TEST REPORT ADDENDUM - RADIATED

FROM

Test of: APIN0314, APIN0315

to

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

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	ARUB204-U17 (FCC Part 15B & ICES-003)

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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):	5180.00	**Data Rate:**	6.00 MBit/s
Power Setting:	16.5	**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	5174.51	71.74	3.70	-11.52	63.92	Fundamental	Vertical	101	0	--	--	
#2	6906.66	60.72	4.11	-7.54	57.29	Peak (NRB)	Horizontal	101	52	--	--	Pass
Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber												

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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):	5200.00	**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	5200.76	82.26	3.66	-11.46	74.46	Fundamental	Horizontal	151	0	--	--	
#2	6933.35	56.37	4.11	-7.49	52.99	Peak (NRB)	Horizontal	151	0	--	--	Pass
#3	10409.26	53.72	5.48	-4.97	54.23	Peak (NRB)	Vertical	151	0	--	--	Pass

Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber

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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):	5240.00	**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	5238.68	83.10	3.63	-11.37	75.36	Fundamental	Horizontal	151	1	--	--	
#2	6986.73	58.22	4.13	-7.45	54.90	Peak (NRB)	Horizontal	151	26	--	--	Pass
#3	10473.38	51.85	5.47	-4.51	52.81	Peak (NRB)	Vertical	151	26	--	--	Pass

Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	19	**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	5739.04	60.47	3.82	-10.67	53.62	Fundamental	Horizontal	101	0	--	--	
Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber												

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5785.00	**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	5790.78	64.37	3.79	-10.41	57.75	Fundamental	Vertical	101	0	--	--	
#2	11577.21	39.39	5.42	-4.62	40.19	Max Avg	Horizontal	129	331	54.0	-13.8	Pass
#3	11577.21	54.33	5.42	-4.62	55.13	Max Peak	Horizontal	129	331	74.0	-18.9	Pass

Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	19.5	**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	5829.34	66.67	3.84	-10.23	60.28	Fundamental	Horizontal	100	1	--	--	
#2	11642.94	37.12	5.47	-4.47	38.12	Max Avg	Horizontal	145	329	54.0	-15.9	Pass
#3	11642.94	51.29	5.47	-4.47	52.29	Max Peak	Horizontal	145	329	74.0	-21.7	Pass

Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber

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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):	5180.00	**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	5172.46	75.46	3.70	-11.53	67.63	Fundamental	Vertical	151	1	--	--	
#2	6906.59	60.08	4.11	-7.54	56.65	Peak (NRB)	Vertical	151	1	--	--	Pass

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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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):	5200.00	**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	5192.42	84.50	3.67	-11.47	76.70	Fundamental	Vertical	151	1	--	--	
#2	6933.35	58.79	4.11	-7.49	55.41	Peak (NRB)	Vertical	151	1	--	--	Pass
#3	10401.10	52.34	5.41	-5.03	52.72	Peak (NRB)	Vertical	151	1	--	--	Pass
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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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):	5240.00	**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	5232.11	86.84	3.63	-11.39	79.08	Fundamental	Vertical	151	1	--	--	
#2	6986.60	57.37	4.13	-7.45	54.05	Peak (NRB)	Vertical	151	1	--	--	Pass
#3	10474.95	50.78	5.46	-4.49	51.75	Peak (NRB)	Vertical	151	21	--	--	Pass
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	20	**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	3826.35	46.43	3.21	-10.84	38.80	Max Avg	Vertical	152	138	54.0	-15.2	Pass
#2	3826.35	60.94	3.21	-10.84	53.31	Max Peak	Vertical	152	138	74.0	-20.7	Pass
#3	5737.91	63.12	3.82	-10.67	56.27	Fundamental	Vertical	151	1	--	--	
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5785.00	**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	3856.64	49.14	3.23	-10.81	41.56	Max Avg	Vertical	143	298	54.0	-12.4	Pass
#2	3856.64	62.03	3.23	-10.81	54.45	Max Peak	Vertical	143	298	74.0	-19.6	Pass
#3	5791.90	67.18	3.78	-10.40	60.56	Fundamental	Vertical	101	0	--	--	
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	19.5	**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	3879.95	46.08	3.26	-10.76	38.58	Max Avg	Vertical	153	300	54.0	-15.4	Pass
#2	3879.95	61.19	3.26	-10.76	53.69	Max Peak	Vertical	153	300	74.0	-20.3	Pass
#3	5831.59	66.45	3.84	-10.22	60.07	Fundamental	Vertical	151	0	--	--	
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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2.1.1.3. AP-ANT-1W

Equipment Configuration for Radiated Spurious - Restricted Band 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):	5180.00	**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	5186.65	73.39	3.68	-11.49	65.58	Fundamental	Horizontal	151	1	--	--	
#2	6906.63	54.89	4.11	-7.54	51.46	Peak (NRB)	Horizontal	151	1	--	--	Pass

Test Notes: EUT on 150cm table, powered by POE. Connected to laptop outside chamber

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Equipment Configuration for Radiated Spurious - Restricted Band 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):	5200.00	**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	5206.45	82.86	3.65	-11.45	75.06	Fundamental	Horizontal	151	1	--	--	
#2	6933.36	55.10	4.11	-7.49	51.72	Peak (NRB)	Horizontal	151	1	--	--	Pass
#3	10395.32	50.04	5.36	-5.06	50.34	Peak (NRB)	Horizontal	151	1	--	--	Pass

Test Notes: EUT on 150cm table, powered by POE. Connected to laptop outside chamber

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Equipment Configuration for Radiated Spurious - Restricted Band 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):	5240.00	**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	5234.51	82.82	3.63	-11.37	75.08	Fundamental	Horizontal	101	0	--	--	
#2	6986.67	54.20	4.13	-7.45	50.88	Peak (NRB)	Horizontal	151	0	--	--	Pass
#3	10476.45	50.67	5.45	-4.49	51.63	Peak (NRB)	Horizontal	151	0	--	--	Pass

Test Notes: EUT on 150cm table, powered by POE. Connected to laptop outside chamber

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions			
Antenna:	AP-ANT-1W	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	20	**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	5737.51	57.64	3.82	-10.67	50.79	Fundamental	Horizontal	100	141	--	--	
Test Notes: EUT on 150cm table, powered by POE. Connected to laptop outside chamber.												

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5785.00	**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	5791.42	63.14	3.79	-10.41	56.52	Fundamental	Horizontal	101	13	--	--	
Test Notes: EUT on 150cm table, powered by POE. Connected to laptop outside chamber.												

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	19.5	**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	5826.06	66.11	3.84	-10.24	59.71	Fundamental	Horizontal	101	16	--	--	
Test Notes: EUT on 150cm table, powered by POE. Connected to laptop outside chamber.												

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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):	5180.00	**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	5187.65	74.59	3.68	-11.49	66.78	Fundamental	Horizontal	101	1	--	--	
#2	6906.74	57.61	4.11	-7.54	54.18	Peak (NRB)	Horizontal	101	1	--	--	Pass

Test Notes: EUT on 150cm table, powered by POE. Connected to laptop outside chamber.

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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):	5200.00	**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	5205.09	82.00	3.65	-11.45	74.20	Fundamental	Horizontal	151	1	--	--	
#2	6933.35	61.20	4.11	-7.49	57.82	Peak (NRB)	Horizontal	151	1	--	--	Pass
#3	10401.81	53.26	5.42	-5.02	53.66	Peak (NRB)	Horizontal	151	1	--	--	Pass

Test Notes: EUT on 150cm table, powered by POE. Connected to laptop outside chamber.

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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):	5240.00	**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	5237.48	83.53	3.63	-11.37	75.79	Fundamental	Horizontal	151	20	--	--	
#2	6986.49	56.99	4.13	-7.45	53.67	Peak (NRB)	Horizontal	151	31	--	--	Pass
#3	10471.54	51.02	5.48	-4.52	51.98	Peak (NRB)	Vertical	151	53	--	--	Pass

Test Notes: EUT on 150cm table, powered by POE. Connected to laptop outside chamber.

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	20	**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	5741.76	58.50	3.83	-10.66	51.67	Fundamental	Horizontal	101	26	--	--	
#2	8795.03	48.15	4.90	-7.20	45.85	Peak (NRB)	Vertical	156	0	--	--	Pass

Test Notes: EUT on 150cm table, powered by POE. Connected to laptop outside chamber.

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5785.00	**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	5786.37	61.76	3.79	-10.44	55.11	Fundamental	Horizontal	151	34	--	--	
#2	11568.05	38.14	5.50	-4.65	38.99	Max Avg	Vertical	191	348	54.0	-15.0	Pass
#3	11568.05	51.78	5.50	-4.65	52.63	Max Peak	Vertical	191	348	74.0	-21.4	Pass

Test Notes: EUT on 150cm table, powered by POE. Connected to laptop outside chamber.

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	19.5	**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	3890.93	41.45	3.25	-10.74	33.96	Max Avg	Horizontal	152	314	54.0	-20.0	Pass
#2	3890.93	56.38	3.25	-10.74	48.89	Max Peak	Horizontal	152	314	74.0	-25.1	Pass
#3	5827.22	67.02	3.84	-10.24	60.62	Fundamental	Horizontal	151	24	--	--	

Test Notes: EUT on 150cm table, powered by POE. Connected to laptop outside chamber.

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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):	5180.00	**Data Rate:**	6.00 MBit/s
Power Setting:	17.5	**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	5178.48	74.08	3.69	-11.51	66.26	Fundamental	Horizontal	101	44	--	--	
#2	6906.67	59.13	4.11	-7.54	55.70	Peak (NRB)	Horizontal	101	44	--	--	Pass

Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber

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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):	5200.00	**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	5198.12	85.93	3.66	-11.47	78.12	Fundamental	Horizontal	198	24	--	--	
#2	6933.24	59.52	4.11	-7.49	56.14	Peak (NRB)	Horizontal	198	24	--	--	Pass
#3	10402.13	56.04	5.42	-5.02	56.44	Peak (NRB)	Horizontal	198	52	--	--	Pass

Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber

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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):	5240.00	**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	5232.75	80.61	3.63	-11.39	72.85	Fundamental	Horizontal	151	0	--	--	
#2	6986.55	57.95	4.13	-7.45	54.63	Peak (NRB)	Horizontal	151	56	--	--	Pass
#3	10491.10	52.01	5.45	-4.38	53.08	Peak (NRB)	Horizontal	151	56	--	--	Pass

Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	20	**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	3827.02	47.62	3.21	-10.83	40.00	Max Avg	Horizontal	152	60	54.0	-14.0	Pass
#2	3827.02	62.04	3.21	-10.83	54.42	Max Peak	Horizontal	152	60	74.0	-19.6	Pass
#3	5737.91	62.00	3.82	-10.67	55.15	Fundamental	Horizontal	101	30	--	--	
Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber.												

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5785.00	**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	3856.46	48.71	3.23	-10.81	41.13	Max Avg	Horizontal	165	62	54.0	-12.9	Pass
#2	3856.46	62.31	3.23	-10.81	54.73	Max Peak	Horizontal	165	62	74.0	-19.3	Pass
#3	5791.18	68.44	3.79	-10.41	61.82	Fundamental	Horizontal	151	0	--	--	

Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber.

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	19.5	**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	3887.05	46.54	3.25	-10.74	39.05	Max Avg	Horizontal	155	319	54.0	-15.0	Pass
#2	3887.05	61.46	3.25	-10.74	53.97	Max Peak	Horizontal	155	319	74.0	-20.0	Pass
#3	5828.30	63.48	3.84	-10.24	57.08	Fundamental	Horizontal	151	37	--	--	

Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber.

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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):	5180.00	**Data Rate:**	6.00 MBit/s
Power Setting:	17.5	**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	5175.67	77.24	3.69	-11.51	69.42	Fundamental	Horizontal	101	1	--	--	
#2	6906.50	54.36	4.11	-7.54	50.93	Peak (NRB)	Vertical	101	21	--	--	Pass

Test Notes: Eut on 150cm table powered by POE. Connected to laptop outside chamber.

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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):	5200.00	**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	5196.43	83.53	3.67	-11.47	75.73	Fundamental	Horizontal	101	0	--	--	
#2	6933.30	56.38	4.11	-7.49	53.00	Peak (NRB)	Vertical	151	19	--	--	Pass
#3	10400.85	56.52	5.41	-5.03	56.90	Peak (NRB)	Horizontal	151	0	--	--	Pass

Test Notes: Eut on 150cm table powered by POE. Connected to laptop outside chamber.

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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):	5240.00	**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	5237.48	86.72	3.63	-11.37	78.98	Fundamental	Vertical	100	1	--	--	
#2	6986.58	52.62	4.13	-7.45	49.30	Peak (NRB)	Vertical	100	1	--	--	Pass
#3	10474.23	54.58	5.47	-4.51	55.54	Peak (NRB)	Vertical	100	36	--	--	Pass

Test Notes: Eut on 150cm table powered by POE. Connected to laptop outside chamber.

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	19	**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	5737.35	61.08	3.82	-10.67	54.23	Fundamental	Vertical	101	1	--	--	
Test Notes: Eut on 150cm table powered by POE. Connected to laptop outside chamber.												

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5785.00	**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	5783.85	65.99	3.80	-10.45	59.34	Fundamental	Vertical	151	0	--	--	
Test Notes: Eut on 150cm table powered by POE. Connected to laptop outside chamber.												

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	19.5	**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	3884.24	46.58	3.25	-10.76	39.07	Max Avg	Horizontal	105	28	54.0	-14.9	Pass
#2	3884.24	60.51	3.25	-10.76	53.00	Max Peak	Horizontal	105	28	74.0	-21.0	Pass
#3	5821.45	66.38	3.83	-10.26	59.95	Fundamental	Horizontal	101	0	--	--	

Test Notes: Eut on 150cm table powered by POE. Connected to laptop outside chamber.

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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):	5180.00	**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	5175.75	78.42	3.69	-11.51	70.60	Fundamental	Vertical	151	0	--	--	
#2	6906.67	58.33	4.11	-7.54	54.90	Peak (NRB)	Horizontal	151	0	--	--	Pass

Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber

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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):	5200.00	**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	5195.55	88.82	3.67	-11.47	81.02	Fundamental	Vertical	151	1	--	--	
#2	6933.19	60.06	4.11	-7.49	56.68	Peak (NRB)	Horizontal	148	1	--	--	Pass

Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber

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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):	5240.00	**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	5233.63	92.60	3.63	-11.38	84.85	Fundamental	Vertical	151	1	--	--	
#2	6986.57	56.26	4.13	-7.45	52.94	Peak (NRB)	Horizontal	151	1	--	--	Pass
#3	10467.39	51.89	5.55	-4.56	52.88	Peak (NRB)	Vertical	151	1	--	--	Pass

Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	19	**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	3833.66	43.84	3.21	-10.83	36.22	Max Avg	Vertical	160	1	54.0	-17.8	Pass
#2	3833.66	58.41	3.21	-10.83	50.79	Max Peak	Vertical	160	1	74.0	-23.2	Pass
#3	5740.24	64.06	3.83	-10.67	57.22	Fundamental	Vertical	151	1	--	--	
Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber												

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5785.00	**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	5788.02	66.01	3.79	-10.43	59.37	Fundamental	Vertical	101	1	--	--	
#2	11574.37	37.51	5.42	-4.62	38.31	Max Avg	Vertical	138	49	54.0	-15.7	Pass
#3	11574.37	51.25	5.42	-4.62	52.05	Max Peak	Vertical	138	49	74.0	-22.0	Pass
Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber												

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	19	**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	3887.20	44.91	3.25	-10.74	37.42	Max Avg	Vertical	167	2	54.0	-16.6	Pass
#2	3887.20	59.20	3.25	-10.74	51.71	Max Peak	Vertical	167	2	74.0	-22.3	Pass
#3	5831.83	68.13	3.84	-10.22	61.75	Fundamental	Horizontal	101	0	--	--	
Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber												

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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):	2.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	5.70	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5180.00	**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	5185.53	77.40	3.68	-11.49	69.59	Fundamental	Horizontal	151	37	--	--	
#2	6906.58	63.88	4.11	-7.54	60.45	Peak (NRB)	Horizontal	151	60	--	--	Pass

Test Notes: EUT on 150cm table powered by POE, connected to laptop outside table.

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Metal Sheet	**Variant:**	802.11a
Antenna Gain (dBi):	2.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	5.70	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5200.00	**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	5197.39	84.23	3.66	-11.47	76.42	Fundamental	Horizontal	101	21	--	--	
#2	6933.19	63.47	4.11	-7.49	60.09	Peak (NRB)	Horizontal	151	46	--	--	Pass
#3	10397.96	54.36	5.38	-5.05	54.69	Peak (NRB)	Horizontal	200	46	--	--	Pass

Test Notes: EUT on 150cm table powered by POE, connected to laptop outside table.

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	Metal Sheet	**Variant:**	802.11a
Antenna Gain (dBi):	2.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	5.70	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5240.00	**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	5236.31	85.27	3.63	-11.37	77.53	Fundamental	Horizontal	151	19	--	--	
#2	6986.65	62.44	4.13	-7.45	59.12	Peak (NRB)	Horizontal	151	55	--	--	Pass
#3	10477.07	55.74	5.44	-4.48	56.70	Peak (NRB)	Horizontal	151	55	--	--	Pass

Test Notes: EUT on 150cm table powered by POE, connected to laptop outside table.

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Equipment Configuration for Radiated Spurious - Restricted Band 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):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	19	**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	5738.44	63.62	3.82	-10.67	56.77	Fundamental	Horizontal	151	47	--	--	
#2	11492.15	40.35	5.44	-4.84	40.95	Max Avg	Horizontal	157	49	54.0	-13.1	Pass
#3	11492.15	55.81	5.44	-4.84	56.41	Max Peak	Horizontal	157	49	74.0	-17.6	Pass
Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber												

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Equipment Configuration for Radiated Spurious - Restricted Band 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):	5785.00	**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	5789.98	68.43	3.79	-10.42	61.80	Fundamental	Horizontal	101	30	--	--	
#2	11561.20	44.39	5.64	-4.67	45.36	Max Avg	Horizontal	172	61	54.0	-8.6	Pass
#3	11561.20	58.95	5.64	-4.67	59.92	Max Peak	Horizontal	172	61	74.0	-14.1	Pass

Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber

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Equipment Configuration for Radiated Spurious - Restricted Band 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):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	19.5	**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	5829.74	71.40	3.84	-10.22	65.02	Fundamental	Horizontal	101	32	--	--	
#2	11642.25	41.06	5.48	-4.47	42.07	Max Avg	Horizontal	142	55	54.0	-11.9	Pass
#3	11642.25	55.44	5.48	-4.47	56.45	Max Peak	Horizontal	142	55	74.0	-17.6	Pass

Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber

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2.1.2. Restricted Band-Edge Emissions

2.1.2.1. AP-ANT-13B

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

5150 - 5250 MHz

Aruba Networks AP-ANT-13B		Band-Edge Freq	Limit 74.0dBµV/m	Limit 54.0dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5180.00	5150.00	52.65	67.94	16.5
802.11ac-80	5210.00	5150.00	73.34	53.43	12
802.11n HT-20	5180.00	5150.00	52.33	68.40	16.5
802.11n HT-40	5190.00	5150.00	51.98	71.63	15.5

5725 - 5850 MHz

Aruba Networks AP-ANT-13B		Band-Edge Freq	Limit 68.2dBµV/m	Limit 78.2dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5745.00	5725.00	65.83	75.12	19
802.11ac-80	5775.00	5725.00	65.68	67.09	16.5
802.11n HT-20	5745.00	5725.00	67.52	77.08	19.5
802.11n HT-40	5755.00	5725.00	66.84	72.32	18

Aruba Networks AP-ANT-13B		Band-Edge Freq	Limit 78.2dBµV/m	Limit 68.2dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5825.00	5850.00	75.17	65.38	19.5
802.11ac-80	5775.00	5850.00	767.09	67.67	16.5
802.11n HT-20	5825.00	5850.00	75.45	65.23	19.5
802.11n HT-40	5795.00	5850.00	66.45	67.09	19

Click on the links to view the data.

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5180.00	**Data Rate:**	6.00 MBit/s
Power Setting:	16.5	**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	5150.00	14.87	3.67	34.11	52.65	Max Avg	Horizontal	147	317	54.0	-1.4	Pass
#2	5150.00	30.16	3.67	34.11	67.94	Max Peak	Horizontal	147	317	74.0	-6.1	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11ac-80
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5210.00	**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	5140.18	35.52	3.70	34.12	73.34	Max Peak	Horizontal	147	317	74.0	-0.7	Pass
#2	5141.58	15.61	3.70	34.12	53.43	Max Avg	Horizontal	147	317	54.0	-0.6	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5180.00	**Data Rate:**	6.50 MBit/s
Power Setting:	16.5	**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	5150.00	14.55	3.67	34.11	52.33	Max Avg	Horizontal	147	317	54.0	-1.7	Pass
#2	5150.00	30.62	3.67	34.11	68.40	Max Peak	Horizontal	147	317	74.0	-5.6	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5190.00	**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	5141.58	14.16	3.70	34.12	51.98	Max Avg	Horizontal	147	317	54.0	-2.0	Pass
#2	5141.58	33.81	3.70	34.12	71.63	Max Peak	Horizontal	147	317	74.0	-2.4	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-13B	**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:	19	**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	5447.54	29.22	3.77	34.30	67.29	Max Peak	Horizontal	153	30	74.0	-6.7	Pass
#2	5449.04	14.60	3.77	34.30	52.67	Max Avg	Horizontal	153	30	54.0	-1.3	Pass
#3	5460.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-13B	**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:	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	5457.35	33.44	3.80	34.30	71.54	Max Peak	Horizontal	153	30	74.0	-2.5	Pass
#2	5458.90	14.79	3.79	34.31	52.89	Max Avg	Horizontal	153	30	54.0	-1.1	Pass
#3	5460.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-13B	**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:	19	**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	5447.82	28.45	3.77	34.30	66.52	Max Peak	Horizontal	153	30	74.0	-7.5	Pass
#2	5448.80	14.49	3.77	34.30	52.56	Max Avg	Horizontal	153	30	54.0	-1.4	Pass
#3	5460.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-13B	**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:	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	5459.18	12.80	3.79	34.31	50.90	Max Avg	Horizontal	153	30	54.0	-3.1	Pass
#3	5460.16	28.27	3.79	34.31	66.37	Max Peak	Horizontal	153	30	74.0	-7.6	Pass
#2	5460.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5320.00	**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	5350.00	14.00	3.70	34.51	52.21	Max Avg	Horizontal	171	317	54.0	-1.8	Pass
#2	5350.00	30.72	3.70	34.51	68.93	Max Peak	Horizontal	171	317	74.0	-5.1	Pass
#3	5350.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11ac-80
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
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	5358.44	35.28	3.71	34.49	73.48	Max Peak	Horizontal	171	317	74.0	-0.5	Pass
#3	5359.34	14.56	3.71	34.49	52.76	Max Avg	Horizontal	171	317	54.0	-1.2	Pass
#1	5350.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.50 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	12.64	3.70	34.51	50.85	Max Avg	Horizontal	171	317	54.0	-3.2	Pass
#2	5350.00	29.88	3.70	34.51	68.09	Max Peak	Horizontal	171	317	74.0	-5.9	Pass
#3	5350.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**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
#2	5357.92	33.43	3.71	34.49	71.63	Max Peak	Horizontal	171	317	74.0	-2.4	Pass
#3	5358.82	15.57	3.71	34.49	53.77	Max Avg	Horizontal	171	317	54.0	-0.2	Pass
#1	5350.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	19	**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	5715.00	27.68	3.81	34.34	65.83	Marker	Horizontal	152	307	68.2	-2.4	Pass
#2	5725.00	36.98	3.79	34.35	75.12	Marker	Horizontal	152	307	78.2	-3.1	Pass
#3	5725.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11ac-80
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5775.00	**Data Rate:**	29.30 MBit/s
Power Setting:	16.5	**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	5697.06	27.50	3.86	34.32	65.68	Marker	Horizontal	152	307	68.2	-2.6	Pass
#2	5725.00	28.95	3.79	34.35	67.09	Marker	Horizontal	152	307	78.2	-11.1	Pass
#3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.50 MBit/s
Power Setting:	19.5	**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	5715.00	29.37	3.81	34.34	67.52	Marker	Horizontal	152	307	68.2	-0.7	Pass
#2	5725.00	38.94	3.79	34.35	77.08	Marker	Horizontal	152	307	78.2	-1.2	Pass
#3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5755.00	**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	5715.00	28.69	3.81	34.34	66.84	Marker	Horizontal	152	307	68.2	-1.4	Pass
#2	5725.00	34.18	3.79	34.35	72.32	Marker	Horizontal	152	307	78.2	-5.9	Pass
#3	5725.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	19.5	**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	5850.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#2	5851.05	36.73	3.81	34.63	75.17	Marker	Horizontal	146	319	78.2	-3.1	Pass
#3	5871.57	26.89	3.80	34.69	65.38	Marker	Horizontal	146	319	68.2	-2.9	Pass

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11ac-80
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5775.00	**Data Rate:**	29.30 MBit/s
Power Setting:	16.5	**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	5850.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#2	5859.89	28.58	3.86	34.65	67.09	Marker	Horizontal	146	319	78.2	-11.1	Pass
#3	5861.47	29.15	3.86	34.66	67.67	Marker	Horizontal	146	319	68.2	-0.6	Pass

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.50 MBit/s
Power Setting:	19.5	**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	5850.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#2	5851.05	37.01	3.81	34.63	75.45	Marker	Horizontal	146	319	78.2	-2.8	Pass
#3	5870.94	26.74	3.81	34.68	65.23	Marker	Horizontal	146	319	68.2	-3.0	Pass
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5795.00	**Data Rate:**	13.50 MBit/s
Power Setting:	19	**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	5850.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#2	5854.21	27.98	3.83	34.64	66.45	Marker	Horizontal	146	319	78.2	-11.8	Pass
#3	5861.26	28.57	3.86	34.66	67.09	Marker	Horizontal	146	319	68.2	-1.1	Pass

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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2.1.2.2. AP-ANT-19

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

5150 - 5250 MHz

Aruba Networks AP-ANT-19		Band-Edge Freq	Limit 74.0dBµV/m	Limit 54.0dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5180.00	5150.00	51.99	65.65	17
802.11ac-80	5210.00	5150.00	52.62	72.55	12.5
802.11n HT-20	5180.00	5150.00	52.54	68.65	17
802.11n HT-40	5190.00	5150.00	51.99	68.84	15.5

5725 - 5850 MHz

Aruba Networks AP-ANT-19		Band-Edge Freq	Limit 68.2dBµV/m	Limit 78.2dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5745.00	5725.00	65.56	77.58	20
802.11ac-80	5775.00	5725.00	65.83	66.35	16.5
802.11n HT-20	5745.00	5725.00	66.22	77.95	20
802.11n HT-40	5755.00	5725.00	65.83	68.07	17.5

Aruba Networks AP-ANT-19		Band-Edge Freq	Limit 78.2dBµV/m	Limit 68.2dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5825.00	5850.00	76.97	65.23	19.5
802.11ac-80	5775.00	5850.00	64.26	67.45	16
802.11n HT-20	5825.00	5850.00	77.34	65.23	19.5
802.11n HT-40	5795.00	5850.00	65.20	66.47	18.5

Click on the links to view the data.

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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):	5180.00	**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	5147.19	14.20	3.68	34.11	51.99	Max Avg	Vertical	151	8	54.0	-2.0	Pass
#2	5148.60	27.87	3.67	34.11	65.65	Max Peak	Vertical	151	8	74.0	-8.4	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE, connected to laptop outside chamber

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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):	5210.00	**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	5133.17	14.81	3.69	34.12	52.62	Max Avg	Vertical	151	8	54.0	-1.4	Pass
#2	5142.99	34.73	3.70	34.12	72.55	Max Peak	Vertical	151	8	74.0	-1.5	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE, connected to laptop outside chamber

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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):	5180.00	**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	5147.19	14.75	3.68	34.11	52.54	Max Avg	Vertical	151	8	54.0	-1.5	Pass
#2	5147.19	30.86	3.68	34.11	68.65	Max Peak	Vertical	151	8	74.0	-5.4	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on 150cm table powered by POE, connected to laptop outside chamber												

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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):	5190.00	**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	5144.39	14.17	3.70	34.12	51.99	Max Avg	Vertical	151	8	54.0	-2.0	Pass
#2	5144.39	31.02	3.70	34.12	68.84	Max Peak	Vertical	151	8	74.0	-5.2	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE, connected to laptop outside chamber

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	20	**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	5715.00	27.41	3.81	34.34	65.56	Marker	Vertical	158	350	68.2	-2.7	Pass
#2	5725.00	39.44	3.79	34.35	77.58	Marker	Vertical	158	350	78.2	-0.7	Pass
#3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11ac-80
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5775.00	**Data Rate:**	29.30 MBit/s
Power Setting:	16.5	**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	5715.00	27.68	3.81	34.34	65.83	Marker	Vertical	158	350	68.2	-2.4	Pass
#2	5716.27	28.20	3.81	34.34	66.35	Marker	Vertical	158	350	78.2	-11.9	Pass
#3	5725.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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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):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.50 MBit/s
Power Setting:	20	**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	5715.00	28.07	3.81	34.34	66.22	Marker	Vertical	158	350	68.2	-2.0	Pass
#2	5725.00	39.81	3.79	34.35	77.95	Marker	Vertical	158	350	78.2	-0.3	Pass
#3	5725.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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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):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5755.00	**Data Rate:**	13.50 MBit/s
Power Setting:	17.5	**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	5715.00	27.68	3.81	34.34	65.83	Marker	Vertical	158	350	68.2	-2.4	Pass
#2	5722.33	29.92	3.80	34.35	68.07	Marker	Vertical	158	350	78.2	-10.2	Pass
#3	5725.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	19.5	**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	5853.16	38.52	3.82	34.63	76.97	Marker	Vertical	145	-4	78.2	-1.3	Pass
#3	5872.63	26.74	3.80	34.69	65.23	Marker	Vertical	145	-4	68.2	-3.0	Pass
#1	5850.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11ac-80
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5775.00	**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	5850.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#2	5859.99	25.75	3.86	34.65	64.26	Marker	Vertical	145	-4	78.2	-14.0	Pass
#3	5862.53	28.94	3.85	34.66	67.45	Marker	Vertical	145	-4	68.2	-0.8	Pass

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.50 MBit/s
Power Setting:	19.5	**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	5852.74	38.89	3.82	34.63	77.34	Marker	Vertical	145	-4	78.2	-0.9	Pass
#3	5872.63	26.74	3.80	34.69	65.23	Marker	Vertical	145	-4	68.2	-3.0	Pass
#1	5850.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5795.00	**Data Rate:**	13.50 MBit/s
Power Setting:	18.5	**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	5855.05	26.73	3.83	34.64	65.20	Marker	Vertical	145	-4	78.2	-13.0	Pass
#3	5862.31	27.96	3.85	34.66	66.47	Marker	Vertical	145	-4	68.2	-1.8	Pass
#1	5850.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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2.1.2.3. AP-ANT-1W

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

5150 - 5250 MHz

Aruba Networks AP-ANT-1W		Band-Edge Freq	Limit 74.0dBµV/m	Limit 54.0dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5180.00	5150.00	49.53	62.72	18
802.11ac-80	5210.00	5150.00	51.13	70.25	15
802.11n HT-20	5180.00	5150.00	49.37	63.77	18
802.11n HT-40	5190.00	5150.00	52.22	67.61	16.5

5725 - 5850 MHz

Aruba Networks AP-ANT-1W		Band-Edge Freq	Limit 68.2dBµV/m	Limit 78.2dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5745.00	5725.00	67.19	76.71	20
802.11ac-80	5775.00	5725.00	66.22	65.71	17
802.11n HT-20	5745.00	5725.00	64.99	73.22	19.5
802.11n HT-40	5755.00	5725.00	66.59	67.65	18

Aruba Networks AP-ANT-1W		Band-Edge Freq	Limit 78.2dBµV/m	Limit 68.2dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5825.00	5850.00	67.31	64.75	19.5
802.11ac-80	5775.00	5850.00	72.53	67.69	18
802.11n HT-20	5825.00	5850.00	67.19	65.21	19.5
802.11n HT-40	5795.00	5850.00	68.09	63.03	19.5

Click on the links to view the data.

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):	5180.00	**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	5143.29	11.71	3.70	34.12	49.53	Max Avg	Horizontal	173	337	54.0	-4.5	Pass
#2	5145.79	24.92	3.69	34.11	62.72	Max Peak	Horizontal	173	337	74.0	-11.3	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber

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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):	5210.00	**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	5127.45	13.34	3.67	34.12	51.13	Max Avg	Horizontal	173	337	54.0	-2.9	Pass
#2	5147.19	32.46	3.68	34.11	70.25	Max Peak	Horizontal	173	337	74.0	-3.8	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber												

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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):	5180.00	**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	5143.39	11.55	3.70	34.12	49.37	Max Avg	Horizontal	173	337	54.0	-4.6	Pass
#2	5146.49	25.97	3.69	34.11	63.77	Max Peak	Horizontal	173	337	74.0	-10.2	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber

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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):	5190.00	**Data Rate:**	13.50 MBit/s
Power Setting:	16.5	**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	5150.00	14.44	3.67	34.11	52.22	Max Avg	Horizontal	173	337	54.0	-1.8	Pass
#2	5150.00	29.83	3.67	34.11	67.61	Max Peak	Horizontal	173	337	74.0	-6.4	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber												

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	20	**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	5714.76	29.04	3.81	34.34	67.19	Marker	Horizontal	177	323	68.2	-1.0	Pass
#2	5725.00	38.57	3.79	34.35	76.71	Marker	Horizontal	177	323	78.2	-1.5	Pass
#3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber.

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11ac-80
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5775.00	**Data Rate:**	29.30 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	5713.06	28.06	3.82	34.34	66.22	Marker	Horizontal	177	323	68.2	-2.0	Pass
#2	5725.00	27.57	3.79	34.35	65.71	Marker	Horizontal	177	323	78.2	-12.5	Pass
#3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber.

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.50 MBit/s
Power Setting:	19.5	**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	5715.00	26.84	3.81	34.34	64.99	Marker	Horizontal	177	323	68.2	-3.2	Pass
#2	5724.03	35.08	3.79	34.35	73.22	Marker	Horizontal	177	323	78.2	-5.0	Pass
#3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber.

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5755.00	**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	5713.30	28.43	3.82	34.34	66.59	Marker	Horizontal	177	323	68.2	-1.6	Pass
#2	5724.27	29.51	3.79	34.35	67.65	Marker	Horizontal	177	323	78.2	-10.6	Pass
#3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber.

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	19.5	**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	5855.05	28.84	3.83	34.64	67.31	Marker	Horizontal	166	323	78.2	-10.9	Pass
#3	5860.00	26.24	3.86	34.65	64.75	Marker	Horizontal	166	323	78.2	-13.5	Pass
#1	5850.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber.

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11ac-80
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5775.00	**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
#2	5852.74	34.08	3.82	34.63	72.53	Marker	Horizontal	166	323	78.2	-5.7	Pass
#3	5872.84	29.20	3.80	34.69	67.69	Marker	Horizontal	166	323	68.2	-0.5	Pass
#1	5850.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber.

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.50 MBit/s
Power Setting:	19.5	**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	5855.05	28.72	3.83	34.64	67.19	Marker	Horizontal	166	323	78.2	-11.0	Pass
#3	5860.00	26.70	3.86	34.65	65.21	Marker	Horizontal	166	323	78.2	-13.0	Pass
#1	5850.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber.												

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5795.00	**Data Rate:**	13.50 MBit/s
Power Setting:	19.5	**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	5852.53	29.64	3.82	34.63	68.09	Marker	Horizontal	166	323	78.2	-10.1	Pass
#3	5872.41	24.54	3.80	34.69	63.03	Marker	Horizontal	166	323	68.2	-5.2	Pass
#1	5850.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber.

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2.1.2.4. AP-ANT-20W

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

5150 - 5250 MHz

Aruba Networks AP-ANT-20W		Band-Edge Freq	Limit 74.0dBµV/m	Limit 54.0dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5180.00	5150.00	51.76	68.98	18
802.11ac-80	5210.00	5150.00	53.04	72.94	15
802.11n HT-20	5180.00	5150.00	53.05	67.91	18
802.11n HT-40	5190.00	5150.00	53.44	70.10	16.5

5725 - 5850 MHz

Aruba Networks AP-ANT-20W		Band-Edge Freq	Limit 68.2dBµV/m	Limit 78.2dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5745.00	5725.00	63.55	66.10	20
802.11ac-80	5775.00	5725.00	67.62	67.86	18
802.11n HT-20	5745.00	5725.00	63.89	65.57	20
802.11n HT-40	5755.00	5725.00	66.34	74.88	19.5

Aruba Networks AP-ANT-20W		Band-Edge Freq	Limit 78.2dBµV/m	Limit 68.2dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5825.00	5850.00	68.00	66.46	19.5
802.11ac-80	5775.00	5850.00	69.28	67.22	17.5
802.11n HT-20	5825.00	5850.00	67.89	66.33	19.5
802.11n HT-40	5795.00	5850.00	68.80	66.21	19.5

Click on the links to view the data.

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):	5180.00	**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	5150.00	13.98	3.67	34.11	51.76	Max Avg	Vertical	160	15	54.0	-2.2	Pass
#2	5150.00	31.20	3.67	34.11	68.98	Max Peak	Vertical	160	15	74.0	-5.0	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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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):	5210.00	**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	5140.18	15.22	3.70	34.12	53.04	Max Avg	Vertical	160	15	54.0	-1.0	Pass
#2	5147.19	35.15	3.68	34.11	72.94	Max Peak	Vertical	160	15	74.0	-1.1	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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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):	5180.00	**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	5150.00	15.27	3.67	34.11	53.05	Max Avg	Vertical	160	15	54.0	-1.0	Pass
#2	5150.00	30.13	3.67	34.11	67.91	Max Peak	Vertical	160	15	74.0	-6.1	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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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):	5190.00	**Data Rate:**	13.50 MBit/s
Power Setting:	16.5	**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	5147.19	15.65	3.68	34.11	53.44	Max Avg	Vertical	160	15	54.0	-0.6	Pass
#2	5148.60	32.32	3.67	34.11	70.10	Max Peak	Vertical	160	15	74.0	-3.9	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	20	**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	5715.00	25.40	3.81	34.34	63.55	Marker	Vertical	167	332	68.2	-4.7	Pass
#2	5723.30	27.95	3.80	34.35	66.10	Marker	Vertical	167	332	78.2	-12.1	Pass
#3	5725.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11ac-80
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5775.00	**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	5701.91	29.42	3.87	34.33	67.62	Marker	Vertical	168	332	68.2	-0.6	Pass
#2	5722.09	29.71	3.80	34.35	67.86	Marker	Vertical	168	332	78.2	-10.4	Pass
#3	5725.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.50 MBit/s
Power Setting:	20	**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	5715.00	25.74	3.81	34.34	63.89	Marker	Vertical	168	332	68.2	-4.3	Pass
#2	5723.06	27.42	3.80	34.35	65.57	Marker	Vertical	168	332	78.2	-12.7	Pass
#3	5725.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5755.00	**Data Rate:**	13.50 MBit/s
Power Setting:	19.5	**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	5713.06	28.18	3.82	34.34	66.34	Marker	Vertical	168	332	68.2	-1.9	Pass
#2	5721.61	36.73	3.80	34.35	74.88	Marker	Vertical	168	332	78.2	-3.4	Pass
#3	5725.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	19.5	**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	5850.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#2	5858.42	29.50	3.85	34.65	68.00	Marker	Vertical	199	23	78.2	-10.2	Pass
#3	5860.00	27.95	3.86	34.65	66.46	Marker	Vertical	199	23	78.2	-11.8	Pass

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11ac-80
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5775.00	**Data Rate:**	29.30 MBit/s
Power Setting:	17.5	**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	5850.00	30.84	3.81	34.63	69.28	Marker	Vertical	199	23	78.2	-9.0	Pass
#2	5850.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#3	5868.84	28.72	3.82	34.68	67.22	Marker	Vertical	199	23	68.2	-1.0	Pass
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.50 MBit/s
Power Setting:	19.5	**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	5850.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#2	5858.21	29.39	3.85	34.65	67.89	Marker	Vertical	199	23	78.2	-10.3	Pass
#3	5860.00	27.82	3.86	34.65	66.33	Marker	Vertical	199	23	78.2	-11.9	Pass

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5795.00	**Data Rate:**	13.50 MBit/s
Power Setting:	19.5	**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	5850.00	30.36	3.81	34.63	68.80	Marker	Vertical	199	23	78.2	-9.4	Pass
#2	5850.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#3	5868.63	27.71	3.82	34.68	66.21	Marker	Vertical	199	23	68.2	-2.0	Pass
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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2.1.2.5. AP-ANT-40

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

5150 - 5250 MHz

Aruba Networks AP-ANT-40		Band-Edge Freq	Limit 74.0dBµV/m	Limit 54.0dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5180.00	5150.00	51.76	66.54	17.5
802.11ac-80	5210.00	5150.00	53.24	72.11	14
802.11n HT-20	5180.00	5150.00	52.75	66.69	17.5
802.11n HT-40	5190.00	5150.00	50.91	66.45	15.5

5725 - 5850 MHz

Aruba Networks AP-ANT-40		Band-Edge Freq	Limit 68.2dBµV/m	Limit 78.2dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5745.00	5725.00	65.69	74.74	20
802.11ac-80	5775.00	5725.00	67.40	69.31	17.5
802.11n HT-20	5745.00	5725.00	66.09	75.21	20
802.11n HT-40	5755.00	5725.00	66.47	71.73	18.5

Aruba Networks AP-ANT-40		Band-Edge Freq	Limit 78.2dBµV/m	Limit 68.2dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5825.00	5850.00	66.71	66.33	19.5
802.11ac-80	5775.00	5850.00	68.50	66.98	17.5
802.11n HT-20	5825.00	5850.00	67.08	66.84	19.5
802.11n HT-40	5795.00	5850.00	69.56	66.08	19

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):	5180.00	**Data Rate:**	6.00 MBit/s
Power Setting:	17.5	**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	5147.19	13.97	3.68	34.11	51.76	Max Avg	Horizontal	160	27	54.0	-2.2	Pass
#2	5150.00	28.76	3.67	34.11	66.54	Max Peak	Horizontal	160	27	74.0	-7.5	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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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):	5210.00	**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	5138.78	15.42	3.70	34.12	53.24	Max Avg	Horizontal	160	27	54.0	-0.8	Pass
#2	5147.19	34.32	3.68	34.11	72.11	Max Peak	Horizontal	160	27	74.0	-1.9	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber

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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):	5180.00	**Data Rate:**	6.50 MBit/s
Power Setting:	17.5	**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	5147.19	14.96	3.68	34.11	52.75	Max Avg	Horizontal	160	27	54.0	-1.3	Pass
#2	5150.00	28.91	3.67	34.11	66.69	Max Peak	Horizontal	160	27	74.0	-7.3	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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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):	5190.00	**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	5148.60	13.13	3.67	34.11	50.91	Max Avg	Horizontal	160	27	54.0	-3.1	Pass
#2	5148.60	28.67	3.67	34.11	66.45	Max Peak	Horizontal	160	27	74.0	-7.6	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	20	**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	5715.00	27.54	3.81	34.34	65.69	Marker	Horizontal	153	303	68.2	-2.5	Pass
#2	5725.00	36.60	3.79	34.35	74.74	Marker	Horizontal	153	303	78.2	-3.5	Pass
#3	5725.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11ac-80
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5775.00	**Data Rate:**	29.30 MBit/s
Power Setting:	17.5	**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	5696.57	29.22	3.86	34.32	67.40	Marker	Horizontal	153	303	68.2	-0.8	Pass
#2	5716.76	31.16	3.81	34.34	69.31	Marker	Horizontal	153	303	78.2	-8.9	Pass
#3	5725.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.50 MBit/s
Power Setting:	20	**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	5715.00	27.94	3.81	34.34	66.09	Marker	Horizontal	153	303	68.2	-2.1	Pass
#2	5725.00	37.07	3.79	34.35	75.21	Marker	Horizontal	153	303	78.2	-3.0	Pass
#3	5725.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5755.00	**Data Rate:**	13.50 MBit/s
Power Setting:	18.5	**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	5715.00	28.32	3.81	34.34	66.47	Marker	Horizontal	153	303	68.2	-1.8	Pass
#2	5725.00	33.59	3.79	34.35	71.73	Marker	Horizontal	153	303	78.2	-6.5	Pass
#3	5725.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	19.5	**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	5850.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#2	5859.13	28.21	3.85	34.65	66.71	Marker	Horizontal	116	304	78.2	-11.5	Pass
#3	5860.00	27.82	3.86	34.65	66.33	Marker	Horizontal	116	304	78.2	-11.9	Pass

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11ac-80
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5775.00	**Data Rate:**	29.30 MBit/s
Power Setting:	17.5	**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	5850.00	30.06	3.81	34.63	68.50	Marker	Horizontal	116	304	78.2	-9.7	Pass
#2	5850.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#3	5870.31	28.49	3.81	34.68	66.98	Marker	Horizontal	116	304	68.2	-1.3	Pass
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.50 MBit/s
Power Setting:	19.5	**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	5850.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#2	5859.05	28.58	3.85	34.65	67.08	Marker	Horizontal	116	304	78.2	-11.2	Pass
#3	5860.00	28.33	3.86	34.65	66.84	Marker	Horizontal	116	304	78.2	-11.4	Pass

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5795.00	**Data Rate:**	13.50 MBit/s
Power Setting:	19	**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	5850.00	31.12	3.81	34.63	69.56	Marker	Horizontal	116	304	78.2	-8.7	Pass
#2	5850.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#3	5870.10	27.59	3.81	34.68	66.08	Marker	Horizontal	116	304	68.2	-2.2	Pass
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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2.1.2.6. AP-ANT-45

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

5150 - 5250 MHz

Aruba Networks AP-ANT-45		Band-Edge Freq	Limit 74.0dBµV/m	Limit 54.0dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5180.00	5150.00	53.44	68.14	17.5
802.11ac-80	5210.00	5150.00	53.72	73.73	14
802.11n HT-20	5180.00	5150.00	52.75	67.50	17.5
802.11n HT-40	5190.00	5150.00	52.75	68.78	16

5725 - 5850 MHz

Aruba Networks AP-ANT-45		Band-Edge Freq	Limit 68.2dBµV/m	Limit 78.2dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5745.00	5725.00	65.28	70.49	19
802.11ac-80	5775.00	5725.00	67.40	68.07	17
802.11n HT-20	5745.00	5725.00	65.42	69.41	19
802.11n HT-40	5755.00	5725.00	66.08	72.19	18

Aruba Networks AP-ANT-45		Band-Edge Freq	Limit 78.2dBµV/m	Limit 68.2dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5825.00	5850.00	66.96	65.50	19.5
802.11ac-80	5775.00	5850.00	70.26	67.46	17.5
802.11n HT-20	5825.00	5850.00	69.75	65.51	19.5
802.11n HT-40	5795.00	5850.00	68.61	65.06	18.5

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):	5180.00	**Data Rate:**	6.00 MBit/s
Power Setting:	17.5	**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	5148.60	15.66	3.67	34.11	53.44	Max Avg	Horizontal	160	32	54.0	-0.6	Pass
#2	5148.60	30.36	3.67	34.11	68.14	Max Peak	Horizontal	160	32	74.0	-5.9	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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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):	5210.00	**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	5148.60	15.94	3.67	34.11	53.72	Max Avg	Horizontal	160	32	54.0	-0.3	Pass
#2	5148.60	35.95	3.67	34.11	73.73	Max Peak	Horizontal	160	32	74.0	-0.3	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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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):	5180.00	**Data Rate:**	6.50 MBit/s
Power Setting:	17.5	**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	5148.60	14.97	3.67	34.11	52.75	Max Avg	Horizontal	160	32	54.0	-1.3	Pass
#2	5148.60	29.72	3.67	34.11	67.50	Max Peak	Horizontal	160	32	74.0	-6.5	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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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):	5190.00	**Data Rate:**	13.50 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	5148.60	14.97	3.67	34.11	52.75	Max Avg	Horizontal	160	32	54.0	-1.3	Pass
#2	5148.60	31.00	3.67	34.11	68.78	Max Peak	Horizontal	160	32	74.0	-5.2	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	19	**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	5715.00	27.13	3.81	34.34	65.28	Marker	Horizontal	156	331	68.2	-3.0	Pass
#2	5725.00	32.35	3.79	34.35	70.49	Marker	Horizontal	156	331	78.2	-7.7	Pass
#3	5725.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11ac-80
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5775.00	**Data Rate:**	29.30 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	5705.06	29.21	3.86	34.33	67.40	Marker	Horizontal	156	331	68.2	-0.8	Pass
#2	5725.00	29.93	3.79	34.35	68.07	Marker	Horizontal	156	331	78.2	-10.2	Pass
#3	5725.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.50 MBit/s
Power Setting:	19	**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	5715.00	27.27	3.81	34.34	65.42	Marker	Horizontal	156	331	68.2	-2.8	Pass
#2	5725.00	31.27	3.79	34.35	69.41	Marker	Horizontal	156	331	78.2	-8.8	Pass
#3	5725.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5755.00	**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	5706.27	27.89	3.86	34.33	66.08	Marker	Horizontal	156	331	68.2	-2.2	Pass
#2	5725.00	34.05	3.79	34.35	72.19	Marker	Horizontal	156	331	78.2	-6.0	Pass
#3	5725.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	19.5	**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	5850.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#2	5855.47	31.19	3.83	34.64	69.66	Marker	Horizontal	164	335	78.2	-8.6	Pass
#3	5861.26	26.98	3.86	34.66	65.50	Marker	Horizontal	164	335	68.2	-2.7	Pass

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11ac-80
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5775.00	**Data Rate:**	29.30 MBit/s
Power Setting:	17.5	**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	5850.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#2	5851.68	31.81	3.82	34.63	70.26	Marker	Horizontal	164	335	78.2	-8.0	Pass
#3	5871.78	28.97	3.80	34.69	67.46	Marker	Horizontal	164	335	68.2	-0.8	Pass
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.50 MBit/s
Power Setting:	19.5	**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	5850.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#2	5855.47	31.28	3.83	34.64	69.75	Marker	Horizontal	164	335	78.2	-8.5	Pass
#3	5861.89	27.00	3.85	34.66	65.51	Marker	Horizontal	164	335	68.2	-2.7	Pass

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5795.00	**Data Rate:**	13.50 MBit/s
Power Setting:	18.5	**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	5850.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#2	5851.26	30.17	3.81	34.63	68.61	Marker	Horizontal	164	333	78.2	-9.6	Pass
#3	5860.84	26.54	3.86	34.66	65.06	Marker	Horizontal	164	333	68.2	-3.2	Pass

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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2.1.2.7. AP-ANT-48

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

5150 - 5250 MHz

Aruba Networks AP-ANT-48		Band-Edge Freq	Limit 74.0dBµV/m	Limit 54.0dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5180.00	5150.00	53.44	67.52	17
802.11ac-80	5210.00	5150.00	51.65	73.93	12
802.11n HT-20	5180.00	5150.00	52.75	68.58	17
802.11n HT-40	5190.00	5150.00	51.88	69.12	15.5

5725 - 5850 MHz

Aruba Networks AP-ANT-48		Band-Edge Freq	Limit 68.2dBµV/m	Limit 78.2dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5745.00	5725.00	66.35	72.99	19
802.11ac-80	5775.00	5725.00	66.47	66.72	16.5
802.11n HT-20	5745.00	5725.00	66.47	72.50	19
802.11n HT-40	5755.00	5725.00	66.34	70.09	17.5

Aruba Networks AP-ANT-48		Band-Edge Freq	Limit 78.2dBµV/m	Limit 68.2dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5825.00	5850.00	69.19	66.46	19
802.11ac-80	5775.00	5850.00	70.75	66.99	16.5
802.11n HT-20	5825.00	5850.00	69.65	66.59	19
802.11n HT-40	5795.00	5850.00	71.86	66.35	19

Click on the links to view the data.

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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):	5180.00	**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	5150.00	15.66	3.67	34.11	53.44	Max Avg	Horizontal	153	1	54.0	-0.6	Pass
#2	5150.00	29.74	3.67	34.11	67.52	Max Peak	Horizontal	153	1	74.0	-6.5	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE, connected to laptop outside chamber

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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):	5210.00	**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	5150.00	13.87	3.67	34.11	51.65	Max Avg	Horizontal	153	1	54.0	-2.4	Pass
#2	5150.00	36.15	3.67	34.11	73.93	Max Peak	Horizontal	153	1	74.0	-0.1	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE, connected to laptop outside chamber

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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):	5180.00	**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	5150.00	14.97	3.67	34.11	52.75	Max Avg	Horizontal	153	1	54.0	-1.3	Pass
#2	5150.00	30.80	3.67	34.11	68.58	Max Peak	Horizontal	153	1	74.0	-5.4	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE, connected to laptop outside chamber

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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):	5190.00	**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	5150.00	14.10	3.67	34.11	51.88	Max Avg	Horizontal	153	1	54.0	-2.1	Pass
#2	5150.00	31.34	3.67	34.11	69.12	Max Peak	Horizontal	153	1	74.0	-4.9	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE, connected to laptop outside chamber

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	19	**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	5715.00	28.20	3.81	34.34	66.35	Marker	Horizontal	162	360	68.2	-1.9	Pass
#2	5722.58	34.84	3.80	34.35	72.99	Marker	Horizontal	162	360	78.2	-5.2	Pass
#3	5725.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
Test Notes: EUT on 150cm table, powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11ac-80
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5775.00	**Data Rate:**	29.30 MBit/s
Power Setting:	16.5	**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	5712.33	28.30	3.83	34.34	66.47	Marker	Horizontal	162	360	68.2	-1.8	Pass
#2	5719.67	28.57	3.80	34.35	66.72	Marker	Horizontal	162	360	78.2	-11.5	Pass
#3	5725.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
Test Notes: EUT on 150cm table, powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5745.00	**Data Rate:**	6.50 MBit/s
Power Setting:	19	**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	5715.00	28.32	3.81	34.34	66.47	Marker	Horizontal	162	360	68.2	-1.8	Pass
#2	5722.33	34.35	3.80	34.35	72.50	Marker	Horizontal	162	360	78.2	-5.7	Pass
#3	5725.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
Test Notes: EUT on 150cm table, powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5755.00	**Data Rate:**	13.50 MBit/s
Power Setting:	17.5	**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	5712.82	28.18	3.82	34.34	66.34	Marker	Horizontal	162	360	68.2	-1.9	Pass
#2	5725.00	31.95	3.79	34.35	70.09	Marker	Horizontal	162	360	78.2	-8.1	Pass
#3	5725.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
Test Notes: EUT on 150cm table, powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11a
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	19	**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	5850.00	30.75	3.81	34.63	69.19	Marker	Horizontal	141	363	78.2	-9.0	Pass
#2	5850.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#3	5861.68	27.95	3.85	34.66	66.46	Marker	Horizontal	141	363	68.2	-1.8	Pass

Test Notes: EUT on 150cm table, powered by POE. Connected to Laptop outside chamber

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11ac-80
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5775.00	**Data Rate:**	29.30 MBit/s
Power Setting:	16.5	**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	5850.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#2	5852.31	32.30	3.82	34.63	70.75	Marker	Horizontal	141	363	78.2	-7.5	Pass
#3	5871.78	28.50	3.80	34.69	66.99	Marker	Horizontal	141	363	68.2	-1.2	Pass

Test Notes: EUT on 150cm table, powered by POE. Connected to Laptop outside chamber

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5825.00	**Data Rate:**	6.50 MBit/s
Power Setting:	19	**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	5850.00	31.21	3.81	34.63	69.65	Marker	Horizontal	141	363	78.2	-8.6	Pass
#2	5850.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#3	5861.68	28.08	3.85	34.66	66.59	Marker	Horizontal	141	363	68.2	-1.6	Pass
Test Notes: EUT on 150cm table, powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5795.00	**Data Rate:**	13.50 MBit/s
Power Setting:	19	**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	5850.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#2	5852.31	33.41	3.82	34.63	71.86	Marker	Horizontal	141	363	78.2	-6.4	Pass
#3	5871.99	27.86	3.80	34.69	66.35	Marker	Horizontal	141	363	68.2	-1.9	Pass

Test Notes: EUT on 150cm table, powered by POE. Connected to Laptop outside chamber

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2.1.2.8. Metal Sheet

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

5150 - 5250 MHz

Aruba Networks Metal Sheet		Band-Edge Freq	Limit 74.0dBµV/m	Limit 54.0dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5180.00	5150.00	52.85	68.77	17
802.11ac-80	5210.00	5150.00	73.41	51.87	12
802.11n HT-20	5180.00	5150.00	52.43	68.70	17
802.11n HT-40	5190.00	5150.00	51.76	71.97	16

5725 - 5850 MHz

Aruba Networks Metal Sheet		Band-Edge Freq	Limit 68.2dBµV/m	Limit 78.2dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5745.00	5725.00	67.74	69.41	19
802.11ac-80	5775.00	5725.00	66.34	68.17	16.5
802.11n HT-20	5745.00	5725.00	67.85	68.86	19
802.11n HT-40	5755.00	5725.00	67.52	72.32	18

Aruba Networks Metal Sheet		Band-Edge Freq	Limit 78.2dBµV/m	Limit 68.2dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5825.00	5850.00	72.79	66.46	19.5
802.11ac-80	5775.00	5850.00	63.54	66.47	16
802.11n HT-20	5825.00	5850.00	73.04	66.84	19.5
802.11n HT-40	5795.00	5850.00	64.72	66.08	19

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):	2.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	5.70	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5180.00	**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	5150.00	15.07	3.67	34.11	52.85	Max Avg	Vertical	169	334	54.0	-1.2	Pass
#2	5150.00	30.99	3.67	34.11	68.77	Max Peak	Vertical	169	334	74.0	-5.2	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Metal Sheet	**Variant:**	802.11ac-80
Antenna Gain (dBi):	2.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	5.70	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5210.00	**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	5141.58	35.59	3.70	34.12	73.41	Max Peak	Vertical	169	334	74.0	-0.6	Pass
#2	5142.99	14.05	3.70	34.12	51.87	Max Avg	Vertical	169	334	54.0	-2.1	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Metal Sheet	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	2.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	5.70	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5180.00	**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	5150.00	14.65	3.67	34.11	52.43	Max Avg	Vertical	169	334	54.0	-1.6	Pass
#2	5150.00	30.92	3.67	34.11	68.70	Max Peak	Vertical	169	334	74.0	-5.3	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	Metal Sheet	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	2.70	**Modulation:**	OFDM
Beam Forming Gain (Y):	5.70	**Duty Cycle (%):**	100
Channel Frequency (MHz):	5190.00	**Data Rate:**	13.50 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	5142.99	13.94	3.70	34.12	51.76	Max Avg	Vertical	169	334	54.0	-2.2	Pass
#2	5142.99	34.15	3.70	34.12	71.97	Max Peak	Vertical	169	334	74.0	-2.0	Pass
#3	5150.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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Equipment Configuration for 5725 MHz Radiated 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):	5745.00	**Data Rate:**	6.00 MBit/s
Power Setting:	19	**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	5715.00	29.59	3.81	34.34	67.74	Marker	Vertical	175	335	68.2	-0.5	Pass
#2	5724.76	31.27	3.79	34.35	69.41	Marker	Vertical	175	335	78.2	-8.8	Pass
#3	5725.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5725 MHz Radiated 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):	5775.00	**Data Rate:**	29.30 MBit/s
Power Setting:	16.5	**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	5706.03	28.15	3.86	34.33	66.34	Marker	Vertical	175	335	68.2	-1.9	Pass
#2	5725.00	30.03	3.79	34.35	68.17	Marker	Vertical	175	335	78.2	-10.1	Pass
#3	5725.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5725 MHz Radiated 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):	5745.00	**Data Rate:**	6.50 MBit/s
Power Setting:	19	**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	5715.00	29.70	3.81	34.34	67.85	Marker	Vertical	175	335	68.2	-0.4	Pass
#2	5724.52	30.72	3.79	34.35	68.86	Marker	Vertical	175	335	78.2	-9.4	Pass
#3	5725.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5725 MHz Radiated 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):	5755.00	**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	5714.27	29.36	3.82	34.34	67.52	Marker	Vertical	175	335	68.2	-0.7	Pass
#2	5725.00	34.18	3.79	34.35	72.32	Marker	Vertical	175	335	78.2	-5.9	Pass
#3	5725.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5850 MHz Radiated 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):	5825.00	**Data Rate:**	6.00 MBit/s
Power Setting:	19.5	**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	5850.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#2	5855.89	34.31	3.84	34.64	72.79	Marker	Vertical	186	25	78.2	-5.4	Pass
#3	5860.00	27.95	3.86	34.65	66.46	Marker	Vertical	186	25	78.2	-11.8	Pass
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5850 MHz Radiated 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):	5775.00	**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	5850.00	25.10	3.81	34.63	63.54	Marker	Vertical	186	25	78.2	-14.7	Pass
#2	5850.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#3	5866.31	27.97	3.83	34.67	66.47	Marker	Vertical	186	25	68.2	-1.8	Pass
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber												

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Equipment Configuration for 5850 MHz Radiated 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):	5825.00	**Data Rate:**	6.50 MBit/s
Power Setting:	19.5	**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	5850.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#2	5855.68	34.56	3.84	34.64	73.04	Marker	Vertical	186	25	78.2	-5.2	Pass
#3	5860.00	28.33	3.86	34.65	66.84	Marker	Vertical	186	25	78.2	-11.4	Pass

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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Equipment Configuration for 5850 MHz Radiated 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):	5795.00	**Data Rate:**	13.50 MBit/s
Power Setting:	19	**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	5850.00	26.28	3.81	34.63	64.72	Marker	Vertical	186	25	78.2	-13.5	Pass
#2	5850.00	0.00	0.00	0.00	--	Band-Edge		0	0	--	--	
#3	5866.52	27.58	3.83	34.67	66.08	Marker	Vertical	186	25	68.2	-2.2	Pass

Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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2.1.2.9. ac80+80 Operation

The following measurements were made with the unit operating in ac80+80 mode. As this report is for non-DFS operation only two 80+80 channel frequencies were applicable 5210 and 5775 MHz. Further, only the lowest gain and highest gain antennas were tested AP-ANT-48 (highest) and AP-ANT-40 (lowest).

The Restricted Band-Edges were subsequently measured and reported.

2.1.2.9.1 AP-ANT-40

The following ac80 channels were operating simulataneously 5210 and 5775 MHz

5150 - 5250 and 5725 - 5850 MHz

AP-ANT-40		Band-Edge Freq	Limit 54.0dBµV/m	Limit 74.0dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11ac-80+80	5210.00	5150.00	53.14	71.09	14.00

AP-ANT-40		Band-Edge Freq	Limit 78.2dBµV/m	Limit 68.2dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11ac-80+80	5775.00	5725.00	67.40	69.31	17.50
802.11ac-80+80	5775.00	5850.00	68.50	66.98	17.50

Click on the links to view the data.

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2.1.2.9.2 AP-ANT-48

5150 - 5250 and 5725 - 5850 MHz

AP-ANT-48		Band-Edge Freq	Limit 74.0dBµV/m	Limit 54.0dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11ac-80+80	5210.00	5150.00	50.25	71.57	12.00

AP-ANT-48		Band-Edge Freq	Limit 78.2dBµV/m	Limit 68.2dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11ac-80+80	5775.00	5725.00	66.47	66.72	16.50
802.11ac-80+80	5775.00	5850.00	70.75	66.99	16.50

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