



FCC RF Test Report

APPLICANT : Motorola Mobility LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : XT2211-1, XT2211-2, XT2211DL
FCC ID : IHDT56AA2
STANDARD : FCC Part 15 Subpart E §15.407
CLASSIFICATION : (NII) Unlicensed National Information Infrastructure
TEST DATE(S) : Oct. 10, 2021 ~ Oct. 25, 2021

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

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

Reviewed by: Derreck Chen / Supervisor

Approved by: Eric Shih / Manager



Sporton International (ShenZhen) Inc.

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People's Republic of China**



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR181714D	Rev. 01	Initial issue of report	Nov. 02, 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 3.15 dB at 5148.980 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 10.15 dB at 17.944 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	XT2211-1, XT2211-2, XT2211DL
FCC ID	IHDT56AA2
IMEI Code	Conducted: 358116610012173 Conduction: 358116610013841 Radiation: 358116610014203
HW Version	DVT2
SW Version	RRDE31.Q3-37
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 ~ 5720 MHz
Maximum Output Power to Antenna	<p><5180 MHz ~ 5240 MHz> 802.11a : 19.56 dBm / 0.0904 W 802.11n HT20 : 19.32 dBm / 0.0855 W 802.11n HT40 : 17.87 dBm / 0.0612 W 802.11ac VHT20 : 19.31 dBm / 0.0853 W 802.11ac VHT40 : 17.82 dBm / 0.0605 W 802.11ac VHT80 : 17.71 dBm / 0.0590 W</p> <p><5260 MHz ~ 5320 MHz> 802.11a : 19.45 dBm / 0.0881 W 802.11n HT20 : 19.27 dBm / 0.0845 W 802.11n HT40 : 18.49 dBm / 0.0706 W 802.11ac VHT20 : 19.23 dBm / 0.0838 W 802.11ac VHT40 : 18.38 dBm / 0.0689 W 802.11ac VHT80 : 18.04 dBm / 0.0637 W</p> <p><5500 MHz ~ 5720 MHz > 802.11a : 20.49 dBm / 0.1119 W 802.11n HT20 : 20.29 dBm / 0.1069 W 802.11n HT40 : 18.68 dBm / 0.0738 W 802.11ac VHT20 : 20.27 dBm / 0.1064 W 802.11ac VHT40 : 18.64 dBm / 0.0731 W 802.11ac VHT80 : 18.31 dBm / 0.0678 W</p>
Antenna Type / Gain	<p><5150 MHz ~ 5250 MHz> IFA Antenna with gain -3.75 dBi</p> <p><5250 MHz ~ 5350 MHz> IFA Antenna with gain -3.72 dBi</p> <p><5470 MHz ~ 5725 MHz> IFA Antenna with gain -3.73 dBi</p>
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)

Note:

- Note: For 802.11n HT20 / ac VHT20 and 802.11n HT40 / ac VHT40 mode, the whole testing have assessed only 802.11n HT20/HT40 by referring to their maximum conducted power.



1.5 Modification of EUT

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

1.6 Testing Location

<FCC>-KS

Sporton International (Kunshan) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International (Kunshan) Inc.		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	CO01-KS	CN1257	314309

<FCC>-SZ

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.
	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



1.7 Test Software

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

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 (Salcomp)	Model Name	MC-101
AC Adapter 2	Brand Name	Motorola(AOHAI)	Model Name	MC-101
AC Adapter 3	Brand Name	Motorola(Chenyang)	Model Name	MC-101
Battery	Brand Name	Motorola(ATL)	Model Name	MD50
USB Cable 1	Brand Name	Motorola(Saibao)	Model Name	SC18D22297
USB Cable 2	Brand Name	Motorola (Cabletech)	Model Name	SC18D22298
USB Cable 3	Brand Name	Motorola (Luxshare)	Model Name	SC18D22299
Earphone	Brand Name	Motorola (NLD)	Model Name	NLD-EM313A-05SF



2 Test Configuration of Equipment Under Test

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

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5150-5250 MHz U-NII-1	36	5180	44	5220
	38*	5190	46*	5230
	40	5200	48	5240
	42 [#]	5210		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5250-5350 MHz U-NII-2A	52	5260	60	5300
	54*	5270	62*	5310
	56	5280	64	5320
	58 [#]	5290		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5470-5725 MHz U-NII-2C	100	5500	112	5560
	102*	5510	116	5580
	104	5520	132	5660
	106 [#]	5530	134*	5670
	108	5540	136	5680
	110*	5550	140	5700

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



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

Note:

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



2.2 Test Mode

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

Modulation		Data Rate
802.11a		6 Mbps
802.11n HT20		MCS0
802.11n HT40		MCS0
802.11ac VHT80		MCS0
Test Cases		
AC Conducted Emission	Mode 1 : GSM 850 Idle +Bluetooth Link+ WLAN Link(5G)+ Earphone + USB Cable 3(Charging from Adapter 3)	
Remark:		
1. For Radiated Test Cases, The tests were performance with Adapter 1, Earphone , USB Cable 1.		

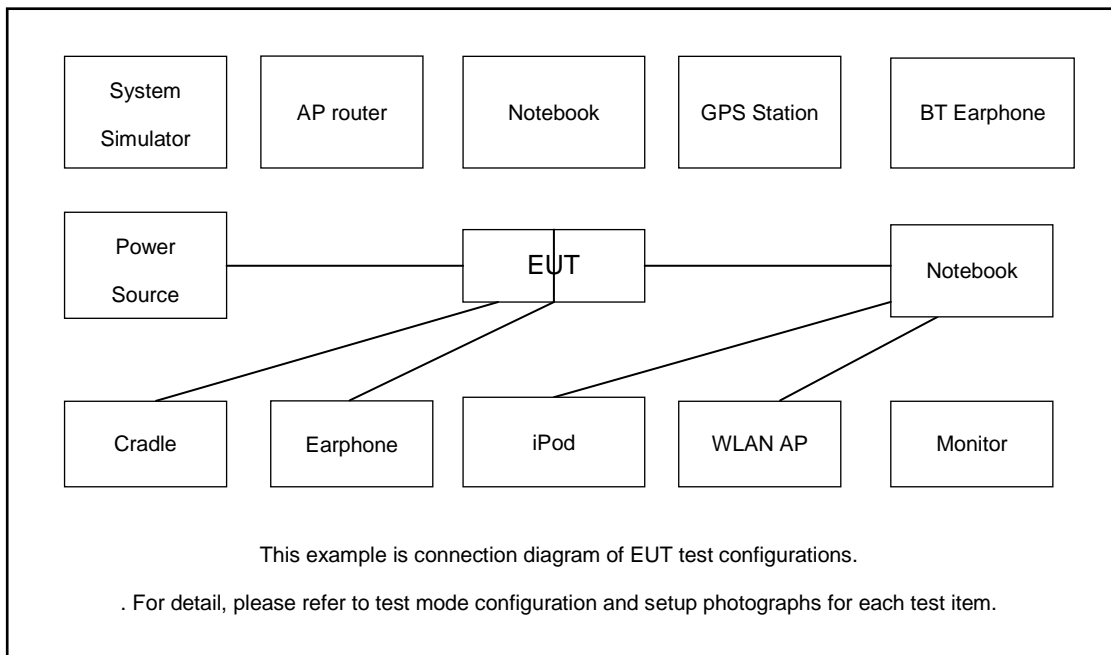
Ch. #		U-NII-1 : 5150-5250 MHz	U-NII-2A : 5250-5350 MHz	U-NII-2C : 5470-5725MHz
		802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140
Straddle		-	-	144

Ch. #		U-NII-1 : 5150-5250 MHz	U-NII-2A : 5250-5350 MHz	U-NII-2C : 5470-5725MHz
		802.11n HT20	802.11n HT20	802.11n HT20
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140
Straddle		-	-	144

Ch. #		U-NII-1 : 5150-5250 MHz	U-NII-2A : 5250-5350 MHz	U-NII-2C : 5470-5725MHz
		802.11n HT40	802.11n HT40	802.11n HT40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	134
Straddle		-	-	142

Ch. #		U-NII-1 : 5150-5250 MHz	U-NII-2A : 5250-5350 MHz	U-NII-2C : 5470-5725MHz
		802.11ac VHT80	802.11ac VHT80	802.11ac VHT80
L	Low	-	-	106
M	Middle	42	58	-
H	High	-	-	122
Straddle		-	-	138

2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	LTE Base Station	Anritus	MT8821C	N/A	N/A	Unshielded, 1.8m
2.	WLAN AP	D-link	DIR-655	KA21R655B1	N/A	Unshielded, 1.8m
3.	Notebook	Lenovo	G480	QDS-BRCM1050I	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
4.	Bluetooth Earphone	Lenovo	LBH308	N/A	N/A	N/A
5.	SD Card	Kingston	8GB	N/A	N/A	N/A



2.5 EUT Operation Test Setup

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

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

2.6 Measurement Results Explanation Example

For all conducted test items:

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

Example :

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

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 2.8 dB and 10dB attenuator.

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\ &= 2.8 + 10 = 12.8 \text{ (dB)} \end{aligned}$$

3 Test Result

3.1 26dB & 99% Occupied Bandwidth Measurement

3.1.1 Description of 26dB & 99% Occupied Bandwidth

This section is for reporting purpose only.

There is no restriction limits for bandwidth.

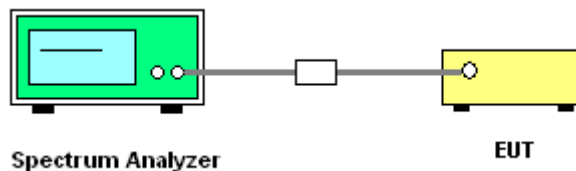
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

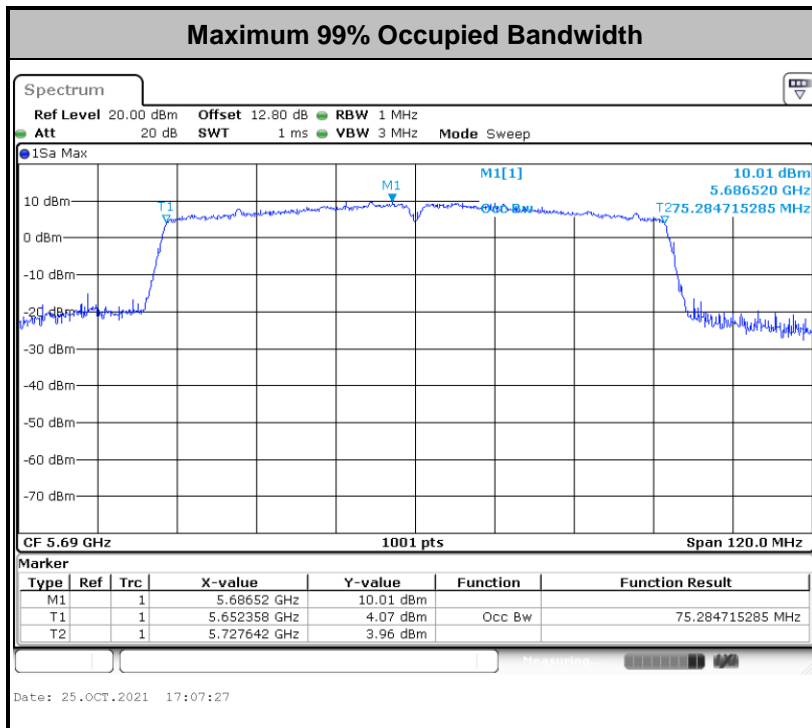
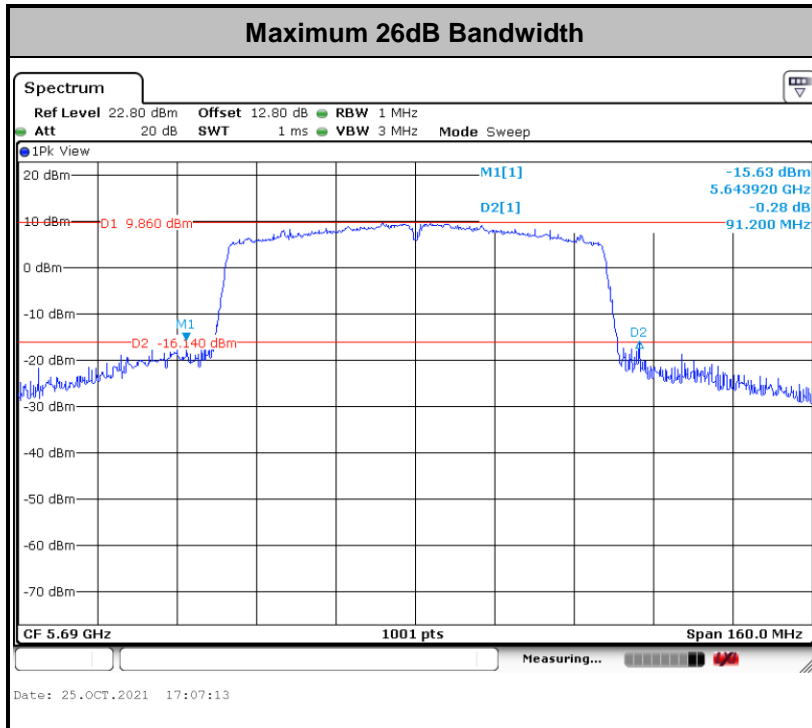
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB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

3.1.4 Test Setup



3.1.5 Test Result of 26dB & 99% Occupied Bandwidth

Please refer to Appendix A.



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



3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

<FCC 14-30 CFR 15.407>

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

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

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

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

3.2.2 Measuring Instruments

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

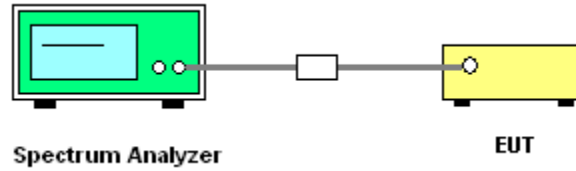
3.2.3 Test Procedures

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

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

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

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.



3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

<FCC 14-30 CFR 15.407>

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

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

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

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

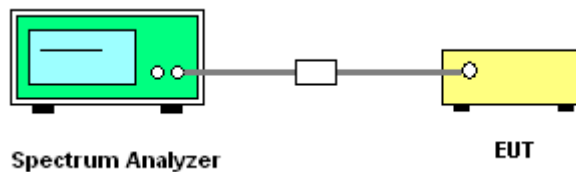
The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
Section F) Maximum power spectral density.

Method SA-2

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

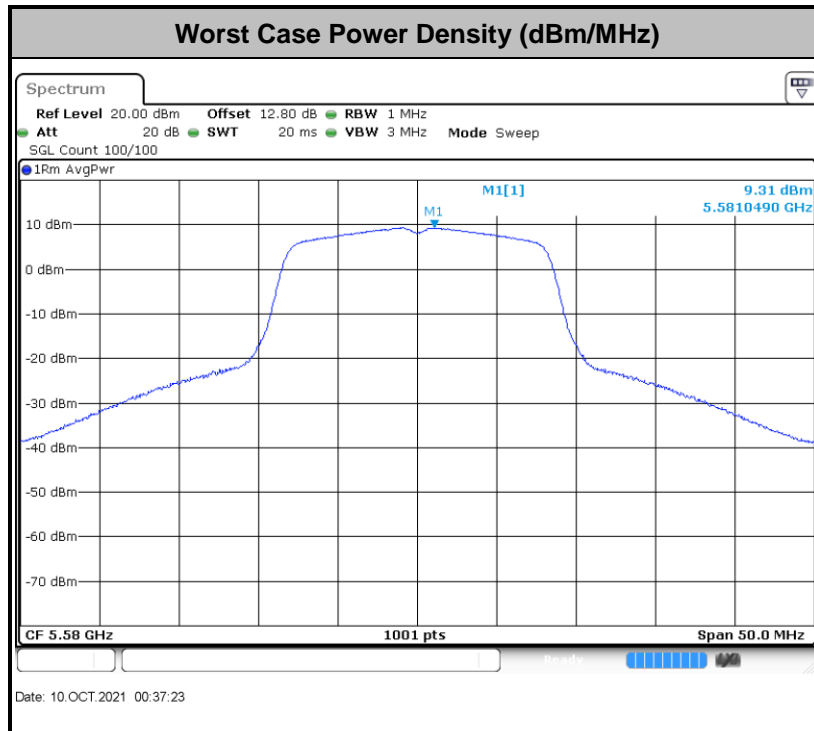
- Measure the duty cycle.
 - Set span to encompass the entire emission bandwidth (EBW) of the signal.
 - Set RBW = 1 MHz.
 - Set VBW \geq 3 MHz.
 - Number of points in sweep \geq 2 Span / RBW.
 - Sweep time = auto.
 - Detector = RMS
 - Trace average at least 100 traces in power averaging mode.
 - Add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

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.



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



3.4 Unwanted Emissions Measurement

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

3.4.1 Limit of Unwanted Emissions

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

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

For transmitters operating in the 5470-5725 MHz band: all emissions outside of the 5470-5725 MHz 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

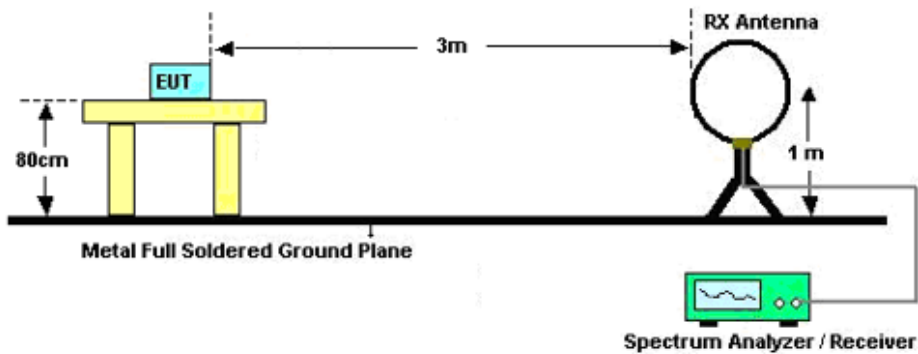
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section G) Unwanted emissions measurement.
 - (1) Procedure for Unwanted Emissions Measurements Below 1000MHz
 - RBW = 120 kHz
 - VBW = 300 kHz
 - Detector = Peak
 - Trace mode = max hold
 - (2) Procedure for Peak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

repeated one by one using the CISPR quasi-peak method and reported.

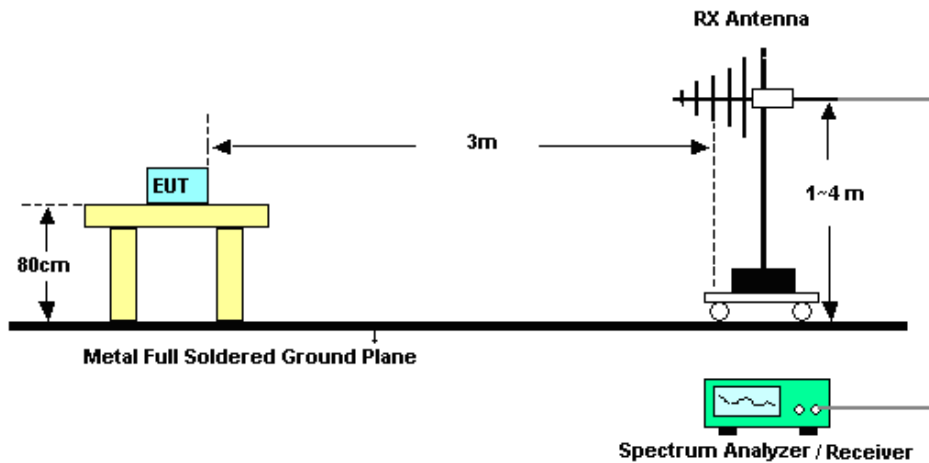
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than peak limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.4.4 Test Setup

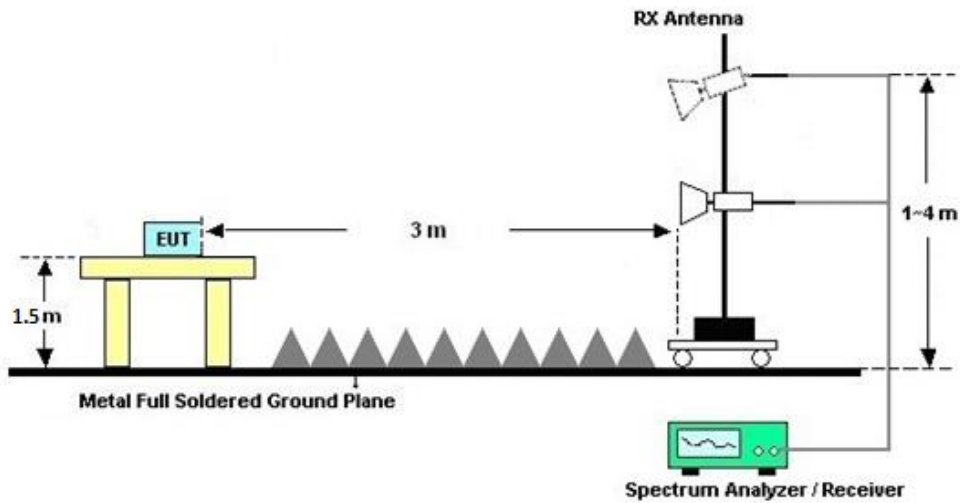
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

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

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

3.4.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C.

3.4.7 Duty Cycle

Please refer to Appendix D.

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

Please refer to Appendix C.



3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

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

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

*Decreases with the logarithm of the frequency.

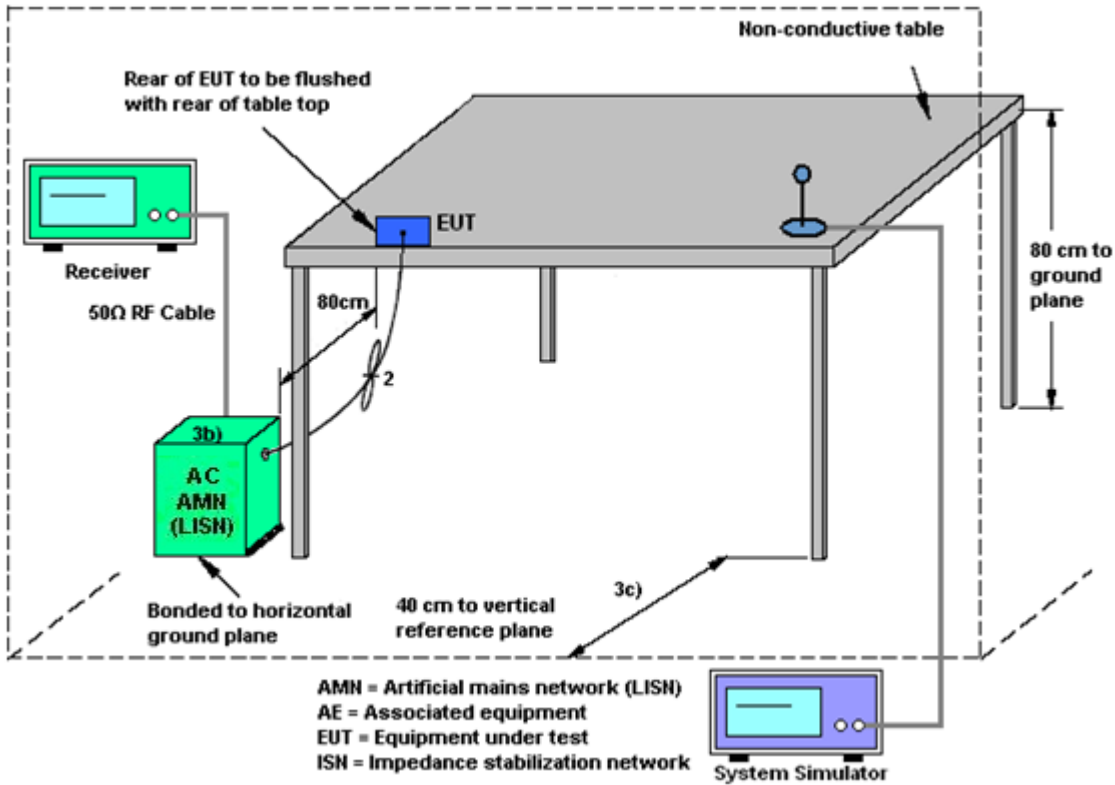
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

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

3.5.4 Test Setup



3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.



3.6 Antenna Requirements

3.6.1 Standard Applicable

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

3.6.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.6.3 Antenna Gain

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



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 08, 2021	Oct. 10, 2021~ Oct. 25, 2021	Apr. 07, 2022	Conducted (TH01-SZ)
Pulse Power Sensor	Anritsu	MA2411B	1207253	30MHz~40GHz	Dec. 25, 2020	Oct. 10, 2021~ Oct. 25, 2021	Dec. 24, 2021	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1218010	50MHz Bandwidth	Dec. 25, 2020	Oct. 10, 2021~ Oct. 25, 2021	Dec. 24, 2021	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 14, 2021	Oct. 10, 2021~ Oct. 25, 2021	Jul. 13, 2022	Conducted (TH01-SZ)
EMI Test Receiver&SA	Agilent	N9038A	MY52260185	20Hz~26.5GHz	Jul. 21, 2021	Oct. 14, 2021	Jul. 20, 2022	Radiation (03CH01-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Jul. 21, 2021	Oct. 14, 2021	Jul. 20, 2022	Radiation (03CH01-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jul. 22, 2021	Oct. 14, 2021	Jul. 21, 2022	Radiation (03CH01-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Jul. 15, 2021	Oct. 14, 2021	Jul. 14, 2022	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Jul. 25, 2021	Oct. 14, 2021	Jul. 24, 2022	Radiation (03CH01-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18GHz-40GHz	Apr. 23, 2021	Oct. 14, 2021	Apr. 22, 2022	Radiation (03CH01-SZ)
LF Amplifier	Burgeon	BPA-530	102209	0.01~3000Mhz	Apr. 17, 2021	Oct. 14, 2021	Apr. 16, 2022	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	AMF-7D-00101800-30-10P-R	1943528	1GHz~18GHz	Oct. 17, 2020	Oct. 14, 2021	Oct. 16, 2021	Radiation (03CH01-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270105	0.5GHz~26.5GHz	Oct. 16, 2020	Oct. 14, 2021	Oct. 15, 2021	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 21, 2021	Oct. 14, 2021	Jul. 20, 2022	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	NCR	Oct. 14, 2021	NCR	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Oct. 14, 2021	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Oct. 14, 2021	NCR	Radiation (03CH01-SZ)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	Apr. 21, 2021	Oct. 20, 2021	Apr. 20, 2022	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060103	9kHz~30MHz	Oct. 17, 2021	Oct. 20, 2021	Oct. 16, 2022	Conduction (CO01-KS)
AC LISN	R&S	ENV216	100334	9kHz~30MHz	Oct. 17, 2021	Oct. 20, 2021	Oct. 16, 2022	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP00000811	AC 0V~300V, 45Hz~1000Hz	Oct. 17, 2021	Oct. 20, 2021	Oct. 16, 2022	Conduction (CO01-KS)

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))	2.94dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.2dB
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.0dB
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.3dB
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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:	2021/10/10~2021/10/25	Relative Humidity:	51~54	%

TEST RESULTS DATA
26dB and 99% OBW

Band I										
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)	IC 99% Bandwidth Power Limit (dBm)	IC 99% Bandwidth EIRP Limit (dBm)		
11a	6Mbps	1	36	5180	16.78	24.70	-	22.25		
11a	6Mbps	1	44	5220	16.78	22.50	-	22.25		
11a	6Mbps	1	48	5240	16.78	23.60	-	22.25		
HT20	MCS0	1	36	5180	17.88	24.00	-	22.52		
HT20	MCS0	1	44	5220	17.83	24.60	-	22.51		
HT20	MCS0	1	48	5240	17.88	23.95	-	22.52		
HT40	MCS0	1	38	5190	36.46	40.77	-	23.01		
HT40	MCS0	1	46	5230	36.66	39.78	-	23.01		
VHT80	MCS0	1	42	5210	75.16	80.96	-	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	19.56	24.00	-3.75		Pass
11a	6Mbps	1	44	5220	0.13	19.41	24.00	-3.75		Pass
11a	6Mbps	1	48	5240	0.13	19.53	24.00	-3.75		Pass
HT20	MCS0	1	36	5180	0.14	19.32	24.00	-3.75		Pass
HT20	MCS0	1	44	5220	0.14	19.31	24.00	-3.75		Pass
HT20	MCS0	1	48	5240	0.14	19.28	24.00	-3.75		Pass
HT40	MCS0	1	38	5190	0.29	17.86	24.00	-3.75		Pass
HT40	MCS0	1	46	5230	0.29	17.87	24.00	-3.75		Pass
VHT20	MCS0	1	36	5180	0.16	19.31	24.00	-3.75		Pass
VHT20	MCS0	1	44	5220	0.16	19.27	24.00	-3.75		Pass
VHT20	MCS0	1	48	5240	0.16	19.25	24.00	-3.75		Pass
VHT40	MCS0	1	38	5190	0.29	17.82	24.00	-3.75		Pass
VHT40	MCS0	1	46	5230	0.29	17.76	24.00	-3.75		Pass
VHT80	MCS0	1	42	5210	0.57	17.71	24.00	-3.75		Pass

TEST RESULTS DATA
Power Spectral Density

FCC Band I										
Mod.	Data Rate	N _{TX}	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	8.42	11.00	-3.75		Pass
11a	6Mbps	1	44	5220	0.13	8.27	11.00	-3.75		Pass
11a	6Mbps	1	48	5240	0.13	8.30	11.00	-3.75		Pass
HT20	MCS0	1	36	5180	0.14	8.08	11.00	-3.75		Pass
HT20	MCS0	1	44	5220	0.14	7.91	11.00	-3.75		Pass
HT20	MCS0	1	48	5240	0.14	7.91	11.00	-3.75		Pass
HT40	MCS0	1	38	5190	0.29	3.66	11.00	-3.75		Pass
HT40	MCS0	1	46	5230	0.29	3.64	11.00	-3.75		Pass
VHT80	MCS0	1	42	5210	0.57	0.51	11.00	-3.75		Pass

TEST RESULTS DATA
26dB and 99% OBW

Band II										
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)	IC 99% Bandwidth Power Limit (dBm)	IC 99% Bandwidth EIRP Limit (dBm)	FCC 26dB Bandwidth Power Limit (dBm)	Note
11a	6M bps	1	52	5260	16.78	27.40	23.25	29.25	23.98	
11a	6M bps	1	60	5300	16.78	23.25	23.25	29.25	23.98	
11a	6M bps	1	64	5320	16.78	24.25	23.25	29.25	23.98	
HT20	MCS 0	1	52	5260	17.83	24.15	23.51	29.51	23.98	
HT20	MCS 0	1	60	5300	17.88	24.75	23.52	29.52	23.98	
HT20	MCS 0	1	64	5320	17.88	25.05	23.52	29.52	23.98	
HT40	MCS 0	1	54	5270	36.76	40.86	23.98	30.00	23.98	
HT40	MCS 0	1	62	5310	36.76	40.68	23.98	30.00	23.98	
VHT80	MCS 0	1	58	5290	75.28	81.12	23.98	30.00	23.98	

TEST RESULTS DATA
Average Power Table

FCC Band II										
Mod.	Data Rate	N _{TX}	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	19.45	23.98	-3.72	26.99	Pass
11a	6M bps	1	60	5300	0.13	19.29	23.98	-3.72	26.99	Pass
11a	6M bps	1	64	5320	0.13	19.24	23.98	-3.72	26.99	Pass
HT20	MCS 0	1	52	5260	0.14	19.27	23.98	-3.72	26.99	Pass
HT20	MCS 0	1	60	5300	0.14	19.24	23.98	-3.72	26.99	Pass
HT20	MCS 0	1	64	5320	0.14	19.14	23.98	-3.72	26.99	Pass
HT40	MCS 0	1	54	5270	0.29	18.49	23.98	-3.72	26.99	Pass
HT40	MCS 0	1	62	5310	0.29	18.39	23.98	-3.72	26.99	Pass
VHT20	MCS 0	1	52	5260	0.16	19.23	23.98	-3.72	26.99	Pass
VHT20	MCS 0	1	60	5300	0.16	19.22	23.98	-3.72	26.99	Pass
VHT20	MCS 0	1	64	5320	0.16	19.10	23.98	-3.72	26.99	Pass
VHT40	MCS 0	1	54	5270	0.29	18.38	23.98	-3.72	26.99	Pass
VHT40	MCS 0	1	62	5310	0.29	18.37	23.98	-3.72	26.99	Pass
VHT80	MCS 0	1	58	5290	0.57	18.04	23.98	-3.72	26.99	Pass

TEST RESULTS DATA
Power Spectral Density

Band II										
Mod.	Data Rate	N _{TX}	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	9.03	11.00	-3.72		Pass
11a	6M bps	1	60	5300	0.13	8.76	11.00	-3.72		Pass
11a	6M bps	1	64	5320	0.13	8.80	11.00	-3.72		Pass
HT20	MCS 0	1	52	5260	0.14	8.65	11.00	-3.72		Pass
HT20	MCS 0	1	60	5300	0.14	8.43	11.00	-3.72		Pass
HT20	MCS 0	1	64	5320	0.14	8.49	11.00	-3.72		Pass
HT40	MCS 0	1	54	5270	0.29	4.23	11.00	-3.72		Pass
HT40	MCS 0	1	62	5310	0.29	4.03	11.00	-3.72		Pass
VHT80	MCS 0	1	58	5290	0.57	0.70	11.00	-3.72		Pass

TEST RESULTS DATA
26dB and 99% OBW

Band III										
Mod.	Data Rate	N _{TX}	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	16.78	27.35	23.25	29.25	23.98	
11a	6M bps	1	116	5580	16.98	26.40	23.30	29.30	23.98	
11a	6M bps	1	140	5700	16.98	27.40	23.30	29.30	23.98	
11a	6Mbps	1	144	5720	16.98	25.60	23.30	29.30	23.98	
HT20	MCS 0	1	100	5500	17.93	25.50	23.54	29.54	23.98	
HT20	MCS 0	1	116	5580	18.03	27.90	23.56	29.56	23.98	
HT20	MCS 0	1	140	5700	18.03	28.75	23.56	29.56	23.98	
HT20	MCS0	1	144	5720	18.03	26.75	23.56	29.56	23.98	
HT40	MCS 0	1	102	5510	36.56	40.77	23.98	30.00	23.98	
HT40	MCS 0	1	110	5550	36.56	40.59	23.98	30.00	23.98	
HT40	MCS 0	1	134	5670	36.86	47.61	23.98	30.00	23.98	
HT40	MCS0	1	142	5710	36.86	40.86	23.98	30.00	23.98	
VHT80	MCS 0	1	106	5530	75.16	81.12	23.98	30.00	23.98	
VHT80	MCS 0	1	122	5610	75.28	85.44	23.98	30.00	23.98	
VHT80	MCS0	1	138	5690	75.28	91.20	23.98	30.00	23.98	

TEST RESULTS DATA
Average Power Table

FCC Band III										
Mod.	Data Rate	N _{TX}	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	19.51	23.98	-3.73	26.99	Pass
11a	6M bps	1	116	5580	0.13	20.49	23.98	-3.73	26.99	Pass
11a	6M bps	1	140	5700	0.13	20.46	23.98	-3.73	26.99	Pass
11a	6M bps	1	144	5720	0.13	20.42	23.98	-3.73	26.99	Pass
HT20	MCS 0	1	100	5500	0.14	19.37	23.98	-3.73	26.99	Pass
HT20	MCS 0	1	116	5580	0.14	20.29	23.98	-3.73	26.99	Pass
HT20	MCS 0	1	140	5700	0.14	20.26	23.98	-3.73	26.99	Pass
HT20	MCS 0	1	144	5720	0.14	20.25	23.98	-3.73	26.99	Pass
HT40	MCS 0	1	102	5510	0.29	17.83	23.98	-3.73	26.99	Pass
HT40	MCS 0	1	110	5550	0.29	17.93	23.98	-3.73	26.99	Pass
HT40	MCS 0	1	134	5670	0.29	18.68	23.98	-3.73	26.99	Pass
HT40	MCS 0	1	142	5710	0.29	18.60	23.98	-3.73	26.99	Pass
VHT20	MCS 0	1	100	5500	0.16	19.36	23.98	-3.73	26.99	Pass
VHT20	MCS 0	1	116	5580	0.16	20.27	23.98	-3.73	26.99	Pass
VHT20	MCS 0	1	140	5700	0.16	20.23	23.98	-3.73	26.99	Pass
VHT20	MCS 0	1	144	5720	0.16	20.22	23.98	-3.73	26.99	Pass
VHT40	MCS 0	1	102	5510	0.29	17.81	23.98	-3.73	26.99	Pass
VHT40	MCS 0	1	110	5550	0.29	17.90	23.98	-3.73	26.99	Pass
VHT40	MCS 0	1	134	5670	0.29	18.64	23.98	-3.73	26.99	Pass
VHT40	MCS 0	1	142	5710	0.29	18.54	23.98	-3.73	26.99	Pass
VHT80	MCS 0	1	106	5530	0.57	16.91	23.98	-3.73	26.99	Pass
VHT80	MCS 0	1	122	5610	0.57	18.31	23.98	-3.73	26.99	Pass
VHT80	MCS 0	1	138	5690	0.57	18.22	23.98	-3.73	26.99	Pass

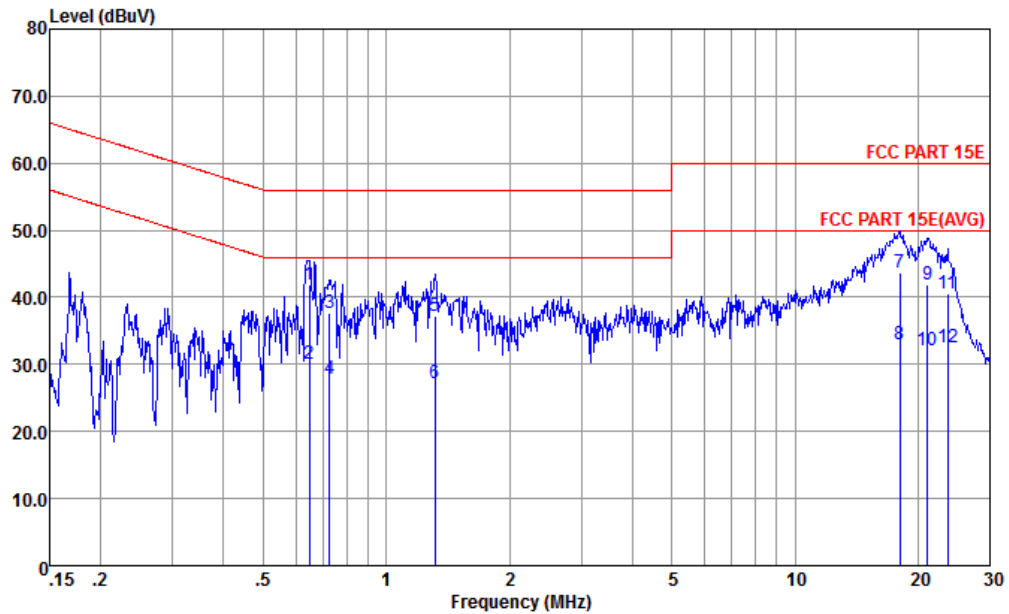
TEST RESULTS DATA
Power Spectral Density

Band III										
Mod.	Data Rate	N _{TX}	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	8.61	11.00	-3.73		Pass
11a	6M bps	1	116	5580	0.13	9.44	11.00	-3.73		Pass
11a	6M bps	1	140	5700	0.13	9.24	11.00	-3.73		Pass
11a	6Mbps	1	144	5720	0.13	9.26	11.00	-3.73		Pass
HT20	MCS 0	1	100	5500	0.14	8.19	11.00	-3.73		Pass
HT20	MCS 0	1	116	5580	0.14	9.13	11.00	-3.73		Pass
HT20	MCS 0	1	140	5700	0.14	8.80	11.00	-3.73		Pass
HT20	MCS0	1	144	5720	0.14	8.98	11.00	-3.73		Pass
HT40	MCS 0	1	102	5510	0.29	4.13	11.00	-3.73		Pass
HT40	MCS 0	1	110	5550	0.29	4.23	11.00	-3.73		Pass
HT40	MCS 0	1	134	5670	0.29	4.71	11.00	-3.73		Pass
HT40	MCS0	1	142	5710	0.29	4.66	11.00	-3.73		Pass
VHT80	MCS 0	1	106	5530	0.57	0.99	11.00	-3.73		Pass
VHT80	MCS 0	1	122	5610	0.57	1.41	11.00	-3.73		Pass
VHT80	MCS0	1	138	5690	0.57	1.26	11.00	-3.73		Pass



Appendix B. AC Conducted Emission Test Results

Test Engineer :	Amos Zhang	Temperature :	25.3~26.2°C
		Relative Humidity :	38~40%
Test Voltage :	120Vac / 60Hz	Phase :	Line

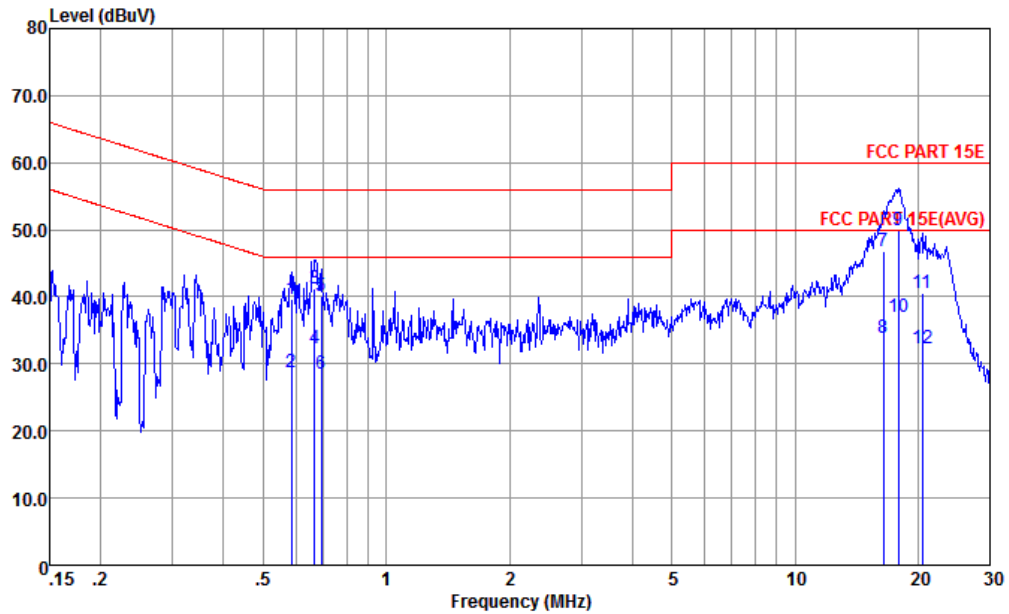


Site : CO01-KS
 Condition : FCC PART 15E TWO-LISN-CN02-L LINE

	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
			dB	dBuV	dBuV	dB	dB	
1 *	0.647	41.89	-14.11	56.00	21.99	9.66	10.24	QP
2	0.647	30.09	-15.91	46.00	10.19	9.66	10.24	Average
3	0.727	37.70	-18.30	56.00	17.80	9.66	10.24	QP
4	0.727	27.80	-18.20	46.00	7.90	9.66	10.24	Average
5	1.317	37.23	-18.77	56.00	17.20	9.80	10.23	QP
6	1.317	27.13	-18.87	46.00	7.10	9.80	10.23	Average
7	18.039	43.62	-16.38	60.00	22.10	11.06	10.46	QP
8	18.039	33.02	-16.98	50.00	11.50	11.06	10.46	Average
9	21.147	41.95	-18.05	60.00	20.20	11.24	10.51	QP
10	21.147	32.05	-17.95	50.00	10.30	11.24	10.51	Average
11	23.636	40.54	-19.46	60.00	18.60	11.39	10.55	QP
12	23.636	32.54	-17.46	50.00	10.60	11.39	10.55	Average



Test Engineer :	Amos Zhang	Temperature :	25.3~26.2°C
		Relative Humidity :	38~40%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral



Site : CO01-KS
 Condition : FCC PART 15E TWO-LISN-CN02-N NEUTRAL

	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
			dB	dBuV	dBuV	dB	dB	
1	0.585	39.56	-16.44	56.00	19.59	9.73	10.24	QP
2	0.585	28.76	-17.24	46.00	8.79	9.73	10.24	Average
3	0.668	41.16	-14.84	56.00	21.19	9.73	10.24	QP
4	0.668	32.26	-13.74	46.00	12.29	9.73	10.24	Average
5	0.694	40.16	-15.84	56.00	20.20	9.72	10.24	QP
6	0.694	28.56	-17.44	46.00	8.60	9.72	10.24	Average
7	16.486	46.70	-13.30	60.00	25.10	11.17	10.43	QP
8	16.486	33.80	-16.20	50.00	12.20	11.17	10.43	Average
9 *	17.944	49.85	-10.15	60.00	28.10	11.29	10.46	QP
10	17.944	36.95	-13.05	50.00	15.20	11.29	10.46	Average
11	20.486	40.57	-19.43	60.00	18.60	11.47	10.50	QP
12	20.486	32.27	-17.73	50.00	10.30	11.47	10.50	Average

Note:

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



Appendix C. Radiated Spurious Emission

Band 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		5145.08	57.2	-16.8	74	43.58	34	12.15	32.53	151	359	P	H
		5149.76	47.17	-6.83	54	33.55	34	12.15	32.53	151	359	A	H
		5180	107.38	-----	-----	93.63	34.13	12.16	32.54	151	359	P	H
		5180	101.31	-----	-----	87.56	34.13	12.16	32.54	151	359	A	H
		5148.46	53.91	-20.09	74	40.29	34	12.15	32.53	242	113	P	V
		5148.2	45.51	-8.49	54	31.89	34	12.15	32.53	242	113	A	V
		5180	104.75	-----	-----	91	34.13	12.16	32.54	242	113	P	V
		5180	97.78	-----	-----	84.03	34.13	12.16	32.54	242	113	A	V
802.11a CH 44 5220MHz		5130	53.05	-20.95	74	39.46	33.97	12.15	32.53	158	360	P	H
		5148.2	45.24	-8.76	54	31.62	34	12.15	32.53	158	360	A	H
		5220	109.2	-----	-----	95.35	34.23	12.17	32.55	158	360	P	H
		5220	102.66	-----	-----	88.81	34.23	12.17	32.55	158	360	A	H
		5372.64	53.7	-20.3	74	39.66	34.4	12.21	32.57	158	360	P	H
		5358.72	45.61	-8.39	54	31.57	34.4	12.21	32.57	158	360	A	H
		5114.92	53.38	-20.62	74	39.83	33.93	12.14	32.52	242	113	P	V
		5138.32	44.75	-9.25	54	31.16	33.97	12.15	32.53	242	113	A	V
		5220	104.54	-----	-----	90.69	34.23	12.17	32.55	242	113	P	V
		5220	97.25	-----	-----	83.4	34.23	12.17	32.55	242	113	A	V
		5386.8	54.02	-19.98	74	39.98	34.4	12.22	32.58	242	113	P	V
	5364.24	43.76	-10.24	54	29.72	34.4	12.21	32.57	242	113	A	V	



802.11a CH 48 5240MHz		5087.36	53.42	-20.58	74	39.94	33.87	12.13	32.52	140	360	P	H
		5136.76	44.87	-9.13	54	31.28	33.97	12.15	32.53	140	360	A	H
		5240	108.53	-----	-----	94.63	34.27	12.18	32.55	140	360	P	H
		5240	102.64	-----	-----	88.74	34.27	12.18	32.55	140	360	A	H
		5361.12	54.82	-19.18	74	40.78	34.4	12.21	32.57	140	360	P	H
		5356.32	45.78	-8.22	54	31.74	34.4	12.21	32.57	140	360	A	H
		5070.46	52.78	-21.22	74	39.34	33.83	12.13	32.52	259	120	P	V
		5145.34	44.5	-9.5	54	30.88	34	12.15	32.53	259	120	A	V
		5240	105.27	-----	-----	91.37	34.27	12.18	32.55	259	120	P	V
		5240	97.3	-----	-----	83.4	34.27	12.18	32.55	259	120	A	V
		5442.24	52.81	-21.19	74	38.77	34.4	12.23	32.59	259	120	P	V
		5353.92	44.01	-9.99	54	29.97	34.4	12.21	32.57	259	120	A	V

Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												
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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	49.56	-18.74	68.3	47.91	37.39	15.31	51.05	-	-	P	H
		15540	50.49	-23.51	74	45.31	40.08	17.76	52.66	-	-	P	H
		10360	49.65	-18.65	68.3	48	37.39	15.31	51.05	-	-	P	V
		15540	50.53	-23.47	74	45.35	40.08	17.76	52.66	-	-	P	V
802.11a CH 44 5220MHz		10440	50.05	-18.25	68.3	48.35	37.45	15.32	51.07	-	-	P	H
		15660	50.53	-23.47	74	45.39	40.19	17.83	52.88	-	-	P	H
		10440	49.58	-18.72	68.3	47.88	37.45	15.32	51.07	-	-	P	V
		15660	50.11	-23.89	74	44.97	40.19	17.83	52.88	-	-	P	V
802.11a CH 48 5240MHz		10480	49.89	-18.41	68.3	48.17	37.49	15.32	51.09	-	-	P	H
		15720	50.27	-23.73	74	45.15	40.25	17.87	53	-	-	P	H
		10480	49.45	-18.85	68.3	47.73	37.49	15.32	51.09	-	-	P	V
		15720	50.36	-23.64	74	45.24	40.25	17.87	53	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz
WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 36 5180MHz		5139.88	58.49	-15.51	74	44.87	34	12.15	32.53	169	360	P	H
		5148.72	48.09	-5.91	54	34.47	34	12.15	32.53	169	360	A	H
		5180	108.3	-----	-----	94.55	34.13	12.16	32.54	169	360	P	H
		5180	102.51	-----	-----	88.76	34.13	12.16	32.54	169	360	A	H
		5149.9	55.9	-18.1	74	42.28	34	12.15	32.53	262	111	P	V
		5150	47.13	-6.87	54	33.51	34	12.15	32.53	262	111	A	V
		5180	106.96	-----	-----	93.21	34.13	12.16	32.54	262	111	P	V
802.11n HT20 CH 44 5220MHz		5180	100.41	-----	-----	86.66	34.13	12.16	32.54	262	111	A	V
		5131.3	55.01	-18.99	74	41.42	33.97	12.15	32.53	166	347	P	H
		5144.82	45.45	-8.55	54	31.83	34	12.15	32.53	166	347	A	H
		5220	109.35	-----	-----	95.5	34.23	12.17	32.55	166	347	P	H
		5220	102.83	-----	-----	88.98	34.23	12.17	32.55	166	347	A	H
		5379.12	54.92	-19.08	74	40.88	34.4	12.22	32.58	166	347	P	H
		5369.76	45.57	-8.43	54	31.53	34.4	12.21	32.57	166	347	A	H
		5125.32	54.35	-19.65	74	40.76	33.97	12.15	32.53	165	117	P	V
		5147.42	45.13	-8.87	54	31.51	34	12.15	32.53	165	117	A	V
		5220	106.38	-----	-----	92.53	34.23	12.17	32.55	165	117	P	V
		5220	100.07	-----	-----	86.22	34.23	12.17	32.55	165	117	A	V
	5371.44	52.45	-21.55	74	38.41	34.4	12.21	32.57	165	117	P	V	
	5354.64	44.06	-9.94	54	30.02	34.4	12.21	32.57	165	117	A	V	



802.11n HT20 CH 48 5240MHz		5057.46	53.79	-20.21	74	40.34	33.83	12.13	32.51	152	349	P	H
		5128.18	45	-9	54	31.41	33.97	12.15	32.53	152	349	A	H
		5240	108.23	-----	-----	94.33	34.27	12.18	32.55	152	349	P	H
		5240	102.14	-----	-----	88.24	34.27	12.18	32.55	152	349	A	H
		5402.16	55.73	-18.27	74	41.69	34.4	12.22	32.58	152	349	P	H
		5353.44	46.3	-7.7	54	32.26	34.4	12.21	32.57	152	349	A	H
		5105.56	55.43	-18.57	74	41.88	33.93	12.14	32.52	178	117	P	V
		5147.42	45.01	-8.99	54	31.39	34	12.15	32.53	178	117	A	V
		5240	105.79	-----	-----	91.89	34.27	12.18	32.55	178	117	P	V
		5240	99.59	-----	-----	85.69	34.27	12.18	32.55	178	117	A	V
		5415.12	52.46	-21.54	74	38.41	34.4	12.23	32.58	178	117	P	V
	5352	44.64	-9.36	54	30.6	34.4	12.21	32.57	178	117	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 HT20 CH 36		10360	49.1	-19.2	68.3	47.45	37.39	15.31	51.05	-	-	P	H
		15540	49.01	-24.99	74	43.83	40.08	17.76	52.66	-	-	P	H
5180MHz		10360	49.94	-18.36	68.3	48.29	37.39	15.31	51.05	-	-	P	V
		15540	49.3	-24.7	74	44.12	40.08	17.76	52.66	-	-	P	V
802.11n HT20 CH 44		10440	48.91	-19.39	68.3	47.21	37.45	15.32	51.07	-	-	P	H
		15660	49.65	-24.35	74	44.51	40.19	17.83	52.88	-	-	P	H
5220MHz		10440	48.99	-19.31	68.3	47.29	37.45	15.32	51.07	-	-	P	V
		15660	50.21	-23.79	74	45.07	40.19	17.83	52.88	-	-	P	V
802.11n HT20 CH 48		10480	48.76	-19.54	68.3	47.04	37.49	15.32	51.09	-	-	P	H
		15720	49.63	-24.37	74	44.51	40.25	17.87	53	-	-	P	H
5240MHz		10480	49.04	-19.26	68.3	47.32	37.49	15.32	51.09	-	-	P	V
		15720	49.05	-24.95	74	43.93	40.25	17.87	53	-	-	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		5147.16	58.5	-15.5	74	44.88	34	12.15	32.53	232	360	P	H
		5150	48.2	-5.8	54	34.58	34	12.15	32.53	232	360	A	H
		5190	102.67	-----	-----	88.92	34.13	12.16	32.54	232	360	P	H
		5190	96.62	-----	-----	82.87	34.13	12.16	32.54	232	360	A	H
		5439.84	52.09	-21.91	74	38.05	34.4	12.23	32.59	232	360	P	H
		5356.68	44.61	-9.39	54	30.57	34.4	12.21	32.57	232	360	A	H
		5135.2	53.78	-20.22	74	40.19	33.97	12.15	32.53	261	116	P	V
		5149.5	46.73	-7.27	54	33.11	34	12.15	32.53	261	116	A	V
		5190	99.35	-----	-----	85.6	34.13	12.16	32.54	261	116	P	V
		5190	93.25	-----	-----	79.5	34.13	12.16	32.54	261	116	A	V
		5429.76	51.49	-22.51	74	37.45	34.4	12.23	32.59	261	116	P	V
		5451.6	44.34	-9.66	54	30.29	34.4	12.24	32.59	261	116	A	V
802.11n HT40 CH 46 5230MHz		5134.42	53.14	-20.86	74	39.55	33.97	12.15	32.53	166	354	P	H
		5142.48	45.34	-8.66	54	31.72	34	12.15	32.53	166	354	A	H
		5230	103.08	-----	-----	89.19	34.27	12.17	32.55	166	354	P	H
		5230	96.97	-----	-----	83.08	34.27	12.17	32.55	166	354	A	H
		5381.52	52.82	-21.18	74	38.78	34.4	12.22	32.58	166	354	P	H
		5357.28	45	-9	54	30.96	34.4	12.21	32.57	166	354	A	H
		5111.28	54.45	-19.55	74	40.9	33.93	12.14	32.52	269	114	P	V
		5125.84	45.57	-8.43	54	31.98	33.97	12.15	32.53	269	114	A	V
		5230	100.19	-----	-----	86.3	34.27	12.17	32.55	269	114	P	V
		5230	94.1	-----	-----	80.21	34.27	12.17	32.55	269	114	A	V
	5360.4	51.55	-22.45	74	37.51	34.4	12.21	32.57	269	114	P	V	
	5351.52	44.39	-9.61	54	30.35	34.4	12.21	32.57	269	114	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 HT40 CH 38 5190MHz		10380	49.18	-19.12	68.3	47.5	37.41	15.32	51.05	-	-	P	H
		15570	49.87	-24.13	74	44.7	40.11	17.78	52.72	-	-	P	H
		10380	49.35	-18.95	68.3	47.67	37.41	15.32	51.05	-	-	P	V
		15570	49.97	-24.03	74	44.8	40.11	17.78	52.72	-	-	P	V
802.11n HT40 CH 46 5230MHz		10460	48.82	-19.48	68.3	47.12	37.46	15.32	51.08	-	-	P	H
		15690	49.26	-24.74	74	44.13	40.22	17.85	52.94	-	-	P	H
		10460	49.12	-19.18	68.3	47.42	37.46	15.32	51.08	-	-	P	V
		15690	48.92	-25.08	74	43.79	40.22	17.85	52.94	-	-	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		5143.78	53.78	-20.22	74	40.16	34	12.15	32.53	213	360	P	H
		5149.76	50.68	-3.32	54	37.06	34	12.15	32.53	213	360	A	H
		5210	99.86	-----	-----	86	34.23	12.17	32.54	213	360	P	H
		5210	93.75	-----	-----	79.89	34.23	12.17	32.54	213	360	A	H
		5441.28	52.81	-21.19	74	38.77	34.4	12.23	32.59	213	360	P	H
		5397.6	46.11	-7.89	54	32.07	34.4	12.22	32.58	213	360	A	H
		5136.24	53.84	-20.16	74	40.25	33.97	12.15	32.53	246	111	P	V
		5146.64	48.6	-5.4	54	34.98	34	12.15	32.53	246	111	A	V
		5210	96.66	-----	-----	82.8	34.23	12.17	32.54	246	111	P	V
		5210	90.61	-----	-----	76.75	34.23	12.17	32.54	246	111	A	V
		5447.28	51.84	-22.16	74	37.79	34.4	12.24	32.59	246	111	P	V
	5435.52	45.63	-8.37	54	31.59	34.4	12.23	32.59	246	111	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 VHT80 CH 42 5210MHz		10420	49.8	-18.5	68.3	48.12	37.43	15.32	51.07	-	-	P	H
		15630	49.87	-24.13	74	44.73	40.17	17.82	52.85	-	-	P	H
		10420	50.96	-17.34	68.3	49.28	37.43	15.32	51.07	-	-	P	V
		15630	49.67	-24.33	74	44.53	40.17	17.82	52.85	-	-	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		5113.1	52.93	-21.07	74	39.38	33.93	12.14	32.52	152	360	P	H
		5147.16	44.89	-9.11	54	31.27	34	12.15	32.53	152	360	A	H
		5260	109.62	-----	-----	95.66	34.33	12.18	32.55	152	360	P	H
		5260	103.46	-----	-----	89.5	34.33	12.18	32.55	152	360	A	H
		5364.24	54.41	-19.59	74	40.37	34.4	12.21	32.57	152	360	P	H
		5355.36	46.01	-7.99	54	31.97	34.4	12.21	32.57	152	360	A	H
		5094.9	53.13	-20.87	74	39.61	33.9	12.14	32.52	281	119	P	V
		5128.96	44.53	-9.47	54	30.94	33.97	12.15	32.53	281	119	A	V
		5260	105.84	-----	-----	91.88	34.33	12.18	32.55	281	119	P	V
		5260	97.11	-----	-----	83.15	34.33	12.18	32.55	281	119	A	V
		5385.84	52.73	-21.27	74	38.69	34.4	12.22	32.58	281	119	P	V
		5353.92	44.39	-9.61	54	30.35	34.4	12.21	32.57	281	119	A	V
802.11a CH 60 5300MHz		5126.7	54.28	-19.72	74	40.69	33.97	12.15	32.53	152	360	P	H
		5129.15	44.93	-9.07	54	31.34	33.97	12.15	32.53	152	360	A	H
		5300	110.35	-----	-----	96.32	34.4	12.19	32.56	152	360	P	H
		5300	104.02	-----	-----	89.99	34.4	12.19	32.56	152	360	A	H
		5364	55.7	-18.3	74	41.66	34.4	12.21	32.57	152	360	P	H
		5356.56	47.37	-6.63	54	33.33	34.4	12.21	32.57	152	360	A	H
		5141.05	53.86	-20.14	74	40.24	34	12.15	32.53	240	114	P	V
		5133	44.6	-9.4	54	31.01	33.97	12.15	32.53	240	114	A	V
		5300	106.01	-----	-----	91.98	34.4	12.19	32.56	240	114	P	V
		5300	97.8	-----	-----	83.77	34.4	12.19	32.56	240	114	A	V
		5360.88	53.41	-20.59	74	39.37	34.4	12.21	32.57	240	114	P	V
		5350.32	44.68	-9.32	54	30.64	34.4	12.21	32.57	240	114	A	V



802.11a CH 64 5320MHz	5320	111.1	-----	-----	97.06	34.4	12.2	32.56	154	359	P	H
	5320	104.05	-----	-----	90.01	34.4	12.2	32.56	154	359	A	H
	5350.88	58.95	-15.05	74	44.91	34.4	12.21	32.57	154	359	P	H
	5353.76	49.88	-4.12	54	35.84	34.4	12.21	32.57	154	359	A	H
	5320	106.42	-----	-----	92.38	34.4	12.2	32.56	240	114	P	V
	5320	98.34	-----	-----	84.3	34.4	12.2	32.56	240	114	A	V
	5355.84	53.86	-20.14	74	39.82	34.4	12.21	32.57	240	114	P	V
	5350.4	45.7	-8.3	54	31.66	34.4	12.21	32.57	240	114	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	49.4	-18.9	68.3	47.63	37.51	15.37	51.11	-	-	P	H
		15780	49.97	-24.03	74	44.87	40.3	17.9	53.1	-	-	P	H
		10520	49.34	-18.96	68.3	47.57	37.51	15.37	51.11	-	-	P	V
		15780	49.87	-24.13	74	44.77	40.3	17.9	53.1	-	-	P	V
802.11a CH 60 5300MHz		10600	49.31	-24.69	74	47.36	37.56	15.55	51.16	-	-	P	H
		15900	49.47	-24.53	74	44.4	40.41	17.97	53.31	-	-	P	H
		10600	49.07	-24.93	74	47.12	37.56	15.55	51.16	-	-	P	V
		15900	50.65	-23.35	74	45.58	40.41	17.97	53.31	-	-	P	V
802.11a CH 64 5320MHz		10640	49.4	-24.6	74	47.35	37.58	15.65	51.18	-	-	P	H
		15960	49.77	-24.23	74	44.73	40.47	18.01	53.44	-	-	P	H
		10640	48.6	-25.4	74	46.55	37.58	15.65	51.18	-	-	P	V
		15960	50.82	-23.18	74	45.78	40.47	18.01	53.44	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 2 5250~5350MHz
WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 52 5260MHz		5143.78	53.43	-20.57	74	39.81	34	12.15	32.53	152	357	P	H
		5149.24	45.22	-8.78	54	31.6	34	12.15	32.53	152	357	A	H
		5260	109.04	-----	-----	95.08	34.33	12.18	32.55	152	357	P	H
		5260	102.75	-----	-----	88.79	34.33	12.18	32.55	152	357	A	H
		5366.16	55.2	-18.8	74	41.16	34.4	12.21	32.57	152	357	P	H
		5351.04	46.27	-7.73	54	32.23	34.4	12.21	32.57	152	357	A	H
		5143.78	53.94	-20.06	74	40.32	34	12.15	32.53	152	109	P	V
		5124.54	44.51	-9.49	54	30.93	33.97	12.14	32.53	152	109	A	V
		5260	105.12	-----	-----	91.16	34.33	12.18	32.55	152	109	P	V
		5260	98.75	-----	-----	84.79	34.33	12.18	32.55	152	109	A	V
		5363.76	52.36	-21.64	74	38.32	34.4	12.21	32.57	152	109	P	V
		5350.08	44.05	-9.95	54	30.01	34.4	12.21	32.57	152	109	A	V
802.11n HT20 CH 60 5300MHz		5128.1	54.2	-19.8	74	40.61	33.97	12.15	32.53	152	359	P	H
		5145.95	44.9	-9.1	54	31.28	34	12.15	32.53	152	359	A	H
		5300	110.55	-----	-----	96.52	34.4	12.19	32.56	152	359	P	H
		5300	104.19	-----	-----	90.16	34.4	12.19	32.56	152	359	A	H
		5350.32	59.91	-14.09	74	45.87	34.4	12.21	32.57	152	359	P	H
		5352.72	47.64	-6.36	54	33.6	34.4	12.21	32.57	152	359	A	H
		5134.75	53.03	-20.97	74	39.44	33.97	12.15	32.53	153	124	P	V
		5145.95	44.69	-9.31	54	31.07	34	12.15	32.53	153	124	A	V
		5300	105.96	-----	-----	91.93	34.4	12.19	32.56	153	124	P	V
		5300	99.7	-----	-----	85.67	34.4	12.19	32.56	153	124	A	V
	5352.72	52.97	-21.03	74	38.93	34.4	12.21	32.57	153	124	P	V	
	5352.48	44.88	-9.12	54	30.84	34.4	12.21	32.57	153	124	A	V	



802.11n HT20 CH 64 5320MHz		5320	109.96	-----	-----	95.92	34.4	12.2	32.56	165	359	P	H
		5320	103.9	-----	-----	89.86	34.4	12.2	32.56	165	359	A	H
		5354.24	63.08	-10.92	74	49.04	34.4	12.21	32.57	165	359	P	H
		5350.72	49.77	-4.23	54	35.73	34.4	12.21	32.57	165	359	A	H
		5320	105.54	-----	-----	91.5	34.4	12.2	32.56	154	121	P	V
		5320	99.47	-----	-----	85.43	34.4	12.2	32.56	154	121	A	V
		5350.08	61.77	-12.23	74	47.73	34.4	12.21	32.57	154	121	P	V
		5350.56	47.15	-6.85	54	33.11	34.4	12.21	32.57	154	121	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 2 5250~5350MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20		10520	48.61	-19.69	68.3	46.84	37.51	15.37	51.11	-	-	P	H
		15780	49.19	-24.81	74	44.09	40.3	17.9	53.1	-	-	P	H
5260MHz		10520	49.32	-18.98	68.3	47.55	37.51	15.37	51.11	-	-	P	V
		15780	48.56	-25.44	74	43.46	40.3	17.9	53.1	-	-	P	V
802.11n HT20		10600	49.28	-24.72	74	47.33	37.56	15.55	51.16	-	-	P	H
		15900	49.32	-24.68	74	44.25	40.41	17.97	53.31	-	-	P	H
		10600	49.3	-24.7	74	47.35	37.56	15.55	51.16	-	-	P	V
		15900	48.17	-25.83	74	43.1	40.41	17.97	53.31	-	-	P	V
5300MHz		10640	50.03	-23.97	74	47.98	37.58	15.65	51.18	-	-	P	H
		15960	48.64	-25.36	74	43.6	40.47	18.01	53.44	-	-	P	H
		10640	49.81	-24.19	74	47.76	37.58	15.65	51.18	-	-	P	V
		15960	48.35	-25.65	74	43.31	40.47	18.01	53.44	-	-	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		5090.65	53.22	-20.78	74	39.7	33.9	12.14	32.52	215	360	P	H
		5112.7	45.04	-8.96	54	31.49	33.93	12.14	32.52	215	360	A	H
		5270	103.64	-----	-----	89.67	34.33	12.19	32.55	215	360	P	H
		5270	97.54	-----	-----	83.57	34.33	12.19	32.55	215	360	A	H
		5351.52	54.07	-19.93	74	40.03	34.4	12.21	32.57	215	360	P	H
		5358.48	45.79	-8.21	54	31.75	34.4	12.21	32.57	215	360	A	H
		5066.85	53.69	-20.31	74	40.25	33.83	12.13	32.52	163	119	P	V
		5128.45	45.03	-8.97	54	31.44	33.97	12.15	32.53	163	119	A	V
		5270	100.17	-----	-----	86.2	34.33	12.19	32.55	163	119	P	V
		5270	94.15	-----	-----	80.18	34.33	12.19	32.55	163	119	A	V
		5449.44	52.94	-21.06	74	38.89	34.4	12.24	32.59	163	119	P	V
		5371.44	44.44	-9.56	54	30.4	34.4	12.21	32.57	163	119	A	V
	802.11n HT40 CH 62 5310MHz		5144.9	53.11	-20.89	74	39.49	34	12.15	32.53	182	360	P
		5126.7	45.29	-8.71	54	31.7	33.97	12.15	32.53	182	360	A	H
		5310	103.6	-----	-----	89.56	34.4	12.2	32.56	182	360	P	H
		5310	97.52	-----	-----	83.48	34.4	12.2	32.56	182	360	A	H
		5354.88	55.87	-18.13	74	41.83	34.4	12.21	32.57	182	360	P	H
		5351.28	47.77	-6.23	54	33.73	34.4	12.21	32.57	182	360	A	H
		5121.8	52.87	-21.13	74	39.33	33.93	12.14	32.53	164	119	P	V
		5133.35	45.05	-8.95	54	31.46	33.97	12.15	32.53	164	119	A	V
		5310	100.16	-----	-----	86.12	34.4	12.2	32.56	164	119	P	V
		5310	94.15	-----	-----	80.11	34.4	12.2	32.56	164	119	A	V
	5373.84	52.62	-21.38	74	38.58	34.4	12.21	32.57	164	119	P	V	
	5350.08	44.9	-9.1	54	30.86	34.4	12.21	32.57	164	119	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)

Table with 14 columns: 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). Rows include data for 802.11n HT40 CH 54 at 5270MHz and 802.11n HT40 CH 62 at 5310MHz.

- 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		5130.2	52.2	-21.8	74	38.61	33.97	12.15	32.53	230	355	P	H
		5147	46.82	-7.18	54	33.2	34	12.15	32.53	230	355	A	H
		5290	99.62	-----	-----	85.62	34.37	12.19	32.56	230	355	P	H
		5290	93.57	-----	-----	79.57	34.37	12.19	32.56	230	355	A	H
		5378.4	55.73	-18.27	74	41.69	34.4	12.22	32.58	230	355	P	H
		5351.28	49.51	-4.49	54	35.47	34.4	12.21	32.57	230	355	A	H
		5145.25	52.4	-21.6	74	38.78	34	12.15	32.53	236	122	P	V
		5100.8	46.48	-7.52	54	32.96	33.9	12.14	32.52	236	122	A	V
		5290	96.47	-----	-----	82.47	34.37	12.19	32.56	236	122	P	V
		5290	90.42	-----	-----	76.42	34.37	12.19	32.56	236	122	A	V
		5393.76	53.31	-20.69	74	39.27	34.4	12.22	32.58	236	122	P	V
		5355.84	47.13	-6.87	54	33.09	34.4	12.21	32.57	236	122	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 VHT80 CH 58 5290MHz		10580	49.58	-18.72	68.3	47.67	37.55	15.51	51.15	-	-	P	H
		15870	49.61	-24.39	74	44.55	40.39	17.95	53.28	-	-	P	H
		10580	49.24	-19.06	68.3	47.33	37.55	15.51	51.15	-	-	P	V
		15870	49.38	-24.62	74	44.32	40.39	17.95	53.28	-	-	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)

Table with 14 columns: WIFI, Note, Frequency, Level, Over, Limit, Read, Antenna, Cable, Preamp, Ant, Table, Peak, Pol. It contains two main sections of data for 802.11a channels CH 100 and CH 116.



802.11a CH 140 5700MHz		5700	108.84	-----	-----	94.75	34.4	12.29	32.6	100	352	P	H
		5700	102.51	-----	-----	88.42	34.4	12.29	32.6	100	352	A	H
		5726.44	64.05	-4.25	68.3	49.88	34.47	12.3	32.6	100	352	P	H
		5700	104	-----	-----	89.91	34.4	12.29	32.6	192	145	P	V
		5700	97.81	-----	-----	83.72	34.4	12.29	32.6	192	145	A	V
		5725.64	61.87	-6.43	68.3	47.7	34.47	12.3	32.6	192	145	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - 5470~5725MHz
WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 100 5500MHz		11000	49.32	-24.68	74	46.43	37.8	16.49	51.4	-	-	P	H
		16500	50.12	-18.18	68.3	43.31	41.31	18.2	52.7	-	-	P	H
		11000	49.31	-24.69	74	46.42	37.8	16.49	51.4	-	-	P	V
		16500	49.52	-18.78	68.3	42.71	41.31	18.2	52.7	-	-	P	V
802.11a CH 116 5580MHz		11160	49.27	-24.73	74	46.1	37.94	16.5	51.27	-	-	P	H
		16740	48.66	-19.64	68.3	41.82	41.69	18.28	53.13	-	-	P	H
		11160	49.89	-24.11	74	46.72	37.94	16.5	51.27	-	-	P	V
		16740	47.97	-20.33	68.3	41.13	41.69	18.28	53.13	-	-	P	V
802.11a CH 140 5700MHz		11400	49.74	-24.26	74	46.17	38.13	16.52	51.08	-	-	P	H
		17100	49.77	-18.53	68.3	42.88	42	18.41	53.52	-	-	P	H
		11400	49.47	-24.53	74	45.9	38.13	16.52	51.08	-	-	P	V
		17100	49.93	-18.37	68.3	43.04	42	18.41	53.52	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 100 5500MHz		5453.52	57.48	-16.52	74	43.43	34.4	12.24	32.59	161	356	P	H
		5469.52	61.45	-6.85	68.3	47.4	34.4	12.24	32.59	161	356	P	H
		5456.72	47.66	-6.34	54	33.61	34.4	12.24	32.59	161	356	A	H
		5500	110.72	-----	-----	96.67	34.4	12.25	32.6	161	356	P	H
		5500	104.59	-----	-----	90.54	34.4	12.25	32.6	161	356	A	H
		5422.64	52.63	-21.37	74	38.58	34.4	12.23	32.58	243	143	P	V
		5469.84	59.51	-8.79	68.3	45.46	34.4	12.24	32.59	243	143	P	V
		5458.8	44.9	-9.1	54	30.85	34.4	12.24	32.59	243	143	A	V
		5500	105	-----	-----	90.95	34.4	12.25	32.6	243	143	P	V
	5500	98.72	-----	-----	84.67	34.4	12.25	32.6	243	143	A	V	
802.11n HT20 CH 116 5580MHz		5388.88	52.67	-21.33	74	38.63	34.4	12.22	32.58	133	357	P	H
		5464.24	52.55	-15.75	68.3	38.5	34.4	12.24	32.59	133	357	P	H
		5458	44.77	-9.23	54	30.72	34.4	12.24	32.59	133	357	A	H
		5580	109.19	-----	-----	95.22	34.3	12.27	32.6	133	357	P	H
		5580	103.14	-----	-----	89.17	34.3	12.27	32.6	133	357	A	H
		5734.76	53.35	-14.95	68.3	39.15	34.5	12.3	32.6	133	357	P	H
		5442.16	52.78	-21.22	74	38.74	34.4	12.23	32.59	222	139	P	V
		5468.08	51.18	-17.12	68.3	37.13	34.4	12.24	32.59	222	139	P	V
		5454.88	43.56	-10.44	54	29.51	34.4	12.24	32.59	222	139	A	V
		5580	103.32	-----	-----	89.35	34.3	12.27	32.6	222	139	P	V
		5580	97.26	-----	-----	83.29	34.3	12.27	32.6	222	139	A	V
	5727.515	52.98	-15.32	68.3	38.81	34.47	12.3	32.6	222	139	P	V	



802.11n HT20 CH 140 5700MHz	5700	108.61	-----	-----	94.52	34.4	12.29	32.6	216	355	P	H
	5700	102.43	-----	-----	88.34	34.4	12.29	32.6	216	355	A	H
	5728.76	61.07	-7.23	68.3	46.9	34.47	12.3	32.6	216	355	P	H
	5700	103.18	-----	-----	89.09	34.4	12.29	32.6	219	141	P	V
	5700	97.03	-----	-----	82.94	34.4	12.29	32.6	219	141	A	V
	5734.12	57.33	-10.97	68.3	43.16	34.47	12.3	32.6	219	141	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	50.18	-23.82	74	47.29	37.8	16.49	51.4	-	-	P	H
		16500	50.33	-17.97	68.3	43.52	41.31	18.2	52.7	-	-	P	H
802.11n HT20 CH 116 5580MHz		11000	50.18	-23.82	74	47.29	37.8	16.49	51.4	-	-	P	V
		16500	49.94	-18.36	68.3	43.13	41.31	18.2	52.7	-	-	P	V
802.11n HT20 CH 140 5700MHz		11160	49.98	-24.02	74	46.81	37.94	16.5	51.27	-	-	P	H
		16740	49.3	-19	68.3	42.46	41.69	18.28	53.13	-	-	P	H
802.11n HT20 CH 140 5700MHz		11160	50.66	-23.34	74	47.49	37.94	16.5	51.27	-	-	P	V
		16740	48.67	-19.63	68.3	41.83	41.69	18.28	53.13	-	-	P	V
802.11n HT20 CH 140 5700MHz		11400	50.7	-23.3	74	47.13	38.13	16.52	51.08	-	-	P	H
		17100	49.63	-18.67	68.3	42.74	42	18.41	53.52	-	-	P	H
802.11n HT20 CH 140 5700MHz		11400	50.13	-23.87	74	46.56	38.13	16.52	51.08	-	-	P	V
		17100	49.84	-18.46	68.3	42.95	42	18.41	53.52	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 102 5510MHz		5459.44	55.33	-18.67	74	41.28	34.4	12.24	32.59	165	360	P	H
		5462.08	54.51	-13.79	68.3	40.46	34.4	12.24	32.59	165	360	P	H
		5458.96	48.51	-5.49	54	34.46	34.4	12.24	32.59	165	360	A	H
		5510	103.18	-----	-----	89.13	34.4	12.25	32.6	165	360	P	H
		5510	97.16	-----	-----	83.11	34.4	12.25	32.6	165	360	A	H
		5730.665	52.56	-15.74	68.3	38.39	34.47	12.3	32.6	165	360	P	H
		5352.88	52.17	-21.83	74	38.13	34.4	12.21	32.57	221	141	P	V
		5467.12	54.2	-14.1	68.3	40.15	34.4	12.24	32.59	221	141	P	V
		5455.84	45.12	-8.88	54	31.07	34.4	12.24	32.59	221	141	A	V
		5510	97.28	-----	-----	83.23	34.4	12.25	32.6	221	141	P	V
		5510	91.26	-----	-----	77.21	34.4	12.25	32.6	221	141	A	V
		5757.125	51.91	-16.39	68.3	37.64	34.57	12.3	32.6	221	141	P	V
802.11n HT40 CH 110 5550MHz		5450.32	52.94	-21.06	74	38.89	34.4	12.24	32.59	204	360	P	H
		5465.2	54.18	-14.12	68.3	40.13	34.4	12.24	32.59	204	360	P	H
		5458.72	45.27	-8.73	54	31.22	34.4	12.24	32.59	204	360	A	H
		5550	102.25	-----	-----	88.29	34.3	12.26	32.6	204	360	P	H
		5550	96.2	-----	-----	82.24	34.3	12.26	32.6	204	360	A	H
		5730.665	51.81	-16.49	68.3	37.64	34.47	12.3	32.6	204	360	P	H
		5428	52.02	-21.98	74	37.98	34.4	12.23	32.59	219	143	P	V
		5466.4	51.9	-16.4	68.3	37.85	34.4	12.24	32.59	219	143	P	V
		5456.8	44.41	-9.59	54	30.36	34.4	12.24	32.59	219	143	A	V
		5550	97.46	-----	-----	83.5	34.3	12.26	32.6	219	143	P	V
		5550	91.45	-----	-----	77.49	34.3	12.26	32.6	219	143	A	V
		5728.775	52.83	-15.47	68.3	38.66	34.47	12.3	32.6	219	143	P	V



802.11n HT40 CH 134 5670MHz		5357.35	52.41	-21.59	74	38.37	34.4	12.21	32.57	204	360	P	H
		5460.25	51.66	-16.64	68.3	37.61	34.4	12.24	32.59	204	360	P	H
		5450.45	44.19	-9.81	54	30.14	34.4	12.24	32.59	204	360	A	H
		5670	101.92	-----	-----	87.84	34.4	12.28	32.6	204	360	P	H
		5670	95.89	-----	-----	81.81	34.4	12.28	32.6	204	360	A	H
		5730.875	57.02	-11.28	68.3	42.85	34.47	12.3	32.6	204	360	P	H
		5403.9	50.86	-23.14	74	36.82	34.4	12.22	32.58	214	124	P	V
		5466.55	51.4	-16.9	68.3	37.35	34.4	12.24	32.59	214	124	P	V
		5447.65	43.78	-10.22	54	29.73	34.4	12.24	32.59	214	124	A	V
		5670	95.97	-----	-----	81.89	34.4	12.28	32.6	214	124	P	V
		5670	89.87	-----	-----	75.79	34.4	12.28	32.6	214	124	A	V
		5745.05	53.88	-14.42	68.3	39.68	34.5	12.3	32.6	214	124	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 102		11020	50.1	-23.9	74	47.19	37.81	16.49	51.39	-	-	P	H
		16530	50.17	-18.13	68.3	43.35	41.37	18.21	52.76	-	-	P	H
5510MHz		11020	50.97	-23.03	74	48.06	37.81	16.49	51.39	-	-	P	V
		16530	50.88	-17.42	68.3	44.06	41.37	18.21	52.76	-	-	P	V
802.11n HT40 CH 110		11100	50.06	-23.94	74	47	37.88	16.5	51.32	-	-	P	H
		16650	50.42	-17.88	68.3	43.59	41.56	18.25	52.98	-	-	P	H
		11100	50.26	-23.74	74	47.2	37.88	16.5	51.32	-	-	P	V
		16650	50.8	-17.5	68.3	43.97	41.56	18.25	52.98	-	-	P	V
802.11n HT40 CH 134		11340	50.94	-23.06	74	47.48	38.07	16.52	51.13	-	-	P	H
		17010	50.44	-17.86	68.3	43.58	42.08	18.37	53.59	-	-	P	H
		11340	49.91	-24.09	74	46.45	38.07	16.52	51.13	-	-	P	V
		17010	50.8	-17.5	68.3	43.94	42.08	18.37	53.59	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - 5470~5725MHz
WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 106 5530MHz		5452.48	56.5	-17.5	74	42.45	34.4	12.24	32.59	230	357	P	H
		5468.56	57.16	-11.14	68.3	43.11	34.4	12.24	32.59	230	357	P	H
		5458.24	49.93	-4.07	54	35.88	34.4	12.24	32.59	230	357	A	H
		5530	99.23	-----	-----	85.2	34.37	12.26	32.6	230	357	P	H
		5530	93.14	-----	-----	79.11	34.37	12.26	32.6	230	357	A	H
		5733.815	52.72	-15.58	68.3	38.55	34.47	12.3	32.6	230	357	P	H
		5457.76	53.52	-20.48	74	39.47	34.4	12.24	32.59	223	131	P	V
		5465.44	52.79	-15.51	68.3	38.74	34.4	12.24	32.59	223	131	P	V
		5458.48	47.2	-6.8	54	33.15	34.4	12.24	32.59	223	131	A	V
		5530	94.05	-----	-----	80.02	34.37	12.26	32.6	223	131	P	V
		5530	88	-----	-----	73.97	34.37	12.26	32.6	223	131	A	V
		5755.865	52.3	-16	68.3	38.03	34.57	12.3	32.6	223	131	P	V
802.11ac VHT80 CH 122 5610MHz		5368.72	52.05	-21.95	74	38.01	34.4	12.21	32.57	218	357	P	H
		5460.64	51.78	-16.52	68.3	37.73	34.4	12.24	32.59	218	357	P	H
		5435.68	46.18	-7.82	54	32.14	34.4	12.23	32.59	218	357	A	H
		5610	99.18	-----	-----	85.21	34.3	12.27	32.6	218	357	P	H
		5610	93.12	-----	-----	79.15	34.3	12.27	32.6	218	357	A	H
		5736.3	52.82	-15.48	68.3	38.62	34.5	12.3	32.6	218	357	P	H
		5389.6	52.14	-21.86	74	38.1	34.4	12.22	32.58	224	138	P	V
		5468.08	50.76	-17.54	68.3	36.71	34.4	12.24	32.59	224	138	P	V
		5412.16	45.29	-8.71	54	31.24	34.4	12.23	32.58	224	138	A	V
		5610	94.03	-----	-----	80.06	34.3	12.27	32.6	224	138	P	V
	5610	87.83	-----	-----	73.86	34.3	12.27	32.6	224	138	A	V	
	5759.575	51.95	-16.35	68.3	37.68	34.57	12.3	32.6	224	138	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		11060	50.46	-23.54	74	47.47	37.85	16.49	51.35	-	-	P	H
		16590	50.58	-17.72	68.3	43.76	41.45	18.23	52.86	-	-	P	H
CH 106 5530MHz		11060	50.65	-23.35	74	47.66	37.85	16.49	51.35	-	-	P	V
		16590	50.82	-17.48	68.3	44	41.45	18.23	52.86	-	-	P	V
802.11ac VHT80 CH 122 5610MHz		11220	50.46	-23.54	74	47.2	37.98	16.51	51.23	-	-	P	H
		16830	49.86	-18.44	68.3	43.01	41.83	18.31	53.29	-	-	P	H
		11220	50.74	-23.26	74	47.48	37.98	16.51	51.23	-	-	P	V
		16830	49.36	-18.94	68.3	42.51	41.83	18.31	53.29	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Straddle Channel

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	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 144 5720MHz		5353.85	52.48	-21.52	74	38.44	34.4	12.21	32.57	146	360	P	H
		5468.8	50.62	-17.68	68.3	36.57	34.4	12.24	32.59	146	360	P	H
		5720	106.36	-----	-----	92.2	34.47	12.29	32.6	146	360	P	H
		5857.1	53.54	-14.76	68.3	38.95	34.87	12.32	32.6	146	360	P	H
		5361.55	45.33	-8.67	54	31.29	34.4	12.21	32.57	146	360	A	H
		5720	101.3	-----	-----	87.14	34.47	12.29	32.6	146	360	A	H
		5386.85	52.81	-21.19	74	38.77	34.4	12.22	32.58	231	139	P	V
		5464.4	50.33	-17.97	68.3	36.28	34.4	12.24	32.59	231	139	P	V
		5720	101.61	-----	-----	87.45	34.47	12.29	32.6	231	139	P	V
		5880.2	52.02	-16.28	68.3	37.36	34.93	12.33	32.6	231	139	P	V
		5380.25	45.38	-8.62	54	31.34	34.4	12.22	32.58	231	139	A	V
		5720	96.66	-----	-----	82.5	34.47	12.29	32.6	231	139	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 - Straddle Channel

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant.	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 144 5720MHz		11440	49.59	-24.41	74	27	38.15	16.53	32.09	-	-	P	H
		17160	50.2	-18.1	68.3	24.31	41.93	18.43	34.47	-	-	P	H
		11440	50.54	-23.46	74	27.95	38.15	16.53	32.09	-	-	P	V
		17160	50.57	-17.73	68.3	24.68	41.93	18.43	34.47	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 2 - Straddle Channel
WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 144 5720MHz		5442.4	52.22	-21.78	74	38.18	34.4	12.23	32.59	136	314	P	H
		5460	51.57	-16.73	68.3	37.52	34.4	12.24	32.59	136	314	P	H
		5720	106.98	-----	-----	92.82	34.47	12.29	32.6	136	314	P	H
		5864.8	53.15	-15.15	68.3	38.56	34.87	12.32	32.6	136	314	P	H
		5444.05	45.2	-8.8	54	31.16	34.4	12.23	32.59	136	314	A	H
		5720	101.71	-----	-----	87.55	34.47	12.29	32.6	136	314	A	H
		5356.6	51.15	-22.85	74	37.11	34.4	12.21	32.57	138	142	P	V
		5463.85	50.72	-17.58	68.3	36.67	34.4	12.24	32.59	138	142	P	V
		5720	100.85	-----	-----	86.69	34.47	12.29	32.6	138	142	P	V
		5890.65	52.42	-15.88	68.3	37.69	35	12.33	32.6	138	142	P	V
		5398.95	45.21	-8.79	54	31.17	34.4	12.22	32.58	138	142	A	V
		5720	96.04	-----	-----	81.88	34.47	12.29	32.6	138	142	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 - 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	50.65	-23.35	74	28.06	38.15	16.53	32.09	-	-	P	H
		17160	50.54	-17.76	68.3	24.65	41.93	18.43	34.47	-	-	P	H
		11440	50.15	-23.85	74	27.56	38.15	16.53	32.09	-	-	P	V
		17160	50.9	-17.4	68.3	25.01	41.93	18.43	34.47	-	-	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 (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 142 5710MHz		5453.4	51.47	-22.53	74	37.42	34.4	12.24	32.59	143	349	P	H
		5464.4	53.88	-14.42	68.3	39.83	34.4	12.24	32.59	143	349	P	H
		5710	101.68	-----	-----	87.56	34.43	12.29	32.6	143	349	P	H
		5863.15	54.85	-13.45	68.3	40.26	34.87	12.32	32.6	143	349	P	H
		5450.1	45.63	-8.37	54	31.58	34.4	12.24	32.59	143	349	A	H
		5710	96.51	-----	-----	82.39	34.43	12.29	32.6	143	349	A	H
		5413.25	51.26	-22.74	74	37.21	34.4	12.23	32.58	140	148	P	V
		5460	50.2	-18.1	68.3	36.15	34.4	12.24	32.59	140	148	P	V
		5710	95.45	-----	-----	81.33	34.43	12.29	32.6	140	148	P	V
		5861.5	52.09	-16.21	68.3	37.5	34.87	12.32	32.6	140	148	P	V
		5455.6	45.23	-8.77	54	31.18	34.4	12.24	32.59	140	148	A	V
	5710	90.44	-----	-----	76.32	34.43	12.29	32.6	140	148	A	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	50	-24	74	46.41	38.14	16.52	51.07	-	-	P	H
		17130	51.21	-17.09	68.3	44.32	41.96	18.42	53.49	-	-	P	H
		11420	50.19	-23.81	74	46.6	38.14	16.52	51.07	-	-	P	V
		17130	50.71	-17.59	68.3	43.82	41.96	18.42	53.49	-	-	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 (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 138 5690MHz		5455.6	52.36	-21.64	74	38.31	34.4	12.24	32.59	122	354	P	H
		5464.4	51.18	-17.12	68.3	37.13	34.4	12.24	32.59	122	354	P	H
		5690	98.73	-----	-----	84.64	34.4	12.29	32.6	122	354	P	H
		5892.85	53.76	-14.54	68.3	39.03	35	12.33	32.6	122	354	P	H
		5375.85	45.63	-8.37	54	31.59	34.4	12.22	32.58	122	354	A	H
		5690	93.45	-----	-----	79.36	34.4	12.29	32.6	122	354	A	H
		5363.75	51.12	-22.88	74	37.08	34.4	12.21	32.57	196	143	P	V
		5460.55	50.58	-17.72	68.3	36.53	34.4	12.24	32.59	196	143	P	V
		5690	91.91	-----	-----	77.82	34.4	12.29	32.6	196	143	P	V
		5883.5	52.48	-15.82	68.3	37.82	34.93	12.33	32.6	196	143	P	V
		5451.2	45.26	-8.74	54	31.21	34.4	12.24	32.59	196	143	P	V
	5690	86.63	-----	-----	72.54	34.4	12.29	32.6	196	143	A	V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - Straddle Channel
WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 138 5690MHz		11380	50.44	-23.56	74	46.9	38.11	16.52	51.09	-	-	P	H
		17070	50.05	-18.25	68.3	43.17	42.03	18.4	53.55	-	-	P	H
		11380	50.19	-23.81	74	46.65	38.11	16.52	51.09	-	-	P	V
		17070	50.08	-18.22	68.3	43.2	42.03	18.4	53.55	-	-	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		30	24.91	-15.09	40	31.58	25.2	0.53	32.4	-	-	P	H
		153.19	23.36	-20.14	43.5	37.29	17	1.26	32.19	-	-	P	H
		282.2	32.33	-13.67	46	43.54	18.78	1.75	31.74	-	-	P	H
		567.38	28.98	-17.02	46	30.94	26.38	2.49	30.83	-	-	P	H
		790.48	30.72	-15.28	46	30.66	28.4	2.92	31.26	-	-	P	H
		963.14	33.75	-20.25	54	30.62	31.26	3.25	31.38	-	-	P	H
		53.28	27.79	-12.21	40	46.26	13.2	0.73	32.4	-	-	P	V
		93.05	24.55	-18.95	43.5	40.38	15.3	0.97	32.1	-	-	P	V
		155.13	27.55	-15.95	43.5	41.57	16.9	1.27	32.19	-	-	P	V
		294.81	27.43	-18.57	46	38.15	19.2	1.79	31.71	-	-	P	V
		563.5	29.56	-16.44	46	31.41	26.5	2.49	30.84	-	-	P	V
		955.38	33.43	-12.57	46	30.53	31.1	3.24	31.44	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



Simultaneous transmission

802.11ac VHT80 CH 42 5210MHz + LTE Band13 (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 & LTE Band13	*	5149.76	57.89	-16.11	74	44.27	34	12.15	32.53	289	0	P	H
	*	5148.98	50.85	-3.15	54	37.23	34	12.15	32.53	289	0	P	H
		5210	100.51	-----	-----	86.65	34.23	12.17	32.54	289	0	A	H
		5210	93.72	-----	-----	79.86	34.23	12.17	32.54	289	0	P	H
		5379.6	52.63	-21.37	74	38.59	34.4	12.22	32.58	289	0	A	H
		5359.44	47.14	-6.86	54	33.1	34.4	12.21	32.57	289	0	P	H
	*	5150.02	55.07	-13.23	68.3	41.45	34	12.15	32.53	319	114	P	V
	*	5149.76	50.49	-3.51	54	36.87	34	12.15	32.53	319	114	P	V
		5210	98.37	-----	-----	84.51	34.23	12.17	32.54	319	114	A	V
		5210	92.1	-----	-----	78.24	34.23	12.17	32.54	319	114	P	V
		5353.44	53.14	-20.86	74	39.1	34.4	12.21	32.57	319	114	A	V
		5395.44	45.82	-8.18	54	31.78	34.4	12.22	32.58	319	114	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



802.11ac VHT80 CH 42 5210MHz + LTE Band13 (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 5210MHz & LTE Band13		1559.5	42.97	-31.03	74	39.6	27.93	8.56	33.12	-	-	P	H
		2339.25	49.76	-24.24	74	40.78	32.1	9.58	32.7	-	-	P	H
		3119	50.33	-17.97	68.3	39.18	32.85	10.75	32.45	-	-	P	H
		10420	50.35	-17.95	68.3	48.67	37.43	15.32	51.07	-	-	P	H
		15630	49.66	-24.34	74	44.52	40.17	17.82	52.85	-	-	P	H
		1559.5	45.92	-28.08	74	42.55	27.93	8.56	33.12	-	-	P	V
		2339.25	49.2	-24.8	74	40.22	32.1	9.58	32.7	-	-	P	V
		3119	50.86	-17.44	68.3	39.71	32.85	10.75	32.45	-	-	P	V
		10420	50.16	-18.14	68.3	48.48	37.43	15.32	51.07	-	-	P	V
	15630	49.58	-24.42	74	44.44	40.17	17.82	52.85	-	-	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	Peak or Average
H/V	Horizontal or Vertical



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

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

For Peak Limit @ 2390MHz:

- 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)
- Over Limit(dB)
= Level(dBμV/m) – Limit Line(dBμV/m)
= 55.45(dBμV/m) – 74(dBμV/m)
= -18.55(dB)

For Average Limit @ 2390MHz:

- 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)
- 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”.

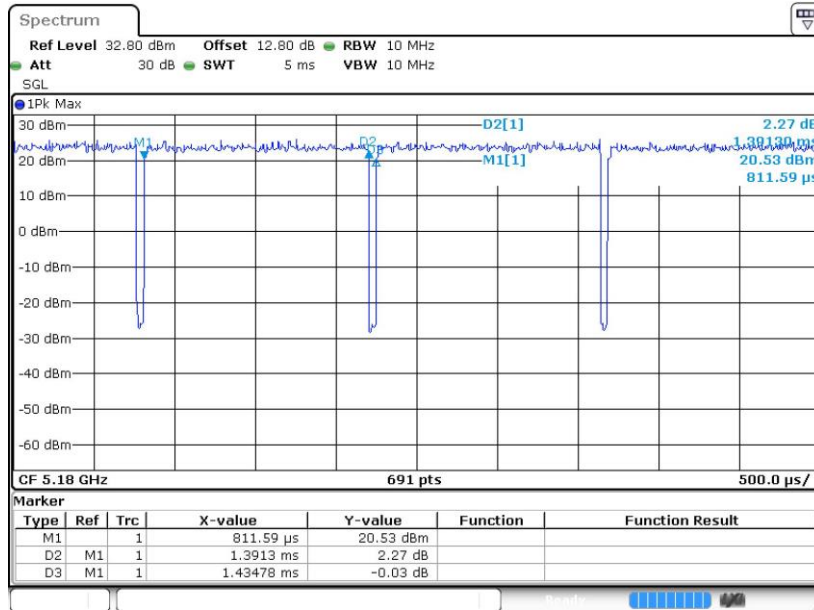


Appendix D. Duty Cycle Plots

Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
802.11a	96.97	1.3913	0.7188	1KHz
802.11n HT20	96.77	1.3044	0.7667	1KHz
802.11n HT40	93.52	0.6478	1.5436	3KHz
802.11ac VHT80	87.65	0.3239	3.0873	10KHZ

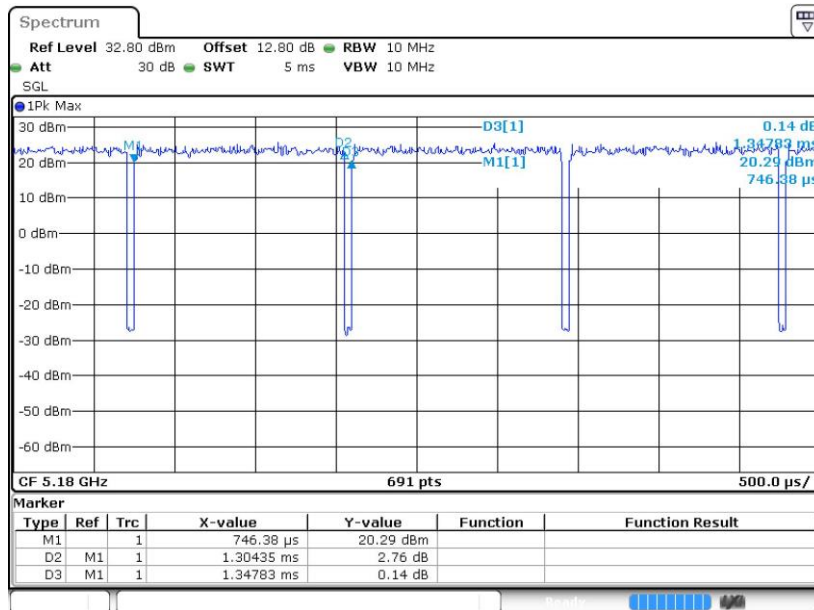


802.11a



Date: 8.OCT.2021 14:14:04

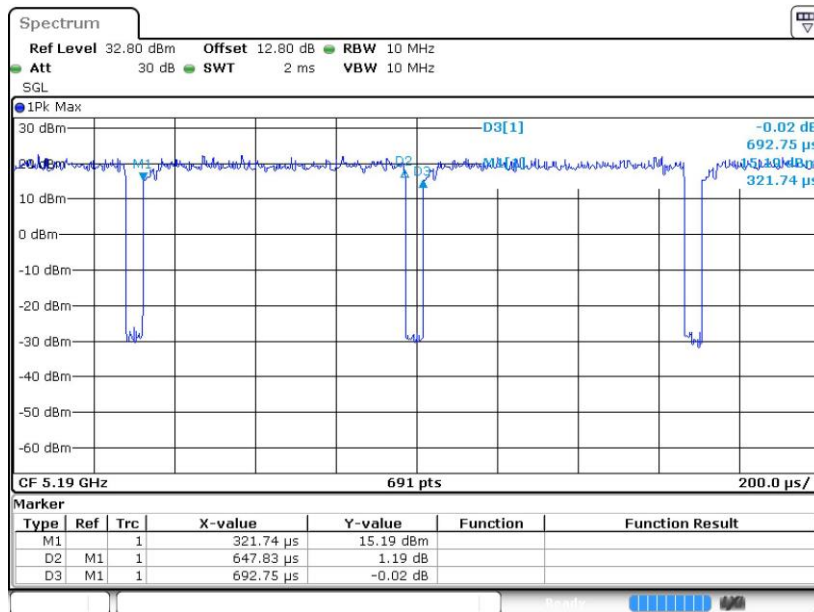
802.11n HT20



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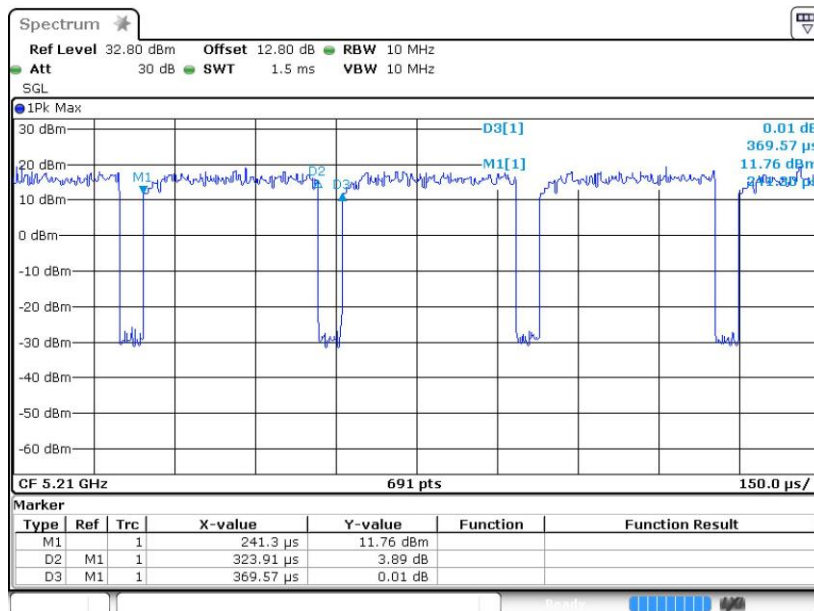


802.11n HT40



Date: 8.OCT.2021 14:18:27

802.11ac VHT80



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