FCC RF Test Report

APPLICANT	:	**Motorola Mobility LLC**
EQUIPMENT	:	**Mobile Cellular Phone**
BRAND NAME	:	**Motorola**
MODEL NAME	:	**XT2128-2**
FCC ID	:	**IHDT56ZQ3**
STANDARD	:	**FCC Part 15 Subpart E §15.407**
CLASSIFICATION	:	**(NII) Unlicensed National Information Infrastructure**

The product was completed on Feb. 19, 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

ACCREDITED Cert #5145.01

Sporton International (ShenZhen) Inc.
1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055
People's Republic of China

TABLE OF CONTENTS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR120201E	Rev. 01	Initial issue of report	Mar. 04, 2021

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 3.15 dB at 11160.000 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 12.01 dB at 0.610 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

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	XT2128-2
FCC ID	IHDT56ZQ3
EUT supports Radios application	GSM/WCDMA/LTE/NFC WLAN 2.4GHz 802.11b/g/n HT20 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE FM Receiver and GNSS
IMEI Code	Conducted: 354244970711699/354244970711707 Conduction: 354244970700254/354244970700262 Radiation: 354244970700270/354244970700288
HW Version	DVT2
SW Version	RTA31.09
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 : 16.43 dBm / 0.0440 W 802.11n HT20 : 16.59 dBm / 0.0456 W 802.11n HT40 : 16.44 dBm / 0.0441 W 802.11ac VHT20 : 16.54 dBm / 0.0451 W 802.11ac VHT40 : 16.35 dBm / 0.0432 W 802.11ac VHT80 : 14.92 dBm / 0.0310 W **<5260 MHz ~ 5320 MHz>** 802.11a : 16.62 dBm / 0.0459 W 802.11n HT20 : 16.61 dBm / 0.0458 W 802.11n HT40 : 16.04 dBm / 0.0402 W 802.11ac VHT20 : 16.39 dBm / 0.0436 W 802.11ac VHT40 : 16.02 dBm / 0.0400 W 802.11ac VHT80 : 14.76 dBm / 0.0299 W **<5500 MHz ~ 5720 MHz >** 802.11a : 16.04 dBm / 0.0402 W 802.11n HT20 : 16.25 dBm / 0.0422 W 802.11n HT40 : 16.15 dBm / 0.0412 W 802.11ac VHT20 : 16.07 dBm / 0.0405 W 802.11ac VHT40 : 16.09 dBm / 0.0406 W 802.11ac VHT80 : 16.18 dBm / 0.0415 W
99% Occupied Bandwidth	**<5180 MHz ~ 5240 MHz>** 802.11a : 17.23 MHz 802.11n HT20 : 18.03 MHz 802.11n HT40 : 36.66 MHz 802.11ac VHT80 : 76.84 MHz **<5260 MHz ~ 5320 MHz>** 802.11a : 17.23 MHz 802.11n HT20 : 18.03 MHz 802.11n HT40 : 36.66 MHz 802.11ac VHT80 : 76.84 MHz **<5500 MHz ~ 5720 MHz >** 802.11a : 17.08 MHz 802.11n HT20 : 18.13 MHz 802.11n HT40 : 36.86 MHz 802.11ac VHT80 : 76.84 MHz
Antenna Type / Gain	**<5180 MHz ~ 5240 MHz>** PIFA Antenna with gain -4.40 dBi **<5260 MHz ~ 5320 MHz>** PIFA Antenna with gain -4.30 dBi **<5500 MHz ~ 5720 MHz>** PIFA Antenna with gain -4.40 dBi
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)

Note: For 802.11n HT20 / ac VHT20 and 802.11n HT40 / ac VHT40 mode, the whole testing has assessed only 802.11n HT20/ 11n HT40 by referring to the higher output power.

1.5 Specification of Accessory

Specification of Accessory				
AC Adapter 1(US)	**Brand Name**	Motorola (Chenyang)	**Model Name**	MC-101
AC Adapter 1(EU)	**Brand Name**	Motorola (Chenyang)	**Model Name**	MC-102
AC Adapter 1(UK)	**Brand Name**	Motorola (Chenyang)	**Model Name**	MC-103
AC Adapter 1(AU)	**Brand Name**	Motorola (Chenyang)	**Model Name**	MC-105
AC Adapter 2(US)	**Brand Name**	Motorola (Salcomp)	**Model Name**	MC-101
AC Adapter 2(EU)	**Brand Name**	Motorola (Salcomp)	**Model Name**	MC-102
AC Adapter 2(UK)	**Brand Name**	Motorola (Salcomp)	**Model Name**	MC-103
AC Adapter 2(AU)	**Brand Name**	Motorola (Salcomp)	**Model Name**	MC-105
AC Adapter 3(US)	**Brand Name**	Motorola (Aohai)	**Model Name**	MC-101
AC Adapter 3(EU)	**Brand Name**	Motorola (Aohai)	**Model Name**	MC-102
Battery	**Brand Name**	Motorola (Sunwoda)	**Model Name**	JK50
Earphone 1	**Brand Name**	Motorola (Juwei)	**Model Name**	JWEP1123-T03
Earphone 2	**Brand Name**	Motorola (Juwei)	**Model Name**	JWEP1182-T03H
Earphone 3	**Brand Name**	Motorola (New Leader)	**Model Name**	NLD-EM313A-11SF
Earphone 4	**Brand Name**	Motorola (LIANYUN)	**Model Name**	SH38C81577
Earphone 5	**Brand Name**	Motorola (Lianchuang)	**Model Name**	SH38C81576
USB Cable 1	**Brand Name**	Motorola (Chuangyitong)	**Model Name**	88806-025
USB Cable 2	**Brand Name**	Motorola (Yihuaxing)	**Model Name**	T365-011B
USB Cable 3	**Brand Name**	Motorola (I SHENG)	**Model Name**	SC18C28955

1.6 Modification of EUT

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

1.7 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.**
	03CH01-SZ	CN1256	421272

1.8 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH01-SZ	AUDIX	E3	6.2009-8-24
2.	CO01-SZ	AUDIX	E3	6.120613b

1.9 Applicable Standards

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

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

Remark:

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

2 Test Configuration of Equipment Under Test

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

b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5180-5240 MHz Band 1 (U-NII-1)	36	5180	44	5220
	38*	5190	46*	5230
	40	5200	48	5240
	42#	5210		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5260-5320 MHz Band 2 (U-NII-2A)	52	5260	60	5300
	54*	5270	62*	5310
	56	5280	64	5320
	58#	5290		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5500-5720 MHz Band 3 (U-NII-2C)	100	5500	112	5560
	102*	5510	116	5580
	104	5520	132	5660
	106#	5530	134*	5670
	108	5540	136	5680
	110*	5550	140	5700

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

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

Note:

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

2.2 Test Mode

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

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

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

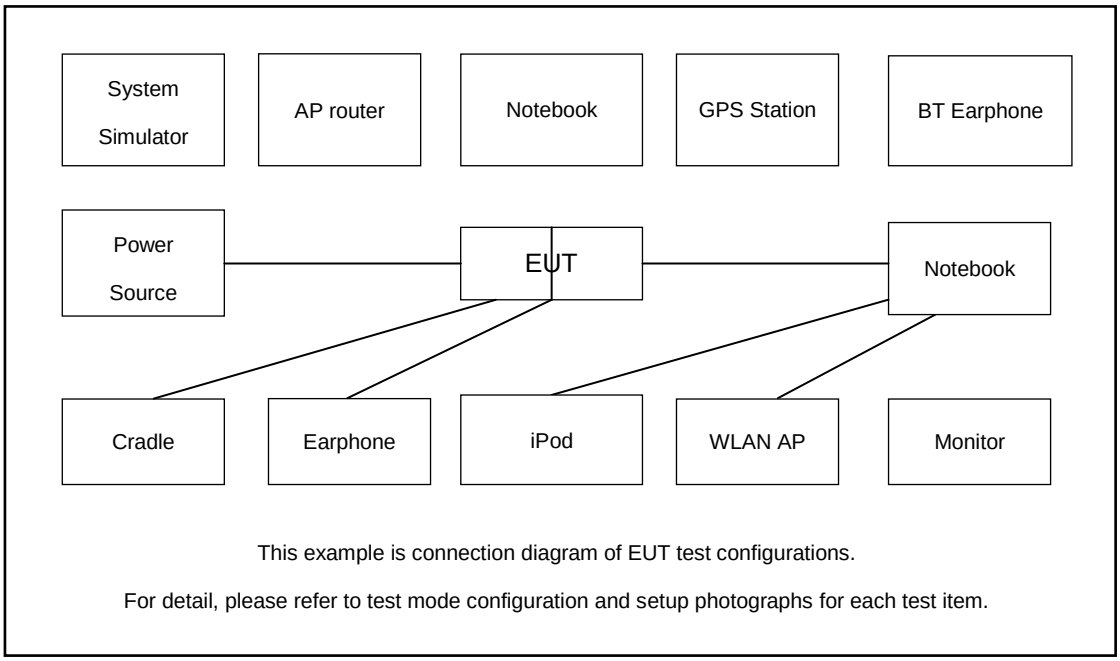
Ch. #		Band I : 5180-5240 MHz	Band II : 5260-5320 MHz	Band III : 5500-5720MHz
		802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140
Straddle		-	-	144

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

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

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

2.3 Connection Diagram of Test System



This example is connection diagram of EUT test configurations.

For detail, please refer to test mode configuration and setup photographs for each test item.

2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8m
2.	WLAN AP	D-Link	DIR-820L	KA2IR820LA1	N/A	Unshielded, 1.8m
3.	Bluetooth Earphone	Samsung	EO-MG900	PYAHS-107W	N/A	N/A
4.	Notebook	Lenovo	E540	FCC DoC	N/A	AC I/P : Unshielded, 1.2m DC O/P : Shielded, 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 2.8 dB and 20dB attenuator.

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

= 2.8 + 10 = 22.8 (dB)

3 Test Result

3.1 26dB & 99% Occupied Bandwidth Measurement

3.1.1 Description of 26dB & 99% Occupied Bandwidth

This section is for reporting purpose only.

There is no restriction limits for bandwidth.

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

3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

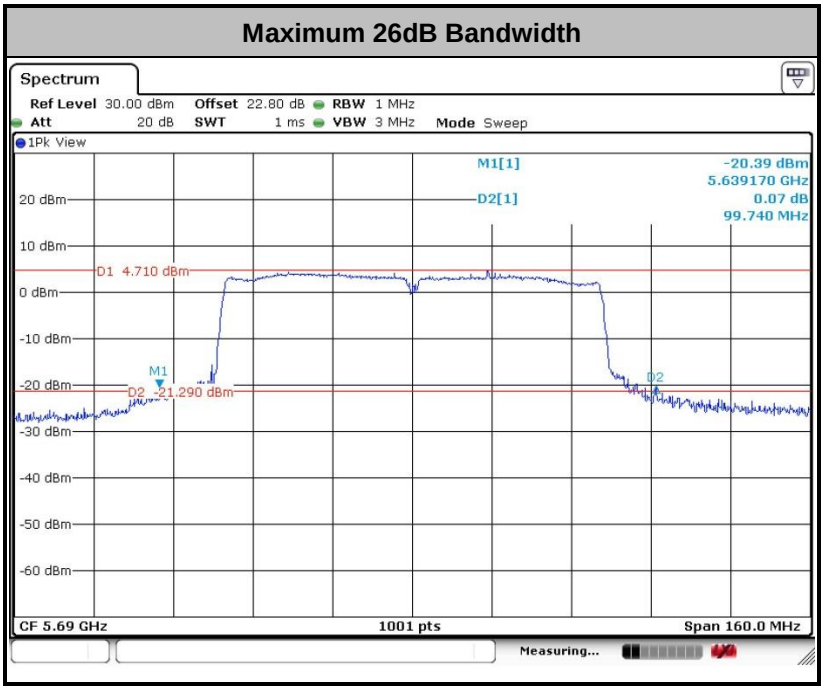
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB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

3.1.4 Test Setup

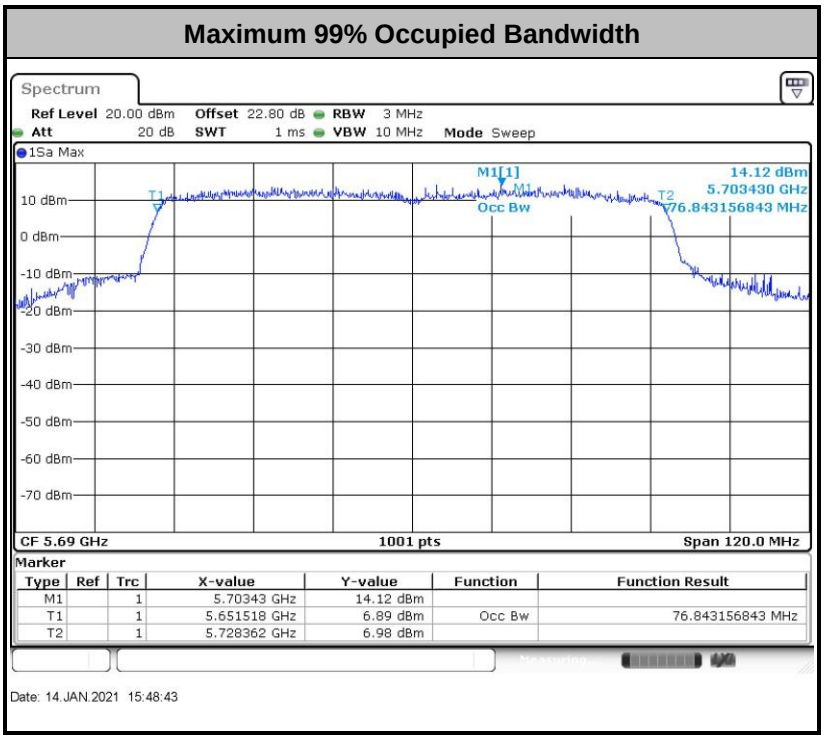
3.1.5 Test Result of 26dB & 99% Occupied Bandwidth

Please refer to Appendix A.

Maximum 26dB Bandwidth



Maximum 99% Occupied Bandwidth



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

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

<FCC 14-30 CFR 15.407>

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

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

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

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

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

3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

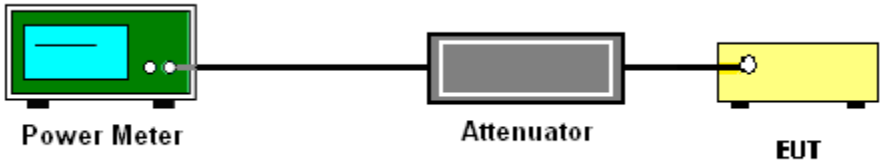
The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

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

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

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

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

<FCC 14-30 CFR 15.407>

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

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

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

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

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

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

 # Method SA-2 #

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

- Measure the duty cycle.
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz.
- Set VBW ≥ 3 MHz.
- Number of points in sweep ≥ 2 Span / RBW.
- Sweep time = auto.
- Detector = RMS
- Trace average at least 100 traces in power averaging mode.
- Add 10 log(1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add 10 log(1/0.25) = 6 dB if the duty cycle is 25 percent.
-

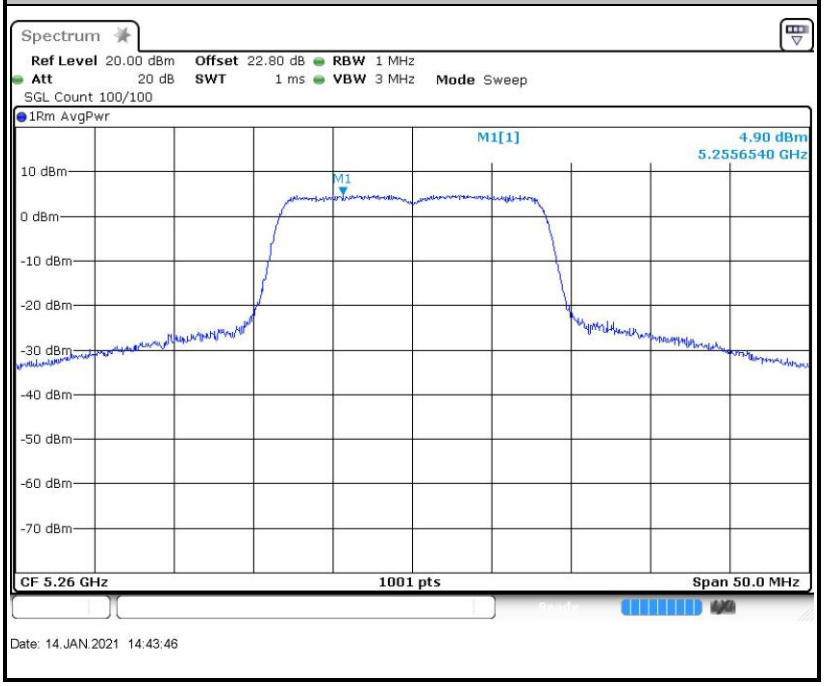
1. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.

3.3.4 Test Setup

3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

Worst Case Power Density (dBm/MHz)



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

3.4 Unwanted Emissions Measurement

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

3.4.1 Limit of Unwanted Emissions

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

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

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

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

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

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

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

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

where

EIRP is the equivalent isotropically radiated power, in dBm

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

d_{Meas} is the measurement distance, in m

3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section G) Unwanted emissions measurement.

   (1) Procedure for Unwanted Emissions Measurements Below 1000MHz

   - RBW = 120 kHz
   - VBW = 300 kHz
   - Detector = Peak
   - Trace mode = max hold

   (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz

   - RBW = 1 MHz
   - VBW ≥ 3 MHz
   - Detector = Peak
   - Sweep time = auto
   - Trace mode = max hold

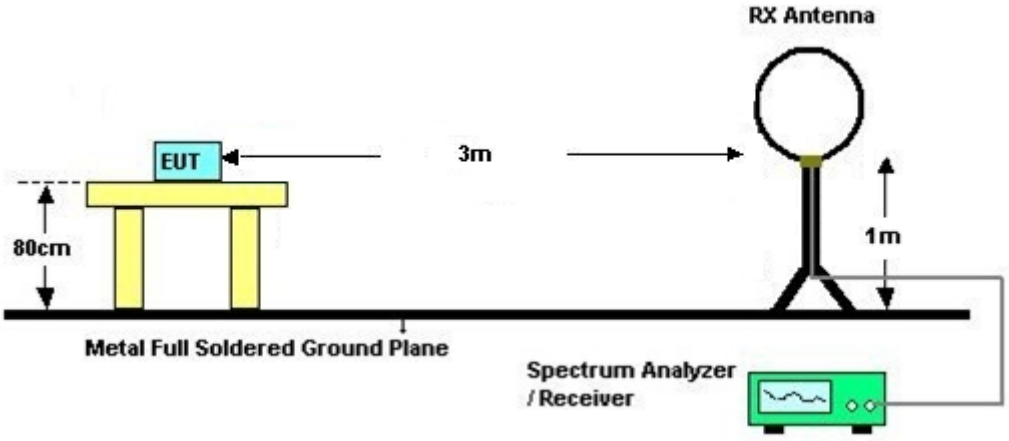
   (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

   - RBW = 1 MHz
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

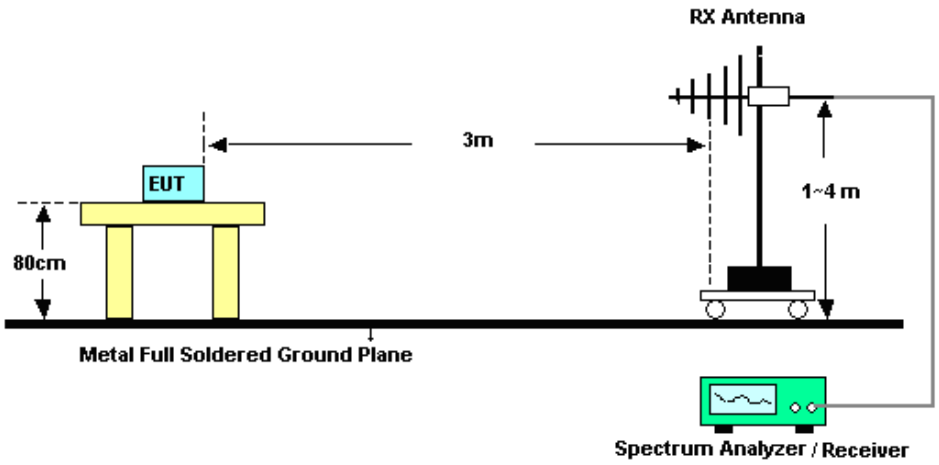
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than peak limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.4.4 Test Setup

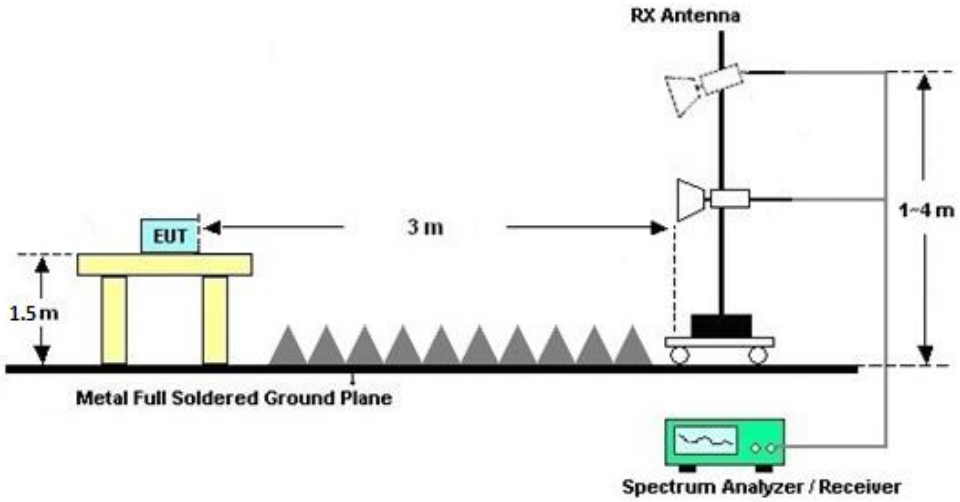
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

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

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

3.4.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C.

3.4.7 Duty Cycle

Please refer to Appendix D.

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

Please refer to Appendix C.

3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

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

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

*Decreases with the logarithm of the frequency.

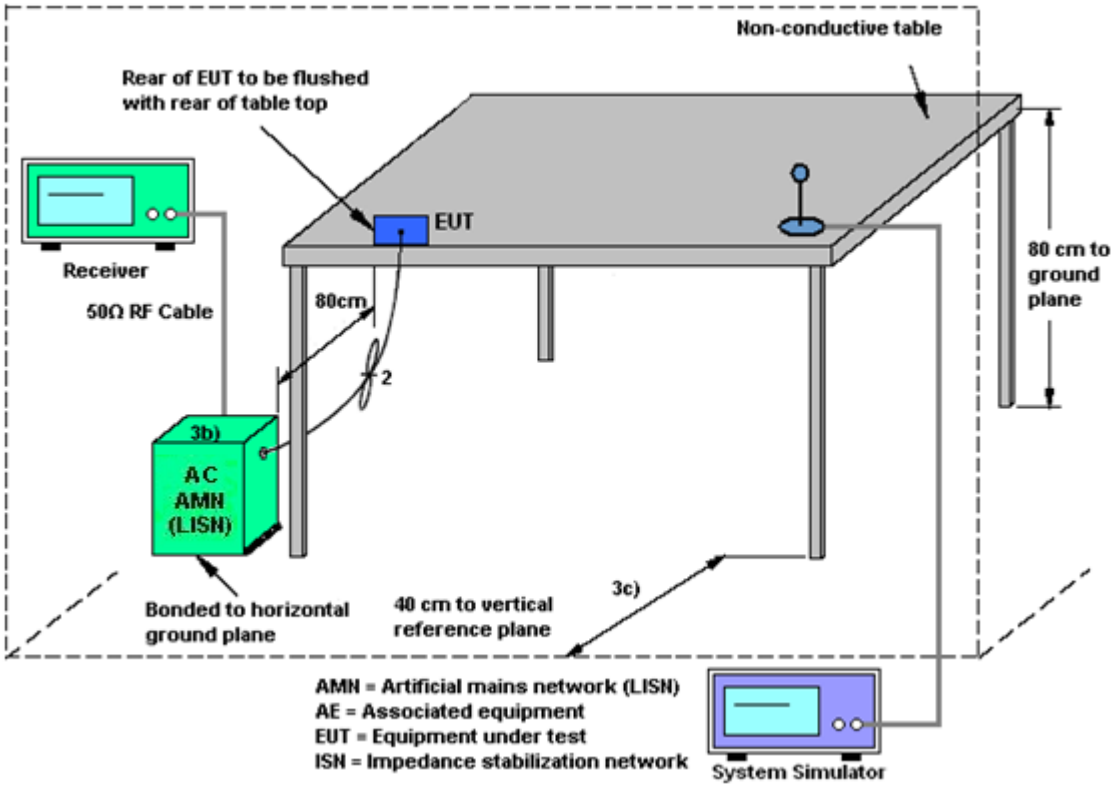
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

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

3.5.4 Test Setup



3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.6 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. 17, 2020	Jan. 14, 2021	Apr. 16, 2021	Conducted (TH01-SZ)
Pulse Power Senor	Anritsu	MA2411B	1207253	30MHz~40GHz	Dec. 25, 2020	Jan. 14, 2021	Dec. 24, 2021	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1218010	50MHz Bandwidth	Dec. 25, 2020	Jan. 14, 2021	Dec. 24, 2021	Conducted (TH01-SZ)
EMI Test Receiver&SA	Agilent	N9038A	MY52260185	20Hz~26.5GHz	Jul. 21, 2020	Feb. 19, 2021	Jul. 20, 2021	Radiation (03CH01-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Jul. 21, 2020	Feb. 19, 2021	Jul. 20, 2021	Radiation (03CH01-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jun. 22, 2020	Feb. 19, 2021	Jun. 21, 2021	Radiation (03CH01-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Jul. 15, 2020	Feb. 19, 2021	Jul. 14, 2021	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Jul. 25, 2020	Feb. 19, 2021	Jul. 24, 2021	Radiation (03CH01-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 23, 2020	Feb. 19, 2021	Apr. 22, 2021	Radiation (03CH01-SZ)
LF Amplifier	Burgeon	BPA-530	102209	0.01~3000Mhz	Apr. 17, 2020	Feb. 19, 2021	Apr. 16, 2021	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	AMF-7D-00101800-30-10P-R	1943528	1GHz~18GHz	Oct. 17, 2020	Feb. 19, 2021	Oct. 16, 2021	Radiation (03CH01-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270104	0.5GHz~26.5Ghz	Dec. 27, 2020	Feb. 19, 2021	Dec. 26, 2021	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 21, 2020	Feb. 19, 2021	Jul. 20, 2021	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	NCR	Feb. 19, 2021	NCR	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Feb. 19, 2021	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Feb. 19, 2021	NCR	Radiation (03CH01-SZ)
EMI Receiver	R&S	ESR7	101630	9kHz~7GHz;	Dec. 25, 2020	Jan. 13, 2021	Dec. 24, 2021	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2 LISN	00103912	9kHz~30MHz	Dec. 25, 2020	Jan. 13, 2021	Dec. 24, 2021	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	EMCO	3816/2SH	00103892	9kHz~30MHz	Oct. 15, 2020	Jan. 13, 2021	Oct. 14, 2021	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000891	100Vac~250Vac	Jul. 21, 2020	Jan. 13, 2021	Jul. 20, 2021	Conduction (CO01-SZ)

NCR: No Calibration Required

5 Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.10-2013. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.7dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.7dB**

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

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

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.3dB**

Appendix A. Conducted Test Results

Report Number : FR120201E

Test Engineer:	2021/1/14	Temperature:	21~25	°C
Test Date:	Zhang Xue Yi	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	17.23	35.56	-	22.36		
11a	6Mbps	1	44	5220	17.03	37.21	-	22.31		
11a	6Mbps	1	48	5240	16.98	38.31	-	22.30		
HT20	MCS0	1	36	5180	17.98	39.01	-	22.55		
HT20	MCS0	1	44	5220	18.03	42.61	-	22.56		
HT20	MCS0	1	48	5240	17.98	40.31	-	22.55		
HT40	MCS0	1	38	5190	36.56	54.13	-	23.01		
HT40	MCS0	1	46	5230	36.66	56.55	-	23.01		
VHT80	MCS0	1	42	5210	76.84	96.86	-	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	0.40	16.43	24.00	-4.40		Pass
11a	6Mbps	1	44	5220	0.40	16.27	24.00	-4.40		Pass
11a	6Mbps	1	48	5240	0.40	16.11	24.00	-4.40		Pass
HT20	MCS0	1	36	5180	0.43	16.05	24.00	-4.40		Pass
HT20	MCS0	1	44	5220	0.43	16.59	24.00	-4.40		Pass
HT20	MCS0	1	48	5240	0.43	16.42	24.00	-4.40		Pass
HT40	MCS0	1	38	5190	0.81	15.11	24.00	-4.40		Pass
HT40	MCS0	1	46	5230	0.81	16.44	24.00	-4.40		Pass
VHT20	MCS0	1	36	5180	0.41	15.98	24.00	-4.40		Pass
VHT20	MCS0	1	44	5220	0.41	16.54	24.00	-4.40		Pass
VHT20	MCS0	1	48	5240	0.41	16.33	24.00	-4.40		Pass
VHT40	MCS0	1	38	5190	0.80	15.06	24.00	-4.40		Pass
VHT40	MCS0	1	46	5230	0.80	16.35	24.00	-4.40		Pass
VHT80	MCS0	1	42	5210	1.50	14.92	24.00	-4.40		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	0.40	5.26	11.00	-4.40		Pass
11a	6Mbps	1	44	5220	0.40	5.07	11.00	-4.40		Pass
11a	6Mbps	1	48	5240	0.40	5.06	11.00	-4.40		Pass
HT20	MCS0	1	36	5180	0.43	4.58	11.00	-4.40		Pass
HT20	MCS0	1	44	5220	0.43	5.25	11.00	-4.40		Pass
HT20	MCS0	1	48	5240	0.43	5.03	11.00	-4.40		Pass
HT40	MCS0	1	38	5190	0.81	1.08	11.00	-4.40		Pass
HT40	MCS0	1	46	5230	0.81	2.24	11.00	-4.40		Pass
VHT80	MCS0	1	42	5210	1.50	-1.48	11.00	-4.40		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	17.23	37.46	23.36	29.36	23.98	
11a	6M bps	1	60	5300	17.03	34.97	23.31	29.31	23.98	
11a	6M bps	1	64	5320	16.98	35.56	23.30	29.30	23.98	
HT20	MCS 0	1	52	5260	18.03	41.76	23.56	29.56	23.98	
HT20	MCS 0	1	60	5300	18.03	40.86	23.56	29.56	23.98	
HT20	MCS 0	1	64	5320	18.03	42.16	23.56	29.56	23.98	
HT40	MCS 0	1	54	5270	36.66	54.31	23.98	30.00	23.98	
HT40	MCS 0	1	62	5310	36.46	59.52	23.98	30.00	23.98	
VHT80	MCS 0	1	58	5290	76.84	94.95	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	0.40	16.62	23.98	-4.30	26.99	Pass
11a	6M bps	1	60	5300	0.40	16.20	23.98	-4.30	26.99	Pass
11a	6M bps	1	64	5320	0.40	16.11	23.98	-4.30	26.99	Pass
HT20	MCS 0	1	52	5260	0.43	16.21	23.98	-4.30	26.99	Pass
HT20	MCS 0	1	60	5300	0.43	16.61	23.98	-4.30	26.99	Pass
HT20	MCS 0	1	64	5320	0.43	15.56	23.98	-4.30	26.99	Pass
HT40	MCS 0	1	54	5270	0.81	16.04	23.98	-4.30	26.99	Pass
HT40	MCS 0	1	62	5310	0.81	14.76	23.98	-4.30	26.99	Pass
VHT20	MCS 0	1	52	5260	0.41	16.13	23.98	-4.30	26.99	Pass
VHT20	MCS 0	1	60	5300	0.41	16.39	23.98	-4.30	26.99	Pass
VHT20	MCS 0	1	64	5320	0.41	15.54	23.98	-4.30	26.99	Pass
VHT40	MCS 0	1	54	5270	0.80	16.02	23.98	-4.30	26.99	Pass
VHT40	MCS 0	1	62	5310	0.80	14.74	23.98	-4.30	26.99	Pass
VHT80	MCS 0	1	58	5290	1.50	14.76	23.98	-4.30	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	0.40	5.30	11.00	-4.30		Pass
11a	6M bps	1	60	5300	0.40	5.09	11.00	-4.30		Pass
11a	6M bps	1	64	5320	0.40	5.04	11.00	-4.30		Pass
HT20	MCS 0	1	52	5260	0.43	4.57	11.00	-4.30		Pass
HT20	MCS 0	1	60	5300	0.43	5.26	11.00	-4.30		Pass
HT20	MCS 0	1	64	5320	0.43	4.84	11.00	-4.30		Pass
HT40	MCS 0	1	54	5270	0.81	1.61	11.00	-4.30		Pass
HT40	MCS 0	1	62	5310	0.81	2.06	11.00	-4.30		Pass
VHT80	MCS 0	1	58	5290	1.50	-1.42	11.00	-4.30		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	36.11	23.31	29.31	23.98	
11a	6M bps	1	116	5580	17.08	34.42	23.33	29.33	23.98	
11a	6M bps	1	140	5700	17.03	35.66	23.31	29.31	23.98	
11a	6Mbps	1	144	5720	17.08	36.46	23.33	29.33	23.98	
HT20	MCS 0	1	100	5500	18.03	42.81	23.56	29.56	23.98	
HT20	MCS 0	1	116	5580	18.08	40.61	23.57	29.57	23.98	
HT20	MCS 0	1	140	5700	18.13	42.21	23.58	29.58	23.98	
HT20	MCS0	1	144	5720	18.13	42.36	23.58	29.58	23.98	
HT40	MCS 0	1	102	5510	36.66	57.09	23.98	30.00	23.98	
HT40	MCS 0	1	110	5550	36.56	55.74	23.98	30.00	23.98	
HT40	MCS 0	1	134	5670	36.86	65.63	23.98	30.00	23.98	
HT40	MCS0	1	142	5710	36.76	67.34	23.98	30.00	23.98	
VHT80	MCS 0	1	106	5530	76.72	90.47	23.98	30.00	23.98	
VHT80	MCS 0	1	122	5610	76.84	96.86	23.98	30.00	23.98	
VHT80	MCS0	1	138	5690	76.84	99.74	23.98	30.00	23.98	

TEST RESULTS DATA
Average Power Table

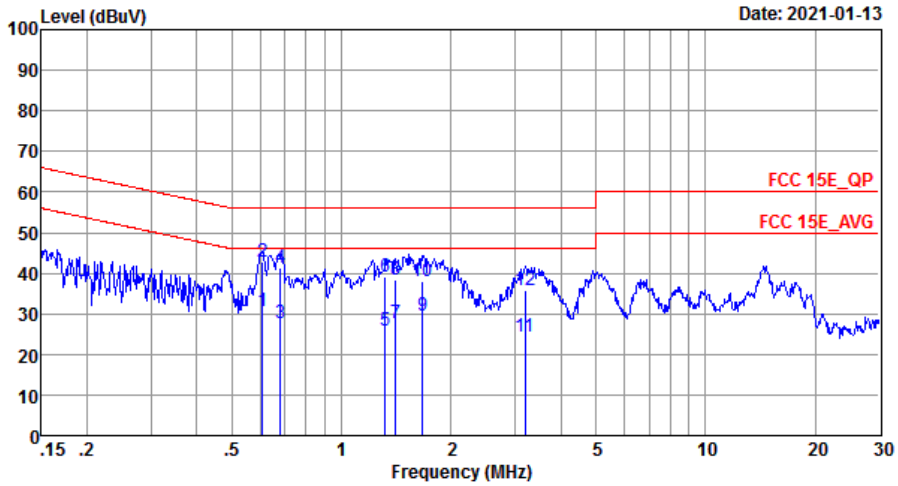
FCC Band III										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)	EIRP Power Limit (dBm)	Pass/Fail
11a	6M bps	1	100	5500	0.40	16.04	23.98	-4.40	26.99	Pass
11a	6M bps	1	116	5580	0.40	15.97	23.98	-4.40	26.99	Pass
11a	6M bps	1	140	5700	0.40	13.70	23.98	-4.40	26.99	Pass
11a	6M bps	1	144	5720	0.40	15.76	23.98	-4.40	26.99	Pass
HT20	MCS 0	1	100	5500	0.43	16.15	23.98	-4.40	26.99	Pass
HT20	MCS 0	1	116	5580	0.43	16.11	23.98	-4.40	26.99	Pass
HT20	MCS 0	1	140	5700	0.43	15.07	23.98	-4.40	26.99	Pass
HT20	MCS 0	1	144	5720	0.43	16.25	23.98	-4.40	26.99	Pass
HT40	MCS 0	1	102	5510	0.81	16.03	23.98	-4.40	26.99	Pass
HT40	MCS 0	1	110	5550	0.81	15.87	23.98	-4.40	26.99	Pass
HT40	MCS 0	1	134	5670	0.81	16.09	23.98	-4.40	26.99	Pass
HT40	MCS 0	1	142	5710	0.81	16.15	23.98	-4.40	26.99	Pass
VHT20	MCS 0	1	100	5500	0.41	16.07	23.98	-4.40	26.99	Pass
VHT20	MCS 0	1	116	5580	0.41	15.99	23.98	-4.40	26.99	Pass
VHT20	MCS 0	1	140	5700	0.41	15.05	23.98	-4.40	26.99	Pass
VHT20	MCS 0	1	144	5720	0.41	16.04	23.98	-4.40	26.99	Pass
VHT40	MCS 0	1	102	5510	0.80	15.92	23.98	-4.40	26.99	Pass
VHT40	MCS 0	1	110	5550	0.80	15.82	23.98	-4.40	26.99	Pass
VHT40	MCS 0	1	134	5670	0.80	15.99	23.98	-4.40	26.99	Pass
VHT40	MCS 0	1	142	5710	0.80	16.09	23.98	-4.40	26.99	Pass
VHT80	MCS 0	1	106	5530	1.50	13.80	23.98	-4.40	26.99	Pass
VHT80	MCS 0	1	122	5610	1.50	15.92	23.98	-4.40	26.99	Pass
VHT80	MCS 0	1	138	5690	1.50	16.18	23.98	-4.40	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	0.40	5.10	11.00	-4.40		Pass
11a	6M bps	1	116	5580	0.40	4.86	11.00	-4.40		Pass
11a	6M bps	1	140	5700	0.40	4.57	11.00	-4.40		Pass
11a	6Mbps	1	144	5720	0.40	4.77	11.00	-4.40		Pass
HT20	MCS 0	1	100	5500	0.43	5.07	11.00	-4.40		Pass
HT20	MCS 0	1	116	5580	0.43	5.06	11.00	-4.40		Pass
HT20	MCS 0	1	140	5700	0.43	4.85	11.00	-4.40		Pass
HT20	MCS0	1	144	5720	0.43	4.79	11.00	-4.40		Pass
HT40	MCS 0	1	102	5510	0.81	1.89	11.00	-4.40		Pass
HT40	MCS 0	1	110	5550	0.81	1.51	11.00	-4.40		Pass
HT40	MCS 0	1	134	5670	0.81	2.00	11.00	-4.40		Pass
HT40	MCS0	1	142	5710	0.81	1.83	11.00	-4.40		Pass
VHT80	MCS 0	1	106	5530	1.50	-1.16	11.00	-4.40		Pass
VHT80	MCS 0	1	122	5610	1.50	-1.44	11.00	-4.40		Pass
VHT80	MCS0	1	138	5690	1.50	-1.31	11.00	-4.40		Pass

Appendix B. AC Conducted Emission Test Results

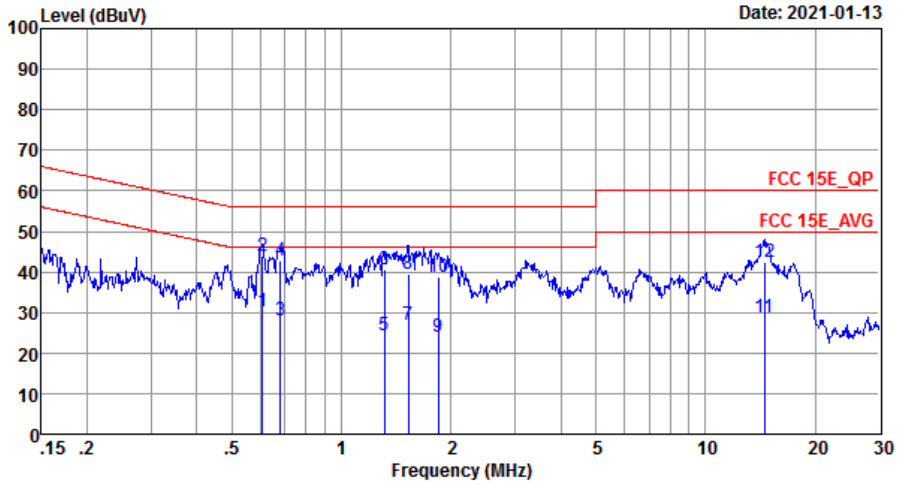
Test Engineer :	Yan Zheng	**Temperature :**	22~25℃
		Relative Humidity :	50~55%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line



Site : CO01-SZ
Condition: FCC 15E_QP LISN_20200719_L LINE

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1		0.61	30.59	-15.41	46.00	20.50	0.02	10.07	Average
2	*	0.61	42.89	-13.11	56.00	32.80	0.02	10.07	QP
3		0.68	27.79	-18.21	46.00	17.70	0.02	10.07	Average
4		0.68	41.39	-14.61	56.00	31.30	0.02	10.07	QP
5		1.32	25.94	-20.06	46.00	15.80	0.09	10.05	Average
6		1.32	39.24	-16.76	56.00	29.10	0.09	10.05	QP
7		1.41	27.74	-18.26	46.00	17.60	0.09	10.05	Average
8		1.41	38.44	-17.56	56.00	28.30	0.09	10.05	QP
9		1.67	29.35	-16.65	46.00	19.20	0.10	10.05	Average
10		1.67	37.85	-18.15	56.00	27.70	0.10	10.05	QP
11		3.19	24.46	-21.54	46.00	14.20	0.16	10.10	Average
12		3.19	35.66	-20.34	56.00	25.40	0.16	10.10	QP

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



Site : CO01-SZ
Condition: FCC 15E_QP LISN_20200719_N NEUTRAL

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1		0.61	30.19	-15.81	46.00	20.10	0.02	10.07	Average
2	*	0.61	43.99	-12.01	56.00	33.90	0.02	10.07	QP
3		0.68	27.89	-18.11	46.00	17.80	0.02	10.07	Average
4		0.68	42.89	-13.11	56.00	32.80	0.02	10.07	QP
5		1.31	24.30	-21.70	46.00	14.20	0.05	10.05	Average
6		1.31	40.70	-15.30	56.00	30.60	0.05	10.05	QP
7		1.53	26.90	-19.10	46.00	16.80	0.05	10.05	Average
8		1.53	39.30	-16.70	56.00	29.20	0.05	10.05	QP
9		1.85	23.90	-22.10	46.00	13.80	0.05	10.05	Average
10		1.85	38.60	-17.40	56.00	28.50	0.05	10.05	QP
11		14.52	28.80	-21.20	50.00	18.19	0.32	10.29	Average
12		14.52	42.40	-17.60	60.00	31.79	0.32	10.29	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	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 36 5180MHz		5149.5	57.77	-16.23	74	46.53	31.62	12.15	32.53	145	350	P	H
		5150	48.9	-5.1	54	37.66	31.62	12.15	32.53	145	350	A	H
	*	5180	103.83	-	-	92.57	31.64	12.16	32.54	145	350	P	H
		5180	96.63	-	-	85.37	31.64	12.16	32.54	145	350	A	H
		5149.24	58.73	-15.27	74	47.49	31.62	12.15	32.53	149	297	P	V
		5150	50.81	-3.19	54	39.57	31.62	12.15	32.53	149	297	A	V
	*	5180	105.41	-	-	94.15	31.64	12.16	32.54	149	297	P	V
		5180	97.86	-	-	86.6	31.64	12.16	32.54	149	297	A	V
802.11a CH 44 5220MHz		5013	50.28	-23.72	74	39.17	31.51	12.11	32.51	155	347	P	H
		5111.8	41.88	-12.12	54	30.67	31.59	12.14	32.52	155	347	A	H
	*	5220	103.44	-	-	92.14	31.68	12.17	32.55	155	347	P	H
		5220	95.51	-	-	84.21	31.68	12.17	32.55	155	347	A	H
		5425.44	49.59	-24.41	74	38.1	31.84	12.23	32.58	155	347	P	H
		5459.76	40.39	-13.61	54	28.87	31.87	12.24	32.59	155	347	A	H
		5060.06	50.51	-23.49	74	39.34	31.55	12.13	32.51	159	297	P	V
		5113.62	41.92	-12.08	54	30.71	31.59	12.14	32.52	159	297	A	V
	*	5220	105.24	-	-	93.94	31.68	12.17	32.55	159	297	P	V
		5220	98.29	-	-	86.99	31.68	12.17	32.55	159	297	A	V
		5374.32	49.21	-24.79	74	37.77	31.8	12.21	32.57	159	297	P	V
		5435.04	40.36	-13.64	54	28.87	31.85	12.23	32.59	159	297	A	V

802.11a CH 48 5240MHz		5099.06	51.1	-22.9	74	39.9	31.58	12.14	32.52	153	347	P	H
		5111.28	42.01	-11.99	54	30.8	31.59	12.14	32.52	153	347	A	H
	*	5240	102.97	-	-	91.65	31.69	12.18	32.55	153	347	P	H
		5240	96.01	-	-	84.69	31.69	12.18	32.55	153	347	A	H
		5443.68	49.25	-24.75	74	37.76	31.85	12.23	32.59	153	347	P	H
		5364.72	40.33	-13.67	54	28.9	31.79	12.21	32.57	153	347	A	H
		5066.56	50.03	-23.97	74	38.87	31.55	12.13	32.52	157	297	P	V
		5128.18	41.94	-12.06	54	30.72	31.6	12.15	32.53	157	297	A	V
	*	5240	104.53	-	-	93.21	31.69	12.18	32.55	157	297	P	V
		5240	96.68	-	-	85.36	31.69	12.18	32.55	157	297	A	V
		5357.28	49.12	-24.88	74	37.69	31.79	12.21	32.57	157	297	P	V
		5454.96	40.4	-13.6	54	28.89	31.86	12.24	32.59	157	297	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	52.54	-15.76	68.3	48.5	39.78	15.31	51.05	152	260	P	H
		15540	50.21	-23.79	74	46.62	38.49	17.76	52.66	189	238	P	H
		10360	50.58	-17.72	68.3	46.54	39.78	15.31	51.05	152	260	P	V
		15540	50.73	-23.27	74	47.14	38.49	17.76	52.66	189	238	P	V
802.11a CH 44 5220MHz		10440	52.87	-15.43	68.3	48.72	39.9	15.32	51.07	150	230	P	H
		15660	50.33	-23.67	74	47.23	38.15	17.83	52.88	160	225	P	H
		10440	52.21	-16.09	68.3	48.06	39.9	15.32	51.07	150	230	P	V
		15660	50.75	-23.25	74	47.65	38.15	17.83	52.88	160	225	P	V
802.11a CH 48 5240MHz		10480	54.11	-14.19	68.3	49.91	39.97	15.32	51.09	150	289	P	H
		15720	50.25	-23.75	74	28.37	37.98	17.87	33.97	150	291	P	H
		10480	54.11	-14.19	68.3	49.91	39.97	15.32	51.09	150	289	P	H
		15720	50.85	-23.15	74	28.97	37.98	17.87	33.97	150	291	P	H
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)
		5149.5	56.66	-17.34	74	45.42	31.62	12.15	32.53	173	340	P	H
		5150	49.34	-4.66	54	38.1	31.62	12.15	32.53	173	340	A	H
802.11n	*	5180	102.2	-	-	90.94	31.64	12.16	32.54	173	340	P	H
HT20		5180	95.9	-	-	84.64	31.64	12.16	32.54	173	340	A	H
CH 36		5148.72	59.06	-14.94	74	47.82	31.62	12.15	32.53	175	281	P	V
5180MHz		5149.5	50.56	-3.44	54	39.32	31.62	12.15	32.53	175	281	A	V
	*	5180	104.36	-	-	93.1	31.64	12.16	32.54	175	281	P	V
		5180	98.22	-	-	86.96	31.64	12.16	32.54	175	281	A	V
		5107.12	50.1	-23.9	74	38.89	31.59	12.14	32.52	151	347	P	H
		5111.28	42.03	-11.97	54	30.82	31.59	12.14	32.52	151	347	A	H
	*	5220	101.86	-	-	90.56	31.68	12.17	32.55	151	347	P	H
		5220	97.71	-	-	86.41	31.68	12.17	32.55	151	347	A	H
802.11n		5362.32	49.96	-24.04	74	38.53	31.79	12.21	32.57	151	347	P	H
HT20		5446.8	40.37	-13.63	54	28.86	31.86	12.24	32.59	151	347	A	H
CH 44		5072.28	50.79	-23.21	74	39.62	31.56	12.13	32.52	152	267	P	V
5220MHz		5148.2	42.04	-11.96	54	30.8	31.62	12.15	32.53	152	267	A	V
	*	5220	104.38	-	-	93.08	31.68	12.17	32.55	152	267	P	V
		5220	96.99	-	-	85.69	31.68	12.17	32.55	152	267	A	V
		5354.4	50.81	-23.19	74	39.39	31.78	12.21	32.57	152	267	P	V
		5443.68	40.3	-13.7	54	28.81	31.85	12.23	32.59	152	267	A	V

		5130.26	50.09	-23.91	74	38.87	31.6	12.15	32.53	153	347	P	H
		5137.02	41.83	-12.17	54	30.6	31.61	12.15	32.53	153	347	A	H
	*	5240	102.4	-	-	91.08	31.69	12.18	32.55	153	347	P	H
		5240	95.21	-	-	83.89	31.69	12.18	32.55	153	347	A	H
802.11n		5421.12	49.1	-24.9	74	37.61	31.84	12.23	32.58	153	347	P	H
HT20		5455.92	40.58	-13.42	54	29.07	31.86	12.24	32.59	153	347	A	H
CH 48		5041.34	50.42	-23.58	74	39.28	31.53	12.12	32.51	156	296	P	V
5240MHz		5118.56	41.87	-12.13	54	30.67	31.59	12.14	32.53	156	296	A	V
	*	5240	104.98	-	-	93.66	31.69	12.18	32.55	156	296	P	V
		5240	97.53	-	-	86.21	31.69	12.18	32.55	156	296	A	V
		5401.68	49.2	-24.8	74	37.74	31.82	12.22	32.58	156	296	P	V
		5434.56	40.58	-13.42	54	29.09	31.85	12.23	32.59	156	296	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	52.97	-15.33	68.3	48.93	39.78	15.31	51.05	152	260	P	H
HT20		15540	50.54	-23.46	74	46.95	38.49	17.76	52.66	189	238	P	H
CH 36		10360	57.66	-10.64	68.3	53.62	39.78	15.31	51.05	152	260	P	V
5180MHz		15540	50.46	-23.54	74	46.87	38.49	17.76	52.66	189	238	P	V
802.11n		10440	54.58	-13.72	68.3	50.43	39.9	15.32	51.07	150	230	P	H
HT20		15660	51.06	-22.94	74	47.96	38.15	17.83	52.88	160	225	P	H
CH 44		10440	56.39	-11.91	68.3	52.24	39.9	15.32	51.07	150	230	P	V
5220MHz		15660	51.34	-22.66	74	48.24	38.15	17.83	52.88	160	225	P	V
802.11n		10480	55.18	-13.12	68.3	50.98	39.97	15.32	51.09	150	289	P	H
HT20		15720	50.33	-23.67	74	47.48	37.98	17.87	53	150	291	P	H
CH 48		10480	56.17	-12.13	68.3	51.97	39.97	15.32	51.09	150	289	P	V
5240MHz		15720	50.2	-23.8	74	47.35	37.98	17.87	53	150	291	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 38 5190MHz		5148.2	55.88	-18.12	74	44.64	31.62	12.15	32.53	188	335	P	H
		5148.98	49.46	-4.54	54	38.22	31.62	12.15	32.53	188	335	A	H
	*	5190	97.49	-	-	86.22	31.65	12.16	32.54	188	335	P	H
		5190	90.5	-	-	79.23	31.65	12.16	32.54	188	335	A	H
		5351.36	48.96	-25.04	74	37.54	31.78	12.21	32.57	188	335	P	H
		5424.72	41.18	-12.82	54	29.69	31.84	12.23	32.58	188	335	A	H
		5140.66	56.66	-17.34	74	45.43	31.61	12.15	32.53	195	283	P	V
		5149.24	50.75	-3.25	54	39.51	31.62	12.15	32.53	195	283	A	V
	*	5190	100.01	-	-	88.74	31.65	12.16	32.54	195	283	P	V
		5190	92.52	-	-	81.25	31.65	12.16	32.54	195	283	A	V
		5372.92	48.95	-25.05	74	37.51	31.8	12.21	32.57	195	283	P	V
		5441.8	41.39	-12.61	54	29.9	31.85	12.23	32.59	195	283	A	V
802.11n HT40 CH 46 5230MHz		5094.12	50.21	-23.79	74	39.01	31.58	12.14	32.52	172	341	P	H
		5106.6	42.76	-11.24	54	31.55	31.59	12.14	32.52	172	341	A	H
	*	5230	98.45	-	-	87.15	31.68	12.17	32.55	172	341	P	H
		5230	91.01	-	-	79.71	31.68	12.17	32.55	172	341	A	H
		5405.04	49.5	-24.5	74	38.04	31.82	12.22	32.58	172	341	P	H
		5450.64	41.02	-12.98	54	29.51	31.86	12.24	32.59	172	341	A	H
		5003.9	50.02	-23.98	74	38.91	31.5	12.11	32.5	183	267	P	V
		5149.5	43.07	-10.93	54	31.83	31.62	12.15	32.53	183	267	A	V
	*	5230	102.04	-	-	90.74	31.68	12.17	32.55	183	267	P	V
		5230	94.4	-	-	83.1	31.68	12.17	32.55	183	267	A	V
		5362.32	48.6	-25.4	74	37.17	31.79	12.21	32.57	183	267	P	V
		5422.08	41.05	-12.95	54	29.56	31.84	12.23	32.58	183	267	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	51.98	-16.32	68.3	47.9	39.81	15.32	51.05	150	360	P	H
HT40		15570	50.48	-23.52	74	47.02	38.4	17.78	52.72	155	360	P	H
CH 38		10380	52.89	-15.41	68.3	48.81	39.81	15.32	51.05	150	360	P	V
5190MHz		15570	50.31	-23.69	74	46.85	38.4	17.78	52.72	155	360	P	V
802.11n		10460	51.19	-17.11	68.3	47.01	39.94	15.32	51.08	150	360	P	H
HT40		15690	50.8	-23.2	74	47.82	38.07	17.85	52.94	150	225	P	H
CH 46		10460	53.25	-15.05	68.3	49.07	39.94	15.32	51.08	150	360	P	V
5230MHz		15690	50.41	-23.59	74	47.43	38.07	17.85	52.94	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		5132.86	55.63	-18.37	74	44.4	31.61	12.15	32.53	259	329	P	H
		5150	47.38	-6.62	54	36.14	31.62	12.15	32.53	259	329	A	H
		5210	95.39	-	-	84.09	31.67	12.17	32.54	259	329	P	H
		5210	90.14	-	-	78.84	31.67	12.17	32.54	259	329	A	H
		5409.84	48.93	-25.07	74	37.46	31.83	12.22	32.58	259	329	P	H
		5351.04	41.59	-12.41	54	30.17	31.78	12.21	32.57	259	329	A	H
		5147.94	55.56	-18.44	74	44.32	31.62	12.15	32.53	153	293	P	V
		5148.2	49.16	-4.84	54	37.92	31.62	12.15	32.53	153	293	A	V
		5210	97.27	-	-	85.97	31.67	12.17	32.54	153	293	P	V
		5210	88.55	-	-	77.25	31.67	12.17	32.54	153	293	A	V
		5400.48	49.1	-24.9	74	37.64	31.82	12.22	32.58	153	293	P	V
		5352.96	41.51	-12.49	54	30.09	31.78	12.21	32.57	153	293	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	53.95	-14.35	68.3	49.83	39.87	15.32	51.07	122	15	P	H
VHT80		15630	50.79	-23.21	74	47.58	38.24	17.82	52.85	160	225	P	H
CH 42		10420	53.41	-14.89	68.3	49.29	39.87	15.32	51.07	150	230	P	V
5210MHz		15630	50.31	-23.69	74	47.1	38.24	17.82	52.85	168	177	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		5141.18	49.89	-24.11	74	38.66	31.61	12.15	32.53	150	345	P	H
		5134.42	41.87	-12.13	54	30.64	31.61	12.15	32.53	150	345	P	H
		5260	103.06	-	-	91.72	31.71	12.18	32.55	150	345	A	H
	*	5260	95.97	-	-	84.63	31.71	12.18	32.55	150	345	P	H
		5444.4	49.69	-24.31	74	38.19	31.86	12.23	32.59	150	345	A	H
		5454.24	40.52	-13.48	54	29.01	31.86	12.24	32.59	150	345	P	H
		5063.96	49.97	-24.03	74	38.81	31.55	12.13	32.52	155	296	P	V
		5110.76	42.06	-11.94	54	30.85	31.59	12.14	32.52	155	296	P	V
		5260	105.06	-	-	93.72	31.71	12.18	32.55	155	296	A	V
	*	5260	97.7	-	-	86.36	31.71	12.18	32.55	155	296	P	V
		5386.08	48.89	-25.11	74	37.44	31.81	12.22	32.58	155	296	A	V
		5449.44	40.53	-13.47	54	29.02	31.86	12.24	32.59	155	296	P	V
802.11a CH 60 5300MHz	*	5071.75	49.66	-24.34	74	38.49	31.56	12.13	32.52	160	342	P	H
		5114.45	42.14	-11.86	54	30.93	31.59	12.14	32.52	160	342	P	H
		5300	103.88	-	-	92.51	31.74	12.19	32.56	160	342	A	H
		5300	95.4	-	-	84.03	31.74	12.19	32.56	160	342	P	H
		5387.04	49.57	-24.43	74	38.12	31.81	12.22	32.58	160	342	A	H
		5351.04	41.16	-12.84	54	29.74	31.78	12.21	32.57	160	342	P	H
	*	5126.35	50.2	-23.8	74	38.98	31.6	12.15	32.53	164	282	P	V
		5115.5	42.32	-11.68	54	31.12	31.59	12.14	32.53	164	282	P	V
		5300	104.78	-	-	93.41	31.74	12.19	32.56	164	282	A	V
		5300	96.35	-	-	84.98	31.74	12.19	32.56	164	282	P	V
		5396.16	49.53	-24.47	74	38.07	31.82	12.22	32.58	164	282	A	V
		5350.32	41.1	-12.9	54	29.68	31.78	12.21	32.57	164	282	P	V

802.11a CH 64 5320MHz		5320	104.19	-	-	92.79	31.76	12.2	32.56	306	353	P	H
		5320	97.78	-	-	86.38	31.76	12.2	32.56	306	353	A	H
		5352.8	58.58	-15.42	74	47.16	31.78	12.21	32.57	306	353	P	H
		5350.56	50.56	-3.44	54	39.14	31.78	12.21	32.57	306	353	A	H
		5320	104.39	-	-	92.99	31.76	12.2	32.56	152	296	P	V
		5320	96.35	-	-	84.95	31.76	12.2	32.56	152	296	A	V
		5351.36	58.55	-15.45	74	47.13	31.78	12.21	32.57	152	296	P	V
		5350.56	49.97	-4.03	54	38.55	31.78	12.21	32.57	152	296	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	56.75	-11.55	68.3	52.47	40.02	15.37	51.11	150	220	P	H
		15780	52.12	-21.88	74	49.5	37.82	17.9	53.1	159	345	P	H
		10520	58.21	-10.09	68.3	53.93	40.02	15.37	51.11	150	220	P	V
		15780	50.86	-23.14	74	48.24	37.82	17.9	53.1	159	345	P	V
802.11a CH 60 5300MHz		10600	56.56	-17.44	74	52.05	40.12	15.55	51.16	185	215	P	H
		10600	47.96	-6.04	54	43.45	40.12	15.55	51.16	185	215	A	H
		15900	50.98	-23.02	74	48.84	37.48	17.97	53.31	196	190	P	H
		10600	57.52	-16.48	74	53.01	40.12	15.55	51.16	185	215	P	V
		10600	49.14	-4.86	54	44.63	40.12	15.55	51.16	185	215	A	V
		15900	50.83	-23.17	74	48.69	37.48	17.97	53.31	196	190	P	V
802.11a CH 64 5320MHz		10640	56.31	-17.69	74	51.67	40.17	15.65	51.18	152	135	P	H
		10640	49.44	-4.56	54	44.8	40.17	15.65	51.18	152	135	A	H
		15960	49.53	-24.47	74	47.65	37.31	18.01	53.44	173	245	P	H
		10640	57.38	-16.62	74	52.74	40.17	15.65	51.18	152	135	P	V
		10640	50.1	-3.9	54	45.46	40.17	15.65	51.18	152	135	A	V
		15960	50.09	-23.91	74	48.21	37.31	18.01	53.44	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)
		5074.36	50.98	-23.02	74	39.81	31.56	12.13	32.52	117	348	P	H
		5121.68	42.04	-11.96	54	30.83	31.6	12.14	32.53	117	348	A	H
	*	5260	101.43	-	-	90.09	31.71	12.18	32.55	117	348	P	H
		5260	93.95	-	-	82.61	31.71	12.18	32.55	117	348	A	H
802.11n		5439.84	49.36	-24.64	74	37.87	31.85	12.23	32.59	117	348	P	H
HT20		5363.52	40.58	-13.42	54	29.15	31.79	12.21	32.57	117	348	A	H
CH 52		5074.1	50.56	-23.44	74	39.39	31.56	12.13	32.52	146	297	P	V
5260MHz		5116.48	42.24	-11.76	54	31.04	31.59	12.14	32.53	146	297	A	V
	*	5260	104.63	-	-	93.29	31.71	12.18	32.55	146	297	P	V
		5260	99.79	-	-	88.45	31.71	12.18	32.55	146	297	A	V
		5364.96	49.76	-24.24	74	38.33	31.79	12.21	32.57	146	297	P	V
		5358.96	40.72	-13.28	54	29.29	31.79	12.21	32.57	146	297	A	V
		5096.6	51.24	-22.76	74	40.04	31.58	12.14	32.52	103	349	P	H
		5098	42.13	-11.87	54	30.93	31.58	12.14	32.52	103	349	A	H
	*	5300	103.49	-	-	92.12	31.74	12.19	32.56	103	349	P	H
		5300	96.22	-	-	84.85	31.74	12.19	32.56	103	349	A	H
802.11n		5408.64	49.24	-24.76	74	37.77	31.83	12.22	32.58	103	349	P	H
HT20		5350.08	41.59	-12.41	54	30.17	31.78	12.21	32.57	103	349	A	H
CH 60		5117.6	49.82	-24.18	74	38.62	31.59	12.14	32.53	148	267	P	V
5300MHz		5104.3	42.09	-11.91	54	30.89	31.58	12.14	32.52	148	267	A	V
	*	5300	104.74	-	-	93.37	31.74	12.19	32.56	148	267	P	V
		5300	98.82	-	-	87.45	31.74	12.19	32.56	148	267	A	V
		5383.68	48.49	-25.51	74	37.04	31.81	12.22	32.58	148	267	P	V
		5350.8	41.23	-12.77	54	29.81	31.78	12.21	32.57	148	267	A	V

802.11n HT20 CH 64 5320MHz	*	5320	102.68	-	-	91.28	31.76	12.2	32.56	149	343	P	H
		5320	95.14	-	-	83.74	31.76	12.2	32.56	149	343	A	H
		5350.72	56	-18	74	44.58	31.78	12.21	32.57	149	343	P	H
		5350.08	47.6	-6.4	54	36.18	31.78	12.21	32.57	149	343	A	H
	*	5320	103.11	-	-	91.71	31.76	12.2	32.56	162	297	P	V
		5320	95.61	-	-	84.21	31.76	12.2	32.56	162	297	A	V
		5351.36	57.57	-16.43	74	46.15	31.78	12.21	32.57	162	297	P	V
		5350.4	48.37	-5.63	54	36.95	31.78	12.21	32.57	162	297	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n		10520	53.79	-14.51	68.3	49.51	40.02	15.37	51.11	150	220	P	H
HT20		15780	49.97	-24.03	74	47.35	37.82	17.9	53.1	159	345	P	H
CH 52		10520	55.38	-12.92	68.3	51.1	40.02	15.37	51.11	150	220	P	V
5260MHz		15780	50.56	-23.44	74	47.94	37.82	17.9	53.1	159	345	P	V
		10600	56.2	-17.8	74	51.69	40.12	15.55	51.16	185	215	P	H
802.11n		10600	47.17	-6.83	54	42.66	40.12	15.55	51.16	185	215	A	H
HT20		15900	49.74	-24.26	74	47.6	37.48	17.97	53.31	196	190	P	H
CH 60		10600	58.61	-15.39	74	54.1	40.12	15.55	51.16	185	215	P	V
5300MHz		10600	48.06	-5.94	54	43.55	40.12	15.55	51.16	185	215	A	V
		15900	50.44	-23.56	74	48.3	37.48	17.97	53.31	196	190	P	V
		10640	54.57	-19.43	74	49.93	40.17	15.65	51.18	152	135	P	H
802.11n		10640	45.69	-8.31	54	41.05	40.17	15.65	51.18	152	135	A	H
HT20		15960	49.59	-24.41	74	47.71	37.31	18.01	53.44	173	245	P	H
CH 64		10640	55.8	-18.2	74	51.16	40.17	15.65	51.18	152	135	P	V
5320MHz		10640	44.96	-9.04	54	40.32	40.17	15.65	51.18	152	135	A	V
		15960	50.65	-23.35	74	48.77	37.31	18.01	53.44	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		5139.36	50.51	-23.49	74	39.28	31.61	12.15	32.53	150	344	P	H
		5108.16	42.7	-11.3	54	31.49	31.59	12.14	32.52	150	344	A	H
	*	5270	97.79	-	-	86.43	31.72	12.19	32.55	150	344	P	H
		5270	90.72	-	-	79.36	31.72	12.19	32.55	150	344	A	H
		5445.12	48.42	-25.58	74	36.92	31.86	12.23	32.59	150	344	P	H
		5434.32	41.17	-12.83	54	29.68	31.85	12.23	32.59	150	344	A	H
		5048.88	50.96	-23.04	74	39.81	31.54	12.12	32.51	146	281	P	V
		5099.58	42.59	-11.41	54	31.39	31.58	12.14	32.52	146	281	A	V
	*	5270	100.23	-	-	88.87	31.72	12.19	32.55	146	281	P	V
		5270	92.94	-	-	81.58	31.72	12.19	32.55	146	281	A	V
		5445.6	48.62	-25.38	74	37.12	31.86	12.23	32.59	146	281	P	V
		5353.68	41.06	-12.94	54	29.64	31.78	12.21	32.57	146	281	A	V
802.11n HT40 CH 62 5310MHz		5073.15	50.18	-23.82	74	39.01	31.56	12.13	32.52	142	344	P	H
		5039.2	42.78	-11.22	54	31.64	31.53	12.12	32.51	142	344	A	H
	*	5310	99.3	-	-	87.91	31.75	12.2	32.56	142	344	P	H
		5310	92.4	-	-	81.01	31.75	12.2	32.56	142	344	A	H
		5350.08	57.08	-16.92	74	45.66	31.78	12.21	32.57	142	344	P	H
		5353.44	48.72	-5.28	54	37.3	31.78	12.21	32.57	142	344	A	H
		5070.7	49.99	-24.01	74	38.82	31.56	12.13	32.52	151	278	P	V
		5096.95	42.72	-11.28	54	31.52	31.58	12.14	32.52	151	278	A	V
	*	5310	99.33	-	-	87.94	31.75	12.2	32.56	151	278	P	V
		5310	92.59	-	-	81.2	31.75	12.2	32.56	151	278	A	V
		5353.44	57.15	-16.85	74	45.73	31.78	12.21	32.57	151	278	P	V
		5350.08	49.54	-4.46	54	38.12	31.78	12.21	32.57	151	278	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	52.18	-16.12	68.3	47.84	40.05	15.41	51.12	150	220	P	H
		15810	50.62	-23.38	74	48.13	37.73	17.92	53.16	168	345	P	H
		10540	54.34	-13.96	68.3	50	40.05	15.41	51.12	150	220	P	V
		15810	51.04	-22.96	74	48.55	37.73	17.92	53.16	168	345	P	V
		15810	44.49	-9.51	54	42	37.73	17.92	53.16	168	345	A	V
802.11n HT40 CH 62 5310MHz		10620	53.97	-20.03	74	49.4	40.14	15.6	51.17	150	220	P	H
		10620	44.19	-9.81	54	39.62	40.14	15.6	51.17	150	220	A	H
		15930	49.6	-24.4	74	47.59	37.4	17.99	53.38	160	100	P	H
		10620	54.34	-19.66	74	49.77	40.14	15.6	51.17	150	220	P	V
		10620	45.26	-8.74	54	40.69	40.14	15.6	51.17	150	220	A	V
		15930	50.73	-23.27	74	48.72	37.4	17.99	53.38	160	100	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 58 5290MHz		5000.35	50.3	-23.7	74	39.19	31.5	12.11	32.5	277	353	P	H
		5068.95	42.79	-11.21	54	31.62	31.56	12.13	32.52	277	353	A	H
	*	5290	96.81	-	-	85.45	31.73	12.19	32.56	277	353	P	H
		5290	89.05	-	-	77.69	31.73	12.19	32.56	277	353	A	H
		5359.92	57.53	-16.47	74	46.1	31.79	12.21	32.57	277	353	P	H
		5357.28	50.3	-3.7	54	38.87	31.79	12.21	32.57	277	353	A	H
		5050.05	51.22	-22.78	74	40.07	31.54	12.12	32.51	274	283	P	V
		5145.95	43.15	-10.85	54	31.91	31.62	12.15	32.53	274	283	A	V
	*	5290	97.19	-	-	85.83	31.73	12.19	32.56	274	283	P	V
		5290	87.76	-	-	76.4	31.73	12.19	32.56	274	283	A	V
		5361.12	55.7	-18.3	74	44.27	31.79	12.21	32.57	274	283	P	V
		5354.88	50.76	-3.24	54	39.34	31.78	12.21	32.57	274	283	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		10580	53.4	-14.9	68.3	48.94	40.1	15.51	51.15	150	220	P	H
VHT80		15870	50.38	-23.62	74	48.15	37.56	17.95	53.28	139	4	P	H
CH 58		10580	53.72	-14.58	68.3	49.26	40.1	15.51	51.15	188	54	P	V
5290MHz		15870	50.92	-23.08	74	48.69	37.56	17.95	53.28	168	345	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 100 5500MHz		5456.72	52.73	-21.27	74	41.21	31.87	12.24	32.59	366	197	P	H
		5469.84	56.8	-11.5	68.3	45.27	31.88	12.24	32.59	366	197	P	H
		5459.6	43.23	-10.77	54	31.71	31.87	12.24	32.59	366	197	A	H
		5500	103.03	-	-	91.48	31.9	12.25	32.6	366	197	P	H
		5500	95.41	-	-	83.86	31.9	12.25	32.6	366	197	A	H
		5454	52.56	-21.44	74	41.05	31.86	12.24	32.59	341	282	P	V
		5468.72	57.81	-10.49	68.3	46.29	31.87	12.24	32.59	341	282	P	V
		5460	44.01	-9.99	54	32.49	31.87	12.24	32.59	341	282	A	V
		5500	104.94	-	-	93.39	31.9	12.25	32.6	341	282	P	V
		5500	97.26	-	-	85.71	31.9	12.25	32.6	341	282	A	V
802.11a CH 116 5580MHz		5351.68	48.87	-25.13	74	37.45	31.78	12.21	32.57	143	342	P	H
		5464.96	48	-20.3	68.3	36.48	31.87	12.24	32.59	143	342	P	H
		5454.88	40.58	-13.42	54	29.07	31.86	12.24	32.59	143	342	A	H
		5580	103.47	-	-	91.82	31.98	12.27	32.6	143	342	P	H
		5580	97.34	-	-	85.69	31.98	12.27	32.6	143	342	A	H
		5726.885	48.71	-19.59	68.3	36.88	32.13	12.3	32.6	143	342	P	H
		5355.04	49.84	-24.16	74	38.42	31.78	12.21	32.57	140	295	P	V
		5468.56	48.69	-19.61	68.3	37.17	31.87	12.24	32.59	140	295	P	V
		5458.72	40.4	-13.6	54	28.88	31.87	12.24	32.59	140	295	A	V
		5580	105.77	-	-	94.12	31.98	12.27	32.6	140	295	P	V
		5580	98.61	-	-	86.96	31.98	12.27	32.6	140	295	A	V
		5749.565	49.13	-19.17	68.3	37.28	32.15	12.3	32.6	140	295	P	V

802.11a CH 140 5700MHz		5700	101.68	-	-	89.89	32.1	12.29	32.6	183	328	P	H
		5700	95.44	-	-	83.65	32.1	12.29	32.6	183	328	A	H
		5725.48	61.08	-7.22	68.3	49.25	32.13	12.3	32.6	183	328	P	H
		5700	103.3	-	-	91.51	32.1	12.29	32.6	173	298	P	V
		5700	99.47	-	-	87.68	32.1	12.29	32.6	173	298	A	V
		5726.6	61.26	-7.04	68.3	49.43	32.13	12.3	32.6	173	298	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	57	-17	74	51.31	40.6	16.49	51.4	163	230	P	H
		11000	46.14	-7.86	54	40.45	40.6	16.49	51.4	163	230	A	H
		16500	51.5	-16.8	68.3	47.4	38.6	18.2	52.7	178	296	P	H
		11000	59.27	-14.73	74	53.58	40.6	16.49	51.4	163	230	P	V
		11000	50.16	-3.84	54	44.47	40.6	16.49	51.4	163	230	A	V
		16500	51.25	-17.05	68.3	47.15	38.6	18.2	52.7	178	296	P	V
802.11a CH 116 5580MHz		11160	55.59	-18.41	74	49.79	40.57	16.5	51.27	170	200	P	H
		11160	48.7	-5.3	54	42.9	40.57	16.5	51.27	170	200	A	H
		16740	51.36	-16.94	68.3	46.55	39.66	18.28	53.13	156	350	P	H
		11160	57.5	-16.5	74	51.7	40.57	16.5	51.27	170	200	P	V
		11160	50.85	-3.15	54	45.05	40.57	16.5	51.27	170	200	A	V
		16740	52.2	-16.1	68.3	47.39	39.66	18.28	53.13	156	350	P	V
802.11a CH 140 5700MHz		11400	54.57	-19.43	74	48.61	40.52	16.52	51.08	157	285	P	H
		11400	45.82	-8.18	54	39.86	40.52	16.52	51.08	157	285	A	H
		17100	53.13	-15.17	68.3	47.16	41.08	18.41	53.52	165	246	P	H
		11400	54.96	-19.04	74	49	40.52	16.52	51.08	157	285	P	V
		11400	46.48	-7.52	54	40.52	40.52	16.52	51.08	157	285	A	V
		17100	53.23	-15.07	68.3	47.26	41.08	18.41	53.52	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)
		5459.44	52.36	-21.64	74	40.84	31.87	12.24	32.59	140	347	P	H
		5468.56	56.77	-11.53	68.3	45.25	31.87	12.24	32.59	140	347	P	H
		5459.76	44.19	-9.81	54	32.67	31.87	12.24	32.59	140	347	A	H
802.11n	*	5500	104.37	-	-	92.82	31.9	12.25	32.6	140	347	P	H
HT20		5500	96.76	-	-	85.21	31.9	12.25	32.6	140	347	A	H
CH 100		5459.44	51.79	-22.21	74	40.27	31.87	12.24	32.59	149	298	P	V
5500MHz		5468.56	57.58	-10.72	68.3	46.06	31.87	12.24	32.59	149	298	P	V
		5460	44.27	-9.73	54	32.75	31.87	12.24	32.59	149	298	A	V
	*	5500	104.54	-	-	92.99	31.9	12.25	32.6	149	298	P	V
		5500	97.78	-	-	86.23	31.9	12.25	32.6	149	298	A	V
		5454.16	49.29	-24.71	74	37.78	31.86	12.24	32.59	172	355	P	H
		5467.84	48.71	-19.59	68.3	37.19	31.87	12.24	32.59	172	355	P	H
		5437.6	40.43	-13.57	54	28.94	31.85	12.23	32.59	172	355	A	H
	*	5580	103.95	-	-	92.3	31.98	12.27	32.6	172	355	P	H
802.11n		5580	96.1	-	-	84.45	31.98	12.27	32.6	172	355	A	H
HT20		5763.425	48.84	-19.46	68.3	36.98	32.16	12.3	32.6	172	355	P	H
CH 116		5454.64	48.86	-25.14	74	37.35	31.86	12.24	32.59	150	269	P	V
5580MHz		5463.52	48.43	-19.87	68.3	36.91	31.87	12.24	32.59	150	269	P	V
		5456.56	40.57	-13.43	54	29.05	31.87	12.24	32.59	150	269	A	V
	*	5580	105.44	-	-	93.79	31.98	12.27	32.6	150	269	P	V
		5580	98.25	-	-	86.6	31.98	12.27	32.6	150	269	A	V
		5757.125	50.09	-18.21	68.3	38.23	32.16	12.3	32.6	150	269	P	V

802.11n HT20 CH 140 5700MHz	*	5700	103.31	-	-	91.52	32.1	12.29	32.6	191	329	P	H
		5700	96.13	-	-	84.34	32.1	12.29	32.6	191	329	A	H
		5725	63.62	-4.68	68.3	51.8	32.12	12.3	32.6	191	329	P	H
	*	5700	105.11	-	-	93.32	32.1	12.29	32.6	198	289	P	V
		5700	97.23	-	-	85.44	32.1	12.29	32.6	198	289	A	V
		5726.2	64.62	-3.68	68.3	52.79	32.13	12.3	32.6	198	289	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	55.14	-18.86	74	49.45	40.6	16.49	51.4	163	230	P	H
		11000	46.75	-7.25	54	41.06	40.6	16.49	51.4	163	230	A	H
		16500	52.08	-16.22	68.3	47.98	38.6	18.2	52.7	178	296	P	H
		11000	58.19	-15.81	74	52.5	40.6	16.49	51.4	163	230	P	V
		11000	48.16	-5.84	54	42.47	40.6	16.49	51.4	163	230	A	V
		16500	51.16	-17.14	68.3	47.06	38.6	18.2	52.7	178	296	P	V
802.11n HT20 CH 116 5580MHz		11160	53.64	-20.36	74	47.84	40.57	16.5	51.27	170	200	P	H
		11160	44.49	-9.51	54	38.69	40.57	16.5	51.27	170	200	A	H
		16740	51.59	-16.71	68.3	46.78	39.66	18.28	53.13	156	350	P	H
		11160	57.38	-16.62	74	51.58	40.57	16.5	51.27	170	200	P	V
		11160	49.06	-4.94	54	43.26	40.57	16.5	51.27	170	200	A	V
		16740	51.78	-16.52	68.3	46.97	39.66	18.28	53.13	156	350	P	V
802.11n HT20 CH 140 5700MHz		11400	53.84	-20.16	74	47.88	40.52	16.52	51.08	157	285	P	H
		11400	45.58	-8.42	54	39.62	40.52	16.52	51.08	157	285	A	H
		17100	53.3	-15	68.3	47.33	41.08	18.41	53.52	165	246	P	H
		11400	55.03	-18.97	74	49.07	40.52	16.52	51.08	157	285	P	V
		11400	46.32	-7.68	54	40.36	40.52	16.52	51.08	157	285	A	V
		17100	53.03	-15.27	68.3	47.06	41.08	18.41	53.52	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)
		5458.48	54.55	-19.45	74	43.03	31.87	12.24	32.59	133	344	P	H
		5465.2	63.16	-5.14	68.3	51.64	31.87	12.24	32.59	133	344	P	H
		5459.92	48.16	-5.84	54	36.64	31.87	12.24	32.59	133	344	A	H
	*	5510	100.25	-	-	88.69	31.91	12.25	32.6	133	344	P	H
802.11n		5510	93.88	-	-	82.32	31.91	12.25	32.6	133	344	A	H
HT40		5761.535	48.42	-19.88	68.3	36.56	32.16	12.3	32.6	133	344	P	H
CH 102		5459.2	55.06	-18.94	74	43.54	31.87	12.24	32.59	135	303	P	V
5510MHz		5468.32	61.04	-7.26	68.3	49.52	31.87	12.24	32.59	135	303	P	V
		5459.68	48.51	-5.49	54	36.99	31.87	12.24	32.59	135	303	A	V
	*	5510	100.84	-	-	89.28	31.91	12.25	32.6	135	303	P	V
		5510	93.72	-	-	82.16	31.91	12.25	32.6	135	303	A	V
		5733.185	49.57	-18.73	68.3	37.74	32.13	12.3	32.6	135	303	P	V
		5453.68	49.7	-24.3	74	38.19	31.86	12.24	32.59	165	342	P	H
		5469.04	49.19	-19.11	68.3	37.66	31.88	12.24	32.59	165	342	P	H
		5452.72	40.9	-13.1	54	29.39	31.86	12.24	32.59	165	342	A	H
	*	5550	100.55	-	-	88.94	31.95	12.26	32.6	165	342	P	H
802.11n		5550	93.71	-	-	82.1	31.95	12.26	32.6	165	342	A	H
HT40		5760.275	49.45	-18.85	68.3	37.59	32.16	12.3	32.6	165	342	P	H
CH 110		5452.72	50.19	-23.81	74	38.68	31.86	12.24	32.59	144	279	P	V
5550MHz		5463.52	48.82	-19.48	68.3	37.3	31.87	12.24	32.59	144	279	P	V
		5458.48	41.37	-12.63	54	29.85	31.87	12.24	32.59	144	279	A	V
	*	5550	101.44	-	-	89.83	31.95	12.26	32.6	144	279	P	V
		5550	94.24	-	-	82.63	31.95	12.26	32.6	144	279	A	V
		5740.745	49.2	-19.1	68.3	37.36	32.14	12.3	32.6	144	279	P	V

		5425.95	49.53	-24.47	74	38.04	31.84	12.23	32.58	184	324	P	H
		5463.4	48.15	-20.15	68.3	36.63	31.87	12.24	32.59	184	324	P	H
		5446.6	41.07	-12.93	54	29.56	31.86	12.24	32.59	184	324	A	H
	*	5670	100.56	-	-	88.81	32.07	12.28	32.6	184	324	P	H
802.11n		5670	94.38	-	-	82.63	32.07	12.28	32.6	184	324	A	H
HT40		5728.775	53.11	-15.19	68.3	41.28	32.13	12.3	32.6	184	324	P	H
CH 134		5376.6	48.45	-25.55	74	37.01	31.8	12.22	32.58	232	287	P	V
5670MHz		5461.65	48.25	-20.05	68.3	36.73	31.87	12.24	32.59	232	287	P	V
		5455.35	41.08	-12.92	54	29.57	31.86	12.24	32.59	232	287	A	V
	*	5670	102.09	-	-	90.34	32.07	12.28	32.6	232	287	P	V
		5670	96.07	-	-	84.32	32.07	12.28	32.6	232	287	A	V
		5725.975	53.88	-14.42	68.3	42.05	32.13	12.3	32.6	232	287	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)
		11020	54.97	-19.03	74	49.27	40.6	16.49	51.39	170	230	P	H
802.11n		11020	46.32	-7.68	54	40.62	40.6	16.49	51.39	170	230	A	H
HT40		16530	51.7	-16.6	68.3	47.52	38.73	18.21	52.76	160	300	P	H
CH 102		11020	54.29	-19.71	74	48.59	40.6	16.49	51.39	170	230	P	V
5510MHz		11020	46.33	-7.67	54	40.63	40.6	16.49	51.39	170	230	A	V
		16530	51.56	-16.74	68.3	47.38	38.73	18.21	52.76	160	300	P	V
		11100	54.75	-19.25	74	48.99	40.58	16.5	51.32	150	200	P	H
802.11n		11100	45.97	-8.03	54	40.21	40.58	16.5	51.32	150	200	A	H
HT40		16650	52.22	-16.08	68.3	47.69	39.26	18.25	52.98	180	350	P	H
CH 110		11100	54.57	-19.43	74	48.81	40.58	16.5	51.32	150	200	P	V
5550MHz		11100	45.92	-8.08	54	40.16	40.58	16.5	51.32	150	200	A	V
		16650	51.19	-17.11	68.3	46.66	39.26	18.25	52.98	180	350	P	V
		11340	52.9	-21.1	74	46.98	40.53	16.52	51.13	200	360	P	H
802.11n		11340	44.43	-9.57	54	38.51	40.53	16.52	51.13	200	360	A	H
HT40		17010	53.16	-15.14	68.3	47.55	40.83	18.37	53.59	200	360	P	H
CH 134		11340	53.42	-20.58	74	47.5	40.53	16.52	51.13	200	360	P	V
5670MHz		11340	44.61	-9.39	54	38.69	40.53	16.52	51.13	200	360	A	V
		17010	52.43	-15.87	68.3	46.82	40.83	18.37	53.59	200	360	P	V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.

Band 3 - 5470~5725MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5440.96	57.62	-16.38	74	46.13	31.85	12.23	32.59	260	333	P	H
		5468.32	56.18	-12.12	68.3	44.66	31.87	12.24	32.59	260	333	P	H
		5459.2	49.27	-4.73	54	37.75	31.87	12.24	32.59	260	333	A	H
	*	5530	97.26	-	-	85.67	31.93	12.26	32.6	260	333	P	H
802.11ac		5530	90.22	-	-	78.63	31.93	12.26	32.6	260	333	A	H
VHT80		5746.73	48.91	-19.39	68.3	37.06	32.15	12.3	32.6	260	333	P	H
CH 106		5444.08	56	-18	74	44.5	31.86	12.23	32.59	227	292	P	V
5530MHz		5467.6	57.16	-11.14	68.3	45.64	31.87	12.24	32.59	227	292	P	V
		5456.8	48.75	-5.25	54	37.23	31.87	12.24	32.59	227	292	A	V
	*	5530	97.97	-	-	86.38	31.93	12.26	32.6	227	292	P	V
		5530	89.91	-	-	78.32	31.93	12.26	32.6	227	292	A	V
		5731.925	48.92	-19.38	68.3	37.09	32.13	12.3	32.6	227	292	P	V
		5361.04	49.2	-24.8	74	37.77	31.79	12.21	32.57	252	333	P	H
		5469.52	49.84	-18.46	68.3	38.31	31.88	12.24	32.59	252	333	P	H
		5459.2	41.98	-12.02	54	30.46	31.87	12.24	32.59	252	333	A	H
	*	5610	97.48	-	-	85.8	32.01	12.27	32.6	252	333	P	H
802.11ac		5610	90.3	-	-	78.62	32.01	12.27	32.6	252	333	A	H
VHT80		5732.975	50.12	-18.18	68.3	38.29	32.13	12.3	32.6	252	333	P	H
CH 122		5431.6	49.11	-24.89	74	37.62	31.85	12.23	32.59	253	285	P	V
5610MHz		5466.64	49.11	-19.19	68.3	37.59	31.87	12.24	32.59	253	285	P	V
		5458.96	41.91	-12.09	54	30.39	31.87	12.24	32.59	253	285	A	V
	*	5610	98.04	-	-	86.36	32.01	12.27	32.6	253	285	P	V
		5610	91.31	-	-	79.63	32.01	12.27	32.6	253	285	A	V
		5764.65	49.18	-19.12	68.3	37.32	32.16	12.3	32.6	253	285	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	56.18	-17.82	74	50.45	40.59	16.49	51.35	125	177	P	H
		11060	46.06	-7.94	54	40.33	40.59	16.49	51.35	125	177	A	H
		16590	51.99	-16.31	68.3	47.62	39	18.23	52.86	187	54	P	H
		11060	55.66	-18.34	74	49.93	40.59	16.49	51.35	170	230	P	V
		11060	45.99	-8.01	54	40.26	40.59	16.49	51.35	170	230	A	V
		16590	51.99	-16.31	68.3	47.62	39	18.23	52.86	160	300	P	V
802.11ac VHT80 CH 122 5610MHz		11220	55.39	-18.61	74	49.55	40.56	16.51	51.23	170	200	P	H
		11220	46.86	-7.14	54	41.02	40.56	16.51	51.23	170	200	A	H
		16830	53.42	-14.88	68.3	48.35	40.05	18.31	53.29	156	350	P	H
		11220	54.64	-19.36	74	48.8	40.56	16.51	51.23	170	200	P	V
		11220	46.53	-7.47	54	40.69	40.56	16.51	51.23	170	200	A	V
		16830	52.68	-15.62	68.3	47.61	40.05	18.31	53.29	156	350	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	54.1	-19.9	74	48.11	40.51	16.53	51.05	157	285	P	H
		11440	45.6	-8.4	54	39.61	40.51	16.53	51.05	157	285	A	H
		17160	53.23	-15.07	68.3	47.02	41.25	18.43	53.47	165	246	P	H
		11440	55.17	-18.83	74	49.18	40.51	16.53	51.05	157	285	P	V
		11440	44.61	-9.39	54	38.62	40.51	16.53	51.05	157	285	A	V
		17160	53.03	-15.27	68.3	46.82	41.25	18.43	53.47	165	246	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - Straddle Channel

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 144 5720MHz		11440	55.09	-18.91	74	49.1	40.51	16.53	51.05	157	285	P	H
		11440	47.04	-6.96	54	41.05	40.51	16.53	51.05	157	285	A	H
		17160	53.03	-15.27	68.3	46.82	41.25	18.43	53.47	165	246	P	H
		11440	54.47	-19.53	74	48.48	40.51	16.53	51.05	157	285	P	V
		11440	46.54	-7.46	54	40.55	40.51	16.53	51.05	157	285	A	V
		17160	53.59	-14.71	68.3	47.38	41.25	18.43	53.47	165	246	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - Straddle Channel

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 142 5710MHz		11420	54.29	-19.71	74	48.32	40.52	16.52	51.07	157	285	P	H
		11420	46.33	-7.67	54	40.36	40.52	16.52	51.07	157	285	A	H
		17130	52.56	-15.74	68.3	46.47	41.16	18.42	53.49	165	246	P	H
		11420	53.77	-20.23	74	47.8	40.52	16.52	51.07	157	285	P	V
		11420	44.59	-9.41	54	38.62	40.52	16.52	51.07	157	285	A	V
		17130	52.53	-15.77	68.3	46.44	41.16	18.42	53.49	165	246	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - Straddle Channel

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 138 5690MHz		11380	54.03	-19.97	74	48.08	40.52	16.52	51.09	157	285	P	H
		11380	45.64	-8.36	54	39.69	40.52	16.52	51.09	157	285	A	H
		17070	52.97	-15.33	68.3	47.12	41	18.4	53.55	165	246	P	H
		11380	53.81	-20.19	74	47.86	40.52	16.52	51.09	157	285	P	V
		11380	45.15	-8.85	54	39.2	40.52	16.52	51.09	157	285	A	V
		17070	51.92	-16.38	68.3	46.07	41	18.4	53.55	165	246	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

WIFI 802.11a (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		70.74	28.89	-11.11	40	44.21	17.51	2.31	35.14	-	-	P	H
		159.01	33.31	-10.19	43.5	46.51	19.31	2.59	35.1	100	169	P	H
		198.78	30.51	-12.99	43.5	46.4	16.46	2.75	35.1	-	-	P	H
		290.93	30.84	-15.16	46	43.06	19.57	3.13	34.92	-	-	P	H
		404.42	25.41	-20.59	46	34.73	22.16	3.31	34.79	-	-	P	H
		927.25	31.04	-14.96	46	31.56	29.57	4.16	34.25	-	-	P	H
		43.58	30.87	-9.13	40	43.74	20.1	2.07	35.04	100	169	P	V
		81.41	25	-15	40	42.58	15.19	2.39	35.16	-	-	P	V
		155.13	33.37	-10.13	43.5	46.61	19.29	2.57	35.1	-	-	P	V
		198.78	30.66	-12.84	43.5	46.55	16.46	2.75	35.1	-	-	P	V
		277.35	27.61	-18.39	46	40.3	19.22	3.04	34.95	-	-	P	V
		996.12	29.46	-24.54	54	29.19	30.19	4.19	34.11	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Note symbol

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

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

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

1. Level(dBμV/m) =

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

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

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

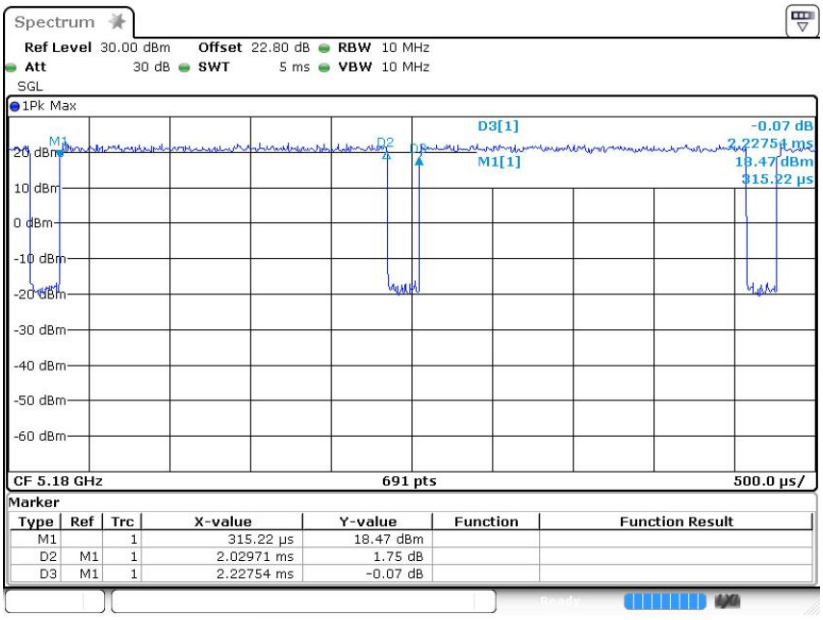
= -10.46(dB)

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

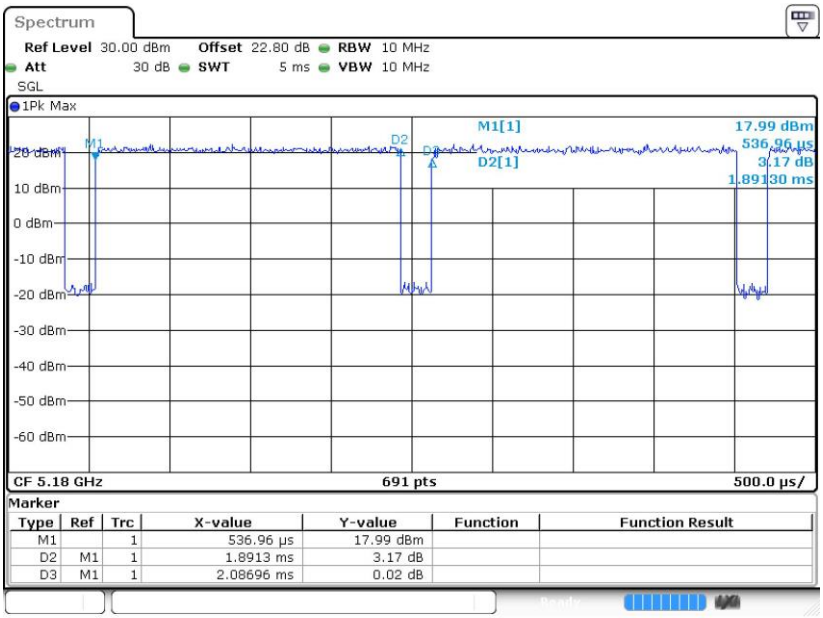
Appendix D. Duty Cycle Plots

Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
802.11a	91.12	2.0297	0.4927	1kHz
802.11n HT20	90.62	1.8913	0.5287	1kHz
802.11n HT40	82.96	0.9312	1.0739	3kHz
802.11ac VHT80	70.79	0.4565	2.1905	3kHz

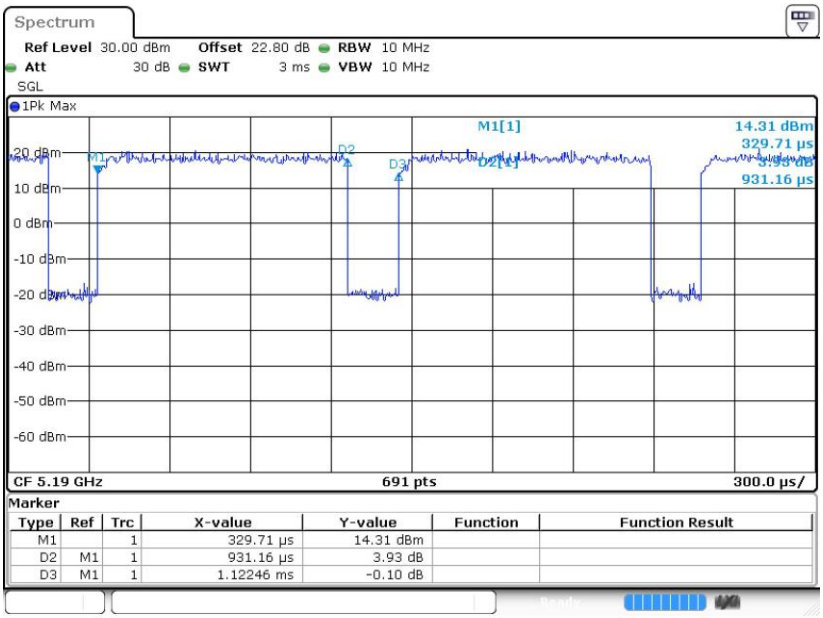
802.11a



802.11n HT20



802.11n HT40



802.11ac VHT80