

JAPAN SPECIFIED RADIO EQUIPMENT TEST REPORT

For

Cool.revo Inc.

Ohashi Gyoen Station Bldg. 8F, 1-8-1 Shinjuku 160-0022, Tokyo, JAPAN.

Model: CIV-Flex

Report Type Original Report	Product Type: IP CAMERA
Report Producer : <u>Coco Lin</u>	
Report Number : <u>RXZ250808026RF02</u>	
Report Date : <u>2025-12-29</u>	
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Revision History

Revision	No.	Report Number	Issue Date	Description	Author/ Revised by
0.0	RXZ250808026	RXZ250808026RF02	2025-12-29	Original Report	Coco Lin

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1. GENERAL INFORMATION

1.1 PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)

Applicant	Cool.revo Inc.
	Ohashi Gyoen Station Bldg. 8F, 1-8-1 Shinjuku 160-0022, Tokyo, JAPAN
Manufacturer	Hi Sharp Intelligence Technology Co.,Ltd.
	No.673, CHANGXING RD, BADE DIST, TAOYUAN CITY, TAIWAN, R.O.C.
Brand(Trade) Name	HS
Product (Equipment)	IP CAMERA
Model Name	CIV-Flex
Series Model Name	N/A
Frequency Range	5150 MHz ~ 5250 MHz
Rated Antenna Power	802.11a Mode: 1.4 mW/MHz
	802.11ac VHT20 Mode: 0.7 mW/MHz
	802.11ac VHT40 Mode: 0.3 mW/MHz
	802.11ac VHT80 Mode: 0.2 mW/MHz
Modulation Type	OFDM
Antenna Specification	FPC Antenna / 4.22 dBi
Power Operation (Voltage Range)	5Vdc from Adapter, 48Vdc from POE
Sample Received Date	2025/08/12

*All measurement and test data in this report was gathered from production sample serial number:

RXZ250808026-1 (Assigned by BACL, New Taipei Laboratory).

1.2 OBJECTIVE

Type of Equipment: Certification Ordinance Article 2, Paragraph 1, Item 19-3

Test method(s): 5GHz帯小電力データ通信システムの特性試験方法 (DSP Research, Inc.)

1.3 STATEMENT

Decision Rule: No, (The test results do not include MU judgment)

1. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (New Taipei Laboratory).
2. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.
3. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
4. The determination of the test results does not require consideration of the uncertainty of the measurement, unless the assessment is required by customer agreement, regulation or standard document specification.
5. Bay Area Compliance Laboratories Corp. (New Taipei Laboratory) is not responsible for the authenticity of the information provided by the applicant that affects the test results.

2. SUMMARY OF TEST RESULTS

Items	Description of Test	Result
1	Frequency Error	Compliance
2	Occupied Bandwidth	Compliance
3	Antenna Output Power and Antenna Power Tolerance	Compliance
4	Transmitter Emissions Strength and Out Of Band Leakage Power	Compliance
5	Adjacent Channel Power	Compliance
6	Secondary Radiated Emission Strength	Compliance
7	Transmission Burst Length	Compliance
8	Interference Prevention Function	Compliance
9	Transmission Power Control Function (TPC)	Not Applicable
10	Carrier Sensing Function	Compliance
11	DFS Function	Not Applicable
Note	Construction Protection Confirmation	Compliance

Note:

Not Applicable: The EUT only work in the 5150-5250MHz band.

3. TEST METHODOLOGY & CONDITIONS

3.1 TEST CONDITIONS

The main board has voltage regulator IC: Silergy/SY8088AAC, power deviation of the RF chipset input is less than 1% when extreme voltage supplied, therefore exempt extremely high and low supply voltage condition tests the test only performed at normal condition.

Normal Voltage: worst case is 5 Vdc

3.2 DESCRIPTION OF TEST MODES

The system supports 802.11a/n ht20/n ht40/ac vht20/ac vht40/ac vht80 mode.

Since the 802.11n ht20/n ht40 parameters are the same as 802.11ac vht20 and ac vht40, 802.11n ht20/n ht40 is reduced.

The EUT (model: CIV-Flex) had been tested under operating condition.

For 5150 ~ 5250MHz

4 channels are provided for 802.11a, 802.11n HT20, 802.11ac VHT20:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	44	5220
40	5200	48	5240

2 channels are provided for 802.11n HT40, 802.11ac VHT40:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	46	5230

1 channel is provided for 802.11ac VHT80:

Channel	Frequency (MHz)
42	5210

802.11a/ac20 mode Channel 36, 40, 48 were tested.

802.11ac40 mode Channel 38, 46 were tested.

802.11ac80 mode Channel 42 was tested.

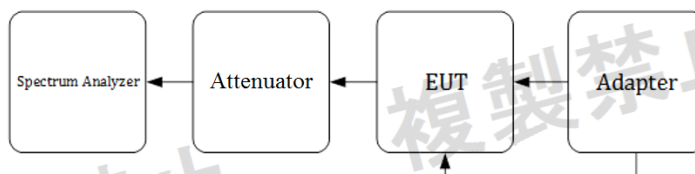
3.3 RF SHIELDING METHOD

The device is not easy to open, otherwise it will be damaged.

3.4 SETUP OF EQUIPMENT UNDER TEST

Setup Diagram

See test photographs attached in Annexes for the actual connections between EUT and support equipment.



Support Equipment

Description	Manufacturer	Model Number
NB	DELL	E6410

External Cable List and Details

Description	Manufacturer	Model Number
USB Cable	BACL	1m
RJ-45 Cable	BACL	1m

Power Setting

The system was configured for testing in an engineering mode, which is provided by Applicant.

The test software was used: Tera Term v4.95.

UNII Band	Mode	Channel	Frequency (MHz)	Power setting
UNII-1	802.11a	36	5180	42
		40	5200	42
		48	5240	42
UNII-1	802.11n HT20 / 802.11ac VHT20	36	5180	42
		40	5200	42
		48	5240	42
UNII-1	802.11n HT40 / 802.11ac VHT40	38	5190	42
		46	5230	42
UNII-1	802.11ac VHT80	42	5210	42

The worst case data rates are as follows:

802.11a: 6Mbps

802.11ac VHT20: MCS0

802.11ac VHT40: MCS0

802.11ac VHT80: MCS0

4. INSTRUMENT AND CALIBRATION

4.1 MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated once a year or in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2 TEST AND MEASUREMENT EQUIPMENT

The following list contains measurement equipment used for testing. The equipment conforms to the requirement of CISPR 16-1, ANSI C63.2 and other equivalent standards.

Calibration of all test and measurement, including any accessories that may effect such calibration, is checked frequently to ensure the accuracy. Adjustments are made and correction factors are applied in accordance with the instructions contained in the respective manual.

Equipment Used for Emission Measurement

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Proposed Calibration Date	Calibration Authority	Calibration Method
Power Meter	Agilent	E4419B	GB43312279	2025/1/3	2026/1/3	ETC	c)
E-Series Avg Power Sensor	Agilent	E9304A	MZ54110016	2025/1/3	2026/1/3	ETC	c)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101204	2025/6/4	2026/6/4	ITRI	c)
Spectrum Analyzer	Rohde & Schwarz	FSU26	200268	2025/5/7	2026/5/7	ITRI	c)
Signal Generator	Rohde & Schwarz	SMB100A	110700	2025/2/12	2026/2/12	ETC	c)
Wideband Radio Communication Tester	Rohde & Schwarz	CMW 500	107105	2025/3/14	2026/3/14	ITRI	c)
Cable	UTIFLEX	UFA210A	9435	2025/9/30	2026/9/30	BACL	d)
Power Splitter	Mini-Circuits	ZFRSC-183-S+	S F112701513	2025/1/20	2026/1/20	BACL	d)
Attenuator	MCL	BW-S10W5+	1419	2025/3/6	2026/3/6	ETC	c)

NOTE: Calibration Method

- a) : Calibration conducted by the National Institute of Information and Communications Technology - NICT - or a designated calibration agency under Article 102-18 paragraph (1)
- b) : Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Law (Law No. 51 of 1992) - Japan Calibration Service System
- c) : Calibration conducted in foreign countries, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1)
- d) : Calibration conducted by using other equipment that listed above from a) to c)

4.3 MEASUREMENT UNCERTAINTY

For the test methods, according to the present document, the measurement uncertainty figures shall be calculated in accordance with TR 100 028-1 [2] and shall correspond to an expansion factor (coverage factor) $k = 1,96$ or $k = 2$ (which provide confidence levels of respectively 95 % and 95,45 % in the case where the distributions characterizing the actual measurement uncertainties are normal (Gaussian)).

Table: Maximum measurement uncertainty

Parameter	Uncertainty
Frequency Error	+/- 0.01 ppm
Antenna Output Power	+/- 3.78 dB
Occupied Bandwidth	+/- 0.09 %
Transmitter Emissions Strength and Out Of Band Leakage Power	+/- 1.09 dB
Humidity	+/- 0.41 %
Temperature	+/- 0.76 °C
Voltages	+/- 0.42V

5. TEST RESULT

Environmental Conditions

Temperature:	25.5~26.1 °C
Relative Humidity:	45~49 %

The testing was performed by Toney Chen on 2025.10.08 ~ 2025.10.13

5.1 FREQUENCY ERROR

TEST PROCEDURE

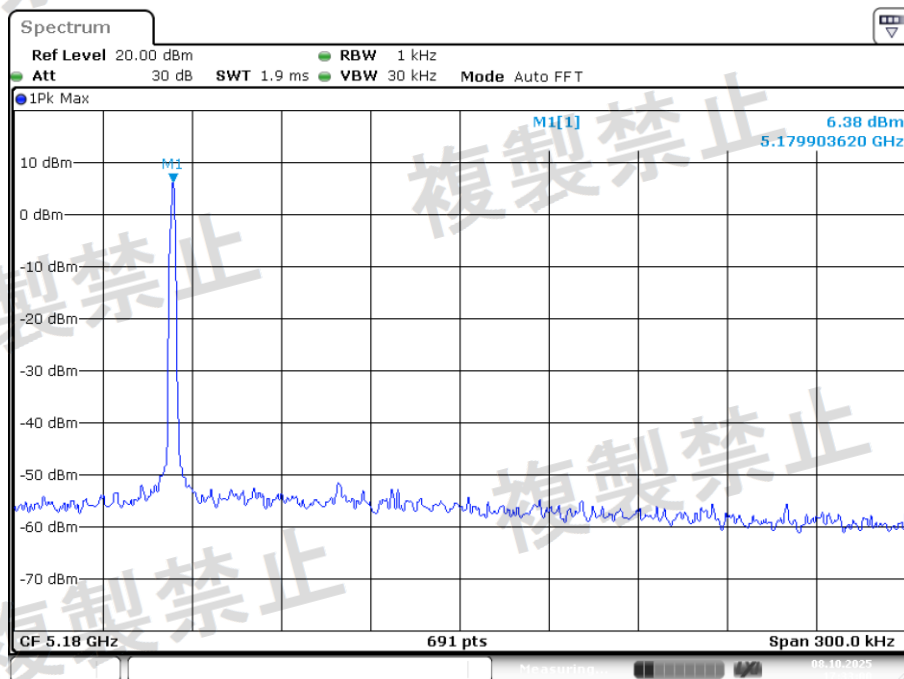
Spectrum Analyzer Conditions

- Center Frequency: Frequency to measure
- RBW: 1 kHz, VBW: 30 kHz
- Span: 300kHz
- Sweep time: Auto
- Log scale: 10dB/Div, Data points: 400 points or more
- Reference level: Enough level for maximum dynamic range
- Detection: Positive Peak
- Sweep mode: Single Sweep
- Marker: Spot

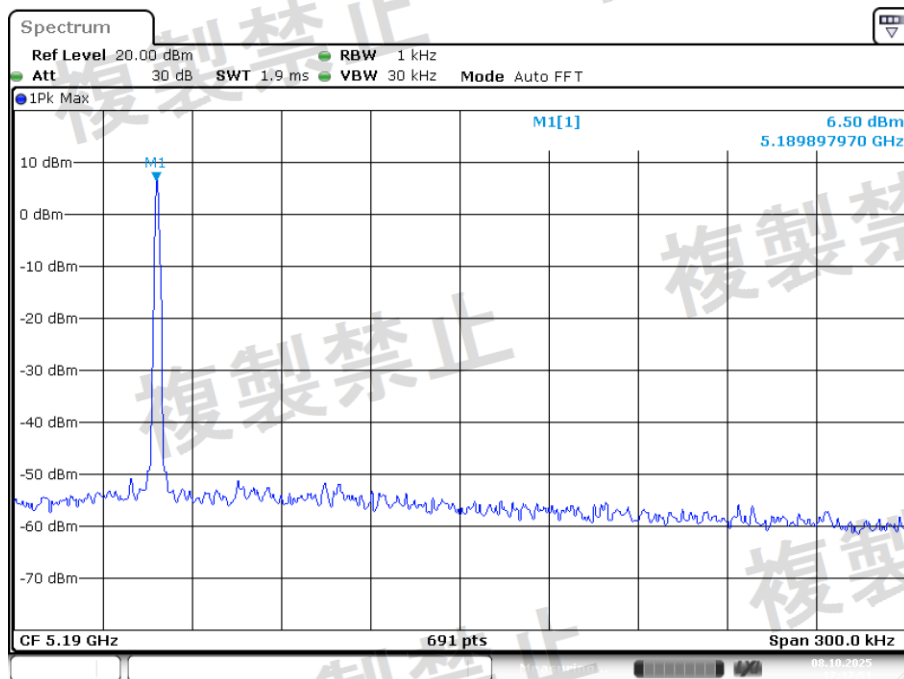
TEST RESULT

Frequency (MHz)	Measure frequency (MHz)	Frequency tolerance (ppm)	Limit (ppm)
5180	5179.903620	-18.61	< ±20 ppm
5190	5189.897970	-19.66	
5200	5199.904490	-18.37	
5210	5209.902320	-18.75	
5230	5229.901880	-18.76	
5240	5239.904920	-18.15	

Note: Frequency Tolerance = (((Measurement Frequency- Frequency)*1000000)/ Frequency)

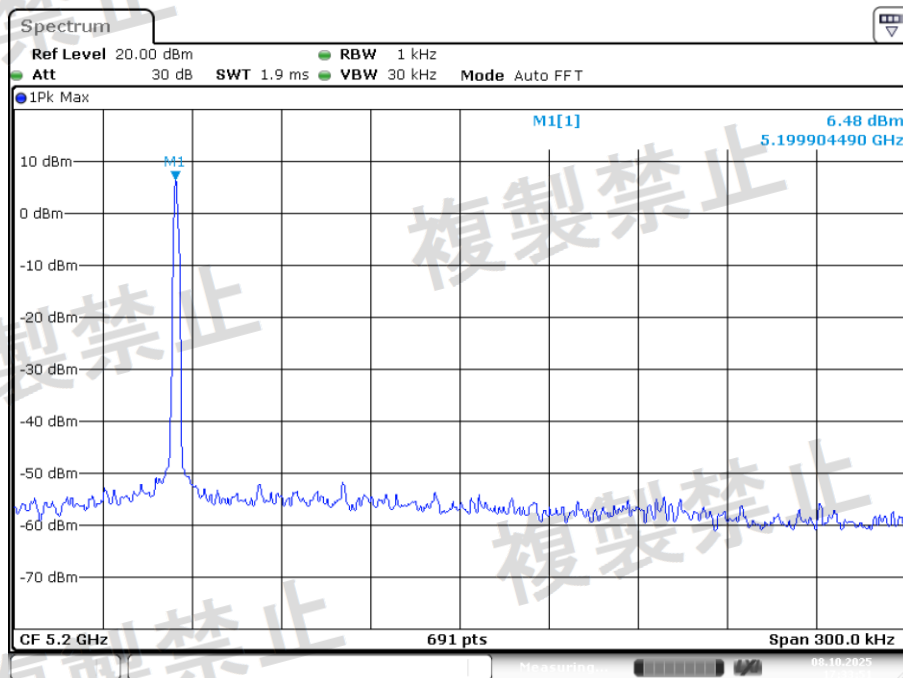
TEST PLOTS**5180 MHz**

ProjectNo.:RXZ250808026 Tester:toney
Date: 8.OCT.2025 17:33:00

5190 MHz

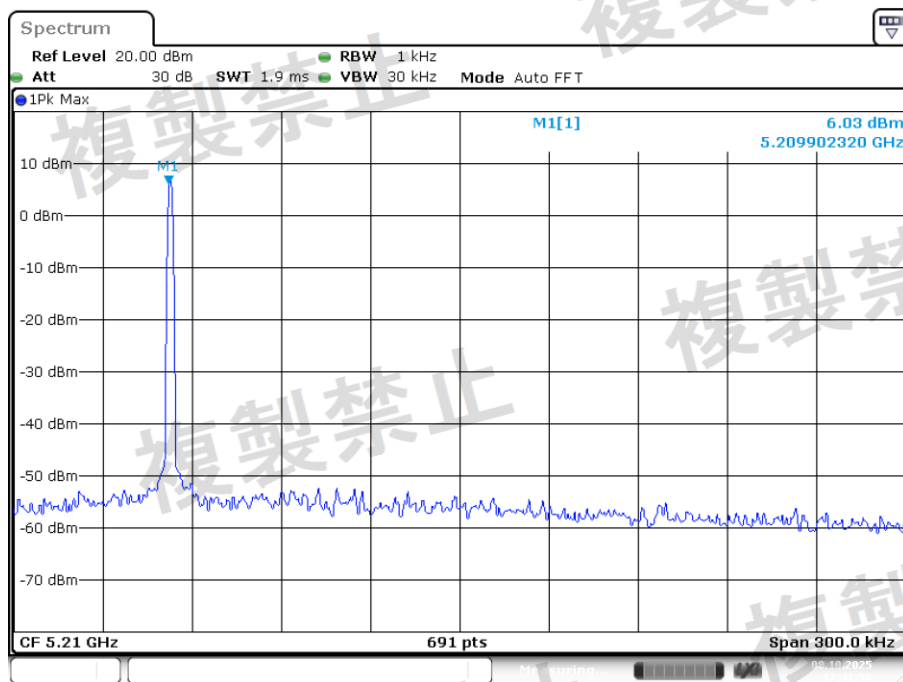
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5200 MHz



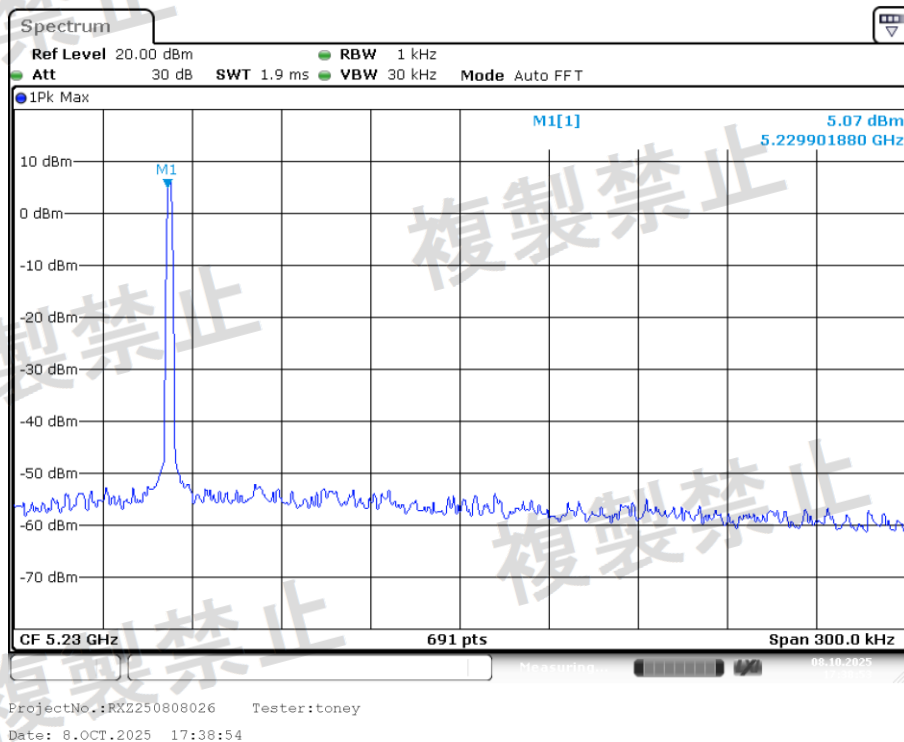
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5210 MHz

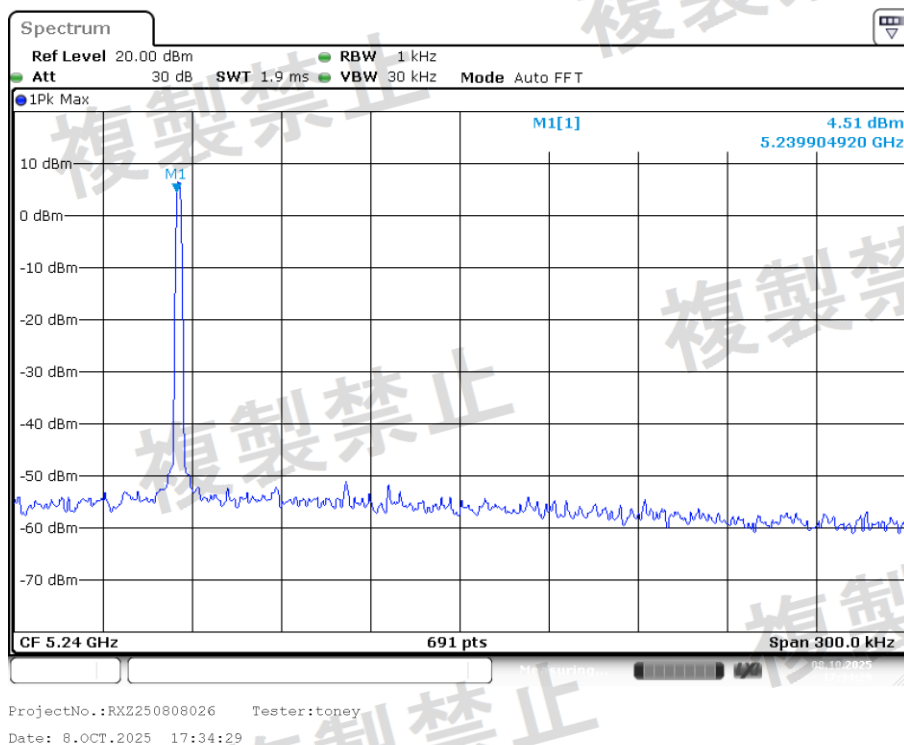


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5230 MHz



5240 MHz



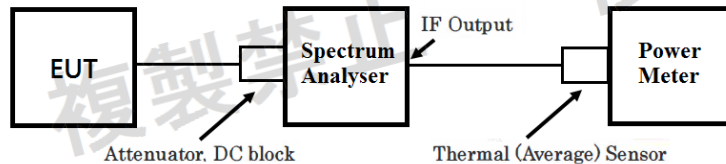
5.2 ANTENNA OUTPUT POWER AND ANTENNA POWER TOLERANCE

TEST PROCEDURE

For WiFi:

Connect the UUT to the spectrum analyser and Connect a high frequency power meter to the IF output of the spectrum analyzer.

<Block Diagram of Test Setup>:



Step 2:

The spectrum analyzer used the following settings:

- Centre Frequency: The centre frequency of the channel under test.
- RBW: 1 MHz.
- VBW: 1 MHz.
- Span: Wide enough to cover the complete power envelope of the signal of the UUT.
- Detector: Peak.
- Trace Mode: Max Hold.

Step 3:

When the trace is complete, find the peak value of the power envelope and record the frequency.

Step 4:

Make the following changes to the settings of the spectrum analyser:

- Center frequency Frequency that gives the maximum power (searched frequency)
- Sweep frequency width: 0 Hz
- Resolution bandwidth: 1 MHz
- Video bandwidth: Approximately the same as the resolution bandwidth
- Sweep mode: Continuous sweep
- Trace Mode: Max Hold.

Step 5:

When the trace is complete, capture the trace, for example using the "View" option on the spectrum analyser. For Find the peak value of the trace and place the analyser marker on this peak.

The value of Power Meter (from IF output) at that time is recorded.

TEST RESULT**802.11a Mode:** (Declared Antenna power is 1.4 mW/MHz)

Frequency	5180MHz	5200MHz	5240MHz	Limit
Power Meter(dBm)	-31.94	-28.92	-29.03	/
Antenna power(dBm/MHz)	-1.84	1.18	1.07	10
ON Time(ms)	100	100	100	/
(ON+OFF)Time(ms)	100	100	100	/
Duty Cycle Factor(dB)	0	0	0	/
System Factor(dB)	30.10	30.10	30.10	/
Antenna power(mW/MHz)	0.65	1.31	1.28	10
Antenna power error(%)	-53.24	-6.27	-8.62	-80 - +20
EIRP(mW/MHz)	1.73	3.47	3.38	10

802.11ac VHT20 Mode: (Declared Antenna power is 0.7 mW/MHz)

Frequency	5180MHz	5200MHz	5240MHz	Limit
Power Meter(dBm)	-32.78	-32.46	-32.15	/
Antenna power(dBm/MHz)	-2.68	-2.36	-2.05	10
ON Time(ms)	100	100	100	/
(ON+OFF)Time(ms)	100	100	100	/
Duty Cycle Factor(dB)	0	0	0	/
System Factor(dB)	30.10	30.10	30.10	/
Antenna power(mW/MHz)	0.54	0.58	0.62	10
Antenna power error(%)	-22.93	-17.03	-10.90	-80 - +20
EIRP(mW/MHz)	1.43	1.53	1.65	10

802.11ac VHT40 Mode: (Declared Antenna power is 0.3 mW/MHz)

Frequency	5190MHz	5230MHz	Limit
Power Meter(dBm)	-35.66	-35.97	/
Antenna power(dBm/MHz)	-5.56	-5.87	7
ON Time(ms)	100	100	/
(ON+OFF)Time(ms)	100	100	/
Duty Cycle Factor(dB)	0	0	/
System Factor(dB)	30.10	30.10	/
Antenna power(mW/MHz)	0.28	0.26	5
Antenna power error(%)	-7.34	-13.73	-80 - +20
EIRP(mW/MHz)	0.73	0.68	5

802.11ac VHT80 Mode: (Declared Antenna power is 0.2 mW/MHz)

Frequency	5210MHz	Limit
Power Meter(dBm)	-37.43	/
Antenna power(dBm/MHz)	-7.33	4
ON Time(ms)	100	/
(ON+OFF)Time(ms)	100	/
Duty Cycle Factor(dB)	0	/
System Factor(dB)	30.10	/
Antenna power(mW/MHz)	0.18	2.5
Antenna power error(%)	-7.54	-80 - +20
EIRP(mW/MHz)	0.49	2.5

Note:

Duty Cycle Factor = $10 \cdot \log(1/\text{duty cycle})$

Antenna Power(dBm/MHz) = Power Meter + System Factor + Duty Cycle Factor

Antenna Power(mW/MHz) = $10^{(\text{Antenna Output Power(dBm/MHz)}/10)}$

Antenna Power Tolerance = $(\text{Antenna Power} - \text{Declared Power}) / \text{Declared Power} \cdot 100\%$

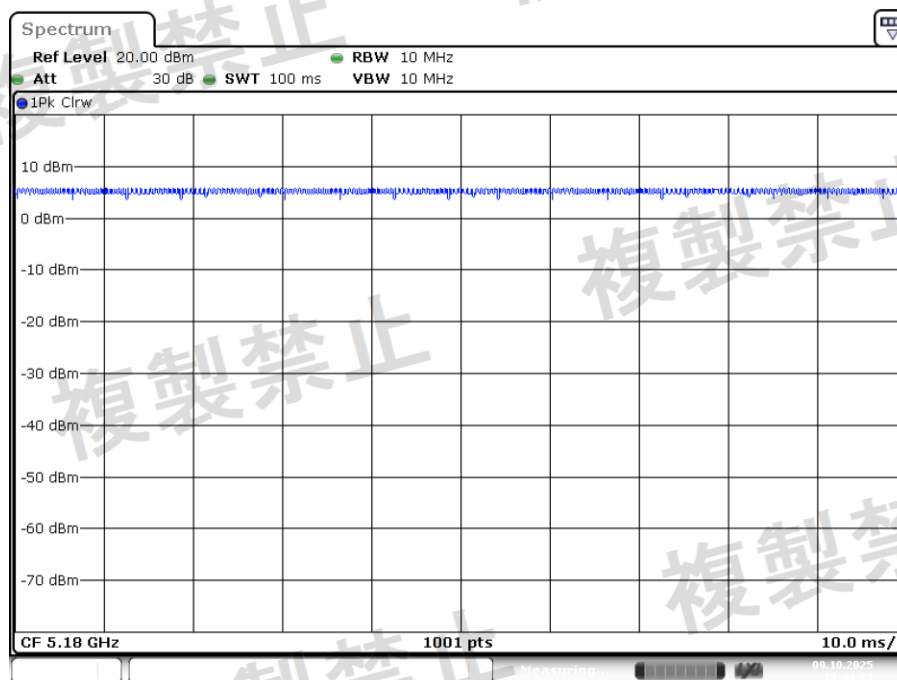
System Factor:

SG Output (MHz)	Power Meter Raw (dBm)	Power Meter to IF Output (dBm)	System Path Loss EUT to IF (dB)
WIFI 5G	-0.60	-30.70	30.10

System Factor = Power Meter Raw(dBm) – Power meter to IF output(dBm)

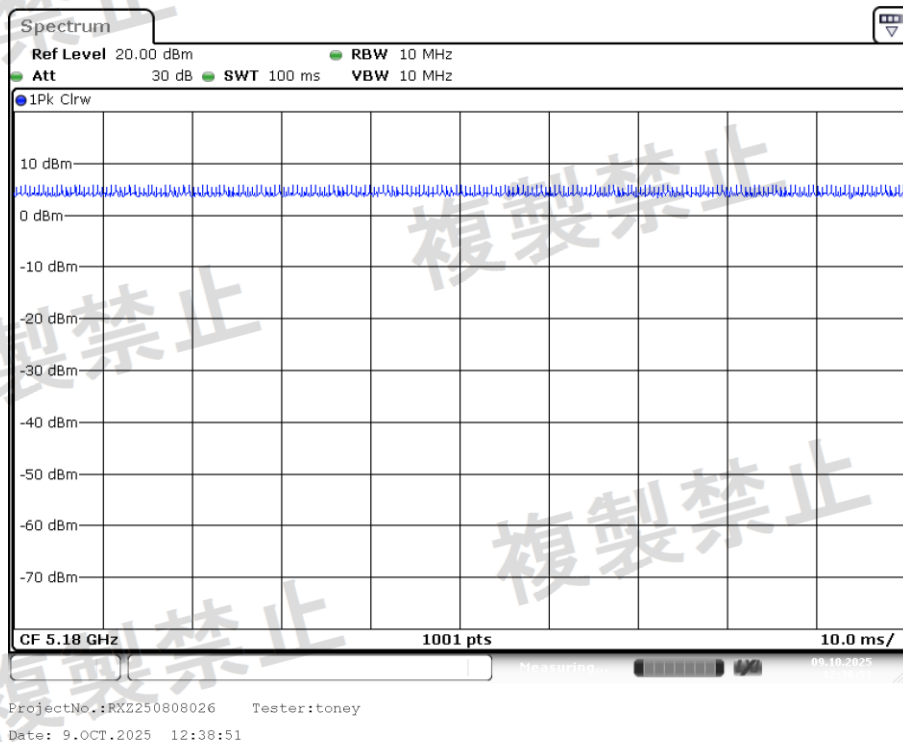
Please refer to the following Duty Cycle plots.

802.11a Mode:

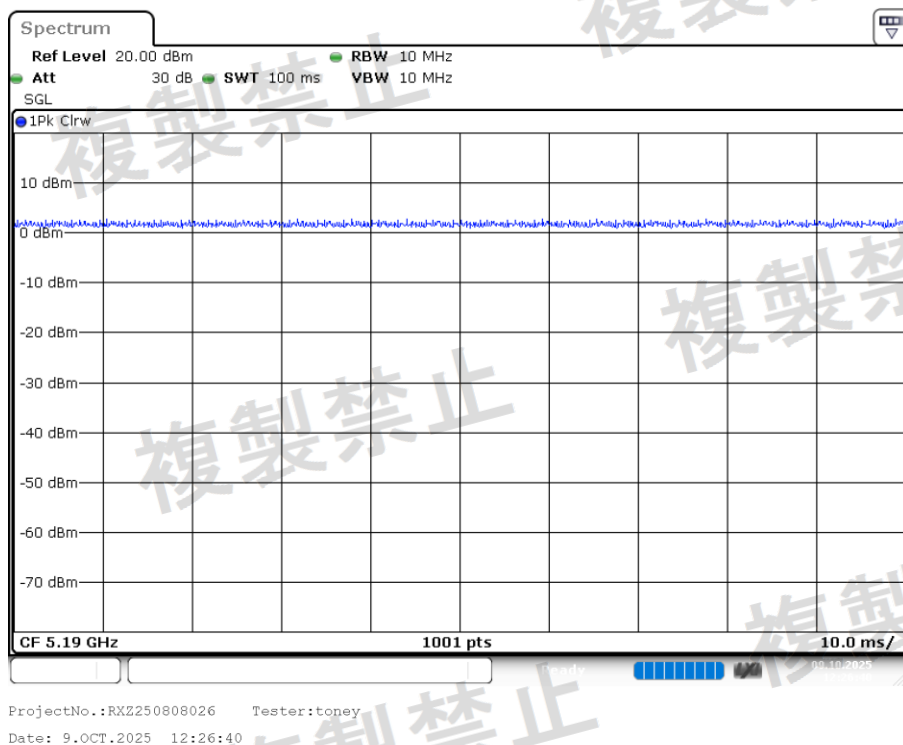


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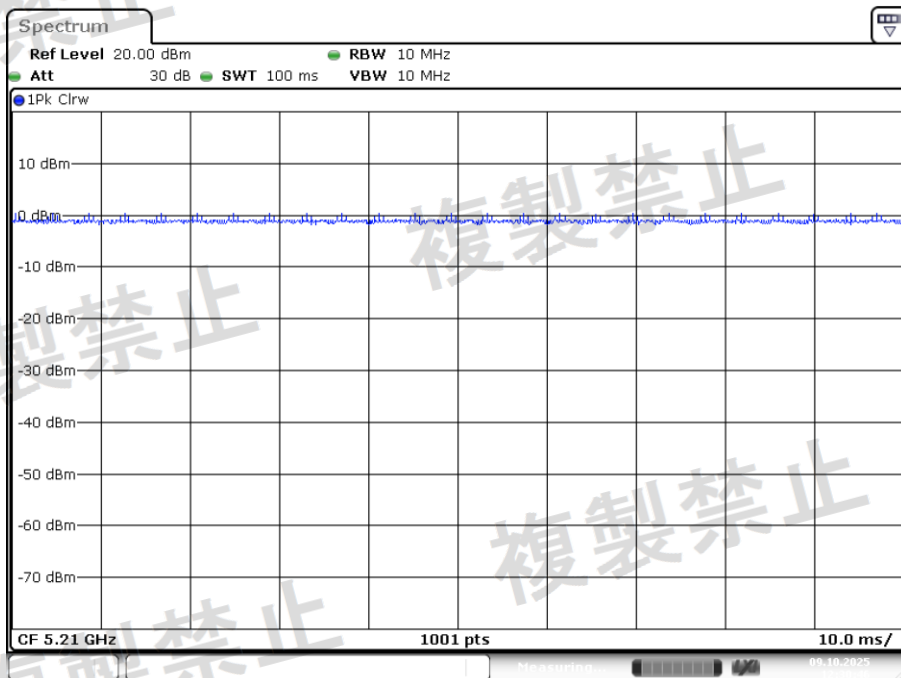
802.11ac VHT20 Mode:



802.11ac VHT40 Mode:



802.11ac VHT80 Mode:



ProjectNo.:RXZ250808026 Tester:toney

Date: 9.OCT.2025 12:30:46

5.3 TRANSMITTER EMISSIONS STRENGTH AND OUT OF BAND LEAKAGE POWER

TEST PROCEDURE

Spectrum Analyzer Conditions

- Span: Measuring Frequency Range
- RBW: 1MHz (frequency range; 1GHz over), 100kHz (frequency range; 30MHz to 1GHz)
- VBW: Same as RBW (1MHz or 100kHz)
- Sweep time: Auto(Minimum time to ensure measurement accuracy.)
- Data points : 400 points or more
- Reference level: Enough level for maximum dynamic range
- Detection: Positive Peak

TEST RESULT**802.11a Mode:**

Test Frequency	MHz	5180	5200	5240	
W52	Max value in the band	MHz	906.60	704.50	915.10
		Raw dBm	-67.29	-68.06	-67.31
		dBm/MHz	-52.75	-53.52	-52.77
		μW/100kHz	0.00531	0.00445	0.00528
	Max value in the band	MHz	4287.80	4575.50	5019.10
		Raw dBm	-56.05	-54.87	-55.89
		dBm/MHz	-41.51	-40.33	-41.35
		μW/MHz	0.07063	0.09268	0.07328
	Max value in the band	MHz	5149.18	5149.47	5147.31
		Raw dBm	-53.59	-54.88	-54.53
		dBm/MHz	-39.05	-40.34	-39.99
		μW/MHz	0.12445	0.09247	0.10023
	Max value in the band	MHz	5250.87	5250.21	5250.00
		Raw dBm	-54.03	-54.52	-24.19
		dBm/MHz	-39.49	-39.98	-9.65
		μW/MHz	0.11246	0.10046	108.39269
	Max value in the band	dB	30.77	37.89	9.64
					Margin to the technical requirement
	Max value in the band	MHz	5253.26	5254.47	5251.02
		Raw dBm	-54.14	-53.48	-29.15
		dBm/MHz	-39.60	-38.94	-14.61
		μW/MHz	0.10965	0.12764	34.59394
	Max value in the band	dB	27.59	25.85	4.59
					Margin to the technical requirement
	Max value in the band	MHz	5266.25	5263.88	5260.36
		Raw dBm	-54.66	-54.13	-41.79
		dBm/MHz	-40.12	-39.59	-27.25
		μW/MHz	0.09727	0.10990	1.88365
	Max value in the band	dB	14.62	16.93	8.81
					Margin to the technical requirement
	Max value in the band	MHz	16173.70	16203.70	17673.70
		Raw dBm	-53.52	-52.46	-53.65
		dBm/MHz	-38.98	-37.92	-39.11
		μW/MHz	0.12647	0.16144	0.12274

Note:

Cable Loss: 10.32 dB

Result(dBm/MHz): Raw dBm+ Cable Loss +Antenna Gain

802.11ac VHT20 Mode:

Test Frequency	MHz	5180	5200	5240	
W52	Max value in the band	MHz	865.90	880.00	951.60
		Raw dBm	-67.79	-68.24	-68.49
		dBm/MHz	-53.25	-53.70	-53.95
		μW/100kHz	0.00473	0.00427	0.00403
	Max value in the band	MHz	4323.80	5067.10	4401.70
		Raw dBm	-56.06	-55.53	-55.06
		dBm/MHz	-41.52	-40.99	-40.52
		μW/MHz	0.07047	0.07962	0.08872
	Max value in the band	MHz	5145.56	5142.43	5146.28
		Raw dBm	-54.08	-54.55	-54.69
		dBm/MHz	-39.54	-40.01	-40.15
		μW/MHz	0.11117	0.09977	0.09661
	Max value in the band	MHz	5250.11	5250.19	5250.00
		Raw dBm	-54.45	-54.30	-20.56
		dBm/MHz	-39.91	-39.76	-6.02
		μW/MHz	0.10209	0.10568	250.03454
		dB	40.39	37.99	9.34
					Margin to the technical requirement
	Max value in the band	MHz	5250.68	5250.97	5250.20
		Raw dBm	-54.59	-54.40	-22.00
		dBm/MHz	-40.05	-39.86	-7.46
		μW/MHz	0.09886	0.10328	179.47336
		dB	33.27	30.18	5.45
					Margin to the technical requirement
	Max value in the band	MHz	5252.92	5259.81	5251.01
		Raw dBm	-54.63	-54.47	-26.46
		dBm/MHz	-40.09	-39.93	-11.92
		μW/MHz	0.09795	0.10162	64.26877
		dB	28.38	22.10	1.91
					Margin to the technical requirement
	Max value in the band	MHz	5264.33	5261.08	5260.09
		Raw dBm	-54.30	-54.33	-35.07
		dBm/MHz	-39.76	-39.79	-20.53
		μW/MHz	0.10568	0.10495	8.85116
		dB	16.56	20.49	2.42
					Margin to the technical requirement
	Max value in the band	MHz	15873.70	17973.70	17613.70
		Raw dBm	-52.93	-53.37	-52.64
		dBm/MHz	-38.39	-38.83	-38.10
		μW/MHz	0.14488	0.13092	0.15488

Note:

Cable Loss: 10.32 dB

Result(dBm/MHz): Raw dBm+ Cable Loss +Antenna Gain

802.11a40 Mode:

Test Frequency	MHz	5190	5230	
W52	Max value in the band	MHz	877.20	496.80
		Raw dBm	-67.99	-67.95
		dBm/MHz	-53.45	-53.41
		μW/100kHz	0.00452	0.00456
	Max value in the band	MHz	5138.60	5126.60
		Raw dBm	-51.95	-56.09
		dBm/MHz	-37.41	-41.55
		μW/MHz	0.18155	0.06998
	Max value in the band	MHz	5149.99	5142.68
		Raw dBm	-42.19	-54.52
		dBm/MHz	-27.65	-39.98
		μW/MHz	1.71791	0.10046
	Max value in the band	MHz	5250.18	5250.01
		Raw dBm	-53.95	-25.41
		dBm/MHz	-39.41	-10.87
		μW/MHz	0.11455	81.84648
	Max value in the band	dB	34.61270	7.79970
		MHz	5259.04	5251.04
		Raw dBm	-54.48	-31.77
		dBm/MHz	-39.94	-17.23
	Max value in the band	μW/MHz	0.10139	18.92344
		dB	23.54317	4.20244
		MHz	5277.07	5270.09
		Raw dBm	-54.48	-41.61
	Max value in the band	dBm/MHz	-39.94	-27.07
		μW/MHz	0.10139	1.96336
		dB	14.68830	6.00510
		MHz	15909.40	5293.40
	Max value in the band	Raw dBm	-53.33	-48.24
		dBm/MHz	-38.79	-33.70
		μW/MHz	0.13213	0.42658

Note:

Cable Loss: 10.32 dB

Result(dBm/MHz): Raw dBm+ Cable Loss +Antenna Gain

802.11ac VHT80 Mode:

Test Frequency	MHz	5210	
Max value in the band	MHz	948.80	
	Raw dBm	-68.01	30MHz~1000MHz Limit $\leq 0.25 \mu$
	dBm/MHz	-53.47	W/MHz (-36 dBm/100kHz)
	μ W/100kHz	0.00450	
Max value in the band	MHz	5120.20	
	Raw dBm	-48.67	1000MHz~5123.2MHz Limit $\leq 2.5 \mu$
	dBm/MHz	-34.13	W/MHz (-26 dBm/MHz)
	μ W/MHz	0.38637	
Max value in the band	MHz	5149.36	
	Raw dBm	-41.46	5123.2MHz~5150MHz Limit $\leq 15 \mu$
	dBm/MHz	-26.92	W/MHz (-26 dBm/MHz)
	μ W/MHz	2.03236	
Max value in the band	MHz	5250.00	
	Raw dBm	-30.17	5250MHz~5251MHz Limit $\leq 250 \sim 25 \mu$
	dBm/MHz	-15.63	W/MHz (-6 ~ -16 dBm/MHz)
	μ W/MHz	27.35269	
Max value in the band	dB	9.60240	Margin to the technical requirement
	MHz	5251.20	
	Raw dBm	-32.97	5251MHz~5290MHz Limit $\leq 25 \sim 3.96$
	dBm/MHz	-18.43	μ W/MHz (-16 ~ -24 dBm/MHz)
Max value in the band	μ W/MHz	14.35489	
	dB	2.36878	Margin to the technical requirement
	MHz	5291.28	
	Raw dBm	-41.77	5290MHz~5296.7MHz Limit $\leq 3.96 \sim$
Max value in the band	dBm/MHz	-27.23	2.5μ W/MHz (-24 ~ -26 dBm/MHz)
	μ W/MHz	1.89234	
	dB	2.82690	Margin to the technical requirement
	MHz	5311.70	
Max value in the band	Raw dBm	-44.87	5296.7MHz~26000MHz Limit $\leq 2.5 \mu$
	dBm/MHz	-30.33	W/MHz (-26 dBm/MHz)
	μ W/MHz	0.92683	

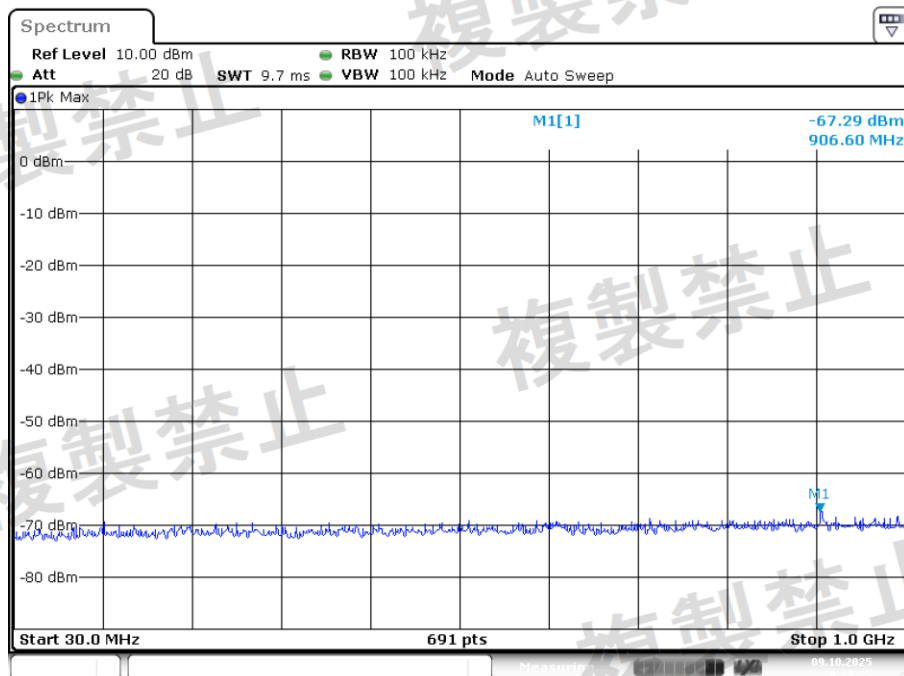
Note:

Cable Loss: 10.32 dB

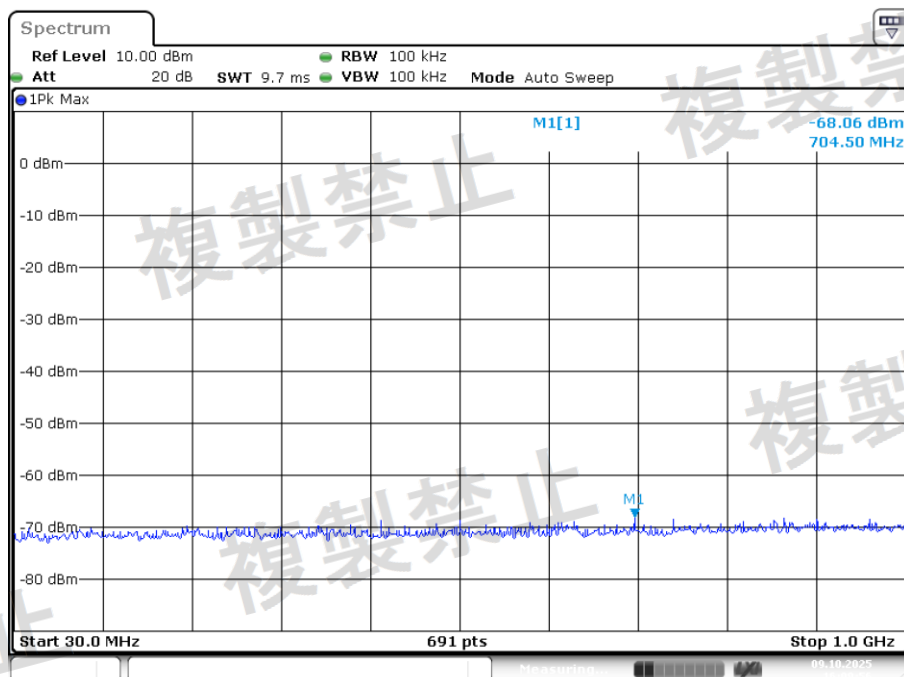
Result(dBm/MHz): Raw dBm+ Cable Loss +Antenna Gain

TEST PLOTS

Test Mode: Transmitting

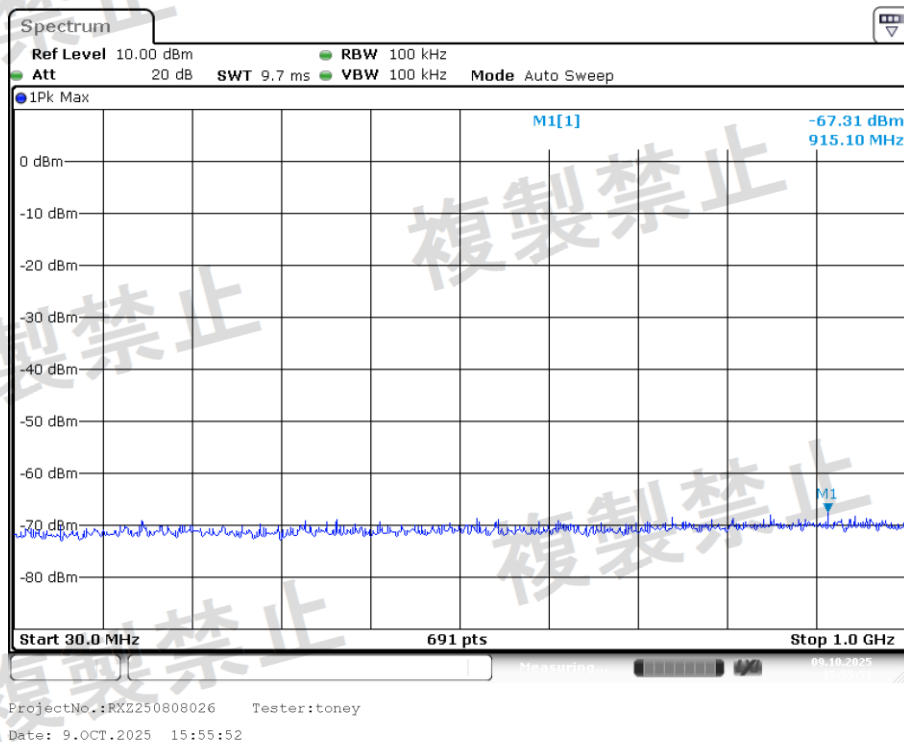
802.11a Mode**30MHz-1000MHz:****5180 MHz**

ProjectNo.:RXZ250808026 Tester:toney
Date: 9.OCT.2025 16:19:26

5200 MHz

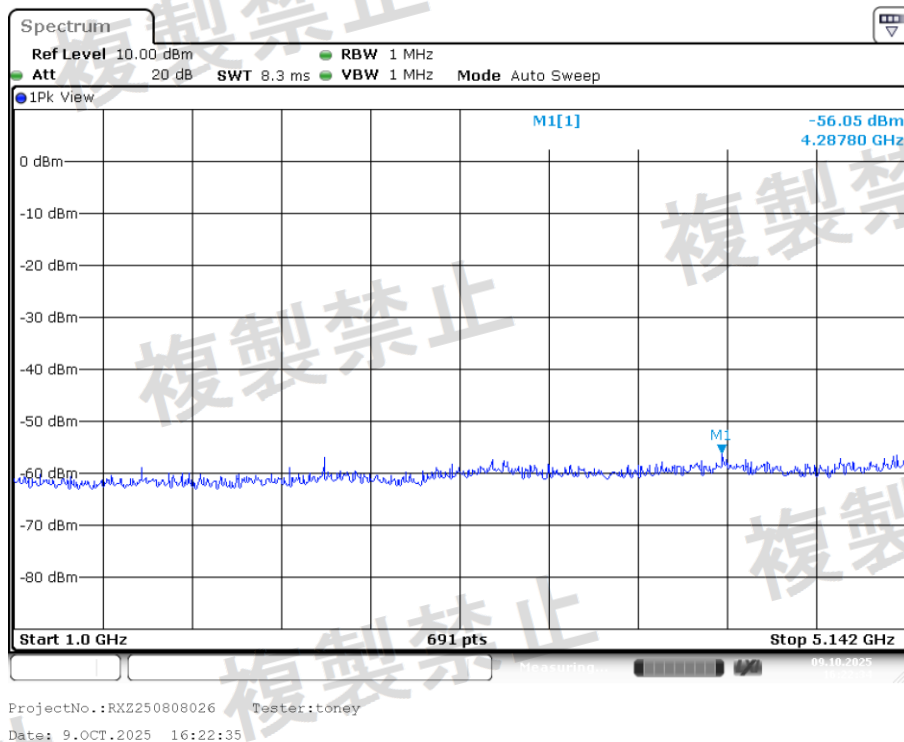
ProjectNo.:RXZ250808026 Tester:toney
Date: 9.OCT.2025 16:09:56

5240 MHz

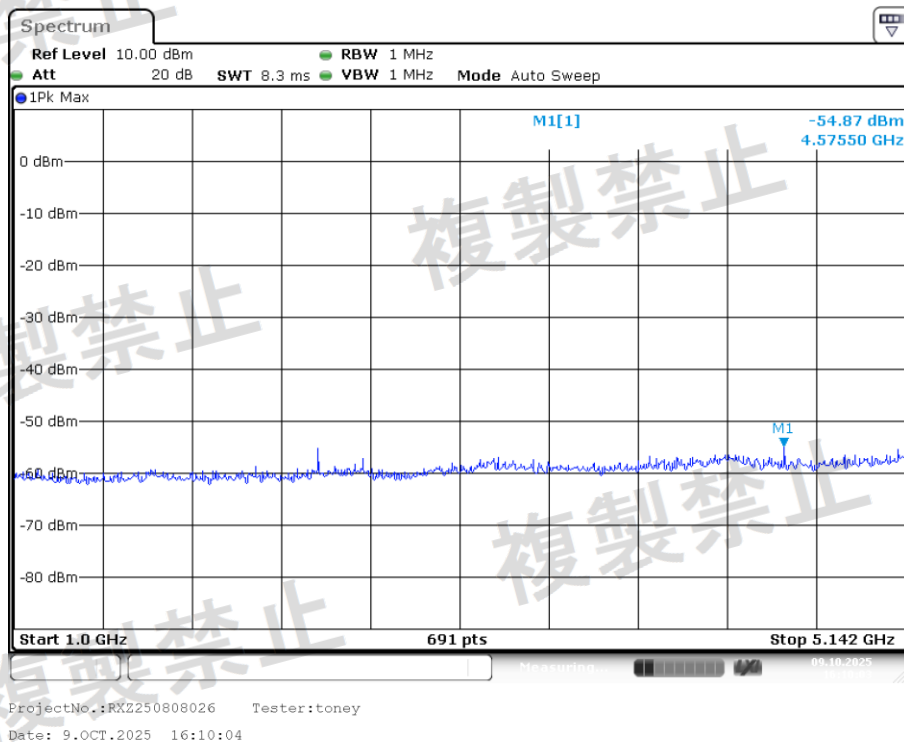


1000MHz-5142MHz

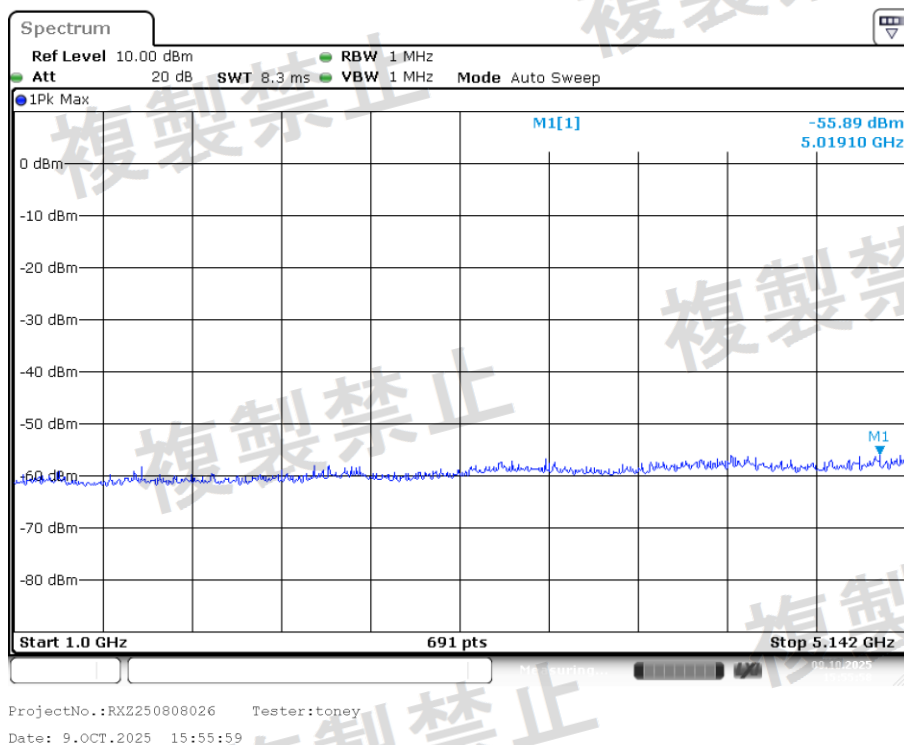
5180MHz



5200MHz

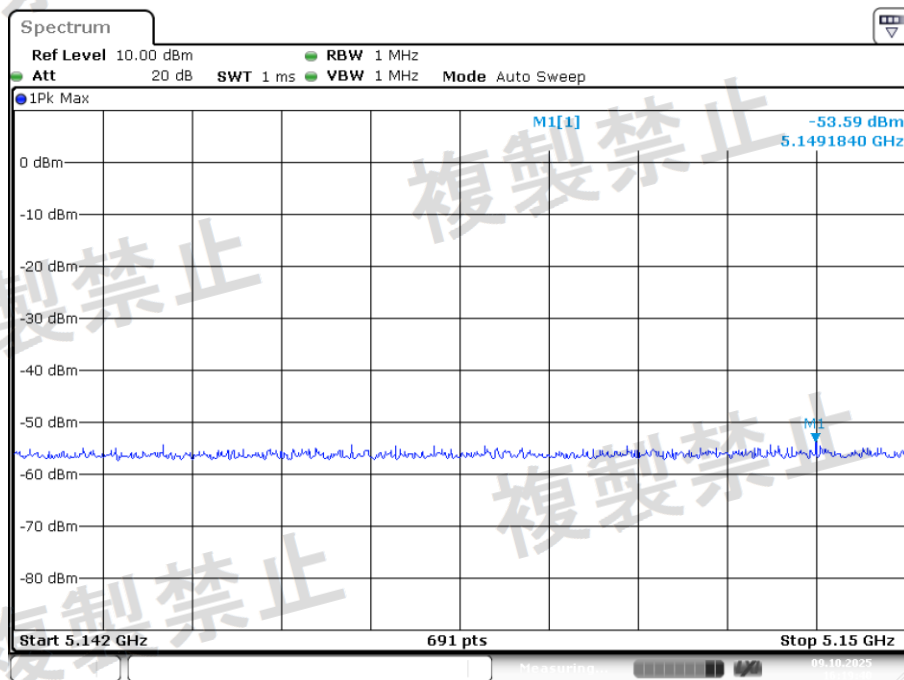


5240MHz



5142MHz-5150MHz

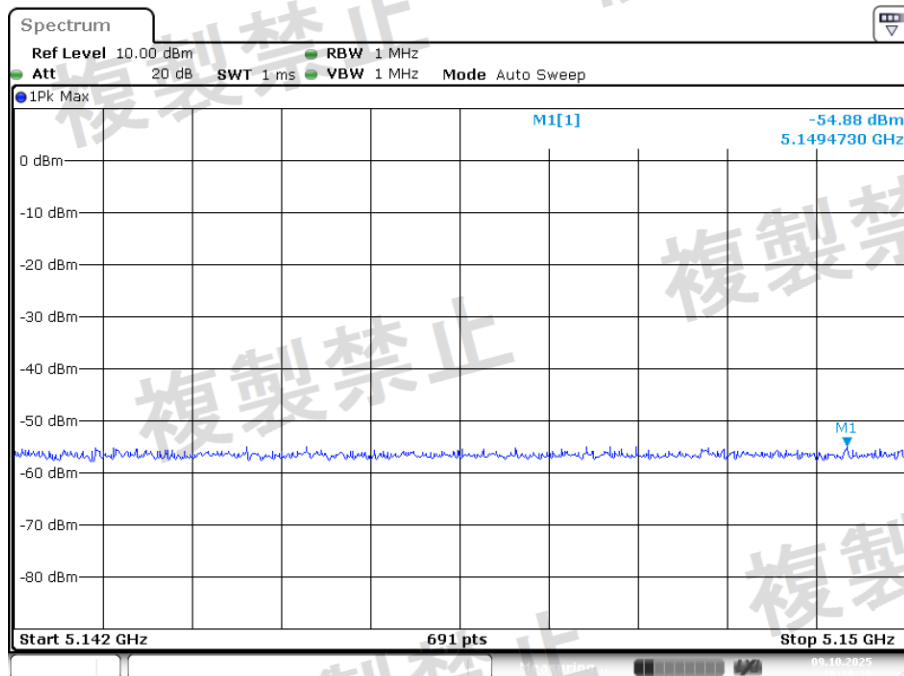
5180MHz



ProjectNo.:RXZ250808026 Tester:toney

Date: 9.OCT.2025 16:19:40

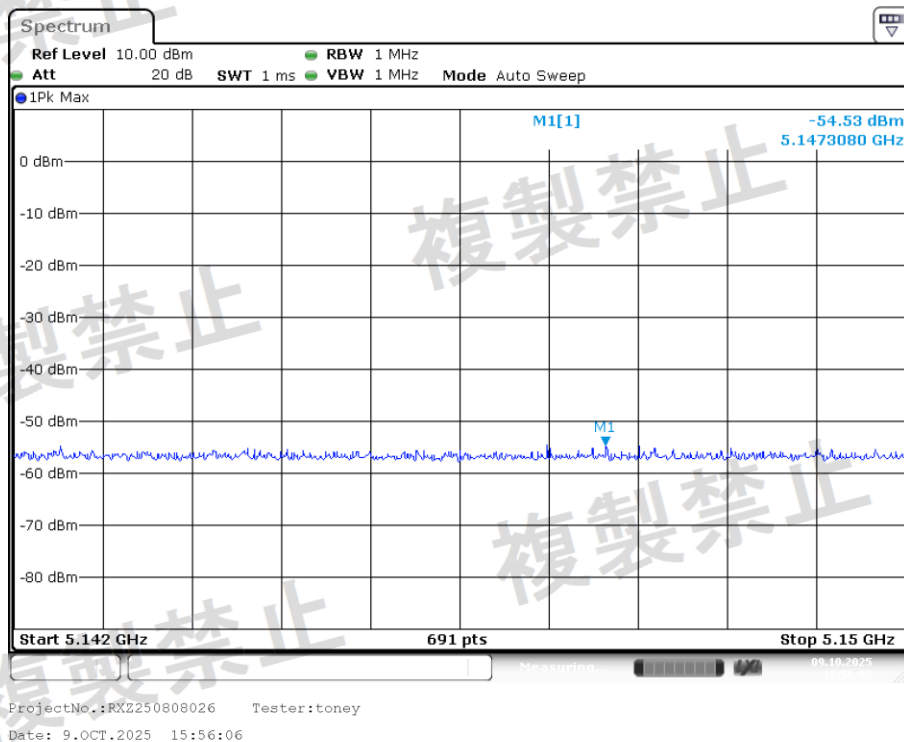
5200MHz



ProjectNo.:RXZ250808026 Tester:toney

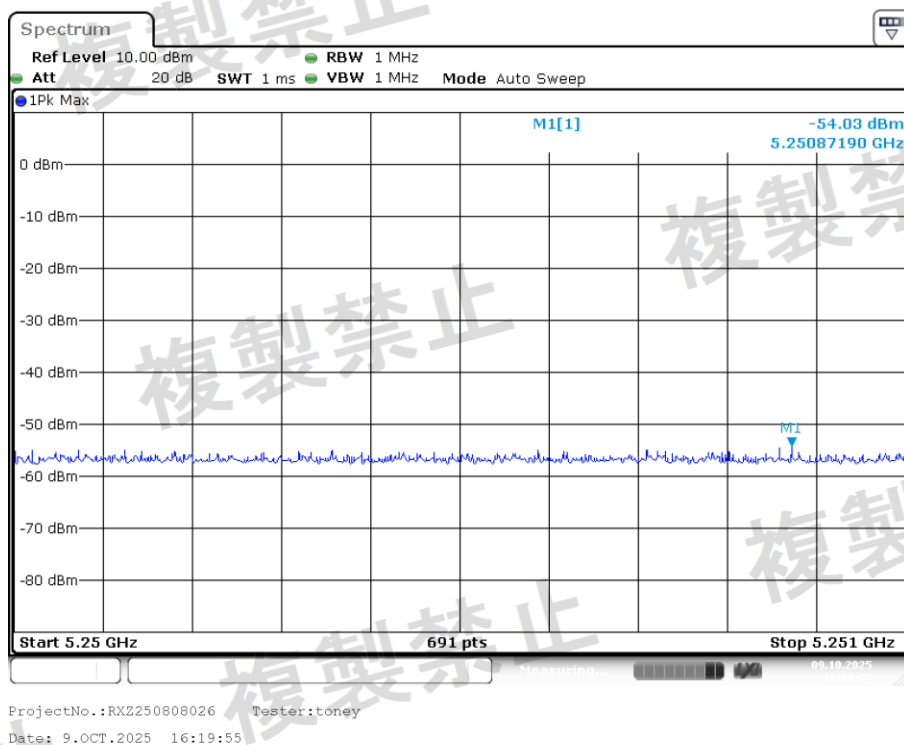
Date: 9.OCT.2025 16:10:11

5240MHz

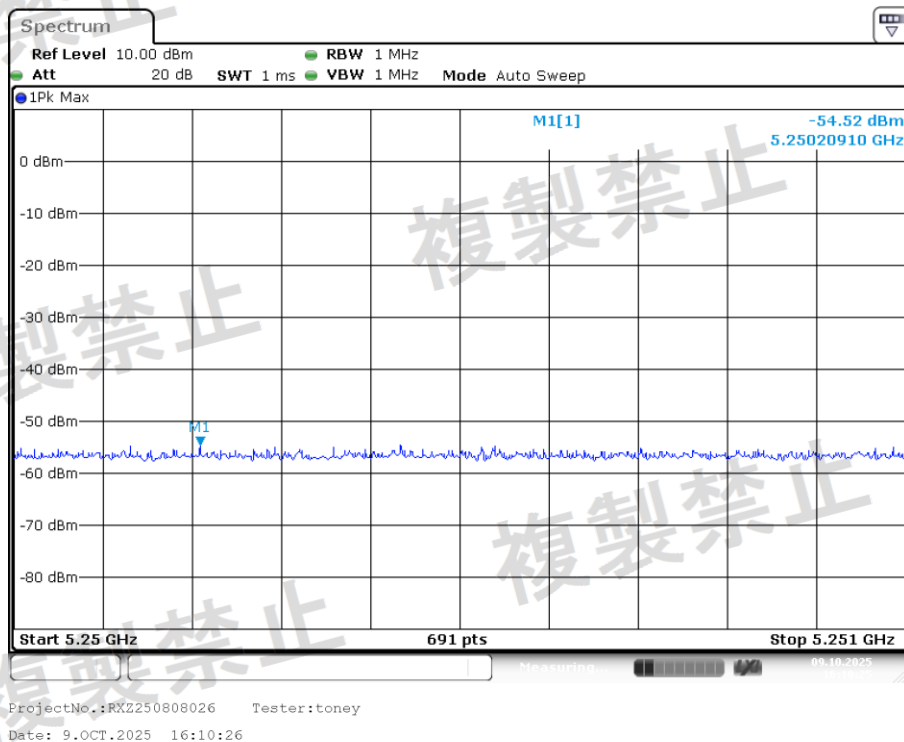


5250MHz-5251MHz

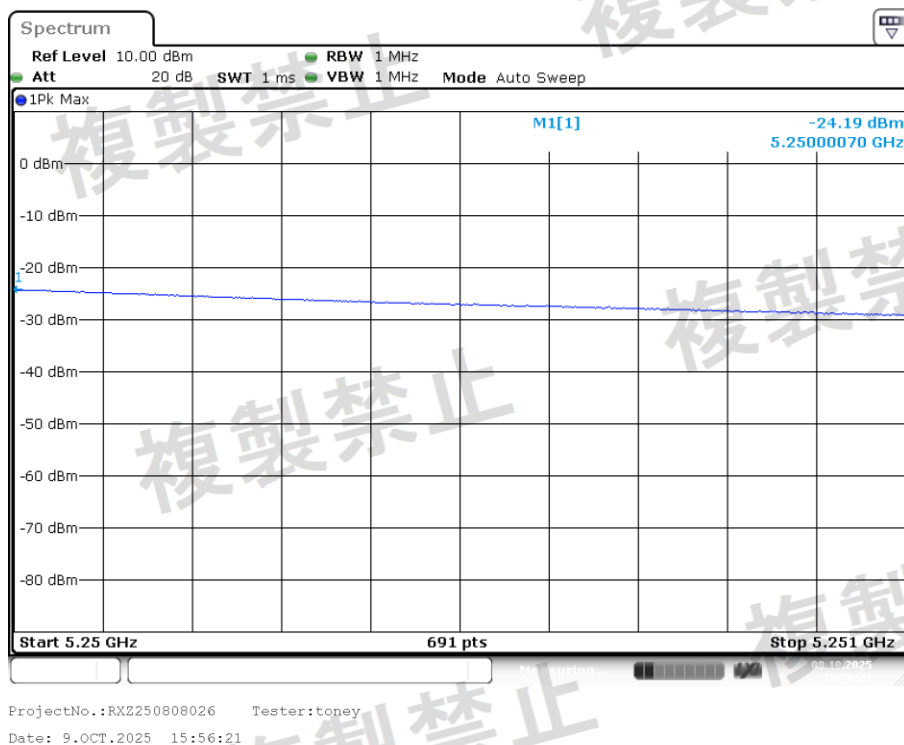
5180MHz



5200MHz

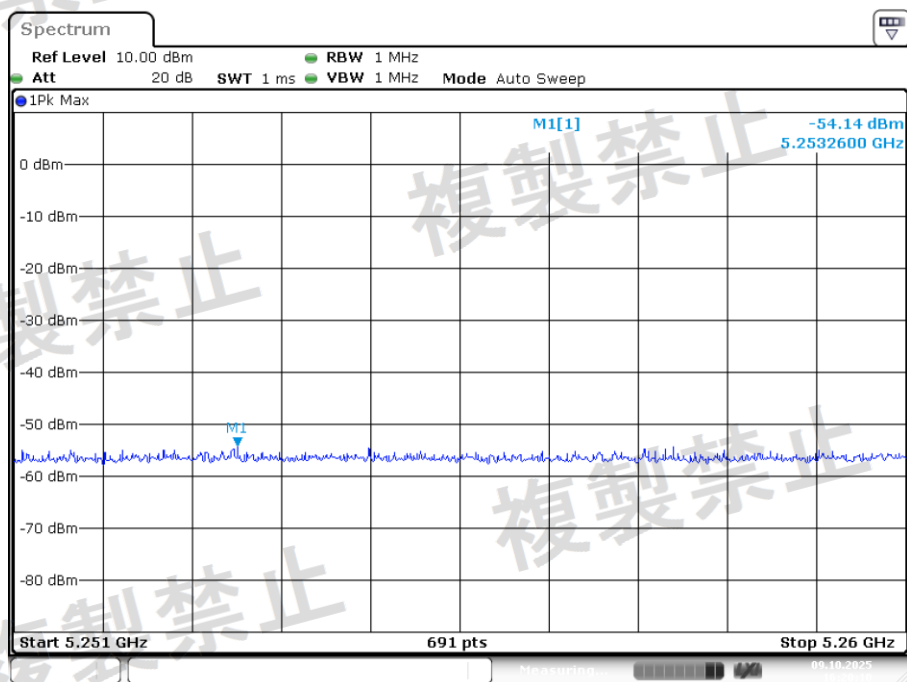


5240MHz

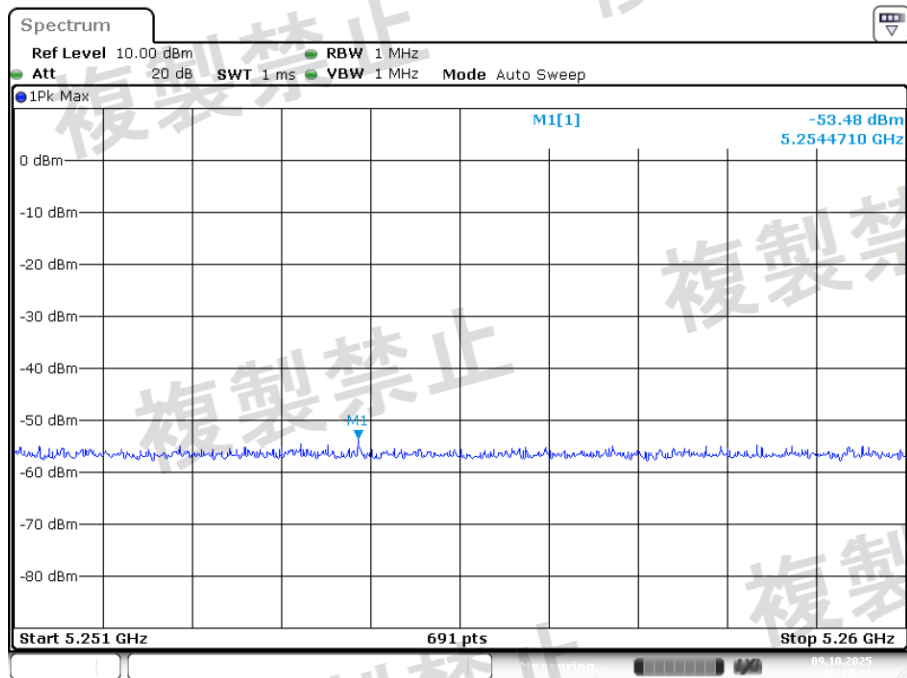


5251MHz-5260MHz

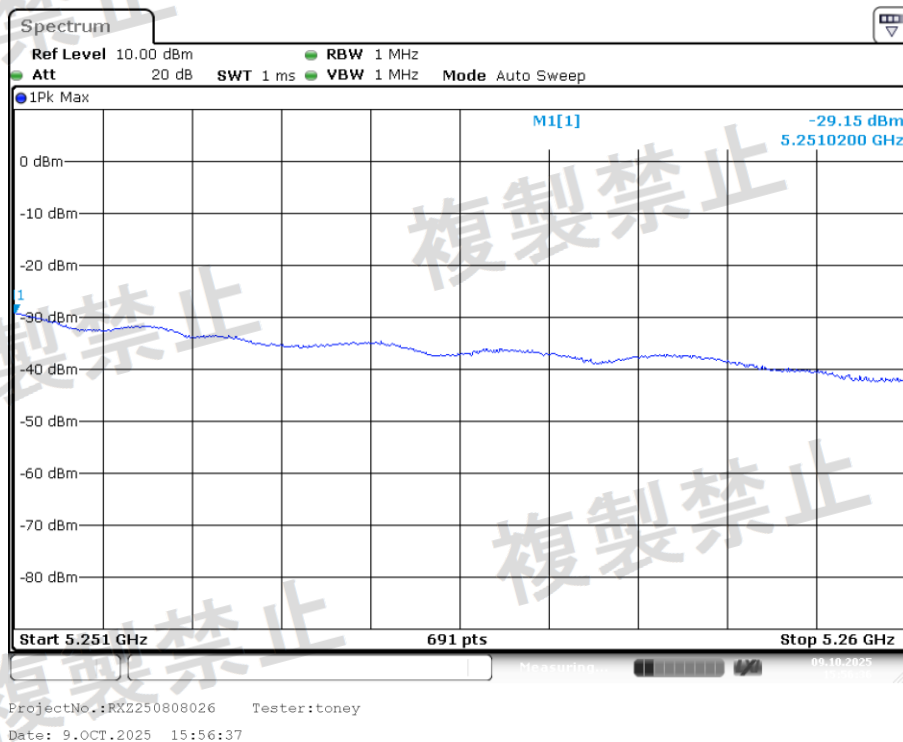
5180MHz



5200MHz

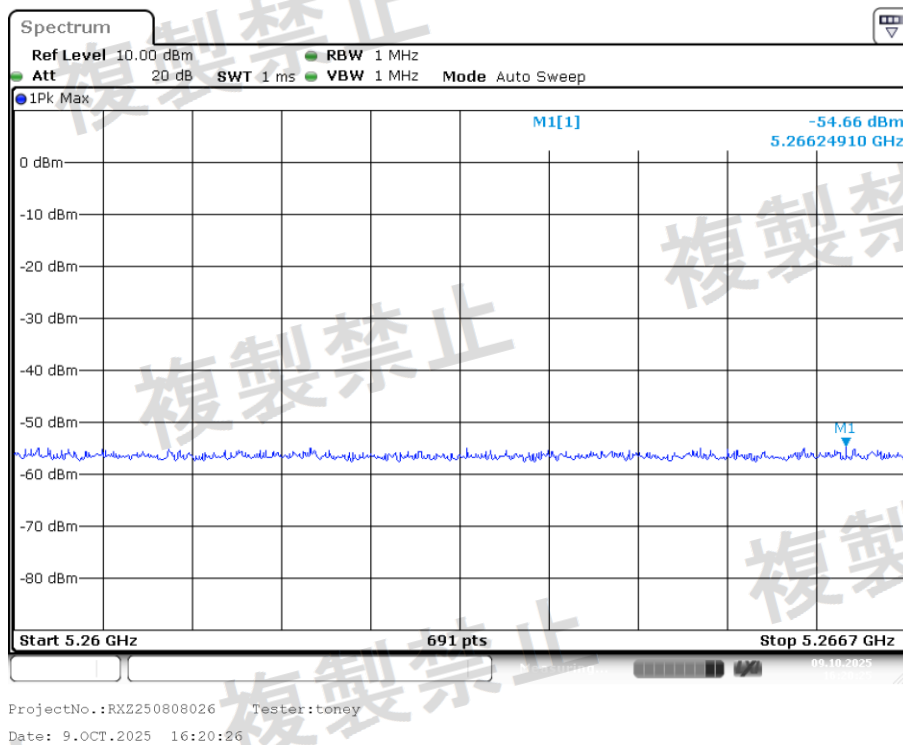


5240MHz

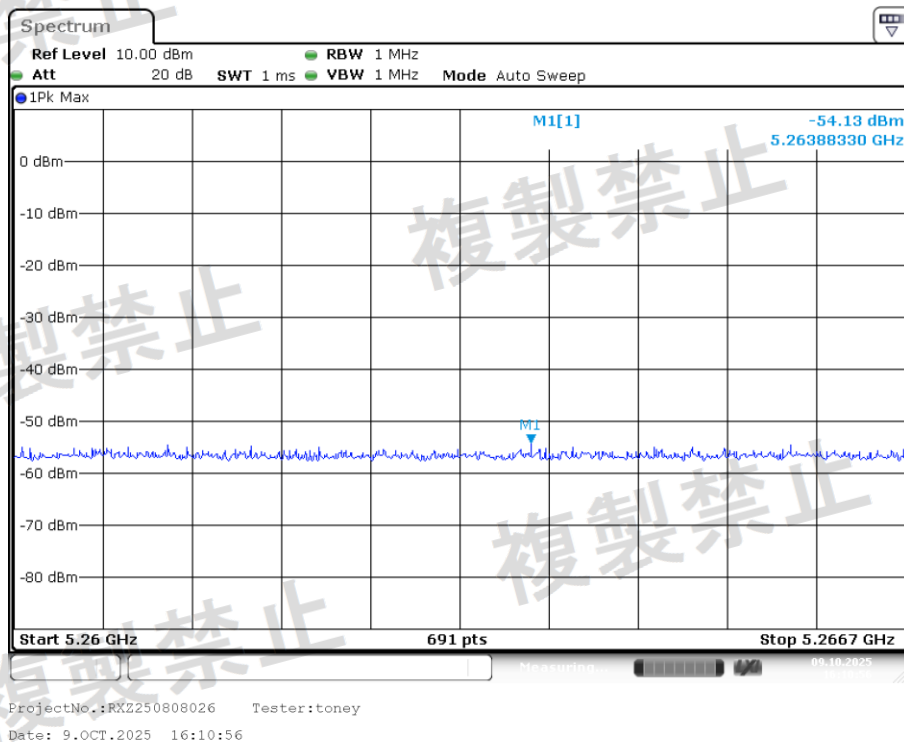


5260MHz-5266.7MHz

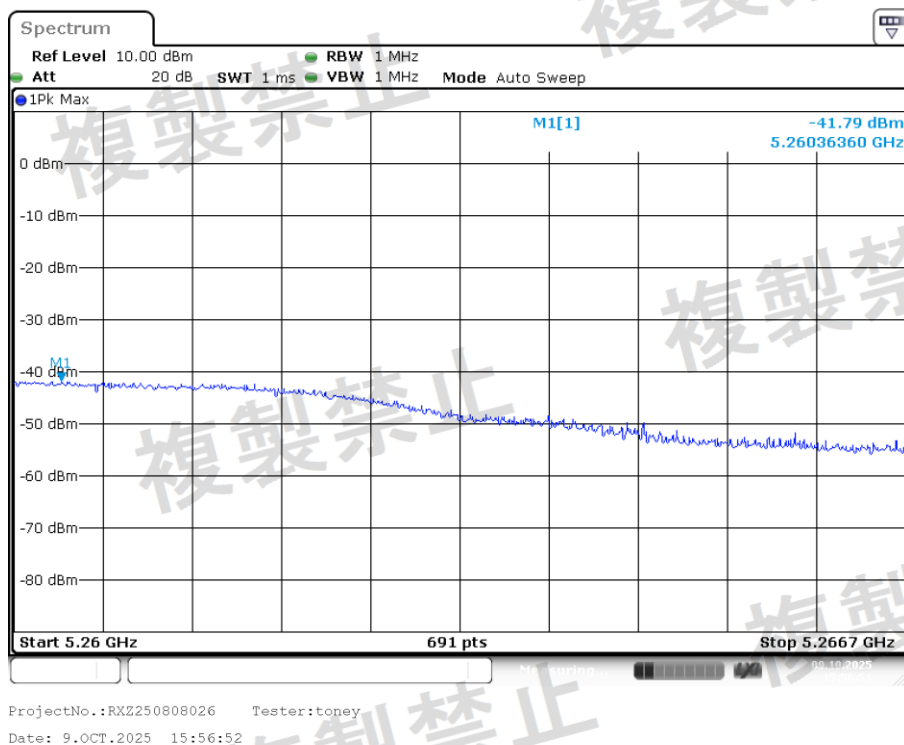
5180MHz



5200MHz

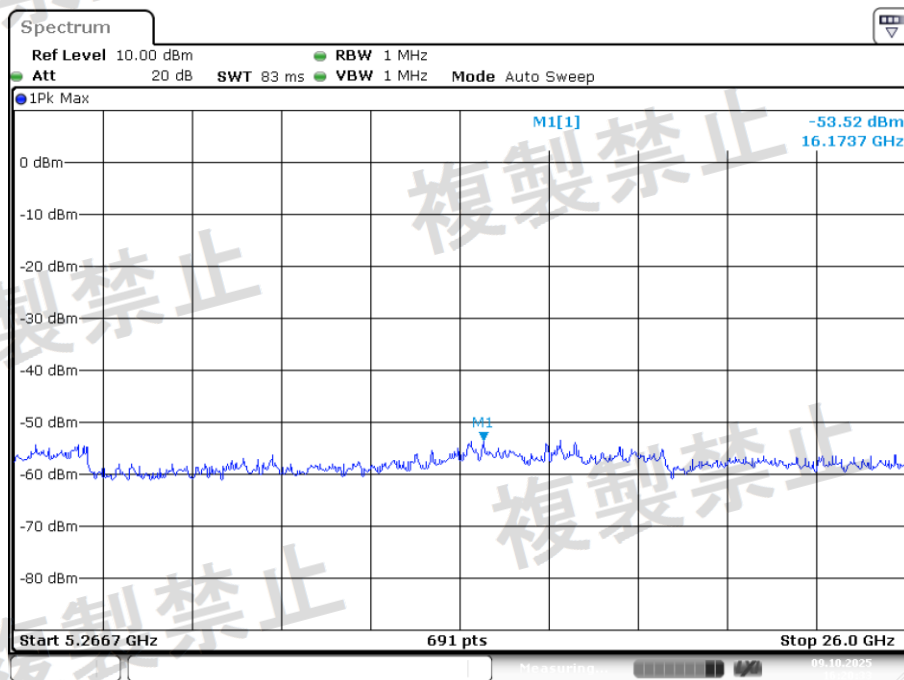


5240MHz

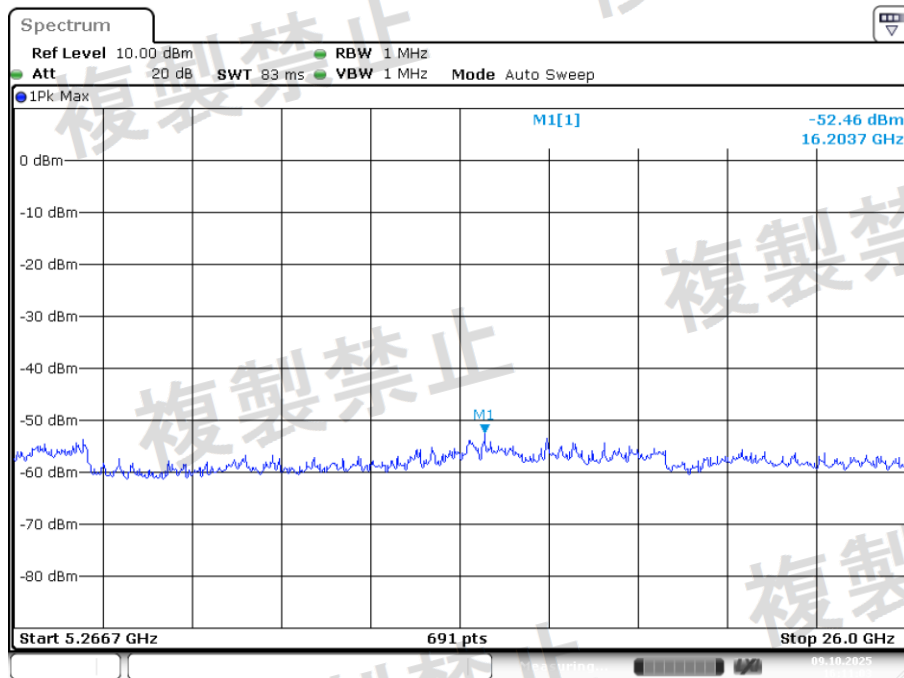


5266.7MHz-26GHz

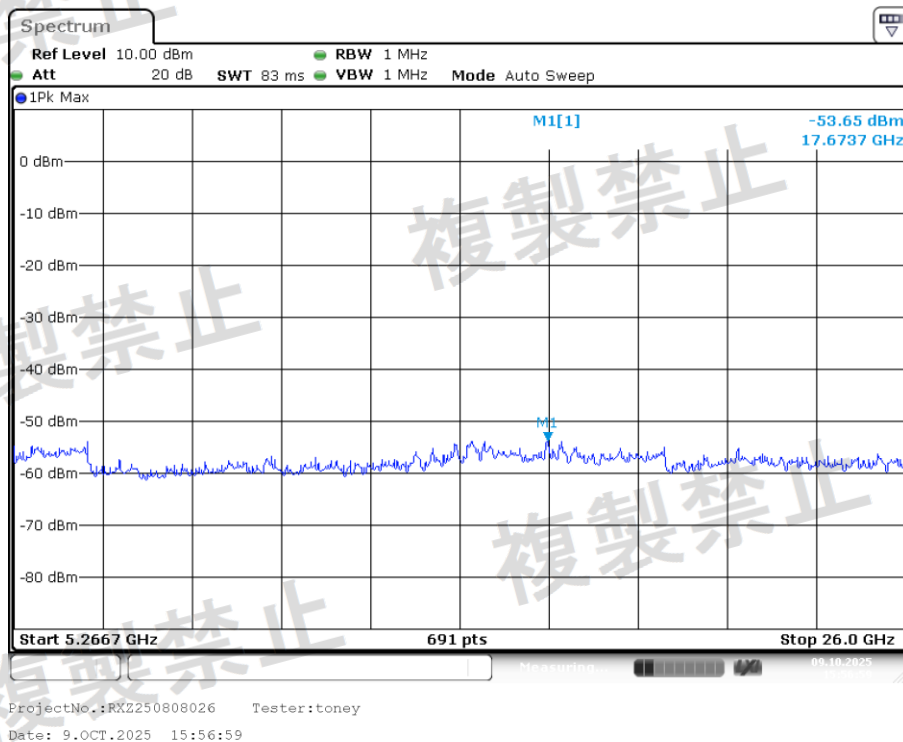
5180MHz



5200MHz



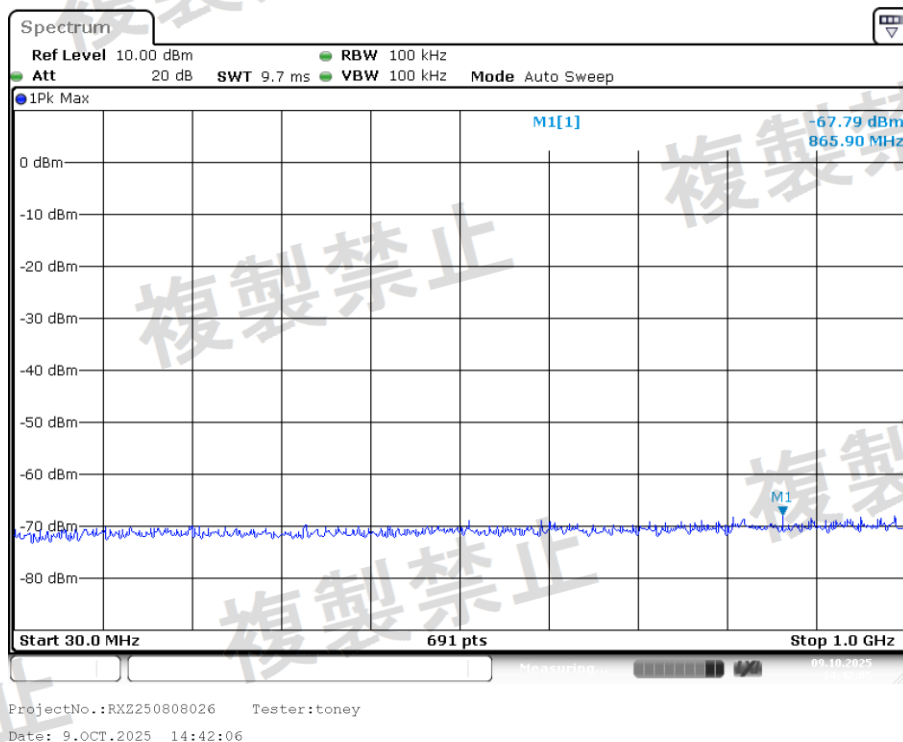
5240MHz



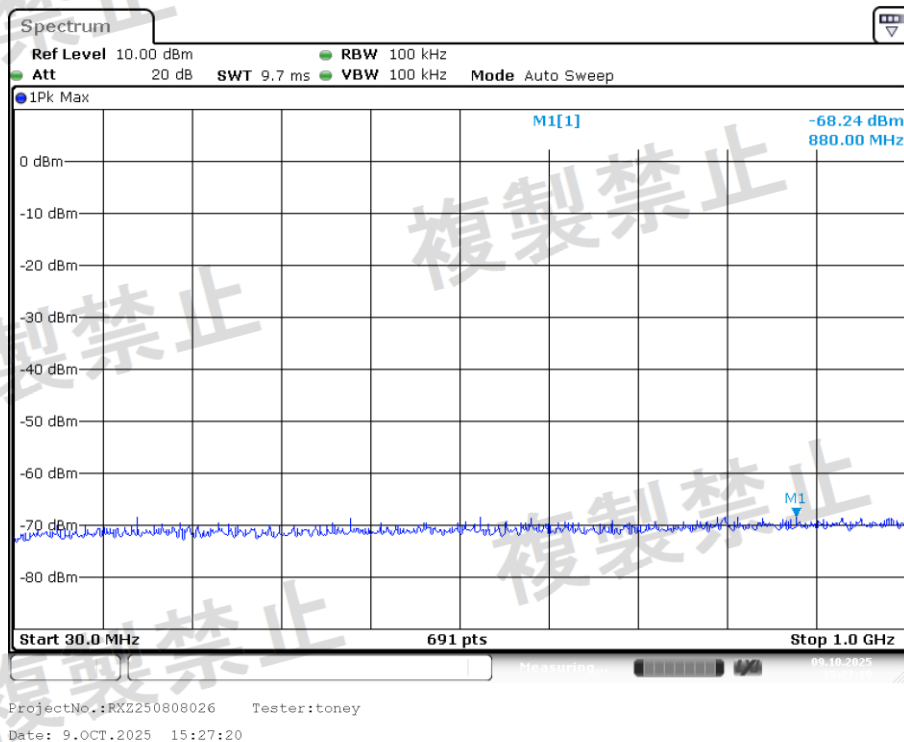
802.11ac VHT20 Mode:

30MHz-1000MHz:

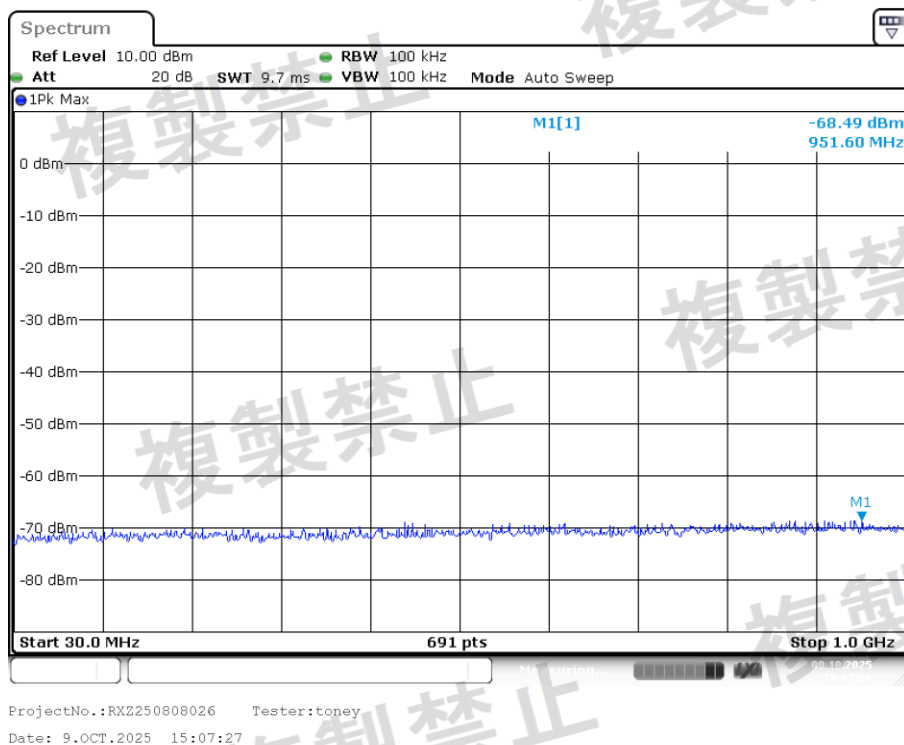
5180 MHz



5200 MHz

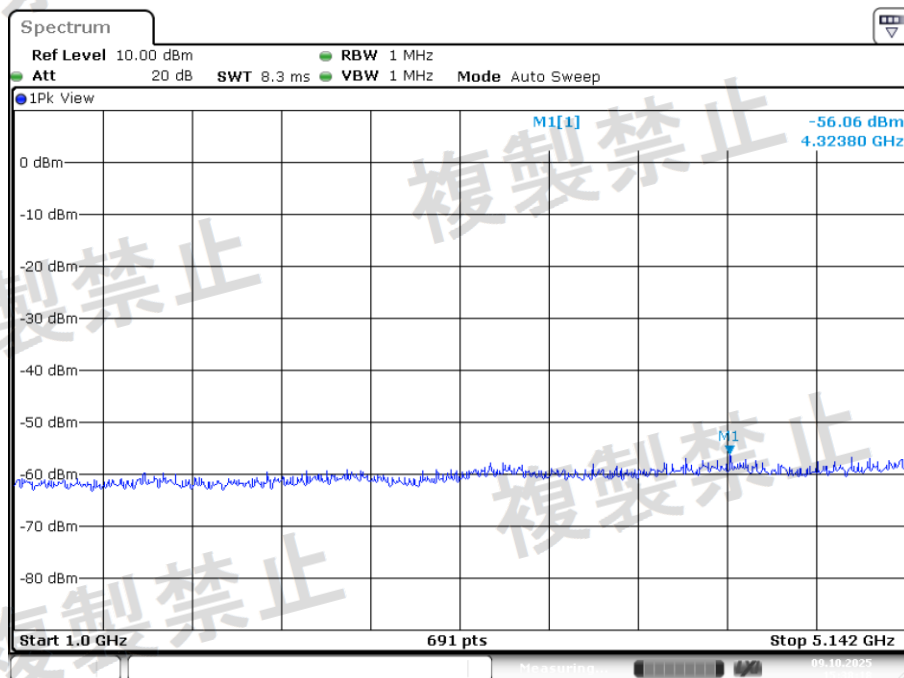


5240 MHz



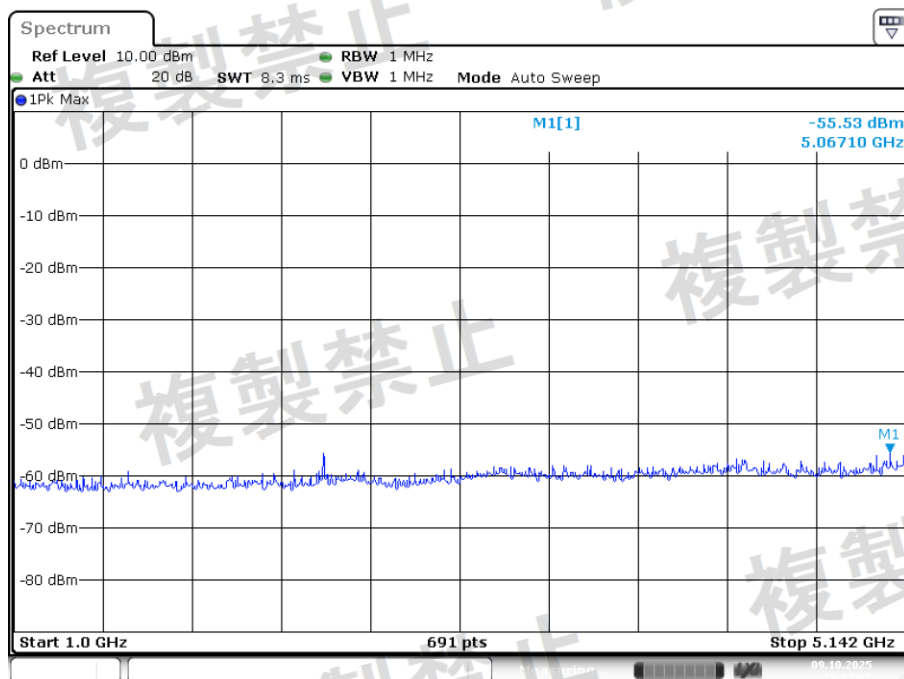
1000MHz-5142MHz

5180MHz



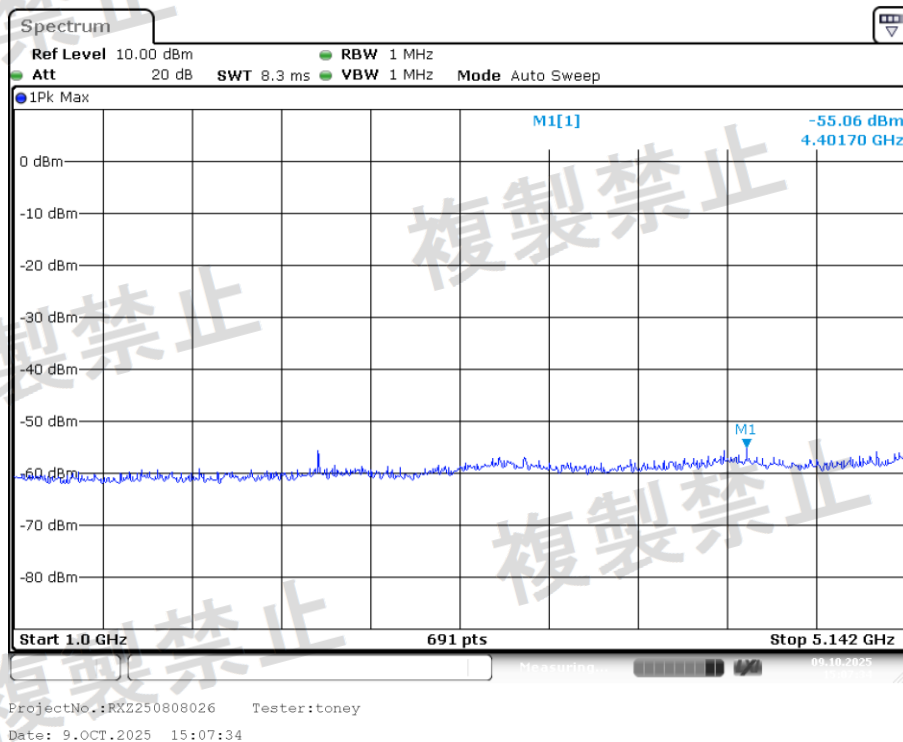
ProjectNo.:RXZ250808026 Tester:toney
Date: 9.OCT.2025 15:38:18

5200MHz



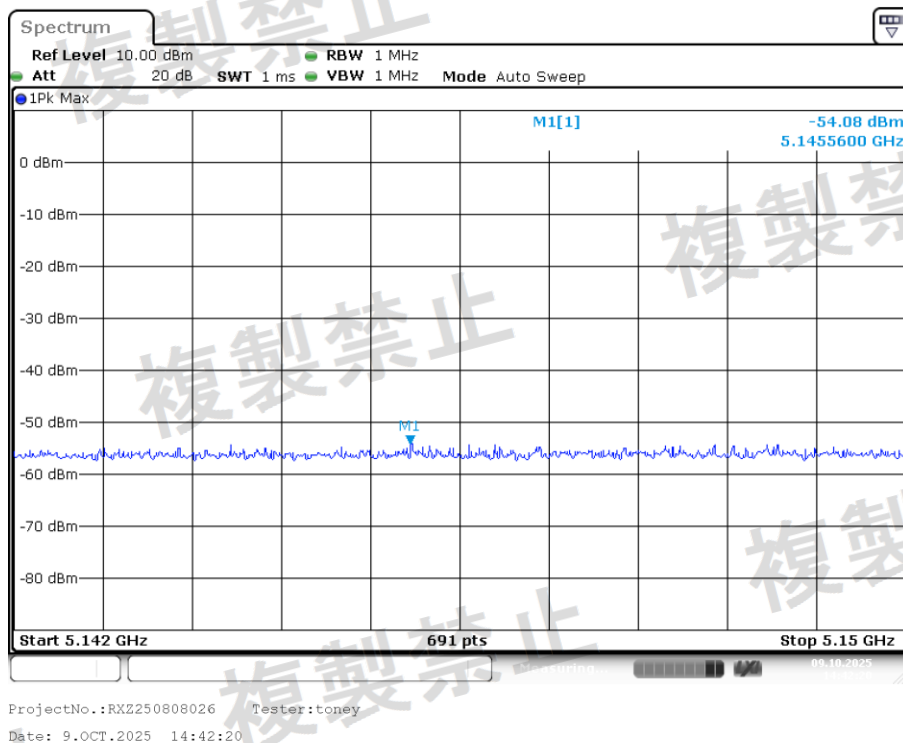
ProjectNo.:RXZ250808026 Tester:toney
Date: 9.OCT.2025 15:27:27

5240MHz

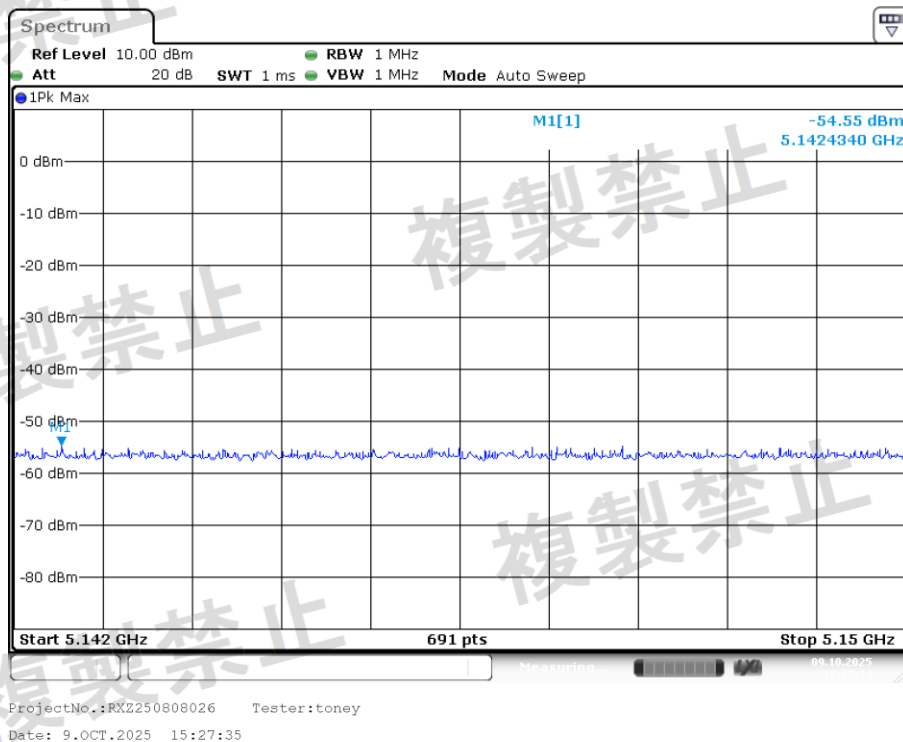


5142MHz-5150MHz

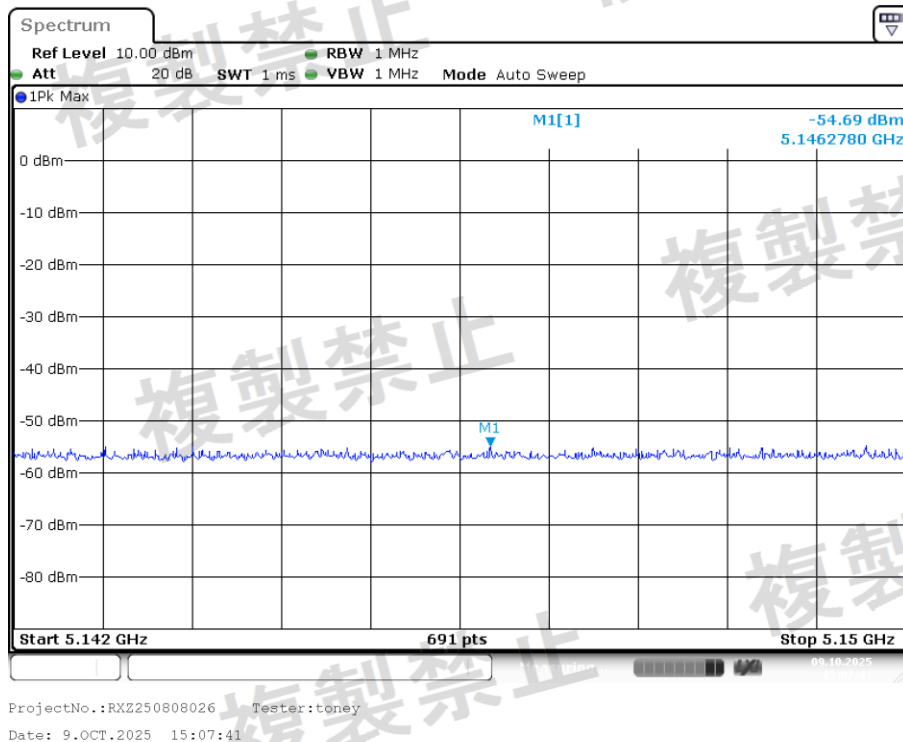
5180MHz



5200MHz

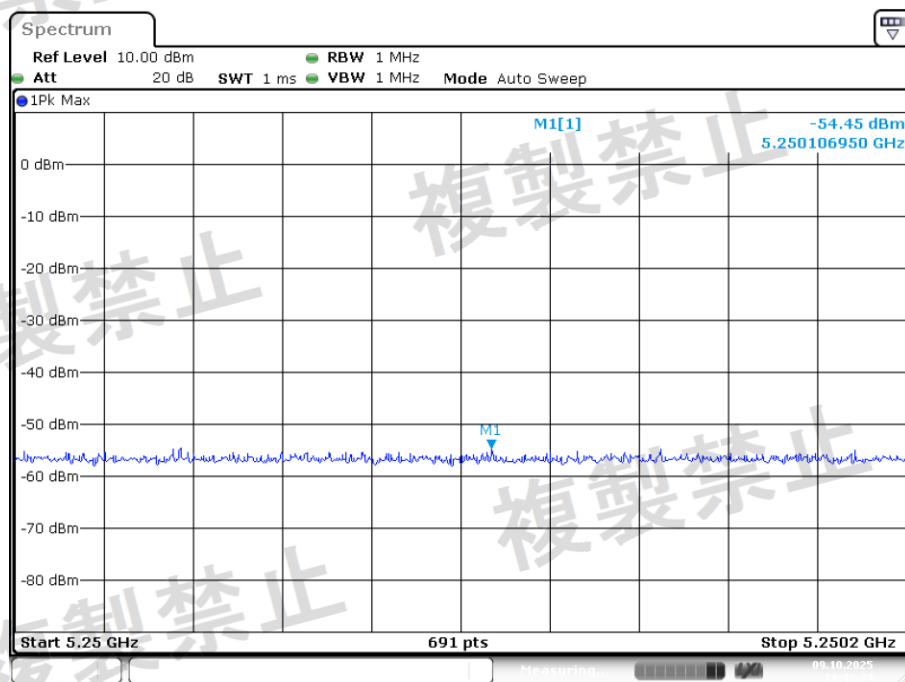


5240MHz



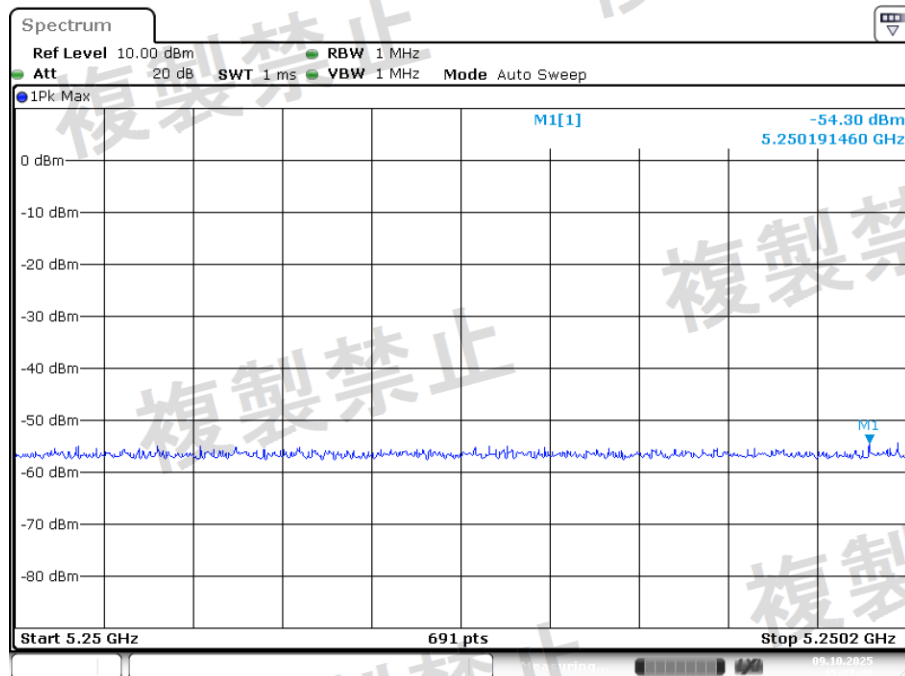
5250MHz-5250.2MHz

5180MHz



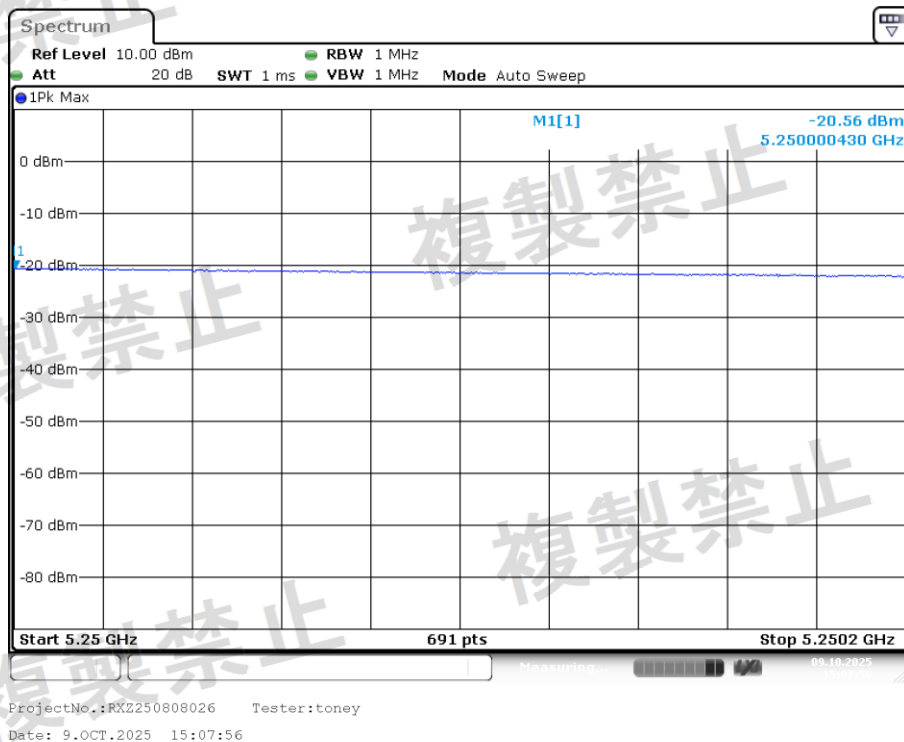
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Date: 9.OCT.2025 14:42:35

5200MHz



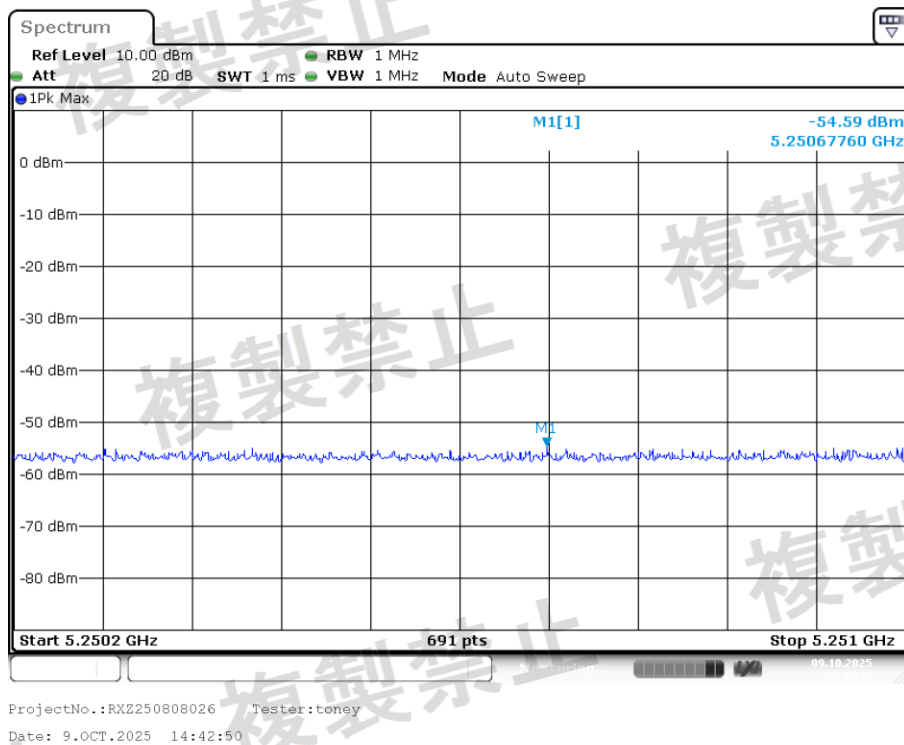
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Date: 9.OCT.2025 15:27:50

5240MHz

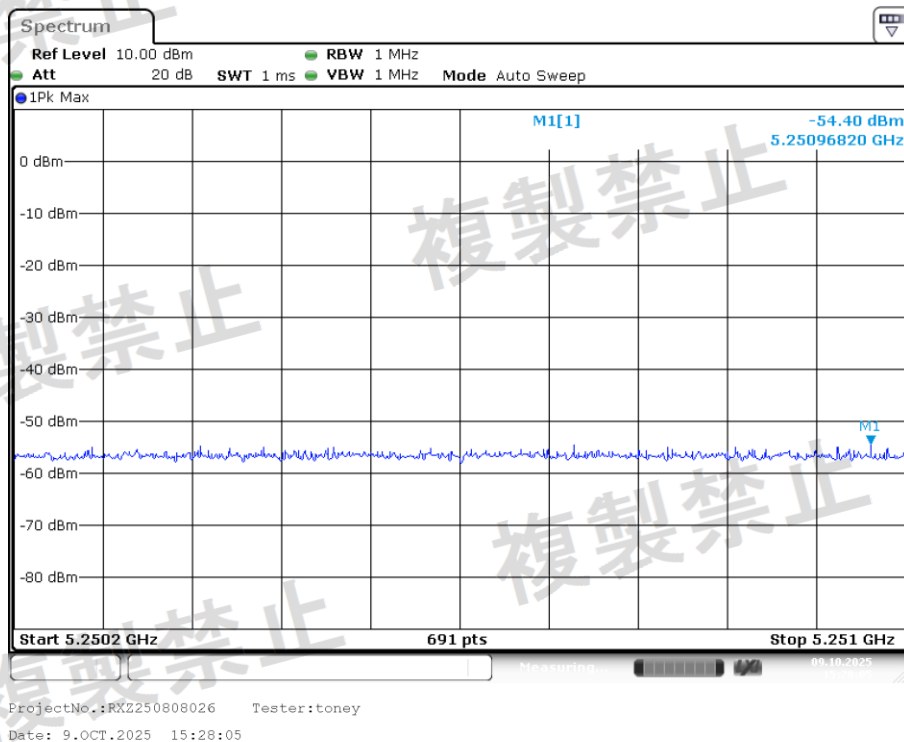


5250.2MHz-5251MHz

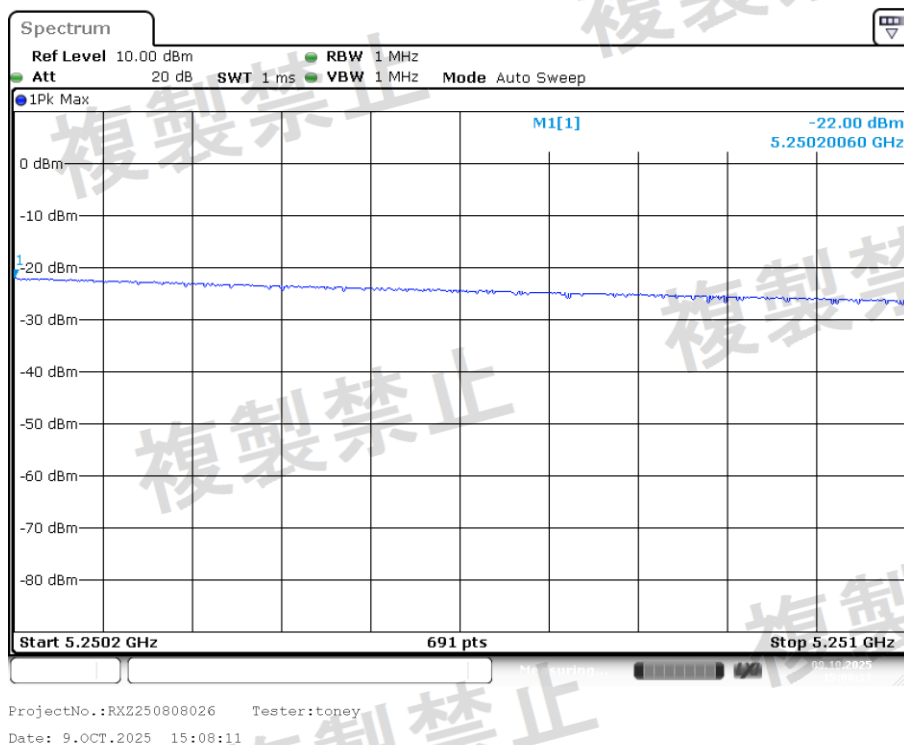
5180MHz



5200MHz

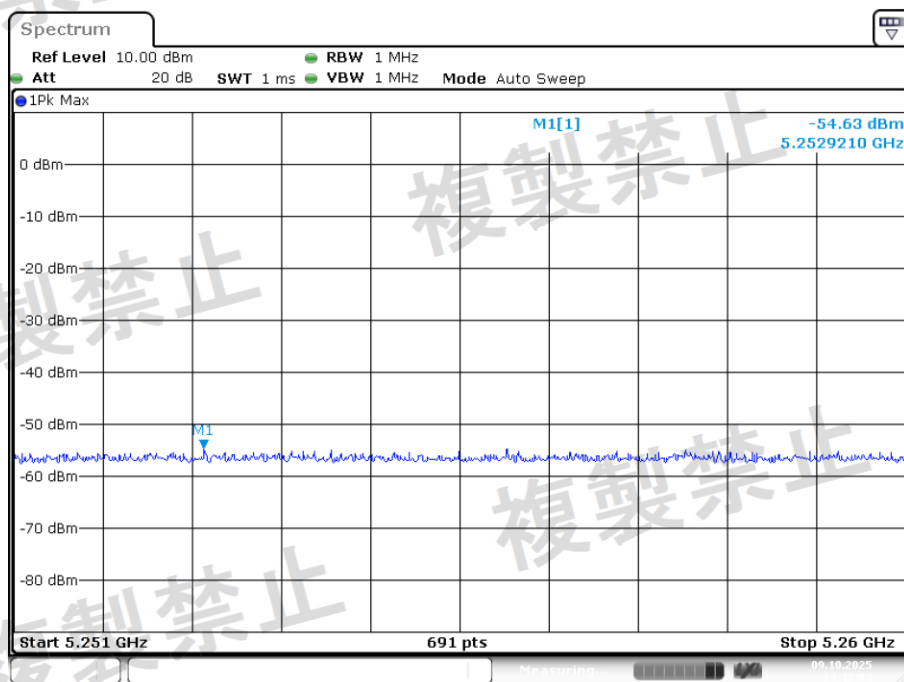


5240MHz

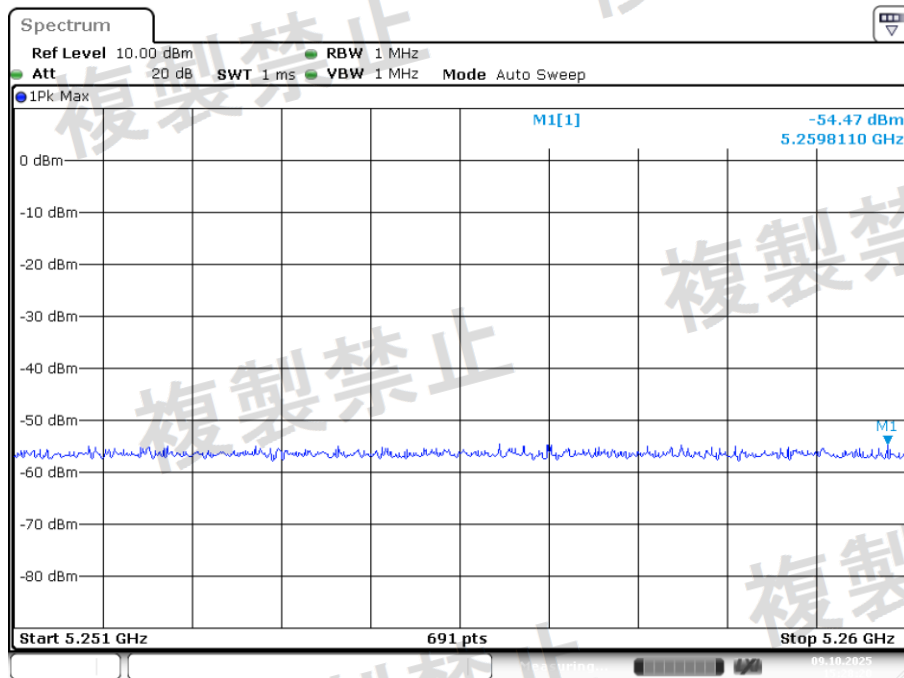


5251MHz-5260MHz

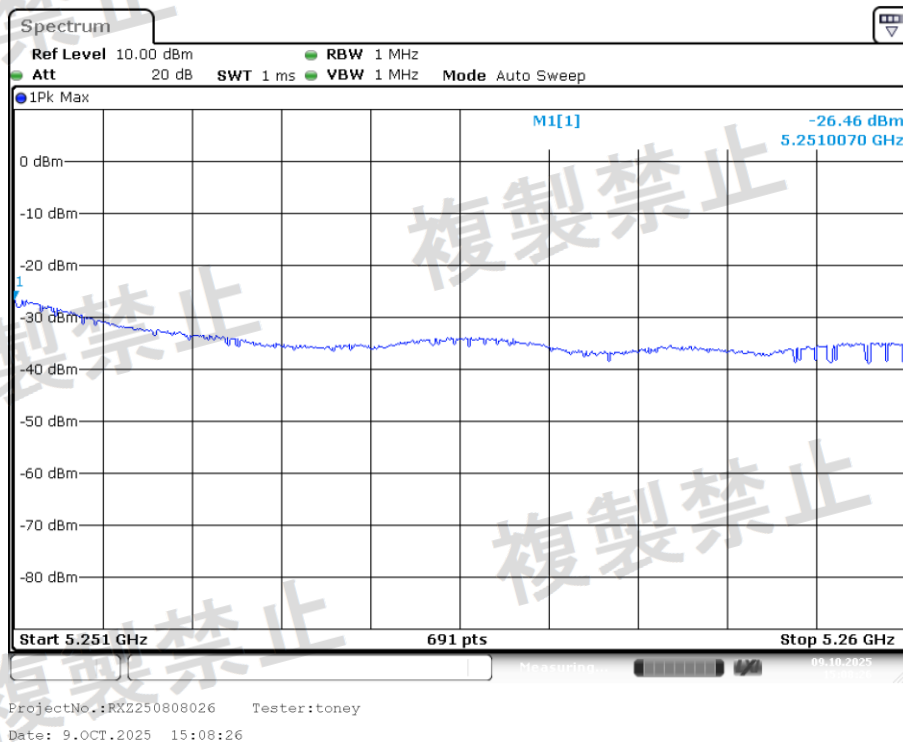
5180MHz



5200MHz

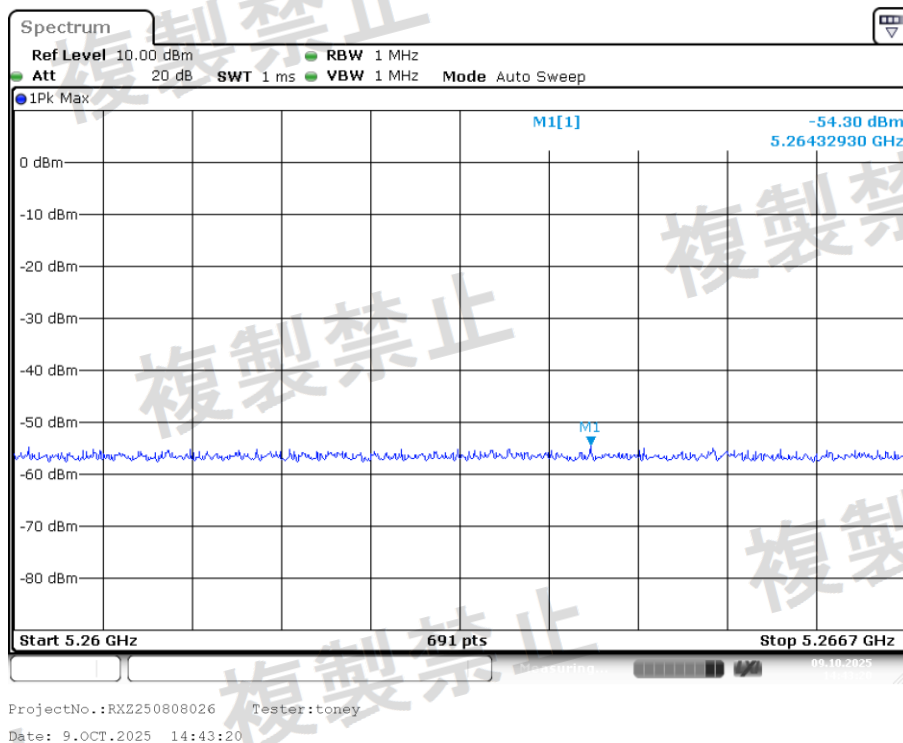


5240MHz

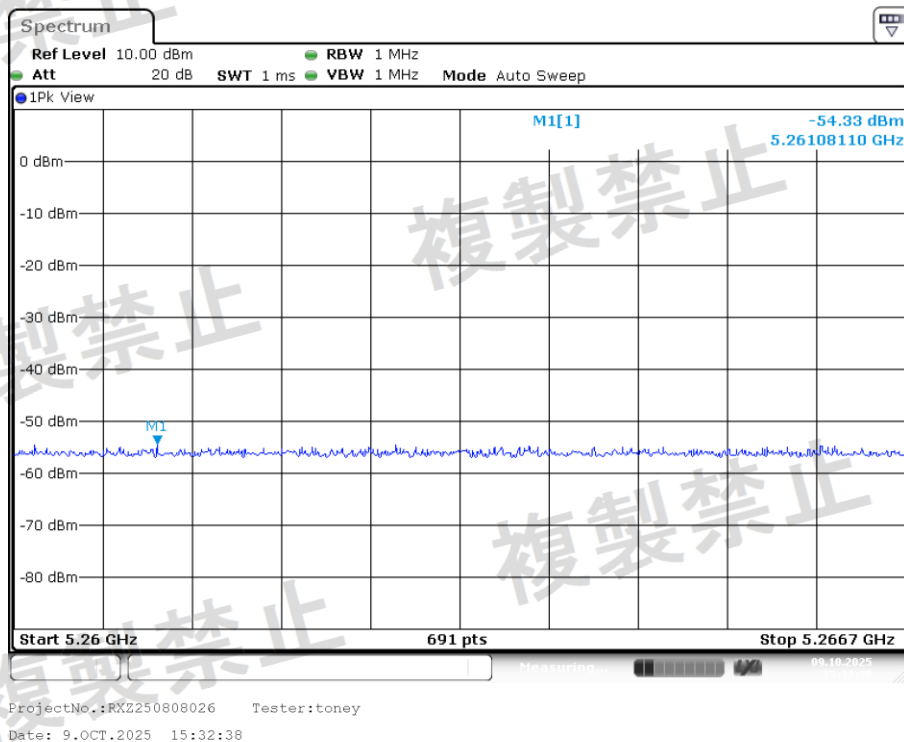


5260MHz-5266.7MHz

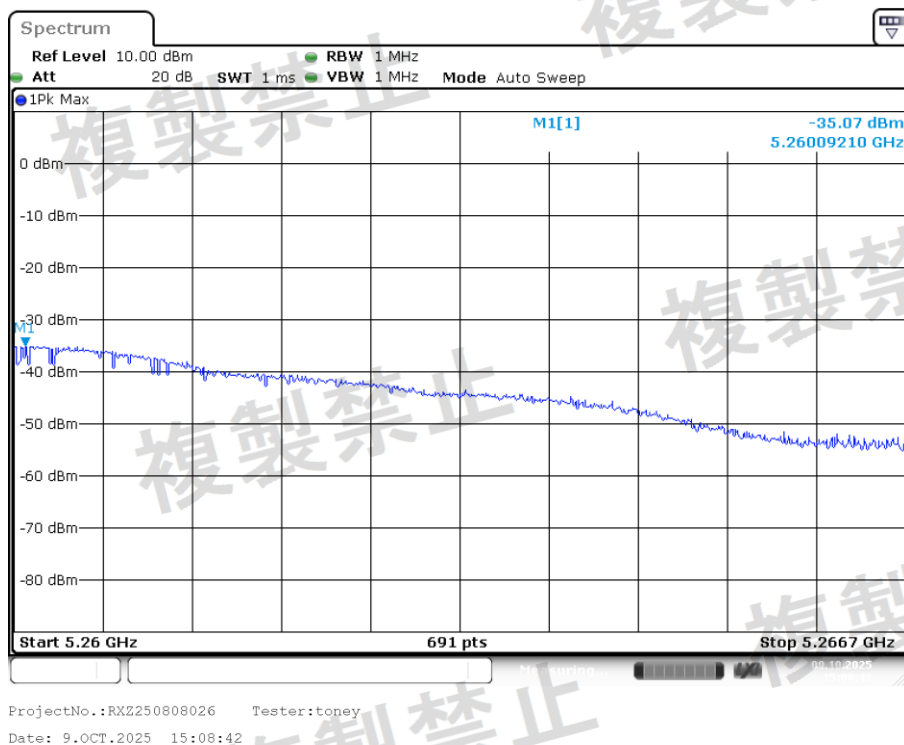
5180MHz



5200MHz

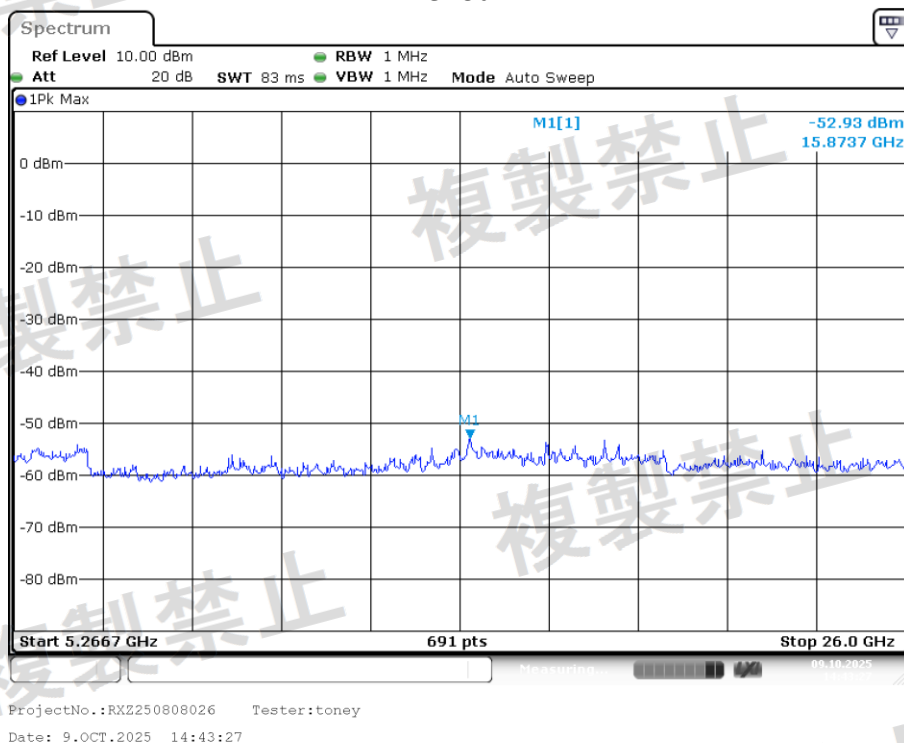


5240MHz

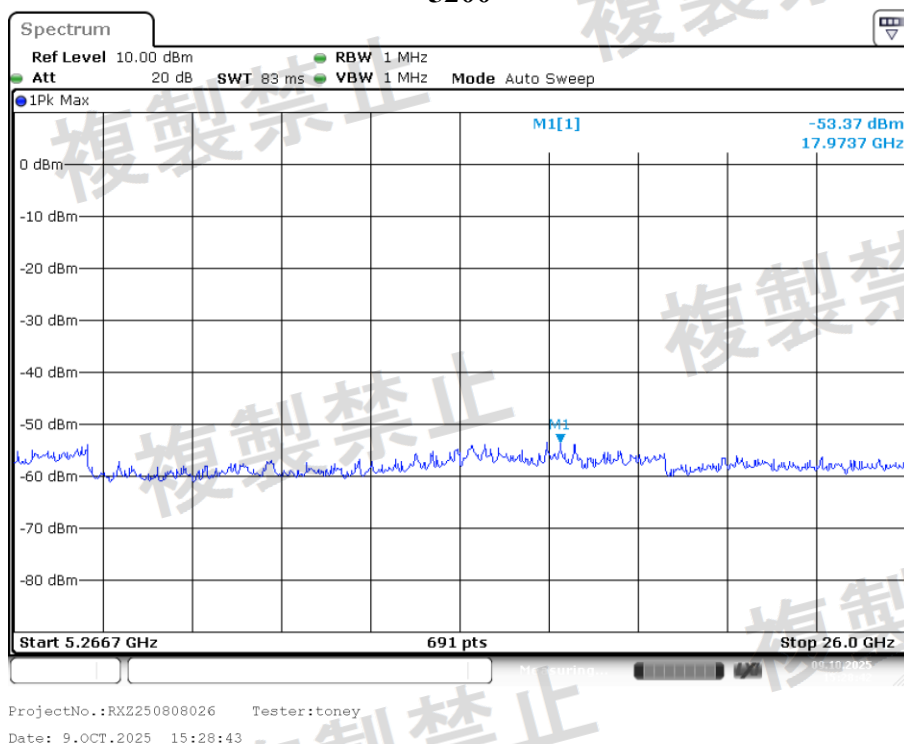


5266.7MHz-26GHz:

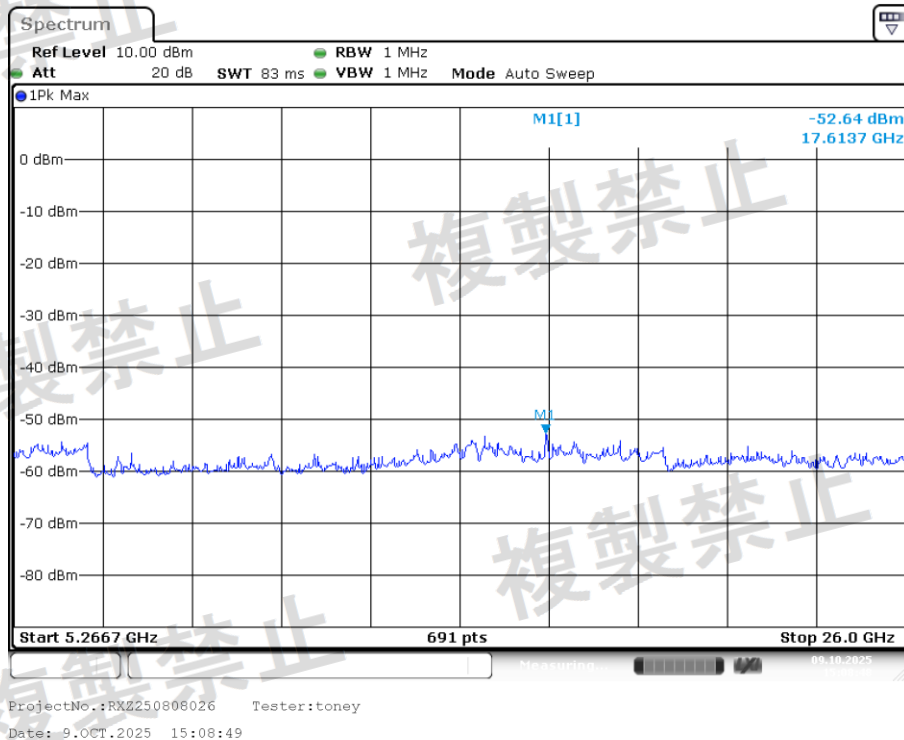
5180



5200



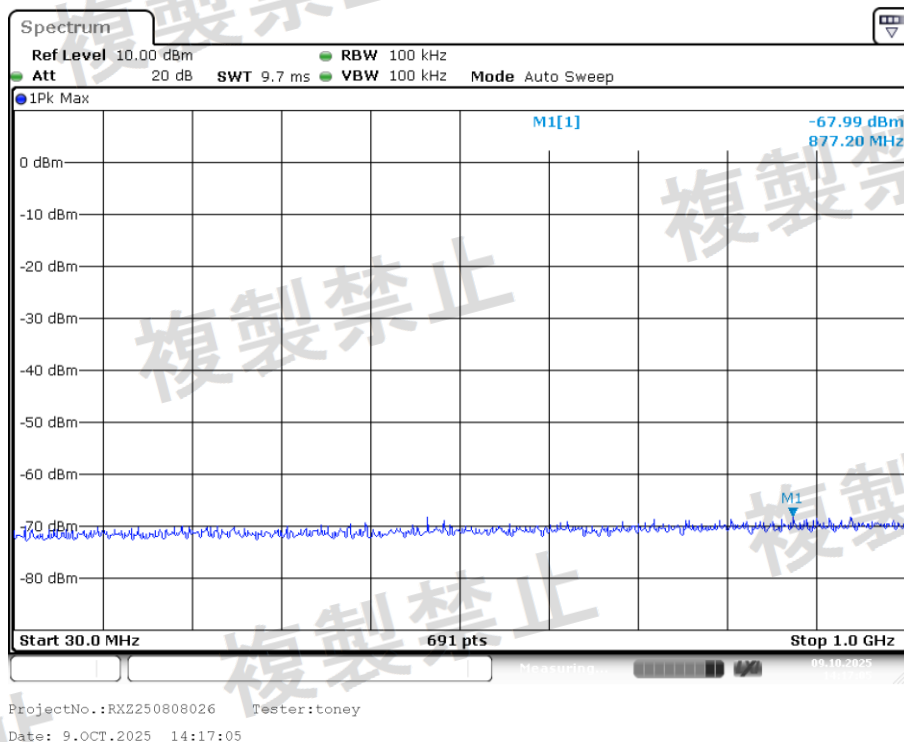
5240



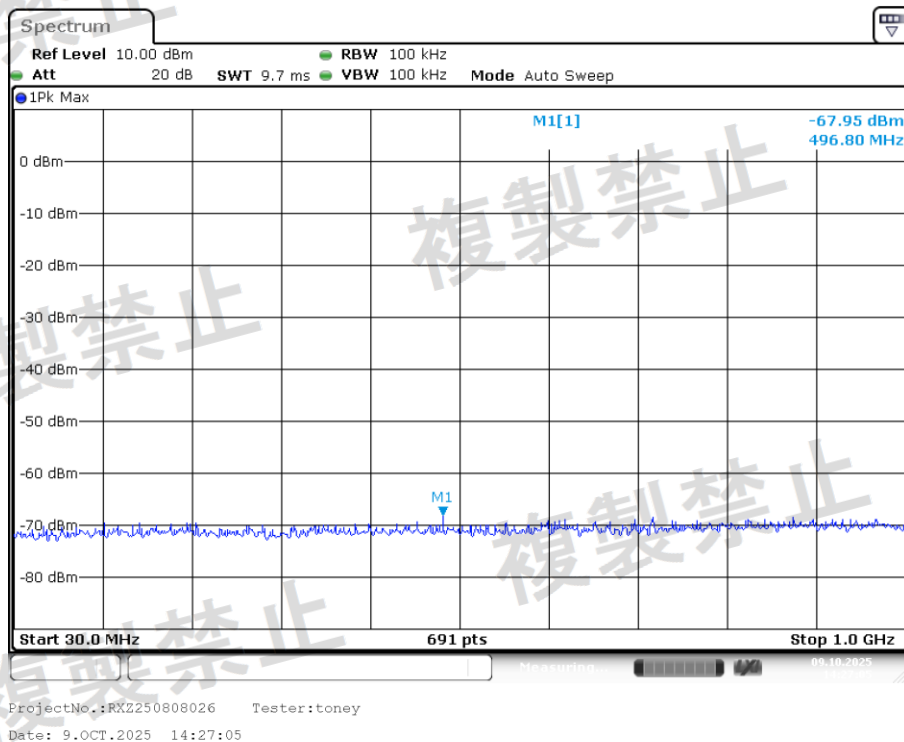
802.11ac VHT40 Mode:

30MHz-1000MHz:

5190 MHz

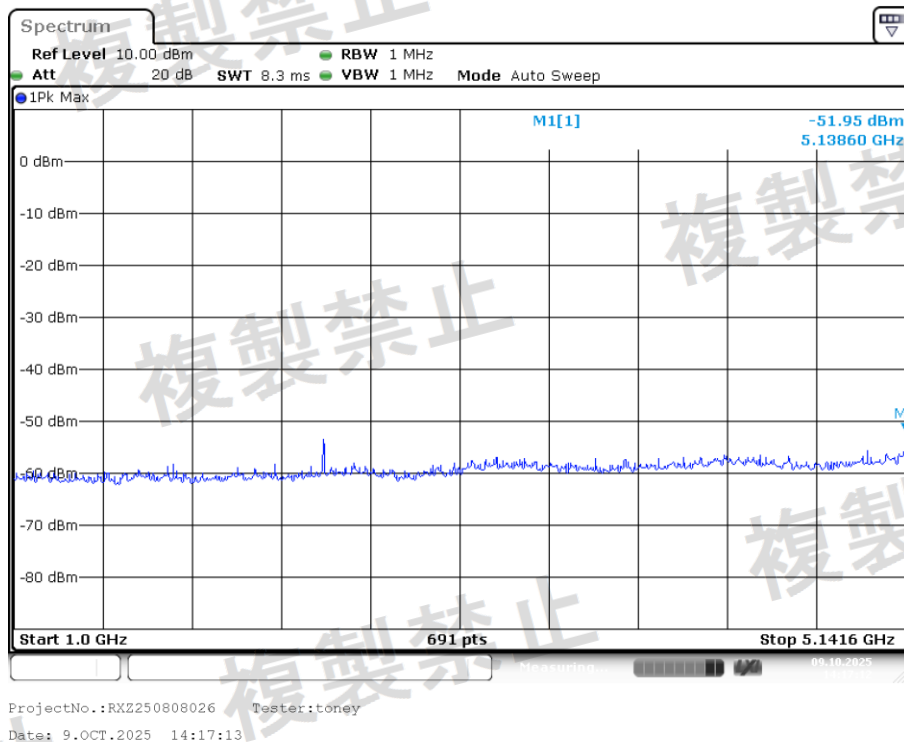


5230 MHz

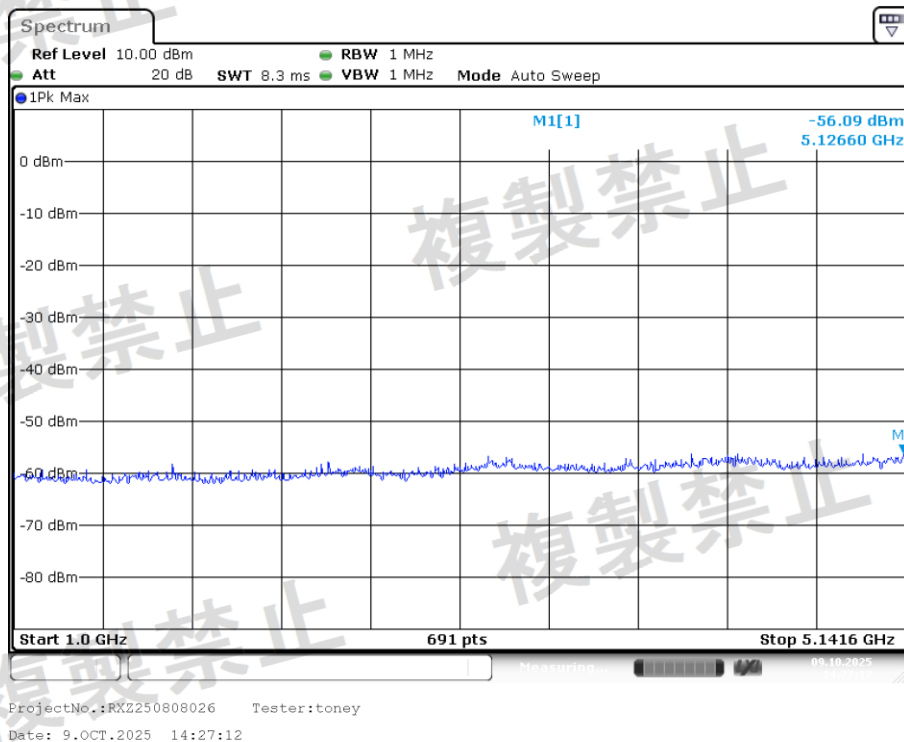


1000MHz-5141.6MHz

5190MHz

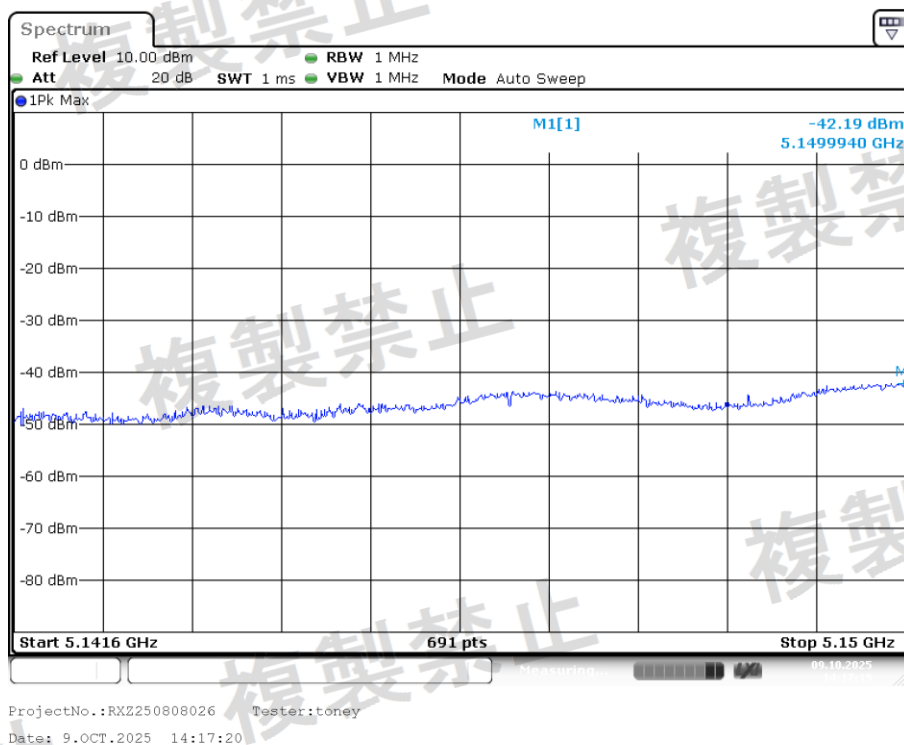


5230MHz

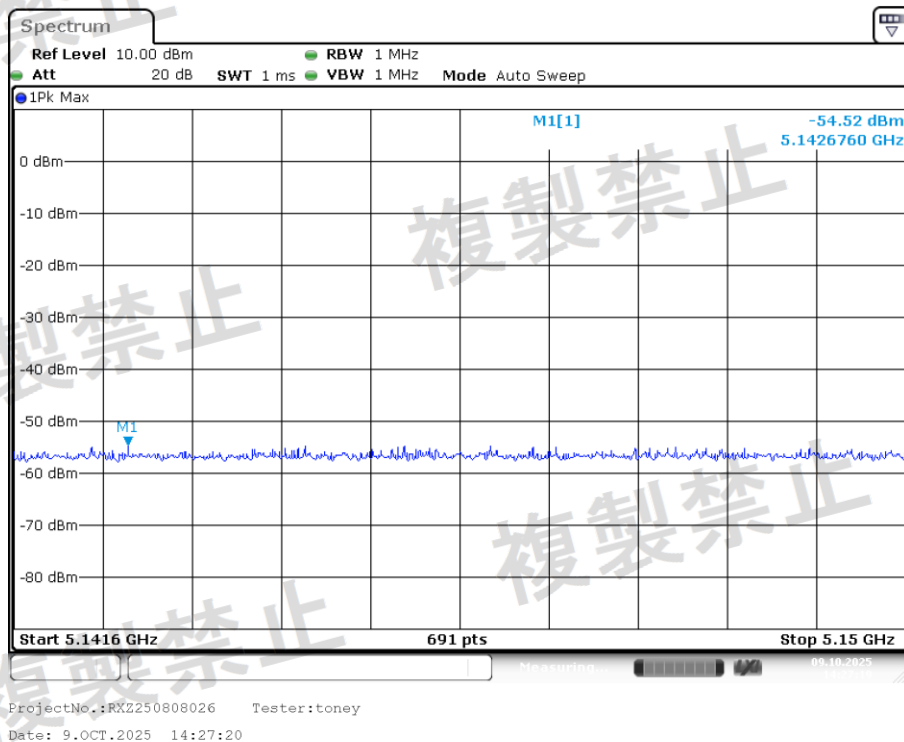


5141.6MHz-5150MHz

5190MHz

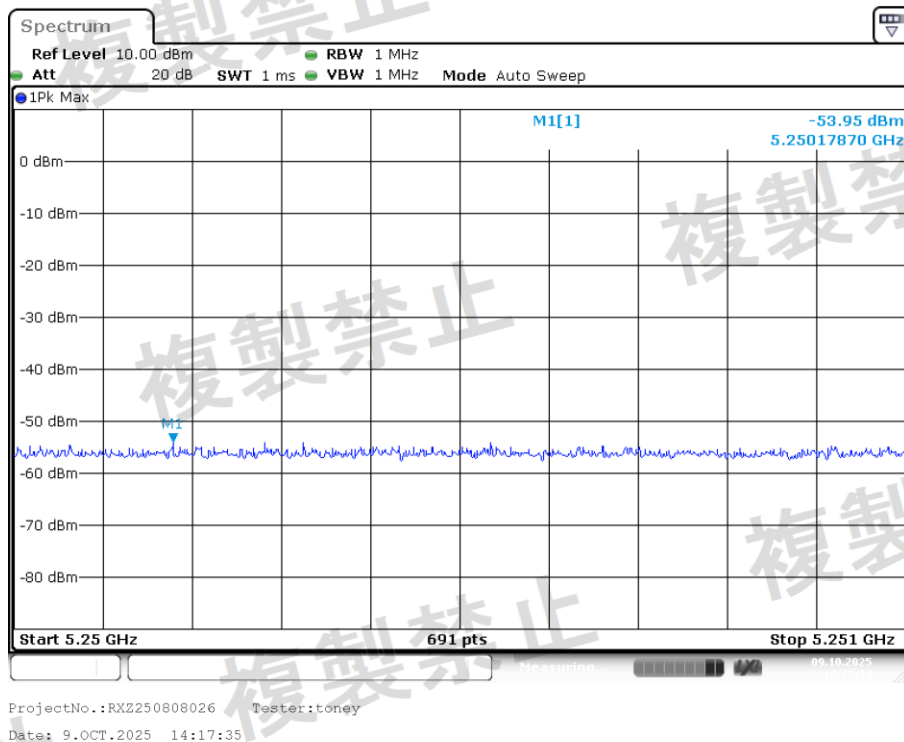


5230MHz

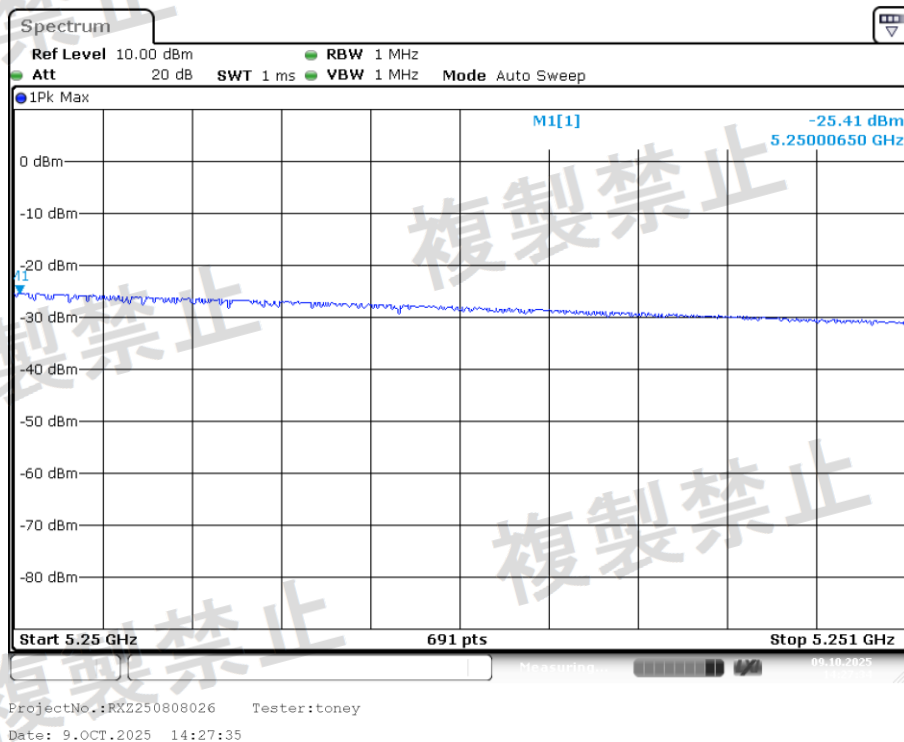


5250MHz-5251MHz

5190MHz

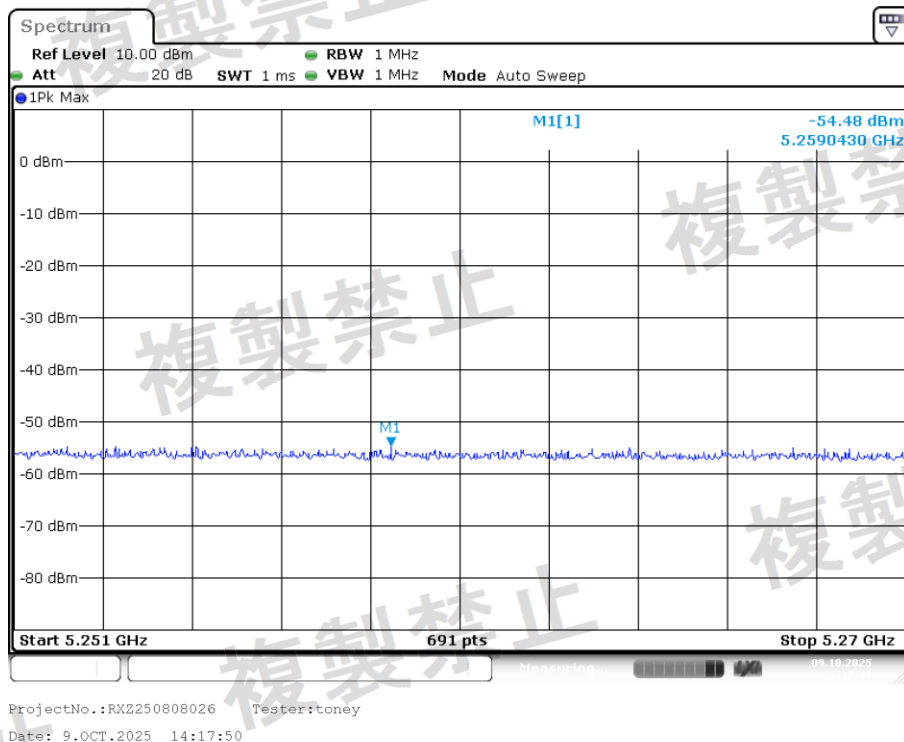


5230MHz

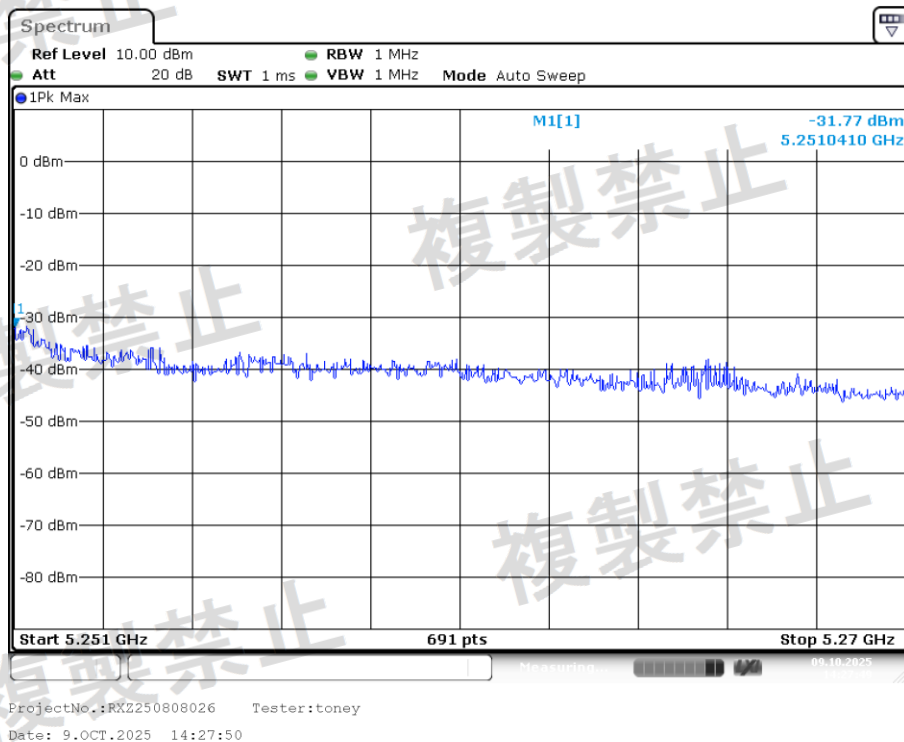


5251MHz-5270MHz

5190MHz

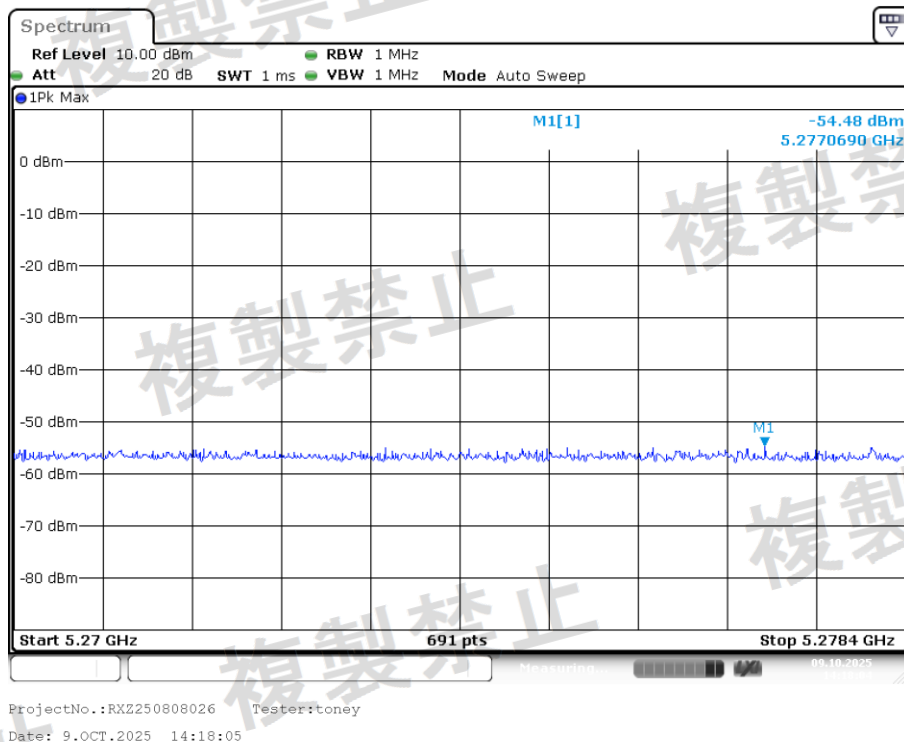


5230MHz

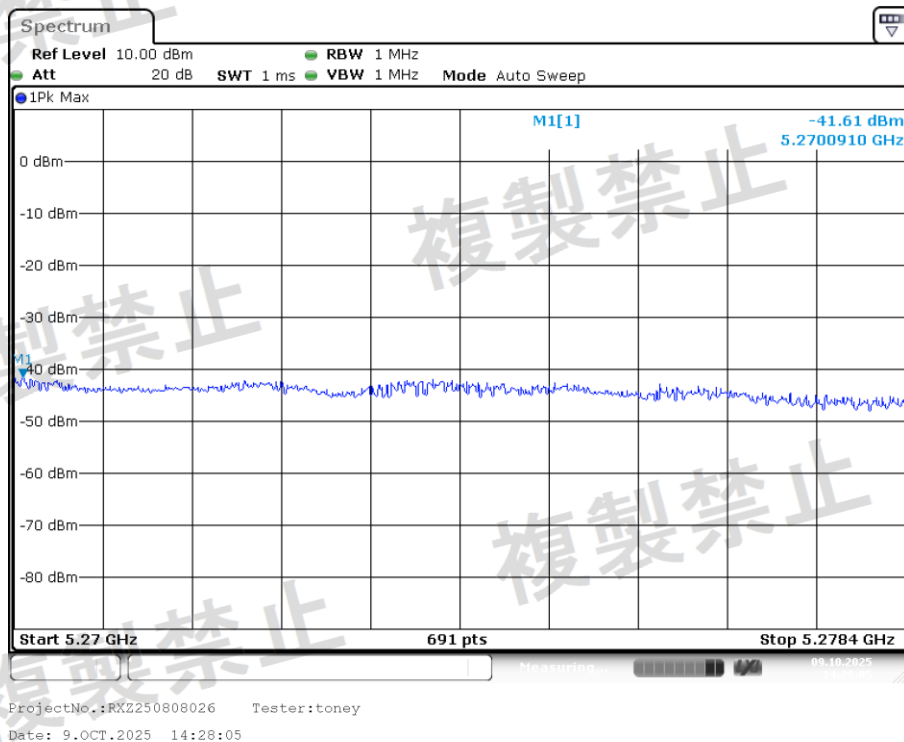


5270MHz-5278.4MHz

5190MHz

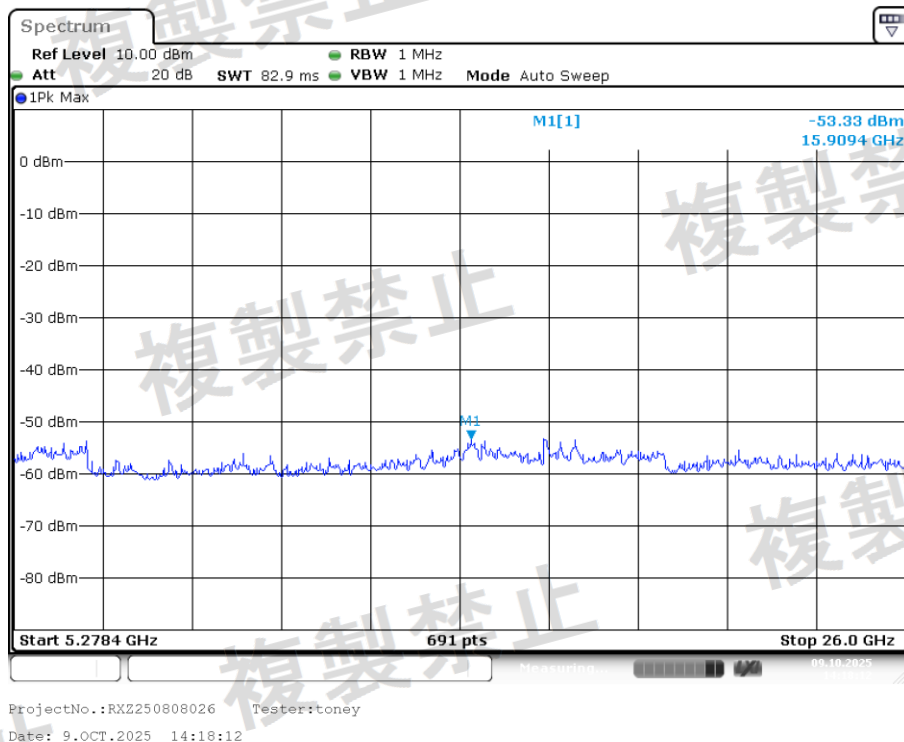


5230MHz

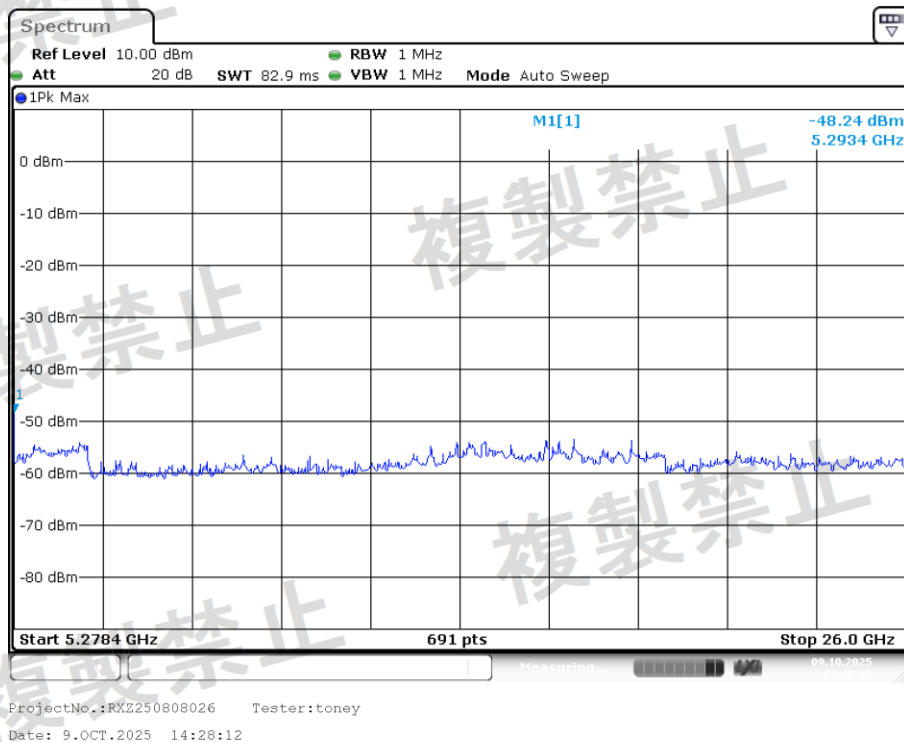


5278.4MHz-26000MHz

5190MHz



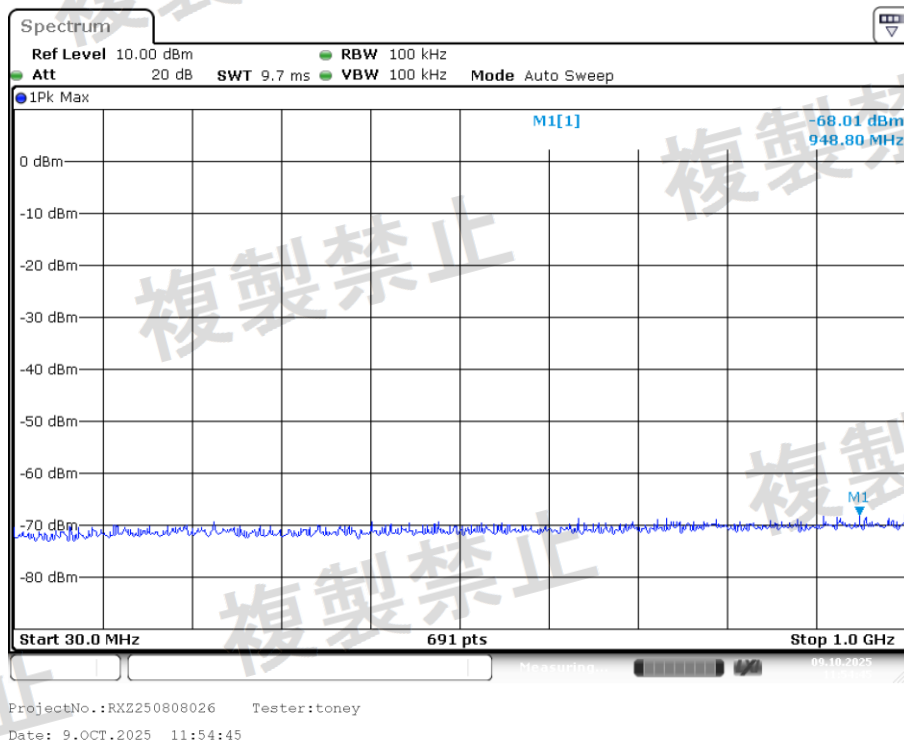
5230MHz



802.11ac VHT80 Mode:

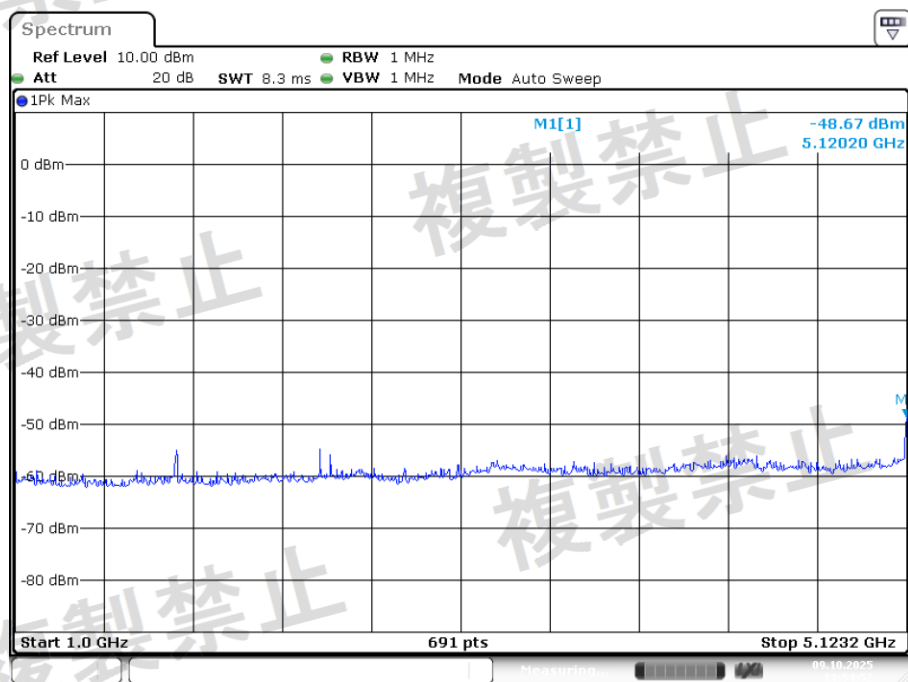
30MHz-1000MHz:

5210 MHz



1000MHz-5123.2MHz

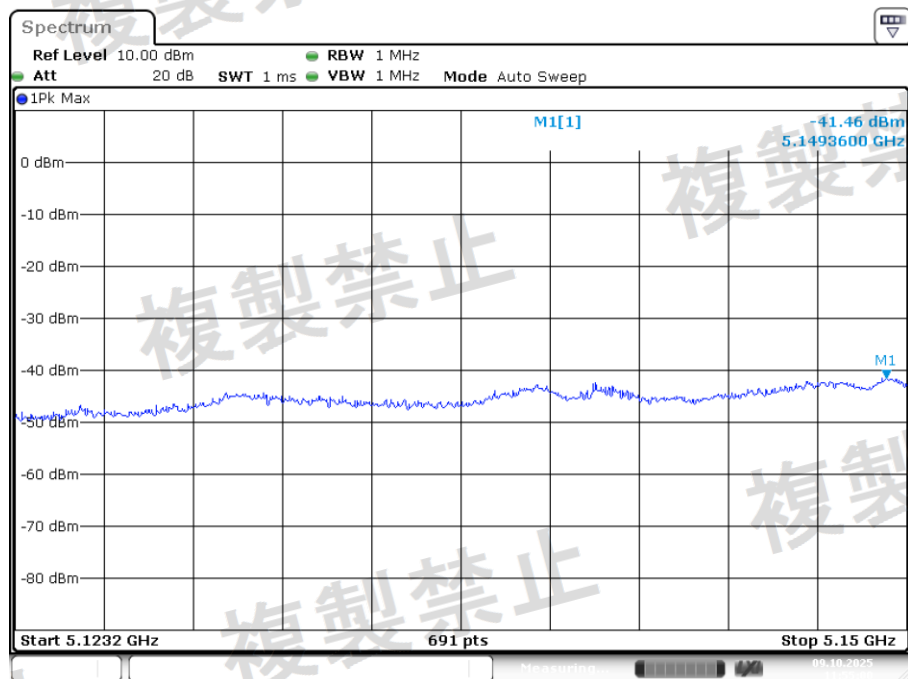
5210MHz



ProjectNo.:RXZ250808026 Tester:toney
Date: 9.OCT.2025 11:54:53

5123.2MHz-5150MHz

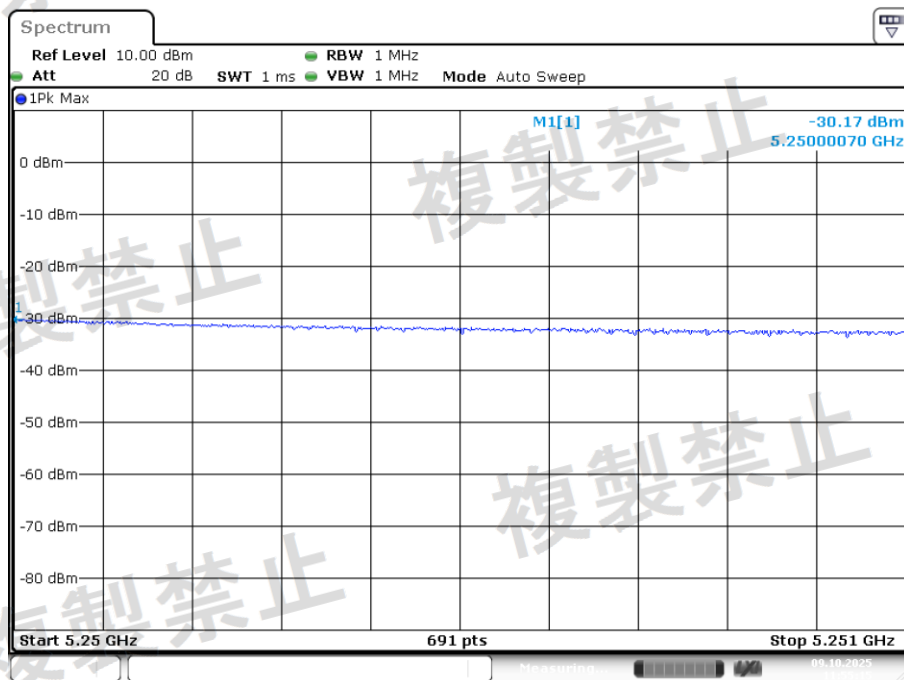
5210MHz



ProjectNo.:RXZ250808026 Tester:toney
Date: 9.OCT.2025 11:55:00

5250MHz-5251MHz

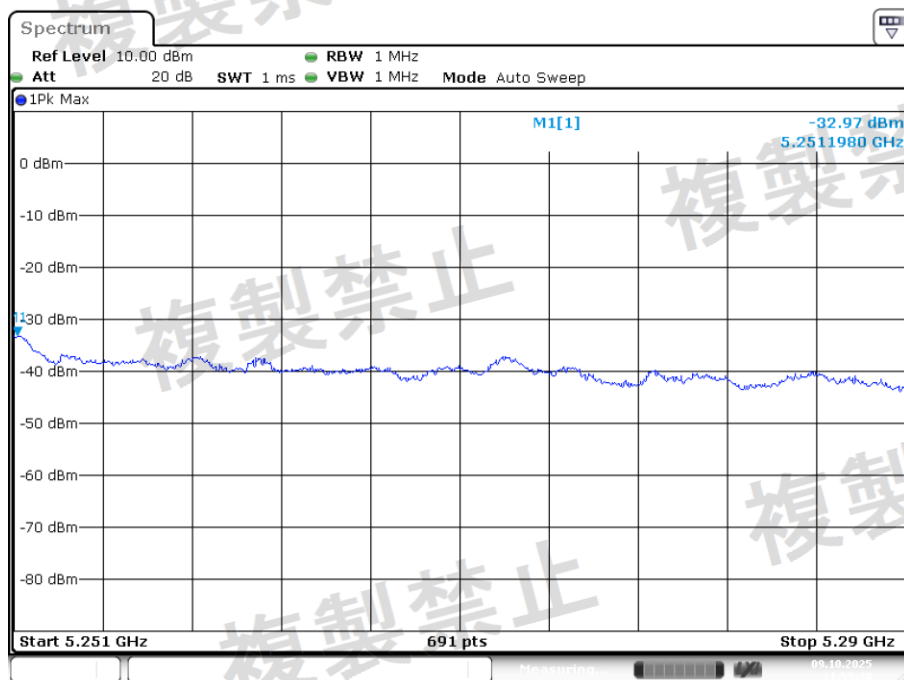
5210MHz



ProjectNo.:RXZ250808026 Tester:toney
Date: 9.OCT.2025 11:55:15

5251MHz-5290MHz

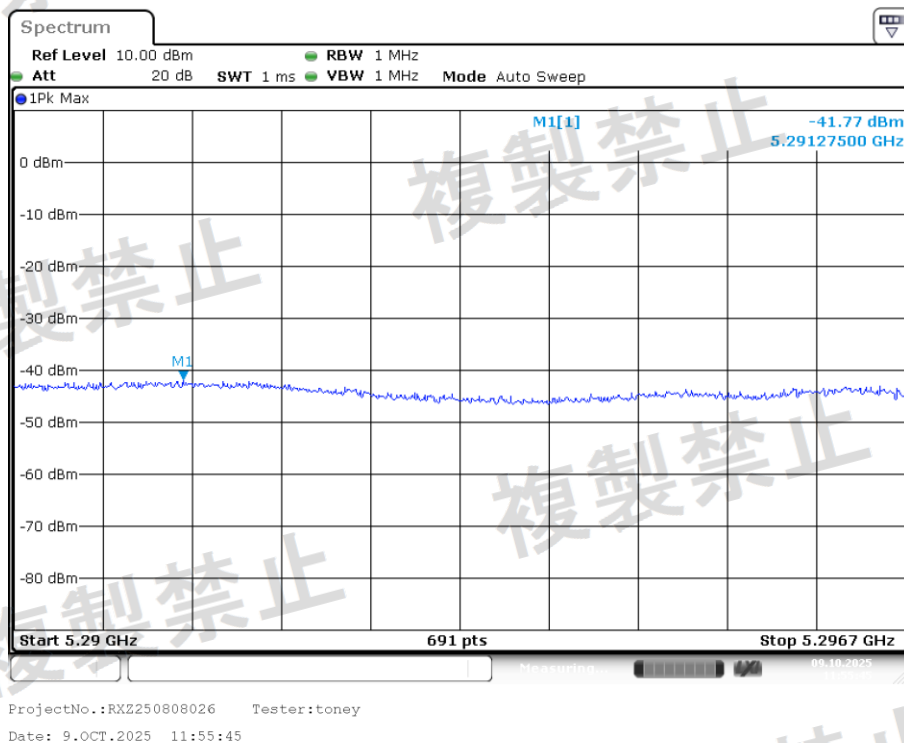
5210MHz



ProjectNo.:RXZ250808026 Tester:toney
Date: 9.OCT.2025 11:55:30

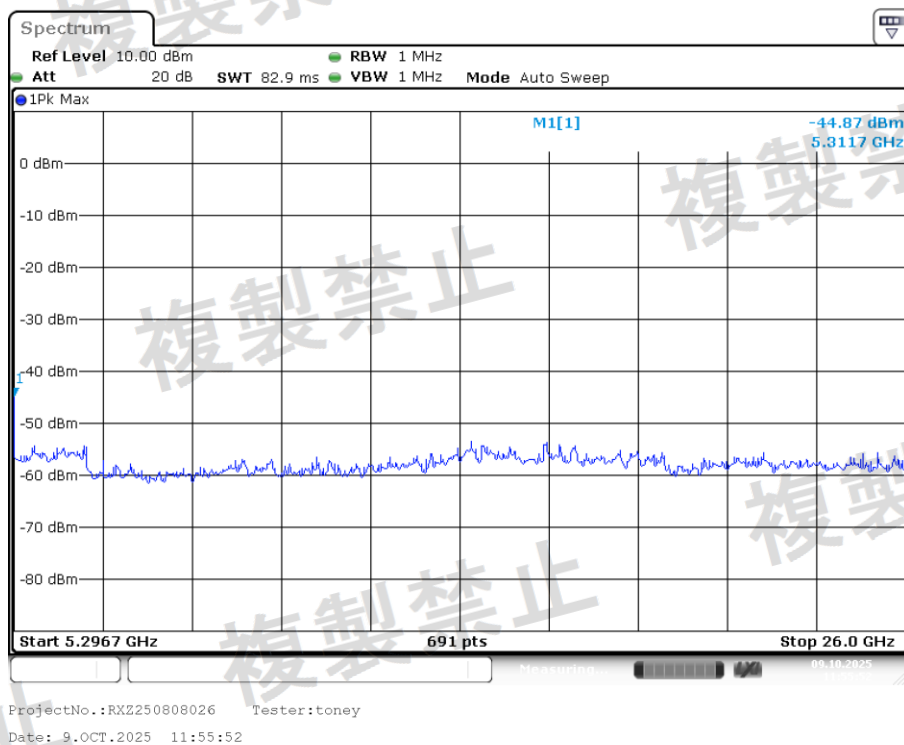
5290MHz-5296.7MHz

5210MHz



5296.7MHz-26GHz

5210MHz



5.4 OCCUPIED BANDWIDTH

TEST PROCEDURE

Spectrum Analyzer Conditions

Center Frequency: Frequency to measure

- RBW: 300 kHz, VBW: 300 kHz
- Span: Nominal Bandwidth 2 to 3.5 times
- Sweep time: Auto ; Sweep mode: Continuous Sweep
- Data points: 400 points or more
- Detection: 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 RESULT

802.11a

Frequency (MHz)	Occupied bandwidth (MHz)	Limit (MHz)
5180	16.76	<20
5200	16.85	
5240	16.85	

802.11ac VHT20

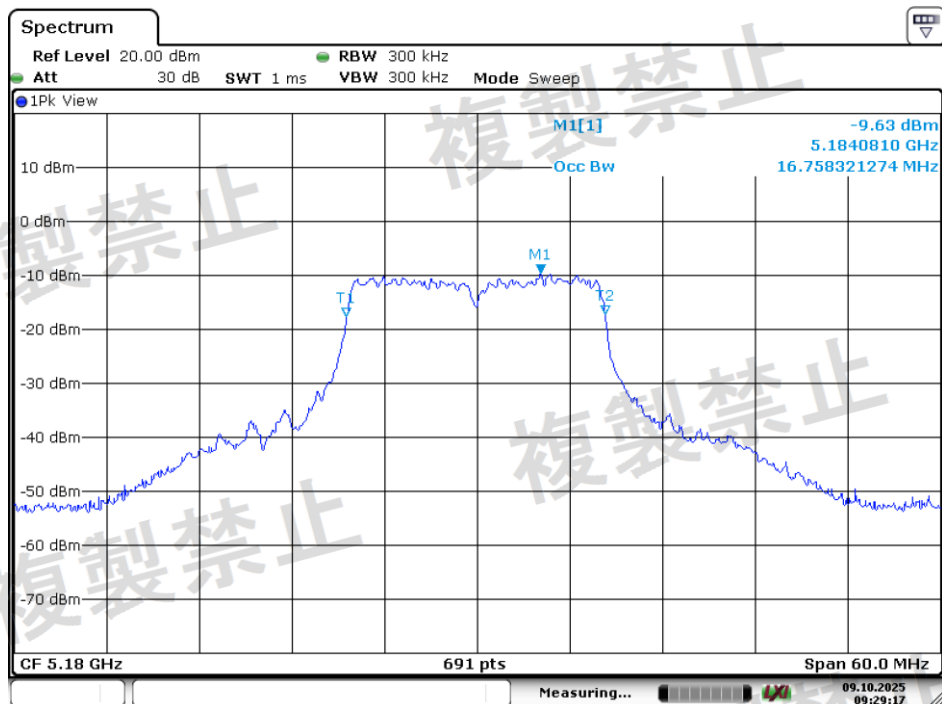
Frequency (MHz)	Occupied bandwidth (MHz)	Limit (MHz)
5180	18.06	<20
5200	18.15	
5240	18.15	

802.11ac VHT40

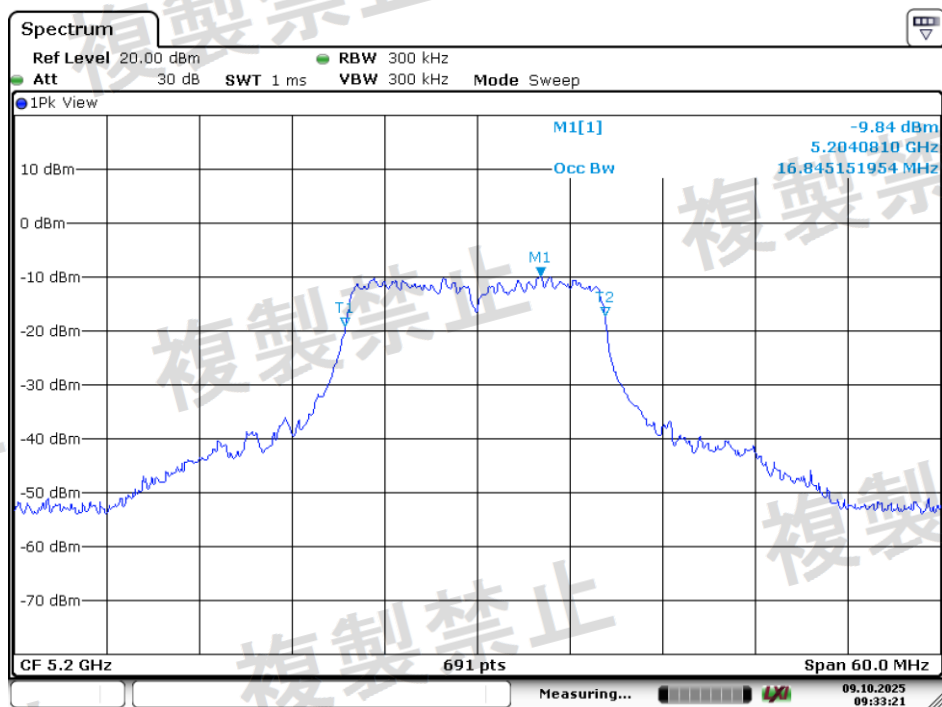
Frequency (MHz)	Occupied bandwidth (MHz)	Limit (MHz)
5190	36.47	<40
5230	36.30	

802.11ac VHT80

Frequency (MHz)	Occupied bandwidth (MHz)	Limit (MHz)
5210	76.06	<80

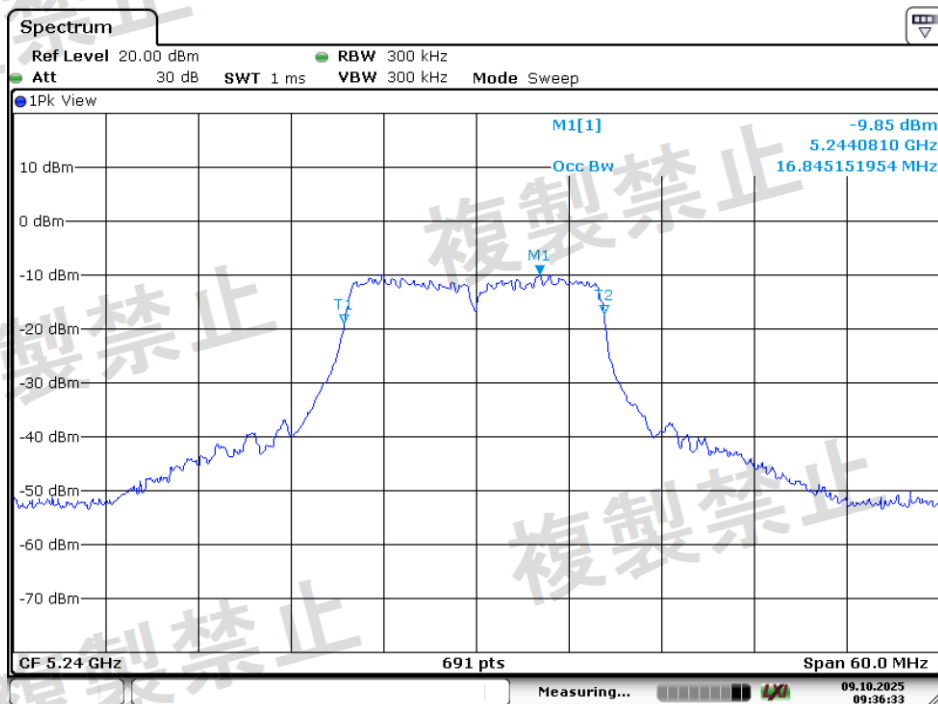
TEST PLOTS**802.11a Mode:****5180 MHz**

Date: 9.OCT.2025 09:29:17

5200 MHz

Date: 9.OCT.2025 09:33:21

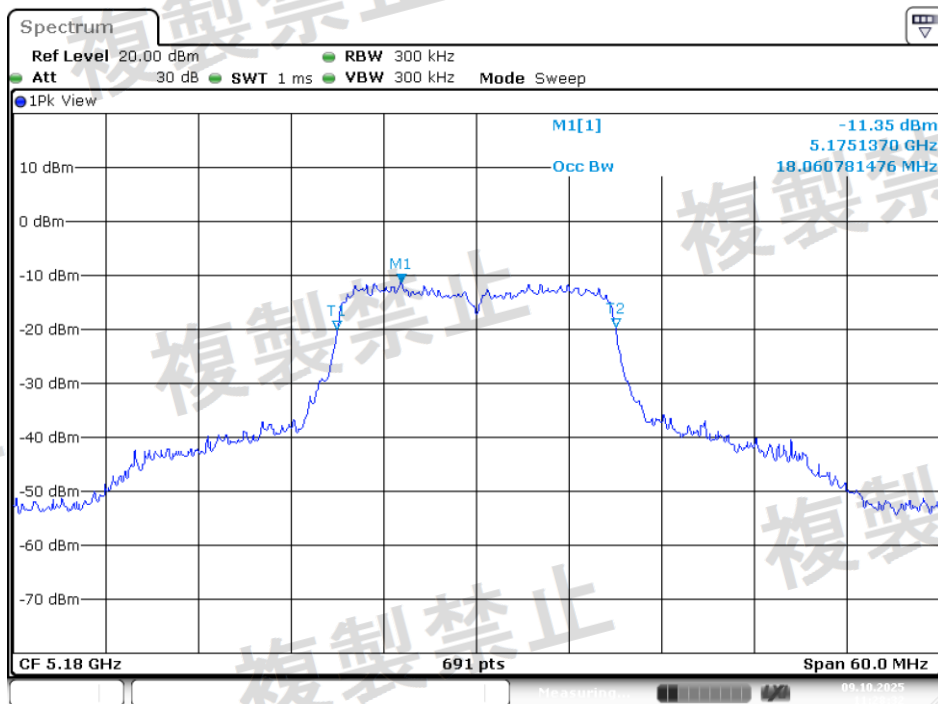
5240 MHz



Date: 9.OCT.2025 09:36:33

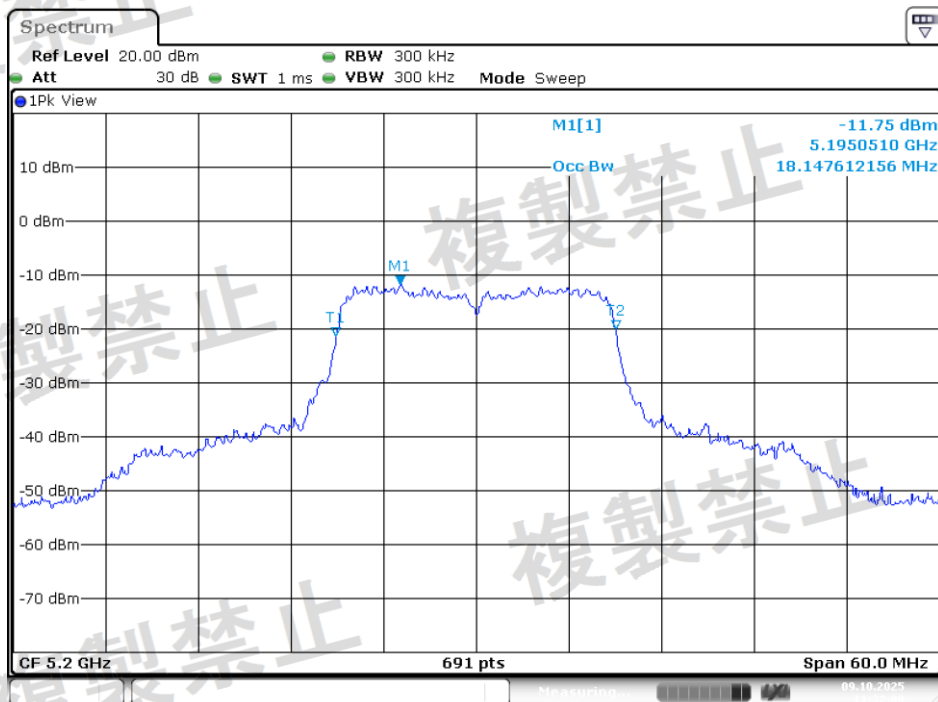
802.11ac VHT20 Mode:

5180 MHz



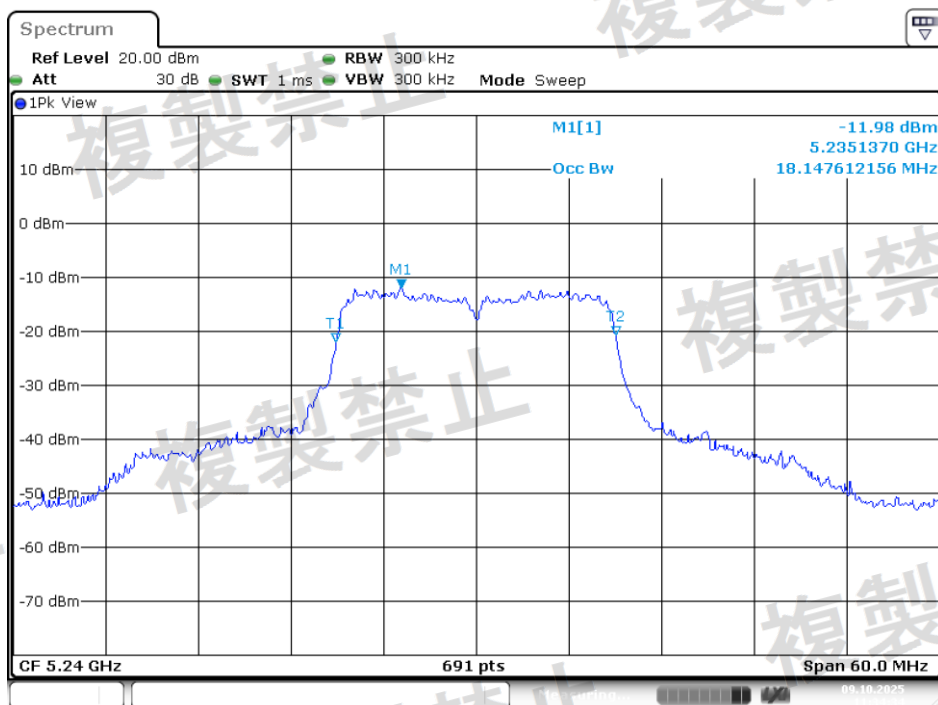
Date: 9.OCT.2025 11:28:33

5200 MHz



Date: 9.OCT.2025 11:32:01

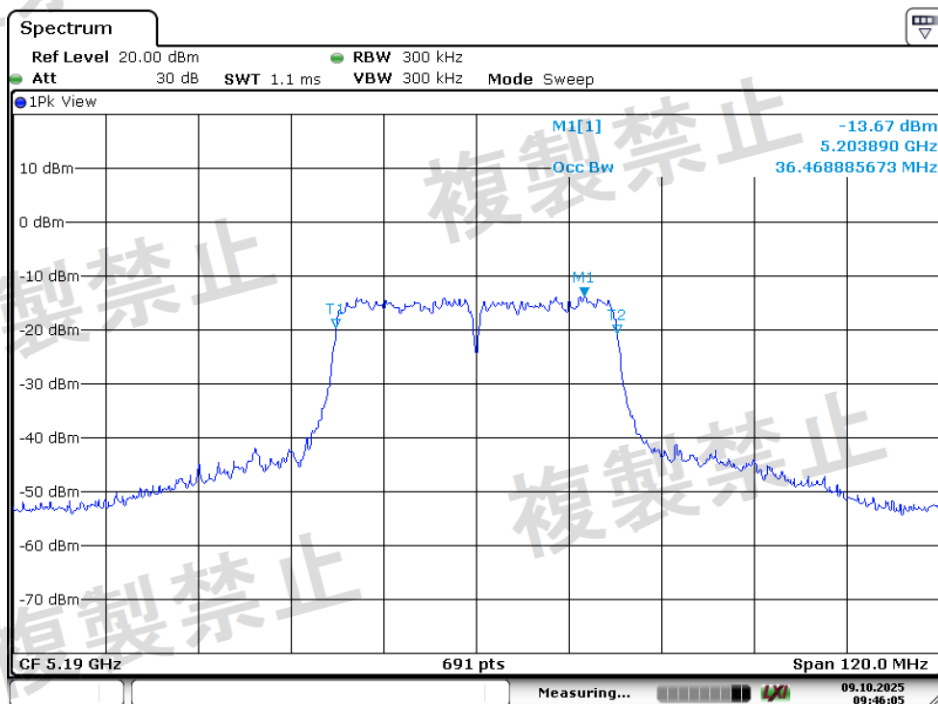
5240 MHz



Date: 9.OCT.2025 11:34:34

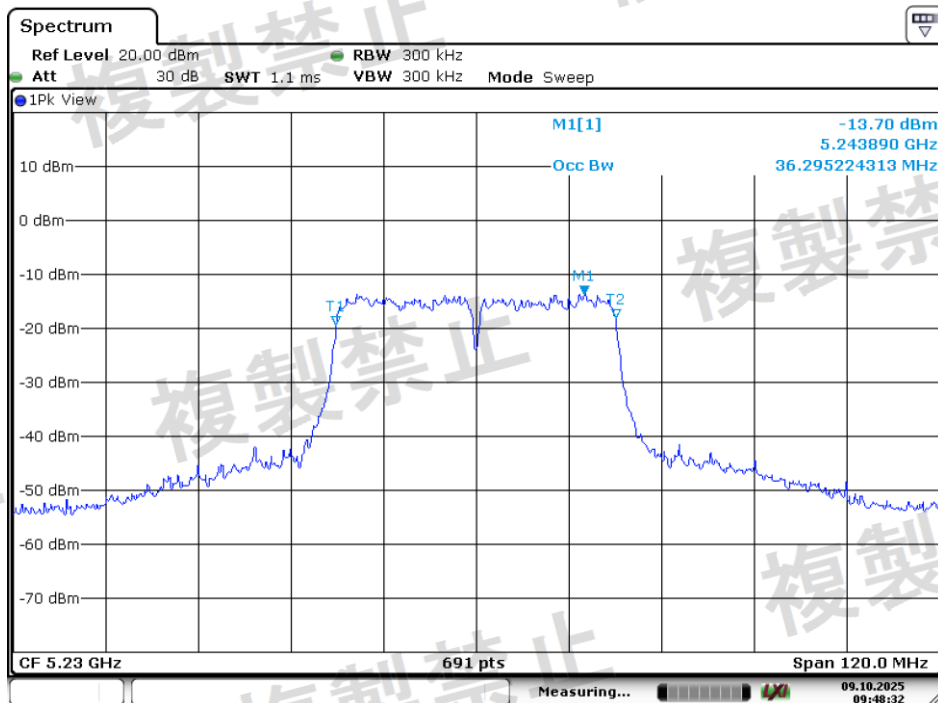
802.11ac VHT40 Mode:

5190 MHz



Date: 9.OCT.2025 09:46:05

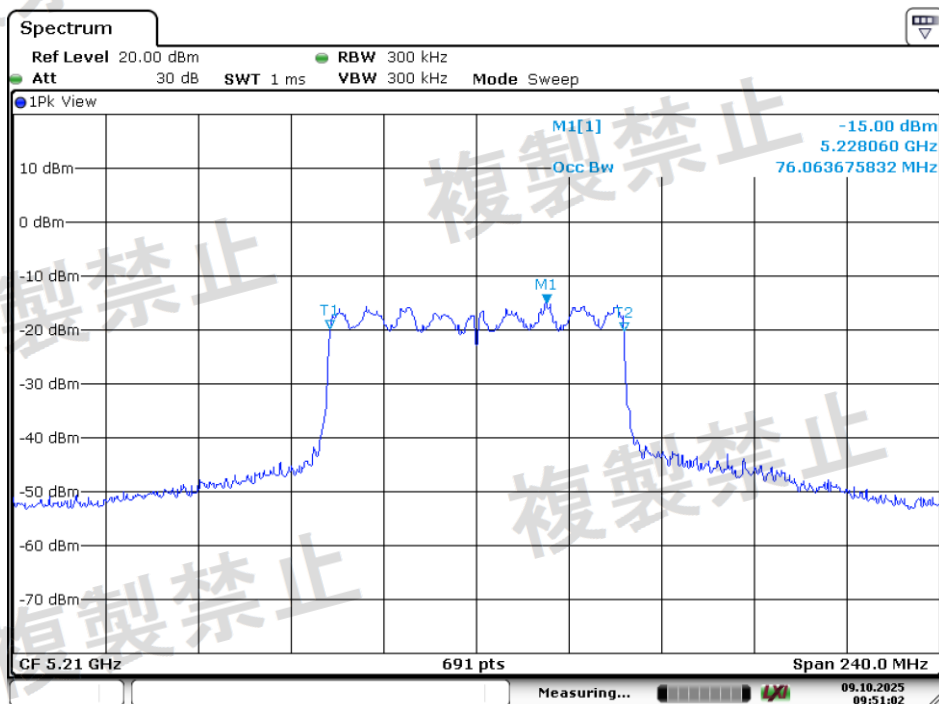
5230 MHz



Date: 9.OCT.2025 09:48:32

802.11ac VHT80 Mode:

5210 MHz



Date: 9.OCT.2025 09:51:03

5.5 ADJACENT CHANNEL POWER

TEST PROCEDURE

Spectrum Analyzer Conditions

Center Frequency: Frequency to measure

- RBW: 300 kHz, VBW: 300 kHz
- Sweep time: Auto ; Sweep mode: Continuous Sweep
- Data points: 400 points or more
- Detection: Positive Peak
- SA set the Channel Power Function and Channel Bandwidth: Sweep bandwidth corresponding to the tested signal, Center Frequency: The center frequency of testing for EUT, adjacent channel and second adjacent Channel as “Adjacent Channel” above. Then SA automatically calculate the channel power of EUT and adjacent channel power.

TEST RESULT

802.11a

Frequency (MHz)	5180MHz	5200MHz	5240MHz	Limit
	Result(dBc)			
+40	43.23	43.54	43.88	≥ 40dBc
+20	35.94	36.15	36.64	≥ 25dBc
-20	36.53	36.57	36.88	≥ 25dBc
-40	43.15	43.50	43.66	≥ 40dBc

802.11ac VHT20

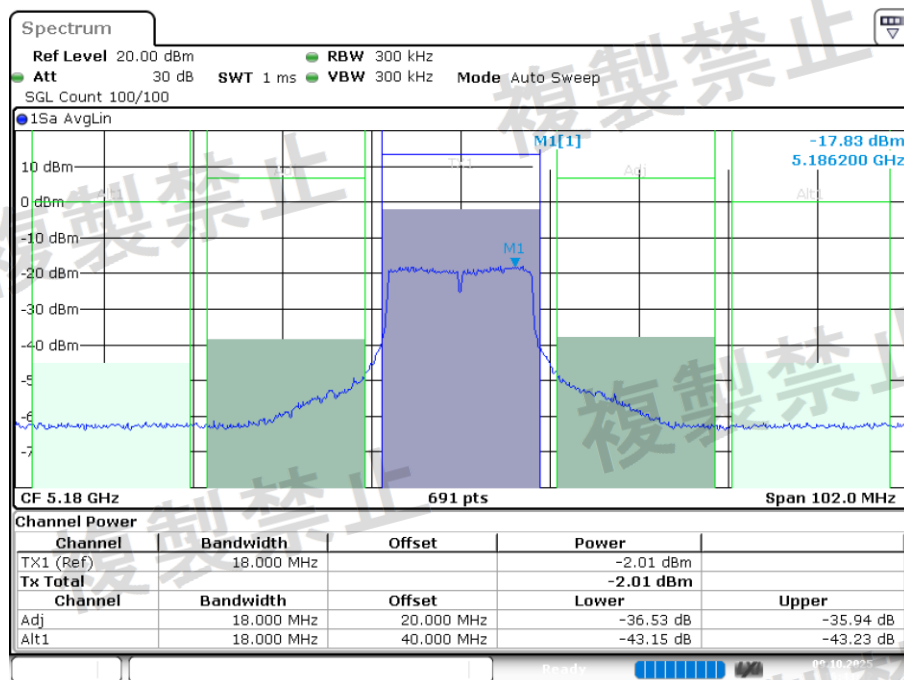
Frequency (MHz)	5180MHz	5200MHz	5240MHz	Limit
	Result(dBc)			
+40	43.20	43.74	44.50	≥ 40dBc
+20	35.74	35.63	35.53	≥ 25dBc
-20	36.59	36.34	35.60	≥ 25dBc
-40	43.35	43.64	44.31	≥ 40dBc

802.11ac VHT40

Frequency (MHz)	5190MHz	5230MHz	Limit
	Result(dBc)		
+40	41.48	41.19	≥ 40dBc
+20	31.65	33.28	≥ 25dBc
-20	33.05	34.17	≥ 25dBc
-40	41.50	40.93	≥ 40dBc

802.11ac VHT80

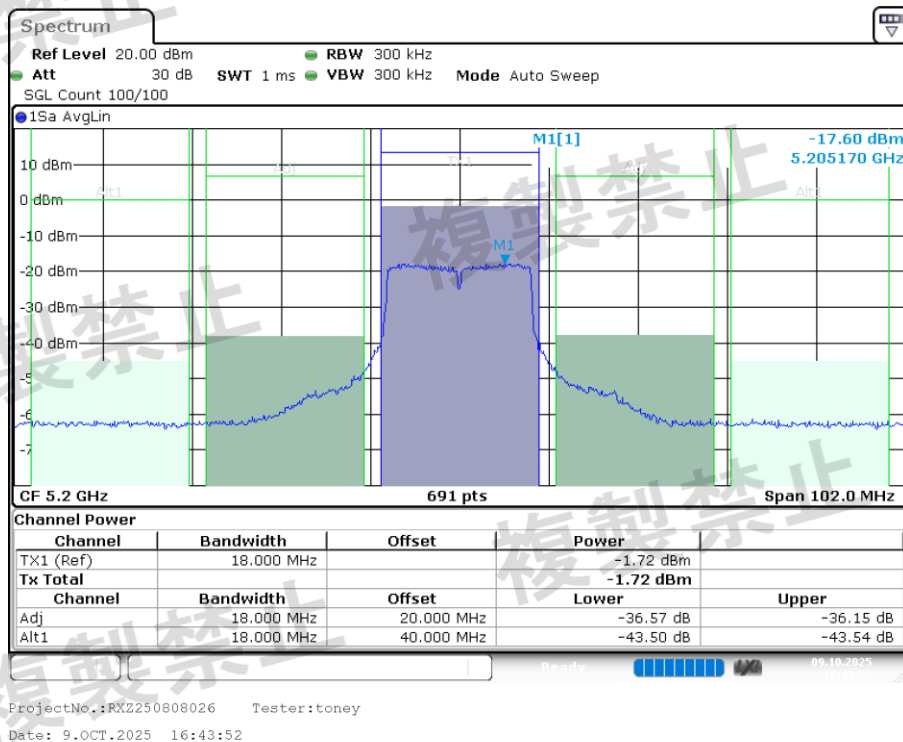
Frequency (MHz)	5210MHz	Limit
	Result(dBc)	
+80	31.95	$\geq 25\text{dBc}$
-80	33.89	$\geq 25\text{dBc}$

TEST PLOTS**802.11a Mode:****5180 MHz**

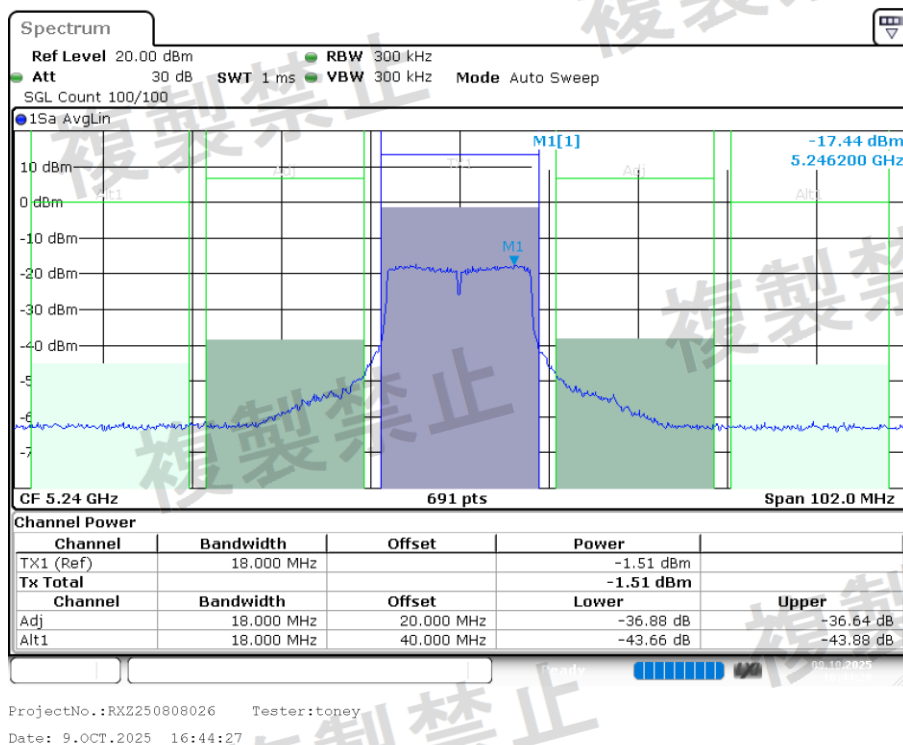
ProjectNo.:RXZ250808026 Tester:toney

Date: 9.OCT.2025 16:43:11

5200 MHz

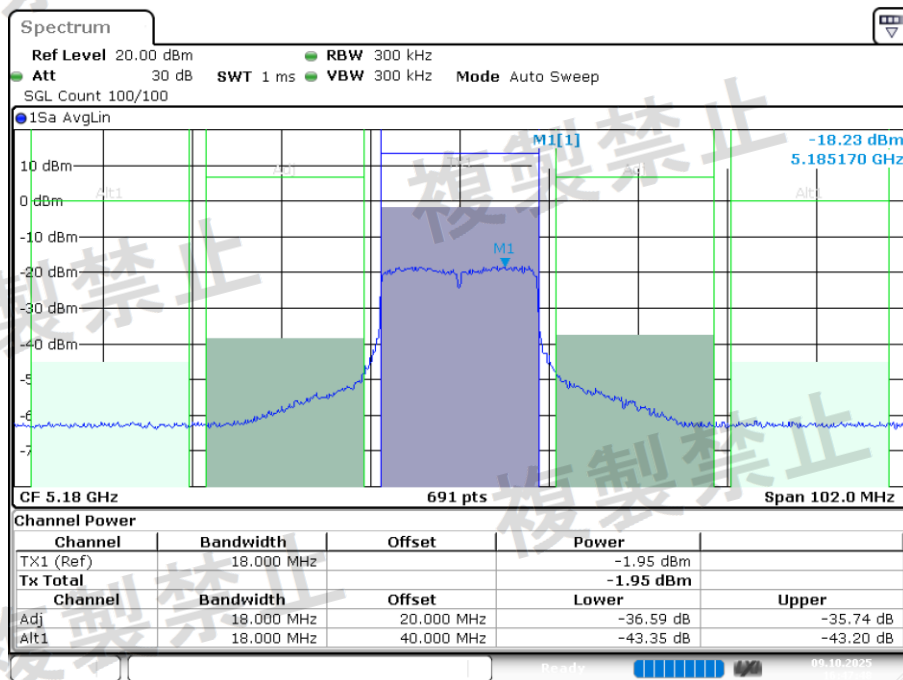


5240 MHz



802.11ac VHT20 Mode:

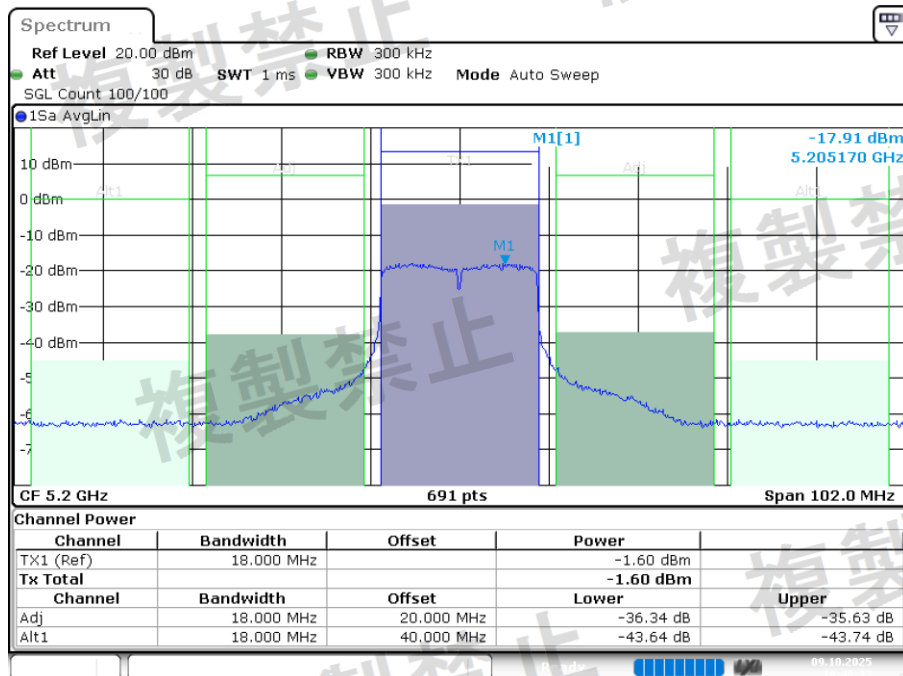
5180 MHz



ProjectNo.:RXZ250808026 Tester:toney

Date: 9.OCT.2025 16:47:48

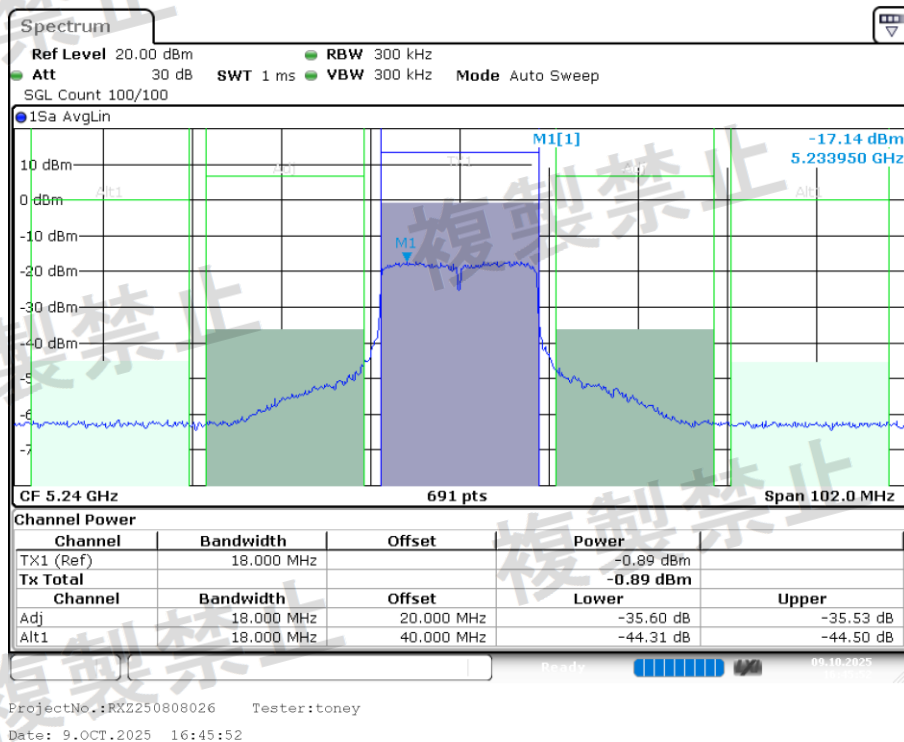
5200 MHz



ProjectNo.:RXZ250808026 Tester:toney

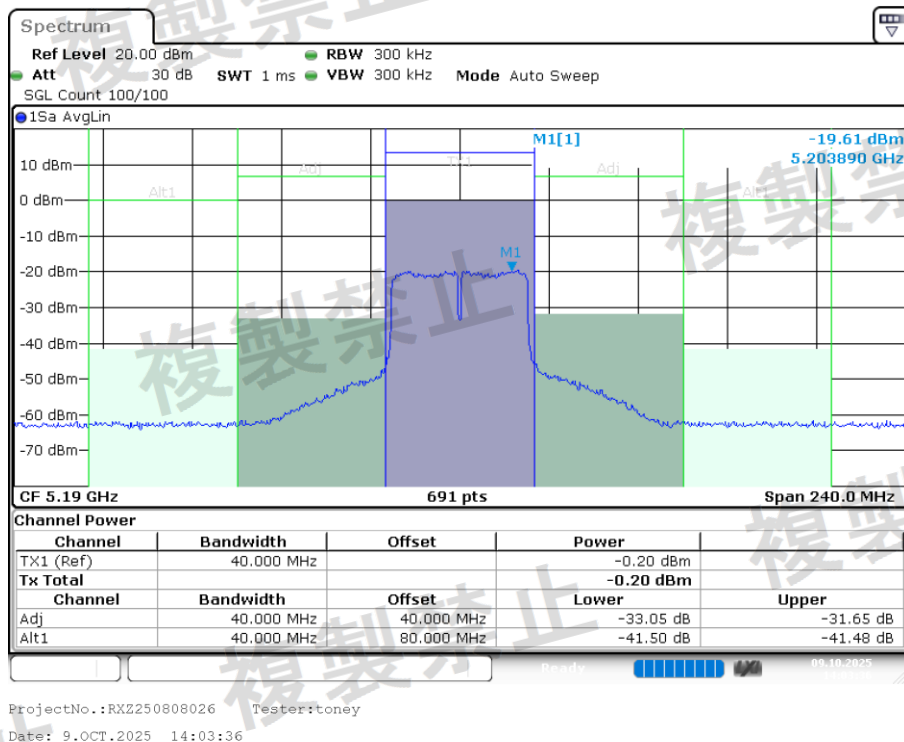
Date: 9.OCT.2025 16:46:33

5240 MHz

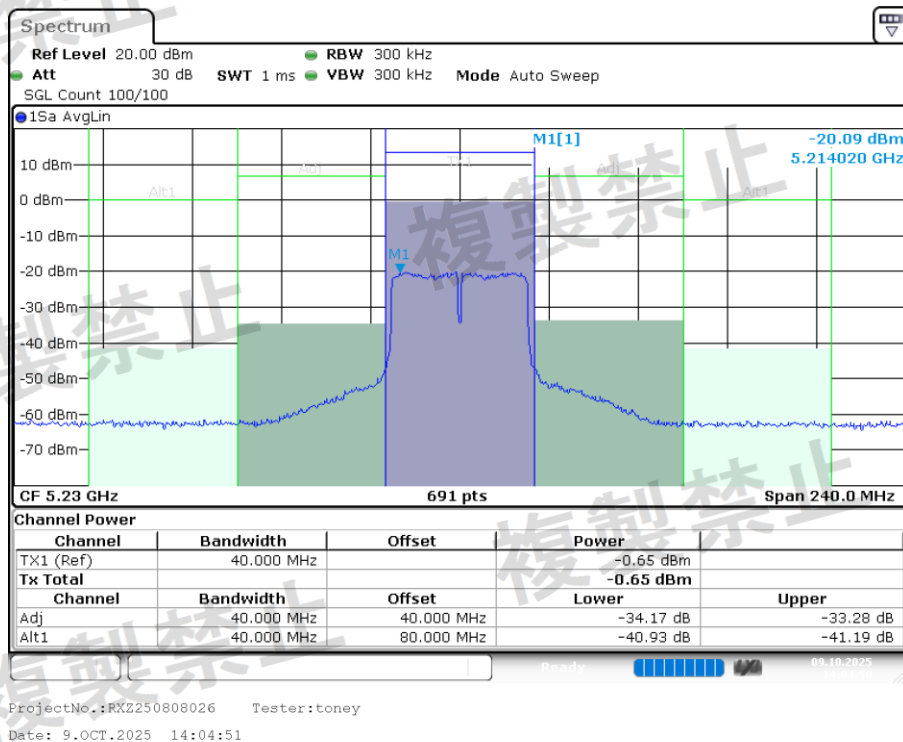


802.11ac VHT40 Mode:

5190 MHz

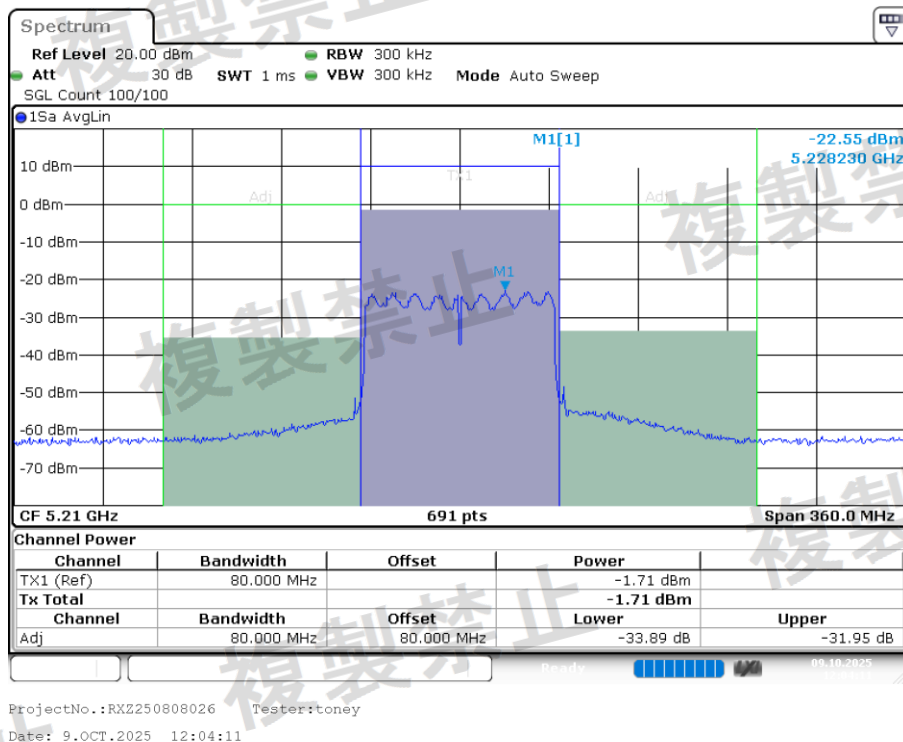


5230 MHz



802.11ac VHT80 Mode:

5210 MHz



5.6 SECONDARY RADIATED EMISSION STRENGTH

TEST PROCEDURE

Spectrum Analyzer Conditions

- Span: Measuring Frequency Range
- RBW: 1MHz (frequency range; 1GHz over), 100kHz (frequency range; 30MHz to 1GHz)
- VBW: Same as RBW (1MHz or 100kHz)
- Sweep time: Auto
- Data points : 400 points or more
- Reference level: Enough level for maximum dynamic range
- Detection: Positive Peak

TEST RESULT

Test Mode: Receiving

802.11a

Test Voltage		V	Normal Voltage (11.1V)			Remarks
Test Frequency		MHz	5180	5200	5240	Limit
Spurious Emission Frequency	※ 1	MHz	923.50	892.60	908.10	
	※ 2	MHz	17624.00	17661.00	15924.00	
Spectrum Raw	※ 1	dBm	-77.95	-78.02	-77.86	
	※ 2	dBm	-63.44	-62.42	-63.49	
Spurious Emission Intensity	※ 1	nW	0.17	0.17	0.18	≤ 4 nW
	※ 2	nW	4.88	6.17	4.82	≤ 20 nW

802.11ac VHT20

Test Frequency		MHz	5180	5200	5240	Limit
Spurious Emission Frequency	※ 1	MHz	936.10	816.80	867.30	
	※ 2	MHz	17624.00	16213.00	17624.00	
Spectrum Raw	※ 1	dBm	-78.18	-78.22	-78.41	
	※ 2	dBm	-63.10	-62.33	-64.07	
Spurious Emission Intensity	※ 1	nW	0.16	0.16	0.16	≤ 4 nW
	※ 2	nW	5.27	6.30	4.22	≤ 20 nW

802.11ac VHT40

Test Frequency		MHz	5190	5230	Limit
Spurious Emission Frequency	※ 1	MHz	832.30	701.70	
	※ 2	MHz	18312.00	17661.00	
Spectrum Raw	※ 1	dBm	-78.40	-77.45	
	※ 2	dBm	-63.40	-62.15	
Spurious Emission Intensity	※ 1	nW	0.16	0.19	≤ 4 nW
	※ 2	nW	4.92	6.56	≤ 20 nW

802.11ac VHT80

Test Frequency		MHz	5210	Limit
Spurious Emission Frequency	※ 1	MHz	807.00	
	※ 2	MHz	17624.00	
Spectrum Raw	※ 1	dBm	-77.84	
	※ 2	dBm	-61.96	
Spurious Emission Intensity	※ 1	nW	0.18	≤ 4 nW
	※ 2	nW	6.85	≤ 20 nW

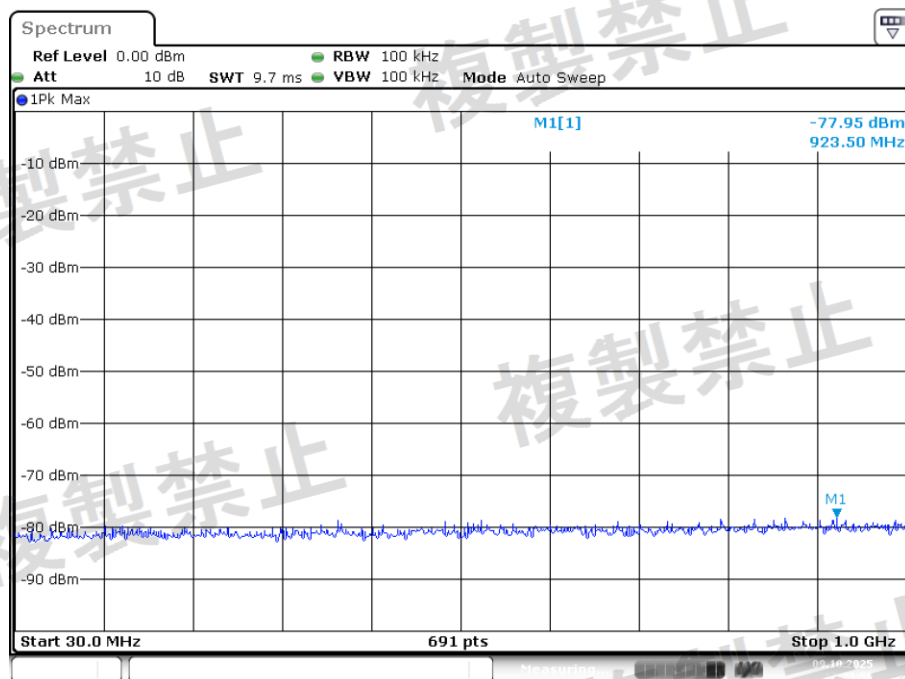
Note:

※ 1: Frequency Band (30 MHz ~ 1000 MHz)

※ 2: Frequency Band (1000 MHz ~ 26 GHz)

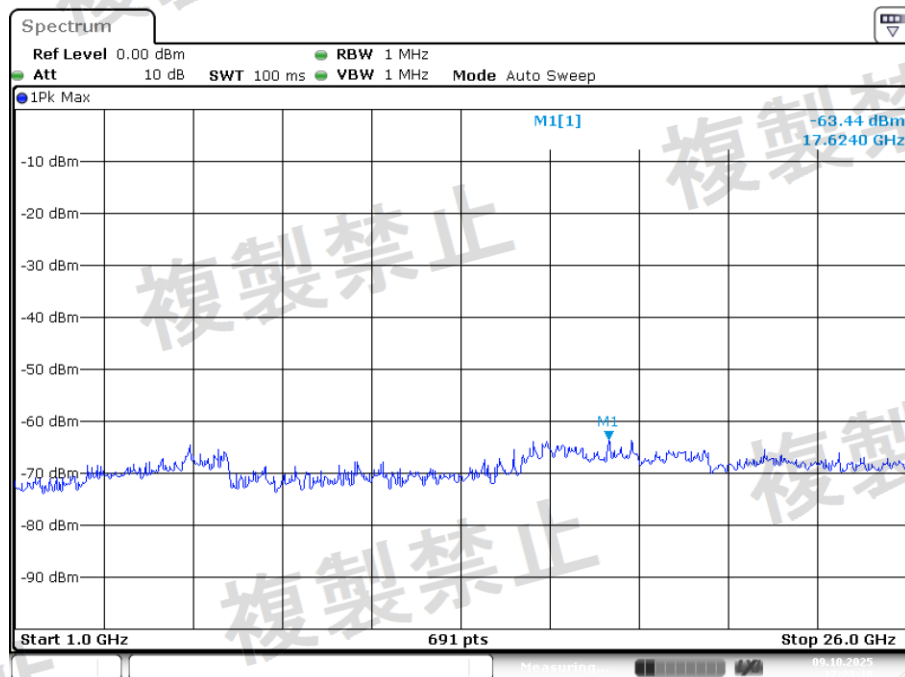
Cable Loss: 10.32 dB

Spurious Emission Intensity: $10^{[(\text{Spectrum Raw} + \text{Cable Loss})/10]*1000000}$

TEST PLOTS**802.11a Mode****5180 MHz****30MHz-1000MHz**

ProjectNo.:RXZ250808026 Tester:toney

Date: 9.OCT.2025 17:23:50

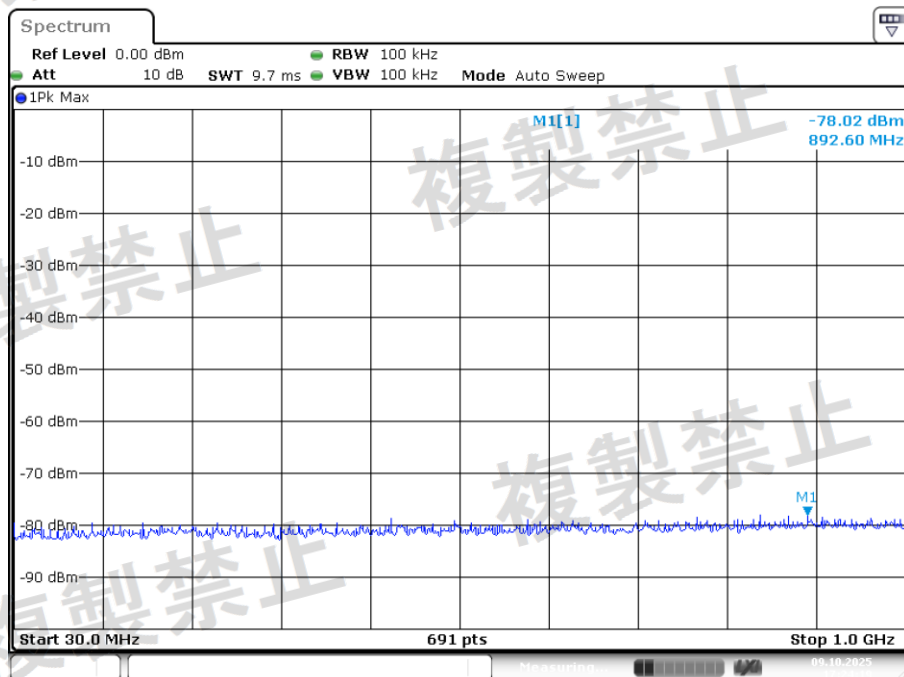
1000MHz-26GHz

ProjectNo.:RXZ250808026 Tester:toney

Date: 9.OCT.2025 17:23:18

5200 MHz

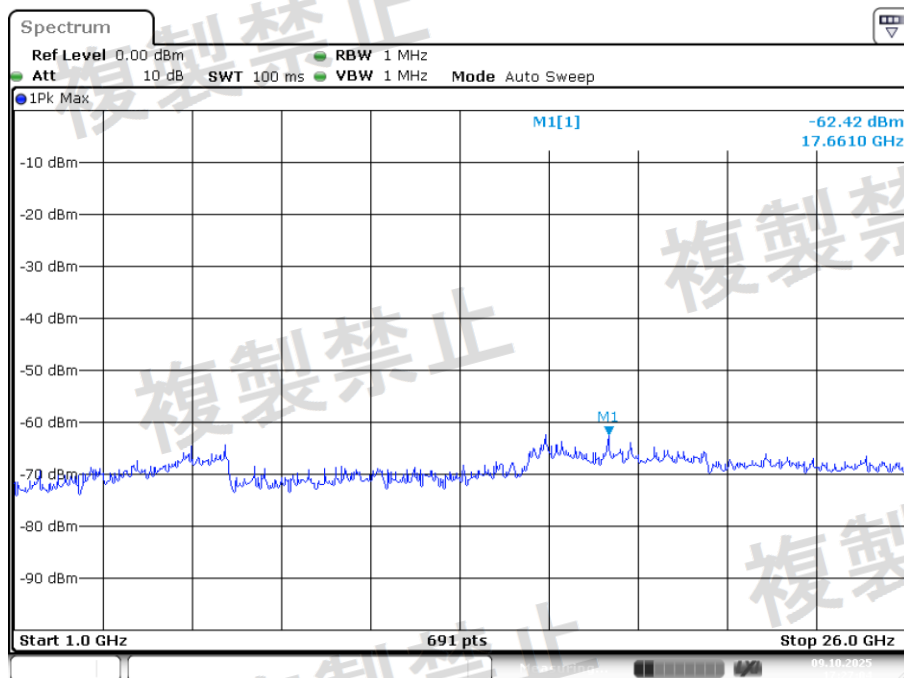
30MHz-1000MHz



ProjectNo.:RXZ250808026 Tester:toney

Date: 9.OCT.2025 17:24:19

1000MHz-26GHz

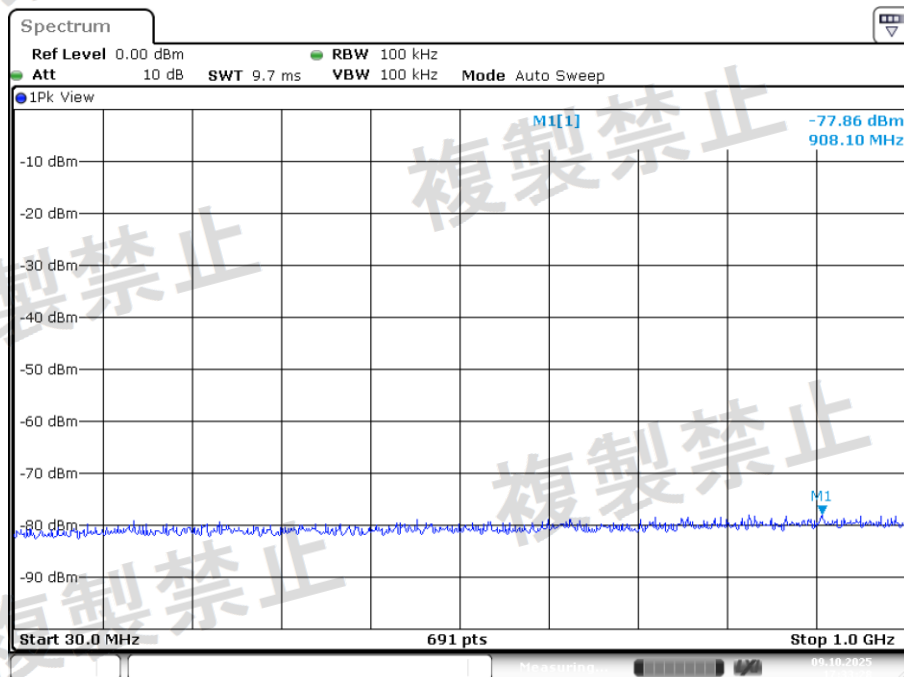


ProjectNo.:RXZ250808026 Tester:toney

Date: 9.OCT.2025 17:27:05

5240 MHz

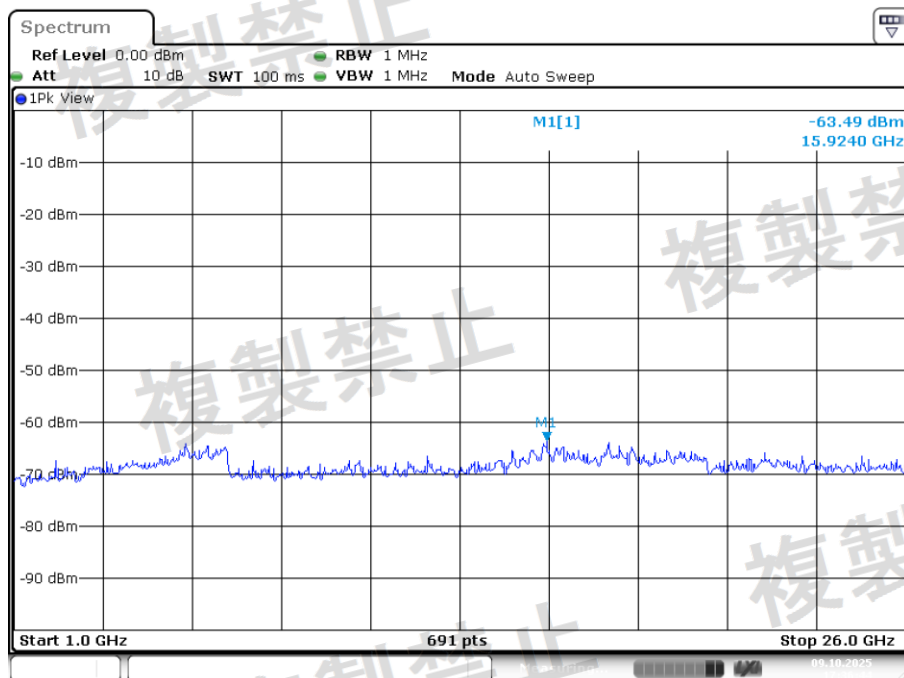
30MHz-1000MHz



ProjectNo.:RXZ250808026 Tester:toney

Date: 9.OCT.2025 17:33:28

1000MHz-26GHz



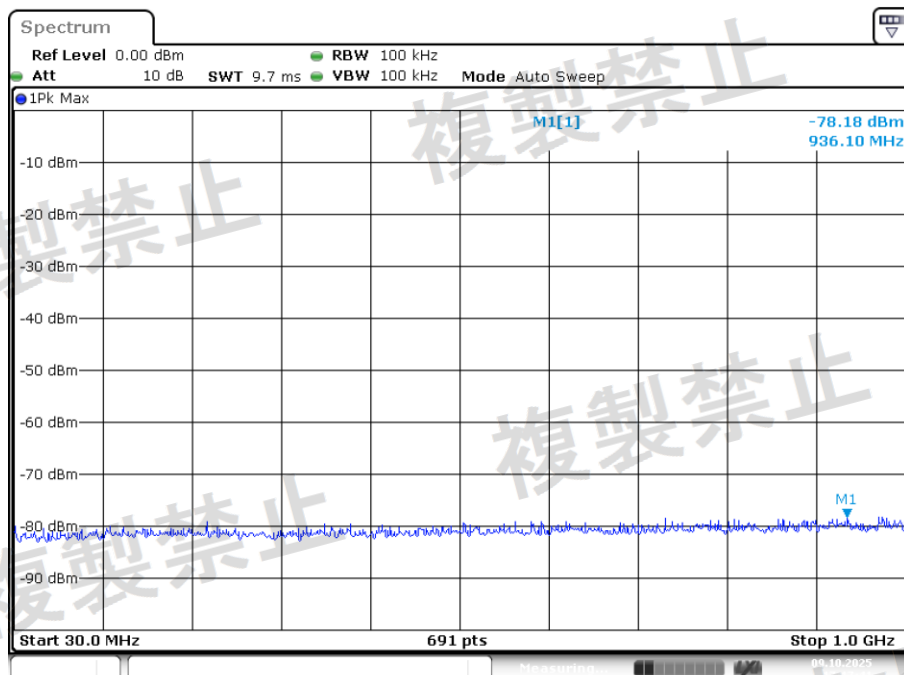
ProjectNo.:RXZ250808026 Tester:toney

Date: 9.OCT.2025 17:36:44

802.11ac VHT20 Mode

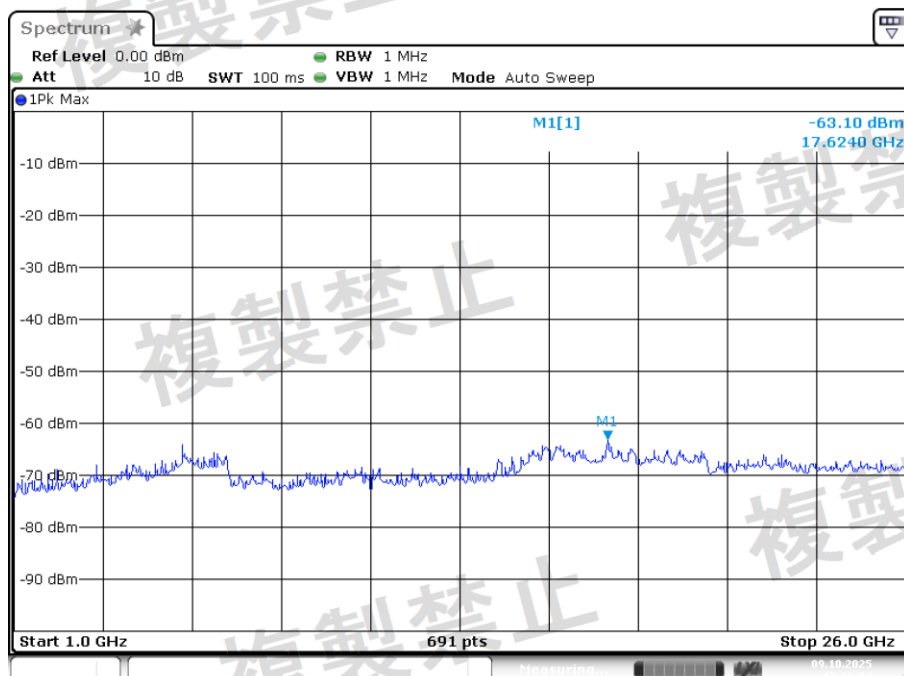
5180 MHz

30MHz-1000MHz



ProjectNo.:RXZ250808026 Tester:toney
Date: 9.OCT.2025 17:17:42

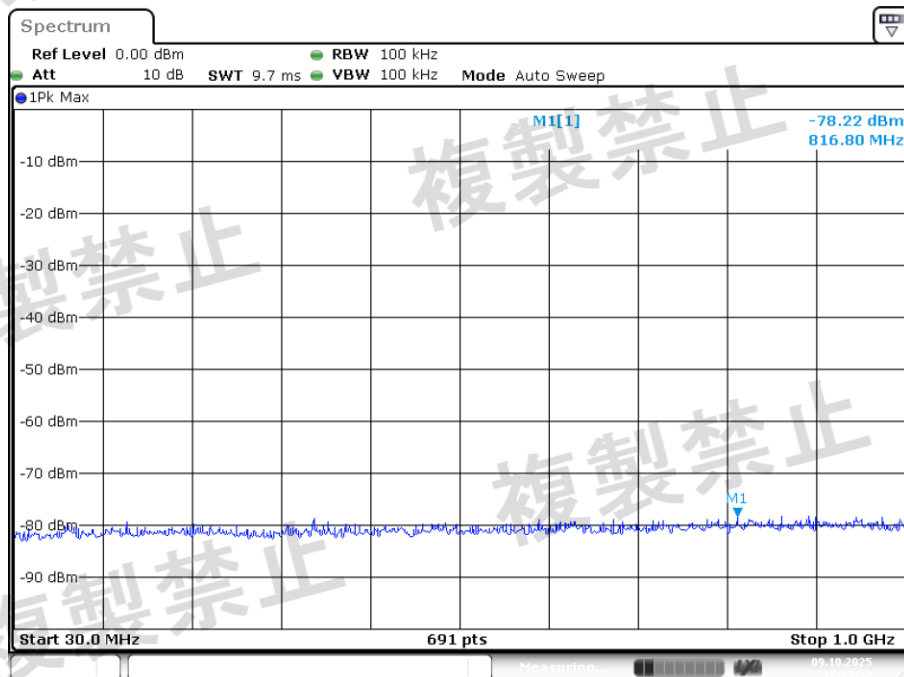
1000MHz-26GHz



ProjectNo.:RXZ250808026 Tester:toney
Date: 9.OCT.2025 17:16:04

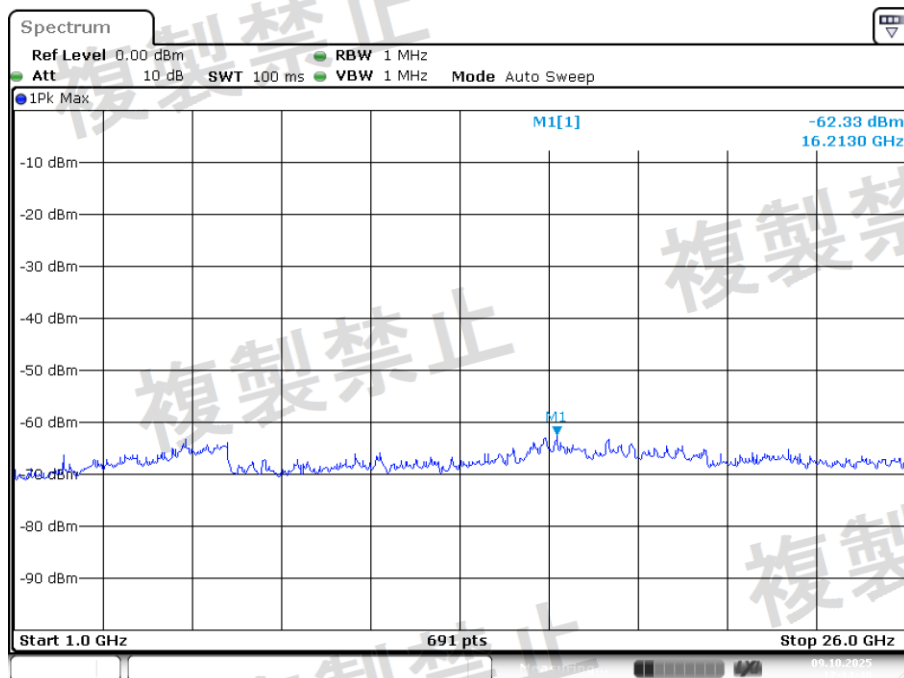
5200 MHz

30MHz-1000MHz



ProjectNo.:RXZ250808026 Tester:toney
Date: 9.OCT.2025 17:09:52

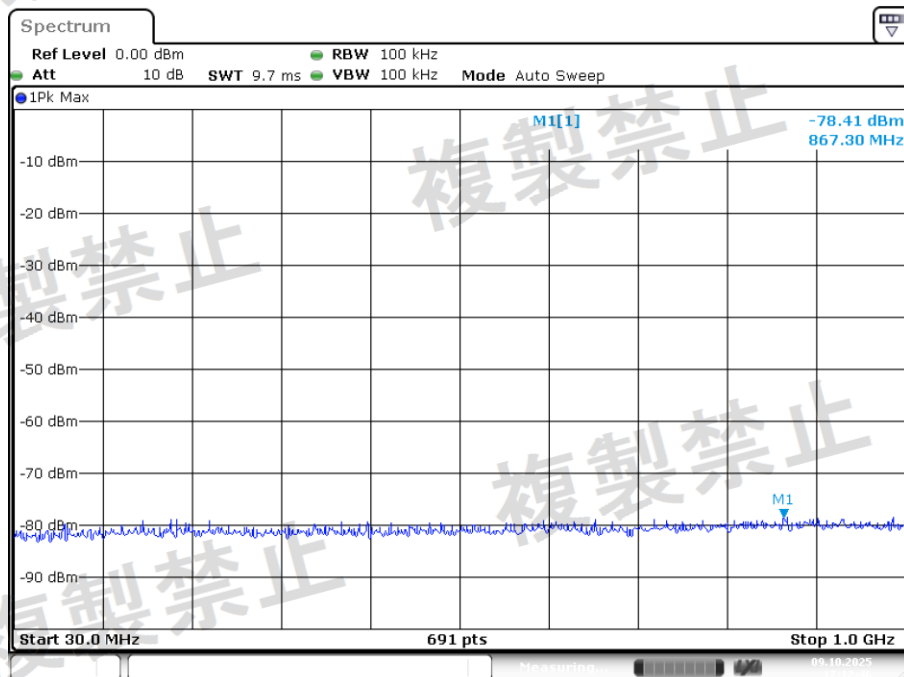
1000MHz-26GHz



ProjectNo.:RXZ250808026 Tester:toney
Date: 9.OCT.2025 17:14:40

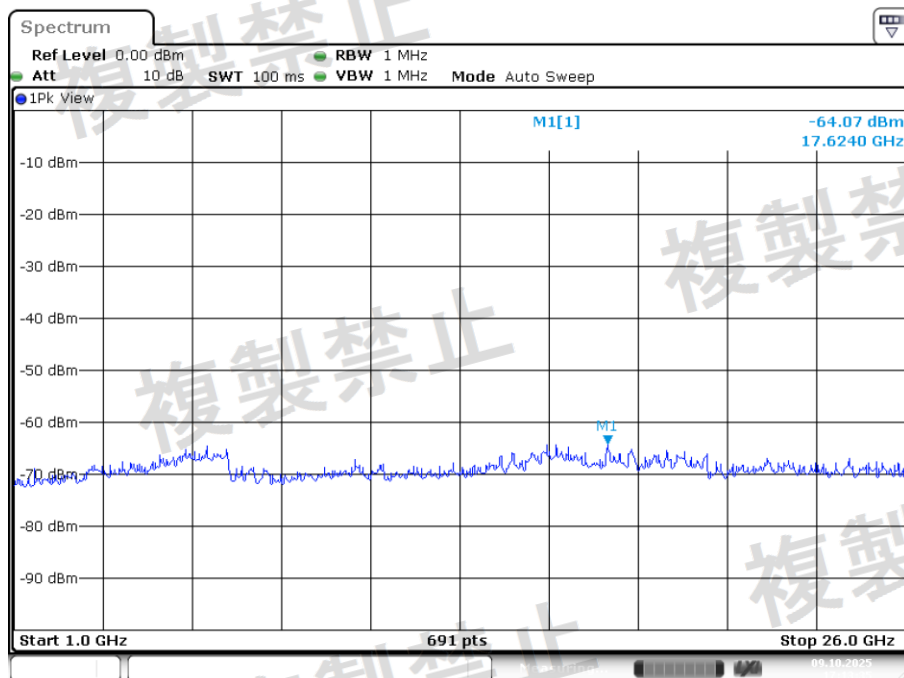
5240 MHz

30MHz-1000MHz



ProjectNo.:RXZ250808026 Tester:toney
Date: 9.OCT.2025 17:12:46

1000MHz-26GHz

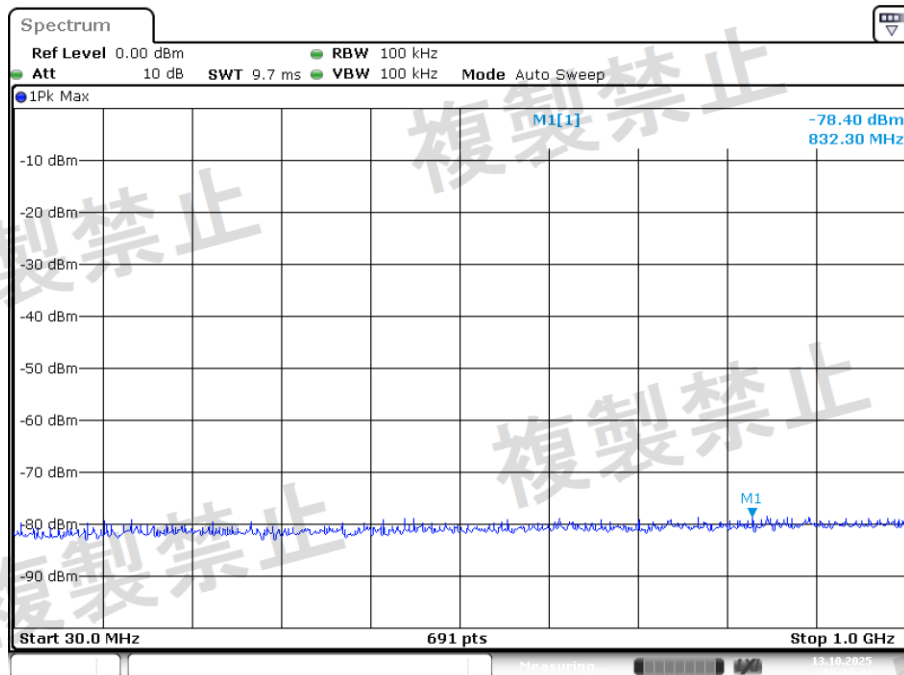


ProjectNo.:RXZ250808026 Tester:toney
Date: 9.OCT.2025 17:13:35

802.11ac VHT40 Mode

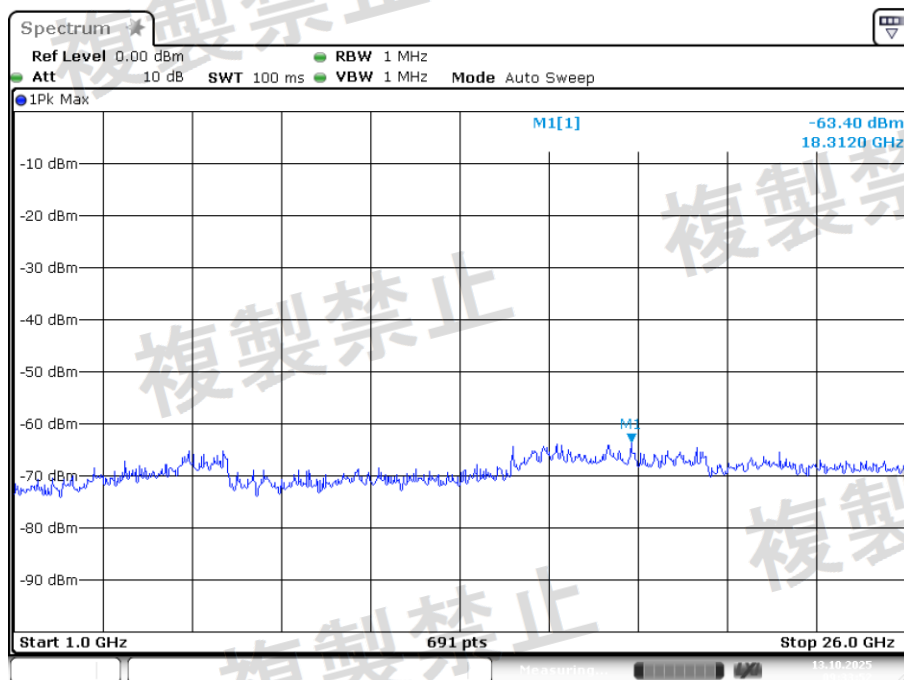
5190 MHz

30MHz-1000MHz



ProjectNo.:RXZ250808026 Tester:toneytoney
Date: 13.OCT.2025 09:33:44

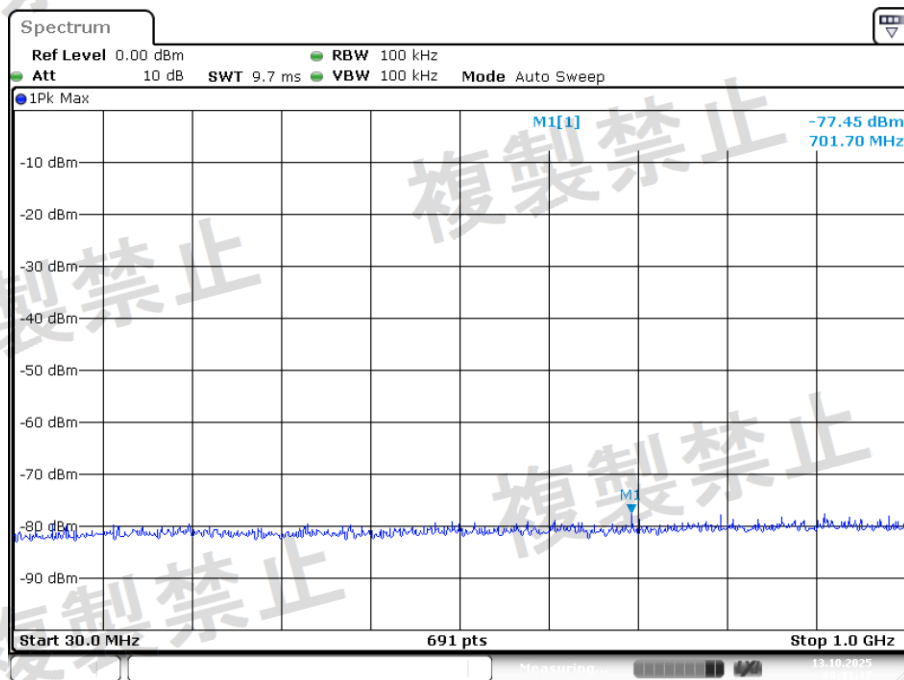
1000MHz-26GHz



ProjectNo.:RXZ250808026 Tester:toneytoney
Date: 13.OCT.2025 09:33:52

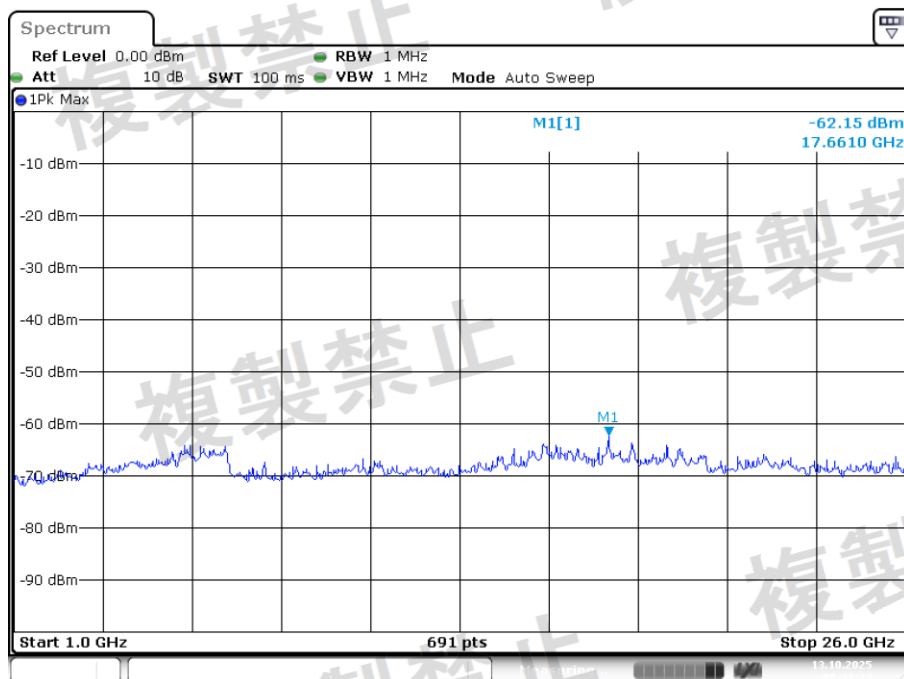
5230 MHz

30MHz-1000MHz



ProjectNo.:RXZ250808026 Tester:toneytoney
Date: 13.OCT.2025 09:31:17

1000MHz-26GHz

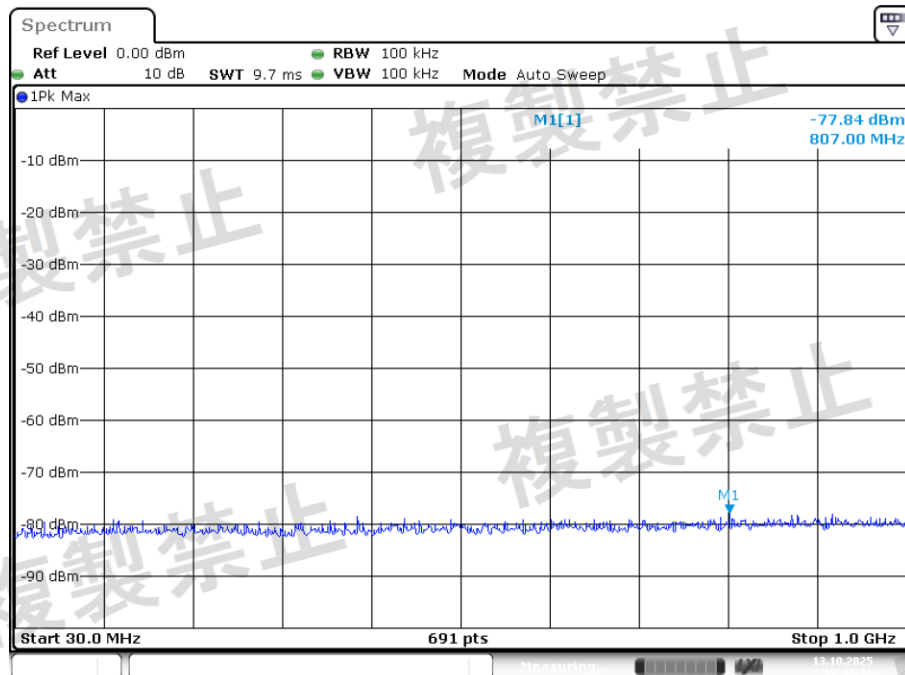


ProjectNo.:RXZ250808026 Tester:toneytoney
Date: 13.OCT.2025 09:31:24

802.11ac VHT80 Mode

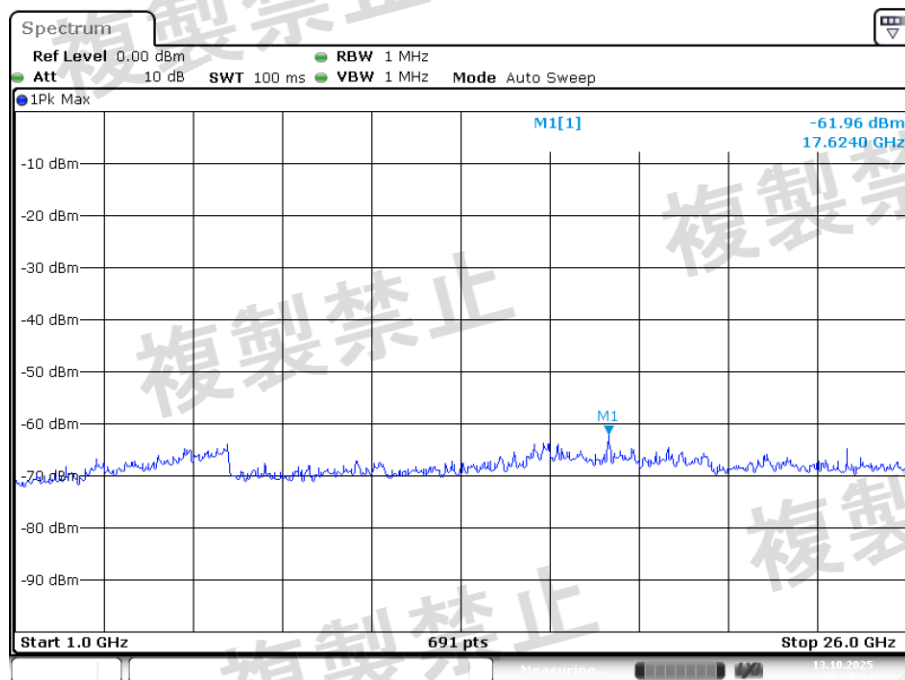
5210 MHz

30MHz-1000MHz



ProjectNo.:RXZ250808026 Tester:toneytoney
Date: 13.OCT.2025 12:48:16

1000MHz-26GHz



ProjectNo.:RXZ250808026 Tester:toneytoney
Date: 13.OCT.2025 09:29:34

5.7 TRANSMISSION BURST LENGTH

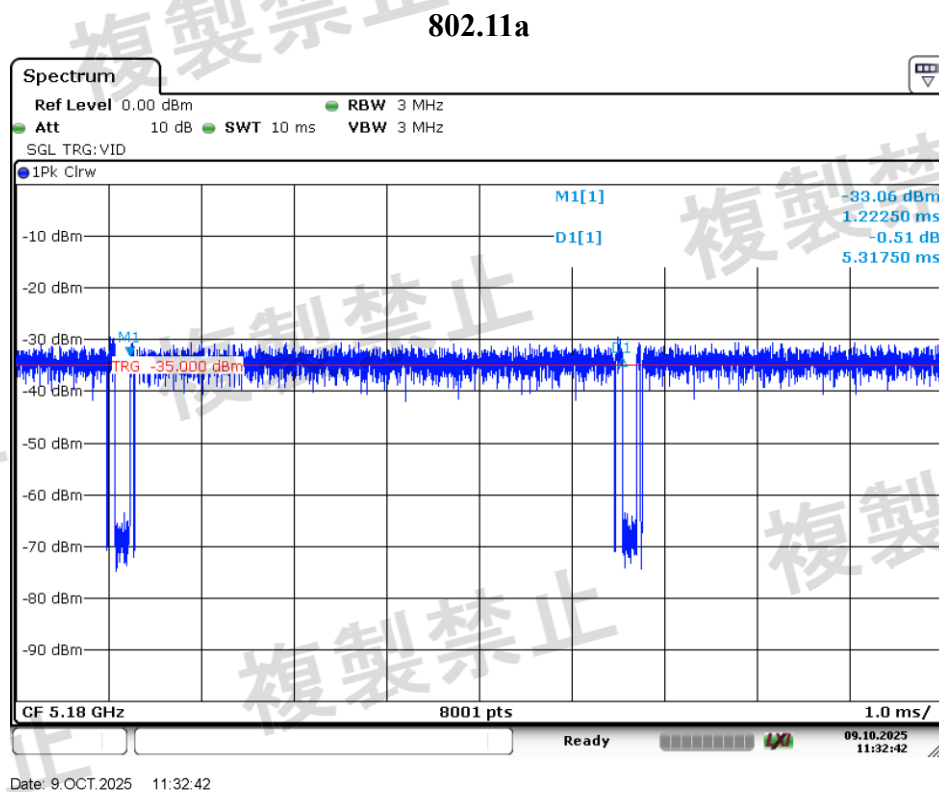
TEST PROCEDURE

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. Set RBW of spectrum analyzer to 10MHz and VBW to 10MHz.
3. Use a video trigger with the trigger level set to enable triggering only on full pulses.
4. Sweep Time is more than once pulse time.
5. Set the center frequency on any frequency would be measure and set the frequency span to zero span.
6. Measure the maximum time duration of one single pulse.

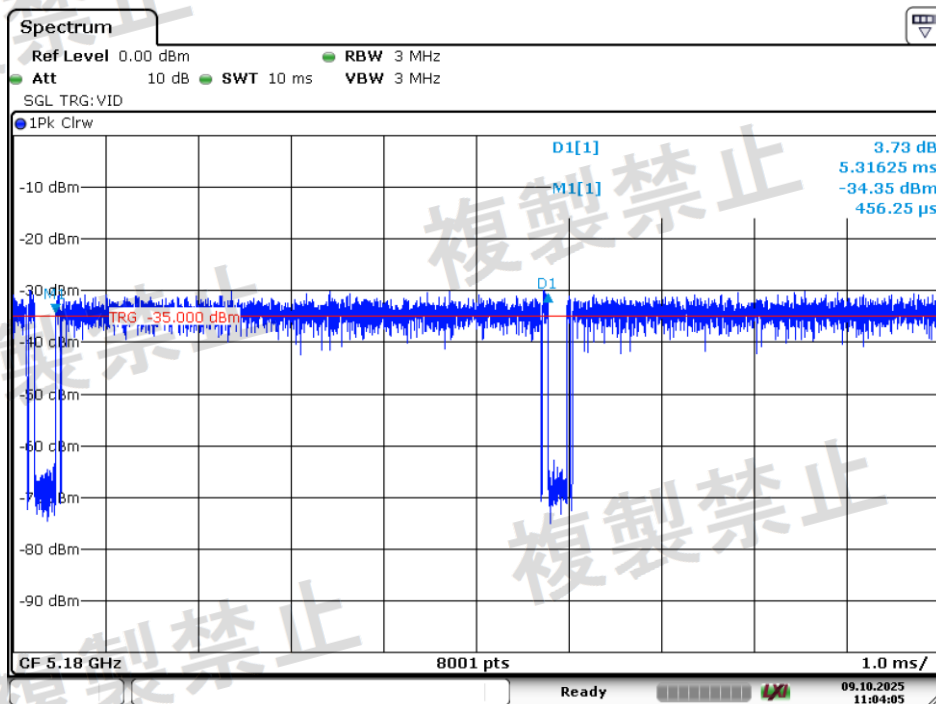
TEST RESULT

Mode	Test Frequency (MHz)	Transmission Burst Length (ms)	Limit (ms)
802.11a	5180	5.32	≤ 8
802.11ac VHT20	5180	5.32	≤ 8
802.11ac VHT40	5190	3.92	≤ 8
802.11ac VHT80	5210	1.93	≤ 8

TEST PLOTS

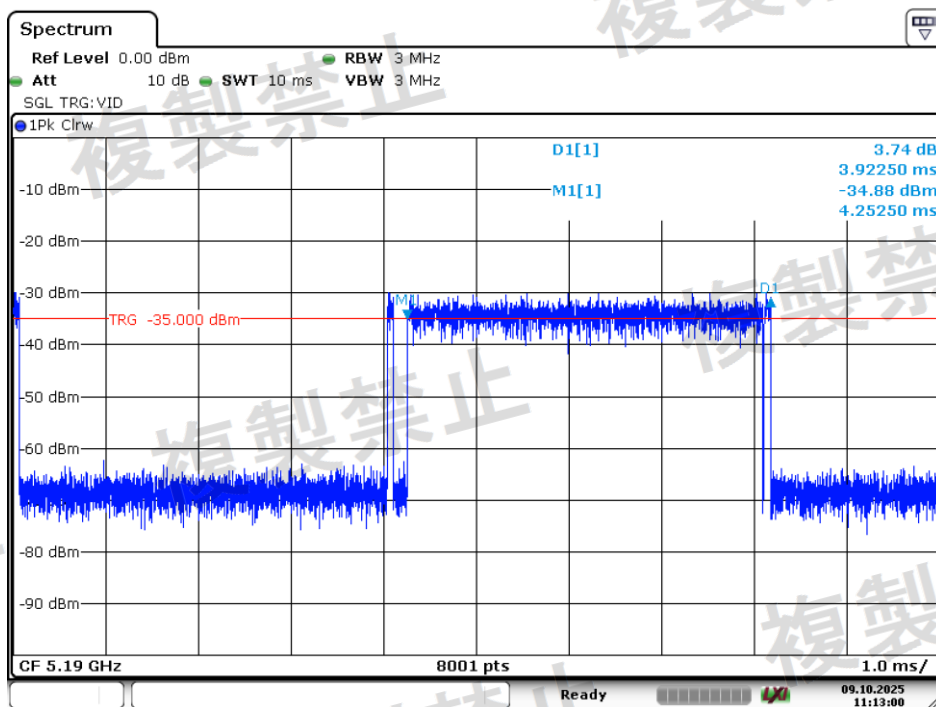


802.11ac VHT20



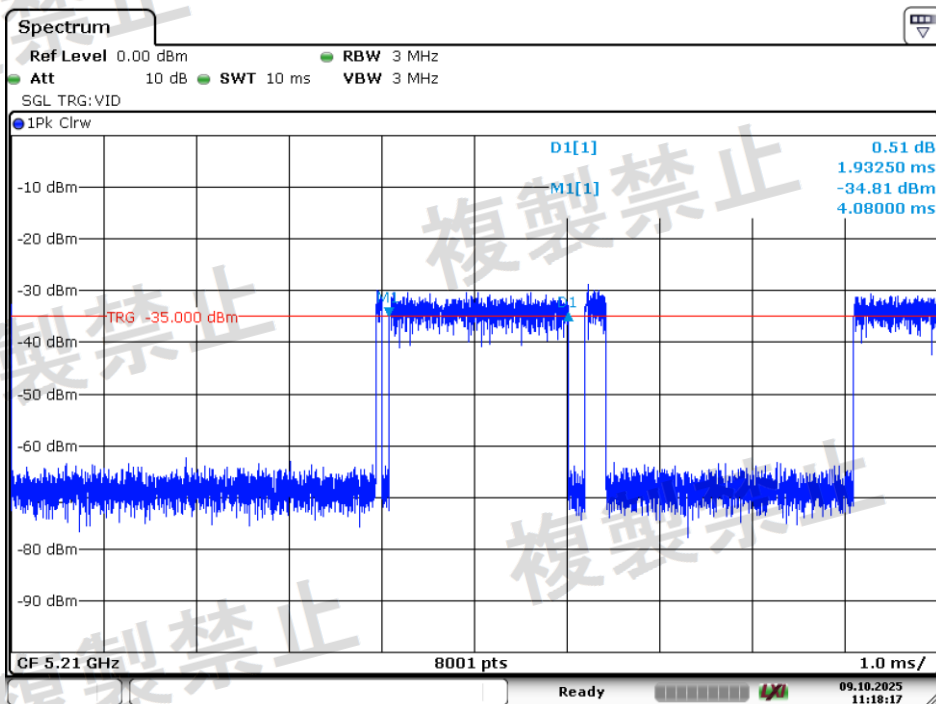
Date: 9.OCT.2025 11:04:06

802.11ac VHT40



Date: 9.OCT.2025 11:13:00

802.11ac VHT80



Date: 9.OCT.2025 11:18:17

5.8 INTERFERENCE PREVENTION FUNCTION

TEST PROCEDURE

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

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

In the case of receiving the identification codes:

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

The EUT shall have the interference prevention capability to transmit or to receive the identification automatically, so that sender and receiver shall exclude other equipment.

Test Block



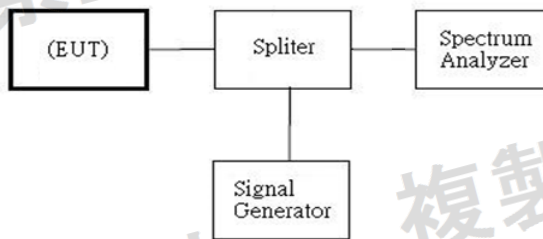
Test Result: Compliant

5.9 CARRIER SENSING FUNCTION

TEST PROCEDURE

1. SG adjusted the frequency as same as the EUT transmitted signal and emitted the absence of modulation from SG and power level is (on $22.79 + G - 20 \cdot \log(f) \text{ dBm}$) (G is the antenna gain is the test frequency).
2. Turn off the RF signal of the SG.
3. EUT have transmitted the maximum modulation signal and fixed channelize.
4. Setting of SA: RBW/VBW=1MHz/1MHz, Span=50MHz, Sweep time=auto, Sweep mode=continuous, Detect mode=positive peak.
5. SG RF signal on.
6. EUT shall be stop the transmitted any signal and SG RF signal off, the EUT will be continuous, transmitted signal.

Test Block



Test Result: Good

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