

FCC RF Test Report

(5GHz Wi-Fi)

Applicant: Wuhu Hongjing Electronic Co., Ltd.

Address of Applicant: No. 216, Huashan Road, Economic and Technological Development Zone, Wuhu, Anhui, China

Product Name: NO DISC DVD

Model No.: X9H BASE

Brand Name:  , Chery

FCC ID: 2BVPG-X9HBASE

Test Standards: FCC CFR Title 47 Part 15E (§15.407)

Date of Sample Receipt: Apr. 06, 2026

Date of Test: Apr. 07 to 27, 2026

Date of Report Issue:
May 11, 2026

Prepared By:

Shenzhen Acote Technology Co., Ltd.

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Xinqiao Street, Bao'an District, Shenzhen, Guangdong Province, China



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Reviewed by

Report Revision History

Rev.	Issue Date	Description
V00	Apr. 28, 2026	Initial Release
V01	May 11, 2026	Section 2.3 on page 5: The antenna gain has been updated to 3.3 dBi.



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1 Laboratory Introduction

1.1 Laboratory Location

Company Name:	Shenzhen Acote Technology Co., Ltd.
Address of Main Laboratory:	Room 719, Excellence Times Building, No. 27, Xinqiao 3rd Road, Xinqiao Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong Province, China.
Address of Satellite Laboratory:	101, F1, building 15, zhongda 365, Xincheng Road No.9, Songshanhu, Dongguan, Guangdong, China.
Website:	www.acotelabs.com
Email:	info@acotelabs.com
Tel.:	+86-0755-2788 9963

1.2 Laboratory Facility

Our company's laboratory facilities have received accreditation, certification, or authorization from the following organizations:

- **FCC - Designation No.: CN1450**
Shenzhen Acote Technology Co., Ltd. has been certified by the FCC (Federal Communications Commission) as a testing laboratory. Test Firm Registration Number: **832670**.
- **A2LA - Accreditation Number: 7697.01**
Shenzhen Acote Technology Co., Ltd. has been accredited by A2LA (American Association for Laboratory Accreditation) in compliance with the internationally recognized standard ISO/IEC 17025:2017, "General Requirements for the Competence of Testing and Calibration Laboratories."

1.3 Announcement

Shenzhen Acote Technology Co., Ltd. tested the equipment in accordance with the requirements set forth in the test standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

This document may not be altered or revised in any way unless done so by Shenzhen Acote Technology Co., Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Shenzhen Acote Technology Co., Ltd. will constitute fraud and shall nullify the document.

1.4 Disclaimer

For the information or data provided by the client in this report, the relevant results or conclusions of this report are only made for these data or information. The testing laboratory is not responsible for the authenticity and accuracy of these data or information.

2 Equipment Under Test Information

2.1 Application Information

Applicant:	Wuhu Hongjing Electronic Co., Ltd.
Address of Applicant:	No. 216, Huashan Road, Economic and Technological Development Zone, Wuhu, Anhui, China
Manufacturer:	Wuhu Hongjing Electronic Co., Ltd.
Address of Manufacturer:	No. 216, Huashan Road, Economic and Technological Development Zone, Wuhu, Anhui, China

2.2 Product Information

Product Name:	NO DISC DVD
Model No.:	X9H BASE
Description of Model Differentiation:	N/A

2.3 EUT Technical Parameters

Operation Frequency:	Band 4: 5745MHz ~ 5825MHz	
Modulation Technology:	802.11ac: Orthogonal Frequency Division Multiplexing(OFDM)	
Modulation Type:	802.11ac: BPSK, QPSK, 16QAM, 64QAM, 256QAM	
Channel Numbers:	☒ 40MHz Bandwidth:	☒ Band 4: <u>2</u> channels
Antenna Type:	Ceramic Antenna	
Antenna Gain:	<u>3.3</u> dBi (declared by applicant)	
Antenna Transmit Mode:	☒ SISO (<u>1</u> TX, <u>1</u> RX) ☐ MIMO (<u>/</u> TX, <u>/</u> RX)	
TPC Function:	☐ With TPC ☒ Without TPC	
DFS Function:	☐ Master ☐ Client Without Radar Detection ☐ Client With Radar Detection	
Power Supply:	DC 12V	
Test Sample Condition:	The test samples were provided in good working order with no visible defects.	

3 Test Information

3.1 Test Methodology

The tests documented in this report were performed in accordance with:

- FCC CFR Title 47 Part 2
- FCC CFR Title 47 Part 15E (§15.407)
- ANSI C63.10:2020
- KDB 789033 D02 General U-NII Test Procedures New Rules v02r01

3.2 Test Result Summary

Report Section	Test Items	Band	Standard Clause	Test Result
5.1	Antenna Requirement	/	§15.203	Pass
5.2	AC Power Line Conducted Emission	/	§15.207	N/A
5.3	Duty Cycle	/	ANSI C63.10-2020 Section 12.2	Pass ^{Note 1}
5.4	26dB Bandwidth and 99% Occupied Bandwidth	/	ANSI C63.10-2020 Section 6.9.2 and 6.9.3	Pass ^{Note 1}
5.5	6dB Emission Bandwidth	B4	§15.407 (e)	Pass ^{Note 1}
5.6	Conducted Output Power	B4	15.407 (a)(3)(i)	Pass ^{Note 1}
5.7	Power Spectral Density	B4	§15.407 (a)(3)(i)	Pass ^{Note 1}
5.8	Unwanted Emissions in the Restricted Bands	/	§15.205, §15.209	Pass ^{Note 2}
5.9	Unwanted Emissions that fall Outside of the Restricted Bands	B4	§15.407 (b)(4)(i)	Pass ^{Note 2}
5.10	Frequency Stability	B4	§15.407 (g)	Pass ^{Note 1}
5.11	Dynamic Frequency Selection (DFS)	N/A	§15.407 (h)(2)	N/A

Remark:

- a) Pass: The EUT complies with the essential requirements in the standard.
b) N/A: Not applicable.
c) The test cable insertion loss used for RF output power and other conducted measurements is provided by the applicant.

Note 1: This test item was performed at the main laboratory.

Note 2: This test item was performed at the satellite laboratory.

3.3 Environment of test site

Temperature:	15 ~ 35°C
Humidity:	20 ~ 75% RH
Atmospheric Pressure:	990 ~ 1010 mbar

3.4 Measurement Uncertainty

Parameter	Expanded Uncertainty (Confidence of 95%(U = 2Uc(y)))
Radio Frequency	$\pm 2 \times 10^{-8}$
RF Power, Conducted	± 0.66 dB
Spurious emission, Conducted	± 2.28 dB
Bandwidth, Conducted	$\pm 4\%$
Temperature	± 0.3 °C
Voltage	± 0.1 %
Humidity	± 2 %
Conducted Emission (9kHz ~ 150kHz)	± 3.02 dB
Conducted Emission (30MHz ~ 1000MHz)	± 2.52 dB
Radiated Emission (30MHz ~ 1000MHz) (3m SAC)	± 4.78 dB
Radiated Emission (1GHz ~ 6GHz) (3m SAC)	± 5.16 dB
Radiated Emission (6GHz ~ 18GHz) (3m SAC)	± 5.48 dB
Radiated Emission (18GHz ~ 40GHz) (3m SAC)	± 5.48 dB
Note: All the measurement uncertainty value were shown with a coverage $k=2$ to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.	

3.5 Description of Support Units

The EUT was test as an independent unit.
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3.6 Additions to, Deviations, or Exclusions from the Method

None

3.7 Test Instruments List

Radiated Emission(3m SAC)				
Test Equipment	Manufacturer	Model	Serial No.	Cal Due
3m SAC	YiHeng	9m*6m*6m	20250422	2028/05/28
EMI Test Receiver	Rohde & Schwarz	ESR7	101542	2026/08/31
TRILOG Broad Band Antenna (30MHz – 1000MHz)	Schwarzbeck	VULB 9168	9168-771	2026/09/08
6dB Attenuator	SRTechnology Corporate	N-ATTENUATOR(6dB)	311248	2026/08/31
Preamplifier (30MHz – 1000MHz)	TESTEK	TK-PA06S	190014-L	2026/08/31
Broadband Horn Antenna (1GHz – 18GHz)	Gwave Technology	GHA0118A-11	20251014010	2026/11/16
Preamplifier (1GHz – 18GHz)	Gwave Technology	GWLAN008018-50	20251014010	2026/10/23
Broadband Horn Antenna (18GHz – 40GHz)	Gwave Technology	GHA180400-292F-20	20251014010	2026/11/16
Preamplifier (18GHz – 40GHz)	Gwave Technology	GWLAN018040-45	20251014010	2026/10/23
RF Cable (9kHz – 18GHz)	REBES	SF104/10000MM	805225/4	2026/08/31
RF Cable (9kHz – 18GHz)	REBES	SF104/10000MM	805226/4	2026/08/31
RF Cable (18GHz – 40GHz)	MWRFTTest	UCA400-2.92M2092M-1.5M	004	2026/10/23
RF Cable (18GHz – 40GHz)	Gwave Technology	GAU3-292M292M-3000A1	20251021001-01-01	2026/10/23
RF Cable (18GHz – 40GHz)	Gwave Technology	GAU3-292M292M-600A1	20251021001-01-01	2026/10/23
High-pass filter (1GHz – 18GHz)	K&L MICROWAVE	11SH10-2000/U1800-O/O	350	2026/10/23
High-pass filter (3GHz – 18GHz)	UIY	UIYHPF3025A4T18SF	DL0019131	2026/10/23
High-pass filter (7GHz – 18GHz)	Narda	F4036A	1572	2026/10/23
Spectrum Analyzer	Rohde & Schwarz	FSP40	102129	2026/07/04
Test Software	Frad	EZ_EM C	Version: EMEC-3A1	N/A

Conducted Emission				
Test Equipment	Manufacturer	Model	Serial No.	Cal Due
EMI Test Receiver	Rohde & Schwarz	ESR3	101763	2026/08/31
TWO-LINE V-NETWORK	Rohde & Schwarz	ENV216	101078	2026/08/31
RF Cable (9kHz – 30MHz)	REBES	WG4R-60-60-3	210305	2026/08/31
Test Software	Frad	EZ EMC	Version: EMEC-3A1	N/A

RF Conducted Measurement				
Test Equipment	Manufacturer	Model	Serial No.	Cal Due
Spectrum Analyzer	Keysight	N9020A	MY56060179	2026/11/13
Vector Signal Generator	N5182A	Agilent	MY49060467	2026/11/13
Spectrum Analyzer	Keysight	N9010B	MY60240202	2026/08/07
Automatic control unit (including power sensor)	MWRFTTest	MW100-RFCB	MW250722AKT-59	2026/11/13
High and low temperature test chamber	TPS	TJR	0806000098	2026/11/13
DC Power Supply	Agilent	E3632A	MY40026044	2026/11/13
BT/WiFi automated testing software	MWRFTTest	MTS8310	Version: 2.0.0.0	N/A

4 Test Configuration of EUT

4.1 Channels Selected to Perform the Tests

Operation frequency: 5725 MHz – 5850 MHz		
802.11ac-VHT40		
Channels	Channel No.	Frequency (MHz)
Lowest	151	5755
Middle	/	/
Highest	159	5795

4.2 Test Mode

TM 1:	Keep the EUT in continuously transmitting mode
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4.3 Worst-case Configuration

The worst-case scenario for all measurements is based on an engineering evaluation made on all modulation types at different data rate. The details are as follows:

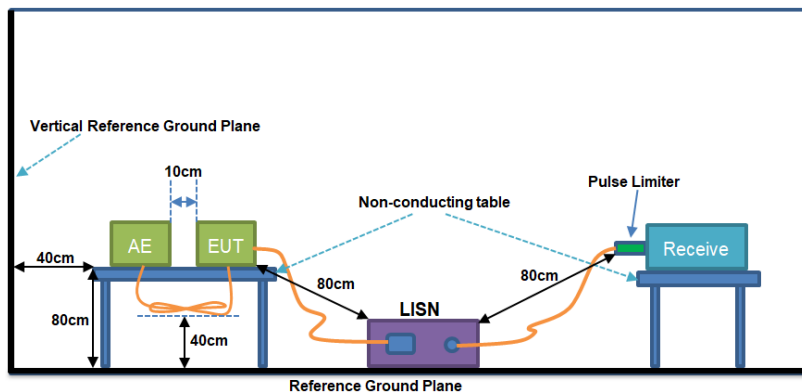
Report Section	Test Channel	Test Mode	Modulation Type / Data rate
5.2	N/A	N/A	802.11ac-VHT40 / MCS0 (13.5Mbps)
5.3	L, M, H	TM 1	
5.4	L, M, H	TM 1	
5.5	L, M, H	TM 1	
5.6	L, M, H	TM 1	
5.7	L, M, H	TM 1	
5.8	L, H	TM 1	
5.9 ^{Note 2), Note 3)}	L, M, H	TM 1	
5.10	L, M, H	TM 1	
5.11	N/A	N/A	N/A

Note:

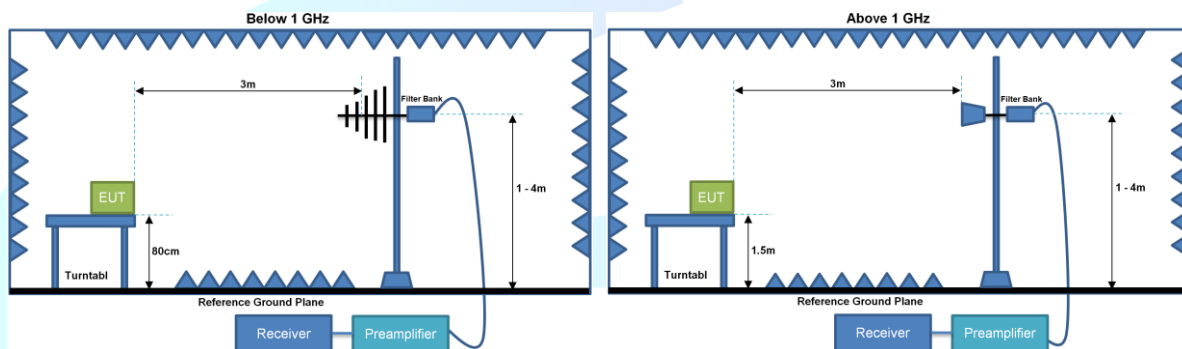
- 1) The EUT was investigated in three orthogonal orientations X, Y and Z, it was determined that Y was the worst-case of radiated field strength.
- 2) For the 30 MHz to 1000 MHz range in Section 5.9, only the modulation type and the channel corresponding to the highest output power were tested.
- 3) For frequencies above 1 GHz in Section 5.9, measurements were performed up to the 10th harmonic of the fundamental frequency (or up to 40 GHz). Frequencies with emission levels at least 20 dB below the limit are not presented in the test report.

4.4 Test Setup Block

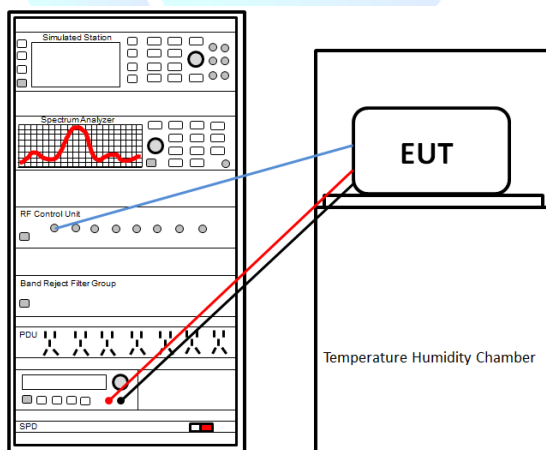
Setup 1 (Conducted Emission):



Setup 2 (Radiated Emission):

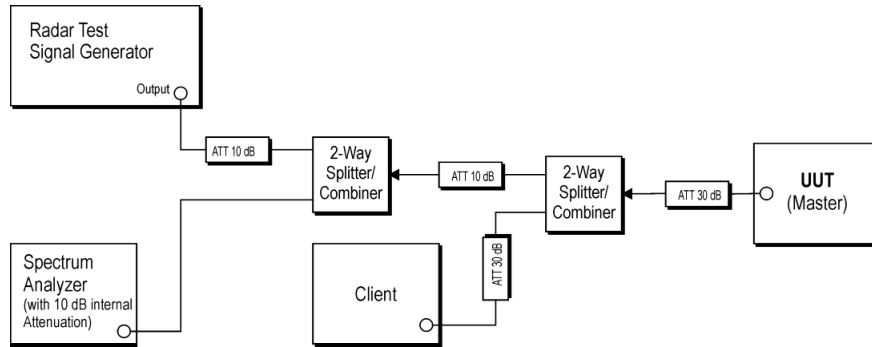


Setup 3 (MTS8310 Testing System):

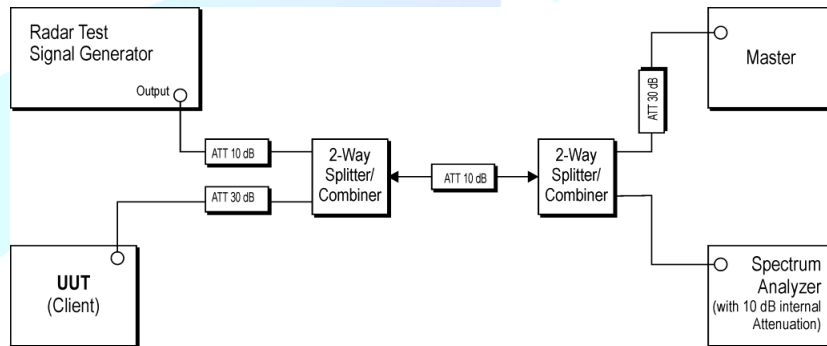


Setup 4 (DFS Measurement):

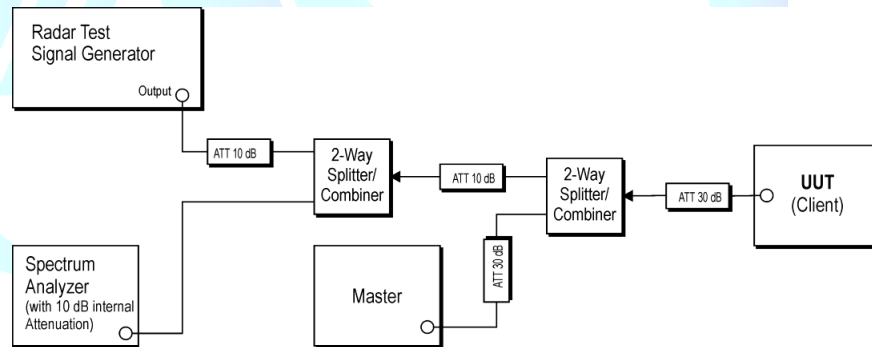
☐ Master device:



☐ Client Device Without Radar Detection:



☐ Client Device With Radar Detection:



5 Technical requirements specification

5.1 Antenna Requirement

5.1.1 Requirement

15.203 Requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.407(a) (1) to (3)(i) Requirement:

The maximum conducted output power and the maximum power spectral density for each operating frequency band are provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For fixed point-to-point U-NII devices operating in the band 5.15-5.25 GHz, the maximum conducted output power and maximum power spectral density may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi.

For fixed point-to-point U-NII devices operating in the band 5.725-5.850 GHz, may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power.

5.1.2 Results

Pass.

The Wi-Fi antenna is an ceramic antenna with a maximum gain of 3.3 dBi. Please refer to the product internal photos for details.

5.2 AC Power Line Conducted Emission

5.2.1 Limits

Frequency (MHz)	Limit (dBμV)	
	Quasi-peak	Average
0.15 – 0.5	66 to 56 ^{Note 1}	56 to 46 ^{Note 1}
0.5 – 5	56	46
5 – 30	60	50
Note 1: The limit level in dBμV decreases linearly with the logarithm of frequency. Note 2: The more stringent limit applies at transition frequencies.		

5.2.2 Test Procedure

- The EUT was placed on a non-conductive table, 40 cm from the vertical ground plane and 80 cm from the horizontal ground plane. The EUT was arranged in accordance with ANSI C63.10.
- The EUT was configured to operate in TM 1 mode as specified in Section 4.2. The test channels and modulation types of the EUT are described in Section 4.3.
- The phase of the LISN was set to L1.
- Open the EZ-EMC test software, load the FCC conducted emission test script, or create a new conducted emission test script, and configure the test parameters, including the test frequency range, RBW = 9kHz, VBW = 30kHz, test standard, LISN, receiver, and other related settings.
- The test script was executed, the measurement was performed. Save the test data.
- The phase of the LISN was set to N, and steps d) and e) were repeated.

5.2.3 Test Setup

See setup 1 in section 4.4.

5.2.4 Test Instruments

Refer to section 3.7.

5.2.5 Test Results

N/A.

The EUT is a battery-powered in-vehicle device, so this test item is not applicable.

5.3 Duty Cycle

5.3.1 Limits

N/A.

5.3.2 Test Procedure

- a) The EUT antenna port is connected to the RF port of the test system control unit via an RF cable.
- b) The EUT is set to operate in TM 1 mode as described in Section 4.2. The EUT test channel and modulation type settings are described in Section 4.3.
- c) Open the MTS8310 test software, load the FCC 5G WiFi test script, and select the test items and other relevant test parameters.
- d) The test script was executed, the measurement was performed.
- e) Save the test data.

5.3.3 Test Setup

See setup 3 in section 4.4.

5.3.4 Test Instruments

Refer to section 3.7.

5.3.5 Test Results

Pass.

The detailed test data see: Appendix – 5GHz Wi-Fi.

5.4 26dB Bandwidth and 99% Occupied Bandwidth

5.4.1 Limits

N/A.

5.4.2 Test Procedure

- The EUT antenna port is connected to the RF port of the test system control unit via an RF cable.
- The EUT is set to operate in TM 1 mode as described in Section 4.2. The EUT test channel and modulation type settings are described in Section 4.3.
- Open the MTS8310 test software, load the FCC 5G WiFi test script, and select the test items and other relevant test parameters.
- The test script was executed, the measurement was performed.
- Save the test data.

5.4.3 Test Setup

See setup 3 in section 4.4.

5.4.4 Test Instruments

Refer to section 3.7.

5.4.5 Test Results

Pass.

The detailed test data see: Appendix – 5GHz Wi-Fi.

5.5 6dB Emission Bandwidth

5.5.1 Limits

Within the 5.725-5.850 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

5.5.2 Test Procedure

- The EUT antenna port is connected to the RF port of the test system control unit via an RF cable.
- The EUT is set to operate in TM 1 mode as described in Section 4.2. The EUT test channel and modulation type settings are described in Section 4.3.
- Open the MTS8310 test software, load the FCC 5G WiFi test script, and select the test items and other relevant test parameters.
- The test script was executed, the measurement was performed.
- Save the test data.

5.5.3 Test Setup

See setup 3 in section 4.4.

5.5.4 Test Instruments

Refer to section 3.7.

5.5.5 Test Results

Pass.

The detailed test data see: Appendix – 5GHz Wi-Fi.

5.6 Conducted Output Power

5.6.1 Limits

- **For the band 5.725-5.850 GHz:**

The maximum conducted output power over the frequency band of operation shall not exceed 1 W. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power.

5.6.2 Test Procedure

- a) The EUT antenna port is connected to the RF port of the test system control unit via an RF cable.
- b) The EUT is set to operate in TM 1 mode as described in Section 4.2. The EUT test channel and modulation type settings are described in Section 4.3.
- c) Open the MTS8310 test software, load the FCC 5G WiFi test script, and select the test items and other relevant test parameters.
- d) The test script was executed, the measurement was performed.
- e) Save the test data.

5.6.3 Test Setup

See setup 3 in section 4.4.

5.6.4 Test Instruments

Refer to section 3.7.

5.6.5 Test Results

Pass.

The detailed test data see: Appendix – 5GHz Wi-Fi.

5.7 Power Spectral Density

5.7.1 Limits

- **For the band 5.725-5.850 GHz:**

The maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power.

5.7.2 Test Procedure

- a) The EUT antenna port is connected to the RF port of the test system control unit via an RF cable.
- b) The EUT is set to operate in TM 1 mode as described in Section 4.2. The EUT test channel and modulation type settings are described in Section 4.3.
- c) Open the MTS8310 test software, load the FCC 5G WiFi test script, and select the test items and other relevant test parameters.
- d) The test script was executed, the measurement was performed.
- e) Save the test data.

5.7.3 Test Setup

See setup 3 in section 4.4.

5.7.4 Test Instruments

Refer to section 3.7.

5.7.5 Test Results

Pass.

The detailed test data see: Appendix – 5GHz Wi-Fi.

5.8 Unwanted Emissions in the Restricted Bands

5.8.1 Limits

- General Limits

Frequency (MHz)	Limits (dBμV/m) at 3m	Detector
30 - 88	40.0	Quasi-peak
88 - 216	43.5	Quasi-peak
216 - 960	46.0	Quasi-peak
960 - 1000	54.0	Quasi-peak
Note: The more stringent limits applies at transition frequencies.		
Frequency (MHz)	Limits (dBμV/m) at 3m	
	Average	Peake
Above 1GHz	54.0	74.

- For transmitters operating solely in the 5.725-5.850 GHz band:

All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

5.8.2 Test Procedure

- The EUT is placed on a non-conducting table of the 3m SAC turntable, 80 cm above the ground plane for measurement below 1GHz, 1.5 m above the ground plane for measurement above 1GHz. The measurement receiving antenna to EUT distance is 3 meters. The EUT was arranged in accordance with ANSI C63.10.
- The EUT is operated in TM 1 mode as described in Section 4.2. The EUT test channel and modulation type settings are described in Section 4.3.
- Open the EZ-EMC test software, load the FCC radiated emissions test script, or create a new radiated emissions test script, and configure the test parameters, including the test frequency range, RBW = 100kHz (for below 1GHz) or 1MHz (for above 1GHz), VBW = 300kHz (for below 1GHz) or 3MHz (for above 1GHz), test standard, test antenna, spectrum analyzer, and other related settings.
- The test script was executed, the measurement was performed.
- The turntable rotates 360 degrees, and the test antenna is raised and lowered within a range of 1 to 4 meters.
- Use the spectrum analyzer's Max Hold function to record the maximum test trace. For frequencies below 1 GHz, mark the maximum Quasi-peak value. For frequencies above 1 GHz, mark the maximum Peak and Average values. Save the test data.
- Both vertical and horizontal polarizations of the test antenna need to be tested.

- h) The radiated power measurements above 1 GHz are calculated according to sections 12.7.3 of the ANSI C63.10-2020 standard:
- $EIRP\ (dBm) = E\ (dB\mu V/m) + 20\log(d\ [m]) - 104.77$, where E is field strength and d is distance at which the field strength limit is specified in the applicable requirements.
 - Therefore, when the measurement distance is 3 meters:
 $EIRP\ (dBm) = E\ (dB\mu V/m) - 95.2$
 $E\ (dB\mu V/m) = EIRP\ (dBm) + 95.2$

5.8.3 Test Setup

See setup 2 in section 4.4.

5.8.4 Test Instruments

Refer to section 3.7.

5.8.5 Test Results

Pass.



Operating Frequency Band: 5725 MHz – 5825MHz (Band 4)

Modulation Type: 802.11ac-VHT40							
Test Channel: Lowest channel							
Frequency (MHz)	Read Level (dBuV)	Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
5460.00	14.52	45.93	60.45	68.20	7.75	Peak	Vertical
	3.41	45.93	49.34	54.00	4.66	Average	
	15.25	45.93	61.18	68.20	7.02	Peak	Horizontal
	3.69	45.93	49.62	54.00	4.38	Average	
Test channel: Highest channel							
Frequency (MHz)	Read Level (dBuV)	Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
7250.00	13.20	49.70	62.90	68.20	5.30	Peak	Vertical
	0.28	49.70	49.98	54.00	4.02	Average	
	12.66	49.70	62.36	68.20	5.84	Peak	Horizontal
	0.14	49.70	49.84	54.00	4.16	Average	

Remark: Level = Read level + Factor (Antenna Factor + Cable Loss – Preamplifier Factor).

5.9 Unwanted Emissions that fall Outside of the Restricted Bands

5.9.1 Limits

- **For transmitters operating solely in the 5.725-5.850 GHz band:**

All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

5.9.2 Test Procedure

- The EUT is placed on a non-conducting table of the 3m SAC turntable, 80 cm above the ground plane for measurement below 1GHz, 1.5 m above the ground plane for measurement above 1GHz. The measurement receiving antenna to EUT distance is 3 meters. The EUT was arranged in accordance with ANSI C63.10.
- The EUT is operated in TM 1 mode as described in Section 4.2. The EUT test channel and modulation type settings are described in Section 4.3.
- Open the EZ-EMC test software, load the FCC radiated spurious emissions test script, or create a new radiated spurious emissions test script, and configure the test parameters, including the test frequency range, RBW = 100kHz (for below 1GHz) or 1MHz (for above 1GHz), VBW = 300kHz (for below 1GHz) or 3MHz (for above 1GHz), test standard, test antenna, spectrum analyzer, and other related settings.
- The test script was executed, the measurement was performed.
- The turntable rotates 360 degrees, and the test antenna is raised and lowered within a range of 1 to 4 meters.
- Use the spectrum analyzer's Max Hold function to record the maximum test trace. For frequencies below 1 GHz, mark the maximum Quasi-peak value. For frequencies above 1 GHz, mark the maximum Peak and Average values. Save the test data.
- Both vertical and horizontal polarizations of the test antenna need to be tested.
- The radiated power measurements above 1 GHz are calculated according to sections 12.7.3 of the ANSI C63.10-2020 standard:
 - $EIRP\ (dBm) = E\ (dB\mu V/m) + 20\log(d\ [m]) - 104.77$, where E is field strength and d is distance at which the field strength limit is specified in the applicable requirements.
 - Therefore, when the measurement distance is 3 meters:
 $EIRP\ (dBm) = E\ (dB\mu V/m) - 95.2$
 $E\ (dB\mu V/m) = EIRP\ (dBm) + 95.2$

5.9.3 Test Setup

See setup 2 in section 4.4.

5.9.4 Test Instruments

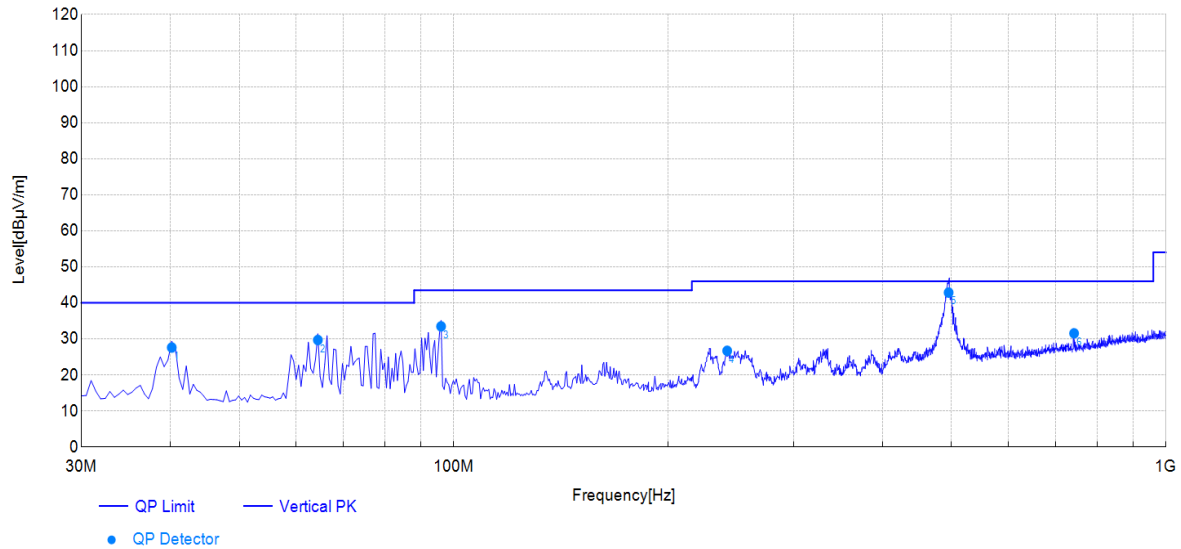
Refer to section 3.7.

5.9.5 Test Results

Pass.

1) Test Frequency Range: Below 1000MHz

Product Name:	NO DISC DVD	Model No.:	X9H BASE
Test By:	Albers Liu	Test mode:	TM 1
Test Frequency:	30MHz ~ 1GHz	Polarization:	Vertical
Test Voltage:	DC 12V		

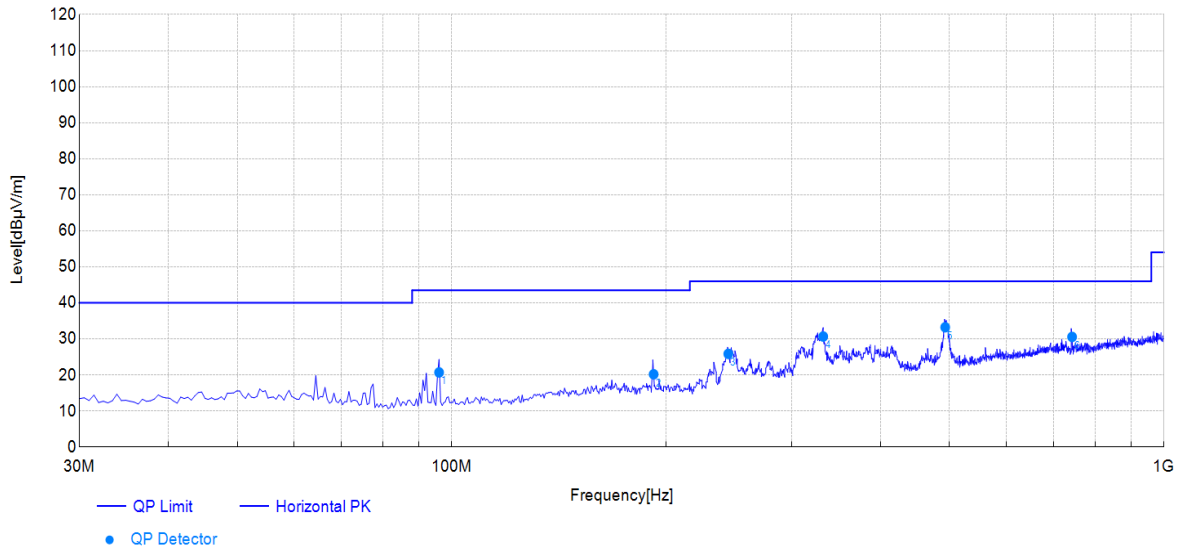


Final Data List

NO.	Frequency [MHz]	Factor [dB/m]	QP Reading [dBμV]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pol	Verdict
1	40.19	13.00	14.62	27.62	40.00	12.38	100	300	Vertical	PASS
2	64.45	12.16	17.54	29.70	40.00	10.30	200	143	Vertical	PASS
3	95.99	11.81	21.68	33.49	43.50	10.01	200	0	Vertical	PASS
4	242.05	15.89	10.82	26.71	46.00	19.29	200	201	Vertical	PASS
5	495.23	22.07	20.80	42.87	46.00	3.13	100	186	Vertical	PASS
6	742.82	25.63	5.92	31.55	46.00	14.45	100	99	Vertical	PASS

Remark: Level = Read level + Factor (Antenna Factor + Cable Loss – Preamplifier Factor).

Product Name:	NO DISC DVD	Model No.:	X9H BASE
Test By:	Albers Liu	Test mode:	TM 1
Test Frequency:	30MHz ~ 1GHz	Polarization:	Horizontal
Test Voltage:	DC 12V		



Final Data List										
NO.	Frequency [MHz]	Factor [dB/m]	QP Reading [dBμV]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pol	Verdict
1	95.99	11.95	8.76	20.71	43.50	22.79	200	0	Horizontal	PASS
2	192.07	14.75	5.45	20.20	43.50	23.30	100	149	Horizontal	PASS
3	244.48	15.64	10.22	25.86	46.00	20.14	200	318	Horizontal	PASS
4	332.31	18.00	12.68	30.68	46.00	15.32	100	331	Horizontal	PASS
5	492.92	20.88	12.36	33.24	46.00	12.76	200	91	Horizontal	PASS
6	742.82	25.38	5.19	30.57	46.00	15.43	100	91	Horizontal	PASS

Remark: Level = Read level + Factor (Antenna Factor + Cable Loss – Preamplifier Factor).

2) Test Frequency Range: Above 1GHz

a) Operating Frequency Band: 5725 MHz – 5825MHz (Band 4)

Modulation Type: 802.11ac-VHT40							
Test Channel: Lowest channel							
Frequency (MHz)	Read Level (dBuV)	Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
5650.00	3.48	46.13	49.61	68.20	18.59	Peak	Vertical
	3.69	46.13	49.82	68.20	18.38	Peak	Horizontal
5700.00	44.88	45.99	90.87	105.20	14.33	Peak	Vertical
	45.65	45.99	91.64	105.20	13.56	Peak	Horizontal
5720.00	53.74	45.86	99.60	110.80	11.20	Peak	Vertical
	53.36	45.86	99.22	110.80	11.58	Peak	Horizontal
5725.00	65.98	45.82	111.80	122.20	10.40	Peak	Vertical
	66.32	45.82	112.14	122.20	10.06	Peak	Horizontal
11510.00	54.21	8.06	62.27	68.20	5.93	Peak	Vertical
	41.56	8.06	49.62	54.00	4.38	Average	
	54.28	8.06	62.34	68.20	5.86	Peak	Horizontal
	41.63	8.06	49.69	54.00	4.31	Average	
Test channel: Highest channel							
Frequency (MHz)	Read Level (dBuV)	Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
5850.00	66.52	46.18	112.70	122.20	9.50	Peak	Vertical
	65.78	46.18	111.96	122.20	10.24	Peak	Horizontal
5855.00	53.12	46.22	99.34	110.80	11.46	Peak	Vertical
	53.16	46.22	99.38	110.80	11.42	Peak	Horizontal
5875.00	45.25	46.41	91.66	105.20	13.54	Peak	Vertical
	45.82	46.41	92.23	105.20	12.97	Peak	Horizontal
5925.00	3.21	46.47	49.68	68.20	18.52	Peak	Vertical
	3.45	46.47	49.92	68.20	18.28	Peak	Horizontal
11590.00	54.55	8.52	63.07	68.20	5.13	Peak	Vertical
	41.23	8.52	49.75	54.00	4.25	Average	
	54.63	8.52	63.15	68.20	5.05	Peak	Horizontal
	41.25	8.52	49.77	54.00	4.23	Average	

Remark: Level = Read level + Factor (Antenna Factor + Cable Loss – Preamplifier Factor).

5.10 Frequency Stability

5.10.1 Limits

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.

5.10.2 Test Procedure

- **Frequency Stability vs. Temperature:**
 - a) The EUT is placed in a temperature chamber, and the temperature is set to -30°C . The test is performed after the chamber temperature has stabilized.
 - b) The DC power supply output voltage is set to the rated voltage of the EUT.
 - c) The EUT antenna port is connected to the RF port of the test system control unit via an RF cable.
 - d) The EUT is configured to operate in TM 1 mode as described in Section 4.2. The EUT test channels and modulation types are set as specified in Section 4.3.
 - e) Open the MTS8310 test software, load the FCC 5 GHz Wi-Fi test script, and select the test items, test frequency bands, and other relevant test parameters.
 - f) The test script was executed, the measurement was performed. Save the test data.
 - g) Increase the temperature by 10°C , allow it to stabilize and soak for a period of time, and then repeat the measurements. Repeat this process until $+50^{\circ}\text{C}$ is reached.
- **Frequency Stability vs Voltage:**
 - a) The EUT is placed in a temperature chamber, and the temperature is set to 25°C . The test is performed after the chamber temperature has stabilized.
 - b) The DC power supply output voltage is set to the rated voltage of the EUT.
 - c) The EUT antenna port is connected to the RF port of the test system control unit via an RF cable.
 - d) The EUT is configured to operate in TM 1 modes as described in Section 4.2. The EUT test channels and modulation types are set as specified in Section 4.3.
 - e) Open the MTS8310 test software, load the FCC 5 GHz Wi-Fi test script, and select the test items, test frequency bands, and other relevant test parameters.
 - f) The test script was executed, the measurement was performed. Save the test data.
 - g) Reduce the DC power supply output voltage to the minimum and maximum limit voltages of the EUT respectively, and then repeat the measurements.

5.10.3 Test Setup

See setup 3 in section 4.4.

5.10.4 Test Instruments

Refer to section 3.7.

5.10.5 Test Results

Pass.

The detailed test data see: Appendix – 5GHz Wi-Fi.

5.11 Dynamic Frequency Selection (DFS)

5.11.1 DFS Overview

A U-NII network will employ a DFS function to detect signals from radar systems and to avoid co-channel operation with these systems. This applies to the 5250-5350 MHz and/or 5470-5725 MHz bands.

5.11.2 DFS Technical Requirements

Table 1: Applicability of DFS Requirements Prior to Use of a Channel

Requirement	Operational Mode		
	Master	Client Without Radar Detection	Client With Radar Detection
<i>Non-Occupancy Period</i>	Yes	Not required	Yes
<i>DFS Detection Threshold</i>	Yes	Not required	Yes
<i>Channel Availability Check Time</i>	Yes	Not required	Not required
<i>U-NII Detection Bandwidth</i>	Yes	Not required	Yes

Table 2: Applicability of DFS requirements during normal operation

Requirement	Operational Mode	
	Master Device or Client With Radar Detection	Client Without Radar Detection
<i>DFS Detection Threshold</i>	Yes	Not required
<i>Channel Closing Transmission Time</i>	Yes	Yes
<i>Channel Move Time</i>	Yes	Yes
<i>U-NII Detection Bandwidth</i>	Yes	Not required

Additional requirements for devices with multiple bandwidth modes	Operational Mode	
	Master Device or Client With Radar Detection	Client Without Radar Detection
<i>U-NII Detection Bandwidth and Statistical Performance Check</i>	All BW modes must be tested	Not required
<i>Channel Move Time and Channel Closing Transmission Time</i>	Test using widest BW mode available	Test using the widest BW mode available for the link
<i>All other tests</i>	Any single BW mode	Not required
Note: Frequencies selected for statistical performance check should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.		

Table 3: DFS Detection Thresholds for Master Devices and Client Devices with Radar Detection

Maximum Transmit Power	Value (See Notes 1, 2, and 3)
EIRP $\geq$ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna. Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response. Note3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.	

Table 4: DFS Response Requirement Values

Parameter	Value
<i>Non-occupancy period</i>	Minimum 30 minutes
<i>Channel Availability Check Time</i>	60 seconds
<i>Channel Move Time</i>	10 seconds (See Note 1)
<i>Channel Closing Transmission Time</i>	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. (See Notes 1 and 2)
<i>U-NII Detection Bandwidth</i>	Minimum 100% of the U-NII 99% transmission power bandwidth. (See Note 3)
Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst. Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions. Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.	

5.11.3 RADAR TEST WAVEFORMS

Radar Test Waveforms are described in Section 6 of KDB 905462 D02 U-NII DFS Compliance Procedures New Rules v02.

5.11.4 Test Procedure

- a) The EUT antenna port is connected to the RF port of the test system control unit via an RF cable.
- b) The EUT is set to operate in TM 2 mode as described in Section 4.2. The EUT test channel and modulation type settings are described in Section 4.3.
- c) Open the MTS8310 test software, load the FCC 5 GHz Wi-Fi DFS test script, and select the test items and other relevant test parameters.
- d) The test script was executed, the measurement was performed.
- e) Save the test data.

5.11.5 Test Setup

See setup 4 in section 4.4.

5.11.6 Test Instruments

Refer to section 3.7.

5.11.7 Test Results

N/A.

The EUT operates only in the 5745 MHz to 5825 MHz frequency band. Therefore, this test item is not applicable.

----- End of Report -----