

TEST REPORT ADDENDUM - RADIATED

FROM



Test of: Aruba Networks, Inc. APIN0314, APIN0315

to

To: FCC Subpart C 15.247 (DTS), IC RSS-247

Test Report Serial No.: ARUB204-U5_Radiated Rev A

Issue Date: 8th April 2016

Master Document Number	Addendum Reports
ARUB204-U5_Master	ARUB204-U5_Conducted
	ARUB204-U5_Radiated
	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 (Restricted Bands)			
Standard:	FCC CFR 47 Part 15 Subpart C 15.247 (DTS)	Ambient Temp. (°C):	20.0 - 24.5
Test Heading:	Radiated Spurious and Band-Edge Emissions	Rel. Humidity (%):	32 - 45
Standard Section(s):	15.205, 15.209	Pressure (mBars):	999 - 1001
Reference Document(s):	See Normative References		

Test Procedure for Radiated Spurious and Band-Edge Emissions (Restricted Bands)

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 Radiated Spurious and Band-Edge Measurement were per the Radiated Test Set-up specified in this document.

Limits for Restricted Bands

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:

Given receiver input reading of 51.5 dBmV; Antenna Factor of 8.5 dB; Cable Loss of 1.3 dB; Falloff Factor of 0 dB, an Amplifier Gain of 26 dB and Notch Filter Loss of 1 dB. The Field Strength (FS) of the measured emission is:

$$FS = 51.5 + 8.5 + 1.3 - 26.0 + 1 = 36.3 \text{ dBmV/m}$$

Conversion between dBmV/m (or dBmV) and mV/m (or mV) are as follows:

$$\text{Level (dBmV/m)} = 20 * \log (\text{level (mV/m)})$$

$$40 \text{ dBmV/m} = 100 \text{ mV/m}$$

$$48 \text{ dBmV/m} = 250 \text{ mV/m}$$

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:

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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.

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(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 Restricted Band Emissions

2.1.1 AP-ANT-13B

Equipment Configuration for Radiated Spurious – Restricted Band Emissions

Antenna:	AP-ANT-13B	Variant:	802.11b
Antenna Gain (dBi):	4.40	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	1.00 Mbit/s
Power Setting:	21	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2414.00	48.82	2.70	-11.79	39.73	Fundamental	Horizontal	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-13B	Variant:	802.11b
Antenna Gain (dBi):	4.40	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2437.00	Data Rate:	1.00 Mbit/s
Power Setting:	21	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2438.03	62.21	2.72	-11.73	53.20	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-13B	Variant:	802.11b
Antenna Gain (dBi):	4.40	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	1.00 Mbit/s
Power Setting:	19.5	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2460.96	59.26	2.74	-11.68	50.32	Fundamental	Vertical	101	0	--	--	

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

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2.1.2 AP-ANT-19

Equipment Configuration for Radiated Spurious – Restricted Band Emissions

Antenna:	AP-ANT-19	Variant:	802.11b
Antenna Gain (dBi):	3.00	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	1.00 Mbit/s
Power Setting:	20	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2412.92	53.26	2.70	-11.79	44.17	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-19	Variant:	802.11b
Antenna Gain (dBi):	3.00	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2437.00	Data Rate:	1.00 Mbit/s
Power Setting:	21	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2434.35	58.77	2.71	-11.74	49.74	Fundamental	Vertical	151	0	--	--	
#2	4874.01	55.57	3.53	-11.24	47.86	Max Avg	Vertical	149	284	54.0	-6.1	Pass
#3	4874.01	59.47	3.53	-11.24	51.76	Max Peak	Vertical	149	284	74.0	-22.2	Pass
#4	7311.89	50.33	4.24	-7.29	47.28	Max Avg	Vertical	151	315	54.0	-6.7	Pass
#5	7311.89	57.50	4.24	-7.29	54.45	Max Peak	Vertical	151	315	74.0	-19.6	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:	AP-ANT-19	Variant:	802.11b
Antenna Gain (dBi):	3.00	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	1.00 Mbit/s
Power Setting:	19	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2462.89	64.08	2.74	-11.67	55.15	Fundamental	Vertical	151	0	--	--	
#2	4924.00	53.29	3.58	-11.38	45.49	Max Avg	Vertical	184	283	54.0	-8.5	Pass
#3	4924.00	58.38	3.58	-11.38	50.58	Max Peak	Vertical	184	283	74.0	-23.4	Pass
#4	7385.13	53.00	4.29	-7.17	50.12	Max Avg	Vertical	143	20	54.0	-3.9	Pass
#5	7385.13	58.66	4.29	-7.17	55.78	Max Peak	Vertical	143	20	74.0	-18.2	Pass

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

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2.1.3 AP-ANT-1W

Equipment Configuration for Radiated Spurious – Restricted Band Emissions

Antenna:	AP-ANT-1W	Variant:	802.11b
Antenna Gain (dBi):	3.80	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	1.00 Mbit/s
Power Setting:	20	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2414.56	49.16	2.70	-11.79	40.07	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-1W	Variant:	802.11b
Antenna Gain (dBi):	3.80	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2437.00	Data Rate:	1.00 Mbit/s
Power Setting:	21	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2435.07	58.74	2.72	-11.74	49.72	Fundamental	Horizontal	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-1W	Variant:	802.11b
Antenna Gain (dBi):	3.80	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	1.00 Mbit/s
Power Setting:	21	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2462.94	61.10	2.74	-11.67	52.17	Fundamental	Horizontal	101	0	--	--	

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

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2.1.4 AP-ANT-20W

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-20W	Variant:	802.11b
Antenna Gain (dBi):	2.00	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	1.00 MBit/s
Power Setting:	20	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2413.06	86.53	2.70	-11.79	77.44	Fundamental	Vertical	151	264	--	--	
#2	4824.03	46.76	3.54	-11.15	39.15	Max Avg	Horizontal	119	299	54.0	-14.9	Pass
#3	4824.03	54.32	3.54	-11.15	46.71	Max Peak	Horizontal	119	299	74.0	-27.3	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:	802.11b
Antenna Gain (dBi):	2.00	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2437.00	Data Rate:	1.00 MBit/s
Power Setting:	21	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2436.07	64.23	2.72	-11.73	55.22	Fundamental	Vertical	151	360	--	--	
#2	4873.93	56.29	3.53	-11.24	48.58	Max Avg	Horizontal	103	338	54.0	-5.4	Pass
#3	4873.93	59.71	3.53	-11.24	52.00	Max Peak	Horizontal	103	338	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-20W	Variant:	802.11b
Antenna Gain (dBi):	2.00	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	1.00 MBit/s
Power Setting:	21	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2462.89	62.54	2.74	-11.67	53.61	Fundamental	Vertical	151	66	--	--	
#2	4923.97	52.05	3.58	-11.38	44.25	Max Avg	Horizontal	120	36	54.0	-9.8	Pass
#3	4923.97	57.11	3.58	-11.38	49.31	Max Peak	Horizontal	120	36	74.0	-24.7	Pass

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

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2.1.5 AP-ANT-40

Equipment Configuration for Radiated Spurious – Restricted Band Emissions

Antenna:	AP-ANT-40	Variant:	802.11b
Antenna Gain (dBi):	3.90	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	1.00 Mbit/s
Power Setting:	19.5	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2413.04	49.17	2.70	-11.79	40.08	Fundamental	Vertical	151	105	--	--	

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:	802.11b
Antenna Gain (dBi):	3.90	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2437.00	Data Rate:	1.00 Mbit/s
Power Setting:	21	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2437.91	58.11	2.72	-11.73	49.10	Fundamental	Horizontal	151	23	--	--	

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:	802.11b
Antenna Gain (dBi):	3.90	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	1.00 Mbit/s
Power Setting:	20	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2462.89	59.25	2.74	-11.67	50.32	Fundamental	Horizontal	101	29	--	--	

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

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2.1.6 AP-ANT-45

Equipment Configuration for Radiated Spurious – Restricted Band Emissions

Antenna:	AP-ANT-45	Variant:	802.11b
Antenna Gain (dBi):	5.00	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	1.00 Mbit/s
Power Setting:	21	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2412.84	53.78	2.70	-11.79	44.69	Fundamental	Horizontal	151	76	--	--	

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:	802.11b
Antenna Gain (dBi):	5.00	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2437.00	Data Rate:	1.00 Mbit/s
Power Setting:	21	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2437.95	63.10	2.72	-11.73	54.09	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-45	Variant:	802.11b
Antenna Gain (dBi):	5.00	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	1.00 Mbit/s
Power Setting:	19.5	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2464.57	62.41	2.73	-11.67	53.47	Fundamental	Horizontal	101	11	--	--	

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

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2.1.7 AP-ANT-48

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-48	Variant:	802.11b
Antenna Gain (dBi):	8.50	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	1.00 MBit/s
Power Setting:	21	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2414.00	53.31	2.70	-11.79	44.22	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-48	Variant:	802.11b
Antenna Gain (dBi):	8.50	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2437.00	Data Rate:	1.00 MBit/s
Power Setting:	21	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2436.11	59.70	2.72	-11.73	50.69	Fundamental	Vertical	151	1	--	--	
#2	4874.02	53.62	3.53	-11.24	45.91	Max Avg	Vertical	176	59	54.0	-8.1	Pass
#3	4874.02	58.26	3.53	-11.24	50.55	Max Peak	Vertical	176	59	74.0	-23.5	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:	802.11b
Antenna Gain (dBi):	8.50	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	1.00 MBit/s
Power Setting:	20	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2462.97	61.43	2.74	-11.67	52.50	Fundamental	Vertical	101	0	--	--	

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

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2.1.8 Metal Sheet

Equipment Configuration for Radiated Spurious – Restricted Band Emissions

Antenna:	Metal Sheet	Variant:	802.11b
Antenna Gain (dBi):	1.90	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	1 Mbit/s
Power Setting:	21	Tested By:	SB

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	1319.95	36.98	2.23	-14.92	24.29	Max Avg	Horizontal	163	114	54.0	-29.7	Pass
#2	1319.95	53.61	2.23	-14.92	40.92	Max Peak	Horizontal	163	114	74.0	-33.1	Pass
#3	1792.46	50.33	2.46	-13.76	39.03	Peak (NRB)	Vertical	138	169	--	--	Pass
#4	2413.98	46.84	2.70	-11.79	37.75	Fundamental	Vertical	148	138	--	--	

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Equipment Configuration for Radiated Spurious – Restricted Band Emissions

Antenna:	Metal Sheet	Variant:	802.11b
Antenna Gain (dBi):	1.90	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2437.00	Data Rate:	1 Mbit/s
Power Setting:	21	Tested By:	SB

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	1794.05	49.83	2.46	-13.76	38.53	Peak (NRB)	Vertical	138	169	--	--	Pass
#2	2434.95	54.06	2.72	-11.74	45.04	Fundamental	Horizontal	151	169	--	--	

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Equipment Configuration for Radiated Spurious – Restricted Band Emissions

Antenna:	Metal Sheet	Variant:	802.11b
Antenna Gain (dBi):	1.90	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	1 Mbit/s
Power Setting:	21	Tested By:	SB

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	1799.17	47.11	2.47	-13.67	35.91	Peak (NRB)	Vertical	148	1	--	--	Pass
#2	2462.90	53.79	2.74	-11.67	44.86	Fundamental	Horizontal	151	1	--	--	

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2.2 Restricted Band-Edge Emissions

2.2.1 AP-ANT-13B

Aruba Networks AP-ANT-13B		Band-Edge Freq	Limit 74.0dB μ V/m	Limit 54.0dB μ V/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dB μ V/m	dB μ V/m	
802.11b	2412.00	2390.00	53.08	61.04	21
802.11b	2462.00	2483.50	48.06	56.50	19.5
802.11g	2412.00	2390.00	67.30	52.67	17
802.11g	2462.00	2483.50	70.71	53.34	18
802.11n HT-20	2412.00	2390.00	52.60	68.95	17
802.11n HT-20	2462.00	2483.50	53.20	69.05	19
802.11n HT-40	2422.00	2390.00	68.60	53.24	16
802.11n HT-40	2452.00	2483.50	53.82	67.74	15.5

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Equipment Configuration for Radiated – Lower Restricted Band-Edge Emissions			
Antenna:	AP-ANT-13B	Variant:	802.11b
Antenna Gain (dBi):	4.40	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	1.00 Mbit/s
Power Setting:	21	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2388.11	18.37	2.68	32.03	53.08	Max Avg	Horizontal	181	7	54.0	-0.9	Pass
#2	2390.00	26.31	2.69	32.04	61.04	Max Peak	Horizontal	181	7	74.0	-13.0	Pass
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Lower Restricted Band-Edge Emissions

Antenna:	AP-ANT-13B	Variant:	802.11g
Antenna Gain (dBi):	4.40	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	6.00 Mbit/s
Power Setting:	17	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2389.78	32.57	2.69	32.04	67.30	Max Peak	Horizontal	181	7	74.0	-6.7	Pass
#2	2390.00	17.94	2.69	32.04	52.67	Max Avg	Horizontal	181	7	54.0	-1.3	Pass
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Lower Restricted Band-Edge Emissions

Antenna:	AP-ANT-13B	Variant:	802.11n HT-20
Antenna Gain (dBi):	4.40	Modulation:	OFDM
Beam Forming Gain (Y):	6.00	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	6.50 Mbit/s
Power Setting:	17	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2390.00	17.87	2.69	32.04	52.60	Max Avg	Horizontal	181	7	54.0	-1.4	Pass
#2	2390.00	34.22	2.69	32.04	68.95	Max Peak	Horizontal	181	7	74.0	-5.1	Pass
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Lower Restricted Band-Edge Emissions

Antenna:	AP-ANT-13B	Variant:	802.11n HT-40
Antenna Gain (dBi):	4.40	Modulation:	OFDM
Beam Forming Gain (Y):	6.00	Duty Cycle (%):	100
Channel Frequency (MHz):	2422.00	Data Rate:	13.50 Mbit/s
Power Setting:	16	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2389.78	33.87	2.69	32.04	68.60	Max Peak	Horizontal	181	7	74.0	-5.4	Pass
#2	2390.00	18.51	2.69	32.04	53.24	Max Avg	Horizontal	181	7	54.0	-0.8	Pass
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Upper Restricted Band-Edge Emissions

Antenna:	AP-ANT-13B	Variant:	802.11b
Antenna Gain (dBi):	4.40	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	1.00 Mbit/s
Power Setting:	19.5	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2483.50	12.96	2.73	32.37	48.06	Max Avg	Horizontal	153	367	54.0	-5.9	Pass
#2	2483.50	21.40	2.73	32.37	56.50	Max Peak	Horizontal	153	367	74.0	-17.5	Pass
#3	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Upper Restricted Band-Edge Emissions

Antenna:	AP-ANT-13B	Variant:	802.11g
Antenna Gain (dBi):	4.40	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	6.00 Mbit/s
Power Setting:	18	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#2	2486.21	35.61	2.73	32.37	70.71	Max Peak	Horizontal	153	367	74.0	-3.3	Pass
#3	2486.42	18.24	2.73	32.37	53.34	Max Avg	Horizontal	153	367	54.0	-0.7	Pass
#1	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Upper Restricted Band-Edge Emissions

Antenna:	AP-ANT-13B	Variant:	802.11n HT-20
Antenna Gain (dBi):	4.40	Modulation:	OFDM
Beam Forming Gain (Y):	6.00	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	6.50 Mbit/s
Power Setting:	19	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#2	2487.13	18.10	2.73	32.37	53.20	Max Avg	Horizontal	153	367	54.0	-0.8	Pass
#3	2487.62	33.94	2.73	32.38	69.05	Max Peak	Horizontal	153	367	74.0	-5.0	Pass
#1	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Upper Restricted Band-Edge Emissions

Antenna:	AP-ANT-13B	Variant:	802.11n HT-40
Antenna Gain (dBi):	4.40	Modulation:	OFDM
Beam Forming Gain (Y):	6.00	Duty Cycle (%):	100
Channel Frequency (MHz):	2452.00	Data Rate:	13.50 Mbit/s
Power Setting:	15.5	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2483.50	18.72	2.73	32.37	53.82	Max Avg	Horizontal	153	367	54.0	-0.2	Pass
#2	2483.50	32.64	2.73	32.37	67.74	Max Peak	Horizontal	153	367	74.0	-6.3	Pass
#3	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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2.2.2 AP-ANT-19

Aruba Networks AP-ANT-19		Band-Edge Freq	Limit 74.0dB μ V/m	Limit 54.0dB μ V/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dB μ V/m	dB μ V/m	
802.11b	2412.00	2390.00	52.94	59.13	20
802.11b	2462.00	2483.50	53.12	61.88	19
802.11g	2412.00	2390.00	53.74	69.39	19
802.11g	2462.00	2483.50	52.05	68.85	17
802.11n HT-20	2412.00	2390.00	51.67	64.86	18
802.11n HT-20	2462.00	2483.50	52.21	68.31	18
802.11n HT-40	2422.00	2390.00	51.83	65.38	15.5
802.11n HT-40	2452.00	2483.50	52.98	66.22	15

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Equipment Configuration for Radiated – Lower Restricted Band-Edge Emissions			
Antenna:	AP-ANT-19	Variant:	802.11b
Antenna Gain (dBi):	3.00	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	1.00 Mbit/s
Power Setting:	20	Tested By:	JMH

Test Measurement Results																																																				
<table border="1"><thead><tr><th>Num</th><th>Frequency MHz</th><th>Raw dBμV</th><th>Cable Loss</th><th>AF dB</th><th>Level dBμV/m</th><th>Measurement Type</th><th>Pol</th><th>Hgt cm</th><th>Azt Deg</th><th>Limit dBμV/m</th><th>Margin dB</th><th>Pass /Fail</th></tr></thead><tbody><tr><td>#1</td><td>2387.31</td><td>18.24</td><td>2.68</td><td>32.02</td><td>52.94</td><td>Max Avg</td><td>Vertical</td><td>168</td><td>355</td><td>54.0</td><td>-1.1</td><td>Pass</td></tr><tr><td>#2</td><td>2387.53</td><td>24.42</td><td>2.68</td><td>32.03</td><td>59.13</td><td>Max Peak</td><td>Vertical</td><td>168</td><td>355</td><td>74.0</td><td>-14.9</td><td>Pass</td></tr><tr><td>#3</td><td>2390.00</td><td>--</td><td>--</td><td>--</td><td>--</td><td>Band-Edge</td><td>--</td><td>--</td><td>--</td><td>--</td><td>--</td><td>--</td></tr></tbody></table>	Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	#1	2387.31	18.24	2.68	32.02	52.94	Max Avg	Vertical	168	355	54.0	-1.1	Pass	#2	2387.53	24.42	2.68	32.03	59.13	Max Peak	Vertical	168	355	74.0	-14.9	Pass	#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail																																								
#1	2387.31	18.24	2.68	32.02	52.94	Max Avg	Vertical	168	355	54.0	-1.1	Pass																																								
#2	2387.53	24.42	2.68	32.03	59.13	Max Peak	Vertical	168	355	74.0	-14.9	Pass																																								
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--																																								

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

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Equipment Configuration for Radiated – Lower Restricted Band-Edge Emissions

Antenna:	AP-ANT-19	Variant:	802.11g
Antenna Gain (dBi):	3.00	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	6.00 Mbit/s
Power Setting:	19	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2387.08	19.04	2.68	32.02	53.74	Max Avg	Vertical	168	355	54.0	-0.3	Pass
#2	2387.31	34.69	2.68	32.02	69.39	Max Peak	Vertical	168	355	74.0	-4.6	Pass
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Lower Restricted Band-Edge Emissions

Antenna:	AP-ANT-19	Variant:	802.11n HT-20
Antenna Gain (dBi):	3.00	Modulation:	OFDM
Beam Forming Gain (Y):	6.00	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	6.50 Mbit/s
Power Setting:	18	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2390.00	16.94	2.69	32.04	51.67	Max Avg	Vertical	168	355	54.0	-2.3	Pass
#2	2390.00	30.13	2.69	32.04	64.86	Max Peak	Vertical	168	355	74.0	-9.1	Pass
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Lower Restricted Band-Edge Emissions

Antenna:	AP-ANT-19	Variant:	802.11n HT-40
Antenna Gain (dBi):	3.00	Modulation:	OFDM
Beam Forming Gain (Y):	6.00	Duty Cycle (%):	100
Channel Frequency (MHz):	2422.00	Data Rate:	13.50 Mbit/s
Power Setting:	15.5	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2390.00	17.10	2.69	32.04	51.83	Max Avg	Vertical	168	355	54.0	-2.2	Pass
#2	2390.00	30.65	2.69	32.04	65.38	Max Peak	Vertical	168	355	74.0	-8.6	Pass
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Upper Restricted Band-Edge Emissions

Antenna:	AP-ANT-19	Variant:	802.11b
Antenna Gain (dBi):	3.00	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	1.00 Mbit/s
Power Setting:	19	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2483.50	18.02	2.73	32.37	53.12	Max Avg	Vertical	162	19	54.0	-0.9	Pass
#2	2483.50	26.78	2.73	32.37	61.88	Max Peak	Vertical	162	19	74.0	-12.1	Pass
#3	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Upper Restricted Band-Edge Emissions			
Antenna:	AP-ANT-19	Variant:	802.11g
Antenna Gain (dBi):	3.00	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	6.00 Mbit/s
Power Setting:	17	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#2	2485.09	16.95	2.73	32.37	52.05	Max Avg	Vertical	162	19	54.0	-2.0	Pass
#3	2486.16	33.75	2.73	32.37	68.85	Max Peak	Vertical	162	19	74.0	-5.2	Pass
#1	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Upper Restricted Band-Edge Emissions

Antenna:	AP-ANT-19	Variant:	802.11n HT-20
Antenna Gain (dBi):	3.00	Modulation:	OFDM
Beam Forming Gain (Y):	6.00	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	6.50 Mbit/s
Power Setting:	18	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#2	2484.56	17.11	2.73	32.37	52.21	Max Avg	Vertical	162	19	54.0	-1.8	Pass
#3	2486.69	33.21	2.73	32.37	68.31	Max Peak	Vertical	162	19	74.0	-5.7	Pass
#1	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Upper Restricted Band-Edge Emissions

Antenna:	AP-ANT-19	Variant:	802.11n HT-40
Antenna Gain (dBi):	3.00	Modulation:	OFDM
Beam Forming Gain (Y):	6.00	Duty Cycle (%):	100
Channel Frequency (MHz):	2452.00	Data Rate:	13.50 Mbit/s
Power Setting:	15	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2483.50	17.88	2.73	32.37	52.98	Max Avg	Vertical	162	19	54.0	-1.0	Pass
#3	2483.68	31.12	2.73	32.37	66.22	Max Peak	Vertical	162	19	74.0	-7.8	Pass
#2	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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2.2.3 AP-ANT-1W

Aruba Networks AP-ANT-1W		Band-Edge Freq	Limit 74.0dB μ V/m	Limit 54.0dB μ V/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dB μ V/m	dB μ V/m	
802.11b	2412.00	2390.00	49.09	56.78	20
802.11b	2462.00	2483.50	58.85	53.41	21
802.11g	2412.00	2390.00	67.00	52.52	18.5
802.11g	2462.00	2483.50	53.12	67.00	19
802.11n HT-20	2412.00	2390.00	52.95	67.70	19
802.11n HT-20	2462.00	2483.50	51.71	66.96	19
802.11n HT-40	2422.00	2390.00	51.50	65.61	16.5
802.11n HT-40	2452.00	2483.50	69.40	53.27	17

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Equipment Configuration for Radiated – Lower Restricted Band-Edge Emissions			
Antenna:	AP-ANT-1W	Variant:	802.11b
Antenna Gain (dBi):	3.80	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	1.00 Mbit/s
Power Setting:	20	Tested By:	JMH

Test Measurement Results																																																				
<table border="1"><thead><tr><th>Num</th><th>Frequency MHz</th><th>Raw dBμV</th><th>Cable Loss</th><th>AF dB</th><th>Level dBμV/m</th><th>Measurement Type</th><th>Pol</th><th>Hgt cm</th><th>Azt Deg</th><th>Limit dBμV/m</th><th>Margin dB</th><th>Pass /Fail</th></tr></thead><tbody><tr><td>#1</td><td>2387.25</td><td>14.39</td><td>2.68</td><td>32.02</td><td>49.09</td><td>Max Avg</td><td>Horizontal</td><td>131</td><td>260</td><td>54.0</td><td>-4.9</td><td>Pass</td></tr><tr><td>#2</td><td>2389.99</td><td>22.05</td><td>2.69</td><td>32.04</td><td>56.78</td><td>Max Peak</td><td>Horizontal</td><td>131</td><td>260</td><td>74.0</td><td>-17.2</td><td>Pass</td></tr><tr><td>#3</td><td>2390.00</td><td>--</td><td>--</td><td>--</td><td>--</td><td>Band-Edge</td><td>--</td><td>--</td><td>--</td><td>--</td><td>--</td><td>--</td></tr></tbody></table>	Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	#1	2387.25	14.39	2.68	32.02	49.09	Max Avg	Horizontal	131	260	54.0	-4.9	Pass	#2	2389.99	22.05	2.69	32.04	56.78	Max Peak	Horizontal	131	260	74.0	-17.2	Pass	#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail																																								
#1	2387.25	14.39	2.68	32.02	49.09	Max Avg	Horizontal	131	260	54.0	-4.9	Pass																																								
#2	2389.99	22.05	2.69	32.04	56.78	Max Peak	Horizontal	131	260	74.0	-17.2	Pass																																								
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--																																								

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

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Equipment Configuration for Radiated – Lower Restricted Band-Edge Emissions

Antenna:	AP-ANT-1W	Variant:	802.11g
Antenna Gain (dBi):	3.80	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	6.00 Mbit/s
Power Setting:	18.5	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2388.92	32.28	2.68	32.04	67.00	Max Peak	Horizontal	131	260	74.0	-7.0	Pass
#2	2389.37	17.80	2.68	32.04	52.52	Max Avg	Horizontal	131	260	54.0	-1.5	Pass
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Lower Restricted Band-Edge Emissions			
Antenna:	AP-ANT-1W	Variant:	802.11n HT-20
Antenna Gain (dBi):	3.80	Modulation:	OFDM
Beam Forming Gain (Y):	6.00	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	6.50 Mbit/s
Power Setting:	19	Tested By:	JMH

Antenna:	AP-ANT-1W	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	3.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	2412.00	**Data Rate:**	6.50 Mbit/s
Power Setting:	19	**Tested By:**	JMH

Test Measurement Results																																																				
<table border="1"><thead><tr><th>Num</th><th>Frequency MHz</th><th>Raw dBμV</th><th>Cable Loss</th><th>AF dB</th><th>Level dBμV/m</th><th>Measurement Type</th><th>Pol</th><th>Hgt cm</th><th>Azt Deg</th><th>Limit dBμV/m</th><th>Margin dB</th><th>Pass /Fail</th></tr></thead><tbody><tr><td>#1</td><td>2388.79</td><td>18.23</td><td>2.68</td><td>32.04</td><td>52.95</td><td>Max Avg</td><td>Horizontal</td><td>131</td><td>260</td><td>54.0</td><td>-1.1</td><td>Pass</td></tr><tr><td>#2</td><td>2389.10</td><td>32.98</td><td>2.68</td><td>32.04</td><td>67.70</td><td>Max Peak</td><td>Horizontal</td><td>131</td><td>260</td><td>74.0</td><td>-6.3</td><td>Pass</td></tr><tr><td>#3</td><td>2390.00</td><td>--</td><td>--</td><td>--</td><td>--</td><td>Band-Edge</td><td>--</td><td>--</td><td>--</td><td>--</td><td>--</td><td>--</td></tr></tbody></table>	Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	#1	2388.79	18.23	2.68	32.04	52.95	Max Avg	Horizontal	131	260	54.0	-1.1	Pass	#2	2389.10	32.98	2.68	32.04	67.70	Max Peak	Horizontal	131	260	74.0	-6.3	Pass	#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail																																								
#1	2388.79	18.23	2.68	32.04	52.95	Max Avg	Horizontal	131	260	54.0	-1.1	Pass																																								
#2	2389.10	32.98	2.68	32.04	67.70	Max Peak	Horizontal	131	260	74.0	-6.3	Pass																																								
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--																																								

| | Num | Frequency MHz | Raw dB μ V | Cable Loss | AF dB | Level dB μ V/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dB μ V/m | Margin dB | Pass /Fail | |-----|---------------|----------------|------------|-------|--------------------|------------------|------------|--------|---------|--------------------|-----------|------------| | #1 | 2388.79 | 18.23 | 2.68 | 32.04 | 52.95 | Max Avg | Horizontal | 131 | 260 | 54.0 | -1.1 | Pass | | #2 | 2389.10 | 32.98 | 2.68 | 32.04 | 67.70 | Max Peak | Horizontal | 131 | 260 | 74.0 | -6.3 | Pass | | #3 | 2390.00 | -- | -- | -- | -- | Band-Edge | -- | -- | -- | -- | -- | -- | |

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

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To: FCC CFR 47 Part 15.247 (DTS) & IC RSS-247
Serial #: ARUB204-U5_Radiated Rev A
Issue Date: 8th April 2016
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Equipment Configuration for Radiated – Lower Restricted Band-Edge Emissions

Antenna:	AP-ANT-1W	Variant:	802.11n HT-40
Antenna Gain (dBi):	3.80	Modulation:	OFDM
Beam Forming Gain (Y):	6.00	Duty Cycle (%):	100
Channel Frequency (MHz):	2422.00	Data Rate:	13.50 Mbit/s
Power Setting:	16.5	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2390.00	16.77	2.69	32.04	51.50	Max Avg	Horizontal	131	260	54.0	-2.5	Pass
#2	2390.00	30.88	2.69	32.04	65.61	Max Peak	Horizontal	131	260	74.0	-8.4	Pass
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Upper Restricted Band-Edge Emissions			
Antenna:	AP-ANT-1W	Variant:	802.11b
Antenna Gain (dBi):	3.80	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	1.00 Mbit/s
Power Setting:	21	Tested By:	JMH

Antenna:	AP-ANT-1W	**Variant:**	802.11b
Antenna Gain (dBi):	3.80	**Modulation:**	CCK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	2462.00	**Data Rate:**	1.00 Mbit/s
Power Setting:	21	**Tested By:**	JMH

Test Measurement Results																																																				
<table border="1"><thead><tr><th>Num</th><th>Frequency MHz</th><th>Raw dBμV</th><th>Cable Loss</th><th>AF dB</th><th>Level dBμV/m</th><th>Measurement Type</th><th>Pol</th><th>Hgt cm</th><th>Azt Deg</th><th>Limit dBμV/m</th><th>Margin dB</th><th>Pass /Fail</th></tr></thead><tbody><tr><td>#2</td><td>2486.57</td><td>23.75</td><td>2.73</td><td>32.37</td><td>58.85</td><td>Max Peak</td><td>Horizontal</td><td>151</td><td>49</td><td>74.0</td><td>-15.2</td><td>Pass</td></tr><tr><td>#3</td><td>2486.77</td><td>18.31</td><td>2.73</td><td>32.37</td><td>53.41</td><td>Max Avg</td><td>Horizontal</td><td>151</td><td>49</td><td>54.0</td><td>-0.6</td><td>Pass</td></tr><tr><td>#1</td><td>2483.50</td><td>--</td><td>--</td><td>--</td><td>--</td><td>Band-Edge</td><td>--</td><td>--</td><td>--</td><td>--</td><td>--</td><td>--</td></tr></tbody></table>	Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	#2	2486.57	23.75	2.73	32.37	58.85	Max Peak	Horizontal	151	49	74.0	-15.2	Pass	#3	2486.77	18.31	2.73	32.37	53.41	Max Avg	Horizontal	151	49	54.0	-0.6	Pass	#1	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--
Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail																																								
#2	2486.57	23.75	2.73	32.37	58.85	Max Peak	Horizontal	151	49	74.0	-15.2	Pass																																								
#3	2486.77	18.31	2.73	32.37	53.41	Max Avg	Horizontal	151	49	54.0	-0.6	Pass																																								
#1	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--																																								

| **Test Measurement Results** |
| | Num | Frequency MHz | Raw dB μ V | Cable Loss | AF dB | Level dB μ V/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dB μ V/m | Margin dB | Pass /Fail | |-----|---------------|----------------|------------|-------|--------------------|------------------|------------|--------|---------|--------------------|-----------|------------| | #2 | 2486.57 | 23.75 | 2.73 | 32.37 | 58.85 | Max Peak | Horizontal | 151 | 49 | 74.0 | -15.2 | Pass | | #3 | 2486.77 | 18.31 | 2.73 | 32.37 | 53.41 | Max Avg | Horizontal | 151 | 49 | 54.0 | -0.6 | Pass | | #1 | 2483.50 | -- | -- | -- | -- | Band-Edge | -- | -- | -- | -- | -- | -- | |

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

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Title: Aruba Networks, Inc. APIN0314 & APIN0315
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Equipment Configuration for Radiated – Upper Restricted Band-Edge Emissions

Antenna:	AP-ANT-1W	Variant:	802.11g
Antenna Gain (dBi):	3.80	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	6.00 Mbit/s
Power Setting:	19	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2483.50	18.02	2.73	32.37	53.12	Max Avg	Horizontal	151	49	54.0	-0.9	Pass
#2	2483.50	31.90	2.73	32.37	67.00	Max Peak	Horizontal	151	49	74.0	-7.0	Pass
#3	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Upper Restricted Band-Edge Emissions			
Antenna:	AP-ANT-1W	Variant:	802.11n HT-20
Antenna Gain (dBi):	3.80	Modulation:	OFDM
Beam Forming Gain (Y):	6.00	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	6.50 Mbit/s
Power Setting:	19	Tested By:	JMH

Antenna:	AP-ANT-1W	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	3.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	2462.00	**Data Rate:**	6.50 Mbit/s
Power Setting:	19	**Tested By:**	JMH

Test Measurement Results																																																				
<table border="1"><thead><tr><th>Num</th><th>Frequency MHz</th><th>Raw dBμV</th><th>Cable Loss</th><th>AF dB</th><th>Level dBμV/m</th><th>Measurement Type</th><th>Pol</th><th>Hgt cm</th><th>Azt Deg</th><th>Limit dBμV/m</th><th>Margin dB</th><th>Pass /Fail</th></tr></thead><tbody><tr><td>#1</td><td>2483.50</td><td>16.61</td><td>2.73</td><td>32.37</td><td>51.71</td><td>Max Avg</td><td>Horizontal</td><td>151</td><td>49</td><td>54.0</td><td>-2.3</td><td>Pass</td></tr><tr><td>#2</td><td>2483.50</td><td>31.86</td><td>2.73</td><td>32.37</td><td>66.96</td><td>Max Peak</td><td>Horizontal</td><td>151</td><td>49</td><td>74.0</td><td>-7.0</td><td>Pass</td></tr><tr><td>#3</td><td>2483.50</td><td>--</td><td>--</td><td>--</td><td>--</td><td>Band-Edge</td><td>--</td><td>--</td><td>--</td><td>--</td><td>--</td><td>--</td></tr></tbody></table>	Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	#1	2483.50	16.61	2.73	32.37	51.71	Max Avg	Horizontal	151	49	54.0	-2.3	Pass	#2	2483.50	31.86	2.73	32.37	66.96	Max Peak	Horizontal	151	49	74.0	-7.0	Pass	#3	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--
Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail																																								
#1	2483.50	16.61	2.73	32.37	51.71	Max Avg	Horizontal	151	49	54.0	-2.3	Pass																																								
#2	2483.50	31.86	2.73	32.37	66.96	Max Peak	Horizontal	151	49	74.0	-7.0	Pass																																								
#3	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--																																								

| **Test Measurement Results** |
| | Num | Frequency MHz | Raw dB μ V | Cable Loss | AF dB | Level dB μ V/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dB μ V/m | Margin dB | Pass /Fail | |-----|---------------|----------------|------------|-------|--------------------|------------------|------------|--------|---------|--------------------|-----------|------------| | #1 | 2483.50 | 16.61 | 2.73 | 32.37 | 51.71 | Max Avg | Horizontal | 151 | 49 | 54.0 | -2.3 | Pass | | #2 | 2483.50 | 31.86 | 2.73 | 32.37 | 66.96 | Max Peak | Horizontal | 151 | 49 | 74.0 | -7.0 | Pass | | #3 | 2483.50 | -- | -- | -- | -- | Band-Edge | -- | -- | -- | -- | -- | -- | |

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

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Equipment Configuration for Radiated – Upper Restricted Band-Edge Emissions

Antenna:	AP-ANT-1W	Variant:	802.11n HT-40
Antenna Gain (dBi):	3.80	Modulation:	OFDM
Beam Forming Gain (Y):	6.00	Duty Cycle (%):	100
Channel Frequency (MHz):	2452.00	Data Rate:	13.50 Mbit/s
Power Setting:	17	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#2	2484.63	34.30	2.73	32.37	69.40	Max Peak	Horizontal	151	49	74.0	-4.6	Pass
#3	2486.07	18.17	2.73	32.37	53.27	Max Avg	Horizontal	151	49	54.0	-0.7	Pass
#1	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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2.2.4 AP-ANT-20W

Aruba Networks AP-ANT-20W		Band-Edge Freq	Limit 74.0dB μ V/m	Limit 54.0dB μ V/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dB μ V/m	dB μ V/m	
802.11b	2412.00	2390.00	51.31	57.54	20
802.11b	2462.00	2483.50	52.04	58.74	20
802.11g	2412.00	2390.00	52.52	66.00	17.5
802.11g	2462.00	2483.50	50.91	66.97	17.5
802.11n HT-20	2412.00	2390.00	68.12	53.17	17.5
802.11n HT-20	2462.00	2483.50	53.68	67.46	19
802.11n HT-40	2422.00	2390.00	53.03	69.93	17
802.11n HT-40	2452.00	2483.50	53.75	68.27	16.5

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Equipment Configuration for Radiated – Lower Restricted Band-Edge Emissions			
Antenna:	AP-ANT-20W	Variant:	802.11b
Antenna Gain (dBi):	2.00	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	1.00 Mbit/s
Power Setting:	20	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2387.52	16.60	2.68	32.03	51.31	Max Avg	Horizontal	174	55	54.0	-2.7	Pass
#2	2387.54	22.83	2.68	32.03	57.54	Max Peak	Horizontal	174	55	74.0	-16.5	Pass
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE, connected to 59aptop outside chamber

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Equipment Configuration for Radiated – Lower Restricted Band-Edge Emissions

Antenna:	AP-ANT-20W	Variant:	802.11g
Antenna Gain (dBi):	2.00	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	6.00 Mbit/s
Power Setting:	17.5	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2390.00	17.79	2.69	32.04	52.52	Max Avg	Horizontal	174	55	54.0	-1.5	Pass
#2	2390.00	31.27	2.69	32.04	66.00	Max Peak	Horizontal	174	55	74.0	-8.0	Pass
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE, connected to 60aptop outside chamber

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Equipment Configuration for Radiated – Lower Restricted 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):	2412.00	Data Rate:	6.50 Mbit/s
Power Setting:	17.5	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2389.78	33.39	2.69	32.04	68.12	Max Peak	Horizontal	174	55	74.0	-5.9	Pass
#2	2390.00	18.44	2.69	32.04	53.17	Max Avg	Horizontal	174	55	54.0	-0.8	Pass
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE, connected to 61laptop outside chamber

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Equipment Configuration for Radiated – Lower Restricted 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):	2422.00	Data Rate:	13.50 Mbit/s
Power Setting:	17	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2390.00	18.30	2.69	32.04	53.03	Max Avg	Horizontal	174	55	54.0	-1.0	Pass
#2	2390.00	35.20	2.69	32.04	69.93	Max Peak	Horizontal	174	55	74.0	-4.1	Pass
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE, connected to 62laptop outside chamber

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Equipment Configuration for Radiated – Upper Restricted Band-Edge Emissions

Antenna:	AP-ANT-20W	Variant:	802.11b
Antenna Gain (dBi):	2.00	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	1.00 Mbit/s
Power Setting:	20	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2483.50	16.94	2.73	32.37	52.04	Max Avg	Horizontal	108	316	54.0	-2.0	Pass
#2	2483.50	23.64	2.73	32.37	58.74	Max Peak	Horizontal	108	316	74.0	-15.3	Pass
#3	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE, connected to 63aptop outside chamber

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Equipment Configuration for Radiated – Upper Restricted Band-Edge Emissions

Antenna:	AP-ANT-20W	Variant:	802.11g
Antenna Gain (dBi):	2.00	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	6.00 Mbit/s
Power Setting:	17.5	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2483.50	15.81	2.73	32.37	50.91	Max Avg	Horizontal	108	316	54.0	-3.1	Pass
#3	2484.70	31.87	2.73	32.37	66.97	Max Peak	Horizontal	108	316	74.0	-7.0	Pass
#2	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE, connected to 64aptop outside chamber

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Equipment Configuration for Radiated – Upper Restricted 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):	2462.00	Data Rate:	6.50 Mbit/s
Power Setting:	19	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2483.50	18.58	2.73	32.37	53.68	Max Avg	Horizontal	108	316	54.0	-0.3	Pass
#3	2486.11	32.36	2.73	32.37	67.46	Max Peak	Horizontal	108	316	74.0	-6.5	Pass
#2	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE, connected to 65laptop outside chamber

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Equipment Configuration for Radiated – Upper Restricted 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):	2452.00	Data Rate:	13.50 Mbit/s
Power Setting:	16.5	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2483.50	18.65	2.73	32.37	53.75	Max Avg	Horizontal	108	316	54.0	-0.3	Pass
#3	2483.94	33.17	2.73	32.37	68.27	Max Peak	Horizontal	108	316	74.0	-5.7	Pass
#2	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT on 150cm table powered by POE, connected to 66laptop outside chamber

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2.2.5 AP-ANT-40

Aruba Networks AP-ANT-40		Band-Edge Freq	Limit 74.0dB μ V/m	Limit 54.0dB μ V/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dB μ V/m	dB μ V/m	
802.11b	2412.00	2390.00	50.60	56.76	19.5
802.11b	2462.00	2483.50	52.60	60.48	20
802.11g	2412.00	2390.00	52.60	67.50	17.5
802.11g	2462.00	2483.50	70.01	52.45	18.5
802.11n HT-20	2412.00	2390.00	53.77	68.89	18
802.11n HT-20	2462.00	2483.50	52.60	67.07	20
802.11n HT-40	2422.00	2390.00	52.07	66.62	16.5
802.11n HT-40	2452.00	2483.50	53.48	68.25	16

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Equipment Configuration for Radiated – Lower Restricted Band-Edge Emissions			
Antenna:	AP-ANT-40	Variant:	802.11b
Antenna Gain (dBi):	3.90	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	1.00 Mbit/s
Power Setting:	19.5	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2387.21	15.90	2.68	32.02	50.60	Max Avg	Horizontal	117	33	54.0	-3.4	Pass
#2	2387.44	22.06	2.68	32.02	56.76	Max Peak	Horizontal	117	33	74.0	-17.2	Pass
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Lower Restricted Band-Edge Emissions

Antenna:	AP-ANT-40	Variant:	802.11g
Antenna Gain (dBi):	3.90	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	6.00 Mbit/s
Power Setting:	17.5	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2390.00	17.87	2.69	32.04	52.60	Max Avg	Horizontal	117	33	54.0	-1.4	Pass
#2	2390.00	32.77	2.69	32.04	67.50	Max Peak	Horizontal	117	33	74.0	-6.5	Pass
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Lower Restricted Band-Edge Emissions

Antenna:	AP-ANT-40	Variant:	802.11n HT-20
Antenna Gain (dBi):	3.90	Modulation:	OFDM
Beam Forming Gain (Y):	3.00	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	6.50 Mbit/s
Power Setting:	18	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2390.00	19.04	2.69	32.04	53.77	Max Avg	Horizontal	117	33	54.0	-0.2	Pass
#2	2390.00	34.16	2.69	32.04	68.89	Max Peak	Horizontal	117	33	74.0	-5.1	Pass
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Lower Restricted Band-Edge Emissions

Antenna:	AP-ANT-40	Variant:	802.11n HT-40
Antenna Gain (dBi):	3.90	Modulation:	OFDM
Beam Forming Gain (Y):	3.00	Duty Cycle (%):	100
Channel Frequency (MHz):	2422.00	Data Rate:	13.50 Mbit/s
Power Setting:	16.5	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2390.00	17.34	2.69	32.04	52.07	Max Avg	Horizontal	117	33	54.0	-1.9	Pass
#2	2390.00	31.89	2.69	32.04	66.62	Max Peak	Horizontal	117	33	74.0	-7.4	Pass
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Upper Restricted Band-Edge Emissions

Antenna:	AP-ANT-40	Variant:	802.11b
Antenna Gain (dBi):	3.90	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	1.00 Mbit/s
Power Setting:	20	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2483.50	17.50	2.73	32.37	52.60	Max Avg	Horizontal	144	292	54.0	-1.4	Pass
#2	2483.50	25.38	2.73	32.37	60.48	Max Peak	Horizontal	144	292	74.0	-13.5	Pass
#3	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Upper Restricted Band-Edge Emissions

Antenna:	AP-ANT-40	Variant:	802.11g
Antenna Gain (dBi):	3.90	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	6.00 Mbit/s
Power Setting:	18.5	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#2	2487.27	34.91	2.73	32.37	70.01	Max Peak	Horizontal	144	292	74.0	-4.0	Pass
#3	2487.30	17.35	2.73	32.37	52.45	Max Avg	Horizontal	144	292	54.0	-1.6	Pass
#1	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Upper Restricted Band-Edge Emissions			
Antenna:	AP-ANT-40	Variant:	802.11n HT-20
Antenna Gain (dBi):	3.90	Modulation:	OFDM
Beam Forming Gain (Y):	3.00	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	6.50 Mbit/s
Power Setting:	20	Tested By:	JMH

Antenna:	AP-ANT-40	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	3.90	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	2462.00	**Data Rate:**	6.50 Mbit/s
Power Setting:	20	**Tested By:**	JMH

Test Measurement Results																																																				
<table border="1"><thead><tr><th>Num</th><th>Frequency MHz</th><th>Raw dBμV</th><th>Cable Loss</th><th>AF dB</th><th>Level dBμV/m</th><th>Measurement Type</th><th>Pol</th><th>Hgt cm</th><th>Azt Deg</th><th>Limit dBμV/m</th><th>Margin dB</th><th>Pass /Fail</th></tr></thead><tbody><tr><td>#1</td><td>2483.50</td><td>17.50</td><td>2.73</td><td>32.37</td><td>52.60</td><td>Max Avg</td><td>Horizontal</td><td>144</td><td>292</td><td>54.0</td><td>-1.4</td><td>Pass</td></tr><tr><td>#3</td><td>2487.73</td><td>31.96</td><td>2.73</td><td>32.38</td><td>67.07</td><td>Max Peak</td><td>Horizontal</td><td>144</td><td>292</td><td>74.0</td><td>-6.9</td><td>Pass</td></tr><tr><td>#2</td><td>2483.50</td><td>--</td><td>--</td><td>--</td><td>--</td><td>Band-Edge</td><td>--</td><td>--</td><td>--</td><td>--</td><td>--</td><td>--</td></tr></tbody></table>	Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	#1	2483.50	17.50	2.73	32.37	52.60	Max Avg	Horizontal	144	292	54.0	-1.4	Pass	#3	2487.73	31.96	2.73	32.38	67.07	Max Peak	Horizontal	144	292	74.0	-6.9	Pass	#2	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--
Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail																																								
#1	2483.50	17.50	2.73	32.37	52.60	Max Avg	Horizontal	144	292	54.0	-1.4	Pass																																								
#3	2487.73	31.96	2.73	32.38	67.07	Max Peak	Horizontal	144	292	74.0	-6.9	Pass																																								
#2	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--																																								

| **Test Measurement Results** |
| | Num | Frequency MHz | Raw dB μ V | Cable Loss | AF dB | Level dB μ V/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dB μ V/m | Margin dB | Pass /Fail | |-----|---------------|----------------|------------|-------|--------------------|------------------|------------|--------|---------|--------------------|-----------|------------| | #1 | 2483.50 | 17.50 | 2.73 | 32.37 | 52.60 | Max Avg | Horizontal | 144 | 292 | 54.0 | -1.4 | Pass | | #3 | 2487.73 | 31.96 | 2.73 | 32.38 | 67.07 | Max Peak | Horizontal | 144 | 292 | 74.0 | -6.9 | Pass | | #2 | 2483.50 | -- | -- | -- | -- | Band-Edge | -- | -- | -- | -- | -- | -- | |

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

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Equipment Configuration for Radiated – Upper Restricted Band-Edge Emissions			
Antenna:	AP-ANT-40	Variant:	802.11n HT-40
Antenna Gain (dBi):	3.90	Modulation:	OFDM
Beam Forming Gain (Y):	3.00	Duty Cycle (%):	100
Channel Frequency (MHz):	2452.00	Data Rate:	13.50 Mbit/s
Power Setting:	16	Tested By:	JMH

Antenna:	AP-ANT-40	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	3.90	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	2452.00	**Data Rate:**	13.50 Mbit/s
Power Setting:	16	**Tested By:**	JMH

Test Measurement Results																																																				
<table border="1"><thead><tr><th>Num</th><th>Frequency MHz</th><th>Raw dBμV</th><th>Cable Loss</th><th>AF dB</th><th>Level dBμV/m</th><th>Measurement Type</th><th>Pol</th><th>Hgt cm</th><th>Azt Deg</th><th>Limit dBμV/m</th><th>Margin dB</th><th>Pass /Fail</th></tr></thead><tbody><tr><td>#1</td><td>2483.50</td><td>18.38</td><td>2.73</td><td>32.37</td><td>53.48</td><td>Max Avg</td><td>Horizontal</td><td>144</td><td>292</td><td>54.0</td><td>-0.5</td><td>Pass</td></tr><tr><td>#3</td><td>2484.63</td><td>33.15</td><td>2.73</td><td>32.37</td><td>68.25</td><td>Max Peak</td><td>Horizontal</td><td>144</td><td>292</td><td>74.0</td><td>-5.8</td><td>Pass</td></tr><tr><td>#2</td><td>2483.50</td><td>--</td><td>--</td><td>--</td><td>--</td><td>Band-Edge</td><td>--</td><td>--</td><td>--</td><td>--</td><td>--</td><td>--</td></tr></tbody></table>	Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	#1	2483.50	18.38	2.73	32.37	53.48	Max Avg	Horizontal	144	292	54.0	-0.5	Pass	#3	2484.63	33.15	2.73	32.37	68.25	Max Peak	Horizontal	144	292	74.0	-5.8	Pass	#2	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--
Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail																																								
#1	2483.50	18.38	2.73	32.37	53.48	Max Avg	Horizontal	144	292	54.0	-0.5	Pass																																								
#3	2484.63	33.15	2.73	32.37	68.25	Max Peak	Horizontal	144	292	74.0	-5.8	Pass																																								
#2	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--																																								

| **Test Measurement Results** |
| | Num | Frequency MHz | Raw dB μ V | Cable Loss | AF dB | Level dB μ V/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dB μ V/m | Margin dB | Pass /Fail | |-----|---------------|----------------|------------|-------|--------------------|------------------|------------|--------|---------|--------------------|-----------|------------| | #1 | 2483.50 | 18.38 | 2.73 | 32.37 | 53.48 | Max Avg | Horizontal | 144 | 292 | 54.0 | -0.5 | Pass | | #3 | 2484.63 | 33.15 | 2.73 | 32.37 | 68.25 | Max Peak | Horizontal | 144 | 292 | 74.0 | -5.8 | Pass | | #2 | 2483.50 | -- | -- | -- | -- | Band-Edge | -- | -- | -- | -- | -- | -- | |

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

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2.2.6 AP-ANT-45

Aruba Networks AP-ANT-45		Band-Edge Freq	Limit 74.0dB μ V/m	Limit 54.0dB μ V/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dB μ V/m	dB μ V/m	
802.11b	2412.00	2390.00	47.28	59.32	21
802.11b	2462.00	2483.50	51.96	59.94	19.5
802.11g	2412.00	2390.00	52.74	67.94	17
802.11g	2462.00	2483.50	52.29	69.70	17.5
802.11n HT-20	2412.00	2390.00	67.94	53.24	17
802.11n HT-20	2462.00	2483.50	53.62	71.14	18.5
802.11n HT-40	2422.00	2390.00	66.60	52.22	16
802.11n HT-40	2452.00	2483.50	53.48	66.90	15.5

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Equipment Configuration for Radiated – Lower Restricted Band-Edge Emissions

Antenna:	AP-ANT-45	Variant:	802.11b
Antenna Gain (dBi):	5.00	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	1.00 Mbit/s
Power Setting:	21	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2389.19	12.56	2.68	32.04	47.28	Max Avg	Horizontal	133	40	54.0	-6.7	Pass
#2	2389.78	24.59	2.69	32.04	59.32	Max Peak	Horizontal	133	40	74.0	-14.7	Pass
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Lower Restricted Band-Edge Emissions

Antenna:	AP-ANT-45	Variant:	802.11g
Antenna Gain (dBi):	5.00	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	6.00 Mbit/s
Power Setting:	17	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2390.00	18.01	2.69	32.04	52.74	Max Avg	Horizontal	133	40	54.0	-1.3	Pass
#2	2390.00	33.21	2.69	32.04	67.94	Max Peak	Horizontal	133	40	74.0	-6.1	Pass
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Lower Restricted 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):	2412.00	Data Rate:	6.50 Mbit/s
Power Setting:	17	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2389.78	33.21	2.69	32.04	67.94	Max Peak	Horizontal	133	40	74.0	-6.1	Pass
#2	2390.00	18.51	2.69	32.04	53.24	Max Avg	Horizontal	133	40	54.0	-0.8	Pass
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Lower Restricted 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):	2422.00	Data Rate:	13.50 Mbit/s
Power Setting:	16	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2388.92	31.88	2.68	32.04	66.60	Max Peak	Horizontal	133	40	74.0	-7.4	Pass
#2	2390.00	17.49	2.69	32.04	52.22	Max Avg	Horizontal	133	40	54.0	-1.8	Pass
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Upper Restricted Band-Edge Emissions

Antenna:	AP-ANT-45	Variant:	802.11b
Antenna Gain (dBi):	5.00	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	1.00 Mbit/s
Power Setting:	19.5	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2483.50	16.86	2.73	32.37	51.96	Max Avg	Horizontal	155	344	54.0	-2.0	Pass
#2	2483.50	24.84	2.73	32.37	59.94	Max Peak	Horizontal	155	344	74.0	-14.1	Pass
#3	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Upper Restricted Band-Edge Emissions			
Antenna:	AP-ANT-45	Variant:	802.11g
Antenna Gain (dBi):	5.00	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	6.00 Mbit/s
Power Setting:	17.5	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#2	2485.44	17.19	2.73	32.37	52.29	Max Avg	Horizontal	155	344	54.0	-1.7	Pass
#3	2485.98	34.60	2.73	32.37	69.70	Max Peak	Horizontal	155	344	74.0	-4.3	Pass
#1	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Upper Restricted 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):	2462.00	Data Rate:	6.50 Mbit/s
Power Setting:	18.5	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#2	2485.62	18.52	2.73	32.37	53.62	Max Avg	Horizontal	155	344	54.0	-0.4	Pass
#3	2486.16	36.04	2.73	32.37	71.14	Max Peak	Horizontal	155	344	74.0	-2.9	Pass
#1	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Upper Restricted 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):	2452.00	Data Rate:	13.50 Mbit/s
Power Setting:	15.5	Tested By:	JMH

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):	2452.00	**Data Rate:**	13.50 Mbit/s
Power Setting:	15.5	**Tested By:**	JMH

Test Measurement Results																																																				
<table border="1"><thead><tr><th>Num</th><th>Frequency MHz</th><th>Raw dBμV</th><th>Cable Loss</th><th>AF dB</th><th>Level dBμV/m</th><th>Measurement Type</th><th>Pol</th><th>Hgt cm</th><th>Azt Deg</th><th>Limit dBμV/m</th><th>Margin dB</th><th>Pass /Fail</th></tr></thead><tbody><tr><td>#1</td><td>2483.50</td><td>18.38</td><td>2.73</td><td>32.37</td><td>53.48</td><td>Max Avg</td><td>Horizontal</td><td>155</td><td>344</td><td>54.0</td><td>-0.5</td><td>Pass</td></tr><tr><td>#3</td><td>2484.04</td><td>31.80</td><td>2.73</td><td>32.37</td><td>66.90</td><td>Max Peak</td><td>Horizontal</td><td>155</td><td>344</td><td>74.0</td><td>-7.1</td><td>Pass</td></tr><tr><td>#2</td><td>2483.50</td><td>--</td><td>--</td><td>--</td><td>--</td><td>Band-Edge</td><td>--</td><td>--</td><td>--</td><td>--</td><td>--</td><td>--</td></tr></tbody></table>	Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	#1	2483.50	18.38	2.73	32.37	53.48	Max Avg	Horizontal	155	344	54.0	-0.5	Pass	#3	2484.04	31.80	2.73	32.37	66.90	Max Peak	Horizontal	155	344	74.0	-7.1	Pass	#2	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--
Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail																																								
#1	2483.50	18.38	2.73	32.37	53.48	Max Avg	Horizontal	155	344	54.0	-0.5	Pass																																								
#3	2484.04	31.80	2.73	32.37	66.90	Max Peak	Horizontal	155	344	74.0	-7.1	Pass																																								
#2	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--																																								

| **Test Measurement Results** |
| | Num | Frequency MHz | Raw dB μ V | Cable Loss | AF dB | Level dB μ V/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dB μ V/m | Margin dB | Pass /Fail | |-----|---------------|----------------|------------|-------|--------------------|------------------|------------|--------|---------|--------------------|-----------|------------| | #1 | 2483.50 | 18.38 | 2.73 | 32.37 | 53.48 | Max Avg | Horizontal | 155 | 344 | 54.0 | -0.5 | Pass | | #3 | 2484.04 | 31.80 | 2.73 | 32.37 | 66.90 | Max Peak | Horizontal | 155 | 344 | 74.0 | -7.1 | Pass | | #2 | 2483.50 | -- | -- | -- | -- | Band-Edge | -- | -- | -- | -- | -- | -- | |

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

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2.2.7 AP-ANT-48

Aruba Networks AP-ANT-48		Band-Edge Freq	Limit 74.0dB μ V/m	Limit 54.0dB μ V/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dB μ V/m	dB μ V/m	
802.11b	2412.00	2390.00	53.62	59.47	21
802.11b	2462.00	2483.50	53.12	59.53	20
802.11g	2412.00	2390.00	53.30	67.97	18
802.11g	2462.00	2483.50	52.29	68.52	18
802.11n HT-20	2412.00	2390.00	67.79	52.96	17.5
802.11n HT-20	2462.00	2483.50	51.46	68.06	18.5
802.11n HT-40	2422.00	2390.00	52.22	67.66	16.5
802.11n HT-40	2452.00	2483.50	53.27	68.27	16

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Equipment Configuration for Radiated – Lower Restricted Band-Edge Emissions

Antenna:	AP-ANT-48	Variant:	802.11b
Antenna Gain (dBi):	8.50	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	1.00 Mbit/s
Power Setting:	21	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2387.29	18.92	2.68	32.02	53.62	Max Avg	Horizontal	178	330	54.0	-0.4	Pass
#2	2387.53	24.76	2.68	32.03	59.47	Max Peak	Horizontal	178	330	74.0	-14.5	Pass
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Lower Restricted Band-Edge Emissions

Antenna:	AP-ANT-48	Variant:	802.11g
Antenna Gain (dBi):	8.50	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	6.00 Mbit/s
Power Setting:	18	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2390.00	18.57	2.69	32.04	53.30	Max Avg	Horizontal	178	330	54.0	-0.7	Pass
#2	2390.00	33.24	2.69	32.04	67.97	Max Peak	Horizontal	178	330	74.0	-6.0	Pass
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Lower Restricted 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):	2412.00	Data Rate:	6.50 Mbit/s
Power Setting:	17.5	Tested By:	JMH

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):	2412.00	**Data Rate:**	6.50 Mbit/s
Power Setting:	17.5	**Tested By:**	JMH

Test Measurement Results																																																				
<table border="1"><thead><tr><th>Num</th><th>Frequency MHz</th><th>Raw dBμV</th><th>Cable Loss</th><th>AF dB</th><th>Level dBμV/m</th><th>Measurement Type</th><th>Pol</th><th>Hgt cm</th><th>Azt Deg</th><th>Limit dBμV/m</th><th>Margin dB</th><th>Pass /Fail</th></tr></thead><tbody><tr><td>#1</td><td>2389.10</td><td>33.07</td><td>2.68</td><td>32.04</td><td>67.79</td><td>Max Peak</td><td>Horizontal</td><td>178</td><td>330</td><td>74.0</td><td>-6.2</td><td>Pass</td></tr><tr><td>#2</td><td>2390.00</td><td>18.23</td><td>2.69</td><td>32.04</td><td>52.96</td><td>Max Avg</td><td>Horizontal</td><td>178</td><td>330</td><td>54.0</td><td>-1.0</td><td>Pass</td></tr><tr><td>#3</td><td>2390.00</td><td>--</td><td>--</td><td>--</td><td>--</td><td>Band-Edge</td><td>--</td><td>--</td><td>--</td><td>--</td><td>--</td><td>--</td></tr></tbody></table>	Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	#1	2389.10	33.07	2.68	32.04	67.79	Max Peak	Horizontal	178	330	74.0	-6.2	Pass	#2	2390.00	18.23	2.69	32.04	52.96	Max Avg	Horizontal	178	330	54.0	-1.0	Pass	#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail																																								
#1	2389.10	33.07	2.68	32.04	67.79	Max Peak	Horizontal	178	330	74.0	-6.2	Pass																																								
#2	2390.00	18.23	2.69	32.04	52.96	Max Avg	Horizontal	178	330	54.0	-1.0	Pass																																								
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--																																								

| **Test Measurement Results** |
| | Num | Frequency MHz | Raw dB μ V | Cable Loss | AF dB | Level dB μ V/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dB μ V/m | Margin dB | Pass /Fail | |-----|---------------|----------------|------------|-------|--------------------|------------------|------------|--------|---------|--------------------|-----------|------------| | #1 | 2389.10 | 33.07 | 2.68 | 32.04 | 67.79 | Max Peak | Horizontal | 178 | 330 | 74.0 | -6.2 | Pass | | #2 | 2390.00 | 18.23 | 2.69 | 32.04 | 52.96 | Max Avg | Horizontal | 178 | 330 | 54.0 | -1.0 | Pass | | #3 | 2390.00 | -- | -- | -- | -- | Band-Edge | -- | -- | -- | -- | -- | -- | |

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

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Equipment Configuration for Radiated – Lower Restricted 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):	2422.00	Data Rate:	13.50 Mbit/s
Power Setting:	16.5	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2389.78	17.49	2.69	32.04	52.22	Max Avg	Horizontal	178	330	54.0	-1.8	Pass
#2	2390.00	32.93	2.69	32.04	67.66	Max Peak	Horizontal	178	330	74.0	-6.3	Pass
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Upper Restricted Band-Edge Emissions

Antenna:	AP-ANT-48	Variant:	802.11b
Antenna Gain (dBi):	8.50	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	1.00 Mbit/s
Power Setting:	20	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2483.50	18.02	2.73	32.37	53.12	Max Avg	Horizontal	154	10	54.0	-0.9	Pass
#2	2483.50	24.43	2.73	32.37	59.53	Max Peak	Horizontal	154	10	74.0	-14.5	Pass
#3	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Upper Restricted Band-Edge Emissions			
Antenna:	AP-ANT-48	Variant:	802.11g
Antenna Gain (dBi):	8.50	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	6.00 Mbit/s
Power Setting:	18	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#2	2485.79	17.19	2.73	32.37	52.29	Max Avg	Horizontal	154	10	54.0	-1.7	Pass
#3	2485.80	33.42	2.73	32.37	68.52	Max Peak	Horizontal	154	10	74.0	-5.5	Pass
#1	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated – Upper Restricted 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):	2462.00	Data Rate:	6.50 Mbit/s
Power Setting:	18.5	Tested By:	JMH

Test Measurement Results													
Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
#2	2485.62	16.36	2.73	32.37	51.46	Max Avg	Horizontal	154	10	54.0	-2.5	Pass	
#3	2485.80	32.96	2.73	32.37	68.06	Max Peak	Horizontal	154	10	74.0	-5.9	Pass	
#1	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--	



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Equipment Configuration for Radiated – Upper Restricted 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):	2452.00	Data Rate:	13.50 Mbit/s
Power Setting:	16	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2483.50	18.17	2.73	32.37	53.27	Max Avg	Horizontal	154	10	54.0	-0.7	Pass
#2	2483.50	33.17	2.73	32.37	68.27	Max Peak	Horizontal	154	10	74.0	-5.7	Pass
#3	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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2.2.8 Metal Sheet

Aruba Networks Metal Sheet		Band-Edge Freq	Limit 74.0dB μ V/m	Limit 54.0dB μ V/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dB μ V/m	dB μ V/m	
802.11b	2412.00	2390.00	45.95	54.07	20
802.11b	2462.00	2483.50	51.00	58.62	20
802.11g	2412.00	2390.00	66.27	51.55	19
802.11g	2462.00	2483.50	69.27	53.76	20
802.11n HT-20	2412.00	2390.00	53.03	66.26	18.5
802.11n HT-20	2462.00	2483.50	68.02	53.75	20
802.11n HT-40	2422.00	2390.00	65.62	51.65	16
802.11n HT-40	2452.00	2483.50	52.13	66.31	15.5

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Equipment Configuration for Radiated - Lower Restricted Band-Edge Emissions

Antenna:	Metal Sheet	Variant:	802.11b
Antenna Gain (dBi):	1.90	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	1.00 MBit/s
Power Setting:	20	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2387.26	11.25	2.68	32.02	45.95	Max Avg	Horizontal	159	40	54.0	-8.1	Pass
#2	2387.91	19.36	2.68	32.03	54.07	Max Peak	Horizontal	159	40	74.0	-19.9	Pass
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Title: Aruba Networks, Inc. APIN0314 & APIN0315
To: FCC CFR 47 Part 15.247 (DTS) & IC RSS-247
Serial #: ARUB204-U5_Radiated Rev A
Issue Date: 8th April 2016
Page: 96 of 192

Equipment Configuration for Radiated - Lower Restricted Band-Edge Emissions			
Antenna:	Metal Sheet	Variant:	802.11g
Antenna Gain (dBi):	1.90	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	6.00 MBit/s
Power Setting:	19	Tested By:	JMH

Antenna:	Metal Sheet	**Variant:**	802.11g
Antenna Gain (dBi):	1.90	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	100
Channel Frequency (MHz):	2412.00	**Data Rate:**	6.00 MBit/s
Power Setting:	19	**Tested By:**	JMH

Test Measurement Results																																																				
<table border="1"><thead><tr><th>Num</th><th>Frequency MHz</th><th>Raw dBμV</th><th>Cable Loss</th><th>AF dB</th><th>Level dBμV/m</th><th>Measurement Type</th><th>Pol</th><th>Hgt cm</th><th>Azt Deg</th><th>Limit dBμV/m</th><th>Margin dB</th><th>Pass /Fail</th></tr></thead><tbody><tr><td>#1</td><td>2384.82</td><td>31.59</td><td>2.68</td><td>32.00</td><td>66.27</td><td>Max Peak</td><td>Horizontal</td><td>159</td><td>40</td><td>74.0</td><td>-7.7</td><td>Pass</td></tr><tr><td>#2</td><td>2386.18</td><td>16.86</td><td>2.68</td><td>32.01</td><td>51.55</td><td>Max Avg</td><td>Horizontal</td><td>159</td><td>40</td><td>54.0</td><td>-2.5</td><td>Pass</td></tr><tr><td>#3</td><td>2390.00</td><td>--</td><td>--</td><td>--</td><td>--</td><td>Band-Edge</td><td>--</td><td>--</td><td>--</td><td>--</td><td>--</td><td>--</td></tr></tbody></table>	Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	#1	2384.82	31.59	2.68	32.00	66.27	Max Peak	Horizontal	159	40	74.0	-7.7	Pass	#2	2386.18	16.86	2.68	32.01	51.55	Max Avg	Horizontal	159	40	54.0	-2.5	Pass	#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--
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Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail																																								
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Test Notes: EUT on 150cm table powered by POE, connected to laptop outside chamber

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To: FCC CFR 47 Part 15.247 (DTS) & IC RSS-247
Serial #: ARUB204-U5_Radiated Rev A
Issue Date: 8th April 2016
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Equipment Configuration for Radiated - Lower Restricted Band-Edge Emissions			
Antenna:	Metal Sheet	Variant:	802.11n HT-20
Antenna Gain (dBi):	1.90	Modulation:	OFDM
Beam Forming Gain (Y):	2.00	Duty Cycle (%):	100
Channel Frequency (MHz):	2412.00	Data Rate:	6.50 MBit/s
Power Setting:	18.5	Tested By:	JMH

Antenna:	Metal Sheet	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	1.90	**Modulation:**	OFDM
Beam Forming Gain (Y):	2.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	2412.00	**Data Rate:**	6.50 MBit/s
Power Setting:	18.5	**Tested By:**	JMH

Test Measurement Results																																																				
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#1	2390.00	18.30	2.69	32.04	53.03	Max Avg	Horizontal	159	40	54.0	-1.0	Pass																																								
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| **Test Measurement Results** |
| | Num | Frequency MHz | Raw dB μ V | Cable Loss | AF dB | Level dB μ V/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dB μ V/m | Margin dB | Pass /Fail | |-----|---------------|----------------|------------|-------|--------------------|------------------|------------|--------|---------|--------------------|-----------|------------| | #1 | 2390.00 | 18.30 | 2.69 | 32.04 | 53.03 | Max Avg | Horizontal | 159 | 40 | 54.0 | -1.0 | Pass | | #2 | 2390.00 | 31.53 | 2.69 | 32.04 | 66.26 | Max Peak | Horizontal | 159 | 40 | 74.0 | -7.7 | Pass | | #3 | 2390.00 | -- | -- | -- | -- | Band-Edge | -- | -- | -- | -- | -- | -- | |

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

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To: FCC CFR 47 Part 15.247 (DTS) & IC RSS-247
Serial #: ARUB204-U5_Radiated Rev A
Issue Date: 8th April 2016
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Equipment Configuration for Radiated - Lower Restricted Band-Edge Emissions	
------------------------------------------------------------------------------------	--

Antenna:	Metal Sheet	Variant:	802.11n HT-40
Antenna Gain (dBi):	1.90	Modulation:	OFDM
Beam Forming Gain (Y):	2.00	Duty Cycle (%):	100
Channel Frequency (MHz):	2422.00	Data Rate:	13.50 MBit/s
Power Setting:	16	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2387.39	30.92	2.68	32.02	65.62	Max Peak	Horizontal	159	40	74.0	-8.4	Pass
#2	2387.66	16.94	2.68	32.03	51.65	Max Avg	Horizontal	159	40	54.0	-2.4	Pass
#3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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To: FCC CFR 47 Part 15.247 (DTS) & IC RSS-247
Serial #: ARUB204-U5_Radiated Rev A
Issue Date: 8th April 2016
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Equipment Configuration for Radiated - Upper Restricted Band-Edge Emissions	
-----------------------------------------------------------------------------	--

Antenna:	Metal Sheet	Variant:	802.11b
Antenna Gain (dBi):	1.90	Modulation:	CCK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	1.00 MBit/s
Power Setting:	20	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#1	2483.50	15.90	2.73	32.37	51.00	Max Avg	Horizontal	161	317	54.0	-3.0	Pass
#3	2484.03	23.52	2.73	32.37	58.62	Max Peak	Horizontal	161	317	74.0	-15.4	Pass
#2	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Issue Date: 8th April 2016
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Equipment Configuration for Radiated - Upper Restricted Band-Edge Emissions	
-----------------------------------------------------------------------------	--

Antenna:	Metal Sheet	Variant:	802.11g
Antenna Gain (dBi):	1.90	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	6.00 MBit/s
Power Setting:	20	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#2	2486.25	34.17	2.73	32.37	69.27	Max Peak	Horizontal	161	317	74.0	-4.7	Pass
#3	2486.29	18.66	2.73	32.37	53.76	Max Avg	Horizontal	161	317	54.0	-0.2	Pass
#1	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated - Upper Restricted Band-Edge Emissions	
-----------------------------------------------------------------------------	--

Antenna:	Metal Sheet	Variant:	802.11n HT-20
Antenna Gain (dBi):	1.90	Modulation:	OFDM
Beam Forming Gain (Y):	2.00	Duty Cycle (%):	100
Channel Frequency (MHz):	2462.00	Data Rate:	6.50 MBit/s
Power Setting:	20	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
#2	2483.88	32.92	2.73	32.37	68.02	Max Peak	Horizontal	161	317	74.0	-6.0	Pass
#3	2485.11	18.65	2.73	32.37	53.75	Max Avg	Horizontal	161	317	54.0	-0.3	Pass
#1	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Equipment Configuration for Radiated - Upper Restricted Band-Edge Emissions			
Antenna:	Metal Sheet	Variant:	802.11n HT-40
Antenna Gain (dBi):	1.90	Modulation:	OFDM
Beam Forming Gain (Y):	2.00	Duty Cycle (%):	100
Channel Frequency (MHz):	2452.00	Data Rate:	13.50 MBit/s
Power Setting:	15.5	Tested By:	JMH

Antenna:	Metal Sheet	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	1.90	**Modulation:**	OFDM
Beam Forming Gain (Y):	2.00	**Duty Cycle (%):**	100
Channel Frequency (MHz):	2452.00	**Data Rate:**	13.50 MBit/s
Power Setting:	15.5	**Tested By:**	JMH

Test Measurement Results																																																				
<table border="1"><thead><tr><th>Num</th><th>Frequency MHz</th><th>Raw dBμV</th><th>Cable Loss</th><th>AF dB</th><th>Level dBμV/m</th><th>Measurement Type</th><th>Pol</th><th>Hgt cm</th><th>Azt Deg</th><th>Limit dBμV/m</th><th>Margin dB</th><th>Pass /Fail</th></tr></thead><tbody><tr><td>#1</td><td>2483.50</td><td>17.03</td><td>2.73</td><td>32.37</td><td>52.13</td><td>Max Avg</td><td>Horizontal</td><td>161</td><td>317</td><td>54.0</td><td>-1.9</td><td>Pass</td></tr><tr><td>#3</td><td>2483.68</td><td>31.21</td><td>2.73</td><td>32.37</td><td>66.31</td><td>Max Peak</td><td>Horizontal</td><td>161</td><td>317</td><td>74.0</td><td>-7.7</td><td>Pass</td></tr><tr><td>#2</td><td>2483.50</td><td>--</td><td>--</td><td>--</td><td>--</td><td>Band-Edge</td><td>--</td><td>--</td><td>--</td><td>--</td><td>--</td><td>--</td></tr></tbody></table>	Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	#1	2483.50	17.03	2.73	32.37	52.13	Max Avg	Horizontal	161	317	54.0	-1.9	Pass	#3	2483.68	31.21	2.73	32.37	66.31	Max Peak	Horizontal	161	317	74.0	-7.7	Pass	#2	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--
Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail																																								
#1	2483.50	17.03	2.73	32.37	52.13	Max Avg	Horizontal	161	317	54.0	-1.9	Pass																																								
#3	2483.68	31.21	2.73	32.37	66.31	Max Peak	Horizontal	161	317	74.0	-7.7	Pass																																								
#2	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--																																								

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

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Appendix A - Graphical Images

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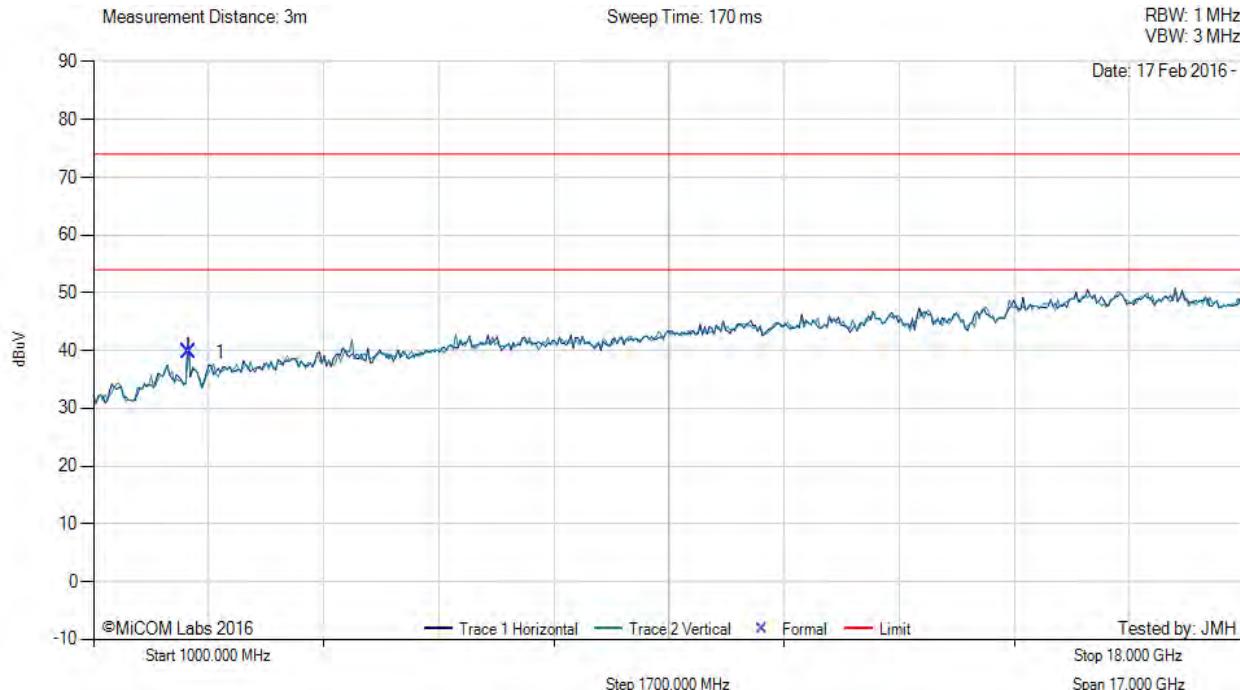
A.1 Restricted Band Emissions

A.1.1 AP-ANT-13B



RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11b, Test Freq: 2412.00 MHz, Antenna: AP-ANT-13B, Power Setting: 21



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2414.00	48.82	2.70	-11.79	39.73	Fundamental	Horizontal	151	1	--	--	

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

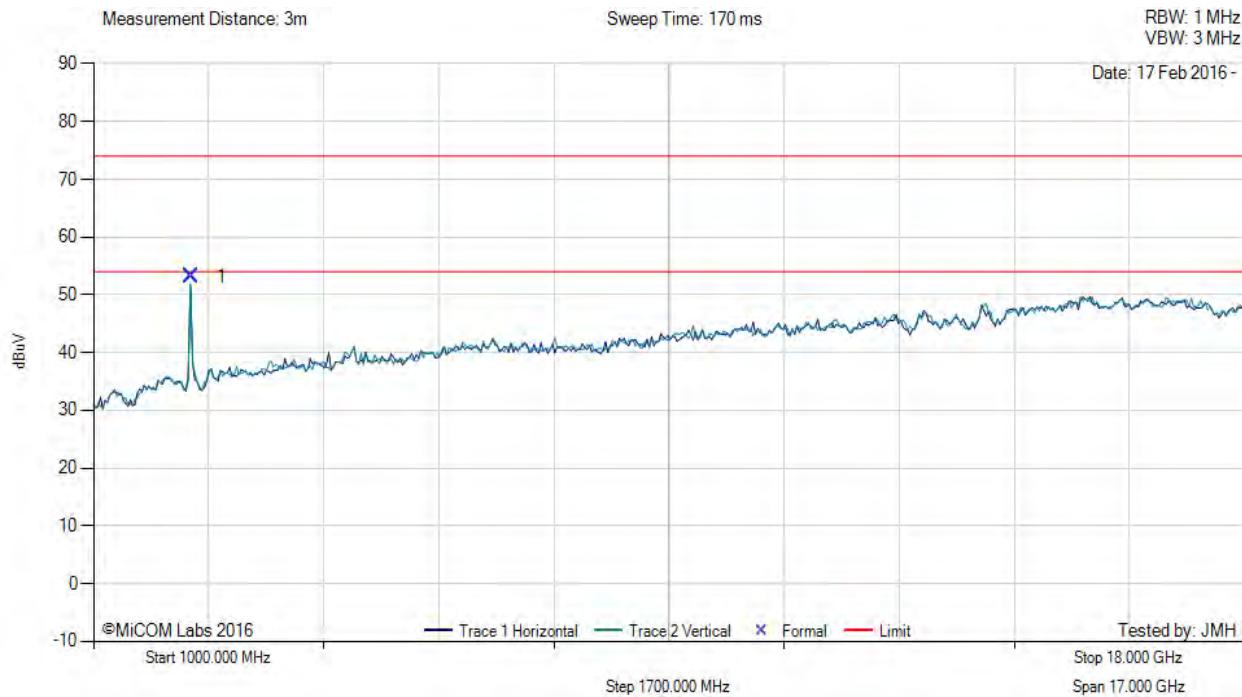
[back to matrix](#)

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11b, Test Freq: 2437.00 MHz, Antenna: AP-ANT-13B, Power Setting: 21



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2438.03	62.21	2.72	-11.73	53.20	Fundamental	Vertical	151	1	--	--	

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

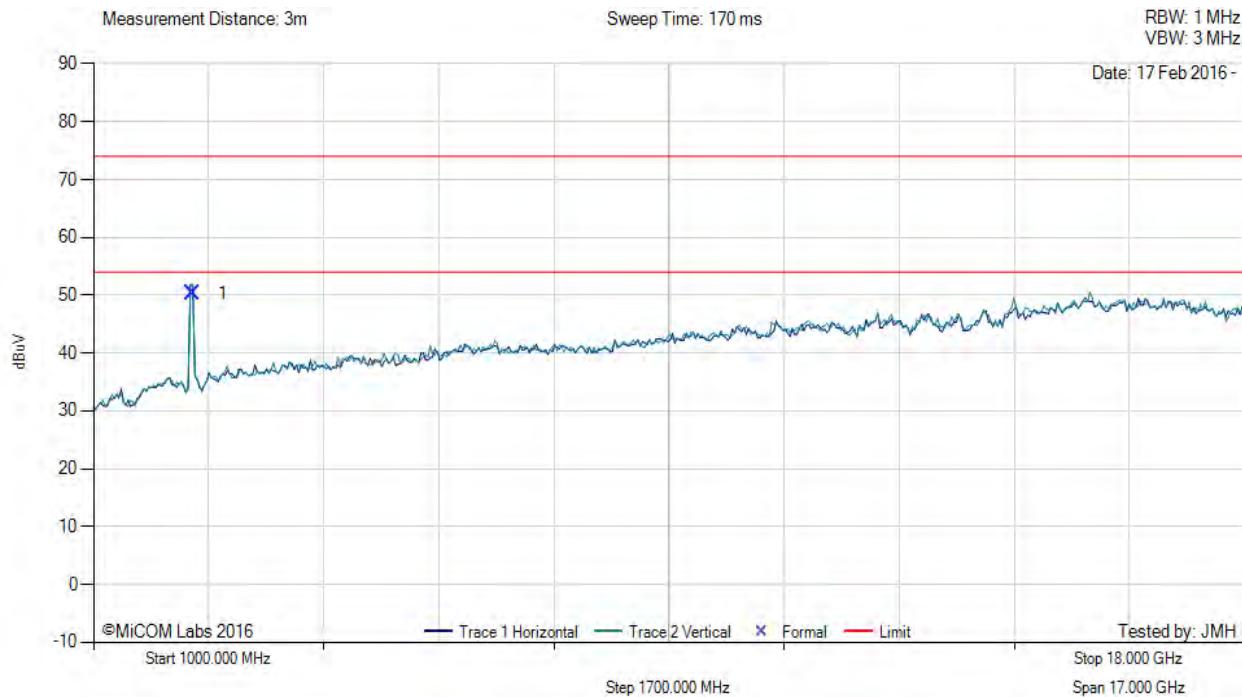
[back to matrix](#)

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11b, Test Freq: 2462.00 MHz, Antenna: AP-ANT-13B, Power Setting: 19.5



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2460.96	59.26	2.74	-11.68	50.32	Fundamental	Vertical	101	0	--	--	

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

[back to matrix](#)

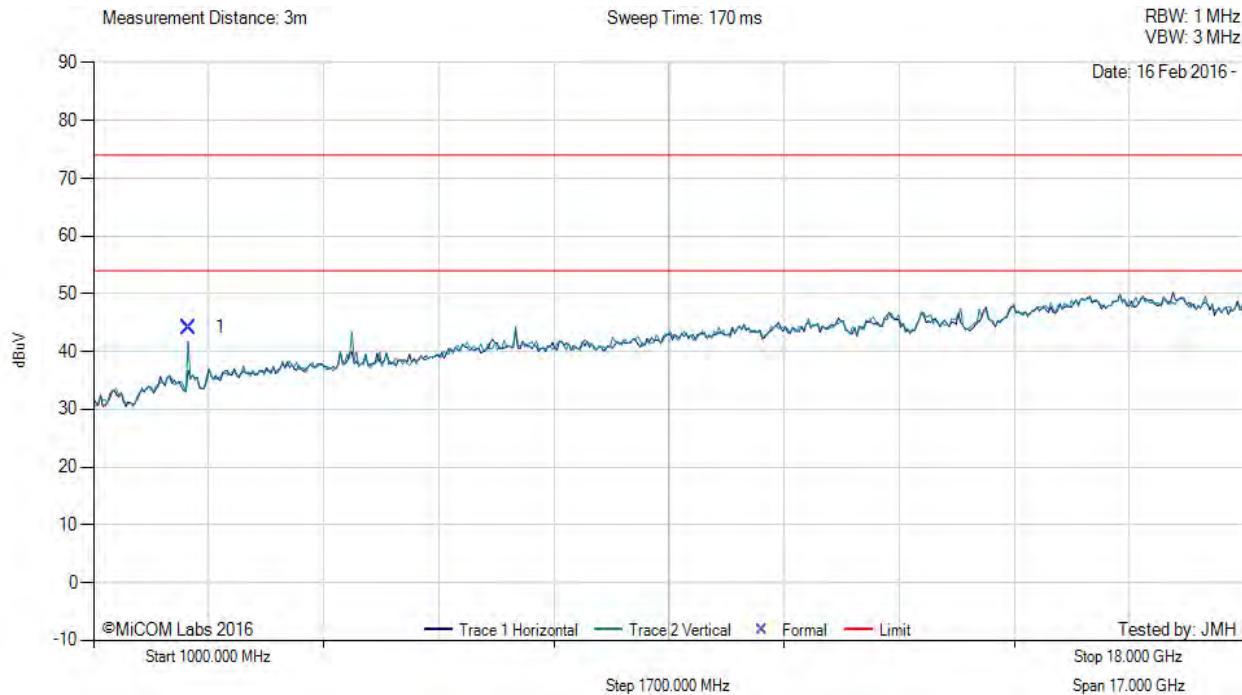
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A.1.2 AP-ANT-19



RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11b, Test Freq: 2412.00 MHz, Antenna: AP-ANT-19, Power Setting: 20



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2412.92	53.26	2.70	-11.79	44.17	Fundamental	Vertical	151	0	--	--	

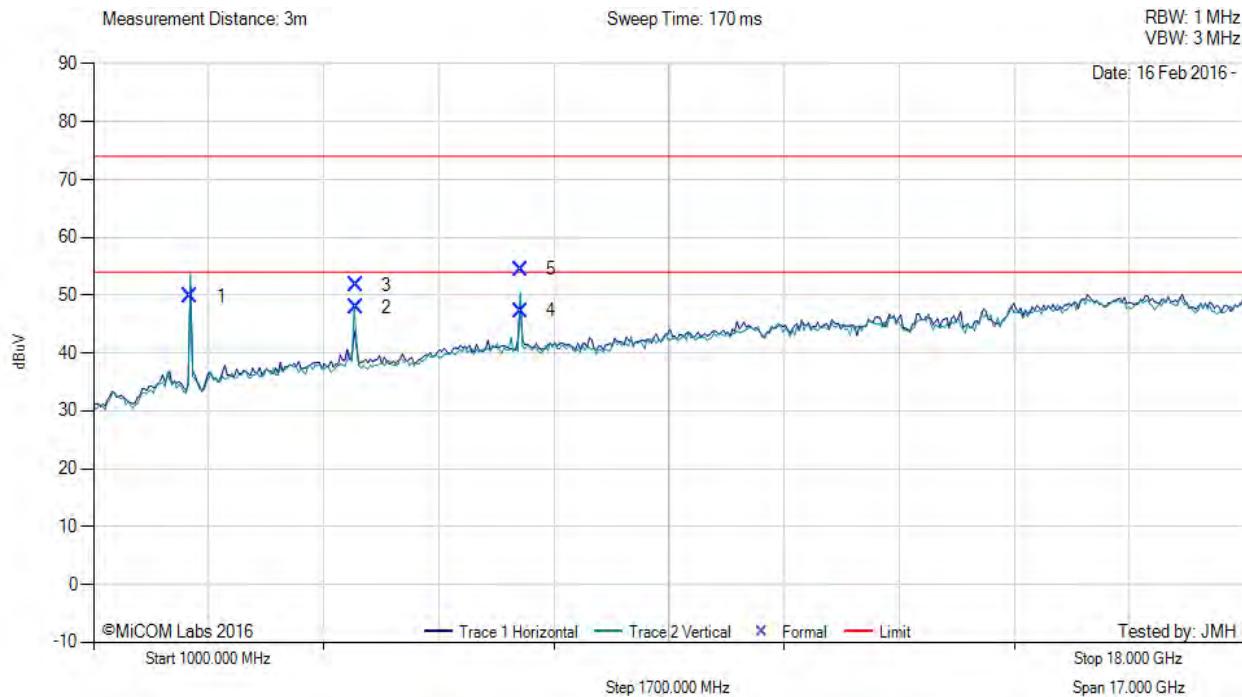
Test Notes: EUT on 150cm table powered by POE. Connected to laptop outside chamber.

[back to matrix](#)

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11b, Test Freq: 2437.00 MHz, Antenna: AP-ANT-19, Power Setting: 21



Num	Frequency MHz	Raw dB _{PtV}	Cable Loss	AF dB	Level dB _{PtV/m}	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _{PtV/m}	Margin dB	Pass /Fail
1	2434.35	58.77	2.71	-11.74	49.74	Fundamental	Vertical	151	0	--	--	
2	4874.01	55.57	3.53	-11.24	47.86	Max Avg	Vertical	149	284	54.0	-6.1	Pass
3	4874.01	59.47	3.53	-11.24	51.76	Max Peak	Vertical	149	284	74.0	-22.2	Pass
4	7311.89	50.33	4.24	-7.29	47.28	Max Avg	Vertical	151	315	54.0	-6.7	Pass
5	7311.89	57.50	4.24	-7.29	54.45	Max Peak	Vertical	151	315	74.0	-19.6	Pass

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

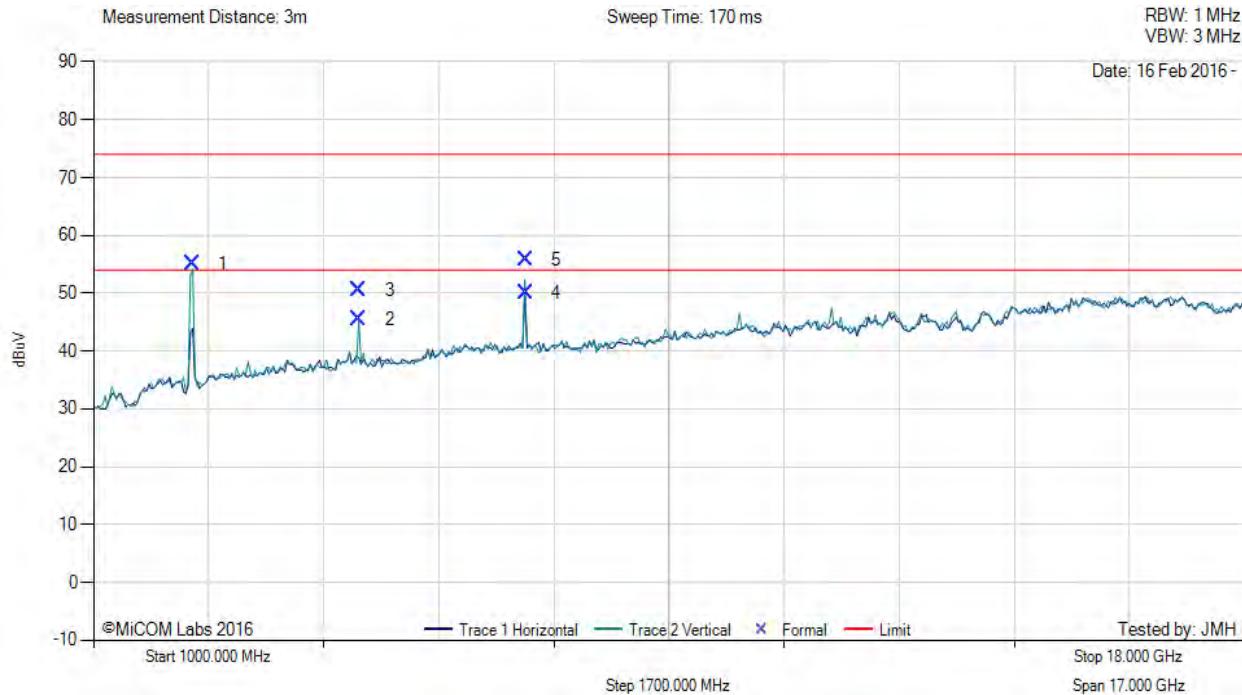
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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11b, Test Freq: 2462.00 MHz, Antenna: AP-ANT-19, Power Setting: 19



Num	Frequency MHz	Raw dB _{PtV}	Cable Loss	AF dB	Level dB _{PtV/m}	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _{PtV/m}	Margin dB	Pass /Fail
1	2462.89	64.08	2.74	-11.67	55.15	Fundamental	Vertical	151	0	--	--	
2	4924.00	53.29	3.58	-11.38	45.49	Max Avg	Vertical	184	283	54.0	-8.5	Pass
3	4924.00	58.38	3.58	-11.38	50.58	Max Peak	Vertical	184	283	74.0	-23.4	Pass
4	7385.13	53.00	4.29	-7.17	50.12	Max Avg	Vertical	143	20	54.0	-3.9	Pass
5	7385.13	58.66	4.29	-7.17	55.78	Max Peak	Vertical	143	20	74.0	-18.2	Pass

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

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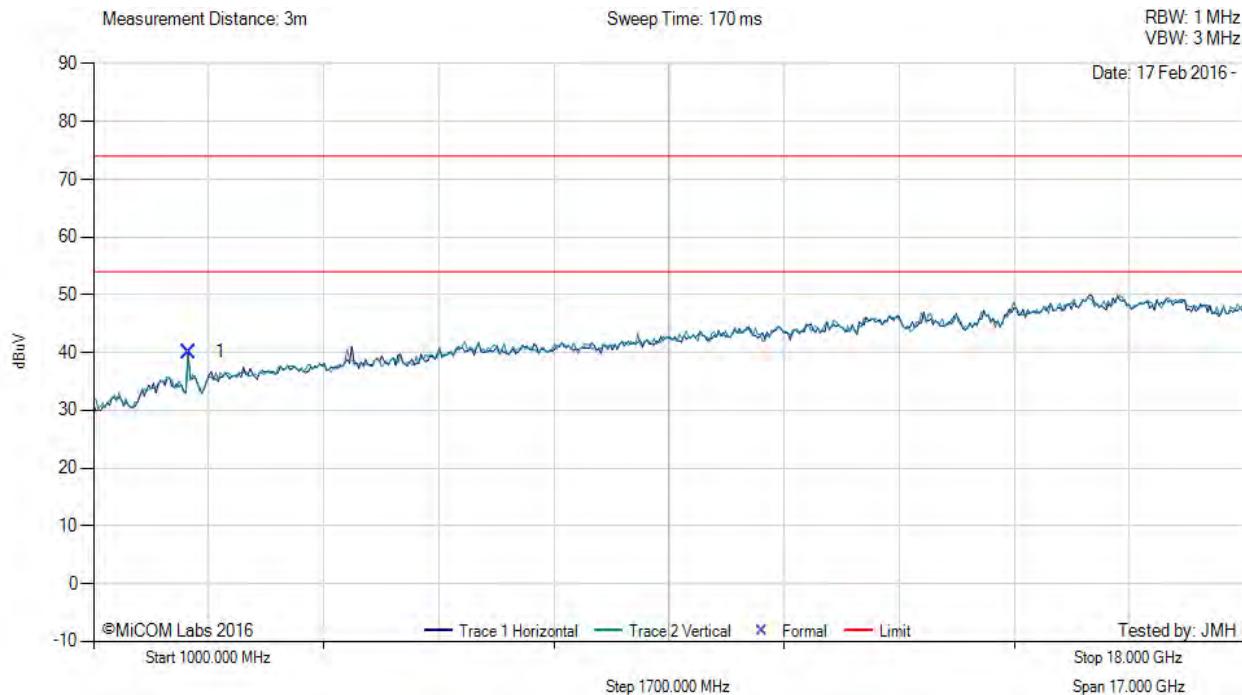
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A.1.3 AP-ANT-1W



RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11b, Test Freq: 2412.00 MHz, Antenna: AP-ANT-1W, Power Setting: 20



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2414.56	49.16	2.70	-11.79	40.07	Fundamental	Horizontal	101	0	--	--	

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

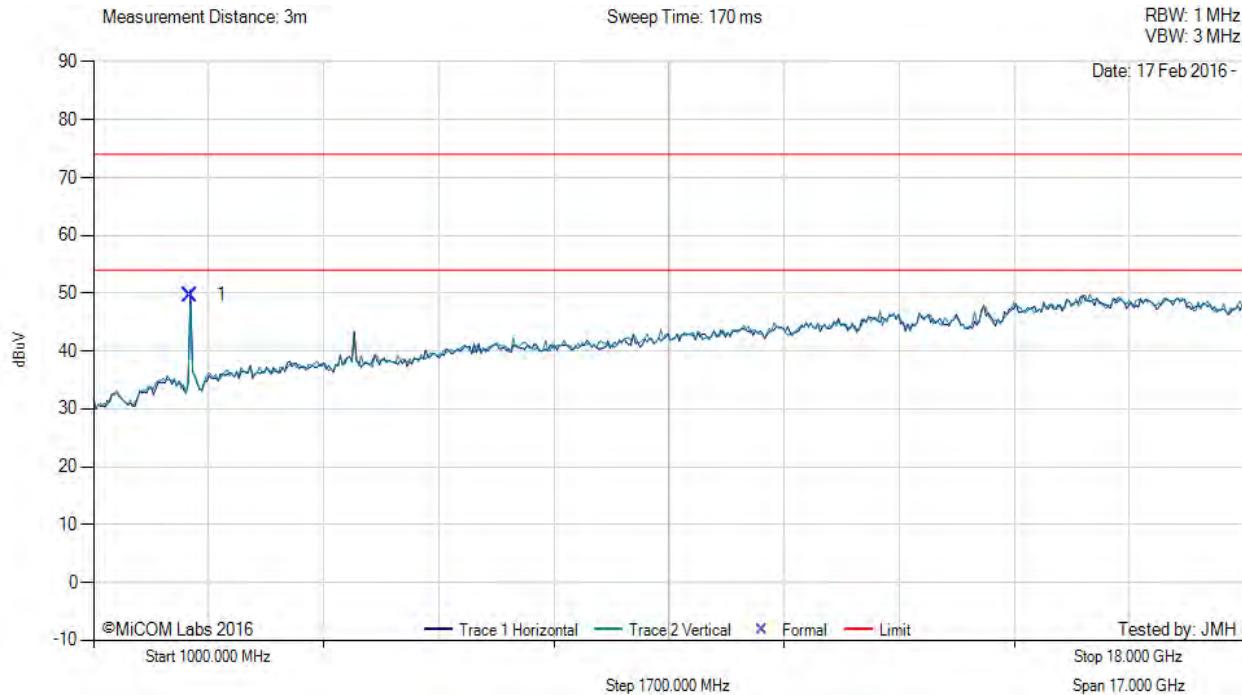
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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11b, Test Freq: 2437.00 MHz, Antenna: AP-ANT-1W, Power Setting: 21



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2435.07	58.74	2.72	-11.74	49.72	Fundamental	Horizontal	101	1	--	--	

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

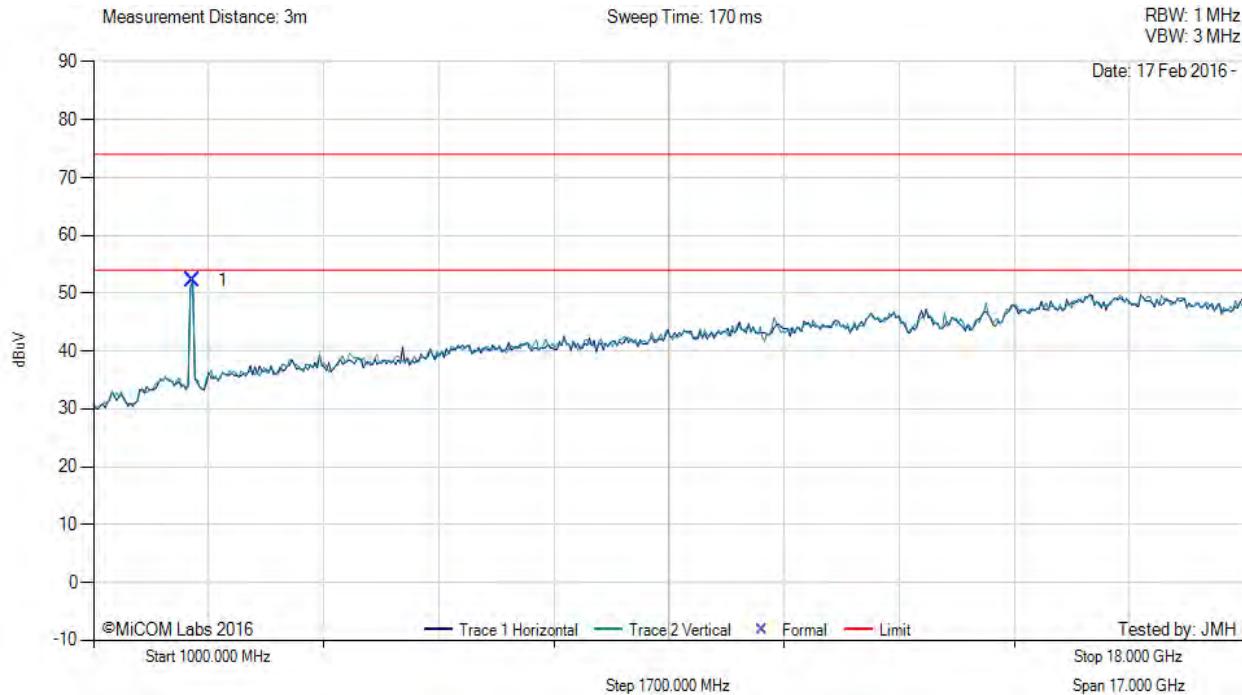
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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11b, Test Freq: 2462.00 MHz, Antenna: AP-ANT-1W, Power Setting: 21



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2462.94	61.10	2.74	-11.67	52.17	Fundamental	Horizontal	101	0	--	--	

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

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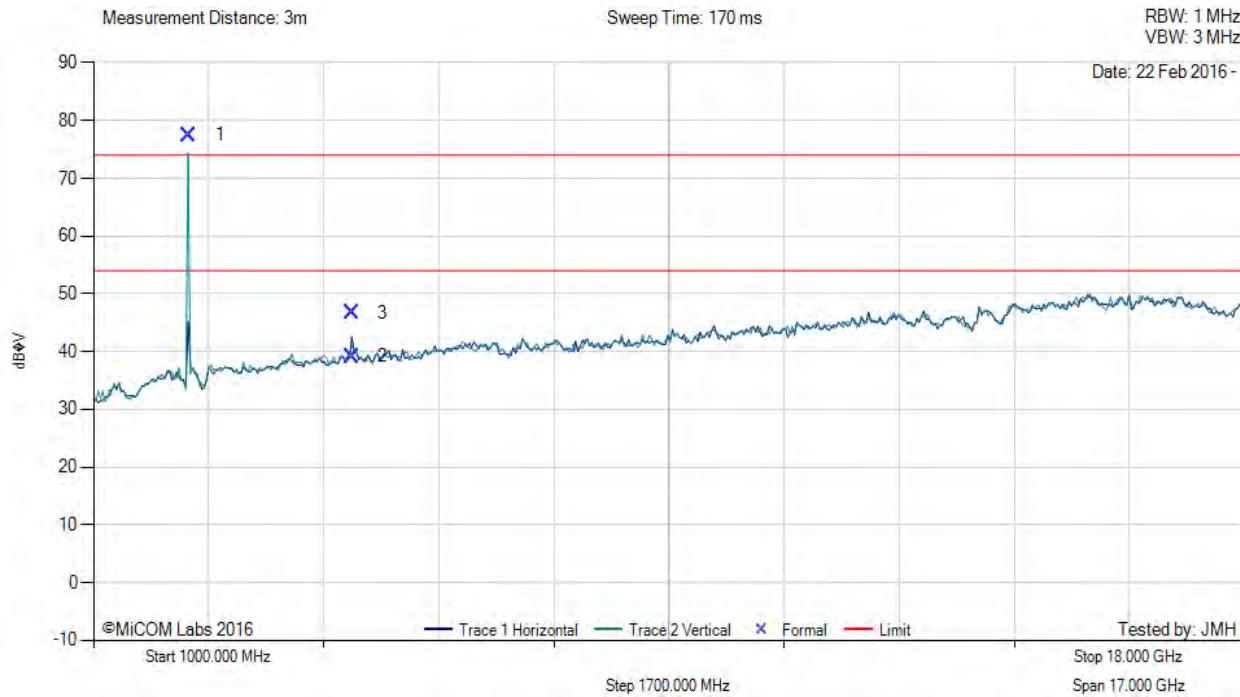
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A.1.4 AP-ANT-20W



RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11b, Test Freq: 2412.00 MHz, Antenna: AP-ANT-20W, Power Setting: 20



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2413.06	86.53	2.70	-11.79	77.44	Fundamental	Vertical	151	264	--	--	
2	4824.03	46.76	3.54	-11.15	39.15	Max Avg	Horizontal	119	299	54.0	-14.9	Pass
3	4824.03	54.32	3.54	-11.15	46.71	Max Peak	Horizontal	119	299	74.0	-27.3	Pass

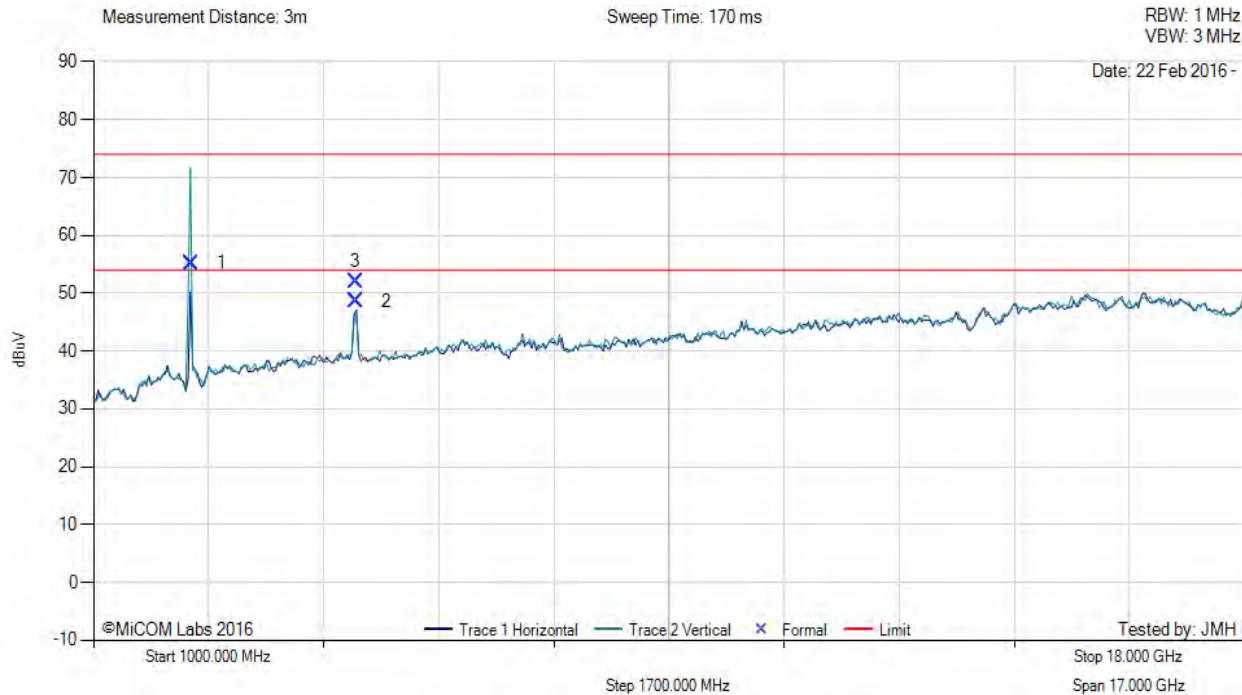
Test Notes: EUT on 150cm table, powered by POE. Connected to laptop outside chamber.

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11b, Test Freq: 2437.00 MHz, Antenna: AP-ANT-20W, Power Setting: 21



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2436.07	64.23	2.72	-11.73	55.22	Fundamental	Vertical	151	360	--	--	
2	4873.93	56.29	3.53	-11.24	48.58	Max Avg	Horizontal	103	338	54.0	-5.4	Pass
3	4873.93	59.71	3.53	-11.24	52.00	Max Peak	Horizontal	103	338	74.0	-22.0	Pass

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

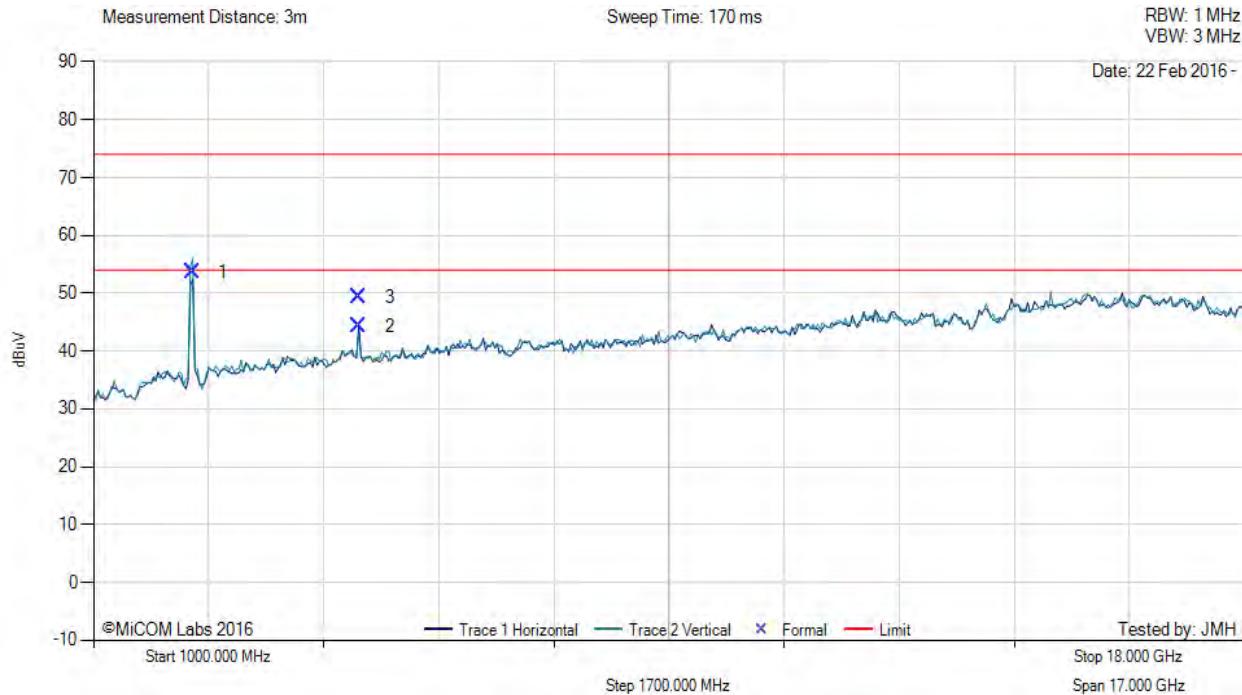
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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11b, Test Freq: 2462.00 MHz, Antenna: AP-ANT-20W, Power Setting: 21

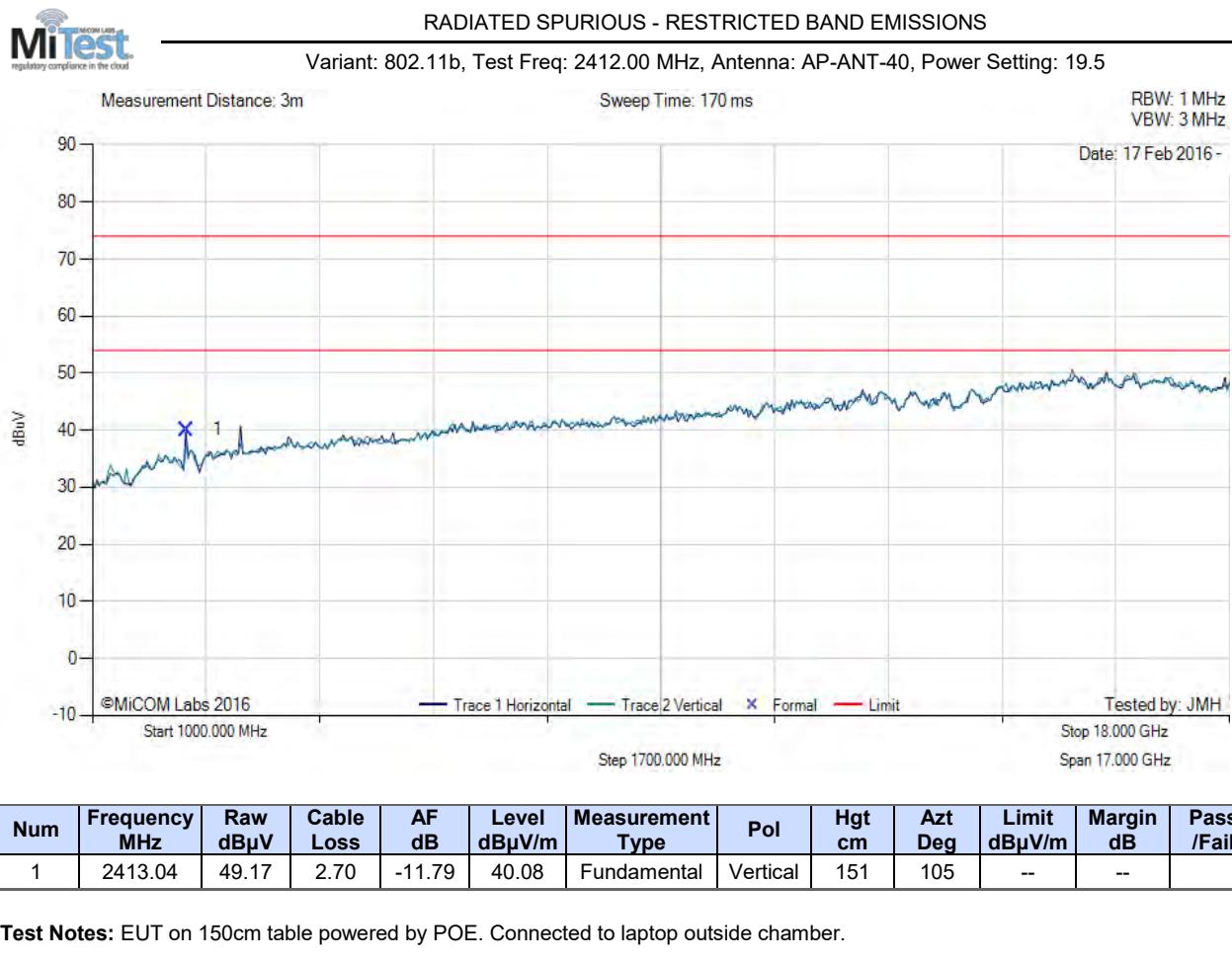


Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2462.89	62.54	2.74	-11.67	53.61	Fundamental	Vertical	151	66	--	--	
2	4923.97	52.05	3.58	-11.38	44.25	Max Avg	Horizontal	120	36	54.0	-9.8	Pass
3	4923.97	57.11	3.58	-11.38	49.31	Max Peak	Horizontal	120	36	74.0	-24.7	Pass

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

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A.1.5 AP-ANT-40

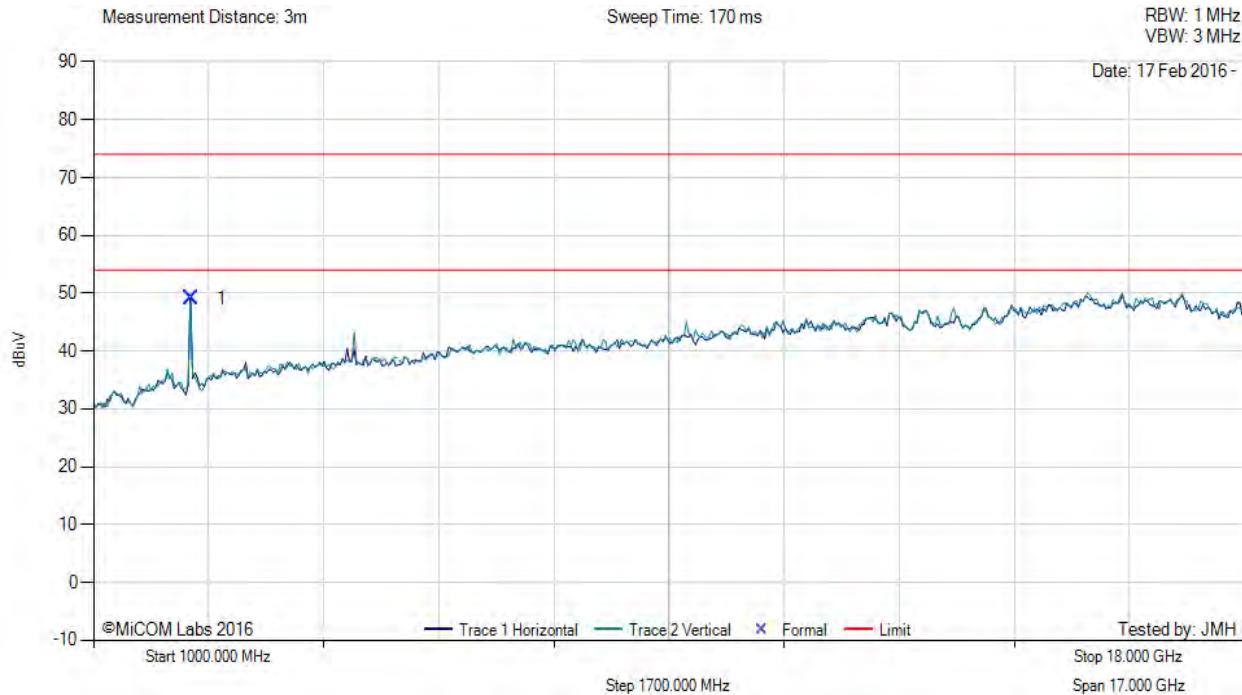


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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11b, Test Freq: 2437.00 MHz, Antenna: AP-ANT-40, Power Setting: 21



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2437.91	58.11	2.72	-11.73	49.10	Fundamental	Horizontal	151	23	--	--	

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

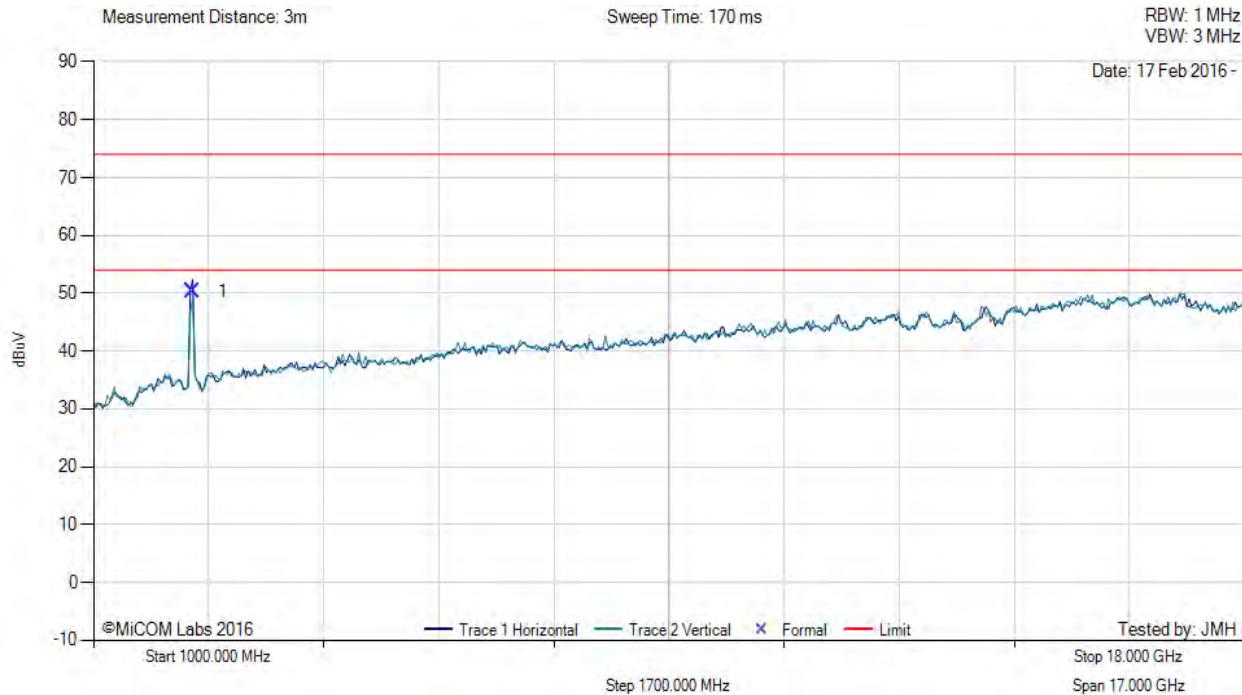
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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11b, Test Freq: 2462.00 MHz, Antenna: AP-ANT-40, Power Setting: 20



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2462.89	59.25	2.74	-11.67	50.32	Fundamental	Horizontal	101	29	--	--	

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

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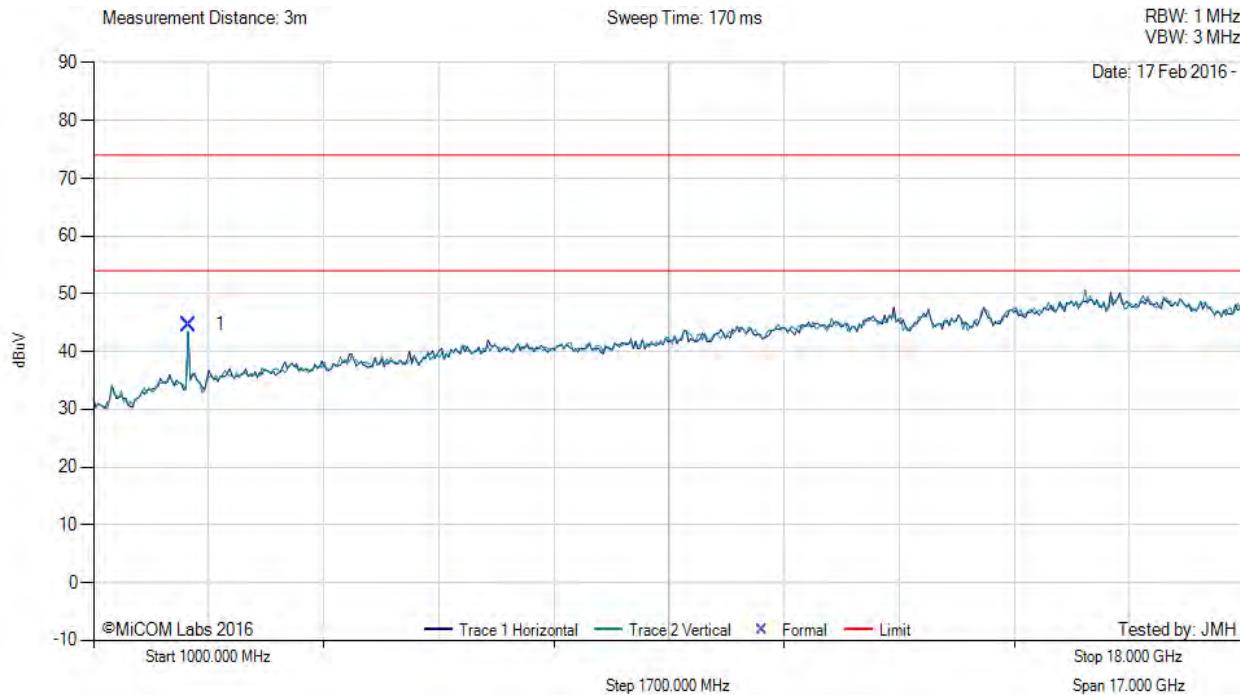
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A.1.6 AP-ANT-45



RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11b, Test Freq: 2412.00 MHz, Antenna: AP-ANT-45, Power Setting: 21



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2412.84	53.78	2.70	-11.79	44.69	Fundamental	Horizontal	151	76	--	--	

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

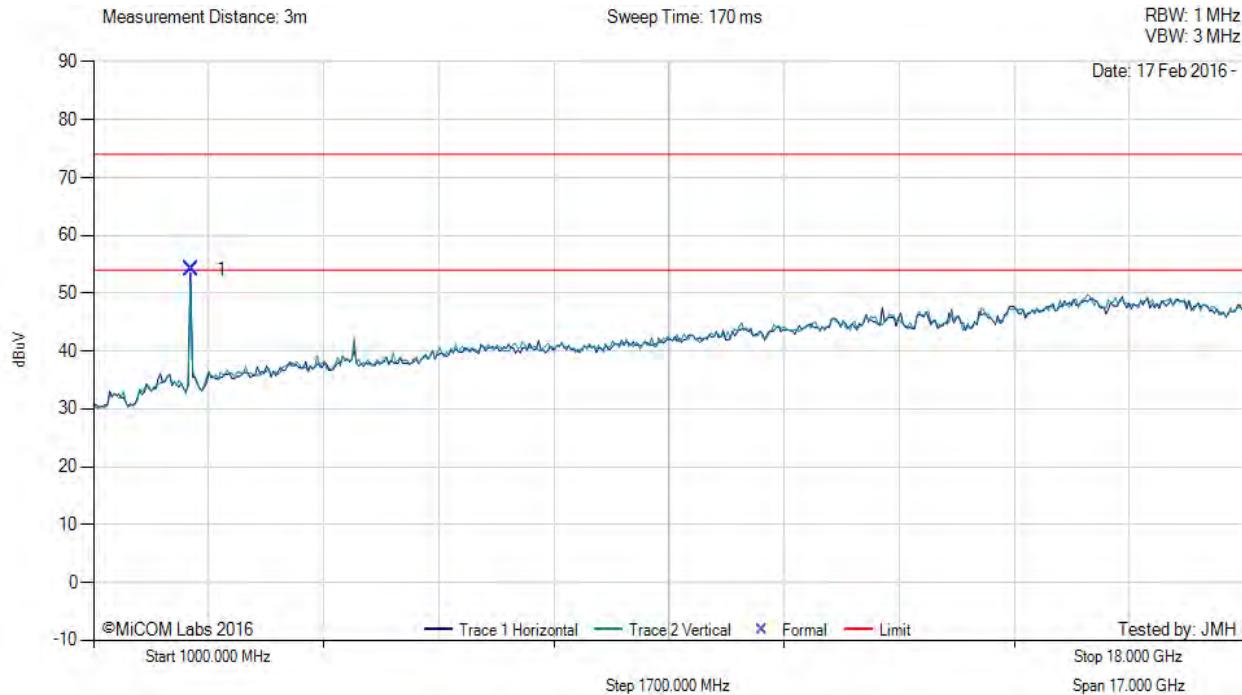
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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11b, Test Freq: 2437.00 MHz, Antenna: AP-ANT-45, Power Setting: 21



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2437.95	63.10	2.72	-11.73	54.09	Fundamental	Horizontal	101	0	--	--	

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

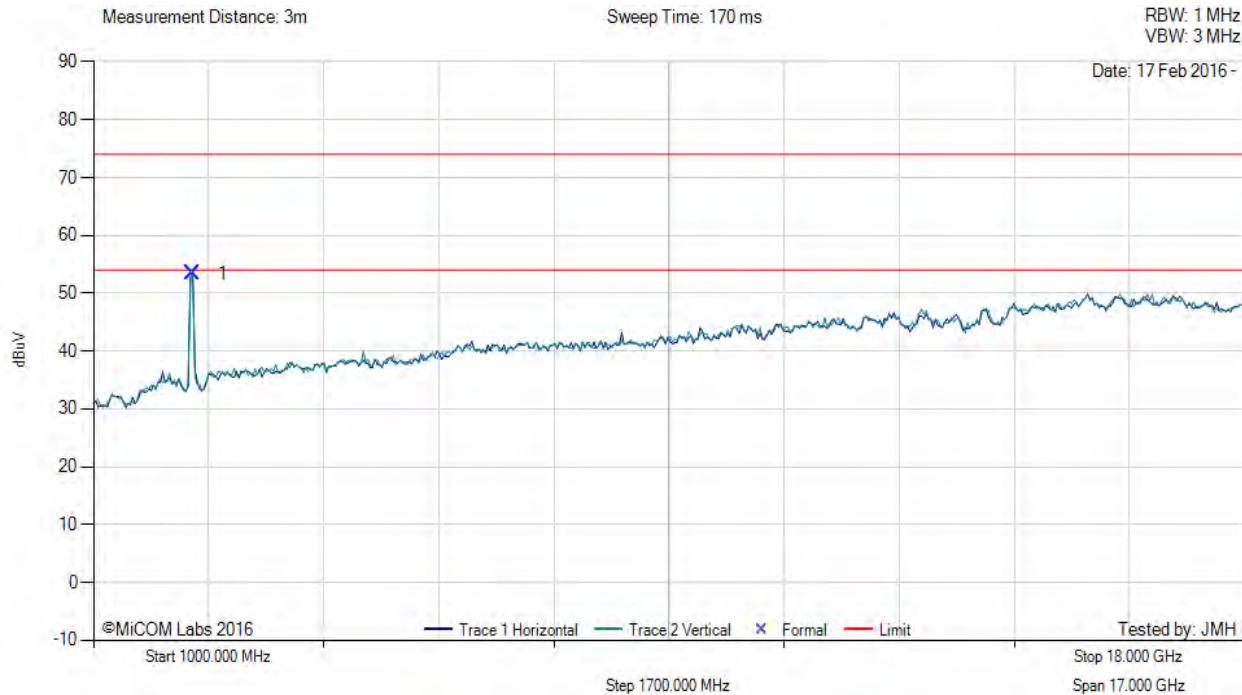
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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11b, Test Freq: 2462.00 MHz, Antenna: AP-ANT-45, Power Setting: 19.5



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2464.57	62.41	2.73	-11.67	53.47	Fundamental	Horizontal	101	11	--	--	

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

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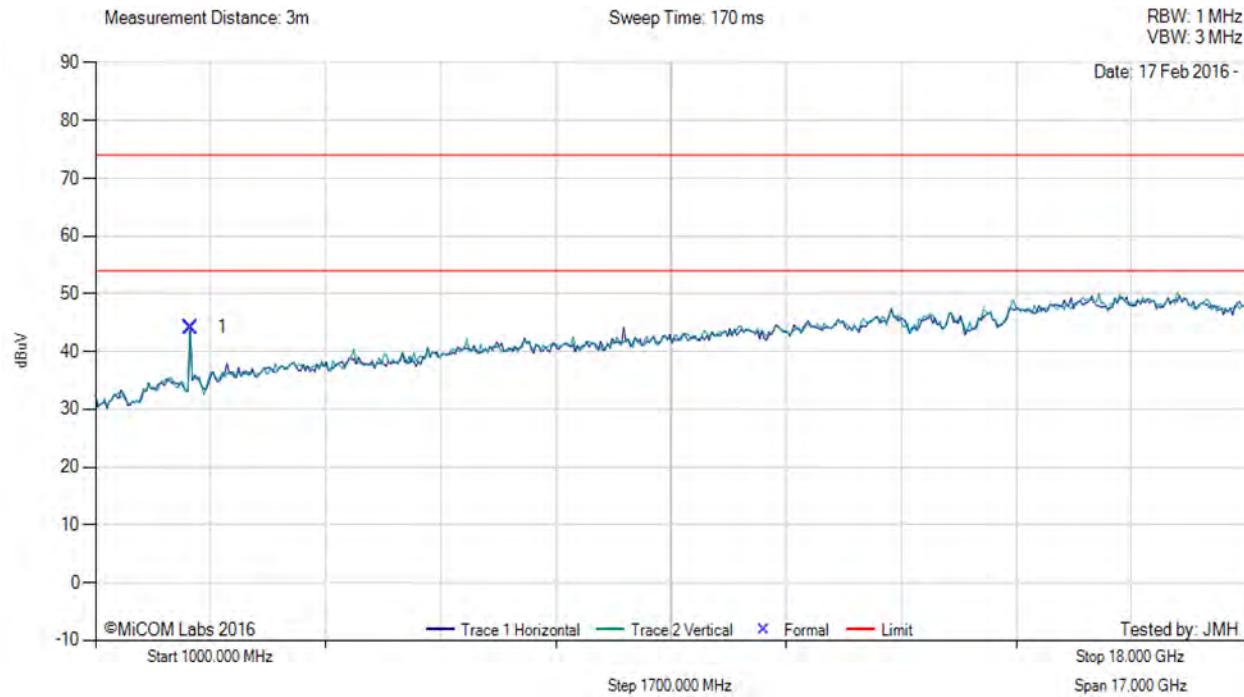
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A.1.7 AP-ANT-48



RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11b, Test Freq: 2412.00 MHz, Antenna: AP-ANT-48, Power Setting: 21



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2414.00	53.31	2.70	-11.79	44.22	Fundamental	Vertical	101	1	--	--	

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

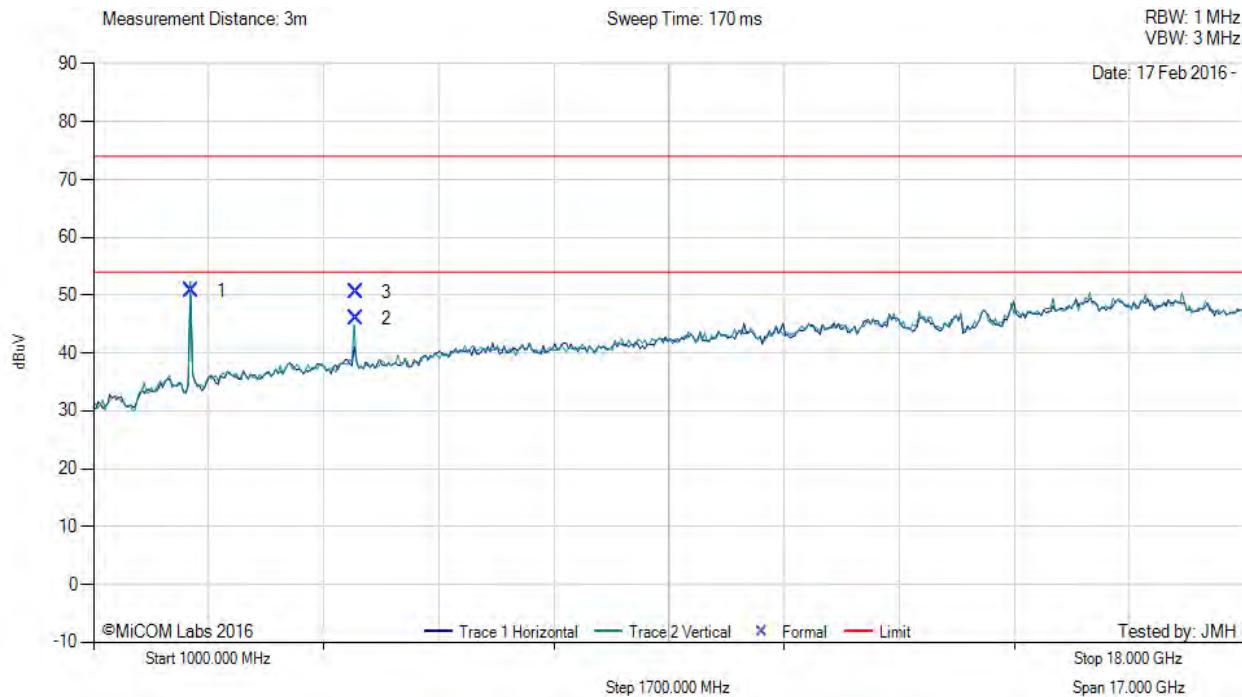
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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11b, Test Freq: 2437.00 MHz, Antenna: AP-ANT-48, Power Setting: 21



Num	Frequency MHz	Raw dB _{PtV}	Cable Loss	AF dB	Level dB _{PtV/m}	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _{PtV/m}	Margin dB	Pass /Fail
1	2436.11	59.70	2.72	-11.73	50.69	Fundamental	Vertical	151	1	--	--	
2	4874.02	53.62	3.53	-11.24	45.91	Max Avg	Vertical	176	59	54.0	-8.1	Pass
3	4874.02	58.26	3.53	-11.24	50.55	Max Peak	Vertical	176	59	74.0	-23.5	Pass

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

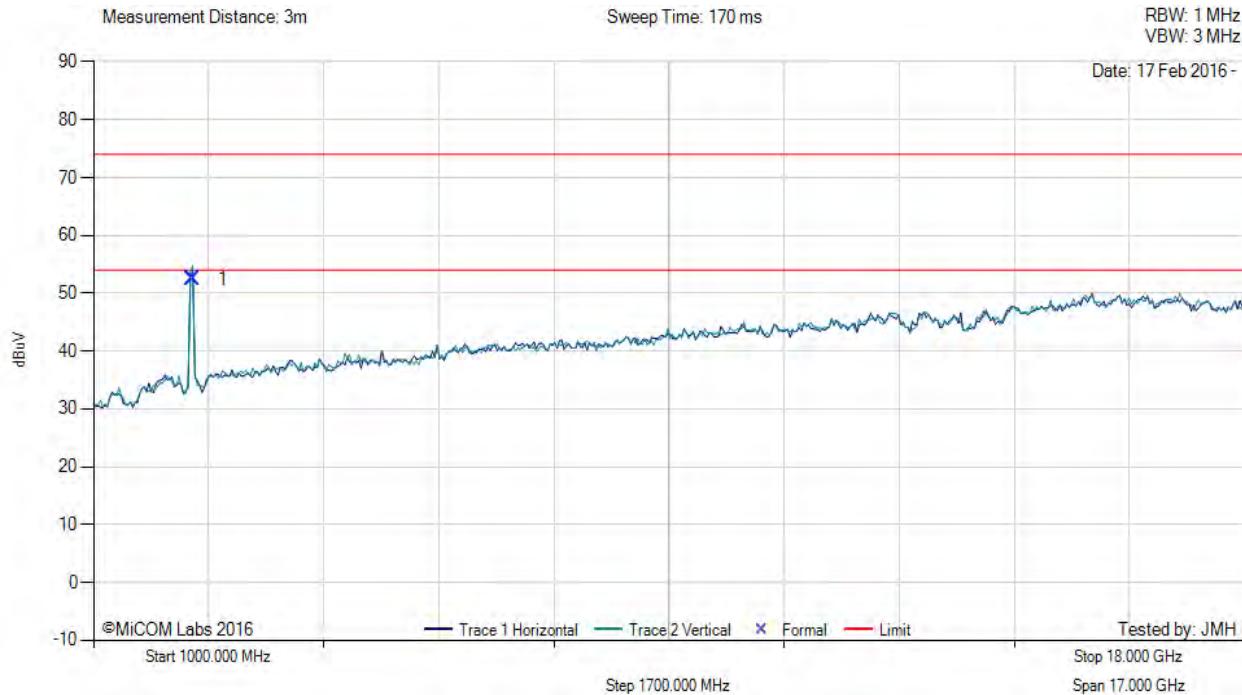
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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11b, Test Freq: 2462.00 MHz, Antenna: AP-ANT-48, Power Setting: 20



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2462.97	61.43	2.74	-11.67	52.50	Fundamental	Vertical	101	0	--	--	

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

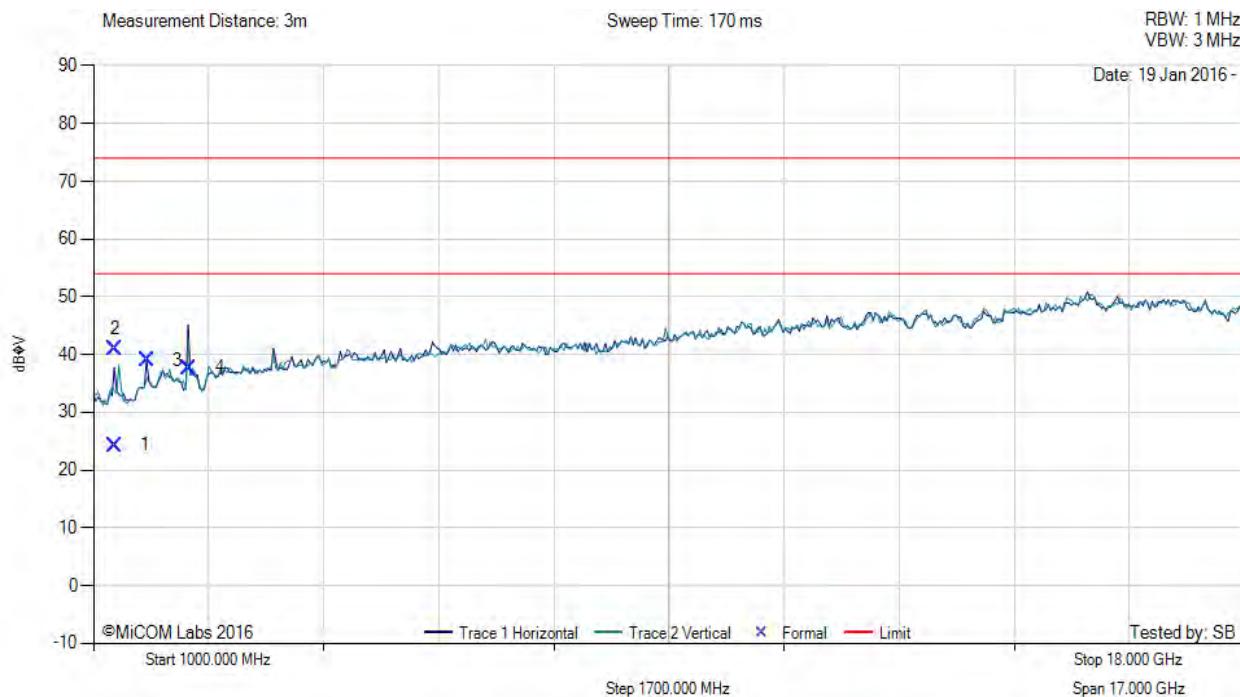
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A.1.8 Metal Sheet



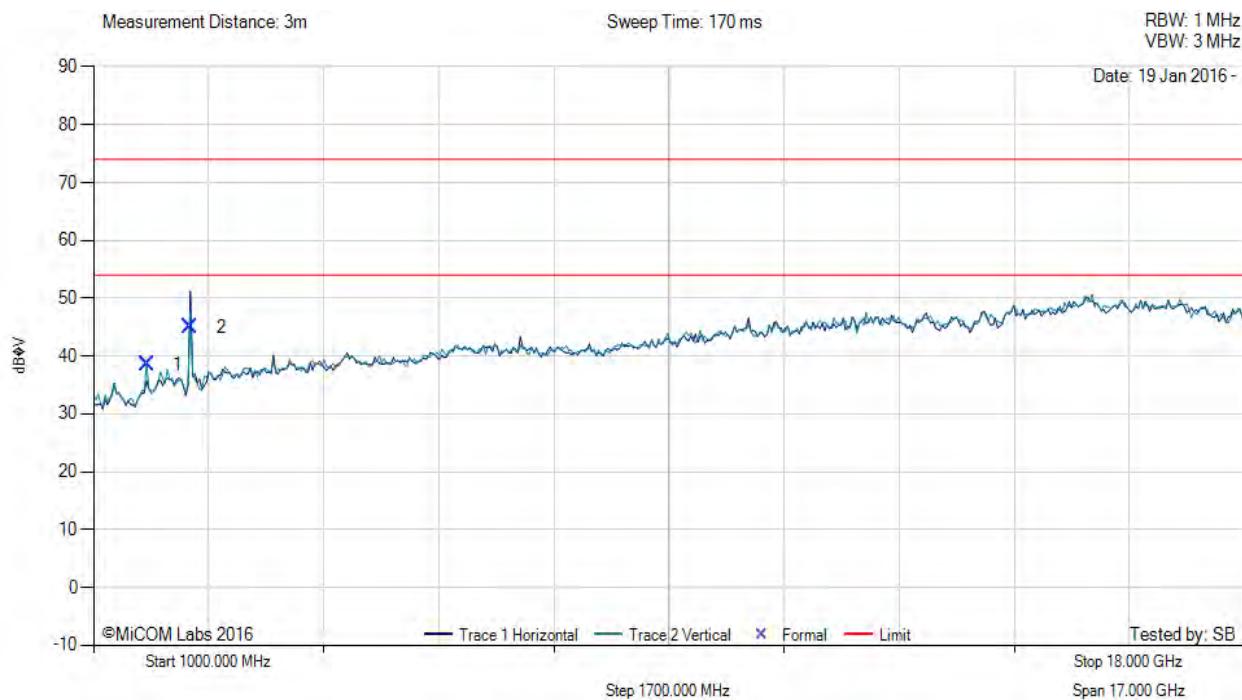
Variant: 802.11b, Test Freq: 2412.00 MHz, Antenna: Metal Sheet, Power Setting: 21



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	1319.95	36.98	2.23	-14.92	24.29	Max Avg	Horizontal	163	114	54.0	-29.7	Pass
2	1319.95	53.61	2.23	-14.92	40.92	Max Peak	Horizontal	163	114	74.0	-33.1	Pass
3	1792.46	50.33	2.46	-13.76	39.03	Peak (NRB)	Vertical	138	169	--	--	Pass
4	2413.98	46.84	2.70	-11.79	37.75	Fundamental	Vertical	148	138	--	--	Pass

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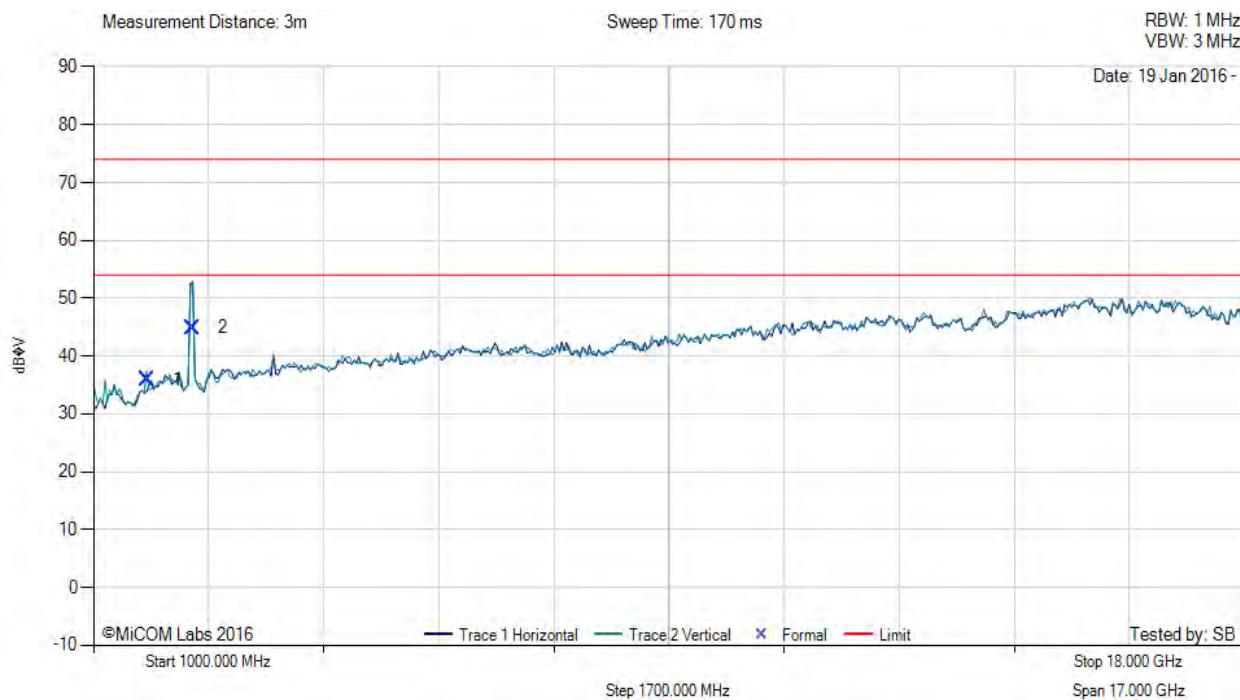
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Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	1794.05	49.83	2.46	-13.76	38.53	Peak (NRB)	Vertical	138	169	--	--	Pass
2	2434.95	54.06	2.72	-11.74	45.04	Fundamental	Horizontal	151	169	--	--	

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Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	1799.17	47.11	2.47	-13.67	35.91	Peak (NRB)	Vertical	148	1	--	--	Pass
2	2462.90	53.79	2.74	-11.67	44.86	Fundamental	Horizontal	151	1	--	--	

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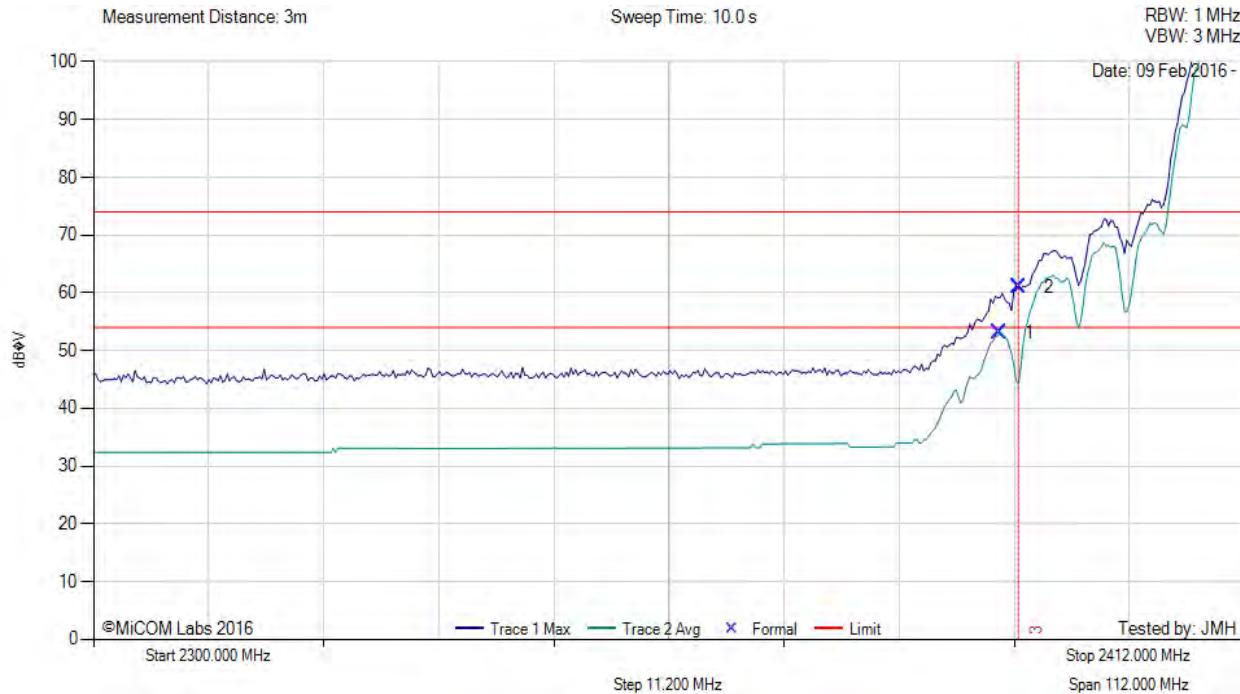
A.2 Restricted Band-Edge Emissions

A.2.1 AP-ANT-13B



RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11b, Test Freq: 2412.00 MHz, Antenna: AP-ANT-13B, Power Setting: 21



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2388.11	18.37	2.68	32.03	53.08	Max Avg	Horizontal	181	7	54.0	-0.9	Pass
2	2390.00	26.31	2.69	32.04	61.04	Max Peak	Horizontal	181	7	74.0	-13.0	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

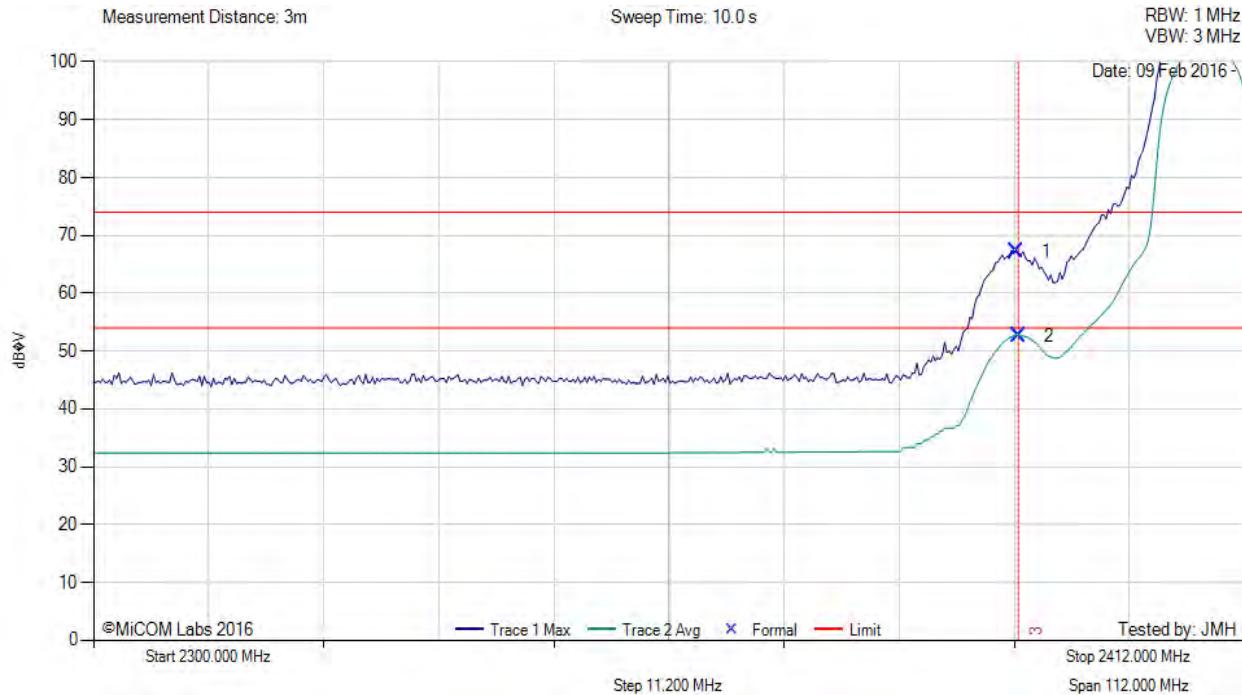
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber.

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RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11g, Test Freq: 2412.00 MHz, Antenna: AP-ANT-13B, Power Setting: 17



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2389.78	32.57	2.69	32.04	67.30	Max Peak	Horizontal	181	7	74.0	-6.7	Pass
2	2390.00	17.94	2.69	32.04	52.67	Max Avg	Horizontal	181	7	54.0	-1.3	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

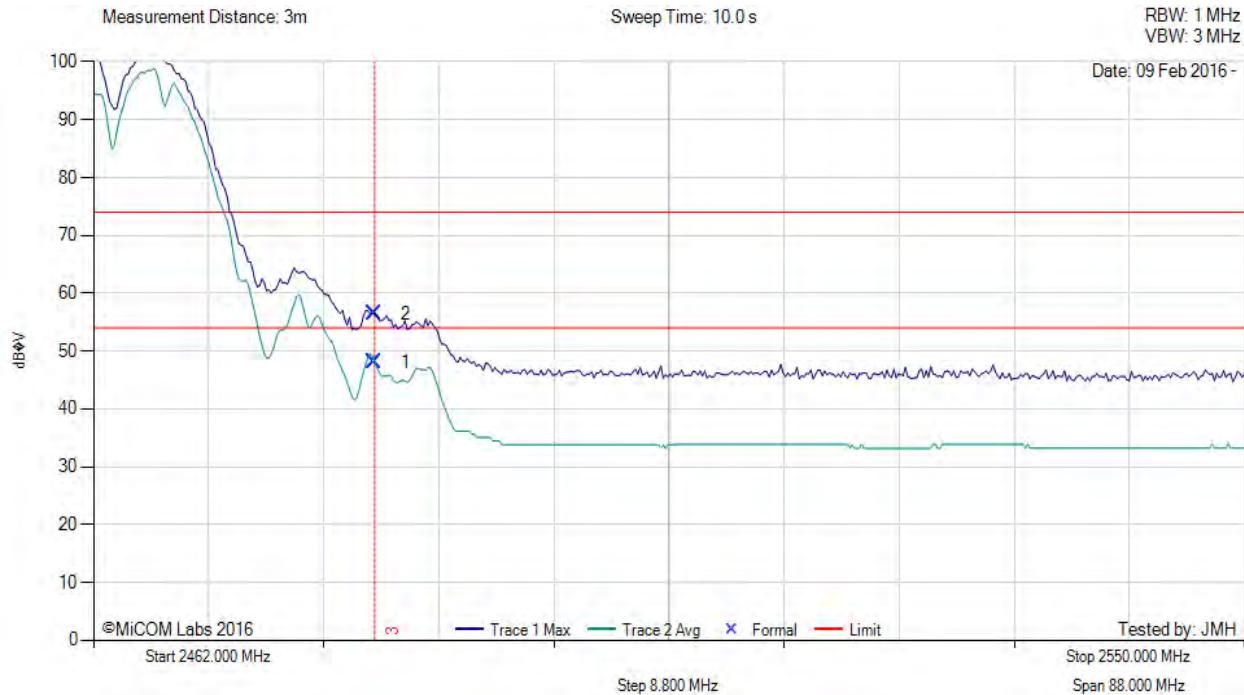
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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11b, Test Freq: 2462.00 MHz, Antenna: AP-ANT-13B, Power Setting: 19.5



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2483.50	12.96	2.73	32.37	48.06	Max Avg	Horizontal	153	367	54.0	-5.9	Pass
2	2483.50	21.40	2.73	32.37	56.50	Max Peak	Horizontal	153	367	74.0	-17.5	Pass
3	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

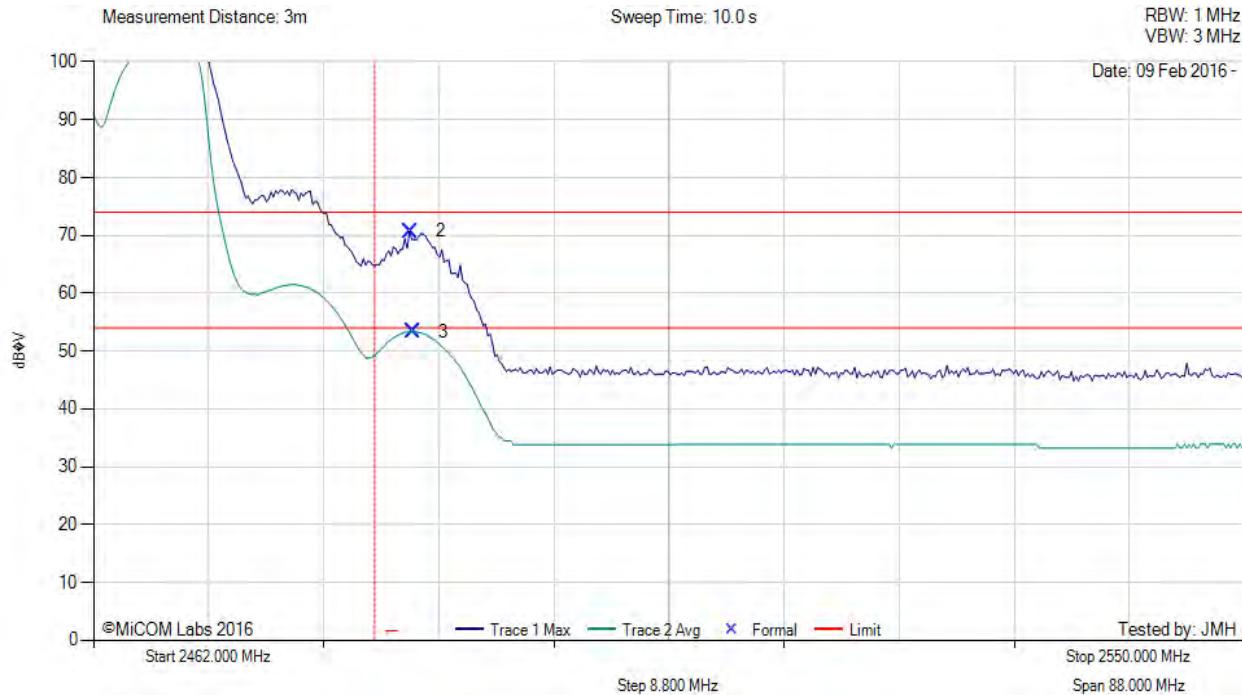
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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11g, Test Freq: 2462.00 MHz, Antenna: AP-ANT-13B, Power Setting: 18



Num	Frequency 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	2486.21	35.61	2.73	32.37	70.71	Max Peak	Horizontal	153	367	74.0	-3.3	Pass
3	2486.42	18.24	2.73	32.37	53.34	Max Avg	Horizontal	153	367	54.0	-0.7	Pass
1	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

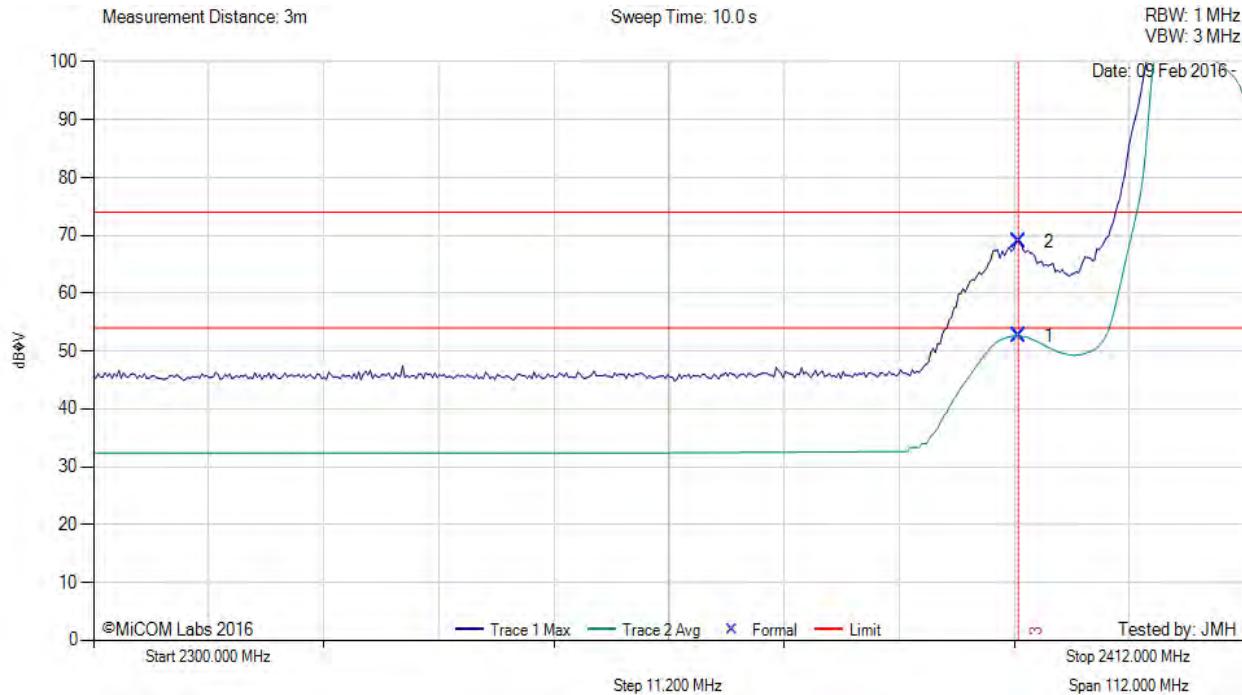
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber.

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RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 2412.00 MHz, Antenna: AP-ANT-13B, Power Setting: 17



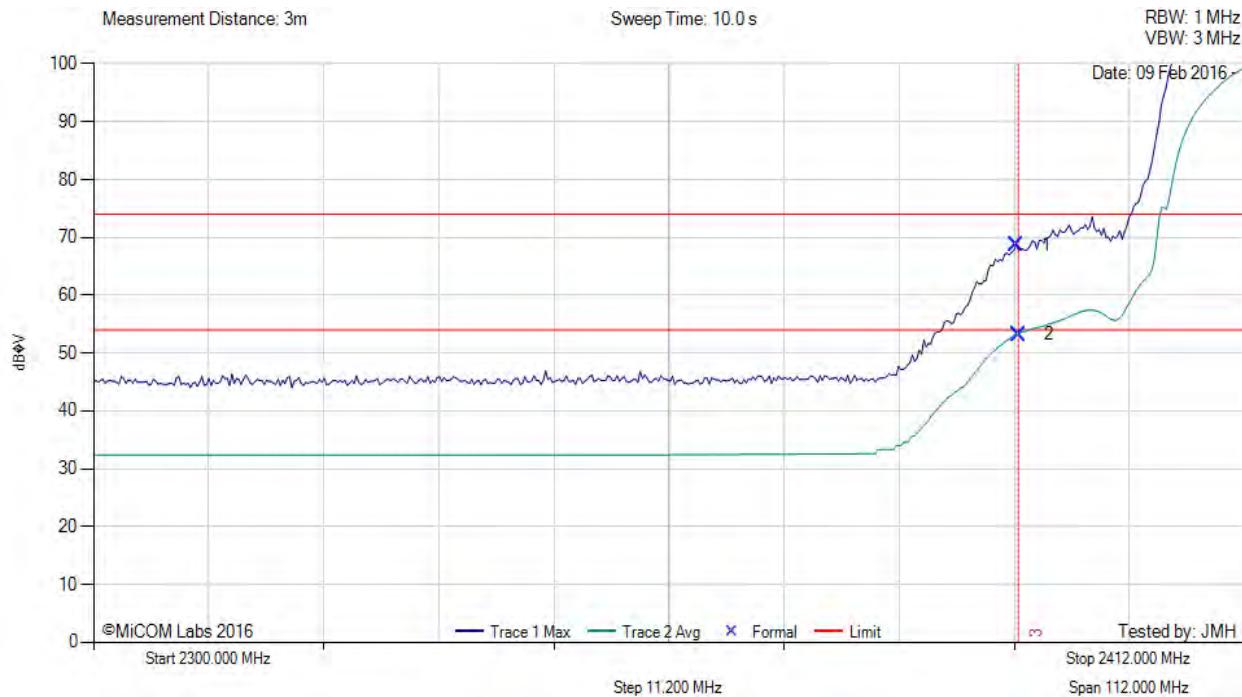
Num	Frequency MHz	Raw dB _{uV}	Cable Loss	AF dB	Level dB _{uV/m}	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _{uV/m}	Margin dB	Pass /Fail
1	2390.00	17.87	2.69	32.04	52.60	Max Avg	Horizontal	181	7	54.0	-1.4	Pass
2	2390.00	34.22	2.69	32.04	68.95	Max Peak	Horizontal	181	7	74.0	-5.1	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 2422.00 MHz, Antenna: AP-ANT-13B, Power Setting: 16



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2389.78	33.87	2.69	32.04	68.60	Max Peak	Horizontal	181	7	74.0	-5.4	Pass
2	2390.00	18.51	2.69	32.04	53.24	Max Avg	Horizontal	181	7	54.0	-0.8	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

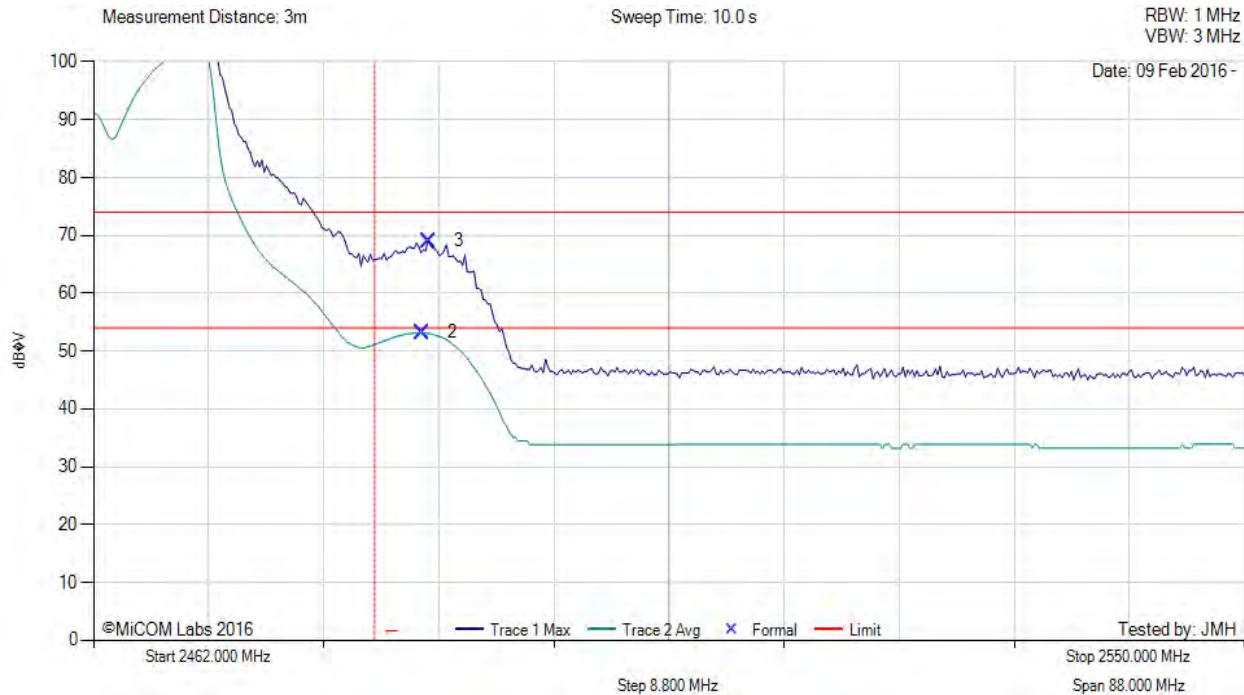
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber.

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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 2462.00 MHz, Antenna: AP-ANT-13B, Power Setting: 19



Num	Frequency 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	2487.13	18.10	2.73	32.37	53.20	Max Avg	Horizontal	153	367	54.0	-0.8	Pass
3	2487.62	33.94	2.73	32.38	69.05	Max Peak	Horizontal	153	367	74.0	-5.0	Pass
1	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

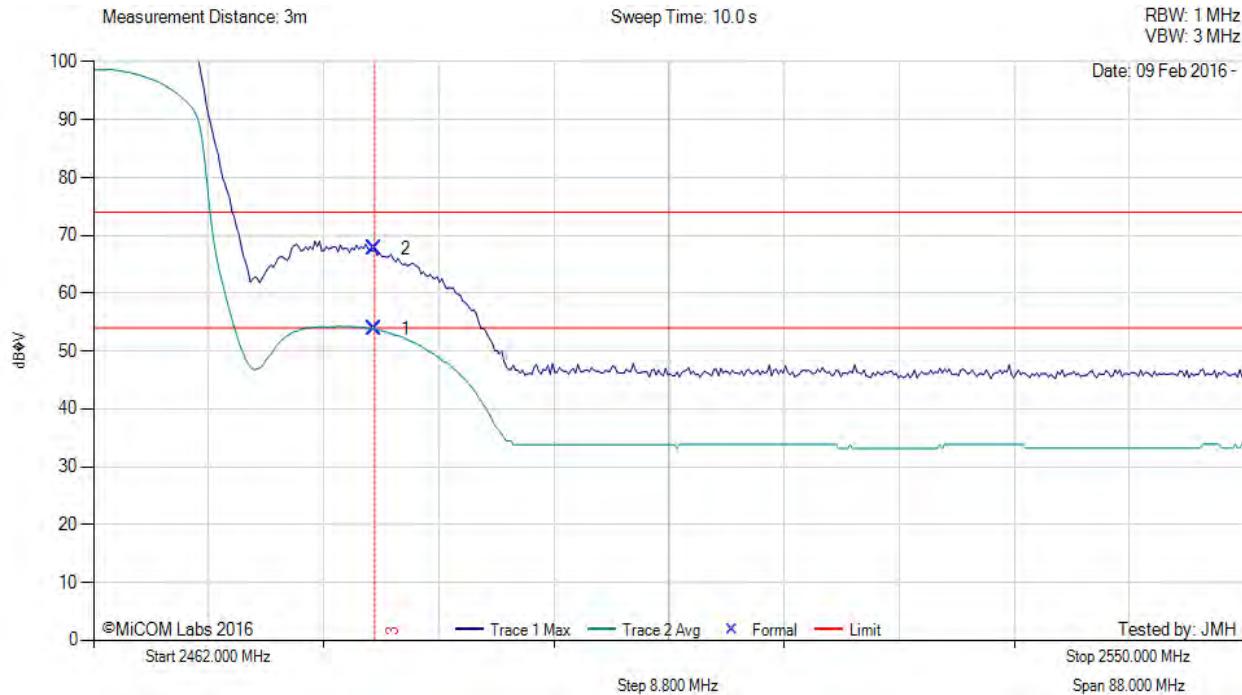
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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 2452.00 MHz, Antenna: AP-ANT-13B, Power Setting: 15.5



Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	2483.50	18.72	2.73	32.37	53.82	Max Avg	Horizontal	153	367	54.0	-0.2	Pass
2	2483.50	32.64	2.73	32.37	67.74	Max Peak	Horizontal	153	367	74.0	-6.3	Pass
3	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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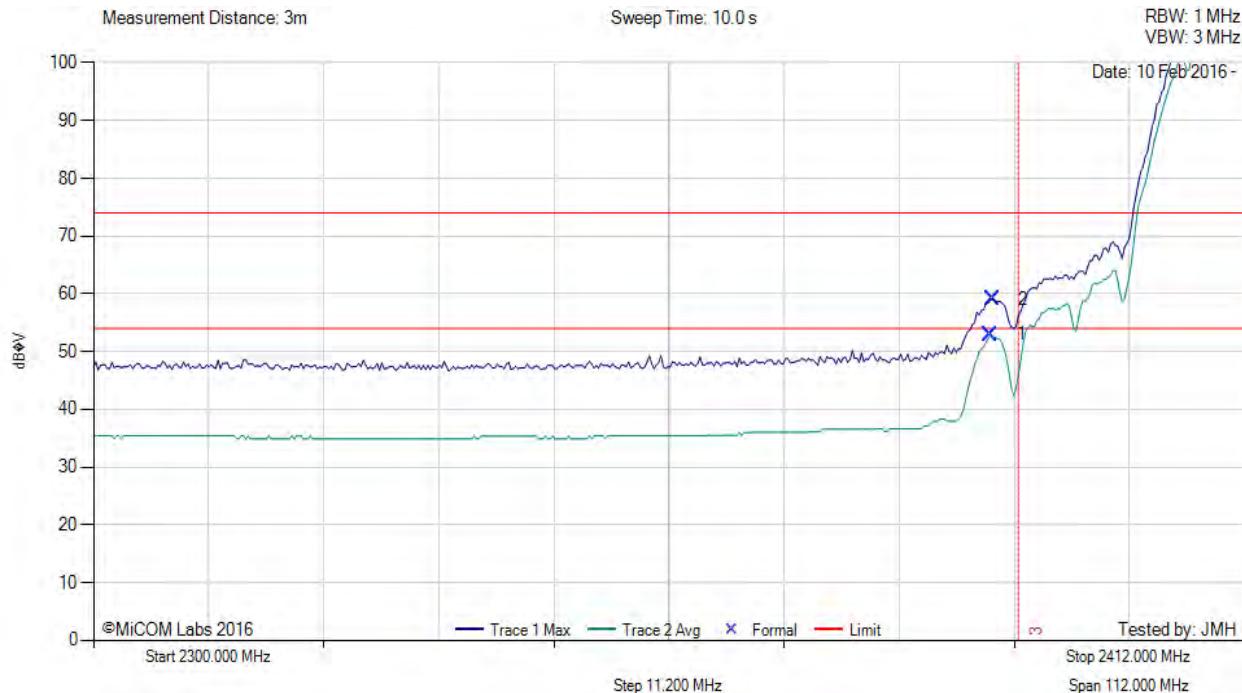
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A.2.2 AP-ANT-19



RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11b, Test Freq: 2412.00 MHz, Antenna: AP-ANT-19, Power Setting: 20



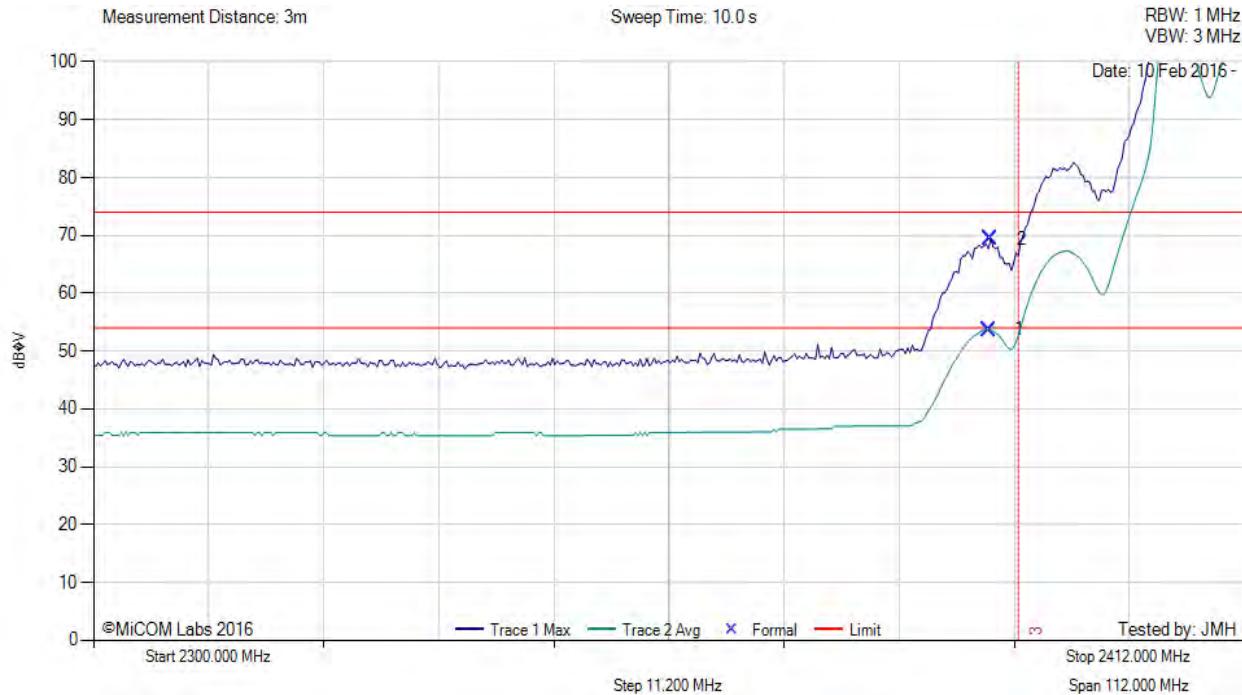
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	2387.31	18.24	2.68	32.02	52.94	Max Avg	Vertical	168	355	54.0	-1.1	Pass
2	2387.53	24.42	2.68	32.03	59.13	Max Peak	Vertical	168	355	74.0	-14.9	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11g, Test Freq: 2412.00 MHz, Antenna: AP-ANT-19, Power Setting: 19



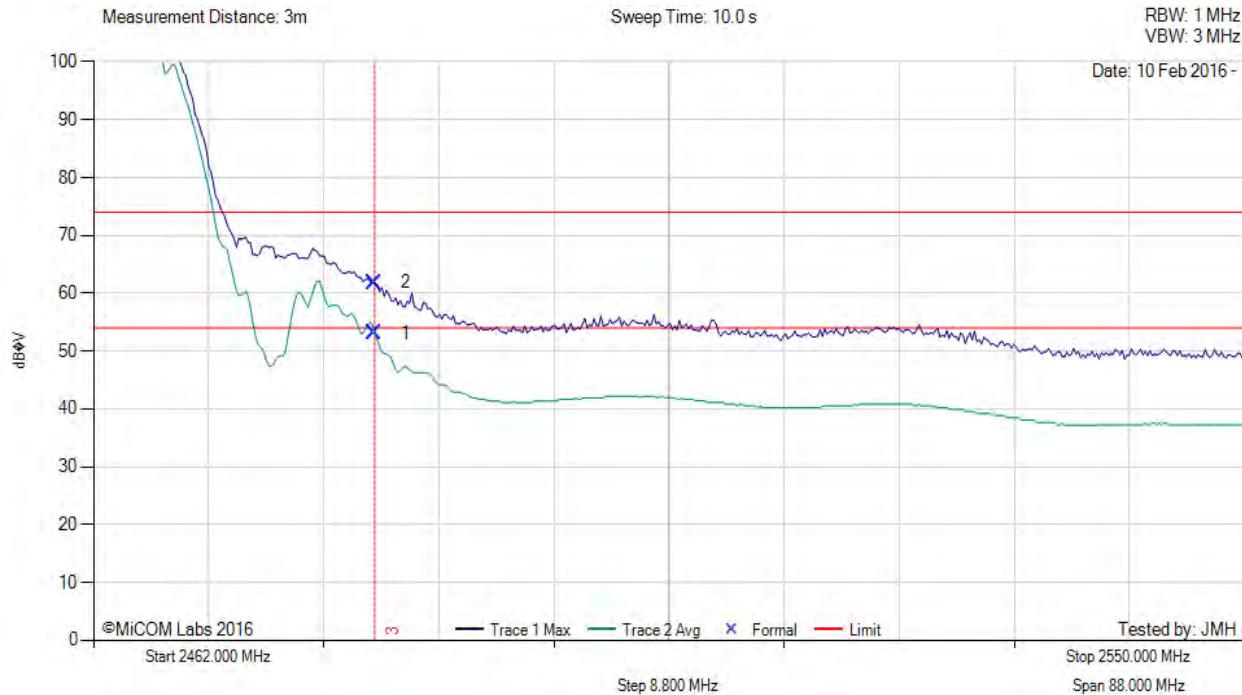
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	2387.08	19.04	2.68	32.02	53.74	Max Avg	Vertical	168	355	54.0	-0.3	Pass
2	2387.31	34.69	2.68	32.02	69.39	Max Peak	Vertical	168	355	74.0	-4.6	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11b, Test Freq: 2462.00 MHz, Antenna: AP-ANT-19, Power Setting: 19



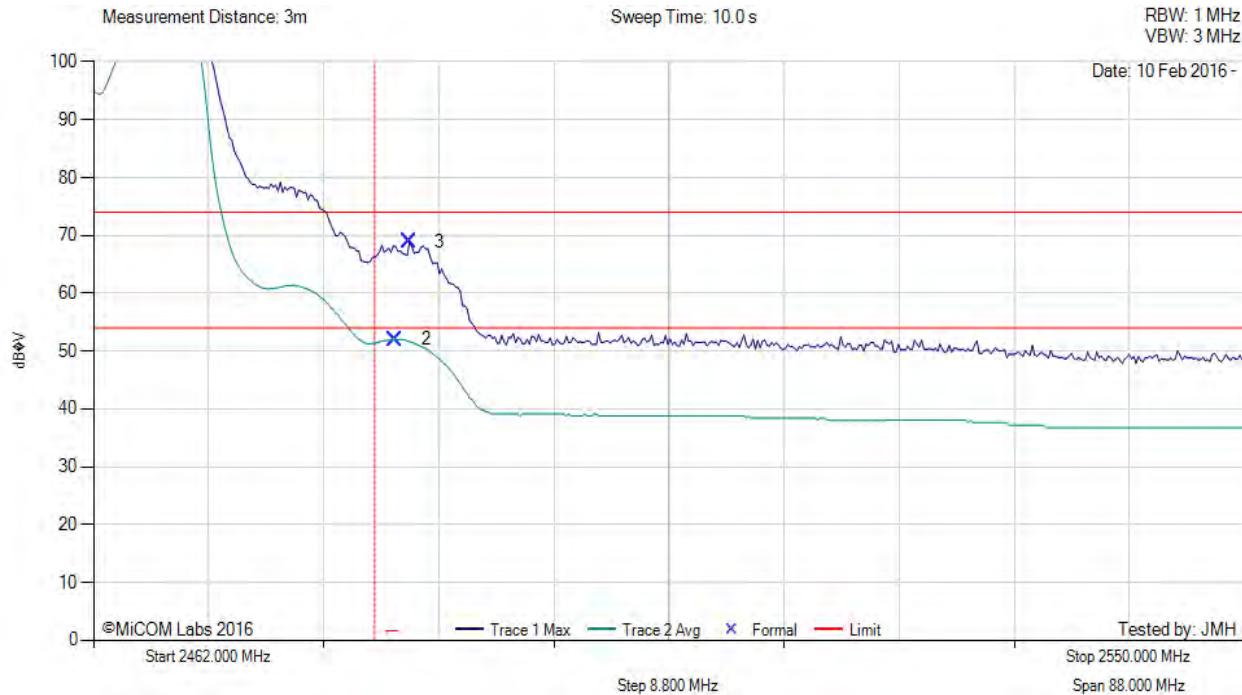
Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2483.50	18.02	2.73	32.37	53.12	Max Avg	Vertical	162	19	54.0	-0.9	Pass
2	2483.50	26.78	2.73	32.37	61.88	Max Peak	Vertical	162	19	74.0	-12.1	Pass
3	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11g, Test Freq: 2462.00 MHz, Antenna: AP-ANT-19, Power Setting: 17



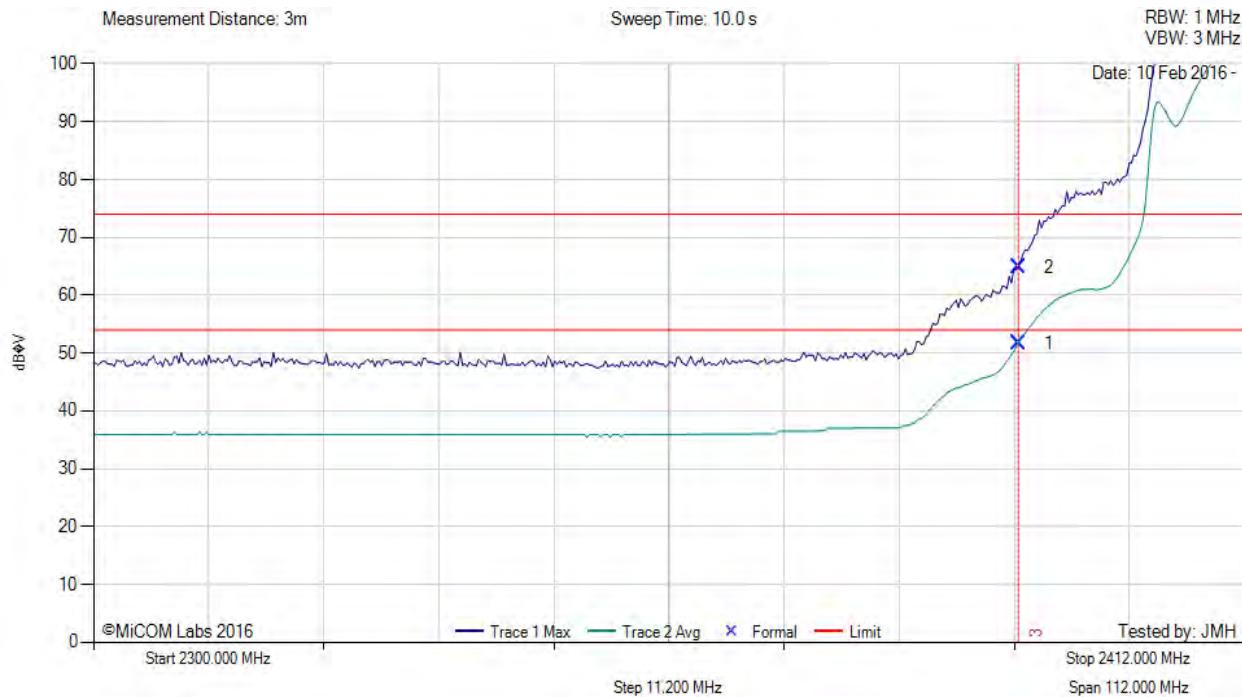
Num	Frequency MHz	Raw dB _u V	Cable Loss	AF dB	Level dB _u V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _u V/m	Margin dB	Pass /Fail
2	2485.09	16.95	2.73	32.37	52.05	Max Avg	Vertical	162	19	54.0	-2.0	Pass
3	2486.16	33.75	2.73	32.37	68.85	Max Peak	Vertical	162	19	74.0	-5.2	Pass
1	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 2412.00 MHz, Antenna: AP-ANT-19, Power Setting: 18



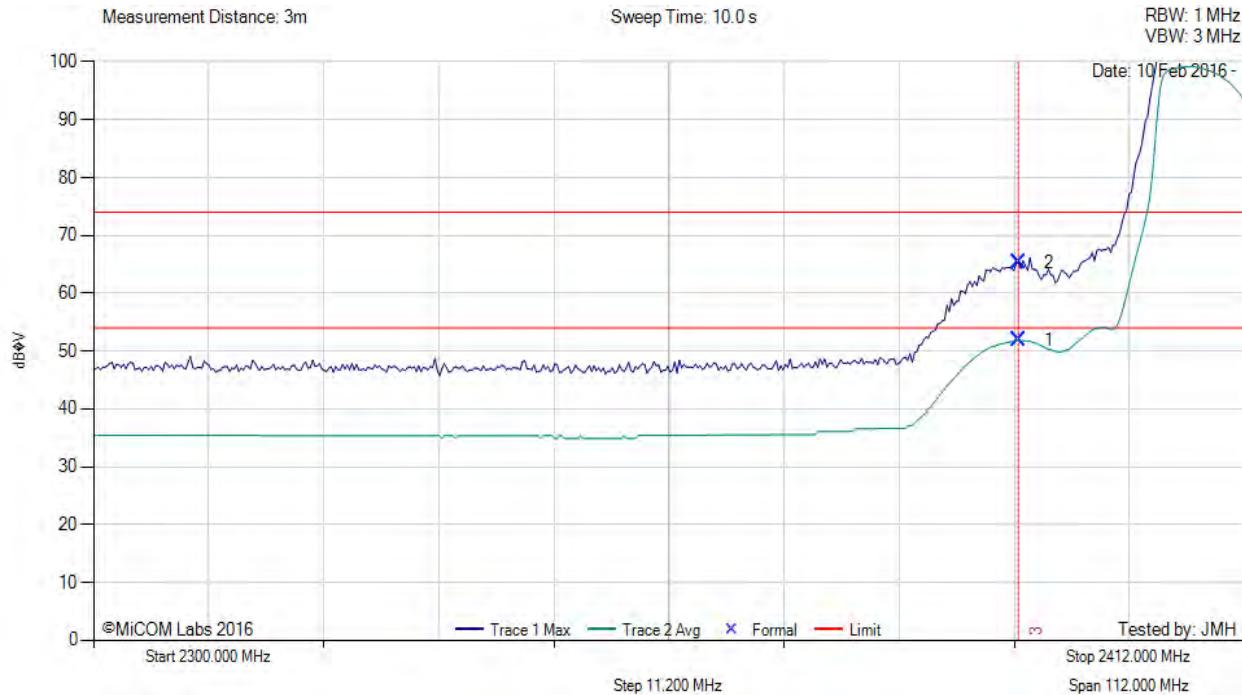
Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2390.00	16.94	2.69	32.04	51.67	Max Avg	Vertical	168	355	54.0	-2.3	Pass
2	2390.00	30.13	2.69	32.04	64.86	Max Peak	Vertical	168	355	74.0	-9.1	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 2422.00 MHz, Antenna: AP-ANT-19, Power Setting: 15.5



Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	2390.00	17.10	2.69	32.04	51.83	Max Avg	Vertical	168	355	54.0	-2.2	Pass
2	2390.00	30.65	2.69	32.04	65.38	Max Peak	Vertical	168	355	74.0	-8.6	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

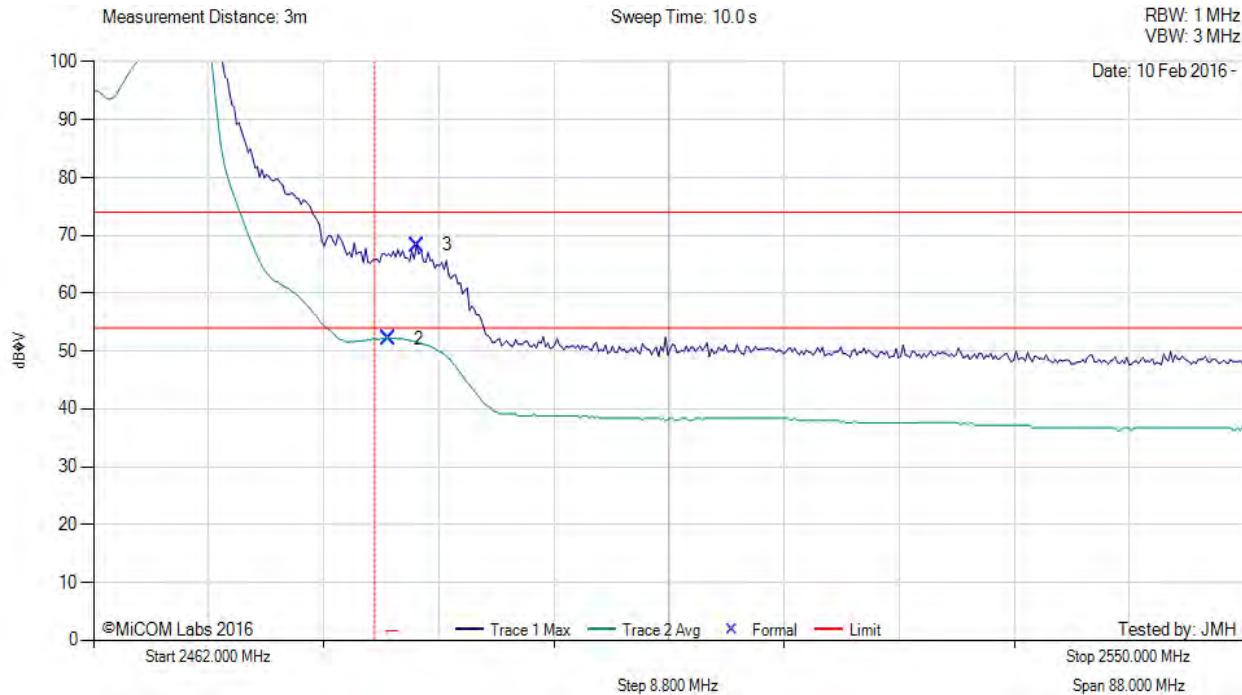
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber

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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 2462.00 MHz, Antenna: AP-ANT-19, Power Setting: 18



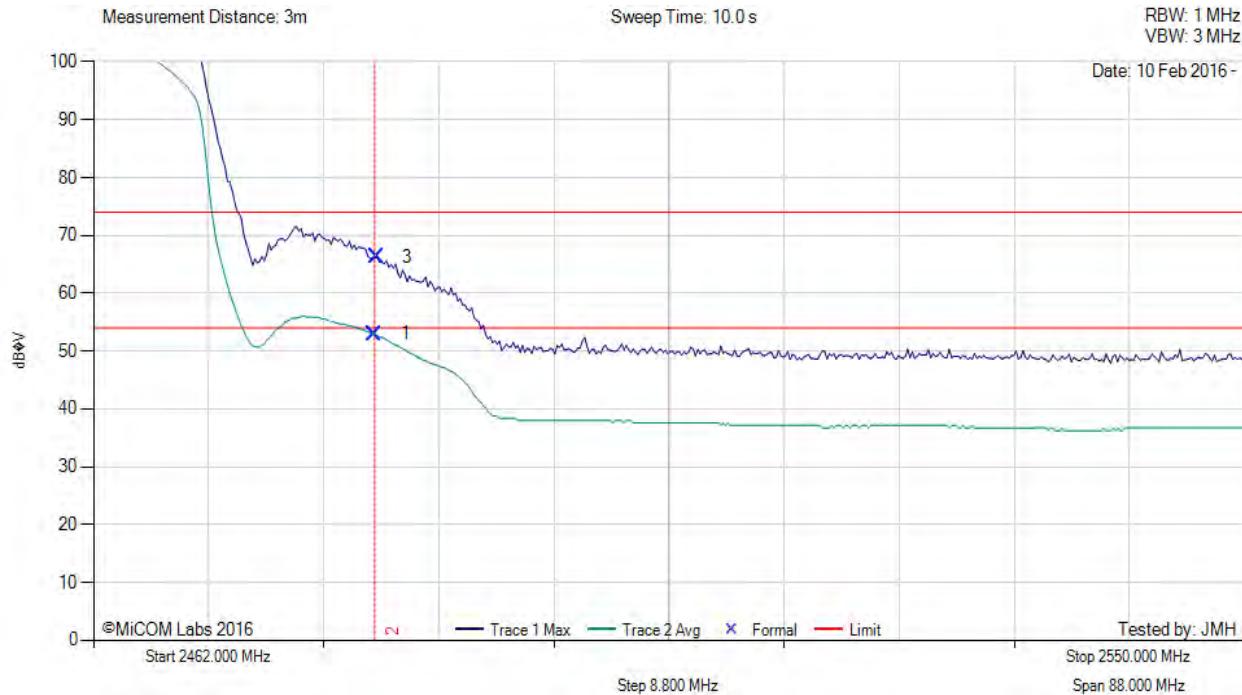
Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
2	2484.56	17.11	2.73	32.37	52.21	Max Avg	Vertical	162	19	54.0	-1.8	Pass
3	2486.69	33.21	2.73	32.37	68.31	Max Peak	Vertical	162	19	74.0	-5.7	Pass
1	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 2452.00 MHz, Antenna: AP-ANT-19, Power Setting: 15



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2483.50	17.88	2.73	32.37	52.98	Max Avg	Vertical	162	19	54.0	-1.0	Pass
3	2483.68	31.12	2.73	32.37	66.22	Max Peak	Vertical	162	19	74.0	-7.8	Pass
2	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

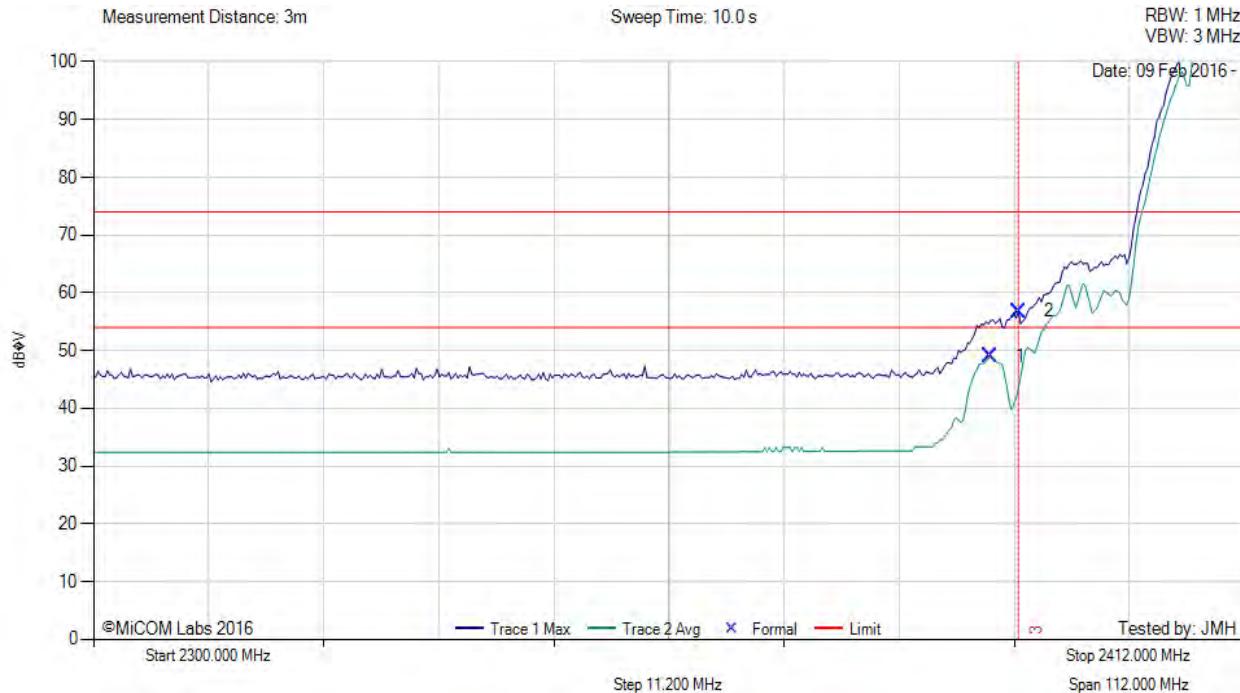
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A.2.3 AP-ANT-1W



RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11b, Test Freq: 2412.00 MHz, Antenna: AP-ANT-1W, Power Setting: 20



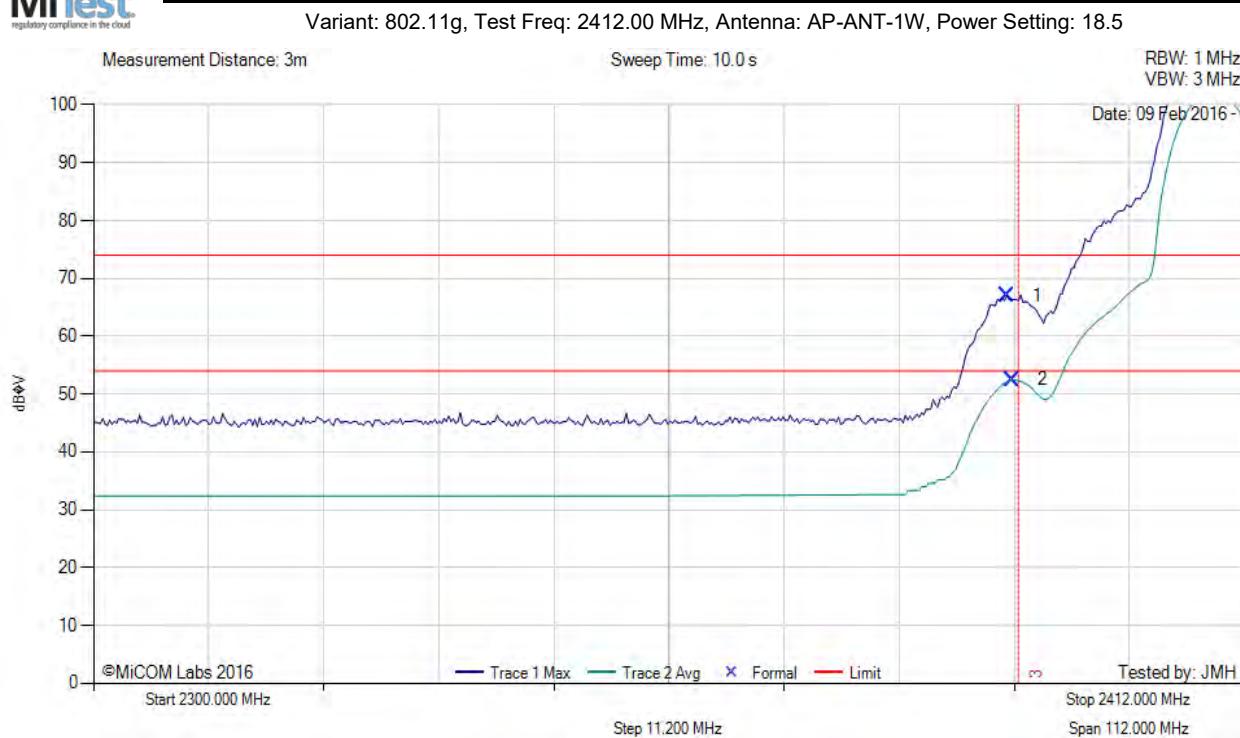
Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2387.25	14.39	2.68	32.02	49.09	Max Avg	Horizontal	131	260	54.0	-4.9	Pass
2	2389.99	22.05	2.69	32.04	56.78	Max Peak	Horizontal	131	260	74.0	-17.2	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2388.92	32.28	2.68	32.04	67.00	Max Peak	Horizontal	131	260	74.0	-7.0	Pass
2	2389.37	17.80	2.68	32.04	52.52	Max Avg	Horizontal	131	260	54.0	-1.5	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

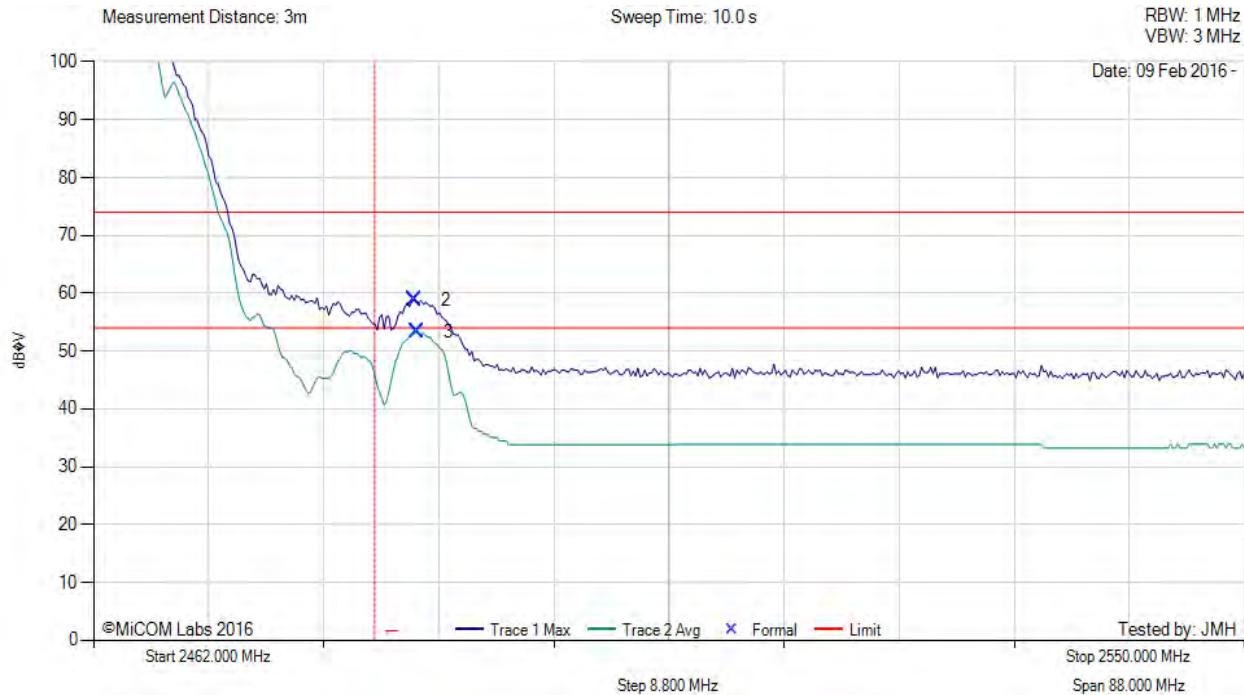
Test Notes: EUT on 150cm table powered by POE. Connected to Laptop outside chamber.

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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11b, Test Freq: 2462.00 MHz, Antenna: AP-ANT-1W, Power Setting: 21



Num	Frequency 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	2486.57	23.75	2.73	32.37	58.85	Max Peak	Horizontal	151	49	74.0	-15.2	Pass
3	2486.77	18.31	2.73	32.37	53.41	Max Avg	Horizontal	151	49	54.0	-0.6	Pass
1	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

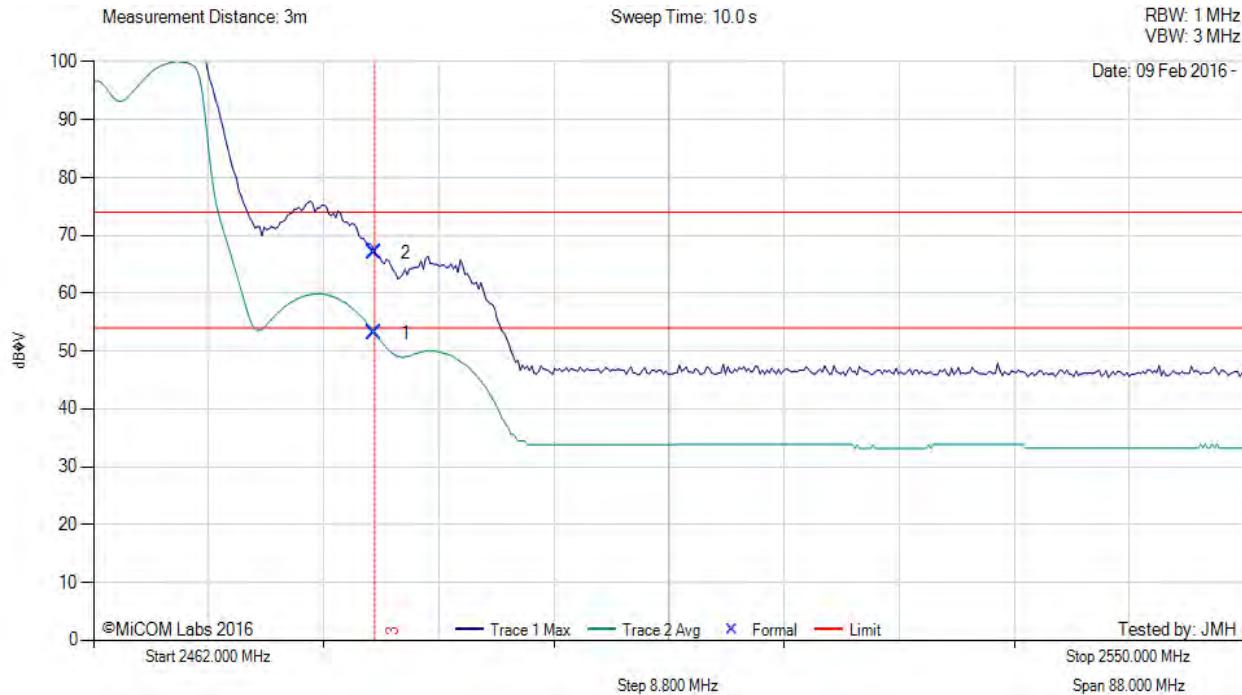
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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11g, Test Freq: 2462.00 MHz, Antenna: AP-ANT-1W, Power Setting: 19

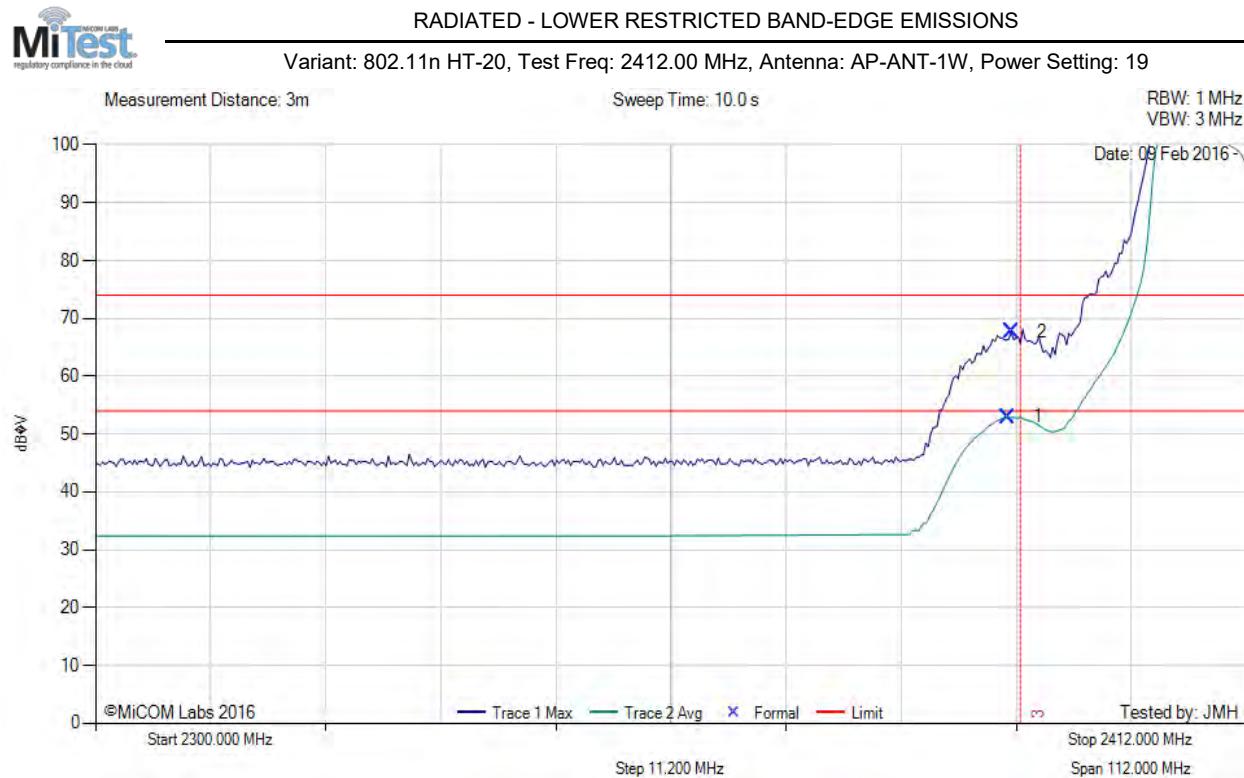


Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	2483.50	18.02	2.73	32.37	53.12	Max Avg	Horizontal	151	49	54.0	-0.9	Pass
2	2483.50	31.90	2.73	32.37	67.00	Max Peak	Horizontal	151	49	74.0	-7.0	Pass
3	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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Num	Frequency MHz	Raw dB _µ V	Cable Loss	AF dB	Level dB _µ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB _µ V/m	Margin dB	Pass /Fail
1	2388.79	18.23	2.68	32.04	52.95	Max Avg	Horizontal	131	260	54.0	-1.1	Pass
2	2389.10	32.98	2.68	32.04	67.70	Max Peak	Horizontal	131	260	74.0	-6.3	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

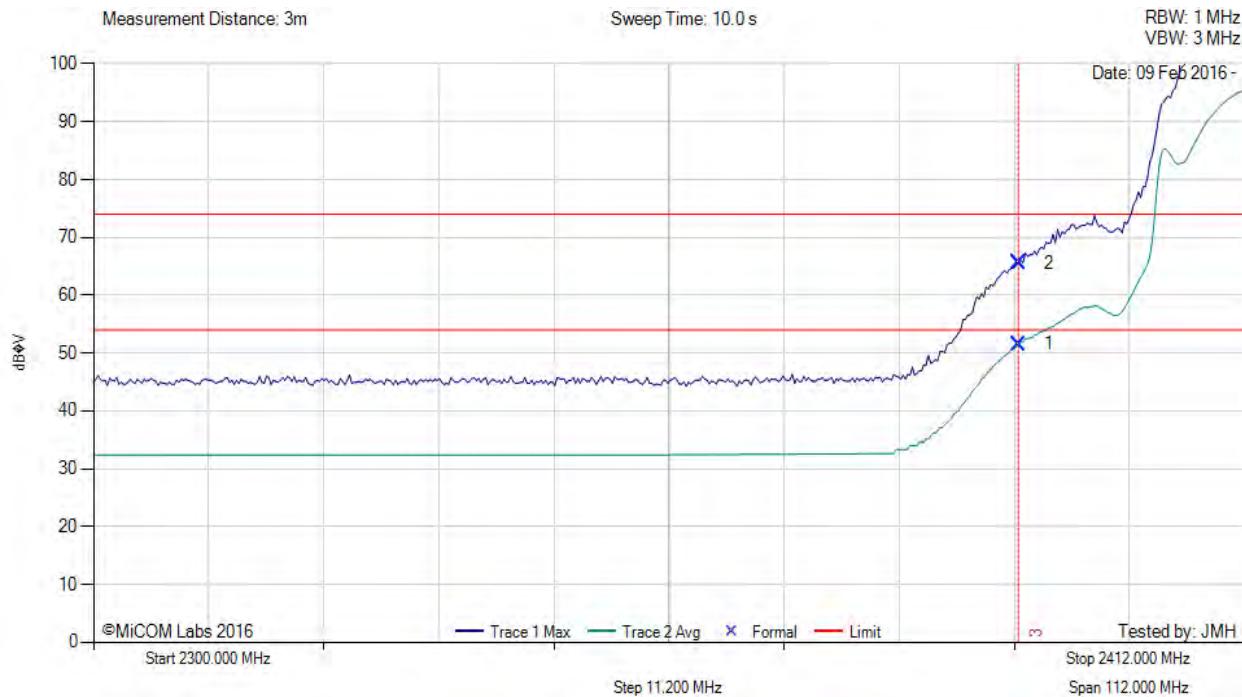
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RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 2422.00 MHz, Antenna: AP-ANT-1W, Power Setting: 16.5



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2390.00	16.77	2.69	32.04	51.50	Max Avg	Horizontal	131	260	54.0	-2.5	Pass
2	2390.00	30.88	2.69	32.04	65.61	Max Peak	Horizontal	131	260	74.0	-8.4	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

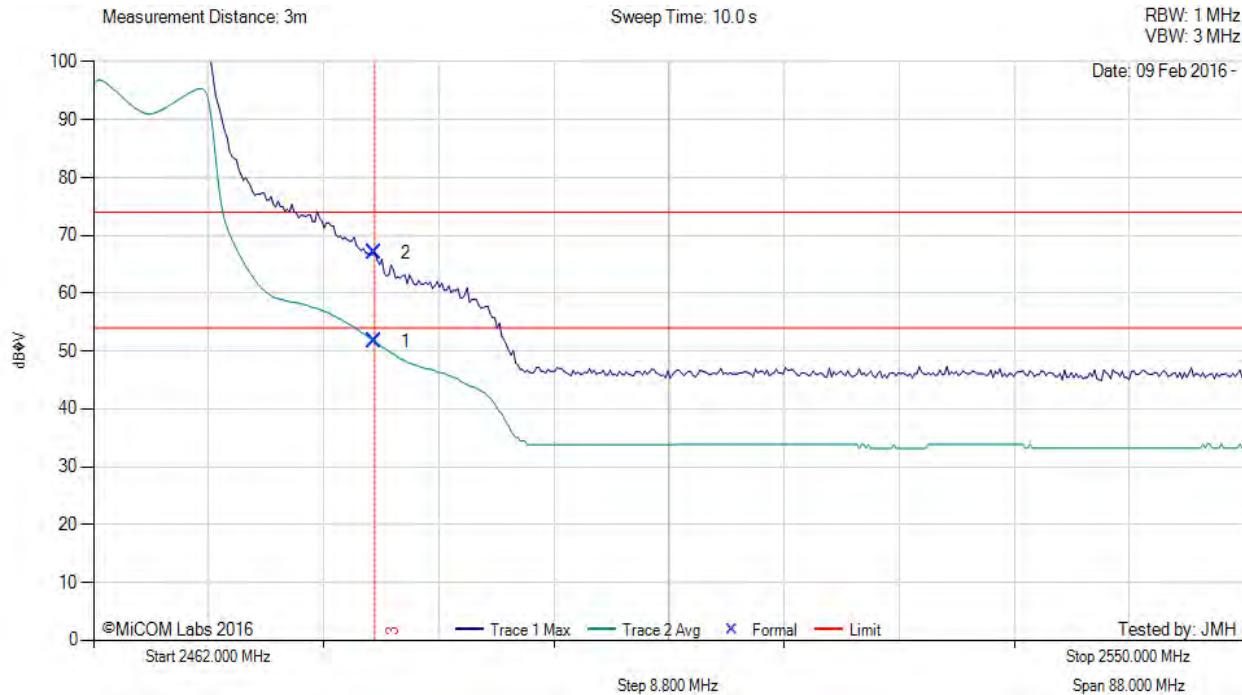
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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 2462.00 MHz, Antenna: AP-ANT-1W, Power Setting: 19



Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	2483.50	16.61	2.73	32.37	51.71	Max Avg	Horizontal	151	49	54.0	-2.3	Pass
2	2483.50	31.86	2.73	32.37	66.96	Max Peak	Horizontal	151	49	74.0	-7.0	Pass
3	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

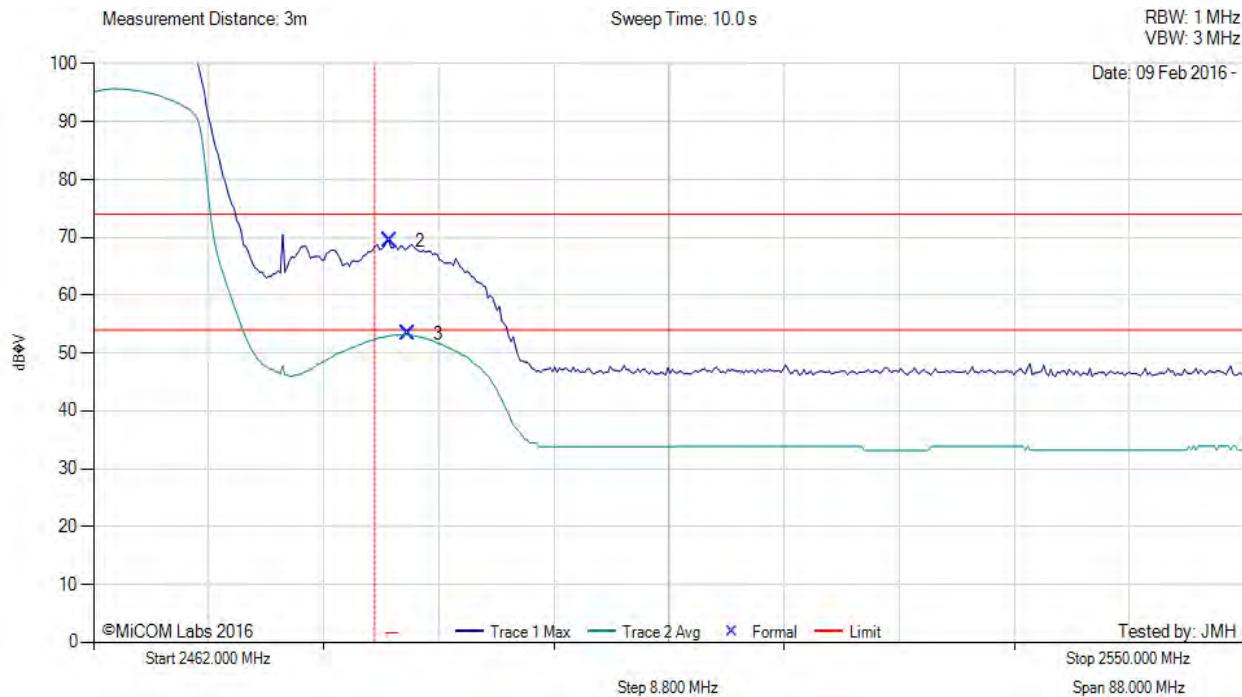
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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 2452.00 MHz, Antenna: AP-ANT-1W, Power Setting: 17



Num	Frequency 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	2484.63	34.30	2.73	32.37	69.40	Max Peak	Horizontal	151	49	74.0	-4.6	Pass
3	2486.07	18.17	2.73	32.37	53.27	Max Avg	Horizontal	151	49	54.0	-0.7	Pass
1	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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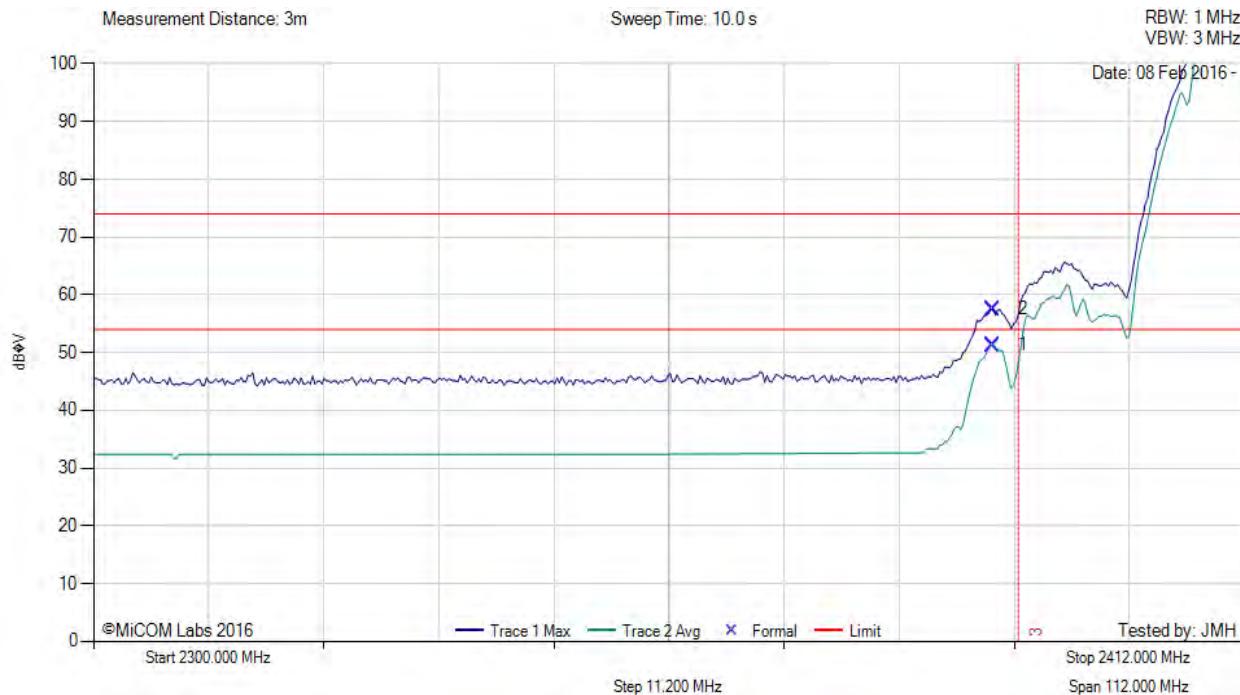
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A.2.4 AP-ANT-20W



RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11b, Test Freq: 2412.00 MHz, Antenna: AP-ANT-20W, Power Setting: 20



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2387.52	16.60	2.68	32.03	51.31	Max Avg	Horizontal	174	55	54.0	-2.7	Pass
2	2387.54	22.83	2.68	32.03	57.54	Max Peak	Horizontal	174	55	74.0	-16.5	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

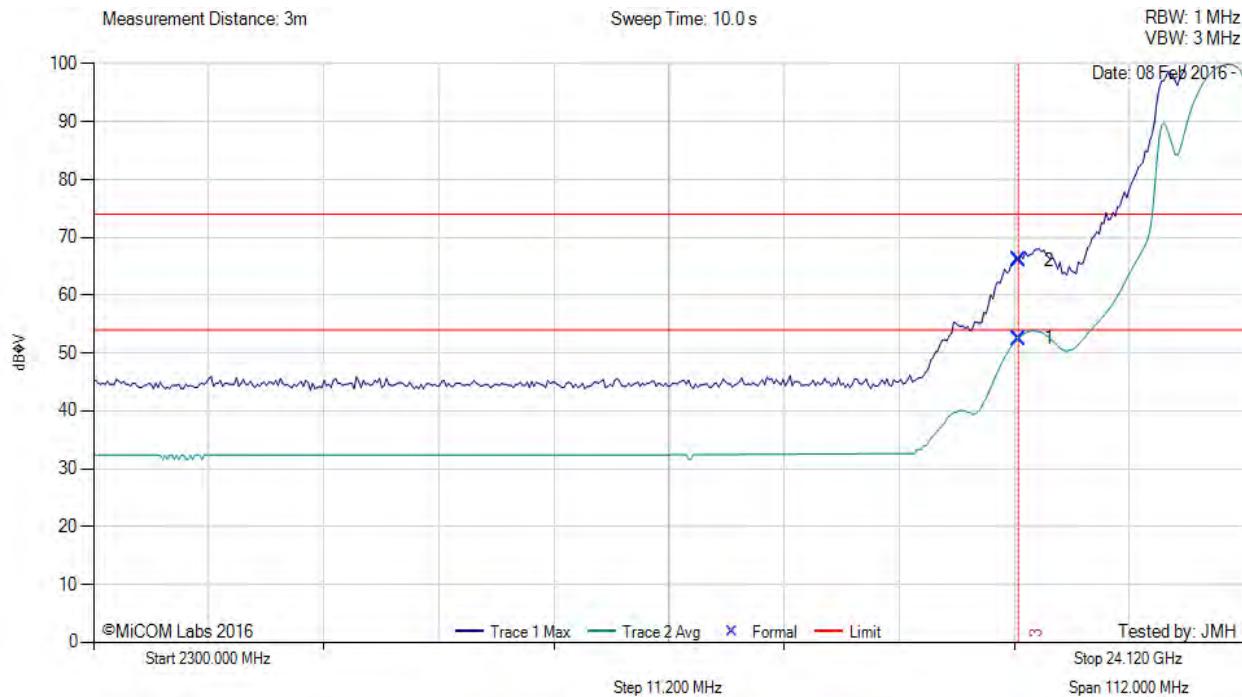
Test Notes: EUT on 150cm table powered by POE, connected to laptop outside chamber

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RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11g, Test Freq: 2412.00 MHz, Antenna: AP-ANT-20W, Power Setting: 17.5



Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	2390.00	17.79	2.69	32.04	52.52	Max Avg	Horizontal	174	55	54.0	-1.5	Pass
2	2390.00	31.27	2.69	32.04	66.00	Max Peak	Horizontal	174	55	74.0	-8.0	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

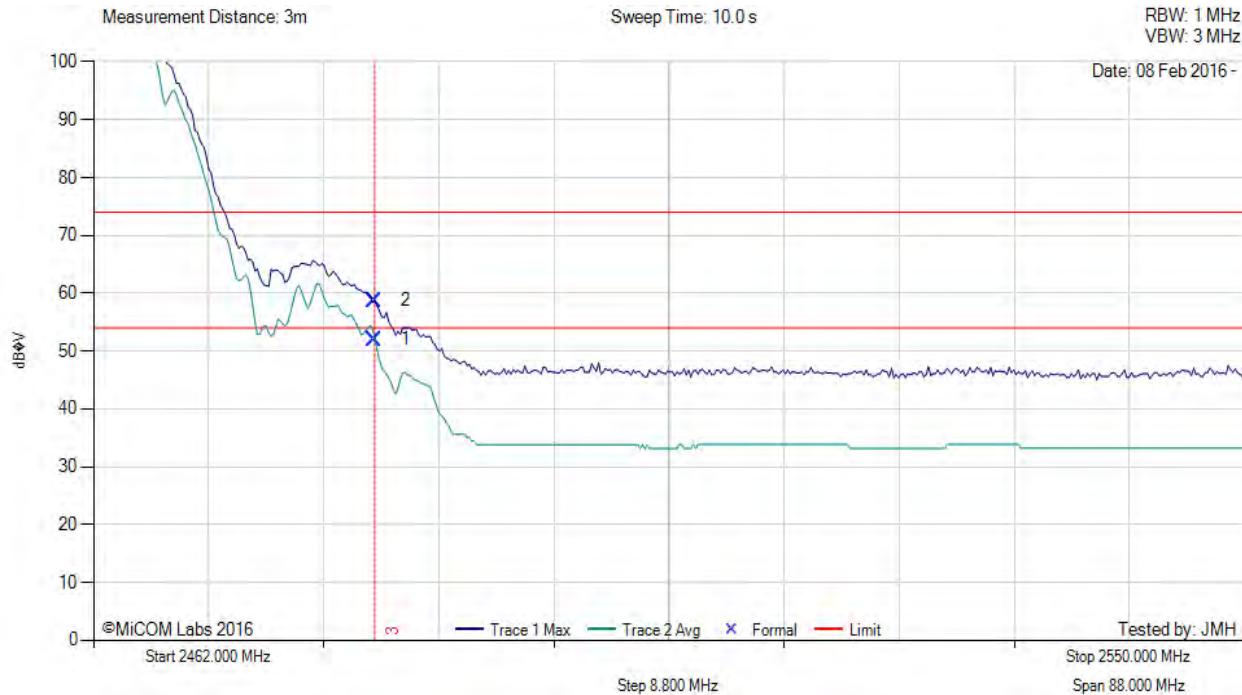
Test Notes: EUT on 150cm table powered by POE, connected to laptop outside chamber

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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11b, Test Freq: 2462.00 MHz, Antenna: AP-ANT-20W, Power Setting: 20



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2483.50	16.94	2.73	32.37	52.04	Max Avg	Horizontal	108	316	54.0	-2.0	Pass
2	2483.50	23.64	2.73	32.37	58.74	Max Peak	Horizontal	108	316	74.0	-15.3	Pass
3	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

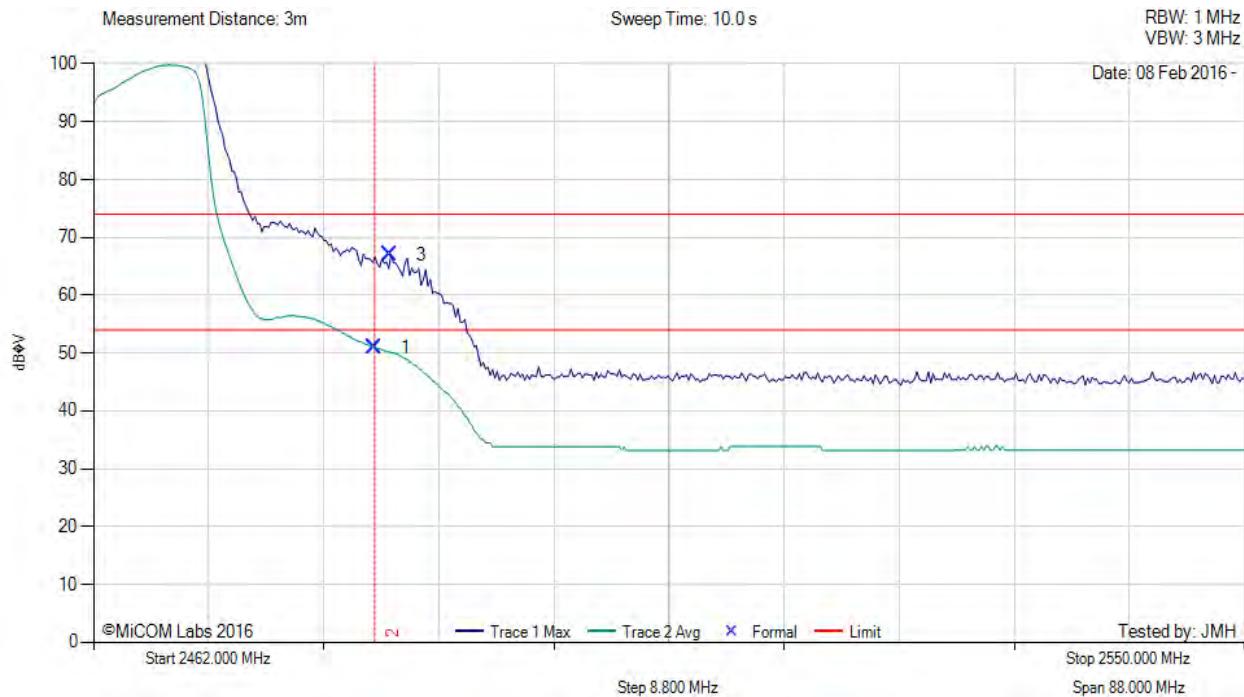
Test Notes: EUT on 150cm table powered by POE, connected to laptop outside chamber

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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11g, Test Freq: 2462.00 MHz, Antenna: AP-ANT-20W, Power Setting: 17.5



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2483.50	15.81	2.73	32.37	50.91	Max Avg	Horizontal	108	316	54.0	-3.1	Pass
3	2484.70	31.87	2.73	32.37	66.97	Max Peak	Horizontal	108	316	74.0	-7.0	Pass
2	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

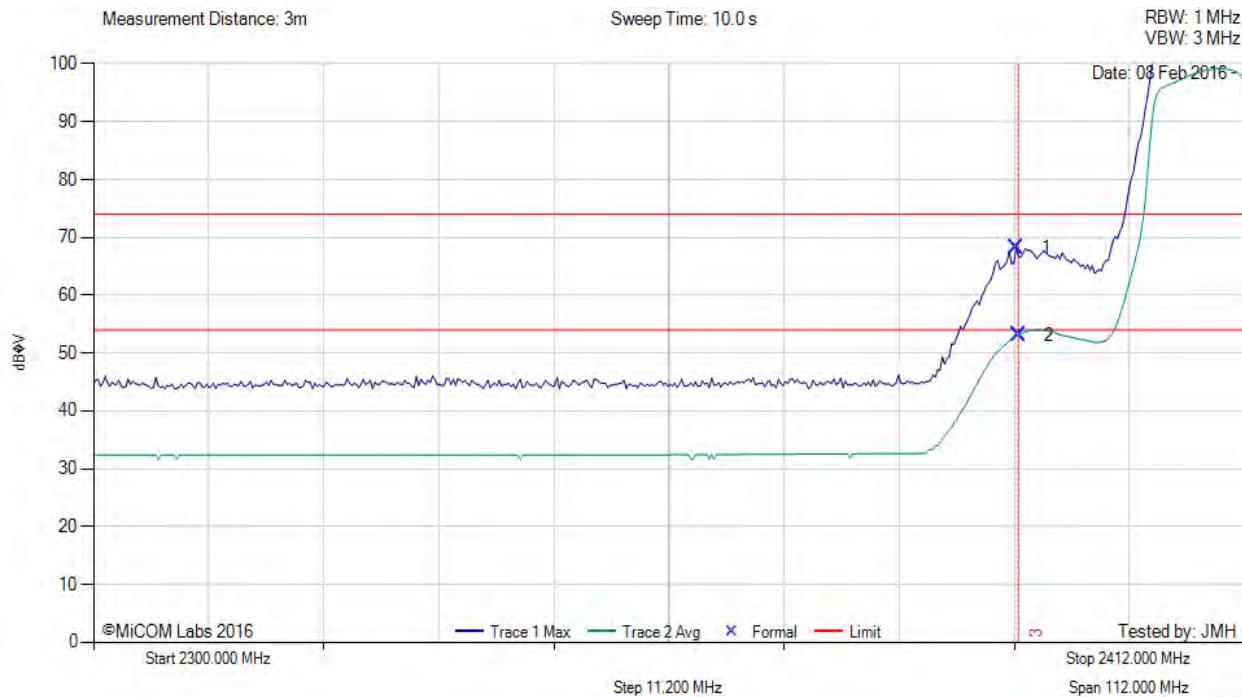
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RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 2412.00 MHz, Antenna: AP-ANT-20W, Power Setting: 17.5



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2389.78	33.39	2.69	32.04	68.12	Max Peak	Horizontal	174	55	74.0	-5.9	Pass
2	2390.00	18.44	2.69	32.04	53.17	Max Avg	Horizontal	174	55	54.0	-0.8	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

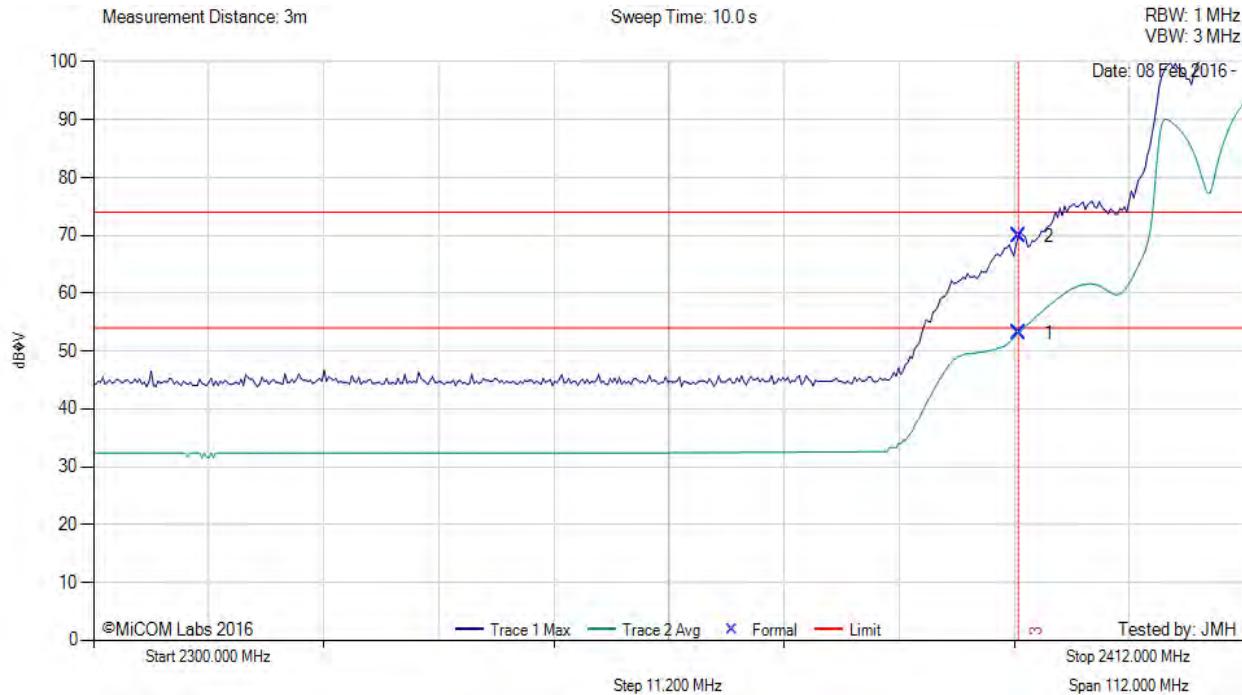
Test Notes: EUT on 150cm table powered by POE, connected to laptop outside chamber

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RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 2422.00 MHz, Antenna: AP-ANT-20W, Power Setting: 17



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2390.00	18.30	2.69	32.04	53.03	Max Avg	Horizontal	174	55	54.0	-1.0	Pass
2	2390.00	35.20	2.69	32.04	69.93	Max Peak	Horizontal	174	55	74.0	-4.1	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

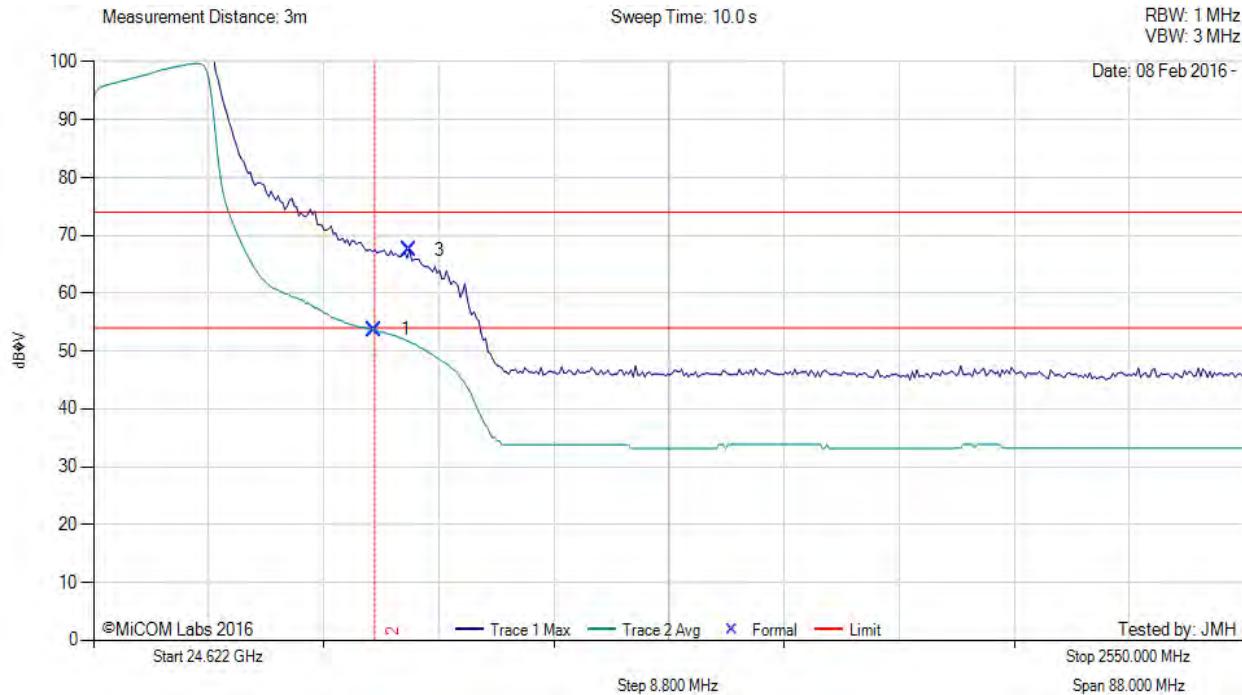
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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 2462.00 MHz, Antenna: AP-ANT-20W, Power Setting: 19



Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	2483.50	18.58	2.73	32.37	53.68	Max Avg	Horizontal	108	316	54.0	-0.3	Pass
3	2486.11	32.36	2.73	32.37	67.46	Max Peak	Horizontal	108	316	74.0	-6.5	Pass
2	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

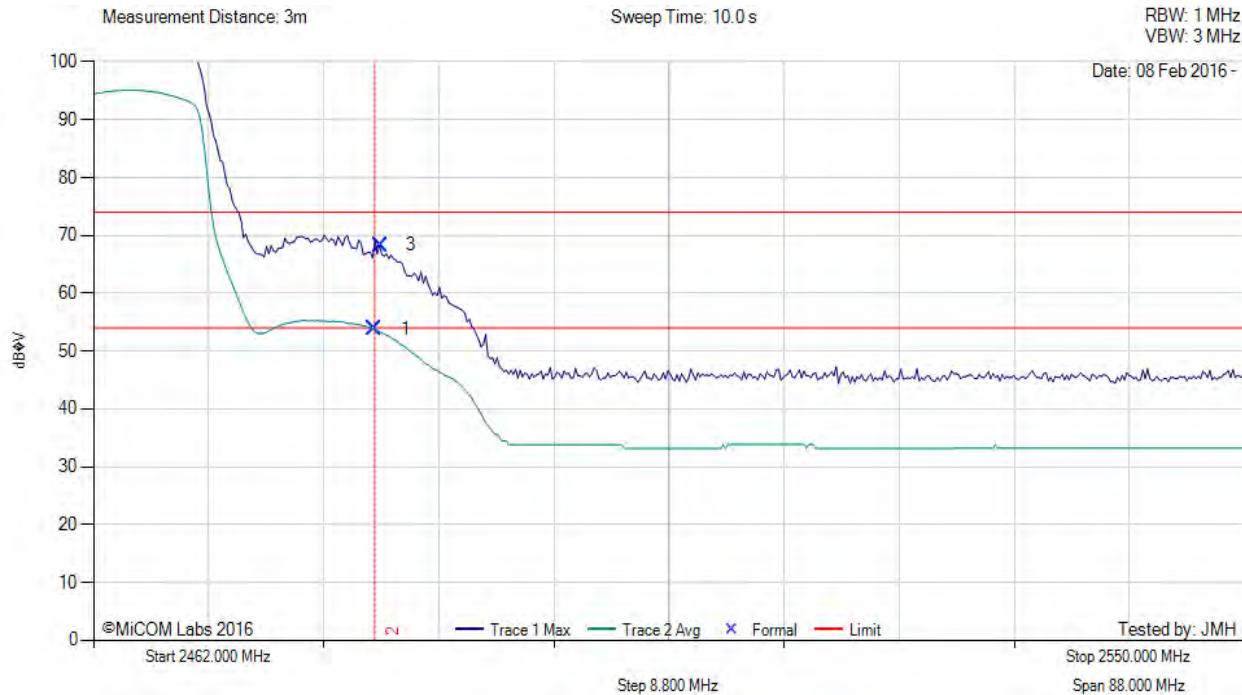
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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 2452.00 MHz, Antenna: AP-ANT-20W, Power Setting: 16.5



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2483.50	18.65	2.73	32.37	53.75	Max Avg	Horizontal	108	316	54.0	-0.3	Pass
3	2483.94	33.17	2.73	32.37	68.27	Max Peak	Horizontal	108	316	74.0	-5.7	Pass
2	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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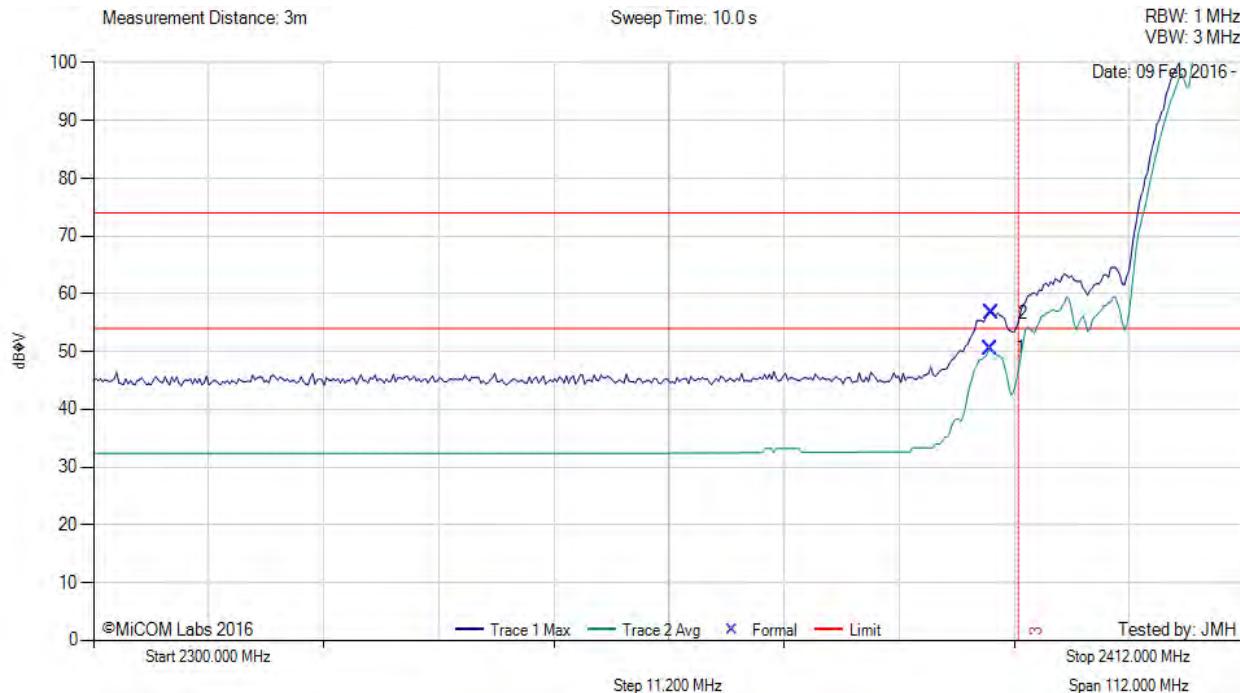
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A.2.5 AP-ANT-40



RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11b, Test Freq: 2412.00 MHz, Antenna: AP-ANT-40, Power Setting: 19.5



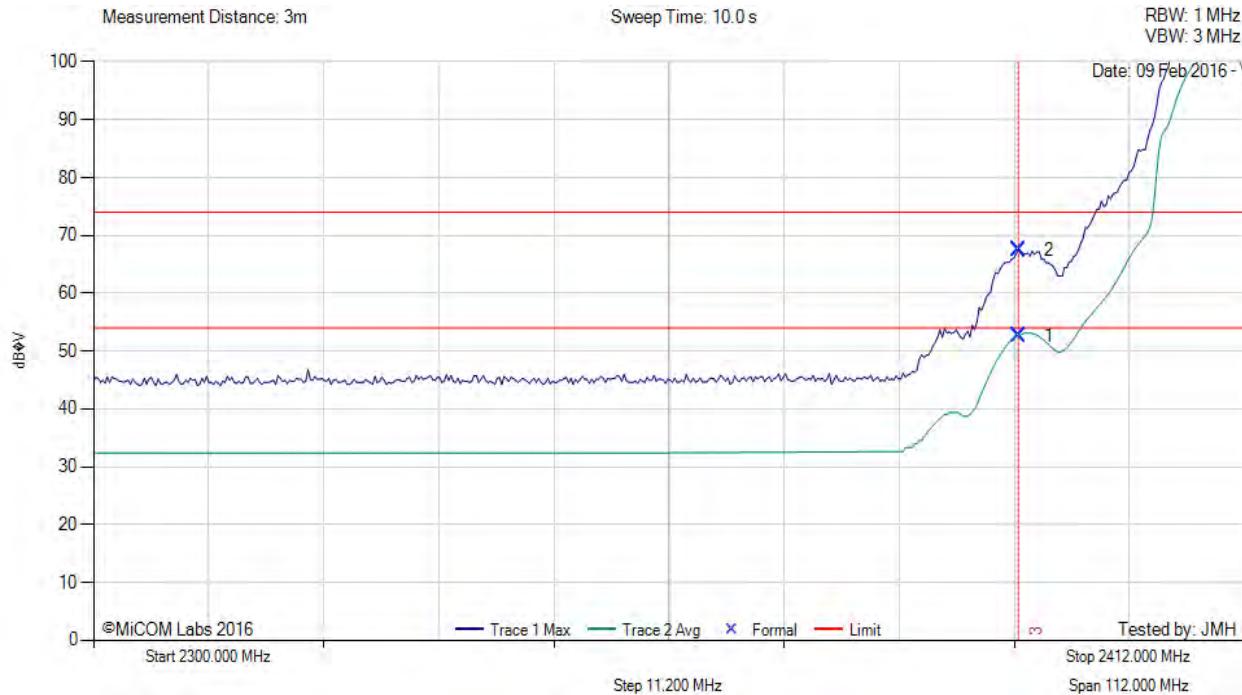
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	2387.21	15.90	2.68	32.02	50.60	Max Avg	Horizontal	117	33	54.0	-3.4	Pass
2	2387.44	22.06	2.68	32.02	56.76	Max Peak	Horizontal	117	33	74.0	-17.2	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11g, Test Freq: 2412.00 MHz, Antenna: AP-ANT-40, Power Setting: 17.5



Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	2390.00	17.87	2.69	32.04	52.60	Max Avg	Horizontal	117	33	54.0	-1.4	Pass
2	2390.00	32.77	2.69	32.04	67.50	Max Peak	Horizontal	117	33	74.0	-6.5	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

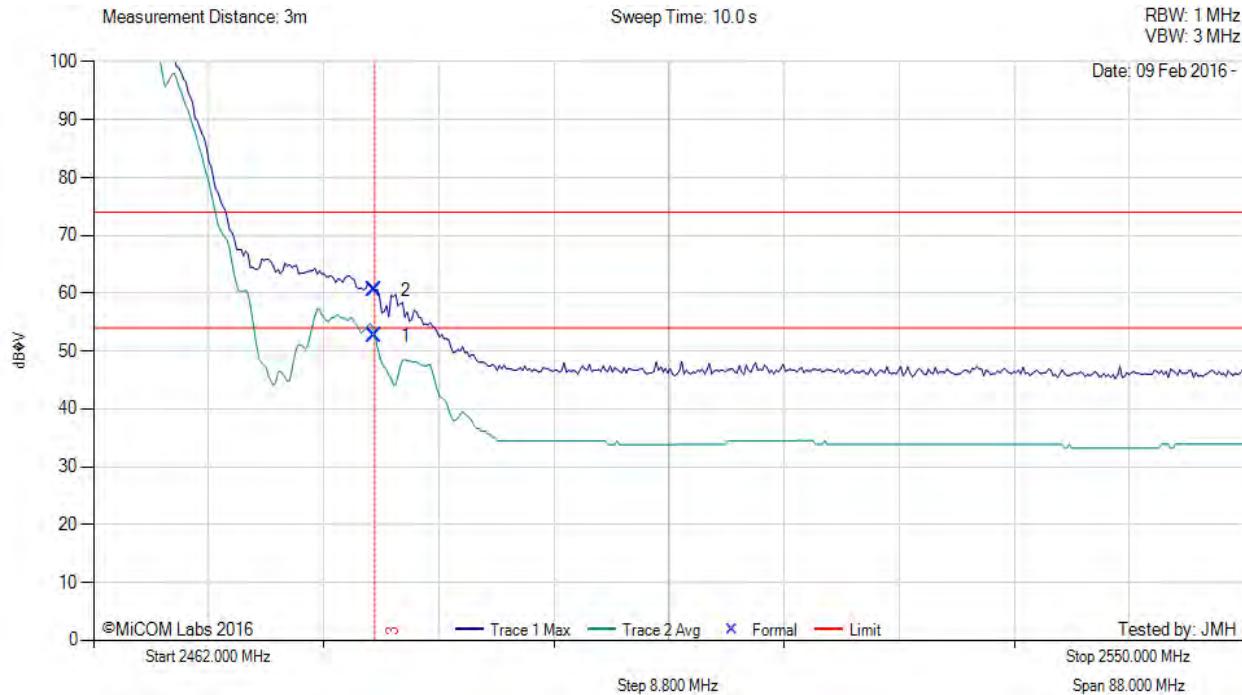
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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11b, Test Freq: 2462.00 MHz, Antenna: AP-ANT-40, Power Setting: 20



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2483.50	17.50	2.73	32.37	52.60	Max Avg	Horizontal	144	292	54.0	-1.4	Pass
2	2483.50	25.38	2.73	32.37	60.48	Max Peak	Horizontal	144	292	74.0	-13.5	Pass
3	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

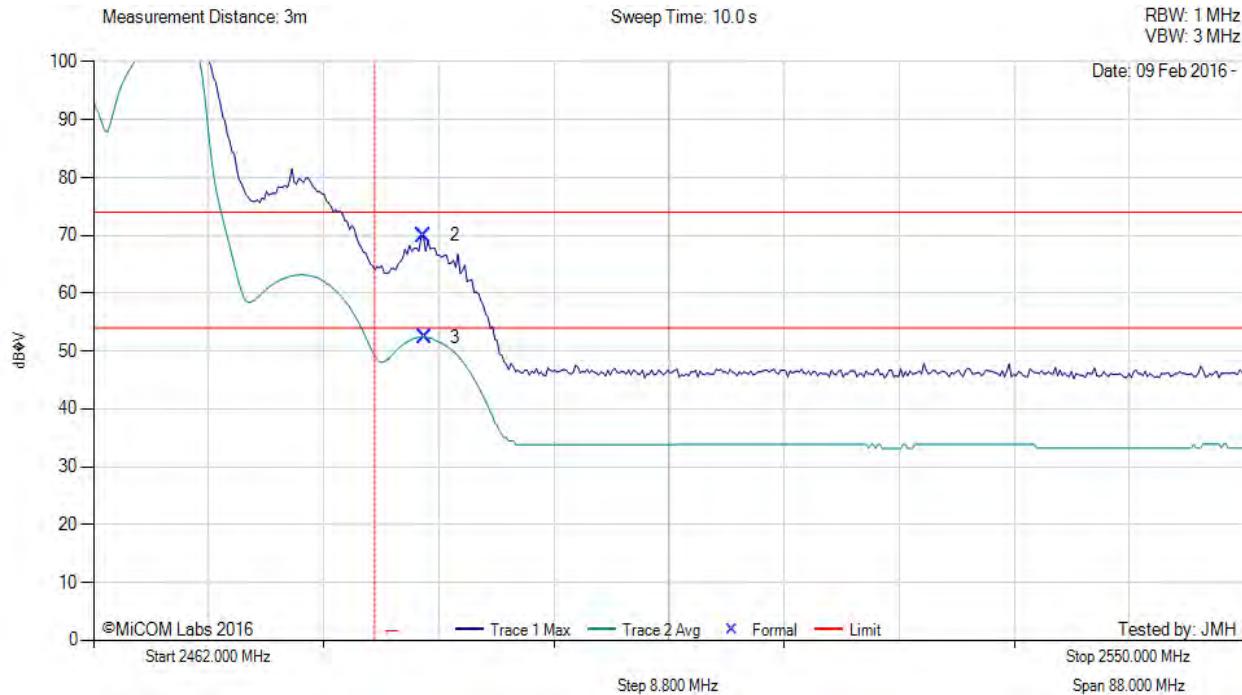
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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11g, Test Freq: 2462.00 MHz, Antenna: AP-ANT-40, Power Setting: 18.5



Num	Frequency 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	2487.27	34.91	2.73	32.37	70.01	Max Peak	Horizontal	144	292	74.0	-4.0	Pass
3	2487.30	17.35	2.73	32.37	52.45	Max Avg	Horizontal	144	292	54.0	-1.6	Pass
1	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

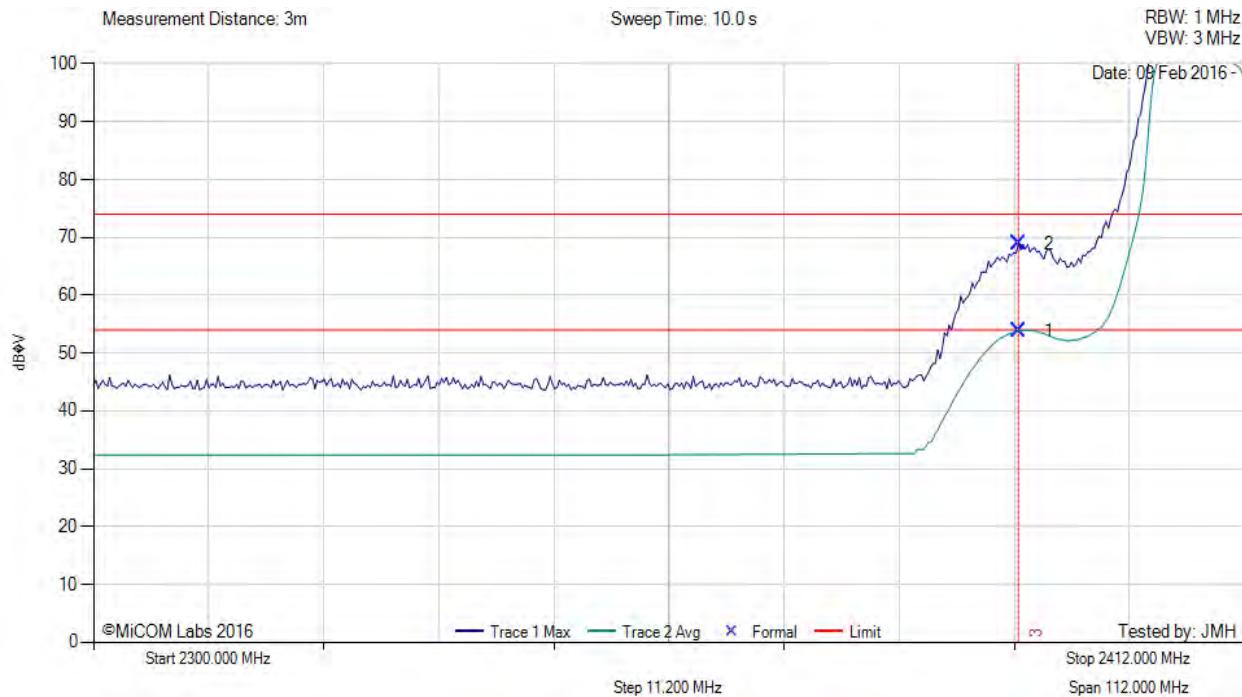
Test Notes: EUT on 150cm table, powered by POE. Connected to Laptop outside chamber.

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RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 2412.00 MHz, Antenna: AP-ANT-40, Power Setting: 18



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2390.00	19.04	2.69	32.04	53.77	Max Avg	Horizontal	117	33	54.0	-0.2	Pass
2	2390.00	34.16	2.69	32.04	68.89	Max Peak	Horizontal	117	33	74.0	-5.1	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

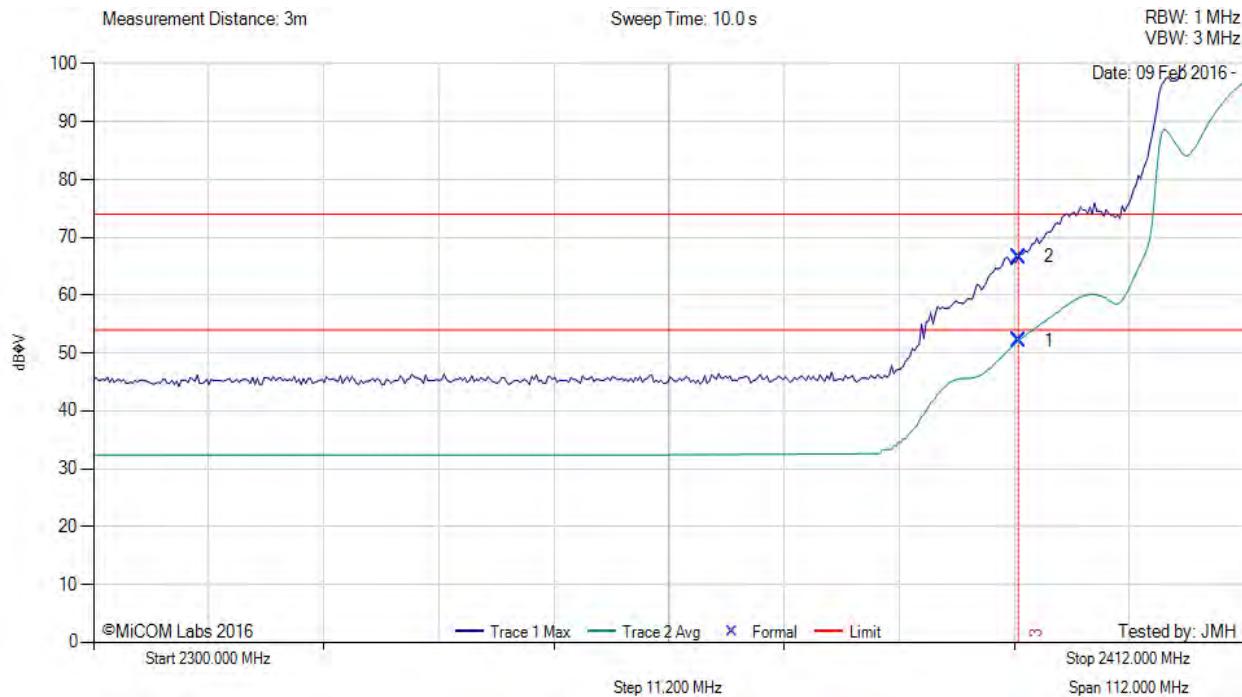
Test Notes: EUT on 150cm table, powered by POE. Connected to Laptop outside chamber.

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RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 2422.00 MHz, Antenna: AP-ANT-40, Power Setting: 16.5



Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	2390.00	17.34	2.69	32.04	52.07	Max Avg	Horizontal	117	33	54.0	-1.9	Pass
2	2390.00	31.89	2.69	32.04	66.62	Max Peak	Horizontal	117	33	74.0	-7.4	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

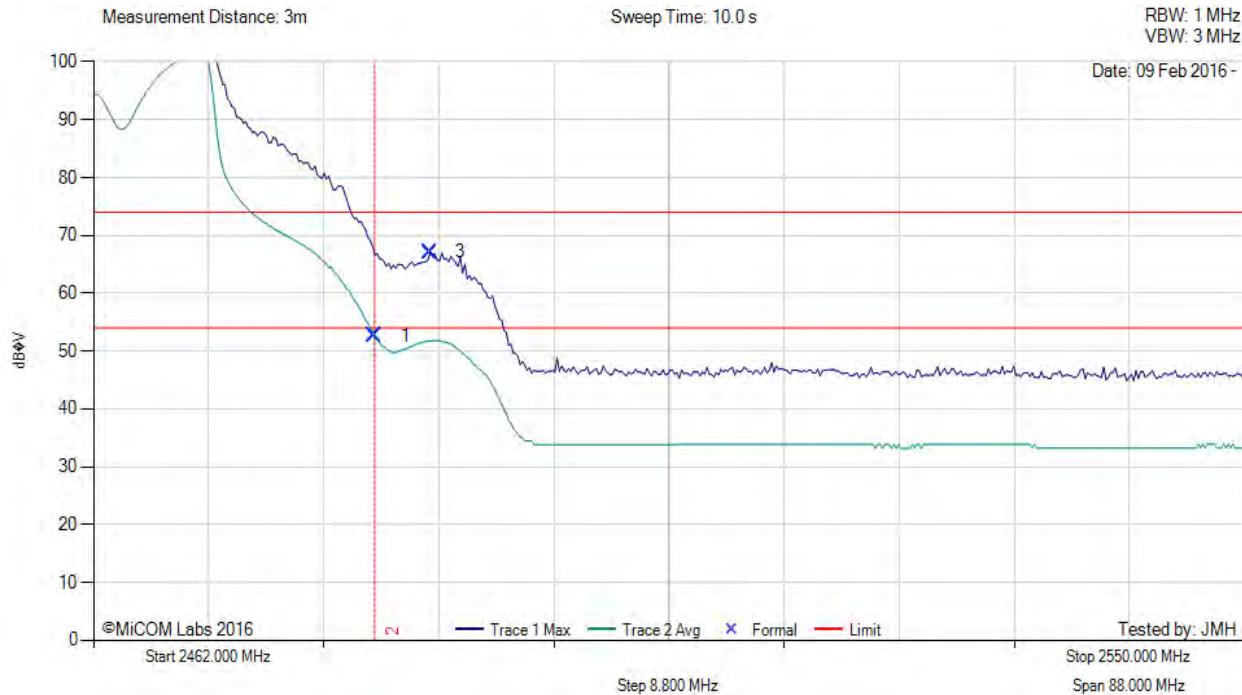
Test Notes: EUT on 150cm table, powered by POE. Connected to Laptop outside chamber.

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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 2462.00 MHz, Antenna: AP-ANT-40, Power Setting: 20



Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	2483.50	17.50	2.73	32.37	52.60	Max Avg	Horizontal	144	292	54.0	-1.4	Pass
3	2487.73	31.96	2.73	32.38	67.07	Max Peak	Horizontal	144	292	74.0	-6.9	Pass
2	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

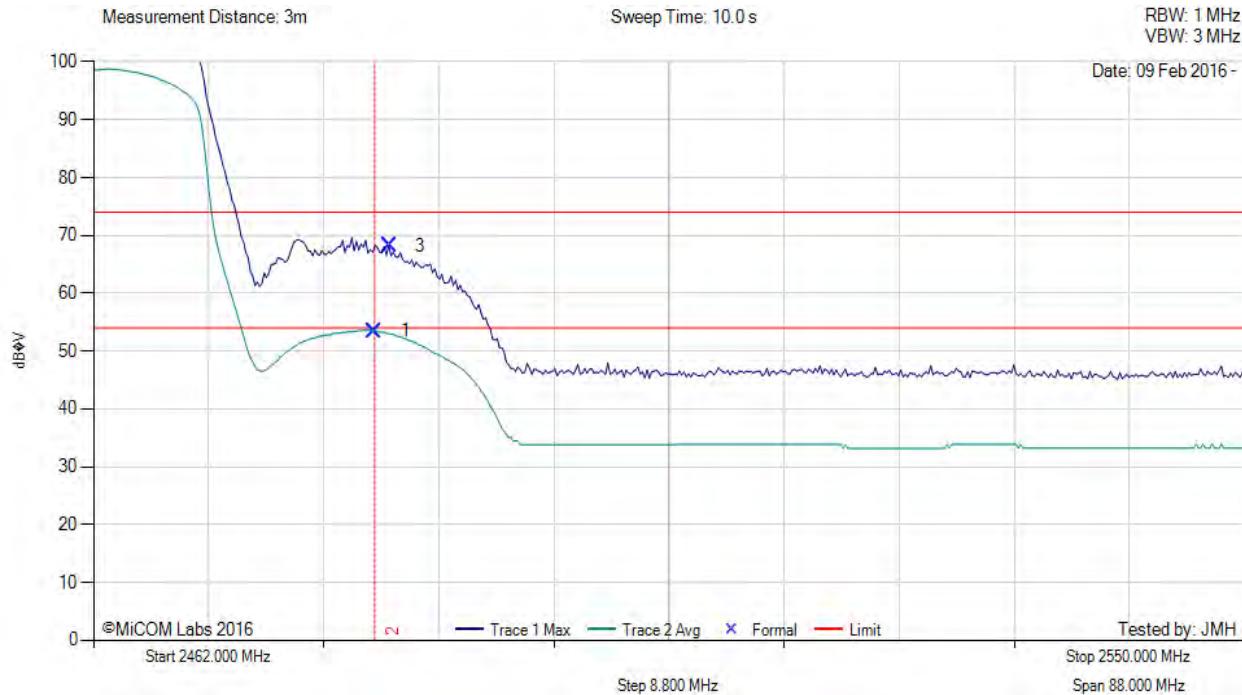
Test Notes: EUT on 150cm table, powered by POE. Connected to Laptop outside chamber.

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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 2452.00 MHz, Antenna: AP-ANT-40, Power Setting: 16



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2483.50	18.38	2.73	32.37	53.48	Max Avg	Horizontal	144	292	54.0	-0.5	Pass
3	2484.63	33.15	2.73	32.37	68.25	Max Peak	Horizontal	144	292	74.0	-5.8	Pass
2	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

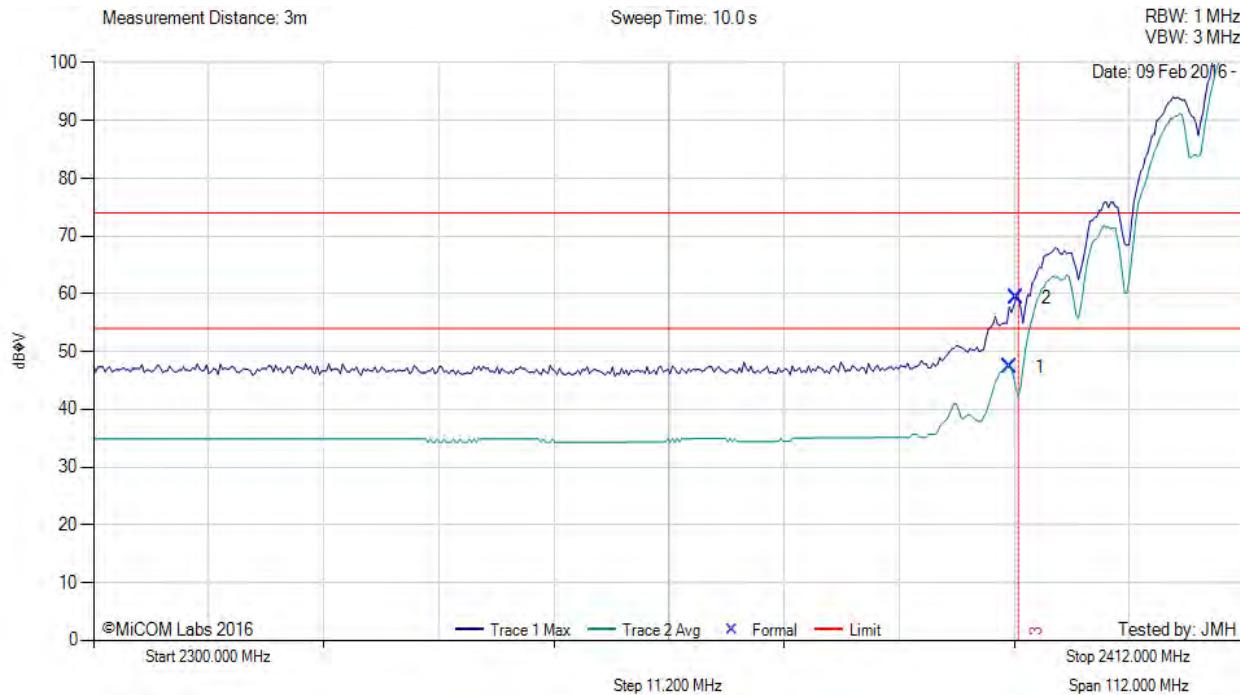
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A.2.6 AP-ANT-45



RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11b, Test Freq: 2412.00 MHz, Antenna: AP-ANT-45, Power Setting: 21



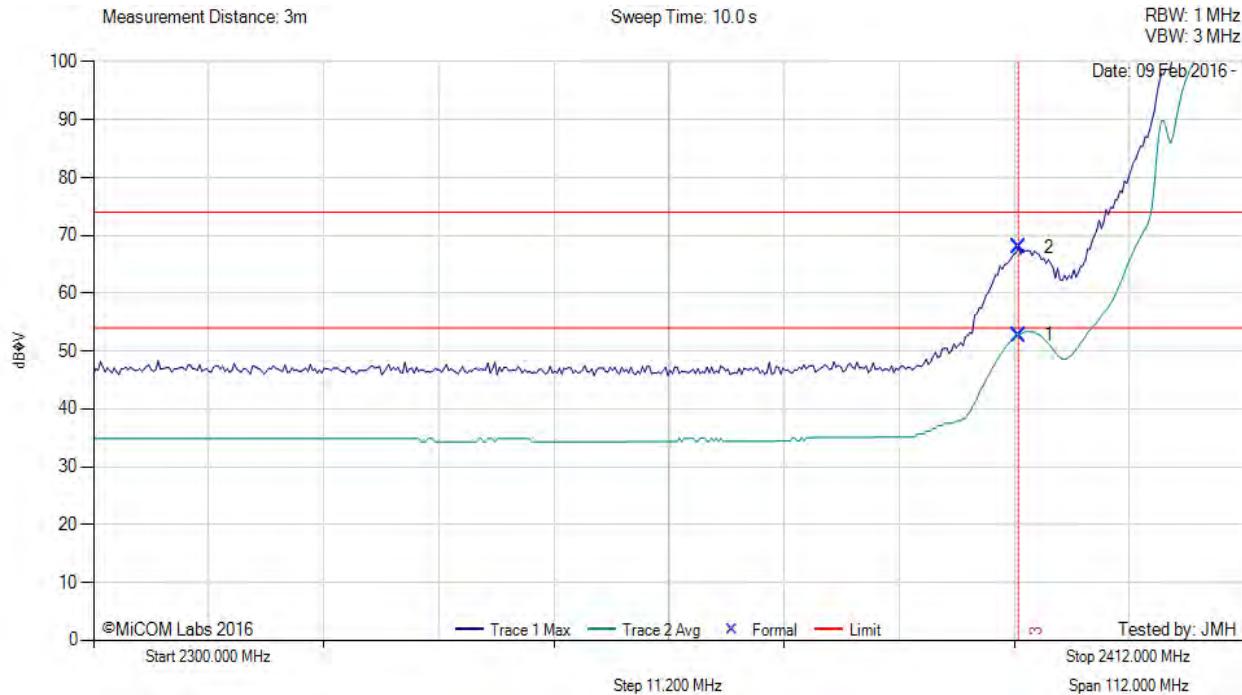
Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2389.19	12.56	2.68	32.04	47.28	Max Avg	Horizontal	133	40	54.0	-6.7	Pass
2	2389.78	24.59	2.69	32.04	59.32	Max Peak	Horizontal	133	40	74.0	-14.7	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11g, Test Freq: 2412.00 MHz, Antenna: AP-ANT-45, Power Setting: 17



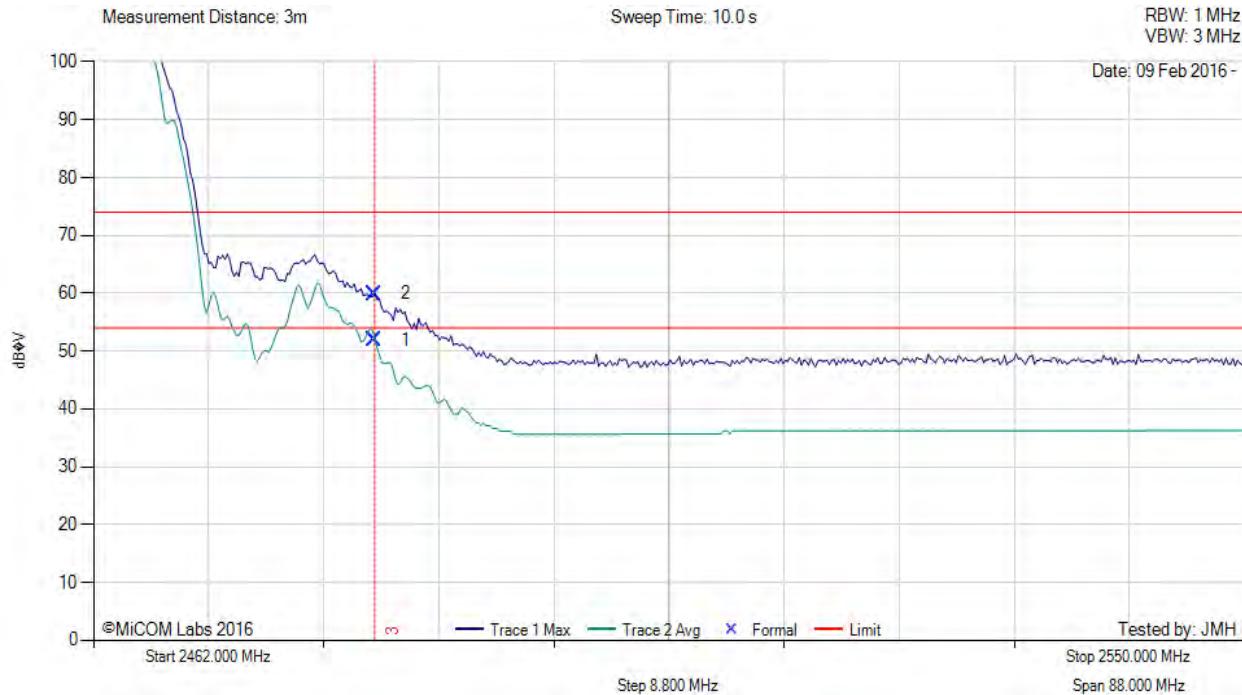
Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2390.00	18.01	2.69	32.04	52.74	Max Avg	Horizontal	133	40	54.0	-1.3	Pass
2	2390.00	33.21	2.69	32.04	67.94	Max Peak	Horizontal	133	40	74.0	-6.1	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11b, Test Freq: 2462.00 MHz, Antenna: AP-ANT-45, Power Setting: 19.5



Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	2483.50	16.86	2.73	32.37	51.96	Max Avg	Horizontal	155	344	54.0	-2.0	Pass
2	2483.50	24.84	2.73	32.37	59.94	Max Peak	Horizontal	155	344	74.0	-14.1	Pass
3	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

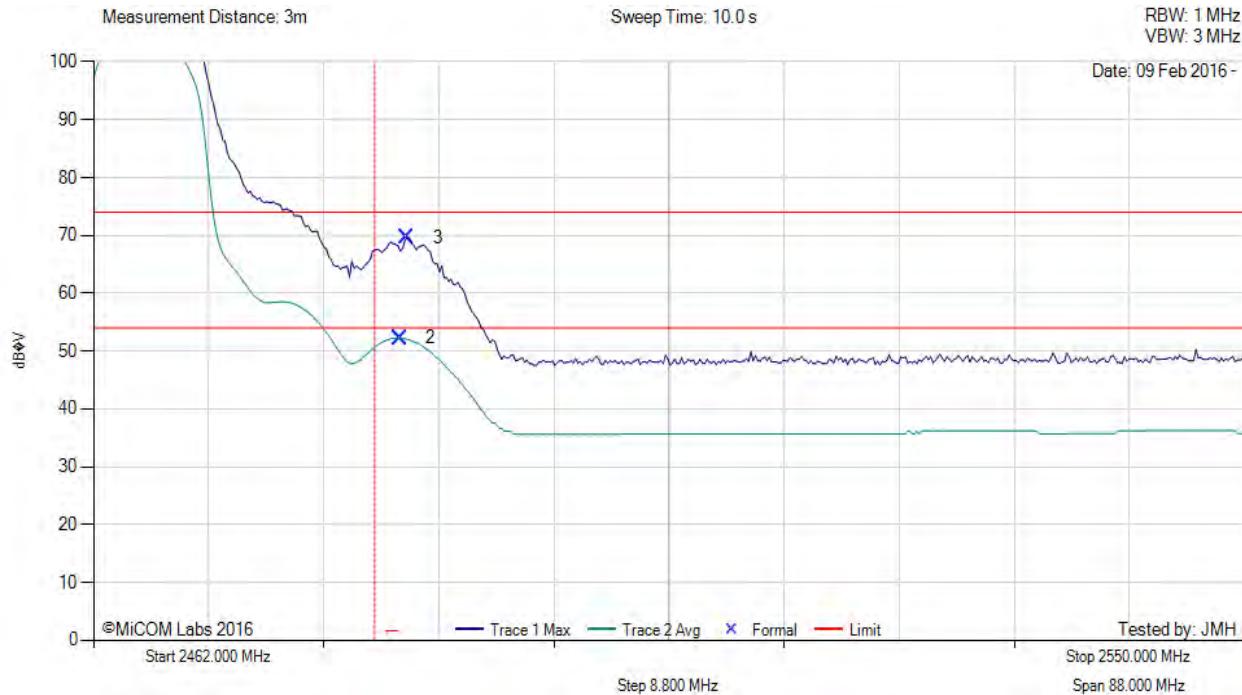
Test Notes: EUT on 150cm table, powered by POE. Connected to Laptop outside chamber.

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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11g, Test Freq: 2462.00 MHz, Antenna: AP-ANT-45, Power Setting: 17.5



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
2	2485.44	17.19	2.73	32.37	52.29	Max Avg	Horizontal	155	344	54.0	-1.7	Pass
3	2485.98	34.60	2.73	32.37	69.70	Max Peak	Horizontal	155	344	74.0	-4.3	Pass
1	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

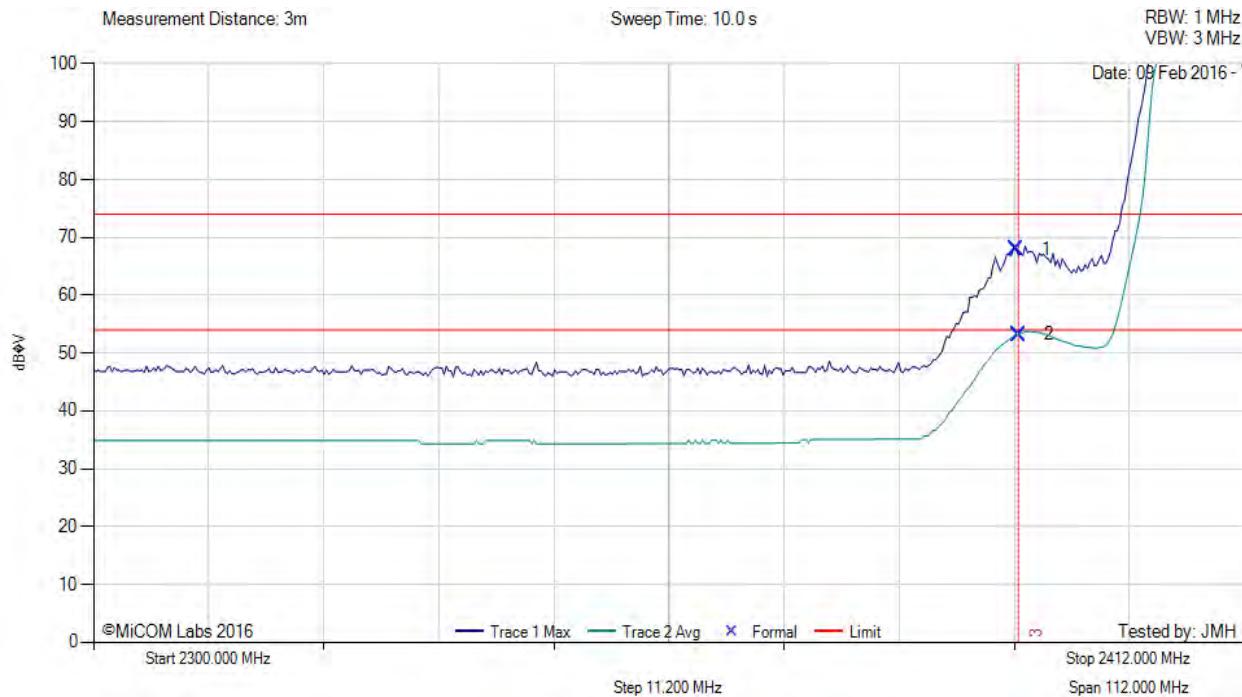
Test Notes: EUT on 150cm table, powered by POE. Connected to Laptop outside chamber.

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RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 2412.00 MHz, Antenna: AP-ANT-45, Power Setting: 17



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2389.78	33.21	2.69	32.04	67.94	Max Peak	Horizontal	133	40	74.0	-6.1	Pass
2	2390.00	18.51	2.69	32.04	53.24	Max Avg	Horizontal	133	40	54.0	-0.8	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

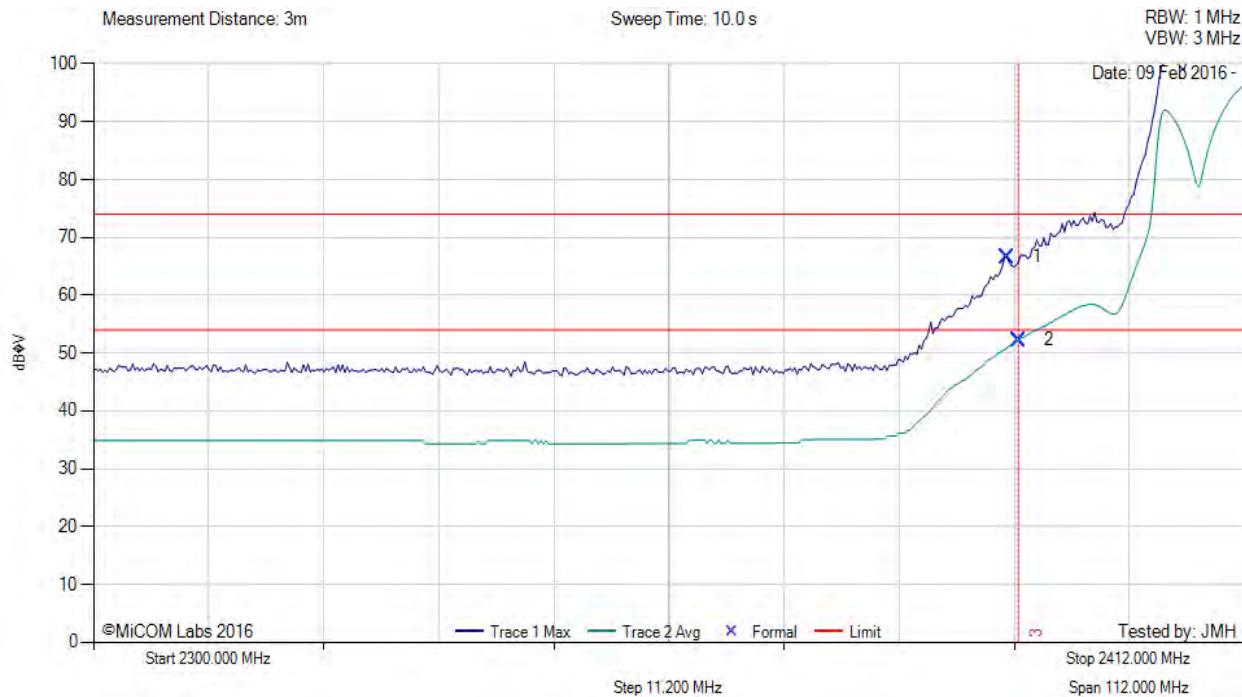
Test Notes: EUT on 150cm table, powered by POE. Connected to Laptop outside chamber.

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RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 2422.00 MHz, Antenna: AP-ANT-45, Power Setting: 16



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2388.92	31.88	2.68	32.04	66.60	Max Peak	Horizontal	133	40	74.0	-7.4	Pass
2	2390.00	17.49	2.69	32.04	52.22	Max Avg	Horizontal	133	40	54.0	-1.8	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

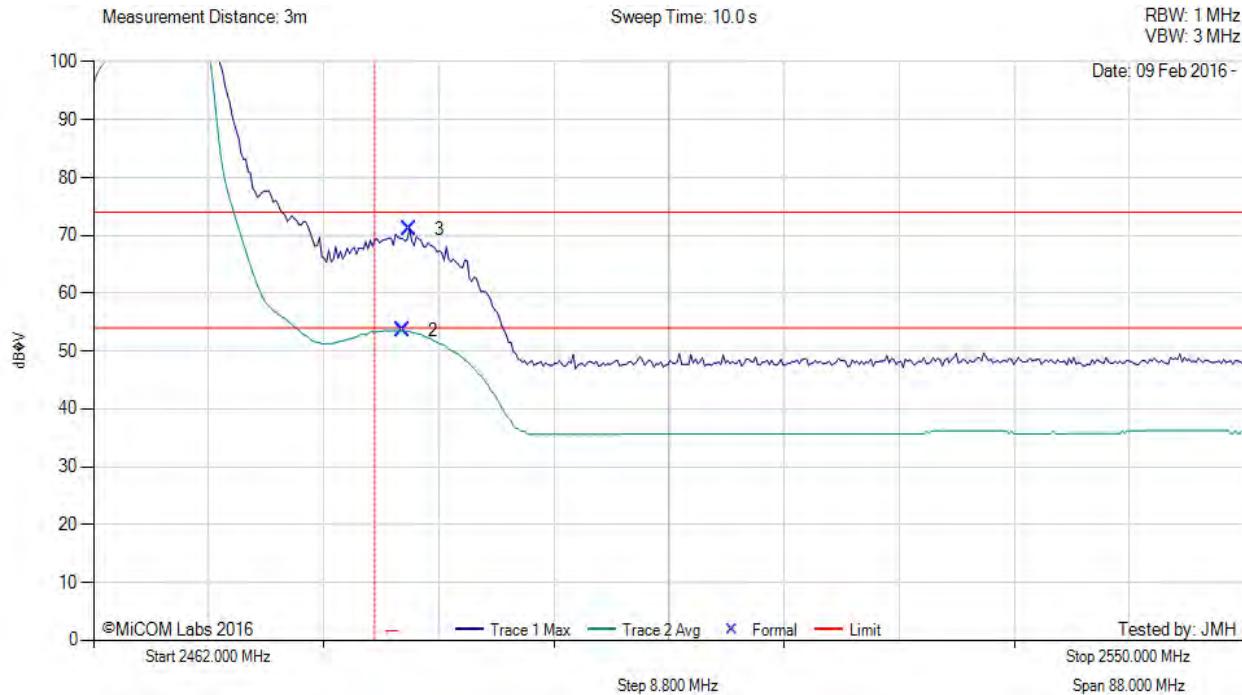
Test Notes: EUT on 150cm table, powered by POE. Connected to Laptop outside chamber.

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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 2462.00 MHz, Antenna: AP-ANT-45, Power Setting: 18.5



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
2	2485.62	18.52	2.73	32.37	53.62	Max Avg	Horizontal	155	344	54.0	-0.4	Pass
3	2486.16	36.04	2.73	32.37	71.14	Max Peak	Horizontal	155	344	74.0	-2.9	Pass
1	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

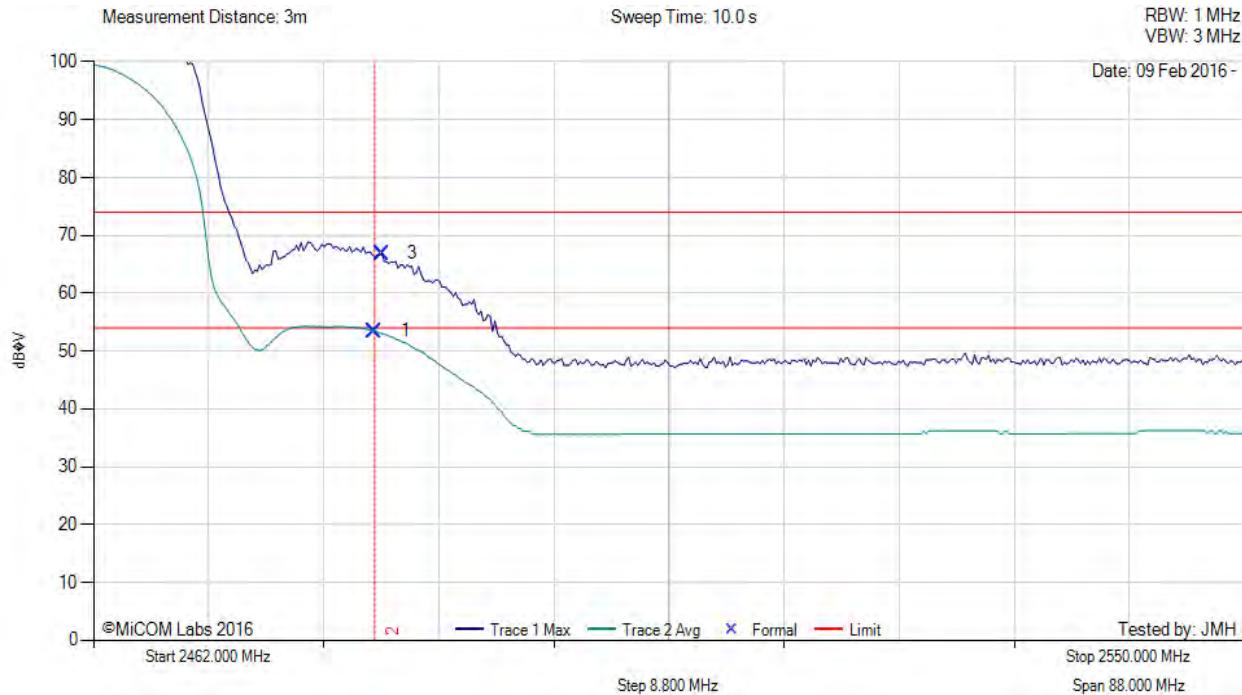
Test Notes: EUT on 150cm table, powered by POE. Connected to Laptop outside chamber.

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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 2452.00 MHz, Antenna: AP-ANT-45, Power Setting: 15.5



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2483.50	18.38	2.73	32.37	53.48	Max Avg	Horizontal	155	344	54.0	-0.5	Pass
3	2484.04	31.80	2.73	32.37	66.90	Max Peak	Horizontal	155	344	74.0	-7.1	Pass
2	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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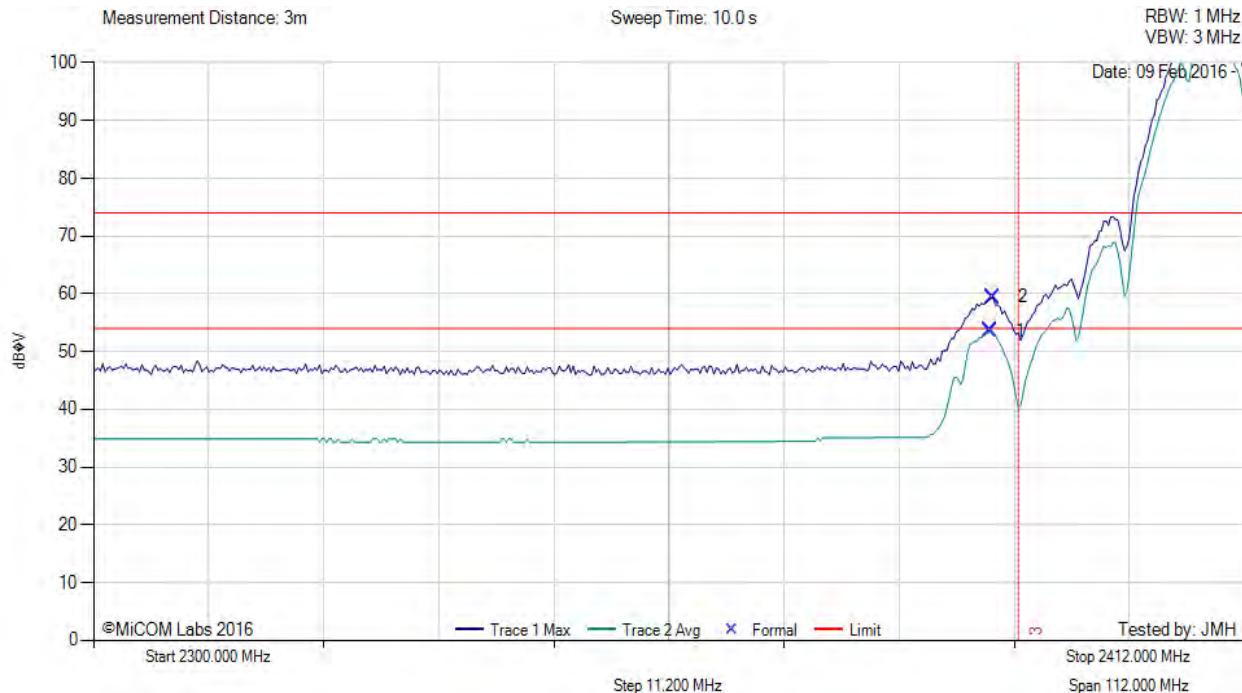
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A.2.7 AP-ANT-48



RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11b, Test Freq: 2412.00 MHz, Antenna: AP-ANT-48, Power Setting: 21



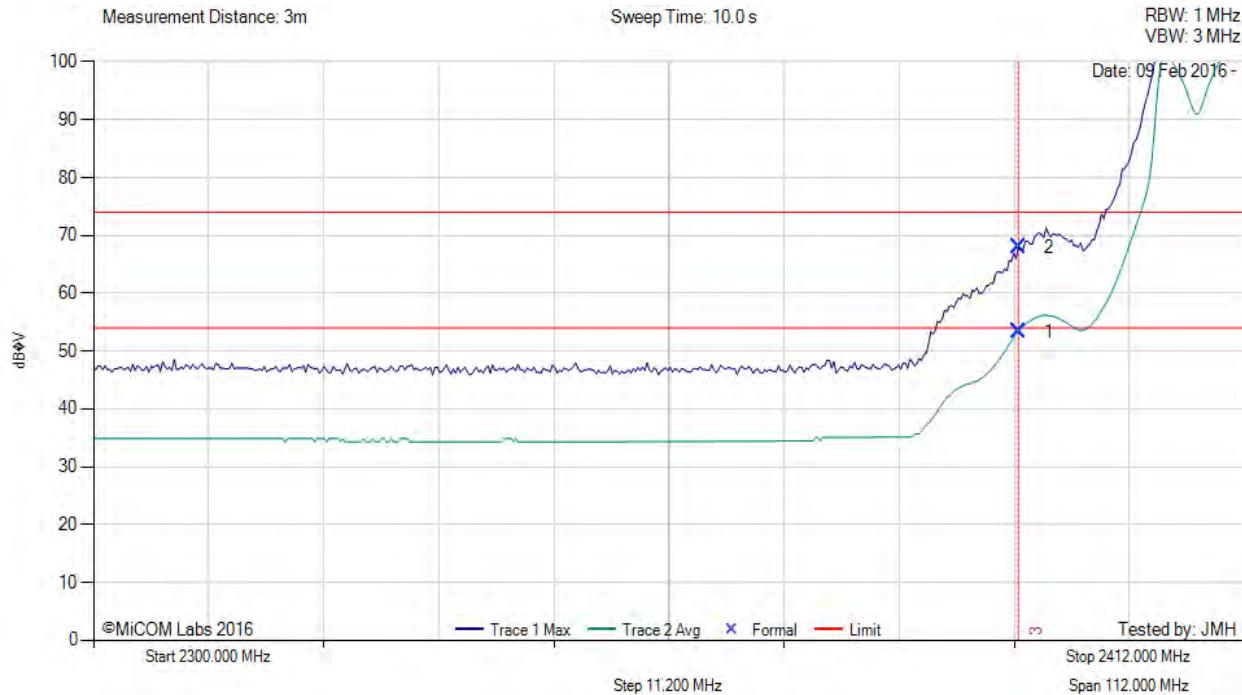
Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2387.29	18.92	2.68	32.02	53.62	Max Avg	Horizontal	178	330	54.0	-0.4	Pass
2	2387.53	24.76	2.68	32.03	59.47	Max Peak	Horizontal	178	330	74.0	-14.5	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11g, Test Freq: 2412.00 MHz, Antenna: AP-ANT-48, Power Setting: 18



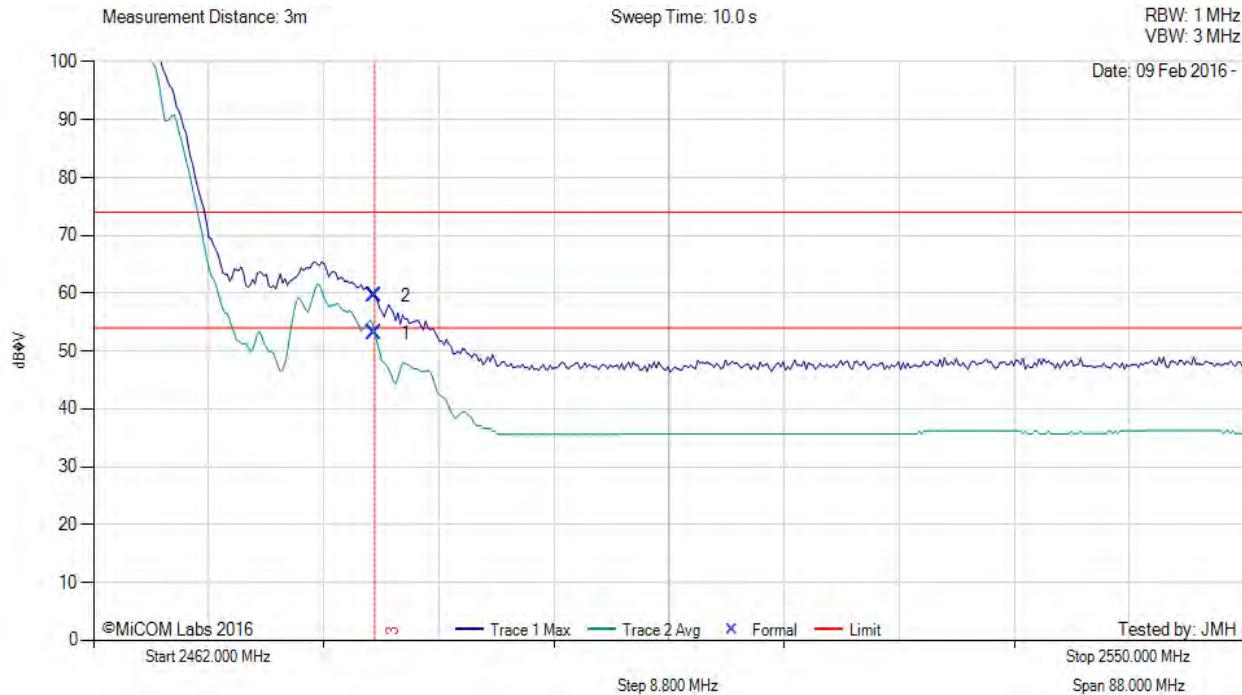
Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2390.00	18.57	2.69	32.04	53.30	Max Avg	Horizontal	178	330	54.0	-0.7	Pass
2	2390.00	33.24	2.69	32.04	67.97	Max Peak	Horizontal	178	330	74.0	-6.0	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11b, Test Freq: 2462.00 MHz, Antenna: AP-ANT-48, Power Setting: 20



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2483.50	18.02	2.73	32.37	53.12	Max Avg	Horizontal	154	10	54.0	-0.9	Pass
2	2483.50	24.43	2.73	32.37	59.53	Max Peak	Horizontal	154	10	74.0	-14.5	Pass
3	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

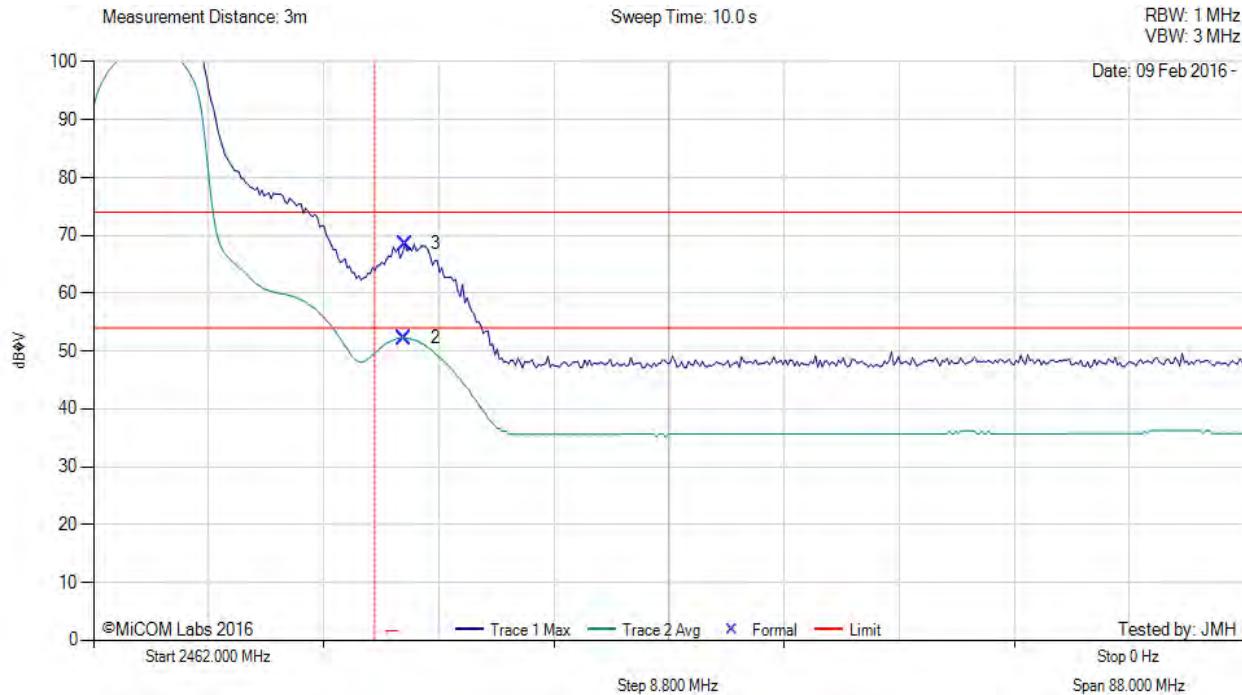
Test Notes: EUT on 150cm table, powered by POE. Connected to Laptop outside chamber.

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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11g, Test Freq: 2462.00 MHz, Antenna: AP-ANT-48, Power Setting: 18



Num	Frequency 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	2485.79	17.19	2.73	32.37	52.29	Max Avg	Horizontal	154	10	54.0	-1.7	Pass
3	2485.80	33.42	2.73	32.37	68.52	Max Peak	Horizontal	154	10	74.0	-5.5	Pass
1	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

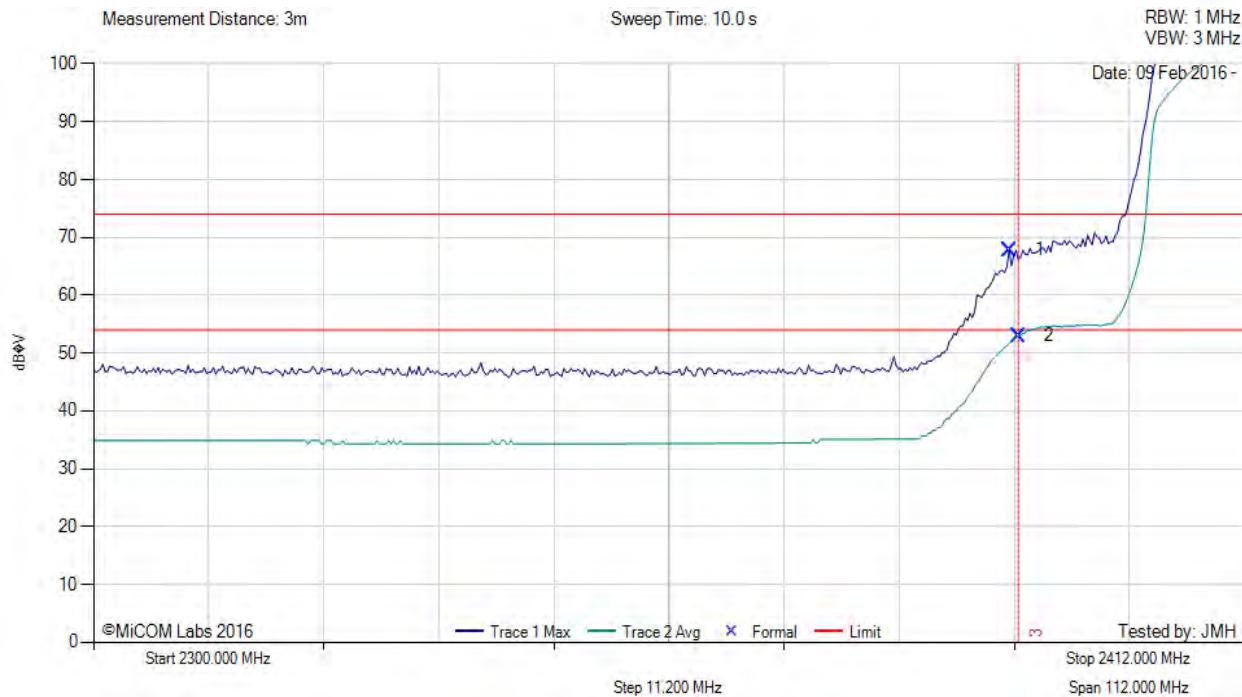
Test Notes: EUT on 150cm table, powered by POE. Connected to Laptop outside chamber.

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RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 2412.00 MHz, Antenna: AP-ANT-48, Power Setting: 17.5



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2389.10	33.07	2.68	32.04	67.79	Max Peak	Horizontal	178	330	74.0	-6.2	Pass
2	2390.00	18.23	2.69	32.04	52.96	Max Avg	Horizontal	178	330	54.0	-1.0	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

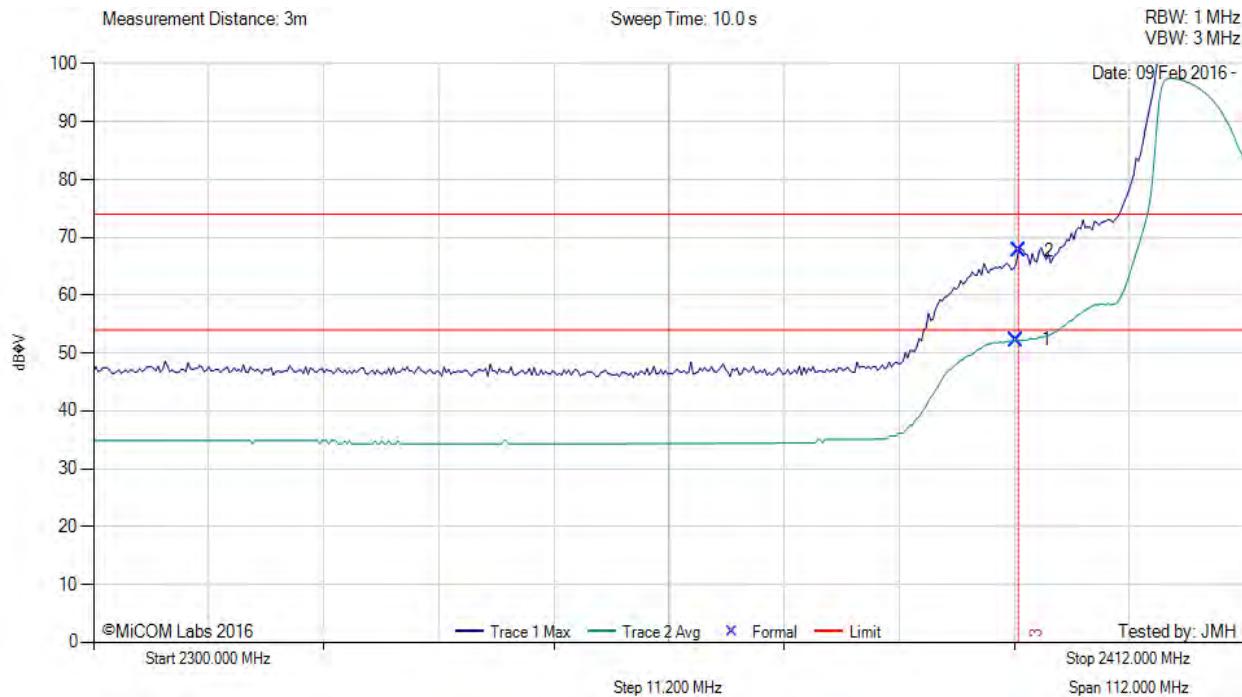
Test Notes: EUT on 150cm table, powered by POE. Connected to Laptop outside chamber.

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RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 2422.00 MHz, Antenna: AP-ANT-48, Power Setting: 16.5



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2389.78	17.49	2.69	32.04	52.22	Max Avg	Horizontal	178	330	54.0	-1.8	Pass
2	2390.00	32.93	2.69	32.04	67.66	Max Peak	Horizontal	178	330	74.0	-6.3	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

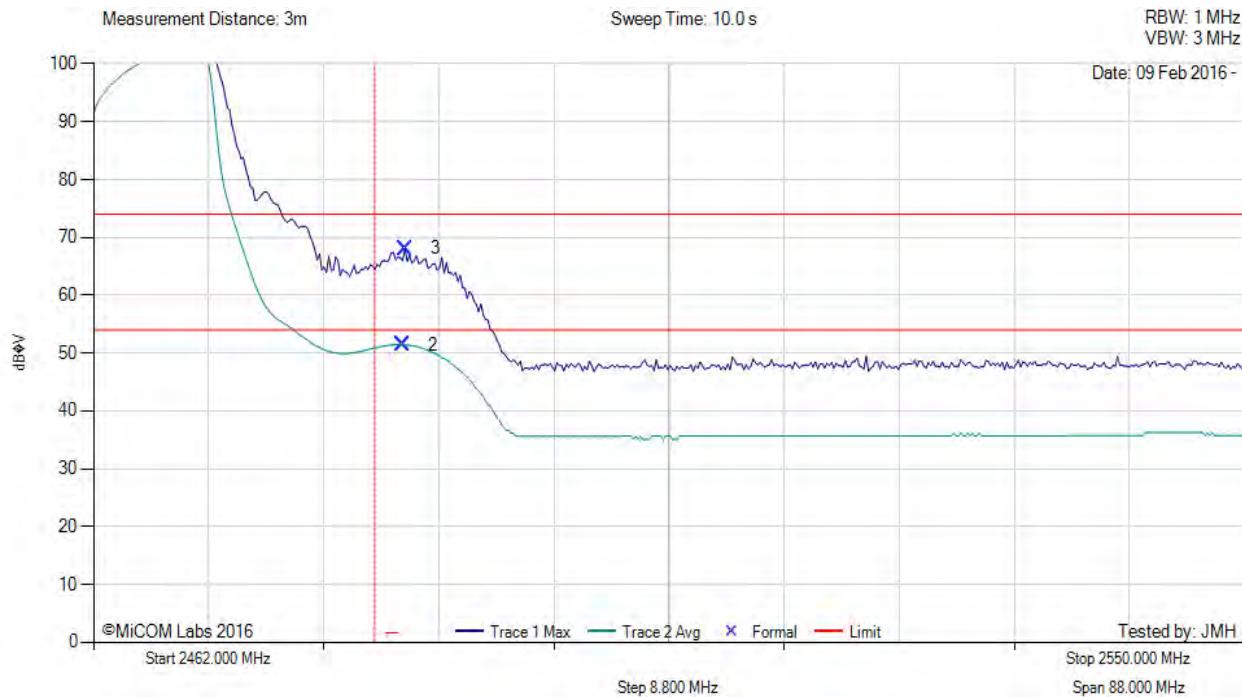
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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 2462.00 MHz, Antenna: AP-ANT-48, Power Setting: 18.5



Num	Frequency 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	2485.62	16.36	2.73	32.37	51.46	Max Avg	Horizontal	154	10	54.0	-2.5	Pass
3	2485.80	32.96	2.73	32.37	68.06	Max Peak	Horizontal	154	10	74.0	-5.9	Pass
1	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

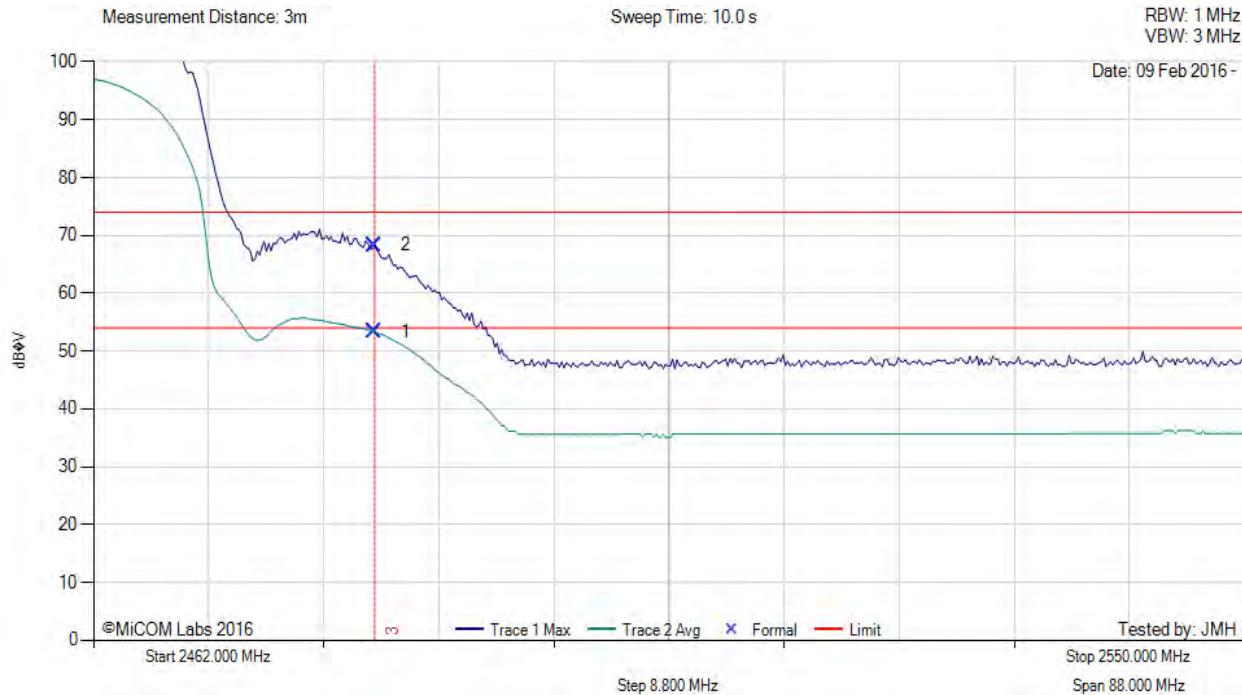
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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 2452.00 MHz, Antenna: AP-ANT-48, Power Setting: 16



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2483.50	18.17	2.73	32.37	53.27	Max Avg	Horizontal	154	10	54.0	-0.7	Pass
2	2483.50	33.17	2.73	32.37	68.27	Max Peak	Horizontal	154	10	74.0	-5.7	Pass
3	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

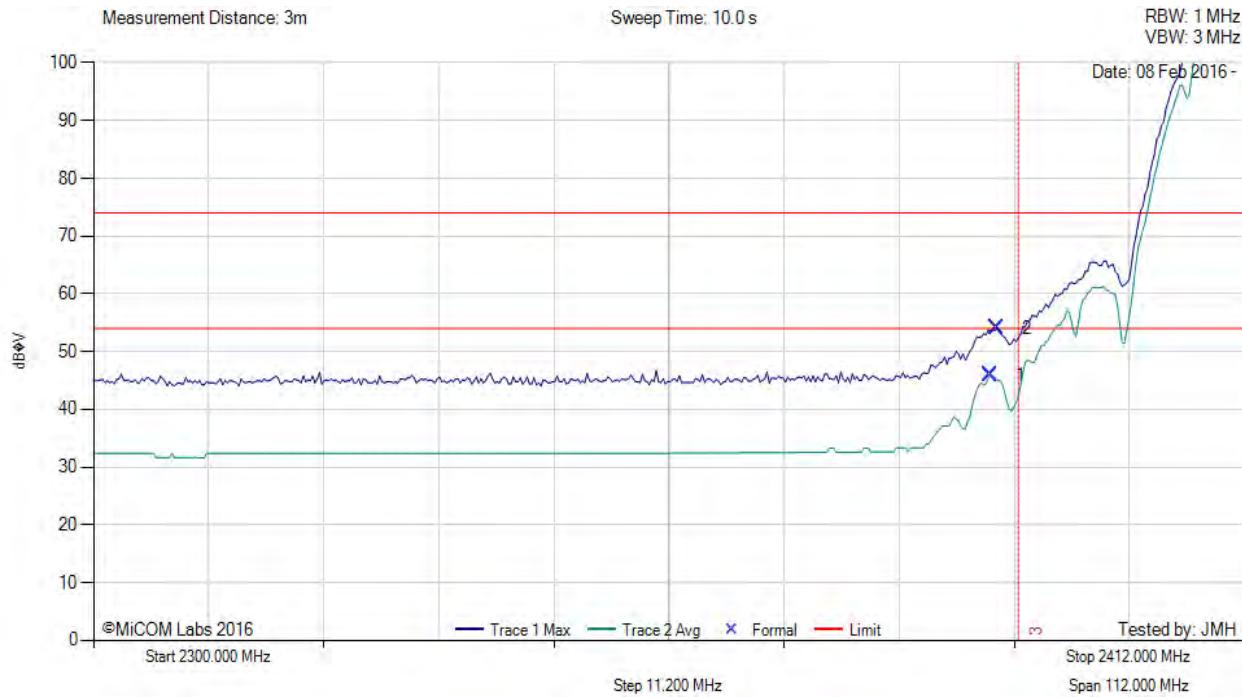
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A.2.8 Metal Sheet



RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11b, Test Freq: 2412.00 MHz, Antenna: Metal Sheet, Power Setting: 20



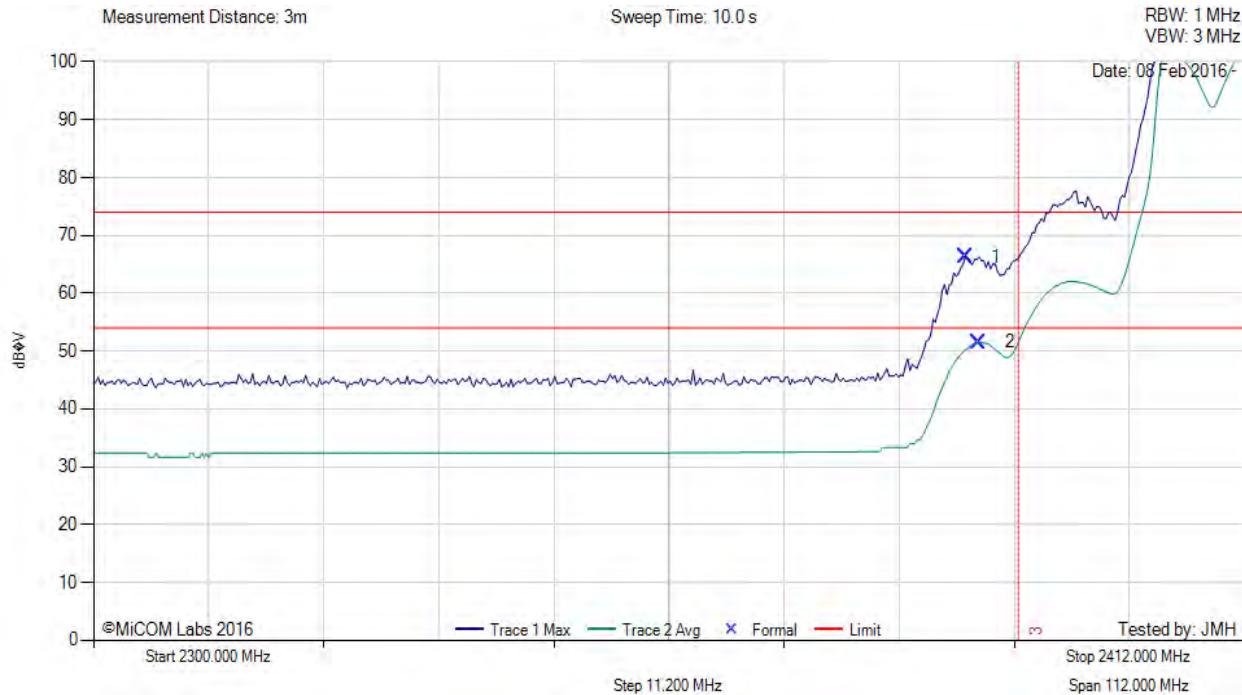
Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2387.26	11.25	2.68	32.02	45.95	Max Avg	Horizontal	159	40	54.0	-8.1	Pass
2	2387.91	19.36	2.68	32.03	54.07	Max Peak	Horizontal	159	40	74.0	-19.9	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11g, Test Freq: 2412.00 MHz, Antenna: Metal Sheet, Power Setting: 19



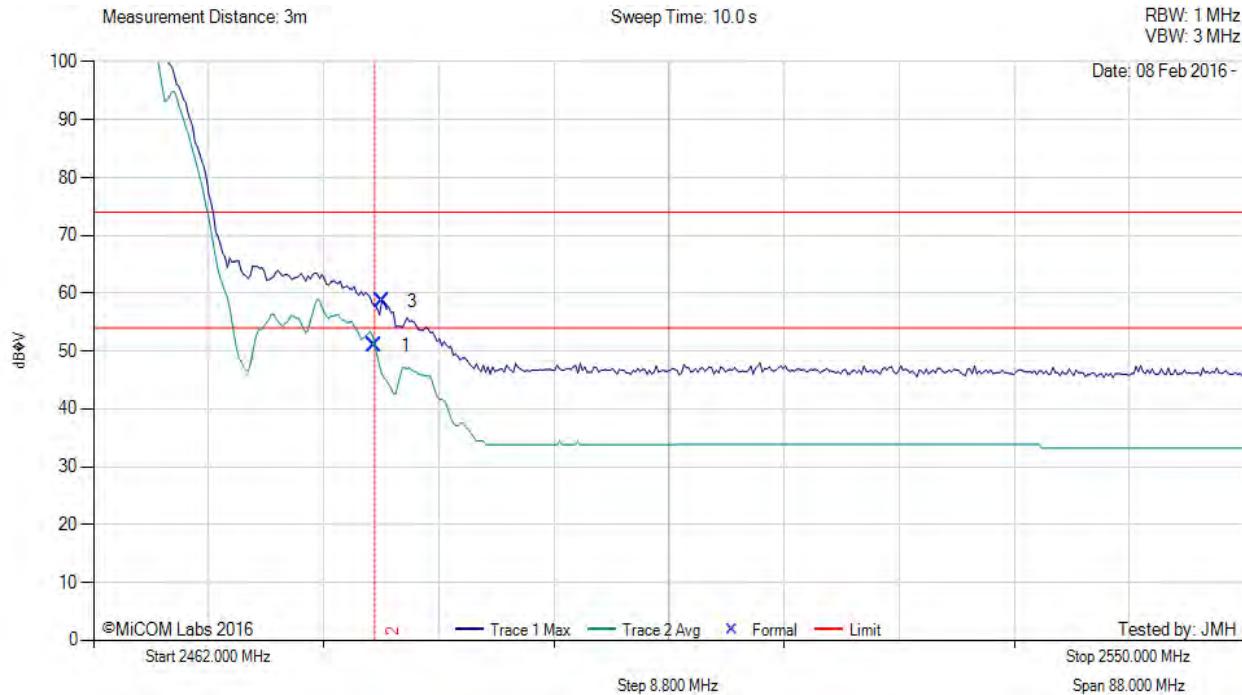
Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2384.82	31.59	2.68	32.00	66.27	Max Peak	Horizontal	159	40	74.0	-7.7	Pass
2	2386.18	16.86	2.68	32.01	51.55	Max Avg	Horizontal	159	40	54.0	-2.5	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11b, Test Freq: 2462.00 MHz, Antenna: Metal Sheet, Power Setting: 20



Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	2483.50	15.90	2.73	32.37	51.00	Max Avg	Horizontal	161	317	54.0	-3.0	Pass
3	2484.03	23.52	2.73	32.37	58.62	Max Peak	Horizontal	161	317	74.0	-15.4	Pass
2	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

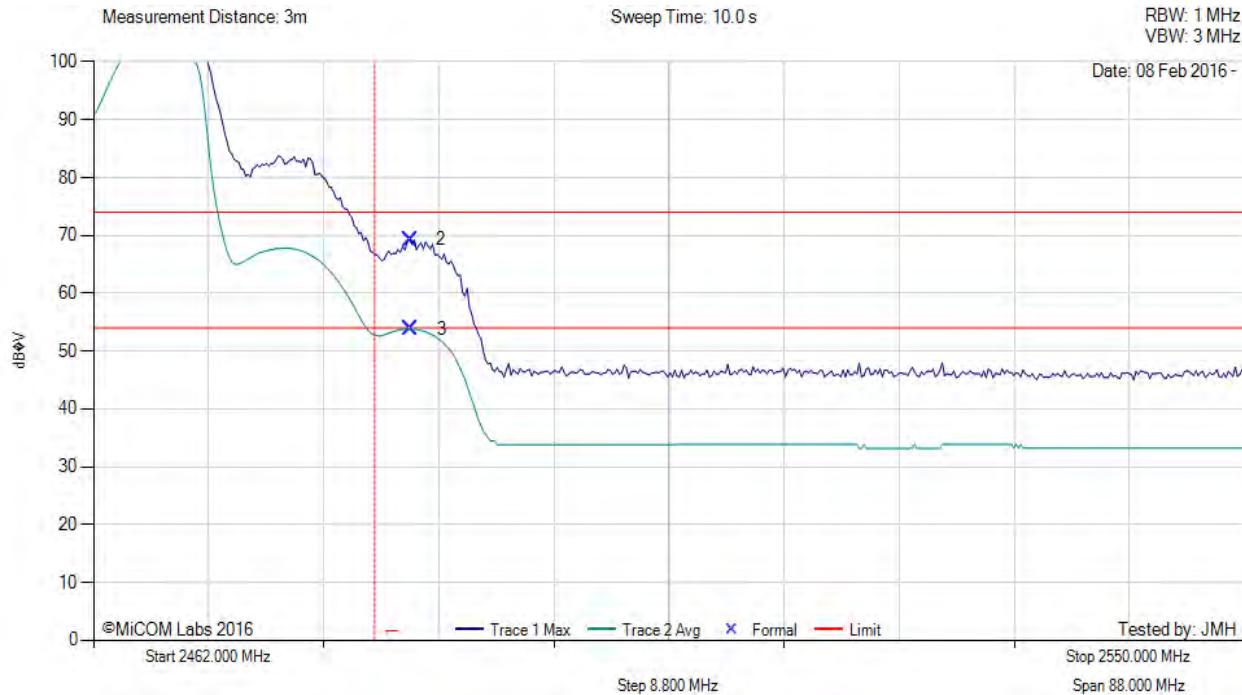
Test Notes: EUT on 150cm table powered by POE, connected to laptop outside chamber

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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11g, Test Freq: 2462.00 MHz, Antenna: Metal Sheet, Power Setting: 20



Num	Frequency 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	2486.25	34.17	2.73	32.37	69.27	Max Peak	Horizontal	161	317	74.0	-4.7	Pass
3	2486.29	18.66	2.73	32.37	53.76	Max Avg	Horizontal	161	317	54.0	-0.2	Pass
1	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

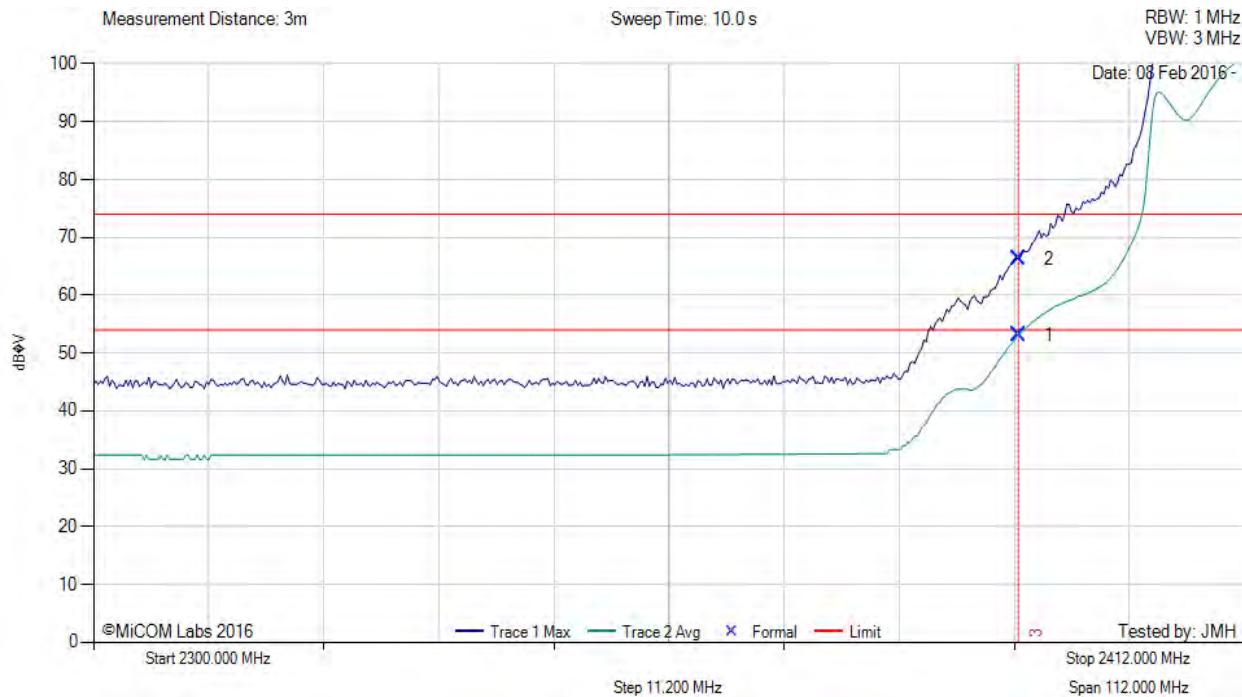
Test Notes: EUT on 150cm table powered by POE, connected to laptop outside chamber

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RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 2412.00 MHz, Antenna: Metal Sheet, Power Setting: 18.5



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2390.00	18.30	2.69	32.04	53.03	Max Avg	Horizontal	159	40	54.0	-1.0	Pass
2	2390.00	31.53	2.69	32.04	66.26	Max Peak	Horizontal	159	40	74.0	-7.7	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

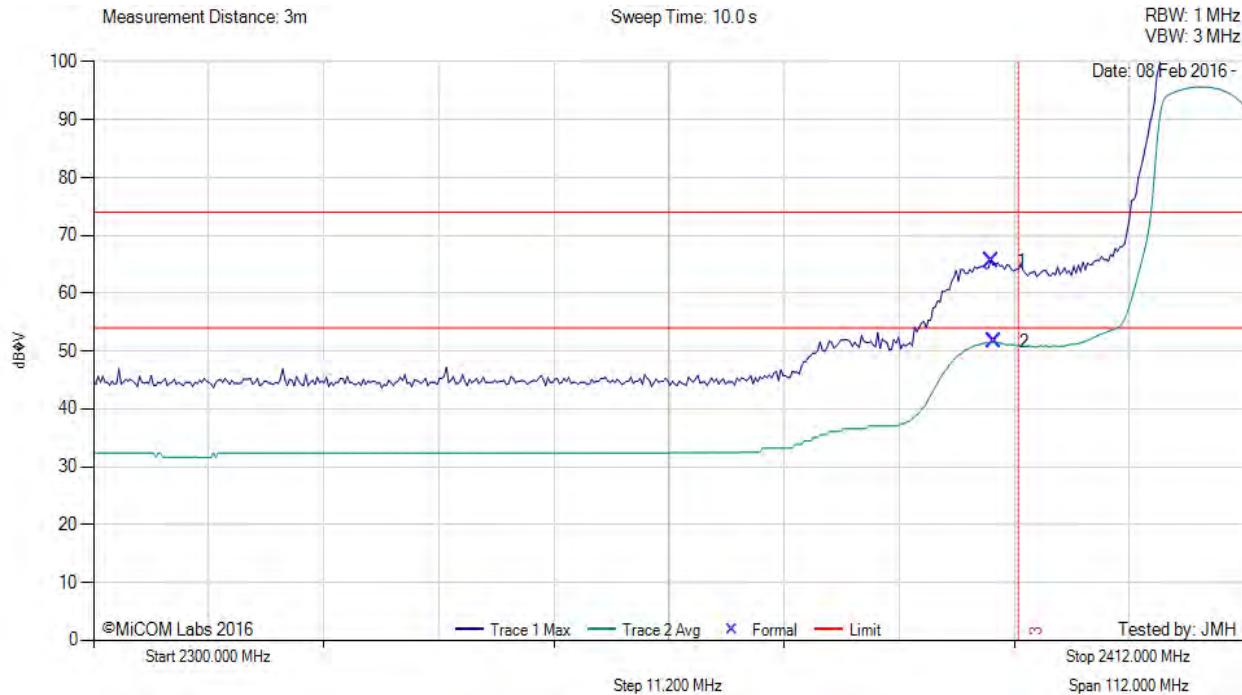
Test Notes: EUT on 150cm table powered by POE, connected to laptop outside chamber

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RADIATED - LOWER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 2422.00 MHz, Antenna: Metal Sheet, Power Setting: 16



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
1	2387.39	30.92	2.68	32.02	65.62	Max Peak	Horizontal	159	40	74.0	-8.4	Pass
2	2387.66	16.94	2.68	32.03	51.65	Max Avg	Horizontal	159	40	54.0	-2.4	Pass
3	2390.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

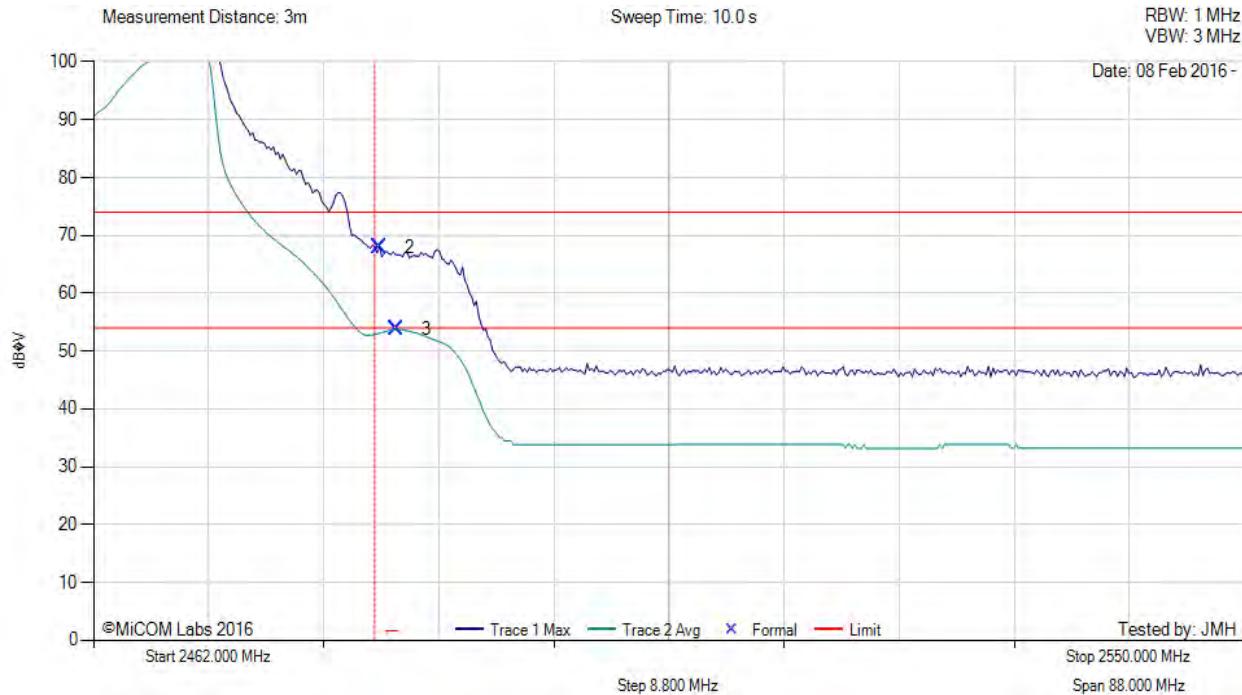
Test Notes: EUT on 150cm table powered by POE, connected to laptop outside chamber

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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 2462.00 MHz, Antenna: Metal Sheet, Power Setting: 20



Num	Frequency MHz	Raw dB μ V	Cable Loss	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail
2	2483.88	32.92	2.73	32.37	68.02	Max Peak	Horizontal	161	317	74.0	-6.0	Pass
3	2485.11	18.65	2.73	32.37	53.75	Max Avg	Horizontal	161	317	54.0	-0.3	Pass
1	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

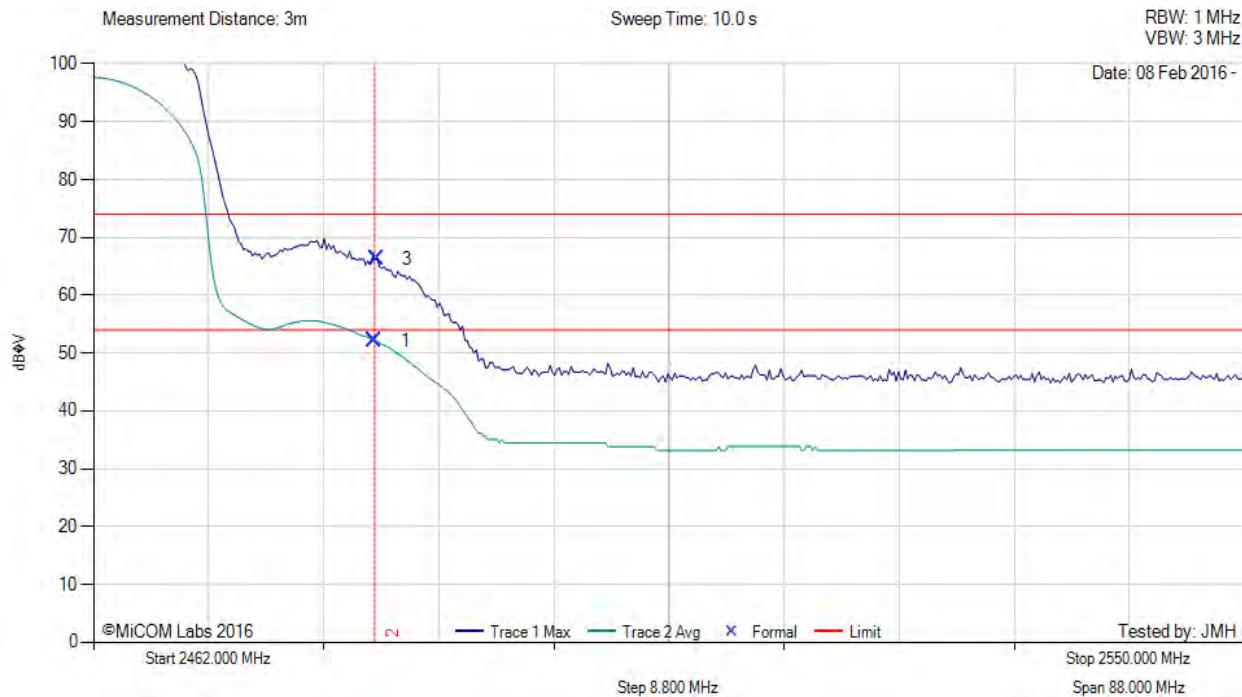
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RADIATED - UPPER RESTRICTED BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 2452.00 MHz, Antenna: Metal Sheet, Power Setting: 15.5



Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	2483.50	17.03	2.73	32.37	52.13	Max Avg	Horizontal	161	317	54.0	-1.9	Pass
3	2483.68	31.21	2.73	32.37	66.31	Max Peak	Horizontal	161	317	74.0	-7.7	Pass
2	2483.50	--	--	--	--	Band-Edge	--	--	--	--	--	--

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

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