



FCC RF Test Report

APPLICANT : Motorola Mobility LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : XT2165-3, XT2165-3PP, XT2165DL, XT2165-5
FCC ID : IHDT56ZP5
STANDARD : FCC Part 15 Subpart E §15.407
CLASSIFICATION : (NII) Unlicensed National Information
Infrastructure
TEST DATE(S) : Aug. 12, 2021 ~ Sep. 07, 2021

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

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

Reviewed by: Derreck Chen / Supervisor

Approved by: Eric Shih / Manager



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People's Republic of China**



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR170628D	Rev. 01	Initial issue of report	Sep. 16, 2021

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	2.1049 & 15.403(i)	26dB & 99% Bandwidth	-	Report only	-
3.2	15.407(a)	Maximum Conducted Output Power	≤ 24 dBm	Pass	-
3.3	15.407(a)	Power Spectral Density	≤ 11 dBm	Pass	-
3.4	15.407(b)	Unwanted Emissions	15.407(b) & 15.209(a)	Pass	Under limit 3.02 dB at 5147.680 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 13.66 dB at 0.640 MHz
3.6	15.203 & 15.407(a)	Antenna Requirement	15.203 & 15.407(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

Motorola Mobility LLC

222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

1.2 Manufacturer

Motorola Mobility LLC

222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2165-3, XT2165-3PP, XT2165DL, XT2165-5
FCC ID	IHDT56ZP5
IMEI Code	Conducted: 351024740029462 Conduction: 351024740008417 Radiation: 351024740024521
HW Version	DVT2
SW Version	RRQ31.Q3-51
EUT Stage	Identical Prototype

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

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Frequency Range	5180 MHz ~ 5240 MHz 5260 MHz ~ 5320 MHz 5500 MHz ~ 5700 MHz
Maximum Output Power to Antenna	<5180 MHz ~ 5240 MHz> 802.11a : 18.75 dBm / 0.0750 W 802.11n HT20 : 18.65 dBm / 0.0733 W 802.11n HT40 : 17.66 dBm / 0.0583 W 802.11ac VHT20 : 18.69 dBm / 0.0740 W 802.11ac VHT40 : 18.55 dBm / 0.0716 W 802.11ac VHT80 : 16.32 dBm / 0.0429 W <5260 MHz ~ 5320 MHz> 802.11a : 18.25 dBm / 0.0668 W 802.11n HT20 : 18.20 dBm / 0.0661 W 802.11n HT40 : 17.28 dBm / 0.0535 W 802.11ac VHT20 : 18.23 dBm / 0.0665 W 802.11ac VHT40 : 18.46 dBm / 0.0701 W 802.11ac VHT80 : 16.55 dBm / 0.0452 W <5500 MHz ~ 5700 MHz > 802.11a : 18.68 dBm / 0.0738 W 802.11n HT20 : 18.68 dBm / 0.0738 W 802.11n HT40 : 17.35 dBm / 0.0543 W 802.11ac VHT20 : 18.72 dBm / 0.0745 W 802.11ac VHT40 : 18.56 dBm / 0.0718 W 802.11ac VHT80 : 17.85 dBm / 0.0610 W
99% Occupied Bandwidth	<5180 MHz ~ 5240 MHz> 802.11a : 17.98 MHz 802.11ac VHT20 : 18.78 MHz 802.11ac VHT40 : 36.56 MHz 802.11ac VHT80 : 75.28 MHz <5260 MHz ~ 5320 MHz > 802.11a : 17.93 MHz 802.11ac VHT20 : 18.63 MHz 802.11ac VHT40 : 36.56 MHz 802.11ac VHT80 : 75.28 MHz <5500 MHz ~ 5700 MHz > 802.11a : 18.03 MHz 802.11ac VHT20 : 18.73 MHz 802.11ac VHT40 : 36.56 MHz 802.11ac VHT80 : 75.16 MHz
Antenna Type / Gain	<5180 MHz ~ 5240 MHz> FPC Antenna with gain -2.92 dBi <5260 MHz ~ 5320 MHz > FPC Antenna with gain -2.57 dBi <5500 MHz ~ 5700 MHz > FPC Antenna with gain -2.47 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 802.11ac VHT20/ VHT40 by referring to their maximum conducted power.

1.5 Modification of EUT

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

1.6 Testing Location

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

Test Firm	Sporton International (Shenzhen) Inc.		
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	CO01-SZ TH01-SZ	CN1256	421272

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

1.7 Test Software

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

1.8 Applicable Standards

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

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

Remark:

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

1.9 Specification of Accessory

Specification of Accessory				
AC Adapter 1	Brand Name	Motorola(AOHAI)	Model Name	MC-101
AC Adapter 2	Brand Name	Motorola(Salcomp)	Model Name	MC-101
AC Adapter 3	Brand Name	Motorola(Chenyang)	Model Name	MC-101
Battery	Brand Name	Motorola (Sunwoda)	Model Name	JK50
USB Cable 1	Brand Name	Motorola (Cabletech)	Model Name	SC18C49697
USB Cable 2	Brand Name	Motorola (Saibao)	Model Name	SC18C24367
USB Cable 3	Brand Name	Motorola (Luxshare)	Model Name	SC18C24368
USB Cable 4	Brand Name	Motorola (Saibao)	Model Name	SC18D22297
USB Cable 5	Brand Name	Motorola (Luxshare)	Model Name	SC18D22299
USB Cable 6	Brand Name	Motorola (Cabletech)	Model Name	SC18D22298

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 (X 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 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 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)
5500-5700 MHz U-NII-2C	100	5500	112	5560
	102*	5510	116	5580
	104	5520	132	5660
	106 [#]	5530	134*	5670
	108	5540	136	5680
	110*	5550	140	5700

Note:

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

2.2 Test Mode

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

Modulation	Data Rate
802.11a	6 Mbps
802.11ac VHT20	MCS0
802.11ac VHT40	MCS0
802.11ac VHT80	MCS0

Test Cases	
AC Conducted Emission	Mode 1 : GSM 850 Idle + Bluetooth Link + WLAN Link (5G) + USB Cable1 (Charging from Adapter1) + Battery + Earphone
Remark: For Radiated Test Cases, The tests were performed with Battery, Adapter1, Earphone and USB Cable1.	



Ch. #		U-NII-1 : 5180-5240 MHz	U-NII-2A : 5260-5320 MHz	U-NII-2C : 5500-5700MHz
		802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

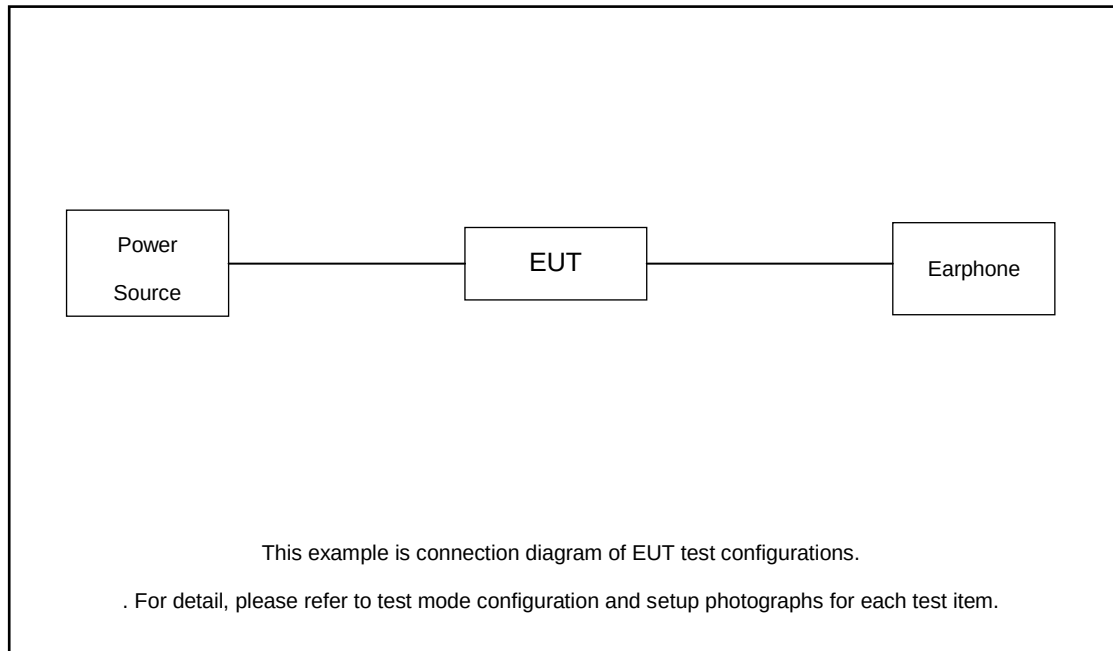
Ch. #		U-NII-1 : 5180-5240 MHz	U-NII-2A : 5260-5320 MHz	U-NII-2C : 5500-5700MHz
		802.11ac VHT20	802.11ac VHT20	802.11ac VHT20
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

Ch. #		U-NII-1 : 5180-5240 MHz	U-NII-2A : 5260-5320 MHz	U-NII-2C : 5500-5700MHz
		802.11ac VHT40	802.11ac VHT40	802.11ac VHT40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	134

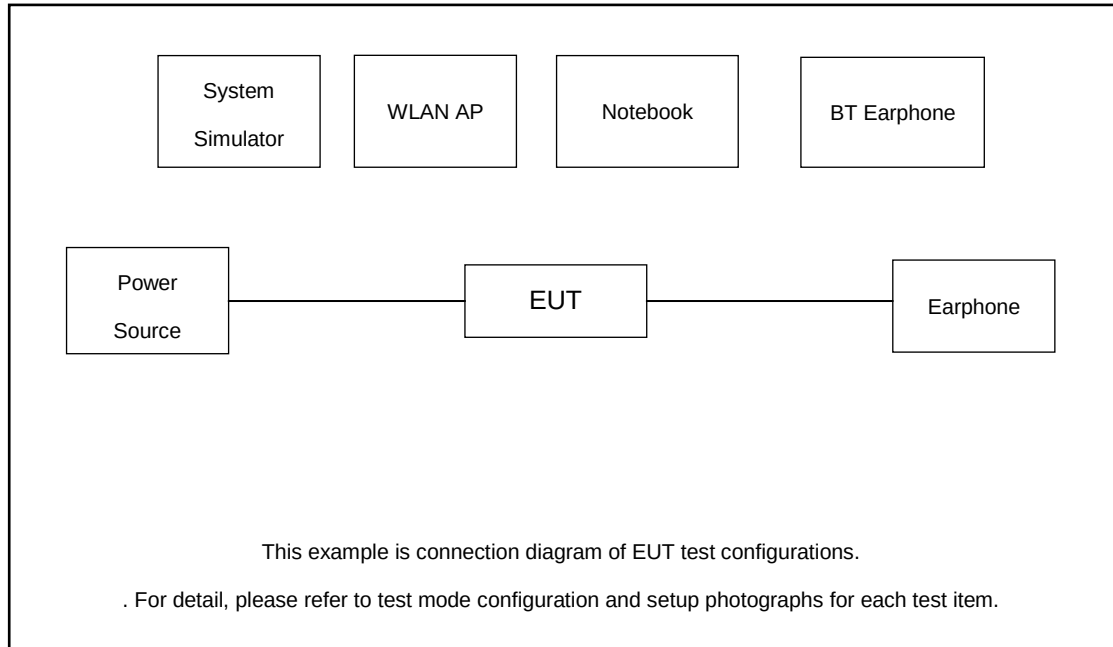
Ch. #		U-NII-1 : 5180-5240 MHz	U-NII-2A : 5260-5320 MHz	U-NII-2C : 5500-5700MHz
		802.11ac VHT80	802.11ac VHT80	802.11ac VHT80
L	Low	-	-	-
M	Middle	42	58	106
H	High	-	-	-

2.3 Connection Diagram of Test System

<For Radiated Emission >



<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.	WLAN AP	D-Link	DIR-820L	KA2IR820LA1	N/A	Unshielded,1.8m
2.	Earphone	Apple	N/A	N/A	Shielded,1.2m	N/A
3.	Bluetooth Earphone	Lenovo	V9	N/A	N/A	N/A
4.	Notebook	Lenovo	E540	Fcc DoC	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
5.	Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded,1.8m

2.5 EUT Operation Test Setup

For WLAN RF test items, an engineering test program was provided and enabled to make EUT continuously 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 3.30 dB and 10dB attenuator.

$$\begin{aligned}
 \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\
 &= 3.30 + 10 = 13.30 \text{ (dB)}
 \end{aligned}$$

3 Test Result

3.1 26dB & 99% Occupied Bandwidth Measurement

3.1.1 Description of 26dB & 99% Occupied Bandwidth

This section is for reporting purpose only.

There is no restriction limits for bandwidth.

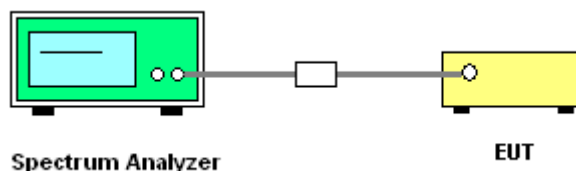
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

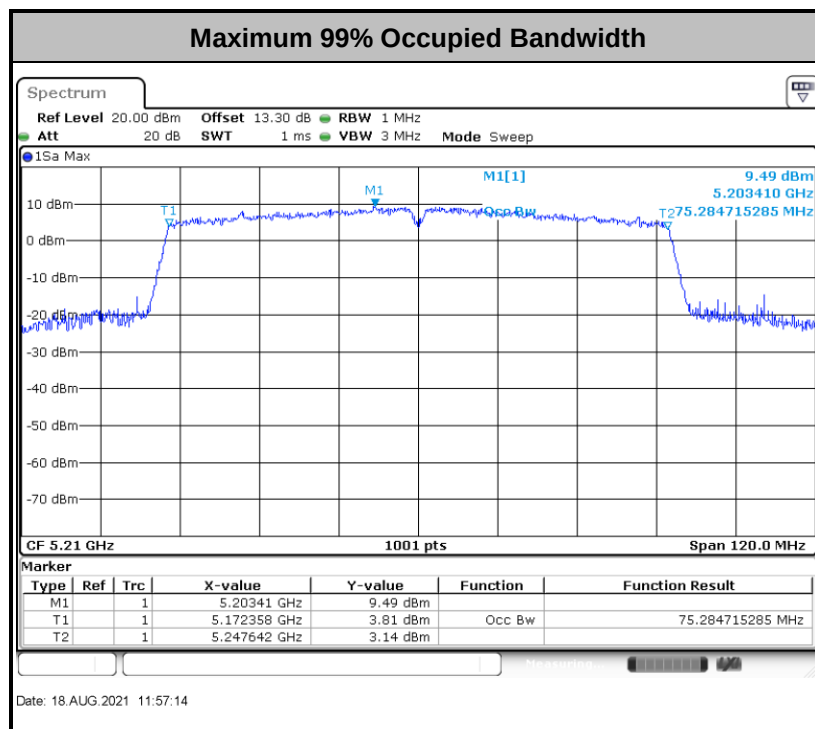
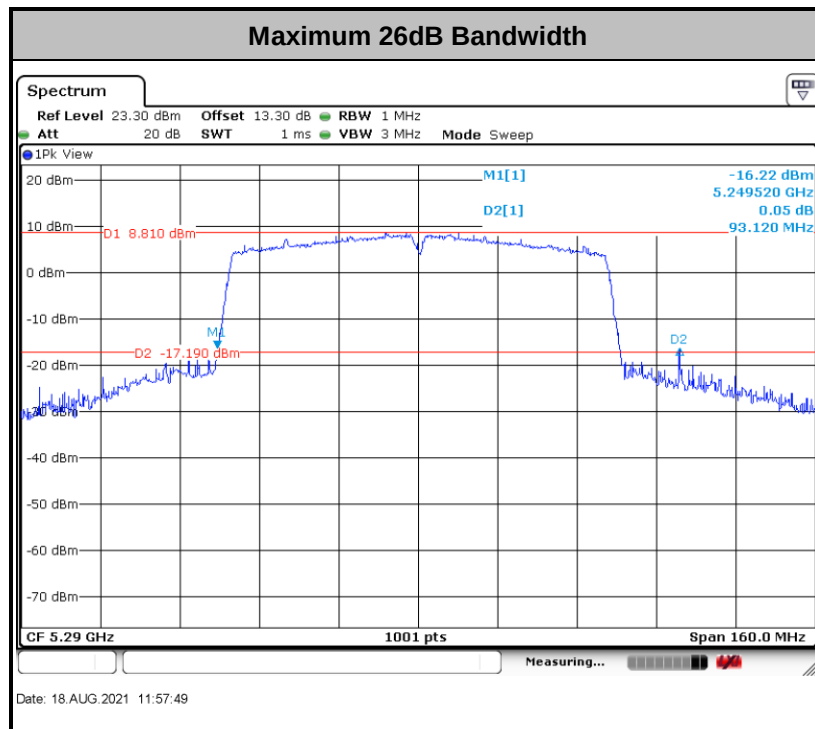
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB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

3.1.4 Test Setup



3.1.5 Test Result of 26dB & 99% Occupied Bandwidth

Please refer to Appendix A.



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



3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

<FCC 14-30 CFR 15.407>

For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW.

For the 5.25–5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 + 10 \log B$, dBm, where B is the 26 dB emission bandwidth in megahertz.

For the 5.47–5.6 GHz and 5.65–5.725 GHz band, the maximum conducted output power shall not exceed 250 mW or $11 + 10 \log_{10} B$, dBm, whichever power is less. The maximum e.i.r.p. shall not exceed 1.0 W or $17 + 10 \log_{10} B$, dBm, whichever is less. B is the 99% emission bandwidth in megahertz.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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

3.2.2 Measuring Instruments

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

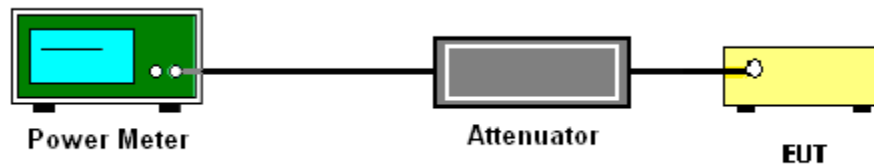
3.2.3 Test Procedures

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

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

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

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.



3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

<FCC 14-30 CFR 15.407>

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

For the 5.25–5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

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

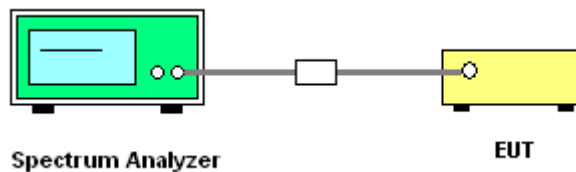
Section F) Maximum power spectral density.

Method SA-2

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

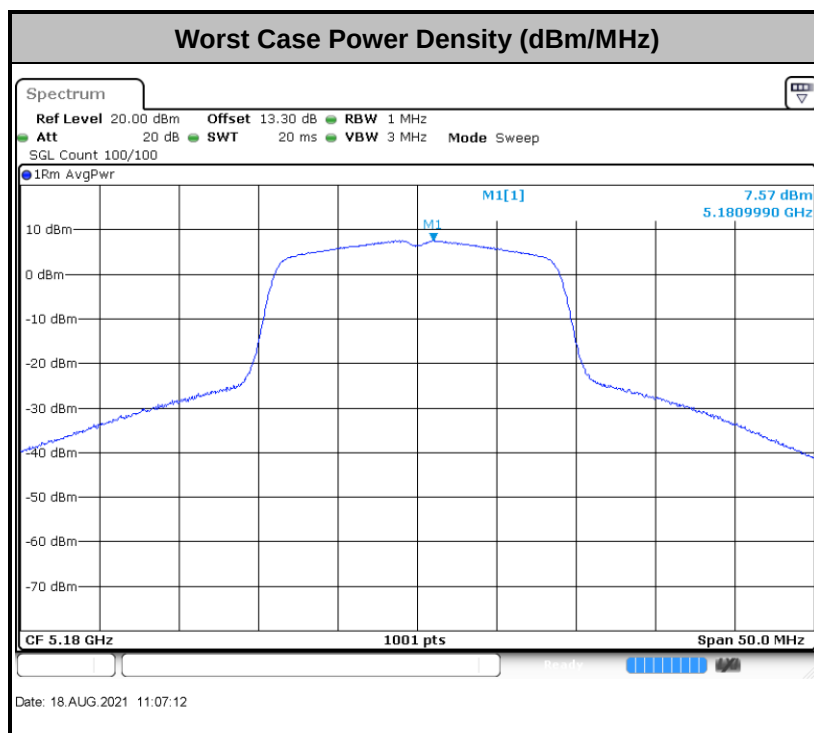
- Measure the duty cycle.
 - Set span to encompass the entire emission bandwidth (EBW) of the signal.
 - Set RBW = 1 MHz.
 - Set VBW $\geq$ 3 MHz.
 - Number of points in sweep $\geq$ 2 Span / RBW.
 - Sweep time = auto.
 - Detector = RMS
 - Trace average at least 100 traces in power averaging mode.
 -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

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.



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

3.4 Unwanted Emissions Measurement

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

3.4.1 Limit of Unwanted Emissions

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

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

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

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

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3



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

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

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

where

EIRP is the equivalent isotropically radiated power, in dBm

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

d_{Meas} is the measurement distance, in m

3.4.2 Measuring Instruments

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

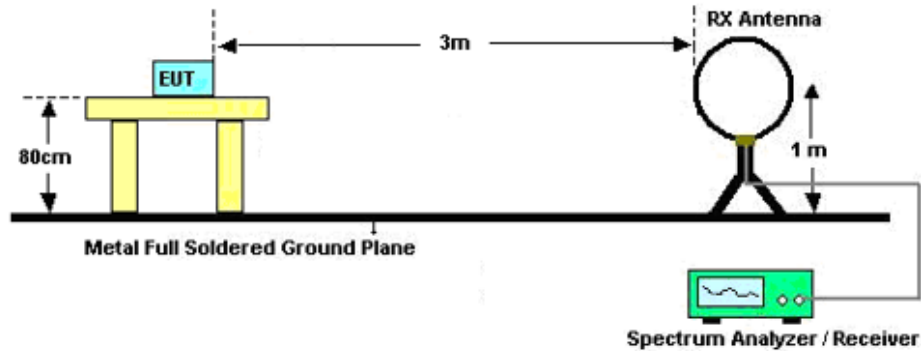


3.4.3 Test Procedures

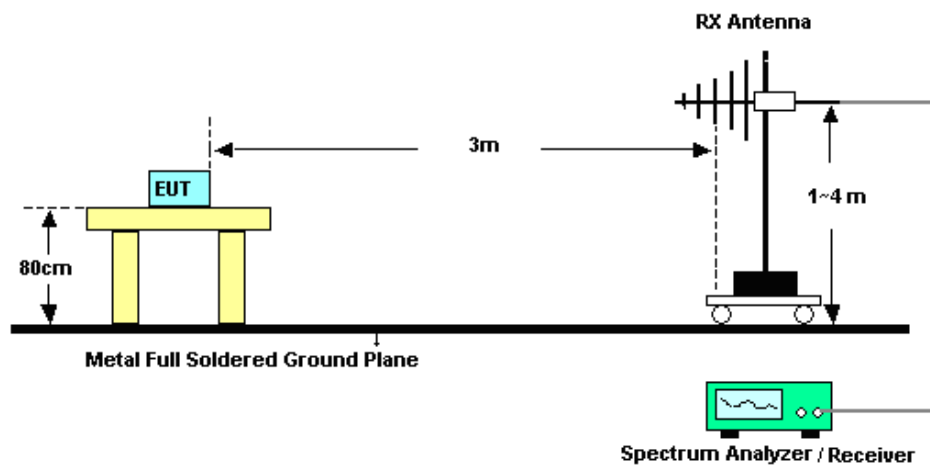
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
Section G) Unwanted emissions measurement.
 - (1) Procedure for Unwanted Emissions Measurements Below 1000MHz
 - RBW = 120 kHz
 - VBW = 300 kHz
 - Detector = Peak
 - Trace mode = max hold
 - (2) Procedure for Peak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

3.4.4 Test Setup

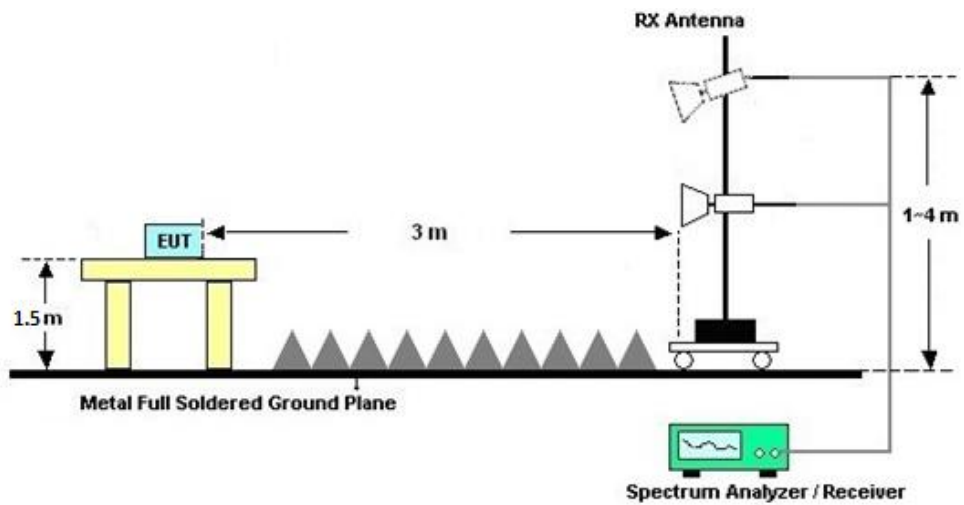
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

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

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

3.4.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C.

3.4.7 Duty Cycle

Please refer to Appendix D.

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

Please refer to Appendix C.

3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

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

Frequency of emission (MHz)	Conducted limit (dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

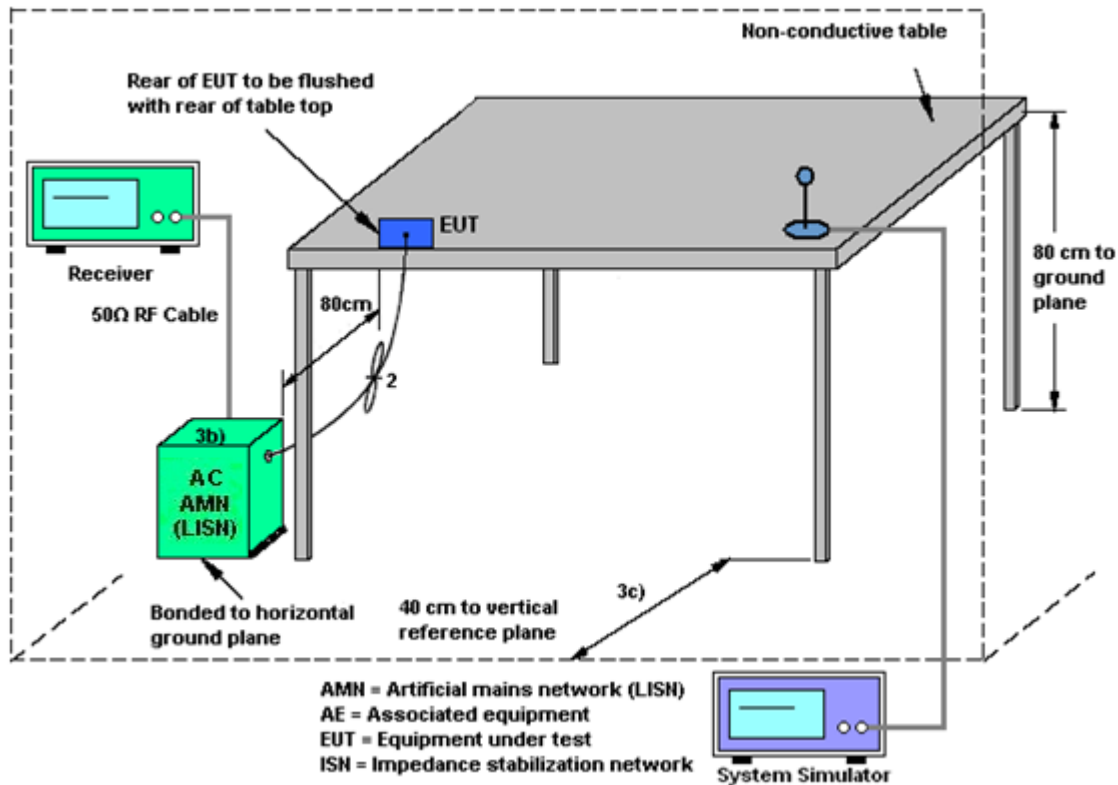
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

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

3.5.4 Test Setup



3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.



3.6 Antenna Requirements

3.6.1 Standard Applicable

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

3.6.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.6.3 Antenna Gain

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



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 08, 2021	Aug. 12, 2021~ Aug. 18, 2021	Apr. 07, 2022	Conducted (TH01-SZ)
Pulse Power Sensor	Anritsu	MA2411B	1207253	30MHz~40GHz	Dec. 25, 2020	Aug. 12, 2021~ Aug. 18, 2021	Dec. 24, 2021	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1218010	50MHz Bandwidth	Dec. 25, 2020	Aug. 12, 2021~ Aug. 18, 2021	Dec. 24, 2021	Conducted (TH01-SZ)
EMI Test Receiver&SA	KEYSIGHT	N9038A	MY54450083	20Hz~8.4GHz	Apr. 07, 2021	Sep. 07, 2021	Apr. 06, 2022	Radiation (03CH03-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150246	10Hz~44GHz;	Apr. 07, 2021	Sep. 07, 2021	Apr. 06, 2022	Radiation (03CH03-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jun. 22, 2021	Sep. 07, 2021	Jun. 21, 2022	Radiation (03CH03-SZ)
Bilog Antenna	TeseQ	CBL6112D	35408	30MHz~2GHz	Jun. 22, 2021	Sep. 07, 2021	Jun. 21, 2022	Radiation (03CH03-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1355	1GHz~18GHz	Apr. 25, 2021	Sep. 07, 2021	Apr. 24, 2022	Radiation (03CH03-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 20, 2021	Sep. 07, 2021	Jul. 19, 2022	Radiation (03CH03-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18GHz~40GHz	Apr. 11, 2021	Sep. 07, 2021	Apr. 10, 2022	Radiation (03CH03-SZ)
Amplifier	Burgeon	BPA-530	102211	0.01Hz~3000MHz	Oct. 16, 2020	Sep. 07, 2021	Oct. 15, 2021	Radiation (03CH03-SZ)
HF Amplifier	MITEQ	AMF-7D-0010 1800-30-10P-	1943528	1GHz~18GHz	Oct. 16, 2020	Sep. 07, 2021	Oct. 15, 2021	Radiation (03CH03-SZ)
Amplifier	Agilent Technologies	83017A	MY39501302	500MHz~26.5GHz	Dec. 30, 2020	Sep. 07, 2021	Dec. 29, 2021	Radiation (03CH03-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	NCR	Sep. 07, 2021	NCR	Radiation (03CH03-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Sep. 07, 2021	NCR	Radiation (03CH03-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Sep. 07, 2021	NCR	Radiation (03CH03-SZ)
EMI Receiver	R&S	ESR7	101630	9kHz~7GHz;	Mar. 08, 2021	Aug. 17, 2021	Mar. 07, 2022	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2 LISN	00103912	9kHz~30MHz	Dec. 25, 2020	Aug. 17, 2021	Dec. 24, 2021	Conduction (CO01-SZ)
AC LISN (for auxiliary)	EMCO	3816/2SH	00103892	9kHz~30MHz	Oct. 15, 2020	Aug. 17, 2021	Oct. 14, 2021	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000891	100Vac~250Vac	Jul. 14, 2021	Aug. 17, 2021	Jul. 13, 2022	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 (150 kHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.2dB
---	-------

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

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

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.9dB
---	-------

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

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



Appendix A. Conducted Test Results

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Ma Jie	Temperature:	21~25	°C
Test Date:	2021/8/12~2021/8/18	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	17.88	27.20	-	22.52		
11a	6Mbps	1	44	5220	17.98	29.85	-	22.55		
11a	6Mbps	1	48	5240	17.93	29.00	-	22.54		
VHT20	MCS0	1	36	5180	18.73	35.05	-	22.73		
VHT20	MCS0	1	44	5220	18.68	31.85	-	22.71		
VHT20	MCS0	1	48	5240	18.78	32.15	-	22.74		
VHT40	MCS0	1	38	5190	36.56	56.43	-	23.01		
VHT40	MCS0	1	46	5230	36.46	48.24	-	23.01		
VHT80	MCS0	1	42	5210	75.28	91.52	-	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	18.75	24.00	-2.92		Pass
11a	6Mbps	1	44	5220	0.13	18.50	24.00	-2.92		Pass
11a	6Mbps	1	48	5240	0.13	18.55	24.00	-2.92		Pass
HT20	MCS0	1	36	5180	0.14	18.65	24.00	-2.92		Pass
HT20	MCS0	1	44	5220	0.14	18.46	24.00	-2.92		Pass
HT20	MCS0	1	48	5240	0.14	18.44	24.00	-2.92		Pass
HT40	MCS0	1	38	5190	0.27	16.59	24.00	-2.92		Pass
HT40	MCS0	1	46	5230	0.27	17.66	24.00	-2.92		Pass
VHT20	MCS0	1	36	5180	0.14	18.69	24.00	-2.92		Pass
VHT20	MCS0	1	44	5220	0.14	18.50	24.00	-2.92		Pass
VHT20	MCS0	1	48	5240	0.14	18.48	24.00	-2.92		Pass
VHT40	MCS0	1	38	5190	0.28	16.66	24.00	-2.92		Pass
VHT40	MCS0	1	46	5230	0.28	18.55	24.00	-2.92		Pass
VHT80	MCS0	1	42	5210	0.57	16.32	24.00	-2.92		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	7.22	11.00	-2.92		Pass
11a	6Mbps	1	44	5220	0.13	7.37	11.00	-2.92		Pass
11a	6Mbps	1	48	5240	0.13	7.48	11.00	-2.92		Pass
VHT20	MCS0	1	36	5180	0.14	7.71	11.00	-2.92		Pass
VHT20	MCS0	1	44	5220	0.14	7.45	11.00	-2.92		Pass
VHT20	MCS0	1	48	5240	0.14	7.36	11.00	-2.92		Pass
VHT40	MCS0	1	38	5190	0.28	5.03	11.00	-2.92		Pass
VHT40	MCS0	1	46	5230	0.28	4.78	11.00	-2.92		Pass
VHT80	MCS0	1	42	5210	0.57	1.26	11.00	-2.92		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	17.88	27.80	23.52	29.52	23.98	
11a	6M bps	1	60	5300	17.93	28.45	23.54	29.54	23.98	
11a	6M bps	1	64	5320	17.93	28.20	23.54	29.54	23.98	
VHT20	MCS 0	1	52	5260	18.63	30.05	23.70	29.70	23.98	
VHT20	MCS 0	1	60	5300	18.63	30.80	23.70	29.70	23.98	
VHT20	MCS 0	1	64	5320	18.53	30.45	23.68	29.68	23.98	
VHT40	MCS 0	1	54	5270	36.56	54.45	23.98	30.00	23.98	
VHT40	MCS 0	1	62	5310	36.56	45.81	23.98	30.00	23.98	
VHT80	MCS 0	1	58	5290	75.28	93.12	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	18.25	23.98	-2.57	26.99	Pass
11a	6M bps	1	60	5300	0.13	18.19	23.98	-2.57	26.99	Pass
11a	6M bps	1	64	5320	0.13	18.15	23.98	-2.57	26.99	Pass
HT20	MCS 0	1	52	5260	0.14	18.12	23.98	-2.57	26.99	Pass
HT20	MCS 0	1	60	5300	0.14	18.07	23.98	-2.57	26.99	Pass
HT20	MCS 0	1	64	5320	0.14	18.20	23.98	-2.57	26.99	Pass
HT40	MCS 0	1	54	5270	0.27	17.28	23.98	-2.57	26.99	Pass
HT40	MCS 0	1	62	5310	0.27	17.02	23.98	-2.57	26.99	Pass
VHT20	MCS 0	1	52	5260	0.14	18.15	23.98	-2.57	26.99	Pass
VHT20	MCS 0	1	60	5300	0.14	18.10	23.98	-2.57	26.99	Pass
VHT20	MCS 0	1	64	5320	0.14	18.23	23.98	-2.57	26.99	Pass
VHT40	MCS 0	1	54	5270	0.28	18.46	23.98	-2.57	26.99	Pass
VHT40	MCS 0	1	62	5310	0.28	17.07	23.98	-2.57	26.99	Pass
VHT80	MCS 0	1	58	5290	0.57	16.55	23.98	-2.57	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	6.86	11.00	-2.57		Pass
11a	6M bps	1	60	5300	0.13	6.62	11.00	-2.57		Pass
11a	6M bps	1	64	5320	0.13	6.63	11.00	-2.57		Pass
VHT20	MCS 0	1	52	5260	0.14	6.82	11.00	-2.57		Pass
VHT20	MCS 0	1	60	5300	0.14	6.60	11.00	-2.57		Pass
VHT20	MCS 0	1	64	5320	0.14	6.62	11.00	-2.57		Pass
VHT40	MCS 0	1	54	5270	0.28	4.02	11.00	-2.57		Pass
VHT40	MCS 0	1	62	5310	0.28	3.80	11.00	-2.57		Pass
VHT80	MCS 0	1	58	5290	0.57	0.20	11.00	-2.57		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	17.88	29.20	23.52	29.52	23.98	
11a	6M bps	1	116	5580	17.88	28.50	23.52	29.52	23.98	
11a	6M bps	1	140	5700	18.03	30.70	23.56	29.56	23.98	
VHT20	MCS 0	1	100	5500	18.73	30.05	23.73	29.73	23.98	
VHT20	MCS 0	1	116	5580	18.73	29.75	23.73	29.73	23.98	
VHT20	MCS 0	1	140	5700	18.73	29.60	23.73	29.73	23.98	
VHT40	MCS 0	1	102	5510	36.56	51.12	23.98	30.00	23.98	
VHT40	MCS 0	1	110	5550	36.56	41.76	23.98	30.00	23.98	
VHT40	MCS 0	1	134	5670	36.46	55.17	23.98	30.00	23.98	
VHT80	MCS 0	1	106	5530	75.16	88.96	23.98	30.00	23.98	

TEST RESULTS DATA
Average Power Table

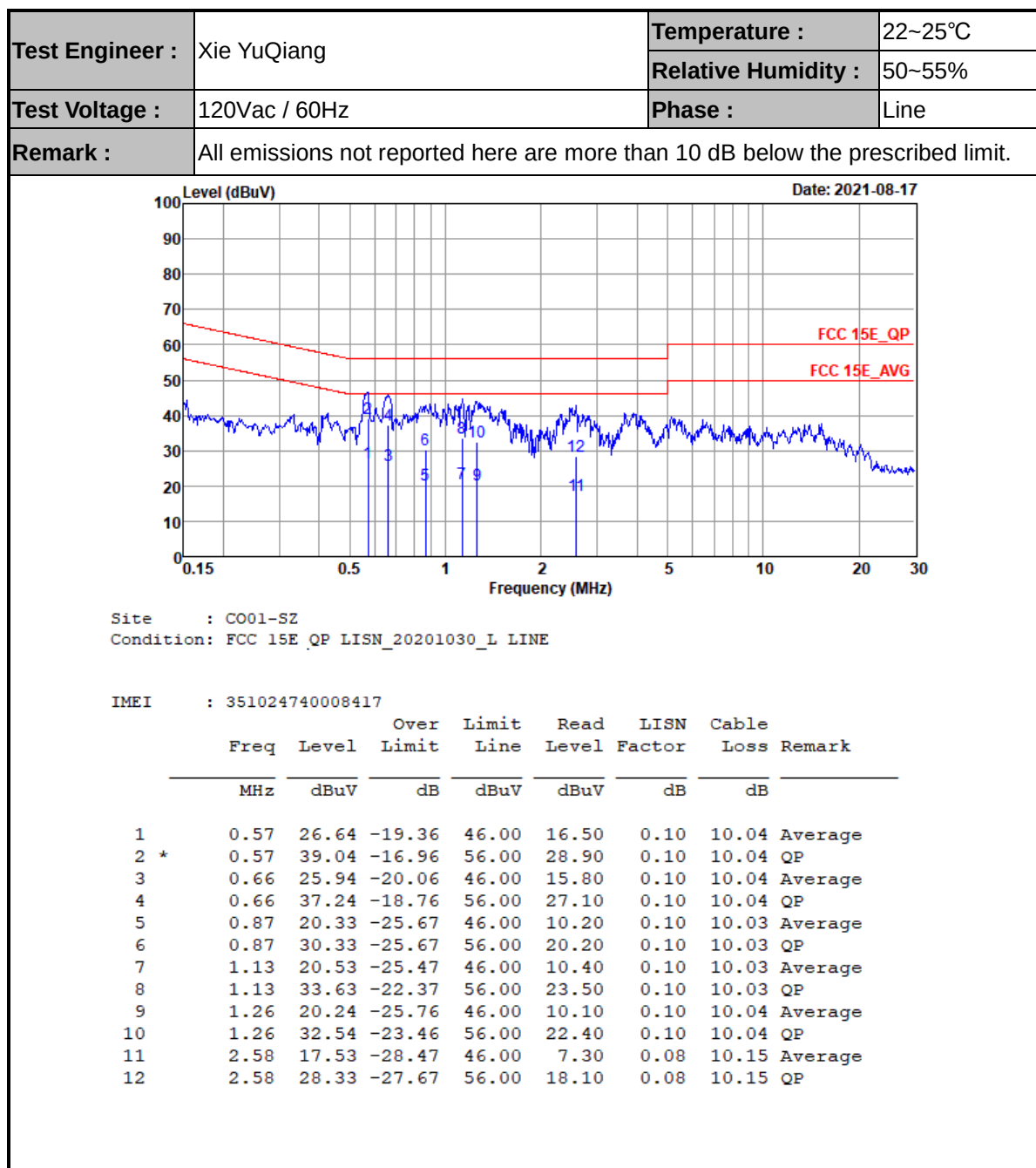
FCC Band III										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)	EIRP Power Limit (dBm)	Pass/Fail
11a	6M bps	1	100	5500	0.13	18.21	23.98	-2.47	26.99	Pass
11a	6M bps	1	116	5580	0.13	18.36	23.98	-2.47	26.99	Pass
11a	6M bps	1	140	5700	0.13	18.68	23.98	-2.47	26.99	Pass
HT20	MCS 0	1	100	5500	0.14	18.26	23.98	-2.47	26.99	Pass
HT20	MCS 0	1	116	5580	0.14	18.42	23.98	-2.47	26.99	Pass
HT20	MCS 0	1	140	5700	0.14	18.68	23.98	-2.47	26.99	Pass
HT40	MCS 0	1	102	5510	0.27	17.19	23.98	-2.47	26.99	Pass
HT40	MCS 0	1	110	5550	0.27	17.10	23.98	-2.47	26.99	Pass
HT40	MCS 0	1	134	5670	0.27	17.35	23.98	-2.47	26.99	Pass
VHT20	MCS 0	1	100	5500	0.14	18.30	23.98	-2.47	26.99	Pass
VHT20	MCS 0	1	116	5580	0.14	18.46	23.98	-2.47	26.99	Pass
VHT20	MCS 0	1	140	5700	0.14	18.72	23.98	-2.47	26.99	Pass
VHT40	MCS 0	1	102	5510	0.28	18.36	23.98	-2.47	26.99	Pass
VHT40	MCS 0	1	110	5550	0.28	18.25	23.98	-2.47	26.99	Pass
VHT40	MCS 0	1	134	5670	0.28	18.56	23.98	-2.47	26.99	Pass
VHT80	MCS 0	1	106	5530	0.57	17.85	23.98	-2.47	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	6.71	11.00	-2.47		Pass
11a	6M bps	1	116	5580	0.13	7.03	11.00	-2.47		Pass
11a	6M bps	1	140	5700	0.13	7.20	11.00	-2.47		Pass
VHT20	MCS 0	1	100	5500	0.14	6.65	11.00	-2.47		Pass
VHT20	MCS 0	1	116	5580	0.14	6.92	11.00	-2.47		Pass
VHT20	MCS 0	1	140	5700	0.14	7.09	11.00	-2.47		Pass
VHT40	MCS 0	1	102	5510	0.28	3.87	11.00	-2.47		Pass
VHT40	MCS 0	1	110	5550	0.28	3.58	11.00	-2.47		Pass
VHT40	MCS 0	1	134	5670	0.28	3.89	11.00	-2.47		Pass
VHT80	MCS 0	1	106	5530	0.57	-0.02	11.00	-2.47		Pass

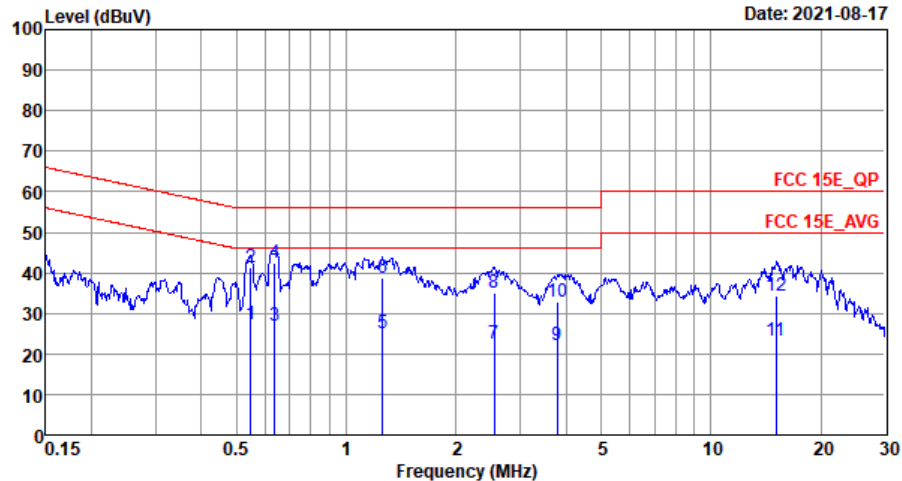


Appendix B. AC Conducted Emission Test Results





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



Site : CO01-SZ
Condition: FCC 15E_QP LISN_20201030_N NEUTRAL

IMEI : 351024740008417

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.55	27.35	-18.65	46.00	17.20	0.10	10.05	Average
2	0.55	41.25	-14.75	56.00	31.10	0.10	10.05	QP
3	0.64	26.94	-19.06	46.00	16.80	0.10	10.04	Average
4 *	0.64	42.34	-13.66	56.00	32.20	0.10	10.04	QP
5	1.26	24.94	-21.06	46.00	14.80	0.10	10.04	Average
6	1.26	38.84	-17.16	56.00	28.70	0.10	10.04	QP
7	2.54	22.42	-23.58	46.00	12.20	0.08	10.14	Average
8	2.54	35.22	-20.78	56.00	25.00	0.08	10.14	QP
9	3.78	21.98	-24.02	46.00	11.70	0.04	10.24	Average
10	3.78	32.68	-23.32	56.00	22.40	0.04	10.24	QP
11	15.07	23.09	-26.91	50.00	12.30	0.49	10.30	Average
12	15.07	34.19	-25.81	60.00	23.40	0.49	10.30	QP

Note:

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



Appendix C. Radiated Spurious Emission

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		5146.64	53.52	-20.48	74	47.27	31.62	7.48	32.85	293	148	P	H
		5150	46.19	-7.81	54	39.94	31.62	7.48	32.85	293	148	A	H
		5180	105.77	-----	-----	99.48	31.65	7.53	32.89	293	148	P	H
		5180	98.02	-----	-----	91.73	31.65	7.53	32.89	293	148	A	H
		5146.9	55.01	-18.99	74	48.76	31.62	7.48	32.85	247	93	P	V
		5150	45.63	-8.37	54	39.38	31.62	7.48	32.85	247	93	A	V
		5180	105.11	-----	-----	98.82	31.65	7.53	32.89	247	93	P	V
		5180	97.71	-----	-----	91.42	31.65	7.53	32.89	247	93	A	V
802.11a CH 44 5220MHz		5043.42	49.04	-24.96	74	42.86	31.54	7.32	32.68	289	145	P	H
		5147.94	39.67	-14.33	54	33.42	31.62	7.48	32.85	289	145	A	H
		5220	104.51	-----	-----	98.25	31.67	7.57	32.98	289	145	P	H
		5220	97.58	-----	-----	91.32	31.67	7.57	32.98	289	145	A	H
		5352.24	46.78	-27.22	74	40.51	31.78	7.68	33.19	289	145	P	H
		5353.68	37.7	-16.3	54	31.43	31.78	7.68	33.19	289	145	A	H
		5120.9	48.25	-25.75	74	42.04	31.59	7.43	32.81	243	91	P	V
		5147.42	39.49	-14.51	54	33.24	31.62	7.48	32.85	243	91	A	V
		5220	103.79	-----	-----	97.53	31.67	7.57	32.98	243	91	P	V
		5220	97.5	-----	-----	91.24	31.67	7.57	32.98	243	91	A	V
		5428.32	45.3	-28.7	74	39.04	31.83	7.75	33.32	243	91	P	V
		5352	37.32	-16.68	54	31.05	31.78	7.68	33.19	243	91	A	V



802.11a CH 48 5240MHz		5123.5	48.11	-25.89	74	41.85	31.61	7.46	32.81	297	143	P	H
		5142.74	39.63	-14.37	54	33.38	31.62	7.48	32.85	297	143	A	H
		5240	104.71	-----	-----	98.41	31.69	7.59	32.98	297	143	P	H
		5240	97.52	-----	-----	91.22	31.69	7.59	32.98	297	143	A	H
		5358	46.17	-27.83	74	39.9	31.78	7.68	33.19	297	143	P	H
		5350.08	38.3	-15.7	54	32.03	31.78	7.68	33.19	297	143	A	H
		5142.22	47.61	-26.39	74	41.36	31.62	7.48	32.85	261	99	P	V
		5150	39.26	-14.74	54	33.01	31.62	7.48	32.85	261	99	A	V
		5240	104.54	-----	-----	98.24	31.69	7.59	32.98	261	99	P	V
		5240	97.76	-----	-----	91.46	31.69	7.59	32.98	261	99	A	V
		5397.6	45.35	-28.65	74	39.05	31.82	7.71	33.23	261	99	P	V
		5350.08	37.99	-16.01	54	31.72	31.78	7.68	33.19	261	99	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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	50.18	-18.12	68.3	32.92	39.79	10.8	33.33	152	260	P	H
		15547	49.81	-24.19	74	30.86	38.46	13.69	33.2	100	126	P	H
		10360	50.26	-18.04	68.3	33	39.79	10.8	33.33	201	0	P	V
		15540	48.92	-25.08	74	29.95	38.5	13.67	33.2	189	238	P	V
802.11a CH 44 5220MHz		10440	49.32	-18.98	68.3	57.51	39.89	10.84	58.92	150	230	P	H
		15660	49.71	-24.29	74	56.84	38.17	13.76	59.06	160	225	P	H
		10440	50.47	-17.83	68.3	33.05	39.89	10.84	33.31	288	145	P	V
		15660	49.22	-24.78	74	30.49	38.17	13.76	33.2	288	145	P	V
802.11a CH 48 5240MHz		10480	49.16	-19.14	68.3	57.18	39.97	10.87	58.86	150	289	P	H
		15720	49.43	-24.57	74	30.85	37.97	13.81	33.2	151	295	P	H
		10480	50.08	-18.22	68.3	58.1	39.97	10.87	58.86	150	289	P	V
		15720	50.16	-23.84	74	57.5	37.97	13.81	59.12	150	291	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



5150~5250MHz

WIFI 802.11ac VHT20 (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 VHT20 CH 36 5180MHz		5149.76	53.29	-20.71	74	47.04	31.62	7.48	32.85	294	142	P	H
		5150	46.65	-7.35	54	40.4	31.62	7.48	32.85	294	142	A	H
		5180	105.02	-----	-----	98.73	31.65	7.53	32.89	294	142	P	H
		5180	97.75	-----	-----	91.46	31.65	7.53	32.89	294	142	A	H
		5148.46	52.92	-21.08	74	46.67	31.62	7.48	32.85	250	94	P	V
		5149.5	46.58	-7.42	54	40.33	31.62	7.48	32.85	250	94	A	V
		5180	104.71	-----	-----	98.42	31.65	7.53	32.89	250	94	P	V
		5180	96.96	-----	-----	90.67	31.65	7.53	32.89	250	94	A	V
802.11ac VHT20 CH 44 5220MHz		5134.42	48.18	-25.82	74	41.92	31.61	7.46	32.81	304	145	P	H
		5150	40.56	-13.44	54	34.31	31.62	7.48	32.85	304	145	A	H
		5220	105.26	-----	-----	99	31.67	7.57	32.98	304	145	P	H
		5220	97.6	-----	-----	91.34	31.67	7.57	32.98	304	145	A	H
		5363.52	45.25	-28.75	74	38.96	31.79	7.69	33.19	304	145	P	H
		5354.88	36.84	-17.16	54	30.57	31.78	7.68	33.19	304	145	A	H
		5134.68	47.78	-26.22	74	41.52	31.61	7.46	32.81	264	95	P	V
		5132.86	39.9	-14.1	54	33.64	31.61	7.46	32.81	264	95	A	V
		5220	104.83	-----	-----	98.57	31.67	7.57	32.98	264	95	P	V
		5220	97.53	-----	-----	91.27	31.67	7.57	32.98	264	95	A	V
		5353.92	45.41	-28.59	74	39.14	31.78	7.68	33.19	264	95	P	V
		5386.08	37.03	-16.97	54	30.75	31.81	7.7	33.23	264	95	A	V



802.11ac VHT20 CH 48 5240MHz		5129.48	48.28	-25.72	74	42.02	31.61	7.46	32.81	281	145	P	H
		5137.28	40.04	-13.96	54	33.78	31.61	7.46	32.81	281	145	A	H
		5240	102.87	-----	-----	96.57	31.69	7.59	32.98	281	145	P	H
		5240	95.82	-----	-----	89.52	31.69	7.59	32.98	281	145	A	H
		5388	45.8	-28.2	74	39.52	31.81	7.7	33.23	281	145	P	H
		5352.24	37.37	-16.63	54	31.1	31.78	7.68	33.19	281	145	A	H
		5114.4	47.74	-26.26	74	41.49	31.59	7.43	32.77	273	98	P	V
		5146.12	39.42	-14.58	54	33.17	31.62	7.48	32.85	273	98	A	V
		5240	104.53	-----	-----	98.23	31.69	7.59	32.98	273	98	P	V
		5240	97.46	-----	-----	91.16	31.69	7.59	32.98	273	98	A	V
		5356.08	45.79	-28.21	74	39.52	31.78	7.68	33.19	273	98	P	V
		5350.56	37.62	-16.38	54	31.35	31.78	7.68	33.19	273	98	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



5150~5250MHz

WIFI 802.11ac VHT20 (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		10360	49.92	-18.38	68.3	58.32	39.79	10.8	58.99	152	260	P	H
VHT20		15540	48.45	-25.55	74	29.48	38.5	13.67	33.2	152	260	P	H
CH 36		10360	50.24	-18.06	68.3	32.98	39.79	10.8	33.33	189	238	P	V
5180MHz		15540	49	-25	74	55.76	38.5	13.67	58.93	189	238	P	V
802.11ac		10440	50.07	-18.23	68.3	58.26	39.89	10.84	58.92	150	230	P	H
VHT20		15660	49.74	-24.26	74	56.87	38.17	13.76	59.06	100	0	P	H
CH 44		10440	50.38	-17.92	68.3	58.57	39.89	10.84	58.92	150	230	P	V
5220MHz		15660	48.88	-25.12	74	56.01	38.17	13.76	59.06	160	225	P	V
802.11ac		10480	49.2	-19.1	68.3	31.67	39.97	10.87	33.31	163	255	P	H
VHT20		15720	49.91	-24.09	74	31.33	37.97	13.81	33.2	163	255	P	H
CH 48		10480	49.81	-18.49	68.3	57.83	39.97	10.87	58.86	150	289	P	V
5240MHz		15720	50.19	-23.81	74	31.61	37.97	13.81	33.2	150	289	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



5150~5250MHz

WIFI 802.11ac VHT40 (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 VHT40 CH 38 5190MHz		5149.9	60.3	-13.7	74	49.06	31.62	12.15	32.53	292	146	P	H
		5150	50.96	-3.04	54	39.72	31.62	12.15	32.53	292	146	A	H
		5190	100.9	-----	-----	89.63	31.65	12.16	32.54	292	146	P	H
		5190	93.49	-----	-----	82.22	31.65	12.16	32.54	292	146	A	H
		5357.52	50.02	-23.98	74	38.59	31.79	12.21	32.57	292	146	P	H
		5358.92	42.19	-11.81	54	30.76	31.79	12.21	32.57	292	146	A	H
		5149.76	55.49	-18.51	74	44.25	31.62	12.15	32.53	326	247	P	V
		5149.76	47.69	-6.31	54	36.45	31.62	12.15	32.53	326	247	A	V
		5190	100.36	-----	-----	89.09	31.65	12.16	32.54	326	247	P	V
		5190	92.51	-----	-----	81.24	31.65	12.16	32.54	326	247	A	V
		5391.96	48.72	-25.28	74	37.6	31.48	12.22	32.58	326	247	P	V
		5380.48	41.24	-12.76	54	29.8	31.8	12.22	32.58	326	247	A	V
802.11ac VHT40 CH 46 5230MHz		5139.36	50.34	-23.66	74	44.08	31.61	7.46	32.81	100	290	P	H
		5149.24	42.9	-11.1	54	36.65	31.62	7.48	32.85	100	290	A	H
		5230	103.37	-----	-----	97.07	31.69	7.59	32.98	100	290	P	H
		5230	96.51	-----	-----	90.21	31.69	7.59	32.98	100	290	A	H
		5352.24	47.48	-26.52	74	41.21	31.78	7.68	33.19	100	290	P	H
		5354.4	39.11	-14.89	54	32.84	31.78	7.68	33.19	100	290	A	H
		5137.54	47.48	-26.52	74	41.22	31.61	7.46	32.81	100	68	P	V
		5148.98	39.78	-14.22	54	33.53	31.62	7.48	32.85	100	68	A	V
		5230	98.88	-----	-----	92.58	31.69	7.59	32.98	100	68	P	V
		5230	91.42	-----	-----	85.12	31.69	7.59	32.98	100	68	A	V
		5351.28	45.48	-28.52	74	39.21	31.78	7.68	33.19	100	68	P	V
		5354.64	37.82	-16.18	54	31.55	31.78	7.68	33.19	100	68	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



5150~5250MHz

WIFI 802.11ac VHT40 (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		10380	49.59	-18.71	68.3	32.3	39.81	10.81	33.33	122	145	P	H
VHT40		15570	49.4	-24.6	74	30.49	38.41	13.7	33.2	123	145	P	H
CH 38		10380	50.17	-18.13	68.3	58.52	39.81	10.81	58.97	150	360	P	V
5190MHz		15570	49.38	-24.62	74	56.24	38.41	13.7	58.97	155	360	P	V
802.11ac		10460	49.26	-19.04	68.3	57.39	39.92	10.85	58.9	150	360	P	H
VHT40		15690	50.11	-23.89	74	57.34	38.07	13.79	59.09	150	225	P	H
CH 46		10460	50.44	-17.86	68.3	32.98	39.92	10.85	33.31	114	163	P	V
5230MHz		15690	48.73	-25.27	74	30.07	38.07	13.79	33.2	114	163	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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		5148.72	57.09	-16.91	74	50.84	31.62	7.48	32.85	100	285	P	H
		5147.68	50.98	-3.02	54	44.73	31.62	7.48	32.85	100	296	A	H
		5210	97.19	-----	-----	90.89	31.67	7.57	32.94	100	285	P	H
		5210	89.55	-----	-----	83.25	31.67	7.57	32.94	100	285	A	H
		5355.12	47.32	-26.68	74	41.05	31.78	7.68	33.19	100	285	P	H
		5352.72	39.71	-14.29	54	33.44	31.78	7.68	33.19	100	285	A	H
		5144.3	53.69	-20.31	74	47.44	31.62	7.48	32.85	284	100	P	V
		5148.72	47.01	-6.99	54	40.76	31.62	7.48	32.85	284	100	A	V
		5210	94.49	-----	-----	88.19	31.67	7.57	32.94	284	100	P	V
		5210	87.55	-----	-----	81.25	31.67	7.57	32.94	284	100	A	V
		5458.56	45.52	-28.48	74	39.18	31.86	7.84	33.36	284	100	P	V
		5358.48	38.5	-15.5	54	32.23	31.78	7.68	33.19	284	100	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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	49.56	-18.74	68.3	32.17	39.87	10.83	33.31	143	214	P	H
VHT80		15630	49.74	-24.26	74	30.98	38.21	13.75	33.2	143	214	P	H
CH 42		10420	50.08	-18.22	68.3	32.69	39.87	10.83	33.31	163	225	P	V
5210MHz		15630	49.33	-24.67	74	30.57	38.21	13.75	33.2	163	225	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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		5109.2	47.71	-26.29	74	41.46	31.59	7.43	32.77	299	143	P	H
		5144.3	39.19	-14.81	54	32.94	31.62	7.48	32.85	299	143	A	H
		5260	105.59	-----	-----	99.28	31.71	7.62	33.02	299	143	P	H
		5260	98.55	-----	-----	92.24	31.71	7.62	33.02	299	143	A	H
		5362.56	47.65	-26.35	74	41.36	31.79	7.69	33.19	299	143	P	H
		5350.32	39.02	-14.98	54	32.75	31.78	7.68	33.19	299	143	A	H
		5138.58	46.99	-27.01	74	40.73	31.61	7.46	32.81	264	97	P	V
		5137.8	38.63	-15.37	54	32.37	31.61	7.46	32.81	264	97	A	V
		5260	105.27	-----	-----	98.96	31.71	7.62	33.02	264	97	P	V
		5260	98.06	-----	-----	91.75	31.71	7.62	33.02	264	97	A	V
		5391.12	46.38	-27.62	74	40.1	31.81	7.7	33.23	264	97	P	V
		5350.56	37.98	-16.02	54	31.71	31.78	7.68	33.19	264	97	A	V
802.11a CH 60 5300MHz		5103.25	47.74	-26.26	74	41.52	31.58	7.41	32.77	310	142	P	H
		5135.45	39.58	-14.42	54	33.32	31.61	7.46	32.81	310	142	A	H
		5300	103.61	-----	-----	97.33	31.74	7.65	33.11	310	142	P	H
		5300	96.75	-----	-----	90.47	31.74	7.65	33.11	310	142	A	H
		5353.2	46.35	-27.65	74	40.08	31.78	7.68	33.19	310	142	P	H
		5351.04	38.66	-15.34	54	32.39	31.78	7.68	33.19	310	142	A	H
		5077.35	47.5	-26.5	74	41.28	31.57	7.38	32.73	290	98	P	V
		5134.4	38.21	-15.79	54	31.95	31.61	7.46	32.81	290	98	A	V
		5300	104.6	-----	-----	98.32	31.74	7.65	33.11	290	98	P	V
		5300	98.05	-----	-----	91.77	31.74	7.65	33.11	290	98	A	V
		5350.8	48.21	-25.79	74	41.94	31.78	7.68	33.19	290	98	P	V
		5350.08	39.87	-14.13	54	33.6	31.78	7.68	33.19	290	98	A	V



802.11a CH 64 5320MHz		5320	103.8	-----	-----	97.5	31.75	7.66	33.11	287	145	P	H
		5320	97.62	-----	-----	91.32	31.75	7.66	33.11	287	145	A	H
		5352.64	51.38	-22.62	74	45.11	31.78	7.68	33.19	287	145	P	H
		5350.24	42.31	-11.69	54	36.04	31.78	7.68	33.19	287	145	A	H
		5320	104.33	-----	-----	98.03	31.75	7.66	33.11	269	101	P	V
		5320	96.83	-----	-----	90.53	31.75	7.66	33.11	269	101	A	V
		5351.04	52.42	-21.58	74	46.15	31.78	7.68	33.19	269	101	P	V
		5350.08	43.67	-10.33	54	37.4	31.78	7.68	33.19	269	101	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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	49.74	-18.56	68.3	57.66	40.02	10.88	58.82	150	220	P	H
		15780	50.56	-23.44	74	58.06	37.83	13.85	59.18	159	345	P	H
		10520	49.72	-18.58	68.3	57.64	40.02	10.88	58.82	150	220	P	V
		15780	49.26	-24.74	74	56.76	37.83	13.85	59.18	159	345	P	V
802.11a CH 60 5300MHz		10600	50.16	-23.84	74	32.44	40.12	10.93	33.33	196	190	P	H
		15900	48.71	-25.29	74	56.58	37.49	13.94	59.3	196	190	P	H
		10600	50.36	-23.64	74	58.04	40.12	10.93	58.73	185	215	P	V
		15900	50.56	-23.44	74	32.33	37.49	13.94	33.2	185	215	P	V
802.11a CH 64 5320MHz		10640	50.16	-23.84	74	57.73	40.17	10.95	58.69	152	135	P	H
		15960	48.37	-25.63	74	30.28	37.3	13.99	33.2	152	135	P	H
		10640	50.11	-23.89	74	32.34	40.17	10.95	33.35	173	245	P	V
		15960	48.54	-25.46	74	56.62	37.3	13.99	59.37	173	245	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



5250~5350MHz

WIFI 802.11ac VHT20 (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 VHT20 CH 52 5260MHz		5147.42	49.38	-24.62	74	43.13	31.62	7.48	32.85	100	300	P	H
		5141.7	40.12	-13.88	54	33.87	31.62	7.48	32.85	100	300	A	H
		5260	106.26	-----	-----	99.95	31.71	7.62	33.02	100	300	P	H
		5260	98.42	-----	-----	92.11	31.71	7.62	33.02	100	300	A	H
		5363.28	48.25	-25.75	74	41.96	31.79	7.69	33.19	100	300	P	H
		5353.2	40.91	-13.09	54	34.64	31.78	7.68	33.19	100	300	A	H
		5112.06	47.01	-26.99	74	40.76	31.59	7.43	32.77	116	69	P	V
		5105.04	38.62	-15.38	54	32.4	31.58	7.41	32.77	116	69	A	V
		5260	103.82	-----	-----	97.51	31.71	7.62	33.02	116	69	P	V
		5260	96.78	-----	-----	90.47	31.71	7.62	33.02	116	69	A	V
		5397.84	45.82	-28.18	74	39.52	31.82	7.71	33.23	116	69	P	V
		5350.08	37.32	-16.68	54	31.05	31.78	7.68	33.19	116	69	A	V
802.11ac VHT20 CH 60 5300MHz		5132.3	48.72	-25.28	74	42.46	31.61	7.46	32.81	106	300	P	H
		5129.85	39.84	-14.16	54	33.58	31.61	7.46	32.81	106	300	A	H
		5300	106.56	-----	-----	100.28	31.74	7.65	33.11	106	300	P	H
		5300	98.5	-----	-----	92.22	31.74	7.65	33.11	106	300	A	H
		5352.24	49.56	-24.44	74	43.29	31.78	7.68	33.19	106	300	P	H
		5350.32	41.71	-12.29	54	35.44	31.78	7.68	33.19	106	300	A	H
		5120.75	46.93	-27.07	74	40.72	31.59	7.43	32.81	106	74	P	V
		5135.8	37.75	-16.25	54	31.49	31.61	7.46	32.81	106	74	A	V
		5300	103.81	-----	-----	97.53	31.74	7.65	33.11	106	74	P	V
		5300	97.41	-----	-----	91.13	31.74	7.65	33.11	106	74	A	V
		5371.2	46.73	-27.27	74	40.44	31.79	7.69	33.19	106	74	P	V
		5351.28	39.33	-14.67	54	33.06	31.78	7.68	33.19	106	74	A	V



802.11ac VHT20 CH 64 5320MHz		5320	107.04	-----	-----	100.74	31.75	7.66	33.11	101	300	P	H
		5320	99.52	-----	-----	93.22	31.75	7.66	33.11	101	300	A	H
		5353.44	58.45	-15.55	74	52.18	31.78	7.68	33.19	101	300	P	H
		5350.24	46.72	-7.28	54	40.45	31.78	7.68	33.19	101	300	A	H
		5320	102.66	-----	-----	96.36	31.75	7.66	33.11	102	75	P	V
		5320	95.34	-----	-----	89.04	31.75	7.66	33.11	102	75	A	V
		5351.68	51.55	-22.45	74	45.28	31.78	7.68	33.19	102	75	P	V
		5350.4	43.05	-10.95	54	36.78	31.78	7.68	33.19	102	75	A	V
Remark		1. No other spurious found. 2. All results are PASS against Peak and Average limit line.											



5250~5350MHz

WIFI 802.11ac VHT20 (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		10520	49.32	-18.98	68.3	31.72	40.02	10.88	33.3	159	345	P	H
VHT20		15780	49.14	-24.86	74	56.64	37.83	13.85	59.18	159	345	P	H
CH 52		10520	51.25	-17.05	68.3	59.17	40.02	10.88	58.82	150	220	P	V
5260MHz		15780	49.5	-24.5	74	31.02	37.83	13.85	33.2	150	220	P	V
802.11ac		10600	50.82	-23.18	74	58.5	40.12	10.93	58.73	185	215	P	H
VHT20		15900	48.59	-25.41	74	30.36	37.49	13.94	33.2	185	215	P	H
CH 60		10600	50.29	-23.71	74	32.57	40.12	10.93	33.33	196	190	P	V
5300MHz		15900	48.89	-25.11	74	56.76	37.49	13.94	59.3	196	190	P	V
802.11ac		10640	50.28	-23.72	74	32.51	40.17	10.95	33.35	173	245	P	H
VHT20		15960	47.68	-26.32	74	55.76	37.3	13.99	59.37	173	245	P	H
CH 64		10640	50.39	-23.61	74	57.96	40.17	10.95	58.69	152	135	P	V
5320MHz		15960	49.58	-24.42	74	31.49	37.3	13.99	33.2	152	135	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



5250~5350MHz

WIFI 802.11ac VHT40 (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 VHT40 CH 54 5270MHz		5093.1	48.19	-25.81	74	41.97	31.58	7.41	32.77	105	262	P	H
		5140.35	41.05	-12.95	54	34.76	31.62	7.48	32.81	105	262	A	H
		5270	104.22	-----	-----	97.91	31.71	7.62	33.02	105	262	P	H
		5270	97.52	-----	-----	91.21	31.71	7.62	33.02	105	262	A	H
		5361.84	48.64	-25.36	74	42.35	31.79	7.69	33.19	105	262	P	H
		5350.8	41.7	-12.3	54	35.43	31.78	7.68	33.19	105	262	A	H
		5089.6	46.11	-27.89	74	39.89	31.58	7.41	32.77	104	74	P	V
		5137.2	38.21	-15.79	54	31.95	31.61	7.46	32.81	104	74	A	V
		5270	100.03	-----	-----	93.72	31.71	7.62	33.02	104	74	P	V
		5270	93.43	-----	-----	87.12	31.71	7.62	33.02	104	74	A	V
		5350.32	47.2	-26.8	74	40.93	31.78	7.68	33.19	104	74	P	V
		5353.2	39.43	-14.57	54	33.16	31.78	7.68	33.19	104	74	A	V
802.11ac VHT40 CH 62 5310MHz		5116.9	51.08	-22.92	74	39.88	31.59	12.14	32.53	279	167	P	H
		5128.1	43.56	-10.44	54	32.34	31.6	12.15	32.53	279	167	A	H
		5310	101.59	-----	-----	90.2	31.75	12.2	32.56	279	167	P	H
		5310	94.08	-----	-----	82.69	31.75	12.2	32.56	279	167	A	H
		5350.1	61.31	-12.69	74	49.89	31.78	12.21	32.57	279	167	P	H
		5350.08	49.4	-4.6	54	37.98	31.78	12.21	32.57	279	167	A	H
		5102.55	50.9	-23.1	74	39.7	31.58	12.14	32.52	256	100	P	V
		5141.05	42.99	-11.01	54	31.76	31.61	12.15	32.53	256	100	A	V
		5310	99.33	-----	-----	87.94	31.75	12.2	32.56	256	100	P	V
		5310	91.88	-----	-----	80.49	31.75	12.2	32.56	256	100	A	V
		5351.28	56.91	-17.09	74	45.49	31.78	12.21	32.57	256	100	P	V
		5350.56	48	-6	54	36.58	31.78	12.21	32.57	256	100	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



5250~5350MHz

WIFI 802.11ac VHT40 (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		10540	49.28	-19.02	68.3	57.15	40.04	10.89	58.8	150	220	P	H
VHT40		15810	49.72	-24.28	74	57.33	37.73	13.87	59.21	168	345	P	H
CH 54		10540	49.33	-18.97	68.3	31.71	40.04	10.89	33.31	166	231	P	V
5270MHz		15810	49.64	-24.36	74	31.24	37.73	13.87	33.2	166	231	P	V
802.11ac		10620	49.88	-24.12	74	57.51	40.14	10.94	58.71	150	220	P	H
VHT40		15930	47.87	-26.13	74	29.72	37.39	13.96	33.2	150	220	P	H
CH 62		10620	50.25	-23.75	74	32.51	40.14	10.94	33.34	160	100	P	V
5310MHz		15930	48.59	-25.41	74	56.57	37.39	13.96	59.33	160	100	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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		5074.2	50.61	-23.39	74	39.44	31.56	12.13	32.52	285	165	P	H
		5103.6	44.11	-9.89	54	32.91	31.58	12.14	32.52	285	165	A	H
		5290	95.02	-----	-----	83.66	31.73	12.19	32.56	285	165	P	H
		5290	88.66	-----	-----	77.3	31.73	12.19	32.56	285	165	A	H
		5351.28	55.75	-18.25	74	44.33	31.78	12.21	32.57	285	165	P	H
		5355.36	49.42	-4.58	54	38	31.78	12.21	32.57	285	165	A	H
		5045.5	49.79	-24.21	74	38.64	31.54	12.12	32.51	256	100	P	V
		5148.05	44.46	-9.54	54	33.22	31.62	12.15	32.53	256	100	A	V
		5290	95.17	-----	-----	83.81	31.73	12.19	32.56	256	100	P	V
		5290	88.56	-----	-----	77.2	31.73	12.19	32.56	256	100	A	V
		5361.36	54.43	-19.57	74	43	31.79	12.21	32.57	256	100	P	V
		5350.32	46.96	-7.04	54	35.54	31.78	12.21	32.57	256	100	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**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	49.96	-18.34	68.3	57.69	40.1	10.92	58.75	185	215	P	H
VHT80		15870	49.62	-24.38	74	57.44	37.54	13.92	59.28	196	190	P	H
CH 58		10580	49.68	-18.62	68.3	57.41	40.1	10.92	58.75	170	232	P	V
5290MHz		15870	48.76	-25.24	74	56.58	37.54	13.92	59.28	190	130	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



5470~5725MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preampl	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		5455.6	49.21	-24.79	74	42.87	31.86	7.84	33.36	130	300	P	H
		5468.88	51.22	-17.08	68.3	44.83	31.87	7.88	33.36	130	300	P	H
		5459.12	41.16	-12.84	54	34.82	31.86	7.84	33.36	130	300	A	H
		5500	104.13	-----	-----	97.67	31.9	7.96	33.4	130	300	P	H
		5500	97.1	-----	-----	90.64	31.9	7.96	33.4	130	300	A	H
		5405.68	47.69	-26.31	74	41.43	31.82	7.71	33.27	304	101	P	V
		5469.68	52.76	-15.54	68.3	46.37	31.87	7.88	33.36	304	101	P	V
		5459.28	40.31	-13.69	54	33.97	31.86	7.84	33.36	304	101	A	V
		5500	103.47	-----	-----	97.01	31.9	7.96	33.4	304	101	P	V
		5500	97.02	-----	-----	90.56	31.9	7.96	33.4	304	101	A	V
802.11a CH 116 5580MHz		5402.08	47.25	-26.75	74	40.99	31.82	7.71	33.27	104	297	P	H
		5468.56	46.91	-21.39	68.3	40.52	31.87	7.88	33.36	104	297	P	H
		5415.76	39.36	-14.64	54	33.05	31.83	7.75	33.27	104	297	A	H
		5580	103.15	-----	-----	96.6	31.97	7.97	33.39	104	297	P	H
		5580	95.86	-----	-----	89.31	31.97	7.97	33.39	104	297	A	H
		5733.5	47.47	-20.83	68.3	40.25	32.12	8.45	33.35	104	297	P	H
		5431.12	48.07	-25.93	74	41.75	31.85	7.79	33.32	277	99	P	V
		5466.64	45.23	-23.07	68.3	38.84	31.87	7.88	33.36	277	99	P	V
		5459.68	37.99	-16.01	54	31.65	31.86	7.84	33.36	277	99	A	V
		5580	103.61	-----	-----	97.06	31.97	7.97	33.39	277	99	P	V
		5580	97	-----	-----	90.45	31.97	7.97	33.39	277	99	A	V
		5730.35	46.46	-21.84	68.3	39.24	32.12	8.45	33.35	277	99	P	V



802.11a CH 140 5700MHz		5700	106.75	-----	-----	99.5	32.09	8.52	33.36	100	288	P	H
		5700	99.66	-----	-----	92.41	32.09	8.52	33.36	100	288	A	H
		5726.68	55.8	-12.5	68.3	48.58	32.12	8.45	33.35	100	288	P	H
		5700	103.18	-----	-----	95.93	32.09	8.52	33.36	262	102	P	V
		5700	95.92	-----	-----	88.67	32.09	8.52	33.36	262	102	A	V
		5728.68	51.83	-16.47	68.3	44.61	32.12	8.45	33.35	262	102	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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	50.22	-23.78	74	56.78	40.6	11.14	58.3	163	230	P	H
		16500	50.41	-17.89	68.3	56.38	38.6	14.27	58.84	196	273	P	H
		11000	50.65	-23.35	74	57.21	40.6	11.14	58.3	155	212	P	V
		16500	49.29	-19.01	68.3	55.26	38.6	14.27	58.84	178	296	P	V
802.11a CH 116 5580MHz		11160	50.99	-23.01	74	57.25	40.57	11.28	58.11	183	32	P	H
		16740	50.4	-17.9	68.3	54.92	39.66	14.4	58.58	163	332	P	H
		11160	50.34	-23.66	74	56.6	40.57	11.28	58.11	170	200	P	V
		16740	50.91	-17.39	68.3	55.43	39.66	14.4	58.58	156	350	P	V
802.11a CH 140 5700MHz		11400	50.22	-23.78	74	56.08	40.52	11.47	57.85	157	285	P	H
		17100	51.33	-16.97	68.3	53.72	41.08	14.69	58.16	165	246	P	H
		11400	50.13	-23.87	74	55.99	40.52	11.47	57.85	122	291	P	V
		17100	53.05	-15.25	68.3	55.44	41.08	14.69	58.16	153	102	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



5470~5725MHz

WIFI 802.11ac VHT20 (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 VHT20 CH 100 5500MHz		5455.28	50.71	-23.29	74	44.37	31.86	7.84	33.36	100	292	P	H
		5469.04	59.15	-9.15	68.3	52.76	31.87	7.88	33.36	100	292	P	H
		5459.76	42.43	-11.57	54	36.09	31.86	7.84	33.36	100	292	A	H
		5500	105.34	-----	-----	98.88	31.9	7.96	33.4	100	292	P	H
		5500	98.1	-----	-----	91.64	31.9	7.96	33.4	100	292	A	H
		5459.92	49.11	-24.89	74	42.77	31.86	7.84	33.36	267	103	P	V
		5469.04	53.88	-14.42	68.3	47.49	31.87	7.88	33.36	267	103	P	V
		5459.12	40.61	-13.39	54	34.27	31.86	7.84	33.36	267	103	A	V
		5500	103.78	-----	-----	97.32	31.9	7.96	33.4	267	103	P	V
802.11ac VHT20 CH 116 5580MHz		5500	96.88	-----	-----	90.42	31.9	7.96	33.4	267	103	A	V
		5453.2	47.17	-26.83	74	40.83	31.86	7.84	33.36	100	288	P	H
		5468.56	45.16	-23.14	68.3	38.77	31.87	7.88	33.36	100	288	P	H
		5413.36	38.81	-15.19	54	32.5	31.83	7.75	33.27	100	288	A	H
		5580	104.69	-----	-----	98.14	31.97	7.97	33.39	100	288	P	H
		5580	97.67	-----	-----	91.12	31.97	7.97	33.39	100	288	A	H
		5732.87	48.44	-19.86	68.3	41.22	32.12	8.45	33.35	100	288	P	H
		5458	47.45	-26.55	74	41.11	31.86	7.84	33.36	259	103	P	V
		5470	45.07	-23.23	68.3	38.68	31.87	7.88	33.36	259	103	P	V
		5456.32	38.16	-15.84	54	31.82	31.86	7.84	33.36	259	103	A	V
		5580	102.7	-----	-----	96.15	31.97	7.97	33.39	259	103	P	V
		5580	95.89	-----	-----	89.34	31.97	7.97	33.39	259	103	A	V
		5731.61	46.66	-21.64	68.3	39.44	32.12	8.45	33.35	259	103	P	V



802.11ac VHT20 CH 140 5700MHz		5700	105.28	-----	-----	98.03	32.09	8.52	33.36	100	288	P	H
		5700	98.13	-----	-----	90.88	32.09	8.52	33.36	100	288	A	H
		5725	57.78	-10.52	68.3	50.56	32.12	8.45	33.35	100	288	P	H
		5700	103.52	-----	-----	96.27	32.09	8.52	33.36	253	94	P	V
		5700	96.88	-----	-----	89.63	32.09	8.52	33.36	253	94	A	V
		5727.88	52.25	-16.05	68.3	45.03	32.12	8.45	33.35	253	94	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



5470~5725MHz

WIFI 802.11ac VHT20 (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		11000	50.11	-23.89	74	56.67	40.6	11.14	58.3	163	230	P	H
VHT20		16500	49.57	-18.73	68.3	55.54	38.6	14.27	58.84	196	273	P	H
CH 100		11000	50.46	-23.54	74	57.02	40.6	11.14	58.3	155	212	P	V
5500MHz		16500	49.96	-18.34	68.3	55.93	38.6	14.27	58.84	178	296	P	V
802.11ac		11160	50.83	-23.17	74	57.09	40.57	11.28	58.11	183	32	P	H
VHT20		16740	50.79	-17.51	68.3	55.31	39.66	14.4	58.58	163	332	P	H
CH 116		11160	50.1	-23.9	74	56.36	40.57	11.28	58.11	170	200	P	V
5580MHz		16740	51.09	-17.21	68.3	55.61	39.66	14.4	58.58	156	350	P	V
802.11ac		11400	50.69	-23.31	74	56.55	40.52	11.47	57.85	157	285	P	H
VHT20		17100	51.9	-16.4	68.3	54.29	41.08	14.69	58.16	165	246	P	H
CH 140		11400	50.09	-23.91	74	55.95	40.52	11.47	57.85	122	291	P	V
5700MHz		17100	52.26	-16.04	68.3	54.65	41.08	14.69	58.16	153	102	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



5470~5725MHz

WIFI 802.11ac VHT40 (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 VHT40 CH 102 5510MHz		5459.68	53.19	-20.81	74	46.85	31.86	7.84	33.36	100	287	P	H
		5467.6	59.21	-9.09	68.3	52.82	31.87	7.88	33.36	100	287	P	H
		5459.92	46.75	-7.25	54	40.41	31.86	7.84	33.36	100	287	A	H
		5510	102.01	-----	-----	95.55	31.9	7.96	33.4	100	287	P	H
		5510	94.57	-----	-----	88.11	31.9	7.96	33.4	100	287	A	H
		5733.185	48.8	-19.5	68.3	41.58	32.12	8.45	33.35	100	287	P	H
		5459.44	53.08	-20.92	74	46.74	31.86	7.84	33.36	257	100	P	V
		5469.28	59.03	-9.27	68.3	52.64	31.87	7.88	33.36	257	100	P	V
		5459.68	46.15	-7.85	54	39.81	31.86	7.84	33.36	257	100	A	V
		5510	100.2	-----	-----	93.74	31.9	7.96	33.4	257	100	P	V
		5510	92.65	-----	-----	86.19	31.9	7.96	33.4	257	100	A	V
802.11ac VHT40 CH 110 5550MHz		5429.68	47.6	-26.4	74	41.28	31.85	7.79	33.32	104	289	P	H
		5465.2	48.07	-20.23	68.3	41.68	31.87	7.88	33.36	104	289	P	H
		5453.44	40.58	-13.42	54	34.24	31.86	7.84	33.36	104	289	P	H
		5550	99.7	-----	-----	93.17	31.95	7.97	33.39	104	289	P	H
		5550	93.02	-----	-----	86.49	31.95	7.97	33.39	104	289	P	H
		5735.075	48.11	-20.19	68.3	40.9	32.14	8.42	33.35	104	289	P	H
		5456.32	47.25	-26.75	74	40.91	31.86	7.84	33.36	264	98	P	V
		5461.36	46.65	-21.65	68.3	40.31	31.86	7.84	33.36	264	98	P	V
		5449.12	39.61	-14.39	54	33.23	31.86	7.84	33.32	264	98	A	V
		5550	100.76	-----	-----	94.23	31.95	7.97	33.39	264	98	P	V
		5550	93.21	-----	-----	86.68	31.95	7.97	33.39	264	98	A	V
		5738.225	45.92	-22.38	68.3	38.71	32.14	8.42	33.35	264	98	P	V



802.11ac VHT40 CH 134 5670MHz		5448	46.64	-27.36	74	40.26	31.86	7.84	33.32	100	289	P	H
		5467.6	45.85	-22.45	68.3	39.46	31.87	7.88	33.36	100	289	P	H
		5459.9	38.02	-15.98	54	31.68	31.86	7.84	33.36	100	289	A	H
		5670	103.07	-----	-----	95.96	32.07	8.41	33.37	100	289	P	H
		5670	95.41	-----	-----	88.3	32.07	8.41	33.37	100	289	A	H
		5724.925	51.66	-16.64	68.3	44.44	32.12	8.45	33.35	100	289	P	H
		5457.8	47.22	-26.78	74	40.88	31.86	7.84	33.36	264	100	P	V
		5462.7	44.95	-23.35	68.3	38.56	31.87	7.88	33.36	264	100	P	V
		5446.6	38.31	-15.69	54	31.93	31.86	7.84	33.32	264	100	A	V
		5670	100.93	-----	-----	93.82	32.07	8.41	33.37	264	100	P	V
		5670	93.58	-----	-----	86.47	32.07	8.41	33.37	264	100	A	V
		5727.375	48.35	-19.95	68.3	41.13	32.12	8.45	33.35	264	100	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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)
802.11ac		11020	50.3	-23.7	74	56.83	40.6	11.15	58.28	170	230	P	H
VHT40		16530	49.8	-18.5	68.3	55.56	38.75	14.29	58.8	160	300	P	H
CH 102		11020	50.09	-23.91	74	31.86	40.6	11.15	33.52	256	211	P	V
5510MHz		16530	50.11	-18.19	68.3	29.6	38.75	14.29	32.53	256	211	P	V
802.11ac		11100	50.55	-23.45	74	32.31	40.58	11.22	33.56	180	353	P	H
VHT40		16650	50.97	-17.33	68.3	56.01	39.28	14.35	58.67	180	353	P	H
CH 110		11100	50.26	-23.74	74	56.65	40.58	11.22	58.19	160	220	P	V
5550MHz		16650	50.37	-17.93	68.3	29.13	39.28	14.35	32.39	160	220	P	V
802.11ac		11340	50.7	-23.3	74	56.68	40.53	11.42	57.93	195	335	P	H
VHT40		17010	51.81	-16.49	68.3	54.68	40.85	14.56	58.28	205	310	P	H
CH 134		11340	50.57	-23.43	74	56.55	40.53	11.42	57.93	205	325	P	V
5670MHz		17010	50.31	-17.99	68.3	53.18	40.85	14.56	58.28	185	290	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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		5453.92	57	-17	74	50.66	31.86	7.84	33.36	100	287	P	H
		5467.84	57.44	-10.86	68.3	51.05	31.87	7.88	33.36	100	287	P	H
		5453.92	49.36	-4.64	54	43.02	31.86	7.84	33.36	100	287	A	H
		5530	98.45	-----	-----	91.97	31.92	7.96	33.4	100	287	P	H
		5530	91.6	-----	-----	85.12	31.92	7.96	33.4	100	287	A	H
		5754.92	46.71	-21.59	68.3	39.51	32.16	8.39	33.35	100	287	P	H
		5456.08	56.96	-17.04	74	50.62	31.86	7.84	33.36	215	86	P	V
		5467.36	58.08	-10.22	68.3	51.69	31.87	7.88	33.36	215	86	P	V
		5456.56	49.11	-4.89	54	42.77	31.86	7.84	33.36	215	86	A	V
		5530	96.19	-----	-----	89.71	31.92	7.96	33.4	215	86	P	V
		5530	88.65	-----	-----	82.17	31.92	7.96	33.4	215	86	A	V
		5734.13	46.01	-22.29	68.3	38.79	32.12	8.45	33.35	215	86	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



5470~5725MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		11060	50.18	-23.82	74	56.62	40.59	11.2	58.23	170	230	P	H
VHT80		16590	49.93	-18.37	68.3	55.38	38.98	14.32	58.75	155	305	P	H
CH 106		11060	49.9	-24.1	74	56.34	40.59	11.2	58.23	166	212	P	V
5530MHz		16590	50.84	-17.46	68.3	56.29	38.98	14.32	58.75	132	343	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz

WIFI 802.11ac VHT80 (LF @ 3m)

WIFI 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)
802.11ac VHT80		56.19	22.77	-17.23	40	41.66	12.97	0.64	32.5	-----	-----	P	H
		100.81	28.58	-14.92	43.5	42.54	17.27	0.87	32.1	-----	-----	P	H
		145.43	27.08	-16.42	43.5	41.3	16.91	1.06	32.19	-----	-----	P	H
		287.05	30.47	-15.53	46	41.98	19.12	1.39	32.02	-----	-----	P	H
		384.05	34.38	-11.62	46	43.44	21.21	1.63	31.9	100	125	P	H
		768.17	32.8	-13.2	46	36.18	25.94	2.4	31.72	-----	-----	P	H
		74.62	24.83	-15.17	40	43.79	12.77	0.77	32.5	-----	-----	P	V
		99.84	27.28	-16.22	43.5	41.36	17.16	0.86	32.1	-----	-----	P	V
		157.07	29.01	-14.49	43.5	43.7	16.26	1.09	32.04	-----	-----	P	V
		262.8	30.37	-15.63	46	41.97	19.26	1.22	32.08	-----	-----	P	V
		384.05	29.81	-16.19	46	38.87	21.21	1.63	31.9	-----	-----	P	V
		768.17	35.2	-10.8	46	38.58	25.94	2.4	31.72	100	134	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



WIFI 802.11ac VHT80 CH 42 + LTE B13

(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+LTE B13		5141.96	54.35	-19.65	74	48.1	31.62	7.48	32.85	100	119	P	H
		5149.5	46.82	-7.18	54	40.57	31.62	7.48	32.85	100	119	A	H
		5210	96.21	-----	-----	89.91	31.67	7.57	32.94	100	119	P	H
		5210	89.47	-----	-----	83.17	31.67	7.57	32.94	100	119	A	H
		5432.16	43.92	-30.08	74	37.6	31.85	7.79	33.32	100	119	P	H
		5354.88	38.9	-15.1	54	32.63	31.78	7.68	33.19	100	119	A	H
		5148.72	50.63	-23.37	74	44.38	31.62	7.48	32.85	286	76	P	V
		5150	44.03	-9.97	54	37.78	31.62	7.48	32.85	286	76	A	V
		5210	92.98	-----	-----	86.68	31.67	7.57	32.94	286	76	P	V
		5210	85.99	-----	-----	79.69	31.67	7.57	32.94	286	76	A	V
		5425.2	44.38	-29.62	74	38.07	31.83	7.75	33.27	286	76	P	V
		5356.56	38.23	-15.77	54	31.96	31.78	7.68	33.19	286	76	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**WIFI 802.11ac VHT80 CH 42 + LTE B13 (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 42+LTE B13		10420	50.26	-18.04	68.3	58.49	39.87	10.83	58.93	150	360	P	H
		15630	50.39	-23.61	74	57.47	38.21	13.75	59.04	150	225	P	H
		10420	49.8	-18.5	68.3	58.03	39.87	10.83	58.93	150	360	P	V
		15630	50.9	-23.1	74	57.98	38.21	13.75	59.04	150	225	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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)

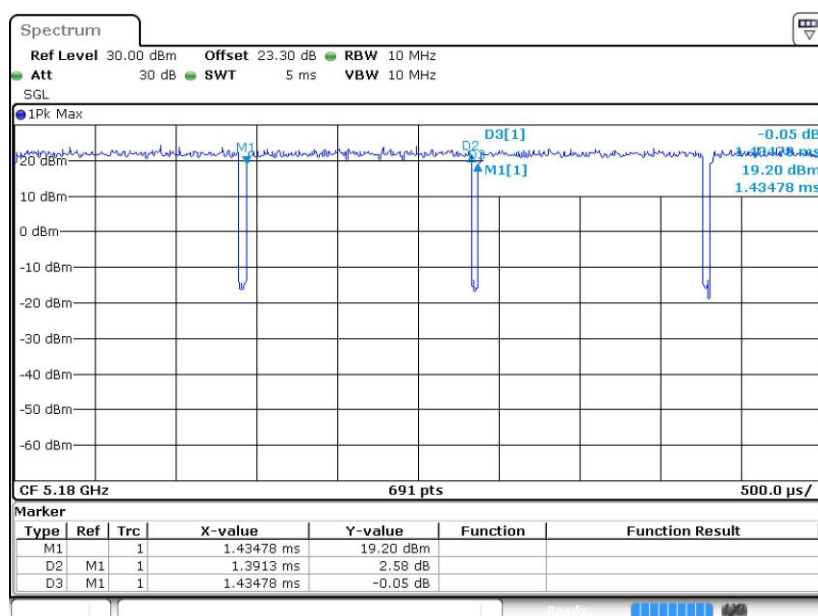
= -10.46(dB)

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

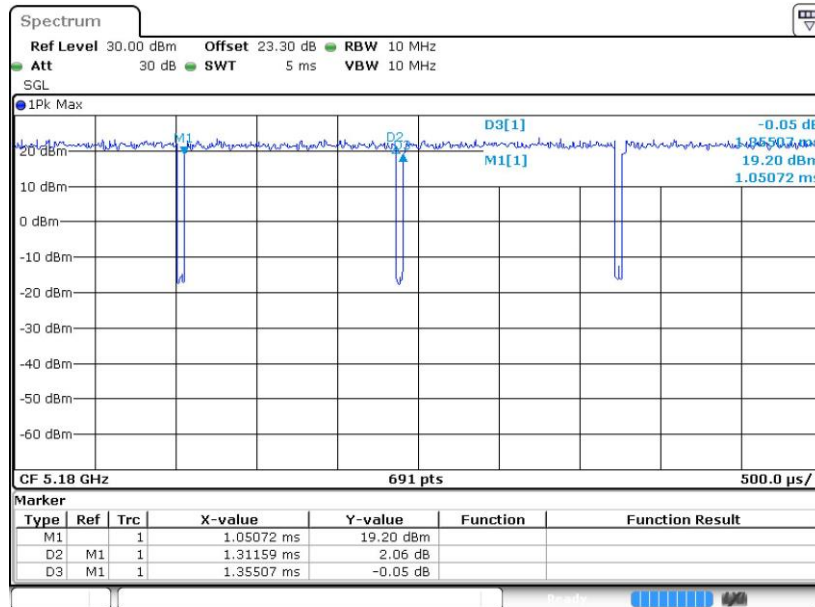
Appendix D. Duty Cycle Plots

Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
802.11a	96.97	1.391	0.719	1KHz
802.11ac VHT20	96.79	1.312	0.762	1KHz
802.11ac VHT40	93.79	0.657	1.523	3KHz
802.11ac VHT80	87.79	0.323	3.094	10KHz

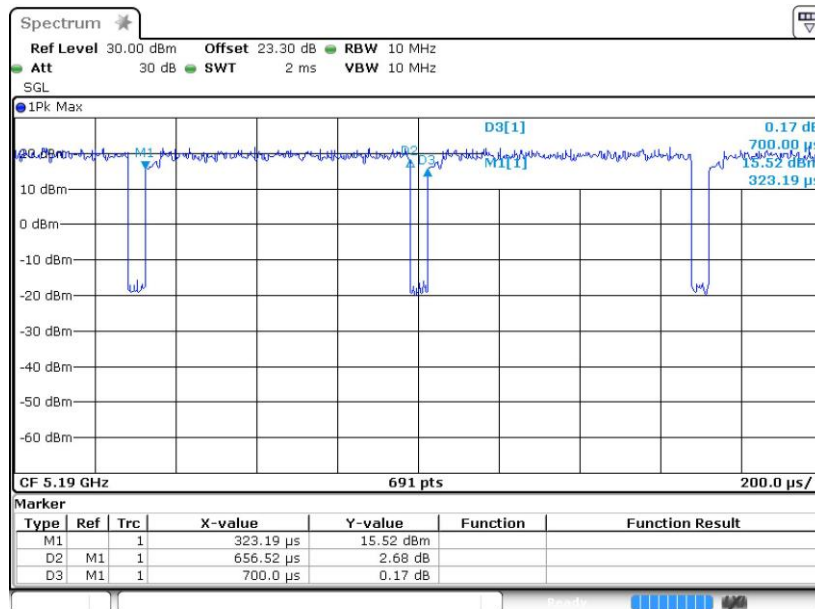
802.11a



802.11ac VHT20



802.11ac VHT40



802.11ac VHT80

