



CTC Laboratories, Inc.

TEST REPORT

Report No. : **CTC2026084001**

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-073_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:

(Printed name + signature)

Aicia Liu

Aicia Liu

Supervised by:

(Printed name + signature)

Eric Zhang

Eric Zhang

Approved by:

(Printed name + signature)

Totti Zhao

Totti Zhao

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

TRF No: CTC-TR-073_A3

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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	CTC2026084001	Mar. 30, 2026	Original

1.3. Test Description

Test Item	Result	Note
Frequency Error	Pass	/
Occupied Bandwidth	Pass	/
Transmitter Spurious Emission and Unwanted Emission Intensity	Pass	/
Antenna Output Power and Output Power Tolerance	Pass	/
Receiver Spurious Emission and Unwanted Emission Intensity	Pass	/
Radio Interference Prevention Capability	Pass	/
Frequency Hopping Dwell Time	N/A ^{Note 1}	N/A
Transmission Radiation Angle Width (3dB Beamwidth)	N/A ^{Note 3}	N/A
Carrier Sense Capability	N/A ^{Note 2}	N/A
Construction Protection Confirmation	Pass	/

N/A^{Note 1}: Testing is only required for FHSS system devices

N/A^{Note 2}: Not apply to this device, since EIRP does not require compensation through Antenna Power.

N/A^{Note 3}: Required when the design value of Rated +Antenna gain exceeds 12.14 dBm.



1.4. Test Facility

Address of the test 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: $\pm 1.328\text{dB}$



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	101kPa

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/BLE	
Modulation:	GFSK (1Mbps, 2Mbps)
Operation frequency:	2402MHz~2480MHz
Channel number:	40
Channel separation:	2MHz
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.

Operation Frequency List BT:

Channel	Frequency (MHz)
00	2402
01	2404
...	...
18	2438
19	2440
20	2442
...	...
38	2478
39	2480

Note: These channels with bold were be 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



2.6. Accessory Equipment Information

Equipment Information			
Name	Model	S/N	Manufacturer
Notebook	ThinkPad T460s	MP246QDR	Lenovo
/	/	/	/
Cable Information			
Name	Shielded Type	Ferrite Core	Length
USB Cable	Unshielded	NO	100cm
SMA-JJ	Unshielded	NO	80cm
Test Software Information			
Name	Version	/	/
Bluetooth RF Test Tool	5.2.3.32	/	/



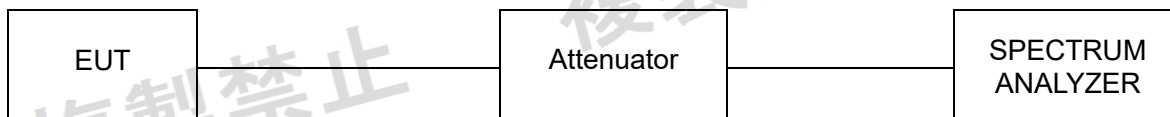
3. TEST CONDITIONS AND RESULTS

3.1. Frequency Error

LIMIT

$\pm 50\text{ppm}$

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: Non-modulation

Spectrum Condition:

Frequency: test frequency

Span: Show the entire waveform

RBW: 10 KHz

VBW: 10 KHz

Sweep time: Auto

Detector mode: Positive peak

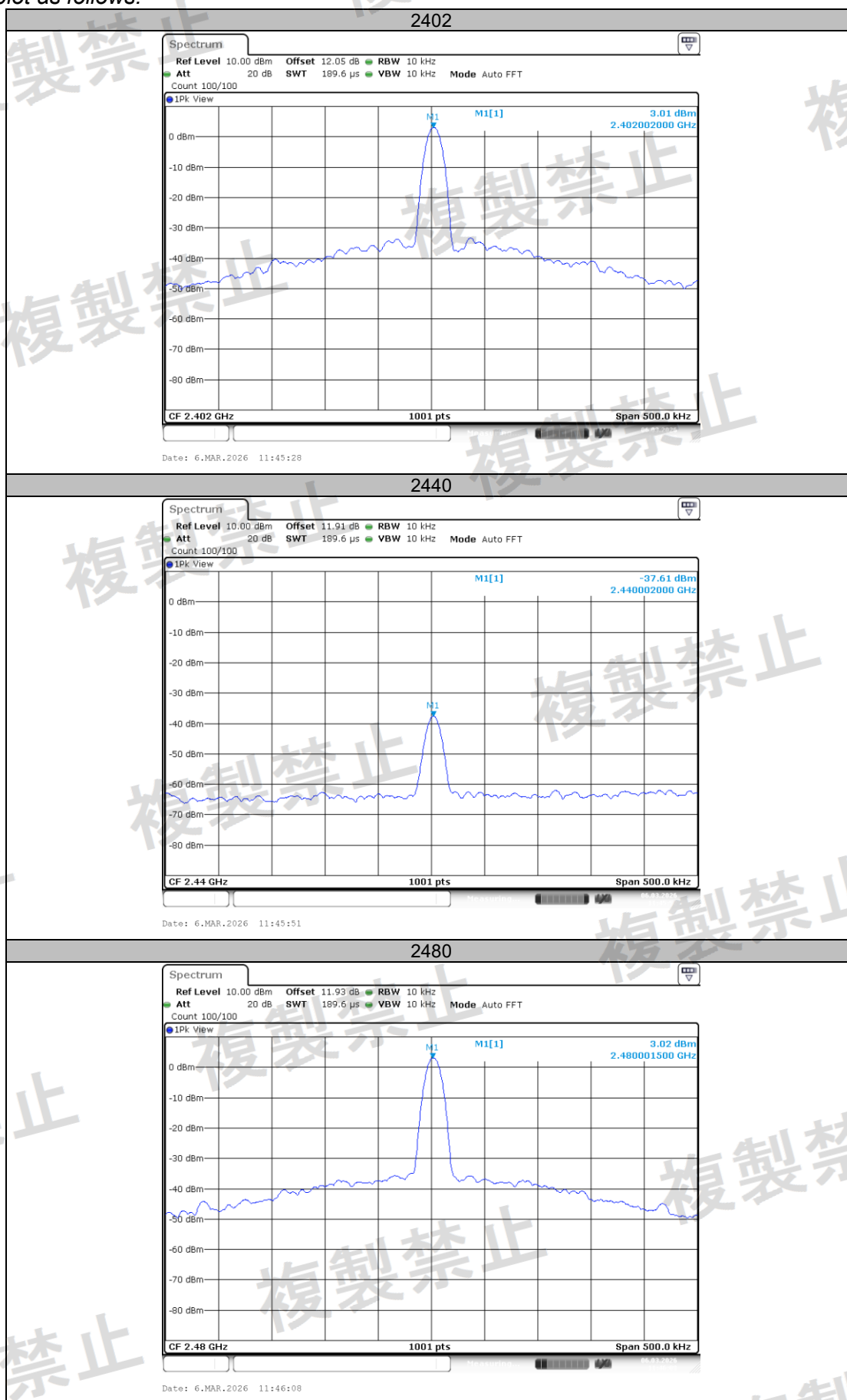
Indication mode: Max hold

TEST RESULTS

DC 3.7V					
Test Mode	Channel	Read (MHz)	Result (ppm)	Limit[ppm]	Verdict
CW	2402	2402.0020	0.83264	± 50	PASS
	2440	2440.0020	0.81967		
	2480	2480.0015	0.60484		



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 RESULTS

DC 3.7V									
Test Mode	Channel	Power (mW)	Limit (mW)	EIRP Power (dBm)	Limit (dBm)	RatedPower (mW)	Tolerance (%)	Limit (%)	Verdict
Ant1_BLE_1M	2402	1.6218	10	4.10	12.14	2.00	-18.91	< +20	PASS
	2440	1.5704	10	3.96	12.14	2.00	-21.48		
	2480	1.6866	10	4.27	12.14	2.00	-15.67		
Ant1_BLE_2M	2402	1.3677	10	3.36	12.14	2.00	-31.61		
	2440	1.2106	10	2.83	12.14	2.00	-39.47		
	2480	1.3583	10	3.33	12.14	2.00	-32.08		

Note: The EIRP limit is 12.14dBm(16.37mW).

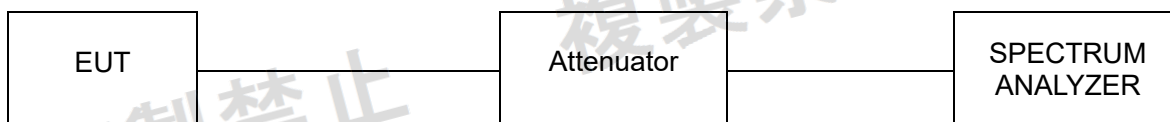


3.3. Occupied Bandwidth

LIMIT

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

TEST CONFIGURATION



TEST PROCEDURE

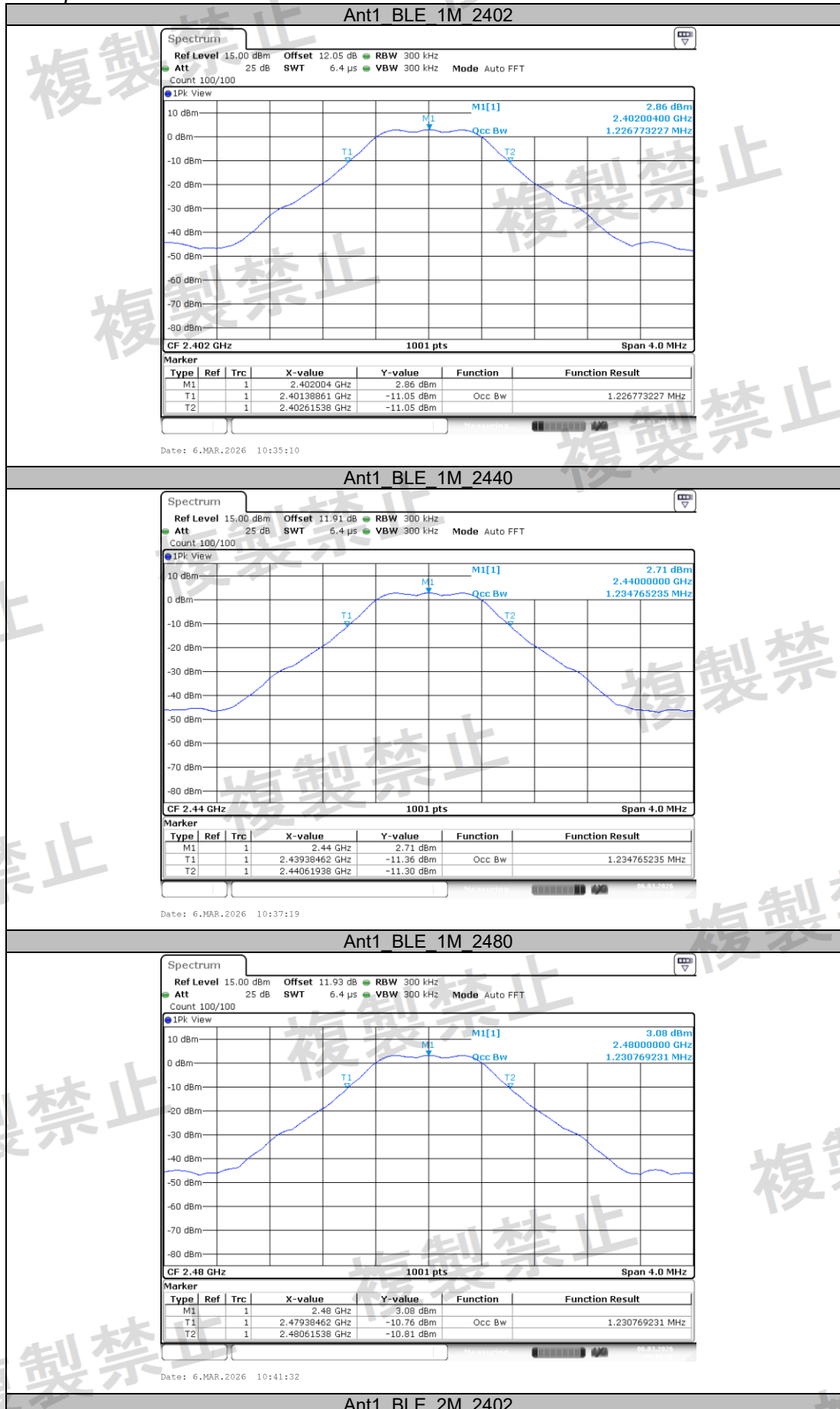
- Setting of SA is following as follow:
RBW: 300 kHz
VBW: 300 kHz
Sweep time: Auto
Sweep Mode: Continuous sweep
Detect mode: Positive peak
Trace mode: Max hold
- EUT have transmitted the maximum modulation signal and fixed channelize. SA set to 99% of occupied bandwidth to measure occupied bandwidth.

TEST RESULTS

DC 3.7V				
Test Mode	Channel	Result [MHz]	Limit [MHz]	Verdict
Ant1_BLE_1M	2402	1.227	<=26	PASS
	2440	1.235		
	2480	1.231		
Ant1_BLE_2M	2402	2.166		
	2440	2.162		
	2480	2.166		



Test plot as follows:



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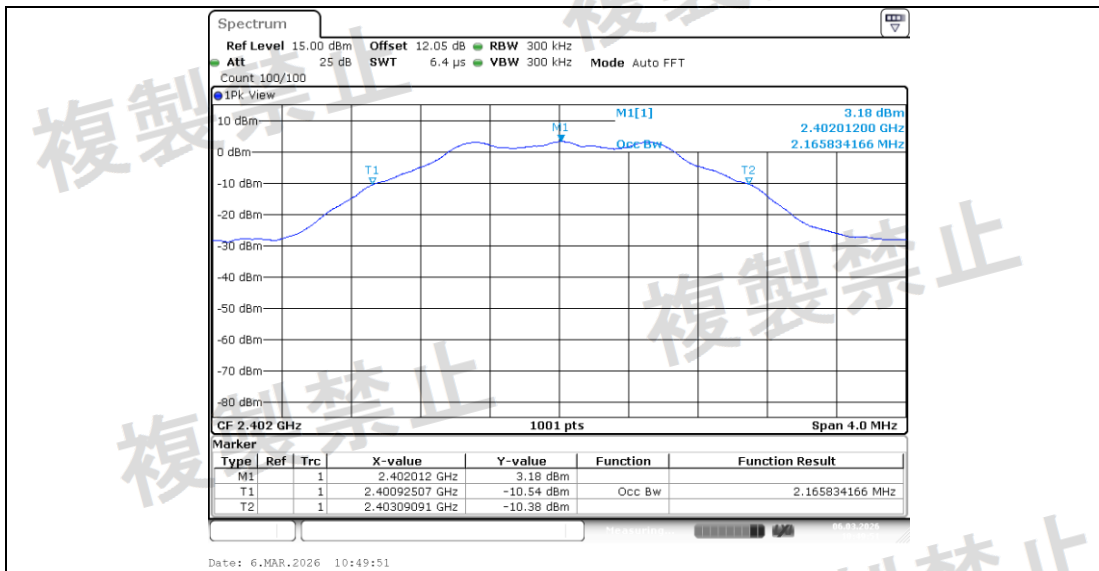
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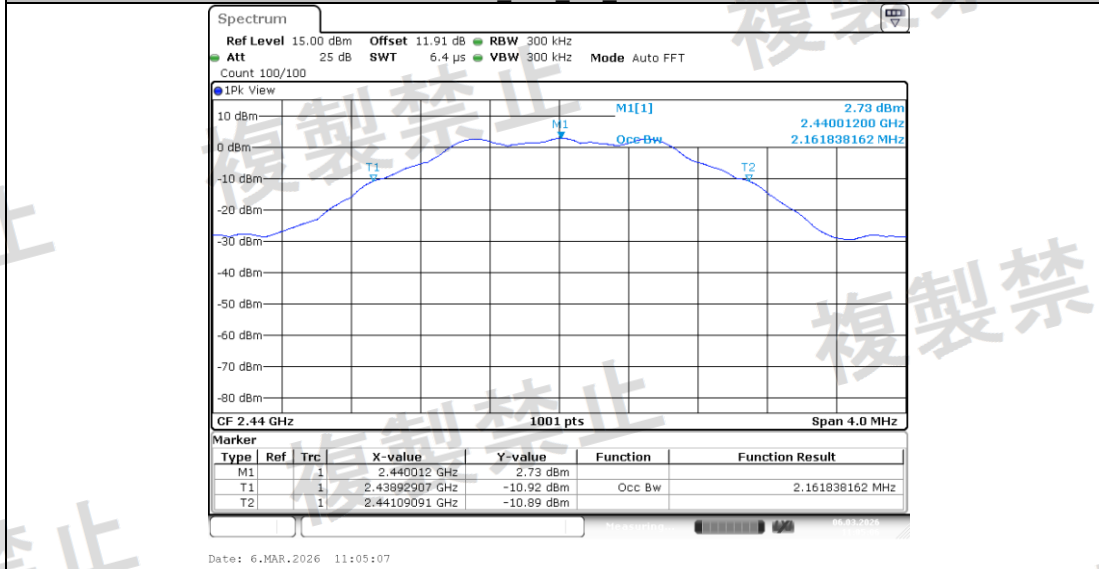
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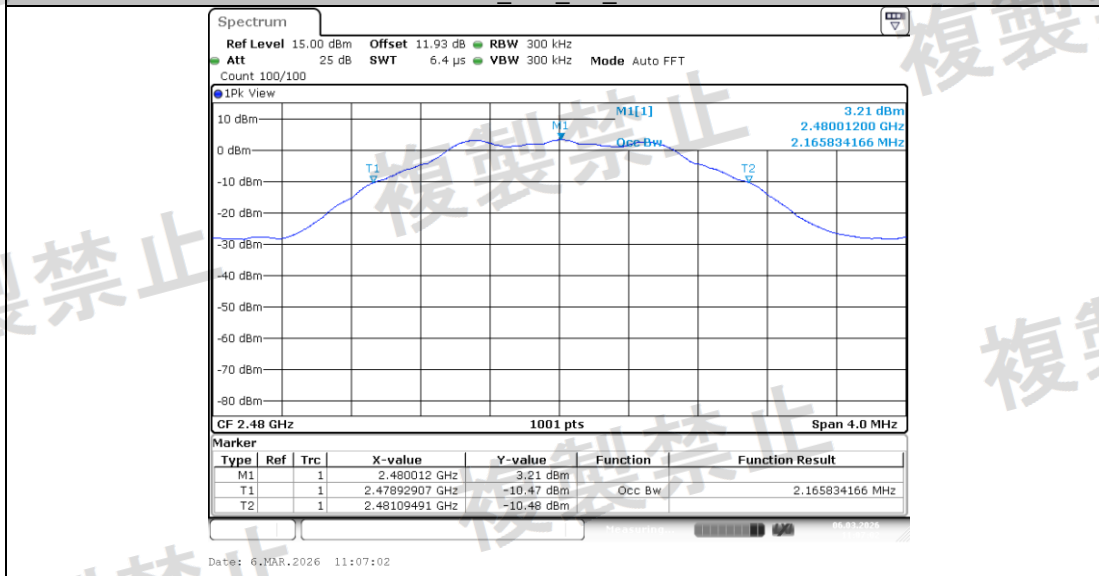
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Ant1_BLE_2M_2440



Ant1_BLE_2M_2480





3.4. Transmitter Spurious Emission Strength and Unwanted Emission Intensity

LIMIT

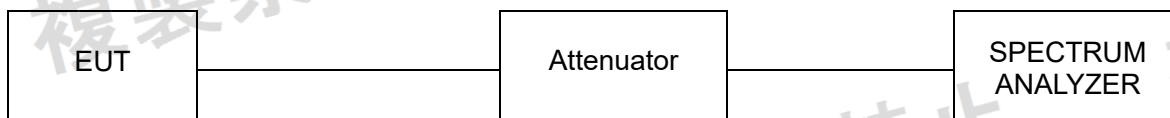
30MHz to 2387MHz: 2.5 μ W/MHz or less

2387MH to 2400MHz: 25 μ W/MHz or less

2483.5MH to 2496.5MHz: 25 μ W/MHz or less

Over 2496.5 MHz: 2.5 μ W/MHz 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-12.5GHz)

VBW: 1MHz (30MHz-12.5GHz)

Sweep time: Auto

Detector mode: Positive peak

Indication mode: Max hold

If the test margin is insufficient, then proceed with the following final test steps.

- The EUT is configured to the modulation mode, and transmitting at maximum power.
- When searching for Spurious Emission or unwanted emissions, the spectrum analyzer should be set as follows:

- Test frequency range = 30MHz to 5 times the carrier frequency
- RBW = 100kHz, VBW = 100kHz (for 30MHz~1000MHz)
- RBW = 1MHz, VBW = 1MHz (for above 1GHz)
- Sweep time = Auto
- Sweep mode = Single sweep
- Detect mode = Positive peak

- When measuring the amplitude of spurious emission or unwanted emissions, the spectrum analyzer should be set as follows:

- Center frequency = The frequency found in step b)
- Span = 0



- RBW = 1MHz (for 30MHz~1000MHz:100KHz)
- VBW = 1MHz (for 30MHz~1000MHz:100KHz)
- Sweep time = Auto
- Sweep mode = Single sweep
- Detect mode = Sample or RMS

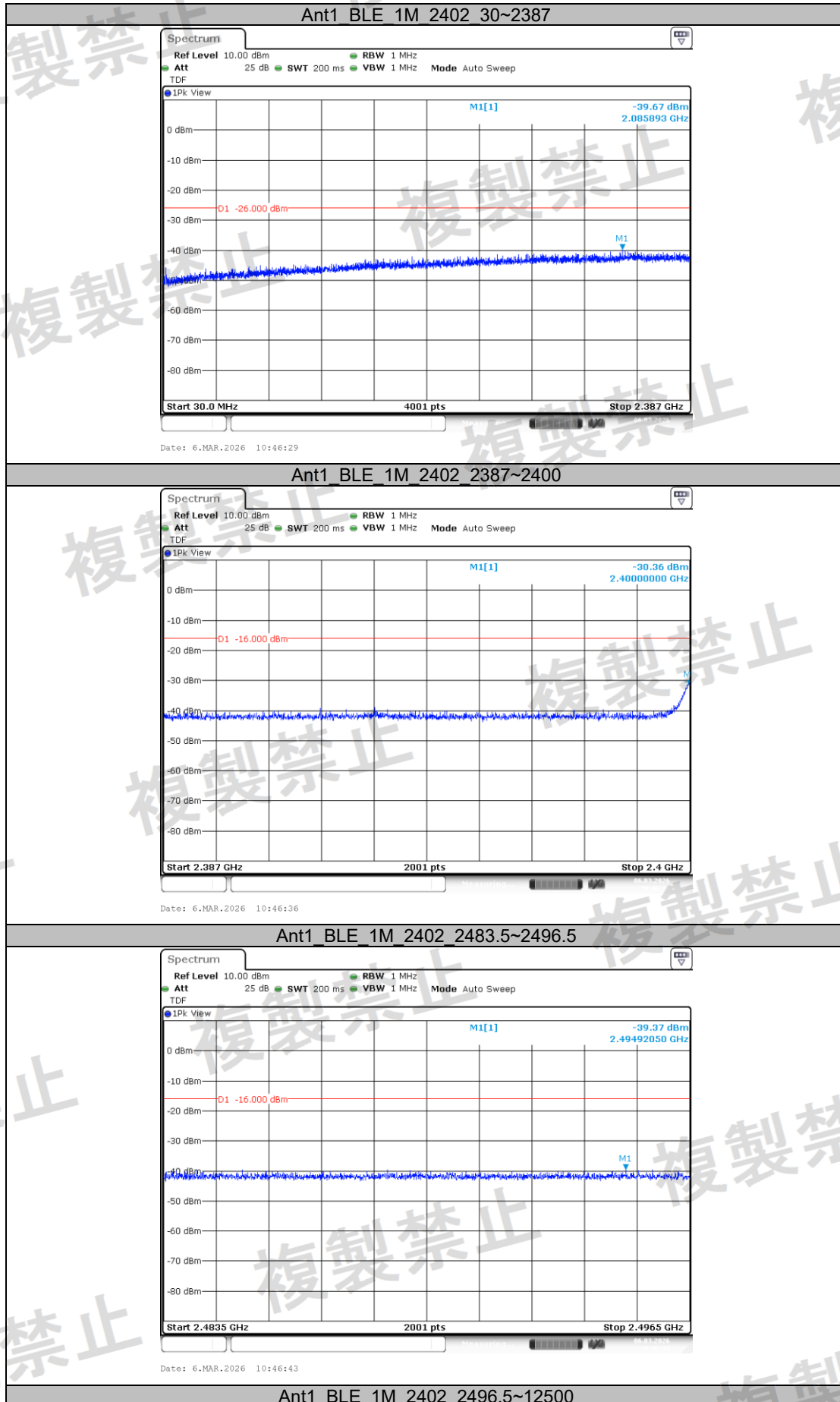
TEST RESULTS

Measurement Data:

DC 3.7V								
TestMode	Freq(MHz)	Freq.Range [MHz]	Freq. [MHz]	Result [dBm/MHz]	Limit [dBm/MHz]	Result [μW/MHz]	Limit [μW/MHz]	Verdict
Ant1_BLE_1M	2402	30~2387	2085.89	-39.67	≤-26	0.10789	≤2.5	PASS
		2387~2400	2400.00	-30.36	≤-16	0.92045	≤25	PASS
		2483.5~2496.5	2494.92	-39.37	≤-16	0.11561	≤25	PASS
		2496.5~12500	6987.57	-36.83	≤-26	0.20749	≤2.5	PASS
	2440	30~2387	2351.65	-39.69	≤-26	0.10740	≤2.5	PASS
		2387~2400	2391.40	-39.79	≤-16	0.10495	≤25	PASS
		2483.5~2496.5	2492.96	-39.25	≤-16	0.11885	≤25	PASS
		2496.5~12500	6999.08	-38.53	≤-26	0.14028	≤2.5	PASS
	2480	30~2387	2339.27	-39.62	≤-26	0.10914	≤2.5	PASS
		2387~2400	2398.57	-39.87	≤-16	0.10304	≤25	PASS
		2483.5~2496.5	2491.53	-38.45	≤-16	0.14289	≤25	PASS
		2496.5~12500	6961.56	-38.91	≤-26	0.12853	≤2.5	PASS
Ant1_BLE_2M	2402	30~2387	2131.85	-40.30	≤-26	0.09333	≤2.5	PASS
		2387~2400	2400.00	-19.03	≤-16	12.50259	≤25	PASS
		2483.5~2496.5	2494.39	-39.68	≤-16	0.10765	≤25	PASS
		2496.5~12500	6971.57	-39.39	≤-26	0.11508	≤2.5	PASS
	2440	30~2387	2302.74	-39.50	≤-26	0.11220	≤2.5	PASS
		2387~2400	2396.30	-39.68	≤-16	0.10765	≤25	PASS
		2483.5~2496.5	2486.58	-39.54	≤-16	0.11117	≤25	PASS
		2496.5~12500	6989.57	-38.90	≤-26	0.12882	≤2.5	PASS
	2480	30~2387	1923.26	-39.68	≤-26	0.10765	≤2.5	PASS
		2387~2400	2391.69	-39.64	≤-16	0.10864	≤25	PASS
		2483.5~2496.5	2487.32	-39.06	≤-16	0.12417	≤25	PASS
		2496.5~12500	6866.03	-38.16	≤-26	0.15276	≤2.5	PASS



Test plot as follows:



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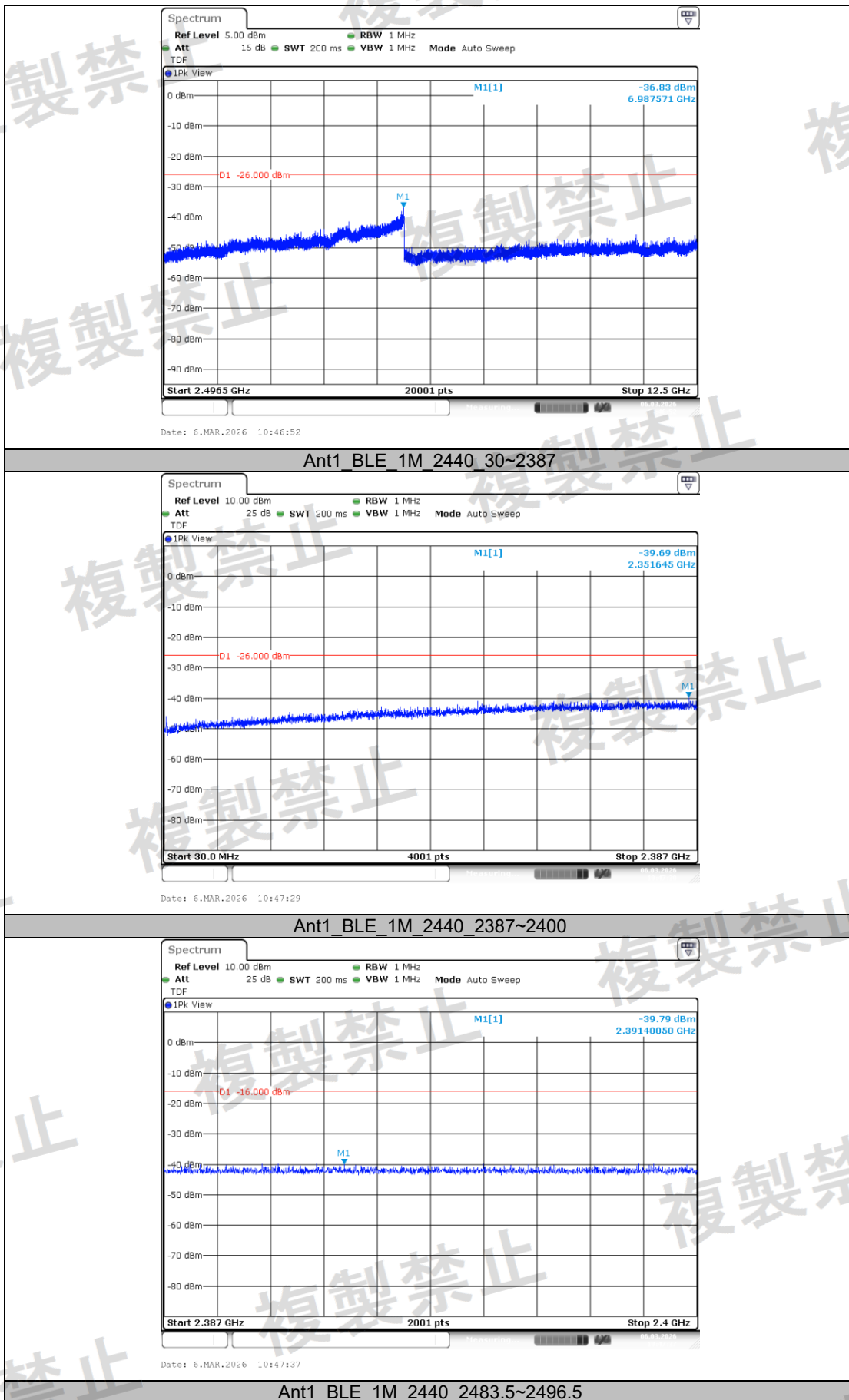
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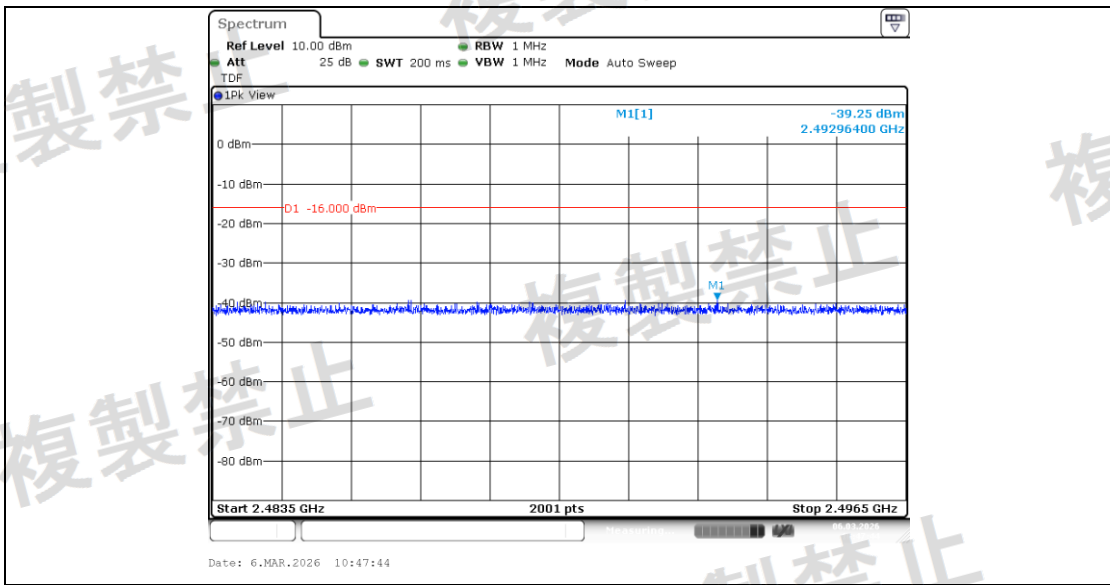


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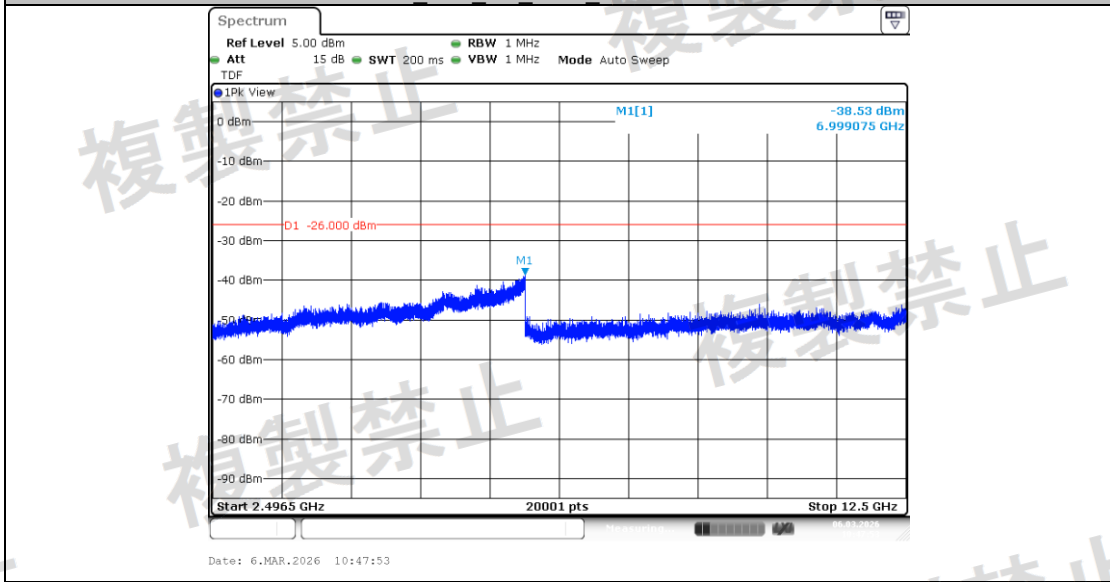
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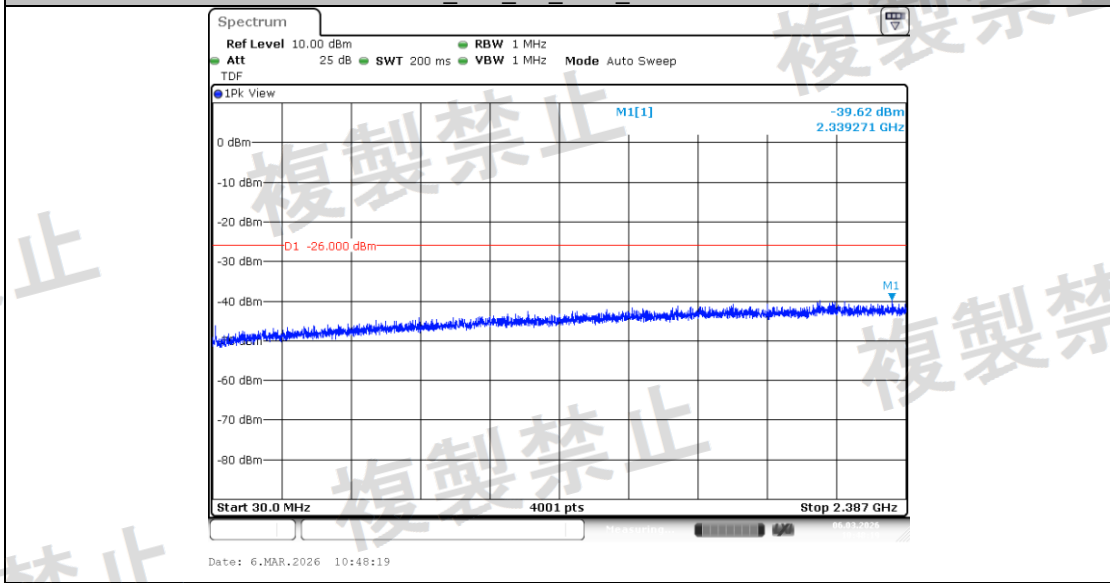
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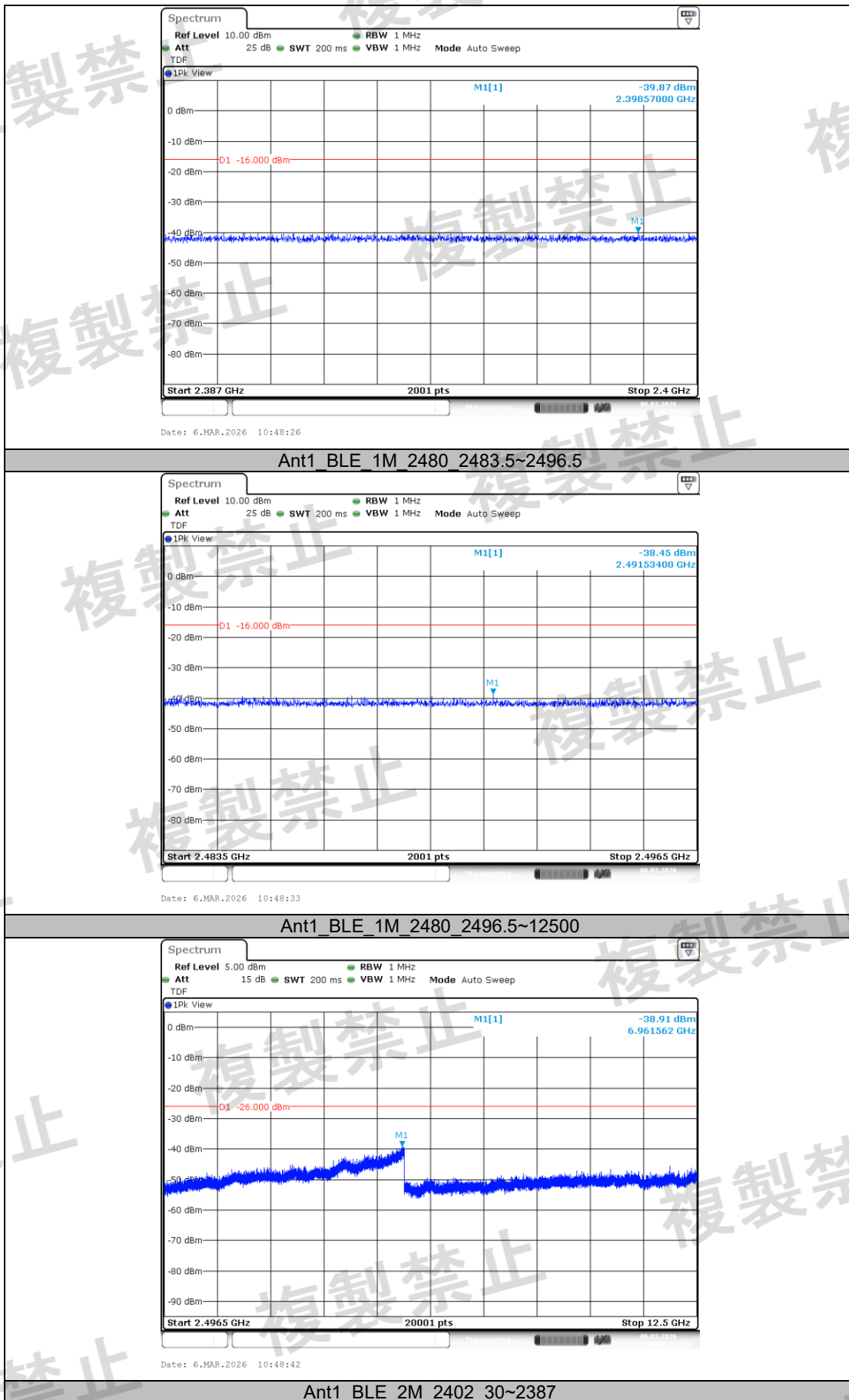
Ant1_BLE_1M_2440_2496.5~12500



Ant1_BLE_1M_2480_30~2387



Ant1_BLE_1M_2480_2387~2400

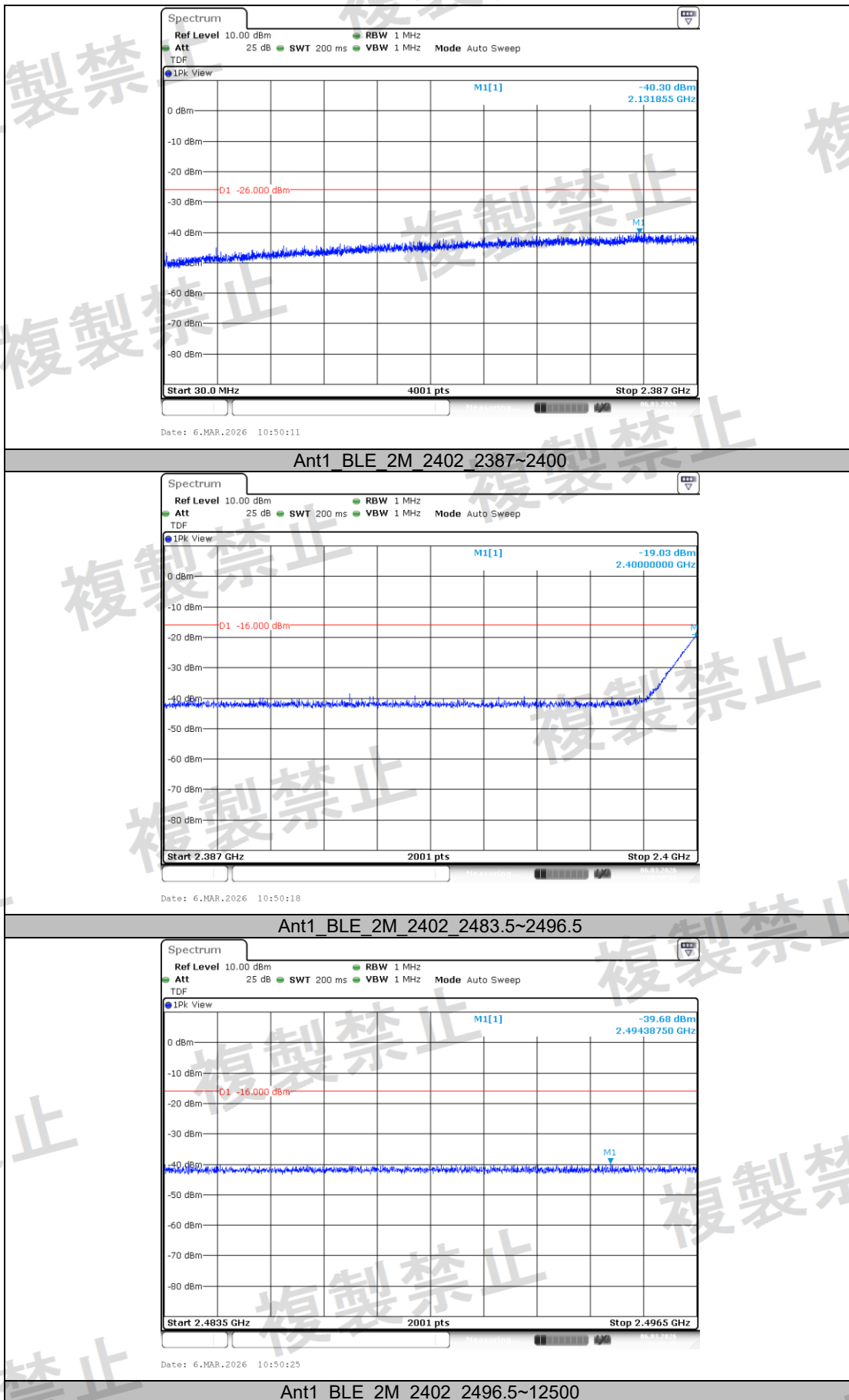


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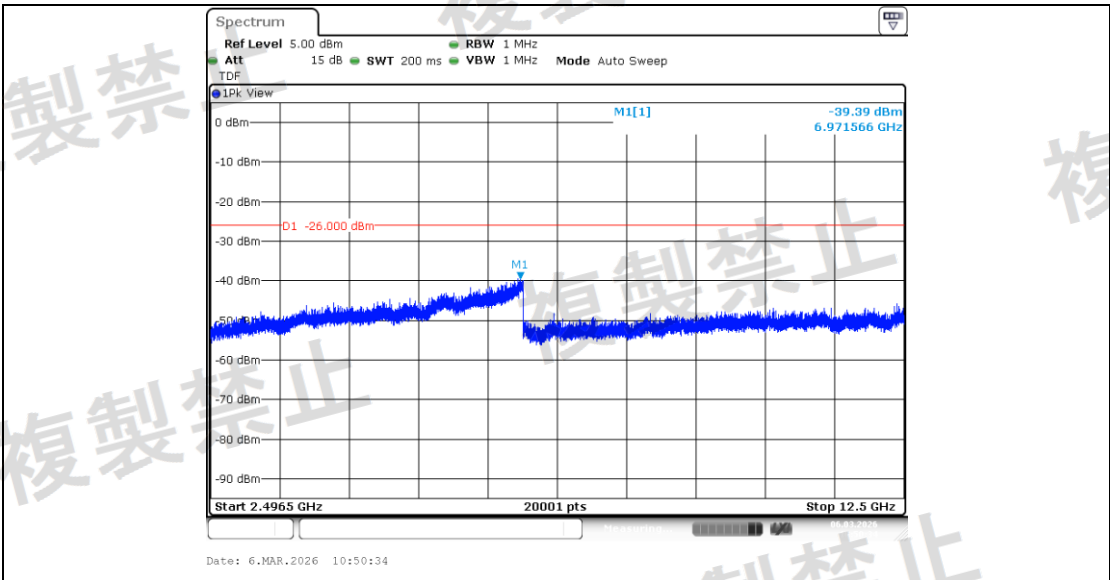


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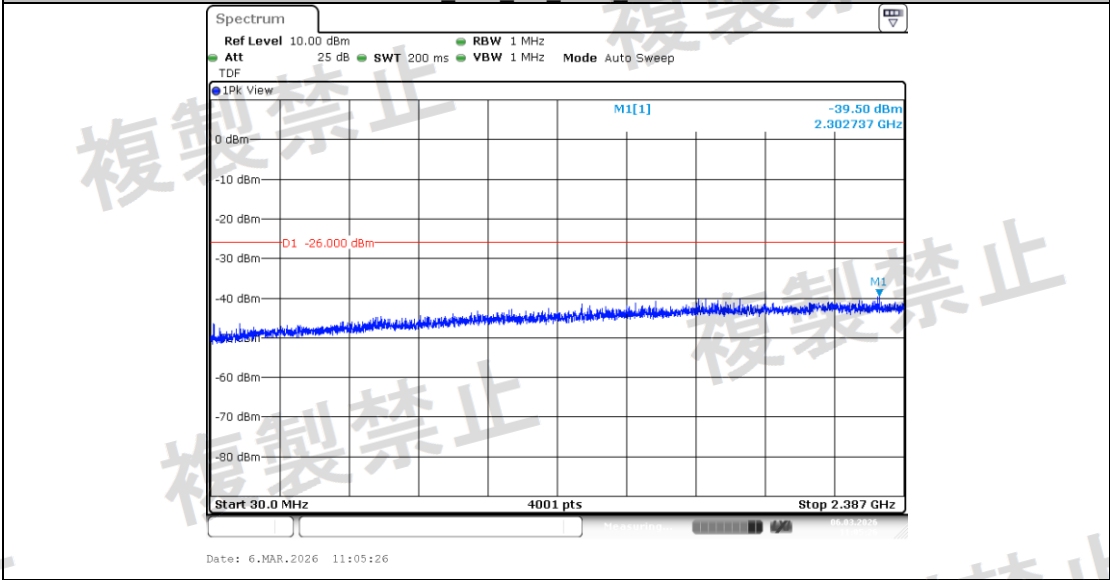
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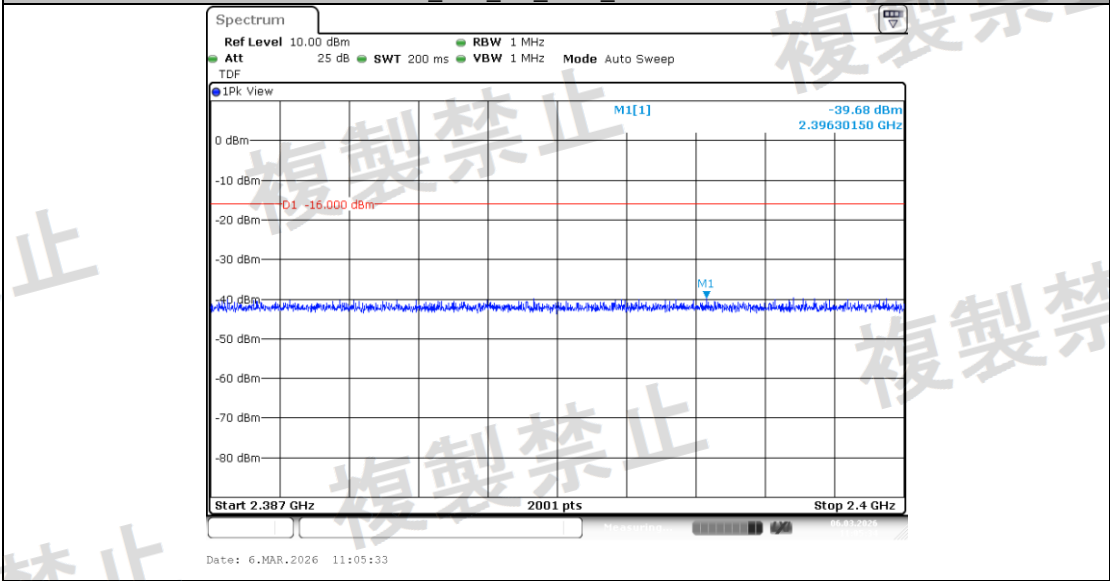
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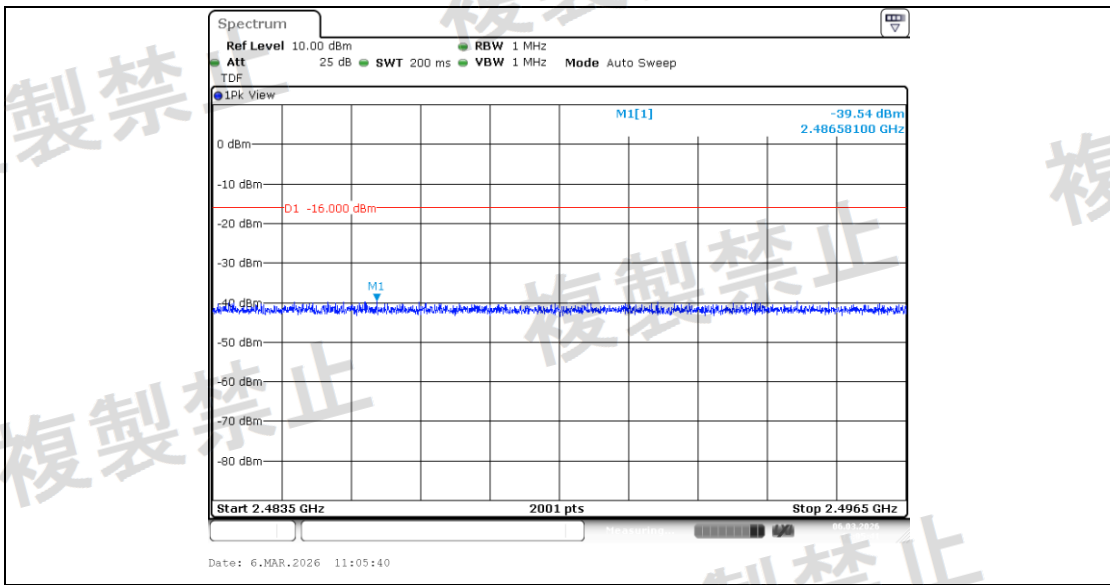
Ant1_BLE_2M_2440_30~2387



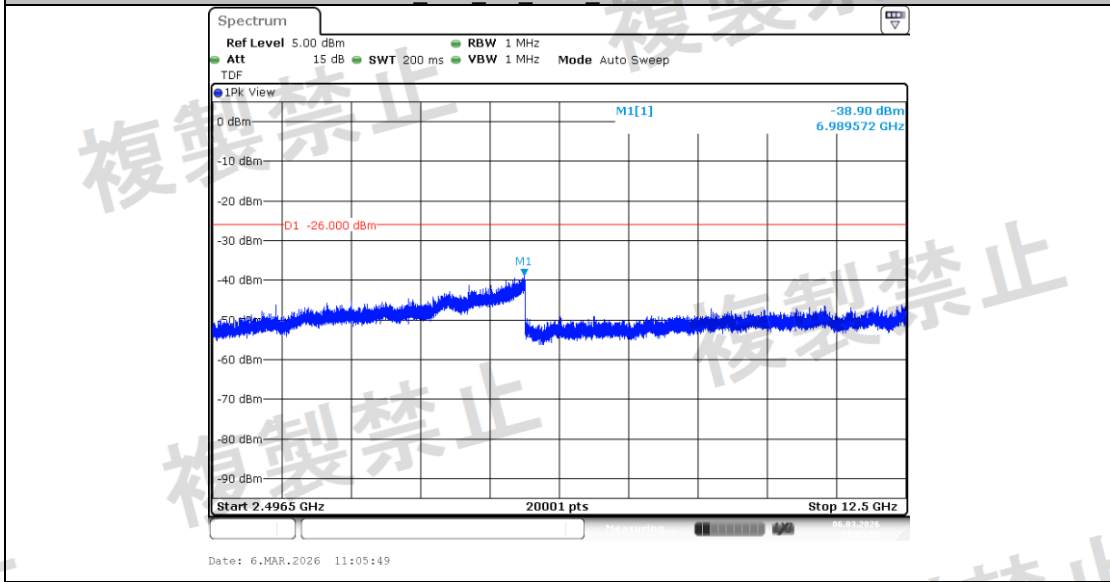
Ant1_BLE_2M_2440_2387~2400



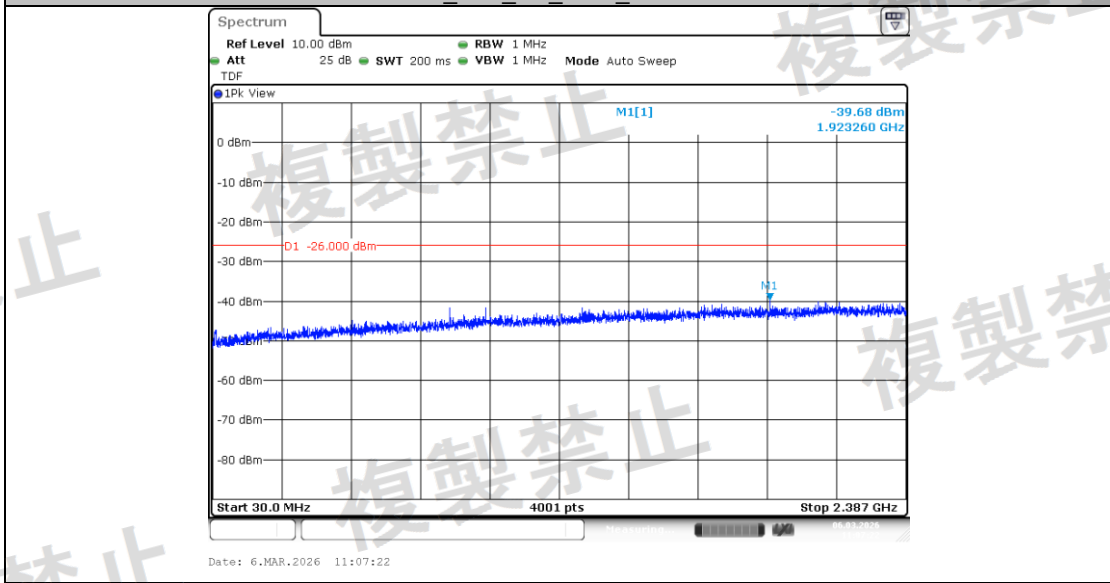
Ant1_BLE_2M_2440_2483.5~2496.5



Ant1_BLE_2M_2440_2496.5~12500



Ant1_BLE_2M_2480_30~2387



Ant1_BLE_2M_2480_2387~2400

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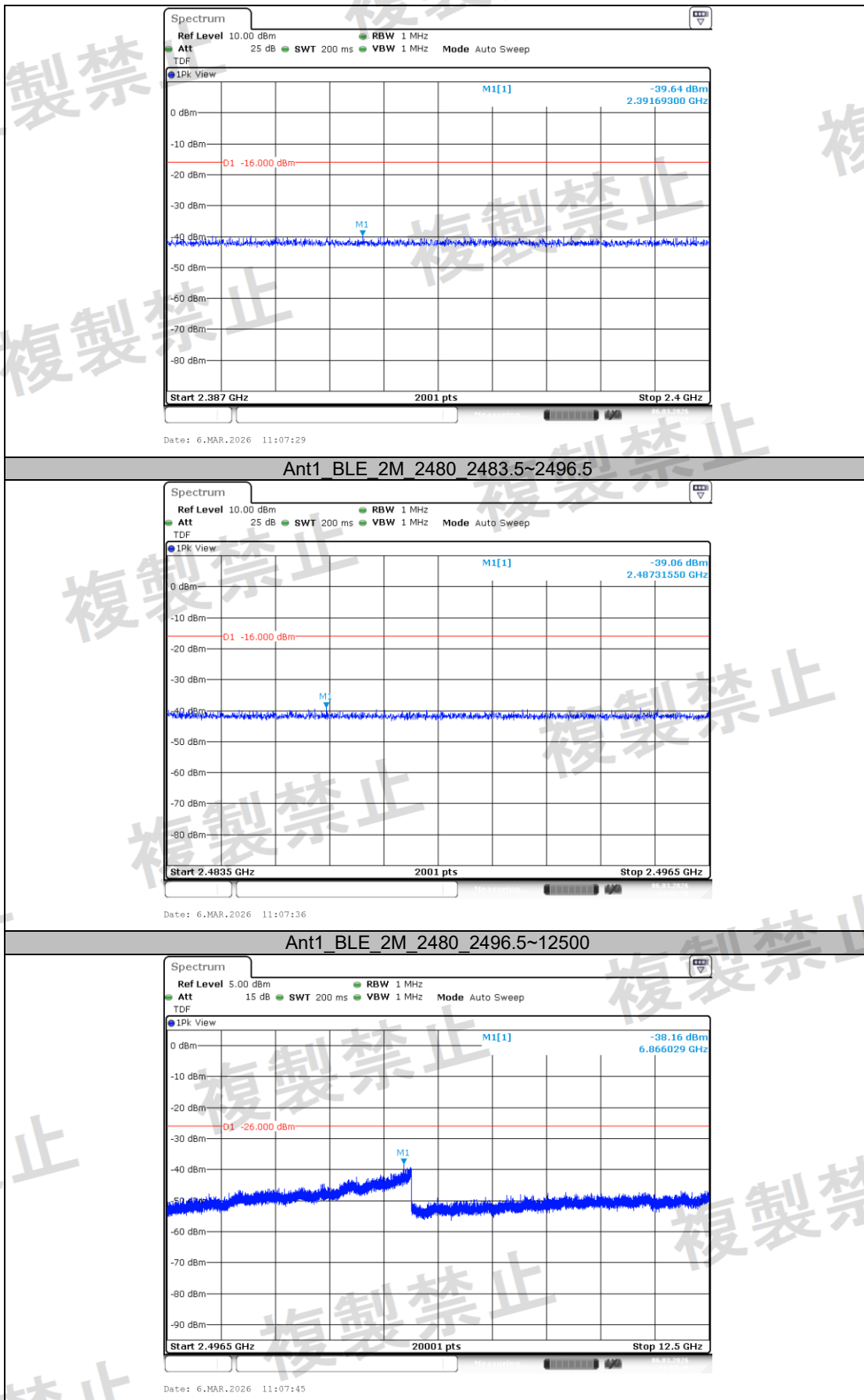
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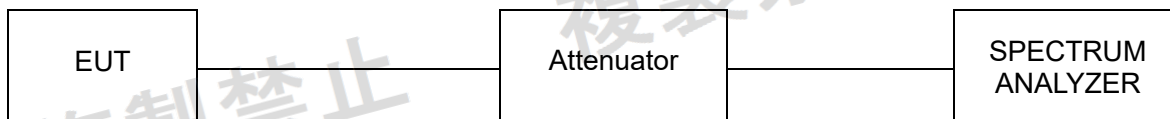
3.5. Receiver Spurious Emission and Unwanted Emission Intensity

LIMIT

Below 1GHz: 4.0nW or less

Above 1GHz: 20nW 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: 100 KHz (30MHz-1GHz), 1MHz (1GHz-12.5GHz)

VBW: 100 KHz (30MHz-1GHz), 1MHz (1GHz-12.5GHz)

Sweep time: Auto

Detector mode: Positive peak

Indication mode: Max hold

If the test margin is insufficient, then proceed with the following final test steps.

a) The EUT is configured to the modulation mode, and transmitting at maximum power.

b) When searching for Spurious Emission or unwanted emissions, the spectrum analyzer should be set as follows:

- Test frequency range = 30MHz to 5 times the carrier frequency
- RBW = 100kHz, VBW = 100kHz (for 30MHz~1000MHz)
- RBW = 1MHz, VBW = 1MHz (for above 1GHz)
- Sweep time = Auto
- Sweep mode = Single sweep
- Detect mode = Positive peak

c) When measuring the amplitude of spurious emission or unwanted emissions, the spectrum analyzer should be set as follows:

- Center frequency = The frequency found in step b)
- Span = 0
- RBW = 1MHz (for 30MHz~1000MHz:100KHz)
- VBW = 1MHz (for 30MHz~1000MHz:100KHz)



- Sweep time = Auto
- Sweep mode = Single sweep
- Detect mode = Sample or RMS

TEST RESULTS

Measurement Data:

DC 3.7V								
Test Mode	Channel	Freq. Range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
Ant1_BLE_1M	2402	30~1000	39.94	-66.80	≤-54	0.20893	≤4	PASS
		1000~12500	6989.78	-55.97	≤-47	2.52930	≤20	See table below
	2440	30~1000	39.94	-64.82	≤-54	0.32961	≤4	PASS
		1000~12500	6998.98	-54.80	≤-47	3.31131	≤20	See table below
	2480	30~1000	39.45	-65.46	≤-54	0.28445	≤4	PASS
		1000~12500	6994.95	-55.18	≤-47	3.03389	≤20	See table below
Ant1_BLE_2M	2402	30~1000	39.94	-65.43	≤-54	0.28642	≤4	PASS
		1000~12500	6984.03	-55.19	≤-47	3.02691	≤20	See table below
	2440	30~1000	39.94	-65.83	≤-54	0.26122	≤4	PASS
		1000~12500	5202.1	-48.52	≤-47	14.06048	≤20	See table below
	2480	30~1000	38.97	-64.52	≤-54	0.35318	≤4	PASS
		1000~12500	6949.53	-54.46	≤-47	3.58096	≤20	See table below

Test Result_Step2

TestMode	Freq(MHz)	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
Ant1_BLE_1M	2402	6795.43	-67.62	≤-47	0.17298	≤20	PASS
		6827.63	-67.51	≤-47	0.17742	≤20	PASS
		6886.28	-66.74	≤-47	0.21184	≤20	PASS
		6937.45	-65.87	≤-47	0.25882	≤20	PASS
		6989.78	-64.94	≤-47	0.32063	≤20	PASS
	2440	6737.35	-67.69	≤-47	0.17022	≤20	PASS
		6754.03	-67.58	≤-47	0.17458	≤20	PASS
		6790.83	-67.64	≤-47	0.17219	≤20	PASS
		6861.55	-67.27	≤-47	0.18750	≤20	PASS
		6888.58	-66.74	≤-47	0.21184	≤20	PASS
		6902.38	-66.40	≤-47	0.22909	≤20	PASS
		6998.98	-64.89	≤-47	0.32434	≤20	PASS
	2480	6791.98	-67.60	≤-47	0.17378	≤20	PASS
		6860.98	-67.15	≤-47	0.19275	≤20	PASS
		6888.00	-66.74	≤-47	0.21184	≤20	PASS
		6932.28	-65.94	≤-47	0.25468	≤20	PASS
		6994.95	-64.82	≤-47	0.32961	≤20	PASS
Ant1_BLE_2M	2402	6469.40	-68.31	≤-47	0.14757	≤20	PASS
		6884.55	-66.78	≤-47	0.20989	≤20	PASS
		6903.53	-66.48	≤-47	0.22491	≤20	PASS
		6984.03	-65.06	≤-47	0.31189	≤20	PASS

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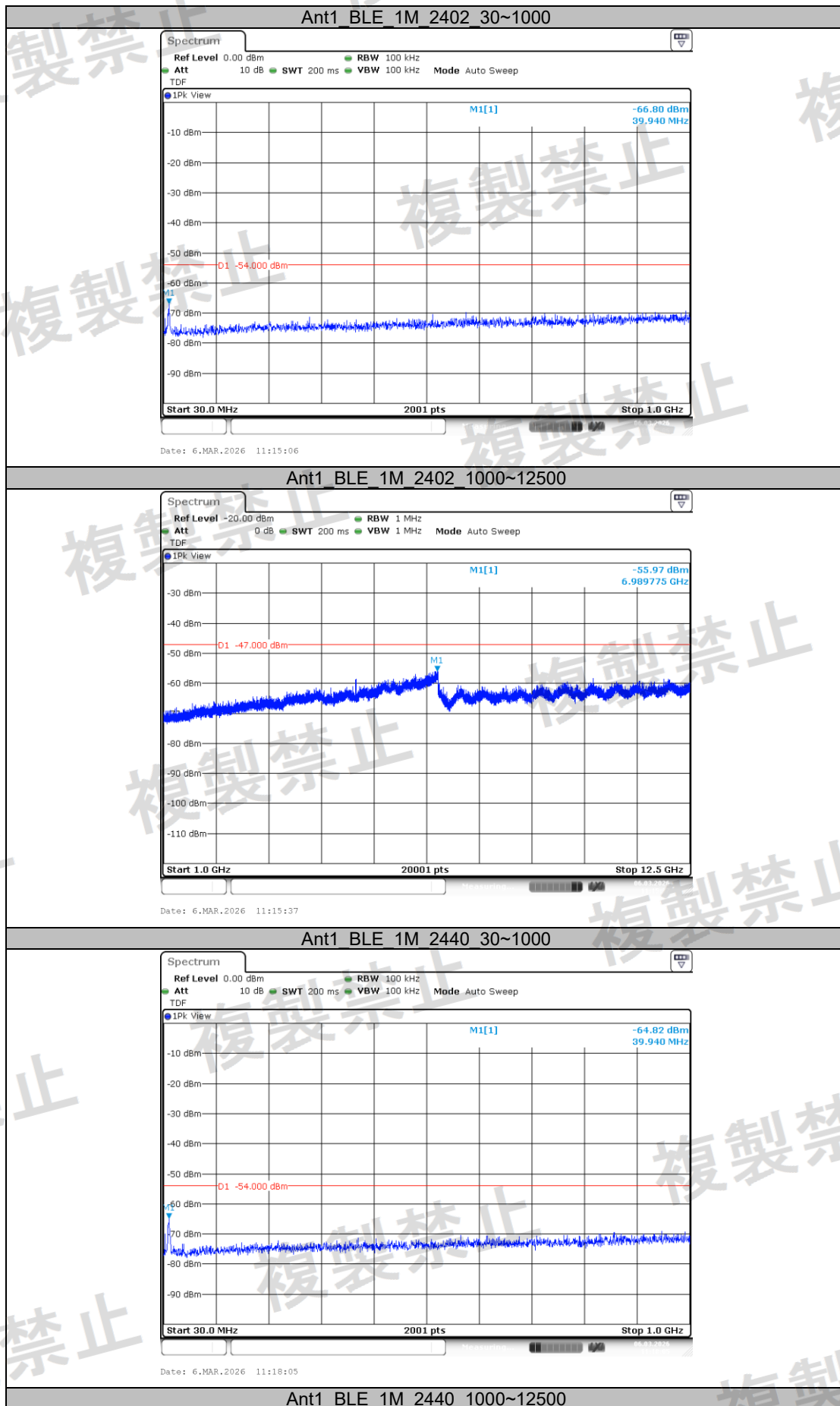
Master TRF : Dated 2026-01-01



	2440	5202.10	-68.52	≤ -47	0.14060	≤ 20	PASS
		6697.68	-68.05	≤ -47	0.15668	≤ 20	PASS
		6873.63	-66.94	≤ -47	0.20230	≤ 20	PASS
		6891.45	-66.73	≤ -47	0.21232	≤ 20	PASS
		6907.55	-66.33	≤ -47	0.23281	≤ 20	PASS
		6919.63	-66.22	≤ -47	0.23878	≤ 20	PASS
		6937.45	-65.88	≤ -47	0.25823	≤ 20	PASS
		6980.58	-65.11	≤ -47	0.30832	≤ 20	PASS
	2480	6913.30	-66.28	≤ -47	0.23550	≤ 20	PASS
		6935.15	-65.86	≤ -47	0.25942	≤ 20	PASS
		6949.53	-65.70	≤ -47	0.26915	≤ 20	PASS
		6976.55	-65.20	≤ -47	0.30200	≤ 20	PASS



Test plot as follows:



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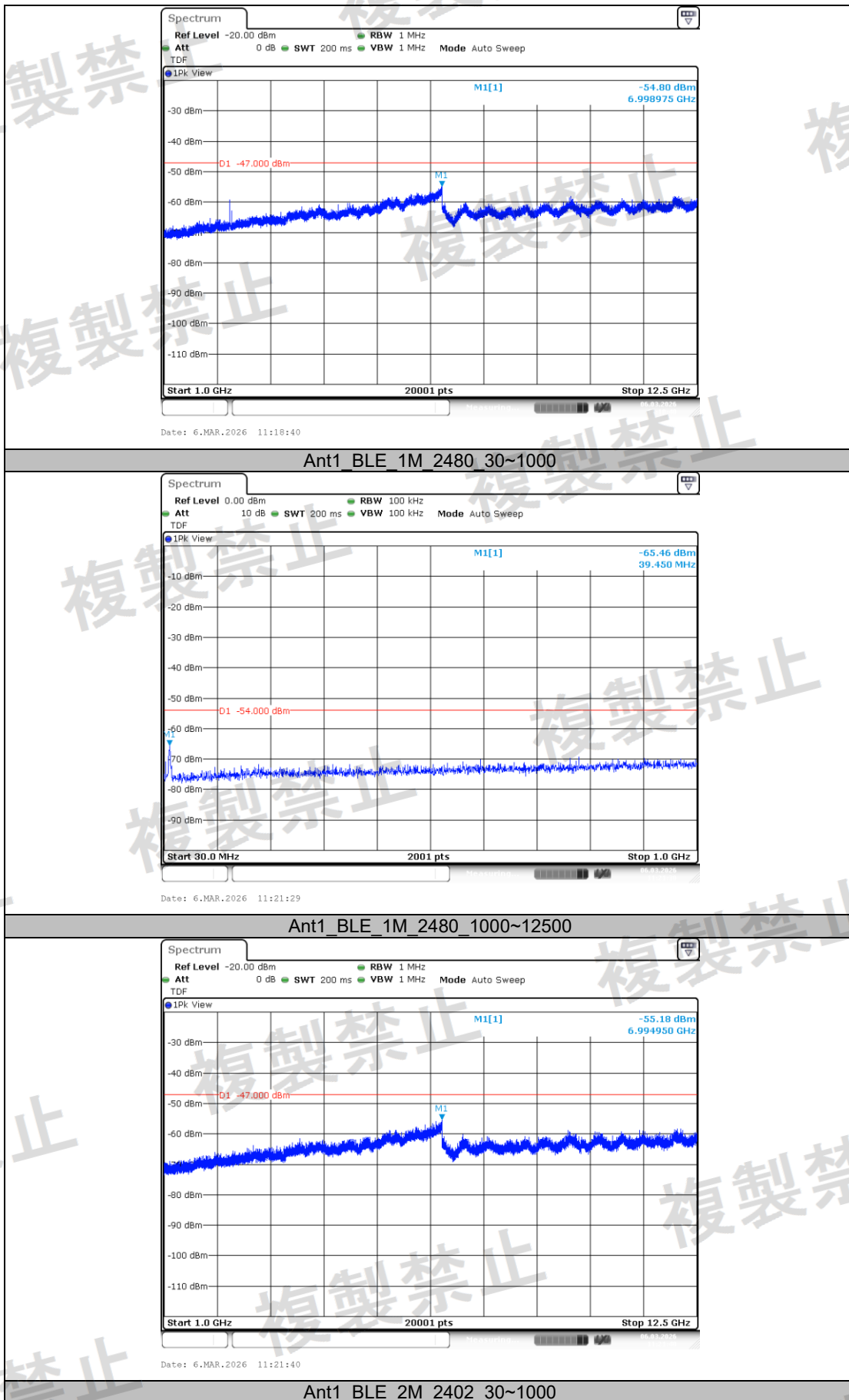
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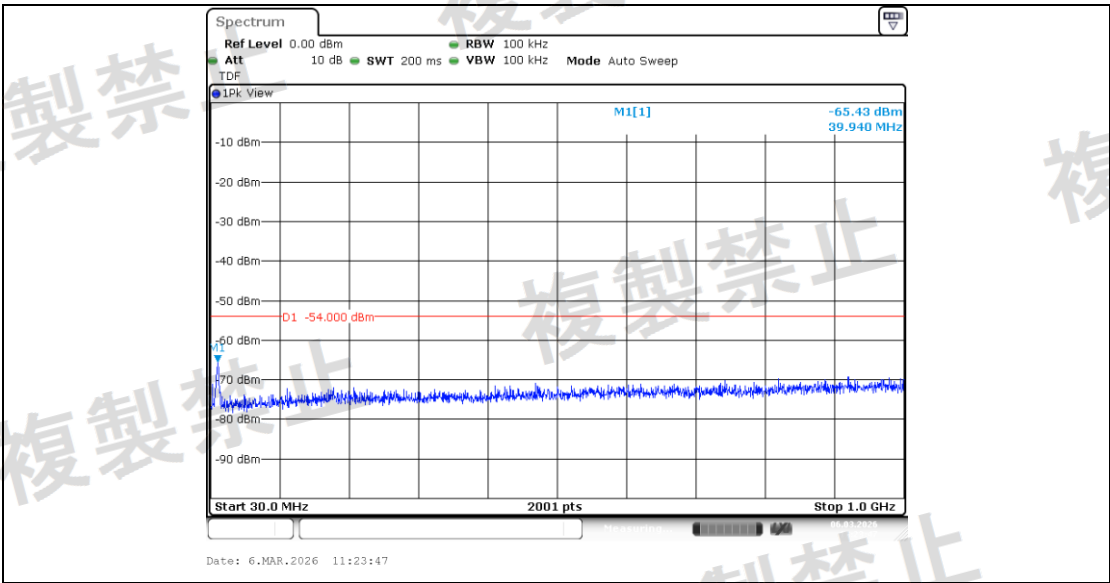


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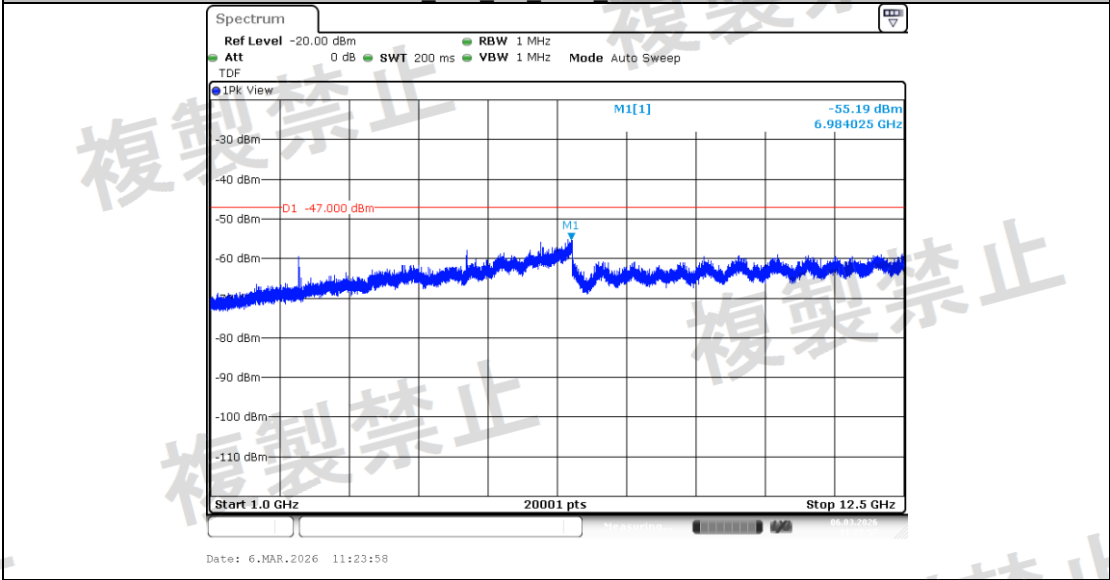
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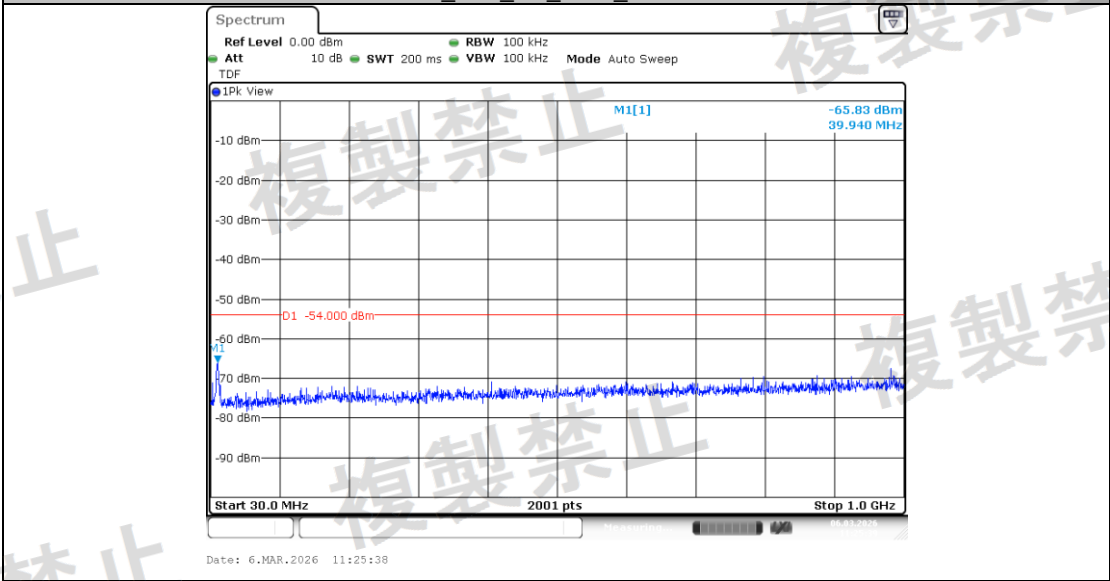
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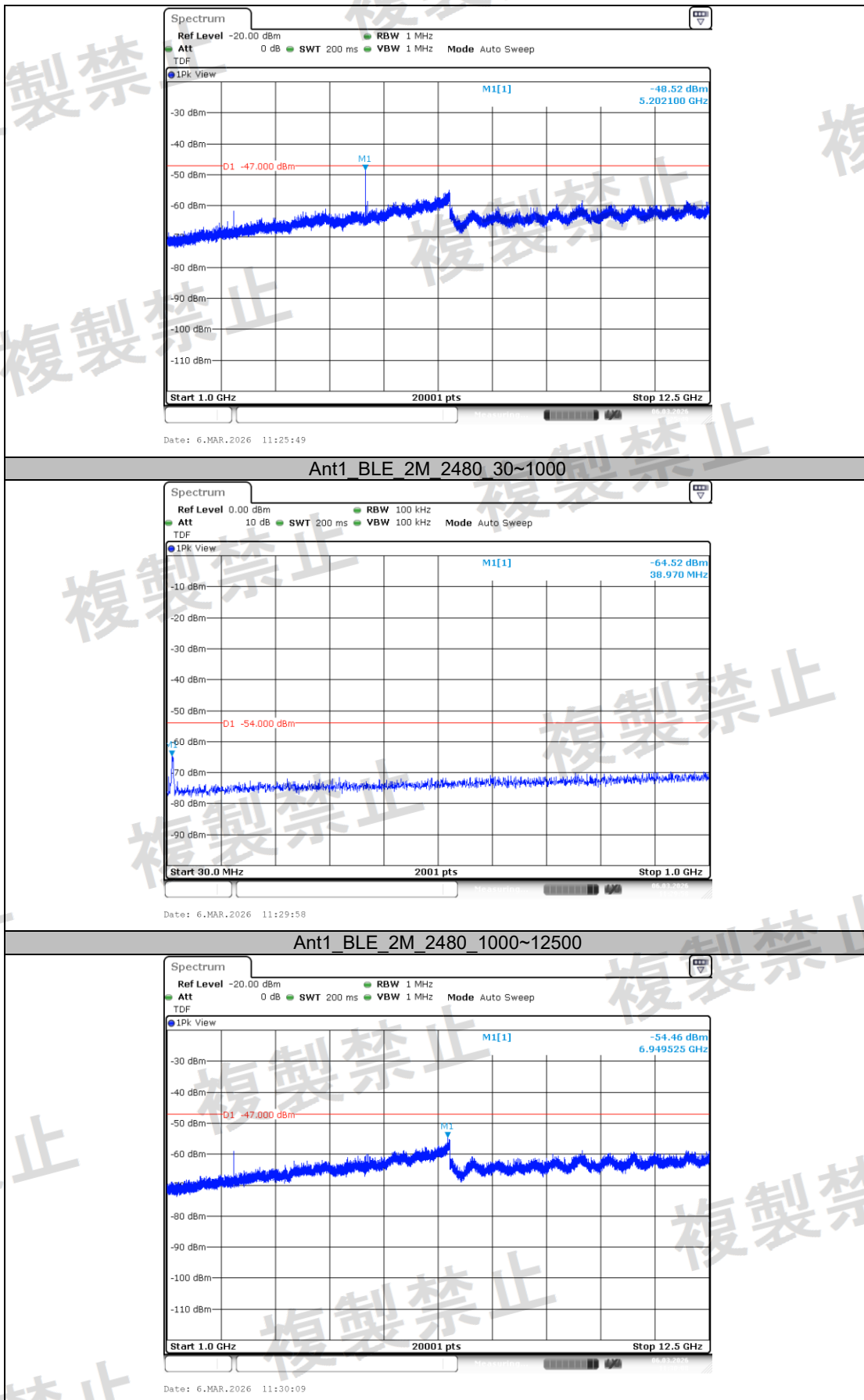
Ant1_BLE_2M_2402_1000~12500



Ant1_BLE_2M_2440_30~1000



Ant1_BLE_2M_2440_1000~12500



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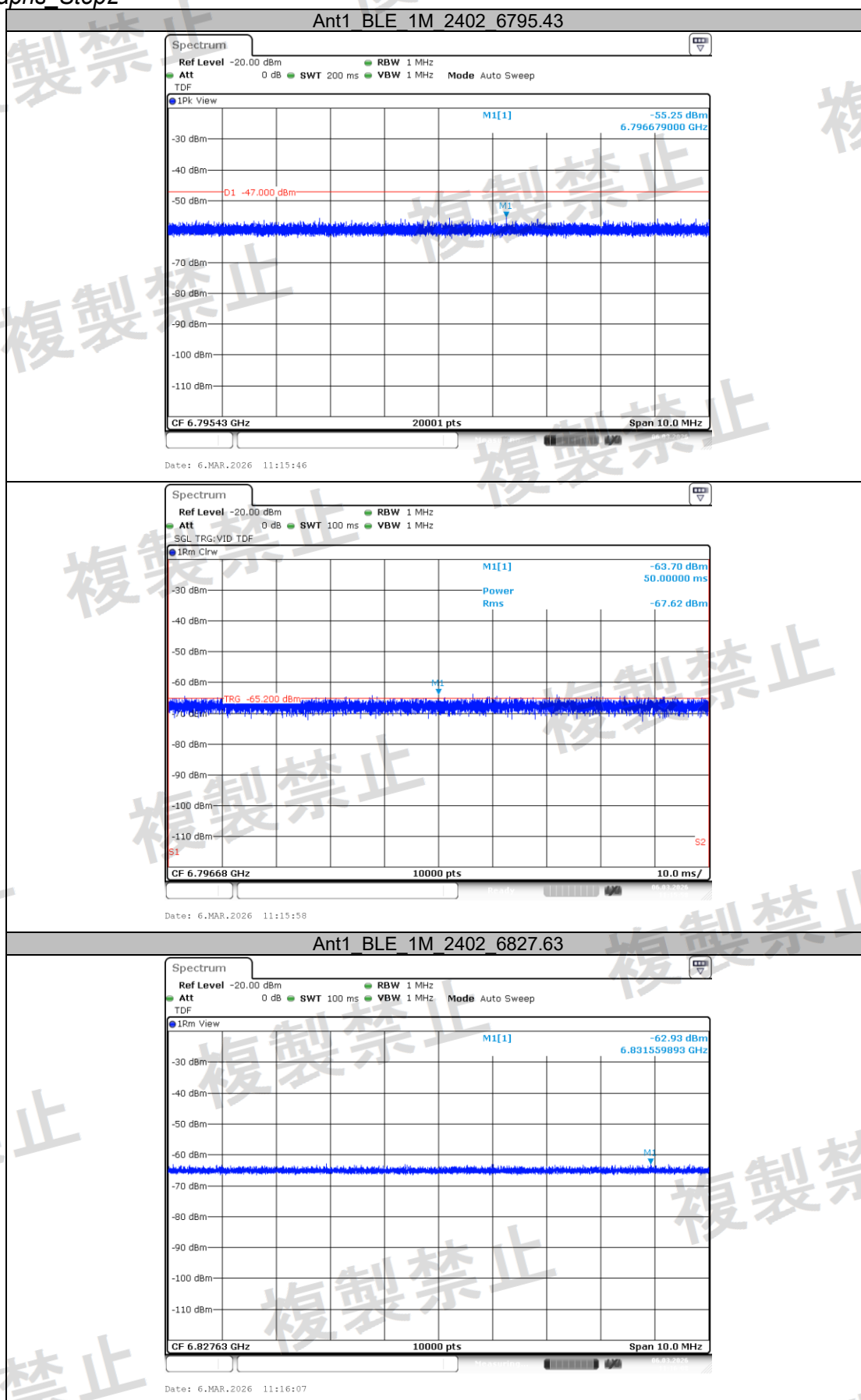
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Test Graphs_Step2



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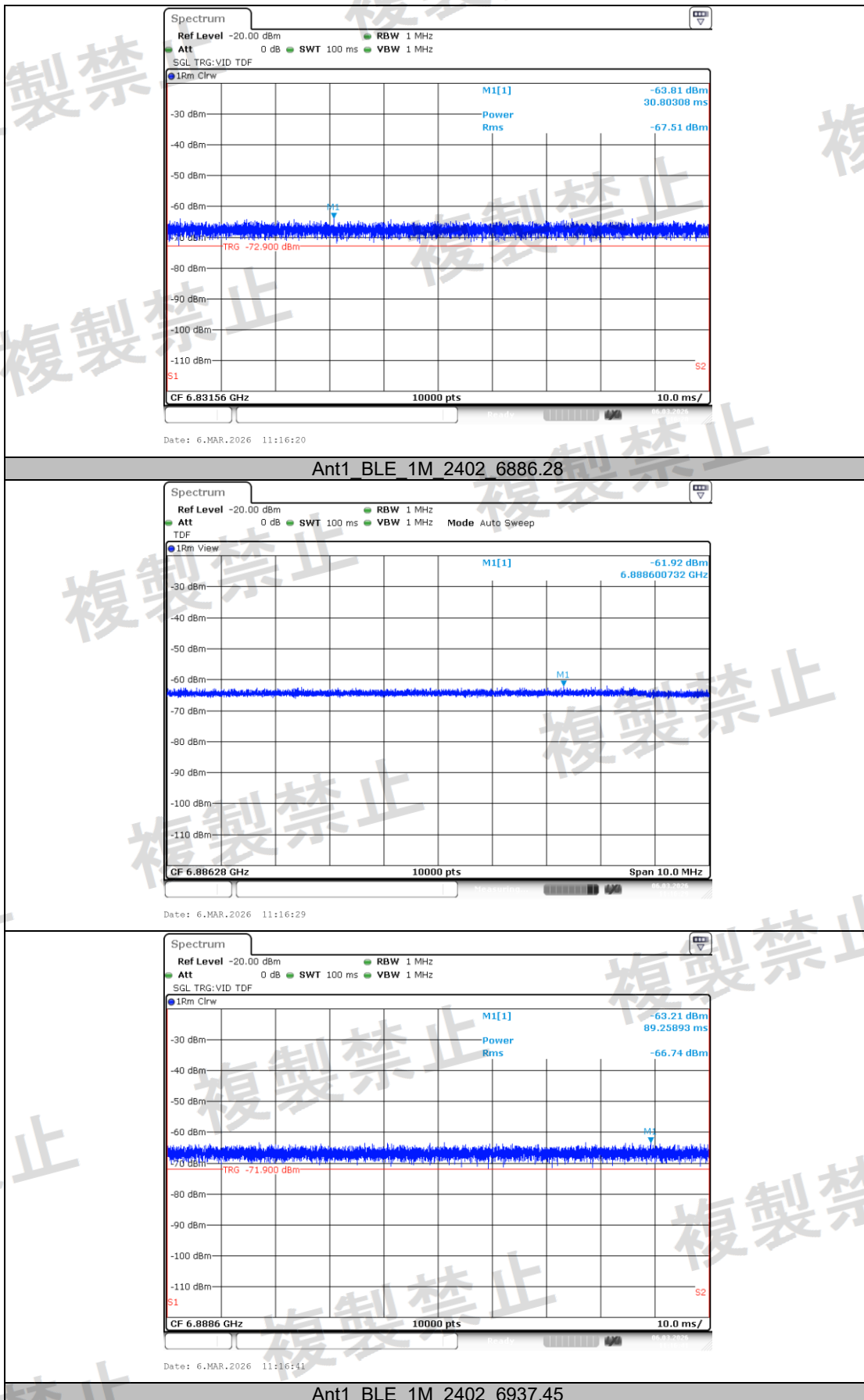
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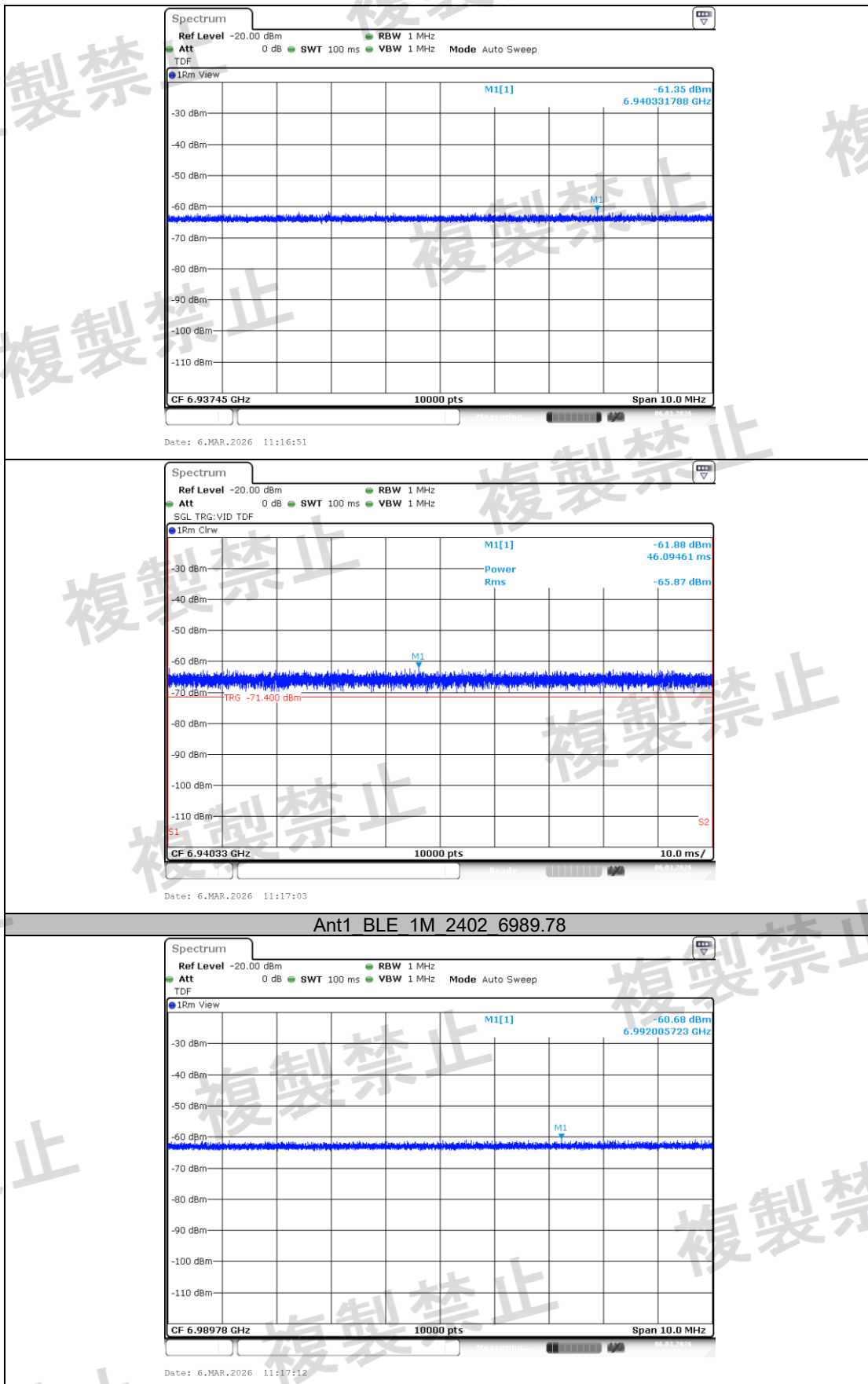
Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhua Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China

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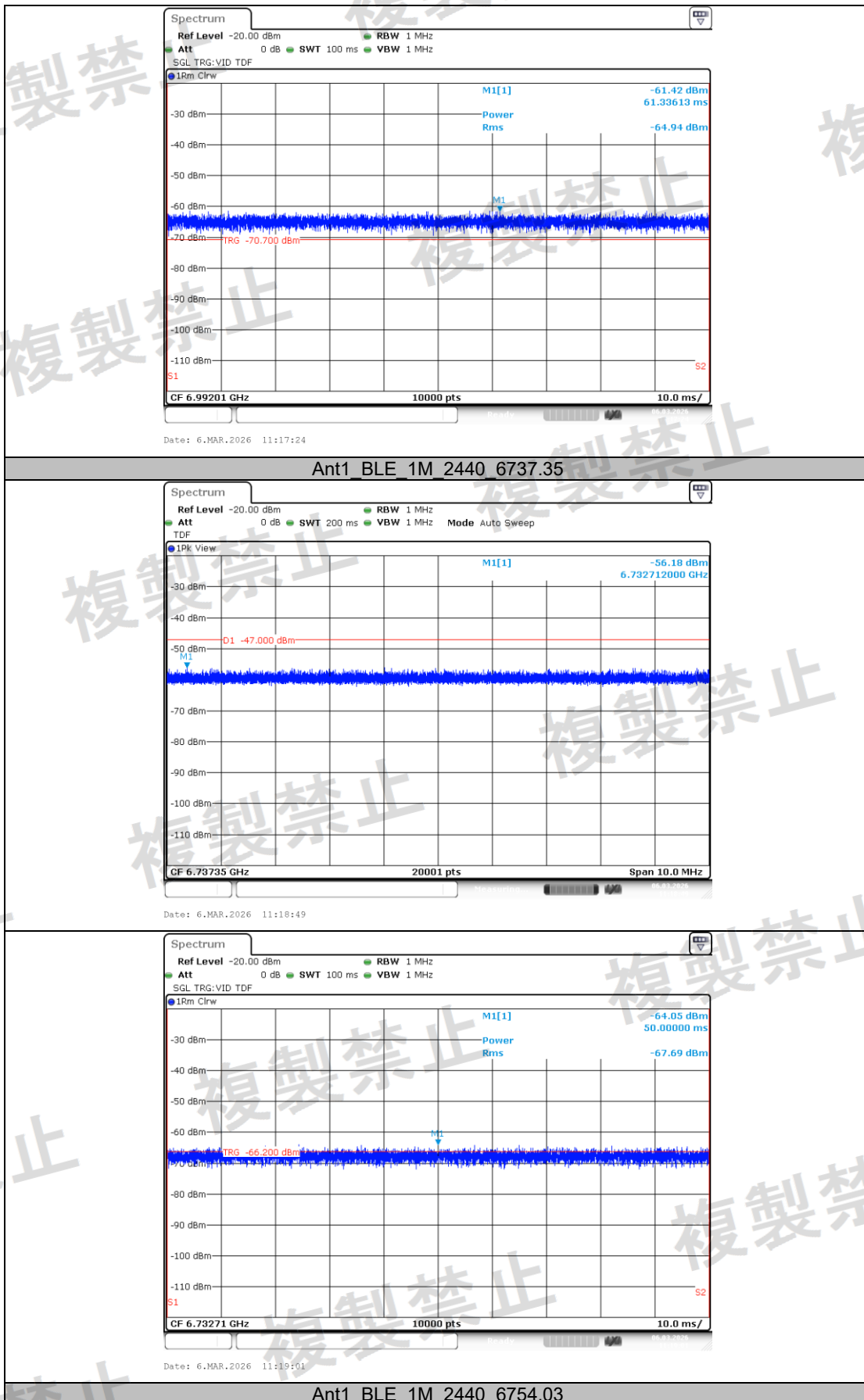


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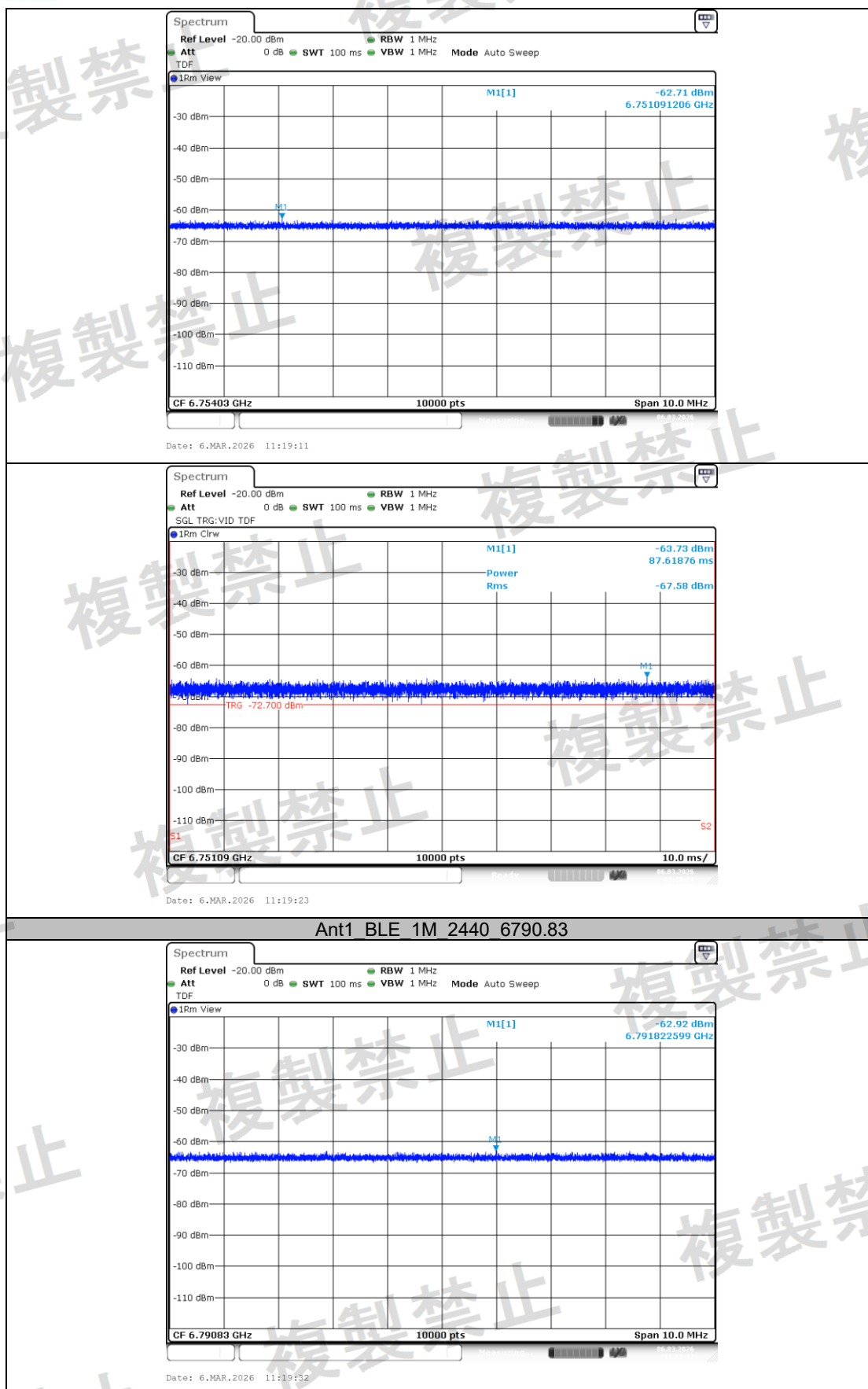
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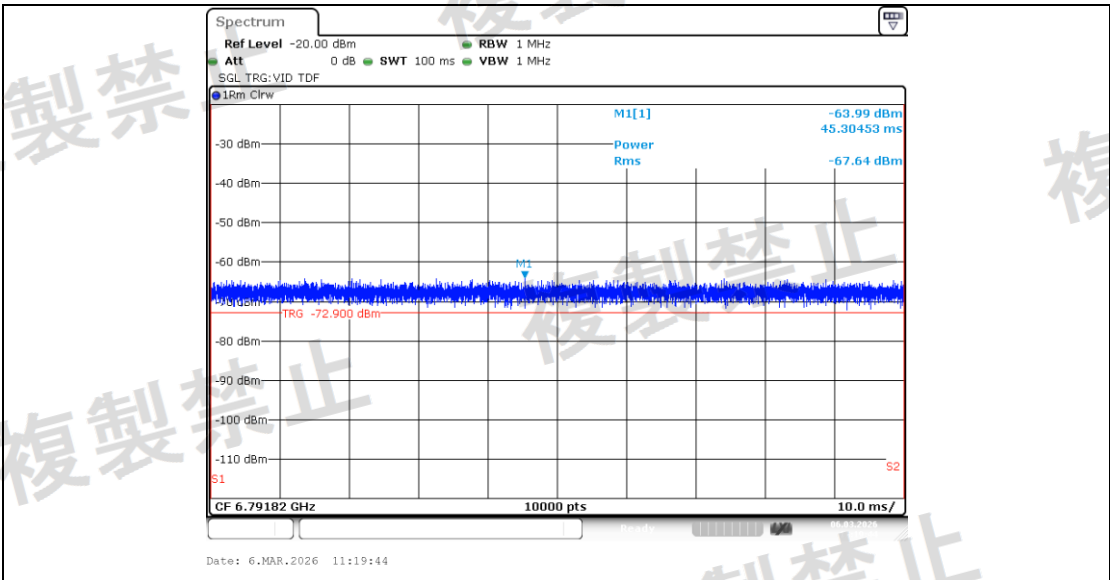
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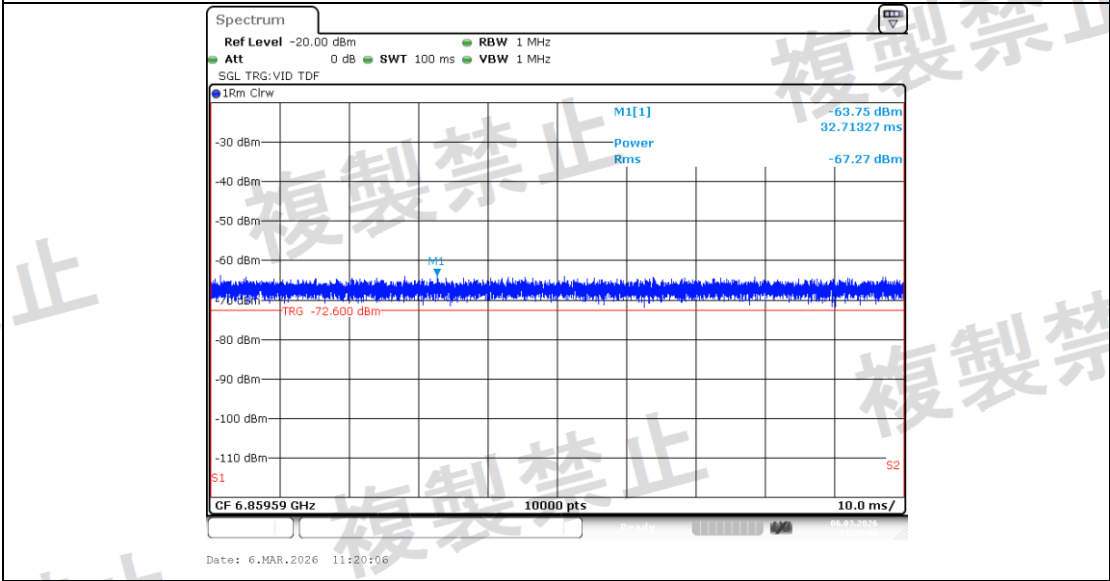
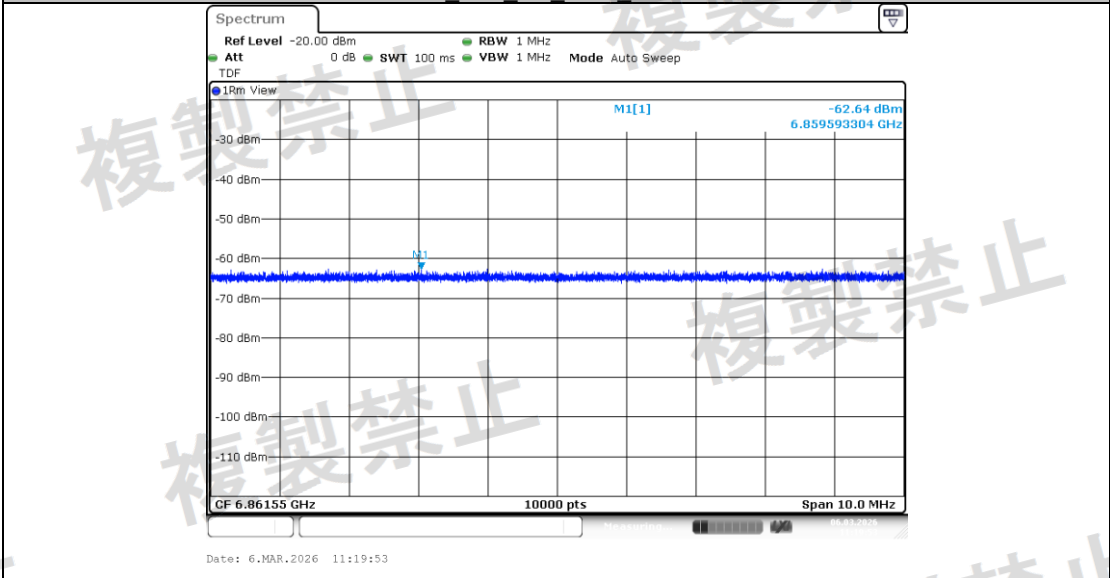
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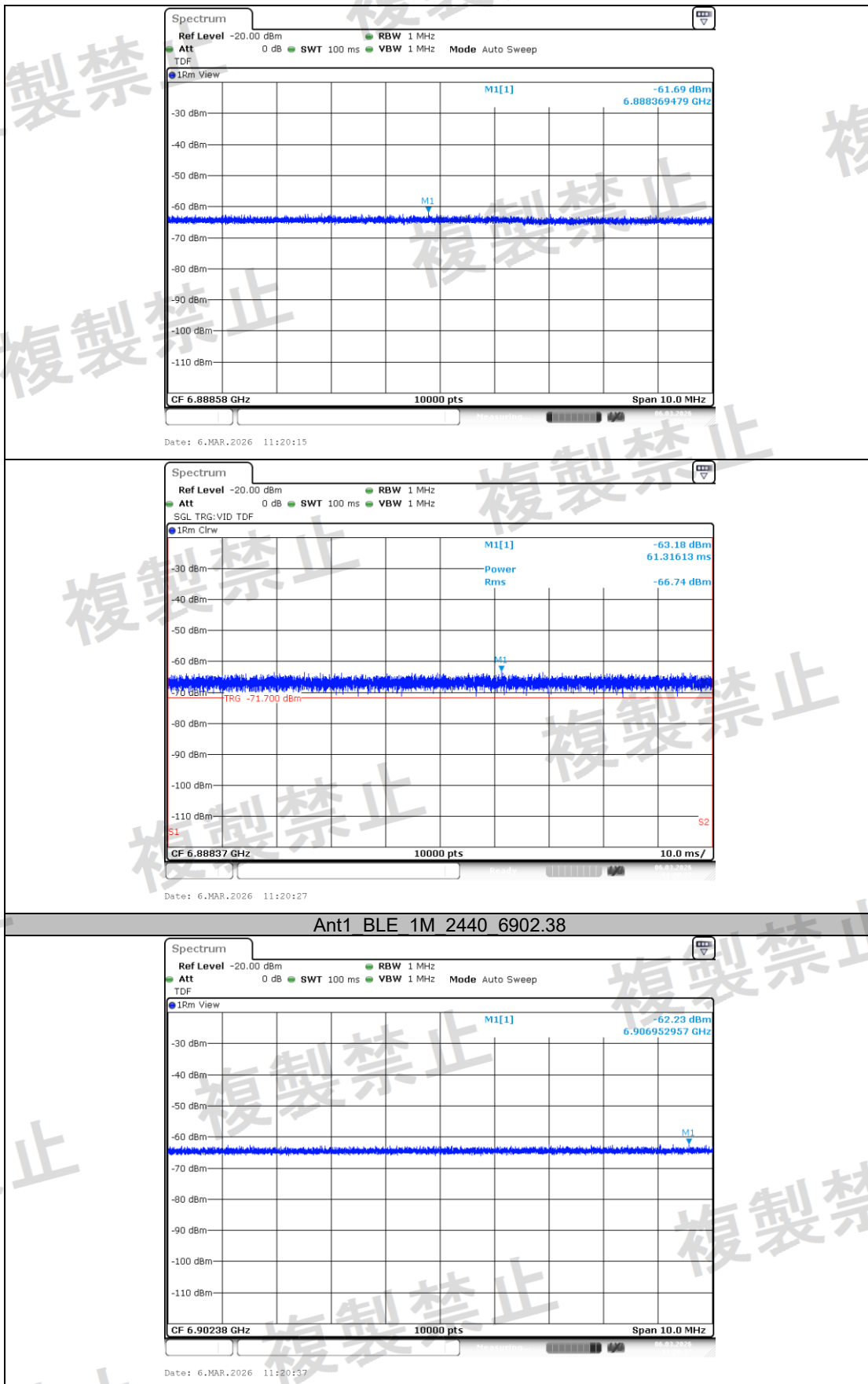


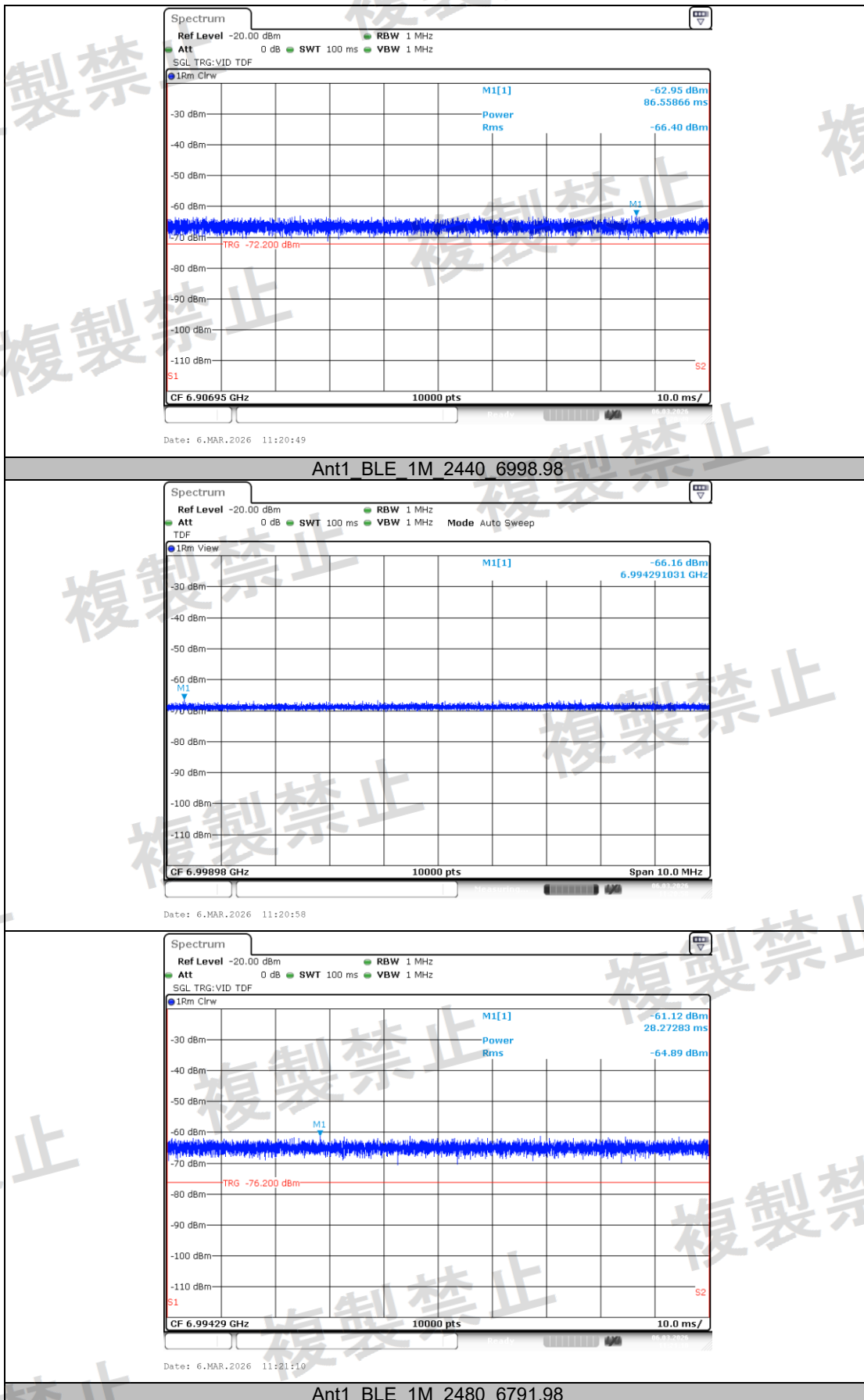


Ant1_BLE_1M_2440_6861.55



Ant1_BLE_1M_2440_6888.58



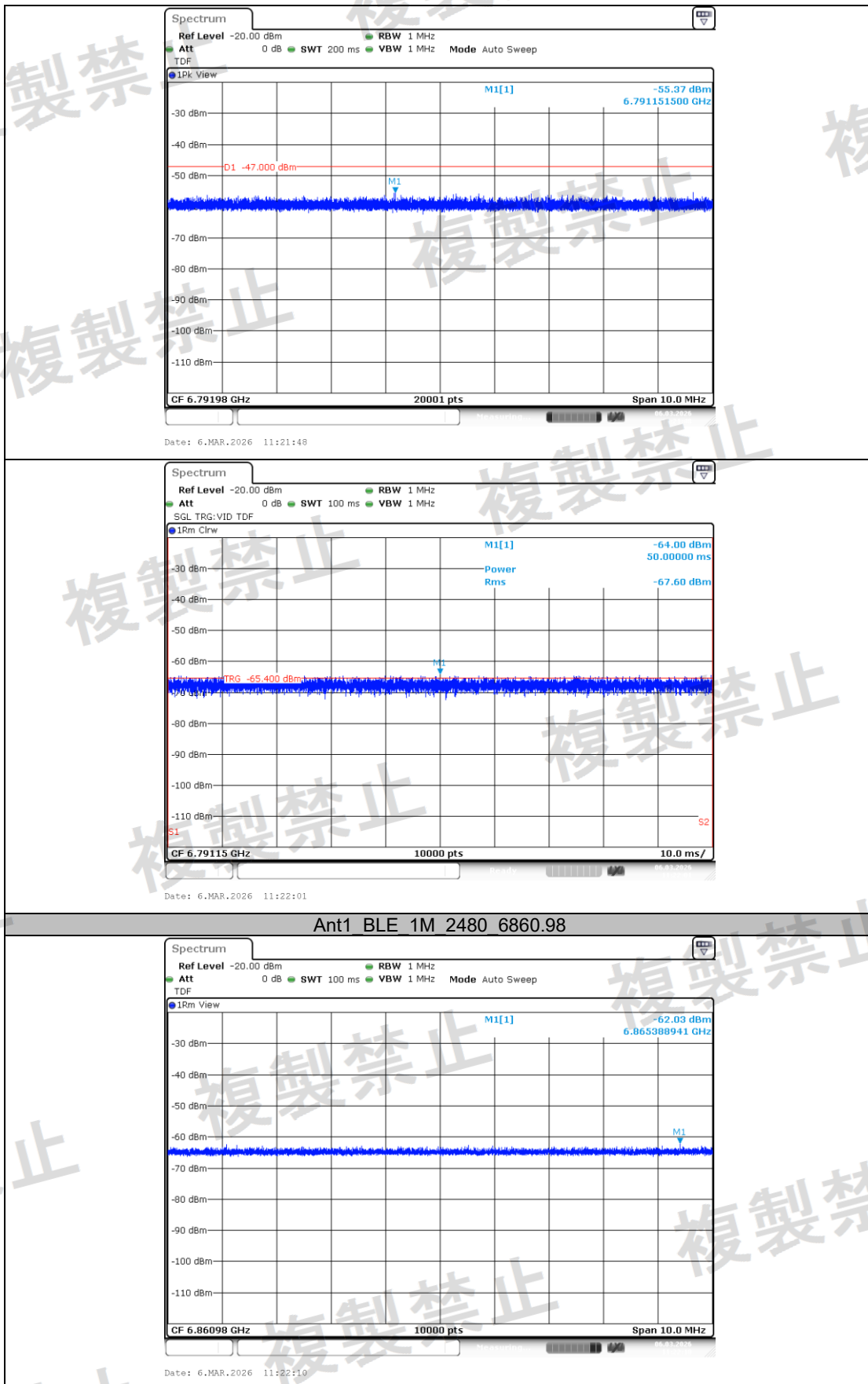


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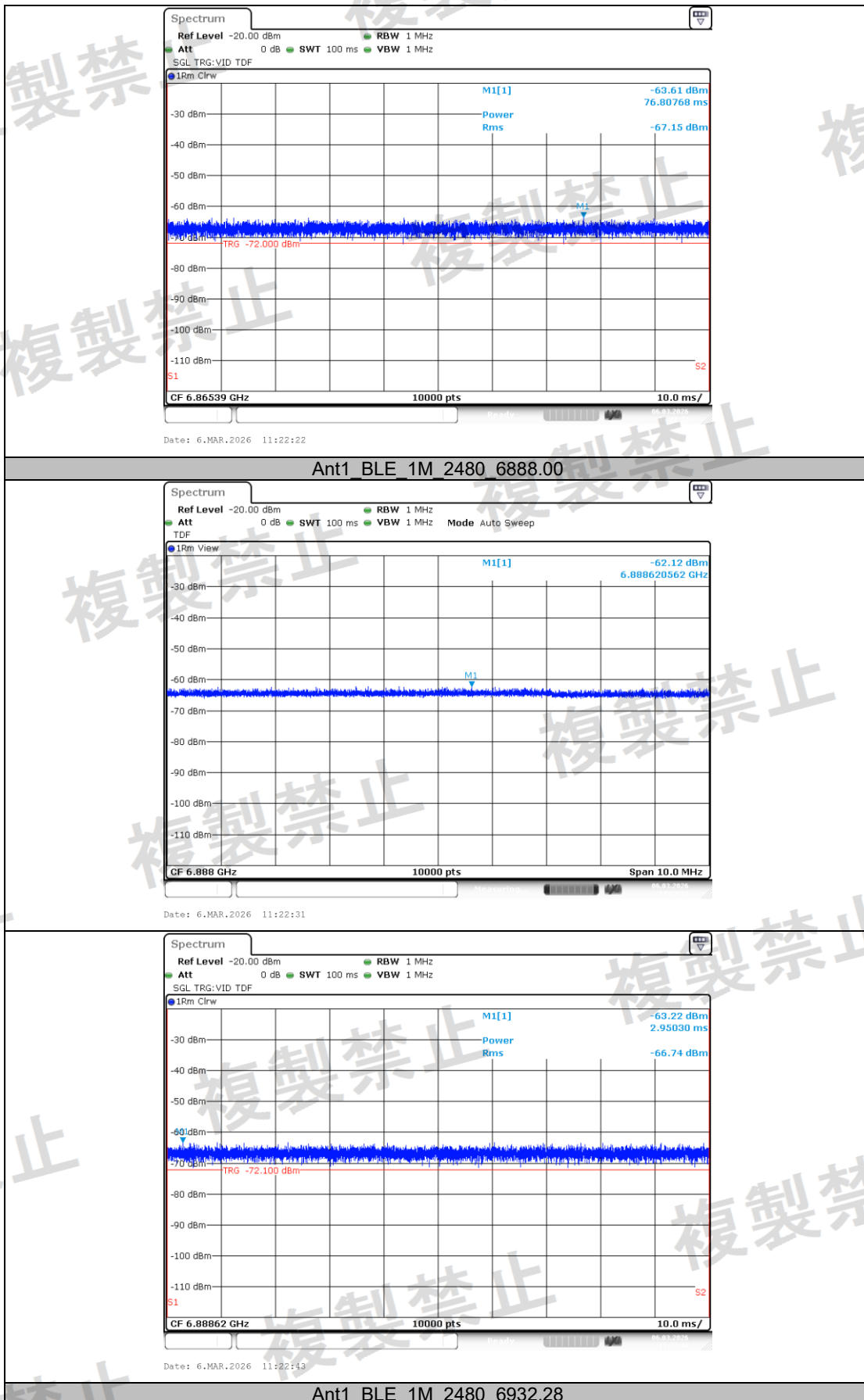


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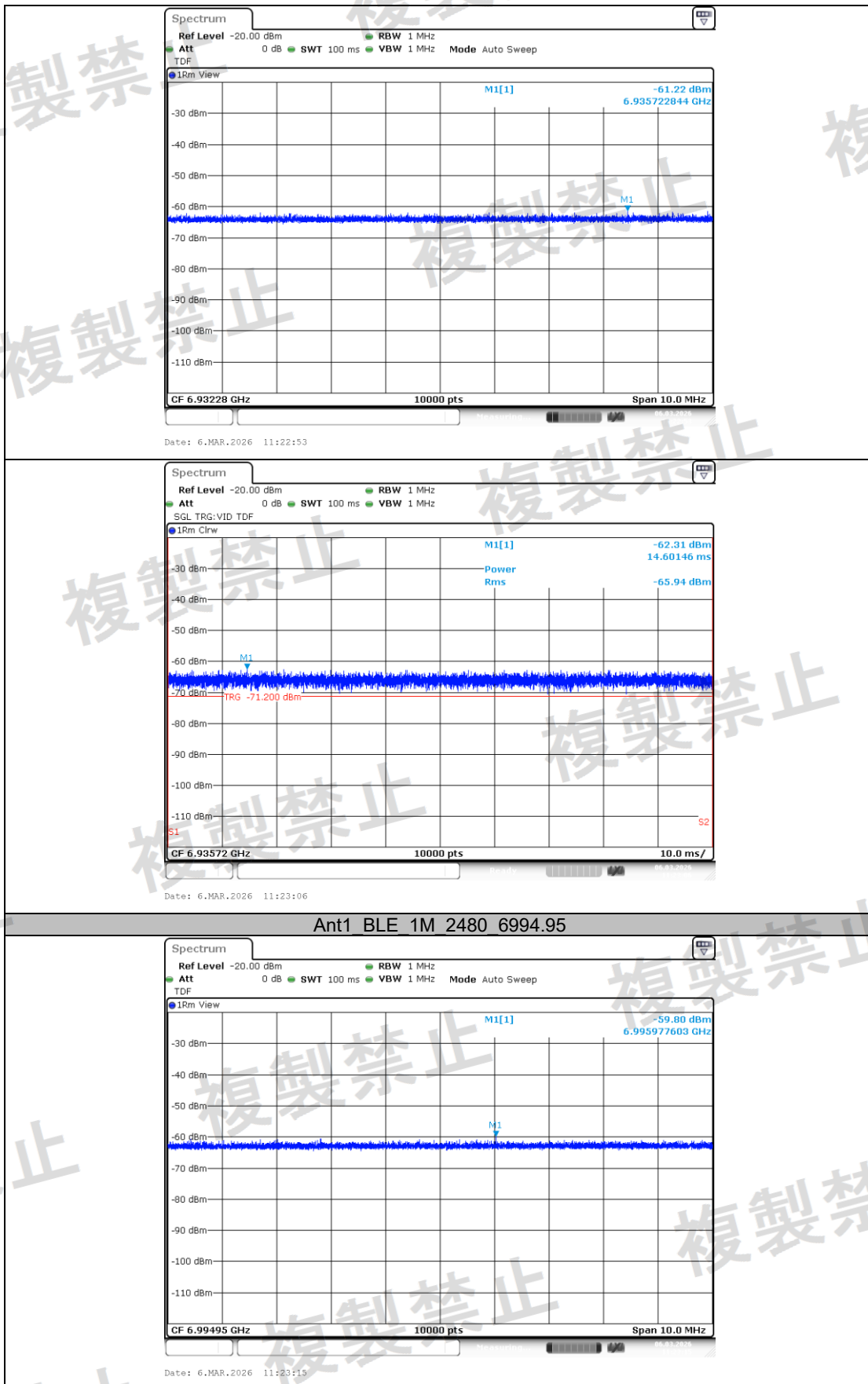
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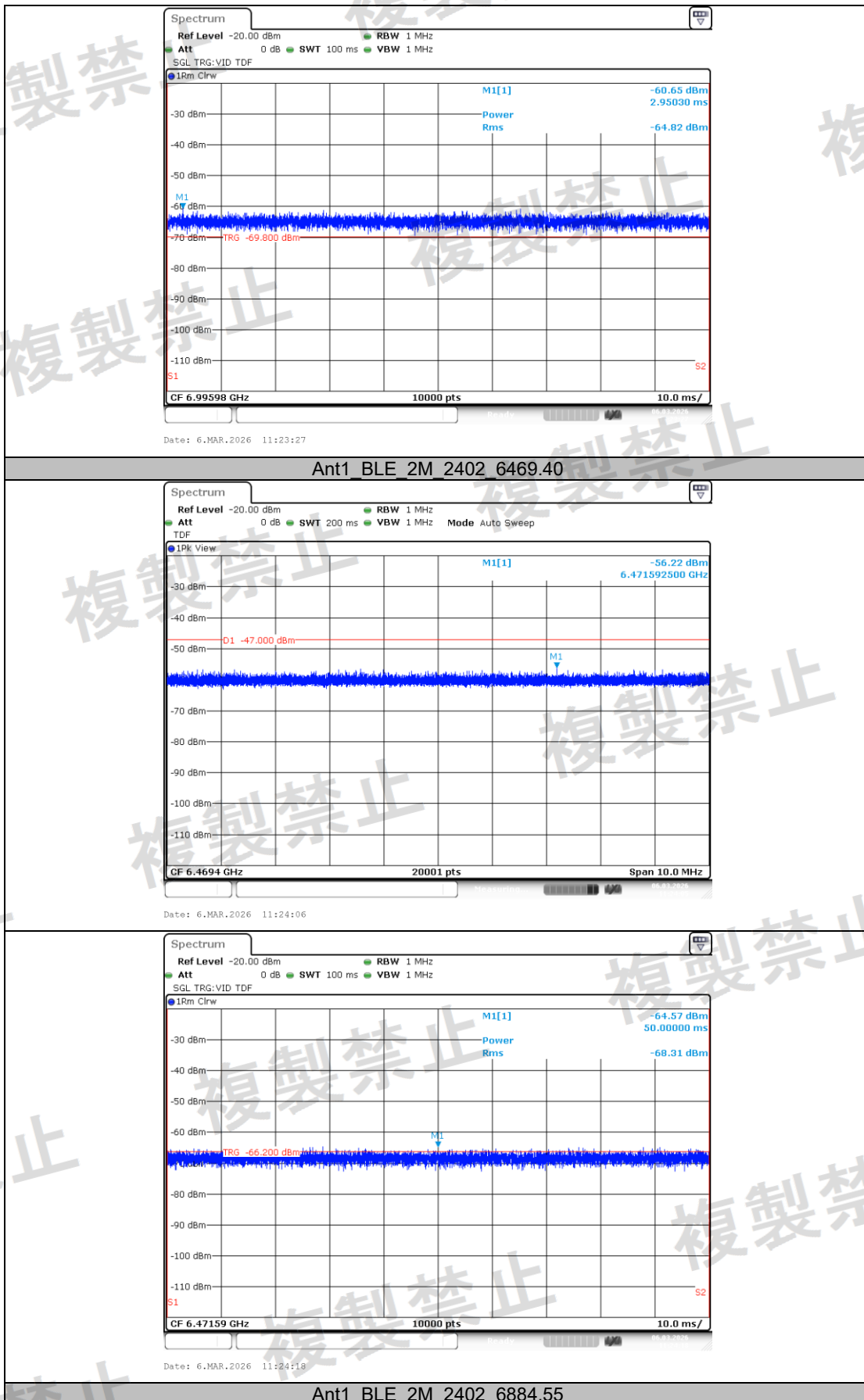
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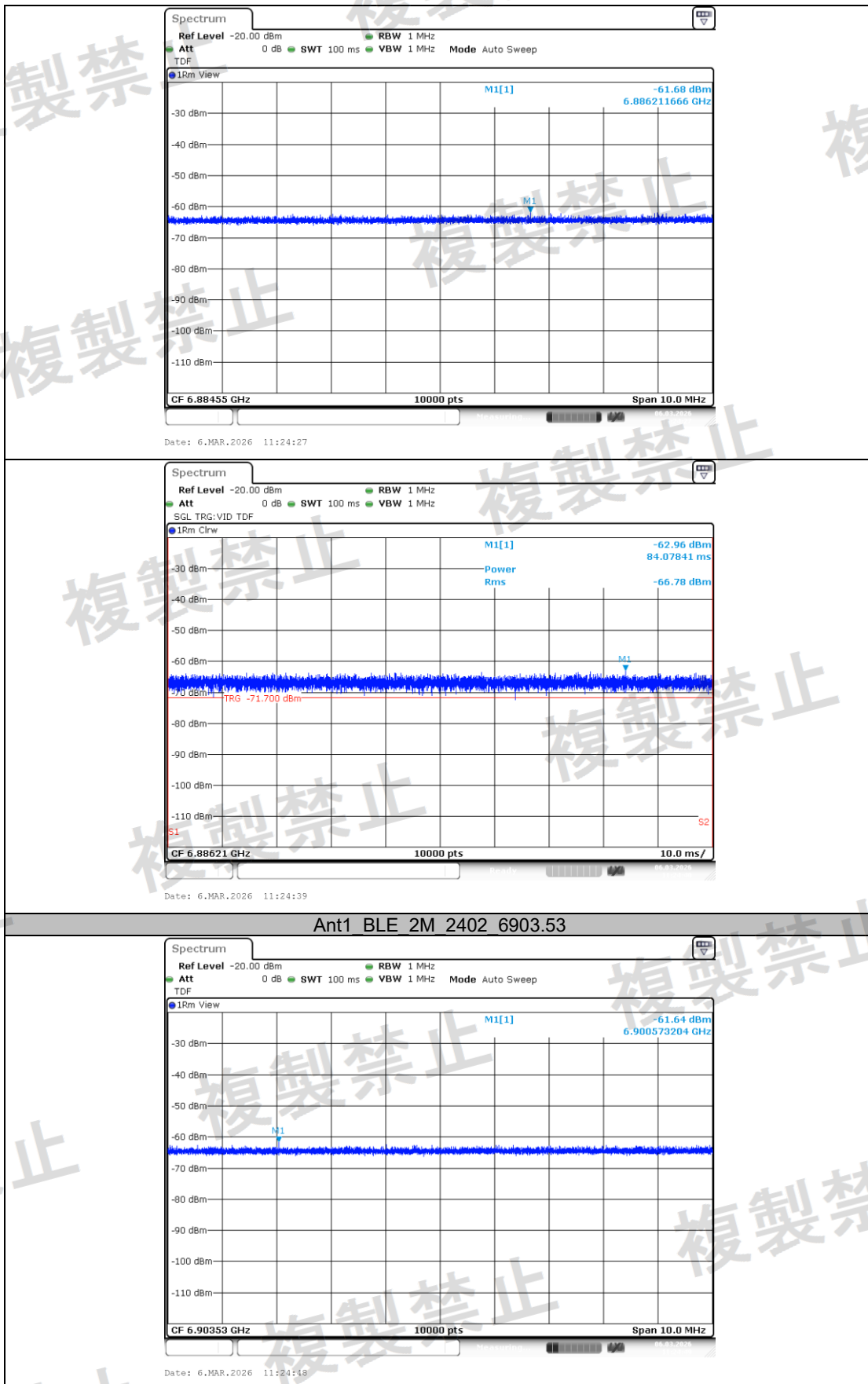
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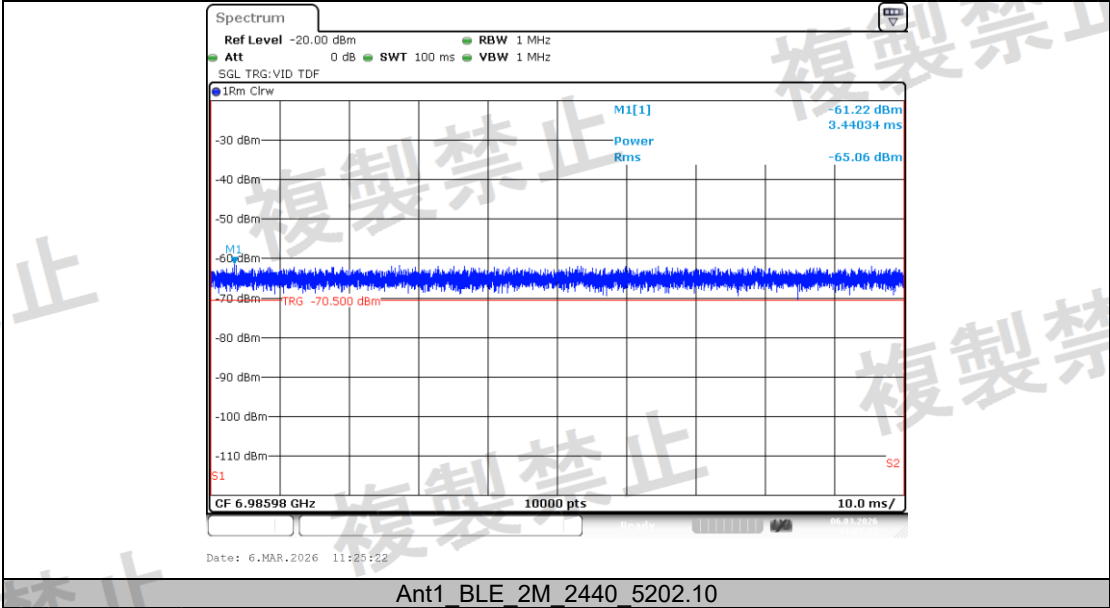
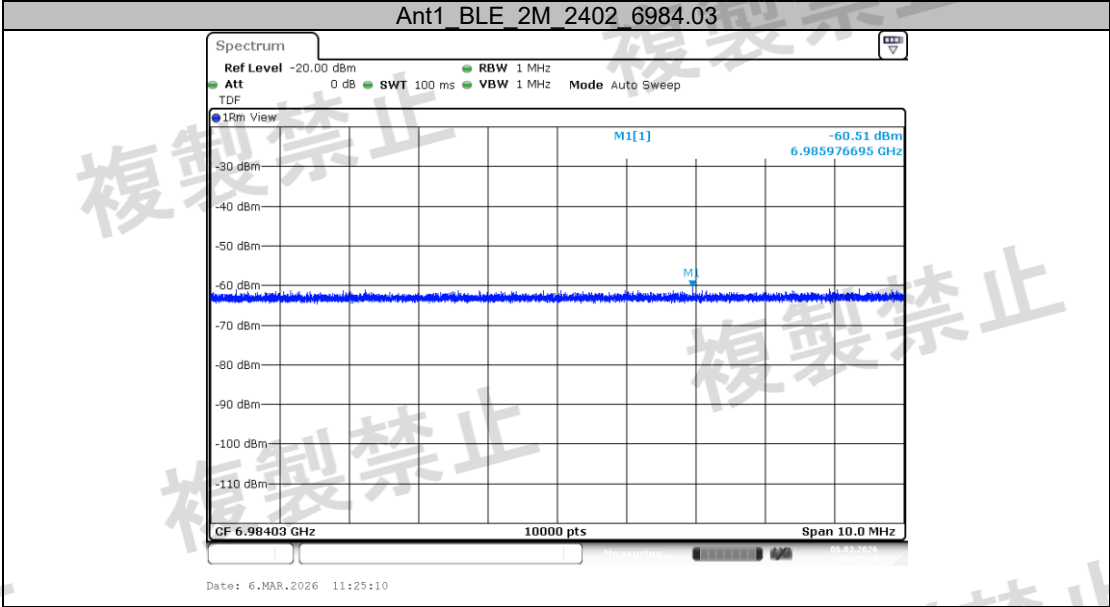
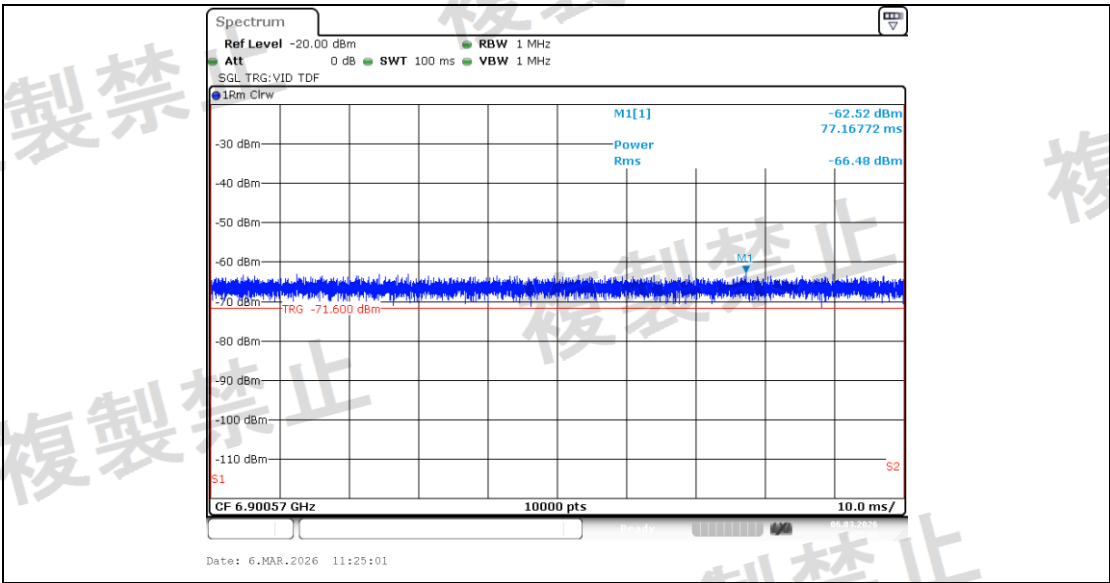
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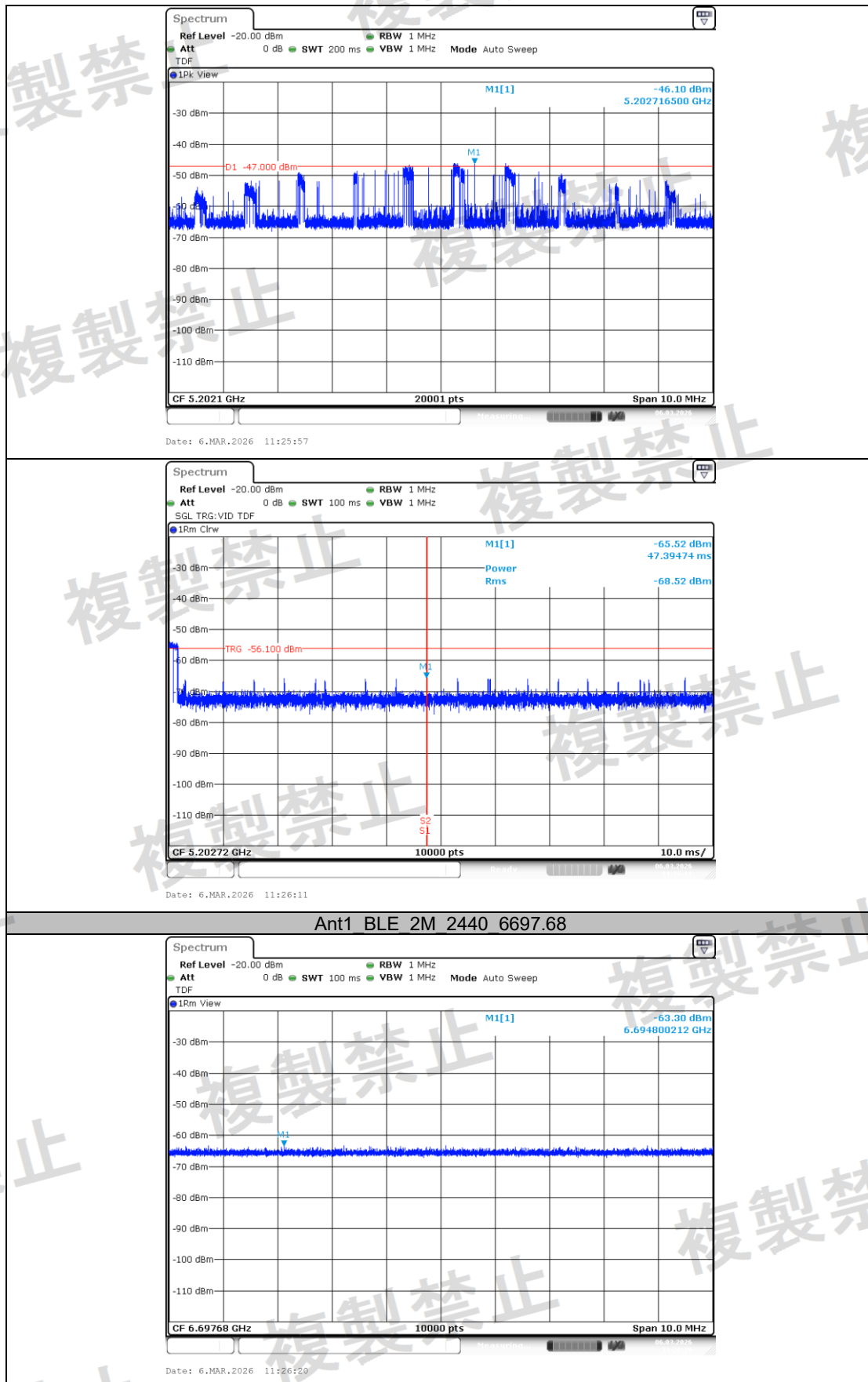
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Ant1 BLE 2M 2440 6697.68

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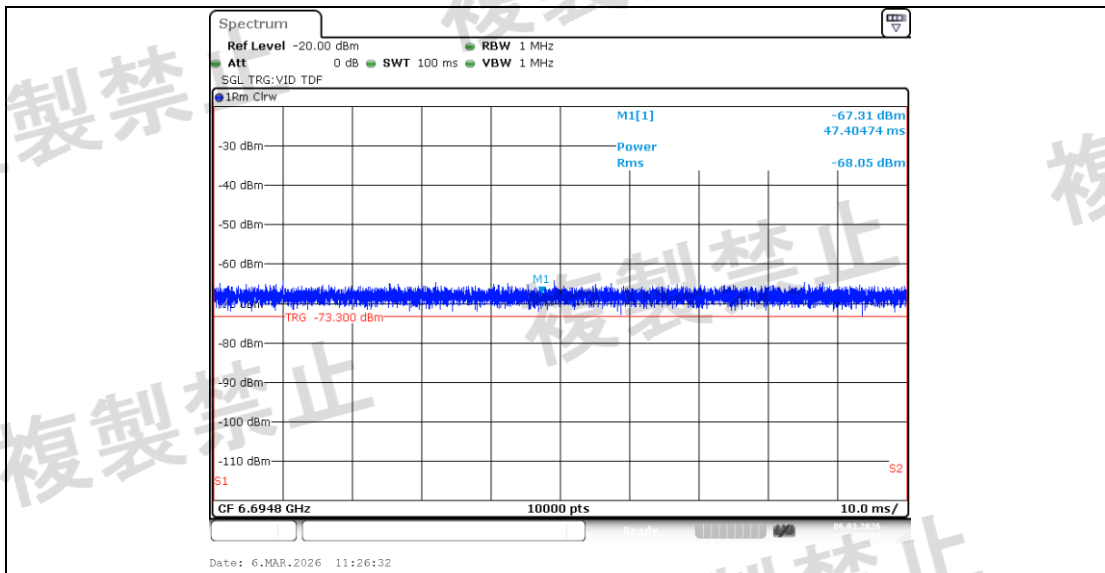
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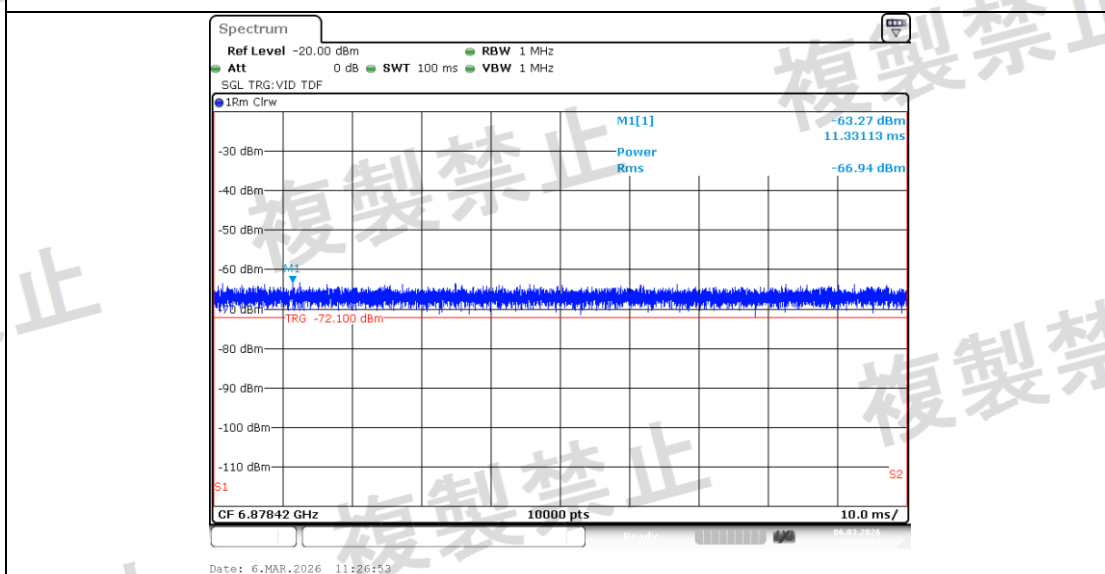
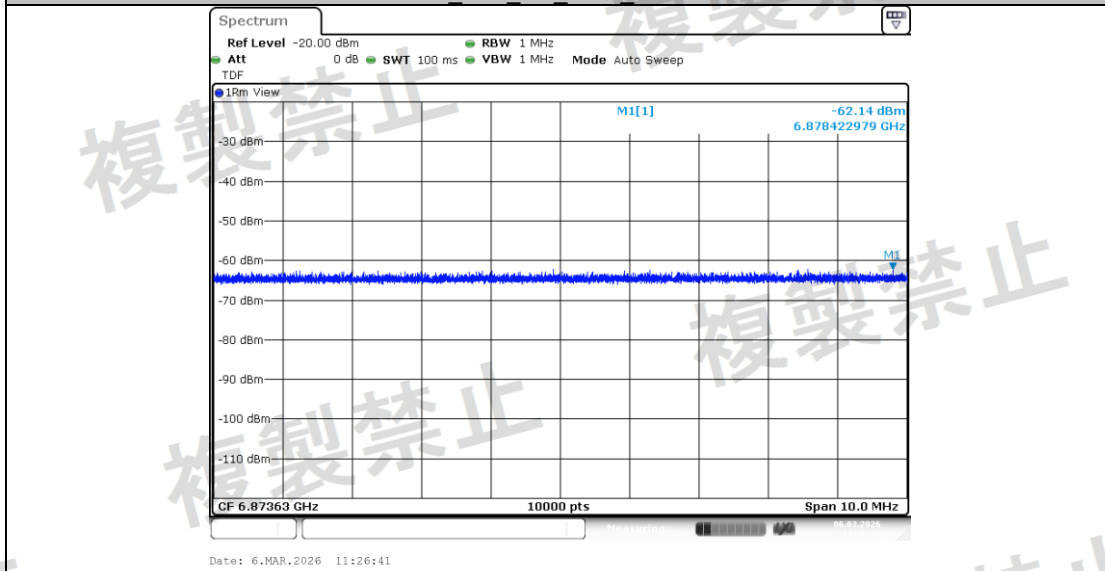
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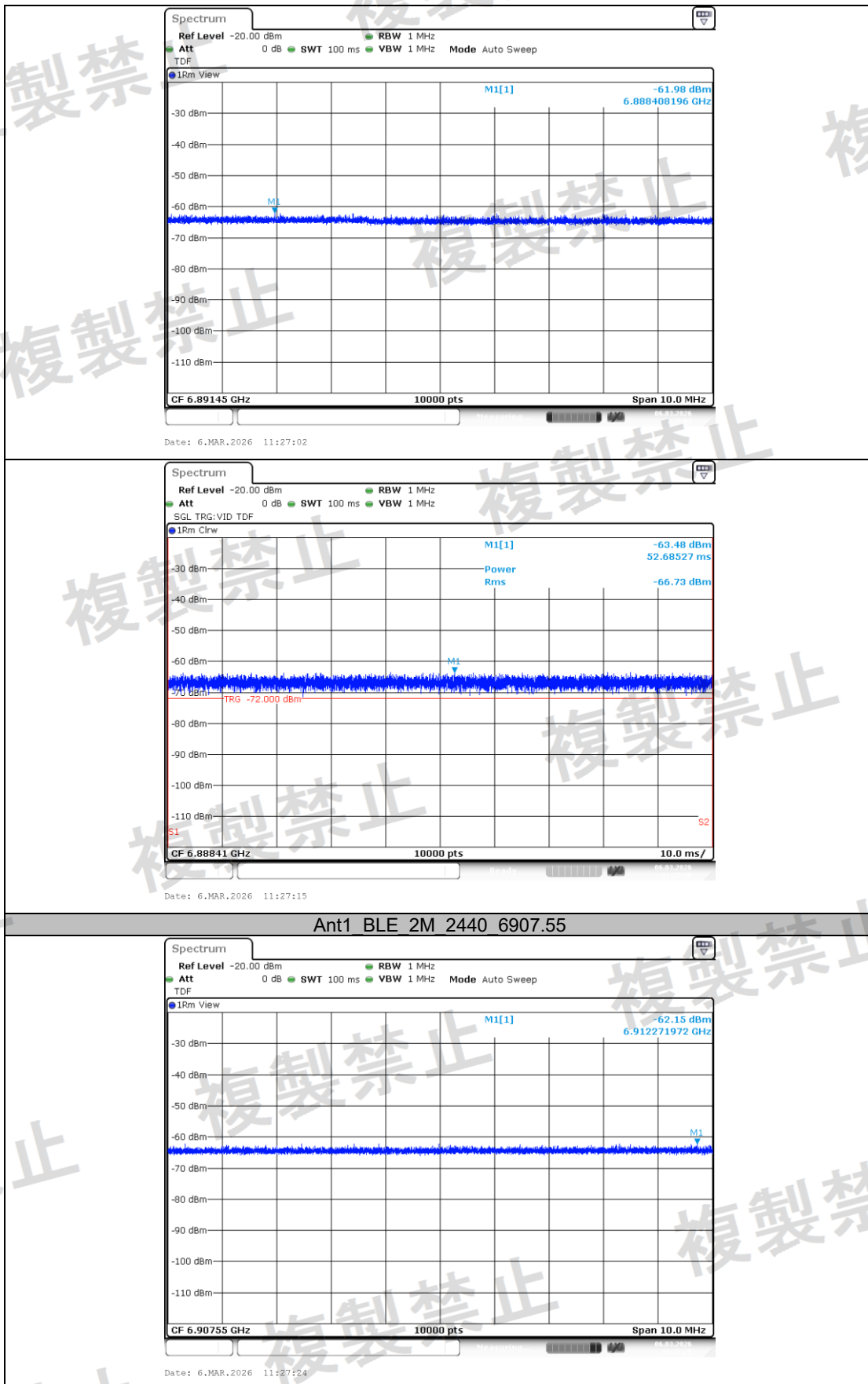
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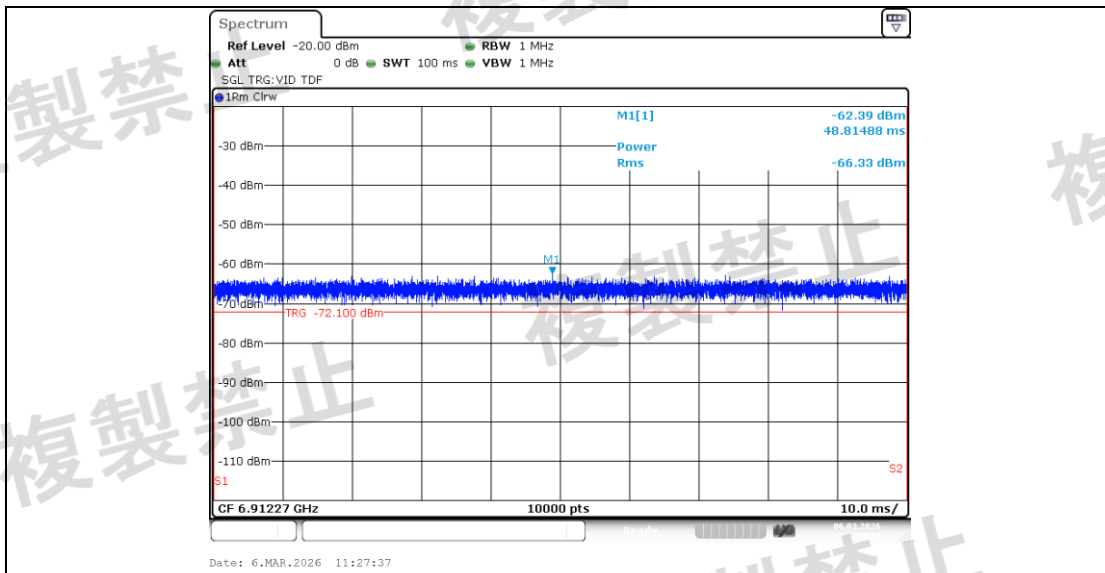


Ant1_BLE_2M_2440_6873.63

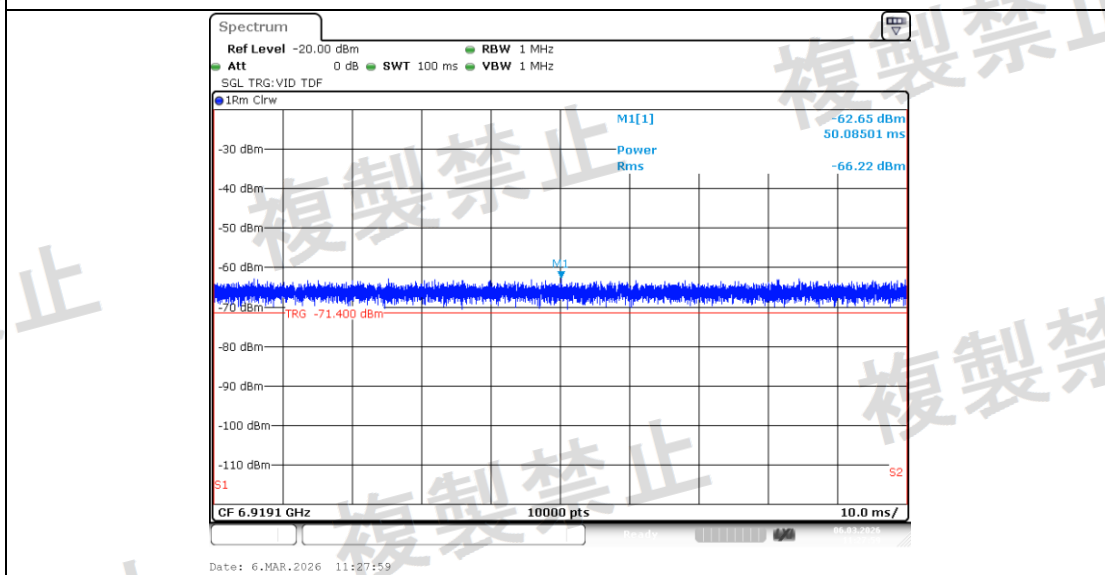
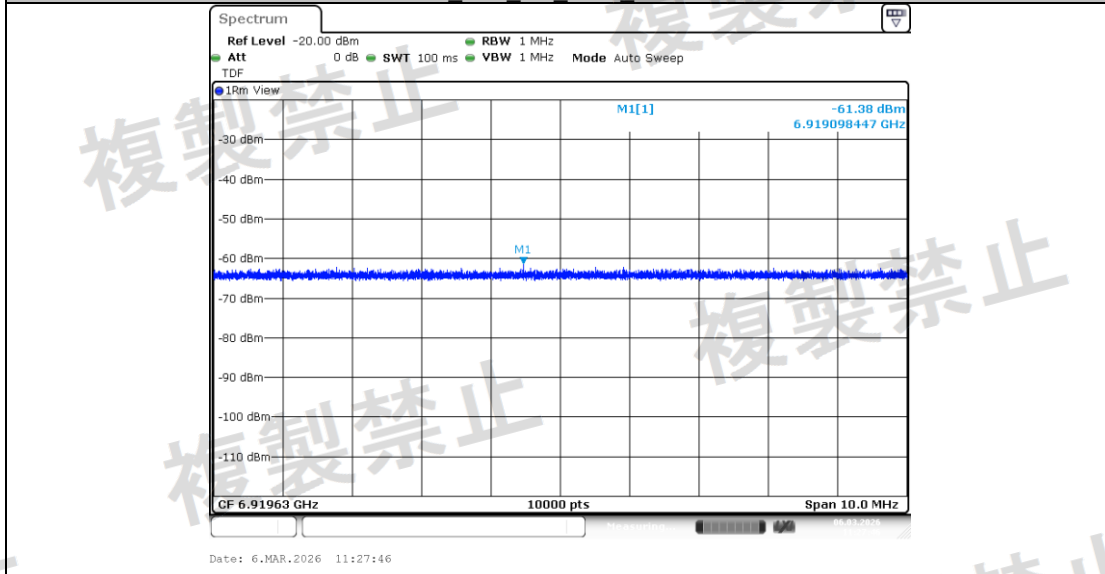


Ant1_BLE_2M_2440_6891.45





Ant1 BLE 2M 2440 6919.63



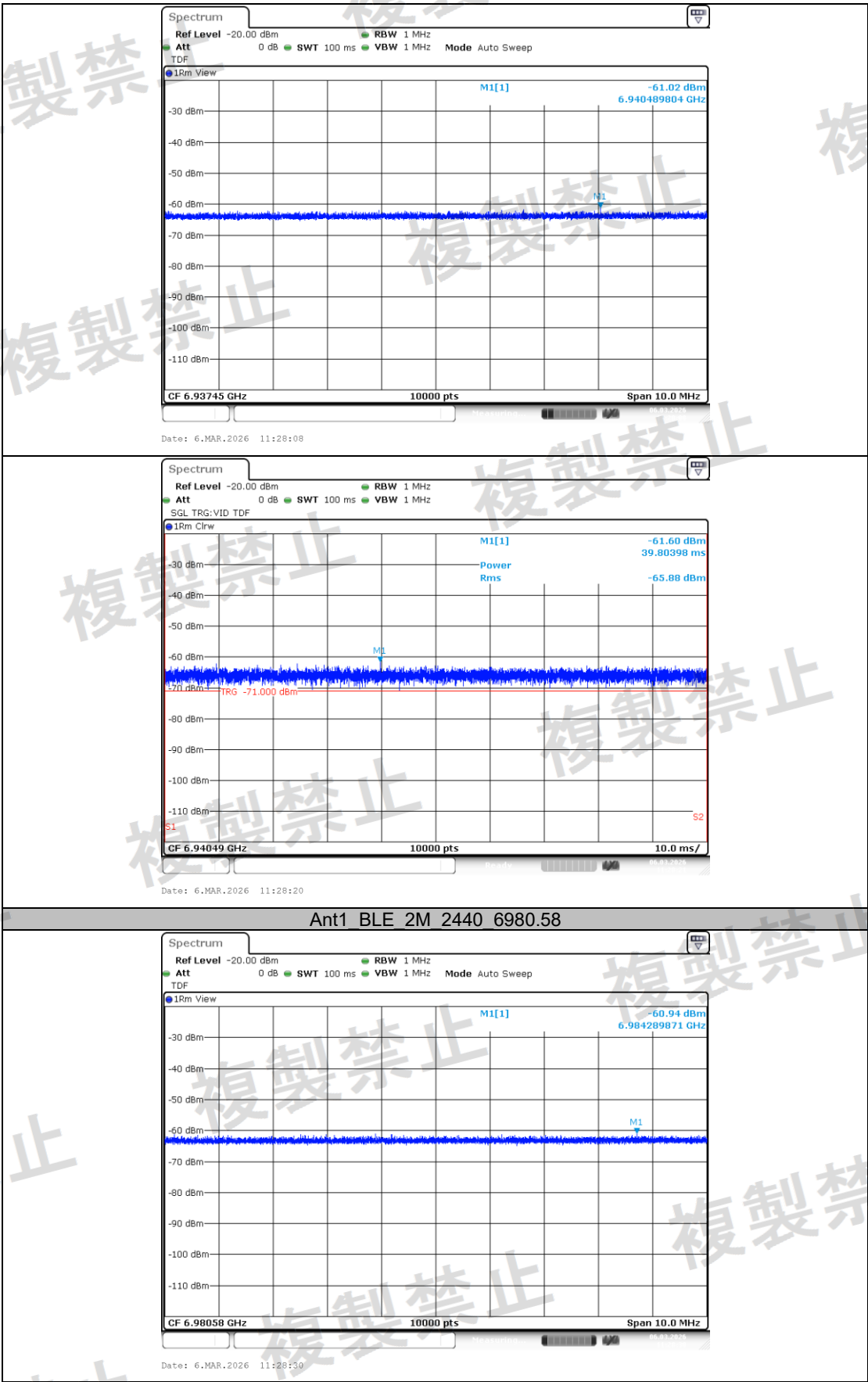
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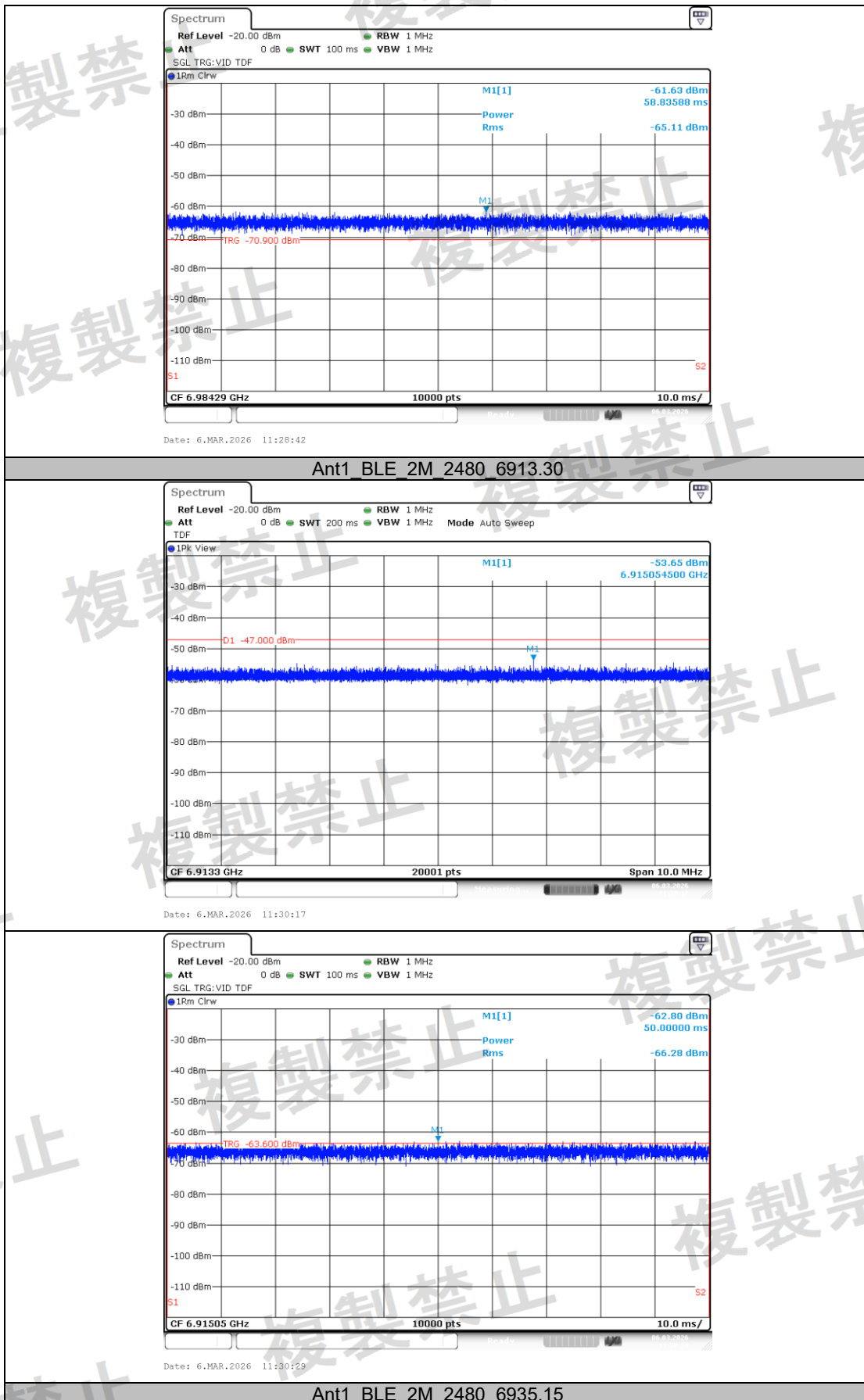
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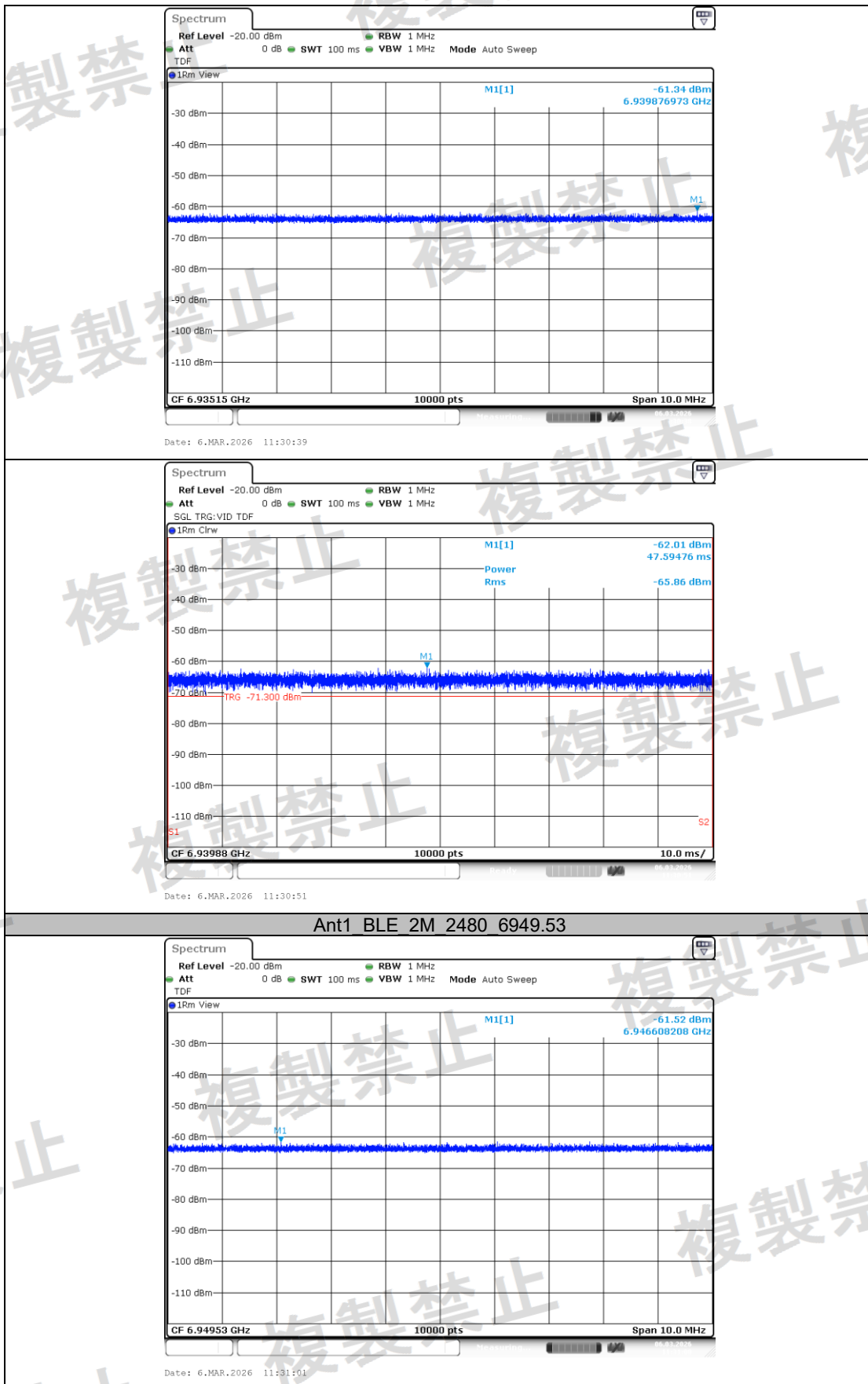
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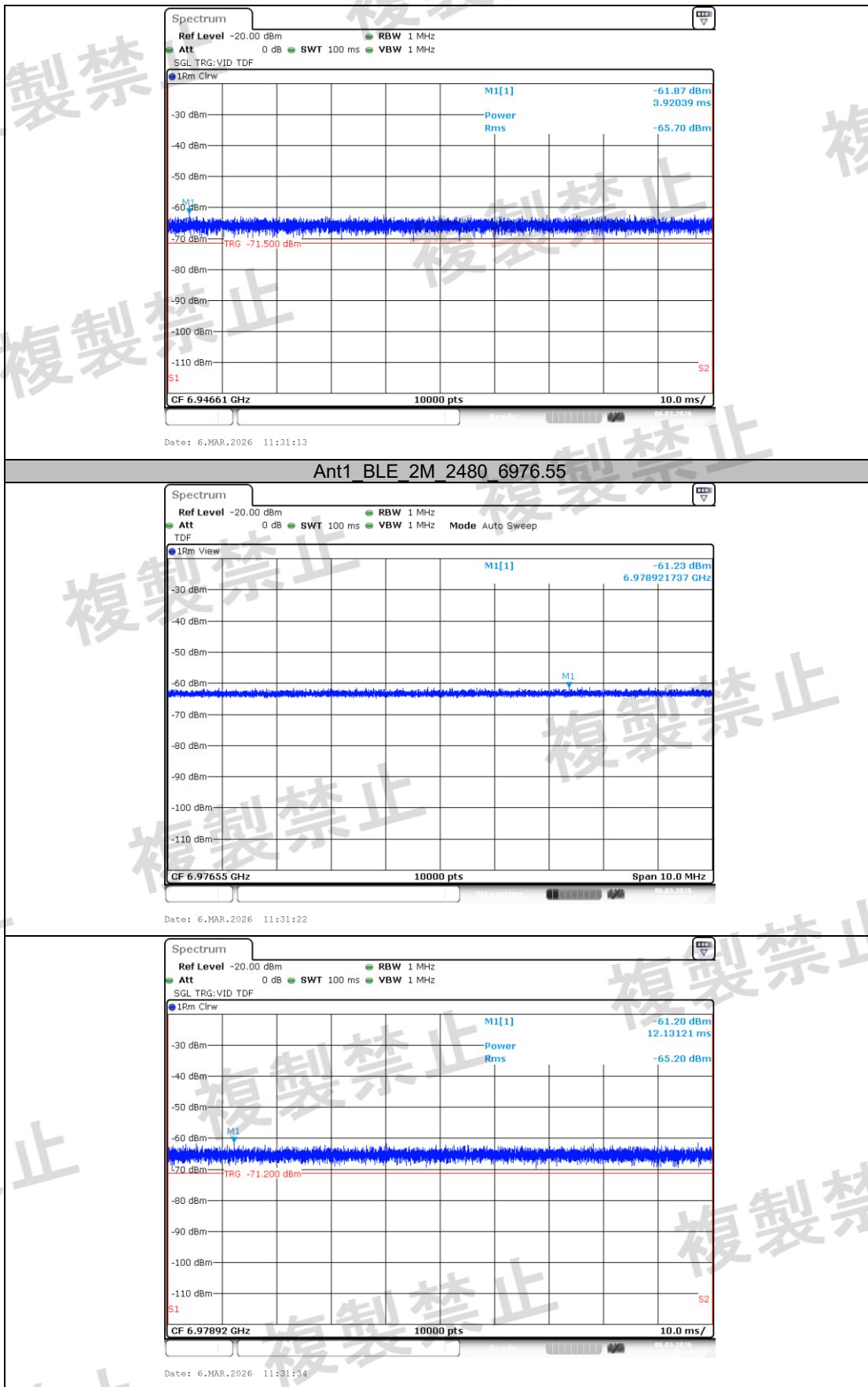
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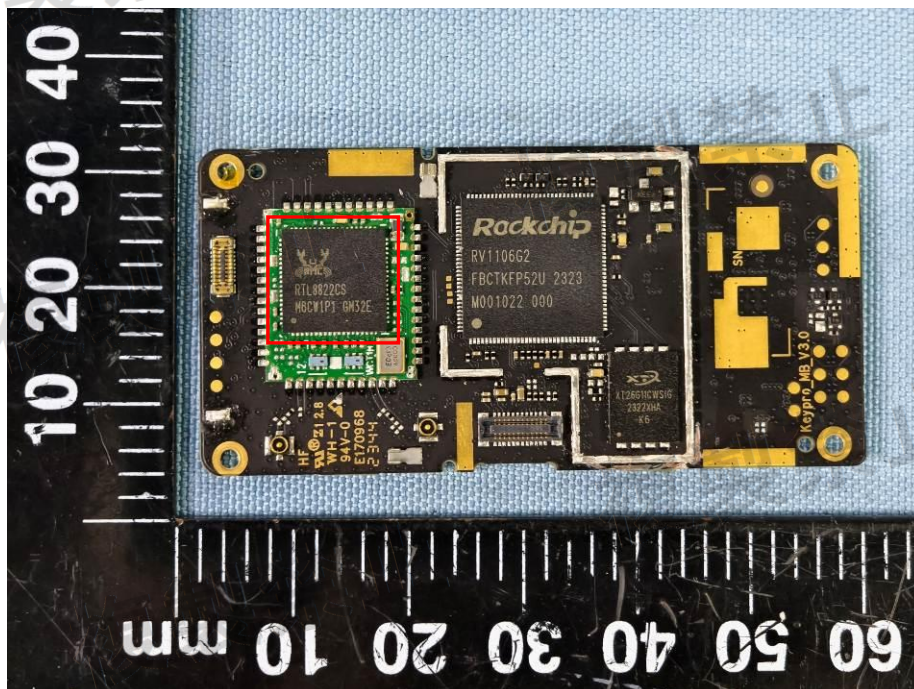
3.6. Construction protection confirmation method

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

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, so the end user can not to modify or change the RF Parts easily, please refer the following photo.



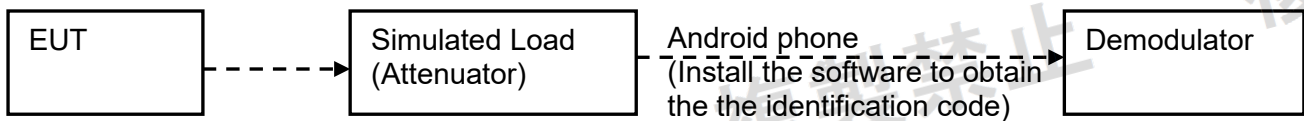


3.7. Interference Prevention Function

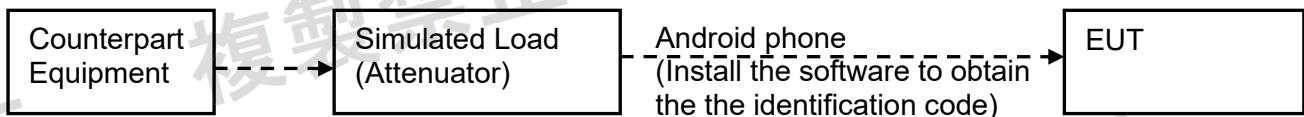
Module apply DSSS technique, in which the message signal is used to modulate a bit sequence known as the Pseudo Noise (PN) code; this PN code consists of pulses of a much shorter duration (larger bandwidth) than the pulse duration of the message signal, therefore the modulation by the message signal 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

Good.



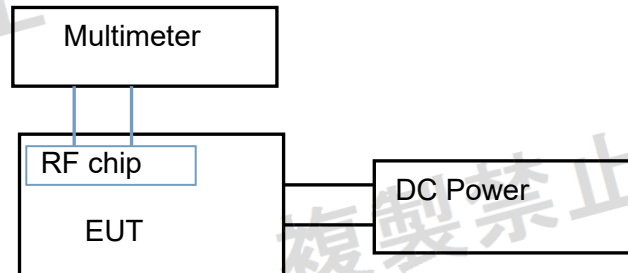
We can get the information as follows:
E0:01:C7:F3:7D:E9



3.8. 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

1. Use the DC power supplies the EUT, set the output power 3.70V.
2. Connect the BT module power input ports to the Multimeter, record the voltage value.
3. Set respectively the DC power output 3.33V and 4.07V, record the Multimeter's voltage values.

EUT supply power	RF module input power	Rated RF module power	Tolerance (%)
3.33V	3.3V	3.3V	0
3.70V	3.3V	3.3V	0
4.07V	3.3V	3.3V	0

Conclusion: when the input voltage to EUT from the external source changes at 10%, the change of the input voltage to RF Module circuit of EUT is less 1%, all test items only need to test for normal condition.



3.9. 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.

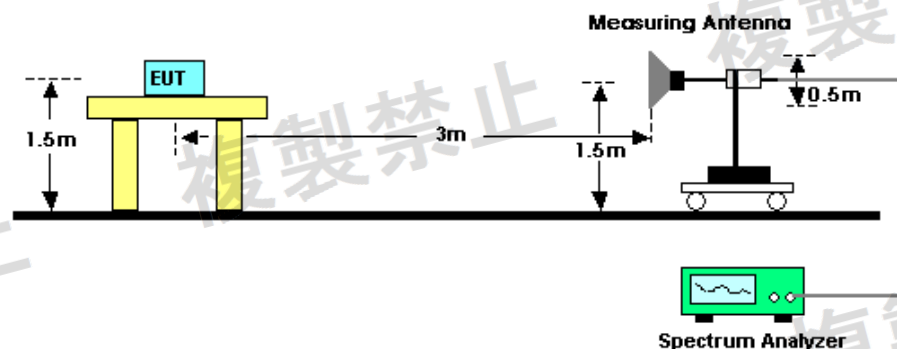
Spectrum Parameter	Setting
Attenuation	Auto
Span	0 MHz
RBW	1 MHz
VBW	1 kHz
Y scale	5 dB
Detector	Peak
Trace	Max Hold

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



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Master TRF : Dated 2026-01-01



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

Not necessary.

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