

FCC RF Test Report

APPLICANT : PAX Technology Limited
EQUIPMENT : POS Terminal
BRAND NAME : PAX
MODEL NAME : A35
FCC ID : V5PA35DBW
STANDARD : FCC Part 15 Subpart E §15.407
CLASSIFICATION : (NII) Unlicensed National Information Infrastructure
TEST DATE(S) : Apr. 02, 2021 ~ May 27, 2021

We, Sporton International (Shenzhen) Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International (Shenzhen) Inc., the test report shall not be reproduced except in full.



Reviewed by: Derreck Chen / Supervisor



Approved by: Eric Shih / Manager



Sporton International (ShenZhen) Inc.

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People's Republic of China**



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR132310E	Rev. 01	Initial issue of report	Jul. 27, 2021

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	2.1049 & 15.403(i)	26dB & 99% Bandwidth	-	N/A	Report only
3.2	15.407(a)	Maximum Conducted Output Power	≤ 24 dBm	Pass	-
3.3	15.407(a)	Power Spectral Density	≤ 11 dBm	Pass	-
3.4	15.407(b)	Unwanted Emissions	15.407(b) & 15.209(a)	Pass	Under limit 3.15 dB at 5350.080 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 17.82 dB at 0.370 MHz
3.6	15.203 & 15.407(a)	Antenna Requirement	N/A	N/A	-

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.



1 General Description

1.1 Applicant

PAX Technology Limited

Room 2416, 24/F., Sun Hung Kai Centre, 30 Harbour Road, Wanchai, Hong Kong

1.2 Manufacturer

PAX Computer Technology (Shenzhen) Co., Ltd.

4/F, No.3 Building, Software Park, Second Central Science-Tech Road, High-Tech industrial Park, Shenzhen, Guangdong, P.R.C.

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	POS Terminal
Brand Name	PAX
Model Name	A35
FCC ID	V5PA35DBW
HW Version	N/A
SW Version	N/A
EUT Stage	Production Unit

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Frequency Range	5180 MHz ~ 5240 MHz 5260 MHz ~ 5320 MHz 5500 MHz ~ 5700 MHz
Maximum Output Power to Antenna	<5180 MHz ~ 5240 MHz> 802.11a : 15.72 dBm / 0.0373 W 802.11n HT20 : 15.65 dBm / 0.0367 W 802.11n HT40 : 15.61 dBm / 0.0364 W 802.11ac VHT20 : 15.63 dBm / 0.0366 W 802.11ac VHT40 : 15.53 dBm / 0.0357 W 802.11ac VHT80 : 15.25 dBm / 0.0335 W <5260 MHz ~ 5320 MHz> 802.11a : 16.16 dBm / 0.0413 W 802.11n HT20 : 16.03 dBm / 0.0401 W 802.11n HT40 : 15.92 dBm / 0.0391 W 802.11ac VHT20 : 16.01 dBm / 0.0399 W 802.11ac VHT40 : 15.89 dBm / 0.0388 W 802.11ac VHT80 : 15.70 dBm / 0.0372 W <5500 MHz ~ 5700 MHz > 802.11a : 16.78 dBm / 0.0476 W 802.11n HT20 : 16.55 dBm / 0.0452 W

	802.11n HT40 : 16.55 dBm / 0.0452 W 802.11ac VHT20 : 16.52 dBm / 0.0449 W 802.11ac VHT40 : 16.47 dBm / 0.0444 W 802.11ac VHT80 : 15.12 dBm / 0.0325 W
99% Occupied Bandwidth	<5180 MHz ~ 5240 MHz> 802.11a : 17.08 MHz 802.11n HT20 : 18.03 MHz 802.11n HT40 : 36.56 MHz 802.11ac VHT80 : 76.60 MHz <5260 MHz ~ 5320 MHz> 802.11a : 17.08 MHz 802.11n HT20 : 18.03 MHz 802.11n HT40 : 36.56 MHz 802.11ac VHT80 : 76.72 MHz <5500 MHz ~ 5700 MHz > 802.11a : 17.03 MHz 802.11n HT20 : 18.08 MHz 802.11n HT40 : 36.46 MHz 802.11ac VHT80 : 76.72 MHz
Antenna Type / Gain	<5150 MHz ~ 5250 MHz> FPC Antenna with gain 0 dBi <5250 MHz ~ 5350 MHz> FPC Antenna with gain 0 dBi <5470 MHz ~ 5725 MHz> FPC Antenna with gain 0 dBi
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)

Note:

1. WLAN operation in 5600 MHz ~ 5650 MHz is notched.
2. Note: For 802.11n HT20 / ac VHT20 and 802.11n HT40 / ac VHT40 mode, the whole testing have assessed only 802.11n HT20/HT40 by referring to their maximum conducted power.

1.5 Modification of EUT

No modifications are made to the EUT during all test items.

1.6 Testing Location

Sporton International (Shenzhen) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Test Firm	Sporton International (Shenzhen) Inc.
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595



Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	CO01-SZ TH01-SZ	CN1256	421272
Test Firm	Sporton International (Shenzhen) Inc.		
Test Site Location	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City Guangdong Province China 518103 TEL: +86-755-33202398		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH03-SZ	CN1256	421272

1.7 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH03-SZ	AUDIX	E3	6.2009-8-24
2.	CO01-SZ	AUDIX	E3	6.120613b

1.8 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ 47 CFR Part 15 Subpart E
- ♦ FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- ♦ ANSI C63.10-2013

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Y plane) were recorded in this report.
- b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5150-5250 MHz U-NII-1	36	5180	44	5220
	38*	5190	46*	5230
	40	5200	48	5240
	42 [#]	5210		
Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5250-5350 MHz U-NII-2A	52	5260	60	5300
	54*	5270	62*	5310
	56	5280	64	5320
	58 [#]	5290		
Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5470-5725 MHz U-NII-2C	100	5500	112	5560
	102*	5510	116	5580
	104	5520	132	5660
	106 [#]	5530	134*	5670
	108	5540	136	5680
	110*	5550	140	5700

Note:

1. The above Frequency and Channel in "*" were 802.11n HT40 and 802.11ac VHT40.
2. The above Frequency and Channel in "[#]" were 802.11ac VHT80.

2.2 Test Mode

Final test modes are considering the modulation and worse data rates as below table.

Modulation	Data Rate
802.11a	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0
802.11ac VHT80	MCS0

Test Cases	
AC Conducted Emission	Mode 1 : Bluetooth Link + 5G WLAN Link + USB load with Notebook + RS-232 Cable load with Notebook + RJ-45(LAN) load with AP + Earphone + USB Cable (Powered by Adapter)
Remark: For Radiated Test Cases, The tests were performance with Adapter and Earphone.	

Ch. #		U-NII-1 : 5150-5250 MHz	U-NII-2A : 5250-5350 MHz	U-NII-2C : 5470-5725MHz
		802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

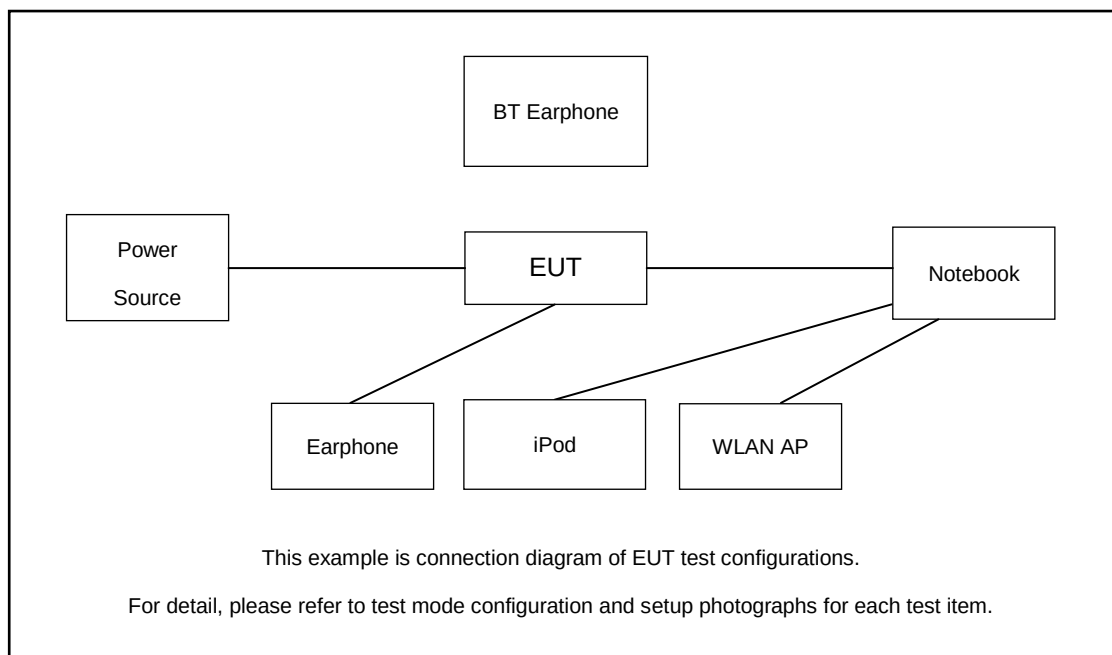
Ch. #		U-NII-1 : 5150-5250 MHz	U-NII-2A : 5250-5350 MHz	U-NII-2C : 5470-5725MHz
		802.11n HT20	802.11n HT20	802.11n HT20
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

Ch. #		U-NII-1 : 5150-5250 MHz	U-NII-2A : 5250-5350 MHz	U-NII-2C : 5470-5725MHz
		802.11n HT40	802.11n HT40	802.11n HT40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	134

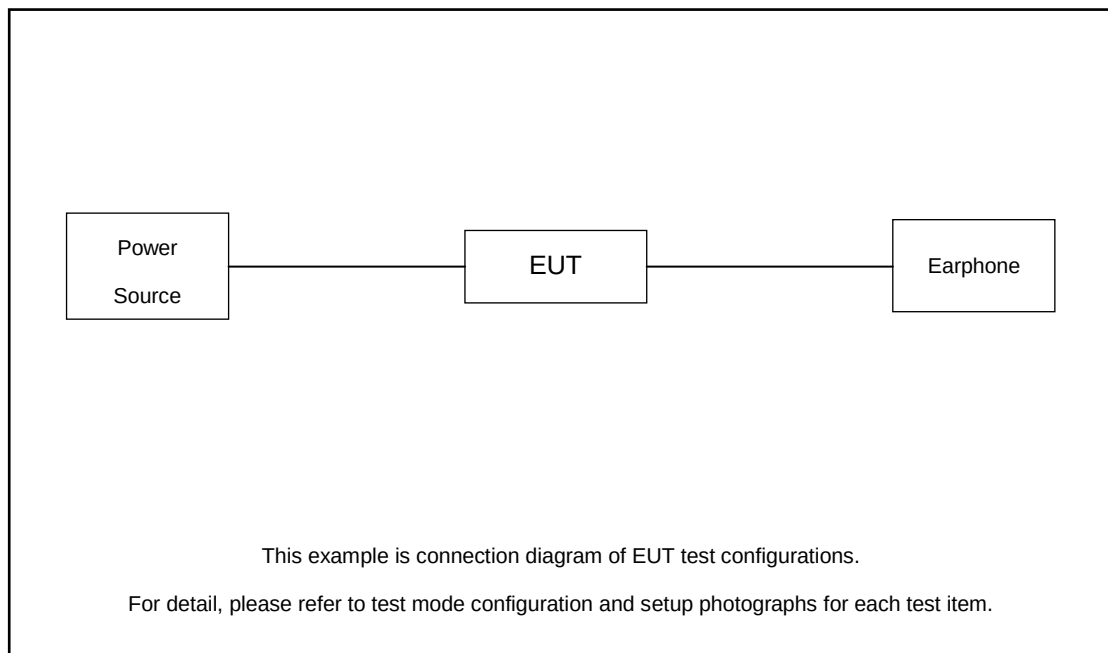
Ch. #		U-NII-1 : 5150-5250 MHz	U-NII-2A : 5250-5350 MHz	U-NII-2C : 5470-5725MHz
		802.11ac VHT80	802.11ac VHT80	802.11ac VHT80
L	Low	-	-	106
M	Middle	42	58	-
H	High	-	-	-

2.3 Connection Diagram of Test System

For Conducted Emission:



For Radiated Emission:



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	WLAN AP	Dlink	DIR-820L	KA2IR820LA1	N/A	Unshielded, 1.8m
2.	Notebook	Lenovo	E540	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
3.	Bluetooth Earphone	Samsung	EO-MG900	PYAHS-107W	N/A	N/A
4.	iPod	Apple	MC69029/A	N/A	N/A	N/A
5.	Earphone	N/A	N/A	N/A	Unshielded,1.2m	N/A

2.5 EUT Operation Test Setup

For WLAN RF test items, an engineering test program was provided and enabled to make EUT continuous transmit/receive.

For AC power line conducted emissions, the EUT was set to connect with the WLAN AP under large package sizes transmission.



2.6 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example :

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 2.8 dB and 20dB attenuator.

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)} \\ &= 2.8 + 20 = 22.8 \text{ (dB)}\end{aligned}$$

3 Test Result

3.1 26dB & 99% Occupied Bandwidth Measurement

3.1.1 Description of 26dB & 99% Occupied Bandwidth

This section is for reporting purpose only.

There is no restriction limits for bandwidth.

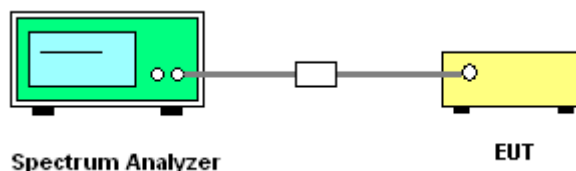
3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.1.3 Test Procedures

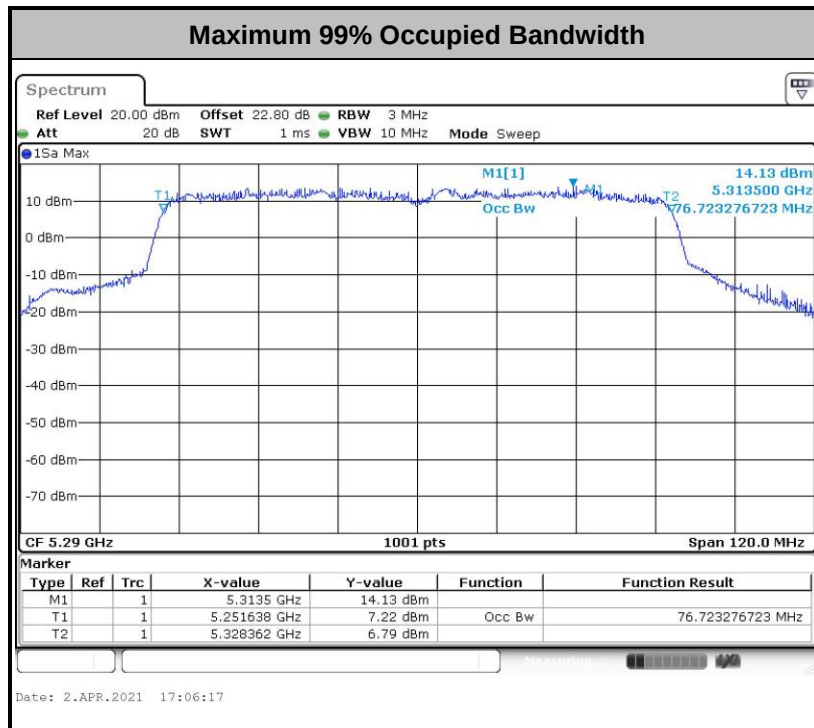
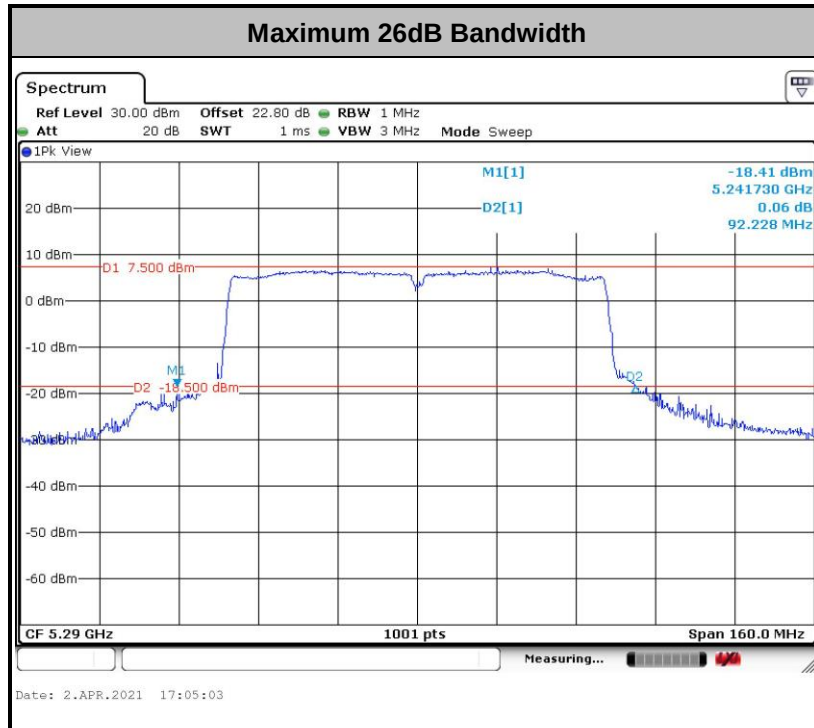
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
7. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1MHz and set the Video bandwidth (VBW) $\geq 3 * RBW$.
8. Measure and record the results in the test report.

3.1.4 Test Setup



3.1.5 Test Result of 26dB & 99% Occupied Bandwidth

Please refer to Appendix A.



Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

<FCC 14-30 CFR 15.407>

For mobile and portable 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.

For the 5.25–5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 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 peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Note that U-NII-2 band, devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

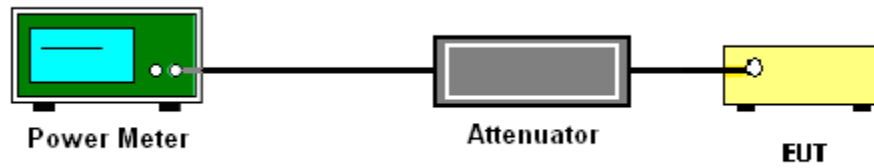
3.2.3 Test Procedures

The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Method PM (Measurement using an RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit continuously with a consistent duty cycle at its maximum power control level.
3. Measure the average power of the transmitter, and the average power is corrected with duty factor, $10 \log(1/x)$, where x is the duty cycle.

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.



3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

<FCC 14-30 CFR 15.407>

For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum power spectral density shall not exceed 11dBm in any 1 megahertz band.

For the 5.25–5.725 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 peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.3.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.3.3 Test Procedures

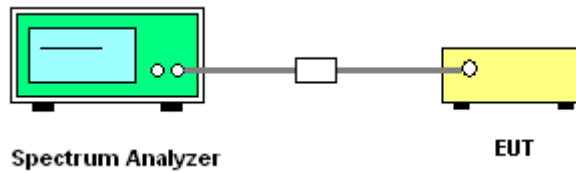
The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
Section F) Maximum power spectral density.

Method SA-2

(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

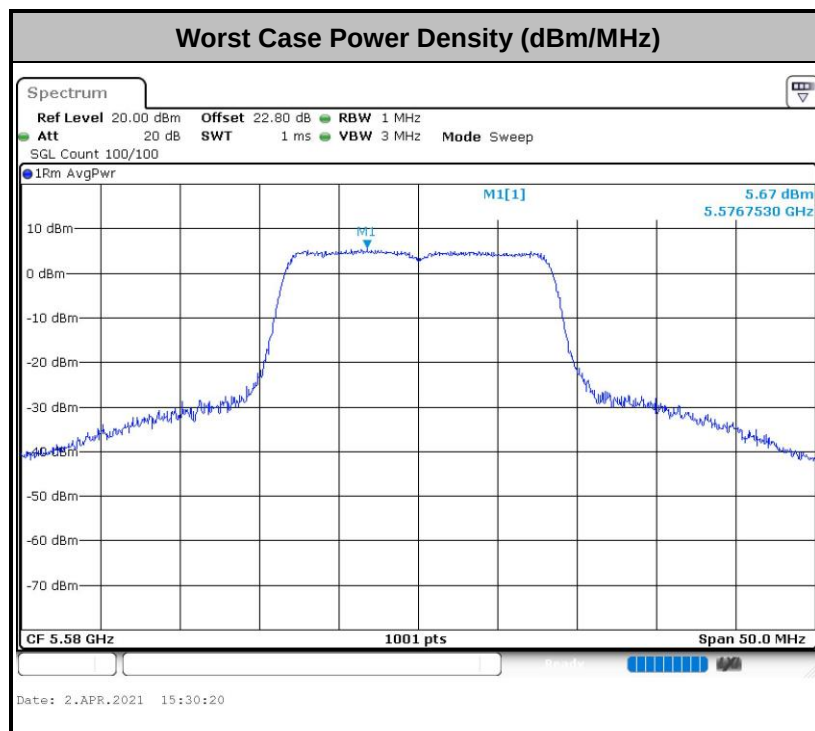
- Measure the duty cycle.
 - Set span to encompass the entire emission bandwidth (EBW) of the signal.
 - Set RBW = 1 MHz.
 - Set VBW $\geq$ 3 MHz.
 - Number of points in sweep $\geq$ 2 Span / RBW.
 - Sweep time = auto.
 - Detector = RMS
 - Trace average at least 100 traces in power averaging mode.
 - Add $10 \log(1/x)$, where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add $10 \log(1/0.25) = 6$ dB if the duty cycle is 25 percent.
-
1. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
 2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.



Note: Average Power Density (dB) = Measured value+ Duty Factor

3.4 Unwanted Emissions Measurement

This section is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement.

3.4.1 Limit of Unwanted Emissions

- (1) For transmitters operating in the 5150-5250 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of -27dBm/MHz.

For transmitters operating in the 5250-5350 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5250-5350 MHz band that generate emissions in the 5150-5250 MHz band must meet all applicable technical requirements for operation in the 5150-5250 MHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5150-5250 MHz band.

For transmitters operating in the 5470-5600 MHz and 5650-5725MHz band: all emissions outside of the 5470-5600 MHz and 5650-5725MHz band shall not exceed an EIRP of -27 dBm/MHz.

- (2) Unwanted spurious emissions fallen in restricted bands shall comply with the general field strength limits as below 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

EIRP (dBm)	Field Strength at 3m (dBμV/m)
- 27	68.3

Note: The following formula is used to convert the EIRP to field strength.

$$\text{EIRP} = E_{\text{Meas}} + 20\log(d_{\text{Meas}}) - 104.7$$

where

EIRP is the equivalent isotropically radiated power, in dBm

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

d_{Meas} is the measurement distance, in m

3.4.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

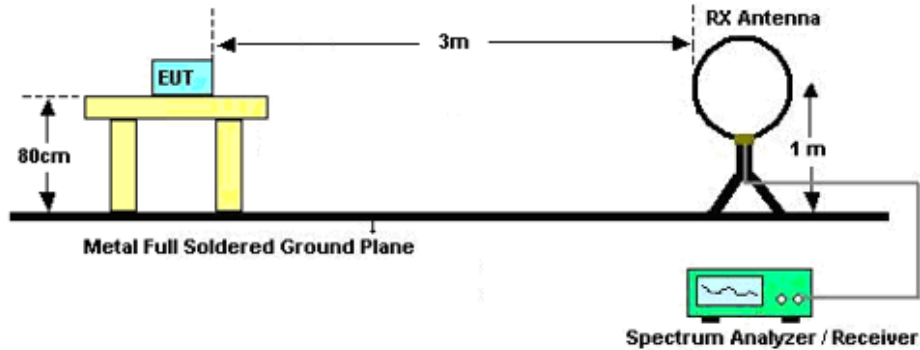


3.4.3 Test Procedures

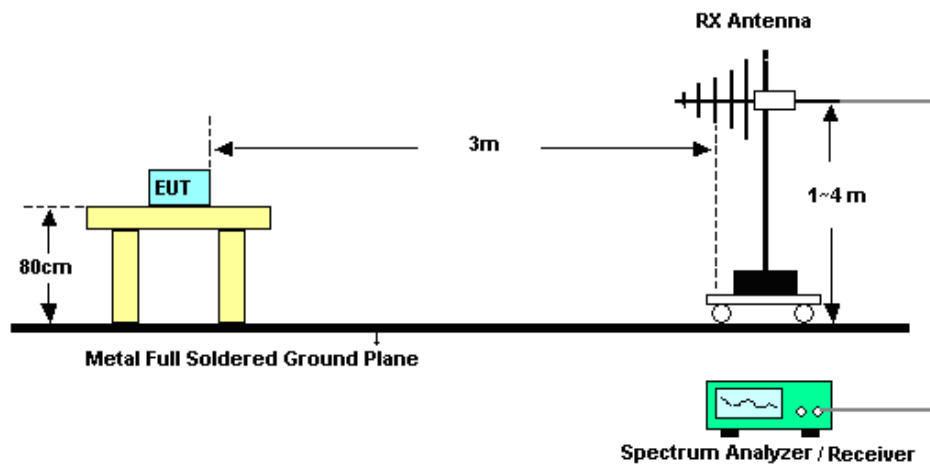
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
Section G) Unwanted emissions measurement.
 - (1) Procedure for Unwanted Emissions Measurements Below 1000MHz
 - RBW = 120 kHz
 - VBW = 300 kHz
 - Detector = Peak
 - Trace mode = max hold
 - (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz
 - RBW = 1 MHz
 - VBW $\geq$ 3 MHz
 - Detector = Peak
 - Sweep time = auto
 - Trace mode = max hold
 - (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz
 - RBW = 1 MHz
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW $\geq$ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than peak limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.4.4 Test Setup

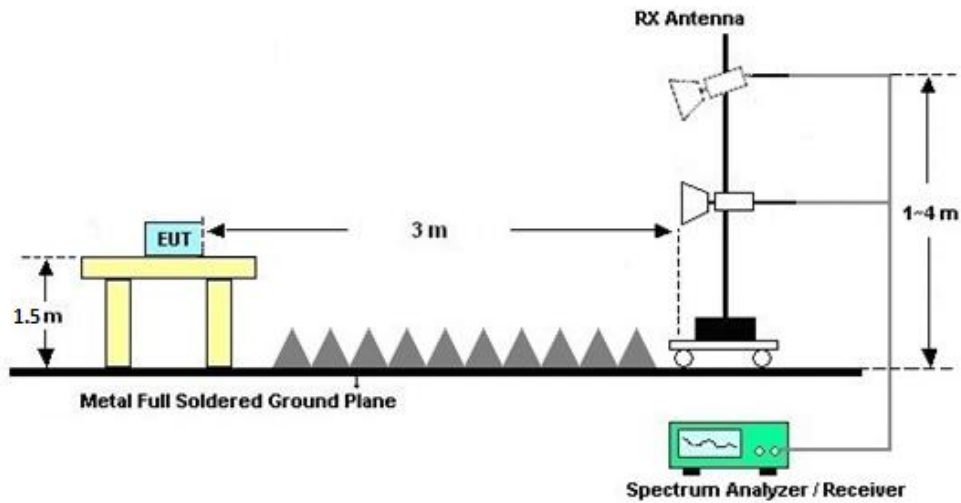
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.4.5 Test Results of Radiated Spurious Emissions (9 kHz ~ 30 MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

3.4.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C.

3.4.7 Duty Cycle

Please refer to Appendix D.

3.4.8 Test Result of Radiated Spurious Emissions (30MHz ~ 10th Harmonic or 40GHz, whichever is lower)

Please refer to Appendix C.

3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of emission (MHz)	Conducted limit (dBμV)	
	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.

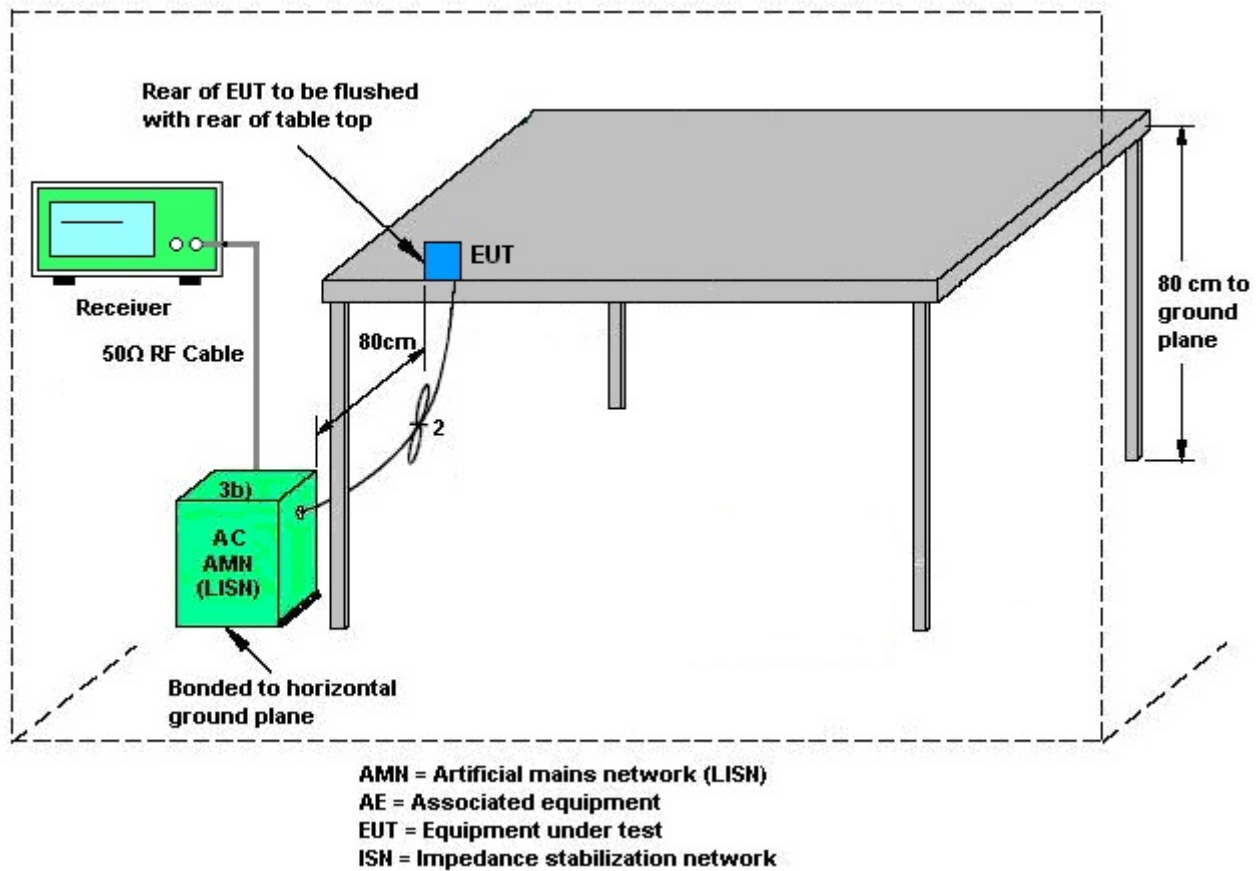
3.5.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.5.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

3.5.4 Test Setup



3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.



3.6 Antenna Requirements

3.6.1 Standard Applicable

If transmitting antenna directional gain is greater than 6 dBi, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.6.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.6.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 17, 2020	Apr. 02, 2021	Apr. 16, 2021	Conducted (TH01-SZ)
Pulse Power Sensor	Anritsu	MA2411B	1207253	30MHz~40GHz	Dec. 25, 2020	Apr. 02, 2021	Dec. 24, 2021	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1218010	50MHz Bandwidth	Dec. 25, 2020	Apr. 02, 2021	Dec. 24, 2021	Conducted (TH01-SZ)
EMI Test Receiver&SA	KEYSIGHT	N9038A	MY54450083	20Hz~8.4GHz	Apr. 07, 2021	May 27, 2021	Apr. 06, 2022	Radiation (03CH03-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150246	10Hz~44GHz;	Apr. 07, 2021	May 27, 2021	Apr. 06, 2022	Radiation (03CH03-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jun. 22, 2020	May 27, 2021	Jun. 21, 2022	Radiation (03CH03-SZ)
Bilog Antenna	TeseQ	CBL6112D	35408	30MHz~2GHz	Jun. 22, 2020	May 27, 2021	Jun. 21, 2022	Radiation (03CH03-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1355	1GHz~18GHz	Apr. 25, 2021	May 27, 2021	Apr. 24, 2022	Radiation (03CH03-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 21, 2020	May 27, 2021	Jul. 20, 2021	Radiation (03CH03-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18GHz~40GHz	Apr. 11, 2021	May 27, 2021	Apr. 10, 2022	Radiation (03CH03-SZ)
Amplifier	Burgeon	BPA-530	102211	0.01Hz~3000MHz	Oct. 16, 2020	May 27, 2021	Oct. 15, 2021	Radiation (03CH03-SZ)
HF Amplifier	MITEQ	AMF-7D-00101800-30-10P-R	1943528	1GHz~18GHz	Oct. 16, 2020	May 27, 2021	Oct. 15, 2021	Radiation (03CH03-SZ)
Amplifier	Agilent Technologies	83017A	MY39501302	500MHz~26.5GHz	Dec. 30, 2020	May 27, 2021	Dec. 29, 2021	Radiation (03CH03-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	NCR	May 27, 2021	NCR	Radiation (03CH03-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	May 27, 2021	NCR	Radiation (03CH03-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	May 27, 2021	NCR	Radiation (03CH03-SZ)
EMI Receiver	R&S	ESR7	101630	9kHz~7GHz;	Mar. 08, 2021	Apr. 02, 2021	Mar. 07, 2022	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2 LISN	00103912	9kHz~30MHz	Dec. 25, 2020	Apr. 02, 2021	Dec. 24, 2021	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	EMCO	3816/2SH	00103892	9kHz~30MHz	Oct. 15, 2020	Apr. 02, 2021	Oct. 14, 2021	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000891	100Vac~250Vac	Jul. 21, 2020	Apr. 02, 2021	Jul. 20, 2021	Conduction (CO01-SZ)

NCR: No Calibration Required

5 Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.10-2013. 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.

Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.2dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.0dB
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.9dB
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.0dB
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----- THE END -----



Appendix A. Conducted Test Results

Test Engineer:	Chen Hong	Temperature:	21~25	°C
Test Date:	2021/4/2	Relative Humidity:	51~54	%

TEST RESULTS DATA
26dB and 99% OBW

Band I										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)	IC 99% Bandwidth Power Limit (dBm)	IC 99% Bandwidth EIRP Limit (dBm)		
11a	6Mbps	1	36	5180	16.98	34.17	-	22.30		
11a	6Mbps	1	44	5220	17.08	33.57	-	22.33		
11a	6Mbps	1	48	5240	17.03	33.77	-	22.31		
HT20	MCS0	1	36	5180	17.93	40.86	-	22.54		
HT20	MCS0	1	44	5220	18.03	41.21	-	22.56		
HT20	MCS0	1	48	5240	18.03	41.36	-	22.56		
HT40	MCS0	1	38	5190	36.56	51.34	-	23.01		
HT40	MCS0	1	46	5230	36.36	53.77	-	23.01		
VHT80	MCS0	1	42	5210	76.60	86.95	-	23.01		

TEST RESULTS DATA
Average Power Table

FCC Band I										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)		Pass/Fail
11a	6Mbps	1	36	5180	0.50	15.72	24.00	0.00		Pass
11a	6Mbps	1	44	5220	0.50	15.28	24.00	0.00		Pass
11a	6Mbps	1	48	5240	0.50	15.20	24.00	0.00		Pass
HT20	MCS0	1	36	5180	0.50	15.65	24.00	0.00		Pass
HT20	MCS0	1	44	5220	0.50	15.26	24.00	0.00		Pass
HT20	MCS0	1	48	5240	0.50	15.13	24.00	0.00		Pass
HT40	MCS0	1	38	5190	0.94	15.61	24.00	0.00		Pass
HT40	MCS0	1	46	5230	0.94	15.17	24.00	0.00		Pass
VHT20	MCS0	1	36	5180	0.49	15.63	24.00	0.00		Pass
VHT20	MCS0	1	44	5220	0.49	15.21	24.00	0.00		Pass
VHT20	MCS0	1	48	5240	0.49	15.07	24.00	0.00		Pass
VHT40	MCS0	1	38	5190	0.93	15.53	24.00	0.00		Pass
VHT40	MCS0	1	46	5230	0.93	15.13	24.00	0.00		Pass
VHT80	MCS0	1	42	5210	1.70	15.25	24.00	0.00		Pass

TEST RESULTS DATA
Power Spectral Density

FCC Band I										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm/MHz)	DG (dBi)	-	Pass/Fail
11a	6Mbps	1	36	5180	0.50	4.79	11.00	0.00		Pass
11a	6Mbps	1	44	5220	0.50	4.19	11.00	0.00		Pass
11a	6Mbps	1	48	5240	0.50	4.34	11.00	0.00		Pass
HT20	MCS0	1	36	5180	0.50	4.05	11.00	0.00		Pass
HT20	MCS0	1	44	5220	0.50	3.68	11.00	0.00		Pass
HT20	MCS0	1	48	5240	0.50	3.52	11.00	0.00		Pass
HT40	MCS0	1	38	5190	0.94	1.02	11.00	0.00		Pass
HT40	MCS0	1	46	5230	0.94	0.39	11.00	0.00		Pass
VHT80	MCS0	1	42	5210	1.70	-1.82	11.00	0.00		Pass

TEST RESULTS DATA
26dB and 99% OBW

Band II										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)	IC 99% Bandwidth Power Limit (dBm)	IC 99% Bandwidth EIRP Limit (dBm)	FCC 26dB Bandwidth Power Limit (dBm)	Note
11a	6M bps	1	52	5260	16.93	33.62	23.29	29.29	23.98	
11a	6M bps	1	60	5300	17.08	32.82	23.33	29.33	23.98	
11a	6M bps	1	64	5320	16.98	34.12	23.30	29.30	23.98	
HT20	MCS 0	1	52	5260	17.93	41.36	23.54	29.54	23.98	
HT20	MCS 0	1	60	5300	18.03	40.36	23.56	29.56	23.98	
HT20	MCS 0	1	64	5320	17.93	39.96	23.54	29.54	23.98	
HT40	MCS 0	1	54	5270	36.56	55.20	23.98	30.00	23.98	
HT40	MCS 0	1	62	5310	36.46	51.70	23.98	30.00	23.98	
VHT80	MCS 0	1	58	5290	76.72	92.23	23.98	30.00	23.98	

TEST RESULTS DATA
Average Power Table

FCC Band II										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)	EIRP Power Limit (dBm)	Pass/Fail
11a	6M bps	1	52	5260	0.50	16.16	23.98	0.00	26.99	Pass
11a	6M bps	1	60	5300	0.50	15.86	23.98	0.00	26.99	Pass
11a	6M bps	1	64	5320	0.50	15.82	23.98	0.00	26.99	Pass
HT20	MCS 0	1	52	5260	0.50	16.03	23.98	0.00	26.99	Pass
HT20	MCS 0	1	60	5300	0.50	15.84	23.98	0.00	26.99	Pass
HT20	MCS 0	1	64	5320	0.50	15.65	23.98	0.00	26.99	Pass
HT40	MCS 0	1	54	5270	0.94	15.92	23.98	0.00	26.99	Pass
HT40	MCS 0	1	62	5310	0.94	15.15	23.98	0.00	26.99	Pass
VHT20	MCS 0	1	52	5260	0.49	16.01	23.98	0.00	26.99	Pass
VHT20	MCS 0	1	60	5300	0.49	15.80	23.98	0.00	26.99	Pass
VHT20	MCS 0	1	64	5320	0.49	15.63	23.98	0.00	26.99	Pass
VHT40	MCS 0	1	54	5270	0.93	15.89	23.98	0.00	26.99	Pass
VHT40	MCS 0	1	62	5310	0.93	15.61	23.98	0.00	26.99	Pass
VHT80	MCS 0	1	58	5290	1.70	15.70	23.98	0.00	26.99	Pass

TEST RESULTS DATA
Power Spectral Density

Band II										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm/MHz)	DG (dBi)		Pass/Fail
11a	6M bps	1	52	5260	0.50	5.07	11.00	0.00		Pass
11a	6M bps	1	60	5300	0.50	4.91	11.00	0.00		Pass
11a	6M bps	1	64	5320	0.50	4.95	11.00	0.00		Pass
HT20	MCS 0	1	52	5260	0.50	4.43	11.00	0.00		Pass
HT20	MCS 0	1	60	5300	0.50	4.15	11.00	0.00		Pass
HT20	MCS 0	1	64	5320	0.50	4.00	11.00	0.00		Pass
HT40	MCS 0	1	54	5270	0.94	1.58	11.00	0.00		Pass
HT40	MCS 0	1	62	5310	0.94	1.33	11.00	0.00		Pass
VHT80	MCS 0	1	58	5290	1.70	-1.30	11.00	0.00		Pass

TEST RESULTS DATA
26dB and 99% OBW

Band III										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)	IC 99% Bandwidth Power Limit (dBm)	IC 99% Bandwidth EIRP Limit (dBm)	FCC 26dB Bandwidth Power Limit (dBm)	Note
11a	6M bps	1	100	5500	17.03	34.47	23.31	29.31	23.98	
11a	6M bps	1	116	5580	17.03	35.02	23.31	29.31	23.98	
11a	6M bps	1	140	5700	17.03	33.92	23.31	29.31	23.98	
HT20	MCS 0	1	100	5500	18.08	40.66	23.57	29.57	23.98	
HT20	MCS 0	1	116	5580	17.98	40.26	23.55	29.55	23.98	
HT20	MCS 0	1	140	5700	17.93	40.11	23.54	29.54	23.98	
HT40	MCS 0	1	102	5510	36.36	57.63	23.98	30.00	23.98	
HT40	MCS 0	1	110	5550	36.36	48.10	23.98	30.00	23.98	
HT40	MCS 0	1	134	5670	36.46	52.15	23.98	30.00	23.98	
VHT80	MCS 0	1	106	5530	76.72	88.87	23.98	30.00	23.98	

TEST RESULTS DATA
Average Power Table

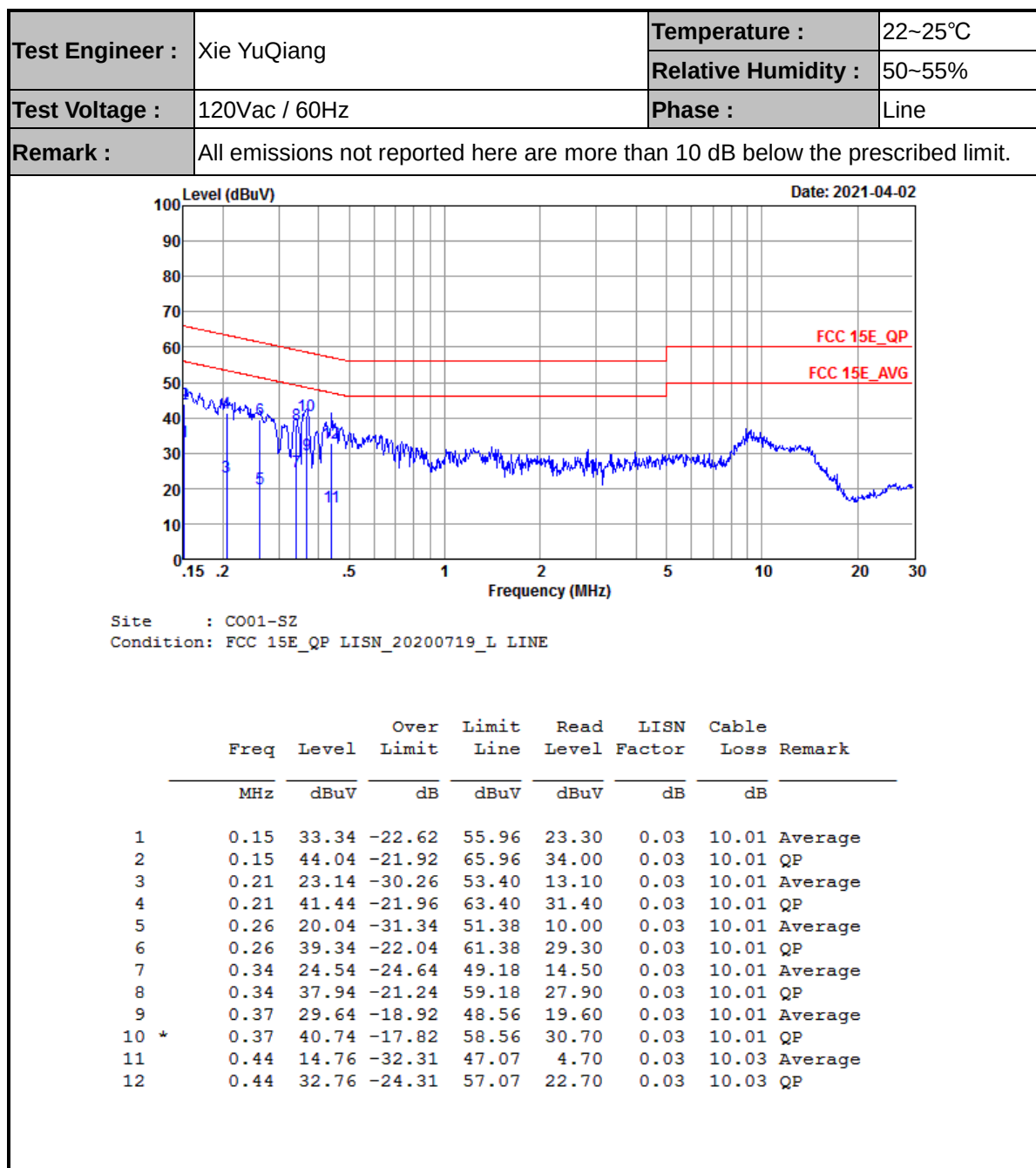
FCC Band III										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)	EIRP Power Limit (dBm)	Pass/Fail
11a	6M bps	1	100	5500	0.50	16.67	23.98	0.00	26.99	Pass
11a	6M bps	1	116	5580	0.50	16.78	23.98	0.00	26.99	Pass
11a	6M bps	1	140	5700	0.50	16.02	23.98	0.00	26.99	Pass
HT20	MCS 0	1	100	5500	0.50	16.49	23.98	0.00	26.99	Pass
HT20	MCS 0	1	116	5580	0.50	16.55	23.98	0.00	26.99	Pass
HT20	MCS 0	1	140	5700	0.50	15.67	23.98	0.00	26.99	Pass
HT40	MCS 0	1	110	5550	0.94	16.23	23.98	0.00	26.99	Pass
HT40	MCS 0	1	134	5670	0.94	16.55	23.98	0.00	26.99	Pass
VHT20	MCS 0	1	100	5500	0.49	16.47	23.98	0.00	26.99	Pass
VHT20	MCS 0	1	116	5580	0.49	16.52	23.98	0.00	26.99	Pass
VHT20	MCS 0	1	140	5700	0.49	16.29	23.98	0.00	26.99	Pass
VHT40	MCS 0	1	102	5510	0.93	16.25	23.98	0.00	26.99	Pass
VHT40	MCS 0	1	110	5550	0.93	16.17	23.98	0.00	26.99	Pass
VHT40	MCS 0	1	134	5670	0.93	16.47	23.98	0.00	26.99	Pass
VHT80	MCS 0	1	106	5530	1.70	15.12	23.98	0.00	26.99	Pass

TEST RESULTS DATA
Power Spectral Density

Band III										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm/MHz)	DG (dBi)		Pass/Fail
11a	6M bps	1	100	5500	0.50	5.77	11.00	0.00		Pass
11a	6M bps	1	116	5580	0.50	6.17	11.00	0.00		Pass
11a	6M bps	1	140	5700	0.50	5.34	11.00	0.00		Pass
HT20	MCS 0	1	100	5500	0.50	4.80	11.00	0.00		Pass
HT20	MCS 0	1	116	5580	0.50	4.95	11.00	0.00		Pass
HT20	MCS 0	1	140	5700	0.50	4.98	11.00	0.00		Pass
HT40	MCS 0	1	102	5510	0.94	1.92	11.00	0.00		Pass
HT40	MCS 0	1	110	5550	0.94	2.16	11.00	0.00		Pass
HT40	MCS 0	1	134	5670	0.94	1.96	11.00	0.00		Pass
VHT80	MCS 0	1	106	5530	1.70	-0.85	11.00	0.00		Pass

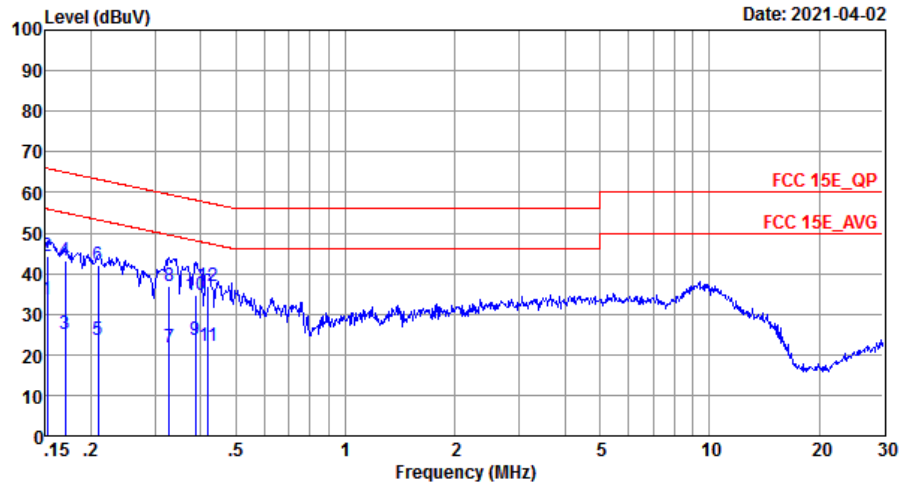


Appendix B. AC Conducted Emission Test Results





Test Engineer :	Xie YuQiang	Temperature :	22~25°C
		Relative Humidity :	50~55%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : C001-SZ
Condition: FCC 15E QP LISN_20200719_N NEUTRAL

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.15	33.44	-22.47	55.91	23.40	0.03	10.01	Average
2	0.15	44.14	-21.77	65.91	34.10	0.03	10.01	QP
3	0.17	25.24	-29.70	54.94	15.20	0.03	10.01	Average
4	0.17	43.34	-21.60	64.94	33.30	0.03	10.01	QP
5	0.21	23.74	-29.49	53.23	13.70	0.03	10.01	Average
6	0.21	42.24	-20.99	63.23	32.20	0.03	10.01	QP
7	0.33	21.74	-27.75	49.49	11.70	0.03	10.01	Average
8	0.33	37.04	-22.45	59.49	27.00	0.03	10.01	QP
9	0.39	23.63	-24.49	48.12	13.60	0.02	10.01	Average
10	0.39	34.83	-23.29	58.12	24.80	0.02	10.01	QP
11	0.42	22.14	-25.32	47.46	12.10	0.02	10.02	Average
12 *	0.42	37.04	-20.42	57.46	27.00	0.02	10.02	QP

Note:

- Level(dBμV) = Read Level(dBμV) + LISN Factor(dB) + Cable Loss(dB)
- Over Limit(dB) = Level(dBμV) – Limit Line(dBμV)



Appendix C. Radiated Spurious Emission

Band U-NII-1 - 5150~5250MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamplifier Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 36 5180MHz		5149.76	58.44	-15.56	74	52.24	31.57	7.48	32.85	100	346	P	H
		5149.5	46.27	-7.73	54	40.07	31.57	7.48	32.85	100	346	A	H
	*	5180	109.15	-	-	102.88	31.63	7.53	32.89	100	346	P	H
		5180	102.77	-	-	96.5	31.63	7.53	32.89	100	346	A	H
		5148.46	52.31	-21.69	74	46.11	31.57	7.48	32.85	115	186	P	V
		5149.76	40.58	-13.42	54	34.38	31.57	7.48	32.85	115	186	A	V
	*	5180	102.89	-	-	96.62	31.63	7.53	32.89	115	186	P	V
		5180	96.82	-	-	90.55	31.63	7.53	32.89	115	186	A	V
802.11a CH 44 5220MHz		5119.86	48.02	-25.98	74	41.89	31.51	7.43	32.81	100	355	P	H
		5023.92	39.75	-14.25	54	33.74	31.36	7.29	32.64	100	355	A	H
	*	5220	109.03	-	-	102.75	31.69	7.57	32.98	100	355	P	H
		5220	102.74	-	-	96.46	31.69	7.57	32.98	100	355	A	H
		5448.48	45.1	-28.9	74	38.47	32.11	7.84	33.32	100	355	P	H
		5351.28	36.4	-17.6	54	29.98	31.93	7.68	33.19	100	355	A	H
		5086.58	47.49	-26.51	74	41.39	31.45	7.38	32.73	100	192	P	V
		5094.38	38.74	-15.26	54	32.62	31.48	7.41	32.77	100	192	A	V
	*	5220	103.29	-	-	97.01	31.69	7.57	32.98	100	192	P	V
		5220	97.42	-	-	91.14	31.69	7.57	32.98	100	192	A	V
		5377.2	45.38	-28.62	74	38.96	31.96	7.69	33.23	100	192	P	V
		5351.04	38.04	-15.96	54	31.62	31.93	7.68	33.19	100	192	A	V



802.11a CH 48 5240MHz		5034.06	48.38	-25.62	74	42.37	31.36	7.29	32.64	105	355	P	H
		5119.34	42.28	-11.72	54	36.15	31.51	7.43	32.81	105	355	A	H
	*	5240	109.31	-	-	102.98	31.72	7.59	32.98	105	355	P	H
		5240	103.2	-	-	96.87	31.72	7.59	32.98	105	355	A	H
		5373.36	47.53	-26.47	74	41.07	31.96	7.69	33.19	105	355	P	H
		5351.76	36.67	-17.33	54	30.25	31.93	7.68	33.19	105	355	A	H
		5081.12	47.2	-26.8	74	41.1	31.45	7.38	32.73	100	195	P	V
		5105.04	38.01	-15.99	54	31.89	31.48	7.41	32.77	100	195	A	V
	*	5240	103.18	-	-	96.85	31.72	7.59	32.98	100	195	P	V
		5240	97.1	-	-	90.77	31.72	7.59	32.98	100	195	A	V
		5449.44	46.09	-27.91	74	39.46	32.11	7.84	33.32	100	195	P	V
		5361.84	37.55	-16.45	54	31.09	31.96	7.69	33.19	100	195	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band U-NII-1 5150~5250MHz
WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 36 5180MHz		10360	56.01	-12.29	68.3	65.48	38.72	10.8	58.99	152	260	P	H
		15540	53.04	-20.96	74	59.6	38.7	13.67	58.93	189	238	P	H
		15540	45.96	-8.04	54	52.52	38.7	13.67	58.93	189	238	A	H
		10360	53.27	-15.03	68.3	62.74	38.72	10.8	58.99	152	260	P	V
		15540	51.9	-22.1	74	58.46	38.7	13.67	58.93	189	238	P	V
		15540	44.47	-9.53	54	51.03	38.7	13.67	58.93	189	238	A	V
802.11a CH 44 5220MHz		10440	60.93	-7.37	68.3	70.19	38.82	10.84	58.92	100	38	P	H
		15660	58.93	-15.07	74	65.9	38.33	13.76	59.06	205	302	P	H
		15660	45.95	-8.05	54	52.92	38.33	13.76	59.06	205	302	A	H
		10440	50.74	-17.56	68.3	60	38.82	10.84	58.92	150	230	P	V
		15660	55.49	-18.51	74	62.46	38.33	13.76	59.06	100	360	P	V
		15660	43.79	-10.21	54	50.76	38.33	13.76	59.06	100	360	A	V
802.11a CH 48 5240MHz		10480	59.77	-8.53	68.3	68.87	38.89	10.87	58.86	100	47	P	H
		15720	54.39	-19.61	74	61.57	38.13	13.81	59.12	322	0	P	H
		15720	42.68	-11.32	54	49.86	38.13	13.81	59.12	322	0	A	H
		10480	51.6	-16.7	68.3	60.7	38.89	10.87	58.86	150	289	P	V
		15720	53.51	-20.49	74	60.69	38.13	13.81	59.12	100	22	P	V
		15720	41.64	-12.36	54	48.82	38.13	13.81	59.12	100	22	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band U-NII-1 5150~5250MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 36 5180MHz		5149.99	58.83	-15.17	74	52.63	31.57	7.48	32.85	104	1	P	H
		5150	49.44	-4.56	54	43.24	31.57	7.48	32.85	104	1	A	H
	*	5180	108.63	-	-	102.36	31.63	7.53	32.89	104	1	P	H
		5180	102.26	-	-	95.99	31.63	7.53	32.89	104	1	A	H
		5149.5	50.82	-23.18	74	44.62	31.57	7.48	32.85	114	182	P	V
		5149.76	42.1	-11.9	54	35.9	31.57	7.48	32.85	114	182	A	V
	*	5180	101.35	-	-	95.08	31.63	7.53	32.89	114	182	P	V
		5180	94.63	-	-	88.36	31.63	7.53	32.89	114	182	A	V
802.11n HT20 CH 44 5220MHz		5102.18	47.14	-26.86	74	41.02	31.48	7.41	32.77	104	0	P	H
		5118.82	38.38	-15.62	54	32.25	31.51	7.43	32.81	104	0	A	H
	*	5220	107.79	-	-	101.51	31.69	7.57	32.98	104	0	P	H
		5220	100.85	-	-	94.57	31.69	7.57	32.98	104	0	A	H
		5456.88	44.53	-29.47	74	37.94	32.11	7.84	33.36	104	0	P	H
		5354.4	36.51	-17.49	54	30.09	31.93	7.68	33.19	104	0	A	H
		5057.2	47.01	-26.99	74	40.92	31.42	7.35	32.68	112	188	P	V
		5094.9	37.36	-16.64	54	31.24	31.48	7.41	32.77	112	188	A	V
	*	5220	101.91	-	-	95.63	31.69	7.57	32.98	112	188	P	V
		5220	94.85	-	-	88.57	31.69	7.57	32.98	112	188	A	V
		5416.56	44.97	-29.03	74	38.44	32.05	7.75	33.27	112	188	P	V
		5444.64	36.14	-17.86	54	29.59	32.08	7.79	33.32	112	188	A	V



802.11n HT20 CH 48 5240MHz		5031.46	46.83	-27.17	74	40.82	31.36	7.29	32.64	102	0	P	H
		5130	38.23	-15.77	54	32.04	31.54	7.46	32.81	102	0	A	H
	*	5240	108.67	-	-	102.34	31.72	7.59	32.98	102	0	P	H
		5240	102.11	-	-	95.78	31.72	7.59	32.98	102	0	A	H
		5424	45.49	-28.51	74	38.96	32.05	7.75	33.27	102	0	P	H
		5352.24	36.58	-17.42	54	30.16	31.93	7.68	33.19	102	0	A	H
		5136.24	46.39	-27.61	74	40.2	31.54	7.46	32.81	112	188	P	V
		5073.06	37.23	-16.77	54	31.13	31.45	7.38	32.73	112	188	A	V
	*	5240	101.48	-	-	95.15	31.72	7.59	32.98	112	188	P	V
		5240	94.96	-	-	88.63	31.72	7.59	32.98	112	188	A	V
		5392.8	44.15	-29.85	74	37.69	31.99	7.7	33.23	112	188	P	V
		5443.68	36.1	-17.9	54	29.55	32.08	7.79	33.32	112	188	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band U-NII-1 5150~5250MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 36 5180MHz		10360	49.4	-18.9	68.3	58.87	38.72	10.8	58.99	152	260	P	H
		15540	47.22	-26.78	74	53.78	38.7	13.67	58.93	189	238	P	H
		10360	49.8	-18.5	68.3	59.27	38.72	10.8	58.99	152	260	P	V
		15540	47.88	-26.12	74	54.44	38.7	13.67	58.93	189	238	P	V
802.11n HT20 CH 44 5220MHz		10440	50.56	-17.74	68.3	59.82	38.82	10.84	58.92	150	230	P	H
		15660	50.78	-23.22	74	57.75	38.33	13.76	59.06	160	225	P	H
		10440	52.94	-15.36	68.3	36.59	38.82	10.84	33.31	394	0	P	V
		15660	55.3	-18.7	74	62.27	38.33	13.76	59.06	394	0	P	V
		15660	43.6	-10.4	54	50.57	38.33	13.76	59.06	394	0	A	V
802.11n HT20 CH 48 5240MHz		10480	52.08	-16.22	68.3	35.63	38.89	10.87	33.31	100	303	P	H
		15720	56.73	-17.27	74	63.91	38.13	13.81	59.12	100	303	P	H
		15720	44.75	-9.25	54	51.93	38.13	13.81	59.12	100	303	A	H
		10480	53.36	-14.94	68.3	36.91	38.89	10.87	33.31	100	13	P	V
		15720	54.91	-19.09	74	62.09	38.13	13.81	59.12	100	13	P	V
		15720	43.41	-10.59	54	50.59	38.13	13.81	59.12	100	13	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band U-NII-1 5150~5250MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 38 5190MHz		5149.24	54.6	-19.4	74	48.19	31.57	7.48	32.64	100	296	P	H
		5150	48.82	-5.18	54	42.41	31.57	7.48	32.64	100	296	A	H
	*	5190	104.62	-	-	98.09	31.63	7.53	32.63	100	296	P	H
		5190	97.42	-	-	90.89	31.63	7.53	32.63	100	296	A	H
		5372.92	46.01	-27.99	74	38.91	31.96	7.69	32.55	100	296	P	H
		5350.52	38.16	-15.84	54	31.1	31.93	7.68	32.55	100	296	A	H
		5148.72	54	-20	74	47.59	31.57	7.48	32.64	288	258	P	V
		5150	47.17	-6.83	54	40.76	31.57	7.48	32.64	288	258	A	V
	*	5190	102.39	-	-	95.86	31.63	7.53	32.63	288	258	P	V
		5190	93.73	-	-	87.2	31.63	7.53	32.63	288	258	A	V
		5418	46.05	-27.95	74	38.78	32.05	7.75	32.53	288	258	P	V
		5353.04	37.36	-16.64	54	30.3	31.93	7.68	32.55	288	258	A	V
802.11n HT40 CH 46 5230MHz		5080.08	48.22	-25.78	74	42.12	31.45	7.38	32.73	100	0	P	H
		5150	39.66	-14.34	54	33.46	31.57	7.48	32.85	100	0	A	H
	*	5230	106.15	-	-	99.82	31.72	7.59	32.98	100	0	P	H
		5230	98.23	-	-	91.9	31.72	7.59	32.98	100	0	A	H
		5415.36	46.15	-27.85	74	39.62	32.05	7.75	33.27	100	0	P	H
		5426.16	37.69	-16.31	54	31.16	32.05	7.75	33.27	100	0	A	H
		5002.6	46.27	-27.73	74	40.34	31.3	7.23	32.6	112	192	P	V
		5113.1	38.29	-15.71	54	32.12	31.51	7.43	32.77	112	192	A	V
	*	5230	99.18	-	-	92.85	31.72	7.59	32.98	112	192	P	V
		5230	91.67	-	-	85.34	31.72	7.59	32.98	112	192	A	V
		5361.84	45.47	-28.53	74	39.01	31.96	7.69	33.19	112	192	P	V
		5440.8	37.18	-16.82	54	30.63	32.08	7.79	33.32	112	192	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band U-NII-1 5150~5250MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n		10380	51.7	-16.6	68.3	61.11	38.75	10.81	58.97	150	360	P	H
HT40		15570	49.83	-24.17	74	56.51	38.59	13.7	58.97	155	360	P	H
CH 38		10380	49.69	-18.61	68.3	59.1	38.75	10.81	58.97	150	360	P	V
5190MHz		15570	50.22	-23.78	74	56.9	38.59	13.7	58.97	155	360	P	V
802.11n		10460	52.97	-15.33	68.3	62.18	38.84	10.85	58.9	150	360	P	H
HT40		15690	49.22	-24.78	74	56.29	38.23	13.79	59.09	150	225	P	H
CH 46		10460	49.76	-18.54	68.3	58.97	38.84	10.85	58.9	150	360	P	V
5230MHz		15690	49.14	-24.86	74	56.21	38.23	13.79	59.09	150	225	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band U-NII-1 5150~5250MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 42 5210MHz		5134.42	59.43	-14.57	74	52.54	32.24	7.46	32.81	107	360	P	H
		5150	47.97	-6.03	54	41.1	32.24	7.48	32.85	107	360	A	H
	*	5210	100.63	-	-	93.74	32.26	7.57	32.94	107	360	P	H
		5210	93.36	-	-	86.47	32.26	7.57	32.94	107	360	A	H
		5413.44	45.5	-28.5	74	38.69	32.33	7.75	33.27	107	360	P	H
		5357.52	36.16	-17.84	54	29.36	32.31	7.68	33.19	107	360	A	H
		5148.72	49.16	-24.84	74	42.29	32.24	7.48	32.85	109	0	P	V
		5137.54	39.21	-14.79	54	32.32	32.24	7.46	32.81	109	0	A	V
	*	5210	93.41	-	-	86.52	32.26	7.57	32.94	109	0	P	V
		5210	86.27	-	-	79.38	32.26	7.57	32.94	109	0	A	V
		5441.28	44.71	-29.29	74	37.9	32.34	7.79	33.32	109	0	P	V
		5357.04	35.56	-18.44	54	28.76	32.31	7.68	33.19	109	0	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Band U-NII-1 5150~5250MHz****WIFI 802.11ac VHT80 (Harmonic @ 3m)**

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		10420	51.55	-16.75	68.3	60.86	38.79	10.83	58.93	150	360	P	H
VHT80		15630	50.1	-23.9	74	57	38.39	13.75	59.04	150	225	P	H
CH 42		10420	50.4	-17.9	68.3	59.71	38.79	10.83	58.93	150	360	P	V
5210MHz		15630	50.75	-23.25	74	57.65	38.39	13.75	59.04	150	225	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band U-NII-2A - 5250~5350MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 52 5260MHz		5041.08	46.83	-27.17	74	40.8	31.39	7.32	32.68	100	356	P	H
		5060.58	39.7	-14.3	54	33.61	31.42	7.35	32.68	100	356	A	H
	*	5260	109.84	-	-	103.46	31.78	7.62	33.02	100	356	P	H
		5260	103.38	-	-	97	31.78	7.62	33.02	100	356	A	H
		5385.36	47.51	-26.49	74	41.05	31.99	7.7	33.23	100	356	P	H
		5391.84	41.05	-12.95	54	34.59	31.99	7.7	33.23	100	356	A	H
		5031.46	46.42	-27.58	74	40.41	31.36	7.29	32.64	100	190	P	V
		5135.72	39.25	-14.75	54	33.06	31.54	7.46	32.81	100	190	A	V
	*	5260	103.63	-	-	97.25	31.78	7.62	33.02	100	190	P	V
		5260	97.82	-	-	91.44	31.78	7.62	33.02	100	190	A	V
		5433.36	44.94	-29.06	74	38.39	32.08	7.79	33.32	100	190	P	V
		5426.64	36.42	-17.58	54	29.89	32.05	7.75	33.27	100	190	A	V
802.11a CH 60 5300MHz		5089.25	47	-27	74	40.88	31.48	7.41	32.77	132	360	P	H
		5110.95	40.08	-13.92	54	33.91	31.51	7.43	32.77	132	360	A	H
	*	5300	108.69	-	-	102.31	31.84	7.65	33.11	132	360	P	H
		5300	102.61	-	-	96.23	31.84	7.65	33.11	132	360	A	H
		5351.52	46.68	-27.32	74	40.26	31.93	7.68	33.19	132	360	P	H
		5431.44	40.73	-13.27	54	34.18	32.08	7.79	33.32	132	360	A	H
		5138.95	48.1	-25.9	74	41.91	31.54	7.46	32.81	100	188	P	V
		5058.8	37.48	-16.52	54	31.39	31.42	7.35	32.68	100	188	A	V
	*	5300	104.22	-	-	97.84	31.84	7.65	33.11	100	188	P	V
		5300	97.93	-	-	91.55	31.84	7.65	33.11	100	188	A	V
		5399.04	46.44	-27.56	74	39.94	32.02	7.71	33.23	100	188	P	V
		5430.48	38.18	-15.82	54	31.63	32.08	7.79	33.32	100	188	A	V



802.11a CH 64 5320MHz	*	5320	108.75	-	-	102.33	31.87	7.66	33.11	127	360	P	H
		5320	102.62	-	-	96.2	31.87	7.66	33.11	127	360	A	H
		5351.84	57.18	-16.82	74	50.76	31.93	7.68	33.19	127	360	P	H
		5350.08	47.03	-6.97	54	40.61	31.93	7.68	33.19	127	360	A	H
	*	5320	103.39	-	-	96.97	31.87	7.66	33.11	100	192	P	V
		5320	97.3	-	-	90.88	31.87	7.66	33.11	100	192	A	V
		5350.88	51.48	-22.52	74	45.06	31.93	7.68	33.19	100	192	P	V
		5350.24	42.69	-11.31	54	36.27	31.93	7.68	33.19	100	192	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band U-NII-2A 5250~5350MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 52 5260MHz		10520	57.02	-11.28	68.3	66.02	38.94	10.88	58.82	150	220	P	H
		15780	56.95	-17.05	74	64.31	37.97	13.85	59.18	210	303	P	H
		15780	44.61	-9.39	54	51.97	37.97	13.85	59.18	210	303	A	H
		10520	53.45	-14.85	68.3	62.45	38.94	10.88	58.82	150	220	P	V
		15780	53.36	-20.64	74	60.72	37.97	13.85	59.18	159	345	P	V
		15780	44.01	-9.99	54	51.37	37.97	13.85	59.18	159	345	A	V
802.11a CH 60 5300MHz		10600	57.8	-16.2	74	66.55	39.05	10.93	58.73	185	215	P	H
		10600	48.27	-5.73	54	57.02	39.05	10.93	58.73	185	215	A	H
		15900	49.96	-24.04	74	57.71	37.61	13.94	59.3	196	190	P	H
		10600	53.62	-20.38	74	62.37	39.05	10.93	58.73	185	215	P	V
		10600	44.88	-9.12	54	53.63	39.05	10.93	58.73	185	215	A	V
		15900	49.89	-24.11	74	57.64	37.61	13.94	59.3	196	190	P	V
802.11a CH 64 5320MHz		10640	59.57	-14.43	74	68.21	39.1	10.95	58.69	100	27	P	H
		10640	48.58	-5.42	54	57.22	39.1	10.95	58.69	100	27	A	H
		15960	49.35	-24.65	74	57.33	37.4	13.99	59.37	173	245	P	H
		10640	52.4	-21.6	74	61.04	39.1	10.95	58.69	152	135	P	V
		10640	44.99	-9.01	54	53.63	39.1	10.95	58.69	152	135	A	V
		15960	49.19	-24.81	74	57.17	37.4	13.99	59.37	173	245	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band U-NII-2A 5250~5350MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 52 5260MHz		5124.28	46.81	-27.19	74	40.62	31.54	7.46	32.81	103	3	P	H
		5149.5	38.14	-15.86	54	31.94	31.57	7.48	32.85	103	3	A	H
	*	5260	109	-	-	102.62	31.78	7.62	33.02	103	3	P	H
		5260	102.74	-	-	96.36	31.78	7.62	33.02	103	3	A	H
		5355.84	45.62	-28.38	74	39.2	31.93	7.68	33.19	103	3	P	H
		5356.8	37.19	-16.81	54	30.77	31.93	7.68	33.19	103	3	A	H
		5123.5	46.67	-27.33	74	40.48	31.54	7.46	32.81	101	198	P	V
		5083.2	37.13	-16.87	54	31.03	31.45	7.38	32.73	101	198	A	V
	*	5260	102.38	-	-	96	31.78	7.62	33.02	101	198	P	V
		5260	94.6	-	-	88.22	31.78	7.62	33.02	101	198	A	V
		5428.56	45.83	-28.17	74	39.28	32.08	7.79	33.32	101	198	P	V
		5358.96	36.28	-17.72	54	29.86	31.93	7.68	33.19	101	198	A	V
802.11n HT20 CH 60 5300MHz		5128.8	47.5	-26.5	74	41.31	31.54	7.46	32.81	100	2	P	H
		5096.6	38.12	-15.88	54	32	31.48	7.41	32.77	100	2	A	H
	*	5300	108.71	-	-	102.33	31.84	7.65	33.11	100	2	P	H
		5300	102.22	-	-	95.84	31.84	7.65	33.11	100	2	A	H
		5356.56	46.34	-27.66	74	39.92	31.93	7.68	33.19	100	2	P	H
		5350.32	39.24	-14.76	54	32.82	31.93	7.68	33.19	100	2	A	H
		5137.55	47.32	-26.68	74	41.13	31.54	7.46	32.81	103	199	P	V
		5123.9	37.37	-16.63	54	31.18	31.54	7.46	32.81	103	199	A	V
	*	5300	102.23	-	-	95.85	31.84	7.65	33.11	103	199	P	V
		5300	94.5	-	-	88.12	31.84	7.65	33.11	103	199	A	V
		5399.04	45.59	-28.41	74	39.09	32.02	7.71	33.23	103	199	P	V
		5352.48	36.97	-17.03	54	30.55	31.93	7.68	33.19	103	199	A	V



802.11n HT20 CH 64 5320MHz	*	5320	108.95	-	-	102.53	31.87	7.66	33.11	102	2	P	H
		5320	102.31	-	-	95.89	31.87	7.66	33.11	102	2	A	H
		5350.24	59.14	-14.86	74	52.72	31.93	7.68	33.19	102	2	P	H
		5350.24	49.62	-4.38	54	43.2	31.93	7.68	33.19	102	2	A	H
	*	5320	101.81	-	-	95.39	31.87	7.66	33.11	102	195	P	V
		5320	94.65	-	-	88.23	31.87	7.66	33.11	102	195	A	V
		5352.32	55.83	-18.17	74	49.41	31.93	7.68	33.19	102	195	P	V
		5350.4	43.67	-10.33	54	37.25	31.93	7.68	33.19	102	195	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band U-NII-2A 5250~5350MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 52 5260MHz		10520	52.31	-15.99	68.3	35.79	38.94	10.88	33.3	159	345	P	H
		15780	50.74	-23.26	74	58.1	37.97	13.85	59.18	159	345	P	H
		10520	54.95	-13.35	68.3	38.43	38.94	10.88	33.3	159	345	P	V
		15780	50.66	-23.34	74	58.02	37.97	13.85	59.18	159	345	P	V
802.11n HT20 CH 60 5300MHz		10600	60.81	-13.19	74	69.56	39.05	10.93	58.73	100	57	P	H
		10600	49.08	-4.92	54	57.83	39.05	10.93	58.73	100	57	A	H
		15900	49.6	-24.4	74	57.35	37.61	13.94	59.3	196	190	P	H
		10600	51.56	-22.44	74	60.31	39.05	10.93	58.73	100	312	P	V
		10600	45.49	-8.51	54	54.24	39.05	10.93	58.73	100	312	A	V
		15900	49.76	-24.24	74	57.51	37.61	13.94	59.3	196	190	P	V
802.11n HT20 CH 64 5320MHz		10640	57.47	-16.53	74	66.11	39.1	10.95	58.69	152	135	P	H
		10640	48.25	-5.75	54	56.89	39.1	10.95	58.69	152	135	A	H
		15960	47.47	-26.53	74	55.45	37.4	13.99	59.37	173	245	P	H
		10640	53.41	-20.59	74	62.05	39.1	10.95	58.69	152	135	P	V
		10640	44.59	-9.41	54	53.23	39.1	10.95	58.69	152	135	A	V
		15960	48.01	-25.99	74	55.99	37.4	13.99	59.37	173	245	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band U-NII-2A 5250~5350MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 54 5270MHz		5063.35	47.52	-26.48	74	41.48	31.42	7.35	32.73	114	0	P	H
		5071.4	38.74	-15.26	54	32.7	31.42	7.35	32.73	114	0	A	H
	*	5270	106.67	-	-	100.29	31.78	7.62	33.02	114	0	P	H
		5270	99.2	-	-	92.82	31.78	7.62	33.02	114	0	A	H
		5384.4	46.3	-27.7	74	39.84	31.99	7.7	33.23	114	0	P	H
		5351.28	38.61	-15.39	54	32.19	31.93	7.68	33.19	114	0	A	H
		5004.55	47.86	-26.14	74	41.87	31.33	7.26	32.6	100	189	P	V
		5072.8	38.33	-15.67	54	32.23	31.45	7.38	32.73	100	189	A	V
	*	5270	100.31	-	-	93.93	31.78	7.62	33.02	100	189	P	V
		5270	91.81	-	-	85.43	31.78	7.62	33.02	100	189	A	V
		5445.84	44.82	-29.18	74	38.19	32.11	7.84	33.32	100	189	P	V
		5351.76	37.37	-16.63	54	30.95	31.93	7.68	33.19	100	189	A	V
802.11n HT40 CH 62 5310MHz		5072.45	47.6	-26.4	74	40.73	32.22	7.38	32.73	100	356	P	H
		5066.15	39.29	-14.71	54	32.45	32.22	7.35	32.73	100	356	A	H
	*	5310	102.06	-	-	95.21	32.3	7.66	33.11	100	356	P	H
		5310	95.04	-	-	88.19	32.3	7.66	33.11	100	356	P	H
		5353.68	55.42	-18.58	74	48.62	32.31	7.68	33.19	100	356	A	H
		5350.08	49.77	-4.23	54	42.97	32.31	7.68	33.19	100	356	A	H
		5023.1	47.55	-26.45	74	40.69	32.21	7.29	32.64	100	138	P	V
		5012.6	38.97	-15.03	54	32.15	32.2	7.26	32.64	100	138	A	V
	*	5310	97.42	-	-	90.57	32.3	7.66	33.11	100	138	P	V
		5310	90.31	-	-	83.46	32.3	7.66	33.11	100	138	P	V
		5352.24	50.11	-23.89	74	43.31	32.31	7.68	33.19	100	138	A	V
		5350.08	41.84	-12.16	54	35.04	32.31	7.68	33.19	100	138	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band U-NII-2A 5250~5350MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 54 5270MHz		10540	54.68	-13.62	68.3	63.63	38.96	10.89	58.8	150	220	P	H
		15810	49.23	-24.77	74	56.7	37.87	13.87	59.21	168	345	P	H
		10540	50.33	-17.97	68.3	59.28	38.96	10.89	58.8	150	220	P	V
		15810	49.24	-24.76	74	56.71	37.87	13.87	59.21	168	345	P	V
802.11n HT40 CH 62 5310MHz		10620	58.27	-15.73	74	66.96	39.08	10.94	58.71	100	39	P	H
		10620	47.97	-6.03	54	56.66	39.08	10.94	58.71	100	39	A	H
		15930	47.37	-26.63	74	55.23	37.51	13.96	59.33	160	100	P	H
		10620	50.55	-23.45	74	59.24	39.08	10.94	58.71	150	220	P	V
		15930	47.38	-26.62	74	55.24	37.51	13.96	59.33	160	100	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band U-NII-2A 5250~5350MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 58 5290MHz		5005.6	48.22	-25.78	74	41.36	32.2	7.26	32.6	114	0	P	H
		5150	38.64	-15.36	54	31.77	32.24	7.48	32.85	114	0	A	H
	*	5290	101.61	-	-	94.74	32.29	7.64	33.06	114	0	P	H
		5290	94.25	-	-	87.38	32.29	7.64	33.06	114	0	A	H
		5351.04	61.68	-12.32	74	54.88	32.31	7.68	33.19	114	0	P	H
		5350.08	50.85	-3.15	54	44.05	32.31	7.68	33.19	114	0	A	H
		5062.3	46.48	-27.52	74	40.39	31.42	7.35	32.68	299	268	P	V
		5138.25	37.87	-16.13	54	31.52	31.54	7.46	32.65	299	268	A	V
	*	5290	99.1	-	-	92.23	31.81	7.64	32.58	299	268	P	V
		5290	91.65	-	-	84.78	31.81	7.64	32.58	299	268	A	V
		5355.6	53.86	-20.14	74	46.8	31.93	7.68	32.55	299	268	P	V
		5350.32	46.5	-7.5	54	39.44	31.93	7.68	32.55	299	268	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Band U-NII-2A 5250~5350MHz****WIFI 802.11ac VHT80 (Harmonic @ 3m)**

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		10580	51.93	-16.37	68.3	60.73	39.03	10.92	58.75	185	215	P	H
VHT80		15870	47.64	-26.36	74	55.34	37.66	13.92	59.28	196	190	P	H
CH 58		10580	50.69	-17.61	68.3	59.49	39.03	10.92	58.75	170	232	P	V
5290MHz		15870	48.38	-25.62	74	56.08	37.66	13.92	59.28	190	130	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band U-NII-2C - 5470~5725MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 100 5500MHz		5459.99	51.56	-22.44	74	44.97	32.11	7.84	33.36	144	351	P	H
		5469.84	58.22	-10.08	68.3	51.56	32.14	7.88	33.36			P	H
		5459.28	41.7	-12.3	54	35.11	32.11	7.84	33.36	144	351	A	H
	*	5500	107.98	-	-	101.22	32.2	7.96	33.4	144	351	P	H
		5500	102.21	-	-	95.45	32.2	7.96	33.4	144	351	A	H
		5458.96	46.12	-27.88	74	39.53	32.11	7.84	33.36	109	193	P	V
		5468.88	54.67	-13.63	68.3	48.01	32.14	7.88	33.36	109	193	P	V
		5460	39.22	-14.78	54	32.63	32.11	7.84	33.36	109	193	A	V
	*	5500	104.12	-	-	97.36	32.2	7.96	33.4	109	193	P	V
		5500	97.92	-	-	91.16	32.2	7.96	33.4	109	193	A	V
802.11a CH 116 5580MHz		5418.88	45.97	-28.03	74	39.44	32.05	7.75	33.27	119	351	P	H
		5465.92	45.82	-22.48	68.3	39.16	32.14	7.88	33.36	119	351	P	H
		5444.8	36.7	-17.3	54	30.15	32.08	7.79	33.32	119	351	A	H
	*	5580	107.35	-	-	100.54	32.23	7.97	33.39	119	351	P	H
		5580	101.13	-	-	94.32	32.23	7.97	33.39	119	351	A	H
		5743.58	46.11	-22.19	68.3	38.74	32.3	8.42	33.35	119	351	P	H
		5453.68	45.31	-28.69	74	38.72	32.11	7.84	33.36	113	189	P	V
		5462.32	44.33	-23.97	68.3	37.74	32.11	7.84	33.36	113	189	P	V
		5392.96	36.99	-17.01	54	30.53	31.99	7.7	33.23	113	189	A	V
	*	5580	104.57	-	-	97.76	32.23	7.97	33.39	113	189	P	V
		5580	98.03	-	-	91.22	32.23	7.97	33.39	113	189	A	V
		5731.925	47.14	-21.16	68.3	39.75	32.29	8.45	33.35	113	189	P	V



802.11a CH 140 5700MHz	*	5700	107.65	-	-	100.04	32.45	8.52	33.36	121	39	P	H
		5700	99.98	-	-	92.37	32.45	8.52	33.36	121	39	A	H
		5725.96	64.51	-3.79	68.3	56.93	32.48	8.45	33.35	121	39	P	H
	*	5700	104.61	-	-	97	32.45	8.52	33.36	138	349	P	V
		5700	96.98	-	-	89.37	32.45	8.52	33.36	138	349	A	V
		5726.84	63.52	-4.78	68.3	55.94	32.48	8.45	33.35	138	349	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band U-NII-2C - 5470~5725MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 100 5500MHz		11000	47.6	-26.4	74	55.16	39.6	11.14	58.3	163	230	P	H
		16500	50.4	-17.9	68.3	56.25	38.72	14.27	58.84	196	273	P	H
		11000	47.35	-26.65	74	54.91	39.6	11.14	58.3	155	212	P	V
		16500	50.57	-17.73	68.3	56.42	38.72	14.27	58.84	178	296	P	V
802.11a CH 116 5580MHz		11160	57.89	-16.11	74	65.22	39.5	11.28	58.11	205	248	P	H
		11160	46.87	-7.13	54	54.2	39.5	11.28	58.11	205	248	A	H
		16740	50.86	-17.44	68.3	55.65	39.39	14.4	58.58	163	332	P	H
		11160	50.87	-23.13	74	58.2	39.5	11.28	58.11	170	200	P	V
		16740	50.85	-17.45	68.3	55.64	39.39	14.4	58.58	156	350	P	V
802.11a CH 140 5700MHz		11400	57.36	-16.64	74	64.38	39.36	11.47	57.85	204	249	P	H
		11400	46.79	-7.21	54	53.81	39.36	11.47	57.85	204	249	A	H
		17100	52.8	-15.5	68.3	27.83	42.16	14.69	31.88	204	249	P	H
		11400	56.9	-17.1	74	63.92	39.36	11.47	57.85	100	50	P	V
		11400	45.67	-8.33	54	52.69	39.36	11.47	57.85	100	50	A	V
		17100	53.17	-15.13	68.3	28.2	42.16	14.69	31.88	100	50	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band U-NII-2C - 5470~5725MHz
WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 100 5500MHz		5459.6	49.49	-24.51	74	42.9	32.11	7.84	33.36	110	1	P	H
		5470	59.39	-8.91	68.3	52.73	32.14	7.88	33.36	110	1	P	H
		5460	41.13	-12.87	54	34.54	32.11	7.84	33.36	110	1	A	H
	*	5500	107.97	-	-	101.21	32.2	7.96	33.4	110	1	P	H
		5500	100.56	-	-	93.8	32.2	7.96	33.4	110	1	A	H
		5459.92	47.92	-26.08	74	41.33	32.11	7.84	33.36	101	196	P	V
		5469.36	52.68	-15.62	68.3	46.02	32.14	7.88	33.36	101	196	P	V
		5460	39.08	-14.92	54	32.49	32.11	7.84	33.36	101	196	A	V
	*	5500	102.74	-	-	95.98	32.2	7.96	33.4	101	196	P	V
		5500	95.72	-	-	88.96	32.2	7.96	33.4	101	196	A	V
802.11n HT20 CH 116 5580MHz		5439.52	46.4	-27.6	74	39.05	32.08	7.79	32.52	100	297	P	H
		5468.32	46.84	-21.46	68.3	39.33	32.14	7.88	32.51	100	297	P	H
		5440	38.77	-15.23	54	31.42	32.08	7.79	32.52	100	297	A	H
	*	5580	108.89	-	-	101.19	32.23	7.97	32.5	100	297	P	H
		5580	101.78	-	-	94.08	32.23	7.97	32.5	100	297	A	H
		5728.775	47.45	-20.85	68.3	39.21	32.29	8.45	32.5	100	297	P	H
		5456.8	44.95	-29.05	74	38.36	32.11	7.84	33.36	103	197	P	V
		5461.36	45.09	-23.21	68.3	38.5	32.11	7.84	33.36	103	197	P	V
		5458.48	36.5	-17.5	54	29.91	32.11	7.84	33.36	103	197	A	V
	*	5580	102.64	-	-	95.83	32.23	7.97	33.39	103	197	P	V
		5580	95.5	-	-	88.69	32.23	7.97	33.39	103	197	A	V
		5726.885	46.07	-22.23	68.3	38.68	32.29	8.45	33.35	103	197	P	V



802.11n HT20 CH 140 5700MHz	*	5700	105.94	-	-	98.33	32.45	8.52	33.36	108	41	P	H
		5700	98.04	-	-	90.43	32.45	8.52	33.36	108	41	A	H
		5726.84	64.9	-3.4	68.3	57.32	32.48	8.45	33.35	108	41	P	H
	*	5700	103.88	-	-	96.44	32.28	8.52	33.36	107	196	P	V
		5700	96.4	-	-	88.96	32.28	8.52	33.36	107	196	A	V
		5725.48	64.1	-4.2	68.3	56.71	32.29	8.45	33.35	107	196	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band U-NII-2C - 5470~5725MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 100 5500MHz		11000	55.17	-18.83	74	62.73	39.6	11.14	58.3	163	230	P	H
		11000	46.76	-7.24	54	54.32	39.6	11.14	58.3	163	230	A	H
		16500	48.54	-19.76	68.3	54.39	38.72	14.27	58.84	196	273	P	H
		11000	52.15	-21.85	74	59.71	39.6	11.14	58.3	155	212	P	V
		11000	44.76	-9.24	54	52.32	39.6	11.14	58.3	155	212	A	V
		16500	48.96	-19.34	68.3	54.81	38.72	14.27	58.84	178	296	P	V
802.11n HT20 CH 116 5580MHz		11160	54.79	-19.21	74	62.12	39.5	11.28	58.11	183	32	P	H
		11160	46.98	-7.02	54	54.31	39.5	11.28	58.11	183	32	A	H
		16740	48.3	-20	68.3	53.09	39.39	14.4	58.58	163	332	P	H
		11160	52.12	-21.88	74	59.45	39.5	11.28	58.11	170	200	P	V
		11160	45.05	-8.95	54	52.38	39.5	11.28	58.11	170	200	A	V
		16740	48.32	-19.98	68.3	53.11	39.39	14.4	58.58	156	350	P	V
802.11n HT20 CH 140 5700MHz		11400	57.32	-16.68	74	64.34	39.36	11.47	57.85	100	28	P	H
		11400	45.82	-8.18	54	52.84	39.36	11.47	57.85	100	28	A	H
		17100	51.19	-17.11	68.3	53.96	40.7	14.69	58.16	165	246	P	H
		11400	56.26	-17.74	74	63.28	39.36	11.47	57.85	100	52	P	V
		11400	45.41	-8.59	54	52.43	39.36	11.47	57.85	100	52	A	V
		17100	51.79	-16.51	68.3	54.56	40.7	14.69	58.16	153	102	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band U-NII-2C - 5470~5725MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 102 5510MHz		5458.72	53.38	-20.62	74	46.79	32.11	7.84	33.36	100	43	P	H
		5464	59.24	-9.06	68.3	52.58	32.14	7.88	33.36	100	43	P	H
		5458.24	46.81	-7.19	54	40.22	32.11	7.84	33.36	100	43	A	H
	*	5510	104.32	-	-	97.56	32.2	7.96	33.4	100	43	P	H
		5510	96.75	-	-	89.99	32.2	7.96	33.4	100	43	A	H
		5752.4	46.28	-22.02	68.3	38.94	32.3	8.39	33.35	100	43	P	H
		5459.44	48.7	-25.3	74	42.11	32.11	7.84	33.36	113	188	P	V
		5468.8	55.26	-13.04	68.3	48.6	32.14	7.88	33.36	113	188	P	V
		5458.96	42.33	-11.67	54	35.74	32.11	7.84	33.36	113	188	A	V
	*	5510	100.99	-	-	94.23	32.2	7.96	33.4	113	188	P	V
		5510	92.76	-	-	86	32.2	7.96	33.4	113	188	A	V
		5764.37	45.76	-22.54	68.3	38.42	32.3	8.39	33.35	113	188	P	V
802.11n HT40 CH 110 5550MHz		5395.6	45.78	-28.22	74	39.28	32.02	7.71	33.23	100	47	P	H
		5470	44.78	-23.52	68.3	38.12	32.14	7.88	33.36	100	47	P	H
		5439.04	38.05	-15.95	54	31.5	32.08	7.79	33.32	100	47	A	H
	*	5550	104.01	-	-	97.21	32.22	7.97	33.39	100	47	P	H
		5550	96.45	-	-	89.65	32.22	7.97	33.39	100	47	A	H
		5756.495	46.17	-22.13	68.3	38.83	32.3	8.39	33.35	100	47	P	H
		5431.36	45.17	-28.83	74	38.62	32.08	7.79	33.32	100	192	P	V
		5466.16	44.35	-23.95	68.3	37.69	32.14	7.88	33.36	100	192	P	V
		5458.24	37.33	-16.67	54	30.74	32.11	7.84	33.36	100	192	A	V
	*	5550	99.97	-	-	93.17	32.22	7.97	33.39	100	192	P	V
		5550	92.53	-	-	85.73	32.22	7.97	33.39	100	192	A	V
		5752.4	45.19	-23.11	68.3	37.85	32.3	8.39	33.35	100	192	P	V



802.11n HT40 CH 134 5670MHz		5456.05	45.13	-28.87	74	38.54	32.11	7.84	33.36	100	41	P	H
		5467.25	44.74	-23.56	68.3	38.08	32.14	7.88	33.36	100	41	P	H
		5457.1	37.24	-16.76	54	30.65	32.11	7.84	33.36	100	41	A	H
	*	5670	104.76	-	-	97.45	32.27	8.41	33.37	100	41	P	H
		5670	97.31	-	-	90	32.27	8.41	33.37	100	41	A	H
		5724.925	55.94	-12.36	68.3	48.55	32.29	8.45	33.35	100	41	P	H
		5407.05	45.17	-28.83	74	38.71	32.02	7.71	33.27	114	191	P	V
		5469.35	46.86	-21.44	68.3	40.2	32.14	7.88	33.36	114	191	P	V
		5421.4	36.98	-17.02	54	30.45	32.05	7.75	33.27	114	191	A	V
	*	5670	101.34	-	-	94.03	32.27	8.41	33.37	114	191	P	V
		5670	93.63	-	-	86.32	32.27	8.41	33.37	114	191	A	V
		5725.45	50.91	-17.39	68.3	43.52	32.29	8.45	33.35	114	191	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band U-NII-2C - 5470~5725MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 102 5510MHz		11020	56.04	-17.96	74	63.58	39.59	11.15	58.28	100	33	P	H
		11020	45.78	-8.22	54	53.32	39.59	11.15	58.28	100	33	A	H
		16530	48.79	-19.51	68.3	54.48	38.82	14.29	58.8	160	300	P	H
		11020	49.75	-24.25	74	57.29	39.59	11.15	58.28	170	230	P	V
		16530	47.97	-20.33	68.3	53.66	38.82	14.29	58.8	160	300	P	V
802.11n HT40 CH 110 5550MHz		11100	51.34	-22.66	74	58.77	39.54	11.22	58.19	100	33	P	H
		16650	48.98	-19.32	68.3	27.87	39.15	14.35	32.39	100	0	P	H
		11100	50.54	-23.46	74	57.97	39.54	11.22	58.19	155	210	P	V
		16650	48.24	-20.06	68.3	53.41	39.15	14.35	58.67	171	352	P	V
802.11n HT40 CH 134 5670MHz		11340	54.75	-19.25	74	61.86	39.4	11.42	57.93	120	31	P	H
		11340	44.69	-9.31	54	51.8	39.4	11.42	57.93	120	31	A	H
		17010	49.84	-18.46	68.3	53.36	40.2	14.56	58.28	205	310	P	H
		11340	50.82	-23.18	74	57.93	39.4	11.42	57.93	205	325	P	V
		17010	49.29	-19.01	68.3	52.81	40.2	14.56	58.28	185	290	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band U-NII-2C - 5470~5725MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 106 5530MHz		5458.24	54.29	-19.71	74	47.47	32.34	7.84	33.36	112	352	P	H
		5466.88	61.14	-7.16	68.3	54.27	32.35	7.88	33.36	112	352	P	H
		5459.92	46.09	-7.91	54	39.27	32.34	7.84	33.36	112	352	A	H
	*	5530	99.68	-	-	92.76	32.36	7.96	33.4	112	352	P	H
		5530	92.39	-	-	85.47	32.36	7.96	33.4	112	352	A	H
		5731.61	46.23	-22.07	68.3	38.65	32.48	8.45	33.35	112	352	P	H
		5455.36	54.05	-19.95	74	47.46	32.11	7.84	33.36	100	192	P	V
		5467.12	56.97	-11.33	68.3	50.31	32.14	7.88	33.36	100	192	P	V
		5458.96	48.21	-5.79	54	41.62	32.11	7.84	33.36	100	192	A	V
	*	5530	97.53	-	-	90.76	32.21	7.96	33.4	100	192	P	V
		5530	89.11	-	-	82.34	32.21	7.96	33.4	100	192	A	V
		5759.96	47.4	-20.9	68.3	40.06	32.3	8.39	33.35	100	192	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Band U-NII-2C 5470~5725MHz****WIFI 802.11ac VHT80 (Harmonic @ 3m)**

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		11060	50.3	-23.7	74	57.77	39.56	11.2	58.23	170	230	P	H
VHT80		16590	48.32	-19.98	68.3	53.79	38.96	14.32	58.75	155	305	P	H
CH 106		11060	50.19	-23.81	74	57.66	39.56	11.2	58.23	166	212	P	V
5530MHz		16590	48.06	-20.24	68.3	53.53	38.96	14.32	58.75	132	343	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz

WIFI 802.11ac VHT80 (LF @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ac VHT80 LF		89.17	25.8	-17.7	43.5	44.6	14.02	2.36	35.18	-	-	p	H
		136.7	22.96	-20.54	43.5	36.79	18.77	2.53	35.13	-	-	p	H
		293.84	23.83	-22.17	46	35.97	19.62	3.15	34.91	-	-	p	H
		326.82	31.13	-14.87	46	42.35	20.47	3.21	34.9	100	45	p	H
		391.81	27.47	-18.53	46	37.03	21.96	3.3	34.82	-	-	p	H
		683.78	27.05	-18.95	46	30.87	26.7	3.98	34.5	-	-	p	H
		67.83	32.08	-7.92	40	46.69	18.19	2.34	35.14	100	264	p	V
		90.14	33.91	-9.59	43.5	52.82	13.92	2.35	35.18	-	-	p	V
		153.19	31.93	-11.57	43.5	45.18	19.29	2.56	35.1	-	-	p	V
		238.55	26.28	-19.72	46	40.51	17.96	2.83	35.02	-	-	p	V
		403.45	27.31	-18.69	46	36.65	22.14	3.31	34.79	-	-	p	V
		508.21	27.21	-18.79	46	34.38	24.01	3.5	34.68	-	-	p	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

**Note symbol**

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is over limit line.
P/A	P eak or A verage
H/V	H orizontal or V ertical



A calculation example for radiated spurious emission is shown as below:

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 01													
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Level(dBμV/m) =

Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

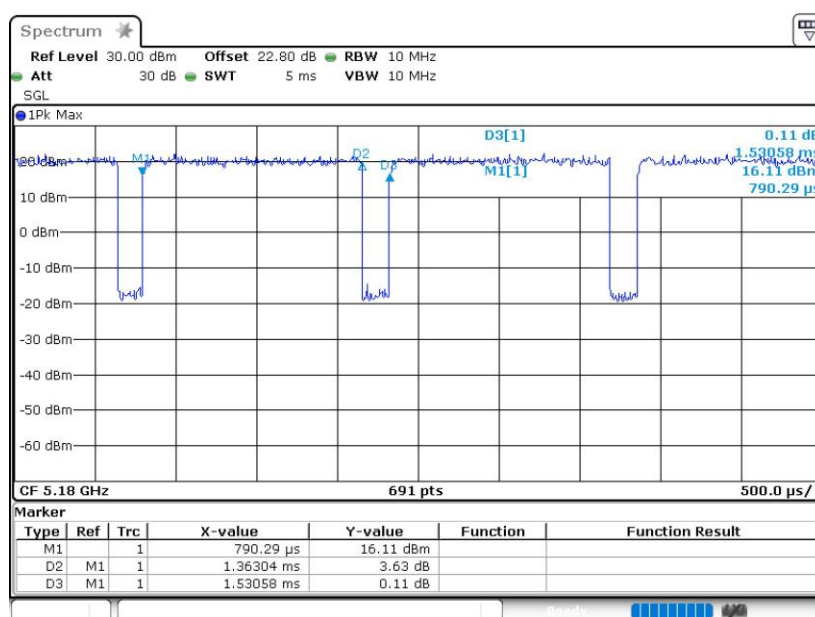
= -10.46(dB)

Both peak and average measured complies with the limit line, so test result is “PASS”.

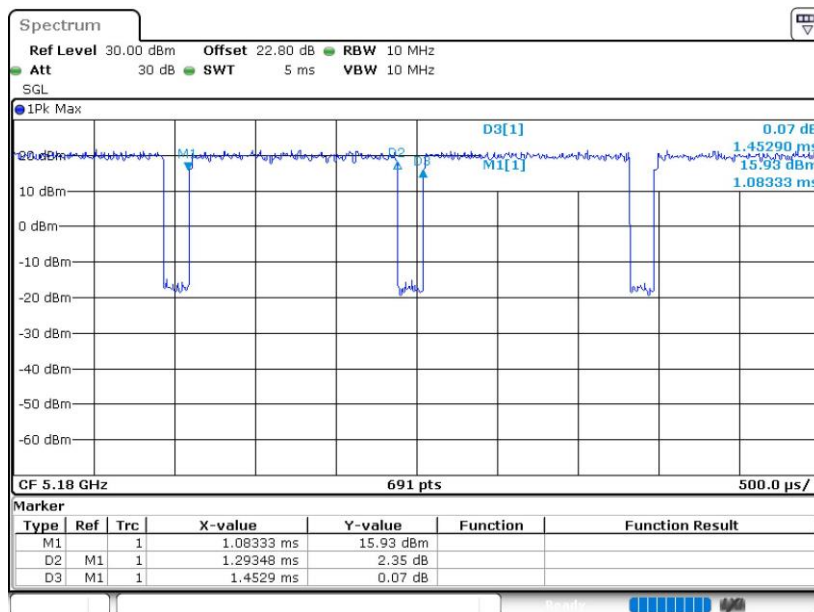
Appendix D. Duty Cycle Plots

Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
802.11a	89.05	1.3630	0.7337	1kHz
802.11n HT20	89.03	1.2935	0.7731	1kHz
802.11n HT40	80.60	0.6384	1.5664	3kHz
802.11ac VHT80	67.62	0.3196	3.1292	10kHz

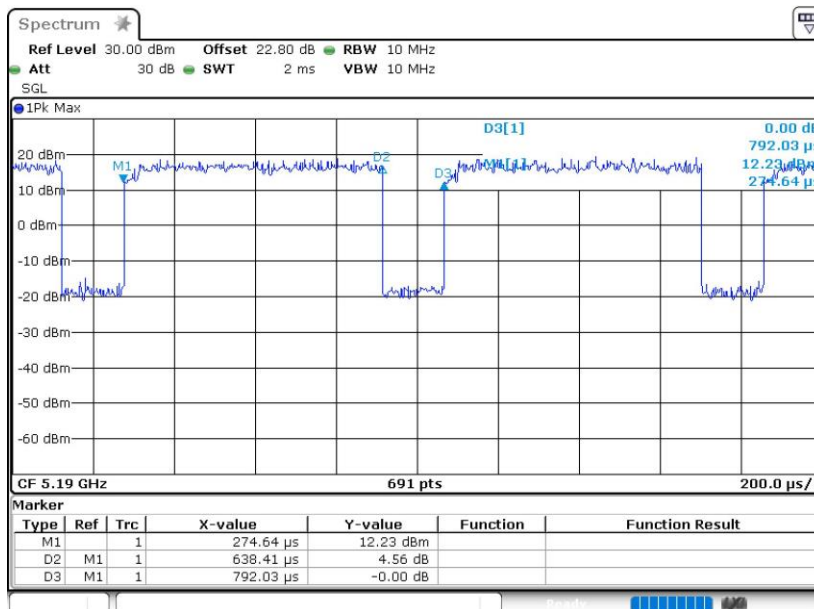
802.11a



802.11n HT20



802.11n HT40



802.11ac VHT80

