

RADIATED TEST REPORT



Test of: Test of: Mimosa Networks A5c, A5-14, A5-18

To: FCC CFR 47 Part 15 Subpart E 15.407 & IC RSS 247 (DFS Bands)

Test Report Serial No.: MIMO09-U8_Radiated Addendum Rev A

Issue Date: 2nd August 2016

Master Document Number	Addendum Reports
MIMO09 – U8_Master	MIMO09 – U8_Conducted
	MIMO09 – U8_Radiated
	MIMO09 – U8_DFS
	MIMO09 – U2 (FCC Part15B Emissions) A5C
	MIMO09 – U3 (FCC Part15B Emissions) A5-14, A5-18



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To: FCC 15.407 & RSS 247 (DFS bands)
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1. MEASUREMENT AND PRESENTATION OF TEST DATA

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

Plots have been relegated into the Appendix 'Graphical Data'.

Test 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 conducted RF testing.



The MiCOM Labs "[MiTest](#)" Automated Test System" (Patent Pending)

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2. TEST RESULTS

2.1. Radiated

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

Test Procedure for Radiated Spurious and Band-Edge Emissions

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

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

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

- (1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (4) For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (5) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.
- (6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.
- (7) The provisions of §15.205 apply to intentional radiators operating under this section.
- (8) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits.

Limits for Restricted Bands (15.205, 15.209)

Peak emission: 74 dBuV/m

Average emission: 54 dBuV/m

Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Loss, and subtracting Amplifier Gain from the measured reading. All factors are included in the reported data.

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$$FS = R + AF + CORR - FO$$

where:

FS = Field Strength

R = Measured Spectrum analyzer Input Amplitude

AF = Antenna Factor

CORR = Correction Factor = CL – AG + NFL

CL = Cable Loss

AG = Amplifier Gain

FO = Distance Falloff Factor

NFL = Notch Filter Loss or Waveguide Loss

Example:

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

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

where P is the EIRP in Watts

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

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

Level (dBmV/m) = 20 * Log (level (mV/m))

40 dBmV/m = 100 mV/m

48 dBmV/m = 250 mV/m

Restricted Bands of Operation (15.205)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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2.1.1. Restricted Band Emissions

2.1.1.1. A-18

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	A-18	Variant:	802.11n ac20
Antenna Gain (dBi):	8.00	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5260.00	Data Rate:	6.50 MBit/s
Power Setting:	0x11	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5261.53	73.79	3.66	-11.28	66.17	Fundamental	Vertical	200	1	--	--	
#2	7310.64	57.18	4.24	-7.29	54.13	Max Peak	Vertical	113	329	74.0	-19.9	Pass
#3	7310.64	34.94	4.24	-7.29	31.89	Max Avg	Vertical	113	329	54.0	-22.1	Pass

Test Notes: EUT A5-18 SN: 2119591877 on 150cm table, powered by Mimosa POE PS 502-00002.

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	A-18	Variant:	802.11n ac20
Antenna Gain (dBi):	8.00	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5300.00	Data Rate:	6.50 MBit/s
Power Setting:	0x11	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5301.45	72.13	3.81	-11.09	64.85	Fundamental	Vertical	200	1	--	--	
#2	7309.90	57.95	4.23	-7.29	54.89	Max Peak	Vertical	136	317	74.0	-19.1	Pass
#3	7309.90	35.16	4.23	-7.29	32.10	Max Avg	Vertical	136	317	54.0	-21.9	Pass

Test Notes: EUT A5-18 SN: 2119591877 on 150cm table, powered by Mimosa POE PS 502-00002.

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	A-18	Variant:	802.11n ac20
Antenna Gain (dBi):	8.00	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5335.00	Data Rate:	6.50 MBit/s
Power Setting:	0x11	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5321.48	67.04	3.75	-11.06	59.73	Fundamental	Vertical	101	1	--	--	
#2	7311.99	57.31	4.24	-7.29	54.26	Max Peak	Vertical	138	307	74.0	-19.7	Pass
#3	7311.99	35.03	4.24	-7.29	31.98	Max Avg	Vertical	138	307	54.0	-22.0	Pass

Test Notes: EUT A5-18 SN: 2119591877 on 150cm table, powered by Mimosa POE PS 502-00002.

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	A-18	Variant:	802.11n ac20
Antenna Gain (dBi):	8.00	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5485.00	Data Rate:	6.50 MBit/s
Power Setting:	0x09	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5507.53	63.57	3.75	-11.19	56.13	Fundamental	Vertical	189	284	--	--	
#2	7310.38	57.82	4.23	-7.29	54.76	Max Peak	Vertical	167	322	74.0	-19.2	Pass
#3	7310.38	35.12	4.23	-7.29	32.06	Max Avg	Vertical	167	322	54.0	-21.9	Pass

Test Notes: EUT A5-18 SN: 2119591877 on 150cm table, powered by Mimosa POE PS 502-00002.

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	A-18	Variant:	802.11n ac20
Antenna Gain (dBi):	8.00	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5580.00	Data Rate:	6.50 MBit/s
Power Setting:	0x09	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5581.64	66.78	3.80	-11.20	59.38	Fundamental	Vertical	200	1	--	--	
#2	7310.88	57.18	4.24	-7.29	54.13	Max Peak	Vertical	137	325	74.0	-19.9	Pass
#3	7310.88	34.82	4.24	-7.29	31.77	Max Avg	Vertical	137	325	54.0	-22.2	Pass

Test Notes: EUT A5-18 SN: 2119591877 on 150cm table, powered by Mimosa POE PS 502-00002.

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	A-18	Variant:	802.11n ac20
Antenna Gain (dBi):	8.00	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5720.00	Data Rate:	6.50 MBit/s
Power Setting:	0x09	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5721.40	59.14	3.80	-10.73	52.21	Fundamental	Vertical	200	1	--	--	
#2	7311.99	56.80	4.24	-7.29	53.75	Max Peak	Vertical	131	311	74.0	-20.3	Pass
#3	7311.99	35.03	4.24	-7.29	31.98	Max Avg	Vertical	131	311	54.0	-22.0	Pass

Test Notes: EUT A5-18 SN: 2119591877 on 150cm table, powered by Mimosa POE PS 502-00002.

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2.1.1.2. KP Performance KPPA-5GHZHV4P65-17 X4

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	KP Performance KPPA-5GHZHV4P65-17 X4	Variant:	802.11n ac20
Antenna Gain (dBi):	17.50	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5260.00	Data Rate:	6.50 MBit/s
Power Setting:	0x03	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5262.97	71.30	3.67	-11.28	63.69	Fundamental	Horizontal	151	1	--	--	

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002. 5G notch filter added in front of amp to prevent overload

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	KP Performance KPPA-5GHZHV4P65-17 X4	Variant:	802.11n ac20
Antenna Gain (dBi):	17.50	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5300.00	Data Rate:	6.50 MBit/s
Power Setting:	0x03	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5293.67	71.69	3.78	-11.12	64.35	Fundamental	Horizontal	151	1	--	--	

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002. 5G notch filter added in front of amp to prevent overload

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	KP Performance KPPA-5GHZHV4P65-17 X4	Variant:	802.11n ac20
Antenna Gain (dBi):	17.50	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5335.00	Data Rate:	6.50 MBit/s
Power Setting:	0x03	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5324.21	65.33	3.74	-11.06	58.01	Fundamental	Horizontal	101	0	--	--	

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002. 5G notch filter added in front of amp to prevent overload

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	KP Performance KPPA-5GHZHV4P65-17 X4	Variant:	802.11n ac20
Antenna Gain (dBi):	18.00	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5485.00	Data Rate:	6.50 MBit/s
Power Setting:	0x01	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5502.40	61.92	3.75	-11.17	54.50	Fundamental	Horizontal	151	1	--	--	
#2	6280.32	55.04	3.92	-8.48	50.48	Peak (NRB)	Horizontal	151	1	--	--	Pass

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002. 5G notch filter added in front of amp to prevent overload

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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	KP Performance KPPA-5GHZHV4P65-17 X4	Variant:	802.11n ac20
Antenna Gain (dBi):	18.00	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5580.00	Data Rate:	6.50 MBit/s
Power Setting:	0x01	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5574.39	67.07	3.81	-11.21	59.67	Fundamental	Horizontal	151	0	--	--	
#2	6228.53	55.80	3.91	-8.72	50.99	Peak (NRB)	Horizontal	151	0	--	--	Pass

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002. 5G notch filter added in front of amp to prevent overload

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Title: Mimosa Networks A5c, A5-14, A5-18
To: FCC 15.407 & RSS 247 (DFS bands)
Serial #: MIMO09-U8_Radiated Addendum Rev A
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Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	KP Performance KPPA-5GHZHV4P65-17 X4	Variant:	802.11n ac20
Antenna Gain (dBi):	18.00	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5720.00	Data Rate:	6.50 MBit/s
Power Setting:	0x01	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5711.99	55.13	3.83	-10.77	48.19	Fundamental	Vertical	151	1	--	--	
#2	6250.63	51.63	3.93	-8.56	47.00	Peak (NRB)	Horizontal	151	1	--	--	Pass

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002. 5G notch filter added in front of amp to prevent overload

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2.1.2. Restricted Band-Edge Emissions

2.1.2.3. A-18

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

5250 - 5350 MHz

A-18		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	
802.11ac-80	5290.00	5350.00	62.58	48.22	0x10
802.11n ac20	5335.00	5350.00	61.56	48.40	0x11
802.11n ac40	5330.00	5350.00	62.20	48.22	0x09

5470 - 5725 MHz

A-18		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	
802.11ac-80	5530.00	5470.00	66.54	49.15	0x09
802.11n ac20	5485.00	5470.00	61.07	48.66	0x09
802.11n HT-40	5510.00	5470.00	64.61	51.53	0x13

A-18		Band Edge Freq	Limit 68.23	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dB μ V/m	
802.11ac-80	5530.00	5470.00	49.93	0x09
802.11n ac20	5485.00	5470.00	48.66	0x09
802.11n HT-40	5510.00	5470.00	56.79	0x13

Click on the links to view the data.



Title: Mimosa Networks A5c, A5-14, A5-18
To: FCC 15.407 & RSS 247 (DFS bands)
Serial #: MIMO09-U8_Radiated Addendum Rev A
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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	A-18	Variant:	802.11ac-80
Antenna Gain (dBi):	8.00	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5290.00	Data Rate:	29.30 MBit/s
Power Setting:	0x10	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#2	5352.26	10.00	3.71	34.51	48.22	Max Avg	Vertical	200	59	54.0	-5.8	Pass
#3	5365.73	24.42	3.69	34.47	62.58	Max Peak	Vertical	200	59	74.0	-11.4	Pass
#1	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT A5-18 SN: 2119591877 on 150cm table, powered by Mimosa POE PS 502-00002.

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Title: Mimosa Networks A5c, A5-14, A5-18
To: FCC 15.407 & RSS 247 (DFS bands)
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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	A-18	Variant:	802.11ac-80
Antenna Gain (dBi):	8.00	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5210.00	Data Rate:	29.30 MBit/s
Power Setting:	0x14	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5147.14	14.96	3.68	34.11	52.75	Max Avg	Vertical	200	71	54.0	-1.3	Pass
#2	5147.55	29.26	3.68	34.11	67.05	Max Peak	Vertical	200	71	74.0	-7.0	Pass
#3	5150.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT A5-18 SN: 2119591877 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002.
Power Reduction to meet band edge limits

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Title: Mimosa Networks A5c, A5-14, A5-18
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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	A-18	Variant:	802.11n ac20
Antenna Gain (dBi):	8.00	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5180.00	Data Rate:	6.50 MBit/s
Power Setting:	0x16	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5143.89	26.43	3.70	34.12	64.25	Max Peak	Vertical	200	71	74.0	-9.8	Pass
#2	5150.00	13.01	3.67	34.11	50.79	Max Avg	Vertical	200	71	54.0	-3.2	Pass
#3	5150.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002. 5G notch filter added in front of amp to prevent overload

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Title: Mimosa Networks A5c, A5-14, A5-18
To: FCC 15.407 & RSS 247 (DFS bands)
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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	A-18	Variant:	802.11n ac40
Antenna Gain (dBi):	8.00	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5190.00	Data Rate:	13.50 MBit/s
Power Setting:	0x14	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5147.24	29.08	3.68	34.11	66.87	Max Peak	Vertical	200	71	74.0	-7.1	Pass
#2	5148.05	16.03	3.68	34.11	53.82	Max Avg	Vertical	200	71	54.0	-0.2	Pass
#3	5150.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT A5-18 SN: 2119591877 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002.
Power reduction to meet band edge limit.

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Title: Mimosa Networks A5c, A5-14, A5-18
To: FCC 15.407 & RSS 247 (DFS bands)
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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	A-18	Variant:	802.11ac-80
Antenna Gain (dBi):	8.00	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5530.00	Data Rate:	29.30 MBit/s
Power Setting:	0x09	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5456.99	28.44	3.80	34.30	66.54	Max Peak	Vertical	200	44	74.0	-7.5	Pass
#2	5457.60	11.05	3.80	34.30	49.15	Max Avg	Vertical	200	44	54.0	-4.9	Pass
#4	5470.00	11.85	3.76	34.32	49.93	Max Avg	Vertical	200	44	68.2	-18.3	Pass
#3	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
#5	5470.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT A5-18 SN: 2119591877 on 150cm table, powered by Mimosa POE PS 502-00002.

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Title: Mimosa Networks A5c, A5-14, A5-18
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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	A-18	Variant:	802.11n ac20
Antenna Gain (dBi):	8.00	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5485.00	Data Rate:	6.50 MBit/s
Power Setting:	0x09	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5458.80	22.97	3.79	34.31	61.07	Max Peak	Vertical	200	44	74.0	-12.9	Pass
#2	5460.00	10.56	3.79	34.31	48.66	Max Avg	Vertical	200	44	54.0	-5.3	Pass
#4	5470.00	10.58	3.76	34.32	48.66	Max Avg	Vertical	200	44	68.2	-19.5	Pass
#3	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
#5	5470.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT A5-18 SN: 2119591877 on 150cm table, powered by Mimosa POE PS 502-00002.

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Title: Mimosa Networks A5c, A5-14, A5-18
To: FCC 15.407 & RSS 247 (DFS bands)
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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	A-18	Variant:	802.11n HT-40
Antenna Gain (dBi):	8.00	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5510.00	Data Rate:	13.50 MBit/s
Power Setting:	0x13	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5458.50	13.43	3.80	34.30	51.53	Max Avg	Vertical	200	44	54.0	-3.5	Pass
#2	5459.70	26.51	3.79	34.31	64.61	Max Peak	Vertical	200	44	74.0	-9.4	Pass
#4	5470.00	18.71	3.76	34.32	56.79	Max Avg	Vertical	200	44	68.2	-11.4	Pass
#3	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
#5	5470.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT A5-18 SN: 2119591877 on 150cm table, powered by Mimosa POE PS 502-00002.

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Title: Mimosa Networks A5c, A5-14, A5-18
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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	A-18	Variant:	802.11n ac20
Antenna Gain (dBi):	8.00	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5335.00	Data Rate:	6.50 MBit/s
Power Setting:	0x11	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#2	5359.84	10.21	3.70	34.49	48.40	Max Avg	Vertical	200	59	54.0	-5.6	Pass
#3	5366.01	23.40	3.69	34.47	61.56	Max Peak	Vertical	200	59	74.0	-12.4	Pass
#1	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT A5-18 SN: 2119591877 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002.

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Title: Mimosa Networks A5c, A5-14, A5-18
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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	A-18	Variant:	802.11n ac40
Antenna Gain (dBi):	8.00	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5330.00	Data Rate:	13.50 MBit/s
Power Setting:	0x09	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#2	5351.68	23.98	3.71	34.51	62.20	Max Peak	Vertical	200	59	74.0	-11.8	Pass
#3	5351.96	10.00	3.71	34.51	48.22	Max Avg	Vertical	200	59	54.0	-5.8	Pass
#1	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT A5-18 SN: 2119591877 on 150cm table, powered by Mimosa POE PS 502-00002.

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2.1.2.4. KP Performance KPPA-5GHZHV4P65-17 X4

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

5250 - 5350 MHz

KP Performance KPPA-5GHZHV4P65-17 X4		Band-Edge Freq	Limit 74.0dBµV/m	Limit 54.0dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11ac-80	5290.00	5350.00	62.55	48.75	0x02
802.11n ac20	5335.00	5350.00	63.95	50.91	0x03
802.11n ac40	5330.00	5350.00	62.22	50.14	0x01

5470 - 5725 MHz

KP Performance KPPA-5GHZHV4P65-17 X4		Band-Edge Freq	Limit 74.0dBµV/m	Limit 54.0dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11ac-80	5530.00	5470.00	66.00	52.53	0x01
802.11n ac20	5485.00	5470.00	65.30	52.65	0x01
802.11n ac40	5510.00	5470.00	66.56	53.46	0x04

KP Performance KPPA-5GHZHV4P65-17 X4		Band Edge Freq	Limit 68.23	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	
802.11ac-80	5530.00	5470.00	53.12	0x09
802.11n ac20	5485.00	5470.00	53.24	0x09
802.11n HT-40	5510.00	5470.00	56.41	0x13

Click on the links to view the data.



Title: Mimosa Networks A5c, A5-14, A5-18
To: FCC 15.407 & RSS 247 (DFS bands)
Serial #: MIMO09-U8_Radiated Addendum Rev A
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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	KP Performance KPPA-5GHZHV4P65-17 X4	Variant:	802.11ac-80
Antenna Gain (dBi):	Not Applicable	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5210.00	Data Rate:	29.30 MBit/s
Power Setting:	0x07	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5147.01	31.83	3.68	34.11	69.62	Max Peak	Vertical	164	358	74.0	-4.4	Pass
#2	5147.67	15.06	3.68	34.11	52.85	Max Avg	Vertical	164	358	54.0	-1.2	Pass
#3	5150.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002.
Power reduction to meet band edge limit

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Title: Mimosa Networks A5c, A5-14, A5-18
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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	KP Performance KPPA-5GHZHV4P65-17 X4	Variant:	802.11n ac20
Antenna Gain (dBi):	17.30	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5180.00	Data Rate:	6.50 MBit/s
Power Setting:	0x18	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5145.79	23.68	3.69	34.11	61.48	Max Peak	Vertical	164	358	74.0	-12.5	Pass
#2	5150.00	11.01	3.67	34.11	48.79	Max Avg	Vertical	164	358	54.0	-5.2	Pass
#3	5150.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002.
Correction factor includes .9 dB addition for connecting cables

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Title: Mimosa Networks A5c, A5-14, A5-18
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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	KP Performance KPPA-5GHZHV4P65-17 X4	Variant:	802.11n ac40
Antenna Gain (dBi):	Not Applicable	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5190.00	Data Rate:	13.50 MBit/s
Power Setting:	0x05	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5150.00	14.97	3.67	34.11	52.75	Max Avg	Vertical	164	358	54.0	-1.3	Pass
#2	5150.00	30.60	3.67	34.11	68.38	Max Peak	Vertical	164	358	74.0	-5.6	Pass
#3	5150.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002.
Power reduction to meet band edge limit

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Title: Mimosa Networks A5c, A5-14, A5-18
To: FCC 15.407 & RSS 247 (DFS bands)
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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	KP Performance KPPA-5GHZHV4P65-17 X4	Variant:	802.11ac-80
Antenna Gain (dBi):	18.00	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5530.00	Data Rate:	29.30 MBit/s
Power Setting:	0x01	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5452.81	14.44	3.79	34.30	52.53	Max Avg	Horizontal	168	358	54.0	-1.5	Pass
#2	5455.21	27.91	3.79	34.30	66.00	Max Peak	Horizontal	168	358	74.0	-8.0	Pass
#4	5469.94	15.01	3.79	34.32	53.12	Max Avg	Horizontal	168	358	68.2	-15.1	Pass
#3	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002.

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Title: Mimosa Networks A5c, A5-14, A5-18
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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	KP Performance KPPA-5GHZHV4P65-17 X4	Variant:	802.11n ac20
Antenna Gain (dBi):	18.00	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5485.00	Data Rate:	6.50 MBit/s
Power Setting:	0x01	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5453.71	14.56	3.79	34.30	52.65	Max Avg	Horizontal	168	358	54.0	-1.4	Pass
#2	5454.01	27.21	3.79	34.30	65.30	Max Peak	Horizontal	168	358	74.0	-8.7	Pass
#4	5469.94	15.13	3.79	34.32	53.24	Max Avg	Horizontal	168	358	68.2	-15.0	Pass
#3	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002

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Title: Mimosa Networks A5c, A5-14, A5-18
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Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	KP Performance KPPA-5GHZHV4P65-17 X4	Variant:	802.11n ac40
Antenna Gain (dBi):	18.00	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5510.00	Data Rate:	13.50 MBit/s
Power Setting:	0x04	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5458.80	28.46	3.79	34.31	66.56	Max Peak	Horizontal	168	358	74.0	-7.4	Pass
#2	5460.00	15.36	3.79	34.31	53.46	Max Avg	Horizontal	168	358	54.0	-0.5	Pass
#4	5469.94	18.30	3.79	34.32	56.41	Max Avg	Horizontal	168	358	68.2	-11.8	Pass
#3	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
#5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002. Power reduction to meet band edge limits.

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Title: Mimosa Networks A5c, A5-14, A5-18
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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	KP Performance KPPA-5GHZHV4P65-17 X4	Variant:	802.11ac-80
Antenna Gain (dBi):	Not Applicable	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5290.00	Data Rate:	29.30 MBit/s
Power Setting:	0x02	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5350.00	10.54	3.70	34.51	48.75	Max Avg	Vertical	164	358	54.0	-5.3	Pass
#3	5367.76	24.39	3.69	34.47	62.55	Max Peak	Vertical	164	358	74.0	-11.5	Pass
#2	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002.

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Title: Mimosa Networks A5c, A5-14, A5-18
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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	KP Performance KPPA-5GHZHV4P65-17 X4	Variant:	802.11n ac20
Antenna Gain (dBi):	Not Applicable	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5335.00	Data Rate:	6.50 MBit/s
Power Setting:	0x03	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#2	5359.84	12.72	3.70	34.49	50.91	Max Avg	Vertical	164	358	54.0	-3.1	Pass
#3	5368.82	25.80	3.69	34.46	63.95	Max Peak	Vertical	164	358	74.0	-10.1	Pass
#1	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002.

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Title: Mimosa Networks A5c, A5-14, A5-18
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Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	KP Performance KPPA-5GHZHV4P65-17 X4	Variant:	802.11n ac40
Antenna Gain (dBi):	Not Applicable	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5330.00	Data Rate:	13.50 MBit/s
Power Setting:	0x01	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5350.00	11.93	3.70	34.51	50.14	Max Avg	Vertical	164	358	54.0	-3.9	Pass
#3	5358.72	24.02	3.71	34.49	62.22	Max Peak	Vertical	164	358	74.0	-11.8	Pass
#2	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002.

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Title: Mimosa Networks A5c, A5-14, A5-18
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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	KP Performance KPPA-5GHZHV4P65-17 X4	Variant:	802.11ac-80
Antenna Gain (dBi):	Not Applicable	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5775.00	Data Rate:	29.30 MBit/s
Power Setting:	0x07	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5699.00	16.94	3.86	34.33	55.13	Max Avg	Horizontal	164	362	68.2	-13.1	Pass
#2	5719.91	17.87	3.80	34.35	56.02	Max Avg	Horizontal	164	362	78.2	-22.2	Pass
#3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002

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Title: Mimosa Networks A5c, A5-14, A5-18
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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	KP Performance KPPA-5GHZHV4P65-17 X4	Variant:	802.11n ac20
Antenna Gain (dBi):	Not Applicable	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5745.00	Data Rate:	6.50 MBit/s
Power Setting:	0x08	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5715.00	17.62	3.81	34.34	55.77	Max Avg	Horizontal	164	362	68.2	-12.5	Pass
#2	5725.00	18.57	3.79	34.35	56.71	Max Avg	Horizontal	164	362	78.2	-21.5	Pass
#3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002

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Equipment Configuration for 5725 MHz Radiated Band-Edge Emissions

Antenna:	KP Performance KPPA-5GHZHV4P65-17 X4	Variant:	802.11n ac40
Antenna Gain (dBi):	Not Applicable	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5755.00	Data Rate:	13.50 MBit/s
Power Setting:	0x07	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5715.00	18.46	3.81	34.34	56.61	Max Avg	Horizontal	164	362	68.2	-11.6	Pass
#2	5719.67	20.13	3.80	34.35	58.28	Max Avg	Horizontal	164	362	78.2	-20.0	Pass
#3	5725.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002

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Title: Mimosa Networks A5c, A5-14, A5-18
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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	KP Performance KPPA-5GHZHV4P65-17 X4	Variant:	802.11ac-80
Antenna Gain (dBi):	Not Applicable	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5775.00	Data Rate:	29.30 MBit/s
Power Setting:	0x07	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#2	5857.58	14.36	3.85	34.65	52.86	Max Avg	Horizontal	164	362	78.2	-25.4	Pass
#3	5867.79	13.73	3.82	34.68	52.23	Max Avg	Horizontal	164	362	68.2	-16.0	Pass
#1	5850.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002

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Title: Mimosa Networks A5c, A5-14, A5-18
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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	KP Performance KPPA-5GHZHV4P65-17 X4	Variant:	802.11n ac20
Antenna Gain (dBi):	Not Applicable	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5825.00	Data Rate:	6.50 MBit/s
Power Setting:	0x07	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5850.00	15.60	3.81	34.63	54.04	Max Avg	Horizontal	164	362	78.2	-24.2	Pass
#3	5871.15	15.59	3.81	34.68	54.08	Max Avg	Horizontal	164	362	68.2	-14.2	Pass
#2	5850.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002

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Title: Mimosa Networks A5c, A5-14, A5-18
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Equipment Configuration for 5850 MHz Radiated Band-Edge Emissions

Antenna:	KP Performance KPPA-5GHZHV4P65-17 X4	Variant:	802.11n ac40
Antenna Gain (dBi):	Not Applicable	Modulation:	OFDM
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	5795.00	Data Rate:	13.50 MBit/s
Power Setting:	0x07	Tested By:	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5850.00	14.95	3.81	34.63	53.39	Max Avg	Horizontal	164	362	78.2	-24.8	Pass
#3	5860.00	14.21	3.86	34.65	52.72	Max Avg	Horizontal	164	362	68.2	-15.5	Pass
#2	5850.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002

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Title: Mimosa Networks A5c, A5-14, A5-18
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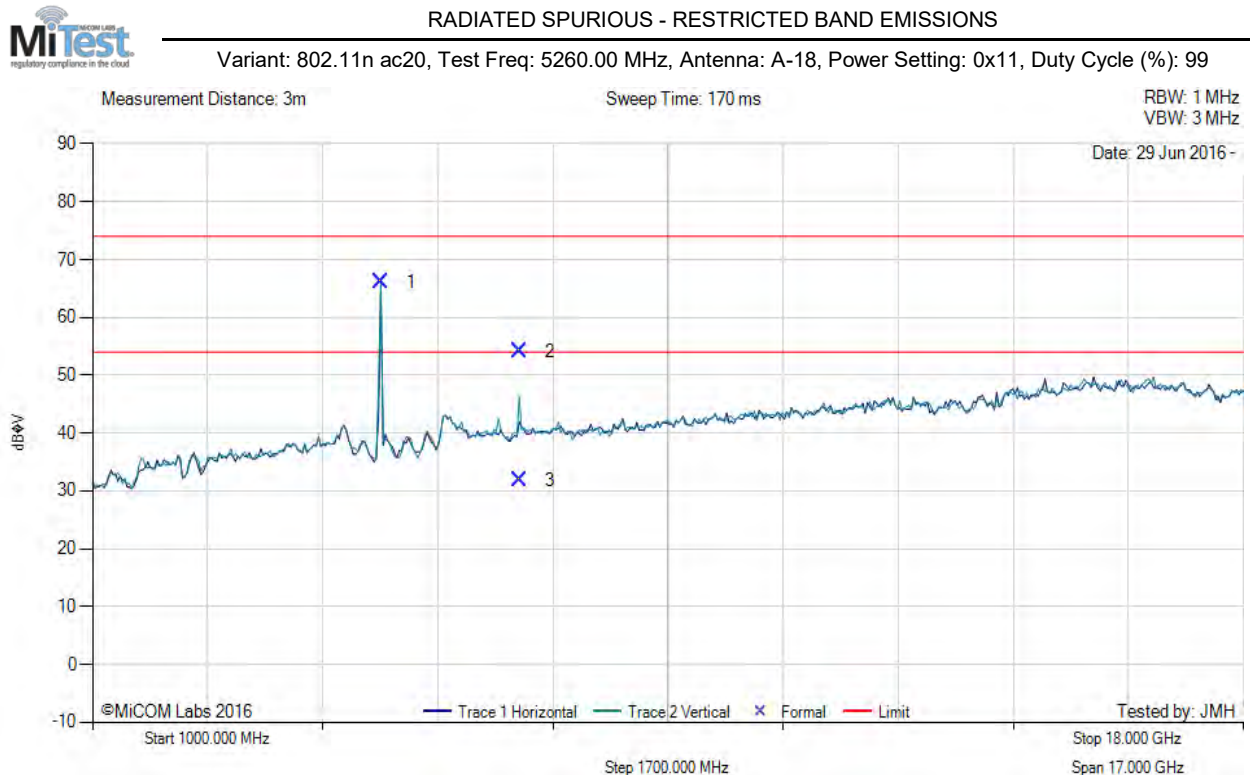
A. APPENDIX - GRAPHICAL IMAGES

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A.1. Radiated

A.1.1. Restricted Band Emissions

A.1.1.1. A-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
1	5261.53	73.79	3.66	-11.28	66.17	Fundamental	Vertical	200	1	--	--	
2	7310.64	57.18	4.24	-7.29	54.13	Max Peak	Vertical	113	329	74.0	-19.9	Pass
3	7310.64	34.94	4.24	-7.29	31.89	Max Avg	Vertical	113	329	54.0	-22.1	Pass

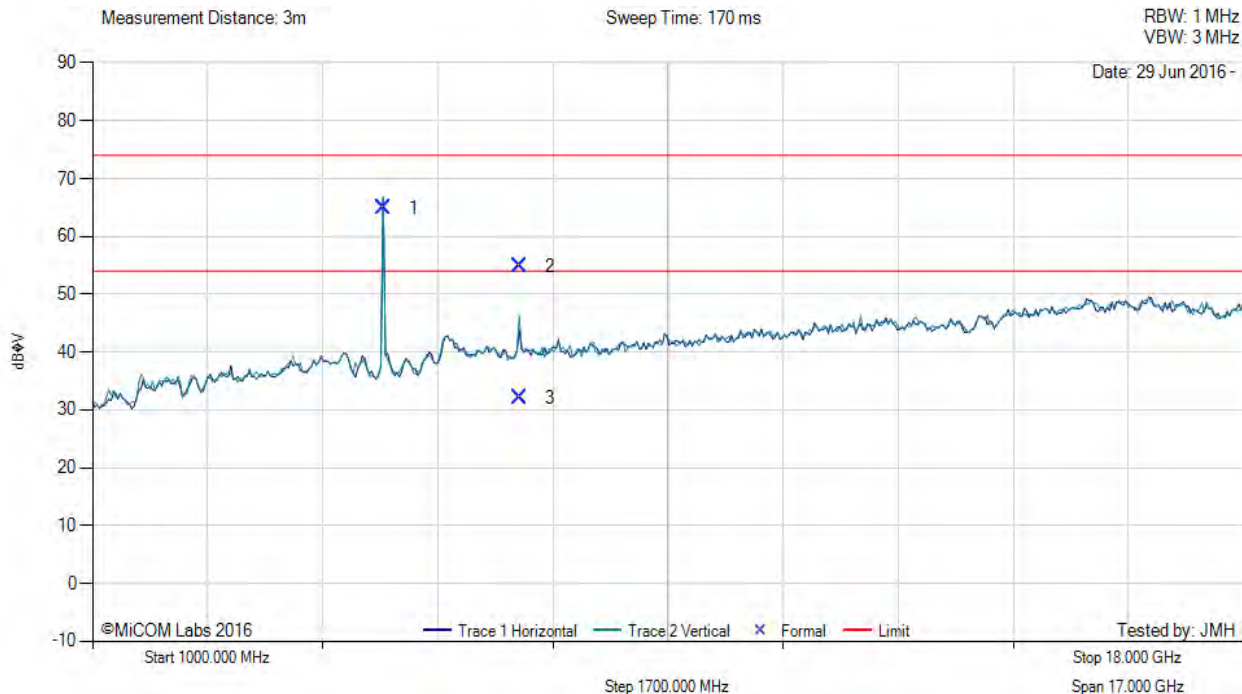
Test Notes: EUT A5-18 SN: 2119591877 on 150cm table, powered by Mimosa POE PS 502-00002.

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11n ac20, Test Freq: 5300.00 MHz, Antenna: A-18, Power Setting: 0x11, Duty Cycle (%): 99



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5301.45	72.13	3.81	-11.09	64.85	Fundamental	Vertical	200	1	--	--	
2	7309.90	57.95	4.23	-7.29	54.89	Max Peak	Vertical	136	317	74.0	-19.1	Pass
3	7309.90	35.16	4.23	-7.29	32.10	Max Avg	Vertical	136	317	54.0	-21.9	Pass

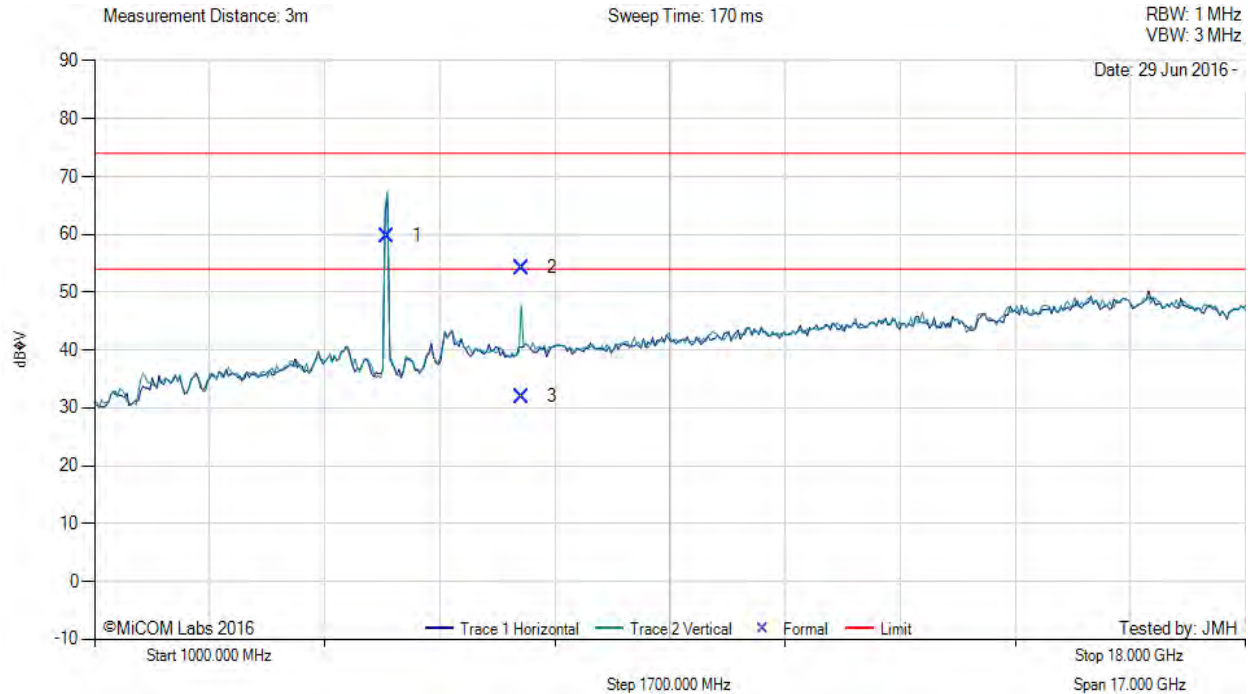
Test Notes: EUT A5-18 SN: 2119591877 on 150cm table, powered by Mimosa POE PS 502-00002.

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11n ac20, Test Freq: 5335.00 MHz, Antenna: A-18, Power Setting: 0x11, Duty Cycle (%): 99



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5321.48	67.04	3.75	-11.06	59.73	Fundamental	Vertical	101	1	--	--	
2	7311.99	57.31	4.24	-7.29	54.26	Max Peak	Vertical	138	307	74.0	-19.7	Pass
3	7311.99	35.03	4.24	-7.29	31.98	Max Avg	Vertical	138	307	54.0	-22.0	Pass

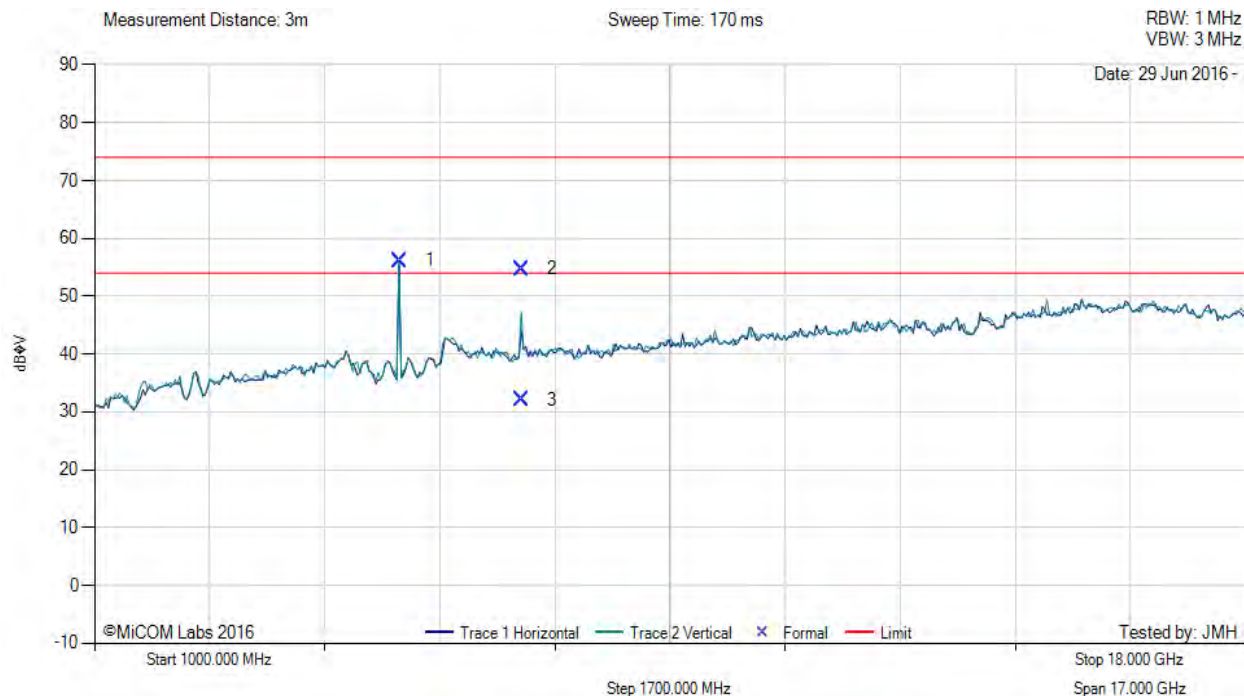
Test Notes: EUT A5-18 SN: 2119591877 on 150cm table, powered by Mimosa POE PS 502-00002.

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11n ac20, Test Freq: 5485.00 MHz, Antenna: A-18, Power Setting: 0x09, Duty Cycle (%): 99



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5507.53	63.57	3.75	-11.19	56.13	Fundamental	Vertical	189	284	--	--	
2	7310.38	57.82	4.23	-7.29	54.76	Max Peak	Vertical	167	322	74.0	-19.2	Pass
3	7310.38	35.12	4.23	-7.29	32.06	Max Avg	Vertical	167	322	54.0	-21.9	Pass

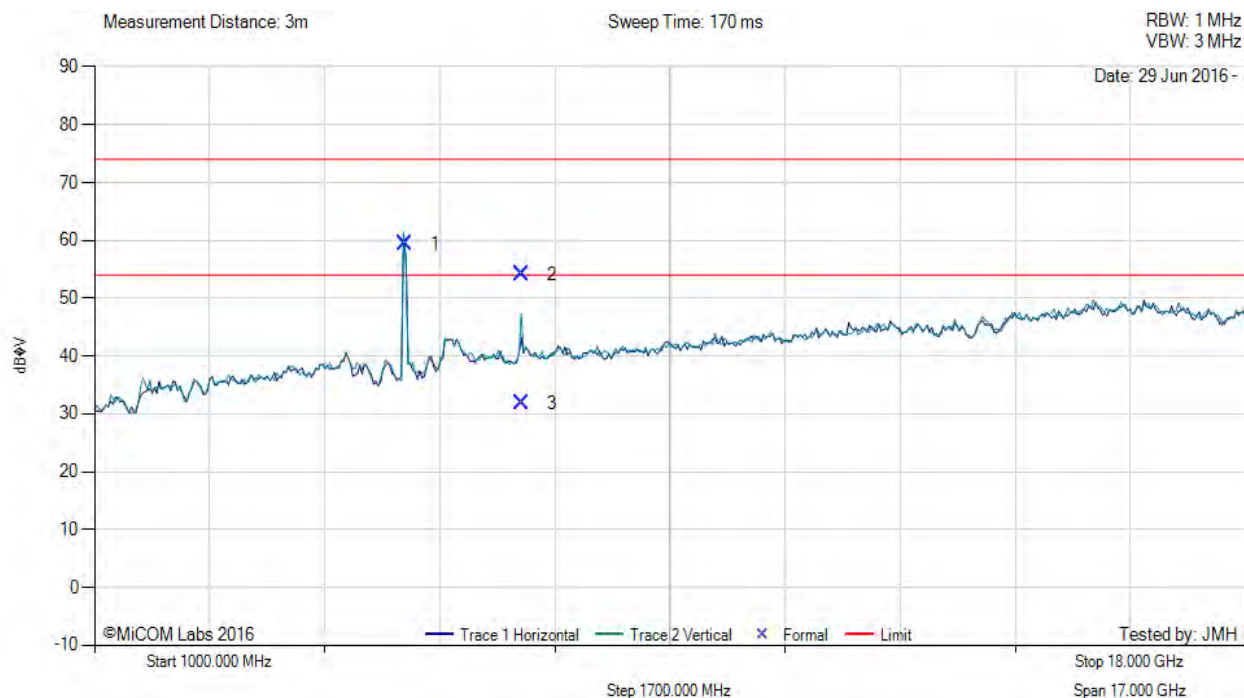
Test Notes: EUT A5-18 SN: 2119591877 on 150cm table, powered by Mimosa POE PS 502-00002.

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11n ac20, Test Freq: 5580.00 MHz, Antenna: A-18, Power Setting: 0x09, Duty Cycle (%): 99



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5581.64	66.78	3.80	-11.20	59.38	Fundamental	Vertical	200	1	--	--	
2	7310.88	57.18	4.24	-7.29	54.13	Max Peak	Vertical	137	325	74.0	-19.9	Pass
3	7310.88	34.82	4.24	-7.29	31.77	Max Avg	Vertical	137	325	54.0	-22.2	Pass

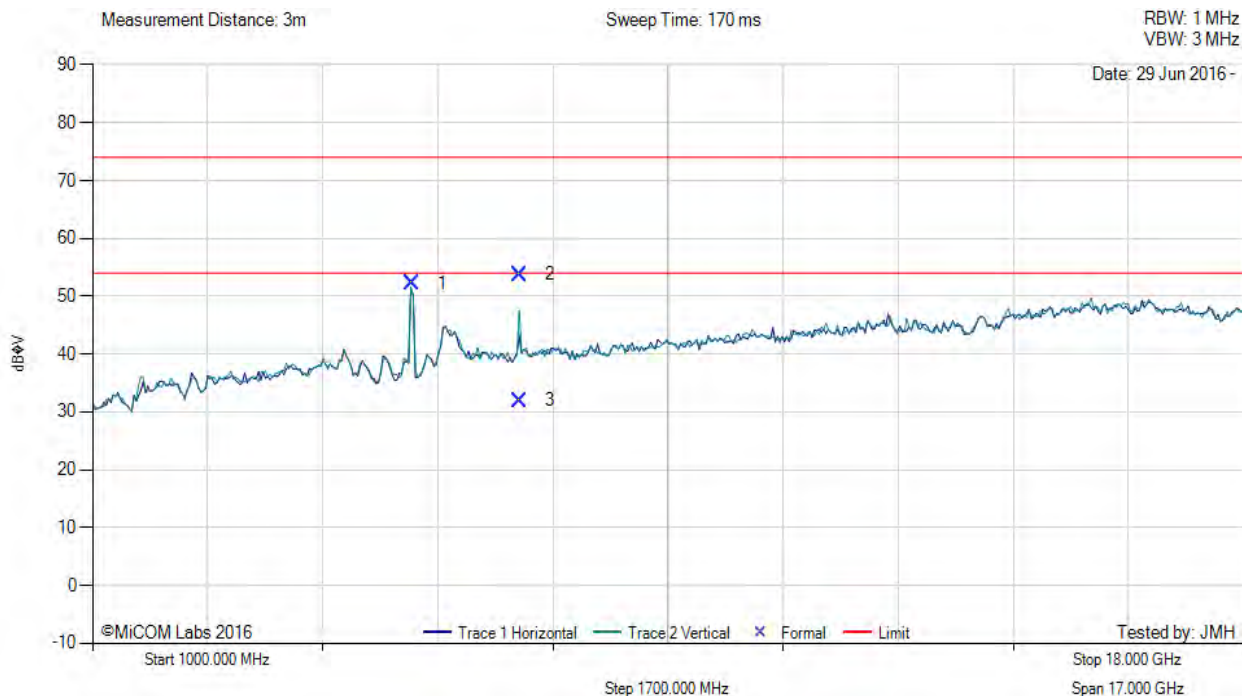
Test Notes: EUT A5-18 SN: 2119591877 on 150cm table, powered by Mimosa POE PS 502-00002.

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11n ac20, Test Freq: 5720.00 MHz, Antenna: A-18, Power Setting: 0x09, Duty Cycle (%): 99



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5721.40	59.14	3.80	-10.73	52.21	Fundamental	Vertical	200	1	--	--	
2	7311.99	56.80	4.24	-7.29	53.75	Max Peak	Vertical	131	311	74.0	-20.3	Pass
3	7311.99	35.03	4.24	-7.29	31.98	Max Avg	Vertical	131	311	54.0	-22.0	Pass

Test Notes: EUT A5-18 SN: 2119591877 on 150cm table, powered by Mimosa POE PS 502-00002.

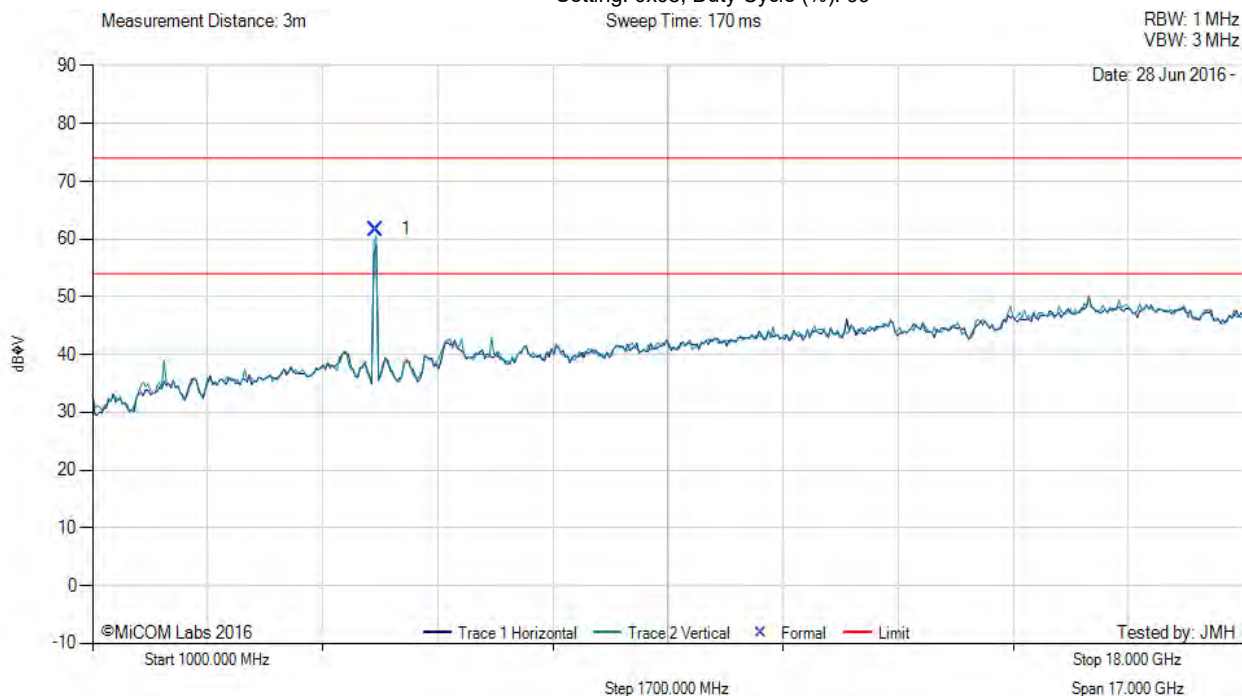
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A.1.1.2. KP Performance KPPA-5GHZHV4P65-17 X4



RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11n ac20, Test Freq: 5180.00 MHz, Antenna: KP Performance KPPA-5GHZHV4P65-17 X4, Power
 Setting: 0x08, Duty Cycle (%): 99



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5188.02	69.48	3.68	-11.49	61.67	Fundamental	Vertical	151	1	--	--	

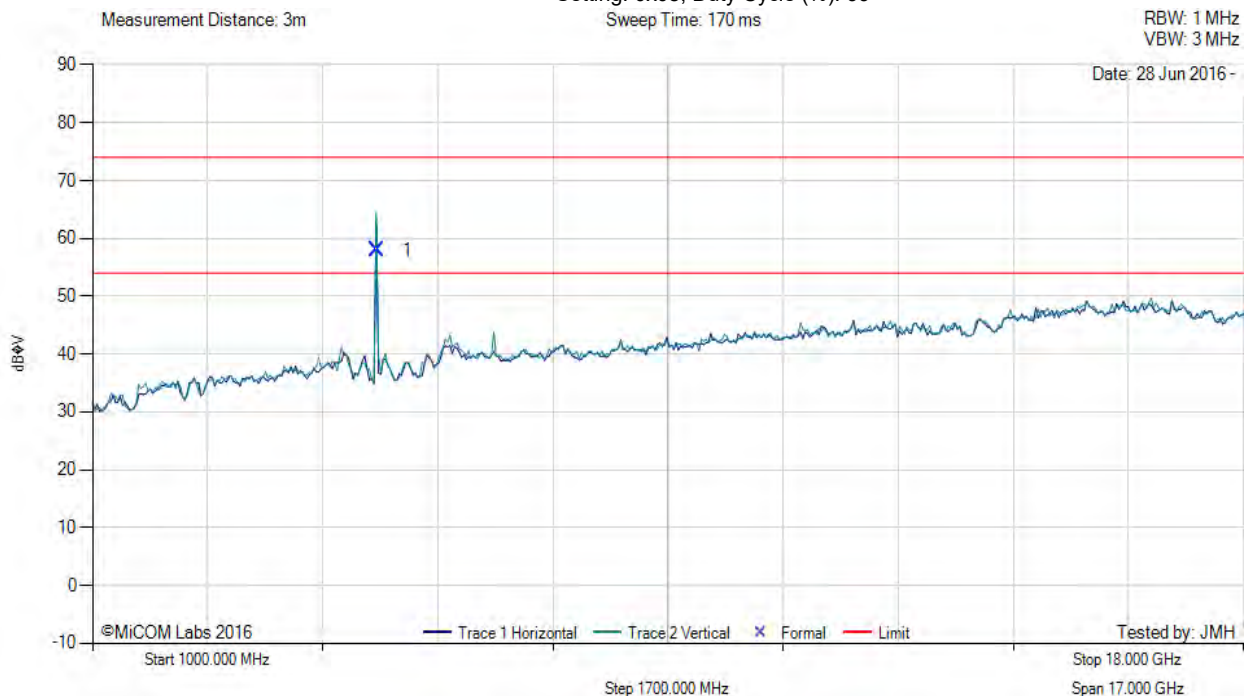
Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002.5G notch filter added in front of amp to prevent overload

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11n ac20, Test Freq: 5200.00 MHz, Antenna: KP Performance KPPA-5GHZHV4P65-17 X4, Power Setting: 0x08, Duty Cycle (%): 99



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5198.76	65.82	3.66	-11.47	58.01	Fundamental	Vertical	101	1	--	--	

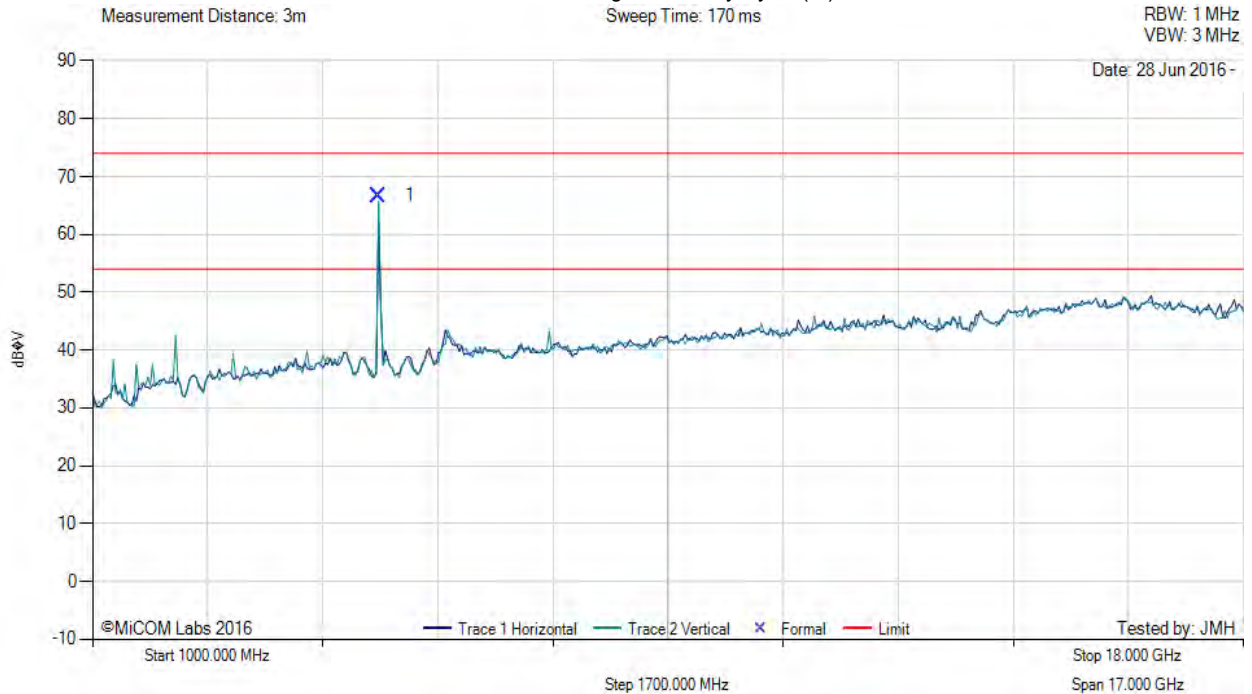
Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002. 5G notch filter added in front of amp to prevent overload

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11n ac20, Test Freq: 5240.00 MHz, Antenna: KP Performance KPPA-5GHZHV4P65-17 X4, Power Setting: 0x08, Duty Cycle (%): 99



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5231.86	74.49	3.63	-11.39	66.73	Fundamental	Vertical	151	1	--	--	

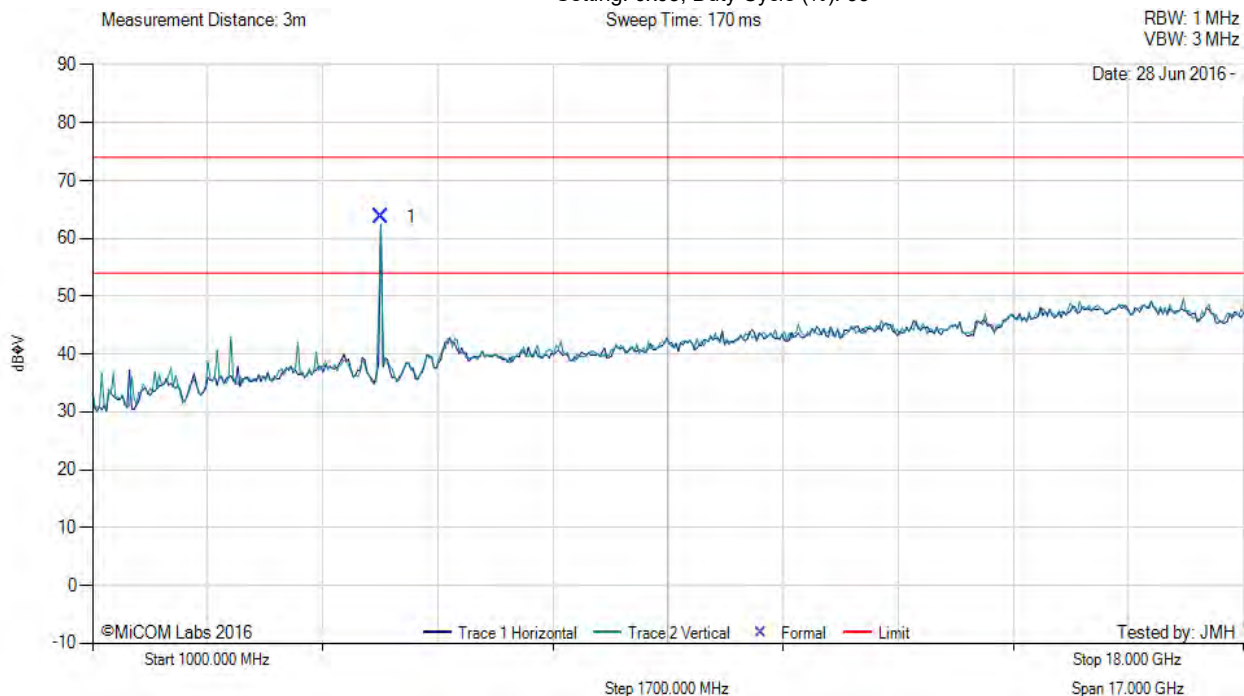
Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002. 5G notch filter added in front of amp to prevent overload

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11n ac20, Test Freq: 5260.00 MHz, Antenna: KP Performance KPPA-5GHZHV4P65-17 X4, Power Setting: 0x03, Duty Cycle (%): 99



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5262.97	71.30	3.67	-11.28	63.69	Fundamental	Horizontal	151	1	--	--	

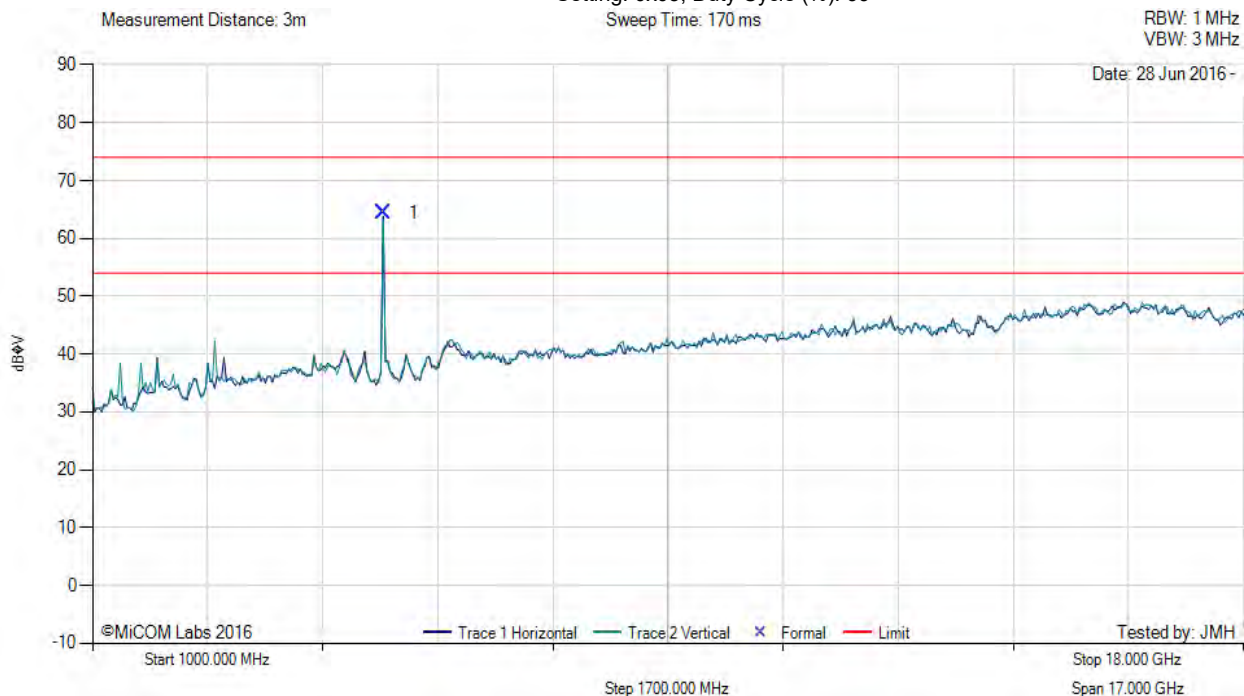
Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002. 5G notch filter added in front of amp to prevent overload

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11n ac20, Test Freq: 5300.00 MHz, Antenna: KP Performance KPPA-5GHZHV4P65-17 X4, Power Setting: 0x03, Duty Cycle (%): 99



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5293.67	71.69	3.78	-11.12	64.35	Fundamental	Horizontal	151	1	--	--	

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002. 5G notch filter added in front of amp to prevent overload

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11n ac20, Test Freq: 5335.00 MHz, Antenna: KP Performance KPPA-5GHZHV4P65-17 X4, Power Setting: 0x03, Duty Cycle (%): 99

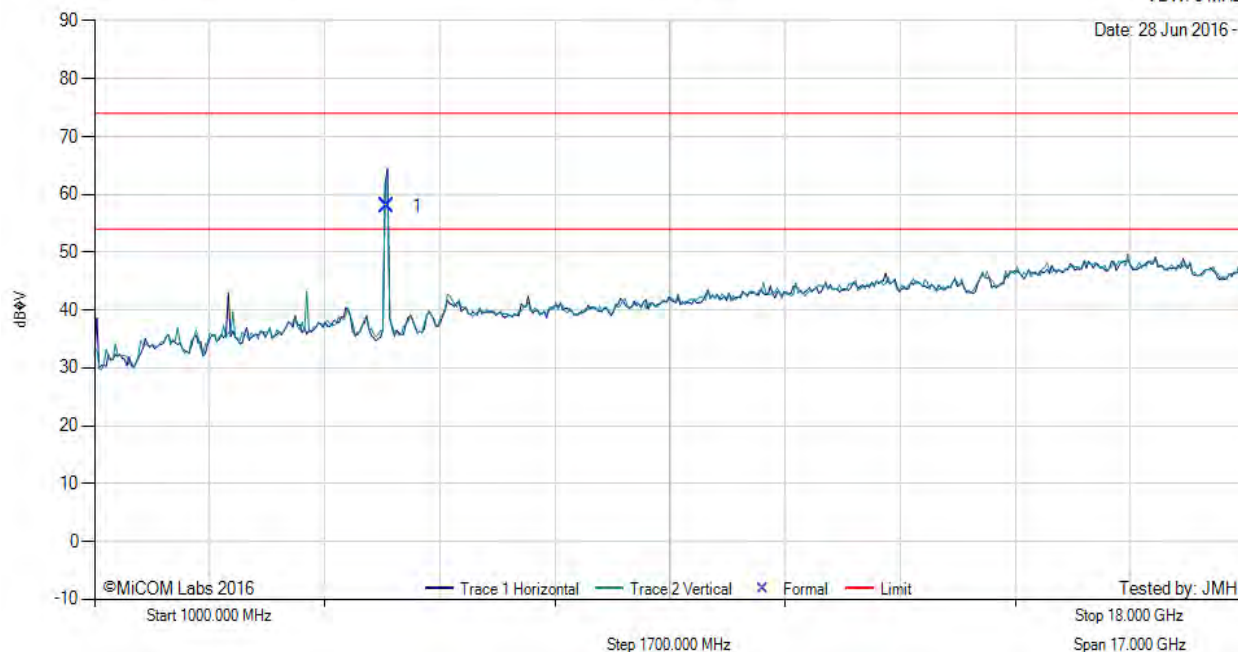
Measurement Distance: 3m

Sweep Time: 170 ms

RBW: 1 MHz

VBW: 3 MHz

Date: 28 Jun 2016 -



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5324.21	65.33	3.74	-11.06	58.01	Fundamental	Horizontal	101	0	--	--	

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002. 5G notch filter added in front of amp to prevent overload

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11n ac20, Test Freq: 5485.00 MHz, Antenna: KP Performance KPPA-5GHZHV4P65-17 X4, Power Setting: 0x01, Duty Cycle (%): 99

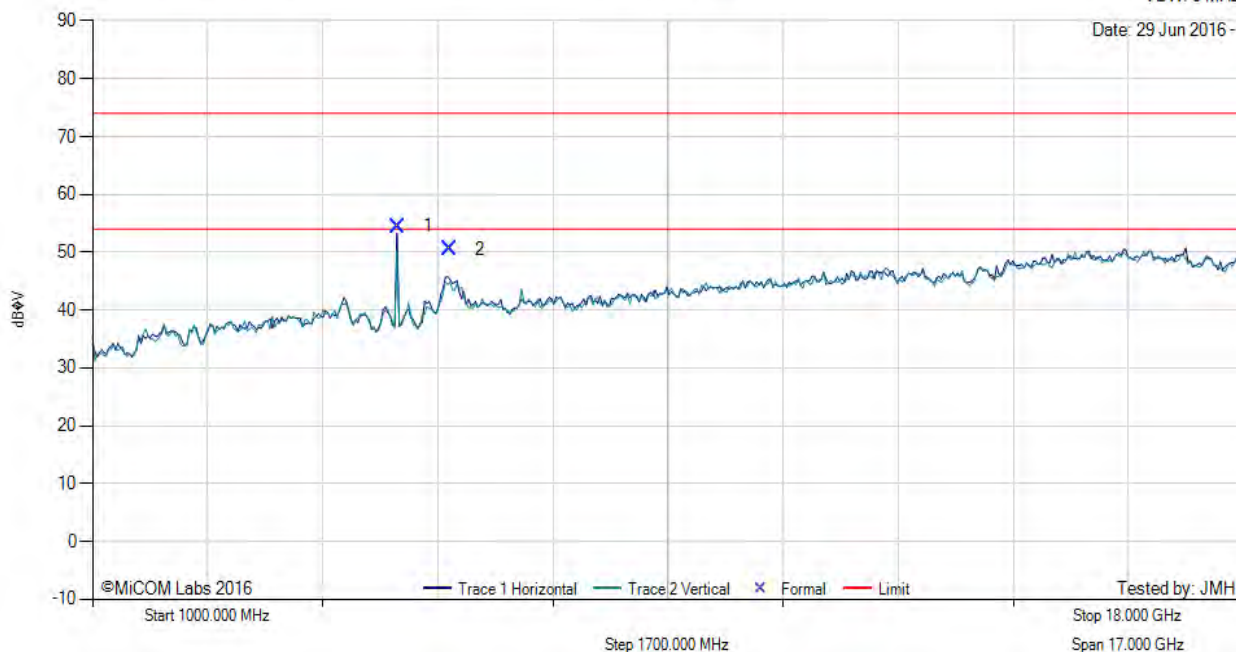
Measurement Distance: 3m

Sweep Time: 170 ms

RBW: 1 MHz

VBW: 3 MHz

Date: 29 Jun 2016 -



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5502.40	61.92	3.75	-11.17	54.50	Fundamental	Horizontal	151	1	--	--	
2	6280.32	55.04	3.92	-8.48	50.48	Peak (NRB)	Horizontal	151	1	--	--	Pass

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002. 5G notch filter added in front of amp to prevent overload

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

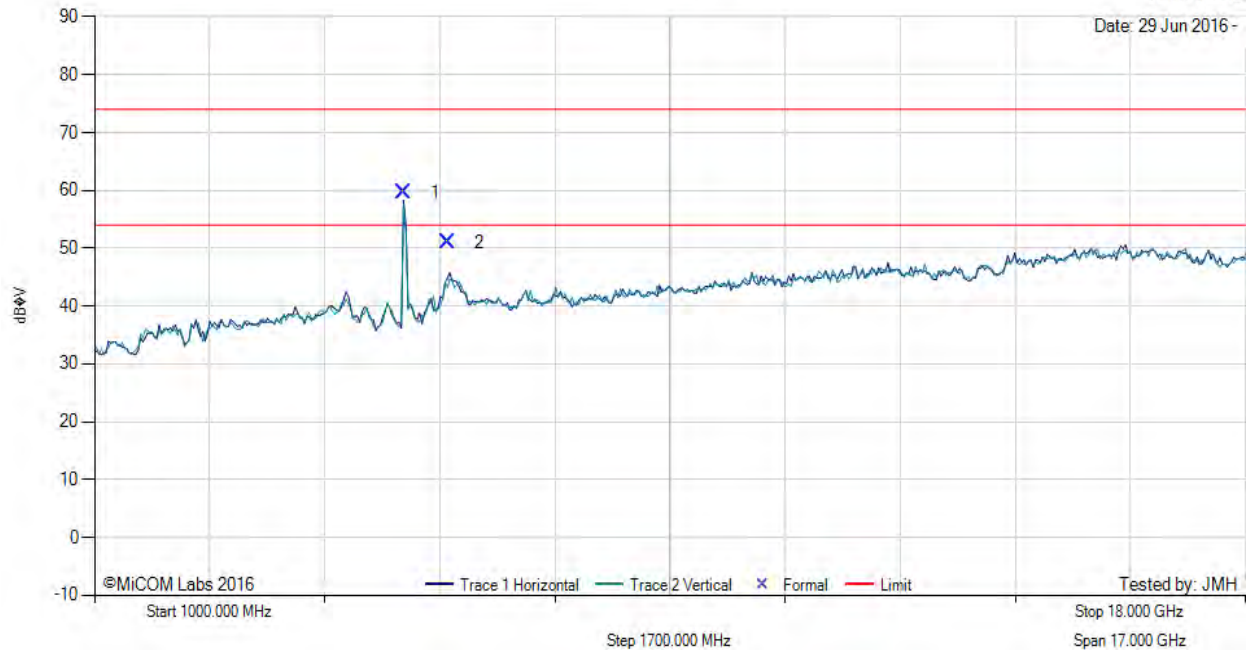
Variant: 802.11n ac20, Test Freq: 5580.00 MHz, Antenna: KP Performance KPPA-5GHZHV4P65-17 X4, Power Setting: 0x01, Duty Cycle (%): 99

Measurement Distance: 3m

Sweep Time: 170 ms

RBW: 1 MHz
 VBW: 3 MHz

Date: 29 Jun 2016 -



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5574.39	67.07	3.81	-11.21	59.67	Fundamental	Horizontal	151	0	--	--	
2	6228.53	55.80	3.91	-8.72	50.99	Peak (NRB)	Horizontal	151	0	--	--	Pass

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002. 5G notch filter added in front of amp to prevent overload

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RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11n ac20, Test Freq: 5720.00 MHz, Antenna: KP Performance KPPA-5GHZHV4P65-17 X4, Power Setting: 0x01, Duty Cycle (%): 99

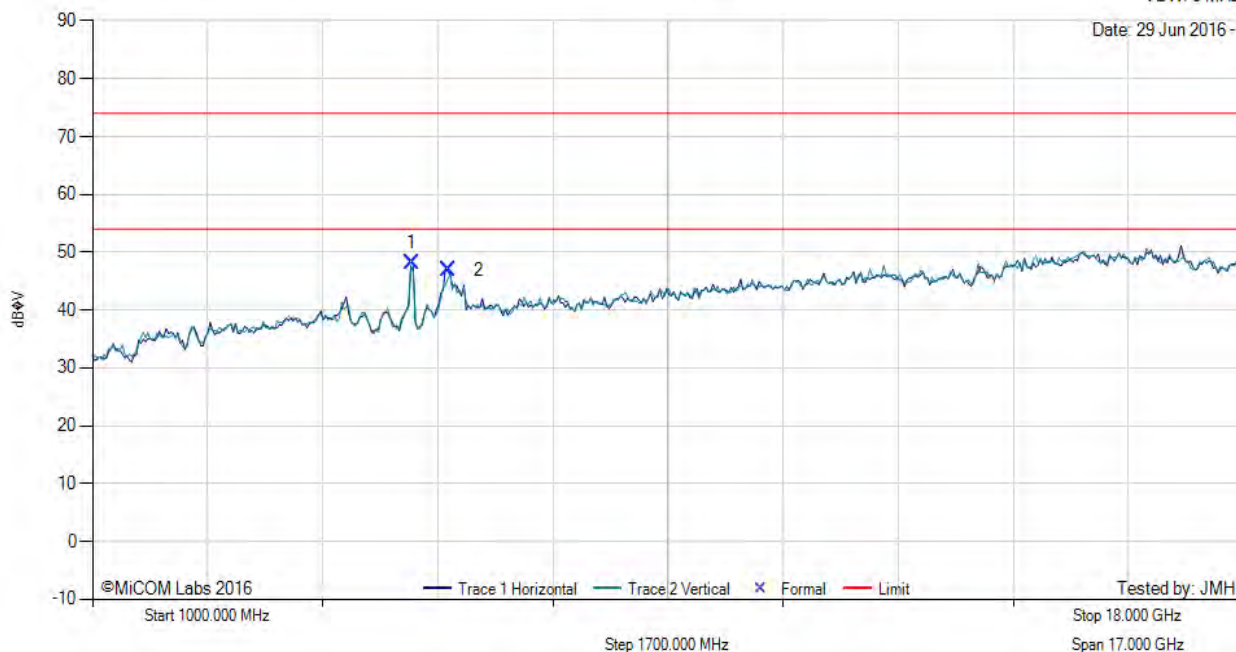
Measurement Distance: 3m

Sweep Time: 170 ms

RBW: 1 MHz

VBW: 3 MHz

Date: 29 Jun 2016 -



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5711.99	55.13	3.83	-10.77	48.19	Fundamental	Vertical	151	1	--	--	
2	6250.63	51.63	3.93	-8.56	47.00	Peak (NRB)	Horizontal	151	1	--	--	Pass

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002. 5G notch filter added in front of amp to prevent overload

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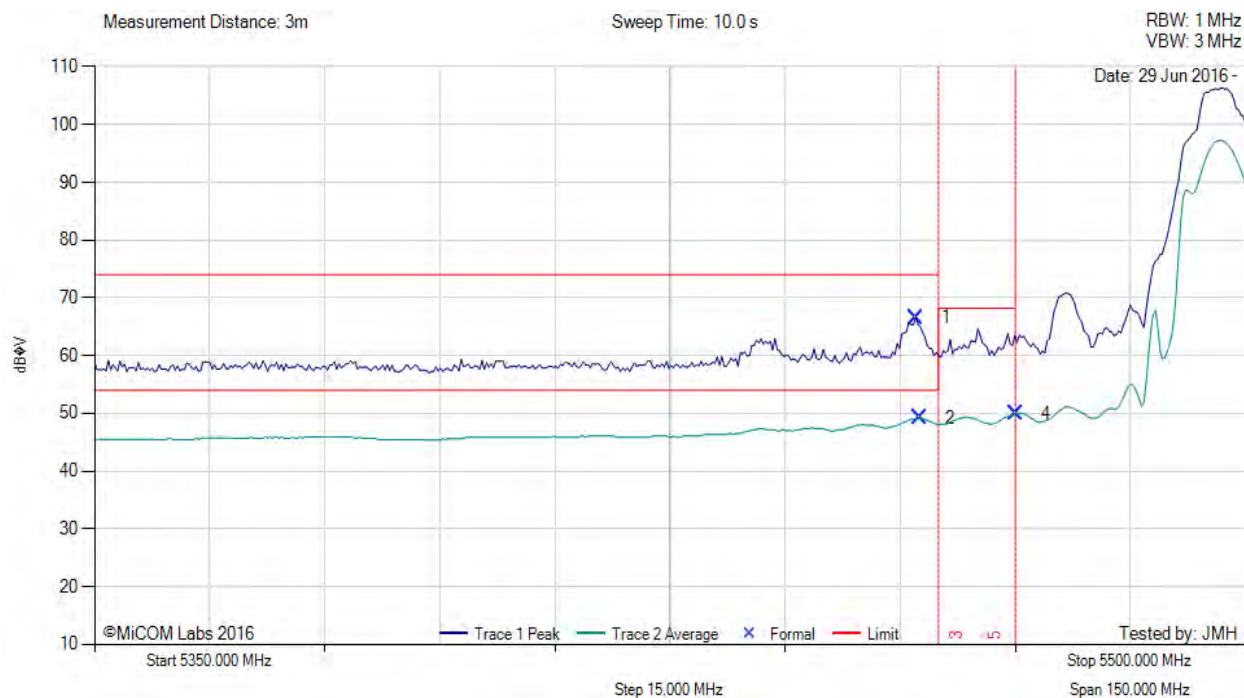
A.1.2. Restricted Band-Edge Emissions

A.1.2.3. A-18



RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5530.00 MHz, Antenna: A-18, Power Setting: 0x09, Duty Cycle (%): 99



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5456.99	28.44	3.80	34.30	66.54	Max Peak	Vertical	200	44	74.0	-7.5	Pass
2	5457.60	11.05	3.80	34.30	49.15	Max Avg	Vertical	200	44	54.0	-4.9	Pass
4	5470.00	11.85	3.76	34.32	49.93	Max Avg	Vertical	200	44	68.2	-18.3	Pass
3	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
5	5470.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

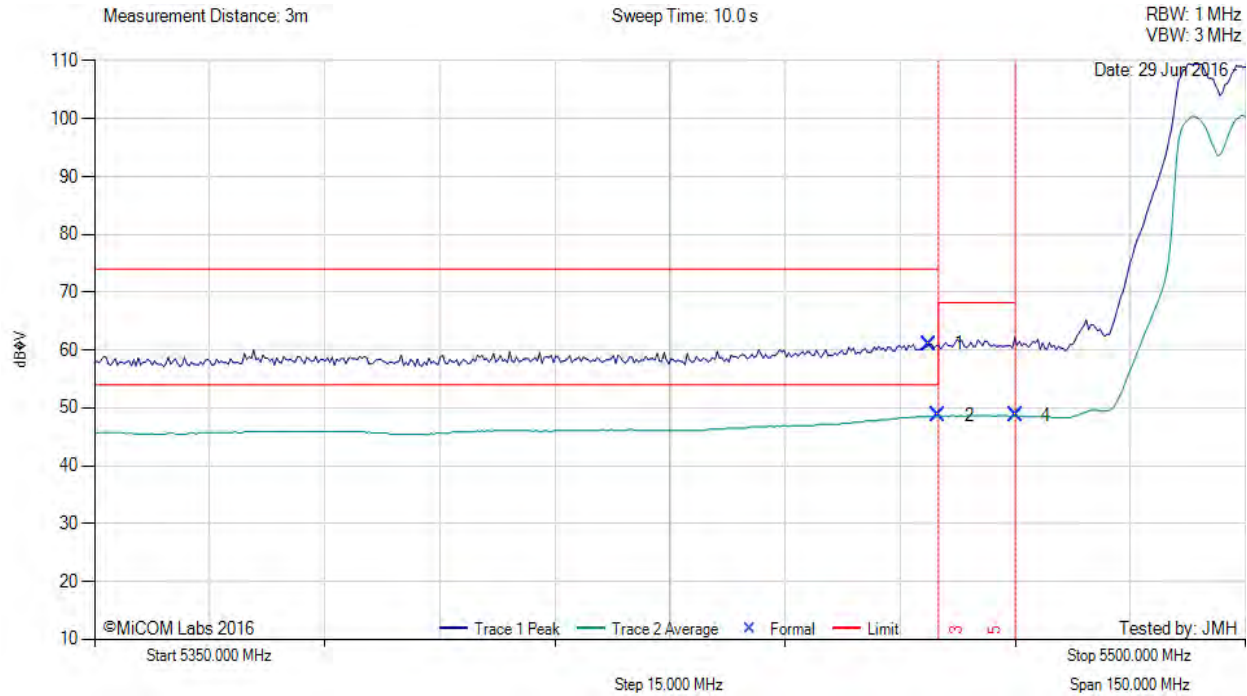
Test Notes: EUT A5-18 SN: 2119591877 on 150cm table, powered by Mimosa POE PS 502-00002.

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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n ac20, Test Freq: 5485.00 MHz, Antenna: A-18, Power Setting: 0x09, Duty Cycle (%): 99



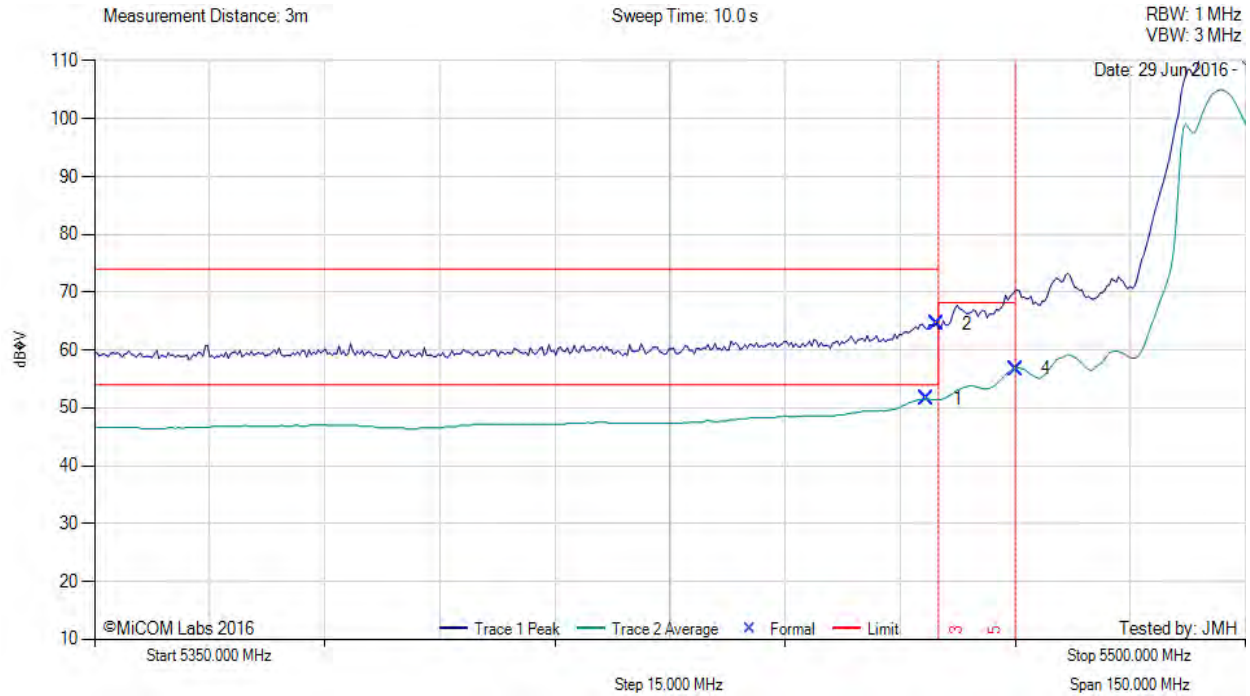
Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5458.80	22.97	3.79	34.31	61.07	Max Peak	Vertical	200	44	74.0	-12.9	Pass
2	5460.00	10.56	3.79	34.31	48.66	Max Avg	Vertical	200	44	54.0	-5.3	Pass
4	5470.00	10.58	3.76	34.32	48.66	Max Avg	Vertical	200	44	68.2	-19.5	Pass
3	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
5	5470.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT A5-18 SN: 2119591877 on 150cm table, powered by Mimosa POE PS 502-00002.

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RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n ac40, Test Freq: 5510.00 MHz, Antenna: A-18, Power Setting: 0x13, Duty Cycle (%): 99



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5458.50	13.43	3.80	34.30	51.53	Max Avg	Vertical	200	44	54.0	-3.5	Pass
2	5459.70	26.51	3.79	34.31	64.61	Max Peak	Vertical	200	44	74.0	-9.4	Pass
4	5470.00	18.71	3.76	34.32	56.79	Max Avg	Vertical	200	44	68.2	-11.4	Pass
3	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
5	5470.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

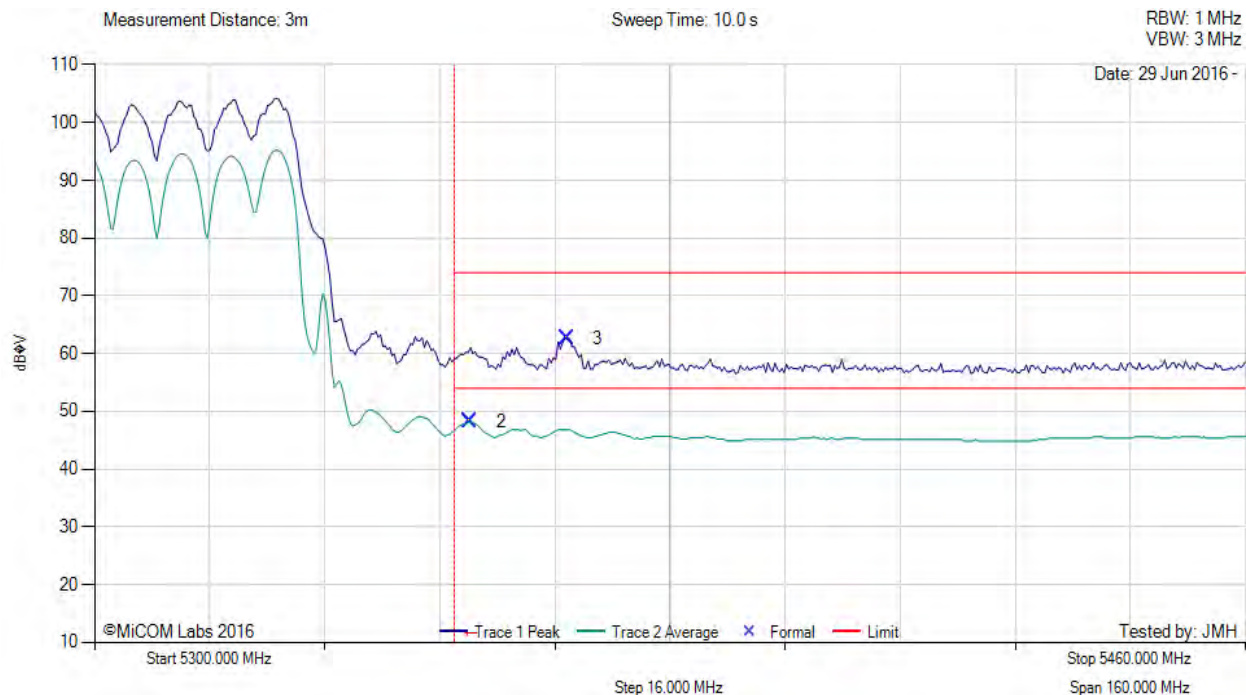
Test Notes: EUT A5-18 SN: 2119591877 on 150cm table, powered by Mimosa POE PS 502-00002.

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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5290.00 MHz, Antenna: A-18, Power Setting: 0x10, Duty Cycle (%): 99



Num	Frequency 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	5352.26	10.00	3.71	34.51	48.22	Max Avg	Vertical	200	59	54.0	-5.8	Pass
3	5365.73	24.42	3.69	34.47	62.58	Max Peak	Vertical	200	59	74.0	-11.4	Pass
1	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

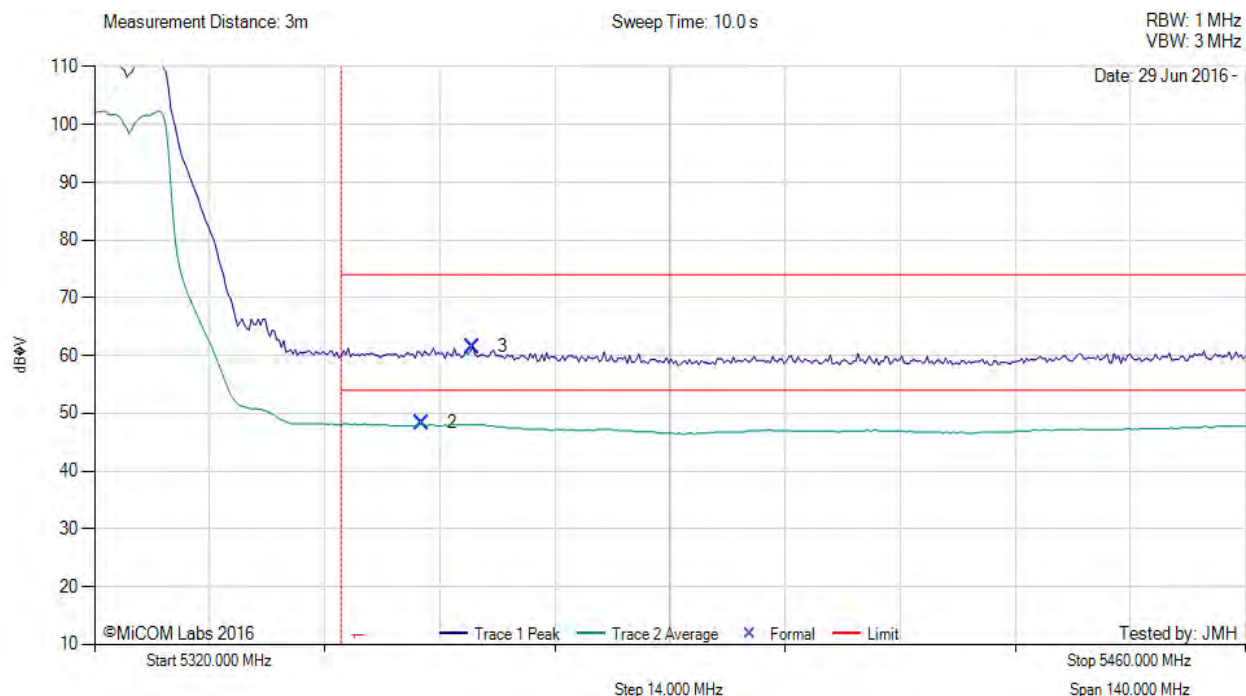
Test Notes: EUT A5-18 SN: 2119591877 on 150cm table, powered by Mimosa POE PS 502-00002.

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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n ac20, Test Freq: 5335.00 MHz, Antenna: A-18, Power Setting: 0x11, Duty Cycle (%): 99



Num	Frequency 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	5359.84	10.21	3.70	34.49	48.40	Max Avg	Vertical	200	59	54.0	-5.6	Pass
3	5366.01	23.40	3.69	34.47	61.56	Max Peak	Vertical	200	59	74.0	-12.4	Pass
1	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

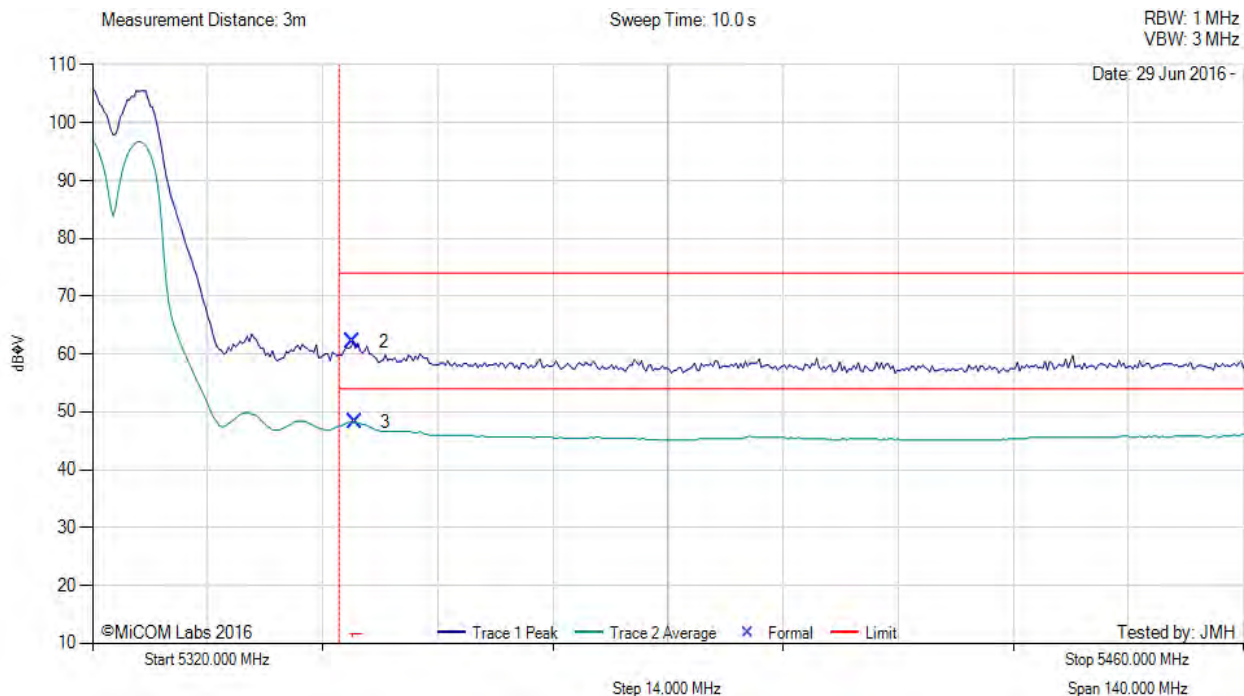
Test Notes: EUT A5-18 SN: 2119591877 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002.

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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n ac40, Test Freq: 5330.00 MHz, Antenna: A-18, Power Setting: 0x09, Duty Cycle (%): 99



Num	Frequency 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	5351.68	23.98	3.71	34.51	62.20	Max Peak	Vertical	200	59	74.0	-11.8	Pass
3	5351.96	10.00	3.71	34.51	48.22	Max Avg	Vertical	200	59	54.0	-5.8	Pass
1	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT A5-18 SN: 2119591877 on 150cm table, powered by Mimosa POE PS 502-00002.

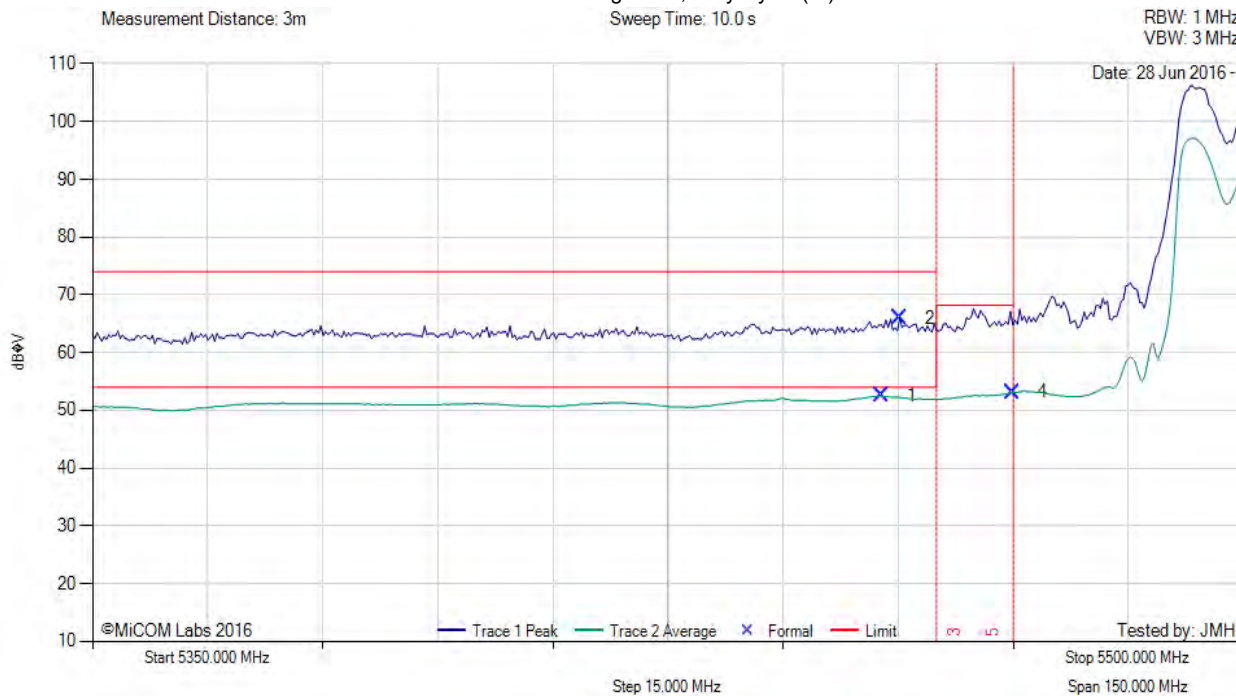
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A.1.2.4. KP Performance KPPA-5GHZHV4P65-17 X4



RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5530.00 MHz, Antenna: KP Performance KPPA-5GHZHV4P65-17 X4, Power Setting: 0x01, Duty Cycle (%): 99



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5452.81	14.44	3.79	34.30	52.53	Max Avg	Horizontal	168	358	54.0	-1.5	Pass
2	5455.21	27.91	3.79	34.30	66.00	Max Peak	Horizontal	168	358	74.0	-8.0	Pass
4	5469.94	15.01	3.79	34.32	53.12	Max Avg	Horizontal	168	358	68.2	-15.1	Pass
3	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002.

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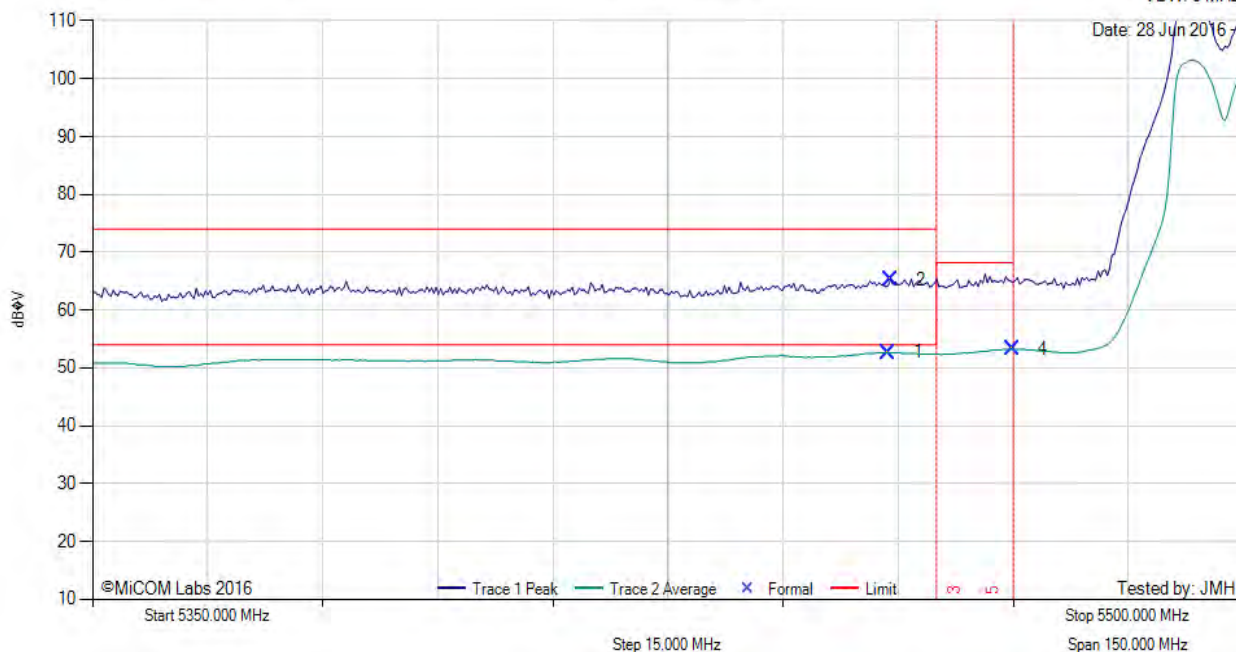
RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n ac20, Test Freq: 5485.00 MHz, Antenna: KP Performance KPPA-5GHZHV4P65-17 X4, Power Setting: 0x01, Duty Cycle (%): 99

Measurement Distance: 3m

Sweep Time: 10.0 s

RBW: 1 MHz
 VBW: 3 MHz



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5453.71	14.56	3.79	34.30	52.65	Max Avg	Horizontal	168	358	54.0	-1.4	Pass
2	5454.01	27.21	3.79	34.30	65.30	Max Peak	Horizontal	168	358	74.0	-8.7	Pass
4	5469.94	15.13	3.79	34.32	53.24	Max Avg	Horizontal	168	358	68.2	-15.0	Pass
3	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002

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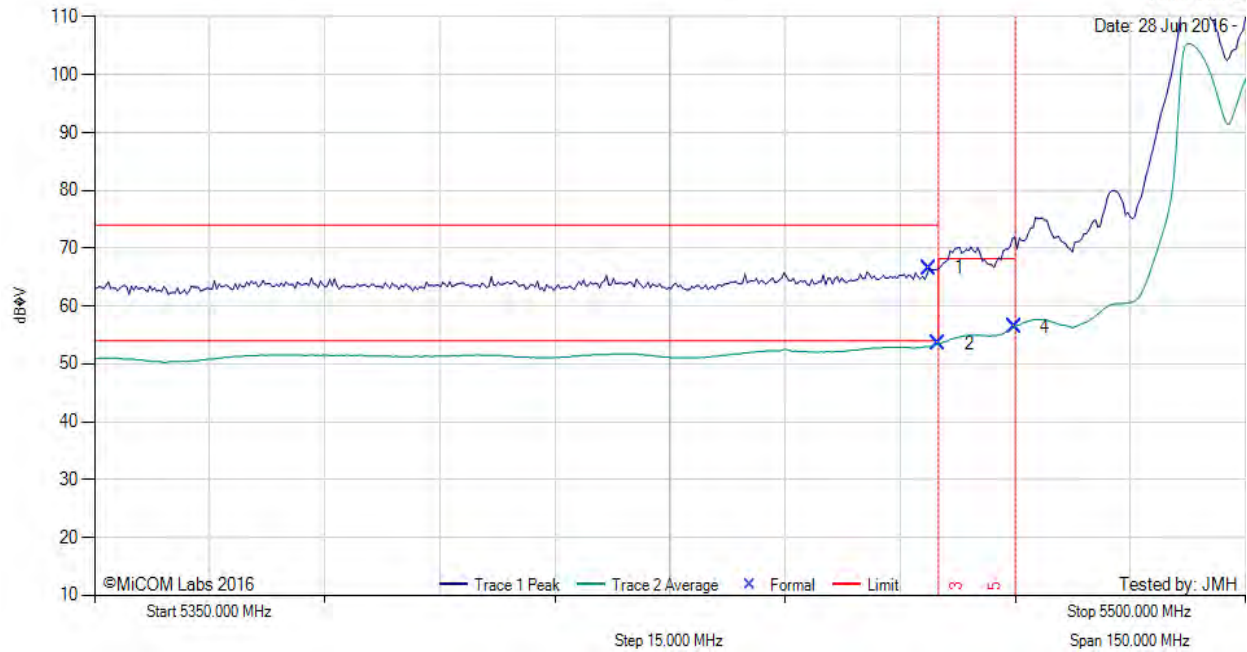
RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n ac40, Test Freq: 5510.00 MHz, Antenna: KP Performance KPPA-5GHZHV4P65-17 X4, Power Setting: 0x04, Duty Cycle (%): 99

Measurement Distance: 3m

Sweep Time: 10.0 s

RBW: 1 MHz
 VBW: 3 MHz



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5458.80	28.46	3.79	34.31	66.56	Max Peak	Horizontal	168	358	74.0	-7.4	Pass
2	5460.00	15.36	3.79	34.31	53.46	Max Avg	Horizontal	168	358	54.0	-0.5	Pass
4	5469.94	18.30	3.79	34.32	56.41	Max Avg	Horizontal	168	358	68.2	-11.8	Pass
3	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
5	5470.00	--	--	--	--	Band Edge	--	--	--	--	--	--

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002. Power reduction to meet band edge limits.

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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5290.00 MHz, Antenna: KP Performance KPPA-5GHZHV4P65-17 X4, Power Setting: 0x02, Duty Cycle (%): 99

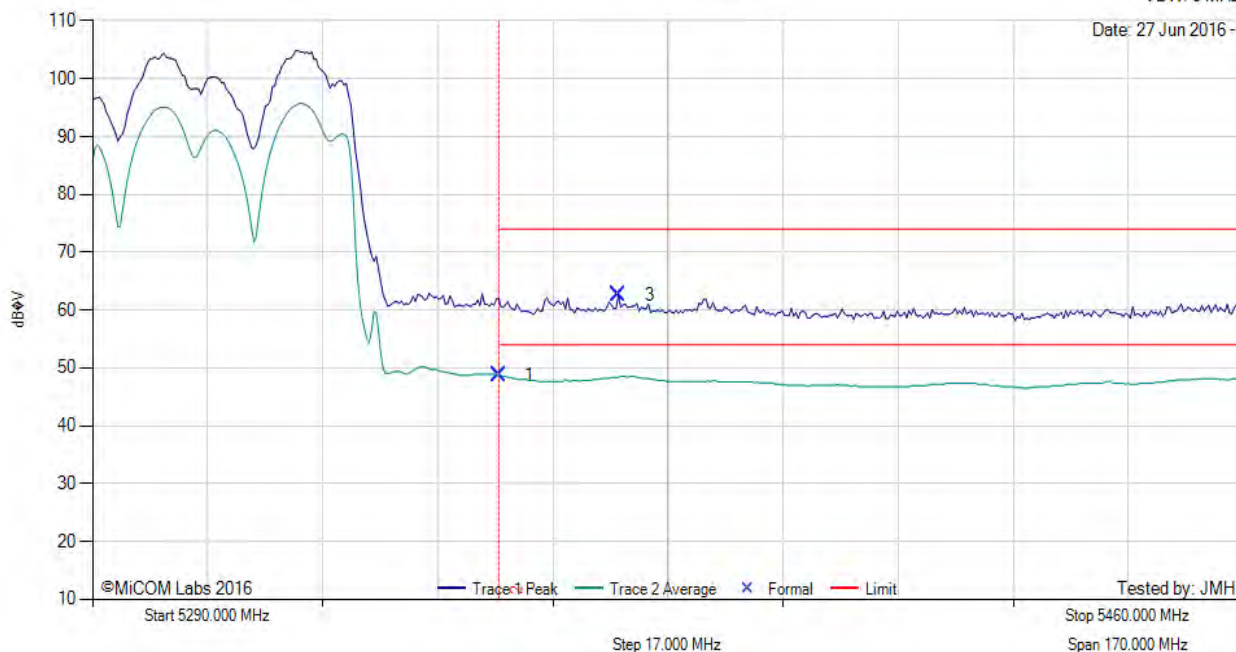
Measurement Distance: 3m

Sweep Time: 10.0 s

RBW: 1 MHz

VBW: 3 MHz

Date: 27 Jun 2016 -



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	10.54	3.70	34.51	48.75	Max Avg	Vertical	164	358	54.0	-5.3	Pass
3	5367.76	24.39	3.69	34.47	62.55	Max Peak	Vertical	164	358	74.0	-11.5	Pass
2	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

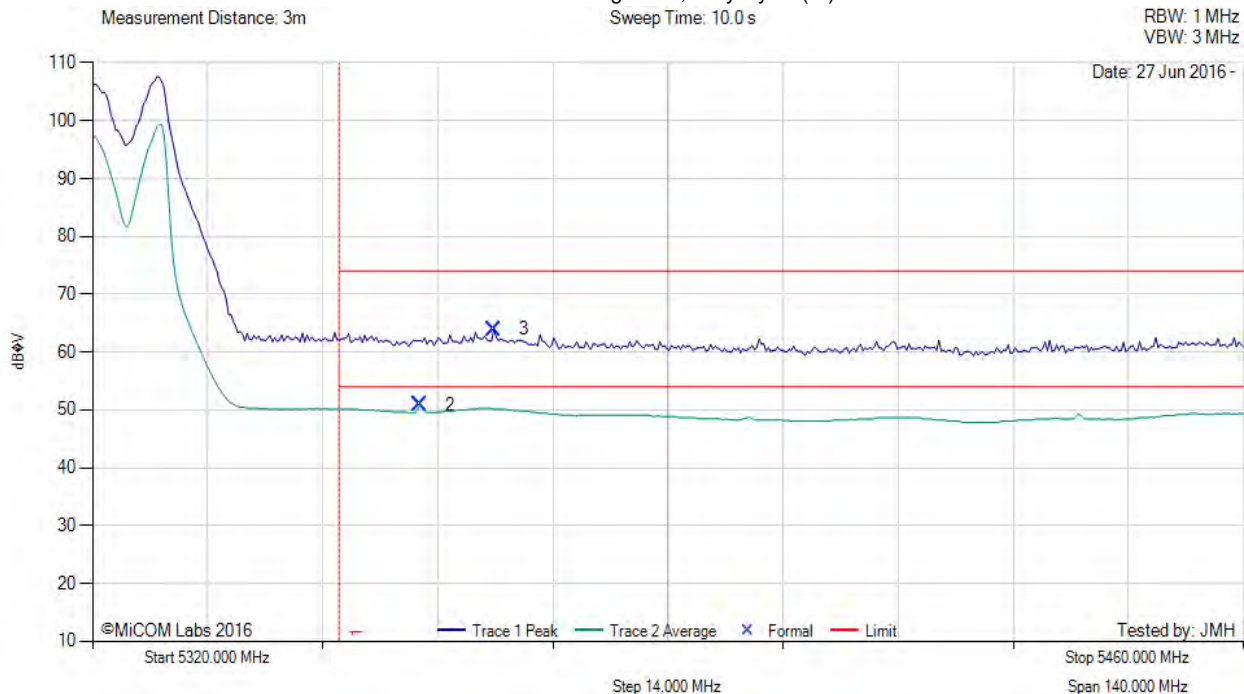
Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002.

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RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n ac20, Test Freq: 5335.00 MHz, Antenna: KP Performance KPPA-5GHZHV4P65-17 X4, Power Setting: 0x03, Duty Cycle (%): 99



Num	Frequency 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	5359.84	12.72	3.70	34.49	50.91	Max Avg	Vertical	164	358	54.0	-3.1	Pass
3	5368.82	25.80	3.69	34.46	63.95	Max Peak	Vertical	164	358	74.0	-10.1	Pass
1	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002.

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RESTRICTED UPPER BAND-EDGE EMISSIONS

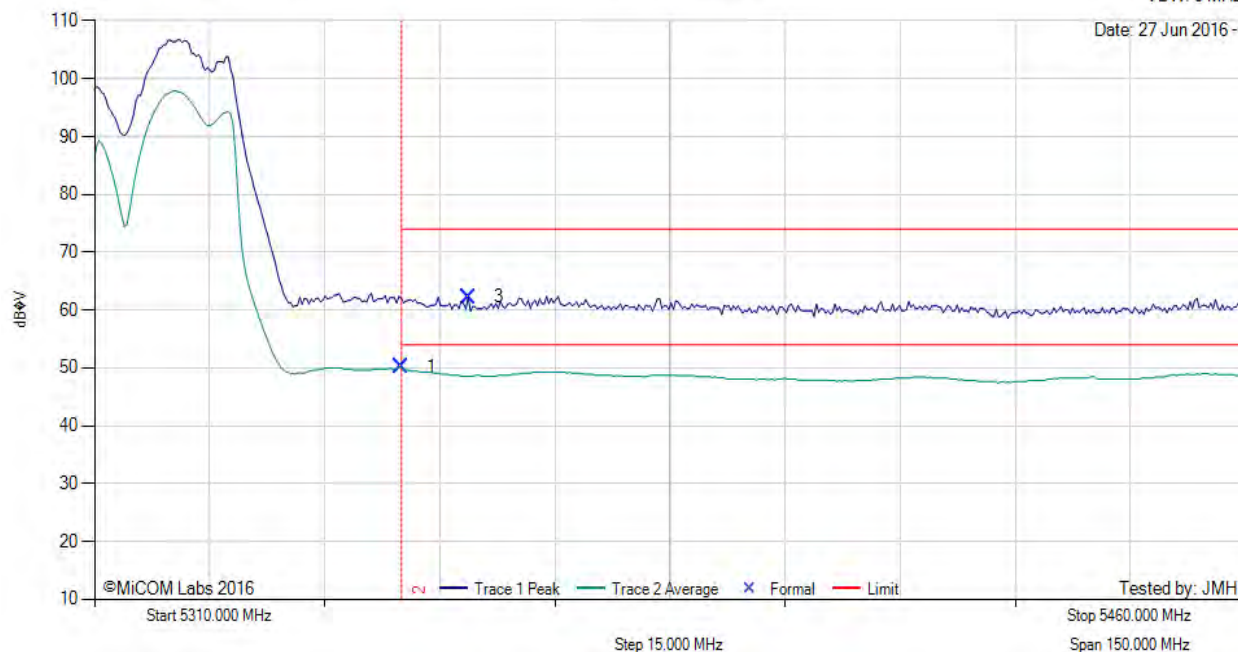
Variant: 802.11n ac40, Test Freq: 5330.00 MHz, Antenna: KP Performance KPPA-5GHZHV4P65-17 X4, Power Setting: 0x01, Duty Cycle (%): 99

Measurement Distance: 3m

Sweep Time: 10.0 s

RBW: 1 MHz
 VBW: 3 MHz

Date: 27 Jun 2016 -



Num	Frequency MHz	Raw dBμV	Cable Loss	AF dB	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	11.93	3.70	34.51	50.14	Max Avg	Vertical	164	358	54.0	-3.9	Pass
3	5358.72	24.02	3.71	34.49	62.22	Max Peak	Vertical	164	358	74.0	-11.8	Pass
2	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT A5c SN: 2118161852 on 150cm table connected to KPPA antenna powered by Mimosa POE PS 502-00002.

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