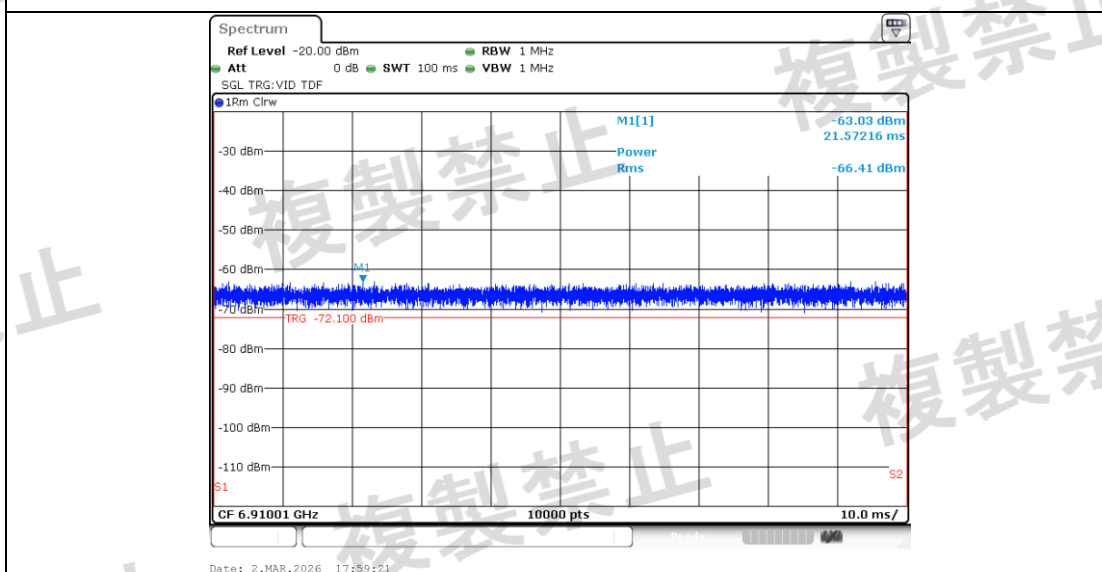
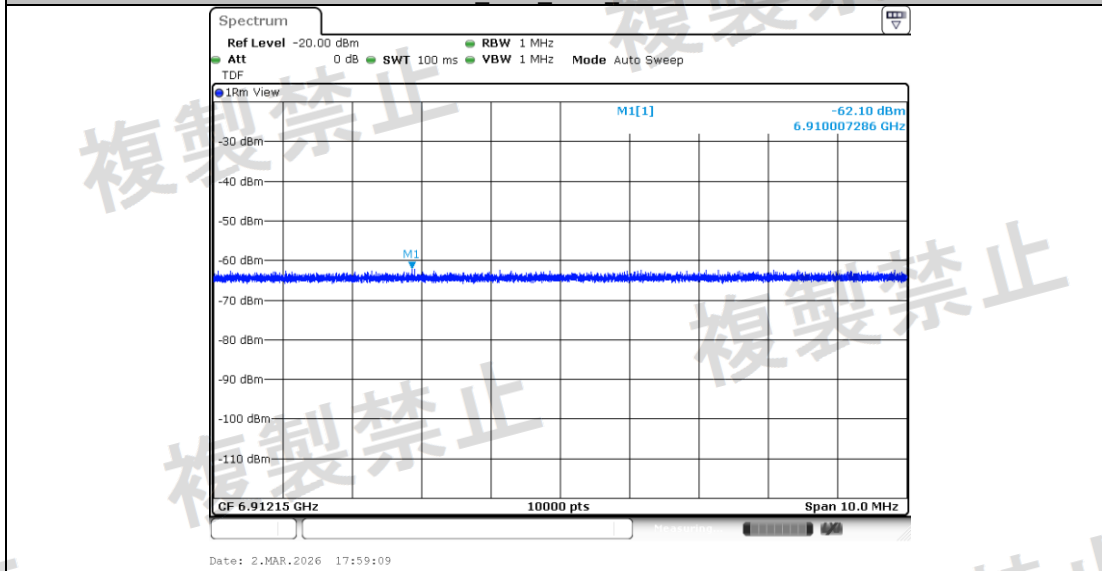
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3DH5_Ant1_2441_6979.43

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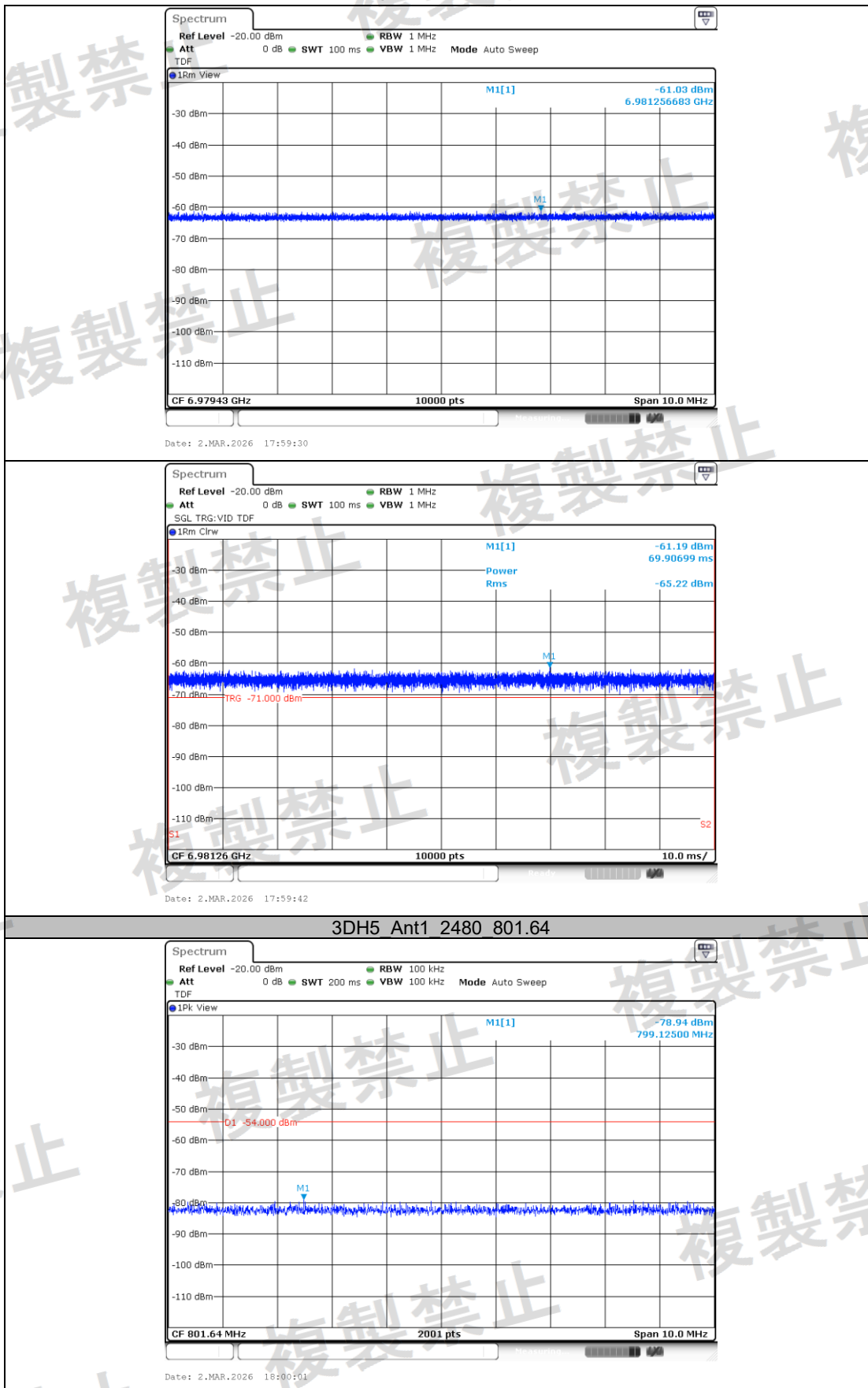
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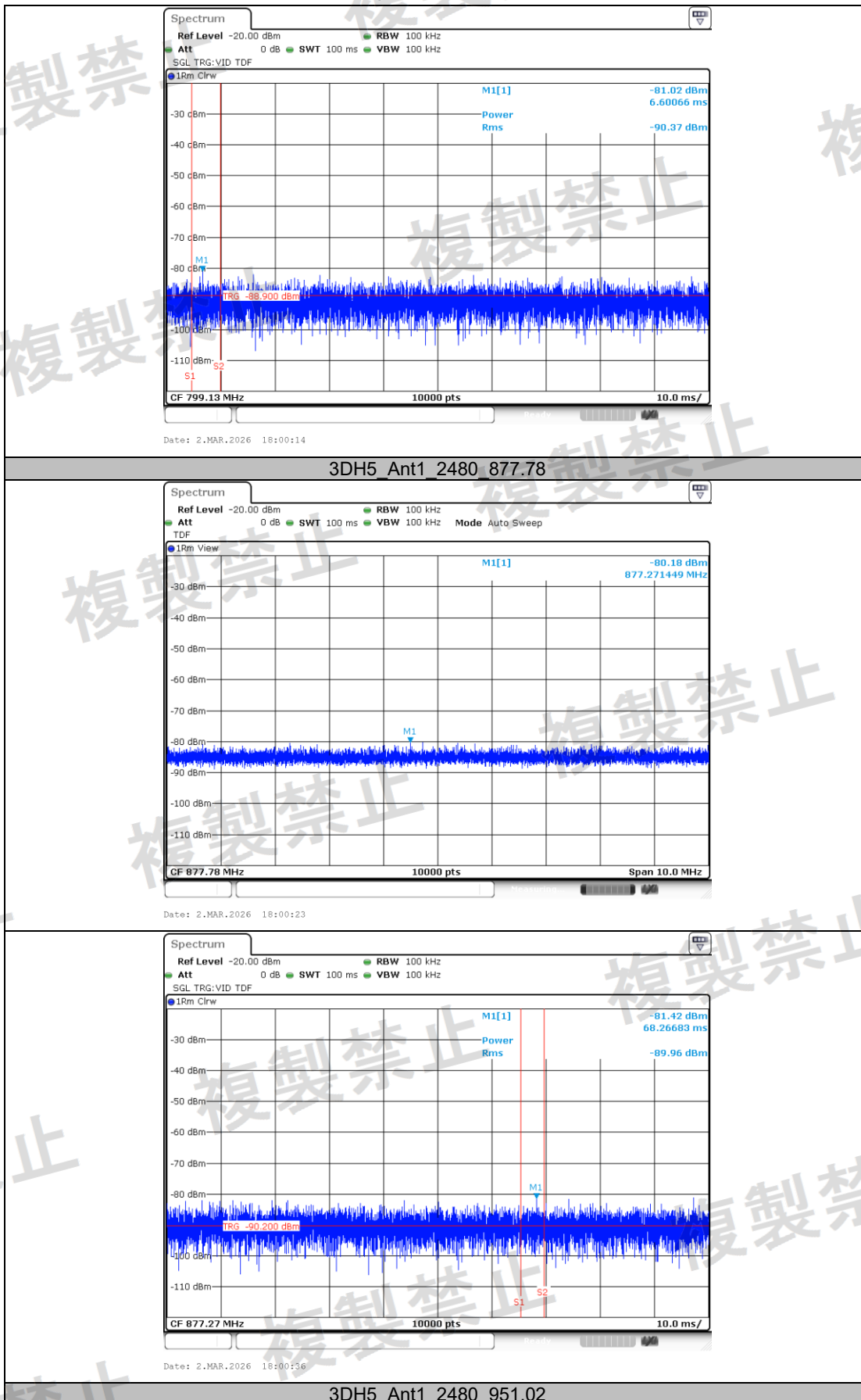
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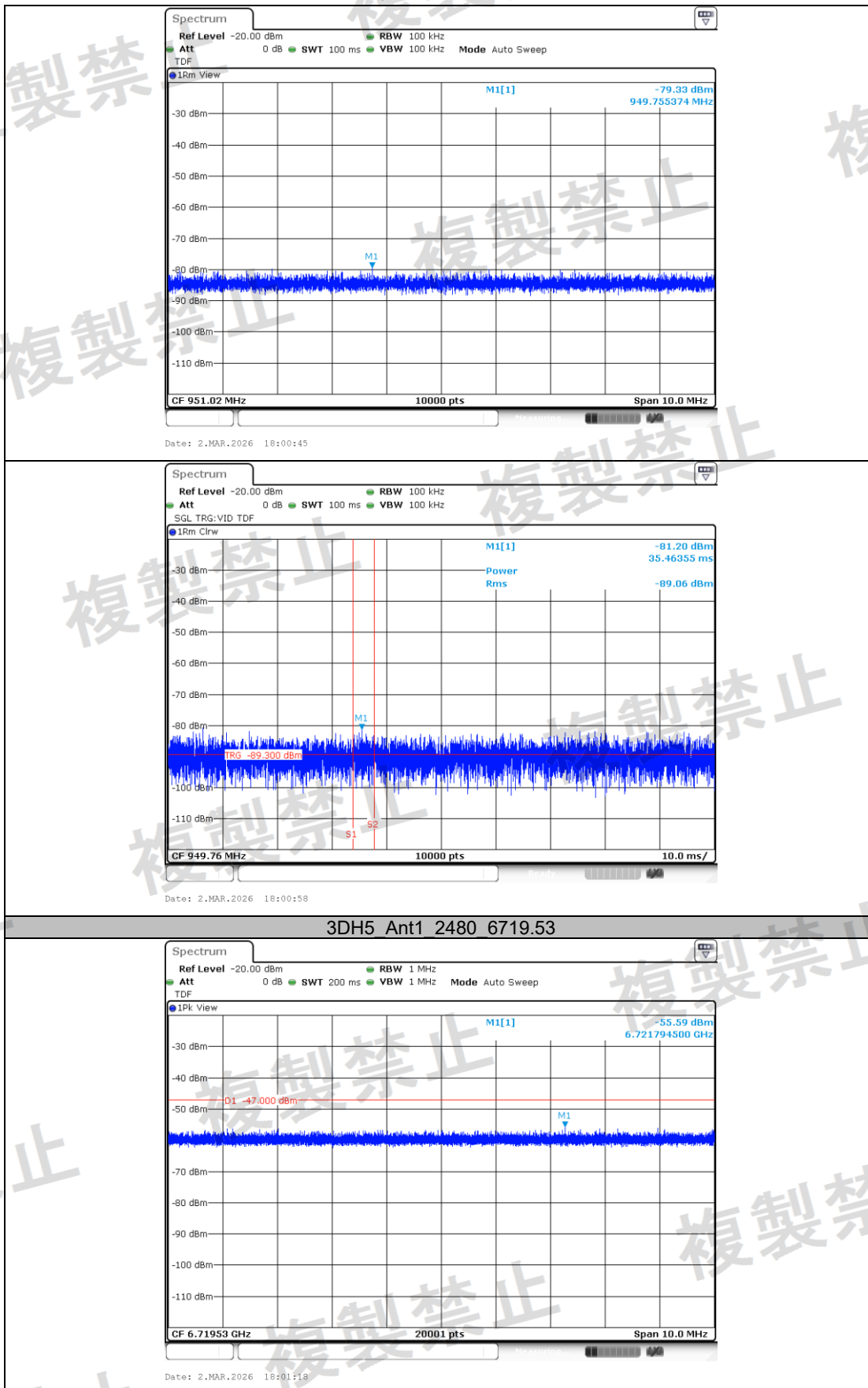
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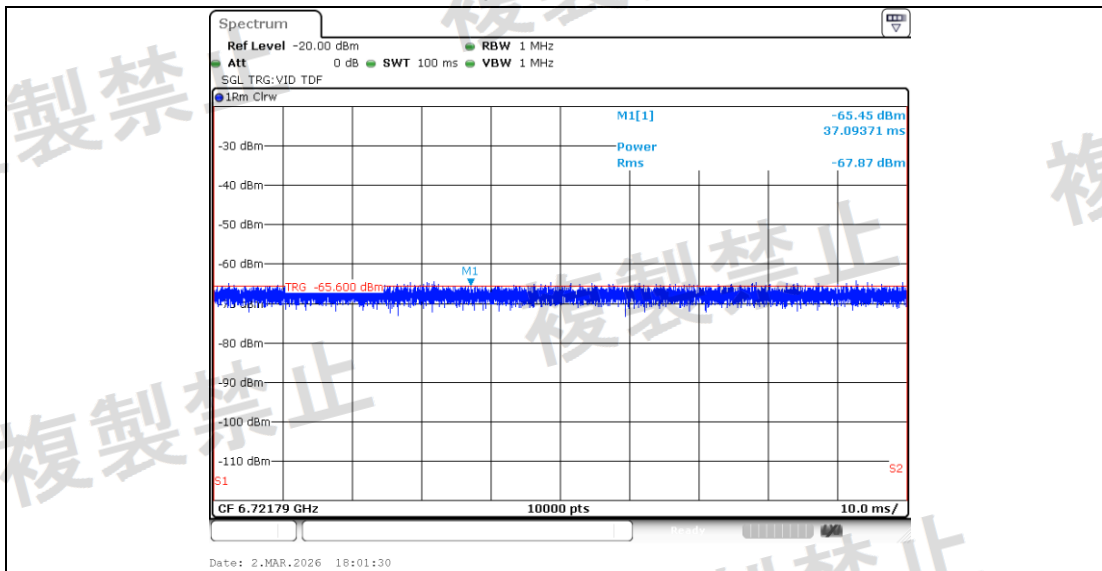
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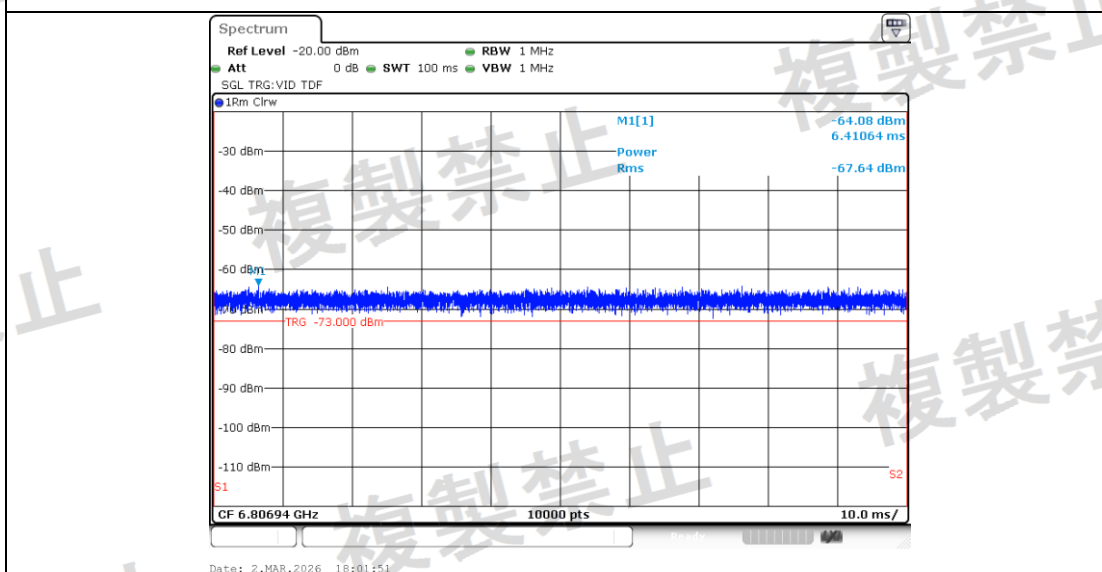
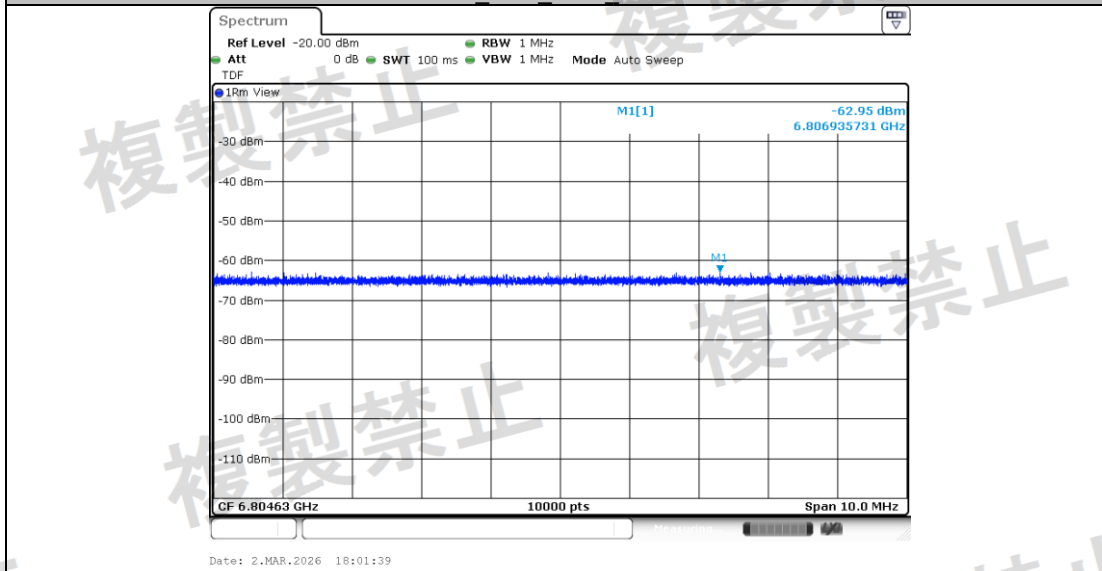
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Master TRF : Dated 2026-01-01



3DH5_Ant1_2480_6804.63



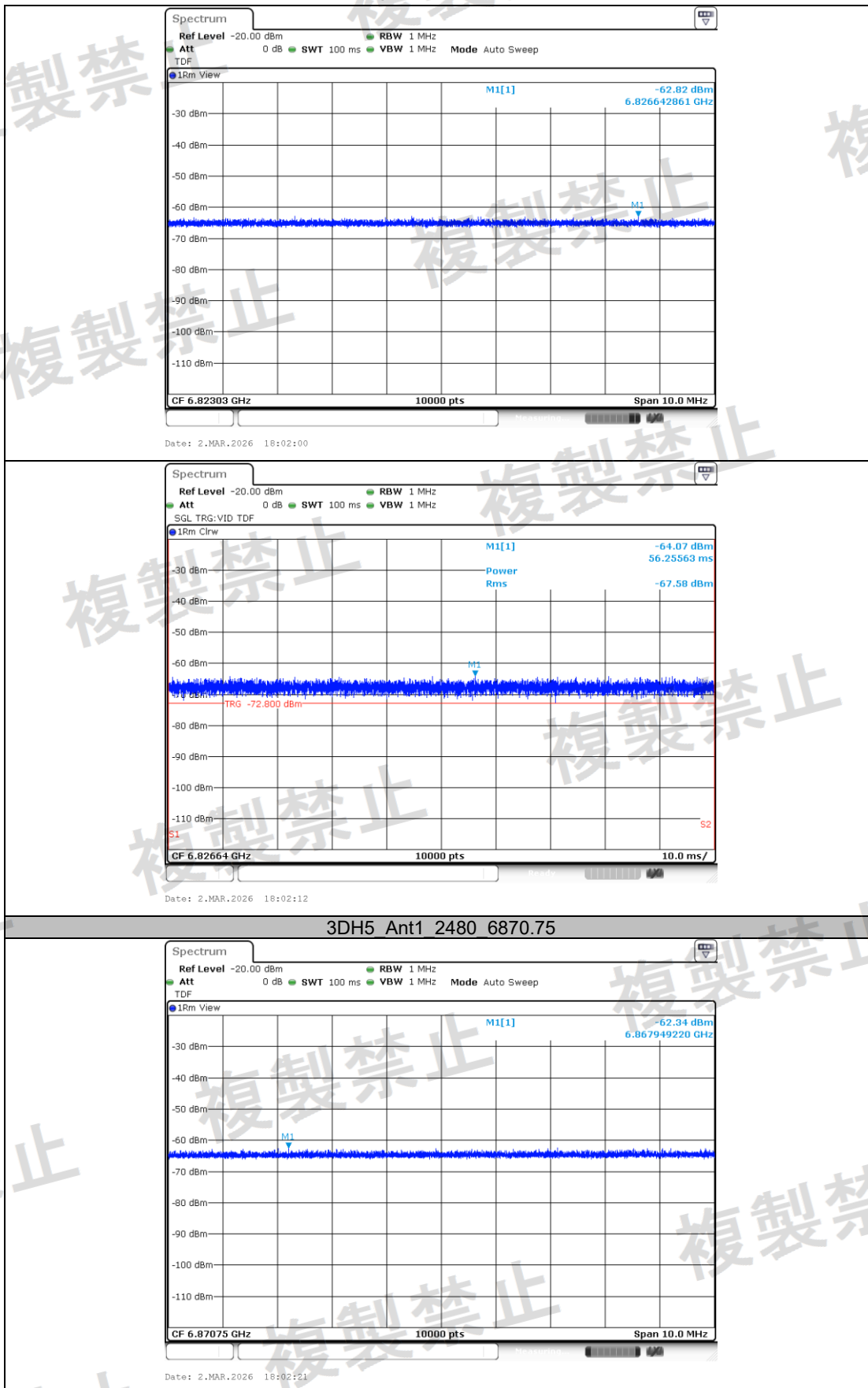
3DH5_Ant1_2480_6823.03

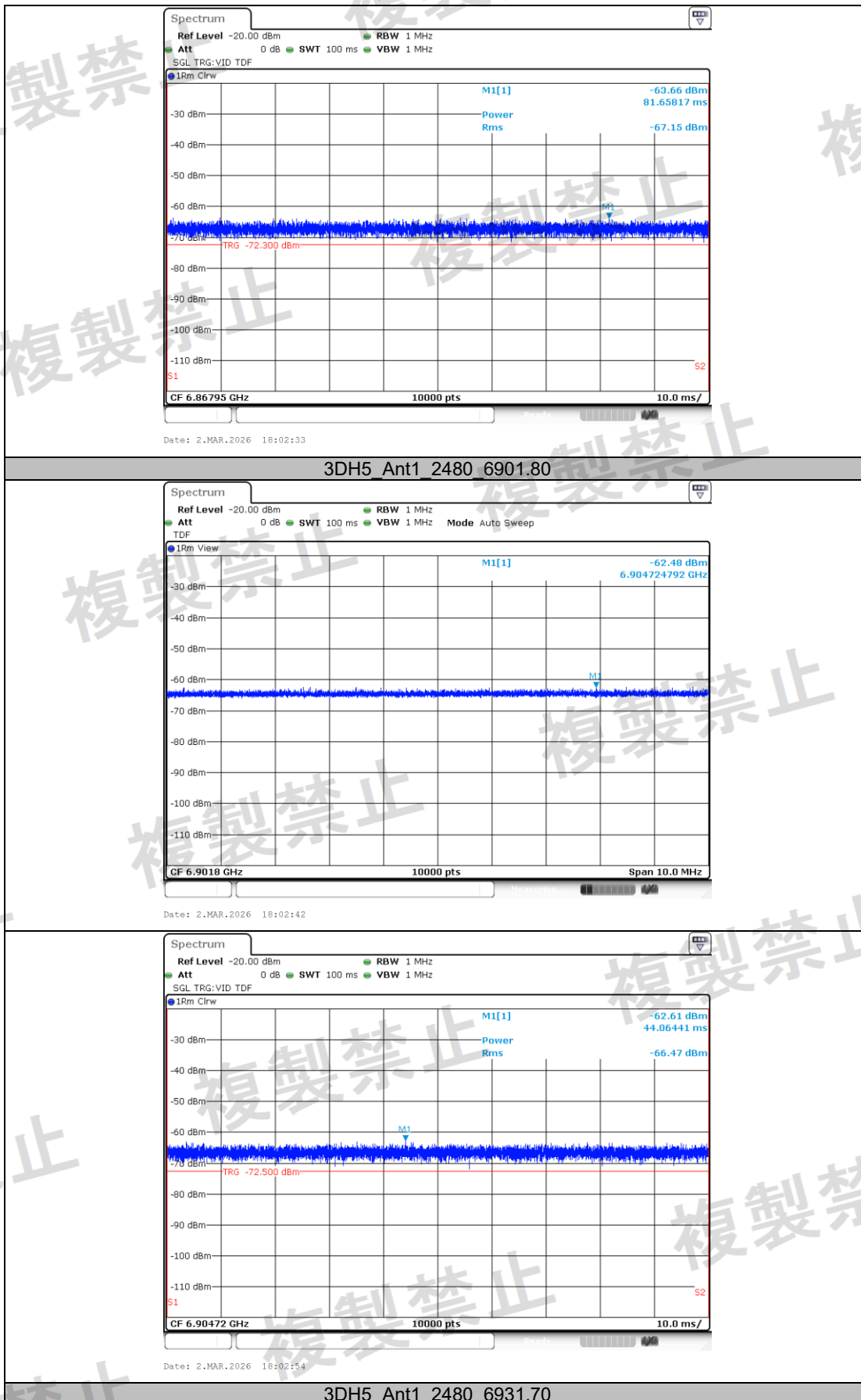
CTC Laboratories, Inc.

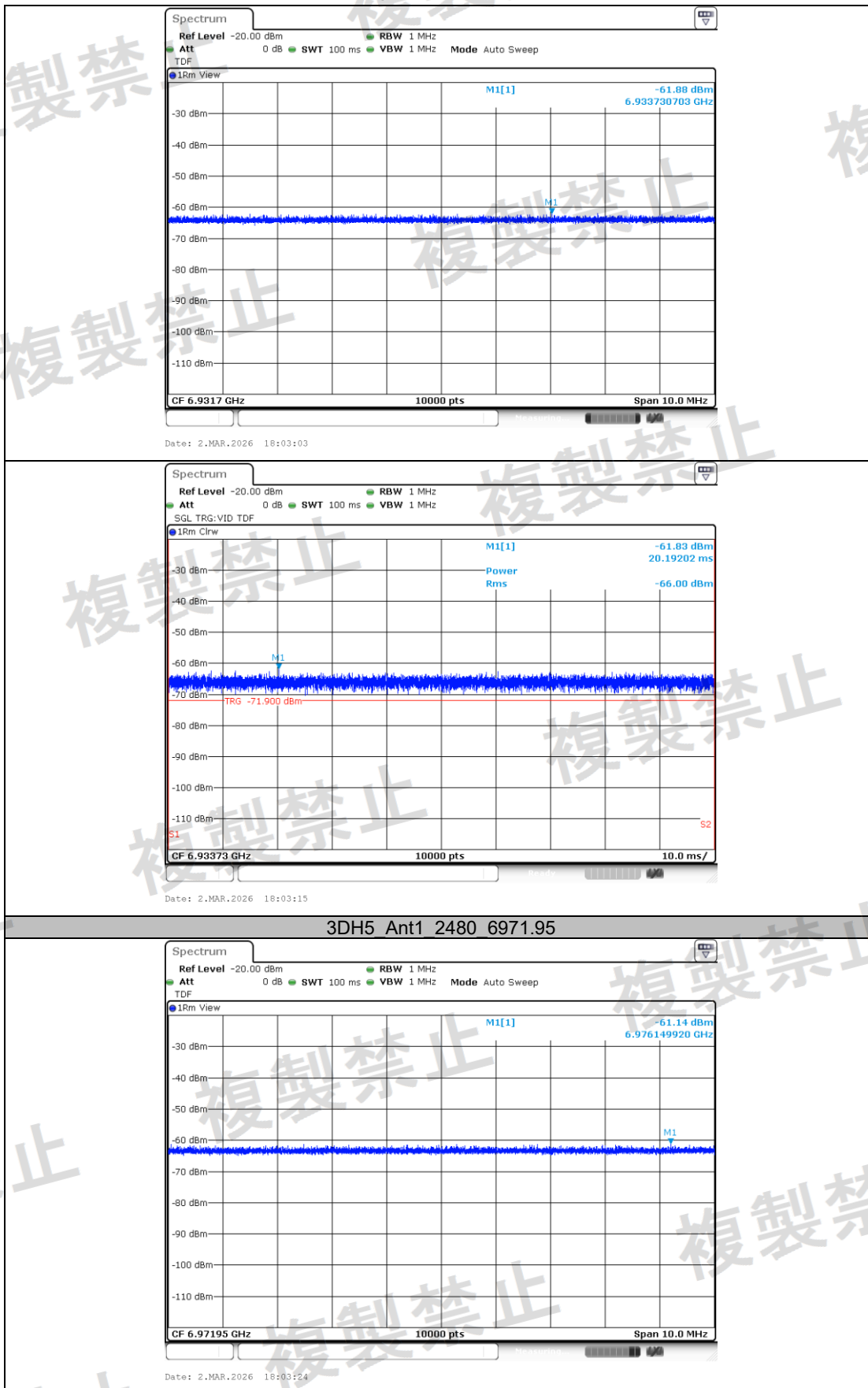
Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhua Community, Guanhu Subdistrict,
Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn

TRF No: CTC-TR-074_A3

Master TRF : Dated 2026-01-01





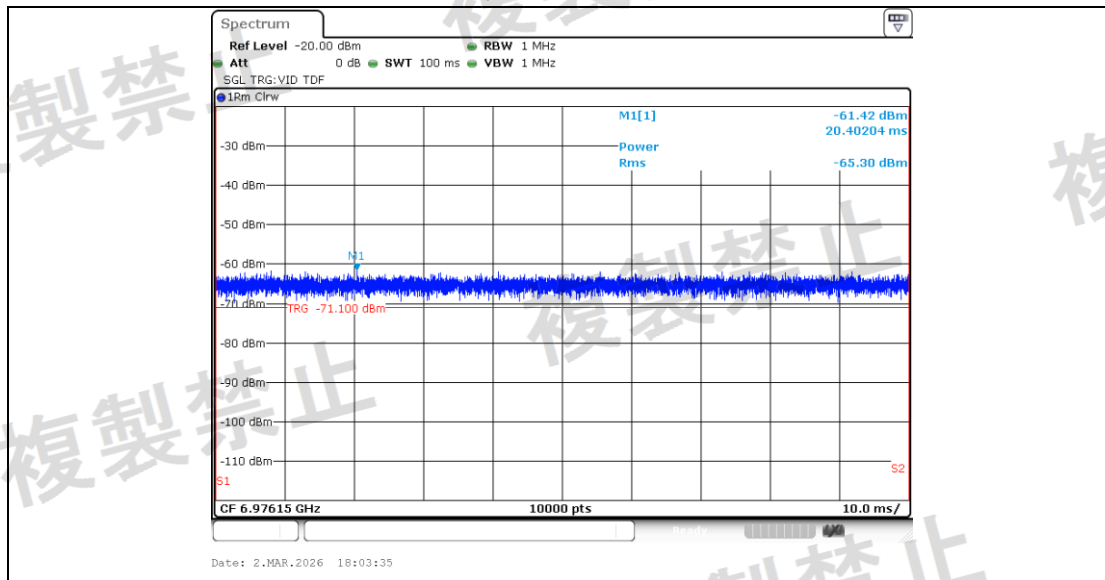


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Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhua Community, Guanhu Subdistrict,
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TRF No: CTC-TR-074_A3

Master TRF : Dated 2026-01-01





3.7. Construction protection confirmation method

Requirement

The high-frequency section and modulation section of the radio equipment except for the antenna system shall not be capable of being opened easily

Confirmation method

Reference to the test report No.: CTC2026084001.

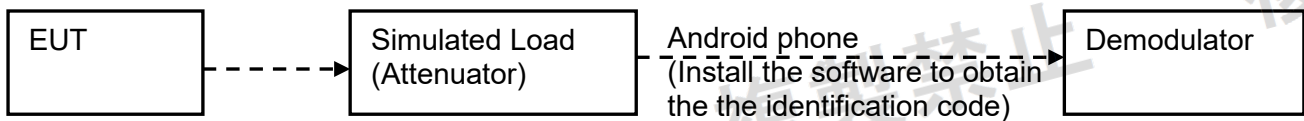


3.8. Interference Prevention Function

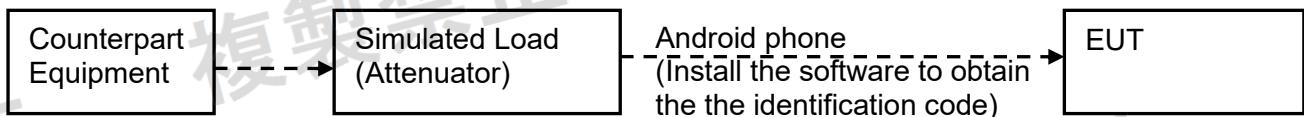
Module apply DSSS technique, in which the message signal is used to modulate a bit sequence known as the Pseudo Noise (PN) code; this PN code consists of pulses of a much shorter duration (larger bandwidth) than the pulse duration of the message signal, therefore the modulation by the message signal has the effect of chopping up the pulses of the message signal and thereby resulting in a signal which has a bandwidth nearly as large as that of the PN sequence. In this context the duration of the pulse of the PN code is referred to as the chip duration and the smaller this value, the larger the bandwidth of the resultant DSSS signal and the more immune to interference the resultant signal becomes.

Measurement System Diagram

(1) When transmitting the identification code.



(2) When receiving the identification code



Procedure for Measuring Operation

- (1) If the test machine has the function of automatically transmitting identification codes. The test equipment transmits the identification code specified in the equipment regulations. Verify the identification code transmitted by the demodulator.
- (2) If the test equipment has the function of automatically receiving identification codes. The opposing device transmits the identification code specified in the equipment regulations. Confirm that communication with the test equipment is performed using a dedicated jig. The opposing device transmits a code different from the identification code specified in the equipment regulations. Verify that the test equipment stops transmission or indicates that the identification code is different

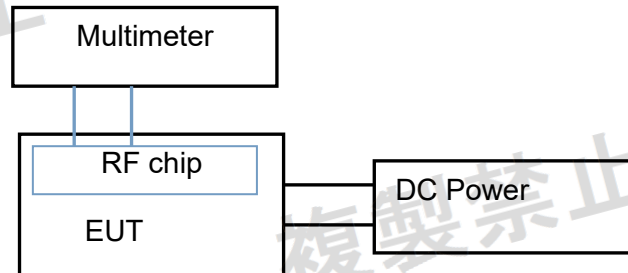
TEST RESULTS

Reference to the test report No.: CTC2026084001.

3.9. Condition for Voltage Stabilization

- In the case of a characteristic test in the technical regulations conformity certification, the power supply supplies the voltage rating
- Other cases
The power supply supplies the voltage rating and the rating. However, when it can be confirmed that the change of the input voltage to the wireless part circuit of the testing machine is 1% or less when the input voltage to the testing machine from the external source changes at 10%, examines it only by the voltage rating.

TEST CONFIGURATION



TEST PROCEDURE

Reference to the test report No.: CTC2026084001.

3.10. Transmission Radiation Angle Width (3DB Beamwidth) Measurement

LIMIT

Item	Limits
	(See Article 49-20, Item1-f of the Ordinance Regulating Radio Equipment)
3dB antenna beam width	$360/A$ (if $A < 1$; then $A = 1$) $A = \{ \text{EIRP Power [mW]} / 16.36 \text{ for DS, OFDM} \}$

MEASURING INSTRUMENTS AND SETTING

Please refer to section 5 in this report. The following table is the setting of the spectrum analyzer.

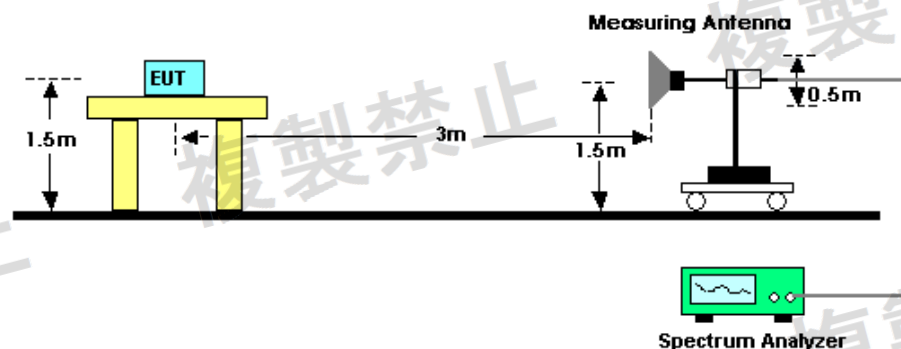
Spectrum Parameter	Setting
Attenuation	Auto
Span	0 MHz
RBW	1 MHz
VBW	1 kHz
Y scale	5 dB
Detector	Peak
Trace	Max Hold

TEST PROCEDURES

Test method which surpass to Clause 22 of Annex No.43 of MIC Notification No.88.

1. Set EUT and measuring antenna at the same height and roughly facing each other.
2. Set spectrum analyzer with condition and tune reference level to observe receiving signal position.
3. Rotate directions of the EUT horizontally and vertically to find the maximum receiving power.
4. Move the measuring antenna height up and down within $\pm 50\text{cm}$ of EUT height and swing it to find the maximum output of measuring antenna. The output level at the spectrum analyzer is read as "E".
5. Calculate permitted radiation angle in horizontal and vertical using EIRP measured in another test method.
6. Calculate 3dB antenna beam width by the formula below $360/A$ (If $A < 1$; then $A = 1$).
 $A = \{ \text{EIRP Power [mW]} / 16.36 \text{ for DS, OFDM} \}$ or
 $A = \{ \text{EIRP Power [mW]} / 4.9 \text{ for FH} \}$

TEST SETUP





TEST RESULT OF TRANSMISSION RADIATION ANGLE WIDTH (3DB BEAMWIDTH)

Not necessary

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