



FCC RF Test Report

APPLICANT : Motorola Mobility LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : XT2233-1
FCC ID : IHDT56AD2
STANDARD : FCC Part 15 Subpart E §15.407
CLASSIFICATION : (NII) Unlicensed National Information Infrastructure
TEST DATE(S) : Feb. 24, 2022 ~ Apr. 28, 2022

We, Sporton International Inc. (ShenZhen), 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 Inc. (ShenZhen), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia



Sporton International Inc. (ShenZhen)

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People's Republic of China



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR212625E	Rev. 01	Initial issue of report	Apr. 28, 2022

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 3.00 dB at 5466.640 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 6.11 dB at 7.140 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	XT2233-1
FCC ID	IHDT56AD2
IMEI Code	Conducted: 353028750021218/353028750021226 Conduction: 353028750008355/353028750008363 Radiation: 353028750015715/353028750015723 for Sample 1 353028750015491/353028750015509 for Sample 2
HW Version	DVT2
SW Version	S2SE32.1
EUT Stage	Identical Prototype

Remark:

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. There are two types of EUT. The differences between them refer to the XT2233-1_Operational Description of Product Equality Declaration which is exhibit separately. According to the difference, we choose sample 1 perform full test and sample 2 verify the worst case for RSE.

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 : 18.26 dBm / 0.0670 W 802.11n HT20 : 18.33 dBm / 0.0681 W 802.11n HT40 : 17.79 dBm / 0.0601 W 802.11ac VHT20 : 17.30 dBm / 0.0537 W 802.11ac VHT40 : 16.90 dBm / 0.0490 W 802.11ac VHT80 : 12.99 dBm / 0.0199 W <5260 MHz ~ 5320 MHz> 802.11a : 18.20 dBm / 0.0661 W 802.11n HT20 : 18.12 dBm / 0.0649 W 802.11n HT40 : 17.61 dBm / 0.0577 W 802.11ac VHT20 : 17.11 dBm / 0.0514 W 802.11ac VHT40 : 16.84 dBm / 0.0483 W 802.11ac VHT80 : 11.62 dBm / 0.0145 W <5500 MHz ~ 5700 MHz > 802.11a : 18.36 dBm / 0.0685 W 802.11n HT20 : 18.13 dBm / 0.0650 W 802.11n HT40 : 17.73 dBm / 0.0593 W 802.11ac VHT20 : 17.32 dBm / 0.0540 W 802.11ac VHT40 : 16.91 dBm / 0.0491 W 802.11ac VHT80 : 16.85 dBm / 0.0484 W
99% Occupied Bandwidth	802.11a : 17.08 MHz 802.11n HT20 : 18.08 MHz 802.11n HT40 : 36.86 MHz 802.11ac VHT80 : 75.88 MHz
Antenna Type / Gain	<5180 MHz ~ 5240 MHz> PIFA Antenna with gain -6.1 dBi <5260 MHz ~ 5320 MHz> PIFA Antenna with gain -5.8 dBi <5500 MHz ~ 5720 MHz> PIFA Antenna with gain -5.5 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 have assessed only 802.11n HT20/HT40 by referring to their maximum conducted power.

1.5 Specification of Accessory

Specification of Accessory				
AC Adapter 1(US)	Brand Name	Motorola (Chengyang)	Model Name	MC-201
AC Adapter 1(EU)	Brand Name	Motorola (Chengyang)	Model Name	MC-202
AC Adapter 1(UK)	Brand Name	Motorola (Chengyang)	Model Name	MC-203
AC Adapter 1(IN)	Brand Name	Motorola (Chengyang)	Model Name	MC-204
AC Adapter 1(AU)	Brand Name	Motorola (Chengyang)	Model Name	MC-205
AC Adapter 1(AR)	Brand Name	Motorola (Chengyang)	Model Name	MC-206
AC Adapter 1(CHILE)	Brand Name	Motorola (Chengyang)	Model Name	MC-209
AC Adapter 2(US)	Brand Name	Motorola (Acbel)	Model Name	MC-201
AC Adapter 2(EU)	Brand Name	Motorola (Acbel)	Model Name	MC-202
AC Adapter 2(UK)	Brand Name	Motorola (Acbel)	Model Name	MC-203
AC Adapter 2(AU)	Brand Name	Motorola (Acbel)	Model Name	MC-205
AC Adapter 2(AR)	Brand Name	Motorola (Acbel)	Model Name	MC-206
AC Adapter 2(CHILE)	Brand Name	Motorola (Acbel)	Model Name	MC-209
AC Adapter 3(IN)	Brand Name	Motorola (AOHAI)	Model Name	MC-204
AC Adapter 4(BR)	Brand Name	Motorola (Flex)	Model Name	MC-207
AC Adapter 5(BR)	Brand Name	Motorola (Salcomp)	Model Name	MC-207
Battery 1	Brand Name	Motorola (ATL)	Model Name	ND50
Battery 2	Brand Name	Motorola (Jiade)	Model Name	ND50
Earphone 1	Brand Name	Motorola (lyand)	Model Name	MH191
Earphone 2	Brand Name	Motorola (LCHSE)	Model Name	MH191
Earphone 3	Brand Name	Motorola (Xinlide)	Model Name	MH202
Earphone 4	Brand Name	Motorola (Juwei)	Model Name	MH202
USB Cable 1	Brand Name	Motorola (SUNTOPS)	Model Name	336258
USB Cable 2	Brand Name	Motorola (Yihuaxing)	Model Name	T365-012B
USB Cable 3	Brand Name	Motorola (I SHENG)	Model Name	SC18D33506
USB Cable 4	Brand Name	Motorola (I SHENG)	Model Name	SC18D38574

1.6 Modification of EUT

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



1.7 Testing Location

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

Test Firm	Sporton International Inc. (Shenzhen)		
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 Inc. (Shenzhen)		
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 U-NII-1	36	5180	44	5220
	38*	5190	46*	5230
	40	5200	48	5240
	42 [#]	5210		
Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5260-5320 MHz U-NII-2A	52	5260	60	5300
	54*	5270	62*	5310
	56	5280	64	5320
	58 [#]	5290		
Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5500- 5720 MHz 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 VHT20 (Covered by HT20)	MCS0
802.11ac VHT40 (Covered by HT40)	MCS0
802.11ac VHT80	MCS0

Co-location Mode
802.11n HT40 CH102 5510MHz Tx + LTE Band 41 Link

Test Cases	
AC Conducted Emission	Mode 1 : GSM 850 Idle + Bluetooth Link + WLAN Link (5G) + USB Cable 4(Charging from Adapter 5) + Earphone 4
Remark: For Radiated Test Cases, The tests were performance with Adapter 1, Earphone 1 and USB Cable 1.	



Ch. #		U-NII-1 : 5180-5240 MHz	U-NII-2A : 5260-5320 MHz	U-NII-2C : 5500- 5720 MHz
		802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140
Straddle		-	-	144

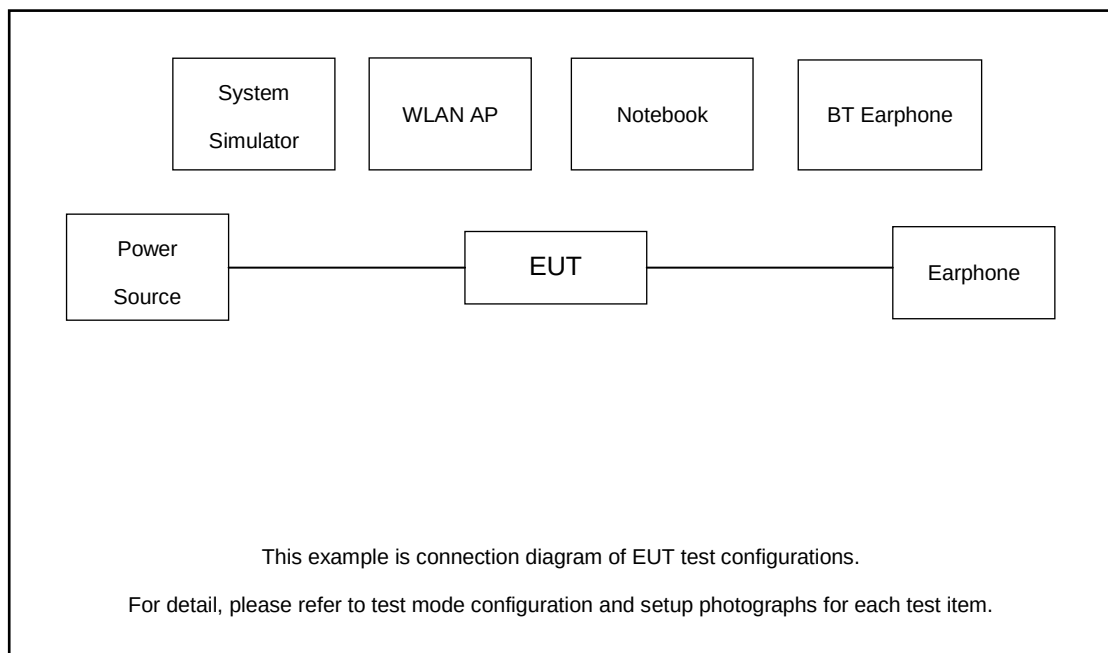
Ch. #		U-NII-1 : 5180-5240 MHz	U-NII-2A : 5260-5320 MHz	U-NII-2C : 5500- 5720 MHz
		802.11n HT20	802.11n HT20	802.11n HT20
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140
Straddle		-	-	144

Ch. #		U-NII-1 : 5180-5240 MHz	U-NII-2A : 5260-5320 MHz	U-NII-2C : 5500- 5720 MHz
		802.11n HT40	802.11n HT40	802.11n HT40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	134
Straddle		-	-	142

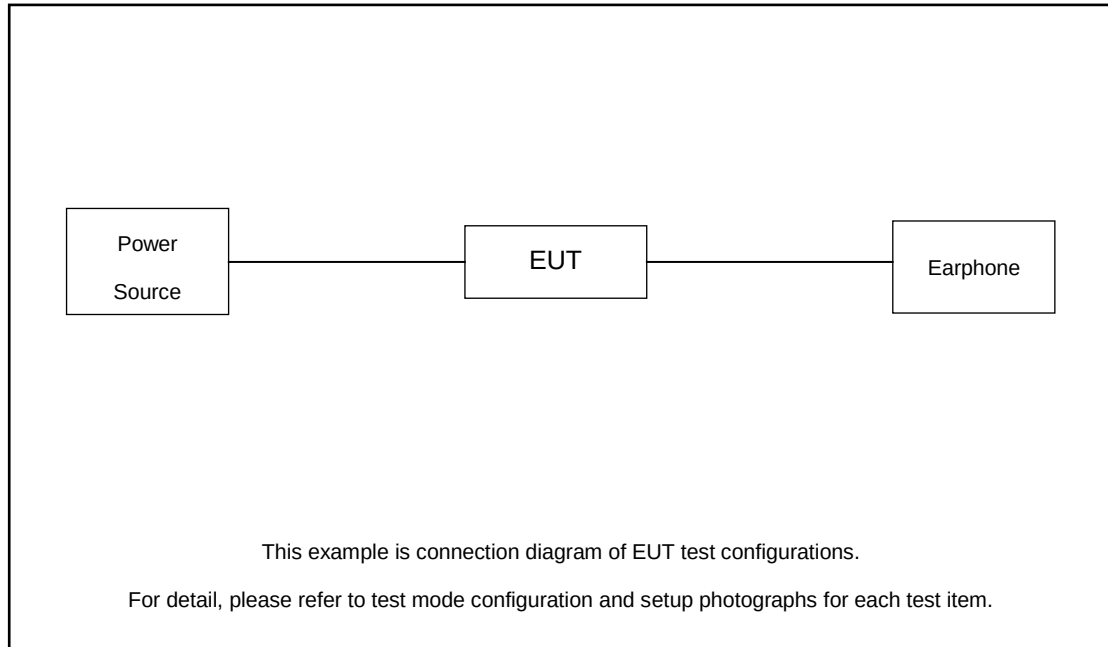
Ch. #		U-NII-1 : 5180-5240 MHz	U-NII-2A : 5260-5320 MHz	U-NII-2C : 5500- 5720 MHz
		802.11ac VHT80	802.11ac VHT80	802.11ac VHT80
L	Low	-	-	106
M	Middle	42	58	-
H	High	-	-	122
Straddle		-	-	138

2.3 Connection Diagram of Test System

Conducted Emission:



Radiated Emission:



2.4 Support Unit used in test configuration and system

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

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 2.8dB 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.

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.

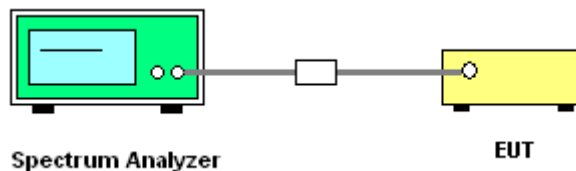
3.1.2 Measuring Instruments

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 1% to 5% of the OBW and set the Video bandwidth (VBW) $\geq 3 * RBW$.
8. Measure and record the results in the test report.

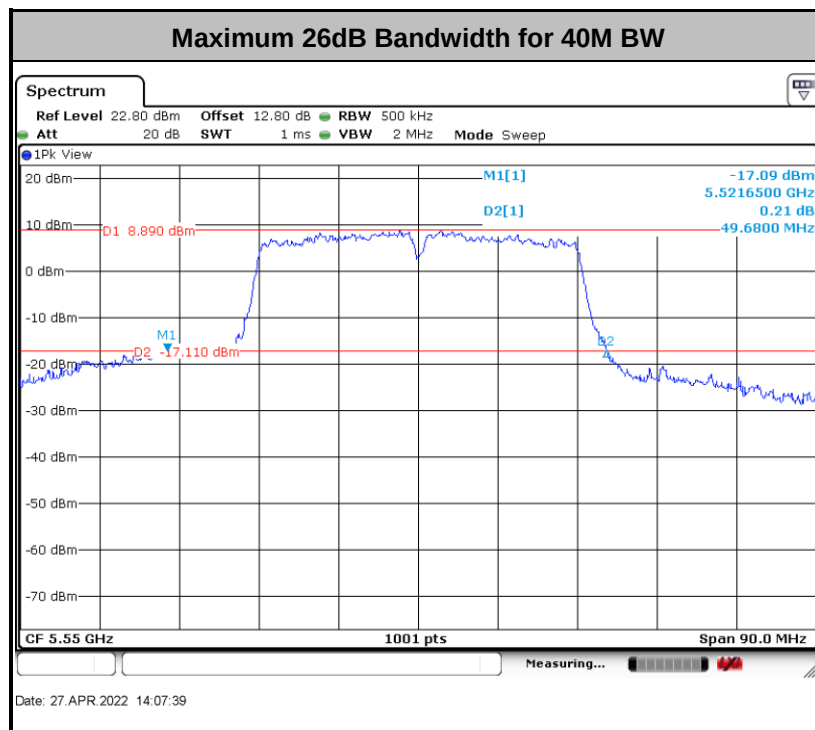
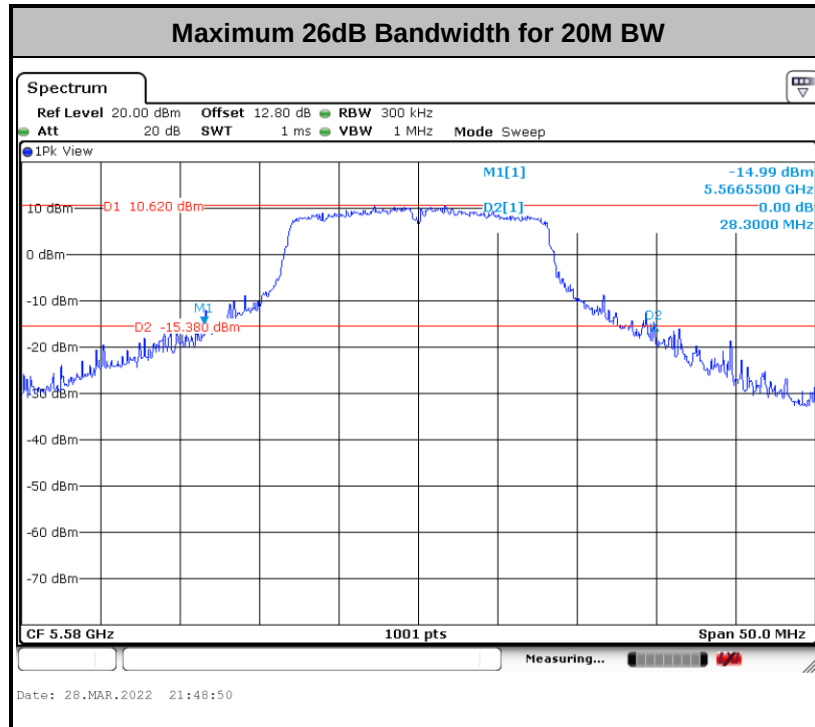
3.1.4 Test Setup

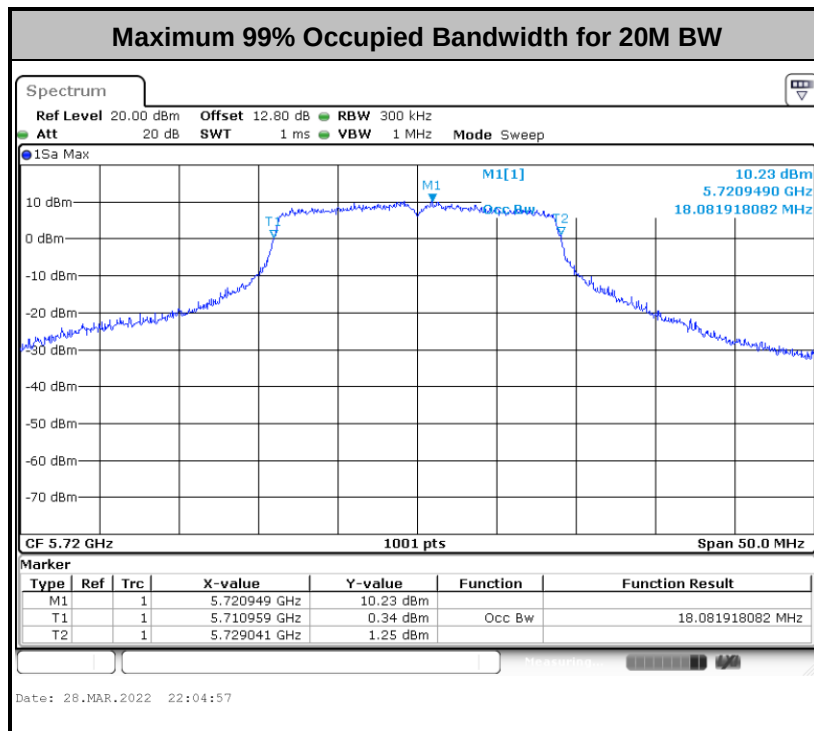
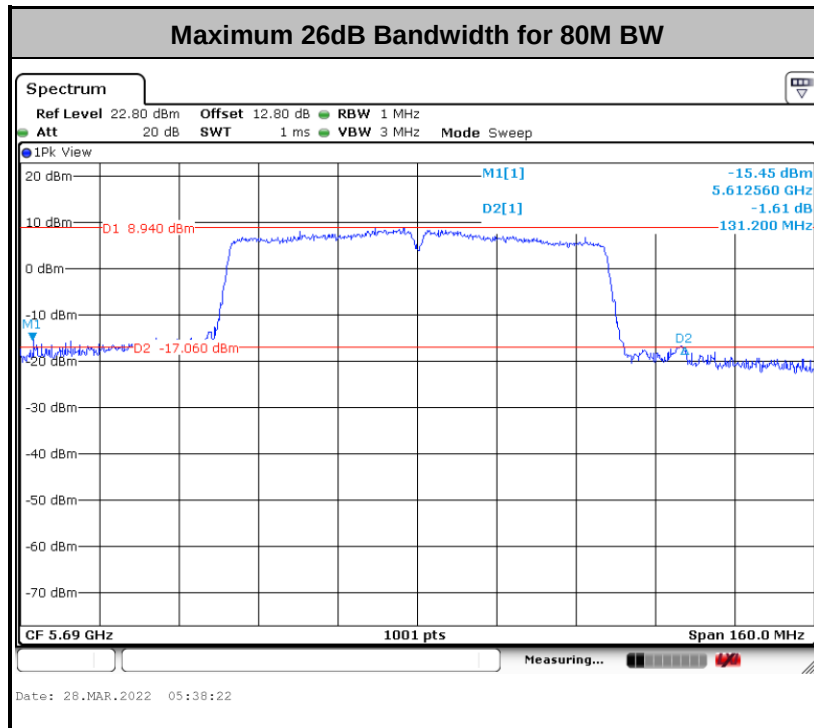


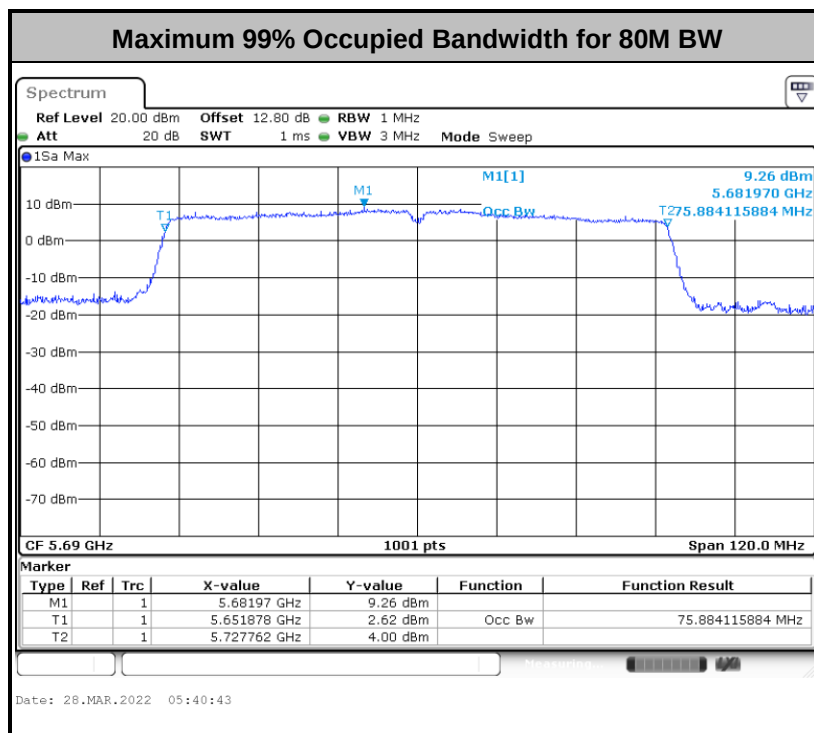
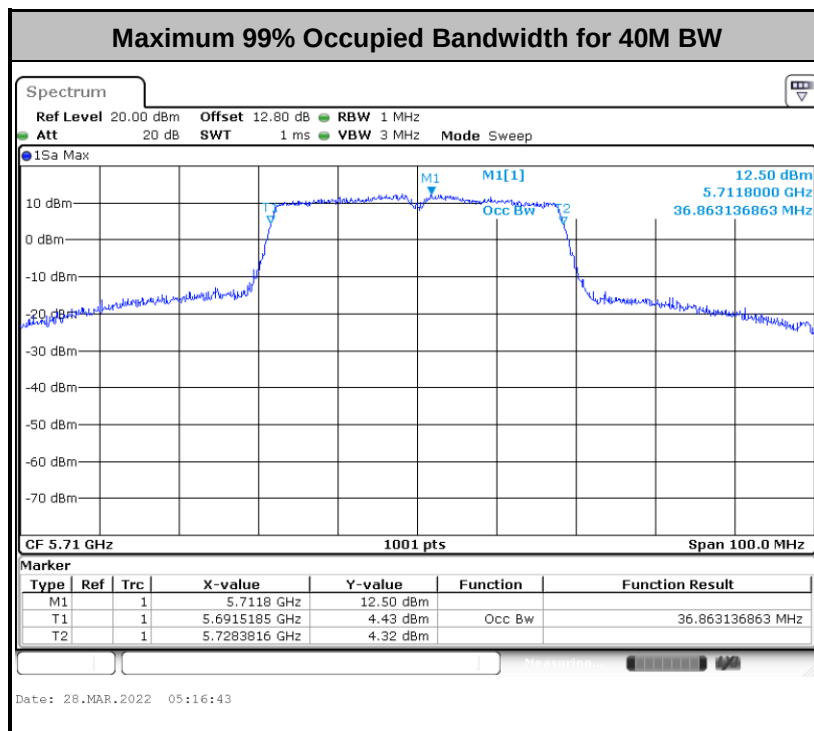


3.1.5 Test Result of 26dB & 99% Occupied Bandwidth

Please refer to Appendix A.







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



3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

<FCC 14-30 CFR 15.407>

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

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

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

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

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

3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

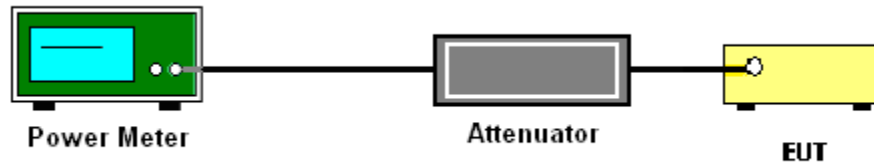
The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

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

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

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

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

<FCC 14-30 CFR 15.407>

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

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

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

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

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

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

Section F) Maximum power spectral density.

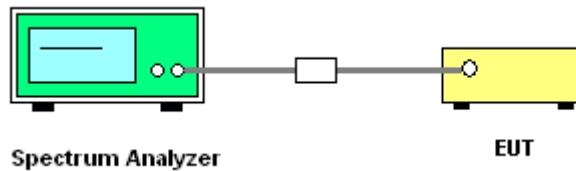
Method SA-2

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

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

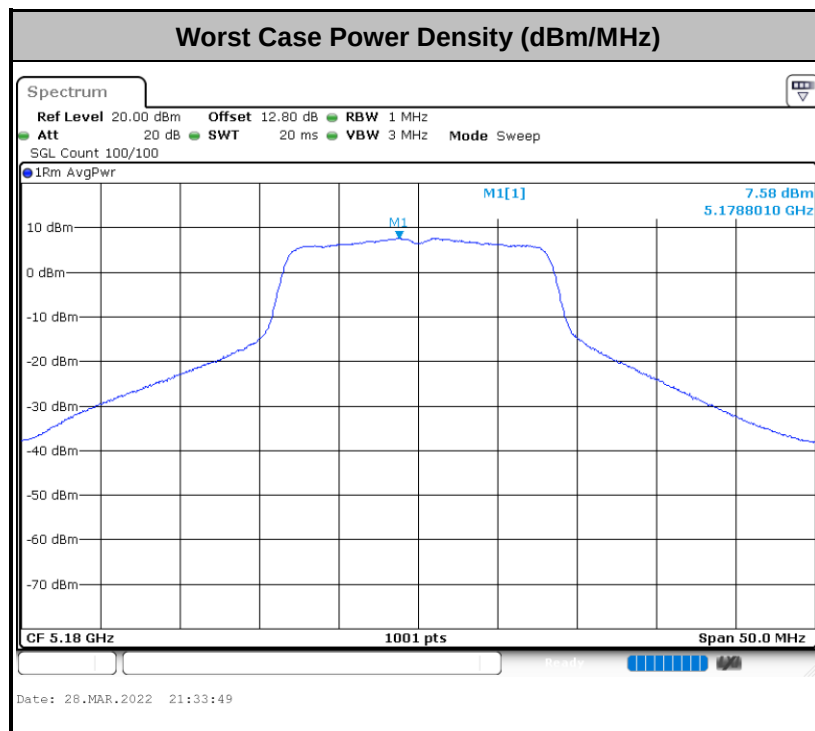
1. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.

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.

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

where

EIRP is the equivalent isotropically radiated power, in dBm

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

d_{Meas} is the measurement distance, in m

(3) ANSI C63.10-2013 clause 12.7.3 note 97

As specified by regulatory requirements, emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit. However, an out-of-band emission that complies with both the average and peak general regulatory limits is not required to satisfy the peak emission limit.

3.4.2 Measuring Instruments

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

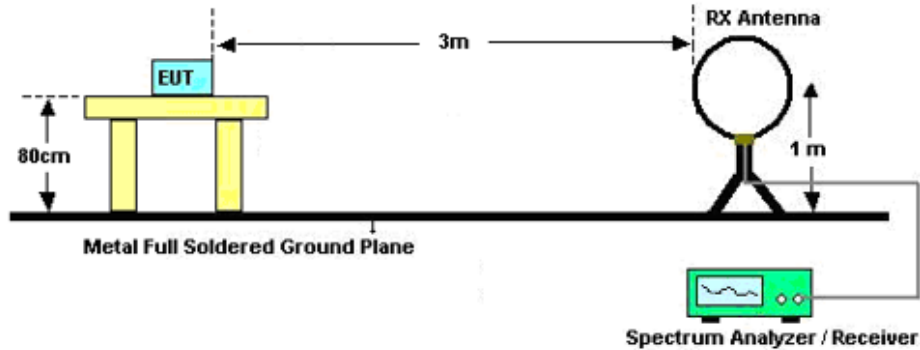


3.4.3 Test Procedures

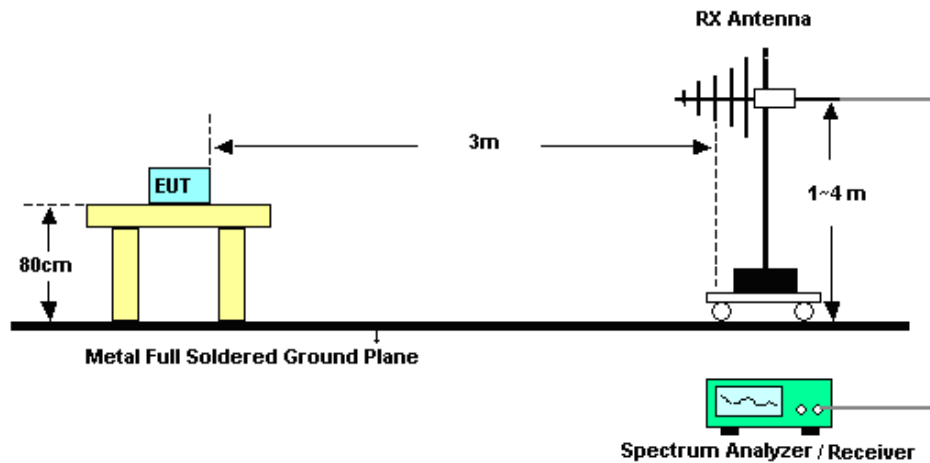
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
Section G) Unwanted emissions measurement.
 - (1) Procedure for Unwanted Emissions Measurements Below 1000MHz
 - RBW = 120 kHz
 - VBW = 300 kHz
 - Detector = Peak
 - Trace mode = max hold
 - (2) Procedure for Peak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

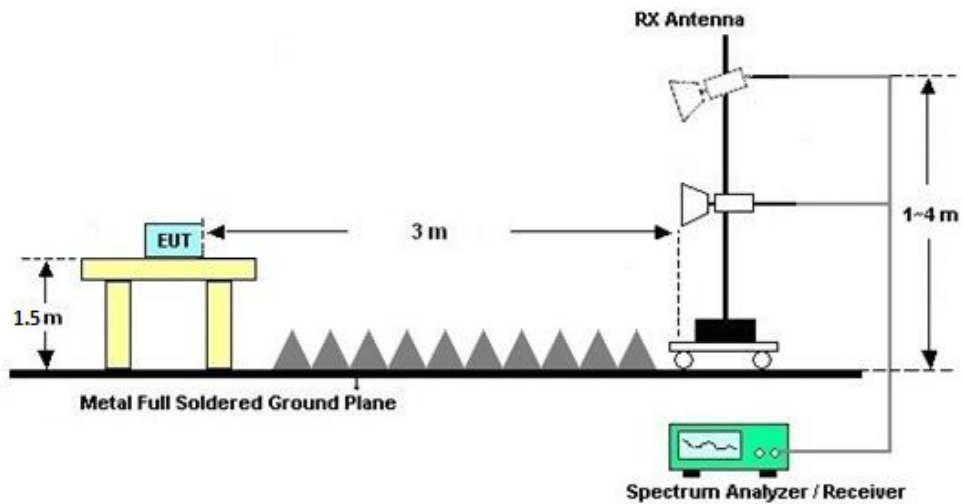
For radiated emissions below 30MHz



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.

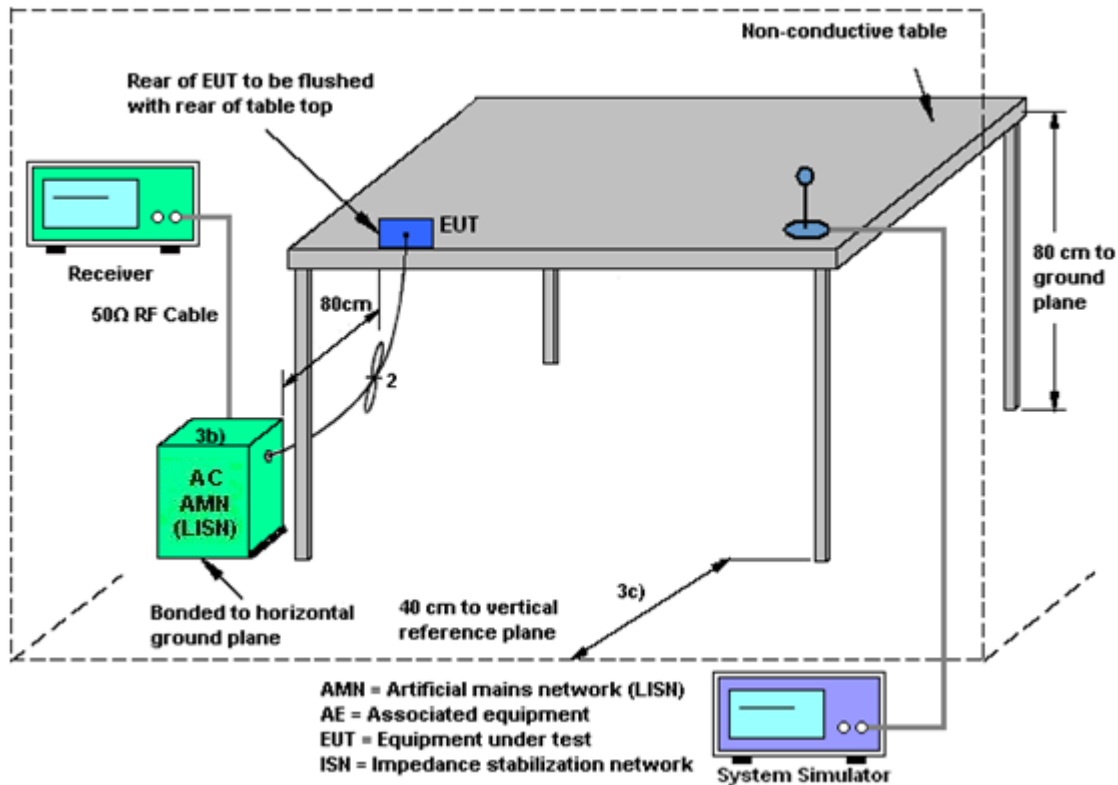
3.5.2 Measuring Instruments

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	Mar. 28, 2022	Apr. 07, 2022	Conducted (TH01-SZ)
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 07, 2022	Apr. 27, 2022	Apr. 06, 2023	Conducted (TH01-SZ)
Pulse Power Sensor	Anritsu	MA2411B	1339473	30MHz~40GHz	Dec. 28, 2021	Mar. 28, 2022~Apr. 27, 2022	Dec. 27, 2022	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1542004	50MHz Bandwidth	Dec. 28, 2021	Mar. 28, 2022~Apr. 27, 2022	Dec. 27, 2022	Conducted (TH01-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Jul. 21, 2021	Mar. 31, 2022	Jul. 20, 2022	Radiation (03CH01-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jun. 22, 2020	Mar. 31, 2022	Jun. 21, 2022	Radiation (03CH01-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz~2GHz	Jul. 15, 2021	Mar. 31, 2022	Jul. 14, 2022	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Jul. 25, 2021	Mar. 31, 2022	Jul. 24, 2022	Radiation (03CH01-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18GHz~40GHz	Apr. 11, 2021	Mar. 31, 2022	Apr. 10, 2022	Radiation (03CH01-SZ)
LF Amplifier	Burgeon	BPA-530	102209	0.01~3000Mhz	Apr. 07, 2021	Mar. 31, 2022	Apr. 06, 2022	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	AMF-7D-00101800-30-10P-R	1943528	1GHz~18GHz	Oct. 16, 2021	Mar. 31, 2022	Oct. 15, 2022	Radiation (03CH01-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270105	0.5GHz~26.5GHz	Oct. 16, 2021	Mar. 31, 2022	Oct. 15, 2022	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 21, 2021	Mar. 31, 2022	Jul. 20, 2022	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	NCR	Mar. 31, 2022	NCR	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Mar. 31, 2022	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Mar. 31, 2022	NCR	Radiation (03CH01-SZ)
EMI Receiver	R&S	ESR7	101630	9kHz~7GHz;	Mar. 08, 2021	Feb. 24, 2022	Mar. 07, 2022	Conduction (CO01-SZ)
AC LISN	R&S	ENV216	100063	9kHz~30MHz	Sep. 01, 2021	Feb. 24, 2022	Aug. 31, 2022	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	EMCO	3816/2SH	00103892	9kHz~30MHz	Oct. 28, 2021	Feb. 24, 2022	Oct. 27, 2022	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000891	100Vac~250Vac	Jul. 14, 2021	Feb. 24, 2022	Jul. 13, 2022	Conduction (CO01-SZ)

NCR: No Calibration Required

5 Uncertainty of Evaluation

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

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

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

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:	2022/3/28~2022/4/27	Relative Humidity:	51~54	%

TEST RESULTS DATA
26dB and 99% OBW

U-NII-1										
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	16.98	26.15	-	22.30		
11a	6Mbps	1	44	5220	16.88	25.95	-	22.27		
11a	6Mbps	1	48	5240	16.98	25.55	-	22.30		
HT20	MCS0	1	36	5180	18.03	26.20	-	22.56		
HT20	MCS0	1	44	5220	17.98	25.50	-	22.55		
HT20	MCS0	1	48	5240	17.98	25.40	-	22.55		
HT40	MCS0	1	38	5190	36.66	41.49	-	23.01		
HT40	MCS0	1	46	5230	36.66	42.03	-	23.01		
VHT80	MCS0	1	42	5210	75.76	85.60	-	23.01		

TEST RESULTS DATA
Average Power Table

U-NII-1										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)		Pass/Fail
11a	6Mbps	1	36	5180	0.09	18.26	24.00	-6.10		Pass
11a	6Mbps	1	44	5220	0.09	18.23	24.00	-6.10		Pass
11a	6Mbps	1	48	5240	0.09	18.20	24.00	-6.10		Pass
HT20	MCS0	1	36	5180	0.09	18.33	24.00	-6.10		Pass
HT20	MCS0	1	44	5220	0.09	18.31	24.00	-6.10		Pass
HT20	MCS0	1	48	5240	0.09	18.26	24.00	-6.10		Pass
HT40	MCS0	1	38	5190	0.16	15.26	24.00	-6.10		Pass
HT40	MCS0	1	46	5230	0.16	17.79	24.00	-6.10		Pass
VHT20	MCS0	1	36	5180	0.08	17.27	24.00	-6.10		Pass
VHT20	MCS0	1	44	5220	0.08	17.30	24.00	-6.10		Pass
VHT20	MCS0	1	48	5240	0.08	17.18	24.00	-6.10		Pass
VHT40	MCS0	1	38	5190	0.16	15.17	24.00	-6.10		Pass
VHT40	MCS0	1	46	5230	0.16	16.90	24.00	-6.10		Pass
VHT80	MCS0	1	42	5210	0.34	12.99	24.00	-6.10		Pass

TEST RESULTS DATA
Power Spectral Density

U-NII-1										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm/MHz)	DG (dBi)	-	Pass/Fail
11a	6Mbps	1	36	5180	0.09	7.67	11.00	-6.10		Pass
11a	6Mbps	1	44	5220	0.09	7.06	11.00	-6.10		Pass
11a	6Mbps	1	48	5240	0.09	7.35	11.00	-6.10		Pass
HT20	MCS0	1	36	5180	0.09	7.25	11.00	-6.10		Pass
HT20	MCS0	1	44	5220	0.09	6.82	11.00	-6.10		Pass
HT20	MCS0	1	48	5240	0.09	6.76	11.00	-6.10		Pass
HT40	MCS0	1	38	5190	0.16	3.55	11.00	-6.10		Pass
HT40	MCS0	1	46	5230	0.16	3.32	11.00	-6.10		Pass
VHT80	MCS0	1	42	5210	0.34	-0.49	11.00	-6.10		Pass

TEST RESULTS DATA
26dB and 99% OBW

U-NII-2A										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)	IC 99% Bandwidth Power Limit (dBm)	IC 99% Bandwidth EIRP Limit (dBm)	FCC 26dB Bandwidth Power Limit (dBm)	Note
11a	6M bps	1	52	5260	16.88	26.75	23.27	29.27	23.98	
11a	6M bps	1	60	5300	17.03	27.15	23.31	29.31	23.98	
11a	6M bps	1	64	5320	16.98	26.65	23.30	29.30	23.98	
HT20	MCS 0	1	52	5260	17.98	26.00	23.55	29.55	23.98	
HT20	MCS 0	1	60	5300	18.03	25.80	23.56	29.56	23.98	
HT20	MCS 0	1	64	5320	17.98	26.35	23.55	29.55	23.98	
HT40	MCS 0	1	54	5270	36.66	41.67	23.98	30.00	23.98	
HT40	MCS 0	1	62	5310	36.76	41.04	23.98	30.00	23.98	
VHT80	MCS 0	1	58	5290	75.88	109.92	23.98	30.00	23.98	

TEST RESULTS DATA
Average Power Table

U-NII-2A										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)	EIRP Power Limit (dBm)	Pass/Fail
11a	6M bps	1	52	5260	0.09	18.20	23.98	-5.80	26.99	Pass
11a	6M bps	1	60	5300	0.09	18.11	23.98	-5.80	26.99	Pass
11a	6M bps	1	64	5320	0.09	18.03	23.98	-5.80	26.99	Pass
HT20	MCS 0	1	52	5260	0.09	18.06	23.98	-5.80	26.99	Pass
HT20	MCS 0	1	60	5300	0.09	18.03	23.98	-5.80	26.99	Pass
HT20	MCS 0	1	64	5320	0.09	18.12	23.98	-5.80	26.99	Pass
HT40	MCS 0	1	54	5270	0.16	17.61	23.98	-5.80	26.99	Pass
HT40	MCS 0	1	62	5310	0.16	14.21	23.98	-5.80	26.99	Pass
VHT20	MCS 0	1	52	5260	0.08	17.11	23.98	-5.80	26.99	Pass
VHT20	MCS 0	1	60	5300	0.08	17.06	23.98	-5.80	26.99	Pass
VHT20	MCS 0	1	64	5320	0.08	16.96	23.98	-5.80	26.99	Pass
VHT40	MCS 0	1	54	5270	0.16	16.84	23.98	-5.80	26.99	Pass
VHT40	MCS 0	1	62	5310	0.16	14.14	23.98	-5.80	26.99	Pass
VHT80	MCS 0	1	58	5290	0.34	11.62	23.98	-5.80	26.99	Pass

TEST RESULTS DATA
Power Spectral Density

U-NII-2A										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm/MHz)	DG (dBi)		Pass/Fail
11a	6M bps	1	52	5260	0.09	7.18	11.00	-5.80		Pass
11a	6M bps	1	60	5300	0.09	7.56	11.00	-5.80		Pass
11a	6M bps	1	64	5320	0.09	7.59	11.00	-5.80		Pass
HT20	MCS 0	1	52	5260	0.09	6.87	11.00	-5.80		Pass
HT20	MCS 0	1	60	5300	0.09	7.16	11.00	-5.80		Pass
HT20	MCS 0	1	64	5320	0.09	7.33	11.00	-5.80		Pass
HT40	MCS 0	1	54	5270	0.16	3.25	11.00	-5.80		Pass
HT40	MCS 0	1	62	5310	0.16	3.42	11.00	-5.80		Pass
VHT80	MCS 0	1	58	5290	0.34	-0.56	11.00	-5.80		Pass

TEST RESULTS DATA
26dB and 99% OBW

U-NII-2C										
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	16.83	23.70	23.26	29.26	23.98	
11a	6M bps	1	116	5580	17.08	28.30	23.33	29.33	23.98	
11a	6M bps	1	140	5700	16.83	24.75	23.26	29.26	23.98	
11a	6Mbps	1	144	5720	16.93	25.40	23.29	29.29	23.98	
HT20	MCS 0	1	100	5500	17.93	24.10	23.54	29.54	23.98	
HT20	MCS 0	1	116	5580	18.08	25.85	23.57	29.57	23.98	
HT20	MCS 0	1	140	5700	17.93	24.25	23.54	29.54	23.98	
HT20	MCS0	1	144	5720	18.08	25.05	23.57	29.57	23.98	
HT40	MCS 0	1	102	5510	36.76	41.58	23.98	30.00	23.98	
HT40	MCS 0	1	110	5550	36.56	49.68	23.98	30.00	23.98	
HT40	MCS 0	1	134	5670	36.76	48.15	23.98	30.00	23.98	
HT40	MCS0	1	142	5710	36.86	47.52	23.98	30.00	23.98	
VHT80	MCS 0	1	106	5530	75.76	116.80	23.98	30.00	23.98	
VHT80	MCS 0	1	122	5610	75.76	124.48	23.98	30.00	23.98	
VHT80	MCS0	1	138	5690	75.88	131.20	23.98	30.00	23.98	

TEST RESULTS DATA
Average Power Table

U-NII-2C										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)	EIRP Power Limit (dBm)	Pass/Fail
11a	6M bps	1	100	5500	0.09	18.00	23.98	-5.50	26.99	Pass
11a	6M bps	1	116	5580	0.09	18.36	23.98	-5.50	26.99	Pass
11a	6M bps	1	140	5700	0.09	18.04	23.98	-5.50	26.99	Pass
11a	6M bps	1	144	5720	0.09	18.00	23.98	-5.50	26.99	Pass
HT20	MCS 0	1	100	5500	0.09	18.01	23.98	-5.50	26.99	Pass
HT20	MCS 0	1	116	5580	0.09	18.13	23.98	-5.50	26.99	Pass
HT20	MCS 0	1	140	5700	0.09	18.07	23.98	-5.50	26.99	Pass
HT20	MCS 0	1	144	5720	0.09	18.01	23.98	-5.50	26.99	Pass
HT40	MCS 0	1	102	5510	0.16	15.57	23.98	-5.50	26.99	Pass
HT40	MCS 0	1	110	5550	0.16	17.61	23.98	-5.50	26.99	Pass
HT40	MCS 0	1	134	5670	0.16	17.73	23.98	-5.50	26.99	Pass
HT40	MCS 0	1	142	5710	0.16	17.41	23.98	-5.50	26.99	Pass
VHT20	MCS 0	1	100	5500	0.08	16.97	23.98	-5.50	26.99	Pass
VHT20	MCS 0	1	116	5580	0.08	17.32	23.98	-5.50	26.99	Pass
VHT20	MCS 0	1	140	5700	0.08	17.03	23.98	-5.50	26.99	Pass
VHT20	MCS 0	1	144	5720	0.08	16.97	23.98	-5.50	26.99	Pass
VHT40	MCS 0	1	102	5510	0.16	15.52	23.98	-5.50	26.99	Pass
VHT40	MCS 0	1	110	5550	0.16	16.83	23.98	-5.50	26.99	Pass
VHT40	MCS 0	1	134	5670	0.16	16.91	23.98	-5.50	26.99	Pass
VHT40	MCS 0	1	142	5710	0.16	16.90	23.98	-5.50	26.99	Pass
VHT80	MCS 0	1	106	5530	0.34	13.07	23.98	-5.50	26.99	Pass
VHT80	MCS 0	1	122	5610	0.34	16.85	23.98	-5.50	26.99	Pass
VHT80	MCS 0	1	138	5690	0.34	16.83	23.98	-5.50	26.99	Pass

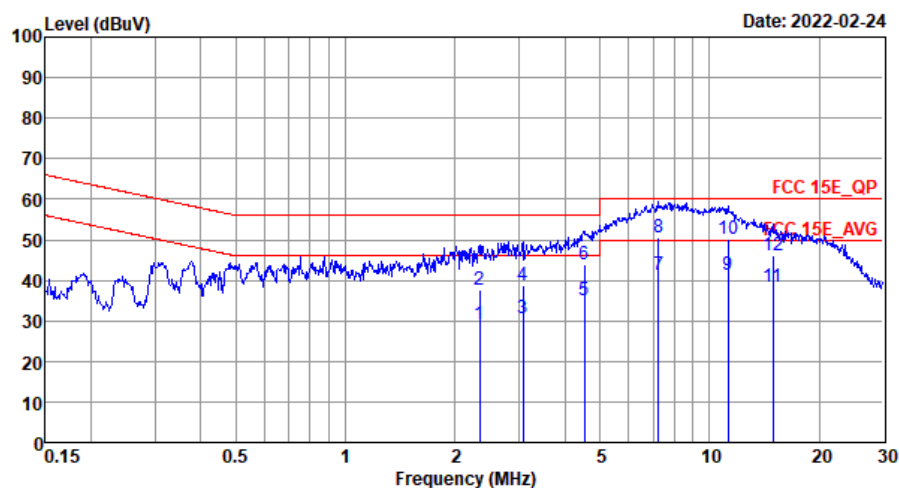
TEST RESULTS DATA
Power Spectral Density

U-NII-2C										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm/MHz)	DG (dBi)		Pass/Fail
11a	6M bps	1	100	5500	0.09	6.95	11.00	-5.50		Pass
11a	6M bps	1	116	5580	0.09	7.55	11.00	-5.50		Pass
11a	6M bps	1	140	5700	0.09	7.23	11.00	-5.50		Pass
11a	6Mbps	1	144	5720	0.09	7.32	11.00	-5.50		Pass
HT20	MCS 0	1	100	5500	0.09	6.69	11.00	-5.50		Pass
HT20	MCS 0	1	116	5580	0.09	7.30	11.00	-5.50		Pass
HT20	MCS 0	1	140	5700	0.09	7.03	11.00	-5.50		Pass
HT20	MCS0	1	144	5720	0.09	7.07	11.00	-5.50		Pass
HT40	MCS 0	1	102	5510	0.16	3.32	11.00	-5.50		Pass
HT40	MCS 0	1	110	5550	0.16	3.66	11.00	-5.50		Pass
HT40	MCS 0	1	134	5670	0.16	3.68	11.00	-5.50		Pass
HT40	MCS0	1	142	5710	0.16	3.76	11.00	-5.50		Pass
VHT80	MCS 0	1	106	5530	0.34	-0.50	11.00	-5.50		Pass
VHT80	MCS 0	1	122	5610	0.34	0.03	11.00	-5.50		Pass
VHT80	MCS0	1	138	5690	0.34	-0.09	11.00	-5.50		Pass



Appendix B. AC Conducted Emission Test Results

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

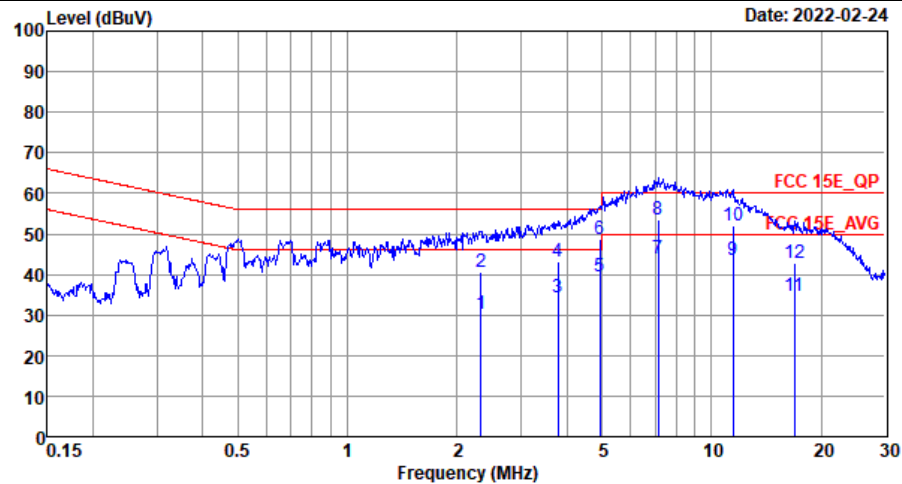


Site : CO01-SZ
Condition: FCC 15E QP LISN 20210901 L LINE

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	2.33	29.29	-16.71	46.00	9.00	10.05	10.24	Average
2	2.33	37.59	-18.41	56.00	17.30	10.05	10.24	QP
3	3.07	30.73	-15.27	46.00	10.40	10.09	10.24	Average
4	3.07	38.63	-17.37	56.00	18.30	10.09	10.24	QP
5	4.53	35.13	-10.87	46.00	14.90	9.99	10.24	Average
6	4.53	43.93	-12.07	56.00	23.70	9.99	10.24	QP
7	7.25	41.20	-8.80	50.00	21.00	9.93	10.27	Average
8	7.25	50.70	-9.30	60.00	30.50	9.93	10.27	QP
9 *	11.26	41.25	-8.75	50.00	21.11	9.83	10.31	Average
10	11.26	50.05	-9.95	60.00	29.91	9.83	10.31	QP
11	14.91	38.41	-11.59	50.00	18.20	9.87	10.34	Average
12	14.91	46.11	-13.89	60.00	25.90	9.87	10.34	QP



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



Site : CO01-SZ
Condition: FCC 15E QP LISN 20210901 N NEUTRAL

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	2.32	30.40	-15.60	46.00	10.00	10.16	10.24	Average
2	2.32	40.70	-15.30	56.00	20.30	10.16	10.24	QP
3	3.78	34.29	-11.71	46.00	13.90	10.15	10.24	Average
4	3.78	43.19	-12.81	56.00	22.80	10.15	10.24	QP
5	4.93	39.37	-6.63	46.00	19.00	10.13	10.24	Average
6	4.93	48.67	-7.33	56.00	28.30	10.13	10.24	QP
7 *	7.14	43.89	-6.11	50.00	23.60	10.02	10.27	Average
8	7.14	53.39	-6.61	60.00	33.10	10.02	10.27	QP
9	11.44	43.36	-6.64	50.00	23.10	9.95	10.31	Average
10	11.44	51.86	-8.14	60.00	31.60	9.95	10.31	QP
11	16.93	34.77	-15.23	50.00	14.60	9.82	10.35	Average
12	16.93	42.67	-17.33	60.00	22.50	9.82	10.35	QP

Note:

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



Appendix C. Radiated Spurious Emission

For Sample 1:

U-NII-1 - 5150~5250MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path 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	58.37	-15.63	74	44.75	34	12.15	32.53	167	133	P	H
		5150	48.32	-5.68	54	34.7	34	12.15	32.53	167	133	A	H
		5180	107.62	-	-	93.87	34.13	12.16	32.54	167	133	P	H
		5180	100.33	-	-	86.58	34.13	12.16	32.54	167	133	A	H
		5146.9	56.3	-17.7	74	42.68	34	12.15	32.53	167	358	P	V
		5150	46.67	-7.33	54	33.05	34	12.15	32.53	167	358	A	V
		5180	104.75	-	-	91	34.13	12.16	32.54	167	358	P	V
		5180	97.96	-	-	84.21	34.13	12.16	32.54	167	358	A	V
802.11a CH 44 5220MHz		5149.76	51.78	-22.22	74	38.16	34	12.15	32.53	167	132	P	H
		5149.5	41.92	-12.08	54	28.3	34	12.15	32.53	167	132	A	H
		5220	107.28	-	-	93.43	34.23	12.17	32.55	167	132	P	H
		5220	99.73	-	-	85.88	34.23	12.17	32.55	167	132	A	H
		5379.12	51.93	-22.07	74	37.89	34.4	12.22	32.58	167	132	P	H
		5373.12	41.26	-12.74	54	27.22	34.4	12.21	32.57	167	132	A	H
		5140.66	51.1	-22.9	74	37.48	34	12.15	32.53	176	357	P	V
		5150	41.66	-12.34	54	28.04	34	12.15	32.53	176	357	A	V
		5220	105.26	-	-	91.41	34.23	12.17	32.55	176	357	P	V
		5220	98.54	-	-	84.69	34.23	12.17	32.55	176	357	A	V
		5351.52	51.02	-22.98	74	36.98	34.4	12.21	32.57	176	357	P	V
		5356.56	41.12	-12.88	54	27.08	34.4	12.21	32.57	176	357	A	V



802.11a CH 48 5240MHz		5134.94	51.74	-22.26	74	38.15	33.97	12.15	32.53	164	133	P	H
		5150	41.43	-12.57	54	27.81	34	12.15	32.53	164	133	A	H
		5240	107.42	-	-	93.52	34.27	12.18	32.55	164	133	P	H
		5240	99.15	-	-	85.25	34.27	12.18	32.55	164	133	A	H
		5437.92	51.28	-22.72	74	37.24	34.4	12.23	32.59	164	133	P	H
		5350.08	41.46	-12.54	54	27.42	34.4	12.21	32.57	164	133	A	H
		5140.66	51.51	-22.49	74	37.89	34	12.15	32.53	165	356	P	V
		5149.24	41.19	-12.81	54	27.57	34	12.15	32.53	165	356	A	V
		5240	105.05	-	-	91.15	34.27	12.18	32.55	165	356	P	V
		5240	98.41	-	-	84.51	34.27	12.18	32.55	165	356	A	V
		5424.96	51.1	-22.9	74	37.05	34.4	12.23	32.58	165	356	P	V
		5352.72	41.23	-12.77	54	27.19	34.4	12.21	32.57	165	356	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



U-NII-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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 36 5180MHz		6906.64	52.77	-15.53	68.3	55.29	35.68	13.84	52.04	161	360	P	H
		10360	50.62	-17.68	68.3	48.97	37.39	15.31	51.05	-	-	P	H
		15540	50.21	-23.79	74	45.03	40.08	17.76	52.66	-	-	P	H
		6906.64	55.46	-12.84	68.3	57.98	35.68	13.84	52.04	175	351	P	V
		10360	50.09	-18.21	68.3	48.44	37.39	15.31	51.05	-	-	P	V
		15540	49.77	-24.23	74	44.59	40.08	17.76	52.66	-	-	P	V
802.11a CH 44 5220MHz		6960	51.84	-16.46	68.3	54.3	35.69	13.93	52.08	141	49	P	H
		10440	49.28	-19.02	68.3	47.58	37.45	15.32	51.07	-	-	P	H
		15660	48.96	-25.04	74	43.82	40.19	17.83	52.88	-	-	P	H
		6960	56.21	-12.09	68.3	58.67	35.69	13.93	52.08	166	352	P	V
		10440	49.35	-18.95	68.3	47.65	37.45	15.32	51.07	-	-	P	V
		15660	48.77	-25.23	74	43.63	40.19	17.83	52.88	-	-	P	V
802.11a CH 48 5240MHz		6986	52.71	-15.59	68.3	55.13	35.7	13.97	52.09	123	21	P	H
		10480	48.96	-19.34	68.3	47.24	37.49	15.32	51.09	-	-	P	H
		15720	49.82	-24.18	74	44.7	40.25	17.87	53	-	-	P	H
		6986	54.46	-13.84	68.3	56.88	35.7	13.97	52.09	227	338	P	V
		10480	49.21	-19.09	68.3	47.49	37.49	15.32	51.09	-	-	P	V
		15720	48.87	-25.13	74	43.75	40.25	17.87	53	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



U-NII-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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 36 5180MHz		5149.5	59.06	-14.94	74	45.44	34	12.15	32.53	170	134	P	H
		5149.24	48.65	-5.35	54	35.03	34	12.15	32.53	170	134	A	H
		5180	106.91	-	-	93.16	34.13	12.16	32.54	170	134	P	H
		5180	99.27	-	-	85.52	34.13	12.16	32.54	170	134	A	H
		5148.2	57.8	-16.2	74	44.18	34	12.15	32.53	168	358	P	V
		5150	47.35	-6.65	54	33.73	34	12.15	32.53	168	358	A	V
		5180	104.51	-	-	90.76	34.13	12.16	32.54	168	358	P	V
		5180	97.33	-	-	83.58	34.13	12.16	32.54	168	358	A	V
802.11n HT20 CH 44 5220MHz		5146.12	51	-23	74	37.38	34	12.15	32.53	167	134	P	H
		5150	41.96	-12.04	54	28.34	34	12.15	32.53	167	134	A	H
		5220	106.55	-	-	92.7	34.23	12.17	32.55	167	134	P	H
		5220	99.82	-	-	85.97	34.23	12.17	32.55	167	134	A	H
		5352.96	51.76	-22.24	74	37.72	34.4	12.21	32.57	167	134	P	H
		5355.6	41.25	-12.75	54	27.21	34.4	12.21	32.57	167	134	A	H
		5141.7	51.36	-22.64	74	37.74	34	12.15	32.53	168	357	P	V
		5150	41.69	-12.31	54	28.07	34	12.15	32.53	168	357	A	V
		5220	104.07	-	-	90.22	34.23	12.17	32.55	168	357	P	V
		5220	97.13	-	-	83.28	34.23	12.17	32.55	168	357	A	V
		5455.92	51.71	-22.29	74	37.66	34.4	12.24	32.59	168	357	P	V
		5356.08	41.2	-12.8	54	27.16	34.4	12.21	32.57	168	357	A	V



802.11n HT20 CH 48 5240MHz		5093.6	51.28	-22.72	74	37.76	33.9	12.14	32.52	163	133	P	H
		5150	41.42	-12.58	54	27.8	34	12.15	32.53	163	133	A	H
		5240	106.87	-	-	92.97	34.27	12.18	32.55	163	133	P	H
		5240	99.88	-	-	85.98	34.27	12.18	32.55	163	133	A	H
		5449.44	51.47	-22.53	74	37.42	34.4	12.24	32.59	163	133	P	H
		5354.4	41.48	-12.52	54	27.44	34.4	12.21	32.57	163	133	A	H
		5134.16	51.67	-22.33	74	38.08	33.97	12.15	32.53	181	347	P	V
		5149.76	41.23	-12.77	54	27.61	34	12.15	32.53	181	347	A	V
		5240	104.84	-	-	90.94	34.27	12.18	32.55	181	347	P	V
		5240	97.92	-	-	84.02	34.27	12.18	32.55	181	347	A	V
		5408.88	51.09	-22.91	74	37.05	34.4	12.22	32.58	181	347	P	V
		5354.64	41.22	-12.78	54	27.18	34.4	12.21	32.57	181	347	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



U-NII-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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 36 5180MHz		6906.66	53.89	-14.41	68.3	56.41	35.68	13.84	52.04	163	348	P	H
		10360	50.93	-17.37	68.3	49.28	37.39	15.31	51.05	-	-	P	H
		15540	49.68	-24.32	74	44.5	40.08	17.76	52.66	-	-	P	H
		6906.66	57.87	-10.43	68.3	60.39	35.68	13.84	52.04	160	340	P	V
		10360	49.52	-18.78	68.3	47.87	37.39	15.31	51.05	-	-	P	V
		15540	49.95	-24.05	74	44.77	40.08	17.76	52.66	-	-	P	V
802.11n HT20 CH 44 5220MHz		6959.98	52.7	-15.6	68.3	55.16	35.69	13.93	52.08	141	49	P	H
		10440	48.36	-19.94	68.3	46.66	37.45	15.32	51.07	-	-	P	H
		15660	49.55	-24.45	74	44.41	40.19	17.83	52.88	-	-	P	H
		6959.98	56.56	-11.74	68.3	59.02	35.69	13.93	52.08	166	352	P	V
		10440	48.69	-19.61	68.3	46.99	37.45	15.32	51.07	-	-	P	V
		15660	49.76	-24.24	74	44.62	40.19	17.83	52.88	-	-	P	V
802.11n HT20 CH 48 5240MHz		6986.64	51.89	-16.41	68.3	54.31	35.7	13.97	52.09	160	49	P	H
		10480	49.25	-19.05	68.3	47.53	37.49	15.32	51.09	-	-	P	H
		15720	49.24	-24.76	74	44.12	40.25	17.87	53	-	-	P	H
		6986.64	55.88	-12.42	68.3	58.3	35.7	13.97	52.09	162	351	P	V
		10480	49.4	-18.9	68.3	47.68	37.49	15.32	51.09	-	-	P	V
		15720	49.31	-24.69	74	44.19	40.25	17.87	53	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



U-NII-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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 38 5190MHz		5149.5	58.33	-15.67	74	44.71	34	12.15	32.53	149	159	P	H
		5149.76	49.47	-4.53	54	35.85	34	12.15	32.53	149	159	A	H
		5190	98.75	-	-	85	34.13	12.16	32.54	149	159	P	H
		5190	92.75	-	-	79	34.13	12.16	32.54	149	159	A	H
		5404.84	51.35	-22.65	74	37.31	34.4	12.22	32.58	149	159	P	H
		5444.6	43.16	-10.84	54	29.12	34.4	12.23	32.59	149	159	A	H
		5147.16	57.72	-16.28	74	44.1	34	12.15	32.53	149	0	P	V
		5149.24	50.35	-3.65	54	36.73	34	12.15	32.53	149	0	A	V
		5190	99.07	-	-	85.32	34.13	12.16	32.54	149	0	P	V
		5190	92.37	-	-	78.62	34.13	12.16	32.54	149	0	A	V
		5366.48	52.76	-21.24	74	38.72	34.4	12.21	32.57	149	0	P	V
		5424.44	43.17	-10.83	54	29.12	34.4	12.23	32.58	149	0	A	V
802.11n HT40 CH 46 5230MHz		5149.5	52.35	-21.65	74	38.73	34	12.15	32.53	150	151	P	H
		5149.76	43.71	-10.29	54	30.09	34	12.15	32.53	150	151	A	H
		5230	101.9	-	-	88.01	34.27	12.17	32.55	150	151	P	H
		5230	95.88	-	-	81.99	34.27	12.17	32.55	150	151	A	H
		5352.24	52.28	-21.72	74	38.24	34.4	12.21	32.57	150	151	P	H
		5354.88	43.17	-10.83	54	29.13	34.4	12.21	32.57	150	151	A	H
		5138.84	52.7	-21.3	74	39.11	33.97	12.15	32.53	148	0	P	V
		5146.12	44.15	-9.85	54	30.53	34	12.15	32.53	148	0	A	V
		5230	103.54	-	-	89.65	34.27	12.17	32.55	148	0	P	V
		5230	96.35	-	-	82.46	34.27	12.17	32.55	148	0	A	V
		5390.4	52.52	-21.48	74	38.48	34.4	12.22	32.58	148	0	P	V
		5362.08	43.37	-10.63	54	29.33	34.4	12.21	32.57	148	0	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



U-NII-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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 38 5190MHz		6919.9	54.18	-14.12	68.3	37.65	35.68	13.86	33.01	201	159	P	H
		10380	50.02	-18.28	68.3	48.34	37.41	15.32	51.05	-	-	P	H
		15570	49.7	-24.3	74	44.53	40.11	17.78	52.72	-	-	P	H
		6919.9	57.28	-11.02	68.3	40.75	35.68	13.86	33.01	215	347	P	V
		10380	49.97	-18.33	68.3	48.29	37.41	15.32	51.05	-	-	P	V
		15570	50.22	-23.78	74	45.05	40.11	17.78	52.72	-	-	P	V
802.11n HT40 CH 46 5230MHz		6973.3	53.01	-15.29	68.3	55.45	35.69	13.95	52.08	162	52	P	H
		10460	49.45	-18.85	68.3	47.75	37.46	15.32	51.08	-	-	P	H
		15690	50.16	-23.84	74	45.03	40.22	17.85	52.94	-	-	P	H
		6973.3	55.88	-12.42	68.3	58.32	35.69	13.95	52.08	160	345	P	V
		10460	49.51	-18.79	68.3	47.81	37.46	15.32	51.08	-	-	P	V
		15690	49.31	-24.69	74	44.18	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.												



U-NII-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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 42 5210MHz		5132.34	58.67	-15.33	74	45.08	33.97	12.15	32.53	166	148	P	H
		5145.34	49.41	-4.59	54	35.79	34	12.15	32.53	166	148	A	H
		5210	96.26	-	-	82.4	34.23	12.17	32.54	166	148	P	H
		5210	89.8	-	-	75.94	34.23	12.17	32.54	166	148	A	H
		5459.28	52.08	-21.92	74	38.03	34.4	12.24	32.59	166	148	P	H
		5433.84	43.26	-10.74	54	29.22	34.4	12.23	32.59	166	148	A	H
		5128.44	56.32	-17.68	74	42.73	33.97	12.15	32.53	298	250	P	V
		5148.2	48.01	-5.99	54	34.39	34	12.15	32.53	298	250	A	V
		5210	94.48	-	-	80.62	34.23	12.17	32.54	298	250	P	V
		5210	87.96	-	-	74.1	34.23	12.17	32.54	298	250	A	V
		5438.16	51.8	-22.2	74	37.76	34.4	12.23	32.59	298	250	P	V
		5352.24	43.32	-10.68	54	29.28	34.4	12.21	32.57	298	250	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



U-NII-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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 42 5210MHz		7055.5	51.17	-17.13	68.3	53.49	35.71	14.02	52.05	147	59	P	H
		10580	49.77	-18.53	68.3	47.86	37.55	15.51	51.15	-	-	P	H
		15870	50.26	-23.74	74	45.2	40.39	17.95	53.28	-	-	P	H
		7055.5	53.12	-15.18	68.3	55.44	35.71	14.02	52.05	172	351	P	V
		10580	50.49	-17.81	68.3	48.58	37.55	15.51	51.15	-	-	P	V
		15870	49.75	-24.25	74	44.69	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.												



U-NII-2A - 5250~5350MHz

WIFI 802.11a (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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 52 5260MHz		5073.32	51.02	-22.98	74	37.54	33.87	12.13	32.52	168	132	P	H
		5150	41.14	-12.86	54	27.52	34	12.15	32.53	168	132	A	H
		5260	107.77	-	-	93.81	34.33	12.18	32.55	168	132	P	H
		5260	99.93	-	-	85.97	34.33	12.18	32.55	168	132	A	H
		5360.16	51.21	-22.79	74	37.17	34.4	12.21	32.57	168	132	P	H
		5352.72	41.78	-12.22	54	27.74	34.4	12.21	32.57	168	132	A	H
		5065	51.43	-22.57	74	37.99	33.83	12.13	32.52	169	348	P	V
		5148.98	41.06	-12.94	54	27.44	34	12.15	32.53	169	348	A	V
		5260	105.75	-	-	91.79	34.33	12.18	32.55	169	348	P	V
		5260	98.99	-	-	85.03	34.33	12.18	32.55	169	348	A	V
		5401.2	51.98	-22.02	74	37.94	34.4	12.22	32.58	169	348	P	V
		5351.52	41.57	-12.43	54	27.53	34.4	12.21	32.57	169	348	A	V
802.11a CH 60 5300MHz		5106.4	51.12	-22.88	74	37.57	33.93	12.14	32.52	166	148	P	H
		5149.45	41.01	-12.99	54	27.39	34	12.15	32.53	166	148	A	H
		5300	107.15	-	-	93.12	34.4	12.19	32.56	166	148	P	H
		5300	100.64	-	-	86.61	34.4	12.19	32.56	166	148	A	H
		5352.72	53.62	-20.38	74	39.58	34.4	12.21	32.57	166	148	P	H
		5350.08	44.22	-9.78	54	30.18	34.4	12.21	32.57	166	148	A	H
		5053.2	51.25	-22.75	74	37.84	33.8	12.12	32.51	168	351	P	V
		5147.35	40.97	-13.03	54	27.35	34	12.15	32.53	168	351	A	V
		5300	105.98	-	-	91.95	34.4	12.19	32.56	168	351	P	V
		5300	99.16	-	-	85.13	34.4	12.19	32.56	168	351	A	V
		5362.32	51.88	-22.12	74	37.84	34.4	12.21	32.57	168	351	P	V
		5350.32	43.41	-10.59	54	29.37	34.4	12.21	32.57	168	351	A	V



802.11a CH 64 5320MHz		5320	106.83	-	-	92.79	34.4	12.2	32.56	170	137	P	H
		5320	99.71	-	-	85.67	34.4	12.2	32.56	170	137	A	H
		5352	57.96	-16.04	74	43.92	34.4	12.21	32.57	170	137	P	H
		5350.08	48.92	-5.08	54	34.88	34.4	12.21	32.57	170	137	A	H
		5320	105.8	-	-	91.76	34.4	12.2	32.56	167	354	P	V
		5320	98.72	-	-	84.68	34.4	12.2	32.56	167	354	A	V
		5352.48	56.36	-17.64	74	42.32	34.4	12.21	32.57	167	354	P	V
		5350.08	47.84	-6.16	54	33.8	34.4	12.21	32.57	167	354	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



U-NII-2A 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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 52 5260MHz		7013	51.98	-16.32	68.3	54.36	35.7	14	52.08	110	29	P	H
		10520	49.64	-18.66	68.3	47.87	37.51	15.37	51.11	-	-	P	H
		15780	50.31	-23.69	74	45.21	40.3	17.9	53.1	-	-	P	H
		7013	54.53	-13.77	68.3	56.91	35.7	14	52.08	205	340	P	V
		10520	49.98	-18.32	68.3	48.21	37.51	15.37	51.11	-	-	P	V
		15780	50.49	-23.51	74	45.39	40.3	17.9	53.1	-	-	P	V
802.11a CH 60 5300MHz		7066.649	51.49	-16.81	68.3	53.78	35.71	14.03	52.03	126	47	P	H
		10600	49.56	-24.44	74	47.61	37.56	15.55	51.16	-	-	P	H
		15900	50.45	-23.55	74	45.38	40.41	17.97	53.31	-	-	P	H
		7066.649	53.94	-14.36	68.3	56.23	35.71	14.03	52.03	168	351	P	V
		10600	49.95	-24.05	74	48	37.56	15.55	51.16	-	-	P	V
		15900	50.05	-23.95	74	44.98	40.41	17.97	53.31	-	-	P	V
802.11a CH 64 5320MHz		7093.316	51.94	-16.36	68.3	54.19	35.72	14.04	52.01	121	58	P	H
		10640	50.34	-23.66	74	48.29	37.58	15.65	51.18	-	-	P	H
		15960	49.45	-24.55	74	44.41	40.47	18.01	53.44	-	-	P	H
		7093.316	53.43	-14.87	68.3	55.68	35.72	14.04	52.01	163	351	P	V
		10640	49.9	-24.1	74	47.85	37.58	15.65	51.18	-	-	P	V
		15960	50.29	-23.71	74	45.25	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.												



U-NII-2A 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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 52 5260MHz		5140.66	50.91	-23.09	74	37.29	34	12.15	32.53	169	134	P	H
		5148.98	41.17	-12.83	54	27.55	34	12.15	32.53	169	134	A	H
		5260	106.25	-	-	92.29	34.33	12.18	32.55	169	134	P	H
		5260	99.58	-	-	85.62	34.33	12.18	32.55	169	134	A	H
		5355.84	51.01	-22.99	74	36.97	34.4	12.21	32.57	169	134	P	H
		5351.52	41.67	-12.33	54	27.63	34.4	12.21	32.57	169	134	A	H
		5136.24	50.99	-23.01	74	37.4	33.97	12.15	32.53	180	349	P	V
		5125.84	41.04	-12.96	54	27.45	33.97	12.15	32.53	180	349	A	V
		5260	104.63	-	-	90.67	34.33	12.18	32.55	180	349	P	V
		5260	97.64	-	-	83.68	34.33	12.18	32.55	180	349	A	V
		5364	50.93	-23.07	74	36.89	34.4	12.21	32.57	180	349	P	V
		5351.76	41.37	-12.63	54	27.33	34.4	12.21	32.57	180	349	A	V
802.11n HT20 CH 60 5300MHz		5062.65	50.97	-23.03	74	37.52	33.83	12.13	32.51	168	133	P	H
		5128.1	41.01	-12.99	54	27.42	33.97	12.15	32.53	168	133	A	H
		5300	106.89	-	-	92.86	34.4	12.19	32.56	168	133	P	H
		5300	99.89	-	-	85.86	34.4	12.19	32.56	168	133	A	H
		5360.4	53.33	-20.67	74	39.29	34.4	12.21	32.57	168	133	P	H
		5350.08	43.7	-10.3	54	29.66	34.4	12.21	32.57	168	133	A	H
		5122.5	51.04	-22.96	74	37.5	33.93	12.14	32.53	167	351	P	V
		5128.8	40.98	-13.02	54	27.39	33.97	12.15	32.53	167	351	A	V
		5300	104.92	-	-	90.89	34.4	12.19	32.56	167	351	P	V
		5300	97.92	-	-	83.89	34.4	12.19	32.56	167	351	A	V
		5350.32	52.06	-21.94	74	38.02	34.4	12.21	32.57	167	351	P	V
		5350.08	43.13	-10.87	54	29.09	34.4	12.21	32.57	167	351	A	V



802.11n HT20 CH 64 5320MHz		5320	107.55	-	-	93.51	34.4	12.2	32.56	125	145	P	H
		5320	100.39	-	-	86.35	34.4	12.2	32.56	125	145	A	H
		5352.16	59.16	-14.84	74	45.12	34.4	12.21	32.57	125	145	P	H
		5350.08	49.98	-4.02	54	35.94	34.4	12.21	32.57	125	145	A	H
		5320	104.12	-	-	90.08	34.4	12.2	32.56	153	0	P	V
		5320	97.64	-	-	83.6	34.4	12.2	32.56	153	0	A	V
		5351.68	57.47	-16.53	74	43.43	34.4	12.21	32.57	153	0	P	V
		5350.08	48.12	-5.88	54	34.08	34.4	12.21	32.57	153	0	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



U-NII-2A 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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 52 5260MHz		7013.15	52.59	-15.71	68.3	54.97	35.7	14	52.08	104	59	P	H
		10520	49.57	-18.73	68.3	47.8	37.51	15.37	51.11	-	-	P	H
		15780	50.33	-23.67	74	45.23	40.3	17.9	53.1	-	-	P	H
		7013.15	54.13	-14.17	68.3	56.51	35.7	14	52.08	206	340	P	V
		10520	49.06	-19.24	68.3	47.29	37.51	15.37	51.11	-	-	P	V
		15780	50.07	-23.93	74	44.97	40.3	17.9	53.1	-	-	P	V
802.11n HT20 CH 60 5300MHz		7066.66	51.85	-16.45	68.3	54.14	35.71	14.03	52.03	147	49	P	H
		10600	50.35	-23.65	74	48.4	37.56	15.55	51.16	-	-	P	H
		15900	50.32	-23.68	74	45.25	40.41	17.97	53.31	-	-	P	H
		7066.66	54.48	-13.82	68.3	56.77	35.71	14.03	52.03	168	352	P	V
		10600	49.4	-24.6	74	47.45	37.56	15.55	51.16	-	-	P	V
		15900	50.38	-23.62	74	45.31	40.41	17.97	53.31	-	-	P	V
802.11n HT20 CH 64 5320MHz		7093.31	52.02	-16.28	68.3	54.27	35.72	14.04	52.01	122	49	P	H
		10640	50.28	-23.72	74	48.23	37.58	15.65	51.18	-	-	P	H
		15960	49.6	-24.4	74	44.56	40.47	18.01	53.44	-	-	P	H
		7093.31	53.1	-15.2	68.3	55.35	35.72	14.04	52.01	198	339	P	V
		10640	50.16	-23.84	74	48.11	37.58	15.65	51.18	-	-	P	V
		15960	50.43	-23.57	74	45.39	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.												



U-NII-2A 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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 54 5270MHz		5134.4	51.91	-22.09	74	38.32	33.97	12.15	32.53	172	141	P	H
		5121.1	42.95	-11.05	54	29.41	33.93	12.14	32.53	172	141	A	H
		5270	103.21	-	-	89.24	34.33	12.19	32.55	172	141	P	H
		5270	97.02	-	-	83.05	34.33	12.19	32.55	172	141	A	H
		5354.64	53.77	-20.23	74	39.73	34.4	12.21	32.57	172	141	P	H
		5350.8	45.98	-8.02	54	31.94	34.4	12.21	32.57	172	141	A	H
		5120.4	52.44	-21.56	74	38.9	33.93	12.14	32.53	253	250	P	V
		5126.35	42.93	-11.07	54	29.34	33.97	12.15	32.53	253	250	A	V
		5270	104.28	-	-	90.31	34.33	12.19	32.55	253	250	P	V
		5270	97.95	-	-	83.98	34.33	12.19	32.55	253	250	A	V
		5351.28	55.49	-18.51	74	41.45	34.4	12.21	32.57	253	250	P	V
		5351.28	47.39	-6.61	54	33.35	34.4	12.21	32.57	253	250	A	V
802.11n HT40 CH 62 5310MHz		5096.95	51.74	-22.26	74	38.22	33.9	12.14	32.52	159	145	P	H
		5125.3	42.93	-11.07	54	29.34	33.97	12.15	32.53	159	145	A	H
		5310	100.04	-	-	86	34.4	12.2	32.56	159	145	P	H
		5310	93.37	-	-	79.33	34.4	12.2	32.56	159	145	A	H
		5354.16	57.86	-16.14	74	43.82	34.4	12.21	32.57	159	145	P	H
		5350.8	49.8	-4.2	54	35.76	34.4	12.21	32.57	159	145	A	H
		5074.9	51.58	-22.42	74	38.1	33.87	12.13	32.52	246	262	P	V
		5126.7	42.77	-11.23	54	29.18	33.97	12.15	32.53	246	262	A	V
		5310	100.56	-	-	86.52	34.4	12.2	32.56	246	262	P	V
		5310	94.15	-	-	80.11	34.4	12.2	32.56	246	262	A	V
		5350.8	60.9	-13.1	74	46.86	34.4	12.21	32.57	246	262	P	V
		5350.08	50.59	-3.41	54	36.55	34.4	12.21	32.57	246	262	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



U-NII-2A 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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 54 5270MHz		6973.3	53.01	-15.29	68.3	55.45	35.69	13.95	52.08	162	52	P	H
		10460	49.45	-18.85	68.3	47.75	37.46	15.32	51.08	-	-	P	H
		15690	50.16	-23.84	74	45.03	40.22	17.85	52.94	-	-	P	H
		6973.3	55.88	-12.42	68.3	58.32	35.69	13.95	52.08	160	345	P	V
		10460	49.51	-18.79	68.3	47.81	37.46	15.32	51.08	-	-	P	V
		15690	49.31	-24.69	74	44.18	40.22	17.85	52.94	-	-	P	V
802.11n HT40 CH 62 5310MHz		7026.5	52.75	-15.55	68.3	55.13	35.7	14	52.08	130	54	P	H
		10540	49.42	-18.88	68.3	47.61	37.52	15.41	51.12	-	-	P	H
		15810	49.87	-24.13	74	44.78	40.33	17.92	53.16	-	-	P	H
		7026.5	53.64	-14.66	68.3	56.02	35.7	14	52.08	213	352	P	V
		10540	49.47	-18.83	68.3	47.66	37.52	15.41	51.12	-	-	P	V
		15810	49.26	-24.74	74	44.17	40.33	17.92	53.16	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



U-NII-2A 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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 58 5290MHz		5013.3	52.81	-21.19	74	39.41	33.8	12.11	32.51	164	148	P	H
		5130.2	42.93	-11.07	54	29.34	33.97	12.15	32.53	164	148	A	H
		5290	94.31	-	-	80.31	34.37	12.19	32.56	164	148	P	H
		5290	88.16	-	-	74.16	34.37	12.19	32.56	164	148	A	H
		5357.28	57.65	-16.35	74	43.61	34.4	12.21	32.57	164	148	P	H
		5361.6	49.74	-4.26	54	35.7	34.4	12.21	32.57	164	148	A	H
		5068.95	52.2	-21.8	74	38.76	33.83	12.13	32.52	303	252	P	V
		5119.7	42.95	-11.05	54	29.41	33.93	12.14	32.53	303	252	A	V
		5290	95.55	-	-	81.55	34.37	12.19	32.56	303	252	P	V
		5290	89.34	-	-	75.34	34.37	12.19	32.56	303	252	A	V
		5358.96	58.31	-15.69	74	44.27	34.4	12.21	32.57	303	252	P	V
		5356.32	49.78	-4.22	54	35.74	34.4	12.21	32.57	303	252	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



U-NII-2A 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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 58 5290MHz		6945.5	54.29	-14.01	68.3	56.77	35.69	13.9	52.07	142	38	P	H
		10420	49.39	-18.91	68.3	47.71	37.43	15.32	51.07	-	-	P	H
		15630	50.52	-23.48	74	45.38	40.17	17.82	52.85	-	-	P	H
		6945.5	54.31	-13.99	68.3	56.79	35.69	13.9	52.07	185	349	P	V
		10420	49.46	-18.84	68.3	47.78	37.43	15.32	51.07	-	-	P	V
		15630	50.04	-23.96	74	44.9	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.												



U-NII-2C - 5470~5725MHz

WIFI 802.11a (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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 100 5500MHz		5457.52	56.04	-17.96	74	41.99	34.4	12.24	32.59	152	152	P	H
		5467.28	62.65	-5.65	68.3	48.6	34.4	12.24	32.59	152	152	P	H
		5460	45.95	-8.05	54	31.9	34.4	12.24	32.59	152	152	A	H
		5500	107.03	-	-	92.98	34.4	12.25	32.6	152	152	P	H
		5500	100.26	-	-	86.21	34.4	12.25	32.6	152	152	A	H
		5459.92	55.24	-18.76	74	41.19	34.4	12.24	32.59	153	355	P	V
		5469.2	62.24	-6.06	68.3	48.19	34.4	12.24	32.59	153	355	P	V
		5460	44.82	-9.18	54	30.77	34.4	12.24	32.59	153	355	A	V
		5500	106.27	-	-	92.22	34.4	12.25	32.6	153	355	P	V
		5500	99.17	-	-	85.12	34.4	12.25	32.6	153	355	A	V
802.11a CH 116 5580MHz		5365.6	50.92	-23.08	74	36.88	34.4	12.21	32.57	153	155	P	H
		5463.52	50.12	-18.18	68.3	36.07	34.4	12.24	32.59	153	155	P	H
		5459.92	41.45	-12.55	54	27.4	34.4	12.24	32.59	153	155	A	H
		5580	106.28	-	-	92.31	34.3	12.27	32.6	153	155	P	H
		5580	99.68	-	-	85.71	34.3	12.27	32.6	153	155	A	H
		5729.405	51.83	-16.47	68.3	37.66	34.47	12.3	32.6	153	155	P	H
		5431.36	52.55	-21.45	74	38.51	34.4	12.23	32.59	155	357	P	V
		5464.96	51.99	-16.31	68.3	37.94	34.4	12.24	32.59	155	357	P	V
		5458	41.29	-12.71	54	27.24	34.4	12.24	32.59	155	357	A	V
		5580	106.08	-	-	92.11	34.3	12.27	32.6	155	357	P	V
		5580	99.64	-	-	85.67	34.3	12.27	32.6	155	357	A	V
		5763.11	50.87	-17.43	68.3	36.6	34.57	12.3	32.6	155	357	P	V



802.11a CH 140 5700MHz		5700	104.06	-	-	89.97	34.4	12.29	32.6	150	153	P	H
		5700	97.78	-	-	83.69	34.4	12.29	32.6	150	153	A	H
		5726.52	58.33	-9.97	68.3	44.16	34.47	12.3	32.6	150	153	P	H
		5700	104.74	-	-	90.65	34.4	12.29	32.6	149	357	P	V
		5700	97.91	-	-	83.82	34.4	12.29	32.6	149	357	A	V
		5727.64	62.41	-5.89	68.3	48.24	34.47	12.3	32.6	149	357	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



U-NII-2C - 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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 100 5500MHz		7333.32	52.38	-21.62	74	54.19	35.77	14.18	51.76	380	16	P	H
		7333.32	45.43	-8.57	54	47.24	35.77	14.18	51.76	380	16	A	H
		11000	49.6	-24.4	74	46.71	37.8	16.49	51.4	-	-	P	H
		16500	51.31	-16.99	68.3	44.5	41.31	18.2	52.7	-	-	P	H
		7333.32	52.73	-21.27	74	54.54	35.77	14.18	51.76	162	360	P	V
		7333.32	47.88	-6.12	54	49.69	35.77	14.18	51.76	162	360	A	V
		11000	50.07	-23.93	74	47.18	37.8	16.49	51.4	-	-	P	V
		16500	51	-17.3	68.3	44.19	41.31	18.2	52.7	-	-	P	V
802.11a CH 116 5580MHz		7439.98	51.17	-22.83	74	52.79	35.79	14.24	51.65	100	53	P	H
		7439.98	43.35	-10.65	54	44.97	35.79	14.24	51.65	100	53	A	H
		11160	49.35	-24.65	74	46.18	37.94	16.5	51.27	-	-	P	H
		16740	49.36	-18.94	68.3	42.52	41.69	18.28	53.13	-	-	P	H
		7439.98	51.25	-22.75	74	52.87	35.79	14.24	51.65	149	360	P	V
		7439.98	44.95	-9.05	54	46.57	35.79	14.24	51.65	149	360	A	V
		11160	50.86	-23.14	74	47.69	37.94	16.5	51.27	-	-	P	V
		16740	50.83	-17.47	68.3	43.99	41.69	18.28	53.13	-	-	P	V
802.11a CH 140 5700MHz		7599.98	51.77	-22.23	74	53.11	35.82	14.4	51.56	183	11	P	H
		7599.98	44.2	-9.8	54	45.54	35.82	14.4	51.56	183	11	A	H
		11400	49.98	-24.02	74	46.41	38.13	16.52	51.08	-	-	P	H
		17100	50.89	-17.41	68.3	44	42	18.41	53.52	-	-	P	H
		7599.98	52.12	-21.88	74	53.46	35.82	14.4	51.56	164	360	P	V
		7599.98	43.73	-10.27	54	45.07	35.82	14.4	51.56	164	360	A	V
		11400	50.23	-23.77	74	46.66	38.13	16.52	51.08	-	-	P	V
		17100	50.45	-17.85	68.3	43.56	42	18.41	53.52	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



U-NII-2C - 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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 100 5500MHz		5459.6	58.14	-15.86	74	44.09	34.4	12.24	32.59	123	148	P	H
		5468.56	64.4	-3.9	68.3	50.35	34.4	12.24	32.59	123	148	P	H
		5460	46.25	-7.75	54	32.2	34.4	12.24	32.59	123	148	A	H
		5500	105.4	-	-	91.35	34.4	12.25	32.6	123	148	P	H
		5500	99.58	-	-	85.53	34.4	12.25	32.6	123	148	A	H
		5458.96	57.91	-16.09	74	43.86	34.4	12.24	32.59	120	0	P	V
		5468.4	60.47	-7.83	68.3	46.42	34.4	12.24	32.59	120	0	P	V
		5460	45.87	-8.13	54	31.82	34.4	12.24	32.59	120	0	A	V
		5500	105.15	-	-	91.1	34.4	12.25	32.6	120	0	P	V
		5500	99.16	-	-	85.11	34.4	12.25	32.6	120	0	A	V
802.11n HT20 CH 116 5580MHz		5445.76	52.35	-21.65	74	38.31	34.4	12.23	32.59	124	149	P	H
		5465.68	52.52	-15.78	68.3	38.47	34.4	12.24	32.59	124	149	P	H
		5459.68	41.59	-12.41	54	27.54	34.4	12.24	32.59	124	149	A	H
		5580	104.97	-	-	91	34.3	12.27	32.6	124	149	P	H
		5580	98.37	-	-	84.4	34.3	12.27	32.6	124	149	A	H
		5738.225	51.9	-16.4	68.3	37.7	34.5	12.3	32.6	124	149	P	H
		5441.68	52.89	-21.11	74	38.85	34.4	12.23	32.59	138	0	P	V
		5460.4	51.39	-16.91	68.3	37.34	34.4	12.24	32.59	138	0	P	V
		5459.92	41.49	-12.51	54	27.44	34.4	12.24	32.59	138	0	A	V
		5580	105.18	-	-	91.21	34.3	12.27	32.6	138	0	P	V
		5580	98.83	-	-	84.86	34.3	12.27	32.6	138	0	A	V
		5759.33	51.07	-17.23	68.3	36.8	34.57	12.3	32.6	138	0	P	V



802.11n HT20 CH 140 5700MHz		5700	102.06	-	-	87.97	34.4	12.29	32.6	124	152	P	H
		5700	95.13	-	-	81.04	34.4	12.29	32.6	124	152	A	H
		5725.48	54.13	-14.17	68.3	39.96	34.47	12.3	32.6	124	152	P	H
		5700	104.25	-	-	90.16	34.4	12.29	32.6	145	0	P	V
		5700	97.6	-	-	83.51	34.4	12.29	32.6	145	0	A	V
		5725.24	57.04	-11.26	68.3	42.87	34.47	12.3	32.6	145	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



U-NII-2C - 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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 100 5500MHz		7333.3	52.52	-21.48	74	54.33	35.77	14.18	51.76	128	55	P	H
		7333.3	46.3	-7.7	54	29.66	35.77	14.18	33.31	128	55	A	H
		11000	48.92	-25.08	74	46.03	37.8	16.49	51.4	-	-	P	H
		16500	50.58	-17.72	68.3	43.77	41.31	18.2	52.7	-	-	P	H
		7333.3	53.02	-20.98	74	54.83	35.77	14.18	51.76	158	344	P	V
		7333.3	47.3	-6.7	54	49.11	35.77	14.18	51.76	158	344	A	V
		11000	49.19	-24.81	74	46.3	37.8	16.49	51.4	-	-	P	V
		16500	51.29	-17.01	68.3	44.48	41.31	18.2	52.7	-	-	P	V
802.11n HT20 CH 116 5580MHz		7439.9	51.94	-22.06	74	53.56	35.79	14.24	51.65	215	132	P	H
		7439.9	44.6	-9.4	54	46.22	35.79	14.24	51.65	215	132	A	H
		11160	50.51	-23.49	74	47.34	37.94	16.5	51.27	-	-	P	H
		16740	50.16	-18.14	68.3	43.32	41.69	18.28	53.13	-	-	P	H
		7439.9	52.48	-21.52	74	54.1	35.79	14.24	51.65	157	346	P	V
		7439.9	45.34	-8.66	54	46.96	35.79	14.24	51.65	157	346	A	V
		11160	50.42	-23.58	74	47.25	37.94	16.5	51.27	-	-	P	V
		16740	50.11	-18.19	68.3	43.27	41.69	18.28	53.13	-	-	P	V
802.11n HT20 CH 140 5700MHz		7599.9	51.37	-22.63	74	52.71	35.82	14.4	51.56	211	138	P	H
		7599.9	43.47	-10.53	54	44.81	35.82	14.4	51.56	211	138	A	H
		11400	49.96	-24.04	74	46.39	38.13	16.52	51.08	-	-	P	H
		17100	50.97	-17.33	68.3	44.08	42	18.41	53.52	-	-	P	H
		7599.9	52.46	-21.54	74	53.8	35.82	14.4	51.56	202	360	P	V
		7599.9	44.39	-9.61	54	45.73	35.82	14.4	51.56	202	360	A	V
		11400	49.68	-24.32	74	46.11	38.13	16.52	51.08	-	-	P	V
		17100	50.99	-17.31	68.3	44.1	42	18.41	53.52	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



U-NII-2C - 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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 102 5510MHz		5459.92	59.15	-14.85	74	45.1	34.4	12.24	32.59	165	147	P	H
		5467.84	64.64	-3.66	68.3	50.59	34.4	12.24	32.59	165	147	P	H
		5459.92	49.99	-4.01	54	35.94	34.4	12.24	32.59	165	147	A	H
		5510	101.09	-	-	87.04	34.4	12.25	32.6	165	147	P	H
		5510	94.2	-	-	80.15	34.4	12.25	32.6	165	147	A	H
		5762.165	53.07	-15.23	68.3	38.8	34.57	12.3	32.6	165	147	P	H
		5459.68	59.28	-14.72	74	45.23	34.4	12.24	32.59	278	251	P	V
		5467.84	63.72	-4.58	68.3	49.67	34.4	12.24	32.59	278	251	P	V
		5459.2	50.75	-3.25	54	36.7	34.4	12.24	32.59	278	251	A	V
		5510	102.84	-	-	88.79	34.4	12.25	32.6	278	251	P	V
		5510	95.09	-	-	81.04	34.4	12.25	32.6	278	251	A	V
		5735.39	52.38	-15.92	68.3	38.18	34.5	12.3	32.6	278	251	P	V
802.11n HT40 CH 110 5550MHz		5419.84	53.42	-20.58	74	39.37	34.4	12.23	32.58	145	148	P	H
		5469.76	55.69	-12.61	68.3	41.64	34.4	12.24	32.59	145	148	P	H
		5458.48	44.78	-9.22	54	30.73	34.4	12.24	32.59	145	148	A	H
		5550	102.69	-	-	88.73	34.3	12.26	32.6	145	148	P	H
		5550	96.33	-	-	82.37	34.3	12.26	32.6	145	148	A	H
		5760.275	51.47	-16.83	68.3	37.2	34.57	12.3	32.6	145	148	P	H
		5401.12	52.95	-21.05	74	38.91	34.4	12.22	32.58	276	251	P	V
		5469.52	55.97	-12.33	68.3	41.92	34.4	12.24	32.59	276	251	P	V
		5457.52	45.29	-8.71	54	31.24	34.4	12.24	32.59	276	251	A	V
		5550	103.73	-	-	89.77	34.3	12.26	32.6	276	251	P	V
		5550	97.5	-	-	83.54	34.3	12.26	32.6	276	251	A	V
		5728.145	51.86	-16.44	68.3	37.69	34.47	12.3	32.6	276	251	P	V



802.11n HT40 CH 134 5670MHz		5434.7	52.31	-21.69	74	38.27	34.4	12.23	32.59	284	248	P	H
		5465.85	52.3	-16	68.3	38.25	34.4	12.24	32.59	284	248	P	H
		5437.15	43.3	-10.7	54	29.26	34.4	12.23	32.59	284	248	A	H
		5670	101.87	-	-	87.79	34.4	12.28	32.6	284	248	P	H
		5670	96.24	-	-	82.16	34.4	12.28	32.6	284	248	A	H
		5729.65	59.4	-8.9	68.3	45.23	34.47	12.3	32.6	284	248	P	H
		5385.35	52.68	-21.32	74	38.64	34.4	12.22	32.58	280	252	P	V
		5461.65	51.04	-17.26	68.3	36.99	34.4	12.24	32.59	280	252	P	V
		5365.75	43.09	-10.91	54	29.05	34.4	12.21	32.57	280	252	A	V
		5670	103.54	-	-	89.46	34.4	12.28	32.6	280	252	P	V
		5670	96.77	-	-	82.69	34.4	12.28	32.6	280	252	A	V
		5725.625	59.57	-8.73	68.3	45.4	34.47	12.3	32.6	280	252	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



U-NII-2C - 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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 102 5510MHz		7347	50	-24	74	51.81	35.77	14.18	51.76	-	-	P	H
		11020	49	-25	74	46.09	37.81	16.49	51.39	-	-	P	H
		16530	51.04	-17.26	68.3	44.22	41.37	18.21	52.76	-	-	P	H
		7347	53.68	-20.32	74	55.49	35.77	14.18	51.76	202	17	P	V
		7347	46.47	-7.53	54	48.28	35.77	14.18	51.76	202	17	P	V
		11020	49.88	-24.12	74	46.97	37.81	16.49	51.39	-	-	P	V
		16530	51.34	-16.96	68.3	44.52	41.37	18.21	52.76	-	-	P	V
802.11n HT40 CH 110 5550MHz		7399	51.82	-22.18	74	53.53	35.78	14.21	51.7	109	55	P	H
		7399	45.14	-8.86	54	46.85	35.78	14.21	51.7	109	55	P	H
		11100	49.67	-24.33	74	46.61	37.88	16.5	51.32	-	-	P	H
		16650	50.45	-17.85	68.3	43.62	41.56	18.25	52.98	-	-	P	H
		7399	52.72	-21.28	74	54.43	35.78	14.21	51.7	160	18	P	V
		7399	46.73	-7.27	54	48.44	35.78	14.21	51.7	160	18	A	V
		11100	49.33	-24.67	74	46.27	37.88	16.5	51.32	-	-	P	V
802.11n HT40 CH 134 5670MHz		16650	49.98	-18.32	68.3	43.15	41.56	18.25	52.98	-	-	P	V
		7559.98	51.77	-22.23	74	53.18	35.81	14.35	51.57	100	56	P	H
		7559.98	45.48	-8.52	54	46.89	35.81	14.35	51.57	100	56	A	H
		11340	49.01	-24.99	74	45.55	38.07	16.52	51.13	-	-	P	H
		17010	50.46	-17.84	68.3	43.6	42.08	18.37	53.59	-	-	P	H
		7559.98	52.12	-21.88	74	53.53	35.81	14.35	51.57	148	351	P	V
		7559.98	46.28	-7.72	54	47.69	35.81	14.35	51.57	148	351	A	V
Remark		11340	49.27	-24.73	74	45.81	38.07	16.52	51.13	-	-	P	V
		17010	51.01	-17.29	68.3	44.15	42.08	18.37	53.59	-	-	P	V
1. No other spurious found. 2. All results are PASS against Peak and Average limit line.													



U-NII-2C - 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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 106 5530MHz		5449.12	59.15	-14.85	74	45.1	34.4	12.24	32.59	158	147	P	H
		5470	59.6	-8.7	68.3	45.55	34.4	12.24	32.59	158	147	P	H
		5452.24	48.59	-5.41	54	34.54	34.4	12.24	32.59	158	147	A	H
		5530	96.48	-	-	82.45	34.37	12.26	32.6	158	147	P	H
		5530	89.18	-	-	75.15	34.37	12.26	32.6	158	147	A	H
		5740.115	52.11	-16.19	68.3	37.91	34.5	12.3	32.6	158	147	P	H
		5451.04	58.02	-15.98	74	43.97	34.4	12.24	32.59	285	252	P	V
		5470	60.58	-7.72	68.3	46.53	34.4	12.24	32.59	285	252	P	V
		5452.48	49.49	-4.51	54	35.44	34.4	12.24	32.59	285	252	A	V
		5530	97.26	-	-	83.23	34.37	12.26	32.6	285	252	P	V
		5530	90.87	-	-	76.84	34.37	12.26	32.6	285	252	A	V
		5762.795	52.15	-16.15	68.3	37.88	34.57	12.3	32.6	285	252	P	V
802.11ac VHT80 CH 122 5610MHz		5454.64	53.31	-20.69	74	39.26	34.4	12.24	32.59	151	145	P	H
		5462.32	53.29	-15.01	68.3	39.24	34.4	12.24	32.59	151	145	P	H
		5459.92	43.51	-10.49	54	29.46	34.4	12.24	32.59	151	145	A	H
		5610	98.4	-	-	84.43	34.3	12.27	32.6	151	145	P	H
		5610	91.61	-	-	77.64	34.3	12.27	32.6	151	145	A	H
		5756.775	53.36	-14.94	68.3	39.09	34.57	12.3	32.6	151	145	P	H
		5453.2	52.87	-21.13	74	38.82	34.4	12.24	32.59	262	251	P	V
		5463.04	52.07	-16.23	68.3	38.02	34.4	12.24	32.59	262	251	P	V
		5459.68	43.45	-10.55	54	29.4	34.4	12.24	32.59	262	251	A	V
		5610	99.83	-	-	85.86	34.3	12.27	32.6	262	251	P	V
		5610	93.43	-	-	79.46	34.3	12.27	32.6	262	251	A	V
		5725.975	54.32	-13.98	68.3	40.15	34.47	12.3	32.6	262	251	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



U-NII-2C 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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 106 5530MHz		7373.33	51.32	-22.68	74	53.06	35.78	14.2	51.72	150	68	P	H
		7373.33	45.96	-8.04	54	47.7	35.78	14.2	51.72	150	68	P	H
		11060	49.75	-24.25	74	46.76	37.85	16.49	51.35	-	-	P	H
		16590	50.63	-17.67	68.3	43.81	41.45	18.23	52.86	-	-	P	H
		7373.33	53.41	-20.59	74	55.15	35.78	14.2	51.72	169	17	P	V
		7373.33	48.48	-5.52	54	50.22	35.78	14.2	51.72	169	17	P	V
		11060	48.74	-25.26	74	45.75	37.85	16.49	51.35	-	-	P	V
		16590	50.44	-17.86	68.3	43.62	41.45	18.23	52.86	-	-	P	V
802.11ac VHT80 CH 122 5610MHz		7479.81	51.06	-22.94	74	52.62	35.8	14.26	51.62	154	67	P	H
		7479.81	44.65	-9.35	54	46.21	35.8	14.26	51.62	154	67	A	H
		11220	49.75	-24.25	74	46.49	37.98	16.51	51.23	-	-	P	H
		16830	49.31	-18.99	68.3	42.46	41.83	18.31	53.29	-	-	P	H
		7479.81	51.54	-22.46	74	53.1	35.8	14.26	51.62	155	347	P	V
		7479.81	46.28	-7.72	54	47.84	35.8	14.26	51.62	155	347	A	V
		11220	48.42	-25.58	74	45.16	37.98	16.51	51.23	-	-	P	V
		16830	50.1	-18.2	68.3	43.25	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.												



U-NII-2C 5470~5725MHz

U-NII-2C - Straddle Channel

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preampl 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 144 5720MHz		5370.9	51.69	-22.31	74	37.65	34.4	12.21	32.57	145	144	P	H
		5462.2	50.98	-17.32	68.3	36.93	34.4	12.24	32.59	145	144	P	H
		5720	102.3	-	-	88.14	34.47	12.29	32.6	145	144	P	H
		5881.85	52.52	-15.78	68.3	37.86	34.93	12.33	32.6	145	144	P	H
		5441.85	44.79	-9.21	54	30.75	34.4	12.23	32.59	145	144	A	H
		5720	96.43	-	-	82.27	34.47	12.29	32.6	145	144	A	H
		5423.7	51.42	-22.58	74	37.37	34.4	12.23	32.58	110	360	P	V
		5460.55	50.43	-17.87	68.3	36.38	34.4	12.24	32.59	110	360	P	V
		5720	105.09	-	-	90.93	34.47	12.29	32.6	110	360	P	V
		5854.35	51.72	-16.58	68.3	37.13	34.87	12.32	32.6	110	360	P	V
		5402.25	44.47	-9.53	54	30.43	34.4	12.22	32.58	110	360	A	V
		5720	98.99	-	-	84.83	34.47	12.29	32.6	110	360		V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



U-NII-2C - Straddle Channel
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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 144 5720MHz		7626.47	51.98	-22.02	74	53.27	35.83	14.43	51.55	159	68	P	H
		7626.47	46.33	-7.67	54	47.62	35.83	14.43	51.55	159	68	A	H
		11440	49.76	-24.24	74	46.13	38.15	16.53	51.05	-	-	P	H
		17160	49.93	-18.37	68.3	43.04	41.93	18.43	53.47	-	-	P	H
		7626.47	51.72	-22.28	74	53.01	35.83	14.43	51.55	164	69	P	V
		7626.47	45.99	-8.01	54	47.28	35.83	14.43	51.55	164	69	A	V
		11440	49.23	-24.77	74	45.6	38.15	16.53	51.05	-	-	P	V
		17160	50.17	-18.13	68.3	43.28	41.93	18.43	53.47	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



U-NII-2C - 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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 144 5720MHz		5383	51.81	-22.19	74	37.77	34.4	12.22	32.58	146	144	P	H
		5460	50.67	-17.63	68.3	36.62	34.4	12.24	32.59	146	144	P	H
		5720	101.86	-	-	87.7	34.47	12.29	32.6	146	144	P	H
		5852.15	52.42	-15.88	68.3	37.9	34.8	12.32	32.6	146	144	P	H
		5430.85	44.48	-9.52	54	30.44	34.4	12.23	32.59	146	144	A	H
		5720	96.41	-	-	82.25	34.47	12.29	32.6	146	144	A	H
		5376.4	51.46	-22.54	74	37.42	34.4	12.22	32.58	112	360	P	V
		5468.25	50.65	-17.65	68.3	36.6	34.4	12.24	32.59	112	360	P	V
		5720	103.64	-	-	89.48	34.47	12.29	32.6	112	360	P	V
		5854.9	51.88	-16.42	68.3	37.29	34.87	12.32	32.6	112	360	P	V
		5431.4	44.82	-9.18	54	30.78	34.4	12.23	32.59	112	360	A	V
		5720	98.4	-	-	84.24	34.47	12.29	32.6	112	360	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



U-NII-2C - 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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 144 5720MHz		7626.47	52.38	-21.62	74	53.67	35.83	14.43	51.55	166	68	P	H
		7626.47	46.66	-7.34	54	47.95	35.83	14.43	51.55	166	68	A	H
		11440	49.7	-24.3	74	46.07	38.15	16.53	51.05	-	-	P	H
		17160	50.67	-17.63	68.3	43.78	41.93	18.43	53.47	-	-	P	H
		7626.47	52.14	-21.86	74	53.43	35.83	14.43	51.55	157	74	P	V
		7626.47	46.29	-7.71	54	47.58	35.83	14.43	51.55	157	74	A	V
		11440	48.94	-25.06	74	45.31	38.15	16.53	51.05	-	-	P	V
		17160	51.16	-17.14	68.3	44.27	41.93	18.43	53.47	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



U-NII-2C - 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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 142 5710MHz		5369.8	52.13	-21.87	74	38.09	34.4	12.21	32.57	145	149	P	H
		5469.9	51.85	-16.45	68.3	37.8	34.4	12.24	32.59	145	149	P	H
		5710	99.91	-	-	85.79	34.43	12.29	32.6	145	149	P	H
		5879.1	52.92	-15.38	68.3	38.26	34.93	12.33	32.6	145	149	P	H
		5443.5	44.8	-9.2	54	30.76	34.4	12.23	32.59	145	149	A	H
		5710	93.94	-	-	79.82	34.43	12.29	32.6	145	149	A	H
		5365.95	52.45	-21.55	74	38.41	34.4	12.21	32.57	109	360	P	V
		5469.9	50.99	-17.31	68.3	36.94	34.4	12.24	32.59	109	360	P	V
		5710	101.9	-	-	87.78	34.43	12.29	32.6	109	360	P	V
		5880.2	52.01	-16.29	68.3	37.35	34.93	12.33	32.6	109	360	P	V
		5433.05	44.66	-9.34	54	30.62	34.4	12.23	32.59	109	360	A	V
		5710	96.03	-	-	81.91	34.43	12.29	32.6	109	360	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



U-NII-2C - 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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 142 5710MHz		7613.14	51.94	-22.06	74	53.26	35.82	14.41	51.55	163	68	P	H
		7613.14	46.04	-7.96	54	47.36	35.82	14.41	51.55	163	68	A	H
		11420	49.84	-24.16	74	46.25	38.14	16.52	51.07	-	-	P	H
		17130	50.6	-17.7	68.3	43.71	41.96	18.42	53.49	-	-	P	H
		7613.14	51.89	-22.11	74	53.21	35.82	14.41	51.55	150	70	P	V
		7613.14	46	-8	54	47.32	35.82	14.41	51.55	150	70	A	V
		11420	50.08	-23.92	74	46.49	38.14	16.52	51.07	-	-	P	V
		17130	50.27	-18.03	68.3	43.38	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.												



U-NII-2C - 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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 138 5690MHz		5436.9	52.17	-21.83	74	38.13	34.4	12.23	32.59	146	147	P	H
		5462.2	52.29	-16.01	68.3	38.24	34.4	12.24	32.59	146	147	P	H
		5690	95.38	-	-	81.29	34.4	12.29	32.6	146	147	P	H
		5853.25	52.29	-16.01	68.3	37.77	34.8	12.32	32.6	146	147	P	H
		5373.65	44.59	-9.41	54	30.55	34.4	12.21	32.57	146	147	A	H
		5690	88.88	-	-	74.79	34.4	12.29	32.6	146	147	A	H
		5394.55	52.73	-21.27	74	38.69	34.4	12.22	32.58	128	360	P	V
		5468.25	51.37	-16.93	68.3	37.32	34.4	12.24	32.59	128	360	P	V
		5690	98.29	-	-	84.2	34.4	12.29	32.6	128	360	P	V
		5887.35	52.71	-15.59	68.3	38.05	34.93	12.33	32.6	128	360	P	V
		5445.7	44.68	-9.32	54	30.64	34.4	12.23	32.59	128	360	A	V
		5690	92.15	-	-	78.06	34.4	12.29	32.6	128	360	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



U-NII-2C - 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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 138 5690MHz		7586	50.56	-23.44	74	51.93	35.82	14.38	51.57	-	-	P	H
		11380	49.13	-24.87	74	45.59	38.11	16.52	51.09	-	-	P	H
		17070	50.49	-17.81	68.3	43.61	42.03	18.4	53.55	-	-	P	H
		7586	50.7	-23.3	74	52.07	35.82	14.38	51.57	-	-	P	V
		11380	49.15	-24.85	74	45.61	38.11	16.52	51.09	-	-	P	V
		17070	50	-18.3	68.3	43.12	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 802.11n HT40 (LF @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT40 LF		38.73	24.45	-15.55	40	37.89	19.58	1.98	35	-	-	P	H
		119.24	33.81	-9.69	43.5	49.45	17.03	2.49	35.16	-	-	P	H
		218.18	24.16	-21.84	46	39.41	17.02	2.79	35.06	-	-	P	H
		314.21	35.25	-10.75	46	46.88	20.07	3.2	34.9	-	-	P	H
		344.28	30.89	-15.11	46	41.75	20.81	3.23	34.9	-	-	P	H
		392.78	29.82	-16.18	46	39.35	21.98	3.3	34.81	-	-	P	H
		44.55	36.55	-3.45	40	49.31	20.19	2.1	35.05	-	-	P	V
		123.12	28.43	-15.07	43.5	43.75	17.33	2.5	35.15	-	-	P	V
		150.28	29.76	-13.74	43.5	43.01	19.3	2.55	35.1	-	-	P	V
		217.21	26.93	-19.07	46	42.25	16.97	2.78	35.07	-	-	P	V
		314.21	33.19	-12.81	46	44.82	20.07	3.2	34.9	-	-	P	V
		392.78	31.25	-14.75	46	40.78	21.98	3.3	34.81	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



Co-location data for Sample 1:

U-NII-2C 5470~5725MHz

802.11n HT40 CH102 5510MHz Tx + LTE Band 41 Link

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamplifier Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT40 CH 102 5510MHz & LTE Band41	*	5458	60.03	-13.97	74	45.98	34.4	12.24	32.59	131	30	P	H
	*	5466.64	65.3	-3	68.3	51.25	34.4	12.24	32.59	131	30	P	H
		5459.92	50.85	-3.15	54	36.8	34.4	12.24	32.59	131	30	A	H
		2584	111.39	-	-	101.99	32.17	9.88	32.65	131	30	P	H
		5510	102.26	-	-	88.21	34.4	12.25	32.6	131	30	P	H
		5510	95.12	-	-	81.07	34.4	12.25	32.6	131	30	A	H
	*	5760.275	51.95	-16.35	68.3	37.68	34.57	12.3	32.6	131	30	P	H
	*	5459.92	59.78	-14.22	74	45.73	34.4	12.24	32.59	116	5	P	V
		5468.32	64.33	-3.97	68.3	50.28	34.4	12.24	32.59	116	5	P	V
		5459.92	50.33	-3.67	54	36.28	34.4	12.24	32.59	116	5	A	V
		2584	104.27	-	-	94.87	32.17	9.88	32.65	116	5	P	V
		5510	101.42	-	-	87.37	34.4	12.25	32.6	116	5	P	V
		5510	94.2	-	-	80.15	34.4	12.25	32.6	116	5	A	V
		5726.255	51.81	-16.49	68.3	37.64	34.47	12.3	32.6	116	5	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



U-NII-2C 5470~5725MHz

802.11n HT40 CH102 5510MHz Tx + LTE Band 41 Link

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 102 5510MHz & LTE Band41		5168	53.49	-14.81	68.3	39.8	34.07	12.16	32.54	-	-	P	H
		7347	49.63	-24.37	74	51.44	35.77	14.18	51.76	322	360	P	H
		7752	55.36	-12.94	68.3	56.42	35.85	14.59	51.5	-	-	P	H
		10336	49.14	-19.16	68.3	47.49	37.37	15.31	51.03	-	-	P	H
		11020	49.94	-24.06	74	47.03	37.81	16.49	51.39	-	-	P	H
		5168	52.47	-15.83	68.3	38.78	34.07	12.16	32.54	-	-	P	V
		7347	53.69	-20.31	74	55.5	35.77	14.18	51.76	243	46	P	V
		7347	46.87	-7.13	54	48.68	35.77	14.18	51.76	243	46	A	V
		7752	59.01	-9.29	68.3	60.07	35.85	14.59	51.5	-	-	P	V
		10336	49.58	-18.72	68.3	47.93	37.37	15.31	51.03	-	-	P	V
		11020	48.95	-25.05	74	46.04	37.81	16.49	51.39	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



For Sample 2:

U-NII-2C - 5470~5725MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path 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)
802.11n HT40 CH 102 5510MHz		5459.92	60	-14	74	45.95	34.4	12.24	32.59	135	145	P	H
		5469.28	64.65	-3.65	68.3	50.6	34.4	12.24	32.59	135	145	P	H
		5459.68	50.61	-3.39	54	36.56	34.4	12.24	32.59	135	145	A	H
		5510	102.43	-	-	88.38	34.4	12.25	32.6	135	145	P	H
		5510	95.56	-	-	81.51	34.4	12.25	32.6	135	145	A	H
		5725.625	51.68	-16.62	68.3	37.51	34.47	12.3	32.6	135	145	P	H
		5459.68	56.83	-17.17	74	42.78	34.4	12.24	32.59	206	349	P	V
		5469.28	61.14	-7.16	68.3	47.09	34.4	12.24	32.59	206	349	P	V
		5459.92	48.58	-5.42	54	34.53	34.4	12.24	32.59	206	349	A	V
		5510	99.85	-	-	85.8	34.4	12.25	32.6	206	349	P	V
		5510	92.57	-	-	78.52	34.4	12.25	32.6	206	349	A	V
		5748.935	51.35	-16.95	68.3	37.15	34.5	12.3	32.6	206	349	P	V
Remark		1. No other spurious found.											
		2. All results are PASS against Peak and Average limit line.											

**U-NII-2C - 5470~5725MHz****WIFI 802.11n HT40 (Harmonic @ 3m)**

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n		11020	49.62	-24.38	74	46.71	37.81	16.49	51.39	-	-	P	H
HT40		16530	51.87	-16.43	68.3	45.05	41.37	18.21	52.76	-	-	P	H
CH 102		11020	50.71	-23.29	74	47.8	37.81	16.49	51.39	-	-	P	V
5510MHz		16530	51	-17.3	68.3	44.18	41.37	18.21	52.76	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Note symbol

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



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

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

1. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)
2. Level(dBμV/m) = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
3. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)
 = Antenna Factor(dB/m) + Path 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:

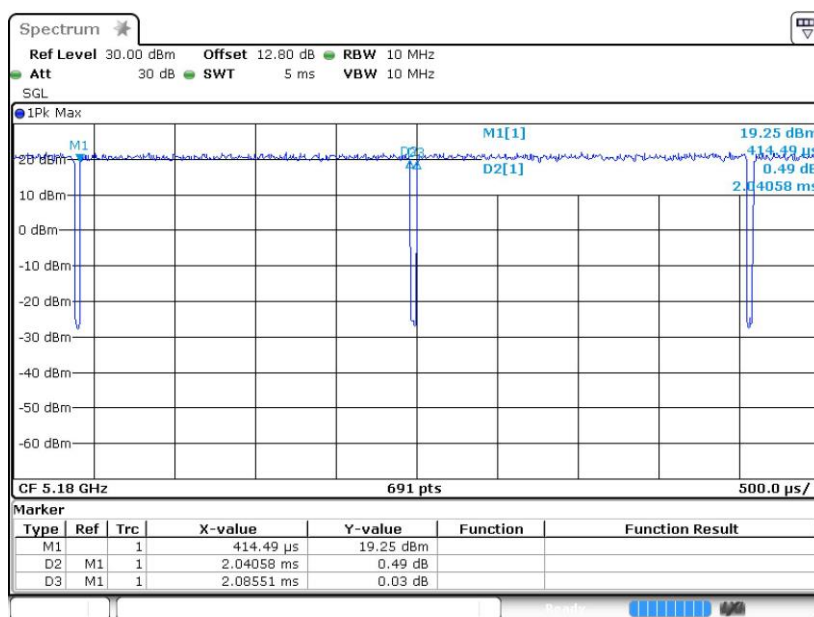
1. Level(dBμV/m)
 = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
 = 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)
 = 43.54 (dBμV/m)
2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)
 = 43.54(dBμV/m) – 54(dBμV/m)
 = -10.46(dB)

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

Appendix D. Duty Cycle Plots

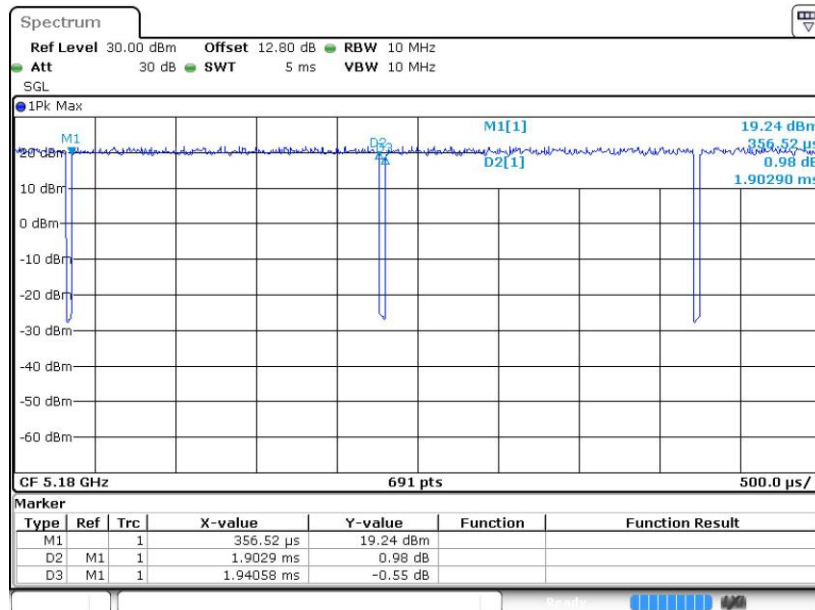
Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
802.11a	97.85	2.041	0.490	1kHz
802.11n HT20	98.06	-	-	10Hz
802.11n HT40	96.30	0.942	1.062	3kHz
802.11ac VHT80	92.44	0.461	2.170	3kHz

802.11a

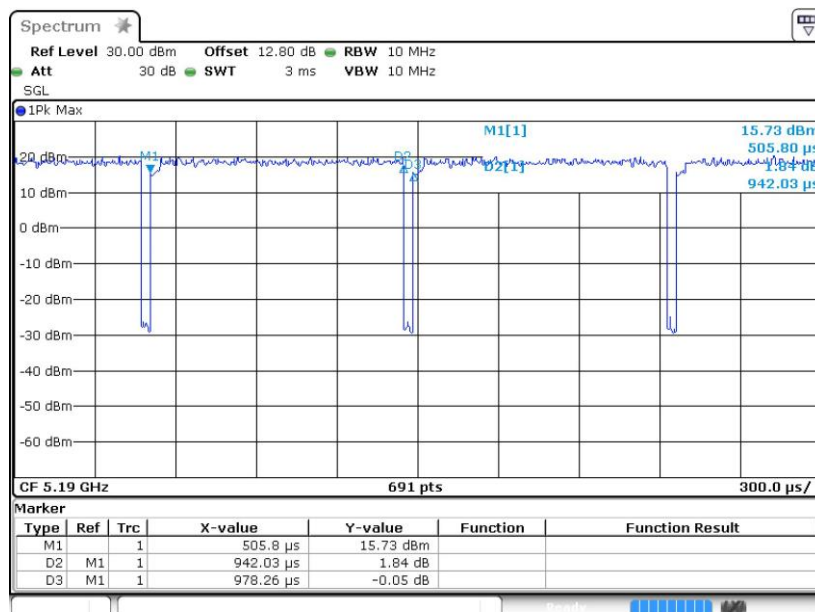




802.11n HT20



802.11n HT40



802.11ac VHT80

