



FCC RF Test Report

APPLICANT : PAX Technology Limited
EQUIPMENT : Smart Mini Payment Terminal
BRAND NAME : PAX
MODEL NAME : A77
FCC ID : V5PA77
STANDARD : FCC Part 15 Subpart E §15.407
CLASSIFICATION : (NII) Unlicensed National Information Infrastructure

The product was received on Mar. 19, 2020 and testing was completed on Jun. 01, 2020. 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



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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 Test Software.....	7
1.8 Applicable Standards.....	8
2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST	9
2.1 Carrier Frequency and Channel	9
2.2 Test Mode.....	11
2.3 Connection Diagram of Test System.....	13
2.4 Support Unit used in test configuration and system	14
2.5 EUT Operation Test Setup	14
2.6 Measurement Results Explanation Example.....	14
3 TEST RESULT	15
3.1 26dB & 99% Occupied Bandwidth Measurement	15
3.2 Maximum Conducted Output Power Measurement	17
3.3 Power Spectral Density Measurement	19
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
FR030911E	Rev. 01	Initial issue of report	Jun. 17, 2020

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 3.00 dB at 10600.000 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 3.42 dB at 0.580 MHz
3.6	15.407(c)	Automatically Discontinue Transmission	Discontinue Transmission	Pass	-
3.7	15.203 & 15.407(a)	Antenna Requirement	N/A	Pass	-

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	Smart Mini Payment Terminal
Brand Name	PAX
Model Name	A77
FCC ID	V5PA77
EUT supports Radios application	WCDMA/LTE/GNSS/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: 359075101010311/359075101010329 Conduction: 359075101009578/359075101009586 Radiation: 867400020316612/867400020316620
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 ~ 5720 MHz
Maximum Output Power to Antenna	<5180 MHz ~ 5240 MHz> 802.11a : 10.45 dBm / 0.0111 W 802.11n HT20 : 11.22 dBm / 0.0132 W 802.11n HT40 : 14.37 dBm / 0.0274 W 802.11ac VHT20 : 10.54 dBm / 0.0113 W 802.11ac VHT40 : 13.51 dBm / 0.0224 W 802.11ac VHT80 : 13.10 dBm / 0.0204 W <5260 MHz ~ 5320 MHz> 802.11a : 14.55 dBm / 0.0285 W 802.11n HT20 : 14.43 dBm / 0.0277 W 802.11n HT40 : 14.55 dBm / 0.0285 W 802.11ac VHT20 : 13.18 dBm / 0.0208 W 802.11ac VHT40 : 13.66 dBm / 0.0232 W 802.11ac VHT80 : 13.05 dBm / 0.0202 W <5500 MHz ~ 5720 MHz > 802.11a : 14.48 dBm / 0.0281 W 802.11n HT20 : 14.55 dBm / 0.0285 W 802.11n HT40 : 14.72 dBm / 0.0296 W 802.11ac VHT20 : 13.13 dBm / 0.0206 W 802.11ac VHT40 : 13.58 dBm / 0.0228 W 802.11ac VHT80 : 13.72 dBm / 0.0236 W
99% Occupied Bandwidth	<5180 MHz ~ 5240 MHz> 802.11a : 17.13 MHz 802.11n HT20 : 18.03 MHz 802.11n HT40 : 36.86 MHz 802.11ac VHT80 : 76.72 MHz <5260 MHz ~ 5320 MHz> 802.11a : 17.08 MHz 802.11n HT20 : 18.03 MHz 802.11n HT40 : 36.86 MHz 802.11ac VHT80 : 76.60 MHz <5500 MHz ~ 5720 MHz > 802.11a : 17.08 MHz 802.11n HT20 : 18.08 MHz 802.11n HT40 : 37.06 MHz 802.11ac VHT80 : 76.72 MHz
Antenna Type / Gain	<5180 MHz ~ 5240 MHz > FPC Antenna with gain 1.50 dBi <5260 MHz ~ 5320 MHz > FPC Antenna with gain 1.50 dBi <5500 MHz ~ 5720 MHz > FPC Antenna with gain 1.50 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. 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	No. 3 Bldg the third floor of south, Shahe River west, Fengzeyuan Warehouse, Nanshan Shenzhen, 518055 People's Republic of China TEL: +86-755-33202398		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH04-SZ	CN1256	421272

1.7 Test Software

Item	Site	Manufacture	Name	Version
1.	03CH04-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)
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)
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 : WCDMA Band V Idle + Bluetooth Link + WLAN 5G Link + Earphone + USB Cable(Charging from Adapter)
Remark: For Radiated Test Cases, The tests were performed with Adapter, Earphone 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

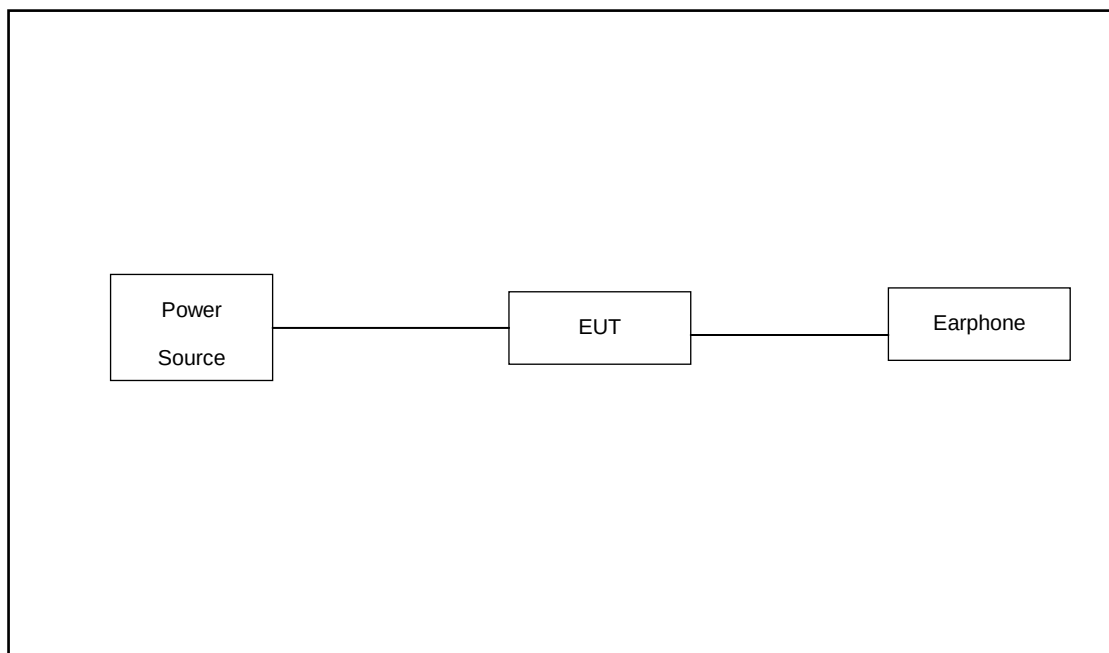
Ch. #		Band I : 5180-5240 MHz	Band II : 5260-5320 MHz	Band III : 5500-5720MHz
		802.11n HT20	802.11n HT20	802.11n HT20
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140
Straddle		-	-	144

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

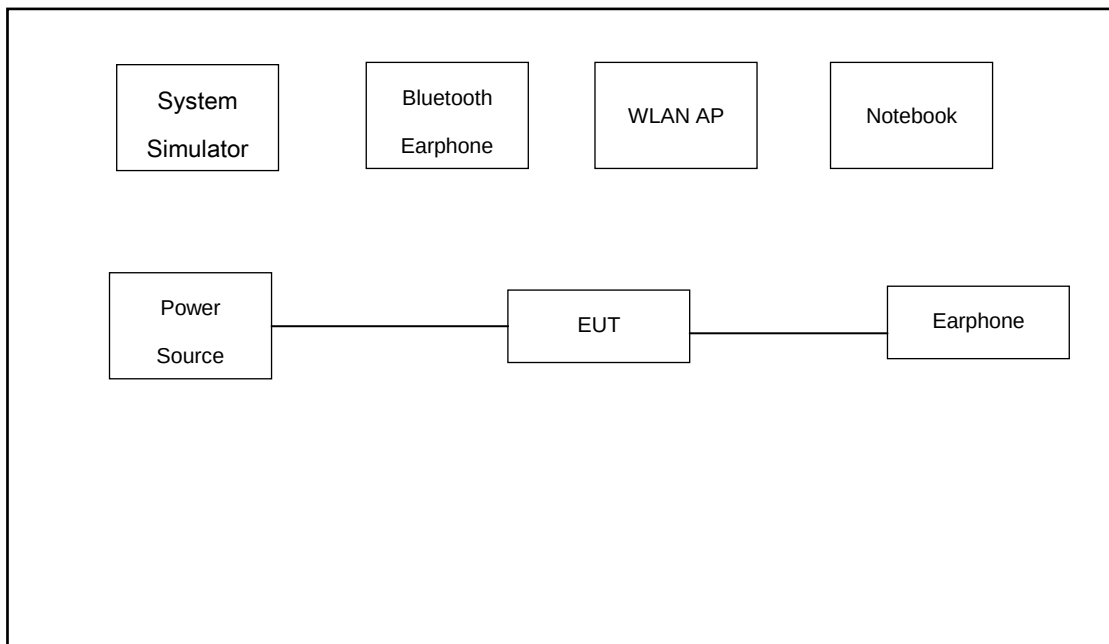
Ch. #		Band I : 5180-5240 MHz	Band II : 5260-5320 MHz	Band III : 5500-5720MHz
		802.11ac VHT80	802.11ac VHT80	802.11ac VHT80
L	Low	-	-	-
M	Middle	42	58	106
H	High	-	-	-
Straddle		-	-	138

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.	System Simulator	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
5.	Earphone	apple	DCAY1V-A9007ZJW3-000	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 5.6 dB and 20dB attenuator.

$$\begin{aligned}
 \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\
 &= 5.6 + 20 = 25.6 \text{ (dB)}
 \end{aligned}$$

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.

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.

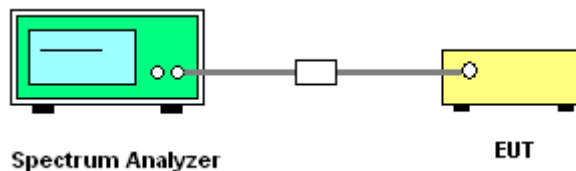
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

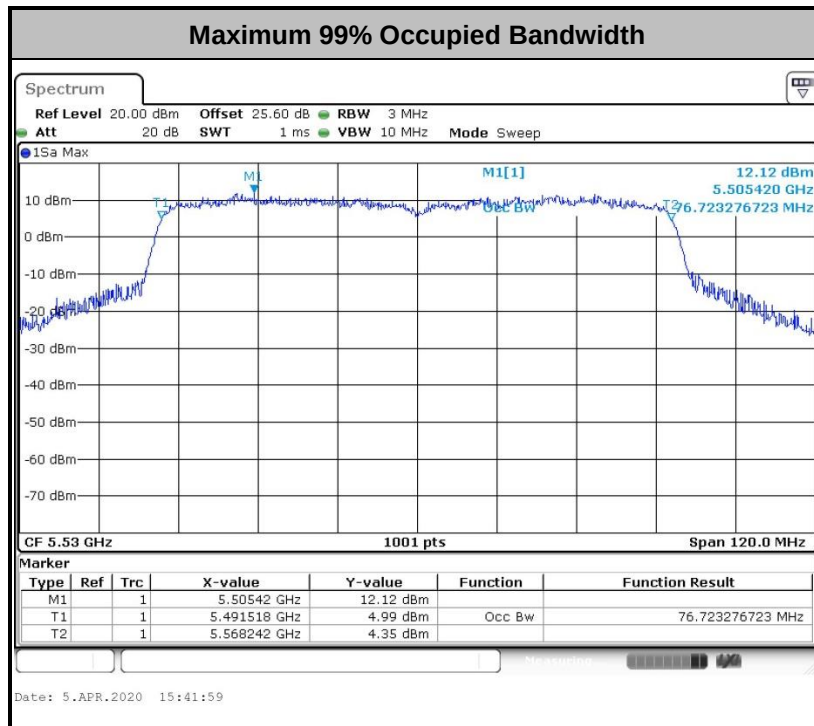
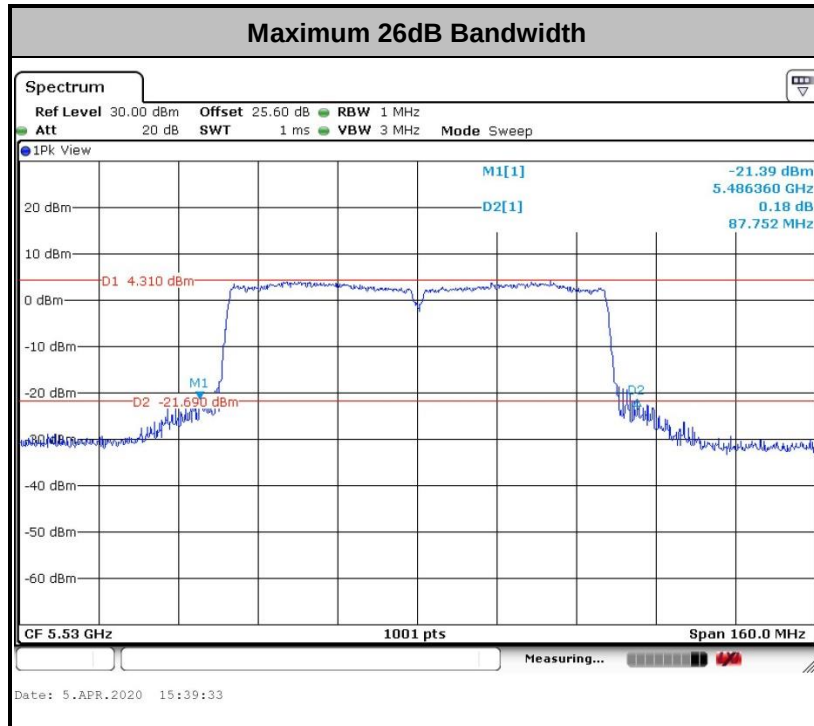
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB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

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

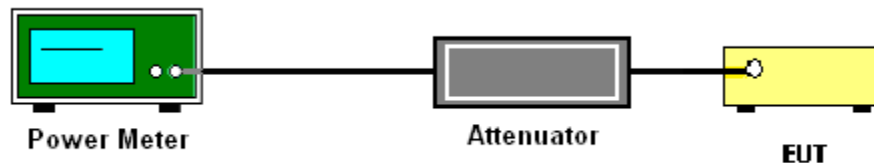
The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

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

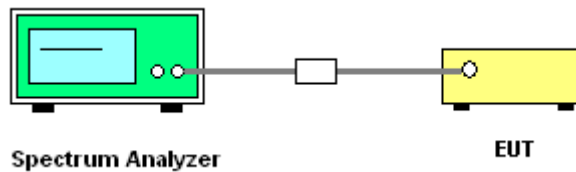
(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

- Measure the duty cycle.
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz.
- Set VBW $\geq$ 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.

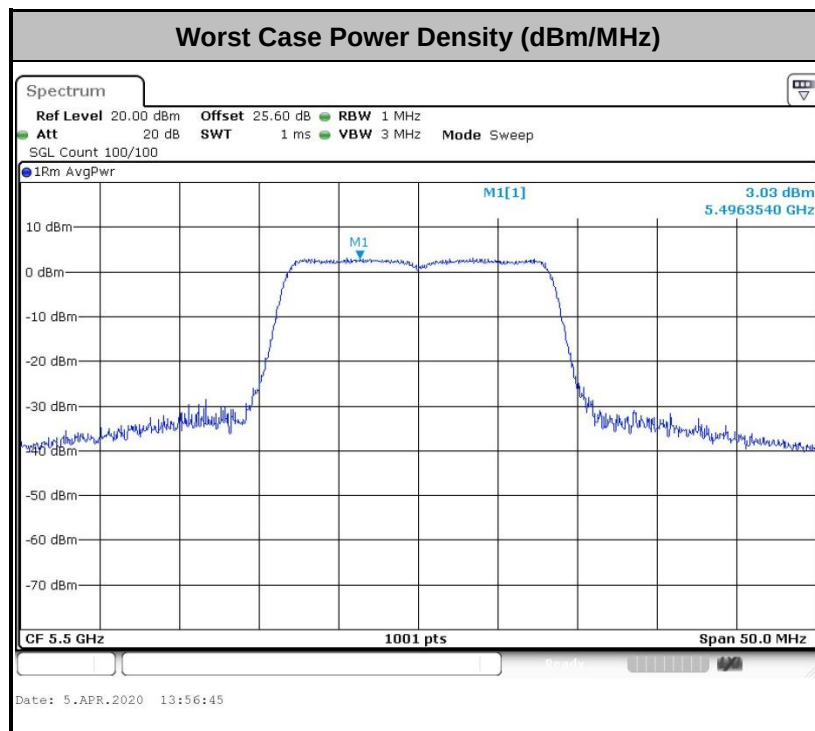
1. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
2. Each plot has already offset with cable loss, and attenuator loss. Measure the PSD and record it.

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

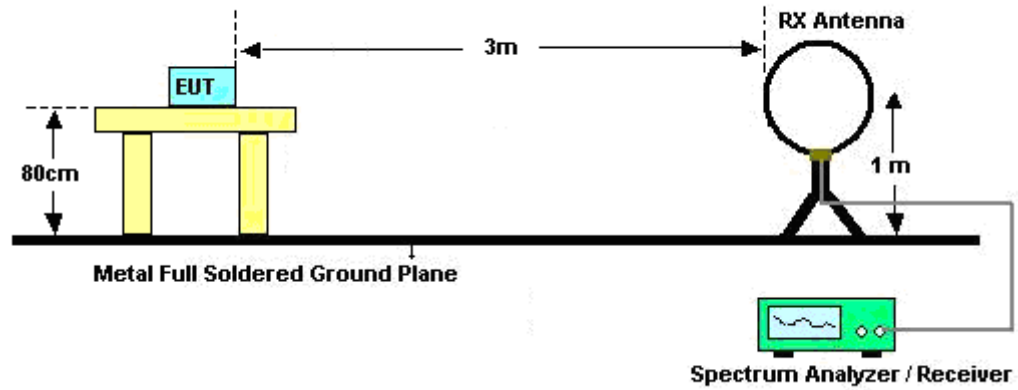
The measuring equipment is listed in the section 4 of this test report.

3.4.3 Test Procedures

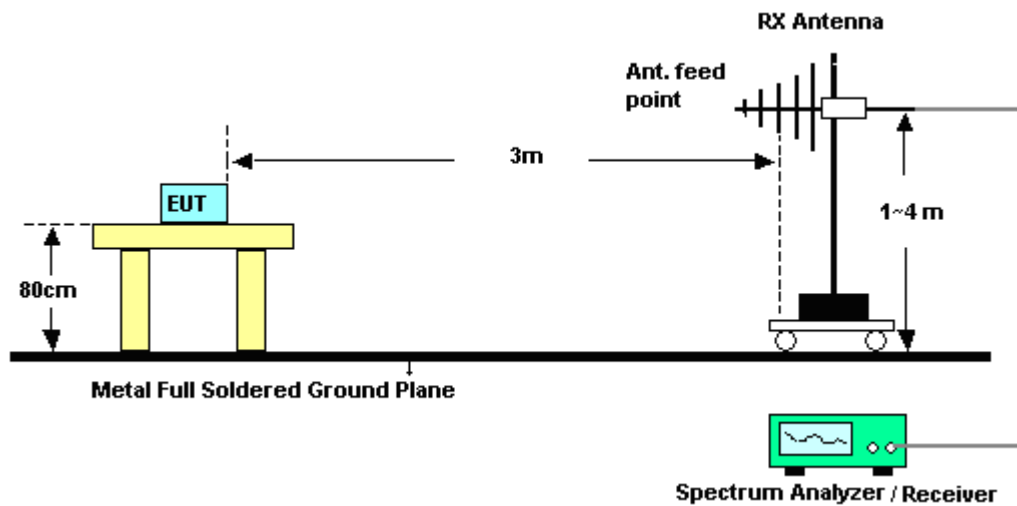
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
Section G) Unwanted emissions measurement.
 - (1) Procedure for Unwanted Emissions Measurements Below 1000MHz
 - RBW = 120 kHz
 - VBW = 300 kHz
 - Detector = Peak
 - Trace mode = max hold
 - (2) Procedure for Peak 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 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

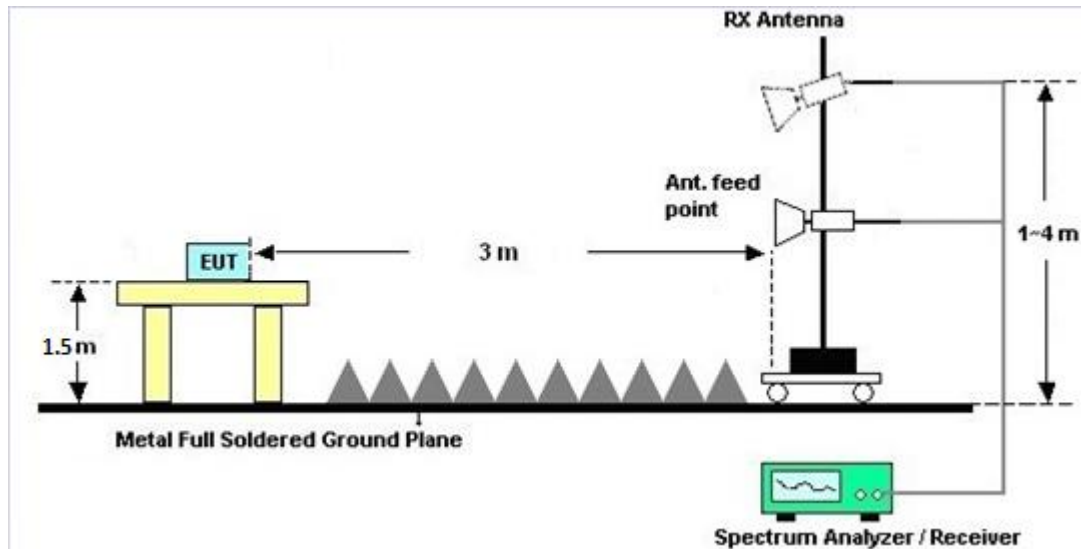
For radiated emissions below 30MHz



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.

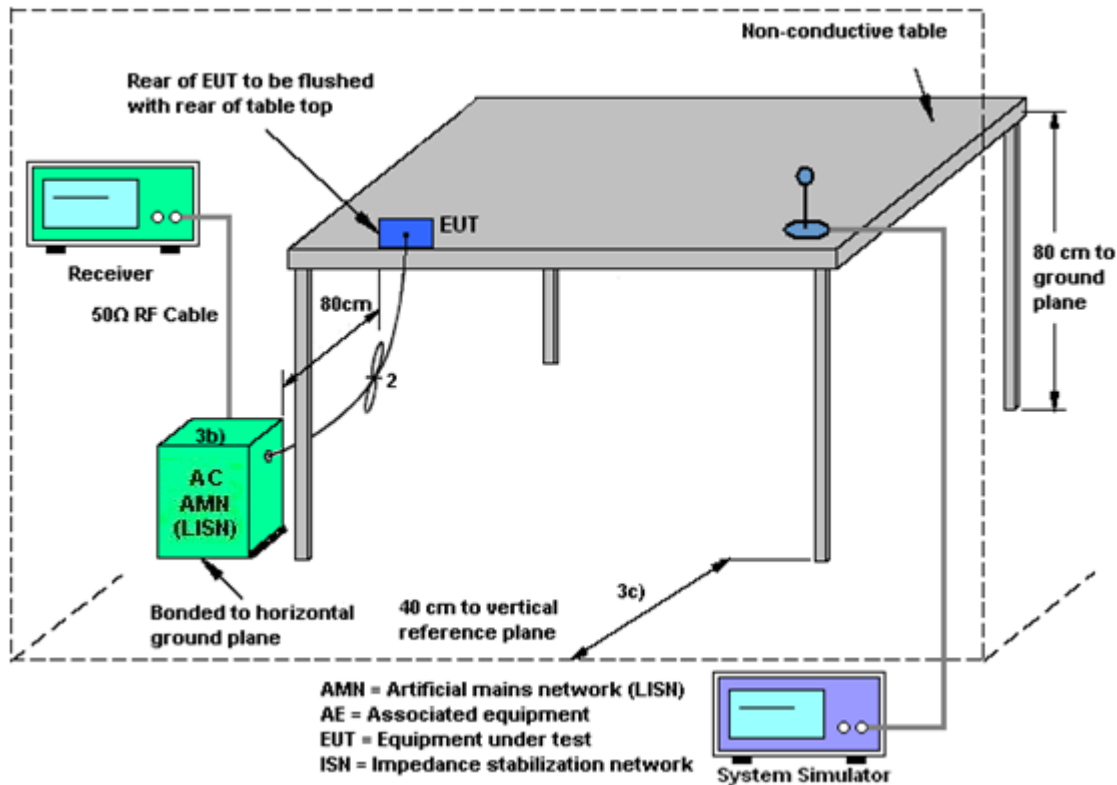
3.5.2 Measuring Instruments

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	Apr. 03, 2020	Apr. 17, 2020	Conducted (TH01-SZ)
Pulse Power Sensor	Anritsu	MA2411B	1207253	30MHz~40GHz	Dec. 26, 2019	Apr. 05, 2020	Dec. 25, 2020	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1218010	50MHz Bandwidth	Dec. 26, 2019	Apr. 05, 2020	Dec. 25, 2020	Conducted (TH01-SZ)
EMI Test Receiver	R&S	ESR7	101404	9kHz~7GHz	Apr. 17, 2020	Jun. 01, 2020	Apr. 16, 2021	Radiation (03CH04-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Apr. 17, 2020	Jun. 01, 2020	Apr. 16, 2021	Radiation (03CH04-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	May 28, 2020	Jun. 01, 2020	May 27, 2021	Radiation (03CH04-SZ)
Bilog Antenna	TeseQ	CBL6111D	41909	30MHz~1GHz	Aug. 27, 2019	Jun. 01, 2020	Aug. 26, 2020	Radiation (03CH04-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1474	1GHz~18GHz	Apr. 01, 2020	Jun. 01, 2020	Mar. 31, 2021	Radiation (03CH04-SZ)
Horn Antenna	SCHWARZBECK	BBHA9170	9170#679	15GHz~40GHz	Apr. 17, 2020	Jun. 01, 2020	Apr. 16, 2021	Radiation (03CH04-SZ)
Amplifier	Burgeon	BPA-530	102211	0.01Hz~3000MHz	Oct. 18, 2019	Jun. 01, 2020	Oct. 17, 2020	Radiation (03CH04-SZ)
HF Amplifier	MITEQ	AMF-7D-00101800-30-10P-R	1943528	1GHz~18GHz	Oct. 18, 2019	Jun. 01, 2020	Oct. 17, 2020	Radiation (03CH04-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 22, 2019	Jun. 01, 2020	Jul. 21, 2020	Radiation (03CH04-SZ)
Amplifier	Agilent Technologies	83017A	MY53270156	500MHz~26.5GHz	Aug. 26, 2019	Jun. 01, 2020	Aug. 25, 2020	Radiation (03CH04-SZ)
AC Power Source	Chroma	61601	N/A	N/A	NCR	Jun. 01, 2020	NCR	Radiation (03CH04-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Jun. 01, 2020	NCR	Radiation (03CH04-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Jun. 01, 2020	NCR	Radiation (03CH04-SZ)
EMI Receiver	R&S	ESR7	101630	9kHz~7GHz;	Dec. 26, 2019	Mar. 21, 2020	Dec. 25, 2020	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103912	9kHz~30MHz	Oct. 17, 2019	Mar. 21, 2020	Oct. 16, 2020	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	EMCO	3816/2SH	00103892	9kHz~30MHz	Oct. 17, 2019	Mar. 21, 2020	Oct. 16, 2020	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000891	100Vac~250Vac	Jul. 23, 2019	Mar. 21, 2020	Jul. 22, 2020	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% ($U = 2Uc(y)$)	2.6dB
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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% ($U = 2Uc(y)$)	4.8dB
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.1dB
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Appendix A. Conducted Test Results

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Zhang Jiang	Temperature:	21~25	°C
Test Date:	2020/4/5	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	17.13	33.72	-	22.34		
11a	6Mbps	1	44	5220	16.98	34.17	-	22.30		
11a	6Mbps	1	48	5240	17.03	35.06	-	22.31		
HT20	MCS0	1	36	5180	17.98	38.21	-	22.55		
HT20	MCS0	1	44	5220	18.03	40.41	-	22.56		
HT20	MCS0	1	48	5240	17.98	41.91	-	22.55		
HT40	MCS0	1	38	5190	36.76	61.41	-	23.01		
HT40	MCS0	1	46	5230	36.86	55.83	-	23.01		
VHT80	MCS0	1	42	5210	76.72	85.51	-	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	0.09	10.27	24.00	1.50		Pass
11a	6Mbps	1	44	5220	0.09	10.45	24.00	1.50		Pass
11a	6Mbps	1	48	5240	0.09	10.17	24.00	1.50		Pass
HT20	MCS0	1	36	5180	0.08	10.36	24.00	1.50		Pass
HT20	MCS0	1	44	5220	0.08	11.22	24.00	1.50		Pass
HT20	MCS0	1	48	5240	0.08	10.28	24.00	1.50		Pass
HT40	MCS0	1	38	5190	0.12	14.15	24.00	1.50		Pass
HT40	MCS0	1	46	5230	0.12	14.37	24.00	1.50		Pass
VHT20	MCS0	1	36	5180	0.06	9.41	24.00	1.50		Pass
VHT20	MCS0	1	44	5220	0.06	10.54	24.00	1.50		Pass
VHT20	MCS0	1	48	5240	0.06	9.42	24.00	1.50		Pass
VHT40	MCS0	1	38	5190	0.12	13.02	24.00	1.50		Pass
VHT40	MCS0	1	46	5230	0.12	13.51	24.00	1.50		Pass
VHT80	MCS0	1	42	5210	0.20	13.10	24.00	1.50		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	0.09	2.48	11.00	1.50		Pass
11a	6Mbps	1	44	5220	0.09	2.75	11.00	1.50		Pass
11a	6Mbps	1	48	5240	0.09	2.03	11.00	1.50		Pass
HT20	MCS0	1	36	5180	0.08	2.50	11.00	1.50		Pass
HT20	MCS0	1	44	5220	0.08	1.55	11.00	1.50		Pass
HT20	MCS0	1	48	5240	0.08	2.35	11.00	1.50		Pass
HT40	MCS0	1	38	5190	0.12	-1.05	11.00	1.50		Pass
HT40	MCS0	1	46	5230	0.12	-0.82	11.00	1.50		Pass
VHT80	MCS0	1	42	5210	0.20	-5.07	11.00	1.50		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	16.98	34.42	23.30	29.30	23.98	
11a	6M bps	1	60	5300	17.03	34.82	23.31	29.31	23.98	
11a	6M bps	1	64	5320	17.08	35.56	23.33	29.33	23.98	
HT20	MCS 0	1	52	5260	17.98	40.71	23.55	29.55	23.98	
HT20	MCS 0	1	60	5300	17.93	37.36	23.54	29.54	23.98	
HT20	MCS 0	1	64	5320	18.03	40.26	23.56	29.56	23.98	
HT40	MCS 0	1	54	5270	36.76	58.98	23.98	30.00	23.98	
HT40	MCS 0	1	62	5310	36.86	54.85	23.98	30.00	23.98	
VHT80	MCS 0	1	58	5290	76.60	86.31	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	0.09	14.55	23.98	1.50	26.99	Pass
11a	6M bps	1	60	5300	0.09	12.24	23.98	1.50	26.99	Pass
11a	6M bps	1	64	5320	0.09	12.27	23.98	1.50	26.99	Pass
HT20	MCS 0	1	52	5260	0.08	14.43	23.98	1.50	26.99	Pass
HT20	MCS 0	1	60	5300	0.08	11.23	23.98	1.50	26.99	Pass
HT20	MCS 0	1	64	5320	0.08	11.39	23.98	1.50	26.99	Pass
HT40	MCS 0	1	54	5270	0.12	13.92	23.98	1.50	26.99	Pass
HT40	MCS 0	1	62	5310	0.12	14.55	23.98	1.50	26.99	Pass
VHT20	MCS 0	1	52	5260	0.06	13.18	23.98	1.50	26.99	Pass
VHT20	MCS 0	1	60	5300	0.06	9.86	23.98	1.50	26.99	Pass
VHT20	MCS 0	1	64	5320	0.06	10.01	23.98	1.50	26.99	Pass
VHT40	MCS 0	1	54	5270	0.12	13.13	23.98	1.50	26.99	Pass
VHT40	MCS 0	1	62	5310	0.12	13.66	23.98	1.50	26.99	Pass
VHT80	MCS 0	1	58	5290	0.20	13.05	23.98	1.50	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	0.09	2.81	11.00	1.50		Pass
11a	6M bps	1	60	5300	0.09	2.35	11.00	1.50		Pass
11a	6M bps	1	64	5320	0.09	2.50	11.00	1.50		Pass
HT20	MCS 0	1	52	5260	0.08	2.09	11.00	1.50		Pass
HT20	MCS 0	1	60	5300	0.08	2.50	11.00	1.50		Pass
HT20	MCS 0	1	64	5320	0.08	2.51	11.00	1.50		Pass
HT40	MCS 0	1	54	5270	0.12	-1.16	11.00	1.50		Pass
HT40	MCS 0	1	62	5310	0.12	-0.73	11.00	1.50		Pass
VHT80	MCS 0	1	58	5290	0.20	-4.70	11.00	1.50		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	34.97	23.31	29.31	23.98	
11a	6M bps	1	116	5580	17.03	34.17	23.31	29.31	23.98	
11a	6M bps	1	140	5700	17.08	33.62	23.33	29.33	23.98	
11a	6Mbps	1	144	5720	16.98	35.21	23.30	29.30	23.98	
HT20	MCS 0	1	100	5500	18.08	41.76	23.57	29.57	23.98	
HT20	MCS 0	1	116	5580	18.08	40.11	23.57	29.57	23.98	
HT20	MCS 0	1	140	5700	18.03	41.46	23.56	29.56	23.98	
HT20	MCS0	1	144	5720	17.98	42.61	23.55	29.55	23.98	
HT40	MCS 0	1	102	5510	37.06	57.45	23.98	30.00	23.98	
HT40	MCS 0	1	110	5550	36.86	63.12	23.98	30.00	23.98	
HT40	MCS 0	1	134	5670	36.86	58.71	23.98	30.00	23.98	
HT40	MCS0	1	142	5710	36.96	61.14	23.98	30.00	23.98	
VHT80	MCS 0	1	106	5530	76.72	87.75	23.98	30.00	23.98	
VHT80	MCS0	1	138	5690	76.60	85.36	23.98	30.00	23.98	

TEST RESULTS DATA
Average Power Table

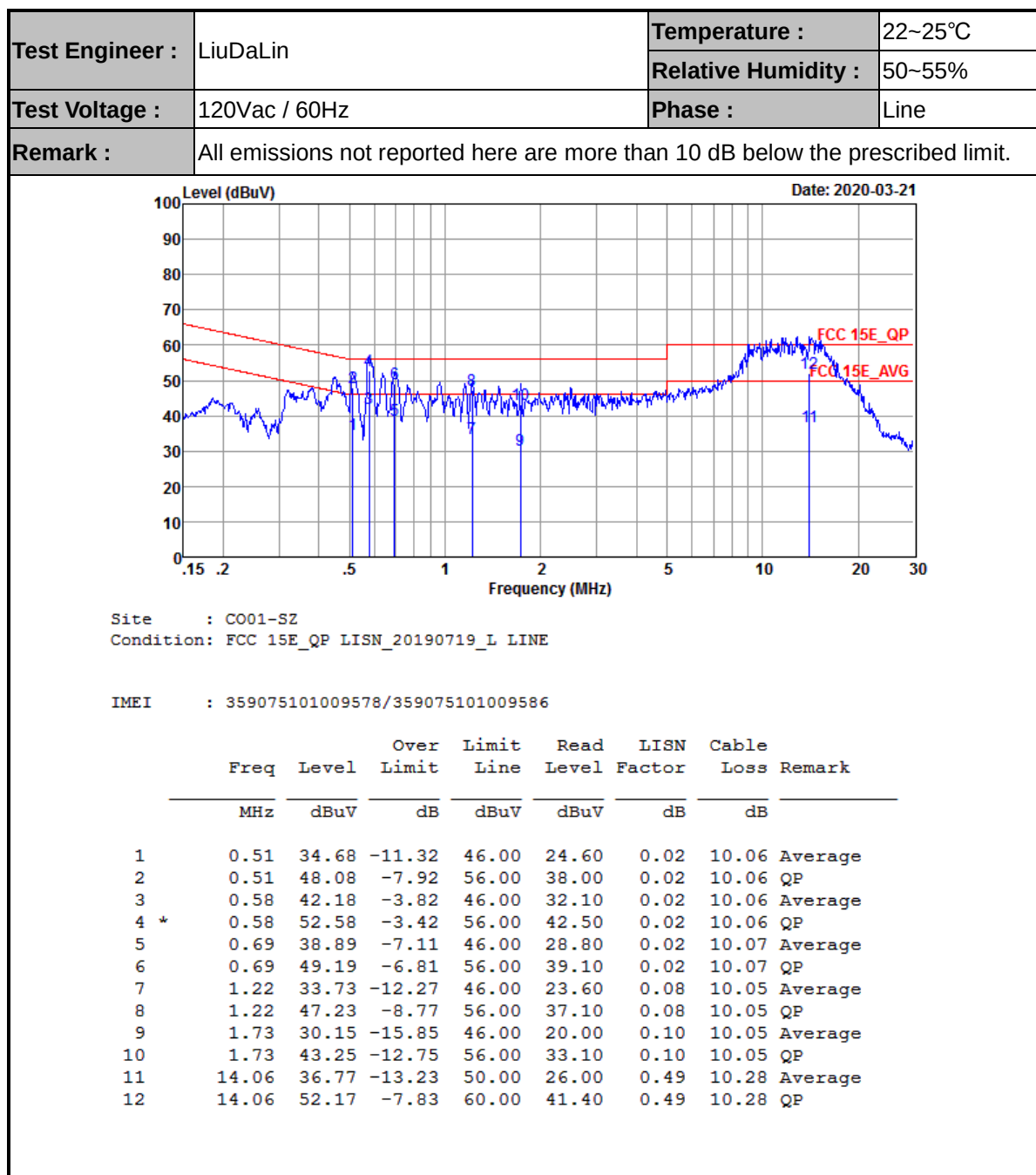
FCC Band III										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)	EIRP Power Limit (dBm)	Pass/Fail
11a	6M bps	1	100	5500	0.09	14.48	23.98	1.50	26.99	Pass
11a	6M bps	1	116	5580	0.09	14.20	23.98	1.50	26.99	Pass
11a	6M bps	1	140	5700	0.09	12.14	23.98	1.50	26.99	Pass
11a	6M bps	1	144	5720	0.09	13.44	23.98	1.50	26.99	Pass
HT20	MCS 0	1	100	5500	0.08	14.29	23.98	1.50	26.99	Pass
HT20	MCS 0	1	116	5580	0.08	14.50	23.98	1.50	26.99	Pass
HT20	MCS 0	1	140	5700	0.08	13.18	23.98	1.50	26.99	Pass
HT20	MCS 0	1	144	5720	0.08	14.55	23.98	1.50	26.99	Pass
HT40	MCS 0	1	102	5510	0.12	14.72	23.98	1.50	26.99	Pass
HT40	MCS 0	1	110	5550	0.12	14.38	23.98	1.50	26.99	Pass
HT40	MCS 0	1	134	5670	0.12	14.69	23.98	1.50	26.99	Pass
HT40	MCS 0	1	142	5710	0.12	14.06	23.98	1.50	26.99	Pass
VHT20	MCS 0	1	100	5500	0.06	13.13	23.98	1.50	26.99	Pass
VHT20	MCS 0	1	116	5580	0.06	13.01	23.98	1.50	26.99	Pass
VHT20	MCS 0	1	140	5700	0.06	12.37	23.98	1.50	26.99	Pass
VHT20	MCS 0	1	144	5720	0.06	12.96	23.98	1.50	26.99	Pass
VHT40	MCS 0	1	102	5510	0.12	12.97	23.98	1.50	26.99	Pass
VHT40	MCS 0	1	110	5550	0.12	13.58	23.98	1.50	26.99	Pass
VHT40	MCS 0	1	134	5670	0.12	12.95	23.98	1.50	26.99	Pass
VHT40	MCS 0	1	142	5710	0.12	13.14	23.98	1.50	26.99	Pass
VHT80	MCS 0	1	106	5530	0.20	13.72	23.98	1.50	26.99	Pass
VHT80	MCS 0	1	138	5690	0.20	13.44	23.98	1.50	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	0.09	3.12	11.00	1.50		Pass
11a	6M bps	1	116	5580	0.09	2.52	11.00	1.50		Pass
11a	6M bps	1	140	5700	0.09	2.10	11.00	1.50		Pass
11a	6Mbps	1	144	5720	0.09	2.70	11.00	1.50		Pass
HT20	MCS 0	1	100	5500	0.08	2.26	11.00	1.50		Pass
HT20	MCS 0	1	116	5580	0.08	2.60	11.00	1.50		Pass
HT20	MCS 0	1	140	5700	0.08	2.43	11.00	1.50		Pass
HT20	MCS0	1	144	5720	0.08	2.99	11.00	1.50		Pass
HT40	MCS 0	1	102	5510	0.12	-0.07	11.00	1.50		Pass
HT40	MCS 0	1	110	5550	0.12	-0.62	11.00	1.50		Pass
HT40	MCS 0	1	134	5670	0.12	-0.28	11.00	1.50		Pass
HT40	MCS0	1	142	5710	0.12	-0.97	11.00	1.50		Pass
VHT80	MCS 0	1	106	5530	0.20	-3.60	11.00	1.50		Pass
VHT80	MCS0	1	138	5690	0.20	-4.11	11.00	1.50		Pass

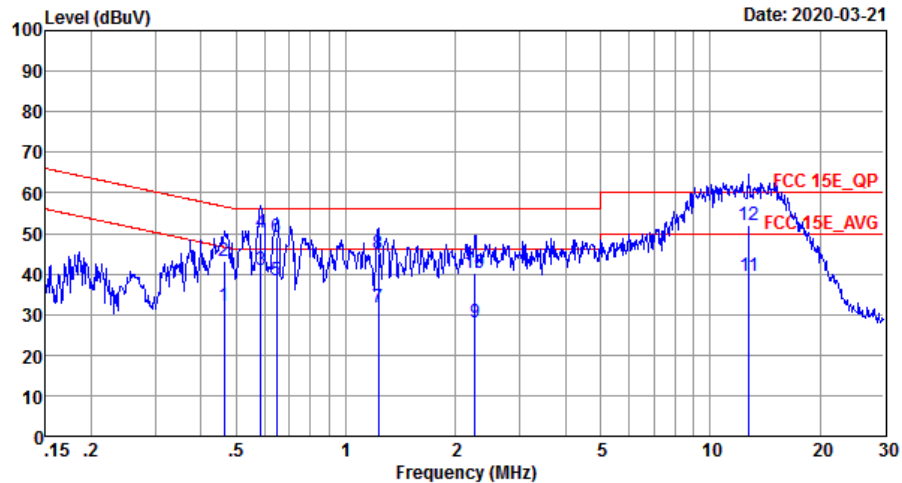


Appendix B. AC Conducted Emission Test Results





Test Engineer :	LiuDaLin	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_20190719_N NEUTRAL

IMEI : 359075101009578/359075101009586

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.46	32.06	-14.57	46.63	22.00	0.02	10.04	Average
2	0.46	43.06	-13.57	56.63	33.00	0.02	10.04	QP
3 *	0.59	40.88	-5.12	46.00	30.80	0.02	10.06	Average
4	0.59	50.18	-5.82	56.00	40.10	0.02	10.06	QP
5	0.64	38.39	-7.61	46.00	28.30	0.02	10.07	Average
6	0.64	49.19	-6.81	56.00	39.10	0.02	10.07	QP
7	1.23	31.80	-14.20	46.00	21.70	0.05	10.05	Average
8	1.23	45.10	-10.90	56.00	35.00	0.05	10.05	QP
9	2.26	28.11	-17.89	46.00	18.01	0.04	10.06	Average
10	2.26	40.21	-15.79	56.00	30.11	0.04	10.06	QP
11	12.78	39.54	-10.46	50.00	29.01	0.26	10.27	Average
12	12.78	52.04	-7.96	60.00	41.51	0.26	10.27	QP

Note:

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



Appendix C. 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	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		5107.38	51.1	-22.9	74	42.98	32.23	8.43	32.54	110	231	P	H
		5028.08	40.19	-13.81	54	32.2	32.21	8.29	32.51	110	231	A	H
		5180	89.91	-	-	81.65	32.25	8.58	32.57	110	231	P	H
		5180	82.56	-	-	74.3	32.25	8.58	32.57	110	231	A	H
		5053.82	50.77	-23.23	74	42.72	32.21	8.36	32.52	100	24	P	V
		5003.38	40.15	-13.85	54	32.2	32.16	8.29	32.5	100	24	A	V
		5180	85.1	-	-	76.84	32.25	8.58	32.57	100	24	P	V
		5180	78.76	-	-	70.5	32.25	8.58	32.57	100	24	A	V
802.11a CH 44 5220MHz		5072.54	50.17	-23.83	74	42.12	32.22	8.36	32.53	100	223	P	H
		5000.26	40.21	-13.79	54	32.26	32.16	8.29	32.5	100	223	A	H
		5220	89.2	-	-	80.87	32.26	8.65	32.58	100	223	P	H
		5220	82.02	-	-	73.69	32.26	8.65	32.58	100	223	A	H
		5442.48	50.49	-23.51	74	41.15	32.34	9.68	32.68	100	223	P	H
		5444.16	40.01	-13.99	54	30.67	32.34	9.68	32.68	100	223	A	H
		5004.42	50.38	-23.62	74	42.39	32.2	8.29	32.5	151	2	P	V
		5026.78	40.1	-13.9	54	32.11	32.21	8.29	32.51	151	2	A	V
		5220	86.24	-	-	77.91	32.26	8.65	32.58	151	2	P	V
		5220	78.65	-	-	70.32	32.26	8.65	32.58	151	2	A	V
		5405.28	50.26	-23.74	74	40.95	32.32	9.66	32.67	151	2	P	V
		5438.88	40.02	-13.98	54	30.68	32.34	9.68	32.68	151	2	A	V



802.11a CH 48 5240MHz		5087.88	50.99	-23.01	74	42.87	32.22	8.43	32.53	100	224	P	H
		5026.26	40.11	-13.89	54	32.12	32.21	8.29	32.51	100	224	A	H
		5240	89.66	-	-	81.13	32.27	8.85	32.59	100	224	P	H
		5240	82.74	-	-	74.21	32.27	8.85	32.59	100	224	A	H
		5429.28	52.04	-21.96	74	42.7	32.34	9.68	32.68	100	224	P	H
		5439.36	40.04	-13.96	54	30.7	32.34	9.68	32.68	100	224	A	H
		5101.92	50.8	-23.2	74	42.68	32.23	8.43	32.54	132	146	P	V
		5001.04	40.15	-13.85	54	32.2	32.16	8.29	32.5	132	146	A	V
		5240	86.18	-	-	77.65	32.27	8.85	32.59	132	146	P	V
		5240	78.49	-	-	69.96	32.27	8.85	32.59	132	146	A	V
		5439.84	49.56	-24.44	74	40.22	32.34	9.68	32.68	132	146	P	V
		5441.52	40.11	-13.89	54	30.77	32.34	9.68	32.68	132	146	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	63.27	-5.03	68.3	71.95	38.25	12.06	58.99	144	328	P	H
		15540	49.34	-24.66	74	54.74	38.94	14.59	58.93	189	238	P	H
		10360	58.34	-9.96	68.3	67.02	38.25	12.06	58.99	154	268	P	V
		15540	48.73	-25.27	74	54.13	38.94	14.59	58.93	189	238	P	V
802.11a CH 44 5220MHz		10440	63.5	-4.8	68.3	71.99	38.31	12.12	58.92	168	335	P	H
		15660	50.57	-23.43	74	56.45	38.54	14.64	59.06	160	225	P	H
		10440	60	-8.3	68.3	68.49	38.31	12.12	58.92	100	266	P	V
		15660	48.73	-25.27	74	54.61	38.54	14.64	59.06	160	228	P	V
802.11a CH 48 5240MHz		10480	63.88	-4.42	68.3	72.23	38.36	12.15	58.86	162	334	P	H
		15720	50.42	-23.58	74	56.57	38.31	14.66	59.12	198	226	P	H
		10480	61.22	-7.08	68.3	69.57	38.36	12.15	58.86	119	189	P	V
		15720	50.05	-23.95	74	56.2	38.31	14.66	59.12	198	226	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)
802.11n HT20 CH 36 5180MHz		5061.62	46.99	-27.01	74	38.93	32.22	8.36	32.52	247	140	P	H
		5150	37.78	-16.22	54	29.59	32.24	8.51	32.56	247	140	A	H
		5180	90.65	-	-	82.39	32.25	8.58	32.57	247	140	P	H
		5180	82.02	-	-	73.76	32.25	8.58	32.57	247	140	A	H
		5068.9	48.16	-25.84	74	40.11	32.22	8.36	32.53	100	6	P	V
		5068.64	37.54	-16.46	54	29.49	32.22	8.36	32.53	100	6	A	V
		5180	87.36	-	-	79.1	32.25	8.58	32.57	100	6	P	V
		5180	79.23	-	-	70.97	32.25	8.58	32.57	100	6	A	V
802.11n HT20 CH 44 5220MHz		5091.26	46.32	-27.68	74	38.19	32.23	8.43	32.53	263	139	P	H
		5067.08	37.55	-16.45	54	29.49	32.22	8.36	32.52	263	139	A	H
		5220	89.07	-	-	80.74	32.26	8.65	32.58	263	139	P	H
		5220	81.1	-	-	72.77	32.26	8.65	32.58	263	139	A	H
		5420.4	46.4	-27.6	74	37.08	32.33	9.66	32.67	263	139	P	H
		5426.64	37.05	-16.95	54	27.72	32.33	9.68	32.68	263	139	A	H
		5089.7	47.32	-26.68	74	39.19	32.23	8.43	32.53	116	158	P	V
		5067.6	37.59	-16.41	54	29.54	32.22	8.36	32.53	116	158	A	V
		5220	85.98	-	-	77.65	32.26	8.65	32.58	116	158	P	V
		5220	78.83	-	-	70.5	32.26	8.65	32.58	116	158	A	V
		5394.72	45.74	-28.26	74	36.42	32.32	9.66	32.66	116	158	P	V
		5429.28	37.11	-16.89	54	27.77	32.34	9.68	32.68	116	158	A	V



802.11n HT20 CH 48 5240MHz		5059.8	47.84	-26.16	74	39.78	32.22	8.36	32.52	271	141	P	H
		5065.26	38.01	-15.99	54	29.95	32.22	8.36	32.52	271	141	A	H
		5240	89.71	-	-	81.18	32.27	8.85	32.59	271	141	P	H
		5240	80.38	-	-	71.85	32.27	8.85	32.59	271	141	A	H
		5399.52	46.52	-27.48	74	37.21	32.32	9.66	32.67	271	141	P	H
		5408.16	37.68	-16.32	54	28.37	32.32	9.66	32.67	271	141	A	H
		5134.68	47.94	-26.06	74	39.74	32.24	8.51	32.55	106	1	P	V
		5132.08	38.01	-15.99	54	29.81	32.24	8.51	32.55	106	1	A	V
		5240	87.52	-	-	78.99	32.27	8.85	32.59	106	1	P	V
		5240	78.89	-	-	70.36	32.27	8.85	32.59	106	1	A	V
		5406.96	48.21	-25.79	74	38.9	32.32	9.66	32.67	106	1	P	V
		5428.32	37.6	-16.4	54	28.27	32.33	9.68	32.68	106	1	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	64.33	-3.97	68.3	73.01	38.25	12.06	58.99	100	237	P	H
HT20		15540	49.23	-24.77	74	54.63	38.94	14.59	58.93	189	238	P	H
CH 36		10360	60.51	-7.79	68.3	69.19	38.25	12.06	58.99	106	262	P	V
5180MHz		15540	50.34	-23.66	74	55.74	38.94	14.59	58.93	185	210	P	V
802.11n		10440	63.8	-4.5	68.3	72.29	38.31	12.12	58.92	100	239	P	H
HT20		15660	49.11	-24.89	74	54.99	38.54	14.64	59.06	160	225	P	H
CH 44		10440	61.89	-6.41	68.3	70.38	38.31	12.12	58.92	100	277	P	V
5220MHz		15660	49.39	-24.61	74	55.27	38.54	14.64	59.06	160	228	P	V
802.11n		10480	62.97	-5.33	68.3	71.32	38.36	12.15	58.86	102	220	P	H
HT20		15720	49.66	-24.34	74	55.81	38.31	14.66	59.12	198	211	P	H
CH 48		10480	59.96	-8.34	68.3	68.31	38.36	12.15	58.86	101	274	P	V
5240MHz		15720	49.2	-24.8	74	55.35	38.31	14.66	59.12	198	226	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		5076.7	47.69	-26.31	74	39.57	32.22	8.43	32.53	137	182	P	H
		5149.76	40.18	-13.82	54	31.99	32.24	8.51	32.56	137	182	A	H
		5190	88.35	-	-	80.09	32.25	8.58	32.57	137	182	P	H
		5190	83.36	-	-	75.1	32.25	8.58	32.57	137	182	A	H
		5378.8	47.46	-26.54	74	38.34	32.32	9.46	32.66	137	182	P	H
		5407.92	38.26	-15.74	54	28.95	32.32	9.66	32.67	137	182	A	H
		5124.8	48.15	-25.85	74	39.95	32.24	8.51	32.55	198	161	P	V
		5149.5	39.66	-14.34	54	31.47	32.24	8.51	32.56	198	161	A	V
		5190	86.99	-	-	78.73	32.25	8.58	32.57	198	161	P	V
		5190	79.31	-	-	71.05	32.25	8.58	32.57	198	161	A	V
		5398.4	47.25	-26.75	74	37.93	32.32	9.66	32.66	198	161	P	V
		5404.56	38.19	-15.81	54	28.88	32.32	9.66	32.67	198	161	A	V
802.11n HT40 CH 46 5230MHz		5107.38	47.53	-26.47	74	39.41	32.23	8.43	32.54	257	139	P	H
		5073.32	38.44	-15.56	54	30.39	32.22	8.36	32.53	257	139	A	H
		5230	88.04	-	-	79.71	32.27	8.65	32.59	257	139	P	H
		5230	80.69	-	-	72.36	32.27	8.65	32.59	257	139	A	H
		5431.2	48.37	-25.63	74	39.03	32.34	9.68	32.68	257	139	P	H
		5402.16	38.01	-15.99	54	28.7	32.32	9.66	32.67	257	139	A	H
		5087.88	47.84	-26.16	74	39.72	32.22	8.43	32.53	256	262	P	V
		5087.62	38.46	-15.54	54	30.34	32.22	8.43	32.53	256	262	A	V
		5230	86.13	-	-	77.8	32.27	8.65	32.59	256	262	P	V
		5230	78.62	-	-	70.29	32.27	8.65	32.59	256	262	A	V
		5407.2	47.46	-26.54	74	38.15	32.32	9.66	32.67	256	262	P	V
		5435.04	38.06	-15.94	54	28.72	32.34	9.68	32.68	256	262	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	62.4	-5.9	68.3	71.02	38.26	12.09	58.97	291	222	P	H
HT40		15570	49.48	-24.52	74	55.03	38.82	14.6	58.97	155	360	P	H
CH 38		10380	60.55	-7.75	68.3	69.17	38.26	12.09	58.97	111	260	P	V
5190MHz		15570	49.46	-24.54	74	55.01	38.82	14.6	58.97	155	32	P	V
802.11n		10460	59.57	-8.73	68.3	41.71	38.32	12.15	32.61	291	222	P	H
HT40		15690	49.97	-24.03	74	55.98	38.42	14.66	59.09	150	225	P	H
CH 46		10460	53.57	-14.73	68.3	62	38.32	12.15	58.9	150	360	P	V
5230MHz		15690	49.72	-24.28	74	55.73	38.42	14.66	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		5141.18	49.08	-24.92	74	40.88	32.24	8.51	32.55	104	175	P	H
		5141.44	40.39	-13.61	54	32.19	32.24	8.51	32.55	104	175	A	H
		5210	84.24	-	-	75.91	32.26	8.65	32.58	104	175	P	H
		5210	76.79	-	-	68.46	32.26	8.65	32.58	104	175	A	H
		5454.24	46.62	-27.38	74	37.29	32.34	9.68	32.69	104	175	P	H
		5406.48	38.67	-15.33	54	29.36	32.32	9.66	32.67	104	175	A	H
		5136.76	48.9	-25.1	74	40.7	32.24	8.51	32.55	100	19	P	V
		5135.72	39.82	-14.18	54	31.62	32.24	8.51	32.55	100	19	A	V
		5210	82.68	-	-	74.35	32.26	8.65	32.58	100	19	P	V
		5210	75.69	-	-	67.36	32.26	8.65	32.58	100	19	A	V
		5422.32	47.08	-26.92	74	37.76	32.33	9.66	32.67	100	19	P	V
		5410.32	38.52	-15.48	54	29.21	32.32	9.66	32.67	100	19	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	57.84	-10.46	68.3	40.05	38.29	12.12	32.62	159	265	P	H
VHT80		15630	49.56	-24.44	74	55.39	38.59	14.62	59.04	155	360	P	H
CH 42		10420	51.98	-16.32	68.3	60.5	38.29	12.12	58.93	150	360	P	V
5210MHz		15630	48.88	-25.12	74	54.71	38.59	14.62	59.04	155	360	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		5104.52	51.68	-22.32	74	43.56	32.23	8.43	32.54	100	228	P	H
		5033.02	40.18	-13.82	54	32.19	32.21	8.29	32.51	100	228	A	H
		5260	92.26	-	-	83.74	32.28	8.85	32.61	100	228	P	H
		5260	84.16	-	-	75.64	32.28	8.85	32.61	100	228	A	H
		5429.76	50.69	-23.31	74	41.35	32.34	9.68	32.68	100	228	P	H
		5441.52	40.1	-13.9	54	30.76	32.34	9.68	32.68	100	228	A	H
		5037.44	50.98	-23.02	74	42.92	32.21	8.36	32.51	121	0	P	V
		5005.2	40.25	-13.75	54	32.26	32.2	8.29	32.5	121	0	A	V
		5260	87.9	-	-	79.38	32.28	8.85	32.61	121	0	P	V
		5260	80.96	-	-	72.44	32.28	8.85	32.61	121	0	A	V
		5436.48	50.1	-23.9	74	40.76	32.34	9.68	32.68	121	0	P	V
		5440.8	40.1	-13.9	54	30.76	32.34	9.68	32.68	121	0	A	V
802.11a CH 60 5300MHz		5029.05	50.37	-23.63	74	42.38	32.21	8.29	32.51	104	235	P	H
		5000.35	40.17	-13.83	54	32.22	32.16	8.29	32.5	104	235	A	H
		5300	89.81	-	-	81.1	32.29	9.05	32.63	104	235	P	H
		5300	83.02	-	-	74.31	32.29	9.05	32.63	104	235	A	H
		5361.6	50.55	-23.45	74	41.43	32.31	9.46	32.65	104	235	P	H
		5436.24	40.18	-13.82	54	30.84	32.34	9.68	32.68	104	235	A	H
		5095.55	51.58	-22.42	74	43.46	32.23	8.43	32.54	100	20	P	V
		5138.6	40.36	-13.64	54	32.16	32.24	8.51	32.55	100	20	A	V
		5300	87.87	-	-	79.16	32.29	9.05	32.63	100	20	P	V
		5300	81.72	-	-	73.01	32.29	9.05	32.63	100	20	A	V
		5426.4	50.28	-23.72	74	40.97	32.33	9.66	32.68	100	20	P	V
		5434.56	40.07	-13.93	54	30.73	32.34	9.68	32.68	100	20	A	V



802.11a CH 64 5320MHz		5320	89.43	-	-	80.5	32.3	9.26	32.63	109	226	P	H
		5320	82.59	-	-	73.66	32.3	9.26	32.63	109	226	A	H
		5409.76	50.89	-23.11	74	41.58	32.32	9.66	32.67	109	226	P	H
		5444.8	40.02	-13.98	54	30.68	32.34	9.68	32.68	109	226	A	H
		5320	86.76	-	-	77.83	32.3	9.26	32.63	100	22	P	V
		5320	81.92	-	-	72.99	32.3	9.26	32.63	100	22	A	V
		5350.56	51.28	-22.72	74	42.16	32.31	9.46	32.65	100	22	P	V
		5440	40.03	-13.97	54	30.69	32.34	9.68	32.68	100	22	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	64.56	-3.74	68.3	72.82	38.39	12.17	58.82	233	218	P	H
		15780	50.22	-23.78	74	56.57	38.14	14.69	59.18	159	345	P	H
		10520	57.37	-10.93	68.3	65.63	38.39	12.17	58.82	101	191	P	V
		15780	49.79	-24.21	74	56.14	38.14	14.69	59.18	192	39	P	V
802.11a CH 60 5300MHz		10600	59.4	-14.6	74	67.43	38.47	12.23	58.73	238	209	P	H
		10600	51	-3	54	59.03	38.47	12.23	58.73	238	209	A	H
		13948	51.34	-16.96	68.3	31.1	40.47	13.86	34.09	159	0	P	H
		10600	54.11	-19.89	74	62.14	38.47	12.23	58.73	108	185	P	V
		10600	45.33	-8.67	54	53.36	38.47	12.23	58.73	108	185	A	V
		15900	49.64	-24.36	74	56.45	37.74	14.75	59.3	196	18	P	V
802.11a CH 64 5320MHz		10640	58.45	-15.55	74	66.38	38.5	12.26	58.69	238	209	P	H
		10640	50.29	-3.71	54	58.22	38.5	12.26	58.69	238	209	A	H
		15960	49.96	-24.04	74	57.04	37.51	14.78	59.37	173	296	P	H
		10640	56.67	-17.33	74	64.6	38.5	12.26	58.69	108	185	P	V
		10640	48.21	-5.79	54	56.14	38.5	12.26	58.69	108	185	A	V
		15960	48.33	-25.67	74	55.41	37.51	14.78	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		5043.68	48.08	-25.92	74	40.03	32.21	8.36	32.52	274	146	P	H
		5064.22	37.99	-16.01	54	29.93	32.22	8.36	32.52	274	146	A	H
		5260	90.74	-	-	82.22	32.28	8.85	32.61	274	146	P	H
		5260	82.9	-	-	74.38	32.28	8.85	32.61	274	146	A	H
		5427.84	46.89	-27.11	74	37.56	32.33	9.68	32.68	274	146	P	H
		5435.76	37.68	-16.32	54	28.34	32.34	9.68	32.68	274	146	A	H
		5140.92	47.65	-26.35	74	39.45	32.24	8.51	32.55	100	2	P	V
		5063.18	37.97	-16.03	54	29.91	32.22	8.36	32.52	100	2	A	V
		5260	88.18	-	-	79.66	32.28	8.85	32.61	100	2	P	V
		5260	80.89	-	-	72.37	32.28	8.85	32.61	100	2	A	V
		5360.64	46.27	-27.73	74	37.15	32.31	9.46	32.65	100	2	P	V
		5408.4	37.64	-16.36	54	28.33	32.32	9.66	32.67	100	2	A	V
802.11n HT20 CH 60 5300MHz		5071.75	49.65	-24.35	74	41.6	32.22	8.36	32.53	104	235	P	H
		5000.56	40.17	-13.83	54	32.22	32.16	8.29	32.5	104	235	A	H
		5300	88.81	-	-	80.1	32.29	9.05	32.63	104	235	P	H
		5300	82.02	-	-	73.31	32.29	9.05	32.63	104	235	A	H
		5382.72	48.32	-25.68	74	39.2	32.32	9.46	32.66	104	235	P	H
		5436.63	40.18	-13.82	54	30.84	32.34	9.68	32.68	104	235	A	H
		5035	50.22	-23.78	74	42.23	32.21	8.29	32.51	100	20	P	V
		5138.6	40.52	-13.48	54	32.32	32.24	8.51	32.55	100	20	A	V
		5300	86.87	-	-	78.16	32.29	9.05	32.63	100	20	P	V
		5300	80.72	-	-	72.01	32.29	9.05	32.63	100	20	A	V
		5380.32	48.78	-25.22	74	39.66	32.32	9.46	32.66	100	20	P	V
		5434.66	40.07	-13.93	54	30.73	32.34	9.68	32.68	100	20	A	V



802.11n HT20 CH 64 5320MHz		5320	89.55	-	-	80.62	32.3	9.26	32.63	272	142	P	H
		5320	82.29	-	-	73.36	32.3	9.26	32.63	272	142	A	H
		5372	47.2	-26.8	74	38.08	32.31	9.46	32.65	272	142	P	H
		5350.08	37.69	-16.31	54	28.57	32.31	9.46	32.65	272	142	A	H
		5320	88.17	-	-	79.24	32.3	9.26	32.63	100	4	P	V
		5320	80.29	-	-	71.36	32.3	9.26	32.63	100	4	A	V
		5430.72	46.66	-27.34	74	37.32	32.34	9.68	32.68	100	4	P	V
		5406.72	37.64	-16.36	54	28.33	32.32	9.66	32.67	100	4	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 HT20 CH 52 5260MHz		10520	64.78	-3.52	68.3	73.04	38.39	12.17	58.82	240	206	P	H
		15780	46.83	-27.17	74	53.18	38.14	14.69	59.18	192	39	P	H
		10520	59.96	-8.34	68.3	68.22	38.39	12.17	58.82	106	243	P	V
		15780	49.68	-24.32	74	56.03	38.14	14.69	59.18	159	345	P	V
802.11n HT20 CH 60 5300MHz		10600	61.48	-12.52	74	69.51	38.47	12.23	58.73	227	214	P	H
		10600	50.91	-3.09	54	58.94	38.47	12.23	58.73	227	214	A	H
		15900	48.97	-25.03	74	55.78	37.74	14.75	59.3	196	18	P	H
		10600	59.55	-14.45	74	67.58	38.47	12.23	58.73	106	187	P	V
		10600	48.19	-5.81	54	56.22	38.47	12.23	58.73	106	187	A	V
		15900	49.32	-24.68	74	56.13	37.74	14.75	59.3	196	190	P	V
802.11n HT20 CH 64 5320MHz		10640	59.88	-14.12	74	67.81	38.5	12.26	58.69	241	214	P	H
		10640	50.22	-3.78	54	58.15	38.5	12.26	58.69	241	214	A	H
		15960	48.93	-25.07	74	56.01	37.51	14.78	59.37	173	296	P	H
		10640	57.94	-16.06	74	65.87	38.5	12.26	58.69	101	187	P	V
		10640	47.63	-6.37	54	55.56	38.5	12.26	58.69	101	187	A	V
		15960	48.5	-25.5	74	55.58	37.51	14.78	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		5095.68	47.88	-26.12	74	39.76	32.23	8.43	32.54	119	234	P	H
		5066.3	38.5	-15.5	54	30.44	32.22	8.36	32.52	119	234	A	H
		5270	88.67	-	-	80.15	32.28	8.85	32.61	119	234	P	H
		5270	80.09	-	-	71.57	32.28	8.85	32.61	119	234	A	H
		5436.96	47.06	-26.94	74	37.72	32.34	9.68	32.68	119	234	P	H
		5431.44	38.18	-15.82	54	28.84	32.34	9.68	32.68	119	234	A	H
		5006.76	47.65	-26.35	74	39.66	32.2	8.29	32.5	100	6	P	V
		5063.96	38.53	-15.47	54	30.47	32.22	8.36	32.52	100	6	A	V
		5270	87.26	-	-	78.74	32.28	8.85	32.61	100	6	P	V
		5270	78.75	-	-	70.23	32.28	8.85	32.61	100	6	A	V
		5440.08	46.56	-27.44	74	37.22	32.34	9.68	32.68	100	6	P	V
		5435.28	38.15	-15.85	54	28.81	32.34	9.68	32.68	100	6	A	V
802.11n HT40 CH 62 5310MHz		5001.05	47.7	-26.3	74	39.75	32.16	8.29	32.5	106	219	P	H
		5031.5	38.53	-15.47	54	30.54	32.21	8.29	32.51	106	219	A	H
		5310	89.26	-	-	80.33	32.3	9.26	32.63	106	219	P	H
		5310	81.35	-	-	72.42	32.3	9.26	32.63	106	219	A	H
		5351.52	47.33	-26.67	74	38.21	32.31	9.46	32.65	106	219	P	H
		5350.08	39.33	-14.67	54	30.21	32.31	9.46	32.65	106	219	A	H
		5093.8	47.3	-26.7	74	39.18	32.23	8.43	32.54	106	6	P	V
		5066.15	38.48	-15.52	54	30.42	32.22	8.36	32.52	106	6	A	V
		5310	88.47	-	-	79.54	32.3	9.26	32.63	106	6	P	V
		5310	80.38	-	-	71.45	32.3	9.26	32.63	106	6	A	V
		5353.68	47.71	-26.29	74	38.59	32.31	9.46	32.65	106	6	P	V
		5350.08	39.35	-14.65	54	30.23	32.31	9.46	32.65	106	6	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 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	58.08	-10.22	68.3	66.28	38.4	12.2	58.8	150	220	P	H
		15810	48.94	-25.06	74	55.41	38.03	14.71	59.21	168	345	P	H
		10540	54.92	-13.38	68.3	63.12	38.4	12.2	58.8	150	220	P	V
		15180	53.62	-14.68	68.3	32.7	40.13	14.42	33.63	159	135	P	V
802.11n HT40 CH 62 5310MHz		10620	56.14	-17.86	74	64.11	38.48	12.26	58.71	150	220	P	H
		10620	50.46	-3.54	54	58.43	38.48	12.26	58.71	150	220	A	H
		15930	48.35	-25.65	74	55.29	37.63	14.76	59.33	160	100	P	H
		10620	52.43	-21.57	74	60.4	38.48	12.26	58.71	150	220	P	V
		10620	46.66	-7.34	54	54.63	38.48	12.26	58.71	150	220	A	V
		15930	47.68	-26.32	74	54.62	37.63	14.76	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 802.11n 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)
802.11n VHT80 CH 58 5290MHz		5016.64	47.96	-26.04	74	39.98	32.2	8.29	32.51	339	221	P	H
		5070.2	38.95	-15.05	54	30.9	32.22	8.36	32.53	339	221	A	H
		5290	83.76	-	-	75.04	32.29	9.05	32.62	339	221	P	H
		5290	76.08	-	-	67.36	32.29	9.05	32.62	339	221	A	H
		5413.68	46.48	-27.52	74	37.16	32.33	9.66	32.67	339	221	P	H
		5350.56	38.98	-15.02	54	29.86	32.31	9.46	32.65	339	221	A	H
		5055.12	47.58	-26.42	74	39.52	32.22	8.36	32.52	325	261	P	V
		5102.18	38.91	-15.09	54	30.79	32.23	8.43	32.54	325	261	A	V
		5290	82.29	-	-	73.57	32.29	9.05	32.62	325	261	P	V
		5290	75.14	-	-	66.42	32.29	9.05	32.62	325	261	A	V
		5407.2	47.29	-26.71	74	37.98	32.32	9.66	32.67	325	261	P	V
		5398.8	38.7	-15.3	54	29.39	32.32	9.66	32.67	325	261	A	V

**Band 2 5250~5350MHz****WIFI 802.11n 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)
802.11n		10580	52.71	-15.59	68.3	60.78	38.45	12.23	58.75	159	360	P	H
VHT80		15870	49.98	-24.02	74	56.73	37.8	14.73	59.28	159	186	P	H
CH 58		10580	51.23	-17.07	68.3	59.3	38.45	12.23	58.75	159	173	P	V
5290MHz		15870	49.62	-24.38	74	56.37	37.8	14.73	59.28	159	0	P	V



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		5398.32	47.96	-26.04	74	38.64	32.32	9.66	32.66	267	154	P	H
		5467.6	48.15	-20.15	68.3	38.79	32.35	9.7	32.69	267	154	P	H
		5416.56	38.36	-15.64	54	29.04	32.33	9.66	32.67	267	154	A	H
		5500	92.7	-	-	83.34	32.36	9.7	32.7	267	154	P	H
		5500	85.73	-	-	76.37	32.36	9.7	32.7	267	154	A	H
		5402.32	50.55	-23.45	74	41.24	32.32	9.66	32.67	184	37	P	V
		5465.52	50.63	-17.67	68.3	41.27	32.35	9.7	32.69	184	37	P	V
		5438.96	40.21	-13.79	54	30.87	32.34	9.68	32.68	184	37	A	V
		5500	87.89	-	-	78.53	32.36	9.7	32.7	184	37	P	V
		5500	81.26	-	-	71.9	32.36	9.7	32.7	184	37	A	V
802.11a CH 116 5580MHz		5394.4	46.66	-27.34	74	37.34	32.32	9.66	32.66	258	140	P	H
		5467.84	45.65	-22.65	68.3	36.29	32.35	9.7	32.69	258	140	P	H
		5404.96	38.3	-15.7	54	28.99	32.32	9.66	32.67	258	140	A	H
		5580	91.87	-	-	82.43	32.38	9.74	32.68	258	140	P	H
		5580	85.3	-	-	75.86	32.38	9.74	32.68	258	140	A	H
		5730.98	48.14	-20.16	68.3	38.3	32.48	10.01	32.65	258	140	P	H
		5410	50.43	-23.57	74	41.12	32.32	9.66	32.67	152	141	P	V
		5467.36	50.15	-18.15	68.3	40.79	32.35	9.7	32.69	152	141	P	V
		5434.72	40.1	-13.9	54	30.76	32.34	9.68	32.68	152	141	A	V
		5580	88.68	-	-	79.24	32.38	9.74	32.68	152	141	P	V
		5580	81.04	-	-	71.6	32.38	9.74	32.68	152	141	A	V
		5742.005	50.36	-17.94	68.3	40.43	32.49	10.09	32.65	152	141	P	V



802.11a CH 140 5700MHz		5700	89.56	-	-	79.76	32.45	10.01	32.66	252	217	P	H
		5700	82.79	-	-	72.99	32.45	10.01	32.66	252	217	A	H
		5725.24	53.12	-15.18	68.3	43.28	32.48	10.01	32.65	252	217	P	H
		5700	85.06	-	-	75.26	32.45	10.01	32.66	135	142	P	V
		5700	78.34	-	-	68.54	32.45	10.01	32.66	135	142	A	V
		5725.48	53.78	-14.52	68.3	43.94	32.48	10.01	32.65	135	142	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	59.52	-14.48	74	66.48	38.83	12.51	58.3	356	282	P	H
		11000	48.21	-5.79	54	55.17	38.83	12.51	58.3	356	282	A	H
		16500	49.71	-18.59	68.3	53.92	39.48	15.15	58.84	178	291	P	H
		11000	58.45	-15.55	74	65.41	38.83	12.51	58.3	113	328	P	V
		11000	47.41	-6.59	54	54.37	38.83	12.51	58.3	113	328	A	V
		16500	49.58	-18.72	68.3	53.79	39.48	15.15	58.84	178	296	P	V
802.11a CH 116 5580MHz		11160	60.62	-13.38	74	67.09	38.99	12.65	58.11	210	285	P	H
		11160	50.48	-3.52	54	56.95	38.99	12.65	58.11	210	285	A	H
		16740	50.27	-18.03	68.3	53.03	40.46	15.36	58.58	156	354	P	H
		11160	58.34	-15.66	74	64.81	38.99	12.65	58.11	170	200	P	V
		11160	47.21	-6.79	54	53.68	38.99	12.65	58.11	170	200	A	V
		16740	50.7	-17.6	68.3	53.46	40.46	15.36	58.58	156	350	P	V
802.11a CH 140 5700MHz		11400	59.28	-14.72	74	65.1	39.21	12.82	57.85	156	44	P	H
		11400	50.88	-3.12	54	56.7	39.21	12.82	57.85	156	44	A	H
		17100	50.35	-17.95	68.3	50.73	42.16	15.62	58.16	165	298	P	H
		11400	58.21	-15.79	74	64.03	39.21	12.82	57.85	155	324	P	V
		11400	47.39	-6.61	54	53.21	39.21	12.82	57.85	155	324	A	V
		17100	50.13	-18.17	68.3	50.51	42.16	15.62	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)
802.11n HT20 CH 100 5500MHz		5421.04	46.8	-27.2	74	37.48	32.33	9.66	32.67	292	140	P	H
		5469.04	48.13	-20.17	68.3	38.77	32.35	9.7	32.69	292	140	P	H
		5459.6	37.87	-16.13	54	28.54	32.34	9.68	32.69	292	140	A	H
		5500	91.08	-	-	81.72	32.36	9.7	32.7	292	140	P	H
		5500	83.05	-	-	73.69	32.36	9.7	32.7	292	140	A	H
		5452.88	48.04	-25.96	74	38.71	32.34	9.68	32.69	103	22	P	V
		5470	46.94	-21.36	68.3	37.58	32.35	9.7	32.69	103	22	P	V
		5459.76	37.76	-16.24	54	28.43	32.34	9.68	32.69	103	22	A	V
		5500	89.44	-	-	80.08	32.36	9.7	32.7	103	22	P	V
		5500	81.72	-	-	72.36	32.36	9.7	32.7	103	22	A	V
802.11n HT20 CH 116 5580MHz		5414.56	45.79	-28.21	74	36.47	32.33	9.66	32.67	258	154	P	H
		5467.99	45.65	-22.65	68.3	36.29	32.35	9.7	32.69	258	154	P	H
		5427.52	38.22	-15.78	54	28.89	32.33	9.68	32.68	258	154	A	H
		5580	91.56	-	-	82.12	32.38	9.74	32.68	258	154	P	H
		5580	85.2	-	-	75.76	32.38	9.74	32.68	258	154	A	H
		5730.98	48.14	-20.16	68.3	38.3	32.48	10.01	32.65	258	154	P	H
		5399.2	49.27	-24.73	74	39.96	32.32	9.66	32.67	159	141	P	V
		5467.36	50.23	-18.07	68.3	40.87	32.35	9.7	32.69	159	141	P	V
		5403.52	39.7	-14.3	54	30.39	32.32	9.66	32.67	159	141	A	V
		5580	88.8	-	-	79.36	32.38	9.74	32.68	159	141	P	V
		5580	80.9	-	-	71.46	32.38	9.74	32.68	159	141	A	V
		5705.78	50.67	-17.63	68.3	40.85	32.46	10.01	32.65	159	141	P	V



802.11n HT20 CH 140 5700MHz		5700	90.59	-	-	80.79	32.45	10.01	32.66	245	217	P	H
		5700	83.1	-	-	73.3	32.45	10.01	32.66	245	217	A	H
		5722.68	55.04	-13.26	68.3	45.2	32.48	10.01	32.65	245	217	P	H
		5700	86.57	-	-	76.77	32.45	10.01	32.66	135	154	P	V
		5700	78.49	-	-	68.69	32.45	10.01	32.66	135	154	A	V
		5725.48	53.28	-15.02	68.3	43.44	32.48	10.01	32.65	135	154	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 HT20 CH 100 5500MHz		11000	58.5	-15.5	74	65.46	38.83	12.51	58.3	120	311	P	H
		11000	48.14	-5.86	54	55.1	38.83	12.51	58.3	120	311	A	H
		16500	50.16	-18.14	68.3	54.37	39.48	15.15	58.84	178	296	P	H
		11000	57.1	-16.9	74	64.06	38.83	12.51	58.3	154	308	P	V
		11000	46.85	-7.15	54	53.81	38.83	12.51	58.3	154	308	A	V
		16500	50.99	-17.31	68.3	55.2	39.48	15.15	58.84	178	296	P	V
802.11n HT20 CH 116 5580MHz		11160	59.92	-14.08	74	66.39	38.99	12.65	58.11	255	49	P	H
		11160	50.01	-3.99	54	56.48	38.99	12.65	58.11	255	49	A	H
		16740	50.4	-17.9	68.3	53.16	40.46	15.36	58.58	156	350	P	H
		11160	56.47	-17.53	74	62.94	38.99	12.65	58.11	101	343	P	V
		11160	47.11	-6.89	54	53.58	38.99	12.65	58.11	101	343	A	V
		16740	50.54	-17.76	68.3	53.3	40.46	15.36	58.58	156	354	P	V
802.11n HT20 CH 140 5700MHz		11400	60.07	-13.93	74	65.89	39.21	12.82	57.85	179	44	P	H
		11400	50.67	-3.33	54	56.49	39.21	12.82	57.85	179	44	A	H
		17100	49.49	-18.81	68.3	49.87	42.16	15.62	58.16	165	298	P	H
		11400	57.38	-16.62	74	63.2	39.21	12.82	57.85	100	349	P	V
		11400	46.62	-7.38	54	52.44	39.21	12.82	57.85	100	349	A	V
		17100	49.76	-18.54	68.3	50.14	42.16	15.62	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		5362.48	47.8	-26.2	74	38.68	32.31	9.46	32.65	259	225	P	H
		5469.28	47.48	-20.82	68.3	38.12	32.35	9.7	32.69	259	225	P	H
		5459.44	38.87	-15.13	54	29.54	32.34	9.68	32.69	259	225	A	H
		5510	88.59	-	-	79.2	32.36	9.72	32.69	259	225	P	H
		5510	81.08	-	-	71.69	32.36	9.72	32.69	259	225	A	H
		5744.84	47.51	-20.79	68.3	37.58	32.49	10.09	32.65	259	225	P	H
		5412.64	46.97	-27.03	74	37.65	32.33	9.66	32.67	100	24	P	V
		5461.12	47.02	-21.28	68.3	37.69	32.34	9.68	32.69	100	24	P	V
		5459.44	38.46	-15.54	54	29.13	32.34	9.68	32.69	100	24	A	V
		5510	87.35	-	-	77.96	32.36	9.72	32.69	100	24	P	V
		5510	79.61	-	-	70.22	32.36	9.72	32.69	100	24	A	V
		5734.13	47.63	-20.67	68.3	37.79	32.48	10.01	32.65	100	24	P	V
802.11n HT40 CH 110 5550MHz		5428.48	49	-25	74	39.67	32.33	9.68	32.68	259	230	P	H
		5464.96	45.35	-22.95	68.3	36.01	32.35	9.68	32.69	259	230	P	H
		5436.64	38.19	-15.81	54	28.85	32.34	9.68	32.68	259	230	A	H
		5550	87.99	-	-	78.57	32.37	9.74	32.69	259	230	P	H
		5550	79.97	-	-	70.55	32.37	9.74	32.69	259	230	A	H
		5746.1	48.14	-20.16	68.3	38.21	32.49	10.09	32.65	259	230	P	H
		5410.72	46.8	-27.2	74	37.49	32.32	9.66	32.67	100	24	P	V
		5461.12	46.07	-22.23	68.3	36.74	32.34	9.68	32.69	100	24	P	V
		5411.44	38.18	-15.82	54	28.87	32.32	9.66	32.67	100	24	A	V
		5550	86.45	-	-	77.03	32.37	9.74	32.69	100	24	P	V
		5550	79.05	-	-	69.63	32.37	9.74	32.69	100	24	A	V
		5740.745	47.27	-21.03	68.3	37.34	32.49	10.09	32.65	100	24	P	V



802.11n HT40 CH 134 5670MHz		5432.25	47.29	-26.71	74	37.95	32.34	9.68	32.68	315	214	P	H
		5460.95	45.8	-22.5	68.3	36.47	32.34	9.68	32.69	315	214	P	H
		5423.85	38.06	-15.94	54	28.74	32.33	9.66	32.67	315	214	A	H
		5670	89.36	-	-	79.68	32.43	9.92	32.67	315	214	P	H
		5670	81.25	-	-	71.57	32.43	9.92	32.67	315	214	A	H
		5725.8	48.44	-19.86	68.3	38.6	32.48	10.01	32.65	315	214	P	H
		5406.7	47.92	-26.08	74	38.61	32.32	9.66	32.67	264	239	P	V
		5469	46.59	-21.71	68.3	37.23	32.35	9.7	32.69	264	239	P	V
		5410.55	37.96	-16.04	54	28.65	32.32	9.66	32.67	264	239	A	V
		5670	86.3	-	-	76.62	32.43	9.92	32.67	264	239	P	V
		5670	78.02	-	-	68.34	32.43	9.92	32.67	264	239	A	V
		5762.9	48.5	-19.8	68.3	38.55	32.51	10.09	32.65	264	239	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 HT40 CH 102 5510MHz		11020	51.55	-22.45	74	58.45	38.84	12.54	58.28	170	230	P	H
		16530	50.34	-17.96	68.3	54.34	39.62	15.18	58.8	160	300	P	H
		11020	50.85	-23.15	74	57.75	38.84	12.54	58.28	170	86	P	V
		16530	50.44	-17.86	68.3	54.44	39.62	15.18	58.8	160	59	P	V
802.11n HT40 CH 110 5550MHz		11100	53.61	-20.39	74	60.28	38.92	12.6	58.19	185	200	P	H
		11100	45.69	-8.31	54	52.36	38.92	12.6	58.19	185	200	A	H
		16650	51.46	-16.84	68.3	54.75	40.11	15.27	58.67	180	325	P	H
		11100	51.48	-22.52	74	58.15	38.92	12.6	58.19	196	200	P	V
		11100	44.65	-9.35	54	51.32	38.92	12.6	58.19	196	200	A	V
		16650	51.81	-16.49	68.3	55.1	40.11	15.27	58.67	180	314	P	V
802.11n HT40 CH 134 5670MHz		11340	54.83	-19.17	74	60.86	39.14	12.76	57.93	200	360	P	H
		11340	47.34	-6.66	54	53.37	39.14	12.76	57.93	200	360	A	H
		17010	52.02	-16.28	68.3	53.13	41.61	15.56	58.28	200	360	P	H
		11340	52.44	-21.56	74	58.47	39.14	12.76	57.93	100	360	P	V
		11340	46.54	-7.46	54	52.57	39.14	12.76	57.93	100	360	A	V
		17010	51.6	-16.7	68.3	52.71	41.61	15.56	58.28	200	369	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		5455.12	49.42	-24.58	74	40.09	32.34	9.68	32.69	256	236	P	H
		5466.16	48.22	-20.08	68.3	38.86	32.35	9.7	32.69	256	236	P	H
		5459.92	41.04	-12.96	54	31.71	32.34	9.68	32.69	256	236	A	H
		5530	84.66	-	-	75.27	32.36	9.72	32.69	256	236	P	H
		5530	76.95	-	-	67.56	32.36	9.72	32.69	256	236	A	H
		5745.155	48.27	-20.03	68.3	38.34	32.49	10.09	32.65	256	236	P	H
		5450.08	48.59	-25.41	74	39.26	32.34	9.68	32.69	119	5	P	V
		5460.88	47.36	-20.94	68.3	38.03	32.34	9.68	32.69	119	5	P	V
		5458.72	40.58	-13.42	54	31.25	32.34	9.68	32.69	119	5	A	V
		5530	82.75	-	-	73.36	32.36	9.72	32.69	119	5	P	V
		5530	75.63	-	-	66.24	32.36	9.72	32.69	119	5	A	V
		5763.74	48.84	-19.46	68.3	38.89	32.51	10.09	32.65	119	5	P	V
802.11ac VHT80 CH 122 5610MHz		5364.16	46.62	-27.38	74	37.5	32.31	9.46	32.65	247	221	P	H
		5462.32	47.17	-21.13	68.3	37.84	32.34	9.68	32.69	247	221	P	H
		5437.6	38.69	-15.31	54	29.35	32.34	9.68	32.68	247	221	A	H
		5610	85.47	-	-	75.99	32.39	9.76	32.67	247	221	P	H
		5610	76.86	-	-	67.38	32.39	9.76	32.67	247	221	A	H
		5728.775	47.84	-20.46	68.3	38	32.48	10.01	32.65	247	221	P	H
		5387.92	46.45	-27.55	74	37.13	32.32	9.66	32.66	103	22	P	V
		5469.04	45.97	-22.33	68.3	36.61	32.35	9.7	32.69	103	22	P	V
		5439.76	38.7	-15.3	54	29.36	32.34	9.68	32.68	103	22	A	V
		5610	82.92	-	-	73.44	32.39	9.76	32.67	103	22	P	V
		5610	75.16	-	-	65.68	32.39	9.76	32.67	103	22	A	V
		5763.6	47.81	-20.49	68.3	37.86	32.51	10.09	32.65	103	22	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 VHT80 CH 106 5530MHz		11060	49.72	-24.28	74	56.49	38.89	12.57	58.23	160	176	P	H
		16590	51.67	-16.63	68.3	55.35	39.83	15.24	58.75	160	0	P	H
		11060	52.3	-21.7	74	59.07	38.89	12.57	58.23	160	360	P	V
		11060	45.69	-8.31	54	52.46	38.89	12.57	58.23	160	360	A	V
		16590	51.58	-16.72	68.3	55.26	39.83	15.24	58.75	160	186	P	V
802.11ac VHT80 CH 122 5610MHz		11220	50.33	-23.67	74	56.68	39.03	12.68	58.06	153	186	P	H
		16830	51.72	-16.58	68.3	53.98	40.81	15.42	58.49	160	186	P	H
		11220	49.43	-24.57	74	55.78	39.03	12.68	58.06	160	360	P	V
		16830	50.95	-17.35	68.3	53.21	40.81	15.42	58.49	160	88	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	56.44	-17.56	74	62.17	39.24	12.85	57.82	167	45	P	H
		11440	50.48	-3.52	54	56.21	39.24	12.85	57.82	167	45	A	H
		17160	53.04	-15.26	68.3	52.85	42.6	15.65	58.06	161	186	P	H
		11440	55.92	-18.08	74	61.65	39.24	12.85	57.82	161	183	P	V
		11440	45.63	-8.37	54	51.36	39.24	12.85	57.82	161	183	A	V
		17160	51.95	-16.35	68.3	51.76	42.6	15.65	58.06	161	289	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 HT20 CH 144 5720MHz		11440	57.38	-16.62	74	63.11	39.24	12.85	57.82	157	42	P	H
		11440	49.52	-4.48	54	55.25	39.24	12.85	57.82	157	42	A	H
		17160	56.68	-11.62	68.3	56.49	42.6	15.65	58.06	165	246	P	H
		11440	55.98	-18.02	74	61.71	39.24	12.85	57.82	152	338	P	V
		11440	48.31	-5.69	54	54.04	39.24	12.85	57.82	152	338	A	V
		17160	54.26	-14.04	68.3	54.07	42.6	15.65	58.06	165	61	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 HT40 CH 142 5710MHz		11420	55.29	-18.71	74	61.08	39.22	12.82	57.83	141	85	P	H
		11420	47.66	-6.34	54	53.45	39.22	12.82	57.83	141	85	A	H
		17130	55.27	-13.03	68.3	55.35	42.38	15.65	58.11	189	227	P	H
		11420	54.72	-19.28	74	60.51	39.22	12.82	57.83	174	161	P	V
		11420	45.38	-8.62	54	51.17	39.22	12.82	57.83	174	161	A	V
		17130	54.88	-13.42	68.3	54.96	42.38	15.65	58.11	130	275	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 VHT80 CH 138 5690MHz		11380	50.31	-23.69	74	56.2	39.19	12.79	57.87	164	251	P	H
		17070	53.04	-15.26	68.3	53.72	41.94	15.59	58.21	117	58	P	H
		11380	53.05	-20.95	74	58.94	39.19	12.79	57.87	174	28	P	V
		11380	44.66	-9.34	54	50.55	39.19	12.79	57.87	174	28	A	V
		17070	52.77	-15.53	68.3	53.45	41.94	15.59	58.21	199	308	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz

WIFI 802.11a (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)
802.11a LF		31.94	22.79	-17.21	40	30.8	23.24	0.55	31.8	-	-	P	H
		102.75	27.93	-15.57	43.5	42.52	16.97	1.03	32.59	-	-	P	H
		172.59	30.1	-13.4	43.5	45.57	15.5	1.34	32.31	100	183	P	H
		293.84	28.51	-17.49	46	39.69	19.04	1.78	32	-	-	P	H
		613.94	32.36	-13.64	46	37.18	24.73	2.58	32.13	-	-	P	H
		953.44	28.34	-17.66	46	30.29	26.97	3.24	32.16	-	-	P	H
		30	29.52	-10.48	40	37.39	24.2	0.53	32.6	100	193	P	V
		72.68	27.93	-12.07	40	47.03	12.61	0.85	32.56	-	-	P	V
		172.59	32.85	-10.65	43.5	48.32	15.5	1.34	32.31	-	-	P	V
		315.18	26.6	-19.4	46	37.25	19.49	1.86	32	-	-	P	V
		464.56	27.51	-18.49	46	34.47	22.76	2.24	31.96	-	-	P	V
		613.94	28.78	-17.22	46	33.6	24.73	2.58	32.13	-	-	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)

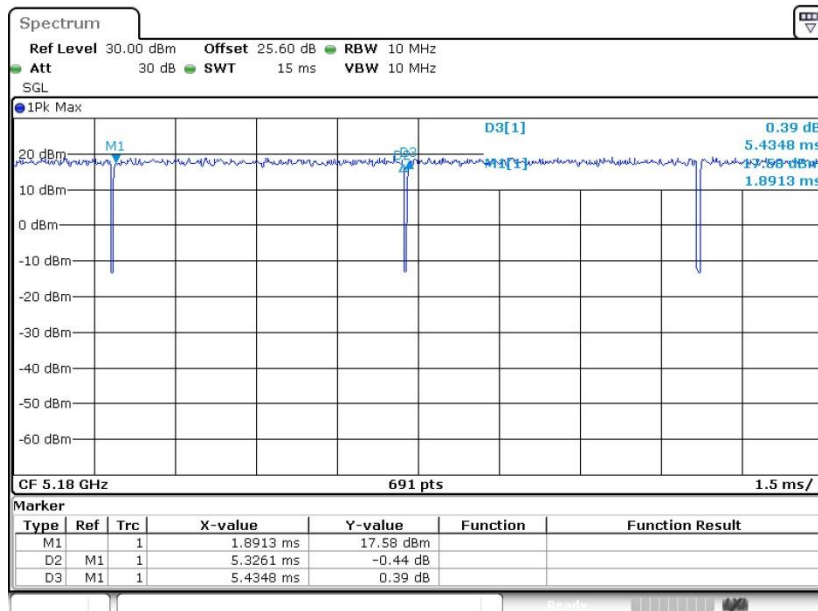
= -10.46(dB)

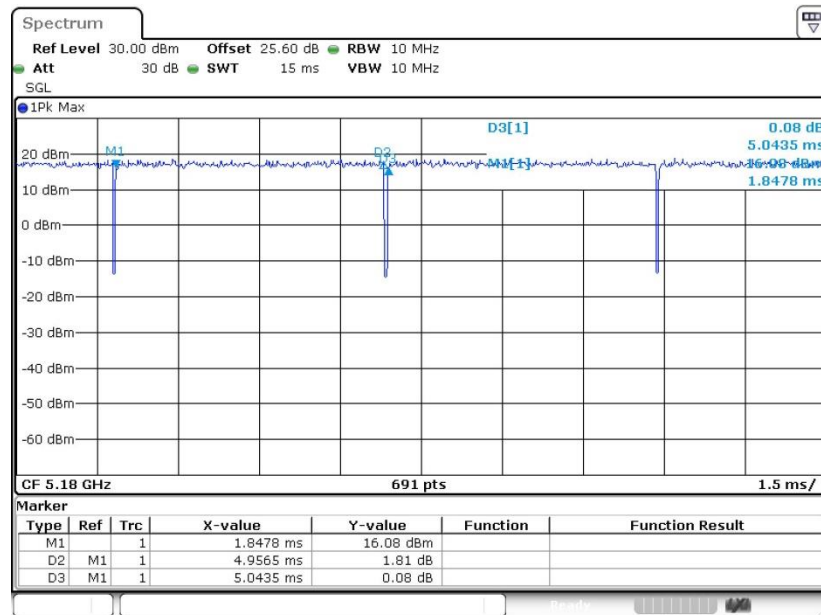
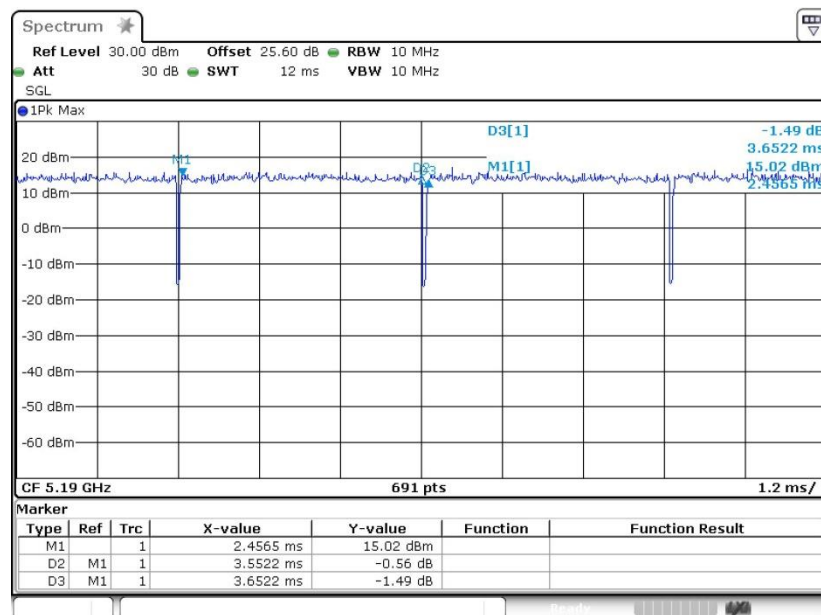
Both peak and average measured complies with the limit line, so test result is “PASS”.

Appendix D. Duty Cycle Plots

Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
802.11a	97.99	5.326	0.188	300Hz
802.11n HT20	98.28	-	-	10Hz
802.11n HT40	97.26	3.552	0.282	300Hz
802.11ac VHT80	95.43	1.665	0.601	1KHz

802.11a



802.11n HT20

802.11n HT40


802.11ac VHT80

