

MIC 5G WIFI TEST REPORT

Applicant : SHENZHEN HANGSHENG ELECTRONICS CORP., LTD.
Address : Hangsheng Industrial Area, 1st Fuyuan Road, Zhancheng Community, Fuhai Street, Baoan District, Shenzhen City, Guangdong Province, China
Product Name : DRIVE RECORDER
Trade mark : HSAE
Model No. : HSCD-DV001
Series model : N/A
Report Number : BLA-RF-202607-A61-01
Date of Issue : Aug. 27, 2026
Test standard : Article 2 Paragraph 1 of Item 78
Test result : PASS

Compiled by:

charlie

Review by:

Xavier

Approved by:

Blue Zheng

Issued Date:

Aug. 27, 2026



BlueAsia Technical Services (Shenzhen) Co., Ltd

Address: No.41, South of Beihuan Road, Shangwu Community, Shiyan Subdistrict, Bao'an District, Shenzhen, Guangdong, China



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1 Version

Version No.	Date	Description
00	Aug. 27, 2026	Original

2 Test Summary

Test	Test Requirement	Limit/Severity	Result
Antenna Requirement	Article 2 Paragraph 1 of Item 78	Notice 88 Appendix 45,B-1 (1)&(2)	PASS
Frequency Tolerance	Article 2 Paragraph 1 of Item 78	±20 PPM or less	PASS
Occupied Bandwidth		20MHz or less for 20MHz system; 40MHz or less for 40MHz system	PASS
Spurious Emission of Tx (Unwanted Emission Strength)		0.5μW/MHz	PASS
Antenna Power		2mW/MHz or less for 20MHz system 1mW/MHz or less for 40MHz system Tolerance: +20%, -80%	PASS
Adjacent channel power tolerance		±9MHz bandwidth at 20MHz detuning: -25dB ±9MHz bandwidth at 40MHz detuning: -40dB	PASS
Spurious Emission of Rx (Secondary Radiated Emission Strength)		(1) Below 1 GHz: -54dBm (2) 1GHz-10GHz: -47dBm (3) 10GHz or higher: -47dBm	PASS
Interference prevention function		Notice 88 Appendix 45	PASS
Carrier sense function		Shall not transmit radio wave when receiving over 100mV/m	PASS
Transmission Burst Length		8ms or less	PASS

Remark:

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

Tx: In this whole report Tx (or tx) means the product in transmitting status.

Rx: In this whole report Rx (or rx) means the product in receiving status.

RF: In this whole report RF means Radiated Frequency.

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4 General Information

4.1 Client Information

Applicant:	SHENZHEN HANGSHENG ELECTRONICS CORP., LTD.
Address of Applicant:	Hangsheng Industrial Area, 1st Fuyuan Road, Zhancheng Community, Fuhai Street, Baoan District, Shenzhen City, Guangdong Province, china
Manufacturer:	SUZHOU HANGSHENG NEWENERGY CO., LTD.
Address of Manufacturer:	Suzhou Hangsheng industrial park, intersection of wangjiang avenue and jingwu Road, Changshu Economic & Technological development Zone, Suzhou City, Jiangsu Province, china
Factory:	SUZHOU HANGSHENG NEWENERGY CO., LTD.
Address of Factory:	Suzhou Hangsheng industrial park, intersection of wangjiang avenue and jingwu Road, Changshu Economic & Technological development Zone, Suzhou City, Jiangsu Province, china

4.2 General Description of EUT

Product Name:	DRIVE RECORDER
Model No.:	HSCD-DV001
Operating Frequency:	5.15-5.25GHz
Rated power:	5.15-5.25GHz: 0.05mW/MHz (W52 Band_802.11ac-VHT20)
Type of Modulation:	IEEE 802.11ac(VHT20):OFDM (BPSK, QPSK, 16QAM, 64QAM,256QAM)
Antenna Type:	FPC antenna
Antenna gain:	4.41dBi
Device type:	Master device
Power supply:	DC8.5V- 16V
Test voltage:	DC 13.5V
Function:	☒ SISO ☐ 2x2 MIMO ☐ TPC
Hardware Version:	S03
Software Version:	V0.8.03
Sample Received Date:	Jul. 16, 2026
Sample tested Date:	Jul. 16, 2026 to Aug. 27, 2026
Sample No.	BLA-RF-202607-01FR
Sample description	Front recorder

4.3 Description of Support Units

The EUT has been tested stand-alone..

Device Type	Manufacturer	Model Name	Serial No.	Remark
Test board	Amba link	CH342F	/	/
PC	Lenovo	E460C	/	/

4.4 Test Location

All tests were performed at:

CNAS —Designation No.: L9788

BlueAsia Technical Services (Shenzhen) Co.,Ltd.

No.41, South of Beihuan Road, Shangwu Community, Shiyan Subdistrict, Bao'an District,
Shenzhen,Guangdong ,China

Telephone: TEL: +86-755-2305 9481FAX: +86-755-2305 9481

No tests were sub-contracted.

4.5 Measurement Uncertainty

No.	Parameter	Measurement Uncertainty
1	Radio Frequency	$<\pm 1 \times 10^{-5}$
2	Total RF power, conducted	$<\pm 1.5$ dB
3	RF power density, conducted	$<\pm 3$ dB
4	Spurious emissions, conducted	$<\pm 3$ dB
5	All emissions, radiated	$<\pm 6$ dB (30MHz – 1GHz) $<\pm 6$ dB (above 1GHz)
6	Temperature	$<\pm 1^{\circ}\text{C}$
7	Humidity	$<\pm 5$ %
8	DC and low frequency voltages	$<\pm 3$ %

Note: The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

5 Instruments Used during Test

Equipment	Manufacturer	Model	Serial No.	Cal Date	Due Date	Calibration body	Classification
Communication test set test set	Anritsu	MT8852B	06262047872	2025/8/6	2026/8/5	GRGT	(c)
				2026/7/31	2027/7/30		
Spectrum Analyzer	Keysight	N9030A	MY52350152	2025/8/6	2026/8/5	GRGT	(c)
				2026/7/31	2027/7/30		
Signal Generator	Agilent	E4438C	MY45092582	2025/8/6	2026/8/5	GRGT	(c)
				2026/7/31	2027/7/30		
DC regulated power supply	ZHAOXIN	KXN-305D	BLA-EMC-027	2025/8/6	2026/8/5	GRGT	(c)
				2026/7/31	2027/7/30		

Remark:

- (a) Calibration conducted by the National Institute of Information and Communications Technology (NICT) in Japan (hereinafter referred to as "NICT") or a designated calibration agency under Article 102-18 paragraph (1) in JRL.
- (b) Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Act (Act No. 51 of 1992) .
- (c) Calibration conducted in countries except Japan, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1).
- (d) Calibration, etc. conducted by using measuring instruments and other equipment listed in the right column of appended table No. 3, which shall have been given any type of calibration, etc. listed above from (a) to (C)

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

Notice: Calibration duration for above equipments is 1 year.

6 Test Results

6.1 Radio Technical Requirements Specification

Tabel 1: 5 GHz band low-power data communication system (1)

Items	Technical standard
Assigned frequency or designated frequency	5180, 5200, 5220, 5240
Number of channels or channel separation	4
Tolerance of frequency	20×10^{-6}
Tolerance of occupied bandwidth	20MHz or less for 20MHz system; 40MHz or less for 40MHz system
Tolerance of unwanted emission intensity	Refer to Attachment
Antenna power	2mW/MHz or less for 20MHz system 1mW/MHz or less for 40MHz system Tolerance: +20%, -80%
Equivalent isotropically radiated power (EIRP)	2mW MHz or less for 20MHz system 1mW MHz or less for 40MHz system
Tolerance of adjacent channel leakage power	Adjacent channel leakage powoer ± 9 MHz bandwidth at 20MHz detuning : -25dB ± 9 MHz bandwidth at 40MHz detuning : -40dB
Limit of secondary radiated emissions	(1) Below 1GHz : 4nW (2) 1GHz - 10GHz : 20nW (3) 10GHz or higher : 20nW
Interference prevention function	Shall have the function of automatic transmission or reception of identification code.
Carrier sensing function (1)	Shall not transmit radio wave when receiving over 100mV/m
Transmission burst length	8ms or less
Note	DS: Direct spreading OFDM : Orthogonal frequency division multiplexing

Attachment:

*Attachment (Unwanted Emission Strength)

20MHz system	40MHz system	80MHz system
5,142 MHz or less : 0.5 μ W/MHz	5,141.6 MHz or less : 0.5 μ W/MHz	5,123.2 MHz or less : 0.5 μ W/MHz
5,142 - 5,150 MHz : 3 μ W/MHz	5,141.6 - 5,150 MHz : 3 μ W/MHz	5,123.2 - 5,150 MHz : 3 μ W/MHz
5,250 - 5,250.2 MHz : $0.2 \times 10^{1-(8/3)(f-9.75)}$ mW/MHz		
5,250.2 - 5,251 MHz : $0.2 \times 10^{1-(f-9)}$ mW/MHz	5,250 - 5,251 MHz : $0.2 \times 10^{-(f-20)+\log(1/2)}$ mW/MHz	5,250 - 5,251 MHz : $0.2 \times 10^{-(f-40)+\log(1/4)}$ mW/MHz
5,251 - 5,260 MHz : $0.2 \times 10^{1-(8/90)(f-11)}$ mW/MHz	5,251 - 5,270 MHz : $0.2 \times 10^{-(8/190)(f-21)-1+\log(1/2)}$ mW/MHz	5,251 - 5,290 MHz : $0.2 \times 10^{-(8/390)(f-41)-1+\log(1/4)}$ mW/MHz
5,260 - 5,266.7 MHz : $0.2 \times 10^{1-1.8-(6/50)(f-20)}$ mW/MHz	5,270 - 5,278.4 MHz : $0.2 \times 10^{-(3/50)(f-40)-1.8+\log(1/2)}$ mW/MHz	5,290 - 5,296.7 MHz : $0.2 \times 10^{-(3/100)(f-80)-1.8+\log(1/4)}$ mW/MHz
5,266.7 - 5,365 MHz : 0.5 μ W/MHz	5,278.4 - 5,400 MHz : 0.5 μ W/MHz	5,296.7 - 5,480 MHz : 0.5 μ W/MHz
*5,365 MHz or more : 0.5 μ W/MHz	*5,400 MHz or more : 0.5 μ W/MHz	*5,480 MHz or more : 0.5 μ W/MHz
f = MHz, Difference from 5240 (MHz)	f = MHz, Difference from 5230 (MHz)	f = MHz, Difference from 5210 (MHz)

* The limit value is defined by the E.I.R.P.

* Recommended measurement up to 26GHz

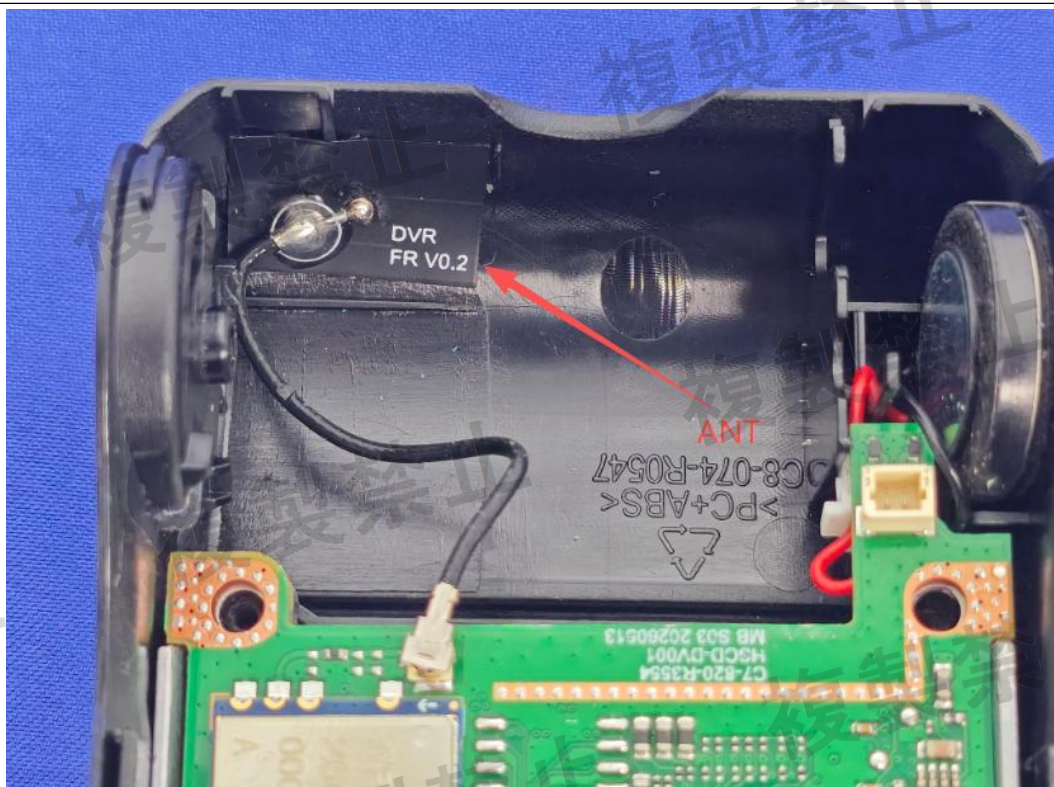
6.2 Antenna Requirement

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

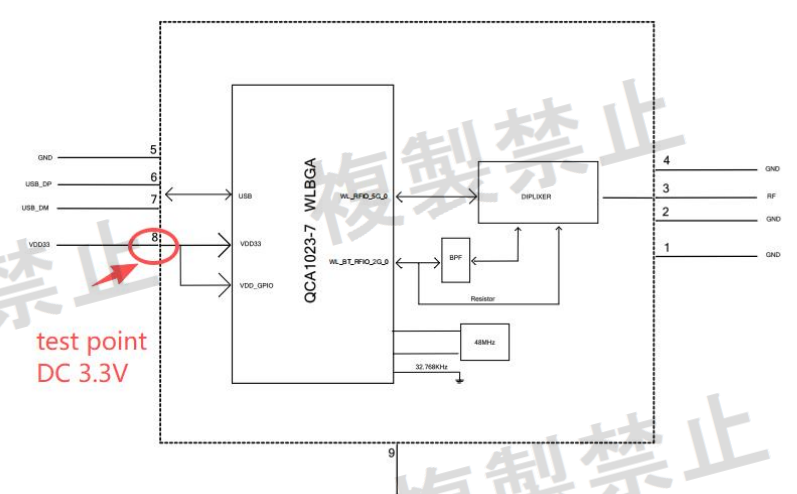
The antenna is FPC antenna. The best case gain of the antenna is 4.41dBi.



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

6.3 Transmitter Requirements

6.3.1 EUT test voltage and Frequency

EUT test voltage			
Power Supply:		DC 13.5V	
Test voltage require:		The power supply is DC 13.50V. The supply voltage of RF part is varied within +/-1%. When DC 13.50V +/- 10%, so DC 13.50V is shown in the test report.	
Power Supply view:			
Power Supply result:		The measurement result of the voltage fluctuation at RF circuit when DC 13.5V +/- 10%.	
		DC INPUT	RF circuit
		14.85V	3.3V
		13.50V	3.3V
		12.15V	3.3V

Test condition	Ambient		
	Temperature(℃)	Humidity(%)	Voltage(V)
NTNV	24	48	DC 13.50
NTLV	N/A	N/A	N/A
NTHV	N/A	N/A	N/A

Test frequencies:

Operation Frequency of channel	
Band I (5.15-5.25GHz)	
Channel	Frequency
36	5180 MHz
40	5200 MHz
44	5220 MHz
48	5240 MHz

For 802.11ac(VHT20):

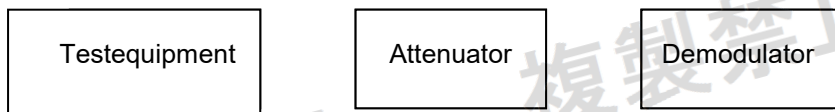
Channel	Frequency
36	5180 MHz
40	5200 MHz
48	5240 MHz

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

6.4 Interference prevention function

1) Measurement system diagram

(1) When transmitting identification code



2) Condition of measuring instrument

- (1) Demodulator must be able to demodulate the transmitting signal emitted by test equipment and to indicate the identification code.

3) Condition of test equipment The mode of normal use.

4) Measuring operation procedure

- (1) When test equipment has the function to transmit identification code automatically:

A) Transmit the predetermined identification code from test equipment.

B) Confirm the transmitted identification code by demodulator.

MAC Address:

88:E0:34:CD:6D:24

- 5) Test result: The unit does meet the requirements (Good).

6.5 Frequency Tolerance

Test Requirement: Article 2 Paragraph 1 of Item 78

Tolerance of frequency: $\pm 20 \times 10^{-6}$

Test Status: Test the EUT in transmitting mode without modulation.

Test Configuration:



Test Procedure:

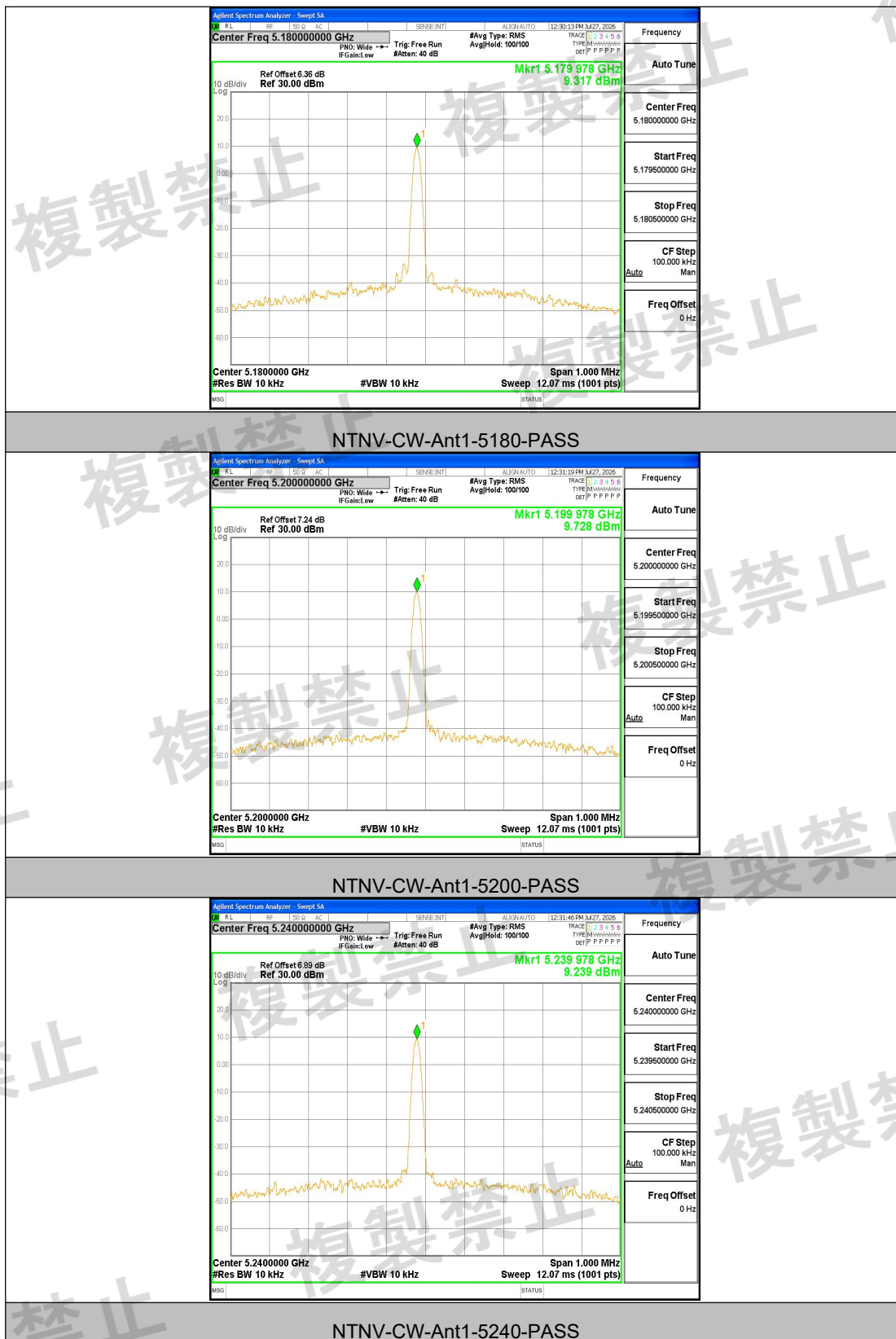
- 1) Test Conditions:
Spectrum Analyzer is used for measurement.
- 2) EUT conditions:
Modulation/Spread/Hopping OFF, CW Tx
- 3) Spectrum Analyzer conditions:
Frequency: Test Frequency
Span 1MHz
RBW 10 kHz (Modulation OFF),
VBW 10 kHz (Modulation OFF),
Sweep Time Auto
Detector mode Positive peak
Indication mode Max hold

6.5.1 Test Result

Test Condition	Test Mode	Antenna	Frequen cy[MHz]	CenterFreq [MHz]	Result [ppm]	Limit [ppm]	Verdict
NTNV	CW	Ant1	5180	5179.978	-4.24710	±20	PASS
		Ant1	5200	5199.978	-4.23077	±20	PASS
		Ant1	5240	5239.978	-4.19847	±20	PASS

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

6.5.2 Test Graphs



6.6 Occupied Bandwidth (99%)

Test Requirement: Article 2 Paragraph 1 of Item 78

20MHz or less for 20MHz system; 40MHz or less for 40MHz system; 80MHz or less for 80MHz system

Test Status: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
Following channel(s) was (were) selected for the final test as listed below.

Test Configuration:



Test Procedure:

1) Test Conditions:

Spectrum Analyzer is used for measurement.

2) EUT conditions:

Modulation/Spread

For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.

3) Spectrum Analyzer conditions:

Frequency: Test Frequency

Span 40MHz for 802.11ac(VHT20)

RBW 300KHz

VBW 300KHz

Sweep Time Auto

detector mode Positive peak

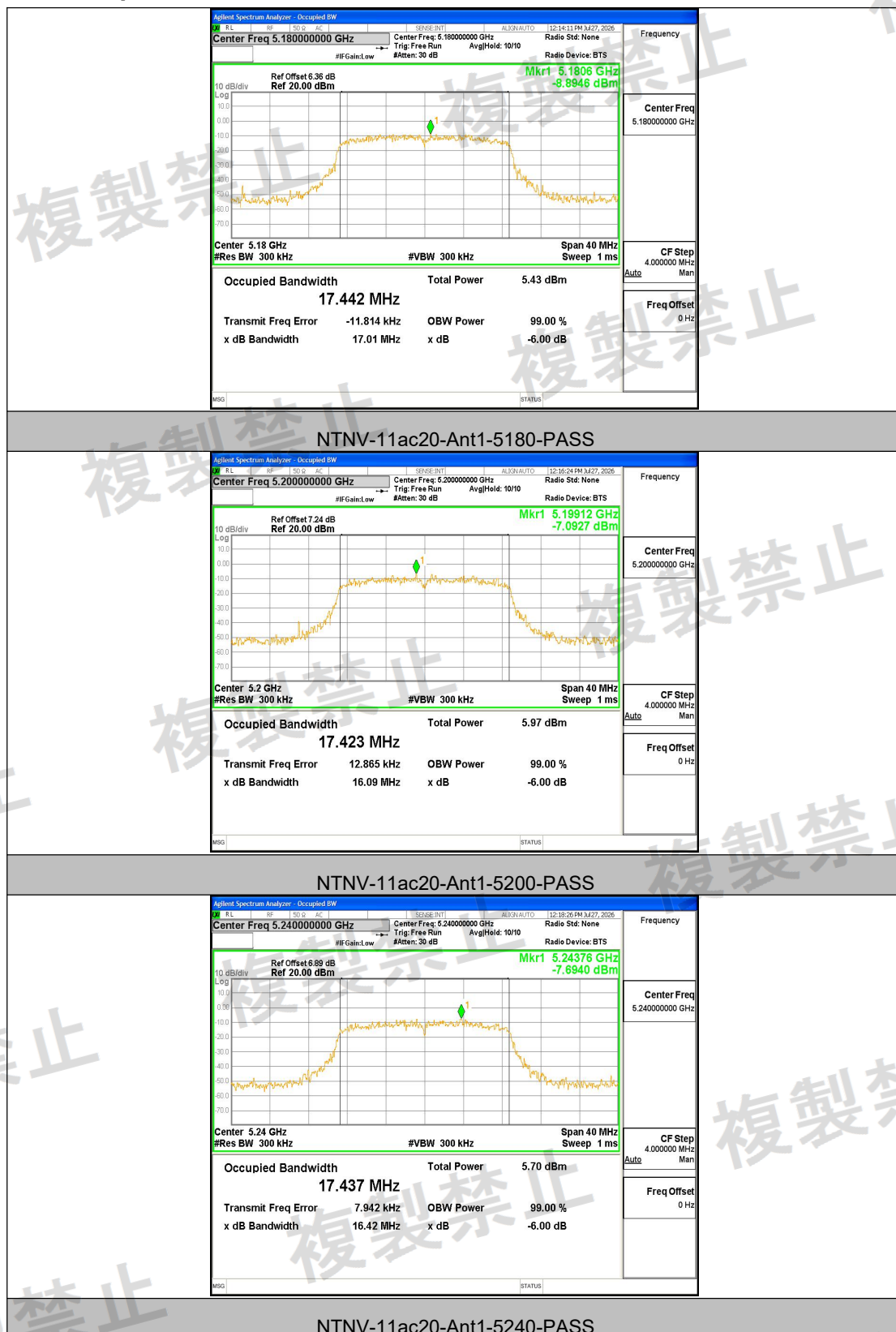
Indication mode Maxhold

OBW 99%

6.6.1 Test Result

Test Condition	Test Mode (802.11)	Antenna	Frequency [MHz]	Result [MHz]	Limit [MHz]	Verdict
NTNV	ac20	Ant1	5180	17.442	≤20	PASS
NTNV	ac20	Ant1	5200	17.423	≤20	PASS
NTNV	ac20	Ant1	5240	17.437	≤20	PASS

6.6.2 Test Graphs



6.7 Antenna Power

Test Requirement: Article 2 Paragraph 1 of Item 78

2mW/MHz or less for 20MHz system; 1mW/MHz or less for 40MHz system

Test Status: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
Following channel(s) was (were) selected for the final test as listed below.

Test Configuration:



Test Procedure:

1) Test Conditions:

Spectrum Analyzer is used for measurement.

2) EUT conditions:

Modulation/Spread

For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.

3) Spectrum Analyzer conditions:

Setup 1:

Settings for search:

Frequency: Test Frequency

Span OBW×2

RBW 1 MHz

VBW 1 MHz

Sweep Time Auto

detector mode Positive peak

Indication mode Max hold

Setup2:

Settings when measuring.

Center frequency: searched frequency.

Span: 0Hz

RBW: 1MHz

VBW: 1MHz

Sweep: continuous sweep

Detector: RMS

Display mode (Trace): Trigger approx.

6.7.1 Test Result

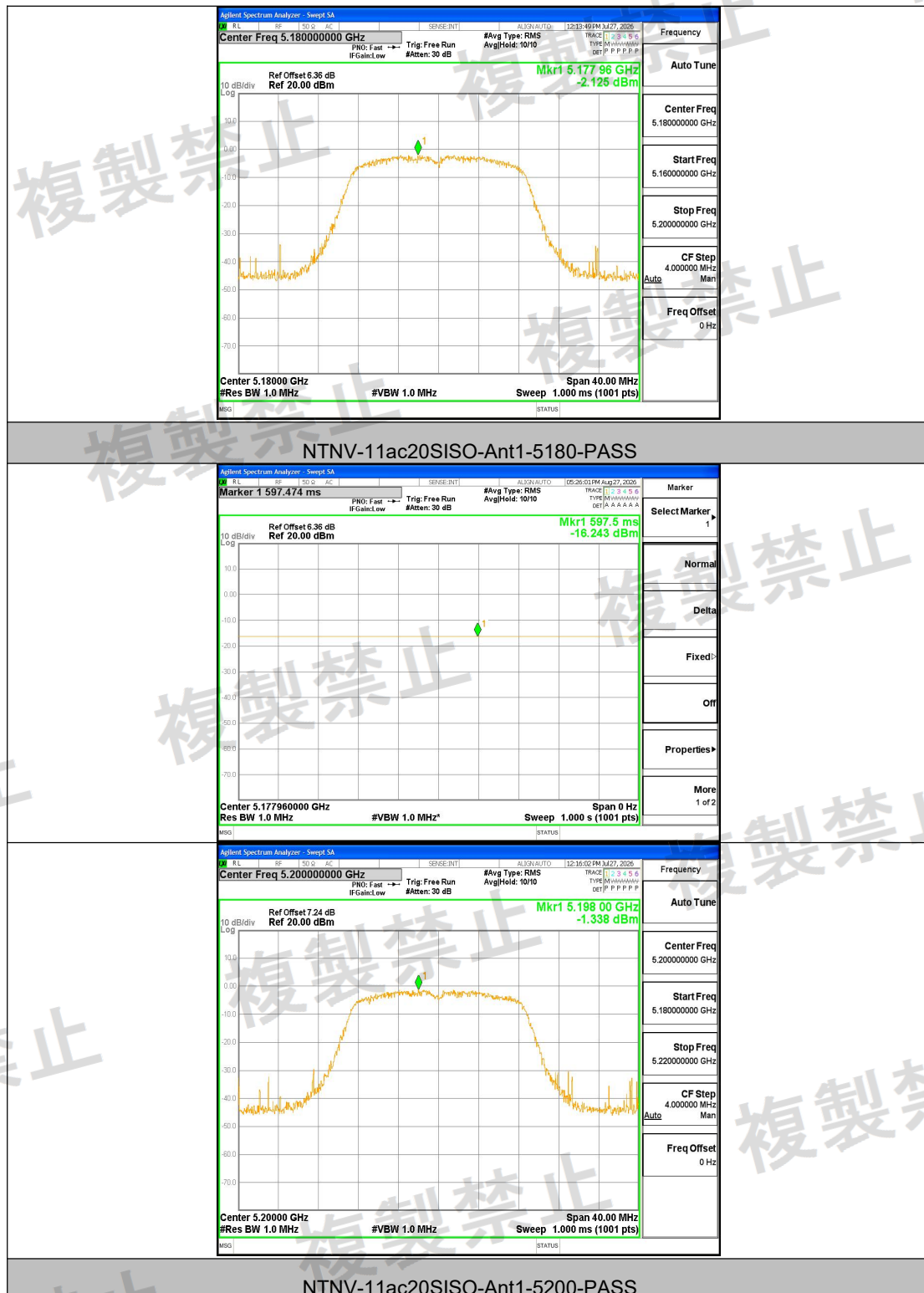
AntennaPower							
TestCondition	TestMode	Antenna	Frequen cy(MHz)	Result (dBm/MHz)	Result (mW/MHz)	Limit (mW/MHz)	Verdict
NTNV	11ac20SISO	Ant1	5180	-16.243	0.0238	<=2	PASS
			5200	-16.448	0.0227	<=2	PASS
			5240	-16.410	0.0229	<=2	PASS

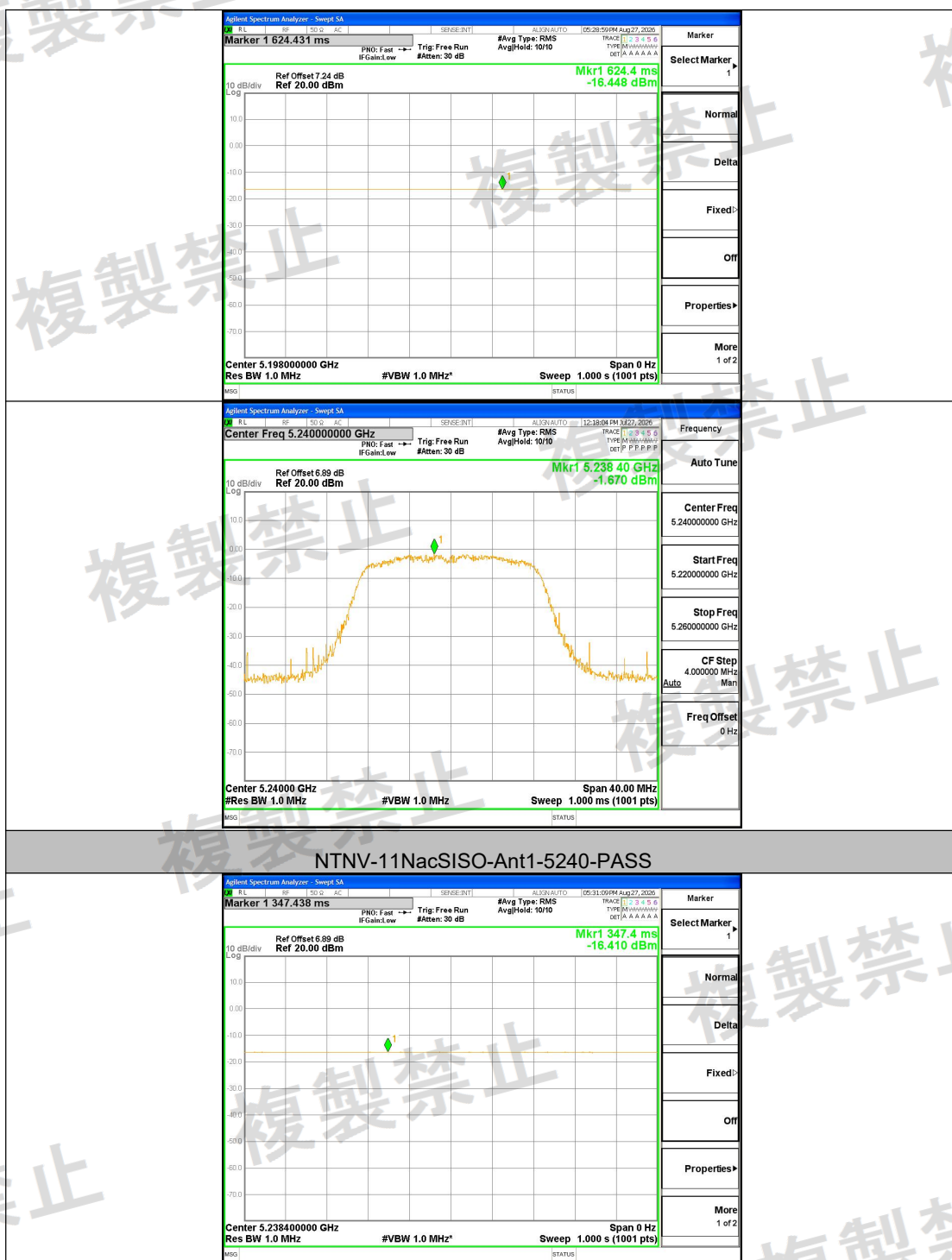
Tolerance								
Test Condition	Test Mode	Antenna	Frequen cy(MHz)	Power (mW/MHz)	RatedPower (mW/MHz)	Result(%)	Limit(%)	Verdict
NTNV	11ac20SISO	Ant1	5180	0.0238	0.05	-52.4	+20, -80%	PASS
			5200	0.0227	0.05	-54.6	+20, -80%	PASS
			5240	0.0229	0.05	-54.2	+20, -80%	PASS

Conducted rated power:1)802.11ac (VHT20) 0.05mW/MHz

Tolerance (%) :[(test value- rate power)/rater power]*100

6.7.2 Test Graphs





NTNV-11NacSISO-Ant1-5240-PASS

6.8 Equivalent isotropically radiated power (EIRP)

Test Requirement:	Article 2 Paragraph 1 of Item 78
	W52 a. 2mW/Mhz for 20MHz system; b. 1mW/Mhz for 40MHz system c. 0.5mW/Mhz for 80MHz system
EIRP=antenna power+antenna gain	

EIRP							
TestCondition	TestMode	Antenna	Channel	Result (mW/MHz)	EIRP (mW/MHz)	Limit(mW/MHz)	Verdict
NTNV	11ac20	Ant1	5180	0.0238	0.0656	<=2	PASS
			5200	0.0227	0.0625	<=2	PASS
			5240	0.0229	0.0631	<=2	PASS

6.9 Adjacent Channel Power Tolerance

Test Requirement: Article 2 Paragraph 1 of Item 78

Mean power $\pm 20\text{MHz}$ (18MHz) distance of carrier: $\cong -25\text{dB}$.

Mean power $\pm 40\text{MHz}$ (18MHz) distance of carrier: $\cong -40\text{dB}$.

Test Status: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channels were selected for the final test as listed below.

Test Configuration:



Test Procedure:

1) Test Conditions:

Power meter or Spectrum Analyzer is used for measurement.

2) EUT conditions:

Modulation/Spread

For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.

3) Spectrum Analyzer conditions:

Frequency: Test Frequency

RBW 300kHz, VBW 300kHz

Span 120MHz for 802.11ac(VHT20);

Tx bandwidth 18MHz

For 802.11 ac(VHT20):

Adjacent channel bandwidth 18MHz, Channel spacing 20MHz

Alternate channel bandwidth 18MHz, Channel spacing 40MHz

Sweep Time Auto

detector mode Positive peak

Indication mode Max hold

6.9.1 Test Result

TestCondition	TestMode	Antenna	Frequenc y[MHz]	Offset [MHz]	Result [dBc]	Limit [dBc]	Verdict
NTNV	11AC20SIS O	Ant1	5180	-40	-46.78	≤-40	PASS
NTNV	11AC20SIS O	Ant1	5180	-20	-36.49	≤-25	PASS
NTNV	11AC20SIS O	Ant1	5180	+20	-37.09	≤-25	PASS
NTNV	11AC20SIS O	Ant1	5180	+40	-47.15	≤-40	PASS
NTNV	11AC20SIS O	Ant1	5200	-40	-46.47	≤-40	PASS
NTNV	11AC20SIS O	Ant1	5200	-20	-36.37	≤-25	PASS
NTNV	11AC20SIS O	Ant1	5200	+20	-36.83	≤-25	PASS
NTNV	11AC20SIS O	Ant1	5200	+40	-46.71	≤-40	PASS
NTNV	11AC20SIS O	Ant1	5240	-40	-47.04	≤-40	PASS
NTNV	11AC20SIS O	Ant1	5240	-20	-37.52	≤-25	PASS
NTNV	11AC20SIS O	Ant1	5240	+20	-36.84	≤-25	PASS
NTNV	11AC20SIS O	Ant1	5240	+40	-46.88	≤-40	PASS

6.9.2 Test Graphs



Test result: The unit does meet the requirements.

BlueAsia Technical Services (Shenzhen) Co., Ltd

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Email: marketing@cblueasia.com www.cblueasia.com

Version:v1.0

6.10 Spurious Emissions of TX (Unwanted Emission Strength)

Test Requirement: Article 2 Paragraph 1 of Item 78

Limit:

- (1) Below 5142MHz : 0.5μW / MHz
- (2) Over 5266.7MHz : 0.5μW / MHz

* Attachment (Unwanted Emission Strength)

20MHz system	40MHz system	80MHz system
5,142 MHz or less : 0.5 μW/MHz	5,141.6 MHz or less : 0.5 μW/MHz	5,123.2 MHz or less : 0.5 μW/MHz
5,142 ~ 5,150 MHz : 3 μW/MHz	5,141.6 ~ 5,150 MHz : 3 μW/MHz	5,123.2 ~ 5,150 MHz : 3 μW/MHz
5,250 ~ 5,250.2 MHz : $0.2 \times 10^{1-(8/3)(f-9.75)}$ mW/MHz		
5,250.2 ~ 5,251 MHz : $0.2 \times 10^{1-(8/90)(f-11)}$ mW/MHz	5,250 ~ 5,251 MHz : $0.2 \times 10^{-(f-20)+\log(1/2)}$ mW/MHz	5,250 ~ 5,251 MHz : $0.2 \times 10^{-(f-40)+\log(1/4)}$ mW/MHz
5,251 ~ 5,260 MHz : $0.2 \times 10^{1-(8/90)(f-11)}$ mW/MHz	5,251 ~ 5,270 MHz : $0.2 \times 10^{-(8/190)(f-21)-1+\log(1/2)}$ mW/MHz	5,251 ~ 5,290 MHz : $0.2 \times 10^{-(8/390)(f-41)-1+\log(1/4)}$ mW/MHz
5,260 ~ 5,266.7 MHz : $0.2 \times 10^{1.8-(6/50)(f-20)}$ mW/MHz	5,270 ~ 5,278.4 MHz : $0.2 \times 10^{-(3/50)(f-40)-1.8+\log(1/2)}$ mW/MHz	5,290 ~ 5,296.7 MHz : $0.2 \times 10^{-(3/100)(f-80)-1.8+\log(1/4)}$ mW/MHz
5,266.7 ~ 5,365 MHz : 0.5 μW/MHz	5,278.4 ~ 5,400 MHz : 0.5 μW/MHz	5,296.7 ~ 5,480 MHz : 0.5 μW/MHz
*5,365 MHz or more : 0.5 μW/MHz	*5,400 MHz or more : 0.5 μW/MHz	*5,480 MHz or more : 0.5 μW/MHz
f = MHz, Difference from 5240 (MHz)	f = MHz, Difference from 5230 (MHz)	f = MHz, Difference from 5210 (MHz)

* The limit value is defined by the E.I.R.P.

* Recommended measurement up to 26GHz

OBW	Frequency Band	EIRP	
20MHz system	~5142MHz	$\leq 0.5 \mu W/MHz$	-33.01dBm/MHz
	5142MHz~5150MHz	$\leq 3 \mu W/MHz$	-25.23dBm/MHz
	5250MHz~5250.2MHz	$\leq 0.2 * 10^{1-(8/3)(Df-9.75)}$ mW/MHz	5250: -3.66dBm/MHz 5250.2: -8.99dBm/MHz
	5250.2MHz~5251MHz	$\leq 0.2 * 10^{1-(Df-9)}$ mW/MHz	5250.2: -8.99dBm/MHz 5251: -16.99dBm/MHz
	5251MHz~5260MHz	$\leq 0.2 * 10^{1-(8/90)(Df-11)}$ mW/MHz	5251: -16.99dBm/MHz 5260: -24.99dBm/MHz
	5260MHz~5266.7MHz	$\leq 0.2 * 10^{1.8-(6/50)(Df-20)}$ mW/MHz	5260: -24.99dBm/MHz 5266.7: -33.03dBm/MHz
	5266.7~MHz	$\leq 0.5 \mu W/MHz$	-33.01dBm/MHz

OBW	Frequency Band	EIRP	
40MHz system	~5141.6MHz	$\leq 0.5 \mu W/MHz$	-33.01dBm/MHz
	5141.6MHz~5150MHz	$\leq 3 \mu W/MHz$	-25.23dBm/MHz
	5250MHz~5251MHz	$\leq 0.2 * 10^{-(Df-20)+\log(1/2)}$ mW/MHz	5250: -10.00dBm/MHz 5251: -20dBm/MHz
	5251MHz~5270MHz	$\leq 0.2 * 10^{-(8/190)(f-21)-1+\log(1/2)}$ mW/MHz	5251: -20dBm/MHz 5270: -28dBm/MHz
	5270MHz~5278.4MHz	$\leq 0.2 * 10^{-(3/50)(Df-40)-1.8+\log(1/2)}$ mW/MHz	5270: -28dBm/MHz

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		mW/MHz	5278.4:-33.04dBm/MHz
	5278.4~MHz	$\leq 0.5 \mu W/MHz$	-33.01dBm/MHz

OBW	Frequency Band	EIRP	
80MHz system	~5123.2MHz	$\leq 0.5 \mu W/MHz$	-33.01dBm/MHz
	5123.2MHz~5150MHz	$\leq 3 \mu W/MHz$	-25.23dBm/MHz
	5250MHz~5251MHz	$\leq 0.2 \times 10^{-(Df-40)+\log(1/4)} mW/MHz$	5250:-13.01dBm/MHz 5251:-23.01dBm/MHz
	5251MHz~5290MHz	$\leq 0.2 \times 10^{-(8/390)(Df-41)-1+\log(1/4)} mW/MHz$	5251:-23.01dBm/MHz 5290:-31.01dBm/MHz
	5290MHz~5296.7MHz	$\leq 0.2 \times 10^{-(3/100)(Df-80)-1.8+\log(1/4)} mW/MHz$	5290:-31.01dBm/MHz 5296.7:-33.02dBm/MHz
	5296.7~MHz	$\leq 0.5 \mu W/MHz$	-33.01dBm/MHz

Test Status:

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

Following channel(s) was (were) selected for the final test as listed below.

Test Configuration:



Test Procedure:

- 1) Test Conditions:
Spectrum Analyzer is used for measurement.
- 2) EUT conditions:
Modulation/Spread
For equipment using diffusion code, set to the test diffusion code and modulate with standard coding testsignal.
- 3) Spectrum Analyzer conditions:
Step1
All spurious are measured from 30MHz to 40GHz by peak mode.

Step 2:

Frequency: Spurious Frequency

RBW 1 MHz

VBW 1 MHz

Span: 0 Hz

Sweep Time Auto

detector mode Sample

Indication mode Max hold

6.10.1 Test Result

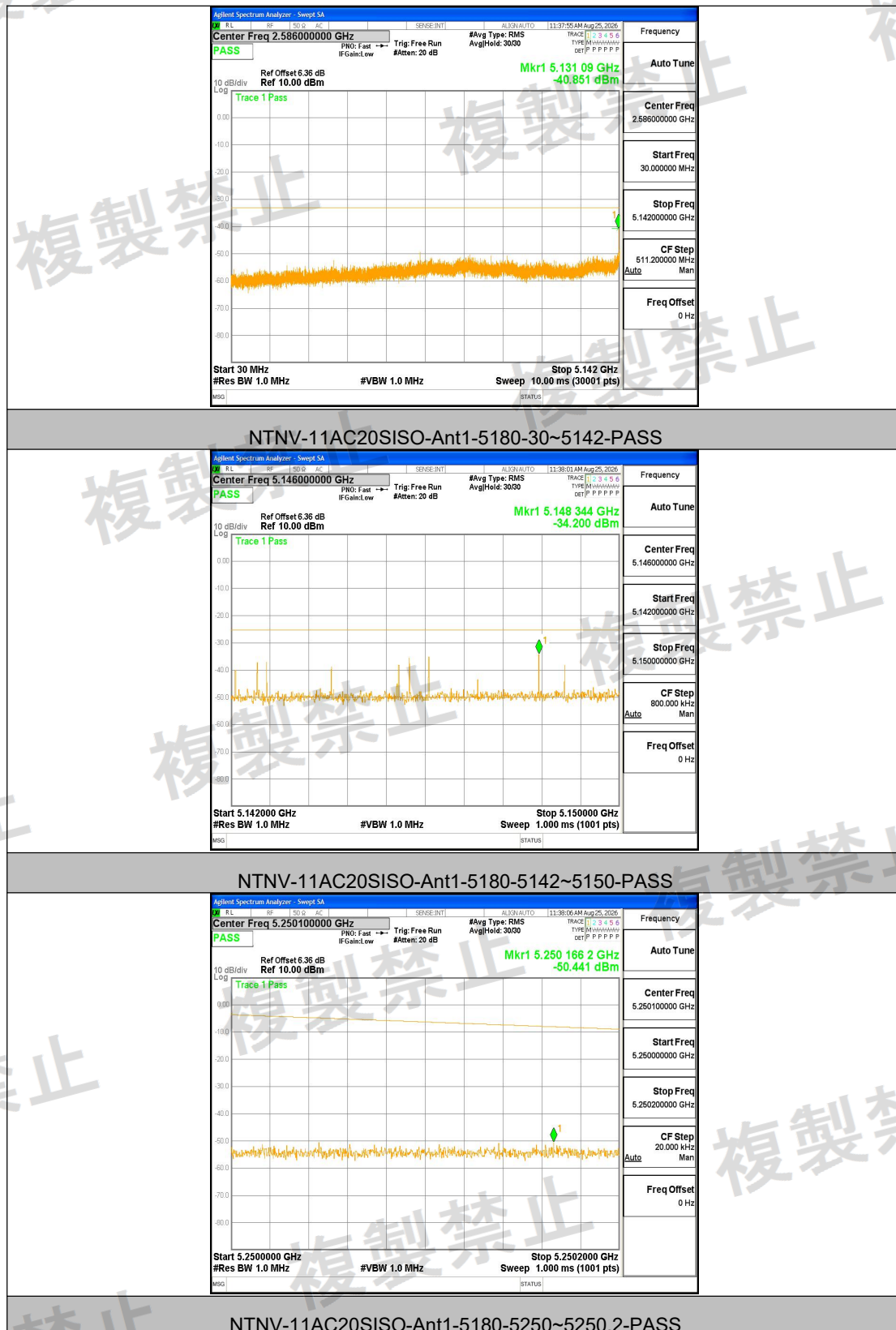
Test Condition	TestMode	Antenna	Frequency[MHz]	Freq.Range [MHz]	Freq [MHz]	Result [dBm/MHz]	Limit [dBm/MHz]	Result [μW/MHz]	Limit [μW/MHz]	Verdict
NTNV	11AC20SISO	Ant1	5180	30~5142	5131.09	-40.85	≤-33.01	0.08222	≤0.5	PASS
NTNV	11AC20SISO	Ant1	5180	5142~5150	5148.34	-34.20	≤-25.23	0.38019	≤3.0	PASS
NTNV	11AC20SISO	Ant1	5180	5250~5250.2	5250.17	-50.44	≤-8.19	0.00904	≤151.7	PASS
NTNV	11AC20SISO	Ant1	5180	5250.2~5251	5250.92	-50.29	≤-16.19	0.00935	≤24.0	PASS
NTNV	11AC20SISO	Ant1	5180	5251~5260	5259.69	-51.22	≤-24.71	0.00755	≤3.4	PASS
NTNV	11AC20SISO	Ant1	5180	5260~5266.7	5266.07	-50.87	≤-32.27	0.00818	≤0.6	PASS
NTNV	11AC20SISO	Ant1	5180	5266.7~26000	6906.70	-40.36	≤-33.01	0.09204	≤0.5	PASS
NTNV	11AC20SISO	Ant1	5200	30~5142	5137.23	-49.38	≤-33.01	0.01153	≤0.5	PASS
NTNV	11AC20SISO	Ant1	5200	5142~5150	5146.23	-43.75	≤-25.23	0.04217	≤3.0	PASS
NTNV	11AC20SISO	Ant1	5200	5250~5250.2	5250.16	-41.73	≤-7.92	0.06714	≤161.3	PASS
NTNV	11AC20SISO	Ant1	5200	5250.2~5251	5250.97	-44.00	≤-16.69	0.03981	≤21.4	PASS
NTNV	11AC20SISO	Ant1	5200	5251~5260	5255.46	-43.72	≤-20.95	0.04246	≤8.0	PASS
NTNV	11AC20SISO	Ant1	5200	5260~5266.7	5265.01	-48.62	≤-31	0.01374	≤0.8	PASS
NTNV	11AC20SISO	Ant1	5200	5266.7~26000	6933.66	-39.22	≤-33.01	0.11967	≤0.5	PASS
NTNV	11AC20SISO	Ant1	5240	30~5142	3592.89	-46.67	≤-33.01	0.02153	≤0.5	PASS
NTNV	11AC20SISO	Ant1	5240	5142~5150	5149.30	-51.41	≤-25.23	0.00723	≤3.0	PASS

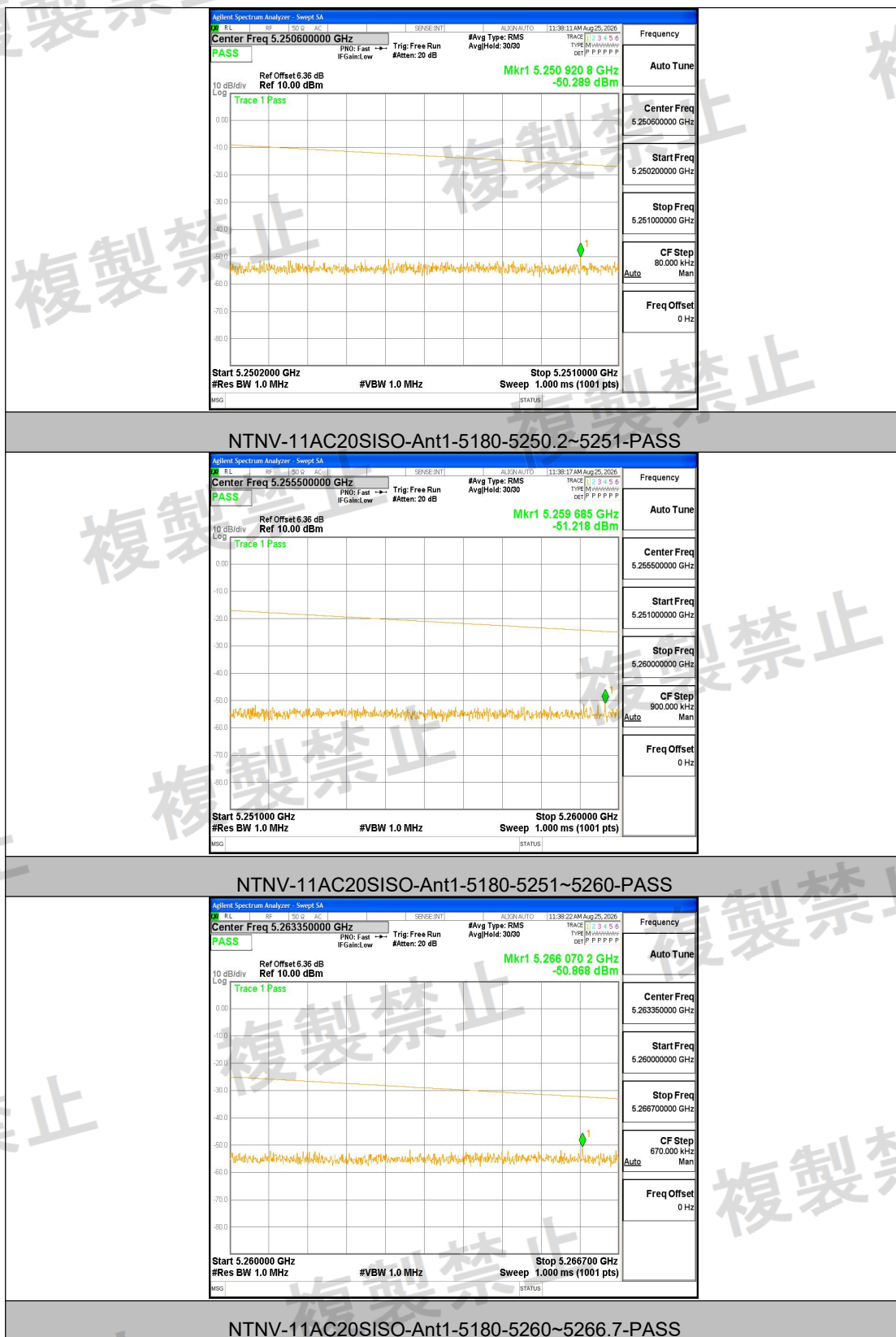
NTNV	11AC20SISO	Ant1	5240	5250~5250.2	5250.18	-13.65	≤-8.46	43.15191	≤142.7	PASS
NTNV	11AC20SISO	Ant1	5240	5250.2~5251	5250.9	-18.37	≤-15.99	14.55459	≤25.2	See table below
NTNV	11AC20SISO	Ant1	5240	5251~5260	5251.05	-20.21	≤-17.03	9.52796	≤19.8	PASS
NTNV	11AC20SISO	Ant1	5240	5260~5266.7	5265.26	-46.98	≤-31.3	0.02004	≤0.7	PASS
NTNV	11AC20SISO	Ant1	5240	5266.7~26000	25752.58	-39.54	≤-33.01	0.11117	≤0.5	PASS

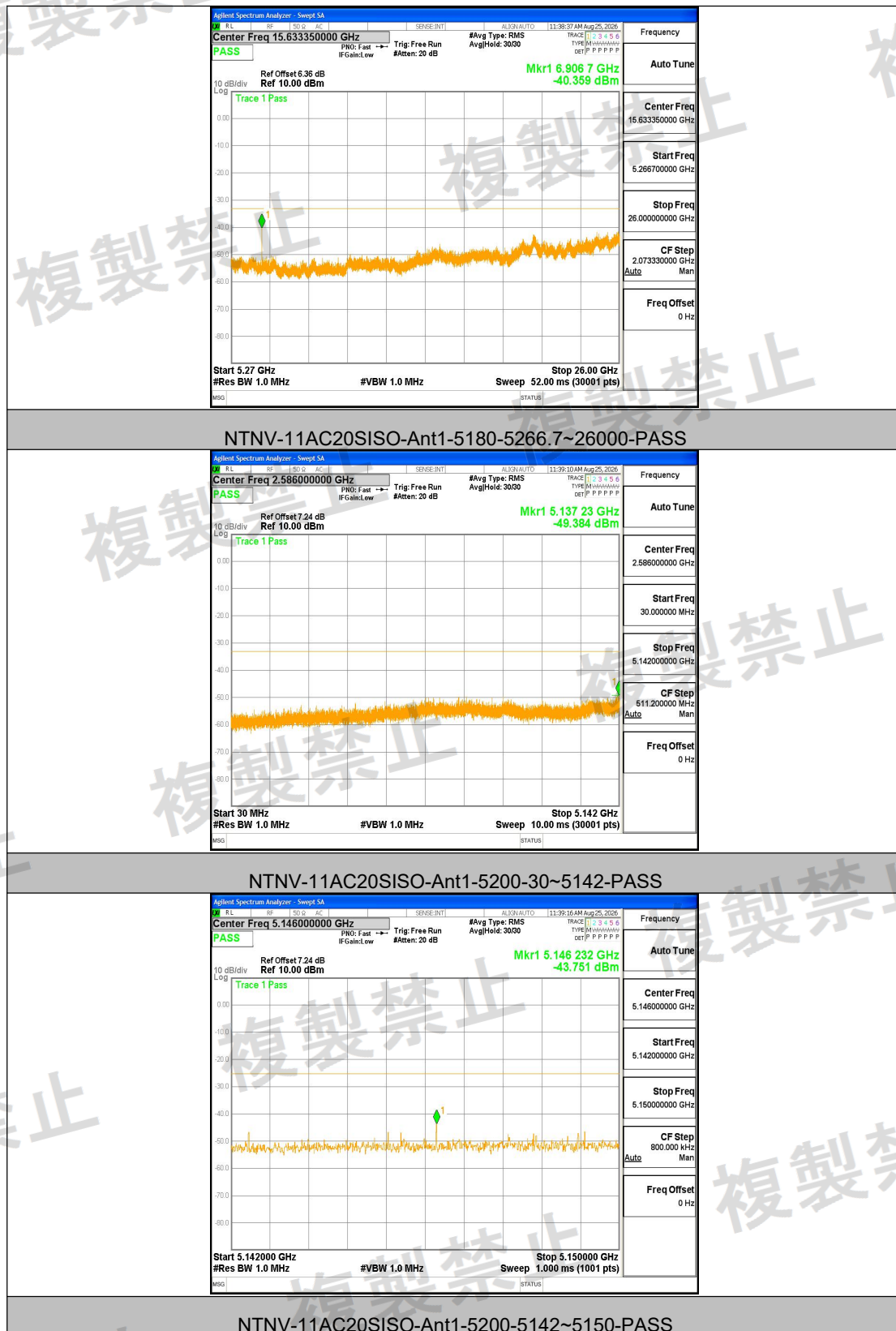
Remark: Antenna gain: 4.41dBi.

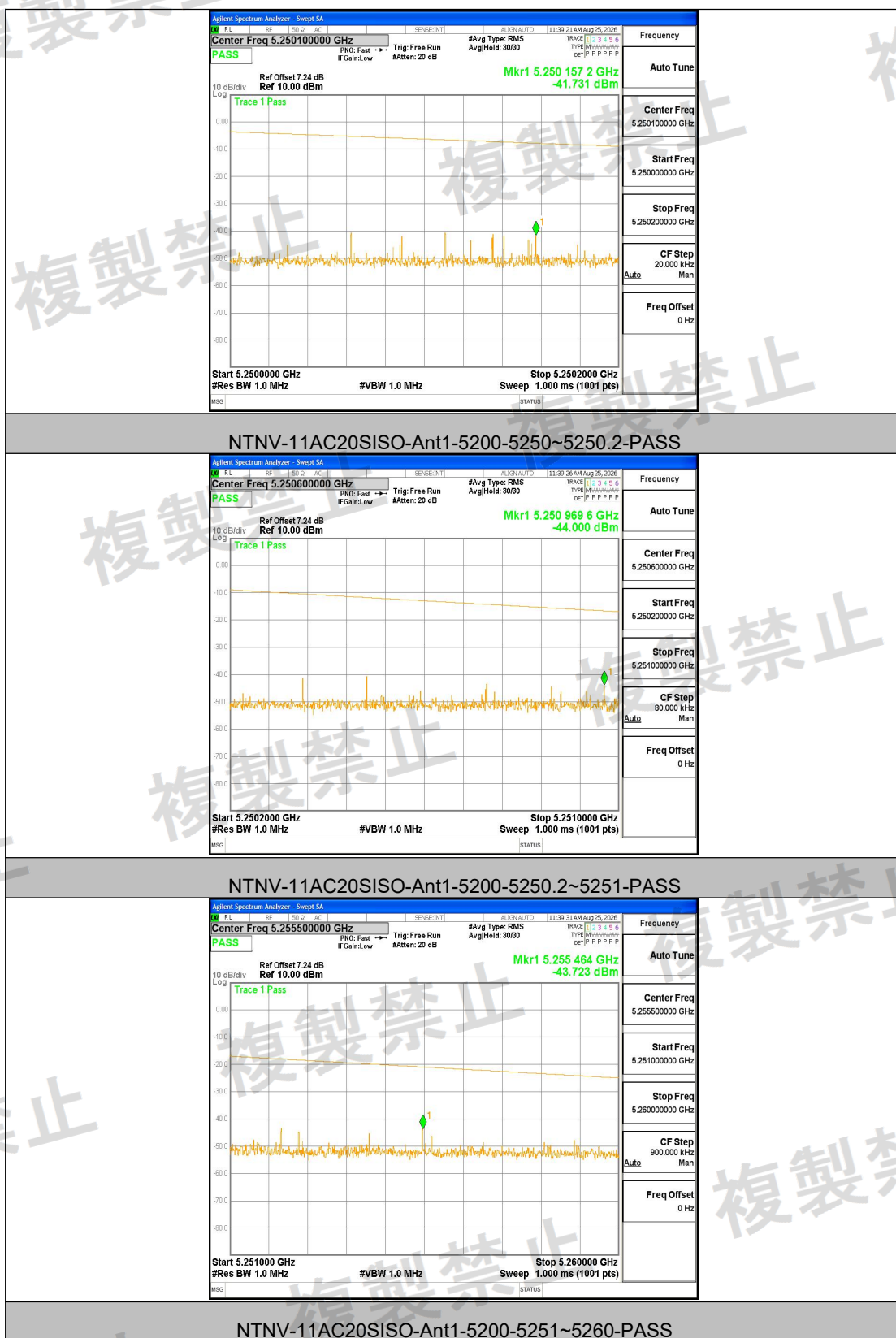
The test results in the table have already taken into account the antenna gain value, above table worst test data Meet the requirements.

6.10.2 Test Graphs

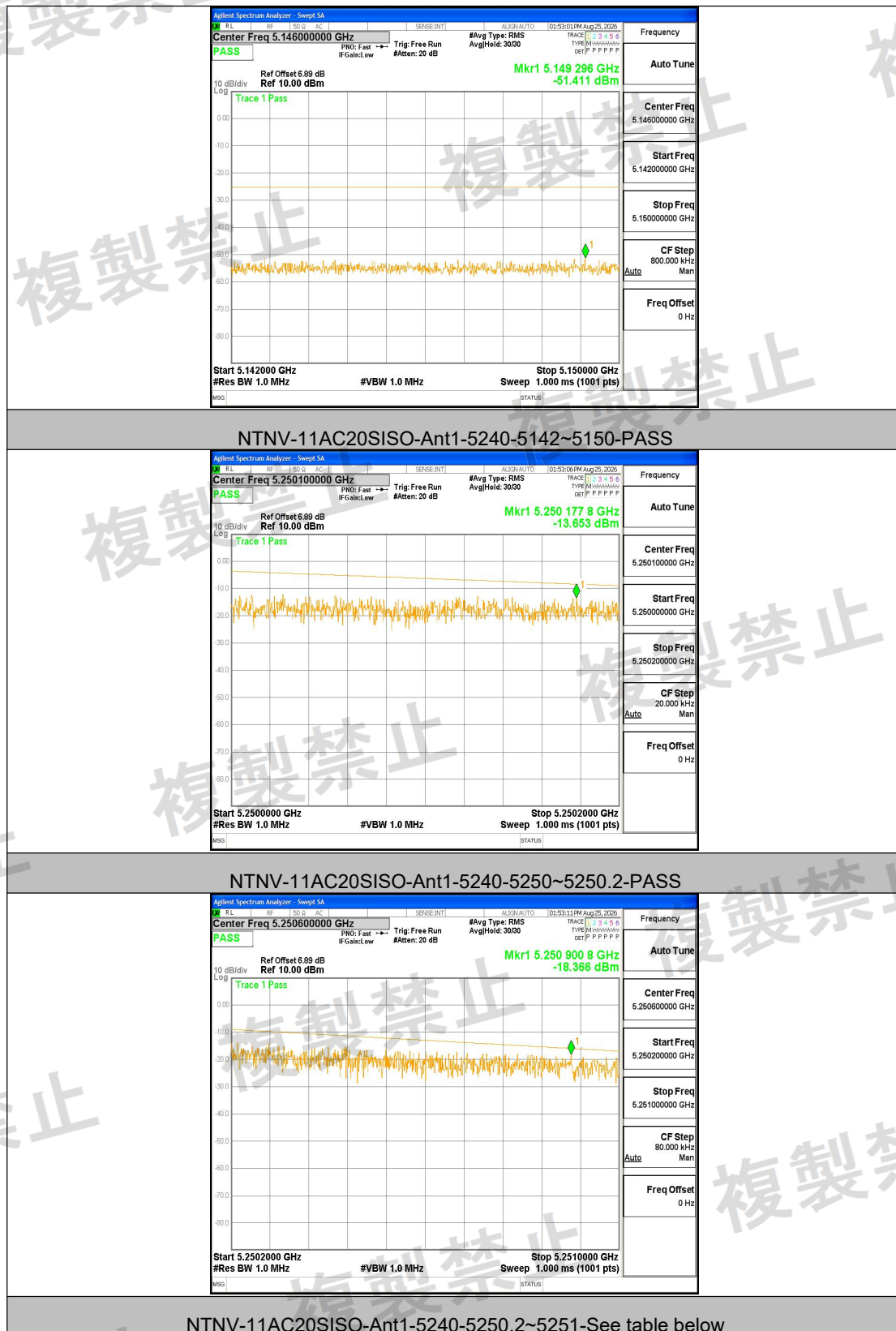


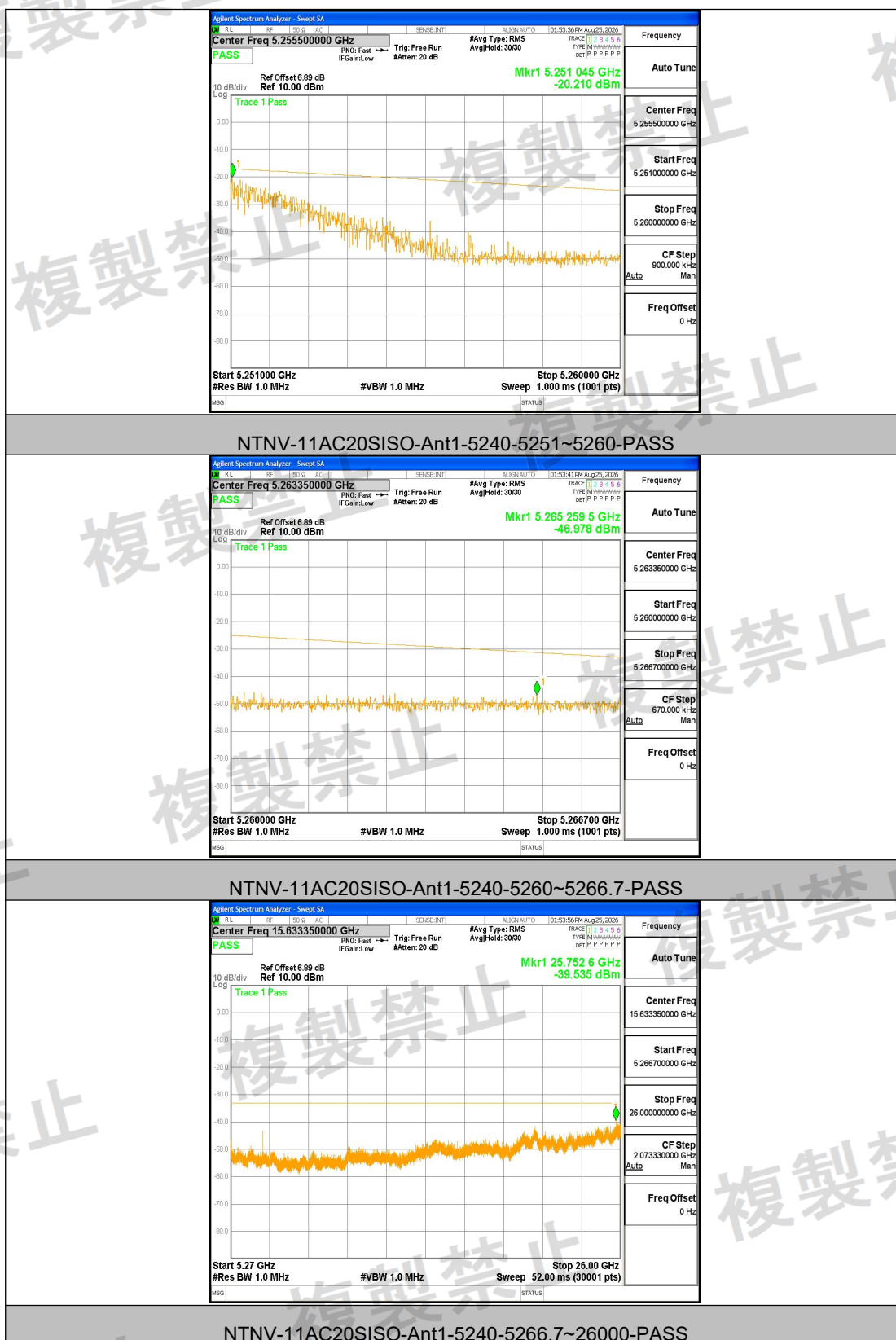












6.11 Spurious Emissions of Rx (Secondary Radiated Emission Strength)

Test Requirement: Article 2 Paragraph 1 of Item 78

- (1) Below 1 GHz : 4 nW or less
- (2) 1 GHz and over : 20 nW or less

Test Status: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.

Test Configuration:



Test Procedure:

1) Test Conditions:

Spectrum Analyzer is used for measurement.

2) EUT conditions:

Modulation/Spread

For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.

3) Spectrum Analyzer conditions:

Step 1

All spurious are measured from 30MHz to 40GHz by peak mode.

Step 2:

Frequency: Spurious Frequency

RBW 1 MHz

VBW 1 MHz

Span: 0 Hz

Sweep Time Auto

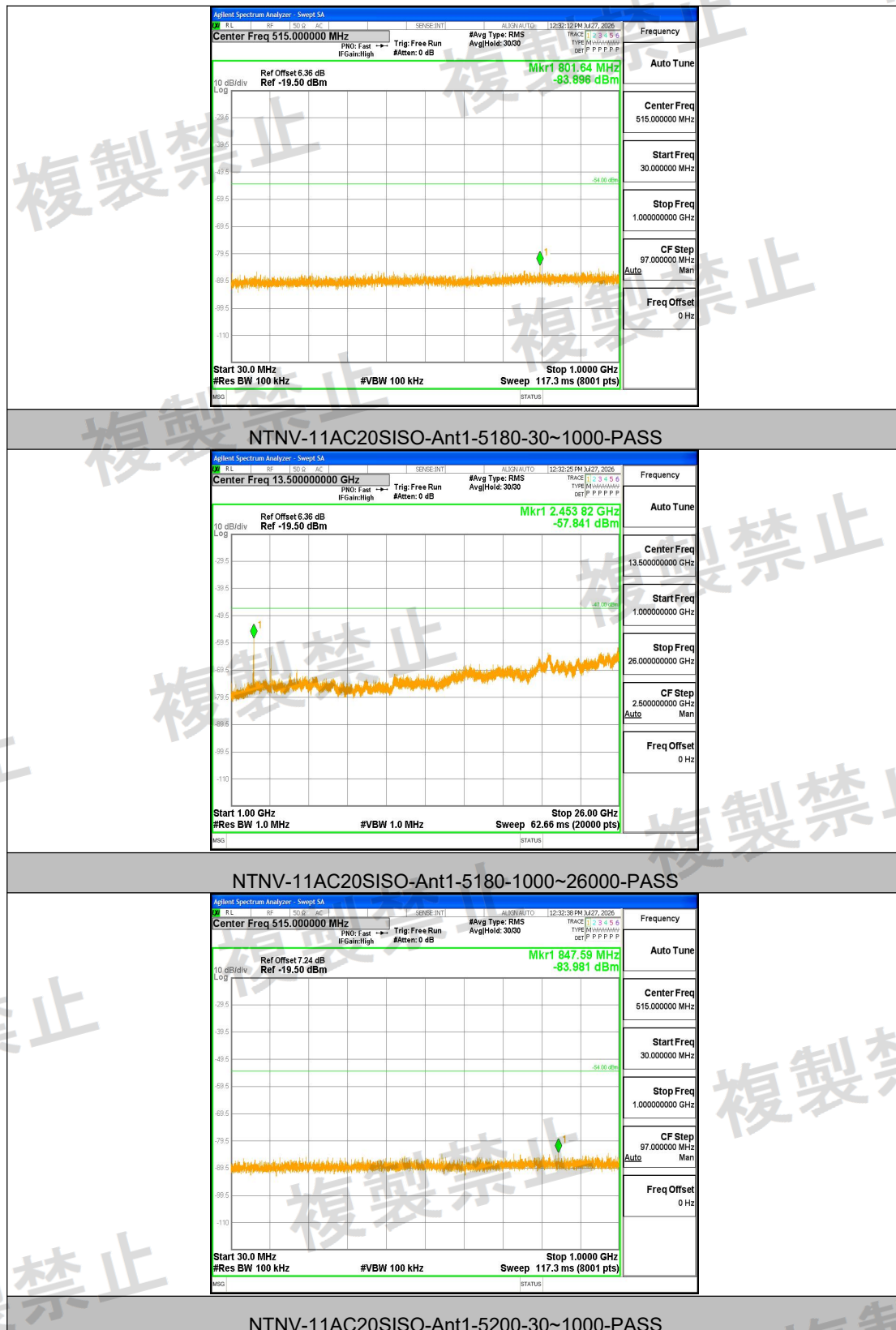
detector mode Sample

Indication mode Max hold

6.11.1 Test Result

Test Condition	TestMode	Antenna	Frequency[MHz]	Freq.Range [MHz]	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
NTNV	11AC20SISO	Ant1	5180	30~1000	801.64	-83.90	≤-54	0.00407	≤4	PASS
NTNV	11AC20SISO	Ant1	5180	1000~2600	2453.82	-57.84	≤-47	1.64437	≤20	PASS
NTNV	11AC20SISO	Ant1	5200	30~1000	847.59	-83.98	≤-54	0.00400	≤4	PASS
NTNV	11AC20SISO	Ant1	5200	1000~2600	2451.32	-59.32	≤-47	1.16950	≤20	PASS
NTNV	11AC20SISO	Ant1	5240	30~1000	916.94	-84.70	≤-54	0.00339	≤4	PASS
NTNV	11AC20SISO	Ant1	5240	1000~2600	5207.71	-58.96	≤-47	1.27057	≤20	PASS

6.11.2 Test Graphs



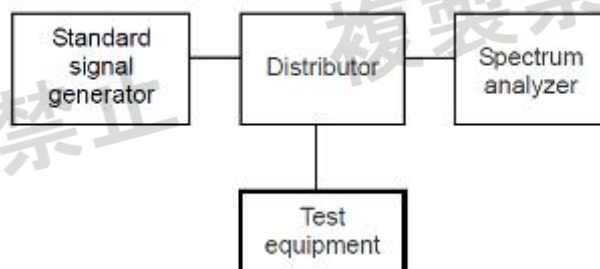


6.12 Carrier sense capability

Test Requirement: Article 2 Paragraph 1 of Item 78

Shall not transmit radio wave when receiving over 100mV/m

Test Configuration: Test with test equipment only



Test Procedure:

1) Test Conditions:

Spectrum Analyzer and signal generator is used for measurement.

2) EUT conditions:

Set the test equipment at the test frequency and the test spread code, and set it to the receiving mode, when using external test equipment, establish a connection

3) Set the standard signal generator as follows:

Carrier frequency: Center frequency of receiving frequency band of test equipment

Modulation: No modulation (when the carrier sense function does not work by the the unmodulated subcarrier in center frequency, shift the frequency or modulate if needed.)

Output level: In the antenna input unit of a test equipment, field intensity is equivalent to the value which becomes 100mV/m.

4) Set the spectrum analyzer as follows:

Center frequency: Center frequency of the bandwidth used.

Sweep frequency band: 50MHz

Resolution bandwidth: Approximately 1 MHz

Video bandwidth: Approximately same as the resolution bandwidth

Y-axis scale: 10dB/Div

Trigger condition: Free-run

Detective mode: Positive peak

5) Measuring operation

- (1) Test with test equipment only: Set the test equipment to the transmitting operation with the output of standard signal generator OFF, and confirm that it emits radio wave, using spectrum analyzer.
- (2) Set the test equipment to the receiving mode.
- (3) Set the test equipment to the transmitting operation with the output of standard signal generator ON, and confirm that it does not emit radio wave, using spectrum analyzer.

IEEE 802.11ac(VHT20)

Channel	Test result	verdict
Low	Good	Pass
Mid	Good	Pass
High	Good	Pass

Test result: The product shall not transmit radio wave when receiving over 100mV/m. The unit does meet the requirements

6.13 Burst Length

Test Requirement: Article 2 Paragraph 1 of Item 78
8ms or less

Test Status: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.

Test Configuration:



Test Procedure:

1) Test Conditions:

Frequency Counter or Spectrum Analyzer is used for measurement.

2) EUT conditions:

Modulation/Spread On,

3) Spectrum Analyzer conditions:

Frequency: Test Frequency

Span 0 MHz

RBW 1MHz,

VBW 1MHz,

Detector mode Positive peak

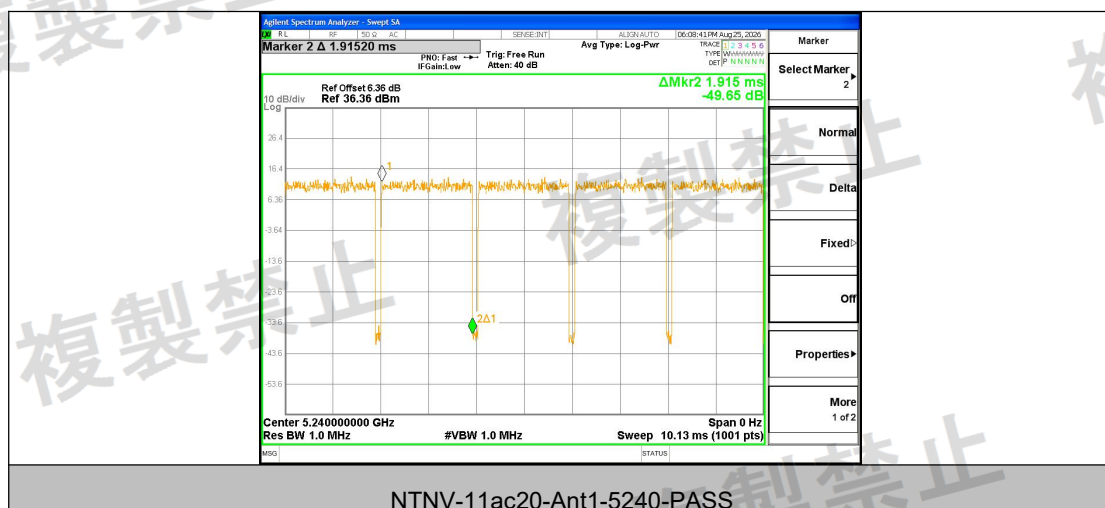
Indication mode Max hold

6.13.1 Test Result

TestCondition	TestMode	Antenna	Frequency[MHz]	Result[ms]	Limit[ms]	Verdict
NTNV	11AC20S ISO	Ant1	5180	1.91	≤8	PASS
NTNV	11AC20S ISO	Ant1	5200	1.92	≤8	PASS
NTNV	11AC20S ISO	Ant1	5240	1.92	≤8	PASS

6.13.2 Test Graphs





6.14 RF accessibility

Standard requirement

Article 2, Item (19) Notice 88 Appendix 45

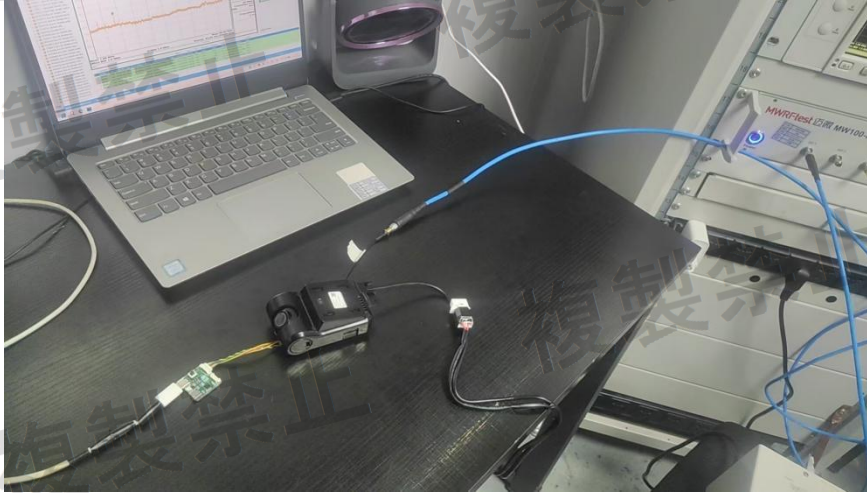
The EUT shall be constructed in such a way that sensitive RF parts, (like modulation and oscillator parts) cannot be reached easily by the user. These parts shall be covered by soldered metal caps or glue or by other mechanical covers. If the covers are fixed with screws, these shall be not the common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

RF and Modulation components are covered with shielding case and this shielding case is soldered.



7 Photographs of test setup

RF TEST



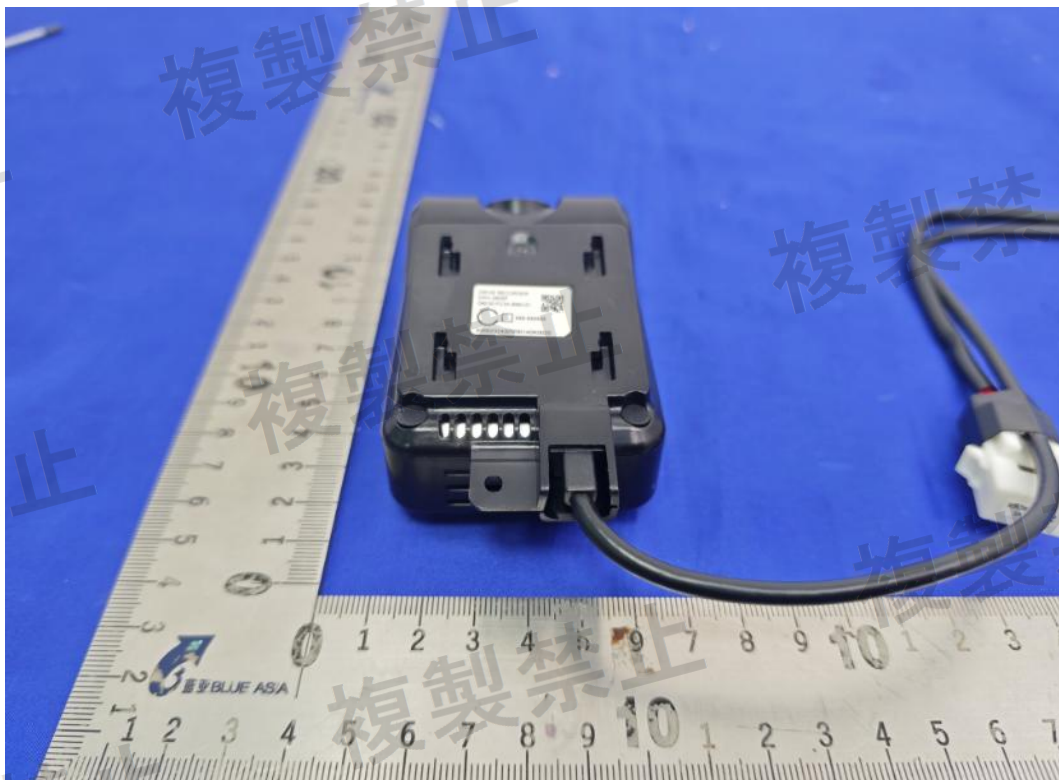
The test report is effective only with both signature and specialized stamp and The result(s) shown in this report refer only to the sample(s) tested. Without written approval of BlueAsia, this report can't be reproduced except in full. The results described in this report do not represent the quality or characteristics of the sampled batch, nor do they represent any similar or identical products that are not explicitly stated.

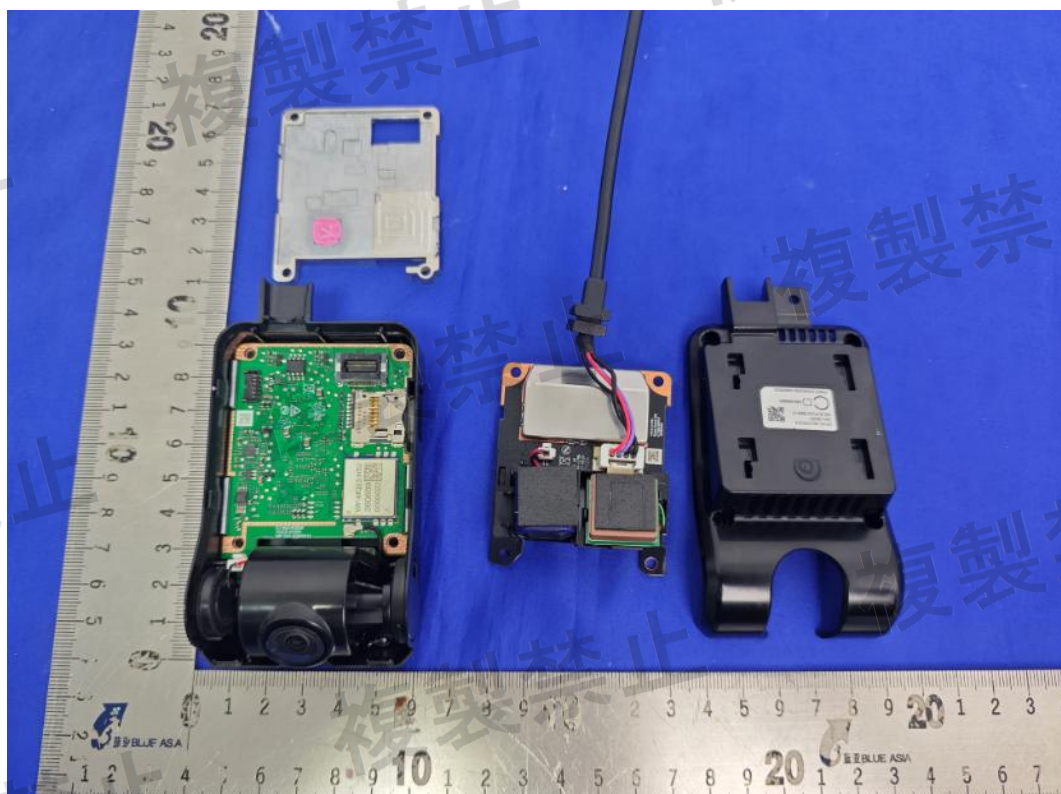
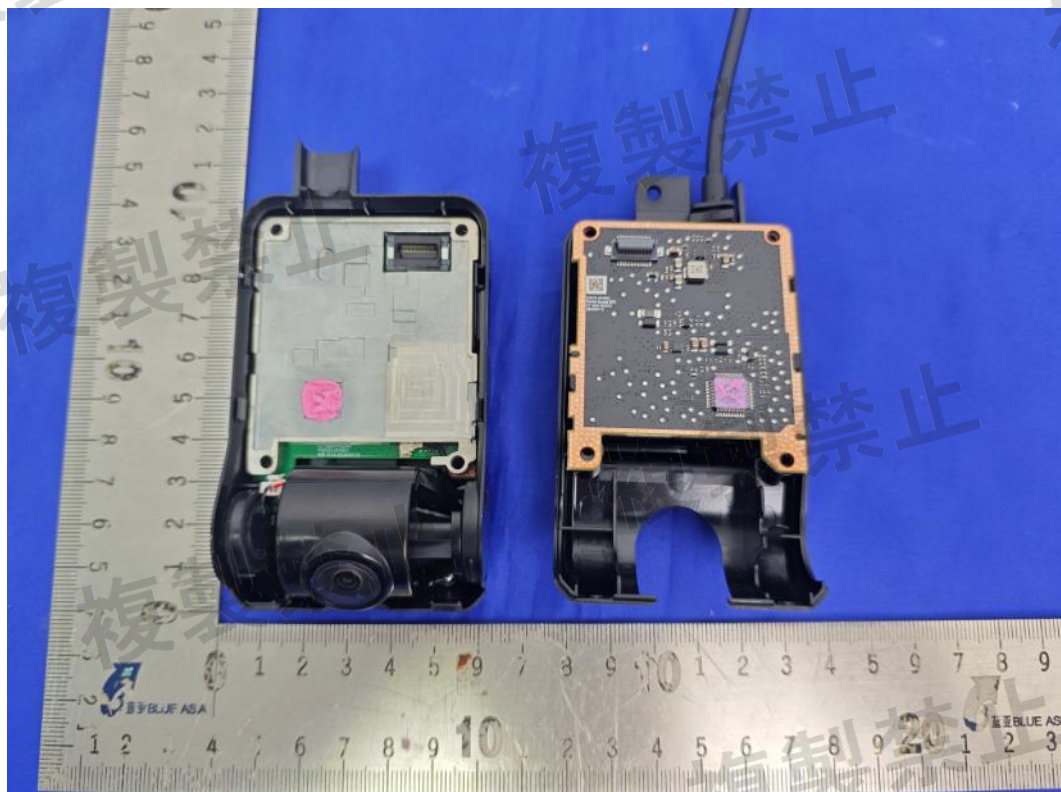
8 Photographs

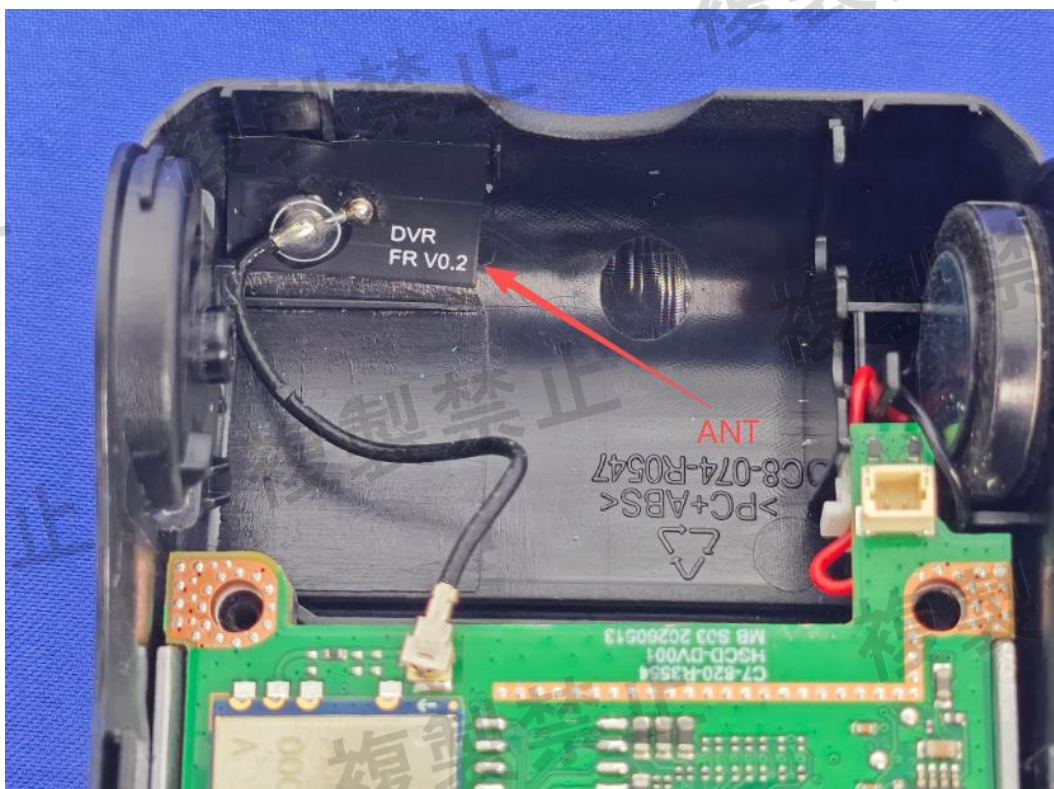
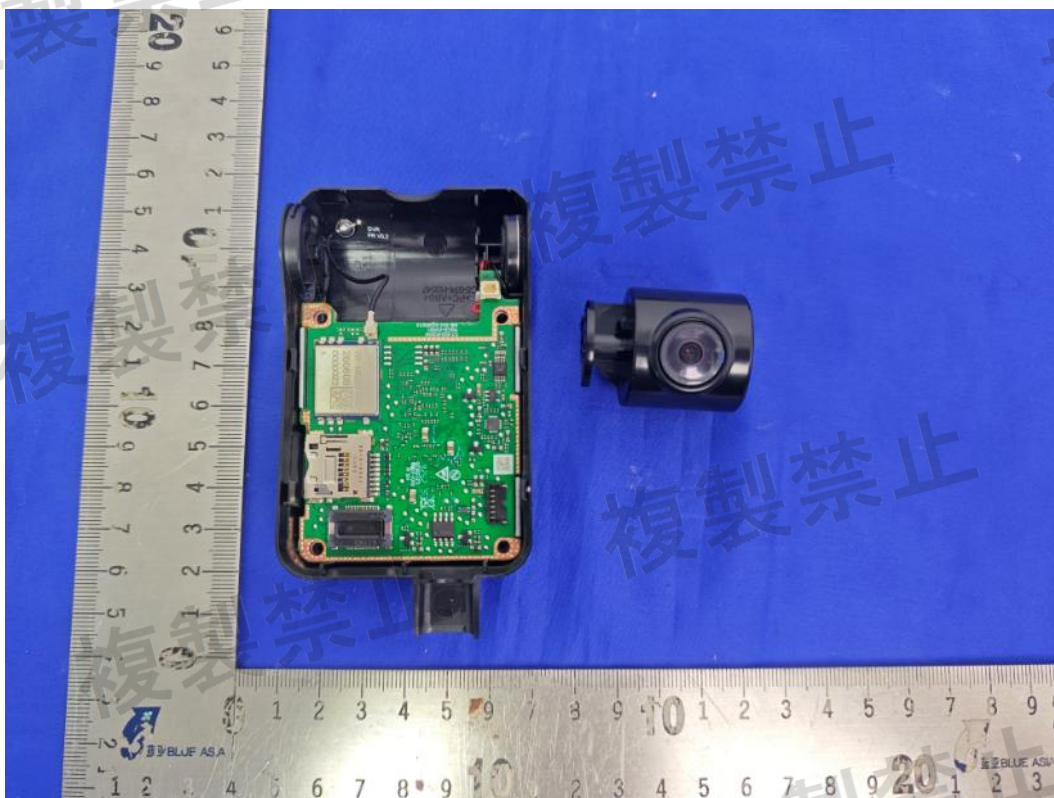
8.1 EUT Constructional Details

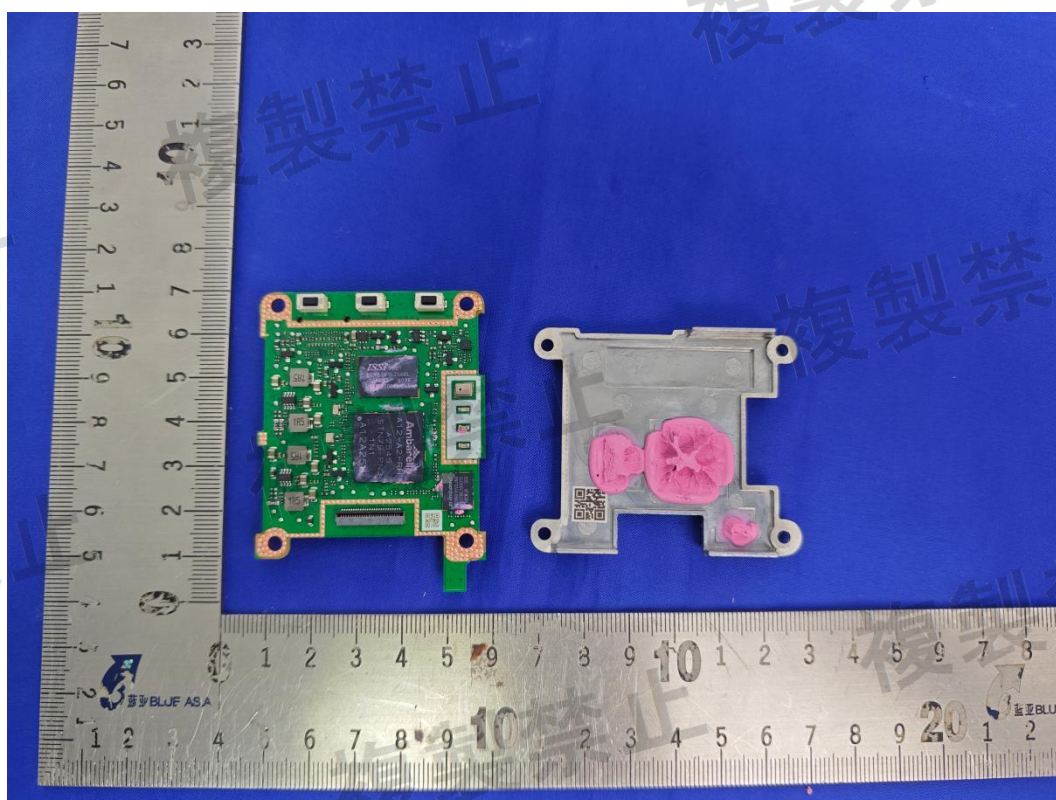
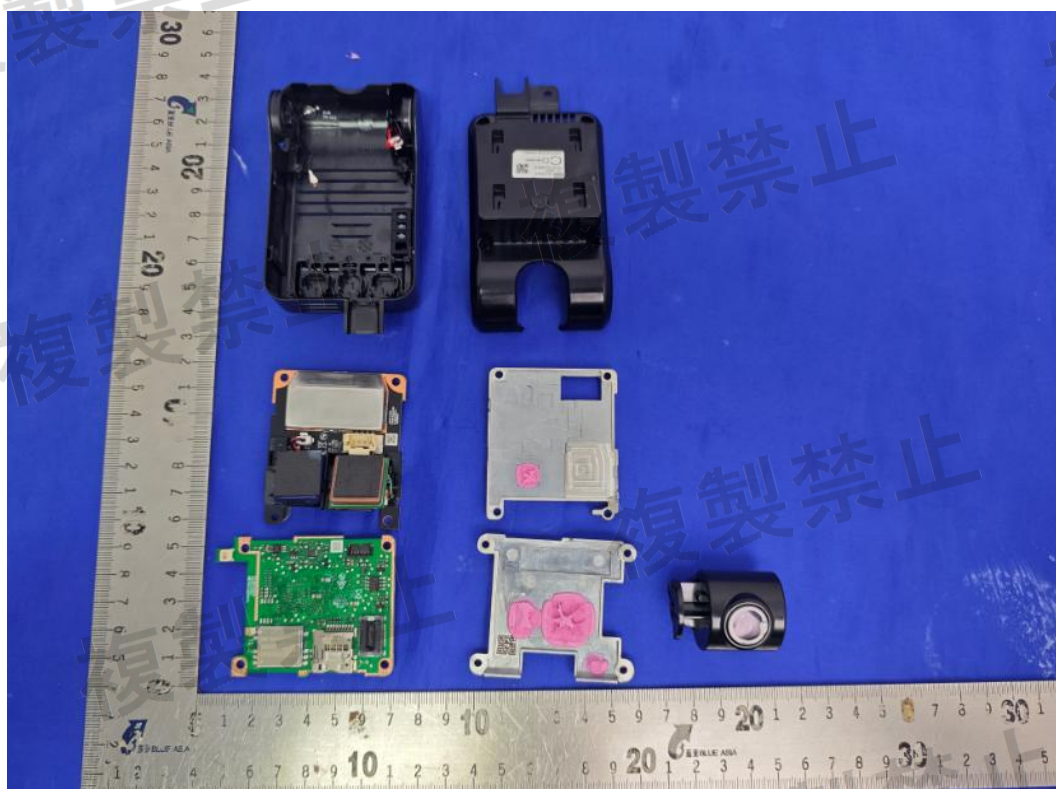


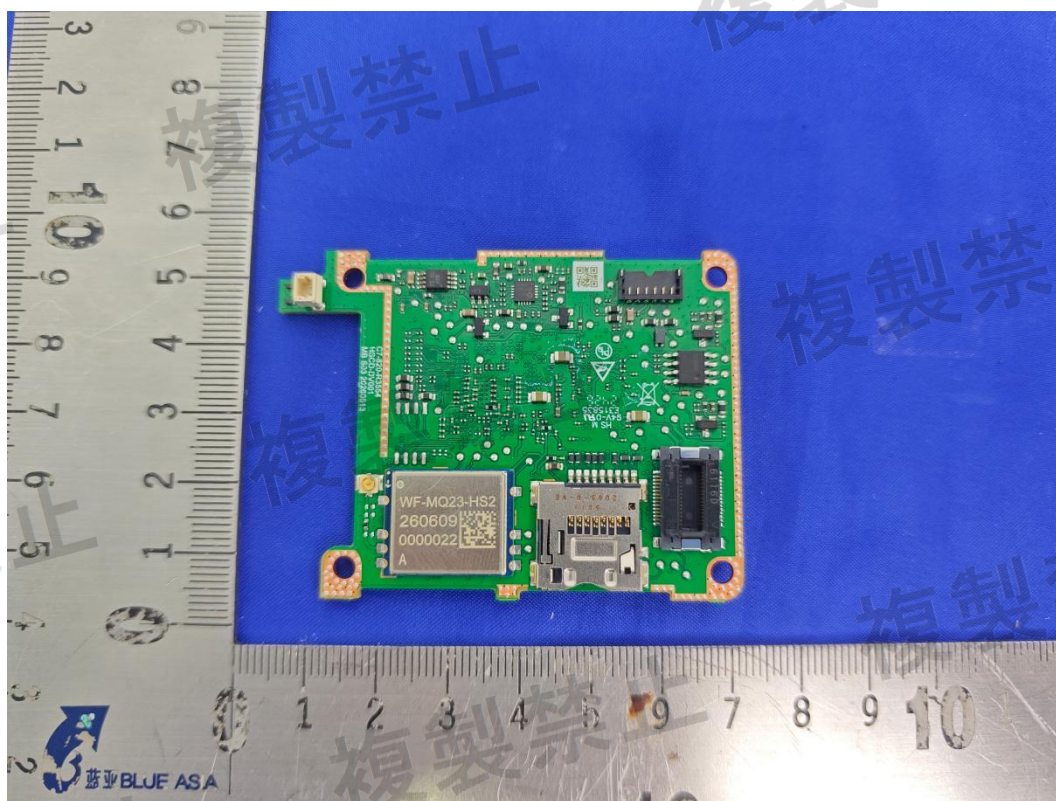
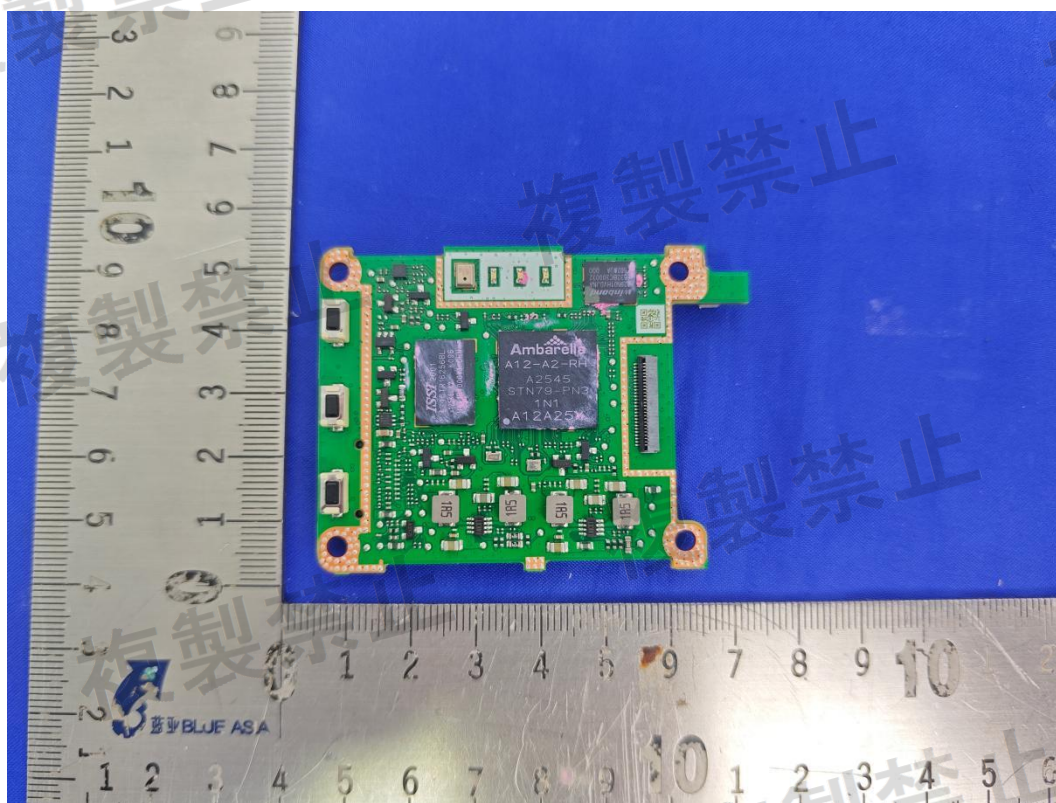


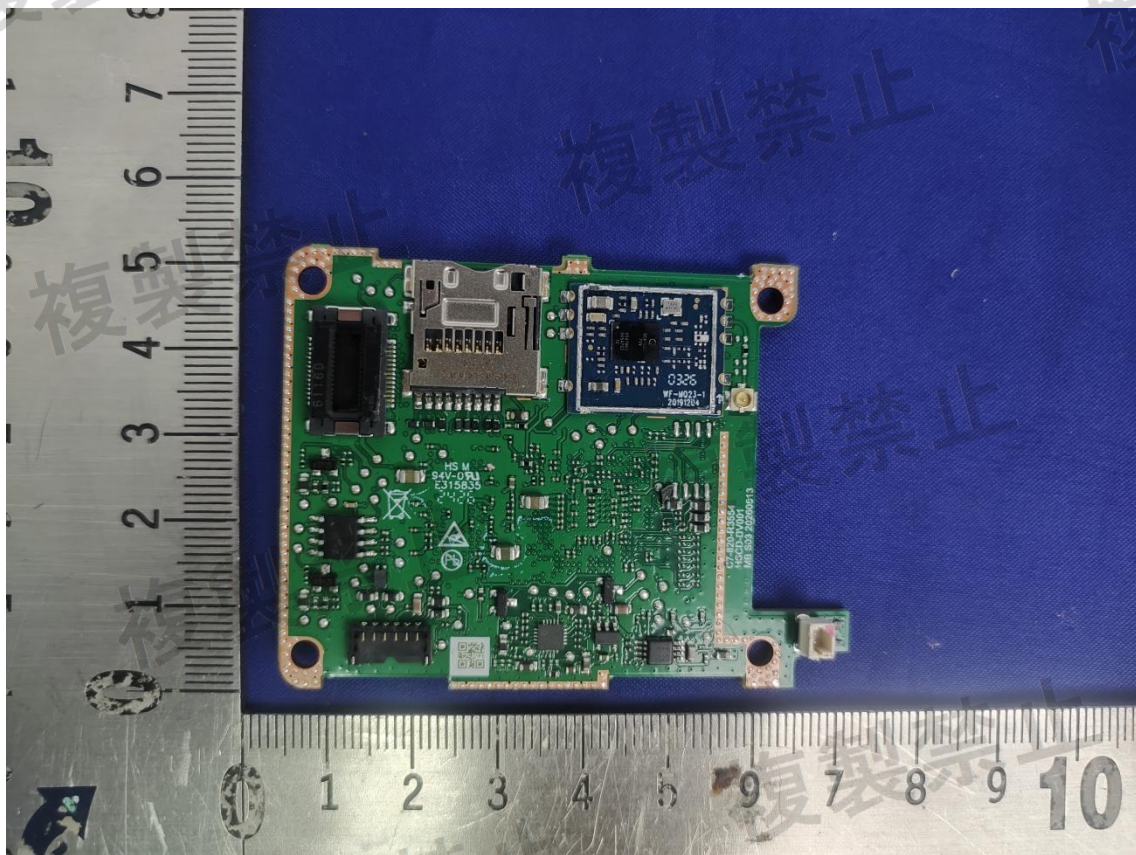












*** End of Report ***

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