



Radio Test Report

Article 2 Paragraph 1 of Item 19-3

MIC notice 88 Appendix 45

Client Information:

Applicant: Autel Intelligent Technology Corp., Ltd.

Applicant add.: Floor 2, Caihong Keji Building, 36 Hi-tech North Six Road, Songpingshan Community, Xili Sub-district, Nanshan District, Shenzhen City, China

Product Information:

Product Name: Digital Target Panel

Model No.: AUTEL-CSC050A/16

Serial Model : N/A

Brand Name: AUTEL

Report No.: CTT2025031002R21T-02

Prepared By:

Shenzhen C-link Testing & Technology Co., Ltd.

Add. : No.709, Enhai Building, No.1 Hangkong Road, Sanwei Community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China

Date of Receipt: Mar. 07, 2025

Date of Test: Mar. 07, 2025~ Mar. 18, 2025

Date of Issue: Mar. 18, 2025

Test Result: Pass

This device has been tested and found to comply with the stated standard(s) above, which is (are) applicable only to the tested sample identified in the report.

Note: This report shall not be reproduced except in full, without the written approval of Shenzhen C-link Testing & Technology Co., Ltd. this document may be altered or revised by Shenzhen C-link Testing & Technology Co., Ltd. personal only, and shall be noted in the revision of the document. This test report must not be used by the client to claim product endorsement.

Reviewed by:

Mary Ye



Approved by:

Brown Lu



Table of Contents

Page

1 . SUMMARY OF TEST RESULTS	5
1.1 TEST FACILITY	6
1.2 MEASUREMENT UNCERTAINTY	6
2 . GENERAL INFORMATION	7
2.1 GENERAL DESCRIPTION OF EUT	7
2.2 DESCRIPTION OF TEST MODES	9
2.3 TEST CONDITIONS	10
2.4 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	10
2.5 DESCRIPTION OF SUPPORT UNITS	11
2.6 EQUIPMENTS LIST FOR ALL TEST ITEMS	12
3 . RF SHIELDING METHOD	13
4 . TEST RESULT FOR WIFI	14
4.1 FREQUENCY ERROR	14
4.2 LIMIT	14
4.3 MEASURING INSTRUMENTS AND SETTING	14
4.4 TEST PROCEDURES	14
4.5 TEST SETUP LAYOUT	14
5 . OCCUPIED BANDWIDTH MEASUREMENT (99% POWER BANDWIDTH)	19
5.1 LIMIT	19
5.2 TEST PROCEDURES	19
5.3 TEST SETUP LAYOUT	19
5.4 TEST DEVIATION	19
5.5 EUT OPERATION DURING TEST	19
5.6 TEST RESULT	20
6 . UNWANTED EMISSION STRENGTH MEASUREMENT	30
6.1 LIMIT	30
6.2 MEASURING INSTRUMENTS AND SETTING	30
6.2 . MEASURING INSTRUMENTS AND SETTING	30
6.3 . TEST PROCEDURES	31
6.4 . TEST SETUP LAYOUT	32
6.5 TEST DEVIATION	32



Table of Contents

	Page
6.5 . TEST RESULT	33
7 . ADJACENT CHANNEL EMITTED POWER MEASUREMENT	78
7.1 LIMIT	78
7.2 TEST PROCEDURES	78
7.3 TEST SETUP	79
7.4 TEST DEVIATION	79
7.5 EUT OPERATION DURING TEST	79
8 . RF OUTPUT POWER / TOLERANCE	89
8.1 TEST DEVIATION	89
8.2 EUT OPERATION DURING TEST	89
8.3 TEST PROCEDURES	89
8.4 TEST SETUP	89
8.5 TEST RESULT	90
9 . E.I.R.P MEASUREMENT	105
9.1 LIMIT	105
9.2 TEST PROCEDURES	105
9.3 TEST SETUP LAYOUT	105
9.4 TEST DEVIATION	105
9.5 EUT OPERATION DURING TEST	105
9.6 TEST RESULT OF TRANSMISSION ANTENNA GAIN (EIRP ANTENNA POWER)	105
10 SPURIOUS EMISSIONS FOR RECEIVER	108
10.1 TEST SETUP LAYOUT	108
10.2 TEST DEVIATION	108
10.3 TEST DEVIATION	108
10.4 TEST RESULT OF LIMITATION OF COLLATERAL EMISSION OF RECEIVER	108
11 TRANSMISSION BURST LENGTH MEASUREMENT	121
11.1 MEASURING INSTRUMENTS	121
11.2 TEST PROCEDURES	121
11.3 TEST SETUP	121
11.4 TEST DEVIATION	121
11.5 EUT OPERATION DURING TEST	121
11.6 TEST RESULT OF TRANSMISSION BURST LENGTH	121



Table of Contents

	Page
12. RADIO INTERFERENCE PREVENTION CAPABILITY MEASUREMENT	128
12.1 LIMIT	128
12.2 MEASURING ID CODE SOFTWARE	128
12.3 TEST PROCEDURES	128
12.4 TEST SETUP LAYOUT	128
12.5 TEST DEVIATION	128
12.6 EUT OPERATION DURING TEST	128
12.7 TEST RESULT OF RADIO INTERFERENCE PREVENTION CAPABILIT	128
13 CARRIER SENSE CAPABILITY	129
14. EUT TEST PHOTO	130



1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

MIC Notice No.88 Appendix No.45	Description of Test	Result
Article 3	Frequency Tolerance	Complies
Article 4	Occupied Bandwidth	Complies
Article 5	Unwanted Emission Strength	Complies
Article 6	Antenna Power Error	Complies
Article 6	E.I.R.P	Complies
Article 7	Adjacent channel Emitted Power	Complies
Article 8	Out-Band Leakage Power	Complies
Article 9	Secondary Radiated Emission Strength	Complies
Article 10	Transmission Burst Length	Complies
Article 11	Interference Prevention Function	Complies
Article 12	Carrier Sensing Function	Complies
Article 13,14	Dynamic Frequency Selection (DFS)	Not applicable (See Note 1)
Article 49.20.3	Construction Protection Confirmation	Please refer to Japan Radio Protection Declaration

Note:

1. It is unnecessary to testing, when the EUT only operate in W52 band.
2. The antenna gain has been compensated.



1.1 TEST FACILITY

Shenzhen C-link Testing & Technology Co., Ltd.

Add. : No.709, Enhai Building, No.1 Hangkong Road, Sanwei Community, Hangcheng Street, Bao 'an District, Shenzhen, Guangdong, China

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	Frequency Error / 99% & 90% Bandwidth	$\pm 0.85 \times 10^{-7}$
2	Antenna Power	± 0.70 dB
3	Spurious Emissions	± 0.80 dB
4	DC / AC Power Source	$\pm 1.4\%$



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Manufacturer:	Autel Intelligent Technology Corp., Ltd.	
Manufacturer Address:	Floor 2, Caihong Keji Building, 36 Hi-tech North Six Road, Songpingshan Community, Xili Sub-district, Nanshan District, Shenzhen City, China	
Equipment	Digital Target Panel	
Model Name	AUTEL-CSC050A/16	
Brand Name:	AUTEL	
Derivative model No.:	N/A	
Model Difference	N/A	
Product Description	The EUT is a Digital Target Panel	
	Operation Frequency:	802.11a/n/ac: 5180.0MHz ~ 5240.0MHz
	Modulation Type:	OFDM
	Number Of Channel	Please see Note 2.
	Antenna Designation:	FPC Antenna
	Antenna Gain (dBi)	7.0dBi
	Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.	
Channel List	Please refer to the Note 2.	
Power Supply Range:	INPUT: DC24V	
Hard Ware Version:	DA2411_DIGITAL_PANEL_CTRL_V2	
Soft Ware Version:	V01.01.00	



Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

802.11a& 802.11n& 802.11ac (20MHz):

2.

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

802.11n& 802.11ac (40MHz):

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

802.11ac (80MHz):

Frequency Channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
42	5210						



2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generated from EUT, the test system was pre-scanning tested based on the consideration of following EUT operation mode or test configuration mode which possibly have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	802.11a /n(20) /ac (20): CH36/ CH40/ CH 48,
Mode 2	802.11n(40)/ac(40): CH 38/ CH 46
Mode 3	802.11ac(80) : CH 42

Final Test Mode	Description
Mode 1	802.11a /n(20) /ac (20): CH36/ CH40/ CH 48,
Mode 2	802.11n(40)/ac(40): CH 38/ CH 46
Mode 3	802.11ac(80) : CH 42

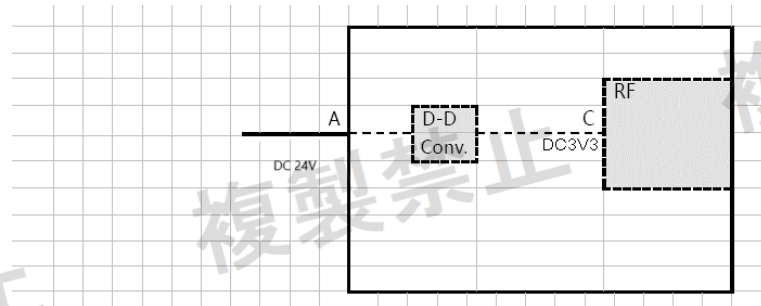
2.3 TEST CONDITIONS

The WIFI module was tested while in a continuous transmitter/receiver mode.

Power supply:

The EUT has the input voltage to the circuit of RF unit complies with output voltage limitation ($\pm 1\%$) against input voltage fluctuation ($\pm 10\%$).

So, all measurements were conducted at only rated voltage DC 24V.



Test below:

1: The fluctuation of C point is under $\pm 1\%$, when input voltage from A point to the test equipment is fluctuated by $\pm 10\%$.

The measurement result of the voltage fluctuation at RF circuit when DC 24V $\pm 10\%$

DC 24V	DC3V3
24V	3.33V
26.4V	3.33V
21.6V	3.33V

Pre-test the EUT in all voltage mode at the DC 26.4V, DC 24V and DC21.6V and conducted to determine the worst-case mode, only the worst-case results (DC 24V) are recorded in this report.

The EUT has the input voltage to the circuit of RF unit complies with output voltage limitation ($\pm 1\%$) against input voltage fluctuation ($\pm 10\%$).

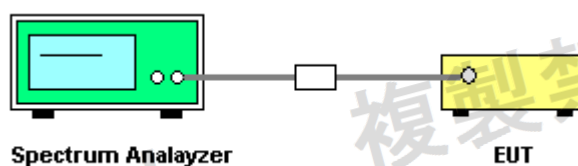
So, all measurements were conducted at only rated voltage DC 24V.

Temperature: 25.0 °C

Humidity: 75 % RH

Atmospheric Pressure: 1013 mbar

2.4 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED





2.5 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Brand	Model/Type No.	Series No.	Note
E-1	Digital Target Panel	AUTEL	AUTEL-CSC050A/16	N/A	EUT

No.	Equipment	Manufacturer	EMC Compliance	Model No.	Serial No.	Power cord	Signal cord
1	Computer	Lenovo	N/A	TP00076A	N/A	N/A	N/A
2	USB TO TTL	FTDI	N/A	FT232RL	N/A	N/A	N/A
3	USB Line	UGREEN	N/A	USB3.0	N/A	N/A	N/A

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
- (3) “YES” is means “shielded” “with core”; “NO” is means “unshielded” “without core”.



2.6 EQUIPMENTS LIST FOR ALL TEST ITEMS

No	Test Equipment	Manufacturer	Model No	Serial No	Cal. Date	Cal. Due Date	Cal. Lab
1	SIGNAL Analyzer	Keysight	N9020A	MY53300466	2025.01.17	2026.01.16	Guangdong LiSai
2	RF Automatic Test System	MWRFTest	MV1 00-RFCB	/	2025.01.17	2026.01.16	

Remark:

(a) Calibration conducted by the National Institute of Information and Communications Technology (NICT) in Japan (hereinafter referred to as "NICT") or a designated calibration agency under Article 102-18 paragraph (1) in JRL.

(b) Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Act (Act No. 51 of 1992) .

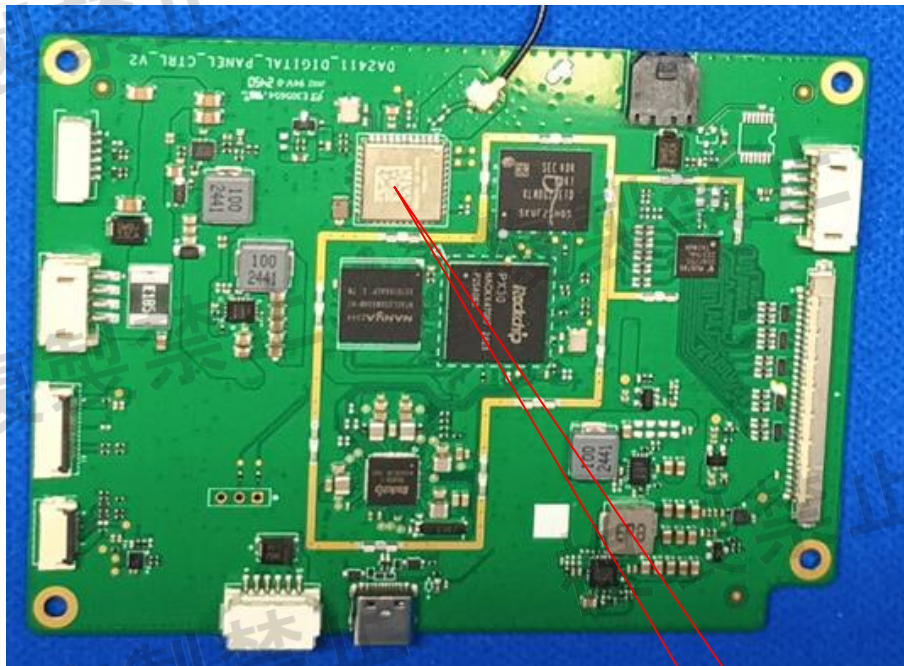
(c) Calibration conducted in countries except Japan, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1).

(d) Calibration, etc. conducted by using measuring instruments and other equipment listed in the right column of appended table No. 3, which shall have been given any type of calibration, etc. listed above from (a) to (C)

From JRL Article 24-2, paragraph 4, Item 2

3. RF SHIELDING METHOD

We apply the product for Japan RF certification. We use covered by soldered metal caps for preventing end- user to access RF parts easily. The shield can only be opened by forced, which will result in damaging the case. Please refer to following for photo for details.



Covered by
soldered
metal caps



4. TEST RESULT FOR WIFI

4.1 FREQUENCY ERROR

4.2 LIMIT

Item	Limits
Frequency Error	+/-20ppm

4.3 MEASURING INSTRUMENTS AND SETTING

The following table is the setting of Spectrum Analyzer.

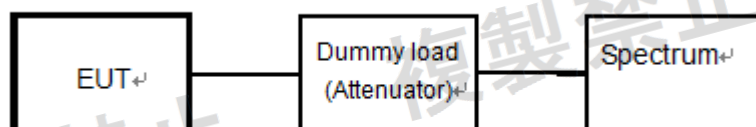
Spectrum Parameter	Setting
Attenuation	Auto
RB / VB	10KHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

4.4 TEST PROCEDURES

- (1) In the case of unmodulated signal (continuous or continuous burst), measure the frequency directly by a frequency meter.
- (2) In the case of burst waves, the measurement shall be done for enough time in order to obtain the enough measuring accuracy, and the average of the measured values becomes the final value.
- (3) In the case of a test mode with a specific frequency spectrum, measure the frequency of the specific spectrum by a spectrum analyzer.
- (4) In the cases above, if the frequency equivalent to the test frequency is not directly measured in principle, it shall be obtained by necessary calculation.

In the case of modulated signal, if there is no specific spectrum measurable by a spectrum analyzer but a specific dip is observed, it is allowed to measure the frequency with the signal generator (synthesized). That is, observe a signal of the signal generator concurrently (or alternately) with the tested signal using the spectrum analyzer while setting the frequency of the signal generator to the position of the dip on the screen of the spectrum analyzer, and determine the frequency of the signal generator at the time as a measured value.

4.5 TEST SETUP LAYOUT



4.1.5. EUT OPERATION DURING TEST

The EUT was placed on the test table and programmed in un-modulation function.

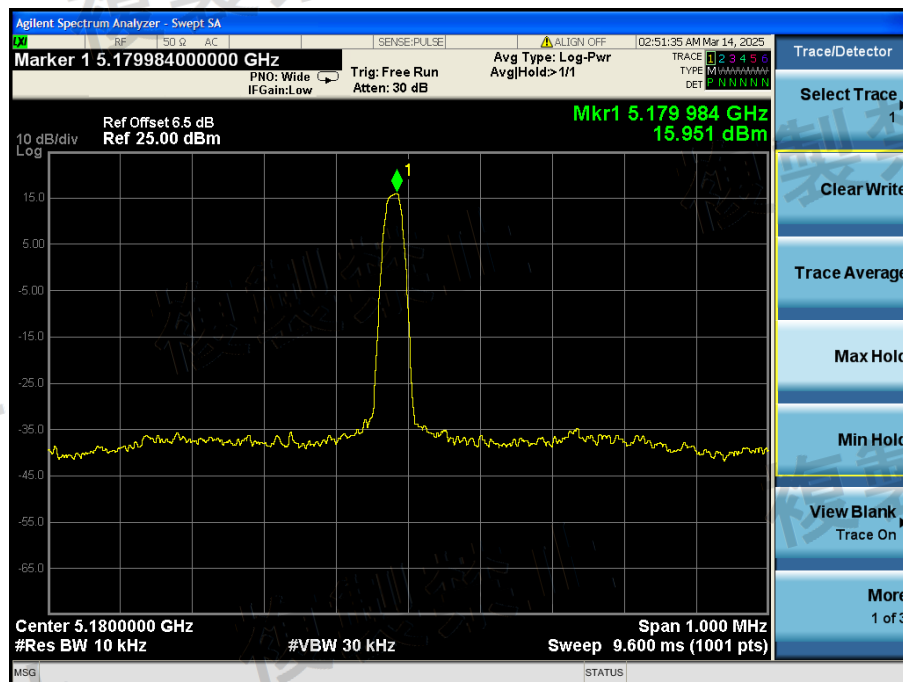


4.5.1 TEST RESULT

EUT:	Digital Target Panel	Model No.:	AUTEL-CSC050A/16
Temperature:	25°C	Test Date:	Mar. 14, 2025
Humidity:	55 % RH	Tested by:	Jack Li
Atmospheric Pressure:	1013 mbar	Test Voltage	Normal Voltage

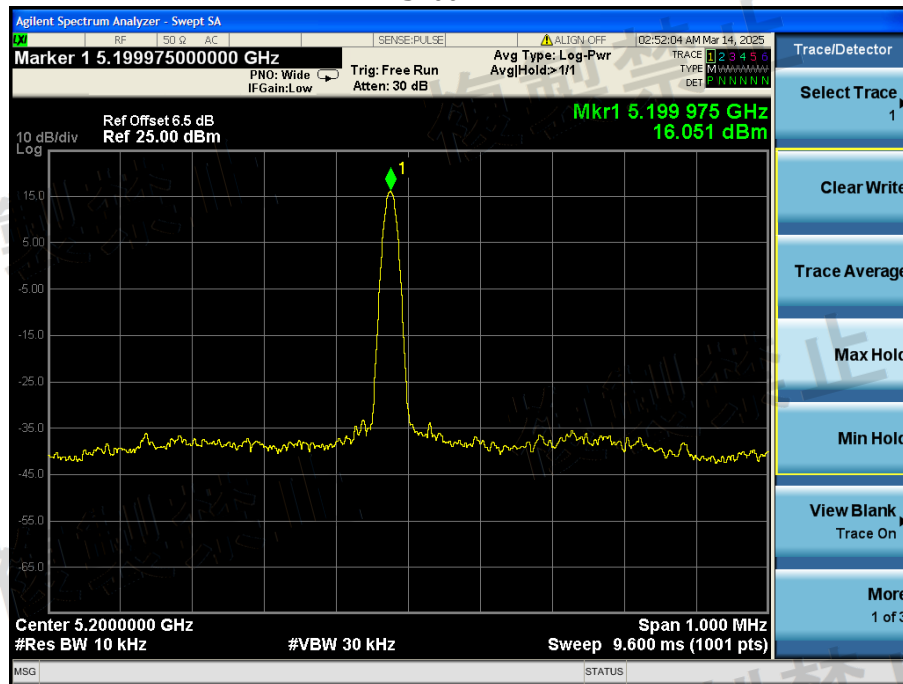
Test Voltage	Test Frequency (MHz)	Measured Frequency (MHz)	Frequency Error(ppm)	Limit (ppm)	P/F
Normal Voltage	5180	5179.984	-3.09	+/-20	PASS
	5200	5199.975	-4.81	+/-20	PASS
	5240	5239.975	-4.77	+/-20	PASS
	5190	5189.975	-4.82	+/-20	PASS
	5230	5229.974	-4.97	+/-20	PASS
	5210	5209.974	-4.99	+/-20	PASS

5180MHz

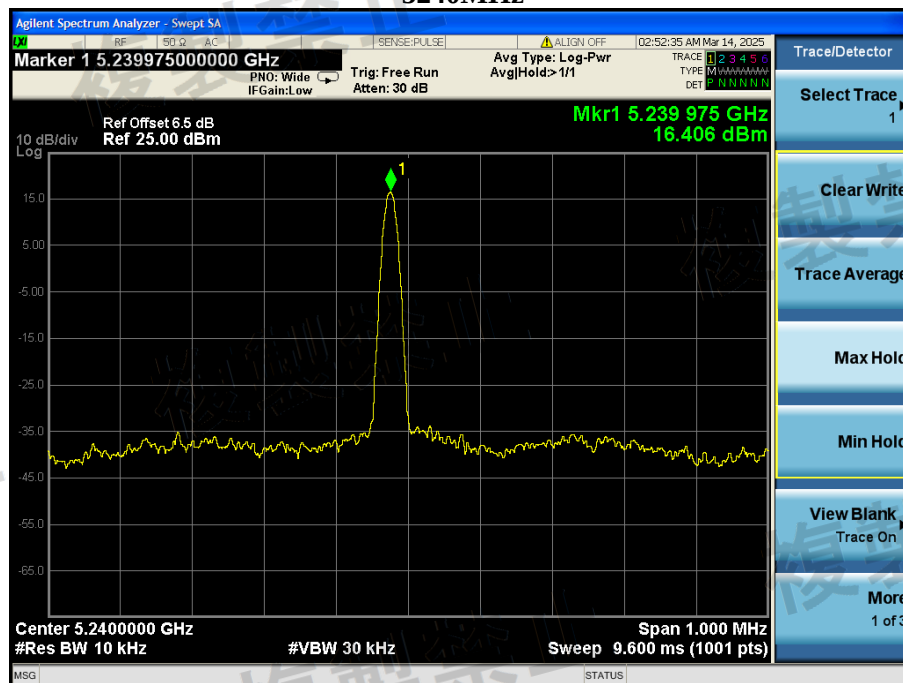




5200MHz

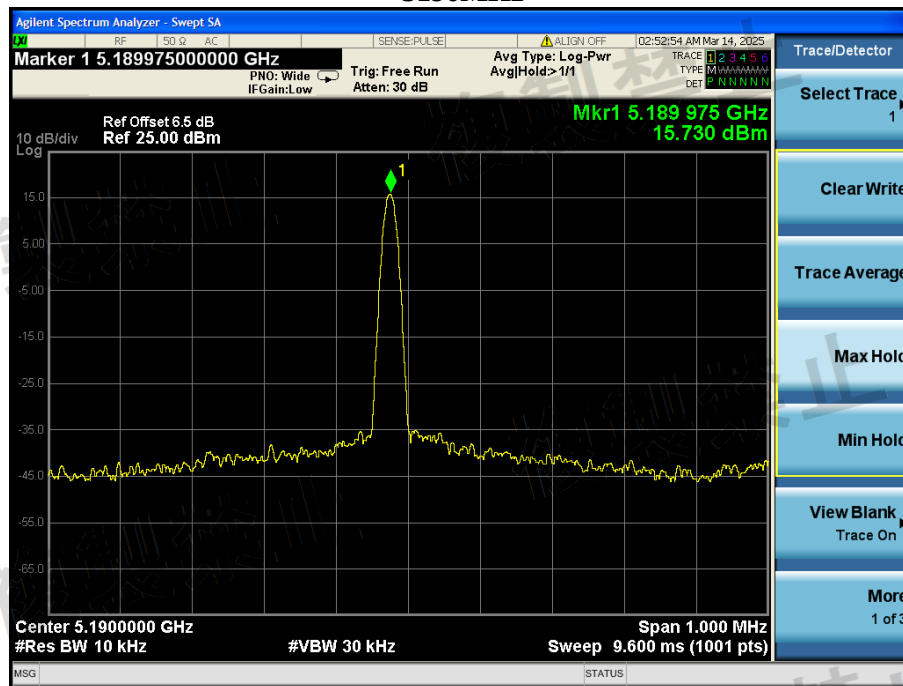


5240MHz

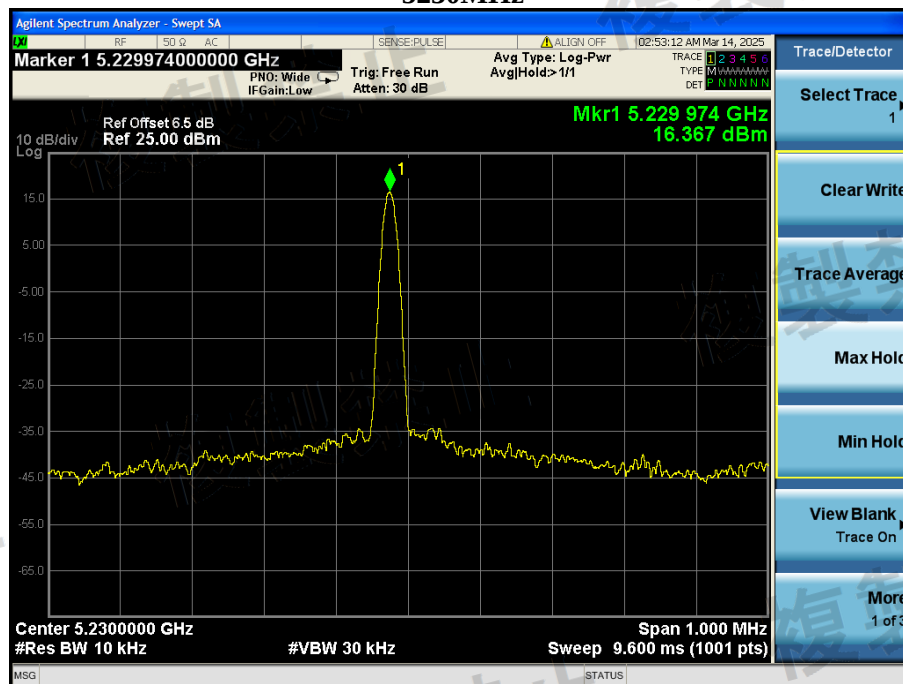


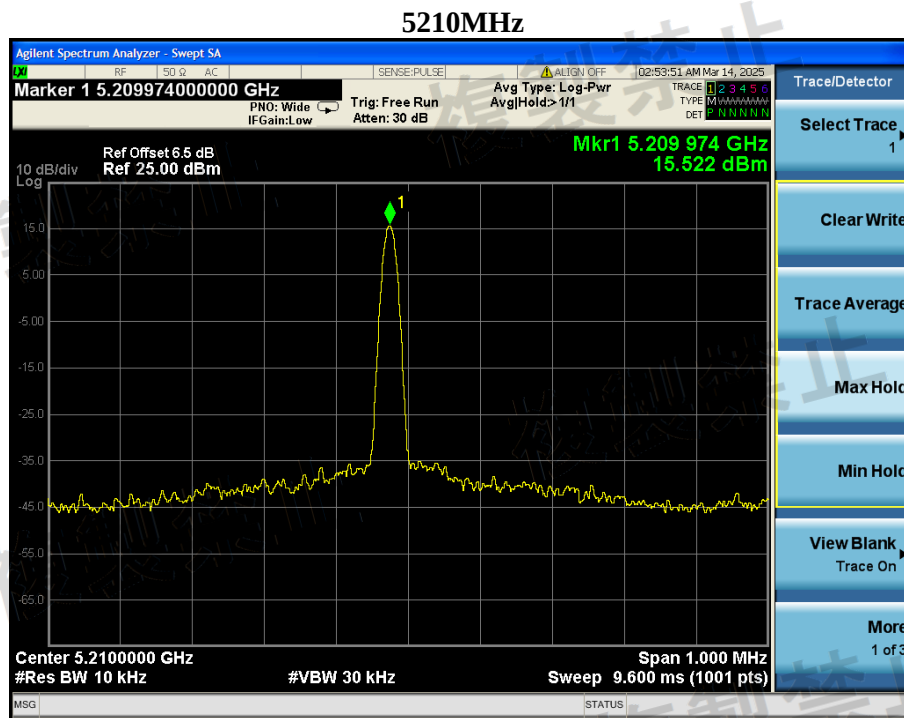


5190MHz



5230MHz





5. OCCUPIED BANDWIDTH MEASUREMENT (99% POWER BANDWIDTH)

5.1 LIMIT

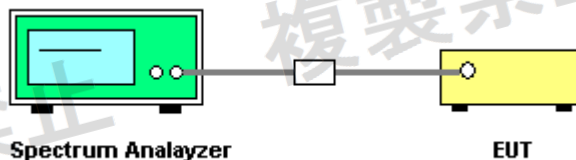
Test Item	Limits
Occupied Bandwidth	≤ 20 MHz (20MHz System for OFDM)
	≤ 40 MHz (40MHz System for OFDM)
	≤ 80 MHz (80MHz System for OFDM)
	≤ 160 MHz (160MHz System for OFDM)

5.2 TEST PROCEDURES

The device under test is connected to the spectrum analyzer through a radio frequency cable and the settings are as follows:

1. EUT have transmitted the maximum modulation signal and fixed channelize.
2. SA set to 99% of occupied bandwidth to measure occupied bandwidth.
3. Resolution bandwidth: Limited to 3% or less of the allowable value specified in equipment regulations.
4. Video bandwidth: Comparable to the resolution bandwidth.
5. Span: Spanning from approximately twice to 3.5 times the allowable value as per equipment regulations.
6. ATT: 30dB /Ref:20dBm (actual sample power adjustment is for reference only)
7. Sweep time = The minimum duration ensuring measurement accuracy, accounting for burst wave scenarios where at least one burst occurs per sample. / Sweep Mode: Continuous sweep
8. Detect mode=Positive peak
9. Trace mode=Max hold
10. Record the result for Occupied Bandwidth Measurements in report..

5.3 TEST SETUP LAYOUT



5.4 TEST DEVIATION

There is no deviation with the original standard.

5.5 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

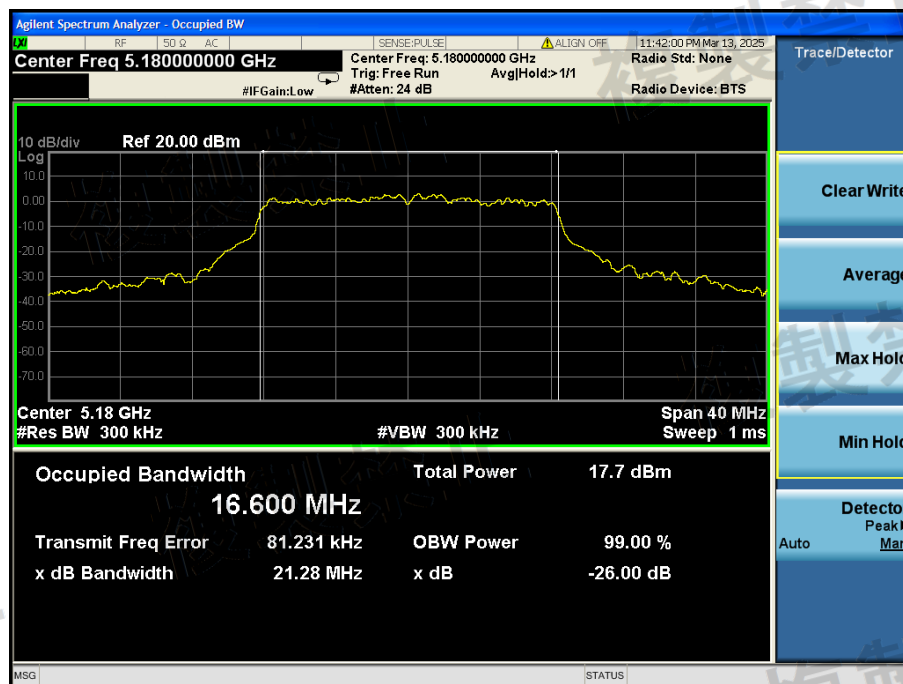


5.6 TEST RESULT

EUT:	Digital Target Panel	Model No.:	AUTEL-CSC050A/16
Temperature:	25°C	Test Date:	Mar. 13, 2025
Humidity:	55 % RH	Tested by:	Jack Li
Atmospheric Pressure:	1013 mbar	Test Voltage	Normal Voltage
Operation Mode:	Normal Voltage-a mode		

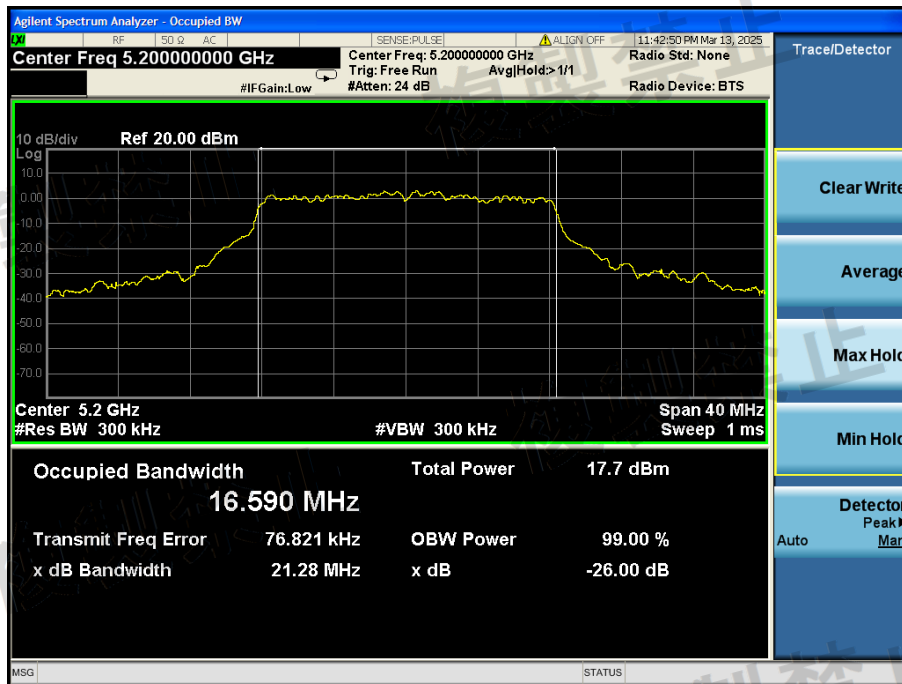
Test Voltage	Test Frequency (MHz)	Occupied Bandwidth(MHz)
Normal Voltage	5180	16.600
	5200	16.590
	5240	16.601

CH36-Occupied Bandwidth (99%)-a Mode

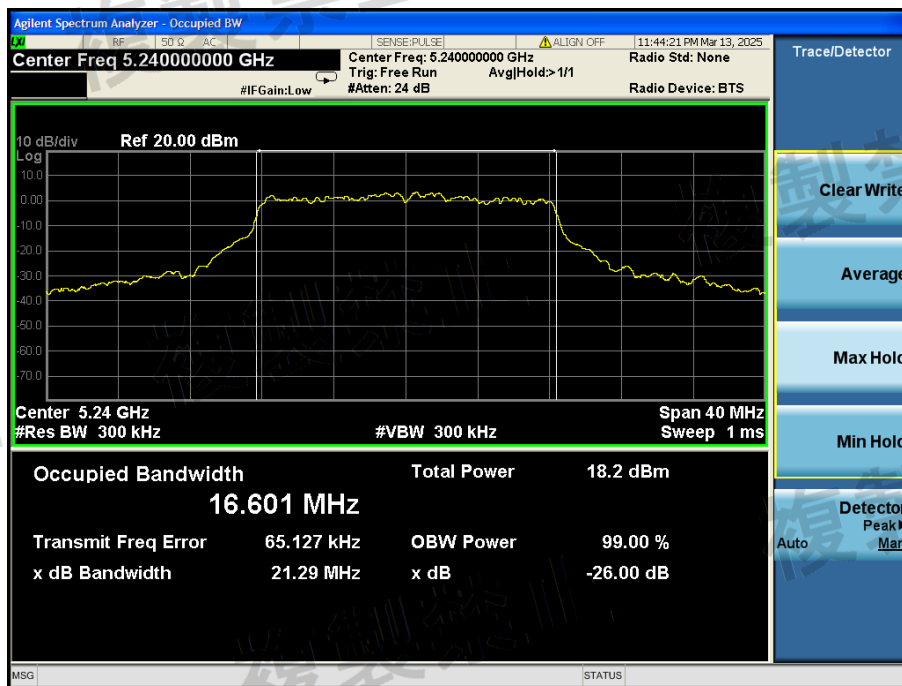




CH40-Occupied Bandwidth (99%)-a Mode



CH48-Occupied Bandwidth (99%)-a Mode

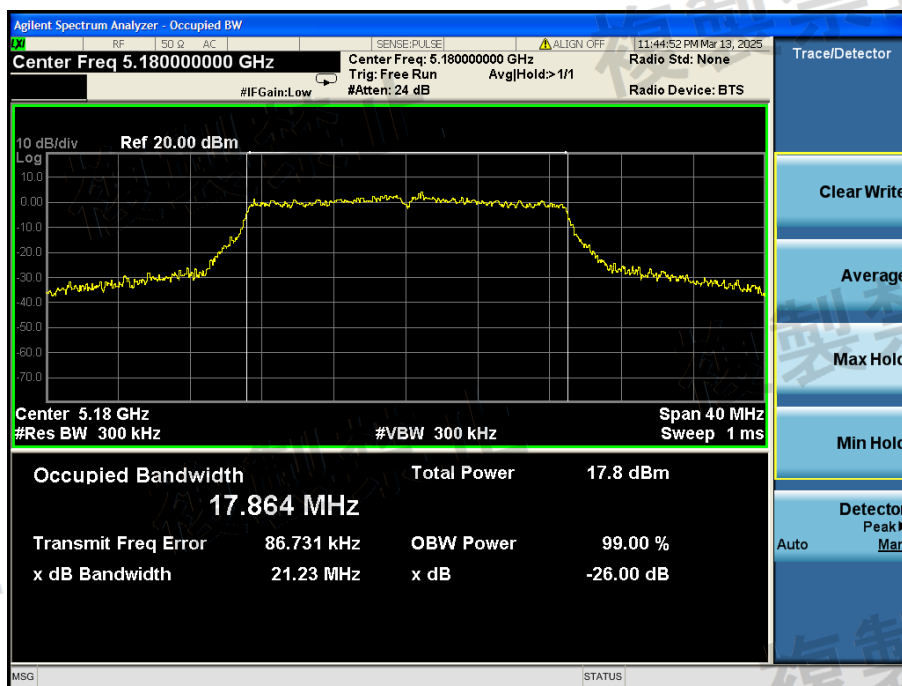




EUT:	Digital Target Panel	Model No.:	AUTEL-CSC050A/16
Temperature:	25°C	Test Date:	Mar. 13, 2025
Humidity:	55 % RH	Tested by:	Jack Li
Atmospheric Pressure:	1013 mbar	Test Voltage	Normal Voltage
Operation Mode:	Normal Voltage-n mode(20MHz)		

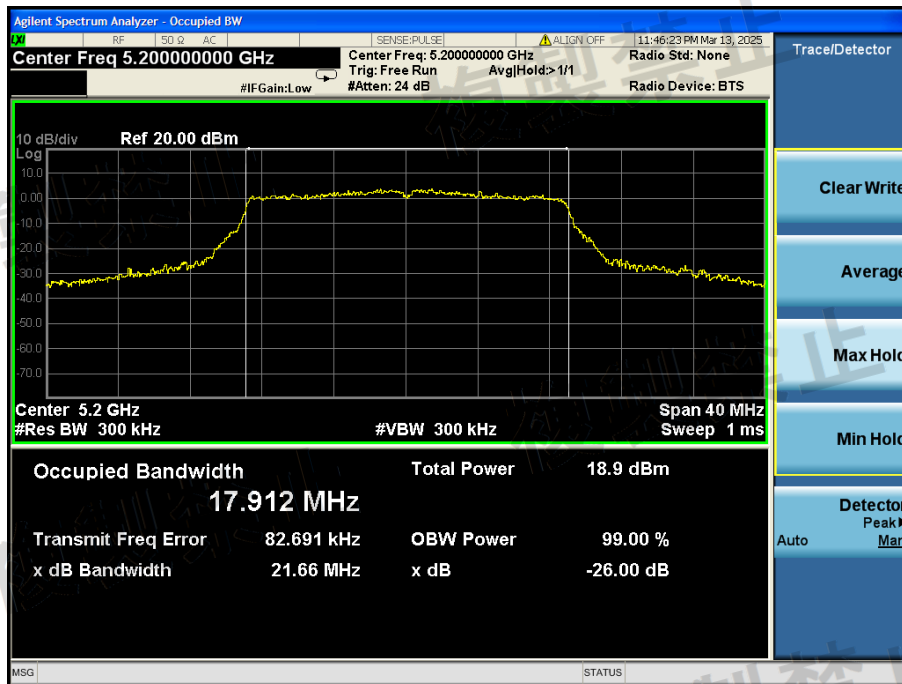
Test Voltage	Test Frequency (MHz)	Occupied Bandwidth(MHz)
Normal Voltage	5180	17.864
	5200	17.912
	5240	17.883

CH36-Occupied Bandwidth (99%)-n(20) Mode

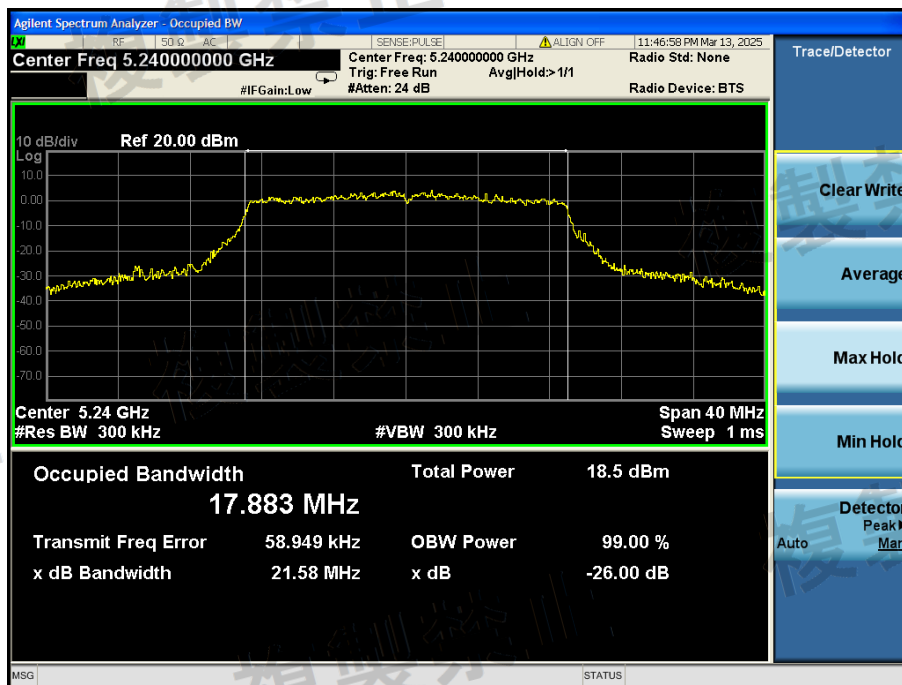




CH40-Occupied Bandwidth (99%)-n(20) Mode



CH48-Occupied Bandwidth (99%)-n(20) Mode

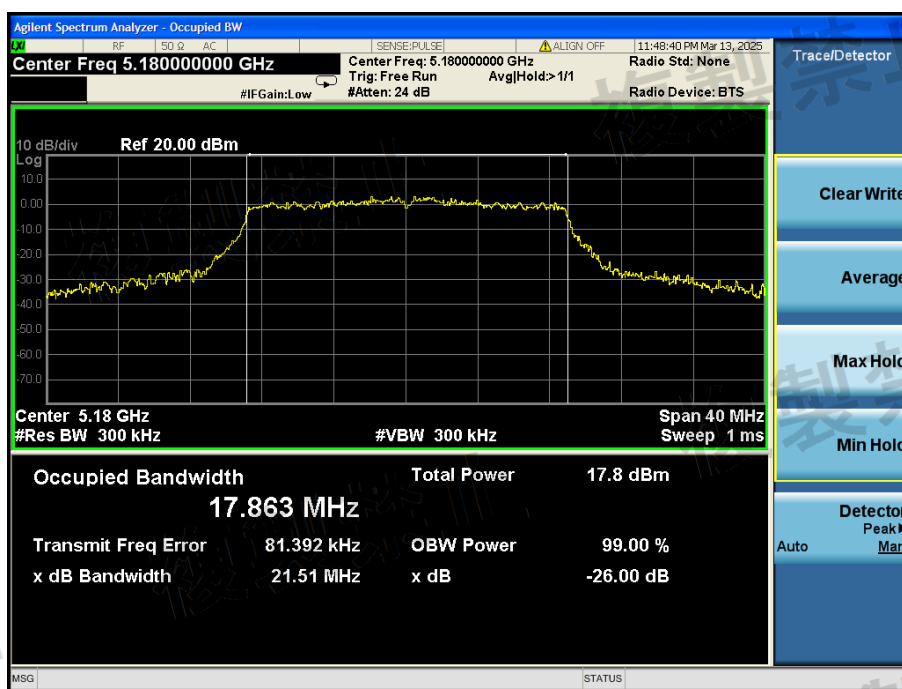




EUT:	Digital Target Panel	Model No.:	AUTEL-CSC050A/16
Temperature:	25°C	Test Date:	Mar. 13, 2025
Humidity:	55 % RH	Tested by:	Jack Li
Atmospheric Pressure:	1013 mbar	Test Voltage	Normal Voltage
Operation Mode:	Normal Voltage- ac mode(20MHz)		

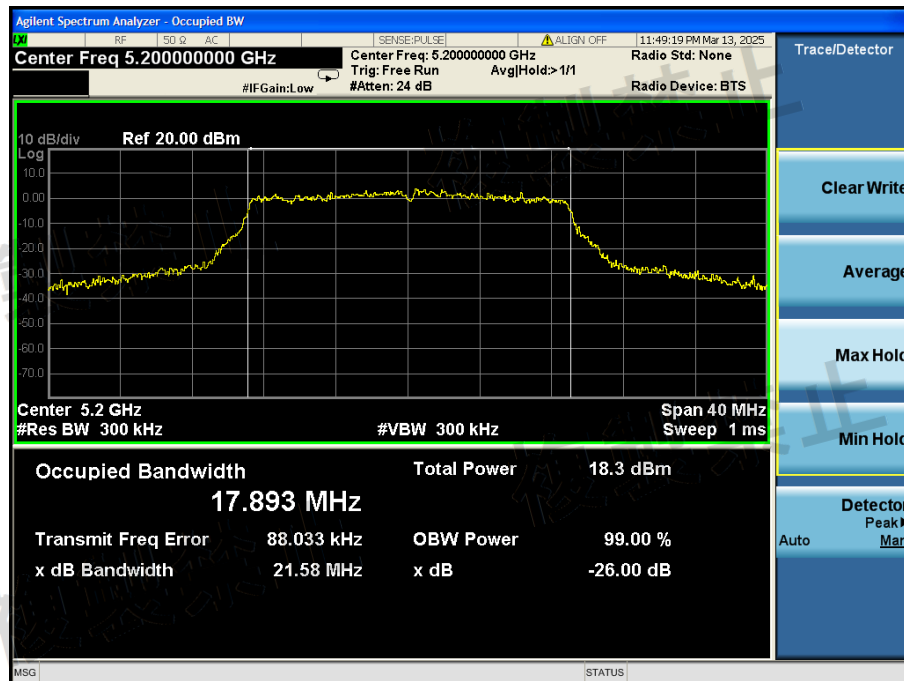
Test Voltage	Test Frequency (MHz)	Occupied Bandwidth(MHz)
Normal Voltage	5180	17.863
	5200	17.893
	5240	17.859

CH36-Occupied Bandwidth (99%)-ac(20) Mode

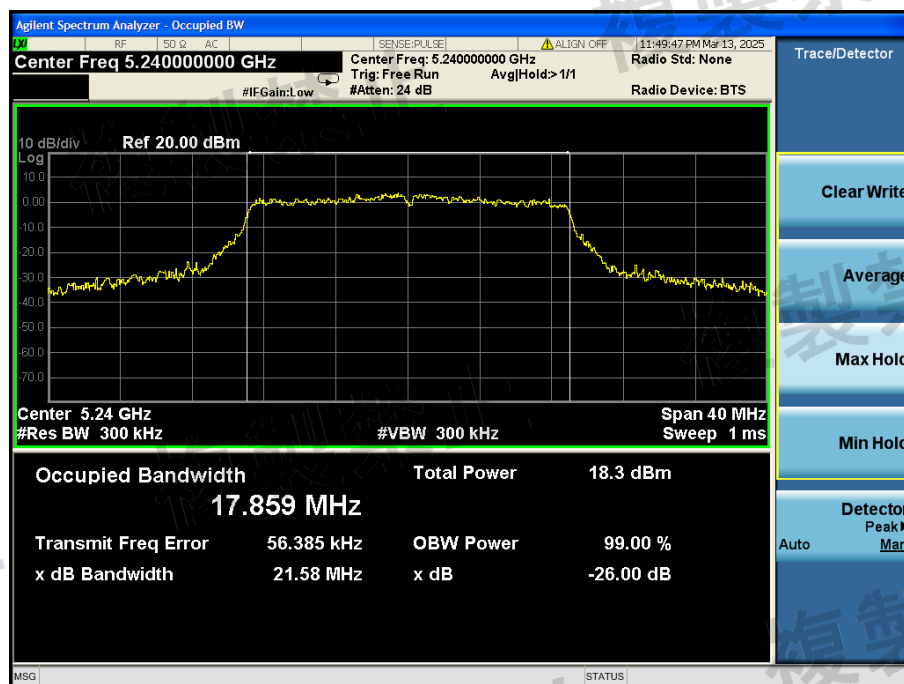




CH40-Occupied Bandwidth (99%)-ac(20) Mode



CH48-Occupied Bandwidth (99%)-ac(20) Mode

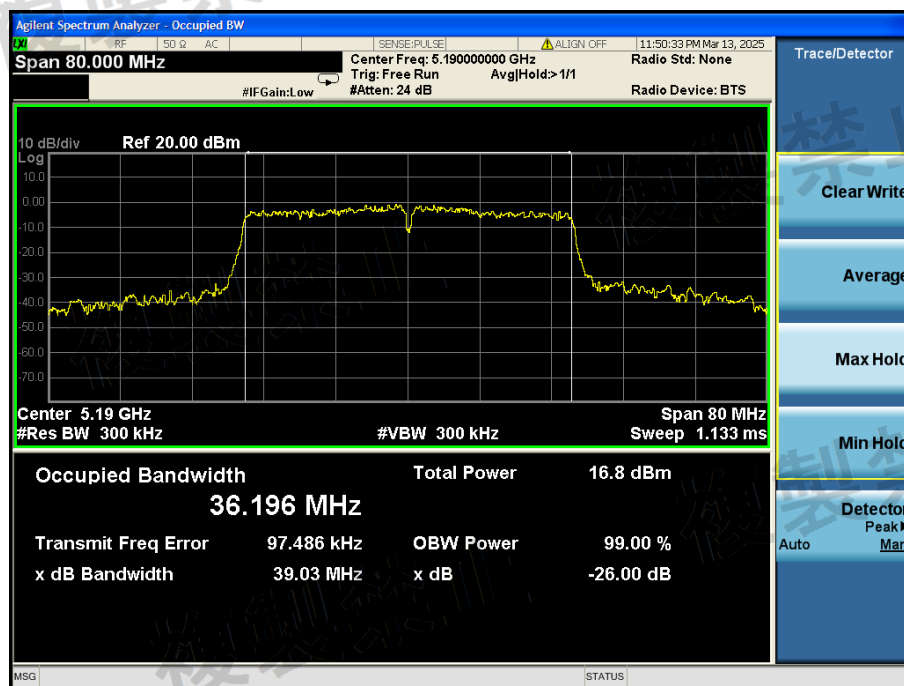




EUT:	Digital Target Panel	Model No.:	AUTEL-CSC050A/16
Temperature:	25°C	Test Date:	Mar. 13, 2025
Humidity:	55 % RH	Tested by:	Jack Li
Atmospheric Pressure:	1013 mbar	Test Voltage	Normal Voltage
Operation Mode:	Normal Voltage-n(40MHz) mode		

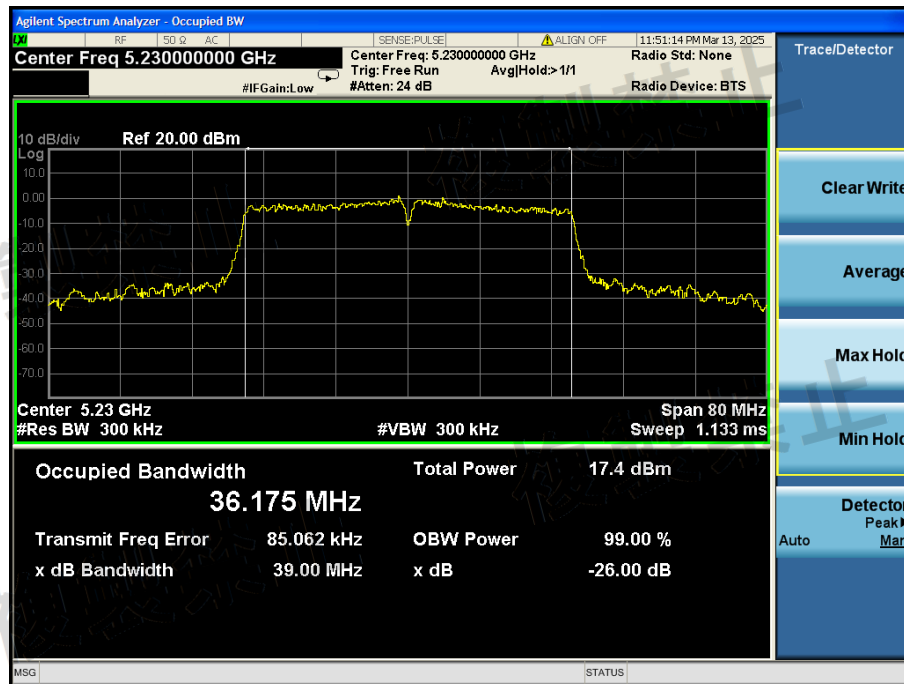
Test Voltage	Test Frequency (MHz)	Occupied Bandwidth(MHz)
Normal Voltage	5190	36.196
	5230	36.175

CH38-Occupied Bandwidth (99%)-n(40) Mode





CH46-Occupied Bandwidth (99%)-n(40) Mode



EUT:	Digital Target Panel	Model No.:	AUTEL-CSC050A/16
Temperature:	25°C	Test Date:	Mar. 13, 2025
Humidity:	55 % RH	Tested by:	Jack Li
Atmospheric Pressure:	1013 mbar	Test Voltage	Normal Voltage
Operation Mode:	Normal Voltage-ac(40MHz) mode		

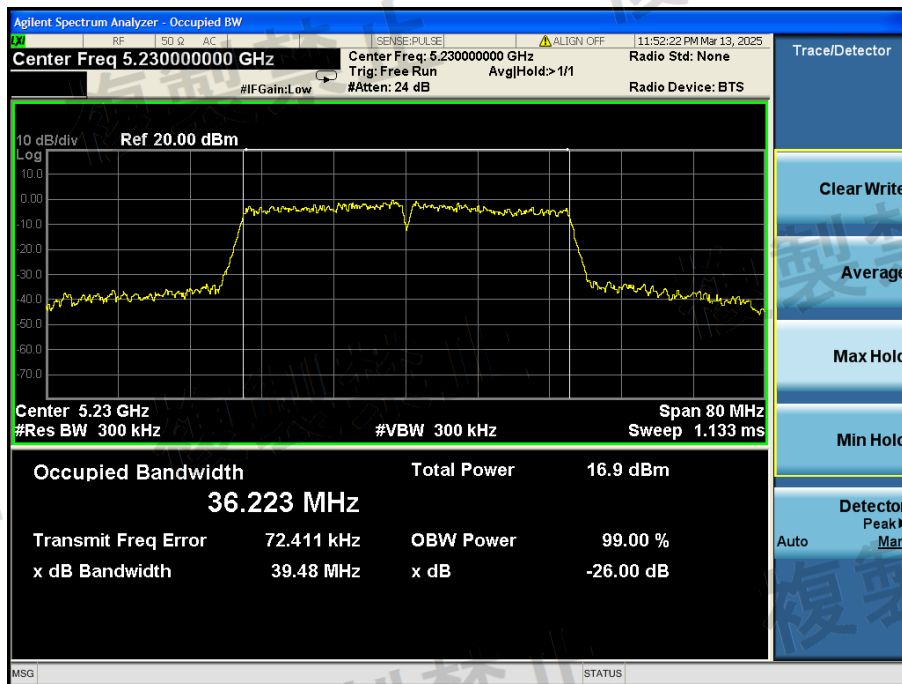
Test Voltage	Test Frequency (MHz)	Occupied Bandwidth(MHz)
Normal Voltage	5190	36.235
	5230	36.223



CH38-Occupied Bandwidth (99%)-ac(40) Mode



CH46-Occupied Bandwidth (99%)-n(40) Mode

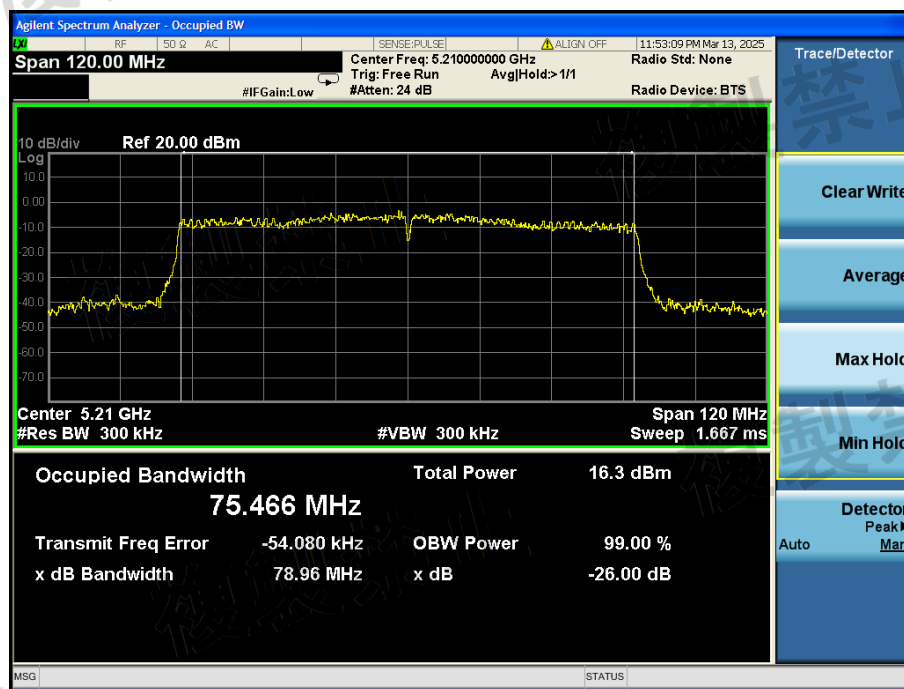




EUT:	Digital Target Panel	Model No.:	AUTEL-CSC050A/16
Temperature:	25°C	Test Date:	Mar. 13, 2025
Humidity:	55 % RH	Tested by:	Jack Li
Atmospheric Pressure:	1013 mbar	Test Voltage	Normal Voltage
Operation Mode:	Normal Voltage-ac mode(80MHz)		

Test Voltage	Test Frequency (MHz)	Occupied Bandwidth(MHz)
Normal Voltage	5210	75.466

CH38-Occupied Bandwidth (99%)-ac(80) Mode





6. UNWANTED EMISSION STRENGTH MEASUREMENT

6.1 LIMIT

20MHz System	
OBW: 18MHz or less	OBW: 18-20 MHz
5142MHz or less: 2.5μW/MHz	5142MHz or less: 2.5μW/MHz
5142 - 5150MHz: 15μW/MHz	5142 - 5150MHz: 15μW/MHz
--	5250 – 5250.2MHz: $10^{1-(8/3)(f-9.75)}$ mW/MHz
5250 - 5251MHz: $10^{1-(f-9)}$ mW/MHz	5250.2 - 5251MHz: $10^{1-(f-9)}$ mW/MHz
5251 - 5260MHz: $10^{1-(8/90)(f-11)}$ mW/MHz	5251 - 5260MHz: $10^{1-(8/90)(f-11)}$ mW/MHz
5260 - 5266.7MHz: $10^{1-1.8-(6/50)(f-20)}$ mW/MHz	5260 - 5266.7MHz: $10^{1-1.8-(6/50)(f-20)}$ mW/MHz
5266.7MHz or more: 2.5μW/MHz	5266.7MHz or more: 2.5μW/MHz
f = MHz, Difference from 5240 (MHz)	

40MHz System	80MHz System
5141.6MHz or less: 2.5μW/MHz	5123.2MHz or less: 2.5μW/MHz
5141.6 - 5150MHz: 15μW/MHz	5123.2 - 5150MHz: 15μW/MHz
5250 - 5251MHz: $10^{1-(f-20)+\log(1/2)}$ mW/MHz	5250 - 5251MHz: $10^{1-(f-40)+\log(1/4)}$ mW/MHz
5251 - 5270MHz: $10^{-(8/190)(f-21)-1+\log(1/2)}$ mW/MHz	5251 - 5290MHz: $10^{-(8/390)(f-41)-1+\log(1/4)}$ mW/MHz
5270 – 5278.4MHz: $10^{-(3/50)(f-40)-1.8+\log(1/2)}$ mW/MHz	5290 – 5296.7MHz: $10^{-(3/100)(f-80)-1.8+\log(1/4)}$ mW/MHz
5278.4MHz or more: 2.5μW/MHz	5296.7MHz or more: 2.5μW/MHz
f = MHz, Difference from 5230 (MHz)	f = MHz, Difference from 5210 (MHz)

6.2 MEASURING INSTRUMENTS AND SETTING

Please refer to section 3.6 in this report. The following table is the setting of Spectrum Analyzer.

6.2. MEASURING INSTRUMENTS AND SETTING

Please refer to section 3.6 in this report. The following table is the setting of Spectrum Analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
RB / VB	Below 1GHz: 1MHz Above 1Ghz: 1MHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto



6.3. TEST PROCEDURES

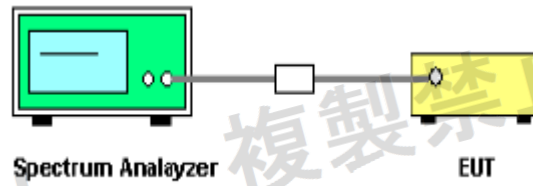
1. UT have transmitted the maximum modulation signal and fixed channelize.
2. Sweep frequency range: From 30MHz to 26GHz
 - Exclude the following frequency ranges from the sweep frequency range:
 - Occupied bandwidth $\leq 18\text{MHz}$:
 - 5.2GHz band: From 5,140MHz to 5,360MHz
 - 5.3GHz band: From 5,140MHz to 5,360MHz
 - 5.6GHz band: From 5,460MHz to 5,740MHz
 - Occupied bandwidth $> 18\text{MHz}$ and $\leq 19\text{MHz}$:
 - 5.2GHz band: From 5,135MHz to 5,365MHz
 - 5.3GHz band: From 5,135MHz to 5,365MHz
 - 5.6GHz band: From 5,455MHz to 5,745MHz
 - Occupied bandwidth $> 19\text{MHz}$ and $\leq 38\text{MHz}$:
 - 5.2GHz band: From 5,100MHz to 5,400MHz
 - 5.3GHz band: From 5,100MHz to 5,400MHz
 - 5.6GHz band: From 5,420MHz to 5,760MHz
 - Occupied bandwidth $> 38\text{MHz}$ and $\leq 78\text{MHz}$:
 - 5.2GHz band: From 5,020MHz to 5,480MHz
 - 5.3GHz band: From 5,020MHz to 5,480MHz
 - 5.6GHz band: From 5,340MHz to 5,800MHz
 - Occupied bandwidth $> 78\text{MHz}$:
 - 5.2GHz band: From 4,916MHz to 5,584MHz
 - 5.3GHz band: From 4,916MHz to 5,584MHz
 - 5.6GHz band: From 5,236MHz to 5,904MHz
3. Resolution bandwidth: 1MHz; Video bandwidth: Comparable to the resolution bandwidth
4. Y-axis scale: 10dB/Div; Input level: Set to achieve maximum dynamic range
5. Sweep time: Minimum time ensuring measurement accuracy (For burst waves, it can be determined as "(Sweep frequency range (MHz) / Resolution bandwidth (MHz)) $\times$ Burst period (s)")
6. Data points: 400 points or more; Sweep mode: Single sweep; Detection mode: Positive peak
7. The cable loss and antenna gain had been edited in the "Input Correction" of the Spectrum Analyzer. In case of MIMO mode, the $10 \times \log(N)$ also had been edited in the "Input Correction" of the Spectrum Analyzer. N is the number of transmit antenna.
8. Convert from dBm to μW : $P(\mu\text{W}) = 1000 * 10^{[P(\text{dBm})/10]}$

When configuring the spectrum analyzer for unwanted emission amplitude measurement, follow these settings:

 - a. Center frequency: Unwanted emission frequency (the frequency being investigated); Span: 0Hz
 - b. Sweep time: Minimum time ensuring measurement accuracy (For burst waves, it should be at least the duration of one burst)
 - c. Data points: 400 points or more; Sweep mode: Single sweep;



6.4. TEST SETUP LAYOUT



6.5 TEST DEVIATION

There is no deviation with the original standard.



6.5. TEST RESULT

Tx Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Range (MHz)	Emission Frequency (MHz)	Max Value (dBm/MHz)	Max Value (uW/MHz)	Limit Start(uW/MHz)	Limit Stop (uW/MHz)	Verdict
NVNT	a	5180	Ant1	30-5142	5142	-43.64	0.0433	2.5	2.5	Pass
NVNT	a	5180	Ant1	5142-5150	5149.52	-39.45	0.1135	15	15	Pass
NVNT	a	5180	Ant1	5250-5251	5250.07	-47.9	0.0162	1000	100	Pass
NVNT	a	5180	Ant1	5251-5260	5258.71	-47.54	0.0176	100	15.85	Pass
NVNT	a	5180	Ant1	5260-5266.7	5264.48	-47.45	0.018	15.85	2.49	Pass
NVNT	a	5180	Ant1	5266.7-26000	26000	-33.65	0.4315	2.5	2.5	Pass
NVNT	a	5200	Ant1	30-5142	2453.09	-44.64	0.0344	2.5	2.5	Pass
NVNT	a	5200	Ant1	5142-5150	5144.41	-45.04	0.0313	15	15	Pass
NVNT	a	5200	Ant1	5250-5251	5250.58	-45.68	0.027	1000	100	Pass
NVNT	a	5200	Ant1	5251-5260	5251.9	-46.25	0.0237	100	15.85	Pass
NVNT	a	5200	Ant1	5260-5266.7	5260.55	-47.65	0.0172	15.85	2.49	Pass
NVNT	a	5200	Ant1	5266.7-26000	26000	-34.03	0.3954	2.5	2.5	Pass
NVNT	a	5240	Ant1	30-5142	3173.88	-44.52	0.0353	2.5	2.5	Pass
NVNT	a	5240	Ant1	5142-5150	5145.9	-47.54	0.0176	15	15	Pass
NVNT	a	5240	Ant1	5250-5251	5250.02	-13.49	44.7713	1000	100	Pass
NVNT	a	5240	Ant1	5251-5260	5251.01	-19.36	11.5878	100	15.85	Pass
NVNT	a	5240	Ant1	5260-5266.7	5260.31	-33.2	0.4786	15.85	2.49	Pass
NVNT	a	5240	Ant1	5266.7-26000	5266.7	-28.89	1.2912	2.5	2.5	Pass
NVNT	n20	5180	Ant1	30-5142	2667.79	-42.61	0.0548	2.5	2.5	Pass
NVNT	n20	5180	Ant1	5142-5150	5149.88	-39.28	0.118	15	15	Pass
NVNT	n20	5180	Ant1	5250-5251	5250.18	-47.78	0.0167	1000	100	Pass
NVNT	n20	5180	Ant1	5251-5260	5259.47	-47.59	0.0174	100	15.85	Pass
NVNT	n20	5180	Ant1	5260-5266.7	5262.73	-47.66	0.0171	15.85	2.49	Pass
NVNT	n20	5180	Ant1	5266.7-26000	25958.53	-34.83	0.3289	2.5	2.5	Pass
NVNT	n20	5200	Ant1	30-5142	3184.1	-44.33	0.0369	2.5	2.5	Pass
NVNT	n20	5200	Ant1	5142-5150	5148.67	-46.47	0.0225	15	15	Pass
NVNT	n20	5200	Ant1	5250-5251	5250.19	-45.6	0.0275	1000	100	Pass
NVNT	n20	5200	Ant1	5251-5260	5258.11	-47.19	0.0191	100	15.85	Pass
NVNT	n20	5200	Ant1	5260-5266.7	5263.52	-47.37	0.0183	15.85	2.49	Pass



				7						
NVNT	n20	5200	Ant1	5266.7-2600	25979.27	-33.44	0.4529	2.5	2.5	Pass
NVNT	n20	5240	Ant1	30-5142	2657.57	-45.35	0.0292	2.5	2.5	Pass
NVNT	n20	5240	Ant1	5142-5150	5147.26	-46.83	0.0207	15	15	Pass
NVNT	n20	5240	Ant1	5250-5251	5250.07	-8.87	129.7179	1000	100	Pass
NVNT	n20	5240	Ant1	5251-5260	5251.05	-17.95	16.0325	100	15.85	Pass
NVNT	n20	5240	Ant1	5260-5266.7	5260.76	-29.94	1.0139	15.85	2.49	Pass
NVNT	n20	5240	Ant1	5266.7-2600	5266.7	-31.03	0.7889	2.5	2.5	Pass
NVNT	n40	5190	Ant1	30-5141.6	3137.85	-44.33	0.0369	2.5	2.5	Pass
NVNT	n40	5190	Ant1	5141.6-5150	5146.28	-38.26	0.1493	15	15	Pass
NVNT	n40	5190	Ant1	5250-5251	5250.36	-46.85	0.0207	500	50	Pass
NVNT	n40	5190	Ant1	5251-5270	5255.79	-47.31	0.0186	50	7.92	Pass
NVNT	n40	5190	Ant1	5270-5278.4	5277.99	-46.96	0.0201	7.92	2.48	Pass
NVNT	n40	5190	Ant1	5278.4-2600	25937.84	-34.56	0.3499	2.5	2.5	Pass
NVNT	n40	5230	Ant1	30-5141.6	3178.75	-44.89	0.0324	2.5	2.5	Pass
NVNT	n40	5230	Ant1	5141.6-5150	5143.99	-46.23	0.0238	15	15	Pass
NVNT	n40	5230	Ant1	5250-5251	5250.03	-23.42	4.5499	500	50	Pass
NVNT	n40	5230	Ant1	5251-5270	5252.65	-30.67	0.857	50	7.92	Pass
NVNT	n40	5230	Ant1	5270-5278.4	5273.37	-38.83	0.1309	7.92	2.48	Pass
NVNT	n40	5230	Ant1	5278.4-2600	25979.28	-34.85	0.3273	2.5	2.5	Pass
NVNT	ac20	5180	Ant1	30-5142	5095.99	-44.59	0.0348	2.5	2.5	Pass
NVNT	ac20	5180	Ant1	5142-5150	5144.98	-39.28	0.118	15	15	Pass
NVNT	ac20	5180	Ant1	5250-5251	5250.24	-47.25	0.0188	1000	100	Pass
NVNT	ac20	5180	Ant1	5251-5260	5251.89	-47.56	0.0175	100	15.85	Pass
NVNT	ac20	5180	Ant1	5260-5266.7	5263.25	-47.38	0.0183	15.85	2.49	Pass
NVNT	ac20	5180	Ant1	5266.7-2600	25958.53	-34.77	0.3334	2.5	2.5	Pass
NVNT	ac20	5200	Ant1	30-5142	2678.02	-44.48	0.0356	2.5	2.5	Pass
NVNT	ac20	5200	Ant1	5142-5150	5144.45	-46.49	0.0224	15	15	Pass
NVNT	ac20	5200	Ant1	5250-5251	5250.67	-46.52	0.0223	1000	100	Pass
NVNT	ac20	5200	Ant1	5251-5260	5252.74	-47.28	0.0187	100	15.85	Pass
NVNT	ac20	5200	Ant1	5260-5266.7	5261.35	-46.95	0.0202	15.85	2.49	Pass



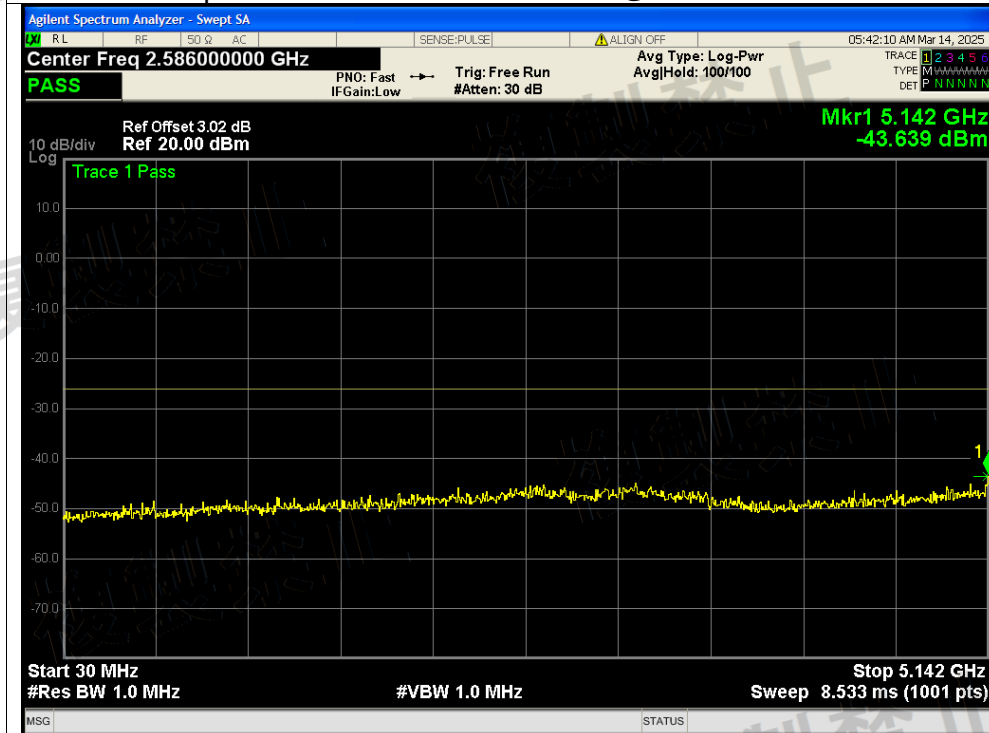
NVNT	ac20	5200	Ant1	5266.7-2600	25917.07	-33.99	0.399	2.5	2.5	Pass
NVNT	ac20	5240	Ant1	30-5142	2637.12	-44.28	0.0373	2.5	2.5	Pass
NVNT	ac20	5240	Ant1	5142-5150	5145.95	-47.09	0.0195	15	15	Pass
NVNT	ac20	5240	Ant1	5250-5251	5250.12	-9.36	115.8777	1000	100	Pass
NVNT	ac20	5240	Ant1	5251-5260	5251.05	-18.27	14.8936	100	15.85	Pass
NVNT	ac20	5240	Ant1	5260-5266.7	5261.17	-29.71	1.0691	15.85	2.49	Pass
NVNT	ac20	5240	Ant1	5266.7-2600	5266.7	-27.45	1.7989	2.5	2.5	Pass
NVNT	ac40	5190	Ant1	30-5141.6	5141.6	-43.8	0.0417	2.5	2.5	Pass
NVNT	ac40	5190	Ant1	5141.6-5150	5146.51	-39.04	0.1247	15	15	Pass
NVNT	ac40	5190	Ant1	5250-5251	5250.52	-47.13	0.0194	500	50	Pass
NVNT	ac40	5190	Ant1	5251-5270	5263.1	-47.34	0.0185	50	7.92	Pass
NVNT	ac40	5190	Ant1	5270-5278.4	5270.25	-47.49	0.0178	7.92	2.48	Pass
NVNT	ac40	5190	Ant1	5278.4-2600	25937.84	-34.86	0.3266	2.5	2.5	Pass
NVNT	ac40	5230	Ant1	30-5141.6	2647.14	-44.01	0.0397	2.5	2.5	Pass
NVNT	ac40	5230	Ant1	5141.6-5150	5145.04	-46.55	0.0221	15	15	Pass
NVNT	ac40	5230	Ant1	5250-5251	5250.01	-21.91	6.4417	500	50	Pass
NVNT	ac40	5230	Ant1	5251-5270	5255.18	-29.84	1.0375	50	7.92	Pass
NVNT	ac40	5230	Ant1	5270-5278.4	5270.13	-40.2	0.0955	7.92	2.48	Pass
NVNT	ac40	5230	Ant1	5278.4-2600	26000	-35.03	0.3141	2.5	2.5	Pass
NVNT	ac80	5210	Ant1	30-5123.2	3126.67	-44.75	0.0335	2.5	2.5	Pass
NVNT	ac80	5210	Ant1	5123.2-5150	5148.74	-38.39	0.1449	15	15	Pass
NVNT	ac80	5210	Ant1	5250-5251	5250	-25.72	2.6792	250	25	Pass
NVNT	ac80	5210	Ant1	5251-5290	5251	-31.85	0.6531	25	3.96	Pass
NVNT	ac80	5210	Ant1	5290-5296.7	5291.6	-43.34	0.0463	3.96	2.49	Pass
NVNT	ac80	5210	Ant1	5296.7-2600	25523.82	-34.51	0.354	2.5	2.5	Pass

Note: The antenna gain has been compensated.

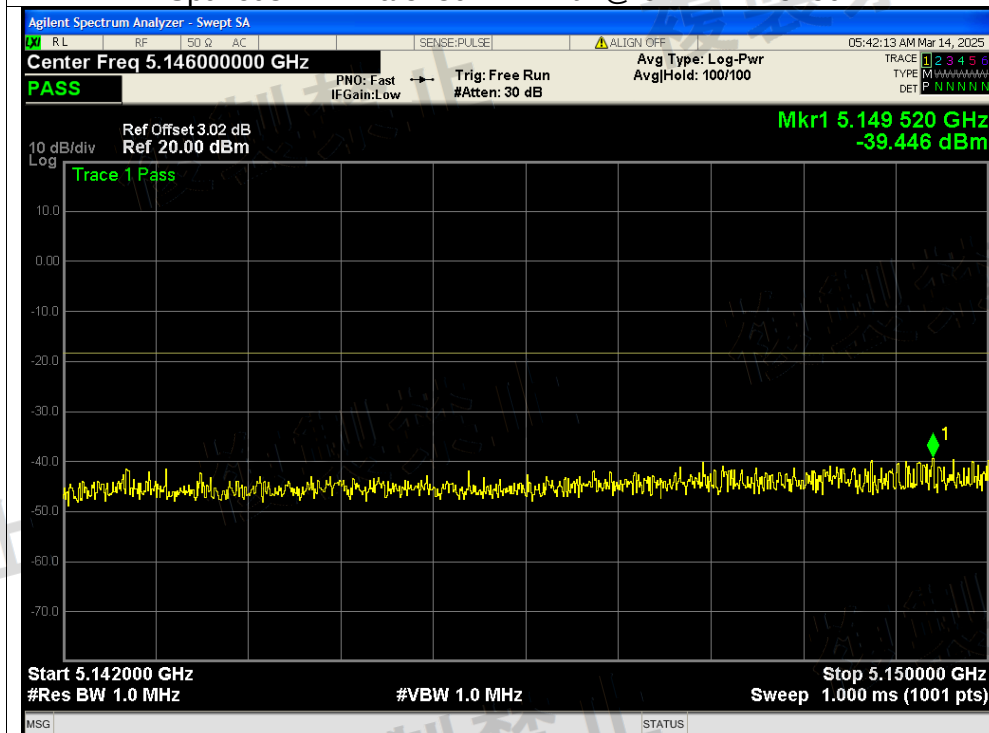


Test Graphs

Tx. Spurious NVNT a 5180MHz Ant1 @ 30MHz-5142MHz

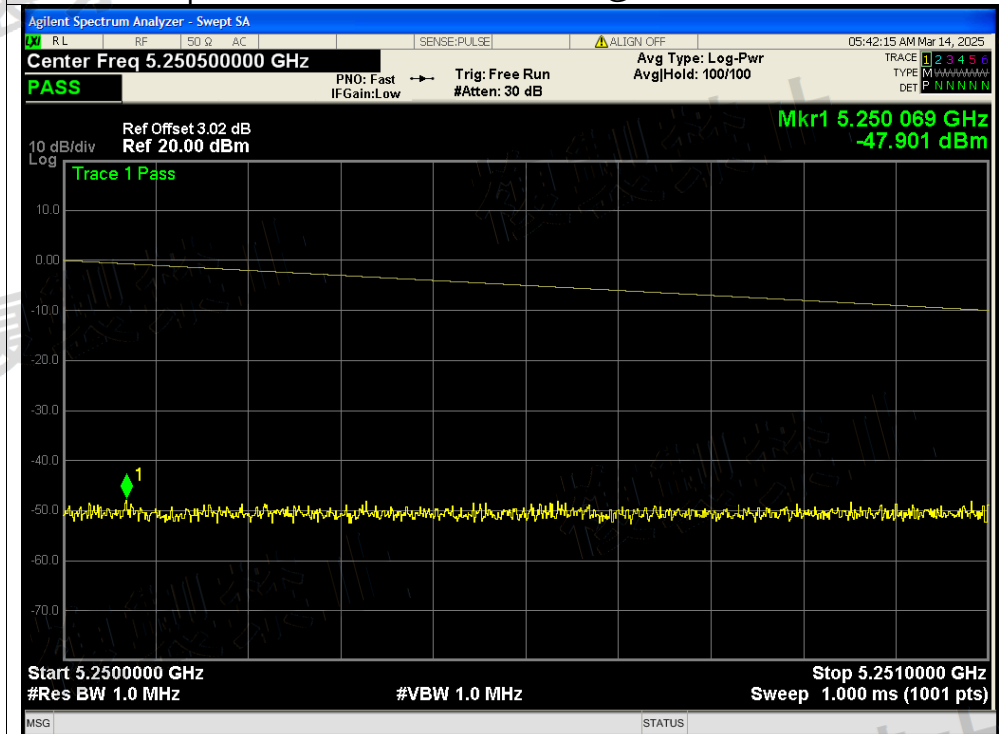


Tx. Spurious NVNT a 5180MHz Ant1 @ 5142MHz-5150MHz

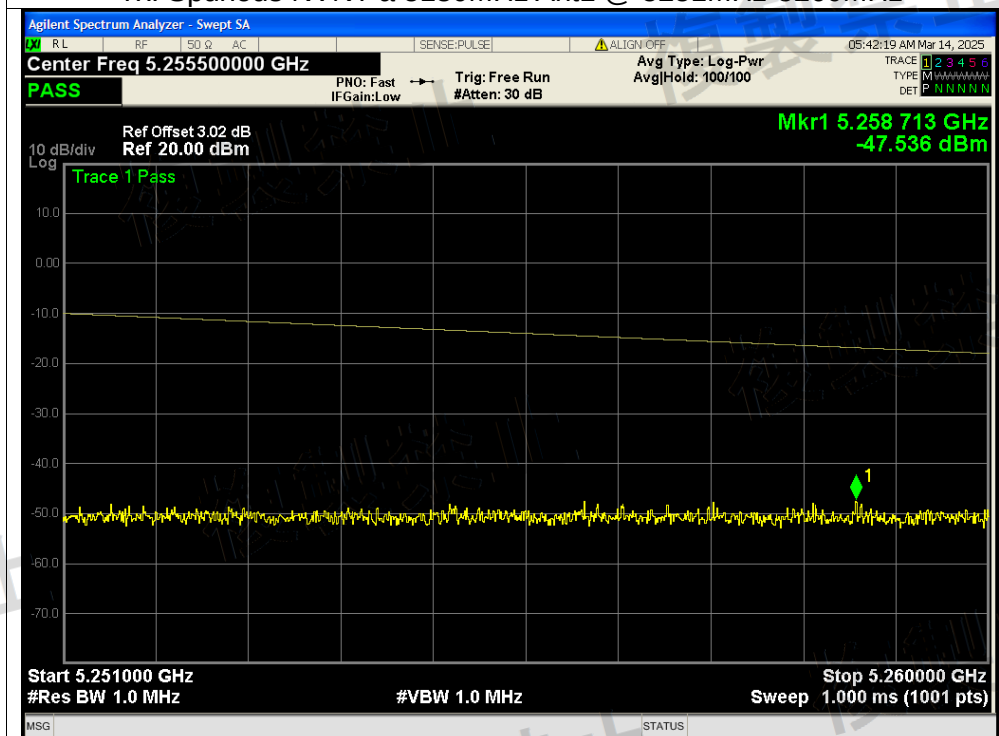




Tx. Spurious NVNT a 5180MHz Ant1 @ 5250MHz-5251MHz

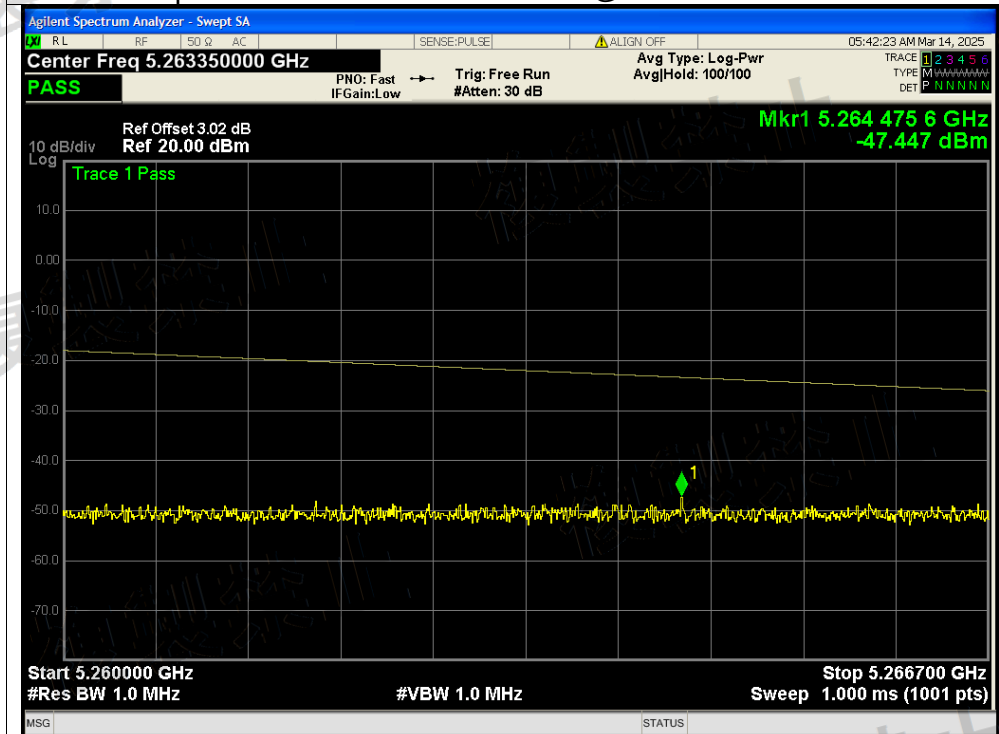


Tx. Spurious NVNT a 5180MHz Ant1 @ 5251MHz-5260MHz

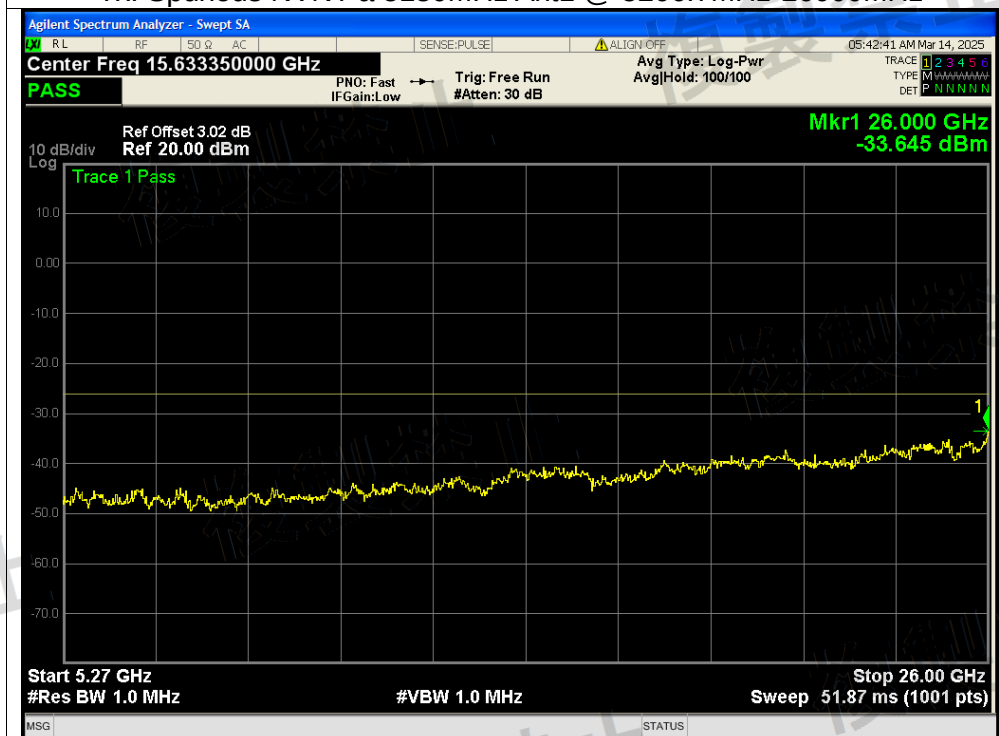




Tx. Spurious NVNT a 5180MHz Ant1 @ 5260MHz-5266.7MHz

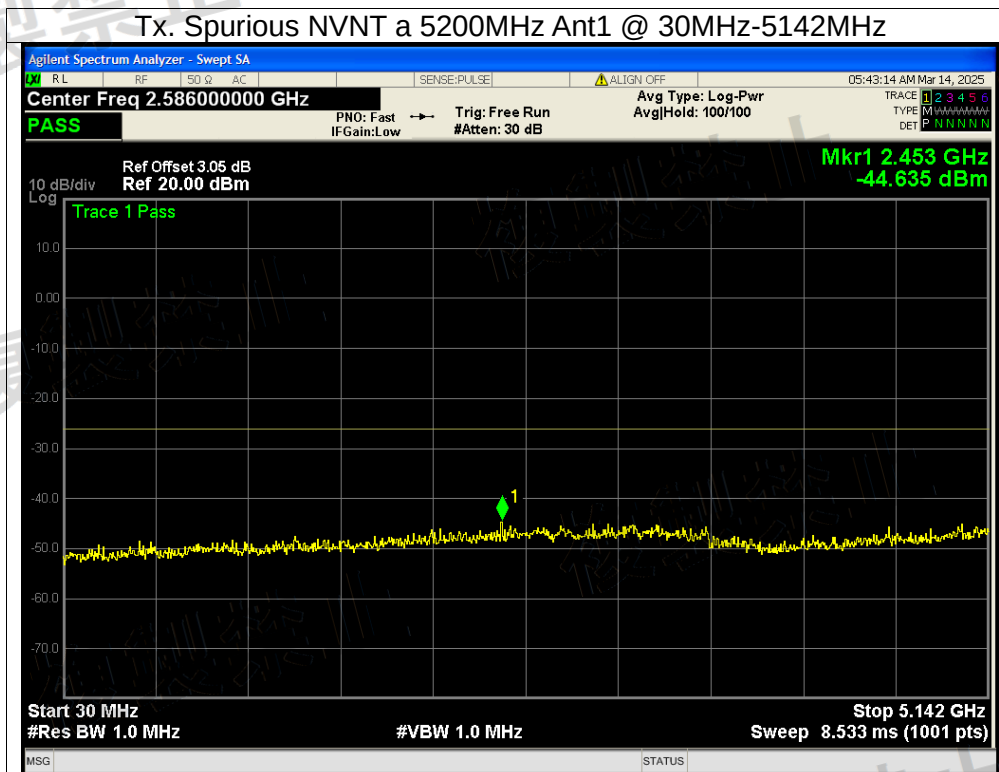


Tx. Spurious NVNT a 5180MHz Ant1 @ 5266.7MHz-26000MHz

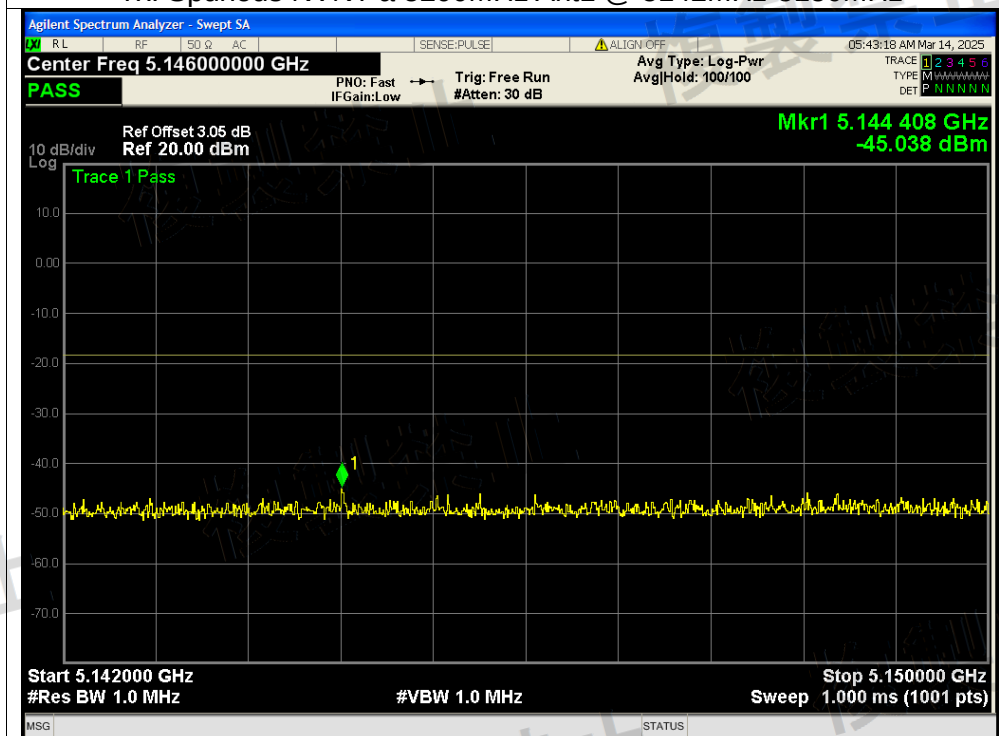




Tx. Spurious NVNT a 5200MHz Ant1 @ 30MHz-5142MHz

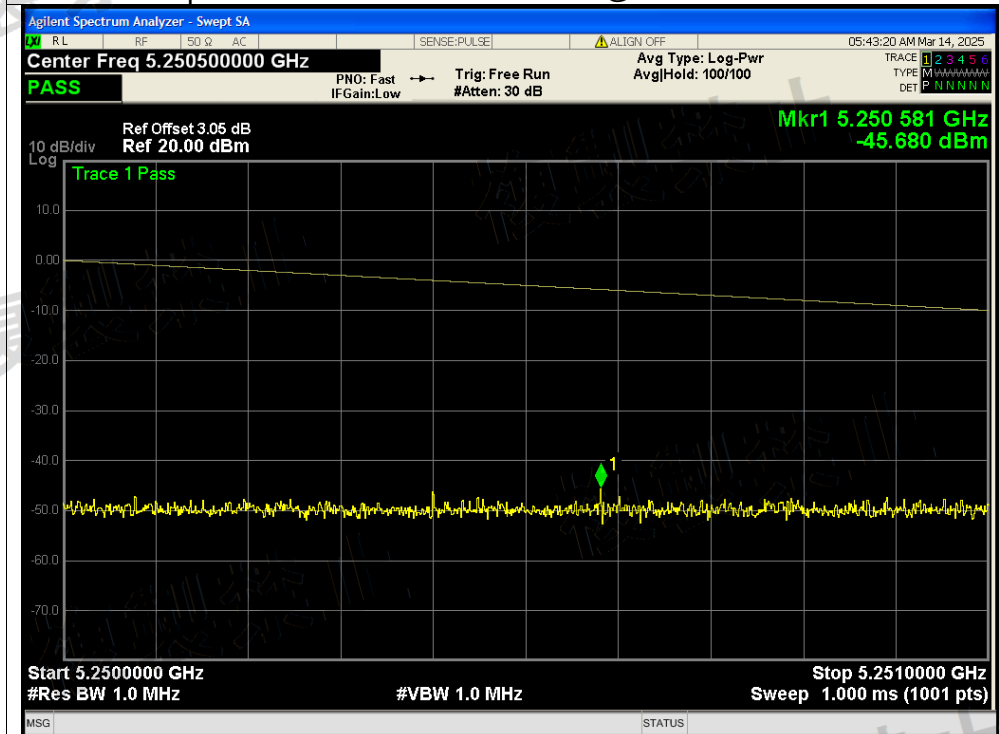


Tx. Spurious NVNT a 5200MHz Ant1 @ 5142MHz-5150MHz

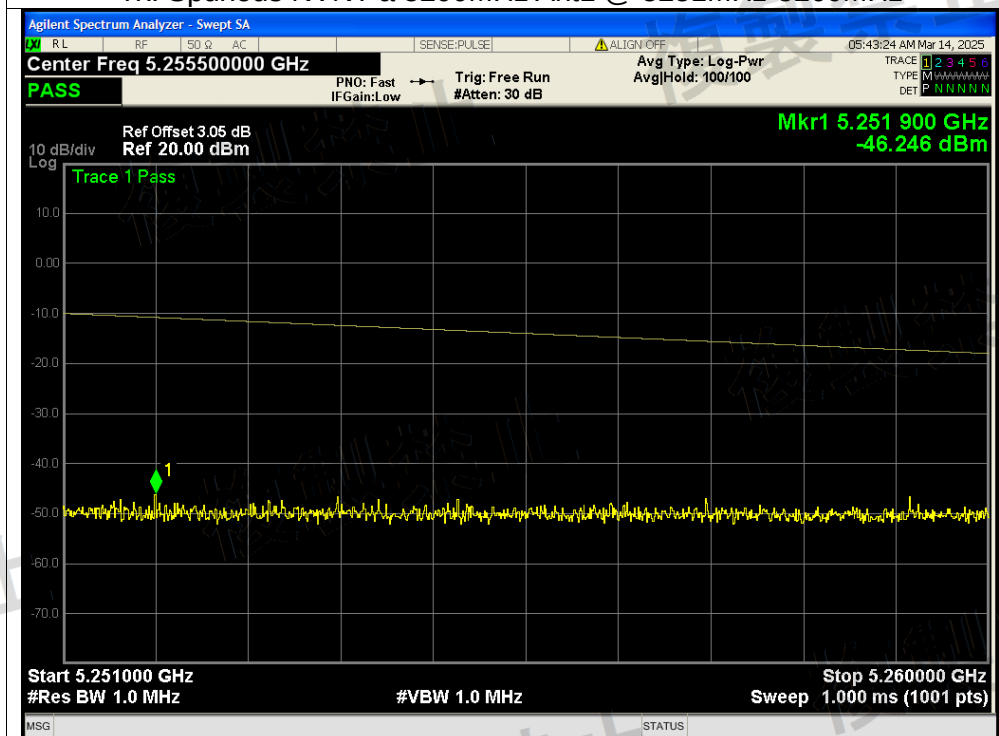




Tx. Spurious NVNT a 5200MHz Ant1 @ 5250MHz-5251MHz

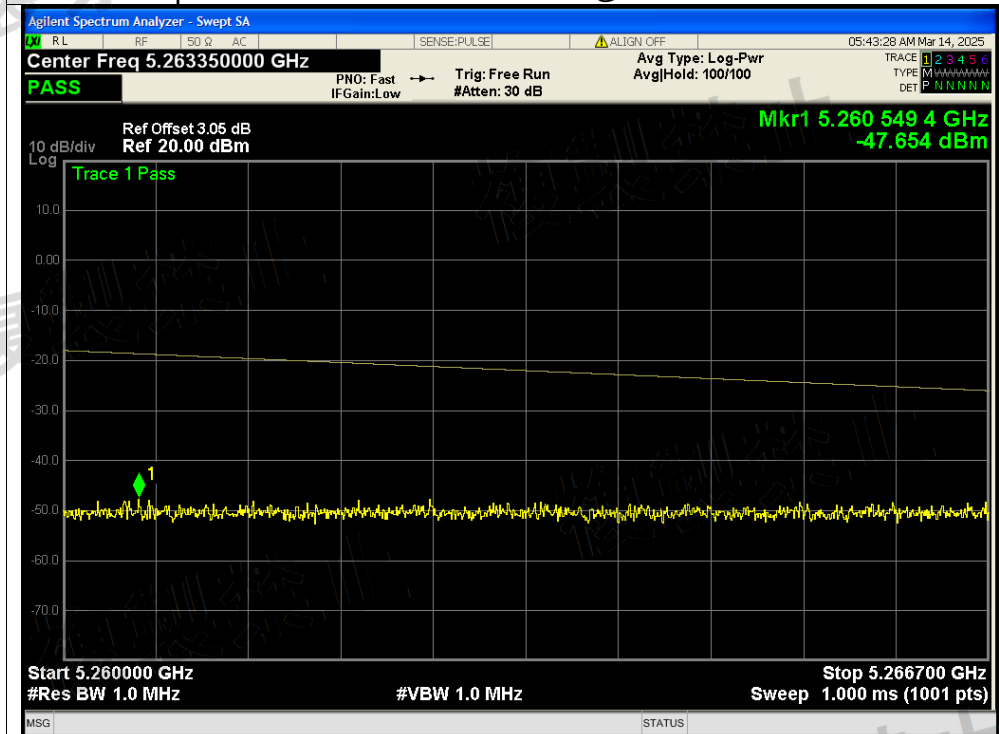


Tx. Spurious NVNT a 5200MHz Ant1 @ 5251MHz-5260MHz

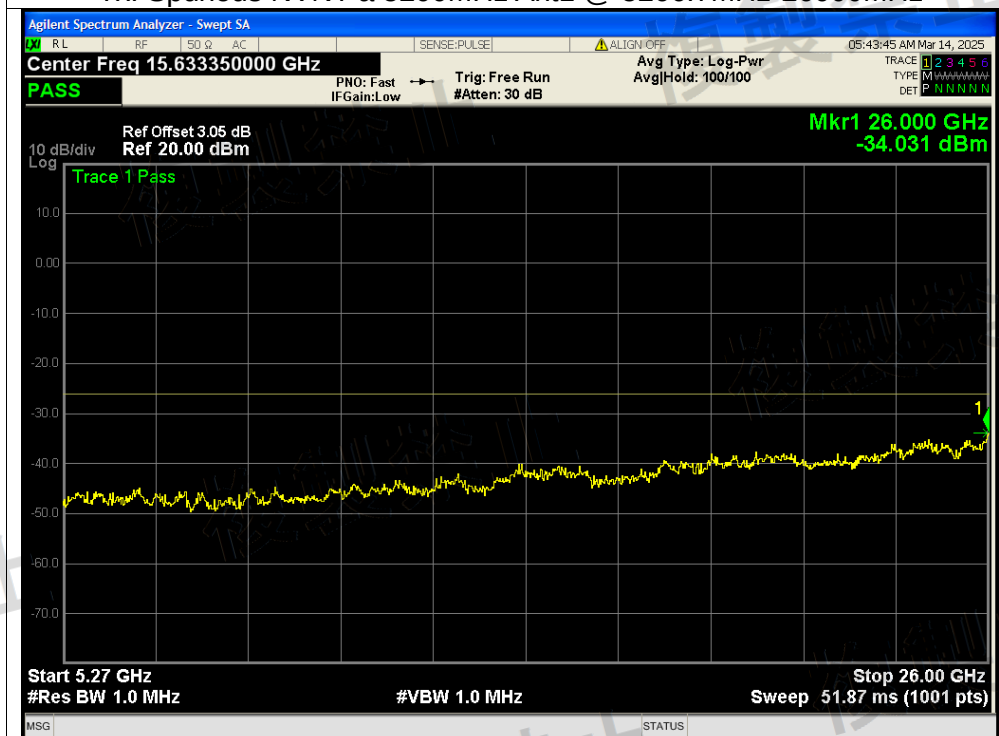




Tx. Spurious NVNT a 5200MHz Ant1 @ 5260MHz-5266.7MHz

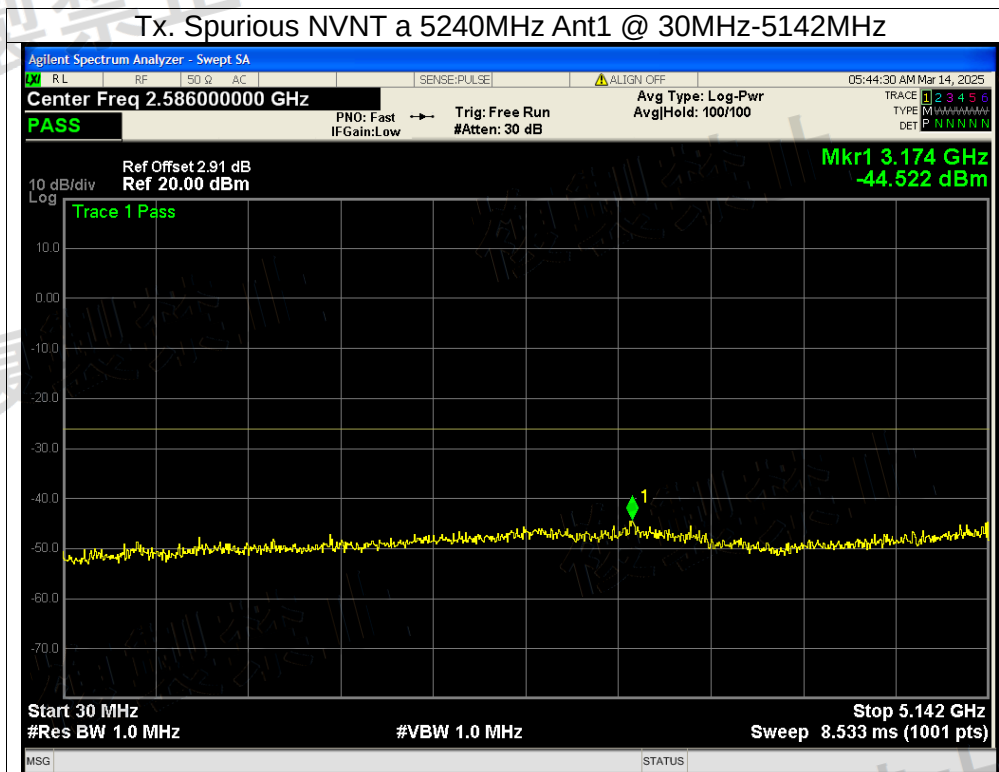


Tx. Spurious NVNT a 5200MHz Ant1 @ 5266.7MHz-26000MHz

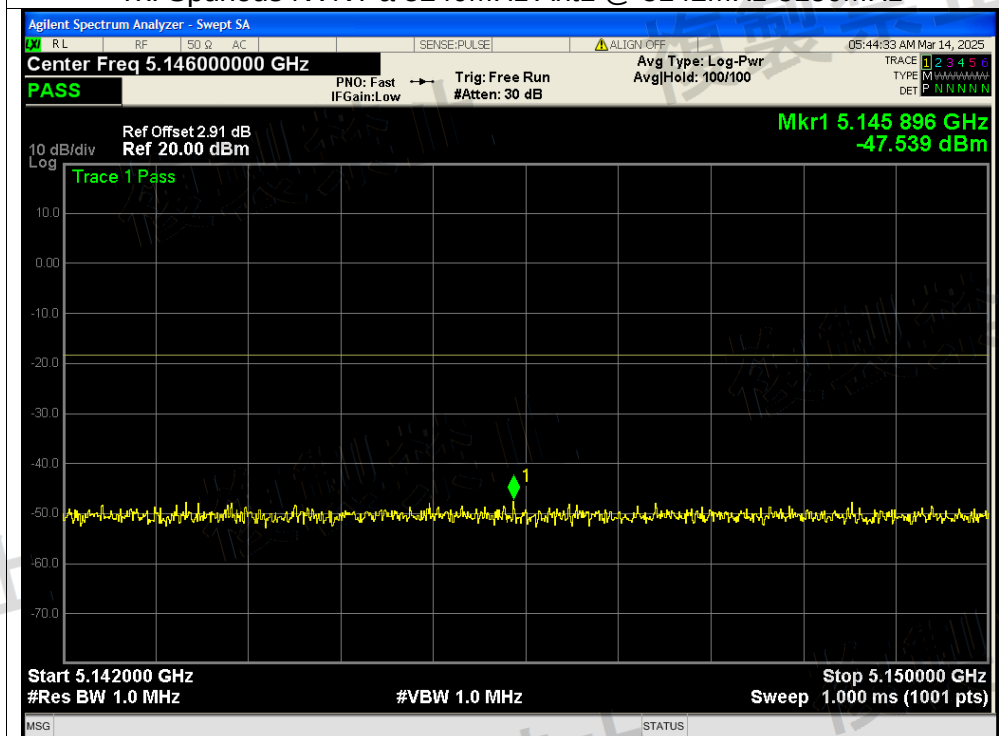




Tx. Spurious NVNT a 5240MHz Ant1 @ 30MHz-5142MHz

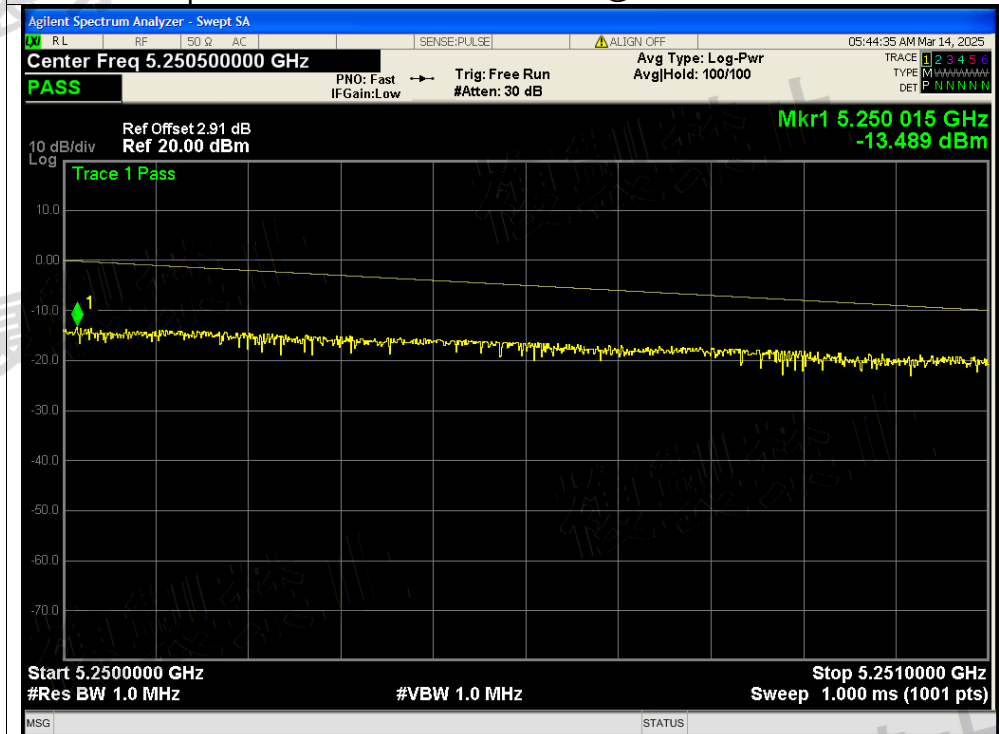


Tx. Spurious NVNT a 5240MHz Ant1 @ 5142MHz-5150MHz

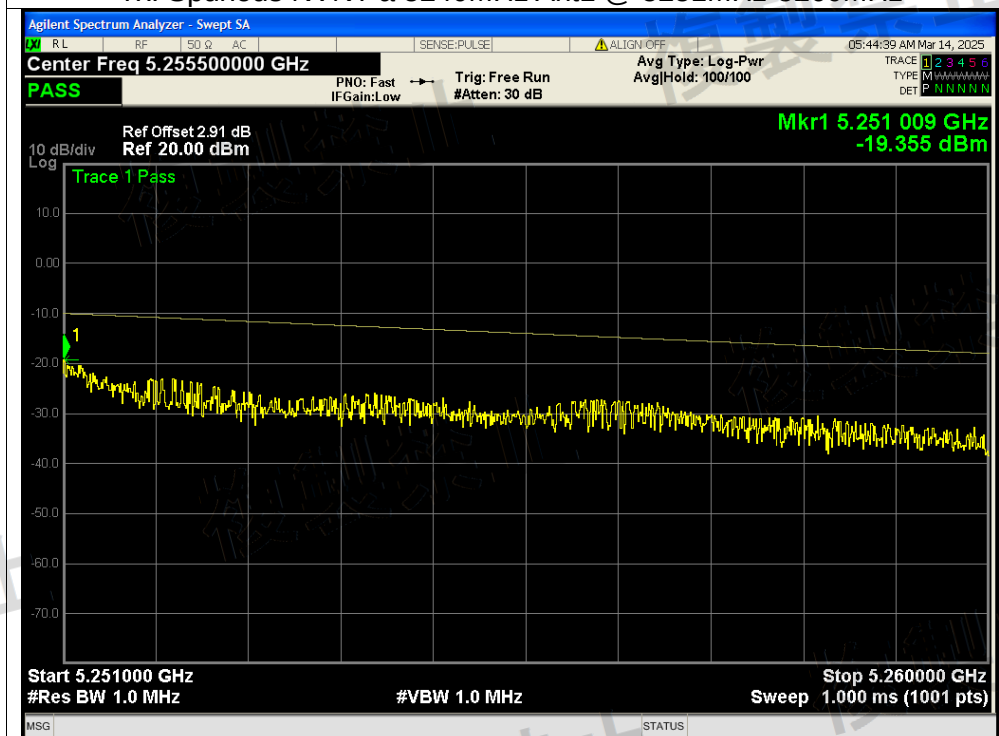




Tx. Spurious NVNT a 5240MHz Ant1 @ 5250MHz-5251MHz

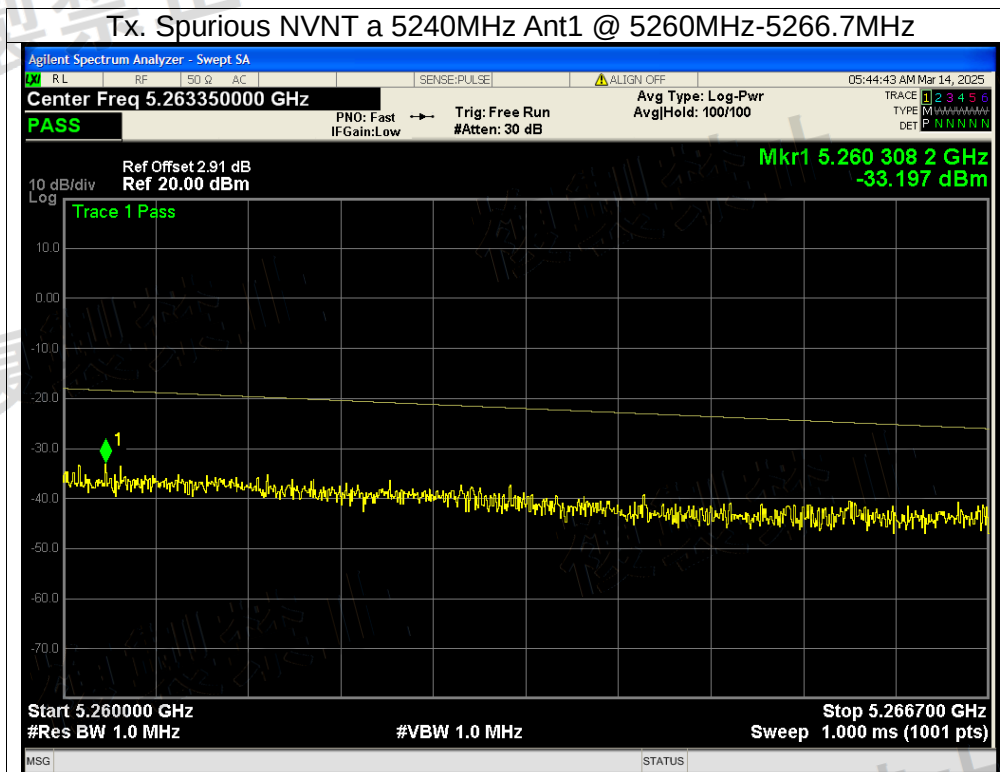


Tx. Spurious NVNT a 5240MHz Ant1 @ 5251MHz-5260MHz

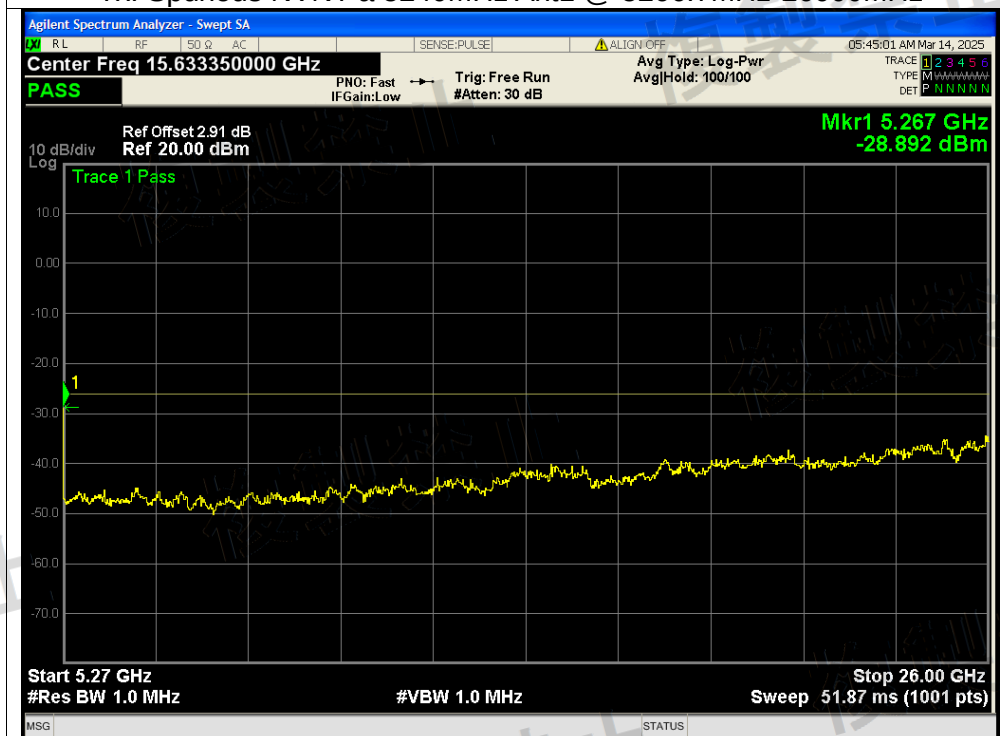




Tx. Spurious NVNT a 5240MHz Ant1 @ 5260MHz-5266.7MHz

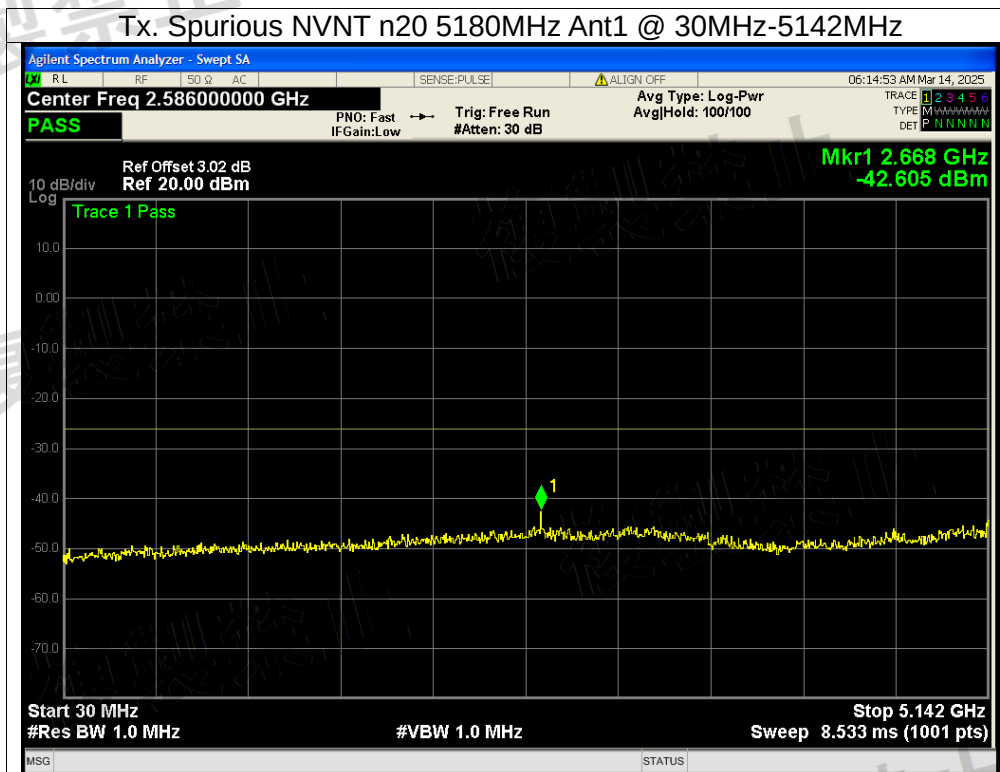


Tx. Spurious NVNT a 5240MHz Ant1 @ 5266.7MHz-26000MHz

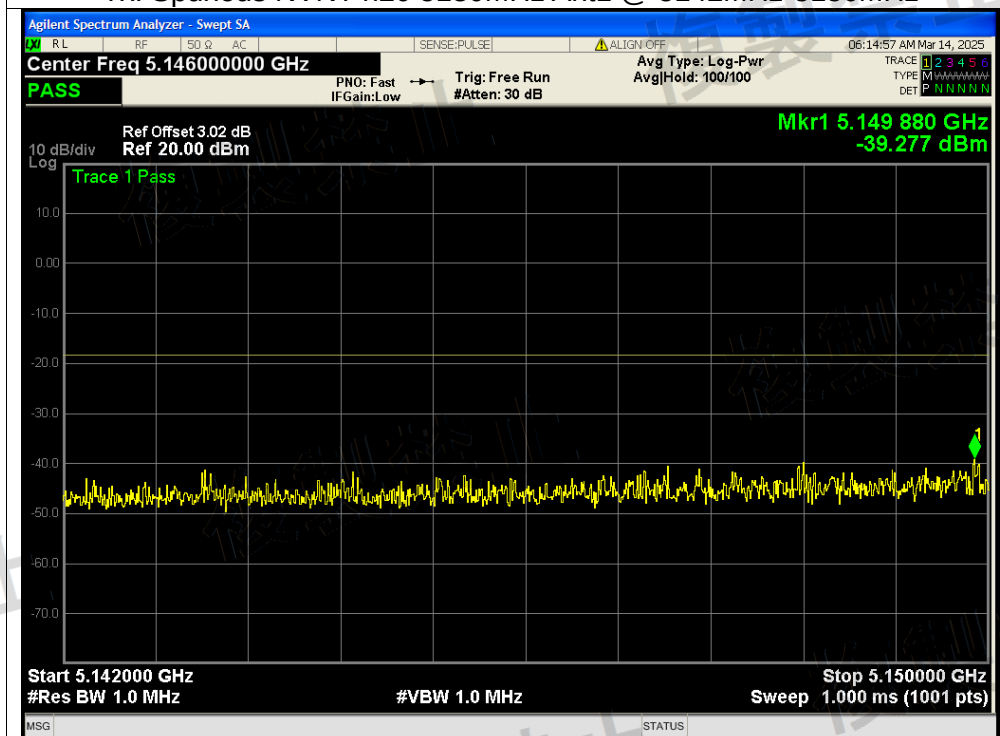




Tx. Spurious NVNT n20 5180MHz Ant1 @ 30MHz-5142MHz

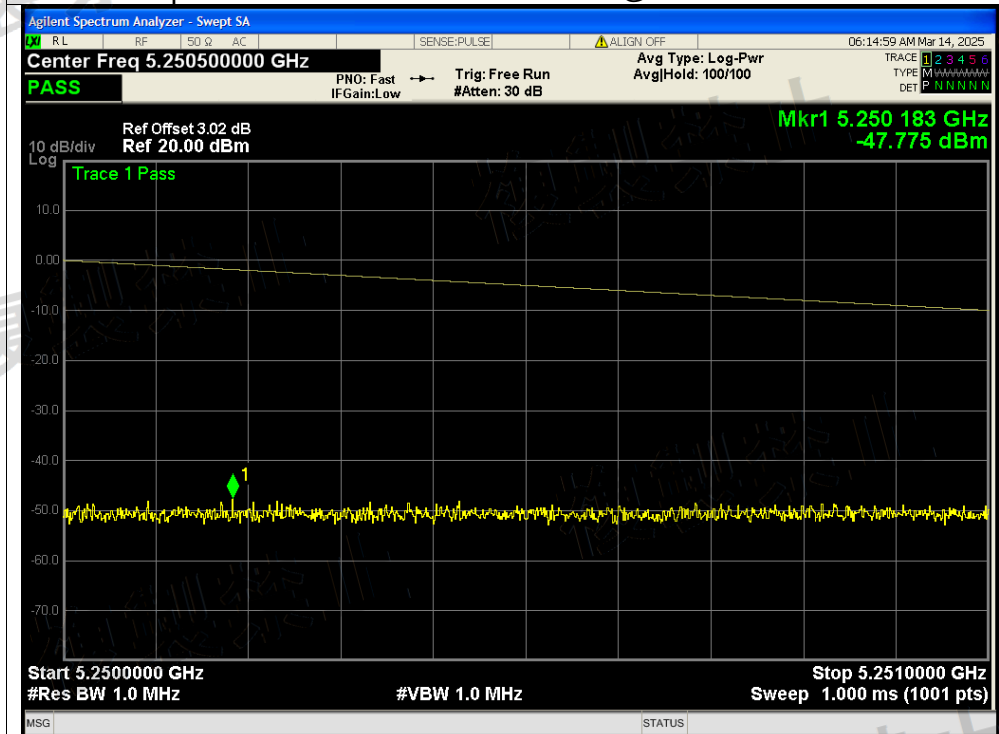


Tx. Spurious NVNT n20 5180MHz Ant1 @ 5142MHz-5150MHz

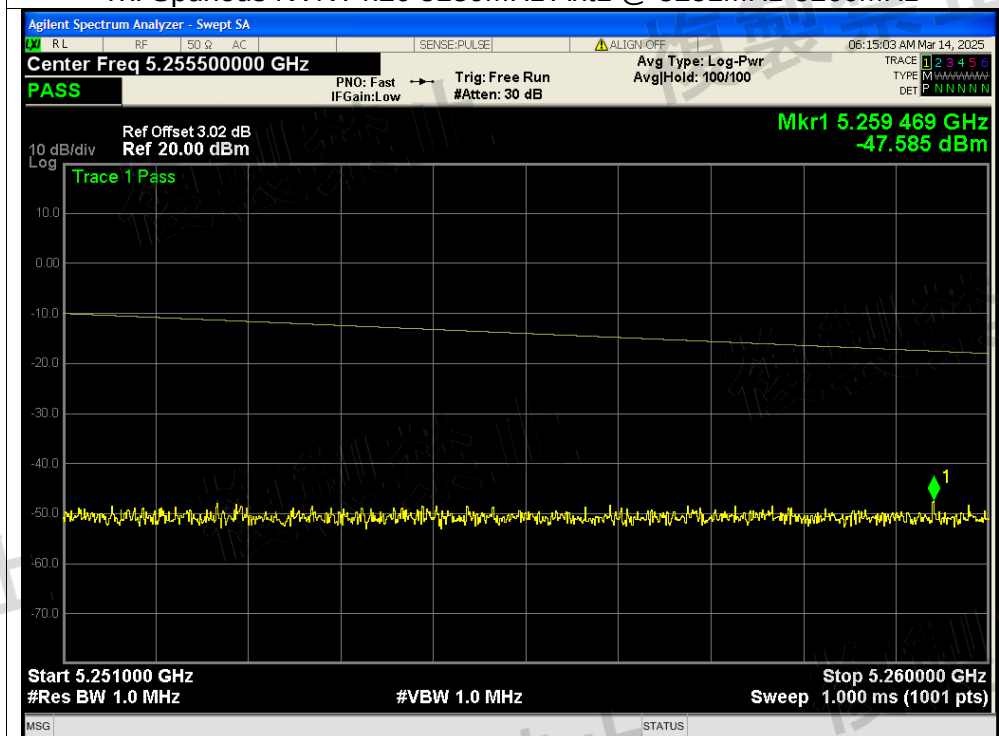




Tx. Spurious NVNT n20 5180MHz Ant1 @ 5250MHz-5251MHz

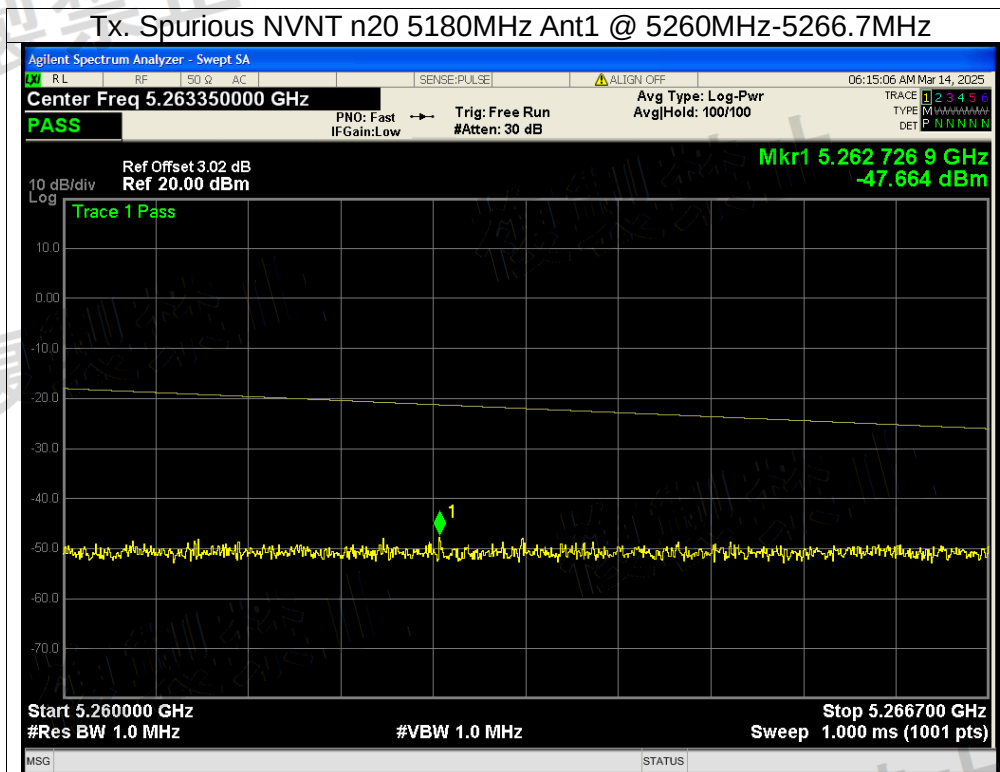


Tx. Spurious NVNT n20 5180MHz Ant1 @ 5251MHz-5260MHz

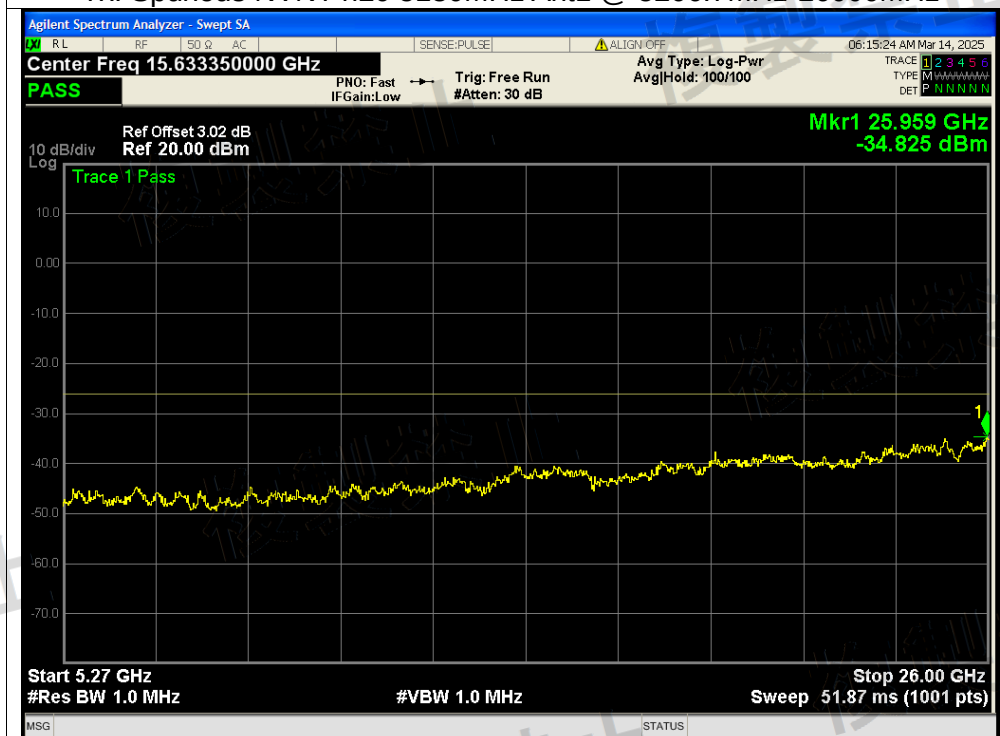




Tx. Spurious NVNT n20 5180MHz Ant1 @ 5260MHz-5266.7MHz

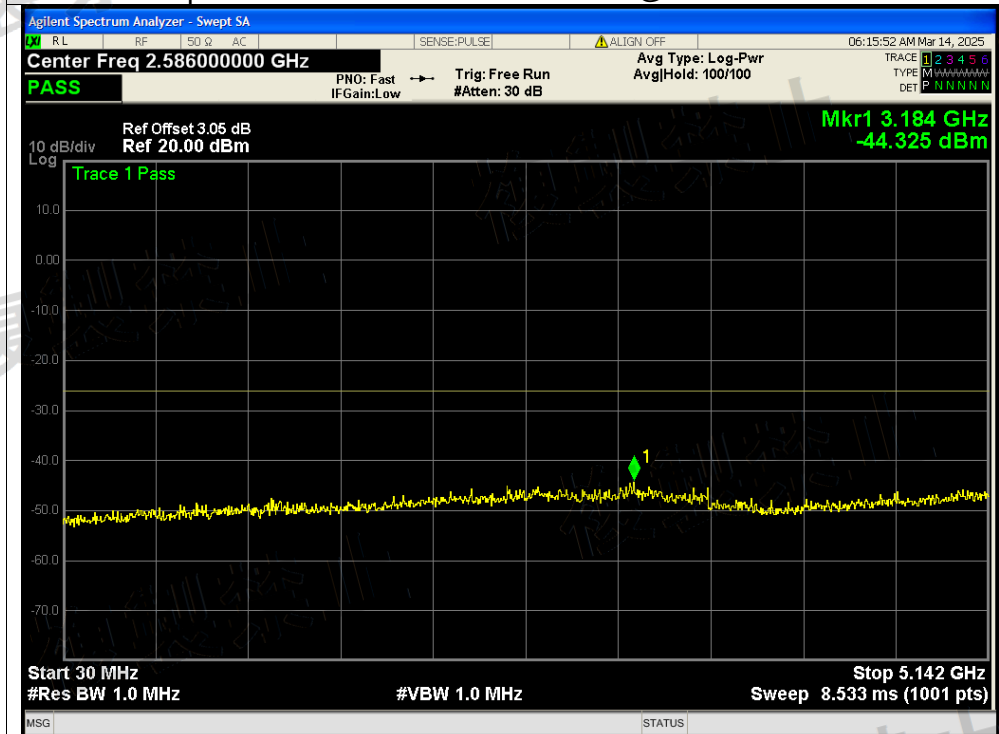


Tx. Spurious NVNT n20 5180MHz Ant1 @ 5266.7MHz-26000MHz

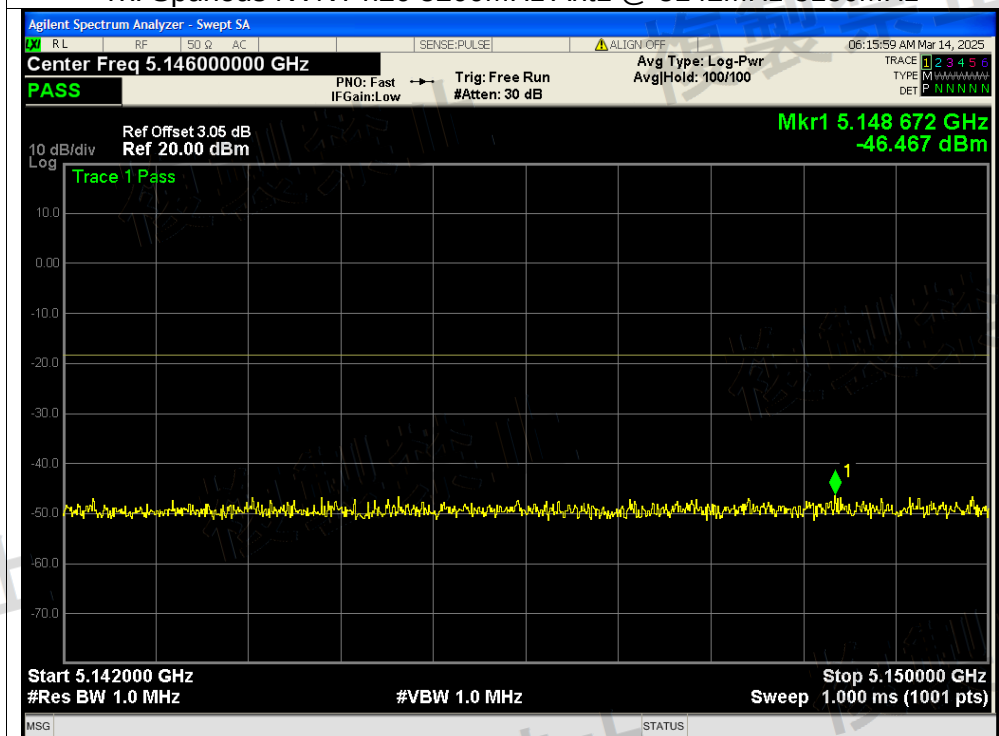




Tx. Spurious NVNT n20 5200MHz Ant1 @ 30MHz-5142MHz

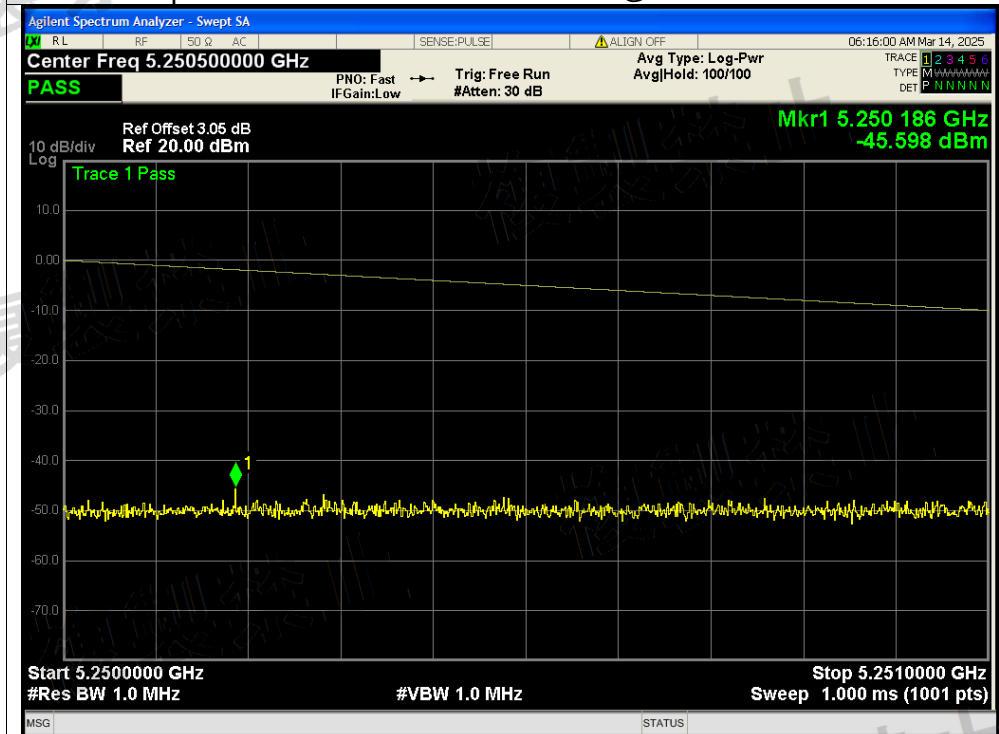


Tx. Spurious NVNT n20 5200MHz Ant1 @ 5142MHz-5150MHz

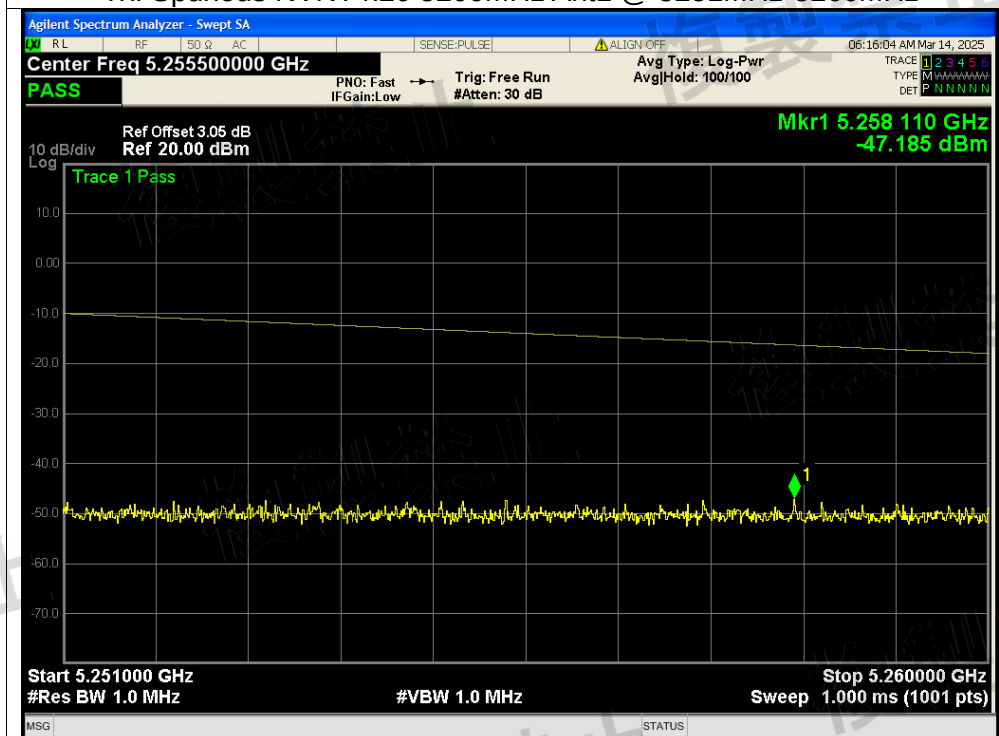




Tx. Spurious NVNT n20 5200MHz Ant1 @ 5250MHz-5251MHz

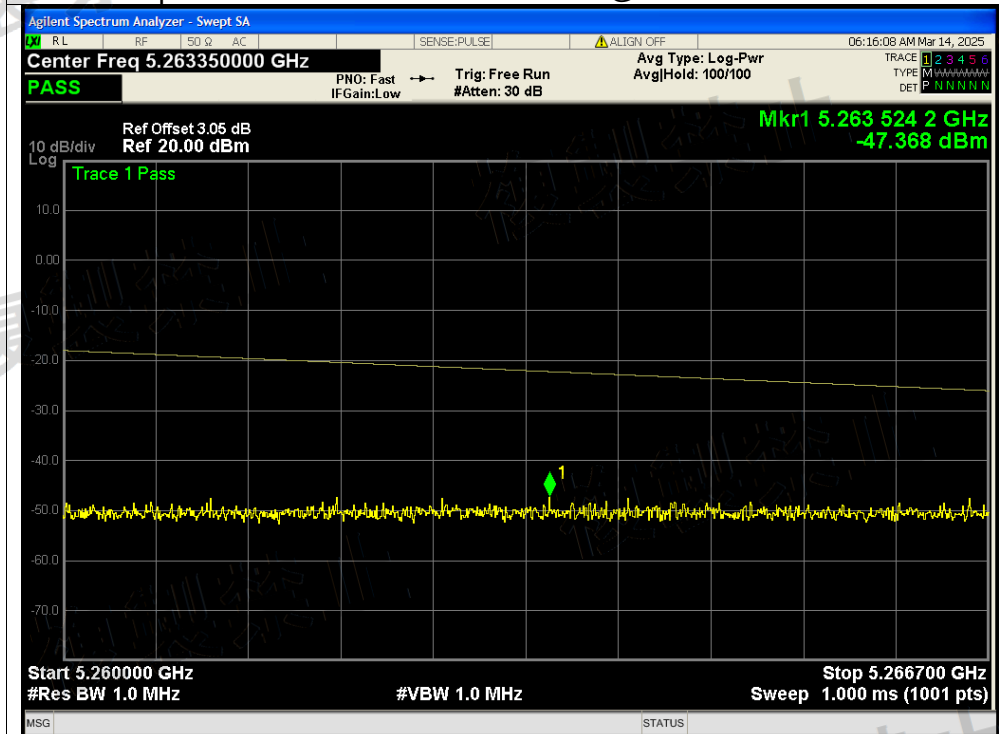


Tx. Spurious NVNT n20 5200MHz Ant1 @ 5251MHz-5260MHz

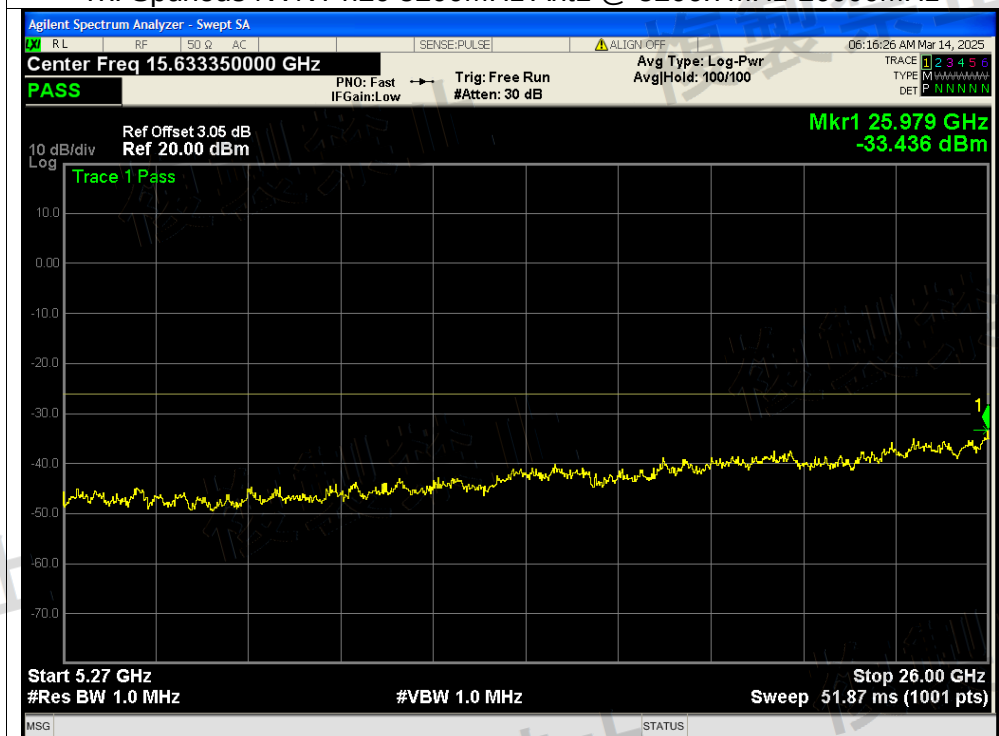




Tx. Spurious NVNT n20 5200MHz Ant1 @ 5260MHz-5266.7MHz

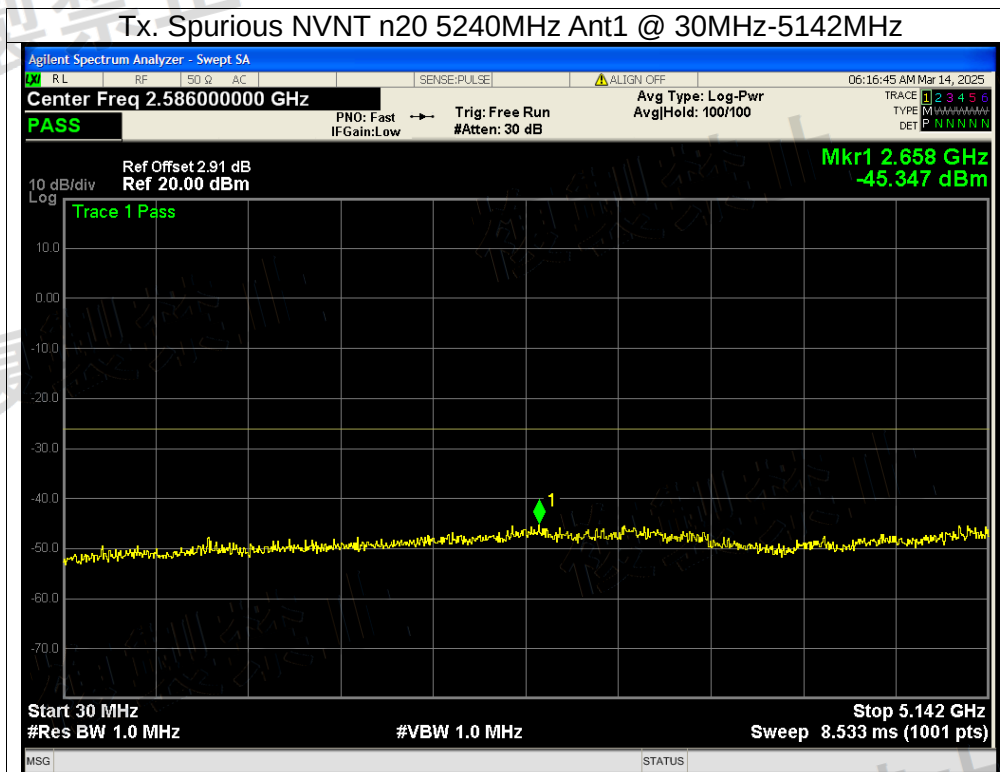


Tx. Spurious NVNT n20 5200MHz Ant1 @ 5266.7MHz-26000MHz

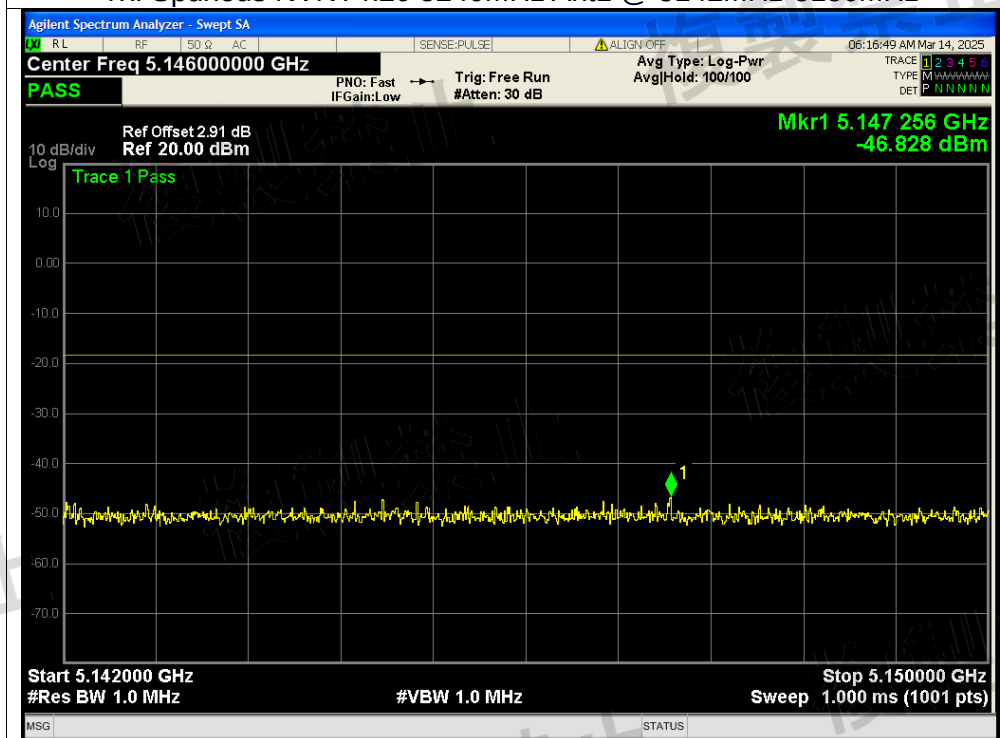




Tx. Spurious NVNT n20 5240MHz Ant1 @ 30MHz-5142MHz

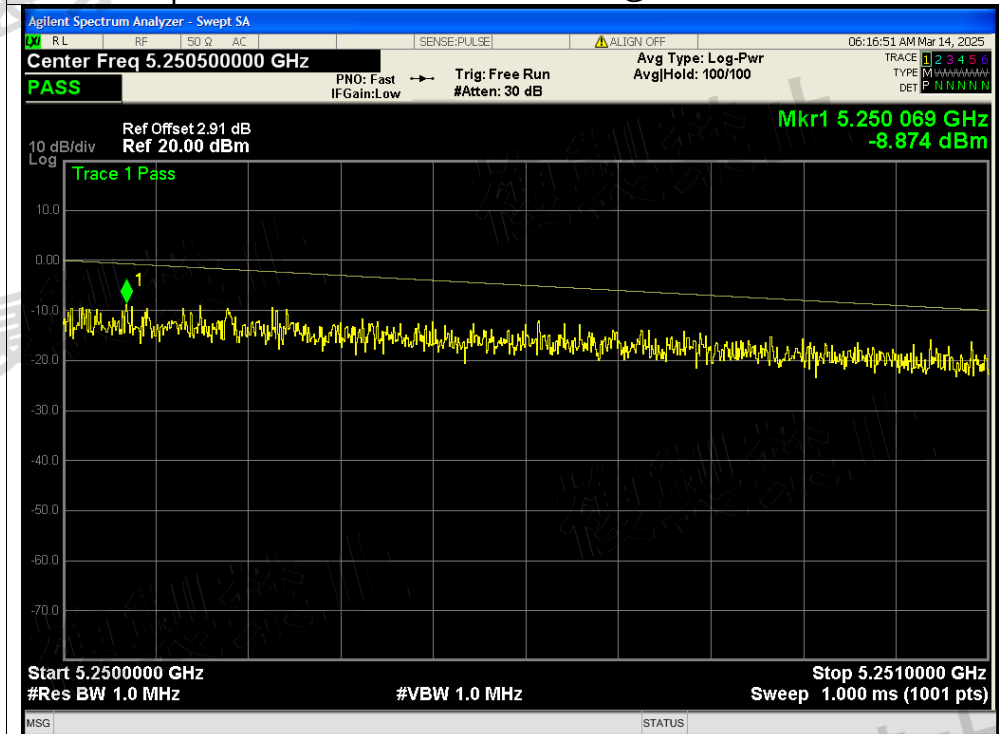


Tx. Spurious NVNT n20 5240MHz Ant1 @ 5142MHz-5150MHz

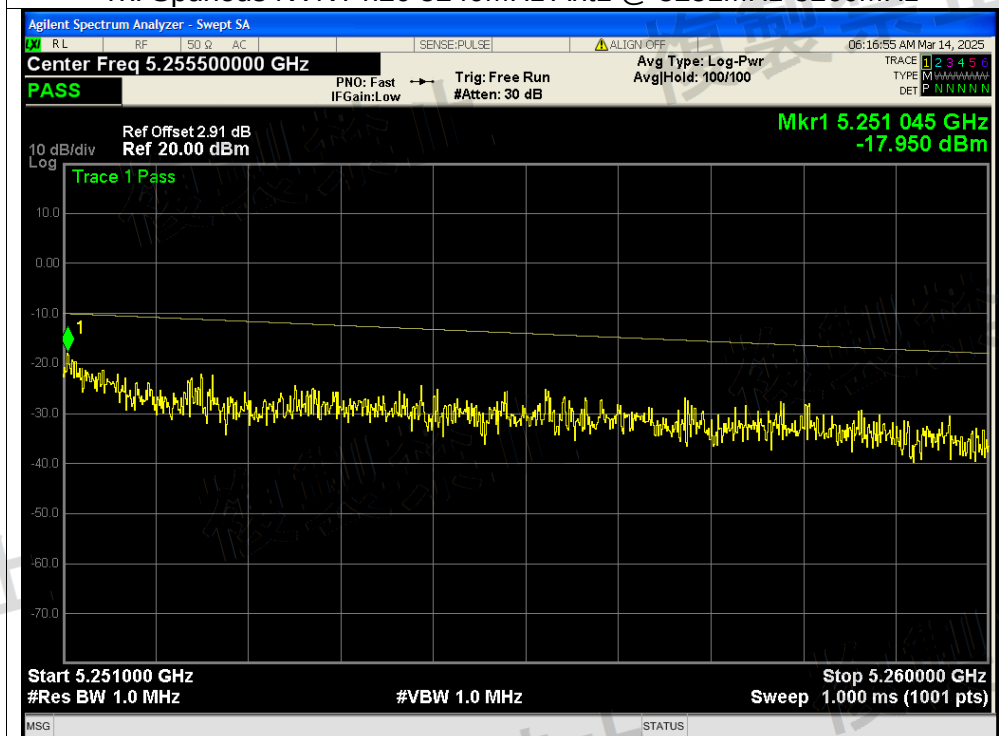




Tx. Spurious NVNT n20 5240MHz Ant1 @ 5250MHz-5251MHz

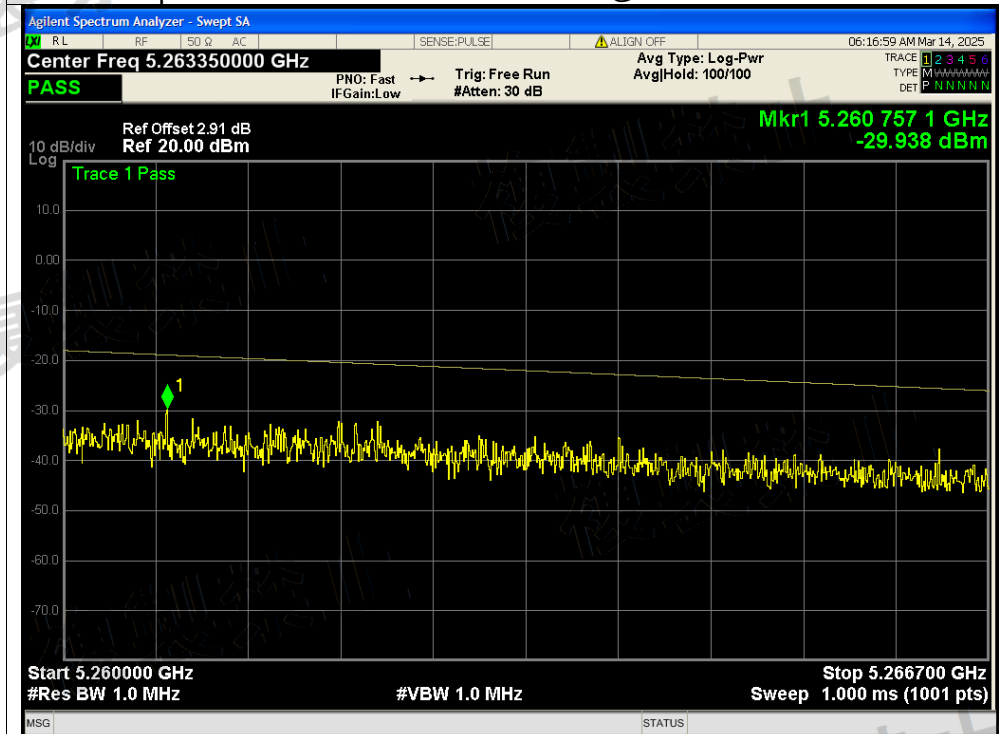


Tx. Spurious NVNT n20 5240MHz Ant1 @ 5251MHz-5260MHz

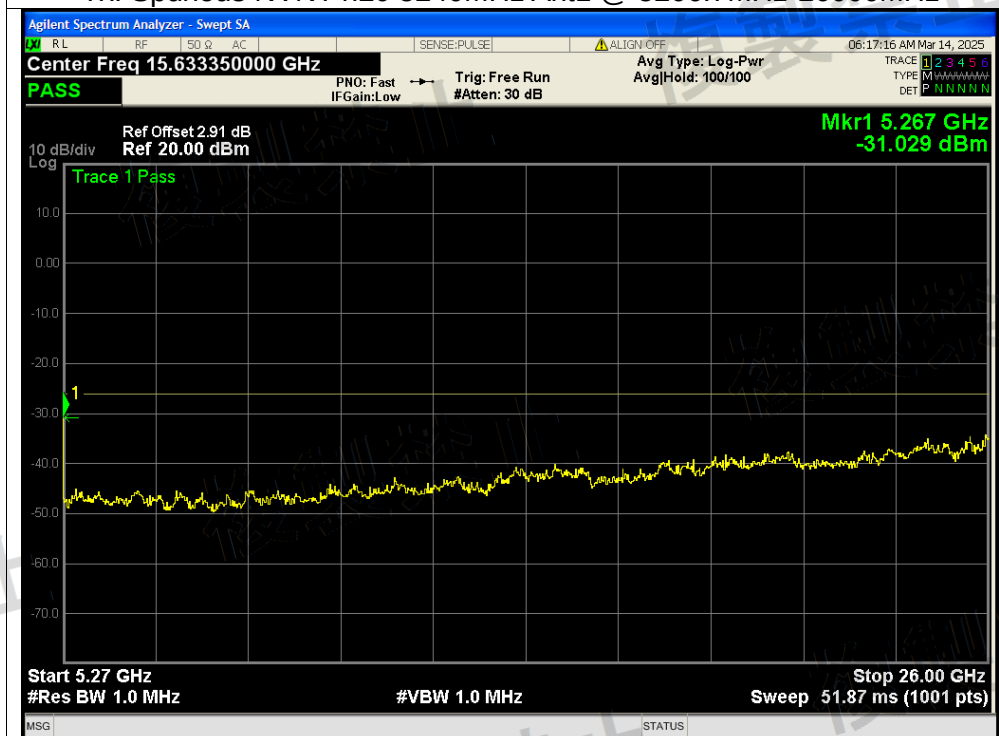




Tx. Spurious NVNT n20 5240MHz Ant1 @ 5260MHz-5266.7MHz

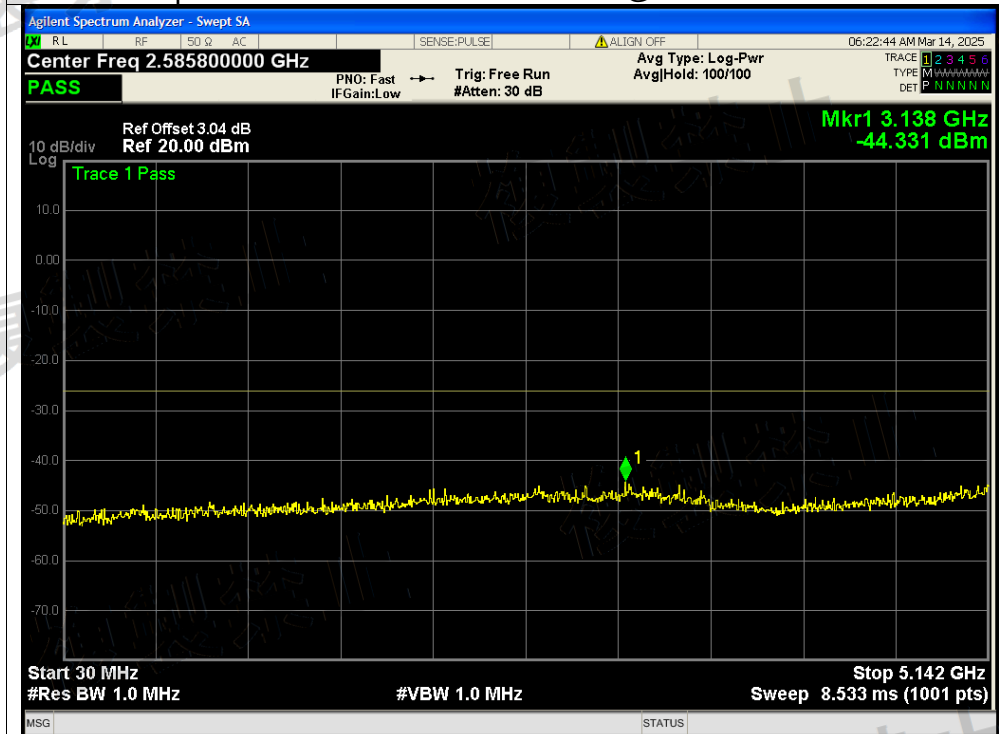


Tx. Spurious NVNT n20 5240MHz Ant1 @ 5266.7MHz-26000MHz

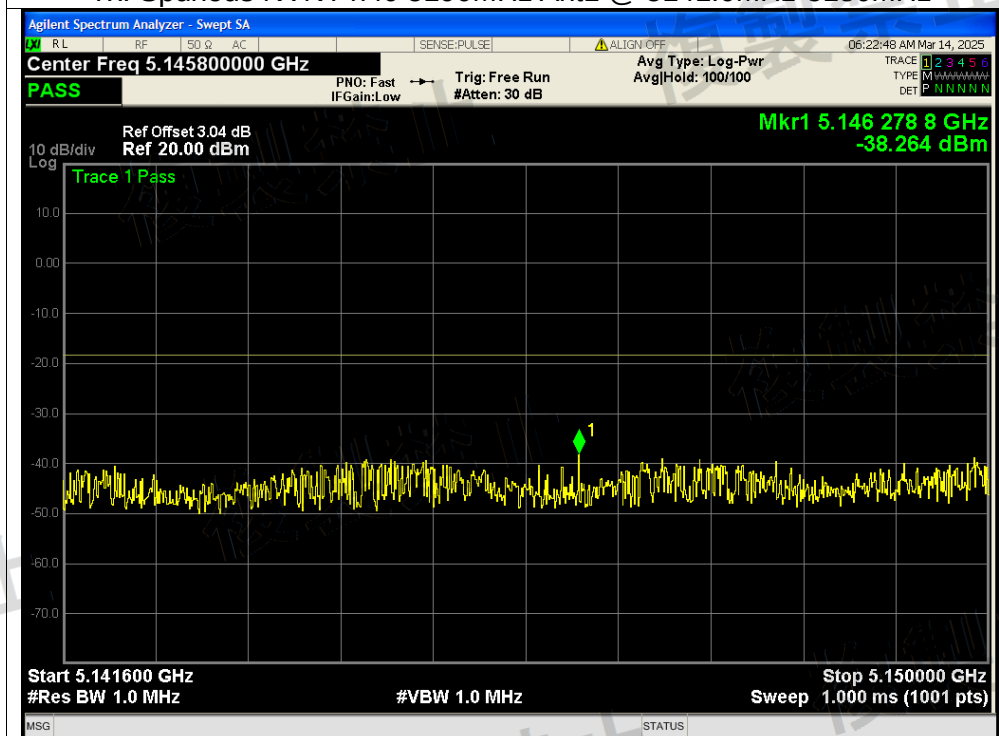




Tx. Spurious NVNT n40 5190MHz Ant1 @ 30MHz-5141.6MHz

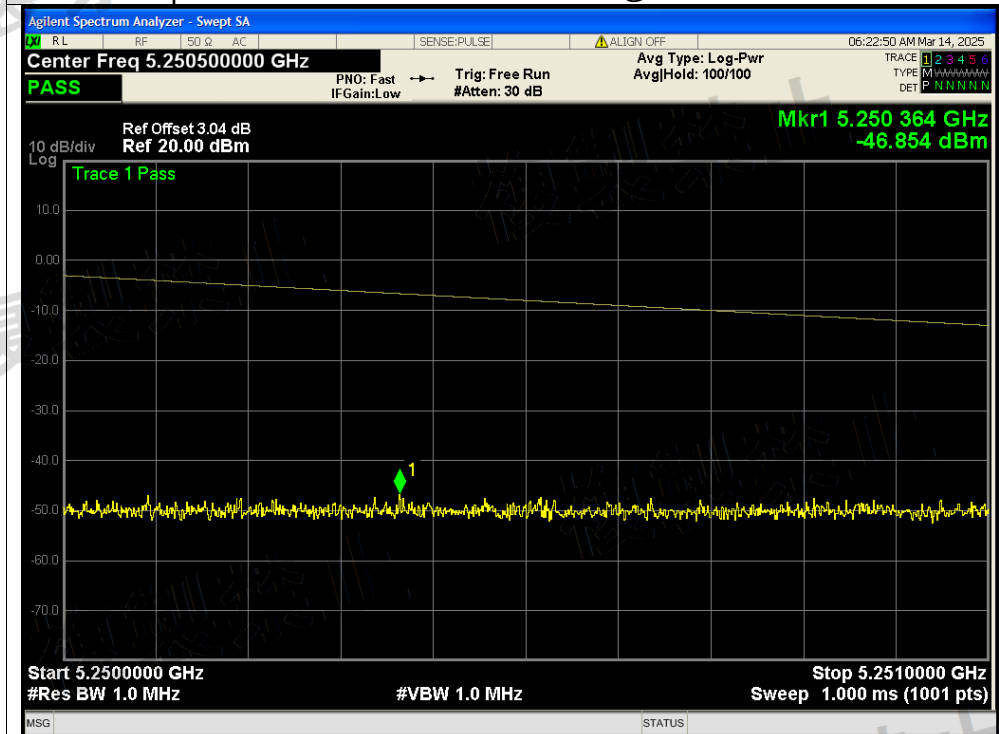


Tx. Spurious NVNT n40 5190MHz Ant1 @ 5141.6MHz-5150MHz

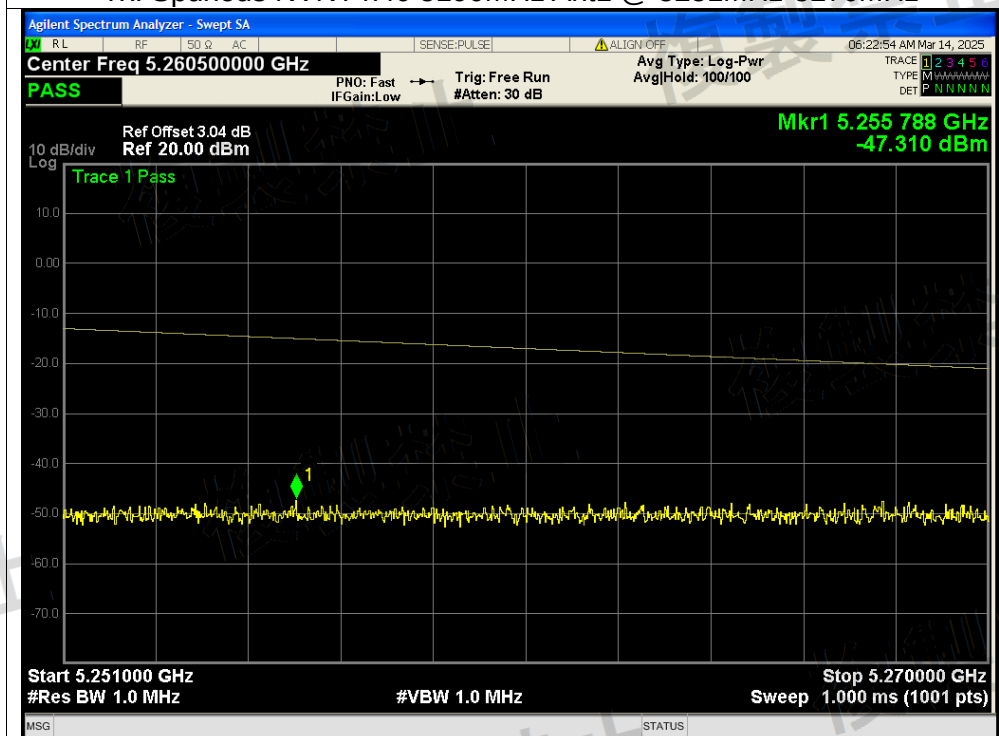




Tx. Spurious NVNT n40 5190MHz Ant1 @ 5250MHz-5251MHz

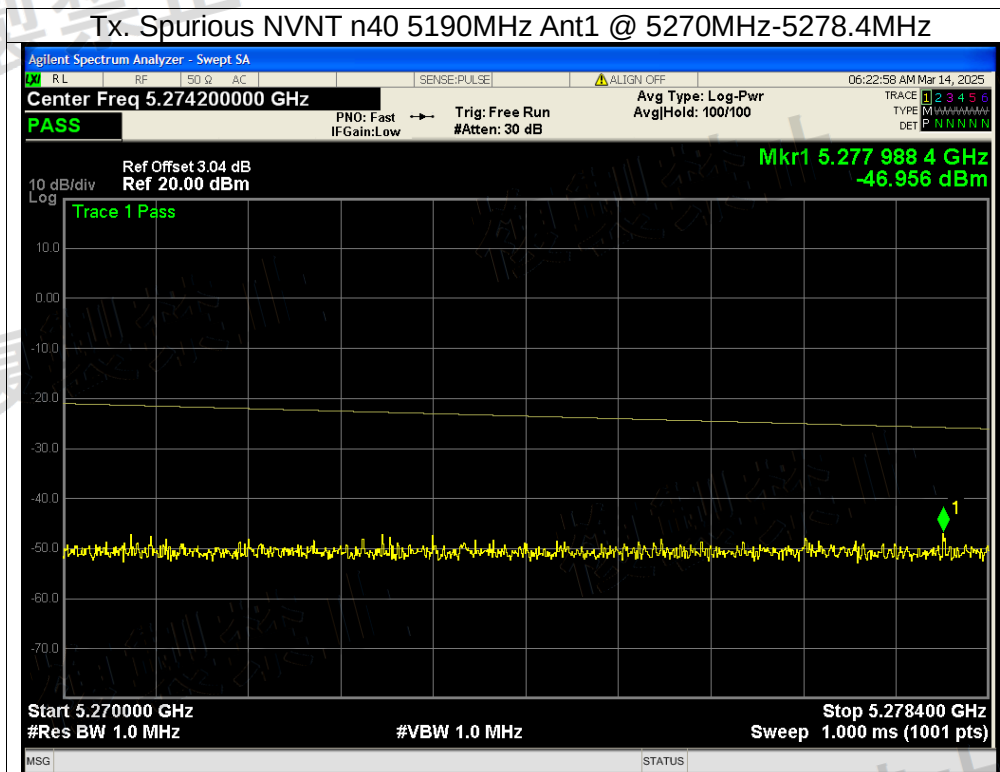


Tx. Spurious NVNT n40 5190MHz Ant1 @ 5251MHz-5270MHz

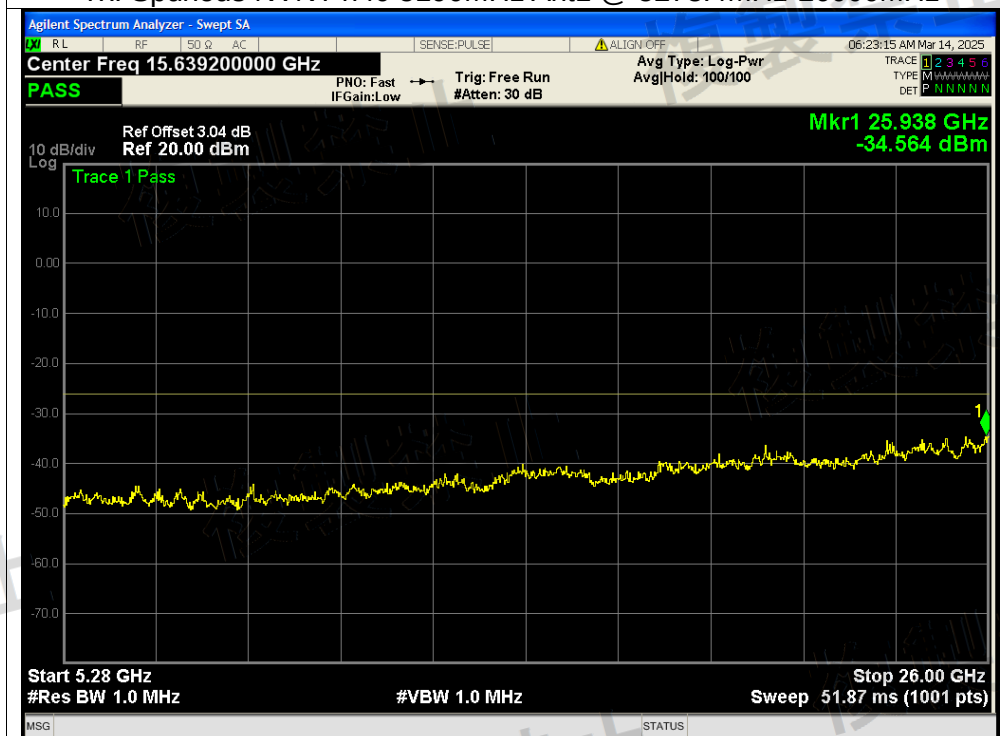




Tx. Spurious NVNT n40 5190MHz Ant1 @ 5270MHz-5278.4MHz

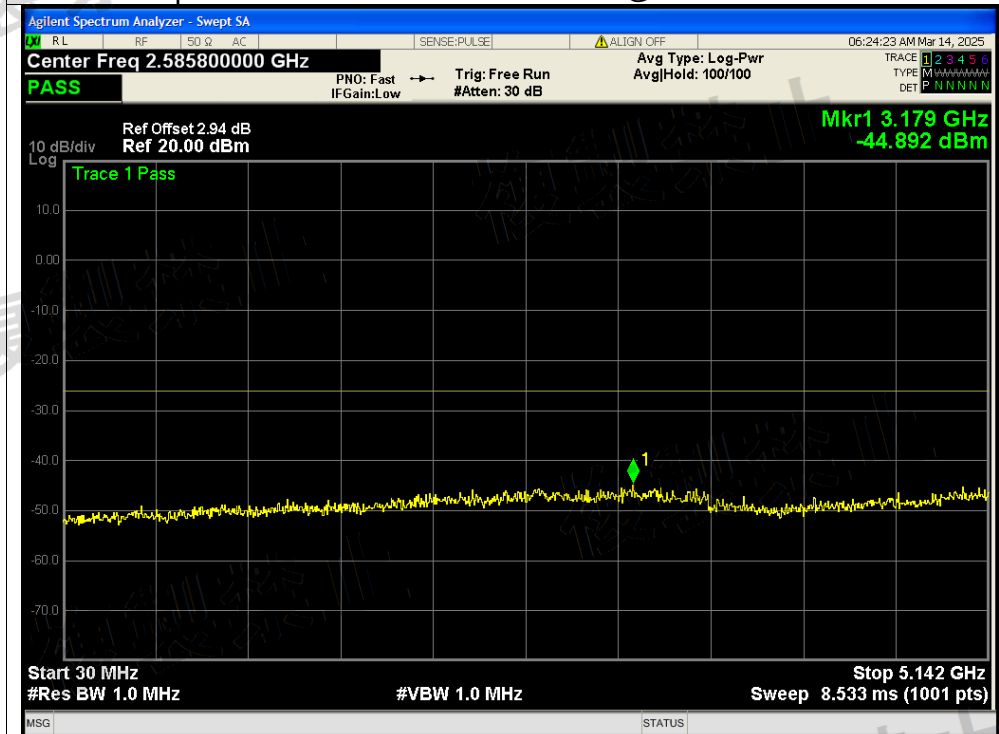


Tx. Spurious NVNT n40 5190MHz Ant1 @ 5278.4MHz-26000MHz

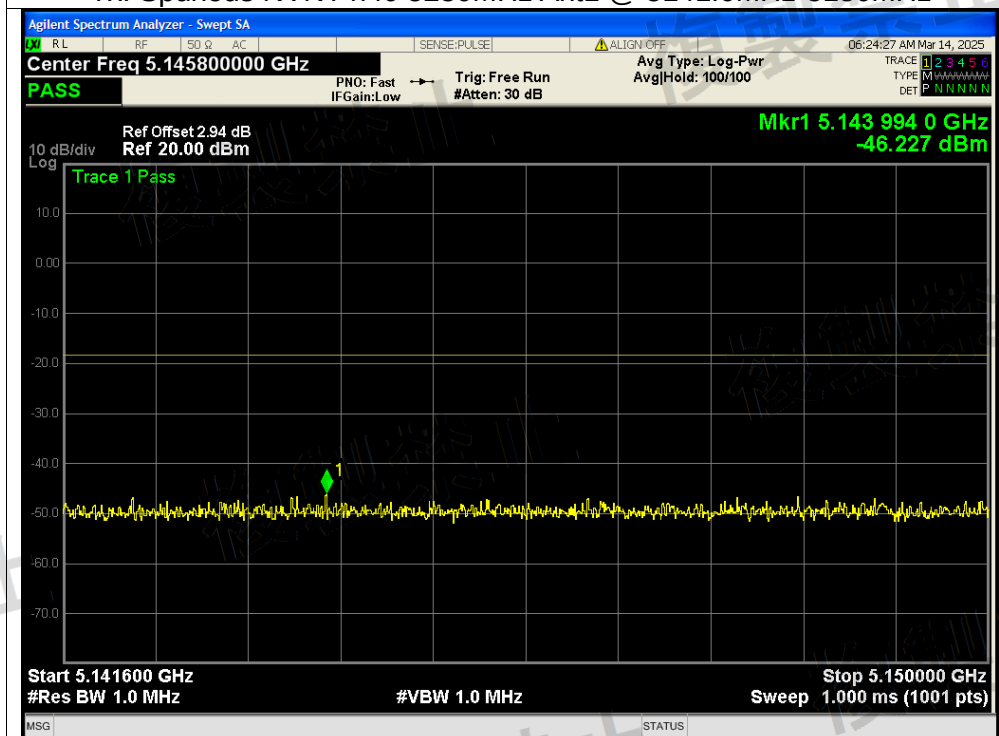




Tx. Spurious NVNT n40 5230MHz Ant1 @ 30MHz-5141.6MHz

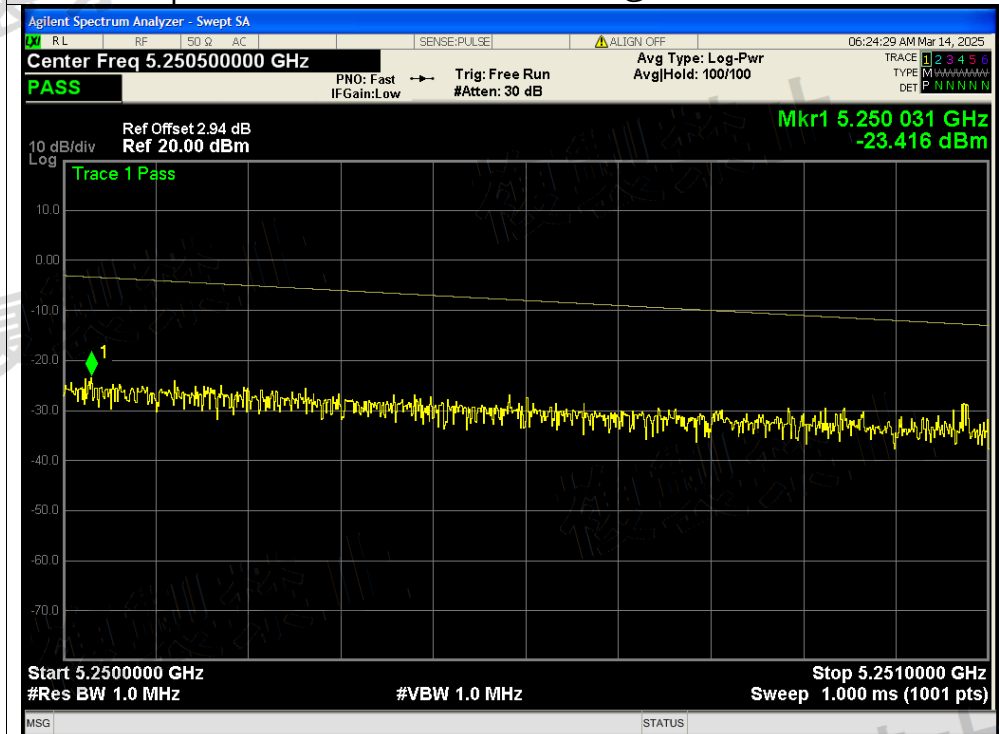


Tx. Spurious NVNT n40 5230MHz Ant1 @ 5141.6MHz-5150MHz





Tx. Spurious NVNT n40 5230MHz Ant1 @ 5250MHz-5251MHz

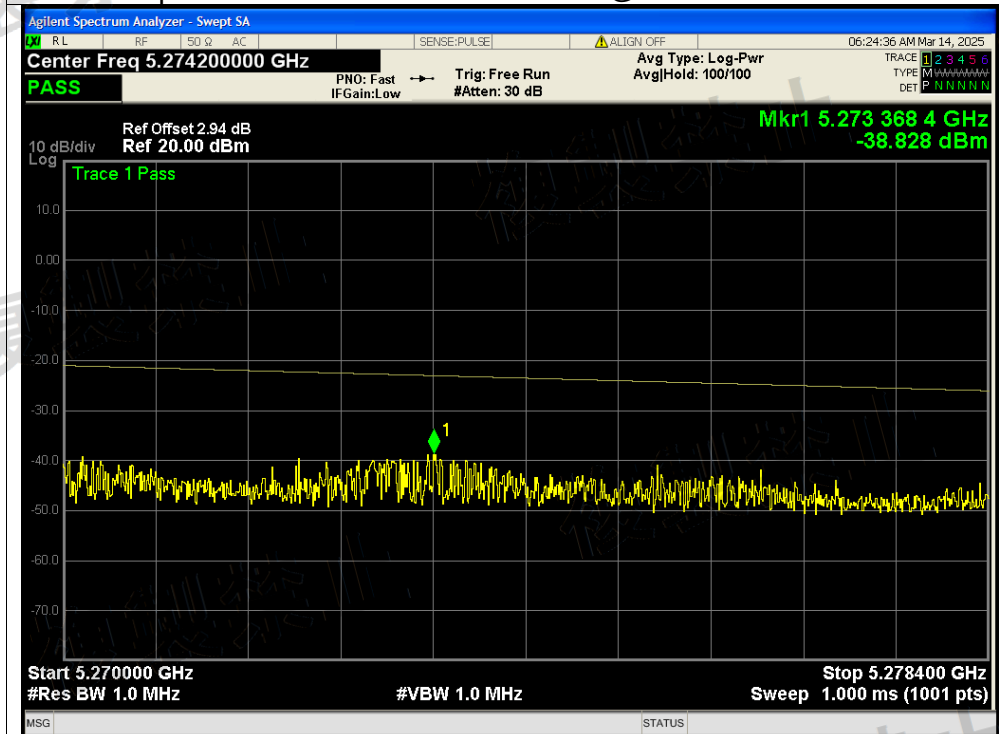


Tx. Spurious NVNT n40 5230MHz Ant1 @ 5251MHz-5270MHz

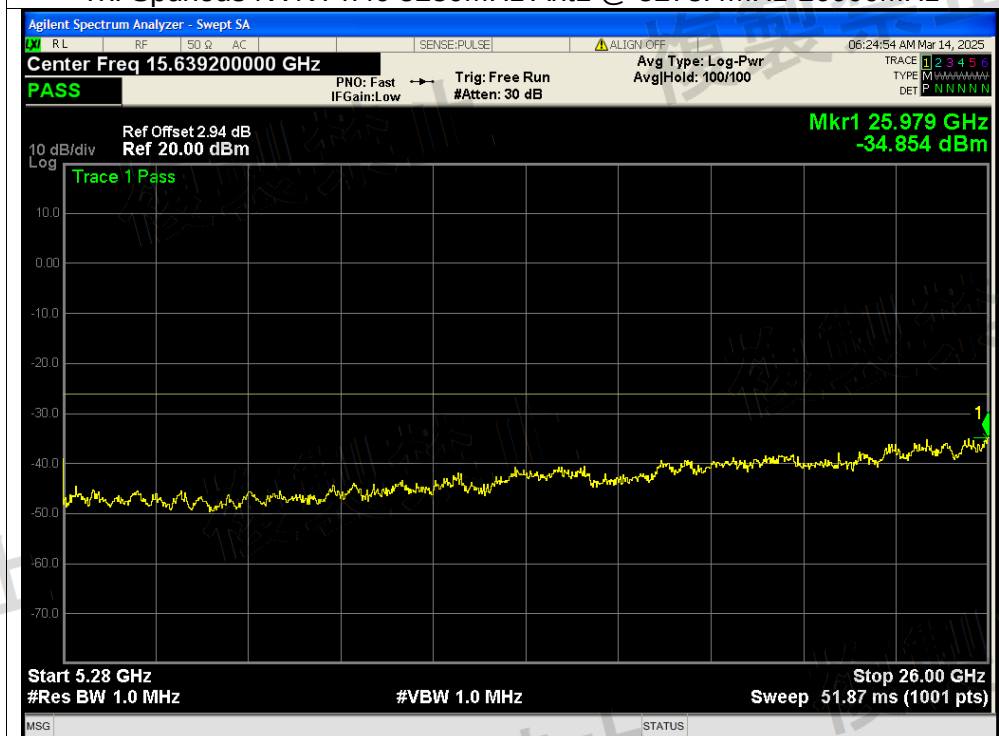




Tx. Spurious NVNT n40 5230MHz Ant1 @ 5270MHz-5278.4MHz

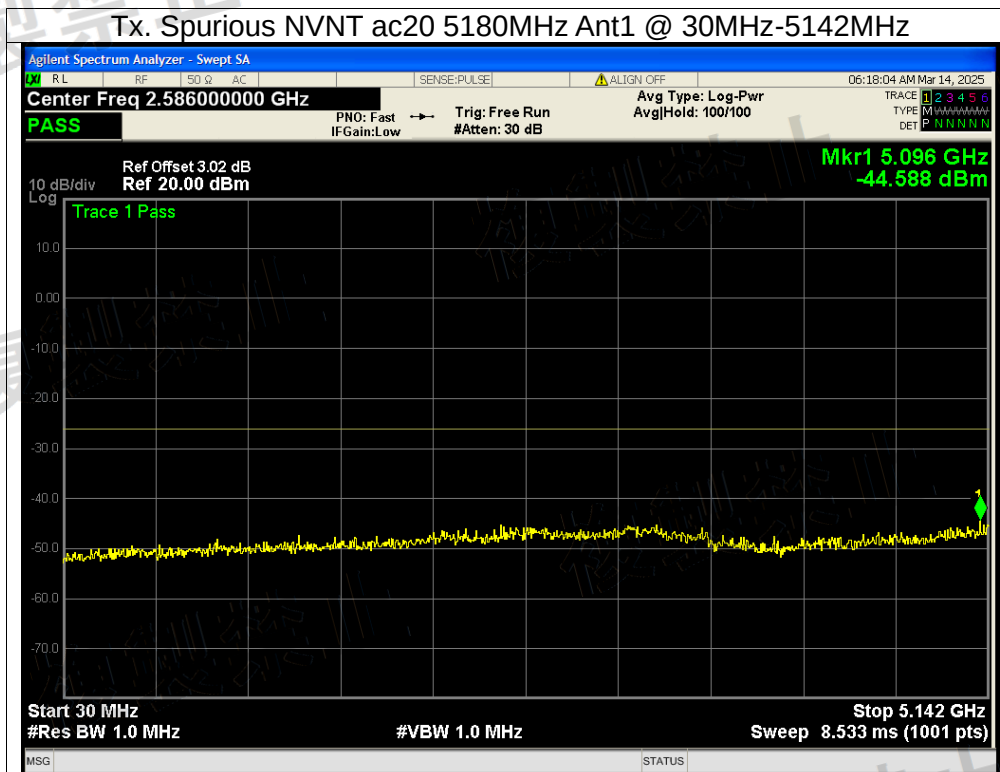


Tx. Spurious NVNT n40 5230MHz Ant1 @ 5278.4MHz-26000MHz

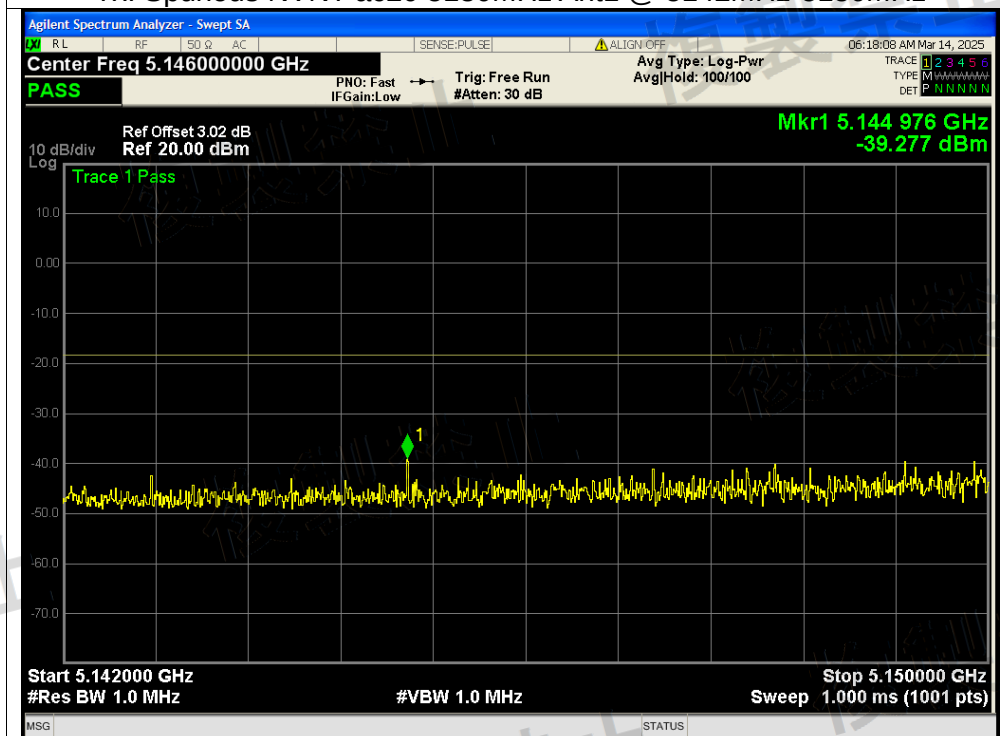




Tx. Spurious NVNT ac20 5180MHz Ant1 @ 30MHz-5142MHz

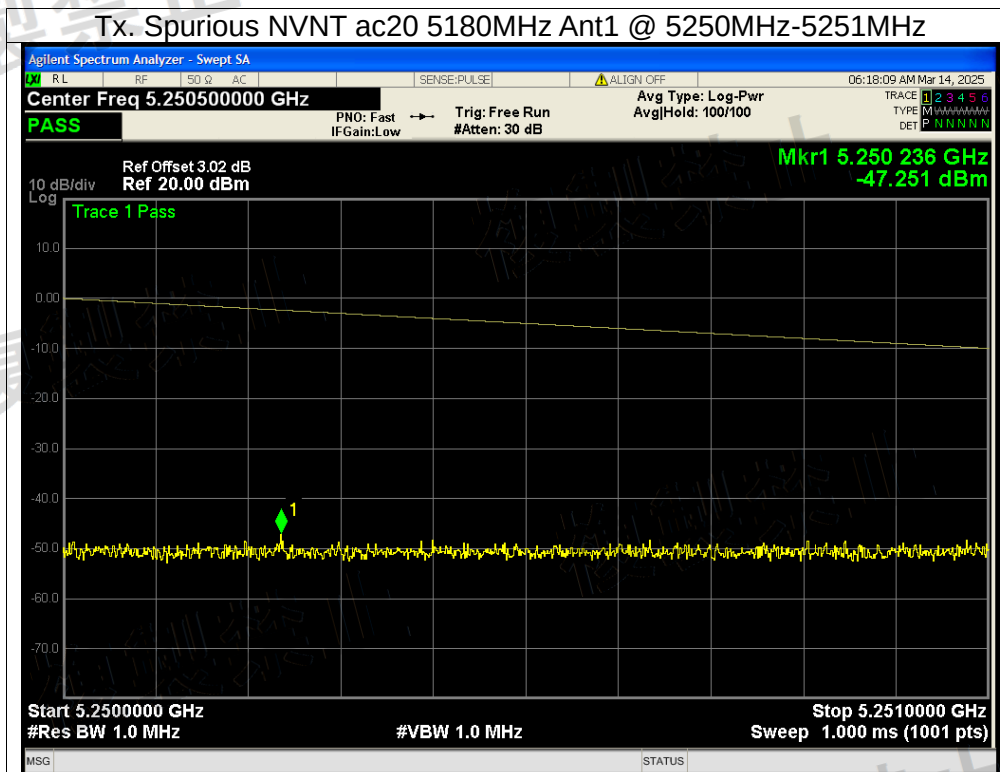


Tx. Spurious NVNT ac20 5180MHz Ant1 @ 5142MHz-5150MHz

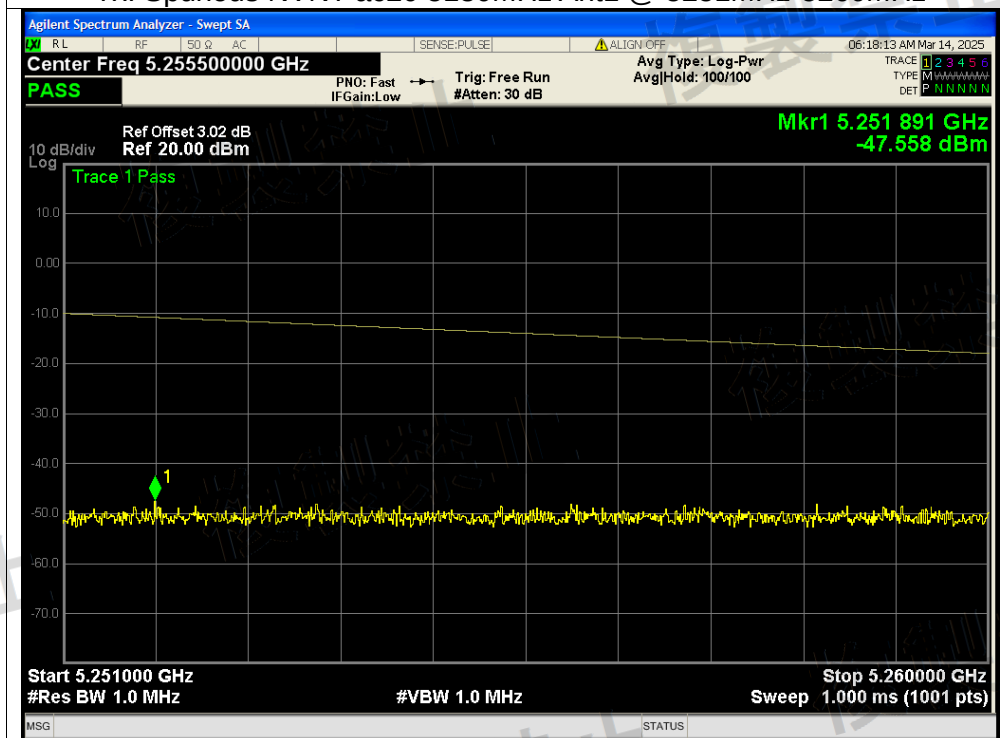




Tx. Spurious NVNT ac20 5180MHz Ant1 @ 5250MHz-5251MHz

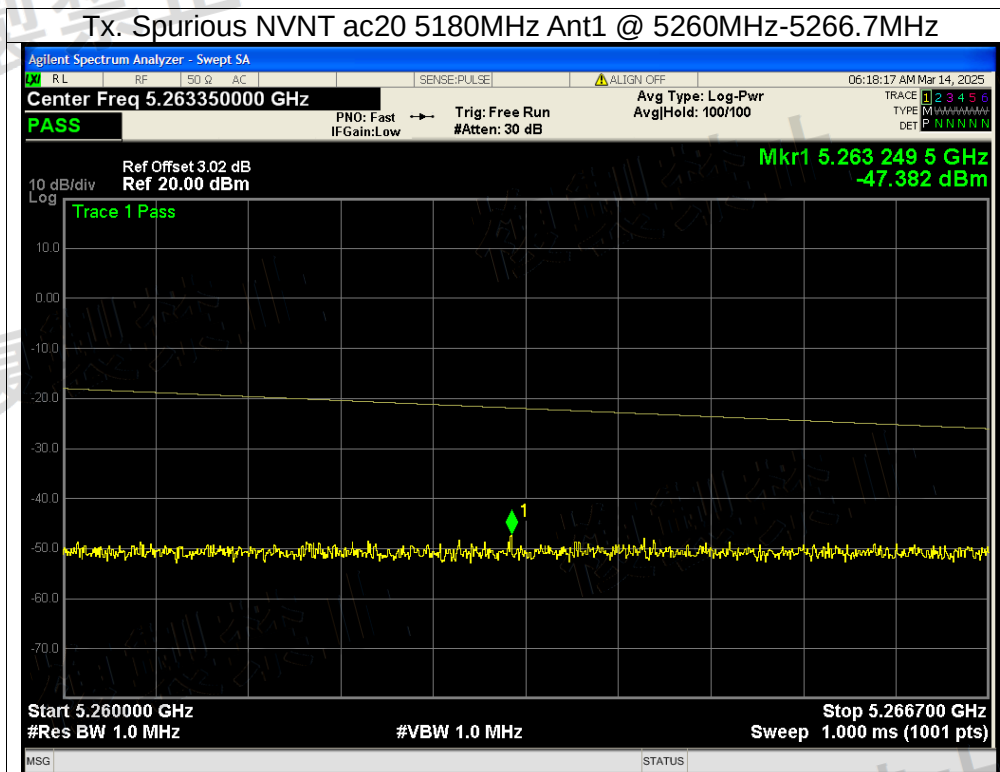


Tx. Spurious NVNT ac20 5180MHz Ant1 @ 5251MHz-5260MHz

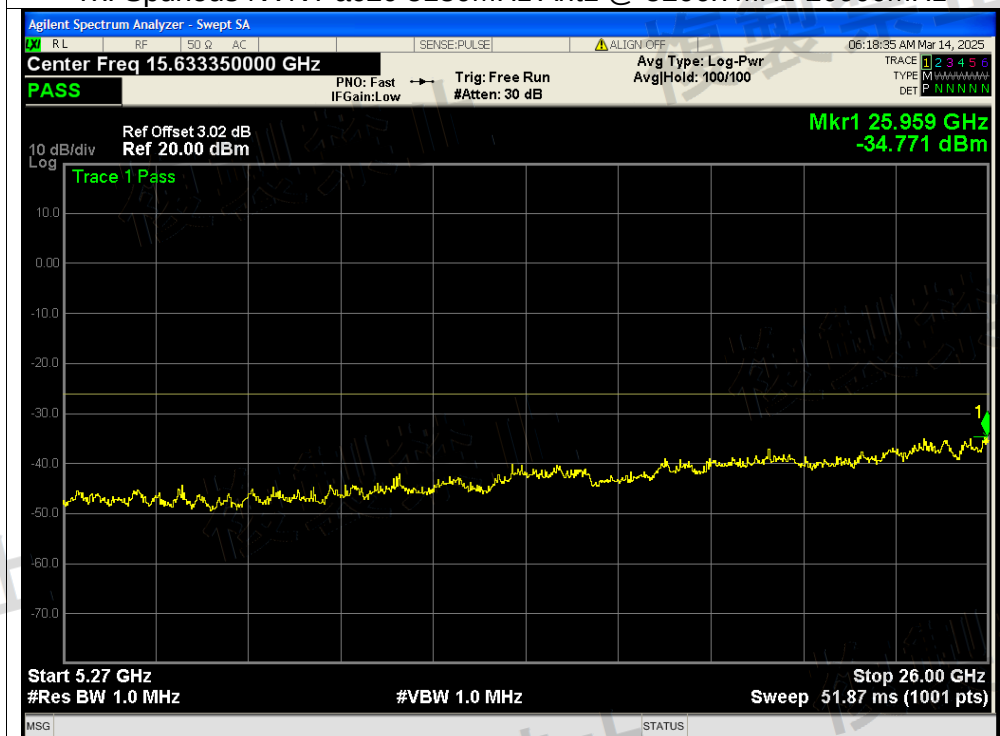




Tx. Spurious NVNT ac20 5180MHz Ant1 @ 5260MHz-5266.7MHz

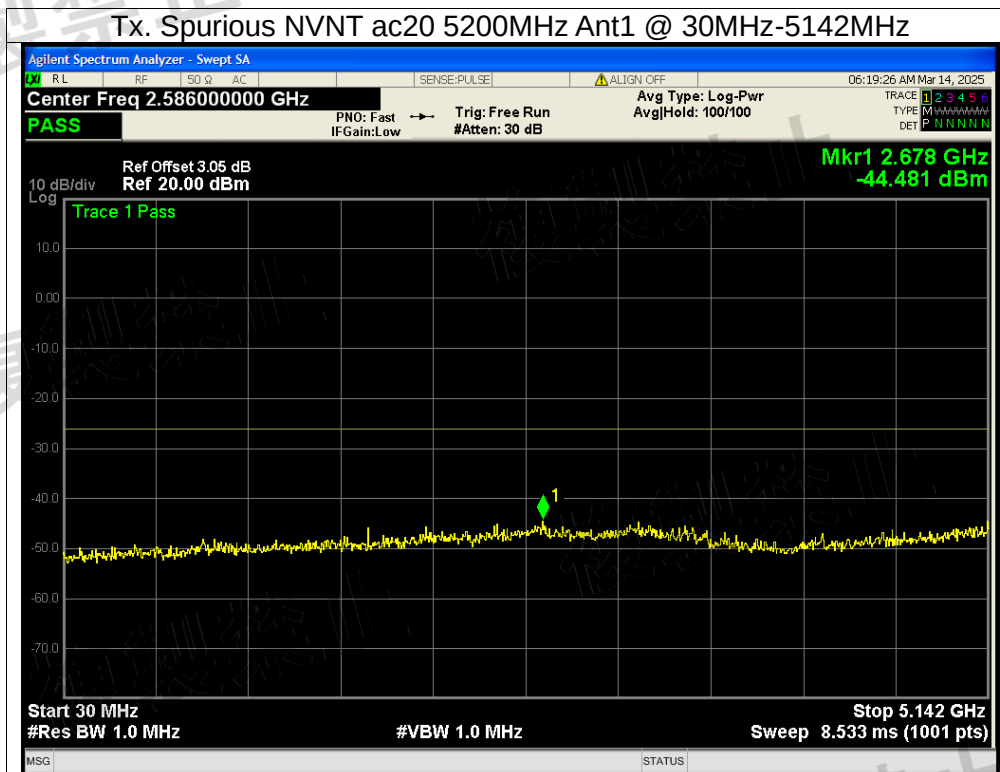


Tx. Spurious NVNT ac20 5180MHz Ant1 @ 5266.7MHz-26000MHz

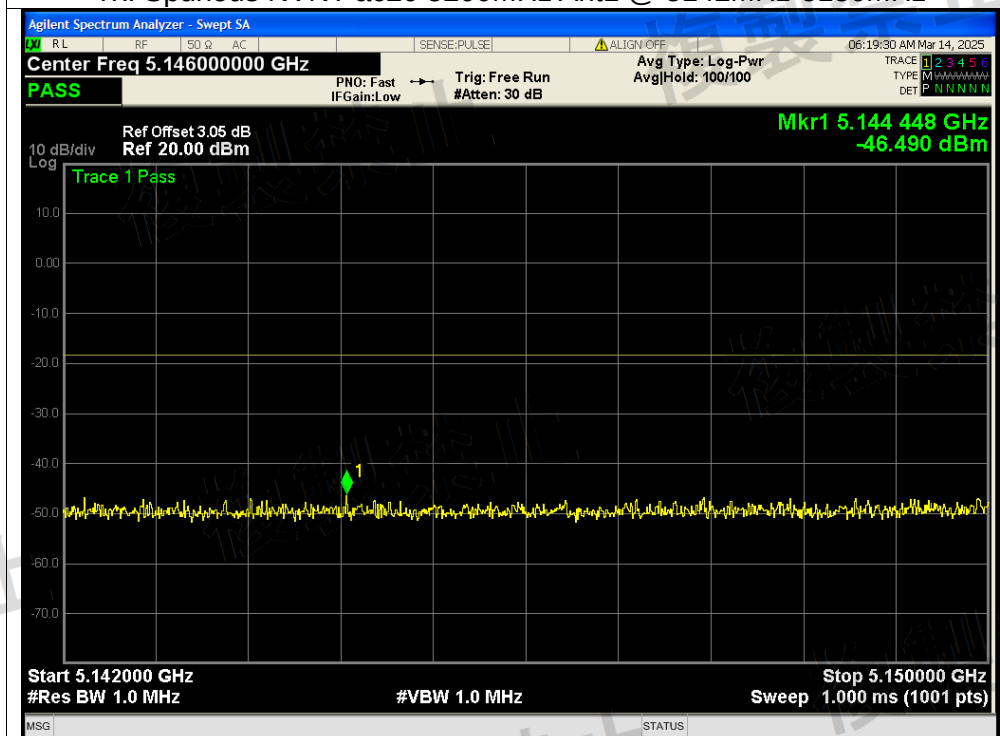




Tx. Spurious NVNT ac20 5200MHz Ant1 @ 30MHz-5142MHz

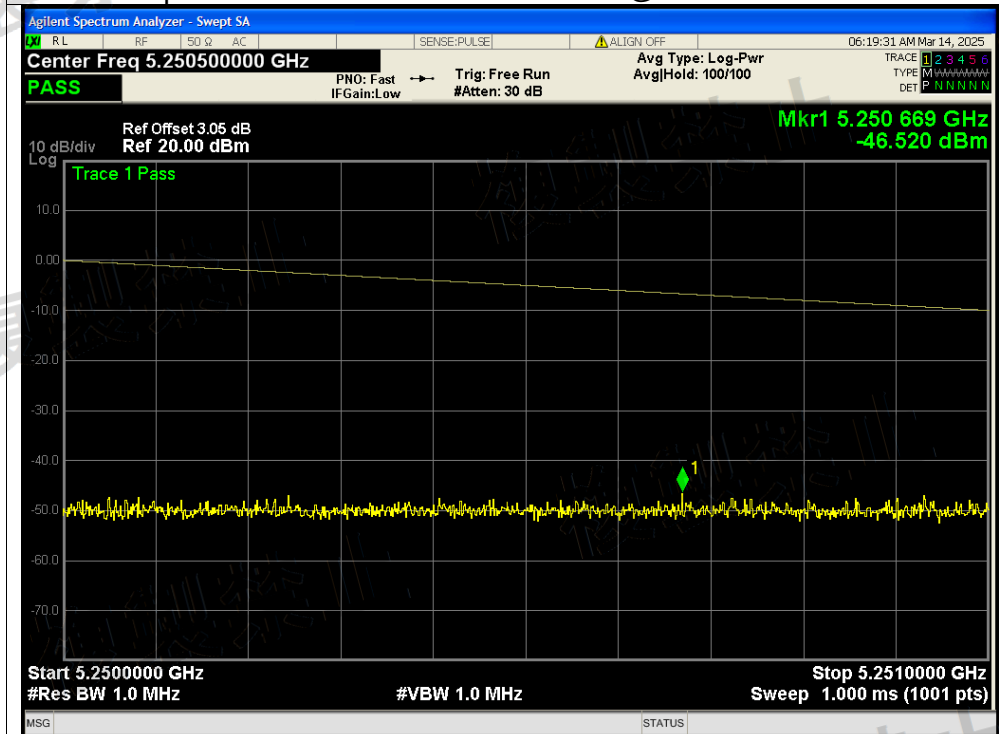


Tx. Spurious NVNT ac20 5200MHz Ant1 @ 5142MHz-5150MHz

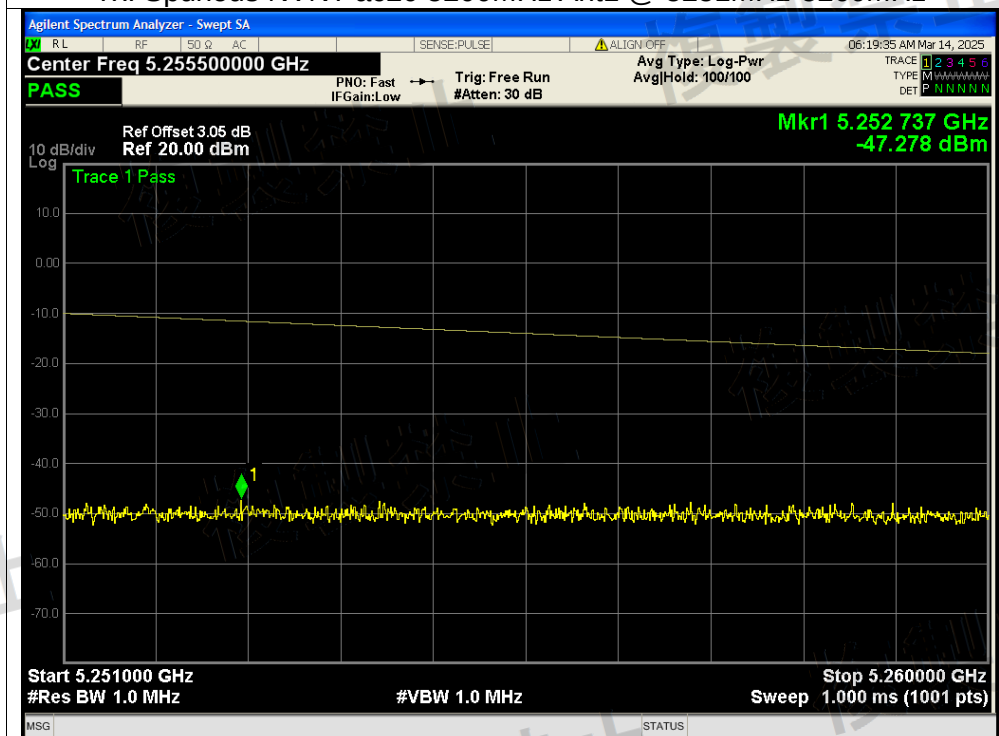




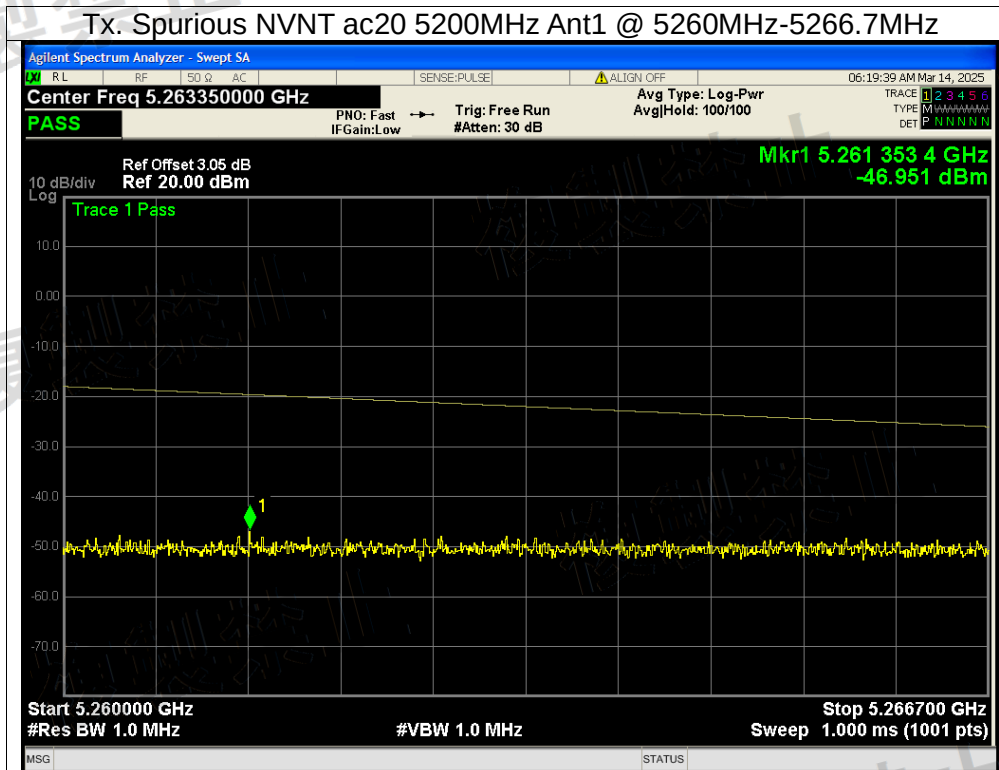
Tx. Spurious NVNT ac20 5200MHz Ant1 @ 5250MHz-5251MHz



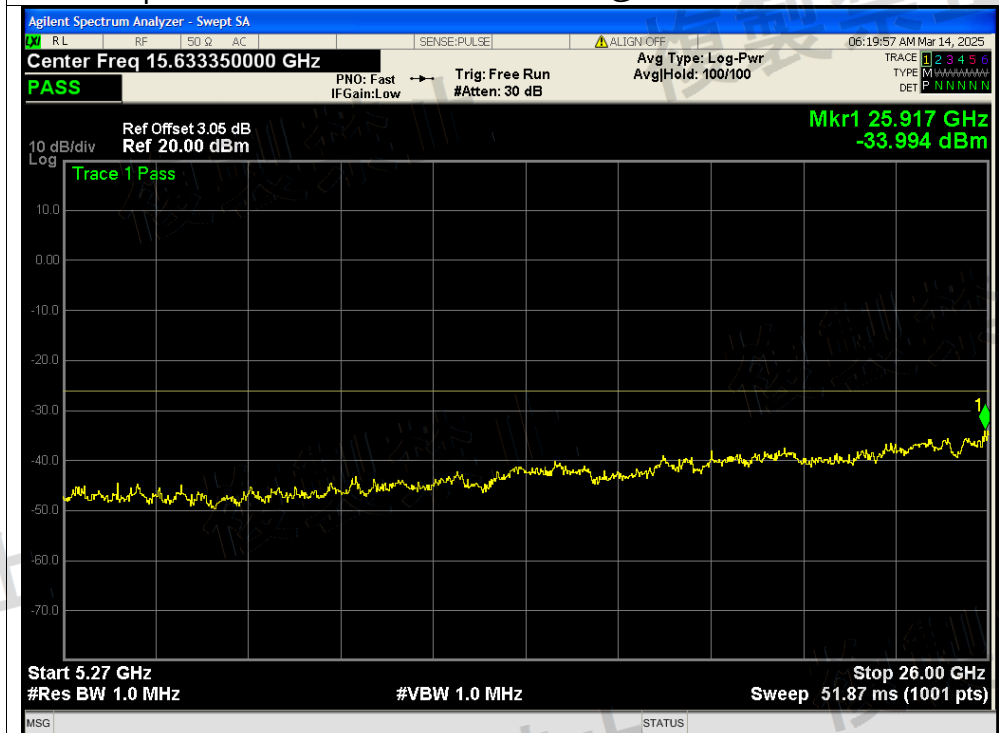
Tx. Spurious NVNT ac20 5200MHz Ant1 @ 5251MHz-5260MHz



Tx. Spurious NVNT ac20 5200MHz Ant1 @ 5260MHz-5266.7MHz

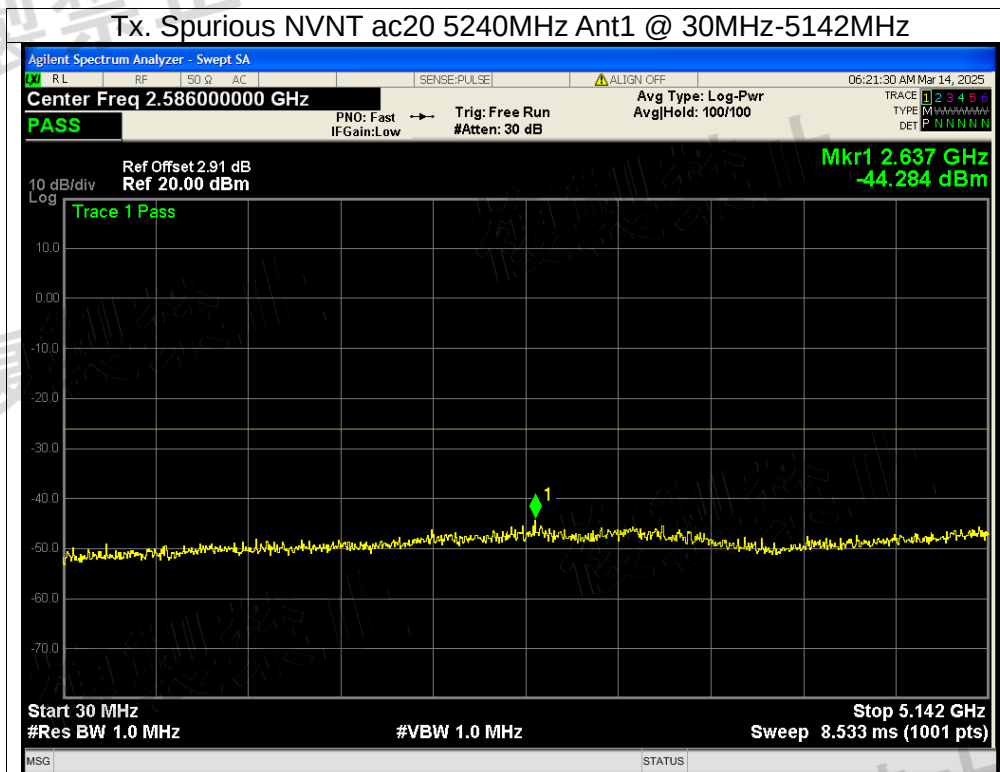


Tx. Spurious NVNT ac20 5200MHz Ant1 @ 5266.7MHz-26000MHz

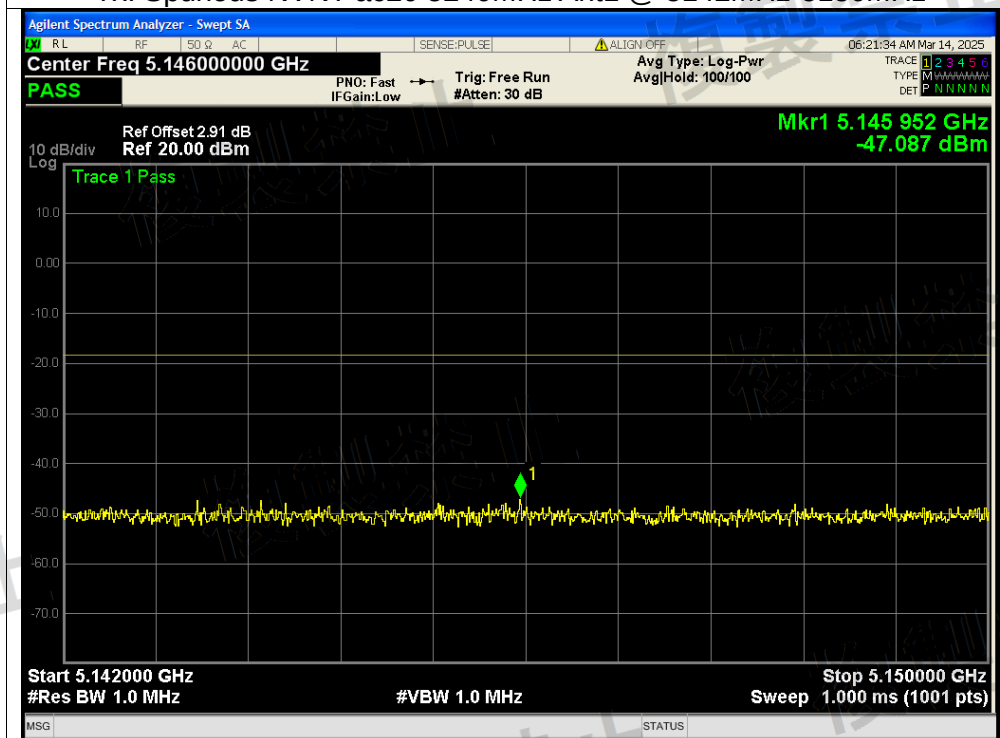




Tx. Spurious NVNT ac20 5240MHz Ant1 @ 30MHz-5142MHz

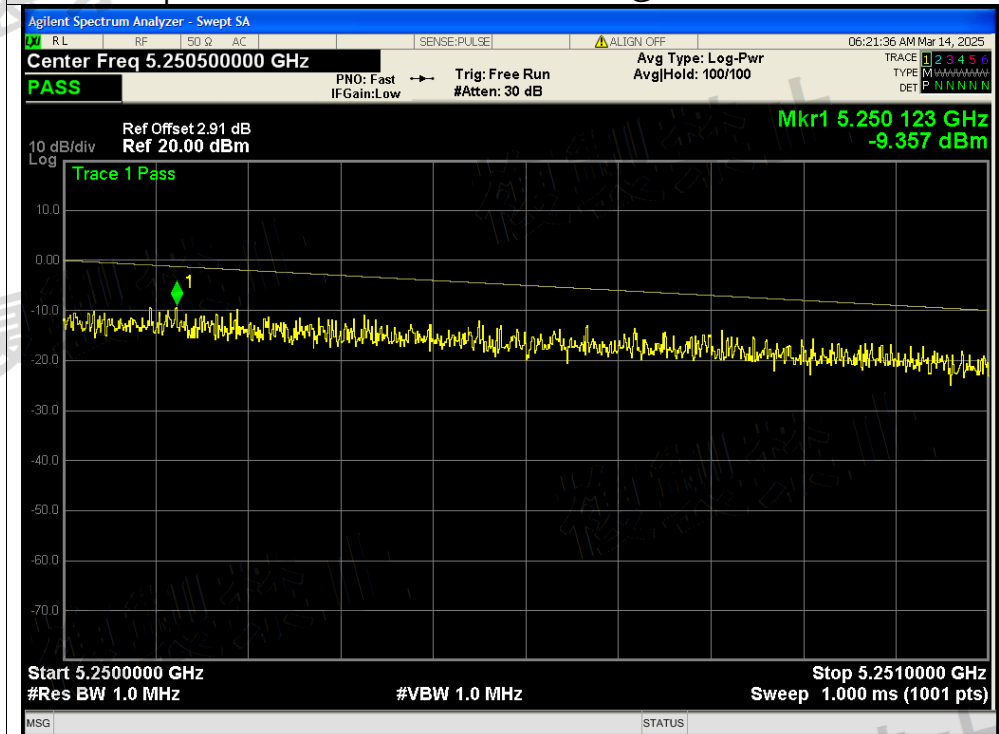


Tx. Spurious NVNT ac20 5240MHz Ant1 @ 5142MHz-5150MHz

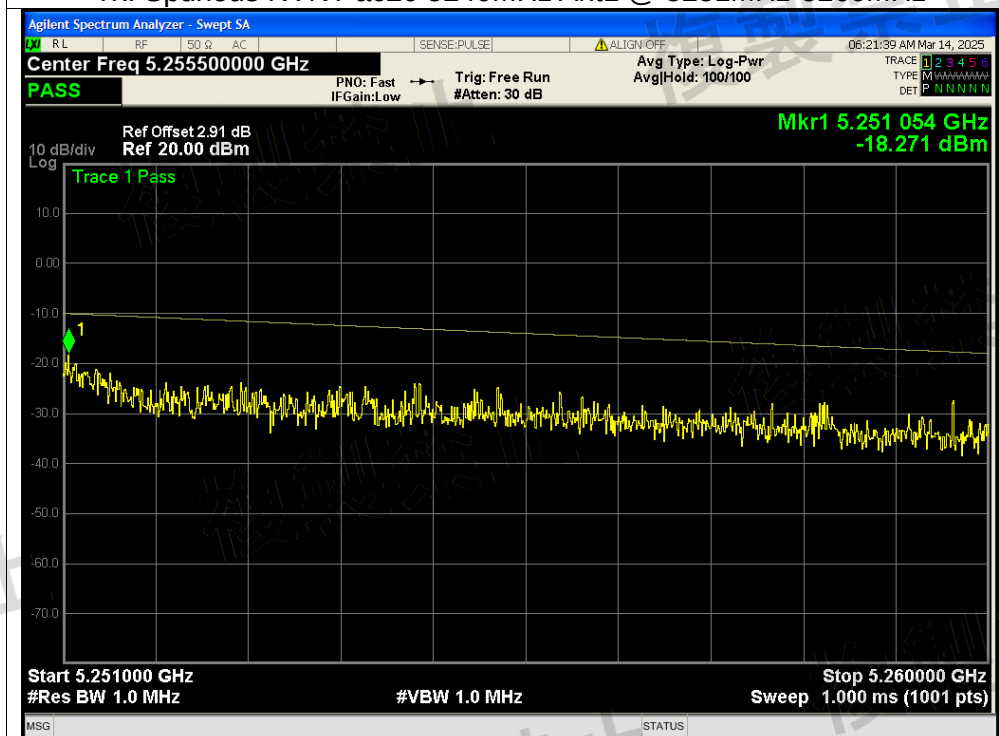




Tx. Spurious NVNT ac20 5240MHz Ant1 @ 5250MHz-5251MHz

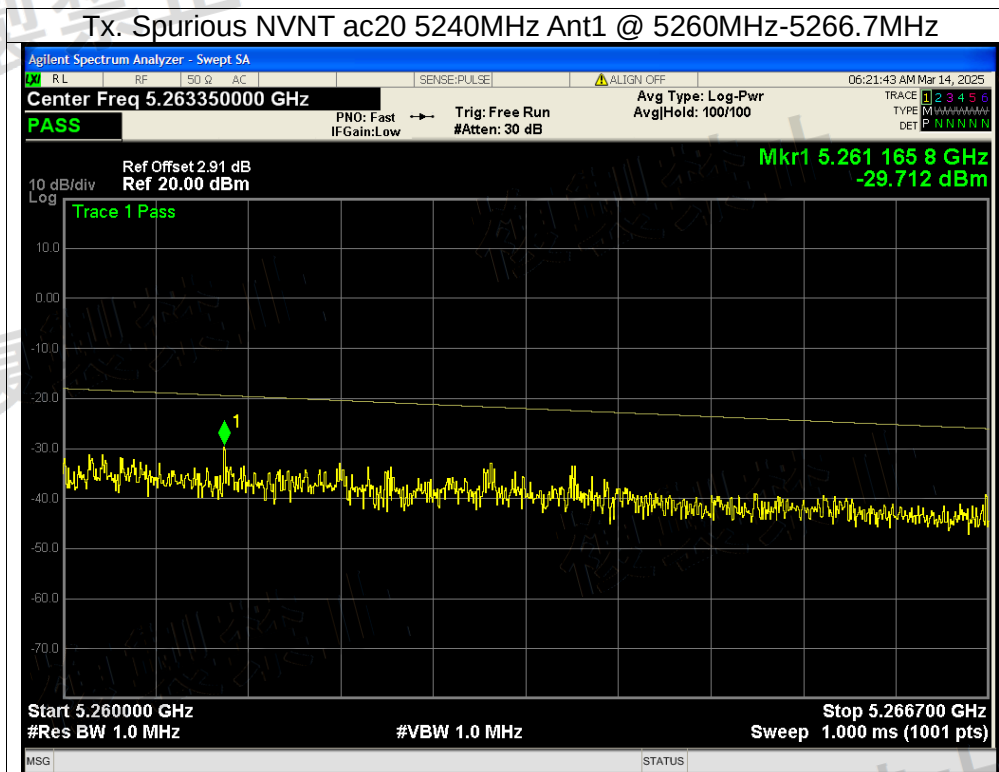


Tx. Spurious NVNT ac20 5240MHz Ant1 @ 5251MHz-5260MHz

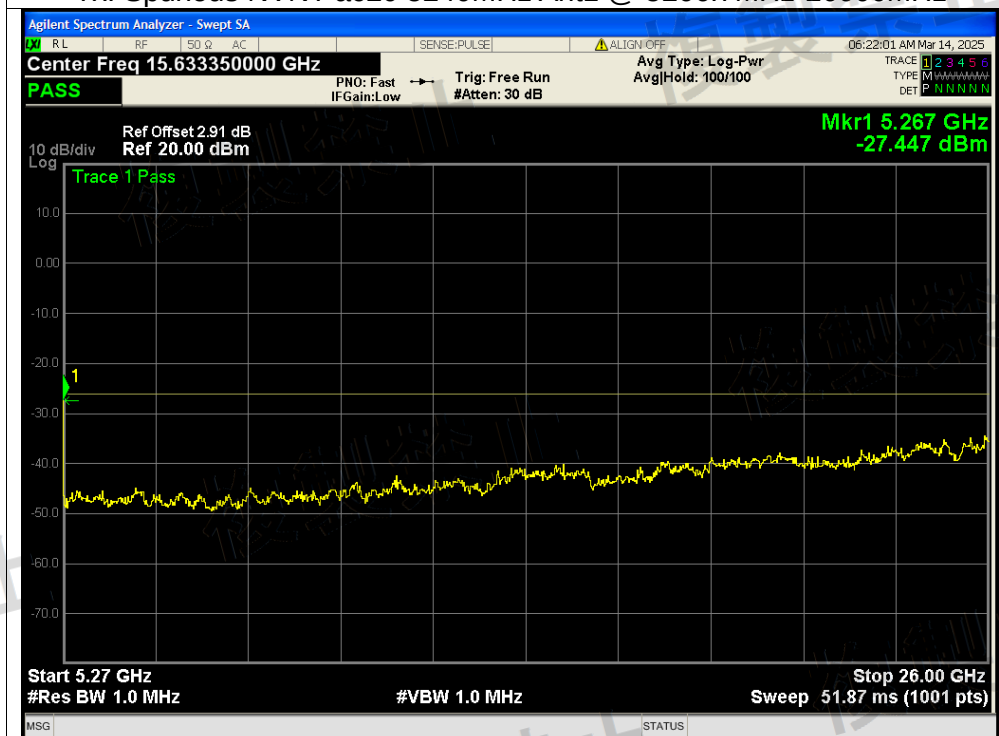




Tx. Spurious NVNT ac20 5240MHz Ant1 @ 5260MHz-5266.7MHz

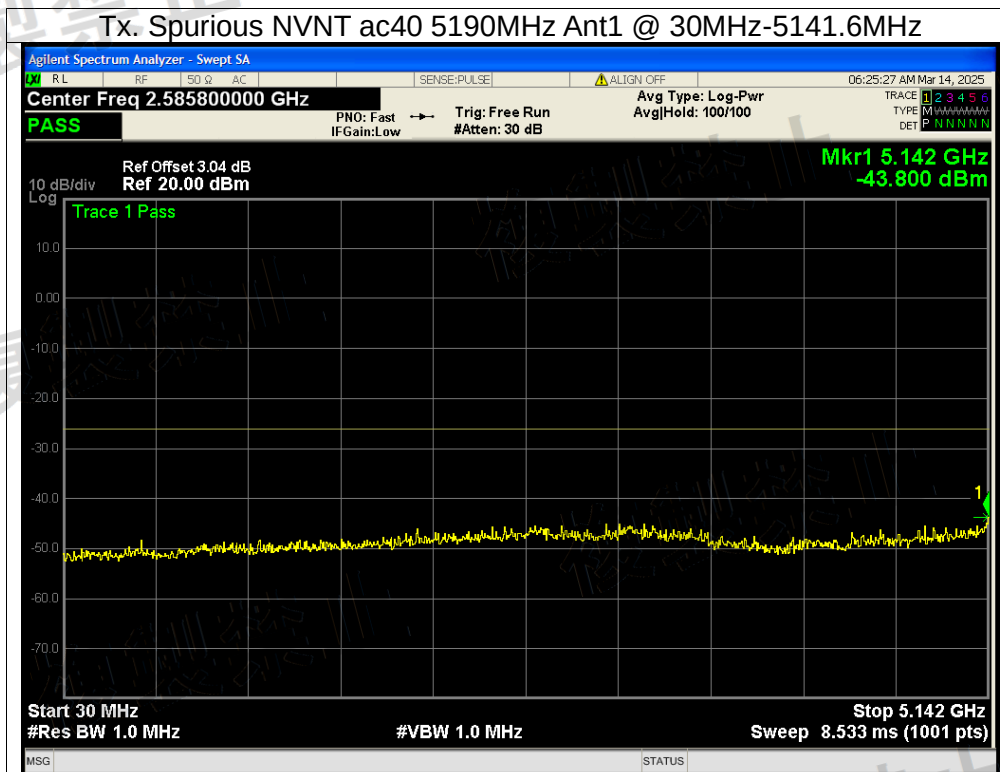


Tx. Spurious NVNT ac20 5240MHz Ant1 @ 5266.7MHz-26000MHz

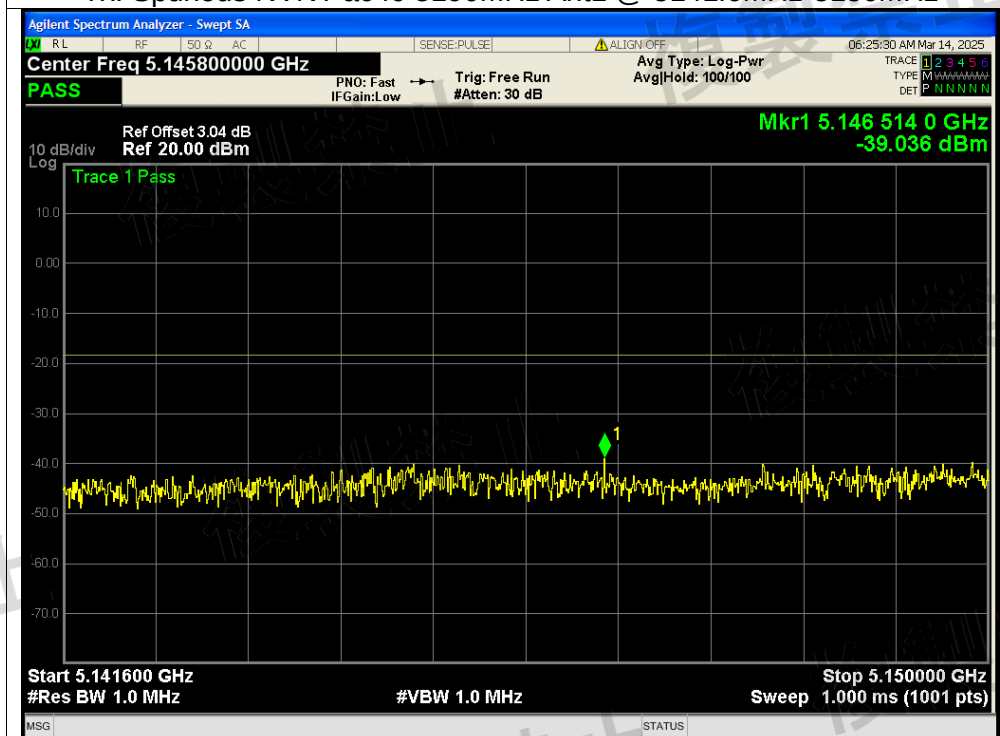




Tx. Spurious NVNT ac40 5190MHz Ant1 @ 30MHz-5141.6MHz

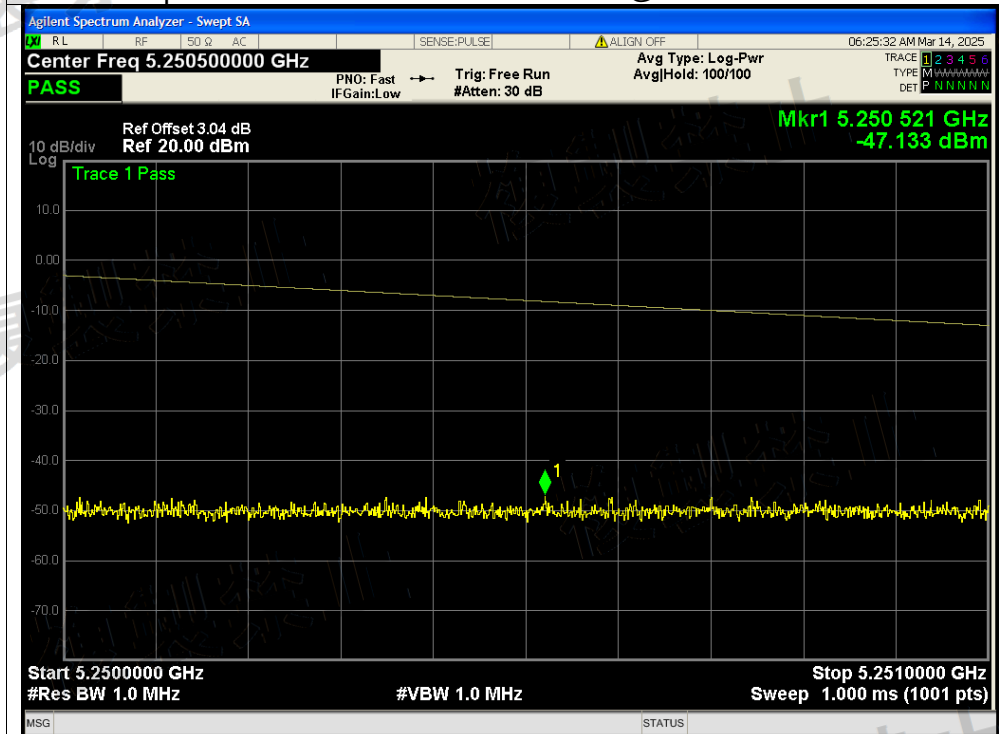


Tx. Spurious NVNT ac40 5190MHz Ant1 @ 5141.6MHz-5150MHz

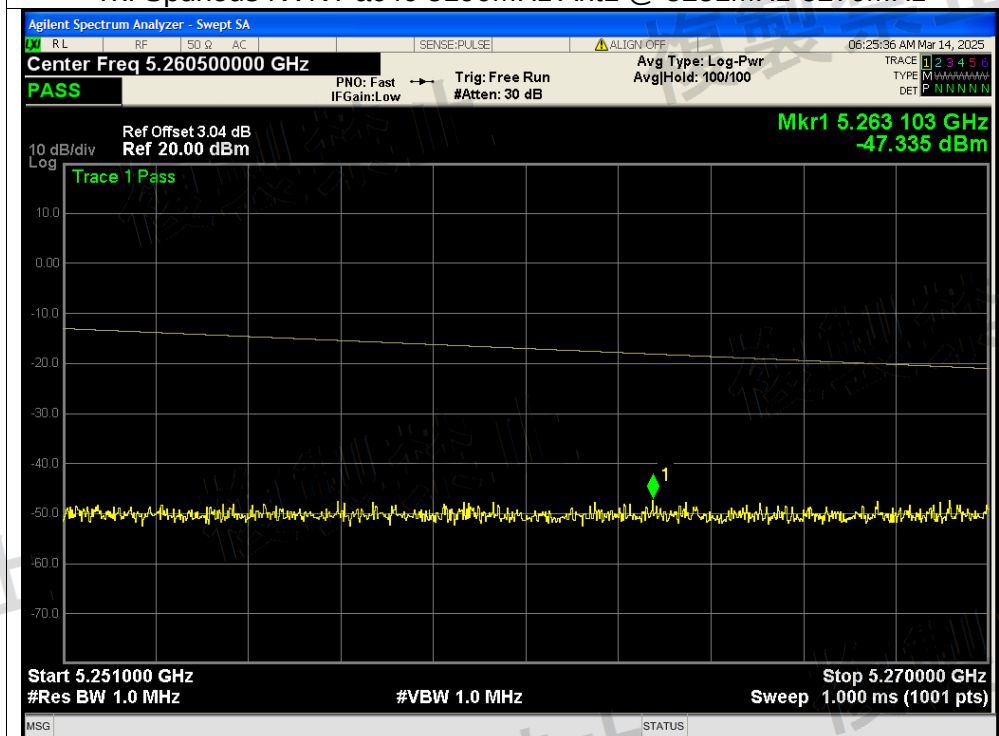




Tx. Spurious NVNT ac40 5190MHz Ant1 @ 5250MHz-5251MHz

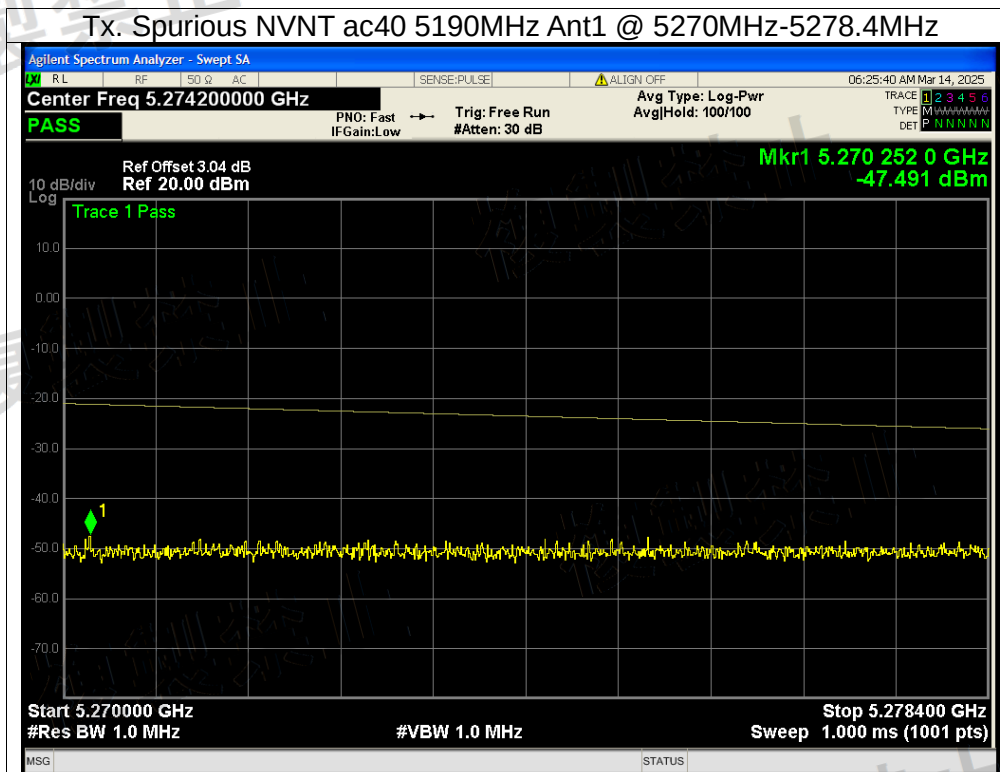


Tx. Spurious NVNT ac40 5190MHz Ant1 @ 5251MHz-5270MHz

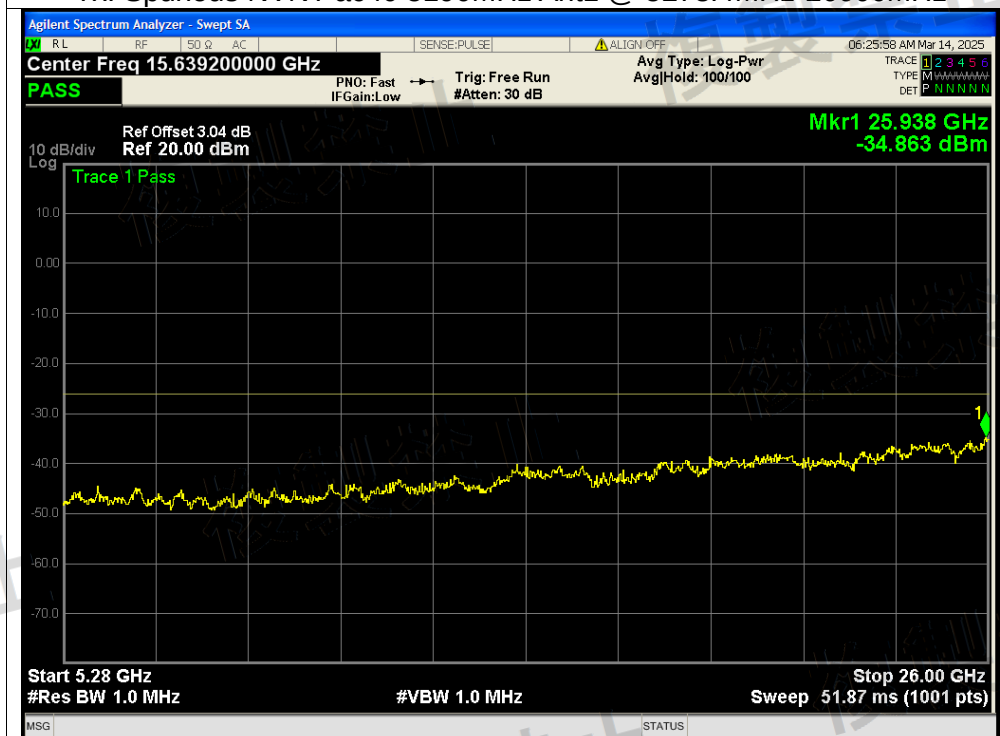


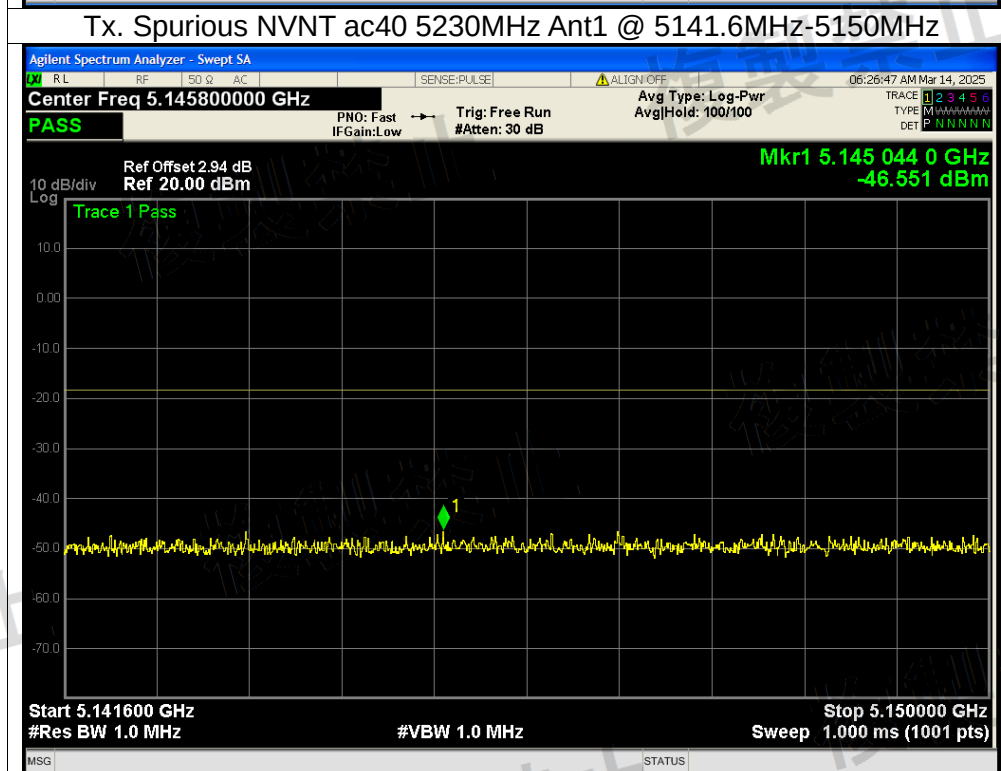


Tx. Spurious NVNT ac40 5190MHz Ant1 @ 5270MHz-5278.4MHz



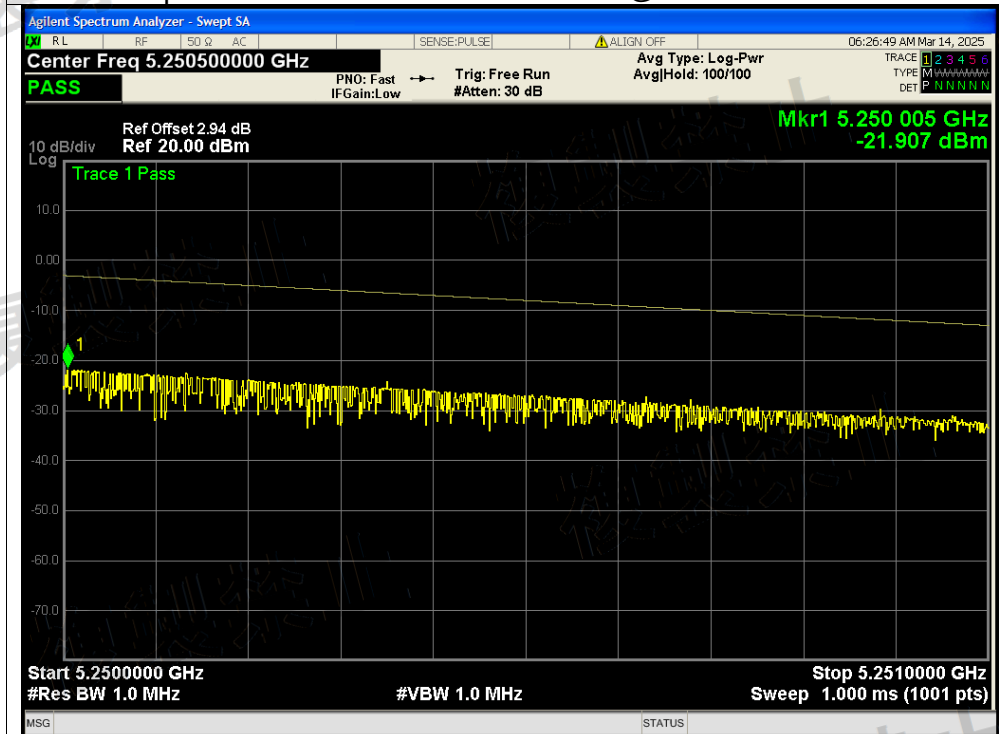
Tx. Spurious NVNT ac40 5190MHz Ant1 @ 5278.4MHz-26000MHz



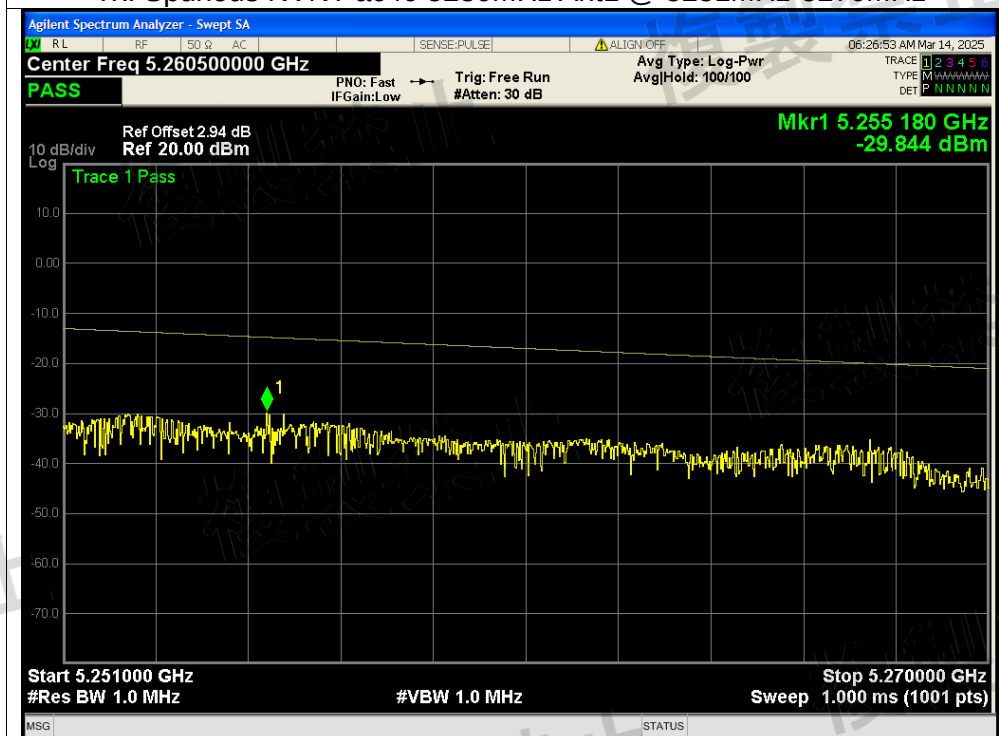




Tx. Spurious NVNT ac40 5230MHz Ant1 @ 5250MHz-5251MHz

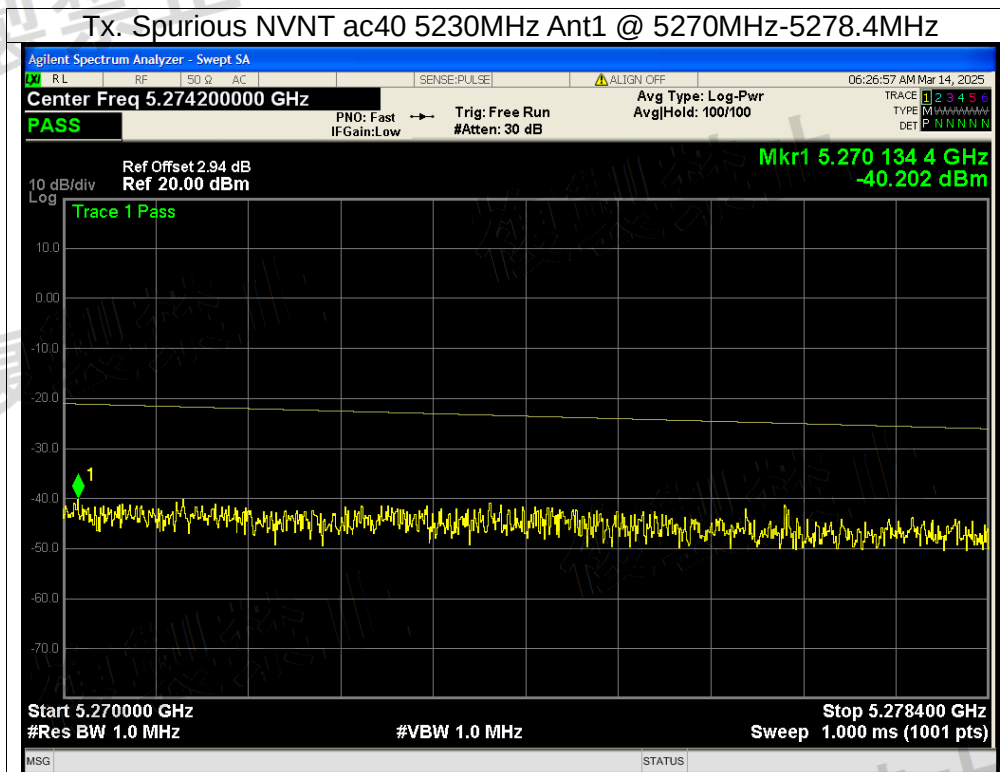


Tx. Spurious NVNT ac40 5230MHz Ant1 @ 5251MHz-5270MHz

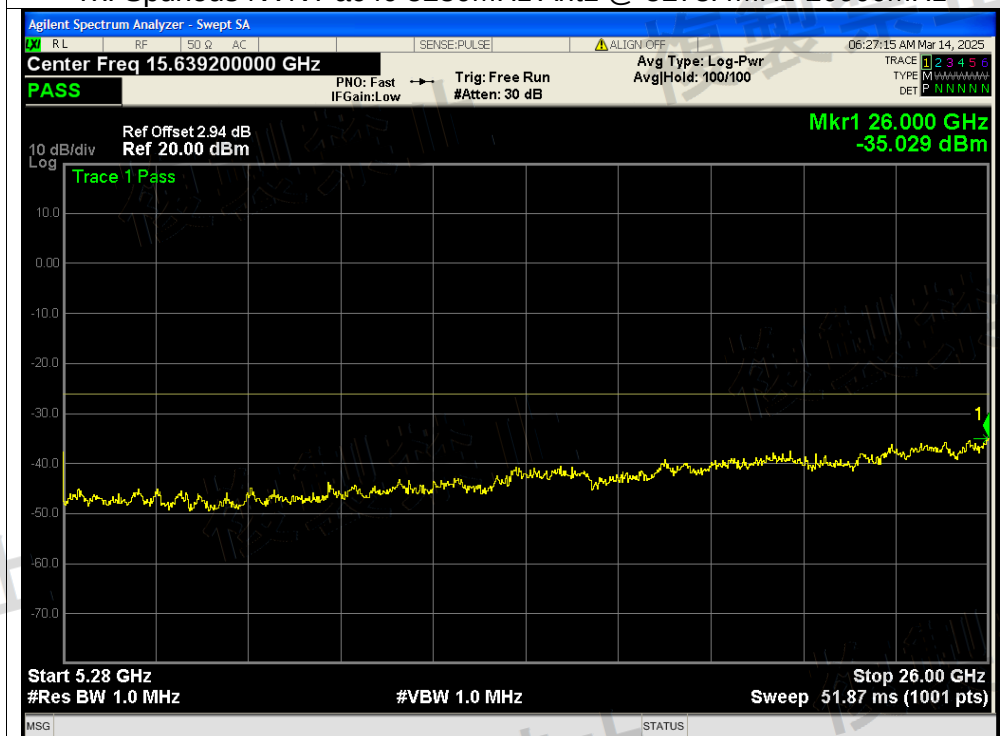




Tx. Spurious NVNT ac40 5230MHz Ant1 @ 5270MHz-5278.4MHz

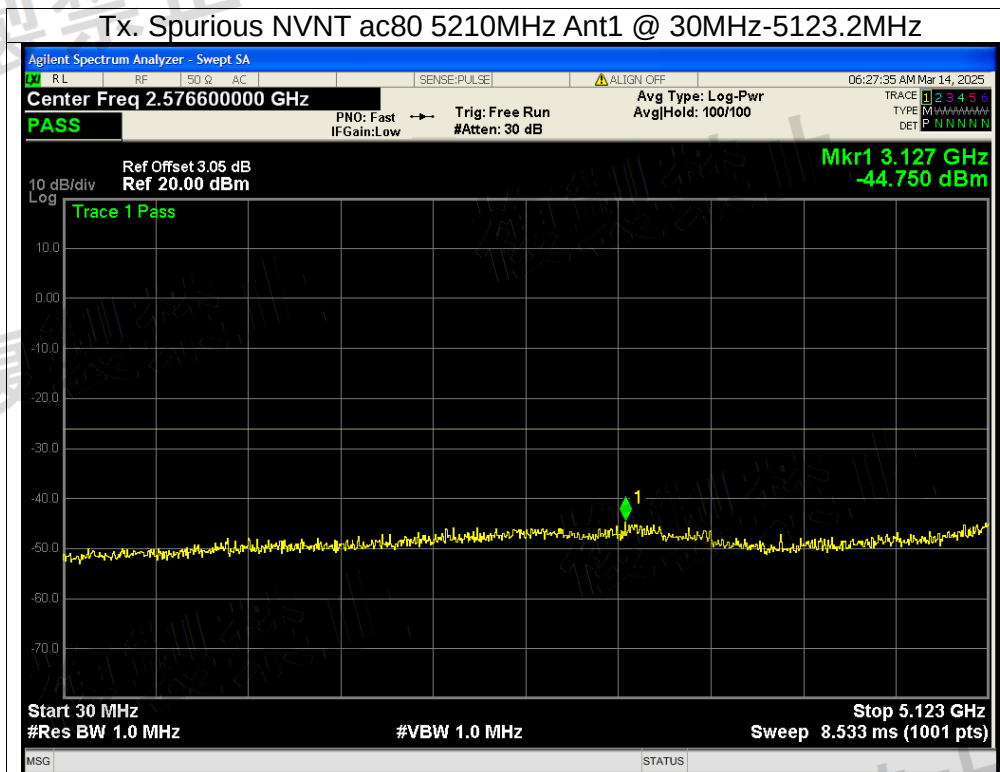


Tx. Spurious NVNT ac40 5230MHz Ant1 @ 5278.4MHz-26000MHz

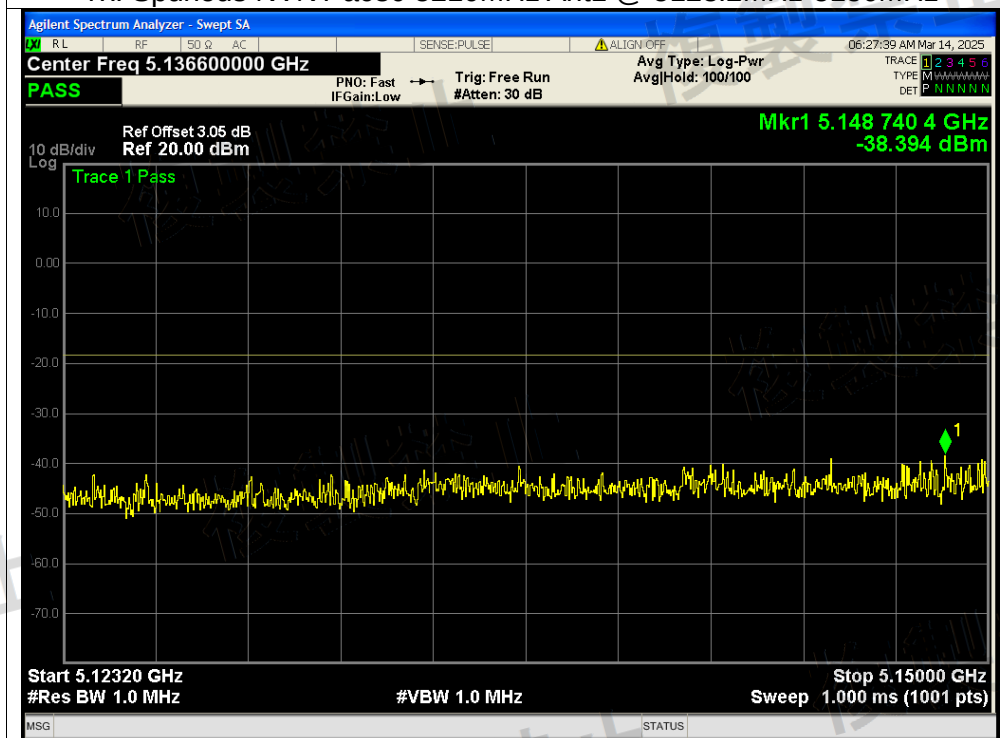




Tx. Spurious NVNT ac80 5210MHz Ant1 @ 30MHz-5123.2MHz

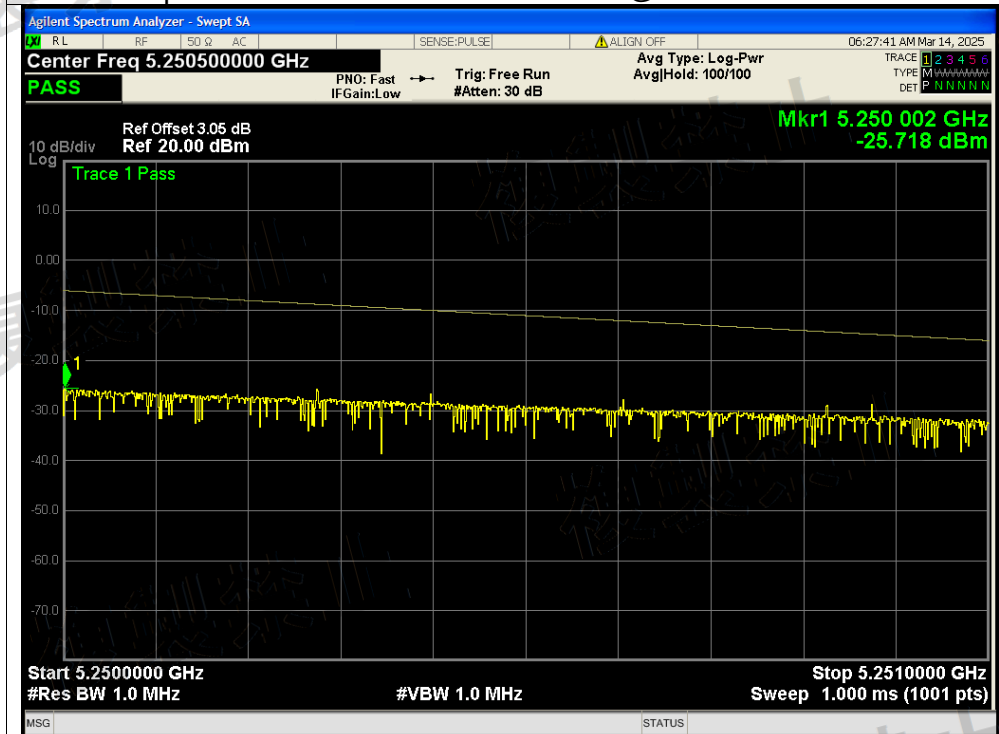


Tx. Spurious NVNT ac80 5210MHz Ant1 @ 5123.2MHz-5150MHz

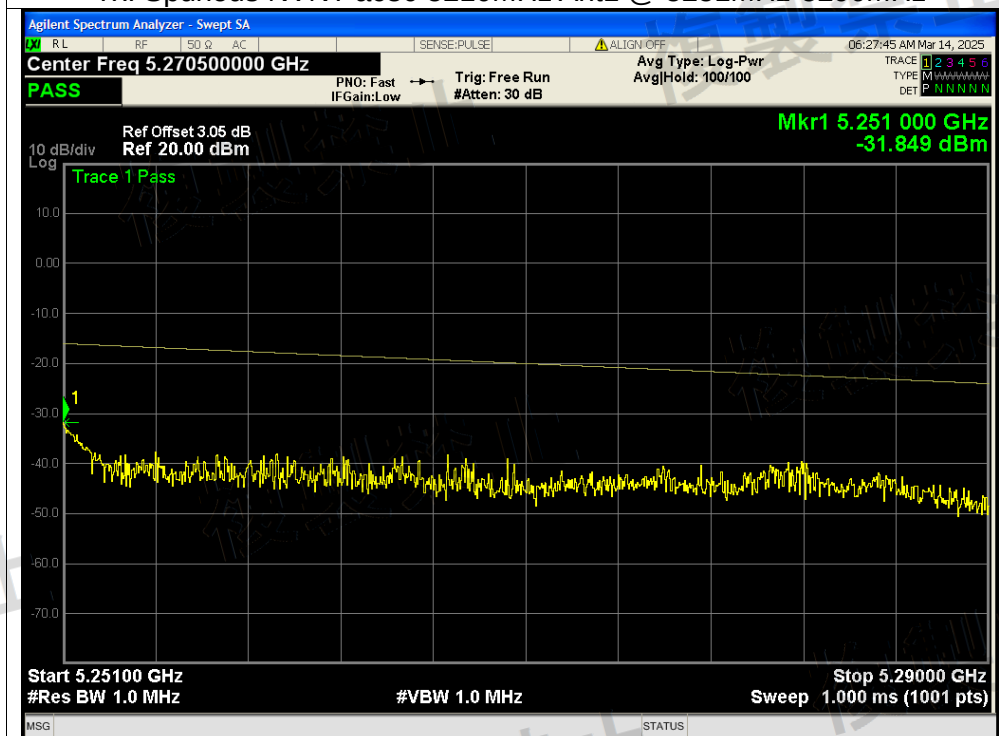




Tx. Spurious NVNT ac80 5210MHz Ant1 @ 5250MHz-5251MHz

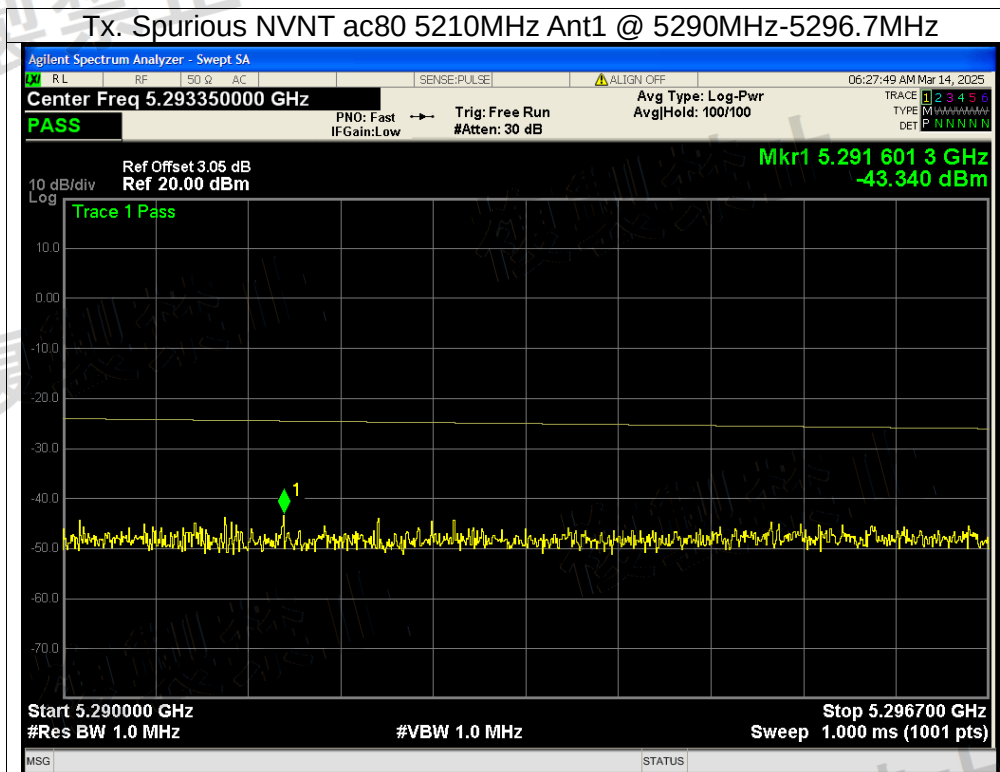


Tx. Spurious NVNT ac80 5210MHz Ant1 @ 5251MHz-5290MHz

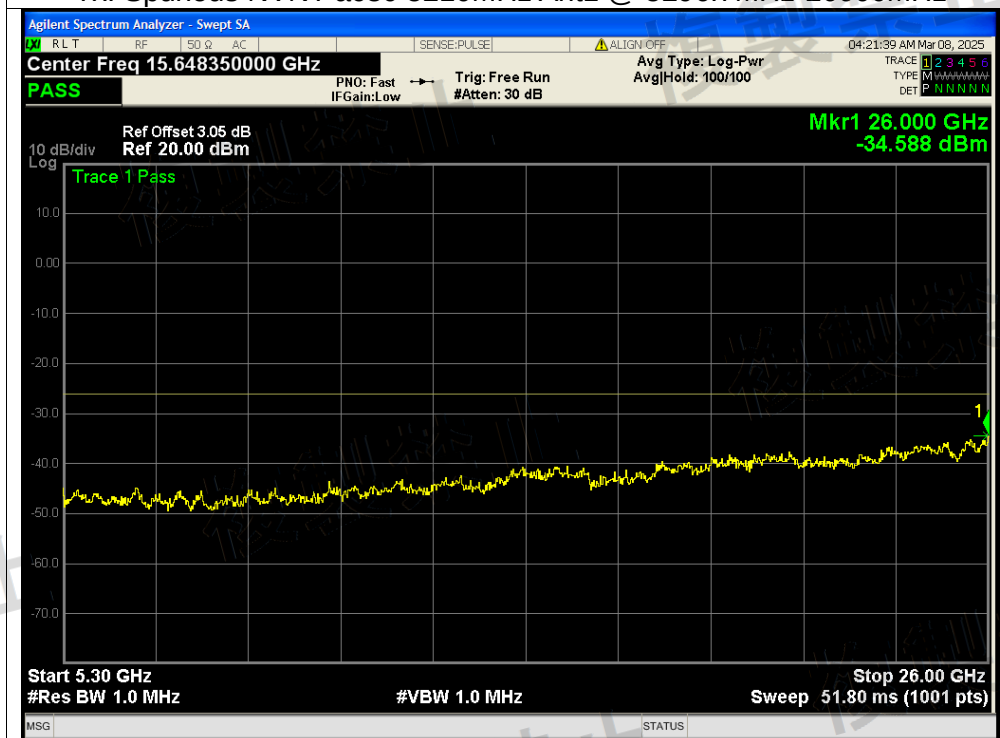




Tx. Spurious NVNT ac80 5210MHz Ant1 @ 5290MHz-5296.7MHz



Tx. Spurious NVNT ac80 5210MHz Ant1 @ 5296.7MHz-26000MHz





7. ADJACENT CHANNEL EMITTED POWER MEASUREMENT

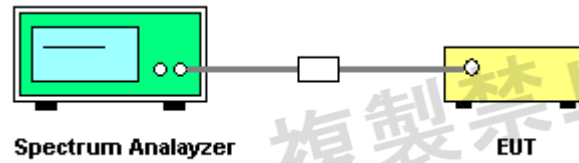
7.1 LIMIT

Item	LIMIT
Adjacent channel leakage power	$\leq -25\text{dBc}$ (within $\pm 10\text{MHz}$ band at $\pm 20\text{MHz}$ spacing) $\text{OBW} \leq 20\text{MHz}$
	$\leq -40\text{dBc}$ (within $\pm 10\text{MHz}$ band at $\pm 40\text{MHz}$ spacing) $\text{OBW} \leq 20\text{MHz}$
	$\leq -25\text{dBc}$ (within $\pm 20\text{MHz}$ band at $\pm 40\text{MHz}$ spacing) $20\text{MHz} < \text{OBW} \leq 40\text{MHz}$
	$\leq -40\text{dBc}$ (within $\pm 20\text{MHz}$ band at $\pm 80\text{MHz}$ spacing) $20\text{MHz} < \text{OBW} \leq 40\text{MHz}$
	$\leq -25\text{dBc}$ (within $\pm 40\text{MHz}$ band at $\pm 80\text{MHz}$ spacing) $40\text{MHz} < \text{OBW} \leq 80\text{MHz}$

7.2 TEST PROCEDURES

1. EUT has the continuous reception mode and fixed only one channelize.
2. SA set RBW: 300KHz and VBW: 300KHz, Span 100MHz (BW=20MHz/200MHz(BW=40MHz), RMS Detector, trace Maximum Hold and use ACLR Option.
3. Frequency spacing and measuring bandwidth be specified in section 3.6.1.
4. Reporting the worst value

7.3 TEST SETUP



7.4 TEST DEVIATION

There is no deviation with the original standard.

7.5 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

EUT:	Digital Target Panel	Model No.:	AUTEL-CSC050A/16
Temperature:	25°C	Test Date:	Mar. 14, 2025
Humidity:	55 % RH	Tested by:	Jack Li
Atmospheric Pressure:	1013 mbar	Test Voltage	Normal Voltage

802.11a

Voltage	TEST CONDITION	5180MHz	5200MHz	5240MHz	LIMIT(dBc)
Vnormal	+20MHz	-33.10	-33.23	-33.73	≤ -25
	-20MHz	-34.72	-34.63	-34.22	≤ -25
	+40MHz	-51.25	-52.65	-52.63	≤ -40
	-40MHz	-49.60	-50.79	-50.41	≤ -40

802.11n(20)

Voltage	TEST CONDITION	5180MHz	5200MHz	5240MHz	LIMIT(dBc)
Vnormal	+20MHz	-32.59	-32.98	-33.99	≤ -25
	-20MHz	-33.31	-33.57	-33.31	≤ -25
	+40MHz	-51.87	-52.64	-52.58	≤ -40
	-40MHz	-49.77	-50.76	-50.28	≤ -40

802.11ac(20)

Voltage	TEST CONDITION	5180MHz	5200MHz	5240MHz	LIMIT(dBc)
Vnormal	+20MHz	-32.90	-33.44	-33.71	≤ -25
	-20MHz	-33.84	-33.77	-33.42	≤ -25
	+40MHz	-52.30	-52.63	-52.82	≤ -40
	-40MHz	-50.60	-50.71	-50.41	≤ -40

**802.11n(40)**

Voltage	TEST CONDITION	5190 MHz	5230 MHz	LIMIT (dBc)
Vnormal	+40MHz	-37.14	-40.06	≤ -25
	-40MHz	-40.38	-39.96	≤ -25
	+80MHz	-51.69	-51.69	≤ -40
	-80MHz	-50.18	-49.60	≤ -40

802.11ac(40)

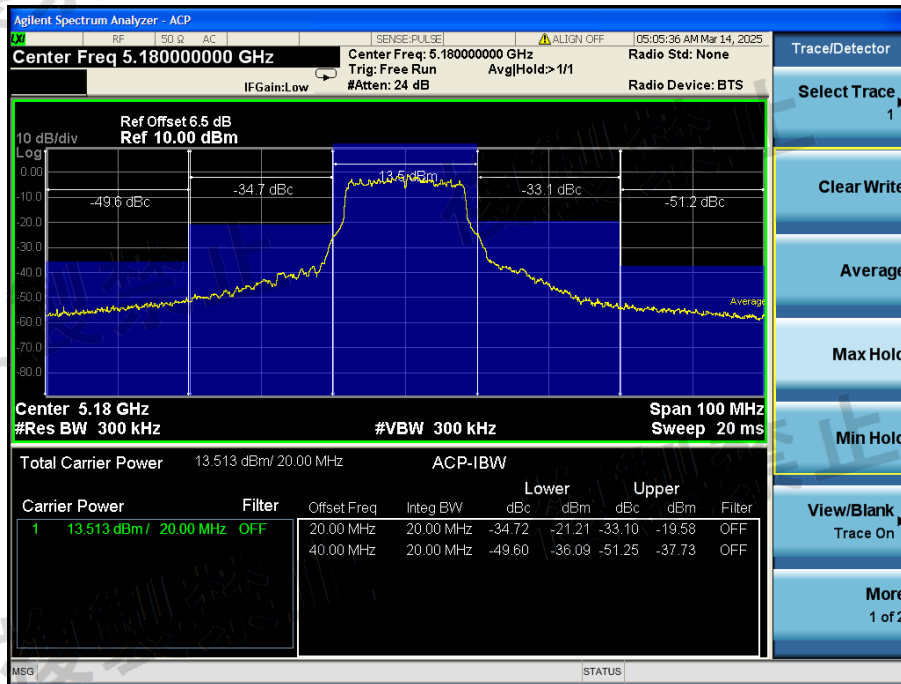
Voltage	TEST CONDITION	5190 MHz	5230 MHz	LIMIT (dBc)
Vnormal	+40MHz	-36.55	-39.38	≤ -25
	-40MHz	-39.84	-39.51	≤ -25
	+80MHz	-51.71	-51.75	≤ -40
	-80MHz	-50.13	-49.52	≤ -40

802.11ac (80)

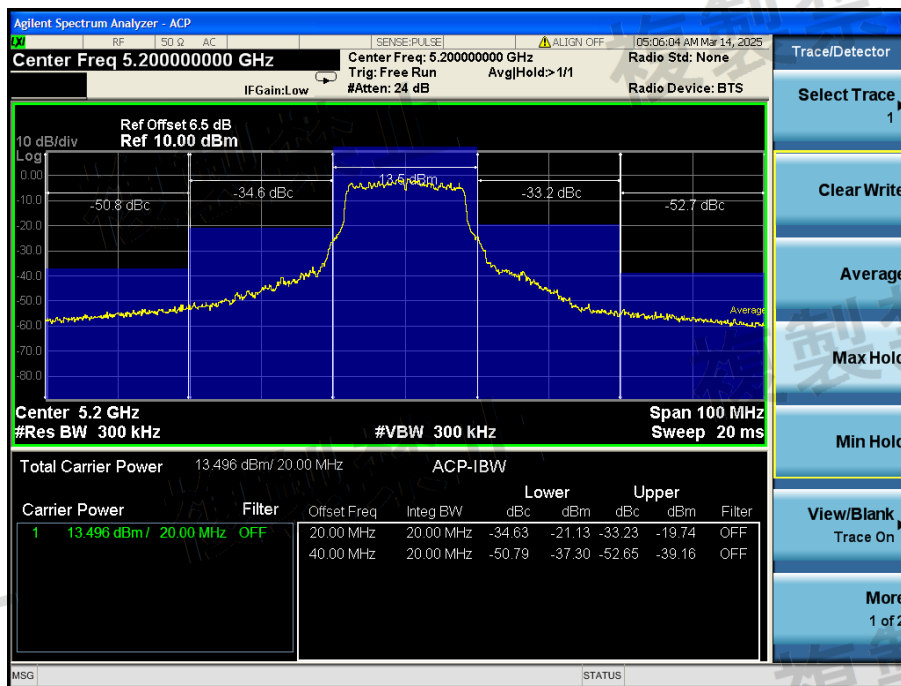
Voltage	TEST CONDITION	ac 5210 MHz	LIMIT (dBc)
Vnormal	+80MHz	-40.34	≤ -25
	-80MHz	-39.84	≤ -25



802.11a (5.15GHz-5.25GHz)
The Lowest Channel 36: 5180MHz

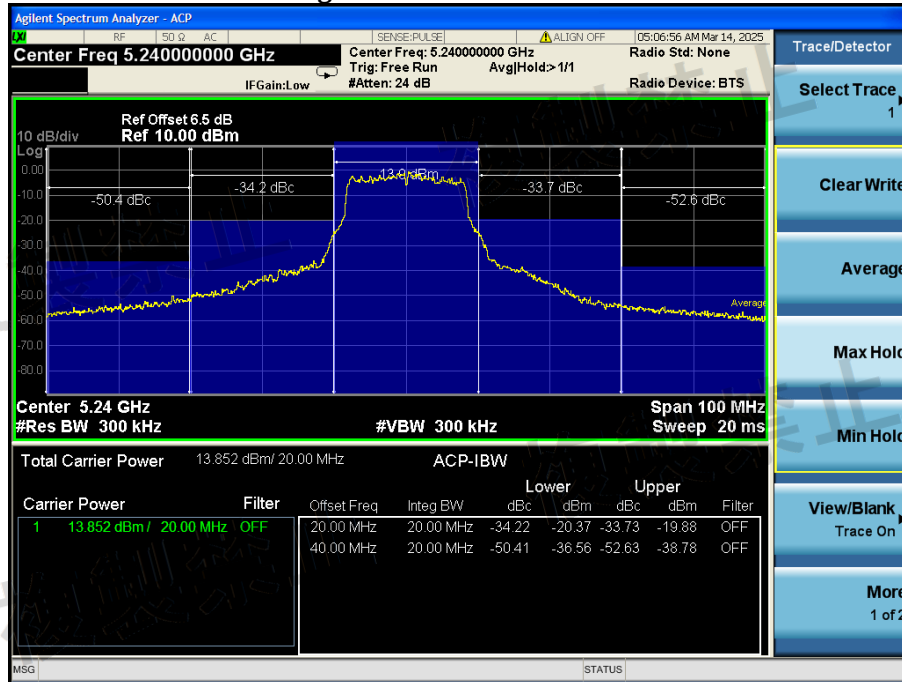


802.11a (5.15GHz-5.25GHz)
The Middle Channel 40: 5200MHz

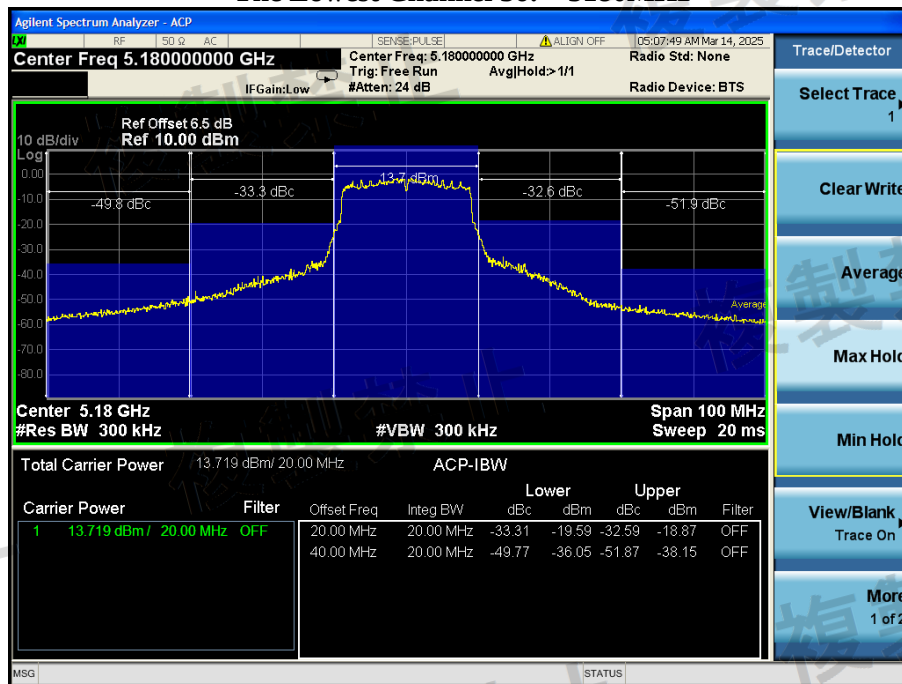




802.11a (5.15GHz-5.25GHz)
The Highest Channel 48: 5240MHz

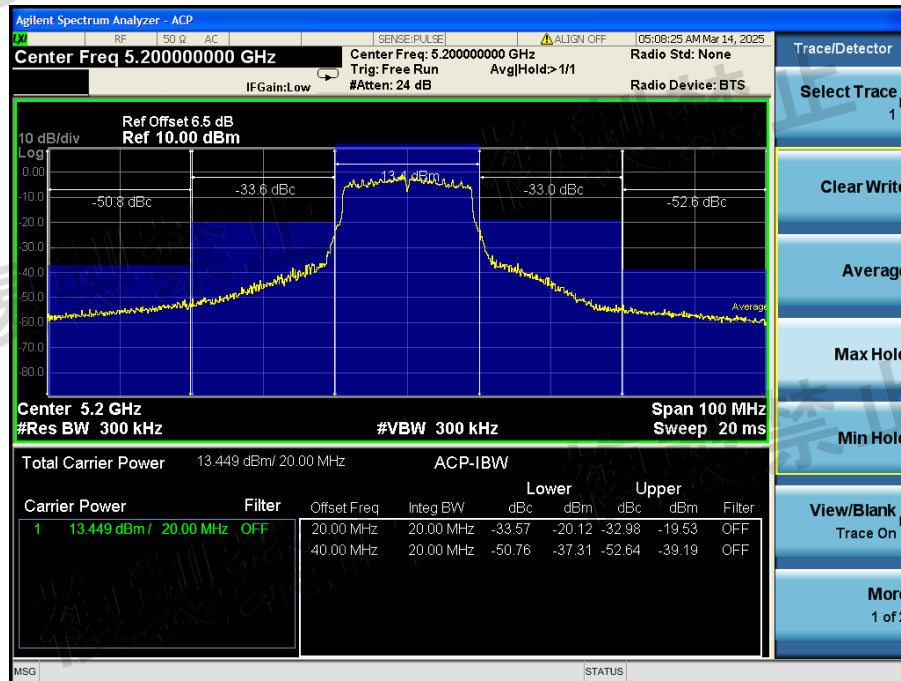


802.11n(20M) (5.15GHz-5.25GHz)
The Lowest Channel 36: 5180MHz

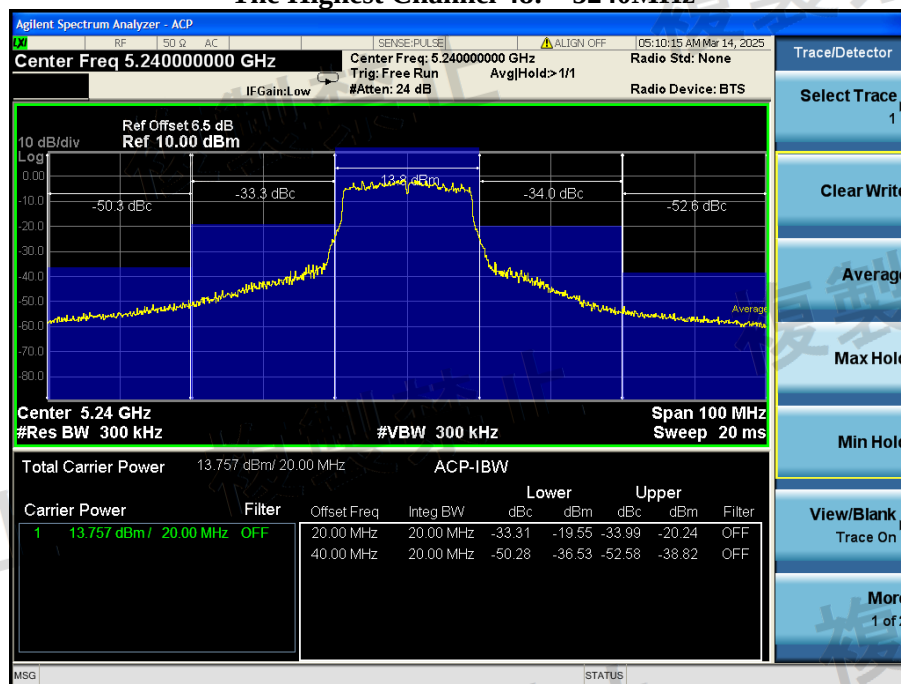




802.11n(20M) (5.15GHz-5.25GHz)
The Middle Channel 40: 5200MHz

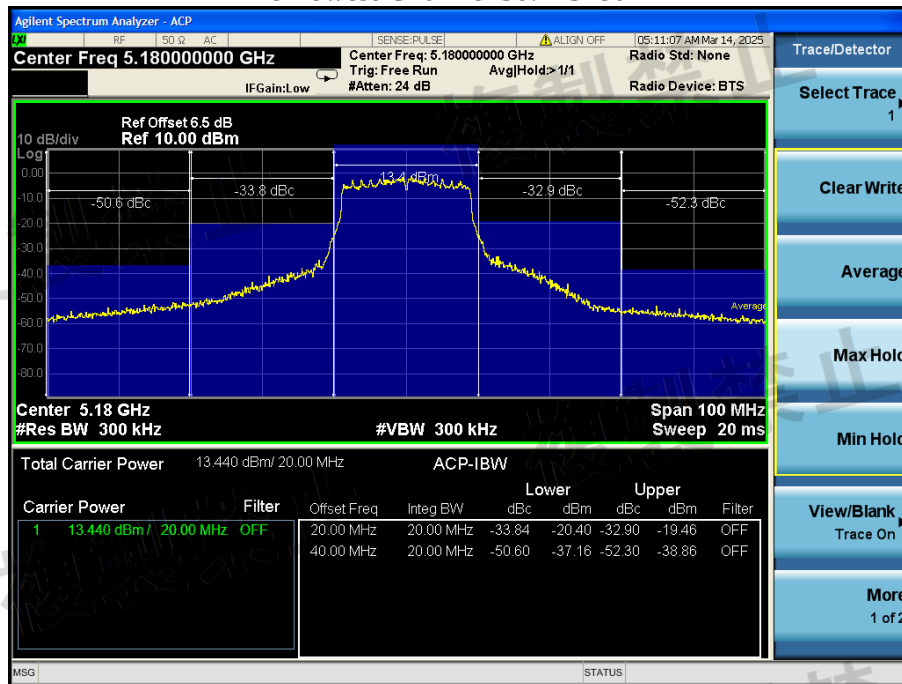


802.11n(20M) (5.15GHz-5.25GHz)
The Highest Channel 48: 5240MHz

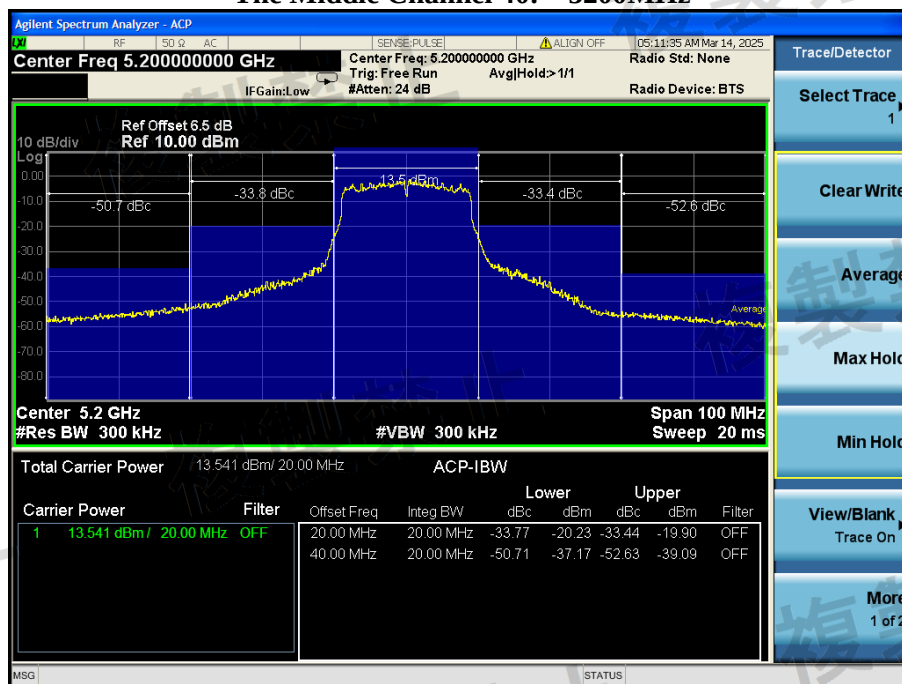




802.11ac (5.15GHz-5.25GHz)
The Lowest Channel 36: 5180MHz

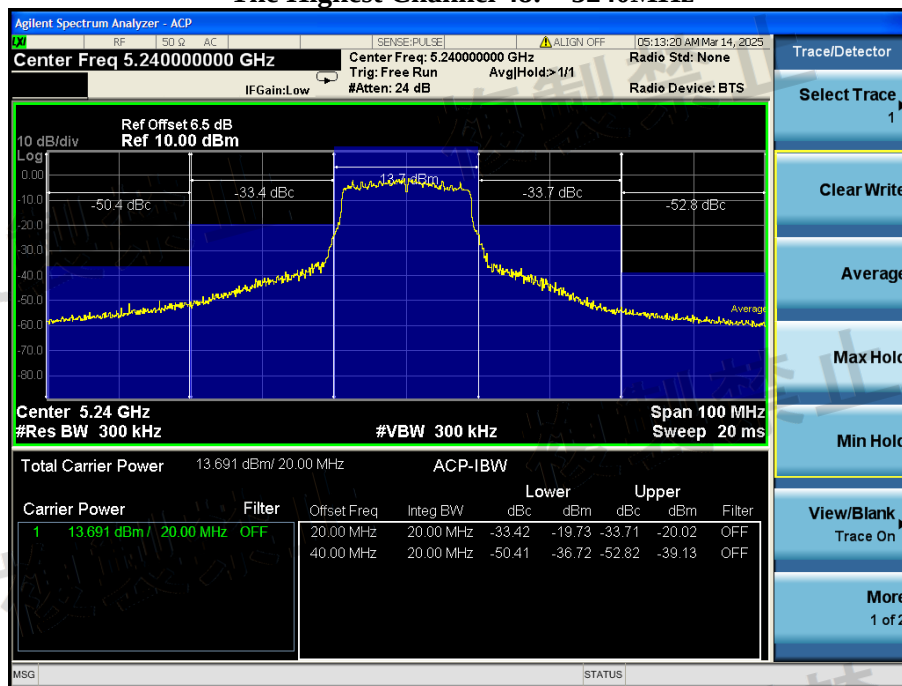


802.11ac (5.15GHz-5.25GHz)
The Middle Channel 40: 5200MHz



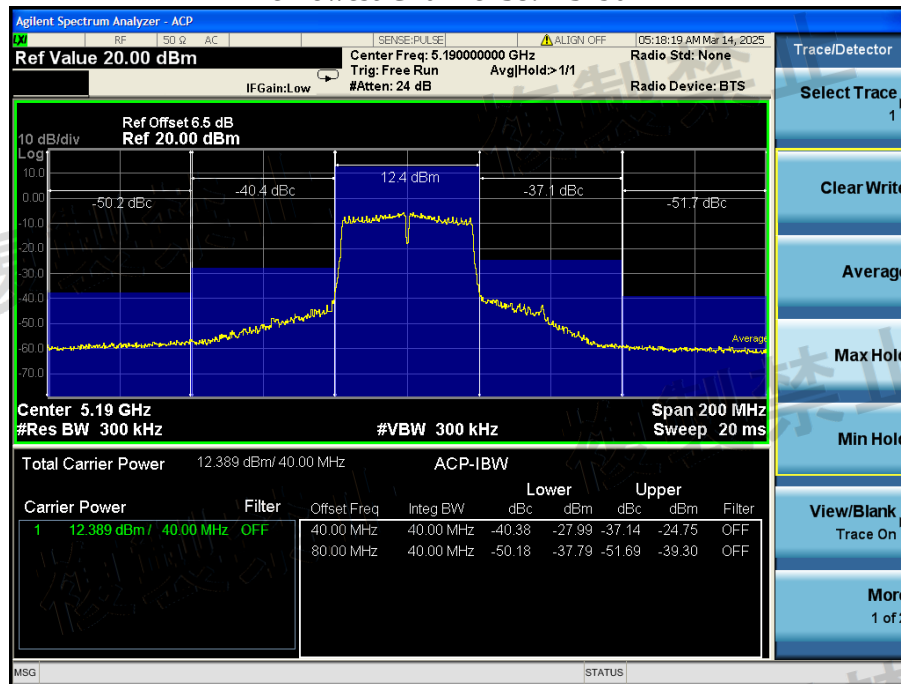


802.11ac (5.15GHz-5.25GHz)
The Highest Channel 48: 5240MHz

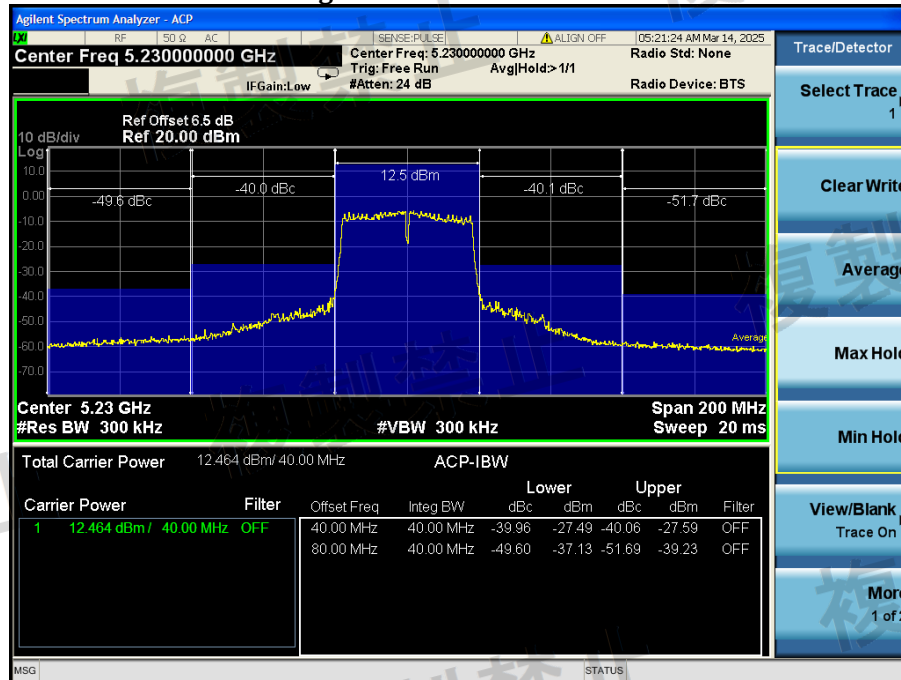




802.11n(40M) (5.15GHz-5.25GHz)
The Lowest Channel 38: 5190MHz



802.11n(40M) (5.15GHz-5.25GHz)
The Highest Channel 46: 5230MHz

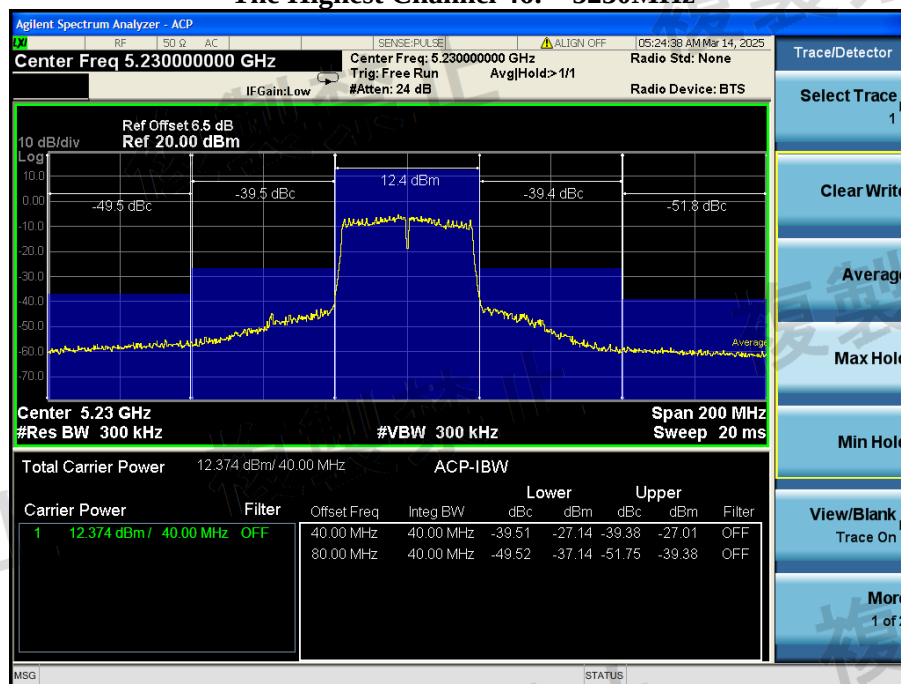




802.11ac(40M) (5.15GHz-5.25GHz)
The Lowest Channel 38: 5190MHz



802.11ac(40M) (5.15GHz-5.25GHz)
The Highest Channel 46: 5230MHz





802.11ac(80M) (5.15GHz-5.25GHz)
The Lowest Channel 42: 5210MHz



8. RF OUTPUT POWER / TOLERANCE

Band	Item	20MHz system		40MHz system	80MHz system	160MHz system
W52&W53	Antenna Power	DSSS,etc	OFDM	OFDM		
		10mW/MHz(DSSS) 10mW(other)	10mW/MHz	5mW/MHz	2.5mW/MHz	1.25mW/MHz
	Antenna Power Error	+20%, -80% (Base on manufacturer declare antenna power density)				
	E.I.R.P.(W52)	10mW/MHz		5mW/MHz	2.5mW/MHz	1.25mW/MHz
	E.I.R.P.(W53)	10mW/MHz With TPC 5mW/MHz Without TPC		5mW/MHz With TPC 2.5mW/MHz Without TPC	2.5mW/MHz With TPC 1.25mW/MHz Without TPC	1.25mW/MHz With TPC 0.625mW/MHz Without TPC
W56	Antenna Power	10mW/MHz(DSSS) 10mW(other)	10mW/MHz	5mW/MHz	2.5mW/MHz	1.25mW/MHz
	Antenna Power Error	+50%, -50% (Base on manufacturer declare antenna power density)				
	E.I.R.P.	50mW/MHz With TPC 25mW/MHz Without TPC		25mW/MHz With TPC 12.5mW/MHz Without TPC	12.5mW/MHz With TPC 6.25mW/MHz Without TPC	6.25mW/MHz With TPC 3.125mW/MHz Without TPC

8.1 TEST DEVIATION

There is no deviation with the original standard.

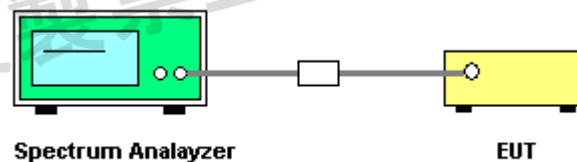
8.2 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

8.3 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

8.4 TEST SETUP



The test procedure contained in this option 1 shall be as follows:

Step 1:

Connect the UUT to the spectrum analyser and use the following settings:

- Centre Frequency: The centre frequency of the channel under test.
- Resolution BW: 1 MHz.
- Video BW: 3 MHz.
- Span: Wide enough to cover the complete power envelope of the signal of the UUT.
- Detector: Peak.
- Trace Mode: Max Hold.

Step 2:

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

Step 3:

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

- Centre Frequency: Equal to the frequency recorded in step 2.
- Span: 0 MHz.
- Resolution BW: 1 MHz.
- Video BW: 1 MHz.
- Sweep time: 1 minute.
- Detector: Average (see note).
- Trace Mode: Max Hold.

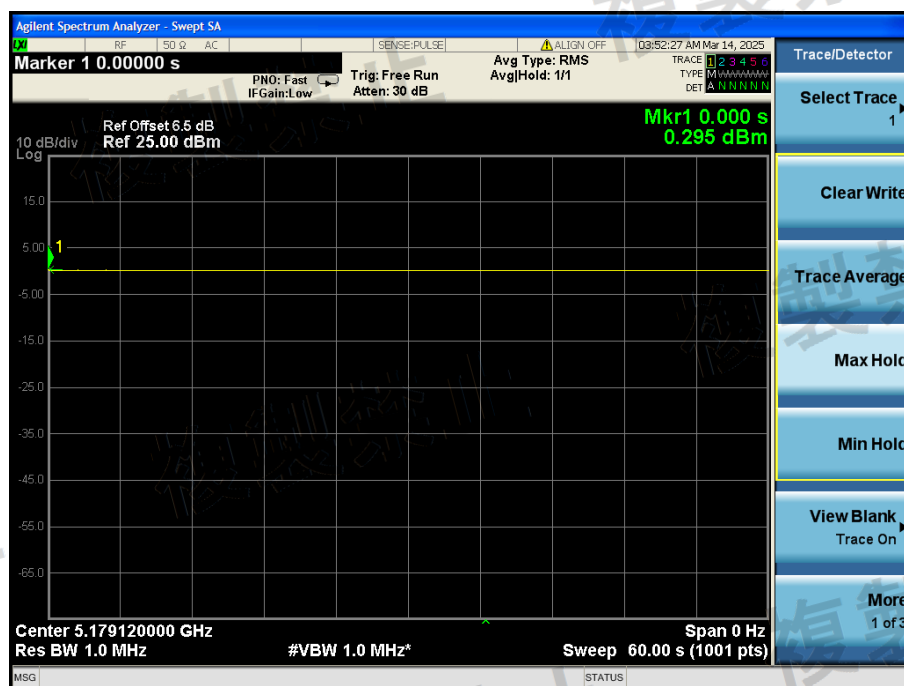
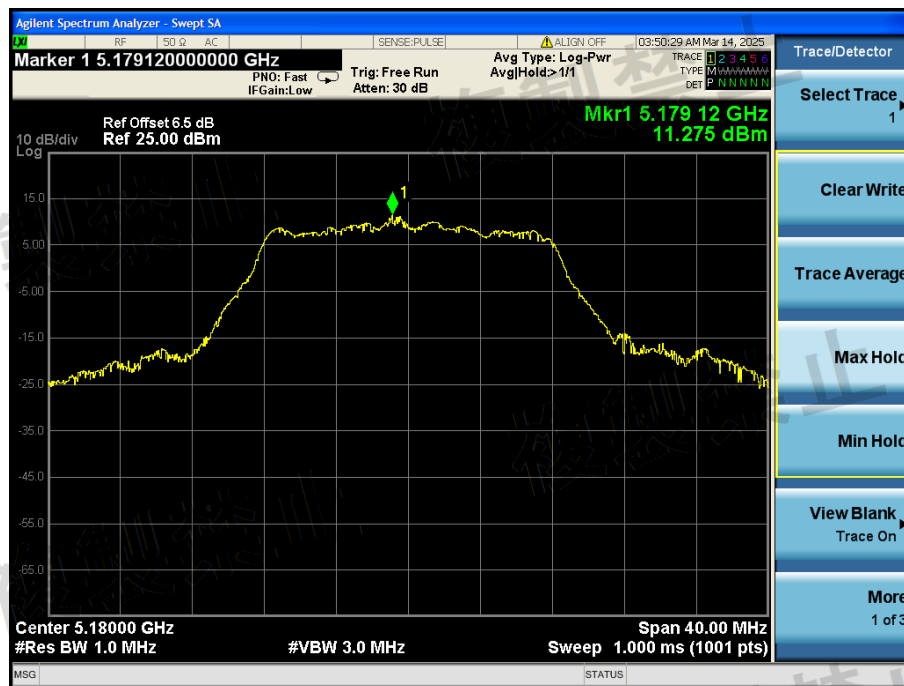
**8.5 TEST RESULT**

EUT:	Digital Target Panel	Model No.:	AUTEL-CSC050A/16
Temperature:	25°C	Test Date:	Mar. 14, 2025
Humidity:	55 % RH	Tested by:	Jack Li
Atmospheric Pressure:	1013 mbar	Test Voltage	Normal Voltage

Mode	Freq (MHz)	Antenna Power (dBm/MHz)	Antenna Power (mW/MHz)	Declared Power (mW/MHz)	Tolerance (%)	Upper Limit (%)	Lower Limit (%)	Verdict
a	5180	0.295	1.07	2.0	-46.50	20	-80	Pass
a	5200	0.475	1.12	2.0	-44.00	20	-80	Pass
a	5240	0.998	1.26	2.0	-37.00	20	-80	Pass
N20	5180	-0.956	0.80	2.0	-60.00	20	-80	Pass
N20	5200	-0.398	0.91	2.0	-54.50	20	-80	Pass
N20	5240	-0.783	0.84	2.0	-58.00	20	-80	Pass
ac20	5180	-1.159	0.77	2.0	-61.50	20	-80	Pass
ac20	5200	-0.674	0.86	2.0	-57.00	20	-80	Pass
ac20	5240	-0.184	0.96	2.0	-52.00	20	-80	Pass
N40	5190	-5.907	0.26	0.5	-48.00	20	-80	Pass
N40	5230	-5.530	0.28	0.5	-44.00	20	-80	Pass
ac40	5190	-6.461	0.23	0.5	-54.00	20	-80	Pass
ac40	5230	-7.290	0.19	0.5	-62.00	20	-80	Pass
ac80	5210	-9.882	0.10	0.1	0.0	20	-80	Pass

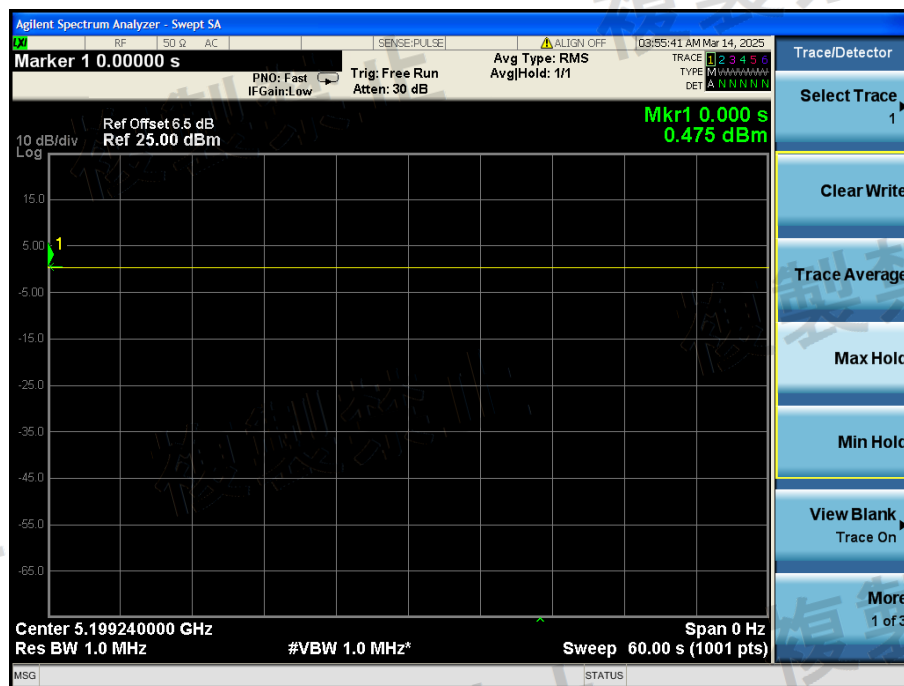
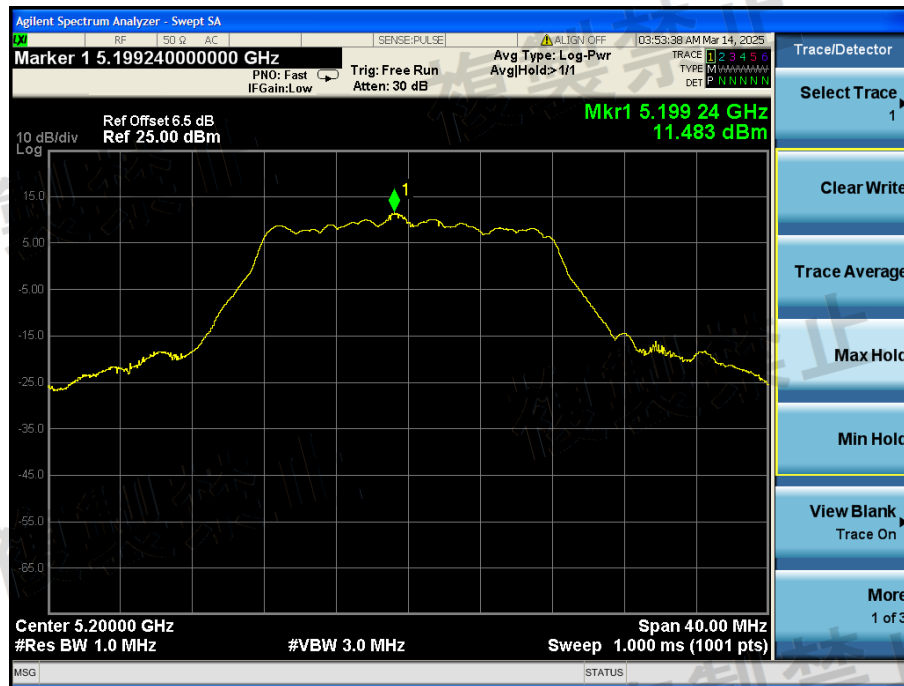


802.11a (5.15GHz-5.25GHz)
The Lowest Channel 36: 5180MHz



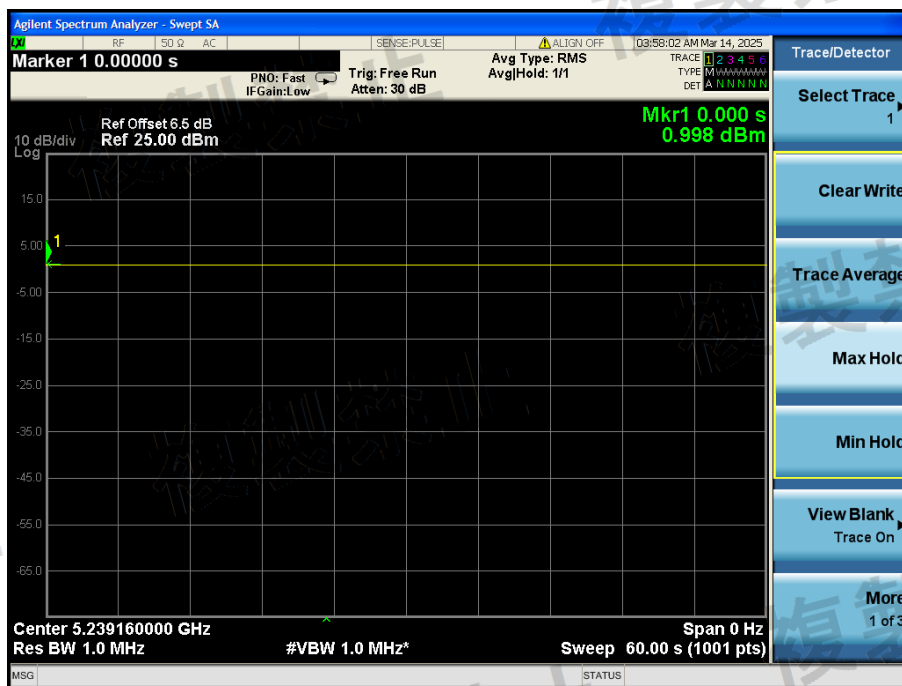


802.11a (5.15GHz-5.25GHz)
The Middle Channel 40: 5200MHz



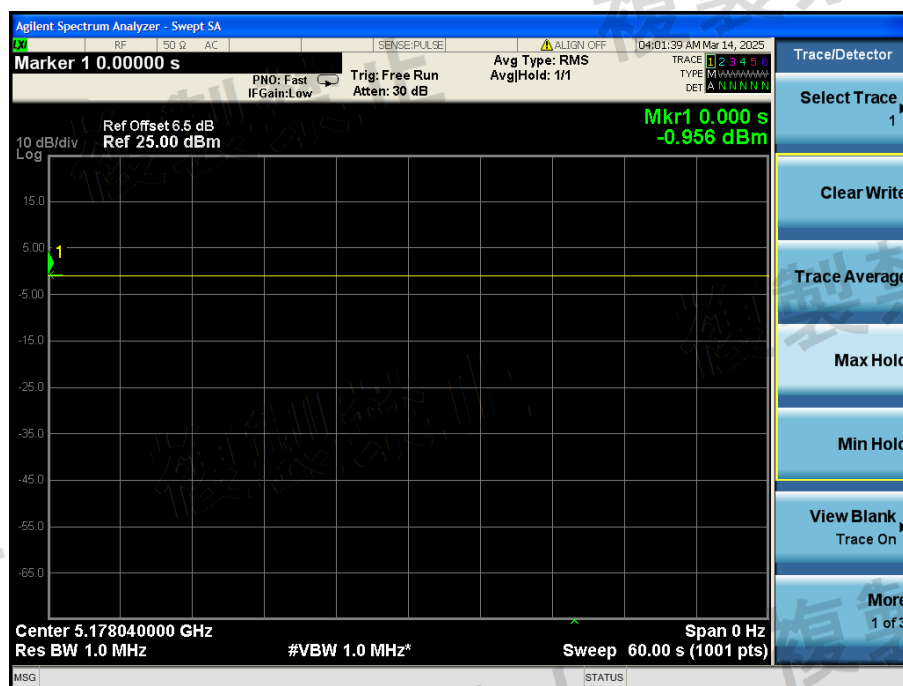
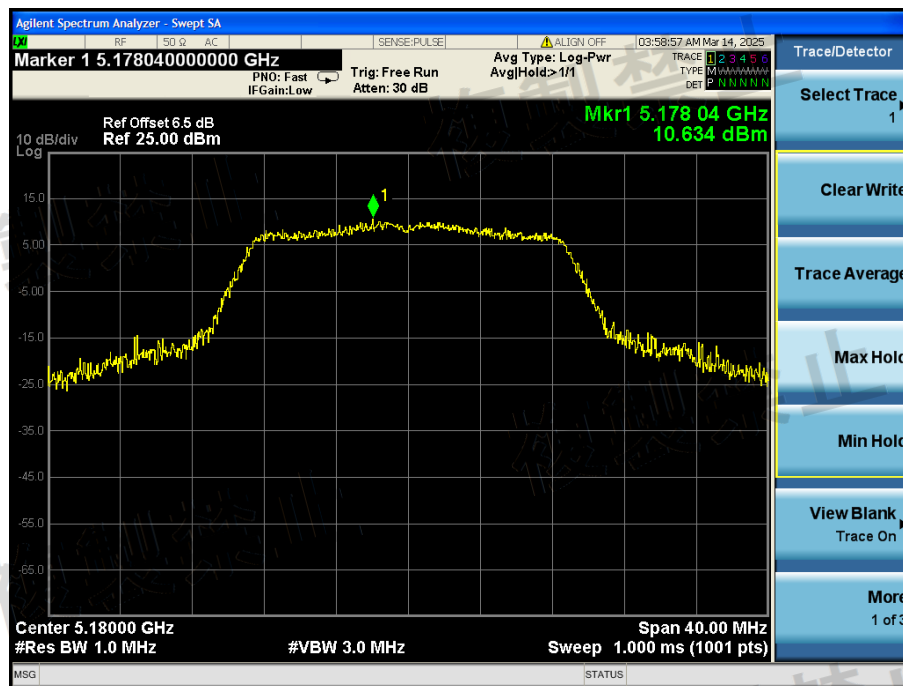


802.11a (5.15GHz-5.25GHz)
The Highest Channel 48: 5240MHz



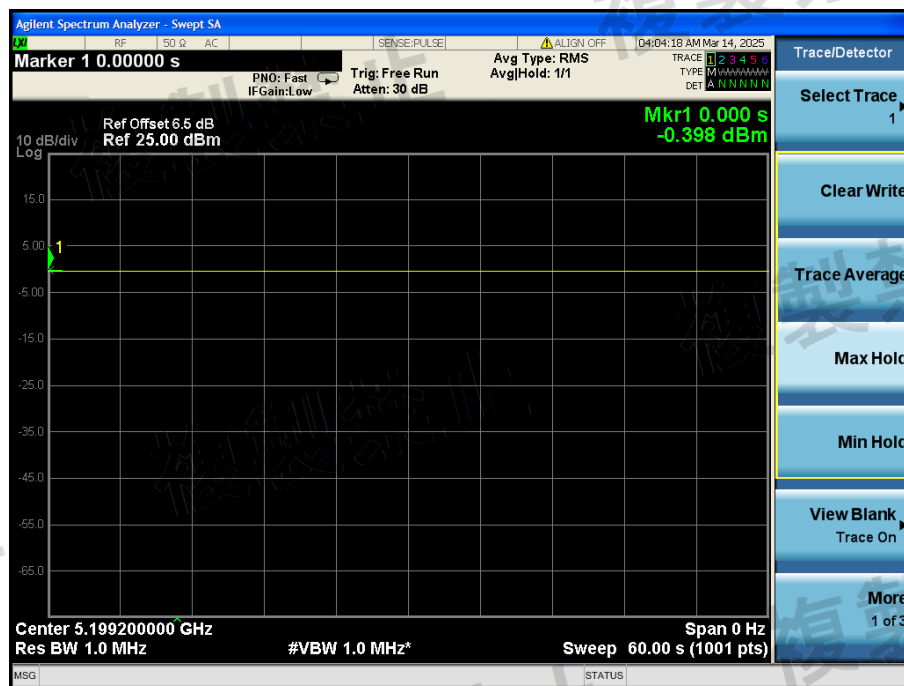
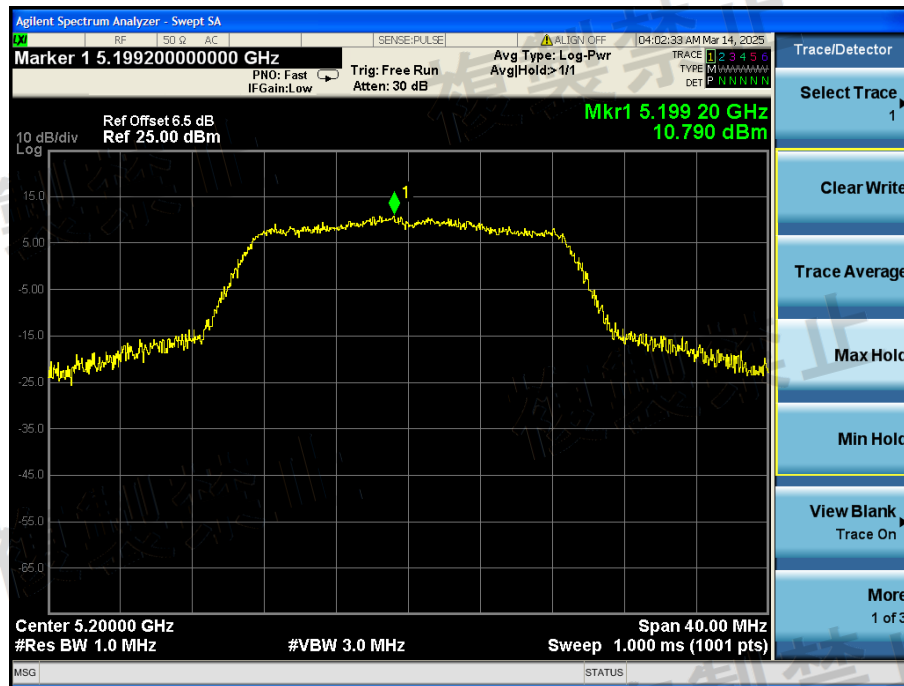


802.11n(20M) (5.15GHz-5.25GHz)
The Lowest Channel 36: 5180MHz



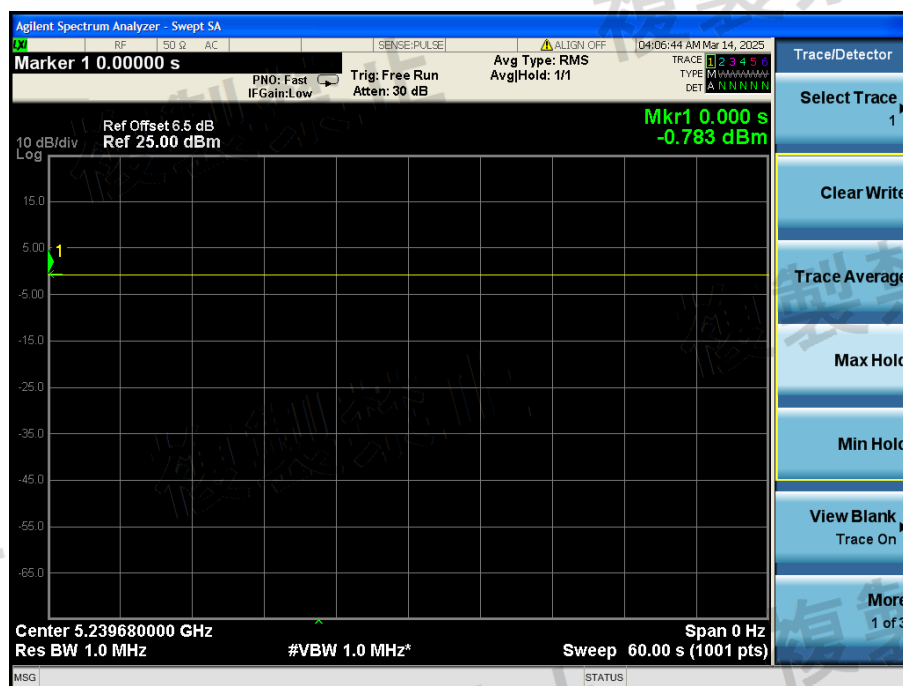
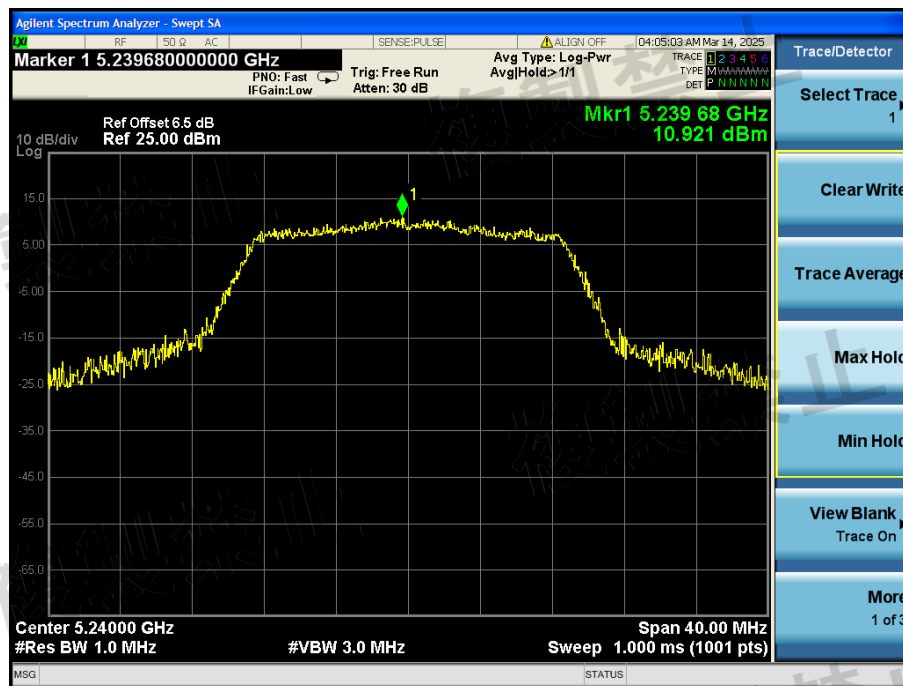


802.11n(20M) (5.15GHz-5.25GHz)
The Middle Channel 40: 5200MHz



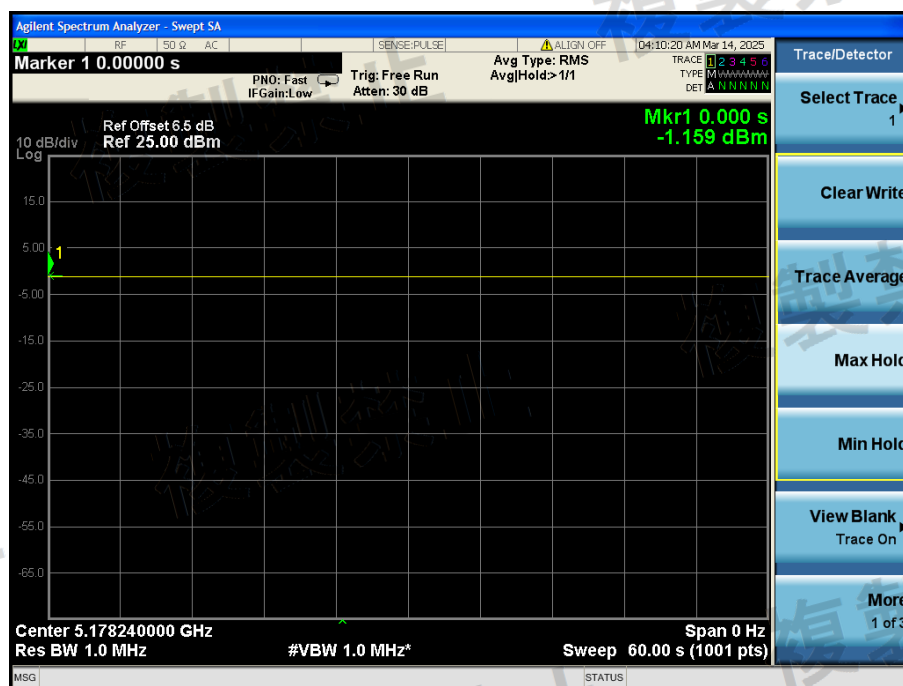
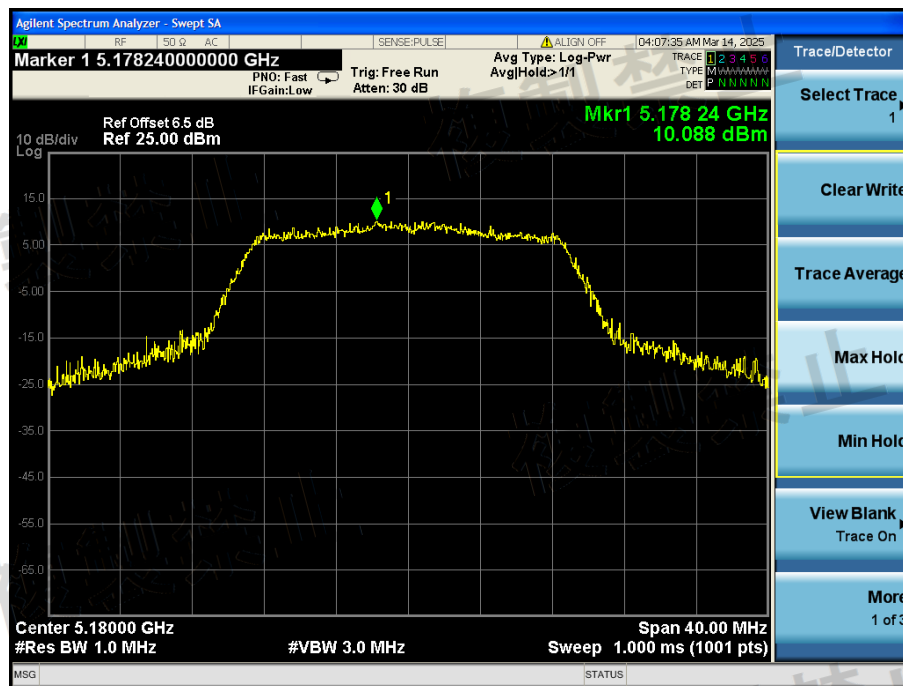


802.11n(20M) (5.15GHz-5.25GHz)
The Highest Channel 48: 5240MHz



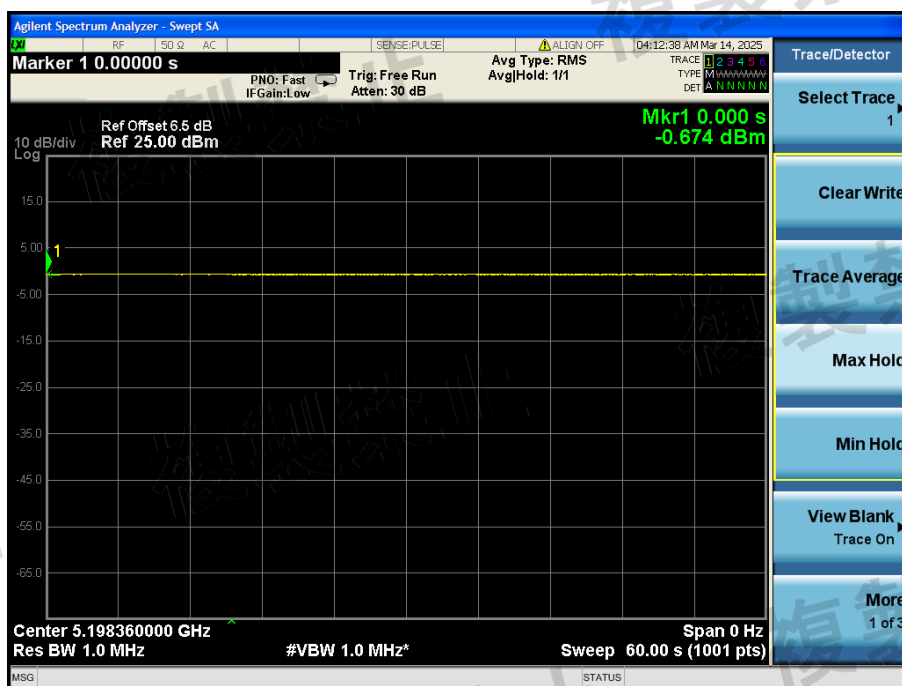
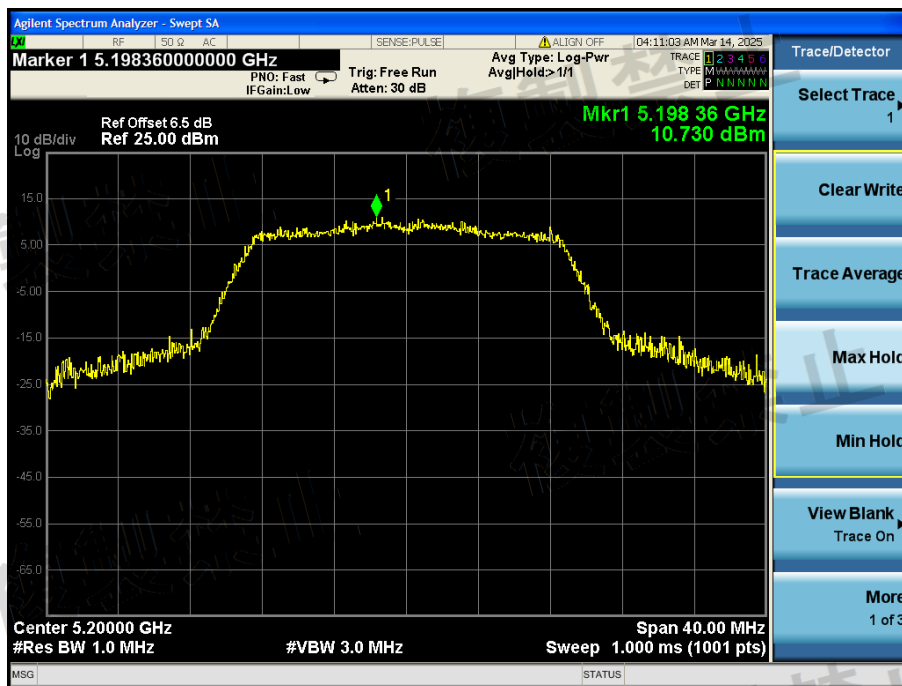


802.11ac (5.15GHz-5.25GHz)
The Lowest Channel 36: 5180MHz



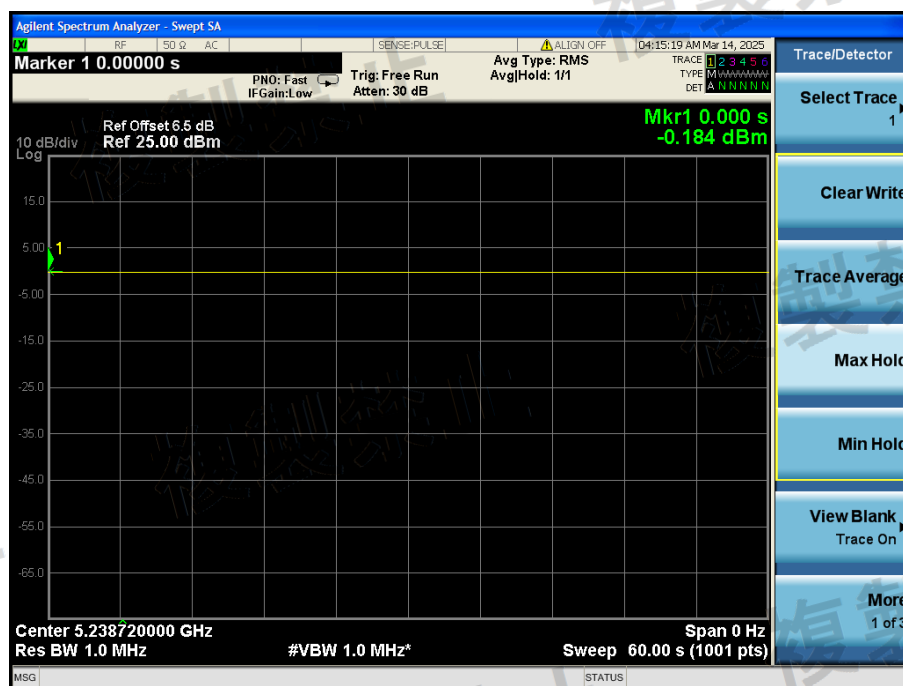
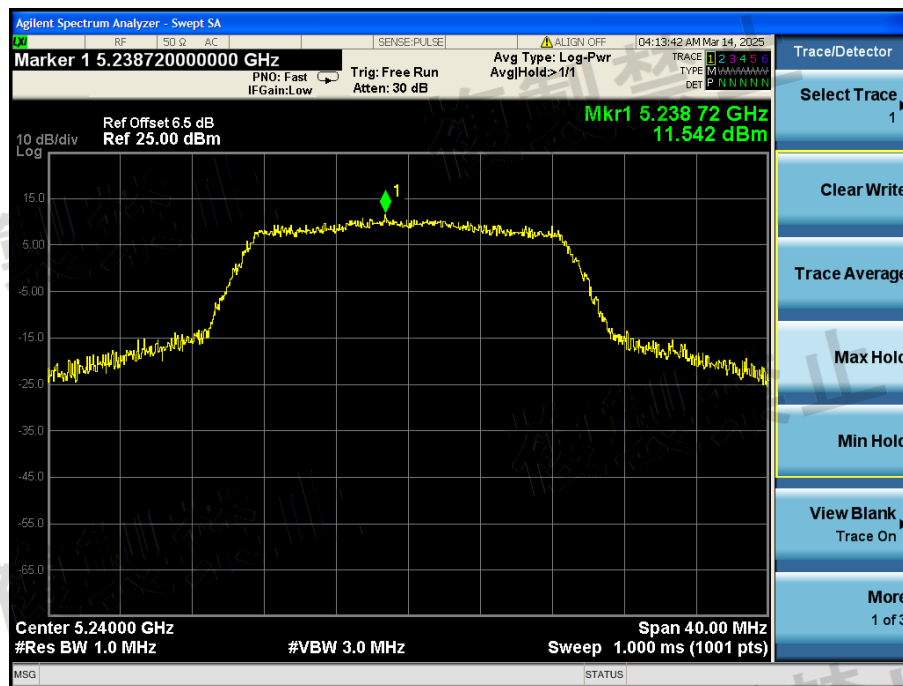


802.11ac (5.15GHz-5.25GHz)
The Middle Channel 40: 5200MHz



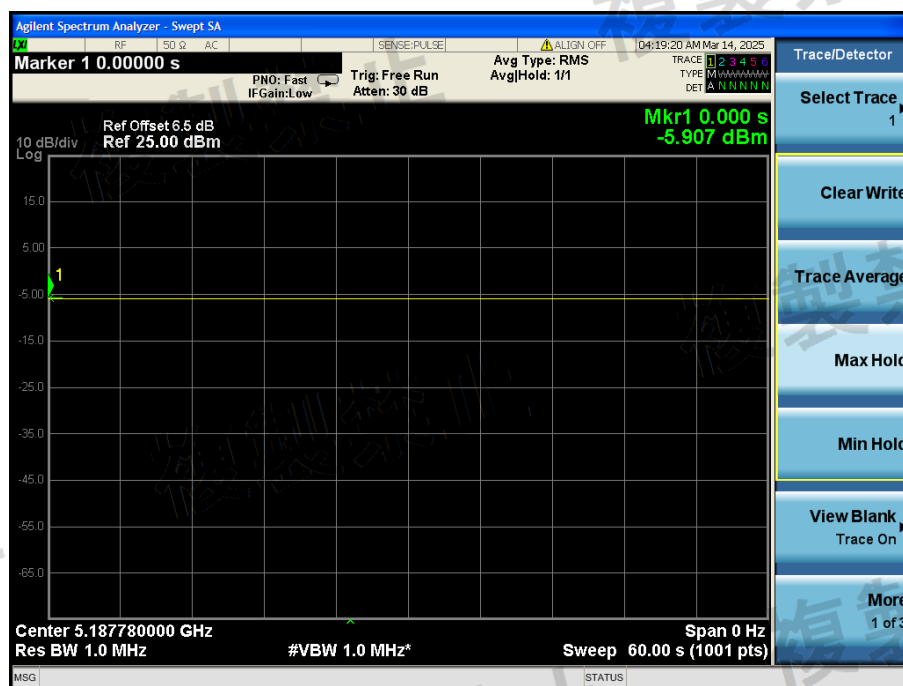
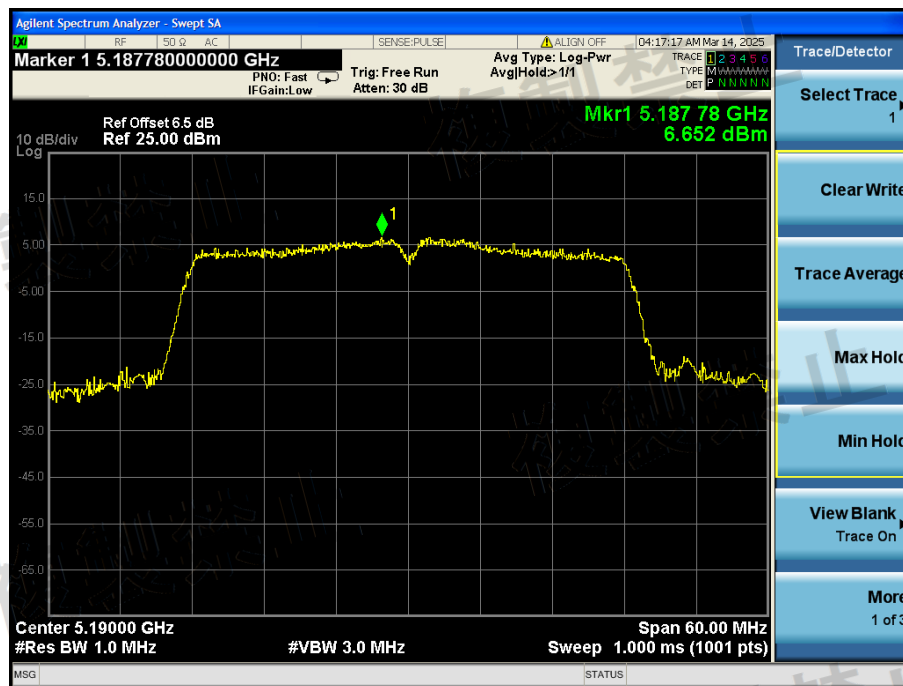


802.11ac (5.15GHz-5.25GHz)
The Highest Channel 48: 5240MHz



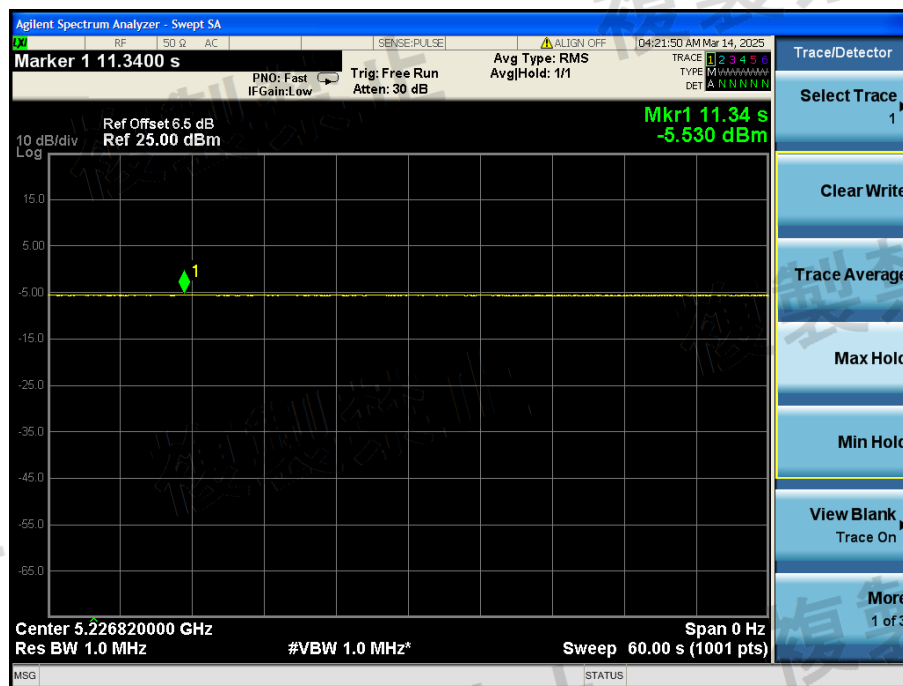
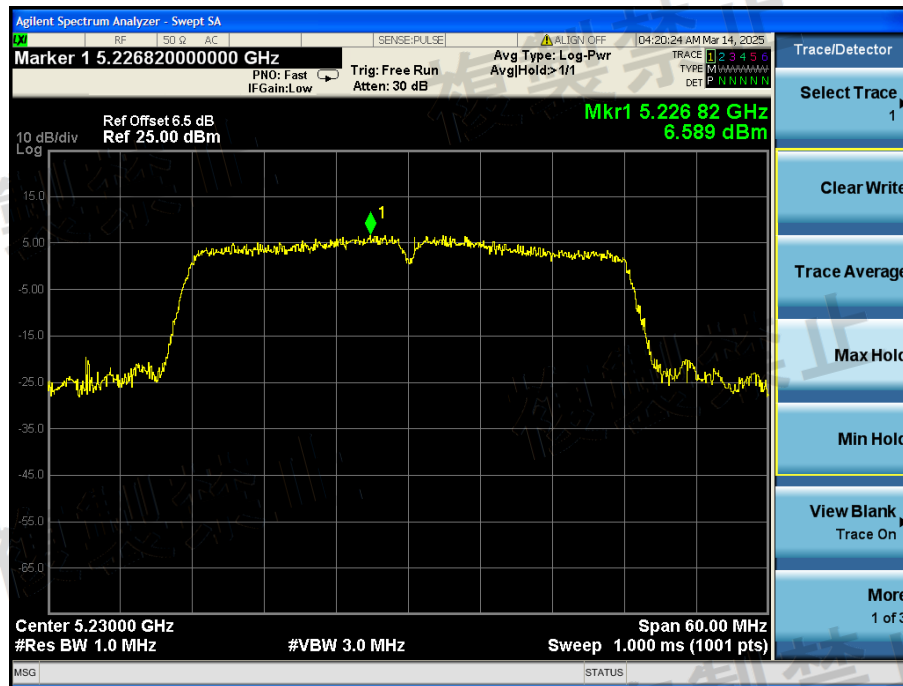


802.11n(40M) (5.15GHz-5.25GHz)
The Lowest Channel 38: 5190MHz



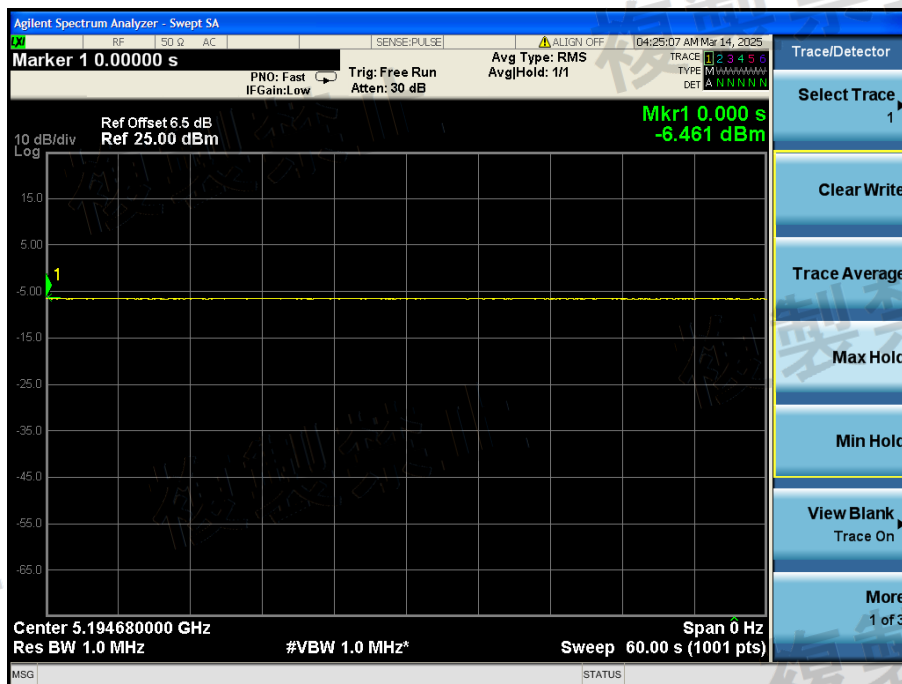
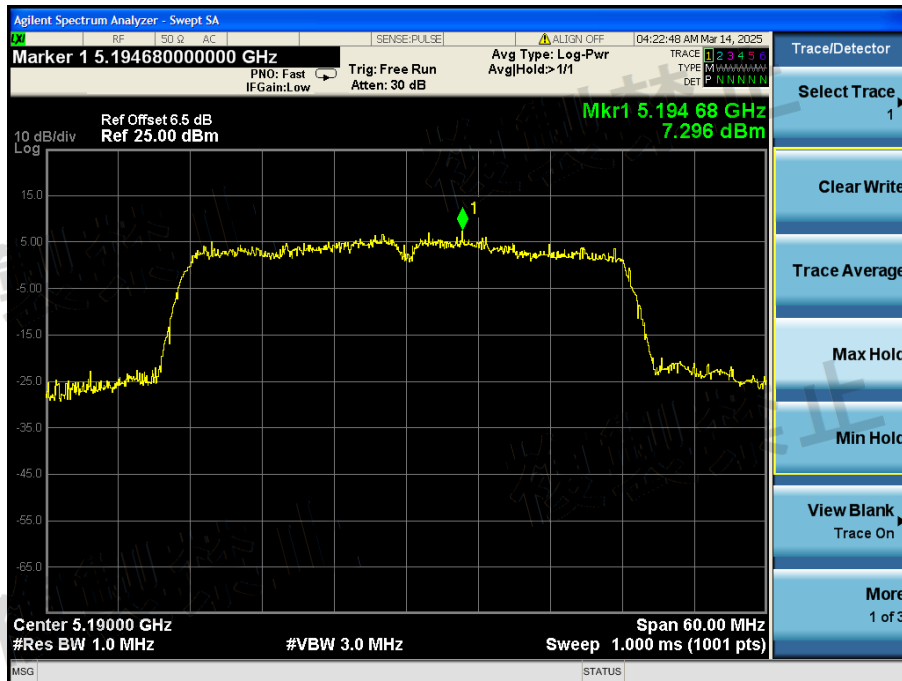


802.11n(40M) (5.15GHz-5.25GHz)
The Highest Channel 46: 5230MHz



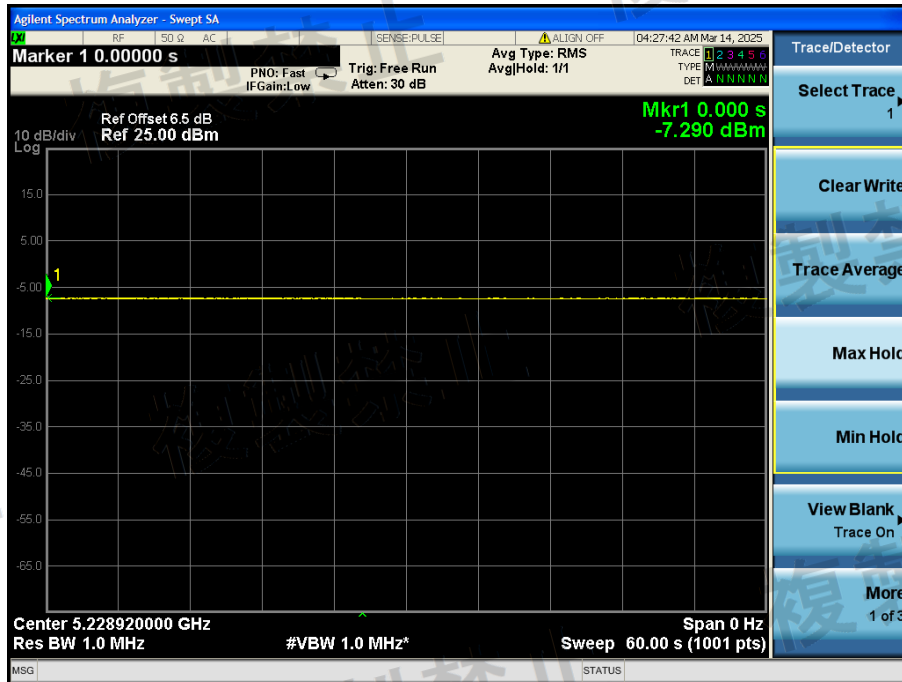
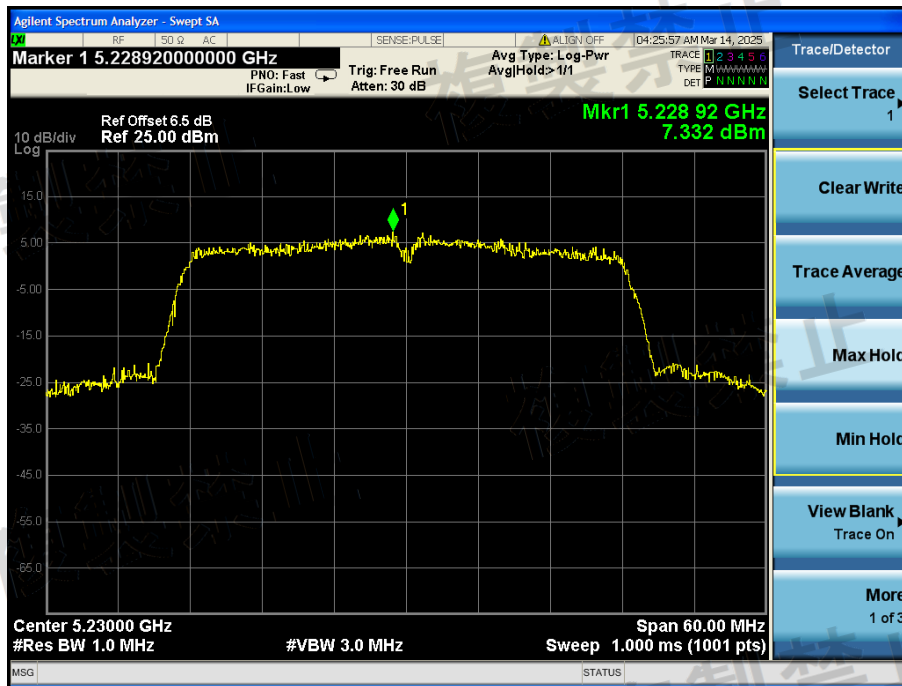


802.11ac(40M) (5.15GHz-5.25GHz)
The Lowest Channel 38: 5190MHz



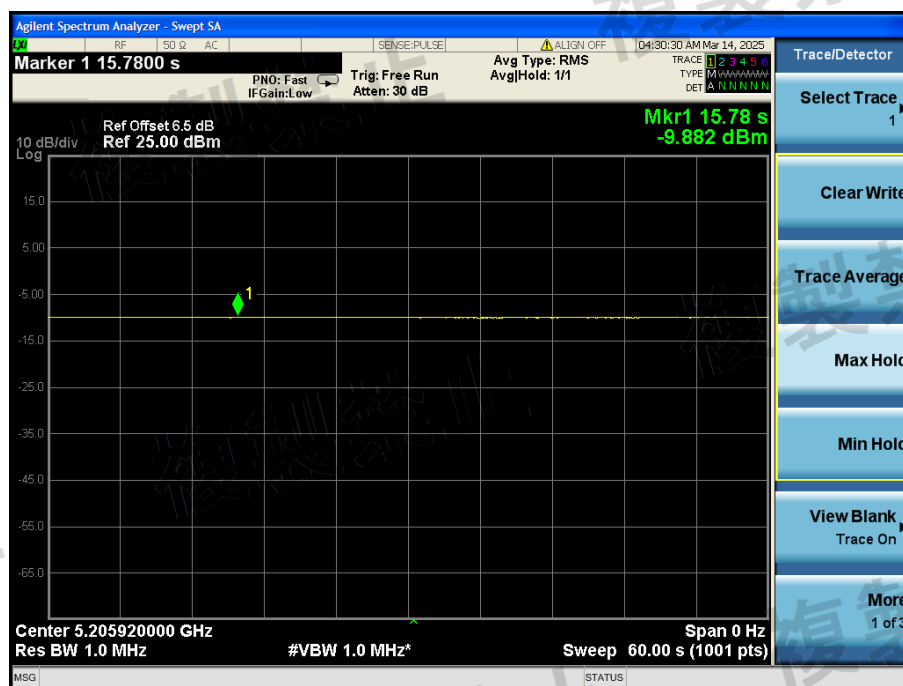
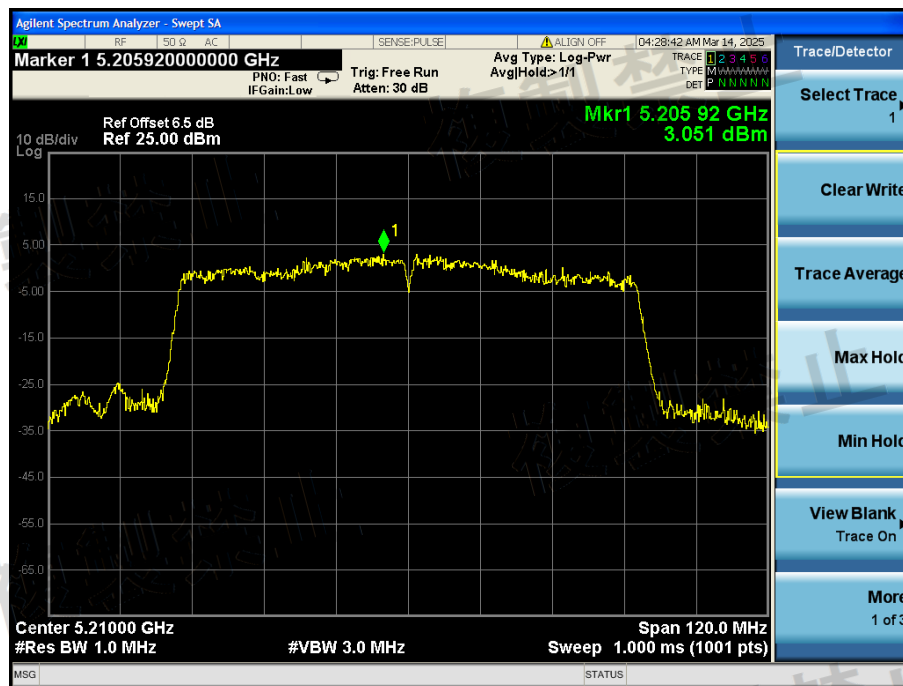


802.11ac(40M) (5.15GHz-5.25GHz)
The Highest Channel 46: 5230MHz





802.11ac(80M) (5.15GHz-5.25GHz)
The Lowest Channel 42: 5210MHz





9. E.I.R.P MEASUREMENT

9.1 LIMIT

Mode	Limits
11a,11n,11ac 20MHz	$\leq 10\text{mW/MHz}$
11n,11ac 40MHz	$\leq 5\text{mW/MHz}$
11n,11ac 80 MHz	$\leq 2.5\text{mW/MHz}$

9.2 TEST PROCEDURES

EIRP Power= Conducted power + antenna gain.

9.3 TEST SETUP LAYOUT

Please refer to Section 8.4 of this test report.

9.4 TEST DEVIATION

There is no deviation with the original standard.

9.5 EUT OPERATION DURING TEST

The EUT was programmed to be in normal transmitting mode.

9.6 TEST RESULT OF TRANSMISSION ANTENNA GAIN (EIRP ANTENNA POWER)



EUT:	Digital Target Panel	Model No.:	AUTEL-CSC050A/16
Temperature:	25°C	Test Date:	Mar. 14, 2025
Humidity:	55 % RH	Tested by:	Jack Li
Atmospheric Pressure:	1013 mbar	Test Voltage	Normal Voltage

Normal Voltage-a mode

Frequency	power density	EIRP	EIRP	Limits
	(dBm/MHz)	(dBm/MHz)	(mW/MHz)	(mW/MHz)
5180MHz	0.295	7.295	5.36	≤10
5200MHz	0.475	7.475	5.59	≤10
5240MHz	0.998	7.998	6.31	≤10

Normal Voltage-n(20) mode

Frequency	power density	EIRP	EIRP	Limits
	(dBm/MHz)	(dBm/MHz)	(mW/MHz)	(mW/MHz)
5180MHz	-0.956	6.044	4.02	≤10
5200MHz	-0.398	6.602	4.57	≤10
5240MHz	-0.783	6.217	4.19	≤10

Normal Voltage-ac(20) mode

Frequency	power density	EIRP	EIRP	Limits
	(dBm/MHz)	(dBm/MHz)	(mW/MHz)	(mW/MHz)
5180MHz	-1.159	5.841	3.84	≤10
5200MHz	-0.674	6.326	4.29	≤10
5240MHz	-0.184	6.816	4.80	≤10



Normal Voltage-n(40) mode

Frequency	power density	EIRP	EIRP	Limits
	(dBm/MHz)	(dBm/MHz)	(mW/MHz)	(mW/MHz)
5190MHz	-5.907	1.093	1.29	≤5
5230MHz	-5.530	1.470	1.40	≤5

Normal Voltage-ac(40) mode

Frequency	power density	EIRP	EIRP	Limits
	(dBm/MHz)	(dBm/MHz)	(mW/MHz)	(mW/MHz)
5190MHz	-6.461	0.539	1.13	≤5
5230MHz	-7.290	-0.290	0.94	≤5

Normal Voltage-ac(80) mode

Frequency	power density	EIRP	EIRP	Limits
	(dBm/MHz)	(dBm/MHz)	(mW/MHz)	(mW/MHz)
5210MHz	-9.882	-2.882	0.51	≤2.5

Note: E.I.R.P. (dBm/MHz) = Antenna Power (dBm/MHz) + Antenna Gain (dBi).

10 SPURIOUS EMISSIONS FOR RECEIVER

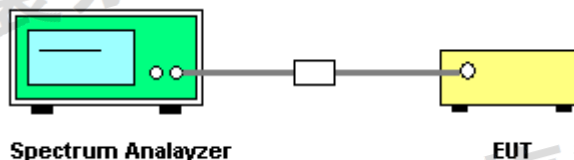
Limit

Item	Limits
Rx Spurious	$\leq 4\text{nW}$ ($f < 1\text{GHz}$)
Emission	$\leq 20\text{nW}$ ($1\text{GHz} \leq f$)

Test Procedure

1. EUT have the continuous reception mode and fixed only one channelize.
2. SA set RBW:100KHz and VBW: 100KHz. Then adjust to start frequency 30MHz and stop frequency 1000MHz. Search to mark peak reading value + cable loss shall be less than 4nW.
3. SA set RBW: 1MHz and VBW: 1MHz. Then adjust to start frequency 1000MHz and stop frequency 12500MHz. Search to mark peak reading value + cable loss shall be less than 20nW.
4. If power level of lower emissions are more than 1/10 of limit ($.0.4\text{nW}$ for $f < 1\text{GHz}$, 2nW for $f \geq 1\text{GHz}$), all those are to be indicated in the 2nd and 3rd lines. If others are 1/10 or less more of the limit, no necessary to be indicated.

10.1 TEST SETUP LAYOUT



10.2 TEST DEVIATION

There is no deviation with the original standard.

10.3 TEST DEVIATION

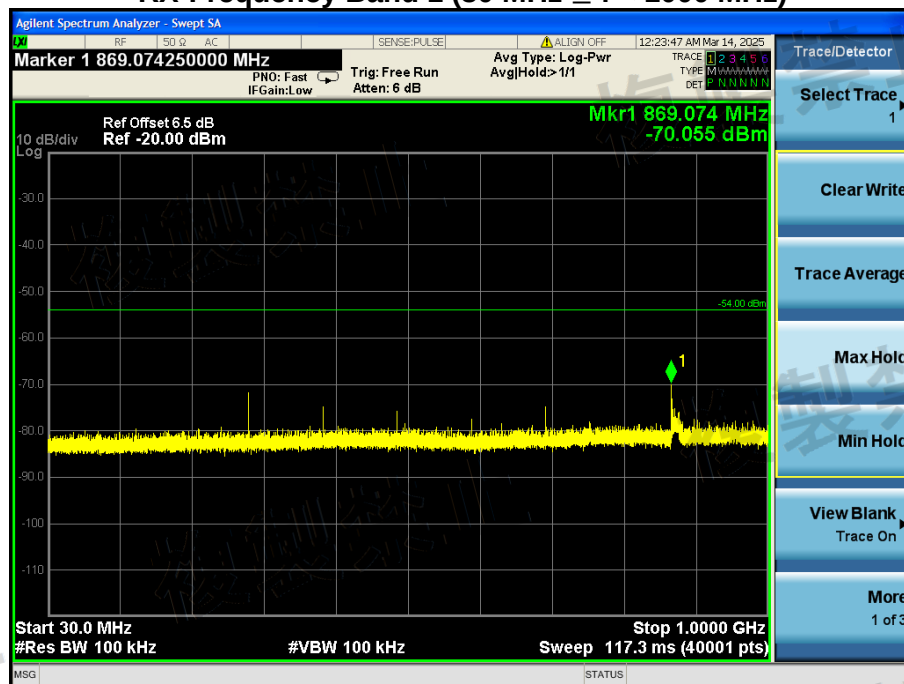
The EUT was programmed to be in continuously reception mode.

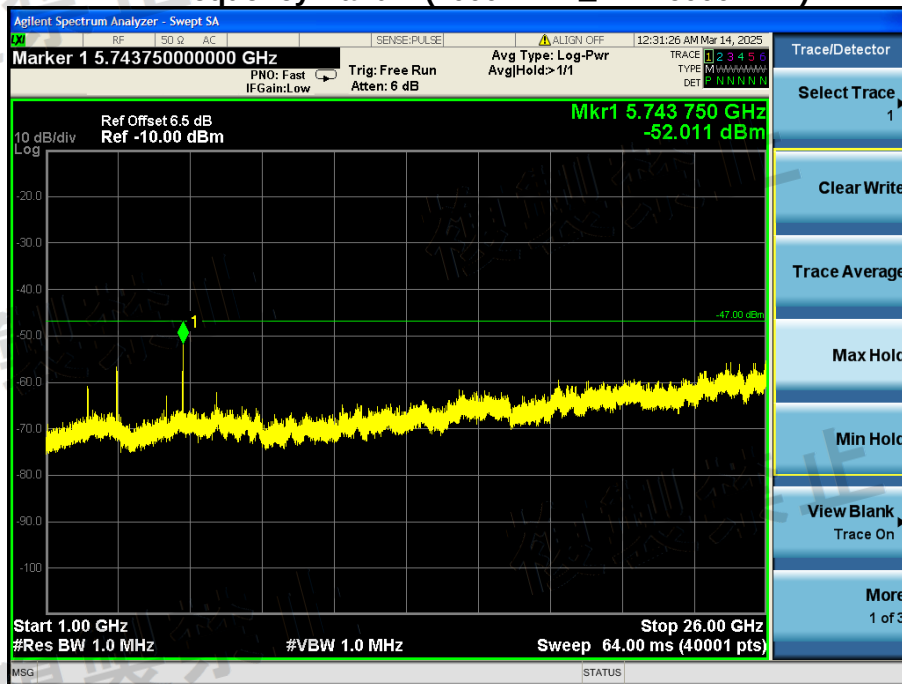
10.4 TEST RESULT OF LIMITATION OF COLLATERAL EMISSION OF RECEIVER



EUT:	Digital Target Panel	Model No.:	AUTEL-CSC050A/16
Temperature:	25°C	Test Date:	Mar. 14, 2025
Humidity:	55 % RH	Tested by:	Jack Li
Atmospheric Pressure:	1013 mbar	Test Voltage	Normal Voltage
Operation Mode:	Normal Voltage-a mode		

Test channel	Test Frequency (MHz)	Test Result			Unit	Limit
		Normal Voltage	High Voltage	Low Voltage		
		24V DC	N/A	N/A		
(5180~5240 MHz)	869.074	-70.055	N/A	N/A	dBm	(1) Below 1 GHz : -54dBm
	5743.750	-52.011	N/A	N/A		(2) 1 GHz to 26GHz : -47dBm

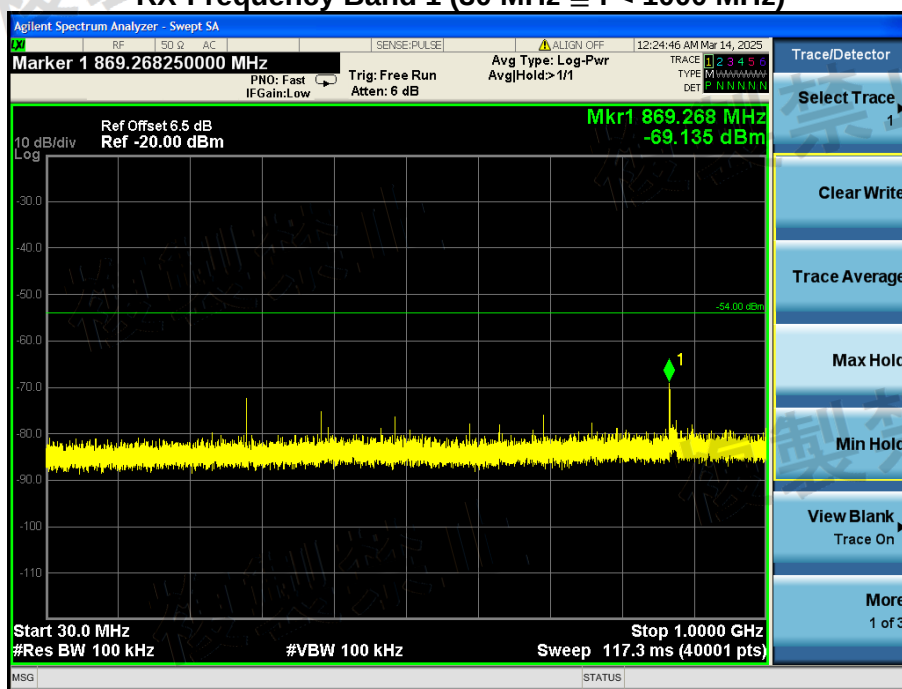
RX-Frequency Band 1 (30 MHz $\leq$ f < 1000 MHz)

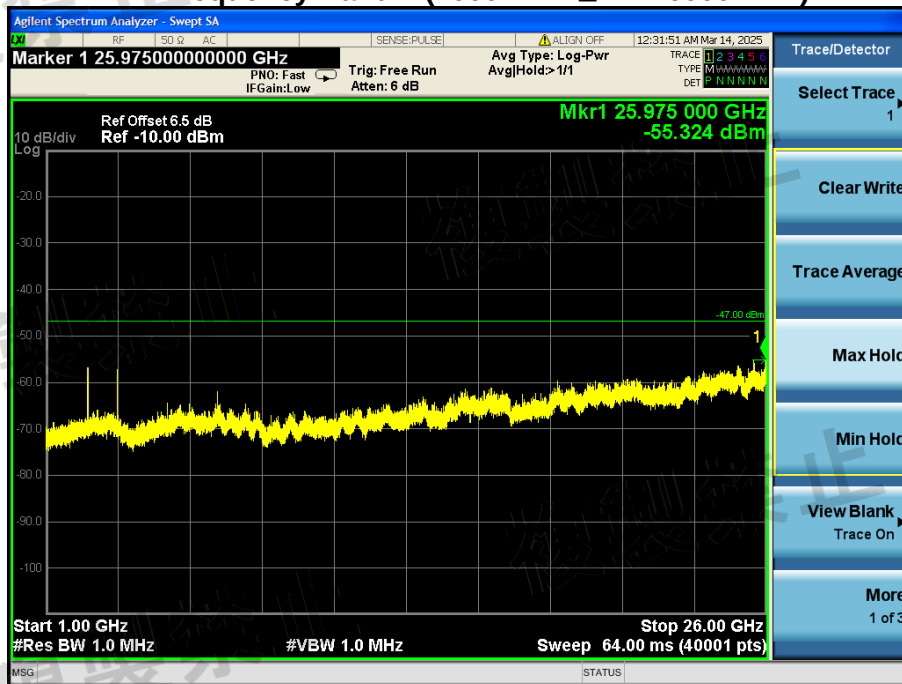
RX-Frequency Band 2 ($1000 \text{ MHz} \leq f < 26000 \text{ MHz}$)



EUT:	Digital Target Panel	Model No.:	AUTEL-CSC050A/16
Temperature:	25°C	Test Date:	Mar. 14, 2025
Humidity:	55 % RH	Tested by:	Jack Li
Atmospheric Pressure:	1013 mbar	Test Voltage	Normal Voltage
Operation Mode:	Normal Voltage-n20 mode		

Test channel	Test Frequency (MHz)	Test Result			Unit	Limit
		Normal Voltage	High Voltage	Low Voltage		
		24V DC	N/A	N/A		
(5180~5240 MHz)	869.268	-69.135	N/A	N/A	dBm	(1) Below 1 GHz : -54dBm
	25975.000	-55.324	N/A	N/A		(2) 1 GHz to 26GHz : -47dBm

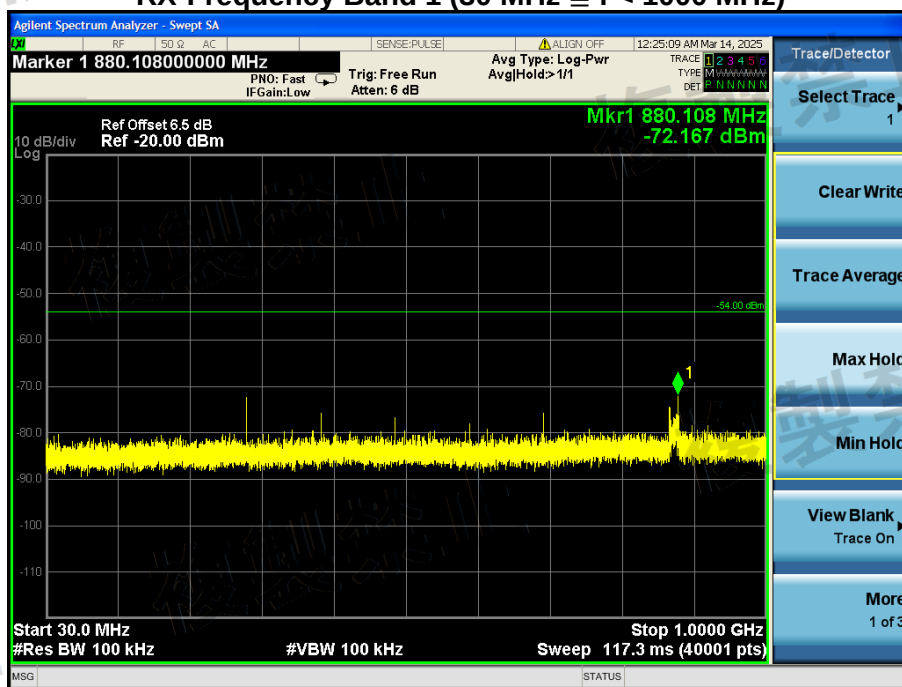
RX-Frequency Band 1 ($30 \text{ MHz} \leq f < 1000 \text{ MHz}$)

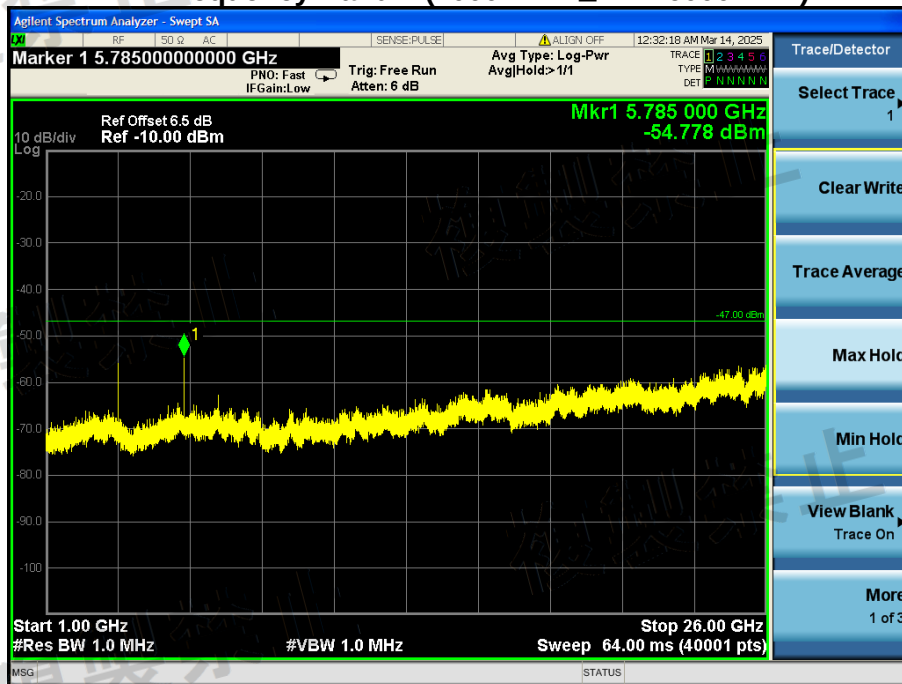
RX-Frequency Band 2 ($1000 \text{ MHz} \leq f < 26000 \text{ MHz}$)



EUT:	Digital Target Panel	Model No.:	AUTEL-CSC050A/16
Temperature:	25°C	Test Date:	Mar. 14, 2025
Humidity:	55 % RH	Tested by:	Jack Li
Atmospheric Pressure:	1013 mbar	Test Voltage	Normal Voltage
Operation Mode:	Normal Voltage-ac20 mode		

Test channel	Test Frequency (MHz)	Test Result			Unit	Limit
		Normal Voltage	High Voltage	Low Voltage		
		24V DC	N/A	N/A		
(5180~5240 MHz)	880.108	-72.167	N/A	N/A	dBm	(1) Below 1 GHz : -54dBm
	5785.000	-54.778	N/A	N/A		(2) 1 GHz to 26GHz : -47dBm

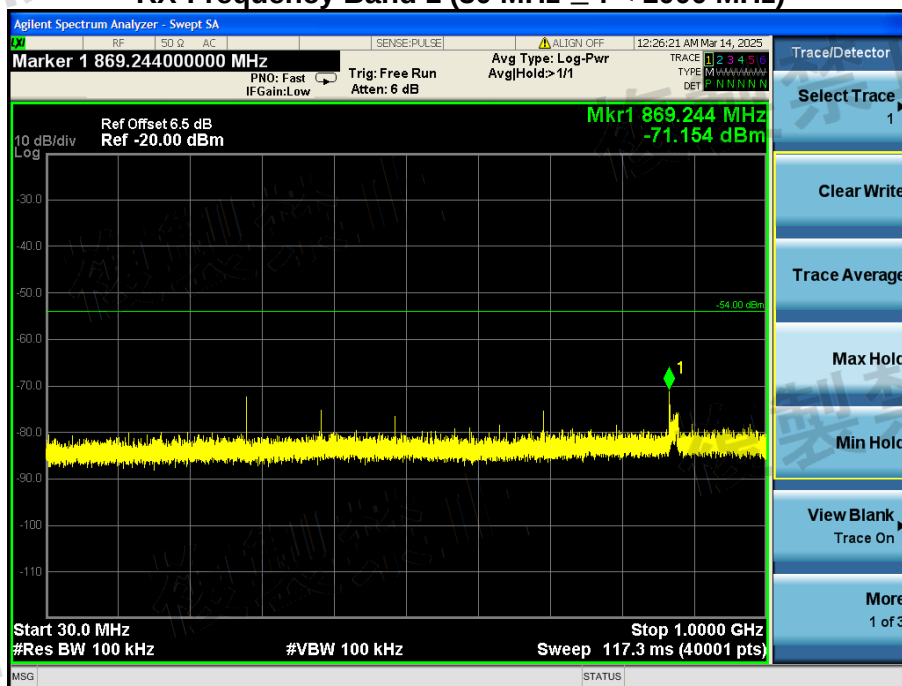
RX-Frequency Band 1 (30 MHz $\leq$ f < 1000 MHz)

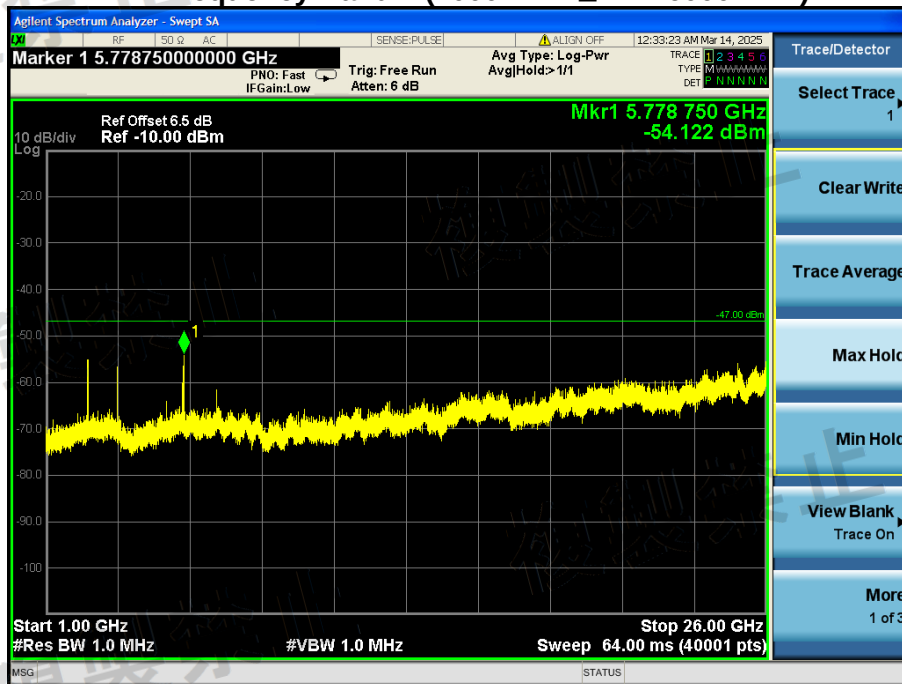
RX-Frequency Band 2 ($1000 \text{ MHz} \leq f < 26000 \text{ MHz}$)



EUT:	Digital Target Panel	Model No.:	AUTEL-CSC050A/16
Temperature:	25°C	Test Date:	Mar. 14, 2025
Humidity:	55 % RH	Tested by:	Jack Li
Atmospheric Pressure:	1013 mbar	Test Voltage	Normal Voltage
Operation Mode:	Normal Voltage-n(40) mode		

Test channel	Test Frequency (MHz)	Test Result			Unit	Limit
		Normal Voltage	High Voltage	Low Voltage		
		24V DC	N/A	N/A		
(5180~5240 MHz)	869.244	-71.154	N/A	N/A	dBm	(1) Below 1 GHz : -54dBm
	5778.750	-54.122	N/A	N/A		(2) 1 GHz to 26GHz : -47dBm

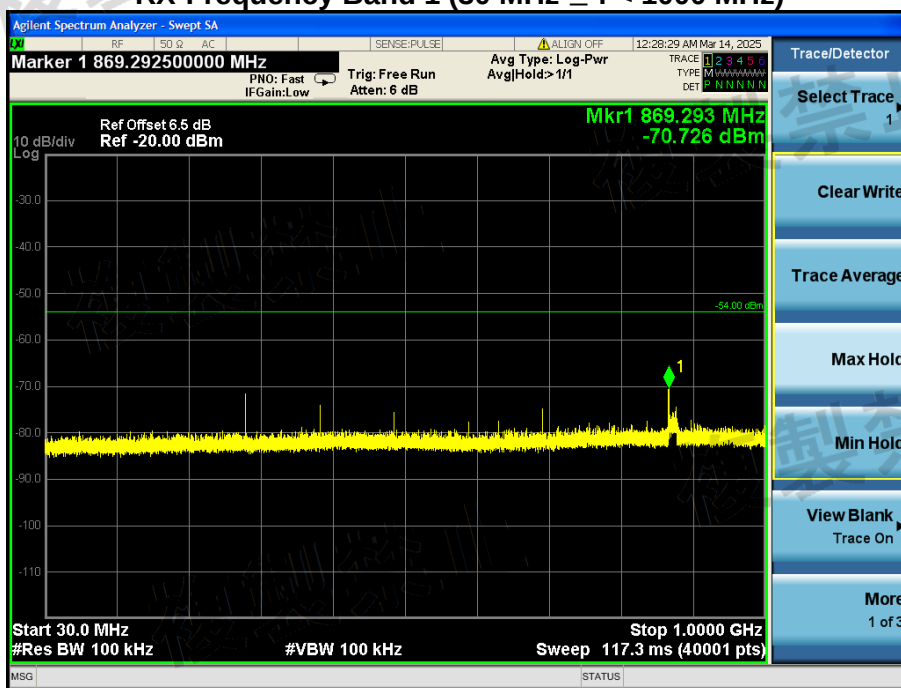
RX-Frequency Band 1 ($30 \text{ MHz} \leq f < 1000 \text{ MHz}$)

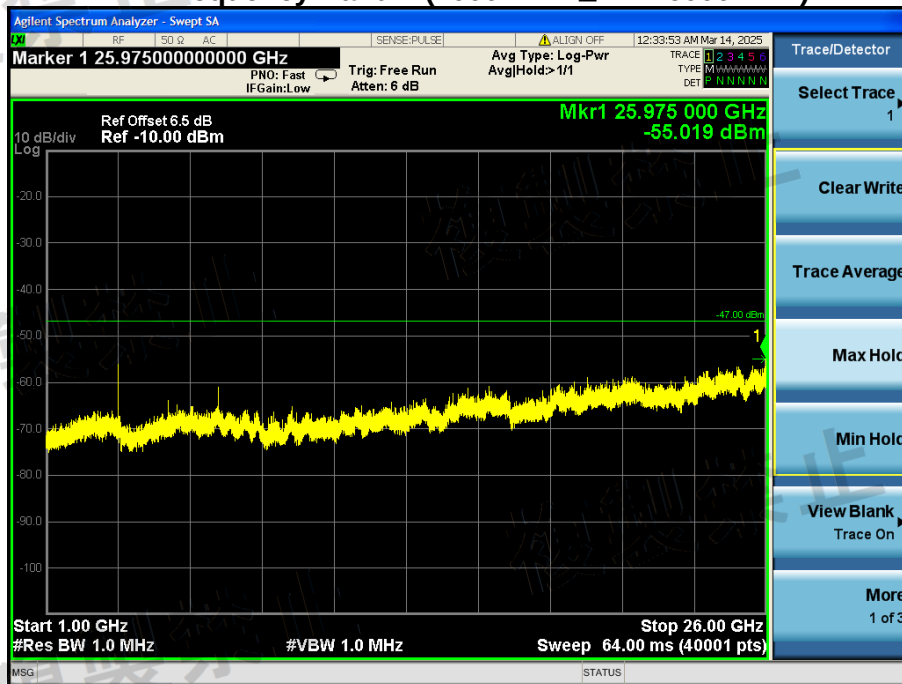
RX-Frequency Band 2 ($1000 \text{ MHz} \leq f < 26000 \text{ MHz}$)



EUT:	Digital Target Panel	Model No.:	AUTEL-CSC050A/16
Temperature:	25°C	Test Date:	Mar. 14, 2025
Humidity:	55 % RH	Tested by:	Jack Li
Atmospheric Pressure:	1013 mbar	Test Voltage	Normal Voltage
Operation Mode:	Normal Voltage-ac(40) mode		

Test channel	Test Frequency (MHz)	Test Result			Unit	Limit
		Normal Voltage	High Voltage	Low Voltage		
		24V DC	N/A	N/A		
(5180~5240 MHz)	869.293	-70.726	N/A	N/A	dBm	(1) Below 1 GHz : -54dBm
	25975.000	-55.019	N/A	N/A		(2) 1 GHz to 26GHz : -47dBm

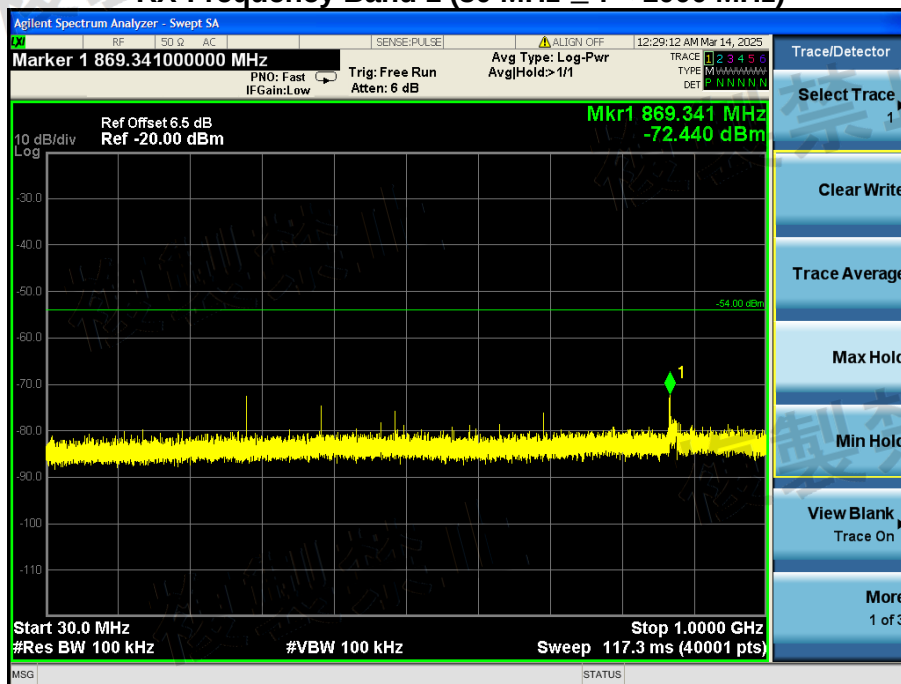
RX-Frequency Band 1 (30 MHz $\leq$ f < 1000 MHz)

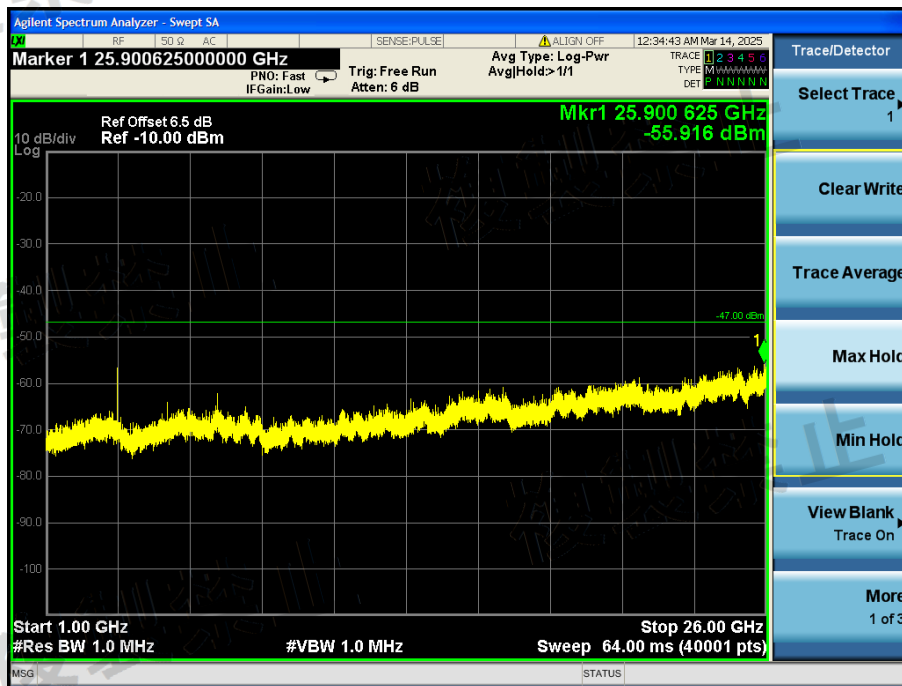
RX-Frequency Band 2 ($1000 \text{ MHz} \leq f < 26000 \text{ MHz}$)



EUT:	Digital Target Panel	Model No.:	AUTEL-CSC050A/16
Temperature:	25°C	Test Date:	Mar. 14, 2025
Humidity:	55 % RH	Tested by:	Jack Li
Atmospheric Pressure:	1013 mbar	Test Voltage	Normal Voltage
Operation Mode:	Normal Voltage-ac(80) mode		

Test channel	Test Frequency (MHz)	Test Result			Unit	Limit
		Normal Voltage	High Voltage	Low Voltage		
		24V DC	N/A	N/A		
(5180~5240 MHz)	869.341	-72.440	N/A	N/A	dBm	(1) Below 1 GHz : -54dBm
	25900.625	-55.916	N/A	N/A		(2) 1 GHz to 26GHz : -47dBm

RX-Frequency Band 1 ($30 \text{ MHz} \leq f < 1000 \text{ MHz}$)

RX-Frequency Band 2 ($1000 \text{ MHz} \leq f < 26000 \text{ MHz}$)

11 TRANSMISSION BURST LENGTH MEASUREMENT LIMITS OF BURST LENGTH

Item	Limits
Transmission Burst	$\leq 8\text{ms}$

11.1 MEASURING INSTRUMENTS

See list of measuring instruments of this test report.

11.2 TEST PROCEDURES

- Setting of SA is following as: RBW: 1MHz/VBW:1MHz /Sweep Mode:Single sweep/Detect mode: Positive peak/Zero Span I Sweet time: more than burst length.
- Measure the maximum time duration of one burst length.

11.3 TEST SETUP

Spectrum Analyzer



EUT

11.4 TEST DEVIATION

There is no deviation with the original standard.

11.5 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

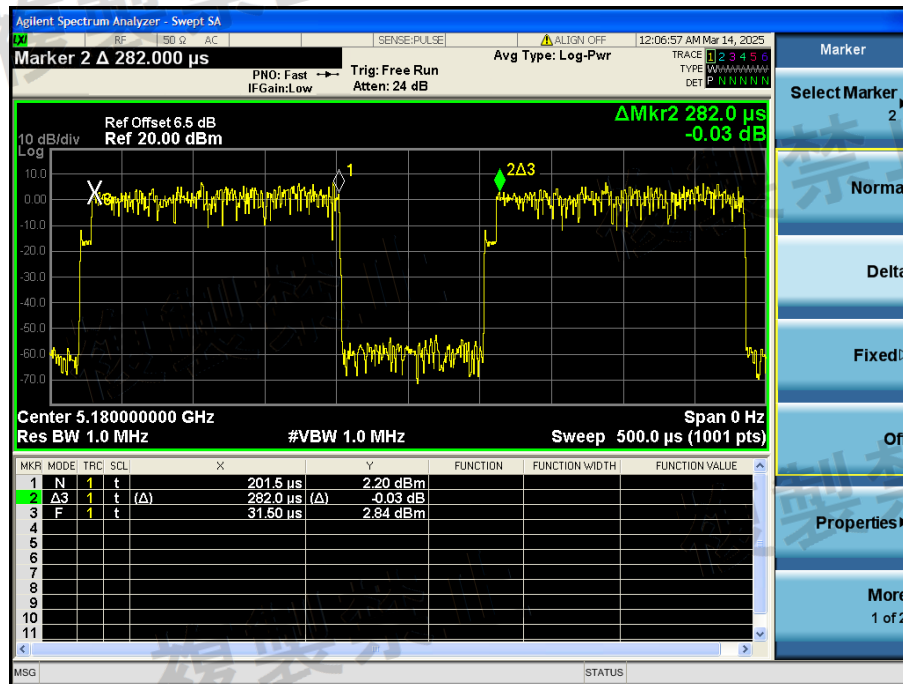
11.6 TEST RESULT OF TRANSMISSION BURST LENGTH



EUT:	Digital Target Panel	Model No.:	AUTEL-CSC050A/16
Temperature:	25°C	Test Date:	Mar. 14, 2025
Humidity:	55 % RH	Tested by:	Jack Li
Atmospheric Pressure:	1013 mbar	Test Voltage	Normal Voltage
Operation Mode:	Normal Voltage-a mode		

CH36

Frequency (MHz)	Burst Length (ms)	Limit (ms)	F/P
5180	0.170	8	Pass

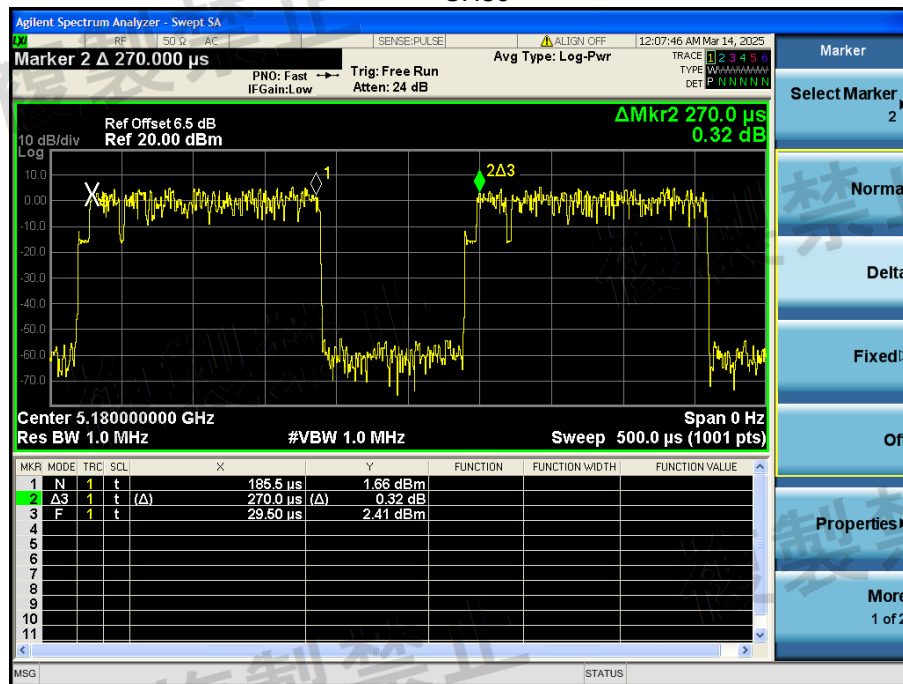




EUT:	Digital Target Panel	Model No.:	AUTEL-CSC050A/16
Temperature:	25°C	Test Date:	Mar. 14, 2025
Humidity:	55 % RH	Tested by:	Jack Li
Atmospheric Pressure:	1013 mbar	Test Voltage	Normal Voltage
Operation Mode:	Normal Voltage-N(20) mode		

Frequency (MHz)	Burst Length (ms)	Limit (ms)	F/P
5180	0.156	8	Pass

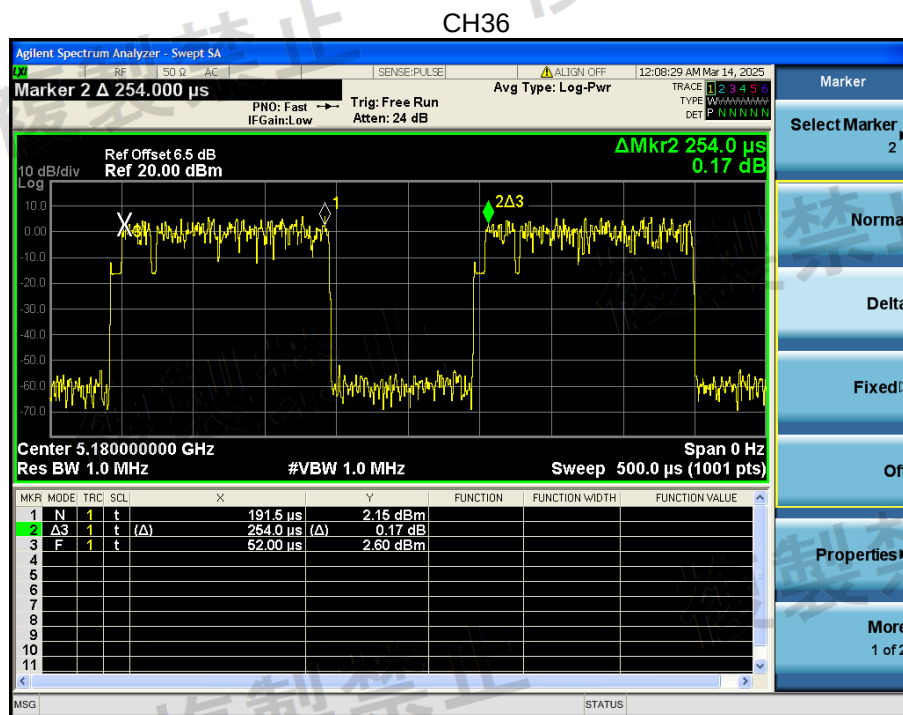
CH36





EUT:	Digital Target Panel	Model No.:	AUTEL-CSC050A/16
Temperature:	25°C	Test Date:	Mar. 14, 2025
Humidity:	55 % RH	Tested by:	Jack Li
Atmospheric Pressure:	1013 mbar	Test Voltage	Normal Voltage
Operation Mode:	Normal Voltage-AC(20) mode		

Frequency (MHz)	Burst Length (ms)	Limit (ms)	F/P
5180	0.140	8	Pass

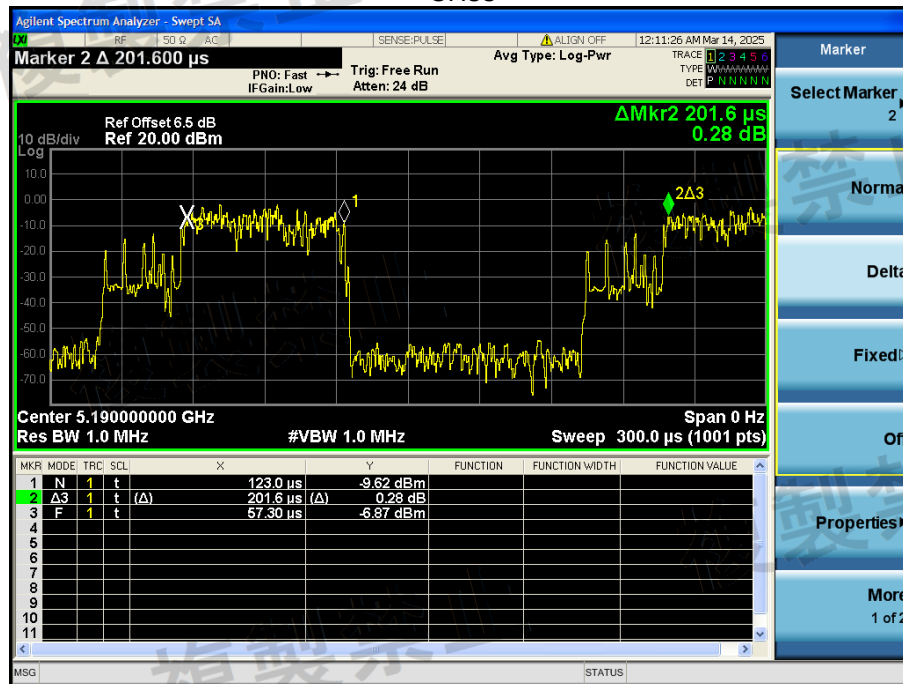




EUT:	Digital Target Panel	Model No.:	AUTEL-CSC050A/16
Temperature:	25°C	Test Date:	Mar. 14, 2025
Humidity:	55 % RH	Tested by:	Jack Li
Atmospheric Pressure:	1013 mbar	Test Voltage	Normal Voltage
Operation Mode:	Normal Voltage-n(40) mode		

Frequency (MHz)	Burst Length (ms)	Limit (ms)	F/P
5190	0.066	8	Pass

CH38

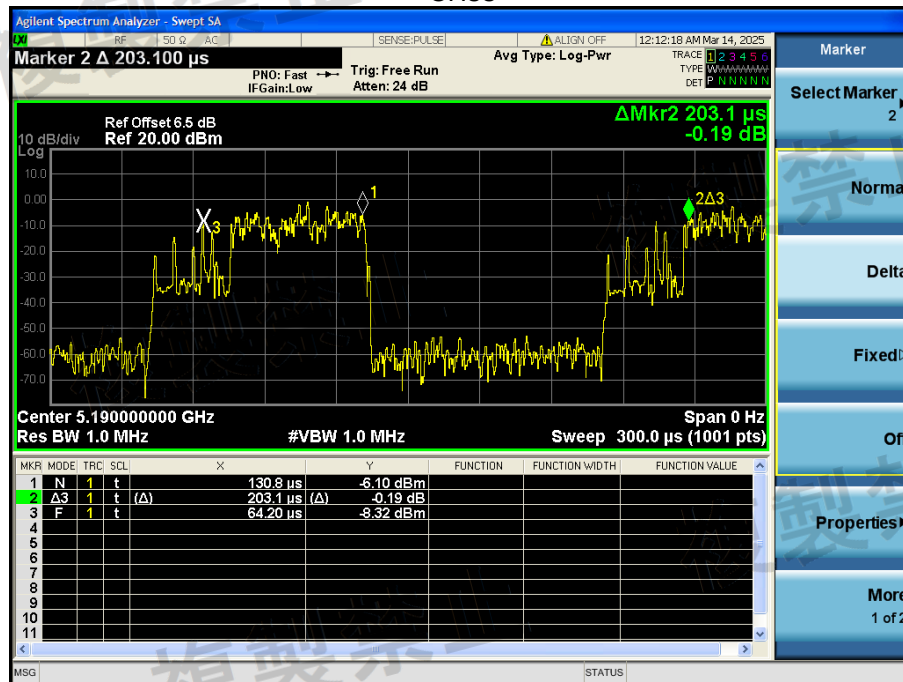




EUT:	Digital Target Panel	Model No.:	AUTEL-CSC050A/16
Temperature:	25°C	Test Date:	Mar. 14, 2025
Humidity:	55 % RH	Tested by:	Jack Li
Atmospheric Pressure:	1013 mbar	Test Voltage	Normal Voltage
Operation Mode:	Normal Voltage-ac(40) mode		

Frequency (MHz)	Burst Length (ms)	Limit (ms)	F/P
5190	0.067	8	Pass

CH38

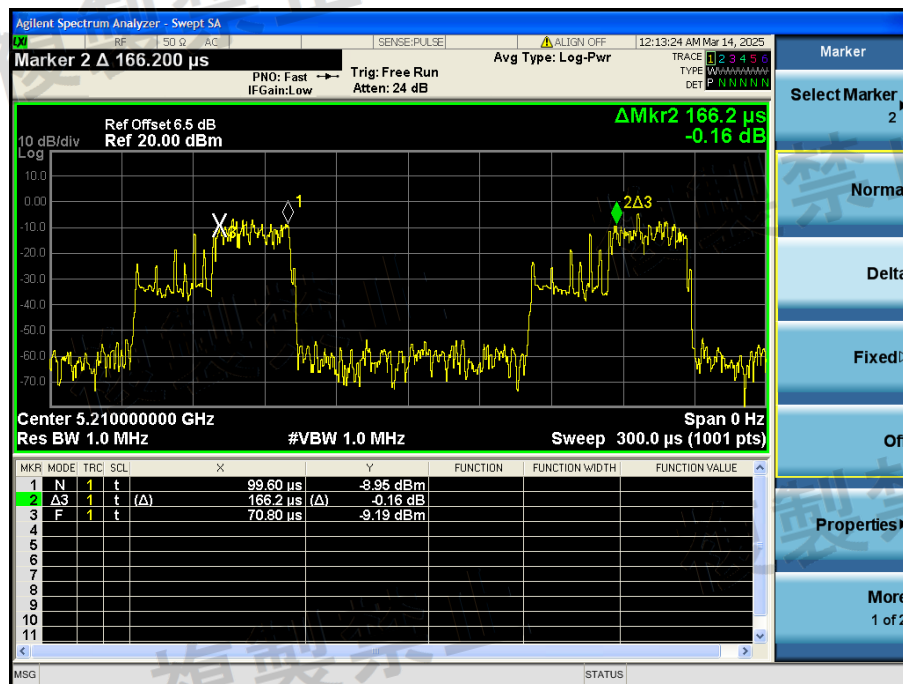




EUT:	Digital Target Panel	Model No.:	AUTEL-CSC050A/16
Temperature:	25°C	Test Date:	Mar. 14, 2025
Humidity:	55 % RH	Tested by:	Jack Li
Atmospheric Pressure:	1013 mbar	Test Voltage	Normal Voltage
Operation Mode:	Normal Voltage-ac(80) mode		

Frequency (MHz)	Burst Length (ms)	Limit (ms)	F/P
5210	0.029	8	Pass

CH42



12. RADIO INTERFERENCE PREVENTION CAPABILITY MEASUREMENT

12.1 LIMIT

Item	Limits
Identification code	≥ 48 bits

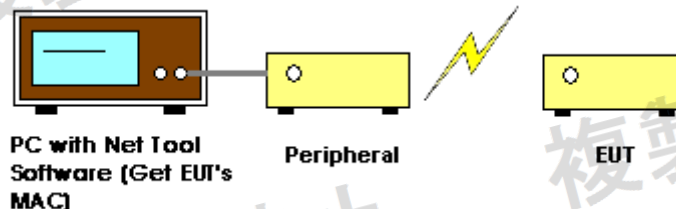
12.2 MEASURING ID CODE SOFTWARE

Item	Limits
MAC IP List	MAC Scan

12.3 TEST PROCEDURES

- In the case that the EUT has the function of automatically transmitting the identification code: a. Transmit the predetermined identification codes from EUT. b. Check the transmitted identification codes with the demodulator.
- In the case of receiving the identification code: a. Transmit the predetermined identification codes from the counterpart. b. Check if communication is normal. c. Transmit the signals other than predetermined ID codes from the counterpart. d. Check if the EUT stops the transmission, or if it displays that identification codes are different from the predetermined ones.

12.4 TEST SETUP LAYOUT



12.5 TEST DEVIATION

There is no deviation with the original standard.

12.6 EUT OPERATION DURING TEST

The EUT was programmed to be in normal transmitting mode.

12.7 TEST RESULT OF RADIO INTERFERENCE PREVENTION CAPABILITY

EUT:	Digital Target Panel	Model No.:	AUTEL-CSC050A/16
Temperature:	25°C	Test Date:	Mar. 13, 2025
Humidity:	55 % RH	Tested by:	Jack Li
Atmospheric Pressure:	1013 mbar	Test Voltage	Normal Voltage

MAC Address: 28: D0: 43: 60: 7C: A1

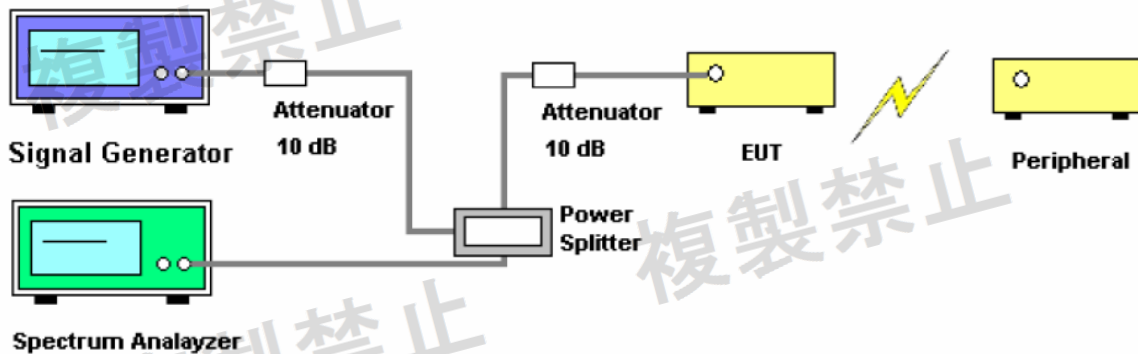
13 CARRIER SENSE CAPABILITY

Limit

EUT stop RF transmission signal after carrier inject to EUT

Test Procedure

Measurement System Diagram



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 $22.79+G-20\log(f)\text{dBm}$)(G is the antenna gain, f 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.

Result:

Mode	Normal Voltage
802.11a	OK
802.11n20	OK
802.11 n40	OK
802.11ac20	OK
802.11 ac40	OK
802.11 ac80	OK

$P_{in}=22.79+G_r-20\log(\text{freq_MHz})[\text{dBm}]$

Limit:100mw/m eirp

Confirmed at -50dBm

Result:OK



14. EUT TEST PHOTO

Measurement Photos

