

TEST REPORT

Product Name: Compact Hotel Phone
Trade Mark: GRANDSTREAM
Model No.: GHP611W
Add. Model No.: GHP610W
Report Number: 24121715263RFC-2
Specified Categories: Item 19-3 of Article 2 Paragraph 1
Standard: ARIB STD-T71 Version 6.2
MIC Notification No. 88 Appendix No.45
Test Result: PASS
Date of Issue: March 13, 2025

Prepared for:

Grandstream Networks, Inc.
126 Brookline Ave., 3rd Floor Boston, MA 02215, USA

Prepared by:

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UTTR-RF-STDT71-V1.1

Version No.	Date	Description
V1.0	March 13, 2025	Original

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1. GENERAL INFORMATION

1.1 CLIENT INFORMATION

Applicant:	Grandstream Networks, Inc.
Address of Applicant:	126 Brookline Ave., 3rd Floor Boston, MA 02215, USA
Manufacturer:	Grandstream Networks, Inc.
Address of Manufacturer:	126 Brookline Ave., 3rd Floor Boston, MA 02215, USA

1.2 EUT INFORMATION

1.2.1 General Description of EUT

Product Name:	Compact Hotel Phone		
Model No.:	GHP611W		
Add. Model No.:	GHP610W		
Trade Mark:	GRANDSTREAM		
DUT Stage:	Identical Prototype		
EUT Supports Function: (Provided by the customer)	2.4 GHz ISM Band:	IEEE 802.11b/g/n/ax	
	5 GHz U-NII Bands:	5 150 MHz to 5 250 MHz	IEEE 802.11a/n/ac/ax
		5 250 MHz to 5 350 MHz	IEEE 802.11a/n/ac/ax
		5 470 MHz to 5 730 MHz	IEEE 802.11a/n/ac/ax
Software Version:	0.28.2.75 (Provided by the customer)		
Hardware Version:	V5.0 (Provided by the customer)		
Sample Received Date:	December 17, 2024		
Sample Tested Date:	December 17, 2024 to March 3, 2025		
Note: The test data is gathered from a production sample, provided by the manufacturer. The appearance of others models listed in the report is different from main-test model GHP611W, but the circuit and the electronic construction do not change, declared by the manufacturer.			

Remark: The above EUT's information was provided by customer. Please refer to the specifications or user's manual for more detailed description.

1.2.2 Description of Accessories

Adapter(1)	
Model No.:	DCT06W120050JP-D1
Input:	100-240 V~50/60 Hz 200 mA
Output:	12.0 V --- 0.5 A
DC Cable:	1.8 Meter, Unshielded without ferrite

Adapter(2)	
Model No.:	TS-A006-120050J1
Input:	100-240 V~50/60 Hz 0.2 A
Output:	12.0 V --- 0.5 A 6.0W
DC Cable:	1.8 Meter, Unshielded without ferrite

Cable	
Connector:	Phone Cord
Cable Type:	Unshielded without ferrite
Length:	2.5 Meter

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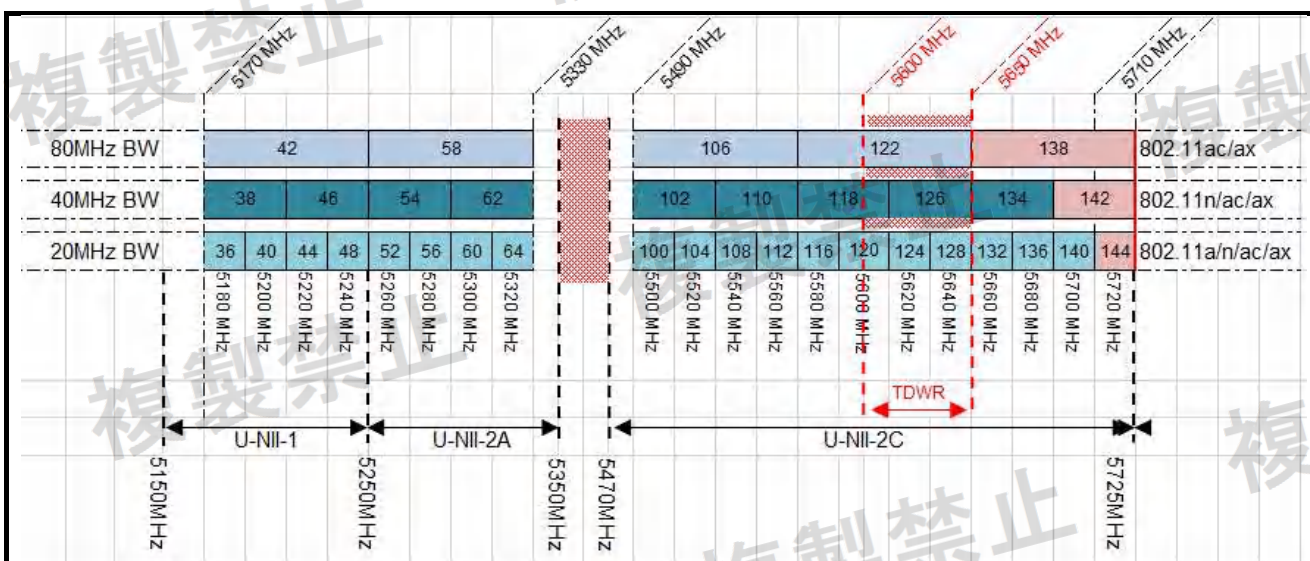
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Others
Charging base

1.3 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD

Frequency Band:	5150 MHz to 5250 MHz	
	5250 MHz to 5350 MHz	
	5470 MHz to 5730 MHz	
Frequency Range:	5180 MHz to 5240 MHz	
	5260 MHz to 5320 MHz	
	5500 MHz to 5720 MHz	
Radio Technique:	IEEE 802.11a/n/ac/ax	
TPC Function:	Not Support	
DFS Operational mode:	Slave without radar Interference detection function	
Modulation Technique:	DSSS, OFDM, OFDMA	
Type of Modulation:	IEEE 802.11a: OFDM(64QAM, 16QAM, QPSK, BPSK)	
	IEEE 802.11n: OFDM(64QAM, 16QAM, QPSK, BPSK)	
	IEEE 802.11ac: OFDM(256QAM, 64QAM, 16QAM, QPSK, BPSK)	
	IEEE 802.11ax:	
	☒ OFDM (1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK) ☒ OFDMA ^{Note 4} (1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK)	
Channel Spacing:	IEEE 802.11a/n-HT20/ac-VHT20/ax-HE20: 20 MHz (Please see NOTE 1)	
	IEEE 802.11n-HT40/ac-VHT40/ax-HE40: 40 MHz (Please see NOTE 1)	
Data Rate:	IEEE 802.11a: Up to 54 Mbps	
	IEEE 802.11n-HT20: Up to MCS7	
	IEEE 802.11n-HT40: Up to MCS7	
	IEEE 802.11ac-VHT20: Up to MCS8	
	IEEE 802.11ac-VHT40: Up to MCS9	
	IEEE 802.11ax-HE20/HE40: Up to MCS11	
RF Output Power:	Please see NOTE 2	
Antenna Type: (Provided by the customer)	Dipole Antenna	
Antenna Gain: (Provided by the customer)	5150 MHz to 5250 MHz	Antenna : 3.5 dBi
	5250 MHz to 5350 MHz	Antenna : 3.5 dBi
	5470 MHz to 5730 MHz	Antenna : 3.5 dBi
Test Voltage:	Please see NOTE 3	
NOTE:		
1. Operation frequency each of channel		



2. The RF output power as below table:

	Rated output power density (mW/MHz)	Conducted RF output power density (mW/MHz)	Radiated RF output power density (mW/MHz)
W52			
IEEE 802.11a	8.6099	3.8459	4.0
IEEE 802.11n-HT20	7.9983	3.5727	3.5
IEEE 802.11n-HT40	4.1020	1.8323	2.0
IEEE 802.11ac-VHT20	7.9433	3.5481	3.5
IEEE 802.11ac-VHT40	2.2699	1.0139	1.0
IEEE 802.11ax-HE20	5.2000	2.3227	2.5
IEEE 802.11ax-HE40	2.1330	0.9528	1.0
W53			
IEEE 802.11a	4.1976	1.8750	2.0
IEEE 802.11n-HT20	3.8282	1.7100	1.5
IEEE 802.11n-HT40	1.8239	0.8147	0.8
IEEE 802.11ac-VHT20	2.3988	1.0715	1.0
IEEE 802.11ac-VHT40	1.7701	0.7907	0.8
IEEE 802.11ax-HE20	2.0893	0.9333	1.0
IEEE 802.11ax-HE40	0.9268	0.4140	0.5
W56			
IEEE 802.11a	5.5463	2.4774	2.0
IEEE 802.11n-HT20	5.2000	2.3227	2.5
IEEE 802.11n-HT40	2.7353	1.2218	1.0
IEEE 802.11ac-VHT20	4.6881	2.0941	2.0
IEEE 802.11ac-VHT40	2.4210	1.0814	1.0
IEEE 802.11ax-HE20	4.4463	1.9861	2.0
IEEE 802.11ax-HE40	2.2751	1.0162	1.0

3. Test voltage as below table:

	Normal Voltage	Low Extreme Voltage	High Extreme Voltage
Operating Voltage (V)	100 V	90 V	110 V

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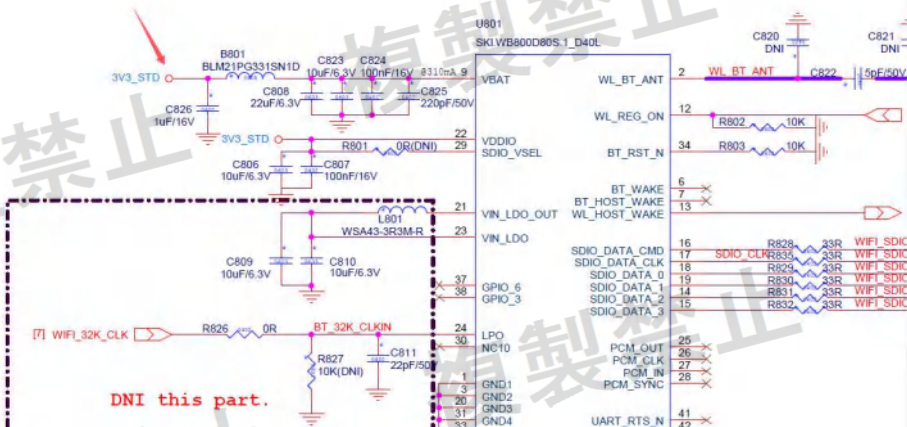
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Measuring Voltage (V)	3.3 V	3.3 V	3.3 V
Tolerance (%)	--	0.00 %	0.00 %
			
When EUT be operated at $\pm 10\%$ from the normal supply voltage, the supply voltage of RF part was varied within $\pm 1\%$. All test cases were done under the normal supply voltage.			

3. For 802.11ax modes, the device not support partial RU mode

1.4 OTHER INFORMATION

None.

1.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product, according to the specifications of the manufacturers. It must comply with the requirements of the following standards:

Item 19-3 of Article 2 Paragraph 1,
ARIB STD-T71 Version 6.2,
MIC Notification No. 88 Appendix No.45

All test items have been performed and recorded as per the above standards

1.6 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested with associated equipment below.

1) Support Equipment

Description	Manufacturer	Model No.	Serial Number	Supplied by
N/A	N/A	N/A	N/A	N/A

2) Support Cable

Cable No.	Description	Connector	Length	Supplied by
1	Antenna Cable	SMA	0.3 Meter	UnionTrust

1.7 TEST LOCATION

All tests were performed at:

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1.8 TEST FACILITY

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L9069

The measuring equipment utilized to perform the tests documented in this report has been calibrated once a year or in accordance with the manufacturer's recommendations, and is traceable under the ISO/IEC 17025 to international or national standards. Equipment has been calibrated by accredited calibration laboratories.

A2LA-Lab Certificate No.: 4312.01

Shenzhen UnionTrust Quality and Technology Co., Ltd. has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

ISED Wireless Device Testing Laboratories

CAB identifier: CN0032

FCC Accredited Lab.

Designation Number: CN1194

Test Firm Registration Number: 259480

1.9 DEVIATION FROM STANDARDS

None.

1.10 ABNORMALITIES FROM STANDARD CONDITIONS

None.

1.11 OTHER INFORMATION REQUESTED BY THE CUSTOMER

None.

1.12 MEASUREMENT UNCERTAINTY

No.	Item	Measurement Uncertainty
1	Radio frequency	$\pm 6.5 \times 10^{-8}$
2	Occupied Channel Bandwidth	$\pm 1.86\%$
3	RF output power, conducted	± 0.9 dB
4	Power Spectral Density	± 0.6 dB
5	Spurious emissions, conducted	± 2.7 dB
6	Supply voltages	± 0.68 %
7	Time	± 0.19 %
8	Adjacent Channel Power	± 1.3 dB
Remark: 95% Confidence Levels, k=2.		

2. TEST SUMMARY

Item	Notice 88 Appendix 45 Reference	ARIB STD-T71 Reference	Report reference	Result
GENERAL PROVISIONS				
Frequency Tolerance	C	3.1.2 (4)	5.3	PASS
Occupied bandwidth	D	3.1.2 (11)	5.4	PASS
Spurious emissions	E	3.1.2 (8)	5.5	PASS
TRANSMITTING EQUIPMENT				
Antenna power	F	3.1.2 (2)	5.6	PASS
SAR	--	--	--	N/A
TRANSMITTING ANTENNA				
Type, configuration, etc. of transmitting antenna	--	--	1.3, 5.2	PASS
Direction pattern of transmitting antenna	--	--	5.2	PASS
RECEIVING EQUIPMENT				
Spurious emissions of receiver	H	3.1.3 (1)	5.10	PASS
Refer to all articles for transmitting antenna	--	--	5.2	PASS
OPERATING FREQUENCY (5150-5350MHZ, 5470-5730MHZ)				
High Frequency/modulation section cannot be opened easily	--	3.1.8 (1)	5.12	PASS
Communication method	--	3.1.1 (1)	1.3	PASS
Modulation method	--	3.1.2 (1)	1.3	PASS
Signal transmission rate	--	3.1.2 (6)	1.3	PASS
Transmission burst length	--	3.1.2 (7)	5.7	PASS
Antenna power	--	3.1.2 (2)	5.6	PASS
Isotropically radiated power	--	3.1.2 (5)	5.6	PASS
Number of carriers	--	3.1.2 (1)	1.3	PASS
Spreading factor	--	--	--	N/A
Out-band leakage power	--	3.1.2 (10)	5.8	PASS
Adjacent Channel Emitted Power	--	3.1.2 (9)	5.9	PASS
Comply with the technical conditions	--	--	--	PASS
Carrier Sense Capability	--	3.1.5	5.11	PASS
Interference Prevention Function	--	--	5.12	PASS
Dynamic frequency selection	--	--	5.13	PASS
Note:				
1) N/A: In this whole report not applicable.				
Disclaimer and Explanations:				
The declared of product specification and data (e.g., antenna gain, RF specification, etc) for EUT presented in the report are provided by the customer, and the customer takes all the responsibilities for the accuracy of product specification.				

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3. EQUIPMENT LIST

Used	Equipment	Manufacturer	Model No.	Serial Number	Cal. date	Cal. Due date
☒	EXA Spectrum Analyzer	KEYSIGHT	N9020A	MY51286807	25-Oct-2024	24-Oct-2025
☒	USB Wideband Power Sensor	KEYSIGHT	U2021XA	MY55430035	25-Oct-2024	24-Oct-2025
☒	MXG X-Series RF Vector Signal Generator	KEYSIGHT	N5182B	MY51350267	25-Oct-2024	24-Oct-2025
☐	Wideband Radio Communication Tester	R&S	CMW500	120932	29-Mar-2024	28-Mar-2025
☐	DC Source	KIKUSUI	PWR400L	LK003024	19-July-2024	18-July-2025
☒	Digital multimeter	FLUKE	15B+	30701460WS 15	29-Oct-2024	28-Oct-2025

Note 1: Calibration Method

- Calibration conducted by the National Institute of Information and Communications Technology [NICT](#) or a designated calibration agency under Article 102-18 paragraph
- Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Law (Law No. 51 of 1992)
- Calibration conducted in foreign countries, which shall be equivalent to the calibration conducted by the [NICT](#) or a designated calibration agency under Article 102-18 paragraph
- 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

The all calibration corresponds to c) described above.

Note 2: Calibration information

Calibration Agency: Guangzhou LiSai Metrology & Test Co., Ltd.

Address: No.8, South Street Shi Ji Institute Guangzhou, Guangdong, China

4. TEST CONFIGURATION

4.1 ENVIRONMENTAL CONDITIONS FOR TESTING

4.1.1 Normal or Extreme Test Conditions

Environment Parameter	Selected Values During Tests		
Test Condition	Ambient		
	Temperature (°C)	Voltage (V)	Relative Humidity (%)
TN/VN	+15 to +35	100	20 to 75
TN/VL		90	
TN/VH		110	
Remark: 1) VN: Normal Voltage; TN: Normal Temperature; 2) VL: Low Extreme Test Voltage; VH: High Extreme Test Voltage. 3) The operating voltage range of this device declared by client is 90V to 110 V.			

4.1.2 Record of Normal Environment and Test Sample

Test Item	Temp. (°C)	Relative Humidity (%)	Pressure (kPa)	Sample No.	Tested by
Frequency Tolerance	24.5	51.2	100.2	S202412174876-ZJA02/4	Allen Zhou
Occupied bandwidth & Spreading bandwidth					
Spurious emissions					
Antenna power					
Spurious emissions of receiver					
Out-band leakage power					
Adjacent Channel power tolerance					

4.2 TEST CHANNELS

Mode	Tx/Rx Frequency	Test RF Channel Lists	Middle(M)	Highest(H)
		Lowest(L)		
IEEE 802.11a IEEE 802.11n-HT20 IEEE 802.11ac-VHT20 IEEE 802.11ax-HE20	5150 MHz to 5250 MHz	Channel 36	Channel 44	Channel 48
		5180 MHz	5220 MHz	5240 MHz
	5250 MHz to 5350 MHz	Channel 52	Channel 60	Channel 64
		5260 MHz	5300 MHz	5320 MHz
	5470 MHz to 5730 MHz	Channel 100	Channel 120	Channel 144
		5500 MHz	5600 MHz	5720 MHz
IEEE 802.11n-HT40 IEEE 802.11ac-VHT40 IEEE 802.11ax-HE40	5150 MHz to 5250 MHz	Channel 38	--	Channel 46
		5190 MHz	--	5230 MHz
	5250 MHz to 5350 MHz	Channel 54	--	Channel 62
		5270 MHz	--	5310 MHz
	5470 MHz to 5730 MHz	Channel 102	Channel 110	Channel 142
		5510 MHz	5550 MHz	5710 MHz

4.3 EUT TEST STATUS

Mode	Tx/Rx Function	Description
IEEE 802.11 a/n/ac/ax	1Tx/1Rx	Keep the EUT in continuously transmitting or receiving with modulation and data rates test single. Keep the equipment in normal operation and achieve a certain throughput.

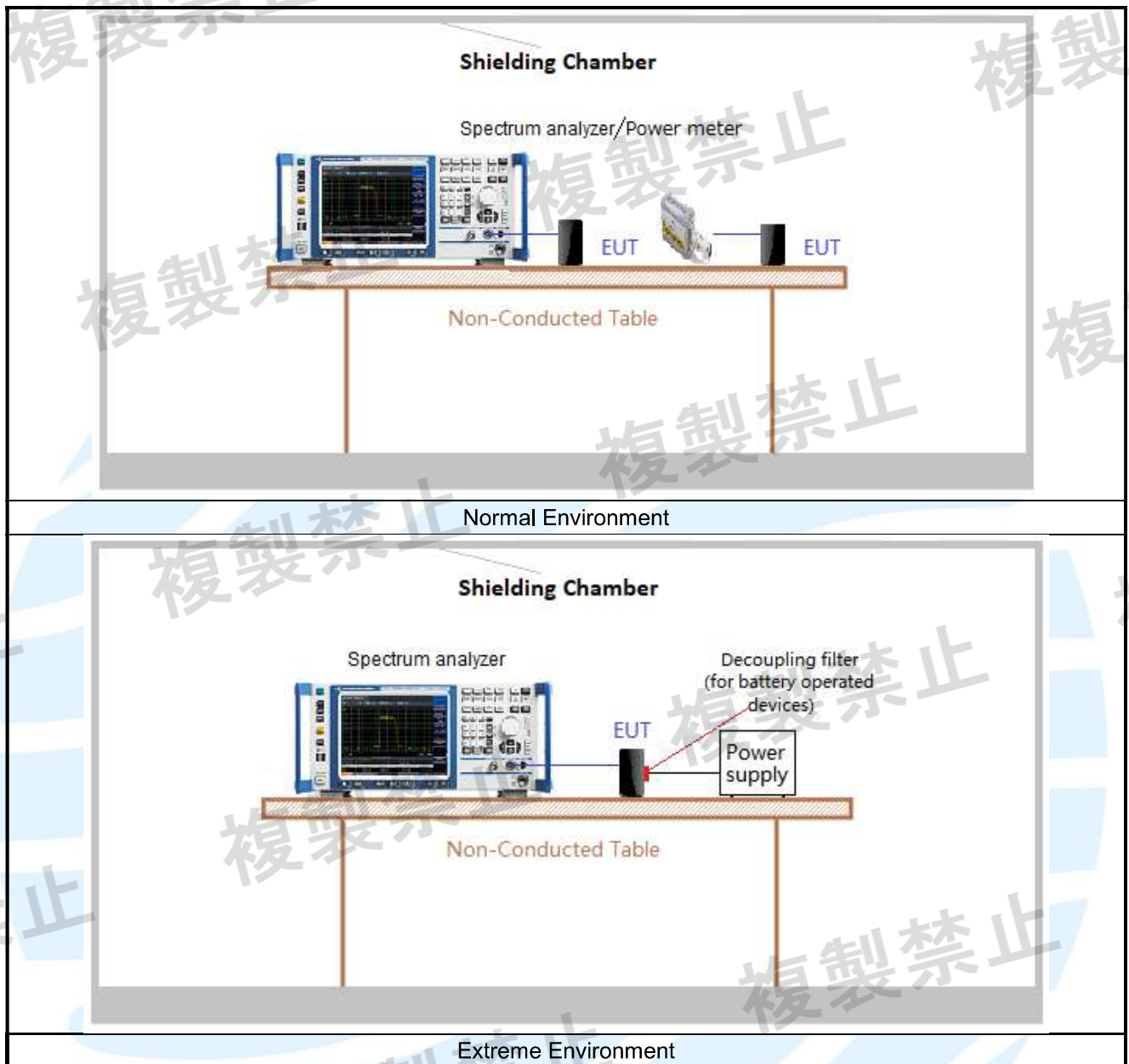
Power Setting (Provided by the customer)			
	Band 1	Band 2	Band 3
IEEE 802.11a	17	15	17
IEEE 802.11n-HT20	17	15	17
IEEE 802.11n-HT40	17	15	17
IEEE 802.11ac-VHT20	17	15	17
IEEE 802.11ac-VHT40	17	15	17
IEEE 802.11ax-HE20	17	15	17
IEEE 802.11ax-HE40	17	15	17

Test Software (Provided by the customer)
Command.

4.4 WORST-CASE DATA RATES

Mode	Worst-case data rates
IEEE 802.11a	6 Mbps
IEEE 802.11n-HT20 IEEE 802.11ac-VHT20 IEEE 802.11ax-HE20	MCS0
IEEE 802.11n-HT40 IEEE 802.11ac-VHT40 IEEE 802.11ax-HE40	MCS0

4.5 TEST SETUP



5. RADIO TECHNICAL REQUIREMENTS SPECIFICATION

5.1 REFERENCE DOCUMENTS FOR TESTING

Item 19-3 of Article 2 Paragraph 1: Low power data communications system in the 5.2, 5.3, 5.6GHz band

ARIB STD-T71 Version 6.2: Broadband Mobile Access Communication System (CSMA)

MIC Notification No. 88 Appendix No.45

5.2 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 installed inside the EUT and no consideration of replacement. The best-case gain of the antenna is 3.5 dBi, for more antenna details, refer to the antenna report.



ANT

Result: An antenna connector is available, all relevant tests will be carried out conducted.



5.3 FREQUENCY TOLERANCE

5.3.1 Limit

Tolerance of frequency shall be +/- 20ppm.

5.3.2 Test Setup

Refer to section 4.5 for details.

5.3.3 Instruments Used

Refer to section 3 for details

5.3.4 Test Procedures

Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

CW tone method

Use the following spectrum analyzer settings:

1. Center Frequency = test frequency
2. RBW = 10kHz, VBW = 10kHz;
3. Sweep = auto;
4. Detector function = peak
5. Trace = max hold
6. The frequency tolerance test case is directly measured using spectrum analyzer. Then the frequency error formula is $(f-f_c)/f_c \times 10^6$ ppm and the limit is less than ± 20 ppm.

10dB down method

1. Center Frequency = test frequency
2. RBW = 100kHz, VBW = 100kHz;
3. Sweep = auto;
4. Detector function = peak
5. Trace = max hold
6. Display line level = Max. level – 10dB to place markers, highest (fH) and lowest (fL) frequency.
7. Determine measuring frequency $f = (fH - fL) / 2$.
8. The frequency tolerance test case is directly measured using spectrum analyzer. Then the frequency error formula is $(f-f_c)/f_c \times 10^6$ ppm and the limit is less than ± 20 ppm.

5.3.5 Test Result

Please refer to Appendix

5.4 OCCUPIED BANDWIDTH (99% BW)

5.4.1 Limit

Item	Limits
Occupied Bandwidth	For BW = 20MHz: $\leq 20\text{MHz}$
	For BW = 40MHz: $\leq 40\text{MHz}$
	For BW = 80MHz: $\leq 80\text{MHz}$

5.4.2 Test Setup

Refer to section 4.5 for details.

5.4.3 Instruments Used

Refer to section 3 for details

5.4.4 Test Procedures

Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

Use the following spectrum analyzer settings:

1. Center Frequency = test frequency
2. Span = 2 to 3.5 times BW
3. RBW = 300kHz, VBW = 300kHz;
4. Sweep = auto;
5. Trace = max hold
6. Use the 99 % bandwidth function of the spectrum analyser to measure the Occupied Channel Bandwidth of the UUT. This value shall be recorded.

5.4.5 Test Result

Please refer to Appendix

5.5 SPURIOUS EMISSIONS

5.5.1 Limit

* Attachment 1 (Unwanted Emission Strength)

20MHz system		W52	
OBW : 18MHz or less	OBW : 18 - 20 MHz	40MHz system	80MHz system
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 - 5,251 MHz : $10^{-1-(f-9)/10}$ mW/MHz	5,250 - 5,251 MHz : $10^{-1-(f-9)/10}$ mW/MHz	5,250 - 5,251 MHz : $10^{-1-(f-9)/10}$ mW/MHz	5,250 - 5,251 MHz : $10^{-1-(f-9)/10}$ mW/MHz
5,251 - 5,260 MHz : $10^{-1-(f-9)/10}$ mW/MHz	5,251 - 5,260 MHz : $10^{-1-(f-9)/10}$ mW/MHz	5,251 - 5,260 MHz : $10^{-1-(f-9)/10}$ mW/MHz	5,251 - 5,260 MHz : $10^{-1-(f-9)/10}$ mW/MHz
5,260 - 5,266.7 MHz : $10^{-1-(f-9)/10}$ mW/MHz	5,260 - 5,266.7 MHz : $10^{-1-(f-9)/10}$ mW/MHz	5,270 - 5,278.4 MHz : $10^{-1-(f-9)/10}$ mW/MHz	5,290 - 5,296.7 MHz : $10^{-1-(f-9)/10}$ 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)

20MHz system		W53	
OBW : 18MHz or less	OBW : 18 - 20 MHz	40MHz system	80MHz system
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 : $10^{-1-(f-9)/10}$ mW/MHz	5,233.3 - 5,240 MHz : $10^{-1-(f-9)/10}$ mW/MHz	5,221.6 - 5,230 MHz : $10^{-1-(f-9)/10}$ mW/MHz	5,203.3 - 5,210 MHz : $10^{-1-(f-9)/10}$ mW/MHz
5,240 - 5,249 MHz : $10^{-1-(f-9)/10}$ mW/MHz	5,240 - 5,249 MHz : $10^{-1-(f-9)/10}$ mW/MHz	5,230 - 5,249 MHz : $10^{-1-(f-9)/10}$ mW/MHz	5,210 - 5,249 MHz : $10^{-1-(f-9)/10}$ mW/MHz
5,249 - 5,250 MHz : $10^{-1-(f-9)/10}$ mW/MHz	5,249 - 5,250 MHz : $10^{-1-(f-9)/10}$ mW/MHz	5,249 - 5,250 MHz : $10^{-1-(f-9)/10}$ mW/MHz	5,249 - 5,250 MHz : $10^{-1-(f-9)/10}$ mW/MHz
5,350 MHz or more : 2.5 μ W/MHz	5,249 - 5,250 MHz : $10^{-1-(f-9)/10}$ mW/MHz	5,350 - 5,356.4 MHz : 15 μ W/MHz	5,350 - 5,376.8 MHz : 15 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)

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

W52 + W53	W56
160MHz system	
5,099.6 MHz or less : 2.5 μ W/MHz	5,419.6 MHz or less : 12.5 μ W/MHz
5,099.6 - 5,150 MHz : 15 μ W/MHz	5,419.6 - 5,470 MHz : 50 μ W/MHz
5,350 - 5,400.4 MHz : 15 μ W/MHz	5,725 MHz or more : 12.5 μ W/MHz
5,400.4 MHz or more : 2.5 μ W/MHz	

* A rated value is defined by the E.I.R.P. .

* Measurement range: 30MHz to 26GHz

5.21GHz & (5.53GHz, 5.61GHz or 5.69GHz)	5.29GHz & (5.53GHz, 5.61GHz or 5.69GHz)	5.53GHz & 5.69GHz
80MHz + 80MHz system (Not adjacent radio)		
5,134.8 MHz or less : 2.5 μ W/MHz	5,214.8 MHz or less : 2.5 μ W/MHz	5,419.6 MHz or less : 12.5 μ W/MHz
5,134.8 - 5,150 MHz : 162.5 μ W/MHz	5,214.8 - 5,249 MHz : $10^{-1-(f-9)/10}$ mW/MHz	5,419.6 - 5,470 MHz : 50 μ W/MHz
5,250 - 5,251 MHz : $10^{-1-(f-9)/10}$ mW/MHz	5,249 - 5,250 MHz : $10^{-1-(f-9)/10}$ mW/MHz	
5,251 - 5,285.2 MHz : $10^{-1-(f-9)/10}$ mW/MHz	5,350 - 5,365.2 MHz : 15 μ W/MHz	5,770 MHz or more : 15 μ W/MHz
5,285.2 - 5,370 MHz : 2.5 μ W/MHz	5,365.2 - 5,410 MHz : 2.5 μ W/MHz	
5,370 - 5,454.8 MHz : 2.5 μ W/MHz (When used simultaneously with a 5.2GHz band high-power radio station : 12.5 μ W/MHz)	5,410 - 5,454.8 MHz : 2.5 μ W/MHz	
5,454.8 - 5,470 MHz : 15 μ W/MHz (When used simultaneously with a 5.2GHz band high-power radio station : 50 μ W/MHz)	5,454.8 - 5,470 MHz : 15 μ W/MHz	
5,730 MHz or more : 15 μ W/MHz (*When used 5690MHz)	5,730 MHz or more : 15 μ W/MHz (*When used 5690MHz)	
5,770 MHz or more : 15 μ W/MHz	5,770 MHz or more : 15 μ W/MHz	
f = MHz, Difference from 5210 (MHz)	f = MHz, Difference from 5290 (MHz)	

5.5.2 Test Setup

Refer to section 4.5 for details.

5.5.3 Instruments Used

Refer to section 3 for details

5.5.4 Test Procedures

Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

Use the following spectrum analyzer settings:

1. Set RBW = 1 MHz. VBW = 3 MHz.
2. Detector = Avg.
3. Sweep = auto couple.
4. Trace Mode = max hold.
5. Allow trace to fully stabilize.
6. Use the peak marker function to determine the maximum amplitude level.

5.5.5 Test Result

Please refer to Appendix

5.6 ANTENNA POWER

5.6.1 Limit

Occupied Bandwidth	Antenna power (mW/MHz)			EIRP (mW/MHz)					
				With TPC			Without TPC		
	W52	W53	W56	W52	W53	W56	W52	W53	W56
For BW = 20MHz	10	10	10	10	10	50	10	5	25
For BW = 40MHz	5	5	5	5	5	25	5	2.5	12.5
For BW = 80MHz	2.5	2.5	2.5	2.5	2.5	12.5	2.5	1.25	6.25

W52/W53: tolerance of antenna power shall be +20% (upper value) and -80% (lower value).

W56: tolerance of antenna power shall be +50% (upper value) and -50% (lower value).

5.6.2 Test Setup

Refer to section 4.5 for details.

5.6.3 Instruments Used

Refer to section 3 for details

5.6.4 Test Procedures

1. A power meter is connected on the IF output port of the spectrum analyzer.
2. Adjust the spectrum analyzer to have the center frequency the same with the measured carrier.
RBW=VBW=1MHz, detector mode is positive peak. Turn off the averaging function and use zero span.
3. The calibrating signal power shall be reduced to 0 dBm and it shall be verified that the power meter reading also reduces by 10 dB.
4. Connect the equipment to be measured. Using the following settings of the spectrum analyzer in combination with "max hold" function, find the frequency of highest power output in the power envelope: center frequency equal to operating frequency; RBW & VBW: 1 MHz; detector mode: positive peak; averaging: off; span: 3 times the spectrum width; amplitude: adjust for middle of the instrument's range. The frequency found shall be recorded.
5. Set the center frequency of the spectrum analyzer to the found frequency and switch to zero span. The power meter indicates the measured power density "E".
6. Remove the EUT and put the replacing standard signal generator (SSG). Set the standard signal generator (SSG) at same frequency and transmit on, then set SSG output power at Pt to give the equivalent output level of "E".
7. Calculate antenna power density by the formula below $PD = Pt + 10 \cdot \log(1/x)$.
x: The duty cycle of the EUT in continuously transmitting mode
Pt: Output power of the SSG
8. Antenna Power Error is definition that actual measure antenna power tolerance between (W52/53: + 20% to - 80%) and (W56: + 50% to - 50%) power range that base on manufacturer declare the conducted power density.

5.6.5 Test Result

Please refer to Appendix

5.7 TRANSMISSION BURST LENGTH

5.7.1 Limit

8ms or less

5.7.2 Test Setup

Refer to section 4.5 for details.

5.7.3 Instruments Used

Refer to section 3 for details

5.7.4 Test Procedures

Table No.45 related to Article 2 Clause 1 item 19-3 of Ordinance Concerning Technical Regulations Conformity Certification etc. of Specified Radio Equipment.

5.7.5 Test Result

Please refer to Appendix

5.8 OUT-BAND LEAKAGE POWER

5.8.1 Limit

* Attachment 1 (Unwanted Emission Strength)

20MHz system		W52	
OBW : 18MHz or less	OBW : 18 - 20 MHz	40MHz system	80MHz system
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 - 5,251 MHz : $10^{-1-(f-5240)/10}$ mW/MHz	5,250 - 5,251 MHz : $10^{-1-(f-5240)/10}$ mW/MHz	5,250 - 5,251 MHz : $10^{-1-(f-5240)/10}$ mW/MHz	5,250 - 5,251 MHz : $10^{-1-(f-5240)/10}$ mW/MHz
5,251 - 5,260 MHz : $10^{-1-(f-5240)/10}$ mW/MHz	5,251 - 5,260 MHz : $10^{-1-(f-5240)/10}$ mW/MHz	5,251 - 5,260 MHz : $10^{-1-(f-5240)/10}$ mW/MHz	5,251 - 5,260 MHz : $10^{-1-(f-5240)/10}$ mW/MHz
5,260 - 5,266.7 MHz : $10^{-1-(f-5240)/10}$ mW/MHz	5,260 - 5,266.7 MHz : $10^{-1-(f-5240)/10}$ mW/MHz	5,270 - 5,278.4 MHz : $10^{-1-(f-5240)/10}$ mW/MHz	5,290 - 5,296.7 MHz : $10^{-1-(f-5240)/10}$ 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)

20MHz system		W53	
OBW : 18MHz or less	OBW : 18 - 20 MHz	40MHz system	80MHz system
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 : $10^{-1-(f-5240)/10}$ mW/MHz	5,233.3 - 5,240 MHz : $10^{-1-(f-5240)/10}$ mW/MHz	5,221.6 - 5,230 MHz : $10^{-1-(f-5240)/10}$ mW/MHz	5,203.3 - 5,210 MHz : $10^{-1-(f-5240)/10}$ mW/MHz
5,240 - 5,249 MHz : $10^{-1-(f-5240)/10}$ mW/MHz	5,240 - 5,249 MHz : $10^{-1-(f-5240)/10}$ mW/MHz	5,230 - 5,249 MHz : $10^{-1-(f-5240)/10}$ mW/MHz	5,210 - 5,249 MHz : $10^{-1-(f-5240)/10}$ mW/MHz
5,249 - 5,250 MHz : $10^{-1-(f-5240)/10}$ mW/MHz	5,249 - 5,250 MHz : $10^{-1-(f-5240)/10}$ mW/MHz	5,249 - 5,250 MHz : $10^{-1-(f-5240)/10}$ mW/MHz	5,249 - 5,250 MHz : $10^{-1-(f-5240)/10}$ mW/MHz
5,350 MHz or more : 2.5 μ W/MHz	5,350 MHz or more : 2.5 μ W/MHz	5,350 - 5,356.4 MHz : 15 μ W/MHz	5,350 - 5,376.8 MHz : 15 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)

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

W52 + W53	W56
160MHz system	
5,099.6 MHz or less : 2.5 μ W/MHz	5,419.6 MHz or less : 12.5 μ W/MHz
5,099.6 - 5,150 MHz : 15 μ W/MHz	5,419.6 - 5,470 MHz : 50 μ W/MHz
5,350 - 5,400.4 MHz : 15 μ W/MHz	5,725 MHz or more : 12.5 μ W/MHz
5,400.4 MHz or more : 2.5 μ W/MHz	

* A rated value is defined by the E.I.R.P. .

* Measurement range: 30MHz to 26GHz

5.21GHz & (5.53GHz, 5.61GHz or 5.69GHz)	5.29GHz & (5.53GHz, 5.61GHz or 5.69GHz)	5.53GHz & 5.69GHz
80MHz + 80MHz system (Not adjacent radio)		
5,134.8 MHz or less : 2.5 μ W/MHz	5,214.8 MHz or less : 2.5 μ W/MHz	5,419.6 MHz or less : 12.5 μ W/MHz
5,134.8 - 5,150 MHz : 162.5 μ W/MHz	5,214.8 - 5,249 MHz : $10^{-1-(f-5240)/10}$ mW/MHz	5,419.6 - 5,470 MHz : 50 μ W/MHz
5,250 - 5,251 MHz : $10^{-1-(f-5240)/10}$ mW/MHz	5,249 - 5,250 MHz : $10^{-1-(f-5240)/10}$ mW/MHz	
5,251 - 5,285.2 MHz : $10^{-1-(f-5240)/10}$ mW/MHz	5,350 - 5,365.2 MHz : 15 μ W/MHz	5,770 MHz or more : 15 μ W/MHz
5,285.2 - 5,370 MHz : 2.5 μ W/MHz	5,365.2 - 5,410 MHz : 2.5 μ W/MHz	
5,370 - 5,454.8 MHz : 2.5 μ W/MHz (When used simultaneously with a 5.2GHz band high-power radio station : 12.5 μ W/MHz)	5,410 - 5,454.8 MHz : 2.5 μ W/MHz	
5,454.8 - 5,470 MHz : 15 μ W/MHz (When used simultaneously with a 5.2GHz band high-power radio station : 50 μ W/MHz)	5,454.8 - 5,470 MHz : 15 μ W/MHz	
5,730 MHz or more : 15 μ W/MHz (*When used 5690MHz)	5,730 MHz or more : 15 μ W/MHz (*When used 5690MHz)	
5,770 MHz or more : 15 μ W/MHz	5,770 MHz or more : 15 μ W/MHz	
f = MHz, Difference from 5210 (MHz)	f = MHz, Difference from 5290 (MHz)	

5.8.2 Test Setup

Refer to section 4.5 for details.

5.8.3 Instruments Used

Refer to section 3 for details

5.8.4 Test Procedures

Table No.45 related to Article 2 Clause 1 item 19-3 of Ordinance Concerning Technical Regulations Conformity Certification etc. of Specified Radio Equipment.

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E-mail: info@uttlab.com

UTTR-RF-STD71-V1.1

<http://www.uttlab.com>

5.8.5 Test Result

Please refer to Appendix

5.9 ADJACENT CHANNEL EMITTED POWER

5.9.1 Limit

Occupied Bandwidth	Frequency (MHz)	Limit (dBc)
OBW = 20MHz	Mean power 20MHz Distance of Carrier	25
	Mean power 40MHz Distance of Carrier	40
OBW = 40MHz	Mean power 40MHz Distance of Carrier	25
	Mean power 80MHz Distance of Carrier	40
OBW = 80MHz	Mean power 80MHz Distance of Carrier	25

5.9.2 Test Setup

Refer to section 4.5 for details.

5.9.3 Instruments Used

Refer to section 3 for details

5.9.4 Test Procedures

Table No.45 related to Article 2 Clause 1 item 19-3 of Ordinance Concerning Technical Regulations Conformity Certification etc. of Specified Radio Equipment.

5.9.5 Test Result

Please refer to Appendix

5.10 SPURIOUS EMISSIONS OF RECEIVER

5.10.1 Limit

Frequency (MHz)	Limit	
	nW	dBm
Below 1GHz	≤4	-54
Above 1GHz	≤20	-47

5.10.2 Test Setup

Refer to section 4.5 for details.

5.10.3 Instruments Used

Refer to section 3 for details

5.10.4 Test Procedures

Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

Use the following spectrum analyzer settings:

Below 1GHz

1. Set RBW = 100 kHz. VBW = 300 kHz.
2. Detector = Avg.
3. Sweep = auto couple.
4. Trace Mode = max hold.
5. Allow trace to fully stabilize.
6. Use the peak marker function to determine the maximum amplitude level.

Above 1GHz

7. Set RBW = 1 MHz. VBW = 3 MHz.
8. Detector = Avg.
9. Sweep = auto couple.
10. Trace Mode = max hold.
11. Allow trace to fully stabilize.

Use the peak marker function to determine the maximum amplitude level.

5.10.5 Test Result

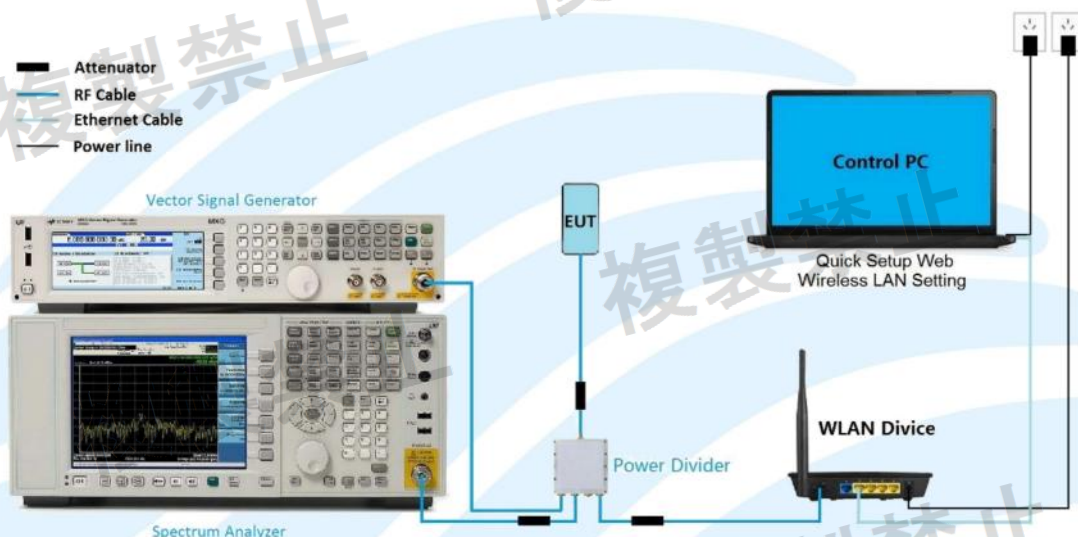
Please refer to Appendix

5.11 CARRIER SENSE CAPABILITY

5.11.1 Limit

The radio equipment connected to telecommunication circuit equipment shall be equipped with a device which detects emissions radiated from another radio station and prevents interference, or a device which prevents interference by operation on a receive signal and a signal for diffusion for signal level detection.

5.11.2 Test Setup



5.11.3 Instruments Used

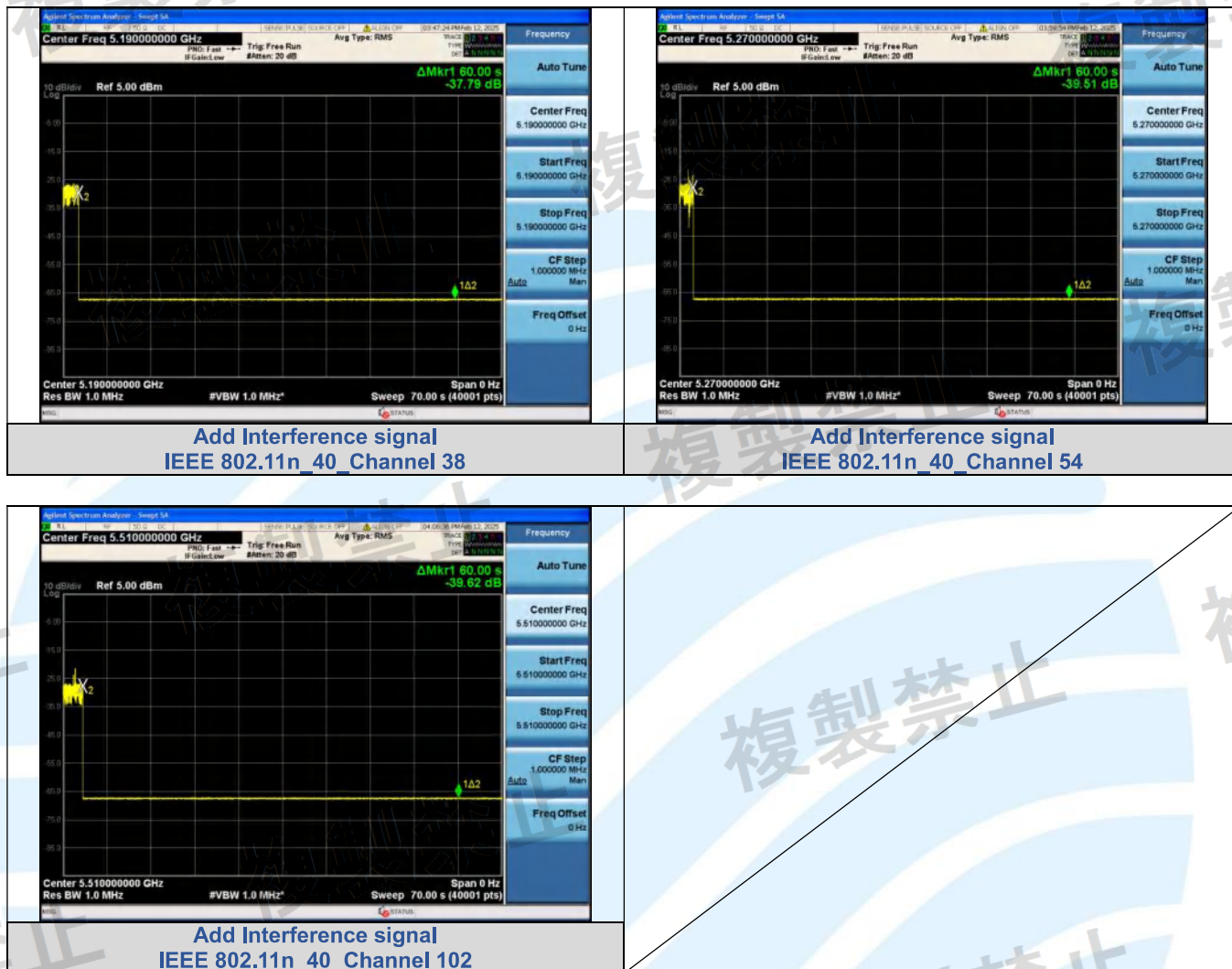
Refer to section 3 for details

5.11.4 Test Procedures

1. Turn the standard signal generator output OFF. Leave the equipment under test to be ready for transmission and verify the transmission with the spectrum analyzer.
2. Set the equipment under test to the receiving state.
3. Turn the standard signal generator ON and leave the equipment under test to be ready for transmission and verify with the spectrum analyzer that no transmission is being made.

5.11.5 Result

The worst measurement data as follows:

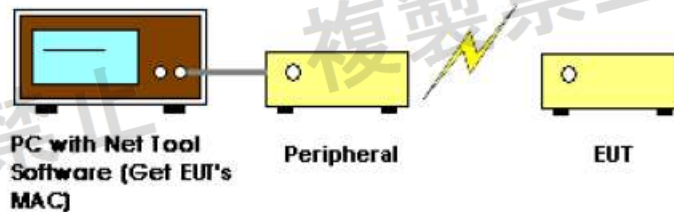


5.12 INTERFERENCE PREVENTION FUNCTION

5.12.1 Limit

Identification code ≥ 48 bits

5.12.2 Test Setup



5.12.3 Test Procedures

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

5.12.4 Test Result

TX: The transmitting mode of EUT is on normal operating, the interference prevention function is okay.

RX: The receiving mode of EUT is on normal operating, the interference prevention function is okay.

The ID Code of this Wi-Fi device is EC-74-D7-61-98-63 as below list:

Identification code	
wlan0	Link encap:Ethernet HWaddr EC:74:D7:61:98:63 inet addr:192.168.1.102 Bcast:192.168.1.255 Mask:255.255.255.0 inet6 addr: fe80::ee74:d7ff:fe61:9863/64 Scope:Link UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1 RX packets:738 errors:0 dropped:1 overruns:0 frame:0 TX packets:60 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 txqueuelen:1000 RX bytes:93257 (91.0 KiB) TX bytes:4907 (4.7 KiB)

5.13 CONSTRUCTION PROTECTION

5.13.1 Limit

The high-frequency section and modulation section of the radio equipment except for the antenna system shall not be capable of being opened easily.

5.13.2 Confirmation Method

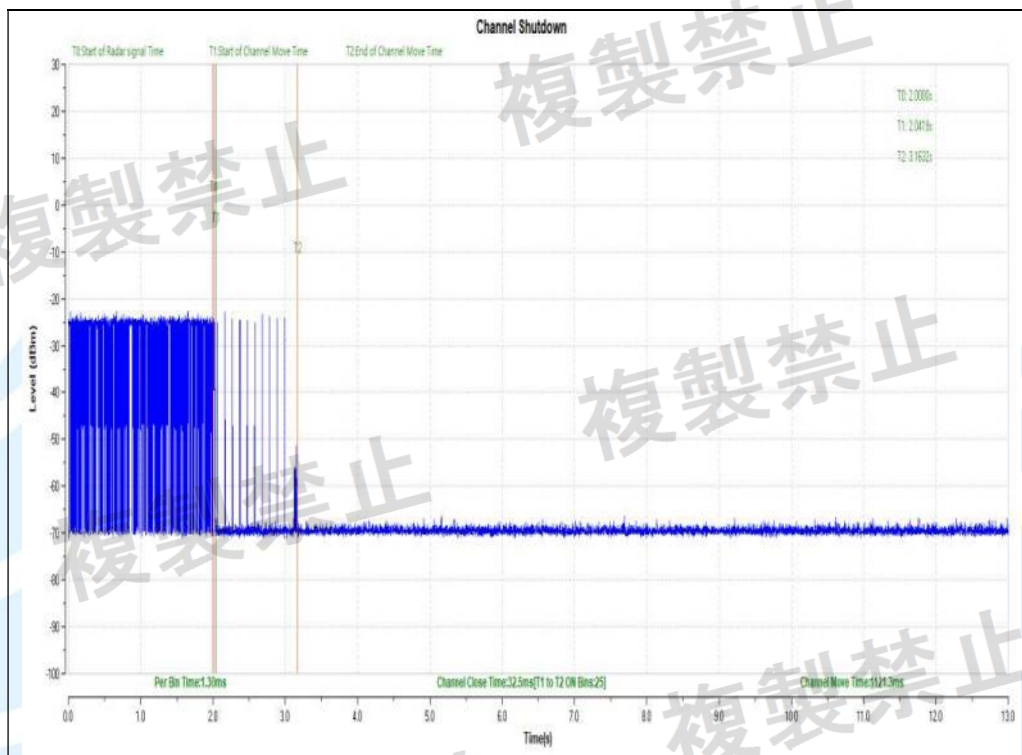
☐	Sealed with special screws.
☐	Plastic chassis is being welded using ultrasonic waves.
☐	Chassis is glued using a special adhesive.
☐	Metal covers are spot-fused.
☐	Cover is specially interlocked.
☒	RF and Modulation components are covered with shielding case and this shielding case is soldered.
☐	Shield case is welded at RF and modulation parts, and ID-ROM is welded using the BGA Method.
☐	Shield case is welded at RF and modulation parts, and ID-ROM is glued at its lead with a special adhesive.
☐	Shield case is welded at RF and modulation parts, and ID-ROM is glued with a non-transparent laminating agent.
☐	Other :

5.13.3 The Photos of Construction Protection

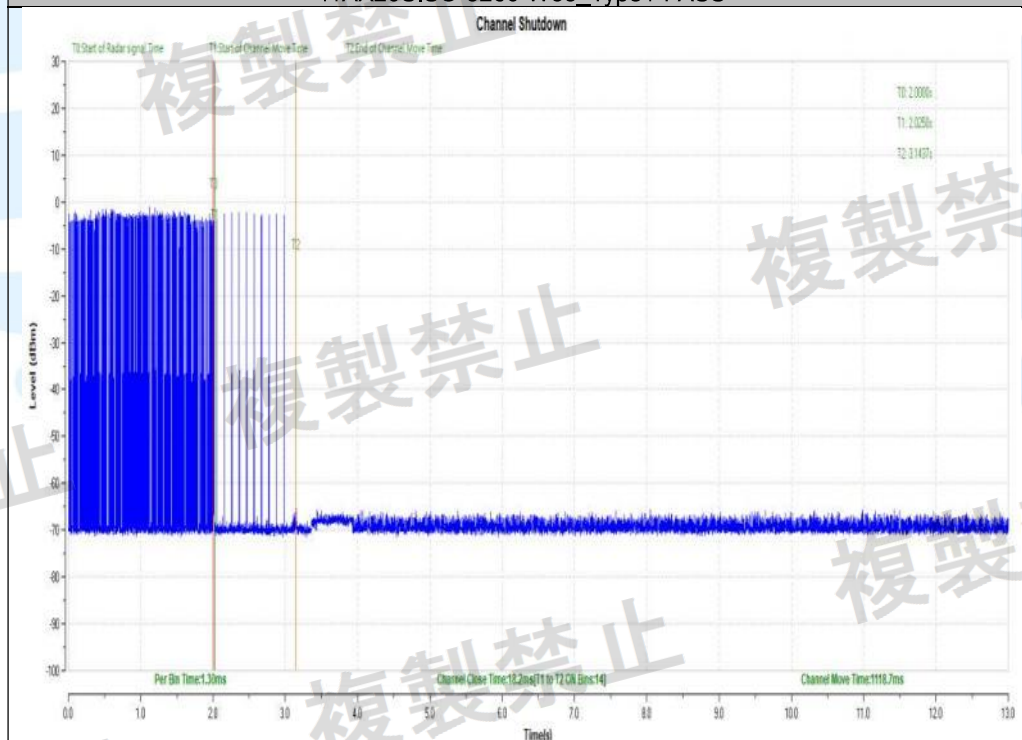


5.14.6 Test result

Test Mode	Frequency [MHz]	Radar Type	CCT [ms]	Limit [ms]	CMT [ms]	Limit [ms]	Verdict
11A	5260	W53_Type1	32.5	260	1121.3	10000	PASS
11A	5500	W56_Type1	18.2	260	1118.7	10000	PASS



11AX20SISO-5260-W53_Type1-PASS



11AX20SISO-5500-W56_Type1-PASS

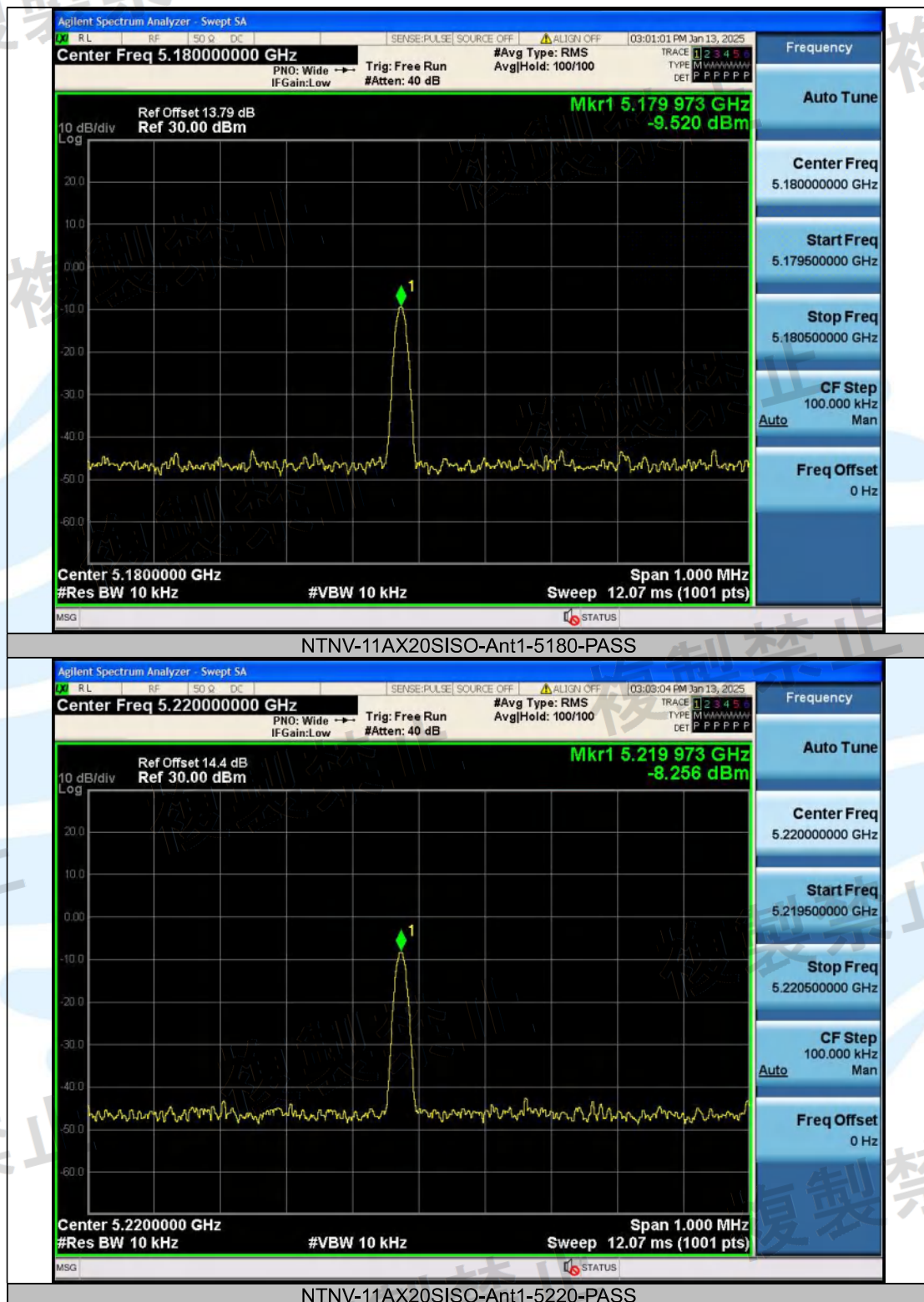
APPENDIX 1 RF TEST DATA

APPENDIX A: FREQUENCY ERROR

Test Result

TestCondition	TestMode	Antenna	Frequen cy[MHz]	CenterFreq [MHz]	Result [ppm]	Limit [ppm]	Verdict
NTNV	11AX20S ISO	Ant1	5180	5179.973	-5.21236	±20	PASS
NTNV	11AX20S ISO	Ant1	5220	5219.973	-5.17241	±20	PASS
NTNV	11AX20S ISO	Ant1	5240	5239.973	-5.15267	±20	PASS
NTNV	11AX20S ISO	Ant1	5260	5259.973	-5.13308	±20	PASS
NTNV	11AX20S ISO	Ant1	5300	5299.958	-7.92453	±20	PASS
NTNV	11AX20S ISO	Ant1	5320	5319.963	-6.95489	±20	PASS
NTNV	11AX20S ISO	Ant1	5500	5499.961	-7.09091	±20	PASS
NTNV	11AX20S ISO	Ant1	5600	5599.96	-7.14286	±20	PASS
NTNV	11AX20S ISO	Ant1	5720	5719.959	-7.16783	±20	PASS
NTNV	11AX40S ISO	Ant1	5190	5189.963	-7.12909	±20	PASS
NTNV	11AX40S ISO	Ant1	5230	5229.962	-7.26577	±20	PASS
NTNV	11AX40S ISO	Ant1	5270	5269.974	-4.93359	±20	PASS
NTNV	11AX40S ISO	Ant1	5310	5309.974	-4.89642	±20	PASS
NTNV	11AX40S ISO	Ant1	5510	5509.973	-4.90018	±20	PASS
NTNV	11AX40S ISO	Ant1	5550	5549.973	-4.86487	±20	PASS
NTNV	11AX40S ISO	Ant1	5710	5709.972	-4.90368	±20	PASS

Test Graphs



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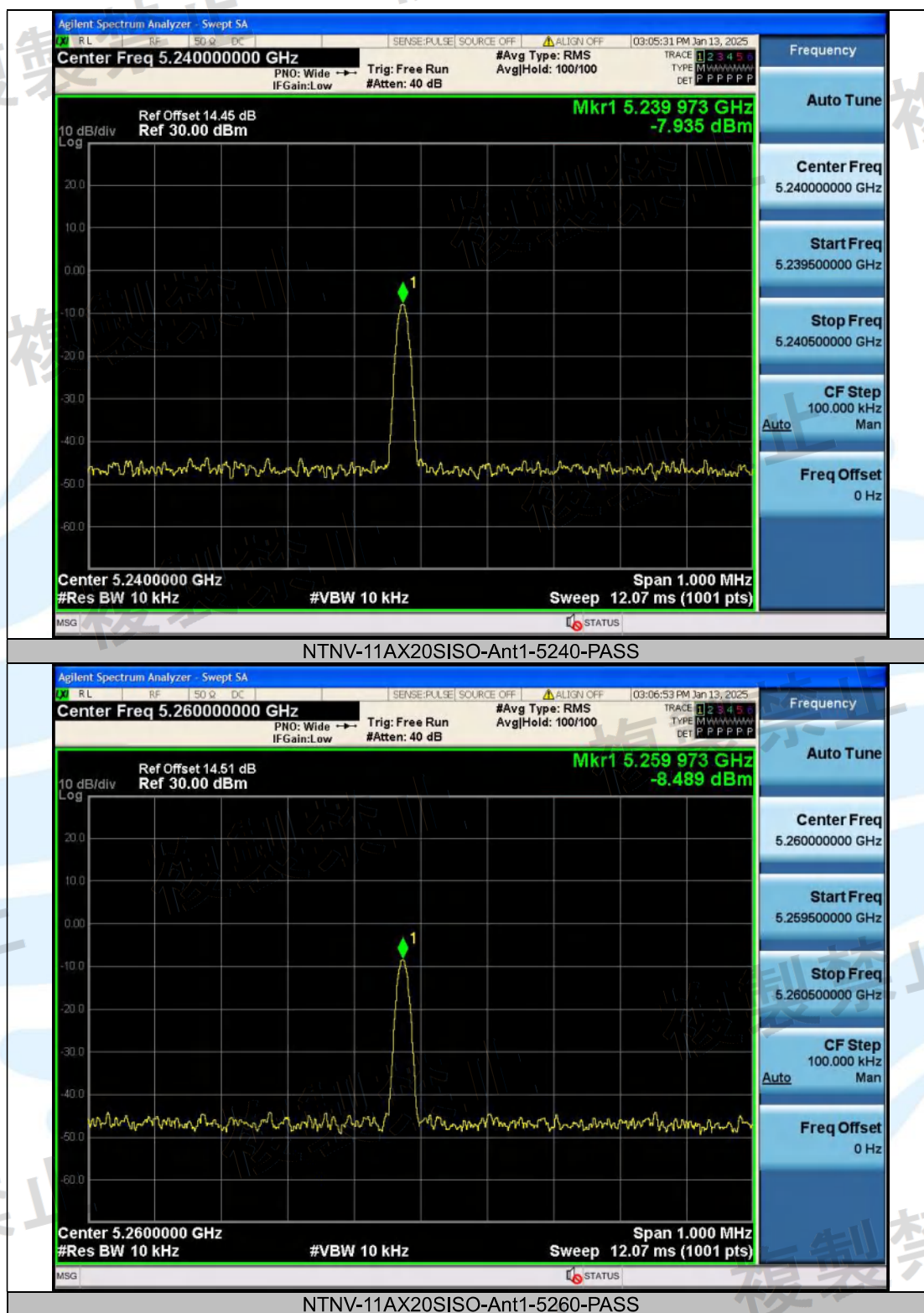
Tel: +86-755-28230888

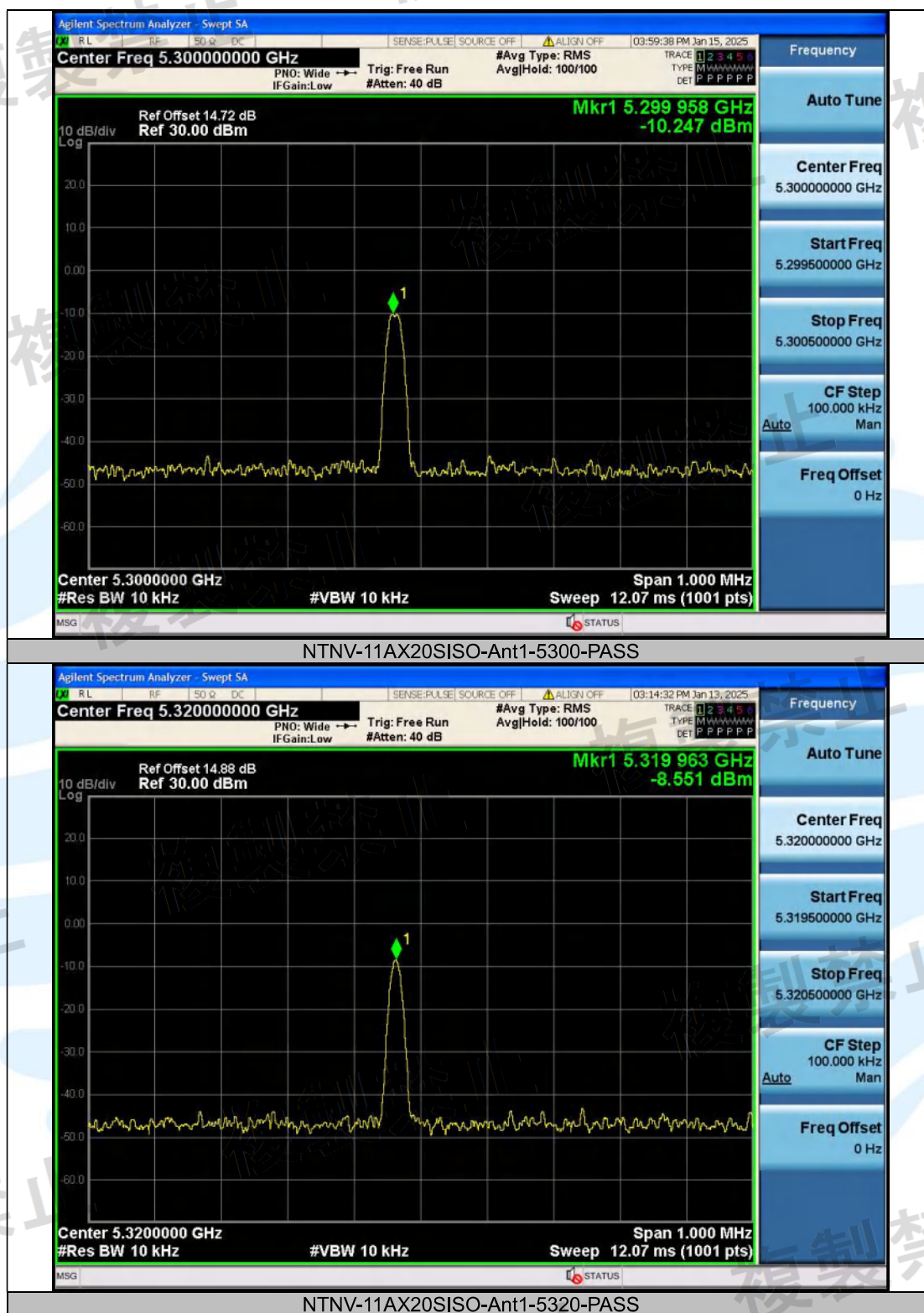
Fax: +86-755-28230886

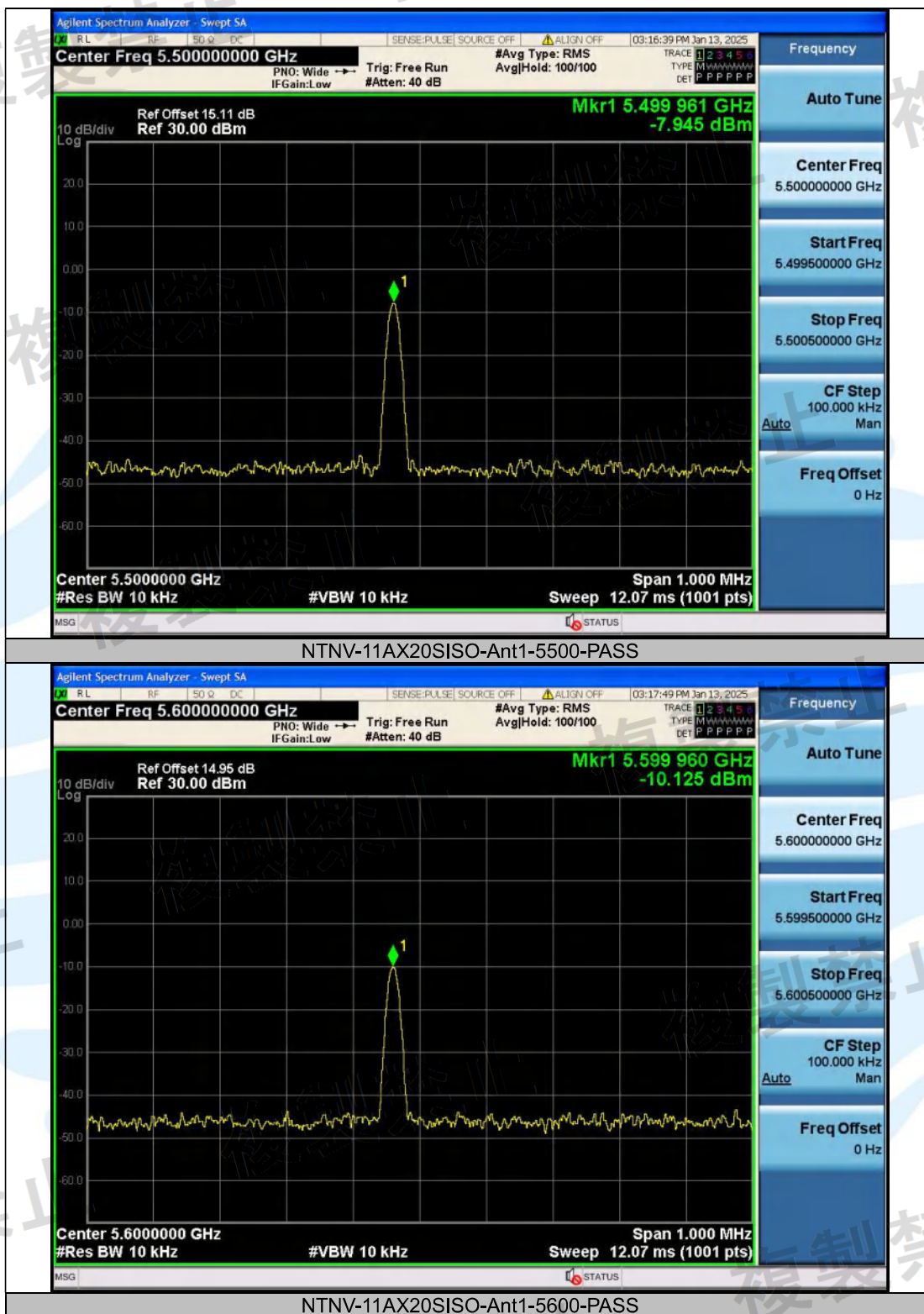
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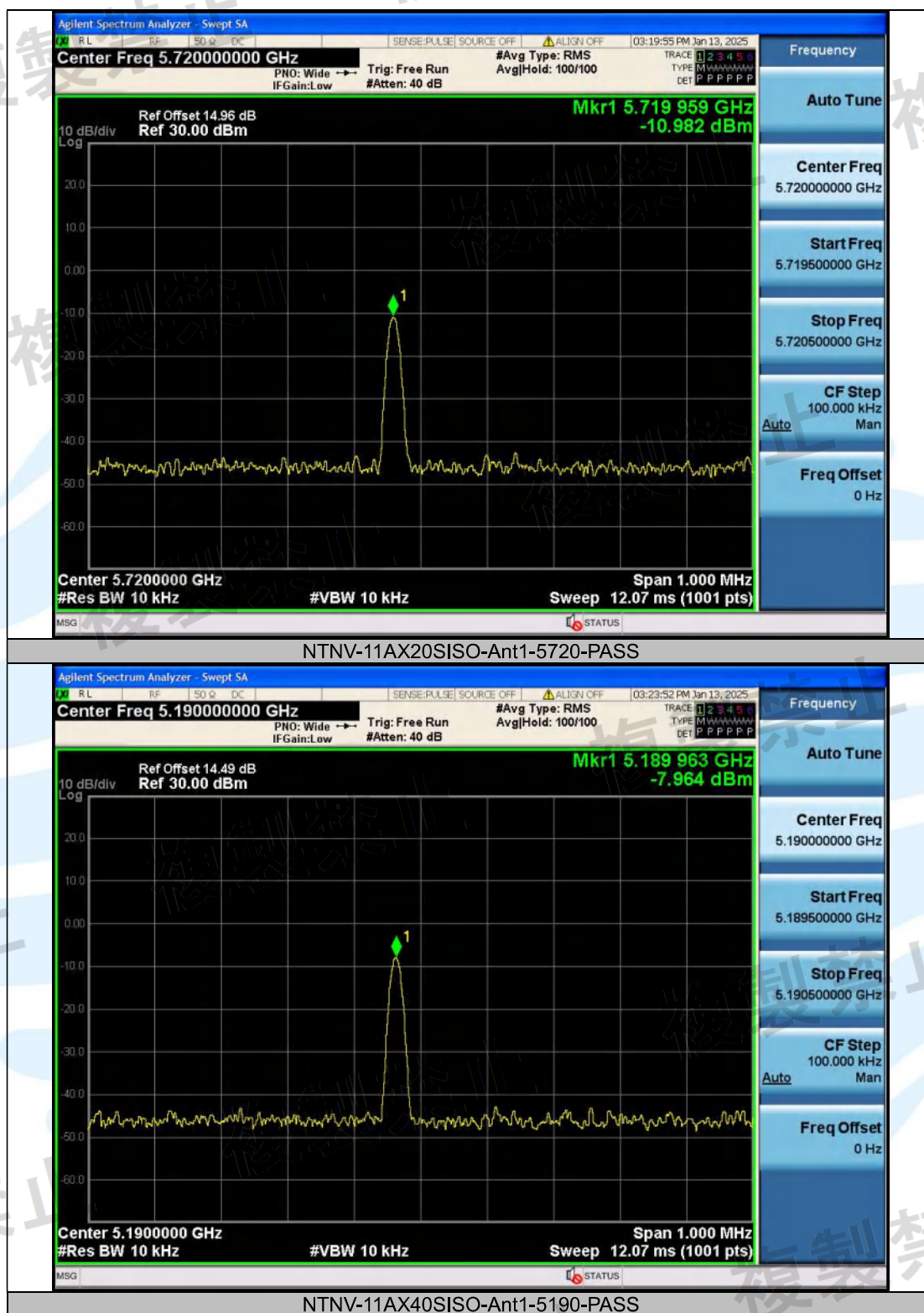
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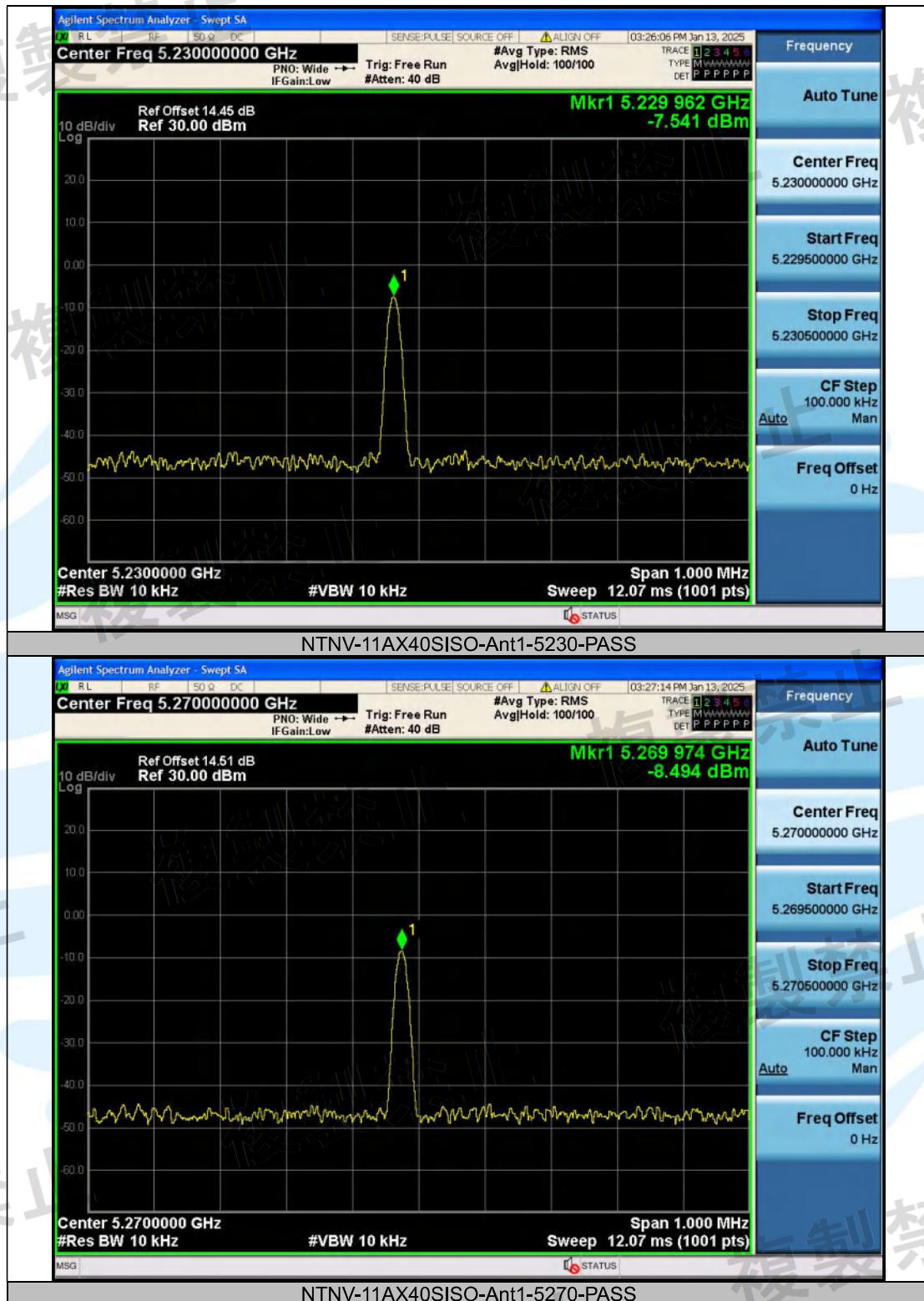
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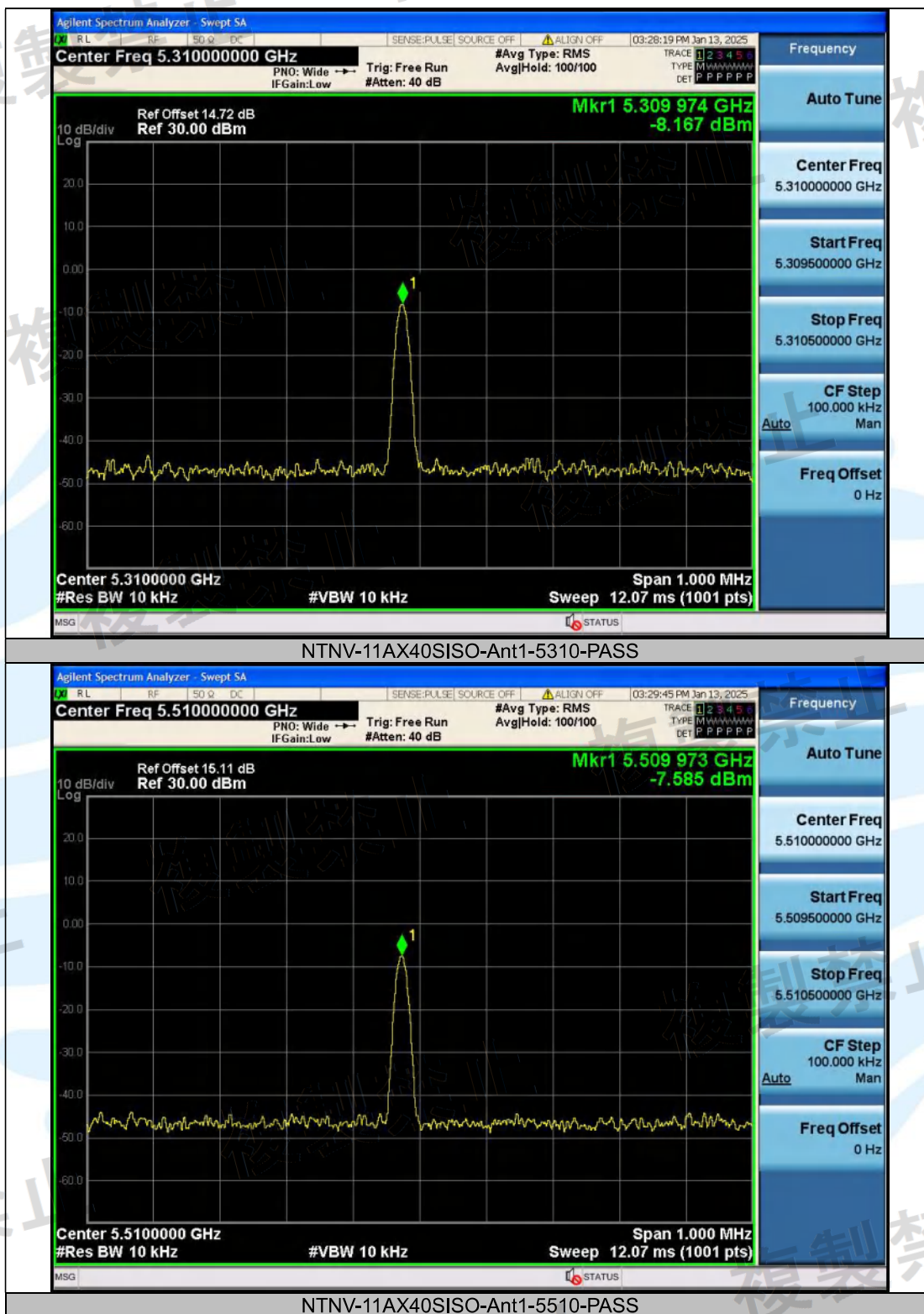
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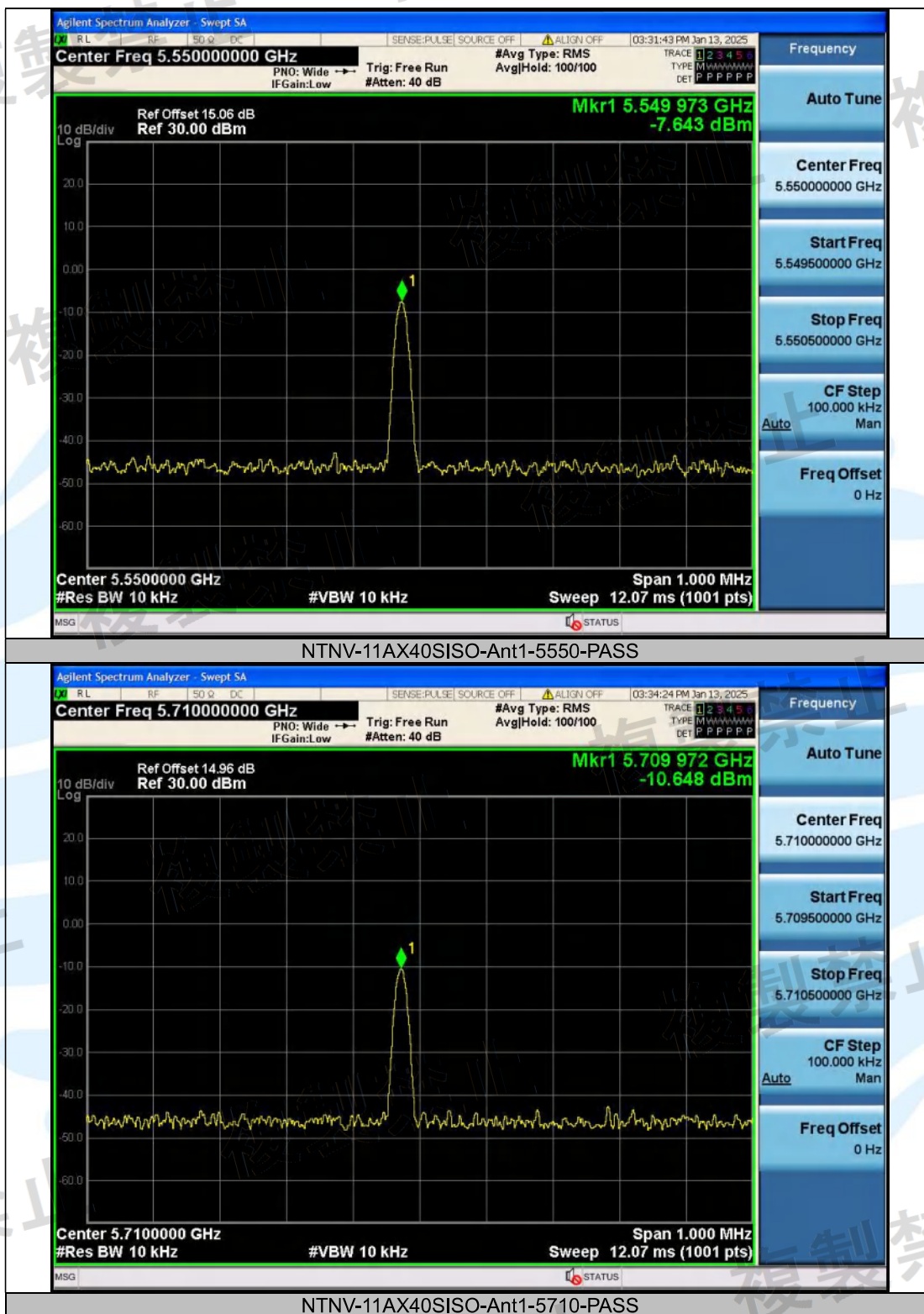
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Appendix B: Antenna Power Test Result

Test Condition	TestMode	Antenna	Frequency[MHz]	Result(dBm/MHz)	Result(mW/MHz)	Limit(mW/MHz)	Verdict
NTNV	11A	Ant1	5180	5.40	3.4674	≤10	PASS
NTNV	11A	Ant1	5220	5.85	3.8459	≤10	PASS
NTNV	11A	Ant1	5240	5.16	3.2810	≤10	PASS
NTNV	11A	Ant1	5260	2.46	1.7620	≤10	PASS
NTNV	11A	Ant1	5300	2.49	1.7742	≤10	PASS
NTNV	11A	Ant1	5320	2.73	1.8750	≤10	PASS
NTNV	11A	Ant1	5500	3.94	2.4774	≤10	PASS
NTNV	11A	Ant1	5600	2.75	1.8836	≤10	PASS
NTNV	11A	Ant1	5720	3.09	2.0370	≤10	PASS
NTNV	11N20SI SO	Ant1	5180	5.23	3.3343	≤10	PASS
NTNV	11N20SI SO	Ant1	5220	5.29	3.3806	≤10	PASS
NTNV	11N20SI SO	Ant1	5240	5.53	3.5727	≤10	PASS
NTNV	11N20SI SO	Ant1	5260	1.26	1.3366	≤10	PASS
NTNV	11N20SI SO	Ant1	5300	2.00	1.5849	≤10	PASS
NTNV	11N20SI SO	Ant1	5320	2.33	1.7100	≤10	PASS
NTNV	11N20SI SO	Ant1	5500	3.66	2.3227	≤10	PASS
NTNV	11N20SI SO	Ant1	5600	3.13	2.0559	≤10	PASS
NTNV	11N20SI SO	Ant1	5720	3.38	2.1777	≤10	PASS
NTNV	11N40SI SO	Ant1	5190	2.45	1.7579	≤5	PASS
NTNV	11N40SI SO	Ant1	5230	2.63	1.8323	≤5	PASS
NTNV	11N40SI SO	Ant1	5270	-1.04	0.7870	≤5	PASS
NTNV	11N40SI SO	Ant1	5310	-0.89	0.8147	≤5	PASS
NTNV	11N40SI SO	Ant1	5510	0.10	1.0233	≤5	PASS
NTNV	11N40SI SO	Ant1	5550	0.87	1.2218	≤5	PASS
NTNV	11N40SI SO	Ant1	5710	0.32	1.0765	≤5	PASS
NTNV	11AC20S ISO	Ant1	5180	5.28	3.3729	≤10	PASS
NTNV	11AC20S ISO	Ant1	5220	5.33	3.4119	≤10	PASS
NTNV	11AC20S ISO	Ant1	5240	5.50	3.5481	≤10	PASS
NTNV	11AC20S ISO	Ant1	5260	0.30	1.0715	≤10	PASS
NTNV	11AC20S ISO	Ant1	5300	0.25	1.0593	≤10	PASS
NTNV	11AC20S ISO	Ant1	5320	-0.05	0.9886	≤10	PASS
NTNV	11AC20S ISO	Ant1	5500	3.21	2.0941	≤10	PASS
NTNV	11AC20S ISO	Ant1	5600	2.19	1.6558	≤10	PASS
NTNV	11AC20S ISO	Ant1	5720	2.43	1.7498	≤10	PASS

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NTNV	11AC40S ISO	Ant1	5190	0.00	1.0000	≤5	PASS
NTNV	11AC40S ISO	Ant1	5230	0.06	1.0139	≤5	PASS
NTNV	11AC40S ISO	Ant1	5270	-1.02	0.7907	≤5	PASS
NTNV	11AC40S ISO	Ant1	5310	-2.59	0.5508	≤5	PASS
NTNV	11AC40S ISO	Ant1	5510	-0.01	0.9977	≤5	PASS
NTNV	11AC40S ISO	Ant1	5550	0.34	1.0814	≤5	PASS
NTNV	11AC40S ISO	Ant1	5710	-0.61	0.8690	≤5	PASS
NTNV	11AX20S ISO	Ant1	5180	3.57	2.2751	≤10	PASS
NTNV	11AX20S ISO	Ant1	5220	3.66	2.3227	≤10	PASS
NTNV	11AX20S ISO	Ant1	5240	3.38	2.1777	≤10	PASS
NTNV	11AX20S ISO	Ant1	5260	-0.30	0.9333	≤10	PASS
NTNV	11AX20S ISO	Ant1	5300	-1.74	0.6699	≤10	PASS
NTNV	11AX20S ISO	Ant1	5320	-1.11	0.7745	≤10	PASS
NTNV	11AX20S ISO	Ant1	5500	2.98	1.9861	≤10	PASS
NTNV	11AX20S ISO	Ant1	5600	1.60	1.4454	≤10	PASS
NTNV	11AX20S ISO	Ant1	5720	1.68	1.4723	≤10	PASS
NTNV	11AX40S ISO	Ant1	5190	-0.25	0.9441	≤5	PASS
NTNV	11AX40S ISO	Ant1	5230	-0.21	0.9528	≤5	PASS
NTNV	11AX40S ISO	Ant1	5270	-3.83	0.4140	≤5	PASS
NTNV	11AX40S ISO	Ant1	5310	-4.08	0.3908	≤5	PASS
NTNV	11AX40S ISO	Ant1	5510	-0.28	0.9376	≤5	PASS
NTNV	11AX40S ISO	Ant1	5550	0.07	1.0162	≤5	PASS
NTNV	11AX40S ISO	Ant1	5710	-1.51	0.7063	≤5	PASS

Test Condition	Test Mode	Antenna	Frequency [MHz]	Power (mW/MHz)	Rated Power (mW/MHz)	Result (%)	Limit (%)	Verdict
NTNV	11A	Ant1	5180	3.4674	4.0	-13.32	-80 to +20	PASS
NTNV	11A	Ant1	5220	3.8459	4.0	-3.85	-80 to +20	PASS
NTNV	11A	Ant1	5240	3.2810	4.0	-17.98	-80 to +20	PASS
NTNV	11A	Ant1	5260	1.7620	2.0	-11.90	-80 to +20	PASS
NTNV	11A	Ant1	5300	1.7742	2.0	-11.29	-80 to +20	PASS
NTNV	11A	Ant1	5320	1.8750	2.0	-6.25	-80 to +20	PASS
NTNV	11A	Ant1	5500	2.4774	2.0	23.87	-50 to +50	PASS

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NTNV	11A	Ant1	5600	1.8836	2.0	-5.82	-50 to +50	PASS
NTNV	11A	Ant1	5720	2.0370	2.0	1.85	-50 to +50	PASS
NTNV	11N20SI SO	Ant1	5180	3.3343	3.5	-4.73	-80 to +20	PASS
NTNV	11N20SI SO	Ant1	5220	3.3806	3.5	-3.41	-80 to +20	PASS
NTNV	11N20SI SO	Ant1	5240	3.5727	3.5	2.08	-80 to +20	PASS
NTNV	11N20SI SO	Ant1	5260	1.3366	1.5	-10.89	-80 to +20	PASS
NTNV	11N20SI SO	Ant1	5300	1.5849	1.5	5.66	-80 to +20	PASS
NTNV	11N20SI SO	Ant1	5320	1.7100	1.5	14.00	-80 to +20	PASS
NTNV	11N20SI SO	Ant1	5500	2.3227	2.5	-7.09	-50 to +50	PASS
NTNV	11N20SI SO	Ant1	5600	2.0559	2.5	-17.76	-50 to +50	PASS
NTNV	11N20SI SO	Ant1	5720	2.1777	2.5	-12.89	-50 to +50	PASS
NTNV	11N40SI SO	Ant1	5190	1.7579	2.0	-12.11	-80 to +20	PASS
NTNV	11N40SI SO	Ant1	5230	1.8323	2.0	-8.39	-80 to +20	PASS
NTNV	11N40SI SO	Ant1	5270	0.7870	0.8	-1.63	-80 to +20	PASS
NTNV	11N40SI SO	Ant1	5310	0.8147	0.8	1.84	-80 to +20	PASS
NTNV	11N40SI SO	Ant1	5510	1.0233	1.0	2.33	-50 to +50	PASS
NTNV	11N40SI SO	Ant1	5550	1.2218	1.0	22.18	-50 to +50	PASS
NTNV	11N40SI SO	Ant1	5710	1.0765	1.0	7.65	-50 to +50	PASS
NTNV	11AC20 SISO	Ant1	5180	3.3729	3.5	-3.63	-80 to +20	PASS
NTNV	11AC20 SISO	Ant1	5220	3.4119	3.5	-2.52	-80 to +20	PASS
NTNV	11AC20 SISO	Ant1	5240	3.5481	3.5	1.37	-80 to +20	PASS
NTNV	11AC20 SISO	Ant1	5260	1.0715	1.0	7.15	-80 to +20	PASS
NTNV	11AC20 SISO	Ant1	5300	1.0593	1.0	5.93	-80 to +20	PASS
NTNV	11AC20 SISO	Ant1	5320	0.9886	1.0	-1.14	-80 to +20	PASS
NTNV	11AC20 SISO	Ant1	5500	2.0941	2.0	4.71	-50 to +50	PASS
NTNV	11AC20 SISO	Ant1	5600	1.6558	2.0	-17.21	-50 to +50	PASS
NTNV	11AC20 SISO	Ant1	5720	1.7498	2.0	-12.51	-50 to +50	PASS
NTNV	11AC40 SISO	Ant1	5190	1.0000	1.0	0.00	-80 to +20	PASS
NTNV	11AC40 SISO	Ant1	5230	1.0139	1.0	1.39	-80 to +20	PASS
NTNV	11AC40 SISO	Ant1	5270	0.7907	0.8	-1.16	-80 to +20	PASS
NTNV	11AC40 SISO	Ant1	5310	0.5508	0.8	-31.15	-80 to +20	PASS
NTNV	11AC40 SISO	Ant1	5510	0.9977	1.0	-0.23	-50 to +50	PASS
NTNV	11AC40	Ant1	5550	1.0814	1.0	8.14	-50 to	PASS

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	SISO						+50	
NTNV	11AC40 SISO	Ant1	5710	0.8690	1.0	-13.10	-50 to +50	PASS
NTNV	11AX20S ISO	Ant1	5180	2.2751	2.5	-9.00	-80 to +20	PASS
NTNV	11AX20S ISO	Ant1	5220	2.3227	2.5	-7.09	-80 to +20	PASS
NTNV	11AX20S ISO	Ant1	5240	2.1777	2.5	-12.89	-80 to +20	PASS
NTNV	11AX20S ISO	Ant1	5260	0.9333	1.0	-6.67	-80 to +20	PASS
NTNV	11AX20S ISO	Ant1	5300	0.6699	1.0	-33.01	-80 to +20	PASS
NTNV	11AX20S ISO	Ant1	5320	0.7745	1.0	-22.55	-80 to +20	PASS
NTNV	11AX20S ISO	Ant1	5500	1.9861	2.0	-0.70	-50 to +50	PASS
NTNV	11AX20S ISO	Ant1	5600	1.4454	2.0	-27.73	-50 to +50	PASS
NTNV	11AX20S ISO	Ant1	5720	1.4723	2.0	-26.39	-50 to +50	PASS
NTNV	11AX40S ISO	Ant1	5190	0.9441	1.0	-5.59	-80 to +20	PASS
NTNV	11AX40S ISO	Ant1	5230	0.9528	1.0	-4.72	-80 to +20	PASS
NTNV	11AX40S ISO	Ant1	5270	0.4140	0.5	-17.20	-80 to +20	PASS
NTNV	11AX40S ISO	Ant1	5310	0.3908	0.5	-21.84	-80 to +20	PASS
NTNV	11AX40S ISO	Ant1	5510	0.9376	1.0	-6.24	-50 to +50	PASS
NTNV	11AX40S ISO	Ant1	5550	1.0162	1.0	1.62	-50 to +50	PASS
NTNV	11AX40S ISO	Ant1	5710	0.7063	1.0	-29.37	-50 to +50	PASS

TestCondition	TestMode	Antenna	Frequen cy[MHz]	Result(mW/ MHz)	EIRP(mW/M Hz)	Limit(mW)	Verdict
NTNV	11A	Ant1	5180	3.4674	7.7625	≤10	PASS
NTNV	11A	Ant1	5220	3.8459	8.6099	≤10	PASS
NTNV	11A	Ant1	5240	3.2810	7.3451	≤10	PASS
NTNV	11A	Ant1	5260	1.7620	3.9446	≤5	PASS
NTNV	11A	Ant1	5300	1.7742	3.9719	≤5	PASS
NTNV	11A	Ant1	5320	1.8750	4.1976	≤5	PASS
NTNV	11A	Ant1	5500	2.4774	5.5463	≤25	PASS
NTNV	11A	Ant1	5600	1.8836	4.2170	≤25	PASS
NTNV	11A	Ant1	5720	2.0370	4.5604	≤25	PASS
NTNV	11N20SI SO	Ant1	5180	3.3343	7.4645	≤10	PASS
NTNV	11N20SI SO	Ant1	5220	3.3806	7.5683	≤10	PASS
NTNV	11N20SI SO	Ant1	5240	3.5727	7.9983	≤10	PASS
NTNV	11N20SI SO	Ant1	5260	1.3366	2.9923	≤5	PASS
NTNV	11N20SI SO	Ant1	5300	1.5849	3.5481	≤5	PASS
NTNV	11N20SI SO	Ant1	5320	1.7100	3.8282	≤5	PASS
NTNV	11N20SI SO	Ant1	5500	2.3227	5.2000	≤25	PASS
NTNV	11N20SI SO	Ant1	5600	2.0559	4.6026	≤25	PASS
NTNV	11N20SI SO	Ant1	5720	2.1777	4.8753	≤25	PASS

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	SO						
NTNV	11N40SI SO	Ant1	5190	1.7579	3.9355	≤5	PASS
NTNV	11N40SI SO	Ant1	5230	1.8323	4.1020	≤5	PASS
NTNV	11N40SI SO	Ant1	5270	0.7870	1.7620	≤2.5	PASS
NTNV	11N40SI SO	Ant1	5310	0.8147	1.8239	≤2.5	PASS
NTNV	11N40SI SO	Ant1	5510	1.0233	2.2909	≤12.5	PASS
NTNV	11N40SI SO	Ant1	5550	1.2218	2.7353	≤12.5	PASS
NTNV	11N40SI SO	Ant1	5710	1.0765	2.4099	≤12.5	PASS
NTNV	11AC20S ISO	Ant1	5180	3.3729	7.5509	≤10	PASS
NTNV	11AC20S ISO	Ant1	5220	3.4119	7.6384	≤10	PASS
NTNV	11AC20S ISO	Ant1	5240	3.5481	7.9433	≤10	PASS
NTNV	11AC20S ISO	Ant1	5260	1.0715	2.3988	≤5	PASS
NTNV	11AC20S ISO	Ant1	5300	1.0593	2.3714	≤5	PASS
NTNV	11AC20S ISO	Ant1	5320	0.9886	2.2131	≤5	PASS
NTNV	11AC20S ISO	Ant1	5500	2.0941	4.6881	≤25	PASS
NTNV	11AC20S ISO	Ant1	5600	1.6558	3.7068	≤25	PASS
NTNV	11AC20S ISO	Ant1	5720	1.7498	3.9174	≤25	PASS
NTNV	11AC40S ISO	Ant1	5190	1.0000	2.2387	≤5	PASS
NTNV	11AC40S ISO	Ant1	5230	1.0139	2.2699	≤5	PASS
NTNV	11AC40S ISO	Ant1	5270	0.7907	1.7701	≤2.5	PASS
NTNV	11AC40S ISO	Ant1	5310	0.5508	1.2331	≤2.5	PASS
NTNV	11AC40S ISO	Ant1	5510	0.9977	2.2336	≤12.5	PASS
NTNV	11AC40S ISO	Ant1	5550	1.0814	2.4210	≤12.5	PASS
NTNV	11AC40S ISO	Ant1	5710	0.8690	1.9454	≤12.5	PASS
NTNV	11AX20S ISO	Ant1	5180	2.2751	5.0933	≤10	PASS
NTNV	11AX20S ISO	Ant1	5220	2.3227	5.2000	≤10	PASS
NTNV	11AX20S ISO	Ant1	5240	2.1777	4.8753	≤5	PASS
NTNV	11AX20S ISO	Ant1	5260	0.9333	2.0893	≤5	PASS
NTNV	11AX20S ISO	Ant1	5300	0.6699	1.4997	≤5	PASS
NTNV	11AX20S ISO	Ant1	5320	0.7745	1.7338	≤5	PASS
NTNV	11AX20S ISO	Ant1	5500	1.9861	4.4463	≤25	PASS
NTNV	11AX20S ISO	Ant1	5600	1.4454	3.2359	≤25	PASS
NTNV	11AX20S ISO	Ant1	5720	1.4723	3.2961	≤25	PASS

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Tel: +86-755-28230888

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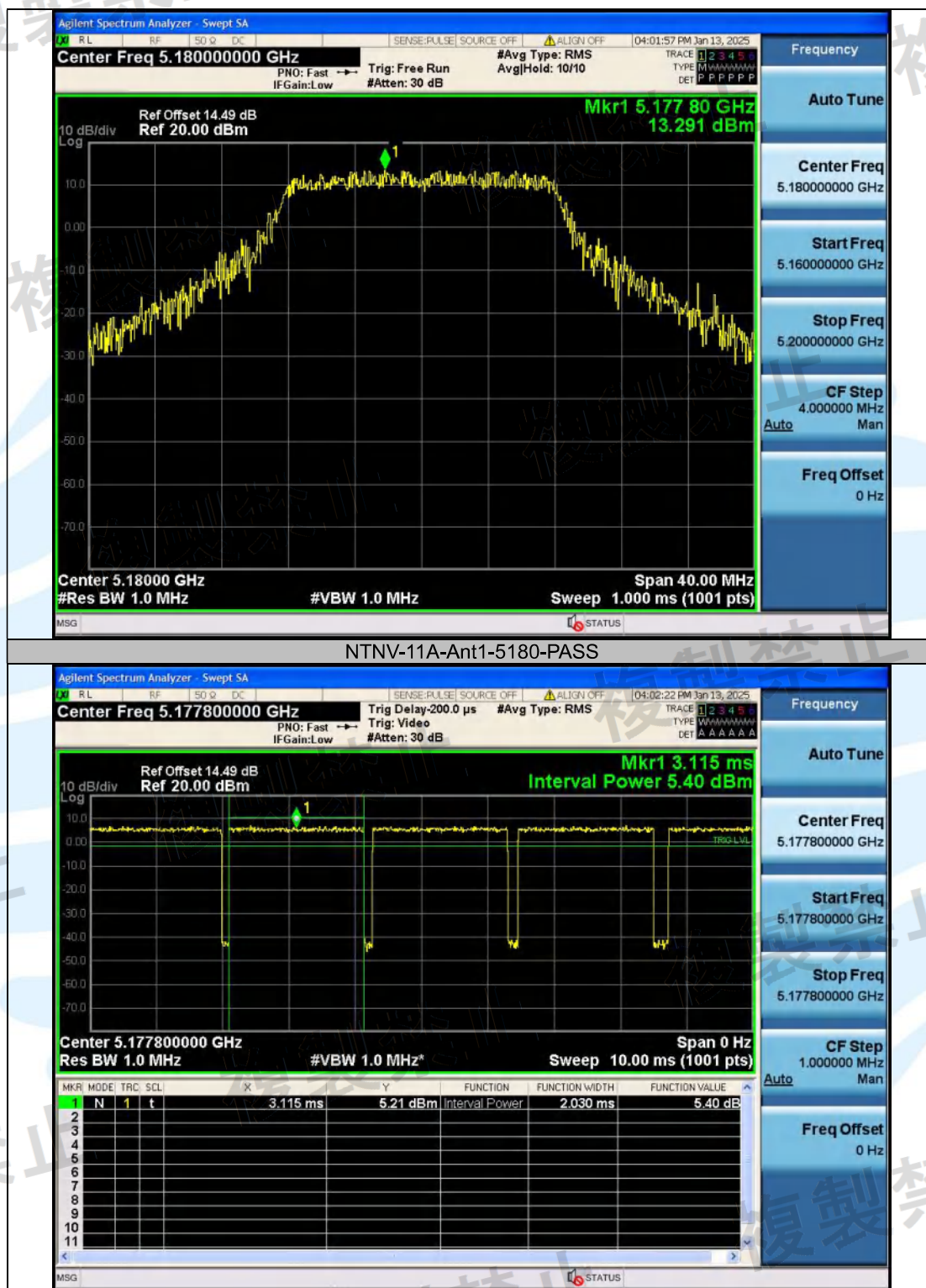
E-mail: info@uttlab.com

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NTNV	11AX40S ISO	Ant1	5190	0.9441	2.1135	≤5	PASS
NTNV	11AX40S ISO	Ant1	5230	0.9528	2.1330	≤5	PASS
NTNV	11AX40S ISO	Ant1	5270	0.4140	0.9268	≤2.5	PASS
NTNV	11AX40S ISO	Ant1	5310	0.3908	0.8750	≤2.5	PASS
NTNV	11AX40S ISO	Ant1	5510	0.9376	2.0989	≤12.5	PASS
NTNV	11AX40S ISO	Ant1	5550	1.0162	2.2751	≤12.5	PASS
NTNV	11AX40S ISO	Ant1	5710	0.7063	1.5812	≤12.5	PASS

Test Graphs



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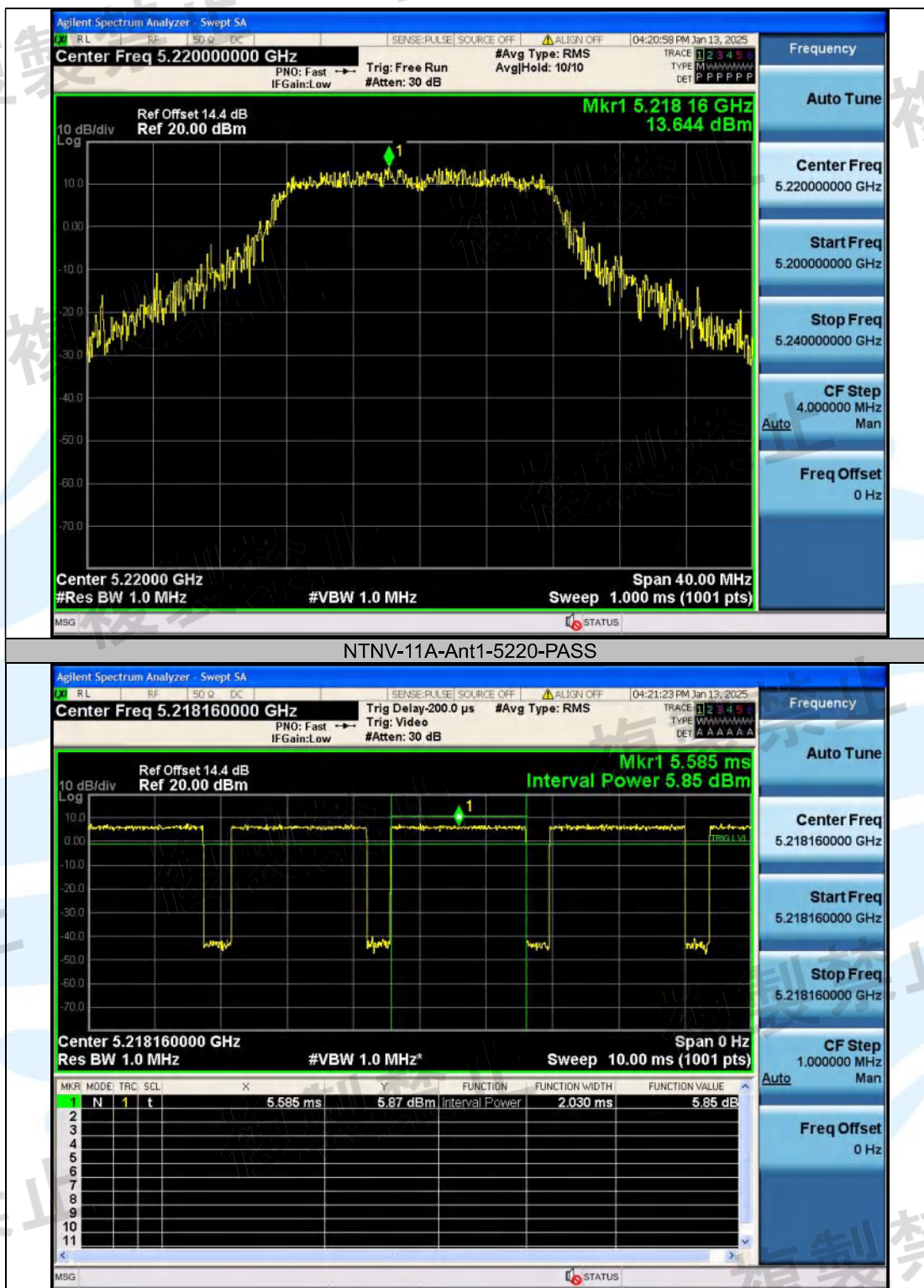
Tel: +86-755-28230888

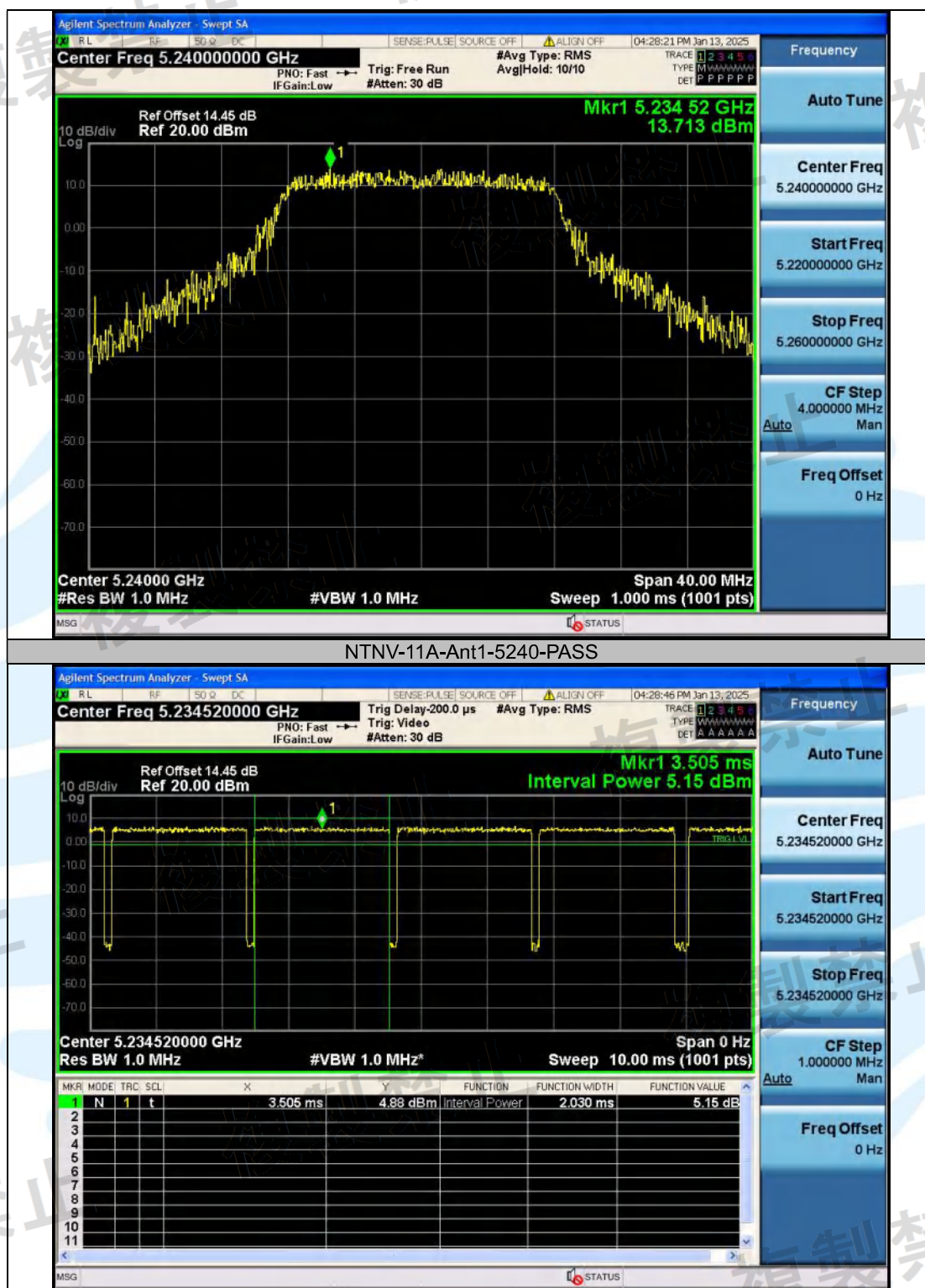
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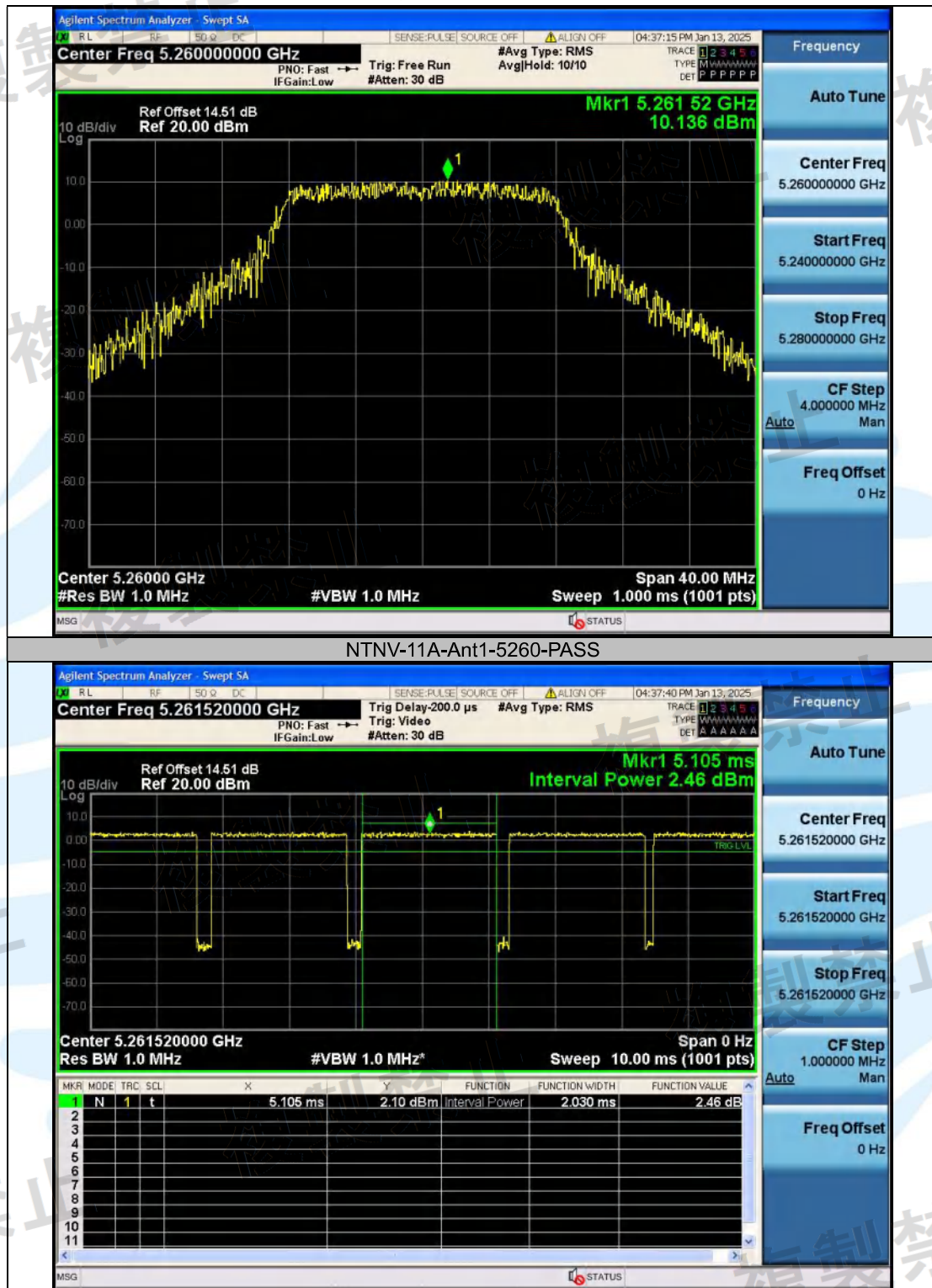
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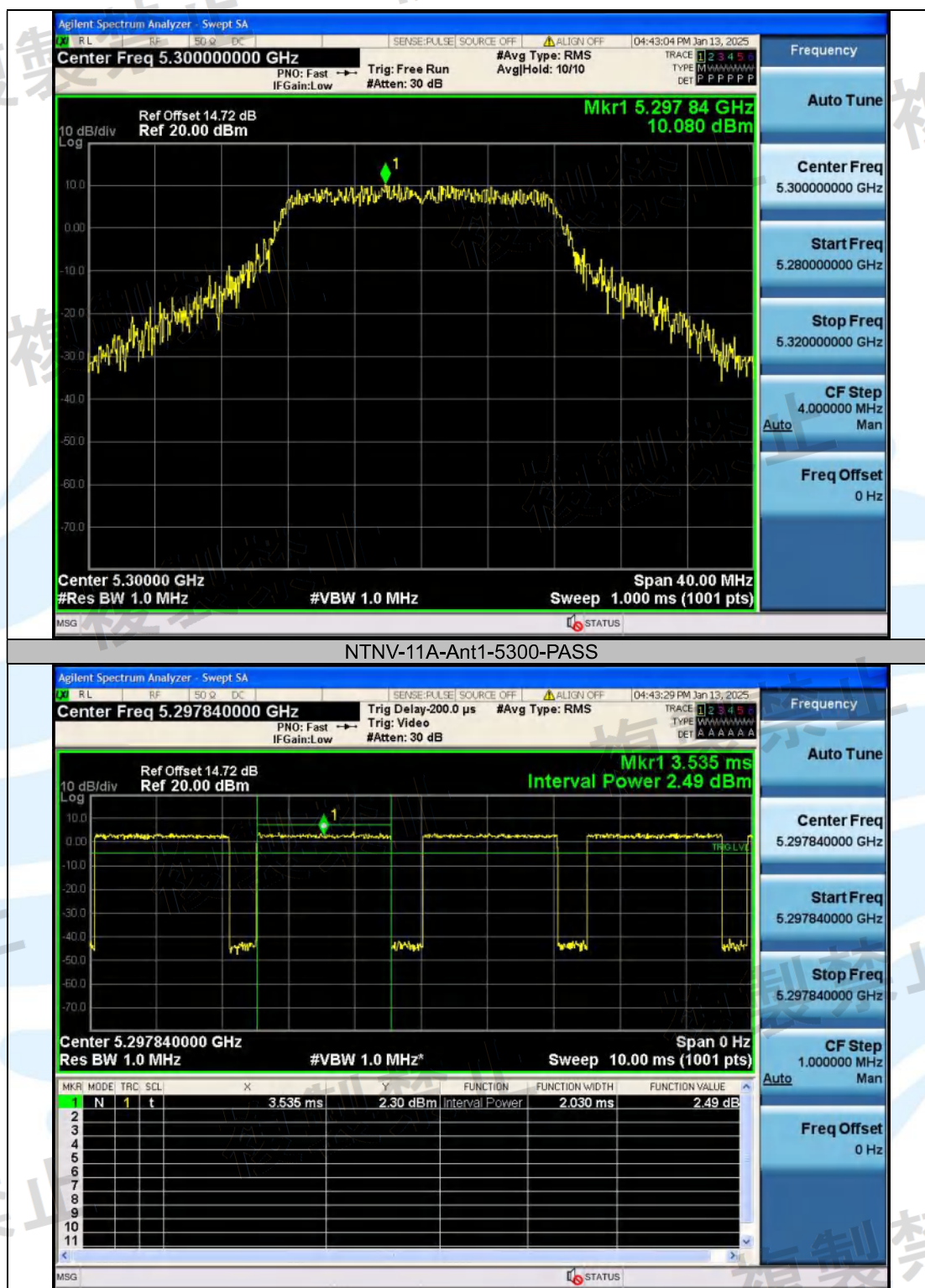
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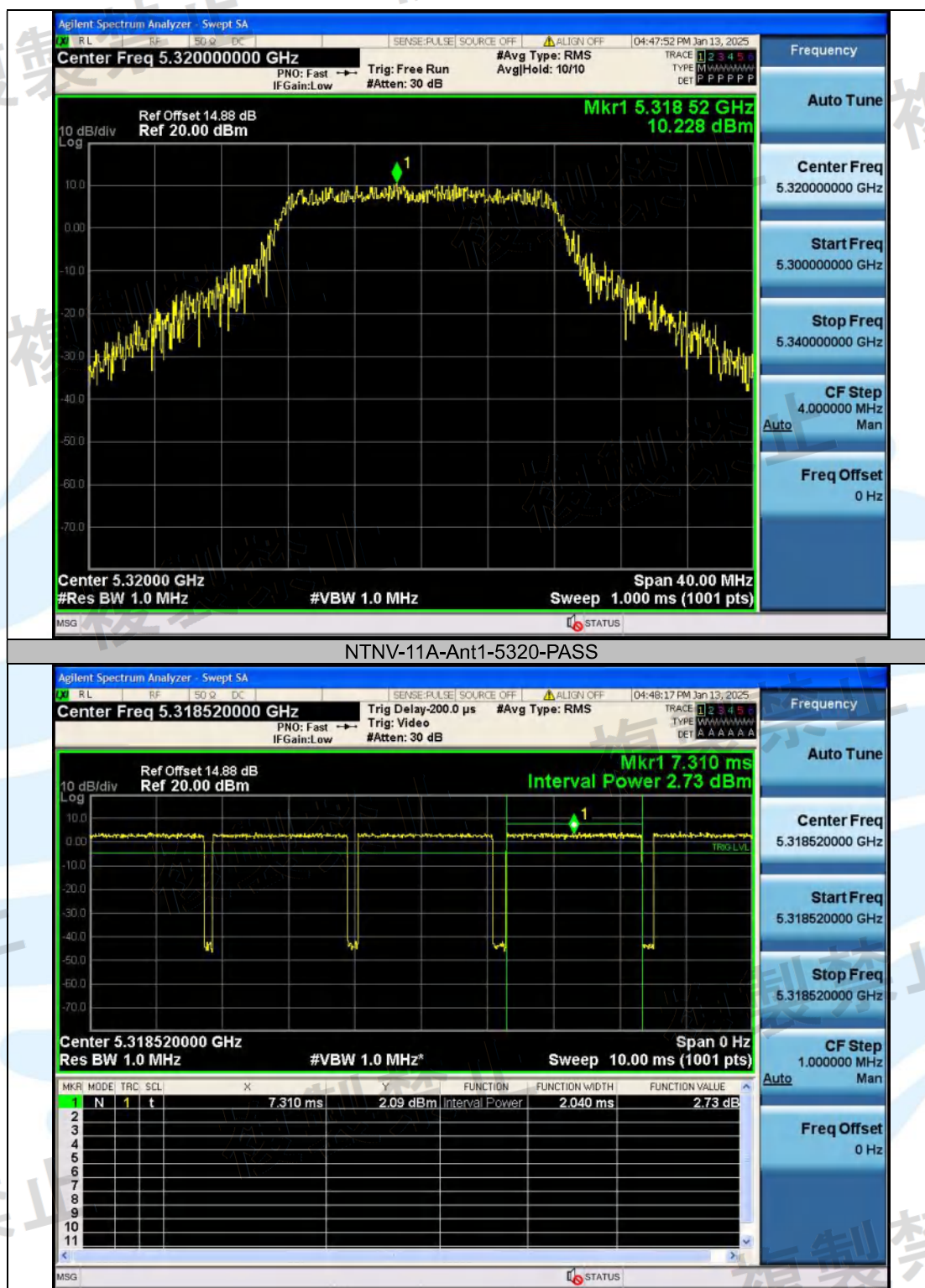
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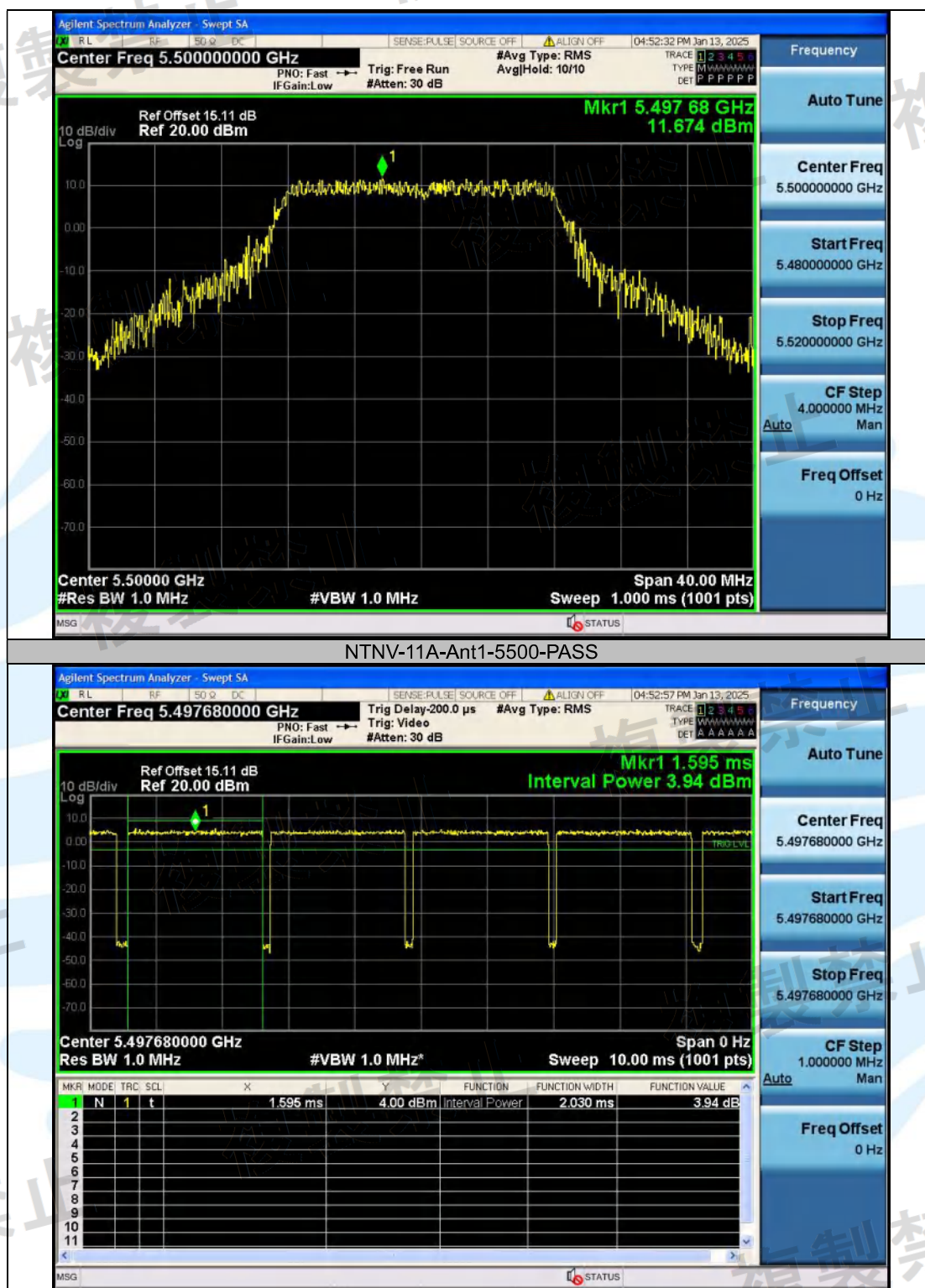
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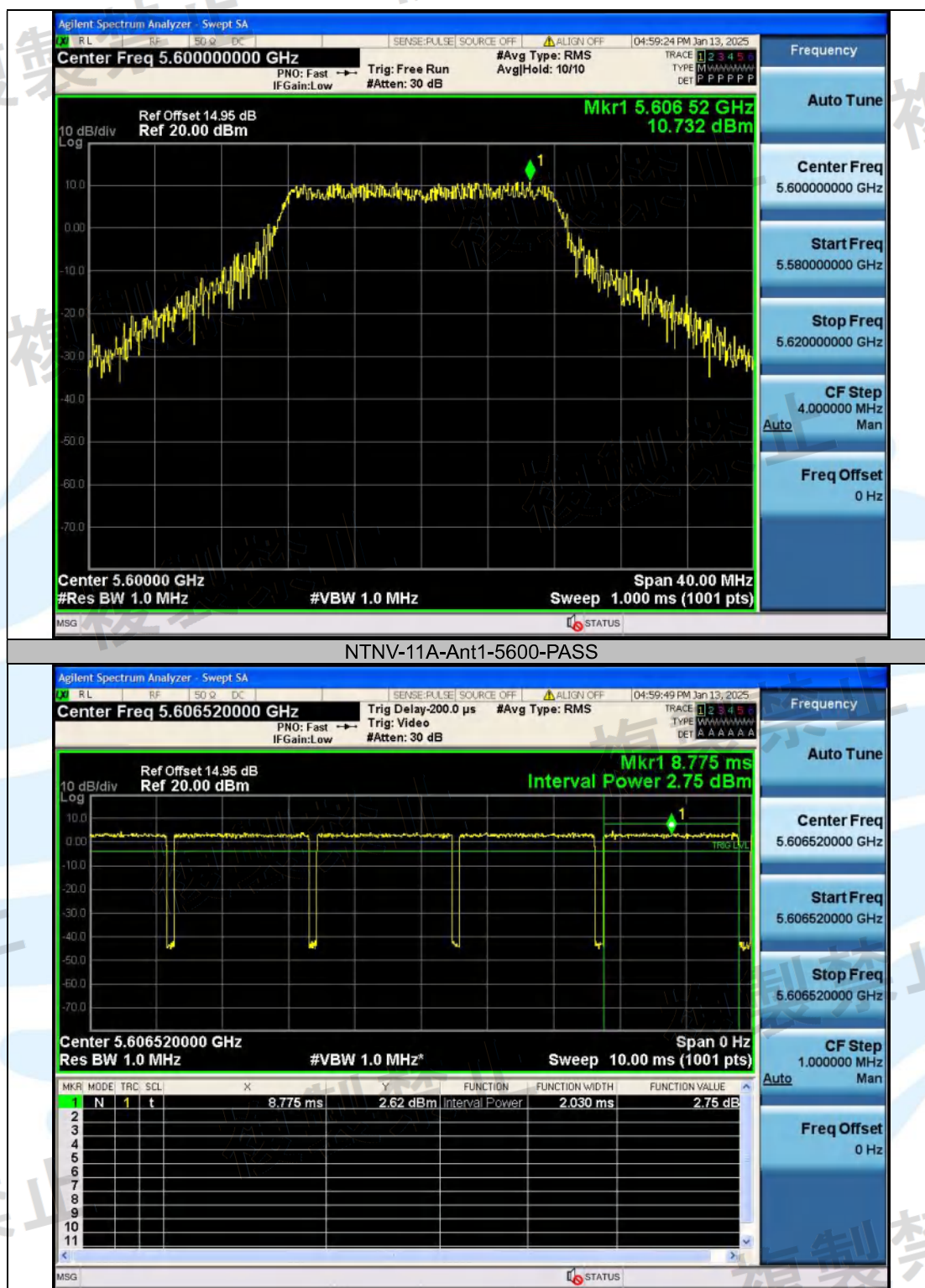
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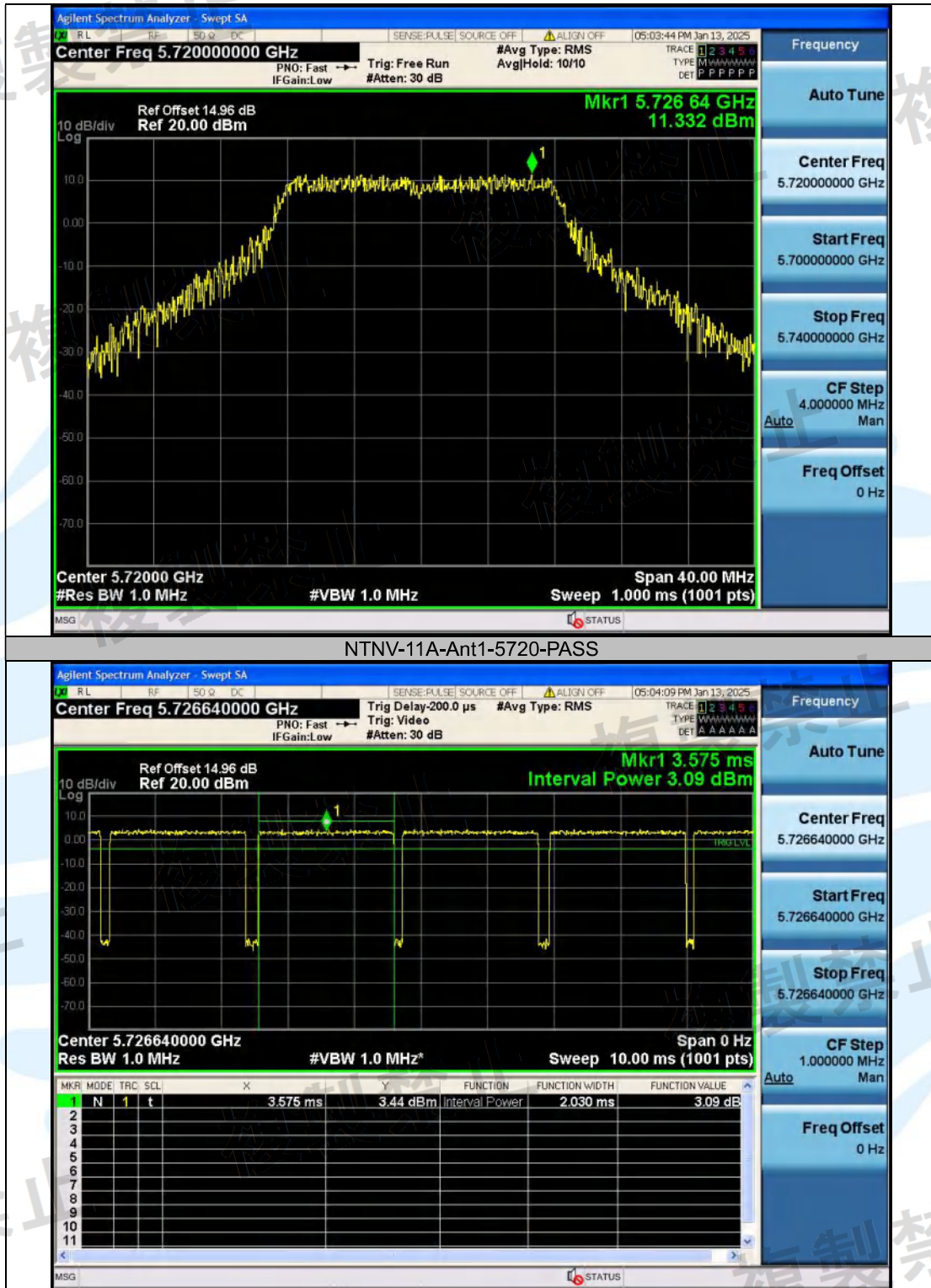
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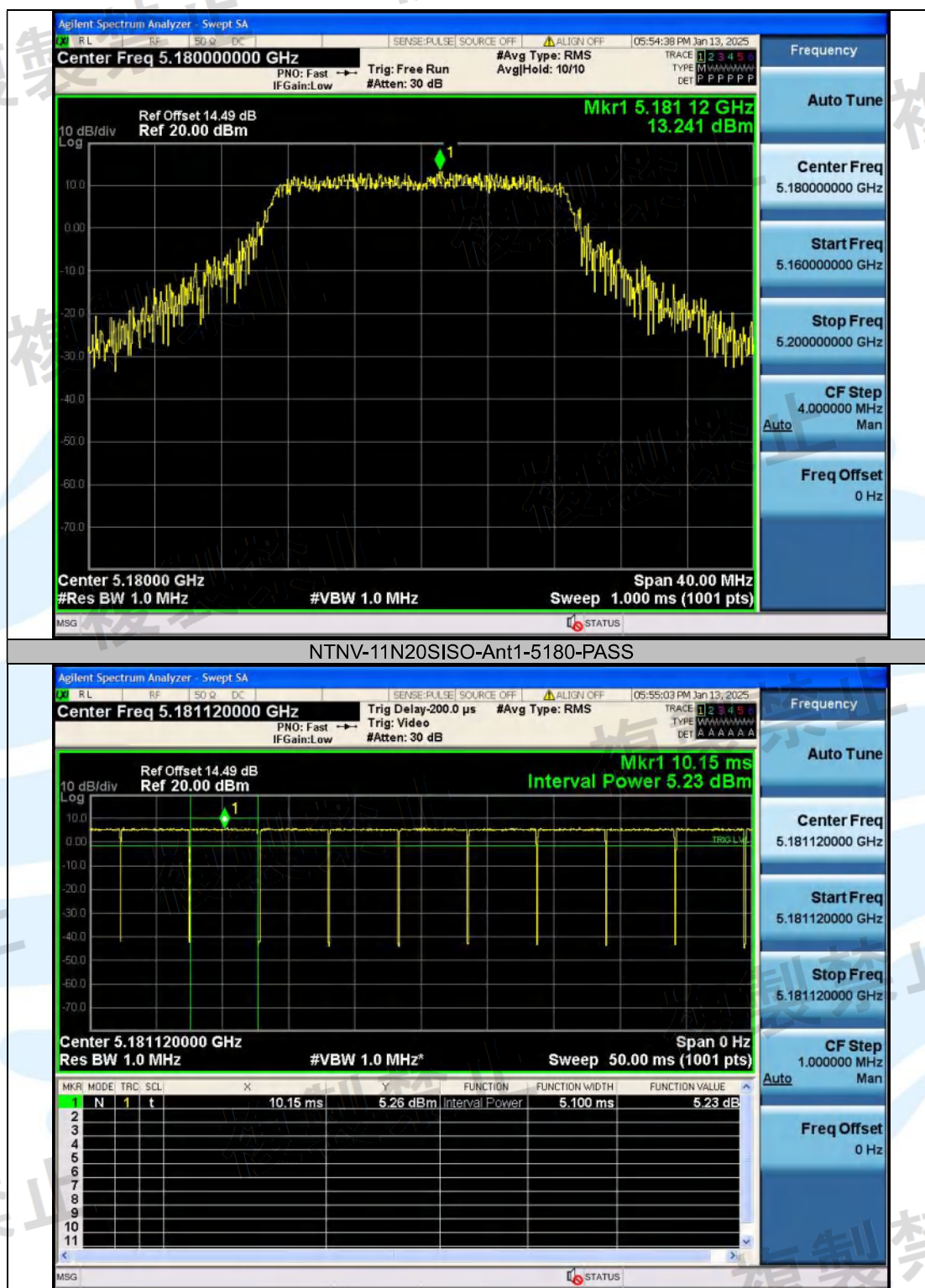
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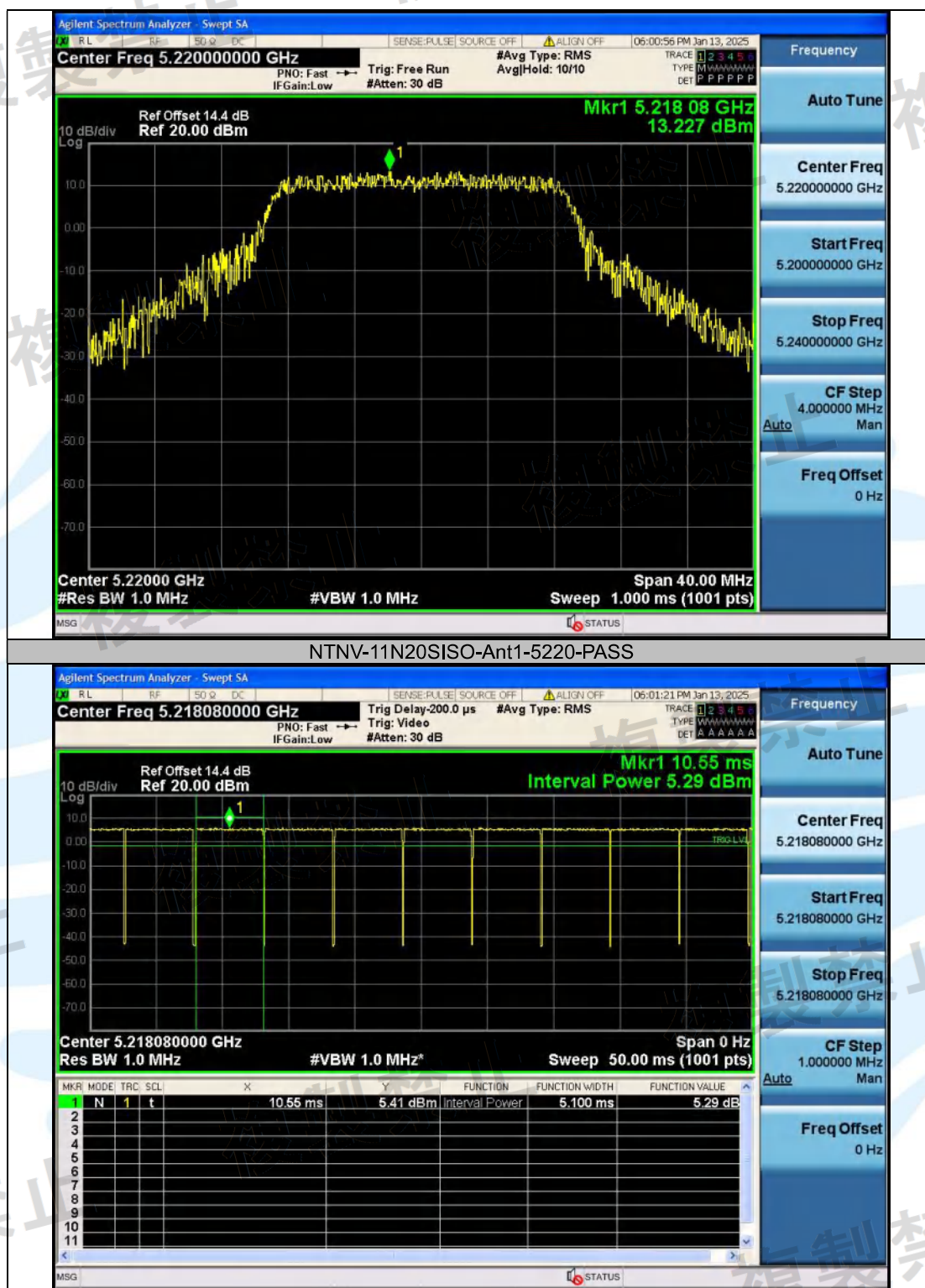
Fax: +86-755-28230886

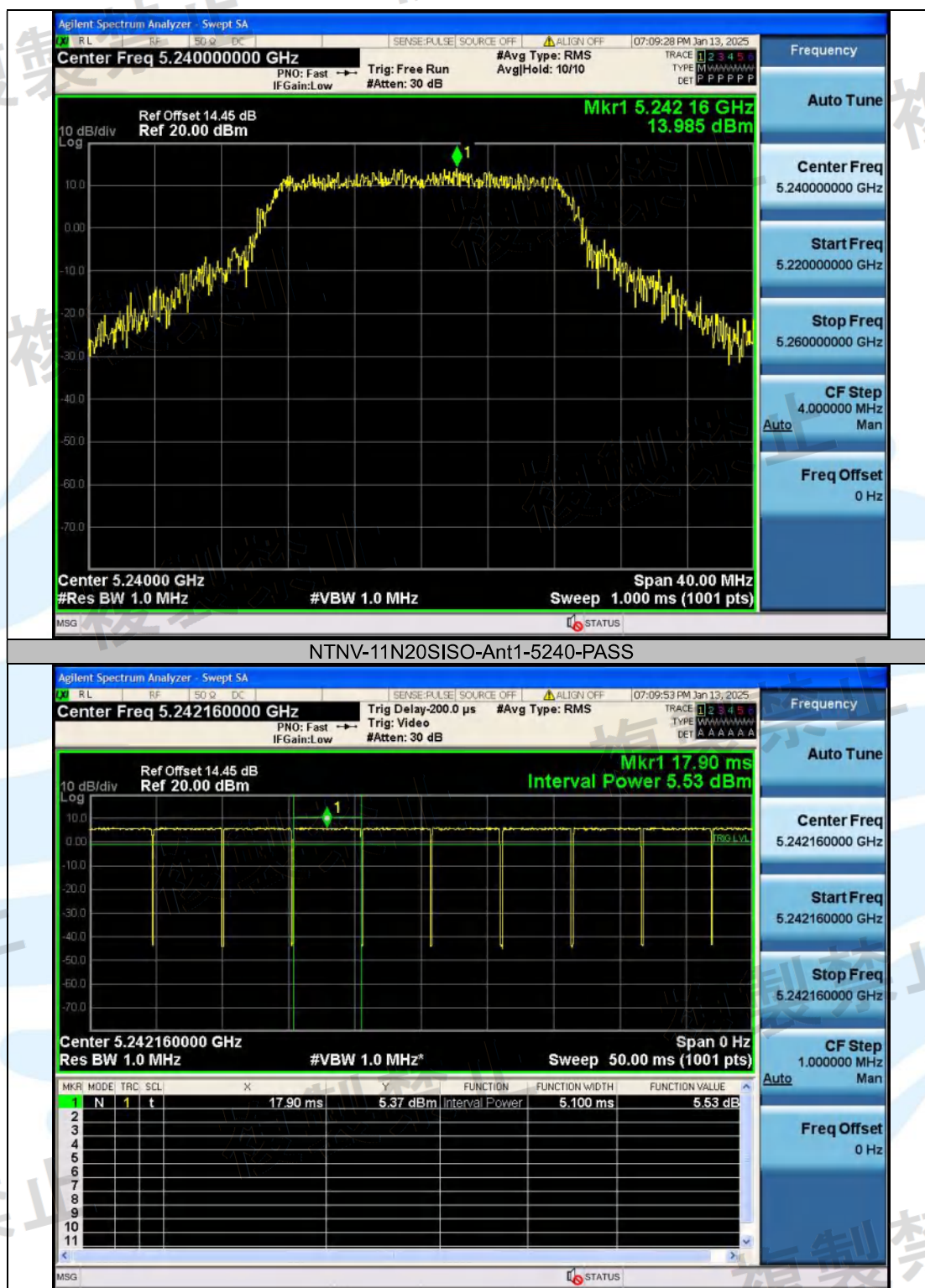
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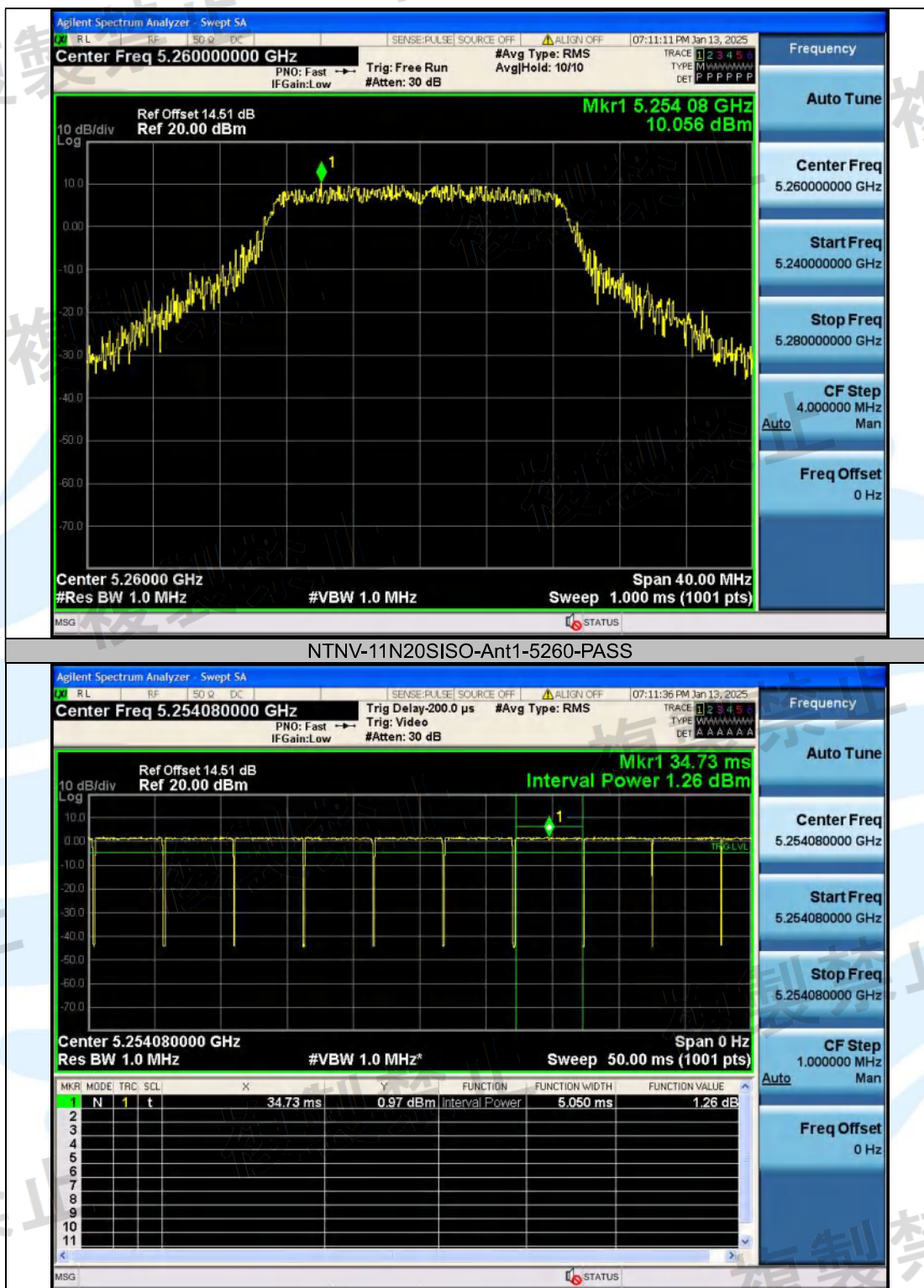
<http://www.uttlab.com>

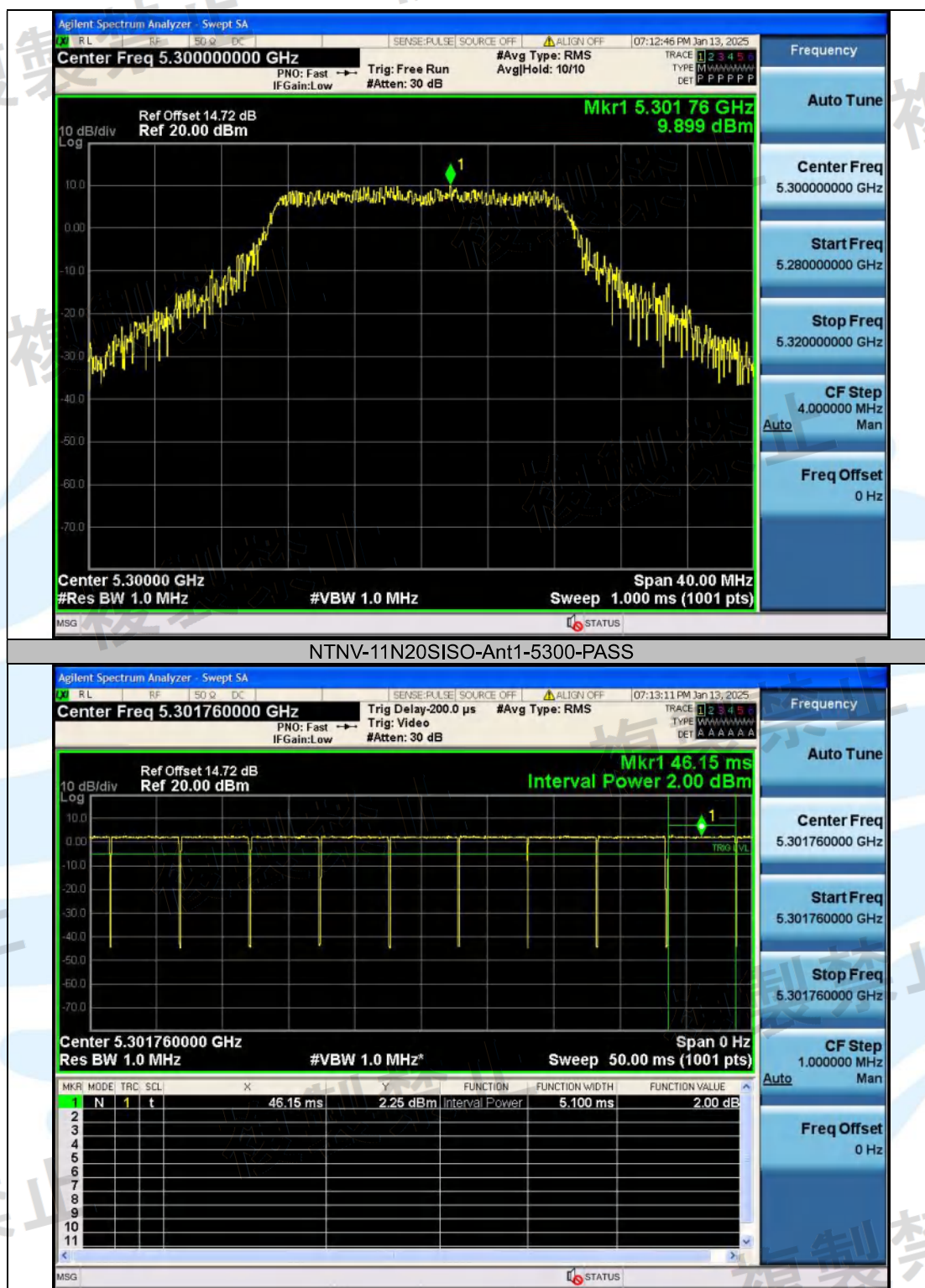
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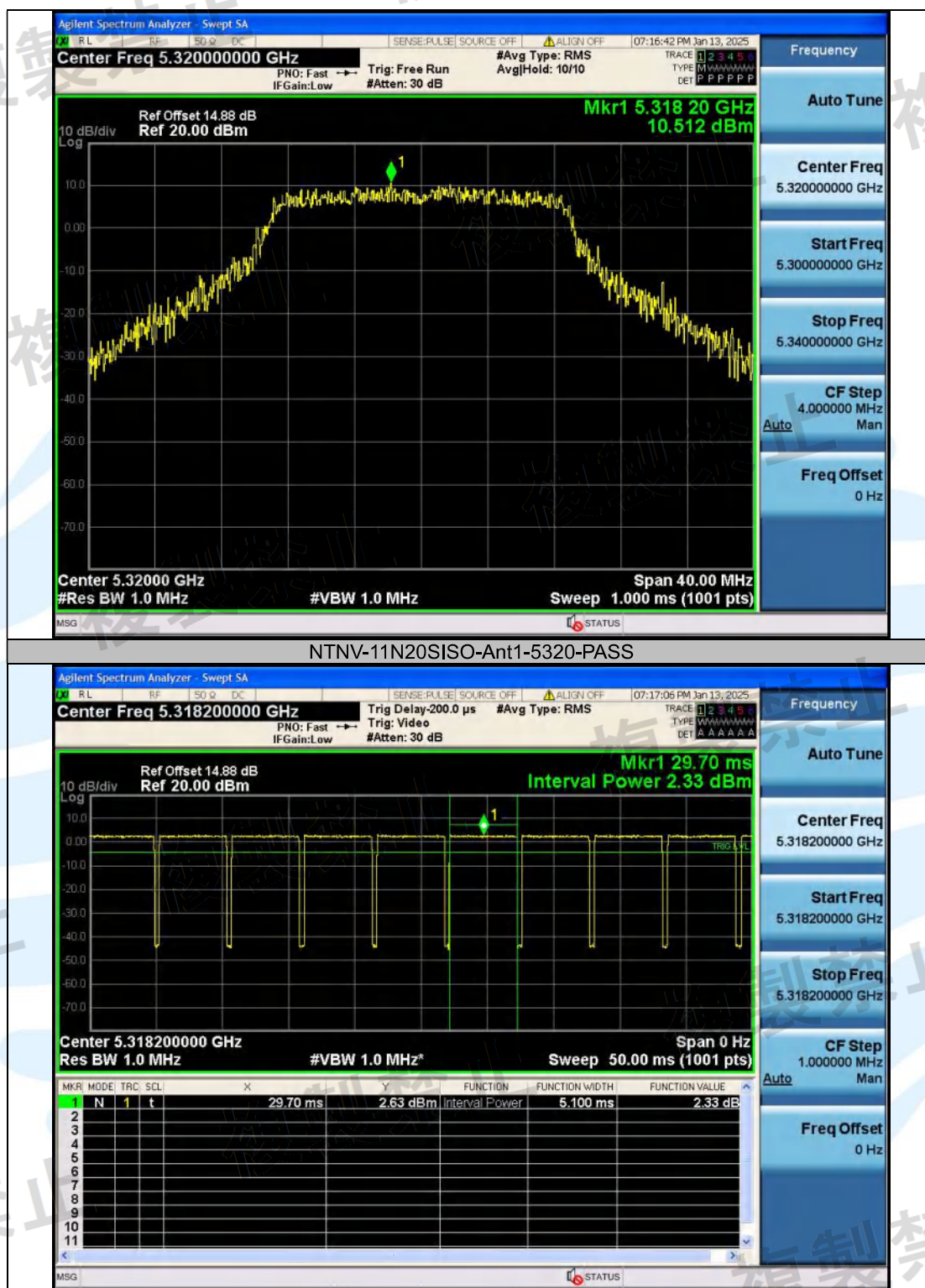


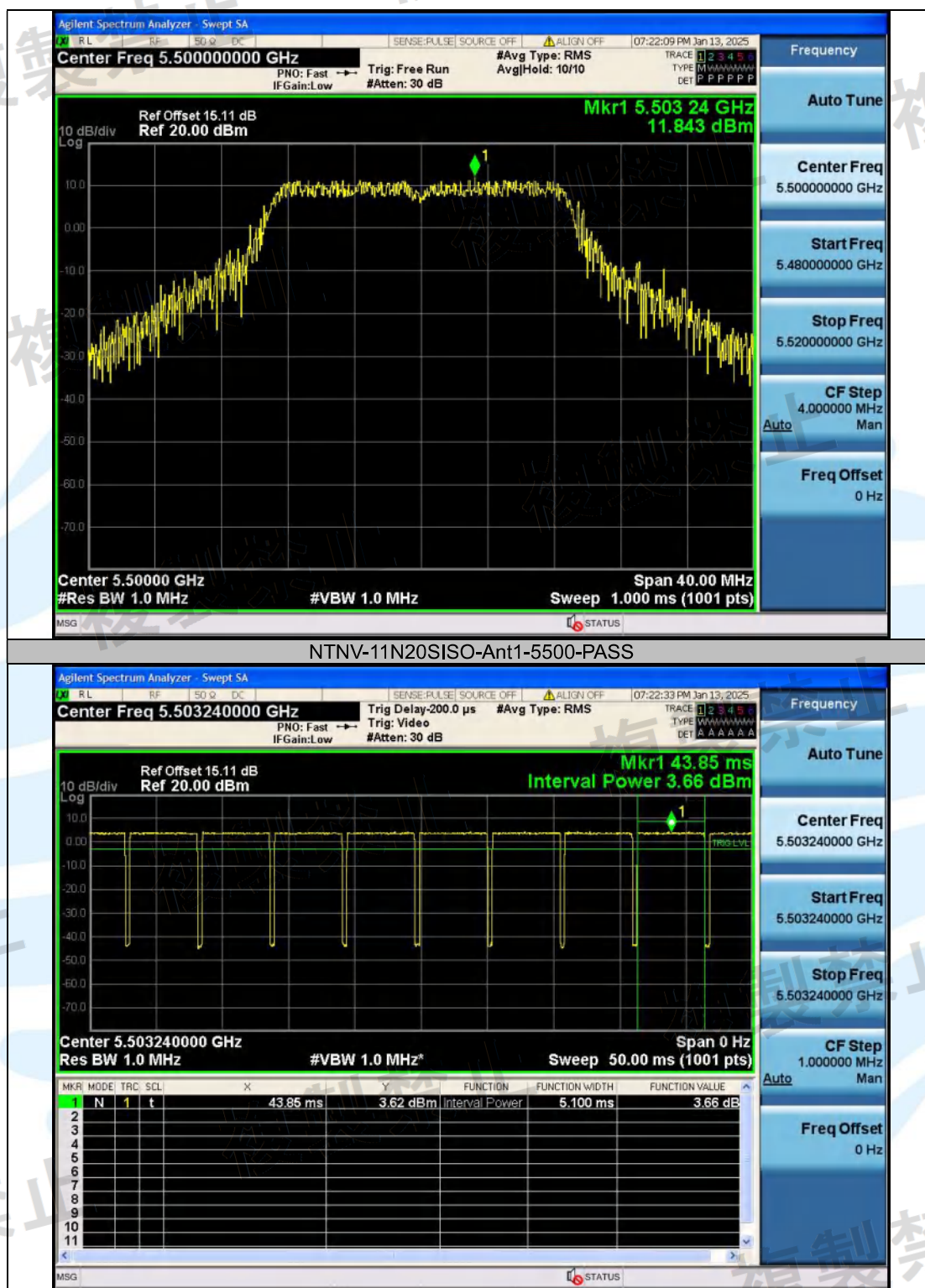












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