FCC RF Test Report

APPLICANT	:	PAX Technology Limited
EQUIPMENT	:	Mobile Payment Terminal
BRAND NAME	:	PAX
MODEL NAME	:	D190
FCC ID	:	V5PD190LTE
STANDARD	:	FCC Part 15 Subpart E §15.407
CLASSIFICATION	:	(NII) Unlicensed National Information Infrastructure

The product was received on Jun. 18, 2019 and testing was completed on Jul. 08, 2019. 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.

Derreck Chen

Reviewed by: Derreck Chen / Supervisor

Eric Shih

Approved by: Eric Shih / Manager

Sporton International (ShenZhen) Inc.

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TABLE OF CONTENTS

REVISION HISTORY **3**
SUMMARY OF TEST RESULT **4**
1 GENERAL DESCRIPTION **5**
1.1 Applicant 5
1.2 Manufacturer 5
1.3 Product Feature of Equipment Under Test 5
1.4 Product Specification of Equipment Under Test 6
1.5 Modification of EUT 7
1.6 Testing Location 7
1.7 Applicable Standards 8
2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST **9**
2.1 Carrier Frequency and Channel 9
2.2 Test Mode 10
2.3 Connection Diagram of Test System 12
2.4 Support Unit used in test configuration and system 13
2.5 EUT Operation Test Setup 13
2.6 Measurement Results Explanation Example 13
3 TEST RESULT **14**
3.1 26dB & 99% Occupied Bandwidth Measurement 14
3.2 Maximum Conducted Output Power Measurement 16
3.3 Power Spectral Density Measurement 18
3.4 Unwanted Emissions Measurement 21
3.5 AC Conducted Emission Measurement 26
3.6 Automatically Discontinue Transmission 28
3.7 Antenna Requirements 29
4 LIST OF MEASURING EQUIPMENT **30**
5 UNCERTAINTY OF EVALUATION **31**
APPENDIX A. CONDUCTED TEST RESULTS
APPENDIX B. AC CONDUCTED EMISSION TEST RESULT
APPENDIX C. RADIATED SPURIOUS EMISSION
APPENDIX D. DUTY CYCLE PLOTS
APPENDIX E. SETUP PHOTOGRAPHS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR961801E	Rev. 01	Initial issue of report	Jul. 29, 2019

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	2.1049 & 15.403(i)	26dB & 99% Bandwidth	-	Pass	-
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 3.14 dB at 5150.000 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 2.75 dB at 0.440 MHz
3.6	15.407(c)	Automatically Discontinue Transmission	Discontinue Transmission	Pass	-
3.7	15.203 & 15.407(a)	Antenna Requirement	N/A	Pass	-

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	Mobile Payment Terminal
Brand Name	PAX
Model Name	D190
FCC ID	V5PD190LTE
EUT supports Radios application	GSM/LTE/NFC WLAN 2.4GHz 802.11b/g/n HT20 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth BR / EDR / LE
IMEI Code	Conducted: 868197030036813 Conduction: 868197030032408 Radiation: 868197030032572
HW Version	D190-xxx-xxx-xxxx
SW Version	V0.0.0.1
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 ~ 5720 MHz
Maximum Output Power to Antenna	**<5180 MHz ~ 5240 MHz>** 802.11a : 15.51 dBm / 0.0356 W 802.11n HT20 : 15.31 dBm / 0.0340 W 802.11n HT40 : 15.01 dBm / 0.0317 W 802.11ac VHT20 : 12.60 dBm / 0.0182 W 802.11ac VHT40 : 9.91 dBm / 0.0098 W 802.11ac VHT80 : 11.51 dBm / 0.0142 W **<5260 MHz ~ 5320 MHz>** 802.11a : 15.12 dBm / 0.0325 W 802.11n HT20 : 14.83 dBm / 0.0304 W 802.11n HT40 : 14.77 dBm / 0.0300 W 802.11ac VHT20 : 12.03 dBm / 0.0160 W 802.11ac VHT40 : 10.50 dBm / 0.0112 W 802.11ac VHT80 : 12.81 dBm / 0.0191 W **<5500 MHz ~ 5720 MHz >** 802.11a : 15.50 dBm / 0.0355 W 802.11n HT20 : 15.17 dBm / 0.0329 W 802.11n HT40 : 15.26 dBm / 0.0336 W 802.11ac VHT20 : 12.45 dBm / 0.0176 W 802.11ac VHT40 : 10.48 dBm / 0.0112 W 802.11ac VHT80 : 13.22 dBm / 0.0210 W
99% Occupied Bandwidth	**<5180 MHz ~ 5240 MHz>** 802.11a : 18.58 MHz 802.11n HT20 : 19.53 MHz 802.11n HT40 : 36.76 MHz 802.11ac VHT80 : 75.40 MHz **<5260 MHz ~ 5320 MHz>** 802.11a : 18.78 MHz 802.11n HT20 : 19.33 MHz 802.11n HT40 : 36.86 MHz 802.11ac VHT80 : 75.52 MHz **<5500 MHz ~ 5720 MHz>** 802.11a : 19.13 MHz 802.11n HT20 : 19.53 MHz 802.11n HT40 : 36.96 MHz 802.11ac VHT80 : 75.76 MHz
Antenna Type / Gain	**<5180 MHz ~ 5240 MHz>** FPC Antenna with gain 1.0 dBi **<5260 MHz ~ 5320 MHz>** FPC Antenna with gain 1.0 dBi **<5500 MHz ~ 5720 MHz >** FPC Antenna with gain 1.0 dBi
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)

Note: For 802.11an HT20 / ac VHT20 and 802.11an HT40 / ac VHT40 mode, the whole testing have

assessed only 802.11an 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 Site	Sporton International (Shenzhen) Inc.		
Test Site Location	No. 3 Bldg the third floor of south, Shahe River west, Fengzeyuan Warehouse, Nanshan District, Shenzhen City, Guangdong Province 518055, China TEL: +86-755- 3320-2398		
Test Site No.	**Sporton Site No.**	**FCC designation No.**	**FCC Test Firm Registration No.**
	03CH02-SZ	CN1256	421272

1.7 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)
5180-5240 MHz Band 1 (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)
5260-5320 MHz Band 2 (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)
5500-5720 MHz Band 3 (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

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
TDWR Channel	118*	5590	124	5620
	120	5600	126*	5630
	122#	5610	128	5640

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
Straddle Channel	138#	5690	144	5720
	142*	5710		

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 : GSM 850 Idle + Bluetooth Link + WLAN Link(5G) + USB Cable(Charging from Adapter)
Remark: For Radiated Test Cases, The tests were performed with Adapter and USB cable.	

Ch. #		Band I：5180-5240 MHz	Band II：5260-5320 MHz	Band III：5500-5720MHz
		802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140
Straddle		-	-	144

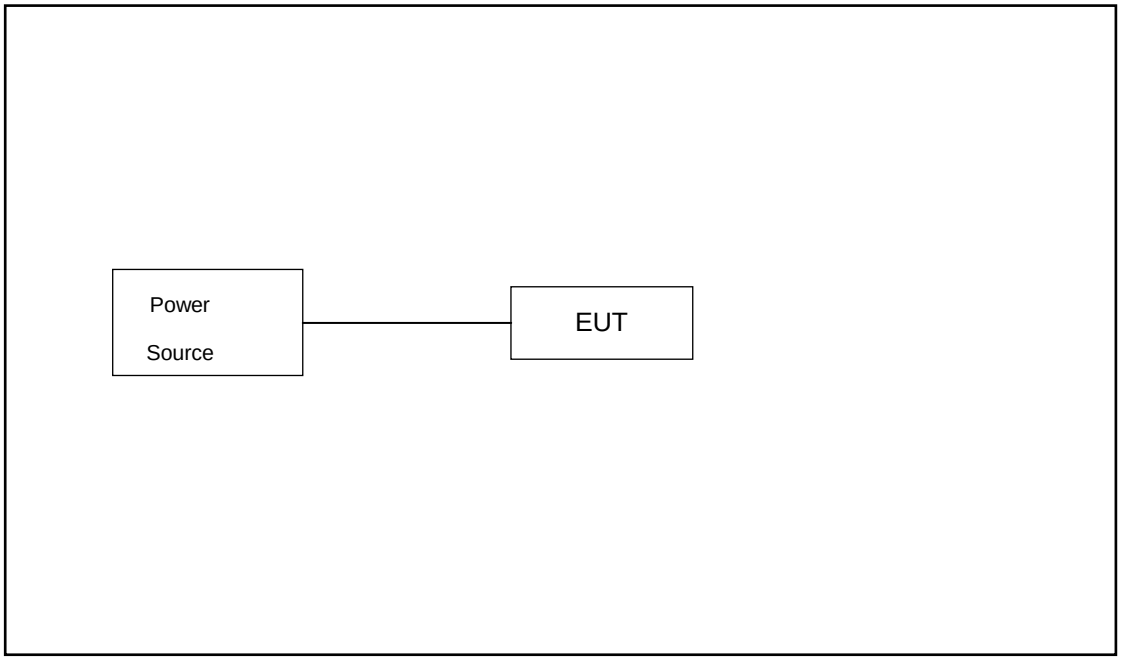
Ch. #		Band I：5180-5240 MHz	Band II：5260-5320 MHz	Band III：5500-5720MHz
		802.11n HT20	802.11n HT20	802.11n HT20
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140
Straddle		-	-	144

Ch. #		Band I：5180-5240 MHz	Band II：5260-5320 MHz	Band III：5500-5720MHz
		802.11n HT40	802.11n HT40	802.11n HT40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	134
Straddle		-	-	142

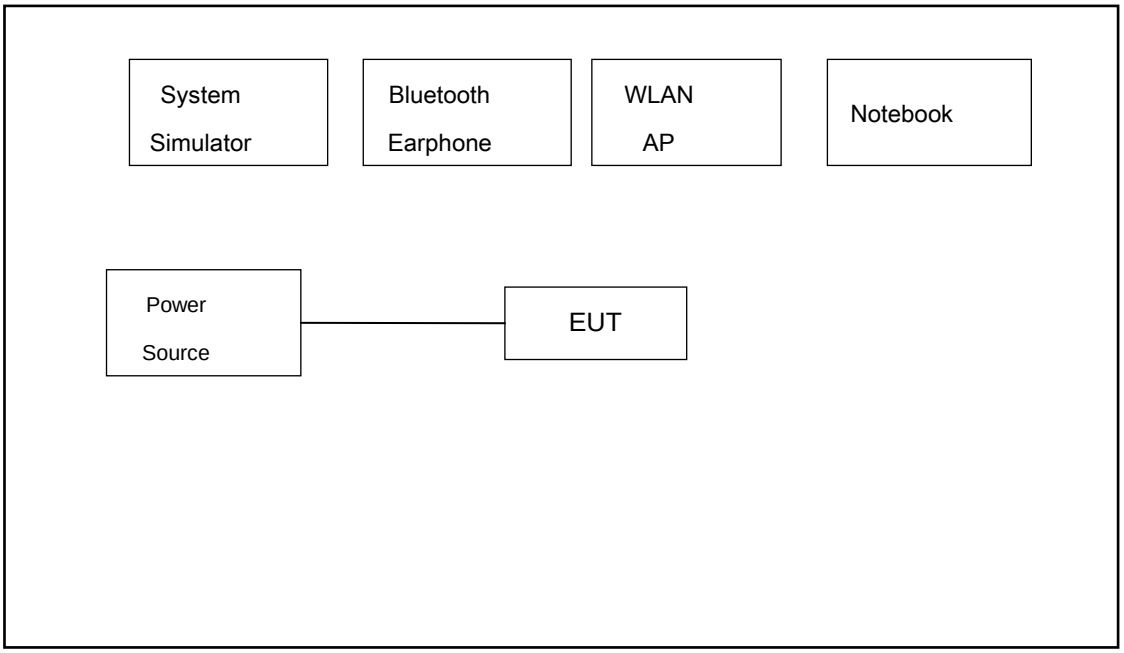
Ch. #		Band I：5180-5240 MHz	Band II：5260-5320 MHz	Band III：5500-5720MHz
		802.11ac VHT80	802.11ac VHT80	802.11ac VHT80
L	Low	-	-	106
M	Middle	42	58	-
H	High	-	-	122
Straddle		-	-	138

2.3 Connection Diagram of Test System

For Radiation



For Conducted Emission



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded,1.8m
2.	WLAN AP	D-Link	DIR-820L	KA2IR820LA1	N/A	Unshielded,1.8m
3.	Notebook	Lenovo	E540	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	Bluetooth Earphone	Samsung	EO-MG900	N/A	N/A	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 6.6 dB and 10dB attenuator.

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 6.6 + 10 = 16.6 (dB)

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.

For Straddle Channel, According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, If the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

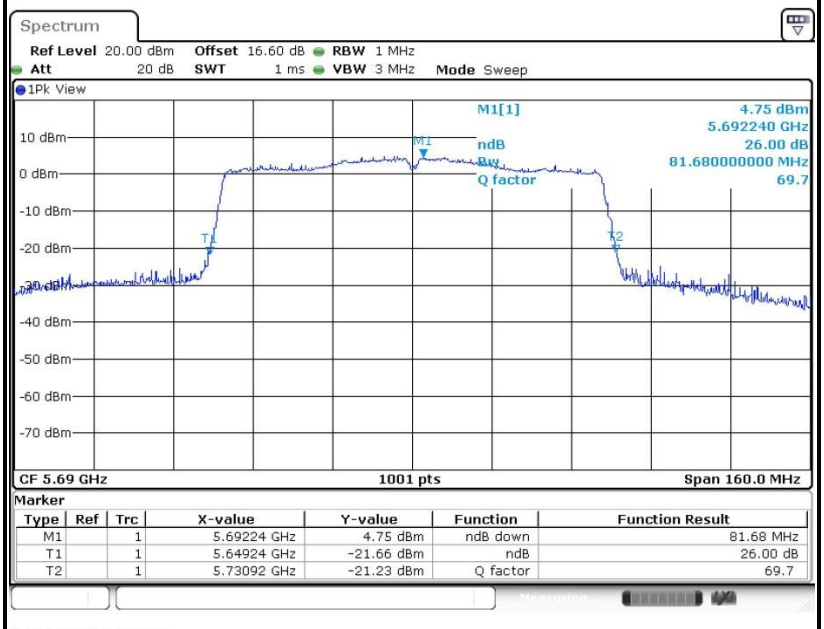
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB 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) ≥ 3 * RBW.
8. Measure and record the results in the test report.

3.1.4 Test Setup

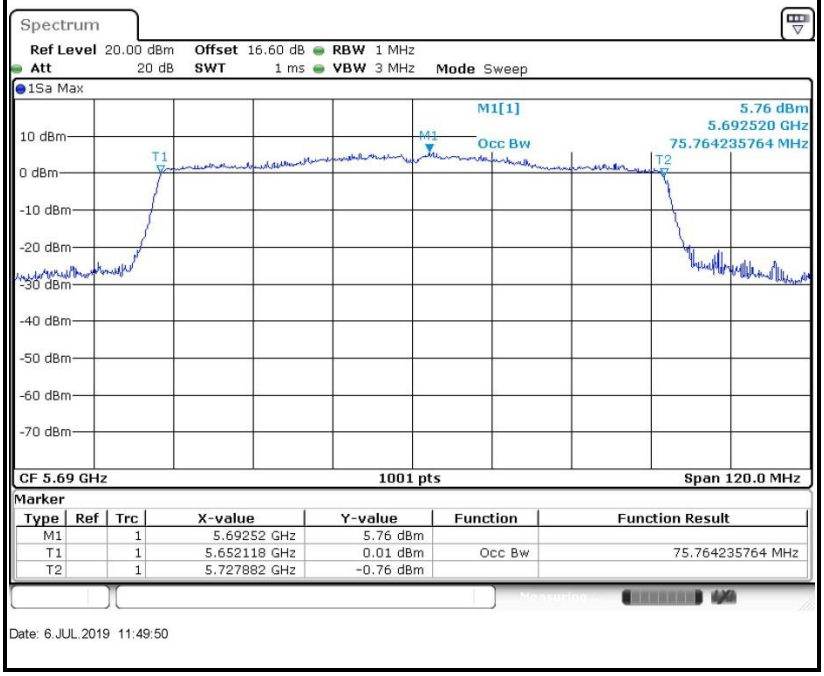
3.1.5 Test Result of 26dB & 99% Occupied Bandwidth

Please refer to Appendix A.

Maximum 26dB Bandwidth



Maximum 99% Occupied Bandwidth



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.

For Straddle Channel, According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, If the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

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

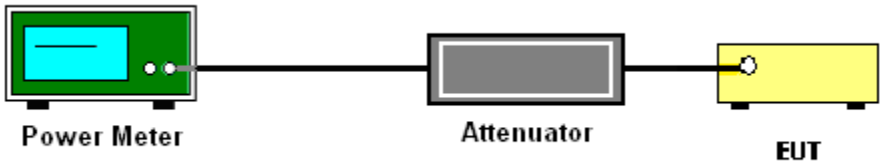
The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

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.

For Straddle Channel, According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, If the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

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.

For Straddle Channel, According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, If the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

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 ≥ 3 MHz.
- Number of points in sweep ≥ 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.

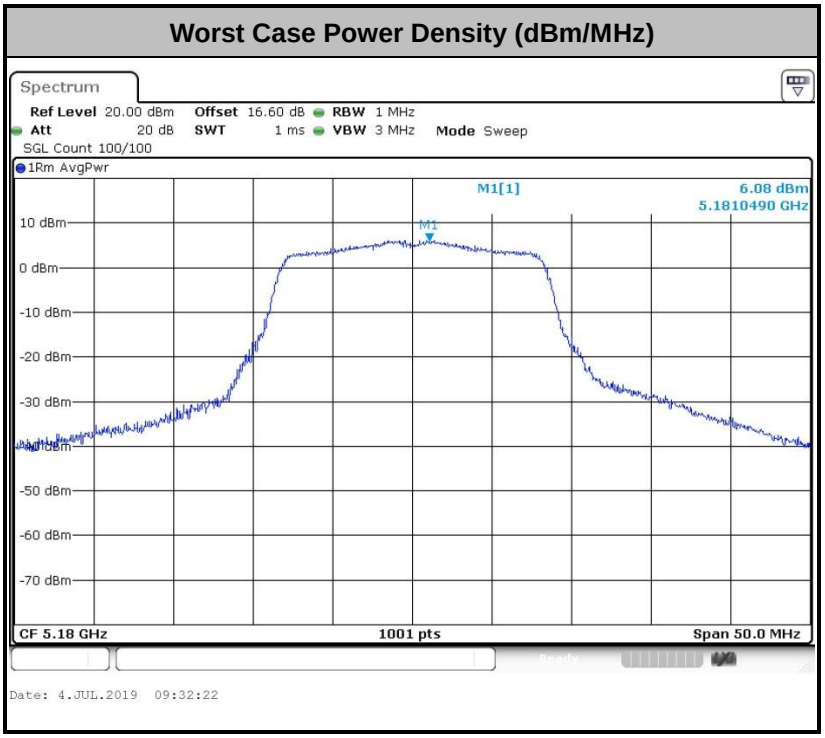
1. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.

3.3.4 Test Setup

3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

Worst Case Power Density (dBm/MHz)



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	68.2

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

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

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 ≥ 3 MHz
   - Detector = Peak
   - Sweep time = auto
   - Trace mode = max hold

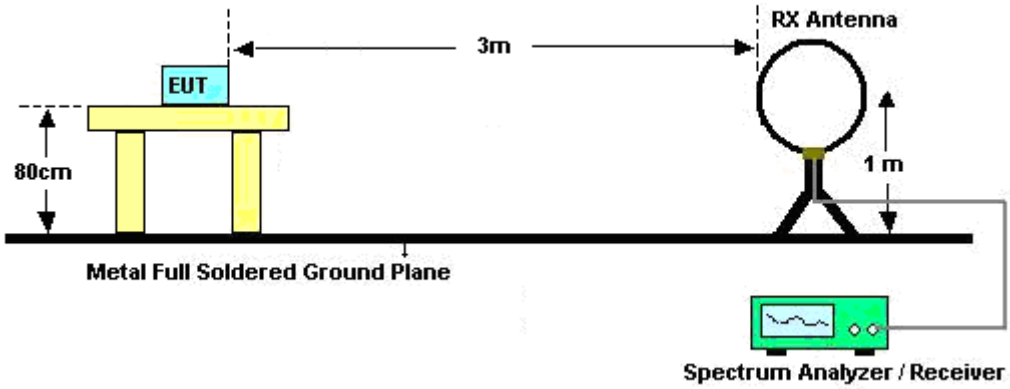
   (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz
   - RBW = 1 MHz
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting 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.

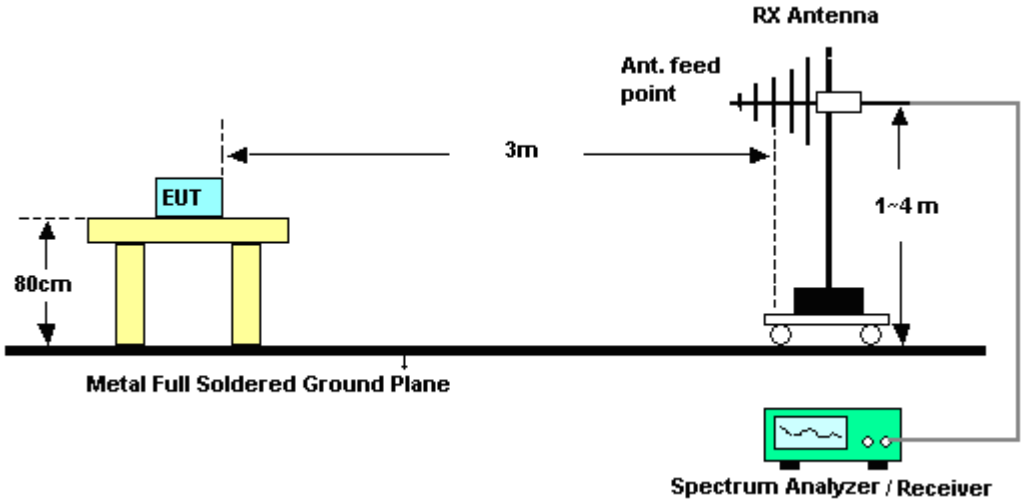
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst 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 average 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

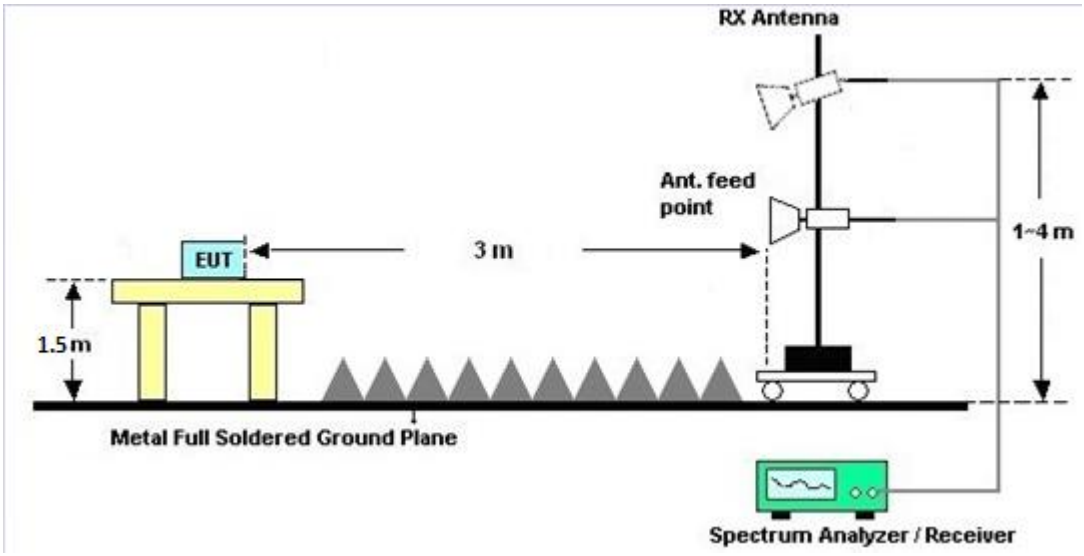
For radiated emissions below 30MHz



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)

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.

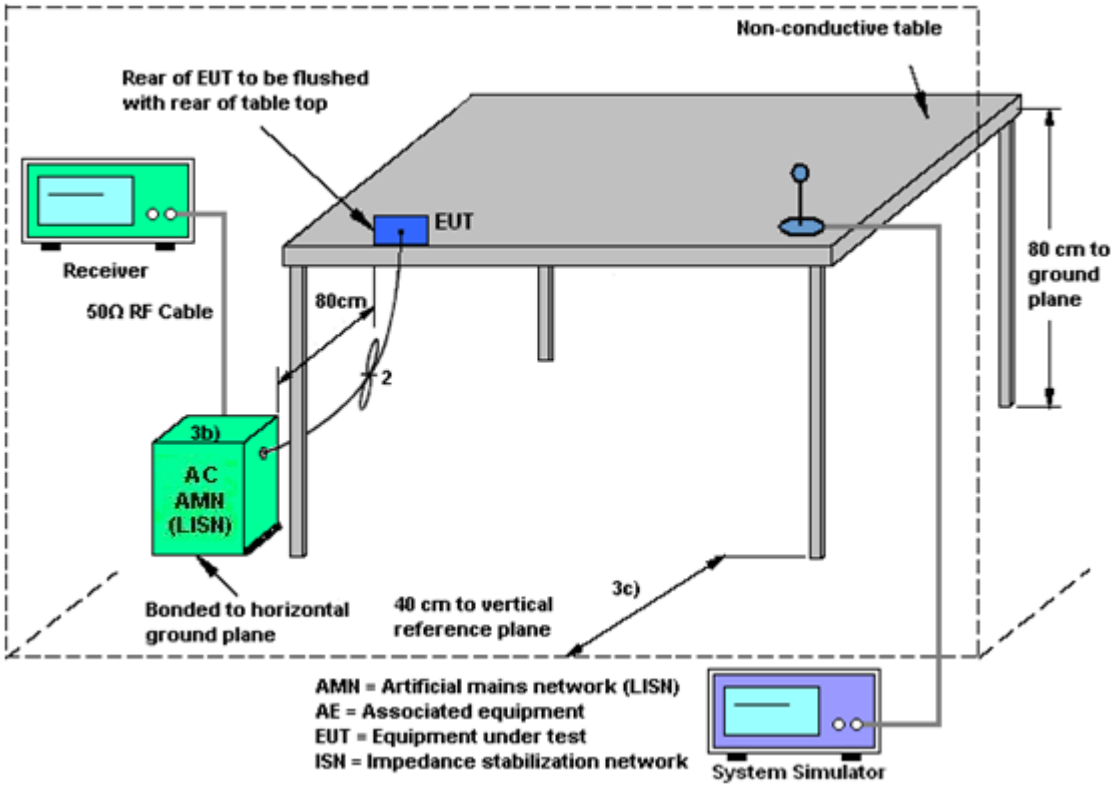
3.5.2 Measuring Instruments

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 Automatically Discontinue Transmission

3.6.1 Limit of Automatically Discontinue Transmission

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

3.6.2 Measuring Instruments

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

3.6.3 Test Result of Automatically Discontinue Transmission

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

3.7 Antenna Requirements

3.7.1 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.

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 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. 18, 2019	Jul. 04, 2019~ Jul. 06, 2019	Apr. 17, 2020	Conducted (TH01-SZ)
Pulse Power Senor	Anritsu	MA2411B	1207253	30MHz~40GHz	Dec. 22, 2018	Jul. 04, 2019~ Jul. 06, 2019	Dec. 21, 2019	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1218010	50MHz Bandwidth	Dec. 22, 2018	Jul. 04, 2019~ Jul. 06, 2019	Dec. 21, 2019	Conducted (TH01-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Apr. 19, 2019	Jul. 08, 2019	Apr. 18, 2020	Radiation (03CH02-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	May 29, 2019	Jul. 08, 2019	May 28, 2020	Radiation (03CH02-SZ)
Bilog Antenna	TeseQ	CBL6112D	35408	30MHz-2GHz	Apr. 19, 2019	Jul. 08, 2019	Apr. 18, 2020	Radiation (03CH02-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1285	1GHz~18GHz	Jan. 07, 2019	Jul. 08, 2019	Jan. 06, 2020	Radiation (03CH02-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 16, 2018	Jul. 08, 2019	Jul. 15, 2019	Radiation (03CH02-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Mar. 30, 2019	Jul. 08, 2019	Mar. 29, 2020	Radiation (03CH02-SZ)
LF Amplifier	Burgeon	BPA-530	102211	0.01~3000Mhz	Oct. 18, 2018	Jul. 08, 2019	Oct. 17, 2019	Radiation (03CH02-SZ)
HF Amplifier	MITEQ	AMF-7D-00101800-30-10P-R	1707137	1GHz~18GHz	Oct. 20, 2018	Jul. 08, 2019	Oct. 19, 2019	Radiation (03CH02-SZ)
Amplifier	Agilent	8449B	3008A01023	1GHz~26.5GHz	Oct. 18, 2018	Jul. 08, 2019	Oct. 17, 2019	Radiation (03CH02-SZ)
AC Power Source	Chroma	61601	616010002470	N/A	NCR	Jul. 08, 2019	NCR	Radiation (03CH02-SZ)
Turn Table	Chaintek	T-200	N/A	0~360 degree	NCR	Jul. 08, 2019	NCR	Radiation (03CH02-SZ)
Antenna Mast	Chaintek	MBS-400	N/A	1 m~4 m	NCR	Jul. 08, 2019	NCR	Radiation (03CH02-SZ)
EMI Receiver	R&S	ESR7	101630	9kHz~7GHz;	Dec. 23, 2018	Jul. 05, 2019	Dec. 22, 2019	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103912	9kHz~30MHz	Oct. 18, 2018	Jul. 05, 2019	Oct. 17, 2019	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	EMCO	3816/2SH	00103892	9kHz~30MHz	Dec. 23, 2018	Jul. 05, 2019	Dec. 22, 2019	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000891	100Vac~250Vac	Jul. 18, 2018	Jul. 05, 2019	Jul. 17, 2019	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))	**2.6 dB**

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.1dB**

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.0dB**

Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.4dB**

Appendix A. Conducted Test Results

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Hayden Chen	Temperature:	21~25	°C
Test Date:	2019/7/4~2019/7/6	Relative Humidity:	51~54	%

Report Number : FR961801E

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	18.38	22.58	-	22.64		
11a	6Mbps	1	44	5220	18.58	22.83	-	22.69		
11a	6Mbps	1	48	5240	18.58	23.48	-	22.69		
HT20	MCS0	1	36	5180	19.23	22.83	-	22.84		
HT20	MCS0	1	44	5220	19.53	22.93	-	22.91		
HT20	MCS0	1	48	5240	19.28	23.08	-	22.85		
HT40	MCS0	1	38	5190	36.66	41.00	-	23.01		
HT40	MCS0	1	46	5230	36.76	41.00	-	23.01		
VHT80	MCS0	1	42	5210	75.40	81.68	-	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	0.13	15.51	24.00	1.00		Pass
11a	6Mbps	1	44	5220	0.13	15.20	24.00	1.00		Pass
11a	6Mbps	1	48	5240	0.13	15.22	24.00	1.00		Pass
HT20	MCS0	1	36	5180	0.14	15.31	24.00	1.00		Pass
HT20	MCS0	1	44	5220	0.14	14.95	24.00	1.00		Pass
HT20	MCS0	1	48	5240	0.14	14.92	24.00	1.00		Pass
HT40	MCS0	1	38	5190	0.26	13.41	24.00	1.00		Pass
HT40	MCS0	1	46	5230	0.26	15.01	24.00	1.00		Pass
VHT20	MCS0	1	36	5180	0.15	12.60	24.00	1.00		Pass
VHT20	MCS0	1	44	5220	0.15	12.33	24.00	1.00		Pass
VHT20	MCS0	1	48	5240	0.15	12.13	24.00	1.00		Pass
VHT40	MCS0	1	38	5190	0.26	9.91	24.00	1.00		Pass
VHT40	MCS0	1	46	5230	0.26	9.71	24.00	1.00		Pass
VHT80	MCS0	1	42	5210	0.53	11.51	24.00	1.00		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	0.13	6.21	11.00	1.00		Pass
11a	6Mbps	1	44	5220	0.13	5.95	11.00	1.00		Pass
11a	6Mbps	1	48	5240	0.13	5.73	11.00	1.00		Pass
HT20	MCS0	1	36	5180	0.14	5.71	11.00	1.00		Pass
HT20	MCS0	1	44	5220	0.14	5.34	11.00	1.00		Pass
HT20	MCS0	1	48	5240	0.14	5.12	11.00	1.00		Pass
HT40	MCS0	1	38	5190	0.26	2.40	11.00	1.00		Pass
HT40	MCS0	1	46	5230	0.26	2.61	11.00	1.00		Pass
VHT80	MCS0	1	42	5210	0.53	-4.77	11.00	1.00		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	18.78	22.63	23.74	29.74	23.98	
11a	6M bps	1	60	5300	18.73	22.73	23.73	29.73	23.98	
11a	6M bps	1	64	5320	18.68	22.83	23.71	29.71	23.98	
HT20	MCS 0	1	52	5260	19.28	22.93	23.85	29.85	23.98	
HT20	MCS 0	1	60	5300	19.33	22.63	23.86	29.86	23.98	
HT20	MCS 0	1	64	5320	19.33	22.98	23.86	29.86	23.98	
HT40	MCS 0	1	54	5270	36.76	41.81	23.98	30.00	23.98	
HT40	MCS 0	1	62	5310	36.86	40.82	23.98	30.00	23.98	
VHT80	MCS 0	1	58	5290	75.52	81.68	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	0.13	15.12	23.98	1.00	26.99	Pass
11a	6M bps	1	60	5300	0.13	14.85	23.98	1.00	26.99	Pass
11a	6M bps	1	64	5320	0.13	15.03	23.98	1.00	26.99	Pass
HT20	MCS 0	1	52	5260	0.14	14.83	23.98	1.00	26.99	Pass
HT20	MCS 0	1	60	5300	0.14	14.51	23.98	1.00	26.99	Pass
HT20	MCS 0	1	64	5320	0.14	14.74	23.98	1.00	26.99	Pass
HT40	MCS 0	1	54	5270	0.26	14.77	23.98	1.00	26.99	Pass
HT40	MCS 0	1	62	5310	0.26	12.86	23.98	1.00	26.99	Pass
VHT20	MCS 0	1	52	5260	0.15	12.03	23.98	1.00	26.99	Pass
VHT20	MCS 0	1	60	5300	0.15	12.01	23.98	1.00	26.99	Pass
VHT20	MCS 0	1	64	5320	0.15	12.00	23.98	1.00	26.99	Pass
VHT40	MCS 0	1	54	5270	0.26	10.46	23.98	1.00	26.99	Pass
VHT40	MCS 0	1	62	5310	0.26	10.50	23.98	1.00	26.99	Pass
VHT80	MCS 0	1	58	5290	0.53	12.81	23.98	1.00	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	0.13	5.76	11.00	1.00		Pass
11a	6M bps	1	60	5300	0.13	5.60	11.00	1.00		Pass
11a	6M bps	1	64	5320	0.13	5.49	11.00	1.00		Pass
HT20	MCS 0	1	52	5260	0.14	4.85	11.00	1.00		Pass
HT20	MCS 0	1	60	5300	0.14	5.07	11.00	1.00		Pass
HT20	MCS 0	1	64	5320	0.14	4.88	11.00	1.00		Pass
HT40	MCS 0	1	54	5270	0.26	2.00	11.00	1.00		Pass
HT40	MCS 0	1	62	5310	0.26	2.20	11.00	1.00		Pass
VHT80	MCS 0	1	58	5290	0.53	-3.26	11.00	1.00		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	18.68	22.83	23.71	29.71	23.98	
11a	6M bps	1	116	5580	18.78	22.68	23.74	29.74	23.98	
11a	6M bps	1	140	5700	19.13	23.58	23.82	29.82	23.98	
11a	6Mbps	1	144	5720	18.88	25.33	23.76	29.76	23.98	
HT20	MCS 0	1	100	5500	19.13	22.78	23.82	29.82	23.98	
HT20	MCS 0	1	116	5580	19.53	22.88	23.91	29.91	23.98	
HT20	MCS 0	1	140	5700	19.48	24.63	23.90	29.90	23.98	
HT20	MCS0	1	144	5720	19.48	22.88	23.90	29.90	23.98	
HT40	MCS 0	1	102	5510	36.86	41.00	23.98	30.00	23.98	
HT40	MCS 0	1	110	5550	36.86	40.73	23.98	30.00	23.98	
HT40	MCS 0	1	134	5670	36.86	41.36	23.98	30.00	23.98	
HT40	MCS0	1	142	5710	36.96	42.08	23.98	30.00	23.98	
VHT80	MCS 0	1	106	5530	75.52	81.52	23.98	30.00	23.98	
VHT80	MCS 0	1	122	5610	75.64	81.68	23.98	30.00	23.98	
VHT80	MCS0	1	138	5690	75.76	81.68	23.98	30.00	23.98	

TEST RESULTS DATA
Average Power Table

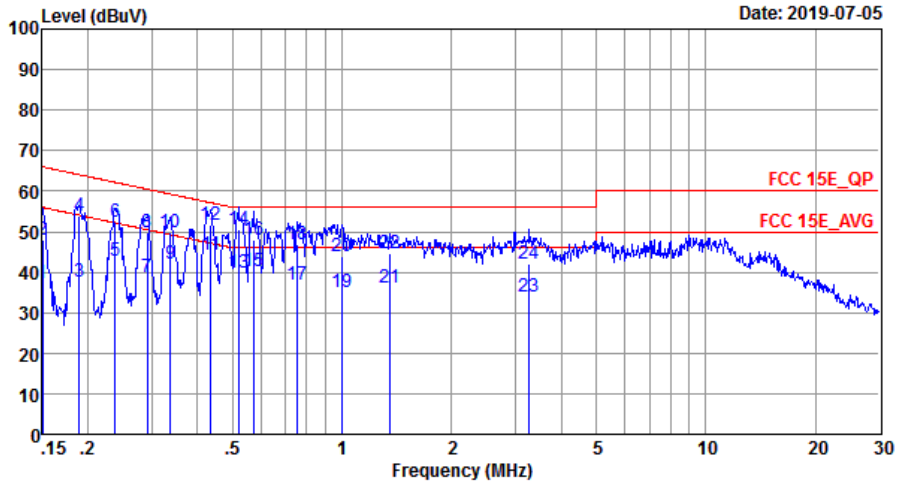
FCC Band III										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)	EIRP Power Limit (dBm)	Pass/Fail
11a	6M bps	1	100	5500	0.13	15.30	23.98	1.00	26.99	Pass
11a	6M bps	1	116	5580	0.13	15.36	23.98	1.00	26.99	Pass
11a	6M bps	1	140	5700	0.13	15.50	23.98	1.00	26.99	Pass
11a	6M bps	1	144	5720	0.13	15.27	23.98	1.00	26.99	Pass
HT20	MCS 0	1	100	5500	0.14	14.85	23.98	1.00	26.99	Pass
HT20	MCS 0	1	116	5580	0.14	15.06	23.98	1.00	26.99	Pass
HT20	MCS 0	1	140	5700	0.14	15.17	23.98	1.00	26.99	Pass
HT20	MCS 0	1	144	5720	0.14	14.98	23.98	1.00	26.99	Pass
HT40	MCS 0	1	102	5510	0.26	15.18	23.98	1.00	26.99	Pass
HT40	MCS 0	1	110	5550	0.26	15.21	23.98	1.00	26.99	Pass
HT40	MCS 0	1	134	5670	0.26	14.70	23.98	1.00	26.99	Pass
HT40	MCS 0	1	142	5710	0.26	15.26	23.98	1.00	26.99	Pass
VHT20	MCS 0	1	100	5500	0.15	12.36	23.98	1.00	26.99	Pass
VHT20	MCS 0	1	116	5580	0.15	12.45	23.98	1.00	26.99	Pass
VHT20	MCS 0	1	140	5700	0.15	11.67	23.98	1.00	26.99	Pass
VHT20	MCS 0	1	144	5720	0.15	12.25	23.98	1.00	26.99	Pass
VHT40	MCS 0	1	102	5510	0.26	10.02	23.98	1.00	26.99	Pass
VHT40	MCS 0	1	110	5550	0.26	10.18	23.98	1.00	26.99	Pass
VHT40	MCS 0	1	134	5670	0.26	10.48	23.98	1.00	26.99	Pass
VHT40	MCS 0	1	142	5710	0.26	10.14	23.98	1.00	26.99	Pass
VHT80	MCS 0	1	106	5530	0.53	13.22	23.98	1.00	26.99	Pass
VHT80	MCS 0	1	122	5610	0.53	13.20	23.98	1.00	26.99	Pass
VHT80	MCS 0	1	138	5690	0.53	12.71	23.98	1.00	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	0.13	5.74	11.00	1.00		Pass
11a	6M bps	1	116	5580	0.13	6.01	11.00	1.00		Pass
11a	6M bps	1	140	5700	0.13	6.10	11.00	1.00		Pass
11a	6Mbps	1	144	5720	0.13	5.98	11.00	1.00		Pass
HT20	MCS 0	1	100	5500	0.14	5.25	11.00	1.00		Pass
HT20	MCS 0	1	116	5580	0.14	5.38	11.00	1.00		Pass
HT20	MCS 0	1	140	5700	0.14	5.48	11.00	1.00		Pass
HT20	MCS0	1	144	5720	0.14	5.10	11.00	1.00		Pass
HT40	MCS 0	1	102	5510	0.26	2.62	11.00	1.00		Pass
HT40	MCS 0	1	110	5550	0.26	2.61	11.00	1.00		Pass
HT40	MCS 0	1	134	5670	0.26	2.20	11.00	1.00		Pass
HT40	MCS0	1	142	5710	0.26	2.87	11.00	1.00		Pass
VHT80	MCS 0	1	106	5530	0.53	-2.46	11.00	1.00		Pass
VHT80	MCS 0	1	122	5610	0.53	-2.58	11.00	1.00		Pass
VHT80	MCS0	1	138	5690	0.53	-3.61	11.00	1.00		Pass

Appendix B. AC Conducted Emission Test Results

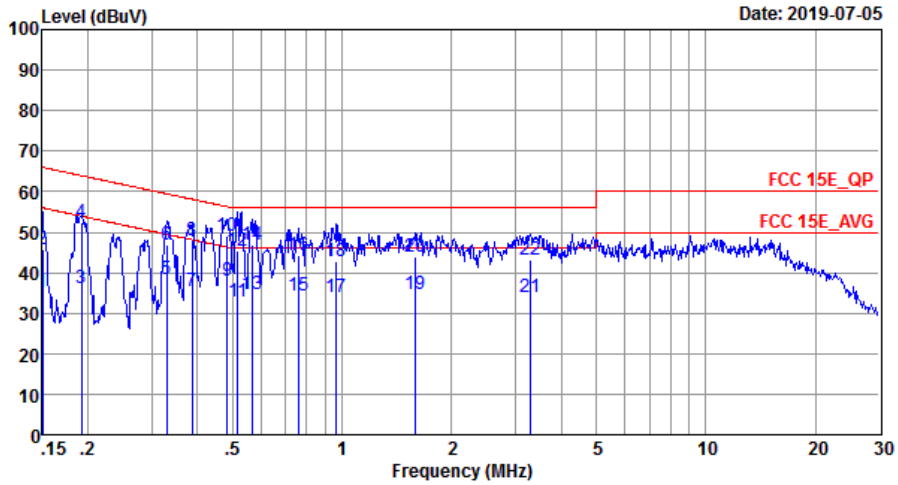
Test Engineer :	Bear Xiong	Temperature :	22~25℃
		Relative Humidity :	50~55%
Test Voltage :	120Vac / 60Hz	Phase :	Line



Site : CO01-SZ
Condition: FCC 15E_QP LISN_20180719_L LINE

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1		0.15	37.26	-18.74	56.00	27.17	0.03	10.06	Average
2		0.15	48.09	-17.91	66.00	38.00	0.03	10.06	QP
3		0.19	37.69	-16.37	54.06	27.59	0.03	10.07	Average
4		0.19	53.90	-10.16	64.06	43.80	0.03	10.07	QP
5		0.24	42.65	-9.52	52.17	32.55	0.03	10.07	Average
6		0.24	52.26	-9.91	62.17	42.16	0.03	10.07	QP
7		0.29	38.71	-11.79	50.50	28.60	0.03	10.08	Average
8		0.29	49.80	-10.70	60.50	39.69	0.03	10.08	QP
9		0.34	42.19	-7.08	49.27	32.08	0.03	10.08	Average
10		0.34	49.73	-9.54	59.27	39.62	0.03	10.08	QP
11	*	0.44	44.40	-2.75	47.15	34.29	0.03	10.08	Average
12		0.44	51.74	-5.41	57.15	41.63	0.03	10.08	QP
13		0.52	39.83	-6.17	46.00	29.73	0.02	10.08	Average
14		0.52	50.37	-5.63	56.00	40.27	0.02	10.08	QP
15		0.57	40.34	-5.66	46.00	30.24	0.02	10.08	Average
16		0.57	48.11	-7.89	56.00	38.01	0.02	10.08	QP
17		0.75	36.78	-9.22	46.00	26.67	0.03	10.08	Average
18		0.75	46.73	-9.27	56.00	36.62	0.03	10.08	QP
19		1.00	34.92	-11.08	46.00	24.76	0.07	10.09	Average
20		1.00	43.86	-12.14	56.00	33.70	0.07	10.09	QP
21		1.35	36.24	-9.76	46.00	26.05	0.09	10.10	Average
22		1.35	44.75	-11.25	56.00	34.56	0.09	10.10	QP
23		3.28	33.93	-12.07	46.00	23.61	0.17	10.15	Average
24		3.28	41.98	-14.02	56.00	31.66	0.17	10.15	QP

Test Engineer :	Bear Xiong	**Temperature :**	22~25℃
		Relative Humidity :	50~55%
Test Voltage :	120Vac / 60Hz	**Phase :**	Neutral



Site : CO01-SZ
Condition: FCC 15E_QP LISN_20180719_N NEUTRAL

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1		0.15	35.02	-20.98	56.00	24.93	0.03	10.06	Average
2		0.15	45.62	-20.38	66.00	35.53	0.03	10.06	QP
3		0.19	36.01	-17.92	53.93	25.91	0.03	10.07	Average
4		0.19	52.44	-11.49	63.93	42.34	0.03	10.07	QP
5		0.33	38.37	-11.07	49.44	28.26	0.03	10.08	Average
6		0.33	46.74	-12.70	59.44	36.63	0.03	10.08	QP
7		0.39	35.30	-12.82	48.12	25.20	0.02	10.08	Average
8		0.39	47.90	-10.22	58.12	37.80	0.02	10.08	QP
9		0.48	37.86	-8.41	46.27	27.76	0.02	10.08	Average
10	*	0.48	48.94	-7.33	56.27	38.84	0.02	10.08	QP
11		0.52	32.94	-13.06	46.00	22.84	0.02	10.08	Average
12		0.52	45.57	-10.43	56.00	35.47	0.02	10.08	QP
13		0.56	34.84	-11.16	46.00	24.74	0.02	10.08	Average
14		0.56	47.00	-9.00	56.00	36.90	0.02	10.08	QP
15		0.76	34.21	-11.79	46.00	24.10	0.03	10.08	Average
16		0.76	44.38	-11.62	56.00	34.27	0.03	10.08	QP
17		0.96	33.94	-12.06	46.00	23.80	0.05	10.09	Average
18		0.96	42.98	-13.02	56.00	32.84	0.05	10.09	QP
19		1.59	34.81	-11.19	46.00	24.66	0.05	10.10	Average
20		1.59	43.85	-12.15	56.00	33.70	0.05	10.10	QP
21		3.29	34.11	-11.89	46.00	23.92	0.04	10.15	Average
22		3.29	43.27	-12.73	56.00	33.08	0.04	10.15	QP

Appendix B. Radiated Spurious Emission

Band 1 - 5150~5250MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp 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		5148.98	52.67	-21.33	74	44.58	31.25	10.01	33.17	122	235	P	H
		5149.5	42.04	-11.96	54	33.95	31.25	10.01	33.17	122	235	A	H
	*	5180	102.4	-	-	94.25	31.28	10.03	33.16	122	235	P	H
		5180	94.92	-	-	86.77	31.28	10.03	33.16	122	235	A	H
		5148.98	56.28	-17.72	74	48.19	31.25	10.01	33.17	100	242	P	V
		5149.76	48.38	-5.62	54	40.29	31.25	10.01	33.17	100	242	A	V
	*	5180	106.59	-	-	98.44	31.28	10.03	33.16	100	242	P	V
		5180	98.92	-	-	90.77	31.28	10.03	33.16	100	242	A	V
802.11a CH 44 5220MHz		5042.38	47.98	-26.02	74	40.08	31.18	9.91	33.19	122	237	P	H
		5058.76	38.59	-15.41	54	30.68	31.19	9.91	33.19	122	237	A	H
	*	5220	102.08	-	-	93.87	31.3	10.07	33.16	122	237	P	H
		5220	94.3	-	-	86.09	31.3	10.07	33.16	122	237	A	H
		5393.28	45.56	-28.44	74	37.03	31.42	10.23	33.12	122	237	P	H
		5457.84	37.35	-16.65	54	28.71	31.47	10.28	33.11	122	237	A	H
		5072.54	48.93	-25.07	74	40.96	31.21	9.94	33.18	100	242	P	V
		5150	39.88	-14.12	54	31.79	31.25	10.01	33.17	100	242	A	V
	*	5220	106.05	-	-	97.84	31.3	10.07	33.16	100	242	P	V
		5220	99.07	-	-	90.86	31.3	10.07	33.16	100	242	A	V
		5447.76	46.41	-27.59	74	37.77	31.47	10.28	33.11	100	242	P	V
		5405.76	38.55	-15.45	54	30.01	31.43	10.23	33.12	100	242	A	V

802.11a CH 48 5240MHz		5088.4	47.38	-26.62	74	39.39	31.21	9.96	33.18	122	237	P	H
		5083.2	38.67	-15.33	54	30.7	31.21	9.94	33.18	122	237	A	H
	*	5240	101.98	-	-	93.72	31.31	10.1	33.15	122	237	P	H
		5240	94.66	-	-	86.4	31.31	10.1	33.15	122	237	A	H
		5449.68	46.22	-27.78	74	37.58	31.47	10.28	33.11	122	237	P	H
		5455.92	37.33	-16.67	54	28.69	31.47	10.28	33.11	122	237	A	H
		5144.3	48.57	-25.43	74	40.48	31.25	10.01	33.17	100	242	P	V
		5138.84	39.34	-14.66	54	31.26	31.24	10.01	33.17	100	242	A	V
	*	5240	105.21	-	-	96.95	31.31	10.1	33.15	100	242	P	V
		5240	98.32	-	-	90.06	31.31	10.1	33.15	100	242	A	V
		5396.64	46.7	-27.3	74	38.16	31.43	10.23	33.12	100	242	P	V
		5426.4	38.31	-15.69	54	29.73	31.44	10.25	33.11	100	242	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 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	48.99	-19.21	68.2	53.56	39.84	14.58	58.99	152	260	P	H
		15540	48.06	-25.94	74	50.7	38.86	17.43	58.93	189	238	P	H
		10360	48.71	-19.49	68.2	53.28	39.84	14.58	58.99	152	260	P	V
		15540	48.83	-25.17	74	51.47	38.86	17.43	58.93	189	238	P	V
802.11a CH 44 5220MHz		10440	48.69	-19.51	68.2	53.03	39.93	14.65	58.92	150	230	P	H
		15660	48.93	-25.07	74	52.16	38.33	17.5	59.06	160	225	P	H
		10440	48.63	-19.57	68.2	52.97	39.93	14.65	58.92	150	230	P	V
		15660	48.48	-25.52	74	51.71	38.33	17.5	59.06	160	225	P	V
802.11a CH 48 5240MHz		10480	48.73	-19.47	68.2	52.93	39.99	14.67	58.86	150	289	P	H
		15720	47.64	-26.36	74	51.19	38.02	17.55	59.12	150	291	P	H
		10480	48.51	-19.69	68.2	52.71	39.99	14.67	58.86	150	289	P	V
		15720	47.58	-26.42	74	51.13	38.02	17.55	59.12	150	291	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 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)
		5150	50.59	-17.61	68.2	42.5	31.25	10.01	33.17	100	1	P	H
		5148.98	41.6	-12.4	54	33.51	31.25	10.01	33.17	100	1	A	H
802.11n	*	5180	100.25	-	-	92.1	31.28	10.03	33.16	100	1	P	H
HT20		5180	94.01	-	-	85.86	31.28	10.03	33.16	100	1	A	H
CH 36		5149.24	56.68	-17.32	74	48.59	31.25	10.01	33.17	100	245	P	V
5180MHz		5149.76	44.69	-9.31	54	36.6	31.25	10.01	33.17	100	245	A	V
	*	5180	104.86	-	-	96.71	31.28	10.03	33.16	100	245	P	V
		5180	97.51	-	-	89.36	31.28	10.03	33.16	100	245	A	V
		5112.32	48.26	-25.74	74	40.25	31.23	9.96	33.18	100	0	P	H
		5061.36	39.06	-14.94	54	31.15	31.19	9.91	33.19	100	0	A	H
	*	5220	100.77	-	-	92.56	31.3	10.07	33.16	100	0	P	H
		5220	93.39	-	-	85.18	31.3	10.07	33.16	100	0	A	H
802.11n		5442.96	46.79	-27.21	74	38.16	31.46	10.28	33.11	100	0	P	H
HT20		5456.88	37.77	-16.23	54	29.13	31.47	10.28	33.11	100	0	A	H
CH 44		5087.62	48.21	-25.79	74	40.22	31.21	9.96	33.18	100	245	P	V
5220MHz		5149.76	39.34	-14.66	54	31.25	31.25	10.01	33.17	100	245	A	V
	*	5220	103.47	-	-	95.26	31.3	10.07	33.16	100	245	P	V
		5220	97.47	-	-	89.26	31.3	10.07	33.16	100	245	A	V
		5434.32	45.97	-28.03	74	37.37	31.46	10.25	33.11	100	245	P	V
		5446.32	37.67	-16.33	54	29.03	31.47	10.28	33.11	100	245	A	V

		5030.68	48.02	-25.98	74	40.15	31.17	9.89	33.19	100	0	P	H
		5040.82	39.03	-14.97	54	31.13	31.18	9.91	33.19	100	0	A	H
	*	5240	100.69	-	-	92.43	31.31	10.1	33.15	100	0	P	H
		5240	93.91	-	-	85.65	31.31	10.1	33.15	100	0	A	H
802.11n		5453.52	47.06	-26.94	74	38.42	31.47	10.28	33.11	100	0	P	H
HT20		5437.92	37.69	-16.31	54	29.06	31.46	10.28	33.11	100	0	A	H
CH 48		5141.96	48.44	-25.56	74	40.35	31.25	10.01	33.17	100	244	P	V
5240MHz		5054.08	39.15	-14.85	54	31.25	31.18	9.91	33.19	100	244	A	V
	*	5240	104.38	-	-	96.12	31.31	10.1	33.15	100	244	P	V
		5240	97.56	-	-	89.3	31.31	10.1	33.15	100	244	A	V
		5442	47.09	-26.91	74	38.46	31.46	10.28	33.11	100	244	P	V
		5442.72	37.99	-16.01	54	29.36	31.46	10.28	33.11	100	244	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 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		10360	47.97	-20.23	68.2	52.54	39.84	14.58	58.99	152	260	P	H
HT20		15540	48.72	-25.28	74	51.36	38.86	17.43	58.93	189	238	P	H
CH 36		10360	47.81	-20.39	68.2	52.38	39.84	14.58	58.99	152	260	P	V
5180MHz		15540	47.68	-26.32	74	50.32	38.86	17.43	58.93	189	238	P	V
802.11n		10440	48.48	-19.72	68.2	52.82	39.93	14.65	58.92	150	230	P	H
HT20		15660	48.32	-25.68	74	51.55	38.33	17.5	59.06	160	225	P	H
CH 44		10440	47.77	-20.43	68.2	52.11	39.93	14.65	58.92	150	230	P	V
5220MHz		15660	47.73	-26.27	74	50.96	38.33	17.5	59.06	160	225	P	V
802.11n		10480	47.69	-20.51	68.2	51.89	39.99	14.67	58.86	150	289	P	H
HT20		15720	48.23	-25.77	74	51.78	38.02	17.55	59.12	150	291	P	H
CH 48		10480	47.99	-20.21	68.2	52.19	39.99	14.67	58.86	150	289	P	V
5240MHz		15720	47.41	-26.59	74	50.96	38.02	17.55	59.12	150	291	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 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		5148.46	53.56	-20.44	74	45.47	31.25	10.01	33.17	100	314	P	H
		5150	47.49	-6.51	54	39.4	31.25	10.01	33.17	100	314	A	H
	*	5190	97.14	-	-	88.97	31.28	10.05	33.16	100	314	P	H
		5190	88.65	-	-	80.48	31.28	10.05	33.16	100	314	A	H
		5444.6	46.68	-27.32	74	38.05	31.46	10.28	33.11	100	314	P	H
		5445.72	38.77	-15.23	54	30.13	31.47	10.28	33.11	100	314	A	H
		5149.24	59.51	-14.49	74	51.42	31.25	10.01	33.17	100	242	P	V
		5150	50.86	-3.14	54	42.77	31.25	10.01	33.17	100	242	A	V
	*	5190	101.65	-	-	93.48	31.28	10.05	33.16	100	242	P	V
		5190	92.97	-	-	84.8	31.28	10.05	33.16	100	242	A	V
		5449.36	46.34	-27.66	74	37.7	31.47	10.28	33.11	100	242	P	V
		5457.48	37.93	-16.07	54	29.29	31.47	10.28	33.11	100	242	A	V
802.11n HT40 CH 46 5230MHz		5109.98	48.41	-25.59	74	40.4	31.23	9.96	33.18	100	314	P	H
		5148.72	41.52	-12.48	54	33.43	31.25	10.01	33.17	100	314	A	H
	*	5230	98.38	-	-	90.15	31.31	10.07	33.15	100	314	P	H
		5230	90.67	-	-	82.44	31.31	10.07	33.15	100	314	A	H
		5459.76	46.52	-27.48	74	37.88	31.47	10.28	33.11	100	314	P	H
		5460	38.53	-15.47	54	29.89	31.47	10.28	33.11	100	314	A	H
		5148.72	51.81	-22.19	74	43.72	31.25	10.01	33.17	100	242	P	V
		5148.98	43.02	-10.98	54	34.93	31.25	10.01	33.17	100	242	A	V
	*	5230	102.94	-	-	94.71	31.31	10.07	33.15	100	242	P	V
		5230	94.63	-	-	86.4	31.31	10.07	33.15	100	242	A	V
		5431.2	46.91	-27.09	74	38.31	31.46	10.25	33.11	100	242	P	V
		5356.56	38.34	-15.66	54	29.88	31.4	10.19	33.13	100	242	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 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	48.12	-20.08	68.2	52.63	39.87	14.59	58.97	150	360	P	H
HT40		15570	49.34	-24.66	74	52.16	38.71	17.44	58.97	155	360	P	H
CH 38		10380	48.06	-20.14	68.2	52.57	39.87	14.59	58.97	150	360	P	V
5190MHz		15570	49.68	-24.32	74	52.5	38.71	17.44	58.97	155	360	P	V
802.11n		10460	48.02	-20.18	68.2	52.32	39.95	14.65	58.9	150	360	P	H
HT40		15690	49.31	-24.69	74	52.7	38.17	17.53	59.09	150	225	P	H
CH 46		10460	48.29	-19.91	68.2	52.59	39.95	14.65	58.9	150	360	P	V
5230MHz		15690	49.12	-24.88	74	52.51	38.17	17.53	59.09	150	225	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 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		5141.96	53.67	-20.33	74	45.58	31.25	10.01	33.17	155	358	P	H
		5145.08	48.31	-5.69	54	40.22	31.25	10.01	33.17	155	358	A	H
		5210	91.63	-	-	83.44	31.3	10.05	33.16	155	358	P	H
		5210	84.76	-	-	76.57	31.3	10.05	33.16	155	358	A	H
		5452.56	47.29	-26.71	74	38.65	31.47	10.28	33.11	155	358	P	H
		5388.96	40.06	-13.94	54	31.53	31.42	10.23	33.12	155	358	A	H
		5146.64	56.85	-17.15	74	48.76	31.25	10.01	33.17	159	213	P	V
		5148.72	50.52	-3.48	54	42.43	31.25	10.01	33.17	159	213	A	V
		5210	93.26	-	-	85.07	31.3	10.05	33.16	159	213	P	V
		5210	86.45	-	-	78.26	31.3	10.05	33.16	159	213	A	V
		5409.36	47.04	-26.96	74	38.5	31.43	10.23	33.12	159	213	P	V
		5354.64	39.94	-14.06	54	31.48	31.4	10.19	33.13	159	213	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 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	49.88	-18.32	68.2	54.27	39.91	14.63	58.93	150	230	P	H
VHT80		15630	49.52	-24.48	74	52.68	38.4	17.48	59.04	160	225	P	H
CH 42		10420	49.01	-19.19	68.2	53.4	39.91	14.63	58.93	150	230	P	V
5210MHz		15630	49.17	-24.83	74	52.33	38.4	17.48	59.04	160	225	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 - 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		5100.8	45.86	-28.14	74	38.61	31.34	10.73	34.82	121	9	P	H
		5107.1	36.01	-17.99	54	28.75	31.35	10.73	34.82	121	9	A	H
	*	5260	102.98	-	-	95.52	31.42	10.89	34.85	121	9	P	H
		5260	99.12	-	-	91.66	31.42	10.89	34.85	121	9	A	H
		5358.96	46.23	-27.77	74	38.63	31.46	11.01	34.87	121	9	P	H
		5452.56	35.87	-18.13	54	28.16	31.51	11.09	34.89	121	9	A	H
		5148.4	46.5	-27.5	74	39.2	31.36	10.77	34.83	223	346	P	V
		5107.1	35.94	-18.06	54	28.68	31.35	10.73	34.82	223	346	A	V
	*	5260	106.05	-	-	98.59	31.42	10.89	34.85	223	346	P	V
		5260	100.57	-	-	93.11	31.42	10.89	34.85	223	346	A	V
		5426.64	45.96	-28.04	74	38.27	31.49	11.09	34.89	223	346	P	V
		5350.08	36.38	-17.62	54	28.78	31.46	11.01	34.87	223	346	A	V
802.11a CH 60 5300MHz		5099.4	48.07	-25.93	74	40.07	31.22	9.96	33.18	122	236	P	H
		5016.45	38.86	-15.14	54	31	31.16	9.89	33.19	122	236	A	H
	*	5300	102.66	-	-	94.3	31.36	10.14	33.14	122	236	P	H
		5300	94.8	-	-	86.44	31.36	10.14	33.14	122	236	A	H
		5452.32	46.3	-27.7	74	37.66	31.47	10.28	33.11	122	236	P	H
		5350.8	38.28	-15.72	54	29.82	31.4	10.19	33.13	122	236	A	H
		5142.8	48.71	-25.29	74	40.62	31.25	10.01	33.17	100	242	P	V
		5111.65	39.56	-14.44	54	31.55	31.23	9.96	33.18	100	242	A	V
	*	5300	104.61	-	-	96.25	31.36	10.14	33.14	100	242	P	V
		5300	97.59	-	-	89.23	31.36	10.14	33.14	100	242	A	V
		5351.28	48.17	-25.83	74	39.71	31.4	10.19	33.13	100	242	P	V
		5350.08	41.01	-12.99	54	32.55	31.4	10.19	33.13	100	242	A	V

802.11a CH 64 5320MHz	*	5320	102.51	-	-	94.12	31.37	10.16	33.14	122	235	P	H
		5320	94.09	-	-	85.7	31.37	10.16	33.14	122	235	A	H
		5351.2	50.96	-23.04	74	42.5	31.4	10.19	33.13	122	235	P	H
		5350.24	41.52	-12.48	54	33.06	31.4	10.19	33.13	122	235	A	H
	*	5320	104.96	-	-	96.57	31.37	10.16	33.14	100	242	P	V
		5320	97.55	-	-	89.16	31.37	10.16	33.14	100	242	A	V
		5350.08	54.92	-19.08	74	46.46	31.4	10.19	33.13	100	242	P	V
		5350.72	45.18	-8.82	54	36.72	31.4	10.19	33.13	100	242	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 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	48.16	-20.04	68.2	52.25	40.03	14.7	58.82	150	220	P	H
		15780	48.01	-25.99	74	51.81	37.79	17.59	59.18	159	345	P	H
		10520	48.21	-19.99	68.2	52.3	40.03	14.7	58.82	150	220	P	V
		15780	49.39	-24.61	74	53.19	37.79	17.59	59.18	159	345	P	V
802.11a CH 60 5300MHz		10600	47.79	-26.21	74	51.63	40.13	14.76	58.73	185	215	P	H
		15900	46.37	-27.63	74	50.73	37.26	17.68	59.3	196	190	P	H
		10600	47.7	-26.3	74	51.54	40.13	14.76	58.73	185	215	P	V
		15900	46.65	-27.35	74	51.01	37.26	17.68	59.3	196	190	P	V
802.11a CH 64 5320MHz		10640	47.82	-26.18	74	51.55	40.17	14.79	58.69	152	135	P	H
		15960	46	-28	74	50.71	36.95	17.71	59.37	173	245	P	H
		10640	47.64	-26.36	74	51.37	40.17	14.79	58.69	152	135	P	V
		15960	45.97	-28.03	74	50.68	36.95	17.71	59.37	173	245	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 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		5102.18	47.51	-26.49	74	39.51	31.22	9.96	33.18	100	0	P	H
		5015.86	38.96	-15.04	54	31.11	31.16	9.89	33.2	100	0	P	H
	*	5260	100.95	-	-	92.66	31.34	10.1	33.15	100	0	P	H
		5260	94.37	-	-	86.08	31.34	10.1	33.15	100	0	A	H
		5448.24	46.37	-27.63	74	37.73	31.47	10.28	33.11	100	0	P	H
		5447.28	37.87	-16.13	54	29.23	31.47	10.28	33.11	100	0	A	H
		5017.16	48.16	-25.84	74	40.3	31.16	9.89	33.19	100	244	P	V
		5112.32	39.21	-14.79	54	31.2	31.23	9.96	33.18	100	244	A	V
	*	5260	104.99	-	-	96.7	31.34	10.1	33.15	100	244	P	V
		5260	98.33	-	-	90.04	31.34	10.1	33.15	100	244	A	V
		5357.28	46.6	-27.4	74	38.14	31.4	10.19	33.13	100	244	P	V
		5448.24	38.16	-15.84	54	29.52	31.47	10.28	33.11	100	244	A	V
802.11n HT20 CH 60 5300MHz		5042	48.5	-25.5	74	40.6	31.18	9.91	33.19	100	0	P	H
		5110.95	39.2	-14.8	54	31.19	31.23	9.96	33.18	100	0	A	H
	*	5300	100.9	-	-	92.54	31.36	10.14	33.14	100	0	P	H
		5300	94.63	-	-	86.27	31.36	10.14	33.14	100	0	A	H
		5350.8	48.25	-25.75	74	39.79	31.4	10.19	33.13	100	0	P	H
		5351.04	39.04	-14.96	54	30.58	31.4	10.19	33.13	100	0	A	H
		5009.1	48.53	-25.47	74	40.7	31.16	9.87	33.2	100	244	P	V
		5111.3	39.27	-14.73	54	31.26	31.23	9.96	33.18	100	244	A	V
	*	5300	103.05	-	-	94.69	31.36	10.14	33.14	100	244	P	V
		5300	97.51	-	-	89.15	31.36	10.14	33.14	100	244	A	V
		5351.28	48.77	-25.23	74	40.31	31.4	10.19	33.13	100	244	P	V
		5353.92	39.6	-14.4	54	31.14	31.4	10.19	33.13	100	244	A	V

802.11n HT20 CH 64 5320MHz	*	5320	99.44	-	-	91.05	31.37	10.16	33.14	100	0	P	H
		5320	93.89	-	-	85.5	31.37	10.16	33.14	100	0	A	H
		5350.88	50.36	-23.64	74	41.9	31.4	10.19	33.13	100	0	P	H
		5350.08	42.67	-11.33	54	34.21	31.4	10.19	33.13	100	0	A	H
	*	5320	103.99	-	-	95.6	31.37	10.16	33.14	100	242	P	V
		5320	97.9	-	-	89.51	31.37	10.16	33.14	100	242	A	V
		5350.56	54.45	-19.55	74	45.99	31.4	10.19	33.13	100	242	P	V
		5350.24	44.49	-9.51	54	36.03	31.4	10.19	33.13	100	242	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 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		10520	47.55	-20.65	68.2	51.64	40.03	14.7	58.82	150	220	P	H
HT20		15780	48.63	-25.37	74	52.43	37.79	17.59	59.18	159	345	P	H
CH 52		10520	47.5	-20.7	68.2	51.59	40.03	14.7	58.82	150	220	P	V
5260MHz		15780	47.44	-26.56	74	51.24	37.79	17.59	59.18	159	345	P	V
802.11n		10600	47.67	-26.33	74	51.51	40.13	14.76	58.73	185	215	P	H
HT20		15900	48.11	-25.89	74	52.47	37.26	17.68	59.3	196	190	P	H
CH 60		10600	48.5	-25.5	74	52.34	40.13	14.76	58.73	185	215	P	V
5300MHz		15900	46.71	-27.29	74	51.07	37.26	17.68	59.3	196	190	P	V
802.11n		10640	48.34	-25.66	74	52.07	40.17	14.79	58.69	152	135	P	H
HT20		15960	46.34	-27.66	74	51.05	36.95	17.71	59.37	173	245	P	H
CH 64		15960	46.79	-27.21	74	51.5	36.95	17.71	59.37	173	245	P	V
5320MHz		15960	46.79	-27.21	74	51.5	36.95	17.71	59.37	173	245	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 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		5065	47.69	-26.31	74	39.75	31.19	9.94	33.19	100	314	P	H
		5123.5	39.91	-14.09	54	31.86	31.24	9.98	33.17	100	314	A	H
	*	5270	98.15	-	-	89.84	31.34	10.12	33.15	100	314	P	H
		5270	90.9	-	-	82.59	31.34	10.12	33.15	100	314	A	H
		5449.2	46.42	-27.58	74	37.78	31.47	10.28	33.11	100	314	P	H
		5354.64	39.09	-14.91	54	30.63	31.4	10.19	33.13	100	314	A	H
		5144.3	48.71	-25.29	74	40.62	31.25	10.01	33.17	100	242	P	V
		5148.72	39.83	-14.17	54	31.74	31.25	10.01	33.17	100	242	A	V
	*	5270	103.83	-	-	95.52	31.34	10.12	33.15	100	242	P	V
		5270	94.79	-	-	86.48	31.34	10.12	33.15	100	242	A	V
		5351.52	49.19	-24.81	74	40.73	31.4	10.19	33.13	100	242	P	V
		5351.04	41.14	-12.86	54	32.68	31.4	10.19	33.13	100	242	A	V
802.11n HT40 CH 62 5310MHz		5147	48.89	-25.11	74	40.8	31.25	10.01	33.17	100	314	P	H
		5120.4	39.67	-14.33	54	31.63	31.23	9.98	33.17	100	314	A	H
	*	5310	97.29	-	-	88.92	31.37	10.14	33.14	100	314	P	H
		5310	90.27	-	-	81.9	31.37	10.14	33.14	100	314	A	H
		5351.28	55.62	-18.38	74	47.16	31.4	10.19	33.13	100	314	P	H
		5350.08	45.08	-8.92	54	36.62	31.4	10.19	33.13	100	314	A	H
		5066.15	48.59	-25.41	74	40.65	31.19	9.94	33.19	100	242	P	V
		5079.1	39.47	-14.53	54	31.5	31.21	9.94	33.18	100	242	A	V
	*	5310	100.15	-	-	91.78	31.37	10.14	33.14	100	242	P	V
		5310	92.47	-	-	84.1	31.37	10.14	33.14	100	242	A	V
		5350.56	59.66	-14.34	74	51.2	31.4	10.19	33.13	100	242	P	V
		5350.32	50.18	-3.82	54	41.72	31.4	10.19	33.13	100	242	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 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		10540	48.68	-19.52	68.2	52.71	40.05	14.72	58.8	150	220	P	H
HT40		15810	48.15	-25.85	74	52.11	37.64	17.61	59.21	168	345	P	H
CH 54		10540	48.06	-20.14	68.2	52.09	40.05	14.72	58.8	150	220	P	V
5270MHz		15810	49.27	-24.73	74	53.23	37.64	17.61	59.21	168	345	P	V
802.11n		10620	48.1	-25.9	74	51.88	40.15	14.78	58.71	150	220	P	H
HT40		15930	49.32	-24.68	74	53.84	37.11	17.7	59.33	160	100	P	H
CH 62		10620	48.55	-25.45	74	52.33	40.15	14.78	58.71	150	220	P	V
5310MHz		15930	49.7	-24.3	74	54.22	37.11	17.7	59.33	160	100	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 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		5135.2	48.38	-25.62	74	40.33	31.24	9.98	33.17	150	319	P	H
		5133.64	42.41	-11.59	54	34.36	31.24	9.98	33.17	150	319	A	H
		5290	93.02	-	-	84.67	31.35	10.14	33.14	150	319	P	H
		5290	86.04	-	-	77.69	31.35	10.14	33.14	150	319	A	H
		5350.08	56.48	-17.52	74	48.02	31.4	10.19	33.13	150	319	P	H
		5350.56	49.46	-4.54	54	41	31.4	10.19	33.13	150	319	A	H
		5037.96	49.13	-24.87	74	41.23	31.18	9.91	33.19	149	218	P	V
		5142.74	43	-11	54	34.91	31.25	10.01	33.17	149	218	A	V
		5290	94.04	-	-	85.69	31.35	10.14	33.14	149	218	P	V
		5290	88.71	-	-	80.36	31.35	10.14	33.14	149	218	A	V
		5356.32	56.71	-17.29	74	48.25	31.4	10.19	33.13	149	218	P	V
		5351.04	50.09	-3.91	54	41.63	31.4	10.19	33.13	149	218	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 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	49.98	-18.22	68.2	53.88	40.11	14.74	58.75	160	360	P	H
VHT80		15870	49.06	-24.94	74	53.35	37.33	17.66	59.28	160	0	P	H
CH 58		10580	49.82	-18.38	68.2	53.72	40.11	14.74	58.75	160	360	P	V
5290MHz		15870	48.01	-25.99	74	52.3	37.33	17.66	59.28	160	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 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		5458.96	48.49	-25.51	74	39.85	31.47	10.28	33.11	122	235	P	H
		5469.84	52.88	-15.32	68.2	44.21	31.48	10.3	33.11	122	235	P	H
		5460	40.77	-13.23	54	32.13	31.47	10.28	33.11	122	235	A	H
		5500	101.2	-	-	92.48	31.5	10.32	33.1	122	235	P	H
		5500	93.6	-	-	84.88	31.5	10.32	33.1	122	235	A	H
		5458.64	52.6	-21.4	74	43.96	31.47	10.28	33.11	100	242	P	V
		5469.84	59.68	-8.52	68.2	51.01	31.48	10.3	33.11	100	242	P	V
		5460	44.35	-9.65	54	35.71	31.47	10.28	33.11	100	242	A	V
	*	5500	103.46	-	-	94.74	31.5	10.32	33.1	100	242	P	V
		5500	96.58	-	-	87.86	31.5	10.32	33.1	100	242	A	V
802.11a CH 116 5580MHz		5459.92	46.23	-27.77	74	38.52	31.51	11.09	34.89	100	352	P	H
		5519.92	48.55	-19.65	68.2	40.74	31.54	11.17	34.9	100	352	P	H
		5452.72	36.14	-17.86	54	28.43	31.51	11.09	34.89	100	352	A	H
	*	5580	103.94	-	-	96.06	31.57	11.21	34.9	100	352	P	H
		5580	99.66	-	-	91.78	31.57	11.21	34.9	100	352	A	H
		5731.925	46.2	-22	68.2	37.82	31.91	11.37	34.9	100	352	P	H
		5453.2	46.53	-27.47	74	38.82	31.51	11.09	34.89	102	11	P	V
		5466.4	45.78	-22.42	68.2	38.03	31.52	11.13	34.9	102	11	P	V
		5459.92	36.82	-17.18	54	29.11	31.51	11.09	34.89	102	11	A	V
	*	5580	107.99	-	-	100.11	31.57	11.21	34.9	102	11	P	V
		5580	104.01	-	-	96.13	31.57	11.21	34.9	102	11	A	V
		5755.865	47.07	-21.13	68.2	38.53	32.03	11.41	34.9	102	11	P	V

802.11a CH 140 5700MHz	*	5700	99.69	-	-	90.57	31.72	10.5	33.1	148	350	P	H
		5700	92.19	-	-	83.07	31.72	10.5	33.1	148	350	A	H
		5727.4	57.8	-10.4	68.2	48.59	31.79	10.52	33.1	148	350	P	H
	*	5700	102.87	-	-	93.75	31.72	10.5	33.1	100	242	P	V
		5700	95.38	-	-	86.26	31.72	10.5	33.1	100	242	A	V
		5725.56	62.01	-6.19	68.2	52.8	31.79	10.52	33.1	100	242	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 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	49.08	-24.92	74	51.74	40.59	15.05	58.3	163	230	P	H
		16500	47.38	-20.82	68.2	49.47	38.94	17.81	58.84	178	296	P	H
		11000	49.18	-24.82	74	51.84	40.59	15.05	58.3	163	230	P	V
		16500	48.28	-19.92	68.2	50.37	38.94	17.81	58.84	178	296	P	V
802.11a CH 116 5580MHz		11160	48.89	-25.11	74	51.08	40.8	15.12	58.11	170	200	P	H
		16740	48.6	-19.6	68.2	49.42	39.93	17.83	58.58	156	350	P	H
		11160	50.02	-23.98	74	52.21	40.8	15.12	58.11	170	200	P	V
		16740	48.23	-19.97	68.2	49.05	39.93	17.83	58.58	156	350	P	V
802.11a CH 140 5700MHz		11400	48.91	-25.09	74	50.45	41.08	15.23	57.85	157	285	P	H
		17100	50.69	-17.51	68.2	49.33	41.6	17.92	58.16	165	246	P	H
		11400	49.65	-24.35	74	51.19	41.08	15.23	57.85	157	285	P	V
		17100	50.87	-17.33	68.2	49.51	41.6	17.92	58.16	165	246	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 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)
		5460.08	52.75	-15.45	68.2	44.11	31.47	10.28	33.11	100	0	P	H
		5467.12	55.63	-12.57	68.2	46.96	31.48	10.3	33.11	100	0	P	H
		5459.76	41.64	-12.36	54	33	31.47	10.28	33.11	100	0	A	H
802.11n	*	5500	99.81	-	-	91.09	31.5	10.32	33.1	100	0	P	H
HT20		5500	93.91	-	-	85.19	31.5	10.32	33.1	100	0	A	H
CH 100		5457.84	56.18	-17.82	74	47.54	31.47	10.28	33.11	100	242	P	V
5500MHz		5468.4	57.4	-10.8	68.2	48.73	31.48	10.3	33.11	100	242	P	V
		5459.92	43.31	-10.69	54	34.67	31.47	10.28	33.11	100	242	A	V
	*	5500	102.49	-	-	93.77	31.5	10.32	33.1	100	242	P	V
		5500	95.97	-	-	87.25	31.5	10.32	33.1	100	242	A	V
		5416	47.08	-26.92	74	38.51	31.44	10.25	33.12	100	0	P	H
		5469.28	46.63	-21.57	68.2	37.96	31.48	10.3	33.11	100	0	P	H
		5455.6	37.67	-16.33	54	29.03	31.47	10.28	33.11	100	0	A	H
	*	5580	98.95	-	-	90.11	31.55	10.39	33.1	100	0	P	H
802.11n		5580	93.38	-	-	84.54	31.55	10.39	33.1	100	0	A	H
HT20		5750.825	47.53	-20.67	68.2	38.25	31.83	10.55	33.1	100	0	P	H
CH 116		5450.08	46.29	-27.71	74	37.65	31.47	10.28	33.11	100	242	P	V
5580MHz		5460.4	44.56	-23.64	68.2	35.92	31.47	10.28	33.11	100	242	P	V
		5451.52	37.93	-16.07	54	29.29	31.47	10.28	33.11	100	242	P	V
	*	5580	102.3	-	-	93.46	31.55	10.39	33.1	100	242	P	V
		5580	95.55	-	-	86.71	31.55	10.39	33.1	100	242	A	V
		5735.39	47.26	-20.94	68.2	38.01	31.83	10.52	33.1	100	242	P	V

802.11n HT20 CH 140 5700MHz	*	5700	98.4	-	-	89.28	31.72	10.5	33.1	100	0	P	H
		5700	93.66	-	-	84.54	31.72	10.5	33.1	100	0	A	H
		5728.6	59.04	-9.16	68.2	49.83	31.79	10.52	33.1	100	0	P	H
	*	5700	102.75	-	-	93.63	31.72	10.5	33.1	100	242	P	V
		5700	95.35	-	-	86.23	31.72	10.5	33.1	100	242	A	V
		5727.48	56.37	-11.83	68.2	47.16	31.79	10.52	33.1	100	242	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 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		11000	50.15	-23.85	74	52.81	40.59	15.05	58.3	163	230	P	H
HT20		16500	48.05	-20.15	68.2	50.14	38.94	17.81	58.84	178	296	P	H
CH 100		11000	49.88	-24.12	74	52.54	40.59	15.05	58.3	163	230	P	V
5500MHz		16500	48.59	-19.61	68.2	50.68	38.94	17.81	58.84	178	296	P	V
802.11n		11160	48.94	-25.06	74	51.13	40.8	15.12	58.11	170	200	P	H
HT20		16740	48.4	-19.8	68.2	49.22	39.93	17.83	58.58	156	350	P	H
CH 116		11160	48.39	-25.61	74	50.58	40.8	15.12	58.11	170	200	P	V
5580MHz		16740	49.83	-18.37	68.2	50.65	39.93	17.83	58.58	156	350	P	V
802.11n		11400	48.86	-25.14	74	50.4	41.08	15.23	57.85	157	285	P	H
HT20		17100	50.31	-17.89	68.2	48.95	41.6	17.92	58.16	165	246	P	H
CH 140		11400	50.34	-23.66	74	51.88	41.08	15.23	57.85	157	285	P	V
5700MHz		17100	50.56	-17.64	68.2	49.2	41.6	17.92	58.16	165	246	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 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		5452.96	53.5	-20.5	74	44.86	31.47	10.28	33.11	100	314	P	H
		5466.64	58.19	-10.01	68.2	49.52	31.48	10.3	33.11	100	314	P	H
		5459.92	46.75	-7.25	54	38.11	31.47	10.28	33.11	100	314	A	H
	*	5510	97.11	-	-	88.39	31.5	10.32	33.1	100	314	P	H
		5510	90.29	-	-	81.57	31.5	10.32	33.1	100	314	A	H
		5734.13	47.12	-21.08	68.2	37.91	31.79	10.52	33.1	100	314	P	H
		5455.84	57.23	-16.77	74	48.59	31.47	10.28	33.11	100	242	P	V
		5466.88	60.18	-8.02	68.2	51.51	31.48	10.3	33.11	100	242	P	V
		5452.48	50.07	-3.93	54	41.43	31.47	10.28	33.11	100	242	A	V
	*	5510	101.04	-	-	92.32	31.5	10.32	33.1	100	242	P	V
		5510	93.2	-	-	84.48	31.5	10.32	33.1	100	242	A	V
		5729.09	48.47	-19.73	68.2	39.26	31.79	10.52	33.1	100	242	P	V
802.11n HT40 CH 110 5550MHz		5406.64	46.68	-27.32	74	38.14	31.43	10.23	33.12	100	0	P	H
		5469.28	47.87	-20.33	68.2	39.2	31.48	10.3	33.11	100	0	P	H
		5459.44	39.68	-14.32	54	31.04	31.47	10.28	33.11	100	0	A	H
	*	5550	97.38	-	-	88.58	31.54	10.36	33.1	100	0	P	H
		5550	90.58	-	-	81.78	31.54	10.36	33.1	100	0	A	H
		5750.195	48.48	-19.72	68.2	39.2	31.83	10.55	33.1	100	0	P	H
		5449.36	49.93	-24.07	74	41.29	31.47	10.28	33.11	100	242	P	V
		5469.52	51.1	-17.1	68.2	42.43	31.48	10.3	33.11	100	242	P	V
		5459.92	41.35	-12.65	54	32.71	31.47	10.28	33.11	100	242	A	V
	*	5550	100.77	-	-	91.97	31.54	10.36	33.1	100	242	P	V
		5550	94.26	-	-	85.46	31.54	10.36	33.1	100	242	A	V
		5754.605	47.57	-20.63	68.2	38.25	31.87	10.55	33.1	100	242	P	V

802.11n HT40 CH 134 5670MHz		5352.8	44.91	-29.09	74	36.45	31.4	10.19	33.13	100	0	P	H
		5465.5	44.96	-23.24	68.2	36.29	31.48	10.3	33.11	100	0	P	H
		5459.55	38.51	-15.49	54	29.87	31.47	10.28	33.11	100	0	A	H
	*	5670	97.19	-	-	88.13	31.68	10.48	33.1	100	0	P	H
		5670	90.13	-	-	81.07	31.68	10.48	33.1	100	0	A	H
		5726.15	52.99	-15.21	68.2	43.78	31.79	10.52	33.1	100	0	P	H
		5422.1	45.86	-28.14	74	37.29	31.44	10.25	33.12	100	242	P	V
		5469.7	46.29	-21.91	68.2	37.62	31.48	10.3	33.11	100	242	P	V
		5448	38.77	-15.23	54	30.13	31.47	10.28	33.11	100	242	A	V
	*	5670	100.32	-	-	91.26	31.68	10.48	33.1	100	242	P	V
		5670	94.23	-	-	85.17	31.68	10.48	33.1	100	242	A	V
		5728.775	56.59	-11.61	68.2	47.38	31.79	10.52	33.1	100	242	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 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		11020	48.44	-25.56	74	51.05	40.61	15.06	58.28	170	230	P	H
HT40		16530	49.15	-19.05	68.2	51.06	39.08	17.81	58.8	160	300	P	H
CH 102		11020	48.42	-25.58	74	51.03	40.61	15.06	58.28	170	230	P	V
5510MHz		16530	49.33	-18.87	68.2	51.24	39.08	17.81	58.8	160	300	P	V
802.11n		11100	48.74	-25.26	74	51.12	40.71	15.1	58.19	150	200	P	H
HT40		16650	49.66	-18.54	68.2	50.93	39.58	17.82	58.67	180	350	P	H
CH 110		11100	47.48	-26.52	74	49.86	40.71	15.1	58.19	150	200	P	V
5550MHz		16650	49.51	-18.69	68.2	50.78	39.58	17.82	58.67	180	350	P	V
802.11n		11340	48.12	-25.88	74	49.84	41	15.21	57.93	200	360	P	H
HT40		17010	49.78	-18.42	68.2	49.1	41.1	17.86	58.28	200	360	P	H
CH 134		11340	48.93	-25.07	74	50.65	41	15.21	57.93	200	360	P	V
5670MHz		17010	49.53	-18.67	68.2	48.85	41.1	17.86	58.28	200	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 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		5453.2	53.83	-20.17	74	45.19	31.47	10.28	33.11	148	309	P	H
		5469.04	56.95	-11.25	68.2	48.28	31.48	10.3	33.11	148	309	P	H
		5442.64	48.91	-5.09	54	40.28	31.46	10.28	33.11	148	309	A	H
		5530	93.41	-	-	84.65	31.52	10.34	33.1	148	309	P	H
		5530	86.45	-	-	77.69	31.52	10.34	33.1	148	309	A	H
		5747.36	47.27	-20.93	68.2	37.99	31.83	10.55	33.1	148	309	P	H
		5456.56	57.54	-16.46	74	48.9	31.47	10.28	33.11	136	217	P	V
		5463.04	57.58	-10.62	68.2	48.91	31.48	10.3	33.11	136	217	P	V
		5442.4	50.82	-3.18	54	42.19	31.46	10.28	33.11	136	217	A	V
		5530	93.38	-	-	84.62	31.52	10.34	33.1	136	217	P	V
		5530	87.01	-	-	78.25	31.52	10.34	33.1	136	217	A	V
		5751.77	47.49	-20.71	68.2	38.17	31.87	10.55	33.1	136	217	P	V
802.11ac VHT80 CH 122 5610MHz		5380.72	46.27	-27.73	74	37.76	31.42	10.21	33.12	115	206	P	H
		5460.4	45.22	-22.98	68.2	36.58	31.47	10.28	33.11	115	206	P	H
		5455.12	39.67	-14.33	54	31.03	31.47	10.28	33.11	115	206	A	H
		5610	92.01	-	-	83.12	31.58	10.41	33.1	115	206	P	H
		5610	83.48	-	-	74.59	31.58	10.41	33.1	115	206	A	H
		5738.575	47.47	-20.73	68.2	38.19	31.83	10.55	33.1	115	206	P	H
		5397.28	47.17	-26.83	74	38.63	31.43	10.23	33.12	125	245	P	V
		5461.6	47.32	-20.88	68.2	38.68	31.47	10.28	33.11	125	245	P	V
		5454.4	40.47	-13.53	54	31.83	31.47	10.28	33.11	125	245	A	V
		5610	94.42	-	-	85.53	31.58	10.41	33.1	125	245	P	V
		5610	86.57	-	-	77.68	31.58	10.41	33.1	125	245	A	V
		5727.025	49.46	-18.74	68.2	40.25	31.79	10.52	33.1	125	245	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 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	48.5	-25.5	74	50.99	40.67	15.07	58.23	150	200	P	H
VHT80		16590	49.89	-18.31	68.2	51.53	39.29	17.82	58.75	180	350	P	H
CH 106		11060	49.71	-24.29	74	52.2	40.67	15.07	58.23	150	200	P	V
5530MHz		16590	49.34	-18.86	68.2	50.98	39.29	17.82	58.75	180	350	P	V
802.11ac		11220	48.66	-25.34	74	50.71	40.86	15.15	58.06	200	360	P	H
VHT80		16830	49.2	-19	68.2	49.56	40.29	17.84	58.49	200	360	P	H
CH 122		11220	49.6	-24.4	74	51.65	40.86	15.15	58.06	200	360	P	V
5610MHz		16830	49.23	-18.97	68.2	49.59	40.29	17.84	58.49	200	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - Straddle Channel

WIFI 802.11a (Harmonic @ 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 144 5720MHz		11440	48.99	-25.01	74	50.44	41.12	15.25	57.82	157	285	P	H
		17160	49.39	-18.81	68.2	47.5	42	17.95	58.06	165	246	P	H
		11440	48.46	-25.54	74	49.91	41.12	15.25	57.82	157	285	P	V
		17160	48.55	-19.65	68.2	46.66	42	17.95	58.06	165	246	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - Straddle Channel

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		11440	48.9	-25.1	74	50.35	41.12	15.25	57.82	157	285	P	H
HT20		17160	49.17	-19.03	68.2	47.28	42	17.95	58.06	165	246	P	H
CH 144		11440	48	-26	74	49.45	41.12	15.25	57.82	157	285	P	V
5720MHz		17160	49.74	-18.46	68.2	47.85	42	17.95	58.06	165	246	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - Straddle Channel

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		11420	48.93	-25.07	74	50.42	41.1	15.24	57.83	157	285	P	H
HT40		17130	49.66	-18.54	68.2	48.03	41.8	17.94	58.11	165	246	P	H
CH 142		11420	48.6	-25.4	74	50.09	41.1	15.24	57.83	157	285	P	V
5710MHz		17130	49.95	-18.25	68.2	48.32	41.8	17.94	58.11	165	246	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - Straddle Channel

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		11380	48.22	-25.78	74	49.81	41.06	15.22	57.87	157	285	P	H
VHT80		17070	49.01	-19.19	68.2	47.91	41.4	17.91	58.21	165	246	P	H
CH 138		11380	48.66	-25.34	74	50.25	41.06	15.22	57.87	157	285	P	V
5690MHz		17070	49.2	-19	68.2	48.1	41.4	17.91	58.21	165	246	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

WIFI 802.11n HT40 (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)
802.11n HT40 LF		30	26.28	-13.72	40	33.42	24.8	0.56	32.5	-	-	P	H
		54.25	24.47	-15.53	40	42.98	13.24	0.75	32.5	-	-	P	H
		195.87	35.68	-7.82	43.5	50.96	15.08	1.45	31.81	-	-	P	H
		264.74	40.22	-5.78	46	50.3	20.07	1.71	31.86	100	301	P	H
		391.81	32.74	-13.26	46	40.75	21.61	2.1	31.72	-	-	P	H
		994.18	30.21	-23.79	54	27.63	30.51	3.47	31.4	-	-	P	H
		30	34.45	-5.55	40	41.59	24.8	0.56	32.5	-	-	P	V
		56.19	34.82	-5.18	40	53.74	12.76	0.77	32.45	155	144	P	V
		83.35	32.76	-7.24	40	49.99	13.82	0.95	32	-	-	P	V
		176.47	30	-13.5	43.5	45.23	15.27	1.35	31.85	-	-	P	V
		269.59	35.64	-10.36	46	46.07	19.73	1.72	31.88	-	-	P	V
		623.64	27.93	-18.07	46	30.92	26.01	2.72	31.72	-	-	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 CH 01 2412MHz		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
		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)

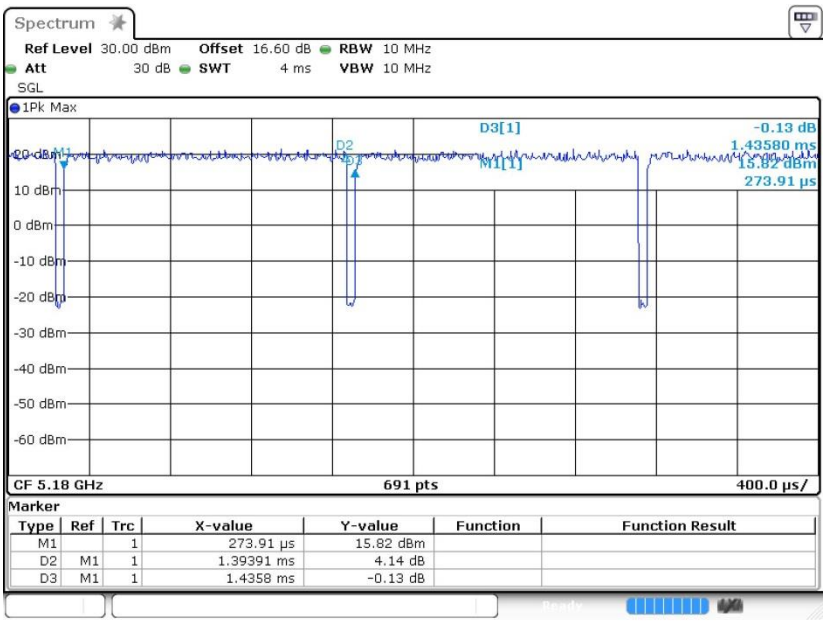
= -10.46(dB)

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

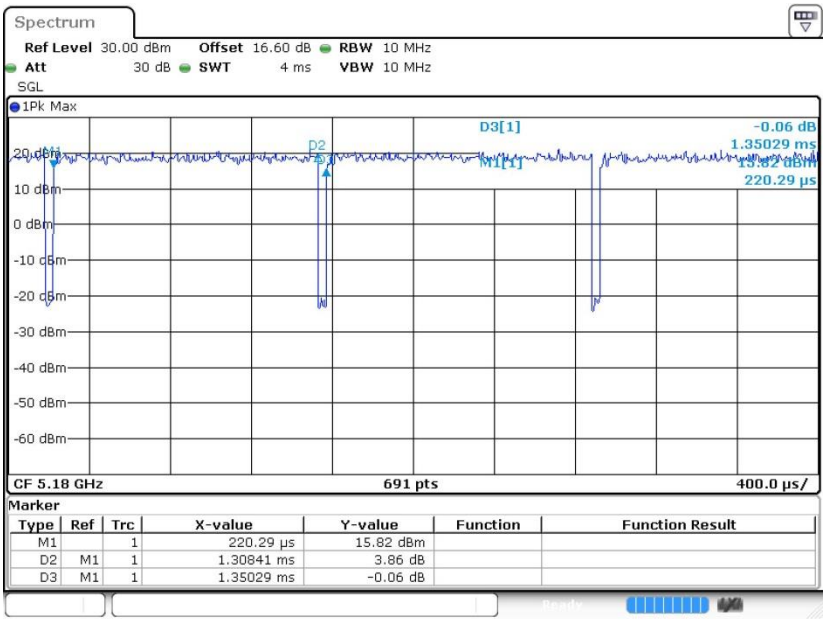
Appendix D. Duty Cycle Plots

Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
802.11a	97.08	1.394	0.717	1KHz
802.11n HT20	96.90	1.308	0.764	1KHz
802.11n HT40	94.12	0.649	1.540	3KHz
802.11ac VHT80	88.54	0.325	3.080	10KHZ

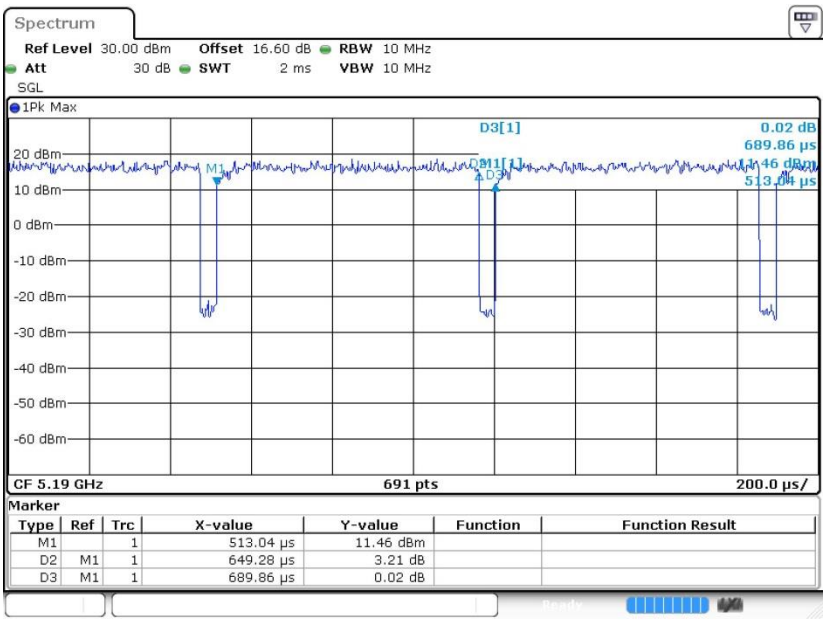
802.11a



802.11n HT20



802.11n HT40



802.11ac VHT80