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Ubicquia, Inc. TEST REPORT

SCOPE OF WORK

EMC TESTING – UBIHUB APAI

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EMC TEST REPORT
(FULL COMPLIANCE)

Report Number: 104626259LEX-005.2

Project Number: G104626259

Report Issue Date: 10/7/2021

Report Revised Date: 3/1/2022

Product Tested: UbiHub APAI

Model Number: UBH-H-AI

Standards: FCC Part 15 Subpart E
RSS-247 Issue 2

Tested by:
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Client:
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1 Introduction and Conclusion

The tests indicated below were performed on the product described in section 4. The remaining test sections are the verbatim text from the actual data sheets used during the investigation. No additions, deviations, or exclusions have been made from the standard(s) unless specifically noted.

Based on the results of our investigation, we have concluded the product tested **complies** with the requirements of the standard(s) indicated. The results obtained in this test report pertain only to the item(s) tested. Intertek does not make any claims of compliance for samples or variants which were not tested.

**2 Test Summary**

U-NII-1 (5150 – 5250MHz)						
FCC Rule	ISED Rule	Test Method	Test Description	Measured Value	Limit	Results
15.407a(1)	RSS-247 (6.2.1)	ANSI C63.10 (12.4)	26dB Bandwidth	802.11a: 22.11MHz 802.11n: 21.07MHz 802.11n(40MHz): 40.75MHz 802.11ac (80MHz): 83.01MHz	None	Pass
15.407a(1)	RSS-247 (6.2.1)	ANSI C63.10 (12.4)	99% Bandwidth	802.11a: 16.91MHz 802.11n: 17.71MHz 802.11n(40MHz): 36.05MHz 802.11ac (80MHz): 75.64MHz	None	Pass
15.407a(1)	RSS-247 (6.2.1)	ANSI C63.10 (12.3)	Maximum Conducted Output Power	802.11a: 21.8dBm 802.11n: 22.02dBm 802.11n(40MHz): 21.47dBm 802.11ac (80MHz): 13.35dBm	30dBm – 7.6dB for array gain adjustment	Pass
15.407a(1)	RSS-247 (6.2.1)	ANSI C63.10 (12.5)	Power Spectral Density	802.11a: 9.2dBm/MHz 802.11n: 8.78dBm/MHz 802.11n(40MHz): 8.59dBm/MHz 802.11ac (80MHz): 5.67dBm/MHz	17dBm/MHz – 7.6dB for array gain adjustment	Pass
15.407b(1)	RSS-247 (6.2.1)	ANSI C63.10 (12.7)	Undesirable Emissions	802.11a: 53.91dBuV/m 802.11n: 51.93dBuV/m 802.11n(40MHz): 53.49dBuV/m 802.11ac (80MHz): 53.47dBuV/m	-27dBm/MHz (68.25dBuV/m, 3m)	Pass

U-NII-3(5725 – 5825MHz)						
FCC Rule	ISED Rule	Test Method	Test Description	Measured Value	Limit	Results
15.407a(3)	RSS-247 (6.2.3)	ANSI C63.10 (12.4)	26dB Bandwidth	802.11a: 23.79MHz 802.11n: 20.99MHz 802.11n(40MHz): 41.02MHz 802.11ac (80MHz): 83.01MHz	None	Pass
15.407a(3)	RSS-247 (6.2.3)	ANSI C63.10 (12.4)	99% Bandwidth	802.11a: 16.91MHz 802.11n: 17.71MHz 802.11n(40MHz): 36.21MHz 802.11ac (80MHz): 75.64MHz	None	Pass
15.407a(3)	RSS-247 (6.2.3)	ANSI C63.10 (12.4)	6dB Bandwidth	802.11a: 16.74MHz 802.11n: 17.54MHz 802.11n(40MHz): 36.53MHz 802.11ac (80MHz): 75.96MHz	>500kHz	Pass
15.407a(3)	RSS-247 (6.2.3)	ANSI C63.10 (12.3)	Maximum Conducted Output Power	802.11a: 22.12dBm 802.11n: 22.3dBm 802.11n(40MHz): 22.30dBm 802.11ac (80MHz): 21.88 dBm	30dBm – 7.6dB for array gain adjustment	Pass
15.407a(3)	RSS-247 (6.2.3)	ANSI C63.10 (12.5)	Power Spectral Density	802.11a: 18.63dBm/500kHz 802.11n: 16.07dBm/kHz 802.11n(40MHz): 12.10dBm/500kHz 802.11ac (80MHz): 8.49dBm/500kHz	30dBm/500kHz - 7.6dBm for array gain adjustment	Pass
15.407b(4)	RSS-247 (6.2.3)	ANSI C63.10 (12.7)	Undesirable Emissions	802.11a: 53.43dBuV/m 802.11n: 51.14dBuV/m 802.11n(40MHz): 51.71dBuV/m 802.11ac (80MHz): 51.29dBuV/m	-27dBm/MHz (68.25dBuV/m, 3m)	Pass



3 Client Information

This product was tested at the request of the following:

Client Information	
Client Name:	Ubicquia, Inc.
Address:	401 Eas Las Olas Blvd. Suite 1750 Fort Lauderdale, FL 33301 USA
Contact:	Shimon Goldstein
Telephone:	(954) 774-6213
Email:	sgoldstein@ubicquia.com
Manufacturer Information	
Manufacturer Name:	Ubicquia, Inc.
Manufacturer Address:	401 Eas Las Olas Blvd. Suite 1750 Fort Lauderdale, FL 33301 USA

**4 Description of Equipment under Test and Variant Models**

Equipment Under Test		
Product Name	UbiHub APAI	
Model Number	UBH-H-AI	
Serial Number	Test Sample 1	
Receive Date	6/1/2021	
Test Start Date	6/2/2021	
Test End Date	2/21/2022	
Transmit Bands Supported	U-NII-1, 5150 – 5250MHz U-NII-3, 5725 – 5850MHz	
Modulation Types Supported	802.11n, 802.11a ,802.11ac, 802.11ax	
Antenna Information	Manufacturer: Taoglas Part Number XP524.D.07.C.001	
	Two of these antennas were used in a 8x8MIMO configuration. Each of the 8 individual antenna paths had gains as follows:	
	Antenna 1: 4.2dBi	Antenna 5: 4.2dBi
	Antenna 2: 5.7dBi	Antenna 6: 5.7dBi
	Antenna 3: 4.4dBi	Antenna 7: 4.4dBi
	Antenna 4: 3.9dBi	Antenna 8: 3.9dBi
	Array gain calculations for correlated outputs with unequal antenna gains yielded an effective array gain of 13.6dBi. Reference KDB662911 D01 Section F. 2. d for the methodology used to calculate the array gain	
Device Received Condition	Good	
Test Sample Type	Production	
Ratings	90 – 504VAC, 50/60Hz, 95W	
Description of Equipment Under Test (provided by client)		
UbiHub is a smart streetlight controller with support for WiFi6 (802.11ax) 5Ghz 8x8 configuration, as well as 2.4Ghz 4x4 configuration, and LTE backhaul (via pre-approved LTE Module: EG25-G or EP06-A).		



4.1 Variant Models:

UbiHub is a smart streetlight controller with two versions (with and without optional AI plug in daughterboard). Both versions have the same AP and enable lighting controls and high-speed internet access. The APAI model version additionally provides AI analysis for street traffic.

- The UbiHub Family of products supports 2 different Model Names: UbiHub APAI and UbiHub AP6
- **AP6:** The AP6 Model (UBH-H-WI) supports full WiFi6 (802.11ax) 5Ghz 8x8 configuration, as well as 2.4Ghz 4x4 configuration, and LTE backhaul (via LTE Module: EG25-G or EP06-A).
- **APAI:** The APAI Model (UBH-H-AI) supports identical AP6 functionality (hardware and software), but in addition supports audio/video street traffic analytics via an AI plug-in daughterboard.

All testing in this report was performed on the APAI version since it is more densely populated than the AP6 version. The differences between the AP6 and APAI versions are only in non-transmitter related circuitry so the results within this report should also apply to the AP6 version.



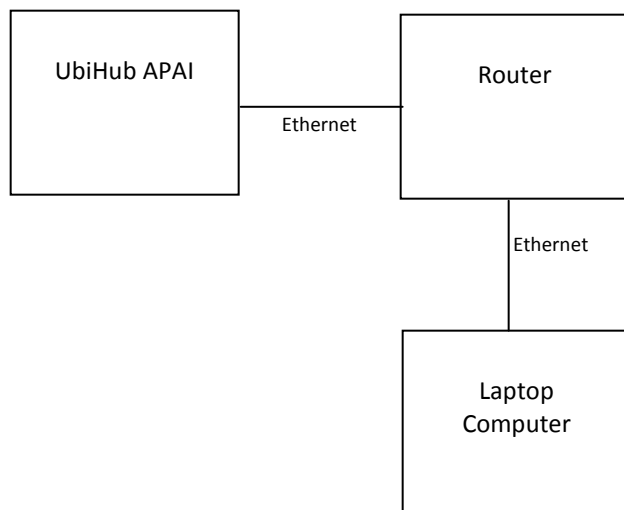
5 System Setup and Method

No.	Descriptions of EUT Exercising
1	The UbiHub APAC was connected to a laptop computer via a router. The laptop was used to send test commands to the UbiHub APAC to force it to transmit on low, mid, or high channels at maximum output power.

Cables					
Qty	Description	Length	Shielding	Ferrites	Termination
1	AC Input	2m	None	None	AC Power Source
1	Ethernet Cable	2m	None	None	Router

Support Equipment			
Description	Manufacturer	Model Number	Serial Number
Laptop	HP	ProBook 455 G4	5CD7212NFW
Router	Belkin	F9K1115V2	14502GM5200027

5.1 Block Diagram:



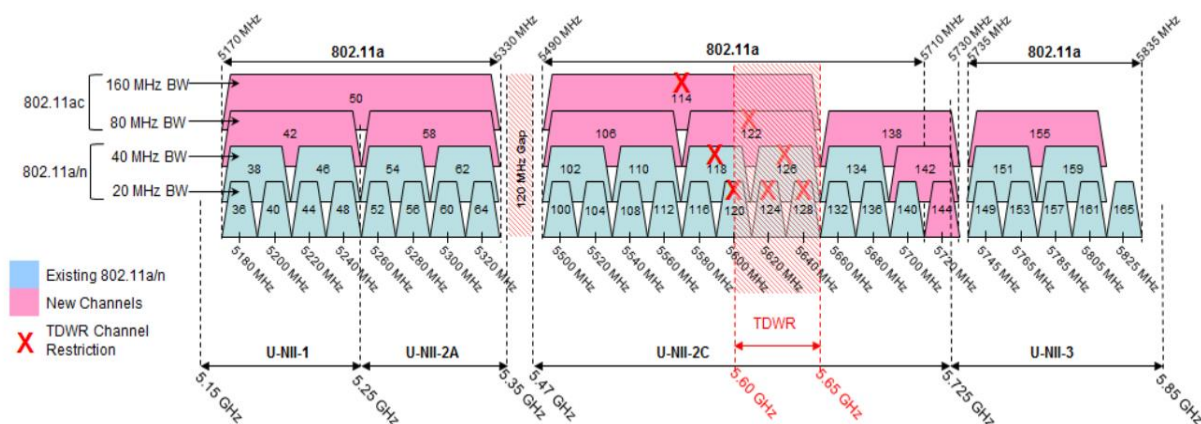


5.2 Test Channels:

The following test channels were used during the evaluation:

TX Mode	Band	TX Channels	TX Frequencies (MHz)
20MHz Wide	U-NII-1	36, 44, 48	5180, 5220, 5240
	U-NII-3	149, 157, 165	5745, 5785, 5825
40MHz Wide	U-NII-1	38, 46	5190, 5230
	U-NII-3	151, 159	5755, 5795
80MHz Wide	U-NII-1	42	5210
	U-NII-3	155	5775

5.3 U-NII Bands / Channels:



**5.4 Test Equipment Used (Conducted Antenna Port Tests):**

Description	Asset	Manufacturer	Model	Cal Date	Cal Due
Wideband Power Sensor	4022	Rohde&Schwarz	NRP-Z81	9/22/2020	9/22/2021
Spectrum Analyzer	3720	Rohde&Schwarz	FSEK30	10/13/2020	10/13/2021
Spectrum Analyzer	3981	Rohde&Schwarz	FSU8	9/22/2020	9/22/2021

5.5 Test Equipment Used (Conducted AC Input Tests):

Description	Asset	Manufacturer	Model	Cal Date	Cal Due
EMI Test Receiver	2327	Rohde & Schwarz	ESI26	10/9/2020	10/9/2021
LISN	2508	Fischer Custom Communication	FCC-LISN-50-50-2M	6/22/2021	6/22/2022
Coaxial Cable	7024			12/21/2020	12/21/2021

5.6 Test Equipment Used (Radiated Tests):

Description	Asset	Manufacturer	Model	Cal Date	Cal Due
EMI Test Receiver	3900	Rohde&Schwarz	ESU40	10/5/2020	10/5/2021
Magnetic Loop Antenna	2366	ETS	6502	7/17/2020	7/17/2021
Bilog Antenna (JB6)	7085	SunAR	JB6	9/4/2020	9/4/2021
Horn Antenna (1-18GHz)	4001	ETS	3117	1/26/2021	1/26/2022
Horn Antenna (18-40GHz)	3779	ETS	3116c	7/23/2020	7/23/2021
Preamplifier (18-40GHz)	3921	Rohde & Schwarz	TS-PR40	12/21/2020	12/21/2021
Coaxial Cable (40GHz)	7020			12/21/2020	12/21/2021
Coaxial Cable (40GHz)	7021			12/21/2020	12/21/2021
System Controller	4096	ETS Lindgren	2090	Verify at Time of Use	Verify at Time of Use
System Controller	3957	Sunol Sciences	SC99V	Verify at Time of Use	Verify at Time of Use
Coaxial Cable	3074			12/21/2020	12/21/2021
3m Cable Preamplifier	3918	Rohde&Schwarz	TS-PR18	12/21/2020	12/21/2021
Coaxial Cable	2588			12/21/2020	12/21/2021
Coaxial Cable	2593			12/21/2020	12/21/2021
Coaxial Cable	2592			12/21/2020	12/21/2021
Coaxial Cable	3339			12/21/2020	12/21/2021

5.7 Software Utilized:

Name	Manufacturer	Version
EMC32	Rohde&Schwarz	Version 9.15.02
TILE7	ETS Lindgren	Version 7.0.6.545
GPIBSHOT	Rohde&Schwarz	Version 2.7.2
Power Viewer Plus	Rohde&Schwarz	Version 6.1



6 Measurement Procedures and Determination of Worst-Case Modes

The occupied bandwidth, power spectral density, and conducted output power measurements were all performed with the UbiHub APAl connected to a spectrum analyzer. Measurements were performed per the procedures outlined in ANSI C63.10: 2013. See the summary tables for specific references to the appropriate sections that were used.

The output power measurements were performed with the UbiHub APAl connected to a wideband power meter.

For the conducted power and power spectral density measurements an array gain was added to the final measurements in order to account for the multiple transmit ports. For 8 correlated output ports with unequal antenna gains this factor was 13.6dB. Reference KDB662911 D01 Section F. 2. d for the methodology used to calculate the array gain.

For radiated spurious emission measurements, testing was performed with the bandwidth setting and modulation that produced the highest output power. The frequency spectrum was investigated from 9kHz to at least 10 times the highest frequency used or generated in the device or 40GHz (whichever was lower).

Testing was performed for the lowest order modulation for each transmit mode as well as for each transmit bandwidth supported as these present the worst case in terms of spurious emissions and output power.

**7 Occupied Bandwidth Data**

U-NII-1 Bandwidth Measurements				
TX Mode	Ch. No.	Freq (MHz)	26dB BW (MHz)	99% BW (MHz)
802.11a	36	5180	22.11	16.82
	44	5220	21.71	16.91
	48	5240	22.11	16.82
802.11n (HT20)	36	5180	21.07	17.62
	44	5220	20.83	17.71
	48	5240	20.99	17.71
802.11n (HT40)	38	5190	40.75	36.05
	46	5230	40.7	36.05
802.11ac (VHT80)	42	5210	83.01	75.64

U-NII-3 Bandwidth Measurements					
TX Mode	Ch. No.	Freq (MHz)	6dB BW (MHz)	26dB BW (MHz)	99% BW (MHz)
802.11a	149	5745	16.66	21.55	16.82
	157	5785	16.66	22.11	16.82
	165	5825	16.74	23.79	16.91
802.11n (HT20)	149	5745	17.38	20.67	17.71
	157	5785	17.54	20.83	17.62
	165	5825	17.54	20.99	17.71
802.11n (HT40)	151	5755	36.37	41.02	36.21
	159	5795	36.53	40.54	36.21
802.11ac (VHT80)	155	5775	75.96	83.01	75.64

Test Personnel: Bryan Taylor
 Supervising/Reviewing Engineer: NA
 (Where Applicable) FCC Part 15E
 Product Standard: RSS-247 Issue 2
 Input Voltage: 120VAC / 60Hz
 Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 7/13/2021 – 7/19/2021
 Limit Applied: 6dB Bandwidth ≥ 500kHz (U-NII-3 Band)
 Ambient Temperature: 22.6C
 Relative Humidity: 41.2%
 Atmospheric Pressure: 991.2mbar

Deviations, Additions, or Exclusions: None



8 Output Power Data

Since the directional antenna gain is 13.6 dBi the limits in the following tables are adjusted down by 7.6dB (the amount above 6dBi for the antenna gain).

U-NII-1 Measurements													
Mode	Channel / Frequency (MHz)		Output 0	Output 1	Output 2	Output 3	Output 4	Output 5	Output 6	Output 7	Total Power (dBm)	15.247 / RSS-247 Limit (dBm)	Margin (dB)
802.11a	36	5180	12.78	13.36	13.07	12.85	13.16	13.01	13.56	13.41	22.19	22.4	0.21
	44	5220	12.25	12.60	12.47	12.39	12.81	12.73	13.26	13.11	21.75	22.4	0.65
	48	5240	12.46	12.96	12.73	12.71	13.05	12.94	13.50	13.36	22.01	22.4	0.39
802.11n (HT20)	36	5180	12.60	13.53	12.84	12.80	12.86	12.97	13.49	13.21	22.08	22.4	0.32
	44	5220	12.59	13.03	12.83	12.86	13.16	13.15	13.63	13.55	22.14	22.4	0.26
	48	5240	12.33	13.12	12.84	12.62	12.90	12.69	13.49	13.16	21.94	22.4	0.46
802.11n (HT40)	38	5190	12.70	13.25	12.60	12.84	12.84	13.03	13.53	13.25	22.05	22.4	0.35
	46	5230	12.42	12.84	12.70	12.55	12.89	12.74	13.34	13.11	21.86	22.4	0.54
802.11ac (VHT80)	42	5210	12.44	13.00	12.59	12.68	13.14	13.14	13.50	13.47	22.04	22.4	0.36

U-NII-3 Measurements													
Mode	Channel / Frequency (MHz)		Output 0	Output 1	Output 2	Output 3	Output 4	Output 5	Output 6	Output 7	Total Power (dBm)	15.247 / RSS-247 Limit (dBm)	Margin (dB)
802.11a	149	5745	12.71	12.71	14.02	13.94	12.18	12.70	12.99	12.68	22.07	22.4	0.33
	157	5785	12.54	12.51	13.93	13.83	11.74	12.20	12.29	12.14	21.75	22.4	0.65
	165	5825	13.15	13.16	14.92	14.62	11.20	11.85	11.14	11.13	21.93	22.4	0.47
802.11n (HT20)	149	5745	12.65	12.66	13.45	13.95	12.08	12.62	12.73	12.77	21.93	22.4	0.47
	157	5785	12.42	12.28	14.03	13.74	11.81	12.19	12.15	11.88	21.67	22.4	0.73
	165	5825	13.03	12.98	15.16	14.49	10.84	11.79	11.06	11.06	21.87	22.4	0.53
802.11n (HT40)	151	5755	12.62	12.67	13.83	13.97	12.12	12.60	12.79	12.61	21.98	22.4	0.42
	159	5795	12.98	12.98	14.59	14.34	12.08	12.37	12.25	12.17	22.10	22.4	0.30
802.11ac (VHT80)	155	5775	12.63	12.69	14.18	14.00	12.36	12.70	12.72	12.76	22.09	22.4	0.31

Test Personnel: Brian Lackey
 Supervising/Reviewing Engineer: NA
 (Where Applicable) FCC Part 15E
 Product Standard: RSS-247 Issue 2
 Input Voltage: 120VAC / 60Hz
 Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 2/21/2022
 Limit Applied: 30dBm less 7.6dB (U-NII-1, U-NII-3)
 Ambient Temperature: 22.6C
 Relative Humidity: 41.2%
 Atmospheric Pressure: 991.2mbar

Deviations, Additions, or Exclusions: None

**9 Power Spectral Density Data**

Since the directional antenna gain is 13.6 dBi the limits in the following tables are adjusted down by 7.6dB (the amount above 6dBi for the antenna gain).

U-NII-I Measurements							
TX Mode	Ch. No.	Freq (MHz)	Single Port PSD	10log(Nant)	Total Cond. PSD (dBm)	15.407 PSD Limit (dBm)	15.407 Margin (dB)
802.11a	36	5180	0.2	9	9.20	9.40	0.20
	44	5220	-0.66	9	8.34	9.40	1.06
	48	5240	-1.28	9	7.72	9.40	1.68
802.11 (HT20)	36	5180	-0.22	9	8.78	9.40	0.62
	44	5220	-0.87	9	8.13	9.40	1.27
	48	5240	-0.15	9	8.85	9.40	0.55
802.11 (HT40)	38	5190	-5.65	9	3.35	9.40	6.05
	46	5230	-0.41	9	8.59	9.40	0.81
802.11 (VHT80)	42	5210	-3.33	9	5.67	9.40	3.73



U-NII-3 Measurements							
TX Mode	Ch. No.	Freq (MHz)	Average Measured PSD (dBm)	10log(Nant)	Total PSD (dBm)	15.407 PSD Limit (dBm)	15.407 Margin (dB)
802.11a	149	5745	6.72	9	15.72	22.40	6.68
	157	5785	7.04	9	16.04	22.40	6.36
	165	5825	9.63	9	18.63	22.40	3.77
802.11 (HT20)	149	5745	5.04	9	14.04	22.40	8.36
	157	5785	5.65	9	14.65	22.40	7.75
	165	5825	7.07	9	16.07	22.40	6.33
802.11 (HT40)	151	5755	1.76	9	10.76	22.40	11.64
	159	5795	3.1	9	12.10	22.40	10.30
802.11 (VHT80)	155	5775	-0.51	9	8.49	22.40	13.91

Test Personnel: Bryan Taylor
Supervising/Reviewing Engineer: NA
(Where Applicable) FCC Part 15E
Product Standard: RSS-247 Issue 2
Input Voltage: 120VAC / 60Hz
Pretest Verification w / Ambient
Signals or BB Source: Yes

Test Date: 8/16/2021 – 8/17/2021
Limit Applied: 17dBm / MHz – 7.6dB (U-NII-1)
30dBm / 500kHz – 7.6dB (U-NII-3)
Ambient Temperature: 22.6C
Relative Humidity: 41.2%
Atmospheric Pressure: 991.2mbar

Deviations, Additions, or Exclusions: None

**10 U-NII-1 Radiated Spurious Emissions****10.1 Worst Case Radiated Spurious Emissions Data (802.11a, Channel 36)**

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
6250.000000	47.00	88.23	41.23	1000.000	218.0	H	137.0	12
9748.000000	49.95	88.23	38.28	1000.000	181.0	H	131.0	16
10359.500000	53.27	88.23	34.96	1000.000	324.0	V	137.0	18
12338.500000	52.08	73.98	21.90	1000.000	100.0	H	264.0	20
15743.500000	54.24	73.98	19.74	1000.000	410.0	V	275.0	23

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
6250.000000	35.60	68.23	32.63	1000.000	218.0	H	137.0	12
9748.000000	37.29	68.23	30.94	1000.000	181.0	H	131.0	16
10359.500000	45.88	68.23	22.35	1000.000	324.0	V	137.0	18
12338.500000	38.78	53.98	15.20	1000.000	100.0	H	264.0	20
15743.500000	40.90	53.98	13.08	1000.000	410.0	V	275.0	23

Test Personnel: Michael Carlson
Supervising/Reviewing Engineer: NA
(Where Applicable) FCC Part 15E
Product Standard: RSS-247 Issue 2
Input Voltage: 120VAC / 60Hz
Pretest Verification w / Ambient
Signals or BB Source: Yes

Test Date: 6/4/2021 – 6/24/2021
Limit Applied: 15.407b
Ambient Temperature: 21.5 °C
Relative Humidity: 40.2 %
Atmospheric Pressure: 988.8 mbar

Deviations, Additions, or Exclusions: None

**10.2 Worst Case Radiated Spurious Emissions Data (802.11a, Channel 44)**

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
125.006111	37.78	43.52	5.75	120.000	103.0	V	0.0	22
256.117778	38.52	46.02	7.50	120.000	100.0	H	68.0	22
256.548889	37.92	46.02	8.10	120.000	100.0	H	79.0	22
257.303333	37.23	46.02	8.80	120.000	100.0	H	102.0	22
257.896111	37.14	46.02	8.88	120.000	103.0	H	100.0	22
258.273333	35.58	46.02	10.45	120.000	106.0	H	109.0	22
267.218889	39.80	46.02	6.22	120.000	103.0	H	214.0	23
273.901111	34.00	46.02	12.03	120.000	149.0	V	264.0	23
274.601667	34.34	46.02	11.69	120.000	162.0	V	268.0	23
400.593889	32.58	46.02	13.44	120.000	100.0	H	48.0	27

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
9748.000000	49.17	88.23	39.06	1000.000	307.0	H	114.0	16
10439.500000	52.84	88.23	35.39	1000.000	279.0	H	114.0	17
12361.000000	52.60	73.98	21.38	1000.000	117.0	H	183.0	21
14622.000000	55.39	88.23	32.84	1000.000	256.0	H	65.0	21
19001.500000	56.25	73.98	17.73	1000.000	100.0	H	67.0	19
23739.500000	57.66	73.98	16.32	1000.000	385.0	V	300.0	11
31406.000000	62.30	73.98	11.68	1000.000	410.0	V	288.0	17
31634.500000	61.74	73.98	12.24	1000.000	391.0	V	272.0	17
36439.000000	64.97	73.98	9.01	1000.000	410.0	H	0.0	19
36467.000000	64.22	73.98	9.76	1000.000	100.0	H	164.0	19

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
9748.000000	37.07	68.23	31.16	1000.000	307.0	H	114.0	16
10439.500000	43.70	68.23	24.53	1000.000	279.0	H	114.0	17
12361.000000	38.93	53.98	15.05	1000.000	117.0	H	183.0	21
14622.000000	45.50	68.23	22.73	1000.000	256.0	H	65.0	21
19001.500000	43.09	53.98	10.89	1000.000	100.0	H	67.0	19
23739.500000	44.36	53.98	9.62	1000.000	385.0	V	300.0	11
31406.000000	48.45	53.98	5.53	1000.000	410.0	V	288.0	17
31634.500000	48.73	53.98	5.25	1000.000	391.0	V	272.0	17
36439.000000	51.37	53.98	2.61	1000.000	410.0	H	0.0	19
36467.000000	51.09	53.98	2.89	1000.000	100.0	H	164.0	19

Test Personnel: Michael Carlson
Supervising/Reviewing Engineer: NA
(Where Applicable) FCC Part 15E
Product Standard: RSS-247 Issue 2
Input Voltage: 120VAC / 60Hz
Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 6/4/2021 – 6/24/2021
Limit Applied: 15.407b
Ambient Temperature: 21.5 °C
Relative Humidity: 40.2 %
Atmospheric Pressure: 988.8 mbar

Deviations, Additions, or Exclusions: None

**10.3 Worst Case Radiated Spurious Emissions Data (802.11a, Channel 48)**

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
6250.000000	47.58	88.23	40.65	1000.000	200.0	V	137.0	12
9748.000000	48.78	88.23	39.45	1000.000	280.0	V	108.0	16
10479.500000	52.33	88.23	35.90	1000.000	271.0	V	114.0	18
14622.000000	53.96	88.23	34.27	1000.000	289.0	V	102.0	21
16014.000000	54.55	73.98	19.43	1000.000	109.0	H	0.0	24

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
6250.000000	36.08	68.23	32.15	1000.000	200.0	V	137.0	12
9748.000000	36.31	68.23	31.92	1000.000	280.0	V	108.0	16
10479.500000	42.75	68.23	25.48	1000.000	271.0	V	114.0	18
14622.000000	42.82	68.23	25.41	1000.000	289.0	V	102.0	21
16014.000000	41.36	53.98	12.62	1000.000	109.0	H	0.0	24

Test Personnel: Michael Carlson
Supervising/Reviewing Engineer: NA
(Where Applicable) FCC Part 15E
Product Standard: RSS-247 Issue 2
Input Voltage: 120VAC / 60Hz
Pretest Verification w / Ambient
Signals or BB Source: Yes

Test Date: 6/4/2021 – 6/24/2021
Limit Applied: 15.407b
Ambient Temperature: 21.5 °C
Relative Humidity: 40.2 %
Atmospheric Pressure: 988.8 mbar

Deviations, Additions, or Exclusions: None

**10.4 Worst Case Radiated Spurious Emissions Data (802.11n, Channel 36)**

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
9648.000000	51.74	88.23	36.49	1000.000	325.0	V	302.0	17
10359.500000	51.27	88.23	36.96	1000.000	410.0	V	230.0	18
14472.000000	53.36	73.98	20.62	1000.000	311.0	V	246.0	21

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
9648.000000	42.89	68.23	25.34	1000.000	325.0	V	302.0	17
10359.500000	41.33	68.23	26.90	1000.000	410.0	V	230.0	18
14472.000000	40.97	53.98	13.01	1000.000	311.0	V	246.0	21

Test Personnel: Michael Carlson
Supervising/Reviewing Engineer: _____
(Where Applicable) NA
FCC Part 15E
Product Standard: RSS-247 Issue 2
Input Voltage: 120VAC / 60Hz
Pretest Verification w / Ambient
Signals or BB Source: Yes

Test Date: 6/4/2021 – 6/24/2021
Limit Applied: 15.407b
Ambient Temperature: 21.5 °C
Relative Humidity: 40.2 %
Atmospheric Pressure: 988.8 mbar

Deviations, Additions, or Exclusions: None

**10.5 Worst Case Radiated Spurious Emissions Data (802.11n, Channel 44)**

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
125.006111	37.78	43.52	5.75	120.000	103.0	V	0.0	22
256.117778	38.52	46.02	7.50	120.000	100.0	H	68.0	22
256.548889	37.92	46.02	8.10	120.000	100.0	H	79.0	22
257.303333	37.23	46.02	8.80	120.000	100.0	H	102.0	22
257.896111	37.14	46.02	8.88	120.000	103.0	H	100.0	22
258.273333	35.58	46.02	10.45	120.000	106.0	H	109.0	22
267.218889	39.80	46.02	6.22	120.000	103.0	H	214.0	23
273.901111	34.00	46.02	12.03	120.000	149.0	V	264.0	23
274.601667	34.34	46.02	11.69	120.000	162.0	V	268.0	23
400.593889	32.58	46.02	13.44	120.000	100.0	H	48.0	27

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
9648.000000	51.35	88.23	36.88	1000.000	326.0	V	300.0	17
10439.500000	51.10	88.23	37.13	1000.000	410.0	V	233.0	17
14472.000000	54.69	73.98	19.29	1000.000	142.0	V	244.0	21
19561.500000	57.13	73.98	16.85	1000.000	410.0	V	200.0	16
22843.500000	58.07	73.98	15.91	1000.000	410.0	H	337.0	10
23909.000000	59.63	73.98	14.35	1000.000	324.0	H	238.0	11
31727.000000	61.68	73.98	12.30	1000.000	410.0	H	0.0	17
36453.000000	65.18	73.98	8.80	1000.000	100.0	H	127.0	19

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
9648.000000	41.54	68.23	26.69	1000.000	326.0	V	300.0	17
10439.500000	40.81	68.23	27.42	1000.000	410.0	V	233.0	17
14472.000000	43.42	53.98	10.56	1000.000	142.0	V	244.0	21
19561.500000	43.59	53.98	10.39	1000.000	410.0	V	200.0	16
22843.500000	45.13	53.98	8.85	1000.000	410.0	H	337.0	10
23909.000000	45.84	53.98	8.14	1000.000	324.0	H	238.0	11
31727.000000	48.38	53.98	5.60	1000.000	410.0	H	0.0	17
36453.000000	51.93	53.98	2.05	1000.000	100.0	H	127.0	19

Test Personnel: Michael Carlson
Supervising/Reviewing Engineer: NA
(Where Applicable) FCC Part 15E
Product Standard: RSS-247 Issue 2
Input Voltage: 120VAC / 60Hz
Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 6/4/2021 – 6/24/2021
Limit Applied: 15.407b
Ambient Temperature: 21.5 °C
Relative Humidity: 40.2 %
Atmospheric Pressure: 988.8 mbar

Deviations, Additions, or Exclusions: None

**10.6 Worst Case Radiated Spurious Emissions Data (802.11n, Channel 48)**

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
9648.000000	51.29	88.23	36.94	1000.000	410.0	V	287.0	17
10480.000000	54.06	88.23	34.17	1000.000	297.0	V	272.0	18
14472.000000	54.59	73.98	19.39	1000.000	134.0	V	243.0	21

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
9648.000000	41.40	68.23	26.83	1000.000	410.0	V	287.0	17
10480.000000	46.95	68.23	21.28	1000.000	297.0	V	272.0	18
14472.000000	42.06	53.98	11.92	1000.000	134.0	V	243.0	21

Test Personnel: Michael Carlson
Supervising/Reviewing Engineer: NA
(Where Applicable) FCC Part 15E
Product Standard: RSS-247 Issue 2
Input Voltage: 120VAC / 60Hz
Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 6/4/2021 – 6/24/2021
Limit Applied: 15.407b
Ambient Temperature: 21.5 °C
Relative Humidity: 40.2 %
Atmospheric Pressure: 988.8 mbar

Deviations, Additions, or Exclusions: None

**10.7 Worst Case Radiated Spurious Emissions Data (802.11n (40MHz), Channel 38)**

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
9648.000000	49.78	88.23	38.45	1000.000	410.0	V	282.0	17
10380.000000	51.99	88.23	36.24	1000.000	410.0	V	229.0	17
14472.000000	53.71	73.98	20.27	1000.000	126.0	V	242.0	21

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
9648.000000	38.77	68.23	29.46	1000.000	410.0	V	282.0	17
10380.000000	41.83	68.23	26.40	1000.000	410.0	V	229.0	17
14472.000000	42.20	53.98	11.78	1000.000	126.0	V	242.0	21

Test Personnel: Michael Carlson
Supervising/Reviewing Engineer: _____
(Where Applicable) NA
FCC Part 15E
Product Standard: RSS-247 Issue 2
Input Voltage: 120VAC / 60Hz
Pretest Verification w / Ambient
Signals or BB Source: Yes

Test Date: 6/4/2021 – 6/24/2021
Limit Applied: 15.407b
Ambient Temperature: 21.5 °C
Relative Humidity: 40.2 %
Atmospheric Pressure: 988.8 mbar

Deviations, Additions, or Exclusions: None

**10.8 Worst Case Radiated Spurious Emissions Data (802.11n (40MHz), Channel 46)**

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
125.006111	37.73	43.52	5.79	120.000	101.0	V	0.0	22
256.225556	37.93	46.02	8.09	120.000	103.0	H	90.0	22
270.344444	39.92	46.02	6.10	120.000	101.0	V	164.0	23
274.224444	36.68	46.02	9.34	120.000	103.0	H	203.0	23
400.001111	35.90	46.02	10.12	120.000	209.0	H	174.0	27
400.701667	34.79	46.02	11.23	120.000	207.0	H	183.0	27

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
9648.000000	51.70	88.23	36.53	1000.000	318.0	V	300.0	17
10460.000000	55.12	88.23	33.11	1000.000	320.0	V	284.0	18
14472.000000	53.79	73.98	20.19	1000.000	126.0	V	242.0	21
23920.000000	58.99	73.98	14.99	1000.000	100.0	H	296.0	11
31740.000000	61.94	73.98	12.04	1000.000	410.0	H	246.0	17
36472.000000	65.72	73.98	8.26	1000.000	100.0	H	67.0	19

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
9648.000000	40.86	68.23	27.37	1000.000	318.0	V	300.0	17
10460.000000	49.79	68.23	18.44	1000.000	320.0	V	284.0	18
14472.000000	41.87	53.98	12.11	1000.000	126.0	V	242.0	21
23920.000000	45.91	53.98	8.07	1000.000	100.0	H	296.0	11
31740.000000	48.25	53.98	5.73	1000.000	410.0	H	246.0	17
36472.000000	51.91	53.98	2.05	1000.000	100.0	H	67.0	19

Test Personnel: Michael Carlson
Supervising/Reviewing Engineer: NA
(Where Applicable) FCC Part 15E
Product Standard: RSS-247 Issue 2
Input Voltage: 120VAC / 60Hz
Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 6/4/2021 – 6/24/2021
Limit Applied: 15.407b
Ambient Temperature: 21.5 °C
Relative Humidity: 40.2 %
Atmospheric Pressure: 988.8 mbar

Deviations, Additions, or Exclusions: None

**10.9 Worst Case Radiated Spurious Emissions Data (802.11n (80MHz), Channel 42)**

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
113.851111	29.74	43.52	13.78	120.000	100.0	V	186.0	21
125.006111	37.95	43.52	5.57	120.000	100.0	V	0.0	22
255.794444	36.75	46.02	9.27	120.000	103.0	H	68.0	22
269.913333	39.83	46.02	6.19	120.000	100.0	V	159.0	23
400.593889	35.55	46.02	10.47	120.000	178.0	H	162.0	27

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
9648.500000	49.57	88.23	38.66	1000.000	328.0	V	292.0	17
10420.000000	56.13	88.23	32.10	1000.000	410.0	V	238.0	17
14472.000000	54.64	73.98	19.34	1000.000	135.0	V	244.0	21
21063.000000	55.53	73.98	18.45	1000.000	388.0	V	348.0	13
22686.500000	56.64	73.98	17.34	1000.000	383.0	H	201.0	11
23721.500000	57.89	73.98	16.09	1000.000	389.0	H	43.0	11
31456.000000	62.45	73.98	11.53	1000.000	100.0	H	304.0	17
36418.500000	65.00	88.23	23.23	1000.000	410.0	H	0.0	19

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
9648.500000	37.08	68.23	31.15	1000.000	328.0	V	292.0	17
10420.000000	51.54	68.23	16.69	1000.000	410.0	V	238.0	17
14472.000000	43.10	53.98	10.88	1000.000	135.0	V	244.0	21
21063.000000	42.47	53.98	11.51	1000.000	388.0	V	348.0	13
22686.500000	43.15	53.98	10.83	1000.000	383.0	H	201.0	11
23721.500000	44.81	53.98	9.17	1000.000	389.0	H	43.0	11
31456.000000	48.95	53.98	5.03	1000.000	100.0	H	304.0	17
36418.500000	51.23	68.23	17.00	1000.000	410.0	H	0.0	19

Test Personnel: Michael Carlson
Supervising/Reviewing Engineer: NA
(Where Applicable) FCC Part 15E
Product Standard: RSS-247 Issue 2
Input Voltage: 120VAC / 60Hz
Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 6/4/2021 – 6/24/2021
Limit Applied: 15.407b
Ambient Temperature: 21.5 °C
Relative Humidity: 40.2 %
Atmospheric Pressure: 988.8 mbar

Deviations, Additions, or Exclusions: None

**11 U-NII-3 Radiated Spurious Emissions****11.1 Worst Case Radiated Spurious Emissions Data (802.11a, Channel 149)**

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
9648.000000	50.80	88.23	37.43	1000.000	300.0	V	298.0	17
11490.000000	57.63	73.98	16.35	1000.000	410.0	V	287.0	19
14472.000000	54.01	73.98	19.97	1000.000	109.0	V	244.0	21

Final_Result_AVG

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
9648.000000	39.91	68.23	28.32	1000.000	300.0	V	298.0	17
11490.000000	53.43	53.98	0.55	1000.000	410.0	V	287.0	19
14472.000000	43.07	53.98	10.91	1000.000	109.0	V	244.0	21

Test Personnel: Michael Carlson
Supervising/Reviewing Engineer: _____
(Where Applicable) NA
FCC Part 15E
Product Standard: RSS-247 Issue 2
Input Voltage: 120VAC / 60Hz
Pretest Verification w / Ambient
Signals or BB Source: Yes

Test Date: 6/4/2021 – 6/24/2021
Limit Applied: 15.407b
Ambient Temperature: 21.5 °C
Relative Humidity: 40.2 %
Atmospheric Pressure: 988.8 mbar

Deviations, Additions, or Exclusions: None

**11.2 Worst Case Radiated Spurious Emissions Data (802.11a, Channel 157)**

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
124.952222	31.20	43.52	12.33	120.000	100.0	V	-1.0	22
267.380556	40.80	46.02	5.22	120.000	207.0	V	173.0	23
270.290556	42.46	46.02	3.56	120.000	206.0	V	274.0	23
270.667778	42.44	46.02	3.58	120.000	209.0	V	281.0	23
271.368333	41.71	46.02	4.31	120.000	210.0	V	278.0	23

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3216.000000	45.78	88.23	42.45	1000.000	321.0	V	140.0	7
4687.500000	47.03	73.98	26.95	1000.000	100.0	V	175.0	10
4824.000000	50.42	73.98	23.56	1000.000	331.0	H	302.0	10
4829.500000	48.84	73.98	25.14	1000.000	297.0	H	23.0	10
11570.000000	54.86	73.98	19.12	1000.000	211.0	V	327.0	19
14472.000000	53.28	73.98	20.70	1000.000	308.0	V	160.0	21
20930.500000	54.65	73.98	19.33	1000.000	390.0	V	291.0	13
23727.500000	57.96	73.98	16.02	1000.000	387.0	V	0.0	11
31395.000000	61.84	73.98	12.14	1000.000	100.0	H	0.0	17
36441.000000	64.23	73.98	9.75	1000.000	100.0	H	0.0	19
36457.500000	64.81	73.98	9.17	1000.000	100.0	H	177.0	19
36476.500000	64.16	73.98	9.82	1000.000	410.0	H	334.0	19

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3216.000000	40.30	68.23	27.93	1000.000	321.0	V	140.0	7
4687.500000	37.51	53.98	16.47	1000.000	100.0	V	175.0	10
4824.000000	38.00	53.98	15.98	1000.000	331.0	H	302.0	10
4829.500000	31.39	53.98	22.59	1000.000	297.0	H	23.0	10
11570.000000	47.19	53.98	6.79	1000.000	211.0	V	327.0	19
14472.000000	40.50	53.98	13.48	1000.000	308.0	V	160.0	21
20930.500000	41.89	53.98	12.09	1000.000	390.0	V	291.0	13
23727.500000	44.53	53.98	9.45	1000.000	387.0	V	0.0	11
31395.000000	48.61	53.98	5.37	1000.000	100.0	H	0.0	17
36441.000000	51.06	53.98	2.92	1000.000	100.0	H	0.0	19
36457.500000	51.14	53.98	2.84	1000.000	100.0	H	177.0	19
36476.500000	51.02	53.98	2.96	1000.000	410.0	H	334.0	19

Test Personnel: Michael Carlson
Supervising/Reviewing Engineer: _____
(Where Applicable) NA
FCC Part 15E
Product Standard: RSS-247 Issue 2
Input Voltage: 120VAC / 60Hz
Pretest Verification w / Ambient
Signals or BB Source: Yes

Test Date: 6/4/2021 – 6/24/2021
Limit Applied: 15.407b
Ambient Temperature: 21.5 °C
Relative Humidity: 40.2 %
Atmospheric Pressure: 988.8 mbar

Deviations, Additions, or Exclusions: None

**11.3 Worst Case Radiated Spurious Emissions Data (802.11a, Channel 165)**

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3216.000000	45.78	88.23	42.45	1000.000	274.0	V	138.0	7
4531.500000	44.93	73.98	29.05	1000.000	100.0	V	164.0	9
4687.500000	47.59	73.98	26.39	1000.000	100.0	V	184.0	10
4824.000000	44.83	73.98	29.15	1000.000	331.0	H	297.0	10
9648.000000	49.93	88.23	38.30	1000.000	197.0	V	173.0	17
11650.000000	55.16	73.98	18.82	1000.000	189.0	H	293.0	19
14472.000000	55.47	73.98	18.51	1000.000	237.0	V	172.0	21

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3216.000000	40.27	68.23	27.96	1000.000	274.0	V	138.0	7
4531.500000	34.02	53.98	19.96	1000.000	100.0	V	164.0	9
4687.500000	37.87	53.98	16.11	1000.000	100.0	V	184.0	10
4824.000000	31.68	53.98	22.30	1000.000	331.0	H	297.0	10
9648.000000	37.68	68.23	30.55	1000.000	197.0	V	173.0	17
11650.000000	47.94	53.98	6.04	1000.000	189.0	H	293.0	19
14472.000000	46.15	53.98	7.83	1000.000	237.0	V	172.0	21

Test Personnel: Michael Carlson
Supervising/Reviewing Engineer: NA
(Where Applicable) FCC Part 15E
Product Standard: RSS-247 Issue 2
Input Voltage: 120VAC / 60Hz
Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 6/4/2021 – 6/24/2021
Limit Applied: 15.407b
Ambient Temperature: 21.5 °C
Relative Humidity: 40.2 %
Atmospheric Pressure: 988.8 mbar

Deviations, Additions, or Exclusions: None

**11.4 Worst Case Radiated Spurious Emissions Data (802.11n, Channel 149)**

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3216.000000	45.00	88.23	43.23	1000.000	318.0	H	262.0	7
4531.500000	45.36	73.98	28.62	1000.000	275.0	V	103.0	9
4687.500000	47.46	73.98	26.52	1000.000	264.0	V	103.0	10
9648.000000	49.02	88.23	39.21	1000.000	410.0	V	241.0	17
11489.500000	52.88	73.98	21.10	1000.000	247.0	V	262.0	19
14472.000000	55.47	73.98	18.51	1000.000	246.0	V	91.0	21

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3216.000000	38.52	68.23	29.71	1000.000	318.0	H	262.0	7
4531.500000	33.86	53.98	20.12	1000.000	275.0	V	103.0	9
4687.500000	37.87	53.98	16.11	1000.000	264.0	V	103.0	10
9648.000000	35.43	68.23	32.80	1000.000	410.0	V	241.0	17
11489.500000	43.04	53.98	10.94	1000.000	247.0	V	262.0	19
14472.000000	45.63	53.98	8.35	1000.000	246.0	V	91.0	21

Test Personnel: Michael Carlson
Supervising/Reviewing Engineer:
(Where Applicable) NA
FCC Part 15E
Product Standard: RSS-247 Issue 2
Input Voltage: 120VAC / 60Hz
Pretest Verification w / Ambient
Signals or BB Source: Yes

Test Date: 6/4/2021 – 6/24/2021
Limit Applied: 15.407b
Ambient Temperature: 21.5 °C
Relative Humidity: 40.2 %
Atmospheric Pressure: 988.8 mbar

Deviations, Additions, or Exclusions: None

**11.5 Worst Case Radiated Spurious Emissions Data (802.11n, Channel 157)**

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
38.137222	28.65	40.00	11.35	120.000	102.0	V	48.0	22
125.006111	38.98	43.52	4.55	120.000	101.0	V	0.0	22
256.333333	35.89	46.02	10.14	120.000	101.0	H	164.0	22
275.302222	33.17	46.02	12.85	120.000	99.0	H	296.0	23
406.360000	34.38	46.02	11.64	120.000	101.0	V	277.0	26

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3216.000000	44.67	88.23	43.56	1000.000	321.0	V	132.0	7
4687.500000	47.33	73.98	26.65	1000.000	100.0	V	185.0	10
4824.000000	54.36	73.98	19.62	1000.000	351.0	H	306.0	10
11570.000000	56.69	73.98	17.29	1000.000	224.0	V	326.0	19
14472.000000	52.38	73.98	21.60	1000.000	227.0	V	161.0	21
19389.000000	57.01	73.98	16.97	1000.000	355.0	V	36.0	17
22849.000000	58.39	73.98	15.59	1000.000	410.0	H	0.0	10
23767.000000	59.28	73.98	14.70	1000.000	410.0	V	0.0	11
31533.500000	61.86	73.98	12.12	1000.000	410.0	H	188.0	17
36450.000000	65.01	73.98	8.97	1000.000	410.0	V	212.0	19

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3216.000000	37.60	68.23	30.63	1000.000	321.0	V	132.0	7
4687.500000	37.78	53.98	16.20	1000.000	100.0	V	185.0	10
4824.000000	42.21	53.98	11.77	1000.000	351.0	H	306.0	10
11570.000000	50.49	53.98	3.49	1000.000	224.0	V	326.0	19
14472.000000	39.28	53.98	14.70	1000.000	227.0	V	161.0	21
19389.000000	43.75	53.98	10.23	1000.000	355.0	V	36.0	17
22849.000000	45.02	53.98	8.96	1000.000	410.0	H	0.0	10
23767.000000	46.19	53.98	7.79	1000.000	410.0	V	0.0	11
31533.500000	48.51	53.98	5.47	1000.000	410.0	H	188.0	17
36450.000000	51.71	53.98	2.27	1000.000	410.0	V	212.0	19

Test Personnel: Michael Carlson
Supervising/Reviewing Engineer: _____
(Where Applicable) NA
FCC Part 15E
Product Standard: RSS-247 Issue 2
Input Voltage: 120VAC / 60Hz
Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 6/4/2021 – 6/24/2021
Limit Applied: 15.407b
Ambient Temperature: 21.5 °C
Relative Humidity: 40.2 %
Atmospheric Pressure: 988.8 mbar

Deviations, Additions, or Exclusions: None

**11.6 Worst Case Radiated Spurious Emissions Data (802.11n, Channel 165)**

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3216.000000	45.53	88.23	42.70	1000.000	100.0	H	110.0	7
4531.500000	45.46	73.98	28.52	1000.000	220.0	V	102.0	9
4687.500000	47.00	73.98	26.98	1000.000	304.0	V	113.0	10
11650.000000	55.66	73.98	18.32	1000.000	193.0	V	243.0	19
14472.000000	53.06	73.98	20.92	1000.000	286.0	V	79.0	21

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3216.000000	39.19	68.23	29.04	1000.000	100.0	H	110.0	7
4531.500000	33.90	53.98	20.08	1000.000	220.0	V	102.0	9
4687.500000	36.79	53.98	17.19	1000.000	304.0	V	113.0	10
11650.000000	47.74	53.98	6.24	1000.000	193.0	V	243.0	19
14472.000000	40.71	53.98	13.27	1000.000	286.0	V	79.0	21

Test Personnel: Michael Carlson
Supervising/Reviewing Engineer: NA
(Where Applicable) FCC Part 15E
Product Standard: RSS-247 Issue 2
Input Voltage: 120VAC / 60Hz
Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 6/4/2021 – 6/24/2021
Limit Applied: 15.407b
Ambient Temperature: 21.5 °C
Relative Humidity: 40.2 %
Atmospheric Pressure: 988.8 mbar

Deviations, Additions, or Exclusions: None

**11.7 Worst Case Radiated Spurious Emissions Data (802.11n (40MHz), Channel 151)**

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
124.952222	35.06	43.52	8.46	120.000	102.0	V	6.0	22
128.401111	30.47	43.52	13.05	120.000	400.0	V	230.0	22
256.225556	36.71	46.02	9.31	120.000	100.0	H	166.0	22
257.357222	36.10	46.02	9.92	120.000	105.0	H	171.0	22
275.086667	33.01	46.02	13.01	120.000	105.0	H	296.0	23
400.486111	34.75	46.02	11.27	120.000	105.0	V	265.0	26

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3216.000000	45.28	88.23	42.95	1000.000	100.0	H	110.0	7
4687.500000	46.58	73.98	27.40	1000.000	262.0	V	102.0	10
9648.000000	50.41	88.23	37.82	1000.000	193.0	V	92.0	17
11510.000000	53.58	73.98	20.40	1000.000	212.0	V	241.0	18
14472.000000	56.26	73.98	17.72	1000.000	219.0	V	92.0	21
19216.500000	58.06	73.98	15.92	1000.000	410.0	H	177.0	18
22526.000000	57.92	73.98	16.06	1000.000	396.0	H	0.0	11
23862.500000	58.81	73.98	15.17	1000.000	377.0	V	0.0	11
31828.000000	62.83	88.23	25.40	1000.000	100.0	H	332.0	17
36513.500000	65.20	88.23	23.03	1000.000	410.0	V	258.0	19

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3216.000000	39.23	68.23	29.00	1000.000	100.0	H	110.0	7
4687.500000	37.06	53.98	16.92	1000.000	262.0	V	102.0	10
9648.000000	39.22	68.23	29.01	1000.000	193.0	V	92.0	17
11510.000000	43.63	53.98	10.35	1000.000	212.0	V	241.0	18
14472.000000	46.62	53.98	7.36	1000.000	219.0	V	92.0	21
19216.500000	44.42	53.98	9.56	1000.000	410.0	H	177.0	18
22526.000000	44.75	53.98	9.23	1000.000	396.0	H	0.0	11
23862.500000	45.46	53.98	8.52	1000.000	377.0	V	0.0	11
31828.000000	49.30	68.23	18.93	1000.000	100.0	H	332.0	17
36513.500000	51.42	68.23	16.81	1000.000	410.0	V	258.0	19

Test Personnel: Michael Carlson
Supervising/Reviewing Engineer: NA
(Where Applicable) FCC Part 15E
Product Standard: RSS-247 Issue 2
Input Voltage: 120VAC / 60Hz
Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 6/4/2021 – 6/24/2021
Limit Applied: 15.407b
Ambient Temperature: 21.5 °C
Relative Humidity: 40.2 %
Atmospheric Pressure: 988.8 mbar

Deviations, Additions, or Exclusions: None

**11.8 Worst Case Radiated Spurious Emissions Data (802.11n (40MHz), Channel 159)**

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3216.000000	45.10	88.23	43.13	1000.000	100.0	H	110.0	7
4687.500000	46.93	73.98	27.05	1000.000	262.0	V	103.0	10
9648.000000	49.63	88.23	38.60	1000.000	344.0	V	91.0	17
11590.000000	55.35	73.98	18.63	1000.000	212.0	V	240.0	19
14472.000000	55.52	73.98	18.46	1000.000	220.0	V	90.0	21

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3216.000000	39.02	68.23	29.21	1000.000	100.0	H	110.0	7
4687.500000	36.99	53.98	16.99	1000.000	262.0	V	103.0	10
9648.000000	37.32	68.23	30.91	1000.000	344.0	V	91.0	17
11590.000000	46.98	53.98	7.00	1000.000	212.0	V	240.0	19
14472.000000	45.98	53.98	8.00	1000.000	220.0	V	90.0	21

Test Personnel: Michael Carlson
Supervising/Reviewing Engineer: NA
(Where Applicable) FCC Part 15E
Product Standard: RSS-247 Issue 2
Input Voltage: 120VAC / 60Hz
Pretest Verification w / Ambient
Signals or BB Source: Yes

Test Date: 6/4/2021 – 6/24/2021
Limit Applied: 15.407b
Ambient Temperature: 21.5 °C
Relative Humidity: 40.2 %
Atmospheric Pressure: 988.8 mbar

Deviations, Additions, or Exclusions: None

**11.9 Worst Case Radiated Spurious Emissions Data (802.11n (80MHz), Channel 155)**

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
124.952222	34.85	43.52	8.67	120.000	121.0	V	349.0	22
128.131667	30.10	43.52	13.42	120.000	194.0	V	224.0	22
256.279444	37.82	46.02	8.20	120.000	356.0	H	167.0	22
256.980000	34.40	46.02	11.62	120.000	354.0	H	176.0	22
278.266111	33.85	46.02	12.17	120.000	400.0	V	225.0	23

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3216.000000	45.03	88.23	43.20	1000.000	100.0	H	108.0	7
4687.500000	47.39	73.98	26.59	1000.000	292.0	V	104.0	10
6083.000000	49.83	88.23	38.40	1000.000	246.0	H	294.0	12
9648.000000	50.31	88.23	37.92	1000.000	308.0	V	95.0	17
11550.000000	55.96	73.98	18.02	1000.000	219.0	V	243.0	19
14472.000000	54.34	73.98	19.64	1000.000	281.0	V	81.0	21
18175.500000	57.45	73.98	16.53	1000.000	100.0	H	71.0	21
20097.000000	56.29	73.98	17.69	1000.000	275.0	V	0.0	15
31303.000000	61.28	73.98	12.70	1000.000	100.0	H	346.0	17
31587.500000	61.85	73.98	12.13	1000.000	410.0	V	283.0	17
36441.000000	64.44	73.98	9.54	1000.000	410.0	H	0.0	19
36480.000000	64.57	73.98	9.41	1000.000	410.0	V	0.0	19

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3216.000000	38.35	68.23	29.88	1000.000	100.0	H	108.0	7
4687.500000	38.02	53.98	15.96	1000.000	292.0	V	104.0	10
6083.000000	36.04	68.23	32.19	1000.000	246.0	H	294.0	12
9648.000000	37.97	68.23	30.26	1000.000	308.0	V	95.0	17
11550.000000	49.63	53.98	4.35	1000.000	219.0	V	243.0	19
14472.000000	42.79	53.98	11.19	1000.000	281.0	V	81.0	21
18175.500000	43.79	53.98	10.19	1000.000	100.0	H	71.0	21
20097.000000	42.98	53.98	11.00	1000.000	275.0	V	0.0	15
31303.000000	48.00	53.98	5.98	1000.000	100.0	H	346.0	17
31587.500000	48.79	53.98	5.19	1000.000	410.0	V	283.0	17
36441.000000	51.29	53.98	2.69	1000.000	410.0	H	0.0	19
36480.000000	50.95	53.98	3.03	1000.000	410.0	V	0.0	19

Test Personnel: Michael Carlson
Supervising/Reviewing Engineer: _____
(Where Applicable) NA
FCC Part 15E
Product Standard: RSS-247 Issue 2
Input Voltage: 120VAC / 60Hz
Pretest Verification w / Ambient
Signals or BB Source: Yes

Test Date: 6/4/2021 – 6/24/2021
Limit Applied: 15.407b
Ambient Temperature: 21.5 °C
Relative Humidity: 40.2 %
Atmospheric Pressure: 988.8 mbar

Deviations, Additions, or Exclusions: None



12 Radiated Band Edge Emissions

12.1 Low Band Edge (U-NII-1)

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5147.352000	69.73	74.00	4.27	1000.000	355.0	H	204.0	10
5149.020000	73.17	74.00	0.83	1000.000	300.0	H	208.0	10
5149.968000	69.92	74.00	4.08	1000.000	356.0	H	205.0	10

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5147.352000	49.20	54.00	4.80	1000.000	355.0	H	204.0	10
5149.020000	53.91	54.00	0.10	1000.000	300.0	H	208.0	10
5149.968000	52.36	54.00	1.64	1000.000	356.0	H	205.0	10

802.11a Channel 36

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5145.114000	67.87	74.00	6.13	1000.000	355.0	H	194.0	10
5146.722000	73.81	74.00	0.19	1000.000	377.0	H	205.0	10
5147.940000	70.20	74.00	3.80	1000.000	298.0	H	210.0	10
5149.488000	57.81	74.00	16.19	1000.000	218.0	V	295.0	10

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5145.114000	45.45	54.00	8.55	1000.000	355.0	H	194.0	10
5146.722000	49.76	54.00	4.24	1000.000	377.0	H	205.0	10
5147.940000	48.50	54.00	5.50	1000.000	298.0	H	210.0	10
5149.488000	38.01	54.00	15.99	1000.000	218.0	V	295.0	10

802.11n Channel 36



Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5141.496000	70.61	74.00	3.39	1000.000	354.0	H	186.0	10
5144.748000	70.68	74.00	3.32	1000.000	278.0	H	223.0	10
5149.500000	70.24	74.00	3.76	1000.000	232.0	H	237.0	10

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5141.496000	52.72	54.00	1.28	1000.000	354.0	H	186.0	10
5144.748000	52.44	54.00	1.56	1000.000	278.0	H	223.0	10
5149.500000	53.49	54.00	0.51	1000.000	232.0	H	237.0	10

802.11n(40MHz) Channel 38

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5136.282000	66.56	74.00	7.44	1000.000	290.0	H	213.0	10
5141.208000	68.18	74.00	5.82	1000.000	361.0	H	192.0	10
5144.700000	67.72	74.00	6.28	1000.000	372.0	H	219.0	10
5149.584000	68.01	74.00	5.99	1000.000	355.0	H	214.0	10

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5136.282000	51.98	54.00	2.03	1000.000	290.0	H	213.0	10
5141.208000	53.25	54.00	0.75	1000.000	361.0	H	192.0	10
5144.700000	53.47	54.00	0.53	1000.000	372.0	H	219.0	10
5149.584000	52.98	54.00	1.02	1000.000	355.0	H	214.0	10

802.11n(80MHz) Channel 42

Test Personnel:	Michael Carlson	Test Date:	7/11/2021 – 7/27/2021
Supervising/Reviewing Engineer:		Limit Applied:	15.407b
(Where Applicable)	NA	Ambient Temperature:	21.5 °C
Product Standard:	FCC Part 15E	Relative Humidity:	40.2 %
Input Voltage:	RSS-247 Issue 2	Atmospheric Pressure:	988.8 mbar
Pretest Verification w / Ambient	120VAC / 60Hz		
Signals or BB Source:	Yes		

Deviations, Additions, or Exclusions: None

**12.2 High Band Edge (U-NII-3)**

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5850.928000	89.25	140.11	50.87	1000.000	294.0	H	228.0	12
5861.008000	83.78	129.15	45.37	1000.000	286.0	H	284.0	12
5923.200000	52.29	89.56	37.27	1000.000	304.0	V	300.0	11

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5850.928000	75.29	120.11	44.83	1000.000	294.0	H	228.0	12
5861.008000	65.84	109.15	43.31	1000.000	286.0	H	284.0	12
5923.200000	39.39	69.56	30.17	1000.000	304.0	V	300.0	11

802.11a Channel 165

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5856.599000	88.42	130.38	41.96	1000.000	283.0	H	52.0	12
5926.163000	53.13	88.23	35.10	1000.000	110.0	H	176.0	11

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5856.599000	71.26	110.38	39.12	1000.000	283.0	H	52.0	12
5926.163000	41.22	68.23	27.01	1000.000	110.0	H	176.0	11

802.11n Channel 165



Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5854.553000	80.72	131.85	51.13	1000.000	185.0	H	182.0	12
5887.256000	72.18	116.16	43.98	1000.000	393.0	H	200.0	12
5910.356000	70.68	99.07	28.39	1000.000	378.0	H	200.0	11

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5854.553000	64.37	111.85	47.48	1000.000	185.0	H	182.0	12
5887.256000	53.23	96.16	42.93	1000.000	393.0	H	200.0	12
5910.356000	49.36	79.07	29.71	1000.000	378.0	H	200.0	11

802.11n (40MHz) Channel 165

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5863.100000	87.05	128.56	41.51	1000.000	374.0	H	196.0	12
5904.251000	79.69	103.58	23.90	1000.000	273.0	H	192.0	12
5927.230000	77.38	88.23	10.85	1000.000	274.0	H	192.0	11
5942.300000	73.53	88.23	14.70	1000.000	273.0	H	192.0	11

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
5863.100000	74.22	108.56	34.34	1000.000	374.0	H	196.0	12
5904.251000	65.91	83.58	17.67	1000.000	273.0	H	192.0	12
5927.230000	61.57	68.23	6.66	1000.000	274.0	H	192.0	11
5942.300000	57.96	68.23	10.27	1000.000	273.0	H	192.0	11

802.11n (80MHz) Channel 155

Test Personnel: Michael Carlson
Supervising/Reviewing Engineer: _____
(Where Applicable) NA
FCC Part 15E
Product Standard: RSS-247 Issue 2
Input Voltage: 120VAC / 60Hz
Pretest Verification w / Ambient
Signals or BB Source: Yes

Test Date: 7/11/2021 – 7/27/2021
Limit Applied: 15.407b
Ambient Temperature: 21.5 °C
Relative Humidity: 40.2 %
Atmospheric Pressure: 988.8 mbar

Deviations, Additions, or Exclusions: None

**13 Revision History**

Revision Level	Date	Report Number	Prepared By	Reviewed By	Notes
0	10/7/2021	104962659LEX-005	BCT	BZ	Original Issue
1	12/17/2021	104962659LEX-005.1	BCT	BZ	Removed the DFS bands for U-NII-2A and U-NII-2C
2	3/1/2022	104626259LEX-005.2	BCT	BZ	Updated output power