



Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai
Street, Bao'an District, Shenzhen, China

TEST REPORT

Report Reference No.....: CTA22012500501

FCC ID.....: 2A4BF-AIWO1401

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Date of issue.....: Feb. 14, 2022

Testing Laboratory Name.....: Shenzhen CTA Testing Technology Co., Ltd.

Address.....: Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China

Applicant's name.....: AIWA (Chongqing) International Trade Co., Ltd

Address.....: 4th Floor, Building 1, No. 36, Fengsheng Road, Jiulongpo District, Chongqing

Test specification.....:

Standard.....: FCC Part 15 Subpart E 15.407

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Test item description.....: Laptop

Trade Mark.....: AIWO

Manufacturer.....: AIWA (Chongqing) International Trade Co., Ltd

Model/Type reference.....: AIWO1401A

AIWO1401B, AIWO1401C, AIWO1401D, AIWO1401E,
AIWO1401F, AIWO1401G, AIWO1401H, AIWO1401I,
AIWO1401J, AIWO1401K, AIWO1401L, AIWO1401M,
AIWO1401N, AIWO1401O

Listed Models: Modulation

OFDM

Frequency.....: From 5260MHz to 5320MHz, 5500MHz to 5700MHz

Rating.....: DC 11.4V From Battery and DC 19V From external circuit

Result.....: PASS

TEST REPORT

Equipment under Test : Laptop

Model /Type : AIWO1401A

Series Model No. : AIWO1401B, AIWO1401C, AIWO1401D, AIWO1401E, AIWO1401F, AIWO1401G, AIWO1401H, AIWO1401I, AIWO1401J, AIWO1401K, AIWO1401L, AIWO1401M, AIWO1401N, AIWO1401O

Applicant : AIWA (Chongqing) International Trade Co., Ltd

Address : 4th Floor, Building 1, No. 36, Fengsheng Road, Jiulongpo District, Chongqing

Manufacturer : AIWA (Chongqing) International Trade Co., Ltd

Address : 4th Floor, Building 1, No. 36, Fengsheng Road, Jiulongpo District, Chongqing

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

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

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2. Summary

Item	Standard	Method	Requirement	Result
Conducted Emission at AC power line	47 CFR Part 15.407 2021	ANSI C63.10-2013 section 6.2	47 CFR Part 15.207(a)	Pass
Duty Cycle	47 CFR Part 15.407 2021	ANSI C63.10-2013 section 12.2 (b)		Pass
Maximum conducted output power	47 CFR Part 15.407 2021	ANSI C63.10-2013, section 12.3	47 CFR Part 15.407(a)(1)(iv) 47 CFR Part 15.407(a)(2) 47 CFR Part 15.407(a)(3)(i)	Pass
Peak power spectral density	47 CFR Part 15.407 2021	ANSI C63.10-2013, section 12.5	47 CFR Part 15.407(a)(1)(iv) 47 CFR Part 15.407(a)(2) 47 CFR Part 15.407(a)(3)(i)	Pass
Emission bandwidth and occupied bandwidth	47 CFR Part 15.407 2021	ANSI C63.10-2013, section 6.9.3 & 12.4 KDB 789033 D02, Clause C.2	U-NII 1, U-NII 2A, U-NII 2C: No limits, only for report use. 47 CFR Part 15.407(e)	Pass
Channel Move Time, Channel Closing Transmission Time	47 CFR Part 15.407 2021	KDB 905462 D02, Clause 7.8.3	47 CFR Part 15.407(h)(2)(iii)	Pass
Non-Occupancy Period Test	47 CFR Part 15.407 2021	KDB 905462 D02, Clause 7.8.3	47 CFR Part 15.407(h)(2)(iv)	Pass
DFS Detection Thresholds	47 CFR Part 15.407 2021	KDB 905462 D02, Clause 7.4.1.1	KDB 905462 D02, Clause 5.2 Table 3	Pass
Emissions around the fundamental	47 CFR Part 15.407 2021	ANSI C63.10-2013, section 12.7.4, 12.7.5, 12.7.6	47 CFR Part 15.407(b)(1) 47 CFR Part 15.407(b)(2) 47 CFR Part 15.407(b)(3) 47 CFR Part 15.407(b)(4) 47 CFR Part 15.407(b)(10)	Pass
Undesirable emission limits (below 1GHz)	47 CFR Part 15.407 2021	ANSI C63.10-2013, section 12.7.4, 12.7.5, 12.7.6	47 CFR Part 15.407(b)(9)	Pass
Undesirable emission limits (above 1GHz)	47 CFR Part 15.407 2021	ANSI C63.10-2013, section 12.7.4, 12.7.5, 12.7.6	47 CFR Part 15.407(b)(1) 47 CFR Part 15.407(b)(2) 47 CFR Part 15.407(b)(3) 47 CFR Part 15.407(b)(4) 47 CFR Part 15.407(b)(10)	Pass

3. General Information

3.1 Details of E.U.T.

Product Name:	Laptop
Model No.:	AIWO1401A, AIWO1401B, AIWO1401C, AIWO1401D, AIWO1401E, AIWO1401F, AIWO1401G, AIWO1401H, AIWO1401I, AIWO1401J, AIWO1401K, AIWO1401L, AIWO1401M, AIWO1401N, AIWO1401O
Trade Mark:	AIWO
Power Supply:	AC/DC Adaptor: Input: 100-240V~ 50/60Hz 1.5A Output: 19V=3.42A 64.98W Battery: DC 11.4V=4000mAh, 45.6Wh
Operation Frequency:	IEEE 802.11a/n(HT20)/ac(HT20): 5180MHz to 5240MHz for U-NII Band 1; 5260MHz to 5320MHz for U-NII Band 2A; 5500MHz to 5700MHz for U-NII Band 2C; 5745MHz to 5825MHz for U-NII Band 3; IEEE 802.11n(HT40)/ac(HT40): 5190MHz to 5230MHz for U-NII Band 1; 5270MHz to 5310MHz for U-NII Band 2A; 5510MHz to 5670MHz for U-NII Band 2C; 5755MHz to 5795MHz for U-NII Band 3; IEEE 802.11ac(HT80): 5210MHz for U-NII Band 1; 5290MHz for U-NII Band 2A; 5530MHz to 5610MHz for U-NII Band 2C; 5775MHz for U-NII Band 3
Channel Number:	IEEE 802.11a/n(HT20)/ac(HT20): 4 for U-NII Band 1; 4 for U-NII Band 2A; 8 for U-NII Band 2C; 5 for U-NII Band 3; IEEE 802.11n(HT40)/ac(HT40): 2 for U-NII Band 1; 2 for U-NII Band 2A; 5 for U-NII Band 2C; 2 for U-NII Band 3; IEEE 802.11ac(HT80): 1 for U-NII Band 1; 1 for U-NII Band 2A; 2 for U-NII Band 2C; 1 for U-NII Band 3;
Modulation Type:	IEEE 802.11a: OFDM(BPSK, QPSK, 16QAM, 64QAM); IEEE 802.11n: OFDM (BPSK, QPSK, 16QAM, 64QAM); IEEE 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM);
Antenna Type:	FPC
Antenna Gain:	1.5dBi

3.2 Description of Support Units

The EUT was tested as an independent device.

3.3 Measurement Uncertainty

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	30~1000MHz	4.06 dB	(1)
Radiated Emission	1~18GHz	5.14 dB	(1)
Radiated Emission	18-40GHz	5.38 dB	(1)
Conducted Disturbance	0.15~30MHz	2.14 dB	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

3.5 Test Facility

3.5.1 Address of the test laboratory

Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China

3.5.2 Test Facility

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

FCC-Registration No.: 517856 Designation Number: CN1318

Shenzhen CTA Testing Technology Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

A2LA-Lab Cert. No.: 6534.01

Shenzhen CTA Testing Technology Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

The 3m-Semi anechoic test site fulfills CISPR 16-1-4 according to ANSI C63.10 and CISPR 16-1-4:2010.

3.6 Deviation from Standards

None

3.7 Abnormalities from Standard Condition

None

4. Equipment List

Test Equipment	Manufacturer	Model No.	Equipment No.	Calibration Date	Calibration Due Date
LISN	R&S	ENV216	CTA-308	2021/08/06	2022/08/05
LISN	R&S	ENV216	CTA-314	2021/08/06	2022/08/05
EMI Test Receiver	R&S	ESPI	CTA-307	2021/08/06	2022/08/05
EMI Test Receiver	R&S	ESCI	CTA-306	2021/08/06	2022/08/05
Spectrum Analyzer	Agilent	N9020A	CTA-301	2021/08/06	2022/08/05
Spectrum Analyzer	R&S	FSP	CTA-337	2021/08/06	2022/08/05
Vector Signal generator	Agilent	N5182A	CTA-305	2021/08/06	2022/08/05
Analog Signal Generator	R&S	SML03	CTA-304	2021/08/06	2022/08/05
Universal Radio Communication	CMW500	R&S	CTA-302	2021/08/06	2022/08/05
Temperature and humidity meter	Chigo	ZG-7020	CTA-326	2021/08/06	2022/08/05
Ultra-Broadband Antenna	Schwarzbeck	VULB9163	CTA-310	2021/08/07	2022/08/06
Horn Antenna	Schwarzbeck	BBHA 9120D	CTA-309	2021/08/07	2022/08/06
Loop Antenna	Zhinan	ZN30900C	CTA-311	2021/08/07	2022/08/06
Horn Antenna	Beijing Hangwei Dayang	OBH100400	CTA-336	2021/08/06	2022/08/05
Amplifier	Schwarzbeck	BBV 9745	CTA-312	2021/08/06	2022/08/05
Amplifier	Taiwan chengyi	EMC051845B	CTA-313	2021/08/06	2022/08/05
Directional coupler	NARDA	4226-10	CTA-303	2021/08/06	2022/08/05
High-Pass Filter	XingBo	XBLBQ-GTA18	CTA-402	2021/08/06	2022/08/05
High-Pass Filter	XingBo	XBLBQ-GTA27	CTA-403	2021/08/06	2022/08/05
Automated filter bank	Tonscend	JS0806-F	CTA-404	2021/08/06	2022/08/05
Power Sensor	Agilent	U2021XA	CTA-405	2021/08/06	2022/08/05

Amplifier	Schwarzbeck	BBV9719	CTA-406	2021/08/06	2022/08/05
Spectrum Analyzer	R&S	FSV40-N	CTA-407	2021/08/06	2022/08/05
Pre-Amplifier	Schwarzbeck	BBV-9721	CTA-408	2021/08/06	2022/08/05
Horn Antenna	Schwarzbeck	BBHA 9170	CTA-409	2021/08/06	2022/08/05

5. Radio Spectrum Matter Test Results (RF)

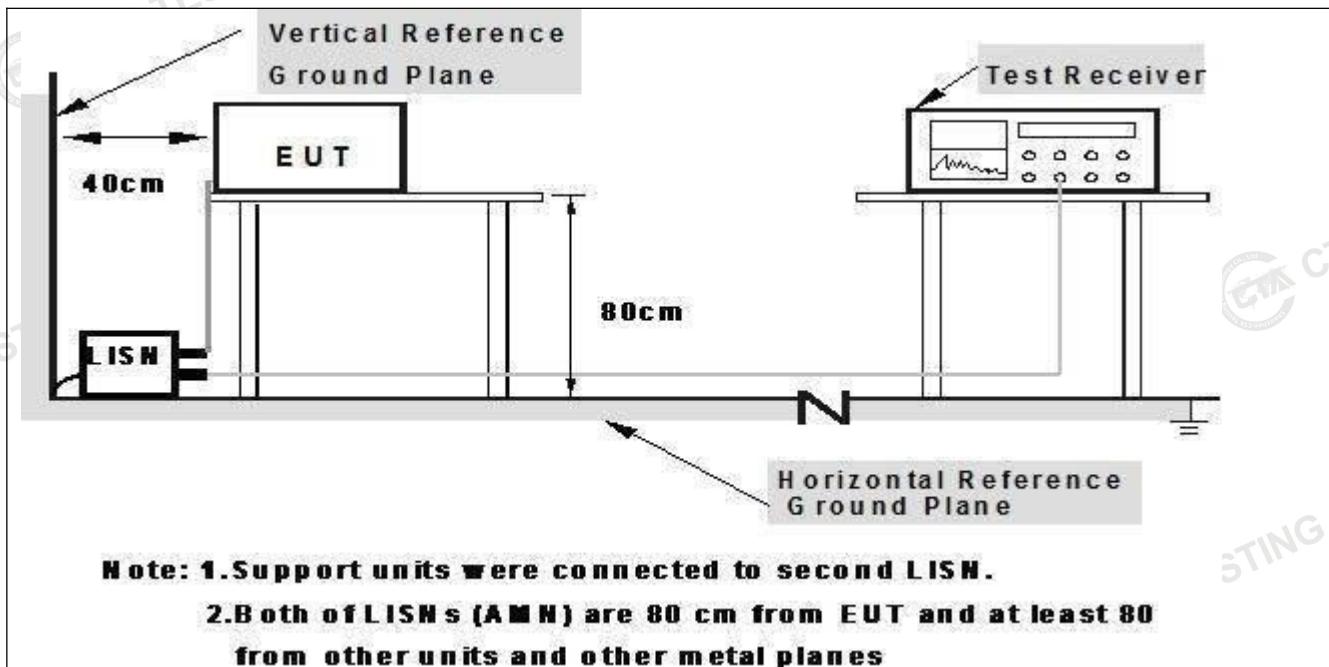
5.1 Conducted Emission at AC power line

Test Requirement:	47 CFR Part 15.207(a)		
Test Method:	Standard test method for ac power-line conducted emissions from unlicensed wireless devices		
Test Limit:	Frequency of emission (MHz)	Conducted limit (dB μ V)	
	Quasi-peak	Average	
	0.15-0.5	66 to 56*	56 to 46*
	0.5-5	56	46
	5-30	60	50*Decreases with the logarithm of the frequency.

5.1.1 E.U.T. Operation:

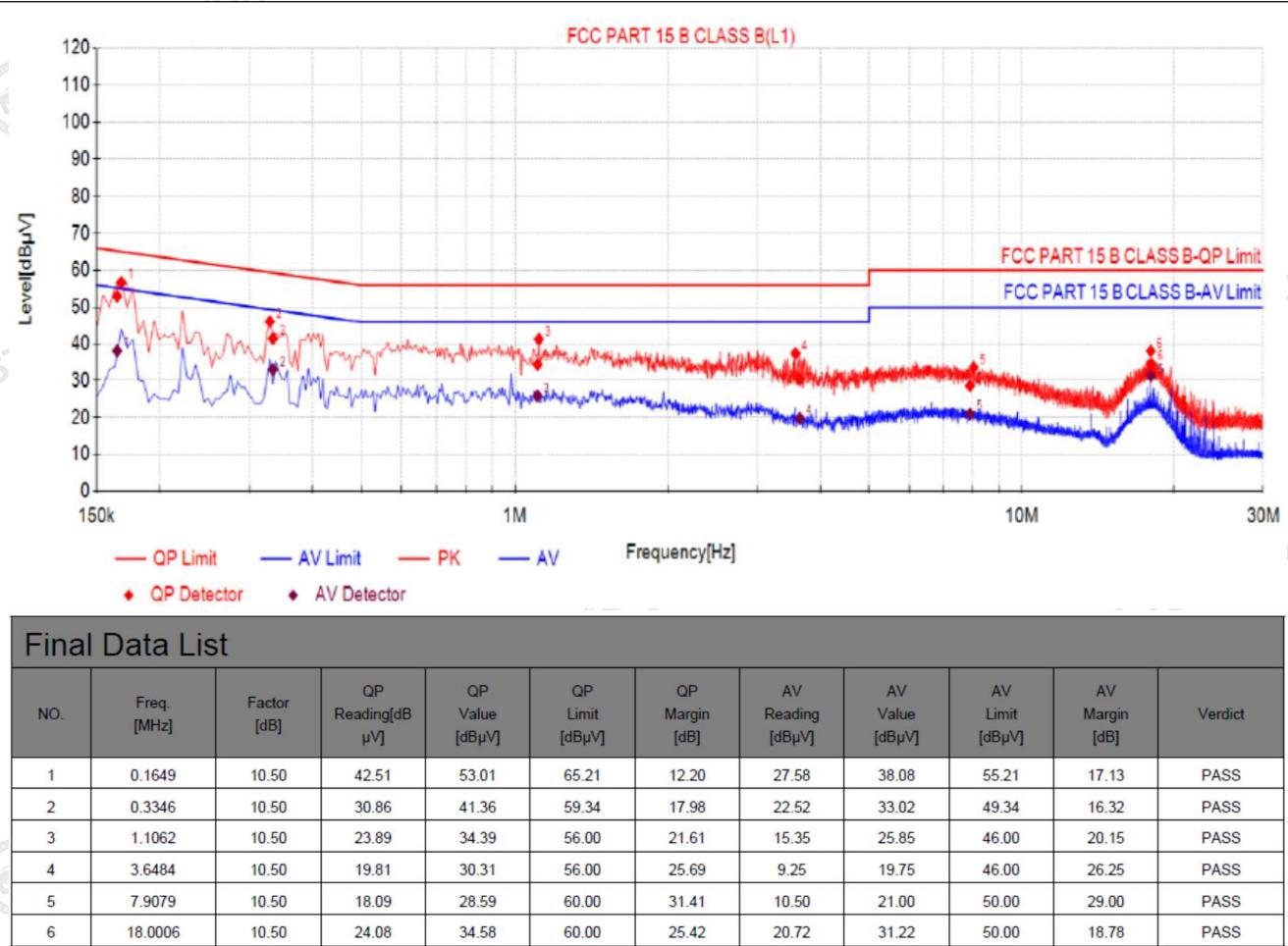
Operating Environment:	
Temperature:	24 °C
Humidity:	56 %
Atmospheric Pressure:	1010 mbar
Pre test mode:	4: Normal Link: Keep the EUT communication with wireless router.
Final test mode:	4: Normal Link Keep the EUT communication with wireless router.

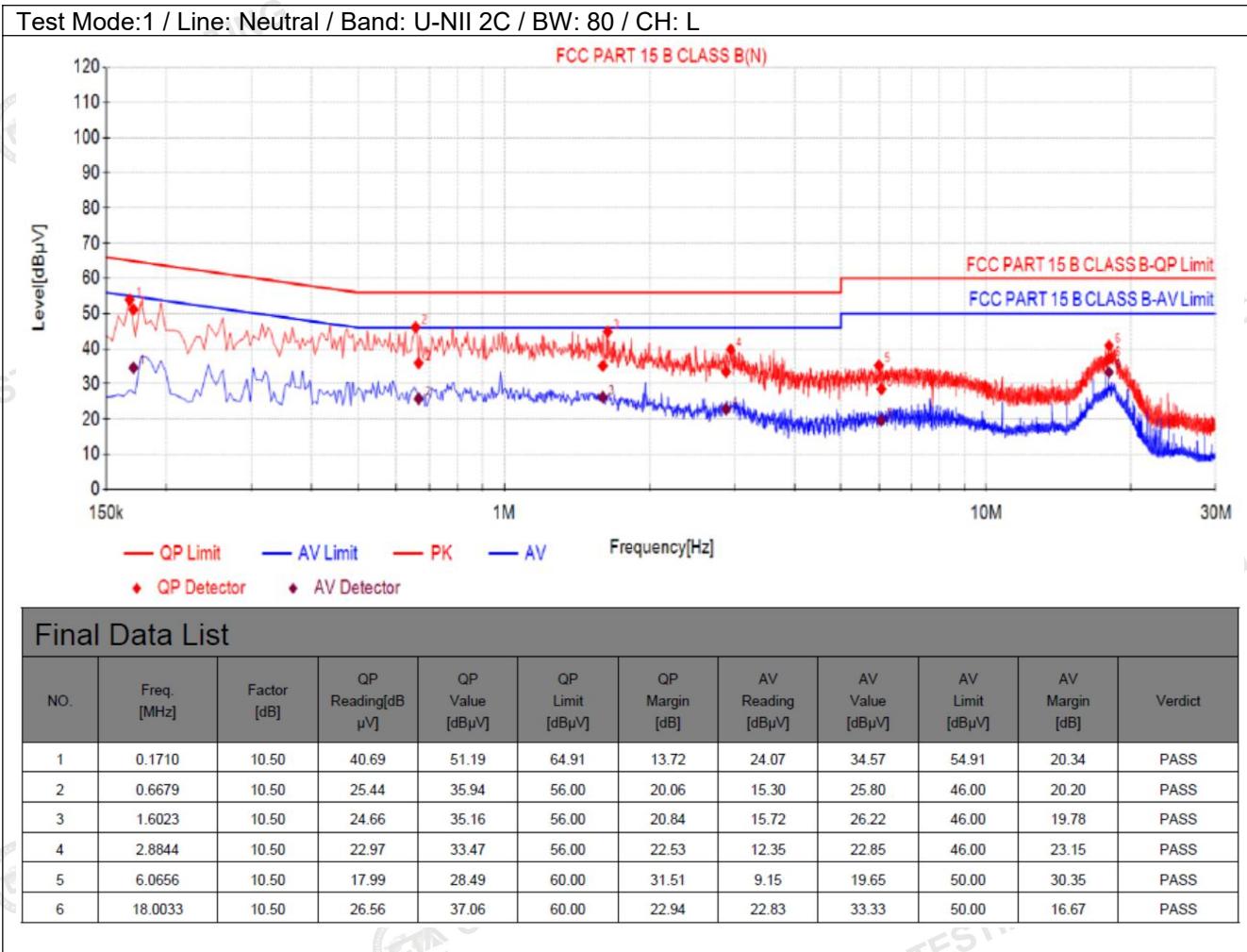
5.1.2 Test Setup Diagram:



5.1.3 Test Data:

Test Mode:1 / Line: Line / Band: U-NII 2C / BW: 80 / CH: L





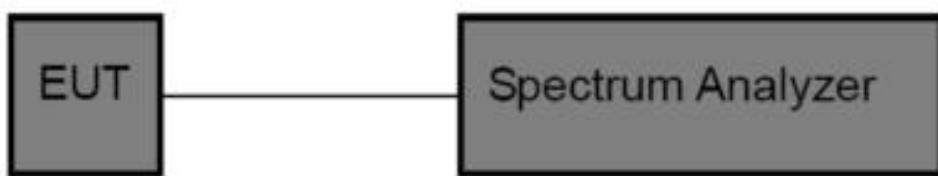
5.2 Duty Cycle

Test Requirement:	All measurements are to be performed with the EUT transmitting at 100% duty cycle at its maximum power control level; however, if 100% duty cycle cannot be achieved, measurements of duty cycle, x, and maximum-power transmission duration, T, are required for each tested mode of operation.
Test Method:	ANSI C63.10-2013 section 12.2 (b)
Test Limit:	No limits, only for report use.

5.2.1 E.U.T. Operation:

Operating Environment:	
Temperature:	24 °C
Humidity:	52 %
Atmospheric Pressure:	1010 mbar
Pre test mode:	<p>1: TX mode IEEE 802.11a: TX mode IEEE 802.11a_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11a modulation type. All data rates has been tested and found the data rate @ 6Mbps is the worst case. Only the data of worst case is recorded in the report.</p> <p>2: TX mode IEEE 802.11n: TX mode IEEE 802.11n_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11n modulation type. All bandwidth and data rates has been tested and found the data rate @ MCS0 is the worst case. Only the data of worst case is recorded in the report.</p> <p>3: TX mode IEEE802.11ac: TX mode IEEE 802.11ac_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11ac modulation type. All bandwidth and data rates has been tested and found the data rate @ MCS0 is the worst case. Only the data of worst case is recorded in the report.</p>
Final test mode:	<p>1: TX mode IEEE 802.11a TX mode IEEE 802.11a_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11a modulation type. All data rates has been tested and found the data rate @ 6Mbps is the worst case. Only the data of worst case is recorded in the report.</p> <p>2: TX mode IEEE 802.11n TX mode IEEE 802.11n_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11n modulation type. All bandwidth and data rates has been tested and found the data rate @ MCS0 is the worst case. Only the data of worst case is recorded in the report.</p> <p>3: TX mode IEEE802.11ac TX mode IEEE 802.11ac_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11ac modulation type. All bandwidth and data rates has been tested and found the data rate @ MCS0 is the worst case. Only the data of worst case is recorded in the report.</p>

5.2.2 Test Setup Diagram:



5.2.3 Test Data:

Please Refer to Appendix for Details.

5.3 Maximum conducted output power

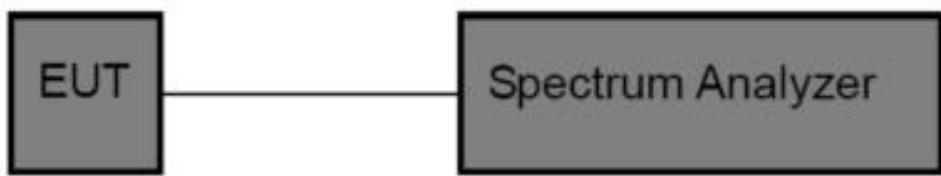
Test Requirement:	47 CFR Part 15.407(a)(1)(iv) 47 CFR Part 15.407(a)(2) 47 CFR Part 15.407(a)(3)(i)
Test Method:	ANSI C63.10-2013, section 12.3
Test Limit:	<p>For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. 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.</p> <p>For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. 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.</p> <p>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. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.</p>

5.3.1 E.U.T. Operation:

Operating Environment:	
Temperature:	24 °C
Humidity:	52 %
Atmospheric Pressure:	1010 mbar
Pre test mode:	<p>1: TX mode IEEE 802.11a; TX mode IEEE 802.11a_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11a modulation type. All data rates has been tested and found the data rate @ 6Mbps is the worst case. Only the data of worst case is recorded in the report.</p> <p>2: TX mode IEEE 802.11n: TX mode IEEE 802.11n_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11n modulation type. All bandwidth and data rates has been tested and found the data rate @ MCS0 is the worst case. Only the data of worst case is recorded in the report.</p> <p>3: TX mode IEEE802.11ac: TX mode IEEE 802.11ac_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11ac modulation type. All bandwidth and data rates has been tested and found the data rate @ MCS0 is the worst case. Only the data of worst case is recorded in the report.</p>
Final test mode:	<p>1: TX mode IEEE 802.11a TX mode IEEE 802.11a_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11a modulation type. All data rates has been tested and found the data rate @ 6Mbps is the worst case. Only the data of worst case is recorded in the report.</p>

	2: TX mode IEEE 802.11n TX mode IEEE 802.11n_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11n modulation type. All bandwidth and data rates has been tested and found the data rate @ MCS0 is the worst case. Only the data of worst case is recorded in the report. 3: TX mode IEEE802.11ac TX mode IEEE 802.11ac_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11ac modulation type. All bandwidth and data rates has been tested and found the data rate @ MCS0 is the worst case. Only the data of worst case is recorded in the report.
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5.3.2 Test Setup Diagram:



5.3.3 Test Data:

Please Refer to Appendix for Details.

5.4 Peak power spectral density

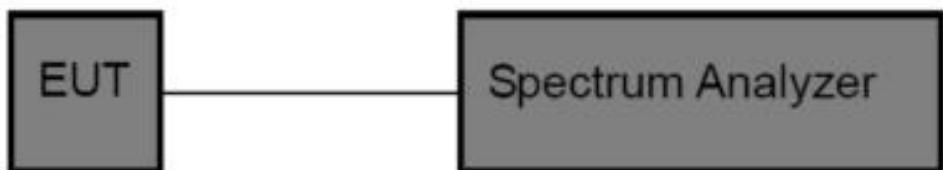
Test Requirement:	47 CFR Part 15.407(a)(1)(iv) 47 CFR Part 15.407(a)(2) 47 CFR Part 15.407(a)(3)(i)
Test Method:	ANSI C63.10-2013, section 12.5
Test Limit:	<p>For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting 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.</p> <p>For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz 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.</p> <p>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. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.</p>

5.4.1 E.U.T. Operation:

Operating Environment:	
Temperature:	24 °C
Humidity:	52 %
Atmospheric Pressure:	1010 mbar
Pre test mode:	<p>1: TX mode IEEE 802.11a: TX mode IEEE 802.11a_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11a modulation type. All data rates has been tested and found the data rate @ 6Mbps is the worst case. Only the data of worst case is recorded in the report.</p> <p>2: TX mode IEEE 802.11n: TX mode IEEE 802.11n_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11n modulation type. All bandwidth and data rates has been tested and found the data rate @ MCS0 is the worst case. Only the data of worst case is recorded in the report.</p> <p>3: TX mode IEEE802.11ac: TX mode IEEE 802.11ac_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11ac modulation type. All bandwidth and data rates has been tested and found the data rate @ MCS0 is the worst case. Only the data of worst case is recorded in the report.</p>
Final test mode:	<p>1: TX mode IEEE 802.11a TX mode IEEE 802.11a_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11a modulation type. All data rates has been tested and found the data rate @ 6Mbps is the worst case. Only the data of worst case is recorded in the report.</p> <p>2: TX mode IEEE 802.11n TX mode IEEE 802.11n_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11n modulation type. All bandwidth and data rates has been tested and found the data rate @ MCS0 is the worst case. Only the data of worst case is recorded in the report.</p>

	3: TX mode IEEE802.11ac TX mode IEEE 802.11ac_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11ac modulation type. All bandwidth and data rates has been tested and found the data rate @ MCS0 is the worst case. Only the data of worst case is recorded in the report.
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5.4.2 Test Setup Diagram:



5.4.3 Test Data:

Please Refer to Appendix for Details.

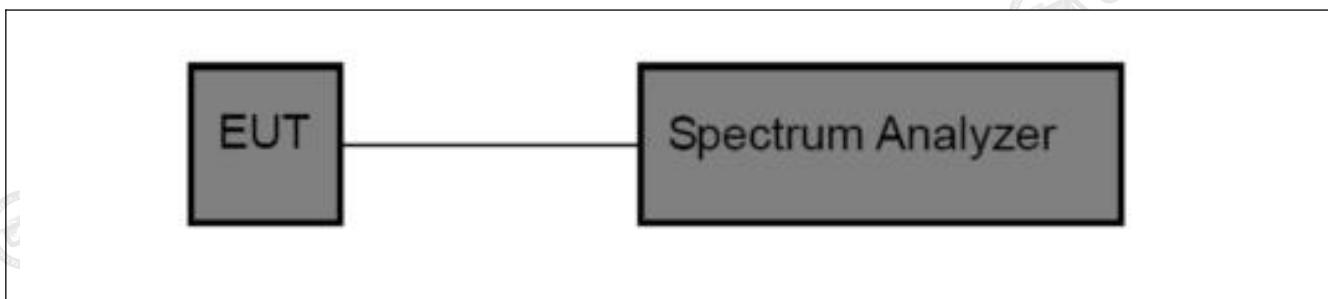
5.5 Emission bandwidth and occupied bandwidth

Test Requirement:	U-NII 1, U-NII 2A, U-NII 2C: No limits, only for report use. U-NII 3, U-NII 4: 47 CFR Part 15.407(e)
Test Method:	ANSI C63.10-2013, section 6.9.3 & 12.4 KDB 789033 D02, Clause C.2
Test Limit:	U-NII 1, U-NII 2A, U-NII 2C: No limits, only for report use. U-NII 3, U-NII 4: Within the 5.725-5.850 GHz and 5.850-5.895 GHz bands, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

5.5.1 E.U.T. Operation:

Operating Environment:	
Temperature:	24 °C
Humidity:	52 %
Atmospheric Pressure:	1010 mbar
Pre test mode:	<p>1: TX mode IEEE 802.11a: TX mode IEEE 802.11a_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11a modulation type. All data rates has been tested and found the data rate @ 6Mbps is the worst case. Only the data of worst case is recorded in the report.</p> <p>2: TX mode IEEE 802.11n: TX mode IEEE 802.11n_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11n modulation type. All bandwidth and data rates has been tested and found the data rate @ MCS0 is the worst case. Only the data of worst case is recorded in the report.</p> <p>3: TX mode IEEE802.11ac: TX mode IEEE 802.11ac_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11ac modulation type. All bandwidth and data rates has been tested and found the data rate @ MCS0 is the worst case. Only the data of worst case is recorded in the report.</p>
Final test mode:	<p>1: TX mode IEEE 802.11a TX mode IEEE 802.11a_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11a modulation type. All data rates has been tested and found the data rate @ 6Mbps is the worst case. Only the data of worst case is recorded in the report.</p> <p>2: TX mode IEEE 802.11n TX mode IEEE 802.11n_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11n modulation type. All bandwidth and data rates has been tested and found the data rate @ MCS0 is the worst case. Only the data of worst case is recorded in the report.</p> <p>3: TX mode IEEE802.11ac TX mode IEEE 802.11ac_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11ac modulation type. All bandwidth and data rates has been tested and found the data rate @ MCS0 is the worst case. Only the data of worst case is recorded in the report.</p>

5.5.2 Test Setup Diagram:



5.5.3 Test Data:

Please Refer to Appendix for Details.

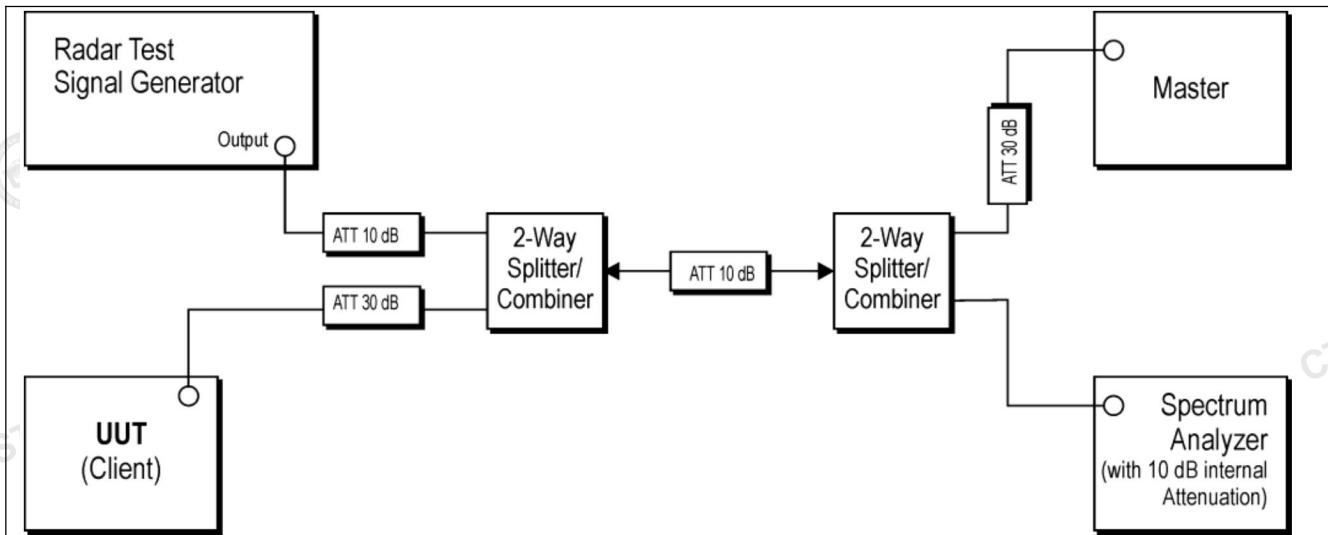
5.6 Channel Move Time, Channel Closing Transmission Time

Test Requirement:	47 CFR Part 15.407(h)(2)(iii)
Test Method:	KDB 905462 D02, Clause 7.8.3
Test Limit:	Channel Move Time: within 10 seconds Channel Closing Transmission Time: 200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. (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.)

5.6.1 E.U.T. Operation:

Operating Environment:	
Temperature:	24 °C
Humidity:	52 %
Atmospheric Pressure:	1010 mbar
Pre test mode:	4: Normal Link: Keep the EUT communication with wireless router.
Final test mode:	4: Normal Link Keep the EUT communication with wireless router.

5.6.2 Test Setup Diagram:

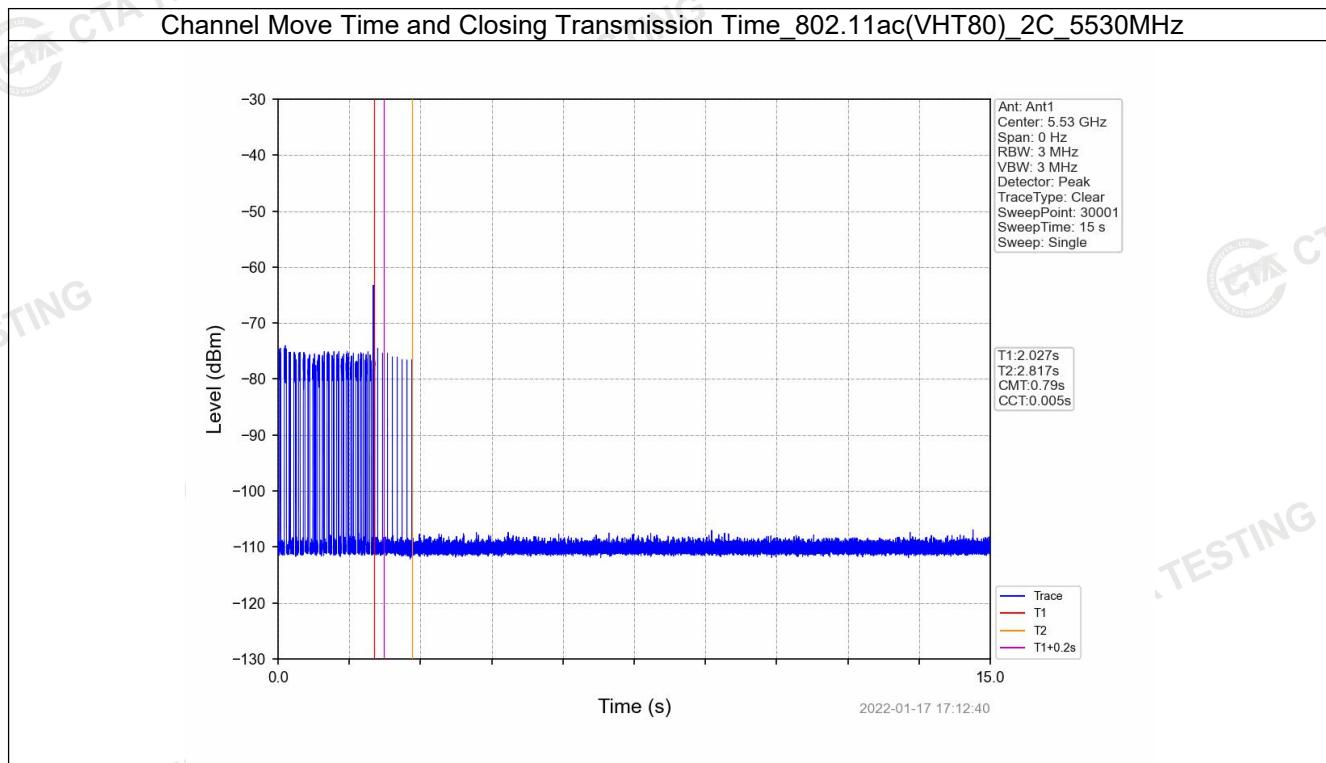


5.6.3 Test Data:

Mode	Bandwidth (MHz)	Frequency (MHz)	Band: 2C		
			Channel Move Time		Verdict
			Result(s)	Limit(s)	
802.11ac (VHT80)	80	5530	0.79	<10	Pass

Mode	Bandwidth (MHz)	Frequency (MHz)	Band: 2C		
			Closing Transmission Time		Verdict
			Result(s)	Limit(s)	
802.11ac (VHT80)	80	5530	0.005	<0.26	Pass

Test Graph



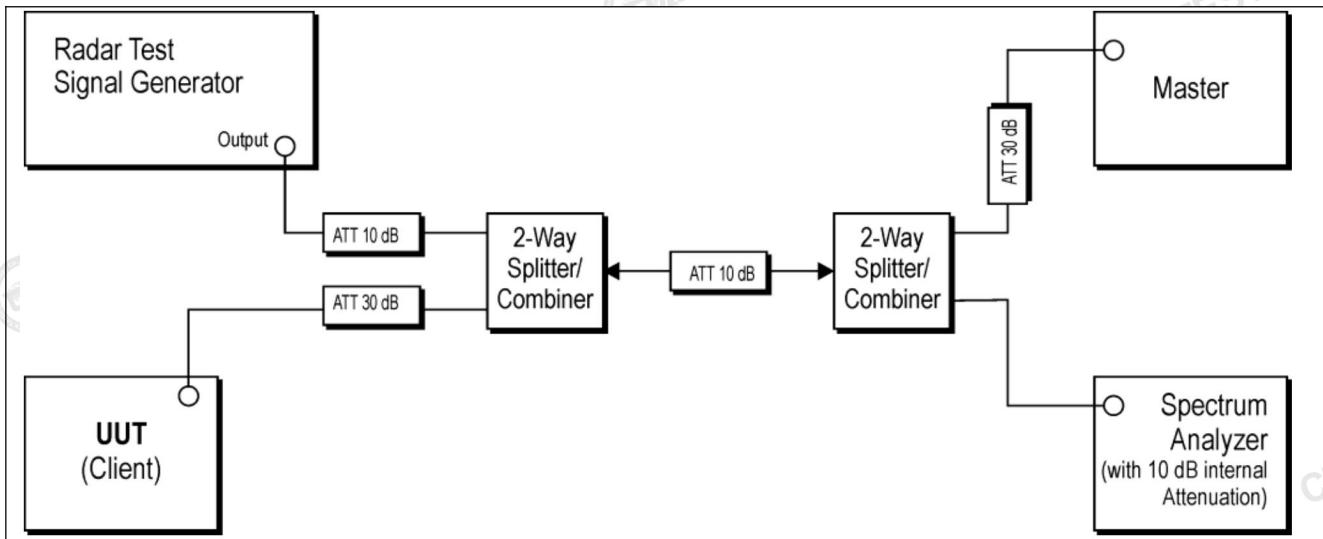
5.7 Non-Occupancy Period Test

Test Requirement:	47 CFR Part 15.407(h)(2)(iv)
Test Method:	KDB 905462 D02, Clause 7.8.3
Test Limit:	A channel that has been flagged as containing a radar system, either by a channel availability check or in-service monitoring, is subject to a non-occupancy period of at least 30 minutes. The non-occupancy period starts at the time when the radar system is detected.

5.7.1 E.U.T. Operation:

Operating Environment:	
Temperature:	24 °C
Humidity:	52 %
Atmospheric Pressure:	1010 mbar
Pre test mode:	4: Normal Link: Keep the EUT communication with wireless router.
Final test mode:	4: Normal Link Keep the EUT communication with wireless router.

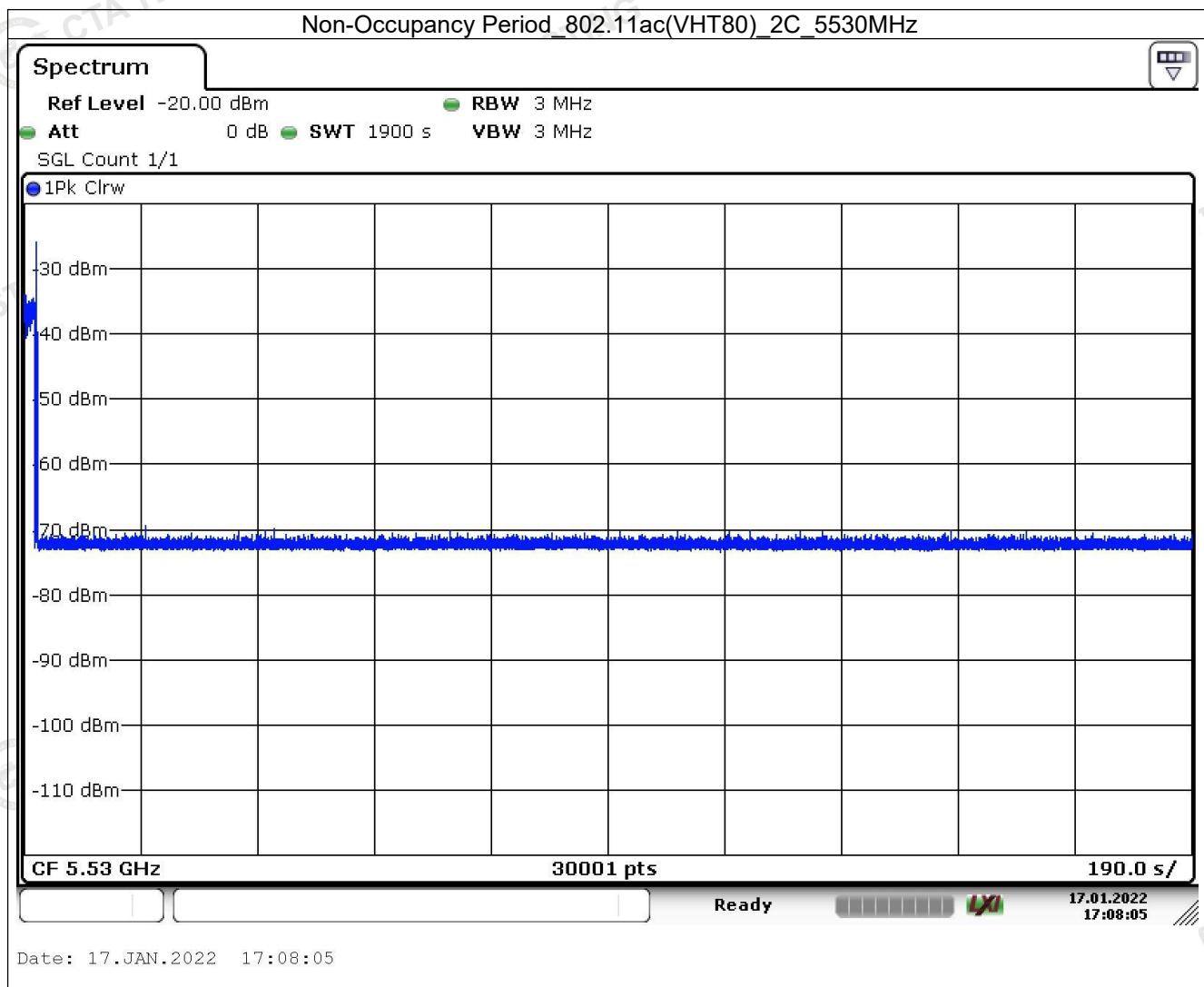
5.7.2 Test Setup Diagram:



5.7.3 Test Data:

Mode	Bandwidth (MHz)	Frequency (MHz)	Band: 2C		Verdict	
			Non-Occupancy Period	Limit(min)		
			Result			
802.11ac (VHT80)	80	5530	Refer to test point	>30	Pass	

Test Graph



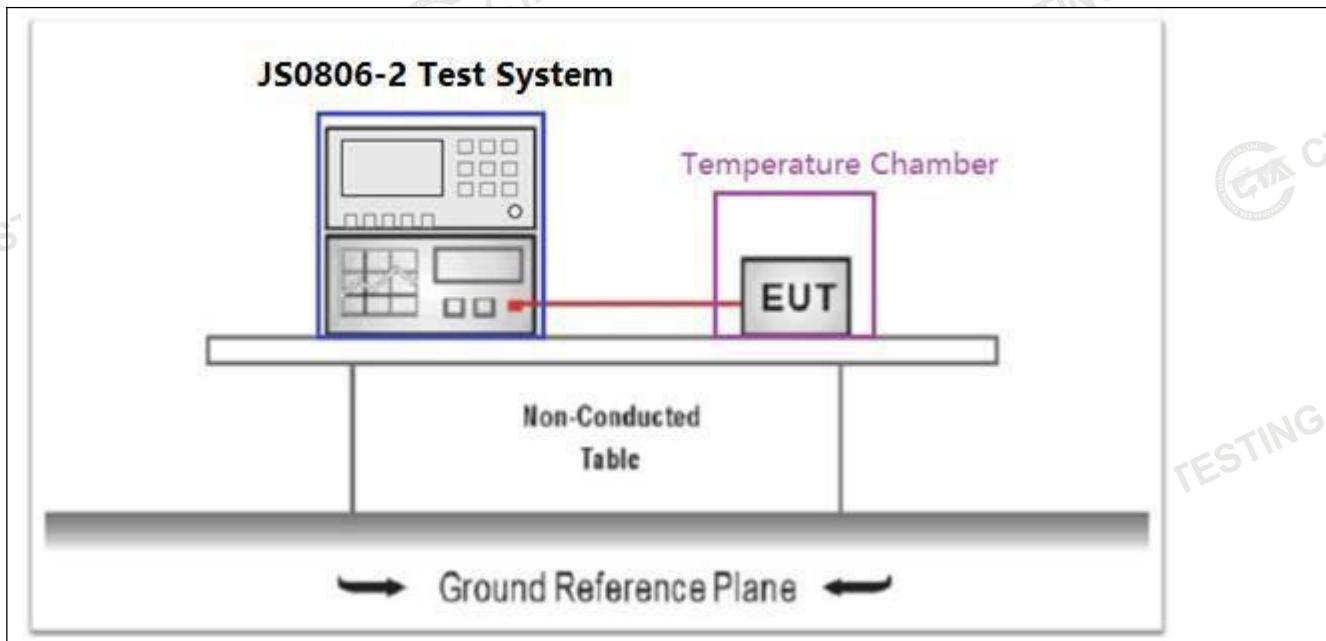
5.8 DFS Detection Thresholds

Test Requirement:	KDB 905462 D02, Clause 5.2 Table 3									
Test Method:	KDB 905462 D02, Clause 7.4.1.1									
Test Limit:	<p>Table 3: DFS Detection Thresholds for Master Devices and Client Devices with Radar Detection</p> <p>Table 3: DFS Detection Thresholds for Master Devices and Client Devices with Radar Detection</p> <table border="1"> <thead> <tr> <th>Maximum Transmit Power</th> <th>Value (See Notes 1, 2, and 3)</th> </tr> </thead> <tbody> <tr> <td>EIRP \geq 200 milliwatt</td> <td>-64 dBm</td> </tr> <tr> <td>EIRP $<$ 200 milliwatt and power spectral density $<$ 10 dBm/MHz</td> <td>-62 dBm</td> </tr> <tr> <td>EIRP $<$ 200 milliwatt that do not meet the power spectral density requirement</td> <td>-64 dBm</td> </tr> </tbody> </table> <p>Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna.</p> <p>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.</p> <p>Note 3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.</p>		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
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									

5.8.1 E.U.T. Operation:

Operating Environment:	
Temperature:	24 °C
Humidity:	52 %
Atmospheric Pressure:	1010 mbar
Pre test mode:	4: Normal Link: Keep the EUT communication with wireless router.
Final test mode:	4: Normal Link Keep the EUT communication with wireless router.

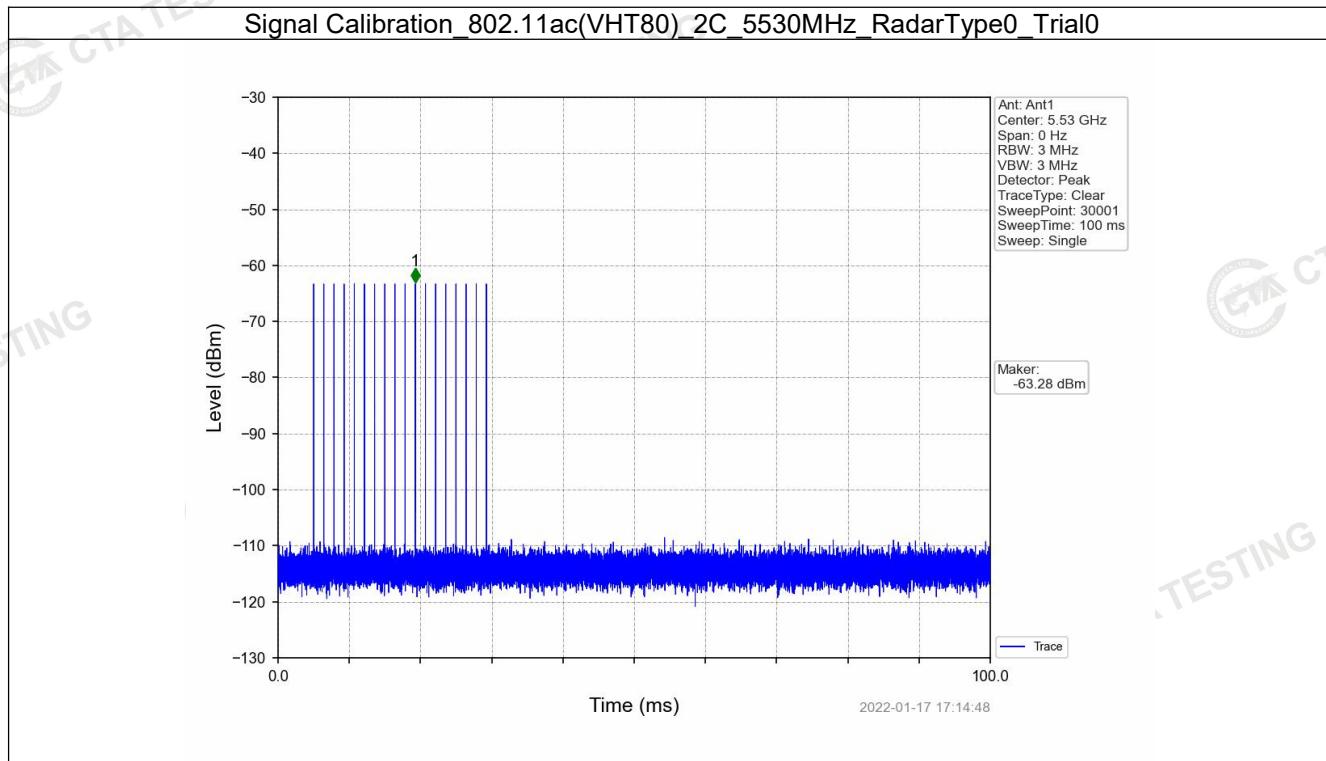
5.8.2 Test Setup Diagram:



Notes:

- TPC is not supported.
- Auxiliary equipment FCC ID: MSQ-RTGW00.
- Time required for the device to fully boot: 108S.

5.8.3 Test Data:



5.9 Emissions around the fundamental

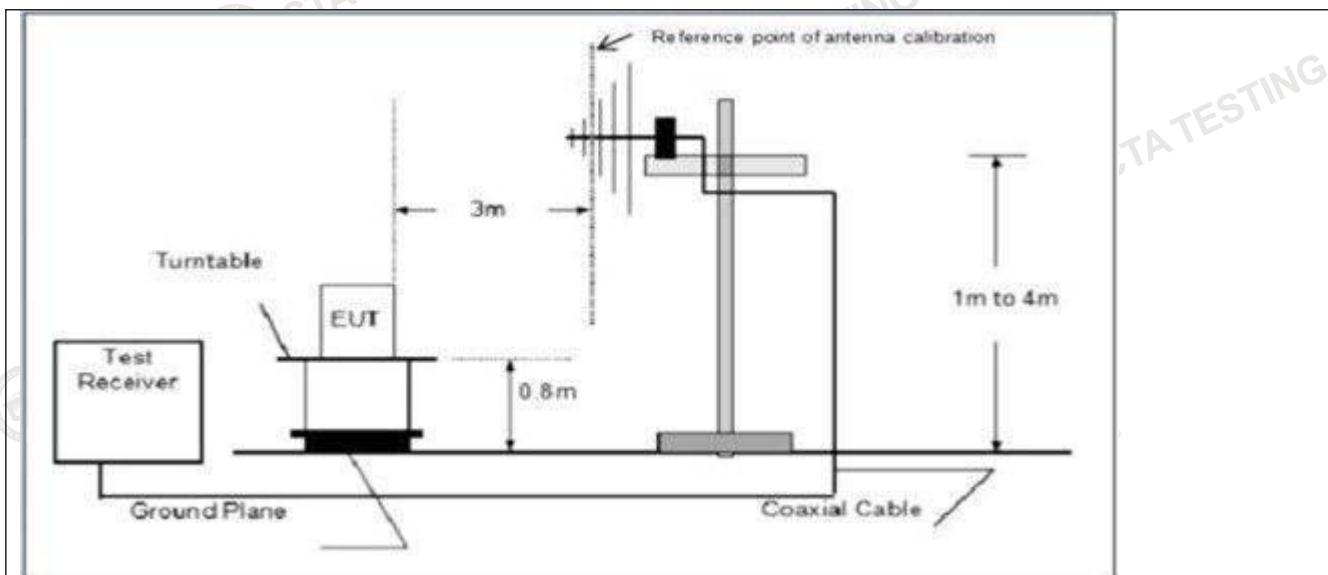
Test Requirement:	47 CFR Part 15.407(b)(1) 47 CFR Part 15.407(b)(2) 47 CFR Part 15.407(b)(3) 47 CFR Part 15.407(b)(4) 47 CFR Part 15.407(b)(10)																																																																								
Test Method:	ANSI C63.10-2013, section 12.7.4, 12.7.5, 12.7.6																																																																								
	<table border="1"> <thead> <tr> <th>MHz</th> <th>MHz</th> <th>MHz</th> <th>GHz</th> </tr> </thead> <tbody> <tr><td>0.090-0.110</td><td>16.42-16.423</td><td>399.9-410</td><td>4.5-5.15</td></tr> <tr><td>10.495-0.505</td><td>16.69475-16.69525</td><td>608-614</td><td>5.35-5.46</td></tr> <tr><td>2.1735-2.1905</td><td>16.80425-16.80475</td><td>960-1240</td><td>7.25-7.75</td></tr> <tr><td>4.125-4.128</td><td>25.5-25.67</td><td>1300-1427</td><td>8.025-8.5</td></tr> <tr><td>4.17725-4.17775</td><td>37.5-38.25</td><td>1435-1626.5</td><td>9.0-9.2</td></tr> <tr><td>4.20725-4.20775</td><td>73-74.6</td><td>1645.5-1646.5</td><td>9.3-9.5</td></tr> <tr><td>6.215-6.218</td><td>74.8-75.2</td><td>1660-1710</td><td>10.6-12.7</td></tr> <tr><td>6.26775-6.26825</td><td>108-121.94</td><td>1718.8-1722.2</td><td>13.25-13.4</td></tr> <tr><td>6.31175-6.31225</td><td>123-138</td><td>2200-2300</td><td>14.47-14.5</td></tr> <tr><td>8.291-8.294</td><td>149.9-150.05</td><td>2310-2390</td><td>15.35-16.2</td></tr> <tr><td>8.362-8.366</td><td>156.52475-156.52525</td><td>2483.5-2500</td><td>17.7-21.4</td></tr> <tr><td>8.37625-8.38675</td><td>156.7-156.9</td><td>2690-2900</td><td>22.01-23.12</td></tr> <tr><td>8.41425-8.41475</td><td>162.0125-167.17</td><td>3260-3267</td><td>23.6-24.0</td></tr> <tr><td>12.29-12.293</td><td>167.72-173.2</td><td>3332-3339</td><td>31.2-31.8</td></tr> <tr><td>12.51975-12.52025</td><td>240-285</td><td>3345.8-3358</td><td>36.43-36.5</td></tr> <tr><td>12.57675-12.57725</td><td>322-335.4</td><td>3600-4400</td><td>(²)</td></tr> <tr><td>13.36-13.41</td><td></td><td></td><td></td></tr> </tbody> </table>	MHz	MHz	MHz	GHz	0.090-0.110	16.42-16.423	399.9-410	4.5-5.15	10.495-0.505	16.69475-16.69525	608-614	5.35-5.46	2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75	4.125-4.128	25.5-25.67	1300-1427	8.025-8.5	4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2	4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5	6.215-6.218	74.8-75.2	1660-1710	10.6-12.7	6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4	6.31175-6.31225	123-138	2200-2300	14.47-14.5	8.291-8.294	149.9-150.05	2310-2390	15.35-16.2	8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4	8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12	8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0	12.29-12.293	167.72-173.2	3332-3339	31.2-31.8	12.51975-12.52025	240-285	3345.8-3358	36.43-36.5	12.57675-12.57725	322-335.4	3600-4400	(²)	13.36-13.41			
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Test Limit:	<p>2 Above 38.6</p> <p>The field strength of emissions appearing within these frequency bands shall not exceed the limits shown in § 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in § 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in § 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in § 15.35 apply to these measurements.</p> <p>Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:</p> <table border="1"> <thead> <tr> <th>Frequency (MHz)</th> <th>Field strength (microvolts/meter)</th> <th>Measurement distance (meters)</th> </tr> </thead> <tbody> <tr><td>0.009-0.490</td><td>2400/F(kHz)</td><td>300</td></tr> <tr><td>0.490-1.705</td><td>24000/F(kHz)</td><td>30</td></tr> <tr><td>1.705-30.0</td><td>30</td><td>30</td></tr> <tr><td>30-88</td><td>100 **</td><td>3</td></tr> <tr><td>88-216</td><td>150 **</td><td>3</td></tr> <tr><td>216-960</td><td>200 **</td><td>3</td></tr> <tr><td>Above 960</td><td>500</td><td>3</td></tr> </tbody> </table>	Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)	0.009-0.490	2400/F(kHz)	300	0.490-1.705	24000/F(kHz)	30	1.705-30.0	30	30	30-88	100 **	3	88-216	150 **	3	216-960	200 **	3	Above 960	500	3																																																
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5.9.1 E.U.T. Operation:

Operating Environment:	
Temperature:	22 °C
Humidity:	52 %
Atmospheric Pressure:	1010 mbar
Pre test mode:	1: TX mode IEEE 802.11a: TX mode IEEE 802.11a_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11a modulation type. All data rates has been tested and found the data rate @ 6Mbps is the worst case. Only the data of worst case is recorded in the report.

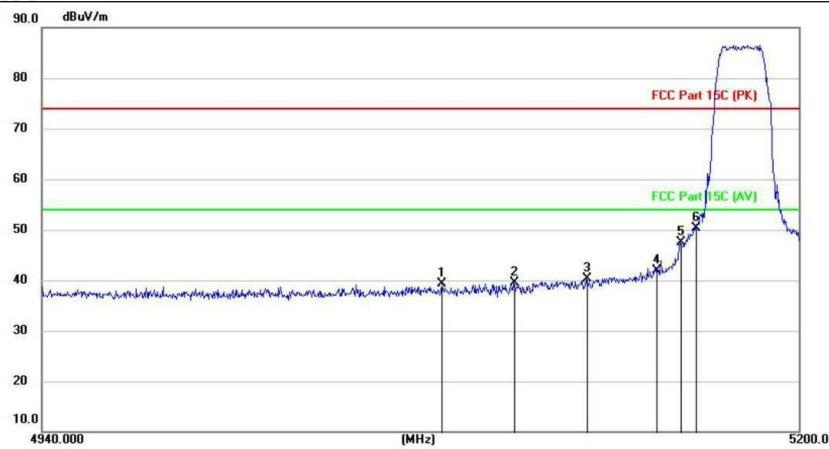
	<p>2: TX mode IEEE 802.11n: TX mode IEEE 802.11n_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11n modulation type. All bandwidth and data rates has been tested and found the data rate @ MCS0 is the worst case. Only the data of worst case is recorded in the report.</p> <p>3: TX mode IEEE802.11ac: TX mode IEEE 802.11ac_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11ac modulation type. All bandwidth and data rates has been tested and found the data rate @ MCS0 is the worst case. Only the data of worst case is recorded in the report.</p>
Final test mode:	<p>1: TX mode IEEE 802.11a TX mode IEEE 802.11a_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11a modulation type. All data rates has been tested and found the data rate @ 6Mbps is the worst case. Only the data of worst case is recorded in the report.</p>

5.9.2 Test Setup Diagram:



5.9.3 Test Data:

Test Mode:1 / Polarization: Horizontal / Band: U-NII 1 / BW: 20 / CH: L



Site: 966 Chamber
Limit: FCC Part 15C (PK)
EUT: Laptop
M/N: AIWO1401A
Mode: 11A-5180
Note:

Polarization: **Horizontal**

Temperature: 25

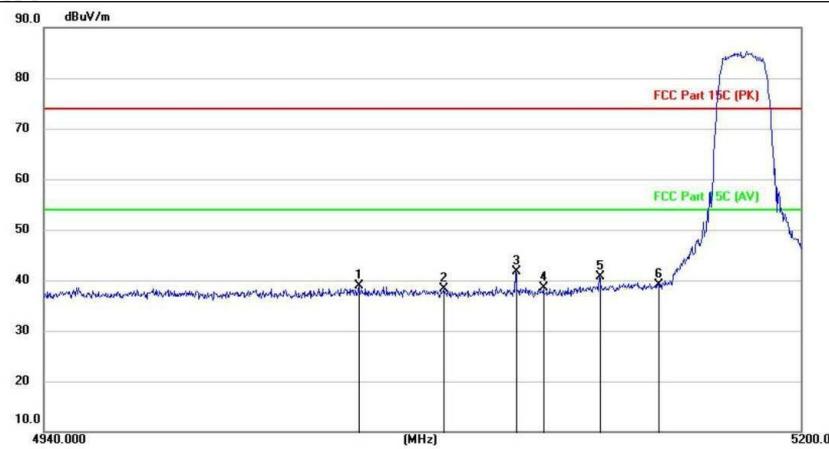
Power: DC 11.4V

Humidity: 55 %

Distance: 3m

No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor	Measure- ment (dB/m)	Limit (dBuV/m)	Over (dB)	Antenna Height cm		Table Degree	Comment
								Detector	Table Degree		
1	5075.850	44.55	-5.32	39.23	74.00	-34.77	peak				
2	5100.498	44.75	-5.30	39.45	74.00	-34.55	peak				
3	5125.588	45.60	-5.27	40.33	74.00	-33.67	peak				
4	5150.000	47.06	-5.25	41.81	74.00	-32.19	peak				
5	5158.478	52.67	-5.25	47.42	74.00	-26.58	peak				
6	*	5163.600	55.53	-5.24	50.29	74.00	-23.71	peak			

Test Mode:1 / Polarization: Vertical / Band: U-NII 1 / BW: 20 / CH: L



Site: 966 Chamber
Limit: FCC Part 15C (PK)
EUT: Laptop
M/N: AIWO1401A
Mode: 11A-5180
Note:

Polarization: **Vertical**

Temperature: 25

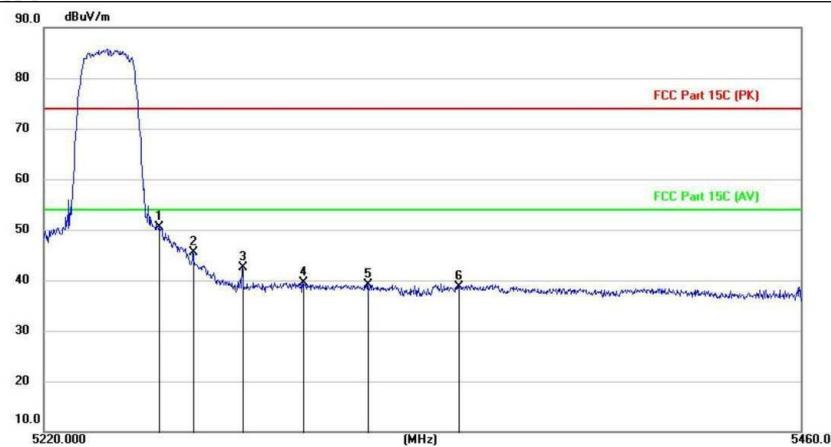
Power: DC 11.4V

Humidity: 55 %

Distance: 3m

No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor	Measure- ment (dB/m)	Limit (dBuV/m)	Over (dB)	Antenna Height cm		Table Degree	Comment
								Detector	cm		
1	5046.782	44.28	-5.35	38.93	74.00	-35.07	peak				
2	5075.824	43.69	-5.32	38.37	74.00	-35.63	peak				
3 *	5100.446	46.91	-5.30	41.61	74.00	-32.39	peak				
4	5110.144	43.87	-5.29	38.58	74.00	-35.42	peak				
5	5129.592	46.04	-5.26	40.78	74.00	-33.22	peak				
6	5150.000	44.32	-5.25	39.07	74.00	-34.93	peak				

Test Mode:1 / Polarization: Horizontal / Band: U-NII 1 / BW: 20 / CH: H



Site: 966 Chamber
Limit: FCC Part 15C (PK)
EUT: Laptop
M/N: AIWO1401A
Mode: 11A-5240
Note:

Polarization: **Vertical**

Temperature: 25

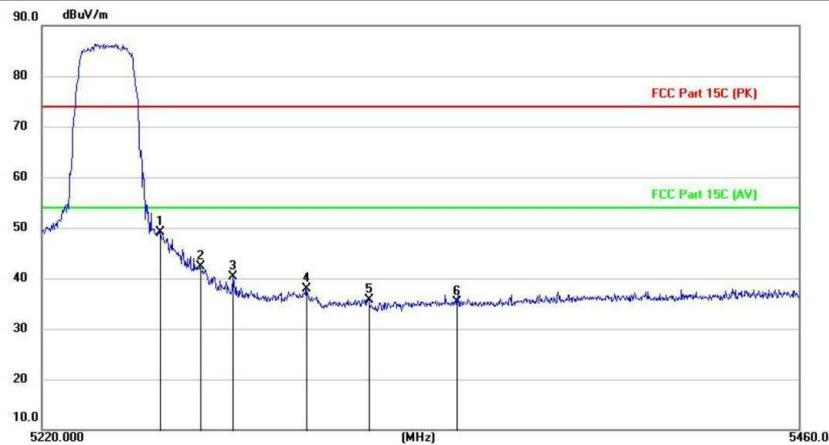
Power: DC 11.4V

Humidity: 55 %

Distance: 3m

No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measure- ment (dBuV/m)	Limit (dBuV/m)	Over (dB)	Antenna Height cm		Table Degree	Comment
								Detector	Table Degree		
1	*	5255.856	55.64	-5.15	50.49	74.00	-23.51	peak			
2		5266.632	50.72	-5.14	45.58	74.00	-28.42	peak			
3		5281.968	47.65	-5.13	42.52	74.00	-31.48	peak			
4		5301.072	44.61	-5.11	39.50	74.00	-34.50	peak			
5		5321.328	44.19	-5.09	39.10	74.00	-34.90	peak			
6		5350.000	43.70	-5.07	38.63	74.00	-35.37	peak			

Test Mode:1 / Polarization: Vertical / Band: U-NII 1 / BW: 20 / CH: H



Site: 966 Chamber
Limit: FCC Part 15C (PK)
EUT: Laptop
M/N: AIWO1401A
Mode: 11A-5240
Note:

Polarization: **Horizontal**

Temperature: 25

Power: DC 11.4V

Humidity: 55 %

Distance: 3m

No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measure- ment (dBuV/m)	Limit (dBuV/m)	Over (dB)	Antenna Height cm		Table Degree	Comment
								Detector	Table Degree		
1	*	5256.624	54.34	-5.16	49.18	74.00	-24.82	peak			
2		5269.416	47.39	-5.15	42.24	74.00	-31.76	peak			
3		5279.688	45.48	-5.12	40.36	74.00	-33.64	peak			
4		5302.704	43.01	-5.11	37.90	74.00	-36.10	peak			
5		5322.120	40.86	-5.09	35.77	74.00	-38.23	peak			
6		5350.000	40.44	-5.07	35.37	74.00	-38.63	peak			

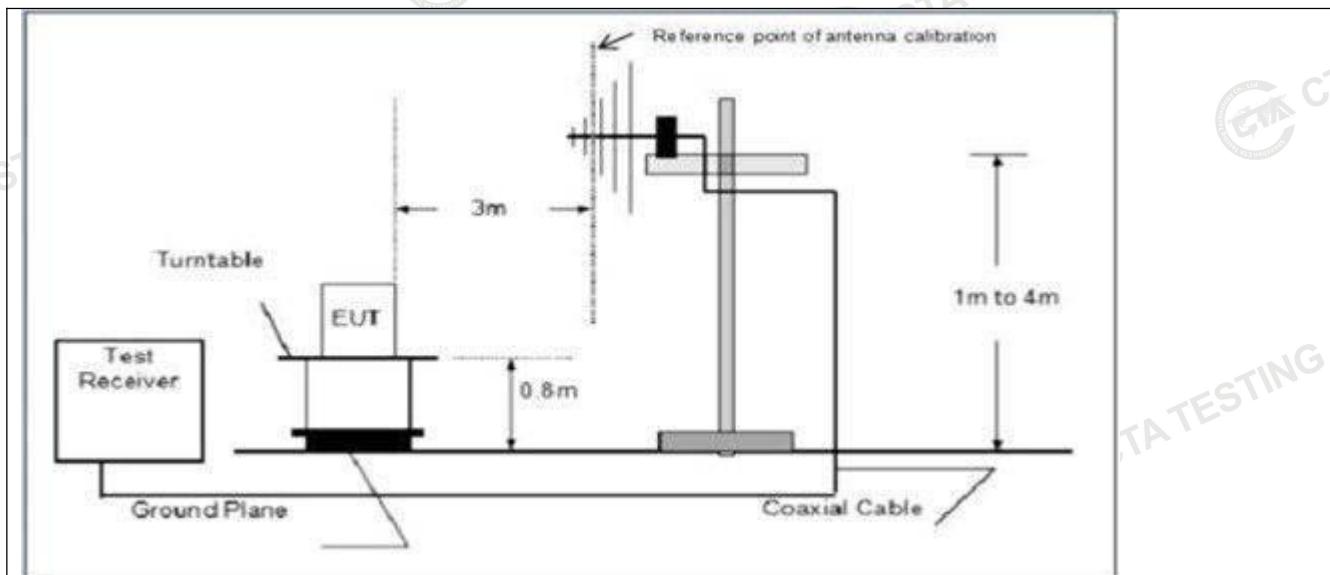
5.10 Undesirable emission limits (below 1GHz)

Test Requirement:	47 CFR Part 15.407(b)(9)		
Test Method:	ANSI C63.10-2013, section 12.7.4, 12.7.5, 12.7.6		
Test Limit:	Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
	0.009-0.490	2400/F(kHz)	300
	0.490-1.705	24000/F(kHz)	30
	1.705-30.0	30	30
	30-88	100 **	3
	88-216	150 **	3
	216-960	200 **	3
	Above 960	500	3

5.10.1 E.U.T. Operation:

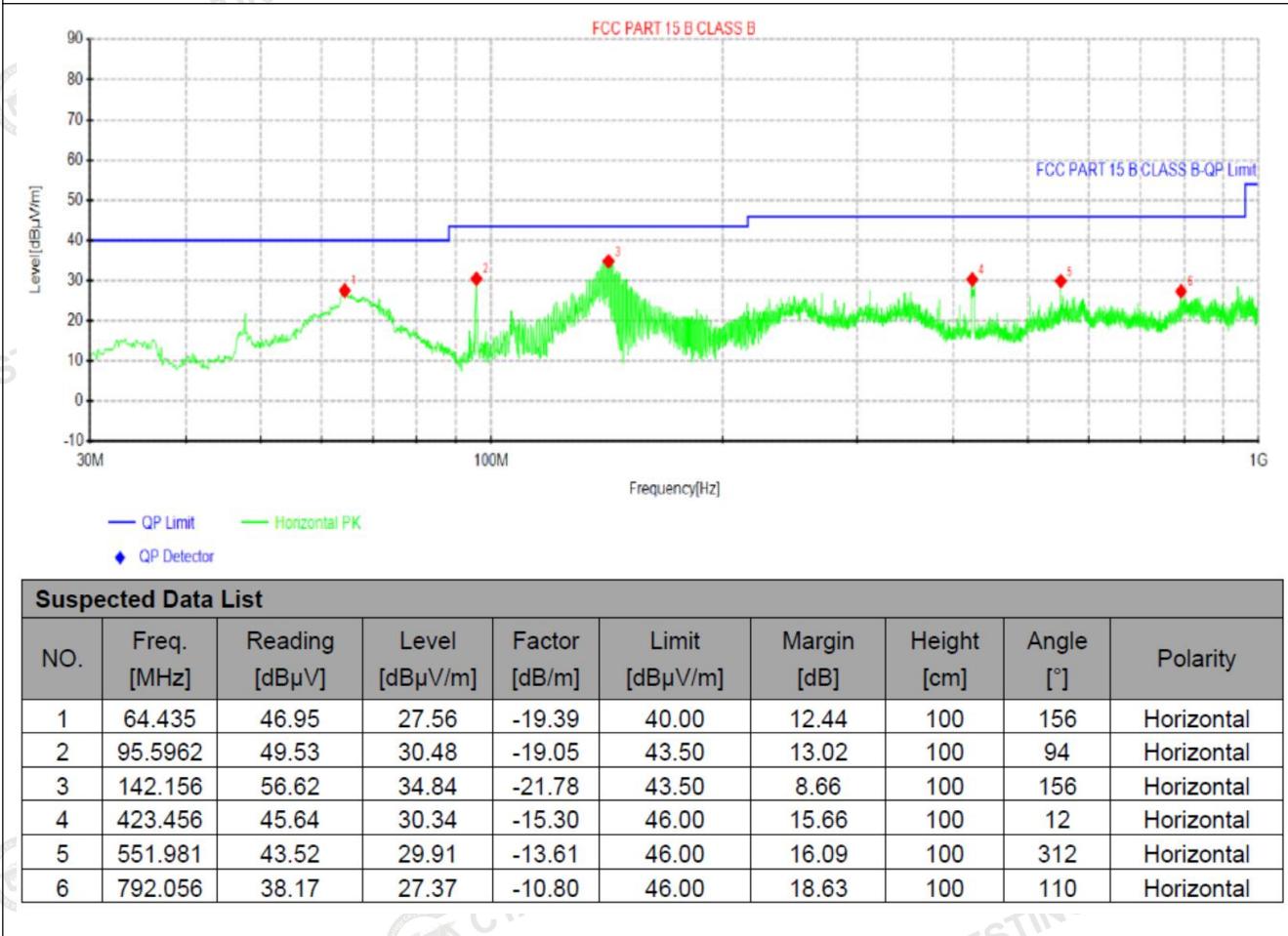
Operating Environment:	
Temperature:	24 °C
Humidity:	48 %
Atmospheric Pressure:	1010 mbar
Pre test mode:	1: TX mode IEEE 802.11a: TX mode IEEE 802.11a_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11a modulation type. All data rates has been tested and found the data rate @ 6Mbps is the worst case. Only the data of worst case is recorded in the report.
Final test mode:	1: TX mode IEEE 802.11a TX mode IEEE 802.11a_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11a modulation type. All data rates has been tested and found the data rate @ 6Mbps is the worst case. Only the data of worst case is recorded in the report.

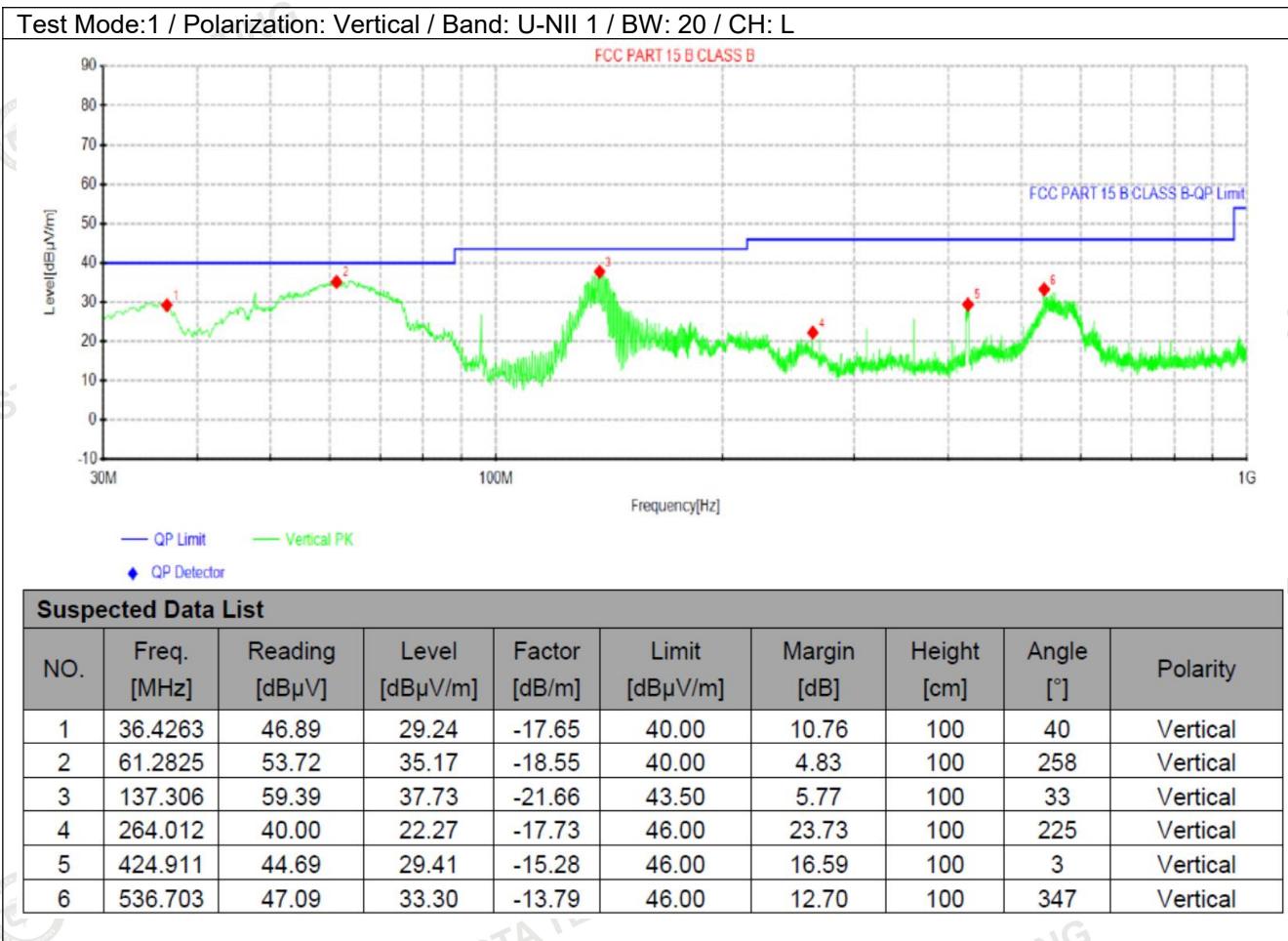
5.10.2 Test Setup Diagram:



5.10.3 Test Data:

Test Mode:1 / Polarization: Horizontal / Band: U-NII 1 / BW: 20 / CH: L





5.11 Undesirable emission limits (above 1GHz)

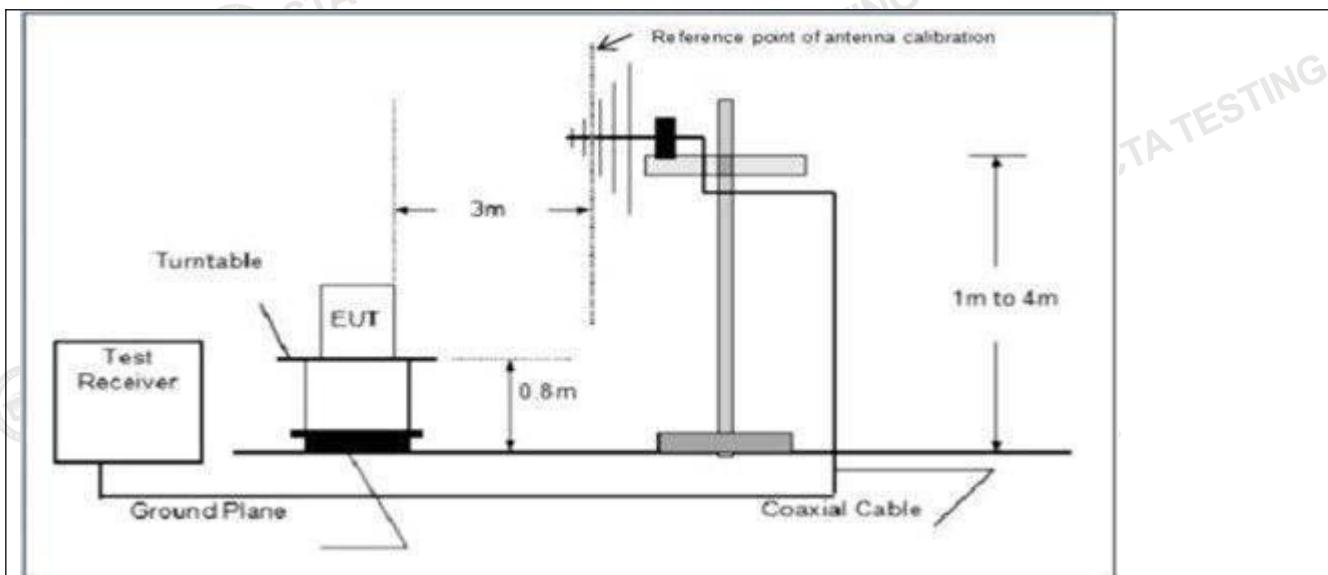
Test Requirement:	47 CFR Part 15.407(b)(1) 47 CFR Part 15.407(b)(2) 47 CFR Part 15.407(b)(3) 47 CFR Part 15.407(b)(4) 47 CFR Part 15.407(b)(10)																																																																								
Test Method:	ANSI C63.10-2013, section 12.7.4, 12.7.5, 12.7.6																																																																								
	<table border="1"> <thead> <tr> <th>MHz</th> <th>MHz</th> <th>MHz</th> <th>GHz</th> </tr> </thead> <tbody> <tr><td>0.090-0.110</td><td>16.42-16.423</td><td>399.9-410</td><td>4.5-5.15</td></tr> <tr><td>10.495-0.505</td><td>16.69475-16.69525</td><td>608-614</td><td>5.35-5.46</td></tr> <tr><td>2.1735-2.1905</td><td>16.80425-16.80475</td><td>960-1240</td><td>7.25-7.75</td></tr> <tr><td>4.125-4.128</td><td>25.5-25.67</td><td>1300-1427</td><td>8.025-8.5</td></tr> <tr><td>4.17725-4.17775</td><td>37.5-38.25</td><td>1435-1626.5</td><td>9.0-9.2</td></tr> <tr><td>4.20725-4.20775</td><td>73-74.6</td><td>1645.5-1646.5</td><td>9.3-9.5</td></tr> <tr><td>6.215-6.218</td><td>74.8-75.2</td><td>1660-1710</td><td>10.6-12.7</td></tr> <tr><td>6.26775-6.26825</td><td>108-121.94</td><td>1718.8-1722.2</td><td>13.25-13.4</td></tr> <tr><td>6.31175-6.31225</td><td>123-138</td><td>2200-2300</td><td>14.47-14.5</td></tr> <tr><td>8.291-8.294</td><td>149.9-150.05</td><td>2310-2390</td><td>15.35-16.2</td></tr> <tr><td>8.362-8.366</td><td>156.52475-156.52525</td><td>2483.5-2500</td><td>17.7-21.4</td></tr> <tr><td>8.37625-8.38675</td><td>156.7-156.9</td><td>2690-2900</td><td>22.01-23.12</td></tr> <tr><td>8.41425-8.41475</td><td>162.0125-167.17</td><td>3260-3267</td><td>23.6-24.0</td></tr> <tr><td>12.29-12.293</td><td>167.72-173.2</td><td>3332-3339</td><td>31.2-31.8</td></tr> <tr><td>12.51975-12.52025</td><td>240-285</td><td>3345.8-3358</td><td>36.43-36.5</td></tr> <tr><td>12.57675-12.57725</td><td>322-335.4</td><td>3600-4400</td><td>(²)</td></tr> <tr><td>13.36-13.41</td><td></td><td></td><td></td></tr> </tbody> </table>	MHz	MHz	MHz	GHz	0.090-0.110	16.42-16.423	399.9-410	4.5-5.15	10.495-0.505	16.69475-16.69525	608-614	5.35-5.46	2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75	4.125-4.128	25.5-25.67	1300-1427	8.025-8.5	4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2	4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5	6.215-6.218	74.8-75.2	1660-1710	10.6-12.7	6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4	6.31175-6.31225	123-138	2200-2300	14.47-14.5	8.291-8.294	149.9-150.05	2310-2390	15.35-16.2	8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4	8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12	8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0	12.29-12.293	167.72-173.2	3332-3339	31.2-31.8	12.51975-12.52025	240-285	3345.8-3358	36.43-36.5	12.57675-12.57725	322-335.4	3600-4400	(²)	13.36-13.41			
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	1 Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.																																																																								
Test Limit:	<p>2 Above 38.6</p> <p>The field strength of emissions appearing within these frequency bands shall not exceed the limits shown in § 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in § 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in § 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in § 15.35 apply to these measurements.</p> <p>Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:</p> <table border="1"> <thead> <tr> <th>Frequency (MHz)</th> <th>Field strength (microvolts/meter)</th> <th>Measurement distance (meters)</th> </tr> </thead> <tbody> <tr><td>0.009-0.490</td><td>2400/F(kHz)</td><td>300</td></tr> <tr><td>0.490-1.705</td><td>24000/F(kHz)</td><td>30</td></tr> <tr><td>1.705-30.0</td><td>30</td><td>30</td></tr> <tr><td>30-88</td><td>100 **</td><td>3</td></tr> <tr><td>88-216</td><td>150 **</td><td>3</td></tr> <tr><td>216-960</td><td>200 **</td><td>3</td></tr> <tr><td>Above 960</td><td>500</td><td>3</td></tr> </tbody> </table>	Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)	0.009-0.490	2400/F(kHz)	300	0.490-1.705	24000/F(kHz)	30	1.705-30.0	30	30	30-88	100 **	3	88-216	150 **	3	216-960	200 **	3	Above 960	500	3																																																
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216-960	200 **	3																																																																							
Above 960	500	3																																																																							

5.11.1 E.U.T. Operation:

Operating Environment:	
Temperature:	22 °C
Humidity:	52 %
Atmospheric Pressure:	1010 mbar
Pre test mode:	1: TX mode IEEE 802.11a: TX mode IEEE 802.11a_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11a modulation type. All data rates has been tested and found the data rate @ 6Mbps is the worst case. Only the data of worst case is recorded in the report.

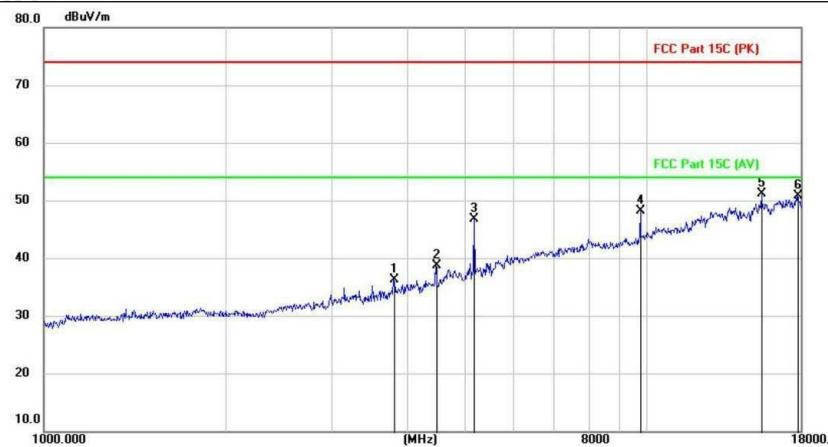
	<p>2: TX mode IEEE 802.11n: TX mode IEEE 802.11n_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11n modulation type. All bandwidth and data rates has been tested and found the data rate @ MCS0 is the worst case. Only the data of worst case is recorded in the report.</p> <p>3: TX mode IEEE802.11ac: TX mode IEEE 802.11ac_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11ac modulation type. All bandwidth and data rates has been tested and found the data rate @ MCS0 is the worst case. Only the data of worst case is recorded in the report.</p>
Final test mode:	<p>1: TX mode IEEE 802.11a TX mode IEEE 802.11a_Keep the EUT connect to AC power line and works in continuously transmitting mode with IEEE 802.11a modulation type. All data rates has been tested and found the data rate @ 6Mbps is the worst case. Only the data of worst case is recorded in the report.</p>

5.11.2 Test Setup Diagram:



5.11.3 Test Data:

Test Mode:1 / Polarization: Horizontal / Band: U-NII 1 / BW: 20 / CH: L



Site: 966 Chamber
Limit: FCC Part 15C (PK)
EUT: Laptop
M/N: AIWO1401A
Mode: 11A-5180
Note:

Polarization: **Horizontal**

Temperature: 25

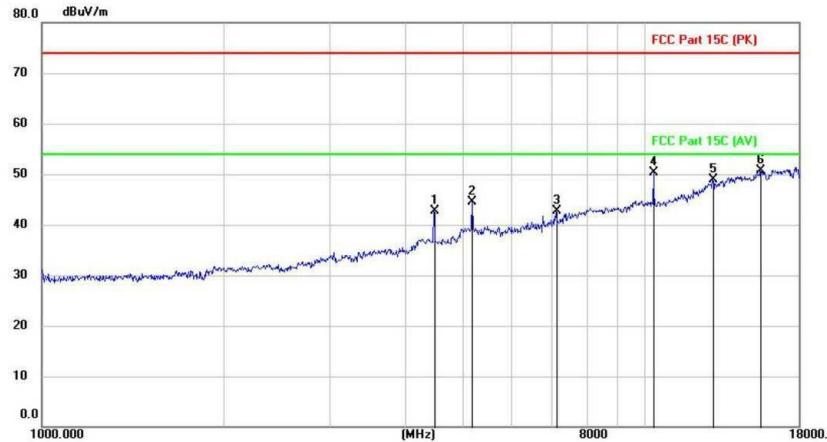
Power: DC 11.4V

Humidity: 55 %

Distance: 3m

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table	Degree	Comment
			Level	Factor	ment						
1		3808.400	45.21	-8.91	36.30	74.00	-37.70	peak			
2		4474.800	45.61	-6.84	38.77	74.00	-35.23	peak			
3		5176.900	52.12	-5.23	46.89	74.00	-27.11	peak			
4		9778.800	44.65	3.59	48.24	74.00	-25.76	peak			
5	*	15529.900	39.11	12.08	51.19	74.00	-22.81	peak			
6		17756.900	37.36	13.51	50.87	74.00	-23.13	peak			

Test Mode:1 / Polarization: Vertical / Band: U-NII 1 / BW: 20 / CH: L



Site: 966 Chamber
Limit: FCC Part 15C (PK)
EUT: Laptop
M/N: AIWO1401A
Mode: 11A-5180
Note:

Polarization: **Vertical**

Temperature: 25

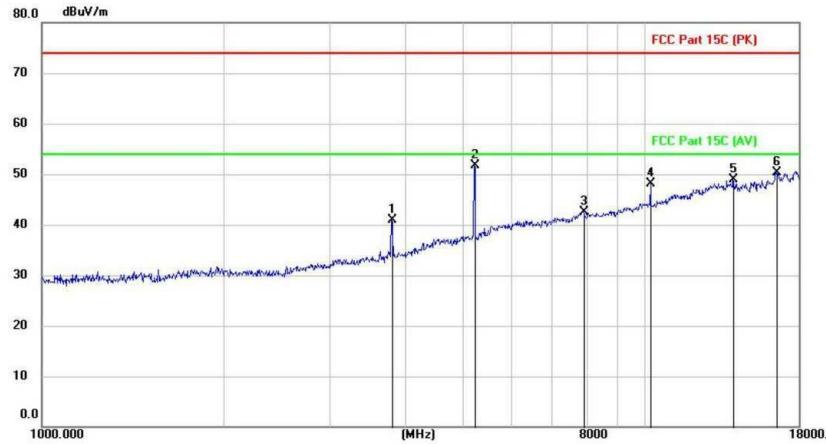
Power: DC 11.4V

Humidity: 55 %

Distance: 3m

No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measure- ment (dBuV/m)	Limit (dBuV/m)	Over (dB)	Antenna Height cm		Table Degree	Comment
								Detector	Table Degree		
1		4474.800	49.48	-6.84	42.64	74.00	-31.36	peak			
2		5176.900	49.73	-5.23	44.50	74.00	-29.50	peak			
3		7125.100	43.06	-0.33	42.73	74.00	-31.27	peak			
4		10355.100	45.72	4.68	50.40	74.00	-23.60	peak			
5		12983.300	38.93	9.90	48.83	74.00	-25.17	peak			
6	*	15541.800	38.52	12.10	50.62	74.00	-23.38	peak			

Test Mode:1 / Polarization: Horizontal / Band: U-NII 1 / BW: 20 / CH: M



Site: 966 Chamber
Limit: FCC Part 15C (PK)
EUT: Laptop
M/N: AIWO1401A
Mode: 11A-5200
Note:

Polarization: **Horizontal**

Temperature: 25

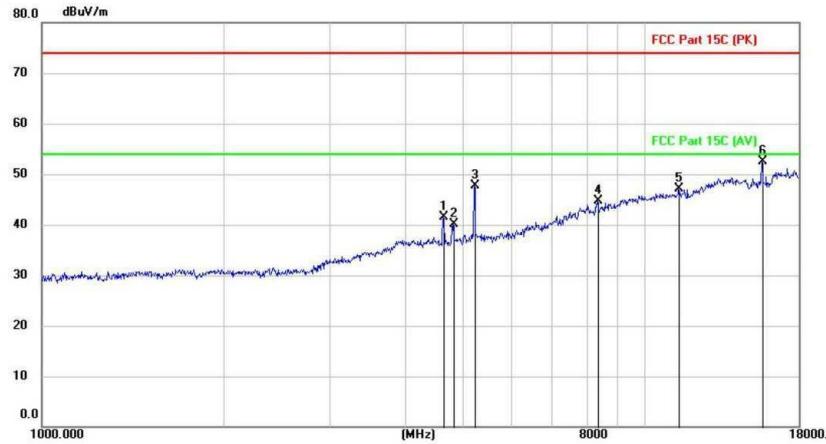
Power: DC 11.4V

Humidity: 55 %

Distance: 3m

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table	Degree	Comment
			Level	Factor	ment						
1		3810.100	49.75	-8.90	40.85	74.00	-33.15	peak			
2	*	5217.700	56.95	-5.19	51.76	74.00	-22.24	peak			
3		7902.000	40.63	1.82	42.45	74.00	-31.55	peak			
4		10227.600	43.59	4.46	48.05	74.00	-25.95	peak			
5		14037.300	37.69	11.18	48.87	74.00	-25.13	peak			
6		16529.500	36.58	13.76	50.34	74.00	-23.66	peak			

Test Mode:1 / Polarization: Vertical / Band: U-NII 1 / BW: 20 / CH: M



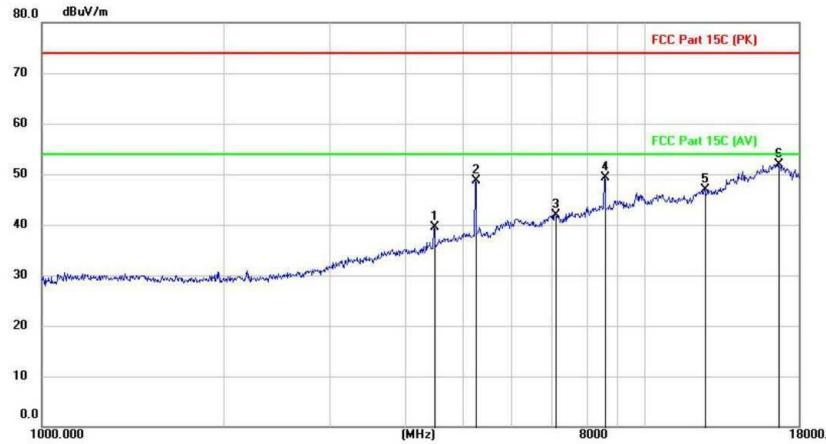
Site: 966 Chamber
Limit: FCC Part 15C (PK)
EUT: Laptop
M/N: AIWO1401A
Mode: 11A-5200
Note:

Polarization: **Vertical**
Power: DC 11.4V
Distance: 3m

Temperature: 25
Humidity: 55 %

No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor	Measure- ment (dBuV/m)	Limit (dBuV/m)	Over (dB)	Antenna Height cm		Table Degree	Comment
								Detector	Table Degree		
1		4638.000	47.87	-6.37	41.50	74.00	-32.50	peak			
2		4809.700	46.04	-5.91	40.13	74.00	-33.87	peak			
3		5221.100	52.85	-5.19	47.66	74.00	-26.34	peak			
4		8352.500	42.73	1.98	44.71	74.00	-29.29	peak			
5		11387.000	40.49	6.60	47.09	74.00	-26.91	peak			
6	*	15667.600	40.35	12.24	52.59	74.00	-21.41	peak			

Test Mode:1 / Polarization: Horizontal / Band: U-NII 1 / BW: 20 / CH: H



Site: 966 Chamber
Limit: FCC Part 15C (PK)
EUT: Laptop
M/N: AIWO1401A
Mode: 11A-5240
Note:

Polarization: **Horizontal**

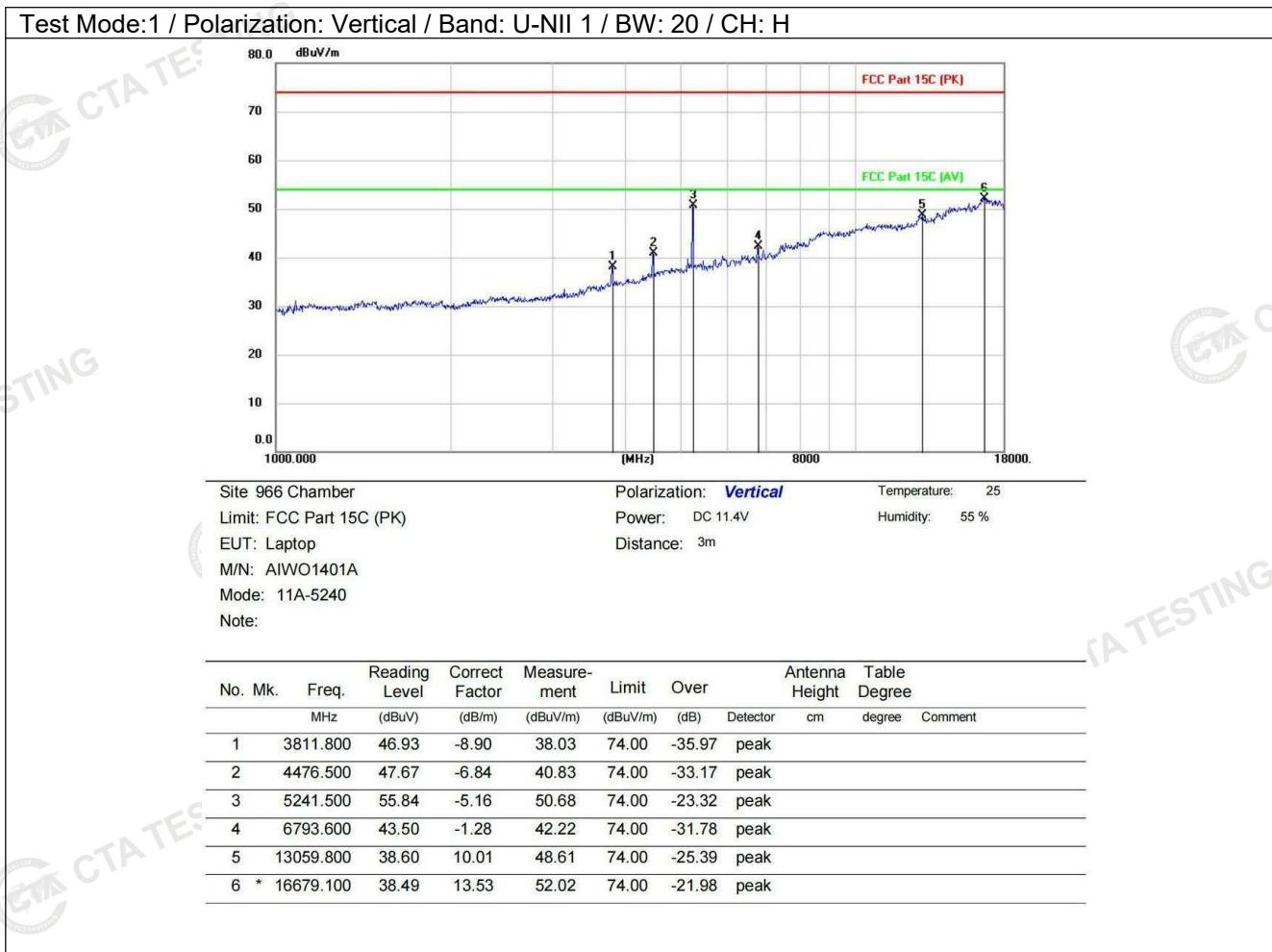
Temperature: 25

Power: DC 11.4V

Humidity: 55 %

Distance: 3m

No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor	Measure- ment (dBuV/m)	Limit (dBuV/m)	Over (dB)	Antenna Height cm		Table Degree	Comment
								Detector	Table Degree		
1		4471.400	46.27	-6.85	39.42	74.00	-34.58	peak			
2		5239.800	53.83	-5.17	48.66	74.00	-25.34	peak			
3		7111.500	42.21	-0.37	41.84	74.00	-32.16	peak			
4		8580.300	47.41	1.93	49.34	74.00	-24.66	peak			
5		12560.000	37.85	9.08	46.93	74.00	-27.07	peak			
6	*	16672.300	38.33	13.54	51.87	74.00	-22.13	peak			



Note:

1.18GHz-40GHz is the background of the site, there is no radiated spurious.

6. Test Setup Photos



7. EUT Constructional Details (EUT Photos)

External Photographs

Photo 1

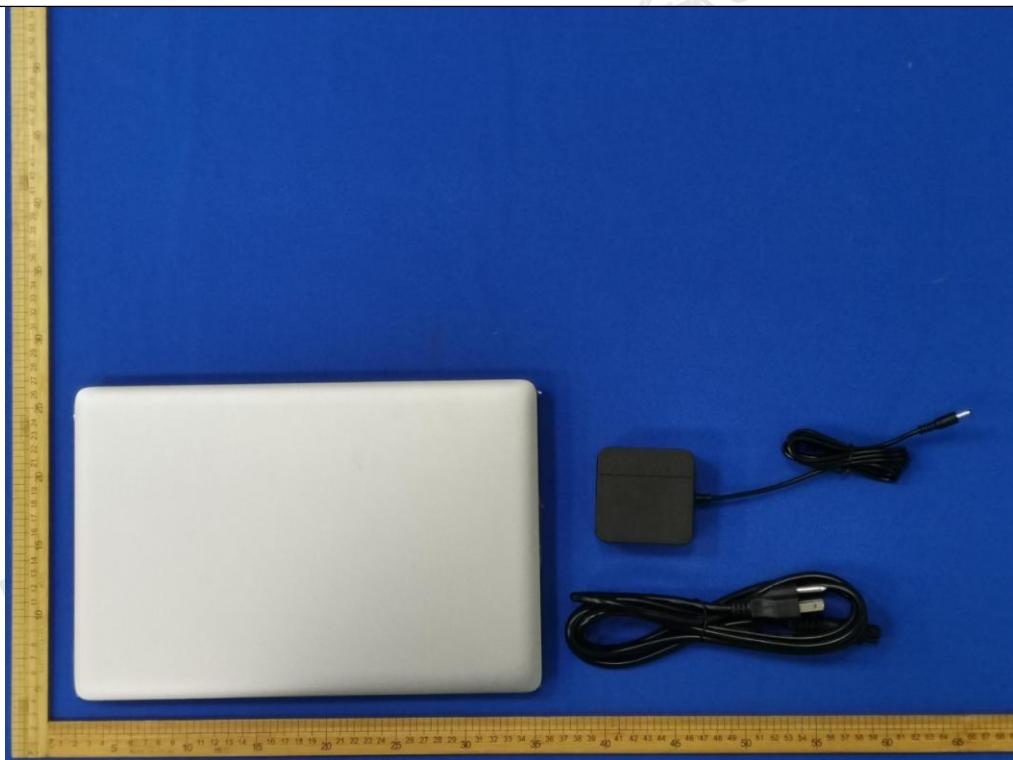


Photo 2



Photo 3



Photo 4



Photo 5

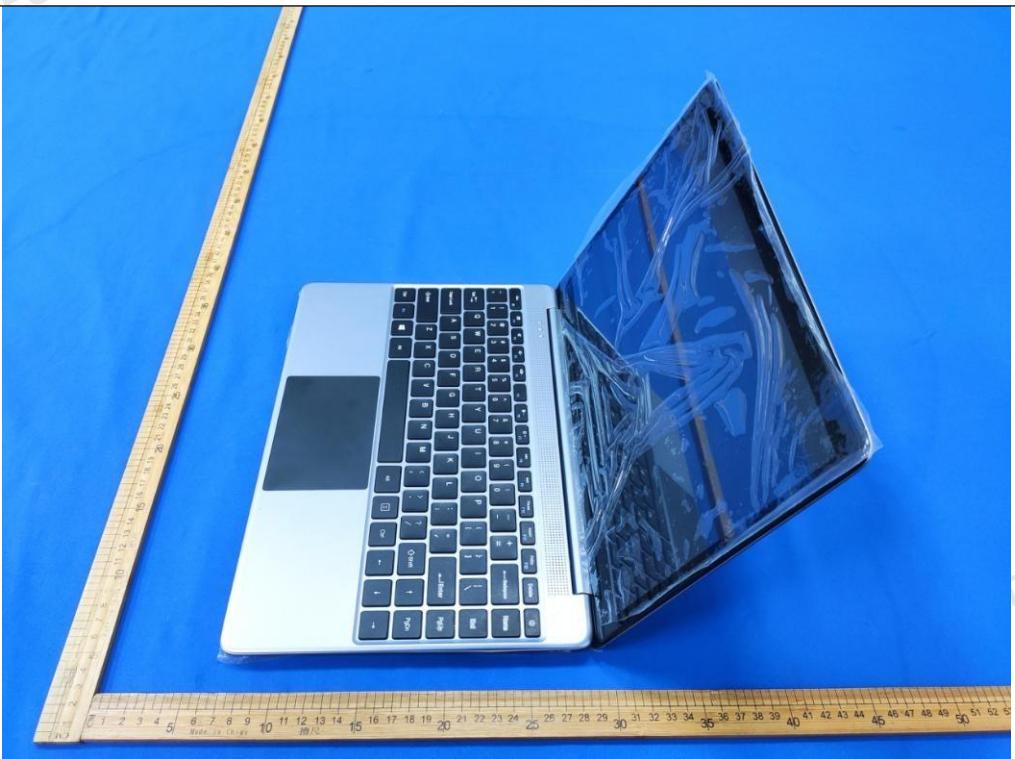


Photo 6

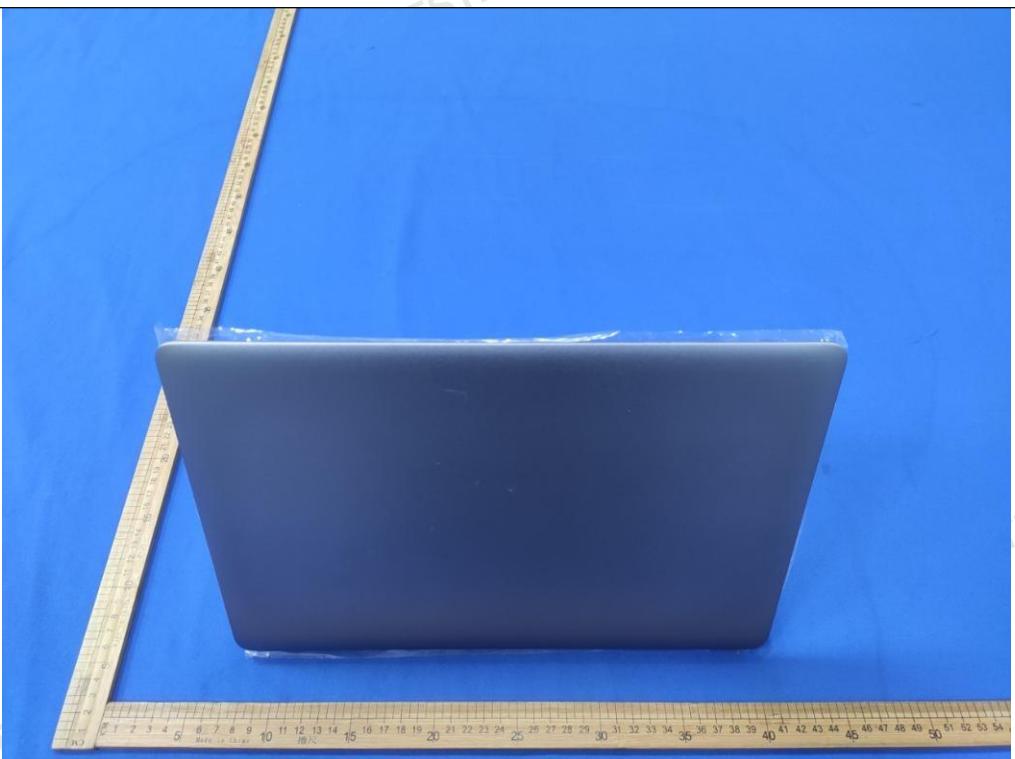


Photo 7



Photo 8

