

TEST REPORT

Ordinance Article 2 paragraph 1 item (19)-3

Report Reference No......: MTEB26010060-R3

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Date of issue.....: **Jan.08,2026**

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Applicant's name.....: **Xiamen Hanin Co., Ltd.**

Address.....: Room 305A, Angye Building, Pioneer Park, Torch High-tech Zone, Xiamen City, Fujian Province, P.R. China

Test specification.....:

Standard.....: **Ordinance Article 2 paragraph 1 item (19)-3**

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Test item description.....: Thermal Receipt Printer

Trade Mark.....: HPRT, Dinii

Model/Type reference.....: TP900-i

Listed Models: TP90i, Dinii-900i

Ratings.....: DC 24V by Adapter

Modulation: OFDM

Frequency.....: W52: 5180MHz-5240MHz

W53: 5260MHz-5320MHz

W56: 5500MHz-5700MHz

HW Ver.....: TP900-MBA

SW Ver.....: TP900_ V1.0.6

Result.....: **PASS**

TEST REPORT

Equipment under Test : Thermal Receipt Printer

Model /Type : TP900-i

Listed Models TP90i, Dinii-900i

Remark The only differences between the models are the model names and the exterior colors; everything else is the same.

Applicant : **Xiamen Hanin Co., Ltd.**

Address : Room 305A, Angye Building, Pioneer Park, Torch High-tech Zone,
Xiamen City, Fujian Province, P.R. China

Manufacturer : **Xiamen Hanin Co., Ltd.**

Address : Room 305A, Angye Building, Pioneer Park, Torch High-tech Zone,
Xiamen City, Fujian Province, P.R. China

Test Result:	PASS
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The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

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1 SUMMAR

1.1 Test Standards

The tests were performed according to following standards:

[ARIB STD-T71](#): 5 GHz band low-power data communication system

[MIC Notice No.88 Appendix No.45](#): Test Method for 5 GHz Band Wideband Low-power Data Communications System.

1.2 Test Description

ARIB STD-T71		
Clause	Description of Test	Result
3.1.2 (2) & 3.1.2 (3) & 3.1.2 (5)	Tolerances Of Antenna Power & E.I.R.P	PASS
3.1.2 (4)	Tolerance Of Frequency	PASS
3.1.2 (7)	Transmission Burst Length	PASS
3.1.2 (8) & 3.1.2 (10)	Tolerance Of Unwanted Emission Intensity & Tolerance Of Out-Of-Band Leakage Power	PASS
3.1.2 (9)	Tolerance Of Adjacent Channel Leakage Power	PASS
3.1.2 (11)	Tolerance Of Occupied Bandwidth	PASS
3.1.3 (1)	Secondary Radiated Emissions	PASS
3.1.4.1	Interference prevention function	PASS
3.1.5	Carrier Sensing function	PASS
3.10	Dynamic Frequency Selection (DFS) for 5.3GHz	PASS (Note 1)
3.10	Dynamic Frequency Selection (DFS) for 5.6GHz	PASS (Note 1)
Note: (1) See separate DFS testing report. (2) N/T means this test item is not tested.		

1.3 TEST ENVIRONMENT

1.3.1 Address of the test laboratory

Shenzhen Most Technology Service Co., Ltd.

No.5, 2nd Langshan Road, North District, Hi-tech Industrial Park, Nanshan, Shenzhen, China

The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.4:2014 and CISPR 16-1-4:2010 SVSWR requirement for radiated emission above 1GHz.

1.3.2 Test Facility

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

CNAS-Lab Code: L3573

1.4 Measurement Uncertainty

For the test methods, according to the present document, the measurement uncertainty figures shall be calculated in accordance with TR100028-1 [2] and shall correspond to an expansion factor (coverage factor) $K=1.96$ or $K=2$ (which provide confidence levels of respectively 95% and 95.5% in the case where the distributions characterizing the actual measurement uncertainties are normal.

Parameter	Uncertainty
Frequency error / 99%&90% bandwidth	$\pm 1.62 \cdot 10^{-6}$
Total RF power, conducted	$\pm 0.8\text{dB}$
Spurious emissions, conducted	$\pm 0.8\text{dB}$
DC and low frequency voltages	$\pm 0.05\%$
Humidity	$\pm 5\%$
Temperature	$\pm 1^\circ\text{C}$

2 GENERAL INFORMATION

2.1 General Remarks

Date of receipt of test sample	:	2025.12.30
Testing commenced on	:	2025.12.31
Testing concluded on	:	2026.01.08

2.2 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Voltage	Normal Voltage	DC 24V
	High Voltage	DC 26.4V
	Low Voltage	DC 21.6V
Other	Normal Temperature	24°C
	Relative Humidity	55 %
	Air Pressure	989 hPa

Note: As the EUT was powered by DC5V from Adapter, and with the voltage stabilizing circuit used, the chip voltage received floating not exceed $\pm 1\%$ of nominal condition when working on extreme voltage, so all test performed at nominal voltage only.

2.3 General Description of EUT

Product Name:	Thermal Receipt Printer
Model:	TP900-i
Power supply:	DC 24V by Adapter
WIFI	
WLAN	Supported 802.11 a/n/ac
Modulation Type	IEEE 802.11a: OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20: OFDM (64QAM, 16QAM, QPSK,BPSK) IEEE 802.11n HT40: OFDM (64QAM, 16QAM, QPSK,BPSK) IEEE 802.11ac HT20: OFDM (64QAM, 16QAM, QPSK,BPSK) IEEE 802.11ac HT40: OFDM (64QAM, 16QAM, QPSK,BPSK) IEEE 802.11ac HT80: OFDM (64QAM, 16QAM, QPSK,BPSK)
Operation frequency	IEEE 802.11a:5180-5240MHz,5260-5320MHz,5500-5700MHz, IEEE 802.11n HT20: 5180-5240MHz,5260-5320MHz,5500-5700MHz, IEEE 802.11n HT40: 5190-5230MHz,5270-5310MHz,5510-5670MHz, IEEE 802.11ac HT20: 5180-5240MHz,5260-5320MHz,5500-5700MHz, IEEE 802.11ac HT40: 5190-5230MHz,5270-5310MHz,5510-5670MHz, IEEE 802.11ac HT80:5210MHz,5290MHz,5530MHz,5610MHz
Channel number	4 Channels for 20MHz bandwidth(5180-5240MHz) 4 Channels for 20MHz bandwidth(5260-5320MHz) 11 Channels for 20MHz bandwidth(5500-5700MHz) 2 channels for 40MHz bandwidth(5190~5230MHz) 2 channels for 40MHz bandwidth(5270~5310MHz) 5 Channels for 40MHz bandwidth(5510-5670MHz) 1 channels for 80MHz bandwidth(5210MHz) 1 channels for 80MHz bandwidth(5290MHz) 2 Channels for 80MHz bandwidth(5530MHz-5610MHz)
Antenna Gain	FPC Antenna 2dBi

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

2.4 Description of Test Modes

The EUT has been tested under typical operating condition. The Applicant provides communication tools software to control the EUT for staying in continuous transmitting and receiving mode for testing.

Operation Frequency List:

W52		W52		W52	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	38	5190	42	5210
40	5200	46	5230	/	/
44	5220	/	/	/	/
48	5240	/	/	/	/

W53		W53		W53	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
52	5260	54	5270	58	5290
56	5280	62	5310	/	/
60	5300	/	/	/	/
64	5320	/	/	/	/

W56		W56		W56	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	102	5510	106	5530
104	5520	110	5550	122	5610
108	5540	118	5590		
112	5560	126	5630		
116	5580	134	5670		
120	5600				
124	5620				
128	5640				
132	5660				
136	5680				
140	5700				

Note: Test performed at the lowest/middle/highest frequencies selected in the list above for EUT supported while working on specified mode.

2.5 Measurement Instruments List

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Due Date
1	Spectrum Analyzer	Agilent	9020A	MY48010446	2025/03/04	2026/03/03
2	Power Meter	R&S	NRVS	100696	2025/03/04	2026/03/03
3	Power Meter	R&S	NRVS	100697	2025/03/04	2026/03/03
4	Test Software	Censheng	WCS-WCN	2024/07/25	N/A	N/A

Note:Calibration Information:
Article24-2,Paragraph 4 of the Radio Act
Calibration unit:
Ti Testing & Certification Group Co., Ltd. Shenzhen Branch
Address:
Room 103, Building B, Hongji High tech Intelligent Industrial Park, No. 1008 Songbai Road,
Nanshan District, Shenzhen
CNAS:L17117

2.6 Table for Parameters of Test Software Setting

During testing, Channel & Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

Power Parameters:

Tested mode, channel, and data rate information					
Mode	Setting TX Power		data rate (Mbps) (see Note)	Channel	Frequency (MHz)
	Main Antenna				
Tested mode, channel, and data rate information					
Mode	Setting TX Power		data rate (Mbps) (see Note)	Channel	Frequency (MHz)
	Main Antenna	Aux Antenna			
IEEE802.11a	16	16	6	36	5180
	16	16	6	40	5200
	16	16	6	48	5240
	14	14	6	52	5260
	16	16	6	56	5300
	16	16	6	64	5320
	13	13	6	100	5500
	13	13	6	116	5580
	12	12	6	140	5700
IEEE802.11n HT20	16	16	MCS7	36	5180
	16	16	MCS7	40	5200
	16	16	MCS7	48	5240
	14	14	MCS7	52	5260
	16	16	MCS7	56	5300
	16	16	MCS7	64	5320
	13	13	MCS7	100	5500
	13	13	MCS7	116	5580
	12	12	MCS7	140	5700
IEEE802.11n HT40	16	16	MCS7	38	5190
	12	12	MCS7	46	5230
	12	12	MCS7	54	5270
	12	12	MCS7	62	5310
	12	12	MCS7	102	5510
	12	12	MCS7	118	5590
	12	12	MCS7	134	5670
IEEE802.11ac HT20	16	16	MCS9	36	5180
	16	16	MCS9	40	5200
	16	16	MCS9	48	5240
	14	14	MCS9	52	5260
	16	16	MCS9	56	5300
	16	16	MCS9	64	5320
	13	13	MCS9	100	5500
	13	13	MCS9	116	5580
	12	12	MCS9	140	5700
IEEE802.11ac HT40	16	16	MCS9	38	5190
	12	12	MCS9	46	5230
	12	12	MCS9	54	5270
	12	12	MCS9	62	5310
	12	12	MCS9	102	5510
	12	12	MCS9	118	5590
	12	12	MCS9	134	5670
IEEE802.11ac HT80	12	12	MCS9	42	5210
	12	12	MCS9	58	5290
	12	12	MCS9	106	5530
	12	12	MCS9	122	5610

2.7 Test Voltage

POWER SUPPLY VOLTAGE FLUCTUATION TEST

Voltage Fluctuation Test	Normal Voltage	High Voltage +10% of Normal Voltage	Low Voltage -10% of Normal Voltage
Input To EUT	DC 24V	DC 26.4V	DC 21.6V
Output To RF Module	DC 3.30V	DC 3.30V	DC 3.30V
Voltage Variation (%)	--	--	--

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.

The sample power supply was confirmed that input voltage variation at the radio unit in the radio equipment to be tested is less than +1% against a variation of +10% at the input voltage from the external power supply to the radio equipment, and the radio equipment was designed so as to be operated in a specified voltage variation limit within +10%, Radio can only tested at rated voltage.

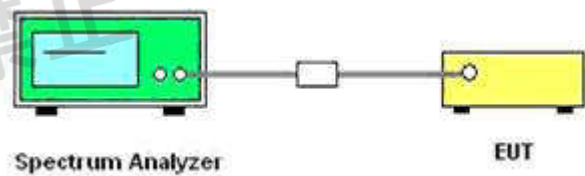
3 Test conditions and Results

3.1 Frequency Error

LIMIT

Tolerance of frequency shall be $\pm 20 \times 10^{-6}$.

TEST CONFIGURATION



TEST PROCEDURE

The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram as TEST CONFIGURATION shows.

EUT Condition: non-modulation

Spectrum Condition:

- Frequency: test frequency
- Span: 1000 KHz
- RBW: 10 KHz
- VBW: 10 KHz
- Sweep time: Auto
- Detector mode: Positive peak
- Indication mode: max hold

TEST RESULTS

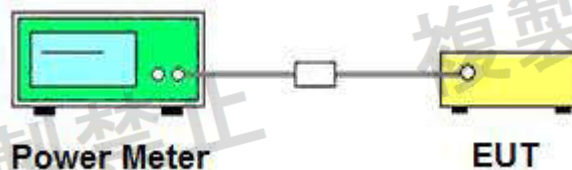
See Appendix I

3.2 Antenna Output Power and Output Power Tolerance

LIMIT

Operation Band	Item	20MHz system		40MHz system	80MHz system	160MHz system
W52 & W53	Antenna Power	DSSS, etc	OFDM	OFDM	OFDM	OFDM
		10mW/MHz	10mW/MHz	5mW/MHz	2.5mW/MHz	1.25mW/MHz
	Antenna power Tolerance	+20%, -80%				
	EIRP	W52	10mW/MHz	5mW/MHz	2.5mW/MHz	1.25mW/MHz
W56	Antenna Power	DSSS, etc	OFDM	OFDM	OFDM	OFDM
		10mW/MHz	10mW/MHz	5mW/MHz	2.5mW/MHz	1.25mW/MHz
	Antenna power Tolerance	+50%, -50%				
	EIRP	W53	10mW/MHz: with TPC 5mW/MHz: without TPC	5mW/MHz: with TPC 2.5mW/MHz: without TPC	2.5mW/MHz: with TPC 1.25mW/MHz: without TPC	1.25mW/MHz: with TPC 0.625mW/MHz: without TPC

TEST CONFIGURATION



TEST PROCEDURE

- Connect the UUT to the power meter as TEST CONFIGURATION and use the following settings:
- Connected the EUT's antenna port to the power meter by suitable attenuator, set the power meter as below:

Centre Frequency: The center frequency of the channel under test.

Resolution BW: 1MHz.

Video BW: 1MHz.

Span: Wide enough to cover the complete power envelope of the signal of the EUT.

Trigger condition: Free run.

Sweep mode: Continuous sweeping.

Detector: Peak.

Trace Mode: Max Hold.

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

- Make the following changes to the setting of the power meter :

Centre Frequency: Equal to the frequency recorded in step c

Resolution BW: 1MHz.

Video BW: 1MHz.

Span: 0Hz

Trigger condition: Free run.

Sweep mode: Continuous sweeping.

Detector: Peak

Trace Mode: Max Hold.

When the trace is complete, find the peak value (value "A" in dBm) of the power envelope and record.

- Add the (stated) antenna assembly gain "G" in dBi of the individual antenna.

- If applicable, add the additional beamforming gain "Y" in dB.

The equivalent isotopically radiated power (P) shall be calculated using the formula below:

$$P = A + G + Y$$

TEST RESULTS

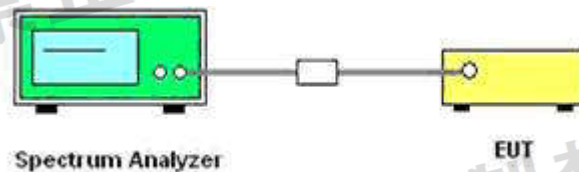
See Appendix II

3.3 Occupied Bandwidth (99% Bandwidth)

LIMIT

Operation Band	20MHz system		40MHz system	80MHz system	160MHz system
W52 & W53	DSSS, etc	OFDM	OFDM	OFDM	OFDM
	18MHz	20MHz	40MHz	80MHz	160MHz
W56	20MHz		40MHz	80MHz	160MHz

TEST CONFIGURATION



TEST PROCEDURE

The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram as TEST CONFIGURATION shows.

EUT Condition: modulation

Spectrum Condition:

1. Setting of SA is following as fellow:

- RBW: under 3% of OBW
- VBW: = RBW
- Sweep time: Auto
- Sweep Mode: Continuous sweep
- Detect mode: Positive peak
- Trace mode: Max hold

2. EUT have transmitted the maximum modulation signal and fixed channelize.

3. SA set to 99% of occupied bandwidth to measure occupied bandwidth.

TEST RESULTS

See Appendix III

3.4 Adjacent Channel Power

LIMIT

For 5.2GHz band and 5.3GHz band: For occupied bandwidth of 20MHz:

Channel power of $\pm 9\text{MHz}$

Frequency offset = 20MHz, Limit: $\leq -25\text{dBc}$

Frequency offset = 40MHz, limit: $\leq -40\text{dBc}$

For occupied bandwidth of over 40MHz:

Channel power of $\pm 19\text{MHz}$

Frequency offset = 40MHz, Limit: $\leq -25\text{dBc}$

Frequency offset = 80MHz, limit: $\leq -40\text{dBc}$

For occupied bandwidth of over 80MHz:

Channel power of $\pm 39\text{MHz}$

Frequency offset = 80MHz, Limit: $\leq -25\text{dBc}$

For 5.6GHz band:

Other than OFDM system:

Channel power of $\pm 9\text{MHz}$

Frequency offset = 20MHz, Limit: $\leq -25\text{dBc}$

Frequency offset = 40MHz, limit: $\leq -40\text{dBc}$

OFDM system:

For occupied bandwidth of 20MHz:

Channel power of $\pm 9.5\text{MHz}$

Frequency offset = 20MHz, Limit: $\leq -25\text{dBc}$

Frequency offset = 40MHz, limit: $\leq -40\text{dBc}$

For occupied bandwidth of over 40MHz:

Channel power of $\pm 19\text{MHz}$

Frequency offset = 40MHz, Limit: $\leq -25\text{dBc}$

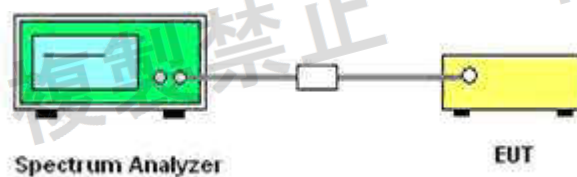
Frequency offset = 80MHz, limit: $\leq -40\text{dBc}$

For occupied bandwidth of over 80MHz:

Channel power of $\pm 39\text{MHz}$

Frequency offset = 80MHz, Limit: $\leq -25\text{dBc}$

TEST CONFIGURATION



TEST PROCEDURE

The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram as TEST CONFIGURATION shows.

Use Spectrum's ACP measurement function and set spectrum analyzer as follow:

Spectrum Condition:

- Frequency: test frequency
- Span: >4 times integrate bandwidth
- RBW: 300 KHz
- VBW: 300 KHz
- Sweep time: Auto
- Sweep mode: Continuous
- Detector mode: Sample
- Indication mode: max hold

TEST RESULTS

See Appendix VIII

3.5 Out of Band Leakage Power

LIMIT

For 5.2GHz band:

OBW $\leq$ 18MHz

Frequency:

5140MHz-5142MHz($\leq 2.5\mu\text{W/MHz}$), 5142MHz-5150MHz($\leq 15\mu\text{W/MHz}$),
5250MHz-5251MHz(1mW/MHz - $100\mu\text{W/MHz}$), 5251MHz-5260MHz($100\mu\text{W/MHz}$ - $16\mu\text{W/MHz}$),
5260MHz-5266.7MHz($16\mu\text{W/MHz}$ - $2.5\mu\text{W/MHz}$), 5266.7MHz-5360MHz($\leq 2.5\mu\text{W/MHz}$)

18MHz < OBW $\leq$ 20MHz

Frequency:

5135MHz-5142MHz($\leq 2.5\mu\text{W/MHz}$), 5142MHz-5150MHz($\leq 15\mu\text{W/MHz}$),
5250MHz-5251MHz(1mW/MHz - $100\mu\text{W/MHz}$), 5251MHz-5260MHz($100\mu\text{W/MHz}$ - $16\mu\text{W/MHz}$),
5260MHz-5266.7MHz($16\mu\text{W/MHz}$ - $2.5\mu\text{W/MHz}$), 5266.7MHz-5365MHz($\leq 2.5\mu\text{W/MHz}$)

20MHz < OBW $\leq$ 40MHz

Frequency:

5100MHz-5141.6MHz($\leq 2.5\mu\text{W/MHz}$), 5141.6MHz-5150MHz($\leq 15\mu\text{W/MHz}$),
5250MHz-5251MHz($500\mu\text{W/MHz}$ - $50\mu\text{W/MHz}$), 5251MHz-5270MHz($50\mu\text{W/MHz}$ - $8\mu\text{W/MHz}$),
5270MHz-5278.4MHz($8\mu\text{W/MHz}$ - $2.5\mu\text{W/MHz}$), 5278.4MHz-5400MHz($\leq 2.5\mu\text{W/MHz}$)

40MHz < OBW $\leq$ 80MHz

Frequency:

5020MHz-5123.2MHz($\leq 2.5\mu\text{W/MHz}$), 5123.2MHz-5150MHz($\leq 15\mu\text{W/MHz}$),
5250MHz-5251MHz($250\mu\text{W/MHz}$ - $25\mu\text{W/MHz}$), 5251MHz-5290MHz($25\mu\text{W/MHz}$ - $4\mu\text{W/MHz}$),
5290MHz-5296.7MHz($4\mu\text{W/MHz}$ - $2.5\mu\text{W/MHz}$), 5296.7MHz-5480MHz($\leq 2.5\mu\text{W/MHz}$)

For 5.3GHz band

OBW $\leq$ 18MHz

Frequency:

5140MHz-5233.3MHz($\leq 2.5\mu\text{W/MHz}$), 5233.3MHz-5240MHz($2.5\mu\text{W/MHz}$ - $16\mu\text{W/MHz}$),
5240MHz-5249MHz($16\mu\text{W/MHz}$ - $100\mu\text{W/MHz}$), 5249MHz-5250MHz($100\mu\text{W/MHz}$ - 1mW/MHz),
5350MHz-5360MHz($\leq 2.5\mu\text{W/MHz}$)

18MHz < OBW $\leq$ 20MHz

Frequency:

5135MHz-5233.3MHz($\leq 2.5\mu\text{W/MHz}$), 5233.3MHz-5240MHz($2.5\mu\text{W/MHz}$ - $16\mu\text{W/MHz}$),
5240MHz-5249MHz($16\mu\text{W/MHz}$ - $100\mu\text{W/MHz}$), 5249MHz-5250MHz($100\mu\text{W/MHz}$ - 1mW/MHz),
5350MHz-5365MHz($\leq 2.5\mu\text{W/MHz}$)

20MHz < OBW $\leq$ 40MHz

Frequency:

5100MHz-5210MHz($\leq 2.5\mu\text{W/MHz}$), 5210MHz-5221.6MHz($\leq 2.5\mu\text{W/MHz}$),
5221.6MHz-5230MHz($2.5\mu\text{W/MHz}$ - $8\mu\text{W/MHz}$), 5230MHz-5249MHz($8\mu\text{W/MHz}$ - $50\mu\text{W/MHz}$),
5249MHz-5250MHz($50\mu\text{W/MHz}$ - $500\mu\text{W/MHz}$), 5350MHz-5358.4MHz($\leq 15\mu\text{W/MHz}$),
5358.4MHz-5400MHz($\leq 2.5\mu\text{W/MHz}$)

40MHz < OBW $\leq$ 80MHz (n80)

Frequency:

5020MHz-5203.3MHz($\leq 2.5\mu\text{W/MHz}$), 5203.3MHz-5210MHz($2.5\mu\text{W/MHz}$ - $4\mu\text{W/MHz}$),
5210MHz-5249MHz($4\mu\text{W/MHz}$ - $25\mu\text{W/MHz}$), 5249MHz-5250MHz($25\mu\text{W/MHz}$ - $250\mu\text{W/MHz}$),
5350MHz-5376.8MHz($\leq 15\mu\text{W/MHz}$), 5376.8MHz-5480MHz($\leq 2.5\mu\text{W/MHz}$)

80MHz < OBW $\leq$ 160MHz (n160)

Frequency:

4916MHz-5099.6MHz($\leq 2.5\mu\text{W/MHz}$), 5099.6MHz-5150MHz($\leq 15\mu\text{W/MHz}$),
5350MHz-5400.4MHz($\leq 15\mu\text{W/MHz}$), 5400.4MHz-5584MHz($\leq 2.5\mu\text{W/MHz}$)

For 5.6GHz band:

OBW $\leq$ 20MHz (exclude OFDM)

Frequency:

5460MHz-5470MHz($\leq 12.5\mu\text{W/MHz}$), 5725MHz-5740MHz($\leq 12.5\mu\text{W/MHz}$)

OBW $\leq$ 20MHz (OFDM)

Frequency:

5455MHz-5460MHz($\leq 2.5\mu\text{W}/\text{MHz}$), 5460MHz-5470MHz($\leq 12.5\mu\text{W}/\text{MHz}$),
5725MHz-5740MHz($\leq 12.5\mu\text{W}/\text{MHz}$), 5740MHz-5745MHz($\leq 2.5\mu\text{W}/\text{MHz}$)20MHz < OBW $\leq$ 40MHz

Frequency:

5420MHz-5460MHz($\leq 12.5\mu\text{W}/\text{MHz}$), 5460MHz-5470MHz($\leq 50\mu\text{W}/\text{MHz}$),
5725MHz-5760MHz($\leq 12.5\mu\text{W}/\text{MHz}$)40MHz < OBW $\leq$ 80MHz

Frequency:

5340MHz-5460MHz($\leq 12.5\mu\text{W}/\text{MHz}$), 5460MHz-5469.5MHz($\leq 50\mu\text{W}/\text{MHz}$),
5469.5MHz-5470MHz($\leq 51.2\mu\text{W}/\text{MHz}$), 5725MHz-5800MHz($\leq 12.5\mu\text{W}/\text{MHz}$)70MHz < OBW $\leq$ 160MHz

Frequency:

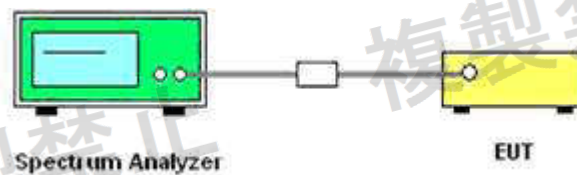
5236MHz-5419.6MHz($\leq 12.5\mu\text{W}/\text{MHz}$), 5419.6MHz-5470MHz($\leq 50\mu\text{W}/\text{MHz}$),
5725MHz-5904MHz($\leq 12.5\mu\text{W}/\text{MHz}$)

W52					
OBW $\leq$ 18MHz			18MHz < OBW $\leq$ 20MHz		
Frequency (MHz)	Limit ($\mu\text{W}/\text{MHz}$)	Limit (dBm/MHz)	Frequency (MHz)	Limit ($\mu\text{W}/\text{MHz}$)	Limit (dBm/MHz)
5140-5142	2.5	-26	5135-5142	2.5	-26
5142-5150	15	-18.24	5142-5150	15	-18.24
5250-5251	1000-100	0 – (-10)	5250-5251	1000-100	0 – (-10)
5251-5260	100-16	(-10) – (-18)	5251-5260	100-16	(-10) – (-18)
5260-5266.7	16-2.5	(-18) – (-26)	5260-5266.7	16-2.5	(-18) – (-26)
5266.7-5360	2.5	-26	5266.7-5365	2.5	-26
20MHz < OBW $\leq$ 40MHz			40MHz < OBW $\leq$ 80MHz		
5100-5141.6	2.5	-26	5020-5123.2	2.5	-26
5141.6-5150	15	-18.24	5123.2-5150	15	-18.24
5250-5251	500-50	(-3) – (-13)	5250-5251	250-25	(-6) – (-16)
5251-5270	50-8	(-13) – (-21)	5251-5290	25—4	(-16) – (-24)
5270-5278.4	8-2.5	(-21) – (-26)	5290-5296.7	4-2.5	(-24) – (-26)
5278.4-5400	2.5	-26	5296.7-5480	2.5	-26

W53					
OBW $\leq$ 18MHz			18MHz < OBW $\leq$ 20MHz		
Frequency (MHz)	Limit ($\mu\text{W}/\text{MHz}$)	Limit (dBm/MHz)	Frequency (MHz)	Limit ($\mu\text{W}/\text{MHz}$)	Limit (dBm/MHz)
5140-5233.3	2.5	-26	5135-5233.3	2.5	-26
5233.3-5240	2.5-16	(-26) – (-18)	5233.3-5240	2.5—16	(-26) – (-18)
5240-5249	16-100	(-18) – (-10)	5240-5249	16—100	(-18) – (-10)
5249-5250	100-1000	(-10) – (0)	5249-5250	100—1000	(-10) – (0)
5350-5360	2.5	-26	5350-5365	16-2.5	(-18) – (-26)
20MHz < OBW $\leq$ 40MHz			40MHz < OBW $\leq$ 80MHz		
5100-5210	2.5	-26	5020-5203.3	2.5	-26
5210-5221.6	2.5	-26	5203.3-5210	2.5 – 4	(-26) – (-24)
5221.6-5230	2.5-8	(-26) – (-21)	5210-5249	4 – 25	(-24) – (-16)
5230-5249	8-50	(-21) – (-13)	5249-5250	25 – 250	(-16) – (-6)
5249-5250	50-500	(-13) – (-3)	5350-5376.8	15	-18.24
5350-5358.4	15	-18.24	5376.8-5480	2.5	-26
5358.4-5400	2.5	-26	/	/	/

W56					
OBW $\leq$ 19MHz			OBW $\leq$ 19.7MHz		
Frequency (MHz)	Limit (uW/MHz)	Limit (dBm/MHz)	Frequency (MHz)	Limit (uW/MHz)	Limit (dBm/MHz)
5460-5470	12.5	-19	5455-5460	2.5	-26
5725-5740	12.5	-19	5460-5470	12.5	-19
/	/	/	5725-5740	12.5	-19
/	/	/	5740-5745	2.5	-26
20MHz < OBW $\leq$ 40MHz			40MHz < OBW $\leq$ 80MHz		
5420-5460	12.5	-19	5340-5460	12.5	-19
5460-5470	50	-13	5460-5469.5	50	-13
5725-5760	12.5	-19	5469.5-5470	51.2	-12.9
/	/	/	5725-5800	12.5	-19
/	/	/	/	/	/

TEST CONFIGURATION



TEST PROCEDURE

Enable EUT under transmission mode and connected it to the spectrum analyzer through antenna output port as the block diagram show in TEST CONFIGURATION

Use Spectrum's ACP measurement function and set spectrum analyzer as follow:

Spectrum Condition:

Step 1:

- Frequency: include each specified frequency range
- RBW: 1 MHz
- VBW: 1 MHz
- Span: Wide enough to cover the complete power envelope of the signal of the UUT.
- Detector: Peak
- Trace Mode: Max Hold

Step 2:

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

Step 3:

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

- Centre Frequency: Equal to the frequency recorded in step 2.
- Span: 0 Hz
- RBW: 1 MHz
- VBW: 1 MHz
- Detector: RMS
- Trace Mode: Clear Write

TEST RESULTS

See Appendix VII

3.6 Unwanted Emission Strength

LIMIT

For 5.2G band and 5.3G band

$OBW \leq 18\text{MHz}$

$f \leq 5140\text{MHz}$ and $5360\text{ MHz} \leq f$

Spurious emission intensity: $2.5\mu\text{W/MHz}$ or less

$18\text{MHz} \leq OBW \leq 19\text{MHz}$

$f \leq 5135\text{MHz}$ and $5365\text{ MHz} \leq f$

Spurious emission intensity: $2.5\mu\text{W/MHz}$ or less

$19\text{MHz} \leq OBW \leq 38\text{MHz}$

$f \leq 5100\text{MHz}$ and $5400\text{ MHz} \leq f$

Spurious emission intensity: $2.5\mu\text{W/MHz}$ or less

$38\text{MHz} \leq OBW \leq 78\text{MHz}$

$f \leq 5020\text{MHz}$ and $5480\text{ MHz} \leq f$

Spurious emission intensity: $2.5\mu\text{W/MHz}$ or less

$78\text{MHz} \leq OBW \leq 158\text{MHz}$ (only for 5.3G band) $f \leq 4916\text{MHz}$ and $5584\text{ MHz} \leq f$

Spurious emission intensity: $2.5\mu\text{W/MHz}$ or less

For 5.6G band

$OBW \leq 19.7\text{MHz}$ (exclude OFDM)

$f \leq 5460\text{MHz}$ and $5740\text{ MHz} \leq f$

Spurious emission intensity: $2.5\mu\text{W/MHz}$ or less

$OBW \leq 19.7\text{MHz}$

$f \leq 5455\text{MHz}$ and $5745\text{ MHz} \leq f$

Spurious emission intensity: $2.5\mu\text{W/MHz}$ or less

$19.7\text{MHz} \leq OBW \leq 38\text{MHz}$

$f \leq 5420\text{MHz}$ and $5760\text{ MHz} \leq f$

Spurious emission intensity: $2.5\mu\text{W/MHz}$ or less

$38\text{MHz} \leq OBW \leq 78\text{MHz}$

$f \leq 5340\text{MHz}$ and $5800\text{ MHz} \leq f$

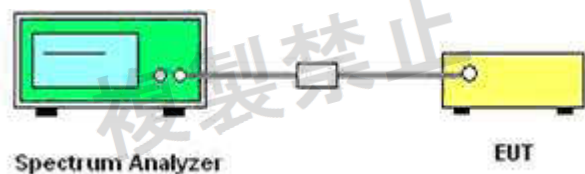
Spurious emission intensity: $2.5\mu\text{W/MHz}$ or less

$78\text{MHz} \leq OBW \leq 158\text{MHz}$

$f \leq 5236\text{MHz}$ and $5904\text{ MHz} \leq f$

Spurious emission intensity: $2.5\mu\text{W/MHz}$ or less

TEST CONFIGURATION



TEST PROCEDURE

The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram as TEST CONFIGURATION shows.

EUT Condition: modulation

Spectrum Condition:

- Frequency: 30MHz-26GHz
- RBW: 100 KHz (30MHz-1GHz), 1MHz (1GHz-26GHz)
- VBW: 100 KHz (30MHz-1GHz), 1MHz (1GHz-26GHz)
- Sweep time: Auto
- Detector mode: Positive peak
- Indication mode: max hold

TEST RESULTS

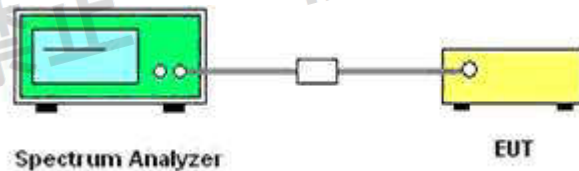
See Appendix IV

3.7 Secondary Radiated Emission Strength

LIMIT

The limit on secondary emissions radiated from the receiving equipment within which the function of other radio equipment will not be impaired shall be, in terms of the power of a dummy antenna circuit that has the same electrical constant as the receiving antenna, 4nW or less at a frequency below 1 GHz and 20 nW or less at a frequency of 1 GHz or higher as measured using the circuit.

TEST CONFIGURATION



TEST PROCEDURE

The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram as TEST CONFIGURATION shows.

EUT Condition: modulation

Spectrum Condition:

- Frequency: 30MHz-26GHz
- RBW: 100 KHz (30MHz-1GHz), 1MHz (1GHz-26GHz)
- VBW: 100 KHz (30MHz-1GHz), 1MHz (1GHz-26GHz)
- Sweep time: Auto
- Detector mode: Positive peak
- Indication mode: max hold

TEST RESULTS

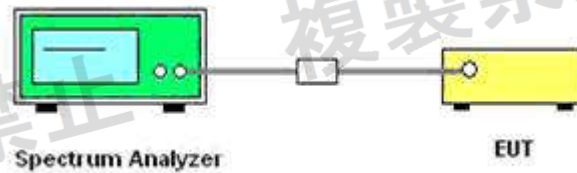
See Appendix IX

3.8 Transmission Burst Length

LIMIT

Transmission Burst Length shall be 8s

TEST CONFIGURATION



TEST PROCEDURE

Enable EUT under transmission mode and connected it to the spectrum analyzer through antenna output port as the block diagram show in TEST CONFIGURATION

Use Spectrum's ACP measurement function and set spectrum analyzer as follow:

Spectrum Condition:

- Frequency: test frequency
- Span: 0Hz
- RBW: 1MHz
- VBW: = RBW
- Sweep time: Auto
- Sweep mode: single
- Detector mode: Peak
- Indication mode: max hold

TEST RESULTS

See Appendix VI

3.8 Carrier Sense Capability

LIMIT

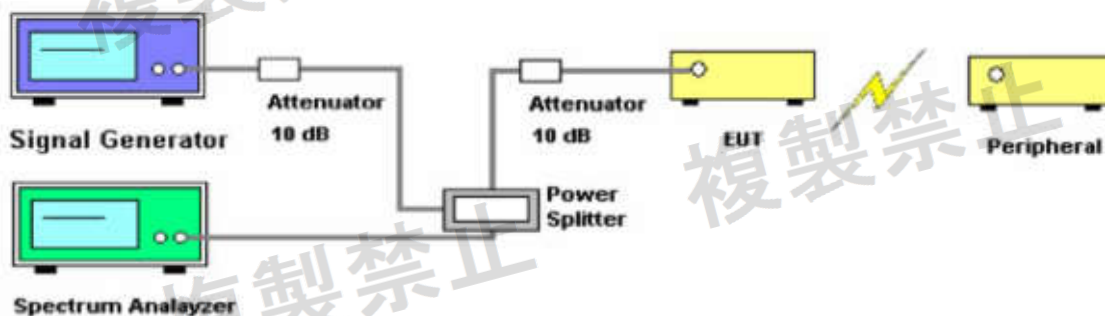
Item	Limits
Carrier Sense	Good – EUT stop RF transmission signal after carrier inject to EUT. (On $22.79 + Gr - 20 \cdot \log(f)$ [dBm] (Gr: dBi; f: MHz) or 100mV/m)

INSTRUMENTS SETTING

The following table is the setting of spectrum analyser and receiver.

Spectrum Parameter	Setting
Attenuation	Auto
RB / VB	1 MHz
Span	0 MHz
Sweep	Continuous
Detector	Peak
Trigger mode	Video

TEST CONFIGURATION



TEST PROCEDURE

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

TEST RESULTS

Remark: we test all modes, only worst cases at the reported as below:

Test mode	Test frequency (MHz)	Interference signal level (dBm)	Test result
IEEE 802.11ac VHT20	5180	-46.24	Good
IEEE 802.11ac VHT40	5230	-46.32	Good
IEEE 802.11ac VHT80	5210	-46.29	Good

3.9 Construction Protection Method

REQUIREMENT

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

CONFIRMATION METHOD

The radio frequency part of the product is shielded by a shield, End user can not modify easily.

3.10 Interference Prevention Function

REQUIREMENT

Clarify the one automatically to transmit and to receive identification code with the wireless equipment of the wireless station used in the same premises.

Item	Limits
Identification code	≥ 48 bits

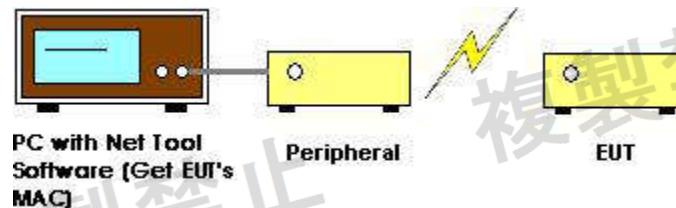
CONFIRMATION METHOD

A communication link was made where the ID code is correct (Identical).

TEST PROCEDURE

- In the case that the EUT has the function of automatically transmitting the identification code: a. Transmit the predetermined identification codes from EUT. b. Check the transmitted identification codes with the demodulator.
- In the case of receiving the identification code: a. Transmit the predetermined identification codes from the counterpart. b. Check if communication is normal. c. Transmit the other signals 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.

TEST CONFIGURATION

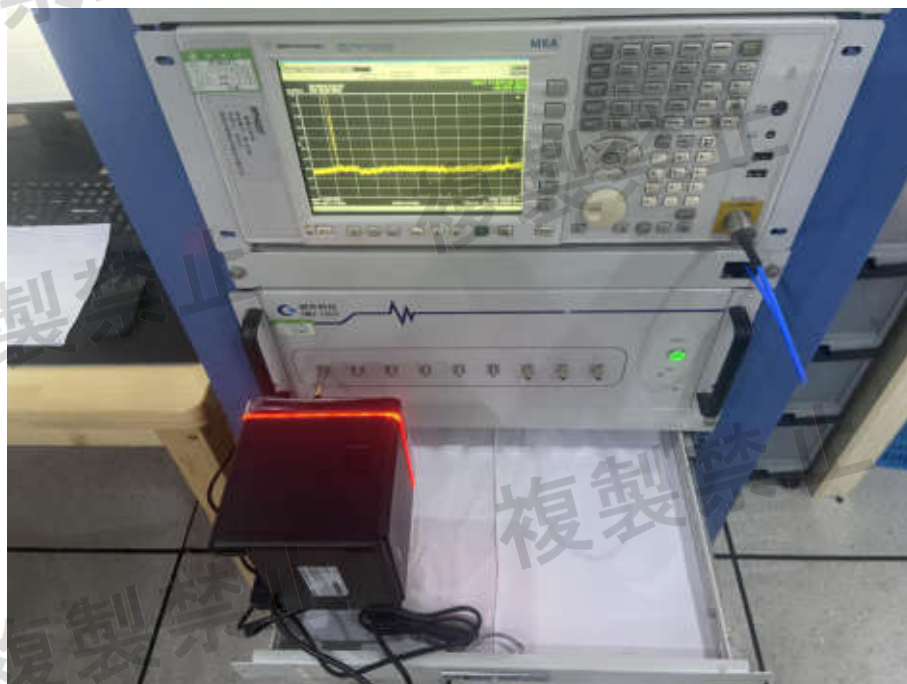


TEST RESULTS

PASS

MAC: 00:0A:C2:1B:1B:A3

4 Test Setup Photos of the EUT



5 Photos of the EUT

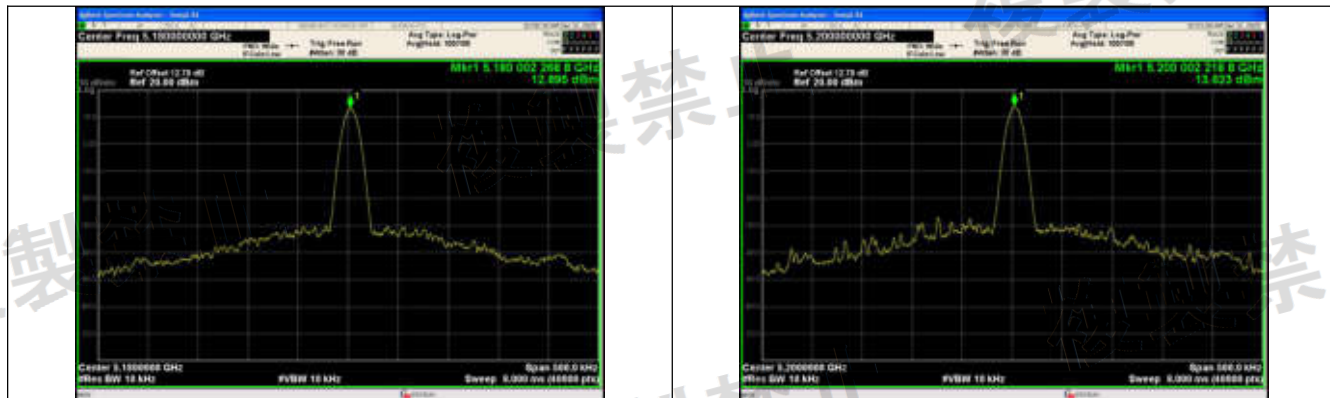
Reference to the test report EUT Report.

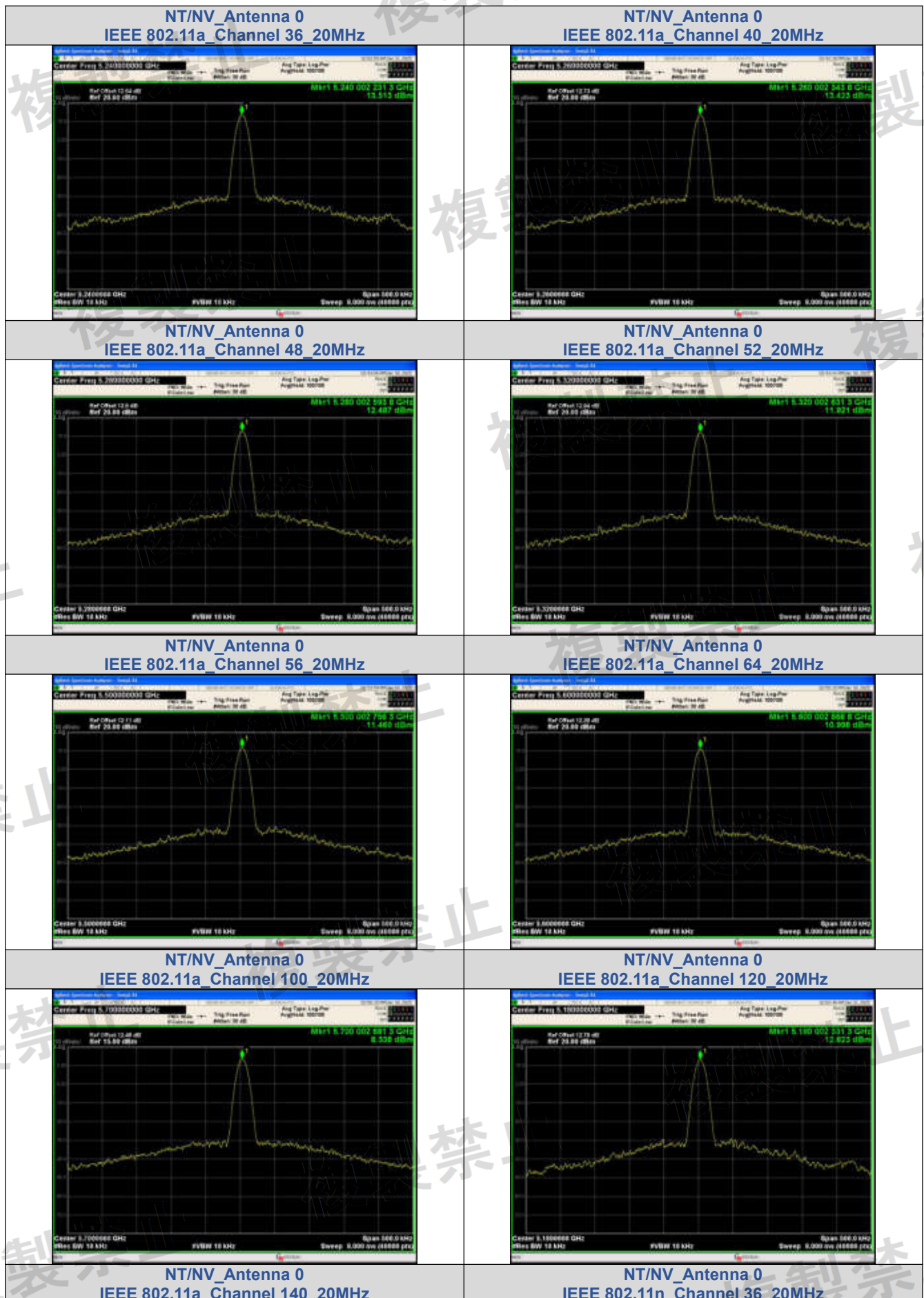
APPENDIX I. Frequency Tolerance

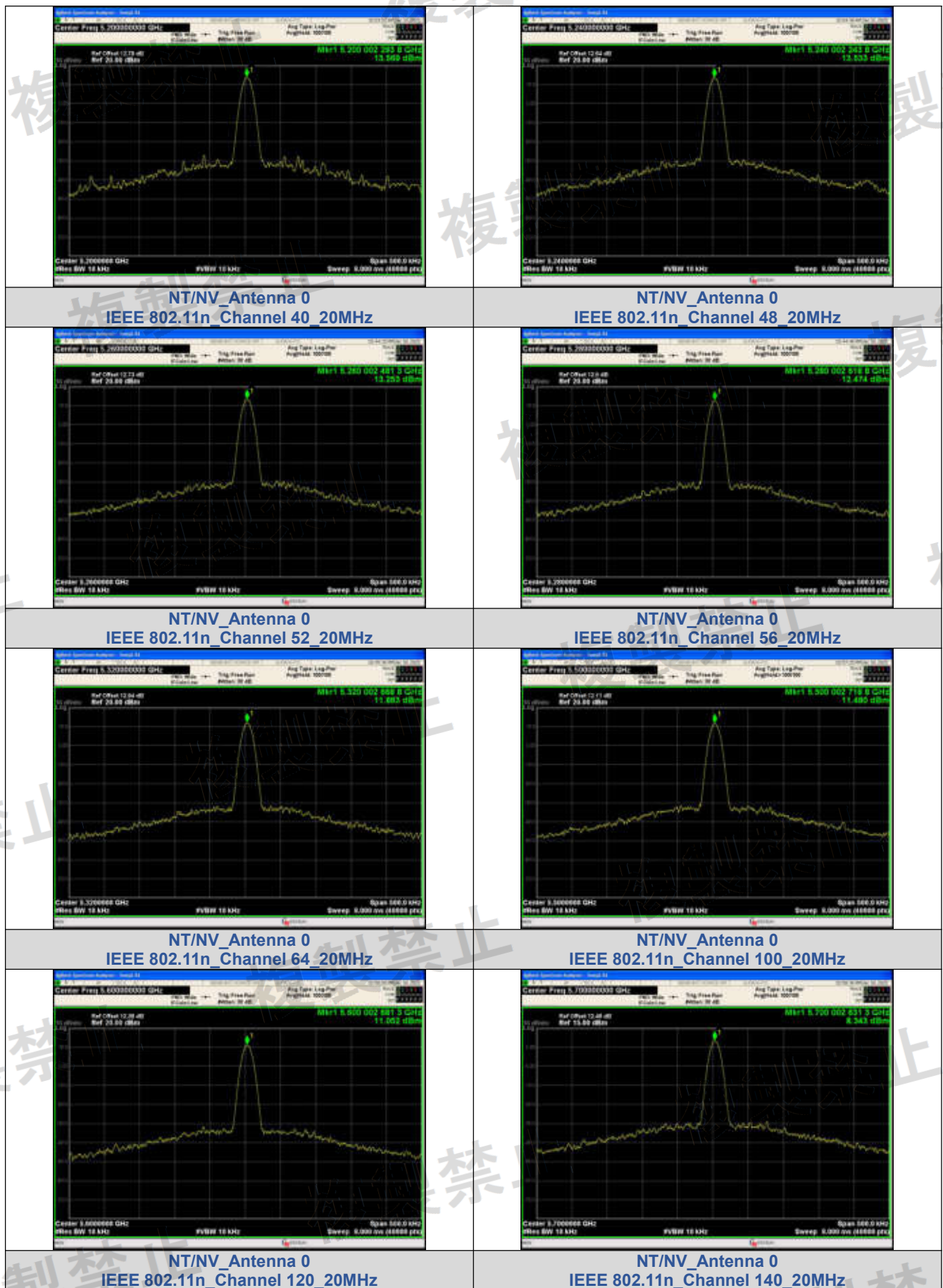
Test Result

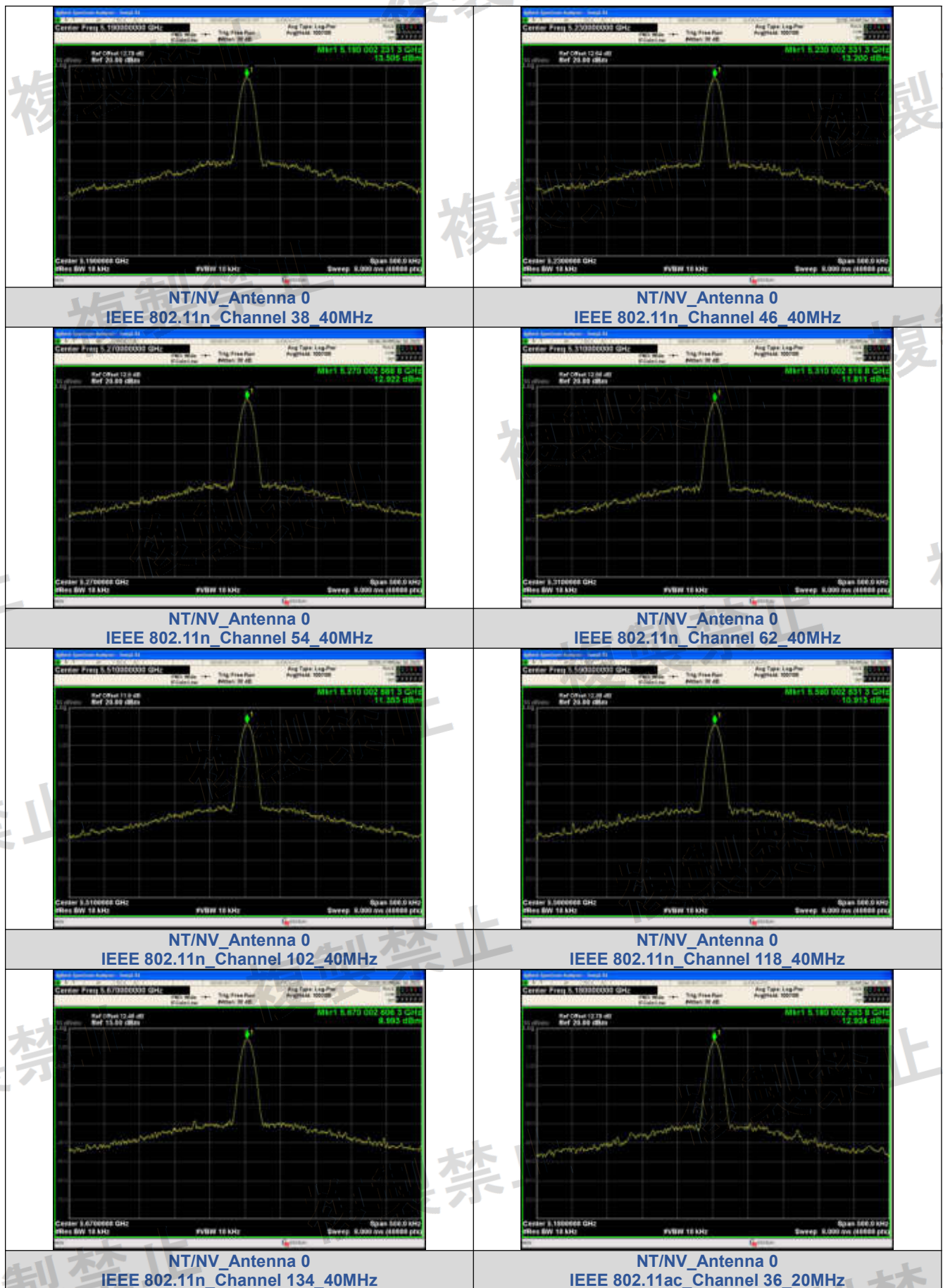
Condition	Mode	Ch.	Antenna	Center Frequency (MHz)	Measured Value (MHz)	Deviation (ppm)	Limit (ppm)	Result
NT/NV	IEEE 802.11a(CW)	36	0	5180	5180.002	0.44	± 20	PASS
		40		5200	5200.002	0.43		PASS
		48		5240	5240.002	0.43		PASS
		52		5260	5260.002	0.45		PASS
		56		5280	5280.003	0.49		PASS
		64		5320	5320.003	0.49		PASS
		100		5500	5500.003	0.50		PASS
		120		5600	5600.003	0.48		PASS
		140		5700	5700.003	0.47		PASS
	IEEE 802.11n_20(CW)	36		5180	5180.002	0.45		PASS
		40		5200	5200.002	0.44		PASS
		48		5240	5240.002	0.43		PASS
		52		5260	5260.002	0.47		PASS
		56		5280	5280.003	0.50		PASS
		64		5320	5320.003	0.50		PASS
		100		5500	5500.003	0.49		PASS
		120		5600	5600.003	0.48		PASS
		140		5700	5700.003	0.46		PASS
	IEEE 802.11n_40(CW)	38		5190	5190.002	0.43		PASS
		46		5230	5230.002	0.45		PASS
		54		5270	5270.003	0.49		PASS
		62		5310	5310.003	0.49		PASS
		102		5510	5510.003	0.49		PASS
		118		5590	5590.003	0.47		PASS
		134		5670	5670.003	0.46		PASS
	IEEE 802.11ac_20(CW)	36		5180	5180.002	0.44		PASS
		40		5200	5200.002	0.44		PASS
		48		5240	5240.002	0.45		PASS
		52		5260	5260.002	0.47		PASS
		56		5280	5280.003	0.49		PASS
		64		5320	5320.003	0.49		PASS
		100		5500	5500.003	0.47		PASS
		120		5600	5600.003	0.47		PASS
	IEEE 802.11ac_40(CW)	38		5190	5190.002	0.45		PASS
		46		5230	5230.002	0.44		PASS
		54		5270	5270.002	0.47		PASS
		62		5310	5310.003	0.49		PASS
		102		5510	5510.003	0.49		PASS
		118		5590	5590.003	0.47		PASS
		134		5670	5670.003	0.46		PASS
	IEEE 802.11ac_80(CW)	42		5210	5210.002	0.44		PASS
		58		5290	5290.003	0.48		PASS
		106		5530	5530.003	0.48		PASS

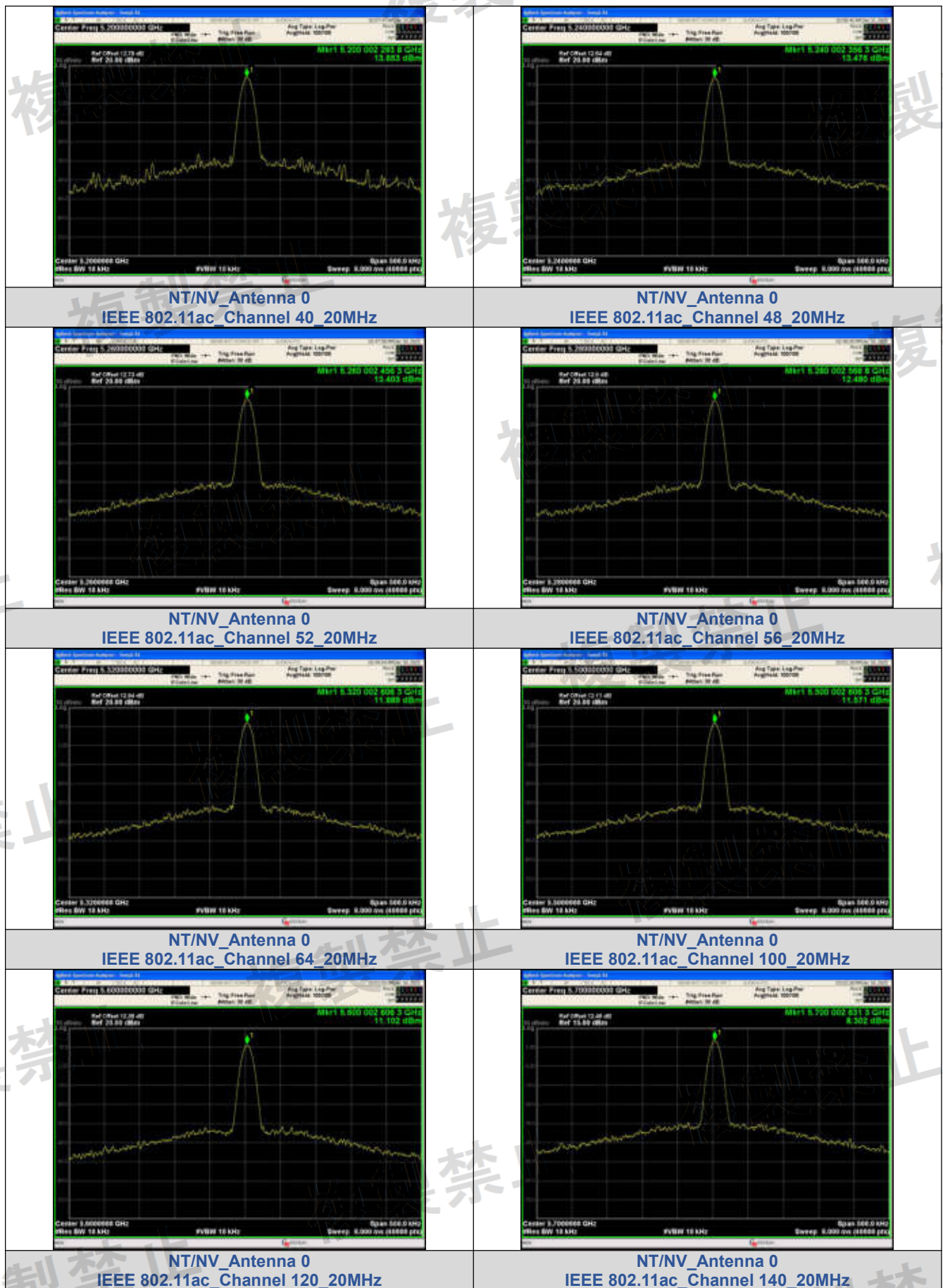
Test Graphs NT/NV

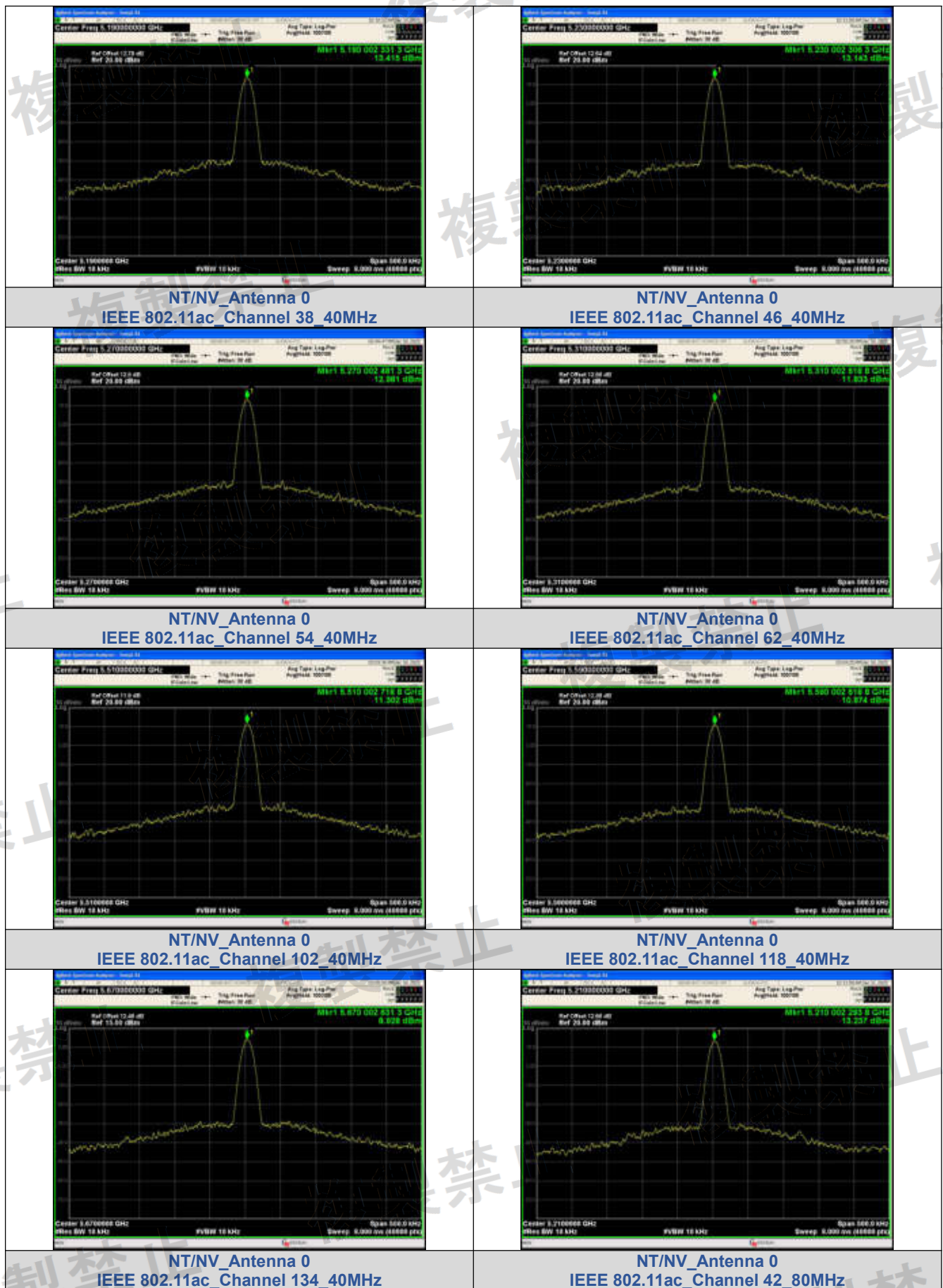


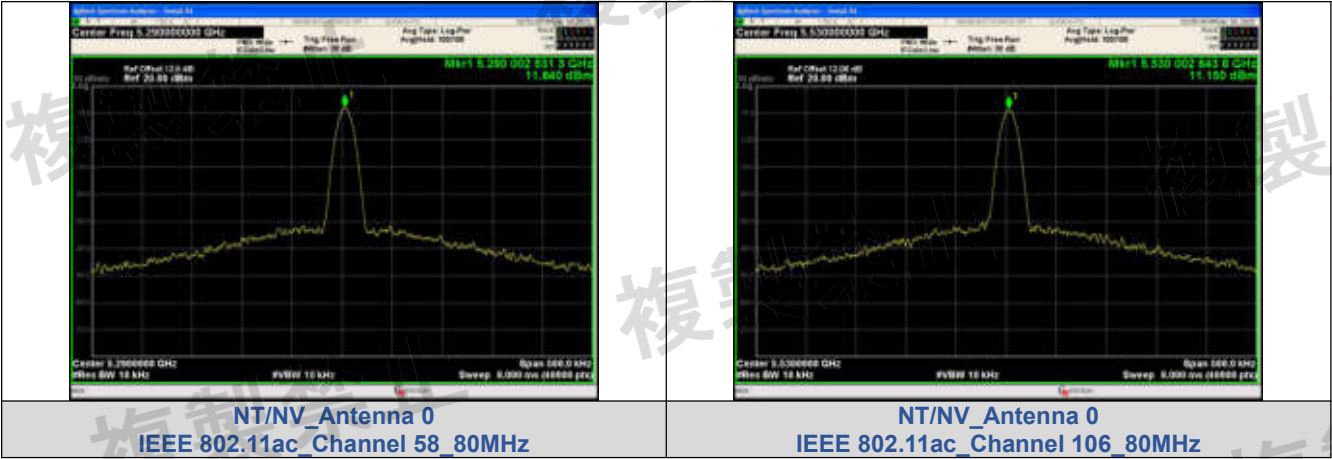












APPENDIX II. Antenna PowerTest Result
Antenna Power

Condition	Mode	Frequency (MHz)	Ant.0 (mW/MHz)	Total (mW/MHz)	Limit (mW/MHz)	Result
NT/NV	IEEE 802.11a	5180	5.1464	--	10	PASS
		5200	5.6507	--	10	PASS
		5240	6.0311	--	10	PASS
		5260	3.074	--	10	PASS
		5280	3.1225	--	10	PASS
		5320	2.9546	--	10	PASS
		5500	6.1944	--	10	PASS
		5600	6.0256	--	10	PASS
	IEEE 802.11n_20	5180	5.0933	--	10	PASS
		5200	6.0104	--	10	PASS
		5240	5.327	--	10	PASS
		5260	2.2629	--	10	PASS
		5280	2.5206	--	10	PASS
		5320	2.8809	--	10	PASS
		5500	5.1558	--	10	PASS
		5600	7.246	--	10	PASS
	IEEE 802.11n_40	5180	3.0033	--	5	PASS
		5230	2.2441	--	5	PASS
		5270	1.2679	--	5	PASS
		5310	1.5029	--	5	PASS
		5510	2.3464	--	5	PASS
		5590	3.074	--	5	PASS
		5670	2.7727	--	5	PASS
	IEEE 802.11ac_20	5180	5.2469	--	10	PASS
		5200	6.2345	--	10	PASS
		5240	5.4595	--	10	PASS
		5260	2.4581	--	10	PASS
		5280	2.6534	--	10	PASS
		5320	2.2004	--	10	PASS
		5500	6.9247	--	10	PASS
		5600	6.1674	--	10	PASS
	IEEE 802.11ac_40	5180	3.0448	--	5	PASS
		5230	2.8699	--	5	PASS
		5270	1.1347	--	5	PASS
		5310	1.2176	--	5	PASS
		5510	2.4339	--	5	PASS
		5590	2.6333	--	5	PASS
		5670	2.8353	--	5	PASS
	IEEE 802.11ac_80	5210	0.6592	--	2.5	PASS
		5290	0.7026	--	2.5	PASS
		5530	1.6951	--	2.5	PASS

Antenna Power Tolerance

Condition	Mode	Frequency (MHz)	Ant.0 (%)	Total (%)	Rated power (mW/MHz)	Limit (%)	Result
NT/NV	IEEE 802.11a	5180	-35.67	--	8.0	-80 to +20	PASS
		5200	-29.3663	--	8.0	-80 to +20	PASS
		5240	-24.6112	--	8.0	-80 to +20	PASS
		5260	-61.575	--	8.0	-80 to +20	PASS
		5280	-60.9687	--	8.0	-80 to +20	PASS
		5320	-63.0675	--	8.0	-80 to +20	PASS
		5500	-22.57	--	8.0	-50 to +50	PASS
		5600	-24.68	--	8.0	-50 to +50	PASS
		5700	-23.05	--	8.0	-50 to +50	PASS
	IEEE 802.11n_20	5180	-36.3337	--	8.0	-80 to +20	PASS
		5200	-24.87	--	8.0	-80 to +20	PASS
		5240	-20.9125	--	8.0	-80 to +20	PASS
		5260	-59.2137	--	8.0	-80 to +20	PASS

		5280	-43.4925	--	8.0	-80 to +20	PASS
		5320	-38.9888	--	8.0	-80 to +20	PASS
		5500	-35.5525	--	8.0	-50 to +50	PASS
		5600	-9.425	--	8.0	-50 to +50	PASS
		5700	-38.41	--	8.0	-50 to +50	PASS
	IEEE 802.11n_40	5190	-24.9175	--	4.0	-80 to +20	PASS
		5230	-18.8975	--	4.0	-80 to +20	PASS
		5270	-68.3025	--	4.0	-80 to +20	PASS
		5310	-57.4275	--	4.0	-80 to +20	PASS
		5510	-41.34	--	4.0	-50 to +50	PASS
		5590	-23.15	--	4.0	-50 to +50	PASS
		5670	-30.6825	--	4.0	-50 to +50	PASS
	IEEE 802.11ac_20	5180	-34.4138	--	8.0	-80 to +20	PASS
		5200	-22.0688	--	8.0	-80 to +20	PASS
		5240	-19.2562	--	8.0	-80 to +20	PASS
		5260	-69.2738	--	8.0	-80 to +20	PASS
		5280	-66.8325	--	8.0	-80 to +20	PASS
		5320	-72.495	--	8.0	-80 to +20	PASS
		5500	-13.4413	--	8.0	-50 to +50	PASS
	IEEE 802.11ac_40	5600	-22.9075	--	8.0	-50 to +50	PASS
		5700	-18.2275	--	8.0	-50 to +50	PASS
		5190	1.12	--	4.0	-80 to +20	PASS
		5230	-3.2525	--	4.0	-80 to +20	PASS
		5270	-71.6325	--	4.0	-80 to +20	PASS
		5310	-69.56	--	4.0	-80 to +20	PASS
		5510	-39.1525	--	4.0	-50 to +50	PASS
	IEEE 802.11ac_80	5590	-34.1675	--	4.0	-50 to +50	PASS
		5670	-29.1175	--	4.0	-50 to +50	PASS
		5210	-65.24	--	2.0	-80 to +20	PASS
		5290	-64.87	--	2.0	-80 to +20	PASS
		5530	-15.245	--	2.0	-50 to +50	PASS

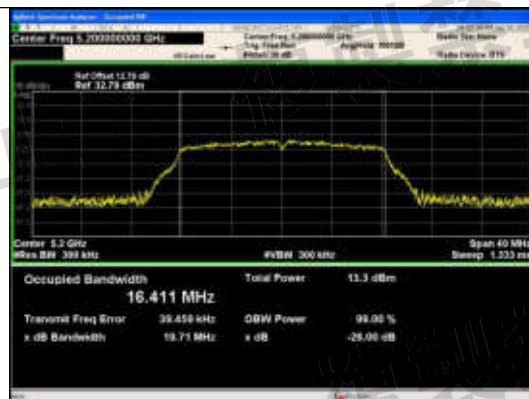
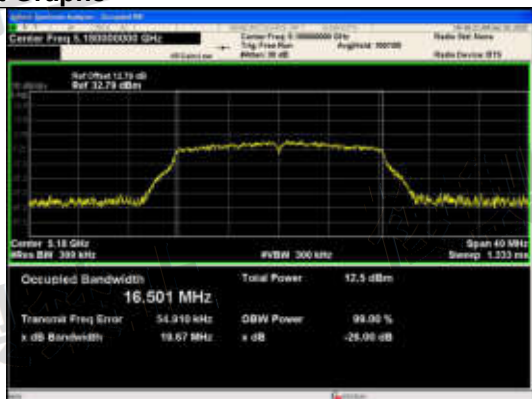
EIRP

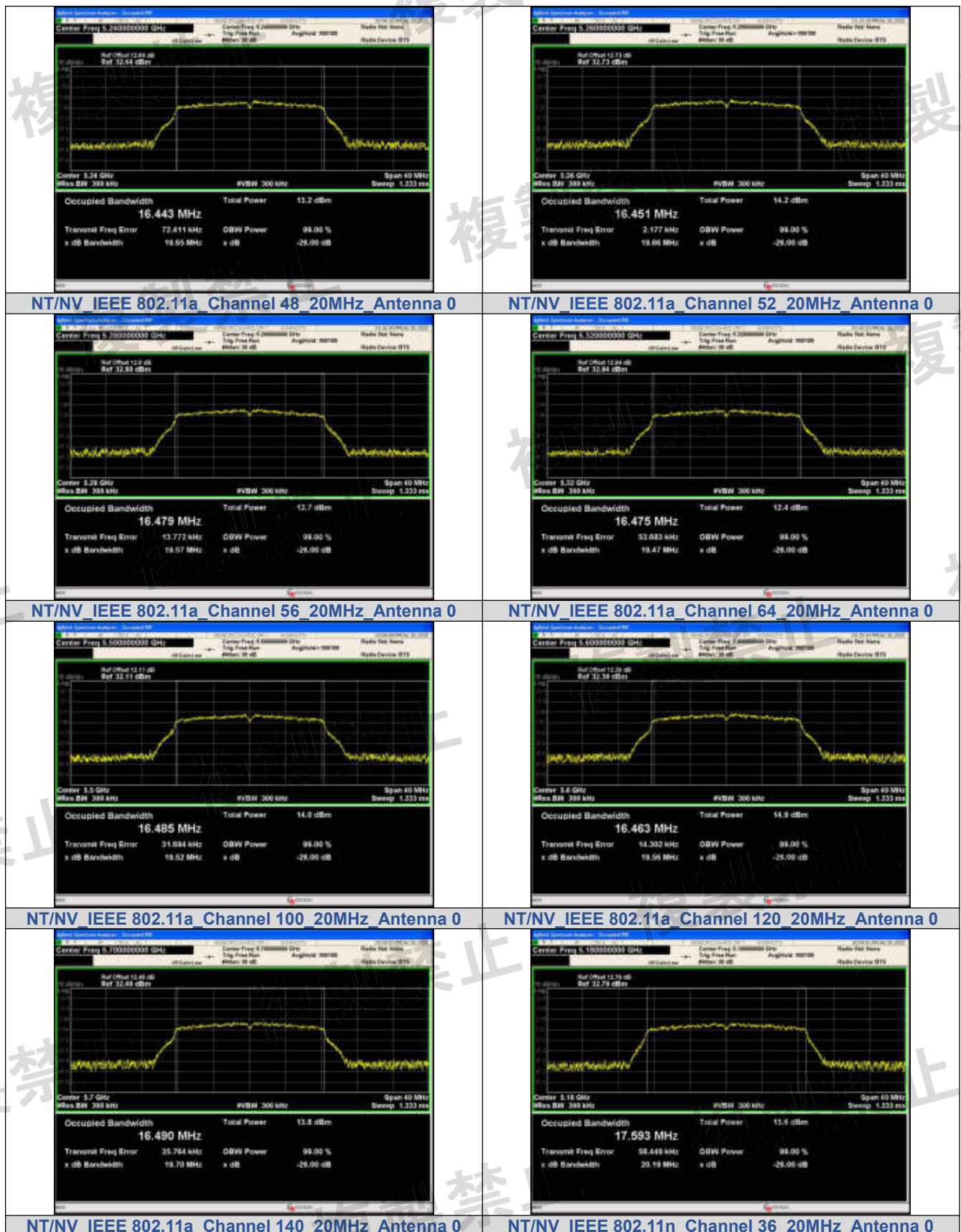
Condition	Mode	Frequency (MHz)	Ant.0 (dBm/MHz)	Total (mW/MHz)	Gain(dBi)	Limit (mW/MHz)	Result
NT/NV	IEEE 802.11a	5180	7.1150	8.1565	2	10	PASS
		5200	7.5210	8.9558	2	10	PASS
		5240	7.8040	9.5586	2	10	PASS
		5260	4.8770	4.8720	2	5	PASS
		5280	4.9450	4.9488	2	5	PASS
		5320	4.7050	4.6827	2	5	PASS
		5500	7.9200	9.8175	2	25	PASS
		5600	7.8000	9.5499	2	25	PASS
		5700	7.8930	9.7566	2	25	PASS
	IEEE 802.11n_20	5180	7.0700	8.0723	2	10	PASS
		5200	7.7890	9.5258	2	10	PASS
		5240	7.2648	8.4427	2	10	PASS
		5260	3.5467	3.5865	2	5	PASS
		5280	4.0150	3.9949	2	5	PASS
		5320	4.5953	4.5659	2	5	PASS
		5500	7.1230	8.1714	2	25	PASS
		5600	8.6010	11.4841	2	25	PASS
		5700	6.9260	7.8091	2	25	PASS
	IEEE 802.11n_40	5190	4.7760	4.7599	2	5	PASS
		5230	3.5104	3.5567	2	5	PASS
		5270	1.0309	2.0095	2	2.5	PASS
		5310	1.7693	2.3819	2	2.5	PASS
		5510	3.7040	3.7188	2	12.5	PASS
		5590	4.8770	4.8720	2	12.5	PASS
		5670	4.4290	4.3944	2	12.5	PASS
	IEEE 802.11ac_20	5180	7.1990	8.3158	2	10	PASS
		5200	7.9480	9.8810	2	10	PASS
		5240	7.3715	8.6527	2	10	PASS
		5260	3.9060	3.8958	2	5	PASS
		5280	4.2380	4.2054	2	5	PASS
		5320	3.4250	3.4874	2	5	PASS
		5500	8.4040	10.9749	2	25	PASS
		5600	7.9010	9.7747	2	25	PASS

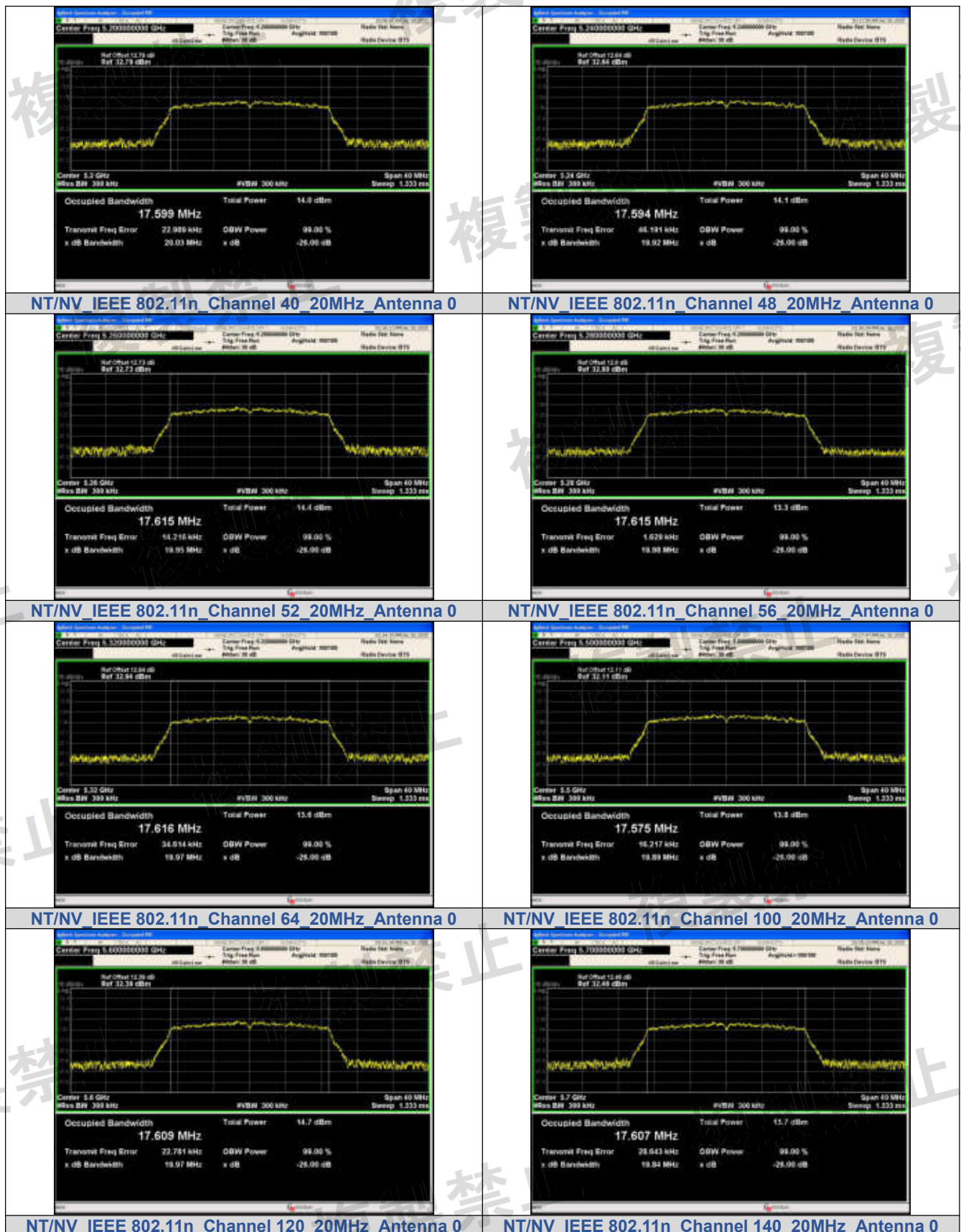
	IEEE 802.11ac_40	5700	8.1570	10.3681	2	25	PASS
		5190	4.8356	4.8257	2	5	PASS
		5230	4.5787	4.5485	2	5	PASS
		5270	0.5488	1.7984	2	2.5	PASS
		5310	0.8550	1.9298	2	2.5	PASS
		5510	3.8630	3.8575	2	12.5	PASS
		5590	4.2050	4.1735	2	12.5	PASS
		5670	4.5260	4.4936	2	12.5	PASS
	IEEE 802.11ac_80	5210	-1.8098	1.0448	2	2.5	PASS
		5290	-3.066	0.7823	2	1.25	PASS
		5530	2.2920	2.6866	2	6.25	PASS

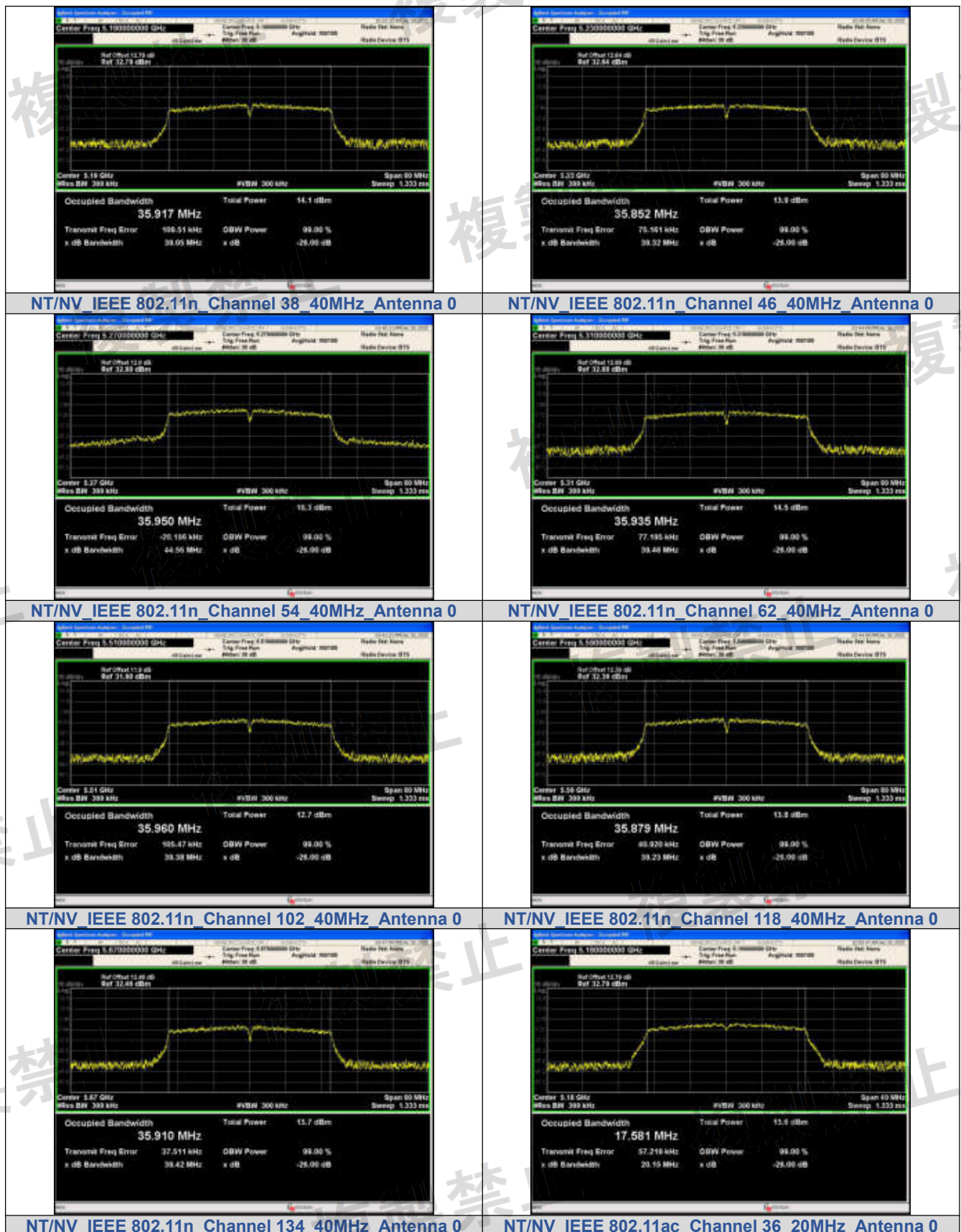
APPENDIX III. Occupied Bandwidth (99% BW)**Test Result**

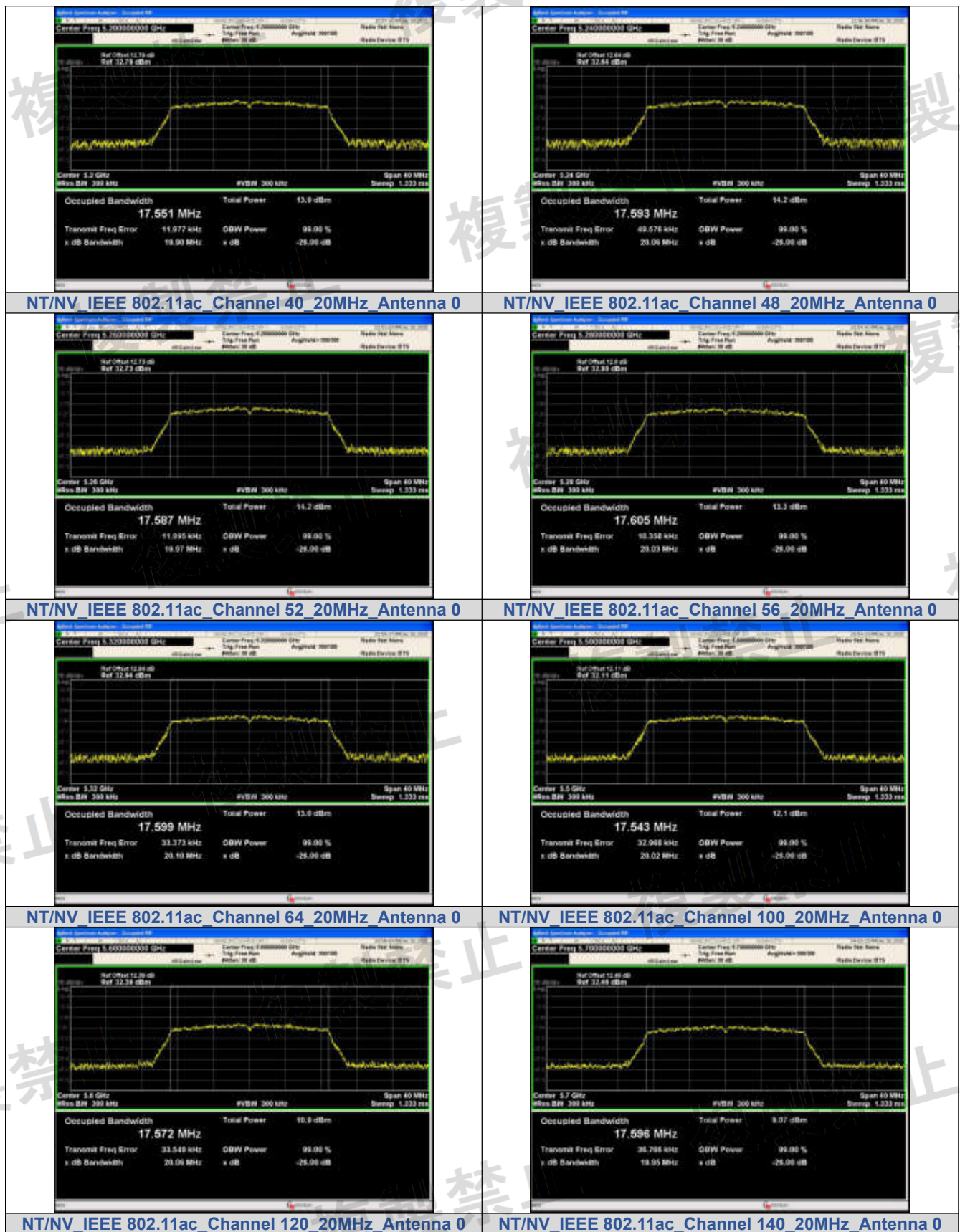
Condition	Mode	Channel	Antenna	Frequency (MHz)	99% BW (MHz)	Limit (MHz)	Result
NT/NV	IEEE 802.11a	36	0	5180	16.501	20	PASS
		40		5200	16.411		PASS
		48		5240	16.443		PASS
		52		5260	16.451		PASS
		56		5280	16.479		PASS
		64		5320	16.475		PASS
		100		5500	16.485		PASS
		120		5600	16.463		PASS
		140		5700	16.490		PASS
	IEEE 802.11n_20	36		5180	17.593	20	PASS
		40		5200	17.599		PASS
		48		5240	17.594		PASS
		52		5260	17.615		PASS
		56		5280	17.615		PASS
		64		5320	17.616		PASS
		100		5500	17.575		PASS
		120		5600	17.609		PASS
		140		5700	17.607		PASS
	IEEE 802.11n_40	38		5190	35.917	40	PASS
		46		5230	35.852		PASS
		54		5270	35.950		PASS
		62		5310	35.935		PASS
		102		5510	35.960		PASS
		118		5590	35.879		PASS
		134		5670	35.910		PASS
	IEEE 802.11ac_20	36		5180	17.581	20	PASS
		40		5200	17.551		PASS
		48		5240	17.593		PASS
		52		5260	17.587		PASS
		56		5280	17.605		PASS
		64		5320	17.599		PASS
		100		5500	17.543		PASS
		120		5600	17.572		PASS
		140		5700	17.596		PASS
	IEEE 802.11ac_40	38		5190	35.879	40	PASS
		46		5230	35.928		PASS
		54		5270	36.144		PASS
		62		5310	36.238		PASS
		102		5510	36.189		PASS
		118		5590	36.233		PASS
		134		5670	36.210		PASS
	IEEE 802.11ac_80	42		5210	77.036	80	PASS
		58		5290	77.112		PASS
		106		5530	76.921		PASS

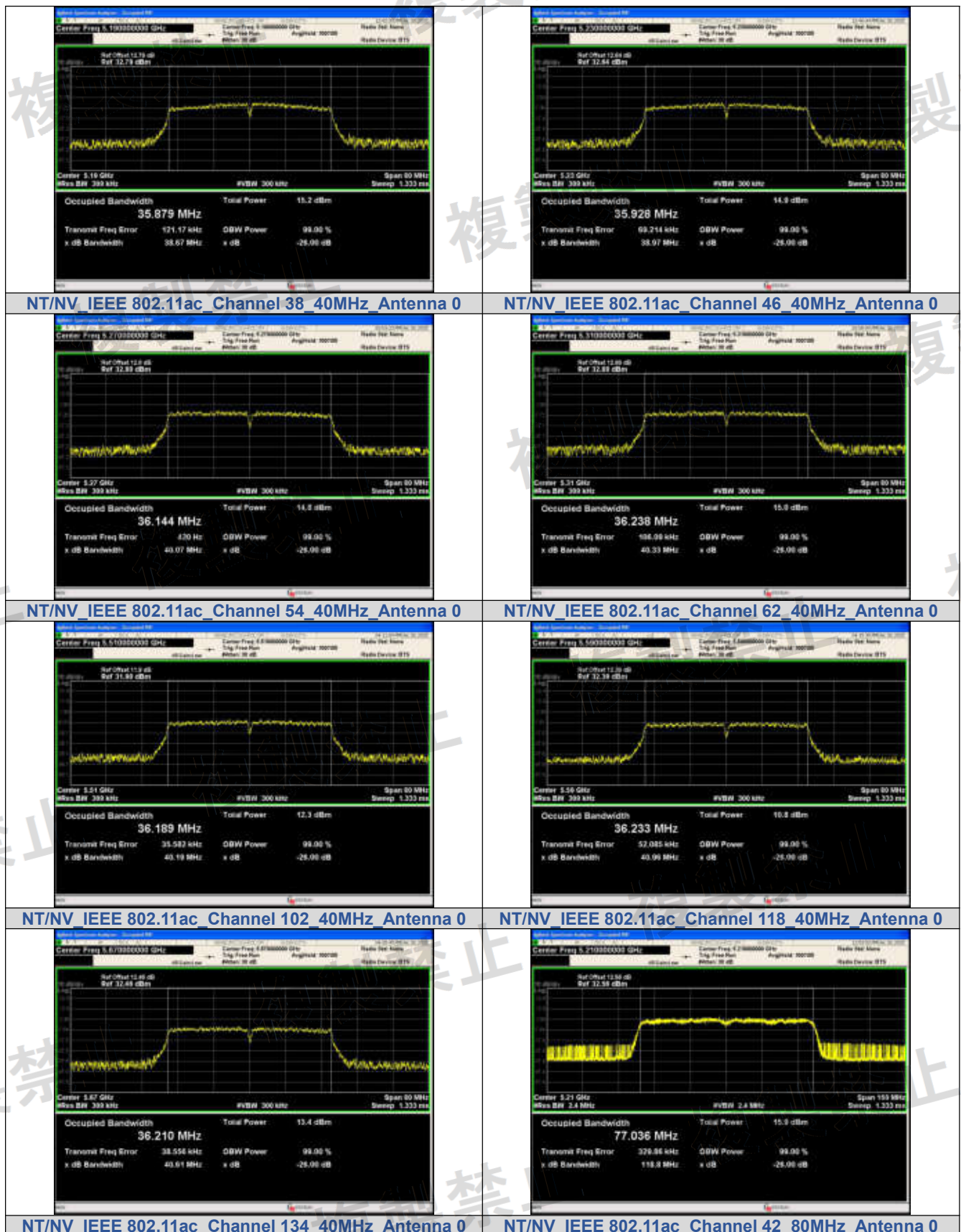
Test Graphs

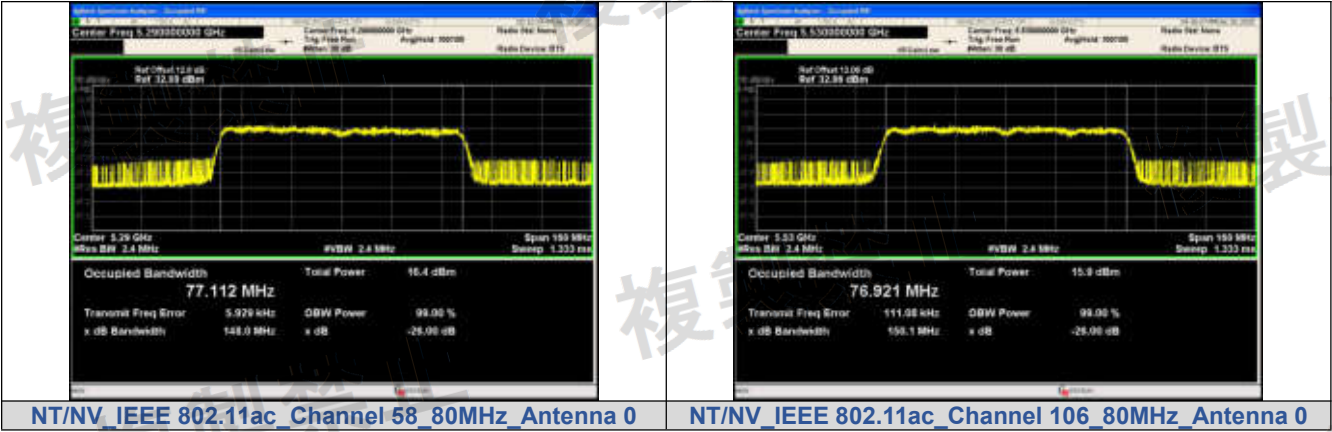












APPENDIX IV. Spreading Bandwidth (90% BW)**Test Result**

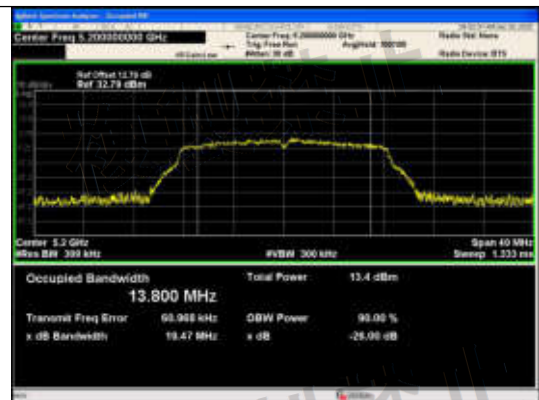
Condition	Mode	Channel	Antenna	Frequency (MHz)	90% SBW (MHz)	Spreading Bandwidth Limit (kHz)	Spreading factor	Spreading factor Limit	Result
NT/NV	IEEE 802.11a	36	0	5180	13.930	500	9.2866	5	PASS
		40		5200	13.800		9.2		PASS
		48		5240	13.857		9.2382		PASS
		52		5260	13.830		9.2201		PASS
		56		5280	13.885		9.2566		PASS
		64		5320	13.893		9.2617		PASS
		100		5500	13.971		9.3139		PASS
		120		5600	13.796		9.1976		PASS
		140		5700	13.980		9.3203		PASS
	IEEE 802.11n_20	36		5180	14.755		9.8365		PASS
		40		5200	14.713		9.8086		PASS
		48		5240	14.673		9.7819		PASS
		52		5260	14.771		9.8476		PASS
		56		5280	14.657		9.7715		PASS
		64		5320	14.798		9.8654		PASS
		100		5500	14.753		9.8353		PASS
		120		5600	14.640		9.7602		PASS
		140		5700	14.681		9.7873		PASS
	IEEE 802.11n_40	38		5190	29.964		9.988		PASS
		46		5230	30.609		10.203		PASS
		54		5270	30.313		10.1043		PASS
		62		5310	30.252		10.084		PASS
		102		5510	29.762		9.9208		PASS
		118		5590	30.214		10.0713		PASS
		134		5670	30.072		10.0239		PASS
	IEEE 802.11ac_20	36		5180	14.789		9.8596		PASS
		40		5200	14.732		9.8216		PASS
		48		5240	14.766		9.8443		PASS
		52		5260	14.762		9.8415		PASS
		56		5280	14.691		9.7941		PASS
		64		5320	14.798		9.8654		PASS

	IEEE 802.11ac_4 0	100	5500	14.64 0	9.7599	PASS
		120	5600	14.65 7	9.7716	PASS
		140	5700	14.75 1	9.834	PASS
		38	5190	30.05 5	20.0369	PASS
		46	5230	30.47 8	20.3186	PASS
		54	5270	31.84 3	21.2289	PASS
		62	5310	32.53 5	21.69	PASS
		102	5510	32.27 3	21.5154	PASS
		118	5590	32.32 4	21.5492	PASS
	IEEE 802.11ac_8 0	134	5670	32.00 2	21.3348	PASS
		42	5210	68.35 7	45.5712	PASS
		58	5290	69.45 4	46.3025	PASS
		106	5530	68.57 7	45.7178	PASS

Test Graphs



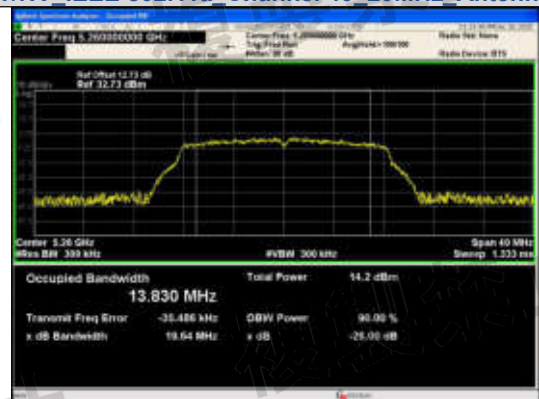
NT/NV IEEE 802.11a Channel 36 20MHz Antenna 0



NT/NV IEEE 802.11a Channel 40 20MHz Antenna 0



NT/NV IEEE 802.11a Channel 48 20MHz Antenna 0



NT/NV IEEE 802.11a Channel 52 20MHz Antenna 0

