



RADIO TEST REPORT

Article 2 paragraph 1 item 19-3

MIC notice 88 Appendix 45

Product : Motorcycle riding system

Trade Mark : AlienRider

Model Name : M2S

Family Model : M12S, M2S-Lite, M2S-Max, M2S-Pro, M2S-200,
M2S-201, M2S-203, M2S-204, M12S-200,
M12S-201, M12S-202, M12S-203, M12S-204

Report No. : S24110803802004

Prepared for

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TEST RESULT CERTIFICATION

Applicant's name..... : Shenzhen ATS Electronics Technology Co., Ltd.

Address..... : 24 Bldg, Baotian Industrial Park, the Third Baotian Road, Bao'an District, Shenzhen Guangdong Province, China

Manufacturer's Name..... : Shenzhen ATS Electronics Technology Co., Ltd.

Address..... : 24 Bldg, Baotian Industrial Park, the Third Baotian Road, Bao'an District, Shenzhen Guangdong Province, China

Test specification:

Standard..... : Article 2 paragraph 1 item 19-3
MIC Notice No.88 Appendix No.45

Test item description

Product name..... : Motorcycle riding system

Trade Mark..... : AlienRider

Model and/or type reference : M2S, M12S, M2S-Lite, M2S-Max, M2S-Pro, M2S-200, M2S-201, M2S-203, M2S-204, M12S-200, M12S-201, M12S-202, M12S-203, M12S-204

This device described above has been tested by NTEK, and the test results show that the equipment under test (EUT) is in compliance with MIC requirements. And it is applicable only to the tested sample identified in the report.

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Test Sample Number..... S241108038002

Date (s) of performance of tests..... Nov. 08, 2024 ~ Dec. 05, 2024

Date of Issue..... Dec. 05, 2024

Test Result..... **Pass**

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※ ※ Revision History ※ ※

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1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

Standard	Method	Description of Test	Result
Article 2 paragraph 1 item (19)-3	MIC Notice No.88 Appendix No.45.3	Frequency Error	Complies
	MIC Notice No.88 Appendix No.45.4	Occupied Bandwidth (99%)	Complies
	MIC Notice No.88 Appendix No.45.6	RF Output Power/Tolerance	Complies
	MIC Notice No.88 Appendix No.45.6	E.I.R.P	Complies
	MIC Notice No.88 Appendix No.45.5	Unwanted Emission Strength	Complies
	MIC Notice No.88 Appendix No.45.7	Adjacent Channel Leakage Power	Complies
	MIC Notice No.88 Appendix No.45.8	Out-Band Leakage Power	Complies
	MIC Notice No.88 Appendix No.45.9	Secondary Radiation Emission Strength	Complies
	MIC Notice No.88 Appendix No.45.3.10	Transmission Burst Length	Complies
	MIC Notice No.88 Appendix No.45.11	Interference Prevention Function	Complies
	MIC Notice No.88 Appendix No.45.12	Carrier Sensing Function	Complies
	MIC Notice No.88 Appendix No.45.13,14	DFS	Complies
	MIC Ordinance Regulating Radio Equipment Section 1.A of Article 49.20.3	Construction Protection Confirmation	Please refer to Japan Radio Protection Declaration

Note: "N/A" means not applicable in the report.

1.1 TEST FACILITY

Site Description

CNAS-Lab. : The Certificate Registration Number is L5516.

IC-Registration : The Certificate Registration Number is 9270A.

CAB identifier:CN0074

FCC- Accredited : Test Firm Registration Number: 463705.

Designation Number: CN1184

A2LA-Lab. : The Certificate Registration Number is 4298.01

Name of Firm : Shenzhen NTEK Testing Technology Co., Ltd.

Site Location : Building 1, 2, 11, 12, No. 24 Xinfu East Road, Xiangshan Community, Xinqiao 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	Conducted Emission Test	$\pm 3.2\text{dB}$
2	Radiated Emission Test	$\pm 4.7\text{dB}$
3	RF power,conducted	$\pm 0.16\text{dB}$
4	Spurious emissions,conducted	$\pm 0.21\text{dB}$
5	All emissions,radiated(<1G)	$\pm 4.68\text{dB}$
6	All emissions,radiated(>1G)	$\pm 5.0\text{dB}$
7	Occupied bandwidth	$\pm 4.7\text{dB}$

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	Motorcycle riding system	
Trade Mark	AlienRider	
Model Name	M2S	
Family Model	M12S, M2S-Lite, M2S-Max, M2S-Pro, M2S-200, M2S-201, M2S-203, M2S-204, M12S-200, M12S-201, M12S-202, M12S-203, M12S-204	
Model Difference	all the models are electrical identical including the same software parameter and hardware design (i.e., circuit design, PCB Layout, RF module/circuit, antenna type(s) and antenna location, components on PCB, etc.), same mechanical structure and design (including product enclosure, materials, etc.). The only difference is the system operating software, and different operating software will create different user interfaces to suit different customer requirements. this software difference has no impact on RF performance.	
Product Description	The EUT is a Motorcycle riding system	
	Operation Frequency:	5470.0MHz ~ 5725.0MHz
	Modulation Type:	802.11a: OFDM (BPSK / QPSK / 16QAM/64QAM) 802.11n: OFDM (QPSK/BPSK/16QAM/64QAM)
	Bit Rate of Transmitter	802.11a: 6,9,12,18,24,36,48,54Mbps; 802.11n(HT20/HT40):MCS0-MCS15;
	Number Of Channel	Please see Note 4.
	DFS type:	☐ master devices ☐ Slave devices with radar detection ☒ Slave devices without radar detection
	Antenna Designation:	FPC Antenna
	Antenna Gain(Peak)	0.87dBi;
	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 4.	
Adapter	N/A	
Battery	N/A	
Rating(s)	DC 12V	
Hardware Version	M2S-V103	
Software Version	M2S1_M75_CPAA_JP_SHOUTOU	

Note:

1 Frequency used for the ARIB STD-T71:

(a) The frequency used in the 20 MHz system shall be one of the following.

② 5,500 MHz, 5,520 MHz, 5,540 MHz, 5,560 MHz, 5,580 MHz, 5,600 MHz, 5,620 MHz, 5,640 MHz, 5,660 MHz, 5,680 MHz or 5,700 MHz

(b) The frequency used in the 40 MHz system shall be one of the following.

② 5, 510 MHz, 5, 550 MHz, 5, 590 MHz, 5, 630 MHz or 5, 670 MHz

(c) The frequency used in the 80 MHz system shall be one of the following.

② 5, 530 MHz or 5, 610 MHz

2. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
3. The EUT does not support TPC function.

4. Carrier Frequency Channel (802.11a)

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	104	5520	108	5540	112	5560
116	5580	120	5600	124	5620	128	5640
132	5660	136	5680	140	5700		

Carrier Frequency Channel (802.11n20)

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	104	5520	108	5540	112	5560
116	5580	120	5600	124	5620	128	5640
132	5660	136	5680	140	5700		

Carrier Frequency Channel (802.11n40)

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
102	5510	110	5550	118	5590	126	5630
134	5670						

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): CH100/ CH120/ CH 140
Mode 2	802.11n(40): CH 102/CH 118/ CH 134

Note: (1) This device 5GHz and 2.4GHz can not transmit simultaneously.

2.3 TEST CONDITIONS

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

The EUT was tuned to a low, middle, and high channel for all tests. For all test case pre/scans were completed in all Modes to determine worst case levels.

Power Supply Voltage Fluctuation Test

Voltage Fluctuation Test	Normal Voltage	High Voltage +10% of Normal Voltage	Low Voltage -10% of Normal Voltage
DC Power	DC 12V	DC 13.2V	DC 10.8V
RF Chip	DC 3.3V	DC 3.3V	DC 3.3V

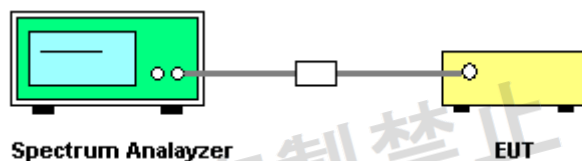
NOTE:

Voltage Variation (%)

= (Output high or Low Voltage - Output Normal Voltage) / Output Normal Voltage * 100

During the input supply voltage to the EUT from the external power source is varied by +/- 10%, if output voltage had been confirmed that the fluctuation of power supply to the RF circuit of EUT (excluding power source) is equal to or less than +/-1%. Exempt extremely high and low supply voltage condition test, EUT only operated in normal voltage to test all regulations.

2.4 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



2.5 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

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	Model/Type No.	Series No.	Note
E-1	Motorcycle riding system	M2S	N/A	EUT

Item	Shielded Type	Ferrite Core	Length	Note

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

Radiation Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	SPECTRUM ANALYZER	AGLIENT	E4440A	MY41000130	2024.04.26	2025.04.25	1 Year
2	SPECTRUM ANALYZER	AGILENT	N9020A	MY49100060	2024.04.25	2025.04.24	1 Year
3	TEST RECEIVER	R&S	ESPI7	101318	2024.04.26	2025.04.25	1 Year
4	50Ω COAXIAL SWITCH	ANRITSU	MP59B	6200983705	2024.04.26	2027.04.25	3 Year
5	HORN ANTENNA	SCHWARZBECK	BBHA 9120 D	2816	2024.05.18	2027.05.17	3 Year
6	HORN ANT	SCHWARZBECK	BBHA 9170	9170-181	2024.05.12	2027.05.11	3 Year
7	PRE-AMPLIFIER	EMC	EMC0518 35SE	980246	2024.04.25	2025.04.24	1 Year
8	POWER METER	DARE	RPR3006 W	15I00041SN O84	2024.04.25	2025.04.24	1 Year
9	TEMPORARY ANTENNA CONNECTOR (NOTE)	NTS	R001	N/A	N/A	N/A	N/A
10	DC POWER SUPPLY	ZHAOXIN	PS-6005D	20170402923	2023.05.06	2026.05.05	3 year
11	AGILENT	PSG ANALOG SIGNAL GENERATOR	E8257D	MY51110112	2024.05.30	2025.05.29	1 year

Measurement Software

Item	Manufacturer	Software Name	Software Version	Description
1	MWRFTtest	MTS 8310 2.4GHz/5GHz	2.0	RF Conducted Test

3. FREQUENCY ERROR

3.1 LIMIT

Item	Limits
Frequency Error	+/-20ppm

3.2 MEASURING INSTRUMENTS AND SETTING

The following table is the setting of Spectrum Analyzer.

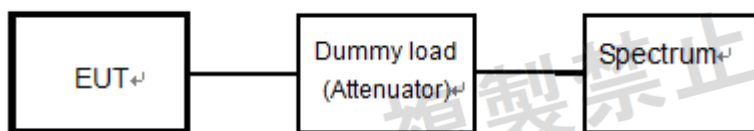
Spectrum Parameter	Setting
Attenuation	Auto
RB / VB	10KHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

3.3 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.

3.4 TEST SETUP LAYOUT



3.5 EUT OPERATION DURING TEST

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

3.6 TEST RESULT

EUT:	Motorcycle riding system	Model:	M2S
Temperature:	25°C	Pressure::	1010 hPa
Humidity:	55 % RH	Test Voltage	Normal Voltage(DC 12V)
Operation Mode:	modulation-(5.6G)		

Test data reference attachment

4. OCCUPIED BANDWIDTH MEASUREMENT (99% POWER BANDWIDTH)

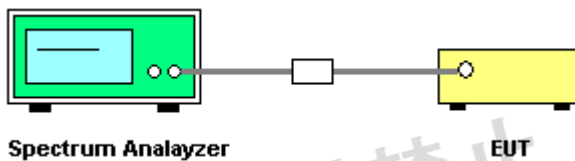
4.1 LIMIT

Items	Limits
(a) ② for Section 2.1, Note 1	≤20MHz;
(b) ② for Section 2.1, Note 1	≤40MHz
(c) ② for Section 2.1, Note 1	≤80MHz
(d) ② for Section 2.1, Note 1	≤160MHz
(e) for Section 2.1, Note 1	≤80MHz

4.2 TEST PROCEDURES

- Setting of SA is following as: RBW: 300KHz /VBW:300KHz/Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold.
- EUT have transmitted each modulation signal and fixed channelize (For DSSS or OFDM Device). SA set to 99% of occupied bandwidth to measure occupied bandwidth. The limit is less than specific value as section 3.2.1.

4.3 TEST SETUP LAYOUT



4.4 TEST DEVIATION

There is no deviation with the original standard.

4.5 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

4.6 TEST RESULT

EUT :	Motorcycle riding system	Model:	M2S
Temperature:	25 ⁰ C	Pressure::	1010 hPa
Humidity:	55 % RH	Test Voltage	Normal Voltage(DC 12V)
Operation Mode:	Normal Voltage-802.11a/n mode(5.6G)		

Test data reference attachment

5. SPURIOUS EMISSIONS FOR TRANSMITTER MEASUREMENT

5.1 LIMIT

W52			
20MHz system		40MHz system	80MHz system
OBW : 18MHz or less	OBW : 18 - 20 MHz		
5,142 MHz or less : 2.5 μ W/MHz	5,142 MHz or less : 2.5 μ W/MHz	5,141.6 MHz or less : 2.5 μ W/MHz	5,123.2 MHz or less : 2.5 μ W/MHz
5,142 - 5,150 MHz : 15 μ W/MHz	5,142 - 5,150 MHz : 15 μ W/MHz	5,141.6 - 5,150 MHz : 15 μ W/MHz	5,123.2 - 5,150 MHz : 15 μ W/MHz
	5,250 - 5,250.2 MHz : $10^{1-(9/50)(f-5250)}$ mW/MHz		
5,250 - 5,251 MHz : $10^{1-(f-5250)}$ mW/MHz	5,250.2 - 5,251 MHz : $10^{1-(f-5250)}$ mW/MHz	5,250 - 5,251 MHz : $10^{-(f-5250)+\log(1/2)}$ mW/MHz	5,250 - 5,251 MHz : $10^{-(f-400)+\log(1/4)}$ mW/MHz
5,251 - 5,260 MHz : $10^{-1-(9/50)(f-5251)}$ mW/MHz	5,251 - 5,260 MHz : $10^{-1-(9/50)(f-5251)}$ mW/MHz	5,251 - 5,270 MHz : $10^{-(9/50)(f-5251)-1+\log(1/2)}$ mW/MHz	5,251 - 5,290 MHz : $10^{-(9/50)(f-41)-1+\log(1/4)}$ mW/MHz
5,260 - 5,266.7 MHz : $10^{-1.8-(6/50)(f-5260)}$ mW/MHz	5,260 - 5,266.7 MHz : $10^{-1.8-(6/50)(f-5260)}$ mW/MHz	5,270 - 5,278.4 MHz : $10^{-(3/50)(f-40)-1.8+\log(1/2)}$ mW/MHz	5,290 - 5,296.7 MHz : $10^{-(3/100)(f-400)-1.8+\log(1/4)}$ mW/MHz
5,266.7 MHz or more : 2.5 μ W/MHz	5,266.7 MHz or more : 2.5 μ W/MHz	5,278.4 MHz or more : 2.5 μ W/MHz	5,296.7 MHz or more : 2.5 μ W/MHz
f = MHz, Difference from 5240 (MHz)	f = MHz, Difference from 5240 (MHz)	f = MHz, Difference from 5230 (MHz)	f = MHz, Difference from 5210 (MHz)

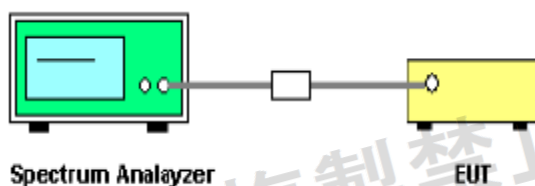
W53			
20MHz system		40MHz system	80MHz system
OBW : 18MHz or less	OBW : 18 - 20 MHz		
5,233.3 MHz or less : 2.5 μ W/MHz	5,233.3 MHz or less : 2.5 μ W/MHz	5,221.6 MHz or less : 2.5 μ W/MHz	5,203.3 MHz or less : 2.5 μ W/MHz
5,233.3 - 5,240 MHz : $10^{-1.8-(6/50)(f-5233)}$ mW/MHz	5,233.3 - 5,240 MHz : $10^{-1.8-(6/50)(f-5233)}$ mW/MHz	5,221.6 - 5,230 MHz : $10^{-(9/50)(f-40)-1.8+\log(1/2)}$ mW/MHz	5,203.3 - 5,210 MHz : $10^{-(9/100)(f-400)-1.8+\log(1/4)}$ mW/MHz
5,240 - 5,249 MHz : $10^{-1-(9/50)(f-5240)}$ mW/MHz	5,240 - 5,249 MHz : $10^{-1-(9/50)(f-5240)}$ mW/MHz	5,230 - 5,249 MHz : $10^{-(9/50)(f-21)-1+\log(1/2)}$ mW/MHz	5,210 - 5,249 MHz : $10^{-(9/300)(f-41)-1+\log(1/4)}$ mW/MHz
5,249 - 5,250 MHz : $10^{1-(f-5249)}$ mW/MHz	5,249 - 5,249.8 MHz : $10^{1-(f-5249)}$ mW/MHz	5,249 - 5,250 MHz : $10^{-(f-5250)+\log(1/2)}$ mW/MHz	5,249 - 5,250 MHz : $10^{-(f-400)+\log(1/4)}$ mW/MHz
	5,249.8 - 5,250 MHz : $10^{1-(9/50)(f-5249.75)}$ mW/MHz	5,350 - 5,358.4 MHz : 15 μ W/MHz	5,350 - 5,376.8 MHz : 15 μ W/MHz
5,350 MHz or more : 2.5 μ W/MHz	5,350 MHz or more : 2.5 μ W/MHz	5,358.4 MHz or more : 2.5 μ W/MHz	5,376.8 MHz or more : 2.5 μ W/MHz
f = MHz, Difference from 5260 (MHz)	f = MHz, Difference from 5260 (MHz)	f = MHz, Difference from 5270 (MHz)	f = MHz, Difference from 5290 (MHz)

W56			
20MHz system		40MHz system	80MHz system
DSSS, etc.	OFDM		
5,470 MHz or less : 12.5 μ W/MHz	5,460 MHz or less : 2.5 μ W/MHz	5,460 MHz or less : 12.5 μ W/MHz	5,460 MHz or less : 12.5 μ W/MHz
	5,460 - 5,470 MHz : 12.5 μ W/MHz	5,460 - 5,470 MHz : 50 μ W/MHz	5,460 - 5,469.5 MHz : 50 μ W/MHz
	5,745 - 5,765 MHz : 12.5 μ W/MHz		5,469.5 - 5,470 MHz : 51.2 μ W/MHz
5,730 MHz or more : 12.5 μ W/MHz	Over 5,765 MHz : 2.5 μ W/MHz	5,770 MHz or more : 12.5 μ W/MHz	5,770 MHz or more : 12.5 μ W/MHz

5.2. TEST PROCEDURES

1. EUT have transmitted the maximum modulation signal and fixed channelize.
2. Setting of SA is following as: Below 1GHz RB:100KHz / VB:100KHz
Above 1GHz RB:1MHz / VB:1MHz / AT: 10dB Ref: 0dBm / Sweep time: Auto
Sweep Mode: Continuous sweep / Detect mode: Positive peak
Trace mode: Max hold
3. Setting of SA is following as 30MHz and stop frequency 1000MHz Then to mark peak reading value + cable loss shall be less than 2.5 μ W.
4. SA adjusted to start frequency and stop frequency 26GHz .Then to mark peak reading value + cable loss shall be less than 2.5 μ W/MHz.
5. If the Result Value is over the requirement, we need to measurement as below steps
6. Span 1~10MHz to find the frequency that have maximum value.
7. Setting of SA is following as: Span: Zero/RBW: 100KHz/VBW: 100KHz under 1GHz,
Sweep time: Auto / Sweep Mode: Singled sweep / Detect mode: Sample.
8. Calculated the mean power value, add all value of test point and division sample point number.
9. Report the mean power

5.3. TEST SETUP LAYOUT



5.4. TEST DEVIATION

There is no deviation with the original standard.

5.5. TEST RESULT

EUT :	Motorcycle riding system	Model:	M2S
Temperature:	25°C	Pressure:.	1010 hPa
Humidity:	55 % RH	Test Voltage	Normal Voltage(DC 12V)
Operation Mode:	Normal Voltage-802.11a/n mode(5.6G)		

Test data reference attachment

6. ADJACENT CHANNEL POWER TOLERANCE

6.1 LIMIT

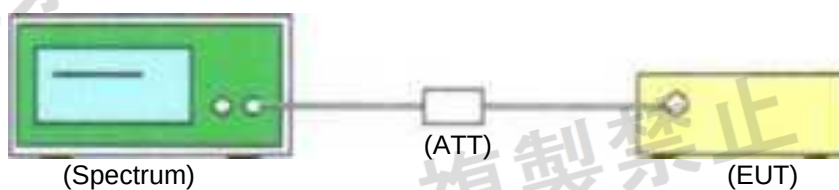
802.11a & 802.11n/ac (20MHz/40MHz/80MHz)

LIMIT
(BW _{ch} 20MHz & CP/OBW≤18MHz) - fc±20MHz ≥25dB; fc±40MHz ≥40dB
(BW _{ch} 20MHz & CP/OBW≤20MHz) - fc±20MHz ≥25dB; fc±40MHz ≥40dB
(BW _{ch} 40MHz & CP/OBW≤40MHz) - fc±40MHz ≥25dB; fc±80MHz ≥40dB
(BW _{ch} 80MHz & CP/OBW≤80MHz) - fc±80MHz ≥25dB- N/A
(BW _{ch} 80+80MHz & CP/OBW≤80MHz) - fc±80MHz ≥25dB- N/A
(BW _{ch} 160MHz & CP/OBW≤160MHz) - N/A

6.2 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

6.3 TEST SETUP



6.4 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.

7.6 TEST RESULT

EUT :	Motorcycle riding system	Model:	M2S
Temperature:	25°C	Pressure::	1010 hPa
Humidity:	55 % RH	Test result:	Pass

Test data reference attachment

7. RF OUTPUT POWER / TOLERANCE

7.1 LIMIT

Band	Item	Limits
W52 Band W53 Band W56 Band	Antenna Power Density	$\leq 10\text{mW(Other) or } \leq 10\text{mW/MHz(DS, OBW} \leq 18\text{MHz)}$ $\leq 10\text{mW/MHz(OFDM, OBW} \leq 20\text{MHz)}$ $\leq 5\text{mW/MHz (OFDM, OBW} \leq 40\text{MHz)}$ $\leq 2.5\text{ mW/MHz (OFDM, OBW} \leq 80\text{MHz)}$
W52 Band W53 Band	Antenna Power Error	+20%, -80%
W56 Band		+50%, -50%

8.2 TEST DEVIATION

There is no deviation with the original standard.

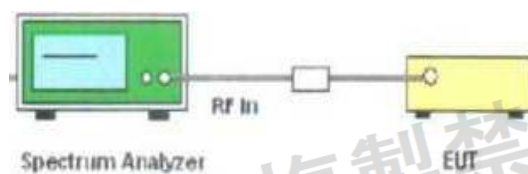
8.3 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

8.4 TEST PROCEDURES

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: Twice of the occupied bandwidth
 - Detector: Peak.
 - Trace Mode: Max Hold
2. When the trace is complete, find the peak value of the power envelope and record the frequency.
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.
 - Trace Mode: Max Hold.
4. Then read the value of antenna power .
between +/- 50% power range that base on manufacturer declare the conducted power density.

8.5 TEST SETUP



8.6 TEST RESULT

EUT :	Motorcycle riding system	Model:	M2S
Temperature:	25°C	Pressure::	1010 hPa
Humidity:	55 % RH	Test Voltage	Normal Voltage(DC 12V)
Operation Mode:	Normal Voltage-a mode(5.6G)		

Test data reference attachment

8. E.I.R.P MEASUREMENT**8.1 LIMIT**

Band	E.I.R.P Power (mW/MHz) Limits				
	20MHz	40MHz	80MHz	160MHz	Note
W52	10	5	2.5	1.25	
W53	10	5	2.5	1.25	With TPC
	5	2.5	1.25	0.625	Without TPC
W56	50	25	12.5	6.25	With TPC
	25	12.5	6.25	3.125	Without TPC

8.2 TEST PROCEDURES

EIRP Power= Conducted power + antenna gain.

8.3 TEST SETUP LAYOUT

Please refer to Section 8.4 of this test report.

8.4 TEST DEVIATION

There is no deviation with the original standard.

8.5 EUT OPERATION DURING TEST

The EUT was programmed to be in normal transmitting mode.

8.6 TEST RESULT

EUT :	Motorcycle riding system	Model:	M2S
Temperature:	25°C	Pressure::	1010 hPa
Humidity:	55 % RH	Test Voltage	Normal Voltage(DC 12V)
Operation Mode:	Normal Voltage-a/n mode(5.6G)		

Test data reference attachment

Note: This device does not support TPC.

10 SPURIOUS EMISSIONS FOR RECEIVER

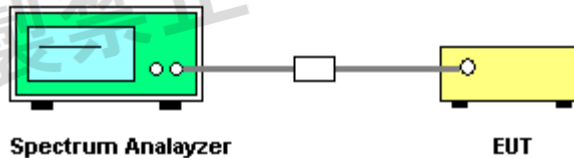
10.1 LIMIT

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

10.2 TEST PROCEDURE

- EUT have the continuous reception mode and fixed only one channelize.
- 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.
- 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.
- If power level of lower emissions are more than 1/10 of limit (0.4nW 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.

10.3 TEST SETUP LAYOUT



10.4 TEST DEVIATION

There is no deviation with the original standard.

10.5 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously reception mode.

10.6 TEST RESULT

EUT :	Motorcycle riding system	Model:	M2S
Temperature:	25°C	Pressure::	1010 hPa
Humidity:	55 % RH	Test Voltage	Normal Voltage(DC 12V)
Operation Mode:	Normal Voltage-802.11a/n mode(5.6G)		

Test data reference attachment

11 BURST LENGTH

11.1 LIMITS OF BURST LENGTH

Item	Limits
Transmission Burst	≤8ms

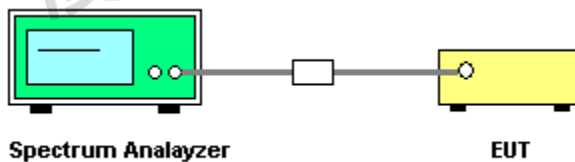
11.2 MEASURING INSTRUMENTS

See list of measuring instruments of this test report.

11.3 TEST PROCEDURES

- Setting of SA is following as: RBW: 8MHz/VBW:8MHz /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.

11.4 TEST SETUP



11.5 TEST DEVIATION

There is no deviation with the original standard.

11.6 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

11.7 TEST RESULT

EUT :	Motorcycle riding system	Model:	M2S
Temperature:	25°C	Pressure::	1010 hPa
Humidity:	55 % RH	Test Voltage	Normal Voltage(DC 12V)
Operation Mode:	Normal Voltage-802.11a/n mode(5.6G)		

Test data reference attachment

12 RADIO INTERFERENCE PREVENTION CAPABILITY MEASUREMENT

12.1 LIMIT

Item	Limits
Identification code	≥ 48 bits

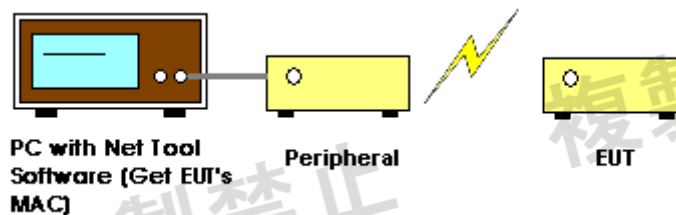
12.2 MEASURING ID CODE SOFTWARE

Item	Limits
MAC IP List	MAC Scan

12.3 TEST PROCEDURES

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.

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

EUT :	Motorcycle riding system	Model:	M2S
Temperature:	25°C	Pressure::	1010 hPa
Humidity:	55 % RH	Test result:	Compliance

Radio interface prevention function

	Normal voltage	Low voltage	High voltage
Result	OK	/	/

Mac address: B4:19:CD:F4:88:3F

Result: OK

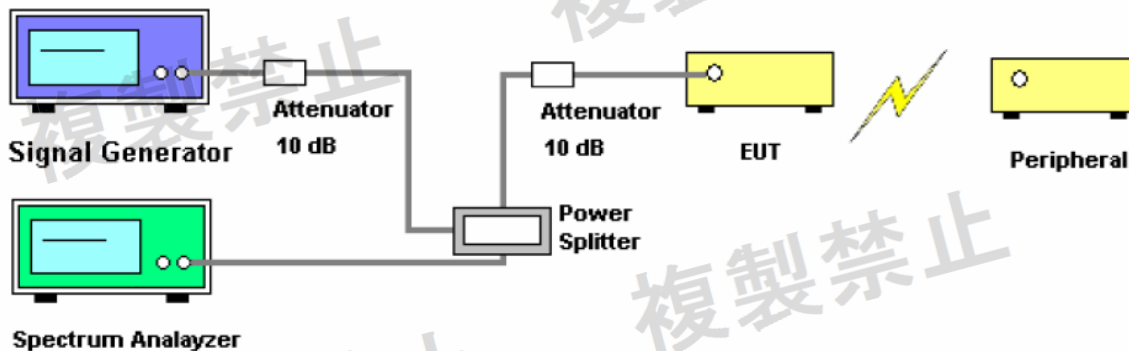
13 CARRIER SENSE CAPABILITY

13.1 LIMIT

EUT stop RF transmission signal after carrier inject to EUT

13.2 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.

13.3 TEST RESULT

Mode	Normal Voltage	High Voltage	Low Voltage
802.11a	OK	/	/
802.11n20/40	OK	/	/

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

Limit:100mw/m eirp

Confirmed at -50dBm

Result:OK

14 DYNAMIC FREQUENCY SELECTION (DFS)

14.1 Limit

DFS is required in the frequency ranges 5250MHz to 5350MHz, 5470MHz to 5725MHz. This requirement applies to all types of RLAN devices and to any type of communication between these devices.

14.1.1 Master equipment requirements

- (1) Before initiating a network on a channel, which has not been identified as an Available Channel, the master device shall perform a Channel Availability Check to ensure that there is no radar operating on the channel.
- (2) During normal operation, the master device shall monitor the Operating Channel (In-Service Monitoring) to ensure that there is no radar operating on the channel. When the master device has detected a radar signal during In-Service Monitoring, the Operating Channel is made unavailable. The master device shall instruct all its associated slave devices to stop transmitting on this (to become unavailable) channel.
- (3) The master device shall not resume any transmissions on this Unavailable Channel during a period of time after a radar signal was detected. This period is referred as the Non-Occupancy Period.

14.1.2 Slave device requirements

Not Applicable.

14.1.3 DFS requirement

Requirement	Master	Slave
Channel Availability Check Time	V	X
Channel Move Time	V	V
Channel Closing Transmission Time	V	V
Non-Occupancy Period	V	X

14.1.4 DFS requirement values

Parameter	Value
Channel Availability Check Time	$\geq 60s$
Channel Move Time	$< 10s$
Channel Closing Transmission Time	$< 260ms$
Non-Occupancy Period	$\geq 30 \text{ min}$

14.2 Setting

The following table is the setting of the spectrum analyzer, data generator and signal generator.

Spectrum Parameter	Setting
Attenuation	10 dB
Span Frequency	0 MHz
RBW	1 MHz
VBW	3 MHz
Sweep Time	More than DFS requirement values

Radar Signal Parameter (Data Generator)

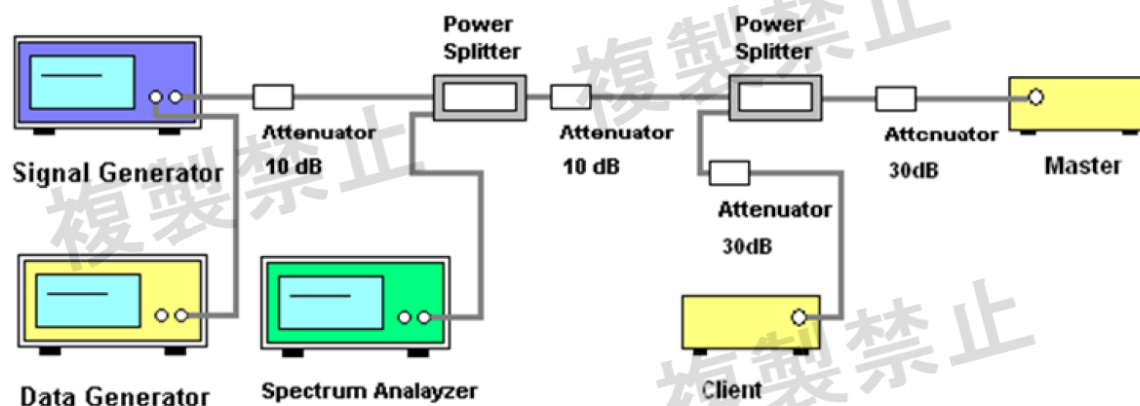
Radar type	Pulse Repetition Frequency (Hz)	Pulse Width (usec.)	Number of Pulses	Radar Detection Probability
DFS-J2-1(W53)	1000	5	10	60% or more
DFS-J2-2(W53)	1600	15	15	60% or more
DFS-J2-1(W56)	720	0.5	18	60% or more
DFS-J2-2(W56)	250	2.0	18	60% or more
DFS-US-1(W56)	700	1.0	18	60% or more
DFS-US-2(W56)	4347-6667	1.0-5.0	23-29	60% or more
DFS-US-3(W56)	2000-5000	6.0-10	16-18	60% or more
DFS-US-4(W56)	2000-5000	11-20	12-16	60% or more
DFS-US-5	500-1000	50-100	1-3	80% or more
DFS-US-6	3000	1	9	70% or more
Aggregate (6 Radar Types) must be:				80% or more

Signal Generator Parameter	Setting
Pulse	External Trigger
ALC	Off
Power Level	Interference Detection Threshold + G [dBi]

14.3 Test procedure

MIC public notice 88:2004, annex 45.

14.4 Test setup



Wireless AP	Manufacturer:	LINKSYS LLC
	Model No:	WRT32X

14.5 Radar test result

* Chooses the frequency which transmits automatically by the control from a "master station"

* Transmission and a stop of a radio wave are performed by the control from a "master station".

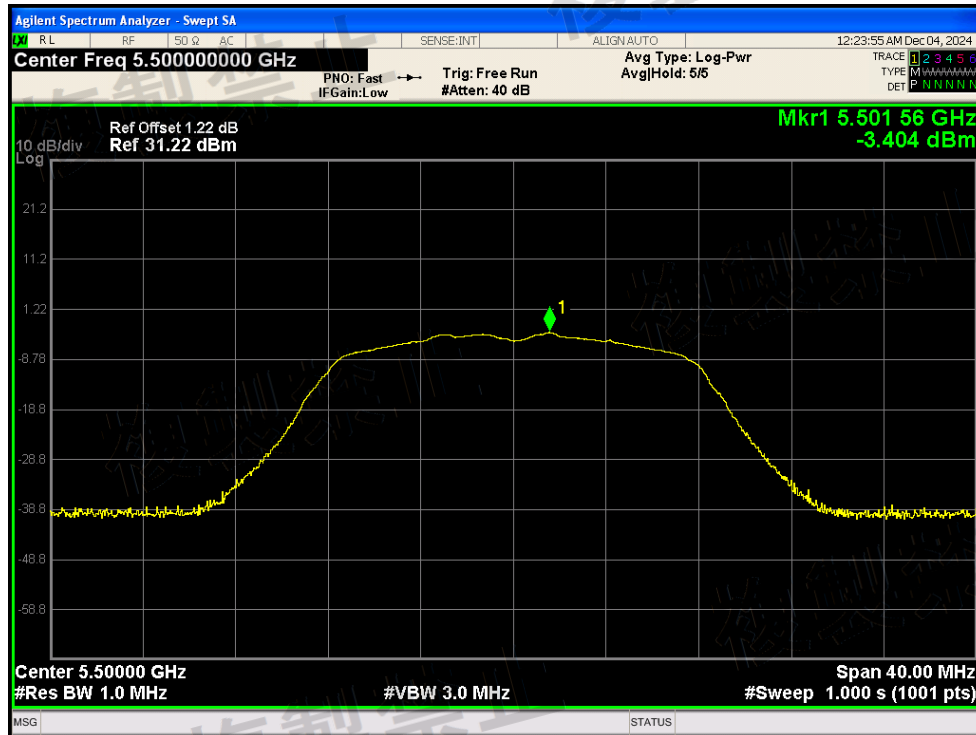
15 TEST RESULTS

15.1 5.6G WIFI

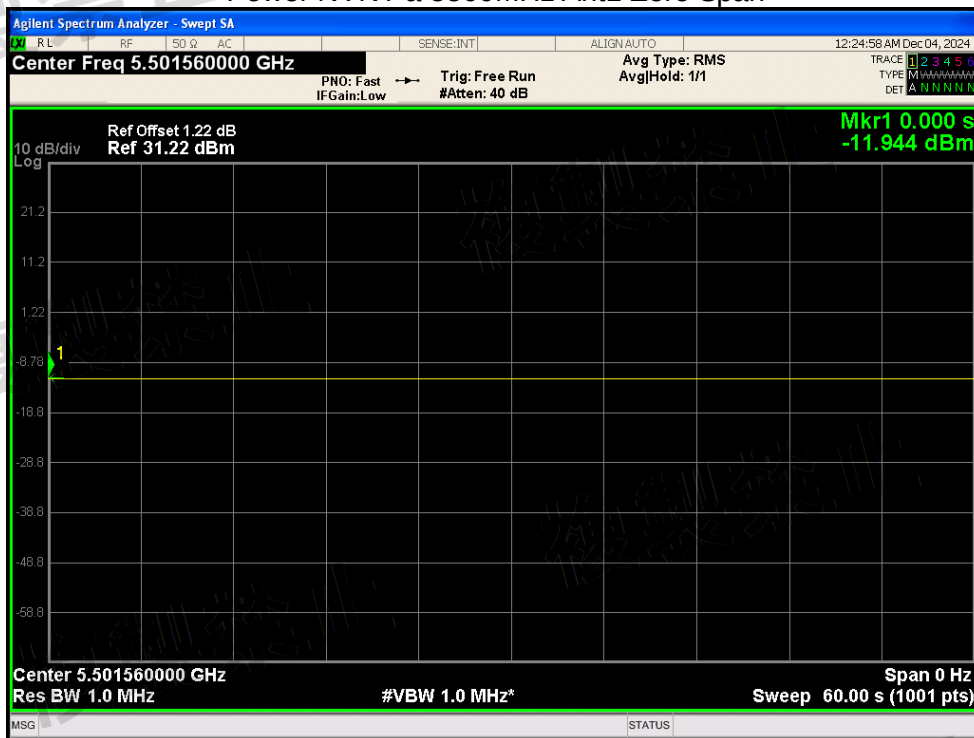
15.1.1 ANTENNA AND EIRP POWER

Condition	Mode	Frequency (MHz)	Antenna	Antenna Power (mW/MHz)	Declared Power (mW/MHz)	Tolerance (%)	Upper Limit (%)	Lower Limit (%)	Verdict
NVNT	a	5500	Ant1	0.064	0.1	-36.09	50	-50	Pass
NVNT	a	5600	Ant1	0.052	0.1	-48.47	50	-50	Pass
NVNT	a	5700	Ant1	0.057	0.1	-42.79	50	-50	Pass
NVNT	n20	5500	Ant1	0.077	0.1	-22.91	50	-50	Pass
NVNT	n20	5600	Ant1	0.062	0.1	-38.13	50	-50	Pass
NVNT	n20	5700	Ant1	0.068	0.1	-32.31	50	-50	Pass
NVNT	n40	5510	Ant1	0.02	0.03	-34.49	50	-50	Pass
NVNT	n40	5590	Ant1	0.018	0.03	-41.2	50	-50	Pass
NVNT	n40	5670	Ant1	0.02	0.03	-32.75	50	-50	Pass

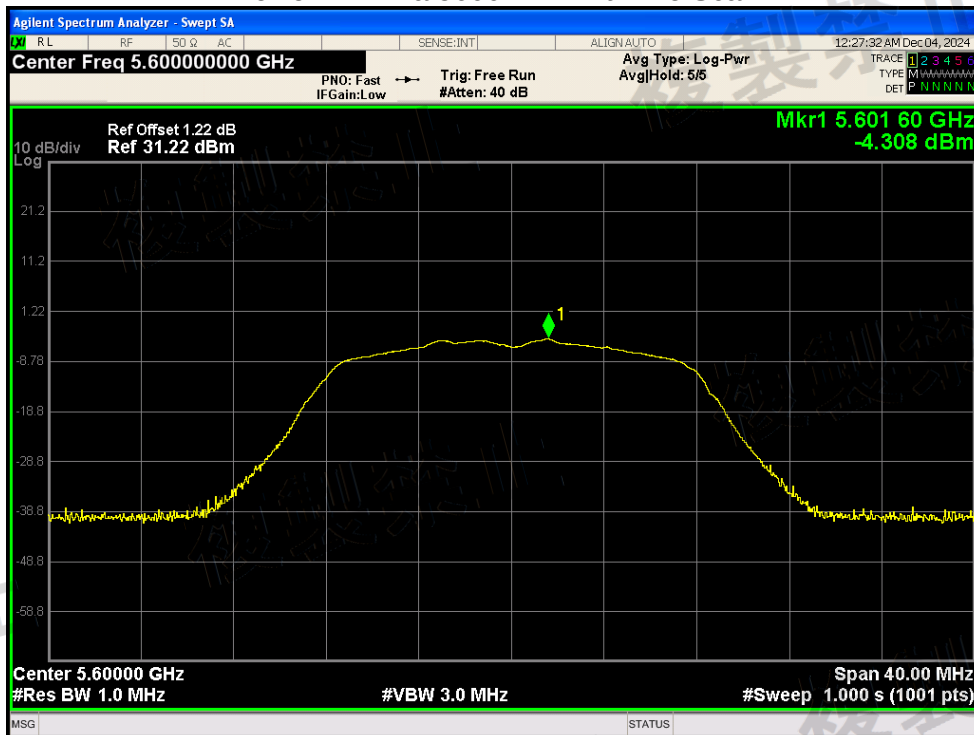
Power NVNT a 5500MHz Ant1 Pre Scan



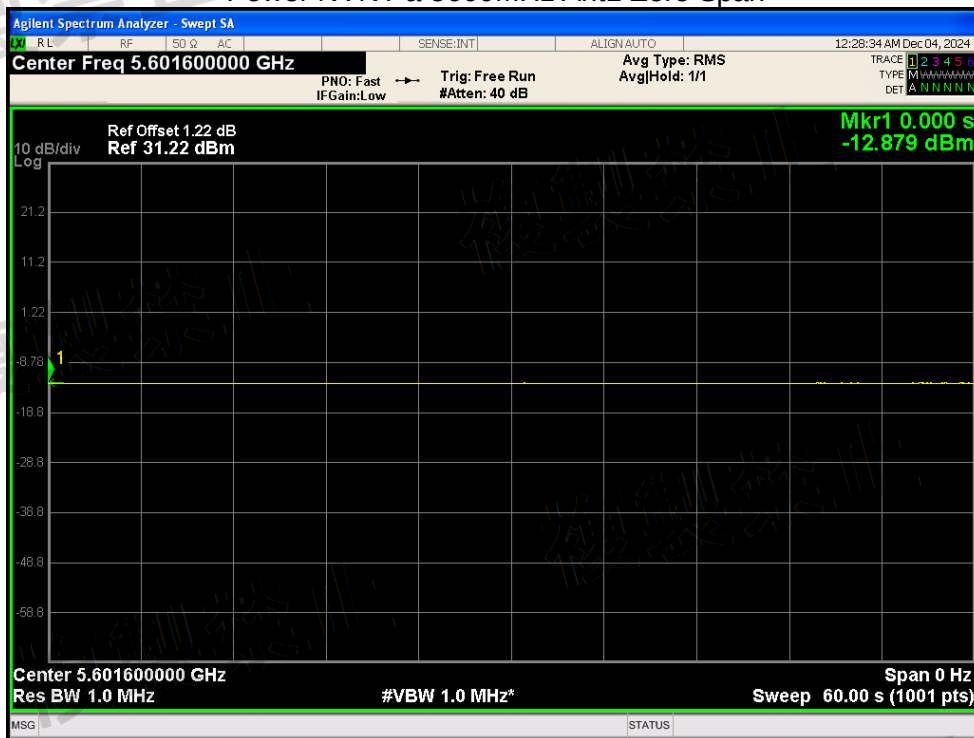
Power NVNT a 5500MHz Ant1 Zero Span



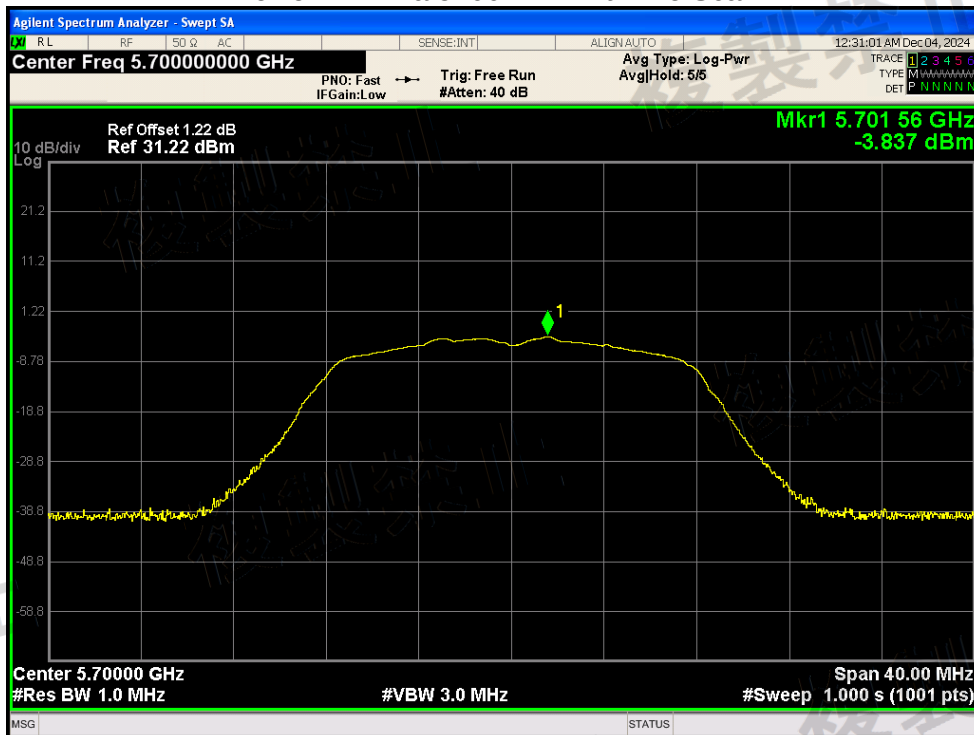
Power NVNT a 5600MHz Ant1 Pre Scan



Power NVNT a 5600MHz Ant1 Zero Span



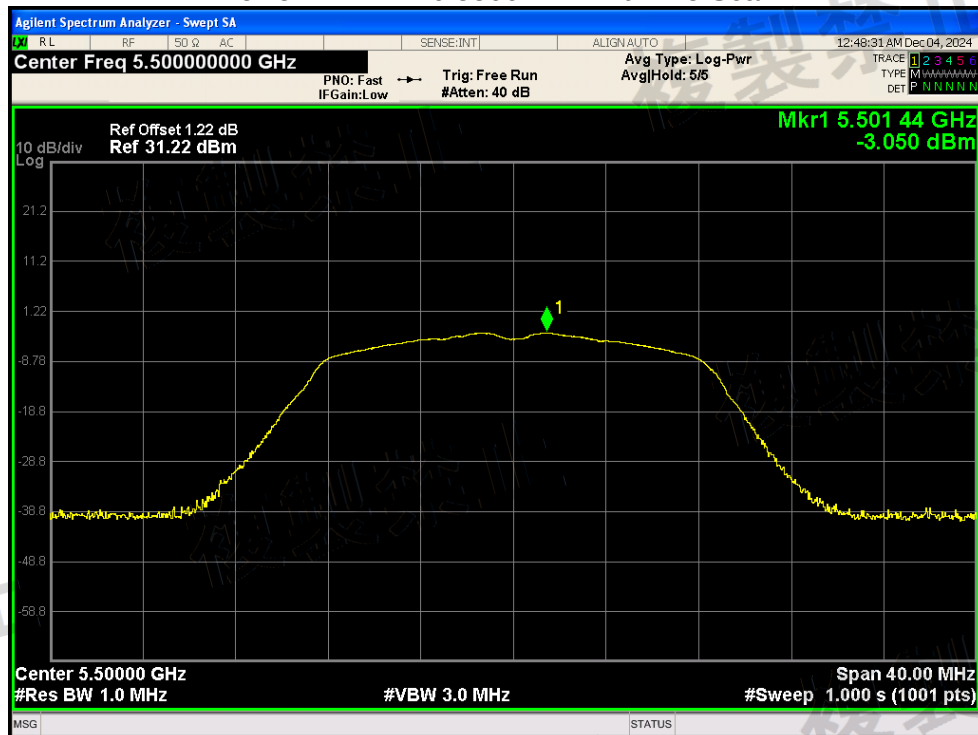
Power NVNT a 5700MHz Ant1 Pre Scan



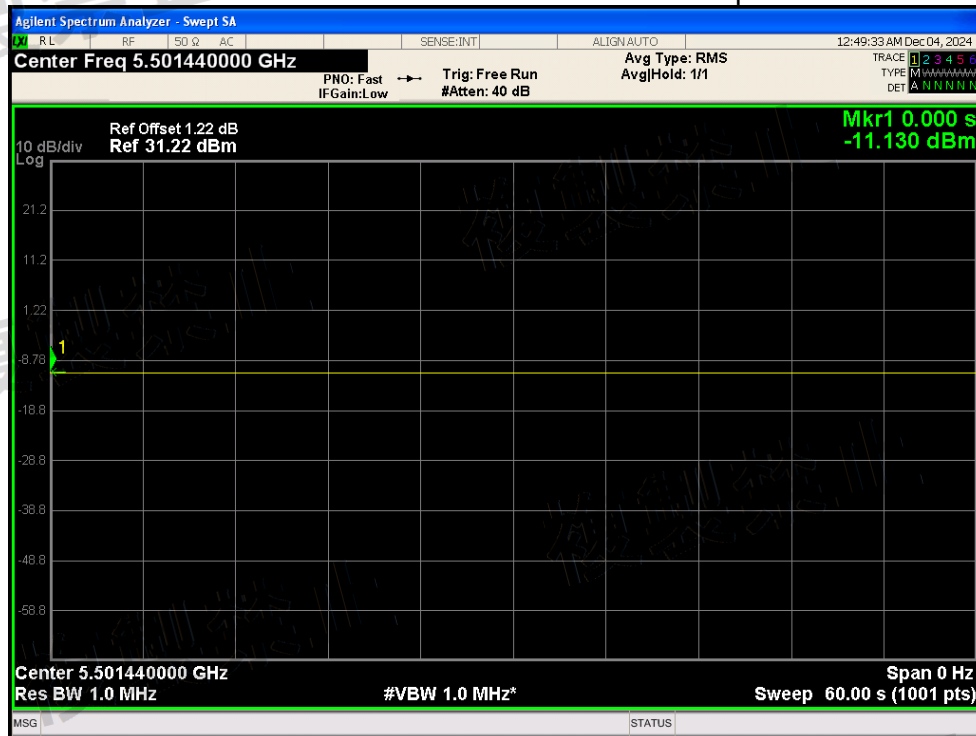
Power NVNT a 5700MHz Ant1 Zero Span



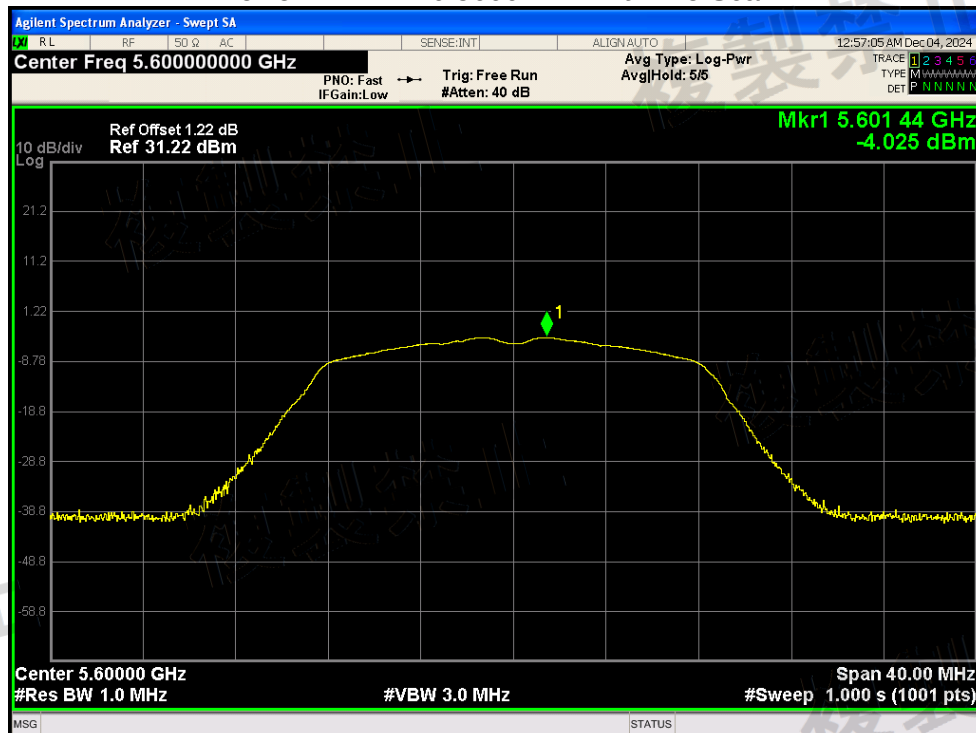
Power NVNT n20 5500MHz Ant1 Pre Scan



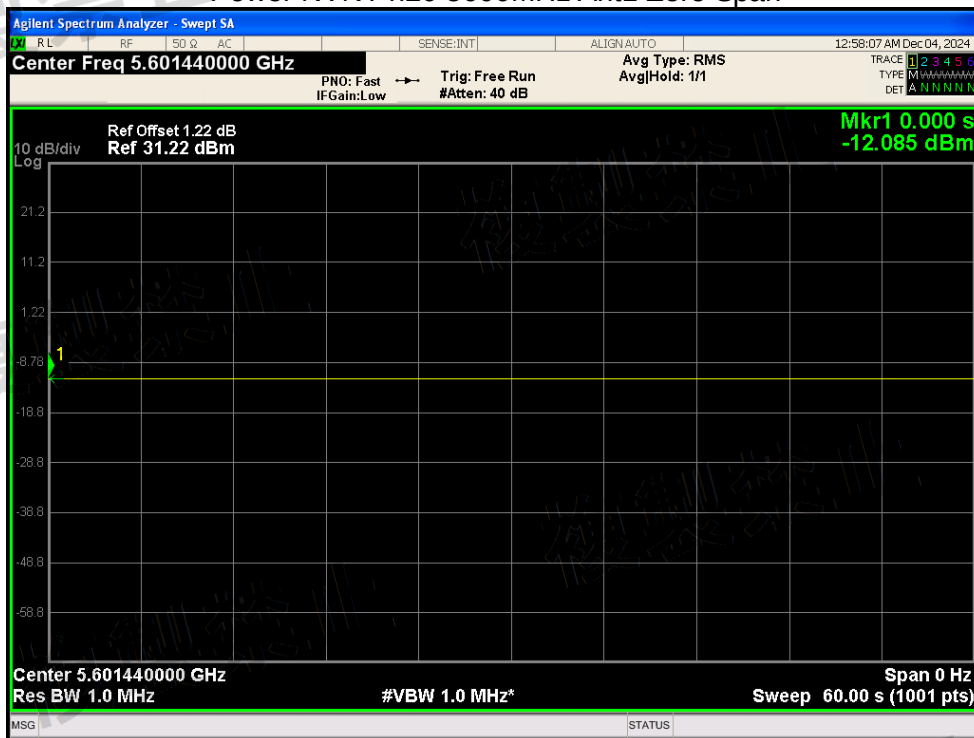
Power NVNT n20 5500MHz Ant1 Zero Span



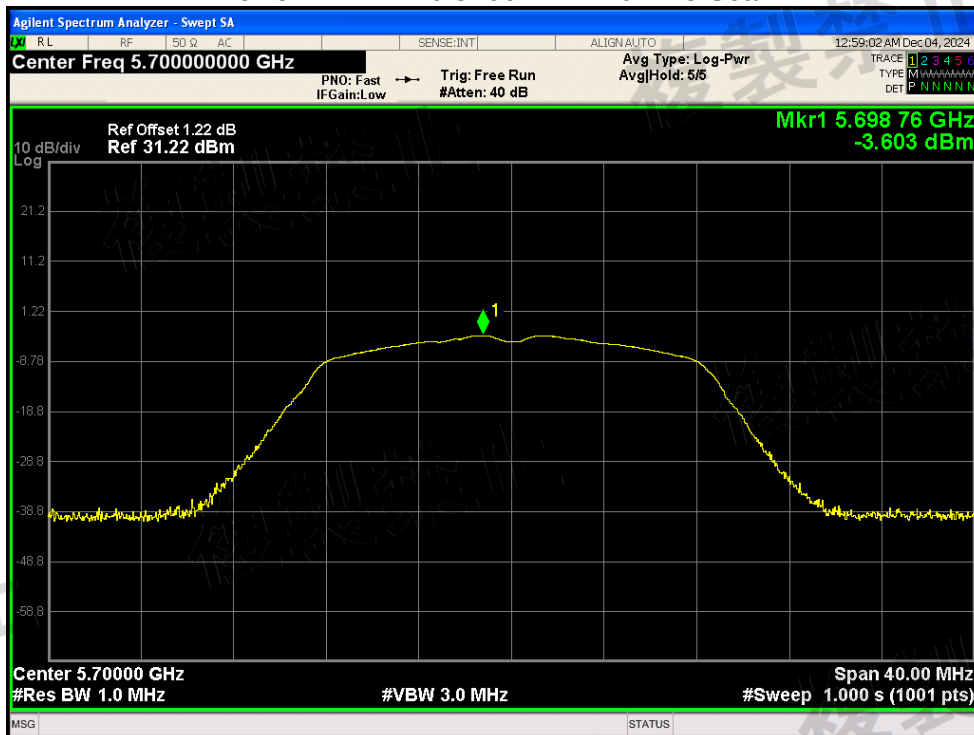
Power NVNT n20 5600MHz Ant1 Pre Scan



Power NVNT n20 5600MHz Ant1 Zero Span



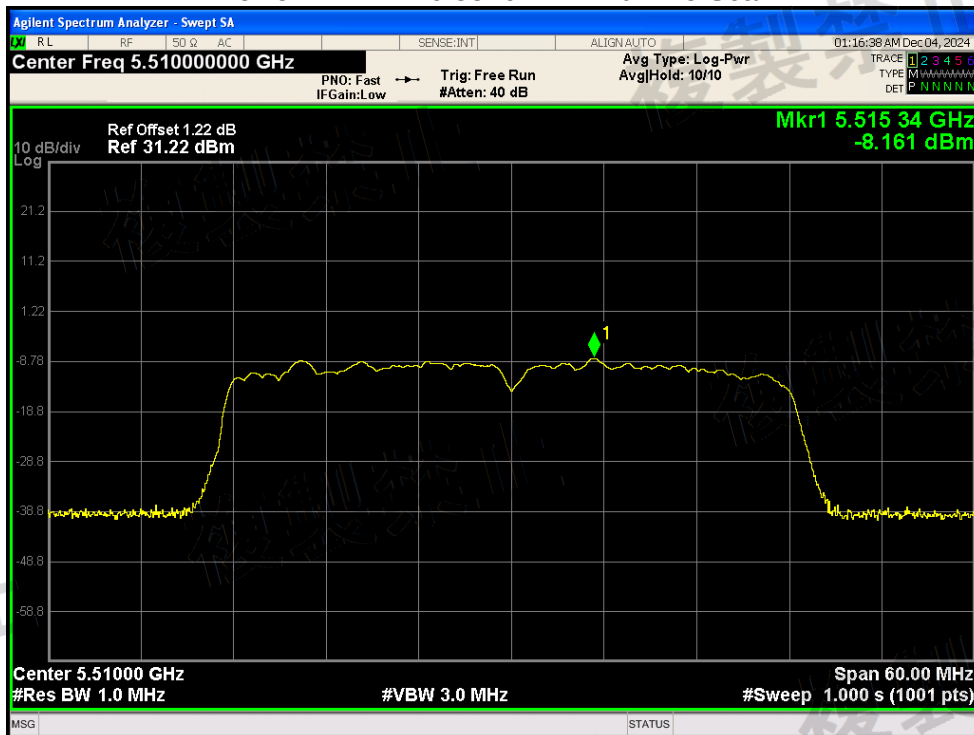
Power NVNT n20 5700MHz Ant1 Pre Scan



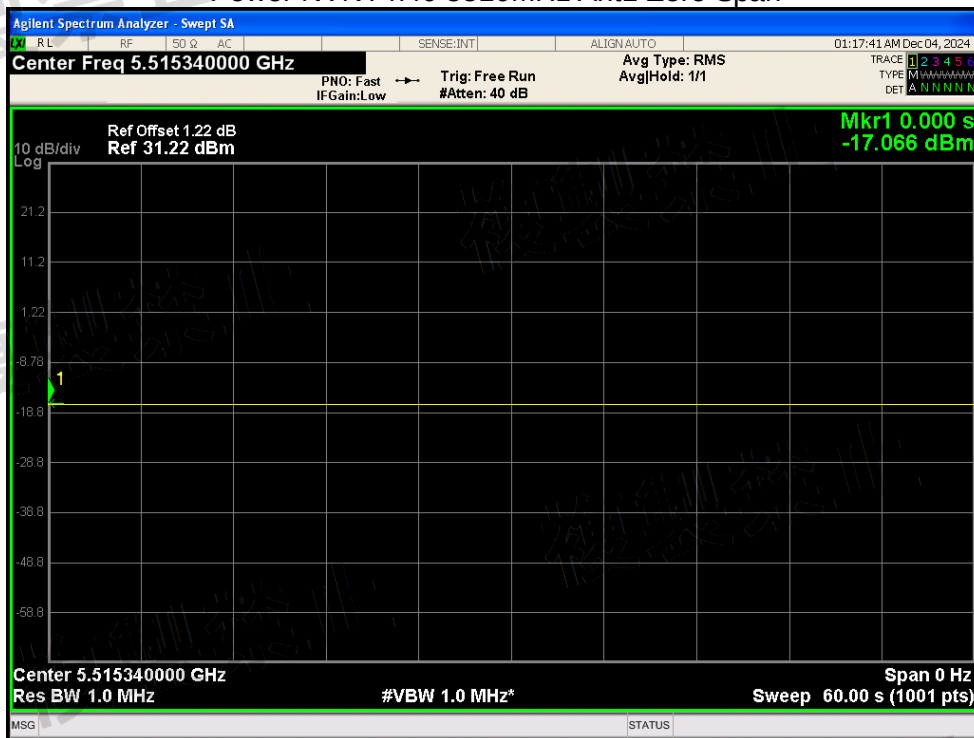
Power NVNT n20 5700MHz Ant1 Zero Span



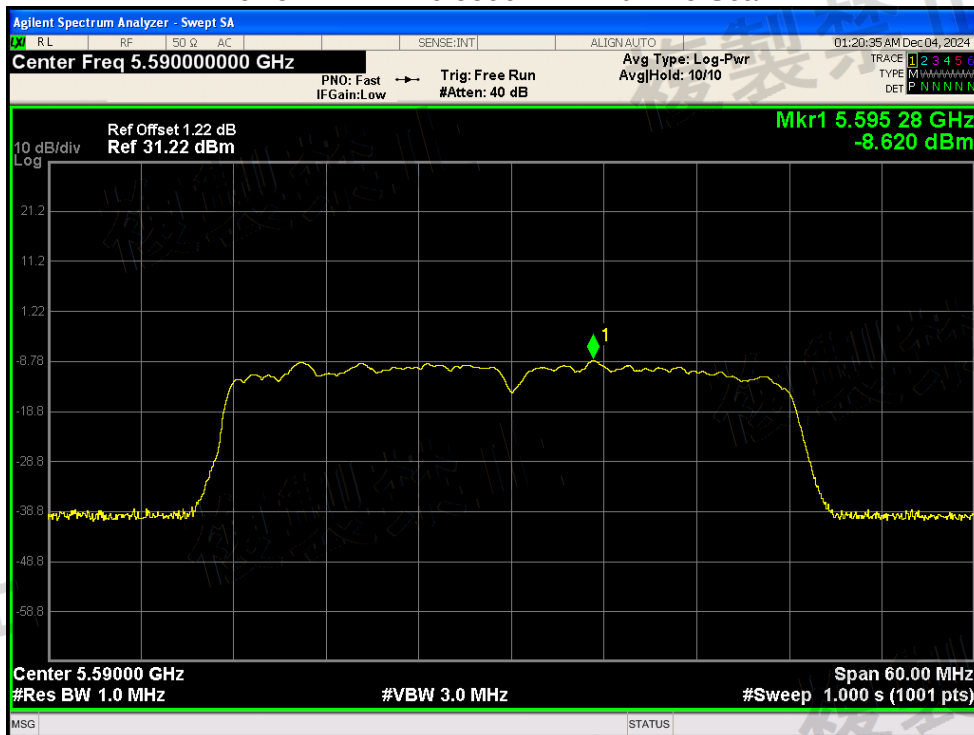
Power NVNT n40 5510MHz Ant1 Pre Scan



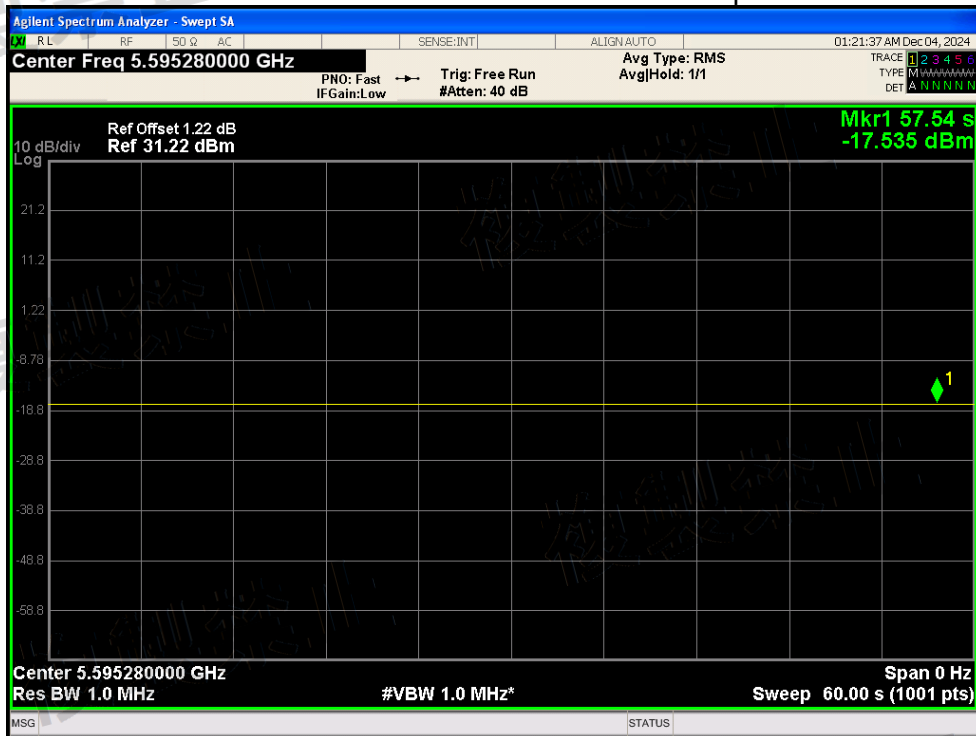
Power NVNT n40 5510MHz Ant1 Zero Span



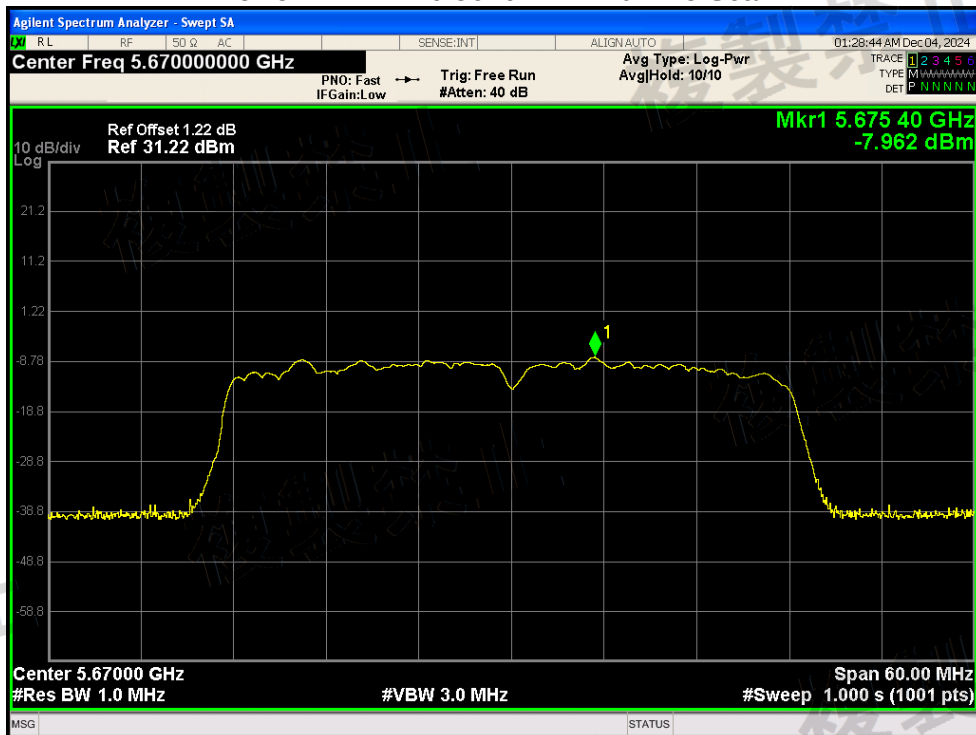
Power NVNT n40 5590MHz Ant1 Pre Scan



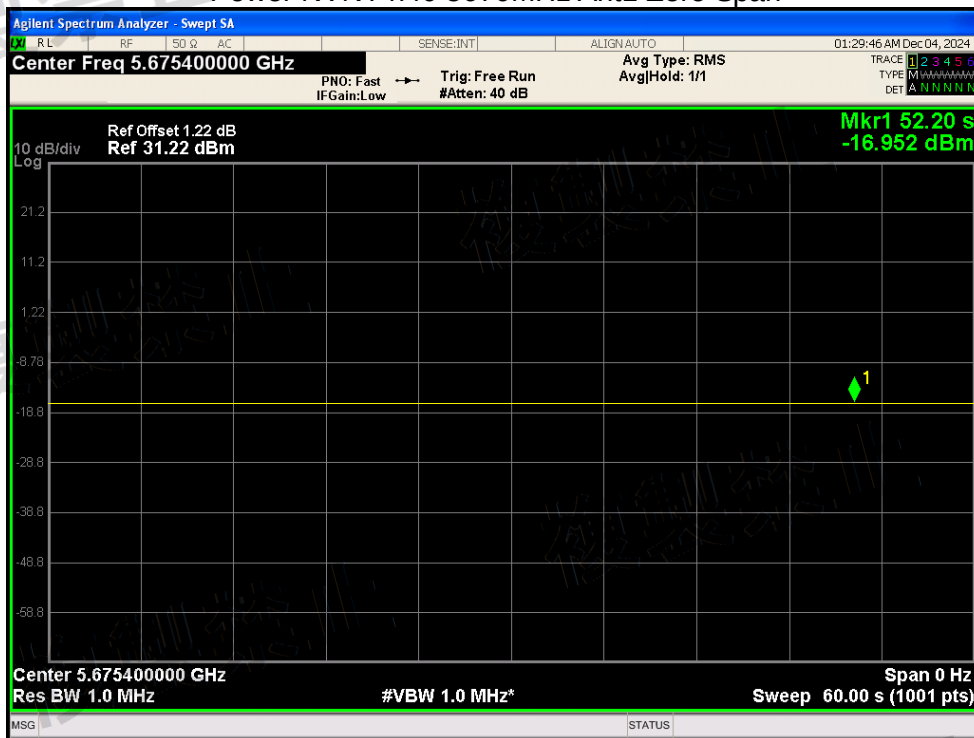
Power NVNT n40 5590MHz Ant1 Zero Span



Power NVNT n40 5670MHz Ant1 Pre Scan



Power NVNT n40 5670MHz Ant1 Zero Span



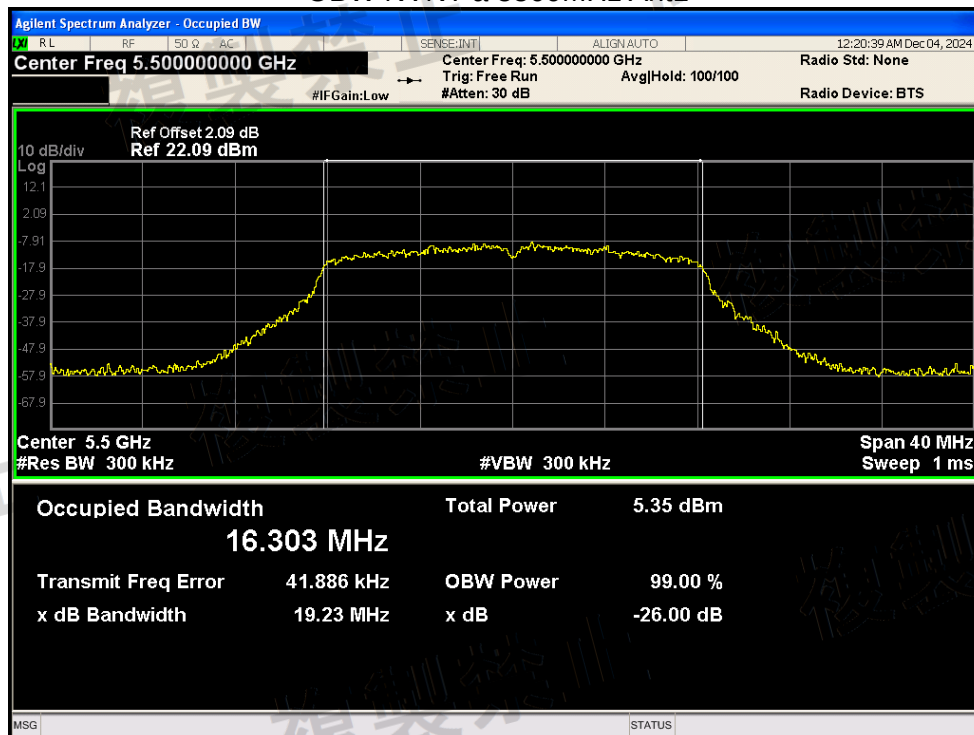
15.1.2 EIRP POWER

Condition	Mode	Frequency (MHz)	Antenna	Antenna Power (mW/MHz)	Gain (dBi)	EIRP Power (mW/MHz)	Limit (mW/MHz)	Verdict
NVNT	a	5500	Ant1	0.064	0.87	0.078	25	Pass
NVNT	a	5600	Ant1	0.052	0.87	0.063	25	Pass
NVNT	a	5700	Ant1	0.057	0.87	0.07	25	Pass
NVNT	n20	5500	Ant1	0.077	0.87	0.094	25	Pass
NVNT	n20	5600	Ant1	0.062	0.87	0.076	25	Pass
NVNT	n20	5700	Ant1	0.068	0.87	0.083	25	Pass
NVNT	n40	5510	Ant1	0.02	0.87	0.024	12.5	Pass
NVNT	n40	5590	Ant1	0.018	0.87	0.022	12.5	Pass
NVNT	n40	5670	Ant1	0.02	0.87	0.025	12.5	Pass

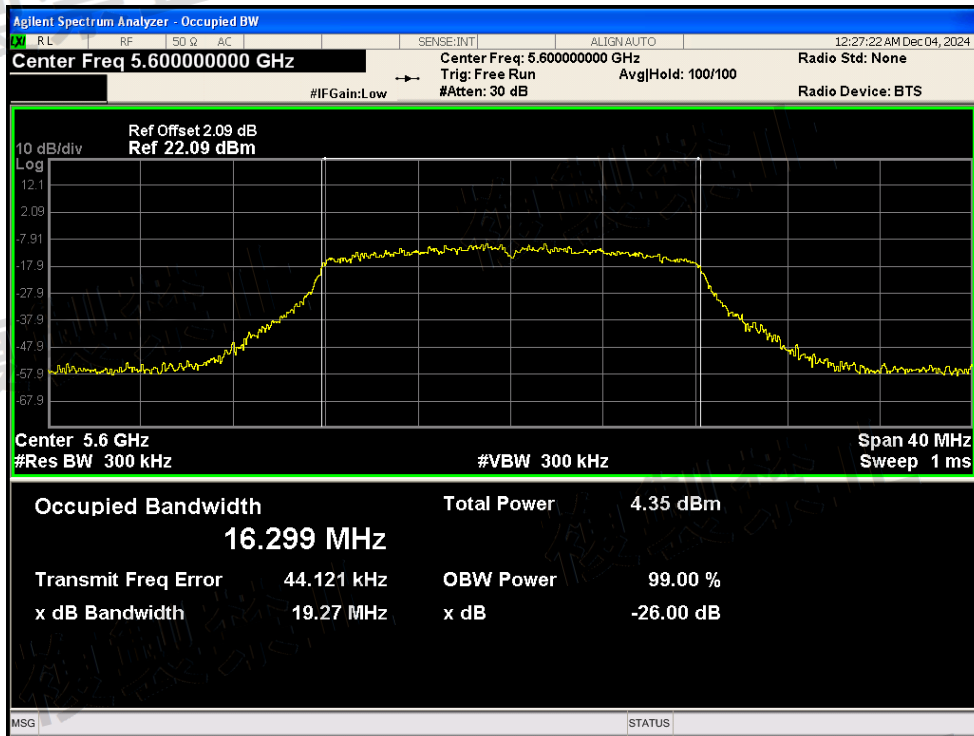
15.1.3 OCCUPIED CHANNEL BANDWIDTH

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)	Limit (MHz)	Verdict
NVNT	a	5500	Ant1	16.303	20	Pass
NVNT	a	5600	Ant1	16.299	20	Pass
NVNT	a	5700	Ant1	16.312	20	Pass
NVNT	n20	5500	Ant1	17.419	20	Pass
NVNT	n20	5600	Ant1	17.446	20	Pass
NVNT	n20	5700	Ant1	17.422	20	Pass
NVNT	n40	5510	Ant1	35.89	40	Pass
NVNT	n40	5590	Ant1	35.849	40	Pass
NVNT	n40	5670	Ant1	35.859	40	Pass

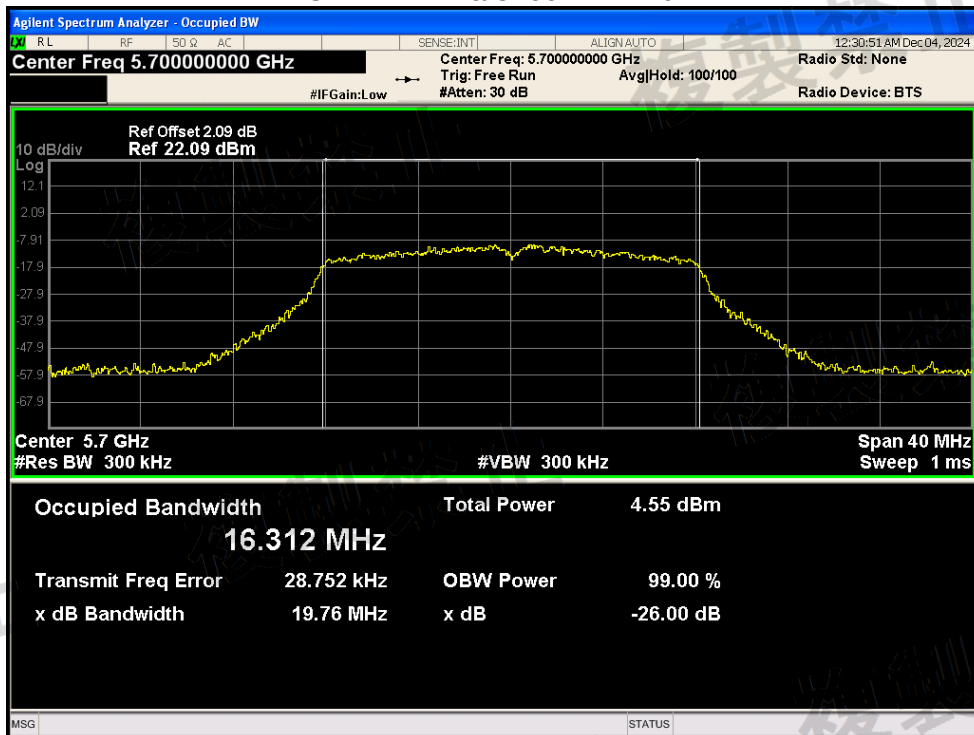
OBW NVNT a 5500MHz Ant1



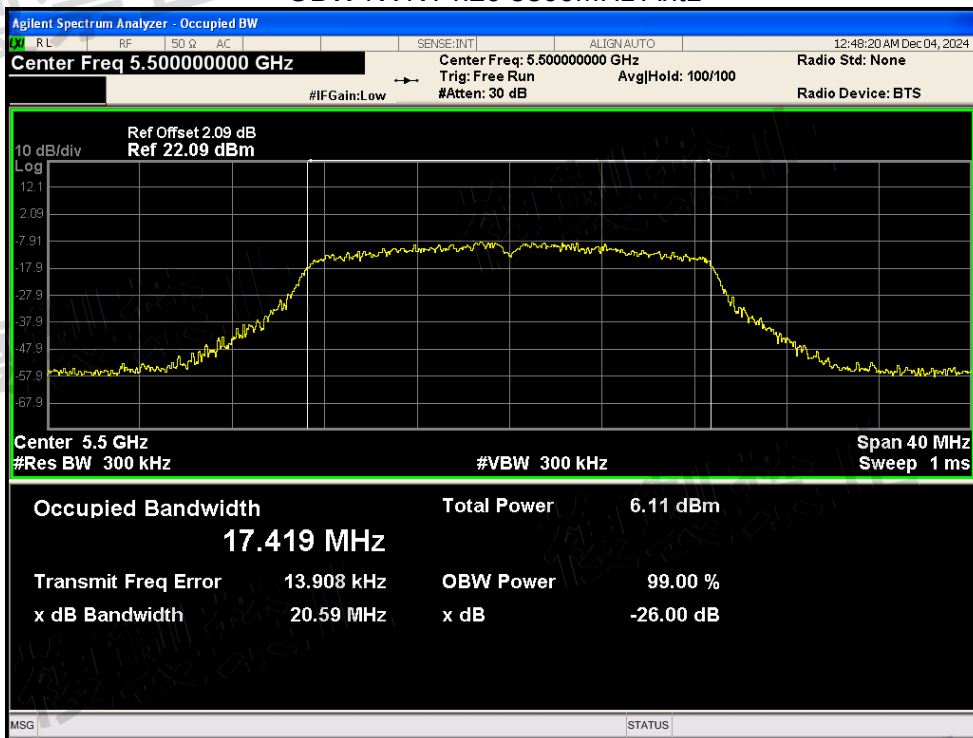
OBW NVNT a 5600MHz Ant1



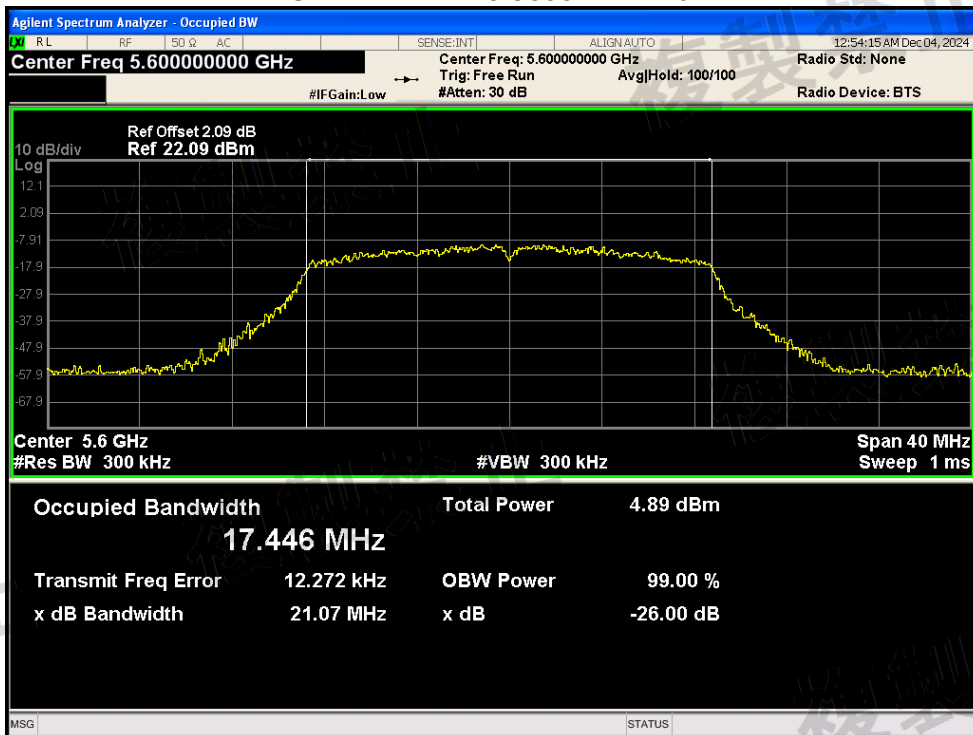
OBW NVNT a 5700MHz Ant1



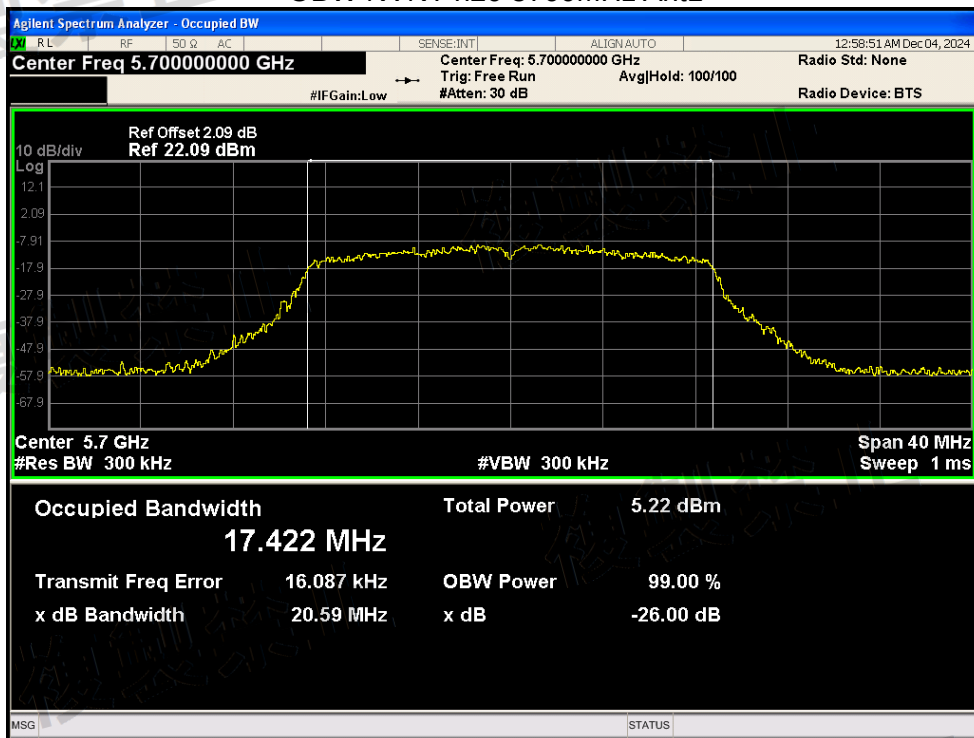
OBW NVNT n20 5500MHz Ant1



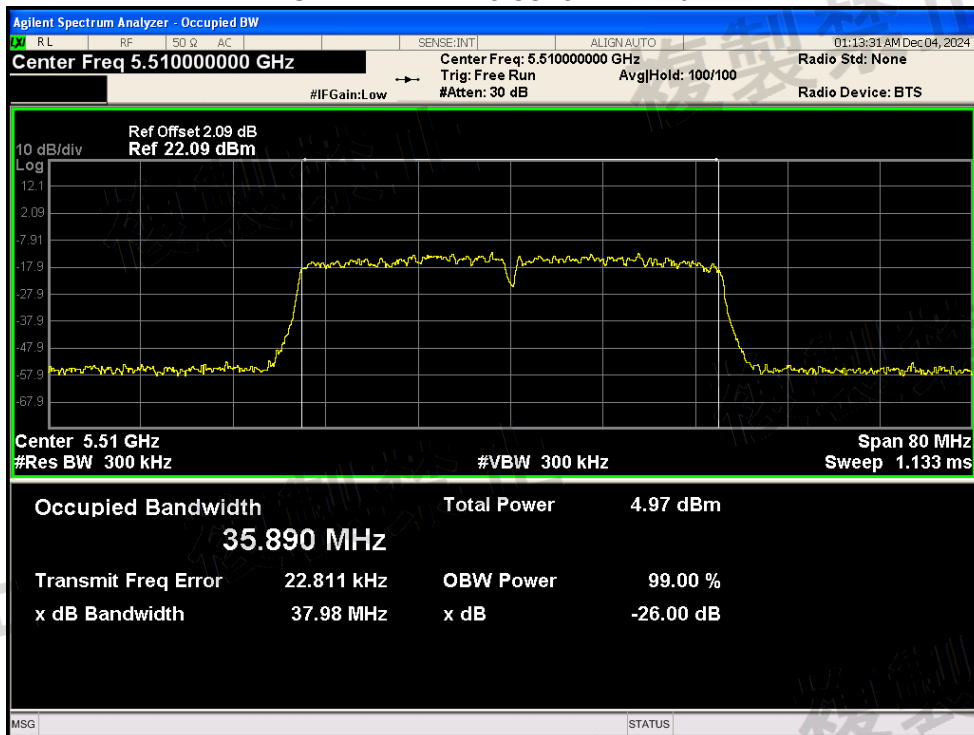
OBW NVNT n20 5600MHz Ant1



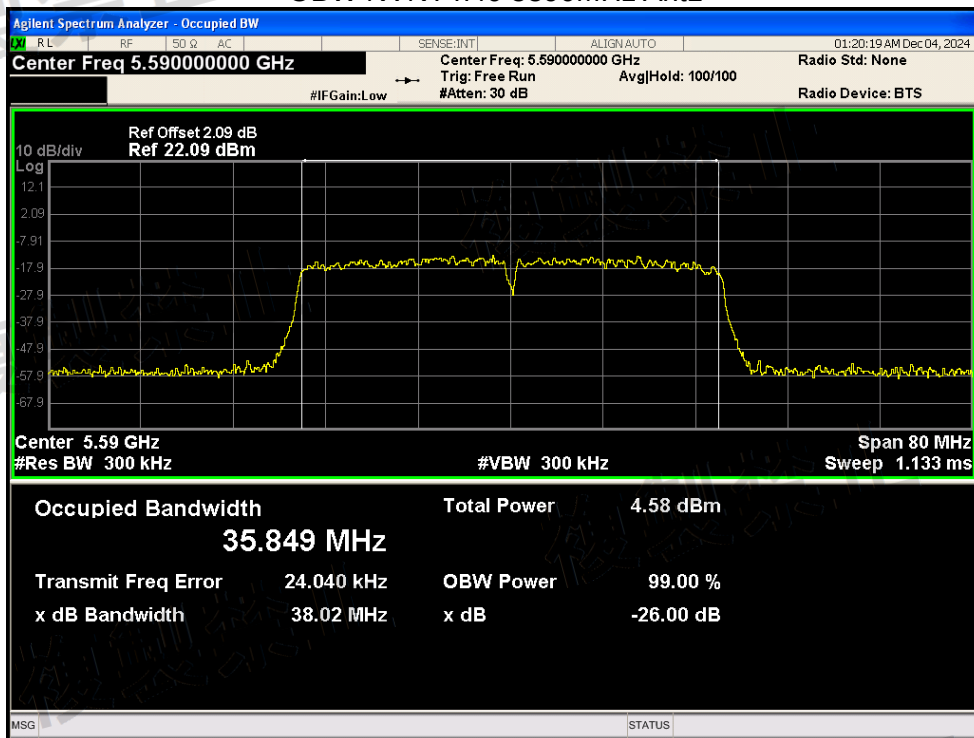
OBW NVNT n20 5700MHz Ant1



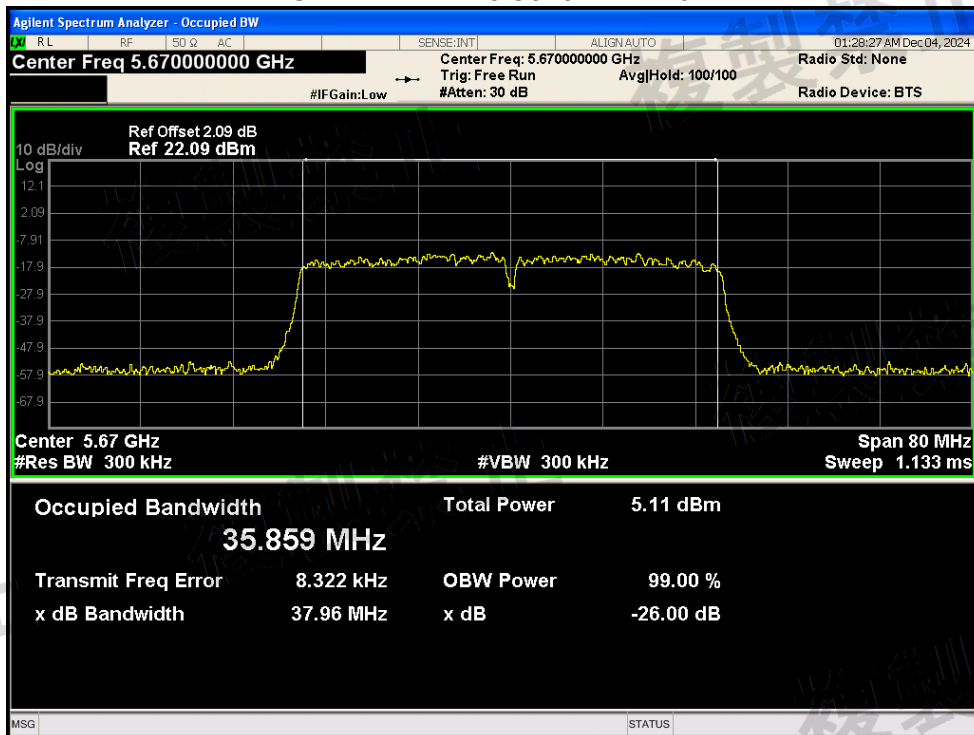
OBW NVNT n40 5510MHz Ant1



OBW NVNT n40 5590MHz Ant1



OBW NVNT n40 5670MHz Ant1

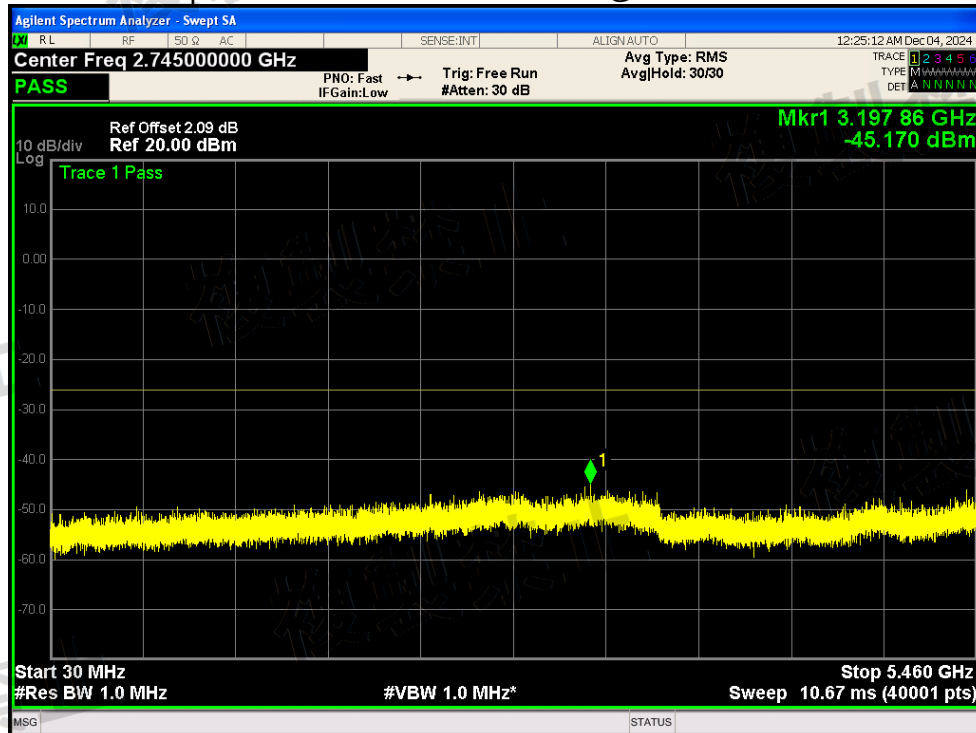


15.1.4 TX SPURIOUS EMISSION

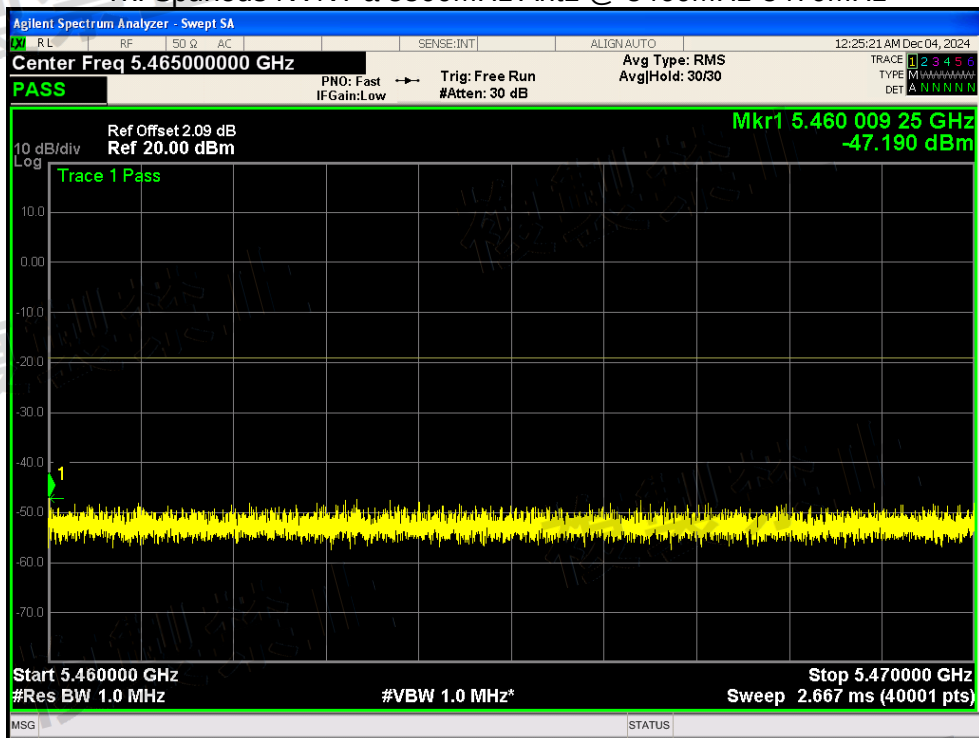
Note: This test has increased antenna gain .

Condition	Mode	Frequency (MHz)	Antenna	Range (MHz)	Emission Frequency (MHz)	Max Value (dBm)	Max Value (uW)	Limit Start(uW)	Limit Stop (uW)	Verdict
NVNT	a	5500	Ant1	30-5460	3197.86	-45.17	0.0304	2.5	2.5	Pass
NVNT	a	5500	Ant1	5460-5470	5460.01	-47.19	0.0191	12.5	12.5	Pass
NVNT	a	5500	Ant1	5745-5765	5747.62	-47.85	0.0164	12.5	12.5	Pass
NVNT	a	5500	Ant1	5765-26000	25158.73	-38.97	0.1268	2.5	2.5	Pass
NVNT	a	5600	Ant1	30-5460	2798.35	-45.41	0.0288	2.5	2.5	Pass
NVNT	a	5600	Ant1	5460-5470	5463	-47.34	0.0185	12.5	12.5	Pass
NVNT	a	5600	Ant1	5745-5765	5755.86	-47.37	0.0183	12.5	12.5	Pass
NVNT	a	5600	Ant1	5765-26000	25605.92	-39.94	0.1014	2.5	2.5	Pass
NVNT	a	5700	Ant1	30-5460	3223.38	-45.5	0.0282	2.5	2.5	Pass
NVNT	a	5700	Ant1	5460-5470	5464.23	-46.71	0.0213	12.5	12.5	Pass
NVNT	a	5700	Ant1	5745-5765	5760.76	-47.52	0.0177	12.5	12.5	Pass
NVNT	a	5700	Ant1	5765-26000	25727.84	-39.45	0.1135	2.5	2.5	Pass
NVNT	n20	5500	Ant1	30-5460	2645.22	-45.41	0.0288	2.5	2.5	Pass
NVNT	n20	5500	Ant1	5460-5470	5466.32	-47.32	0.0185	12.5	12.5	Pass
NVNT	n20	5500	Ant1	5745-5765	5753.38	-46.84	0.0207	12.5	12.5	Pass
NVNT	n20	5500	Ant1	5765-26000	25190.6	-39.17	0.1211	2.5	2.5	Pass
NVNT	n20	5600	Ant1	30-5460	2598.66	-45.87	0.0259	2.5	2.5	Pass
NVNT	n20	5600	Ant1	5460-5470	5460.98	-47.79	0.0166	12.5	12.5	Pass
NVNT	n20	5600	Ant1	5745-5765	5757.19	-47.58	0.0175	12.5	12.5	Pass
NVNT	n20	5600	Ant1	5765-26000	24897.19	-39.23	0.1194	2.5	2.5	Pass
NVNT	n20	5700	Ant1	30-5460	3192.43	-45.84	0.0261	2.5	2.5	Pass
NVNT	n20	5700	Ant1	5460-5470	5460.31	-46.81	0.0208	12.5	12.5	Pass
NVNT	n20	5700	Ant1	5745-5765	5749.46	-47.61	0.0173	12.5	12.5	Pass
NVNT	n20	5700	Ant1	5765-26000	24888.09	-39.93	0.1016	2.5	2.5	Pass
NVNT	n40	5510	Ant1	30-5460	3318	-45.72	0.0268	12.5	12.5	Pass
NVNT	n40	5510	Ant1	5460-5470	5463.1	-47.45	0.018	50	50	Pass
NVNT	n40	5510	Ant1	5770-26000	25600.46	-39.03	0.125	12.5	12.5	Pass
NVNT	n40	5590	Ant1	30-5460	3428.91	-45.81	0.0262	12.5	12.5	Pass
NVNT	n40	5590	Ant1	5460-5470	5460.05	-47.4	0.0182	50	50	Pass
NVNT	n40	5590	Ant1	5770-26000	25224.18	-39.04	0.1247	12.5	12.5	Pass
NVNT	n40	5670	Ant1	30-5460	3158.09	-45.56	0.0278	12.5	12.5	Pass
NVNT	n40	5670	Ant1	5460-5470	5460.16	-47.28	0.0187	50	50	Pass
NVNT	n40	5670	Ant1	5770-26000	25194.85	-39.24	0.1191	12.5	12.5	Pass

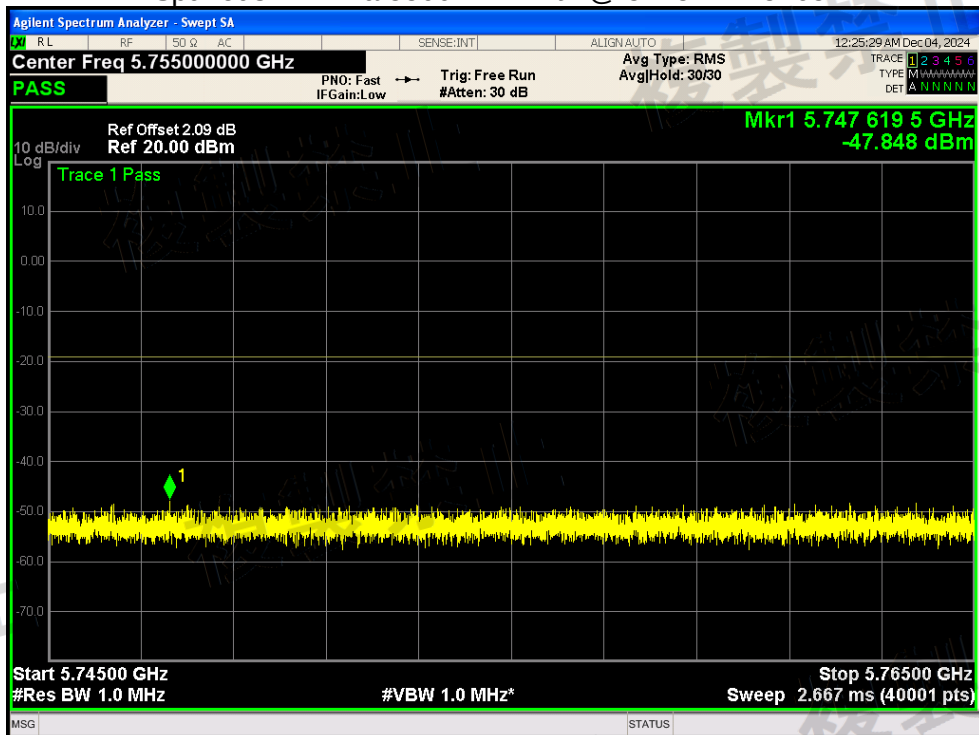
Tx. Spurious NVNT a 5500MHz Ant1 @ 30MHz-5460MHz



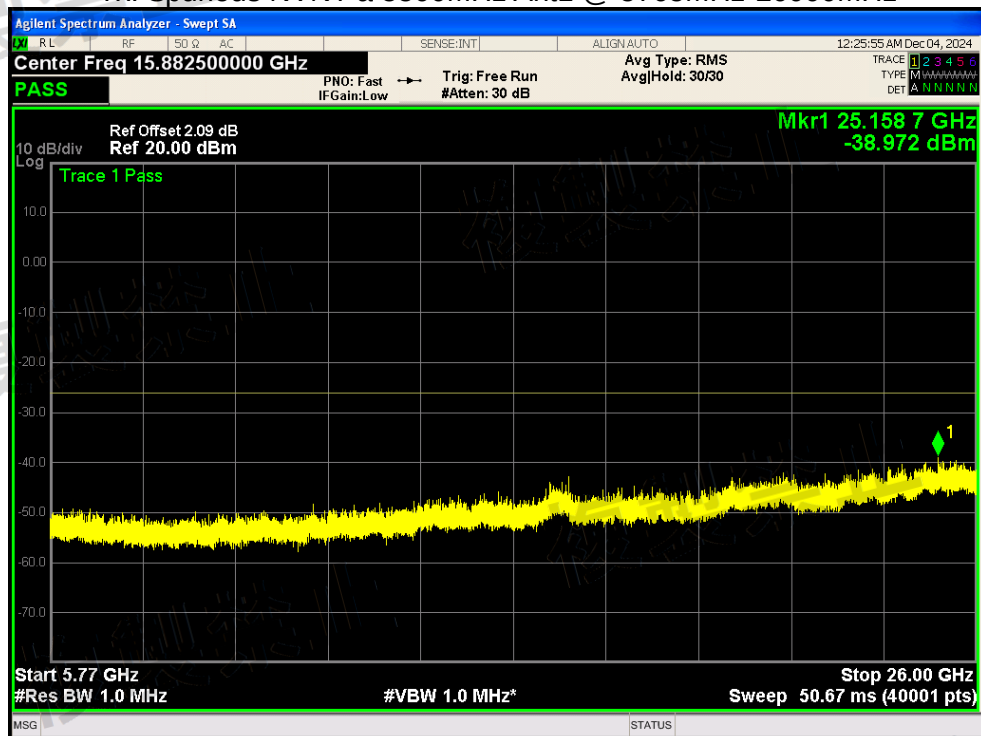
Tx. Spurious NVNT a 5500MHz Ant1 @ 5460MHz-5470MHz



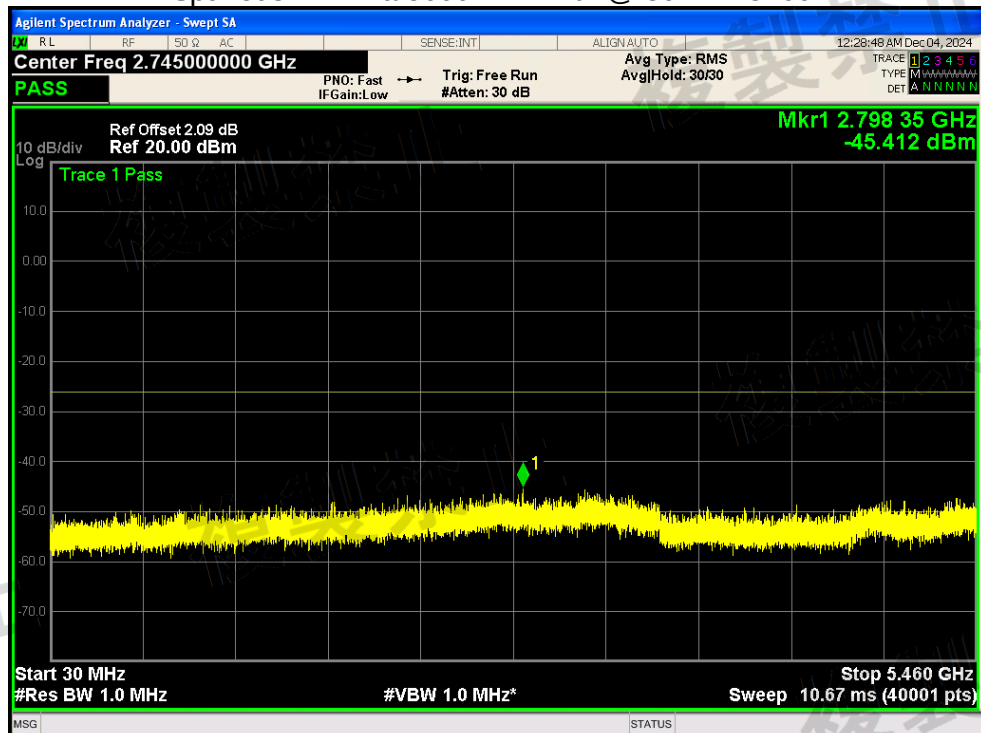
Tx. Spurious NVNT a 5500MHz Ant1 @ 5745MHz-5765MHz



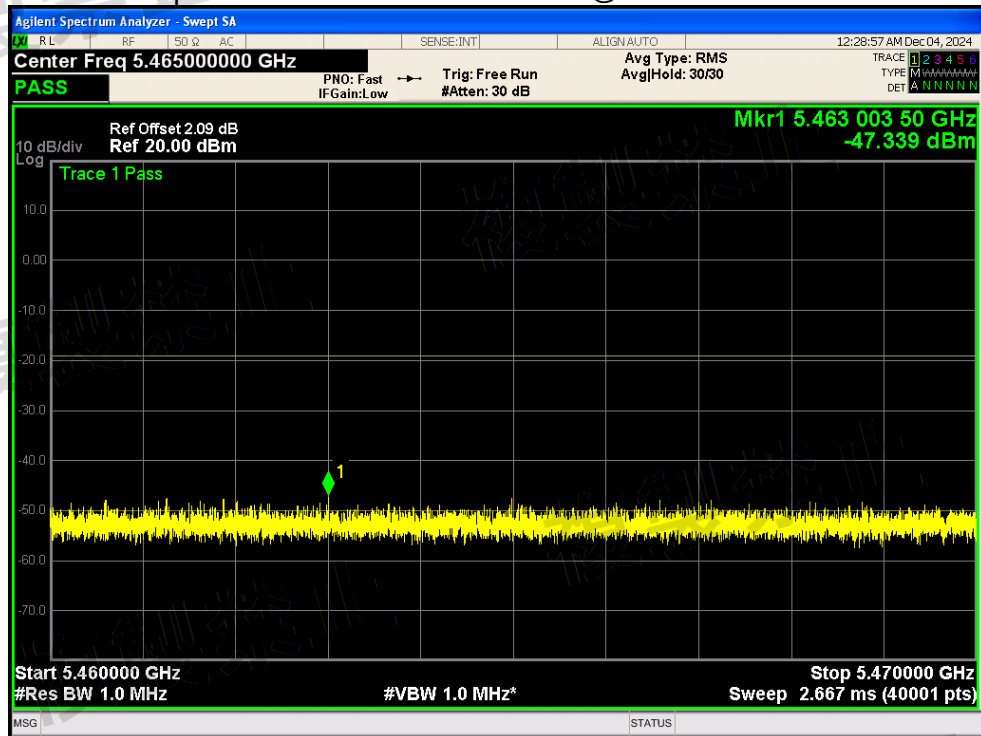
Tx. Spurious NVNT a 5500MHz Ant1 @ 5765MHz-26000MHz



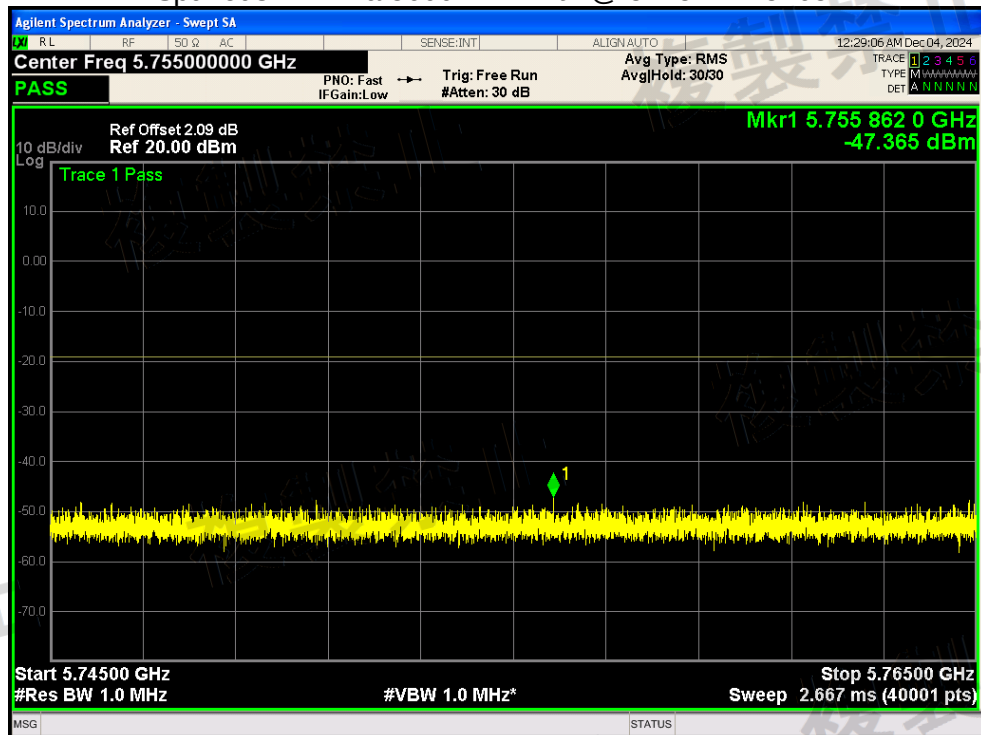
Tx. Spurious NVNT a 5600MHz Ant1 @ 30MHz-5460MHz



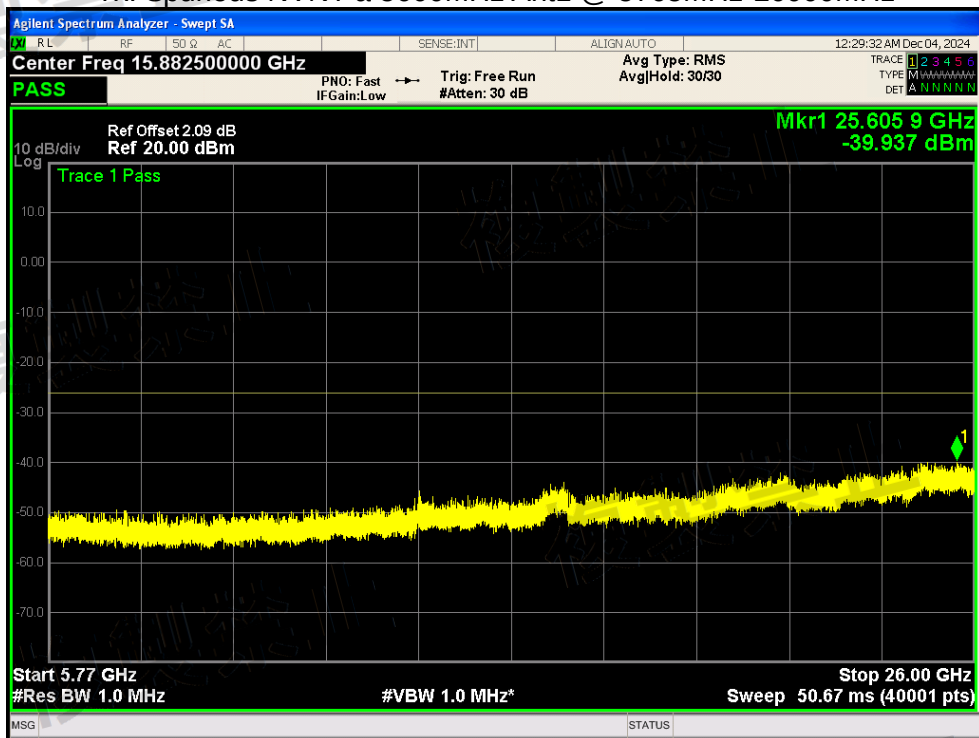
Tx. Spurious NVNT a 5600MHz Ant1 @ 5460MHz-5470MHz



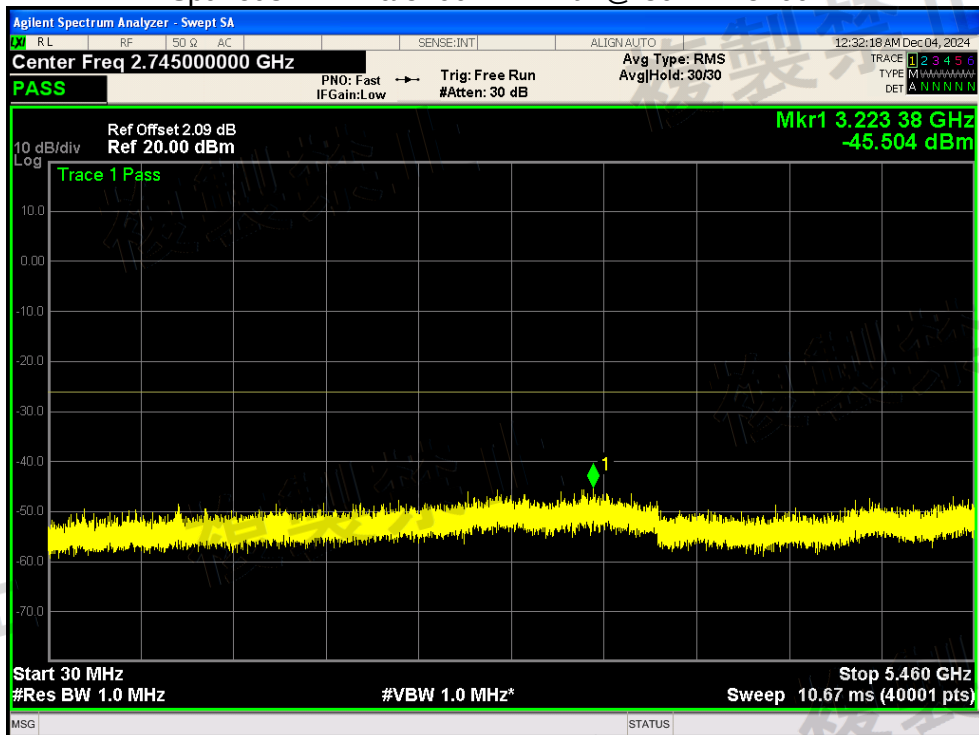
Tx. Spurious NVNT a 5600MHz Ant1 @ 5745MHz-5765MHz



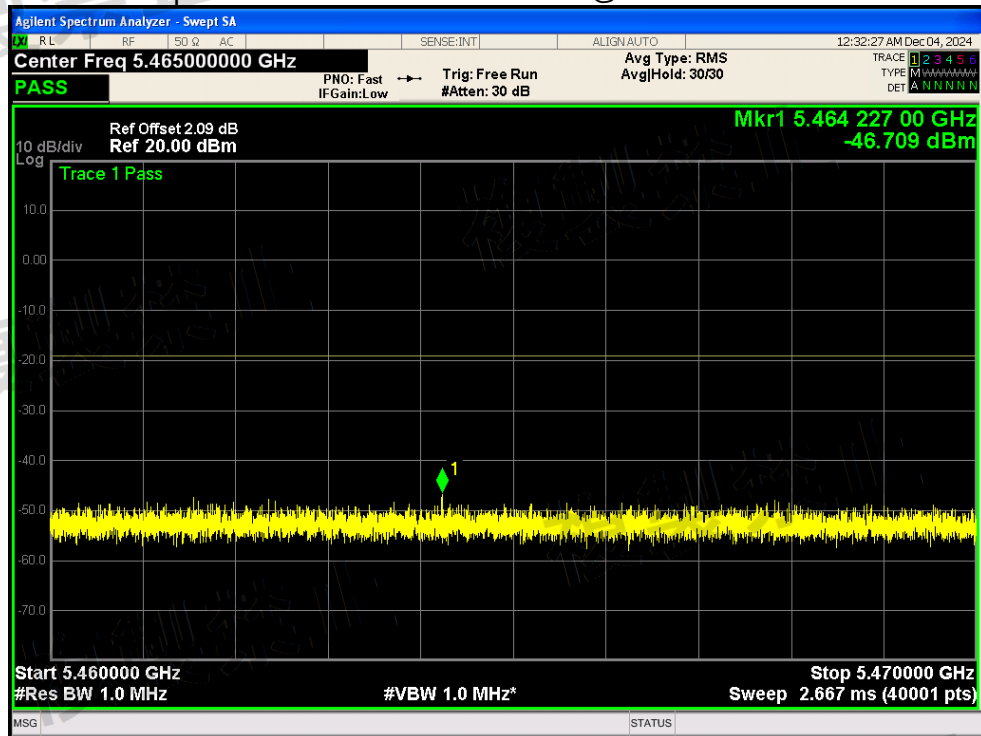
Tx. Spurious NVNT a 5600MHz Ant1 @ 5765MHz-26000MHz



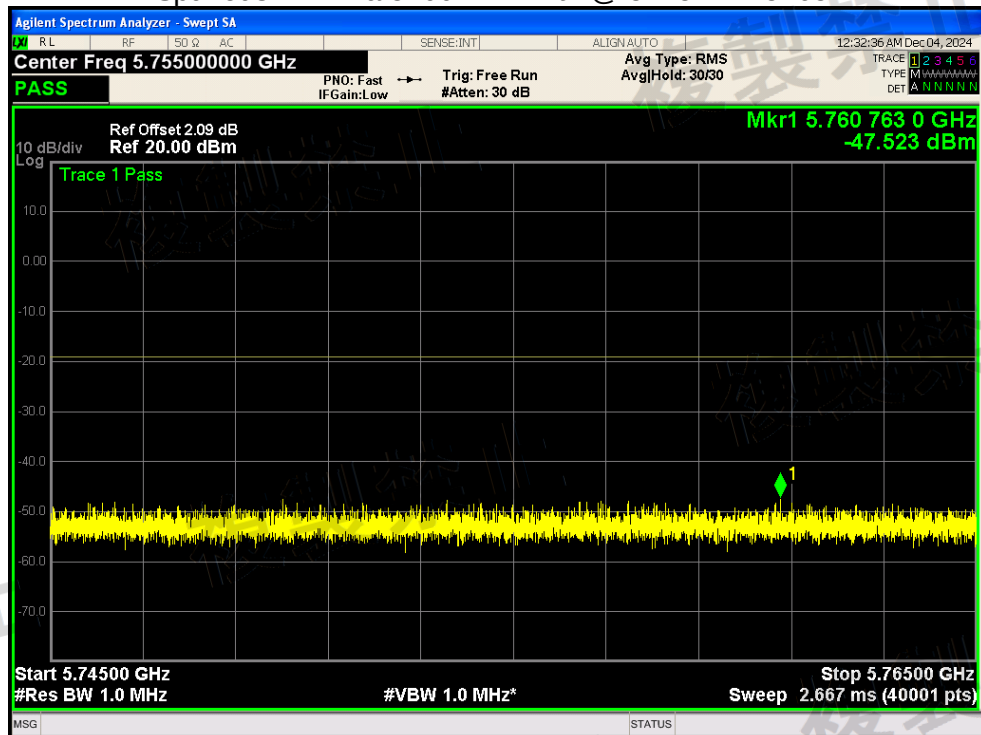
Tx. Spurious NVNT a 5700MHz Ant1 @ 30MHz-5460MHz



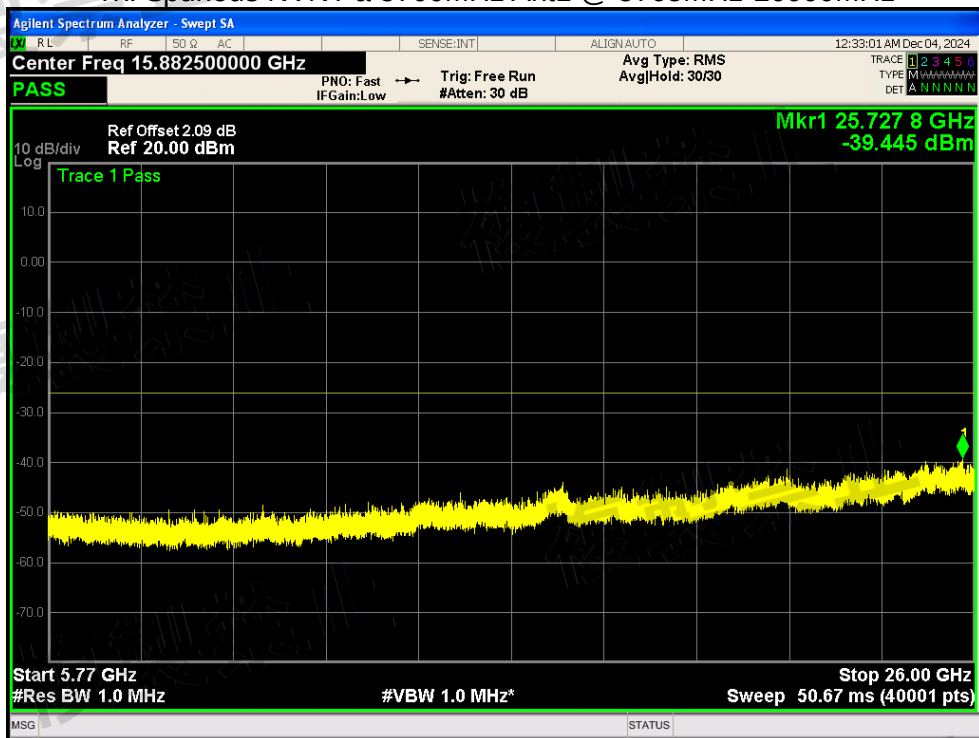
Tx. Spurious NVNT a 5700MHz Ant1 @ 5460MHz-5470MHz



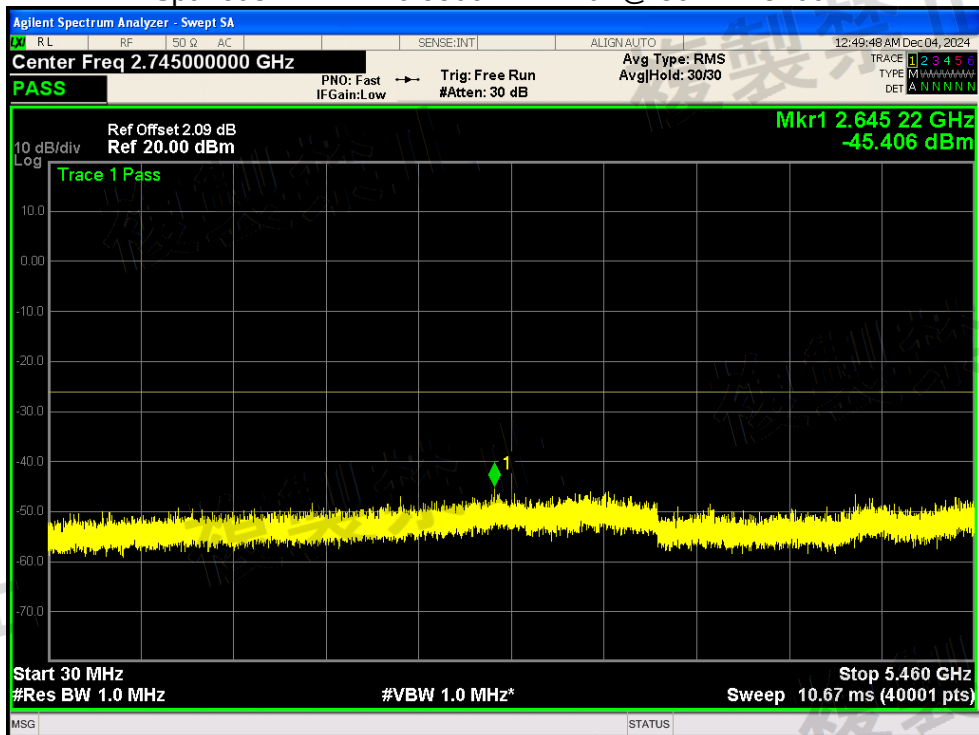
Tx. Spurious NVNT a 5700MHz Ant1 @ 5745MHz-5765MHz



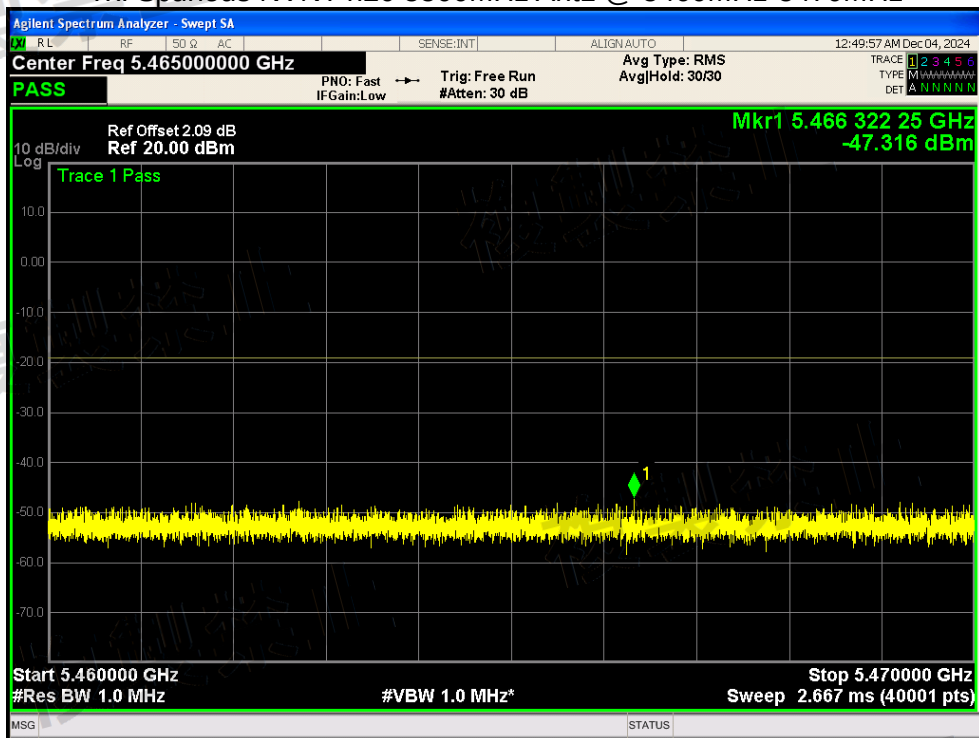
Tx. Spurious NVNT a 5700MHz Ant1 @ 5765MHz-26000MHz



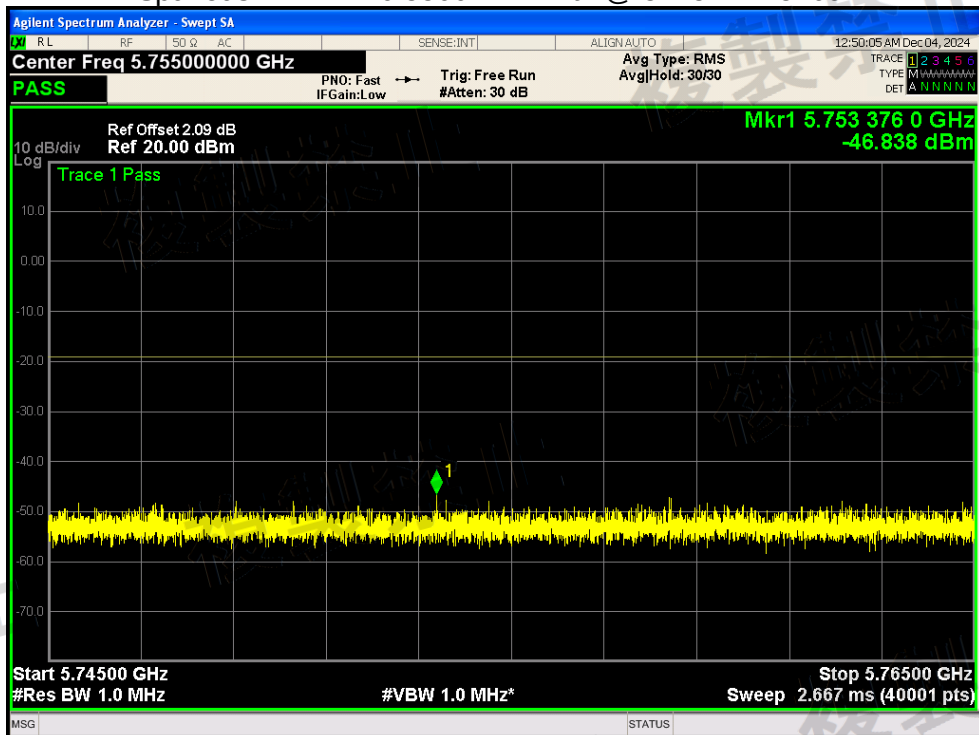
Tx. Spurious NVNT n20 5500MHz Ant1 @ 30MHz-5460MHz



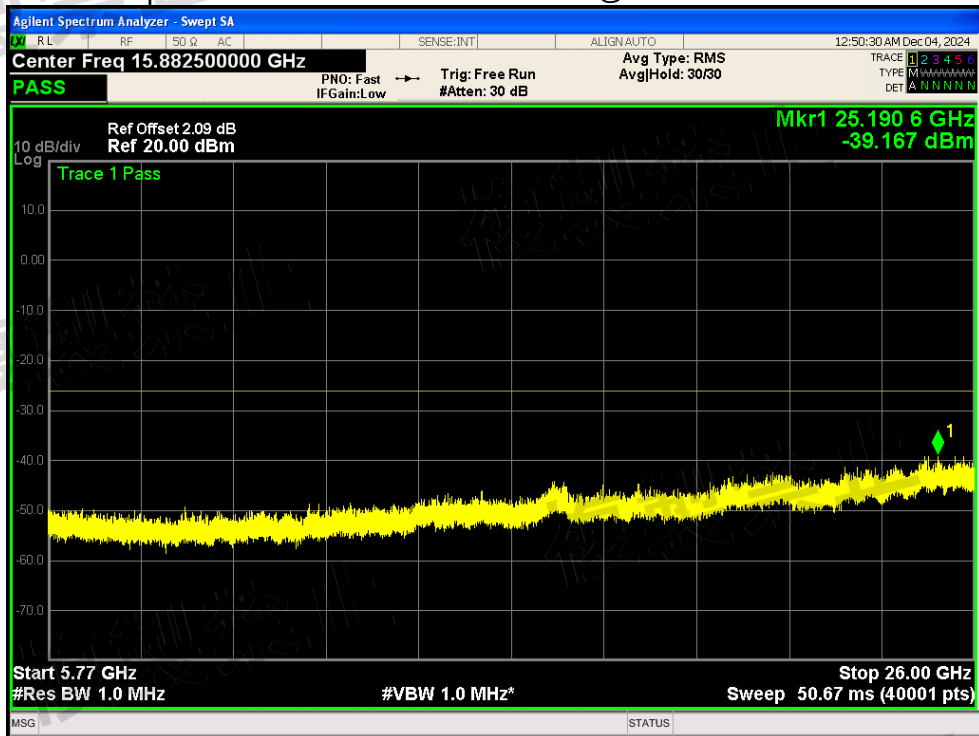
Tx. Spurious NVNT n20 5500MHz Ant1 @ 5460MHz-5470MHz



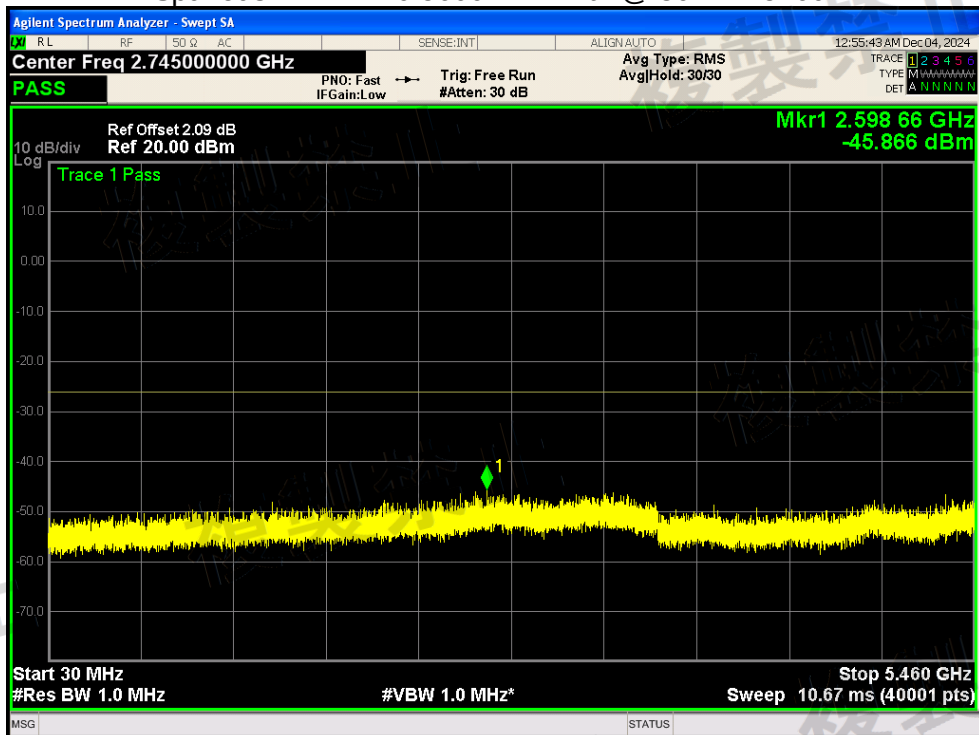
Tx. Spurious NVNT n20 5500MHz Ant1 @ 5745MHz-5765MHz



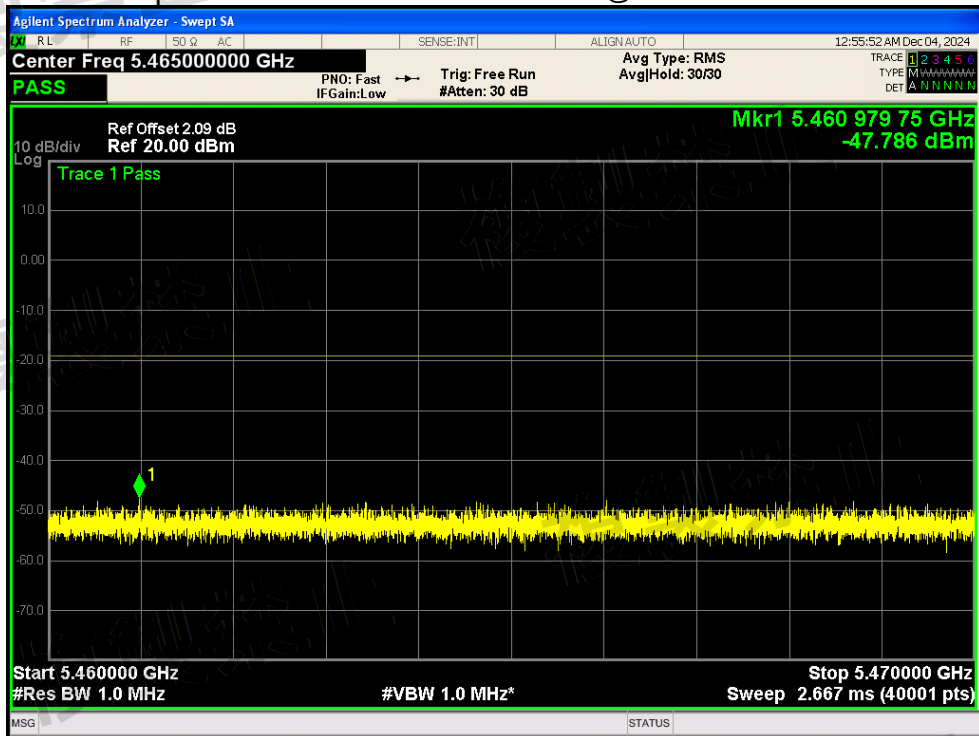
Tx. Spurious NVNT n20 5500MHz Ant1 @ 5765MHz-26000MHz



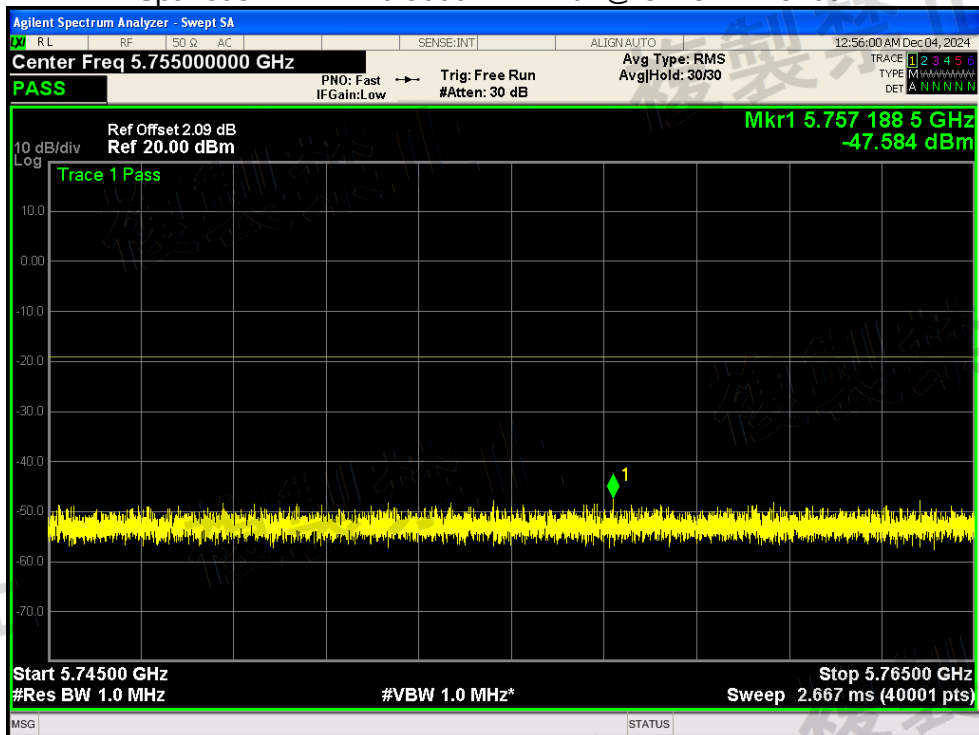
Tx. Spurious NVNT n20 5600MHz Ant1 @ 30MHz-5460MHz



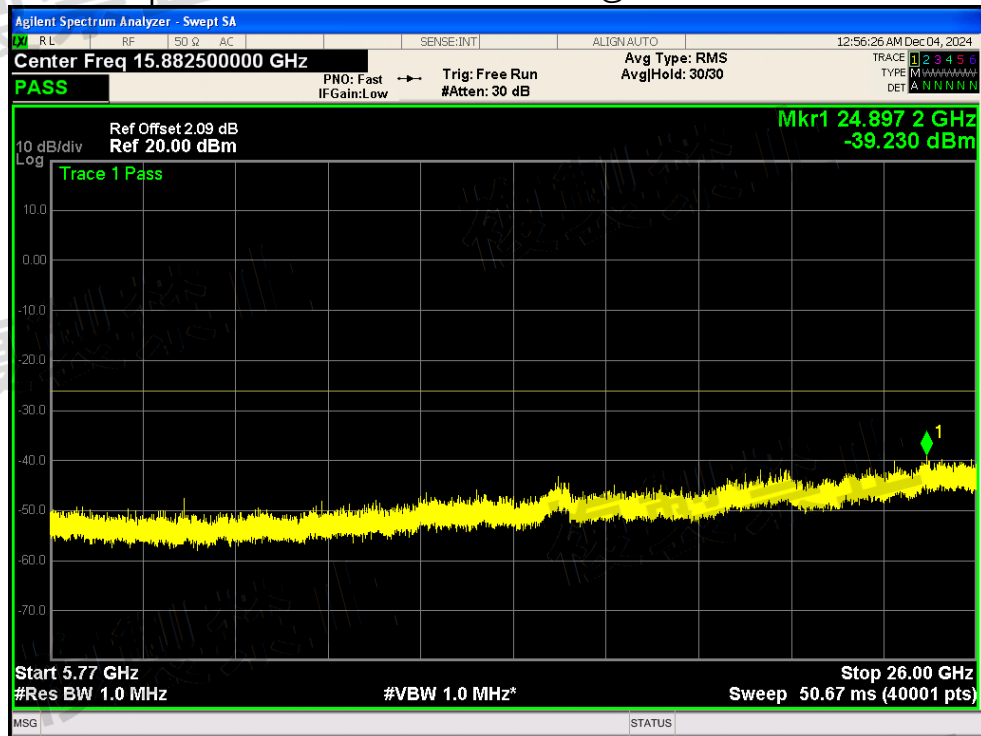
Tx. Spurious NVNT n20 5600MHz Ant1 @ 5460MHz-5470MHz



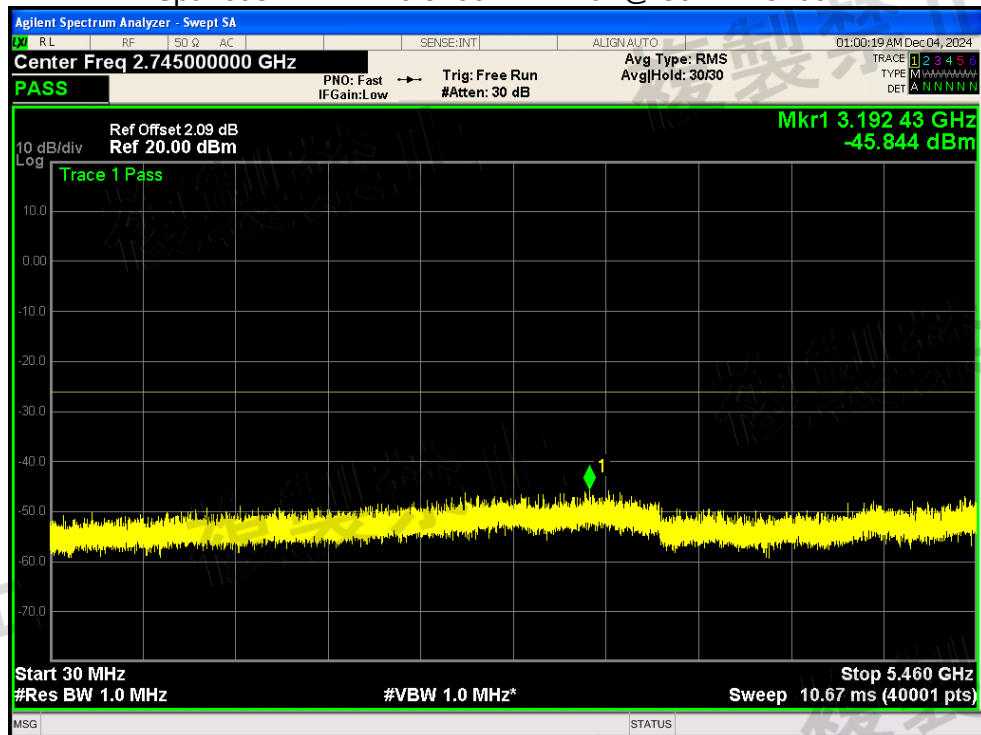
Tx. Spurious NVNT n20 5600MHz Ant1 @ 5745MHz-5765MHz



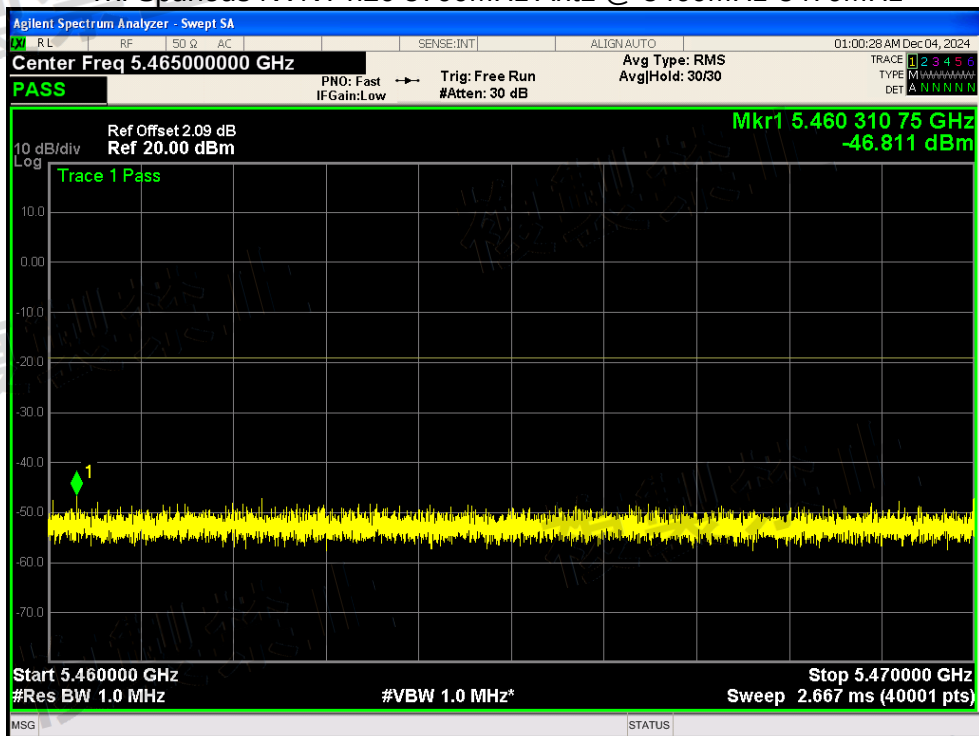
Tx. Spurious NVNT n20 5600MHz Ant1 @ 5765MHz-26000MHz



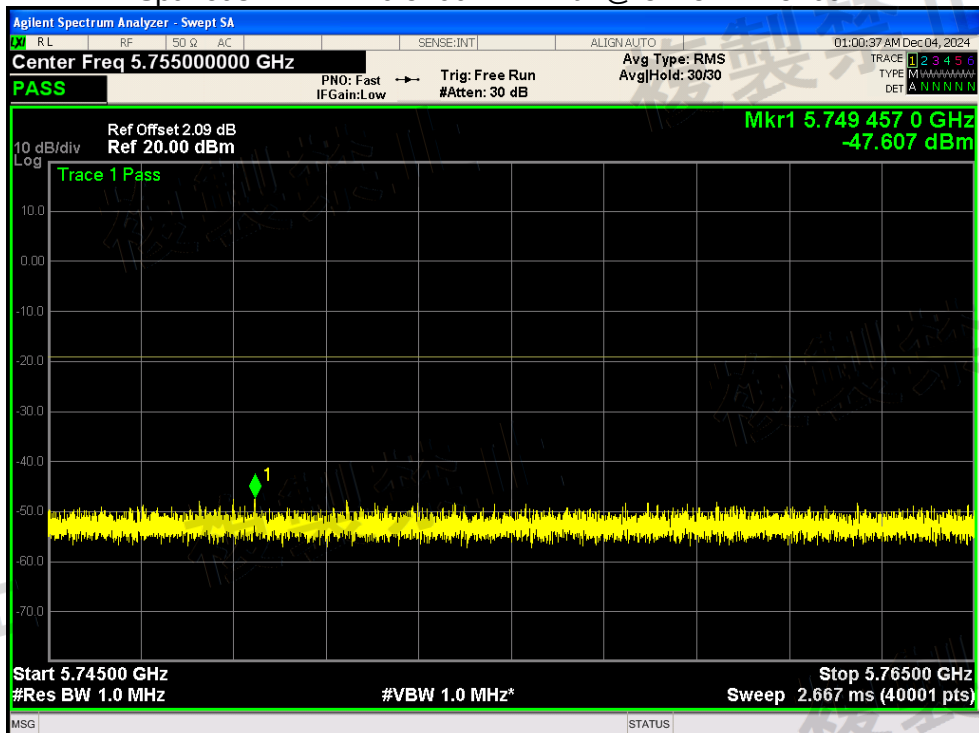
Tx. Spurious NVNT n20 5700MHz Ant1 @ 30MHz-5460MHz



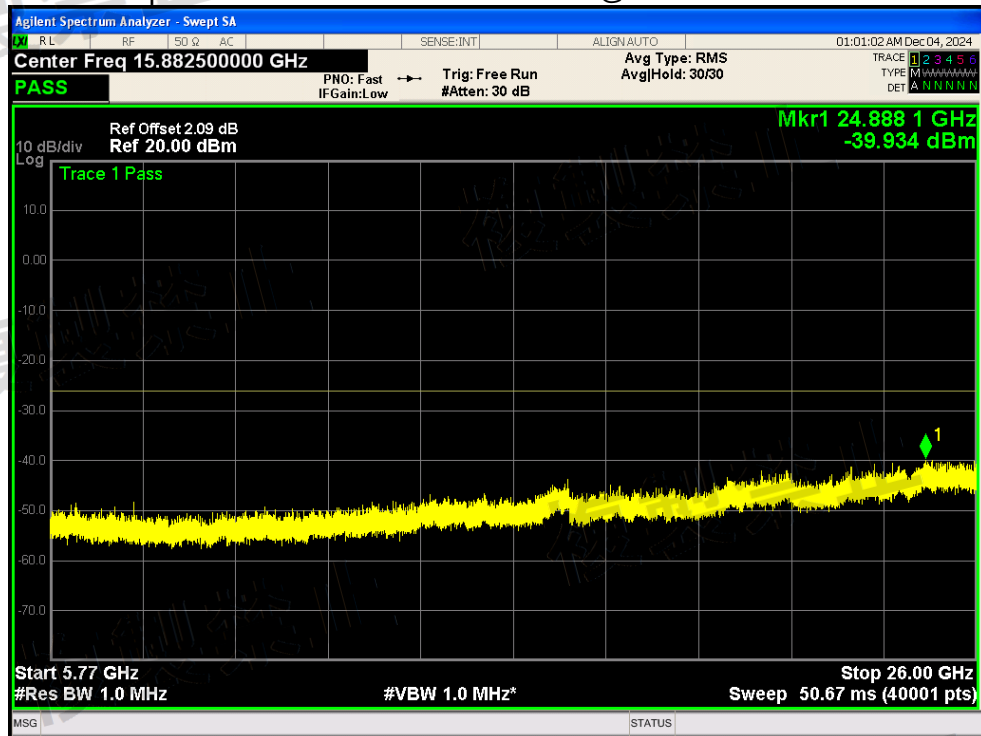
Tx. Spurious NVNT n20 5700MHz Ant1 @ 5460MHz-5470MHz



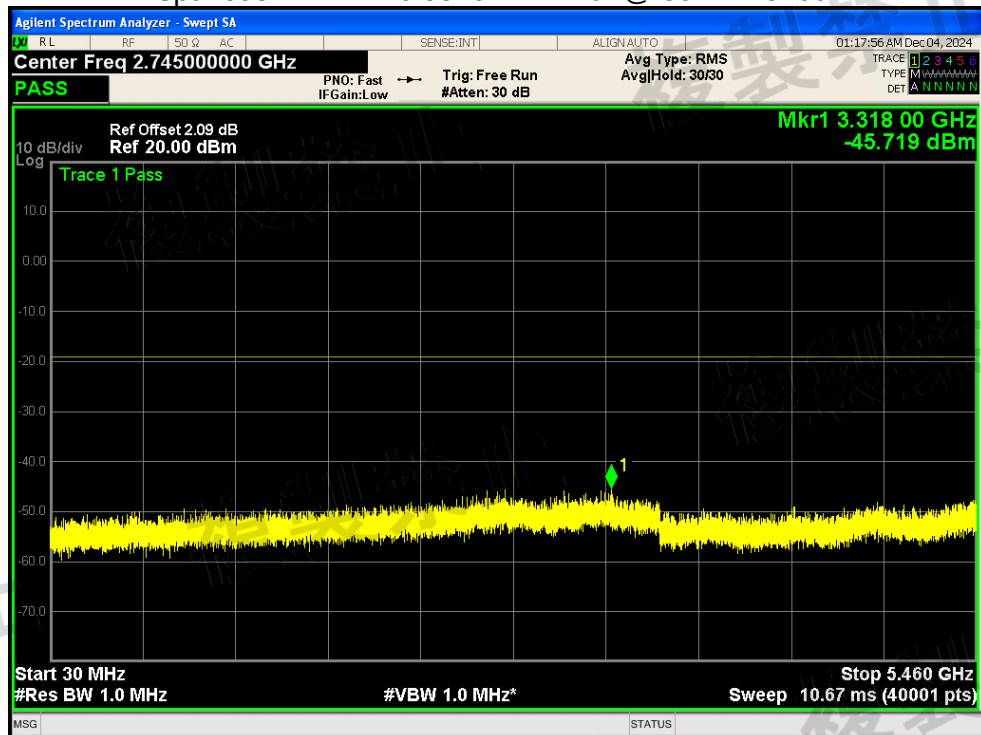
Tx. Spurious NVNT n20 5700MHz Ant1 @ 5745MHz-5765MHz



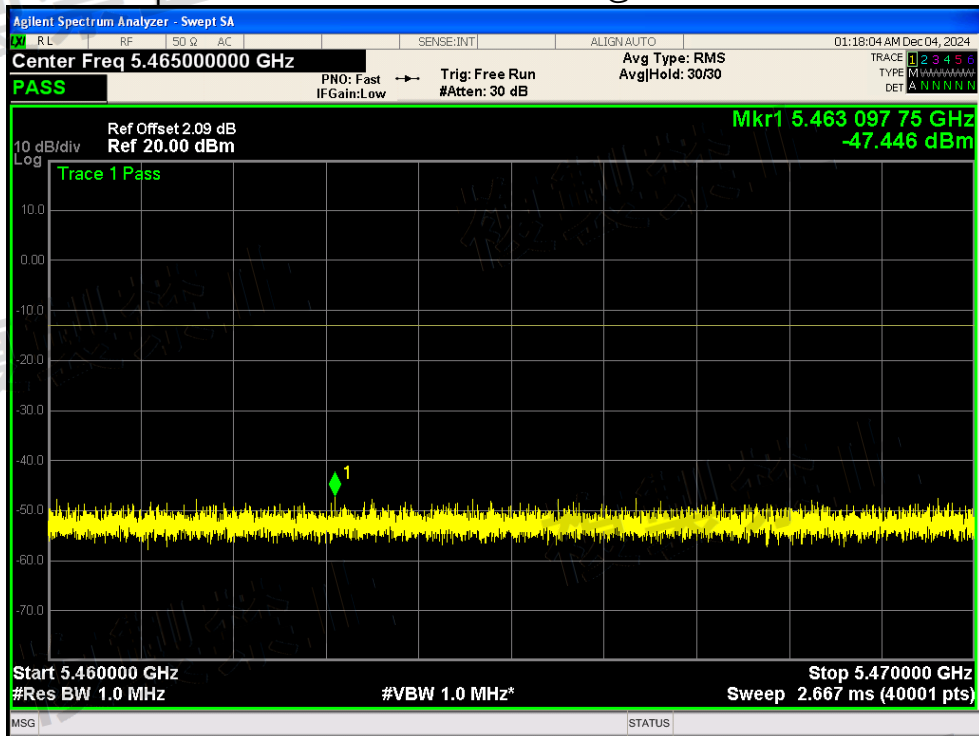
Tx. Spurious NVNT n20 5700MHz Ant1 @ 5765MHz-26000MHz



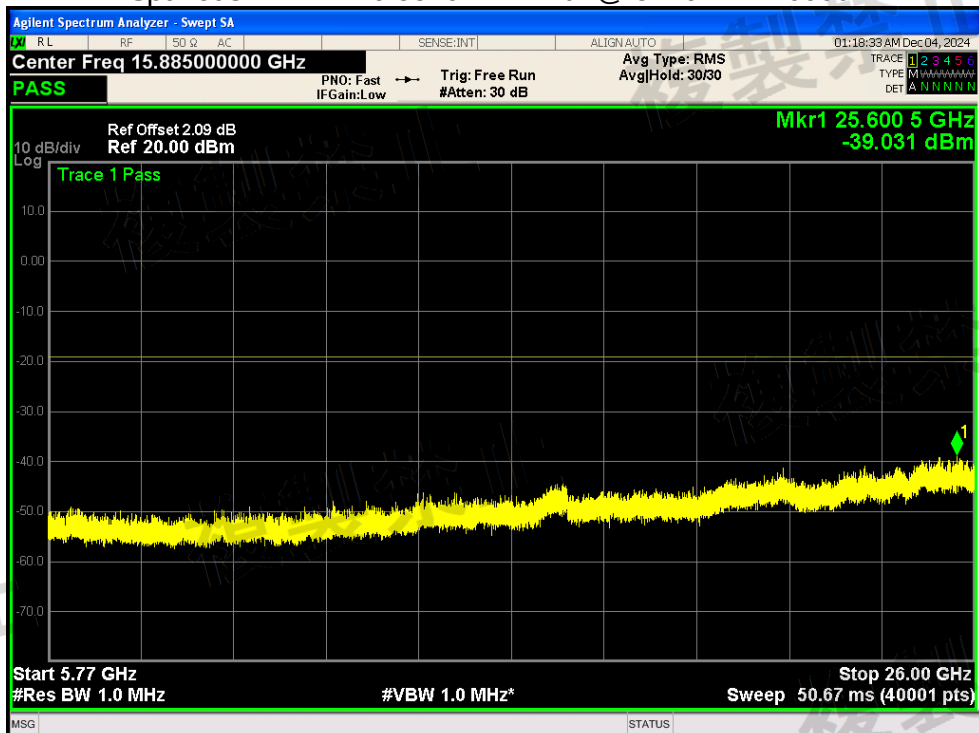
Tx. Spurious NVNT n40 5510MHz Ant1 @ 30MHz-5460MHz



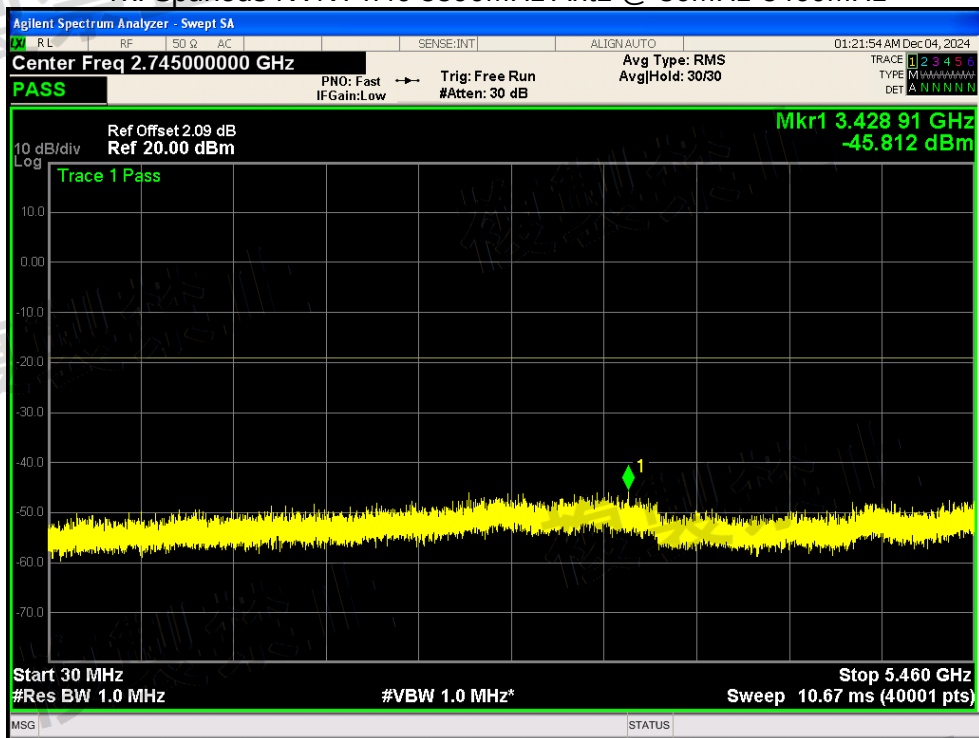
Tx. Spurious NVNT n40 5510MHz Ant1 @ 5460MHz-5470MHz



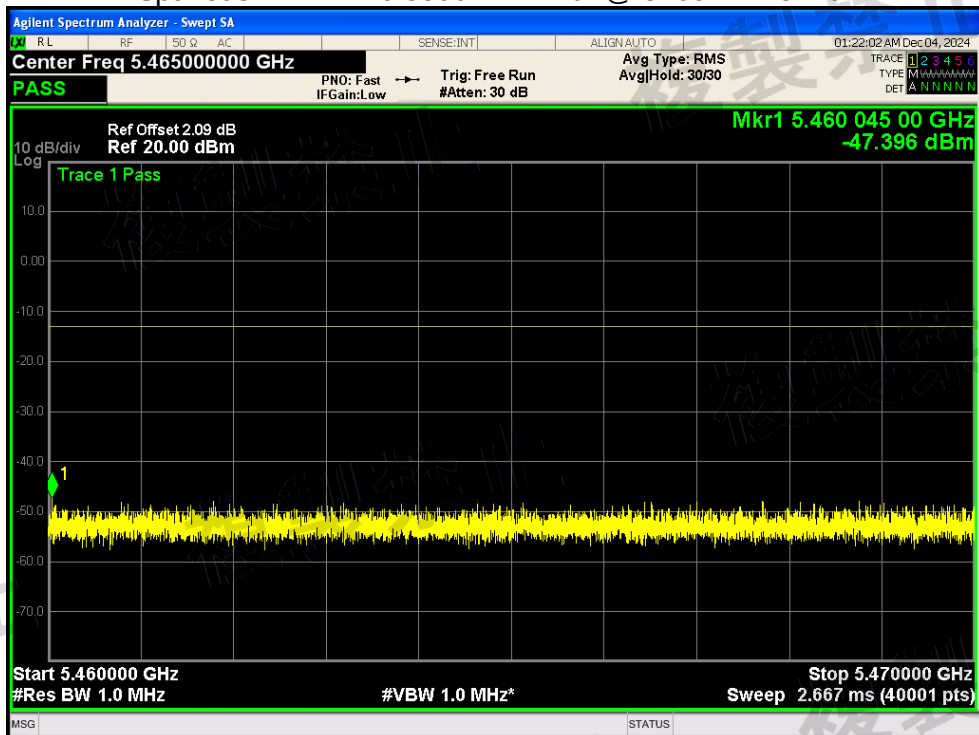
Tx. Spurious NVNT n40 5510MHz Ant1 @ 5770MHz-26000MHz



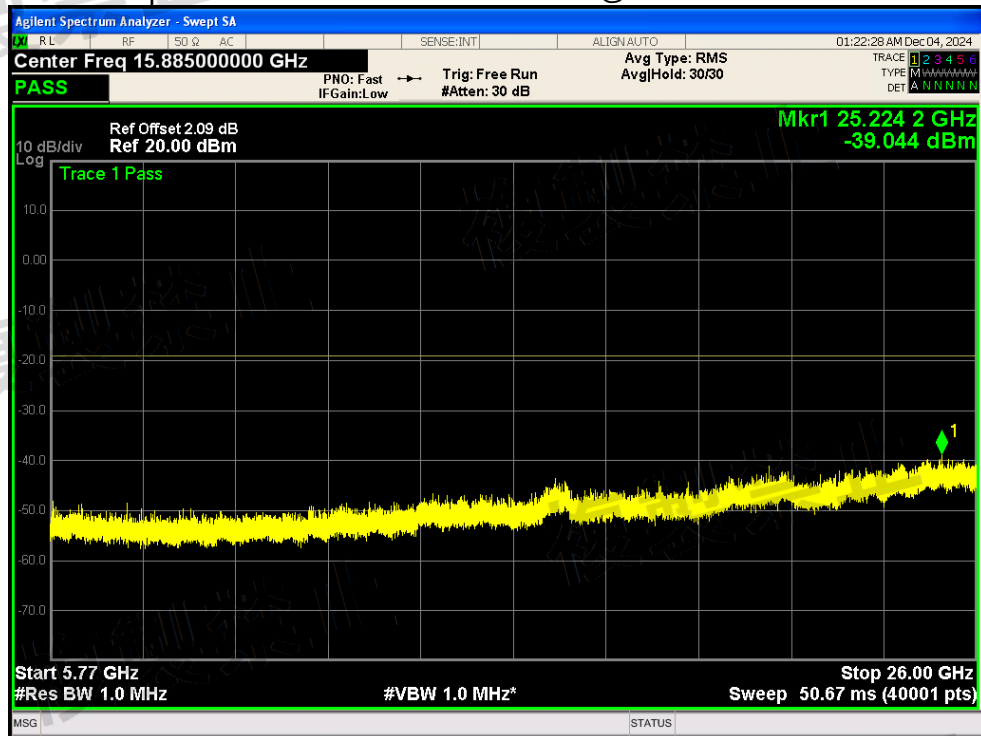
Tx. Spurious NVNT n40 5590MHz Ant1 @ 30MHz-5460MHz



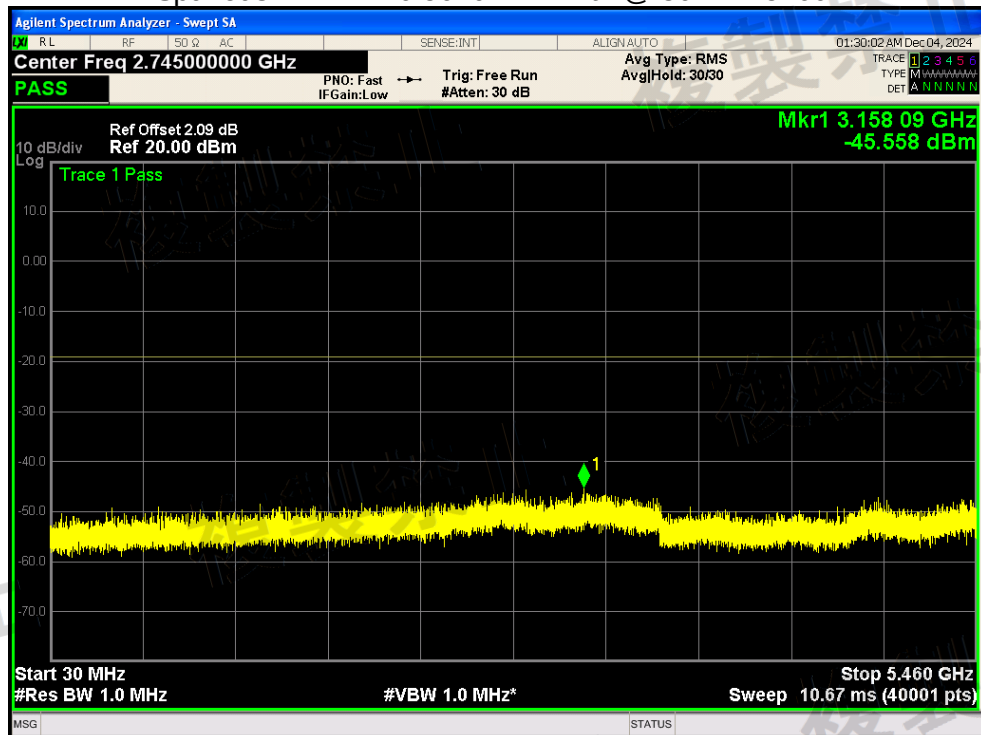
Tx. Spurious NVNT n40 5590MHz Ant1 @ 5460MHz-5470MHz



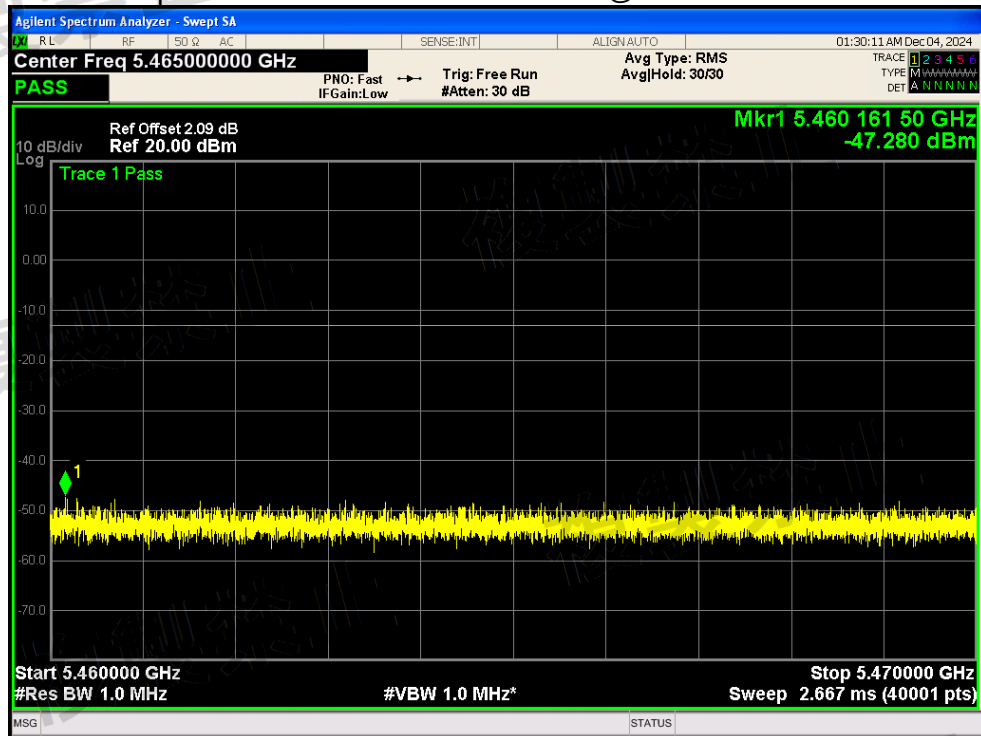
Tx. Spurious NVNT n40 5590MHz Ant1 @ 5770MHz-26000MHz



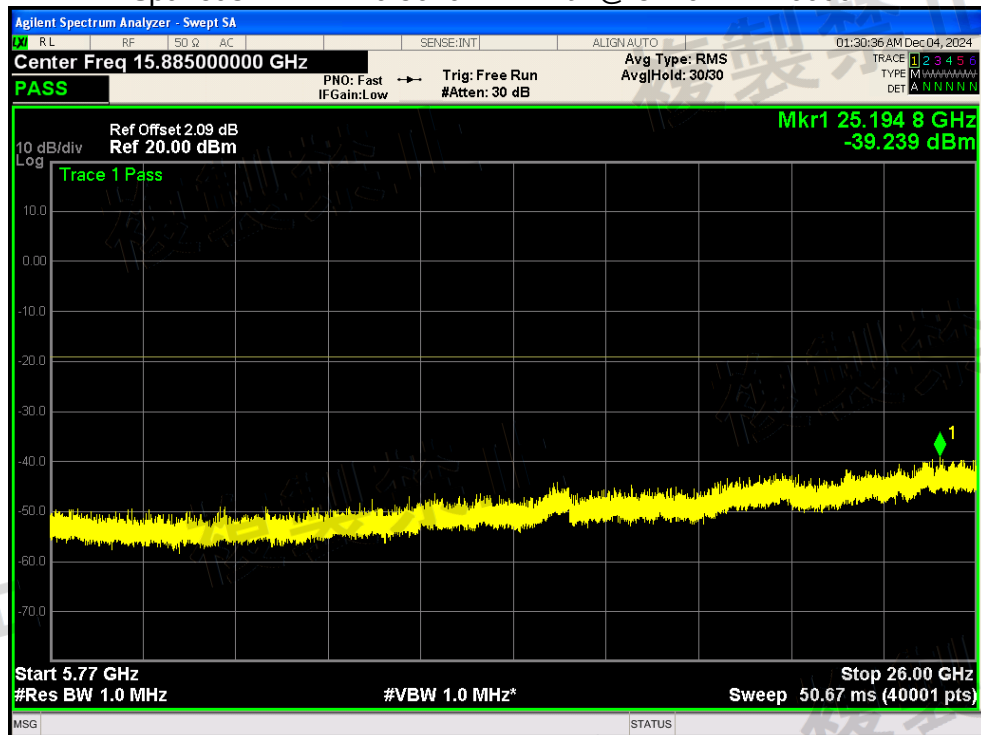
Tx. Spurious NVNT n40 5670MHz Ant1 @ 30MHz-5460MHz



Tx. Spurious NVNT n40 5670MHz Ant1 @ 5460MHz-5470MHz



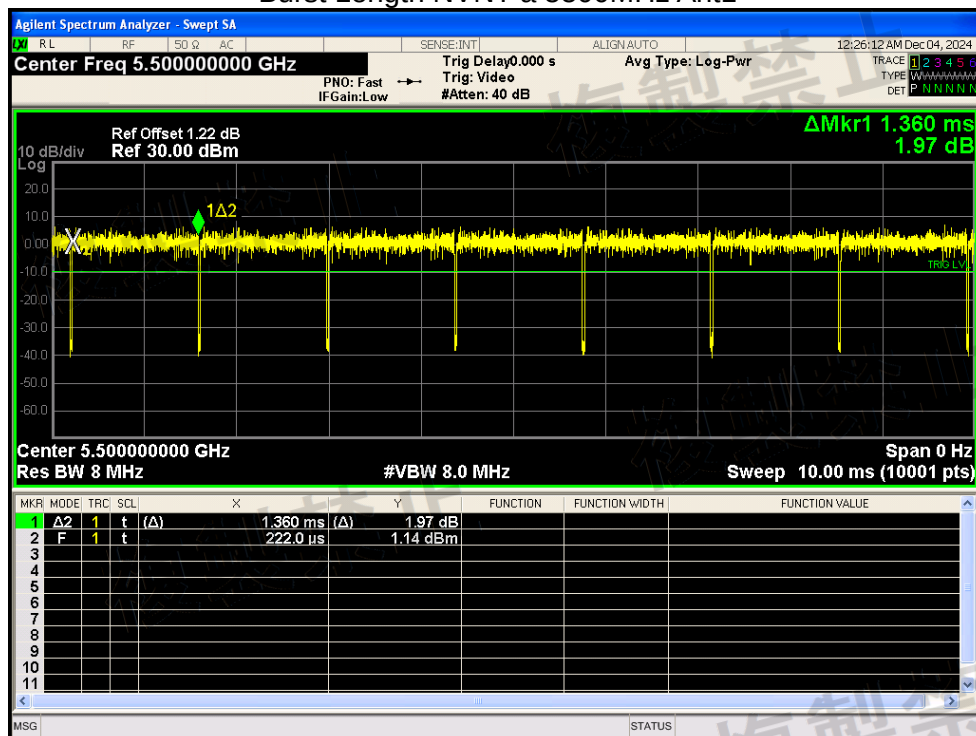
Tx. Spurious NVNT n40 5670MHz Ant1 @ 5770MHz-26000MHz



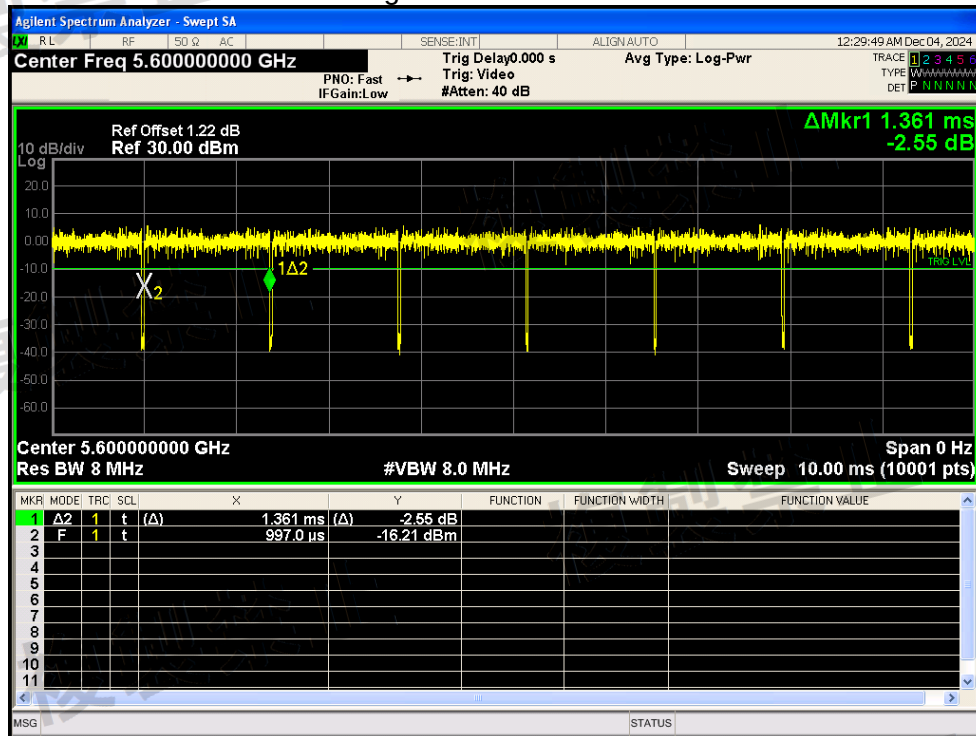
15.1.5 BURST LENGTH

Condition	Mode	Frequency (MHz)	Antenna	Burst Length (ms)	Limit (ms)	Verdict
NVNT	a	Ant1	5500	1.36	8	Pass
NVNT	a	Ant1	5600	1.361	8	Pass
NVNT	a	Ant1	5700	1.36	8	Pass
NVNT	n20	Ant1	5500	1.272	8	Pass
NVNT	n20	Ant1	5600	1.272	8	Pass
NVNT	n20	Ant1	5700	1.272	8	Pass
NVNT	n40	Ant1	5510	0.096	8	Pass
NVNT	n40	Ant1	5590	0.096	8	Pass
NVNT	n40	Ant1	5670	0.096	8	Pass

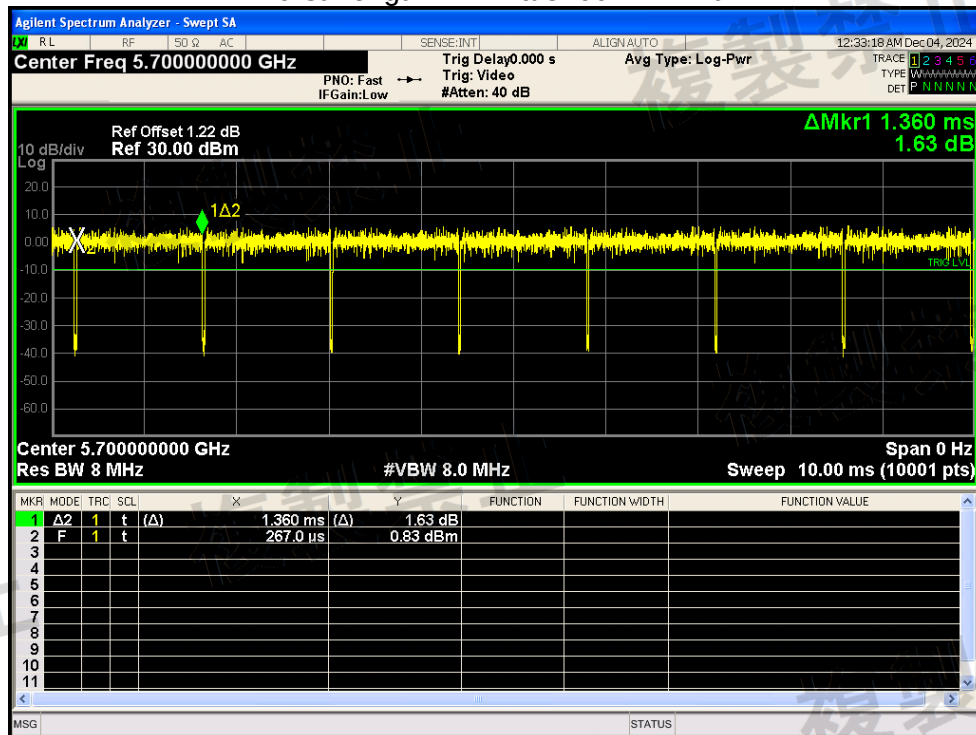
Burst Length NVNT a 5500MHz Ant1



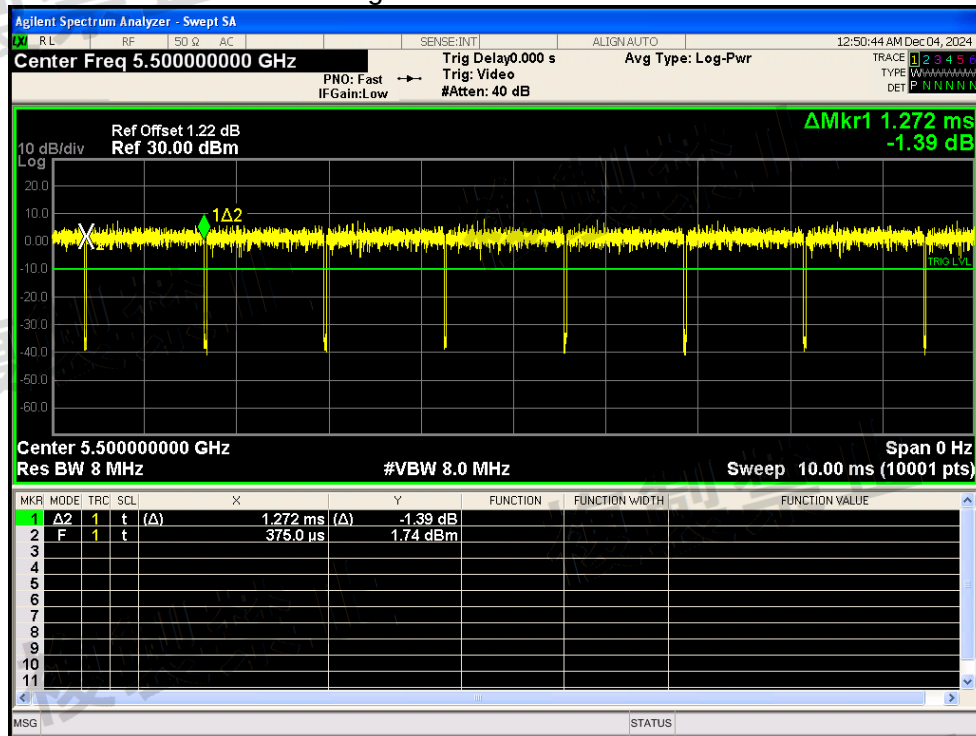
Burst Length NVNT a 5600MHz Ant1



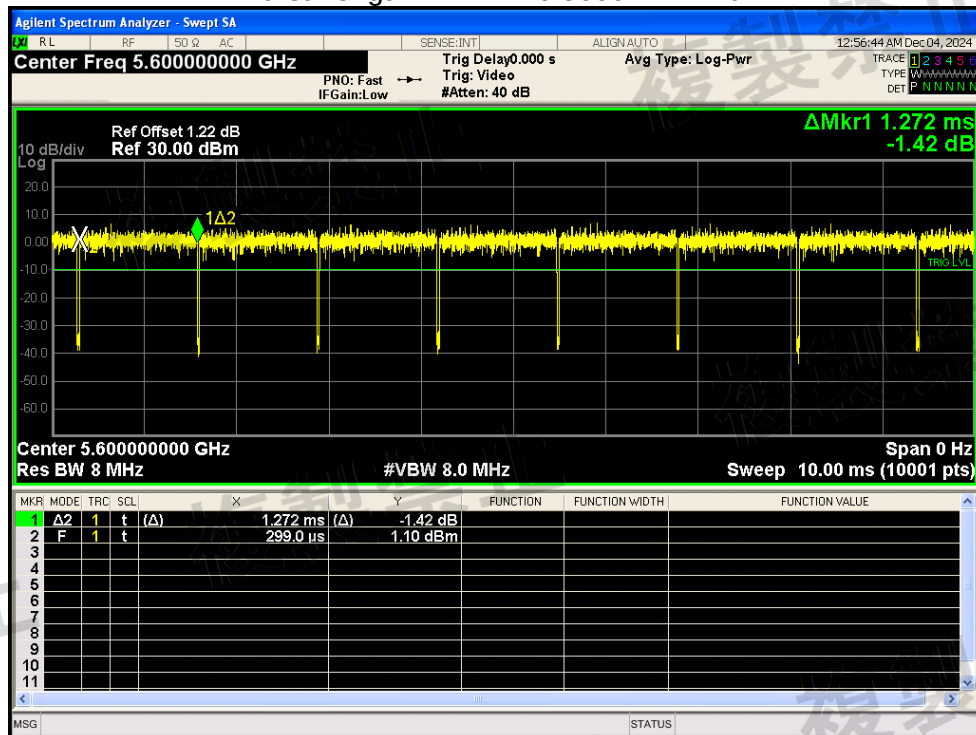
Burst Length NVNT a 5700MHz Ant1



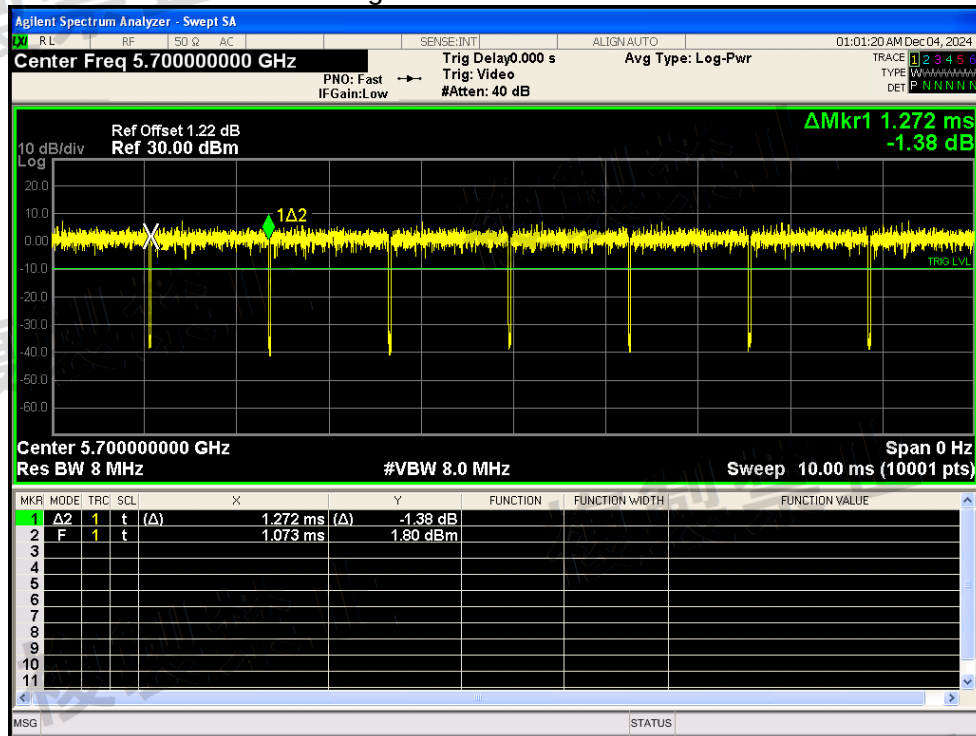
Burst Length NVNT n20 5500MHz Ant1



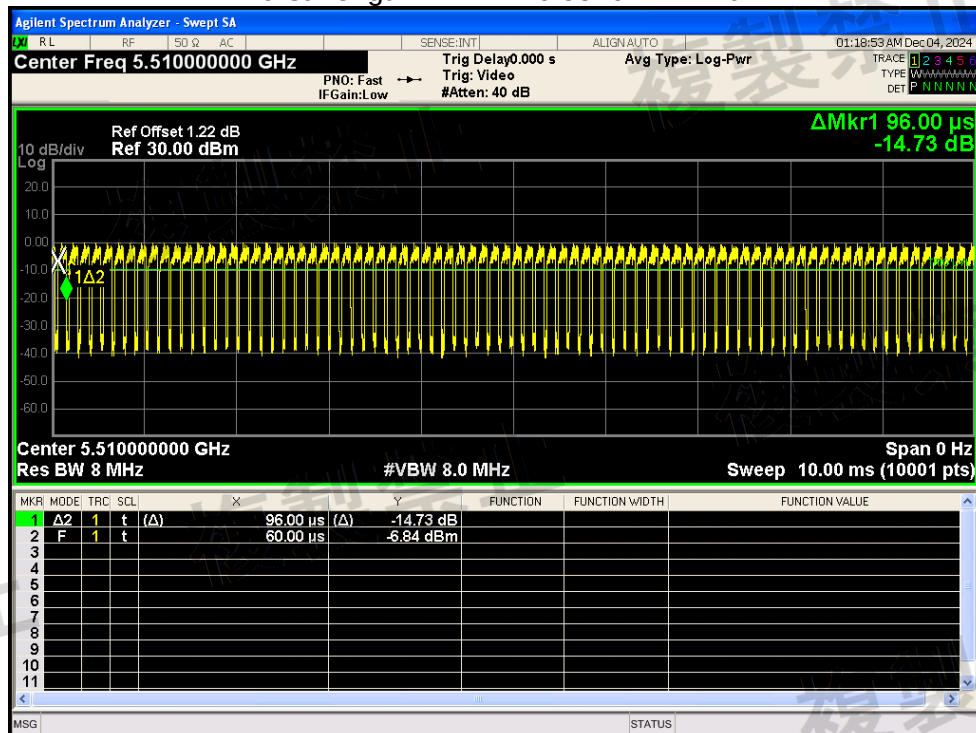
Burst Length NVNT n20 5600MHz Ant1



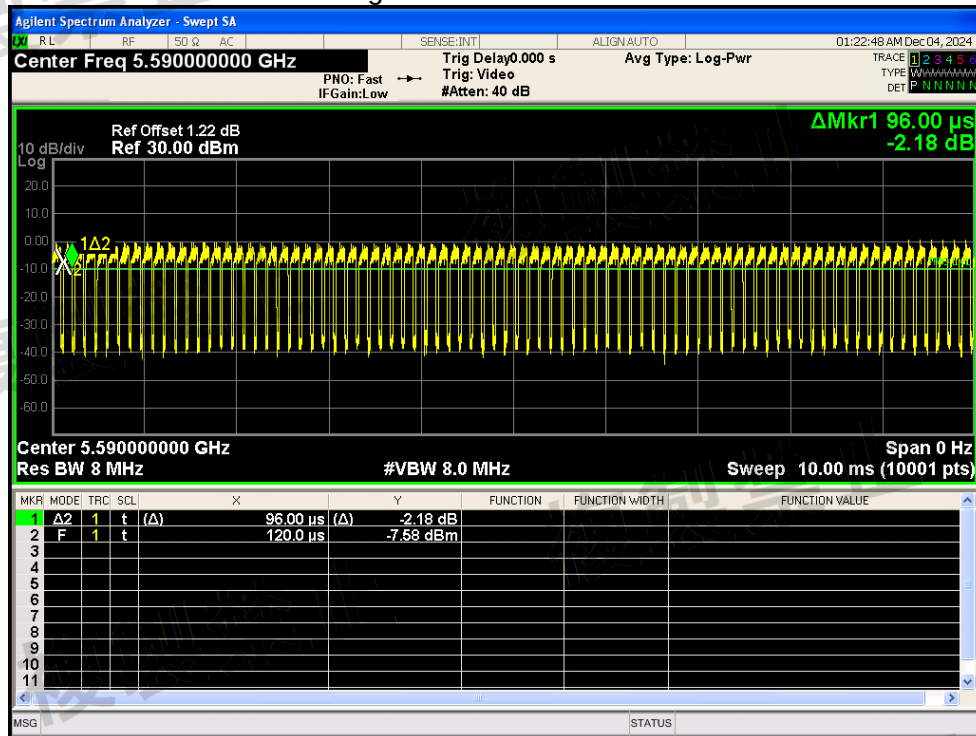
Burst Length NVNT n20 5700MHz Ant1



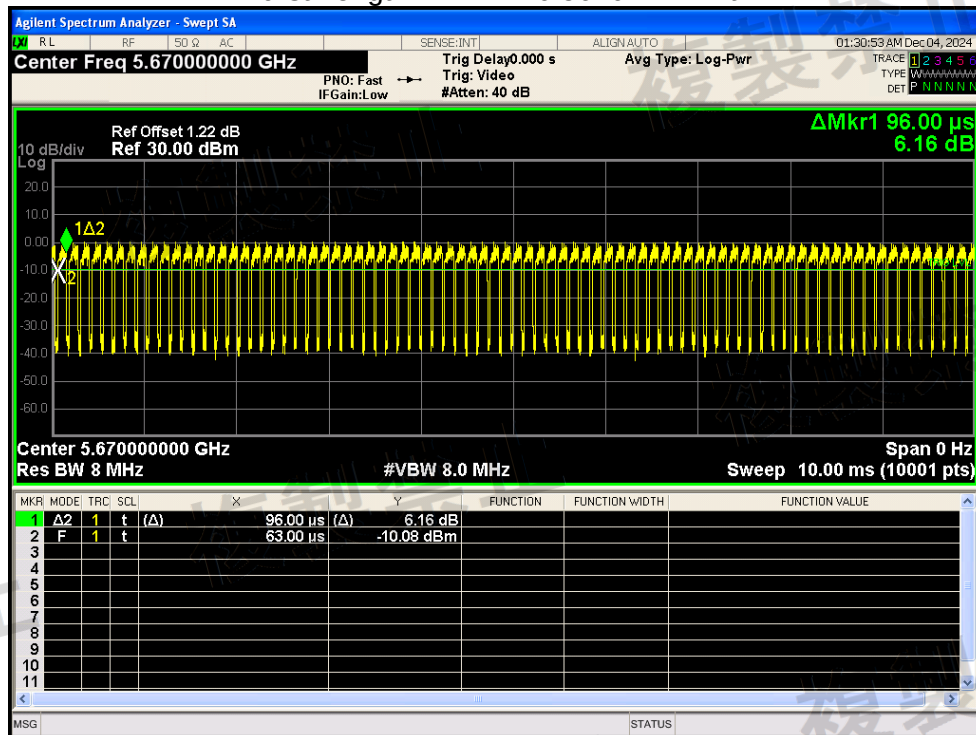
Burst Length NVNT n40 5510MHz Ant1



Burst Length NVNT n40 5590MHz Ant1



Burst Length NVNT n40 5670MHz Ant1

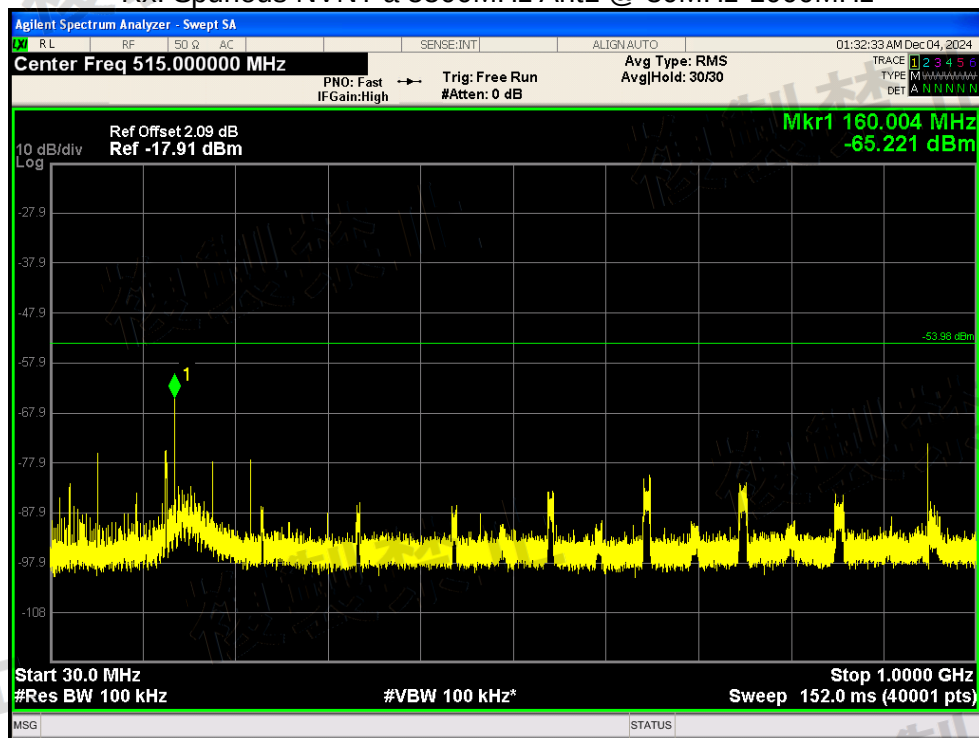


15.1.6 RX SPURIOUS EMISSION

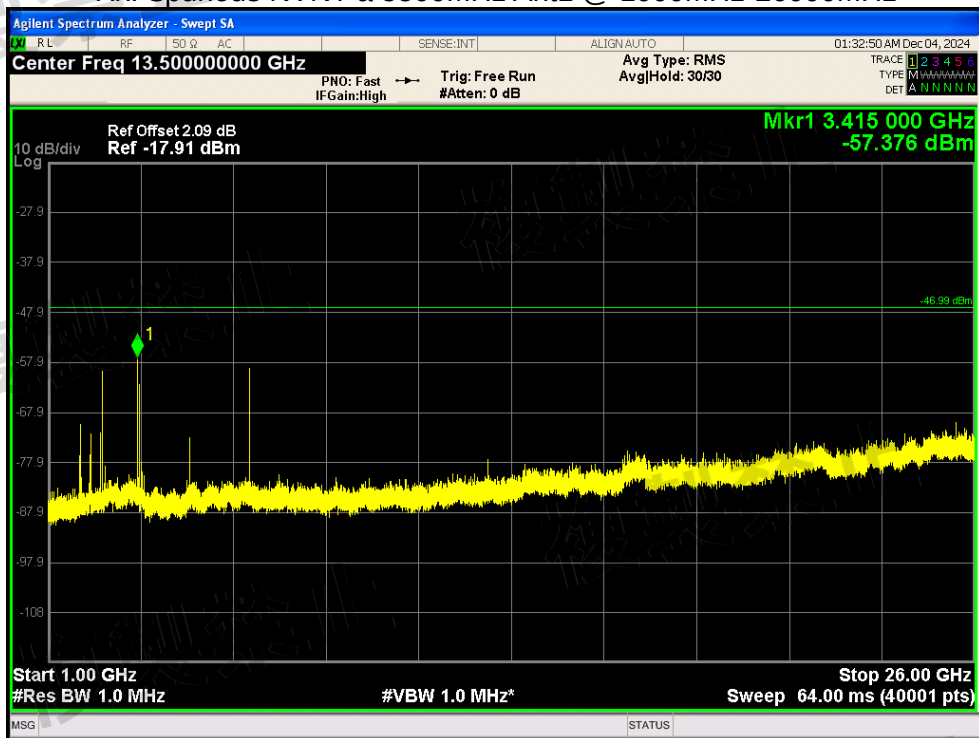
Note: This test has increased antenna gain .

Condition	Mode	Frequency (MHz)	Antenna	Range (MHz)	Emission Frequency (MHz)	Max Value (dBm)	Max Value (nW)	Limit (nW)	Verdict
NVNT	a	5500	Ant1	30-1000	160	-65.22	0.3006	4	Pass
NVNT	a	5500	Ant1	1000-26000	3415	-57.38	1.8281	20	Pass
NVNT	a	5600	Ant1	30-1000	160	-65.2	0.302	4	Pass
NVNT	a	5600	Ant1	1000-26000	6431.88	-59.22	1.1967	20	Pass
NVNT	a	5700	Ant1	30-1000	160	-65.1	0.309	4	Pass
NVNT	a	5700	Ant1	1000-26000	6431.88	-59.12	1.2246	20	Pass
NVNT	n20	5500	Ant1	30-1000	160	-65.17	0.3041	4	Pass
NVNT	n20	5500	Ant1	1000-26000	6431.88	-59.12	1.2246	20	Pass
NVNT	n20	5600	Ant1	30-1000	160	-65.2	0.302	4	Pass
NVNT	n20	5600	Ant1	1000-26000	6431.88	-59.24	1.1912	20	Pass
NVNT	n20	5700	Ant1	30-1000	160	-65.18	0.3034	4	Pass
NVNT	n20	5700	Ant1	1000-26000	6431.88	-59.24	1.1912	20	Pass
NVNT	n40	5510	Ant1	30-1000	160	-65.15	0.3055	4	Pass
NVNT	n40	5510	Ant1	1000-26000	6431.88	-59.26	1.1858	20	Pass
NVNT	n40	5590	Ant1	30-1000	160	-65.14	0.3062	4	Pass
NVNT	n40	5590	Ant1	1000-26000	6431.88	-59.2	1.2023	20	Pass
NVNT	n40	5670	Ant1	30-1000	160	-65.03	0.3141	4	Pass
NVNT	n40	5670	Ant1	1000-26000	6431.88	-59.03	1.2503	20	Pass

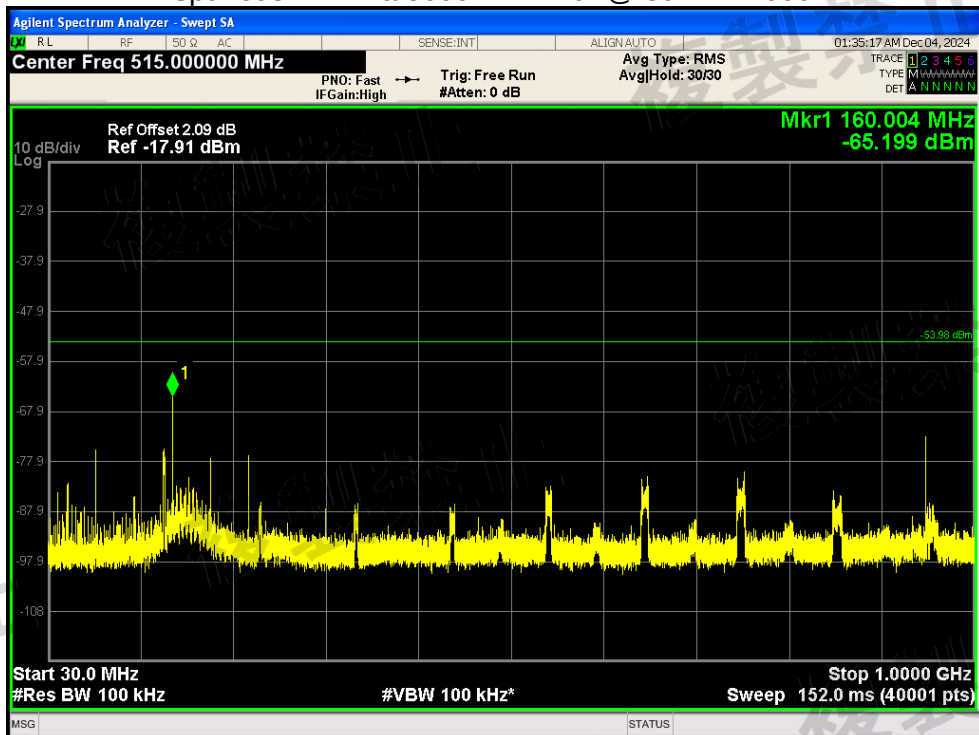
Rx. Spurious NVNT a 5500MHz Ant1 @ 30MHz-1000MHz



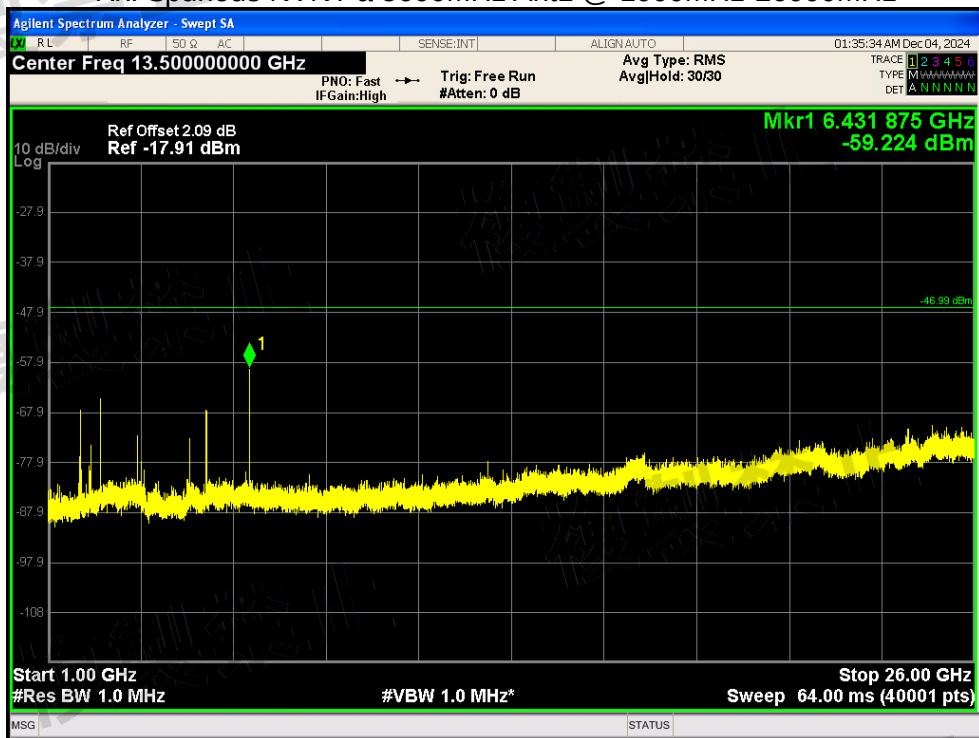
Rx. Spurious NVNT a 5500MHz Ant1 @ 1000MHz-26000MHz



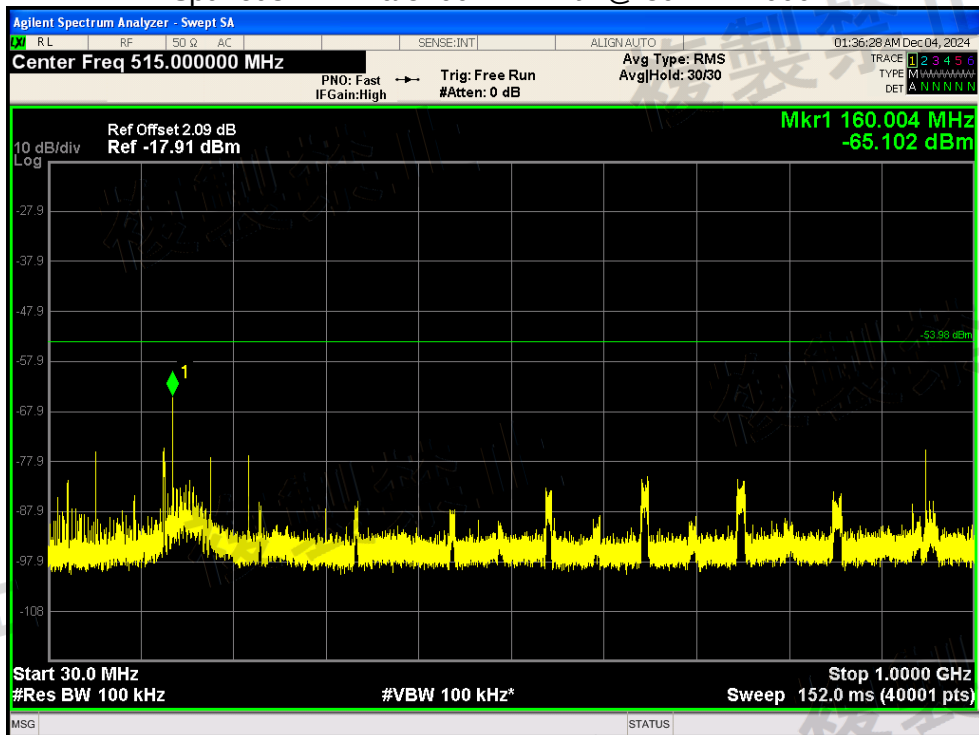
Rx. Spurious NVNT a 5600MHz Ant1 @ 30MHz-1000MHz



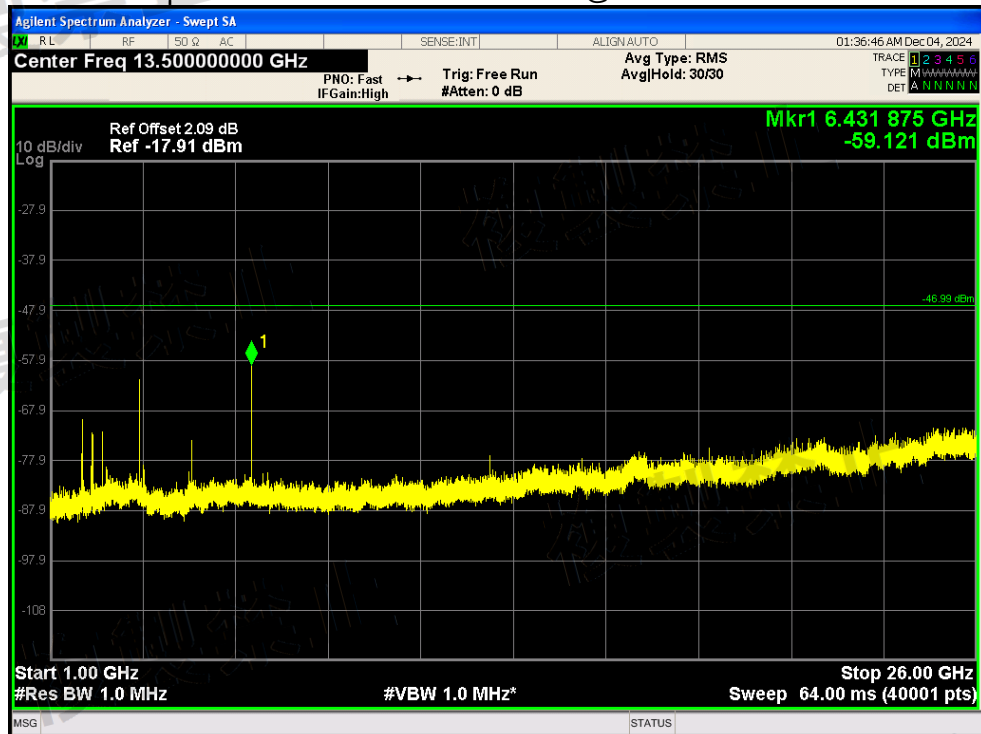
Rx. Spurious NVNT a 5600MHz Ant1 @ 1000MHz-26000MHz



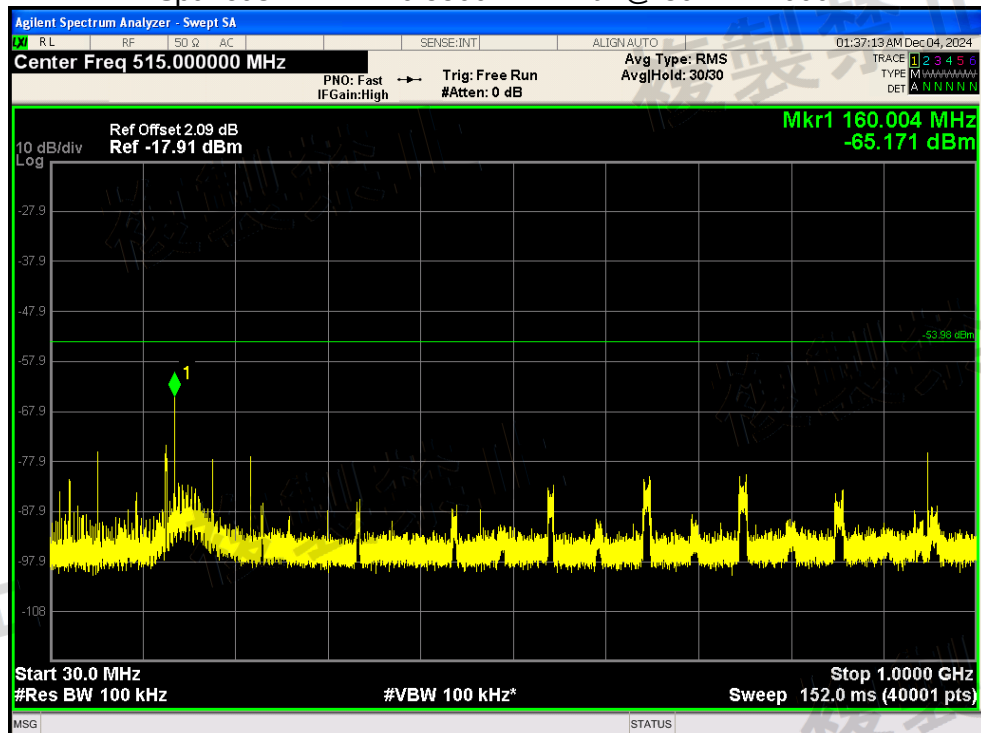
Rx. Spurious NVNT a 5700MHz Ant1 @ 30MHz-1000MHz



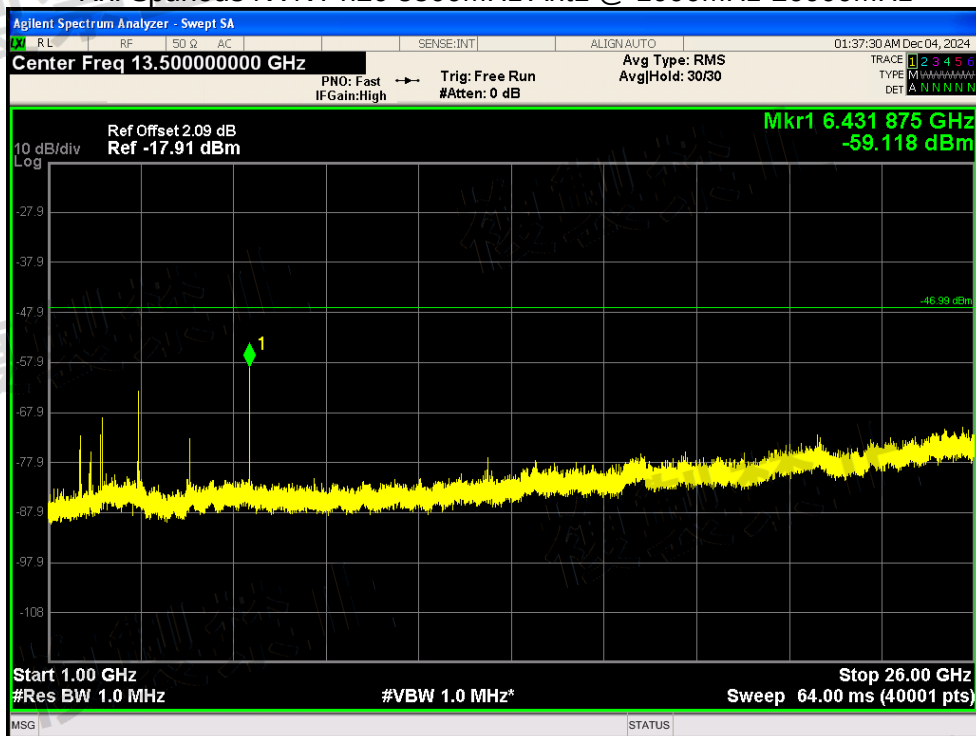
Rx. Spurious NVNT a 5700MHz Ant1 @ 1000MHz-26000MHz



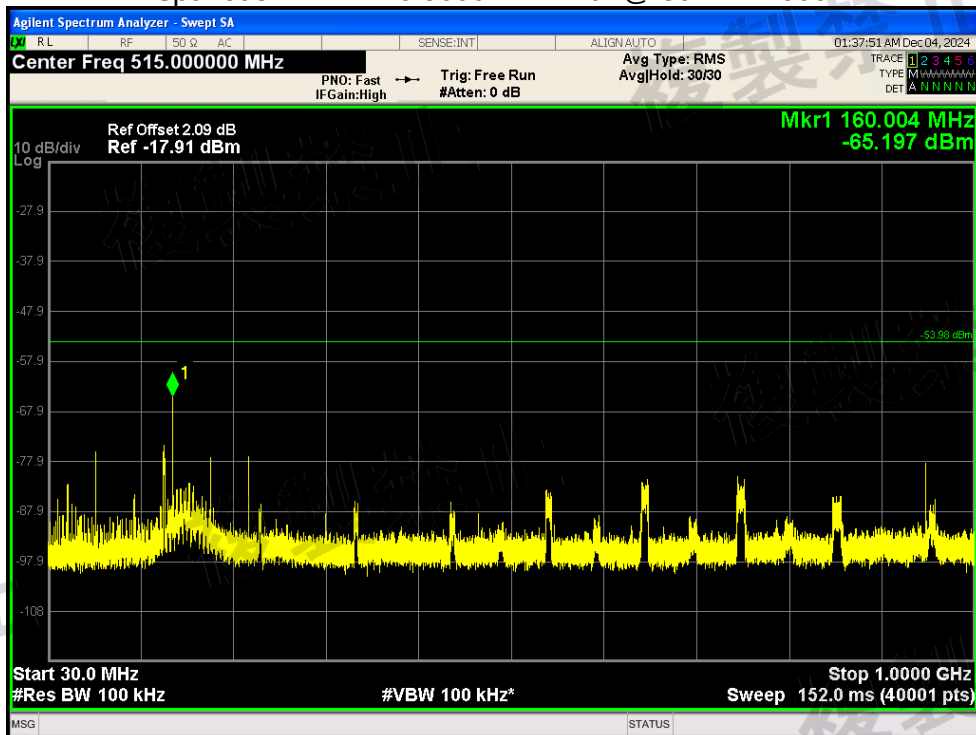
Rx. Spurious NVNT n20 5500MHz Ant1 @ 30MHz-1000MHz



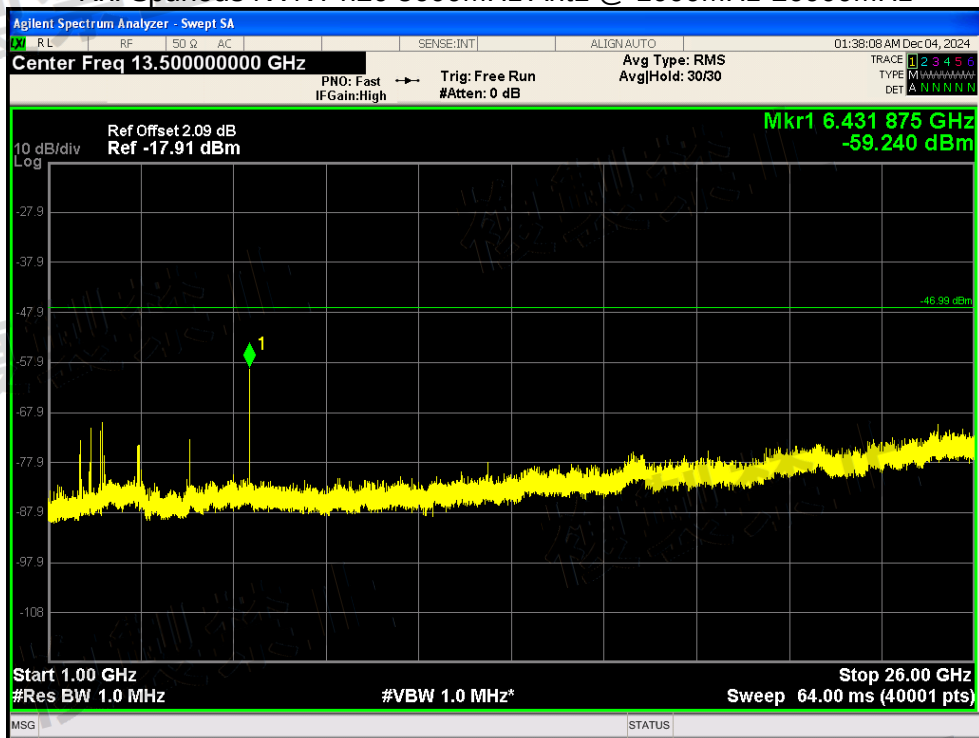
Rx. Spurious NVNT n20 5500MHz Ant1 @ 1000MHz-26000MHz



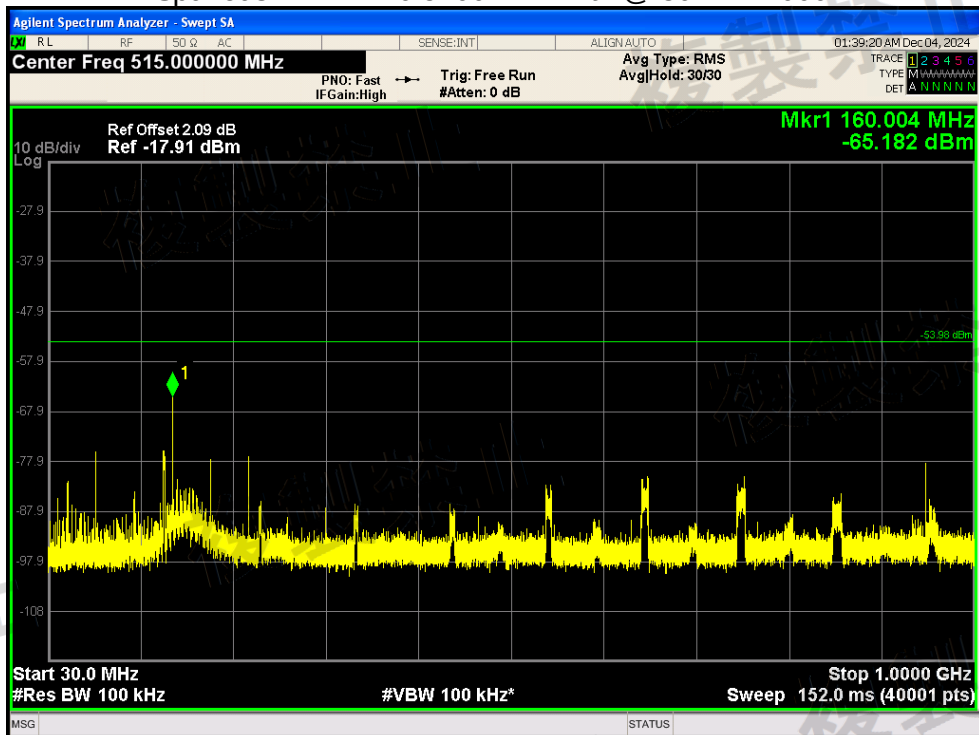
Rx. Spurious NVNT n20 5600MHz Ant1 @ 30MHz-1000MHz



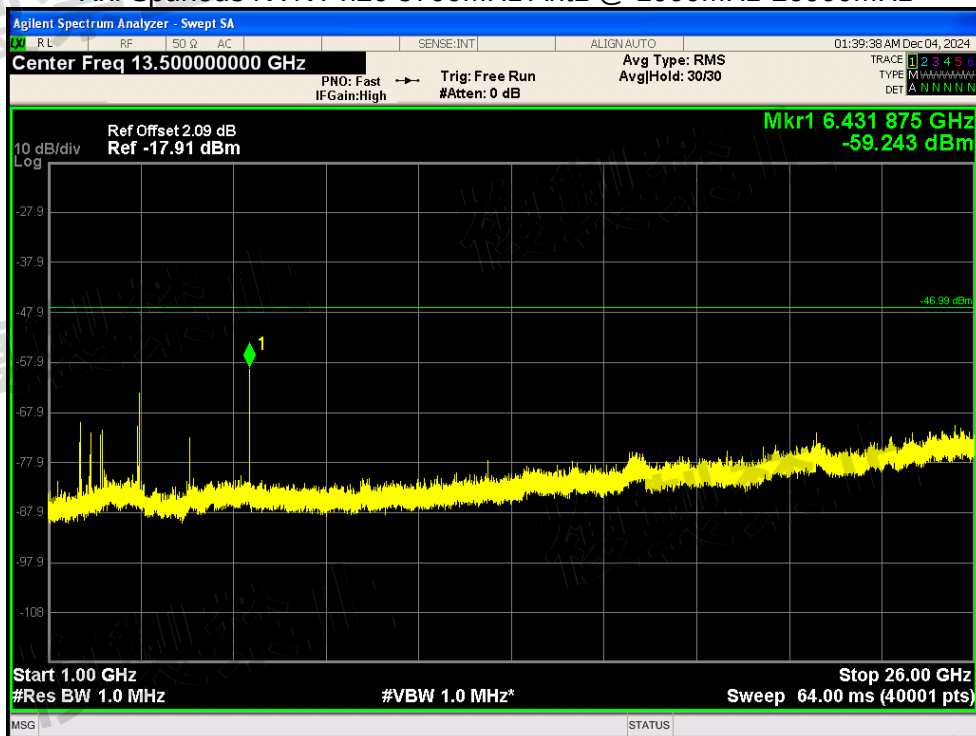
Rx. Spurious NVNT n20 5600MHz Ant1 @ 1000MHz-26000MHz



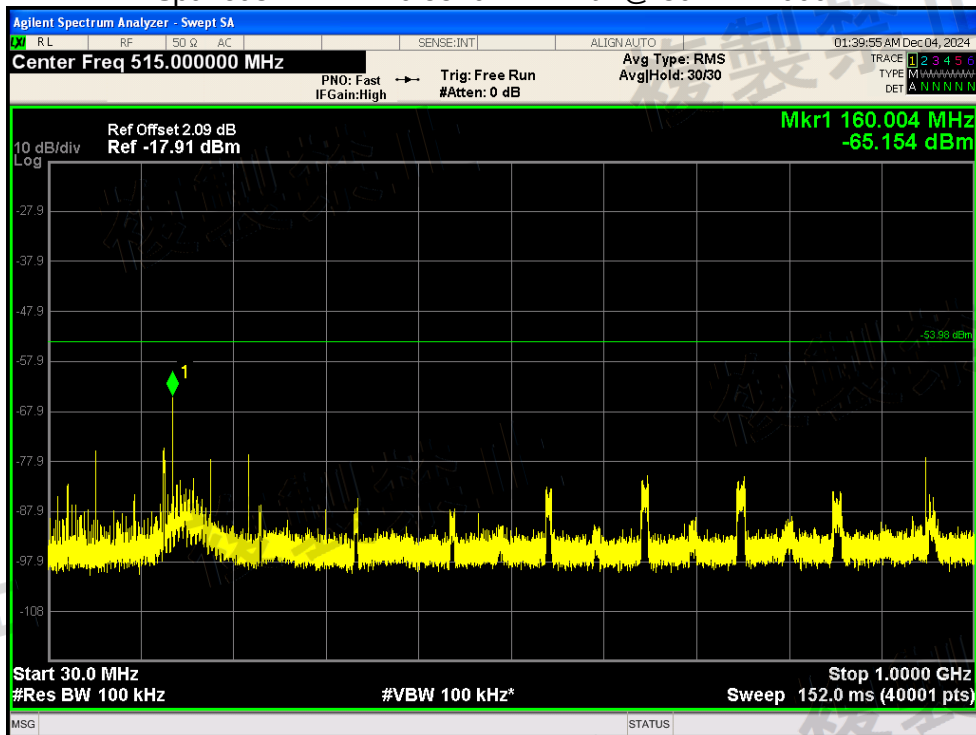
Rx. Spurious NVNT n20 5700MHz Ant1 @ 30MHz-1000MHz



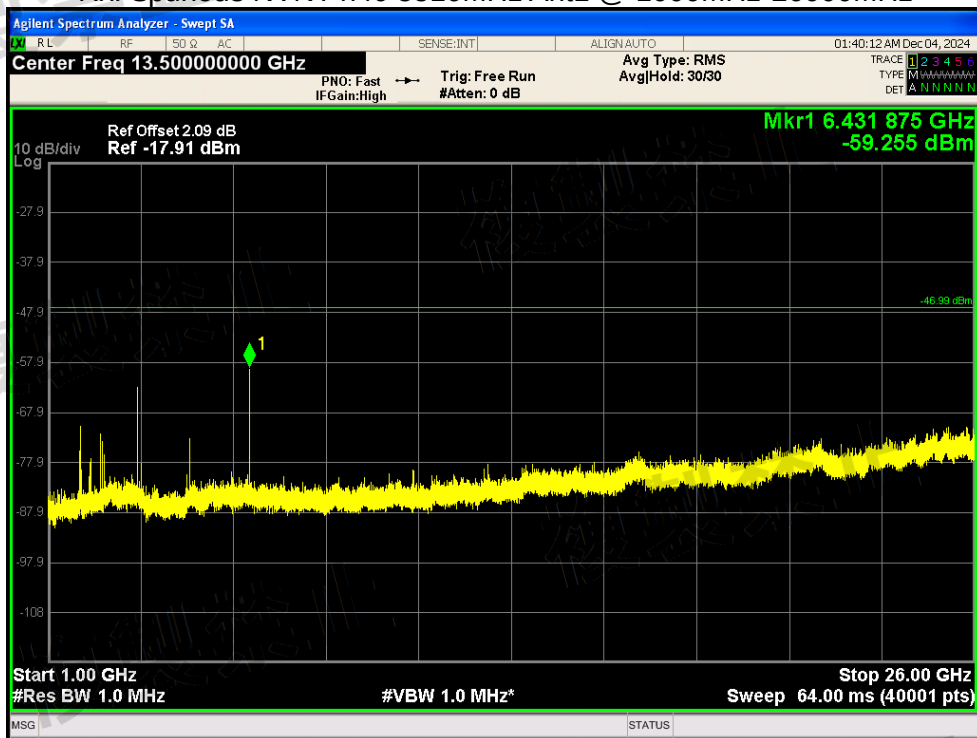
Rx. Spurious NVNT n20 5700MHz Ant1 @ 1000MHz-26000MHz



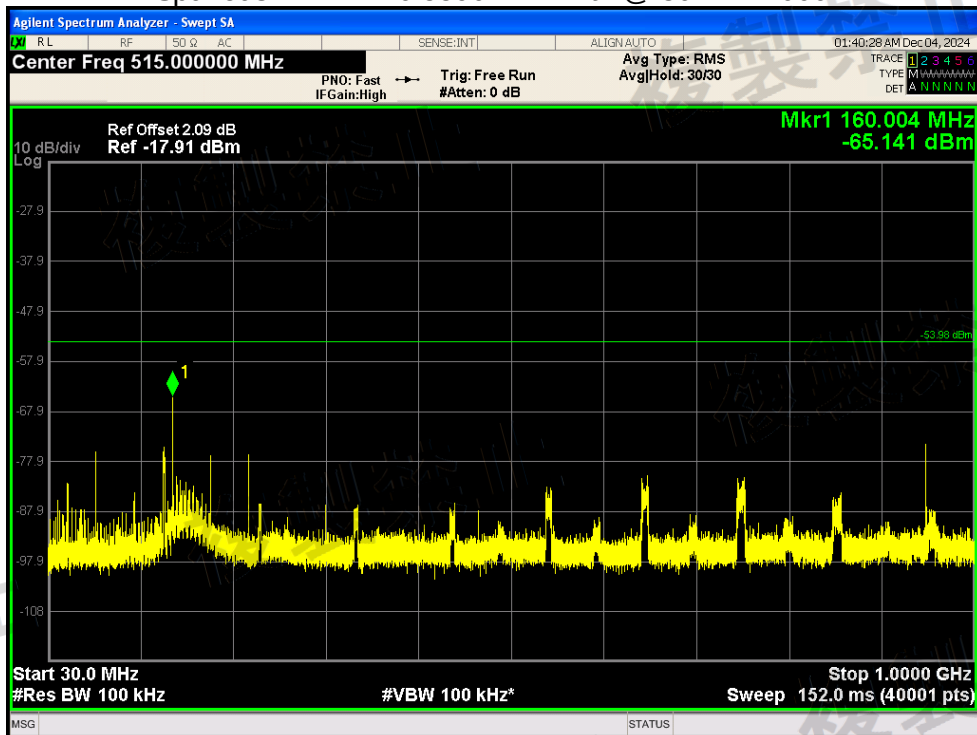
Rx. Spurious NVNT n40 5510MHz Ant1 @ 30MHz-1000MHz



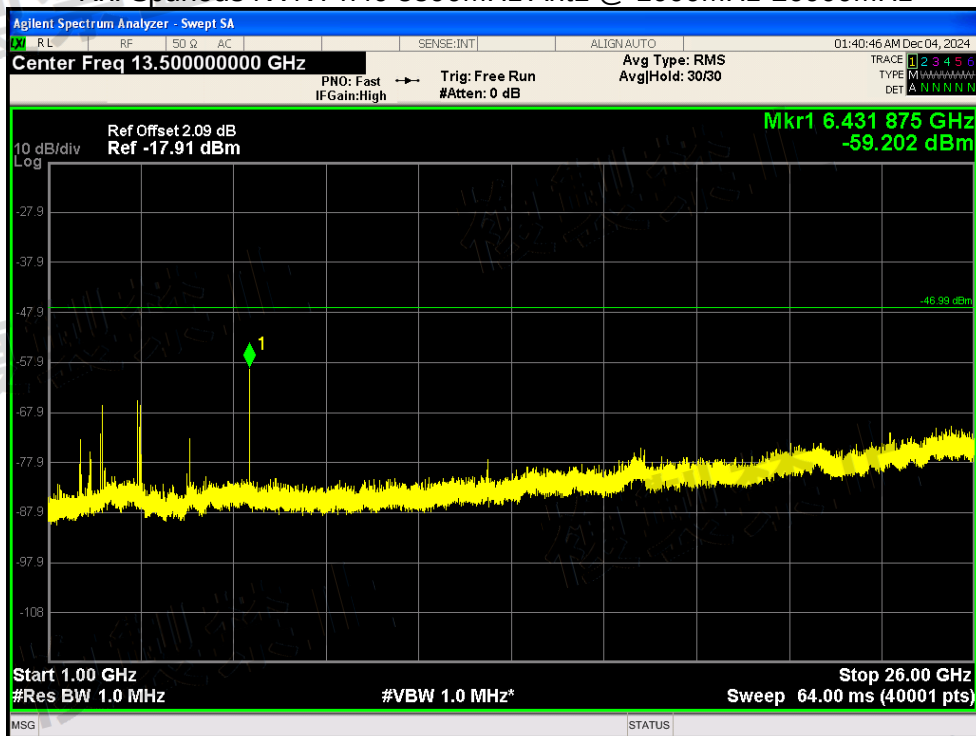
Rx. Spurious NVNT n40 5510MHz Ant1 @ 1000MHz-26000MHz



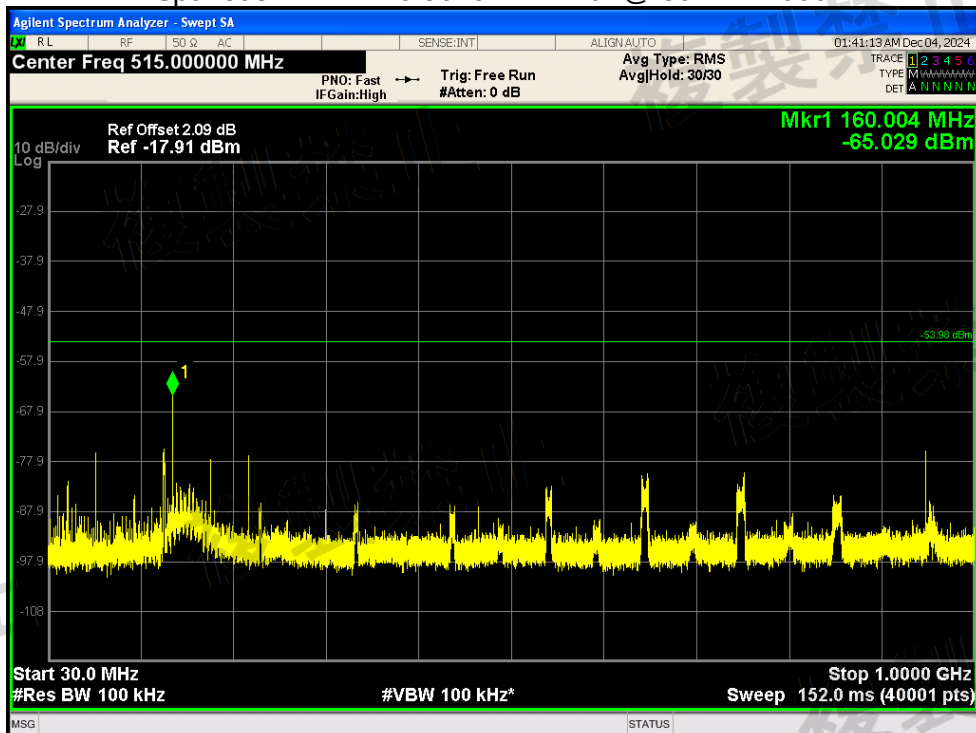
Rx. Spurious NVNT n40 5590MHz Ant1 @ 30MHz-1000MHz



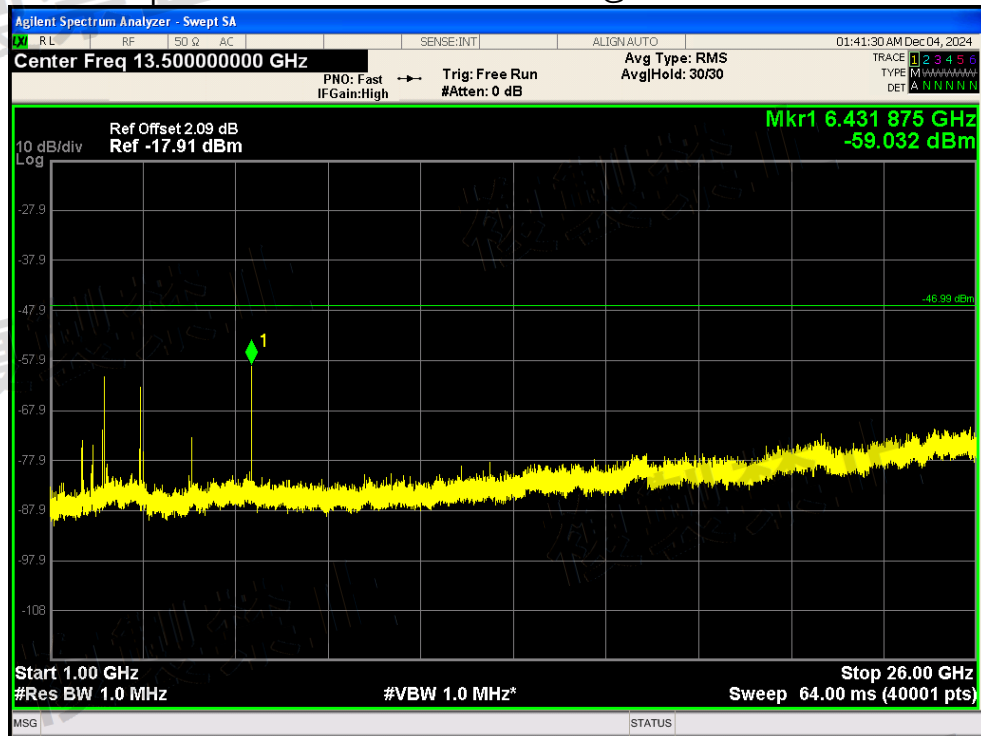
Rx. Spurious NVNT n40 5590MHz Ant1 @ 1000MHz-26000MHz



Rx. Spurious NVNT n40 5670MHz Ant1 @ 30MHz-1000MHz



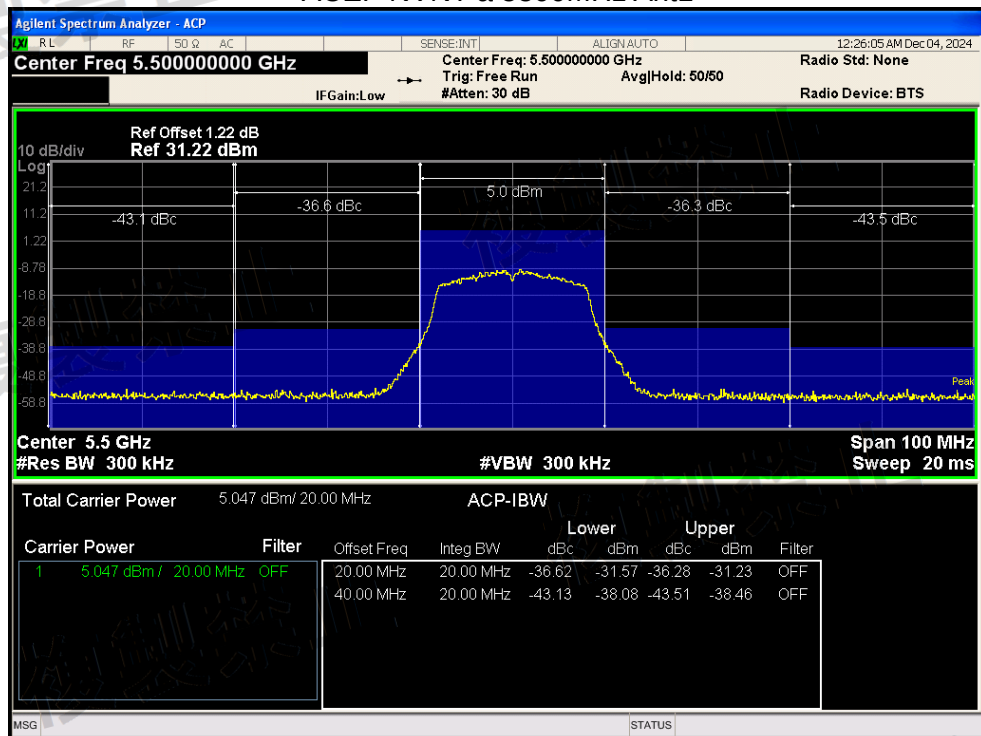
Rx. Spurious NVNT n40 5670MHz Ant1 @ 1000MHz-26000MHz



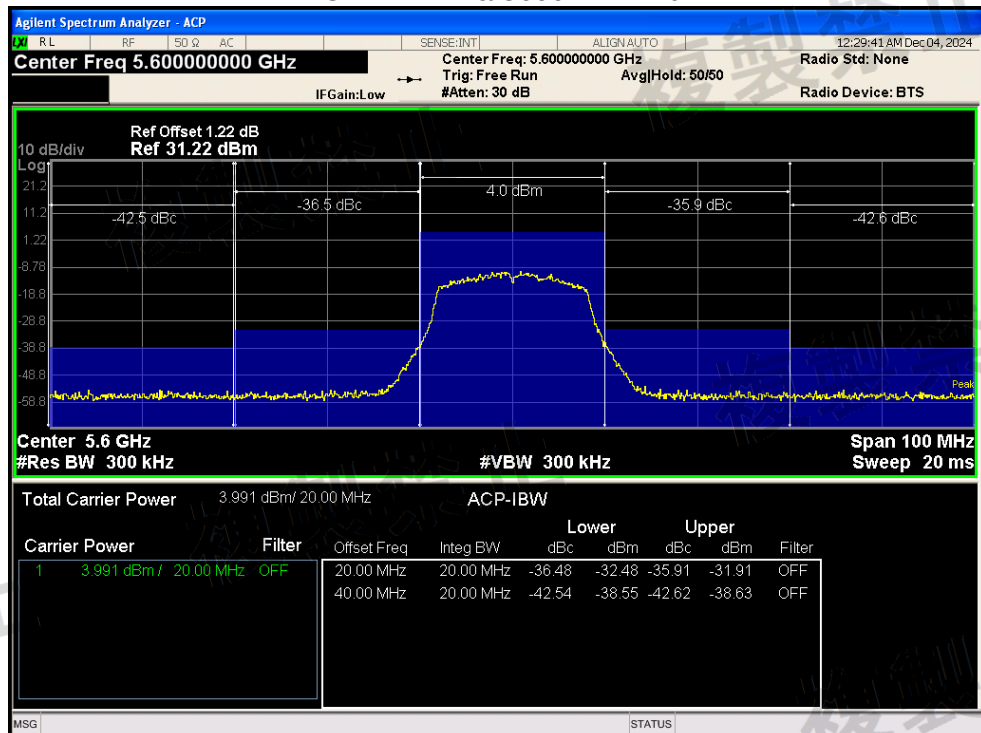
15.1.7 ADJACENT CHANNEL EMITTED POWER

Condition	Mode	Frequency (MHz)	Antenna	Offset (MHz)	Value (dBc)	Limit (dBc)	Verdict
NVNT	a	5500	Ant1	-20	-36.62	-25	Pass
NVNT	a	5500	Ant1	-40	-43.13	-40	Pass
NVNT	a	5500	Ant1	20	-36.28	-25	Pass
NVNT	a	5500	Ant1	40	-43.51	-40	Pass
NVNT	a	5600	Ant1	-20	-36.48	-25	Pass
NVNT	a	5600	Ant1	-40	-42.54	-40	Pass
NVNT	a	5600	Ant1	20	-35.91	-25	Pass
NVNT	a	5600	Ant1	40	-42.62	-40	Pass
NVNT	a	5700	Ant1	-20	-36.71	-25	Pass
NVNT	a	5700	Ant1	-40	-43.01	-40	Pass
NVNT	a	5700	Ant1	20	-35.95	-25	Pass
NVNT	a	5700	Ant1	40	-42.51	-40	Pass
NVNT	n20	5500	Ant1	-20	-34.93	-25	Pass
NVNT	n20	5500	Ant1	-40	-44.07	-40	Pass
NVNT	n20	5500	Ant1	20	-35.56	-25	Pass
NVNT	n20	5500	Ant1	40	-44.54	-40	Pass
NVNT	n20	5600	Ant1	-20	-33.98	-25	Pass
NVNT	n20	5600	Ant1	-40	-43.12	-40	Pass
NVNT	n20	5600	Ant1	20	-34.62	-25	Pass
NVNT	n20	5600	Ant1	40	-43.17	-40	Pass
NVNT	n20	5700	Ant1	-20	-34.07	-25	Pass
NVNT	n20	5700	Ant1	-40	-43.51	-40	Pass
NVNT	n20	5700	Ant1	20	-34.72	-25	Pass
NVNT	n20	5700	Ant1	40	-43.17	-40	Pass
NVNT	n40	5510	Ant1	-40	-40.16	-25	Pass
NVNT	n40	5510	Ant1	-80	-40.27	-40	Pass
NVNT	n40	5510	Ant1	40	-40.55	-25	Pass
NVNT	n40	5510	Ant1	80	-41	-40	Pass
NVNT	n40	5590	Ant1	-40	-40.3	-25	Pass
NVNT	n40	5590	Ant1	-80	-40.3	-40	Pass
NVNT	n40	5590	Ant1	40	-40.42	-25	Pass
NVNT	n40	5590	Ant1	80	-40.63	-40	Pass
NVNT	n40	5670	Ant1	-40	-40.38	-25	Pass
NVNT	n40	5670	Ant1	-80	-40.78	-40	Pass
NVNT	n40	5670	Ant1	40	-40.02	-25	Pass
NVNT	n40	5670	Ant1	80	-40.32	-40	Pass

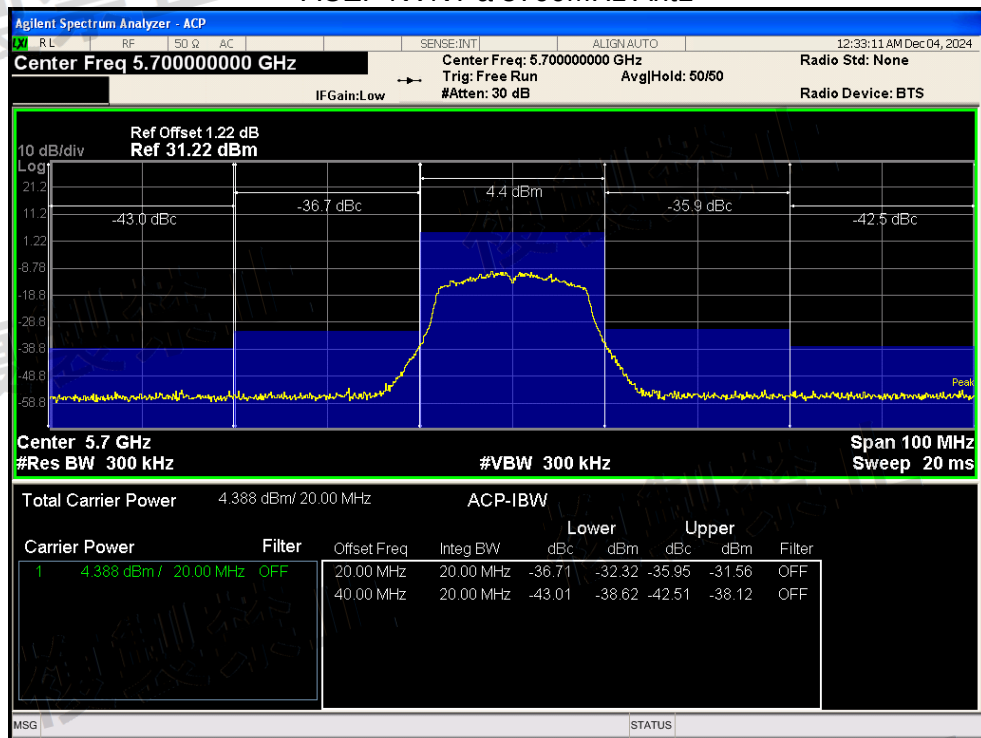
ACEP NVNT a 5500MHz Ant1



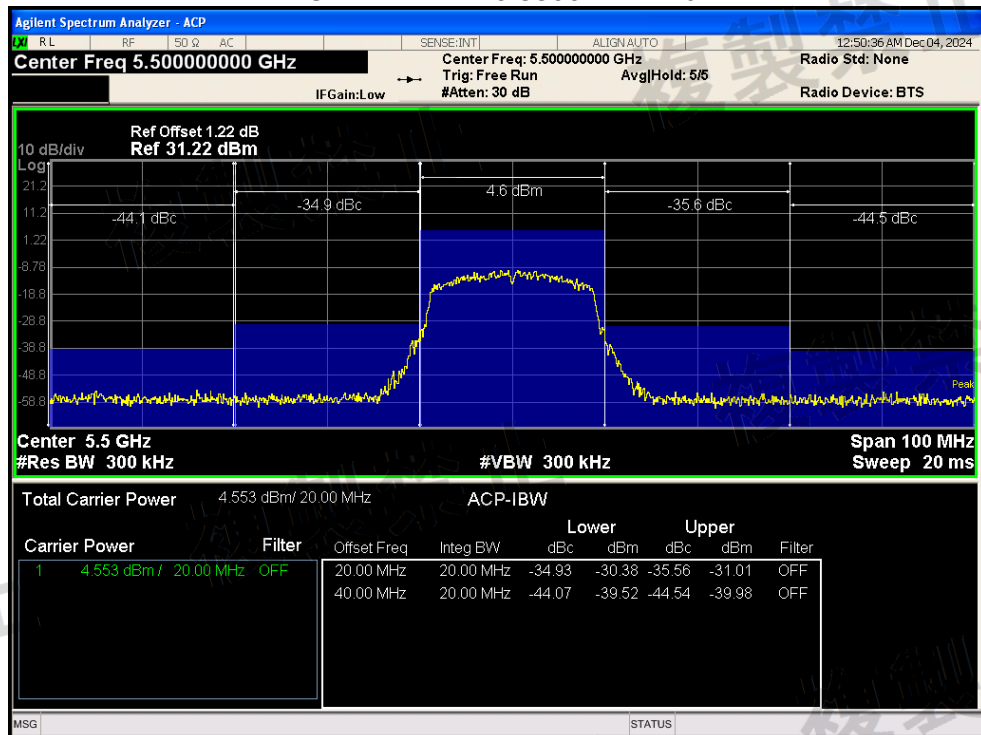
ACEP NVNT a 5600MHz Ant1



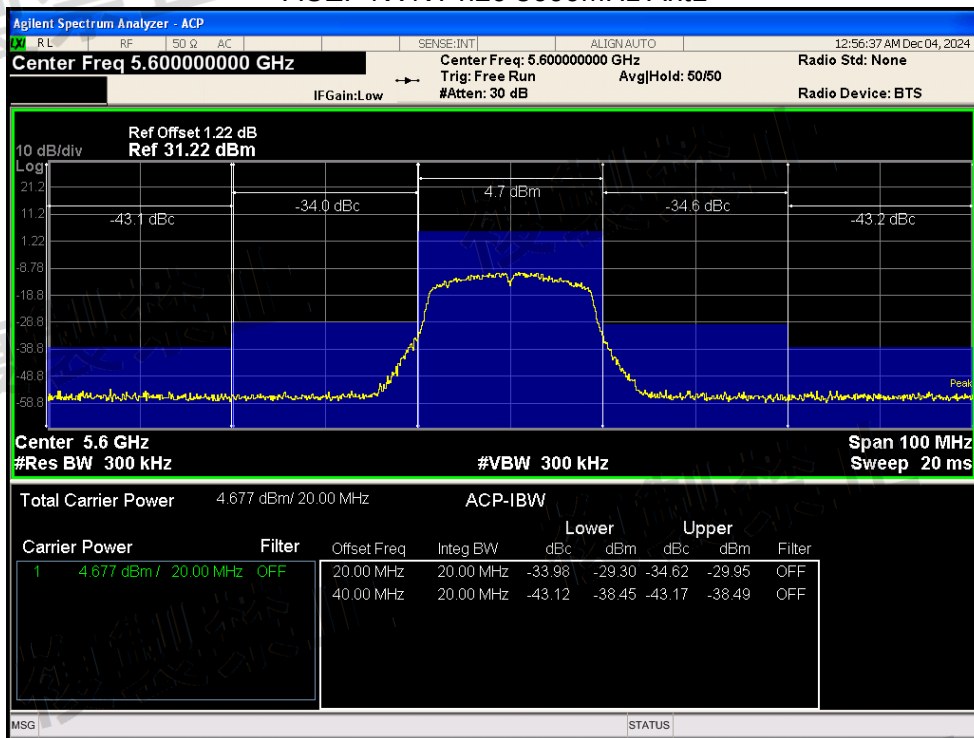
ACEP NVNT a 5700MHz Ant1



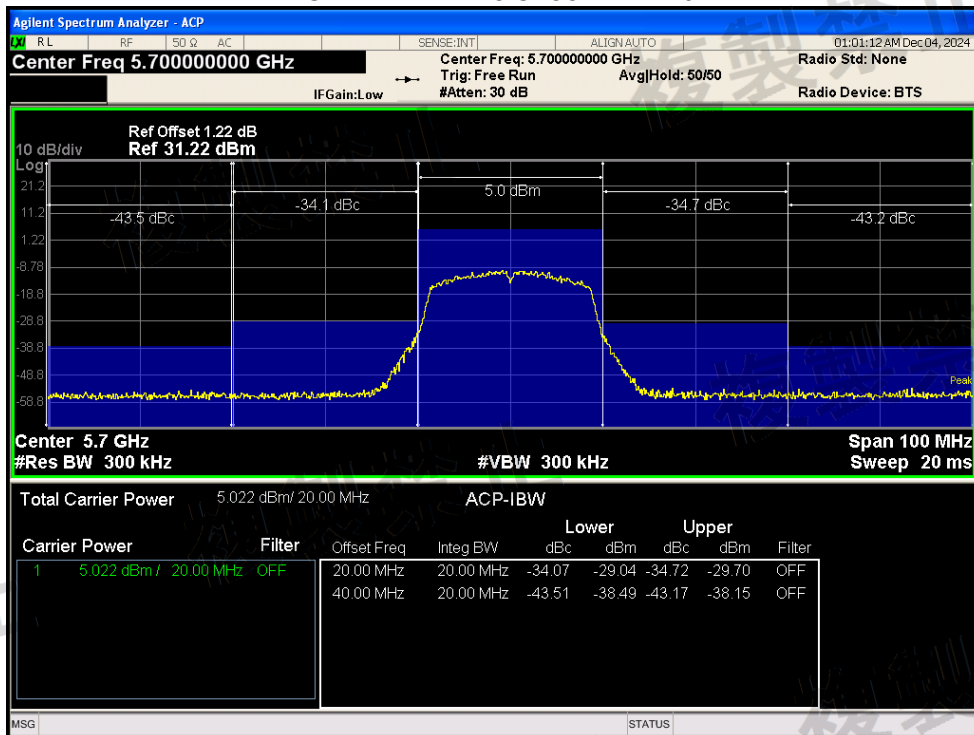
ACEP NVNT n20 5500MHz Ant1



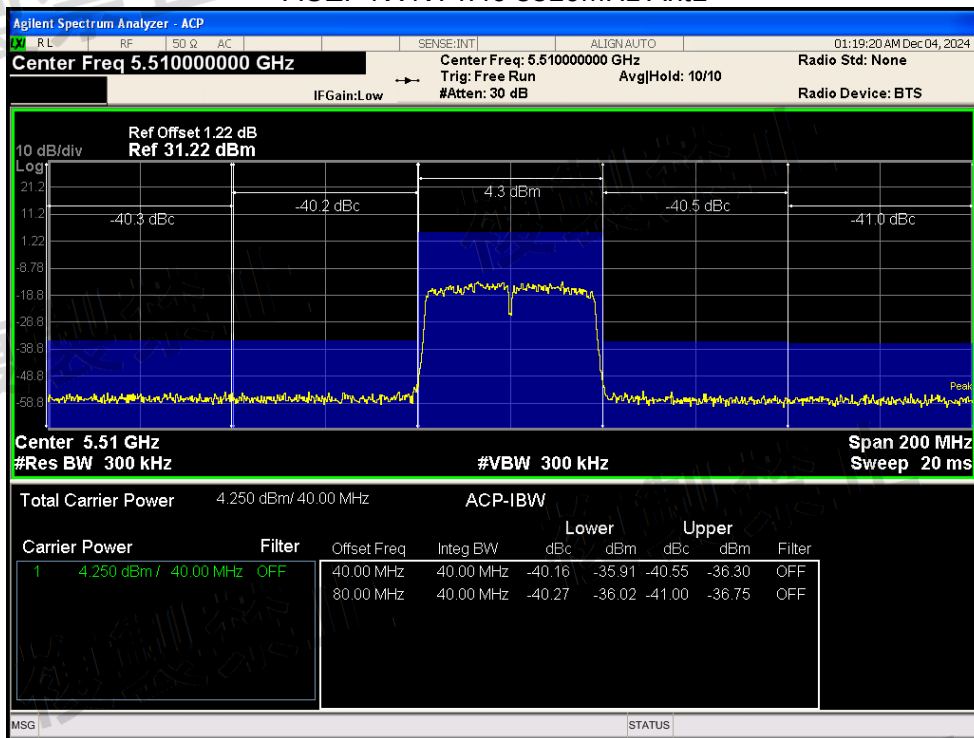
ACEP NVNT n20 5600MHz Ant1



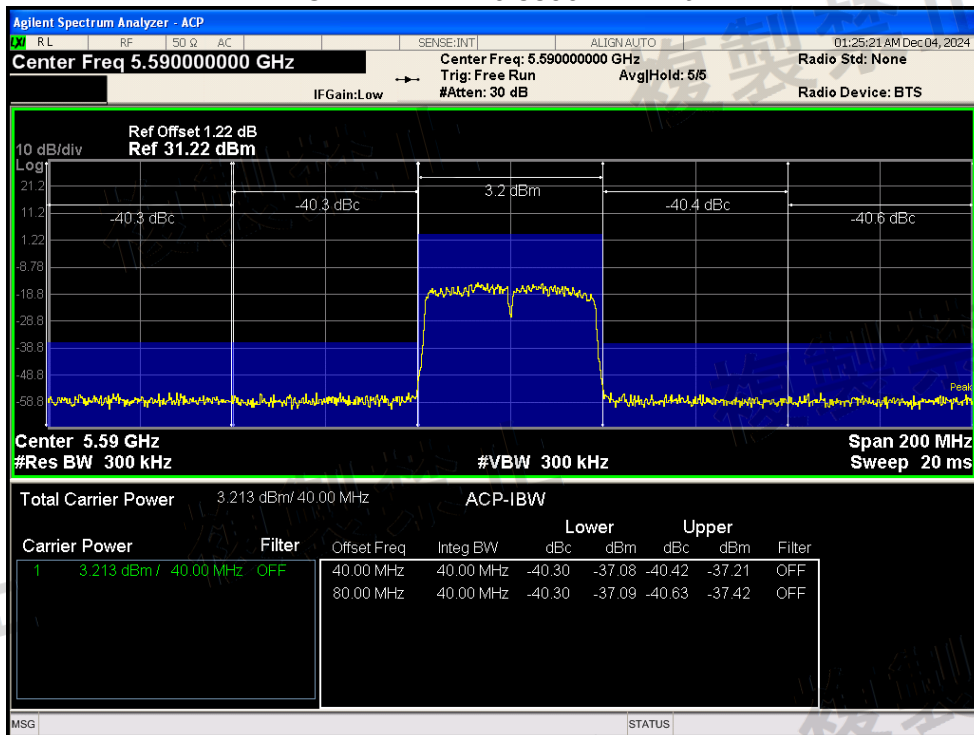
ACEP NVNT n20 5700MHz Ant1



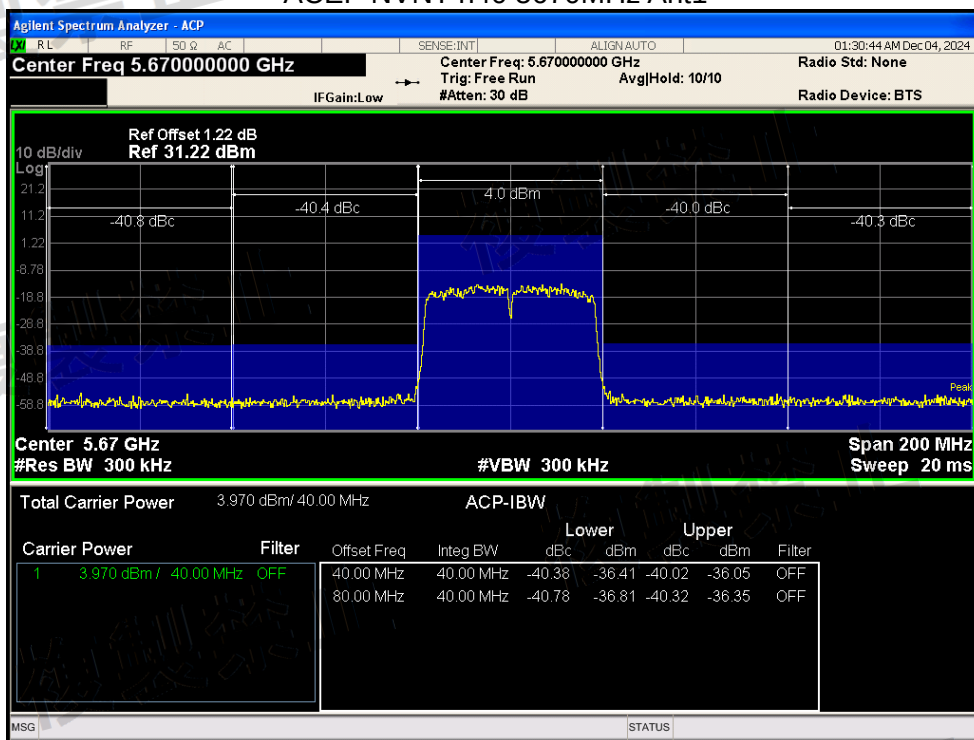
ACEP NVNT n40 5510MHz Ant1



ACEP NVNT n40 5590MHz Ant1



ACEP NVNT n40 5670MHz Ant1



Condition	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	5500	Ant1	5499.94	-10.91	20	Pass
NVNT	5510	Ant1	5509.94	-10.89	20	Pass
NVNT	5590	Ant1	5589.94	-10.73	20	Pass
NVNT	5600	Ant1	5599.94	-10.71	20	Pass
NVNT	5670	Ant1	5669.94	-10.58	20	Pass
NVNT	5700	Ant1	5699.94	-10.53	20	Pass

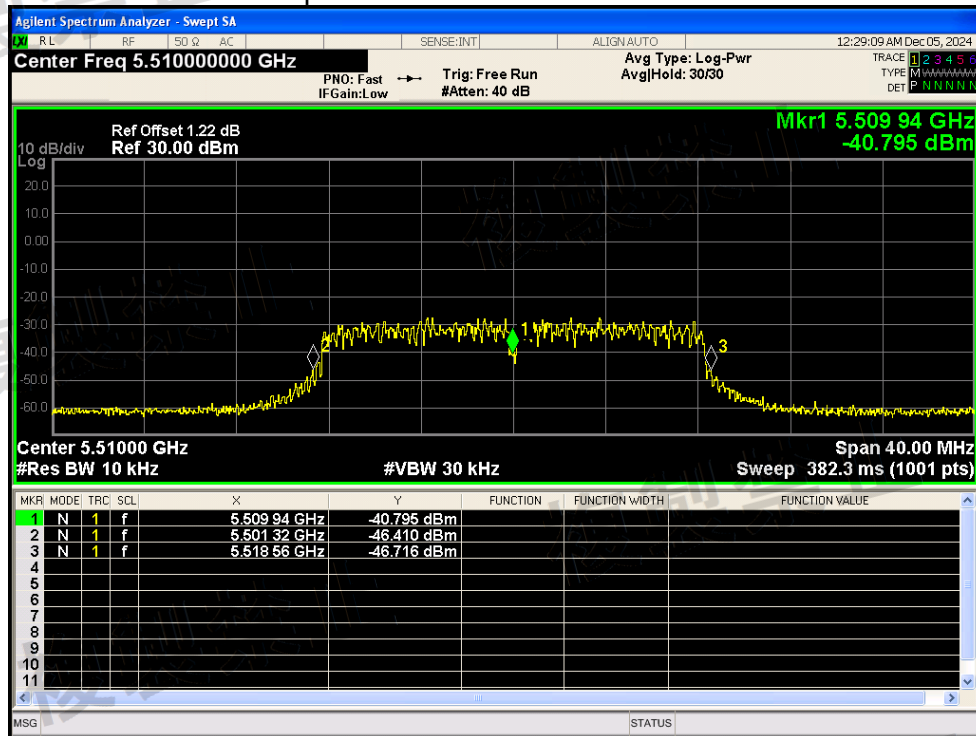
Agilent Spectrum Analyzer - Swept SA

Center Freq 5.50000000 GHz
PNO: Fast IFGain: Low Trig: Free Run #Atten: 40 dB Avg Type: Log-Pwr AvgHold: 30/30

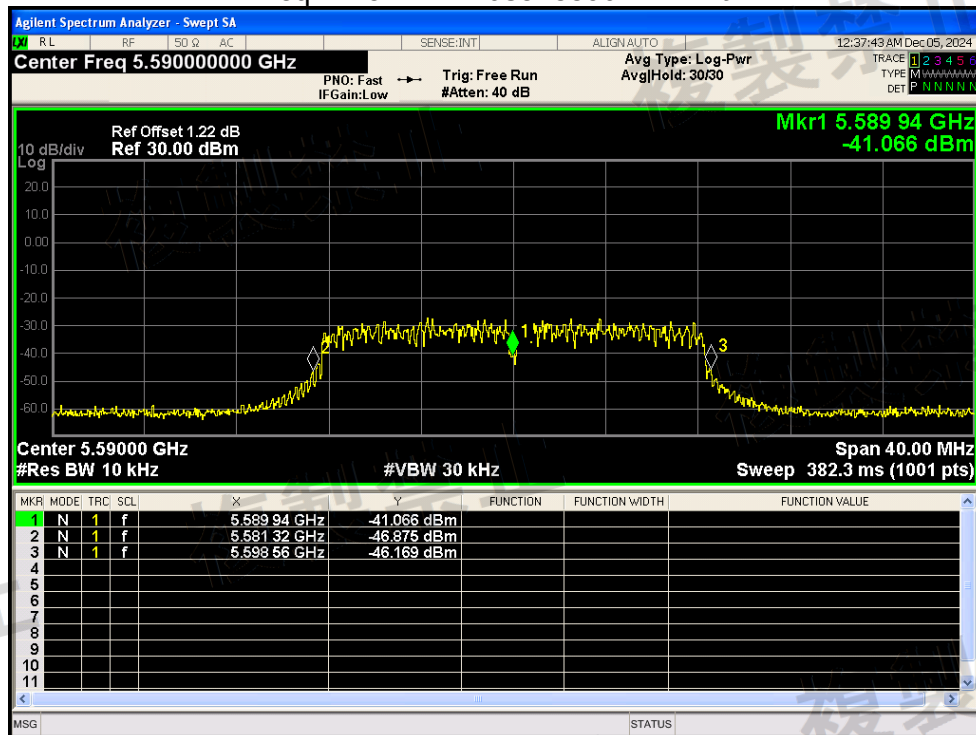
Ref Offset 1.22 dB Ref 30.00 dBm Mkr1 5.499 94 GHz -40.045 dBm

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	5.499 94 GHz	-40.045 dBm			
2	N	1	f	5.491 32 GHz	-45.765 dBm			
3	N	1	f	5.508 56 GHz	-45.744 dBm			

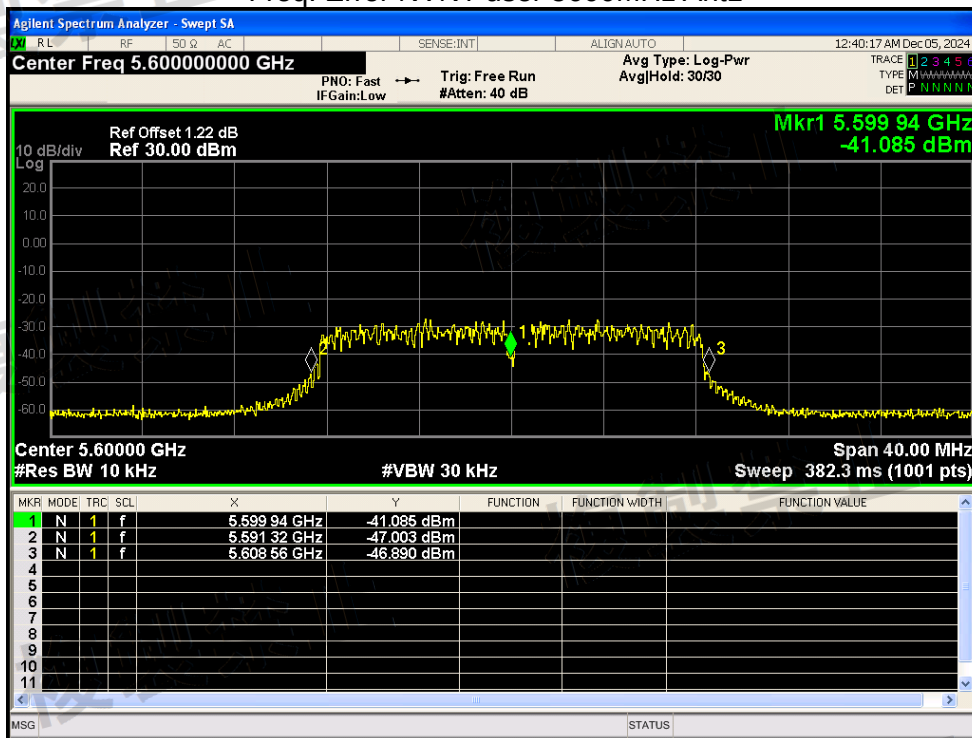
Freq. Error NVNT user 5510MHz Ant1



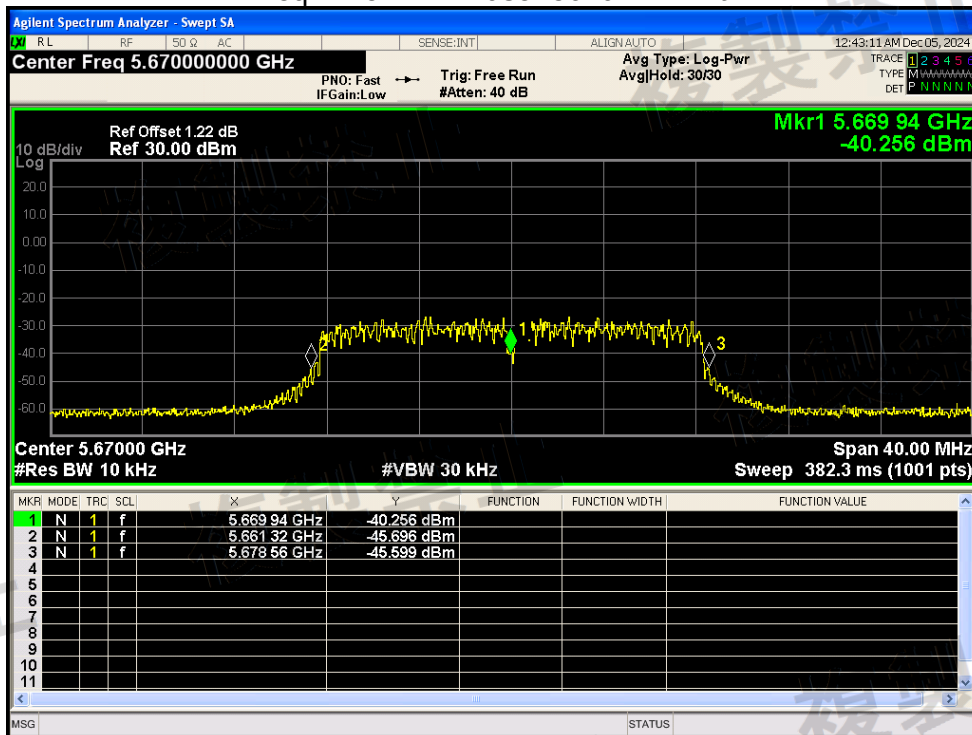
Freq. Error NVNT user 5590MHz Ant1

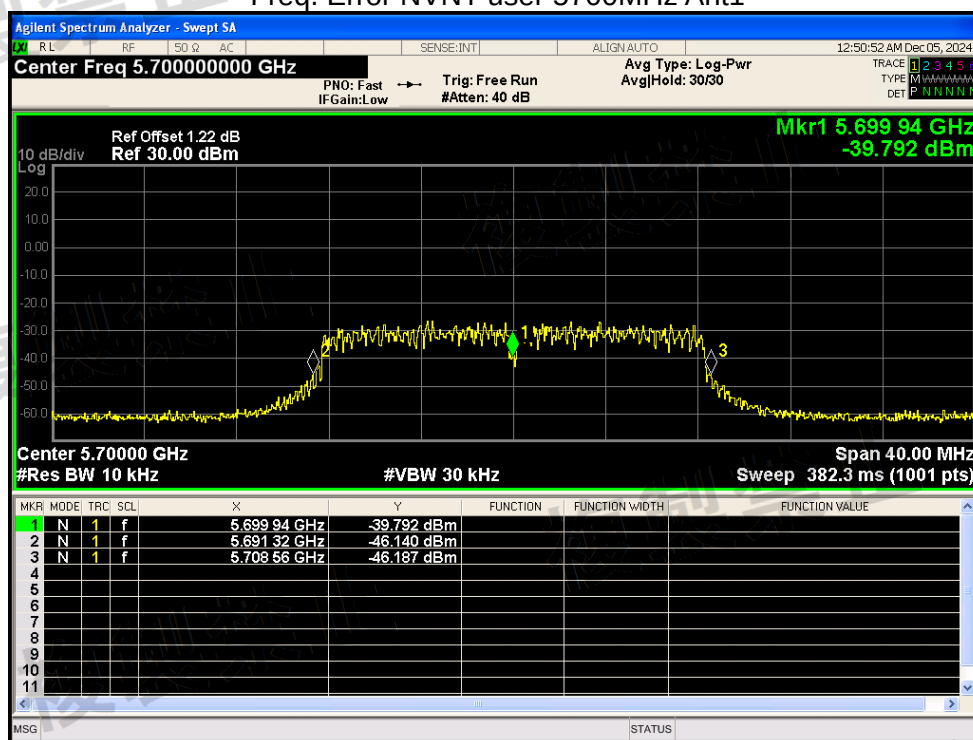


Freq. Error NVNT user 5600MHz Ant1



Freq. Error NVNT user 5670MHz Ant1



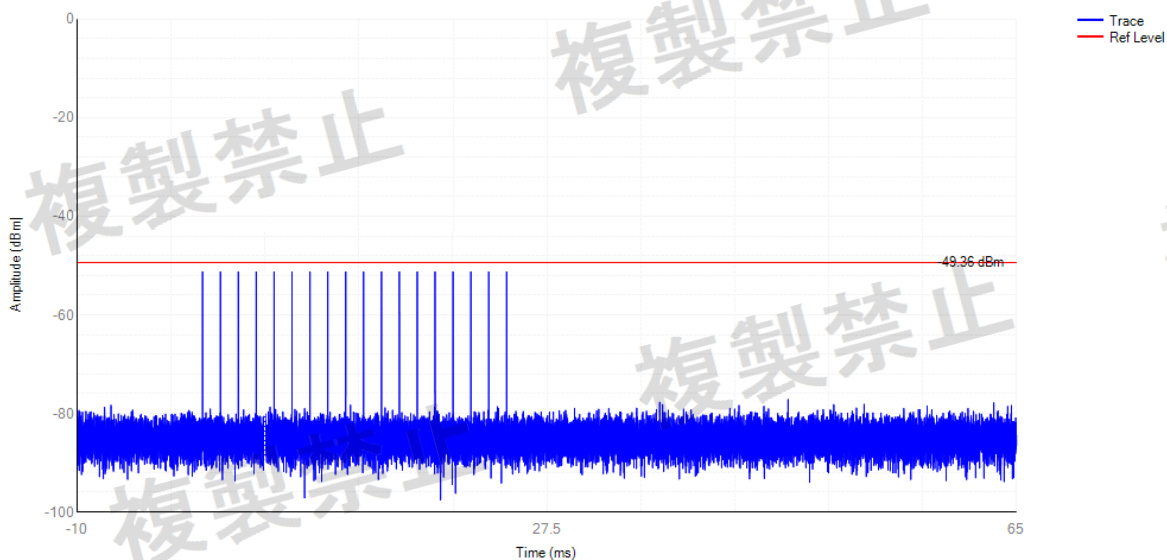


15.2 DFS

15.2.1 CALIBRATION

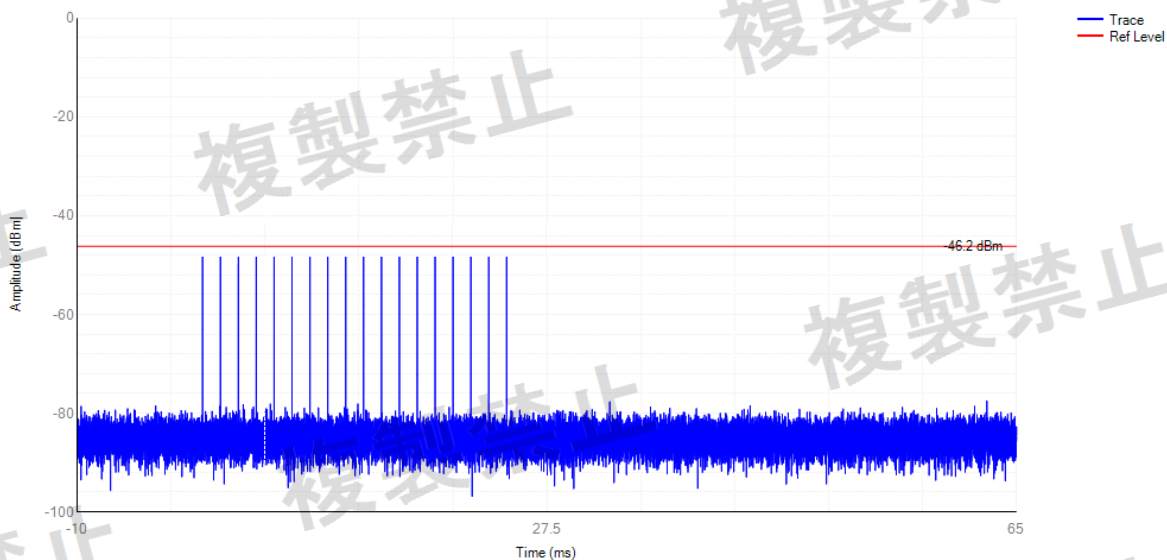
5500MHz a DFS_JAN_T0

Radar Calibration



5510MHz n40 DFS_JAN_T0

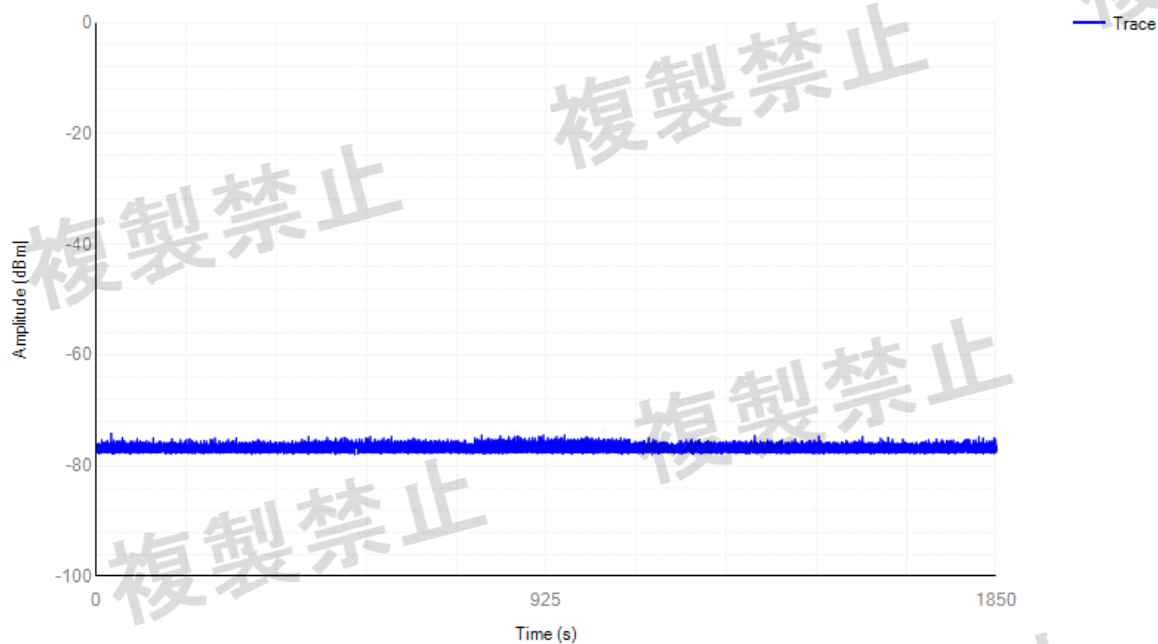
Radar Calibration



15.2.2 NON-OCCUPANCY

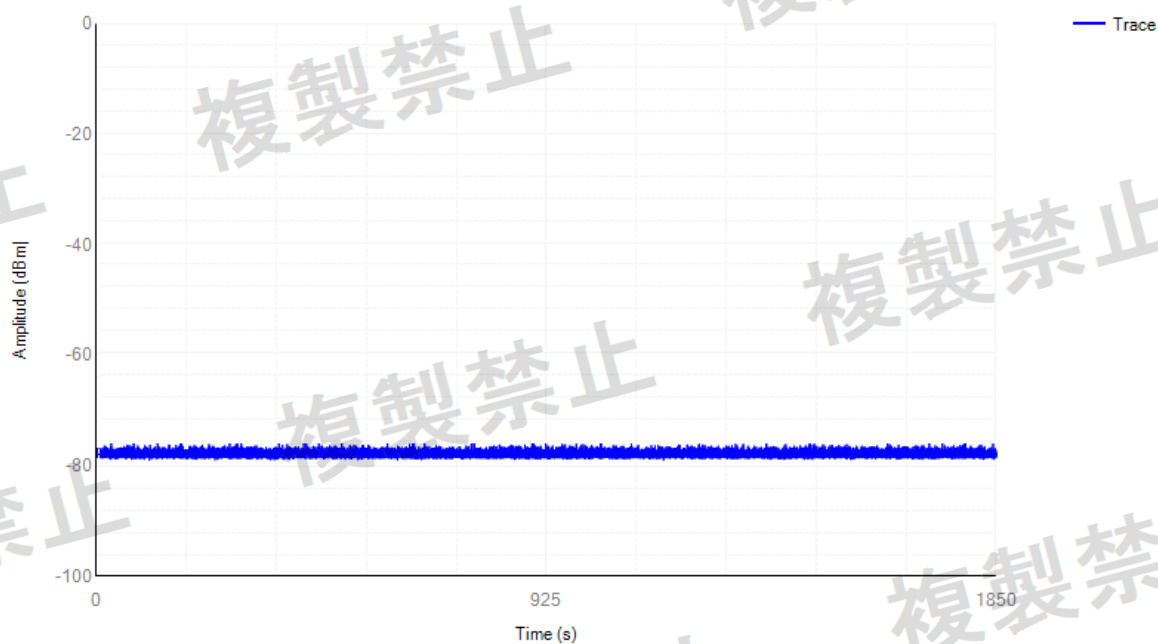
5500MHz a Non-Occupancy

Non-Occupancy period



5510MHz n40 Non-Occupancy

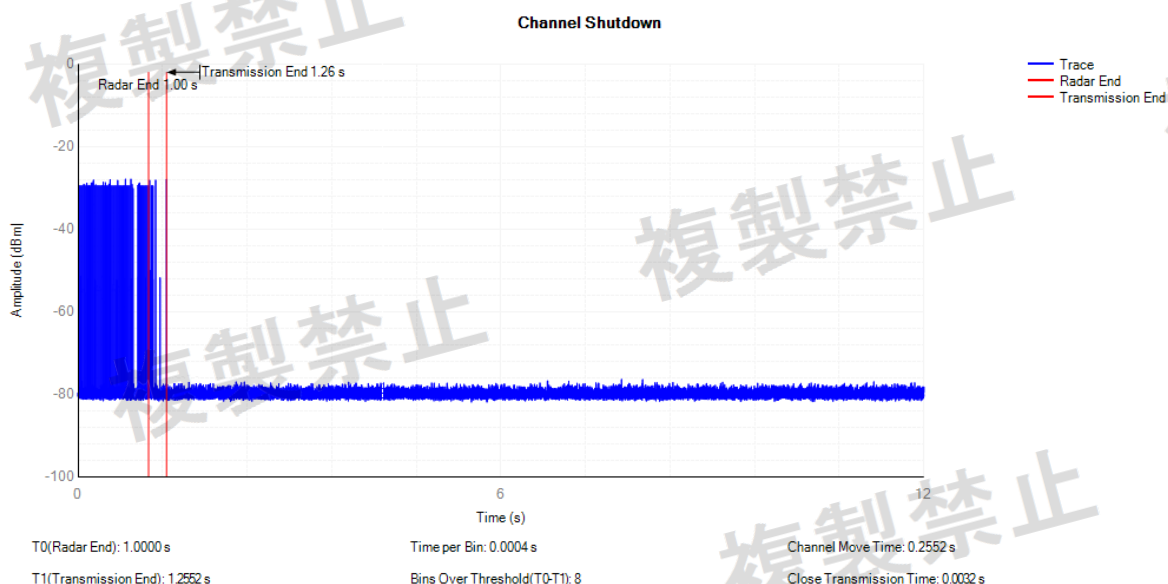
Non-Occupancy period



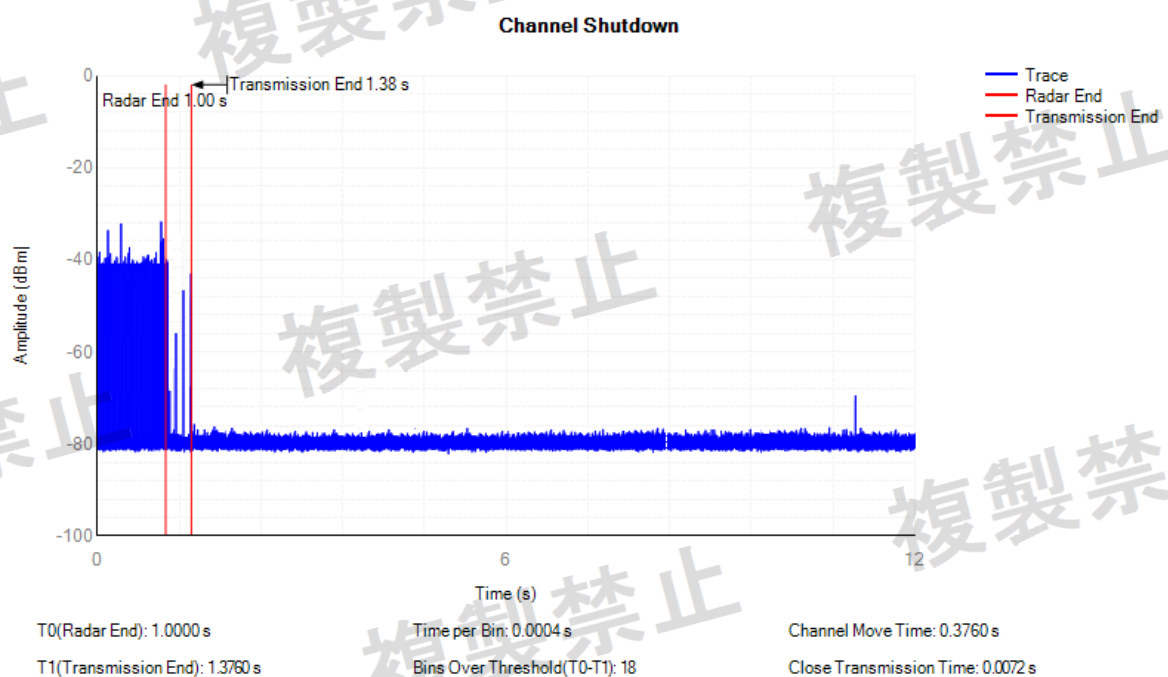
15.2.3 SHUTDOWN TIME

Mode	Frequency (MHz)	Channel Move Time (s)	Limit Channel Move Time (s)	Close Transmission Time (s)	Limit Close Transmission Time (s)	Verdict
a	5500	0.2552	10	0.0032	0.26	Pass
n40	5510	0.376	10	0.0072	0.26	Pass

5500MHz a Shutdown



5510MHz n40 Shutdown



END OF REPORT