TEST REPORT ADDENDUM - RADIATED

FROM

Test of: Aruba Networks APIN0334, APIN0335

to

To: FCC CFR 47 Part 15 Subpart E 15.407 (DFS Bands)

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1. MEASUREMENT AND PRESENTATION OF TEST DATA

The measurement and graphical data presented in this test report was generated automatically using state-of-the-art technology creating an easy to read report structure. Numerical measurement data is separated from supporting graphical data (plots) through hyperlinks. Numerical measurement data can be reviewed without scrolling through numerous graphical pages to arrive at the next data matrix.

Plots have been relegated into the Appendix 'Graphical Data' Section of this report

Testing and report automation was performed by MiTest. MiTest is an automated test system developed by MiCOM Labs. MiTest is the first cloud based modular test system enabling end-to-end automation of regulatory compliance testing for regulatory compliance.

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2. Radiated Emissions

Radiated Test Conditions for Radiated Spurious and Band-Edge Emissions			
Standard:	FCC CFR 47:15.407	**Ambient Temp. (ºC):**	20.0 - 24.5
Test Heading:	Radiated Spurious and Band-Edge Emissions	**Rel. Humidity (%):**	32 - 45
Standard Section(s):	15.407 (b), 15.205, 15.209	**Pressure (mBars):**	999 - 1001
Reference Document(s):	See Normative References		

Test Procedure for Radiated Spurious and Band-Edge Emissions
Radiated emissions for restricted bands above 1 GHz are measured in the anechoic chamber at a 3-meter distance on every azimuth in both horizontal and vertical polarities. The emissions are recorded and maximized as a function of azimuth by rotation through 360° with a spectrum analyzer in peak hold mode. Depending on the frequency band spanned a notch filter and waveguide filter was used to remove the fundamental frequency. The highest emissions relative to the limit are listed for each frequency spanned. Measurements on any restricted band frequency or frequencies above 1 GHz are based on the use of measurement instrumentation employing peak and average detectors. All measurements were performed using a resolution bandwidth of 1 MHz.

Test configuration and setup for Undesirable Measurement were per the Radiated Test Set-up specified in this document.

15.407 (b) Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of −17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of −27 dBm/MHz.

(5) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.

(6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.

(7) The provisions of §15.205 apply to intentional radiators operating under this section.

(8) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits.

Limits for Restricted Bands (15.205, 15.209)
Peak emission: 74 dBuV/m
Average emission: 54 dBuV/m

Field Strength Calculation
The field strength is calculated by adding the Antenna Factor and Cable Loss, and subtracting Amplifier Gain from the measured reading. All factors are included in the reported data.
FS = R + AF + CORR - FO

where:
FS = Field Strength
R = Measured Spectrum analyzer Input Amplitude
AF = Antenna Factor
CORR = Correction Factor = CL – AG + NFL
CL = Cable Loss
AG = Amplifier Gain
FO = Distance Falloff Factor
NFL = Notch Filter Loss or Waveguide Loss

Example:
The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength (dBµV/m);

$$E = 1000000 \times \sqrt{30P}/3 \ \mu V/m$$

where P is the EIRP in Watts

Therefore: -27 dBm/MHz equates to 68.23 dBuV/m

Conversion between dBmV/m (or dBmV) and mV/m (or mV) are as follows:
Level (dBmV/m) = 20 * Log (level (mV/m))

40 dBmV/m = 100 mV/m
48 dBmV/m = 250 mV/m

Restricted Bands of Operation (15.205)
(a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

Frequency Band			
MHz	**MHz**	**MHz**	**GHz**
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8

12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	Above 38.6
13.36-13.41			

(b) Except as provided in paragraphs (d) and (e) of this section, the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in §15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in §15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in §15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in §15.35 apply to these measurements.

(c) Except as provided in paragraphs (d) and (e) of this section, regardless of the field strength limits specified elsewhere in this subpart, the provisions of this section apply to emissions from any intentional radiator.

(d) The following devices are exempt from the requirements of this section:

(1) Swept frequency field disturbance sensors operating between 1.705 and 37 MHz provided their emissions only sweep through the bands listed in paragraph (a) of this section, the sweep is never stopped with the fundamental emission within the bands listed in paragraph (a) of this section, and the fundamental emission is outside of the bands listed in paragraph (a) of this section more than 99% of the time the device is actively transmitting, without compensation for duty cycle.

(2) Transmitters used to detect buried electronic markers at 101.4 kHz which are employed by telephone companies.

(3) Cable locating equipment operated pursuant to §15.213.

(4) Any equipment operated under the provisions of §15.253, 15.255, and 15.256 in the frequency band 75-85 GHz, or §15.257 of this part.

(5) Biomedical telemetry devices operating under the provisions of §15.242 of this part are not subject to the restricted band 608-614 MHz but are subject to compliance within the other restricted bands.

(6) Transmitters operating under the provisions of subparts D or F of this part.

(7) Devices operated pursuant to §15.225 are exempt from complying with this section for the 13.36-13.41 MHz band only.

(8) Devices operated in the 24.075-24.175 GHz band under §15.245 are exempt from complying with the requirements of this section for the 48.15-48.35 GHz and 72.225-72.525 GHz bands only, and shall not exceed the limits specified in §15.245(b).

(9) Devices operated in the 24.0-24.25 GHz band under §15.249 are exempt from complying with the requirements of this section for the 48.0-48.5 GHz and 72.0-72.75 GHz bands only, and shall not exceed the limits specified in §15.249(a).

(e) Harmonic emissions appearing in the restricted bands above 17.7 GHz from field disturbance sensors operating under the provisions of §15.245 shall not exceed the limits specified in §15.245(b).

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2.1.1. Restricted Band Emissions

2.1.1.1. AP-ANT-13B

Equipment Configuration for Radiated Spurious - Restricted Band Emissions			
Antenna:	AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5260.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5257.28	83.91	3.64	-11.30	76.25	Fundamental	Horizontal	151	1	--	--	
#2	10511.46	54.34	5.48	-4.26	55.56	Peak (NRB)	Vertical	200	1	--	--	Pass
Test Notes: EUT on 150cm Table powered by PDSine 9001GR												

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5300.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5295.76	82.83	3.79	-11.11	75.51	Fundamental	Horizontal	101	1	--	--	
#2	10598.43	60.71	5.59	-3.93	62.37	Peak (NRB)	Vertical	200	360	--	--	Pass
#3	10600.52	48.47	5.58	-3.93	50.12	Max Avg	Vertical	196	223	54.0	-3.9	Pass
#4	10600.52	63.50	5.58	-3.93	65.15	Max Peak	Vertical	196	223	74.0	-8.9	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5322.28	81.01	3.75	-11.06	73.70	Fundamental	Horizontal	101	1	--	--	
#2	10637.55	49.18	5.43	-3.89	50.72	Max Avg	Vertical	186	221	54.0	-3.3	Pass
#3	10637.55	62.94	5.43	-3.89	64.48	Max Peak	Vertical	186	221	74.0	-9.5	Pass
Test Notes: EUT on 150cm Table powered by PDSine 9001GR												

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5503.84	69.02	3.75	-11.18	61.59	Fundamental	Vertical	101	0	--	--	
#2	11002.28	51.61	5.59	-4.24	52.96	Max Avg	Vertical	186	278	54.0	-1.0	Pass
#3	11002.28	65.13	5.59	-4.24	66.48	Max Peak	Vertical	186	278	74.0	-7.5	Pass
Test Notes: EUT on 150cm Table powered by PDSine 9001GR												

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5580.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5583.69	80.16	3.79	-11.19	72.76	Fundamental	Horizontal	101	1	--	--	
#2	11162.28	50.27	5.76	-4.06	51.97	Max Avg	Vertical	192	229	54.0	-2.0	Pass
#3	11162.28	63.89	5.76	-4.06	65.59	Max Peak	Vertical	192	229	74.0	-8.4	Pass
Test Notes: EUT on 150cm Table powered by PDSine 9001GR												

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5720.00	**Data Rate:**	6.00 MBit/s
Power Setting:	14	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5723.84	65.75	3.79	-10.72	58.82	Fundamental	Horizontal	101	0	--	--	
#2	11430.90	51.78	5.48	-4.92	52.34	Max Avg	Vertical	161	248	54.0	-1.7	Pass
#3	11430.90	66.65	5.48	-4.92	67.21	Max Peak	Vertical	161	248	74.0	-6.8	Pass
Test Notes: EUT on 150cm Table powered by PDSine 9001GR. Power reduced to 14 due to 11.4 GHz harmonic												

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2.1.1.2. AP-ANT-19

Equipment Configuration for Radiated Spurious - Restricted Band Emissions			
Antenna:	AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5260.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5266.42	85.70	3.68	-11.26	78.12	Fundamental	Vertical	101	1	--	--	
#2	5266.42	85.70	3.68	-11.26	78.12	Peak (NRB)	Vertical	101	1	--	--	Pass
#3	5266.42	85.70	3.68	-11.26	78.12	Peak (NRB)	Vertical	101	1	--	--	Pass
#4	10520.56	47.06	5.43	-4.21	48.28	Max Avg	Vertical	189	232	54.0	-5.7	Pass
#5	10520.56	61.78	5.43	-4.21	63.00	Max Peak	Vertical	189	232	74.0	-11.0	Pass
#6	10520.56	51.84	5.43	-4.21	53.06	Peak (NRB)	Vertical	101	59	--	--	Pass
Test Notes: EUT on 150cm Table powered by PDSine 9001GR												

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5300.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5293.67	83.99	3.78	-11.12	76.65	Fundamental	Vertical	101	1	--	--	
#2	5293.67	83.99	3.78	-11.12	76.65	Peak (NRB)	Vertical	101	1	--	--	Pass
#3	10600.52	47.81	5.58	-3.93	49.46	Max Avg	Vertical	187	276	54.0	-4.5	Pass
#4	10600.52	62.87	5.58	-3.93	64.52	Max Peak	Vertical	187	276	74.0	-9.5	Pass
#5	10600.52	45.49	5.58	-3.93	47.14	Max Avg	Horizontal	141	228	54.0	-6.9	Pass
#6	10600.52	61.00	5.58	-3.93	62.65	Max Peak	Horizontal	141	228	74.0	-11.4	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5321.45	83.83	3.75	-11.06	76.52	Fundamental	Vertical	101	1	--	--	
#2	5321.45	83.83	3.75	-11.06	76.52	Peak (NRB)	Vertical	101	1	--	--	Pass
#3	10638.35	46.16	5.43	-3.89	47.70	Max Avg	Vertical	169	222	54.0	-6.3	Pass
#4	10638.35	60.23	5.43	-3.89	61.77	Max Peak	Vertical	169	222	74.0	-12.2	Pass
#5	10638.35	45.61	5.43	-3.89	47.15	Max Avg	Horizontal	168	228	54.0	-6.9	Pass
#6	10638.35	59.31	5.43	-3.89	60.85	Max Peak	Horizontal	168	228	74.0	-13.2	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5502.24	76.46	3.75	-11.17	69.04	Fundamental	Vertical	101	1	--	--	
#2	5502.24	76.46	3.75	-11.17	69.04	Peak (NRB)	Vertical	101	1	--	--	Pass
#3	11000.56	47.97	5.59	-4.24	49.32	Max Avg	Horizontal	121	231	54.0	-4.7	Pass
#4	11000.56	62.93	5.59	-4.24	64.28	Max Peak	Horizontal	121	231	74.0	-9.7	Pass
#5	11000.56	51.92	5.59	-4.24	53.27	Max Avg	Vertical	198	269	54.0	-0.7	Pass
#6	11000.56	66.39	5.59	-4.24	67.74	Max Peak	Vertical	198	269	74.0	-6.3	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5580.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5580.68	84.96	3.80	-11.20	77.56	Fundamental	Vertical	101	1	--	--	
#2	5580.68	84.96	3.80	-11.20	77.56	Peak (NRB)	Vertical	101	1	--	--	Pass
#3	11162.40	52.06	5.76	-4.06	53.76	Max Avg	Vertical	178	250	54.0	-0.2	Pass
#4	11162.40	65.72	5.76	-4.06	67.42	Max Peak	Vertical	178	250	74.0	-6.6	Pass
#5	11162.40	51.88	5.76	-4.06	53.58	Max Avg	Horizontal	134	247	54	-0.42	Pass
#6	11162.40	67.43	5.76	-4.06	69.13	Max Peak	Horizontal	134	247	74.0	-4.9	Pass
#7	11162.41	51.56	5.76	-4.06	53.26	Max Avg	Vertical	176	251	54	-0.74	Pass
#8	11162.41	66.10	5.76	-4.06	67.80	Max Peak	Vertical	176	251	74.0	-6.2	Pass
#9	11162.41	50.99	5.76	-4.06	52.69	Max Avg	Horizontal	128	250	54.0	-1.3	Pass
#10	11162.41	65.07	5.76	-4.06	66.77	Max Peak	Horizontal	128	250	74.0	-7.2	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5720.00	**Data Rate:**	6.00 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5714.15	60.05	3.82	-10.76	53.11	Fundamental	Vertical	101	1	--	--	
#2	5714.15	60.05	3.82	-10.76	53.11	Peak (NRB)	Vertical	101	1	--	--	Pass
#3	11431.10	52.57	5.48	-4.92	53.13	Max Avg	Vertical	184	253	54	-0.87	Pass
#4	11431.10	71.90	5.48	-4.92	72.46	Max Peak	Vertical	184	253	74.0	-1.5	Pass
#5	11431.10	51.60	5.48	-4.92	52.16	Max Avg	Horizontal	128	247	54.0	-1.8	Pass
#6	11431.10	67.02	5.48	-4.92	67.58	Max Peak	Horizontal	128	247	74.0	-6.4	Pass
#7	11431.11	51.72	5.48	-4.92	52.28	Max Avg	Horizontal	148	247	54.0	-1.7	Pass
#8	11431.11	67.14	5.48	-4.92	67.70	Max Peak	Horizontal	148	247	74.0	-6.3	Pass
#9	11431.11	52.78	5.48	-4.92	53.34	Max Avg	Vertical	191	250	54	-0.66	Pass
#10	11431.11	70.87	5.48	-4.92	71.43	Max Peak	Vertical	191	250	74.0	-2.6	Pass
#11	11431.12	49.92	5.48	-4.92	50.48	Max Avg	Vertical	100	76	54.0	-3.5	Pass
#12	11431.12	64.86	5.48	-4.92	65.42	Max Peak	Vertical	100	76	74.0	-8.6	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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2.1.1.3. AP-ANT-1W

Equipment Configuration for Radiated Spurious - Restricted Band Emissions			
Antenna:	1W	**Variant:**	802.11a
Antenna Gain (dBi):	5.8	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5260.00	**Data Rate:**	6Mbit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5257.12	83.60	3.64	-11.30	75.94	Fundamental	Horizontal	101	1	--	--	
#2	10522.12	54.83	5.43	-4.20	56.06	Peak (NRB)	Horizontal	101	1	--	--	Pass
Test Notes: EUT on 150cm Table powered by PDSine 9001GR												

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Antenna:	1W	**Variant:**	802.11a
Antenna Gain (dBi):	5.8	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5300.00	**Data Rate:**	6Mbit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5293.99	79.09	3.78	-11.12	71.75	Fundamental	Horizontal	200	1	--	--	
#2	5293.99	79.09	3.78	-11.12	71.75	Peak (NRB)	Horizontal	200	1	--	--	Pass
#3	10604.08	47.30	5.56	-3.92	48.94	Max Avg	Horizontal	192	284	54.0	-5.1	Pass
#4	10604.08	61.41	5.56	-3.92	63.05	Max Peak	Horizontal	192	284	74.0	-11.0	Pass
#5	10604.08	42.63	5.56	-3.92	44.27	Max Avg	Vertical	118	342	54.0	-9.7	Pass
#6	10604.08	56.98	5.56	-3.92	58.62	Max Peak	Vertical	118	342	74.0	-15.4	Pass
Test Notes: EUT on 150cm Table powered by PDSine 9001GR												

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	1W	**Variant:**	802.11a
Antenna Gain (dBi):	5.8	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5320.00	**Data Rate:**	6Mbit/s
Power Setting:	21	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5321.96	74.25	3.75	-11.06	66.94	Fundamental	Horizontal	200	1	--	--	
#2	5321.96	74.25	3.75	-11.06	66.94	Peak (NRB)	Horizontal	200	1	--	--	Pass
#3	10644.97	47.12	5.32	-3.89	48.55	Max Avg	Horizontal	190	286	54.0	-5.5	Pass
#4	10644.97	61.15	5.32	-3.89	62.58	Max Peak	Horizontal	190	286	74.0	-11.4	Pass
#5	10644.97	43.34	5.32	-3.89	44.77	Max Avg	Vertical	151	339	54.0	-9.2	Pass
#6	10644.97	57.49	5.32	-3.89	58.92	Max Peak	Vertical	151	339	74.0	-15.1	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11a
Antenna Gain (dBi):	5.8	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	0.00	60.90	0.00	0.00	60.90	Peak (NRB)	Vertical	138	336	--	--	Pass
#2	5503.92	66.24	3.75	-11.18	58.81	Fundamental	Horizontal	200	0	--	--	
#3	5503.92	66.24	3.75	-11.18	58.81	Peak (NRB)	Horizontal	200	0	--	--	Pass
#8	10991.43	47.93	5.61	-4.27	49.27	Max Avg	Horizontal	141	38	54.0	-4.7	Pass
#9	10991.43	62.22	5.61	-4.27	63.56	Max Peak	Horizontal	141	38	74.0	-10.4	Pass
#10	10991.43	44.47	5.61	-4.27	45.81	Max Avg	Vertical	110	333	54.0	-8.2	Pass
#11	10991.43	59.12	5.61	-4.27	60.46	Max Peak	Vertical	110	333	74.0	-13.5	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11a
Antenna Gain (dBi):	5.8	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5580.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5502.88	66.84	3.75	-11.17	59.42	Fundamental	Horizontal	200	1	--	--	
#2	5502.88	66.84	3.75	-11.17	59.42	Peak (NRB)	Horizontal	200	1	--	--	Pass
#9	11005.09	50.29	5.58	-4.23	51.64	Max Avg	Vertical	105	328	54.0	-2.4	Pass
#10	11005.09	64.23	5.58	-4.23	65.58	Max Peak	Vertical	105	328	74.0	-8.4	Pass
#11	11009.22	47.57	5.57	-4.22	48.92	Max Avg	Horizontal	198	284	54.0	-5.1	Pass
#12	11009.22	61.79	5.57	-4.22	63.14	Max Peak	Horizontal	198	284	74.0	-10.9	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11a
Antenna Gain (dBi):	5.8	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5720.00	**Data Rate:**	6.00 MBit/s
Power Setting:	20	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5723.93	55.38	3.79	-10.72	48.45	Fundamental	Horizontal	200	1	--	--	
#2	5723.93	55.38	3.79	-10.72	48.45	Peak (NRB)	Horizontal	200	1	--	--	Pass
#9	11434.07	52.05	5.41	-4.92	52.54	Max Avg	Vertical	194	259	54.0	-1.46	Pass
#10	11434.07	68.48	5.41	-4.92	68.97	Max Peak	Vertical	194	259	74.0	-5.0	Pass
#11	11434.07	50.09	5.41	-4.92	50.58	Max Avg	Horizontal	137	252	54.0	-3.4	Pass
#12	11434.07	63.70	5.41	-4.92	64.19	Max Peak	Horizontal	137	252	74.0	-9.8	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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2.1.1.4. AP-ANT-20W

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11a
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5260.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5255.35	80.33	3.64	-11.32	72.65	Fundamental	Horizontal	101	1	--	--	
#2	5255.35	80.33	3.64	-11.32	72.65	Peak (NRB)	Horizontal	101	1	--	--	Pass
#3	10524.01	52.01	5.43	-4.19	53.25	Peak (NRB)	Horizontal	100	29	--	--	Pass
#4	10524.01	44.77	5.43	-4.19	46.01	Max Avg	Horizontal	104	277	54.0	-8.0	Pass
#5	10524.01	58.71	5.43	-4.19	59.95	Max Peak	Horizontal	104	277	74.0	-14.1	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11a
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5300.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5292.87	72.21	3.77	-11.13	64.85	Fundamental	Vertical	200	1	--	--	
#2	5292.87	72.21	3.77	-11.13	64.85	Peak (NRB)	Vertical	200	1	--	--	Pass
#3	10603.44	43.60	5.57	-3.93	45.24	Max Avg	Horizontal	196	296	54.0	-8.8	Pass
#4	10603.44	57.23	5.57	-3.93	58.87	Max Peak	Horizontal	196	296	74.0	-15.1	Pass
#5	10603.44	41.62	5.57	-3.93	43.26	Max Avg	Vertical	119	340	54.0	-10.7	Pass
#6	10603.44	55.97	5.57	-3.93	57.61	Max Peak	Vertical	119	340	74.0	-16.4	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11a
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5301.21	72.91	3.81	-11.09	65.63	Fundamental	Horizontal	200	1	--	--	
#2	5301.21	72.91	3.81	-11.09	65.63	Peak (NRB)	Horizontal	200	1	--	--	Pass
#3	10605.69	43.23	5.55	-3.92	44.86	Max Avg	Horizontal	162	280	54.0	-9.1	Pass
#4	10605.69	57.74	5.55	-3.92	59.37	Max Peak	Horizontal	162	280	74.0	-14.6	Pass
#5	10605.69	41.61	5.55	-3.92	43.24	Max Avg	Vertical	117	340	54.0	-10.8	Pass
#6	10605.69	56.10	5.55	-3.92	57.73	Max Peak	Vertical	117	340	74.0	-16.3	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11a
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5497.99	71.68	3.74	-11.17	64.25	Fundamental	Horizontal	101	0	--	--	
#2	5497.99	71.68	3.74	-11.17	64.25	Peak (NRB)	Horizontal	101	0	--	--	Pass
#5	11000.32	52.47	5.59	-4.24	53.82	Max Avg	Horizontal	116	300	54.0	-0.18	Pass
#6	11000.32	69.39	5.59	-4.24	70.74	Max Peak	Horizontal	116	300	74.0	-3.3	Pass
#7	11000.32	47.92	5.59	-4.24	49.27	Max Avg	Vertical	120	315	54.0	-4.7	Pass
#8	11000.32	62.92	5.59	-4.24	64.27	Max Peak	Vertical	120	315	74.0	-9.7	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11a
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5580.00	**Data Rate:**	6.00 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5584.29	73.26	3.79	-11.19	65.86	Fundamental	Horizontal	101	0	--	--	
#2	5584.29	73.26	3.79	-11.19	65.86	Peak (NRB)	Horizontal	101	0	--	--	Pass
#3	11156.07	49.68	5.96	-4.05	51.59	Max Avg	Horizontal	115	298	54.0	-2.4	Pass
#4	11156.07	63.55	5.96	-4.05	65.46	Max Peak	Horizontal	115	298	74.0	-8.5	Pass
#5	11156.07	46.78	5.96	-4.05	48.69	Max Avg	Vertical	115	26	54.0	-5.3	Pass
#6	11156.07	61.07	5.96	-4.05	62.98	Max Peak	Vertical	115	26	74.0	-11.0	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11a
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5720.00	**Data Rate:**	6.00 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5726.09	62.72	3.79	-10.72	55.79	Fundamental	Horizontal	101	1	--	--	
#2	5726.09	62.72	3.79	-10.72	55.79	Peak (NRB)	Horizontal	101	1	--	--	Pass
#3	11437.52	52.09	5.34	-4.92	52.51	Max Avg	Horizontal	114	267	54.0	-1.5	Pass
#4	11437.52	65.54	5.34	-4.92	65.96	Max Peak	Horizontal	114	267	74.0	-8.0	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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2.1.1.5. AP-ANT-40

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11a
Antenna Gain (dBi):	4.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5260.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5259.04	80.33	3.65	-11.29	72.69	Fundamental	Horizontal	101	1	--	--	
#2	5259.04	80.33	3.65	-11.29	72.69	Peak (NRB)	Horizontal	101	1	--	--	Pass
#3	10514.55	48.53	5.45	-4.23	49.75	Peak (NRB)	Vertical	101	82	--	--	Pass
#4	10514.55	46.29	5.45	-4.23	47.51	Max Avg	Vertical	170	243	54.0	-6.5	Pass
#5	10514.55	60.38	5.45	-4.23	61.60	Max Peak	Vertical	170	243	74.0	-12.4	Pass
Test Notes: EUT on 150cm Table powered by PDSine 9001GR												

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11a
Antenna Gain (dBi):	4.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5300.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5292.47	75.21	3.76	-11.13	67.84	Fundamental	Horizontal	200	1	--	--	
#2	5292.47	75.21	3.76	-11.13	67.84	Peak (NRB)	Horizontal	200	1	--	--	Pass
#3	10596.71	50.35	5.60	-3.93	52.02	Peak (NRB)	Vertical	198	55	--	--	Pass
#4	10596.71	48.49	5.60	-3.93	50.16	Max Avg	Vertical	190	300	54.0	-3.8	Pass
#5	10596.71	62.33	5.60	-3.93	64.00	Max Peak	Vertical	190	300	74.0	-10.0	Pass
#6	10596.71	44.79	5.60	-3.93	46.46	Max Avg	Horizontal	191	224	54.0	-7.5	Pass
#7	10596.71	58.72	5.60	-3.93	60.39	Max Peak	Horizontal	191	224	74.0	-13.6	Pass
Test Notes: EUT on 150cm Table powered by PDSine 9001GR												

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11a
Antenna Gain (dBi):	4.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5325.46	74.01	3.73	-11.06	66.68	Fundamental	Horizontal	200	110	--	--	
#2	5325.46	74.01	3.73	-11.06	66.68	Peak (NRB)	Horizontal	200	110	--	--	Pass
#3	10636.75	48.97	5.45	-3.89	50.53	Max Avg	Vertical	147	100	54.0	-3.5	Pass
#4	10636.75	63.30	5.45	-3.89	64.86	Max Peak	Vertical	147	100	74.0	-9.1	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11a
Antenna Gain (dBi):	4.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5504.97	65.38	3.75	-11.18	57.95	Fundamental	Horizontal	151	1	--	--	
#2	5504.97	65.38	3.75	-11.18	57.95	Peak (NRB)	Horizontal	151	1	--	--	Pass
#3	11000.32	51.46	5.59	-4.24	52.81	Max Avg	Horizontal	137	240	54.0	-1.2	Pass
#4	11000.32	66.02	5.59	-4.24	67.37	Max Peak	Horizontal	137	240	74.0	-6.6	Pass
#5	11000.32	50.38	5.59	-4.24	51.73	Max Avg	Vertical	195	260	54.0	-2.3	Pass
#6	11000.32	65.25	5.59	-4.24	66.60	Max Peak	Vertical	195	260	74.0	-7.4	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11a
Antenna Gain (dBi):	4.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5580.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5584.85	67.62	3.79	-11.19	60.22	Fundamental	Horizontal	101	1	--	--	
#2	5584.85	67.62	3.79	-11.19	60.22	Peak (NRB)	Horizontal	101	1	--	--	Pass
#3	11159.75	51.39	5.85	-4.07	53.17	Max Avg	Horizontal	134	242	54.0	-0.8	Pass
#4	11159.75	65.12	5.85	-4.07	66.90	Max Peak	Horizontal	134	242	74.0	-7.1	Pass
#5	11159.75	46.27	5.85	-4.07	48.05	Max Avg	Vertical	114	257	54.0	-6.0	Pass
#6	11159.75	60.38	5.85	-4.07	62.16	Max Peak	Vertical	114	257	74.0	-11.8	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11a
Antenna Gain (dBi):	4.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5720.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5713.99	49.50	3.82	-10.76	42.56	Fundamental	Horizontal	101	1	--	--	
#2	5713.99	49.50	3.82	-10.76	42.56	Peak (NRB)	Horizontal	101	1	--	--	Pass
#5	11447.46	51.05	5.41	-4.92	51.54	Max Avg	Vertical	156	272	54.0	-2.5	Pass
#6	11447.46	66.09	5.41	-4.92	66.58	Max Peak	Vertical	156	272	74.0	-7.4	Pass
#7	11447.46	48.69	5.41	-4.92	49.18	Max Avg	Horizontal	128	238	54.0	-4.8	Pass
#8	11447.46	63.63	5.41	-4.92	64.12	Max Peak	Horizontal	128	238	74.0	-9.9	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR

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2.1.1.6. AP-ANT-45

Equipment Configuration for Radiated Spurious - Restricted Band Emissions			
Antenna:	AP-ANT-45	**Variant:**	802.11a
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5260.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5262.49	91.50	3.66	-11.28	83.88	Fundamental	Vertical	101	0	--	--	
#2	10526.57	51.84	5.42	-4.18	53.08	Peak (NRB)	Vertical	200	0	--	--	Pass
#3	15776.51	38.27	5.98	0.10	44.35	Max Avg	Horizontal	160	23	54.0	-9.7	Pass
#4	15776.51	53.43	5.98	0.10	59.51	Max Peak	Horizontal	160	23	74.0	-14.5	Pass
Test Notes: EUT on 150cm Table powered by PDSine 9001GR												

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11a
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5300.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5294.07	88.54	3.78	-11.12	81.20	Fundamental	Vertical	101	1	--	--	
#2	10600.28	47.95	5.58	-3.94	49.59	Max Avg	Vertical	198	217	54.0	-4.4	Pass
#3	10600.28	63.39	5.58	-3.94	65.03	Max Peak	Vertical	198	217	74.0	-9.0	Pass
Test Notes: EUT on 150cm Table powered by PDSine 9001GR												

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11a
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5321.72	85.92	3.75	-11.06	78.61	Fundamental	Vertical	151	1	--	--	
#2	10639.08	47.12	5.42	-3.90	48.64	Max Avg	Vertical	152	103	54.0	-5.4	Pass
#3	10639.08	61.21	5.42	-3.90	62.73	Max Peak	Vertical	152	103	74.0	-11.3	Pass
Test Notes: EUT on 150cm Table powered by PDSine 9001GR												

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11a
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5503.92	75.26	3.75	-11.18	67.83	Fundamental	Horizontal	101	1	--	--	
#2	11001.72	52.29	5.59	-4.24	53.64	Max Avg	Horizontal	157	237	54.0	-0.4	Pass
#3	11001.72	65.77	5.59	-4.24	67.12	Max Peak	Horizontal	157	237	74.0	-6.9	Pass
Test Notes: EUT on 150cm Table powered by PDSine 9001GR												

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11a
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5580.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5581.84	84.80	3.80	-11.20	77.40	Fundamental	Vertical	101	1	--	--	
#2	11159.07	50.62	5.89	-4.06	52.45	Max Avg	Vertical	168	245	54.0	-1.6	Pass
#3	11159.07	64.68	5.89	-4.06	66.51	Max Peak	Vertical	168	245	74.0	-7.5	Pass
Test Notes: EUT on 150cm Table powered by PDSine 9001GR												

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11a
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5720.00	**Data Rate:**	6.00 MBit/s
Power Setting:	16	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5721.32	68.92	3.80	-10.73	61.99	Fundamental	Vertical	101	1	--	--	
#2	11433.22	51.76	5.43	-4.92	52.27	Max Avg	Vertical	196	239	54.0	-1.7	Pass
#3	11433.22	66.16	5.43	-4.92	66.67	Max Peak	Vertical	196	239	74.0	-7.3	Pass
Test Notes: EUT on 150cm Table powered by PDSine 9001GR. Power reduced to 16 due to 11.4 GHz harmonic												

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2.1.1.7. AP-ANT-48

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11a
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5260.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5266.82	92.45	3.68	-11.25	84.88	Fundamental	Vertical	101	1	--	--	
#2	10512.55	53.51	5.47	-4.24	54.74	Peak (NRB)	Vertical	101	32	--	--	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR.

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11a
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5300.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5298.80	94.08	3.81	-11.09	86.80	Fundamental	Horizontal	100	0	--	--	
#2	10600.52	47.61	5.58	-3.93	49.26	Max Avg	Vertical	196	283	54.0	-4.7	Pass
#3	10600.52	62.74	5.58	-3.93	64.39	Max Peak	Vertical	196	283	74.0	-9.6	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR.

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11a
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5318.16	90.36	3.75	-11.07	83.04	Fundamental	Horizontal	101	1	--	--	
#2	10637.35	49.74	5.45	-3.89	51.30	Max Avg	Vertical	177	315	54.0	-2.7	Pass
#3	10637.35	63.42	5.45	-3.89	64.98	Max Peak	Vertical	177	315	74.0	-9.0	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR.

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11a
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5501.68	90.78	3.75	-11.17	83.36	Fundamental	Horizontal	101	1	--	--	
#2	11000.52	52.16	5.59	-4.24	53.51	Max Avg	Vertical	188	315	54.0	-0.5	Pass
#3	11000.52	66.64	5.59	-4.24	67.99	Max Peak	Vertical	188	315	74.0	-6.0	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR.

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11a
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5580.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5578.48	92.68	3.81	-11.20	85.29	Fundamental	Vertical	101	1	--	--	
#2	11154.99	46.94	5.93	-4.05	48.82	Max Avg	Vertical	158	246	54.0	-5.2	Pass
#3	11154.99	60.96	5.93	-4.05	62.84	Max Peak	Vertical	158	246	74.0	-11.2	Pass
Test Notes: EUT on 150cm Table powered by PDSine 9001GR.												

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11a
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5720.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5718.67	92.22	3.80	-10.75	85.27	Fundamental	Horizontal	101	1	--	--	
#2	11431.02	53.18	5.48	-4.92	53.74	Max Avg	Vertical	171	263	54	-0.26	Pass
#3	11431.02	72.82	5.48	-4.92	73.38	Max Peak	Vertical	171	263	74.0	-0.6	Pass

Test Notes: EUT on 150cm Table powered by PDSine 9001GR.

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2.1.1.8. Metal Sheet

Equipment Configuration for Radiated Spurious - Restricted Band Emissions			
Antenna:	Metal Sheet	**Variant:**	802.11a
Antenna Gain (dBi):	2.10	**Modulation:**	OFDM
Beam Forming Gain (Y):	5.10	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5260.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5255.83	86.01	3.64	-11.31	78.34	Fundamental	Vertical	101	0	--	--	
#2	5255.83	86.01	3.64	-11.31	78.34	Peak (NRB)	Vertical	101	0	--	--	Pass
#3	10510.90	48.99	5.48	-4.26	50.21	Peak (NRB)	Horizontal	101	0	--	--	Pass
Test Notes: EUT on 150cm table powered by PDSine 9001GR POE												

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Metal Sheet	**Variant:**	802.11a
Antenna Gain (dBi):	2.10	**Modulation:**	OFDM
Beam Forming Gain (Y):	5.10	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5300.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5299.44	73.60	3.81	-11.09	66.32	Fundamental	Vertical	101	1	--	--	
#2	5299.44	73.60	3.81	-11.09	66.32	Peak (NRB)	Vertical	101	1	--	--	Pass
#3	10587.81	42.05	5.71	-3.95	43.81	Max Avg	Horizontal	166	78	54.0	-10.2	Pass
#4	10587.81	57.61	5.71	-3.95	59.37	Max Peak	Horizontal	166	78	74.0	-14.6	Pass
#5	10587.81	38.80	5.71	-3.95	40.56	Max Avg	Vertical	111	0	54.0	-13.4	Pass
#6	10587.81	53.55	5.71	-3.95	55.31	Max Peak	Vertical	111	0	74.0	-18.7	Pass
#7	10587.81	47.67	5.71	-3.95	49.43	Peak (NRB)	Horizontal	101	1	--	--	Pass
Test Notes: EUT on 150cm table powered by PDSine 9001GR POE												

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Metal Sheet	**Variant:**	802.11a
Antenna Gain (dBi):	2.10	**Modulation:**	OFDM
Beam Forming Gain (Y):	5.10	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5323.77	73.63	3.74	-11.06	66.31	Fundamental	Vertical	101	1	--	--	
#2	5323.77	73.63	3.74	-11.06	66.31	Peak (NRB)	Vertical	101	1	--	--	Pass
#3	10645.89	43.55	5.30	-3.90	44.95	Max Avg	Horizontal	122	48	54.0	-9.1	Pass
#4	10645.89	57.89	5.30	-3.90	59.29	Max Peak	Horizontal	122	48	74.0	-14.7	Pass
#5	10645.89	42.55	5.30	-3.90	43.95	Max Avg	Vertical	122	65	54.0	-10.1	Pass
#6	10645.89	57.64	5.30	-3.90	59.04	Max Peak	Vertical	122	65	74.0	-15.0	Pass

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Metal Sheet	**Variant:**	802.11a
Antenna Gain (dBi):	2.10	**Modulation:**	OFDM
Beam Forming Gain (Y):	5.10	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5492.46	91.04	3.71	-11.18	83.57	Fundamental	Horizontal	101	1	--	--	
#2	5492.46	91.04	3.71	-11.18	83.57	Peak (NRB)	Horizontal	101	1	--	--	Pass
#3	10993.18	45.66	5.60	-4.26	47.00	Max Avg	Horizontal	100	50	54.0	-7.0	Pass
#4	10993.18	59.91	5.60	-4.26	61.25	Max Peak	Horizontal	100	50	74.0	-12.8	Pass
#5	10993.18	44.42	5.60	-4.26	45.76	Max Avg	Vertical	100	19	54.0	-8.2	Pass
#6	10993.18	58.75	5.60	-4.26	60.09	Max Peak	Vertical	100	19	74.0	-13.9	Pass

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Metal Sheet	**Variant:**	802.11a
Antenna Gain (dBi):	2.10	**Modulation:**	OFDM
Beam Forming Gain (Y):	5.10	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5580.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5578.28	87.99	3.81	-11.20	80.60	Fundamental	Horizontal	101	1	--	--	
#2	5578.28	87.99	3.81	-11.20	80.60	Peak (NRB)	Horizontal	101	1	--	--	Pass
#3	11159.51	41.38	5.85	-4.07	43.16	Max Avg	Vertical	144	20	54.0	-10.8	Pass
#4	11159.51	53.46	5.85	-4.07	55.24	Max Peak	Vertical	144	20	74.0	-18.8	Pass
#5	11159.51	38.83	5.85	-4.07	40.61	Max Avg	Horizontal	190	351	54.0	-13.4	Pass
#6	11159.51	52.55	5.85	-4.07	54.33	Max Peak	Horizontal	190	351	74.0	-19.7	Pass

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Metal Sheet	**Variant:**	802.11a
Antenna Gain (dBi):	2.10	**Modulation:**	OFDM
Beam Forming Gain (Y):	5.10	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5720.00	**Data Rate:**	6.00 MBit/s
Power Setting:	21	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5715.75	67.90	3.81	-10.76	60.95	Fundamental	Vertical	101	1	--	--	
#2	5715.75	67.90	3.81	-10.76	60.95	Peak (NRB)	Vertical	101	1	--	--	Pass
#3	11445.21	49.83	5.40	-4.92	50.31	Max Avg	Horizontal	166	75	54.0	-3.7	Pass
#4	11445.21	64.01	5.40	-4.92	64.49	Max Peak	Horizontal	166	75	74.0	-9.5	Pass
#5	11445.21	43.96	5.40	-4.92	44.44	Max Avg	Vertical	100	355	54.0	-9.6	Pass
#6	11445.21	57.60	5.40	-4.92	58.08	Max Peak	Vertical	100	355	74.0	-15.9	Pass

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE

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2.1.2. Restricted Band and Band-Edge Emissions

2.1.2.9. AP-ANT-13B

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

5250 - 5350 MHz

AP-ANT-13B		Band-Edge Freq	Limit 54.0dBµV/m	Limit 74.0dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5320.00	5350.00	49.40	63.03	18.00
802.11ac-80	5290.00	5350.00	53.96	72.80	15.00
802.11n HT-20	5320.00	5350.00	50.85	64.86	18.00
802.11n HT-40	5310.00	5350.00	52.87	68.98	17.00
802.11ac-160	5250.00	5150.00	53.63	71.08	16.00
802.11ac-160	5250.00	5350.00	51.62	69.56	

5470 - 5725 MHz

AP-ANT-13B		Band-Edge Freq	Limit 54.0dBµV/m	Limit 74.0dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5500.00	5460.00	45.63	60.39	18.00
802.11ac-80	5530.00	5460.00	52.78	68.89	15.50
802.11n HT-20	5500.00	5460.00	46.10	59.99	18.00
802.11n HT-40	5510.00	5460.00	48.99	64.13	18.00
802.11ac-160	5570.00	5460.00	53.29	71.03	15.50

AP-ANT-13B		Band Edge Freq	Limit 68.23	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	
802.11a	5500.00	5470.00	50.77	18.00
802.11ac-80	5530.00	5470.00	52.78	15.50
802.11n HT-20	5500.00	5470.00	51.29	18.00
802.11n HT-40	5510.00	5470.00	52.12	18.00
802.11ac-160	5570.00	5470.00	54.77	15.50

Click on the links to view the data.

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.00 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5458.52	22.29	3.79	34.31	60.39	Max Peak	Vertical	147	17	74.0	-13.6	Pass
#2	5460.00	7.53	3.79	34.31	45.63	Max Avg	Vertical	147	17	54.0	-8.4	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5466.15	12.67	3.79	34.31	50.77	Max Avg	Horizontal	153	30	68.2*	-17.5	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11ac-80
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5530.00	**Data Rate:**	29.30 MBit/s
Power Setting:	15.5	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5459.78	14.68	3.79	34.31	52.78	Max Avg	Vertical	147	17	54.0	-1.2	Pass
#2	5460.00	30.79	3.79	34.31	68.89	Max Peak	Vertical	147	17	74.0	-5.1	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5460.54	14.68	3.79	34.31	52.78	Max Avg	Horizontal	153	30	68.2*	-15.5	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.50 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5458.50	21.89	3.80	34.30	59.99	Max Peak	Vertical	147	17	74.0	-14.0	Pass
#2	5459.24	8.00	3.79	34.31	46.10	Max Avg	Vertical	147	17	54.0	-7.9	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5465.87	13.19	3.79	34.31	51.29	Max Avg	--	--	--	68.2*	-16.9	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5510.00	**Data Rate:**	13.50 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5455.75	10.89	3.80	34.30	48.99	Max Avg	Vertical	147	17	54.0	-5.0	Pass
#2	5455.93	26.03	3.80	34.30	64.13	Max Peak	Vertical	147	17	74.0	-9.9	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5463.35	14.02	3.79	34.31	52.12	Max Avg	Horizontal	153	30	68.2	-16.1	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.00 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#2	5356.97	11.20	3.71	34.49	49.40	Max Avg	Vertical	155	6	54.0	-4.6	Pass
#3	5358.60	24.83	3.71	34.49	63.03	Max Peak	Vertical	155	6	74.0	-11.0	Pass

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11ac-80
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5290.00	**Data Rate:**	29.30 MBit/s
Power Setting:	15	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#2	5354.27	34.59	3.71	34.50	72.80	Max Peak	Vertical	147	17	74.0	-1.2	Pass
#3	5360.98	15.78	3.70	34.48	53.96	Max Avg	Vertical	147	17	54.0	0.0	Pass

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.50 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#2	5350.26	26.65	3.70	34.51	64.86	Max Peak	Vertical	147	17	74.0	-9.1	Pass
#3	5350.78	12.63	3.71	34.51	50.85	Max Avg	Vertical	147	17	54.0	-3.2	Pass

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5310.00	**Data Rate:**	13.50 MBit/s
Power Setting:	17	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#2	5353.31	14.66	3.71	34.50	52.87	Max Avg	Vertical	147	17	54.0	-1.1	Pass
#3	5354.65	30.77	3.71	34.50	68.98	Max Peak	Vertical	147	17	74.0	-5.0	Pass

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11ac-160
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	95
Channel Frequency (MHz):	5210.00	**Data Rate:**	29.30 MBit/s
Power Setting:	16	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5150.00	15.85	3.67	34.11	53.63	Max Avg	Vertical	200	-2	54.0	-0.4	Pass
#2	5150.00	33.30	3.67	34.11	71.08	Max Peak	Vertical	200	-2	74.0	-2.9	Pass
#3	5150.00	--	--	--	--	Band Edge	--	--	--	--	--	--
Test Notes: EUT on 150cm table powered by PDSine 9001GR POE.												

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11ac-160
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	95
Channel Frequency (MHz):	5290.00	**Data Rate:**	29.30 MBit/s
Power Setting:	16	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#2	5361.84	31.38	3.70	34.48	69.56	Max Peak	Vertical	200	-2	74.0	-4.4	Pass
#3	5364.19	13.44	3.70	34.48	51.62	Max Avg	Vertical	200	-2	54.0	-2.4	Pass
#1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE.

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11ac-160
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	95
Channel Frequency (MHz):	5570.00	**Data Rate:**	29.30 MBit/s
Power Setting:	15.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5452.26	32.95	3.78	34.30	71.03	Max Peak	Vertical	199	-3	74.0	-3.0	Pass
#2	5452.48	15.21	3.78	34.30	53.29	Max Avg	Vertical	199	-3	54.0	-0.7	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5469.94	16.66	3.79	34.32	54.77	Max Avg	Horizontal	153	30	68.2	-13.5	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--
Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.												

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

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2.1.2.10. AP-ANT-19

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

5250 - 5350 MHz

AP-ANT-19		Band-Edge Freq	Limit 54.	Limit 74.0	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5320.00	5350.00	51.98	66.83	18.00
802.11ac-80	5290.00	5350.00	53.87	72.44	14.00
802.11n HT-20	5320.00	5350.00	51.62	65.28	18.00
802.11n HT-40	5310.00	5350.00	53.28	69.06	17.00
802.11ac-160	5250.00	5150.00	53.62	72.89	11.5
802.11ac-160	5250.00	5350.00	51.98	70.11	

5470 - 5725 MHz

AP-ANT-19		Band-Edge Freq	Limit 54.0	Limit 74.0	Power Setting
Operational Mode	Operating Frequency (MHz)	dBµV/m	dBµV/m	dBµV/m	
802.11a	5500.00	5460.00	48.48	62.74	18.00
802.11ac-80	5530.00	5460.00	53.68	70.62	15.50
802.11n HT-20	5500.00	5460.00	48.65	63.72	18.00
802.11n HT-40	5510.00	5460.00	52.12	67.01	17.00
802.11ac-160	5570.00	5460.00	53.87	72.88	12.50

AP-ANT-19		Band Edge Freq	Limit 68.23	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	
802.11a	5500.00	5470.00	52.46	18.00
802.11ac-80	5530.00	5470.00	56.38	15.50
802.11n HT-20	5500.00	5470.00	52.12	18.00
802.11n HT-40	5510.00	5470.00	56.58	17.00
802.11ac-160	5570.00	5470.00	55.18	12.50

Click on the links to view the data.

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.00 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5456.07	10.38	3.80	34.30	48.48	Max Avg	Vertical	166	118	54.0	-5.5	Pass
#2	5456.35	24.64	3.80	34.30	62.74	Max Peak	Vertical	166	118	74.0	-11.3	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5469.52	14.35	3.79	34.32	52.46	Max Avg	Horizontal	153	30	68.2*	-15.8	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11ac-80
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5530.00	**Data Rate:**	29.30 MBit/s
Power Setting:	15.5	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5449.34	32.55	3.77	34.30	70.62	Max Peak	Vertical	166	118	74.0	-3.4	Pass
#2	5449.62	15.61	3.77	34.30	53.68	Max Avg	Vertical	166	118	54.0	-0.3	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5469.24	18.27	3.79	34.32	56.38	Max Avg	Horizontal	153	30	68.2	-11.9	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.50 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5454.53	25.63	3.79	34.30	63.72	Max Peak	Vertical	166	118	74.0	-10.3	Pass
#2	5455.65	10.55	3.80	34.30	48.65	Max Avg	Vertical	166	118	54.0	-5.4	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5469.24	14.01	3.79	34.32	52.12	Max Avg	Horizontal	153	30	68.2	-16.1	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5510.00	**Data Rate:**	13.50 MBit/s
Power Setting:	17	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5458.84	28.91	3.79	34.31	67.01	Max Peak	Vertical	166	118	74.0	-7.0	Pass
#2	5459.02	14.02	3.79	34.31	52.12	Max Avg	Vertical	166	118	54.0	-1.9	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5465.59	18.48	3.79	34.32	56.58	Max Avg	Horizontal	153	30	68.2	-11.7	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.00 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5353.53	13.77	3.71	34.50	51.98	Max Avg	Vertical	166	102	54.0	-2.0	Pass
#2	5355.05	28.62	3.71	34.50	66.83	Max Peak	Vertical	166	102	74.0	-7.2	Pass
#3	53500.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11ac-80
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5290.00	**Data Rate:**	29.30 MBit/s
Power Setting:	14	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5363.65	15.69	3.70	34.48	53.87	Max Avg	Vertical	166	118	54.0	-0.1	Pass
#2	5364.65	34.28	3.69	34.47	72.44	Max Peak	Vertical	166	118	74.0	-1.6	Pass
#3	53500.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.50 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5352.95	27.07	3.71	34.50	65.28	Max Peak	Vertical	166	118	74.0	-8.7	Pass
#2	5353.31	13.41	3.71	34.50	51.62	Max Avg	Vertical	166	118	54.0	-2.4	Pass
#3	53500.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5310.00	**Data Rate:**	13.50 MBit/s
Power Setting:	17	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5357.78	30.86	3.71	34.49	69.06	Max Peak	Vertical	166	118	74.0	-4.9	Pass
#2	5363.57	15.10	3.70	34.48	53.28	Max Avg	Vertical	166	118	54.0	-0.7	Pass
#3	53500.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5715.00	17.44	3.81	34.34	55.59	Marker	Vertical	166	118	68.2	-12.6	Pass
#2	5721.61	21.53	3.80	34.35	59.68	Marker	Vertical	166	118	78.2	-18.6	Pass
#3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11ac-80
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5775.00	**Data Rate:**	29.30 MBit/s
Power Setting:	16	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5709.67	23.21	3.84	34.34	61.39	Marker	Vertical	174	69	68.2	-6.8	Pass
#2	5716.51	23.24	3.81	34.34	61.39	Marker	Vertical	174	69	78.2	-16.8	Pass
#3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.50 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5707.24	16.95	3.85	34.34	55.14	Marker	Vertical	174	69	68.2	-13.1	Pass
#2	5725.00	24.51	3.79	34.35	62.65	Marker	Vertical	174	69	78.2	-15.6	Pass
#3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5755.00	**Data Rate:**	13.50 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5709.91	20.93	3.84	34.34	59.11	Marker	Vertical	174	69	68.2	-9.1	Pass
#2	5716.51	22.55	3.81	34.34	60.70	Marker	Vertical	174	69	78.2	-17.5	Pass
#3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11ac-160
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	95
Channel Frequency (MHz):	5530.00	**Data Rate:**	29.30 MBit/s
Power Setting:	12.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5452.51	15.78	3.79	34.30	53.87	Max Avg	Vertical	144	312	54.0	-0.1	Pass
#2	5455.81	34.78	3.80	34.30	72.88	Max Peak	Vertical	144	312	74.0	-1.1	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5469.94	17.07	3.79	34.32	55.18	Max Avg	Horizontal	153	30	68.2*	-13.1	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--
Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.												

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11ac-160
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6	**Duty Cycle (%):**	95
Channel Frequency (MHz):	5250.00	**Data Rate:**	29.30 MBit/s
Power Setting:	12.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5140.13	15.80	3.70	34.12	53.62	Max Avg	Vertical	153	346	54.0	-0.4	Pass
#2	5147.39	35.10	3.68	34.11	72.89	Max Peak	Vertical	153	346	74.0	-1.1	Pass
#3	5150.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11ac-160
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	95
Channel Frequency (MHz):	5290.00	**Data Rate:**	29.30 MBit/s
Power Setting:	11.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#2	5353.91	13.77	3.71	34.50	51.98	Max Avg	Vertical	153	346	54.0	-2.0	Pass
#3	5354.55	31.90	3.71	34.50	70.11	Max Peak	Vertical	153	346	74.0	-3.9	Pass
#1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.												

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2.1.2.11. AP-ANT-1W

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

5250 - 5350 MHz

AP-ANT-1W		Band-Edge Freq	Limit 54.0	Limit 74.0	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5320.00	5350.00	45.96	59.15	18.00
802.11ac-80	5290.00	5350.00	51.74	67.77	16.50
802.11n HT-20	5320.00	5350.00	45.48	55.96	18.00
802.11n HT-40	5310.00	5350.00	45.48	58.40	18.00
802.11ac-160	5250.00	5150.00	53.45	70.40	14.5
802.11ac-160	5250.00	5350.00	53.07	69.21	

5470 - 5725 MHz

AP-ANT-1W		Band-Edge Freq	Limit 54.0	Limit 74.0	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5500.00	5460.00	46.76	61.31	18.00
802.11ac-80	5530.00	5460.00	53.39	70.22	16.00
802.11n HT-20	5500.00	5460.00	46.76	61.39	18.00
802.11n HT-40	5510.00	5460.00	50.62	66.36	18.00
802.11ac-160	5570.00	5460.00	53.59	71.00	16.00

AP-ANT-1W		Band-Edge Freq	Limit 68.2dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	
802.11a	5500.00	5470.00	45.87	18.00
802.11ac-80	5530.00	5470.00	54.85	16.00
802.11n HT-20	5500.00	5470.00	44.88	18.00
802.11n HT-40	5510.00	5470.00	58.15	18.00
802.11ac-160	5570.00	5470.00	54.15	16.00

Click on the links to view the data.

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11a
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.00 MBit/s
Power Setting:	18	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5456.89	8.66	3.80	34.30	46.76	Max Avg	Vertical	148	44	54.0	-7.2	Pass
#2	5458.02	23.21	3.80	34.30	61.31	Max Peak	Vertical	148	44	74.0	-12.7	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5469.79	7.76	3.79	34.32	45.87	Max Avg	Horizontal	153	30	68.2	-22.4	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11ac-80
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5530.00	**Data Rate:**	29.30 MBit/s
Power Setting:	16	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5444.77	32.16	3.76	34.30	70.22	Max Peak	Vertical	148	44	74.0	-3.8	Pass
#2	5445.77	15.33	3.76	34.30	53.39	Max Avg	Vertical	148	44	54.0	-0.6	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5466.15	16.75	3.79	34.31	54.85	Max Avg	Horizontal	153	30	68.2*	-13.4	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.50 MBit/s
Power Setting:	18	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5455.27	23.30	3.79	34.30	61.39	Max Peak	Vertical	148	44	74.0	-12.6	Pass
#2	5456.21	8.66	3.80	34.30	46.76	Max Avg	Vertical	148	44	54.0	-7.2	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5469.80	6.77	3.79	34.32	44.88	Max Avg	Horizontal	153	30	68.2	-23.4	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5510.00	**Data Rate:**	13.50 MBit/s
Power Setting:	18	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5445.67	28.30	3.76	34.30	66.36	Max Peak	Vertical	148	44	74.0	-7.6	Pass
#2	5446.51	12.56	3.76	34.30	50.62	Max Avg	Vertical	148	44	54.0	-3.4	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5466.43	20.05	3.79	34.32	58.15	Max Avg	Horizontal	153	30	68.2	-10.1	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11a
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.00 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#2	5350.22	7.75	3.70	34.51	45.96	Max Avg	Vertical	150	54	54.0	-8.0	Pass
#3	5351.00	20.93	3.71	34.51	59.15	Max Peak	Vertical	150	54	74.0	-14.9	Pass

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11ac-80
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5290.00	**Data Rate:**	29.30 MBit/s
Power Setting:	16.5	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#2	5358.10	13.54	3.71	34.49	51.74	Max Avg	Vertical	150	57	54.0	-2.3	Pass
#3	5358.66	29.57	3.71	34.49	67.77	Max Peak	Vertical	150	57	74.0	-6.2	Pass

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.50 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	7.27	3.70	34.51	45.48	Max Avg	Vertical	150	57	54.0	-8.5	Pass
#2	5350.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#3	5353.53	17.75	3.71	34.50	55.96	Max Peak	Vertical	150	57	74.0	-18.0	Pass

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5310.00	**Data Rate:**	13.50 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	7.27	3.70	34.51	45.48	Max Avg	Vertical	150	57	54.0	-8.5	Pass
#2	5350.00	20.19	3.70	34.51	58.40	Max Peak	Vertical	150	57	74.0	-15.6	Pass
#3	5350.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11ac-160
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	6	**Duty Cycle (%):**	95
Channel Frequency (MHz):	5250.00	**Data Rate:**	29.30 MBit/s
Power Setting:	14.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5148.55	32.62	3.67	34.11	70.40	Max Peak	Horizontal	158	31	74.0	-3.6	Pass
#2	5150.00	15.67	3.67	34.11	53.45	Max Avg	Horizontal	158	31	54.0	-0.6	Pass
#3	5150.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE.

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11ac-160
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	95
Channel Frequency (MHz):	5290.00	**Data Rate:**	29.30 MBit/s
Power Setting:	16	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
#2	5351.44	30.99	3.71	34.51	69.21	Max Peak	Horizontal	158	31	74.0	-4.8	Pass
#3	5369.94	14.92	3.69	34.46	53.07	Max Avg	Horizontal	158	31	54.0	-0.9	Pass
Test Notes: EUT on 150cm table powered by PDSine 9001GR POE.												

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11ac-160
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	95
Channel Frequency (MHz):	5570.00	**Data Rate:**	29.30 MBit/s
Power Setting:	16	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5459.96	32.90	3.79	34.31	71.00	Max Peak	Horizontal	170	304	74.0	-3.0	Pass
#2	5460.00	15.49	3.79	34.31	53.59	Max Avg	Horizontal	170	304	54.0	-0.4	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5464.83	16.05	3.79	34.31	54.15	Max Avg	Horizontal	153	30	68.2	-14.1	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--
Test Notes: EUT on 150cm table powered by PDSine 9001GR POE.												

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

2.1.2.12. AP-ANT-20W

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

5250 - 5350 MHz

AP-ANT-20W		Band-Edge Freq	Limit 54.0dBµV/m	Limit 74.0dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5320.00	5350.00	50.44	64.39	18.00
802.11ac-80	5290.00	5350.00	53.87	73.47	15.00
802.11n HT-20	5320.00	5350.00	50.72	64.45	18.00
802.11n HT-40	5310.00	5350.00	53.28	68.81	17.00
802.11ac-160	5250.00	5150.00	48.57	64.81	16.00
802.11ac-160	5250.00	5350.00	53.87	72.57	

5470 - 5725 MHz

AP-ANT-20W		Band-Edge Freq	Limit 54.0dBµV/m	Limit 74.0dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5500.00	5460.00	44.61	57.85	18.00
802.11ac-80	5530.00	5460.00	52.89	71.03	16.50
802.11n HT-20	5500.00	5460.00	44.61	57.43	18.00
802.11n HT-40	5510.00	5460.00	47.37	63.41	18.00
802.11ac-160	5570.00	5460.00	50.76	67.90	

AP-ANT-20W		Band-Edge Freq	Limit 68.2dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	
802.11a	5500.00	5470.00	45.14	18.00
802.11ac-80	5530.00	5470.00	50.36	16.50
802.11n HT-20	5500.00	5470.00	45.14	18.00
802.11n HT-40	5510.00	5470.00	54.68	18.00
802.11ac-160	5570.00	5470.00	53.09	

80 + 80 MHz: 5250 - 5350 and 5470 - 5725 MHz Simultaneous Operation

AP-ANT-20W		Restricted Band Freq	Limit 54.0	Limit 74.0	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11ac-80+80	5290.00	5350.00	47.96	61.48	18.0
	5530.00	5460.00	42.10	54.58	

AP-ANT-20W		Band-Edge Freq	Limit 68.23	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	
802.11ac-80+80	5530.00	5470.00	45.64	18.0

Click on the links to view the data.

80 + 80 MHz: The following measurements were made with the unit operating in ac80+80 mode. As this report is for DFS operation applicable channel frequencies were 5290 and 5530 MHz.

The Restricted Band-Edges for 5350 and 5460 MHz were operating simulataneously and measured, with results reported below.

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11ac-80+80
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5290.00	**Data Rate:**	29.30 MBit/s
Power Setting:	18	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#2	5366.23	23.32	3.69	34.47	61.48	Max Peak	Vertical	160	0	74.0	-12.5	Pass
#3	5490.00	9.91	3.71	34.34	47.96	Max Avg	Vertical	160	0	54.0	-6.0	Pass
#4	5447.35	4.03	3.77	34.30	42.10	Max Avg	Vertical	160	0	54.0	-11.9	Pass
#5	5447.35	16.51	3.77	34.30	54.58	Max Peak	Vertical	160	0	74.0	-19.4	Pass
#6	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#7	5465.63	7.54	3.79	34.31	45.64	Max Avg	Horizontal	153	30	68.2*	-22.6	Pass
#8	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11a
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.00 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5459.72	19.75	3.79	34.31	57.85	Max Peak	Horizontal	141	51	74.0	-16.2	Pass
#2	5460.00	6.51	3.79	34.31	44.61	Max Avg	Horizontal	141	51	54.0	-9.4	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5461.14	7.04	3.79	34.31	45.14	Max Avg	Horizontal	153	30	68.2	-23.1	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11ac-80
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5530.00	**Data Rate:**	29.30 MBit/s
Power Setting:	16.5	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5457.74	14.79	3.80	34.30	52.89	Max Avg	Horizontal	141	298	54.0	-1.1	Pass
#2	5458.02	32.93	3.80	34.30	71.03	Max Peak	Horizontal	141	298	74.0	-3.0	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5465.03	12.26	3.79	34.31	50.36	Max Avg	Horizontal	153	30	68.2	-17.9	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.50 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5460.00	6.51	3.79	34.31	44.61	Max Avg	Horizontal	141	51	54.0	-9.4	Pass
#2	5460.00	19.33	3.79	34.31	57.43	Max Peak	Horizontal	141	51	74.0	-16.6	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5461.66	7.04	3.79	34.31	45.14	Max Avg	Horizontal	153	30	68.2*	-23.1	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5510.00	**Data Rate:**	13.50 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5450.72	25.33	3.78	34.30	63.41	Max Peak	Horizontal	141	51	74.0	-10.6	Pass
#2	5451.84	9.29	3.78	34.30	47.37	Max Avg	Horizontal	141	51	54.0	-6.6	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5469.80	16.57	3.79	34.32	54.68	Max Avg	Horizontal	153	30	68.2	-13.6	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11a
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.00 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5351.82	26.17	3.71	34.51	64.39	Max Peak	Horizontal	141	297	74.0	-9.6	Pass
#2	5351.98	12.22	3.71	34.51	50.44	Max Avg	Horizontal	141	297	54.0	-3.6	Pass
#3	53500.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11ac-80
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5290.00	**Data Rate:**	29.30 MBit/s
Power Setting:	15	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5355.51	15.66	3.71	34.50	53.87	Max Avg	Horizontal	141	298	54.0	-0.1	Pass
#2	5355.95	35.26	3.71	34.50	73.47	Max Peak	Horizontal	141	298	74.0	-0.5	Pass
#3	53500.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.50 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5351.16	26.23	3.71	34.51	64.45	Max Peak	Horizontal	141	297	74.0	-9.6	Pass
#2	5351.62	12.50	3.71	34.51	50.72	Max Avg	Horizontal	141	297	54.0	-3.3	Pass
#3	53500.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5310.00	**Data Rate:**	13.50 MBit/s
Power Setting:	17	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5354.39	30.60	3.71	34.50	68.81	Max Peak	Horizontal	141	297	74.0	-5.2	Pass
#2	5355.65	15.07	3.71	34.50	53.28	Max Avg	Horizontal	141	297	54.0	-0.7	Pass
#3	53500.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11ac-160
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	95
Channel Frequency (MHz):	5250.00	**Data Rate:**	29.30 MBit/s
Power Setting:	16	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5138.68	10.75	3.70	34.12	48.57	Max Avg	Horizontal	150	323	54.0	-5.4	Pass
#2	5141.58	26.99	3.70	34.12	64.81	Max Peak	Horizontal	150	323	74.0	-9.2	Pass
#3	5150.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE.

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11ac-160
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	95
Channel Frequency (MHz):	5290.00	**Data Rate:**	29.30 MBit/s
Power Setting:	16	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
#2	5353.11	15.66	3.71	34.50	53.87	Max Avg	Horizontal	150	323	54.0	-0.1	Pass
#3	5354.97	34.36	3.71	34.50	72.57	Max Peak	Horizontal	150	323	74.0	-1.4	Pass

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE.

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11ac-160
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	95
Channel Frequency (MHz):	5570.00	**Data Rate:**	29.30 MBit/s
Power Setting:	16	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5444.07	29.84	3.75	34.31	67.90	Max Peak	Horizontal	150	312	74.0	-6.1	Pass
#2	5460.00	12.66	3.79	34.31	50.76	Max Avg	Horizontal	150	312	54.0	-3.2	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5464.83	14.99	3.79	34.31	53.09	Max Avg	Horizontal	153	30	68.2	-15.1	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE.

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2.1.2.13. AP-ANT-40

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

5250 - 5350 MHz

AP-ANT-40		Band-Edge Freq	Limit 54.0	Limit 74.0	Power Setting
Operational Mode	Operating Frequency (MHz)	dBµV/m	dBµV/m	dBµV/m	
802.11a	5320.00	5350.00	52.21	65.65	17.50
802.11ac-80	5290.00	5350.00	53.68	73.46	13.00
802.11n HT-20	5320.00	5350.00	52.87	67.42	18.00
802.11n HT-40	5310.00	5350.00	53.58	69.19	16.50
802.11ac-160	5250.00	5150.00	52.84	69.56	12.50
802.11ac-160	5250.00	5350.00	53.38	70.94	

5470 - 5725 MHz

AP-ANT-40		Band-Edge Freq	Limit 54.0	Limit 74.0	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5500.00	5460.00	50.21	66.26	18.00
802.11ac-80	5530.00	5460.00	53.20	70.99	14.50
802.11n HT-20	5500.00	5460.00	50.49	64.77	18.00
802.11n HT-40	5510.00	5460.00	53.09	67.57	17.00
802.11ac-160	5570.00	5460.00	53.09	68.93	15.00

AP-ANT-40		Band-Edge Freq	Limit 68.2	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	
802.11a	5500.00	5470.00	54.51	18.00
802.11ac-80	5530.00	5470.00	55.18	14.50
802.11n HT-20	5500.00	5470.00	53.69	18.00
802.11n HT-40	5510.00	5470.00	57.67	17.00
802.11ac-160	5570.00	5470.00	54.93	15.00

Click on the links to view the data.

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11a
Antenna Gain (dBi):	4.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.00 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5454.97	12.12	3.79	34.30	50.21	Max Avg	Horizontal	153	330	54.0	-3.8	Pass
#2	5454.97	28.17	3.79	34.30	66.26	Max Peak	Horizontal	153	330	74.0	-7.7	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5468.40	16.40	3.79	34.32	54.51	Max Avg	Horizontal	153	30	68.2*	-13.7	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11ac-80
Antenna Gain (dBi):	4.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5530.00	**Data Rate:**	29.30 MBit/s
Power Setting:	14.5	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5460.00	15.10	3.79	34.31	53.20	Max Avg	Horizontal	153	330	54.0	-0.8	Pass
#2	5460.00	32.89	3.79	34.31	70.99	Max Peak	Horizontal	153	330	74.0	-3.0	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5461.94	17.08	3.79	34.31	55.18	Max Avg	Horizontal	153	30	68.2	-13.1	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	4.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.50 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5455.23	12.40	3.79	34.30	50.49	Max Avg	Horizontal	153	330	54.0	-3.5	Pass
#2	5455.23	26.68	3.79	34.30	64.77	Max Peak	Horizontal	153	330	74.0	-9.2	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5467.55	15.58	3.79	34.32	53.69	Max Avg	Horizontal	153	30	68.2	-14.5	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	4.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5510.00	**Data Rate:**	13.50 MBit/s
Power Setting:	17	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5457.39	14.99	3.80	34.30	53.09	Max Avg	Horizontal	153	330	54.0	-0.9	Pass
#2	5458.24	29.47	3.80	34.30	67.57	Max Peak	Horizontal	153	330	74.0	-6.4	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5464.75	19.57	3.79	34.31	57.67	Max Avg	Horizontal	153	30	68.2	-10.6	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11a
Antenna Gain (dBi):	4.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.00 MBit/s
Power Setting:	17.5	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
#2	5351.82	27.43	3.71	34.51	65.65	Max Peak	Horizontal	153	331	74.0	-8.4	Pass
#3	5352.61	14.00	3.71	34.50	52.21	Max Avg	Horizontal	153	331	54.0	-1.8	Pass

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11ac-80
Antenna Gain (dBi):	4.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5290.00	**Data Rate:**	29.30 MBit/s
Power Setting:	13	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5362.06	35.28	3.70	34.48	73.46	Max Peak	Horizontal	153	331	74.0	-0.5	Pass
#2	5362.32	15.50	3.70	34.48	53.68	Max Avg	Horizontal	153	331	54.0	-0.3	Pass
#3	5350.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	4.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.50 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
#2	5352.30	14.65	3.71	34.51	52.87	Max Avg	Horizontal	153	331	54.0	-1.1	Pass
#3	5354.35	29.21	3.71	34.50	67.42	Max Peak	Horizontal	153	331	74.0	-6.6	Pass

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	4.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5310.00	**Data Rate:**	13.50 MBit/s
Power Setting:	16.5	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
#2	5354.39	15.37	3.71	34.50	53.58	Max Avg	Horizontal	153	331	54.0	-0.4	Pass
#3	5355.03	30.98	3.71	34.50	69.19	Max Peak	Horizontal	153	331	74.0	-4.8	Pass

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11ac-160
Antenna Gain (dBi):	4.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	3	**Duty Cycle (%):**	95
Channel Frequency (MHz):	5250.00	**Data Rate:**	29.30 MBit/s
Power Setting:	12.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5143.09	15.02	3.70	34.12	52.84	Max Avg	Horizontal	199	41	54.0	-1.2	Pass
#2	5147.44	31.77	3.68	34.11	69.56	Max Peak	Horizontal	199	41	74.0	-4.4	Pass
#3	5150.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11ac-160
Antenna Gain (dBi):	4.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	95
Channel Frequency (MHz):	5250.00	**Data Rate:**	29.30 MBit/s
Power Setting:	14	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
#2	5361.58	15.20	3.70	34.48	53.38	Max Avg	Horizontal	199	41	54.0	-0.6	Pass
#3	5362.04	32.76	3.70	34.48	70.94	Max Peak	Horizontal	199	41	74.0	-3.1	Pass

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11ac-160
Antenna Gain (dBi):	4.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	95
Channel Frequency (MHz):	5570.00	**Data Rate:**	29.30 MBit/s
Power Setting:	15	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5459.40	30.83	3.79	34.31	68.93	Max Peak	Horizontal	200	41	74.0	-5.1	Pass
#2	5460.00	14.99	3.79	34.31	53.09	Max Avg	Horizontal	200	41	54.0	-0.9	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5465.13	16.82	3.79	34.32	54.93	Max Avg	Horizontal	153	30	68.2	-13.3	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.

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2.1.2.14. AP-ANT-45

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

5250 - 5350 MHz

AP-ANT-45		Band-Edge Freq	Limit 54.0dBµV/m	Limit 74.0dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5320.00	5350.00	53.08	66.94	17.00
802.11ac-80	5290.00	5350.00	52.66	73.28	10.50
802.11n HT-20	5320.00	5350.00	52.87	66.46	17.00
802.11n HT-40	5310.00	5350.00	53.18	69.35	15.50
802.11ac-160	5250	5150	53.62	69.40	15.00
802.11ac-160	5250	5350	53.78	72.79	

5470 - 5725 MHz

AP-ANT-45		Band-Edge Freq	Limit 54.0dBµV/m	Limit 74.0dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5500.00	5460.00	52.99	69.92	18.00
802.11ac-80	5530.00	5460.00	53.68	71.03	14.00
802.11n HT-20	5500.00	5460.00	52.01	67.03	18.00
802.11n HT-40	5510.00	5460.00	52.12	69.50	17.00
802.11ac-160	5570.00	5460.00	53.30	70.42	14.50

AP-ANT-45		Band-Edge Freq	Limit 68.2	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	
802.11a	5500.00	5470.00	52.89	18.00
802.11ac-80	5530.00	5470.00	56.16	14.50
802.11n HT-20	5500.00	5470.00	51.77	18.00
802.11n HT-40	5510.00	5470.00	61.78	17.00
802.11ac-160	5570.00	5470.00	53.59	14.50

Click on the links to view the data.

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11a
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.00 MBit/s
Power Setting:	18	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5458.64	31.82	3.79	34.31	69.92	Max Peak	Horizontal	160	42	74.0	-4.1	Pass
#2	5459.68	14.89	3.79	34.31	52.99	Max Avg	Horizontal	160	42	54.0	-1.0	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5460.72	14.79	3.79	34.31	52.89	Max Avg	Horizontal	153	30	68.2*	-15.3	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11ac-80
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5530.00	**Data Rate:**	29.30 MBit/s
Power Setting:	14	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5449.24	15.61	3.77	34.30	53.68	Max Avg	Horizontal	160	42	54.0	-0.3	Pass
#2	5449.76	32.96	3.77	34.30	71.03	Max Peak	Horizontal	160	42	74.0	-3.0	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5469.58	18.05	3.79	34.32	56.16	Max Avg	Horizontal	153	30	68.2	-12.1	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.50 MBit/s
Power Setting:	18	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5459.38	13.91	3.79	34.31	52.01	Max Avg	Horizontal	160	42	54.0	-2.0	Pass
#2	5459.64	28.93	3.79	34.31	67.03	Max Peak	Horizontal	160	42	74.0	-7.0	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5460.20	13.67	3.79	34.31	51.77	Max Avg	Horizontal	153	30	68.2	-16.5	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5510.00	**Data Rate:**	13.50 MBit/s
Power Setting:	17	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	1	5456.03	14.02	3.80	34.30	52.12	Max Avg	Horizontal	160	42	54.0	-1.9
#2	2	5456.87	31.40	3.80	34.30	69.50	Max Peak	Horizontal	160	42	74.0	-4.5
#3	3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--
#4	4	5469.84	23.67	3.79	34.32	61.78	Max Avg	Horizontal	153	30	68.2	-6.5
#5	5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11a
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.00 MBit/s
Power Setting:	17	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	14.87	3.70	34.51	53.08	Max Avg	Vertical	161	5	54.0	-0.9	Pass
#2	5350.00	28.73	3.70	34.51	66.94	Max Peak	Vertical	161	5	74.0	-7.1	Pass
#3	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11ac-80
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5290.00	**Data Rate:**	29.30 MBit/s
Power Setting:	10.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
#2	5358.92	14.46	3.71	34.49	52.66	Max Avg	Vertical	161	5	54.0	-1.3	Pass
#3	5358.92	35.08	3.71	34.49	73.28	Max Peak	Vertical	161	5	74.0	-0.7	Pass

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.50 MBit/s
Power Setting:	17	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
#2	5350.44	14.66	3.70	34.51	52.87	Max Avg	Vertical	161	5	54.0	-1.1	Pass
#3	5350.44	28.25	3.70	34.51	66.46	Max Peak	Vertical	161	5	74.0	-7.5	Pass

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5310.00	**Data Rate:**	13.50 MBit/s
Power Setting:	15.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
#2	5358.14	31.15	3.71	34.49	69.35	Max Peak	Vertical	161	5	74.0	-4.7	Pass
#3	5358.66	14.98	3.71	34.49	53.18	Max Avg	Vertical	161	5	54.0	-0.8	Pass

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11ac-160
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3	**Duty Cycle (%):**	95
Channel Frequency (MHz):	5250.00	**Data Rate:**	29.30 MBit/s
Power Setting:	15	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5141.58	15.80	3.70	34.12	53.62	Max Avg	Horizontal	162	8	54.0	-0.4	Pass
#2	5141.58	31.58	3.70	34.12	69.40	Max Peak	Horizontal	162	8	74.0	-4.6	Pass
#3	5150.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11ac-160
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3	**Duty Cycle (%):**	95
Channel Frequency (MHz):	5250.00	**Data Rate:**	29.30 MBit/s
Power Setting:	15.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
#2	5354.93	15.57	3.71	34.50	53.78	Max Avg	Horizontal	162	8	54.0	-0.2	Pass
#3	5355.25	34.58	3.71	34.50	72.79	Max Peak	Horizontal	162	8	74.0	-1.2	Pass

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11ac-160
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3	**Duty Cycle (%):**	95
Channel Frequency (MHz):	5570.00	**Data Rate:**	29.30 MBit/s
Power Setting:	14.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5460.00	15.20	3.79	34.31	53.30	Max Avg	Horizontal	162	8	54.0	-0.7	Pass
#2	5460.00	32.32	3.79	34.31	70.42	Max Peak	Horizontal	162	8	74.0	-3.6	Pass
#4	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#3	5461.52	15.49	3.79	34.32	53.59	Max Avg	Horizontal	153	30	68.2*	-14.6	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

2.1.2.15. AP-ANT-48

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

5250 - 5350 MHz

AP-ANT-48		Band-Edge Freq	Limit 54.0dBµV/m	Limit 74.0dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5320.00	5350.00	53.38	66.12	16.00
802.11ac-80	5290.00	5350.00	53.78	71.45	9.50
802.11n HT-20	5320.00	5350.00	51.98	66.68	18.00
802.11n HT-40	5310.00	5350.00	53.68	66.83	14.00
802.11ac-160	5250	5150	52.74	69.75	12.00
802.11ac-160	5250	5350	53.78	72.43	

5470 - 5725 MHz

AP-ANT-48		Band-Edge Freq	Limit 54.0dBµV/m	Limit 74.0dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5500.00	5460.00	53.19	66.88	16.00
802.11ac-80	5530.00	5460.00	53.78	68.50	8.00
802.11n HT-20	5500.00	5460.00	53.39	66.26	17.00
802.11n HT-40	5510.00	5460.00	53.78	66.39	13.00
802.11ac-160	5570.00	5460.00	52.89	71.32	13.50

AP-ANT-48		Band-Edge Freq	Limit 68.2dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	
802.11a	5500.00	5470.00	55.18	16.00
802.11ac-80	5530.00	5470.00	53.98	8.00
802.11n HT-20	5500.00	5470.00	55.95	17.00
802.11n HT-40	5510.00	5470.00	53.20	13.00
802.11ac-160	5570.00	5470.00	52.88	13.50

80 + 80 MHz: 5250 - 5350 and 5470 - 5725 MHz Simultaneous Operation

AP-ANT-48		Restricted Band Freq	Limit 54.0	Limit 74.0	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11ac-80+80	5290.00	5350.00	53.29	72.50	16.00
	5530.00	5460.00	50.48	69.42	

AP-ANT-48		Band-Edge Freq	Limit 68.23	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	
802.11ac-80+80	5530.00	5470.00	53.10	16.00

Click on the links to view the data.

80 + 80 MHz: The following measurements were made with the unit operating in ac80+80 mode. As this report is for DFS operation applicable channel frequencies were 5290 and 5530 MHz.

The Restricted Band-Edges for 5350 and 5460 MHz were operating simulataneously and measured, with results reported below.

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11ac-80+80
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5290.00	**Data Rate:**	29.30 MBit/s
Power Setting:	16	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#2	5350.11	15.08	3.70	34.51	53.29	Max Avg	Vertical	162	362	54.0	-0.7	Pass
#3	5351.28	34.28	3.71	34.51	72.50	Max Peak	Vertical	162	362	74.0	-1.5	Pass
#4	5445.75	31.34	3.78	34.30	69.42	Max Peak	Vertical	162	362	74.0	-4.6	Pass
#5	5447.35	12.39	3.78	34.30	50.48	Max Avg	Vertical	162	362	54.0	-3.5	Pass
#6	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#7	5467.56	14.99	3.79	34.32	53.10	Max Avg	Horizontal	153	30	68.2	-15.1	Pass
#8	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11a
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.00 MBit/s
Power Setting:	16	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5452.00	28.80	3.78	34.30	66.88	Max Peak	Horizontal	162	362	74.0	-7.1	Pass
#2	5455.95	15.09	3.80	34.30	53.19	Max Avg	Horizontal	162	362	54.0	-0.8	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5469.84	17.07	3.79	34.32	55.18	Max Avg	Horizontal	153	30	68.2	-13.1	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11ac-80
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5530.00	**Data Rate:**	29.30 MBit/s
Power Setting:	8	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5458.04	15.68	3.80	34.30	53.78	Max Avg	Horizontal	149	368	54.0	-0.2	Pass
#2	5458.32	30.40	3.80	34.30	68.50	Max Peak	Horizontal	149	368	74.0	-5.5	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5469.80	15.87	3.79	34.32	53.98	Max Avg	Horizontal	153	30	68.2	-14.3	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.50 MBit/s
Power Setting:	17	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5456.07	15.29	3.80	34.30	53.39	Max Avg	Horizontal	162	362	54.0	-0.6	Pass
#2	5458.60	28.16	3.79	34.31	66.26	Max Peak	Horizontal	162	362	74.0	-7.7	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5468.96	17.84	3.79	34.32	55.95	Max Avg	Horizontal	153	30	68.2	-12.3	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5510.00	**Data Rate:**	13.50 MBit/s
Power Setting:	13	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5457.76	28.29	3.80	34.30	66.39	Max Peak	Horizontal	162	362	74.0	-7.6	Pass
#2	5458.32	15.68	3.80	34.30	53.78	Max Avg	Horizontal	162	362	54.0	-0.2	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5469.52	15.09	3.79	34.32	53.20	Max Avg	Horizontal	153	30	68.2	-15.0	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11a
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.00 MBit/s
Power Setting:	16	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
#2	5356.77	27.92	3.71	34.49	66.12	Max Peak	Vertical	152	361	74.0	-7.9	Pass
#3	5357.66	15.18	3.71	34.49	53.38	Max Avg	Vertical	152	361	54.0	-0.6	Pass

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11ac-80
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5290.00	**Data Rate:**	29.30 MBit/s
Power Setting:	9.5	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
#2	5350.62	15.56	3.71	34.51	53.78	Max Avg	Horizontal	149	368	54.0	-0.2	Pass
#3	5351.66	33.23	3.71	34.51	71.45	Max Peak	Horizontal	149	368	74.0	-2.6	Pass

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.50 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
#2	5356.57	28.48	3.71	34.49	66.68	Max Peak	Vertical	152	361	74.0	-7.3	Pass
#3	5356.81	13.78	3.71	34.49	51.98	Max Avg	Vertical	152	361	54.0	-2.0	Pass

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5310.00	**Data Rate:**	13.50 MBit/s
Power Setting:	14	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	15.47	3.70	34.51	53.68	Max Avg	Vertical	152	361	54.0	-0.3	Pass
#2	5350.00	28.62	3.70	34.51	66.83	Max Peak	Vertical	152	361	74.0	-7.2	Pass
#3	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11ac-160
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3	**Duty Cycle (%):**	95
Channel Frequency (MHz):	5250.00	**Data Rate:**	29.30 MBit/s
Power Setting:	12	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5137.22	31.94	3.69	34.12	69.75	Max Peak	Horizontal	180	-6	74.0	-4.3	Pass
#2	5138.73	14.92	3.70	34.12	52.74	Max Avg	Horizontal	180	-6	54.0	-1.3	Pass
#3	5150.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11ac-160
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	95
Channel Frequency (MHz):	5250.00	**Data Rate:**	29.30 MBit/s
Power Setting:	13	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
#2	5357.47	15.58	3.71	34.49	53.78	Max Avg	Horizontal	180	-6	54.0	-0.2	Pass
#3	5357.60	34.23	3.71	34.49	72.43	Max Peak	Horizontal	180	-6	74.0	-1.6	Pass

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11ac-160
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	95
Channel Frequency (MHz):	5530.00	**Data Rate:**	29.30 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5457.84	33.22	3.80	34.30	71.32	Max Peak	Horizontal	183	-6	74.0	-2.7	Pass
#2	5458.38	14.79	3.80	34.30	52.89	Max Avg	Horizontal	183	-6	54.0	-1.1	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5460.62	14.78	3.79	34.31	52.88	Max Avg	Horizontal	153	30	68.2*	-15.4	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

2.1.2.16. Metal Sheet

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

5250 - 5350 MHz

Metal Sheet		Band-Edge Freq	Limit 54.0dBµV/m	Limit 74.0dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5320.00	5350.00	53.68	68.98	18.50
802.11ac-80	5290.00	5350.00	53.87	73.97	14.00
802.11n HT-20	5320.00	5350.00	52.76	66.91	18.50
802.11n HT-40	5310.00	5350.00	52.09	68.55	17.00
802.11ac-160	5250.00	5150.00	53.82	69.13	15.5
802.11ac-160	5250.00	5350.00	53.28	72.43	

5470 - 5725 MHz

Metal Sheet		Band-Edge Freq	Limit 54.0dBµV/m	Limit 74.0dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5500.00	5460.00	47.17	61.11	18.00
802.11ac-80	5530.00	5460.00	53.39	69.44	15.50
802.11n HT-20	5500.00	5460.00	47.37	61.43	18.00
802.11n HT-40	5510.00	5460.00	53.49	69.36	17.50
802.11ac-160	5570.00	5460.00	52.35	70.23	15.50

Metal Sheet		Band-Edge Freq	Limit 68.2dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	
802.11a	5500.00	5470.00	52.46	18.00
802.11ac-80	5530.00	5470.00	55.33	15.50
802.11n HT-20	5500.00	5470.00	52.57	18.00
802.11n HT-40	5510.00	5470.00	56.79	17.50
802.11ac-160	5570.00	5470.00	52.00	15.50

Click on the links to view the data.

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Metal Sheet	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.00 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5453.91	23.02	3.79	34.30	61.11	Max Peak	Vertical	179	313	74.0	-12.9	Pass
#2	5455.19	9.08	3.79	34.30	47.17	Max Avg	Vertical	179	313	54.0	-6.8	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5466.39	14.36	3.79	34.31	52.46	Max Avg	Horizontal	153	30	68.2	-15.8	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Metal Sheet	**Variant:**	802.11ac-80
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5530.00	**Data Rate:**	29.30 MBit/s
Power Setting:	15.5	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5447.21	15.33	3.76	34.30	53.39	Max Avg	Vertical	173	329	54.0	-0.6	Pass
#2	5447.25	31.38	3.76	34.30	69.44	Max Peak	Vertical	173	329	74.0	-4.6	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5466.39	17.22	3.79	34.32	55.33	Max Avg	Horizontal	153	30	68.2	-12.9	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Metal Sheet	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.50 MBit/s
Power Setting:	18	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5454.15	9.28	3.79	34.30	47.37	Max Avg	Vertical	179	313	54.0	-6.6	Pass
#2	5454.75	23.34	3.79	34.30	61.43	Max Peak	Vertical	179	313	74.0	-12.6	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5465.43	14.46	3.79	34.32	52.57	Max Avg	Horizontal	153	30	68.2	-15.7	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Metal Sheet	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5510.00	**Data Rate:**	13.50 MBit/s
Power Setting:	17.5	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5453.65	15.40	3.79	34.30	53.49	Max Avg	Vertical	179	313	54.0	-0.5	Pass
#2	5454.67	31.27	3.79	34.30	69.36	Max Peak	Vertical	179	313	74.0	-4.6	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5465.11	18.68	3.79	34.32	56.79	Max Avg	Horizontal	153	30	68.2	-11.4	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	Metal Sheet	**Variant:**	802.11a
Antenna Gain (dBi):	2.10	**Modulation:**	OFDM
Beam Forming Gain (Y):	5.10	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.00 MBit/s
Power Setting:	18.5	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
#2	5352.61	30.77	3.71	34.50	68.98	Max Peak	Vertical	179	330	74.0	-5.0	Pass
#3	5352.85	15.47	3.71	34.50	53.68	Max Avg	Vertical	179	330	54.0	-0.3	Pass
Test Notes: reduced power setting from 21 to 18.5												

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	Metal Sheet	**Variant:**	802.11ac-80
Antenna Gain (dBi):	2.10	**Modulation:**	OFDM
Beam Forming Gain (Y):	5.10	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5290.00	**Data Rate:**	29.30 MBit/s
Power Setting:	14	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
#2	5363.35	35.79	3.70	34.48	73.97	Max Peak	Vertical	179	330	74.0	0.0	Pass
#3	5364.65	15.71	3.69	34.47	53.87	Max Avg	Vertical	179	330	54.0	-0.1	Pass
Test Notes: reduced power setting from 21 to 14												

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	Metal Sheet	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	2.10	**Modulation:**	OFDM
Beam Forming Gain (Y):	5.10	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.50 MBit/s
Power Setting:	18.5	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
#2	5353.05	28.70	3.71	34.50	66.91	Max Peak	Vertical	179	330	74.0	-7.1	Pass
#3	5353.57	14.55	3.71	34.50	52.76	Max Avg	Vertical	179	330	54.0	-1.2	Pass
Test Notes: reduced power setting from 21 to 18.5												

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	Metal Sheet	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	2.10	**Modulation:**	OFDM
Beam Forming Gain (Y):	5.10	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5310.00	**Data Rate:**	13.50 MBit/s
Power Setting:	17	**Tested By:**	SB

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
#2	5363.51	30.37	3.70	34.48	68.55	Max Peak	Vertical	179	330	74.0	-5.5	Pass
#3	5364.55	13.93	3.69	34.47	52.09	Max Avg	Vertical	179	330	54.0	-1.9	Pass
Test Notes: reduced power setting from 21 to 17												

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Aruba Networks Metal Sheet	**Variant:**	802.11ac-160
Antenna Gain (dBi):	2.10	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	95
Channel Frequency (MHz):	5250.00	**Data Rate:**	29.30 MBit/s
Power Setting:	15.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5136.92	31.32	3.69	34.12	69.13	Max Peak	Vertical	159	305	74.0	-4.9	Pass
#2	5150.00	16.04	3.67	34.11	53.82	Max Avg	Vertical	159	305	54.0	-0.2	Pass
#3	5150.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	Aruba Networks Metal Sheet	**Variant:**	802.11ac-160
Antenna Gain (dBi):	2.10	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	95
Channel Frequency (MHz):	5290.00	**Data Rate:**	29.30 MBit/s
Power Setting:	16	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	--	--	--	--	Band Edge	--	--	--	--	--	--
#2	5355.13	33.22	3.71	34.50	71.43	Max Peak	Vertical	159	305	74.0	-2.6	Pass
#3	5356.01	15.07	3.71	34.50	53.28	Max Avg	Vertical	159	305	54.0	-0.7	Pass

Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. .

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Aruba Networks Metal Sheet	**Variant:**	802.11ac-160
Antenna Gain (dBi):	2.10	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	95
Channel Frequency (MHz):	5530.00	**Data Rate:**	29.30 MBit/s
Power Setting:	15.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5457.56	14.25	3.80	34.30	52.35	Max Avg	Vertical	160	305	54.0	-1.7	Pass
#2	5457.84	32.13	3.80	34.30	70.23	Max Peak	Vertical	160	305	74.0	-3.8	Pass
#3	5460.00	--	--	--	--	Restricted Band	--	--	--	--	--	--
#4	5460.02	27.72	3.79	34.31	52.00	Max Avg	Horizontal	153	30	68.2	-16.2	Pass
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--
Test Notes: EUT on 150cm table powered by PDSine 9001GR POE. Power reduced to meet Band Edge Limits.												

*Note 68.2 dBµV/m is band edge average limit for 5470 MHz per FCC 407

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