



JAPAN RADIO TEST REPORT

Client Information:	
Applicant:	Shenzhen WISO Technology Co.,Ltd
Applicant add.:	Room 815, Building 10, Shenzhen Bay Science and Technology Ecological Park, No. 10, Gaoxin South 9th Road, High-tech Zone Community, Yuehai Street, Nanshan District, Shenzhen
Product Information:	
Product Name:	PixelDarts
Model No.:	DN-PD1
Derivative model No.:	DN-PD1A, DN-PD1B, DN-PD1C
Brand Name:	Dartsnut
Report No.:	CTT2026070601R21T-02
Standards:	Item 19 of Article 2 Paragraph 1 MIC public notice 88:2004, annex 43
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: Jul. 06, 2026	Date of Test: Jul. 06, 2026~ Jul. 31, 2026
Date of Issue: Jul. 31, 2026	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





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2 Test Summary

Test	Test Requirement	Limit/Severity	Result
Antenna Requirement	Item 19 of Article 2-1	Notice 88 Appendix 43,B-1 (1)&(2)	PASS
Test frequency	Item 19 of Article 2-1	Notice 88 Appendix 43, A-3	PASS
Frequency Error	Item 19 of Article 2-1	±50 PPM or less	PASS
Occupied Bandwidth	Item 19 of Article 2-1	IEEE 802.11 b/g/n20: 26 MHz or less IEEE 802.11n40: 26-40MHz	PASS
Spread-spectrum Bandwidth	Item 19 of Article 2-1	Only for reported	PASS
Antenna Power	Item 19 of Article 2-1	0.01W /MHz or less Error + 20% (IEEE 802.11b/g/n20) 5mW/MHz or less Error + 20% (IEEE 802.11n40)	PASS
EIRP	Item 19 of Article 2-1	12.14dBm/MHz or less (IEEE 802.11b/g/n20) 9.13dBm/MHz or less (IEEE 802.11n40)	PASS
Spurious Emission of Tx	Item 19 of Article 2-1	(1) Below 2387 MHz : 2.5μW/MHz (2) 2387 to 2400 MHz : 2.5μW/MHz (3) 2483.5 through 2496.5 MHz : 25μW/MHz (4) Over 2496.5 MHz : 2.5μW/MHz	PASS
Interference prevention capability	Item 19 of Article 2-1	Notice 88 Appendix 43	PASS
RF accessibility	Item 19 of Article 2-1	Notice 88 Appendix 43	PASS
Spurious Emission of Rx	Item 19 of Article 2-1	(1) Below 1 GHz: 4 nW (2) 1GHz or higher: 20 nW	PASS
Carrier sense function①	Item 19 of Article 2-1	/	N/A, Note2
Carrier sense function②	Item 19 of Article 2-1	/	PASS Note3
Half Power Beam Angle	Item 19 of Article 2-1	/	N/A, Note4

Remark:

Note 1:EUT: In this whole report EUT means Equipment Under Test.

Tx: In this whole report Tx (or tx) means Transmitter.

Rx: In this whole report Rx (or rx) means Receiver.

RF: In this whole report RF means Radio Frequency.

Item 19 of Article 2 Paragraph 1

Note 2: Not apply to this device, since EIRP does not require compensation through Antenna Power.



Note3: Apply for 802. 11n40 which the Occupied bandwidth within 26MHz 40MHz

Note4: Not apply to this device, since EIRP less than 12.14dBm/MHz (IEEE 802.11b/g/n20) 9.13dBm/MHz (IEEE 802.11n40)

2.1 Measurement Uncertainty

The report uncertainty of measurement $y \pm U$, where expended 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	$\pm 1.4\%$



3 Version

Revision Record				
Version	Chapter	Date	Modifier	Remark
00		Jul. 31, 2026		Original

3.1 Test Location

All tests were performed at:

Shenzhen C-link Testing & Technology Co., Ltd.
No.709, Enhai Building, No.1 Hangkong Road, Sanwei Community, Hangcheng Street,
Bao 'an District, Shenzhen, Guangdong, China



4 General Information

Manufacturer:	Shenzhen WISO Technology Co.,Ltd
Manufacturer Address:	Room 815, Building 10, Shenzhen Bay Science and Technology Ecological Park, No. 10, Gaoxin South 9th Road, High-tech Zone Community, Yuehai Street, Nanshan District, Shenzhen
Product Name:	PixelDarts
Model No.:	DN-PD1
Brand Name:	Dartsnut
Derivative model No.:	DN-PD1A, DN-PD1B, DN-PD1C
Sample ID:	260706001-01
Operating Frequency	2412 MHz to 2472 MHz
Type of Modulation:	802.11b: DSSS(CCK/QPSK/BPSK) 802.11g/n/ax: OFDM(BPSK/QPSK/16QAM/64QAM)
Transmit Data Rate:	802.11b: 1/2/5.5/11Mbps 802.11g: 6/9/12/18/24/36/48/54Mbps 802.11n: up to 300Mbps 802.11ax: up to 573.5Mbps
Number of Channels	13 Channels for 802.11b/g/n/ax (HT20) 9 Channels for 802.11n/ax (HT40)
Channel Separation:	5 MHz
Antenna Type	PCB Antenna
Antenna gain:	1.49dBi
Normal antenna power:	802.11b:4.0 mW/MHz 802.11g:2.0 mW/MHz 802.11n(HT20):2.0 mW/MHz 802.11n(HT40): 2.0 mW/MHz 802.11ax(HT20):1.0 mW/MHz 802.11ax(HT40): 1.0 mW/MHz
Power Supply Range:	INPUT: DC12V
Adapter:	Model: J652-1205000D Input: 100-240V~ 50/60Hz 1.7A Output: 12.0VDC 5.0A
Normal Test Voltage:	The same as above
Hard Ware Version:	ET_Dartsnut_POWER_P6_260422-1042
Soft Ware Version:	DN-PD1_2.0.2



Model difference:

All the model are the same circuit and RF module, Only the model name are different.



4.1 EUT Peripheral List

No.	Equipment	Manufacturer	Model No.	Serial No.	Power cord	Signal cord
1	N/A	N/A	N/A	N/A	N/A	N/A

4.2 Test Peripheral List

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 Line	UGREEN	N/A	USB3.0	N/A	N/A	N/A

5 Equipment Used during Test

No	Test Equipment	Manufacturer	Model No	Serial No	Cal. Date	Cal. Due Date	Cal. Lab
1	SIGNAL Analyzer	Keysight	N9020A	MY53300466	2026.01.16	2027.01.15	Guangdong LiSai
2	RF Automatic Test System	MWRFTest	MV1 00-RFCB	/	2026.01.16	2027.01.15	

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

Note: The testing equipment is calibrated using the C method.



6 Test Results

6.1 Radio Technical Requirements Specification

Table 1: Radio Technical Requirements Specification for 2.4 GHz band wide-band low-power data communication system (Item 19 of Article 2-1)

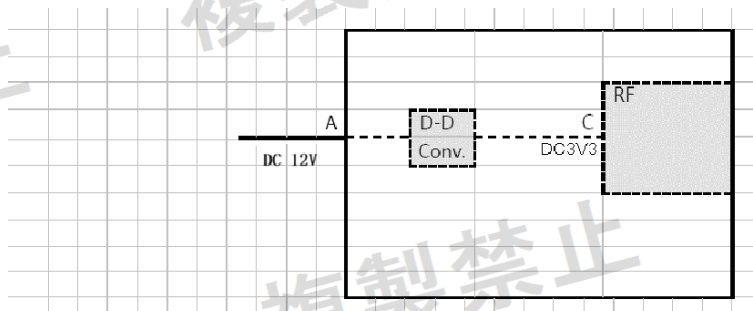
Items	Technical standard
Assigned frequency or designated frequency	2,400-2,483.5MHz
Communication method	One-way communication, simplex, semi-duplex, or duplex operation of digital signal transmission including spread spectrum
Tolerance of frequency ($\times 10^{-6}$)	± 50
Tolerance of occupied bandwidth	FH : 83.5MHz or less FH + DS : 83.5MHz or less FH + OFDM : 83.5MHz or less OFDM : 40MHz or less Others : 26MHz or less
Antenna power	Designated value (1) FH, FH+DS , FH+OFDM: 3mW/MHz (used in the range of 2400 – 2483.5 MHz) (2) OFDM , DS other than (1) 10mW/MHz (3) Other than (1) & (2) 10mW (4) OFDM OBW 26 -40MHz: 5mW/MHz Tolerance:+20%
Antenna gain	1) 12.14 dBi or less in principle 2) In case of directional antenna (1) FH, FH+DS or FH+OFDM using 2400 – 2483.5 MHz EIRP $\leq$ 16.91 dBm/MHz (2) OFDM or DS other than (1) EIRP $\leq$ 22.14 dBm/MHz (3) Other than (1) and (2): 22.14 dBm or less (4) OFDM OBW 26 - 40MHz: 19.14dBm/MHz (5) Half-power angle of directional antenna (e) in case of the item 2): $e \leq 360/A$ (The A is 10 in maximum.)
Tolerance of spurious emission intensity	(1) Below 2387 MHz : 2.5 μ W/MHz (2) 2387 to 2400 MHz : 25 μ W/MHz (3) 2483.5 through 2496.5 MHz : 25 μ W/MHz (4) Over 2496.5 MHz : 2.5 μ W/MHz
Spreading bandwidth	Only for reported
Spreading rate of spectrum	For DS system; (Spreading bandwidth) / (Frequency corresponding to transmission rate) ≥ 5
Limit of secondary radiated emissions	(1) Below 1 GHz : 4 nW (2) 1 GHz or higher : 20 nW
Interference prevention function	Shall have the function of automatic transmission and reception of identification sign.
Structure	Shall be of the structure that the RF and modulator sections excluding antenna cannot easily be opened.
Note	DS: Direct spread FH: Frequency hopping OFDM: Orthogonal frequency division multiplexing



6.2 E.U.T. Test Conditions

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 12V.



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 12V $\pm 10\%$

DC 12V	DC3V3
12V	3.33V
13.2V	3.33V
10.8V	3.33V

Pre-test the EUT in all voltage mode at the DC 13.2V, DC 12V and DC10.8V and conducted to determine the worst-case mode, only the worst-case results (DC 12V) 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 12V.

Temperature:

5.0 -35.0 °C

Humidity:

45-85 % RH

Atmospheric Pressure:

1000 -1020 mbar

Test frequencies:

If the EUT can be set to 3 of more different (carrier) frequencies in 1 allocated band, testing shall be performed using the Lowest, Middle and the Highest frequency (L, M and H). If there are 2 or fewer frequencies, testing shall be performed with the available frequencies.



Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	8	2447
2	2417	9	2452
3	2422	10	2457
4	2427	11	2462
5	2432	12	2467
6	2437	13	2472
7	2442	/	/

Remark:

- Test frequencies are lowest channel: 2412 MHz, middle channel: 2442 MHz and highest channel: 2472 MHz for 802.11b/g/n (HT20)
Test frequencies are lowest channel: 2422 MHz, middle channel: 2442 MHz and highest channel: 2462 MHz for 802.11n (HT40)

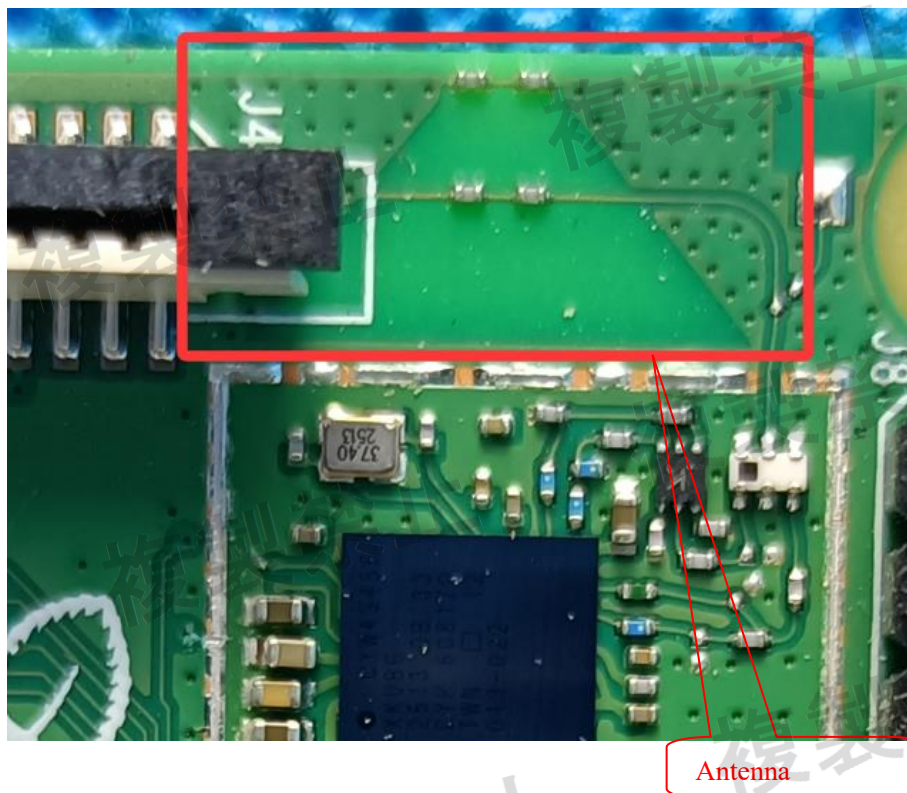
6.3 Antenna Requirement

Standard requirement

Applicable for equipment with an antenna terminal, including testing terminals) If an antenna connector is available, all relevant tests will be carried out conducted. If not, tests will be carried out in an anechoic room or with a suitable test-fixture.

EUT Antenna

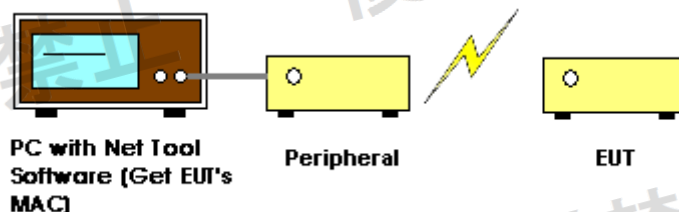
The antenna is integrated inside the EUT and no consideration of replacement. The best case gain of the antenna is 1.49dBi.



Result: All relevant tests will be carried out conducted.

6.4 Interference Prevention Function

The device consists of the PIFA antenna and 2.4 GHz WIFI IC; Component IC CPU also can use the protocol function to protect interference come from outside.



Test Procedure:

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

Test Results:

MAC Address: 54:78:B1:66:C5:00

Test result: The unit does meet the requirements.



6.5 Frequency Error

Test Requirement:	Item 19 of Article 2-1
	Tolerance of frequency: $\pm 50 \times 10^{-6}$
Temperature:	25.0 °C
Humidity:	75 % RH
Atmospheric Pressure:	1013 mbar
Test Status:	Test the EUT in transmitting mode with modulation.
Test Configuration:	
<pre>graph LR; PC[PC] --> EUT[EUT]; EUT --> SA[Spectrum Analyzer];</pre>	
Test Procedure:	
1. Test Conditions:	
	Frequency Counter or Spectrum Analyzer is used for measurement.
2. EUT conditions:	
	Modulation/Spread/Hopping ON, CW Tx
3. Spectrum Analyzer conditions:	
	Frequency: Test Frequency Span 1MHz RBW 10 kHz (Modulation OFF), VBW 10 kHz (Modulation OFF), Sweep Time Auto Detector mode Positive peak Indication mode Max hold



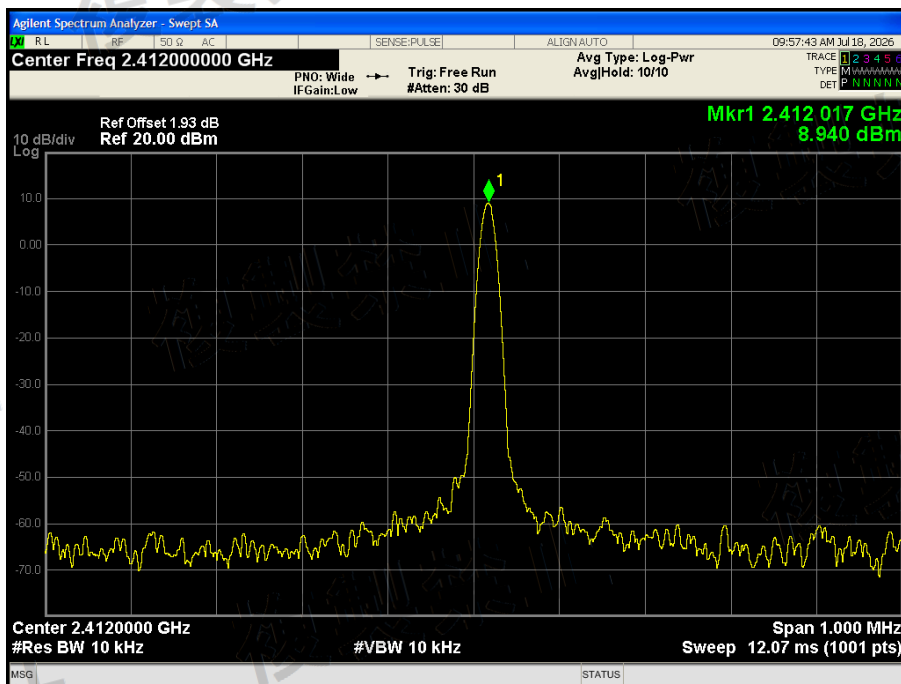
Test result:

Test Frequency (MHz)	Test Result	Unit	Limit
	Normal Voltage DC12V		
2412.0	2412.017	MHz	±50 PPM or less
	+7.05	PPM	
2422.0	2422.016	MHz	
	+6.61	PPM	
2442.0	2442.017	MHz	
	+6.96	PPM	
2462.0	2462.017	MHz	
	+6.90	PPM	
2472.0	2472.017	MHz	
	+6.88	PPM	

Note: The nominal frequency shall be confirmed by the applicant and test lab.

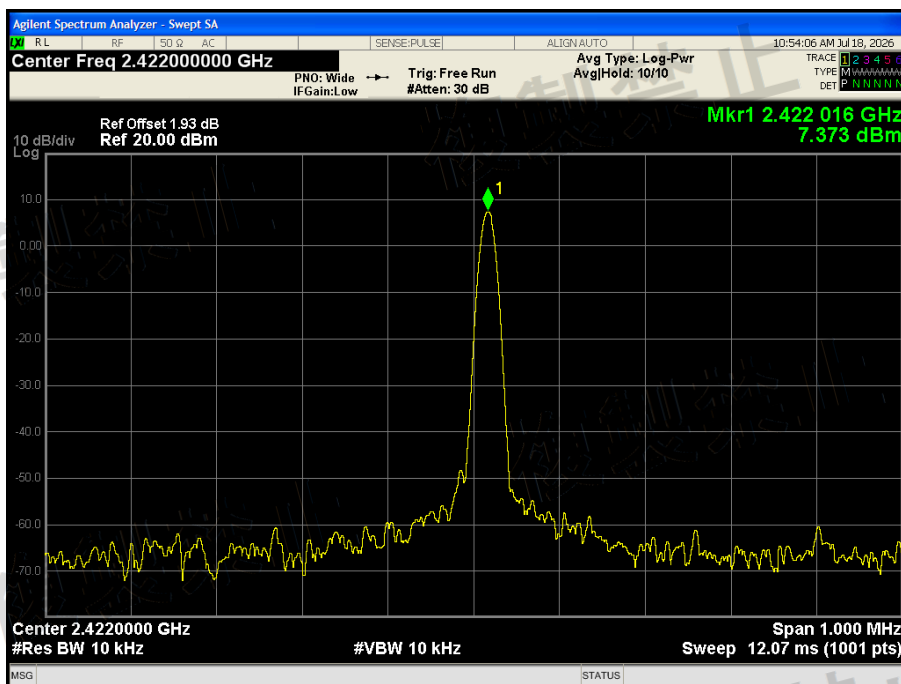
Result plot as follows:

Channel: 2.412GHz:

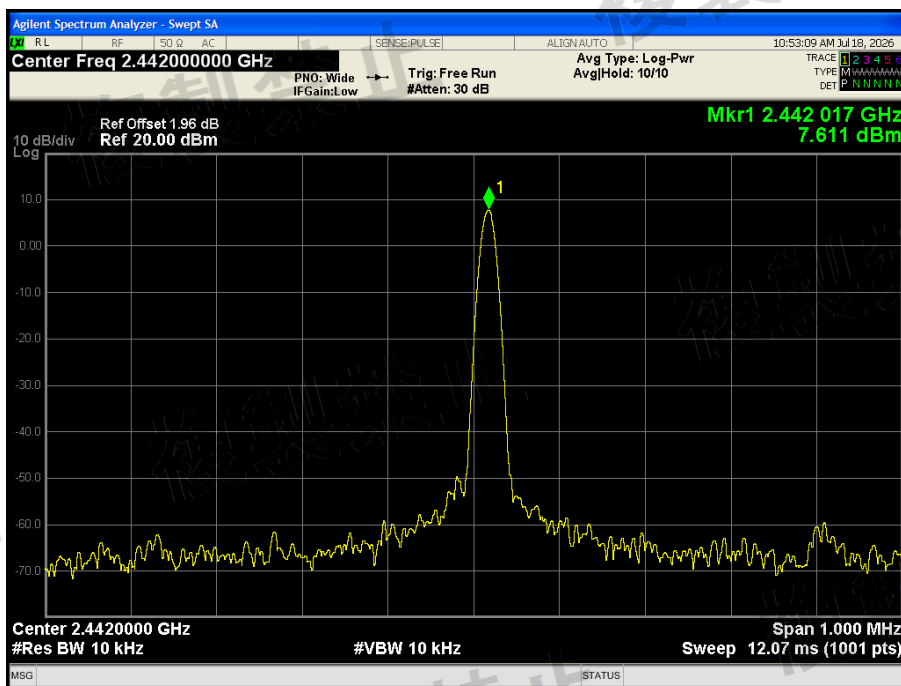




Channel: 2.422GHz:

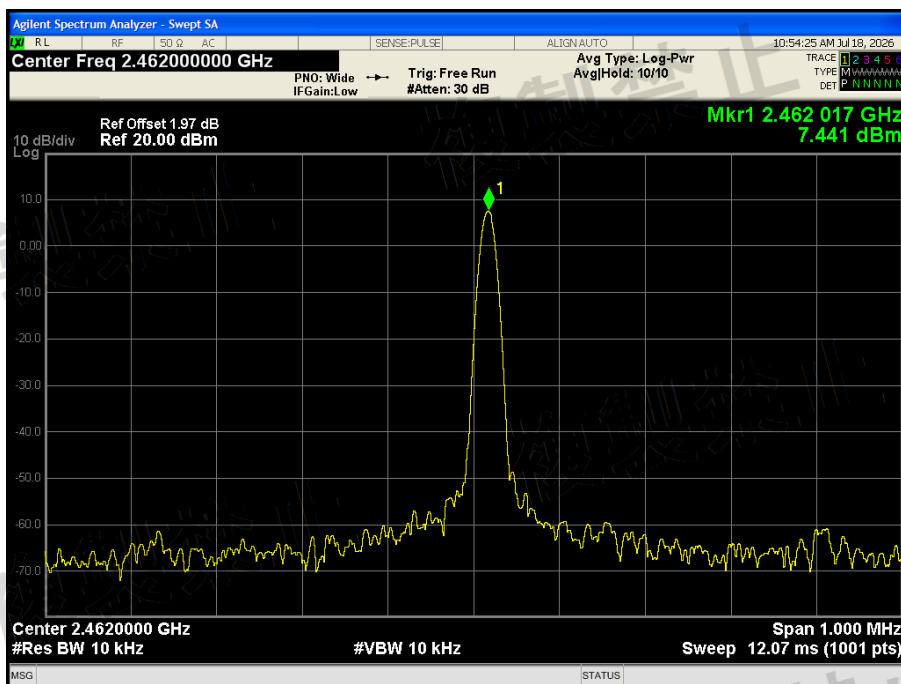


Channel : 2.442GHz:

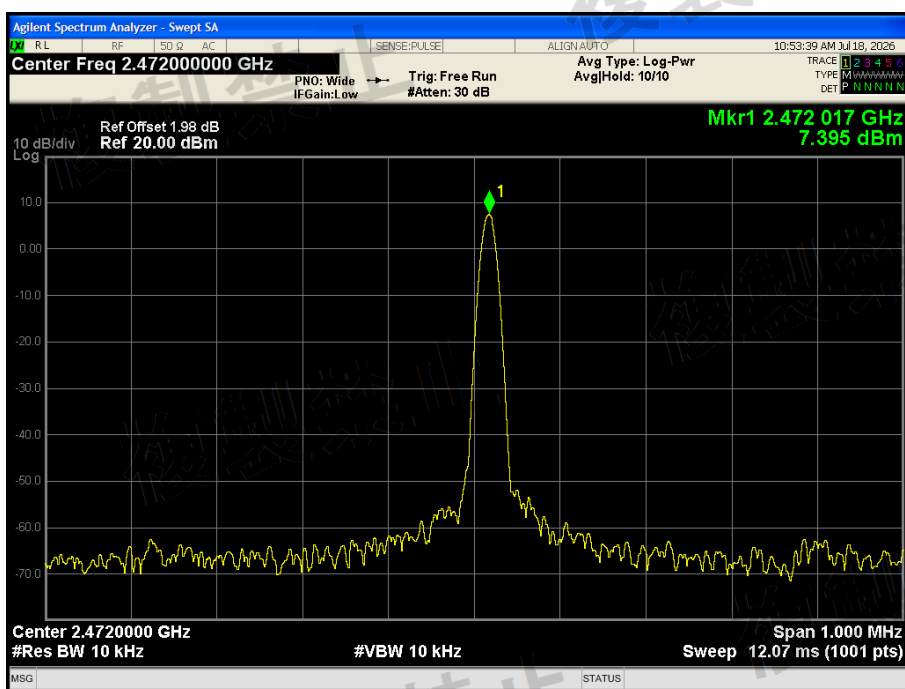




Channel: 2.462GHz



Channel : 2.472GHz:



Test result: The unit does meet the requirements.



6.6 Occupied Bandwidth (99%)

Test Requirement:	Item 19 of Article 2-1
	IEEE 802.11 b/g/n/ax 20: 26 MHz or less IEEE 802.11n/ax 40: 26-40MHz
Temperature:	25.0 °C
Humidity:	75 % RH
Atmospheric Pressure:	1013 mbar
Test Status:	Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.
Test Configuration:	PC EUT Spectrum Analyzer
Test Procedure:	
1. Test Conditions:	
	Spectrum Analyzer is used for measurement.
2. EUT conditions:	
	Modulation/Spread/Hopping ON For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.
3. Spectrum Analyzer conditions:	
	Frequency: Test Frequency Span 40/80MHz (DSSS,OFDM) RBW 300 kHz VBW 300 kHz Sweep Time Auto detector mode Positive peak Indication mode Max hold OBW 99%

**Test result:****802.11b:**

Test channel	Test Frequency (MHz)	Test Result	Unit	Limit
		Normal Voltage DC12V		
Lowest	2412.0	10.352	MHz	26 MHz or less
Middle	2442.0	10.348	MHz	
Highest	2472.0	10.374	MHz	

802.11g:

Test channel	Test Frequency (MHz)	Test Result	Unit	Limit
		Normal Voltage DC12V		
Lowest	2412.0	16.885	MHz	26 MHz or less
Middle	2442.0	16.911	MHz	
Highest	2472.0	16.902	MHz	

802.11n(HT20):

Test channel	Test Frequency (MHz)	Test Result	Unit	Limit
		Normal Voltage DC12V		
Lowest	2412.0	17.941	MHz	26 MHz or less
Middle	2442.0	17.964	MHz	
Highest	2472.0	18.048	MHz	

802.11n(HT40):

Test channel	Test Frequency (MHz)	Test Result	Unit	Limit
		Normal Voltage DC12V		
Lowest	2422.0	36.241	MHz	26-40MHz
Middle	2442.0	36.222	MHz	
Highest	2462.0	36.249	MHz	

**802.11ax(HT20):**

Test channel	Test Frequency (MHz)	Test Result	Unit	Limit
		Normal Voltage DC 12V		
Lowest	2412.0	19.070	MHz	26 MHz or less
Middle	2442.0	19.098	MHz	
Highest	2472.0	19.105	MHz	

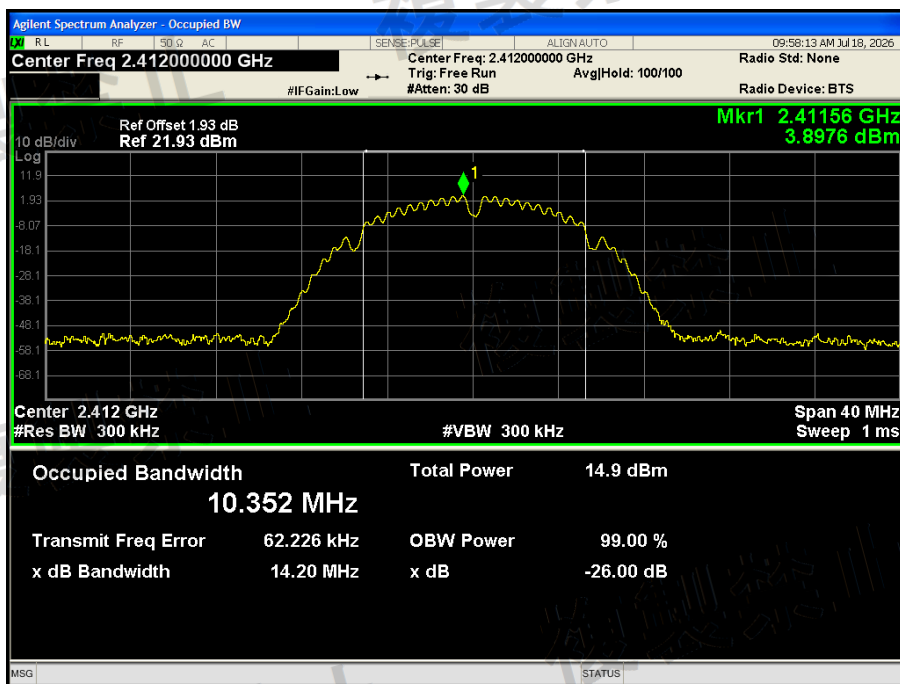
802.11ax(HT40):

Test channel	Test Frequency (MHz)	Test Result	Unit	Limit
		Normal Voltage DC 12V		
Lowest	2422.0	37.805	MHz	26-40MHz
Middle	2442.0	37.753	MHz	
Highest	2462.0	37.802	MHz	

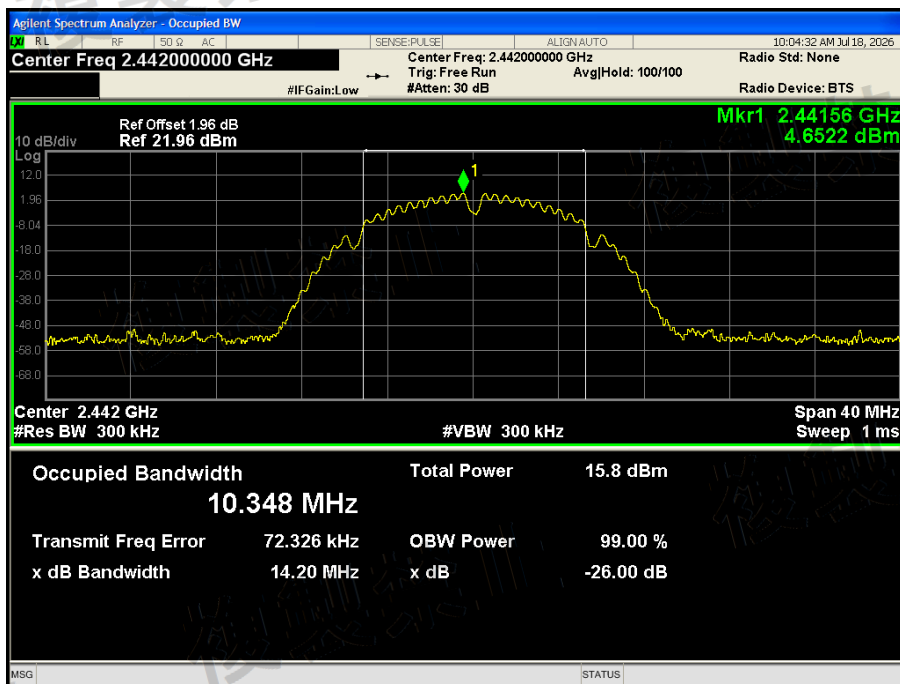
Result plot as follows:

802.11b:

Channel 1: 2.412 GHz:

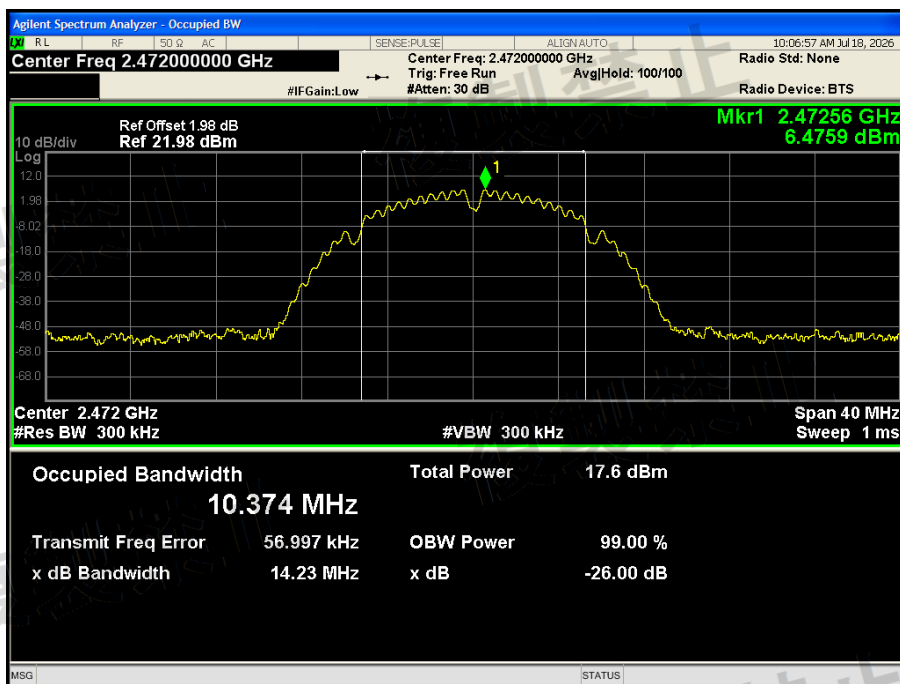


Channel 7: 2.442 GHz:



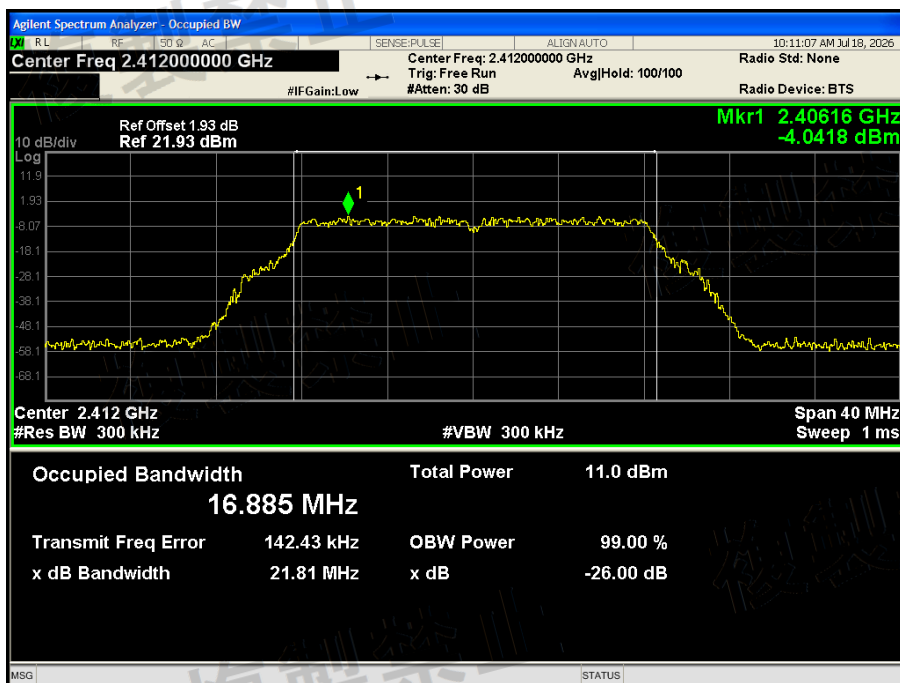


Channel 13: 2.472GHz:



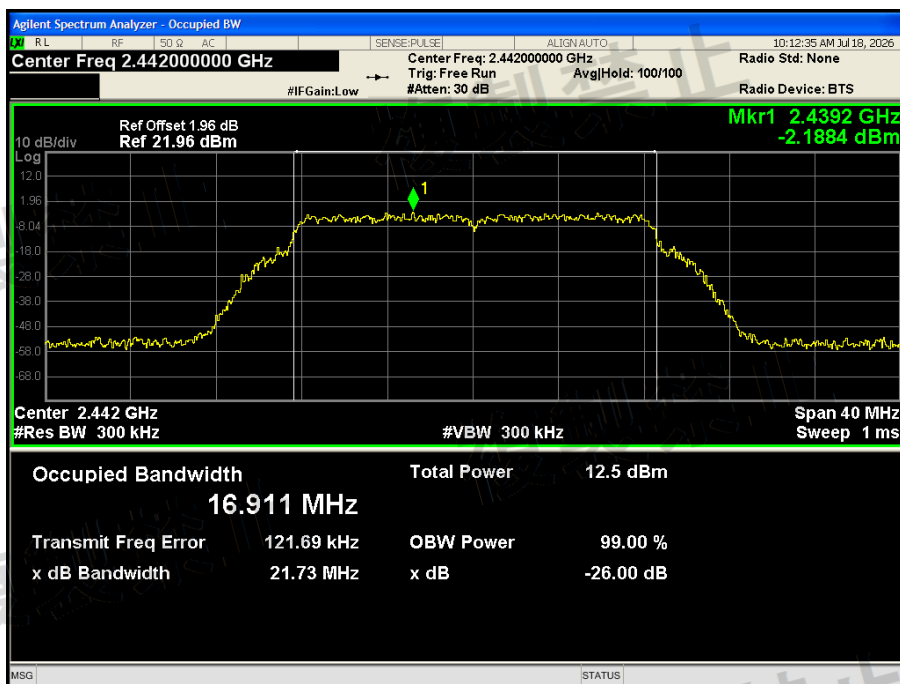
802.11g:

Channel 1: 2.412 GHz:

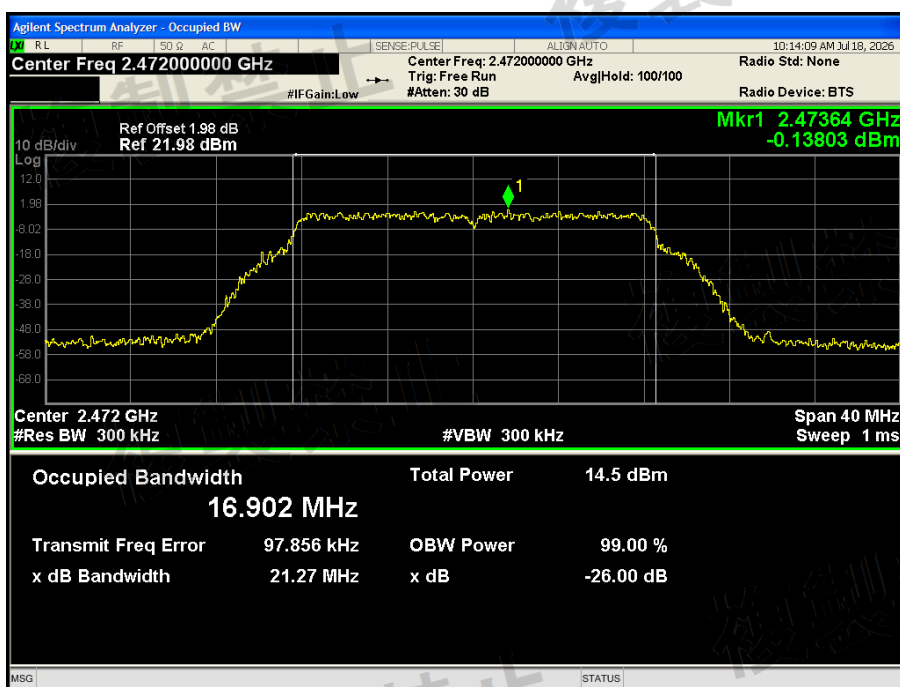




Channel 7: 2.442 GHz:

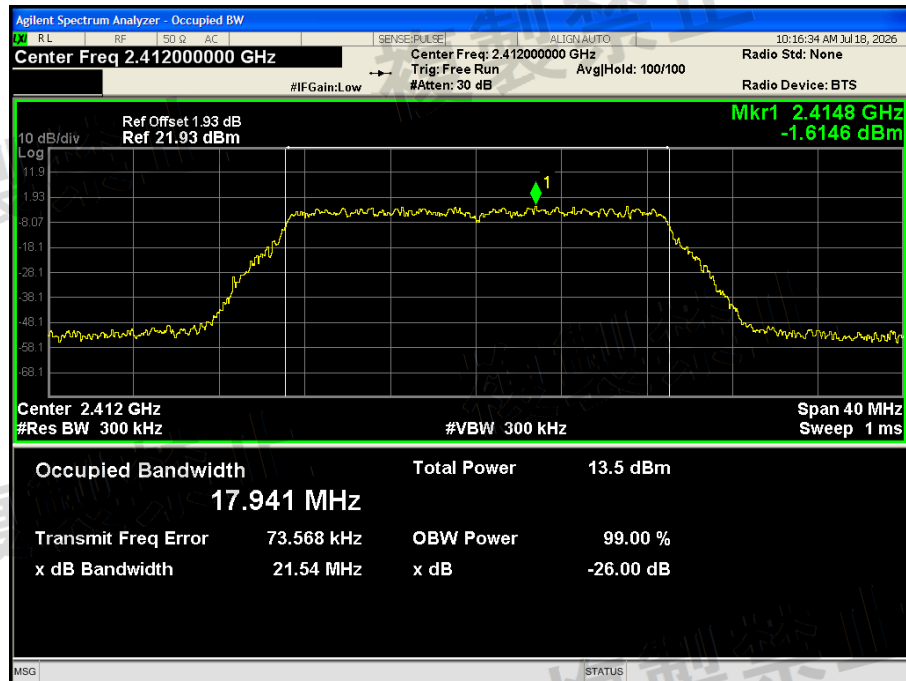


Channel 13: 2.472GHz:

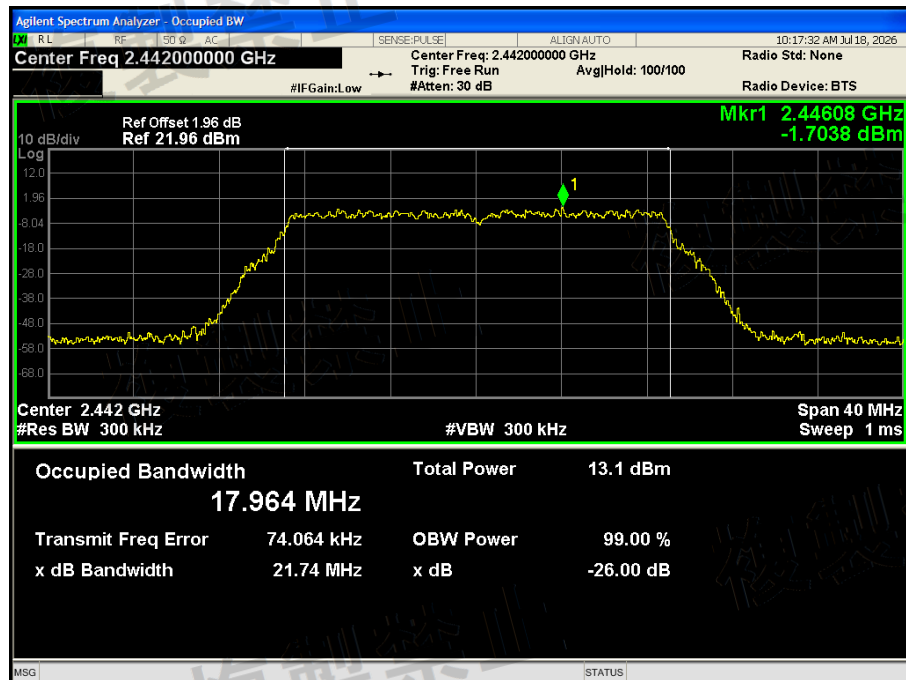


**802.11n(HT20):**

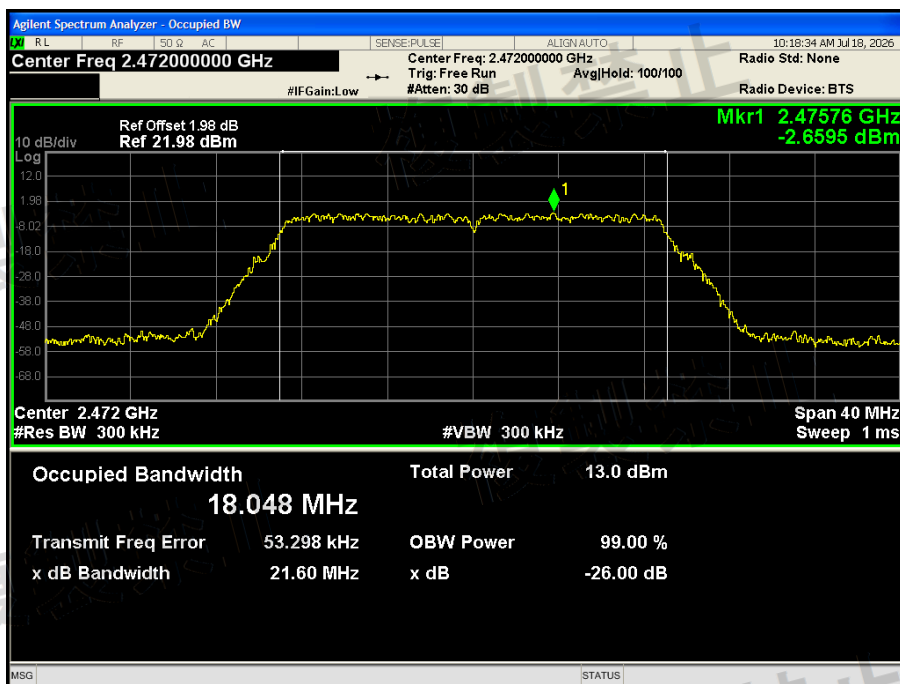
Channel 1: 2.412 GHz:



Channel 7: 2.442 GHz:

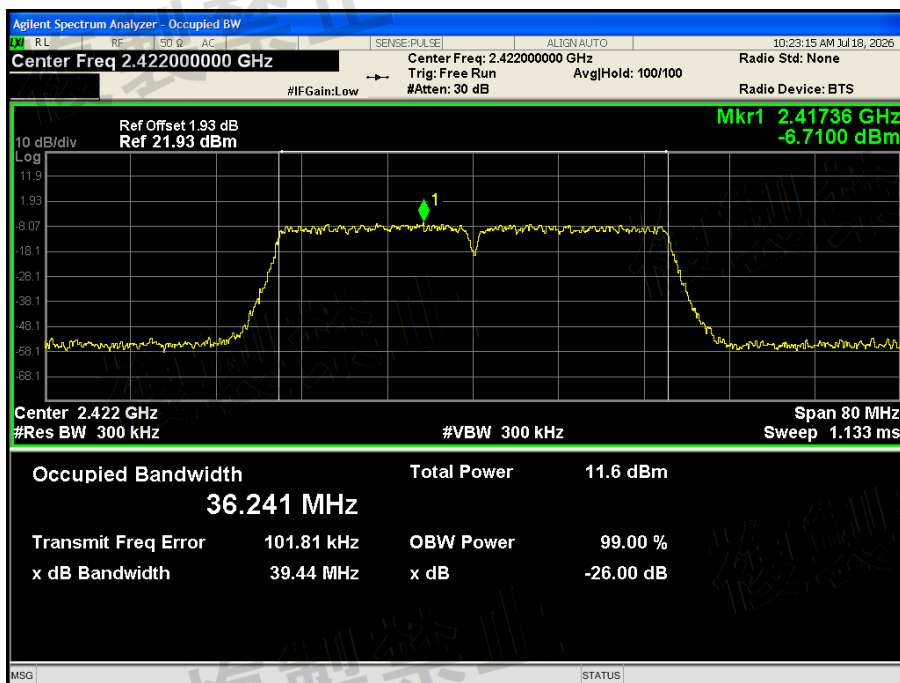


Channel 13: 2.472GHz:



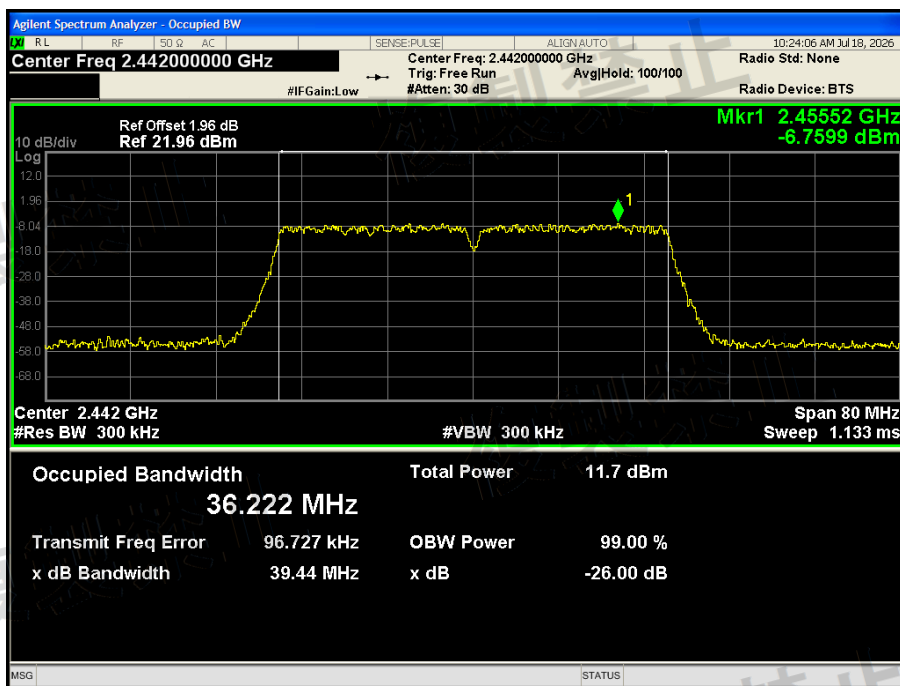
802.11n(HT40):

Channel 3: 2.422 GHz:

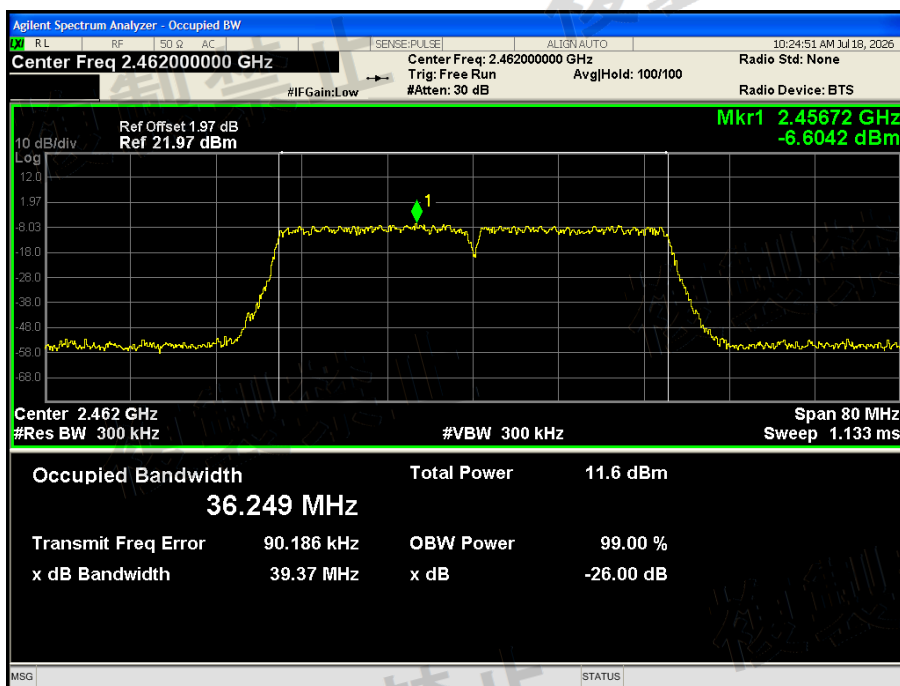




Channel 7: 2.442 GHz:

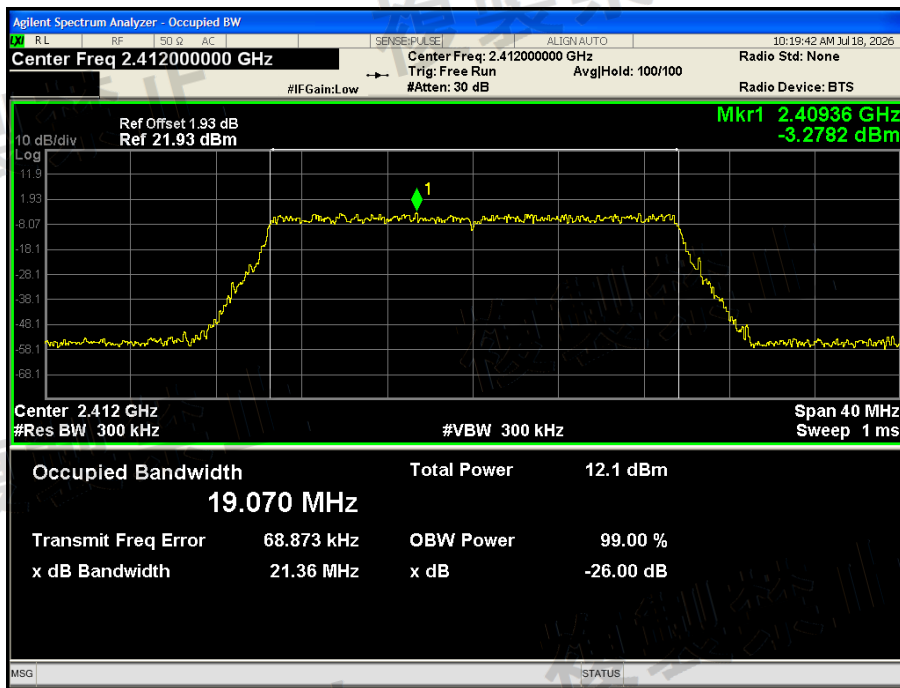


Channel 11: 2.462GHz:

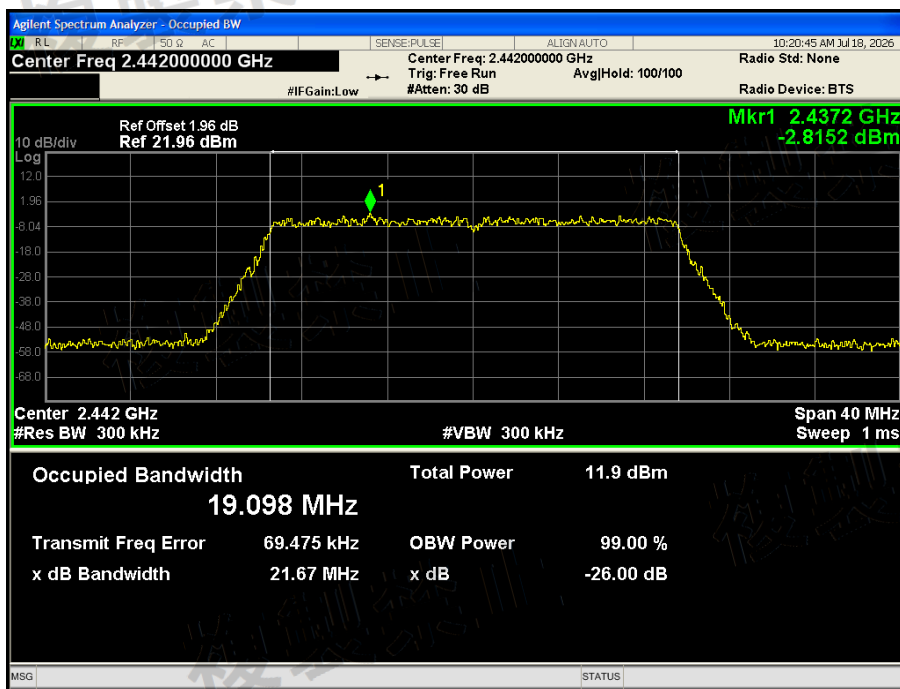


**802.11ax(HT20):**

Channel 1: 2.412 GHz:

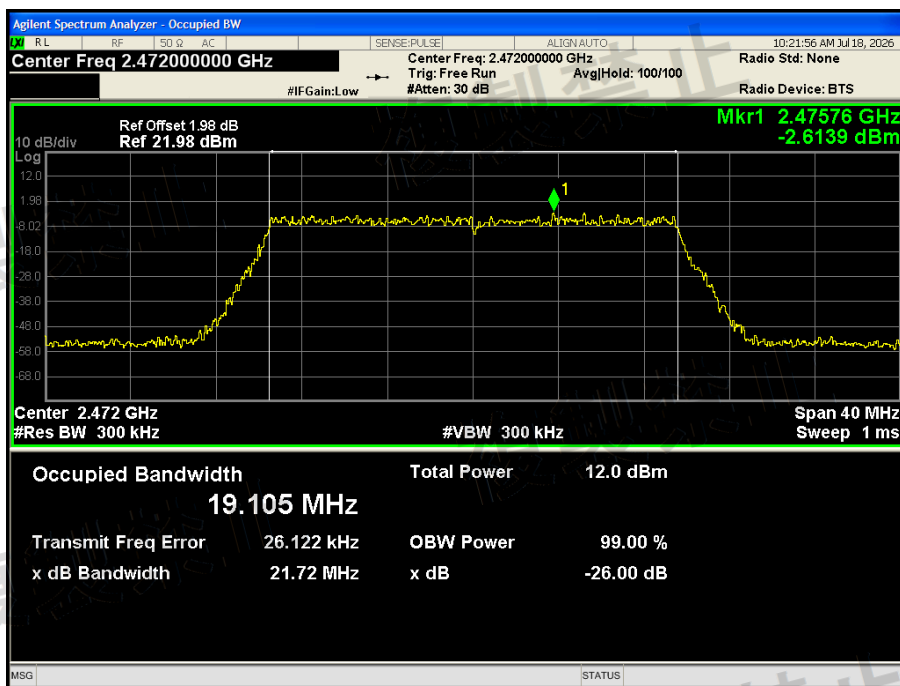


Channel 7: 2.442 GHz:



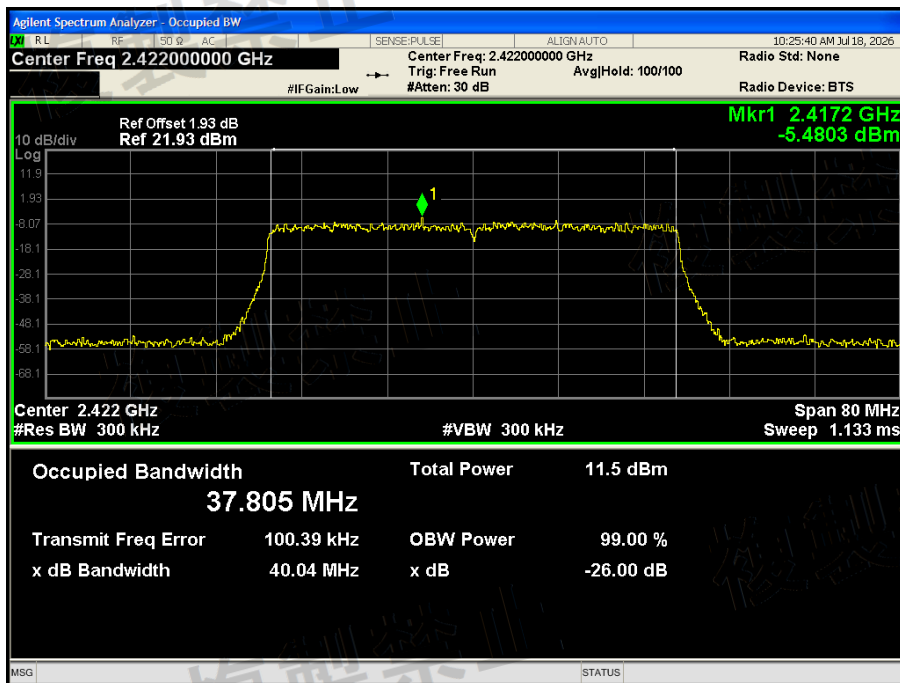


Channel 13: 2.472GHz:

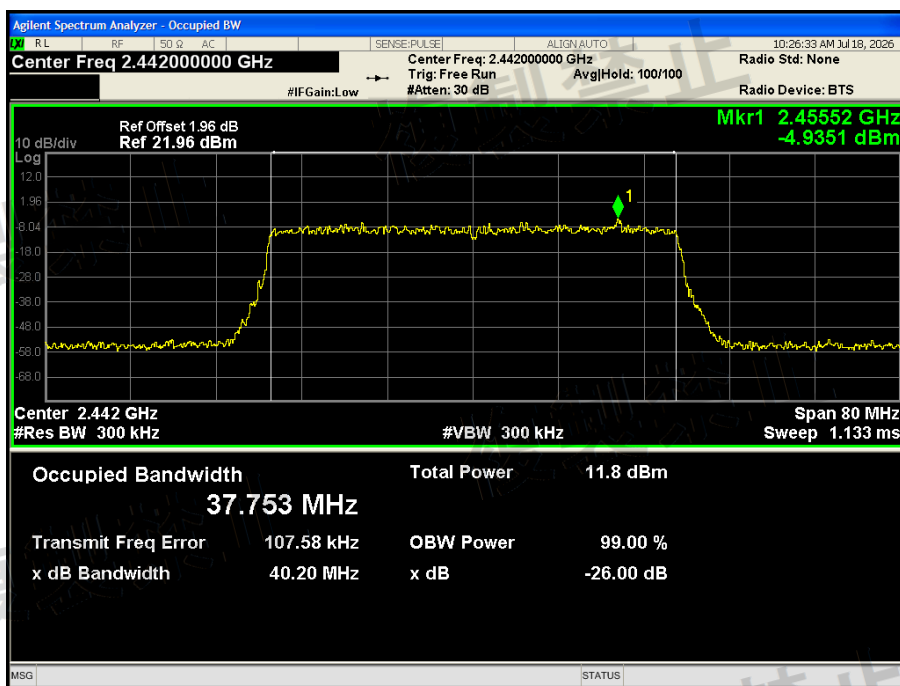


802.11ax(HT40):

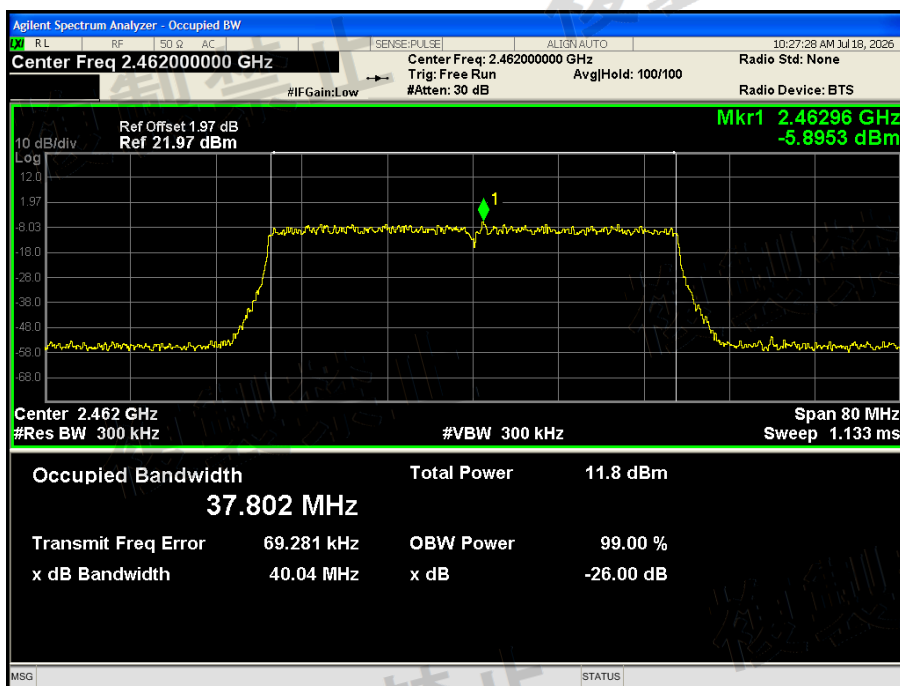
Channel 3: 2.422 GHz:



Channel 7: 2.442 GHz:



Channel 11: 2.462GHz:



Test result: The unit does meet the requirements.



6.7 Spread Spectrum Bandwidth (90%)

Test Requirement:	Item 19 of Article 2-1
Temperature:	25.0 °C
Humidity:	75 % RH
Atmospheric Pressure:	1013 mbar
Test Status:	Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.
Test Configuration:	
PC EUT Spectrum Analyzer	
Test Procedure:	
1. Test Conditions:	
	Spectrum Analyzer is used for measurement.
2. EUT conditions:	
	Modulation/Spread/Hopping ON For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.
3. Spectrum Analyzer conditions:	
	Frequency: Test Frequency Span 40/80MHz (DSSS,OFDM) RBW 300kHz VBW 300kHz Sweep Time Auto detector mode Positive peak Indication mode Max hold OBW 90%
4. Spread Factor=Spread Bandwidth/modulation rate.	
	The modulation rate: MR=1.375 for 802.11b, MR=1.5 for 802.11g/n/ax20, MR=3 for 802.11n/ax 40.

**Test result:****802.11b:**

Test channel	Test Frequency (MHz)	Test Result	Unit
		Normal Voltage DC12V	
Lowest	2412.0	7.4296	MHz
Middle	2442.0	7.4439	MHz
Highest	2472.0	7.4661	MHz

802.11g:

Test channel	Test Frequency (MHz)	Test Result	Unit
		Normal Voltage DC12V	
Lowest	2412.0	14.993	MHz
Middle	2442.0	14.993	MHz
Highest	2472.0	15.041	MHz

802.11n(HT20):

Test channel	Test Frequency (MHz)	Test Result	Unit
		Normal Voltage DC12V	
Lowest	2412.0	15.813	MHz
Middle	2442.0	15.825	MHz
Highest	2472.0	15.966	MHz

802.11n(HT40):

Test channel	Test Frequency (MHz)	Test Result	Unit
		Normal Voltage DC12V	
Lowest	2422.0	32.802	MHz
Middle	2442.0	32.803	MHz
Highest	2462.0	32.908	MHz

**802.11ax(HT20):**

Test channel	Test Frequency (MHz)	Test Result	Unit
		Normal Voltage DC 12V	
Lowest	2412.0	17.127	MHz
Middle	2442.0	17.213	MHz
Highest	2472.0	17.295	MHz

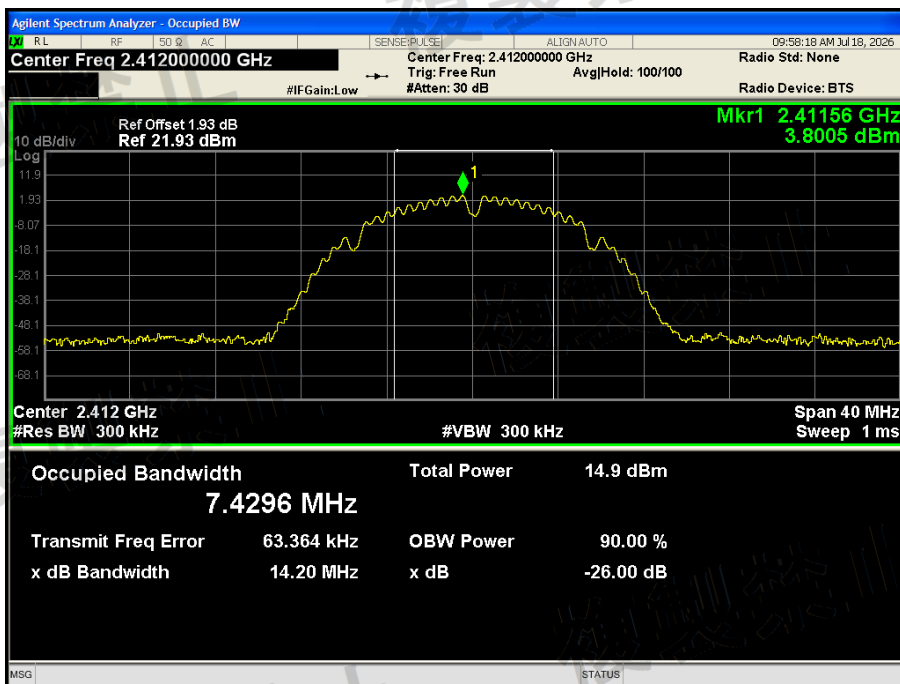
802.11ax(HT40):

Test channel	Test Frequency (MHz)	Test Result	Unit
		Normal Voltage DC 12V	
Lowest	2422.0	34.295	MHz
Middle	2442.0	34.151	MHz
Highest	2462.0	34.039	MHz

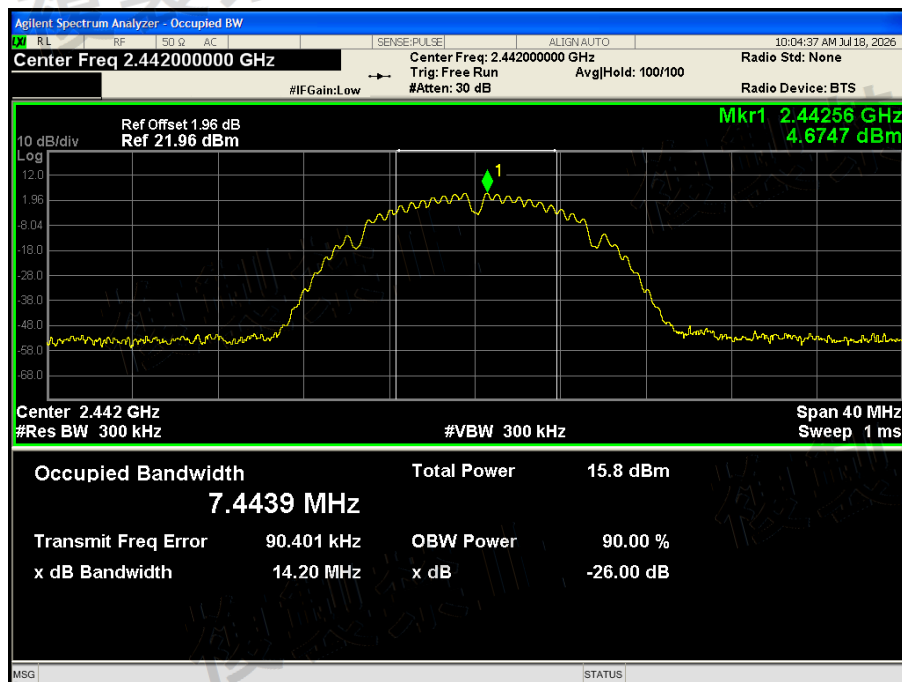
Result plot as follows:

802.11b 1Mbps data rate:

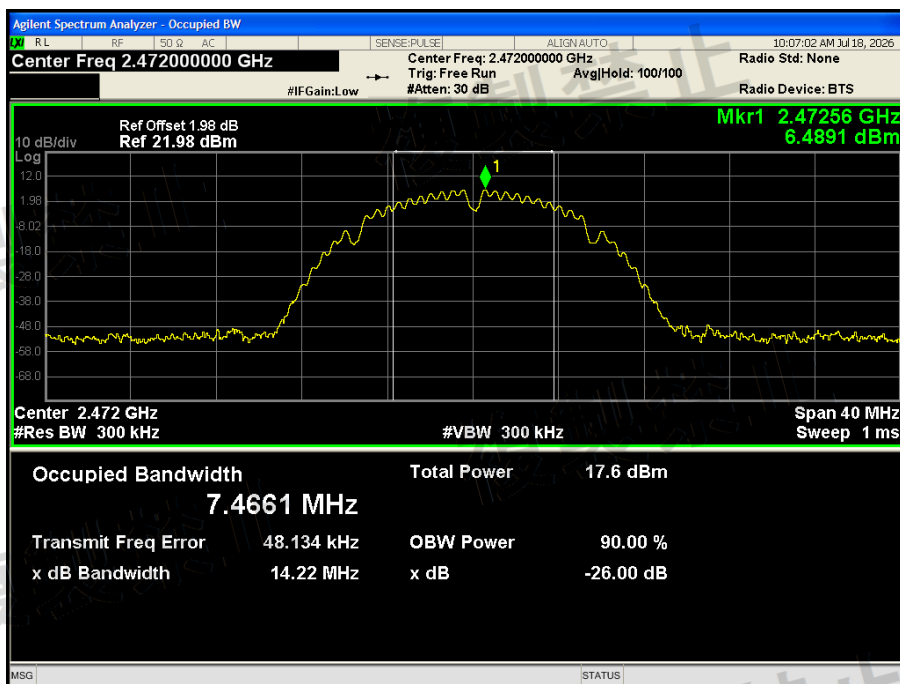
Channel 1: 2.412 GHz:



Channel 7: 2.442 GHz:

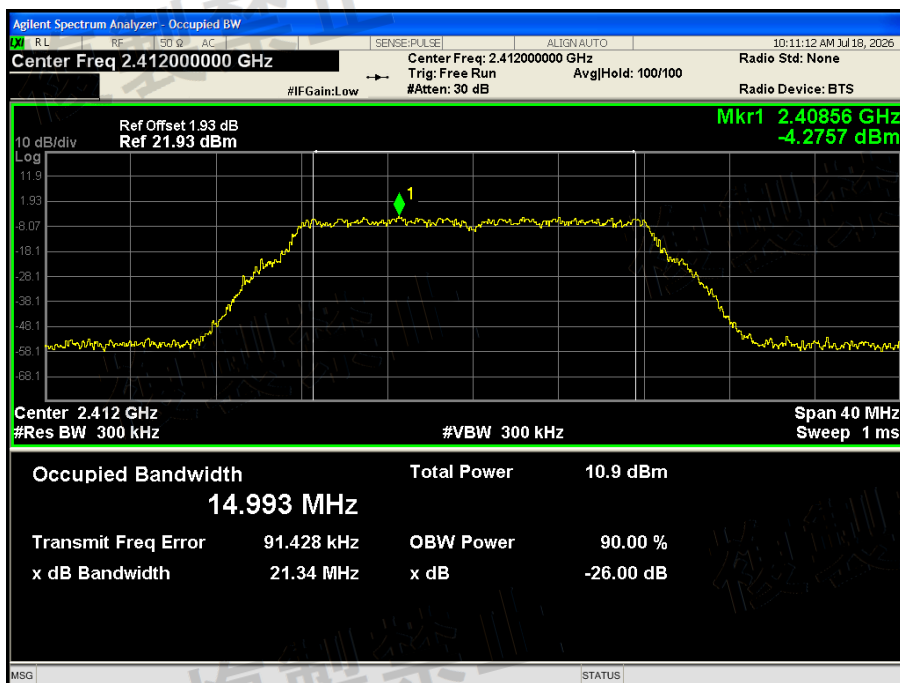


Channel 13: 2.472GHz:

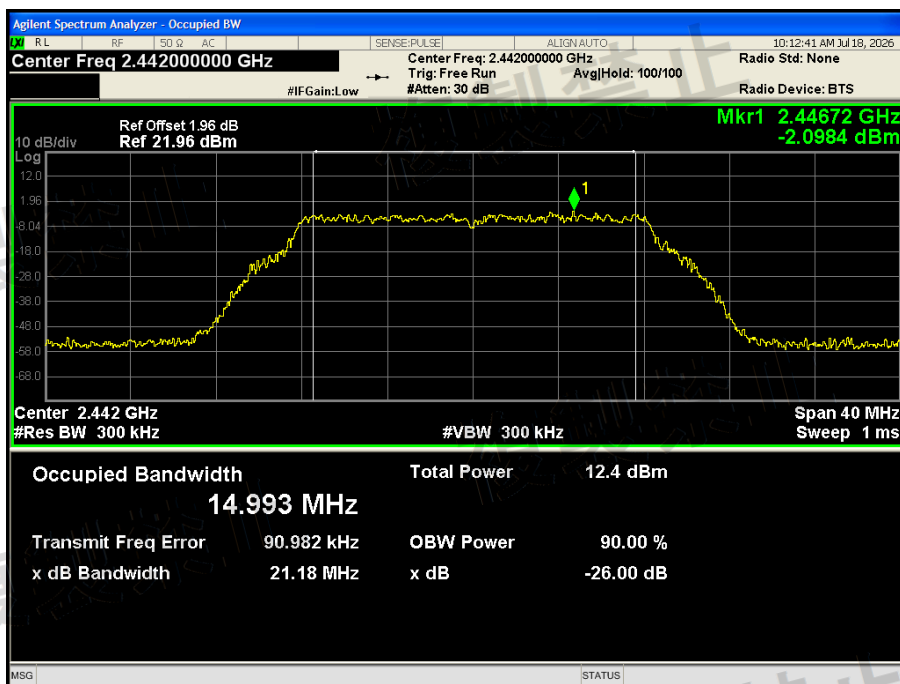


802.11g:

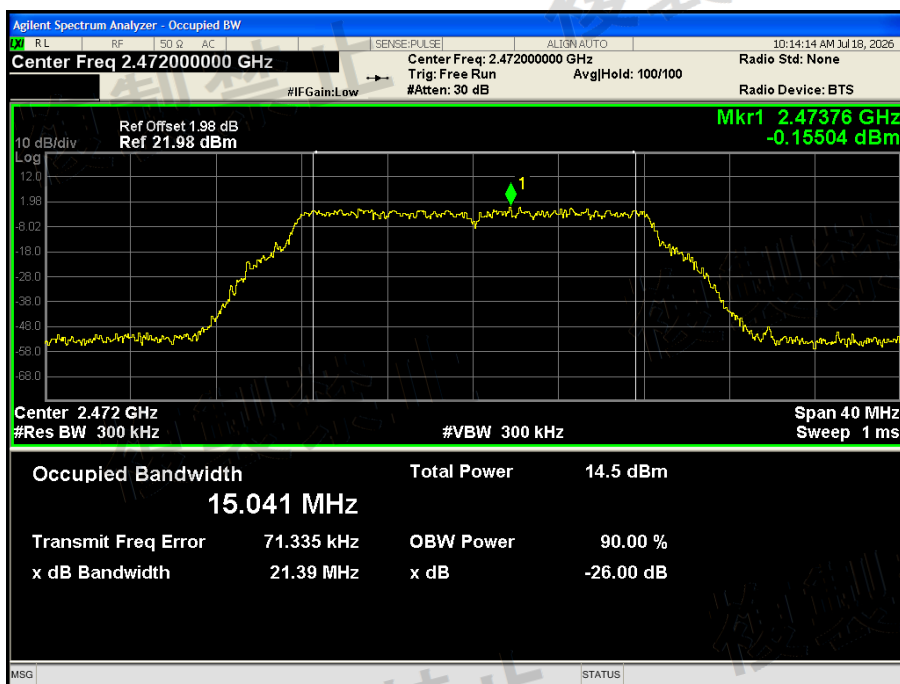
Channel 1: 2.412 GHz:



Channel 7: 2.442 GHz:

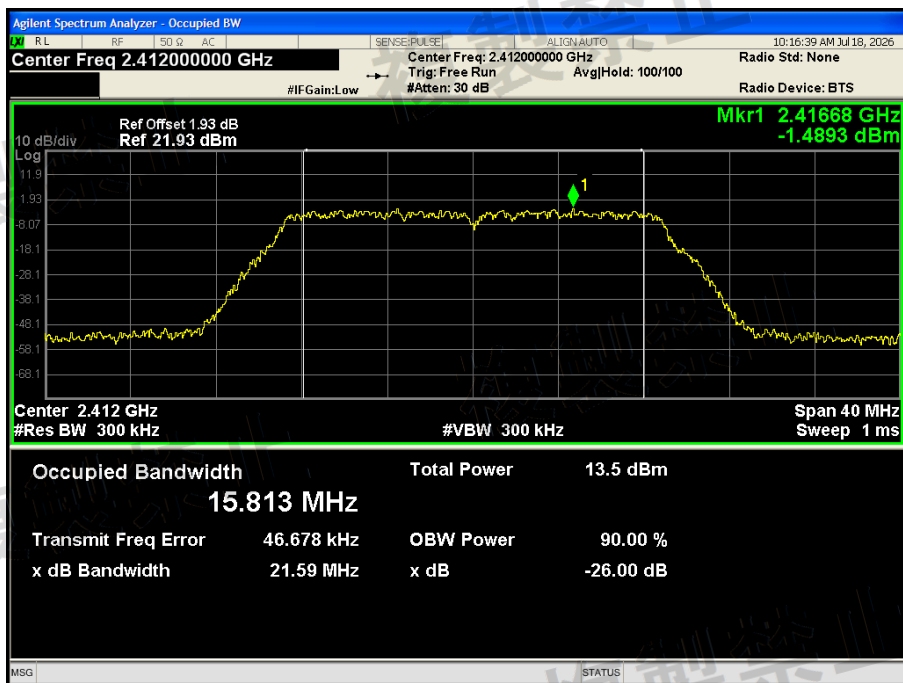


Channel 13: 2.472GHz:

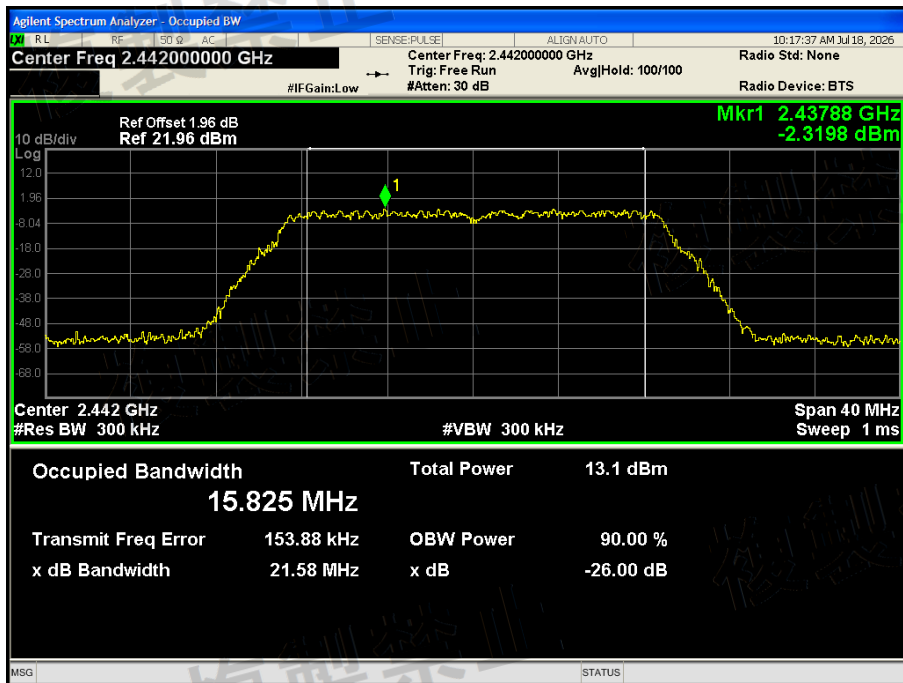


**802.11n(HT20):**

Channel 1: 2.412 GHz:

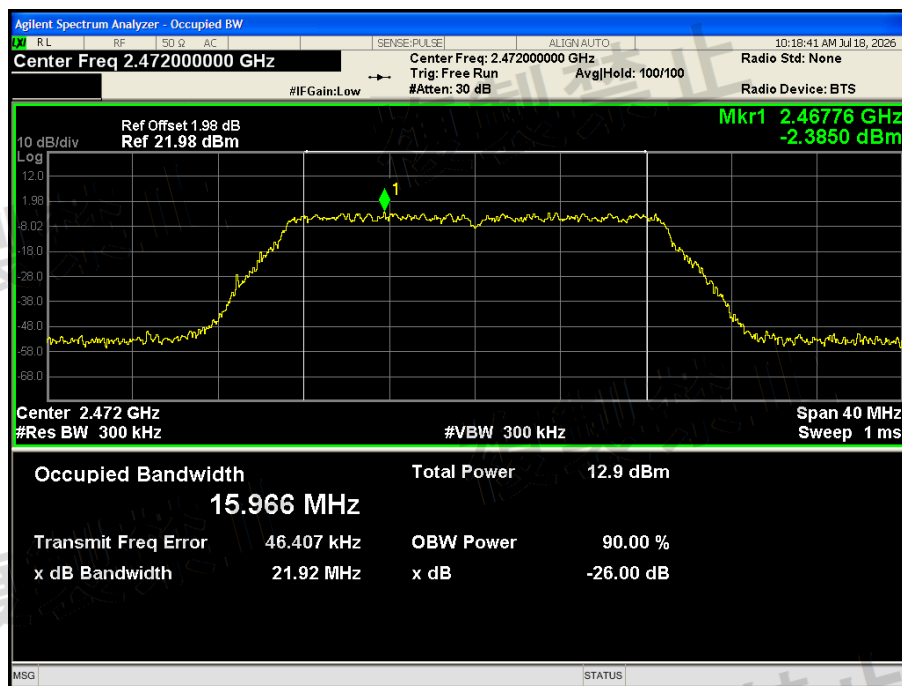


Channel 7: 2.442 GHz:



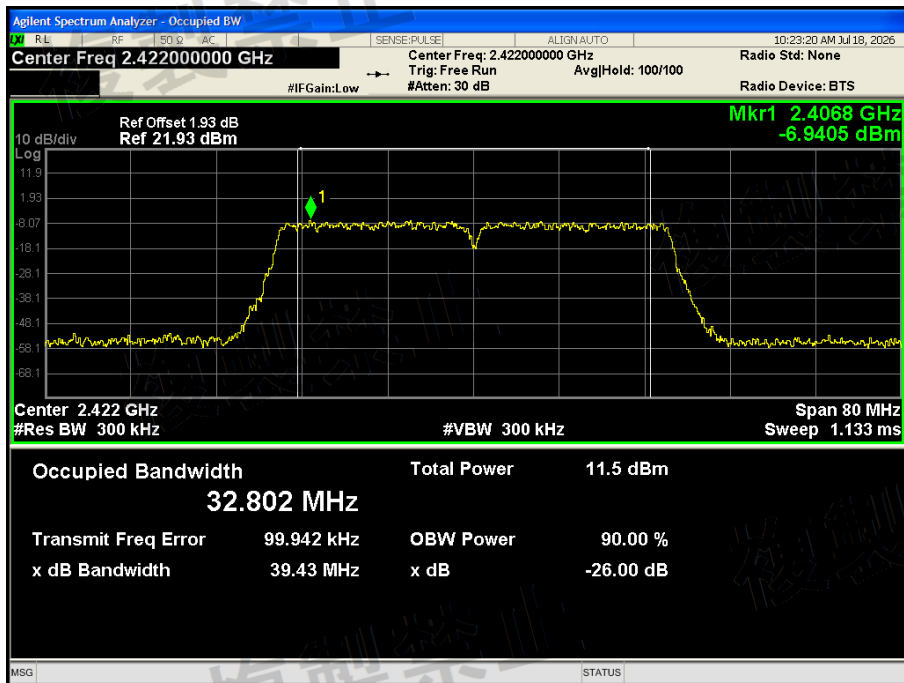


Channel 13: 2.472GHz:

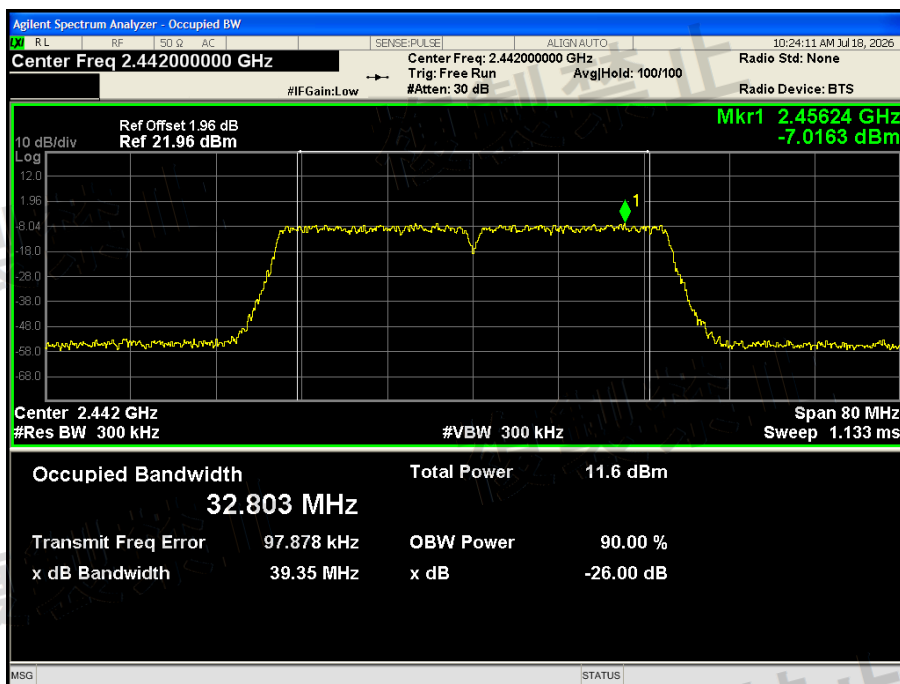


802.11n(HT40):

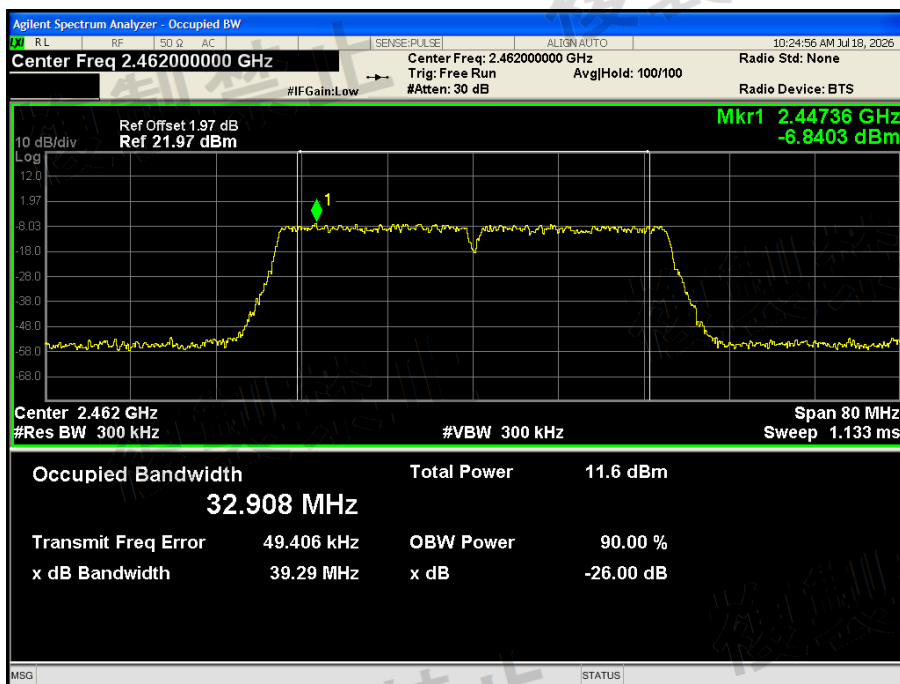
Channel 3: 2.422 GHz:



Channel 7: 2.442 GHz:



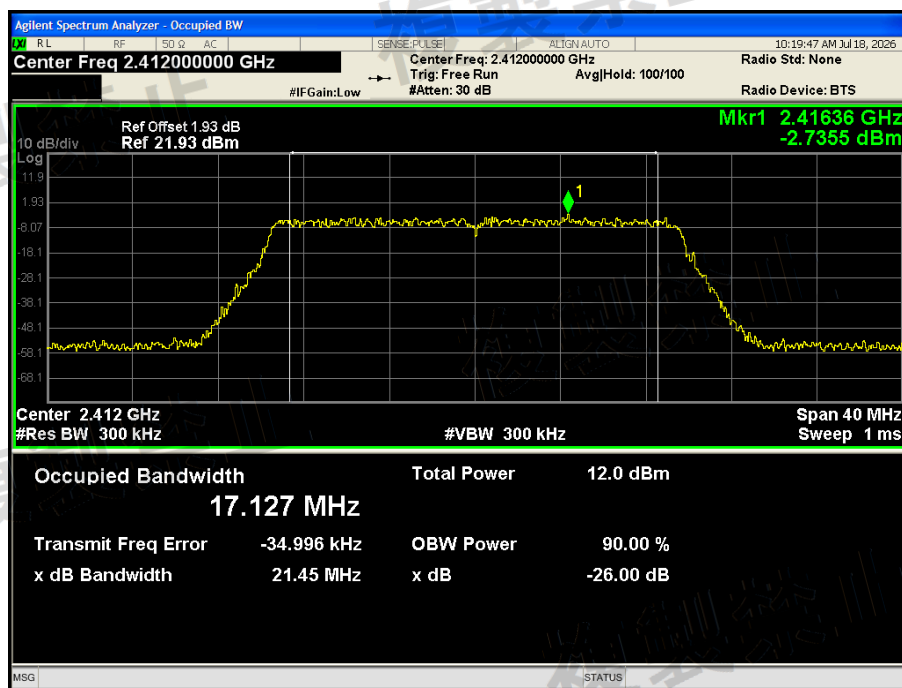
Channel 11: 2.462GHz:



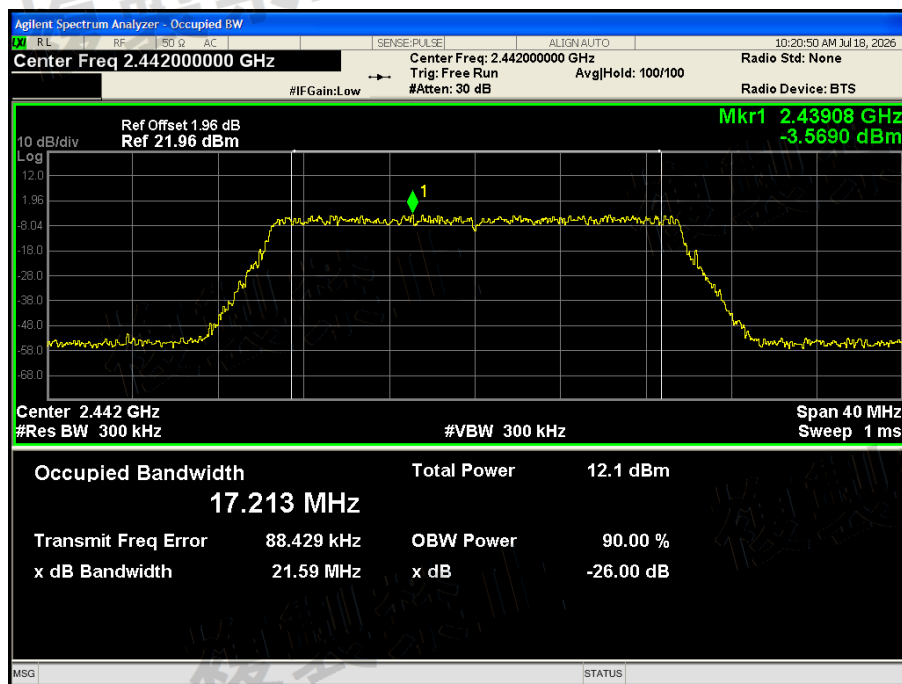


802.11ax(HT20):

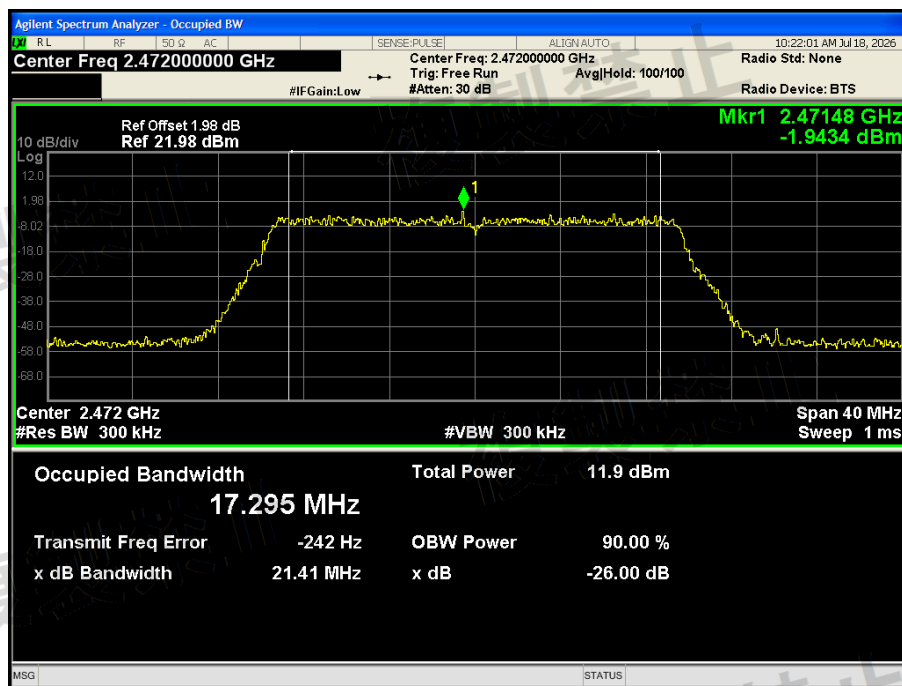
Channel 1: 2.412 GHz:



Channel 7: 2.442 GHz:

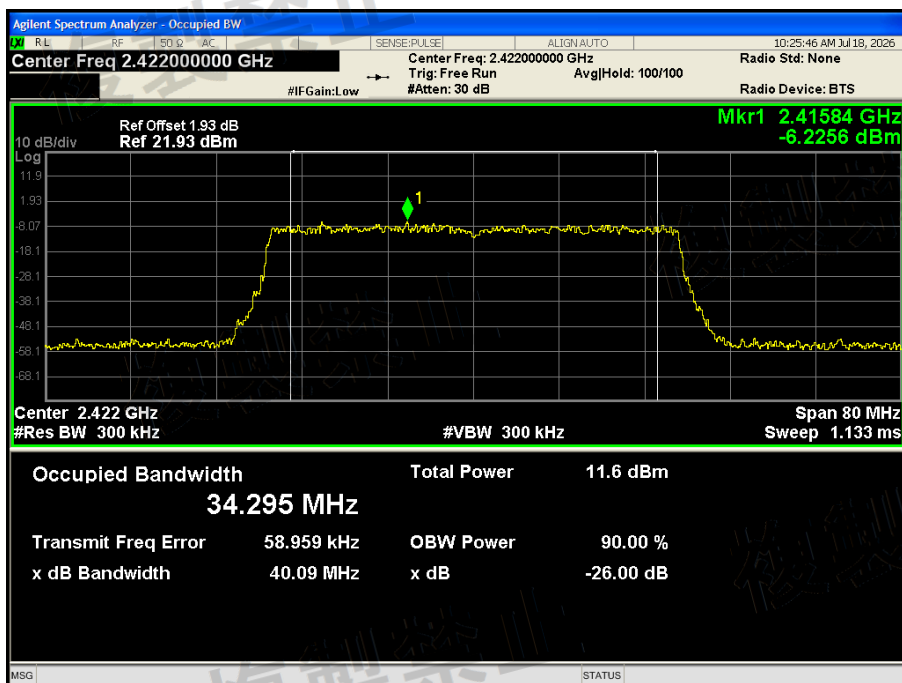


Channel 13: 2.472GHz:

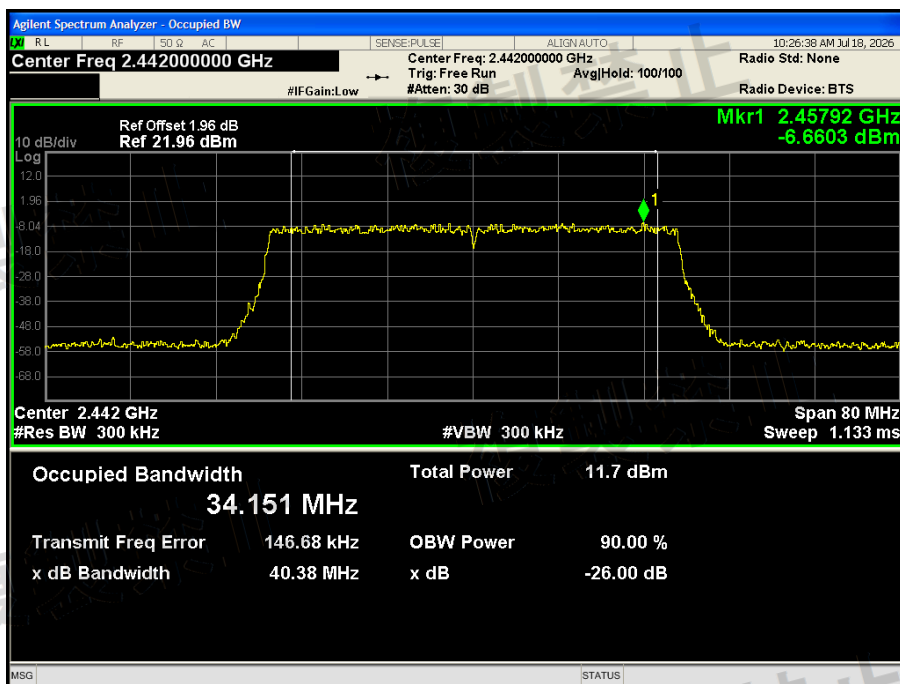


802.11ax(HT40):

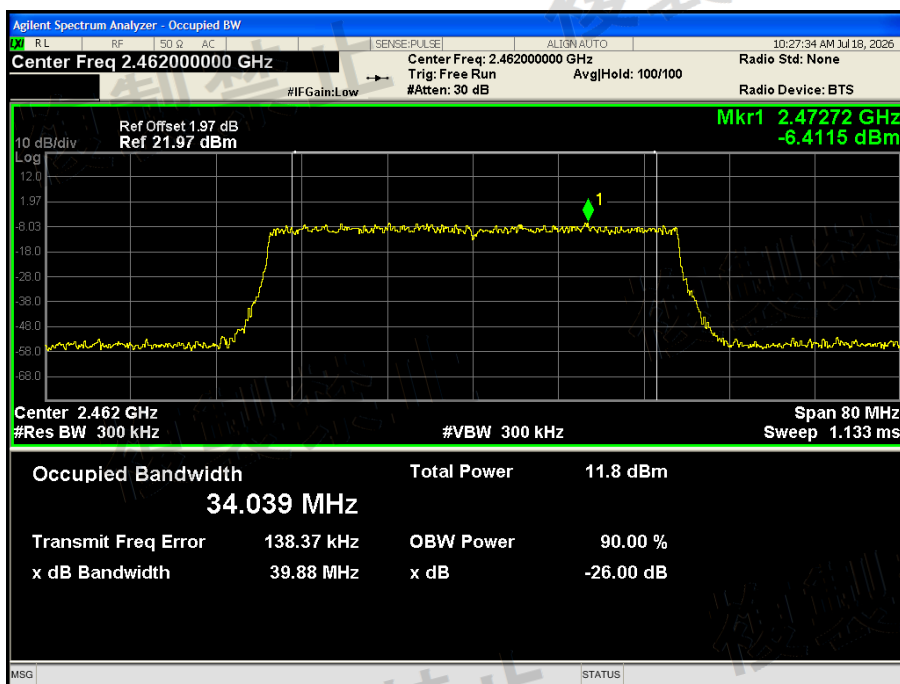
Channel 3: 2.422 GHz:



Channel 7: 2.442 GHz:



Channel 11: 2.462GHz:



Test result: The unit does meet the requirements.



6.8 Antenna Power

Test Requirement:	Item 19 of Article 2-1
Antenna Power:	0.01W /MHz or less Error+20% (IEEE 802.11b/g/n/ax20) 5mW/MHz or less Error+20% (IEEE 802.11n/ax 40)
EIRP:	12.14dBm/MHz or less (IEEE 802.11b/g/n/ax 20) 9.13dBm/MHz or less (IEEE 802.11n/ax 40)
Temperature:	25.0 °C
Humidity:	75 % RH
Atmospheric Pressure:	1013 mbar
Test Configuration:	PC EUT Spectrum Analyzer
Test Procedure:	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.



Test result:

Mode	Freq (MHz)	Antenna Power (dBm/MHz)	Antenna Power (mW/MHz)	Declared Power (mW/MHz)	Tolerance (%)	Upper Limit (%)	Verdict
b	2412	2.438	1.753	4	-56.18	+20	Pass
b	2442	3.085	2.035	4	-49.13	+20	Pass
b	2472	3.608	2.295	4	-42.63	+20	Pass
g	2412	-1.267	0.747	2	-62.65	+20	Pass
g	2442	-0.481	0.895	2	-55.25	+20	Pass
g	2472	-0.590	0.873	2	-56.35	+20	Pass
n20	2412	-0.346	0.923	2	-53.58	+20	Pass
n20	2442	-0.148	0.966	2	-51.70	+20	Pass
n20	2472	-0.417	0.908	2	-54.60	+20	Pass
n40	2422	-0.227	0.949	2	-52.55	+20	Pass
n40	2442	-0.205	0.954	2	-52.30	+20	Pass
n40	2462	-0.547	0.882	2	-55.90	+20	Pass
ax20	2412	-4.251	0.376	1	-62.40	+20	Pass
ax20	2442	-3.964	0.401	1	-59.90	+20	Pass
ax20	2472	-3.960	0.402	1	-58.80	+20	Pass
ax40	2422	-2.768	0.529	1	-47.70	+20	Pass
ax40	2442	-3.287	0.469	1	-53.10	+20	Pass
ax40	2462	-3.486	0.448	1	-55.20	+20	Pass



EIRP

Mode	Freq (MHz)	Antenna Power (dBm/MHz)	EIRP (dBm/MHz)	Limit (dBm/MHz)
b	2412	2.438	3.928	12.14
b	2442	3.085	4.575	
b	2472	3.608	5.098	
g	2412	-1.267	0.223	
g	2442	-0.481	1.009	
g	2472	-0.590	0.900	
n20	2412	-0.346	1.144	
n20	2442	-0.148	1.342	
n20	2472	-0.417	1.073	
n40	2422	-0.227	1.263	9.13
n40	2442	-0.205	1.285	
n40	2462	-0.547	0.943	
ax20	2412	-4.251	-2.761	12.14
ax20	2442	-3.964	-2.474	
ax20	2472	-3.960	-2.470	
ax40	2422	-2.768	-1.278	9.13
ax40	2442	-3.287	-1.797	
ax40	2462	-3.486	-1.996	

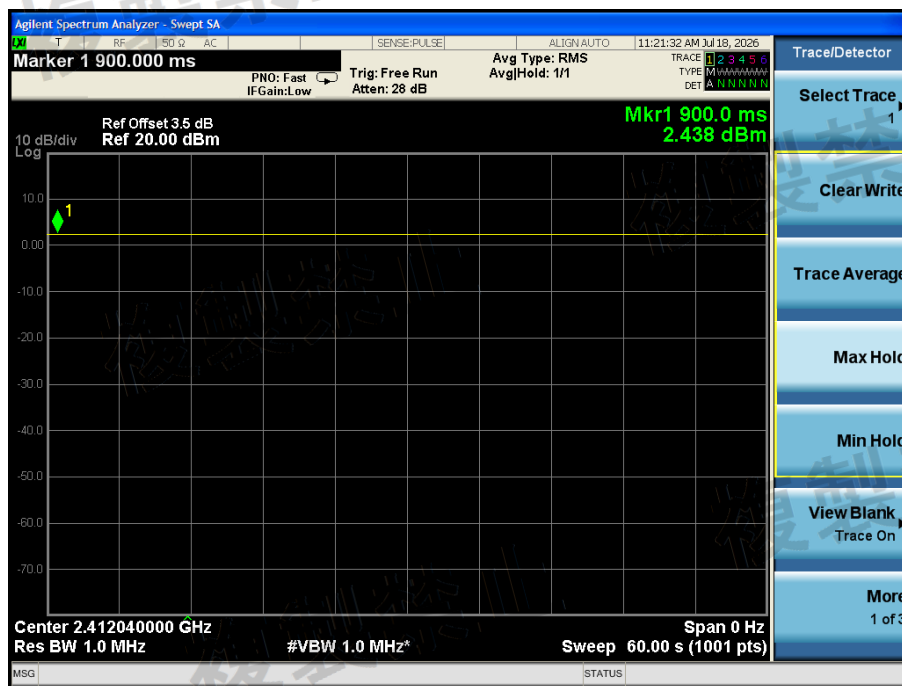
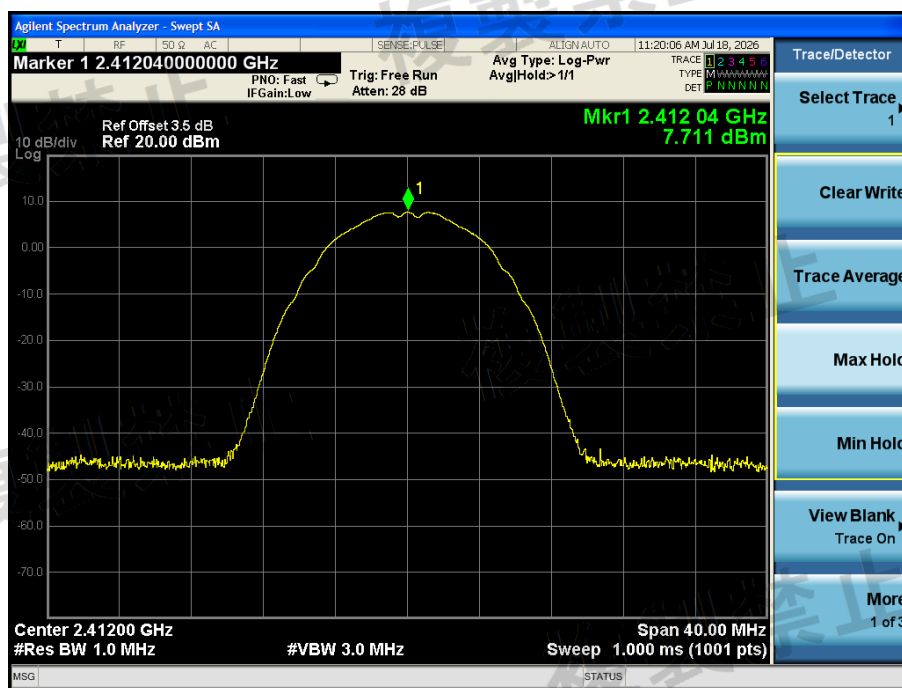
Remark:

EIRP= Antenna Power+ Antenna Gain

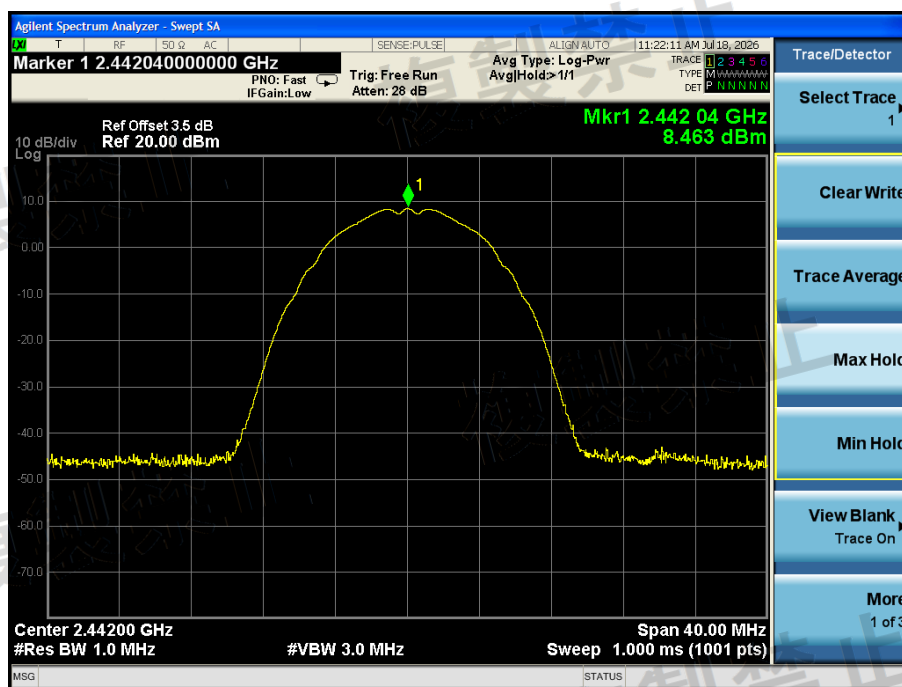
Antenna Gain=1.49dBi

802.11b:

Channel 1: 2.412 GHz:

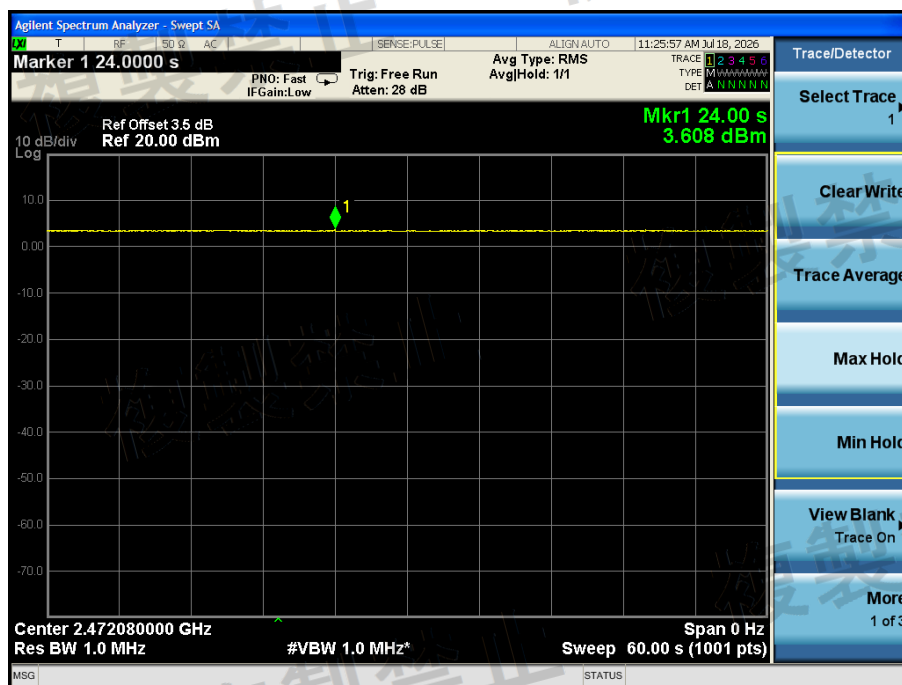
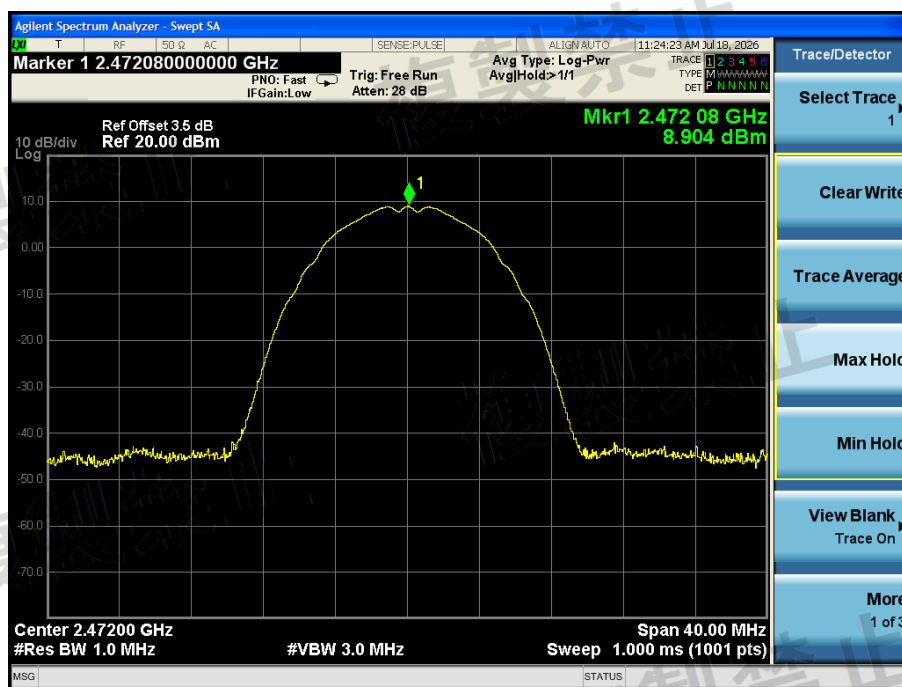


Channel 7: 2.442 GHz:



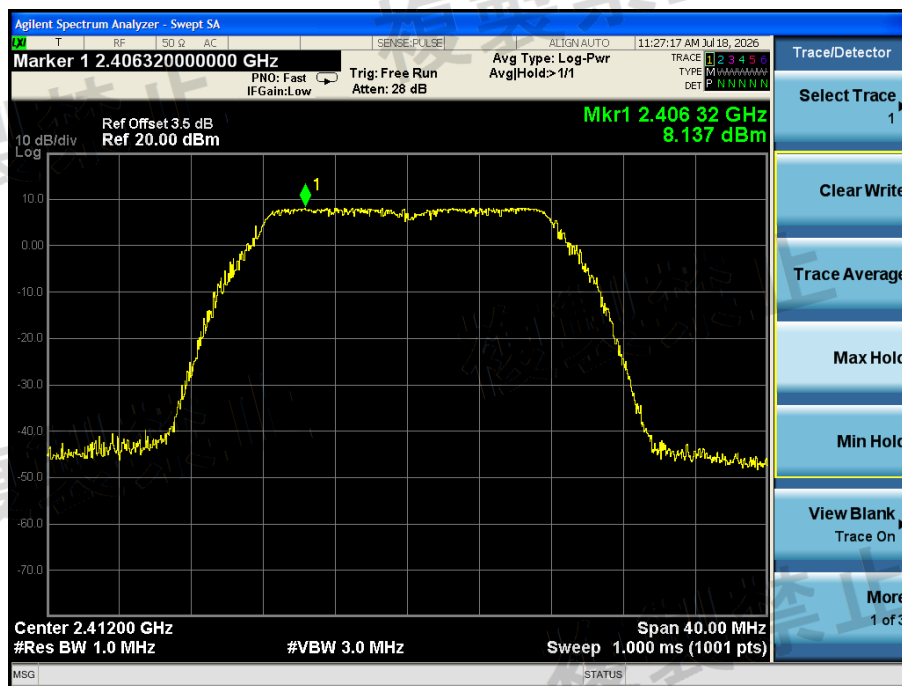


Channel 13: 2.472 GHz:



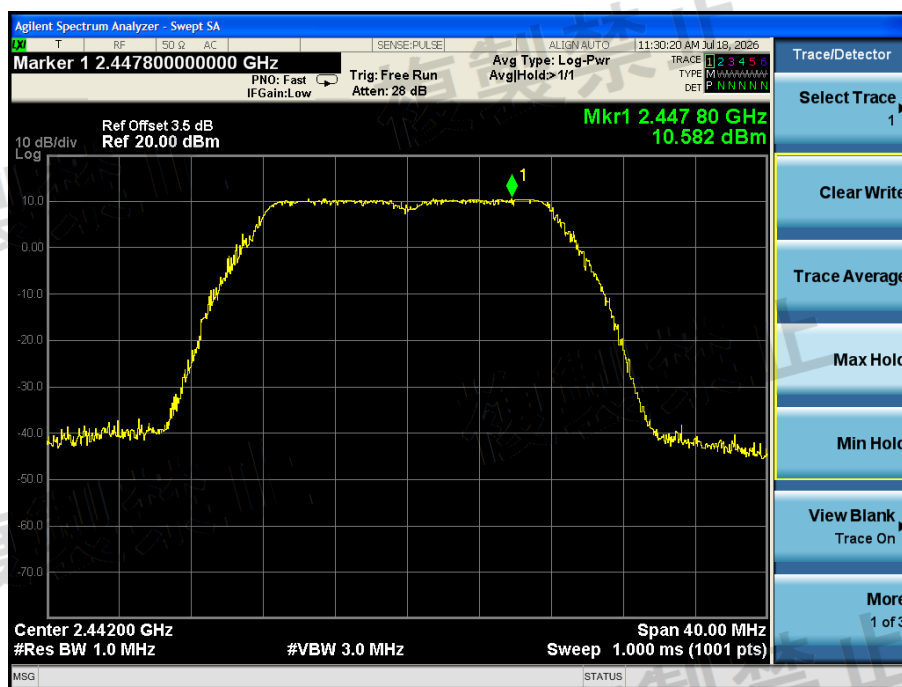
802.11g:

Channel 1: 2.412 GHz:



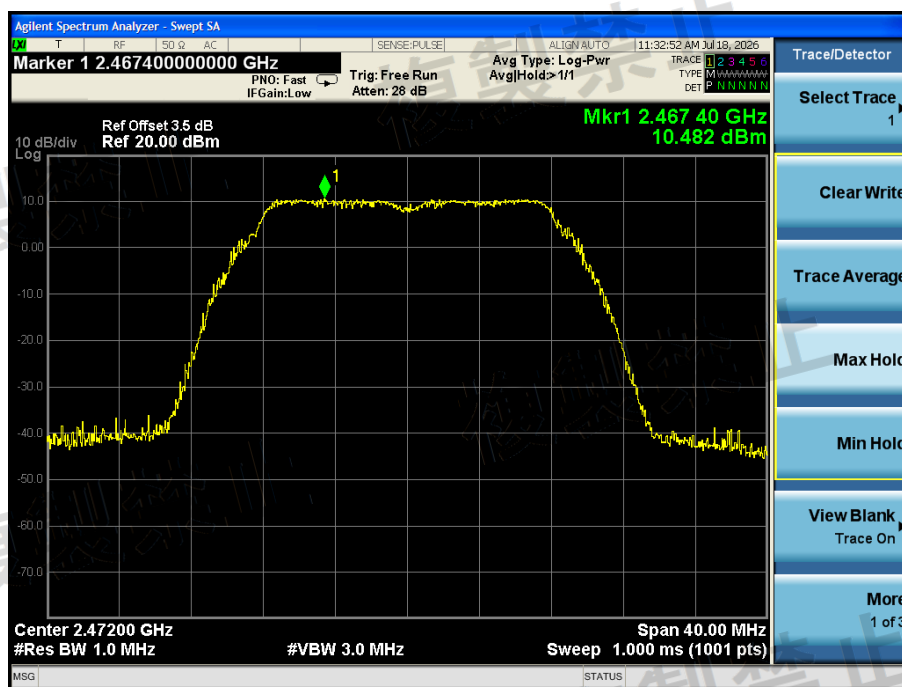


Channel 7: 2.442 GHz:



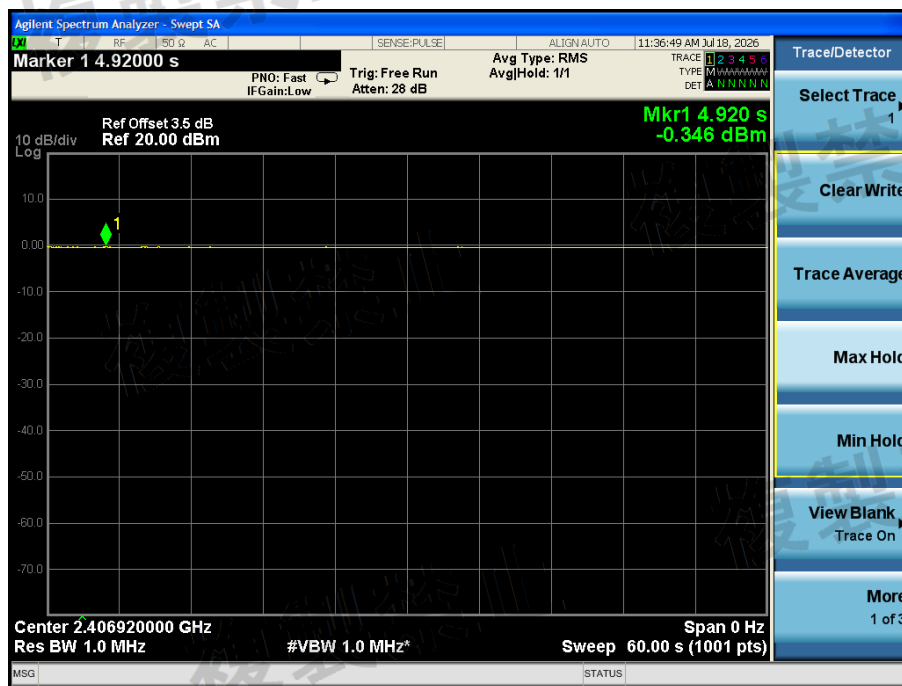
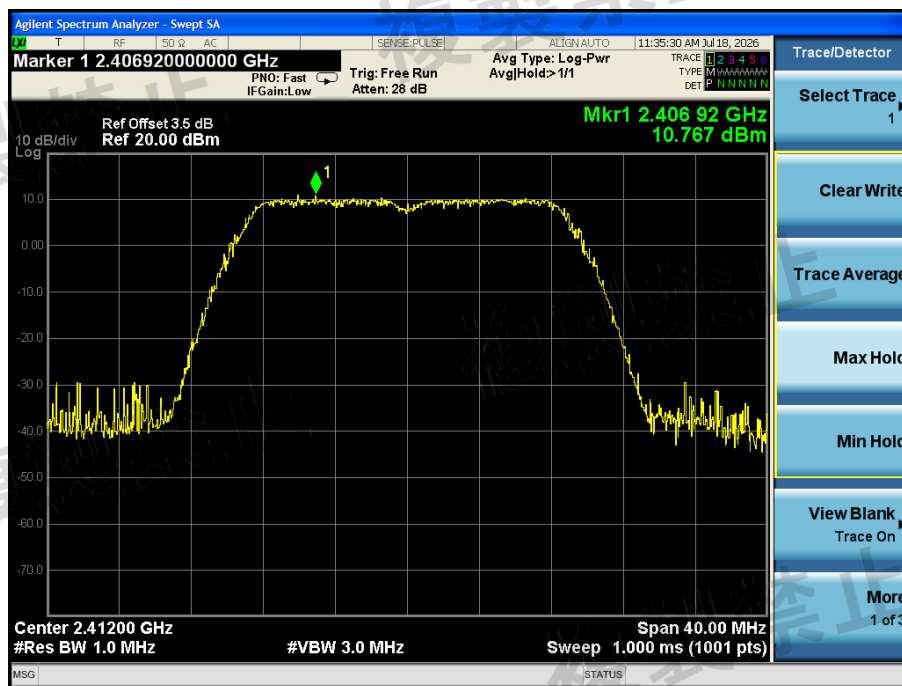


Channel 13: 2.472 GHz:



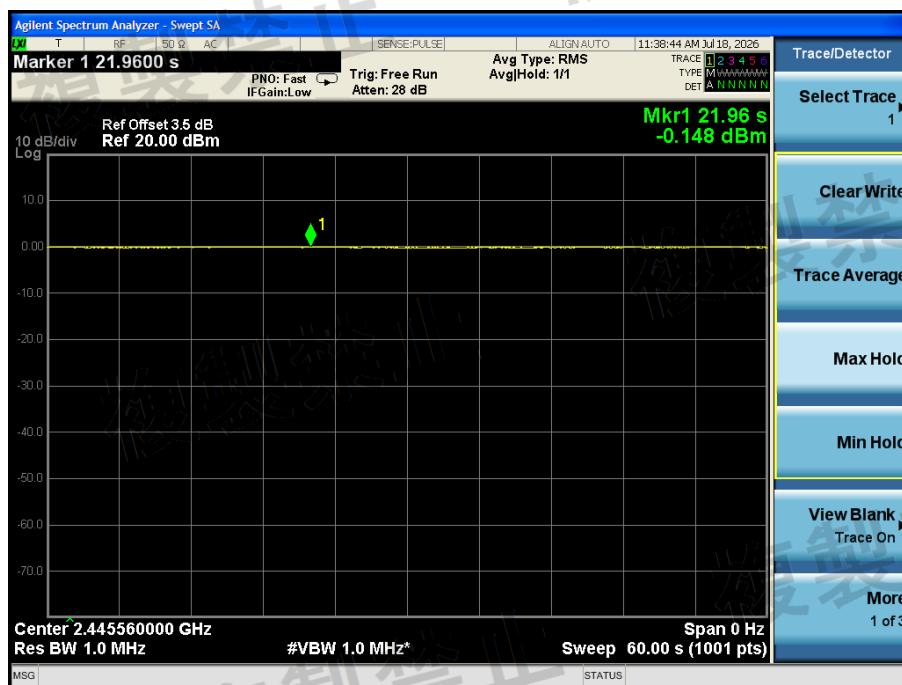
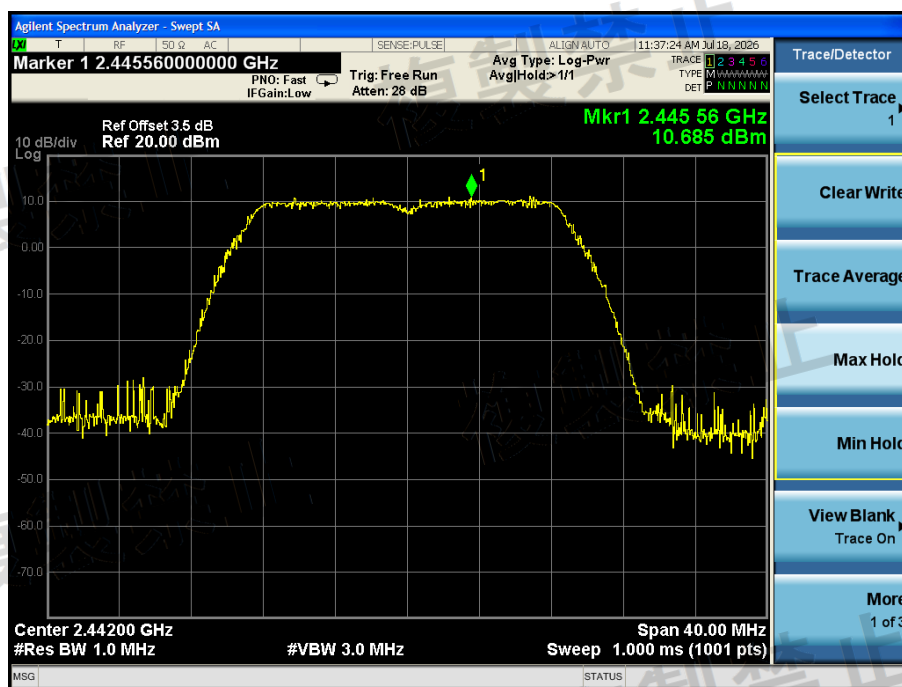
802.11n20:

Channel 1: 2.412 GHz:



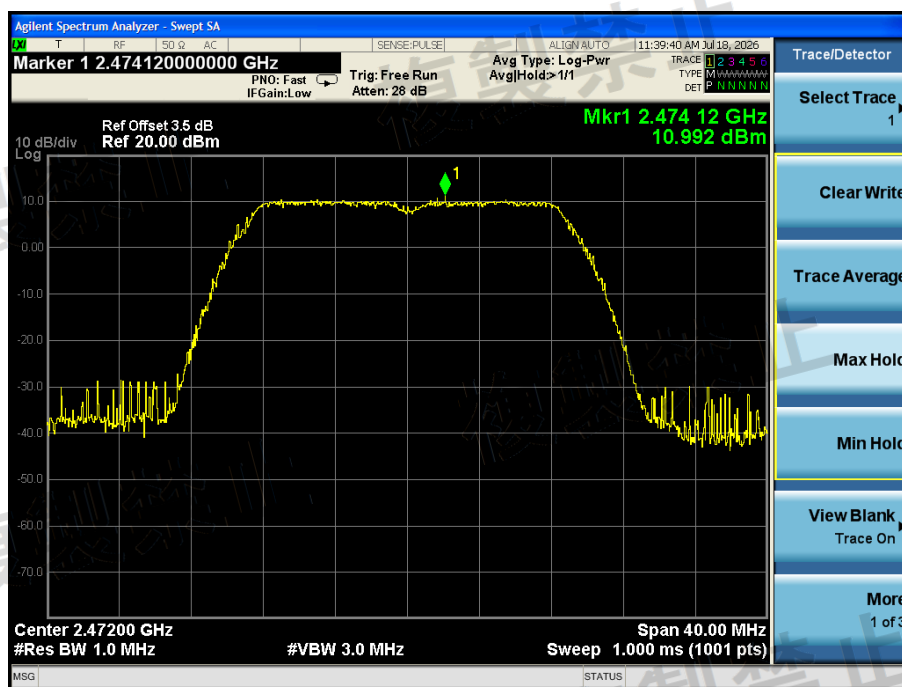


Channel 7: 2.442 GHz:



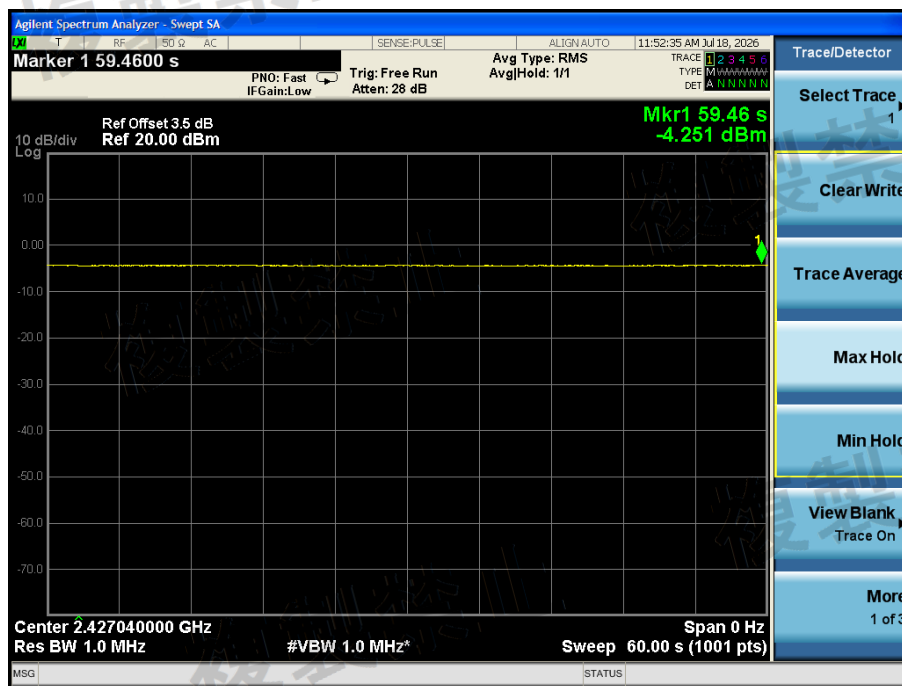
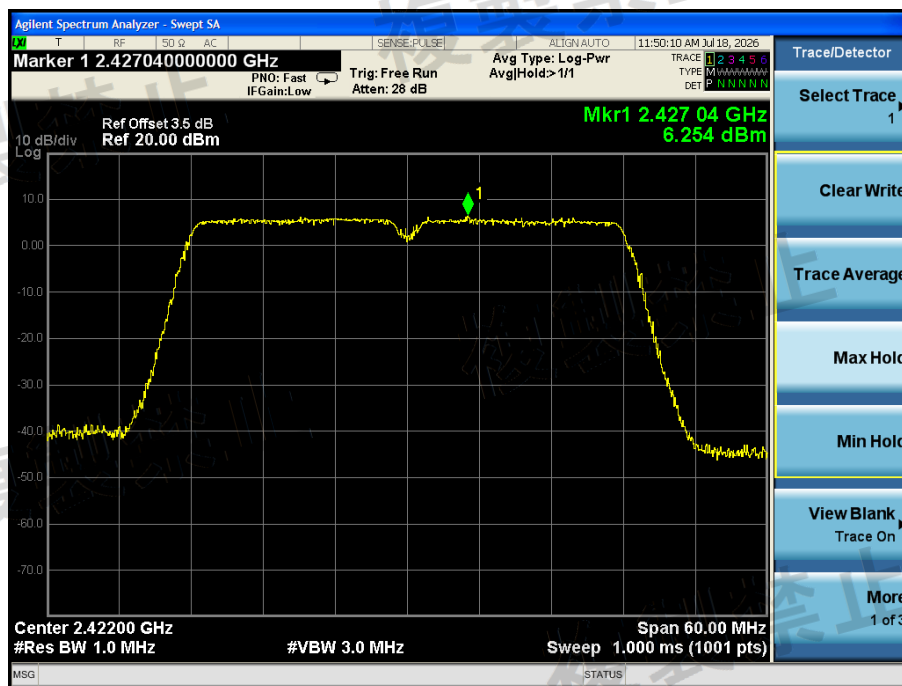


Channel 13: 2.472 GHz:



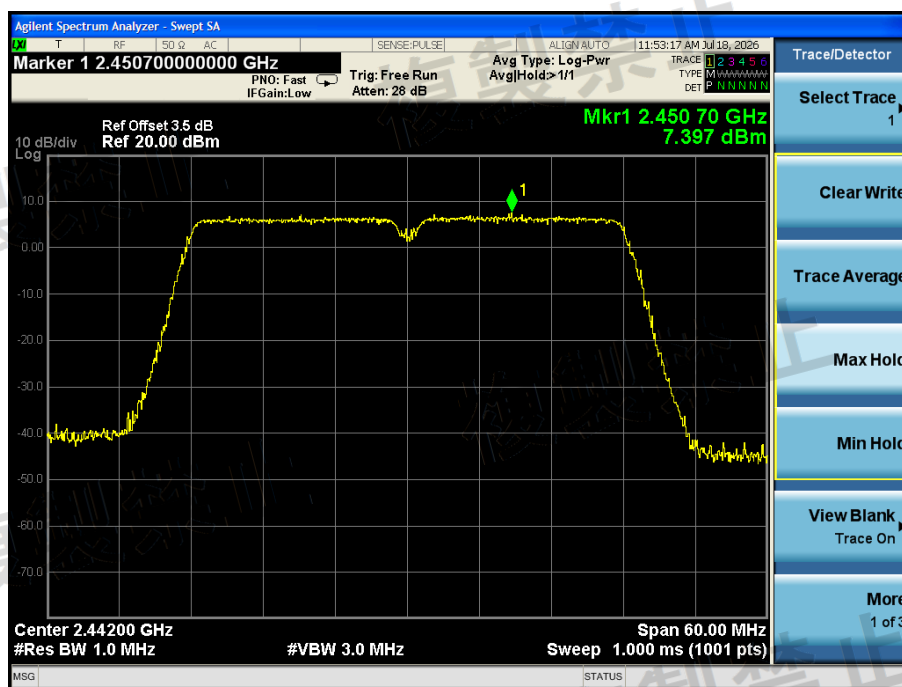
802.11n40:

Channel 3: 2.422 GHz:

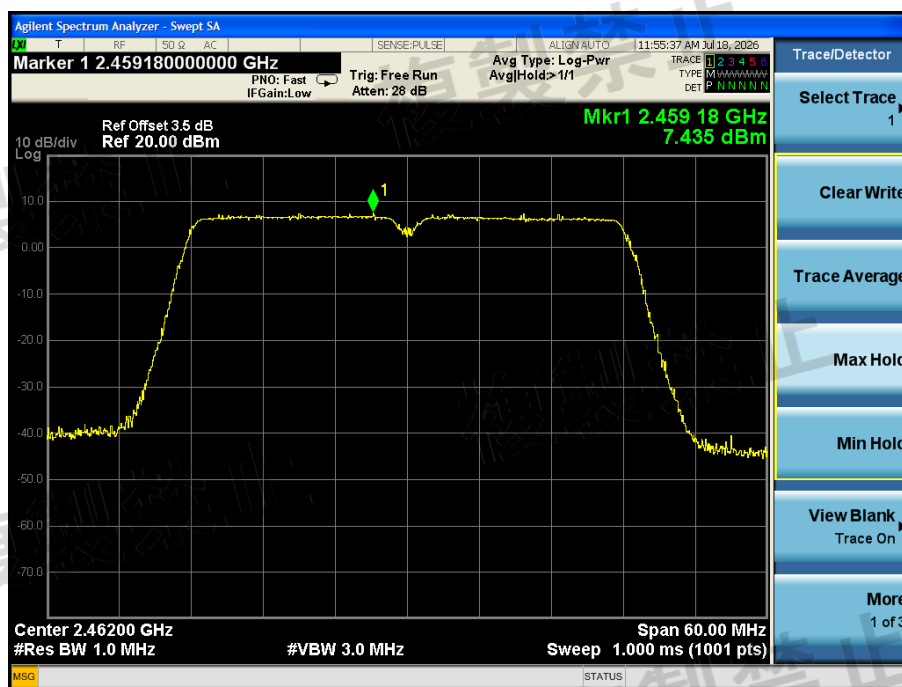




Channel 7: 2.442 GHz:



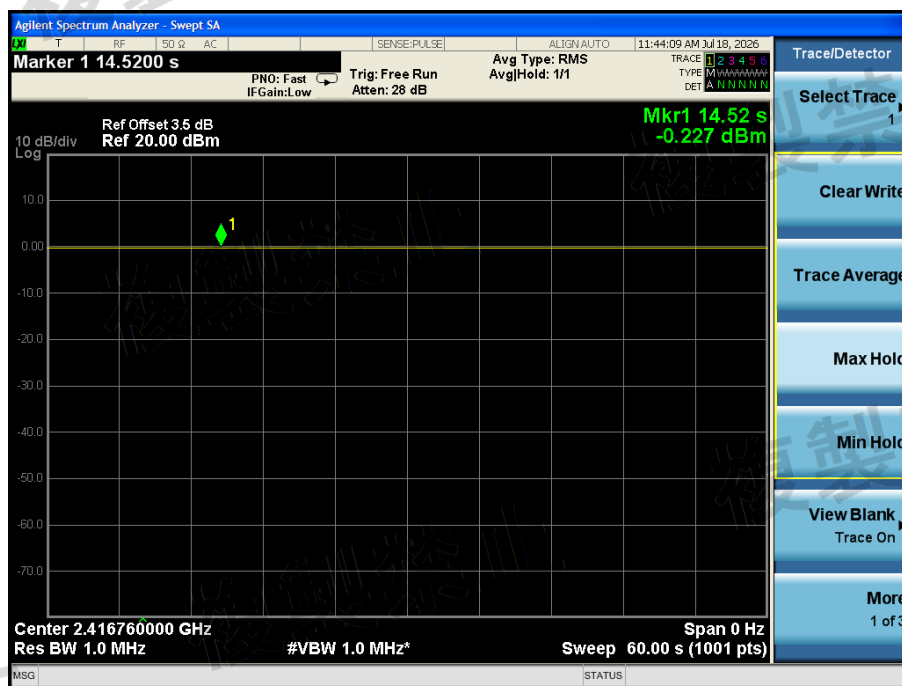
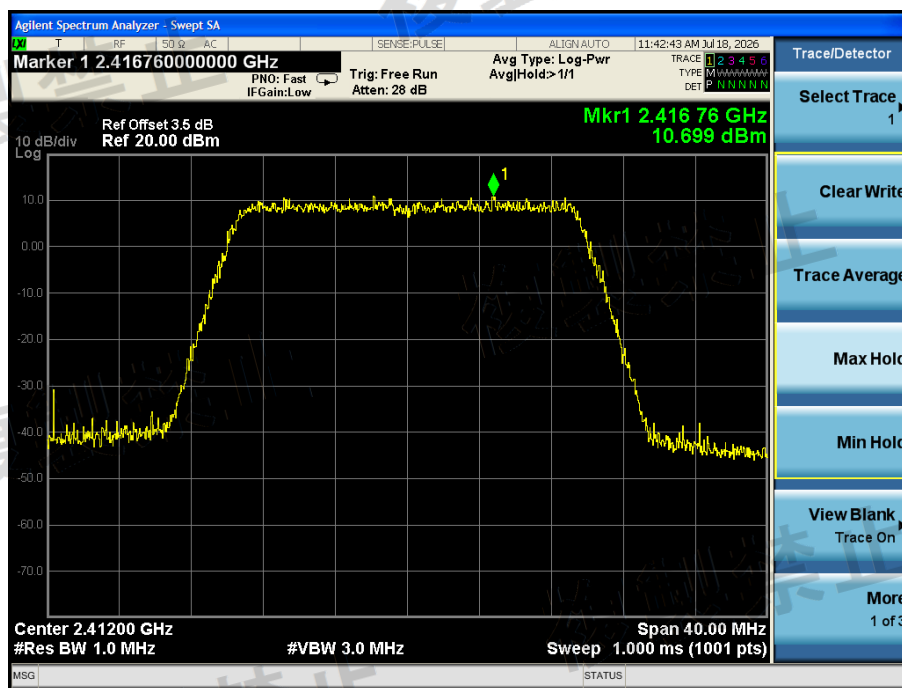
Channel 11: 2.462 GHz:





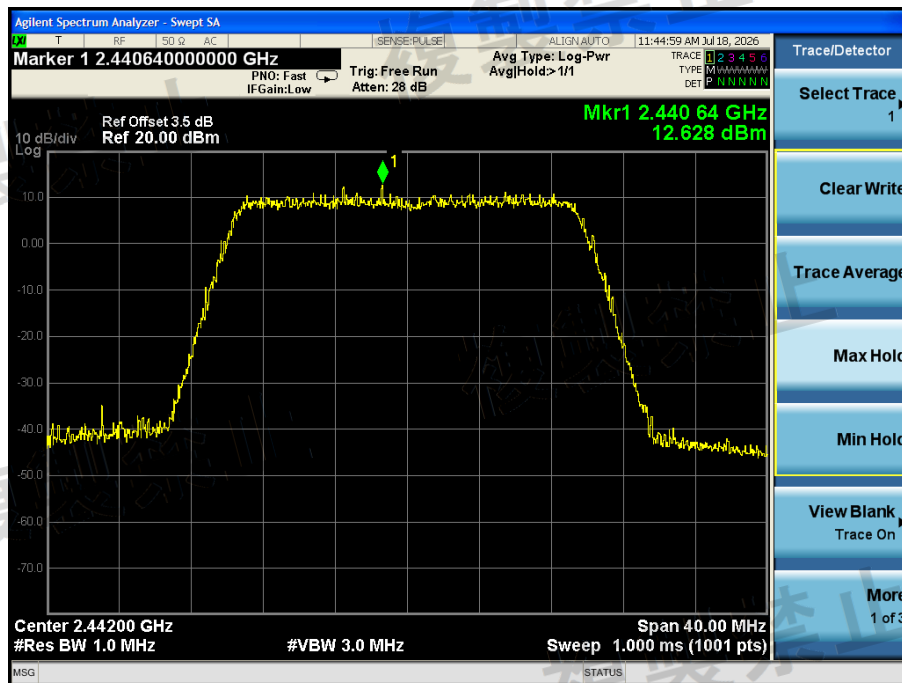
802.11ax20:

Channel 1: 2.412 GHz:

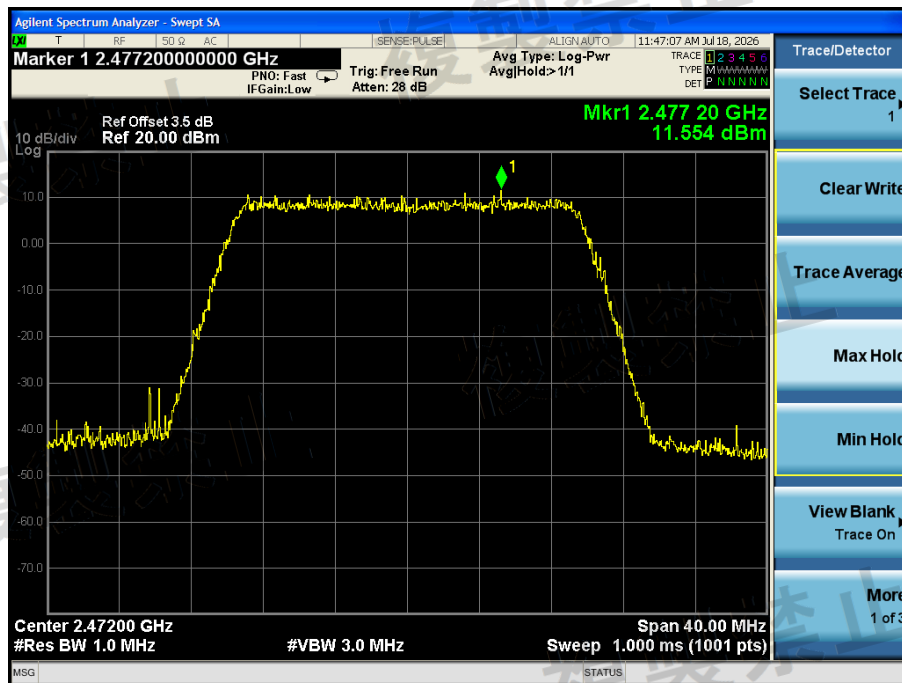




Channel 7: 2.442 GHz:



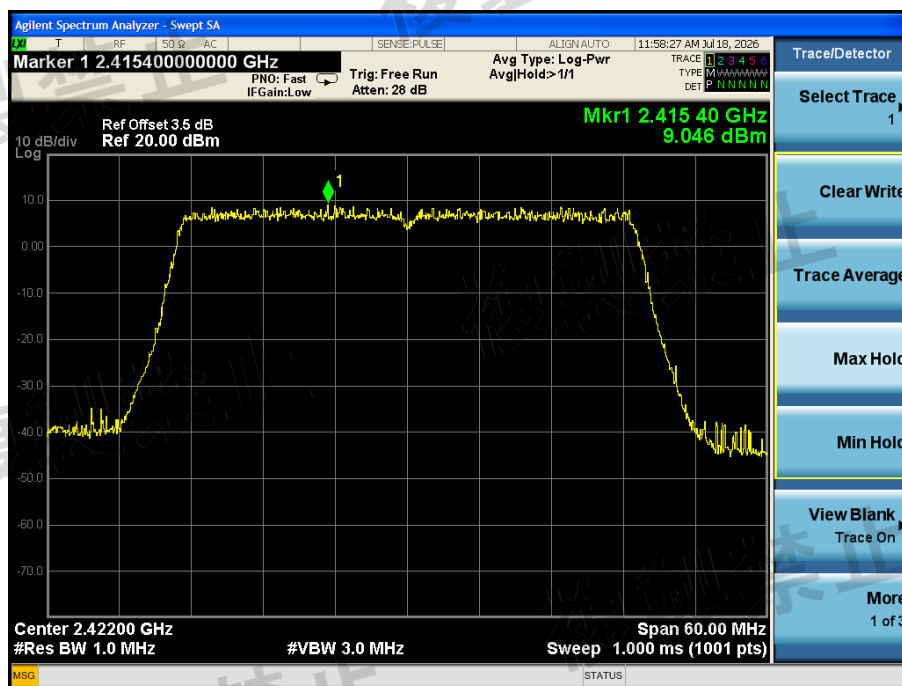
Channel 13: 2.472 GHz:





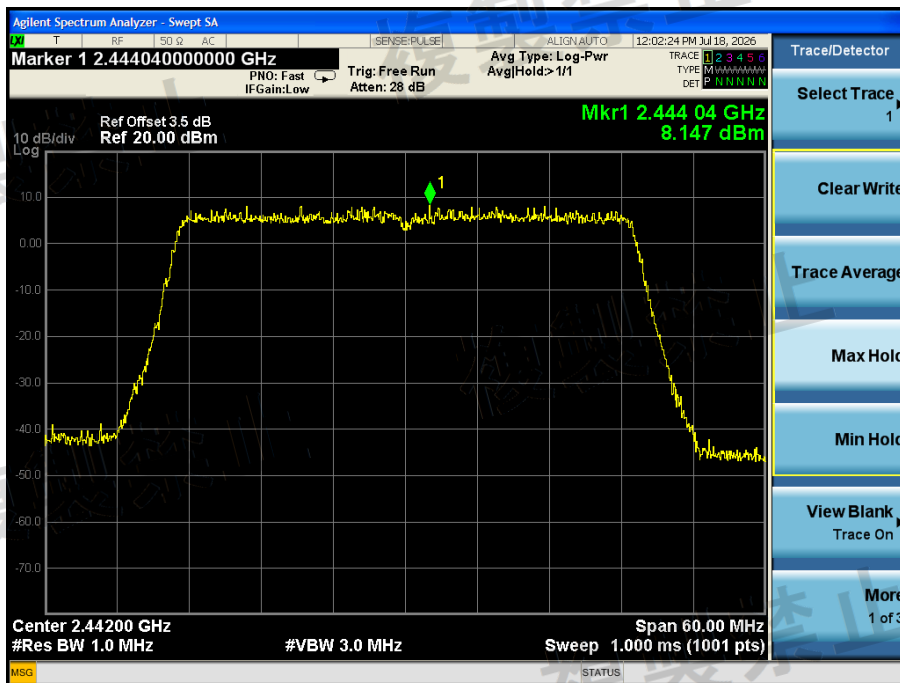
802.11ax40:

Channel 3: 2.422 GHz:



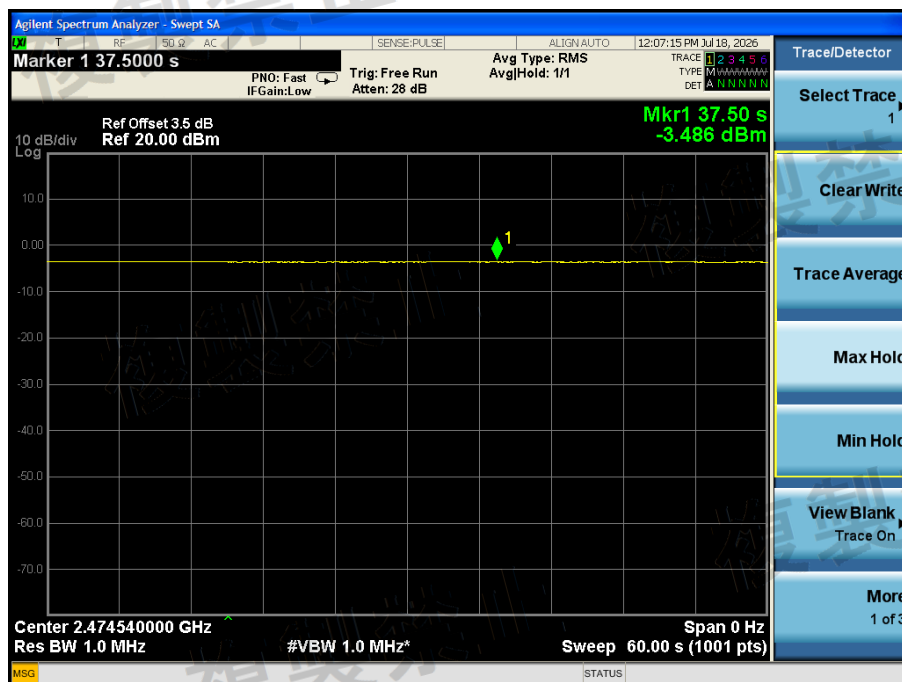
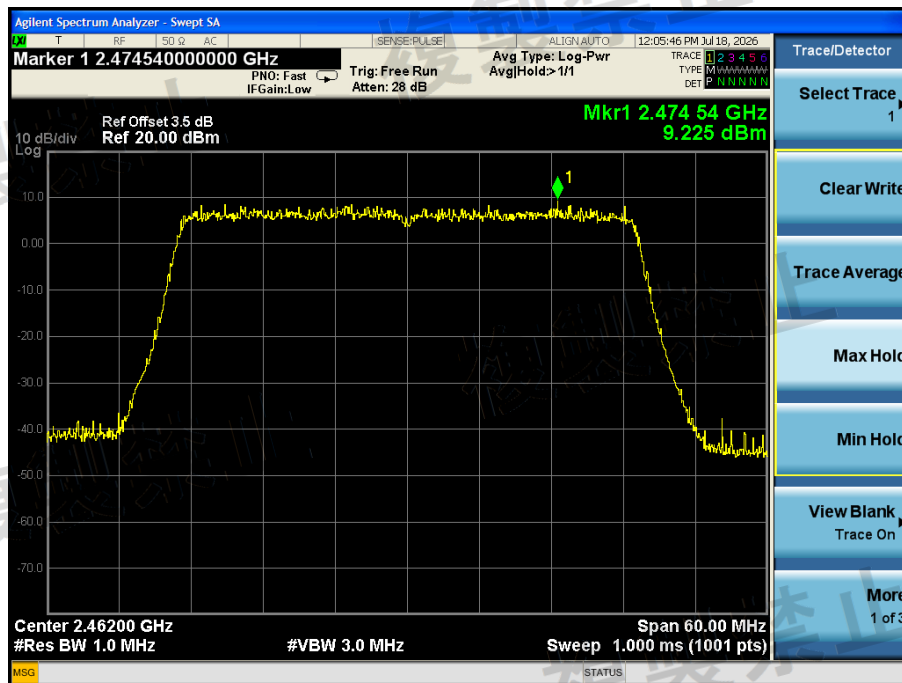


Channel 7: 2.442 GHz:





Channel 11: 2.462 GHz:





6.9 Spurious Emissions of Tx

Test Requirement:	Item 19 of Article 2-1
	(1) 30 to 1000 MHz : 2.5 μ W/MHz(-36dBm/100kHz) (2) 1000 to 2387 MHz : 2.5 μ W/MHz(-26dBm/MHz) (3) 2387 to 2400 MHz : 25 μ W/MHz(-16dBm/MHz) (4) 2483.5 through 2496.5 MHz : 25 μ W/MHz(-16dBm/MHz) (5) Over 2496.5 MHz : 2.5 μ W/MHz(-26dBm/MHz)
Temperature:	25.0 °C
Humidity:	75 % RH
Atmospheric Pressure:	1013 mbar
Test Status:	Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.
Test Configuration:	
PC EUT Spectrum Analyzer	
Test Procedure:	
1. Test Conditions:	Spectrum Analyzer is used for measurement.
2. EUT conditions:	Modulation/Spread/Hopping ON For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.
3. Spectrum Analyzer conditions:	Step 1 All spurious are measured from 30 MHz to 13 GHz by peak mode. Step 2 IF the value measured by Step1 is 2 dB or less, measure in average mode.
	Test setup for Step 1: Frequency: 30 MHz – 1000 MHz, RBW 100 kHz (Below 1000 MHz), VBW 100 kHz (Below 1000 MHz) 1000 MHz – 2400 MHz, 2483.5 MHz –13 GHz RBW 1 MHz (above 1000 MHz), VBW 1 MHz (above 1000 MHz) Sweep Time Auto detector mode Positive peak, Indication mode Max hold



Test setup for Step 2:

Frequency: Spurious Frequency

RBW 100 kHz (Below 1000 MHz), VBW 100 kHz (Below 1000 MHz)

RBW 1 MHz (above 1000 MHz), VBW 1 MHz (above 1000 MHz)

Sweep Time Auto,

Detector mode Sample, Indication mode Max hold



Test result:

Condition	Mode	Frequency (MHz)	Range (MHz)	Emission Frequency (MHz)	Max Value (dBm/MHz)	Max Value (uW/MHz)	Limit Start(uW/MHz)	Limit Stop (uW/MHz)	Verdict
NVNT	b	2412	30-1000	53.28	-56.83	0.0021	2.5	2.5	Pass
NVNT	b	2412	1000-2387	2387	-50.4	0.0091	2.5	2.5	Pass
NVNT	b	2412	2387-2400	2397.21	-47.86	0.0164	25	25	Pass
NVNT	b	2412	2483.5-2496.5	2495.04	-53.99	0.004	25	25	Pass
NVNT	b	2412	2496.5-13000	4828.28	-45.37	0.029	2.5	2.5	Pass
NVNT	b	2442	30-1000	810.85	-59.4	0.0011	2.5	2.5	Pass
NVNT	b	2442	1000-2387	2378.68	-53.33	0.0046	2.5	2.5	Pass
NVNT	b	2442	2387-2400	2393.37	-49.81	0.0104	25	25	Pass
NVNT	b	2442	2483.5-2496.5	2486.48	-50.34	0.0092	25	25	Pass
NVNT	b	2442	2496.5-13000	4880.79	-44.3	0.0372	2.5	2.5	Pass
NVNT	b	2472	30-1000	57.16	-57.57	0.0017	2.5	2.5	Pass
NVNT	b	2472	1000-2387	2355.1	-53.78	0.0042	2.5	2.5	Pass
NVNT	b	2472	2387-2400	2397.46	-50.41	0.0091	25	25	Pass
NVNT	b	2472	2483.5-2496.5	2488.02	-45.93	0.0255	25	25	Pass
NVNT	b	2472	2496.5-13000	4943.82	-41.22	0.0755	2.5	2.5	Pass
NVNT	g	2412	30-1000	54.25	-55.82	0.0026	2.5	2.5	Pass
NVNT	g	2412	1000-2387	2384.23	-54.66	0.0034	2.5	2.5	Pass
NVNT	g	2412	2387-2400	2399.95	-34.22	0.3784	25	25	Pass
NVNT	g	2412	2483.5-2496.5	2489.27	-55.76	0.0027	25	25	Pass
NVNT	g	2412	2496.5-13000	12842.45	-53.16	0.0048	2.5	2.5	Pass
NVNT	g	2442	30-1000	39.7	-53.99	0.004	2.5	2.5	Pass
NVNT	g	2442	1000-2387	2370.36	-55.02	0.0031	2.5	2.5	Pass
NVNT	g	2442	2387-2400	2392.36	-53.23	0.0048	25	25	Pass
NVNT	g	2442	2483.5-2496.5	2483.76	-53.62	0.0043	25	25	Pass
NVNT	g	2442	2496.5-13000	4880.79	-54	0.004	2.5	2.5	Pass
NVNT	g	2472	30-1000	40.67	-54.19	0.0038	2.5	2.5	Pass
NVNT	g	2472	1000-2387	2378.68	-55.37	0.0029	2.5	2.5	Pass
NVNT	g	2472	2387-2400	2392.88	-55.02	0.0031	25	25	Pass
NVNT	g	2472	2483.5-2496.5	2483.66	-22.52	5.5976	25	25	Pass
NVNT	g	2472	2496.5-13000	4943.82	-49.61	0.0109	2.5	2.5	Pass
NVNT	n20	2412	30-1000	38.73	-55.09	0.0031	2.5	2.5	Pass
NVNT	n20	2412	1000-2387	2385.61	-50.52	0.0089	2.5	2.5	Pass
NVNT	n20	2412	2387-2400	2399.95	-30.41	0.9099	25	25	Pass
NVNT	n20	2412	2483.5-2496.5	2494.19	-54.63	0.0034	25	25	Pass
NVNT	n20	2412	2496.5-13000	5216.91	-52.6	0.0055	2.5	2.5	Pass
NVNT	n20	2442	30-1000	37.76	-54.17	0.0038	2.5	2.5	Pass
NVNT	n20	2442	1000-2387	2384.23	-54.51	0.0035	2.5	2.5	Pass
NVNT	n20	2442	2387-2400	2397.59	-52.97	0.005	25	25	Pass
NVNT	n20	2442	2483.5-2496.5	2485.88	-52.96	0.0051	25	25	Pass
NVNT	n20	2442	2496.5-13000	5227.41	-45.86	0.0259	2.5	2.5	Pass



NVNT	n20	2472	30-1000	41.64	-53.49	0.0045	2.5	2.5	Pass
NVNT	n20	2472	1000-2387	2328.75	-56.18	0.0024	2.5	2.5	Pass
NVNT	n20	2472	2387-2400	2397.59	-55.09	0.0031	25	25	Pass
NVNT	n20	2472	2483.5-2496.5	2483.5	-23.58	4.3853	25	25	Pass
NVNT	n20	2472	2496.5-13000	2496.5	-51.38	0.0073	2.5	2.5	Pass
NVNT	n40	2422	30-1000	45.52	-53.63	0.0043	2.5	2.5	Pass
NVNT	n40	2422	1000-2387	2385.61	-53.56	0.0044	2.5	2.5	Pass
NVNT	n40	2422	2387-2400	2399.84	-41.69	0.0678	25	25	Pass
NVNT	n40	2422	2483.5-2496.5	2487.19	-53.13	0.0049	25	25	Pass
NVNT	n40	2422	2496.5-13000	12905.47	-53.53	0.0044	2.5	2.5	Pass
NVNT	n40	2442	30-1000	64.92	-56.19	0.0024	2.5	2.5	Pass
NVNT	n40	2442	1000-2387	2382.84	-54.2	0.0038	2.5	2.5	Pass
NVNT	n40	2442	2387-2400	2397	-52.21	0.006	25	25	Pass
NVNT	n40	2442	2483.5-2496.5	2484.51	-52.81	0.0052	25	25	Pass
NVNT	n40	2442	2496.5-13000	11802.6	-54.35	0.0037	2.5	2.5	Pass
NVNT	n40	2462	30-1000	48.43	-54.02	0.004	2.5	2.5	Pass
NVNT	n40	2462	1000-2387	2387	-55.73	0.0027	2.5	2.5	Pass
NVNT	n40	2462	2387-2400	2393.16	-54.09	0.0039	25	25	Pass
NVNT	n40	2462	2483.5-2496.5	2483.53	-35.95	0.2541	25	25	Pass
NVNT	n40	2462	2496.5-13000	2496.5	-53.25	0.0047	2.5	2.5	Pass
NVNT	ax20	2412	30-1000	38.73	-54.46	0.0036	2.5	2.5	Pass
NVNT	ax20	2412	1000-2387	2387	-52.38	0.0058	2.5	2.5	Pass
NVNT	ax20	2412	2387-2400	2399.96	-32.61	0.5483	25	25	Pass
NVNT	ax20	2412	2483.5-2496.5	2495.37	-55.35	0.0029	25	25	Pass
NVNT	ax20	2412	2496.5-13000	12800.43	-53.22	0.0048	2.5	2.5	Pass
NVNT	ax20	2442	30-1000	39.7	-54.09	0.0039	2.5	2.5	Pass
NVNT	ax20	2442	1000-2387	2387	-55.21	0.003	2.5	2.5	Pass
NVNT	ax20	2442	2387-2400	2396.14	-54.74	0.0034	25	25	Pass
NVNT	ax20	2442	2483.5-2496.5	2487.62	-54.23	0.0038	25	25	Pass
NVNT	ax20	2442	2496.5-13000	12737.41	-53.74	0.0042	2.5	2.5	Pass
NVNT	ax20	2472	30-1000	39.7	-54.91	0.0032	2.5	2.5	Pass
NVNT	ax20	2472	1000-2387	2320.42	-56.43	0.0023	2.5	2.5	Pass
NVNT	ax20	2472	2387-2400	2396.42	-55.53	0.0028	25	25	Pass
NVNT	ax20	2472	2483.5-2496.5	2483.59	-24.68	3.4041	25	25	Pass
NVNT	ax20	2472	2496.5-13000	11739.58	-54	0.004	2.5	2.5	Pass
NVNT	ax40	2422	30-1000	67.83	-54.96	0.0032	2.5	2.5	Pass
NVNT	ax40	2422	1000-2387	2385.61	-54.26	0.0037	2.5	2.5	Pass
NVNT	ax40	2422	2387-2400	2399.94	-36.99	0.2	25	25	Pass
NVNT	ax40	2422	2483.5-2496.5	2486.96	-54.58	0.0035	25	25	Pass
NVNT	ax40	2422	2496.5-13000	11813.1	-54.35	0.0037	2.5	2.5	Pass
NVNT	ax40	2442	30-1000	43.58	-53.99	0.004	2.5	2.5	Pass
NVNT	ax40	2442	1000-2387	2359.26	-55.52	0.0028	2.5	2.5	Pass
NVNT	ax40	2442	2387-2400	2397.14	-53.14	0.0049	25	25	Pass
NVNT	ax40	2442	2483.5-2496.5	2486.44	-53.76	0.0042	25	25	Pass
NVNT	ax40	2442	2496.5-13000	11277.43	-54.08	0.0039	2.5	2.5	Pass

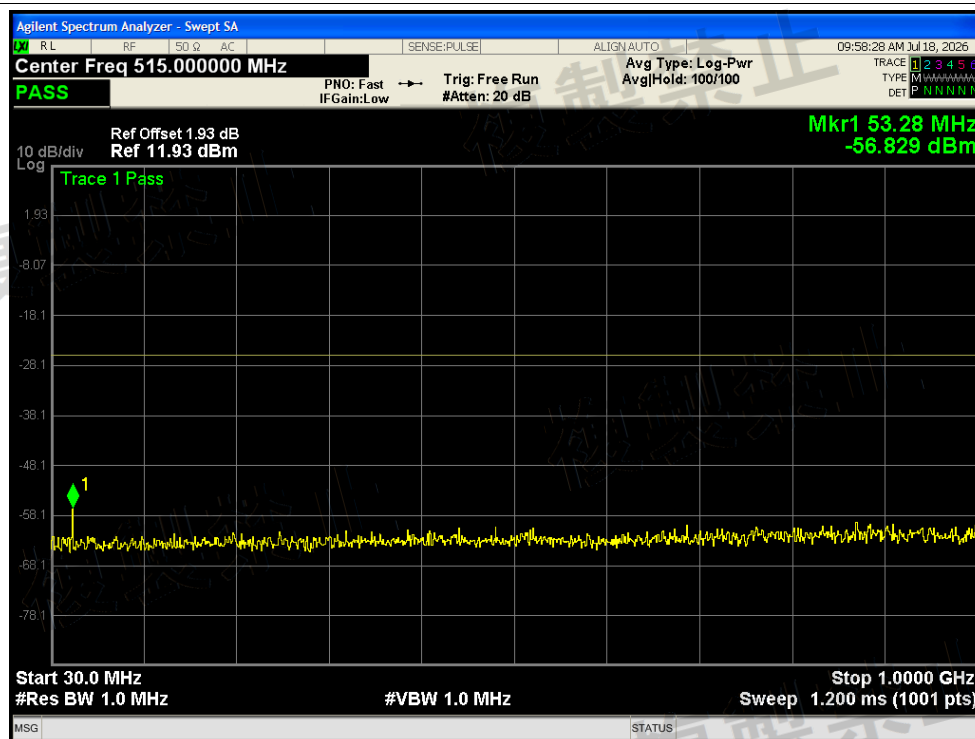


NVNT	ax40	2462	30-1000	49.4	-53.9	0.0041	2.5	2.5	Pass
NVNT	ax40	2462	1000-2387	2363.42	-56.09	0.0025	2.5	2.5	Pass
NVNT	ax40	2462	2387-2400	2397.86	-54.74	0.0034	25	25	Pass
NVNT	ax40	2462	2483.5-2496.5	2483.54	-33.29	0.4688	25	25	Pass
NVNT	ax40	2462	2496.5-13000	2496.5	-53.64	0.0043	2.5	2.5	Pass

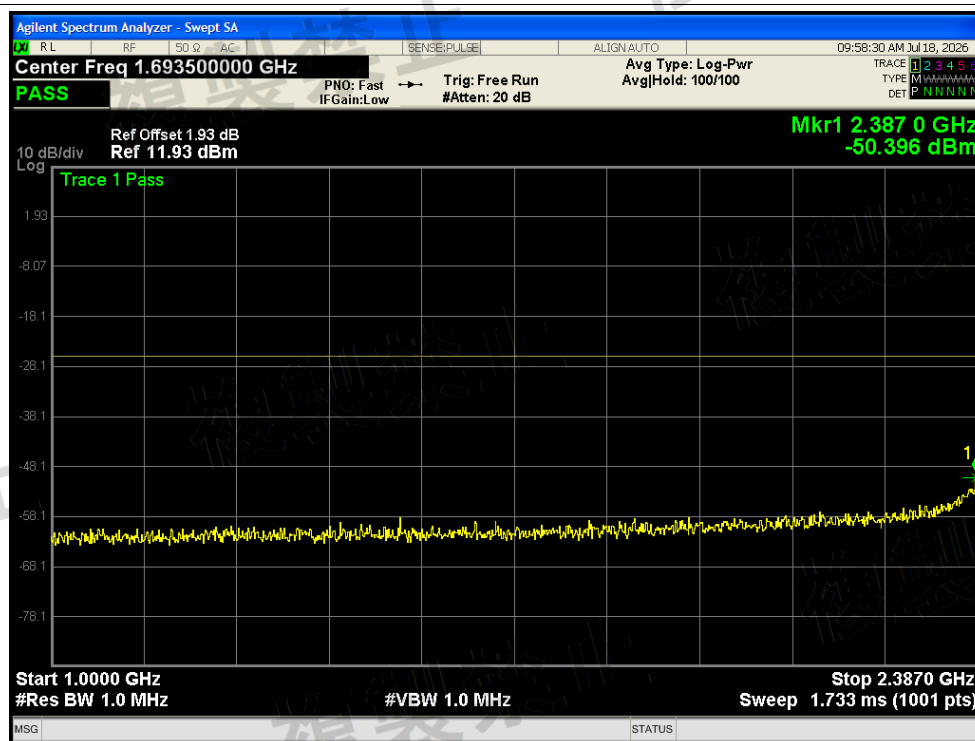


Test Graphs

Tx. Spurious NVNT b 2412MHz Ant1 @ 30MHz-1000MHz

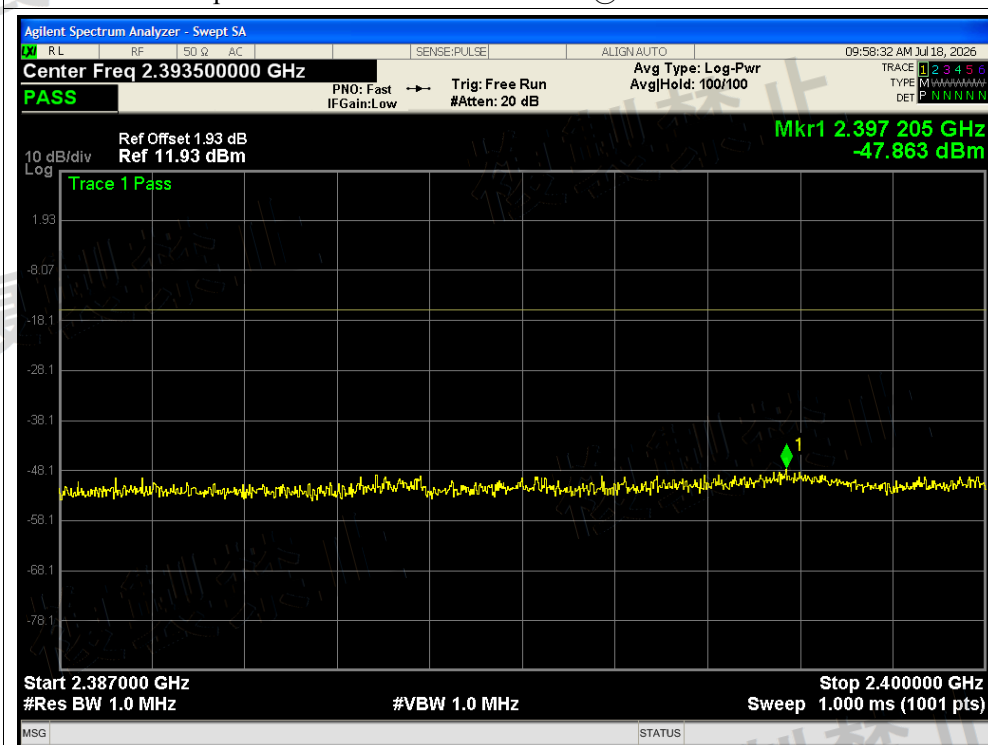


Tx. Spurious NVNT b 2412MHz Ant1 @ 1000MHz-2387MHz

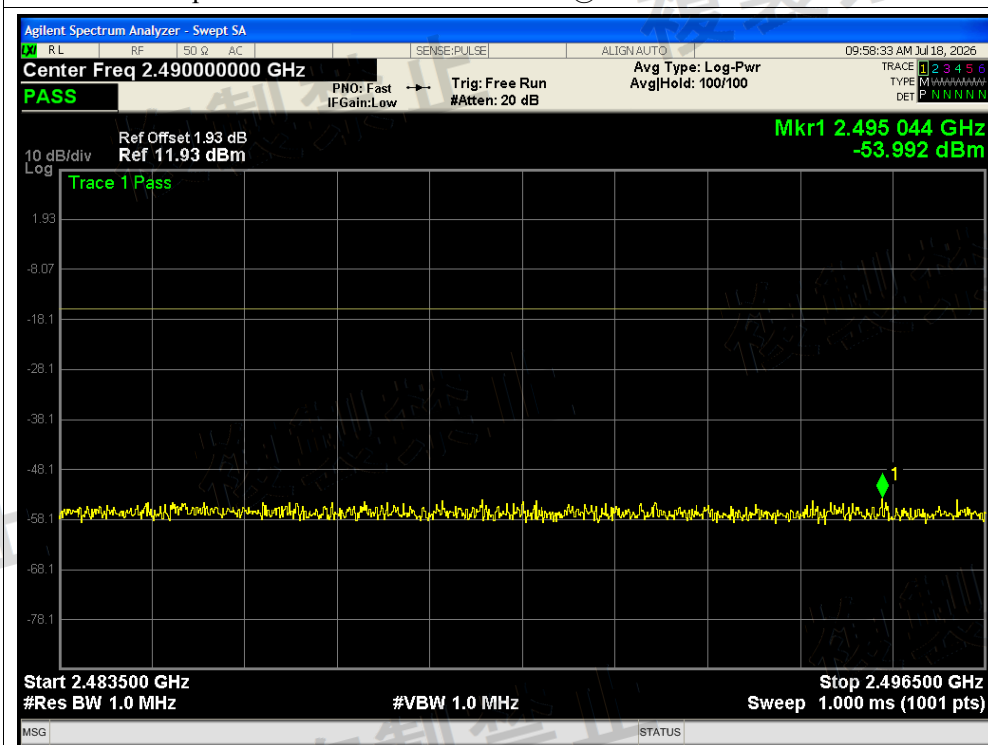




Tx. Spurious NVNT b 2412MHz Ant1 @ 2387MHz-2400MHz

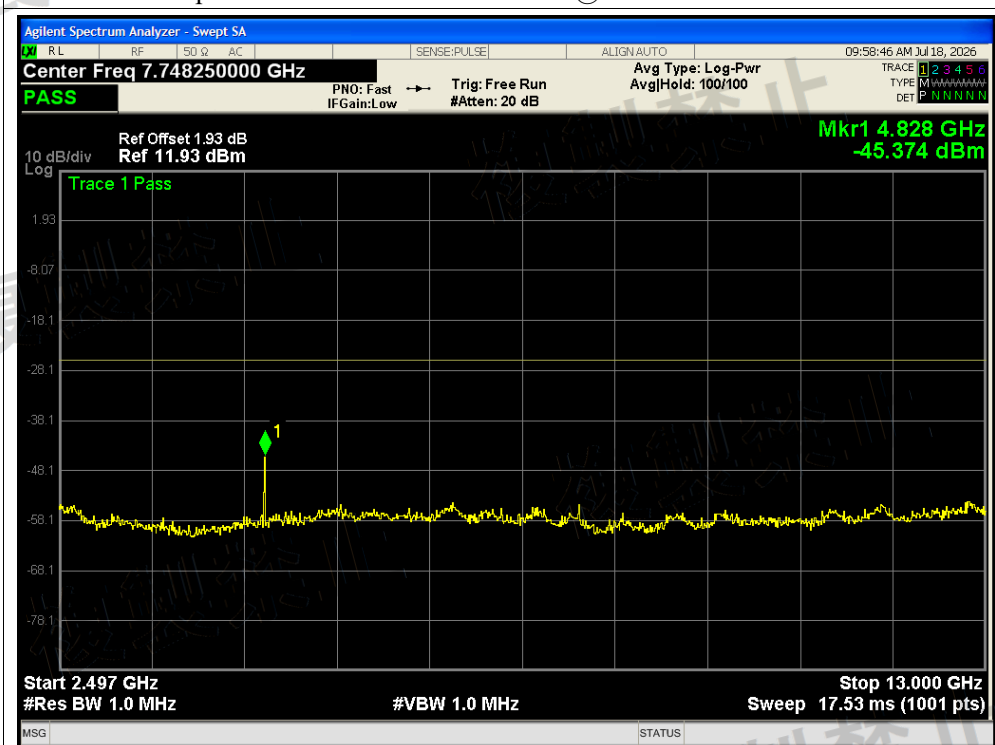


Tx. Spurious NVNT b 2412MHz Ant1 @ 2483.5MHz-2496.5MHz

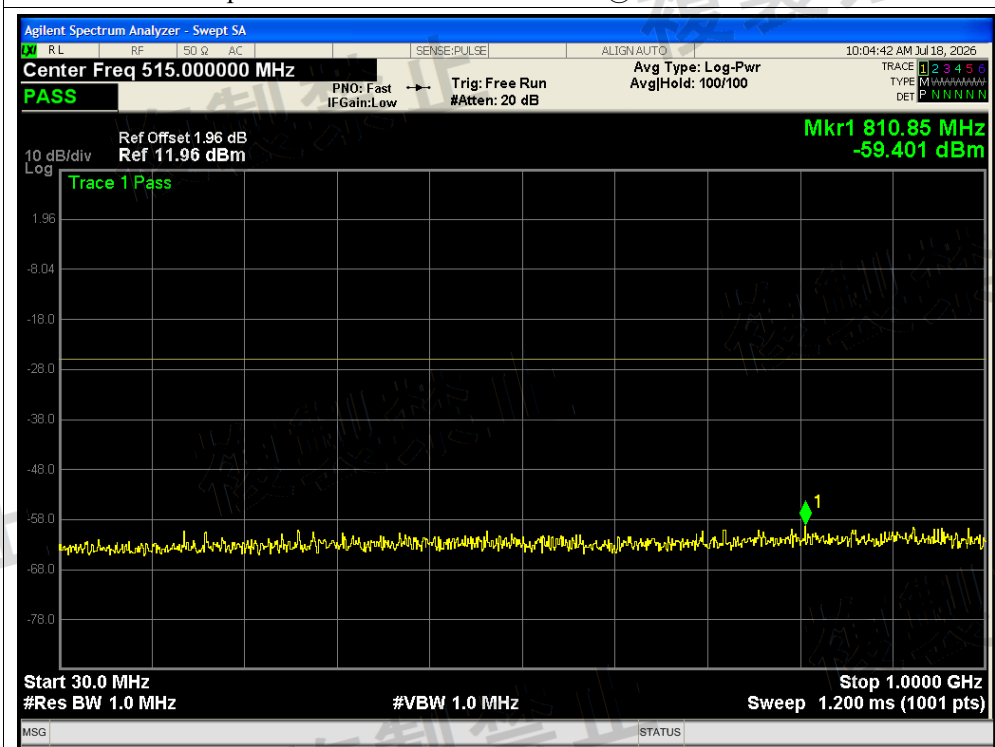




Tx. Spurious NVNT b 2412MHz Ant1 @ 2496.5MHz-13000MHz

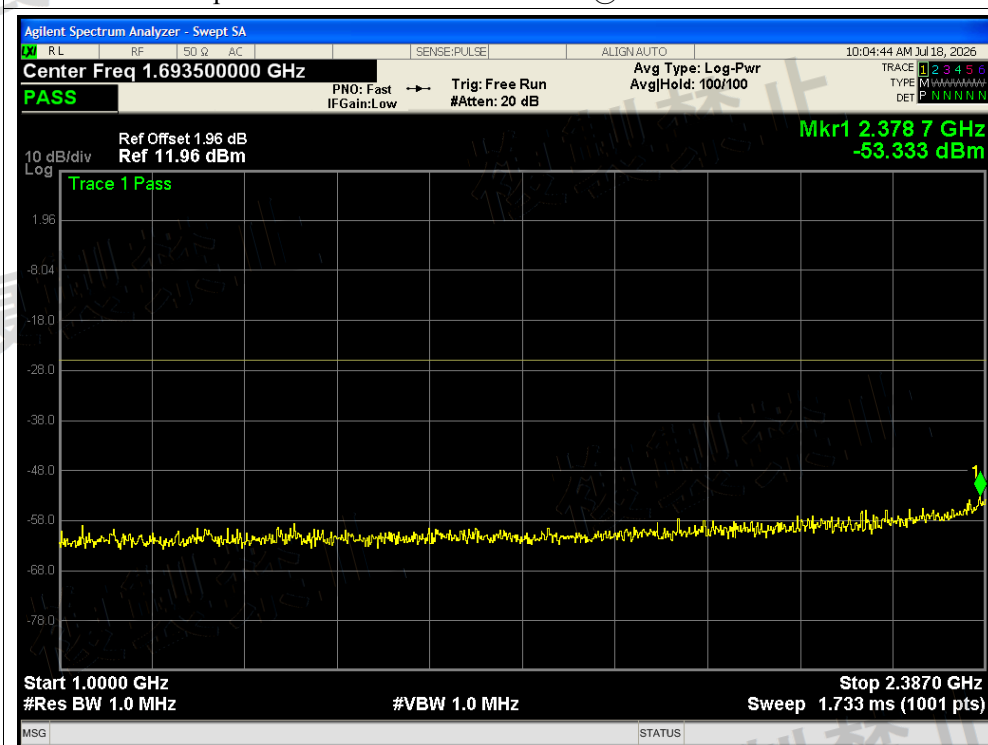


Tx. Spurious NVNT b 2442MHz Ant1 @ 30MHz-1000MHz

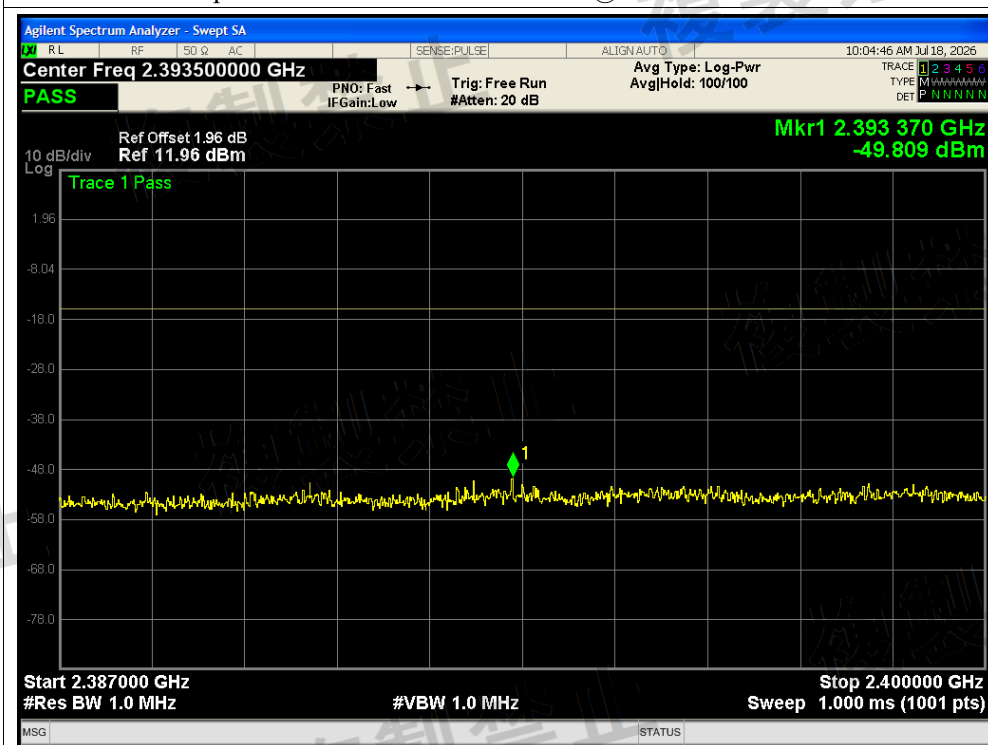




Tx. Spurious NVNT b 2442MHz Ant1 @ 1000MHz-2387MHz

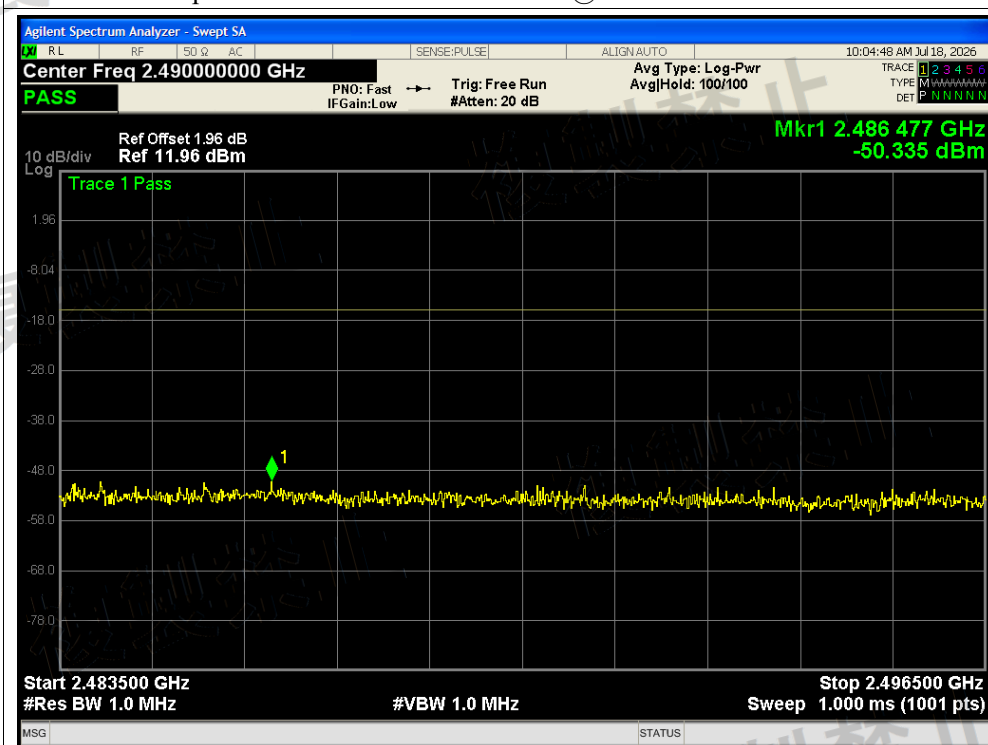


Tx. Spurious NVNT b 2442MHz Ant1 @ 2387MHz-2400MHz

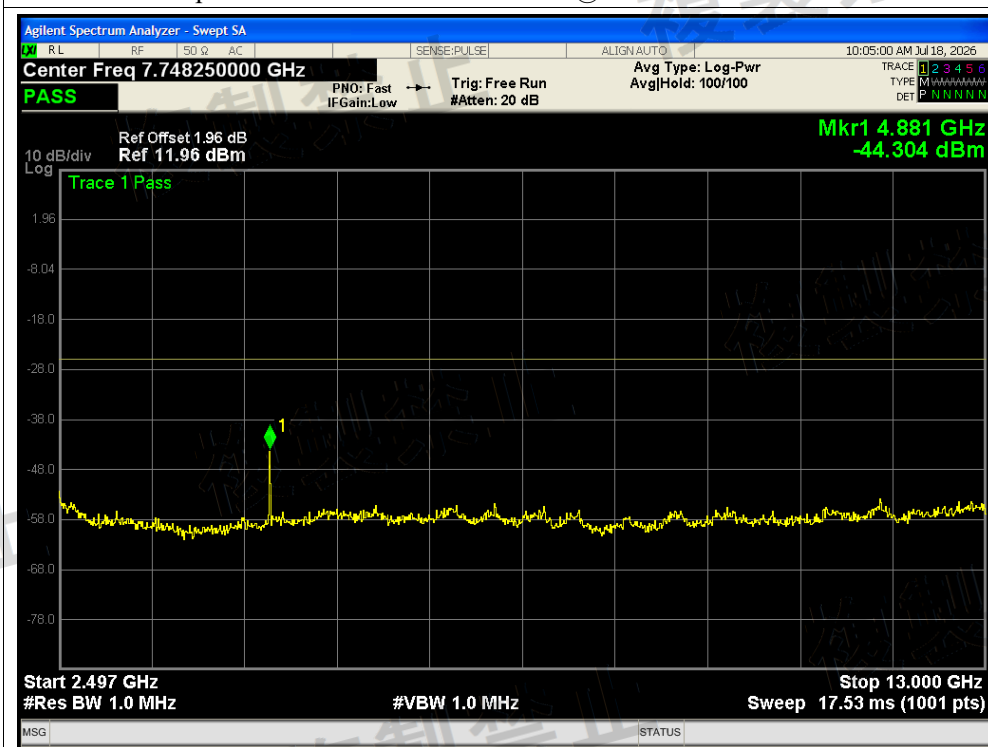




Tx. Spurious NVNT b 2442MHz Ant1 @ 2483.5MHz-2496.5MHz

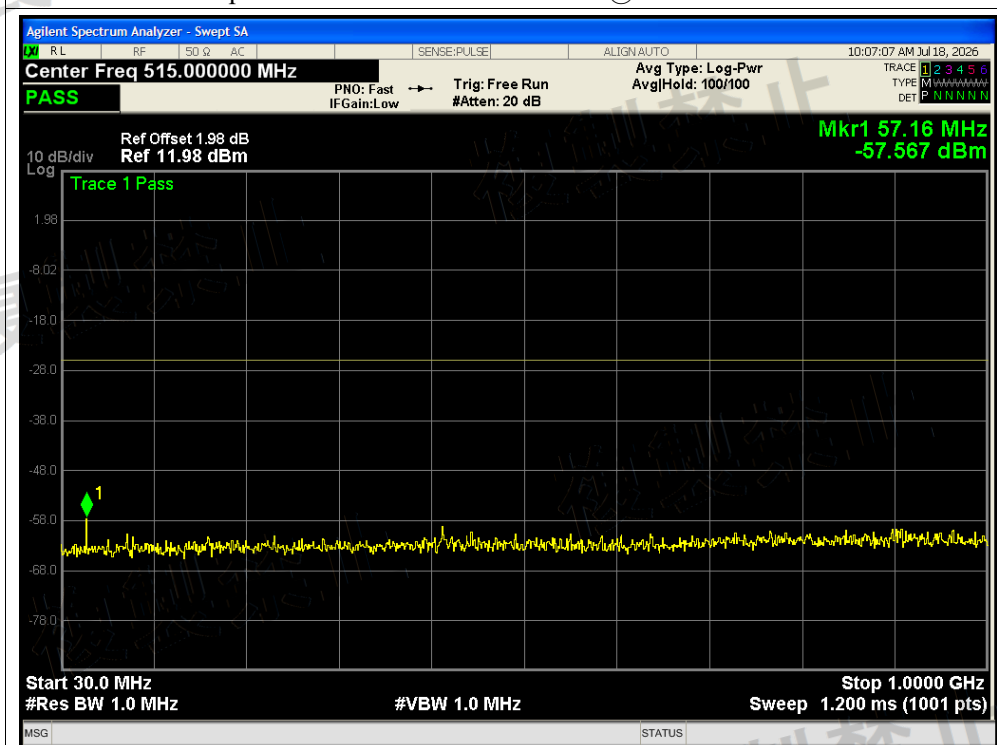


Tx. Spurious NVNT b 2442MHz Ant1 @ 2496.5MHz-13000MHz

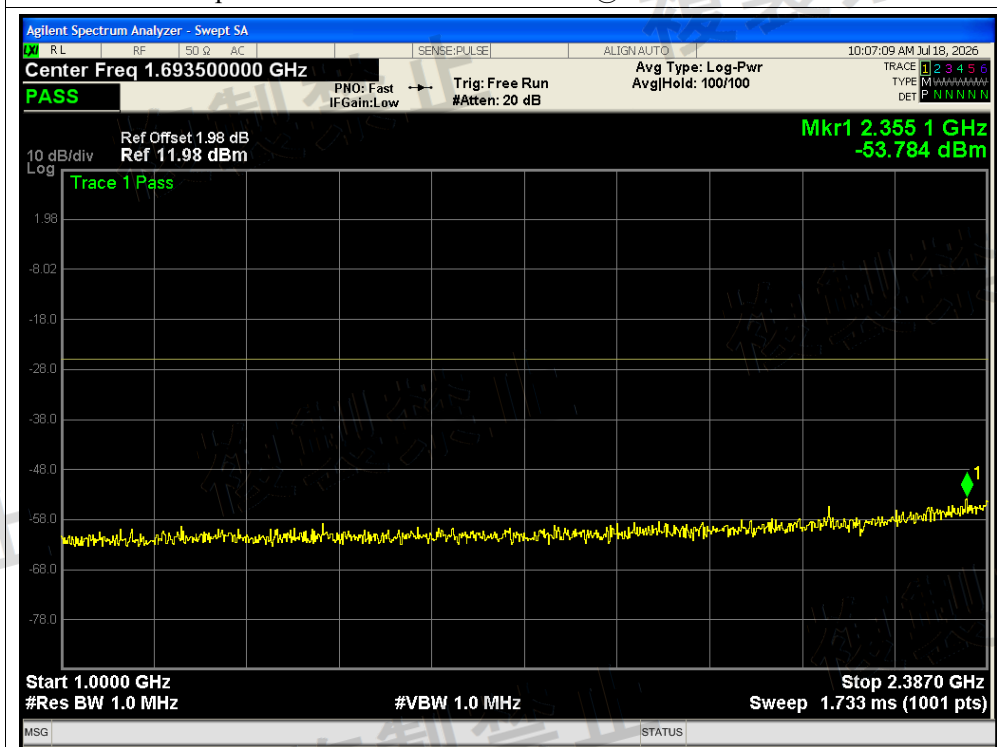




Tx. Spurious NVNT b 2472MHz Ant1 @ 30MHz-1000MHz

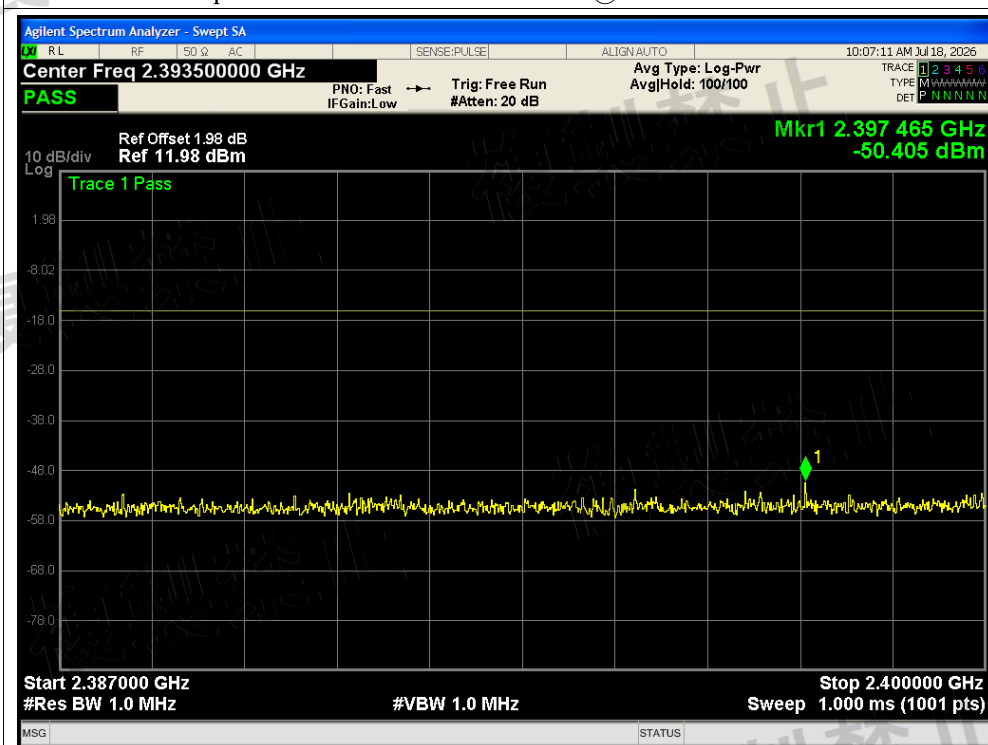


Tx. Spurious NVNT b 2472MHz Ant1 @ 1000MHz-2387MHz

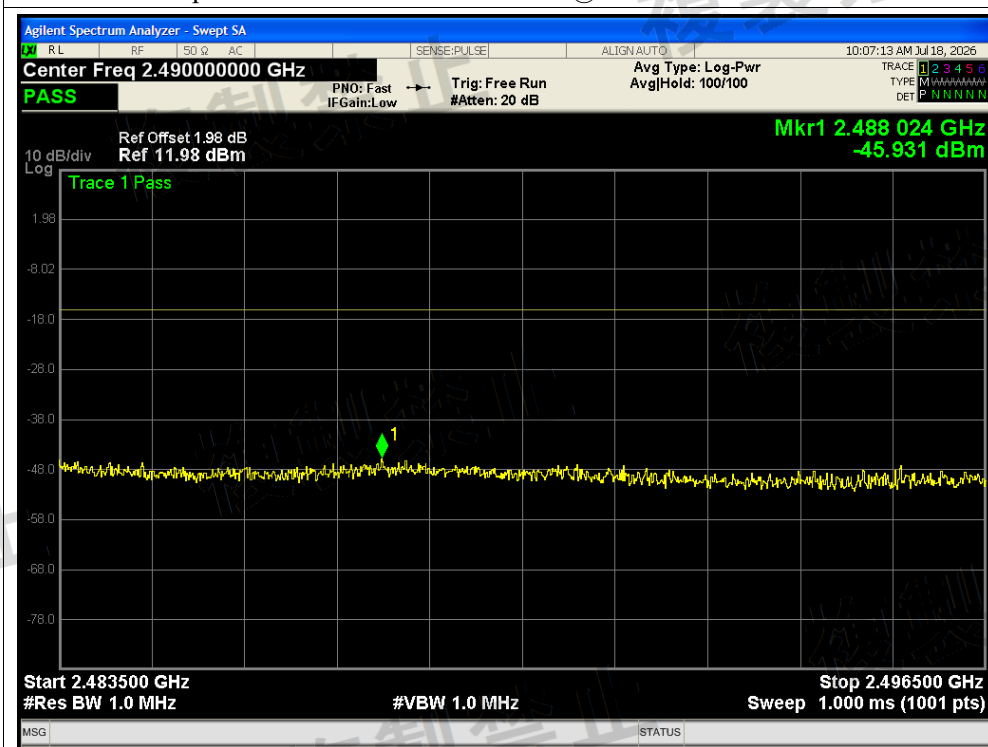




Tx. Spurious NVNT b 2472MHz Ant1 @ 2387MHz-2400MHz

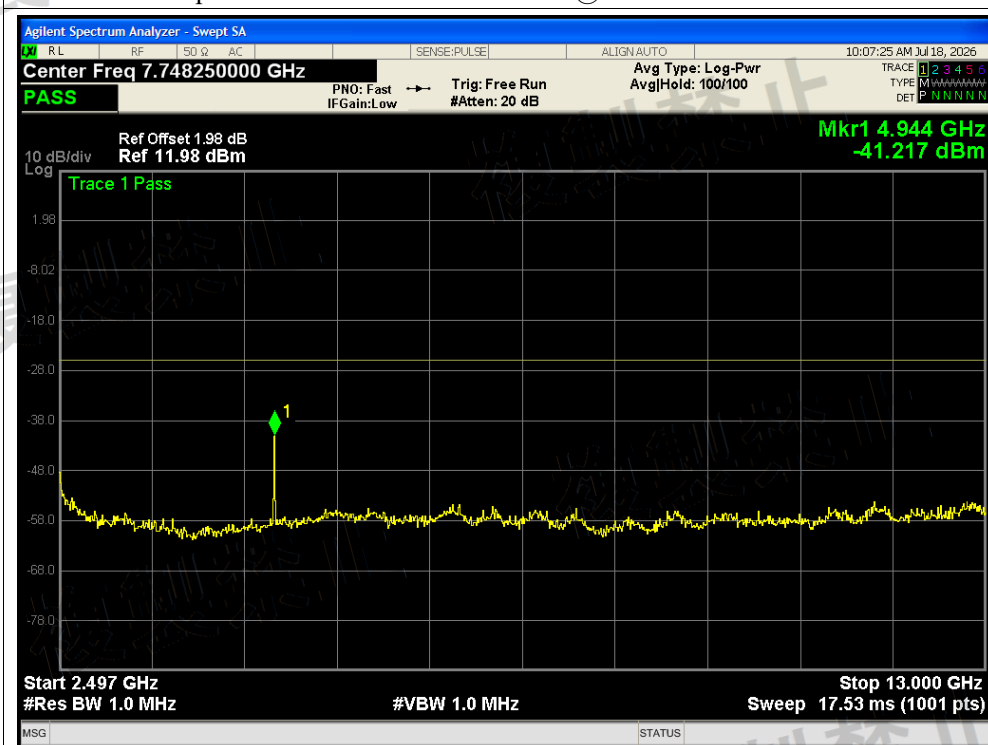


Tx. Spurious NVNT b 2472MHz Ant1 @ 2483.5MHz-2496.5MHz

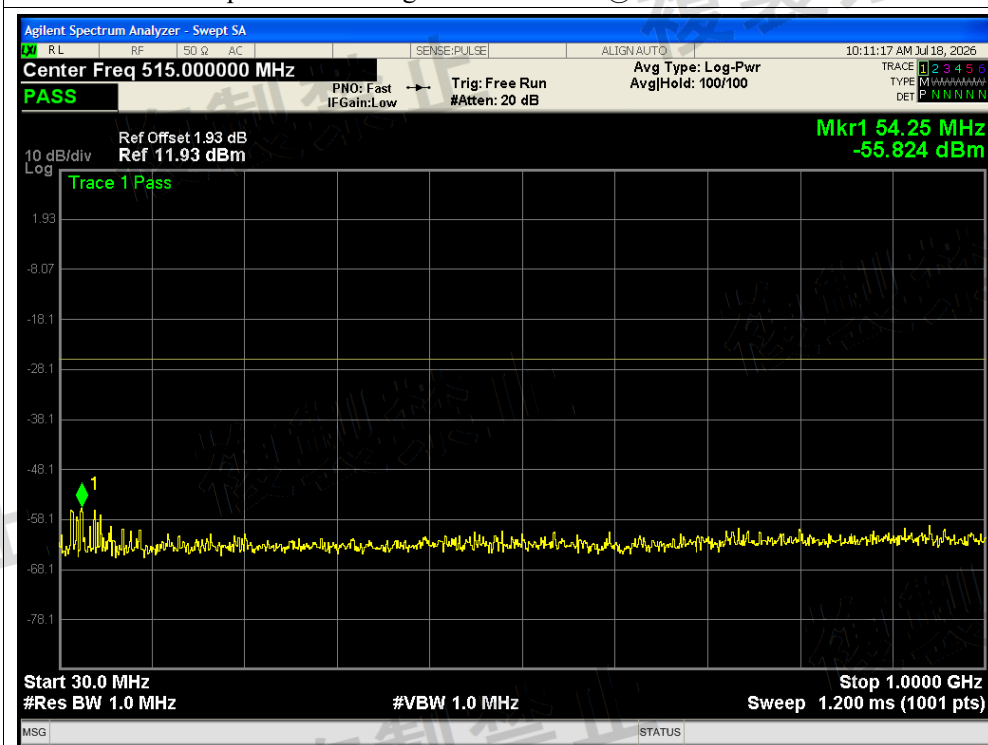




Tx. Spurious NVNT b 2472MHz Ant1 @ 2496.5MHz-13000MHz

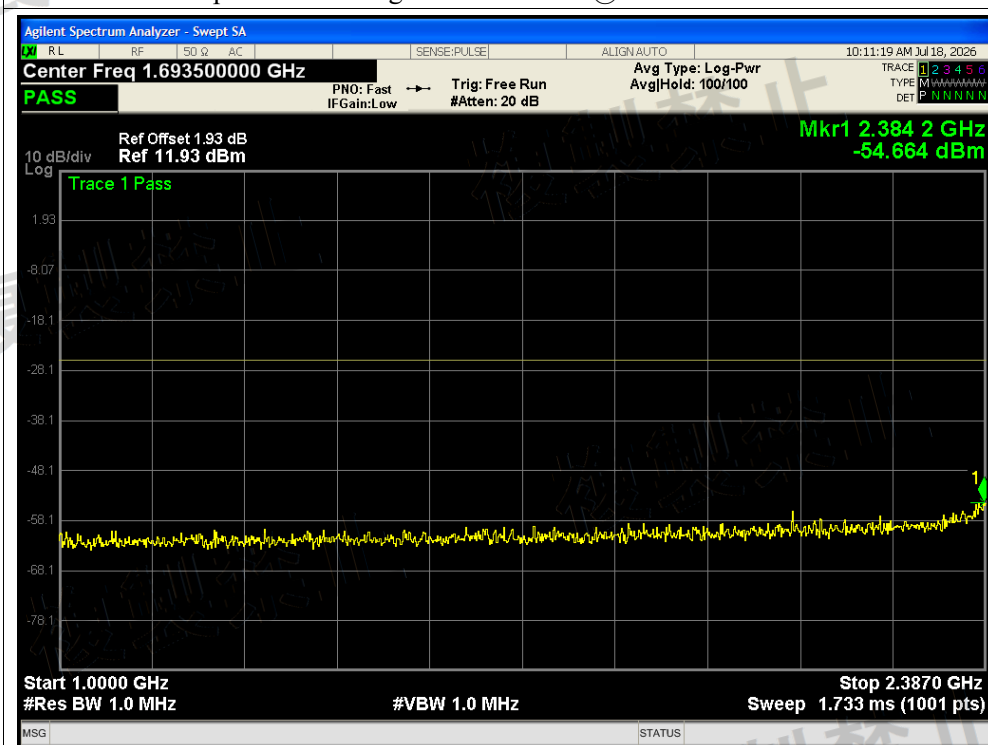


Tx. Spurious NVNT g 2412MHz Ant1 @ 30MHz-1000MHz

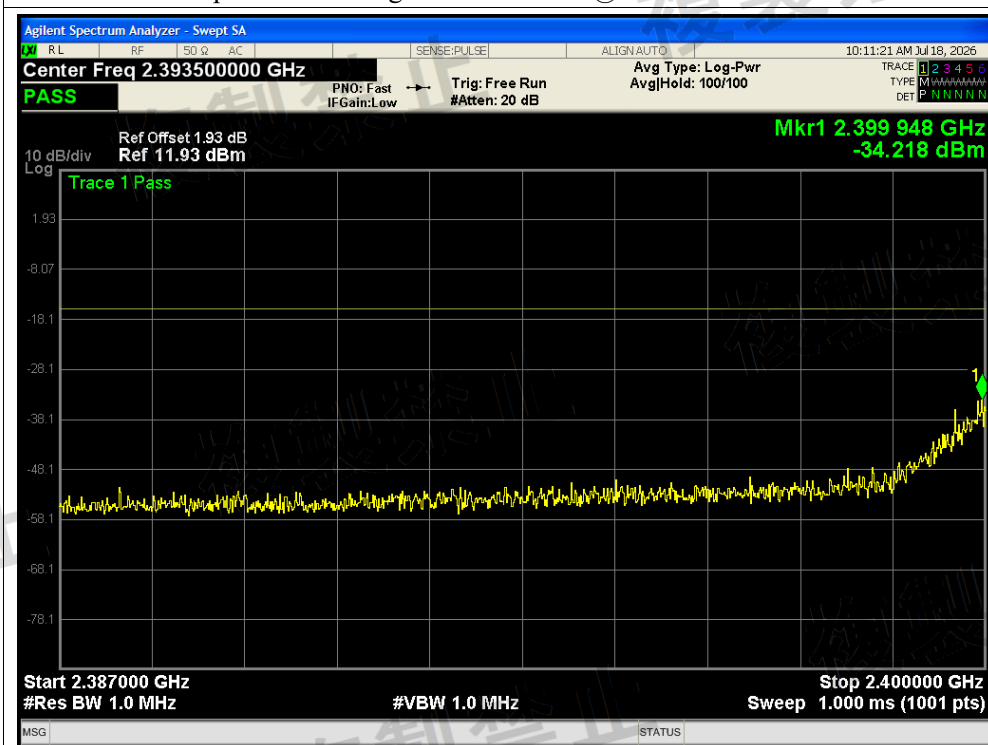




Tx. Spurious NVNT g 2412MHz Ant1 @ 1000MHz-2387MHz

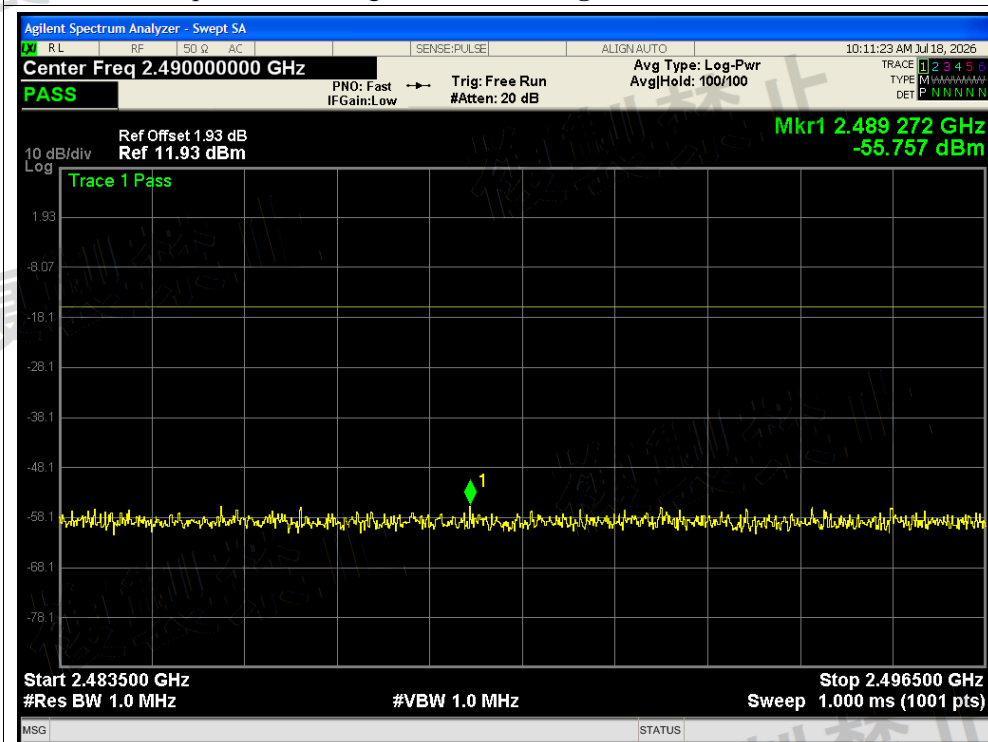


Tx. Spurious NVNT g 2412MHz Ant1 @ 2387MHz-2400MHz

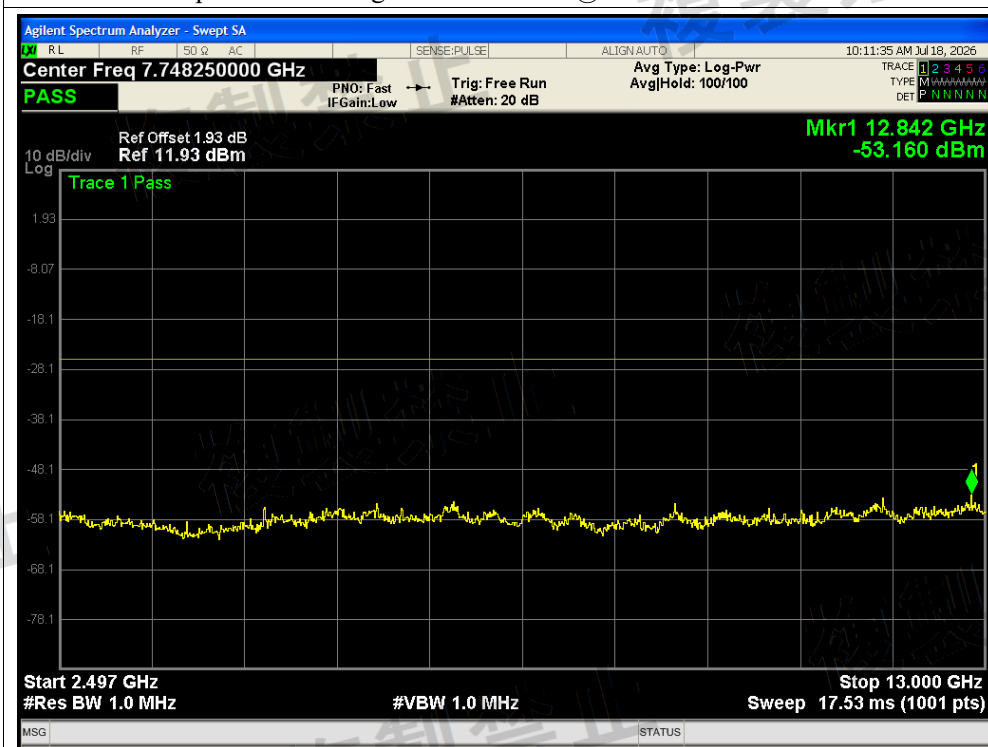




Tx. Spurious NVNT g 2412MHz Ant1 @ 2483.5MHz-2496.5MHz

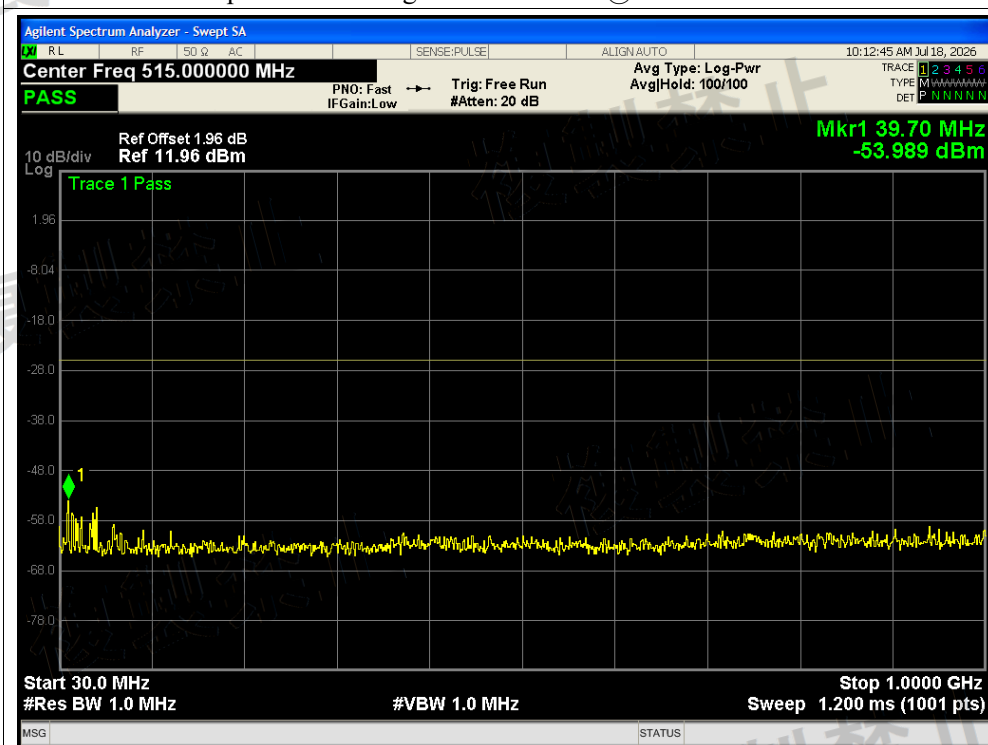


Tx. Spurious NVNT g 2412MHz Ant1 @ 2496.5MHz-13000MHz

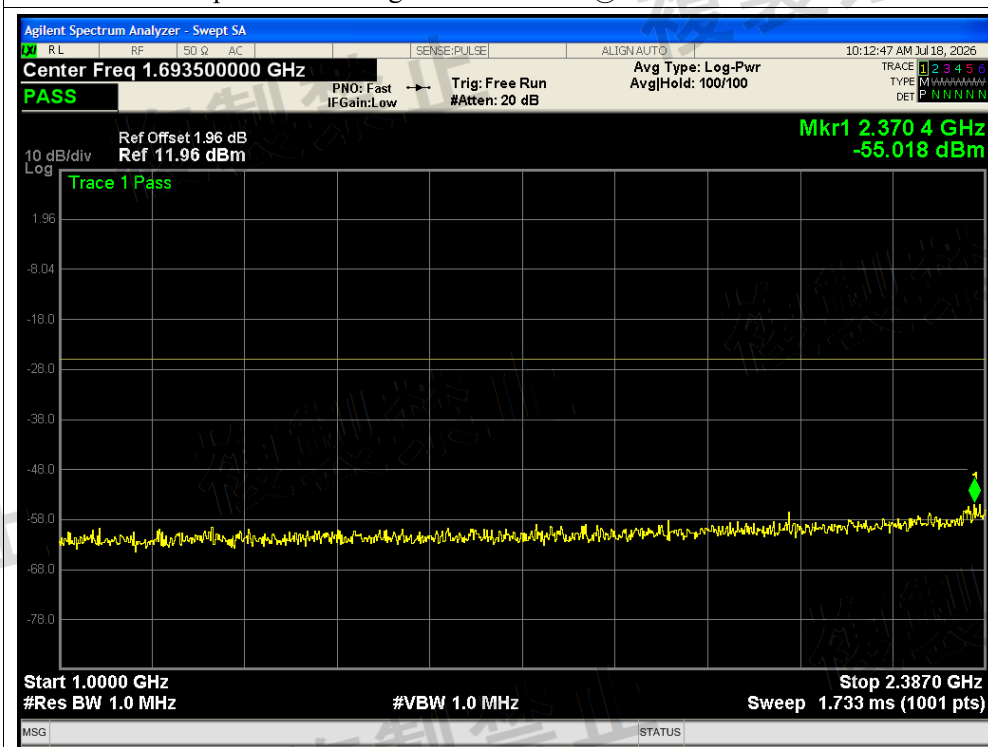




Tx. Spurious NVNT g 2442MHz Ant1 @ 30MHz-1000MHz

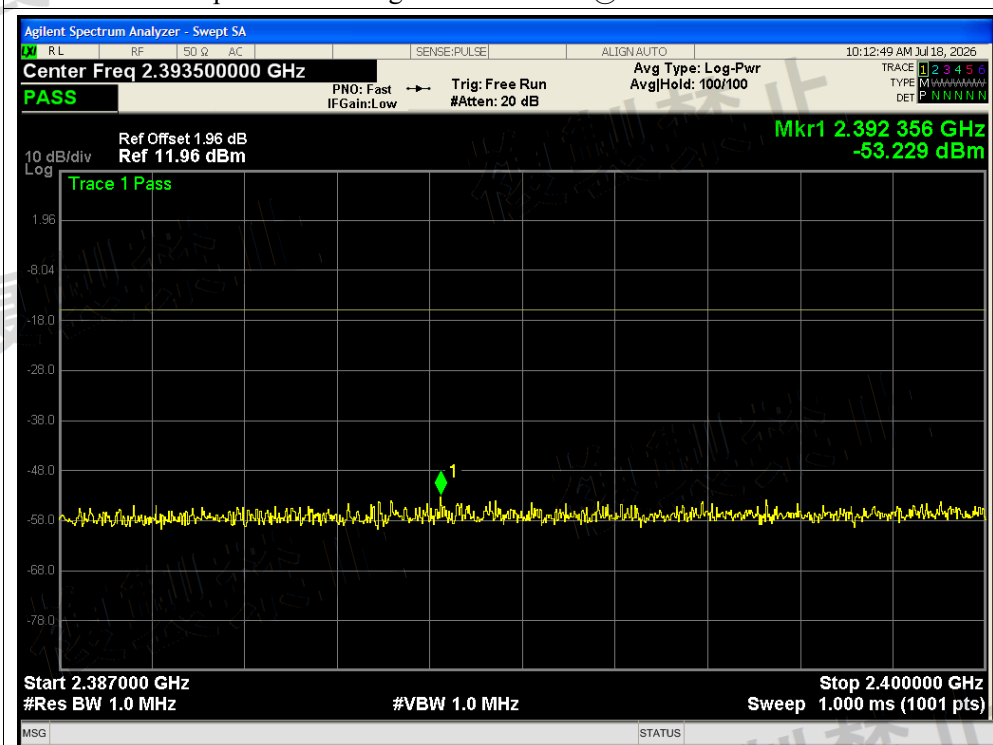


Tx. Spurious NVNT g 2442MHz Ant1 @ 1000MHz-2387MHz

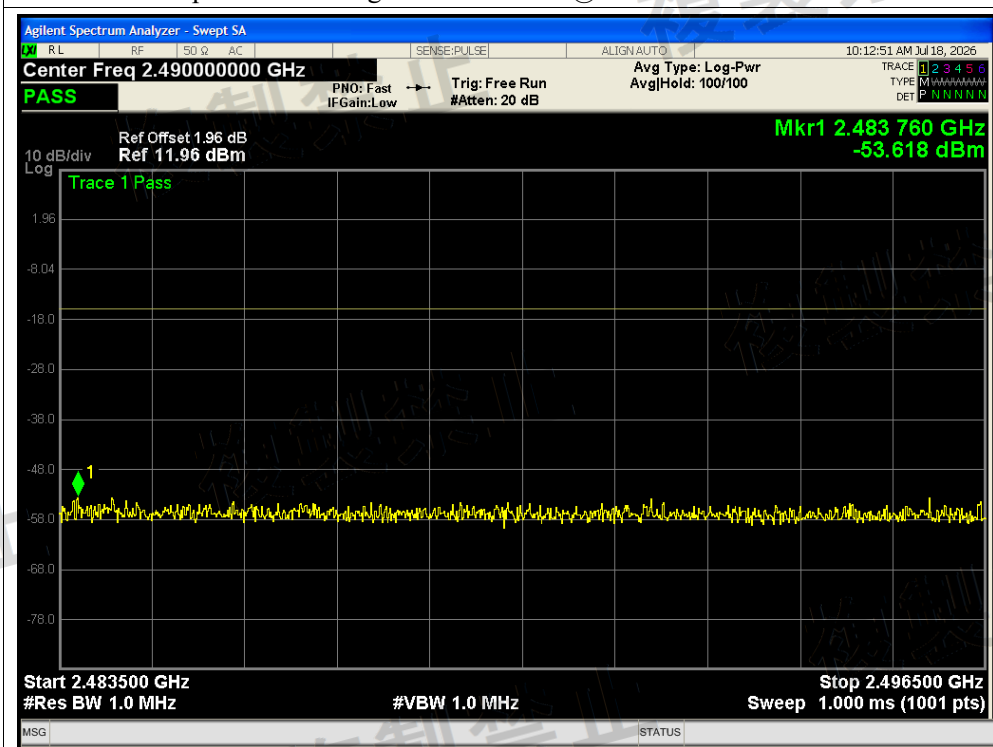




Tx. Spurious NVNT g 2442MHz Ant1 @ 2387MHz-2400MHz

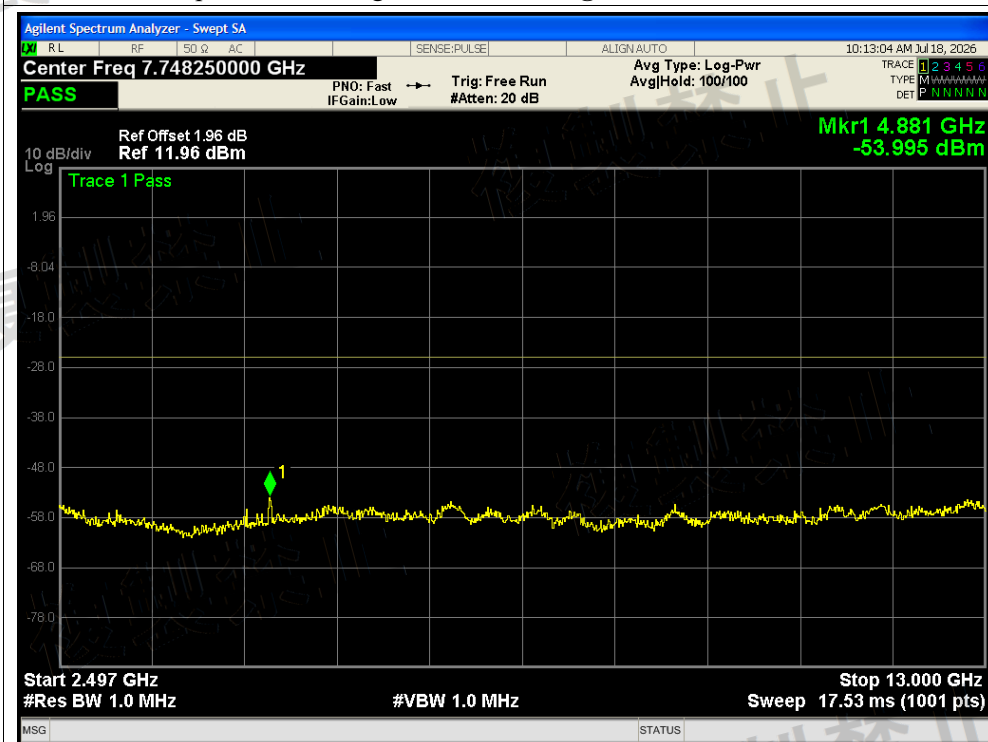


Tx. Spurious NVNT g 2442MHz Ant1 @ 2483.5MHz-2496.5MHz

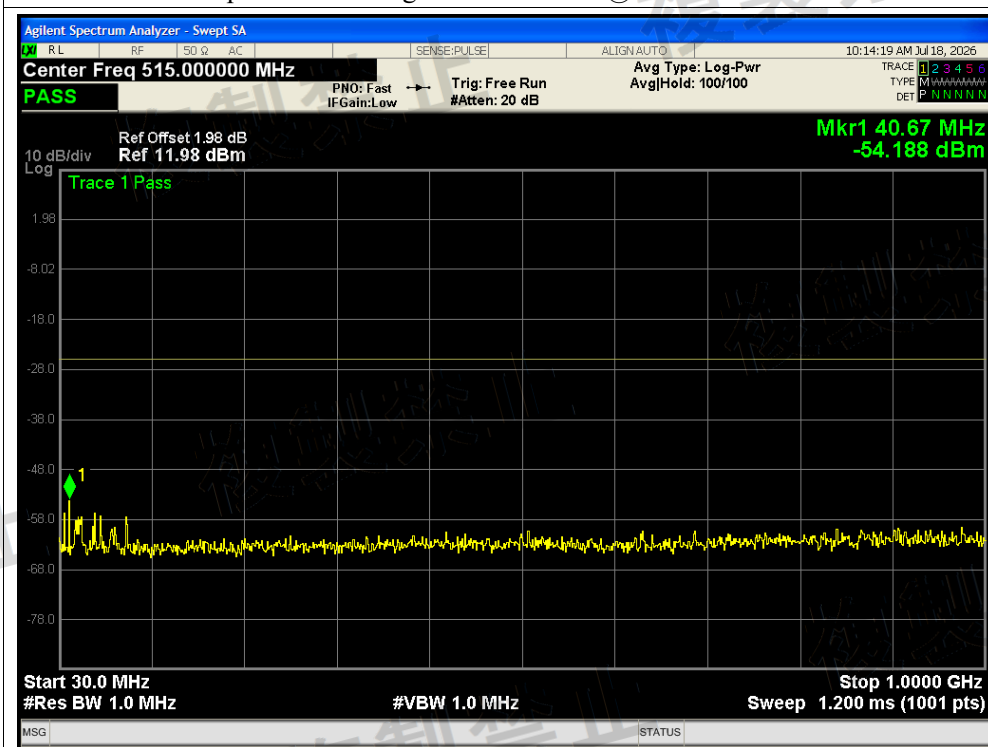




Tx. Spurious NVNT g 2442MHz Ant1 @ 2496.5MHz-13000MHz

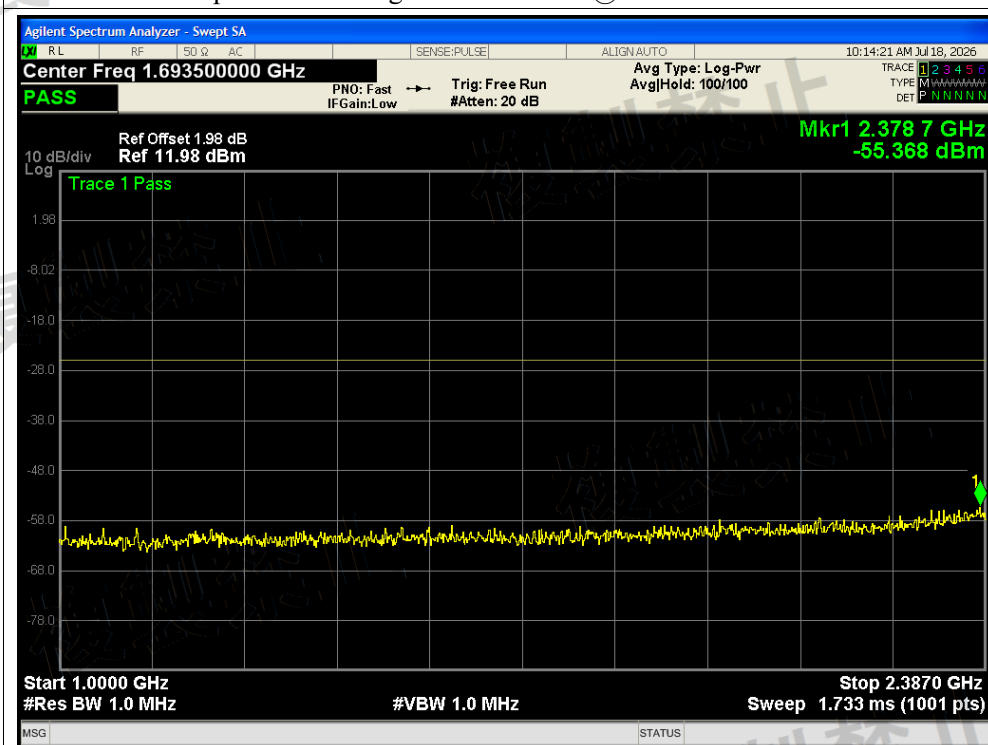


Tx. Spurious NVNT g 2472MHz Ant1 @ 30MHz-1000MHz

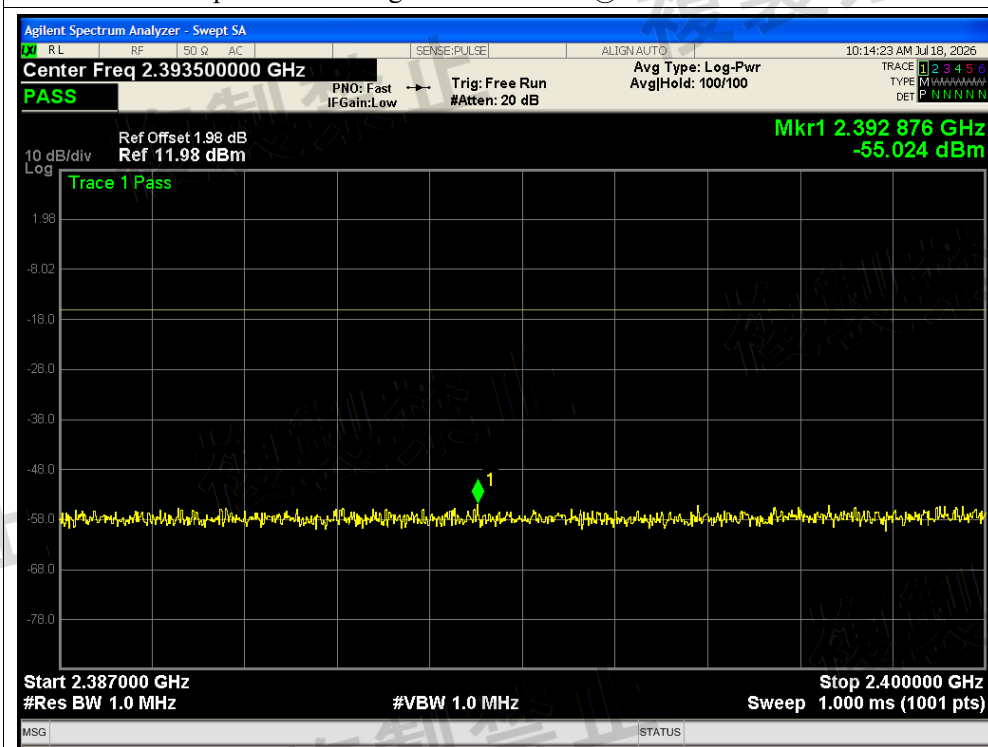




Tx. Spurious NVNT g 2472MHz Ant1 @ 1000MHz-2387MHz

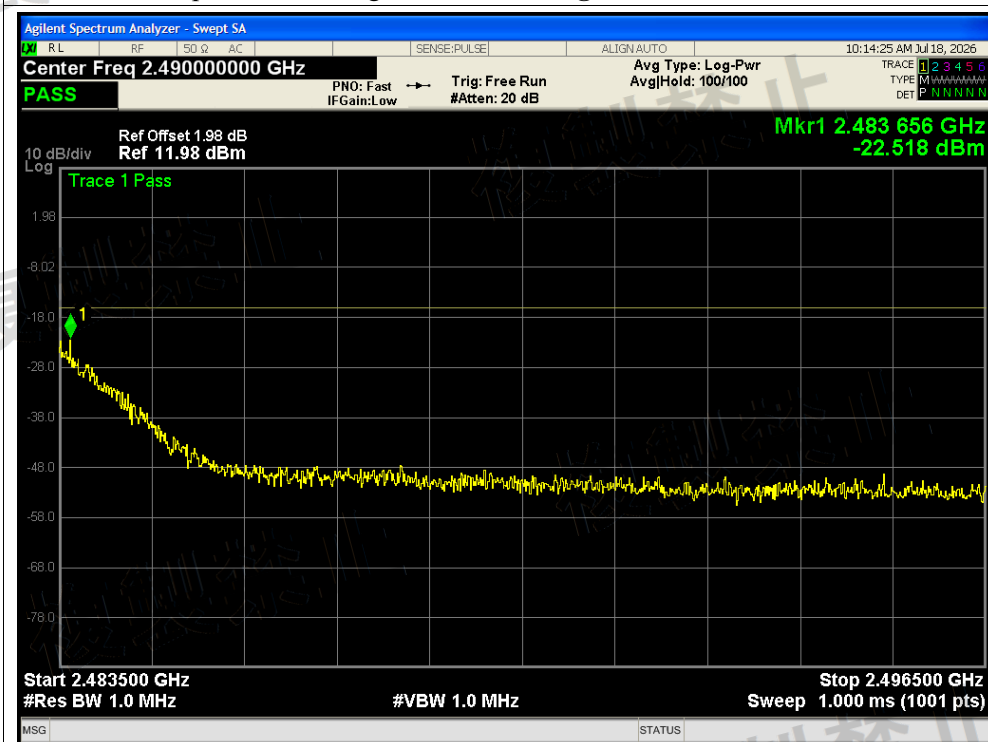


Tx. Spurious NVNT g 2472MHz Ant1 @ 2387MHz-2400MHz

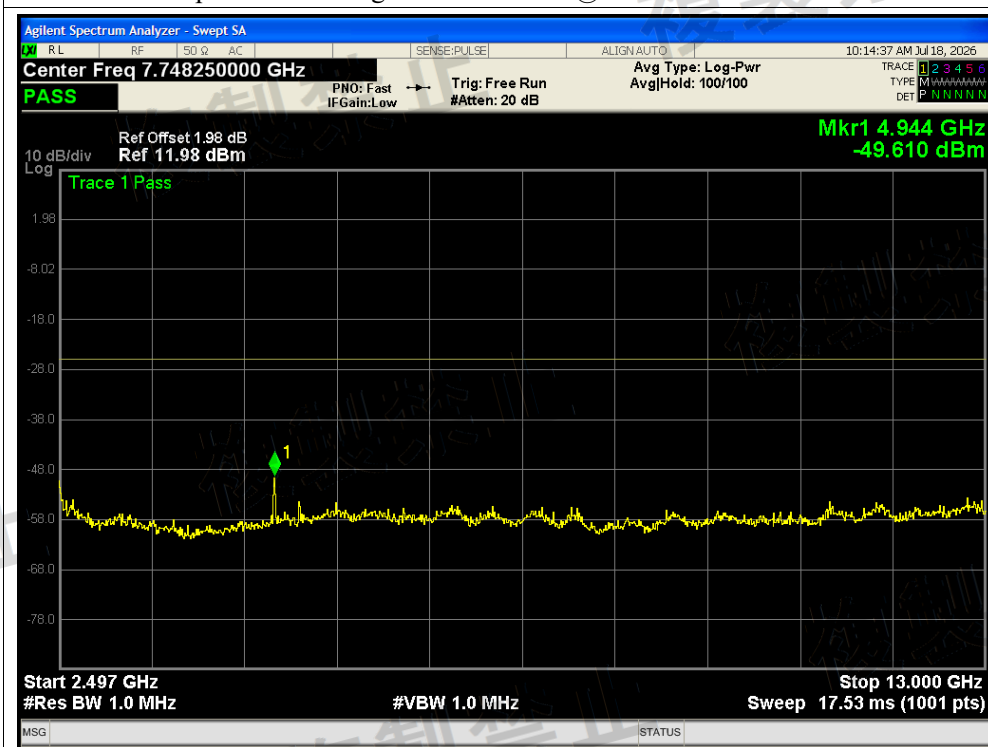




Tx. Spurious NVNT g 2472MHz Ant1 @ 2483.5MHz-2496.5MHz

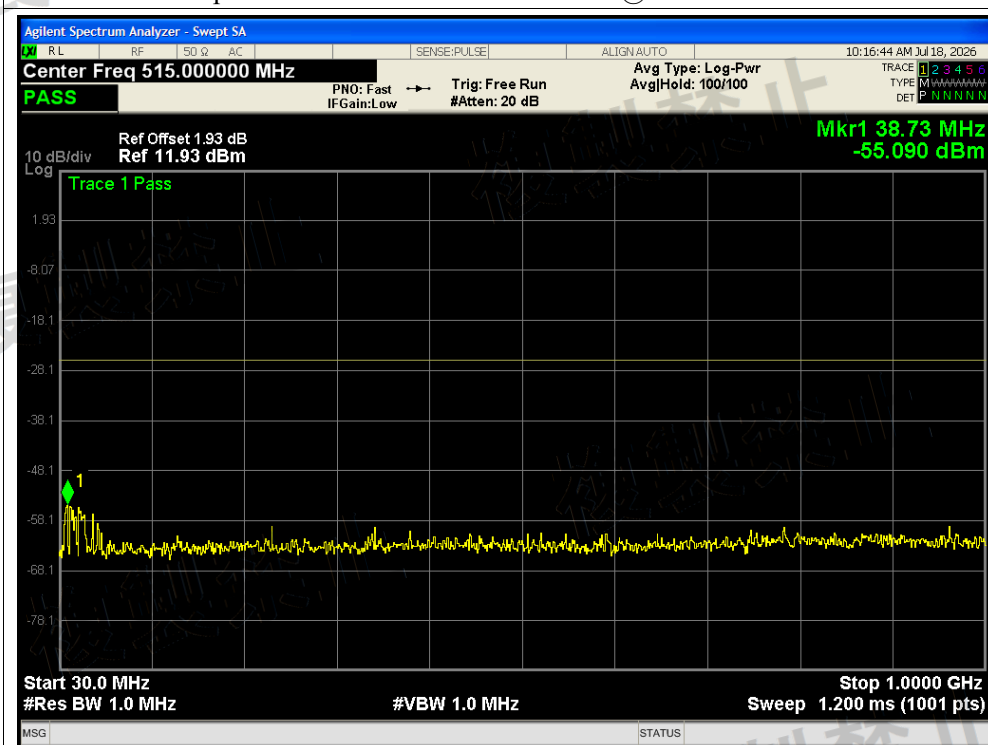


Tx. Spurious NVNT g 2472MHz Ant1 @ 2496.5MHz-13000MHz

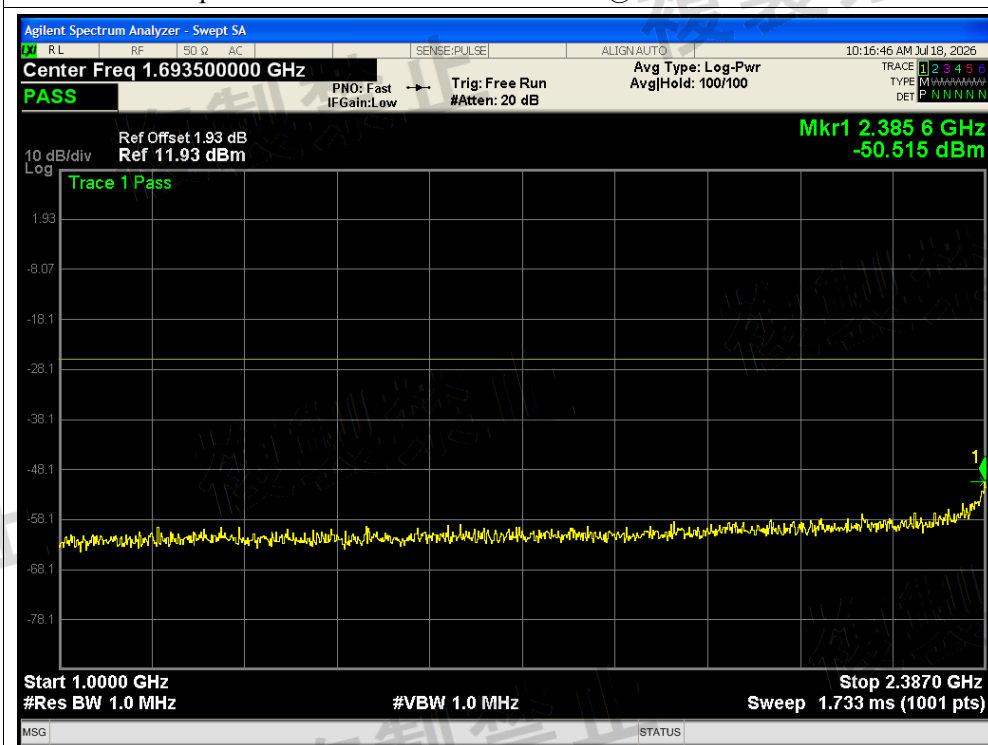




Tx. Spurious NVNT n20 2412MHz Ant1 @ 30MHz-1000MHz

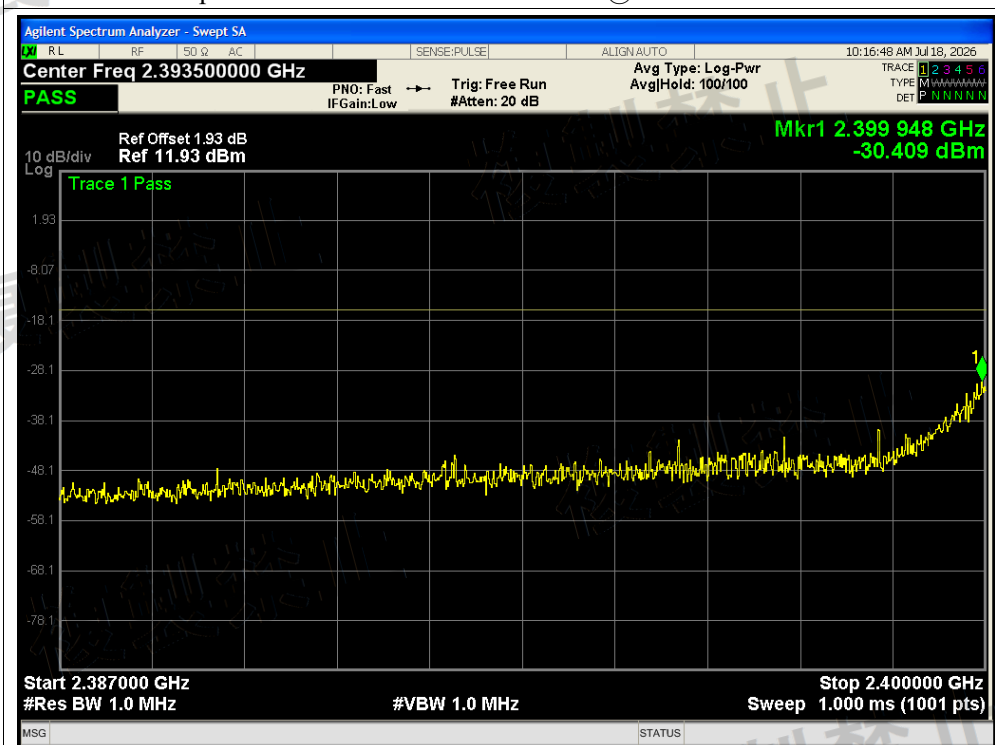


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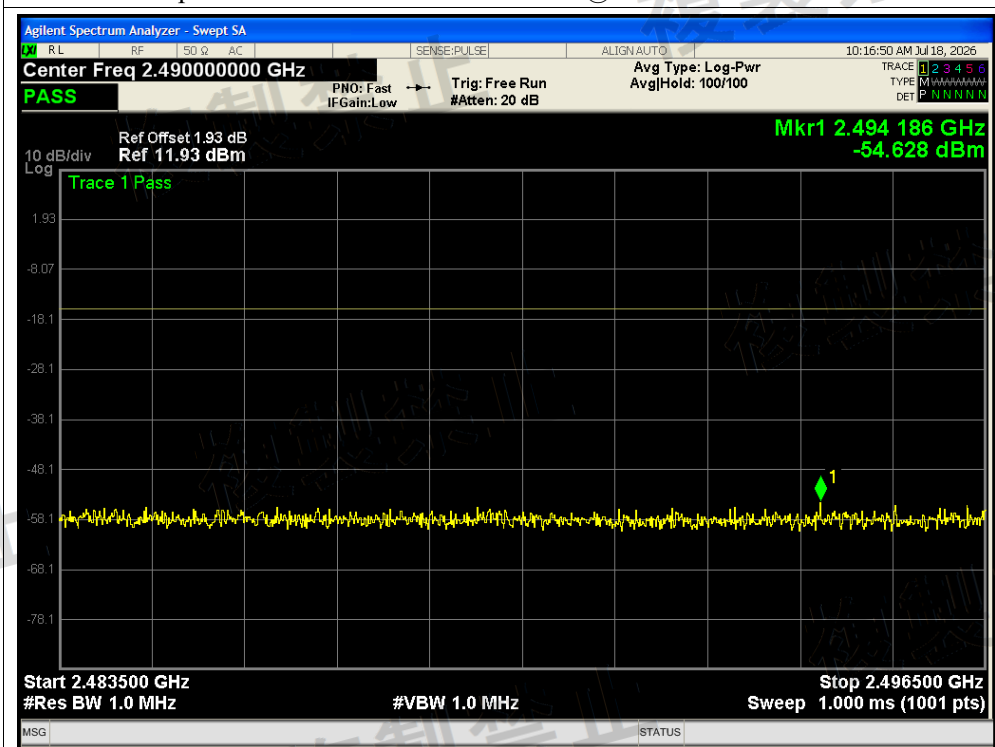




Tx. Spurious NVNT n20 2412MHz Ant1 @ 2387MHz-2400MHz

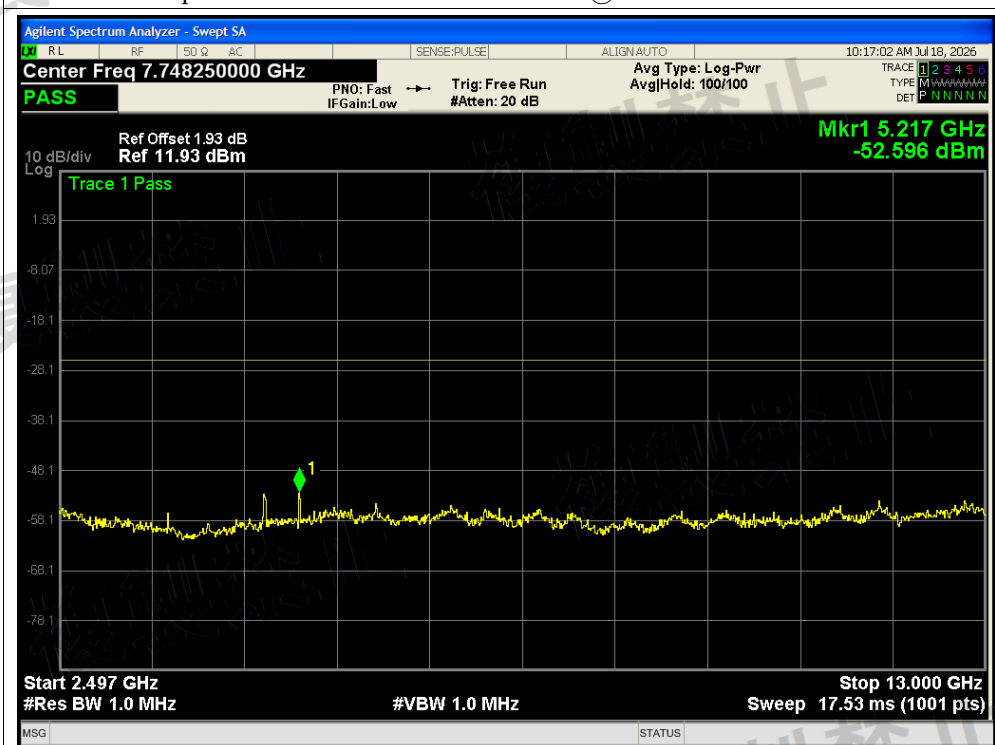


Tx. Spurious NVNT n20 2412MHz Ant1 @ 2483.5MHz-2496.5MHz

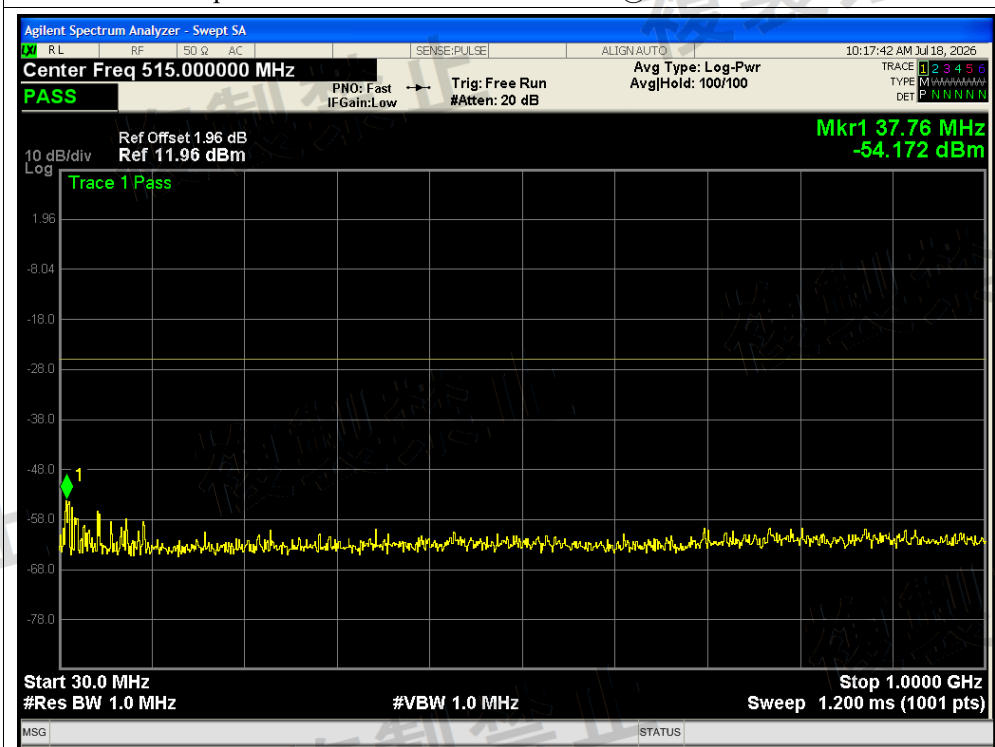




Tx. Spurious NVNT n20 2412MHz Ant1 @ 2496.5MHz-13000MHz

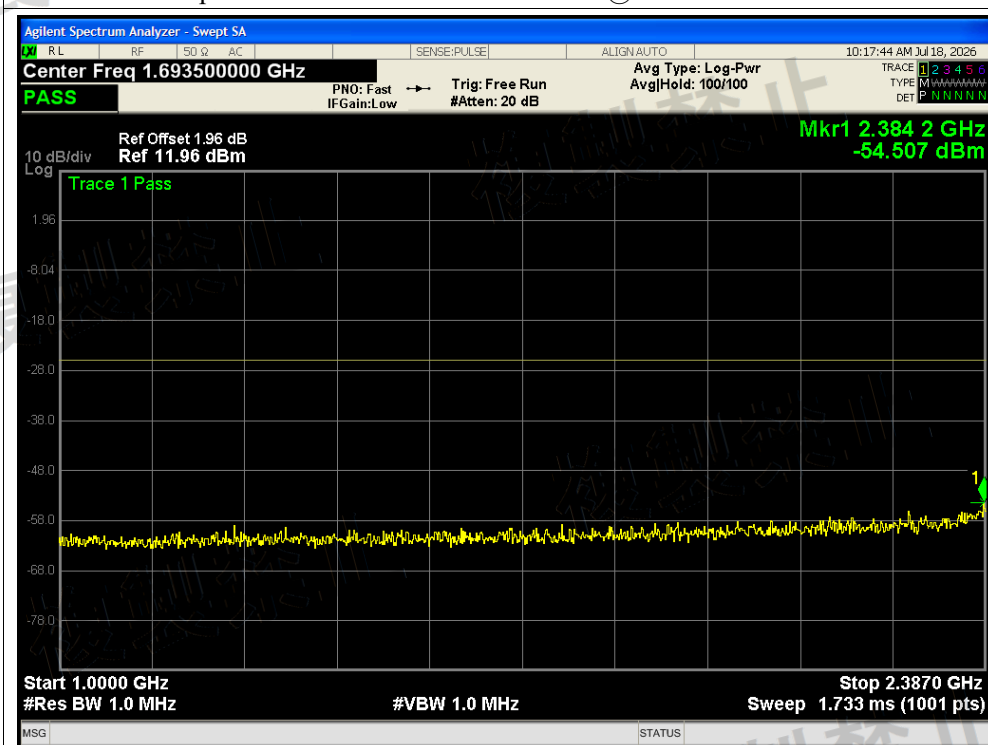


Tx. Spurious NVNT n20 2442MHz Ant1 @ 30MHz-1000MHz

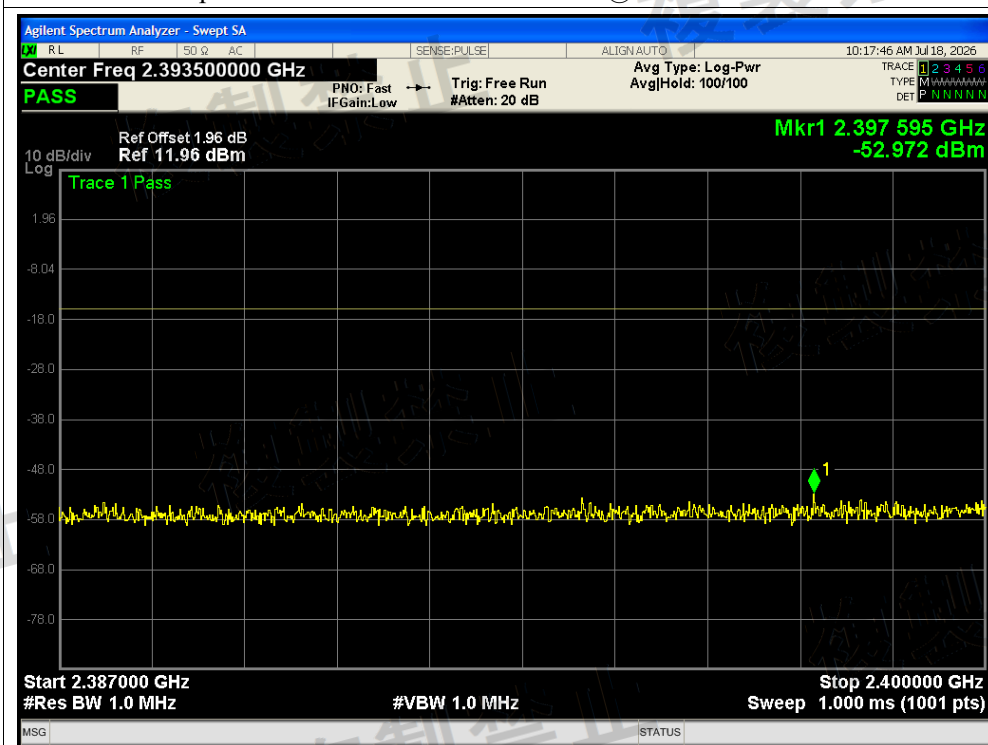




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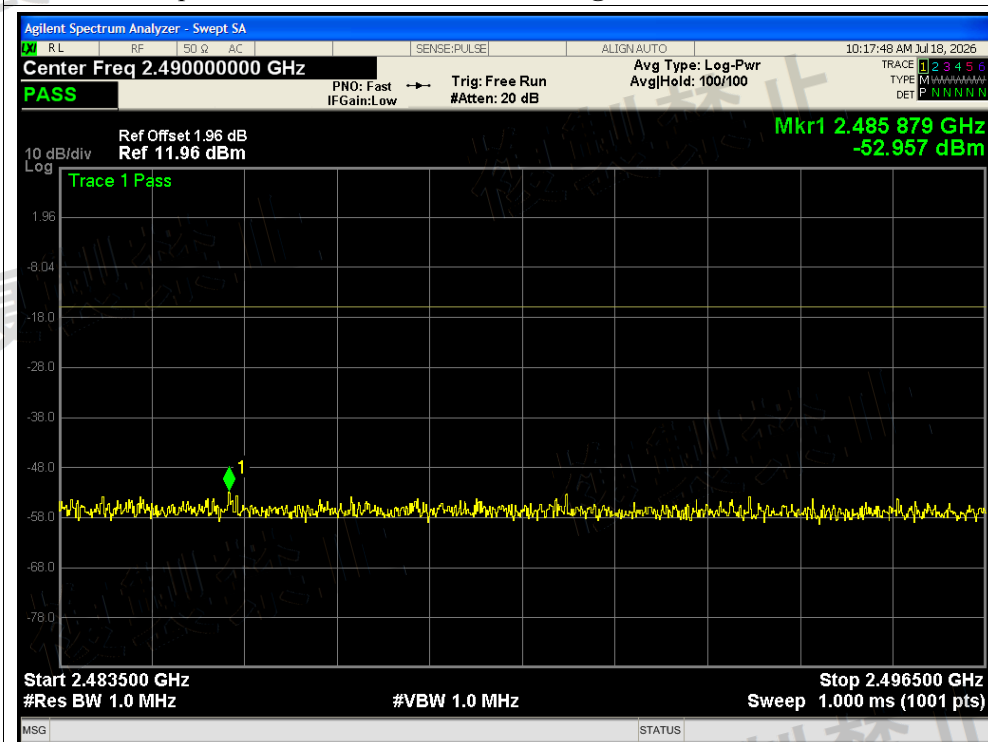


Tx. Spurious NVNT n20 2442MHz Ant1 @ 2387MHz-2400MHz

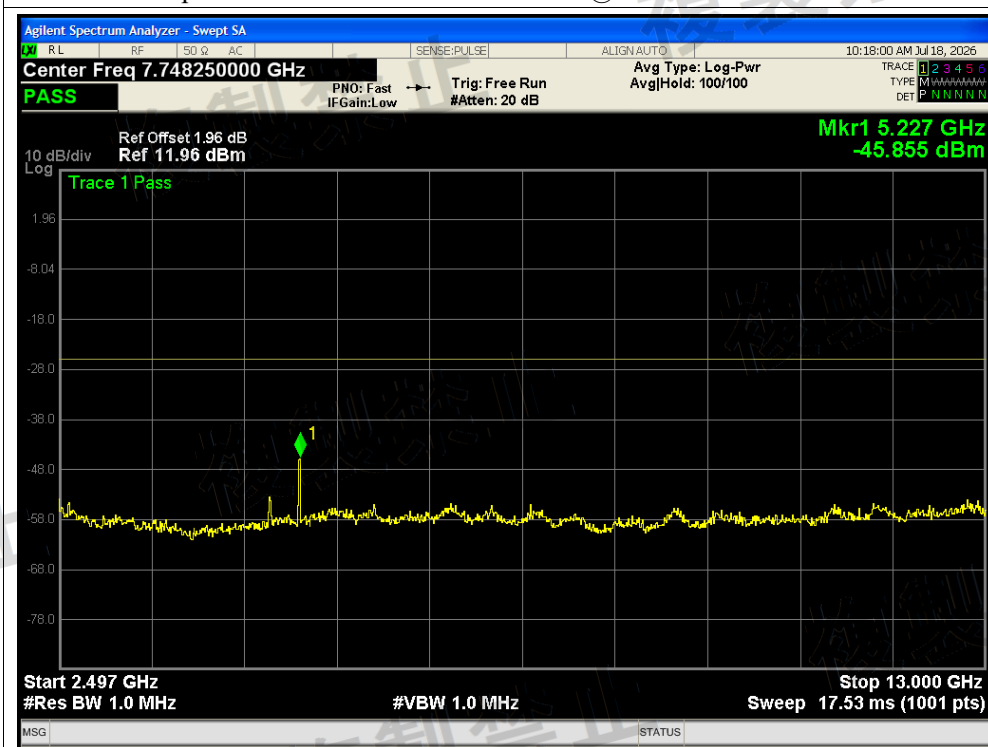




Tx. Spurious NVNT n20 2442MHz Ant1 @ 2483.5MHz-2496.5MHz

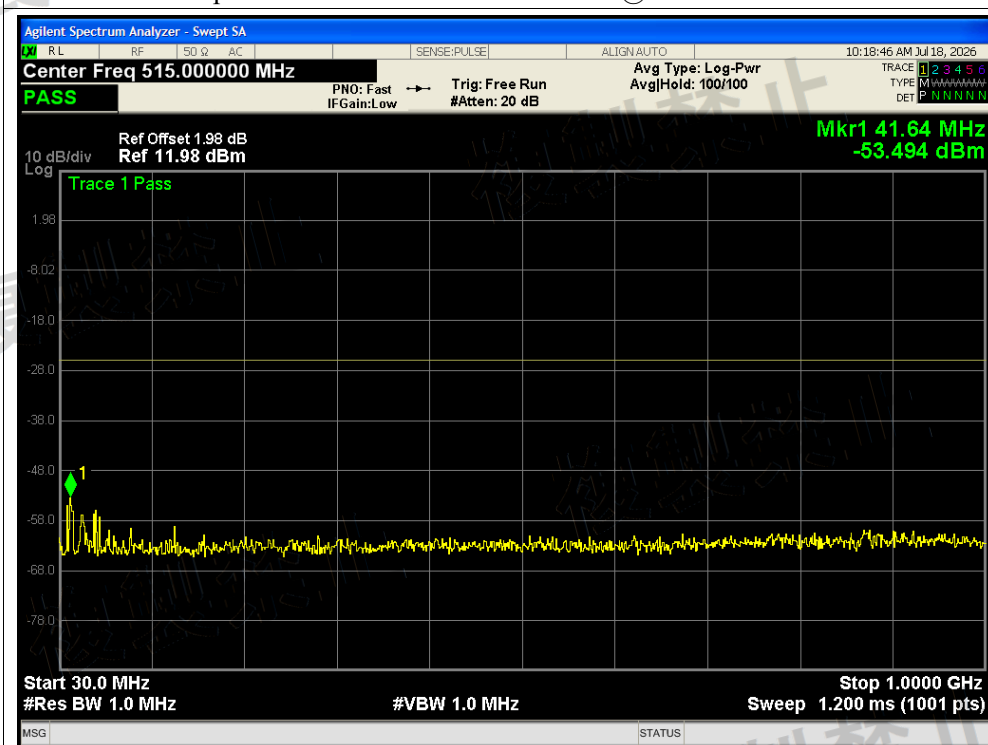


Tx. Spurious NVNT n20 2442MHz Ant1 @ 2496.5MHz-13000MHz

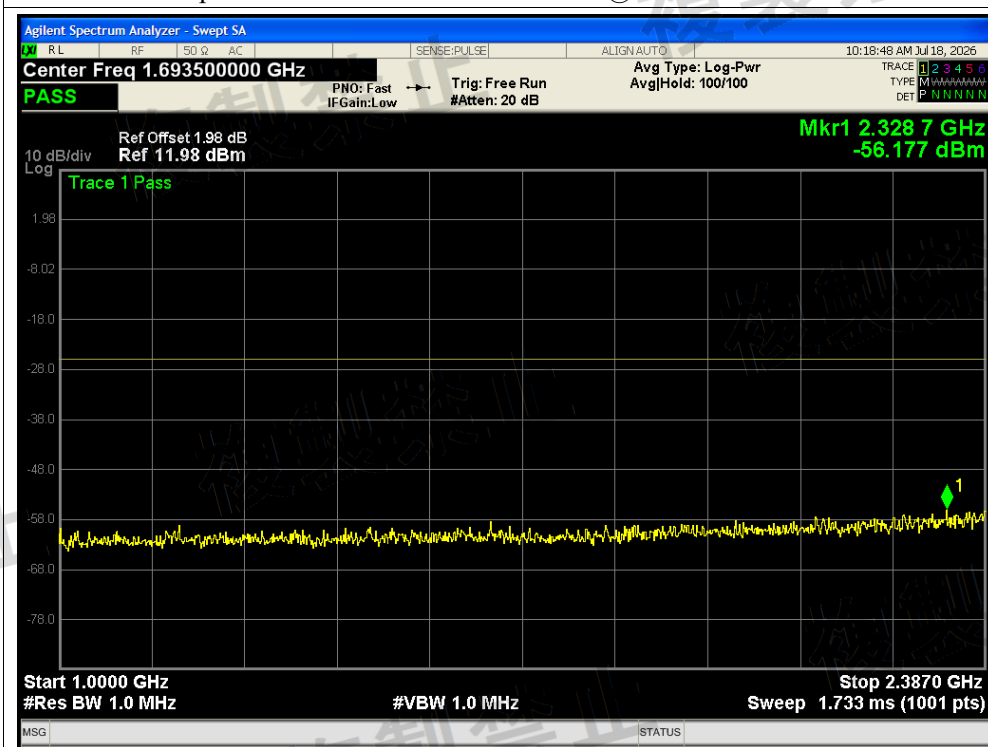




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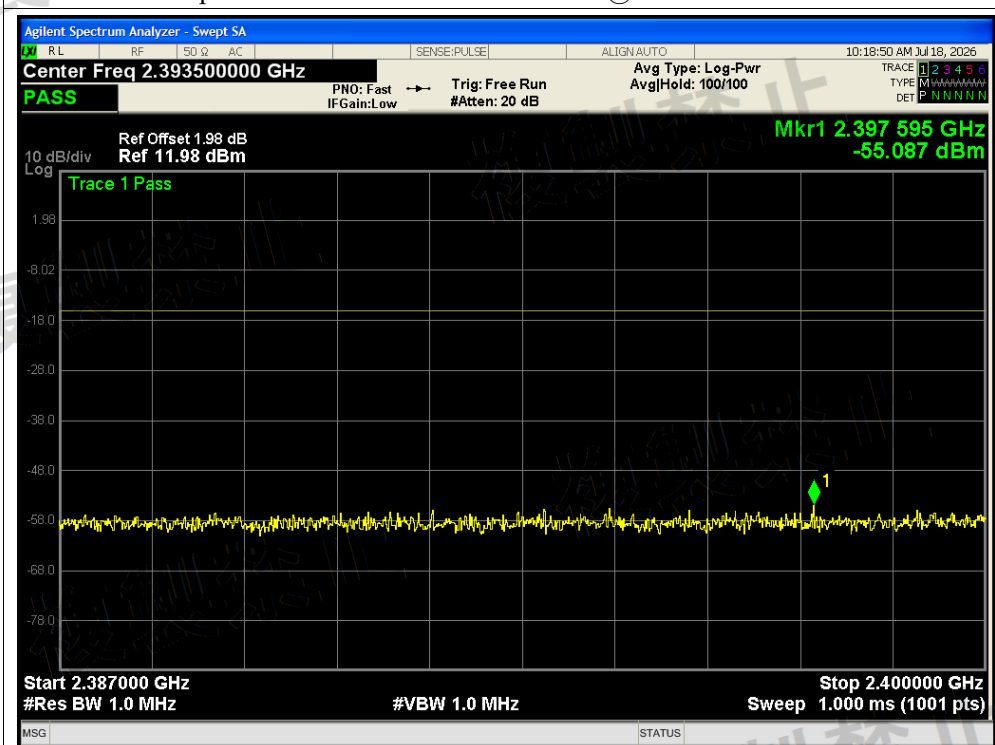


Tx. Spurious NVNT n20 2472MHz Ant1 @ 1000MHz-2387MHz

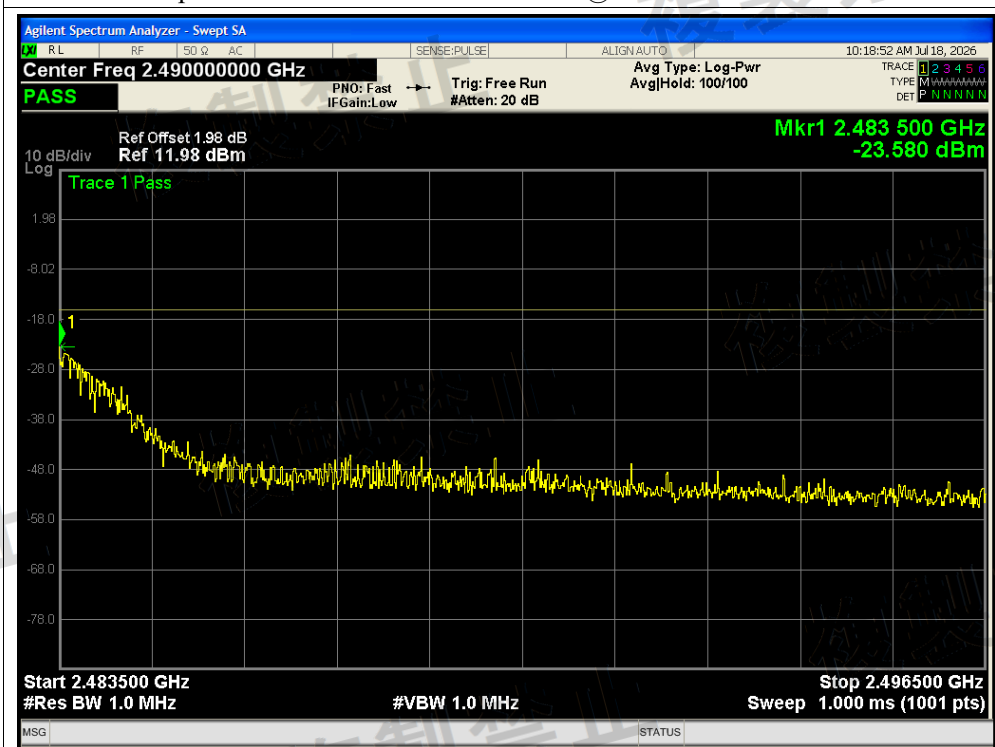




Tx. Spurious NVNT n20 2472MHz Ant1 @ 2387MHz-2400MHz

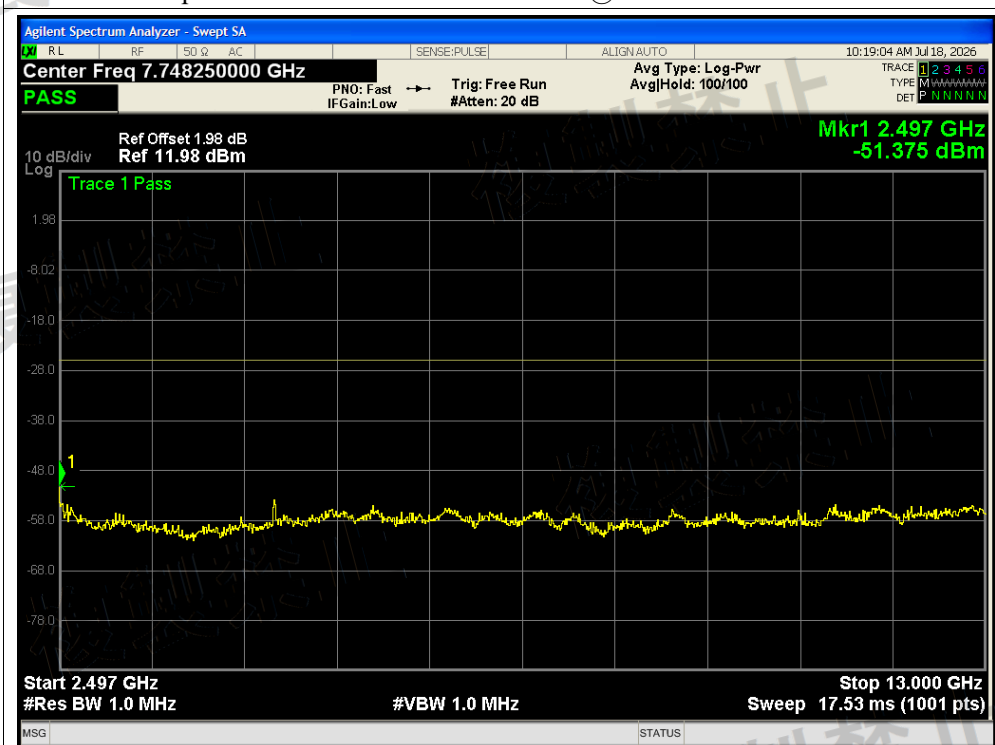


Tx. Spurious NVNT n20 2472MHz Ant1 @ 2483.5MHz-2496.5MHz

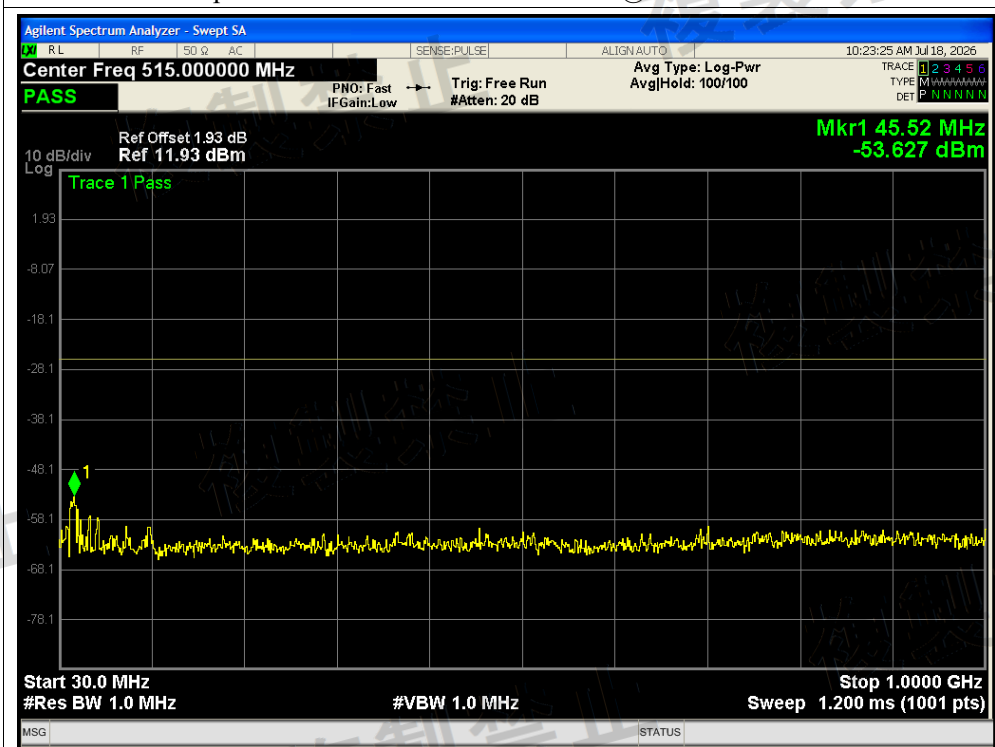




Tx. Spurious NVNT n20 2472MHz Ant1 @ 2496.5MHz-13000MHz

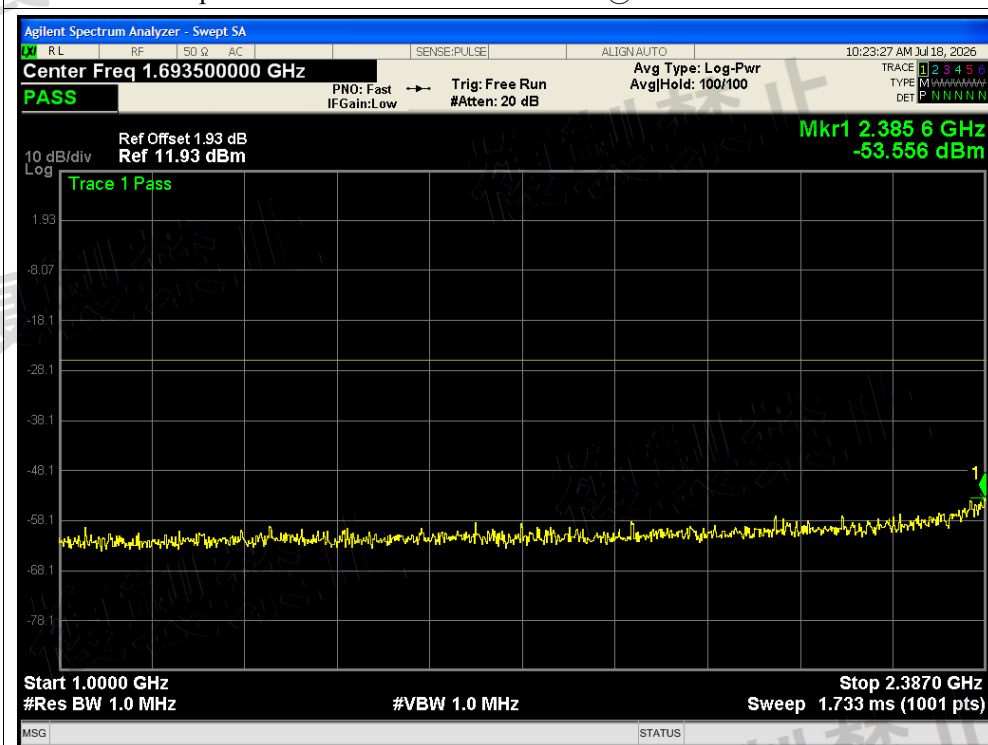


Tx. Spurious NVNT n40 2422MHz Ant1 @ 30MHz-1000MHz

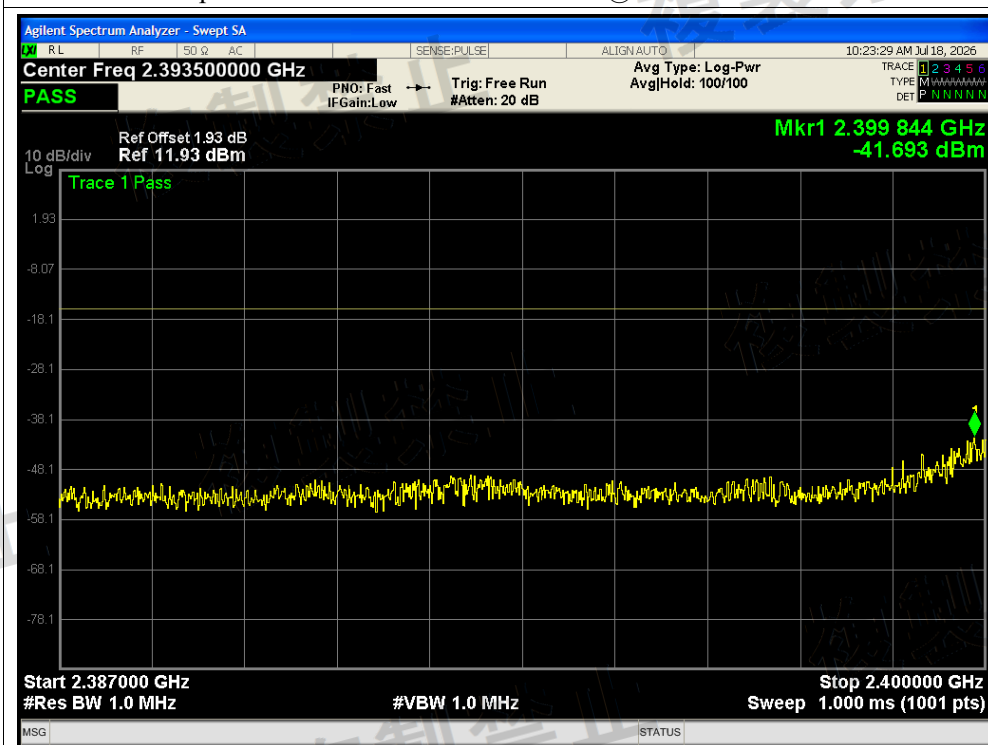




Tx. Spurious NVNT n40 2422MHz Ant1 @ 1000MHz-2387MHz

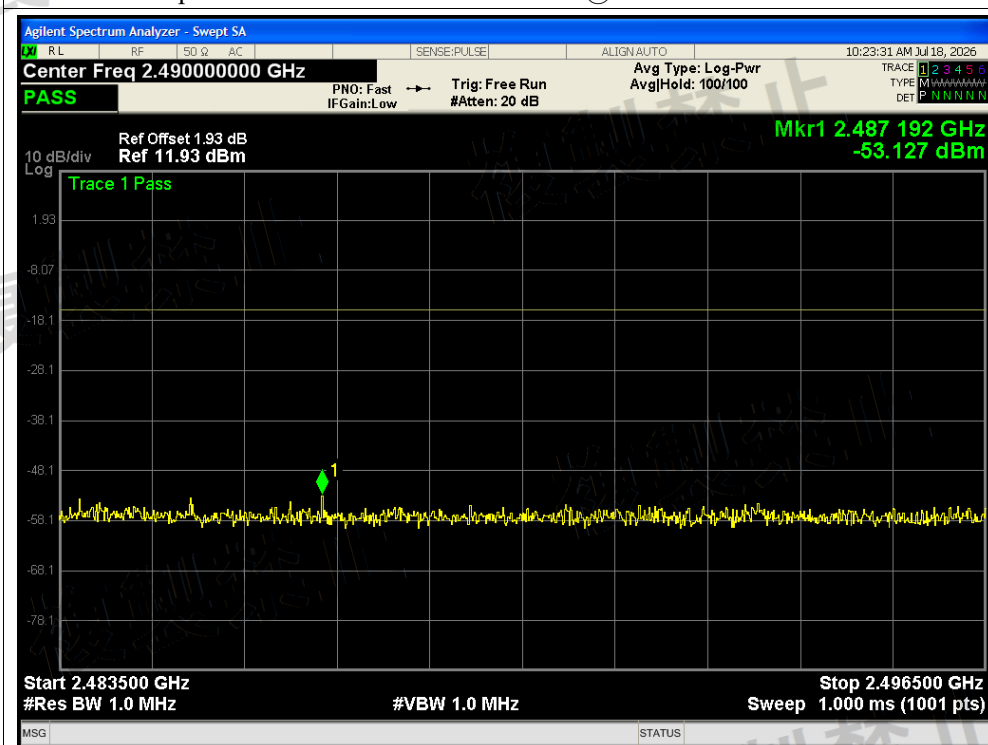


Tx. Spurious NVNT n40 2422MHz Ant1 @ 2387MHz-2400MHz

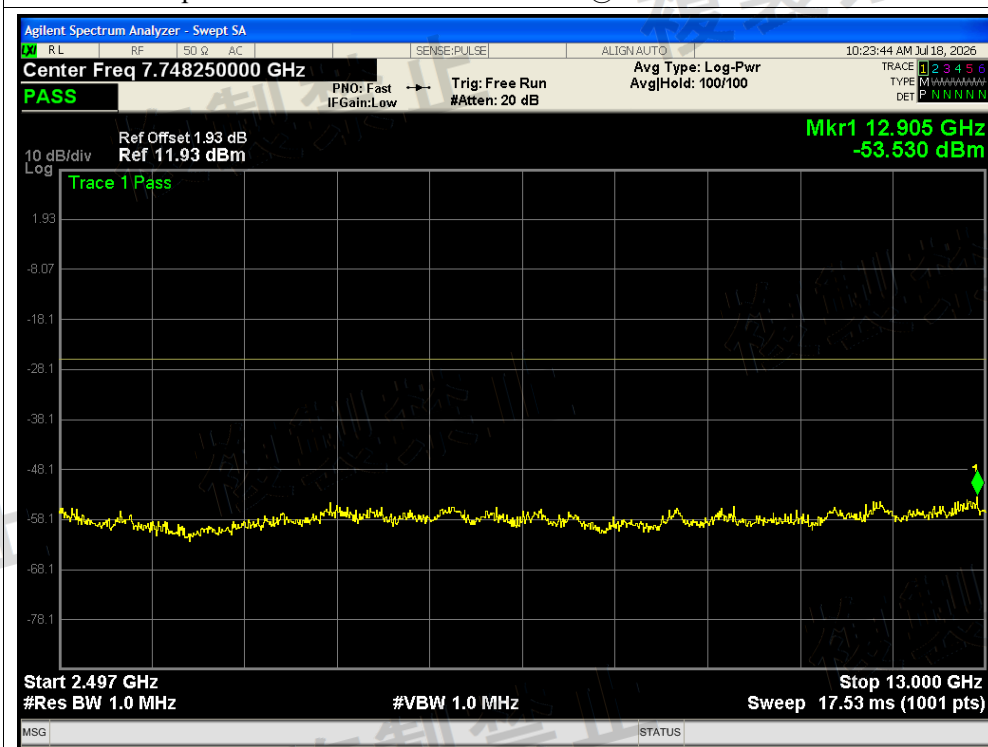




Tx. Spurious NVNT n40 2422MHz Ant1 @ 2483.5MHz-2496.5MHz

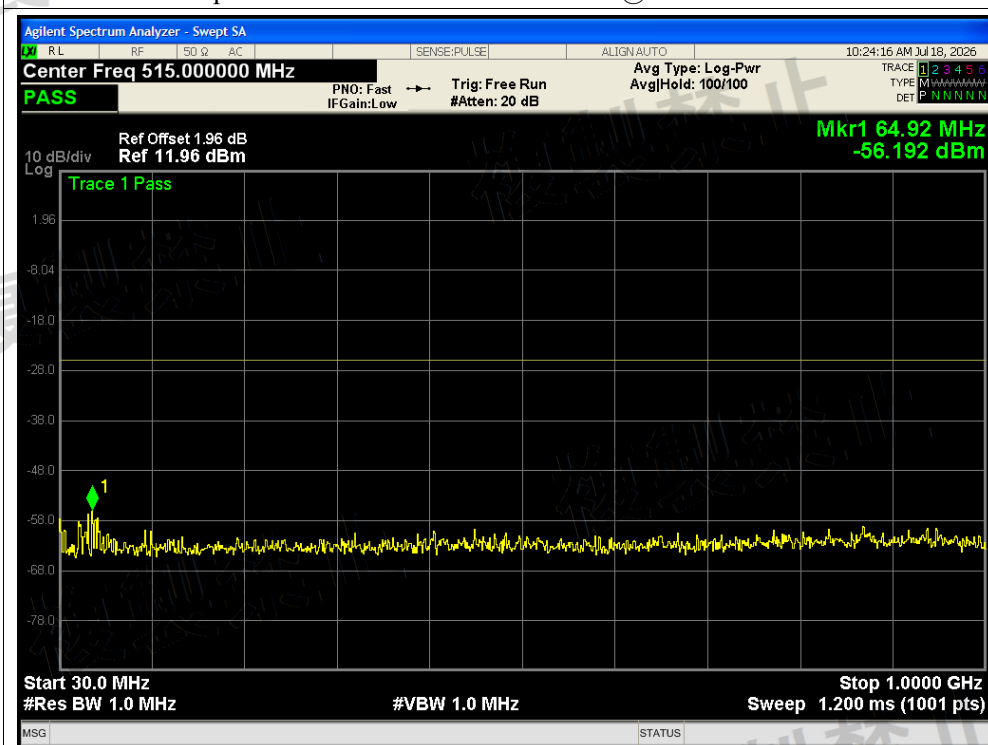


Tx. Spurious NVNT n40 2422MHz Ant1 @ 2496.5MHz-13000MHz

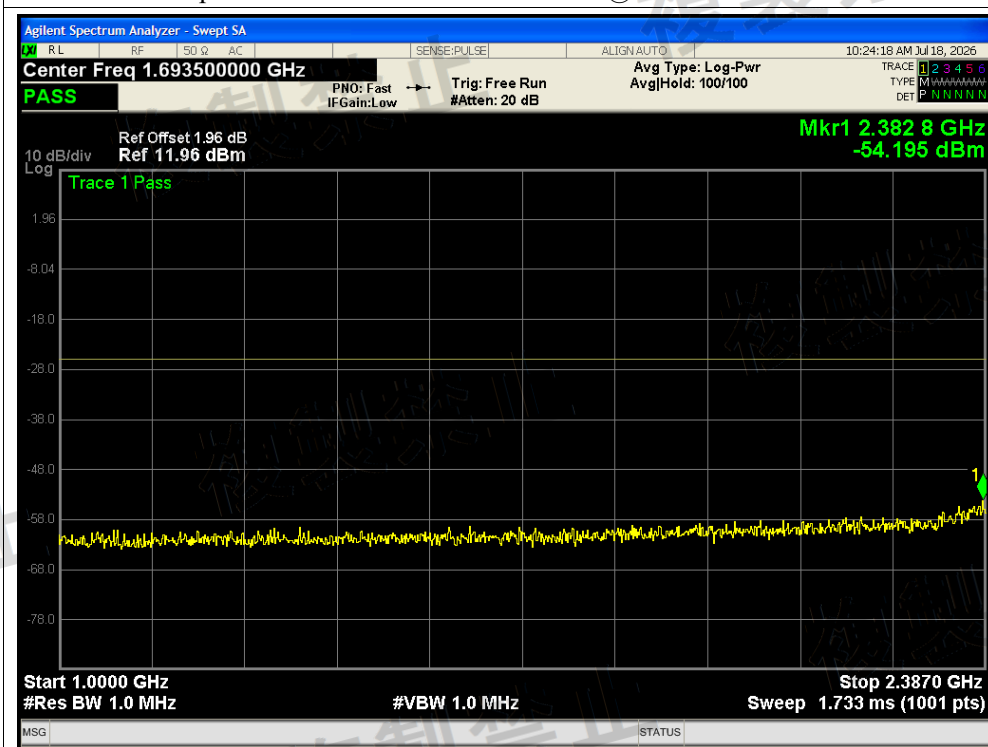




Tx. Spurious NVNT n40 2442MHz Ant1 @ 30MHz-1000MHz

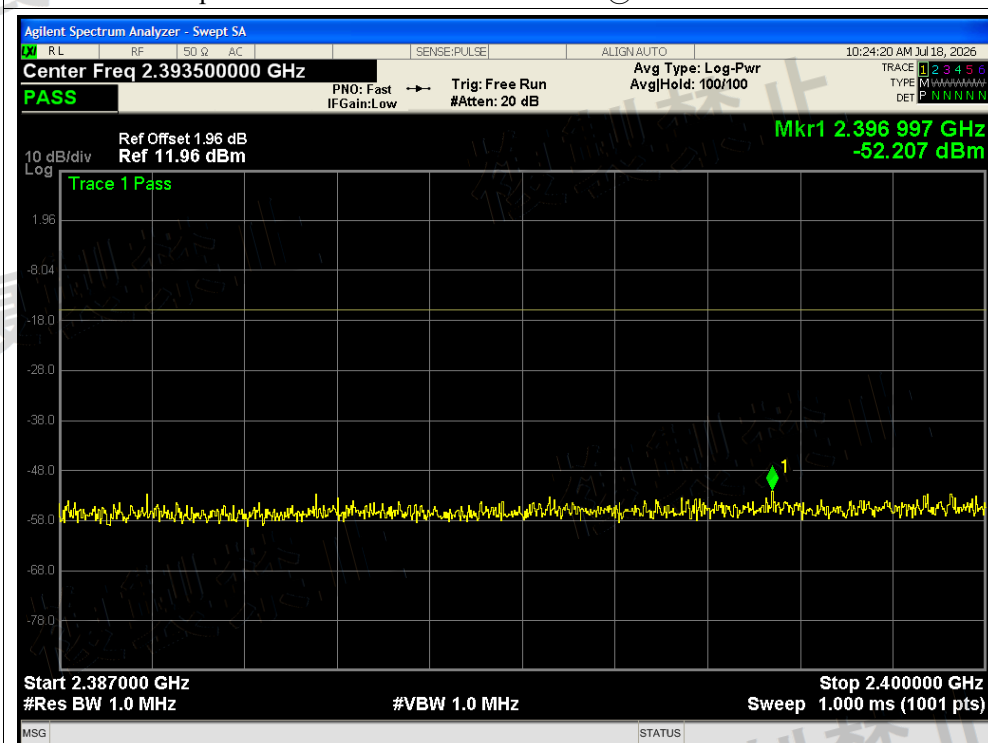


Tx. Spurious NVNT n40 2442MHz Ant1 @ 1000MHz-2387MHz

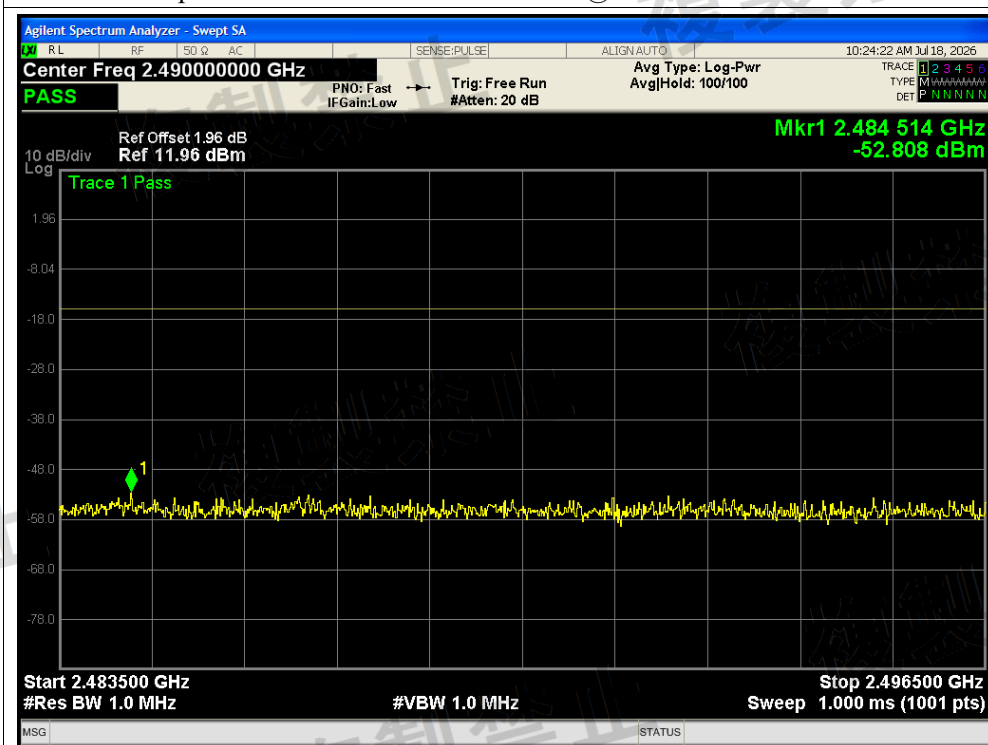




Tx. Spurious NVNT n40 2442MHz Ant1 @ 2387MHz-2400MHz

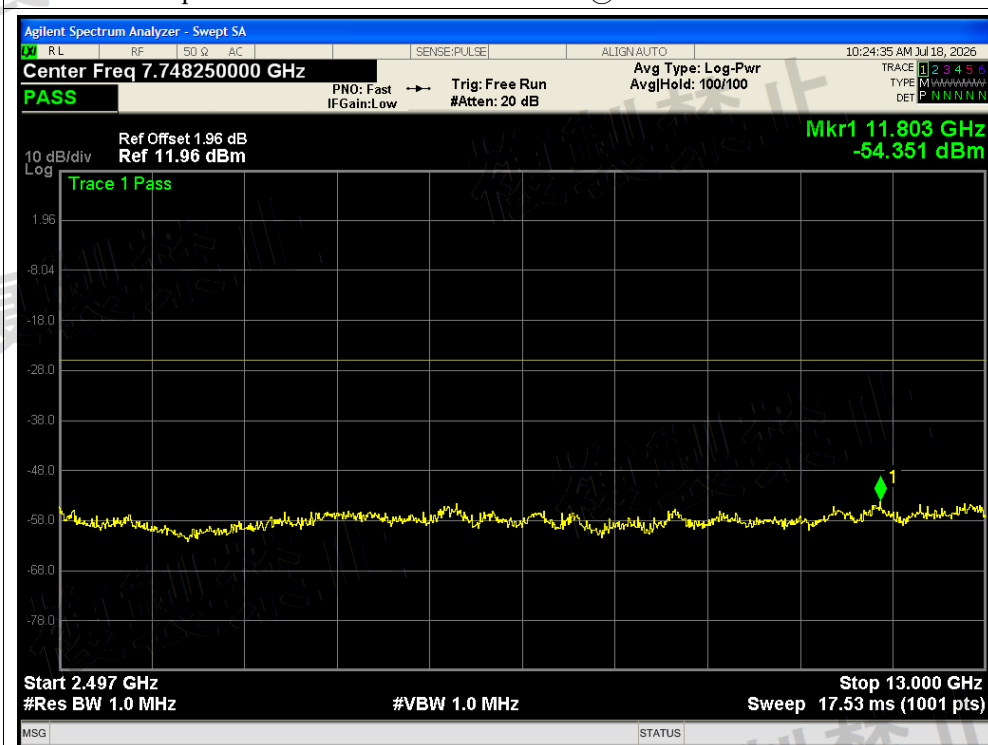


Tx. Spurious NVNT n40 2442MHz Ant1 @ 2483.5MHz-2496.5MHz

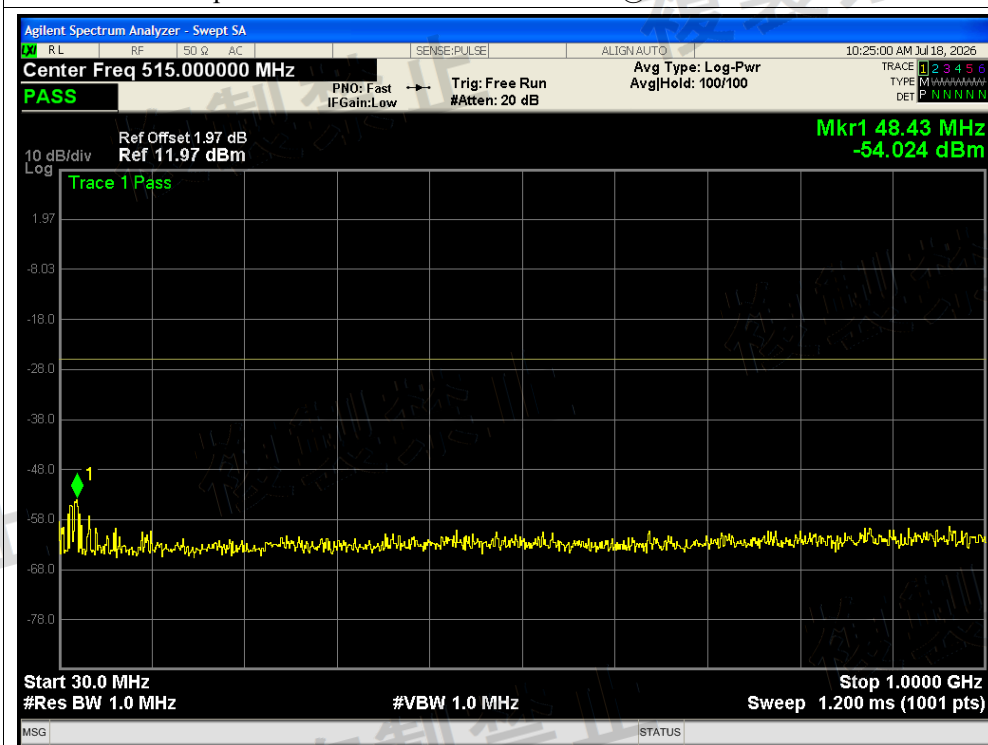




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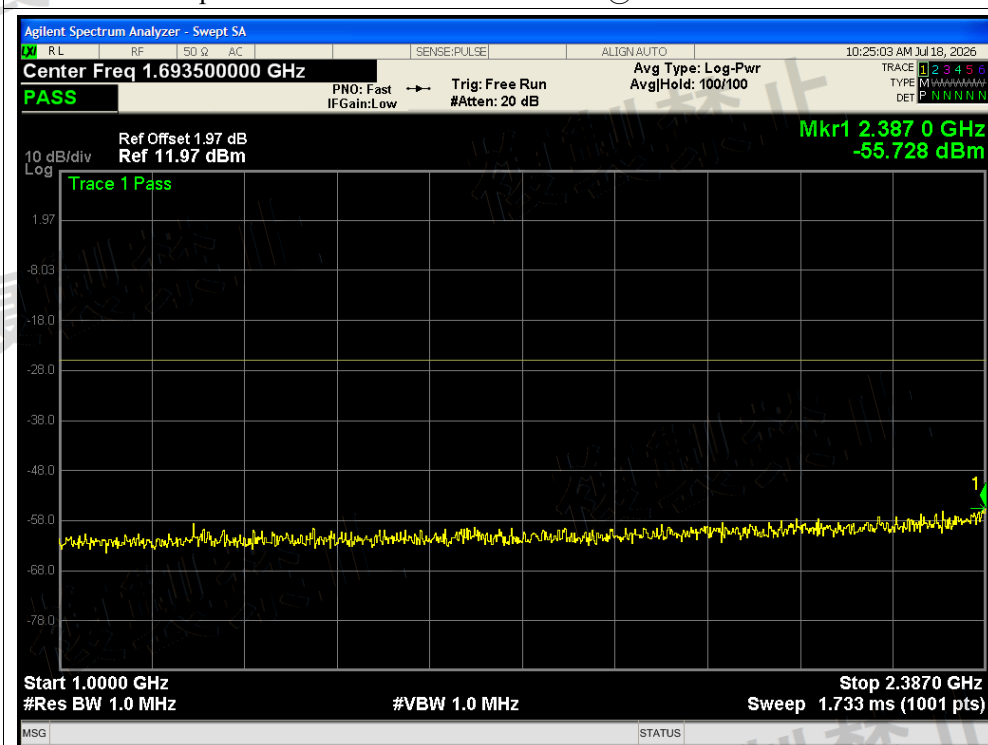


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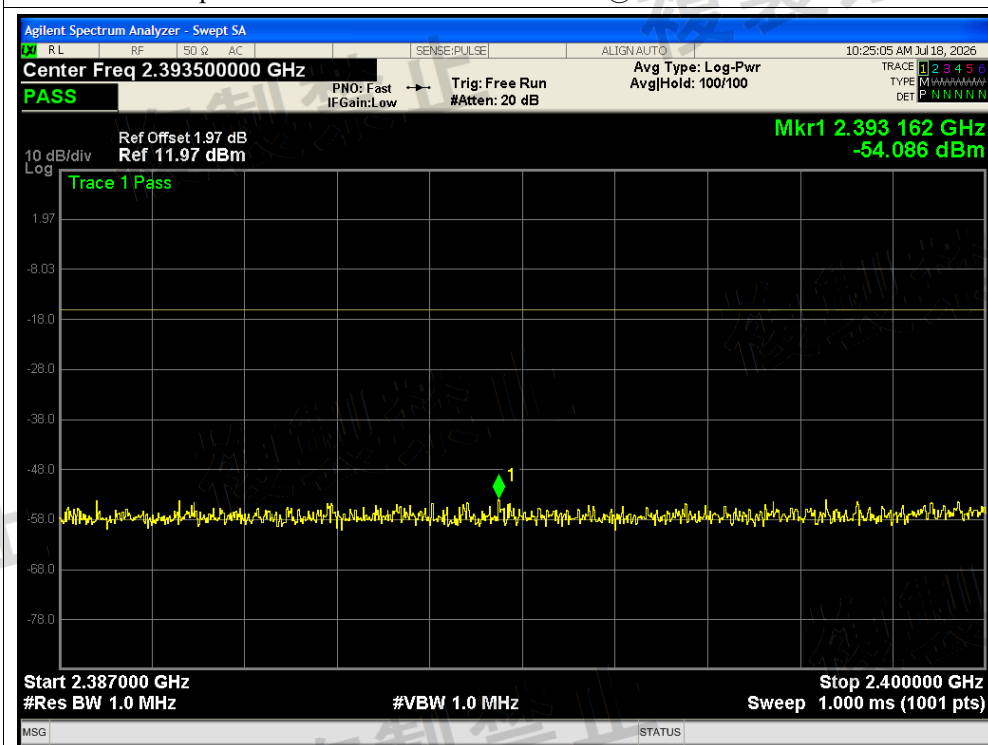




Tx. Spurious NVNT n40 2462MHz Ant1 @ 1000MHz-2387MHz

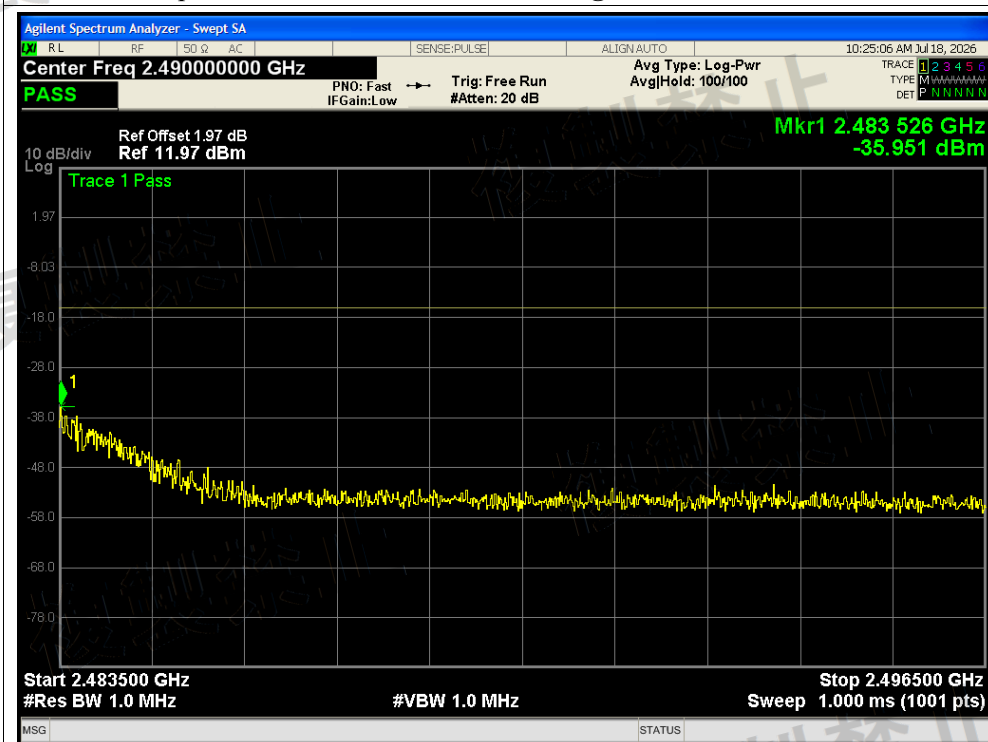


Tx. Spurious NVNT n40 2462MHz Ant1 @ 2387MHz-2400MHz

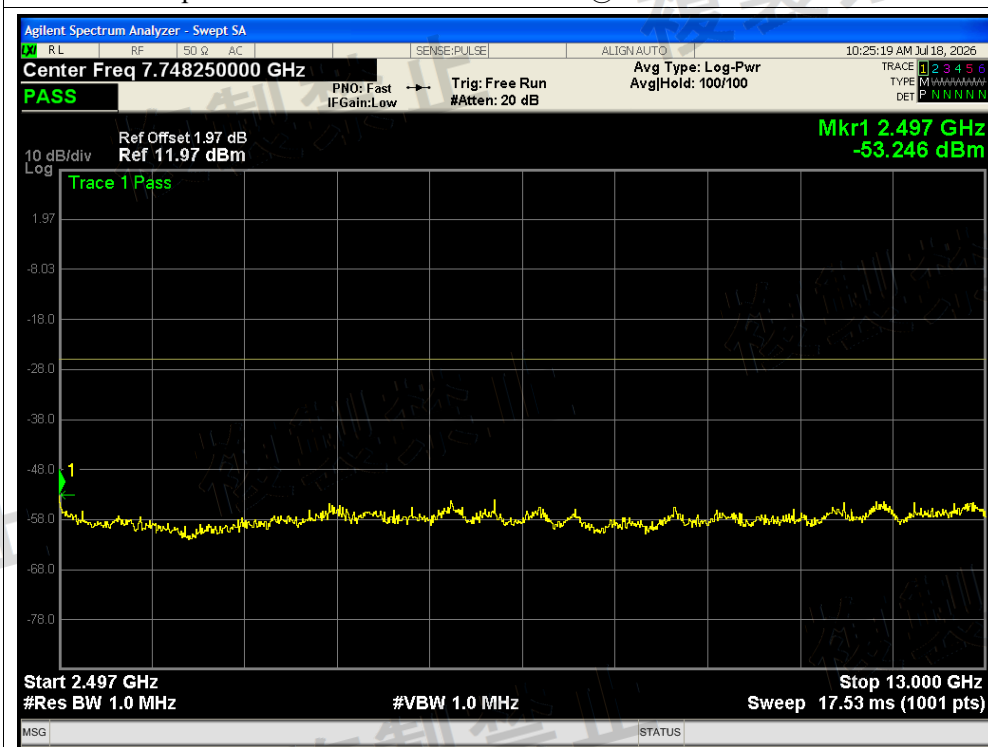




Tx. Spurious NVNT n40 2462MHz Ant1 @ 2483.5MHz-2496.5MHz

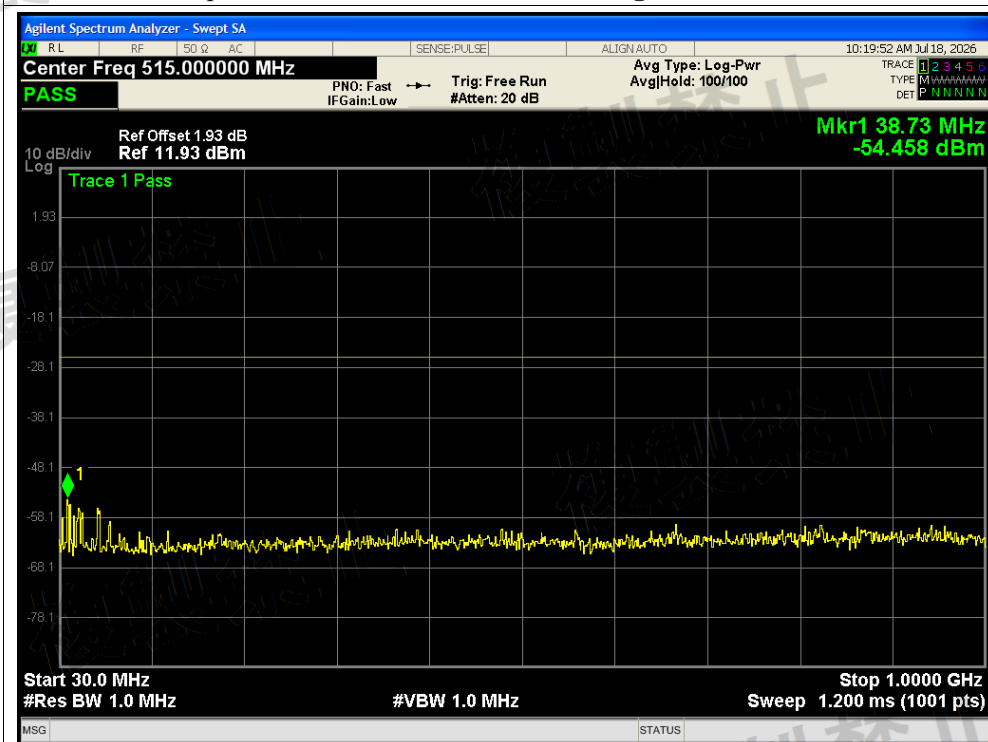


Tx. Spurious NVNT n40 2462MHz Ant1 @ 2496.5MHz-13000MHz

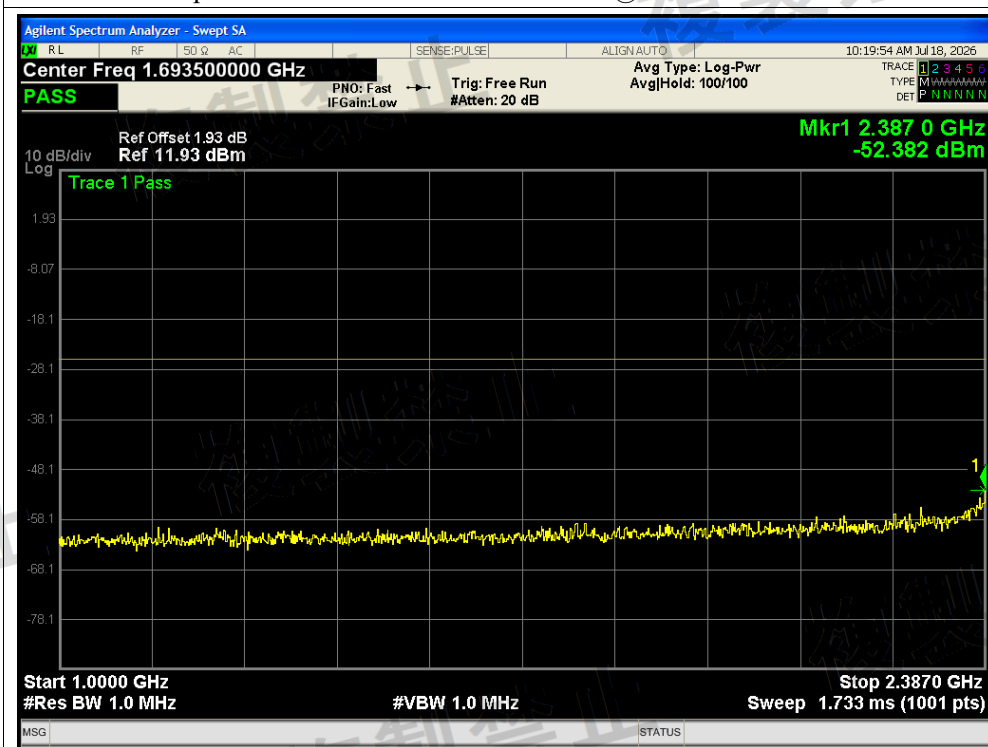




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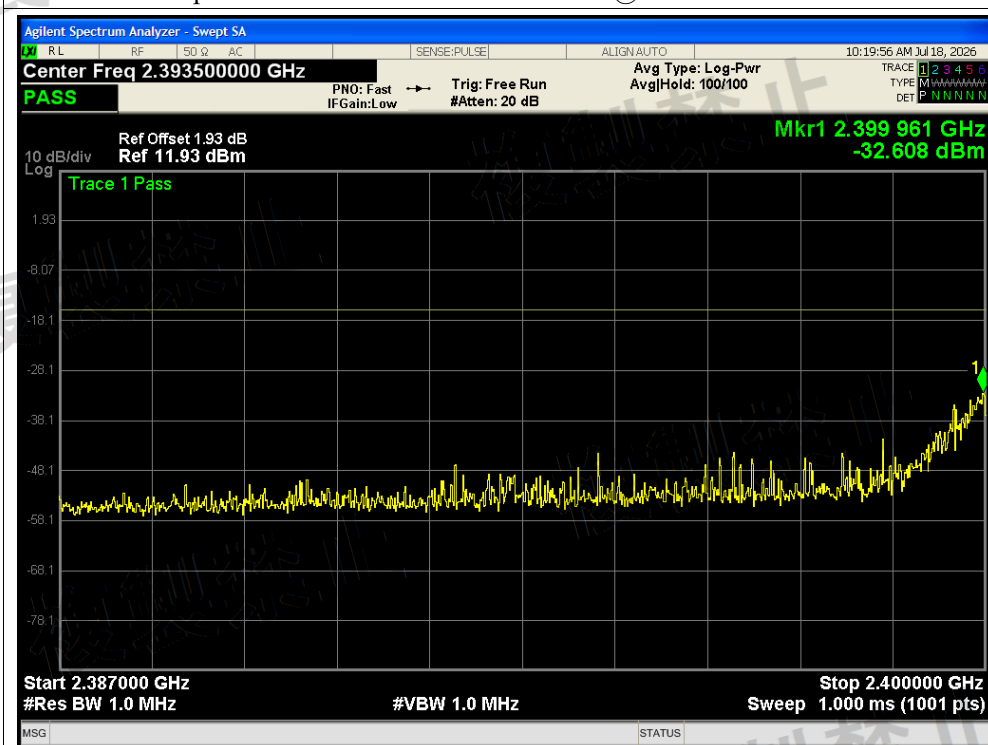


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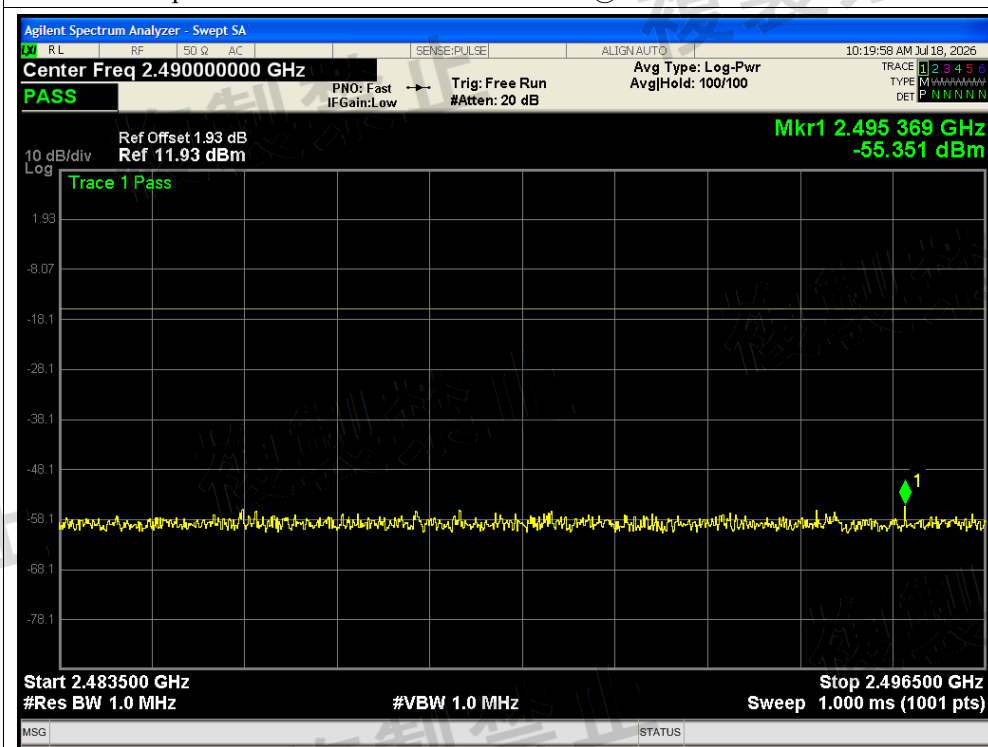




Tx. Spurious NVNT ax20 2412MHz Ant1 @ 2387MHz-2400MHz

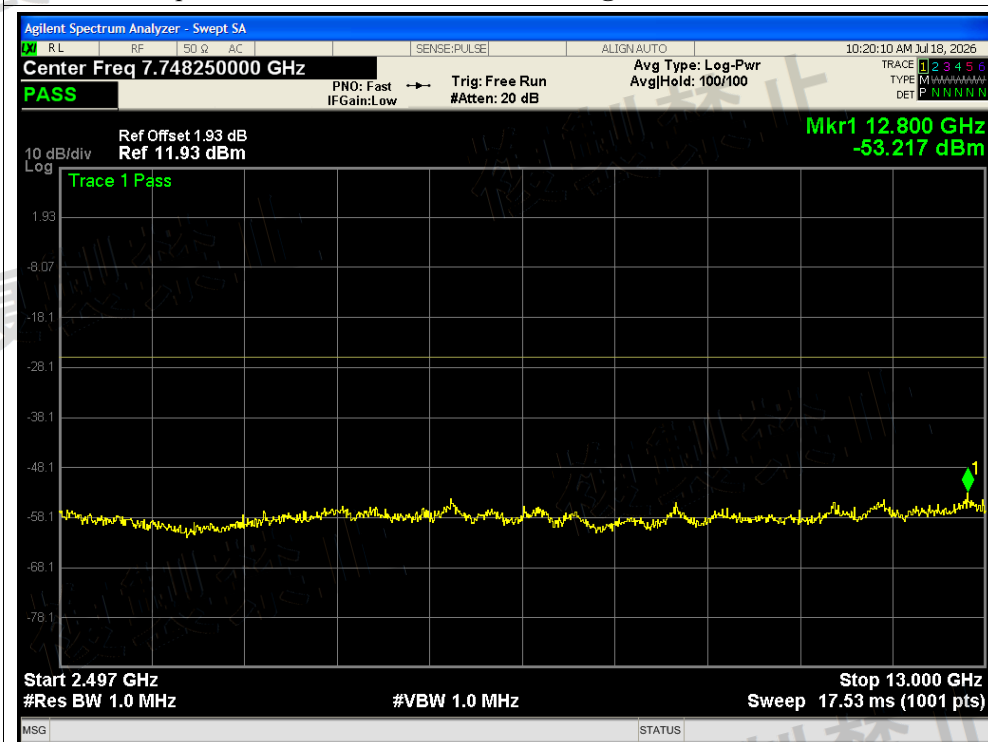


Tx. Spurious NVNT ax20 2412MHz Ant1 @ 2483.5MHz-2496.5MHz

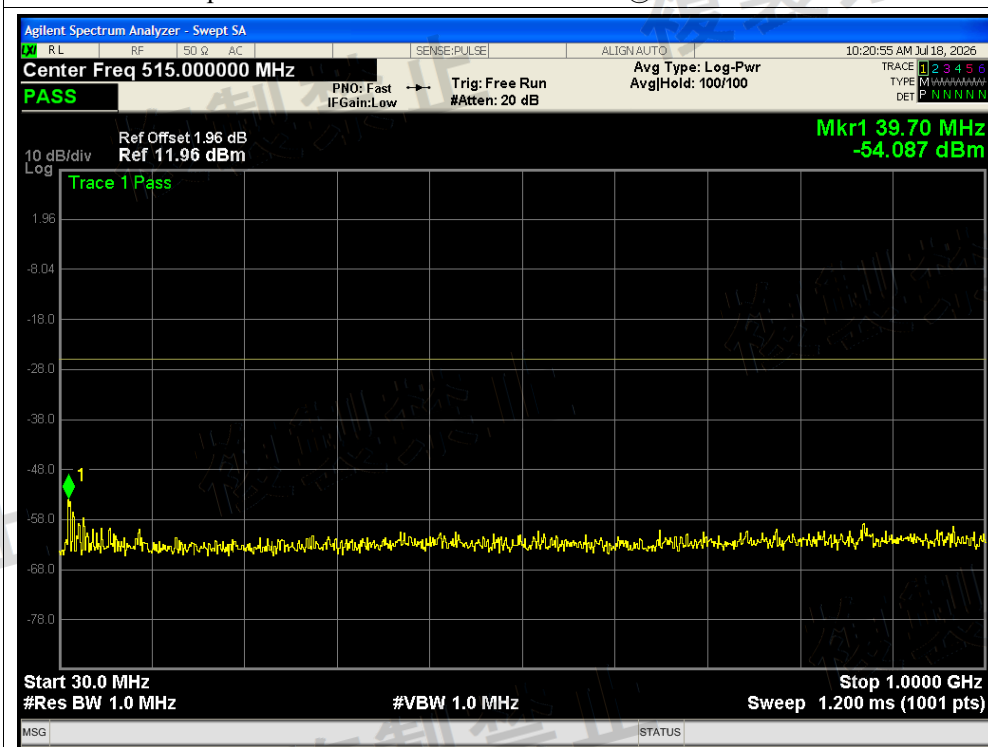




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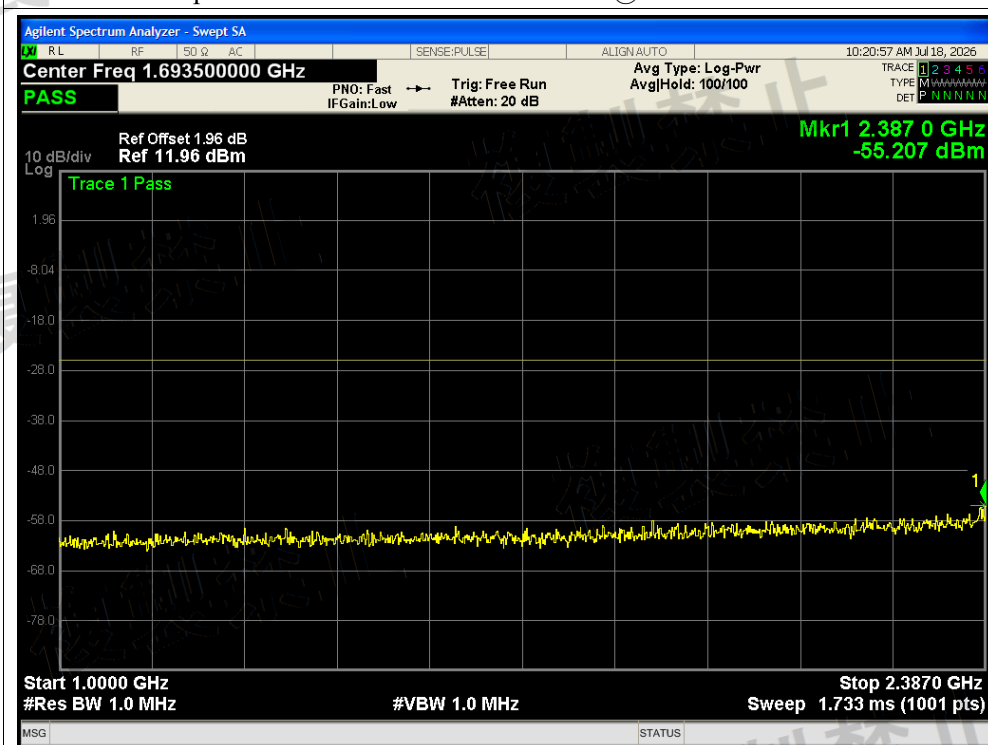


Tx. Spurious NVNT ax20 2442MHz Ant1 @ 30MHz-1000MHz

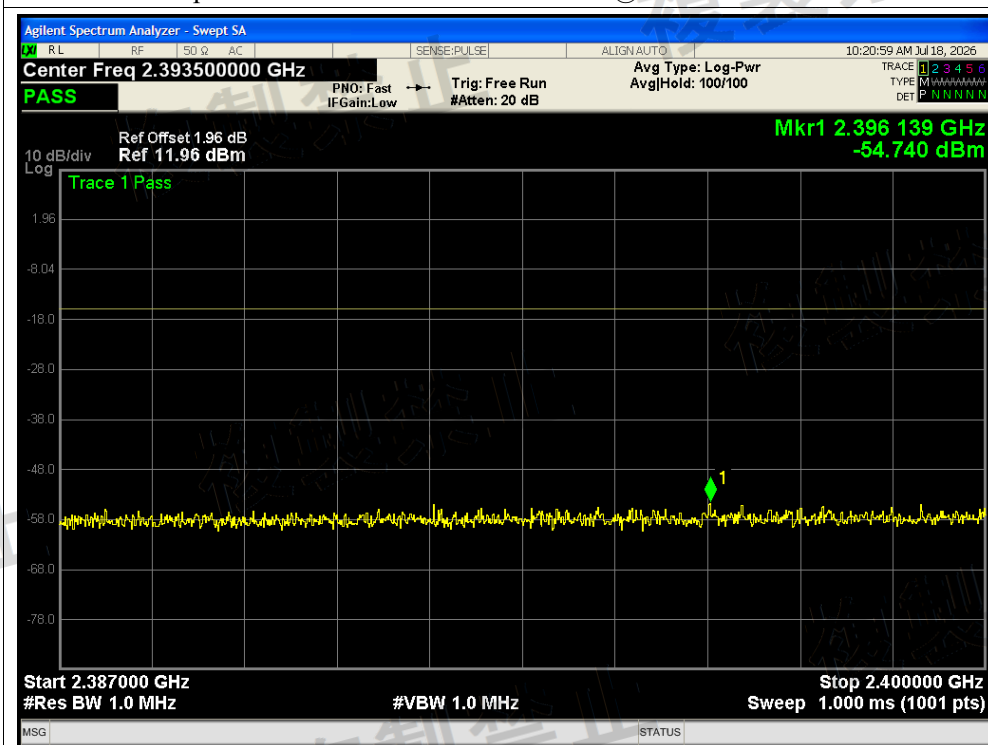




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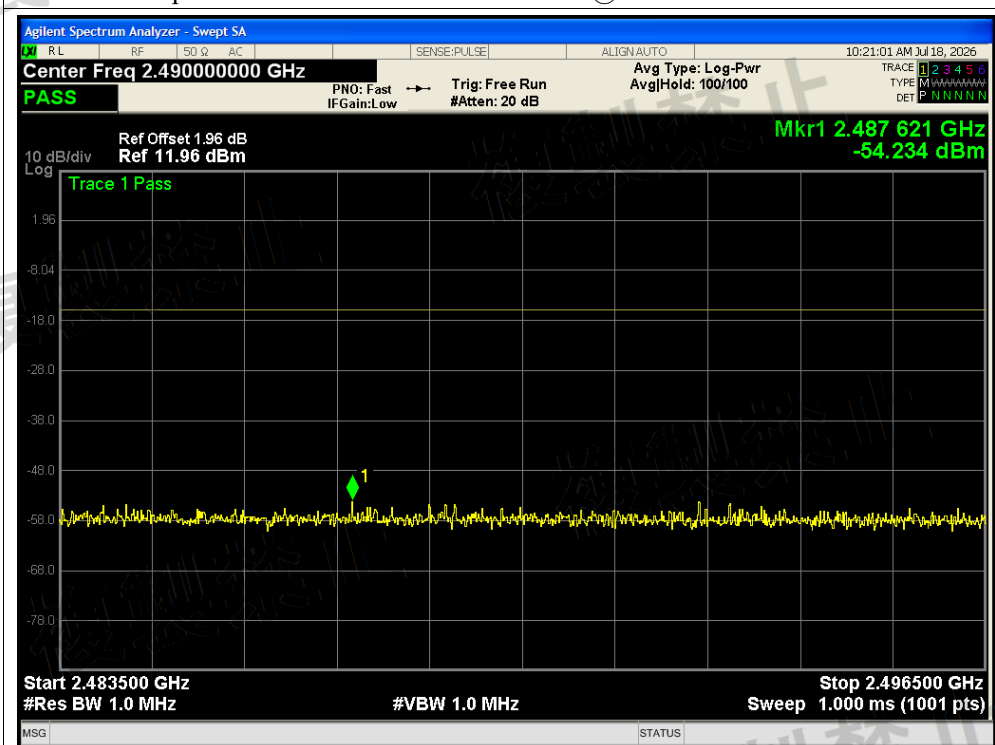


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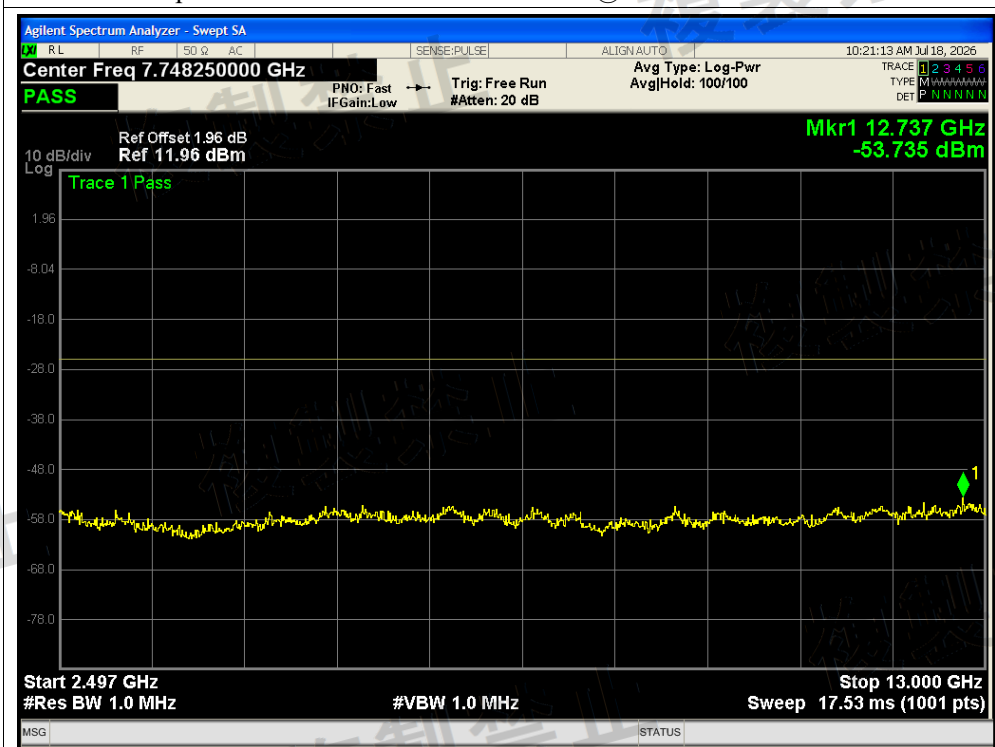




Tx. Spurious NVNT ax20 2442MHz Ant1 @ 2483.5MHz-2496.5MHz

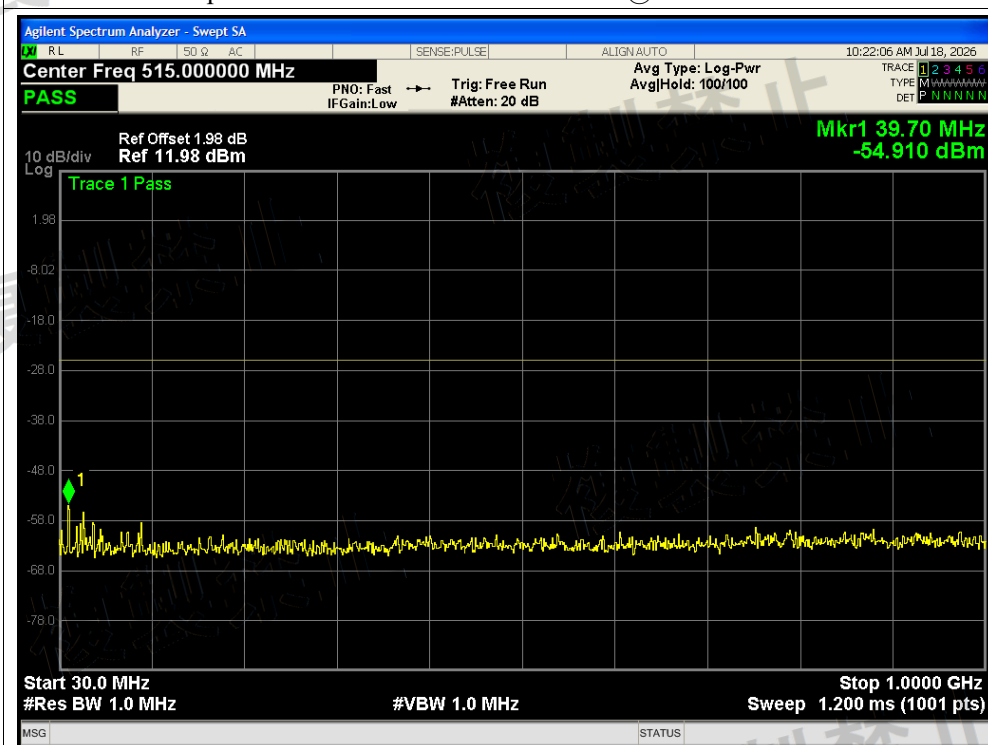


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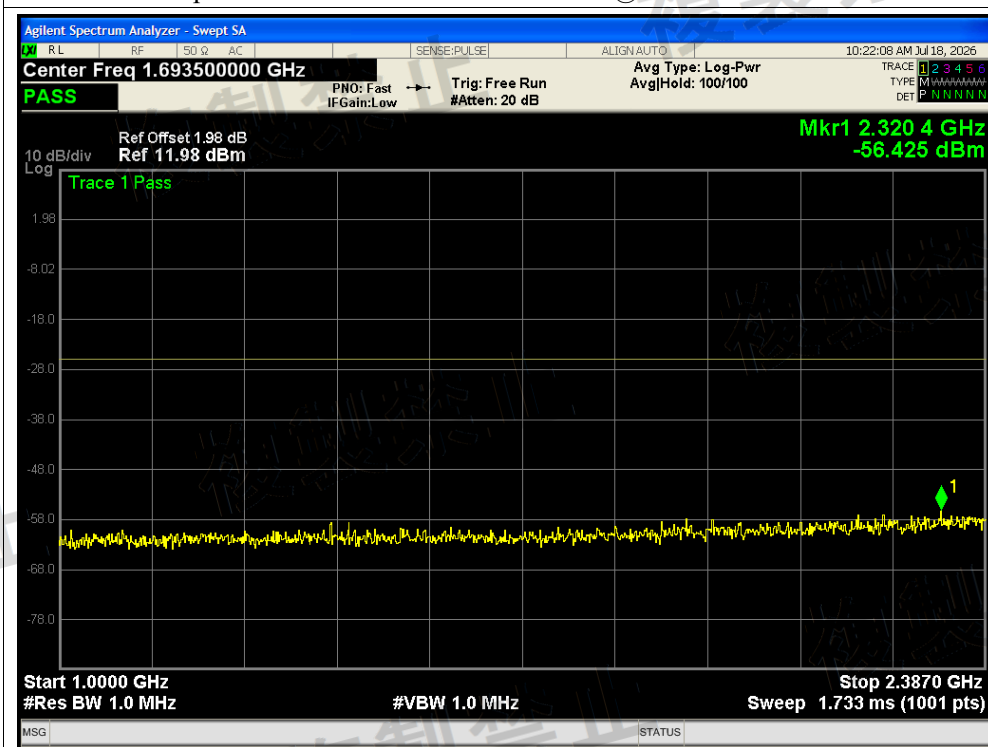




Tx. Spurious NVNT ax20 2472MHz Ant1 @ 30MHz-1000MHz

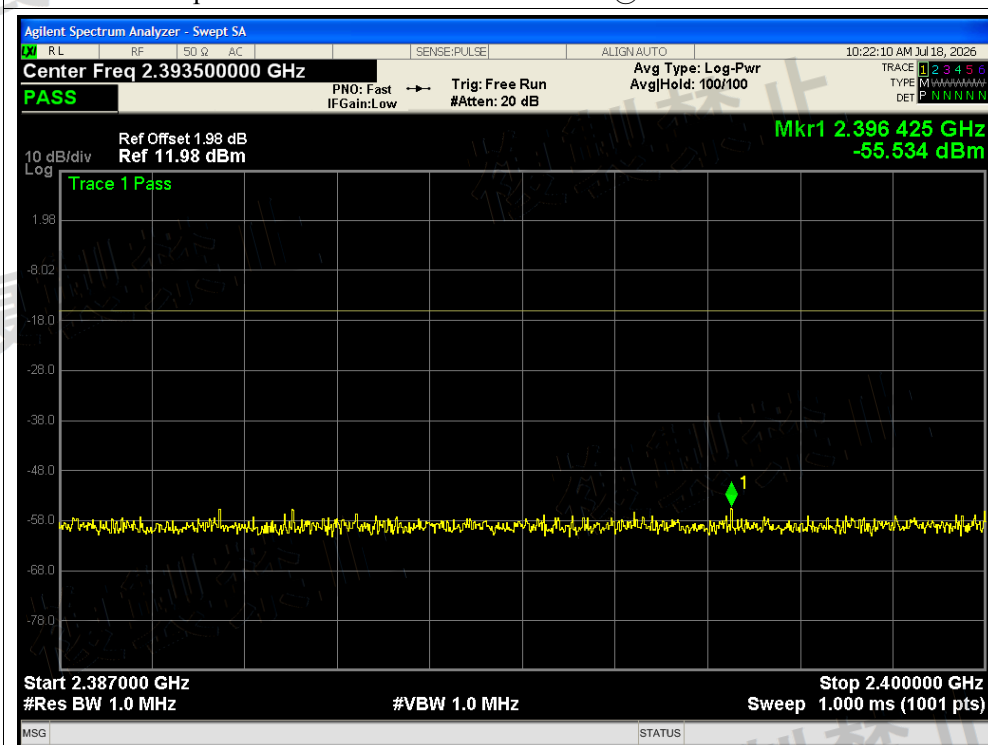


Tx. Spurious NVNT ax20 2472MHz Ant1 @ 1000MHz-2387MHz

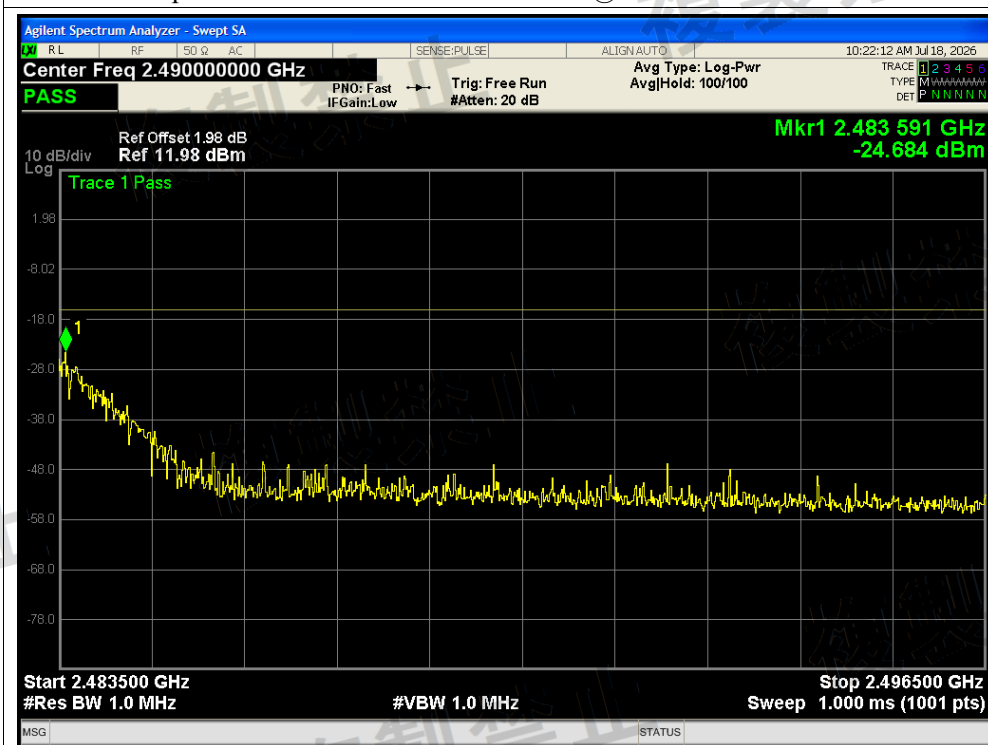




Tx. Spurious NVNT ax20 2472MHz Ant1 @ 2387MHz-2400MHz

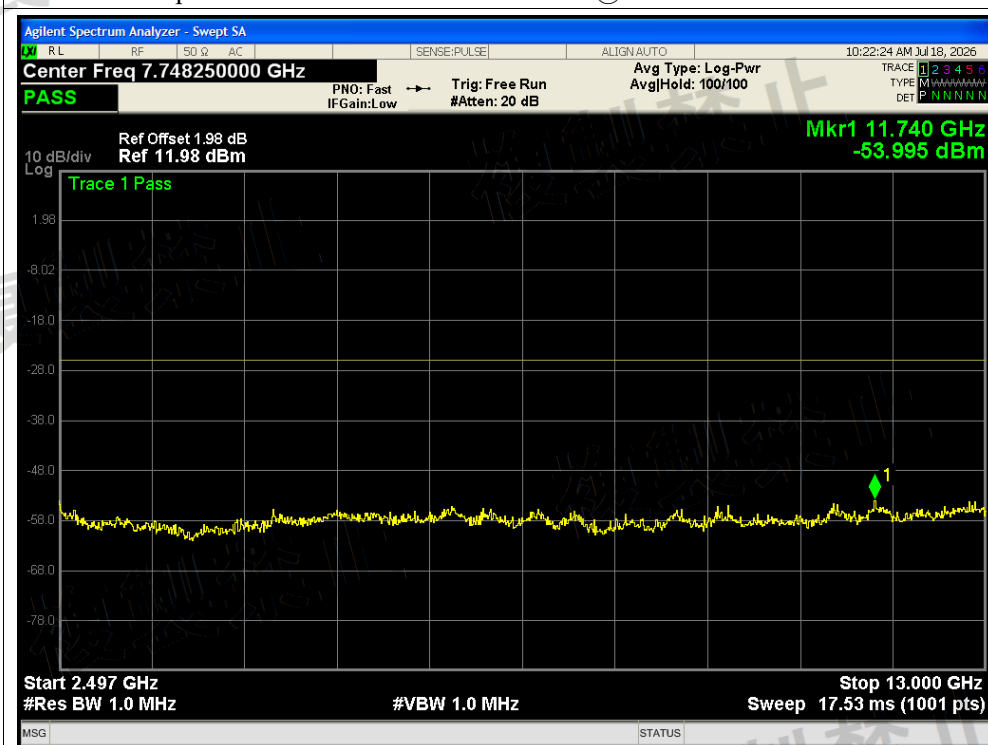


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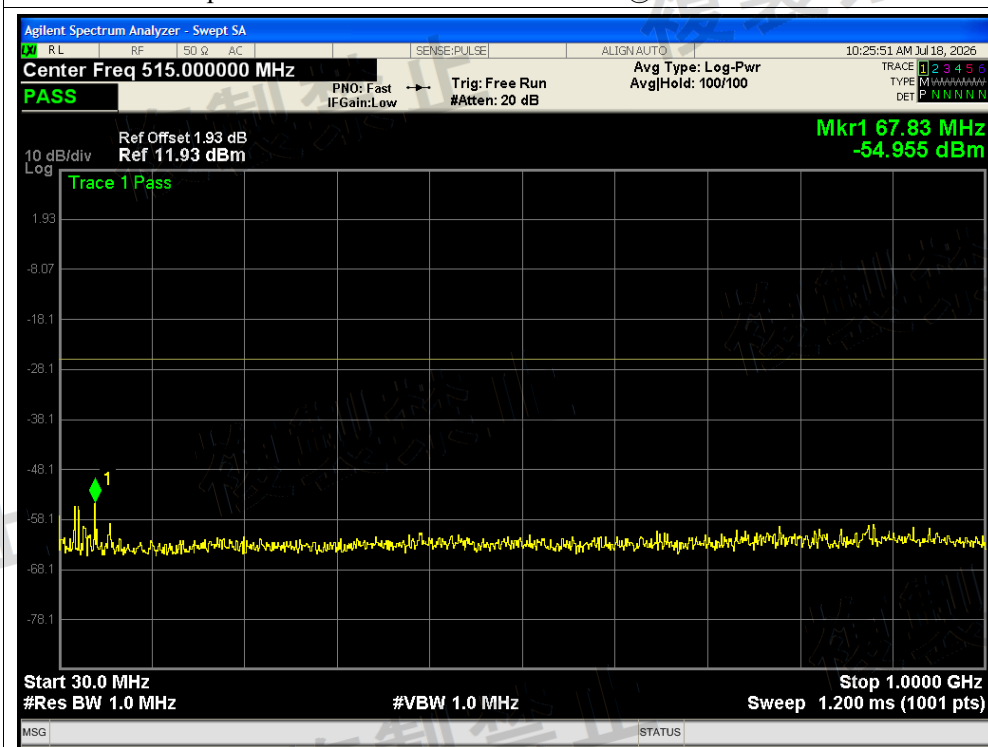




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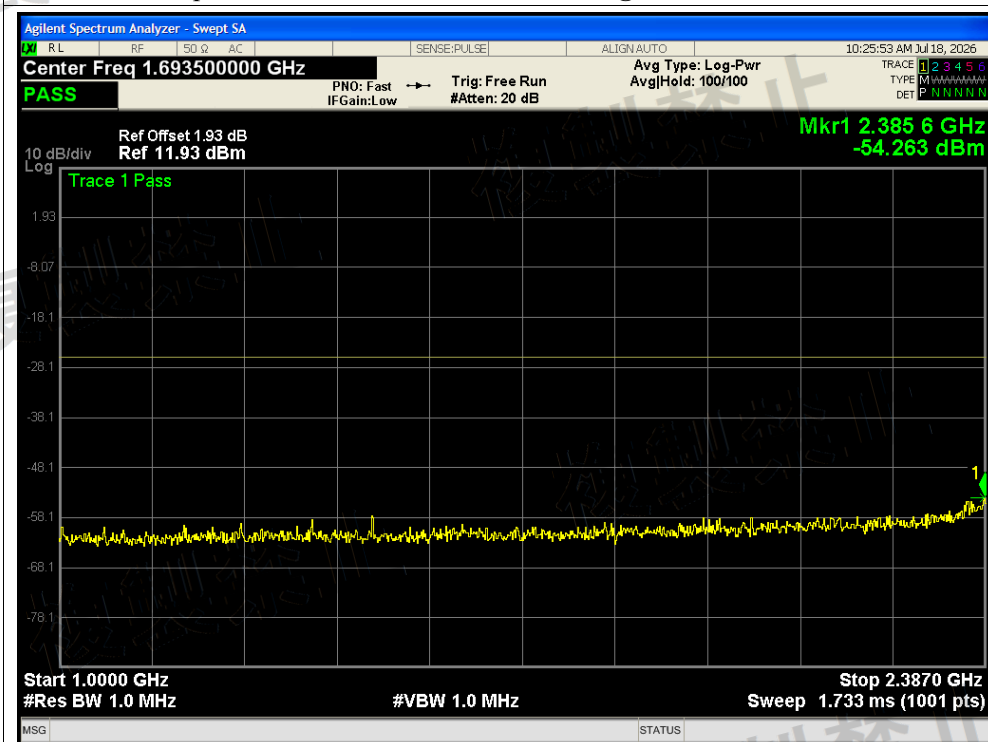


Tx. Spurious NVNT ax40 2422MHz Ant1 @ 30MHz-1000MHz

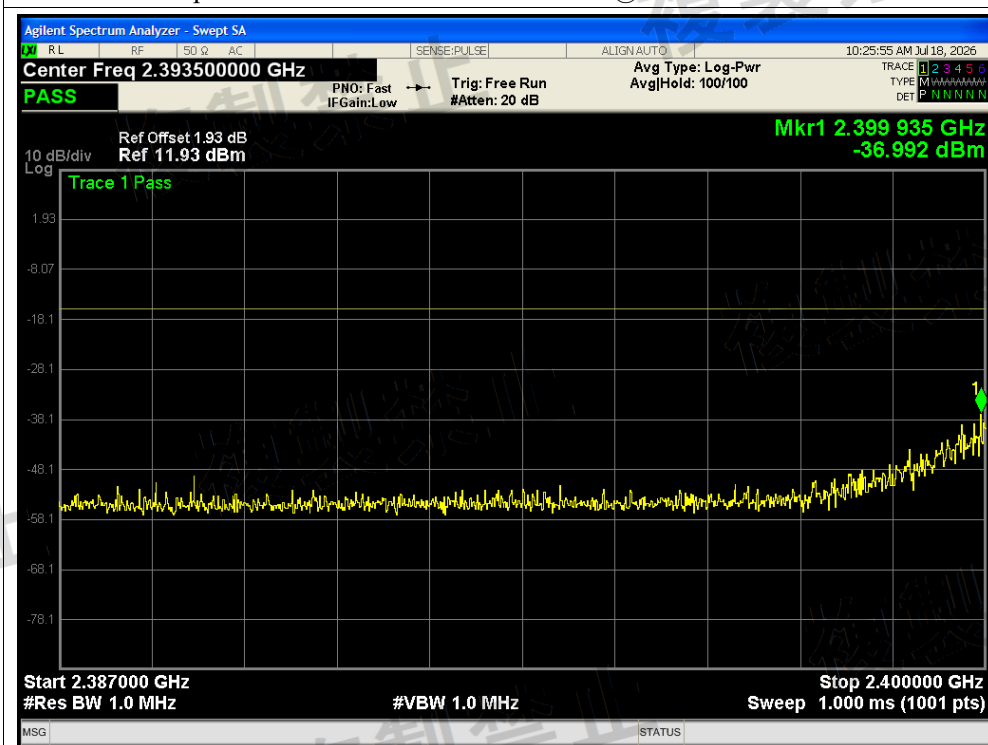




Tx. Spurious NVNT ax40 2422MHz Ant1 @ 1000MHz-2387MHz

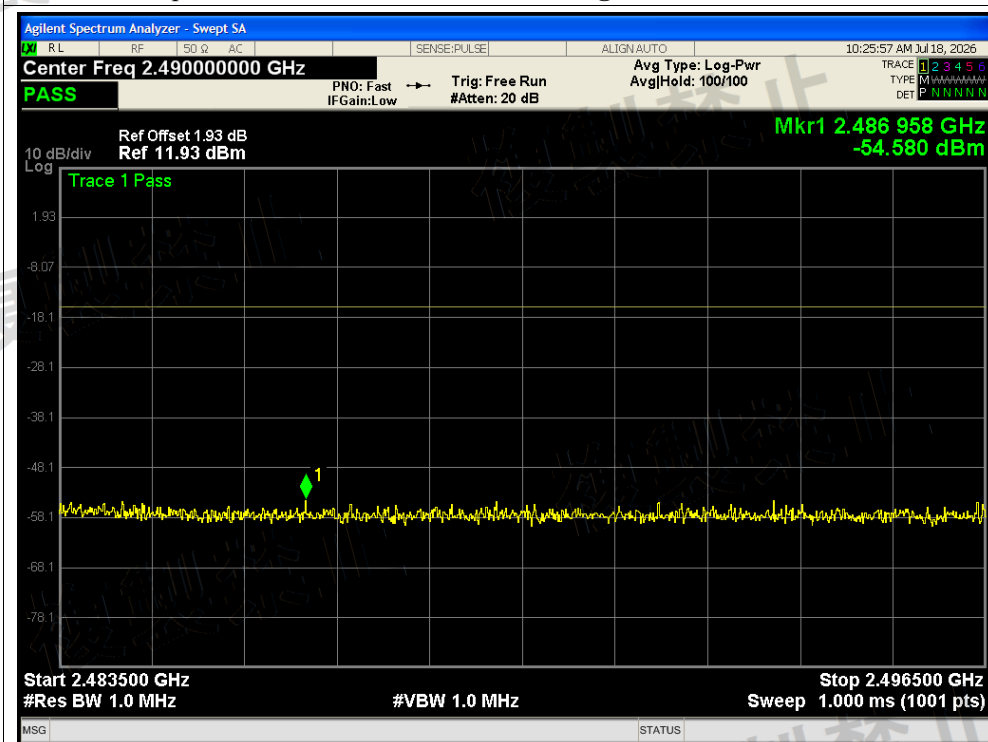


Tx. Spurious NVNT ax40 2422MHz Ant1 @ 2387MHz-2400MHz

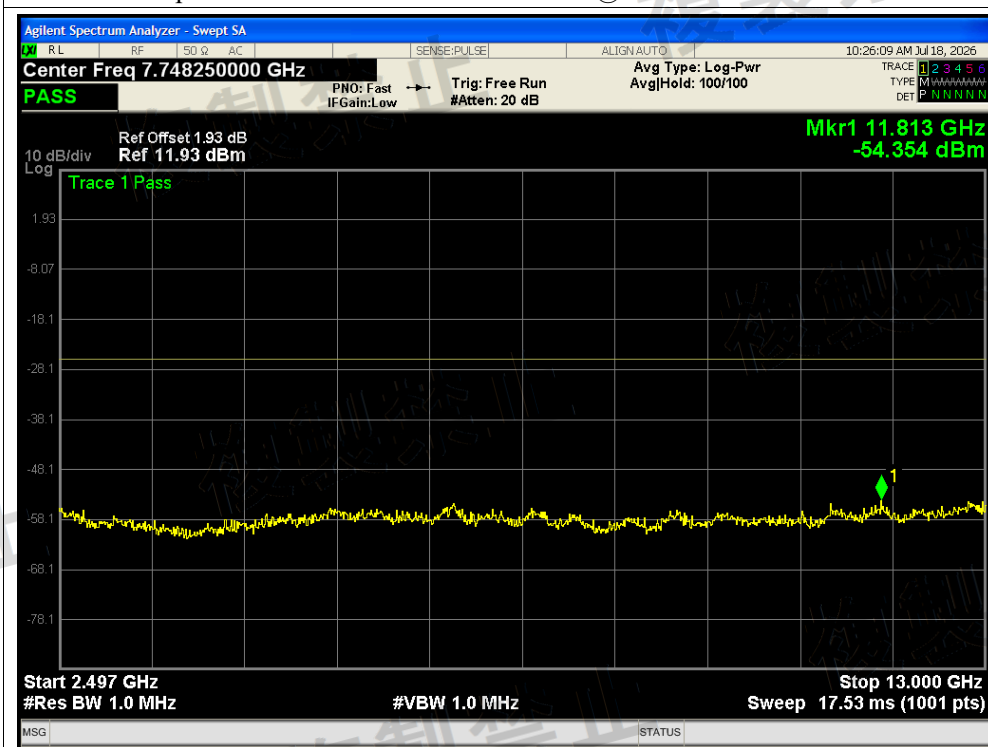




Tx. Spurious NVNT ax40 2422MHz Ant1 @ 2483.5MHz-2496.5MHz

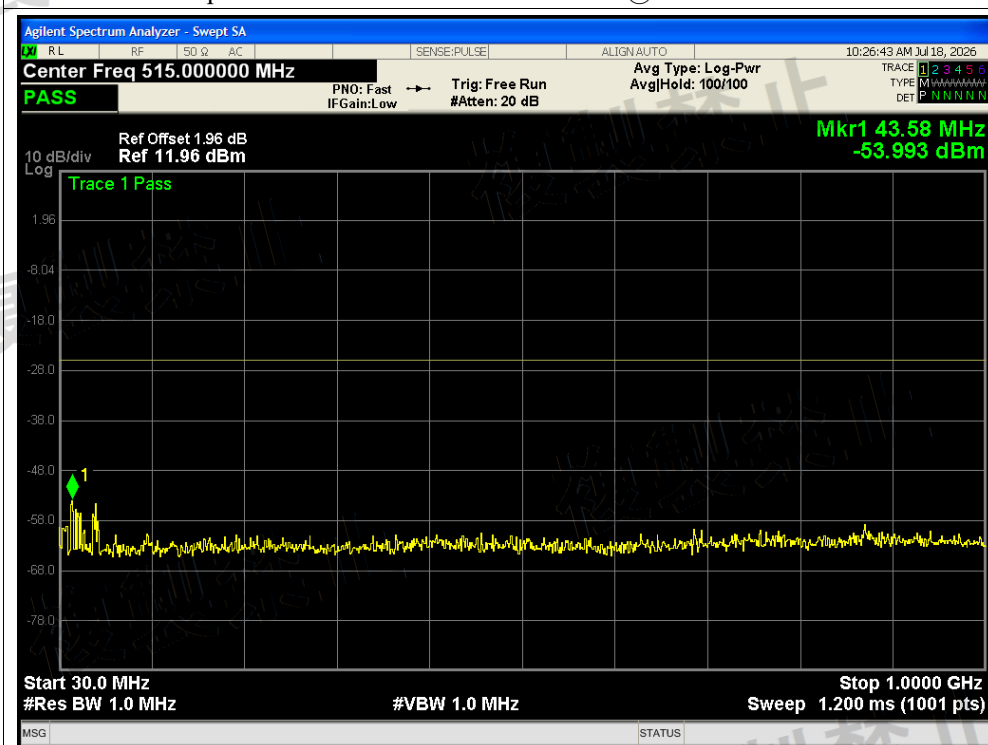


Tx. Spurious NVNT ax40 2422MHz Ant1 @ 2496.5MHz-13000MHz

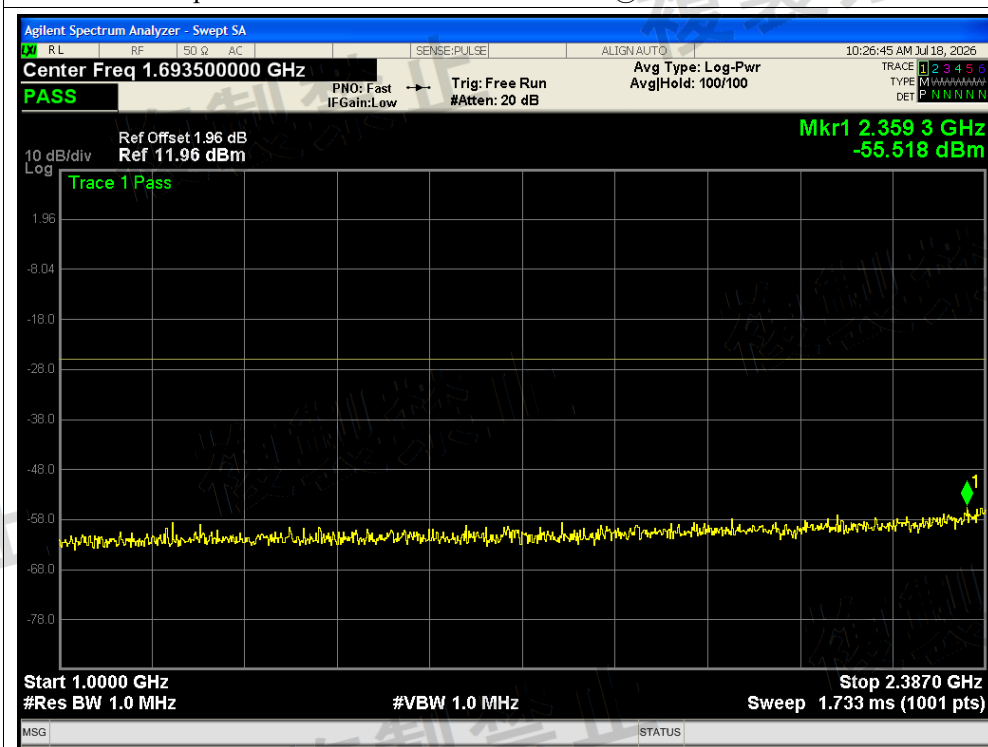




Tx. Spurious NVNT ax40 2442MHz Ant1 @ 30MHz-1000MHz

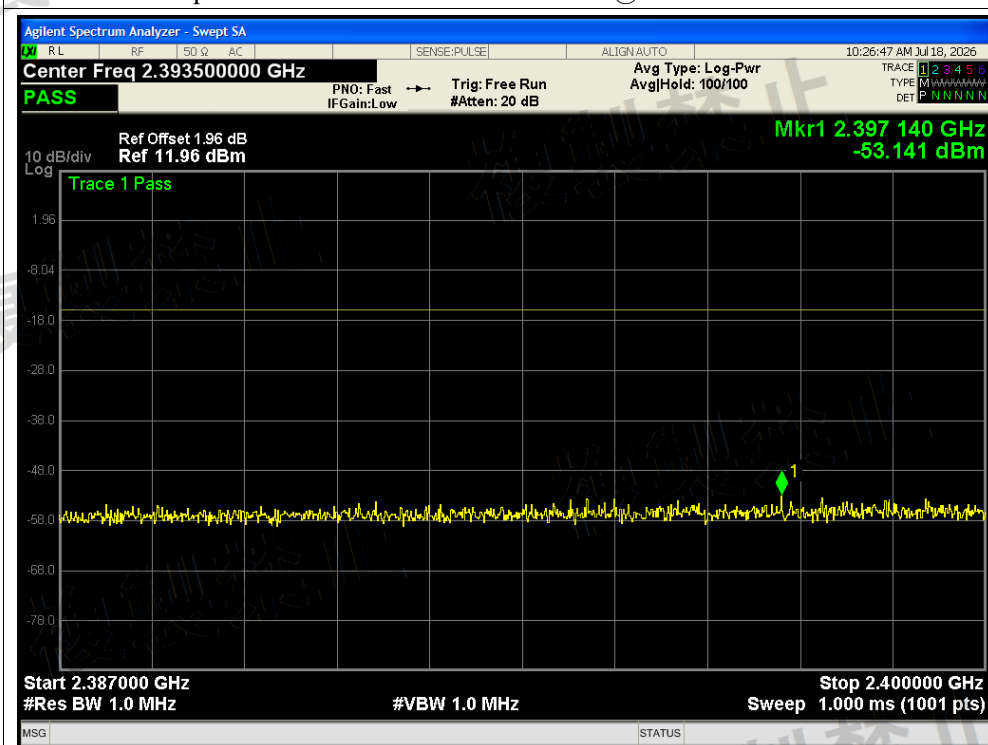


Tx. Spurious NVNT ax40 2442MHz Ant1 @ 1000MHz-2387MHz

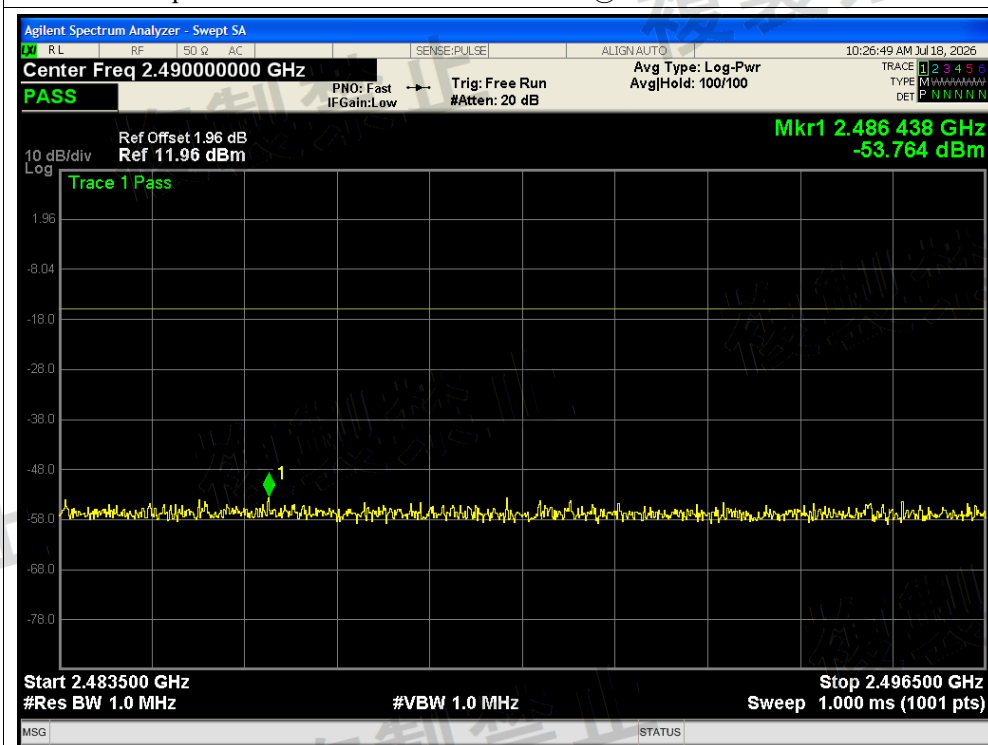




Tx. Spurious NVNT ax40 2442MHz Ant1 @ 2387MHz-2400MHz

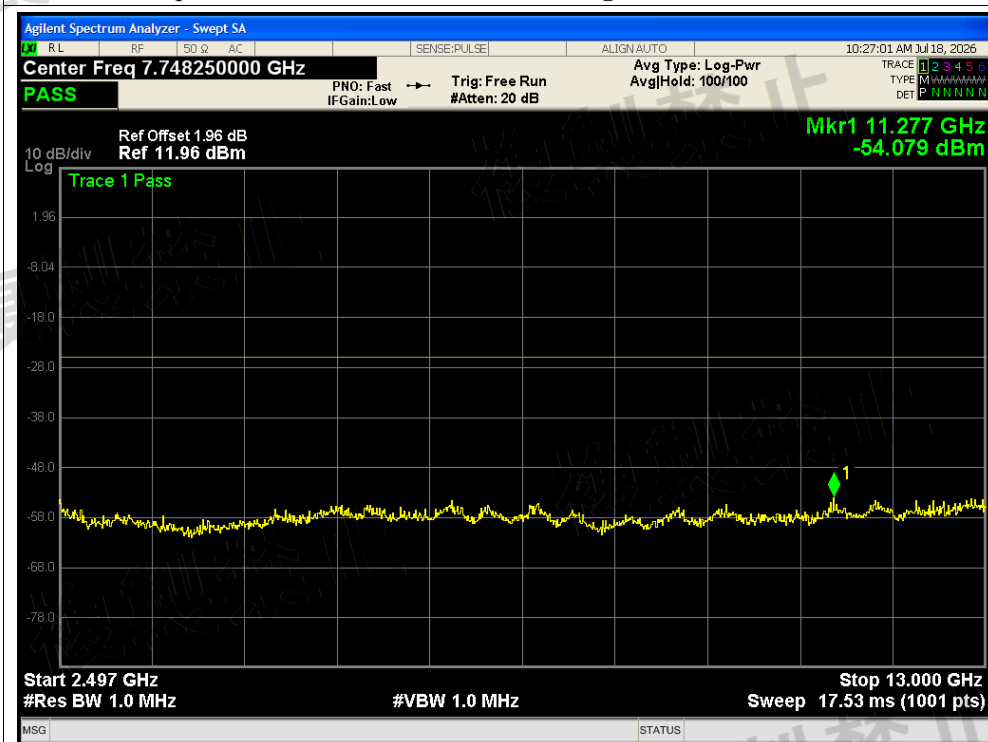


Tx. Spurious NVNT ax40 2442MHz Ant1 @ 2483.5MHz-2496.5MHz

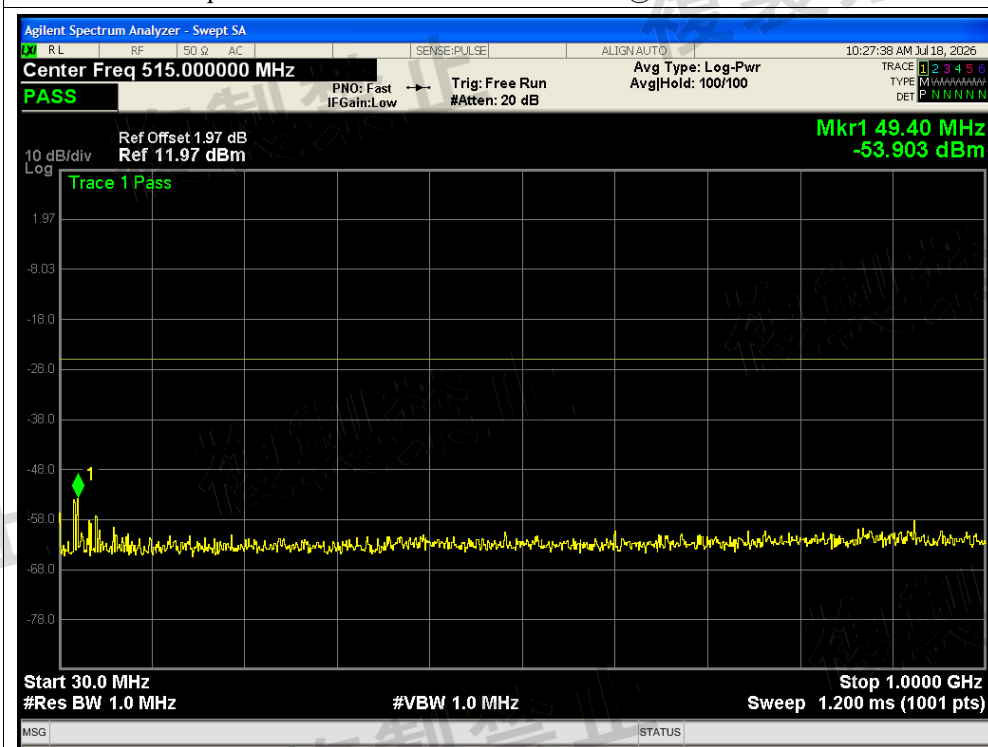




Tx. Spurious NVNT ax40 2442MHz Ant1 @ 2496.5MHz-13000MHz

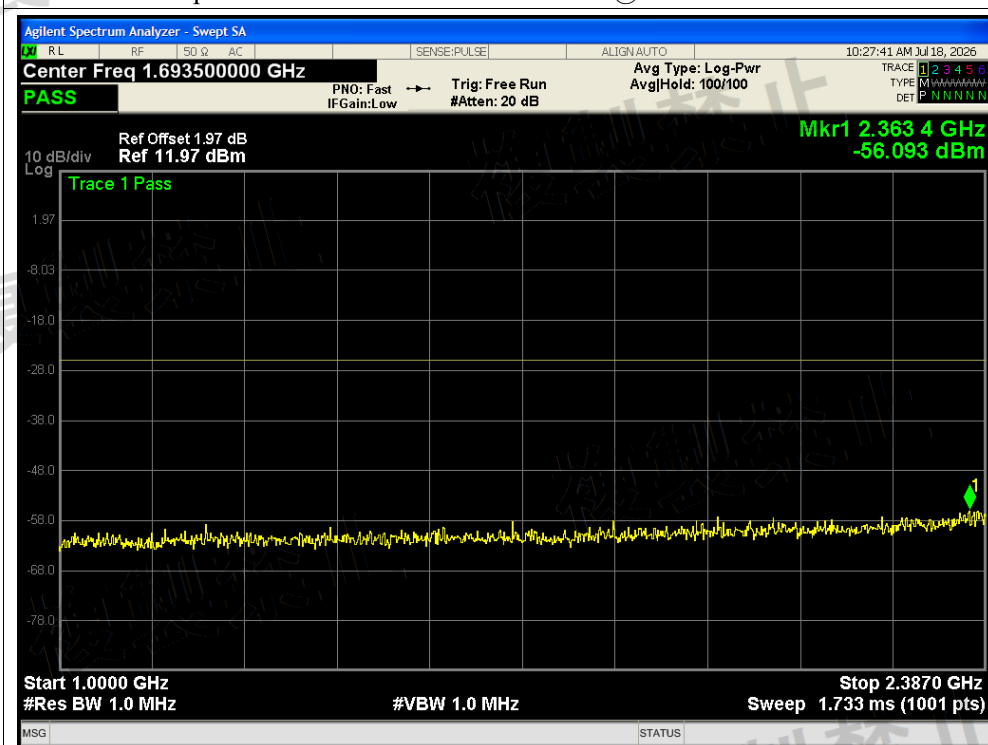


Tx. Spurious NVNT ax40 2462MHz Ant1 @ 30MHz-1000MHz

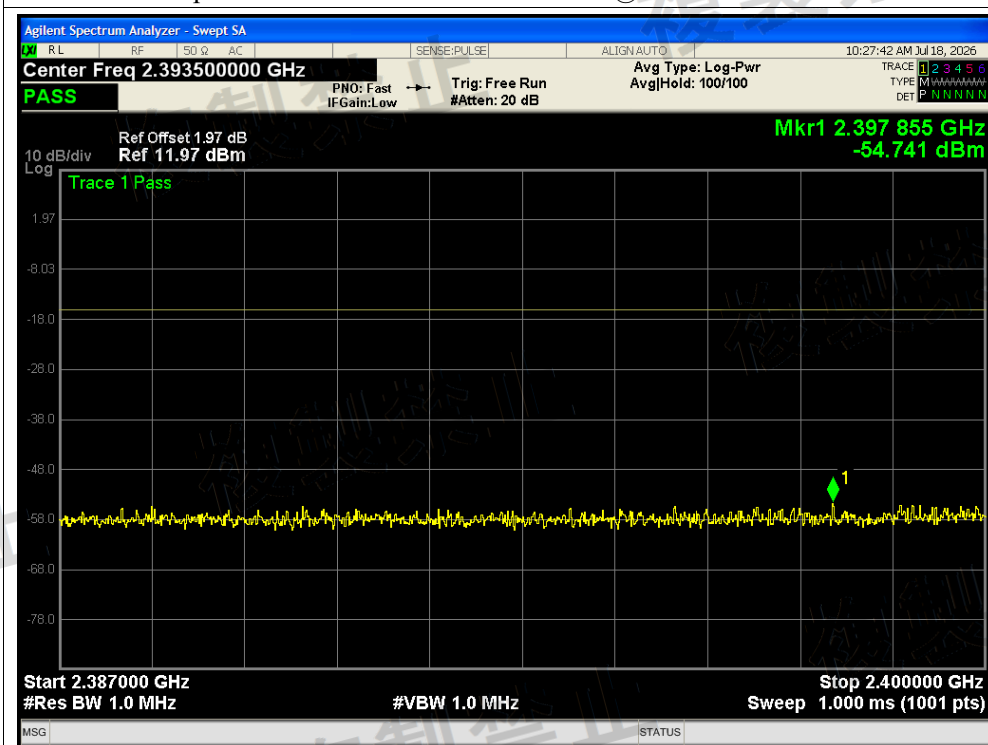




Tx. Spurious NVNT ax40 2462MHz Ant1 @ 1000MHz-2387MHz

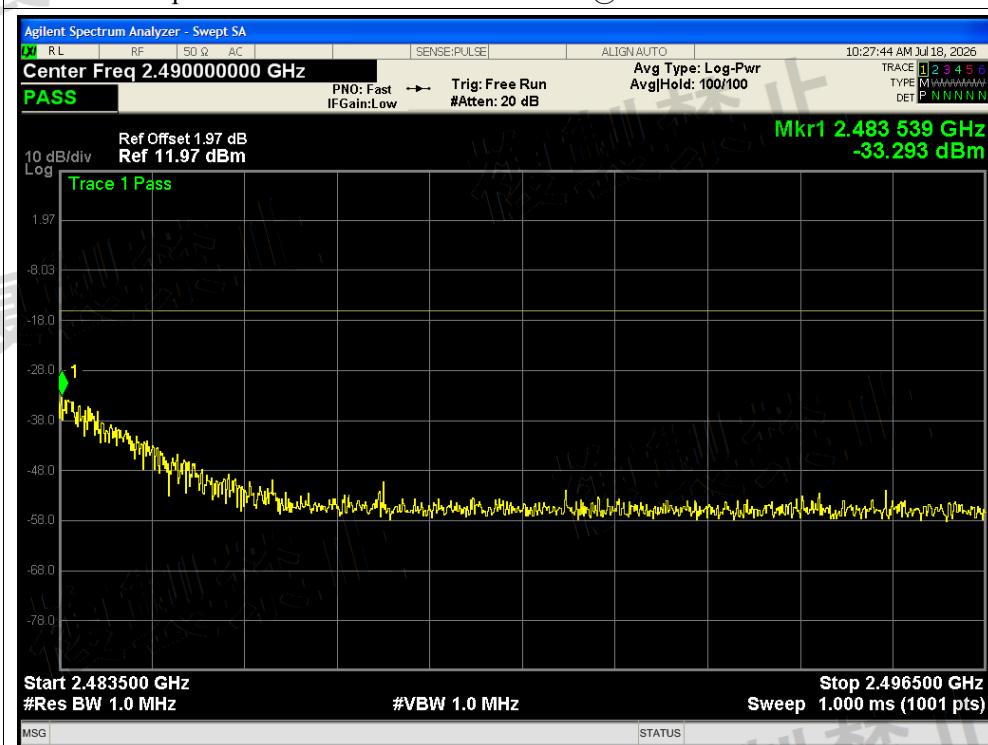


Tx. Spurious NVNT ax40 2462MHz Ant1 @ 2387MHz-2400MHz

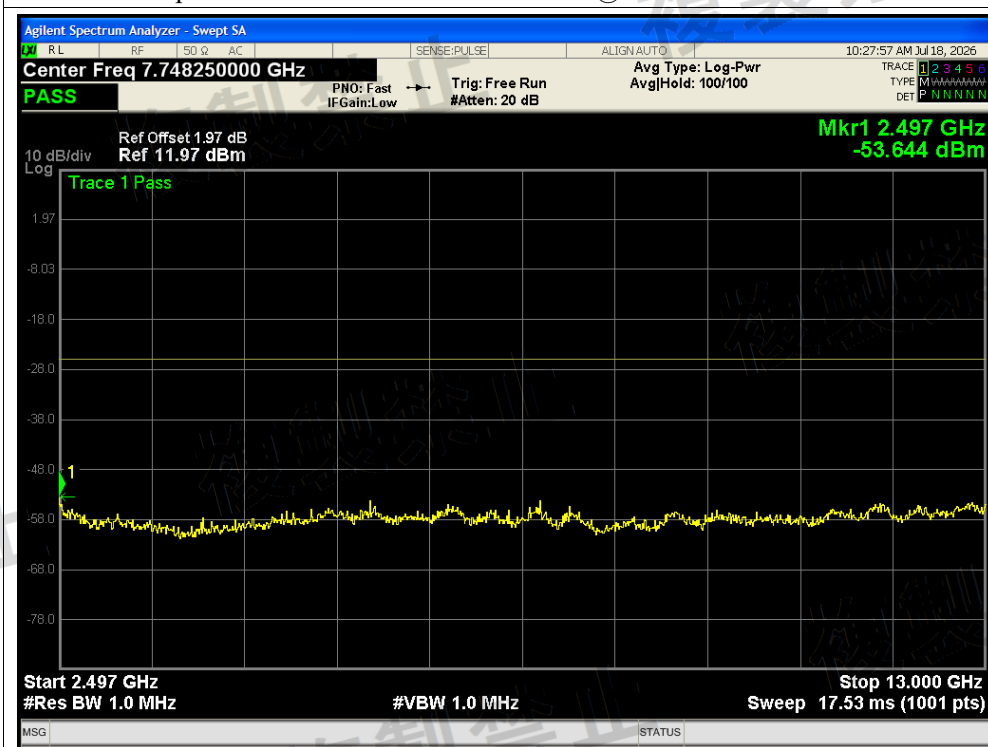




Tx. Spurious NVNT ax40 2462MHz Ant1 @ 2483.5MHz-2496.5MHz



Tx. Spurious NVNT ax40 2462MHz Ant1 @ 2496.5MHz-13000MHz



6.10 RF Accessibility

Standard requirement

Article 2, Item (19) Notice 88 Appendix 43, 44, 45

The EUT shall be constructed in such a way that sensitive RF parts, (like modulation and oscillator parts) cannot be reached easily by the user. These parts shall be covered by soldered metal caps or glue or by other mechanical covers. If the covers are fixed with screws, these shall be not the common type(s) like a Phillips, but special versions like Torx, so that the user cannot open the device with common tools.

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



6.11 Spurious Emissions of Rx

Test Requirement:	Item 19 of Article 2-1
	(1) Below 1 GHz : 4 nW or less(-54dBm) (2) 1 GHz and over : 20 nW or less(-47dBm)
Temperature:	25.0 °C
Humidity:	75 % RH
Atmospheric Pressure:	1013 mbar
Test Status:	Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.
Test Configuration:	PC EUT Spectrum Analyzer
Test Procedure:	
1. Test Conditions:	
	Spectrum Analyzer is used for measurement.
2. EUT conditions:	
	Modulation/Spread/Hopping ON For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.
3. Spectrum Analyzer conditions:	
	Step 1 All spurious are measured from 30 MHz to 13 GHz by peak mode. Step 2 IF the value measured by Step1 is 2 dB or less, measure in average mode.
	Test setup for Step 1: Frequency: 30 MHz – 2400 MHz , 2483.5 MHz –13 GHz RBW 100 kHz (30 – 1GHz) , 1 MHz (over 1GHz) VBW 100 kHz (30 – 1GHz) , 1 MHz (over 1GHz) Sweep Time Auto detector mode Positive peak Indication mode Max hold
	Test setup for Step 2: Frequency: Spurious Frequency Span 0 Hz RBW 100 kHz (30 – 1GHz) , 1 MHz (over 1GHz) VBW 100 kHz (30 – 1GHz) , 1 MHz (over 1GHz) Sweep Time Auto detector mode Sample Indication mode Max hold



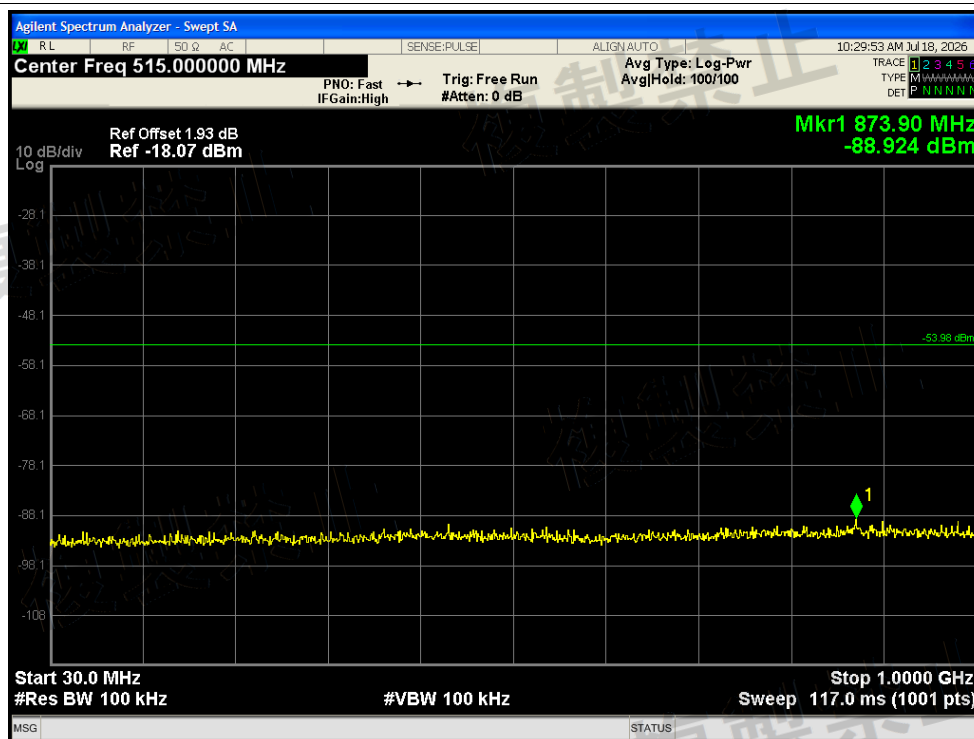
Test result:

Condition	Mode	Frequency (MHz)	Range (MHz)	Emission Frequency (MHz)	Max Value (dBm/MHz)	Max Value (nW/MHz)	Limit (nW/MHz)	Verdict
NVNT	b	2412	30-1000	873.9	-88.92	0.0013	4	Pass
NVNT	b	2412	1000-13000	2452	-72.66	0.0542	20	Pass
NVNT	b	2442	30-1000	838.01	-88.78	0.0013	4	Pass
NVNT	b	2442	1000-13000	5224	-59.98	1.0046	20	Pass
NVNT	b	2472	30-1000	666.32	-89.28	0.0012	4	Pass
NVNT	b	2472	1000-13000	2452	-71.42	0.0721	20	Pass
NVNT	g	2412	30-1000	978.66	-89.25	0.0012	4	Pass
NVNT	g	2412	1000-13000	3412	-61.15	0.7674	20	Pass
NVNT	g	2442	30-1000	869.05	-87.9	0.0016	4	Pass
NVNT	g	2442	1000-13000	2404	-63.82	0.415	20	Pass
NVNT	g	2472	30-1000	874.87	-88.91	0.0013	4	Pass
NVNT	g	2472	1000-13000	5296	-70.04	0.0991	20	Pass
NVNT	n20	2412	30-1000	869.05	-88.69	0.0014	4	Pass
NVNT	n20	2412	1000-13000	12820	-75.16	0.0305	20	Pass
NVNT	n20	2442	30-1000	877.78	-89.64	0.0011	4	Pass
NVNT	n20	2442	1000-13000	2452	-68.39	0.1449	20	Pass
NVNT	n20	2472	30-1000	767.2	-89.34	0.0012	4	Pass
NVNT	n20	2472	1000-13000	5212	-57.75	1.6788	20	Pass
NVNT	n40	2422	30-1000	920.46	-88.58	0.0014	4	Pass
NVNT	n40	2422	1000-13000	2452	-72.94	0.0508	20	Pass
NVNT	n40	2442	30-1000	875.84	-89.31	0.0012	4	Pass
NVNT	n40	2442	1000-13000	2476	-57.38	1.8281	20	Pass
NVNT	n40	2462	30-1000	869.05	-88.4	0.0014	4	Pass
NVNT	n40	2462	1000-13000	2404	-53.09	4.9091	20	Pass
NVNT	ax20	2412	30-1000	869.05	-88.35	0.0015	4	Pass
NVNT	ax20	2412	1000-13000	2452	-72.56	0.0555	20	Pass
NVNT	ax20	2442	30-1000	888.45	-89.48	0.0011	4	Pass
NVNT	ax20	2442	1000-13000	2404	-67.59	0.1742	20	Pass
NVNT	ax20	2472	30-1000	869.05	-88.4	0.0014	4	Pass
NVNT	ax20	2472	1000-13000	5284	-67.35	0.1841	20	Pass
NVNT	ax40	2422	30-1000	769.14	-89.22	0.0012	4	Pass
NVNT	ax40	2422	1000-13000	2440	-74.28	0.0373	20	Pass
NVNT	ax40	2442	30-1000	869.05	-88.42	0.0014	4	Pass
NVNT	ax40	2442	1000-13000	2476	-73.95	0.0403	20	Pass
NVNT	ax40	2462	30-1000	907.85	-88.93	0.0013	4	Pass
NVNT	ax40	2462	1000-13000	2452	-72.96	0.0506	20	Pass

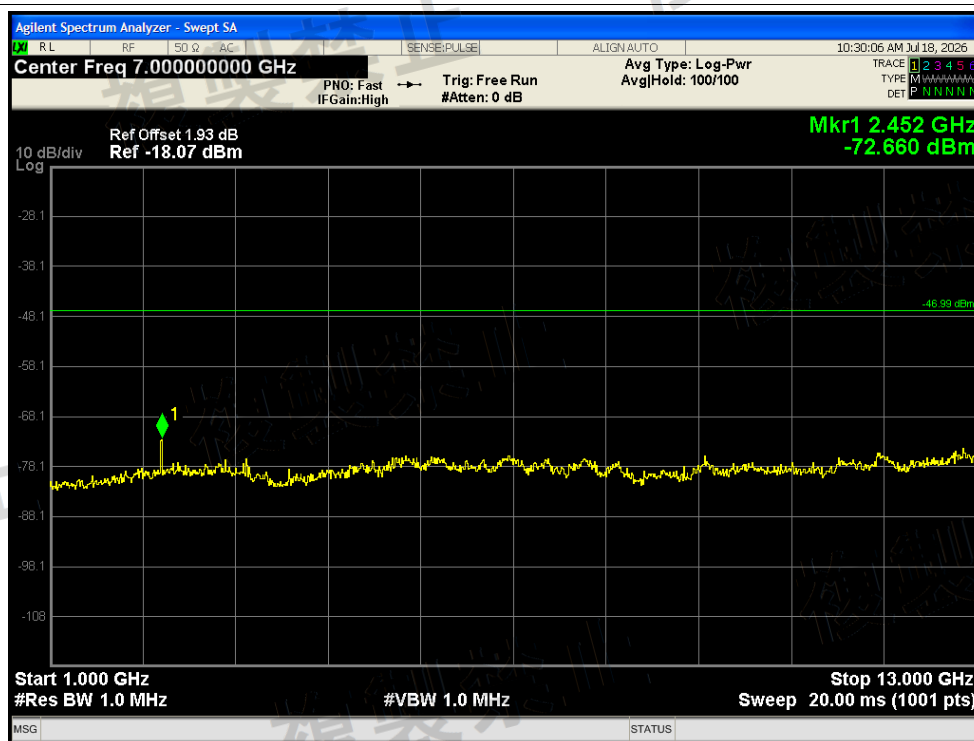


Test Graphs

Rx. Spurious NVNT b 2412MHz Ant1 @ 30MHz-1000MHz

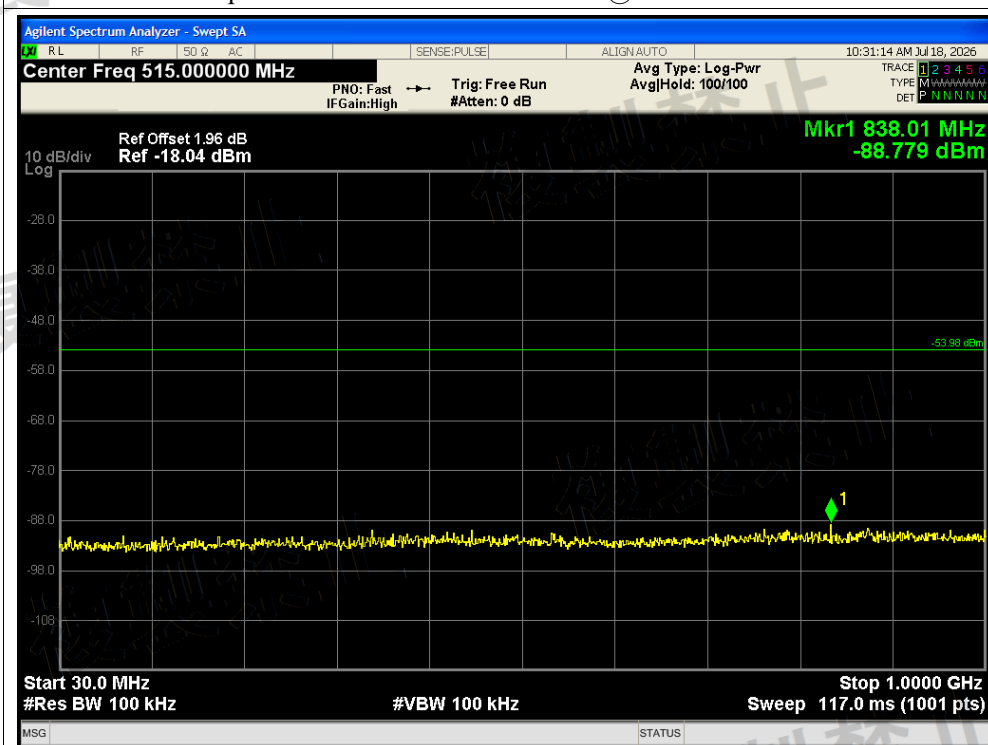


Rx. Spurious NVNT b 2412MHz Ant1 @ 1000MHz-13000MHz

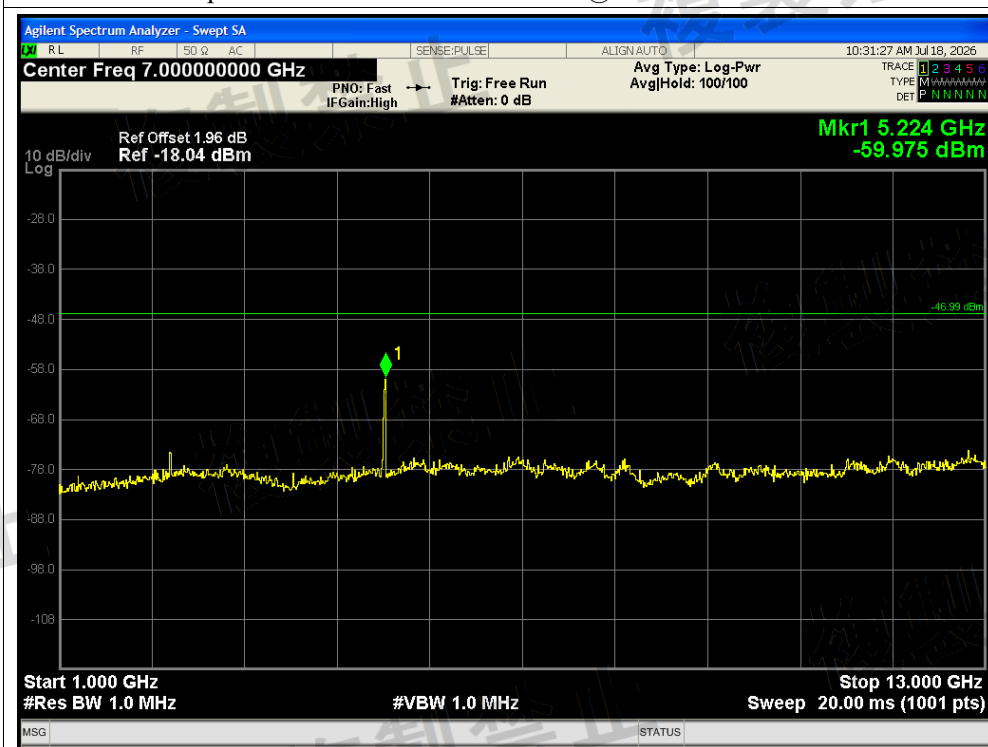




Rx. Spurious NVNT b 2442MHz Ant1 @ 30MHz-1000MHz

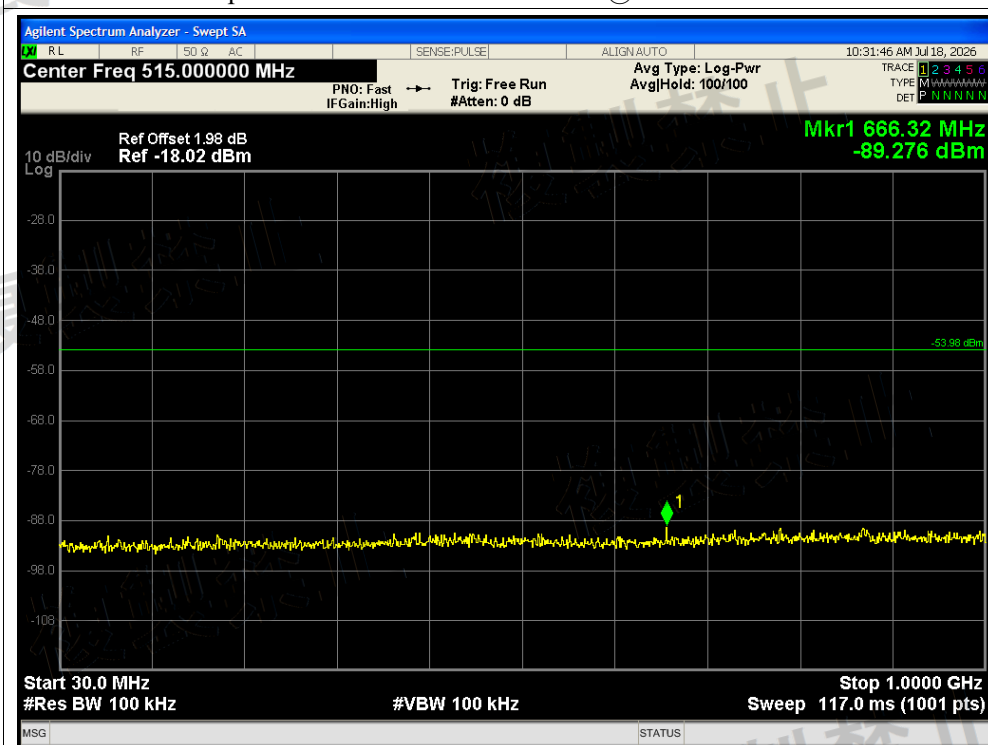


Rx. Spurious NVNT b 2442MHz Ant1 @ 1000MHz-13000MHz

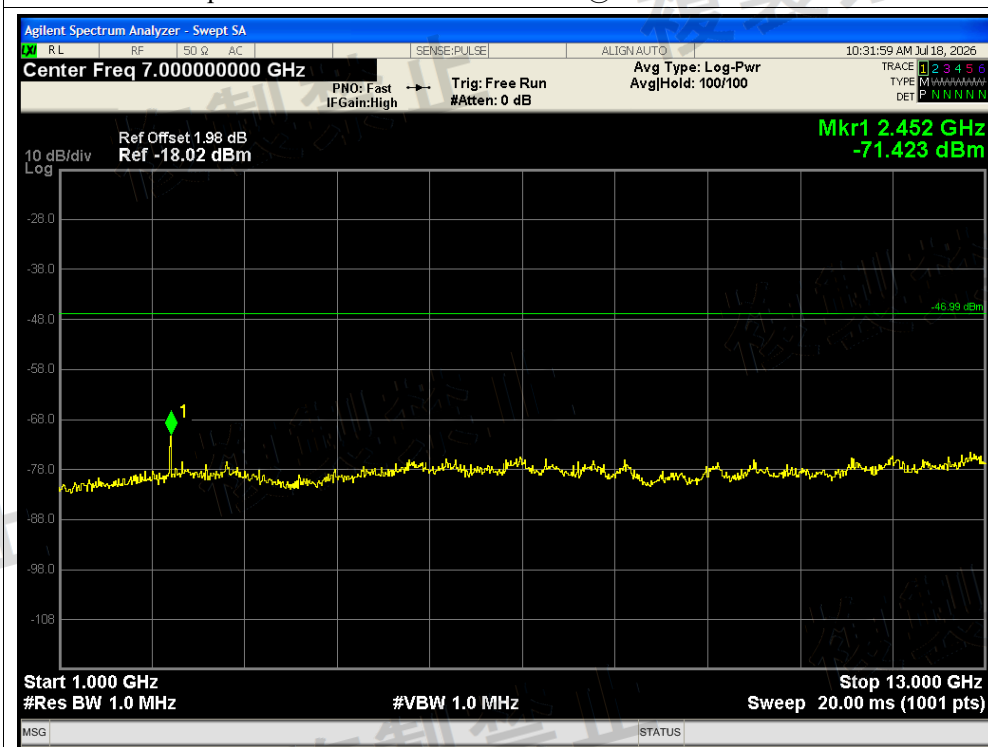




Rx. Spurious NVNT b 2472MHz Ant1 @ 30MHz-1000MHz

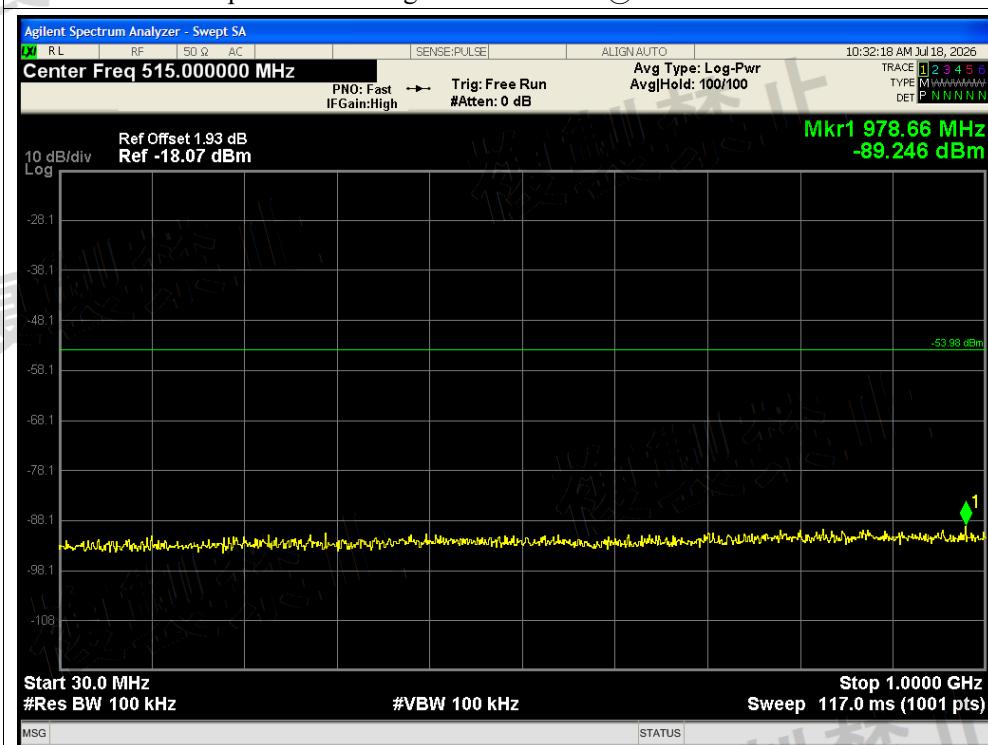


Rx. Spurious NVNT b 2472MHz Ant1 @ 1000MHz-13000MHz

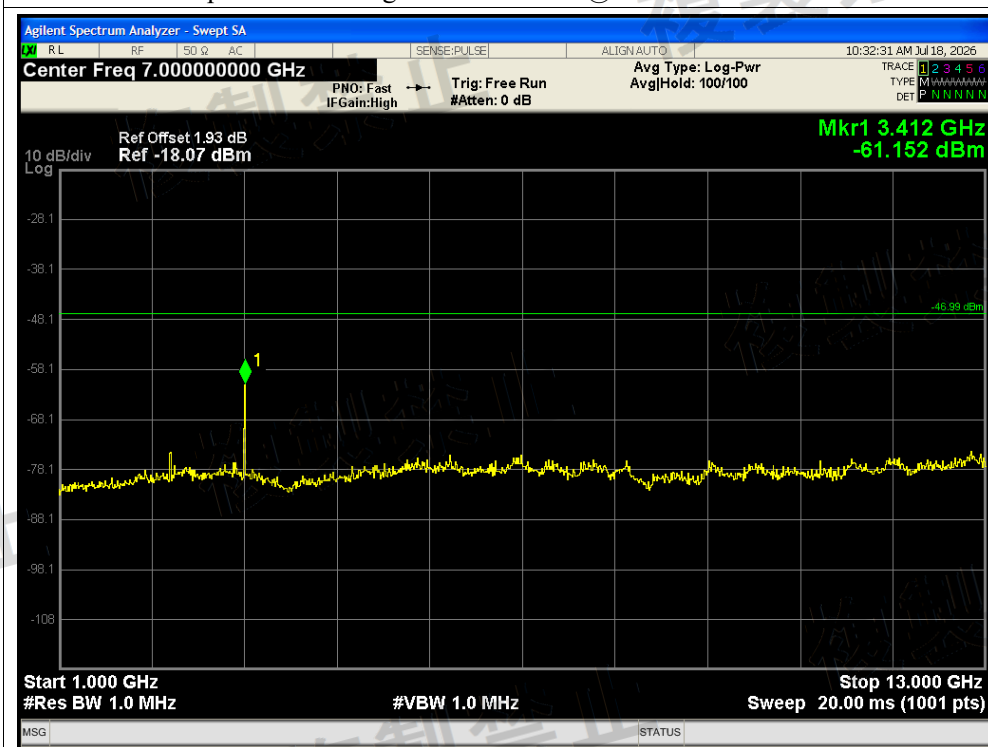




Rx. Spurious NVNT g 2412MHz Ant1 @ 30MHz-1000MHz

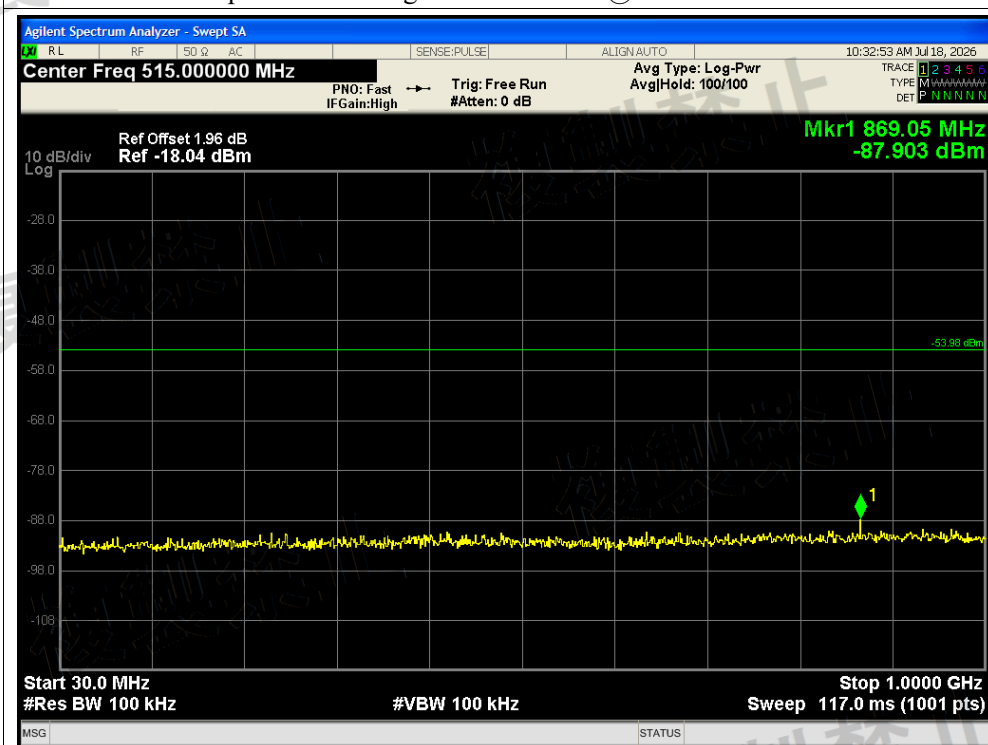


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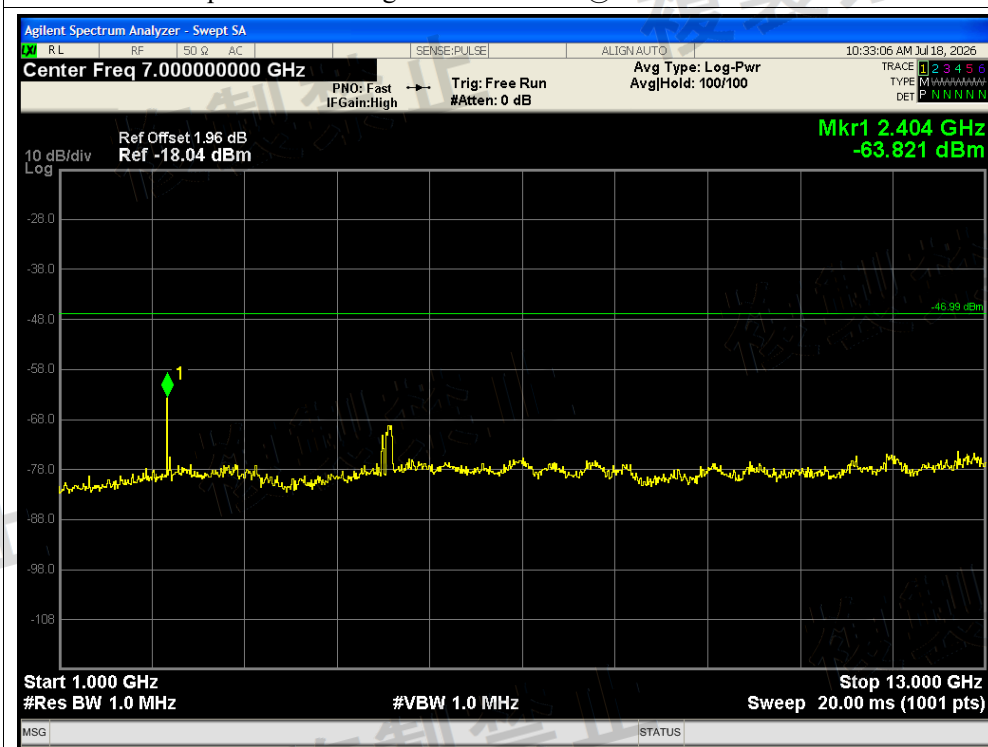




Rx. Spurious NVNT g 2442MHz Ant1 @ 30MHz-1000MHz

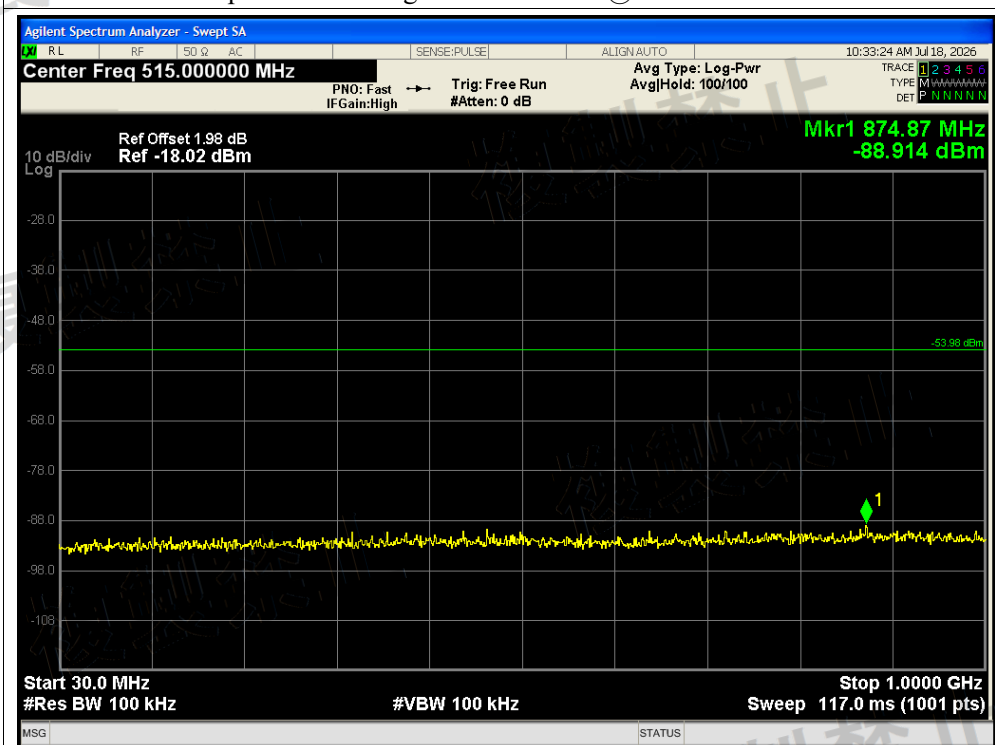


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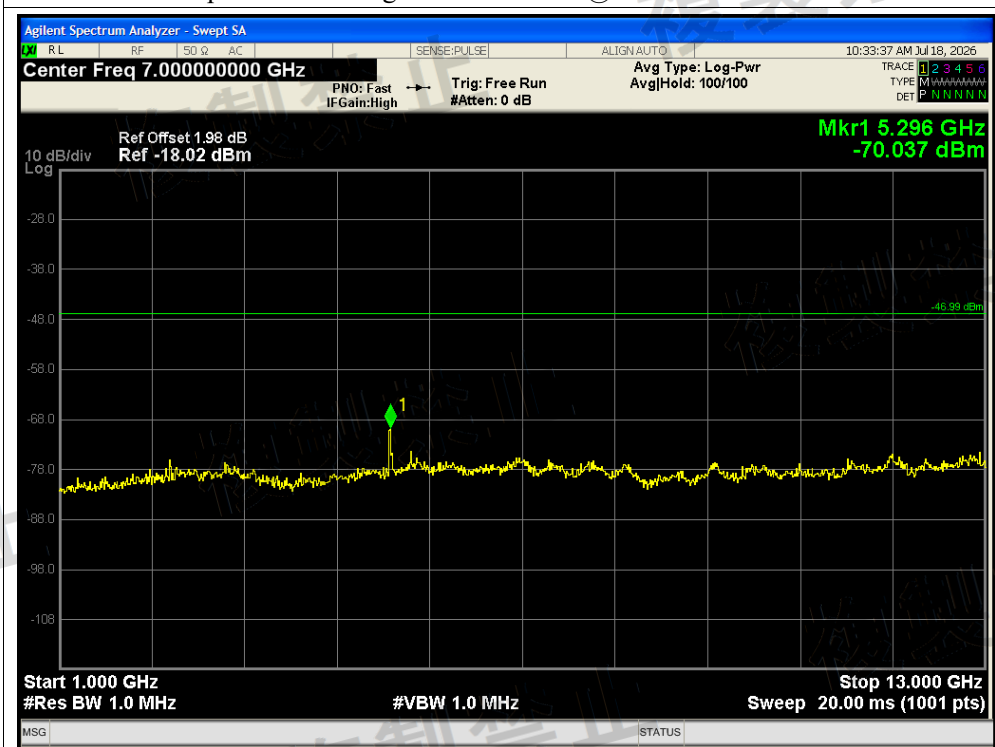




Rx. Spurious NVNT g 2472MHz Ant1 @ 30MHz-1000MHz

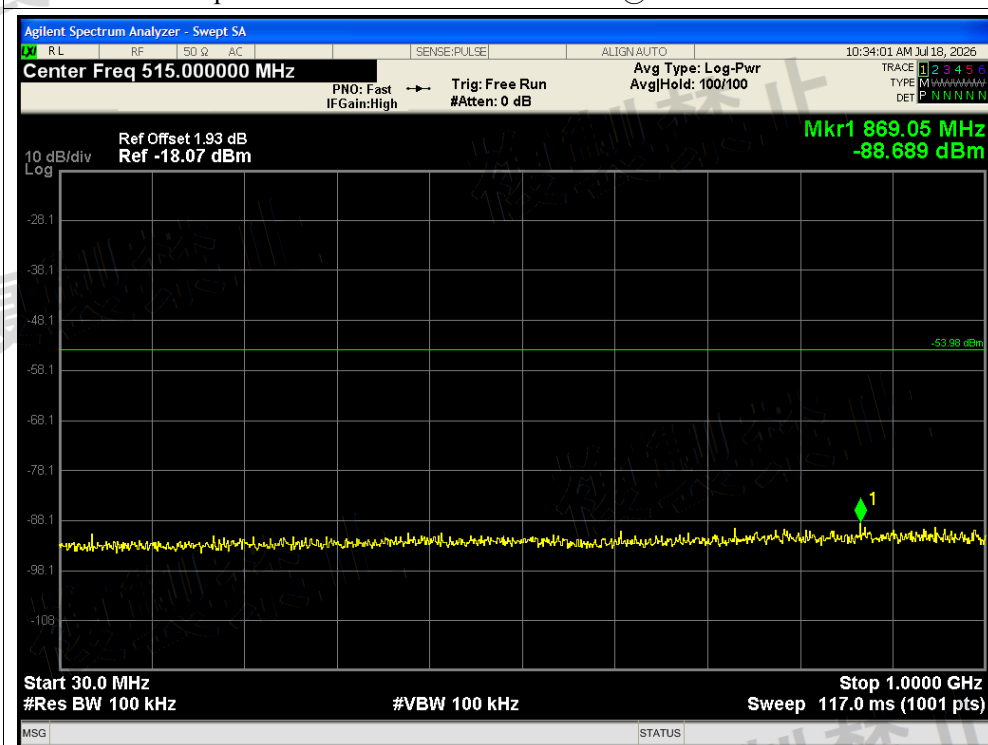


Rx. Spurious NVNT g 2472MHz Ant1 @ 1000MHz-13000MHz

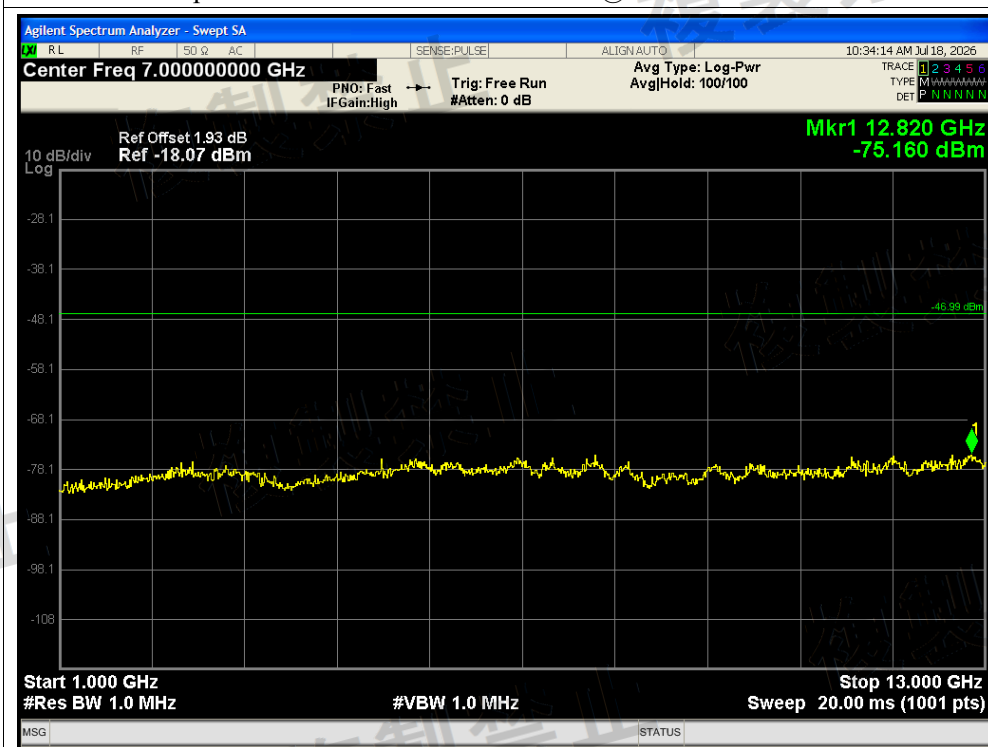




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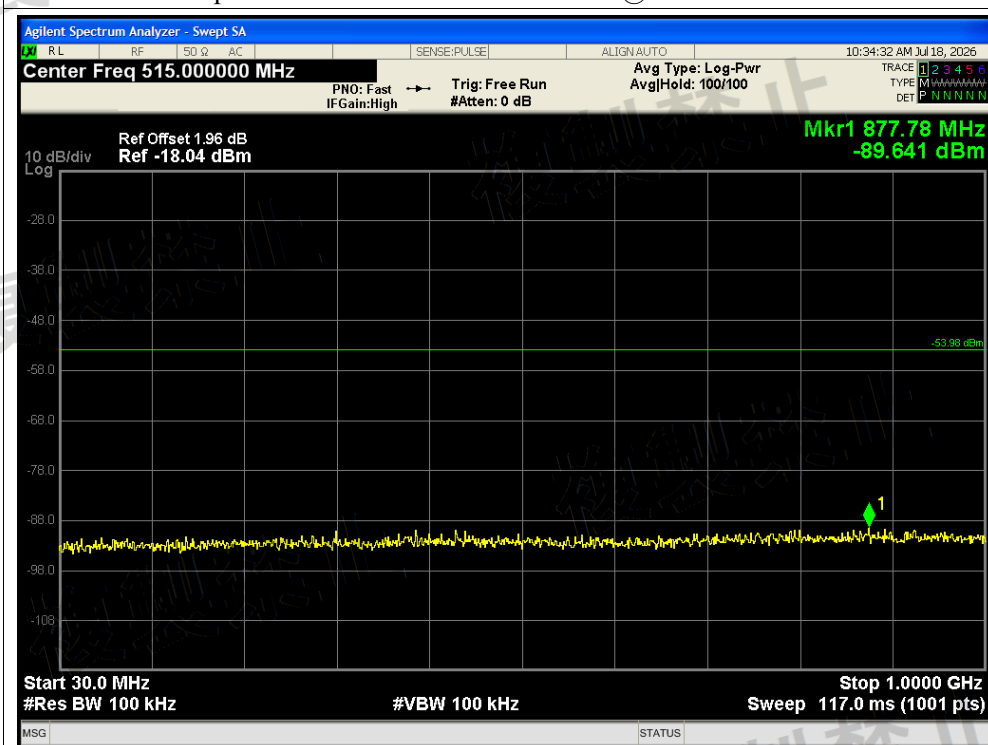


Rx. Spurious NVNT n20 2412MHz Ant1 @ 1000MHz-13000MHz

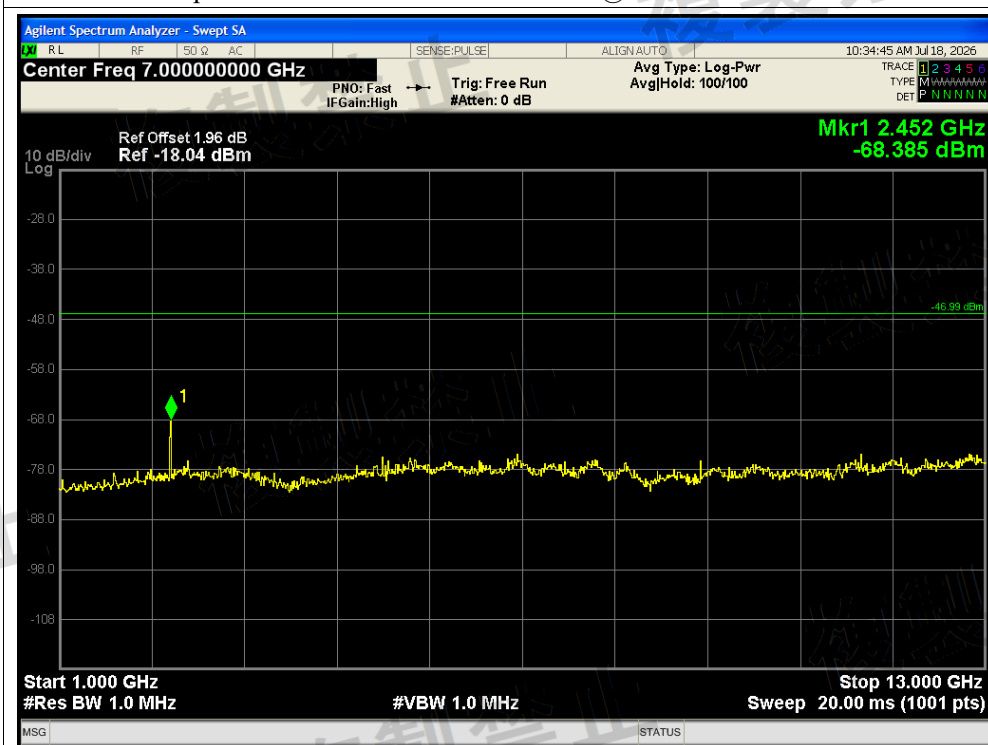




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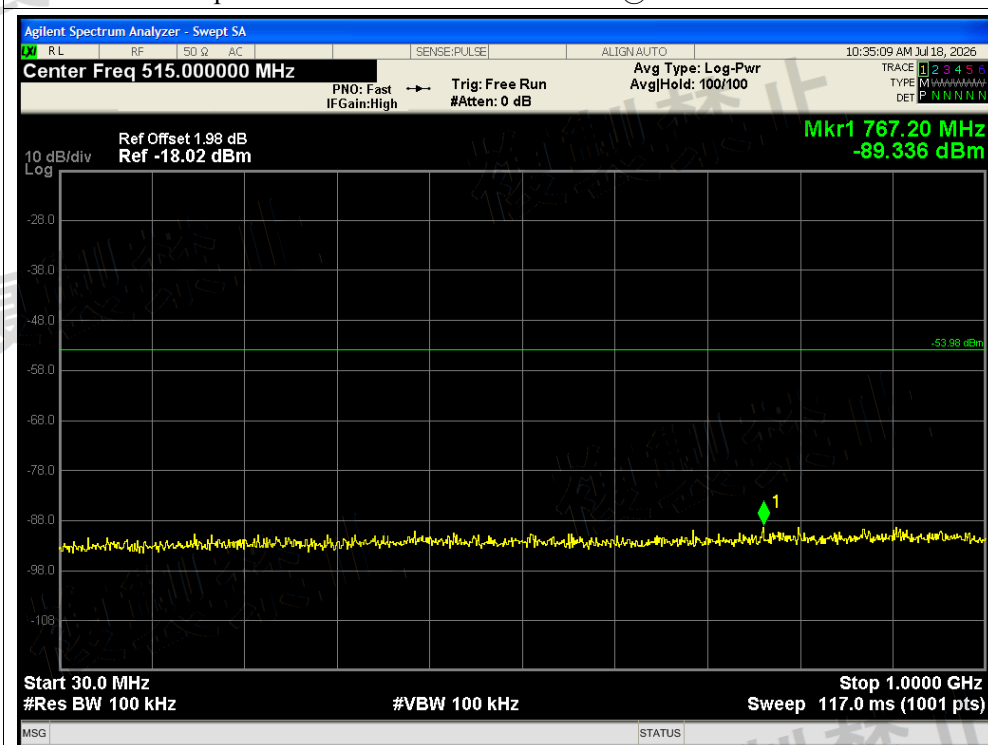


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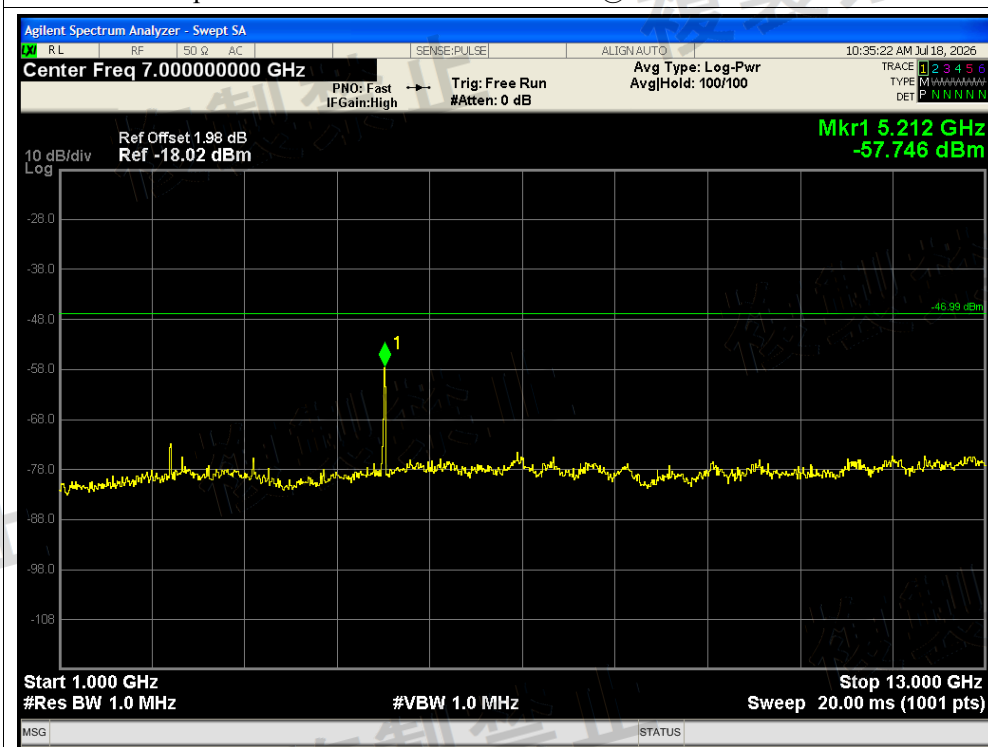




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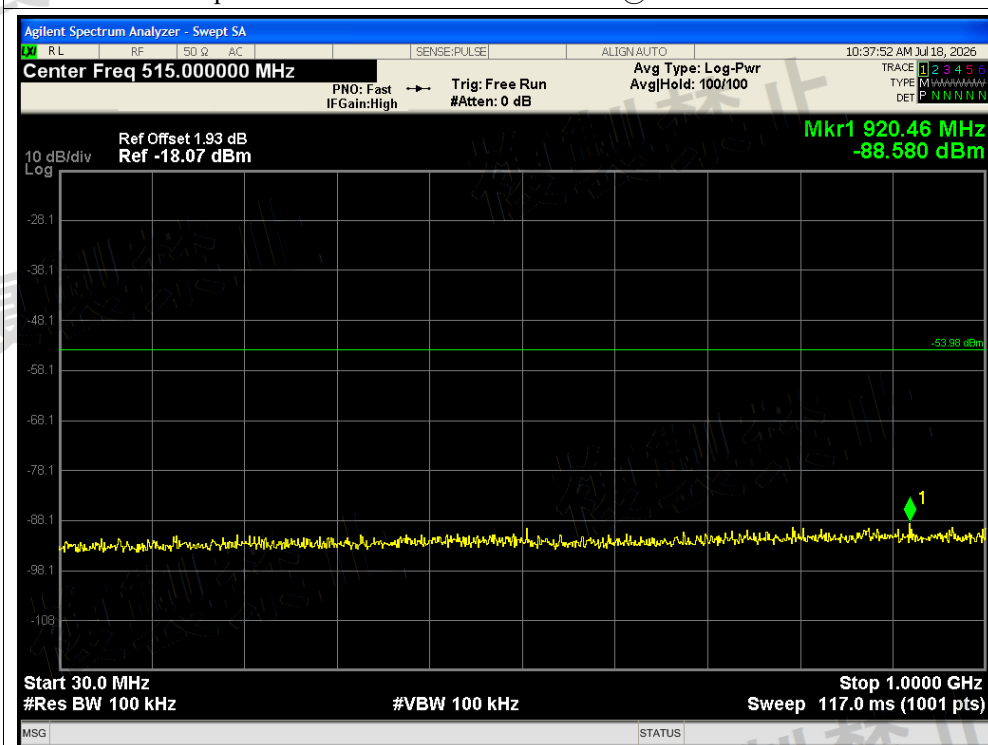


Rx. Spurious NVNT n20 2472MHz Ant1 @ 1000MHz-13000MHz

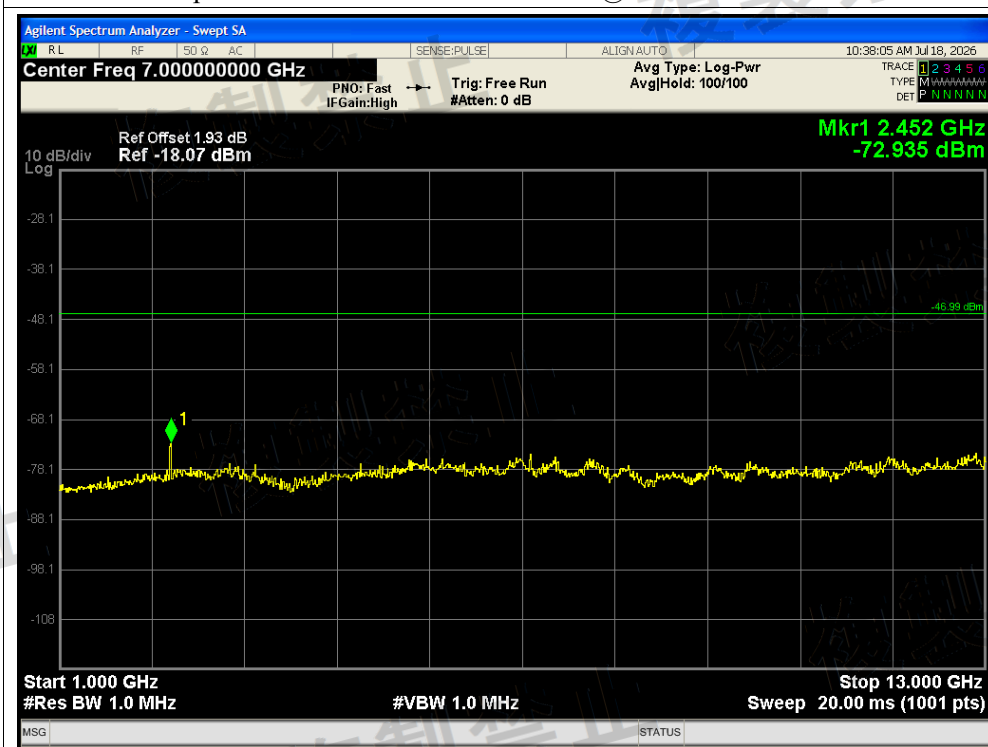




Rx. Spurious NVNT n40 2422MHz Ant1 @ 30MHz-1000MHz

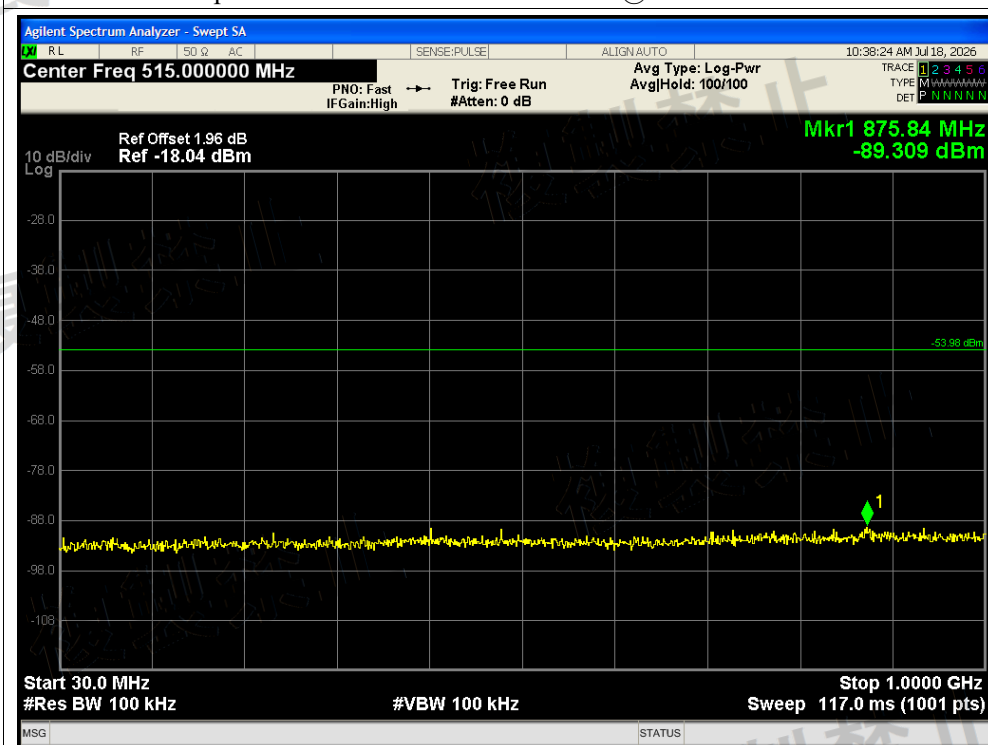


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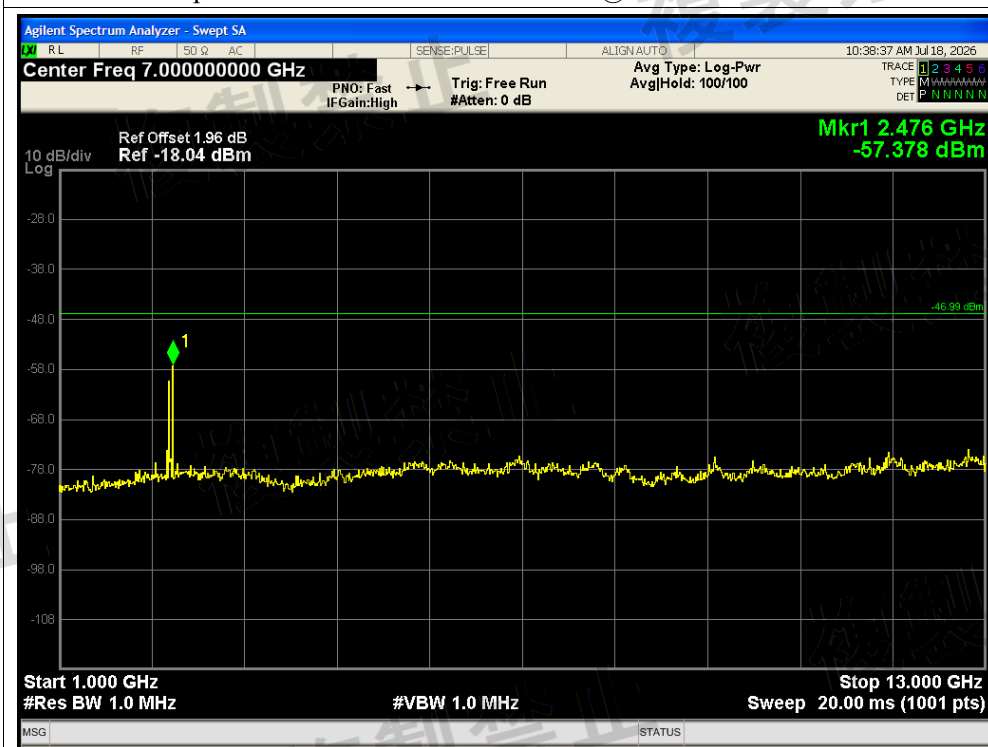




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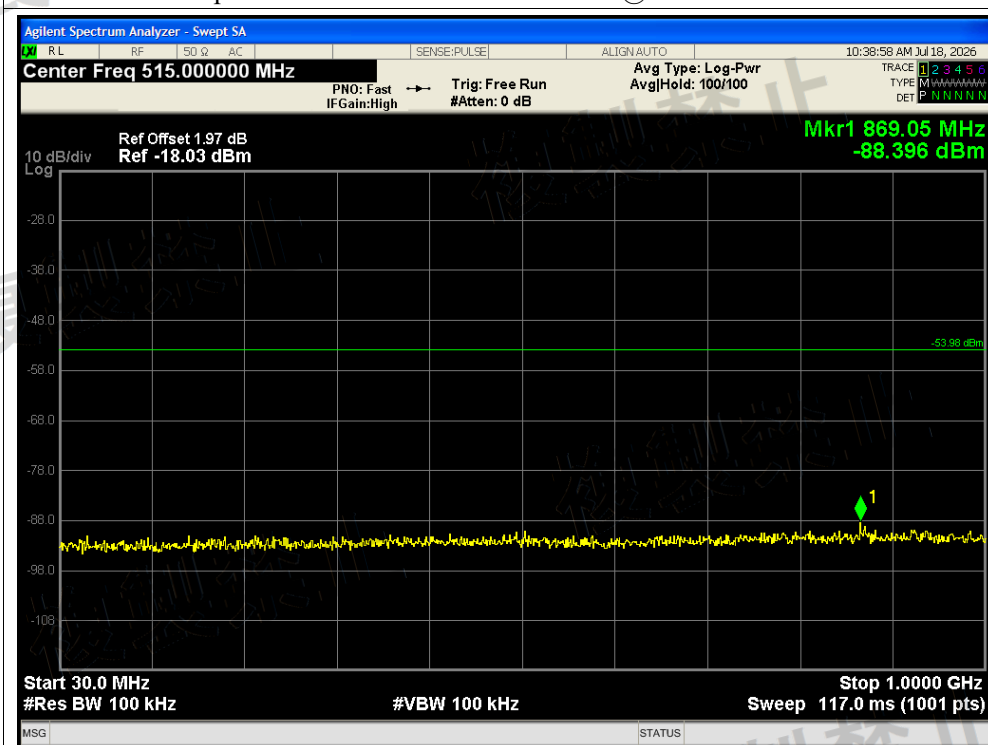


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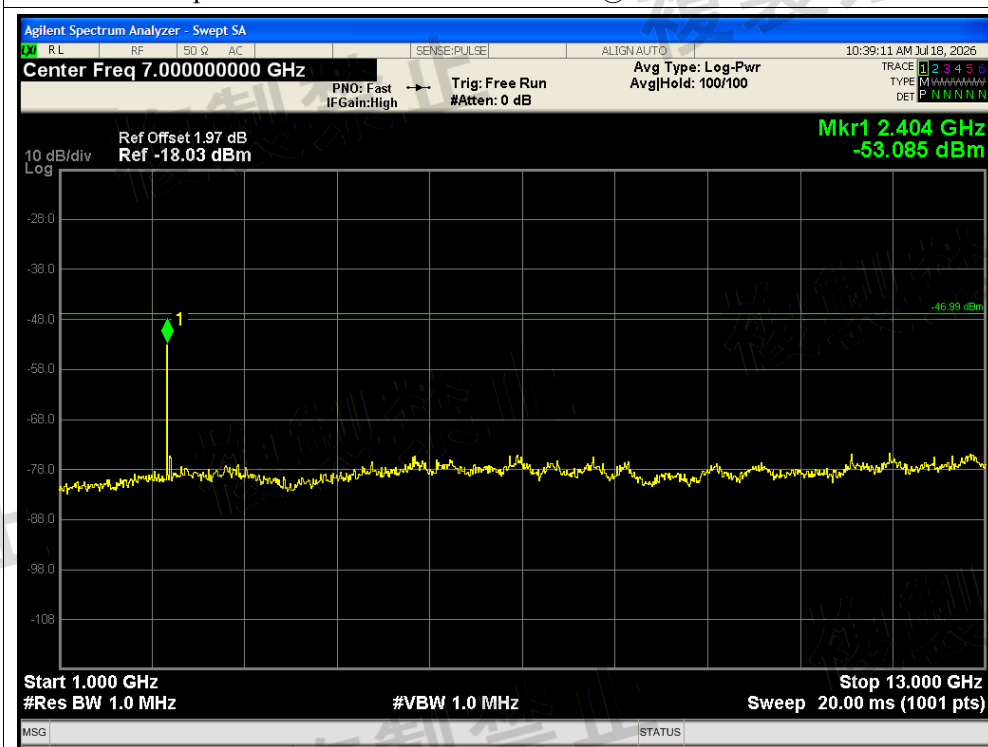




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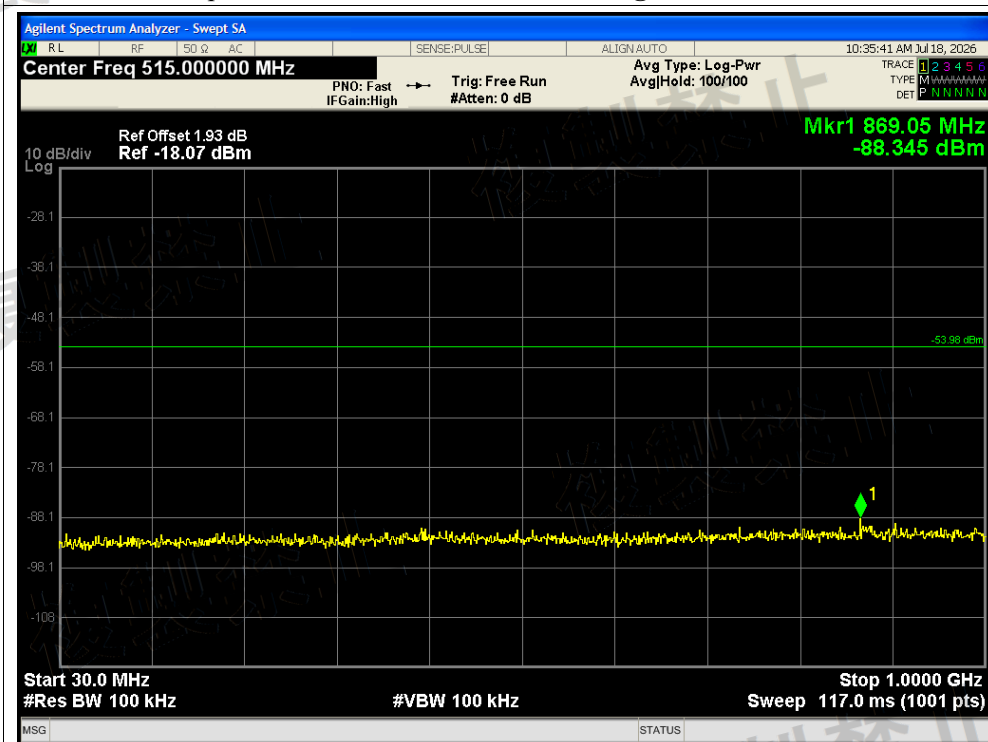


Rx. Spurious NVNT n40 2462MHz Ant1 @ 1000MHz-13000MHz

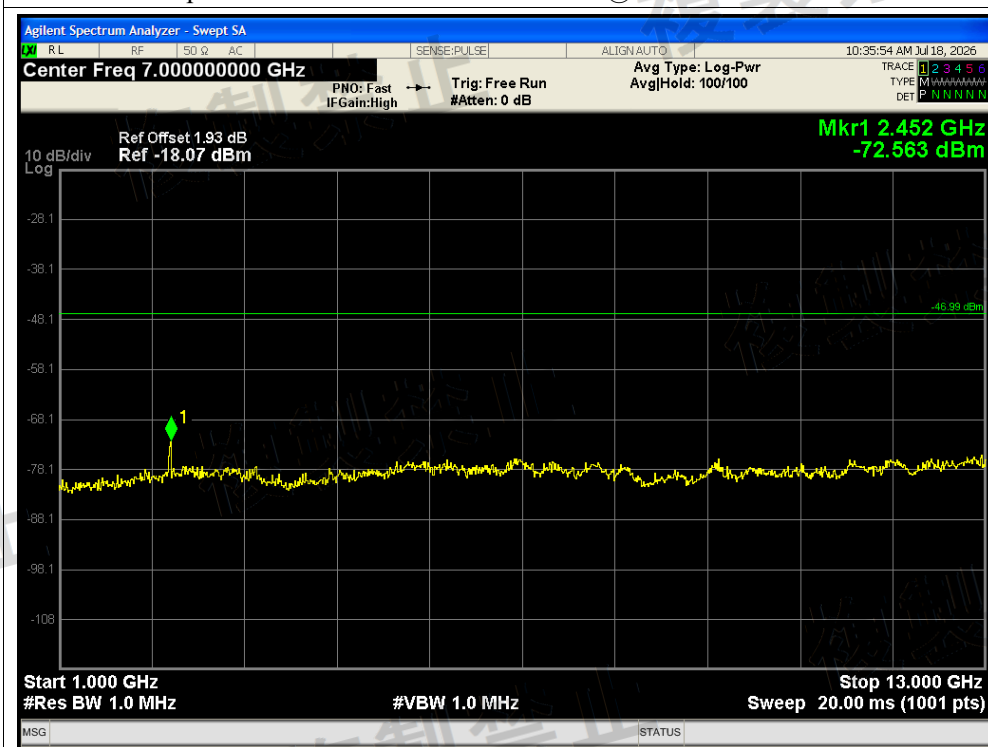




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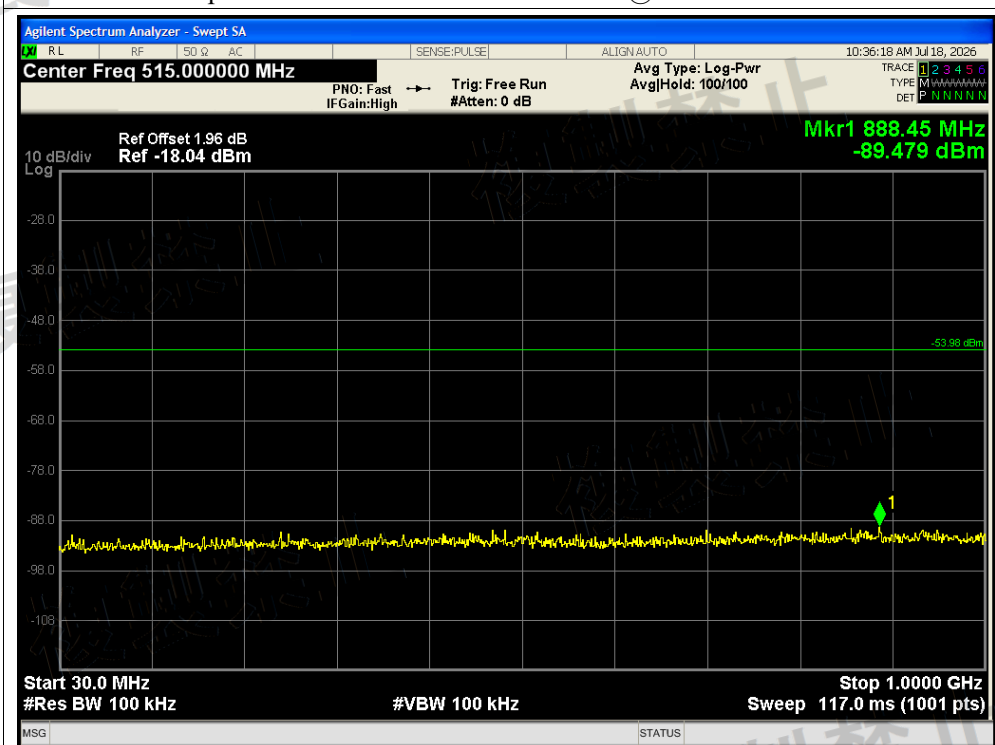


Rx. Spurious NVNT ax20 2412MHz Ant1 @ 1000MHz-13000MHz

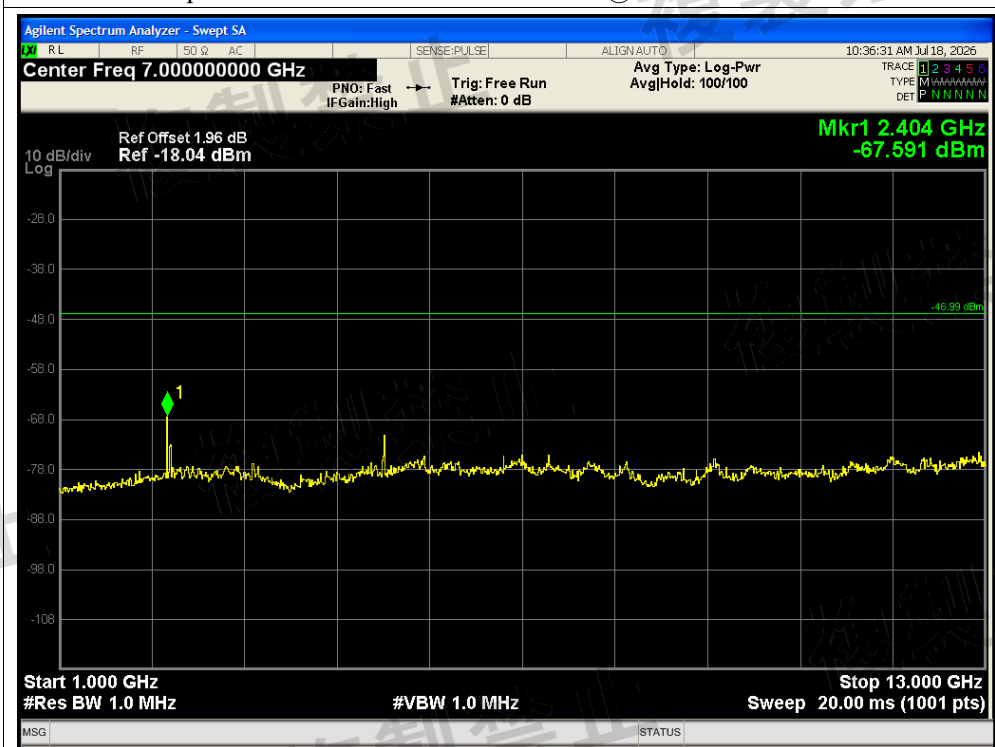




Rx. Spurious NVNT ax20 2442MHz Ant1 @ 30MHz-1000MHz

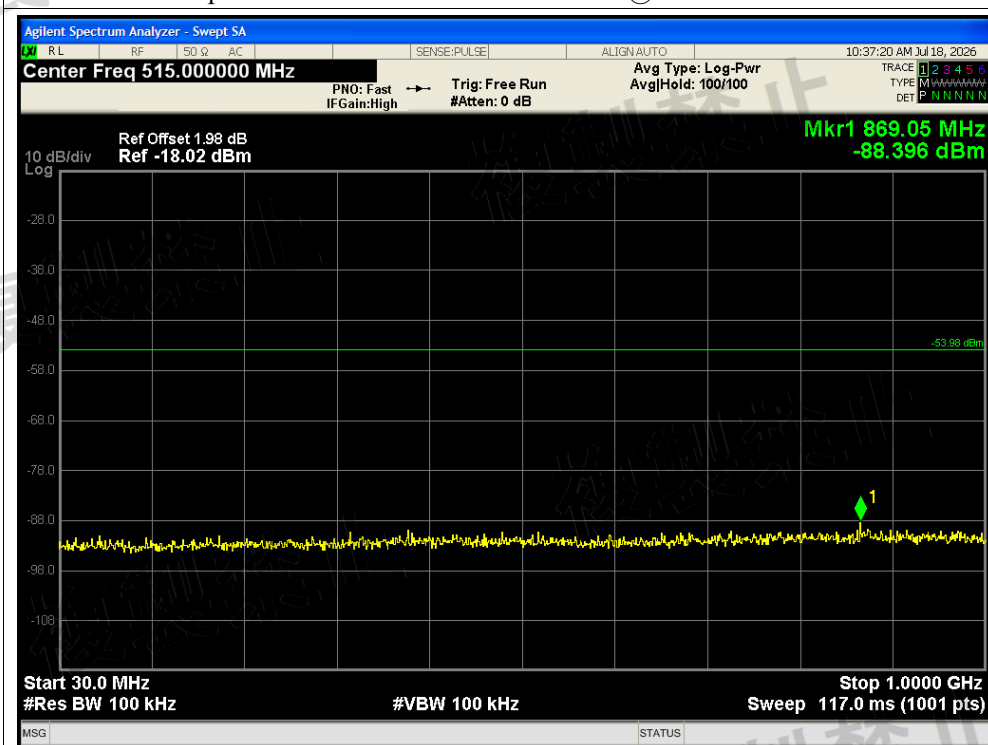


Rx. Spurious NVNT ax20 2442MHz Ant1 @ 1000MHz-13000MHz

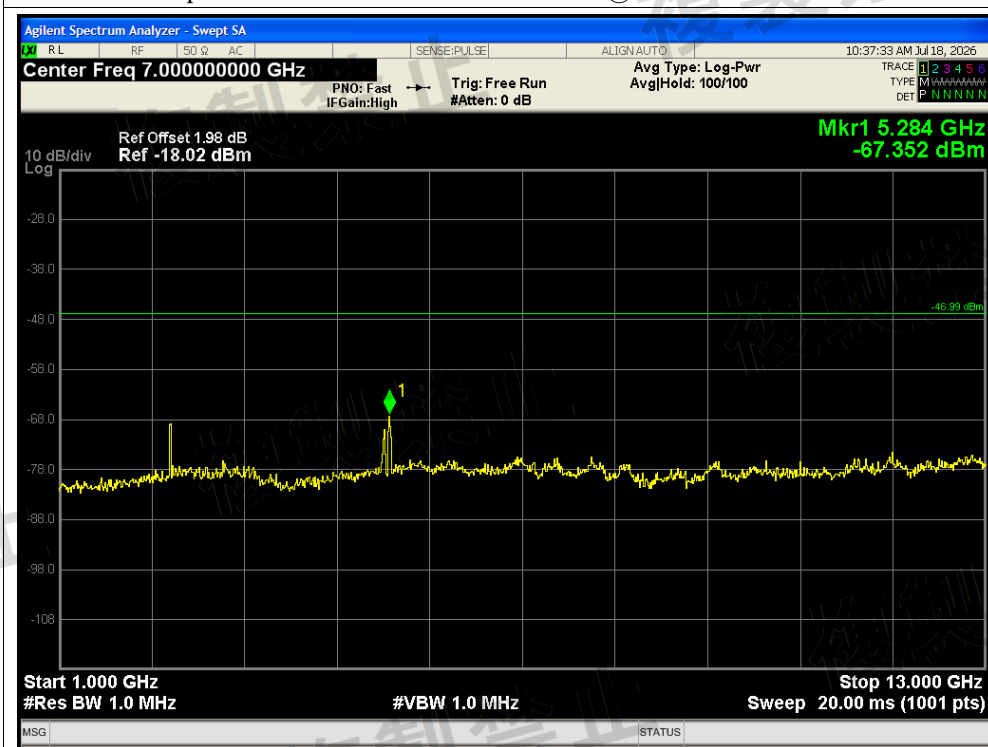




Rx. Spurious NVNT ax20 2472MHz Ant1 @ 30MHz-1000MHz

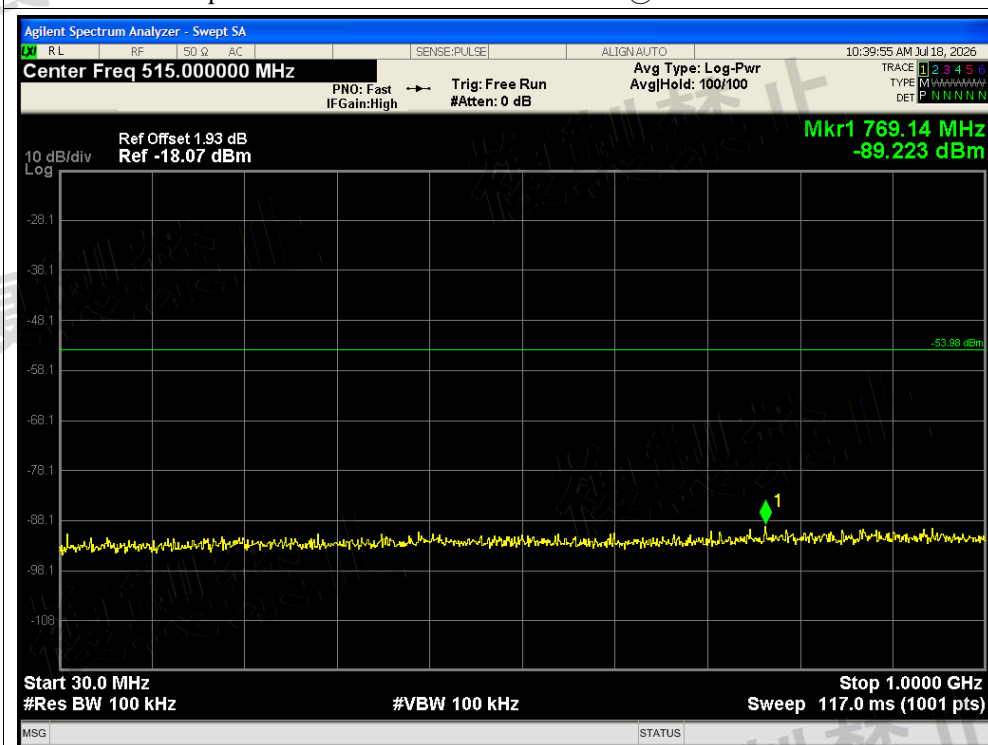


Rx. Spurious NVNT ax20 2472MHz Ant1 @ 1000MHz-13000MHz

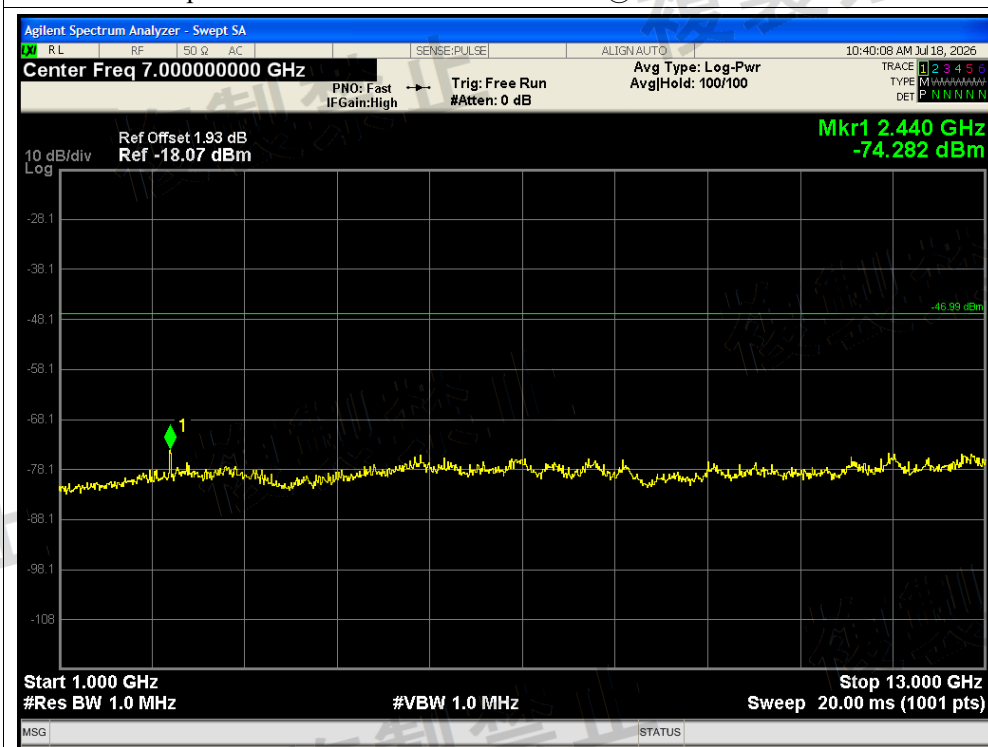




Rx. Spurious NVNT ax40 2422MHz Ant1 @ 30MHz-1000MHz

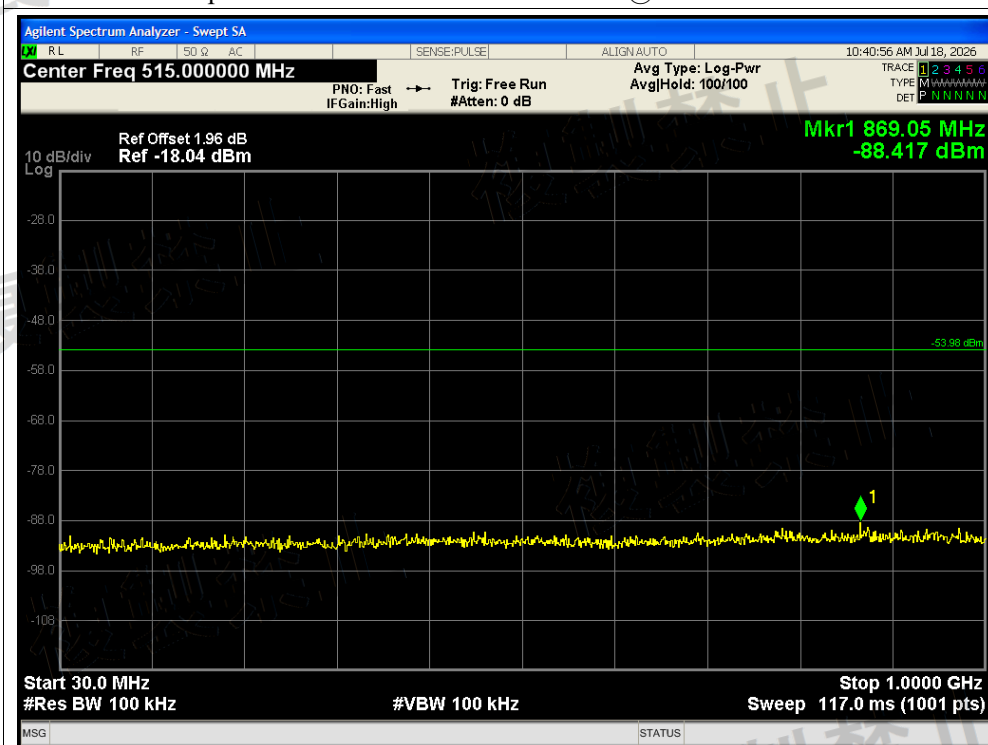


Rx. Spurious NVNT ax40 2422MHz Ant1 @ 1000MHz-13000MHz

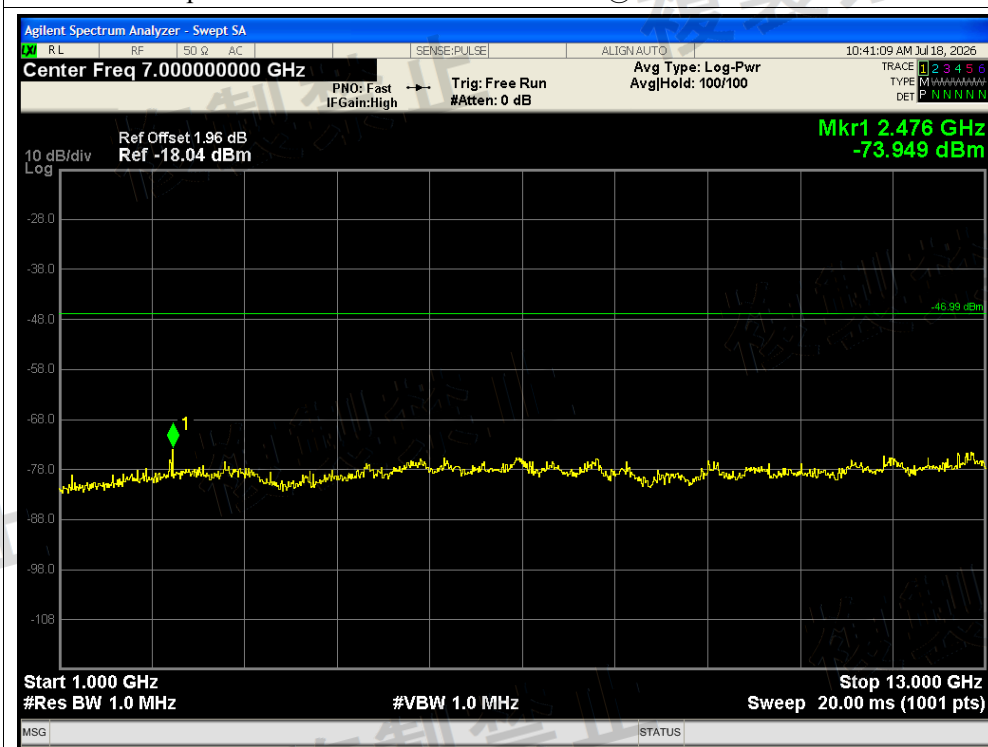




Rx. Spurious NVNT ax40 2442MHz Ant1 @ 30MHz-1000MHz

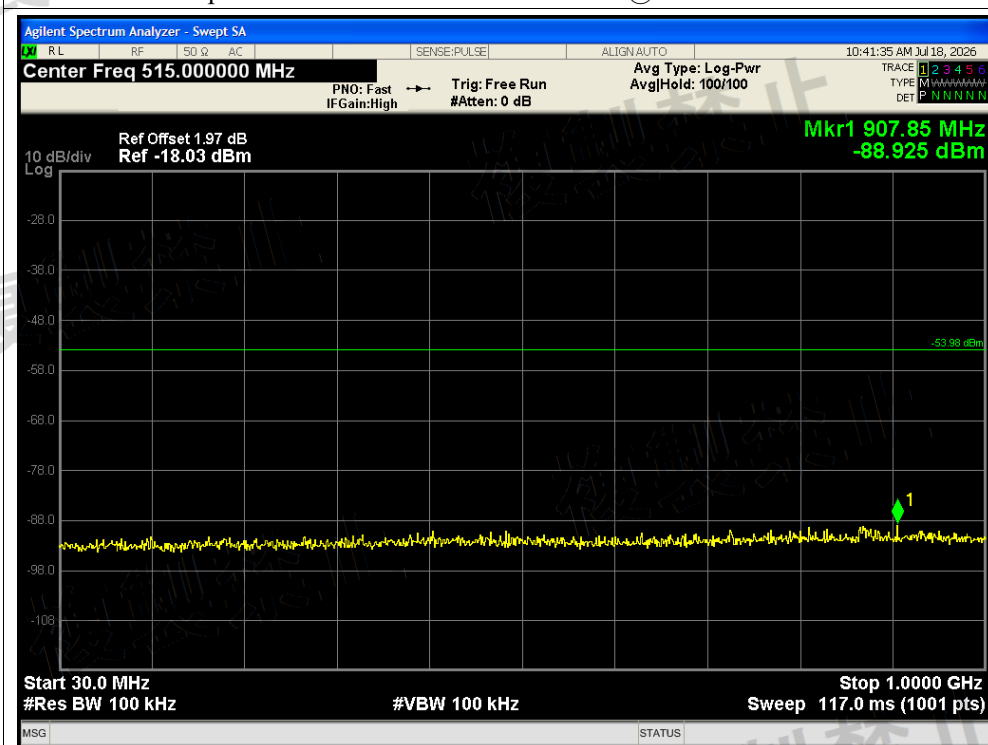


Rx. Spurious NVNT ax40 2442MHz Ant1 @ 1000MHz-13000MHz

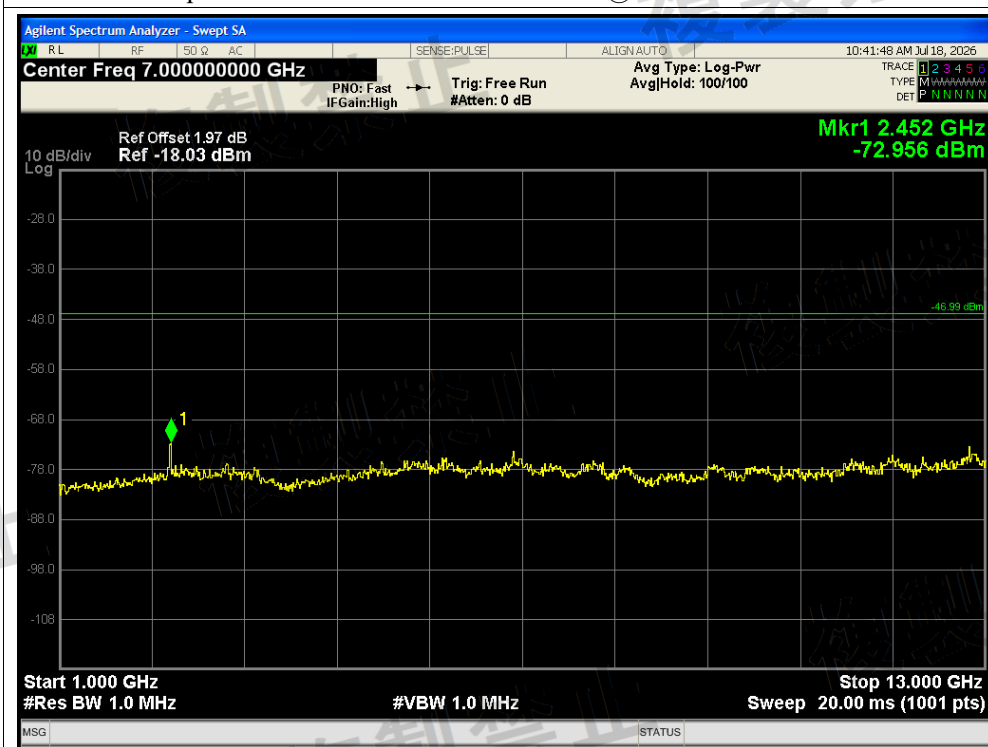




Rx. Spurious NVNT ax40 2462MHz Ant1 @ 30MHz-1000MHz



Rx. Spurious NVNT ax40 2462MHz Ant1 @ 1000MHz-13000MHz



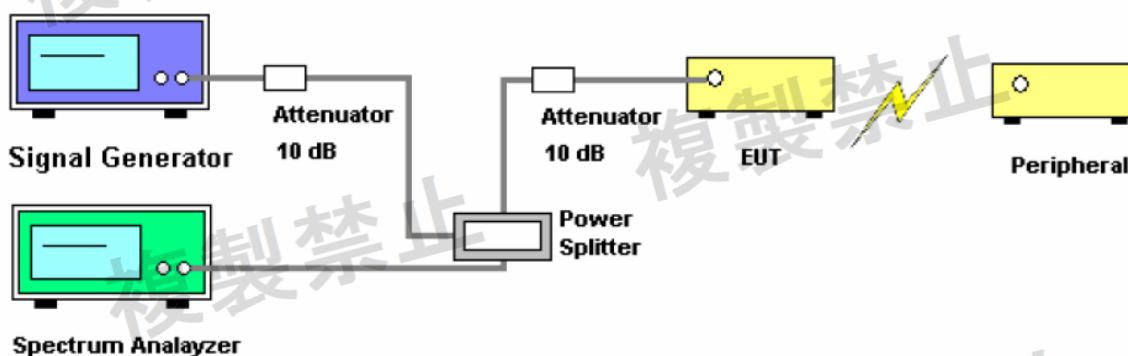
6.12 CARRIER SENSE CAPABILITY

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 $(on\ 22.79 + G - 20 \cdot \log(f) \text{ dBm})$ (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.

802.11n40 mode:

	Normal Voltage
Result	OK

802.11ax40 mode:

	Normal Voltage
Result	OK