

Huawei Technologies Co., Ltd.

TEST REPORT

SCOPE OF WORK

JAPAN RADIO TESTING—eKitEngine AP271E

REPORT NUMBER

251124023SZN-001

ISSUE DATE

21 April 2026

[REVISED DATE]

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JAPAN Radio Test Report-WiFi 2.4G Band

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JAPAN Radio Test Report

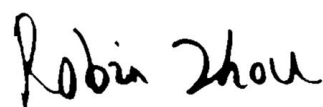
Data transmission equipment operating in the 2.4GHz

Applicant:	Huawei Technologies Co., Ltd.
Address:	Administration Building, Headquarters of Huawei Technologies Co., Ltd, Bantian, Longgang District, 518129 Shenzhen, PEOPLE'S REPUBLIC OF CHINA
Product Name:	Wireless LAN Access Point
Model No.:	eKitEngine AP271E
Standard:	Article 49-20 and the relevant articles of the Ordinance Regulating Radio Equipment
Test Procedure:	MIC Notice No.88 Appendix No.43
Date of Receipt:	24 November 2025
Date of Test:	24 November 2025 to 13 April 2026
Test Site and Location:	Intertek Testing Services Shenzhen Ltd. 101, 201, Building B, No. 308 Wuhe Avenue, Zhangkengjing Community, GuanHu Subdistrict, LongHua District, ShenZhen, P.R. China
Date of Issue:	21 April 2026
Test Result:	Pass*
Note:	

* In the configuration tested, the EUT detailed in this report complied with the standards specified above.

Prepared and Checked By:

Approved By:



Robin Zhou
Senior Project Engineer



Signature

Rui Zhou
Senior Project Engineer

21 April 2026 Date

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Intertek Testing Services Shenzhen Ltd.

101, 201, Building B, No. 308 Wuhe Avenue, Zhangkengjing Community, GuanHu Subdistrict, LongHua District, ShenZhen, P.R. China

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2 Revision History

Report No.	Version	Description	Issued Date
251124023SZN-001	Rev.01	Initial issue of report	21 April 2026

3 Summary of Test Result

Test	Test Requirement	Limit/Severity	Result
Antenna Requirement	Article 2 paragraph 1 item (19)	Notice 88 Appendix 43	PASS
Test frequency	Article 2 paragraph 1 item (19)	Notice 88 Appendix 43	PASS
Frequency Tolerance	Article 2 paragraph 1 item (19)	±50 ppm or less	PASS
Occupied Bandwidth	Article 2 paragraph 1 item (19)	Other (DSSS (11b)) ≤26MHz OFDM≤40MHz	PASS
Spread-spectrum Bandwidth	Article 2 paragraph 1 item (19)	500KHz or more	PASS
Spreading factor	Article 2 paragraph 1 item (19)	5 or more	Pass
Antenna Power	Article 2 paragraph 1 item (19)	10mW/MHz or less 5mW/MHz or less Tolerance: +20%	PASS
E.I.R.P	Article 2 paragraph 1 item (19)	12.14dBm/MHz or 9.14dBm/MHz	PASS
Spurious Emission of Tx	Article 2 paragraph 1 item (19)	Channel 1-13 (1) Below 2387 MHz: 2.5μW/MHz or less(≤-26dBm/MHz) (2) 2387 to 2400 MHz: 25μW/MHz or less(≤-16dBm/MHz) (3) 2483.5 through 2496.5 MHz: 25μW/MHz or less (≤-16dBm/MHz) (4) Over 2496.5 MHz: 2.5μW/MHz or less(≤-26dBm/MHz)	PASS
Interference prevention capability	Article 2 paragraph 1 item (19)	Notice 88 Appendix 43	PASS
RF accessibility	Article 2 paragraph 1 item (19)	Notice 88 Appendix 43	PASS
Spurious Emission of Rx	Article 2 paragraph 1 item (19)	(1) Below 1 GHz: 4nW or less(≤-54dBm/MHz) (2) 1 GHz and over: 20nW or less(≤-47dBm/MHz)	PASS
Carrier Sense	Article 2 paragraph 1 item (19)	N/A	PASS

Remark:

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

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

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

RF: In this whole report RF means Radio Frequency.

Item 19 of Article 2 Paragraph 1.

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5 General Information

5.1 Client Information

Applicant:	Huawei Technologies Co., Ltd.
Address of Applicant:	Administration Building, Headquarters of Huawei Technologies Co., Ltd, Bantian, Longgang District, 518129 Shenzhen, PEOPLE'S REPUBLIC OF CHINA
Manufacturer and Factory:	Same as applicant
Address of Manufacturer and Factory:	Same as applicant

5.2 General Description of EUT

Product Name:	Wireless LAN Access Point
Model No.:	eKitEngine AP271E
Trade Mark:	HUAWEI

5.3 Details of EUT

Operating Frequency	802.11 b/g/n(HT20)/ax(HE20)/be(EHT20): 2412 MHz to 2472 MHz 802.11n(HT40)/ax(HE40)/be(EHT40): 2422 MHz to 2462 MHz
Type of Modulation:	802.11b: DSSS(CCK/QPSK/BPSK) 802.11g: OFDM(BPSK/QPSK/16QAM/64QAM) 802.11n (HT20/HT40): OFDM (BPSK/QPSK/16QAM/64QAM) 802.11ax (HE20/HE40): OFDMA (BPSK/QPSK/16QAM/64QAM/256QAM/1024QAM) 802.11be (EHT20/EHT40): OFDMA (BPSK/QPSK/16QAM/64QAM/256QAM/1024QAM/4096QAM)
RU/MRU:	Supports RU and MRU, include 26-tone RU, 52-tone RU, 106-tone RU, 242-tone RU, 484-tone RU, 996-tone RU, and 2x996 tone RU. Only the worst-case full RU mode was reported.
Transmit Data Rate:	802.11b: 1M/2M/5.5M/11M bps 802.11g: 6M/9M/12M/18M/24M/36M/48M/54M bps 802.11n(HT20/HT40): MCS0-MCS7 802.11ax(HE20/HE40): MCS0-MCS11 802.11be(EHT20/EHT40): MCS0-MCS13
Number of Channels	802.11 b/g/n(HT20)/ax(HE20)/be(EHT20): 13 Channels, 802.11n(HT40)/ax(HE40)/be(EHT40): 9 Channels
Channel Separation:	5 MHz
Antenna Type	PCB antenna
Antenna gain:	ANT1 Max. 6.61dBi, ANT2 Max. 5.50dBi (ANT1: 2GC0, ANT2: 2GC1)
Rated antenna power:	Single Antenna (ANT1, ANT2): 802.11b: 4.0mW/MHz 802.11g: 4.0 mW/MHz 802.11n (HT20): 4.0mW/MHz 802.11n (HT40): 4.0 mW/MHz 802.11ax (HE20): 4.0 mW/MHz 802.11ax (HE40): 4.0 mW/MHz 802.11be (EHT20): 4.0 mW/MHz 802.11be (EHT40): 4.0 mW/MHz MIMO(ANT1+ANT2): 802.11n (HT20/HT40): 2.0mW/MHz 802.11ax (HE20/HE40): 2.0mW/MHz 802.11be (EHT20/EHT40): 2.0mW/MHz
Power Supply:	DC 12V=2.0A Powered by Adapter or POE 48V=0.6A Powered by Adapter (Adapter Input: 100-240V~,50/60Hz)
BLE and NearLink:	The BLE and NearLink functions are disabled by software, and the product does not support BLE or NearLink communication.

5.4 Description of Support Units

Description	Manufacturer	Model No.
Laptop	Dell	Latitude 5420
Test Software (provided by applicant): IPOP V4.3.2 was installed on the laptop.		

5.5 Deviation from Standards

None.

5.6 Abnormalities from Standard Conditions

None.

5.7 Other Information Requested by the Customer

None.

6 Equipment Used during Test

Test Equipment	Manufacturer	Model No.	Serial number	Cal. Date	Next Cal. Date	Calibration body	Calibration Method
Spectrum Analyzer	R&S	FSV40	101214	2025-01-25 2026-01-20	2026-01-25 2027-01-20	CEPREI CALIBRATION & TESTING CENTER	C
Wideband Radio Communication Tester	R&S	CMW500	159876	2025-04-21	2026-04-21		
RF Power Meter	Anritsu	ML2496A	1302005	2025-04-21	2026-04-21		
Pulse Power Sensor	Anritsu	MA2411B	1207429	2025-04-21	2026-04-21		
True RMS Multimeter	Fluke	175	10470115	2024-12-04 2025-12-02	2025-12-04 2026-12-02		
MXG Vector Signal Generator	Keysight	N5182B	MY53051328	2025-09-15	2026-09-15		
Attenuator	Mini-Circuits	BW-S10W5+	1044	2024-12-05 2025-12-02	2025-12-05 2026-12-02		

Remark:

- Calibration conducted by the National Institute of Information and Communications Technology (NITC) in Japan (hereinafter referred to as "NITC") or a designated calibration agency under Article 102-18 paragraph (1) in JRL.
- Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Act (Act No.51 of 1992).
- Calibration conducted in countries except Japan, which shall be equivalent to the calibration Conducted by the NITC or a designation agency under Article 102-18 paragraph (1).
- Calibration, etc. conducted by using measuring instruments and other equipment listed in the night 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
- Calibration duration for above equipments is 1 year.

7 Test Results

7.1 E.U.T. test conditions

Power supply:

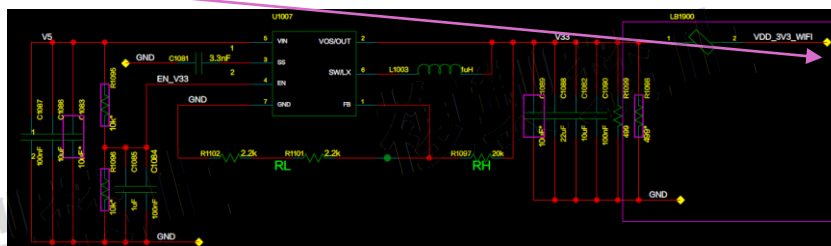
DC 12V=2.0A Powered by Adapter or POE 48V=0.6A Powered by Adapter
(Adapter Input: 100-240V~, 50/60Hz)

The RF unit is supplied by DC 3.3V. The fluctuation of input voltage to the circuit of RF unit of test equipment is under $\pm 1\%$, when input voltage from AC 100V to the test equipment is fluctuated by $\pm 10\%$. So, all measurement has been conducted by only rated voltage AC 100V.

The measurement result of the voltage fluctuation at RF circuit when AC 100V+10%.

Power supply voltage	RF unit measured value	Condition
AC 100V	DC 3.3V	NTNV
AC 90V	DC 3.3V	NTLV
AC 110V	DC 3.3V	NTHV

Test Point



Temperature:

-10°C - +70°C

Humidity:

45-85 % RH

Atmospheric Pressure:

1000 -1010 mbar

Test frequencies:

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.

Channel	Frequency (MHz)	
	802.11b/g/n(HT20)/ax(HE20)/be(EHT20)	802.11n(HT40)/ax(HE40)/be(EHT40)
1	2412	/
2	2417	/
3	2422	2422
4	2427	2427
5	2432	2432
6	2437	2437
7	2442	2442
8	2447	2447
9	2452	2452
10	2457	2457
11	2462	2462
12	2467	/
13	2472	/

Test Frequency (MHz)	
802.11b/g/n(HT20)/ax(HE20)/be(EHT20)	802.11n(HT40)/ax(HE40)/be(EHT40)
2412	2422
2442	2442
2472	2462

7.2 Test Environment

Operating Environment:	
Temperature:	24.0 °C
Humidity:	52.0 % RH
Atmospheric Pressure:	1001 mbar

7.3 Antenna Requirement

EUT Antenna

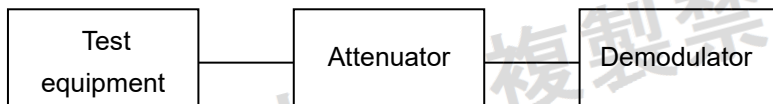
The antenna is PCB antenna connect to the PCB by connector port and no consideration of replacement.

The best-case gain of the antenna are ANT1 Max. 6.61dBi and ANT2 Max. 5.50dBi.

7.4 Interference prevention function

1) Measurement system diagram

When transmitting identification code



2) Condition of measuring instrument

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

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.

Identification code: F8:28:C9:BE:6A:50

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

7.5 Frequency Tolerance

Test Requirement:

Article 2 paragraph 1 item (19)

Tolerance of frequency: $\pm 50 \times 10^{-6}$

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

4. Alternative method in case the UUT cannot be operated in an un-modulated mode.

The UUT shall be connected to spectrum analyser.

Max Hold shall be selected and the centre frequency adjusted to that of the UUT.

The peak value of the power envelope shall be measured and noted. The span shall be reduced and the marker moved in a positive frequency increment until the upper, (relative to the centre frequency), -10 dBc point is reached. This value shall be noted as f1.

The marker shall then be moved in a negative frequency increment until the lower, (relative to the centre frequency), -10 dBc point is reached. This value shall be noted as f2.

The centre frequency is calculated as $(f1 + f2) / 2$.

Test result: PASS

Note: All the configuration were tested, but only the worst data were reported in this report.

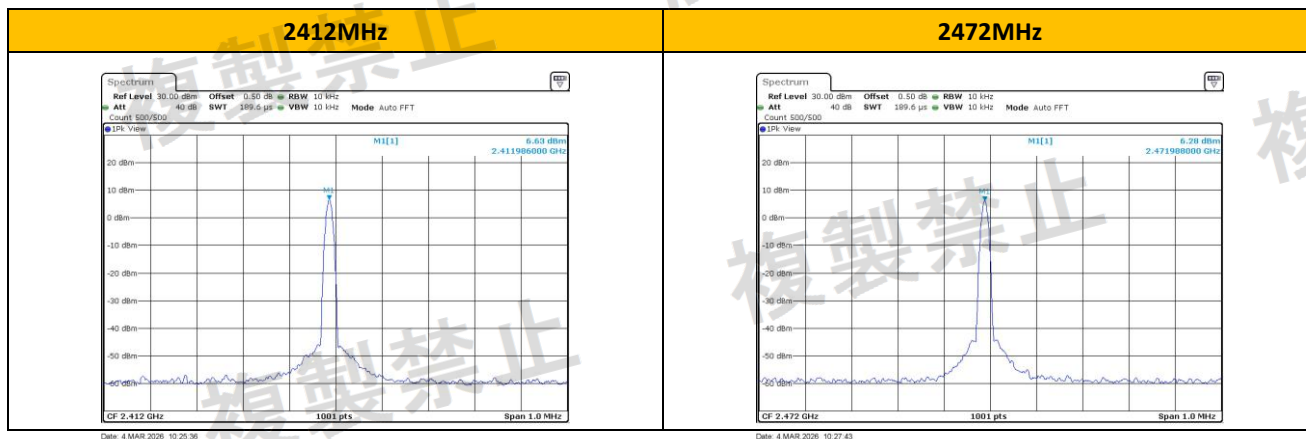
Measurement Uncertainty: $\pm 53.50\text{Hz}$.

Frequency Tolerance

NTNV

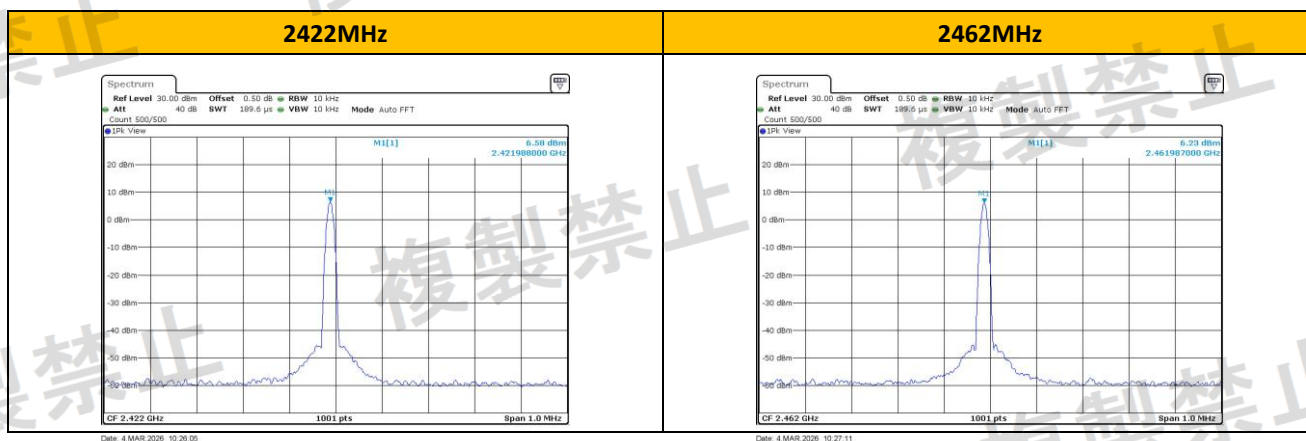
Ant1

802.11b/g/n20/ax20/be20



Measurement Frequency	MHz	2412	2472	Limit	Result
Measured Value	MHz	2411.986	2471.988	-----	-----
Frequency Tolerance	ppm	-5.80	-4.85	±50 ppm or less	Pass

802.11n40/ax40/be40

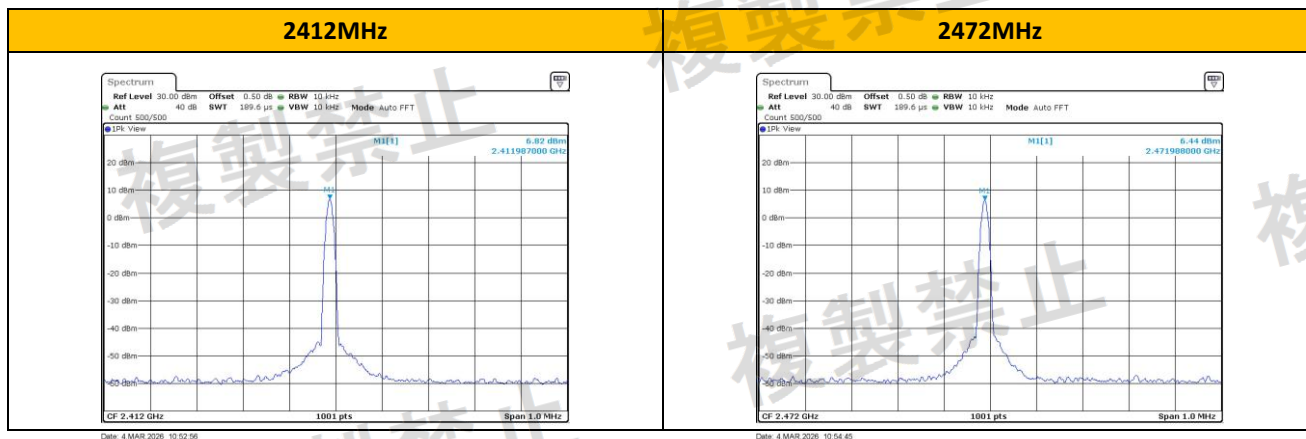


Measurement Frequency	MHz	2422	2462	Limit	Result
Measured Value	MHz	2421.988	2461.987	-----	-----
Frequency Tolerance	ppm	-4.95	-5.28	±50 ppm or less	Pass

NTNV

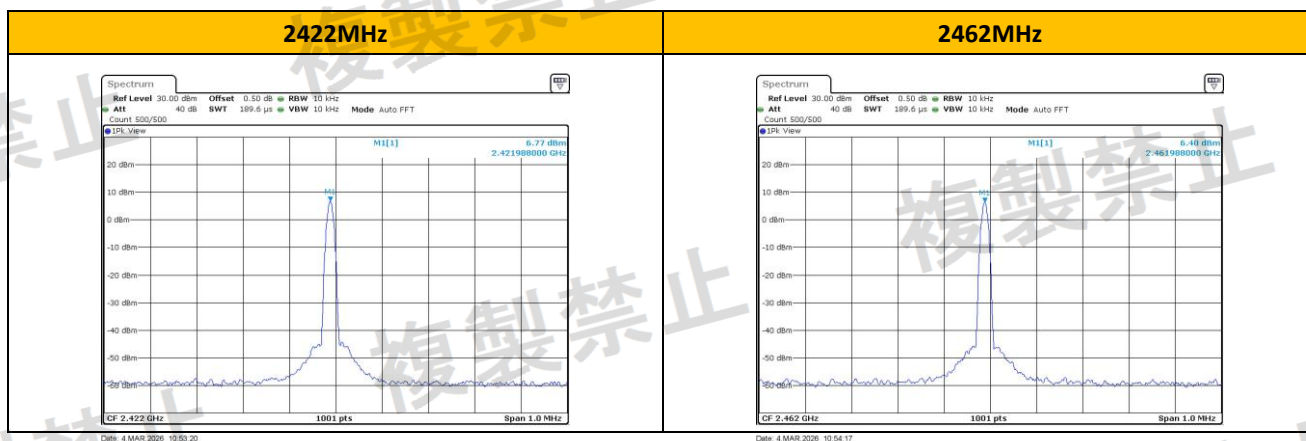
Ant2

802.11b/g/n20/ax20/be20



Measurement Frequency	MHz	2412	2472	Limit	Result
Measured Value	MHz	2411.987	2471.988	-----	-----
Frequency Tolerance	ppm	-5.39	-4.85	±50 ppm or less	Pass

802.11n40/ax40/be40



Measurement Frequency	MHz	2422	2462	Limit	Result
Measured Value	MHz	2421.988	2461.988	-----	-----
Frequency Tolerance	ppm	-4.95	-4.87	±50 ppm or less	Pass

7.6 Occupied Bandwidth (99%)

Test Requirement:

Article 2 paragraph 1 item (19)

Other (DSSS (11b)): $\leq 26\text{MHz}$

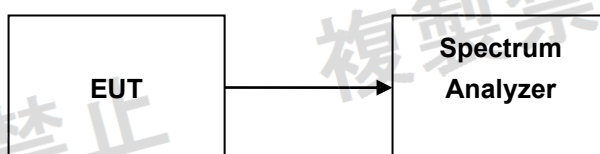
OFDM $\leq 40\text{MHz}$

FH, FH+DS, FH+OFDM $\leq 83.5\text{MHz}$

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/Hopping ON
For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.
3. Spectrum Analyzer conditions:
Frequency: Test Frequency
Span 40MHz
RBW 300KHz
VBW 300KHz
Sweep Time Auto
Detector mode Positive peak
Indication mode Max hold
OBW 99%

Test result: Pass

Note: All the configuration were tested, but only the worst data were reported in this report.

Measurement Uncertainty: $\pm 3.46\%$.

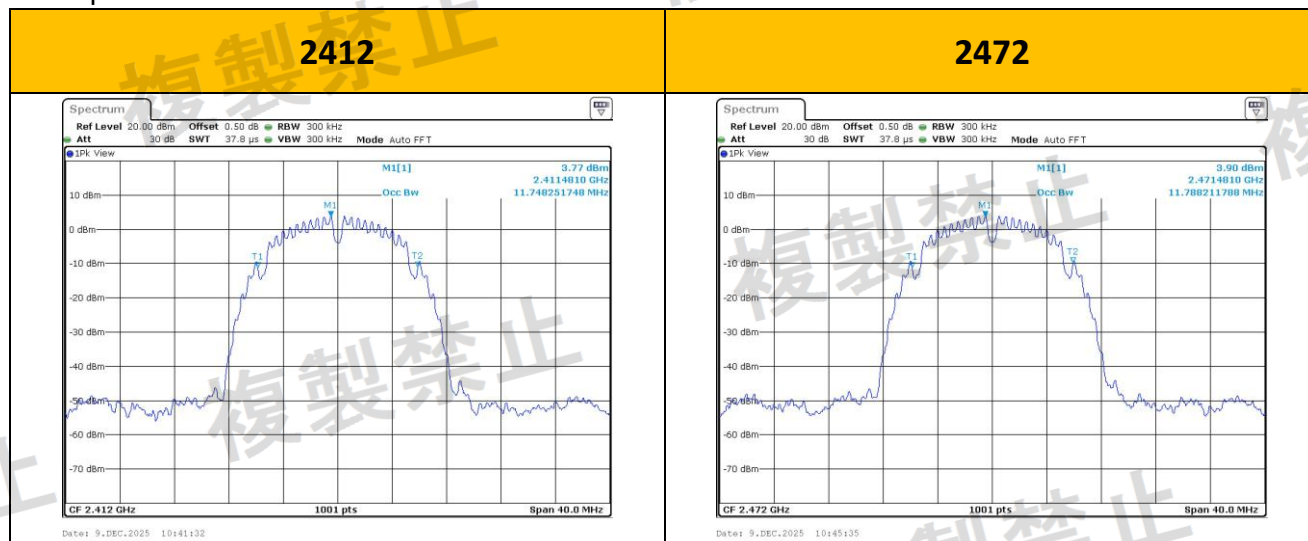
Occupied Bandwidth (99%)

NTNV

ANT1

802.11 b

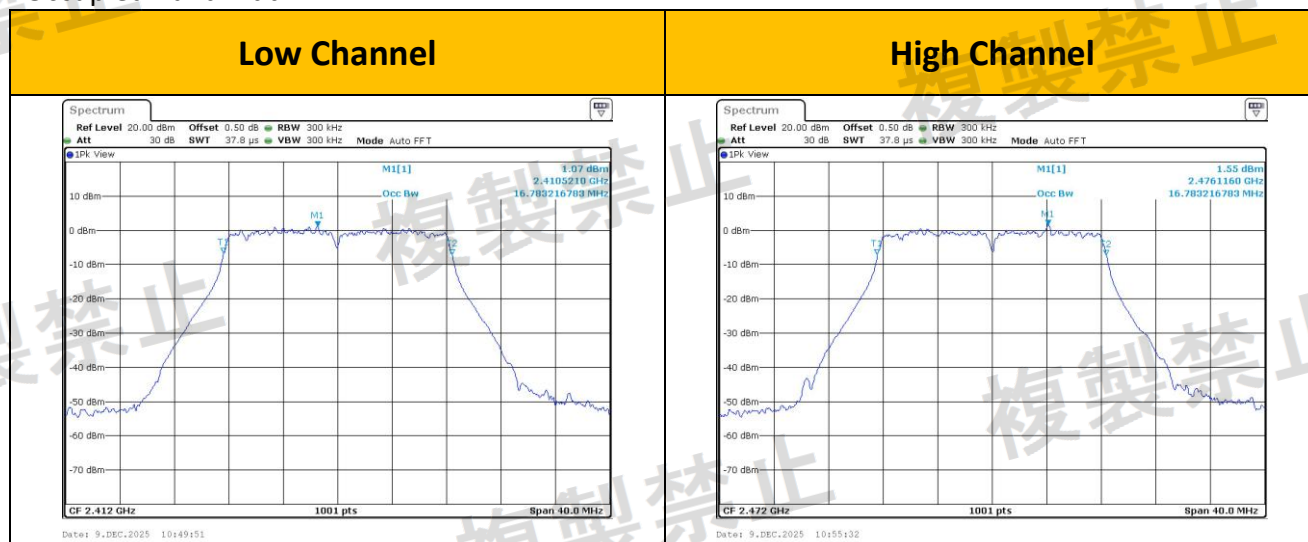
Occupied Bandwidth



Measurement Frequency	2412	2472	Limit	Result
Occupied Bandwidth (MHz)	11.748	11.788	26MHz or Less	Pass

802.11 g

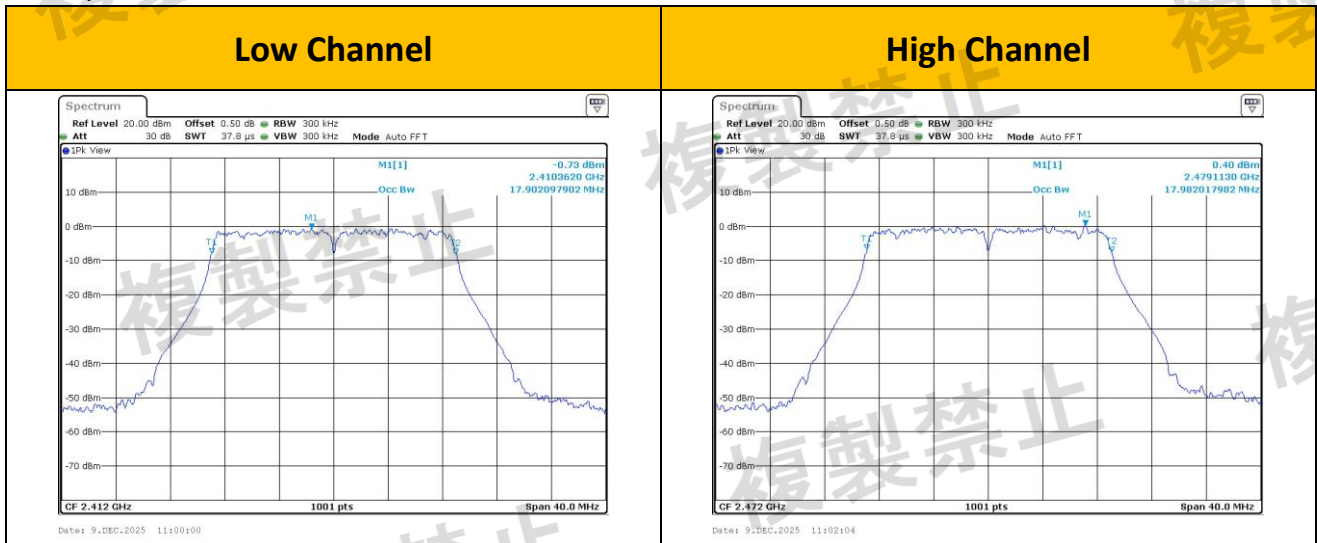
Occupied Bandwidth



Measurement Frequency	2412	2472	Limit	Result
Occupied Bandwidth (MHz)	16.783	16.783	26MHz or Less	Pass

802.11 n20

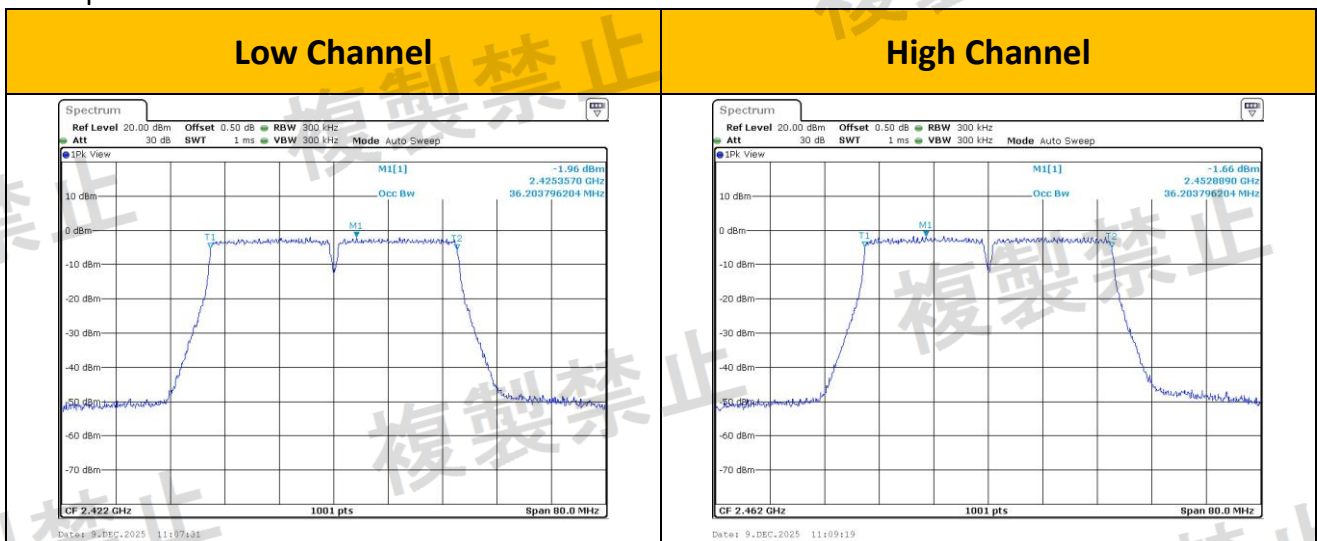
Occupied Bandwidth



Measurement Frequency	2412	2472	Limit	Result
Occupied Bandwidth (MHz)	17.902	17.982	26MHz or Less	Pass

802.11 n40

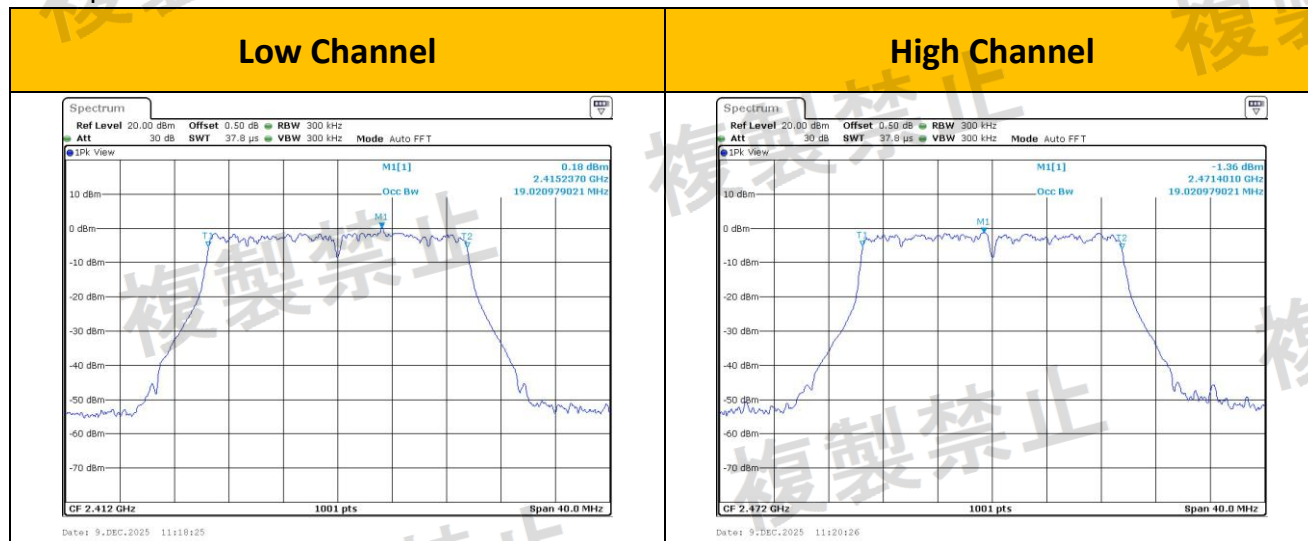
Occupied Bandwidth



Measurement Frequency	2422	2462	Limit	Result
Occupied Bandwidth (MHz)	36.204	36.204	40MHz or Less	Pass

802.11 ax20

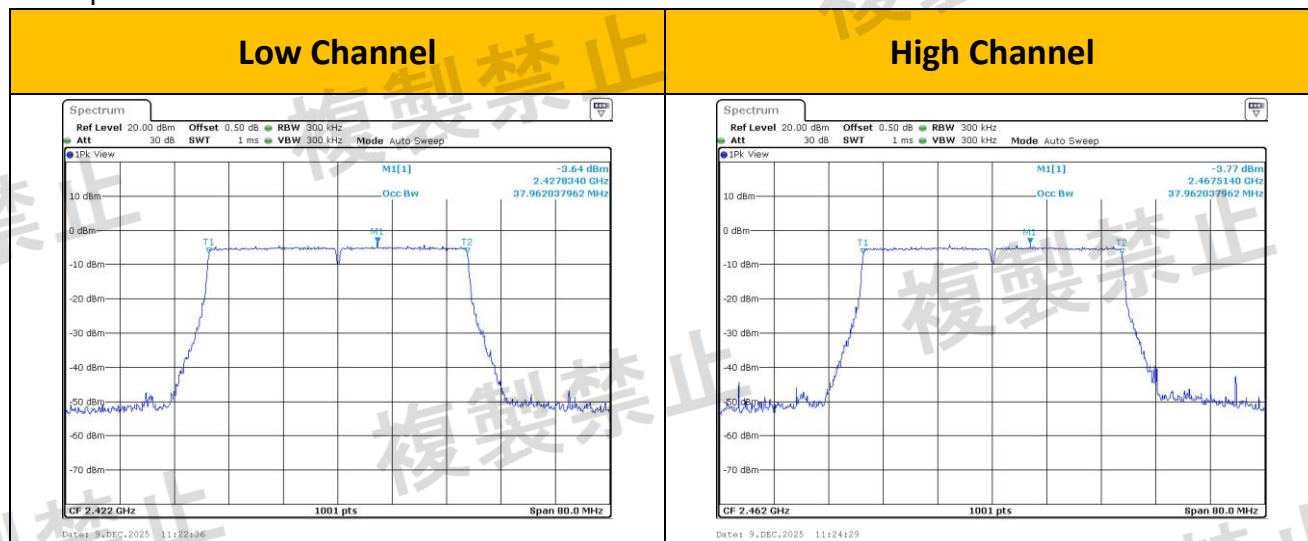
Occupied Bandwidth



Measurement Frequency	2412	2472	Limit	Result
Occupied Bandwidth (MHz)	19.021	19.021	26MHz or Less	Pass

802.11 ax40

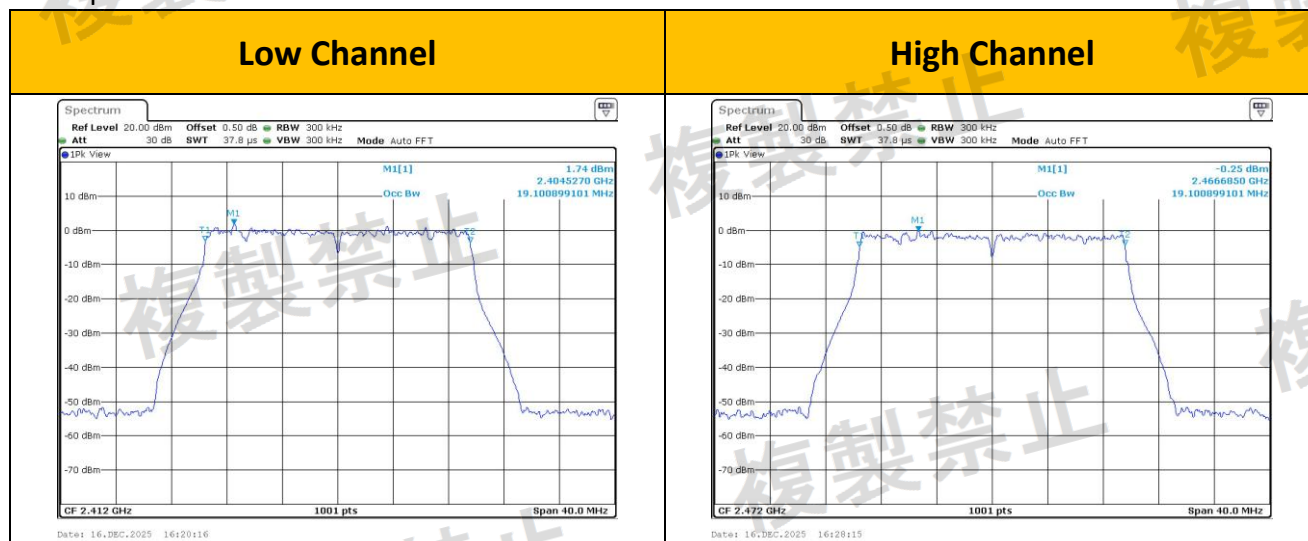
Occupied Bandwidth



Measurement Frequency	2422	2462	Limit	Result
Occupied Bandwidth (MHz)	37.962	37.962	40MHz or Less	Pass

802.11 be20

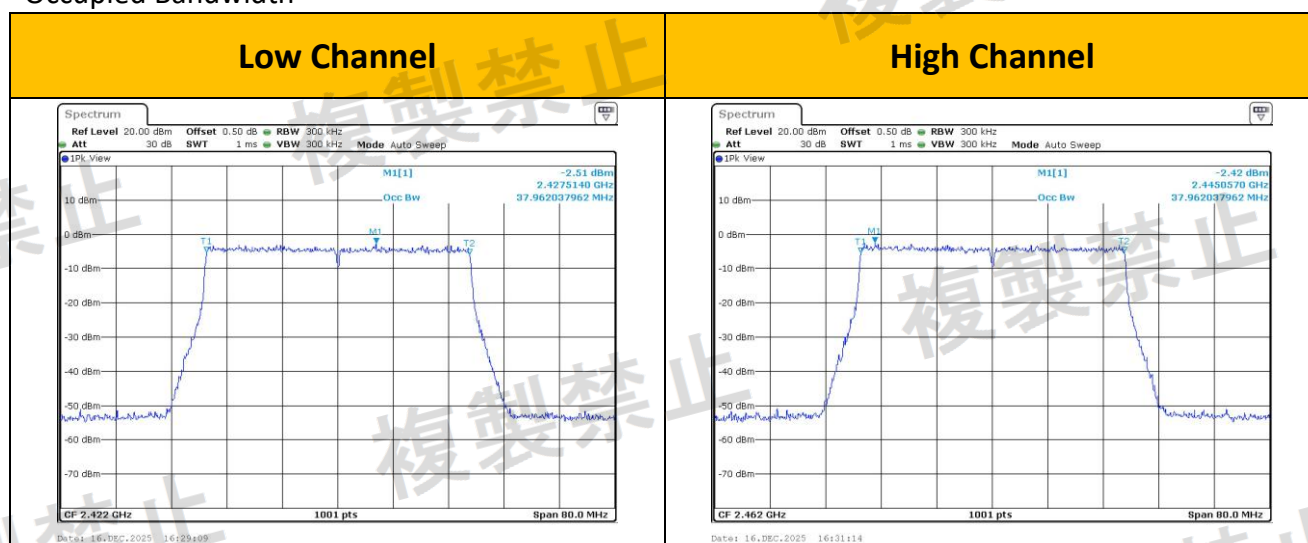
Occupied Bandwidth



Measurement Frequency	2412	2472	Limit	Result
Occupied Bandwidth (MHz)	19.101	19.101	26MHz or Less	Pass

802.11 be40

Occupied Bandwidth



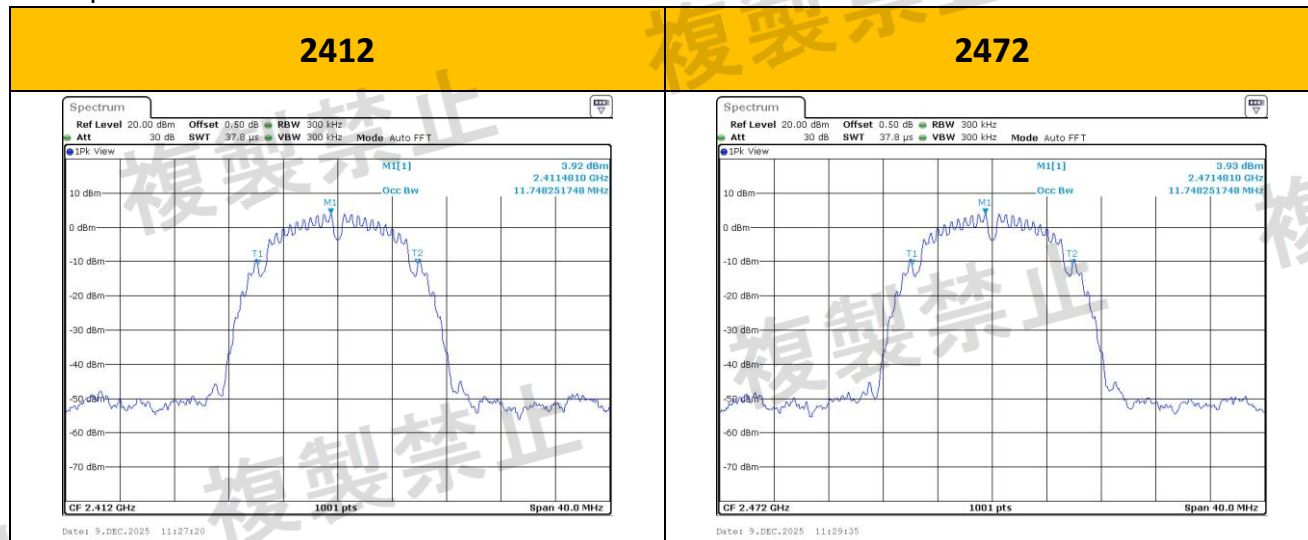
Measurement Frequency	2422	2462	Limit	Result
Occupied Bandwidth (MHz)	37.962	37.962	40MHz or Less	Pass

NTNV

ANT2

802.11 b

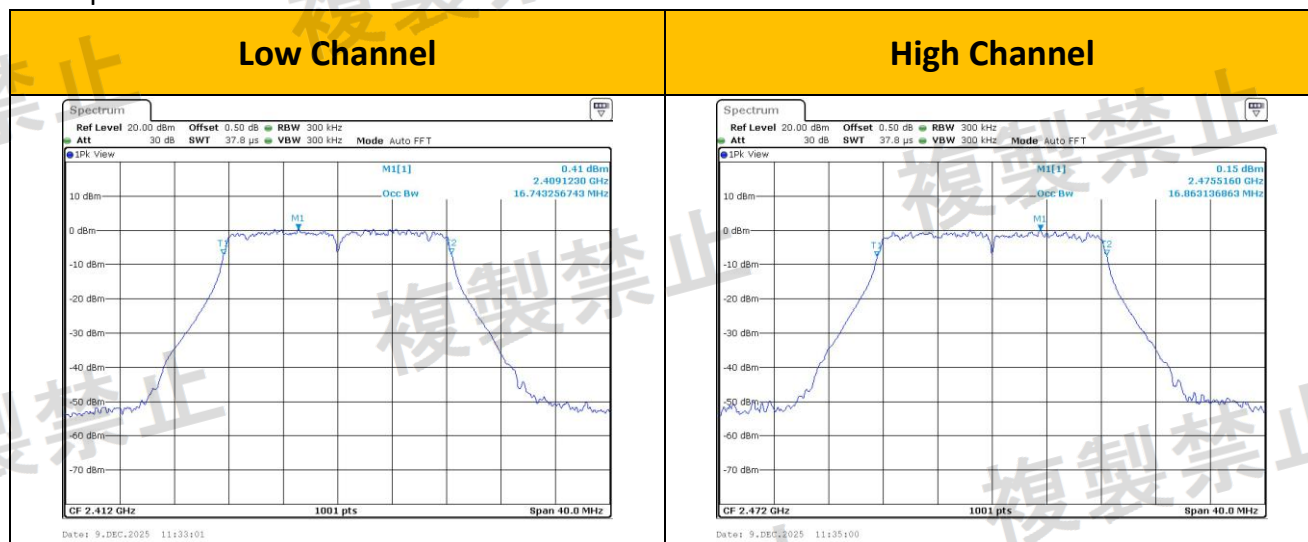
Occupied Bandwidth



Measurement Frequency	2412	2472	Limit	Result
Occupied Bandwidth (MHz)	11.748	11.748	26MHz or Less	Pass

802.11 g

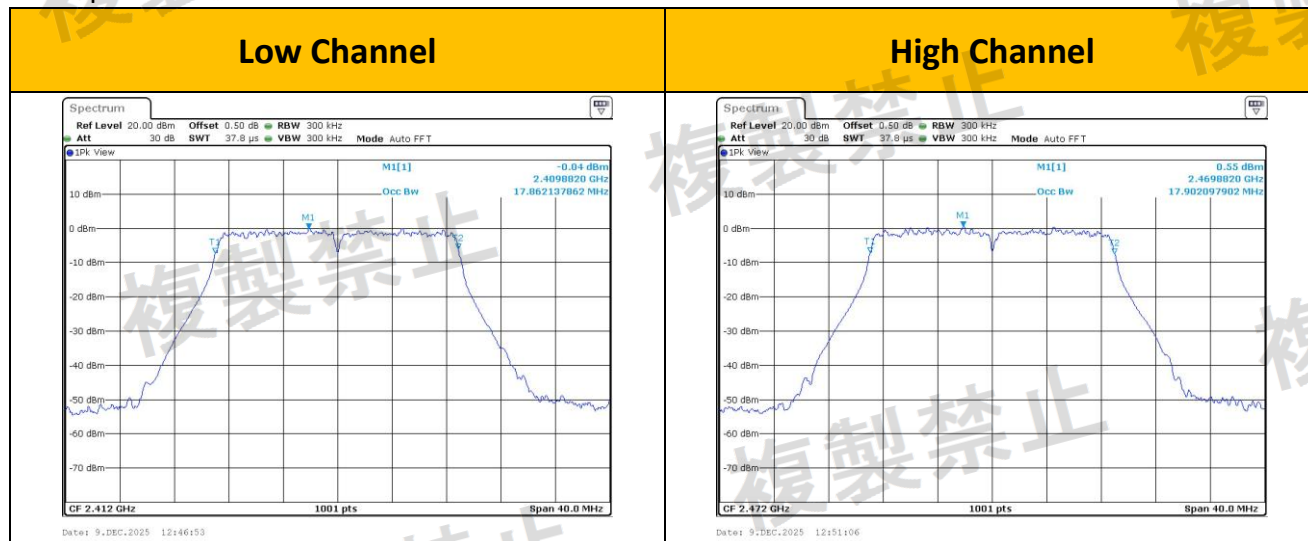
Occupied Bandwidth



Measurement Frequency	2412	2472	Limit	Result
Occupied Bandwidth (MHz)	16.743	16.863	26MHz or Less	Pass

802.11 n20

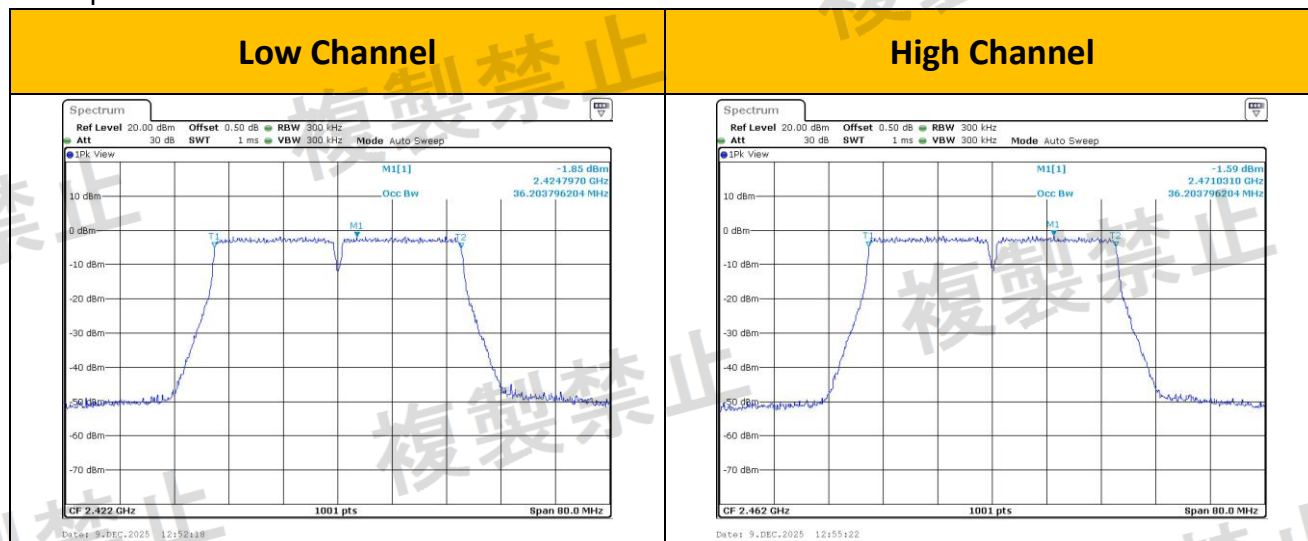
Occupied Bandwidth



Measurement Frequency	2412	2472	Limit	Result
Occupied Bandwidth (MHz)	17.862	17.902	26MHz or Less	Pass

802.11 n40

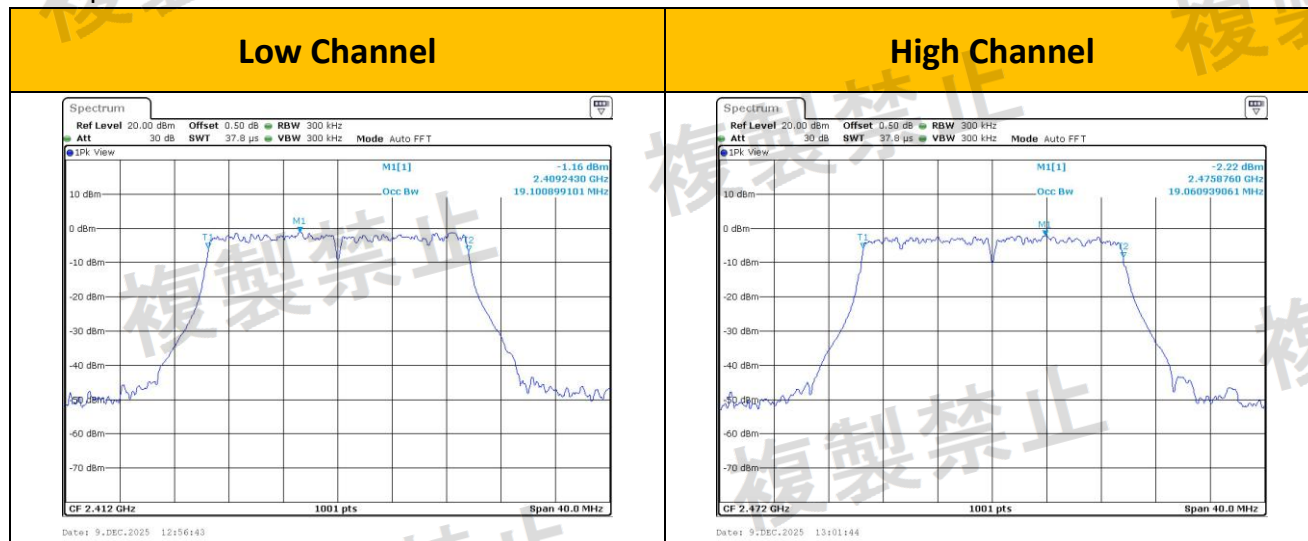
Occupied Bandwidth



Measurement Frequency	2422	2462	Limit	Result
Occupied Bandwidth (MHz)	36.204	36.204	40MHz or Less	Pass

802.11 ax20

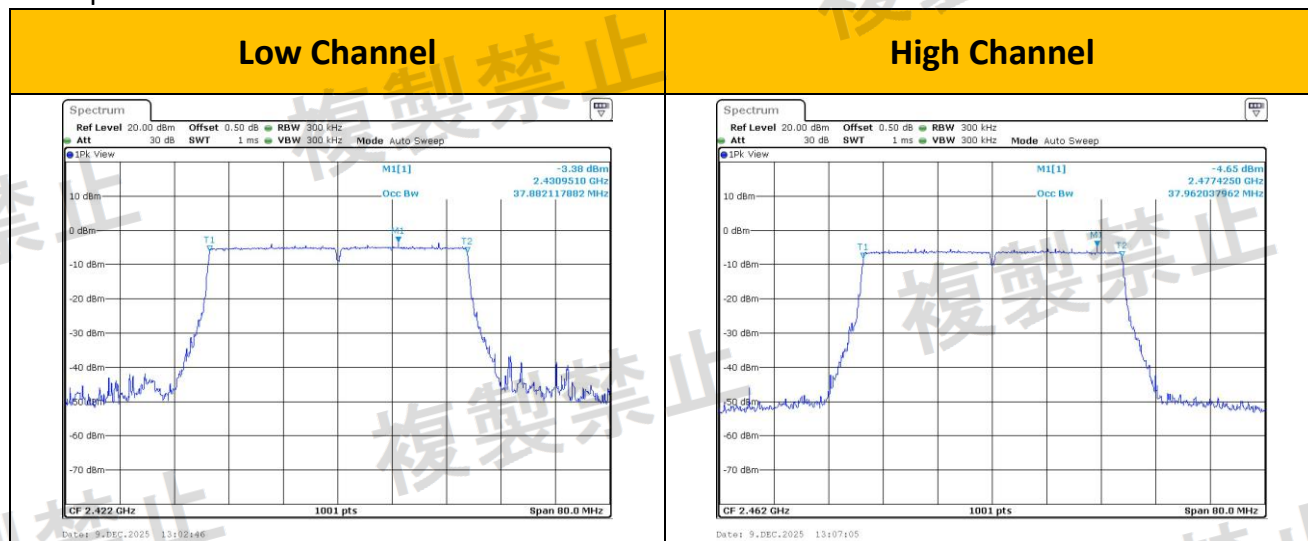
Occupied Bandwidth



Measurement Frequency	2412	2472	Limit	Result
Occupied Bandwidth (MHz)	19.101	19.061	26MHz or Less	Pass

802.11 ax40

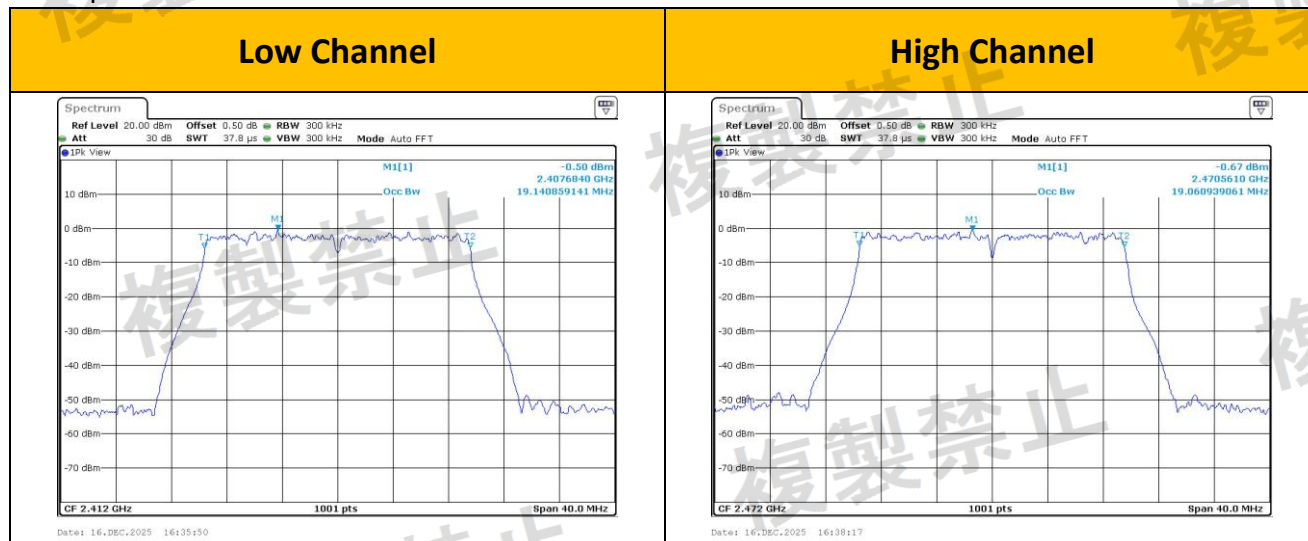
Occupied Bandwidth



Measurement Frequency	2422	2462	Limit	Result
Occupied Bandwidth (MHz)	37.882	37.962	40MHz or Less	Pass

802.11 be20

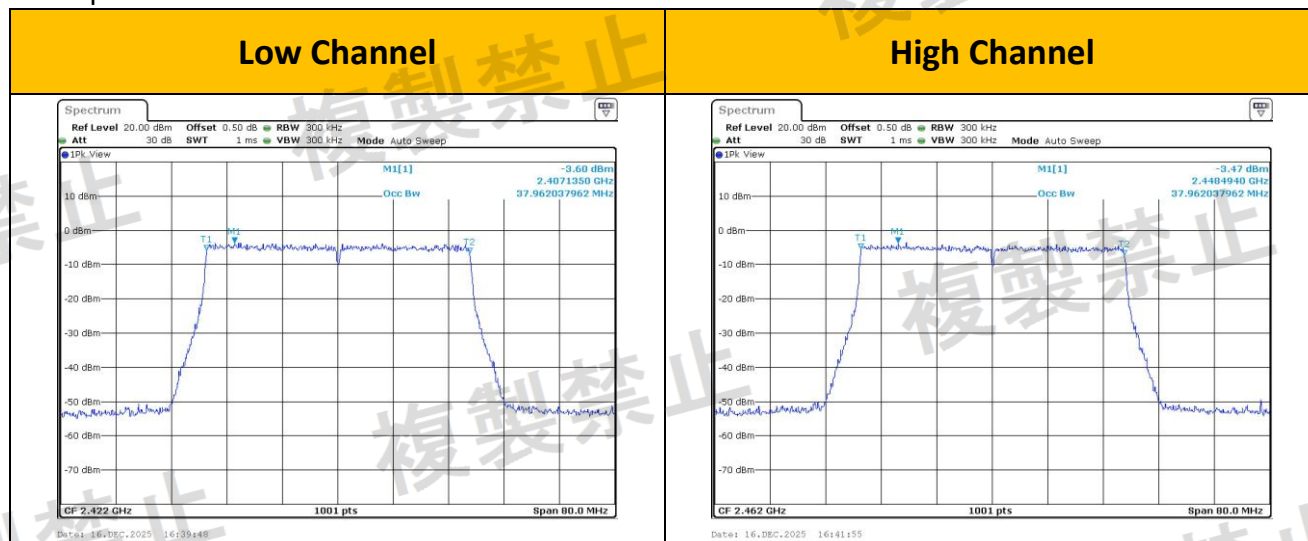
Occupied Bandwidth



Measurement Frequency	2412	2472	Limit	Result
Occupied Bandwidth (MHz)	19.141	19.061	26MHz or Less	Pass

802.11 be40

Occupied Bandwidth

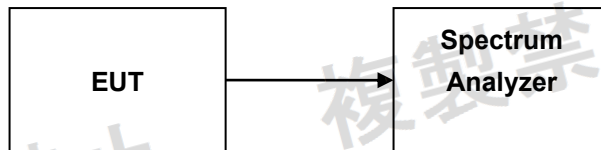


Measurement Frequency	2422	2462	Limit	Result
Occupied Bandwidth (MHz)	37.962	37.962	40MHz or Less	Pass

7.7 Spread spectrum Bandwidth (90%)&Spreading factor

Test Requirement:	Article 2 paragraph 1 item (19)
Spread spectrum Bandwidth	500 kHz or more
Spreading factor	5 or more
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/Hopping ON
For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.
3. Spectrum Analyzer conditions:
Frequency: Test Frequency
Span 40MHz
RBW 300KHz
VBW 300KHz
Sweep Time Auto
Detector mode Positive peak
Indication mode Max hold
OBW 90%

Test result: PASS

Note: All the configuration were tested, but only the worst data were reported in this report.

Measurement Uncertainty: $\pm 3.46\%$.

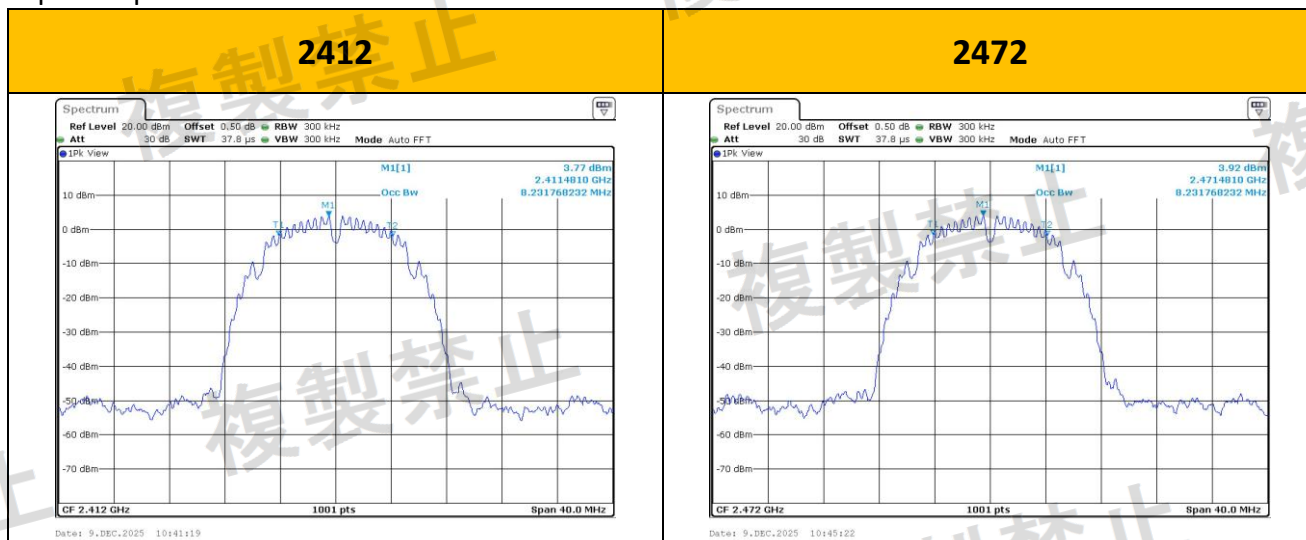
Spread spectrum Bandwidth (90%)

NTNV

Ant1

802.11 b

Spread spectrum Bandwidth



Measurement Frequency	2412 MHz	2472 MHz	Limit	Result
Spread spectrum Bandwidth	8.232 MHz	8.232 MHz	500kHz or more	Pass
Spreading factor	5.99	5.99	5 or more	Pass

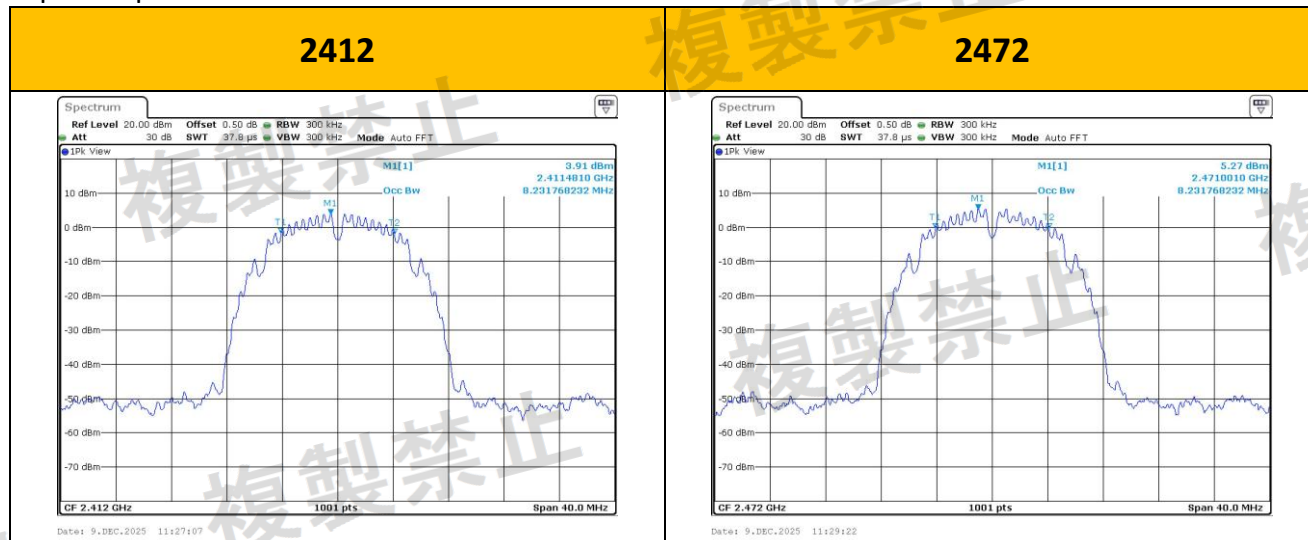
NOTE: Spread Factor=Spread Bandwidth/modulation rate. The modulation rate: MR=1.375 for 802.11b.

NTNV

Ant2

802.11 b

Spread spectrum Bandwidth



Measurement Frequency	2412 MHz	2472 MHz	Limit	Result
Spread spectrum Bandwidth	8.232 MHz	8.232 MHz	500KHz or more	Pass
Spreading factor	5.99	5.99	5 or more	Pass

NOTE: Spread Factor=Spread Bandwidth/modulation rate. The modulation rate: MR=1.375 for 802.11b.

7.8 Antenna Power

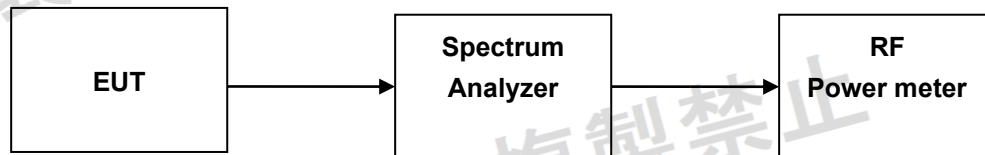
Test Requirement: Article 2 paragraph 1 item (19)

10mW/MHz or less

5mW/MHz 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:

RF Power meter and Spectrum Analyzer are used for measurement.

2. EUT conditions:

Modulation/Spread/Hopping ON

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

3. Spectrum Analyzer conditions:

Central Frequency: Frequency to achieve the maximum power (sought frequency)

Sweeping Bandwidth: 0 Hz

Resolution Bandwidth: 1 MHz

Video Bandwidth: Same level as the resolution bandwidth

Sweep Mode: Consecutive sweep

4. Connect a power sensor to the IF output terminal of spectrum analyzer and measure the power.

5. Correction of measured values

Continuous wave: Calculate the ratio of the equivalent noise bandwidths of the RBW and IF filter and multiply it by the measured value.

Burst wave: Calculate the ratio of the equivalent noise bandwidths of the RBW and IF filter, multiply by the measured value, and calculate the average power in a burst from the transmission time rate.

Test result: PASS

Note: All the configuration were tested, but only the worst data were reported in this report.

Measurement Uncertainty: ± 1.19 dB.

Antenna Power

NTNV

ANT1:

802.11 b

Test Frequency		2412MHz	2472MHz	Limit	Result
Unit	dBm/MHz	4.57	4.70	-----	Pass
	mW/MHz	2.86	2.95	10 or Less	Pass
Tolerance Max:		-28.50%	-26.25%	Upper +20%	Pass
Rate power (mW/MHz)		4	4	-----	-----
E.I.R.P/ERP (dBm/MHz)		11.18	11.31	12.14	Pass

802.11 g

Test Frequency		2412MHz	2472MHz	Limit	Result
Unit	dBm/MHz	4.12	4.93	-----	Pass
	mW/MHz	2.58	3.11	10 or Less	Pass
Tolerance Max:		-35.50%	-22.25%	Upper +20%	Pass
Rate power (mW/MHz)		4	4	-----	-----
E.I.R.P (dBm/MHz)		10.73	11.54	12.14	Pass

802.11 n20

Test Frequency		2412MHz	2472MHz	Limit	Result
Unit	dBm/MHz	4.54	4.99	-----	Pass
	mW/MHz	2.84	3.16	10 or Less	Pass
Tolerance Max:		-29.00%	-21.00%	Upper +20%	Pass
Rate power (mW/MHz)		4	4	-----	-----
E.I.R.P (dBm/MHz)		11.15	11.60	12.14	Pass

802.11 n40

Test Frequency		2422MHz	2462MHz	Limit	Result
Unit	dBm/MHz	1.88	1.36	-----	Pass
	mW/MHz	1.54	1.37	5 or Less	Pass
Tolerance Max:		-61.50%	-65.75%	Upper +20%	Pass
Rate power (mW/MHz)		4	4	-----	-----
E.I.R.P (dBm/MHz)		8.49	7.97	9.14	Pass

802.11 ax20

Test Frequency		2412MHz	2472MHz	Limit	Result
Unit	dBm/MHz	4.28	5.09	-----	Pass
	mW/MHz	2.68	3.23	10 or Less	Pass
Tolerance Max:		-33.00%	-19.25%	Upper +20%	Pass
Rate power (mW/MHz)		4	4	-----	-----
E.I.R.P (dBm/MHz)		10.89	11.70	12.14	Pass

802.11 ax40

Test Frequency		2422MHz	2462MHz	Limit	Result
Unit	dBm/MHz	1.76	1.82	-----	Pass
	mW/MHz	1.50	1.52	5 or Less	Pass
Tolerance Max:		-62.50%	-62.00%	Upper +20%	Pass
Rate power (mW/MHz)		4	4	-----	-----
E.I.R.P (dBm/MHz)		8.37	8.43	9.14	Pass

802.11 be20

Test Frequency		2412MHz	2472MHz	Limit	Result
Unit	dBm/MHz	4.05	4.67	-----	Pass
	mW/MHz	2.54	2.93	10 or Less	Pass
Tolerance Max:		-36.50%	-26.75%	Upper +20%	Pass
Rate power (mW/MHz)		4	4	-----	-----
E.I.R.P (dBm/MHz)		10.66	11.28	12.14	Pass

802.11 be40

Test Frequency		2422MHz	2462MHz	Limit	Result
Unit	dBm/MHz	1.02	1.35	-----	Pass
	mW/MHz	1.26	1.36	5 or Less	Pass
Tolerance Max:		-68.50%	-66.00%	Upper +20%	Pass
Rate power (mW/MHz)		4	4	-----	-----
E.I.R.P (dBm/MHz)		7.63	7.96	9.14	Pass

ANT2:
802.11 b

Test Frequency		2412MHz	2472MHz	Limit	Result
Unit	dBm/MHz	6.14	6.02	-----	Pass
	mW/MHz	4.11	4.00	10 or Less	Pass
Tolerance Max:		2.75%	0.00%	Upper +20%	Pass
Rate power (mW/MHz)		4	4	-----	-----
E.I.R.P/ERP (dBm/MHz)		11.64	11.52	12.14	Pass

802.11 g

Test Frequency		2412MHz	2472MHz	Limit	Result
Unit	dBm/MHz	6.41	6.07	-----	Pass
	mW/MHz	4.38	4.05	10 or Less	Pass
Tolerance Max:		9.50%	1.25%	Upper +20%	Pass
Rate power (mW/MHz)		4	4	-----	-----
E.I.R.P (dBm/MHz)		11.91	11.57	12.14	Pass

802.11 n20

Test Frequency		2412MHz	2472MHz	Limit	Result
Unit	dBm/MHz	5.78	6.23	-----	Pass
	mW/MHz	3.78	4.20	10 or Less	Pass
Tolerance Max:		-5.50%	5.00%	Upper +20%	Pass
Rate power (mW/MHz)		4	4	-----	-----
E.I.R.P (dBm/MHz)		11.28	11.73	12.14	Pass

802.11 n40

Test Frequency		2422MHz	2462MHz	Limit	Result
Unit	dBm/MHz	3.14	3.45	-----	Pass
	mW/MHz	2.06	2.21	5 or Less	Pass
Tolerance Max:		-48.50%	-44.75%	Upper +20%	Pass
Rate power (mW/MHz)		4	4	-----	-----
E.I.R.P (dBm/MHz)		8.64	8.95	9.14	Pass

802.11 ax20

Test Frequency		2412MHz	2472MHz	Limit	Result
Unit	dBm/MHz	6.57	6.43	-----	Pass
	mW/MHz	4.54	4.40	10 or Less	Pass
Tolerance Max:		13.50%	10.00%	Upper +20%	Pass
Rate power (mW/MHz)		4	4	-----	-----
E.I.R.P (dBm/MHz)		12.07	11.93	12.14	Pass

802.11 ax40

Test Frequency		2422MHz	2462MHz	Limit	Result
Unit	dBm/MHz	2.72	2.81	-----	Pass
	mW/MHz	1.87	1.91	5 or Less	Pass
Tolerance Max:		-53.25%	-52.25%	Upper +20%	Pass
Rate power (mW/MHz)		4	4	-----	-----
E.I.R.P (dBm/MHz)		8.22	8.31	9.14	Pass

802.11 be20

Test Frequency		2412MHz	2472MHz	Limit	Result
Unit	dBm/MHz	5.92	5.54	-----	Pass
	mW/MHz	3.91	3.58	10 or Less	Pass
Tolerance Max:		-2.25%	-10.50%	Upper +20%	Pass
Rate power (mW/MHz)		4	4	-----	-----
E.I.R.P (dBm/MHz)		11.42	11.04	12.14	Pass

802.11 be40

Test Frequency		2422MHz	2462MHz	Limit	Result
Unit	dBm/MHz	2.49	2.35	-----	Pass
	mW/MHz	1.77	1.72	5 or Less	Pass
Tolerance Max:		-55.75%	-57.00%	Upper +20%	Pass
Rate power (mW/MHz)		4	4	-----	-----
E.I.R.P (dBm/MHz)		7.99	7.85	9.14	Pass

MIMO :

802.11 n20

Test Frequency		2412MHz	2472MHz	Limit	Result
Unit ANT1	dBm/MHz	-0.50	-0.25	-----	Pass
	mW/MHz	0.89	0.94	10 or Less	Pass
Unit ANT2	dBm/MHz	-0.22	-0.70	-----	Pass
	mW/MHz	0.95	0.85	10 or Less	Pass
ANT1+ANT2	mW/MHz	1.84	1.79	10 or Less	Pass
Tolerance Max:		-8.00%	-10.50%	Upper +20%	Pass
Rate power (mW/MHz)		2	2	-----	-----
Max. E.I.R.P (dBm/MHz)		9.26	9.15	12.14	Pass

802.11 n40

Test Frequency		2422MHz	2462MHz	Limit	Result
Unit ANT1	dBm/MHz	-3.19	-3.36	-----	Pass
	mW/MHz	0.48	0.46	5 or Less	Pass
Unit ANT2	dBm/MHz	-3.54	-2.81	-----	Pass
	mW/MHz	0.44	0.52	5 or Less	Pass
ANT1+ANT2	mW/MHz	0.92	0.98	5 or Less	Pass
Tolerance Max:		-54.00%	-51.00%	Upper +20%	Pass
Rate power (mW/MHz)		2	2	-----	-----
Max. E.I.R.P (dBm/MHz)		6.26	6.54	9.14	Pass

802.11 ax20

Test Frequency		2412MHz	2472MHz	Limit	Result
Unit ANT1	dBm/MHz	0.05	0.19	-----	Pass
	mW/MHz	1.01	1.04	10 or Less	Pass
Unit ANT2	dBm/MHz	-0.75	-0.61	-----	Pass
	mW/MHz	0.84	0.87	10 or Less	Pass
ANT1+ANT2	mW/MHz	1.85	1.91	10 or Less	Pass
Tolerance Max:		-7.50%	-4.50%	Upper +20%	Pass
Rate power (mW/MHz)		2	2	-----	-----
Max. E.I.R.P (dBm/MHz)		9.29	9.23	12.14	Pass

802.11 ax40

Test Frequency		2422MHz	2462MHz	Limit	Result
Unit ANT1	dBm/MHz	-3.07	-3.01	-----	Pass
	mW/MHz	0.49	0.50	5 or Less	Pass
Unit ANT2	dBm/MHz	-3.36	-3.85	-----	Pass
	mW/MHz	0.46	0.41	5 or Less	Pass
ANT1+ANT2	mW/MHz	0.95	0.91	5 or Less	Pass
Tolerance Max:		-52.50%	-54.50%	Upper +20%	Pass
Rate power (mW/MHz)		2	2	-----	-----
Max. E.I.R.P (dBm/MHz)		6.41	6.21	9.14	Pass

802.11 be20

Test Frequency		2412MHz	2472MHz	Limit	Result
Unit	dBm/MHz	-0.29	0.34	-----	Pass
	mW/MHz	0.94	1.08	10 or Less	Pass
Unit	dBm/MHz	-0.43	-0.87	-----	Pass
	mW/MHz	0.91	0.82	10 or Less	Pass
ANT1+ANT2		1.85	1.90	10 or Less	Pass
Tolerance Max:		-7.50%	-5.00%	Upper +20%	Pass
Rate power (mW/MHz)		2	2	-----	-----
Max. E.I.R.P (dBm/MHz)		9.26	9.40	12.14	Pass

802.11 be40

Test Frequency		2422MHz	2462MHz	Limit	Result
Unit	dBm/MHz	-2.81	-2.71	-----	Pass
	mW/MHz	0.52	0.54	5 or Less	Pass
Unit	dBm/MHz	-3.20	-3.66	-----	Pass
	mW/MHz	0.48	0.43	5 or Less	Pass
ANT1+ANT2		1.00	0.97	5 or Less	Pass
Tolerance Max:		-50.00%	-51.50%	Upper +20%	Pass
Rate power (mW/MHz)		2	2	-----	-----
Max. E.I.R.P (dBm/MHz)		6.62	6.46	9.14	Pass

7.9 Spurious Emissions of Tx

Test Requirement:

Article 2 paragraph 1 item (19)

for 2412-2472MHz

(1) Below 2387 MHz: 2.5μW/MHz (≤ -26 dBm/MHz)

(2) 2387 to 2400 MHz: 25μW/MHz (≤ -16 dBm/MHz)

(3) 2483.5 through 2496.5 MHz: 25μW/MHz (≤ -16 dBm/MHz)

(4) Over 2496.5 MHz: 2.5μW/MHz (≤ -26 dBm/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/Hopping ON

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

3. Spectrum Analyzer conditions:

Step 1

All spurious are measured from 30 MHz to 13 GHz by peak mode.

Step 2

IF the value measured by Step1 is 3 dB or less, measure in average mode.

Test setup for Step 1:

Frequency: 30 MHz- 2400 MHz, 2483.5 MHz-13 GHz

RBW 1 MHz

VBW 1 MHz

Sweep Time Auto

Detector mode Positive peak

Indication mode Max hold

Test setup for Step 2:

Frequency: Spurious Frequency

RBW 1 MHz

VBW 1 MHz

Sweep Time Auto

Detector mode Sample

Indication mode Max hold

Test result: PASS

Measured data of Spurious Emissions of Tx test results.

All modes were tested and only worsts case data is shown in the report.

The more detail please refer to "Appendix of 251124023SZN-001" Appendix A

Measurement Uncertainty: ± 0.55 dB

TEST REPORT

7.10 Spurious Emissions of Rx

Test Requirement: Article 2 paragraph 1 item (19)

(1) Below 1 GHz: 4 nW ($\leq -54\text{dBm}$)

(2) 1 GHz and over: 20 nW ($\leq -47\text{dBm}$)

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/Hopping ON

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

3. Spectrum Analyzer conditions:

Step 1

All spurious are measured from 30 MHz to 13 GHz by peak mode.

Step 2

IF the value measured by Step1 is 3 dB or less, measure in average mode.

Test setup for Step 1:

Frequency: 30 MHz-1000 MHz, 1 GHz-13 GHz

RBW 100 kHz (30-1GHz) , 1 MHz (over 1GHz)

VBW 100 kHz (30-1GHz) , 1 MHz (over 1GHz)

Sweep Time Auto

Detector mode Positive peak

Indication mode Max hold

Test setup for Step 2:

Frequency: Spurious Frequency

Span 0 Hz

RBW 100 kHz (30-1GHz) , 1 MHz (over 1GHz)

VBW 100 kHz (30-1GHz) , 1 MHz (over 1GHz)

Sweep Time Auto

Detector mode Sample

Indication mode Max hold

Test result: PASS

Measured data of Spurious Emissions of Rx test results

All modes were tested and only worsts case data is shown in the report.

The more detail please refer to "Appendix of 251124023SZN-001" Appendix B

Measurement Uncertainty: ± 0.55 dB.

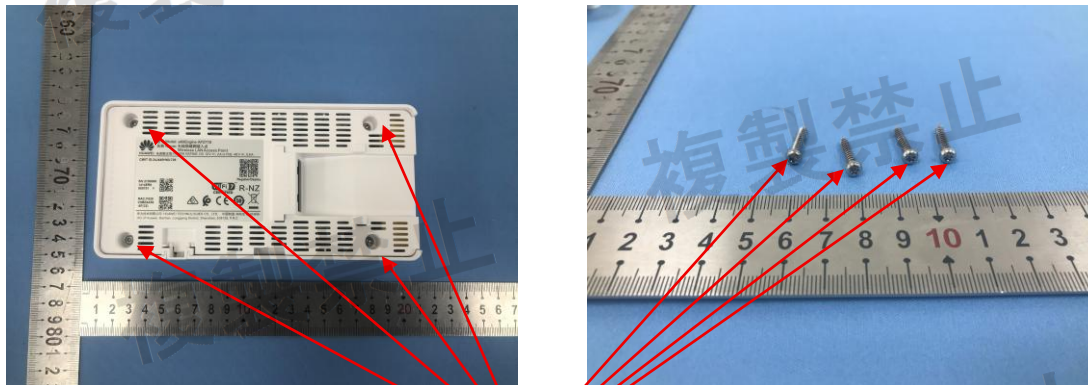
TEST REPORT
7.11 RF accessibility

Standard requirement

Article 49-20, paragraph 1 (a)

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.

Note: the covers are fixed with torx screws, the user cannot open the device with common tools.

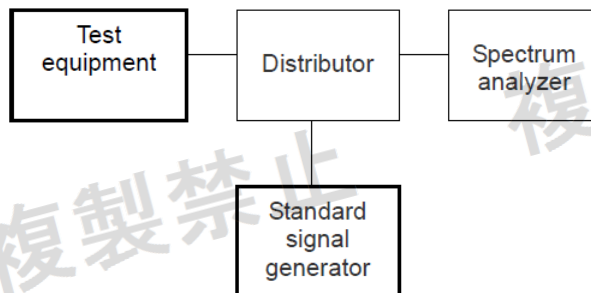


Torx Screws

7.12 Carrier sense capability

1) Measurement system diagram

(1) Test with test equipment only



2) Condition of measuring instrument

(1) Set the standard signal generator as follows:

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

Modulation: No modulation.(note1)

Output level: regulated level on antenna input of test equipment

Note 1: The un-modulated carrier in the center frequency, when the carrier sense function of test equipment is not worked, if necessary, change the frequency or modulate it.

(2) Set the spectrum analyzer as follows:

Center frequency: Center frequency of the bandwidth used.(note2)

Sweep frequency band: 50MHz(note2)

Resolution bandwidth: Approximately 1 MHz

Video bandwidth: Comparable level with resolution bandwidth

Trigger condition: Free-run

Detective mode: positive peak

Note 2: Under 26MHz of OFDM or other modulated method that with transmit function, set sweep frequency band as 0Hz, detective mode as sample, center frequency as the carrier frequency from 13MHz to 19MHz.

3) Condition of test equipment

Set the test equipment at the test frequency and the test spread code and set it to the receiving mode in the beginning. When using external test device, connect with the test equipment by line connection.

4) Measuring operation procedure

(1) Test with test equipment only:

A) Set the spectrum analyzer according to (2) of 2).

B) Set the test equipment to the transmitting operation with the output of standard signal generator OFF, and confirm that it emits over 26MHz occupied frequency bandwidth OFDM radio wave, by using spectrum analyzer.

C) Set the test equipment to the receiving mode.

D) With the output of standard signal generator ON, set the test equipment to the transmitting operation, and confirm that it does not emit over 26MHz occupied frequency bandwidth OFDM radio wave, by using spectrum analyzer.

Test Item	Test Result
Carrier Sensing Function	Good (EUT Stop RF transmission signal after carrier inject to EUT. Stop carrier inject, EUT will transmitting normal.)

Appendix A. EUT Test Setup and Constructional Details

Appendix A.1 EUT Test Setup



RF Conducted Test Setup

Appendix A.2 EUT Constructional Details

Please refer to the document of EUT Photo.

***** End of Report*****