Company: Aruba Networks

Test of: 802.11 a/b/g/n/ac Wireless Access Point

To: FCC CFR 47 Part 15 Subpart E 15.407

Report No.: ARUB198-U3b Radiated Rev A

RADIATED TEST REPORT

RADIATED TEST REPORT

FROM

Test of: Aruba Networks APIN0324, APIN0325

to

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

Test Report Serial No.: ARUB198-U3b Radiated Rev A

Note: this report is one of a set of three reports that together address the requirements for FCC 15.407

Report Number	Test Report Type
ARUB198-U3a	Conducted Test Report
ARUB198-U3b	Radiated Test Report
ARUB198-U3c	DFS Test Report

This report supersedes: NONE

Applicant: Aruba Networks
1344 Crossman Ave.
Sunnyvale, California 94089-1113
USA

Product Function: Transmission of voice and data traffic

Issue Date: 21st July 2015

This Test Report is Issued Under the Authority of:

MiCOM Labs, Inc.
575 Boulder Court
Pleasanton California 94566
USA
Phone: +1 (925) 462-0304
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A2LA ACCREDITED
TESTING CERT #2381.01

MiCOM Labs is an ISO 17025 Accredited Testing Laboratory

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1. ACCREDITATION, LISTINGS & RECOGNITION

1.1. TESTING ACCREDITATION

MiCOM Labs, Inc. is an accredited Electrical testing laboratory per the international standard ISO/IEC 17025:2005. The company is accredited by the American Association for Laboratory Accreditation (A2LA) www.a2la.org test laboratory number 2381.01. MiCOM Labs test schedule is available at the following URL; http://www.a2la.org/scopepdf/2381-01.pdf

American Association for Laboratory Accreditation

Accredited Laboratory

A2LA has accredited

MICOM LABS

Pleasanton, CA

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General Requirements for the Competence of Testing and Calibration Laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009*).

Presented this 28th day of February 2014.

President & CEO
For the Accreditation Council
Certificate Number 2381.01
Valid to November 30, 2015

For the tests or types of tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.

1.2. RECOGNITION

MiCOM Labs, Inc has widely recognized wireless testing capabilities. Our international recognition includes Conformity Assessment Body designation by APEC MRA countries. MiCOM Labs test reports are accepted globally.

Country	Recognition Body	Status	Phase	Identification No.
USA	Federal Communications Commission (FCC)	TCB	-	US0159 Listing #: 102167
Canada	Industry Canada (IC)	FCB	APEC MRA 2	US0159 Listing #: 4143A-2 4143A-3
Japan	MIC (Ministry of Internal Affairs and Communication)	CAB	APEC MRA 2	RCB 210
	VCCI	--	--	A-0012
Europe	European Commission	NB	EU MRA	NB 2280
Australia	Australian Communications and Media Authority (ACMA)	CAB	APEC MRA 1	US0159
Hong Kong	Office of the Telecommunication Authority (OFTA)	CAB	APEC MRA 1	
Korea	Ministry of Information and Communication Radio Research Laboratory (RRL)	CAB	APEC MRA 1	
Singapore	Infocomm Development Authority (IDA)	CAB	APEC MRA 1	
Taiwan	National Communications Commission (NCC) Bureau of Standards, Metrology and Inspection (BSMI)	CAB	APEC MRA 1	
Vietnam	Ministry of Communication (MIC)	CAB	APEC MRA 1	

EU MRA – European Union Mutual Recognition Agreement.
NB – Notified Body
APEC MRA – Asia Pacific Economic Community Mutual Recognition Agreement. Recognition agreement under which test lab is accredited to regulatory standards of the APEC member countries.

Phase I - recognition for product testing
Phase II – recognition for both product testing and certification

1.3. PRODUCT CERTIFICATION

MiCOM Labs, Inc. is an accredited Product Certification Body per the international standard ISO/IEC 17065:2012. The company is accredited by the American Association for Laboratory Accreditation (A2LA) www.a2la.org test laboratory number 2381.02. MiCOM Labs test schedule is available at the following URL; http://www.a2la.org/scopepdf/2381-02.pdf

United States of America – Telecommunication Certification Body (TCB)
Industry Canada – Certification Body, CAB Identifier – US0159
Europe – Notified Body (NB), NB Identifier - 2280
Japan – Recognized Certification Body (RCB), RCB Identifier - 210

2. DOCUMENT HISTORY

Document History		
Revision	Date	Comments
Draft	2nd July 2015	
Draft #2	13th July 2015	
Rev A	21st July 2015	Initial Release
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In the above table the latest report revision will replace all earlier versions.

3. TEST RESULT CERTIFICATE

Manufacturer:	Aruba Networks 1344 Crossman Ave. Sunnyvale, California 94089-1113 USA	**Tested By:**	MiCOM Labs, Inc. 575 Boulder Court Pleasanton California 94566 USA
Model(s):	APIN0324, APIN0325	**Telephone:** **Fax:**	+1 925 462 0304 +1 925 462 0306
Type Of Equipment:	802.11 a/b/g/n/ac Wireless Access Point		
S/N's:	DD0000489 (Model No.: APIN0324)		
Test Date(s):	22nd – 29th June 2015	**Website:**	www.micomlabs.com

STANDARD(S)	TEST RESULTS
FCC CFR 47 Part 15 Subpart E 15.407	EQUIPMENT COMPLIES

MiCOM Labs, Inc. tested the equipment mentioned in accordance with the requirements set forth in the above standards. Test results indicate that the equipment tested is capable of demonstrating compliance with the requirements as documented within this report.

Notes:

1. This document reports conditions under which testing was conducted and the results of testing performed.

2. Details of test methods used have been recorded and kept on file by the laboratory.

3. Test results apply only to the item(s) tested.

A2LA ACCREDITED
TESTING CERT #2381.01

Approved & Released for MiCOM Labs, Inc. by:

Graeme Grieve
Quality Manager MiCOM Labs, Inc.

Gordon Hurst
President & CEO MiCOM Labs, Inc.

4. REFERENCES AND MEASUREMENT UNCERTAINTY

4.1. Normative References

REF.	PUBLICATION	YEAR	TITLE
I	KDB 662911	Oct 31 2013	Guidance for measurement of output emission of devices that employ single transmitter with multiple outputs or systems with multiple transmitters operating simultaneously in the same frequency band
II	KDB 905462 D07 v01	10th June 2015	Test guidance to demonstrate compliance for U-NII devices subject to DFS requirements.
III	KDB 926956 DO1 v01r02	17th October 2014	U-NII Device Transition Plan
IV	KDB 789033 D02 v01	6th June 2014	General UNII Test Procedures New Rules V01
V	A2LA	June 2015	R105 - Requirement's When Making Reference to A2LA Accreditation Status
VI	ANSI C63.10	2013	American National Standard for Testing Unlicensed Wireless Devices
VII	ANSI C63.4	2014	American National Standards for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz
VIII	CISPR 22	2008	Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement
IX	ETSI TR 100 028	2001-12	Parts 1 and 2 Electromagnetic compatibility and Radio Spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics
X	FCC 06-96	Jun 3 2006	Memorandum Opinion and Order
XI	FCC 47 CFR Part 15.407	2014	Radio Frequency Devices; Subpart E –Unlicensed National Information Infrastructure Devices
XII	ICES-003	Issue 5 2012	Spectrum Management and Telecommunications; Interference-Causing Equipment Standard. Information Technology Equipment (ITE) – Limits and methods of measurement.
XIII	M 3003	Edition 3 Nov. 2012	Expression of Uncertainty and Confidence in Measurements
XIV	RSS-247, Issue 1	May 2015	Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices
XV	RSS-Gen, Issue 4	Nov 2014	General Requirements and Information for the Certification of Radiocommunication Equipment
XVI	KDB 644545 D03 v01	August 14th 2014	Guidance for IEEE 802.11ac New Rules
XVII	FCC 47 CFR Part 2.1033	2014	FCC requirements and rules regarding photographs and test setup diagrams.

4.2. Test and Uncertainty Procedure

Conducted and radiated emission measurements were conducted in accordance with American National Standards Institute ANSI C63.4, listed in the Normative References section of this report.

Measurement uncertainty figures are calculated in accordance with ETSI TR 100 028 Parts 1 and 2.

Measurement uncertainties stated are based on a standard uncertainty multiplied by a coverage factor k = 2, providing a level of confidence of approximately 95 % in accordance with UKAS document M 3003 listed in the Normative References section of this report.

5. PRODUCT DETAILS AND TEST CONFIGURATIONS

5.1. Technical Details

Details	Description
Purpose:	Test of the Aruba Networks APIN0324, APIN0325 to FCC CFR 47 Part 15 Subpart E 15.407. Radio Frequency Devices; Subpart E –Unlicensed National Information Infrastructure Devices
Applicant:	Aruba Networks 1344 Crossman Ave. Sunnyvale California 94089-1113 USA
Manufacturer:	As Applicant
Laboratory performing the tests:	MiCOM Labs, Inc. 575 Boulder Court Pleasanton California 94566 USA
Test report reference number:	ARUB198-U3b Radiated
Date EUT received:	21st April 2015
Standard(s) applied:	FCC CFR 47 Part 15 Subpart E 15.407
Dates of test (from - to):	22nd – 29th June 2015
No of Units Tested:	27
Type of Equipment:	802.11 a/b/g/n/ac Wireless Access Point 4x4 Spatial Multiplexing MIMO Configuration
Product Family Name:	Wireless Access Point
Model(s):	APIN0324, APIN0325
Location for use:	Indoor
Declared Frequency Range(s):	5250 - 5350; 5470 – 5725 MHz;
Primary function of equipment:	Transmission of voice and data traffic
Secondary function of equipment:	None Provided
Type of Modulation:	OFDM
EUT Modes of Operation:	802.11a; 802.11ac-80; 802.11n HT-20; 802.11n HT-40;
Declared Nominal Output Power (Ave):	+23 dBm
Transmit/Receive Operation:	Transceiver - Half Duplex
Rated Input Voltage and Current:	AC/ DC adaptor (adaptor NOT sold with unit) 12Vdc
Operating Temperature Range:	Declared Range 0°C to 40°C
ITU Emission Designator:	802.11a: 16M4D1D 802.11ac-80: 75M9D1D 802.11n HT-20: 17M7D1D 802.11n HT-40: 36M2D1D
Equipment Dimensions:	APIN0324: 204mm x 204mm x 55mm / 8.0" x 8.0" x 2.2" (WxDxH) APIN0325: 204mm x 204mm x 35mm / 8.0" x 8.0" x 1.4" (WxDxH)
Weight:	APIN0324: 0.8 kg APIN0325: 0.8 kg
Hardware Rev:	3.0
Software Rev:	3.0

5.2. Scope Of Test Program

Aruba Networks APIN0324, APIN0325

The scope of the test program was to test the Aruba Networks APIN0324, APIN0325, 802.11 a/b/g/n/ac Wireless Access Point 4x4 Spacial Multiplexing MIMO Configuration configurations in the frequency ranges 5250 - 5350 MHz; 5470 - 5725 MHz (DFS Bands) for compliance against the following specification:

FCC CFR 47 Part 15 Subpart E 15.407 Radiated Emissions
Radio Frequency Devices; Subpart E – Unlicensed National Information Infrastructure Devices

Aruba Networks APIN0324 (External Antenna)

APIN0324 - Top View

Aruba Networks APIN0325 (Integral)

Aruba APIN0325 - Top view

5.3. Equipment Model(s) and Serial Number(s)

Type	Description	Manufacturer	Model	Serial no.	Delivery Date
EUT	Conducted Unit	Aruba Networks	APIN0324	DD0000489	21st April 2015
Support Equipment	Laptop Computer with EUT RF Software	DELL	Latitude E5440	7057172342	21st April 2015

5.4. Antenna Details

Type	Manufact.	Model	Family	Gain (dBi)	BF Gain	Dir BW	X-Pol	Frequency Band (MHz)
integral	Aruba Networks	APIN0325	Metal Sheet	5.5	3.5	360	-	5150 – 5250 5250 – 5350 5470 – 5725 5725 - 5850
external	Aruba Networks	AP-ANT-1W	OMNI	5.8	6.0	360	-	5150 – 5250 5250 – 5350 5470 – 5725 5725 - 5850
external	Aruba Networks	AP-ANT-13B	Downtilt OMNI	3.3	6.0	360	-	5150 – 5250 5250 – 5350 5470 – 5725 5725 - 5850
external	Aruba Networks	AP-ANT-19	OMNI	6.0	6.0	360	-	5150 – 5250 5250 – 5350 5470 – 5725 5725 - 5850
external	Aruba Networks	AP-ANT-20W	OMNI	2.0	6.0	360	-	5150 – 5250 5250 – 5350 5470 – 5725 5725 - 5850
external	Aruba Networks	AP-ANT-40	Downtilt OMNI	5.0	3.0	360	-	5150 – 5250 5250 – 5350 5470 – 5725 5725 - 5850
external	Aruba Networks	AP-ANT-45	Multipolarized	5.0	3.0	360	-	5150 – 5250 5250 – 5350 5470 – 5725 5725 - 5850
external	Aruba Networks	AP-ANT-48	Multipolarized	8.5	3.0	360	-	5150 – 5250 5250 – 5350 5470 – 5725 5725 - 5850

BF Gain - Beamforming Gain
Dir BW - Directional BeamWidth
X-Pol - Cross Polarization

5.5. Cabling and I/O Ports

Port Type	Max Cable Length	# Of Ports	Screened	Conn Type	Data Type
Ethernet	100m	2	N	RJ-45	Packet Data
RS232	0.5m	1	N	RJ-45	Digital

5.6. Test Configurations

Results for the following configurations are provided in this report:

Operational Mode(s) (802.11a/b/g/n/ac)	Data Rate with Highest Power MBit/s	Channel Frequency (MHz)		
		Low	Mid	High
5250 - 5350 MHz				
802.11a	6	5,260.00	5,300.00	5,320.00
802.11ac-80	29.3	--	--	5,290.00
802.11n HT-20	6.5	--	--	5,320.00
802.11n HT-40	13.5	--	--	5,310.00
5470 - 5725 MHz				
802.11a	6	5,500.00	5,580.00	5,720.00
802.11ac-80	29.3	5,530.00	--	--
802.11n HT-20	6.5	5,500.00	--	--
802.11n HT-40	13.5	5,510.00	--	--

5.7. Equipment Modifications

The following modifications were required to bring the equipment into compliance:
1. NONE

5.8. Deviations from the Test Standard

The following deviations from the test standard were required in order to complete the test program:
1. NONE

6. TEST SUMMARY

List of Measurements

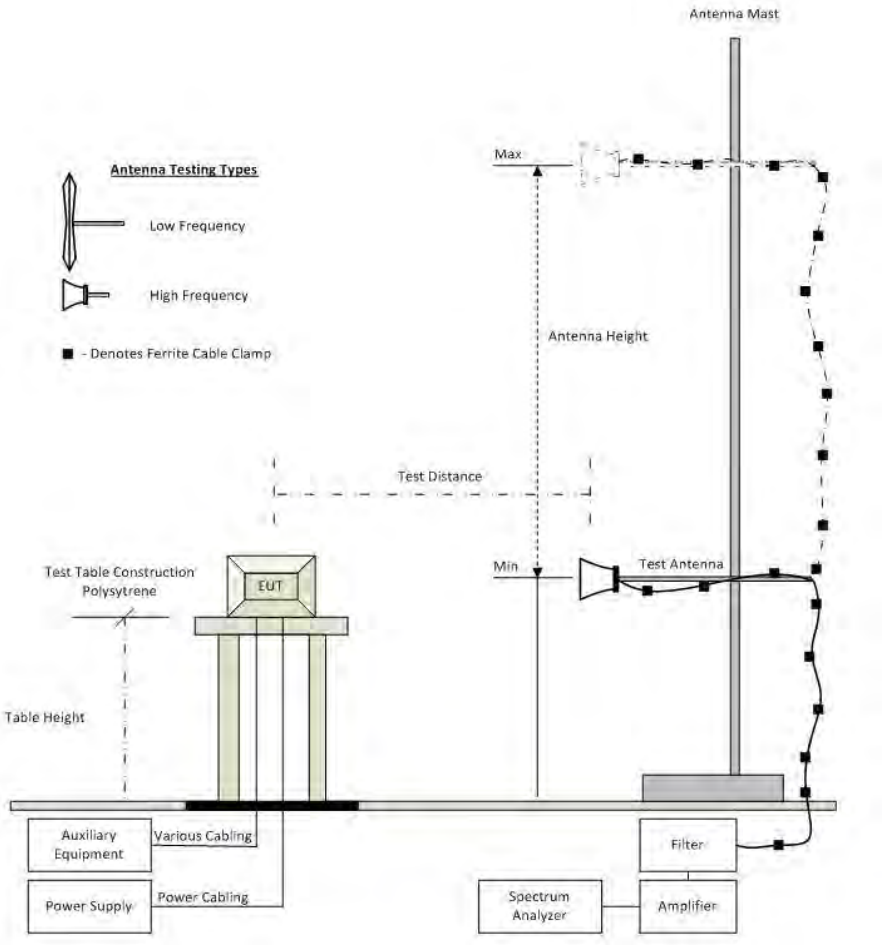
Test Header	Result	Data Link
(b)(2) Radiated	Complies	--
i).. Restricted Band Emissions	Complies	View Data
ii).. Restricted Band-Edge Emissions	Complies	View Data
iv).. Digital Emissions	Complies	View Data

7. TEST EQUIPMENT CONFIGURATION(S)

7.1. Radiated Emissions - 3m Chamber

The following tests were performed using the conducted test set-up shown in the diagram below.

1. Section 9.1.1 Spurious Emissions
2. Section 9.1.2 Restricted Band-Edge Emissions
3. Section 9.1.3. Digital Emissions



Radiated Emission Test Setup

A full system calibration was performed on the test station and any resulting system losses (or gains) were taken into account in the production of all final measurement data.

Asset#	Description	Manufacturer	Model#	Serial#	Calibration Due Date
158	Barometer/Thermometer	Control Company	4196	E2846	04 Dec 2015
170	Video System Controller for Semi Anechoic Chamber	Panasonic	WV-CY101	04R08507	Not Required
287	Rohde & Schwarz 40 GHz Receiver	Rhode & Schwarz	ESIB40	100201	31 Jul 2015
310	SMA Cable	Micro-Coax	UFA210A-0-0787-3G03G0	209089-001	30 Oct 2015
338	Sunol 30 to 3000 MHz Antenna	Sunol	JB3	A052907	14 Aug 2015
393	DC - 1050 MHz Low Pass Filter	Microcircuits	VLFX-1050	N/A	08 Oct 2015
397	Amp 10 - 2500MHz	MiCOM Labs	Amp 10 - 2500 MHz	NA	23 Oct 2015
399	ETS 1-18 GHz Horn Antenna	ETS	3117	00154575	10 Oct 2015
406	Amplifier for Radiated Emissions	MiCOM Labs	40dB 1 to 18GHz Amp	0406	28 May 2016
410	Desktop Computer	Dell	Inspiron 620	WS38	Not Required
411	Mast/Turntable Controller	Sunol Sciences	SC98V	060199-1D	Not Required
412	USB to GPIB Interface	National Instruments	GPIB-USB HS	11B8DC2	Not Required
413	Mast Controller	Sunol Science	TWR95-4	030801-3	Not Required
415	Turntable Controller	Sunol Sciences	Turntable Controller	None	Not Required
416	Gigabit ethernet filter	ETS-Lingren	Gigafoil 260366	None	Not Required
462	Schwarzbeck cable from Antenna to Amplifier.	Schwarzbeck	AK 9513	462	25 Aug 2015
463	Schwarzbeck cable from Amplifier to Bulkhead.	Schwarzbeck	AK 9513	463	25 Aug 2015
464	Schwarzbeck cable from Bulkhead to Receiver	Schwarzbeck	AK 9513	464	25 Aug 2015
465	Low Pass Filter DC-1000 MHz	Mini-Circuits	NLP-1200+	VUU01901402	25 Aug 2015
468	Low pass filter	Mini Circuits	SLP-550	None	30 Sep 2015
469	Low pass filter	Mini Circuit	SLP-1000	None	30 Sep 2015
470	High Pass filter	Mini Circuits	SHP-700	None	30 Sep 2015
CC05	Confidence Check	MiCOM	CC05	None	1 Aug 2015

8. 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)

9. TEST RESULTS

9.1. Radiated

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$E = \frac{1000000 \times \sqrt{30P}}{3}$$ μV/m

where P is the EIRP in Watts

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

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

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

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

Frequency Band			
MHz	**MHz**	**MHz**	**GHz**
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	Above 38.6
13.36-13.41			

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

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

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

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

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

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

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

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

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

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

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

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

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

9.1.1. Restricted Band Emissions

9.1.1.1. Aruba Networks AP-ANT-13B

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5260.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5255.03	71.67	6.13	-11.32	66.48	Fundamental	Horizontal	100	0	--	--	

Test Notes: AP324 on Table powered by AC/DC PS

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5300.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5297.88	69.70	6.17	-11.10	64.77	Fundamental	Horizontal	100	0	--	--	
#2	10608.29	30.37	9.39	-3.92	35.84	Max Avg	Horizontal	100	3	54.0	-18.2	Pass
#3	10608.29	44.09	9.39	-3.92	49.56	Max Peak	Horizontal	100	3	68.2	-18.7	Pass

Test Notes: AP324 on Table powered by AC/DC PS

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5320.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5316.92	69.92	6.19	-11.07	65.04	Fundamental	Horizontal	100	0	--	--	
#2	10630.74	29.86	9.30	-3.90	35.26	Max Avg	Vertical	101	287	54.0	-18.7	Pass
#3	10630.74	41.66	9.30	-3.90	47.06	Max Peak	Vertical	101	287	68.2	-21.2	Pass

Test Notes: AP324 on Table powered by AC/DC PS

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5500.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5496.39	56.72	6.26	-11.17	51.81	Fundamental	Horizontal	100	0	--	--	

Test Notes: AP324 on Table powered by AC/DC PS

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5580.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5582.85	65.61	6.33	-11.19	60.75	Fundamental	Horizontal	100	0	--	--	
#2	11157.20	28.01	9.40	-4.06	33.35	Max Avg	Horizontal	115	78	54.0	-20.7	Pass
#3	11157.20	40.48	9.40	-4.06	45.82	Max Peak	Horizontal	115	78	68.2	-22.4	Pass

Test Notes: AP324 on Table powered by AC/DC PS

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5720.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	4985.13	31.23	5.97	-11.52	25.68	Max Avg	Horizontal	102	71	54.0	-28.3	Pass
#2	4985.13	68.87	5.97	-11.52	63.32	Max Peak	Horizontal	102	71	68.2	-4.9	Pass
#3	5717.79	53.70	6.40	-10.75	49.35	Fundamental	Horizontal	100	0	--	--	
#4	11439.64	30.59	9.47	-4.93	35.13	Max Avg	Vertical	100	283	54.0	-18.9	Pass
#5	11439.64	42.26	9.47	-4.93	46.80	Max Peak	Vertical	100	283	68.2	-21.4	Pass

Test Notes: AP324 on Table powered by AC/DC PS

9.1.1.2. Aruba Networks AP-ANT-19

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5260.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5258.16	73.08	6.13	-11.30	67.91	Fundamental	Vertical	100	0	--	--	

Test Notes: AP324 on table powered by AC/DC PS

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5300.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5298.92	70.98	6.18	-11.09	66.07	Fundamental	Vertical	100	0	--	--	
#2	10609.78	26.64	9.43	-3.92	32.15	Max Avg	Horizontal	109	16	54.0	-21.9	Pass
#3	10609.78	38.65	9.43	-3.92	44.16	Max Peak	Horizontal	109	16	68.2	-24.1	Pass

Test Notes: AP324 on table powered by AC/DC PS

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5320.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5317.60	73.09	6.19	-11.07	68.21	Fundamental	Vertical	100	0	--	--	
#2	10630.46	28.91	9.32	-3.90	34.33	Max Avg	Horizontal	100	300	54.0	-19.7	Pass
#3	10630.46	41.19	9.32	-3.90	46.61	Max Peak	Horizontal	100	300	68.2	-21.6	Pass

Test Notes: AP324 on table powered by AC/DC PS

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5500.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5494.95	62.81	6.27	-11.17	57.91	Fundamental	Vertical	100	0	--	--	

Test Notes: AP324 on table powered by AC/DC PS

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5580.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5582.89	66.24	6.33	-11.19	61.38	Fundamental	Vertical	100	0	--	--	
#2	11159.12	25.77	9.39	-4.06	31.10	Max Avg	Horizontal	101	310	54.0	-22.9	Pass
#3	11159.12	37.39	9.39	-4.06	42.72	Max Peak	Horizontal	101	310	68.2	-25.5	Pass

Test Notes: AP324 on table powered by AC/DC PS

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5720.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	4980.16	35.26	5.96	-11.52	30.70	Max Avg	Vertical	100	127	54.0	-28.3	Pass
#2	4980.16	71.51	5.96	-11.52	65.95	Max Peak	Vertical	100	127	68.2	-5.2	Pass
#3	5717.67	56.60	6.40	-10.75	52.25	Fundamental	Vertical	100	0	--	--	
#4	11446.62	42.43	9.47	-4.92	46.98	Max Peak	Vertical	100	34	68.2	-21.3	Pass
#5	11446.62	30.43	9.47	-4.92	34.98	Max Avg	Vertical	100	127	54.0	-19.0	Pass

Test Notes: AP324 on table powered by AC/DC PS

9.1.1.3. Aruba Networks AP-ANT-1W

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11a
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5260.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5253.11	72.13	6.13	-11.33	66.93	Fundamental	Horizontal	100	0	--	--	

Test Notes: EUT on Table with AC/DC PS

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11a
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5300.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	10609.25	38.34	9.41	-3.92	43.83	Max Avg	Vertical	103	33	54.0	-10.2	Pass
#2	10609.25	50.72	9.41	-3.92	56.21	Max Peak	Vertical	103	33	68.2	-12.0	Pass

Test Notes: EUT on Table with AC/DC PS

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11a
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5320.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	10630.10	34.54	9.32	-3.90	39.96	Max Avg	Vertical	101	291	54.0	-14.0	Pass
#2	10630.10	47.92	9.32	-3.90	53.34	Max Peak	Vertical	101	291	68.2	-14.9	Pass

Test Notes: EUT on Table with AC/DC PS

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11a
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5500.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	10990.62	32.90	9.30	-4.27	37.93	Max Avg	Vertical	111	292	54.0	-16.1	Pass
#2	10990.62	45.89	9.30	-4.27	50.92	Max Peak	Vertical	111	292	68.2	-17.3	Pass

Test Notes: EUT on Table with AC/DC PS

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11a
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5580.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	11167.41	38.73	9.37	-4.08	44.02	Max Avg	Horizontal	100	276	54.0	-10.0	Pass
#2	11167.41	51.41	9.37	-4.08	56.70	Max Peak	Horizontal	100	276	68.2	-11.5	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11a
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5720.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	11437.36	46.79	9.46	-4.92	51.33	Max Avg	Horizontal	101	301	54.0	-2.7	Pass
#2	11437.36	59.26	9.46	-4.92	63.80	Max Peak	Horizontal	101	301	68.2	-4.4	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

9.1.1.4. Aruba Networks AP-ANT-20W

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11a
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5260.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5260.48	73.48	6.12	-11.29	68.31	Fundamental	Vertical	151	0	--	--	

Test Notes: AP324 on table with ENET cables connected to hub outside chamber. Laptop outside chamber pinging EUT. AC/DC PS EMSA120300

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11a
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5300.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5301.21	76.87	6.18	-11.09	71.96	Fundamental	Vertical	151	0	--	--	
#2	10614.22	30.11	9.49	6.08	35.68	Max Avg	Horizontal	100	300	54.0	-10.3	Pass
#3	10614.22	51.39	9.49	-3.92	56.96	Max Peak	Horizontal	100	300	68.2	-11.3	Pass

Test Notes: AP324 on table with ENET cables connected to hub outside chamber. Laptop outside chamber pinging EUT. AC/DC PS EMSA120300

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11a
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5320.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5326.85	78.48	6.18	-11.06	73.60	Fundamental	Horizontal	151	0	--	--	
#2	10640.20	30.72	9.11	-3.89	35.94	Max Avg	Vertical	100	360	54.0	-18.1	Pass
#3	10640.20	43.60	9.11	-3.89	48.82	Max Peak	Vertical	100	360	68.2	-19.4	Pass

Test Notes: AP324 on table with AC/DC PS

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11a
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5500.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5501.16	64.41	6.25	-11.17	59.49	Fundamental	Horizontal	100	0	--	--	
#2	10991.18	37.07	9.30	-4.27	42.10	Max Avg	Horizontal	103	324	54.0	-11.9	Pass
#3	10991.18	50.48	9.30	-4.27	55.51	Max Peak	Horizontal	103	324	68.2	-12.7	Pass

Test Notes: EUT on Table with AC/DC PS

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11a
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5580.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5578.32	62.89	6.32	-11.20	58.01	Fundamental	Horizontal	100	0	--	--	
#2	11157.43	41.44	9.40	-4.06	46.78	Max Avg	Horizontal	102	322	54.0	-7.2	Pass
#3	11157.43	55.25	9.40	-4.06	60.59	Max Peak	Horizontal	102	322	68.2	-7.6	Pass

Test Notes: EUT different ser # due to additional modulated signal from previous EUT

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11a
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5720.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	4984.86	29.67	5.97	-11.52	24.12	Max Avg	Horizontal	142	303	54.0	-29.9	Pass
#2	4984.86	56.95	5.97	-11.52	51.40	Max Peak	Horizontal	142	303	68.2	-26.8	Pass
#3	5714.23	58.21	6.40	-10.76	53.85	Fundamental	Horizontal	100	0	--	--	
#4	11439.24	46.30	9.47	-4.92	50.85	Max Avg	Horizontal	100	317	54.0	-3.2	Pass
#5	11439.24	60.02	9.47	-4.92	64.57	Max Peak	Horizontal	100	317	68.2	-3.7	Pass

Test Notes: EUT on Table with AC/DC PS

9.1.1.5. Aruba Networks AP-ANT-40

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11a
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5260.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5257.92	57.28	6.13	-11.30	52.11	Fundamental	Horizontal	100	0	--	--	

Test Notes: EUT on table powered by AC/DC PS

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11a
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5300.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5299.24	68.15	6.18	-11.09	63.24	Fundamental	Horizontal	100	0	--	--	
#2	10609.94	30.72	9.43	-3.92	36.23	Max Avg	Horizontal	100	300	54.0	-17.8	Pass
#3	10609.94	43.70	9.43	-3.92	49.21	Max Peak	Horizontal	100	300	68.2	-19.0	Pass

Test Notes: EUT on table powered by AC/DC PS

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11a
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5320.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5317.36	70.84	6.19	-11.07	65.96	Fundamental	Horizontal	151	0	--	--	
#2	10631.79	33.56	9.28	-3.90	38.94	Max Avg	Vertical	116	319	54.0	-15.1	Pass
#3	10631.79	47.17	9.28	-3.90	52.55	Max Peak	Vertical	116	319	68.2	-15.7	Pass

Test Notes: EUT on table powered by AC/DC PS

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11a
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5500.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5499.19	59.14	6.26	-11.17	54.23	Fundamental	Horizontal	100	0	--	--	
#2	11003.08	26.73	9.25	-4.24	31.74	Max Avg	Vertical	113	40	54.0	-22.3	Pass
#3	11003.08	39.19	9.25	-4.24	44.20	Max Peak	Vertical	113	40	68.2	-24.0	Pass

Test Notes: EUT on table powered by AC/DC PS

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11a
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5580.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5578.68	65.22	6.33	-11.20	60.35	Fundamental	Horizontal	100	0	--	--	
Test Notes: EUT on table powered by AC/DC PS												

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11a
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5720.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	4986.65	29.29	5.97	-11.53	23.73	Max Avg	Horizontal	106	310	54.0	-30.3	Pass
#2	4986.65	60.67	5.97	-11.53	55.11	Max Peak	Horizontal	106	310	68.2	-13.1	Pass
#3	5715.11	52.88	6.40	-10.76	48.52	Fundamental	Horizontal	101	0	--	--	
#4	11439.64	37.91	9.47	-4.93	42.45	Max Avg	Horizontal	104	309	54.0	-11.6	Pass
#5	11439.64	51.52	9.47	-4.93	56.06	Max Peak	Horizontal	104	309	68.2	-12.2	Pass
Test Notes: EUT on table powered by AC/DC PS												

9.1.1.6. Aruba Networks AP-ANT-45

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11a
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5260.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5259.20	74.12	6.13	-11.29	68.96	Fundamental	Vertical	100	0	--	--	

Test Notes: EUT on table powered by AC/DC PS

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11a
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5300.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5301.21	71.46	6.18	-11.09	66.55	Fundamental	Horizontal	100	0	--	--	
#2	10609.51	28.42	9.43	-3.92	33.93	Max Avg	Horizontal	100	16	54.0	-20.1	Pass
#3	10609.51	40.55	9.43	-3.92	46.06	Max Peak	Horizontal	100	16	68.2	-22.2	Pass

Test Notes: EUT on table powered by AC/DC PS

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11a
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5320.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5313.74	75.09	6.19	-11.07	70.21	Fundamental	Vertical	100	0	--	--	
#2	10632.02	27.42	9.28	-3.90	32.80	Max Avg	Vertical	101	235	54.0	-21.2	Pass
#3	10632.02	40.08	9.28	-3.90	45.46	Max Peak	Vertical	101	235	68.2	-22.8	Pass

Test Notes: EUT on table powered by AC/DC PS

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11a
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5500.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5498.07	62.21	6.26	-11.17	57.30	Fundamental	Vertical	100	0	--	--	

Test Notes: EUT on table powered by AC/DC PS

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11a
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5580.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5584.09	65.87	6.34	-11.19	61.02	Fundamental	Horizontal	100	0	--	--	

Test Notes: EUT on table powered by AC/DC PS

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11a
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5720.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	4979.68	29.64	5.96	-11.52	24.08	Max Avg	Horizontal	102	340	54.0	-29.9	Pass
#2	4979.68	61.77	5.96	-11.52	56.21	Max Peak	Horizontal	102	340	68.2	-12.0	Pass
#3	5715.47	57.22	6.40	-10.76	52.86	Fundamental	Horizontal	100	0	--	--	
#4	11438.12	35.78	9.47	-4.92	40.33	Max Avg	Horizontal	100	314	54.0	-13.7	Pass
#5	11438.12	48.44	9.47	-4.92	52.99	Max Peak	Horizontal	100	314	68.2	-15.2	Pass

Test Notes: EUT on table powered by AC/DC PS

9.1.1.7. Aruba Networks AP-ANT-48

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11a
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5260.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5264.01	74.79	6.12	-11.27	69.64	Fundamental	Horizontal	100	0	--	--	

Test Notes: EUT on table with ENET and Console cables connected to laptop outside chamber

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11a
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5300.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5296.96	72.53	6.17	-11.11	67.59	Fundamental	Horizontal	100	0	--	--	
#2	10608.37	26.91	9.39	-3.92	32.38	Max Avg	Vertical	102	349	54.0	-21.6	Pass
#3	10608.37	48.89	9.39	-3.92	54.36	Max Peak	Vertical	102	349	68.2	-23.9	Pass

Test Notes: EUT on table with ENET and Console cables connected to laptop outside chamber

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11a
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5320.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5317.95	70.82	6.19	-11.07	65.94	Fundamental	Horizontal	100	0	--	--	
#2	10631.10	30.57	9.30	-3.90	35.97	Max Avg	Vertical	108	233	54.0	-18.0	Pass
#3	10631.10	45.03	9.30	-3.90	50.43	Max Peak	Vertical	108	233	68.2	-20.8	Pass

Test Notes: EUT on table with ENET and Console cables connected to laptop outside chamber

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11a
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5500.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5499.19	57.81	6.26	-11.17	52.90	Fundamental	Vertical	100	0	--	--	

Test Notes: EUT on table with ENET and Console cables connected to laptop outside chamber

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11a
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5580.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5577.11	65.41	6.32	-11.20	60.53	Fundamental	Horizontal	100	0	--	--	
#2	11157.67	32.74	9.40	-4.06	38.08	Max Avg	Horizontal	100	325	54.0	-15.9	Pass
#3	11157.67	46.54	9.40	-4.06	51.88	Max Peak	Horizontal	100	325	68.2	-16.4	Pass

Test Notes: EUT on table with ENET and Console cables connected to laptop outside chamber

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11a
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5720.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	4989.30	29.24	5.97	-11.53	23.68	Max Avg	Horizontal	100	333	54.0	-30.3	Pass
#2	4989.30	56.96	5.97	-11.53	51.40	Max Peak	Horizontal	100	333	68.2	-16.8	Pass
#3	5722.64	51.83	6.41	-10.72	47.52	Fundamental	Vertical	100	0	--	--	
#4	11438.40	37.52	9.47	-4.92	42.07	Max Avg	Horizontal	101	297	54.0	-11.9	Pass
#5	11438.40	49.78	9.47	-4.92	54.33	Max Peak	Horizontal	101	297	68.2	-13.9	Pass

Test Notes: EUT on table with ENET and Console cables connected to laptop outside chamber

9.1.1.8. Aruba Networks APIN0325

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	APIN0325	**Variant:**	802.11a
Antenna Gain (dBi):	5.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.5	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5260.00	**Data Rate:**	6.5 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5261.85	73.56	6.12	-11.28	68.40	Fundamental	Horizontal	100	0	--	--	
Test Notes: AP325 on Table powered by AC/DC PS												

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	APIN0325	**Variant:**	802.11a
Antenna Gain (dBi):	5.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.5	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5300.00	**Data Rate:**	6.5 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5302.85	73.30	6.18	-11.08	68.40	Fundamental	Horizontal	100	0	--	--	
Test Notes: AP325 on Table powered by AC/DC PS												

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	APIN0325	**Variant:**	802.11a
Antenna Gain (dBi):	5.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.5	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.5 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5320.68	70.63	6.19	-11.06	65.76	Fundamental	Horizontal	100	0	--	--	
Test Notes: AP325 on Table powered by AC/DC PS												

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	APIN0325	**Variant:**	802.11a
Antenna Gain (dBi):	5.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.5	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.5 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5497.75	59.99	6.26	-11.17	55.08	Fundamental	Horizontal	151	0	--	--	
Test Notes: AP325 on Table powered by AC/DC PS												

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	APIN0325	**Variant:**	802.11a
Antenna Gain (dBi):	5.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.5	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5580.00	**Data Rate:**	6.5 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5581.40	62.35	6.33	-11.20	57.48	Fundamental	Horizontal	100	0	--	--	
Test Notes: AP325 on Table powered by AC/DC PS												

Equipment Configuration for Radiated Spurious - Restricted Band Emissions

Antenna:	APIN0325	**Variant:**	802.11a
Antenna Gain (dBi):	5.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.5	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5720.00	**Data Rate:**	6.5 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5722.08	56.54	6.41	-10.73	52.22	Fundamental	Horizontal	100	0	--	--	
#2	11442.21	34.55	9.47	-4.92	39.10	Max Avg	Horizontal	120	169	54.0	-14.9	Pass
#3	11442.21	47.10	9.47	-4.92	51.65	Max Peak	Horizontal	120	169	68.2	-16.6	Pass
Test Notes: AP325 on Table powered by AC/DC PS												

9.1.2. Restricted Band-Edge Emissions

9.1.2.9. Aruba Networks AP-ANT-13B

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

AP-ANT-13B		Band-Edge Freq	Peak (Limit 74.0dBµV/m)	Average (Limit 54.0dBµV/m)	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5320.00	5350.00	62.39	46.59	13.50
802.11ac-80	5290.00	5350.00	72.67	53.50	11.00
802.11n HT-20	5320.00	5350.00	62.45	47.54	13.50
802.11n HT-40	5310.00	5350.00	71.24	53.26	16.00
802.11a	5500.00	5470.00	61.06	43.94	13.50
802.11ac-80	5530.00	5470.00	72.62	52.90	14.50
802.11n HT-20	5500.00	5470.00	61.79	43.13	13.50
802.11n HT-40	5510.00	5470.00	67.41	42.89	16.00

Click on the links to view the data.

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5500.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5439.94	48.93	6.23	-11.22	43.94	Max Avg	Horizontal	126	53	54.0	-10.1	Pass
#2	5460.00	66.02	6.26	-11.22	61.06	Max Peak	Horizontal	126	53	74.0	-12.9	Pass

Test Notes: AP324 on table powered by AC/DC PS

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11ac-80
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	91.2
Channel Frequency (MHz):	5530.00	**Data Rate:**	29.3 MBit/s
Power Setting:	14.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5460.00	57.86	6.26	-11.22	52.90	Max Avg	Horizontal	126	53	54.0	-1.1	Pass
#2	5460.00	77.58	6.26	-11.22	72.62	Max Peak	Horizontal	126	53	74.0	-1.4	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.3
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.5 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5439.94	48.12	6.23	-11.22	43.13	Max Avg	Horizontal	126	53	54.0	-10.9	Pass
#2	5458.90	66.75	6.26	-11.22	61.79	Max Peak	Horizontal	126	53	74.0	-12.2	Pass

Test Notes: AP324 on table powered by AC/DC PS

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.3
Channel Frequency (MHz):	5510.00	**Data Rate:**	13.5 MBit/s
Power Setting:	16	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5460.00	47.85	6.26	-11.22	42.89	Max Avg	Horizontal	126	53	54.0	-11.1	Pass
#2	5460.00	72.37	6.26	-11.22	67.41	Max Peak	Horizontal	126	53	74.0	-6.6	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11a
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5320.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5355.73	67.27	6.16	-11.04	62.39	Max Peak	Horizontal	110	311	74.0	-11.6	Pass
#2	5439.94	51.58	6.23	-11.22	46.59	Max Avg	Horizontal	110	311	54.0	-7.4	Pass

Test Notes: AP324 on table powered by AC/DC PS

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11ac-80
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	91.2
Channel Frequency (MHz):	5290.00	**Data Rate:**	29.3 MBit/s
Power Setting:	11	**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	5350.44	58.36	6.16	-11.02	53.50	Max Avg	Horizontal	110	311	54.0	-0.5	Pass
#2	5350.44	77.53	6.16	-11.02	72.67	Max Peak	Horizontal	110	311	74.0	-1.3	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.3
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.5 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5357.94	67.33	6.17	-11.05	62.45	Max Peak	Horizontal	110	311	74.0	-11.6	Pass
#2	5439.94	52.53	6.23	-11.22	47.54	Max Avg	Horizontal	110	311	54.0	-6.5	Pass

Test Notes: AP324 on table powered by AC/DC PS

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-13B	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	3.30	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.3
Channel Frequency (MHz):	5310.00	**Data Rate:**	13.5 MBit/s
Power Setting:	16	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5351.76	58.13	6.16	-11.03	53.26	Max Avg	Horizontal	110	311	54.0	-0.7	Pass
#2	5354.85	76.12	6.16	-11.04	71.24	Max Peak	Horizontal	110	311	74.0	-2.8	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

9.1.2.10. Aruba Networks AP-ANT-19

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

AP-ANT-19		Band-Edge Freq	Peak (Limit 74.0dBµV/m)	Average (Limit 54.0dBµV/m)	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5320.00	5350.00	61.64	47.21	13.50
802.11ac-80	5290.00	5350.00	72.19	52.90	10.50
802.11n HT-20	5320.00	5350.00	62.00	47.53	13.50
802.11n HT-40	5310.00	5350.00	72.50	50.60	16.00
802.11a	5500.00	5470.00	65.89	46.36	13.50
802.11ac-80	5530.00	5470.00	71.32	53.62	14.50
802.11n HT-20	5500.00	5470.00	64.95	47.04	13.50
802.11n HT-40	5510.00	5470.00	67.68	47.07	16.00

Click on the links to view the data.

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5500.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5440.16	51.35	6.23	-11.22	46.36	Max Avg	Vertical	117	306	54.0	-7.6	Pass
#2	5459.56	70.85	6.26	-11.22	65.89	Max Peak	Vertical	117	306	74.0	-8.1	Pass

Test Notes: AP324 on table powered by AC/DC PS

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11ac-80
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	91.2
Channel Frequency (MHz):	5530.00	**Data Rate:**	29.3 MBit/s
Power Setting:	14.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5450.96	76.30	6.25	-11.23	71.32	Max Peak	Vertical	114	53	74.0	-2.7	Pass
#2	5459.78	58.58	6.26	-11.22	53.62	Max Avg	Vertical	114	53	54.0	-0.4	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	98.3
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.5 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5440.16	52.03	6.23	-11.22	47.04	Max Avg	Vertical	117	306	54.0	-7.0	Pass
#2	5459.34	69.91	6.26	-11.22	64.95	Max Peak	Vertical	117	306	74.0	-9.1	Pass

Test Notes: AP324 on table powered by AC/DC PS

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.3
Channel Frequency (MHz):	5510.00	**Data Rate:**	13.5 MBit/s
Power Setting:	16	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5459.78	72.64	6.26	-11.22	67.68	Max Peak	Vertical	114	53	74.0	-6.3	Pass
#2	5460.00	52.03	6.26	-11.22	47.07	Max Avg	Vertical	114	53	54.0	-6.9	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11a
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5320.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5355.29	66.52	6.16	-11.04	61.64	Max Peak	Vertical	114	4	74.0	-12.4	Pass
#2	5439.94	52.20	6.23	-11.22	47.21	Max Avg	Vertical	114	4	54.0	-6.8	Pass

Test Notes: AP324 on table powered by AC/DC PS

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11ac-80
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	91.2
Channel Frequency (MHz):	5290.00	**Data Rate:**	29.3 MBit/s
Power Setting:	10.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.44	77.05	6.16	-11.02	72.19	Max Peak	Vertical	114	11	74.0	-1.8	Pass
#2	5351.10	57.77	6.16	-11.03	52.90	Max Avg	Vertical	114	11	54.0	-1.1	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	98.3
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.5 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5354.63	52.41	6.16	-11.04	47.53	Max Avg	Vertical	114	4	54.0	-6.5	Pass
#2	5355.29	66.88	6.16	-11.04	62.00	Max Peak	Vertical	114	4	74.0	-12.0	Pass

Test Notes: AP324 on table powered by AC/DC PS

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-19	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	6.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.3
Channel Frequency (MHz):	5310.00	**Data Rate:**	13.5 MBit/s
Power Setting:	16.0	**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	5350.66	55.47	6.16	-11.03	50.60	Max Avg	Vertical	114	11	54.0	-3.4	Pass
#2	5355.51	77.38	6.16	-11.04	72.50	Max Peak	Vertical	114	11	74.0	-1.5	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

9.1.2.11. Aruba Networks AP-ANT-1W

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

AP-ANT-1W		Band-Edge Freq	Peak (Limit 74.0dBµV/m)	Average (Limit 54.0dBµV/m)	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5320.00	5350.00	61.21	42.22	13.50
802.11ac-80	5290.00	5350.00	72.89	53.02	14.00
802.11n HT-20	5320.00	5350.00	61.16	41.40	13.50
802.11n HT-40	5310.00	5350.00	73.81	50.20	16.00
802.11a	5500.00	5470.00	54.33	39.48	13.50
802.11ac-80	5530.00	5470.00	70.40	53.13	14.50
802.11n HT-20	5500.00	5470.00	55.08	40.41	13.50
802.11n HT-40	5510.00	5470.00	65.46	43.95	13.50

Click on the links to view the data.

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11a
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5500.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5439.94	44.47	6.23	-11.22	39.48	Max Avg	Horizontal	99	315	54.0	-14.5	Pass
#2	5440.16	59.32	6.23	-11.22	54.33	Max Peak	Horizontal	99	315	74.0	-19.7	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11ac-80
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	91.2
Channel Frequency (MHz):	5530.00	**Data Rate:**	29.3 MBit/s
Power Setting:	14.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5457.58	58.10	6.26	-11.23	53.13	Max Avg	Horizontal	100	319	54.0	-0.9	Pass
#2	5458.46	75.37	6.26	-11.23	70.40	Max Peak	Horizontal	100	319	74.0	-3.6	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	98.3
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.5 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5439.94	45.40	6.23	-11.22	40.41	Max Avg	Horizontal	99	315	54.0	-13.6	Pass
#2	5460.00	60.04	6.26	-11.22	55.08	Max Peak	Horizontal	99	315	74.0	-18.9	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	96.3
Channel Frequency (MHz):	5510.00	**Data Rate:**	13.5 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5450.08	70.44	6.25	-11.23	65.46	Max Peak	Horizontal	99	315	74.0	-8.5	Pass
#2	5459.56	48.91	6.26	-11.22	43.95	Max Avg	Horizontal	99	315	54.0	-10.1	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11a
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5320.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5356.61	66.09	6.17	-11.05	61.21	Max Peak	Horizontal	103	112	74.0	-12.8	Pass
#2	5439.94	47.21	6.23	-11.22	42.22	Max Avg	Horizontal	103	112	54.0	-11.8	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11ac-80
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	91.2
Channel Frequency (MHz):	5290.00	**Data Rate:**	29.3 MBit/s
Power Setting:	14.0	**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	57.88	6.16	-11.02	53.02	Max Avg	Horizontal	100	319	54.0	-1.0	Pass
#2	5353.53	77.77	6.16	-11.04	72.89	Max Peak	Horizontal	100	319	74.0	-1.1	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	98.3
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.5 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5358.16	66.04	6.17	-11.05	61.16	Max Peak	Horizontal	103	112	74.0	-12.8	Pass
#2	5440.16	46.39	6.23	-11.22	41.40	Max Avg	Horizontal	103	112	54.0	-12.6	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-1W	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	5.80	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	96.3
Channel Frequency (MHz):	5310.00	**Data Rate:**	13.5 MBit/s
Power Setting:	16.0	**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	5350.22	78.67	6.16	-11.02	73.81	Max Peak	Horizontal	100	322	74.0	-0.2	Pass
#2	5355.07	55.08	6.16	-11.04	50.20	Max Avg	Horizontal	100	322	54.0	-3.8	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

9.1.2.12. Aruba Networks AP-ANT-20W

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

AP-ANT-20W		Band-Edge Freq	Peak (Limit 74.0dBµV/m)	Average (Limit 54.0dBµV/m)	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5320.00	5350.00	55.42	39.07	13.50
802.11ac-80	5290.00	5350.00	69.07	47.04	16.00
802.11n HT-20	5320.00	5350.00	57.19	43.31	13.50
802.11n HT-40	5310.00	5350.00	71.37	48.28	16.00
802.11a	5500.00	5470.00	51.62	37.03	13.50
802.11ac-80	5530.00	5470.00	66.42	45.40	16.00
802.11n HT-20	5500.00	5470.00	52.61	37.26	13.50
802.11n HT-40	5510.00	5470.00	64.95	42.20	16.00

Click on the links to view the data.

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11a
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5500.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5439.94	42.02	6.23	-11.22	37.03	Max Avg	Horizontal	97	333	54.0	-17.0	Pass
#2	5458.02	56.59	6.26	-11.23	51.62	Max Peak	Horizontal	97	333	74.0	-22.4	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11ac-80
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	91.2
Channel Frequency (MHz):	5530.00	**Data Rate:**	29.3 MBit/s
Power Setting:	16	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5459.34	71.38	6.26	-11.22	66.42	Max Peak	Horizontal	97	333	74.0	-1.8	Pass
#2	5460.00	50.36	6.26	-11.22	45.40	Max Avg	Horizontal	97	333	54.0	-8.6	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	98.3
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.5 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5439.94	42.25	6.23	-11.22	37.26	Max Avg	Horizontal	97	333	54.0	-16.7	Pass
#2	5459.78	57.57	6.26	-11.22	52.61	Max Peak	Horizontal	97	333	74.0	-21.4	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.3
Channel Frequency (MHz):	5510.00	**Data Rate:**	13.5 MBit/s
Power Setting:	16	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5459.78	69.91	6.26	-11.22	64.95	Max Peak	Horizontal	97	333	74.0	-9.1	Pass
#2	5460.00	47.16	6.26	-11.22	42.20	Max Avg	Horizontal	97	333	54.0	-11.8	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11a
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5320.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.44	43.93	6.16	-11.02	39.07	Max Avg	Horizontal	124	330	54.0	-14.9	Pass
#2	5354.41	60.30	6.16	-11.04	55.42	Max Peak	Horizontal	124	330	74.0	-18.6	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11ac-80
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	91.2
Channel Frequency (MHz):	5290.00	**Data Rate:**	29.3 MBit/s
Power Setting:	16.0	**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	51.90	6.16	-11.02	47.04	Max Avg	Horizontal	101	343	54.0	-7.0	Pass
#2	5352.65	73.95	6.16	-11.04	69.07	Max Peak	Horizontal	101	343	74.0	-4.9	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	98.3
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.5 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5356.17	62.07	6.16	-11.04	57.19	Max Peak	Horizontal	124	330	74.0	-16.8	Pass
#2	5439.94	48.30	6.23	-11.22	43.31	Max Avg	Horizontal	124	330	54.0	-10.7	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-20W	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	2.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	6.0	**Duty Cycle (%):**	96.3
Channel Frequency (MHz):	5310.00	**Data Rate:**	13.5 MBit/s
Power Setting:	16.0	**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	53.14	6.16	-11.02	48.28	Max Avg	Horizontal	101	343	54.0	-5.7	Pass
#2	5352.87	76.25	6.16	-11.04	71.37	Max Peak	Horizontal	101	343	74.0	-2.6	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

9.1.2.13. Aruba Networks AP-ANT-40

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

AP-ANT-40		Band-Edge Freq	Peak (Limit 74.0dBµV/m)	Average (Limit 54.0dBµV/m)	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5320.00	5350.00	63.74	45.43	13.50
802.11ac-80	5290.00	5350.00	67.79	41.92	6.50
802.11n HT-20	5320.00	5350.00	63.95	45.73	13.50
802.11n HT-40	5310.00	5350.00	63.77	42.29	9.50
802.11a	5500.00	5470.00	58.36	40.13	13.50
802.11ac-80	5530.00	5470.00	67.63	47.09	13.00
802.11n HT-20	5500.00	5470.00	57.98	40.11	13.50
802.11n HT-40	5510.00	5470.00	65.14	42.94	16.00

Click on the links to view the data.

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11a
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5500.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5424.07	45.09	6.23	-11.19	40.13	Max Avg	Horizontal	141	324	54.0	-13.9	Pass
#2	5459.34	63.32	6.26	-11.22	58.36	Max Peak	Horizontal	141	324	74.0	-15.6	Pass

Test Notes: EUT on table powered by AC/DC PS

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11ac-80
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	91.2
Channel Frequency (MHz):	5530.00	**Data Rate:**	29.3 MBit/s
Power Setting:	13.0	**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	5458.68	72.59	6.26	-11.22	67.63	Max Peak	Horizontal	141	324	74.0	-6.4	Pass
#2	5460.00	52.05	6.26	-11.22	47.09	Max Avg	Horizontal	141	324	54.0	-6.9	Pass

Test Notes: EUT on table powered by AC/DC PS

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	98.3
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.5 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5424.07	45.07	6.23	-11.19	40.11	Max Avg	Horizontal	141	324	54.0	-13.9	Pass
#2	5459.56	62.94	6.26	-11.22	57.98	Max Peak	Horizontal	141	324	74.0	-16.0	Pass

Test Notes: EUT on table powered by AC/DC PS

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.3
Channel Frequency (MHz):	5510.00	**Data Rate:**	13.5 MBit/s
Power Setting:	16.0	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5459.34	70.10	6.26	-11.22	65.14	Max Peak	Horizontal	141	324	74.0	-8.9	Pass
#2	5460.00	47.90	6.26	-11.22	42.94	Max Avg	Horizontal	141	324	54.0	-11.1	Pass

Test Notes: EUT on table powered by AC/DC PS

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11a
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5320.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.44	50.29	6.16	-11.02	45.43	Max Avg	Horizontal	100	326	54.0	-8.6	Pass
#2	5355.51	68.62	6.16	-11.04	63.74	Max Peak	Horizontal	100	326	74.0	-10.3	Pass

Test Notes: EUT on table powered by AC/DC PS

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11ac-80
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	91.2
Channel Frequency (MHz):	5290.00	**Data Rate:**	29.3 MBit/s
Power Setting:	6.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5353.53	46.80	6.16	-11.04	41.92	Max Avg	Horizontal	100	326	54.0	-12.1	Pass
#2	5353.97	72.67	6.16	-11.04	67.79	Max Peak	Horizontal	100	326	74.0	-6.2	Pass

Test Notes: EUT on table powered by AC/DC PS

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	98.3
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.5 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5351.32	50.60	6.16	-11.03	45.73	Max Avg	Horizontal	100	326	54.0	-8.3	Pass
#2	5354.41	68.83	6.16	-11.04	63.95	Max Peak	Horizontal	100	326	74.0	-10.1	Pass

Test Notes: EUT on table powered by AC/DC PS

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-40	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.3
Channel Frequency (MHz):	5310.00	**Data Rate:**	13.5 MBit/s
Power Setting:	9.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.44	68.63	6.16	-11.02	63.77	Max Peak	Horizontal	100	326	74.0	-10.2	Pass
#2	5440.16	47.28	6.23	-11.22	42.29	Max Avg	Horizontal	100	326	54.0	-11.7	Pass

Test Notes: EUT on table powered by AC/DC PS

9.1.2.14. Aruba Networks AP-ANT-45

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

AP-ANT-45		Band-Edge Freq	Peak (Limit 74.0dBµV/m)	Average (Limit 54.0dBµV/m)	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5320.00	5350.00	63.49	46.72	13.50
802.11ac-80	5290.00	5350.00	72.82	53.43	10.50
802.11n HT-20	5320.00	5350.00	63.70	47.14	13.50
802.11n HT-40	5310.00	5350.00	72.93	51.83	14.50
802.11a	5500.00	5470.00	61.83	44.08	13.50
802.11ac-80	5530.00	5470.00	69.21	53.30	14.00
802.11n HT-20	5500.00	5470.00	62.10	44.79	13.50
802.11n HT-40	5510.00	5470.00	70.20	45.39	16.00

Click on the links to view the data.

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11a
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5500.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5424.07	49.04	6.23	-11.19	44.08	Max Avg	Horizontal	104	30	54.0	-9.9	Pass
#2	5455.37	66.80	6.26	-11.23	61.83	Max Peak	Horizontal	104	30	74.0	-12.2	Pass

Test Notes: EUT on table powered by AC/DC PS

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11ac-80
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	91.2
Channel Frequency (MHz):	5530.00	**Data Rate:**	29.3 MBit/s
Power Setting:	14.0	**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	5456.25	74.18	6.26	-11.23	69.21	Max Peak	Horizontal	105	30	74.0	-4.8	Pass
#2	5460.00	58.26	6.26	-11.22	53.30	Max Avg	Horizontal	105	30	54.0	-0.7	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5500.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5424.07	49.75	6.23	-11.19	44.79	Max Avg	Horizontal	104	30	54.0	-9.2	Pass
#2	5454.93	67.07	6.26	-11.23	62.10	Max Peak	Horizontal	104	30	74.0	-11.9	Pass

Test Notes: EUT on table powered by AC/DC PS

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.3
Channel Frequency (MHz):	5510.00	**Data Rate:**	13.5 MBit/s
Power Setting:	16.0	**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	5456.47	50.36	6.26	-11.23	45.39	Max Avg	Horizontal	105	30	54.0	-8.6	Pass
#2	5460.00	75.16	6.26	-11.22	70.20	Max Peak	Horizontal	105	30	74.0	-3.8	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11a
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5320.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	51.58	6.16	-11.02	46.72	Max Avg	Horizontal	102	18	54.0	-7.3	Pass
#2	5355.29	68.37	6.16	-11.04	63.49	Max Peak	Horizontal	102	18	74.0	-10.5	Pass

Test Notes: EUT on table powered by AC/DC PS

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11ac-80
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	91.2
Channel Frequency (MHz):	5290.00	**Data Rate:**	29.3 MBit/s
Power Setting:	10.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.22	58.29	6.16	-11.02	53.43	Max Avg	Horizontal	105	18	54.0	-0.6	Pass
#2	5350.66	77.69	6.16	-11.03	72.82	Max Peak	Horizontal	105	18	74.0	-1.2	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5320.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	52.00	6.16	-11.02	47.14	Max Avg	Horizontal	102	18	54.0	-6.9	Pass
#2	5360.58	68.59	6.17	-11.06	63.70	Max Peak	Horizontal	102	18	74.0	-10.3	Pass

Test Notes: EUT on table powered by AC/DC PS

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-45	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	5.00	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.3
Channel Frequency (MHz):	5310.00	**Data Rate:**	13.5 MBit/s
Power Setting:	14.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.22	77.79	6.16	-11.02	72.93	Max Peak	Horizontal	105	18	74.0	-1.1	Pass
#2	5351.76	56.70	6.16	-11.03	51.83	Max Avg	Horizontal	105	18	54.0	-2.2	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

9.1.2.15. Aruba Networks AP-ANT-48

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

AP-ANT-48		Band-Edge Freq	Peak (Limit 74.0dBµV/m)	Average (Limit 54.0dBµV/m)	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5320.00	5350.00	63.67	47.49	13.50
802.11ac-80	5290.00	5350.00	73.25	53.88	14.00
802.11n HT-20	5320.00	5350.00	63.40	48.16	13.50
802.11n HT-40	5310.00	5350.00	71.85	52.24	16.00
802.11a	5500.00	5470.00	62.47	42.65	13.50
802.11ac-80	5530.00	5470.00	68.79	53.56	12.00
802.11n HT-20	5500.00	5470.00	62.42	43.58	13.50
802.11n HT-40	5510.00	5470.00	68.50	47.22	16.00

Click on the links to view the data.

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11a
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5500.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5424.07	47.61	6.23	-11.19	42.65	Max Avg	Horizontal	129	357	54.0	-11.4	Pass
#2	5459.56	67.43	6.26	-11.22	62.47	Max Peak	Horizontal	129	357	74.0	-11.5	Pass

Test Notes: EUT on table with ENET and Console cables connected to laptop outside chamber

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11ac-80
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	91.2
Channel Frequency (MHz):	5530.00	**Data Rate:**	29.3 MBit/s
Power Setting:	12.0	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5460.00	58.52	6.26	-11.22	53.56	Max Avg	Horizontal	100	357	54.0	-0.4	Pass
#2	5460.00	73.75	6.26	-11.22	68.79	Max Peak	Horizontal	100	357	74.0	-5.2	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	98.3
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.5 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5439.94	48.57	6.23	-11.22	43.58	Max Avg	Horizontal	129	357	54.0	-10.4	Pass
#2	5459.12	67.38	6.26	-11.22	62.42	Max Peak	Horizontal	129	357	74.0	-11.6	Pass

Test Notes: EUT on table with ENET and Console cables connected to laptop outside chamber

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.3
Channel Frequency (MHz):	5510.00	**Data Rate:**	13.5 MBit/s
Power Setting:	16.0	**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	5458.90	52.18	6.26	-11.22	47.22	Max Avg	Horizontal	100	357	54.0	-6.8	Pass
#2	5459.78	73.46	6.26	-11.22	68.50	Max Peak	Horizontal	100	357	74.0	-5.5	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11a
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5320.00	**Data Rate:**	6 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	52.35	6.16	-11.02	47.49	Max Avg	Horizontal	100	359	54.0	-6.5	Pass
#2	5355.95	68.55	6.16	-11.04	63.67	Max Peak	Horizontal	100	359	74.0	-10.3	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11ac-80
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	91.2
Channel Frequency (MHz):	5290.00	**Data Rate:**	29.3 MBit/s
Power Setting:	14.0	**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	58.74	6.16	-11.02	53.88	Max Avg	Horizontal	101	359	54.0	-0.1	Pass
#2	5350.22	78.11	6.16	-11.02	73.25	Max Peak	Horizontal	101	359	74.0	-0.8	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	98.3
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.5 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5355.29	68.28	6.16	-11.04	63.40	Max Peak	Horizontal	100	359	74.0	-10.6	Pass
#2	5355.95	53.04	6.16	-11.04	48.16	Max Avg	Horizontal	100	359	54.0	-5.8	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	AP-ANT-48	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	8.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.0	**Duty Cycle (%):**	96.3
Channel Frequency (MHz):	5310.00	**Data Rate:**	13.5 MBit/s
Power Setting:	16.0	**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	5354.41	76.73	6.16	-11.04	71.85	Max Peak	Horizontal	101	359	74.0	-2.2	Pass
#2	5356.39	57.12	6.16	-11.04	52.24	Max Avg	Horizontal	101	359	54.0	-1.8	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

9.1.2.16. Aruba Networks APIN0325

RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

APIN0325		Band-Edge Freq	Peak (Limit 74.0dBµV/m)	Average (Limit 54.0dBµV/m)	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
802.11a	5320.00	5350.00	59.80	41.13	13.50
802.11ac-80	5290.00	5350.00	73.59	52.70	15.50
802.11n HT-20	5320.00	5350.00	59.85	41.73	13.50
802.11n HT-40	5310.00	5350.00	70.66	47.42	16.00
802.11a	5500.00	5470.00	56.41	39.73	13.50
802.11ac-80	5530.00	5470.00	67.75	48.13	16.00
802.11n HT-20	5500.00	5470.00	56.86	39.64	13.50
802.11n HT-40	5510.00	5470.00	65.27	45.31	16.00

Click on the links to view the data.

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	APIN0325	**Variant:**	802.11a
Antenna Gain (dBi):	5.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.5	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.5 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5440.16	44.72	6.23	-11.22	39.73	Max Avg	Vertical	132	-4	54.0	-14.3	Pass
#2	5457.58	61.38	6.26	-11.23	56.41	Max Peak	Vertical	132	-4	74.0	-17.6	Pass

Test Notes: AP325 on Table powered by AC/DC PS

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	APIN0325	**Variant:**	802.11ac-80
Antenna Gain (dBi):	5.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.5	**Duty Cycle (%):**	91.2
Channel Frequency (MHz):	5530.00	**Data Rate:**	29.3 MBit/s
Power Setting:	16.0	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5447.43	72.74	6.24	-11.23	67.75	Max Peak	Vertical	132	-4	68.2	-0.5	Pass
#2	5458.90	53.09	6.26	-11.22	48.13	Max Avg	Vertical	132	-4	54.0	-5.9	Pass

Test Notes: AP325 on Table powered by AC/DC PS

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	APIN0325	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	5.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.5	**Duty Cycle (%):**	98.3
Channel Frequency (MHz):	5500.00	**Data Rate:**	6.5 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5440.16	44.63	6.23	-11.22	39.64	Max Avg	Vertical	132	-4	54.0	-14.4	Pass
#2	5459.12	61.82	6.26	-11.22	56.86	Max Peak	Vertical	132	-4	74.0	-17.1	Pass

Test Notes: AP325 on Table powered by AC/DC PS

Equipment Configuration for Restricted Lower Band-Edge Emissions

Antenna:	APIN0325	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	5.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.5	**Duty Cycle (%):**	96.3
Channel Frequency (MHz):	5510.00	**Data Rate:**	13.5 MBit/s
Power Setting:	16	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5458.02	50.28	6.26	-11.23	45.31	Max Avg	Vertical	132	-4	54.0	-8.7	Pass
#2	5459.56	70.23	6.26	-11.22	65.27	Max Peak	Vertical	132	-4	68.2	-3.0	Pass

Test Notes: AP325 on Table powered by AC/DC PS

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	APIN0325	**Variant:**	802.11a
Antenna Gain (dBi):	5.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.5	**Duty Cycle (%):**	96.1
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.5 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5353.31	46.01	6.16	-11.04	41.13	Max Avg	Vertical	122	353	54.0	-12.9	Pass
#2	5354.85	64.68	6.16	-11.04	59.80	Max Peak	Vertical	122	353	74.0	-14.2	Pass

Test Notes: AP325 on Table powered by AC/DC PS

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	APIN0325	**Variant:**	802.11ac-80
Antenna Gain (dBi):	5.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.5	**Duty Cycle (%):**	91.2
Channel Frequency (MHz):	5290.00	**Data Rate:**	29.3 MBit/s
Power Setting:	15.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5350.00	57.56	6.16	-11.02	52.70	Max Avg	Vertical	122	-8	54.0	-1.3	Pass
#2	5351.32	78.46	6.16	-11.03	73.59	Max Peak	Vertical	122	-8	74.0	-0.4	Pass

Test Notes: AP325 on Table, powered by AC/DC PS

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	APIN0325	**Variant:**	802.11n HT-20
Antenna Gain (dBi):	5.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.5	**Duty Cycle (%):**	98.3
Channel Frequency (MHz):	5320.00	**Data Rate:**	6.5 MBit/s
Power Setting:	13.5	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5352.65	46.61	6.16	-11.04	41.73	Max Avg	Vertical	122	353	54.0	-12.3	Pass
#2	5355.51	64.73	6.16	-11.04	59.85	Max Peak	Vertical	122	353	74.0	-14.2	Pass

Test Notes: AP325 on Table powered by AC/DC PS

Equipment Configuration for Restricted Upper Band-Edge Emissions

Antenna:	APIN0325	**Variant:**	802.11n HT-40
Antenna Gain (dBi):	5.50	**Modulation:**	OFDM
Beam Forming Gain (Y):	3.5	**Duty Cycle (%):**	96.3
Channel Frequency (MHz):	5310.00	**Data Rate:**	13.5 MBit/s
Power Setting:	16	**Tested By:**	JMH

Test Measurement Results

Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5351.10	75.53	6.16	-11.03	70.66	Max Peak	Vertical	122	-8	74.0	-3.3	Pass
#2	5359.26	52.30	6.17	-11.05	47.42	Max Avg	Vertical	122	-8	54.0	-6.6	Pass

Test Notes: AP325 on Table, powered by AC/DC PS

9.1.3. Digital Emissions

FCC, Part 15 Subpart C §15.205/ §15.209
Industry Canada RSS-210 §2.2

Test Procedure

Testing 30M-1 GHz was performed in a 3-meter anechoic chamber using a CISPR compliant receiver. Preliminary radiated emissions were measured on every azimuth and with the receiving antenna in both horizontal and vertical polarizations. To further maximize emissions the receive antenna was varied between 1 and 4 meters. The emissions are recorded with receiver in peak hold mode. Emissions closest to the limits are measured in the quasi-peak mode with the tuned receiver using a bandwidth of 120 kHz. Only the highest emissions relative to the limit are listed. The anechoic chamber test set-up is identified in Section 6 Test Set-Up Photographs.

Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Loss, and subtracting Amplifier Gain from the measured reading. In this test facility, the Antenna Factor, Cable Loss, and Amplifier Gains are loaded into the Rohde & Schwarz Receiver and the corrected field strength can be read directly on the receiver.

$$FS = R + AF + CORR$$

where:

FS = Field Strength
R = Measured Receiver Input Amplitude
AF = Antenna Factor
CORR = Correction Factor = CL – AG + NFL
CL = Cable Loss
AG = Amplifier Gain

For example:
Given a Receiver input reading of 51.5dBμV; Antenna Factor of 8.5dB; Cable Loss of 1.3dB; Falloff Factor of 0dB, an Amplifier Gain of 26dB and Notch Filter Loss of 1dB. The Field Strength of the measured emission is:

$$FS = 51.5 + 8.5 + 1.3 - 26.0 + 1 = 36.3 dB\mu V/m$$

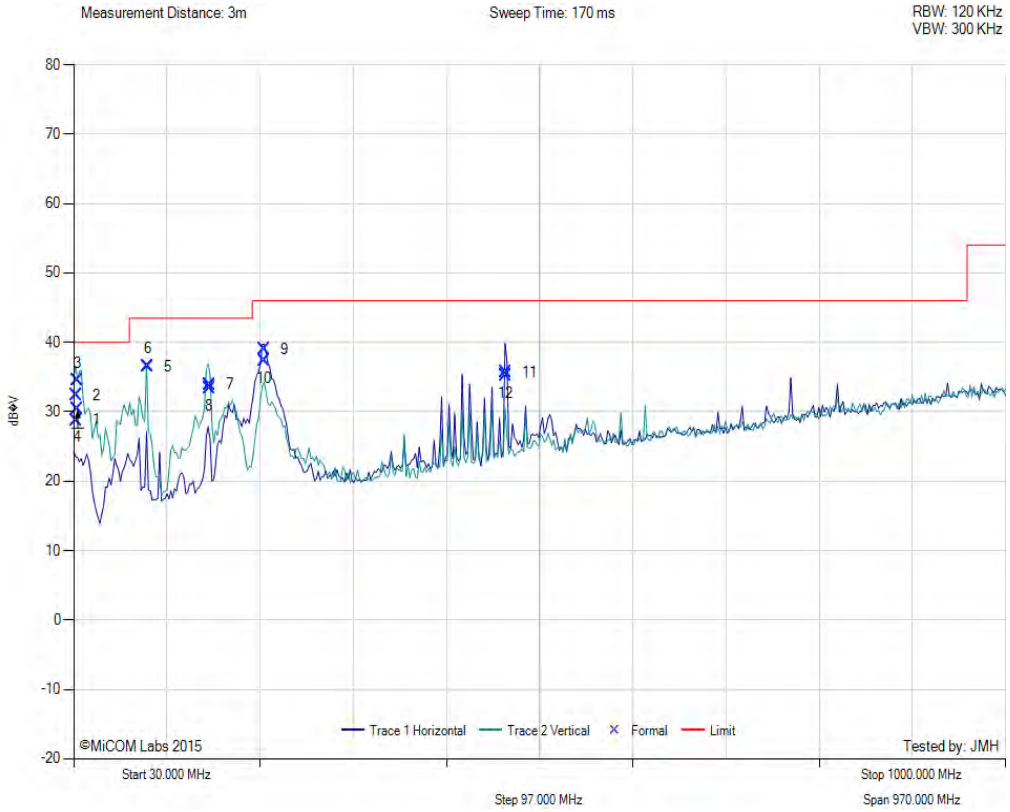
Conversion between dBμV/m (or dBμV) and μV/m (or μV) are done as:

$$Level\ (dB\mu V/m) = 20 * Log\ (level\ (\mu V/m))$$

40 dBμV/m = 100μV/m
48 dBμV/m = 250μV/m

DIGITAL EMISSIONS

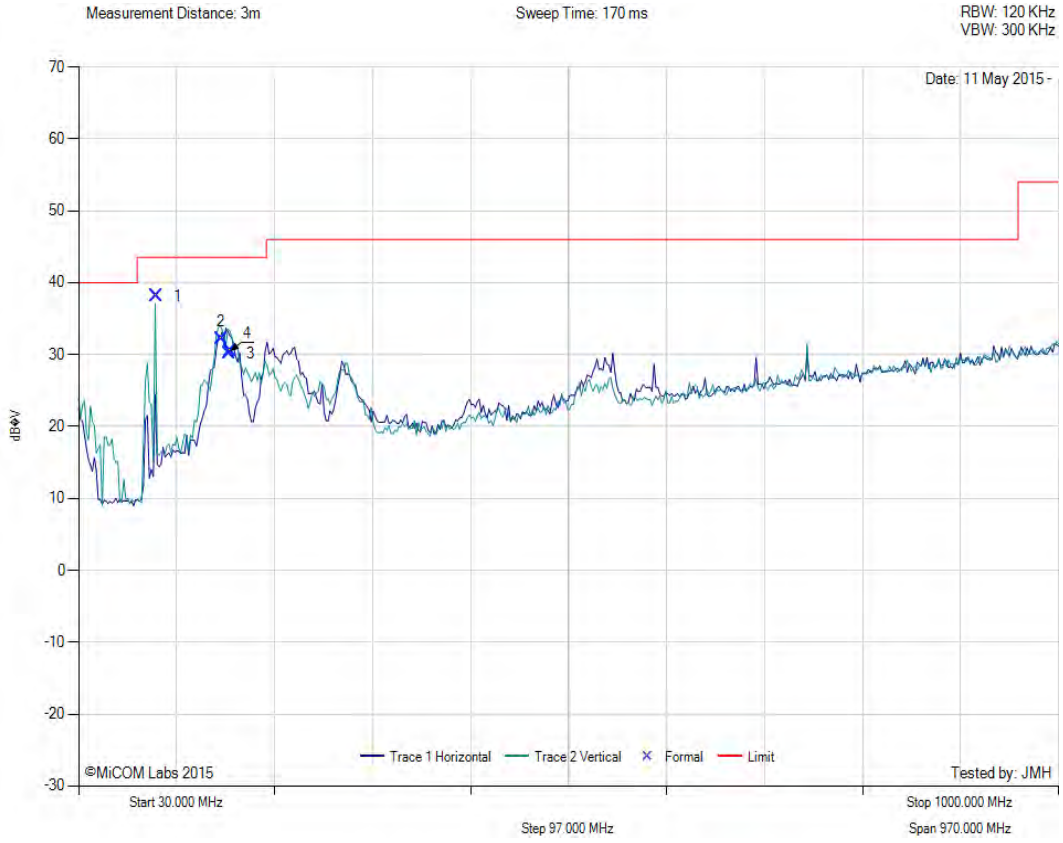
Variant: APIN0324, Test Freq: 5260.00 MHz, Antenna: AP-ANT-20W, Power Setting: NA



Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	32.65	37.47	3.44	-12.09	28.82	MaxQP	Vertical	131	130	40.0	-11.2	Pass
2	32.65	40.99	3.44	-12.09	32.34	Peak (Scan)	Vertical	100	0	0.0	--	
3	34.30	43.93	3.45	-12.88	34.50	Peak (Scan)	Vertical	100	0	0.0	--	
4	34.30	39.83	3.45	-12.88	30.40	MaxQP	Vertical	100	97	40.0	-9.6	Pass
5	106.87	51.98	3.92	-19.43	36.47	MaxQP	Vertical	100	96	43.5	-7.0	Pass
6	106.87	52.08	3.92	-19.43	36.57	Peak (Scan)	Vertical	100	0	0.0	--	
7	171.08	49.20	4.22	-19.47	33.95	MaxQP	Vertical	100	171	43.5	-9.6	Pass
8	171.08	48.63	4.22	-19.47	33.38	Peak (Scan)	Vertical	100	0	0.0	--	
9	228.01	53.98	4.45	-19.47	38.96	MaxQP	Horizontal	146	342	46.0	-7.0	Pass
10	228.01	52.32	4.45	-19.47	37.30	Peak (Scan)	Horizontal	100	0	0.0	--	
11	479.98	43.15	5.28	-12.80	35.63	Peak (Scan)	Horizontal	100	0	0.0	--	
12	479.98	42.73	5.28	-12.80	35.21	MaxQP	Horizontal	198	124	46.0	-10.8	Pass

Test Notes: APIN0324 on table with ENET cables connected to hub outside chamber. Laptop outside chamber pinging EUT. AC/DC PS EMSA120300

Variant: APIN0325, Test Freq: 0.00 MHz, Antenna: Integral, Power Setting: NA



Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	106.87	53.63	3.92	-19.43	38.12	MaxQP	Vertical	116	356	0.0	-2.4	Pass
2	170.99	47.40	4.22	-19.47	32.15	MaxQP	Vertical	104	19	0.0	-8.4	Pass
3	178.85	45.80	4.25	-19.91	30.14	MaxQP	Vertical	100	181	0.0	-10.4	Pass
4	179.78	46.11	4.26	-19.92	30.45	MaxQP	Vertical	101	147	0.0	-10.1	Pass

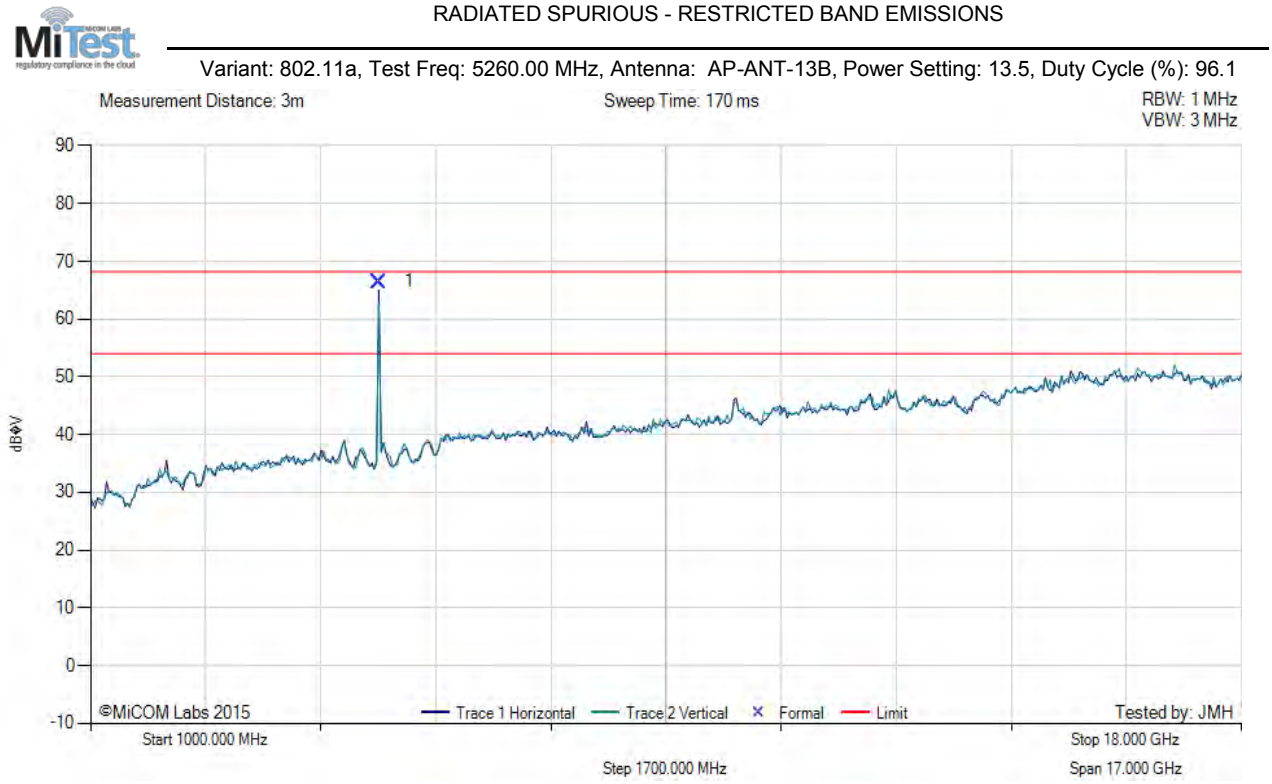
Test Notes: APIN0325 Powered by 110V 60 Hz, AC/DC PS,

A. APPENDIX - GRAPHICAL IMAGES

A.1. Radiated

A.1.1. Restricted Band Emissions

A.1.1.1. Aruba Networks AP-ANT-13B



Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5255.03	71.67	6.13	-11.32	66.48	Fundamental	Horizontal	100	0	--	--	

Test Notes: AP324 on Table powered by AC/DC PS

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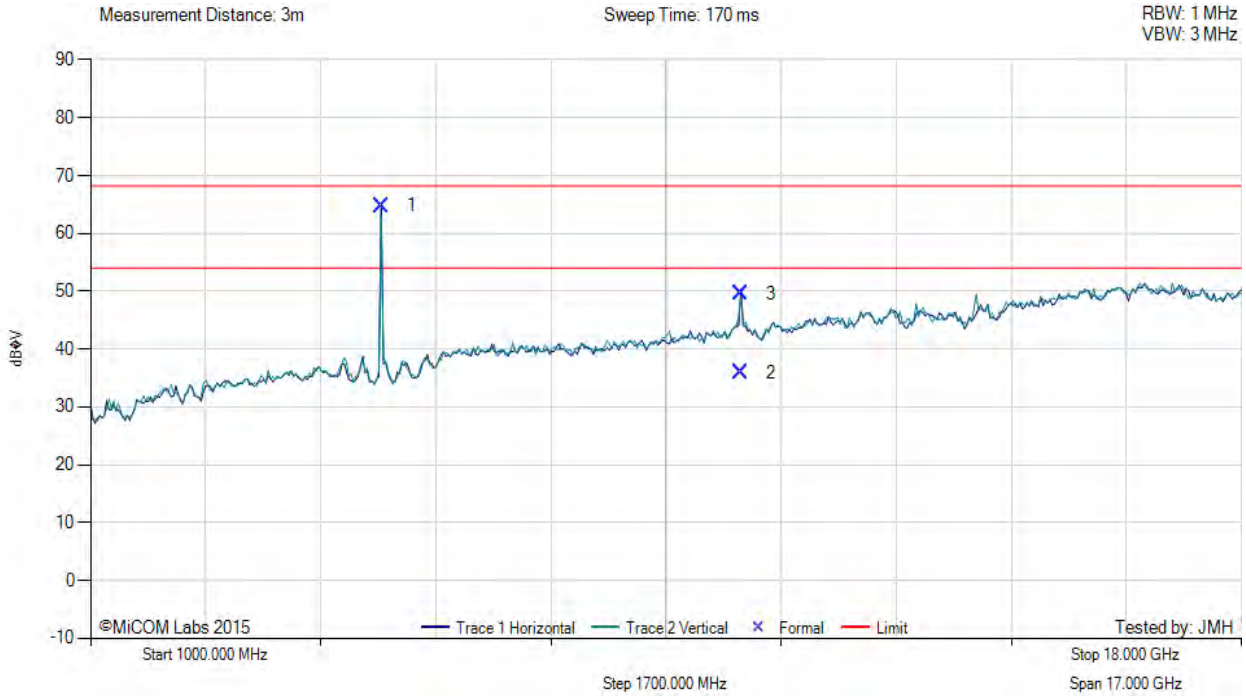
RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5300.00 MHz, Antenna: AP-ANT-13B, Power Setting: 13.5, Duty Cycle (%): 96.1



Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5297.88	69.70	6.17	-11.10	64.77	Fundamental	Horizontal	100	0	--	--	
2	10608.29	30.37	9.39	-3.92	35.84	Max Avg	Horizontal	100	3	54.0	-18.2	Pass
3	10608.29	44.09	9.39	-3.92	49.56	Max Peak	Horizontal	100	3	68.2	-18.7	Pass

Test Notes: AP324 on Table powered by AC/DC PS

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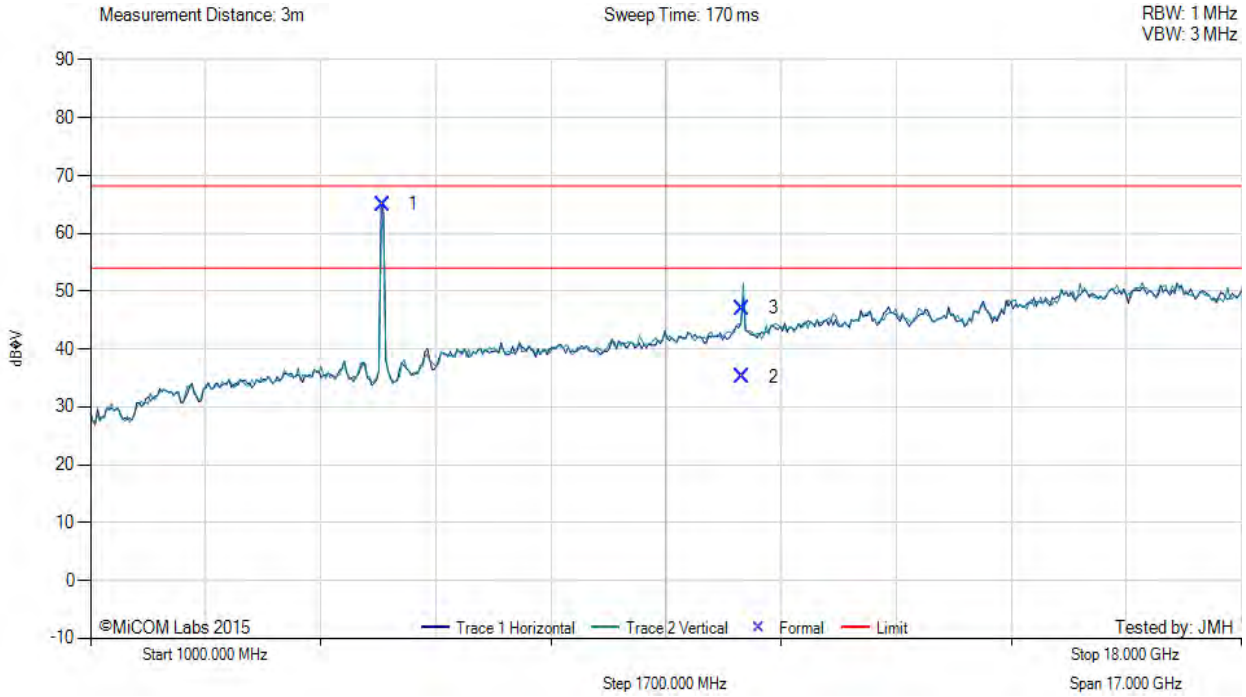
RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: AP-ANT-13B, Power Setting: 13.5, Duty Cycle (%): 96.1



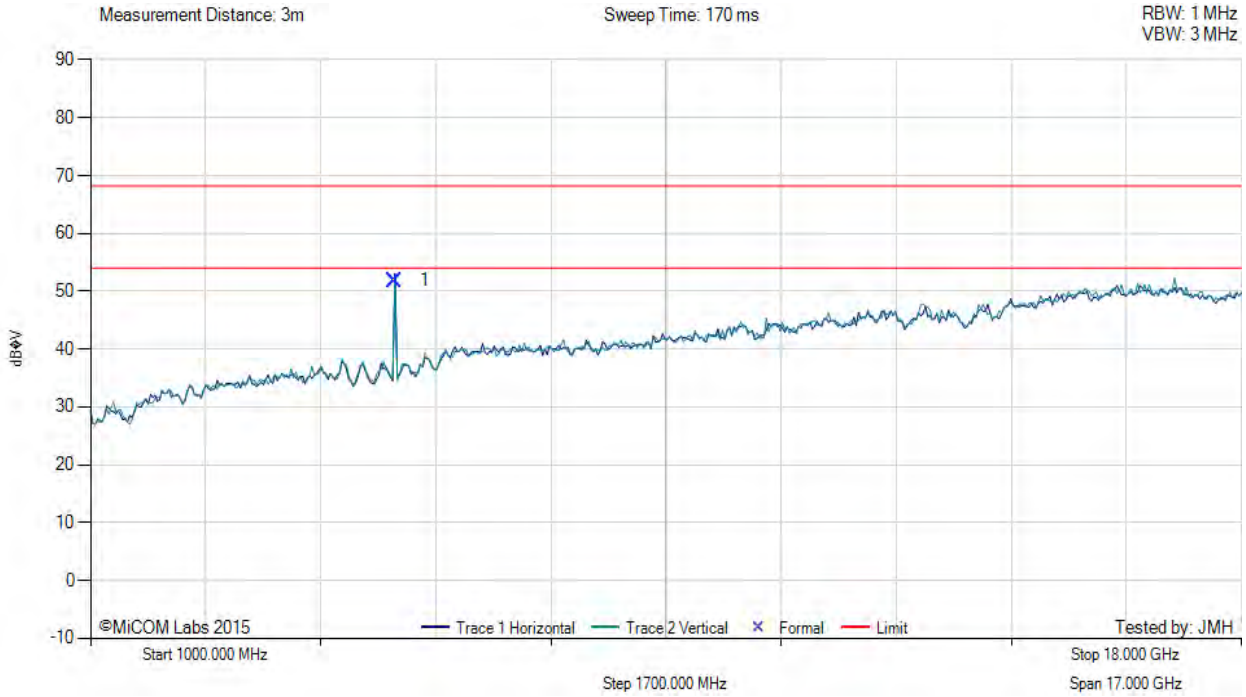
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5316.92	69.92	6.19	-11.07	65.04	Fundamental	Horizontal	100	0	--	--	
2	10630.74	29.86	9.30	-3.90	35.26	Max Avg	Vertical	101	287	54.0	-18.7	Pass
3	10630.74	41.66	9.30	-3.90	47.06	Max Peak	Vertical	101	287	68.2	-21.2	Pass

Test Notes: AP324 on Table powered by AC/DC PS

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5500.00 MHz, Antenna: AP-ANT-13B, Power Setting: 13.5, Duty Cycle (%): 96.1



Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5496.39	56.72	6.26	-11.17	51.81	Fundamental	Horizontal	100	0	--	--	

Test Notes: AP324 on Table powered by AC/DC PS

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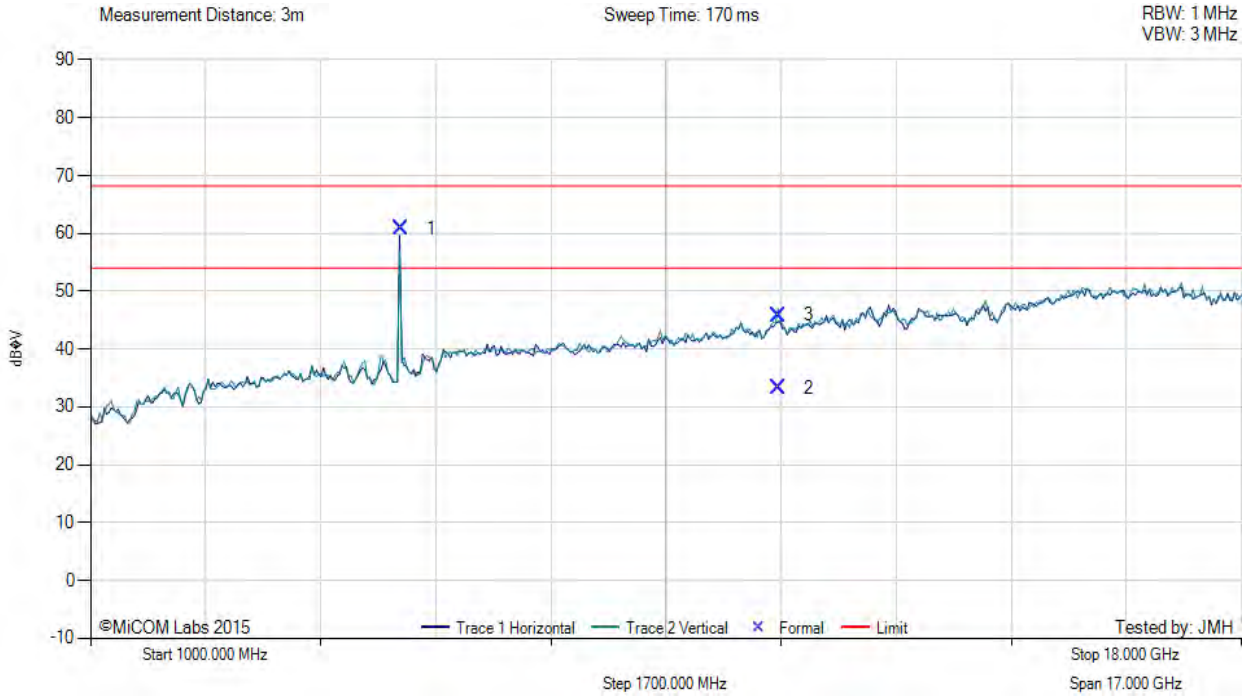
RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5580.00 MHz, Antenna: AP-ANT-13B, Power Setting: 13.5, Duty Cycle (%): 96.1



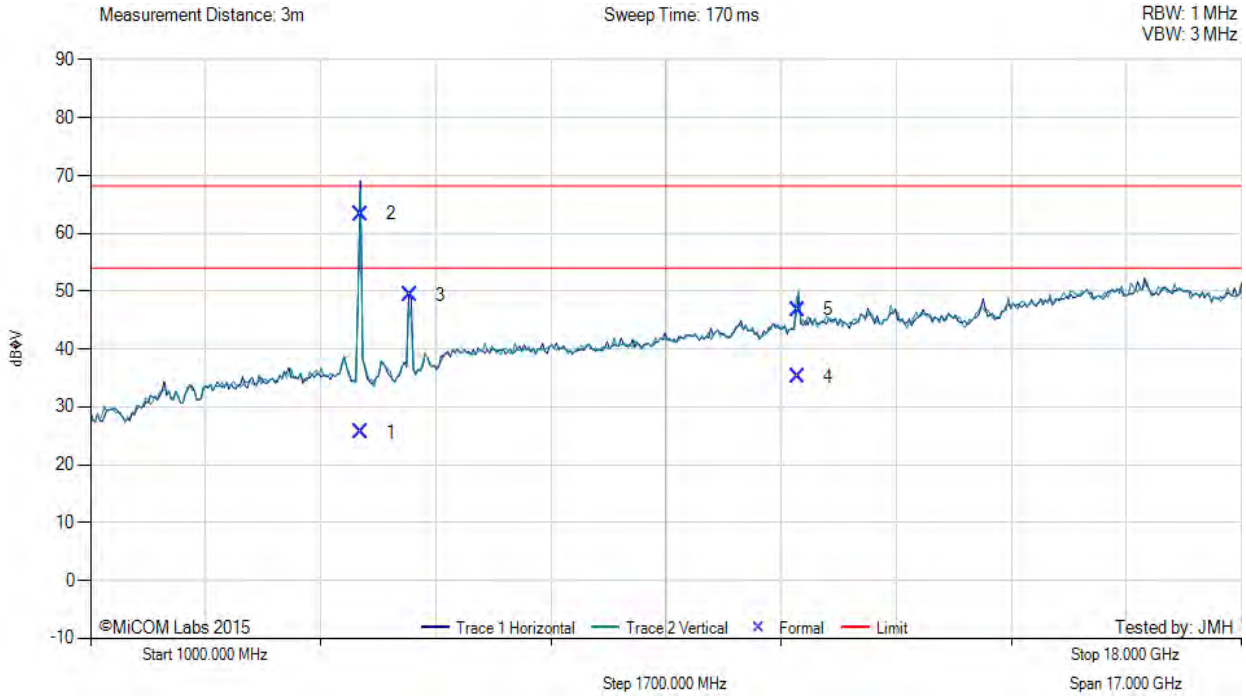
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5582.85	65.61	6.33	-11.19	60.75	Fundamental	Horizontal	100	0	--	--	
2	11157.20	28.01	9.40	-4.06	33.35	Max Avg	Horizontal	115	78	54.0	-20.7	Pass
3	11157.20	40.48	9.40	-4.06	45.82	Max Peak	Horizontal	115	78	68.2	-22.4	Pass

Test Notes: AP324 on Table powered by AC/DC PS

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5720.00 MHz, Antenna: AP-ANT-13B, Power Setting: 13.5, Duty Cycle (%): 96.1

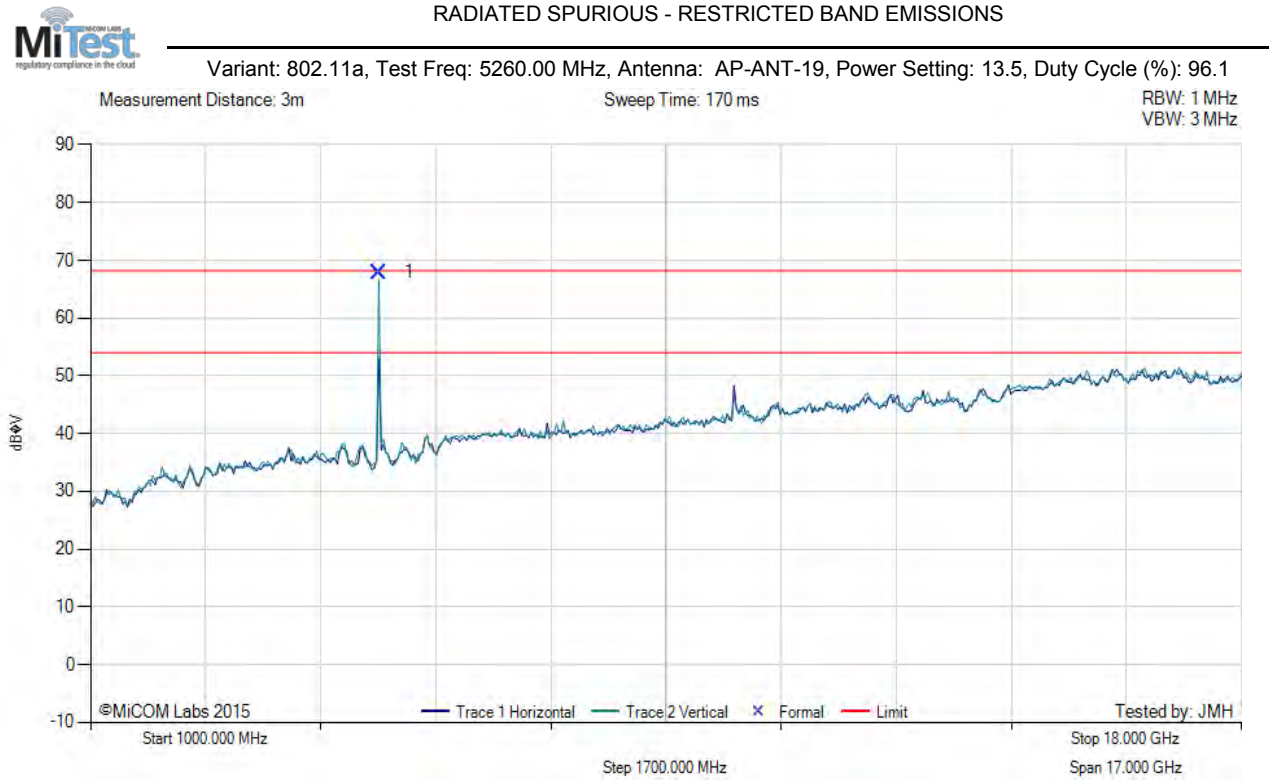


Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	4985.13	31.23	5.97	-11.52	25.68	Max Avg	Horizontal	102	71	54.0	-28.3	Pass
2	4985.13	68.87	5.97	-11.52	63.32	Max Peak	Horizontal	102	71	68.2	-4.9	Pass
3	5717.79	53.70	6.40	-10.75	49.35	Fundamental	Horizontal	100	0	--	--	
4	11439.64	30.59	9.47	-4.93	35.13	Max Avg	Vertical	100	283	54.0	-18.9	Pass
5	11439.64	42.26	9.47	-4.93	46.80	Max Peak	Vertical	100	283	68.2	-21.4	Pass

Test Notes: AP324 on Table powered by AC/DC PS

back to matrix

A.1.1.2. Aruba Networks AP-ANT-19



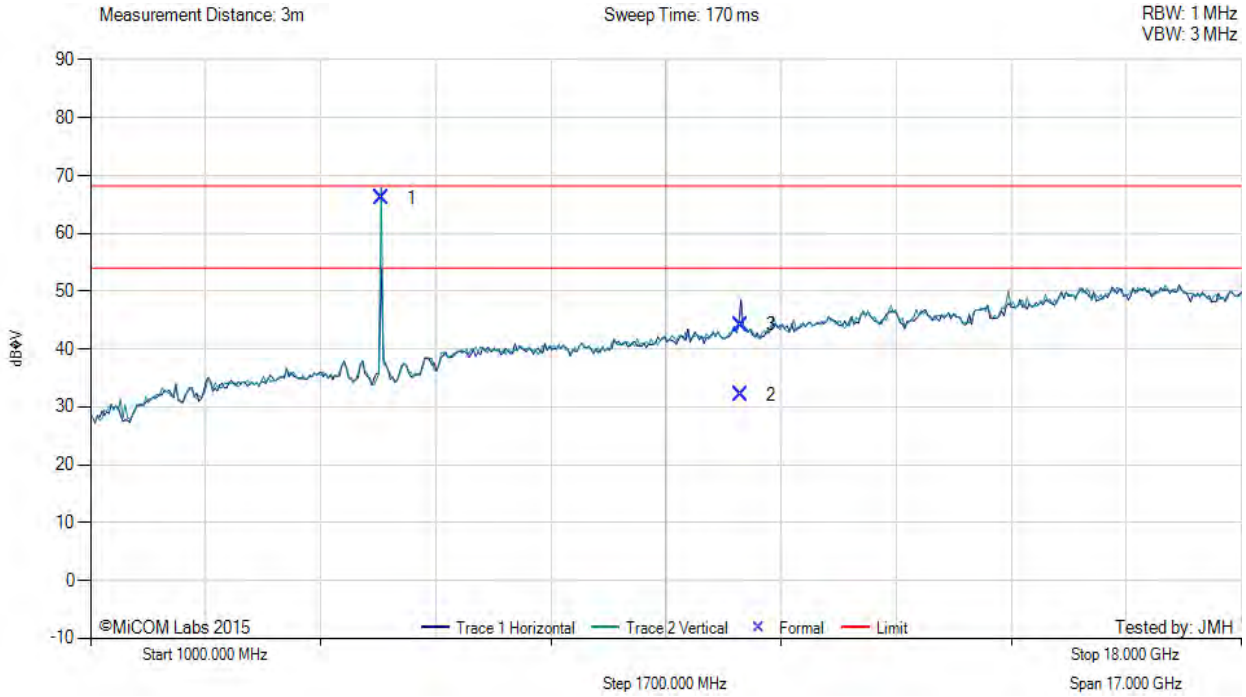
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5258.16	73.08	6.13	-11.30	67.91	Fundamental	Vertical	100	0	--	--	

Test Notes: AP324 on table powered by AC/DC PS

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5300.00 MHz, Antenna: AP-ANT-19, Power Setting: 13.5, Duty Cycle (%): 96.1



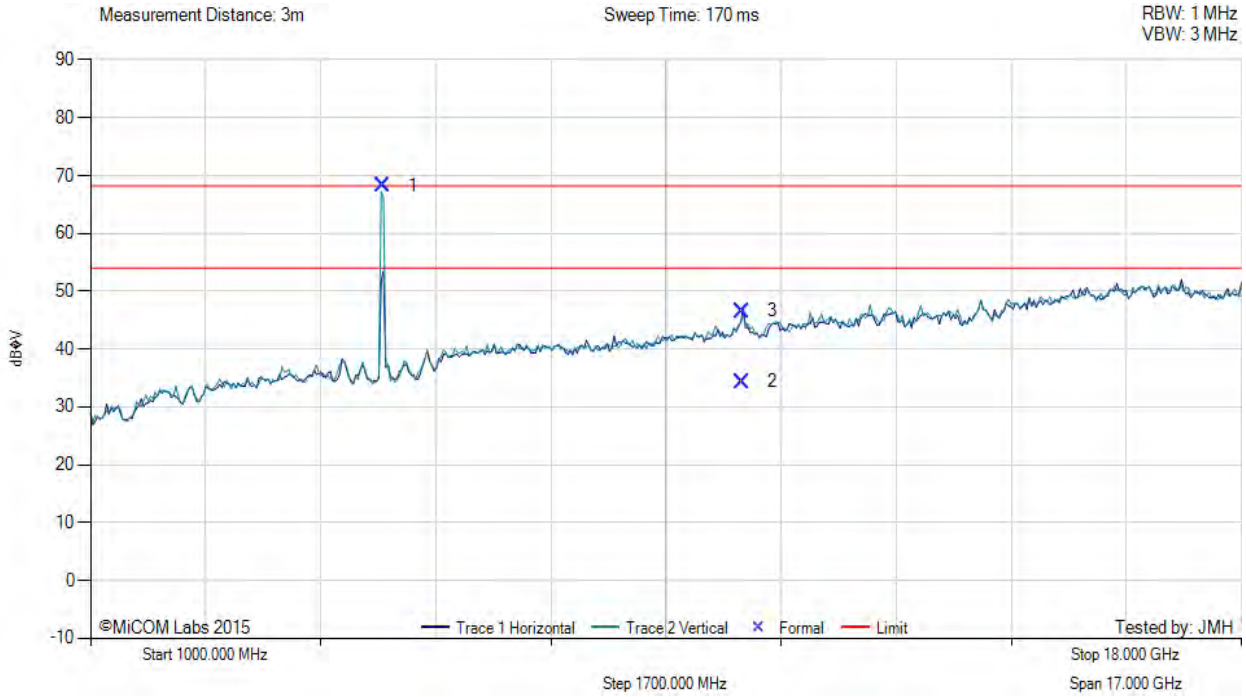
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5298.92	70.98	6.18	-11.09	66.07	Fundamental	Vertical	100	0	--	--	
2	10609.78	26.64	9.43	-3.92	32.15	Max Avg	Horizontal	109	16	54.0	-21.9	Pass
3	10609.78	38.65	9.43	-3.92	44.16	Max Peak	Horizontal	109	16	68.2	-24.1	Pass

Test Notes: AP324 on table powered by AC/DC PS

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: AP-ANT-19, Power Setting: 13.5, Duty Cycle (%): 96.1



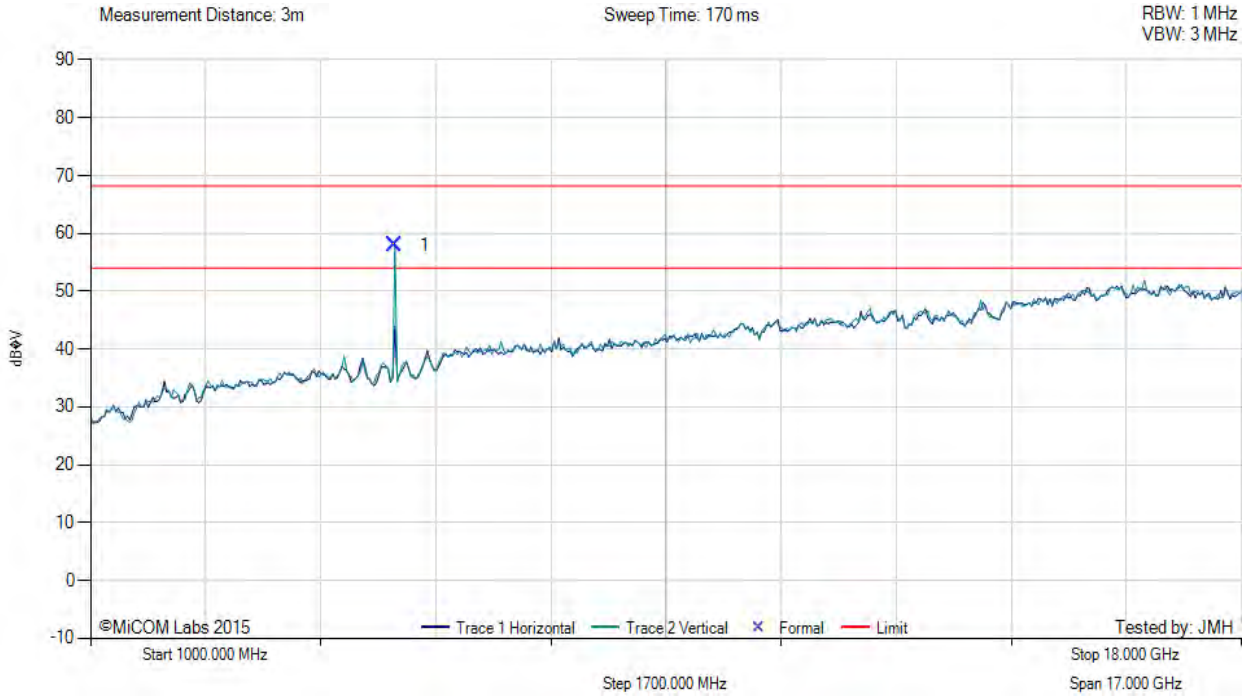
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5317.60	73.09	6.19	-11.07	68.21	Fundamental	Vertical	100	0	--	--	
2	10630.46	28.91	9.32	-3.90	34.33	Max Avg	Horizontal	100	300	54.0	-19.7	Pass
3	10630.46	41.19	9.32	-3.90	46.61	Max Peak	Horizontal	100	300	68.2	-21.6	Pass

Test Notes: AP324 on table powered by AC/DC PS

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5500.00 MHz, Antenna: AP-ANT-19, Power Setting: 13.5, Duty Cycle (%): 96.1



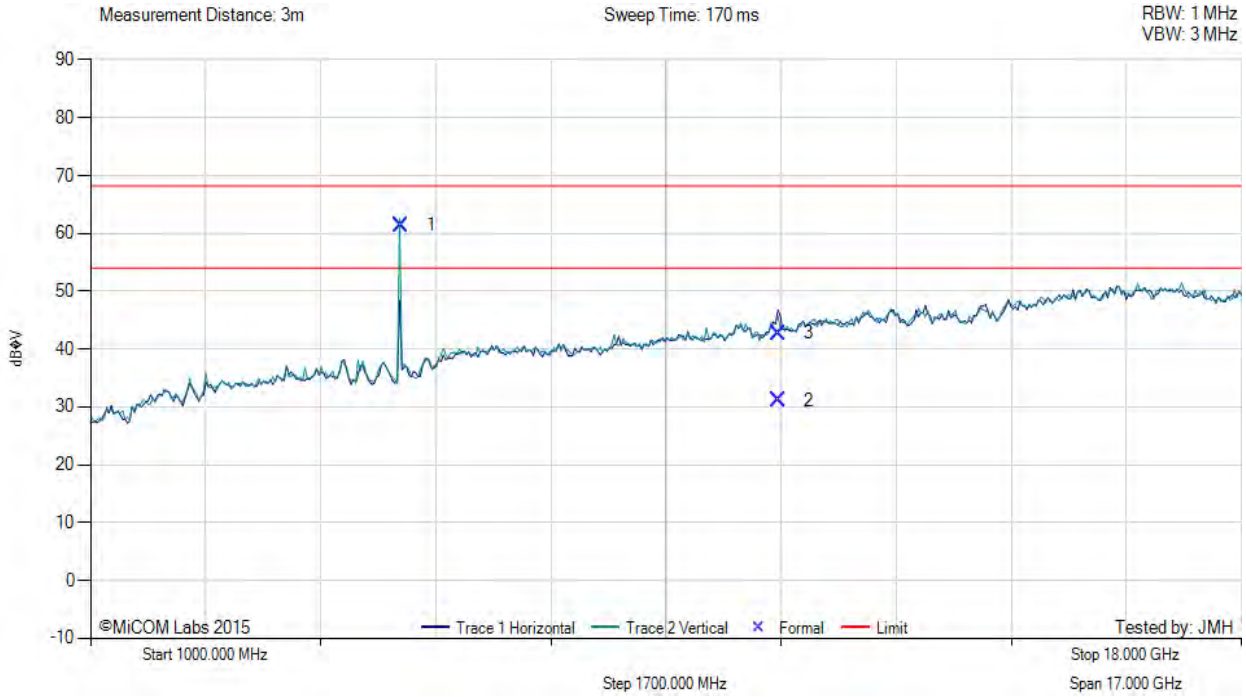
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5494.95	62.81	6.27	-11.17	57.91	Fundamental	Vertical	100	0	--	--	

Test Notes: AP324 on table powered by AC/DC PS

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5580.00 MHz, Antenna: AP-ANT-19, Power Setting: 13.5, Duty Cycle (%): 96.1



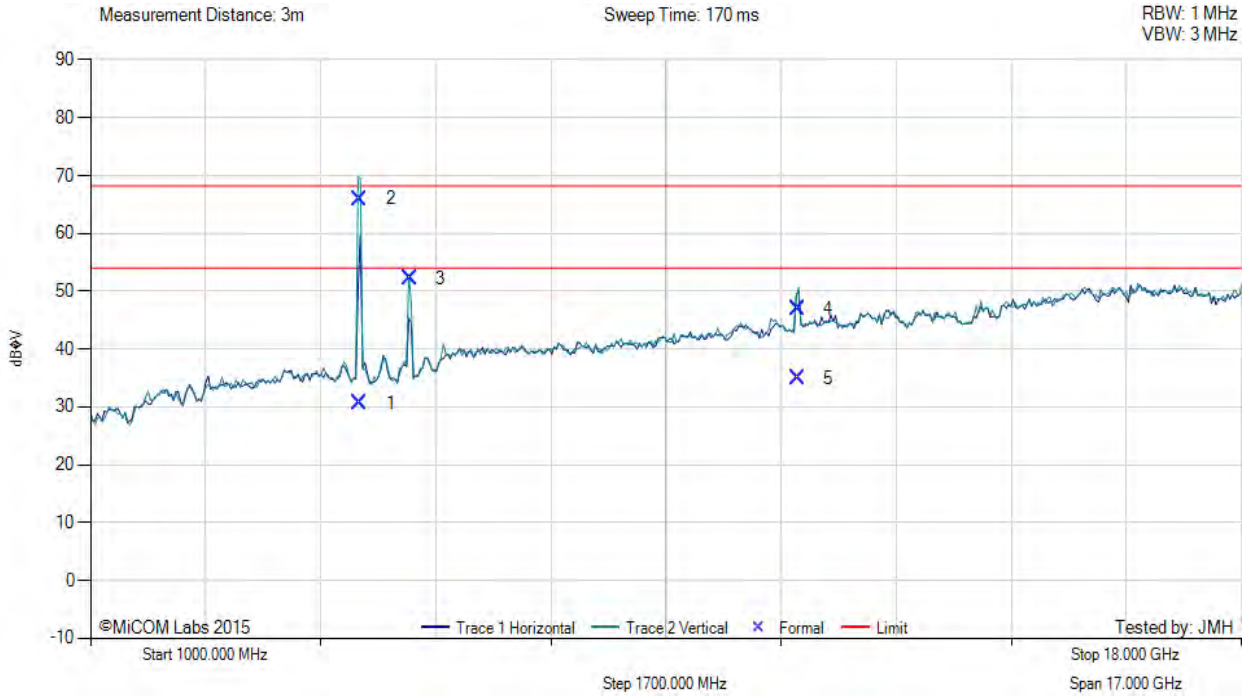
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5582.89	66.24	6.33	-11.19	61.38	Fundamental	Vertical	100	0	--	--	
2	11159.12	25.77	9.39	-4.06	31.10	Max Avg	Horizontal	101	310	54.0	-22.9	Pass
3	11159.12	37.39	9.39	-4.06	42.72	Max Peak	Horizontal	101	310	68.2	-25.5	Pass

Test Notes: AP324 on table powered by AC/DC PS

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5720.00 MHz, Antenna: AP-ANT-19, Power Setting: 13.5, Duty Cycle (%): 96.1

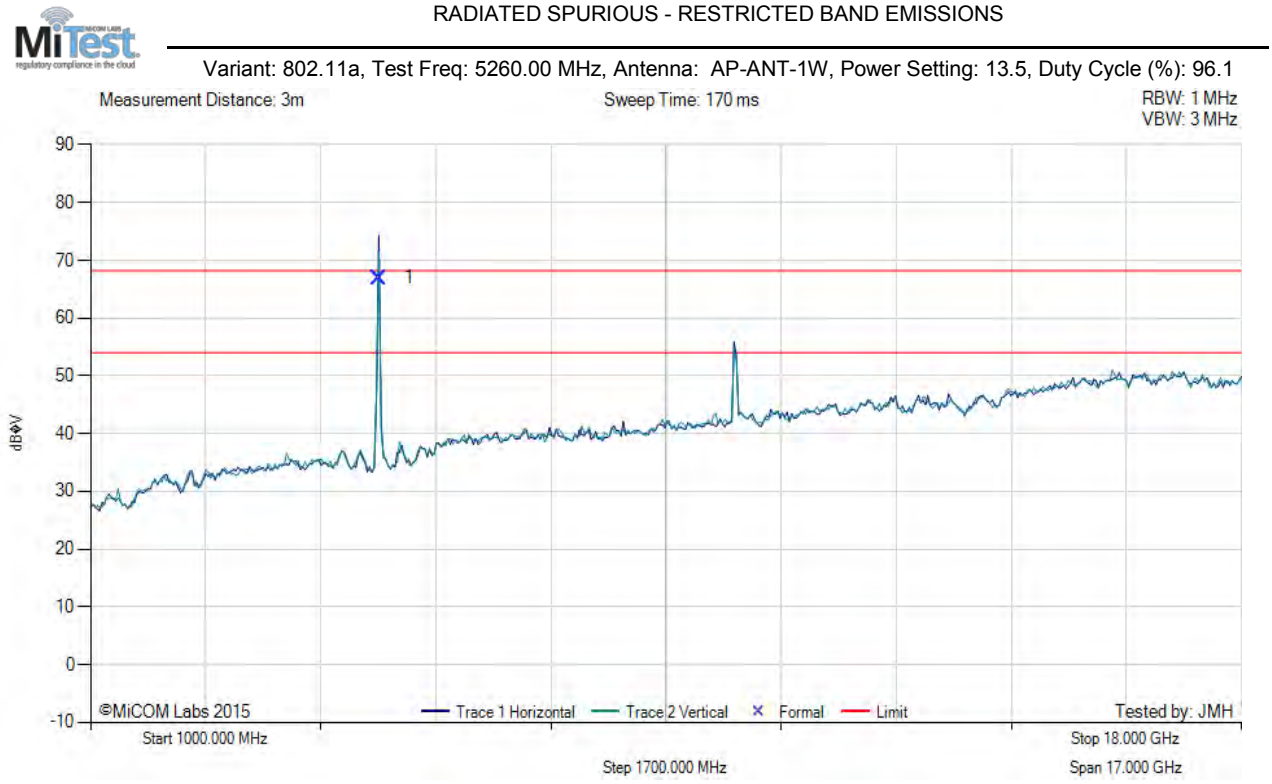


Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	4980.16	35.26	5.96	-11.52	30.70	Max Avg	Vertical	100	127	54.0	-28.3	Pass
2	4980.16	71.51	5.96	-11.52	65.95	Max Peak	Vertical	100	127	68.2	-5.2	Pass
3	5717.67	56.60	6.40	-10.75	52.25	Fundamental	Vertical	100	0	--	--	
4	11446.62	42.43	9.47	-4.92	46.98	Max Peak	Vertical	100	34	68.2	-21.3	Pass
5	11446.62	30.43	9.47	-4.92	34.98	Max Avg	Vertical	100	127	54.0	-19.0	Pass

Test Notes: AP324 on table powered by AC/DC PS

back to matrix

A.1.1.3. Aruba Networks AP-ANT-1W



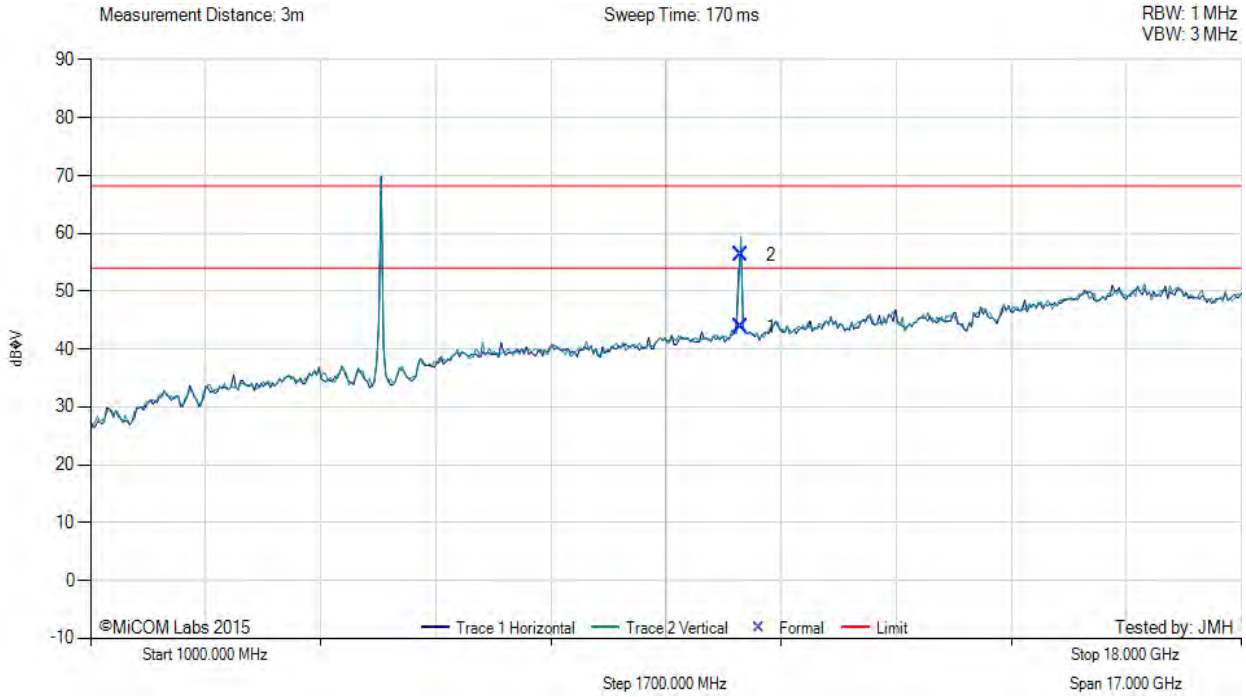
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5253.11	72.13	6.13	-11.33	66.93	Fundamental	Horizontal	100	0	--	--	

Test Notes: EUT on Table with AC/DC PS

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5300.00 MHz, Antenna: AP-ANT-1W, Power Setting: 13.5, Duty Cycle (%): 96.1



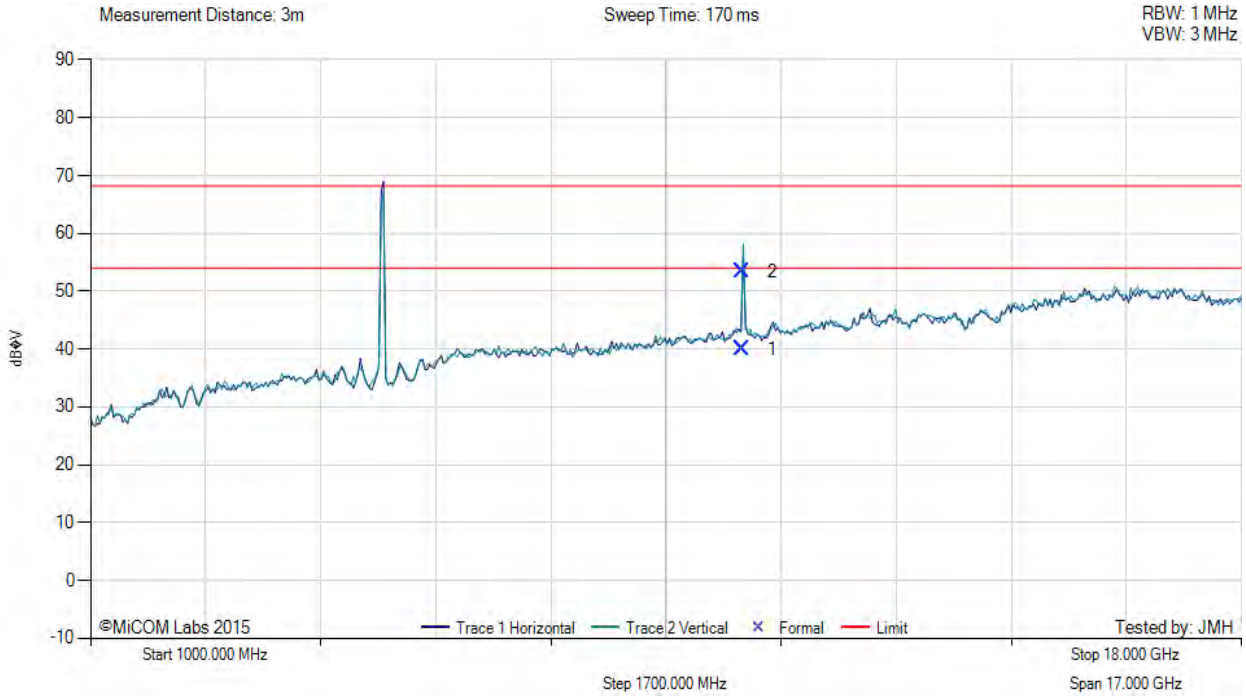
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	10609.25	38.34	9.41	-3.92	43.83	Max Avg	Vertical	103	33	54.0	-10.2	Pass
2	10609.25	50.72	9.41	-3.92	56.21	Max Peak	Vertical	103	33	68.2	-12.0	Pass

Test Notes: EUT on Table with AC/DC PS

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: AP-ANT-1W, Power Setting: 13.5, Duty Cycle (%): 96.1



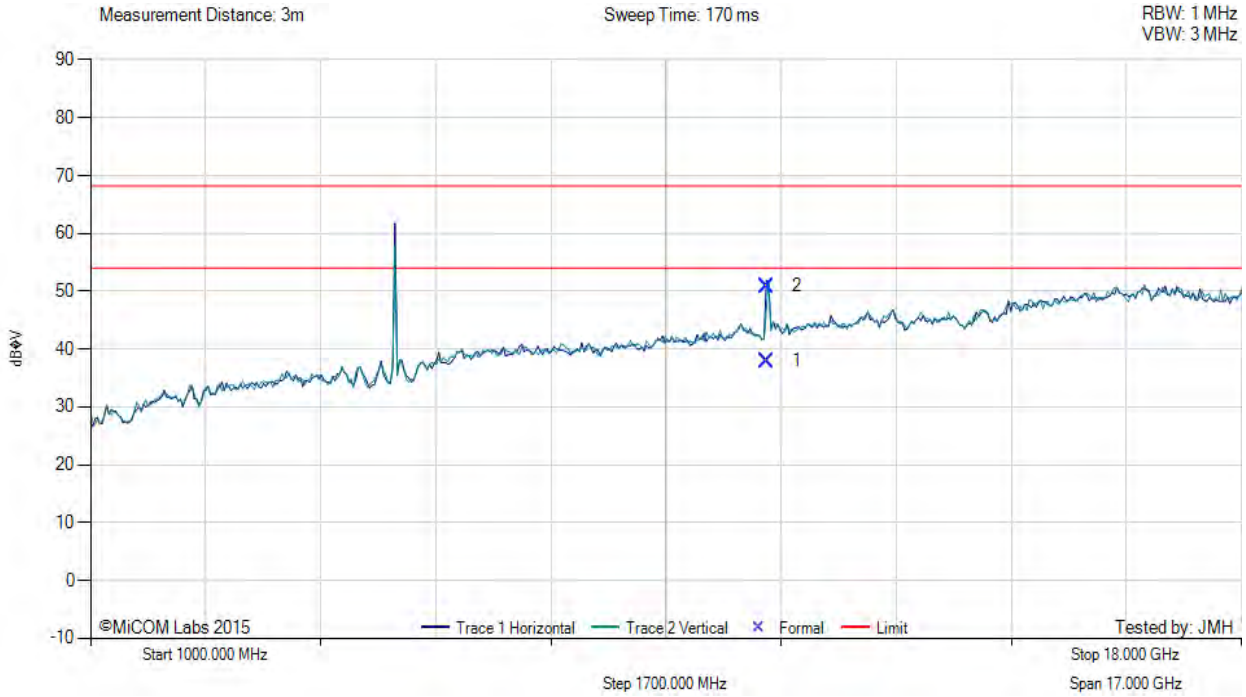
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	10630.10	34.54	9.32	-3.90	39.96	Max Avg	Vertical	101	291	54.0	-14.0	Pass
2	10630.10	47.92	9.32	-3.90	53.34	Max Peak	Vertical	101	291	68.2	-14.9	Pass

Test Notes: EUT on Table with AC/DC PS

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5500.00 MHz, Antenna: AP-ANT-1W, Power Setting: 13.5, Duty Cycle (%): 96.1



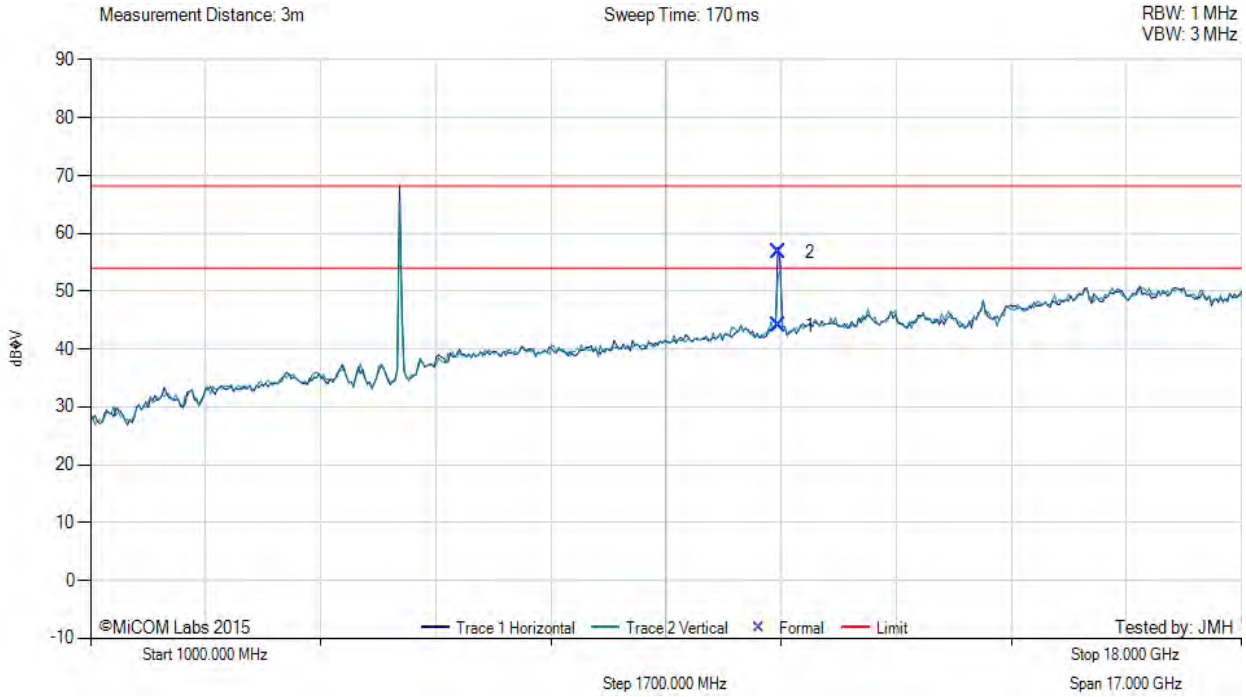
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	10990.62	32.90	9.30	-4.27	37.93	Max Avg	Vertical	111	292	54.0	-16.1	Pass
2	10990.62	45.89	9.30	-4.27	50.92	Max Peak	Vertical	111	292	68.2	-17.3	Pass

Test Notes: EUT on Table with AC/DC PS

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5580.00 MHz, Antenna: AP-ANT-1W, Power Setting: 13.5, Duty Cycle (%): 96.1



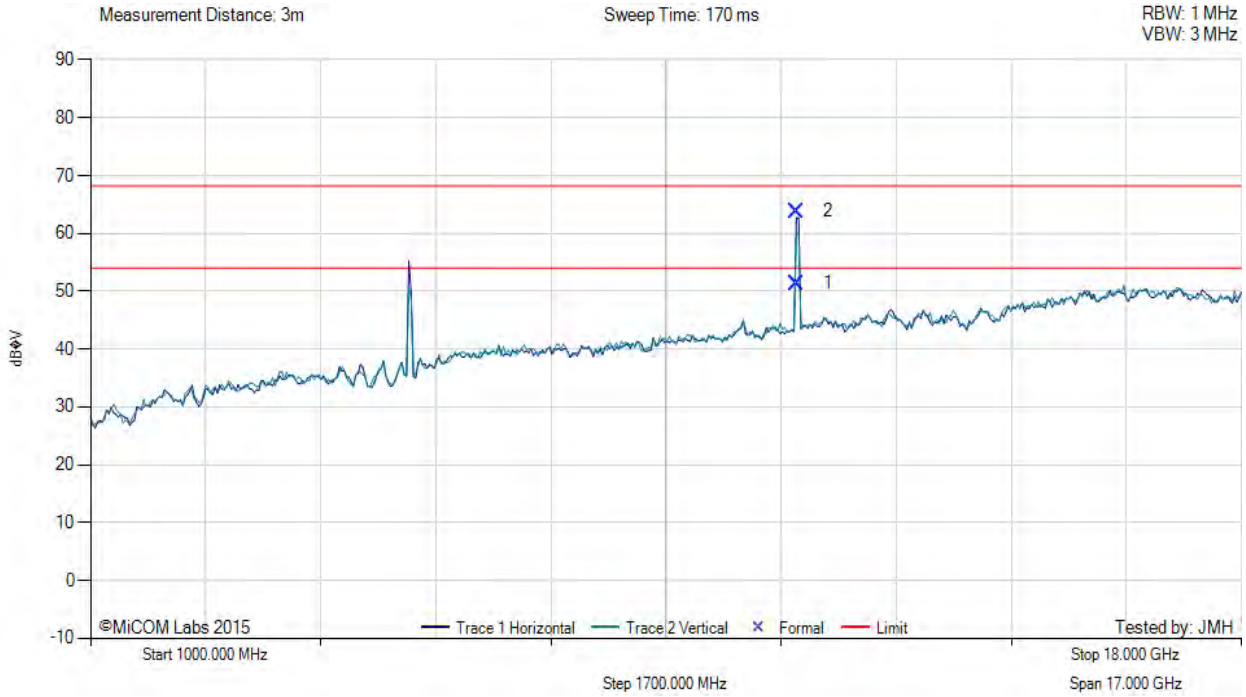
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	11167.41	38.73	9.37	-4.08	44.02	Max Avg	Horizontal	100	276	54.0	-10.0	Pass
2	11167.41	51.41	9.37	-4.08	56.70	Max Peak	Horizontal	100	276	68.2	-11.5	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5720.00 MHz, Antenna: AP-ANT-1W, Power Setting: 13.5, Duty Cycle (%): 96.1

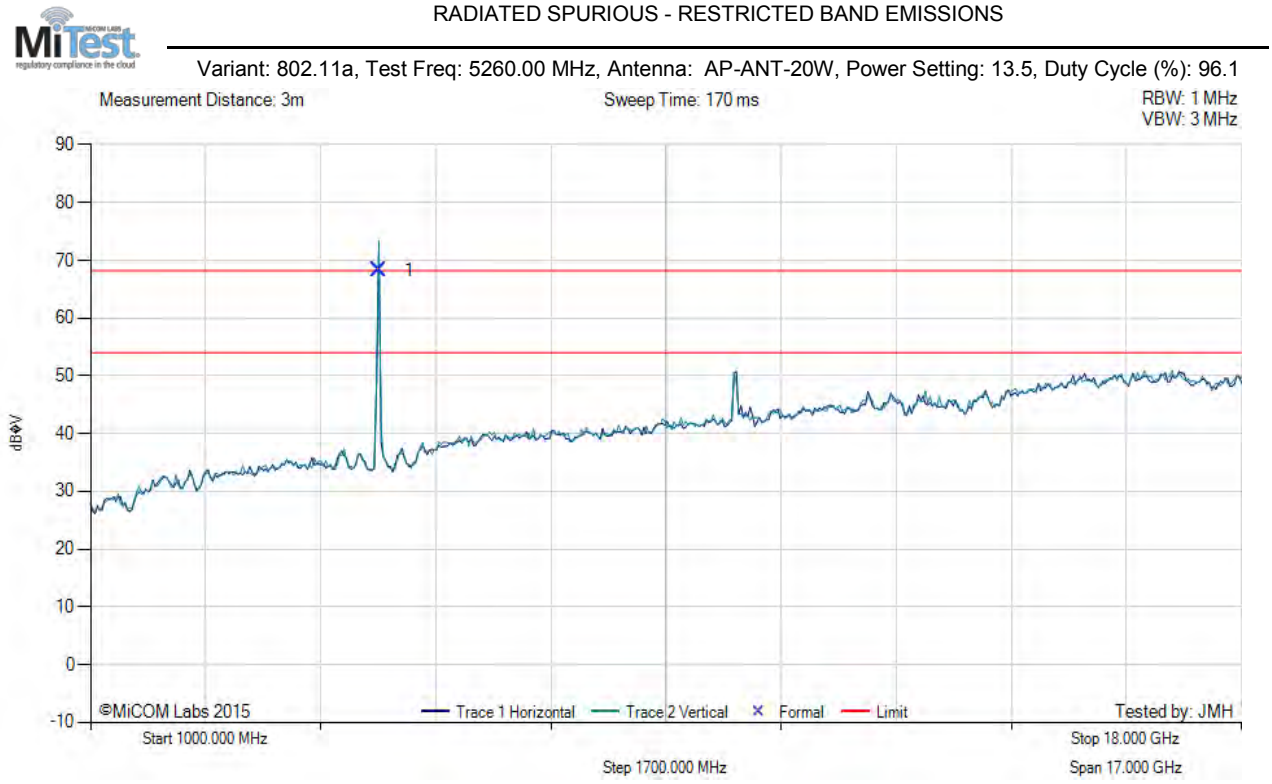


Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	11437.36	46.79	9.46	-4.92	51.33	Max Avg	Horizontal	101	301	54.0	-2.7	Pass
2	11437.36	59.26	9.46	-4.92	63.80	Max Peak	Horizontal	101	301	68.2	-4.4	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

back to matrix

A.1.1.4. Aruba Networks AP-ANT-20W



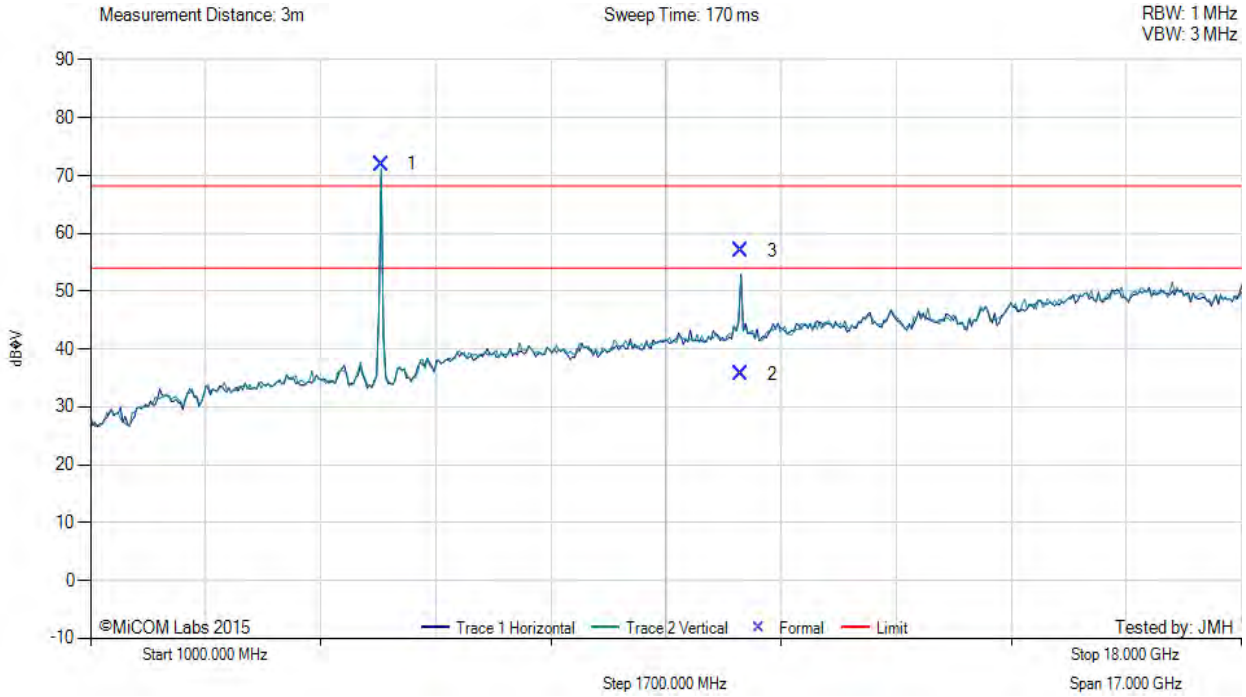
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5260.48	73.48	6.12	-11.29	68.31	Fundamental	Vertical	151	0	--	--	

Test Notes: AP324 on table with ENET cables connected to hub outside chamber. Laptop outside chamber pinging EUT. AC/DC PS EMSA120300

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5300.00 MHz, Antenna: AP-ANT-20W, Power Setting: 13.5, Duty Cycle (%): 96.1



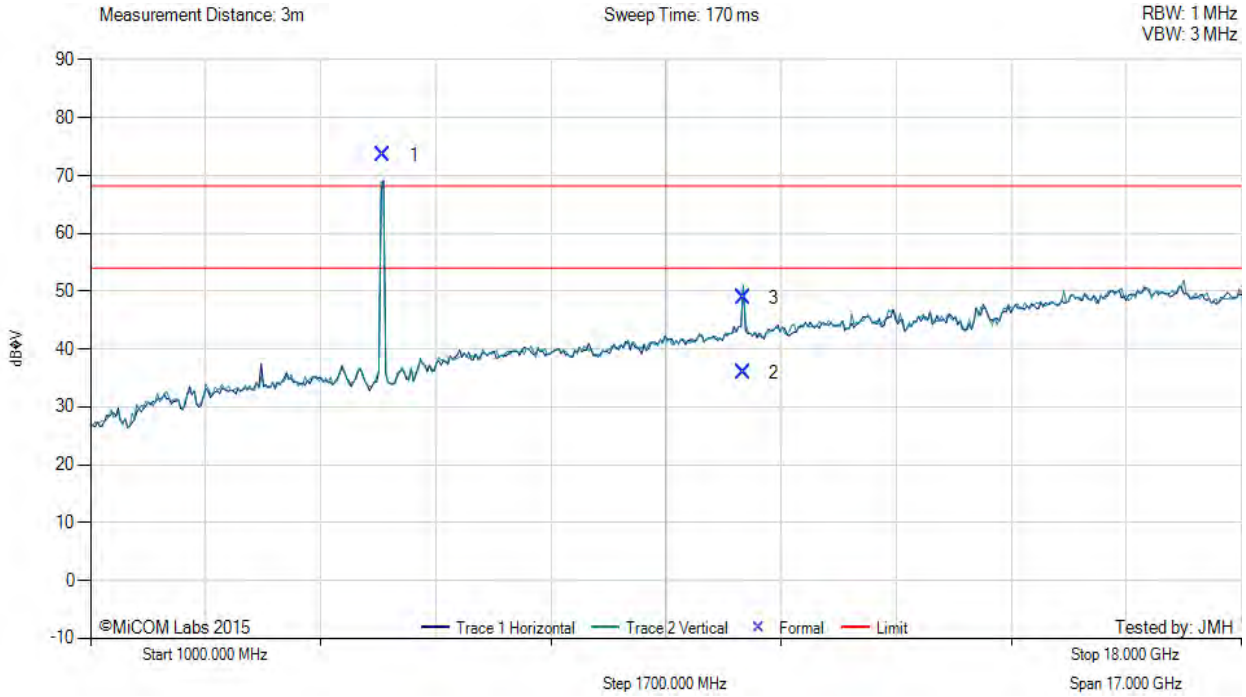
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5301.21	76.87	6.18	-11.09	71.96	Fundamental	Vertical	151	0	--	--	
2	10614.22	30.11	9.49	6.08	35.68	Max Avg	Horizontal	100	300	54.0	-10.3	Pass
3	10614.22	51.39	9.49	-3.92	56.96	Max Peak	Horizontal	100	300	68.2	-11.3	Pass

Test Notes: AP324 on table with ENET cables connected to hub outside chamber. Laptop outside chamber pinging EUT. AC/DC PS EMSA120300

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: AP-ANT-20W, Power Setting: 13.5, Duty Cycle (%): 96.1



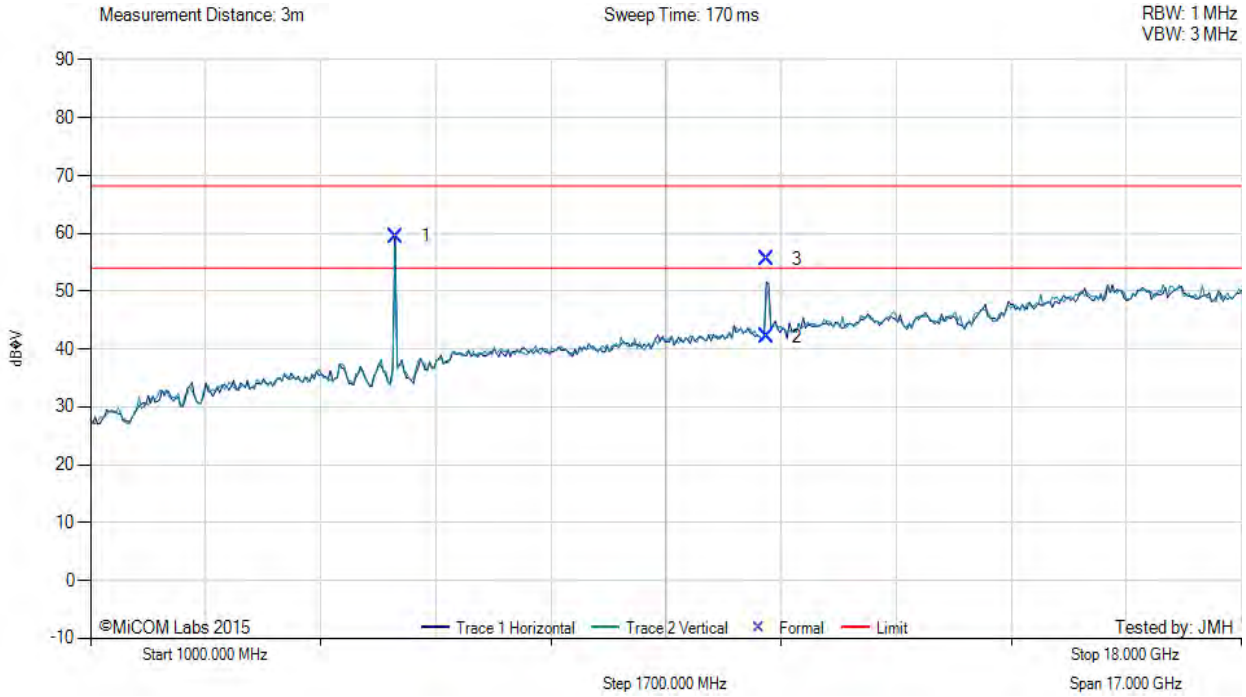
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5326.85	78.48	6.18	-11.06	73.60	Fundamental	Horizontal	151	0	--	--	
2	10640.20	30.72	9.11	-3.89	35.94	Max Avg	Vertical	100	360	54.0	-18.1	Pass
3	10640.20	43.60	9.11	-3.89	48.82	Max Peak	Vertical	100	360	68.2	-19.4	Pass

Test Notes: AP324 on table with AC/DC PS

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5500.00 MHz, Antenna: AP-ANT-20W, Power Setting: 13.5, Duty Cycle (%): 96.1



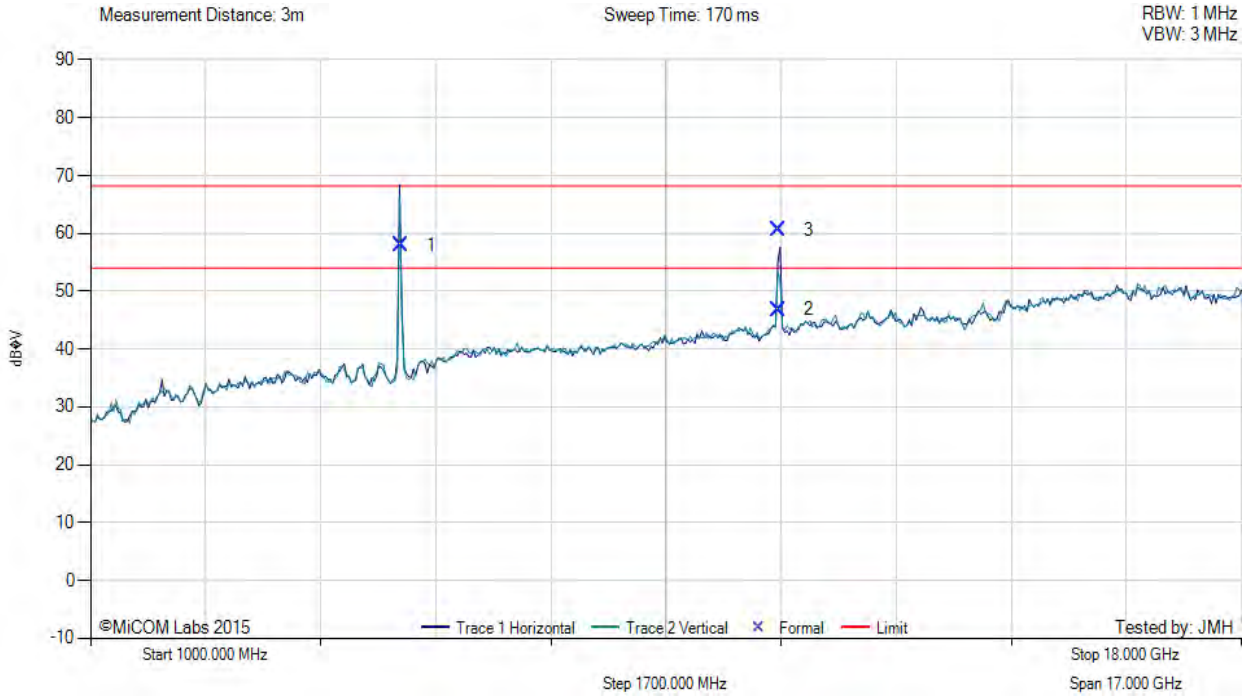
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5501.16	64.41	6.25	-11.17	59.49	Fundamental	Horizontal	100	0	--	--	
2	10991.18	37.07	9.30	-4.27	42.10	Max Avg	Horizontal	103	324	54.0	-11.9	Pass
3	10991.18	50.48	9.30	-4.27	55.51	Max Peak	Horizontal	103	324	68.2	-12.7	Pass

Test Notes: EUT on Table with AC/DC PS

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5580.00 MHz, Antenna: AP-ANT-20W, Power Setting: 13.5, Duty Cycle (%): 96.1



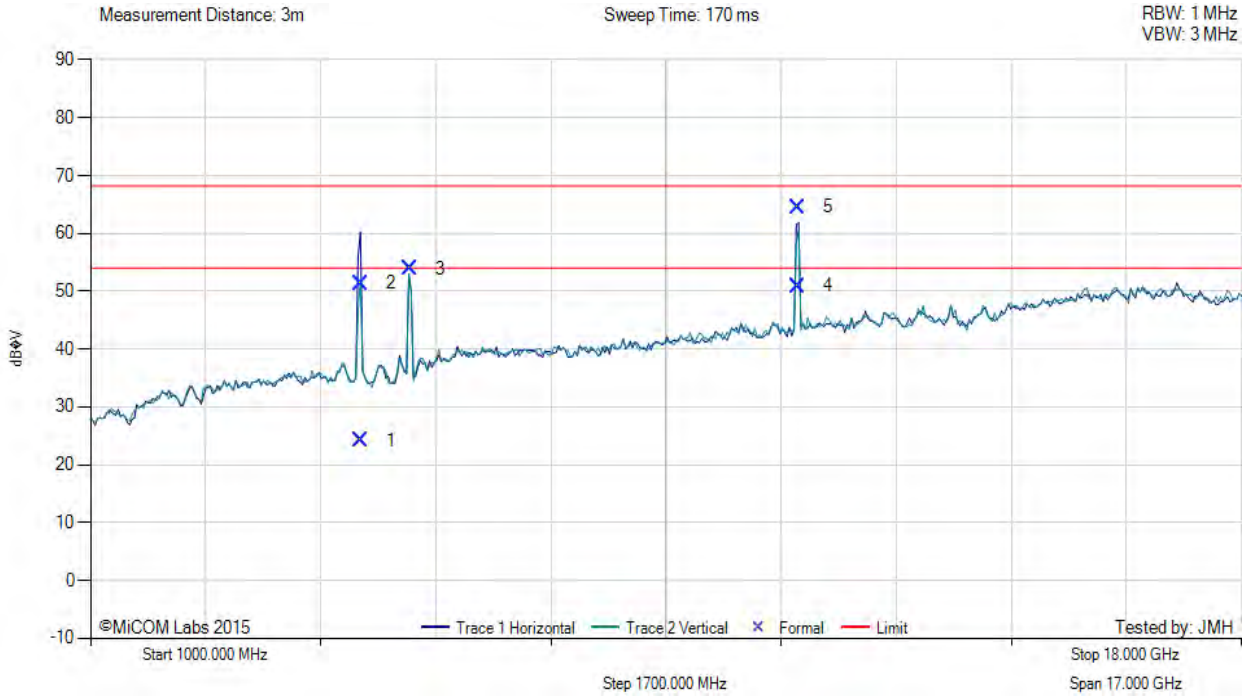
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5578.32	62.89	6.32	-11.20	58.01	Fundamental	Horizontal	100	0	--	--	
2	11157.43	41.44	9.40	-4.06	46.78	Max Avg	Horizontal	102	322	54.0	-7.2	Pass
3	11157.43	55.25	9.40	-4.06	60.59	Max Peak	Horizontal	102	322	68.2	-7.6	Pass

Test Notes: EUT different ser # due to additional modulated signal from previous EUT

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5720.00 MHz, Antenna: AP-ANT-20W, Power Setting: 13.5, Duty Cycle (%): 96.1

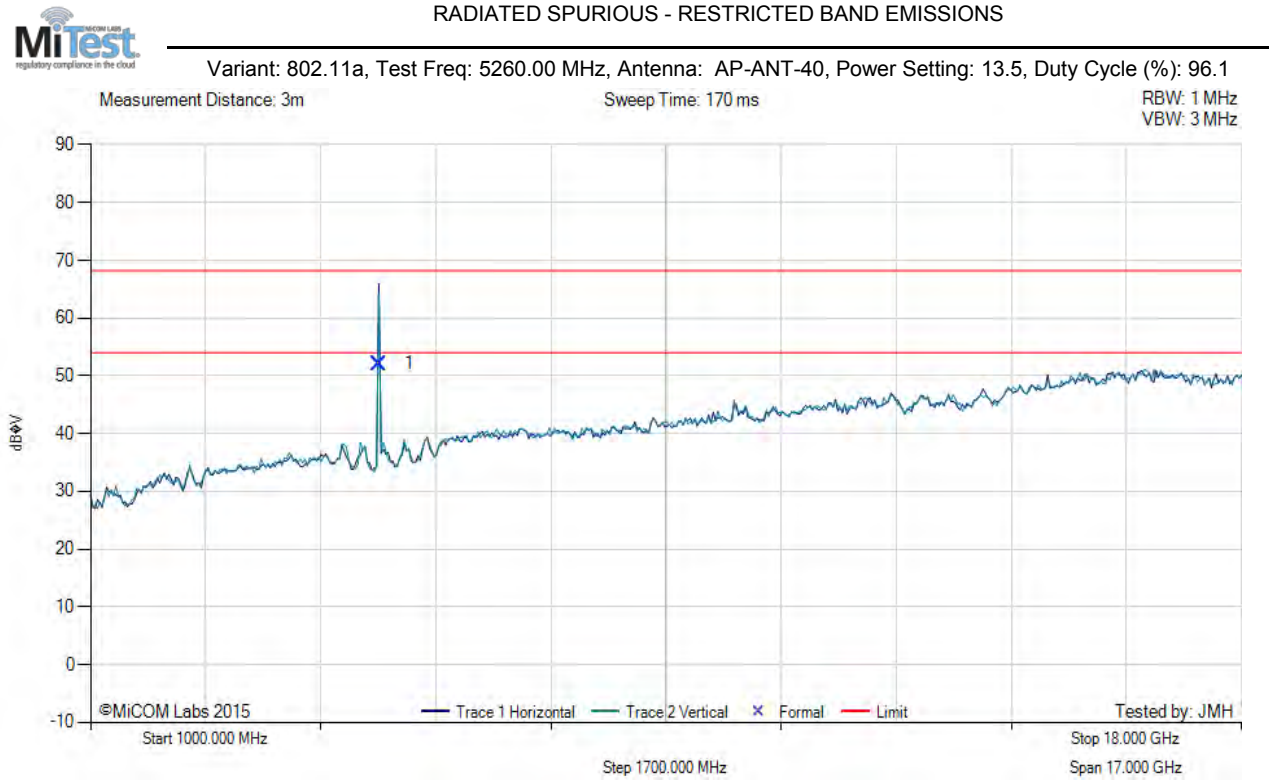


Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	4984.86	29.67	5.97	-11.52	24.12	Max Avg	Horizontal	142	303	54.0	-29.9	Pass
2	4984.86	56.95	5.97	-11.52	51.40	Max Peak	Horizontal	142	303	68.2	-26.8	Pass
3	5714.23	58.21	6.40	-10.76	53.85	Fundamental	Horizontal	100	0	--	--	
4	11439.24	46.30	9.47	-4.92	50.85	Max Avg	Horizontal	100	317	54.0	-3.2	Pass
5	11439.24	60.02	9.47	-4.92	64.57	Max Peak	Horizontal	100	317	68.2	-3.7	Pass

Test Notes: EUT on Table with AC/DC PS

back to matrix

A.1.1.5. Aruba Networks AP-ANT-40



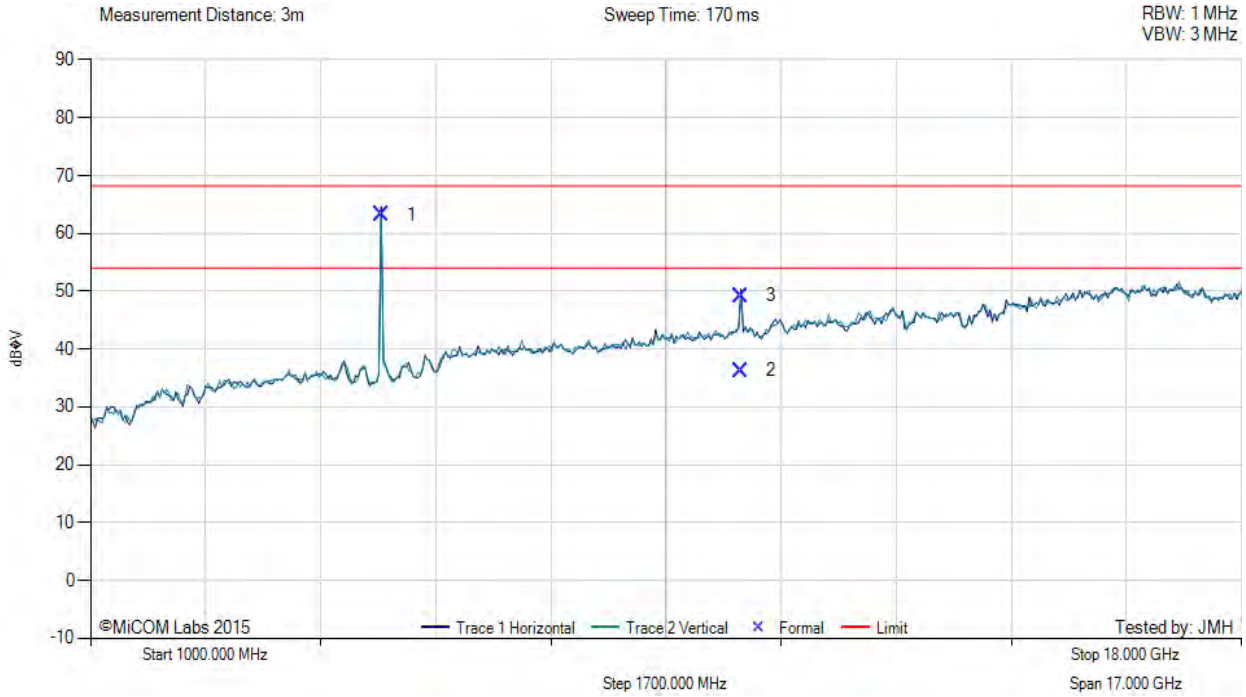
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5257.92	57.28	6.13	-11.30	52.11	Fundamental	Horizontal	100	0	--	--	

Test Notes: EUT on table powered by AC/DC PS

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5300.00 MHz, Antenna: AP-ANT-40, Power Setting: 13.5, Duty Cycle (%): 96.1



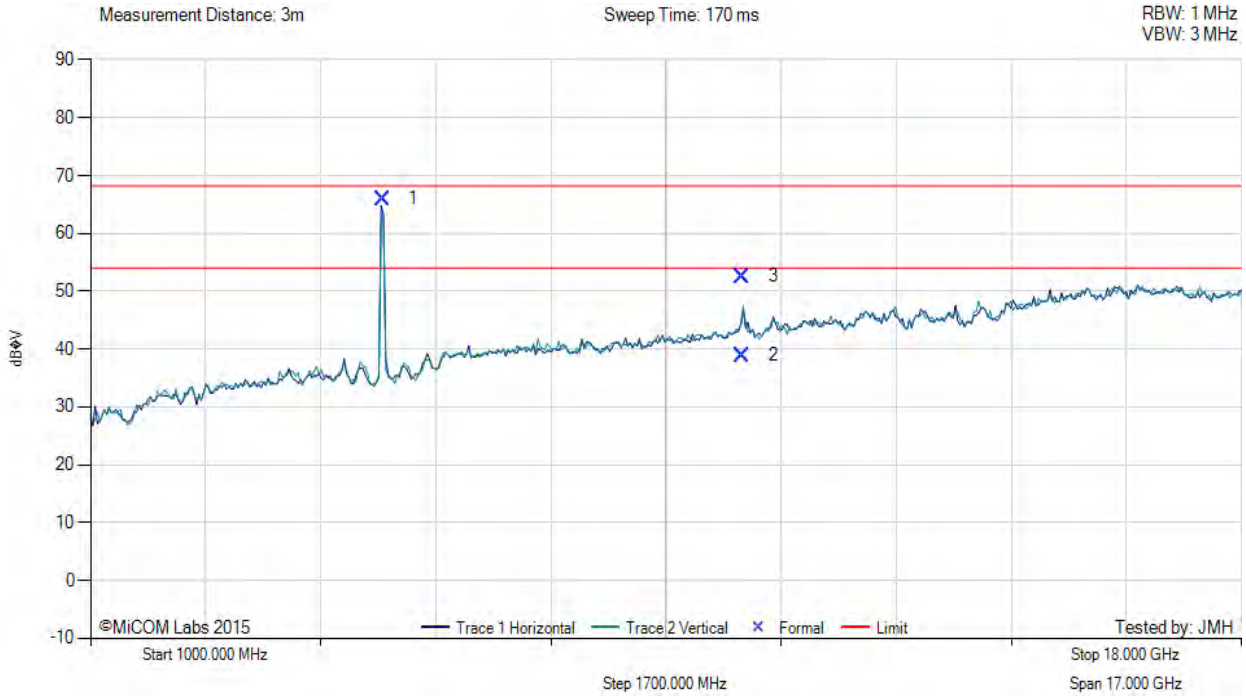
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5299.24	68.15	6.18	-11.09	63.24	Fundamental	Horizontal	100	0	--	--	
2	10609.94	30.72	9.43	-3.92	36.23	Max Avg	Horizontal	100	300	54.0	-17.8	Pass
3	10609.94	43.70	9.43	-3.92	49.21	Max Peak	Horizontal	100	300	68.2	-19.0	Pass

Test Notes: EUT on table powered by AC/DC PS

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: AP-ANT-40, Power Setting: 13.5, Duty Cycle (%): 96.1



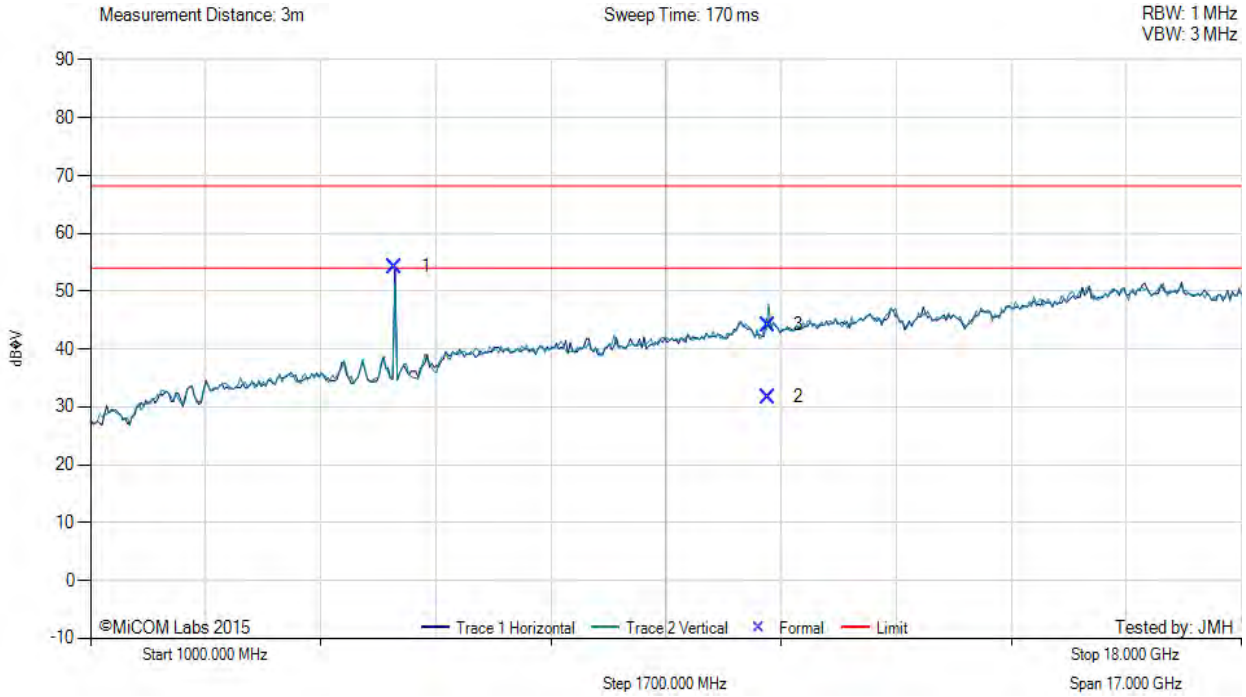
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5317.36	70.84	6.19	-11.07	65.96	Fundamental	Horizontal	151	0	--	--	
2	10631.79	33.56	9.28	-3.90	38.94	Max Avg	Vertical	116	319	54.0	-15.1	Pass
3	10631.79	47.17	9.28	-3.90	52.55	Max Peak	Vertical	116	319	68.2	-15.7	Pass

Test Notes: EUT on table powered by AC/DC PS

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5500.00 MHz, Antenna: AP-ANT-40, Power Setting: 13.5, Duty Cycle (%): 96.1



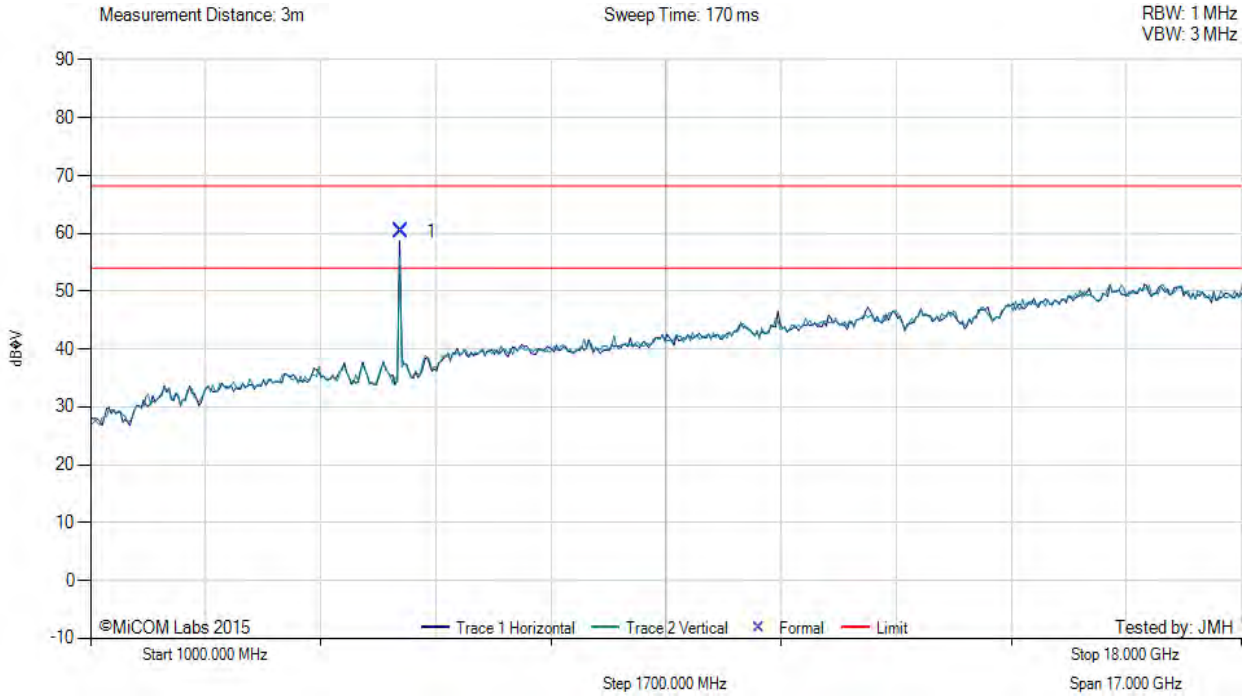
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5499.19	59.14	6.26	-11.17	54.23	Fundamental	Horizontal	100	0	--	--	
2	11003.08	26.73	9.25	-4.24	31.74	Max Avg	Vertical	113	40	54.0	-22.3	Pass
3	11003.08	39.19	9.25	-4.24	44.20	Max Peak	Vertical	113	40	68.2	-24.0	Pass

Test Notes: EUT on table powered by AC/DC PS

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5580.00 MHz, Antenna: AP-ANT-40, Power Setting: 13.5, Duty Cycle (%): 96.1



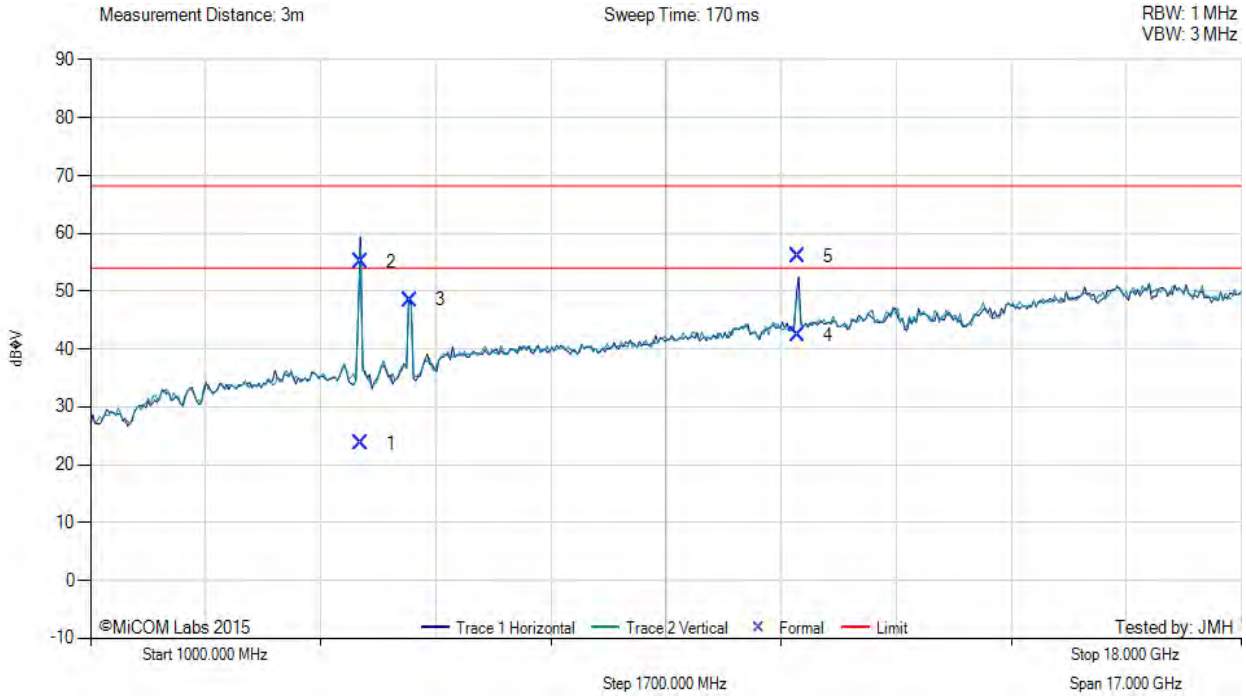
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5578.68	65.22	6.33	-11.20	60.35	Fundamental	Horizontal	100	0	--	--	

Test Notes: EUT on table powered by AC/DC PS

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5720.00 MHz, Antenna: AP-ANT-40, Power Setting: 13.5, Duty Cycle (%): 96.1

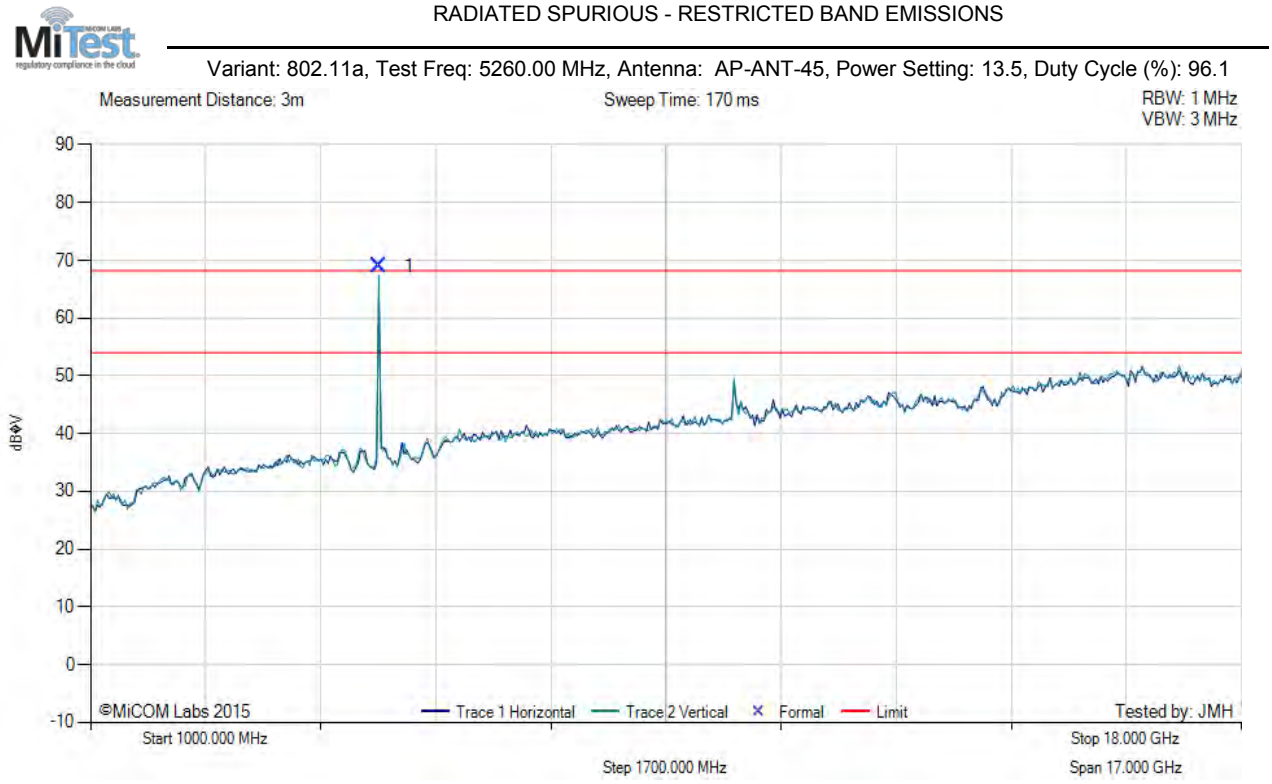


Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	4986.65	29.29	5.97	-11.53	23.73	Max Avg	Horizontal	106	310	54.0	-30.3	Pass
2	4986.65	60.67	5.97	-11.53	55.11	Max Peak	Horizontal	106	310	68.2	-13.1	Pass
3	5715.11	52.88	6.40	-10.76	48.52	Fundamental	Horizontal	101	0	--	--	
4	11439.64	37.91	9.47	-4.93	42.45	Max Avg	Horizontal	104	309	54.0	-11.6	Pass
5	11439.64	51.52	9.47	-4.93	56.06	Max Peak	Horizontal	104	309	68.2	-12.2	Pass

Test Notes: EUT on table powered by AC/DC PS

back to matrix

A.1.1.6. Aruba Networks AP-ANT-45



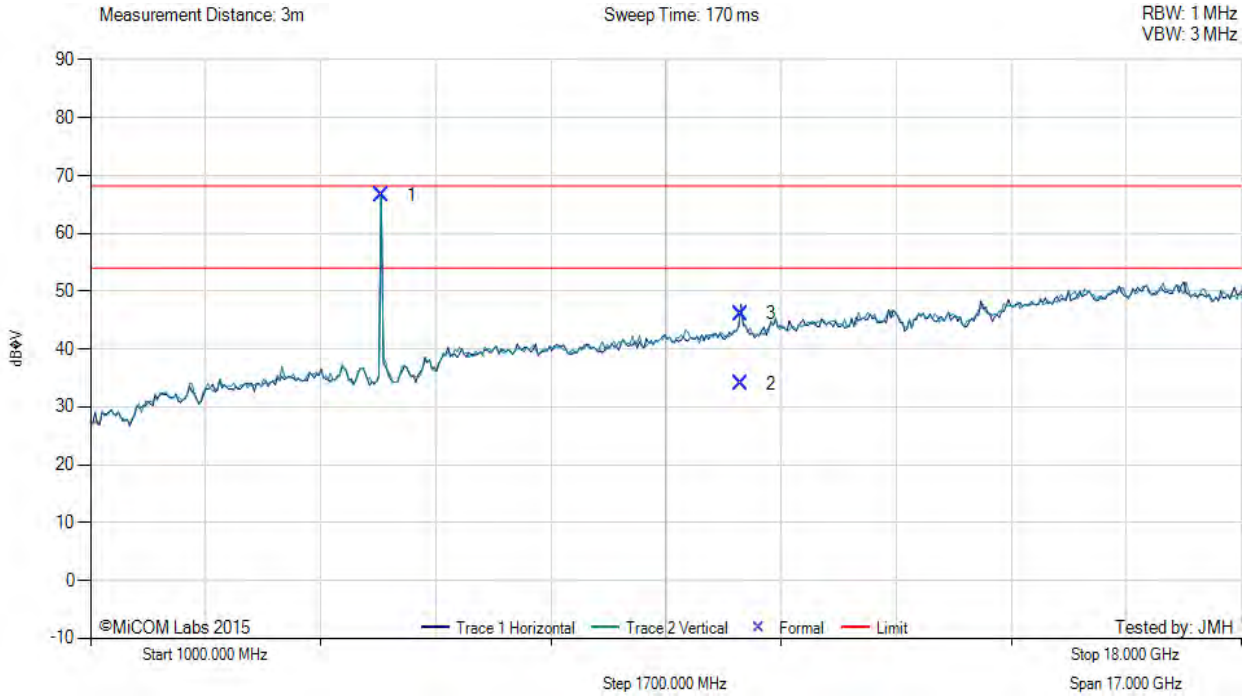
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5259.20	74.12	6.13	-11.29	68.96	Fundamental	Vertical	100	0	--	--	

Test Notes: EUT on table powered by AC/DC PS

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5300.00 MHz, Antenna: AP-ANT-45, Power Setting: 13.5, Duty Cycle (%): 96.1



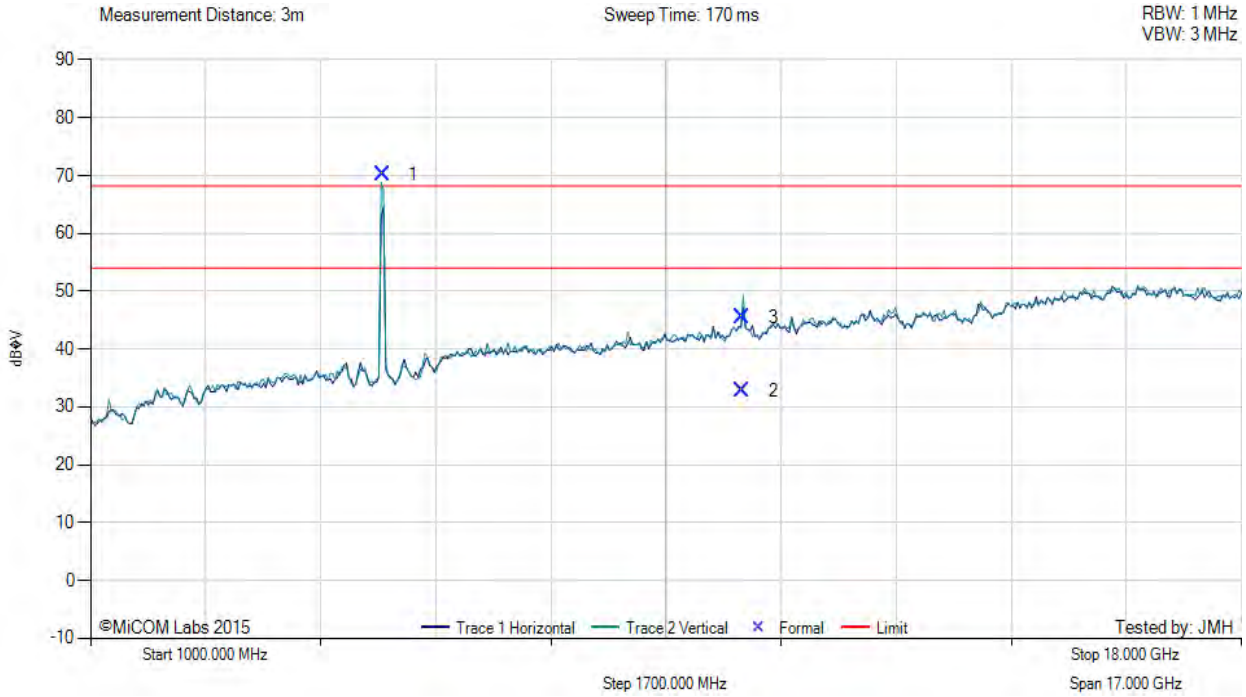
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5301.21	71.46	6.18	-11.09	66.55	Fundamental	Horizontal	100	0	--	--	
2	10609.51	28.42	9.43	-3.92	33.93	Max Avg	Horizontal	100	16	54.0	-20.1	Pass
3	10609.51	40.55	9.43	-3.92	46.06	Max Peak	Horizontal	100	16	68.2	-22.2	Pass

Test Notes: EUT on table powered by AC/DC PS

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: AP-ANT-45, Power Setting: 13.5, Duty Cycle (%): 96.1



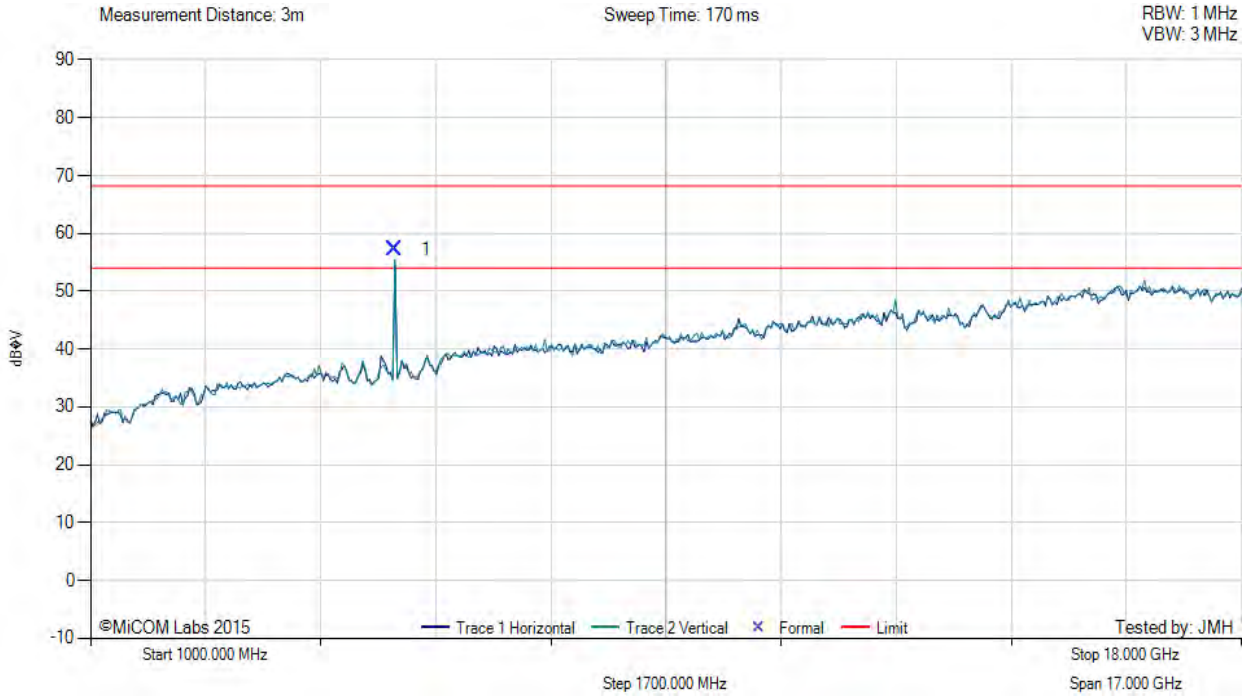
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5313.74	75.09	6.19	-11.07	70.21	Fundamental	Vertical	100	0	--	--	
2	10632.02	27.42	9.28	-3.90	32.80	Max Avg	Vertical	101	235	54.0	-21.2	Pass
3	10632.02	40.08	9.28	-3.90	45.46	Max Peak	Vertical	101	235	68.2	-22.8	Pass

Test Notes: EUT on table powered by AC/DC PS

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5500.00 MHz, Antenna: AP-ANT-45, Power Setting: 13.5, Duty Cycle (%): 96.1



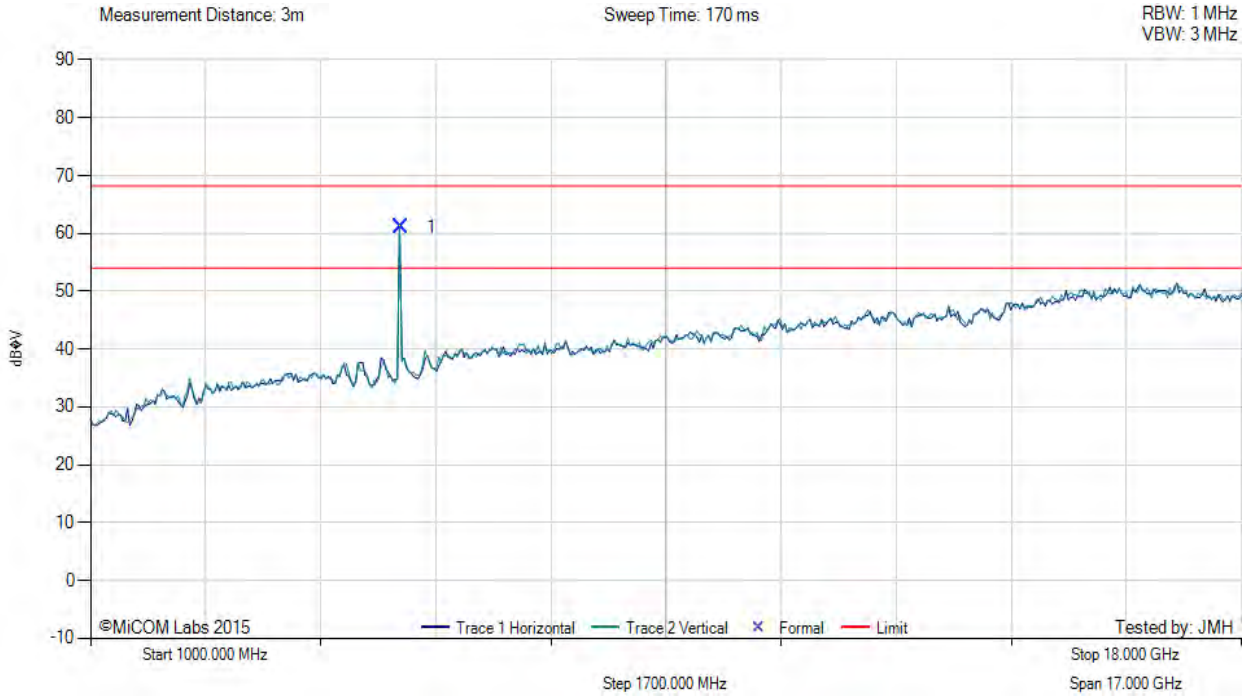
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5498.07	62.21	6.26	-11.17	57.30	Fundamental	Vertical	100	0	--	--	

Test Notes: EUT on table powered by AC/DC PS

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5580.00 MHz, Antenna: AP-ANT-45, Power Setting: 13.5, Duty Cycle (%): 96.1



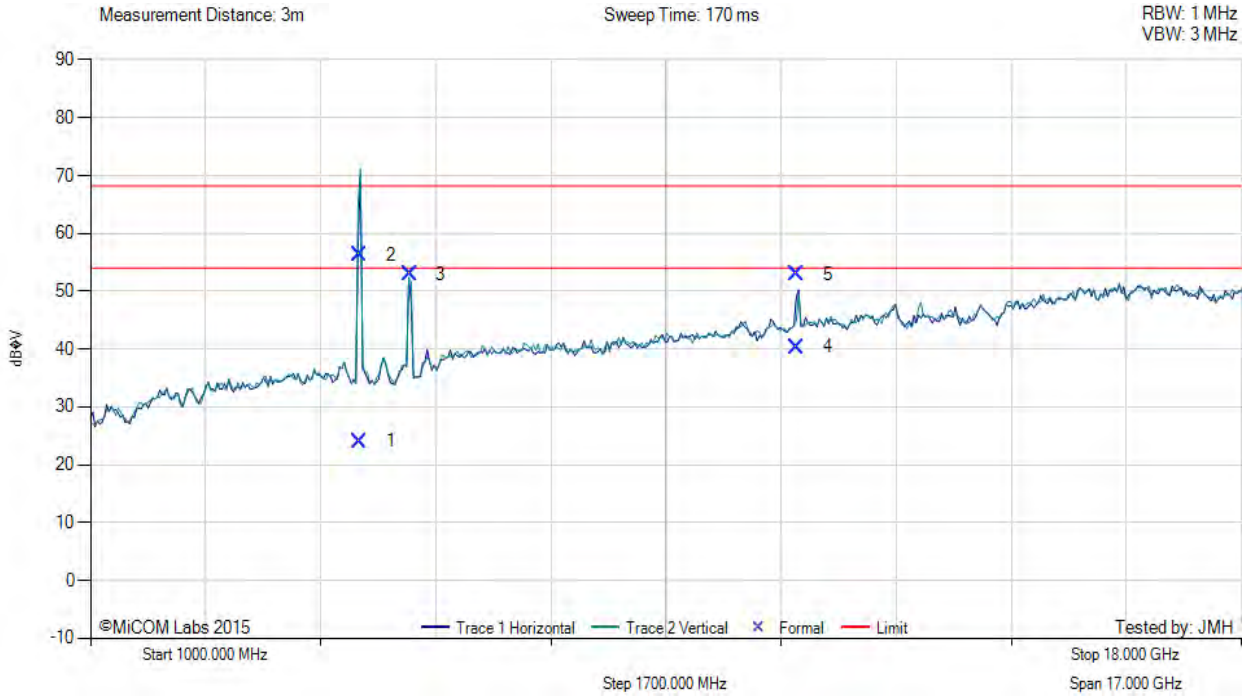
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5584.09	65.87	6.34	-11.19	61.02	Fundamental	Horizontal	100	0	--	--	

Test Notes: EUT on table powered by AC/DC PS

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5720.00 MHz, Antenna: AP-ANT-45, Power Setting: 13.5, Duty Cycle (%): 96.1

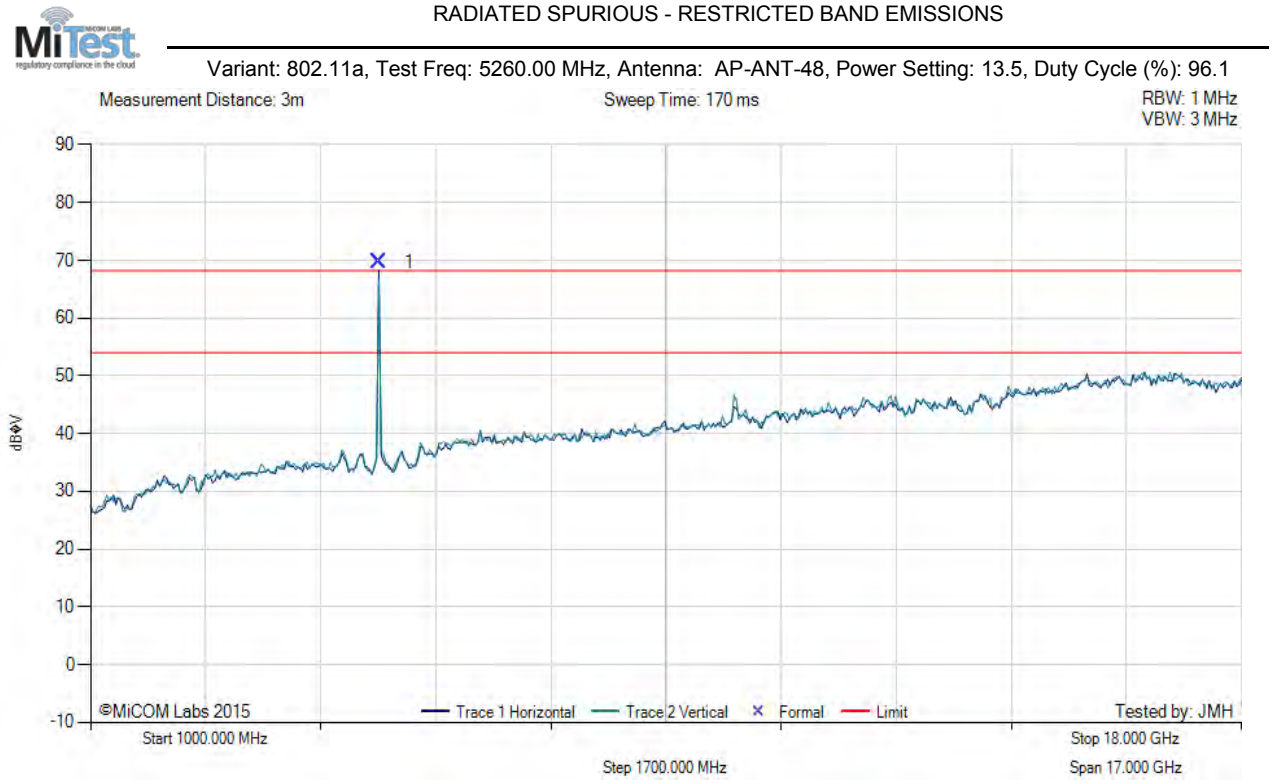


Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	4979.68	29.64	5.96	-11.52	24.08	Max Avg	Horizontal	102	340	54.0	-29.9	Pass
2	4979.68	61.77	5.96	-11.52	56.21	Max Peak	Horizontal	102	340	68.2	-12.0	Pass
3	5715.47	57.22	6.40	-10.76	52.86	Fundamental	Horizontal	100	0	--	--	
4	11438.12	35.78	9.47	-4.92	40.33	Max Avg	Horizontal	100	314	54.0	-13.7	Pass
5	11438.12	48.44	9.47	-4.92	52.99	Max Peak	Horizontal	100	314	68.2	-15.2	Pass

Test Notes: EUT on table powered by AC/DC PS

back to matrix

A.1.1.7. Aruba Networks AP-ANT-48



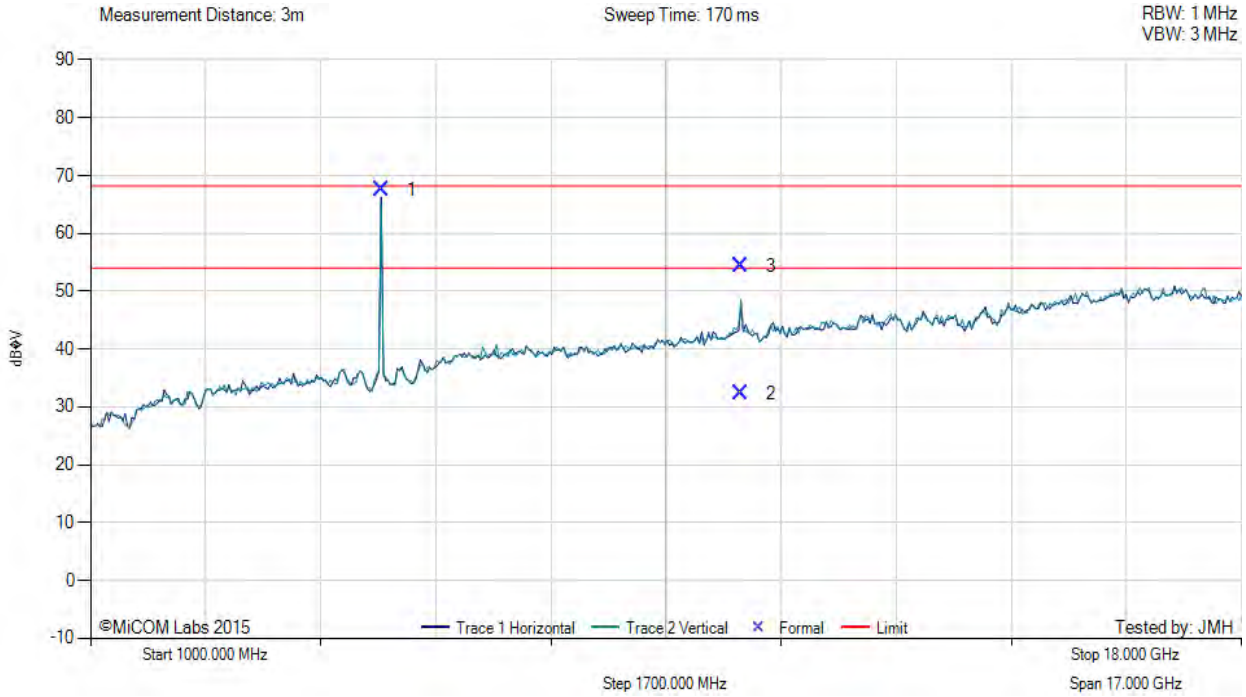
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5264.01	74.79	6.12	-11.27	69.64	Fundamental	Horizontal	100	0	--	--	

Test Notes: EUT on table with ENET and Console cables connected to laptop outside chamber

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5300.00 MHz, Antenna: AP-ANT-48, Power Setting: 13.5, Duty Cycle (%): 96.1



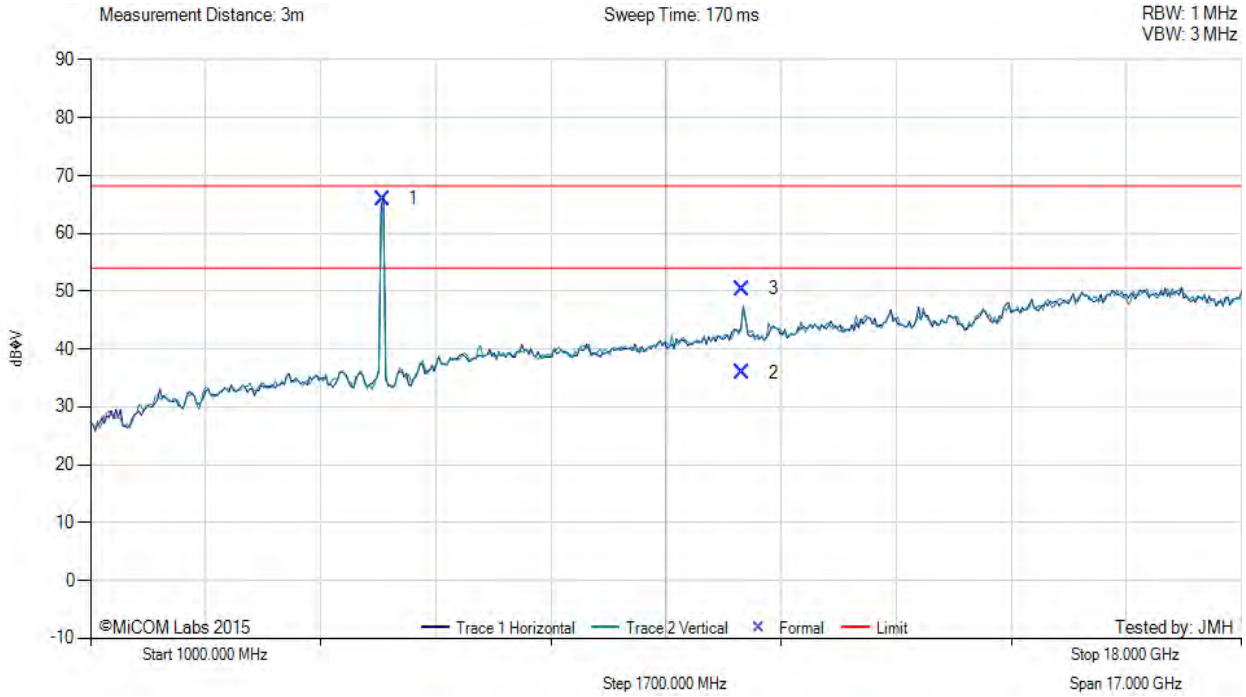
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5296.96	72.53	6.17	-11.11	67.59	Fundamental	Horizontal	100	0	--	--	
2	10608.37	26.91	9.39	-3.92	32.38	Max Avg	Vertical	102	349	54.0	-21.6	Pass
3	10608.37	48.89	9.39	-3.92	54.36	Max Peak	Vertical	102	349	68.2	-23.9	Pass

Test Notes: EUT on table with ENET and Console cables connected to laptop outside chamber

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: AP-ANT-48, Power Setting: 13.5, Duty Cycle (%): 96.1



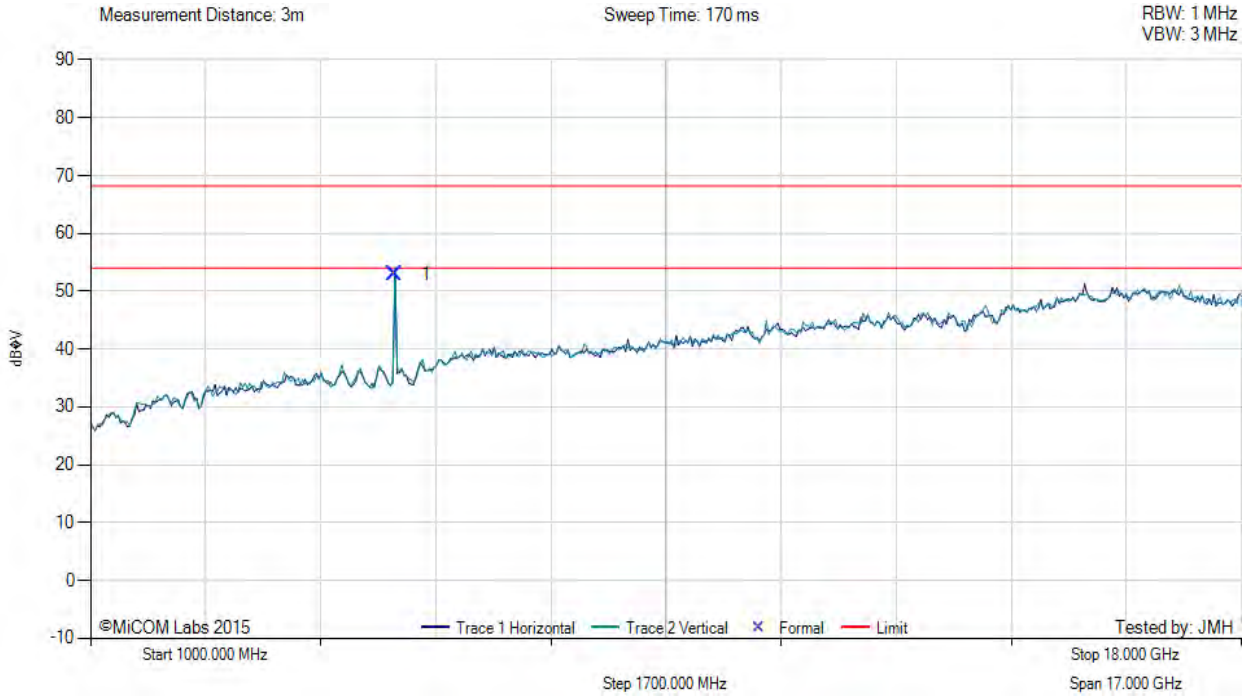
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5317.95	70.82	6.19	-11.07	65.94	Fundamental	Horizontal	100	0	--	--	
2	10631.10	30.57	9.30	-3.90	35.97	Max Avg	Vertical	108	233	54.0	-18.0	Pass
3	10631.10	45.03	9.30	-3.90	50.43	Max Peak	Vertical	108	233	68.2	-20.8	Pass

Test Notes: EUT on table with ENET and Console cables connected to laptop outside chamber

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5500.00 MHz, Antenna: AP-ANT-48, Power Setting: 13.5, Duty Cycle (%): 96.1



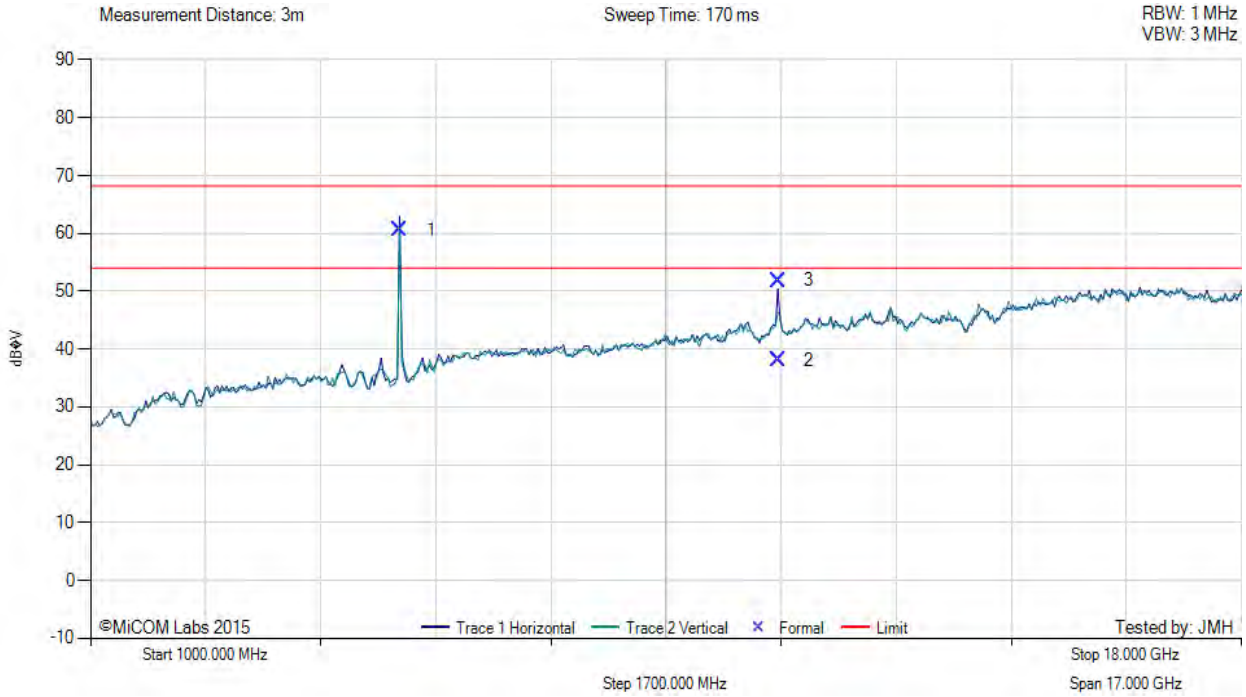
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5499.19	57.81	6.26	-11.17	52.90	Fundamental	Vertical	100	0	--	--	

Test Notes: EUT on table with ENET and Console cables connected to laptop outside chamber

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5580.00 MHz, Antenna: AP-ANT-48, Power Setting: 13.5, Duty Cycle (%): 96.1



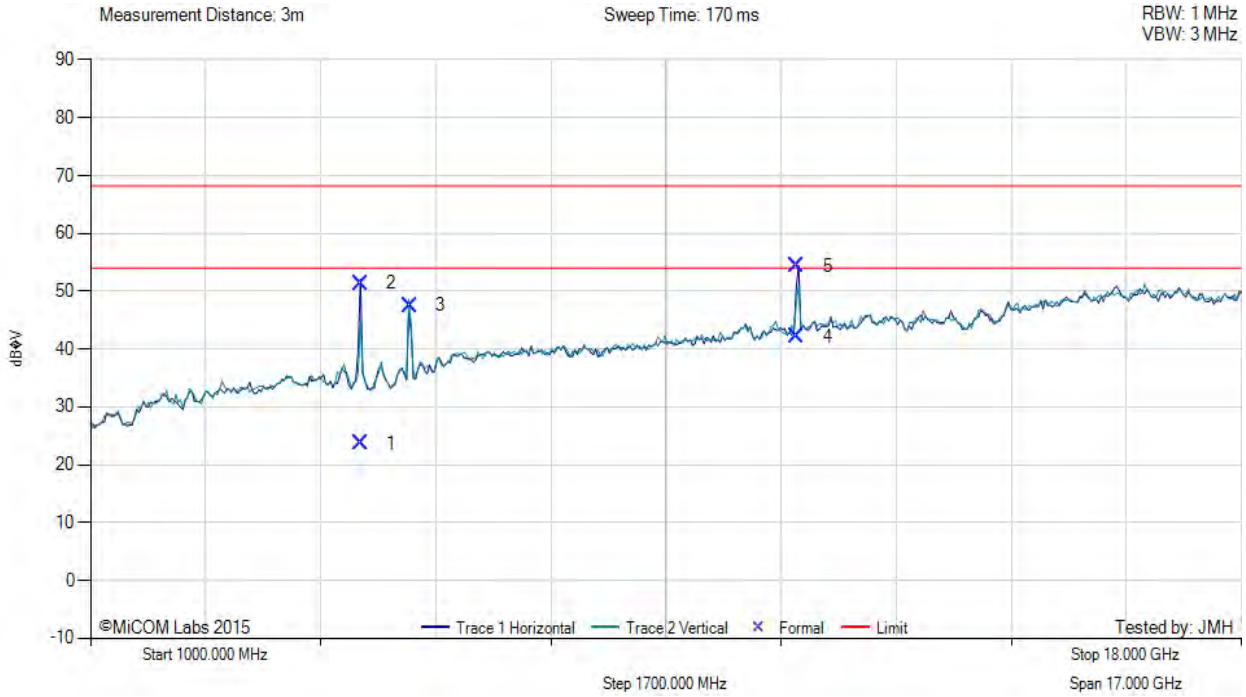
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5577.11	65.41	6.32	-11.20	60.53	Fundamental	Horizontal	100	0	--	--	
2	11157.67	32.74	9.40	-4.06	38.08	Max Avg	Horizontal	100	325	54.0	-15.9	Pass
3	11157.67	46.54	9.40	-4.06	51.88	Max Peak	Horizontal	100	325	68.2	-16.4	Pass

Test Notes: EUT on table with ENET and Console cables connected to laptop outside chamber

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5720.00 MHz, Antenna: AP-ANT-48, Power Setting: 13.5, Duty Cycle (%): 96.1

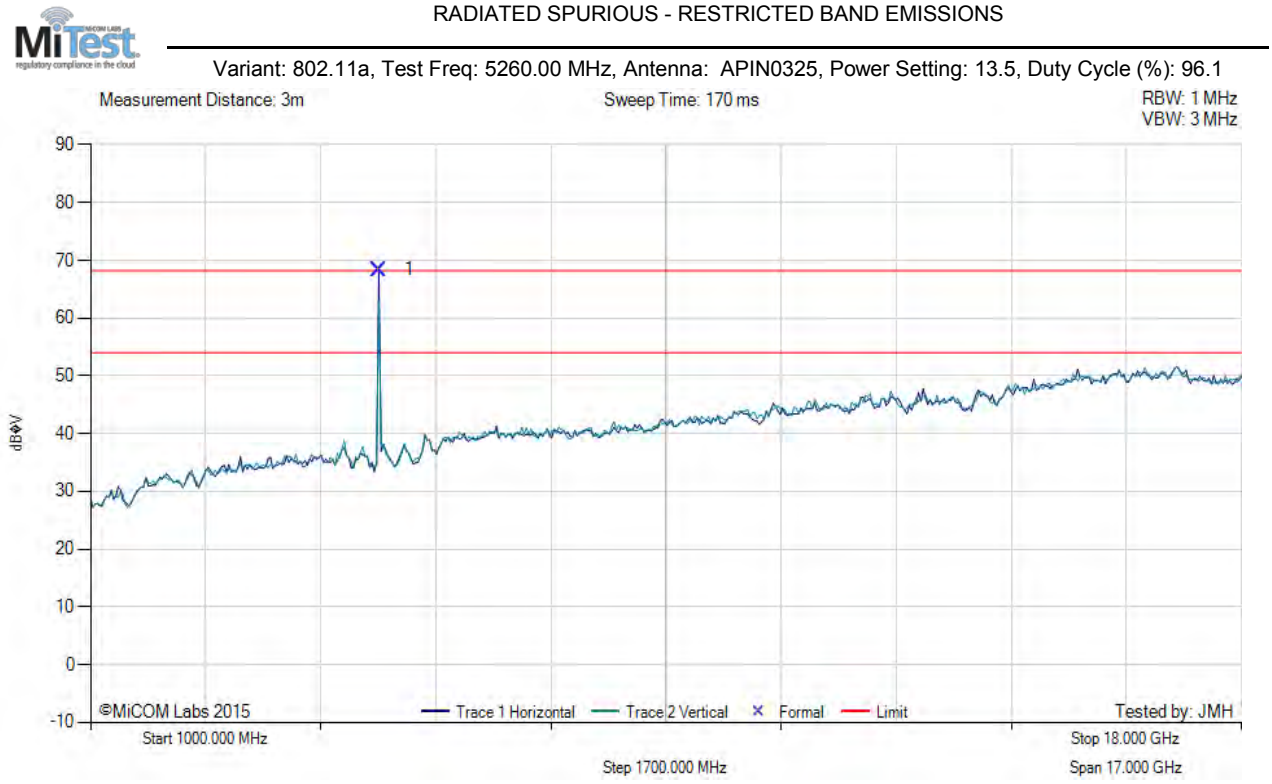


Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	4989.30	29.24	5.97	-11.53	23.68	Max Avg	Horizontal	100	333	54.0	-30.3	Pass
2	4989.30	56.96	5.97	-11.53	51.40	Max Peak	Horizontal	100	333	68.2	-16.8	Pass
3	5722.64	51.83	6.41	-10.72	47.52	Fundamental	Vertical	100	0	--	--	
4	11438.40	37.52	9.47	-4.92	42.07	Max Avg	Horizontal	101	297	54.0	-11.9	Pass
5	11438.40	49.78	9.47	-4.92	54.33	Max Peak	Horizontal	101	297	68.2	-13.9	Pass

Test Notes: EUT on table with ENET and Console cables connected to laptop outside chamber

back to matrix

A.1.1.8. Aruba Networks APIN0325



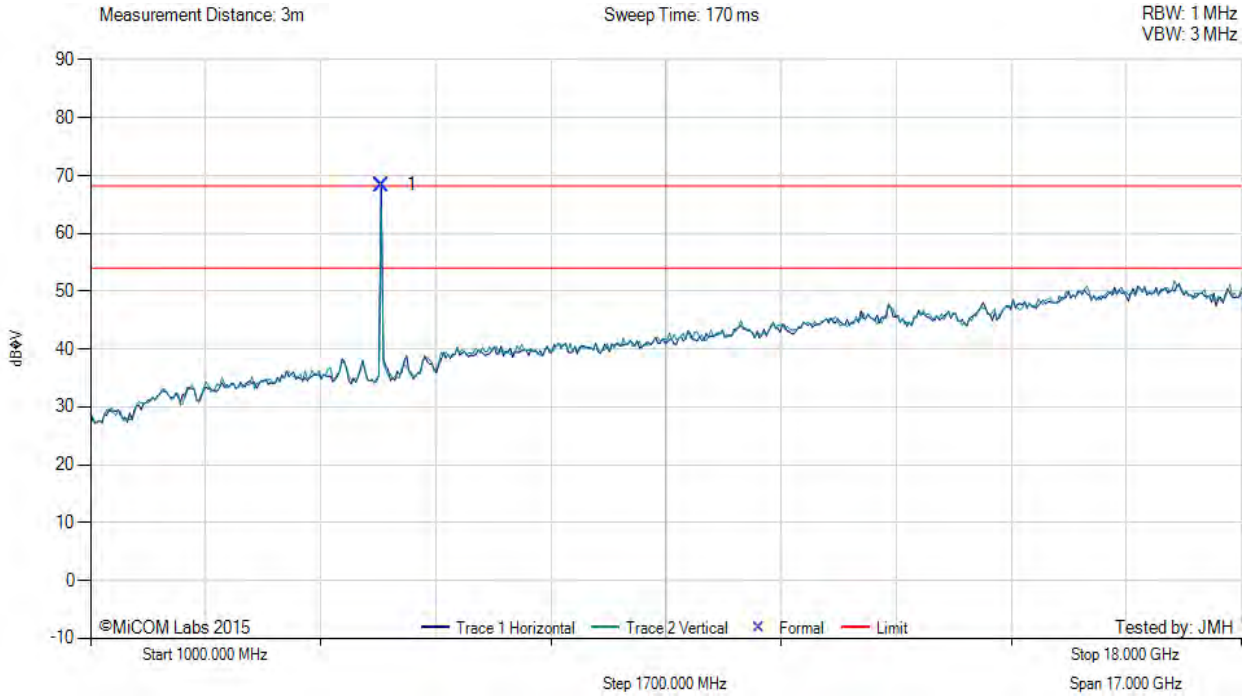
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5261.85	73.56	6.12	-11.28	68.40	Fundamental	Horizontal	100	0	--	--	

Test Notes: AP325 on Table powered by AC/DC PS

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5300.00 MHz, Antenna: APIN0325, Power Setting: 13.5, Duty Cycle (%): 96.1



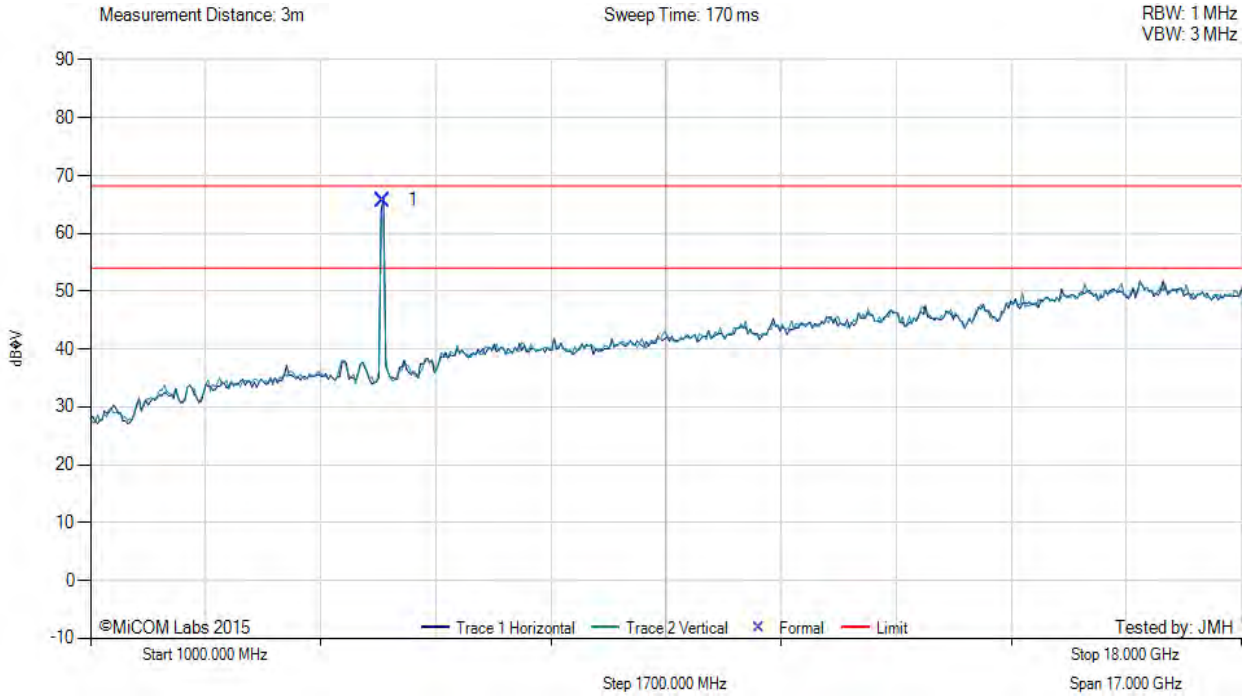
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5302.85	73.30	6.18	-11.08	68.40	Fundamental	Horizontal	100	0	--	--	

Test Notes: AP325 on Table powered by AC/DC PS

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: APIN0325, Power Setting: 13.5, Duty Cycle (%): 96.1



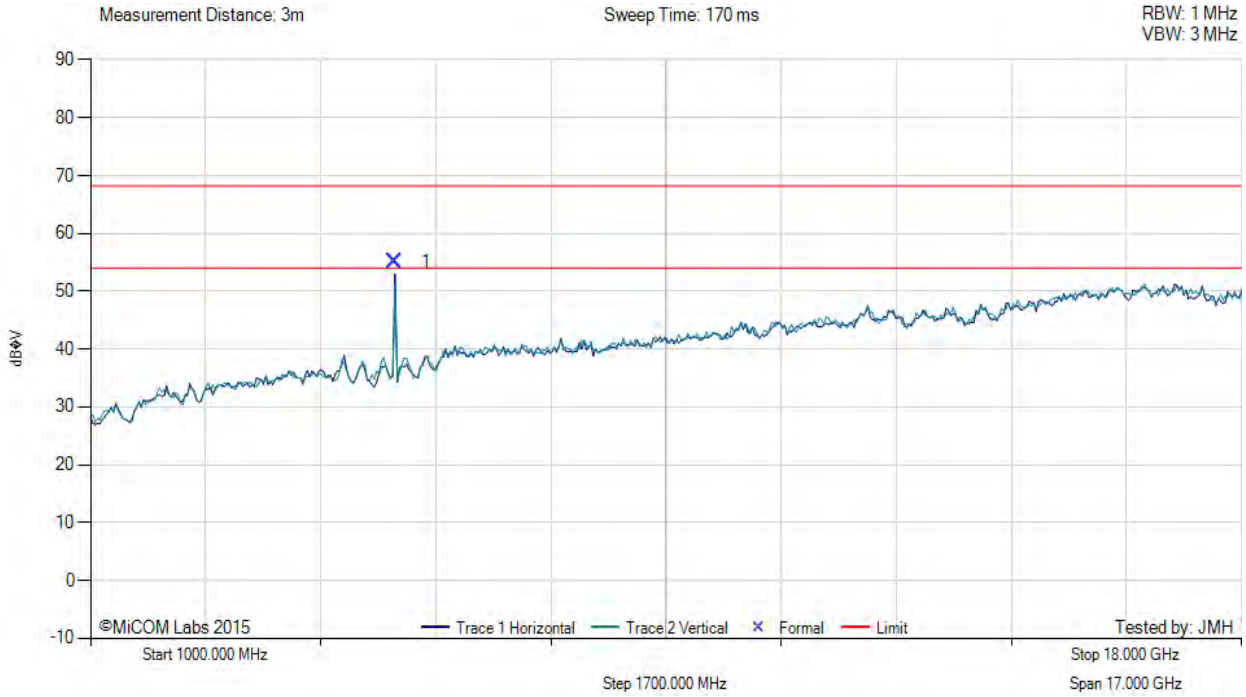
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5320.68	70.63	6.19	-11.06	65.76	Fundamental	Horizontal	100	0	--	--	

Test Notes: AP325 on Table powered by AC/DC PS

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5500.00 MHz, Antenna: APIN0325, Power Setting: 13.5, Duty Cycle (%): 96.1



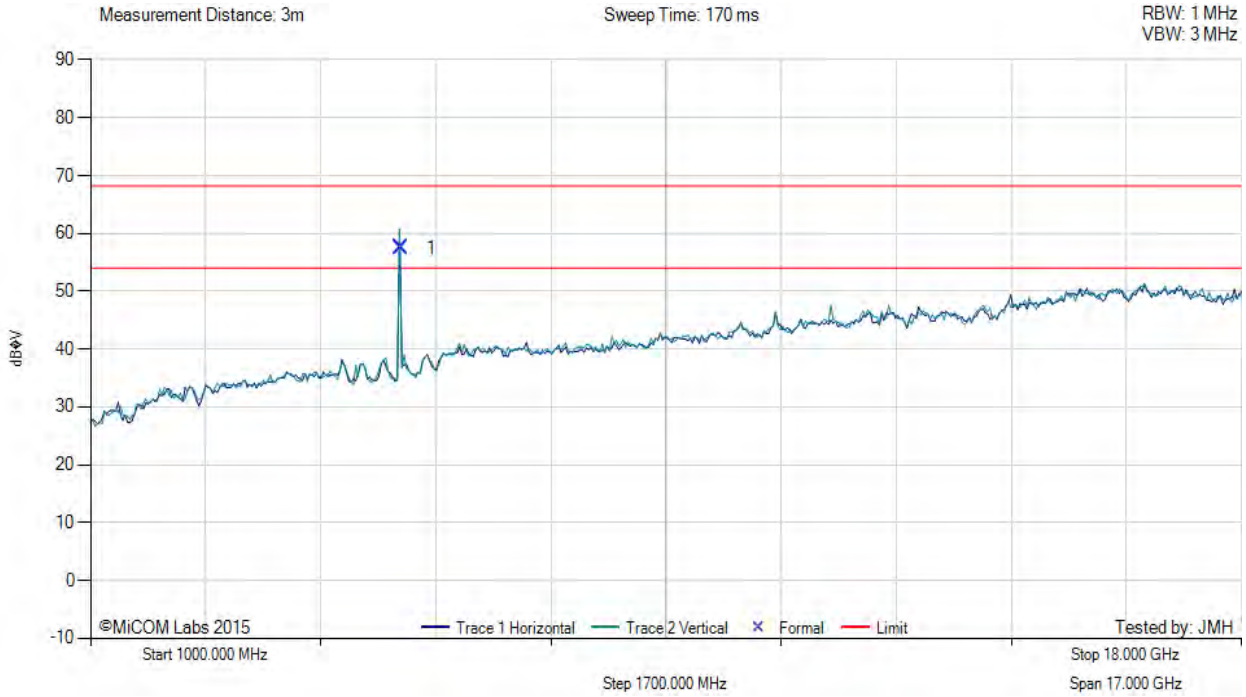
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5497.75	59.99	6.26	-11.17	55.08	Fundamental	Horizontal	151	0	--	--	

Test Notes: AP325 on Table powered by AC/DC PS

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5580.00 MHz, Antenna: APIN0325, Power Setting: 13.5, Duty Cycle (%): 96.1



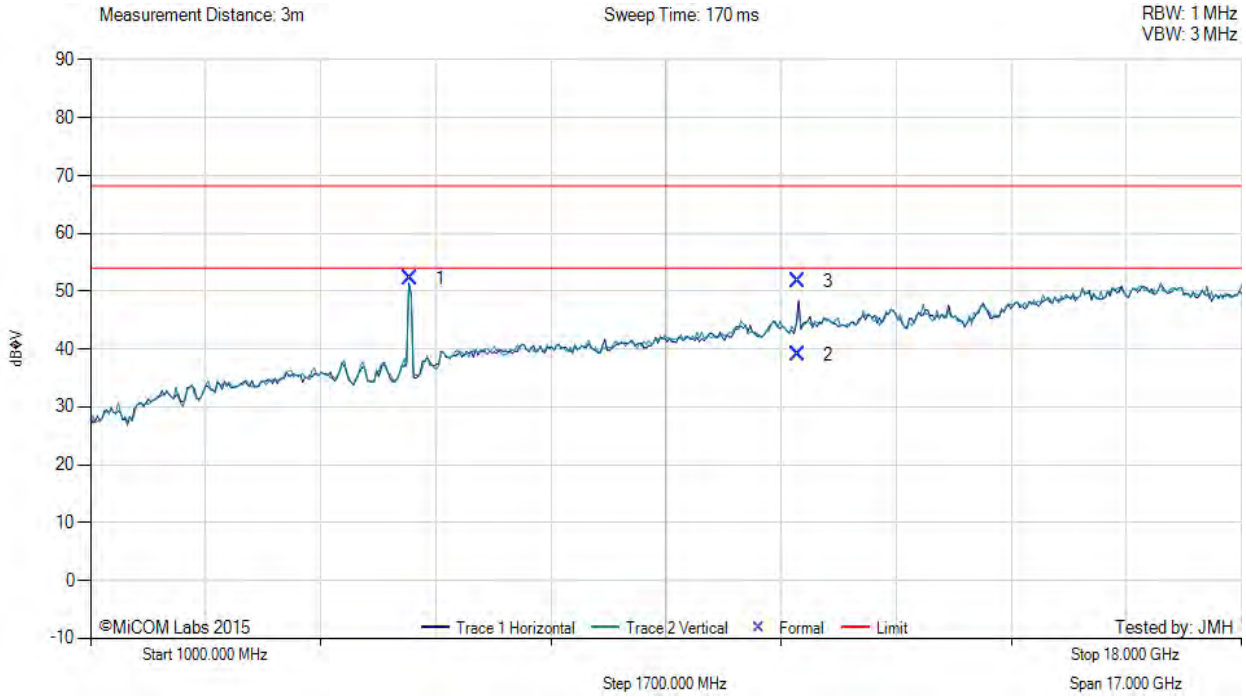
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5581.40	62.35	6.33	-11.20	57.48	Fundamental	Horizontal	100	0	--	--	

Test Notes: AP325 on Table powered by AC/DC PS

back to matrix

RADIATED SPURIOUS - RESTRICTED BAND EMISSIONS

Variant: 802.11a, Test Freq: 5720.00 MHz, Antenna: APIN0325, Power Setting: 13.5, Duty Cycle (%): 96.1



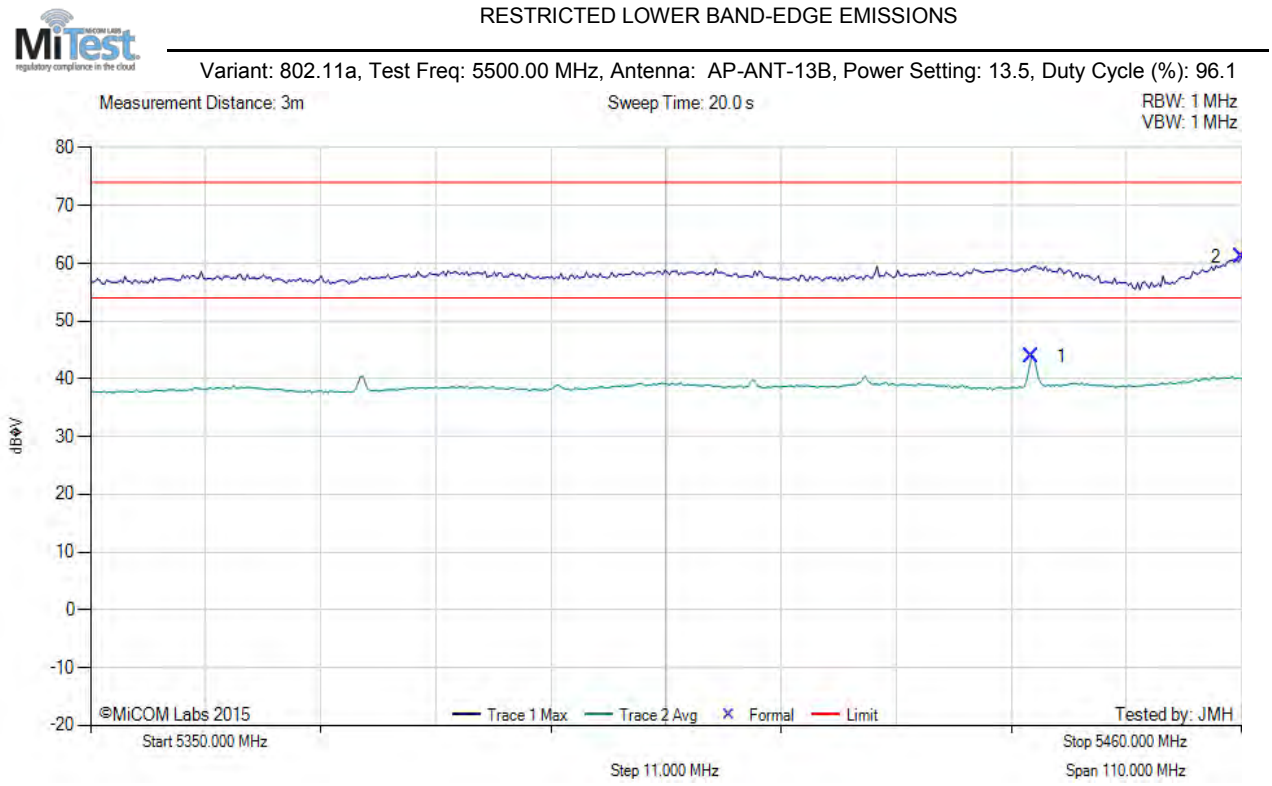
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5722.08	56.54	6.41	-10.73	52.22	Fundamental	Horizontal	100	0	--	--	
2	11442.21	34.55	9.47	-4.92	39.10	Max Avg	Horizontal	120	169	54.0	-14.9	Pass
3	11442.21	47.10	9.47	-4.92	51.65	Max Peak	Horizontal	120	169	68.2	-16.6	Pass

Test Notes: AP325 on Table powered by AC/DC PS

back to matrix

A.1.2. Restricted Band-Edge Emissions

A.1.2.9. Aruba Networks AP-ANT-13B



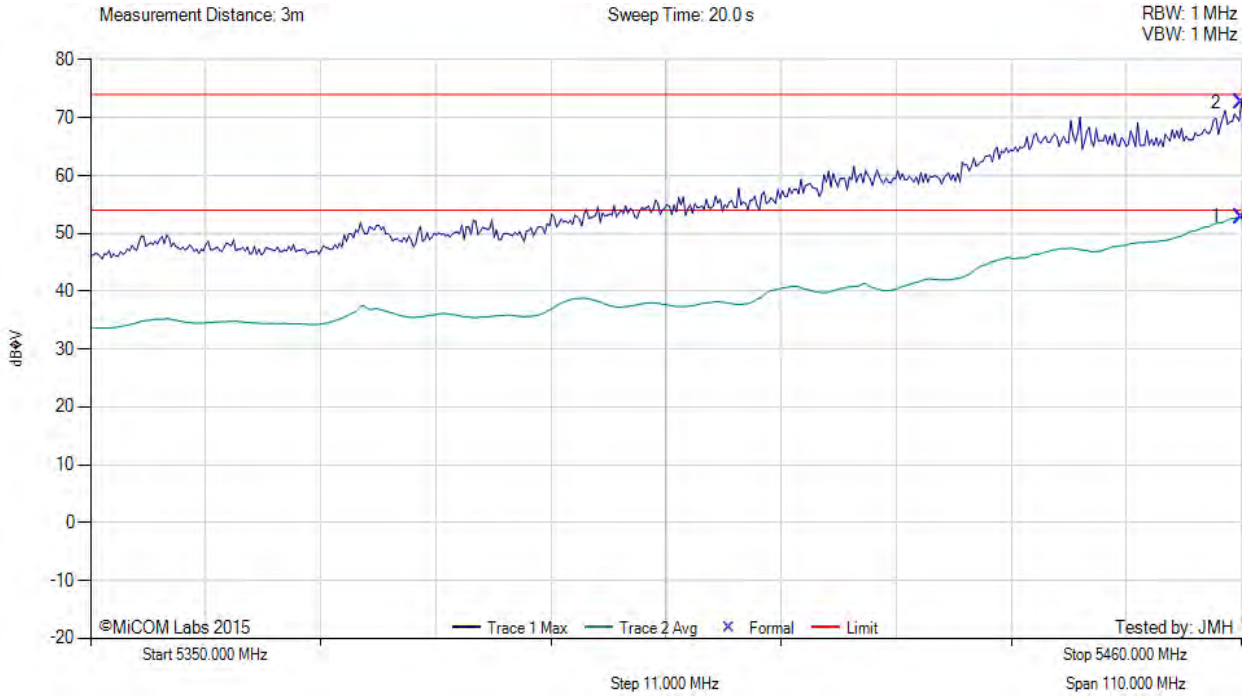
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5439.94	48.93	6.23	-11.22	43.94	Max Avg	Horizontal	126	53	54.0	-10.1	Pass
2	5460.00	66.02	6.26	-11.22	61.06	Max Peak	Horizontal	126	53	74.0	-12.9	Pass

Test Notes: AP324 on table powered by AC/DC PS

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5530.00 MHz, Antenna: AP-ANT-13B, Power Setting: 14.5, Duty Cycle (%): 91.2



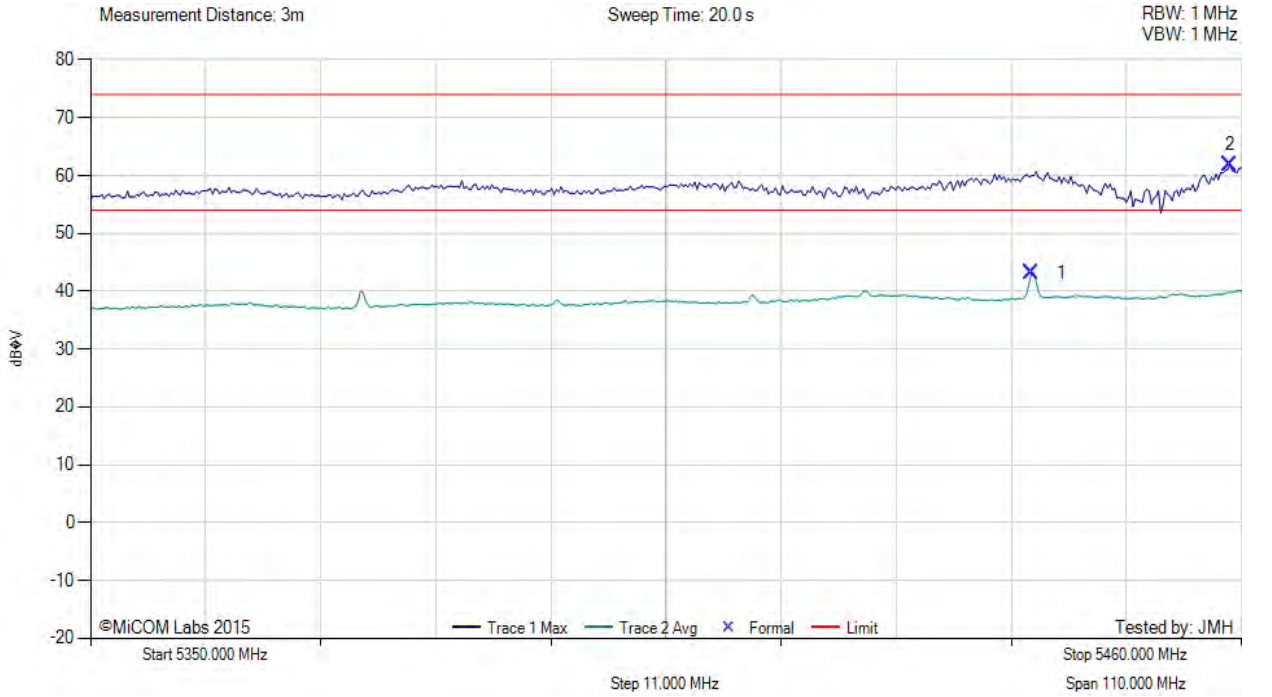
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5460.00	57.86	6.26	-11.22	52.90	Max Avg	Horizontal	126	53	54.0	-1.1	Pass
2	5460.00	77.58	6.26	-11.22	72.62	Max Peak	Horizontal	126	53	74.0	-1.4	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5500.00 MHz, Antenna: AP-ANT-13B, Power Setting: 13.5, Duty Cycle (%): 96.3



Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5439.94	48.12	6.23	-11.22	43.13	Max Avg	Horizontal	126	53	54.0	-10.9	Pass
2	5458.90	66.75	6.26	-11.22	61.79	Max Peak	Horizontal	126	53	74.0	-12.2	Pass

Test Notes: AP324 on table powered by AC/DC PS

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5510.00 MHz, Antenna: AP-ANT-13B, Power Setting: 16, Duty Cycle (%): 96.3

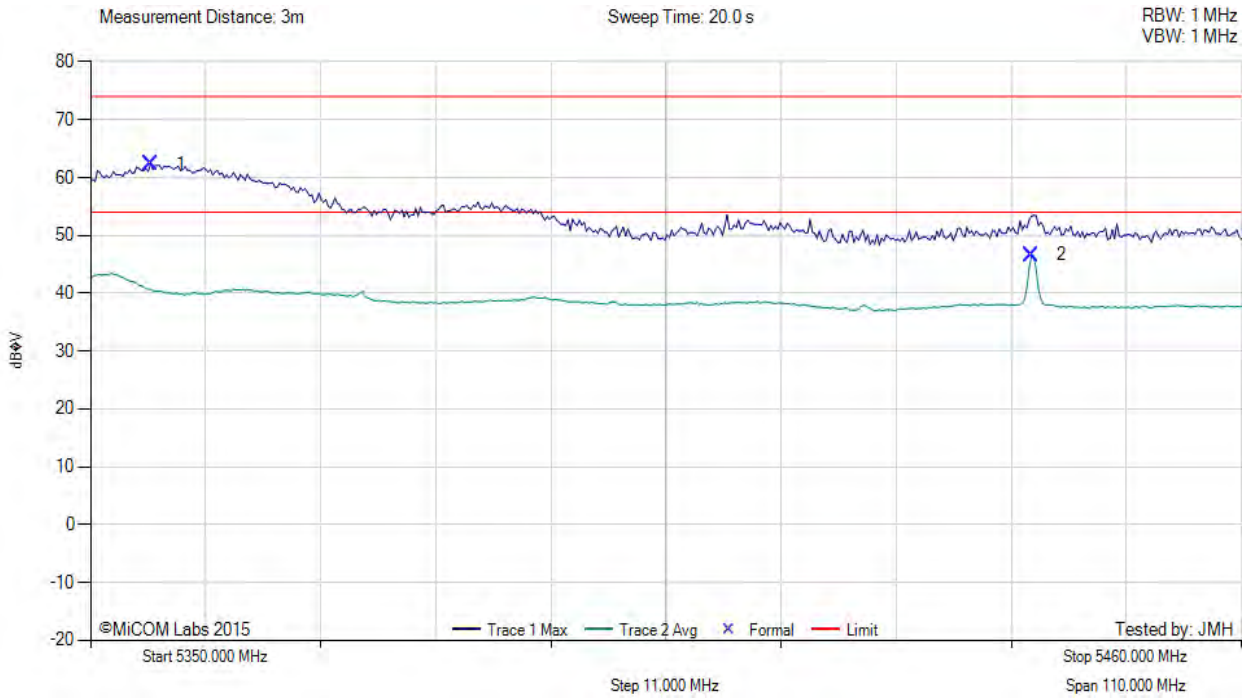
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5460.00	47.85	6.26	-11.22	42.89	Max Avg	Horizontal	126	53	54.0	-11.1	Pass
2	5460.00	72.37	6.26	-11.22	67.41	Max Peak	Horizontal	126	53	74.0	-6.6	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: AP-ANT-13B, Power Setting: 13.5, Duty Cycle (%): 96.1



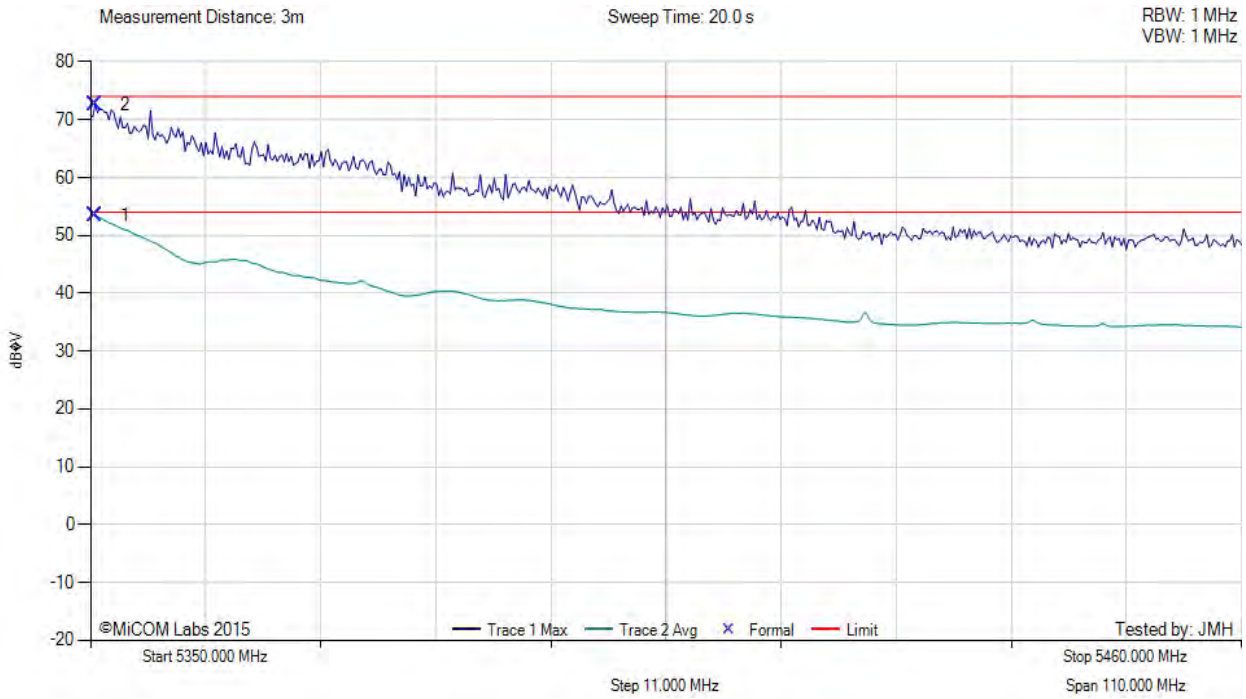
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5355.73	67.27	6.16	-11.04	62.39	Max Peak	Horizontal	110	311	74.0	-11.6	Pass
2	5439.94	51.58	6.23	-11.22	46.59	Max Avg	Horizontal	110	311	54.0	-7.4	Pass

Test Notes: AP324 on table powered by AC/DC PS

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5290.00 MHz, Antenna: AP-ANT-13B, Power Setting: 11, Duty Cycle (%): 91.2



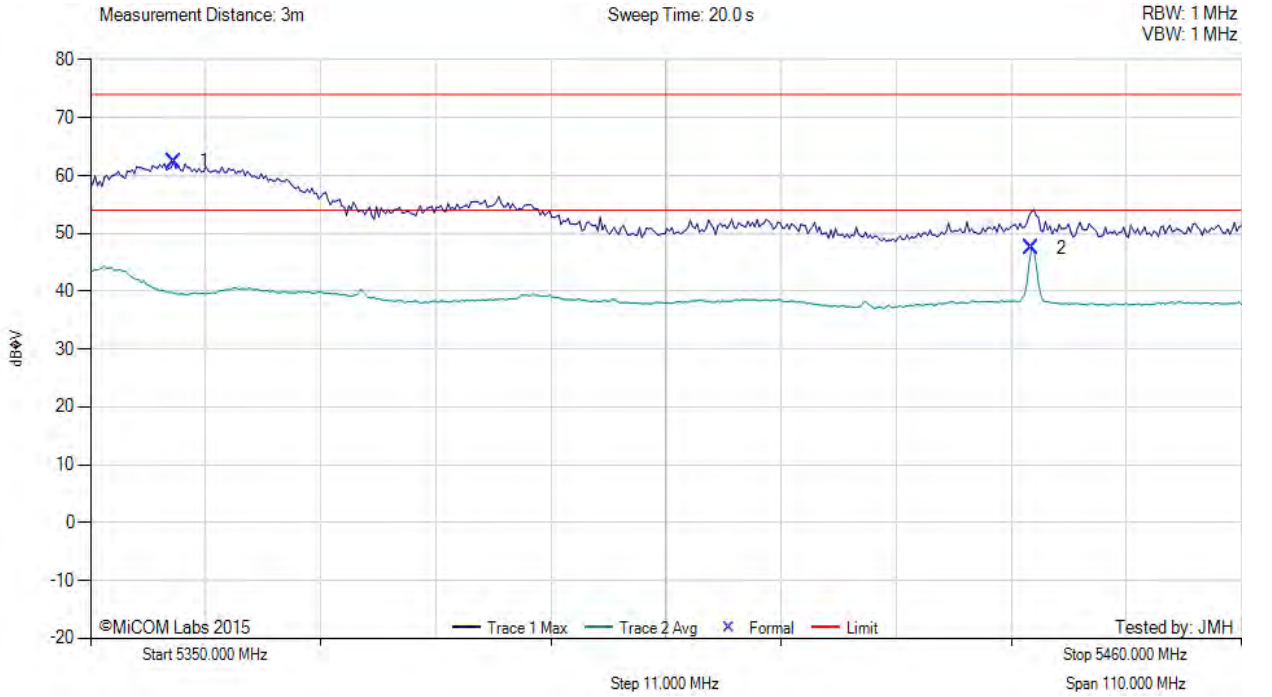
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5350.44	58.36	6.16	-11.02	53.50	Max Avg	Horizontal	110	311	54.0	-0.5	Pass
2	5350.44	77.53	6.16	-11.02	72.67	Max Peak	Horizontal	110	311	74.0	-1.3	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5320.00 MHz, Antenna: AP-ANT-13B, Power Setting: 13.5, Duty Cycle (%): 96.3



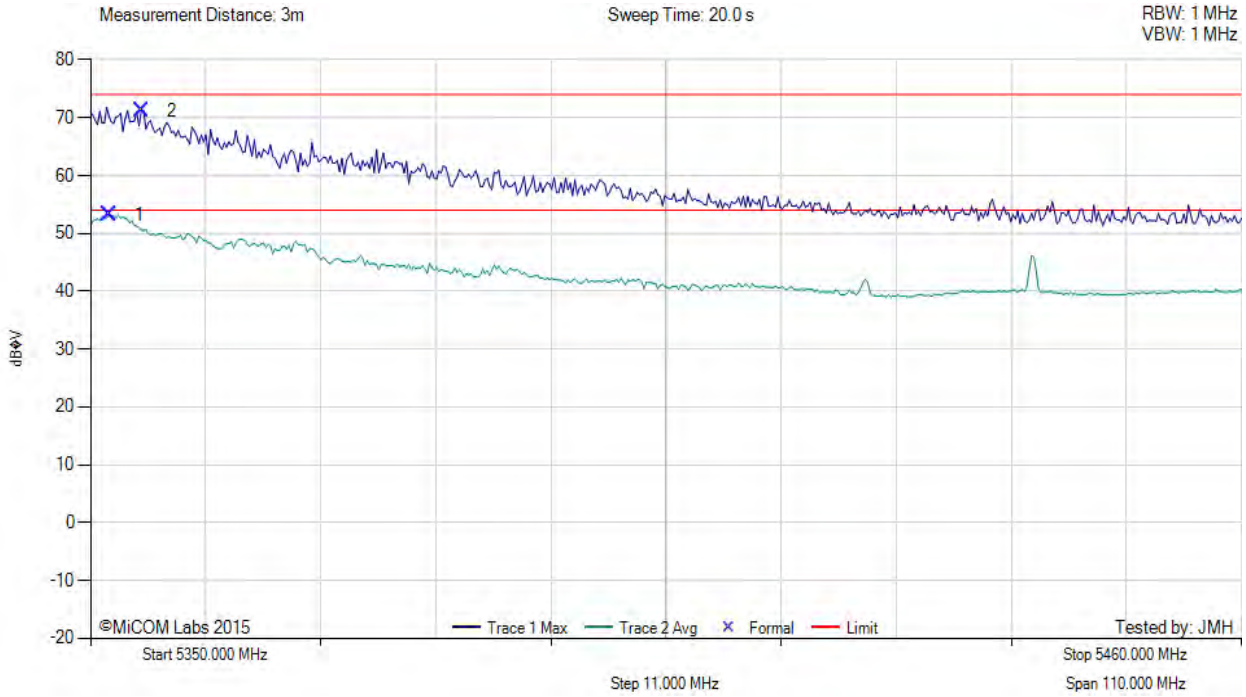
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5357.94	67.33	6.17	-11.05	62.45	Max Peak	Horizontal	110	311	74.0	-11.6	Pass
2	5439.94	52.53	6.23	-11.22	47.54	Max Avg	Horizontal	110	311	54.0	-6.5	Pass

Test Notes: AP324 on table powered by AC/DC PS

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5310.00 MHz, Antenna: AP-ANT-13B, Power Setting: 16, Duty Cycle (%): 96.3

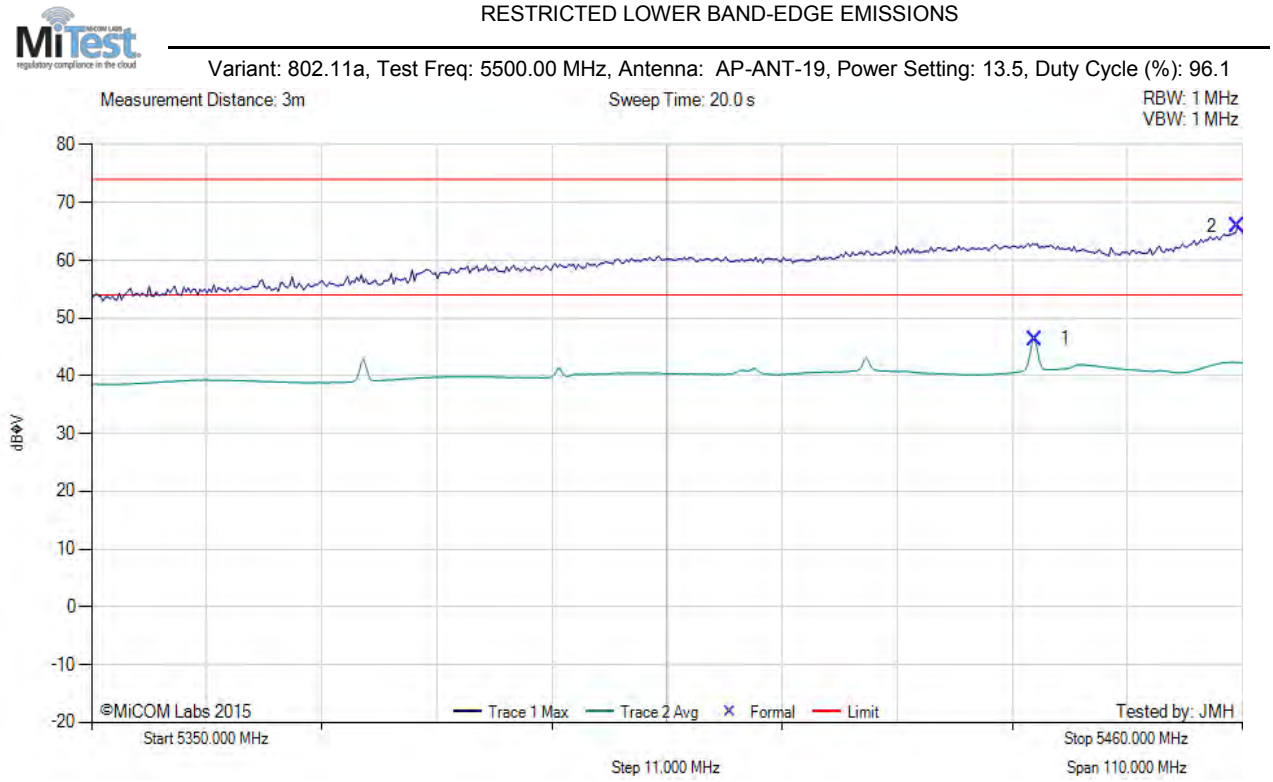


Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5351.76	58.13	6.16	-11.03	53.26	Max Avg	Horizontal	110	311	54.0	-0.7	Pass
2	5354.85	76.12	6.16	-11.04	71.24	Max Peak	Horizontal	110	311	74.0	-2.8	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

back to matrix

A.1.2.10. Aruba Networks AP-ANT-19



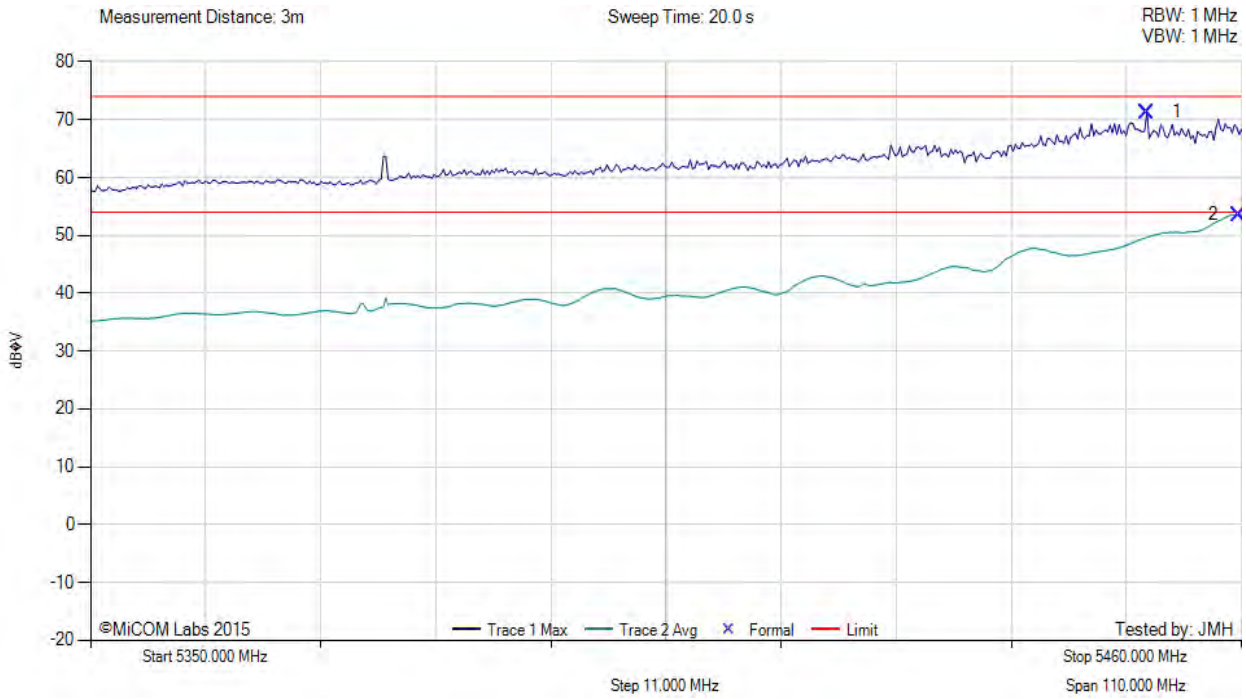
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5440.16	51.35	6.23	-11.22	46.36	Max Avg	Vertical	117	306	54.0	-7.6	Pass
2	5459.56	70.85	6.26	-11.22	65.89	Max Peak	Vertical	117	306	74.0	-8.1	Pass

Test Notes: AP324 on table powered by AC/DC PS

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5530.00 MHz, Antenna: AP-ANT-19, Power Setting: 14.5, Duty Cycle (%): 91.2



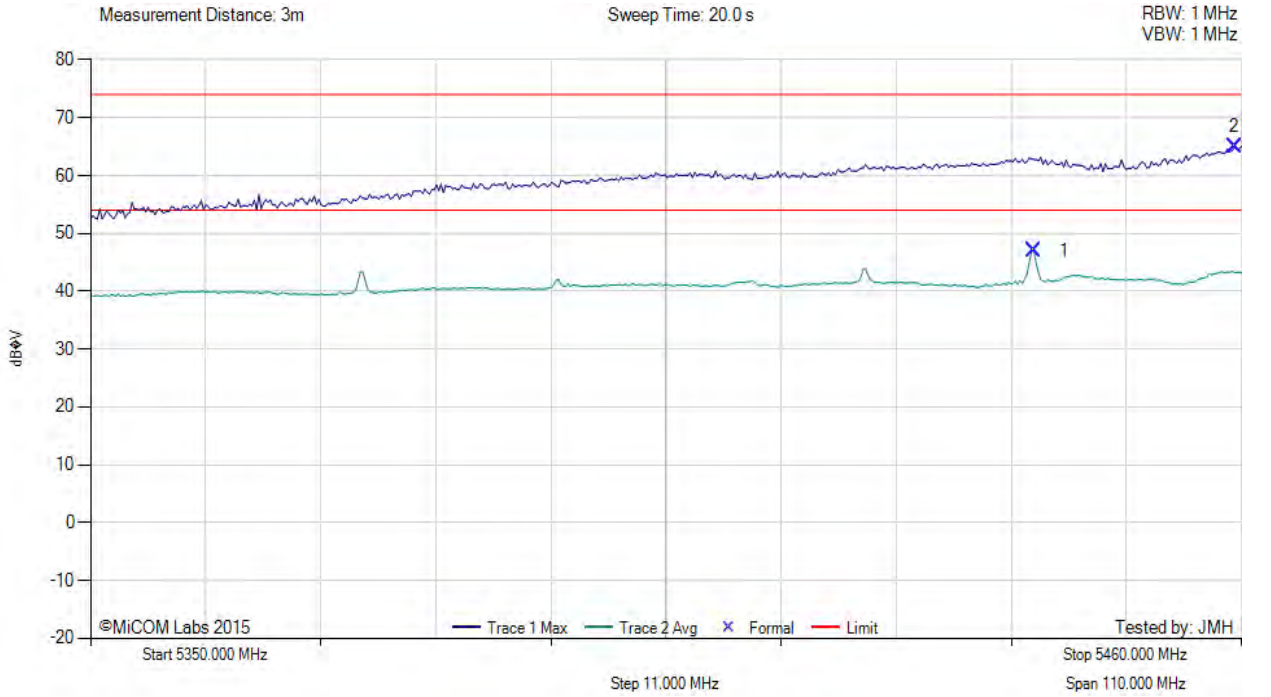
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5450.96	76.30	6.25	-11.23	71.32	Max Peak	Vertical	114	53	74.0	-2.7	Pass
2	5459.78	58.58	6.26	-11.22	53.62	Max Avg	Vertical	114	53	54.0	-0.4	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5500.00 MHz, Antenna: AP-ANT-19, Power Setting: 13.5, Duty Cycle (%): 98.3



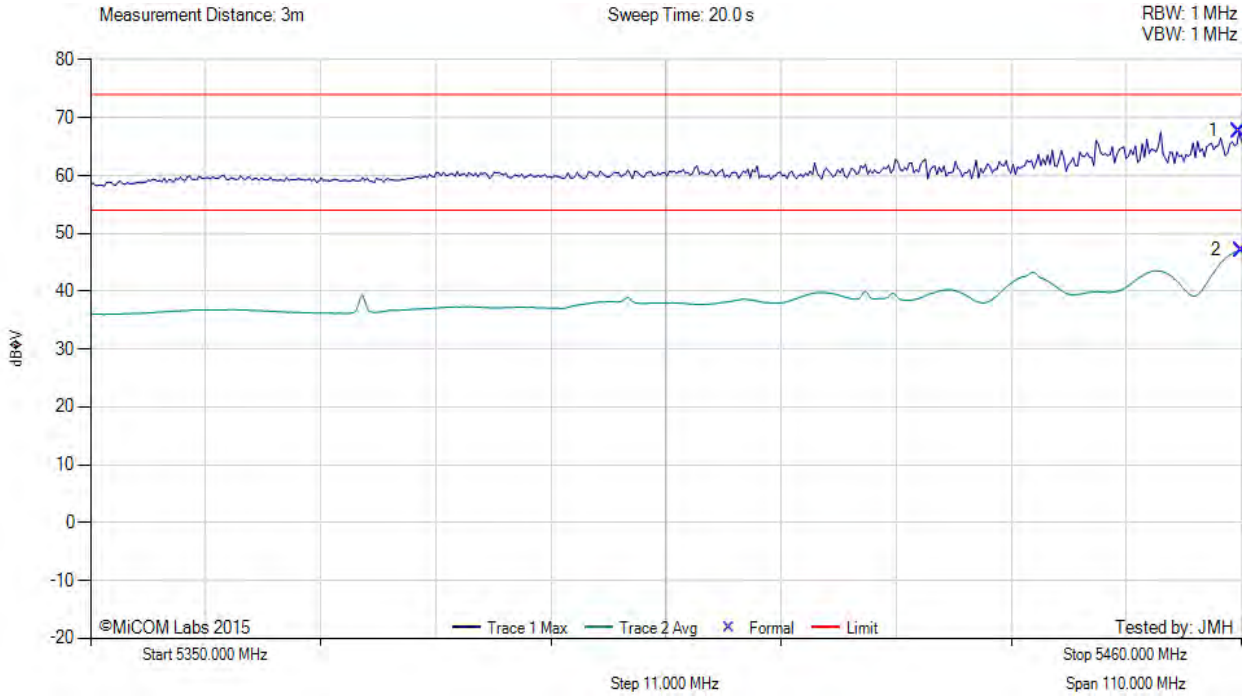
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5440.16	52.03	6.23	-11.22	47.04	Max Avg	Vertical	117	306	54.0	-7.0	Pass
2	5459.34	69.91	6.26	-11.22	64.95	Max Peak	Vertical	117	306	74.0	-9.1	Pass

Test Notes: AP324 on table powered by AC/DC PS

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5510.00 MHz, Antenna: AP-ANT-19, Power Setting: 16, Duty Cycle (%): 96.3



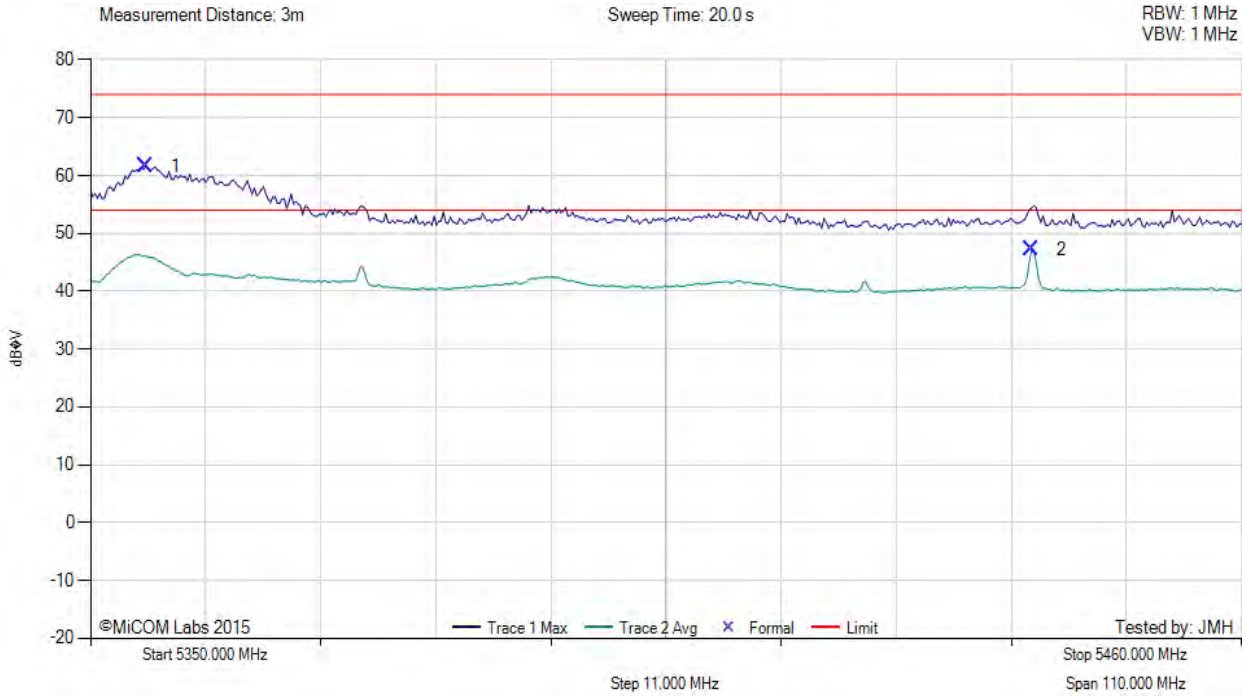
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5459.78	72.64	6.26	-11.22	67.68	Max Peak	Vertical	114	53	74.0	-6.3	Pass
2	5460.00	52.03	6.26	-11.22	47.07	Max Avg	Vertical	114	53	54.0	-6.9	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: AP-ANT-19, Power Setting: 13.5, Duty Cycle (%): 96.1



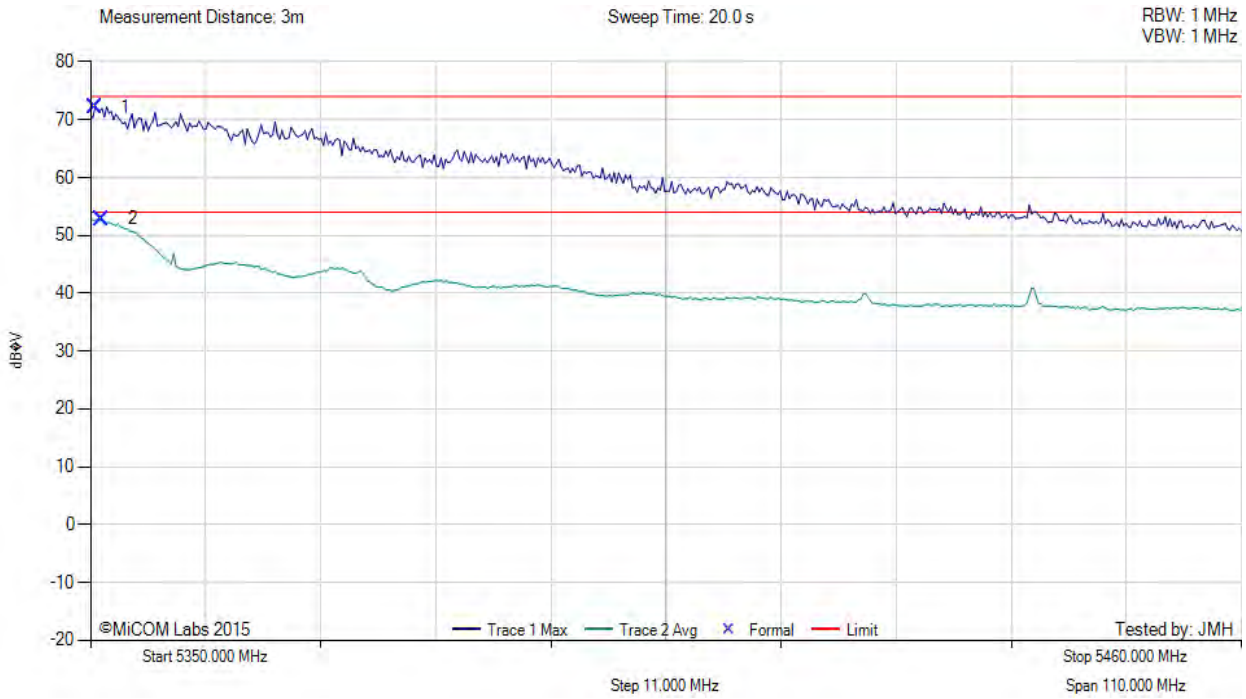
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5355.29	66.52	6.16	-11.04	61.64	Max Peak	Vertical	114	4	74.0	-12.4	Pass
2	5439.94	52.20	6.23	-11.22	47.21	Max Avg	Vertical	114	4	54.0	-6.8	Pass

Test Notes: AP324 on table powered by AC/DC PS

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5290.00 MHz, Antenna: AP-ANT-19, Power Setting: 10.5, Duty Cycle (%): 91.2



Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5350.44	77.05	6.16	-11.02	72.19	Max Peak	Vertical	114	11	74.0	-1.8	Pass
2	5351.10	57.77	6.16	-11.03	52.90	Max Avg	Vertical	114	11	54.0	-1.1	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5320.00 MHz, Antenna: AP-ANT-19, Power Setting: 13.5, Duty Cycle (%): 98.3

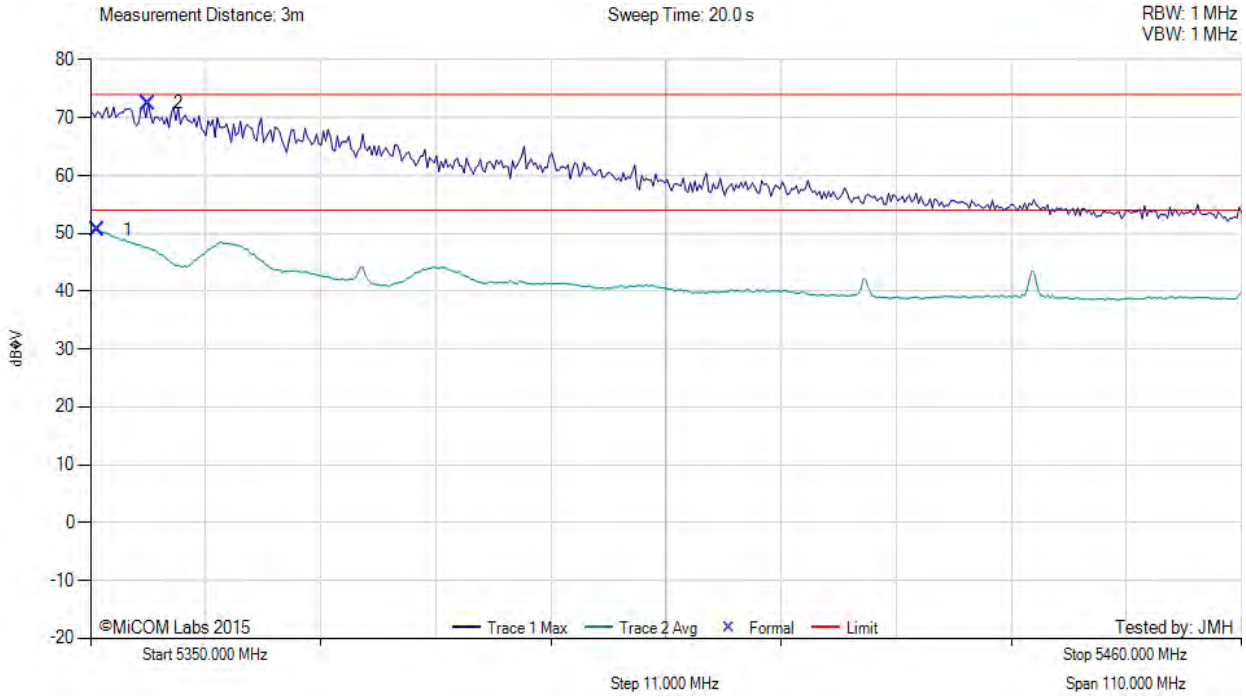
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5354.63	52.41	6.16	-11.04	47.53	Max Avg	Vertical	114	4	54.0	-6.5	Pass
2	5355.29	66.88	6.16	-11.04	62.00	Max Peak	Vertical	114	4	74.0	-12.0	Pass

Test Notes: AP324 on table powered by AC/DC PS

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5310.00 MHz, Antenna: AP-ANT-19, Power Setting: 16.0, Duty Cycle (%): 96.3

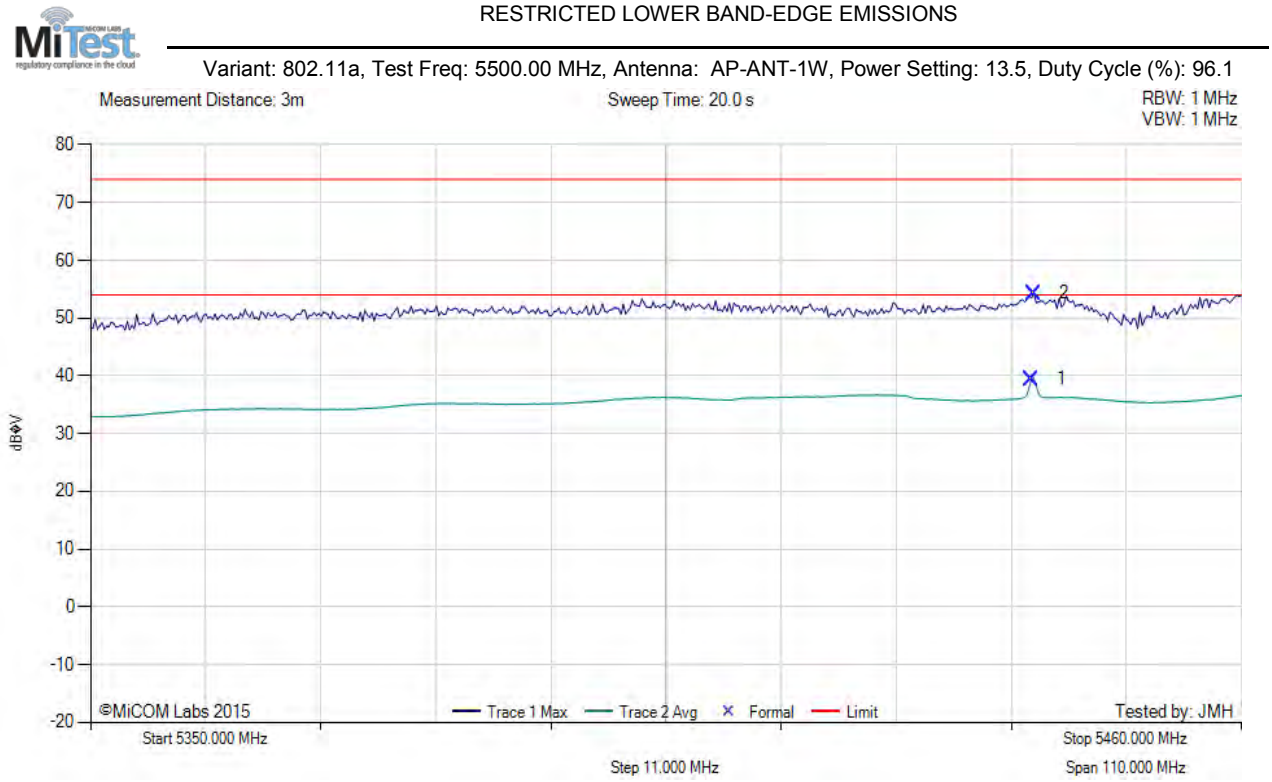


Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5350.66	55.47	6.16	-11.03	50.60	Max Avg	Vertical	114	11	54.0	-3.4	Pass
2	5355.51	77.38	6.16	-11.04	72.50	Max Peak	Vertical	114	11	74.0	-1.5	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

back to matrix

A.1.2.11. Aruba Networks AP-ANT-1W



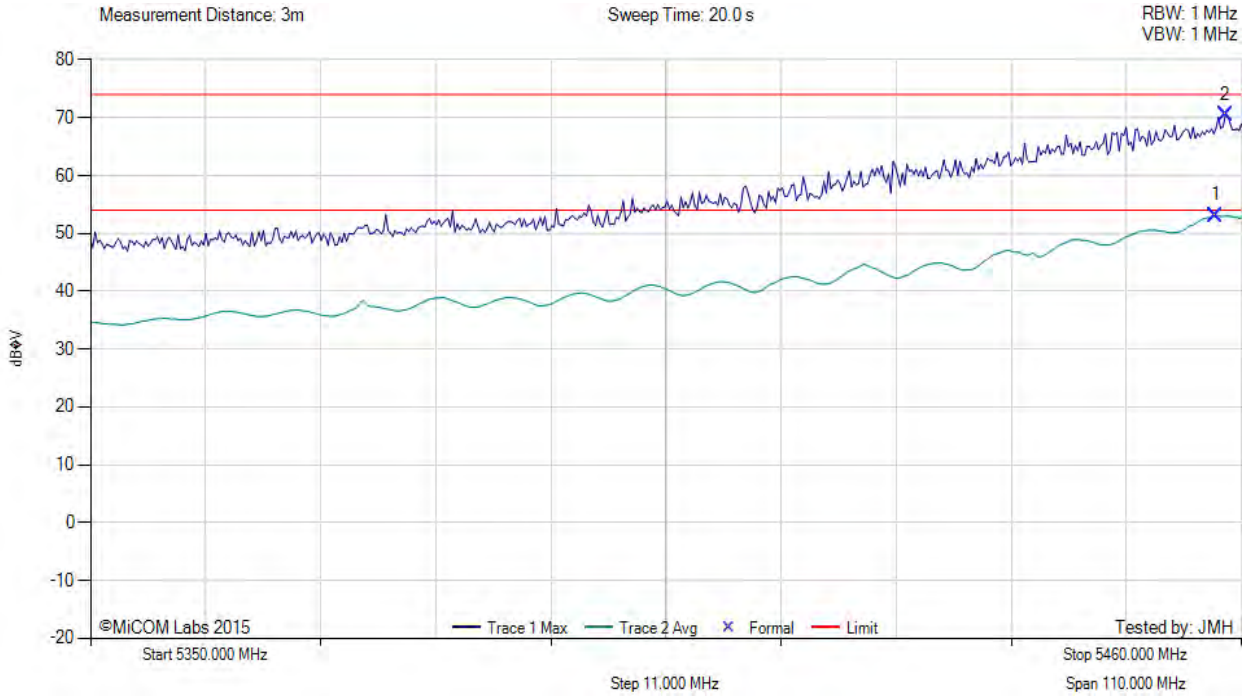
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5439.94	44.47	6.23	-11.22	39.48	Max Avg	Horizontal	99	315	54.0	-14.5	Pass
2	5440.16	59.32	6.23	-11.22	54.33	Max Peak	Horizontal	99	315	74.0	-19.7	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5530.00 MHz, Antenna: AP-ANT-1W, Power Setting: 14.5, Duty Cycle (%): 91.2



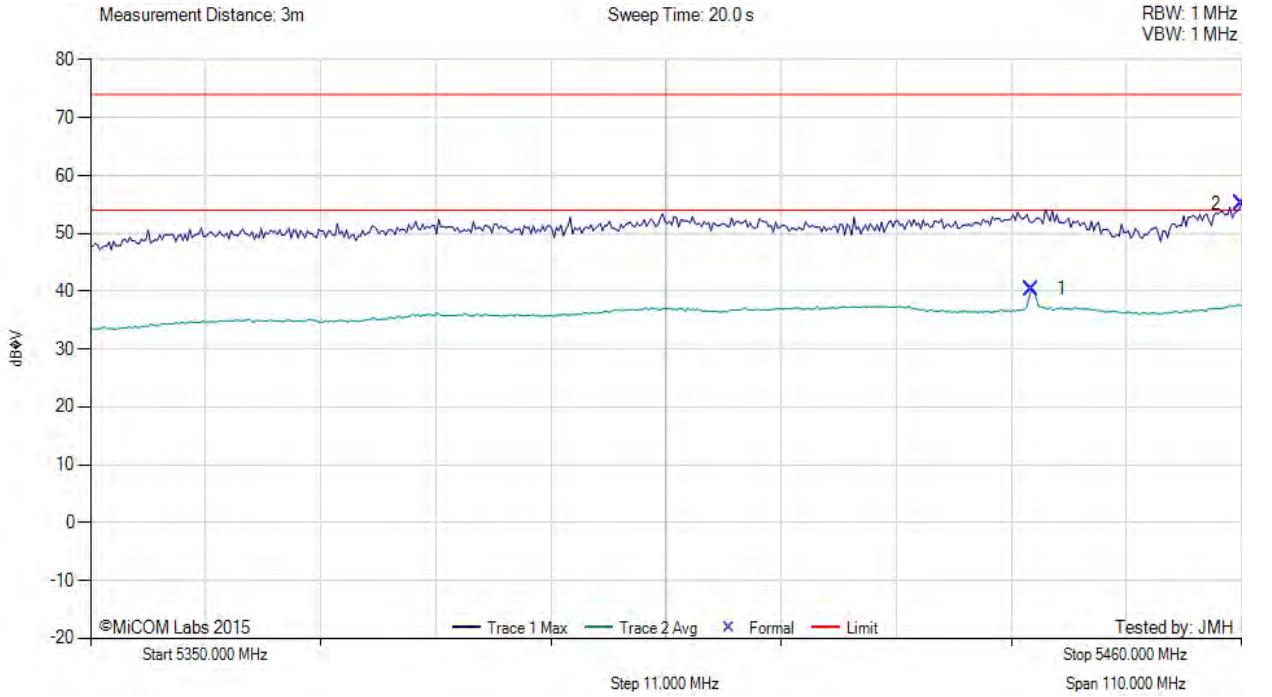
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5457.58	58.10	6.26	-11.23	53.13	Max Avg	Horizontal	100	319	54.0	-0.9	Pass
2	5458.46	75.37	6.26	-11.23	70.40	Max Peak	Horizontal	100	319	74.0	-3.6	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5500.00 MHz, Antenna: AP-ANT-1W, Power Setting: 13.5, Duty Cycle (%): 98.3



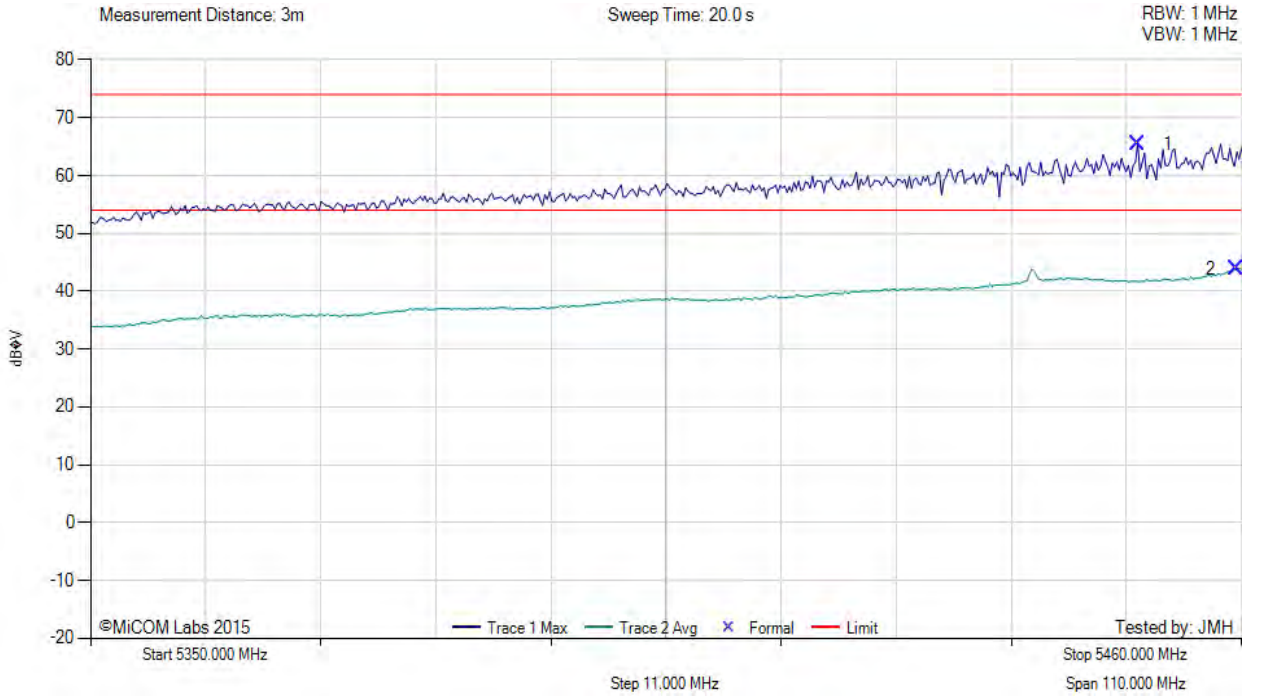
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5439.94	45.40	6.23	-11.22	40.41	Max Avg	Horizontal	99	315	54.0	-13.6	Pass
2	5460.00	60.04	6.26	-11.22	55.08	Max Peak	Horizontal	99	315	74.0	-18.9	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5510.00 MHz, Antenna: AP-ANT-1W, Power Setting: 13.5, Duty Cycle (%): 96.3



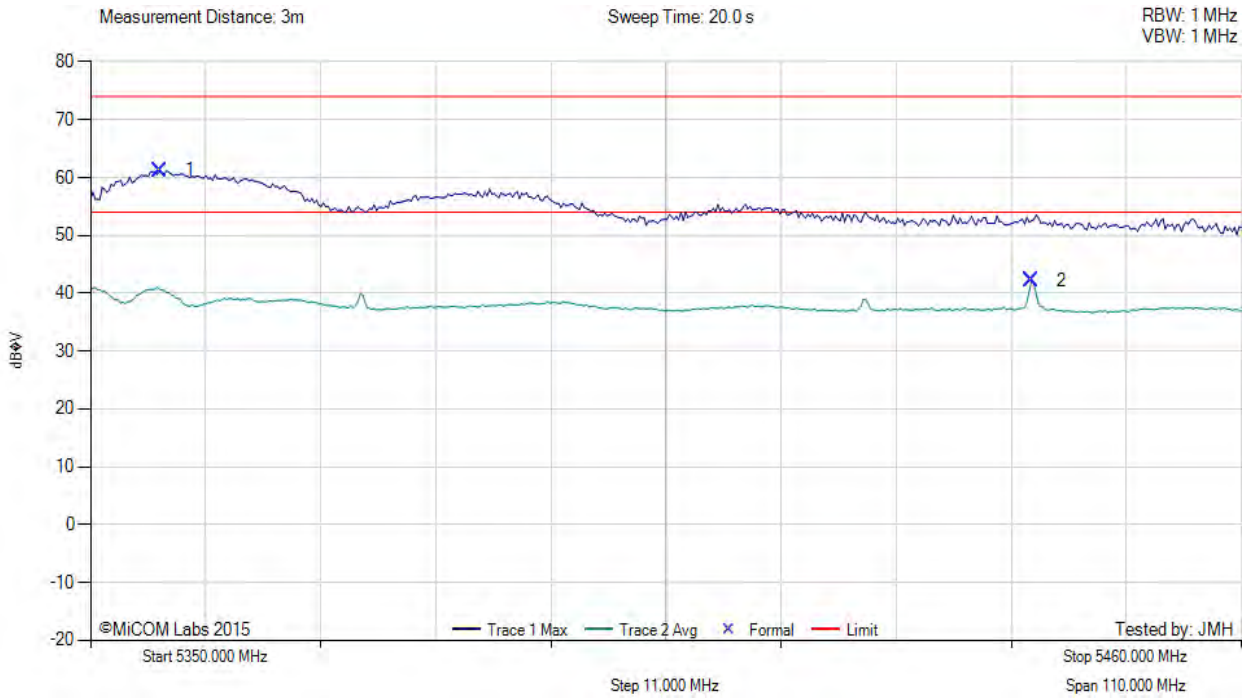
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5450.08	70.44	6.25	-11.23	65.46	Max Peak	Horizontal	99	315	74.0	-8.5	Pass
2	5459.56	48.91	6.26	-11.22	43.95	Max Avg	Horizontal	99	315	54.0	-10.1	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: AP-ANT-1W, Power Setting: 13.5, Duty Cycle (%): 96.1



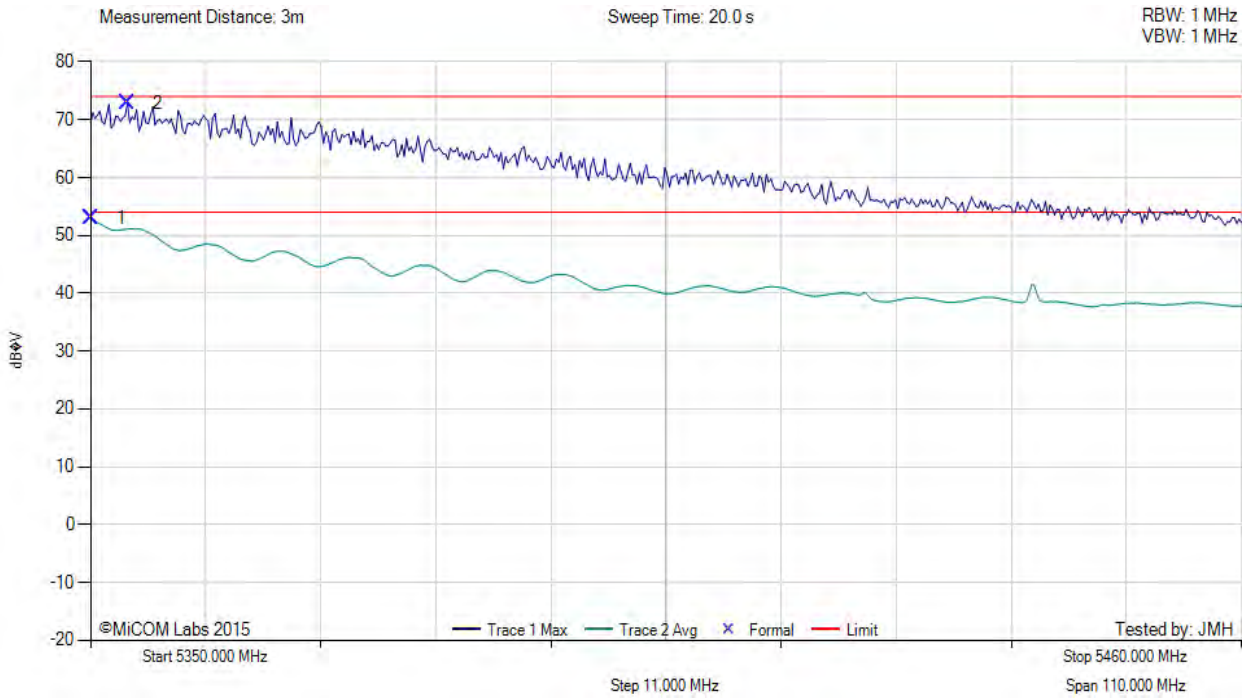
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5356.61	66.09	6.17	-11.05	61.21	Max Peak	Horizontal	103	112	74.0	-12.8	Pass
2	5439.94	47.21	6.23	-11.22	42.22	Max Avg	Horizontal	103	112	54.0	-11.8	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5290.00 MHz, Antenna: AP-ANT-1W, Power Setting: 14.0, Duty Cycle (%): 91.2



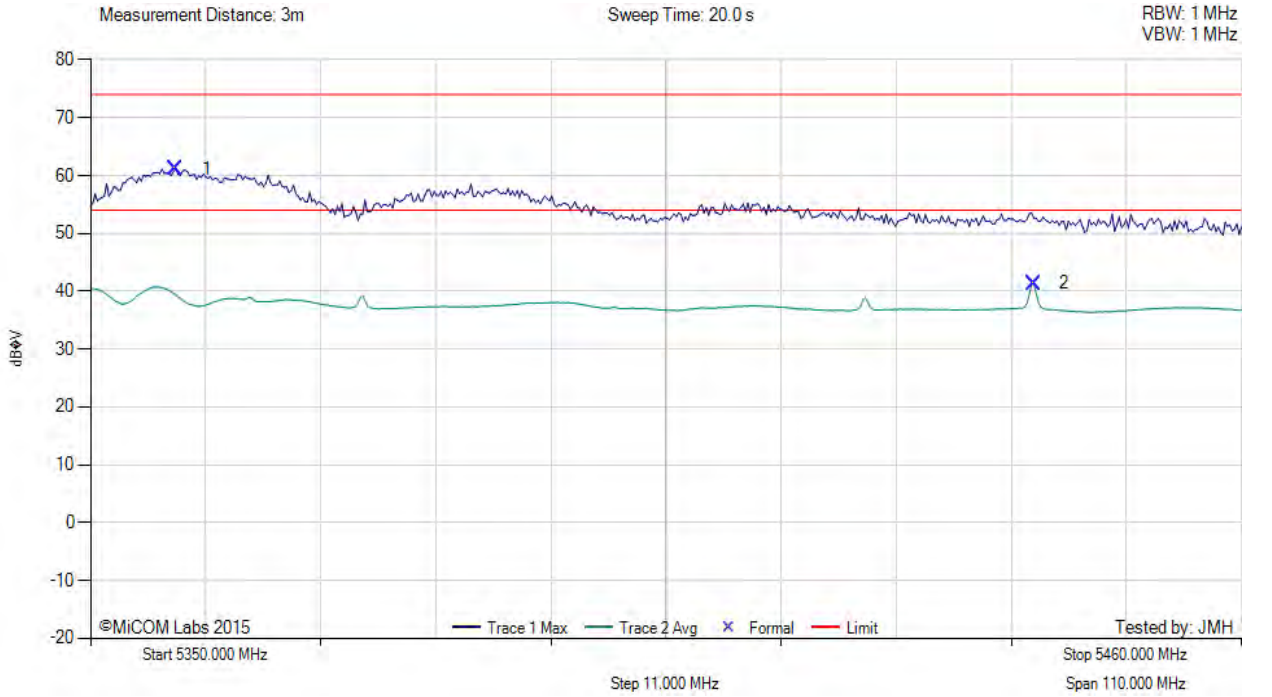
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5350.00	57.88	6.16	-11.02	53.02	Max Avg	Horizontal	100	319	54.0	-1.0	Pass
2	5353.53	77.77	6.16	-11.04	72.89	Max Peak	Horizontal	100	319	74.0	-1.1	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5320.00 MHz, Antenna: AP-ANT-1W, Power Setting: 13.5, Duty Cycle (%): 98.3



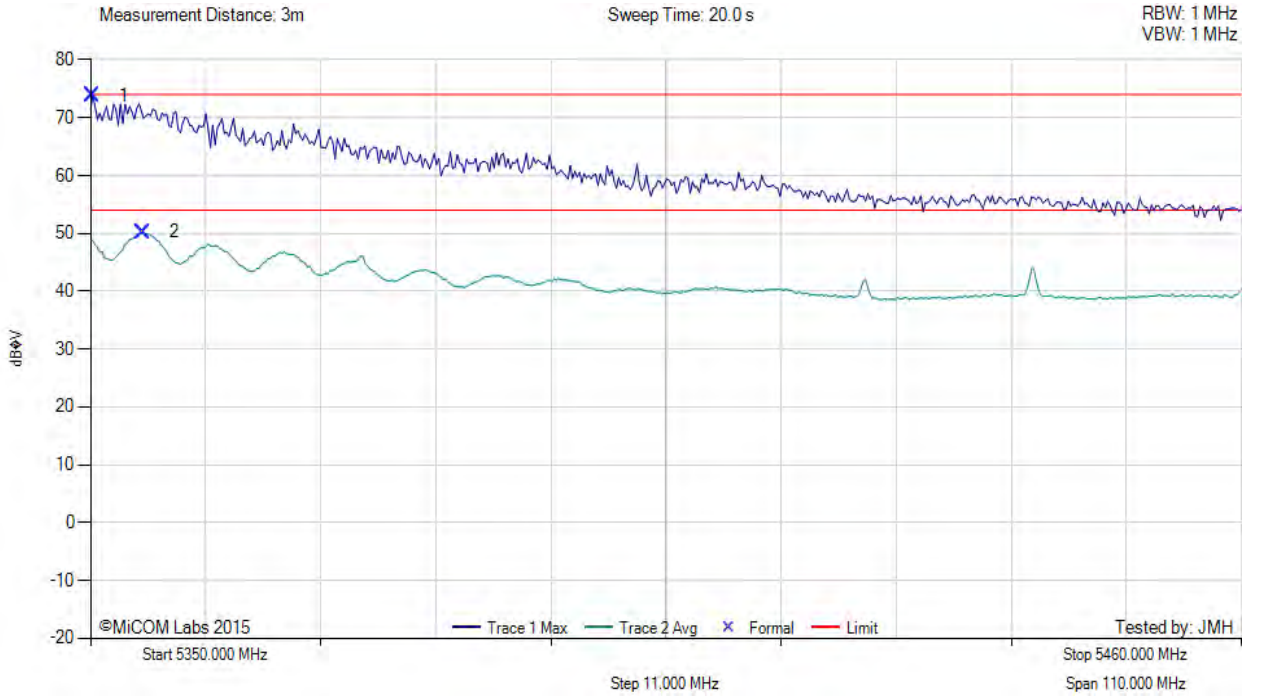
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5358.16	66.04	6.17	-11.05	61.16	Max Peak	Horizontal	103	112	74.0	-12.8	Pass
2	5440.16	46.39	6.23	-11.22	41.40	Max Avg	Horizontal	103	112	54.0	-12.6	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5310.00 MHz, Antenna: AP-ANT-1W, Power Setting: 16.0, Duty Cycle (%): 96.3

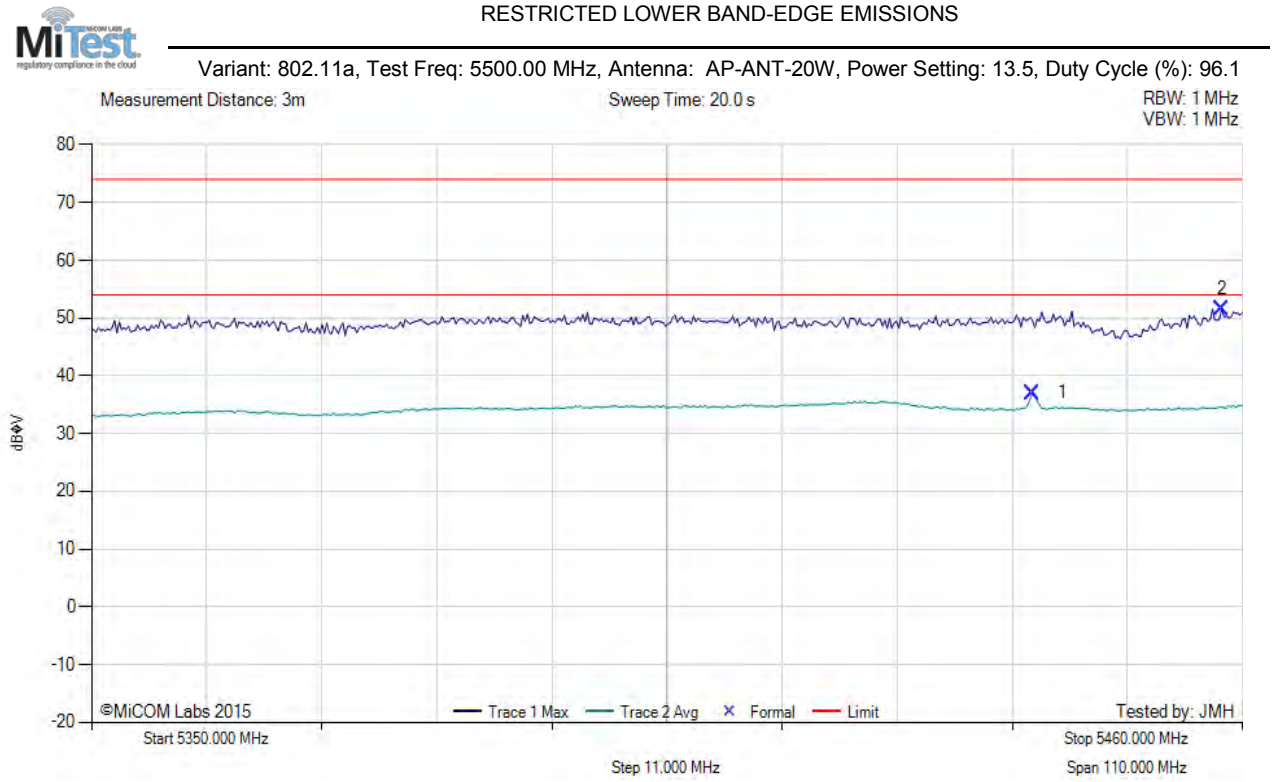


Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5350.22	78.67	6.16	-11.02	73.81	Max Peak	Horizontal	100	322	74.0	-0.2	Pass
2	5355.07	55.08	6.16	-11.04	50.20	Max Avg	Horizontal	100	322	54.0	-3.8	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

back to matrix

A.1.2.12. Aruba Networks AP-ANT-20W



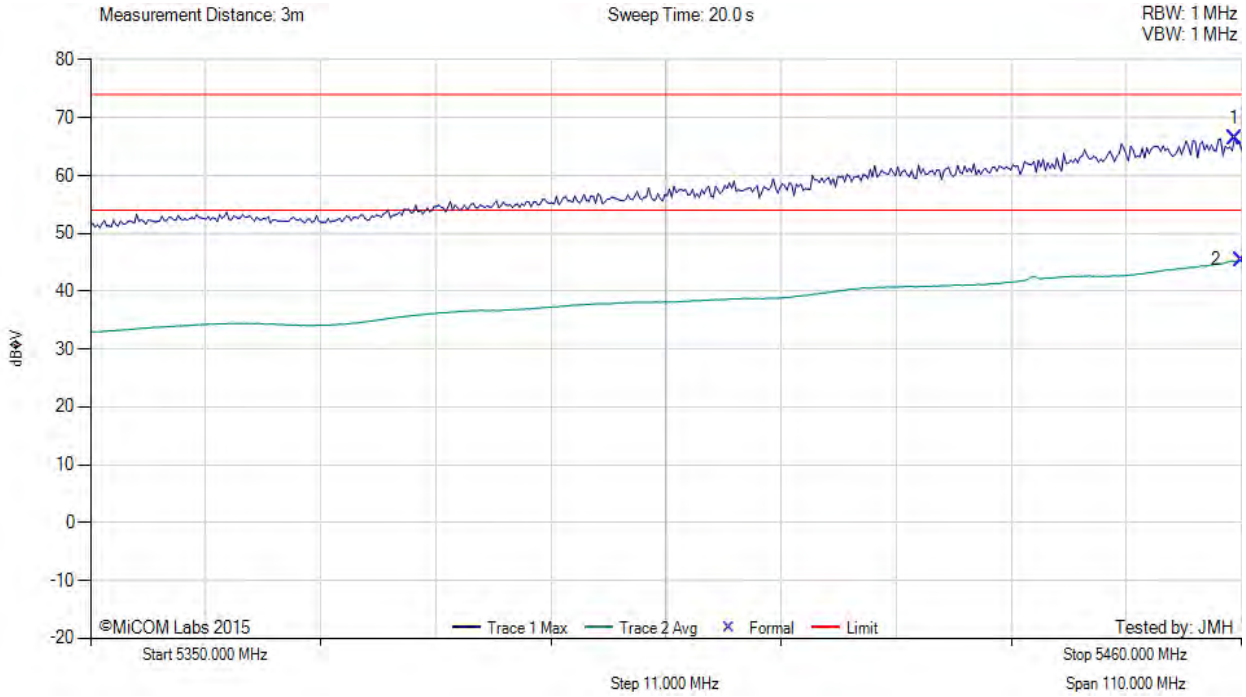
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5439.94	42.02	6.23	-11.22	37.03	Max Avg	Horizontal	97	333	54.0	-17.0	Pass
2	5458.02	56.59	6.26	-11.23	51.62	Max Peak	Horizontal	97	333	74.0	-22.4	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5530.00 MHz, Antenna: AP-ANT-20W, Power Setting: 16, Duty Cycle (%): 91.2



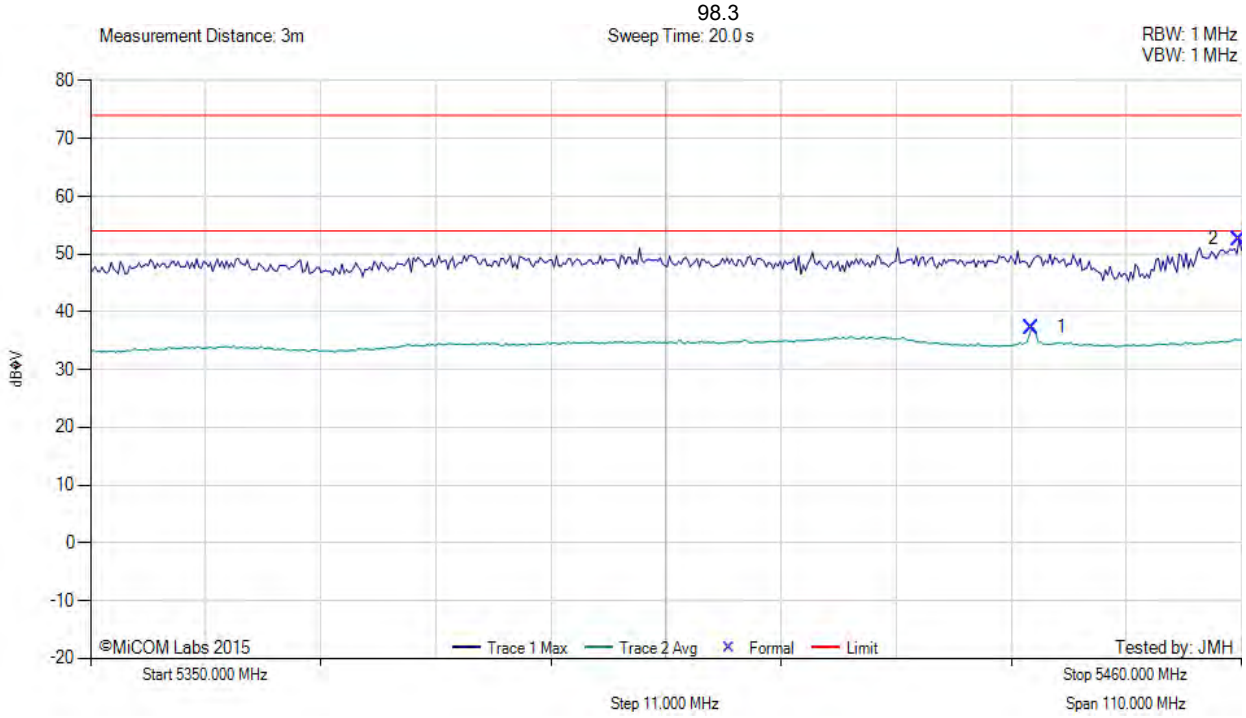
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5459.34	71.38	6.26	-11.22	66.42	Max Peak	Horizontal	97	333	74.0	-1.8	Pass
2	5460.00	50.36	6.26	-11.22	45.40	Max Avg	Horizontal	97	333	54.0	-8.6	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5500.00 MHz, Antenna: AP-ANT-20W, Power Setting: 13.5, Duty Cycle (%): 98.3



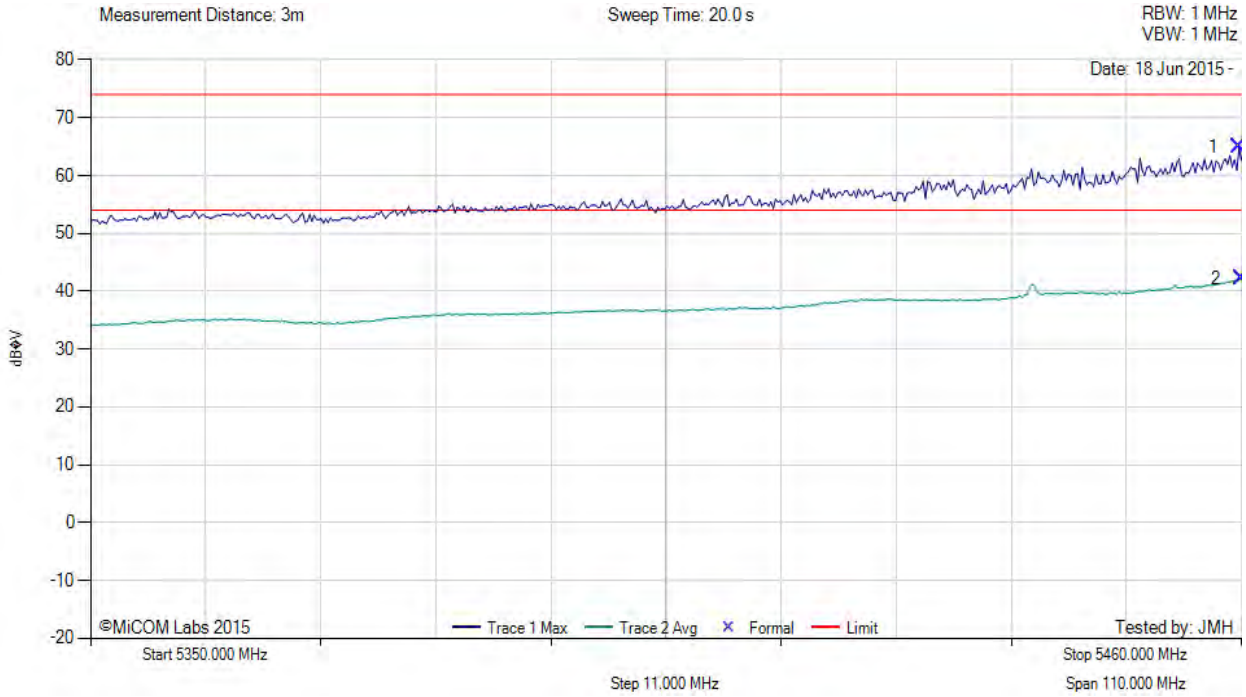
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5439.94	42.25	6.23	-11.22	37.26	Max Avg	Horizontal	97	333	54.0	-16.7	Pass
2	5459.78	57.57	6.26	-11.22	52.61	Max Peak	Horizontal	97	333	74.0	-21.4	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5510.00 MHz, Antenna: AP-ANT-20W, Power Setting: 16, Duty Cycle (%): 96.3



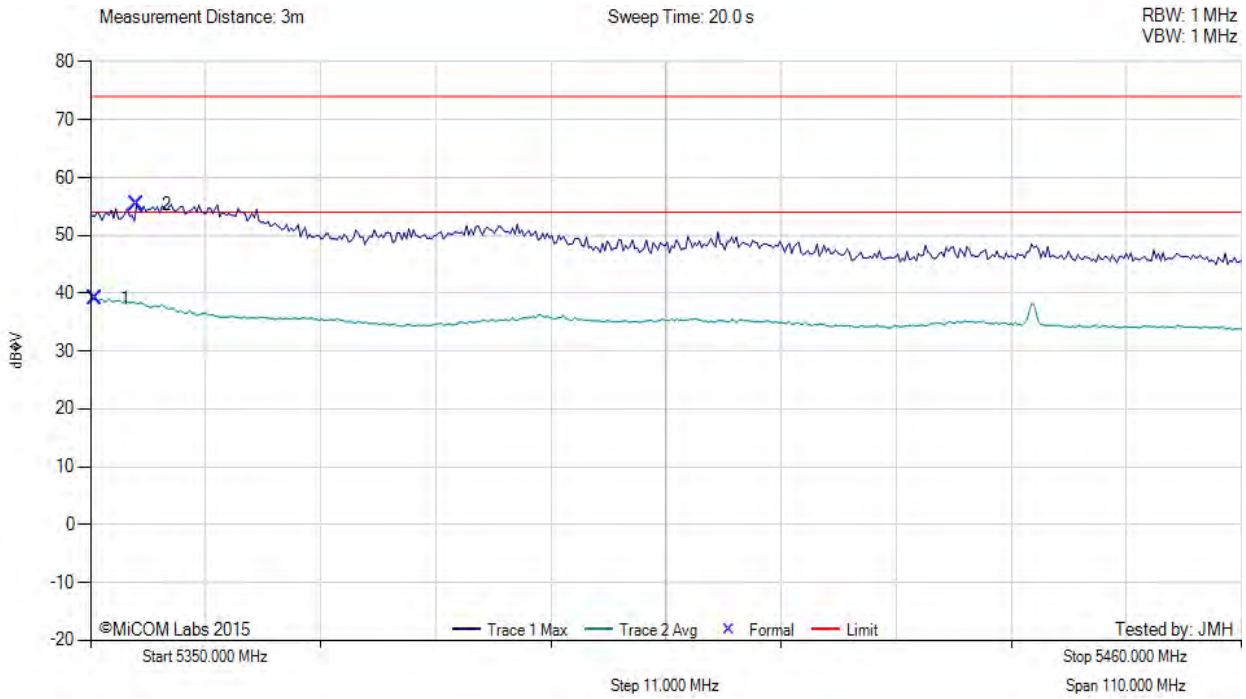
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5459.78	69.91	6.26	-11.22	64.95	Max Peak	Horizontal	97	333	74.0	-9.1	Pass
2	5460.00	47.16	6.26	-11.22	42.20	Max Avg	Horizontal	97	333	54.0	-11.8	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: AP-ANT-20W, Power Setting: 13.5, Duty Cycle (%): 96.1



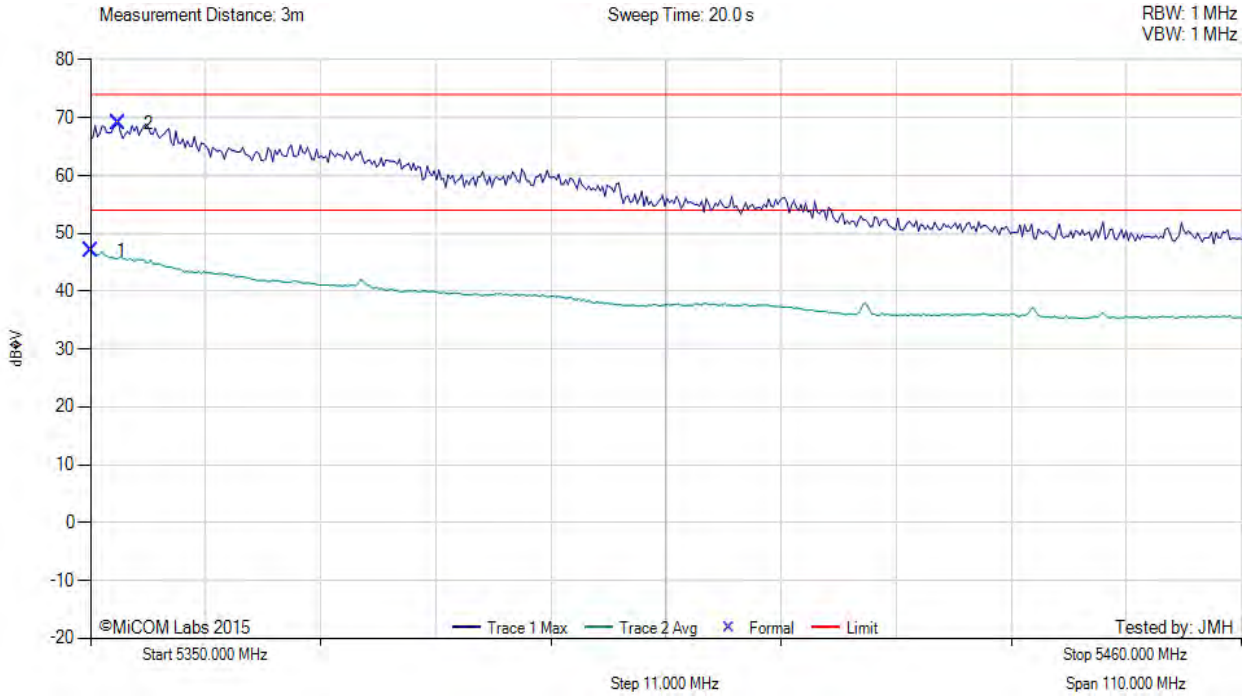
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5350.44	43.93	6.16	-11.02	39.07	Max Avg	Horizontal	124	330	54.0	-14.9	Pass
2	5354.41	60.30	6.16	-11.04	55.42	Max Peak	Horizontal	124	330	74.0	-18.6	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5290.00 MHz, Antenna: AP-ANT-20W, Power Setting: 16.0, Duty Cycle (%): 91.2



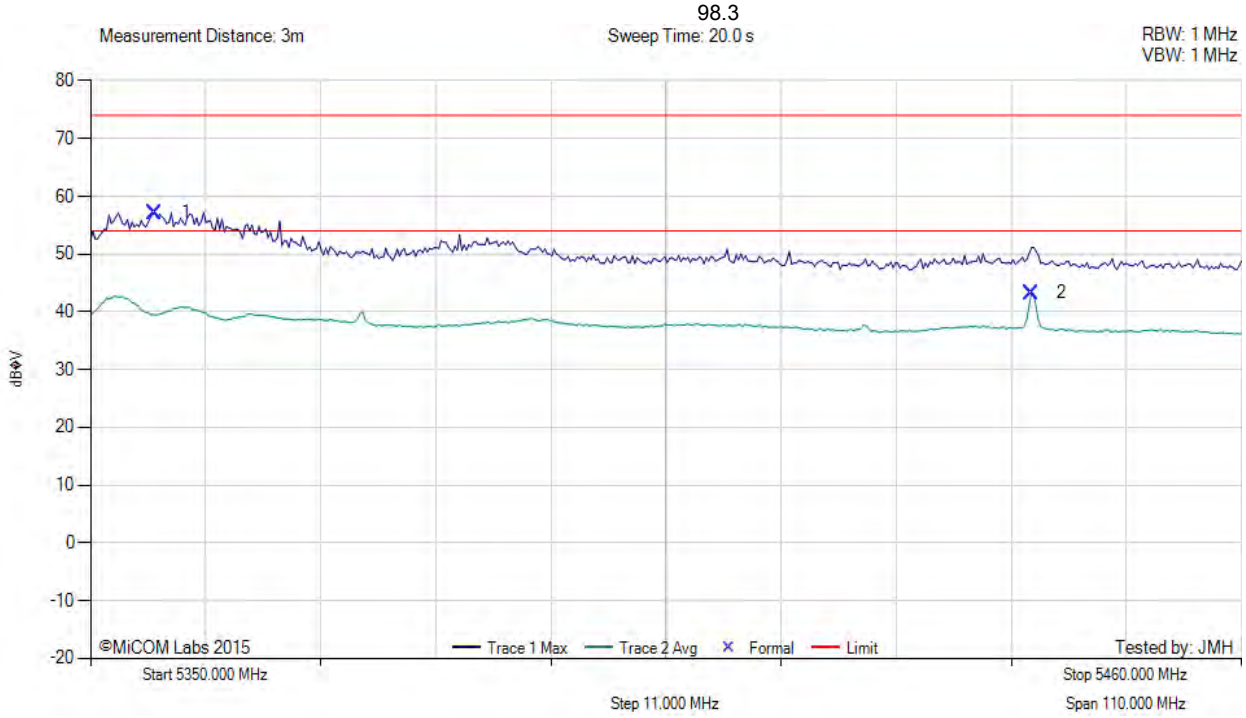
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5350.00	51.90	6.16	-11.02	47.04	Max Avg	Horizontal	101	343	54.0	-7.0	Pass
2	5352.65	73.95	6.16	-11.04	69.07	Max Peak	Horizontal	101	343	74.0	-4.9	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5320.00 MHz, Antenna: AP-ANT-20W, Power Setting: 13.5, Duty Cycle (%): 98.3



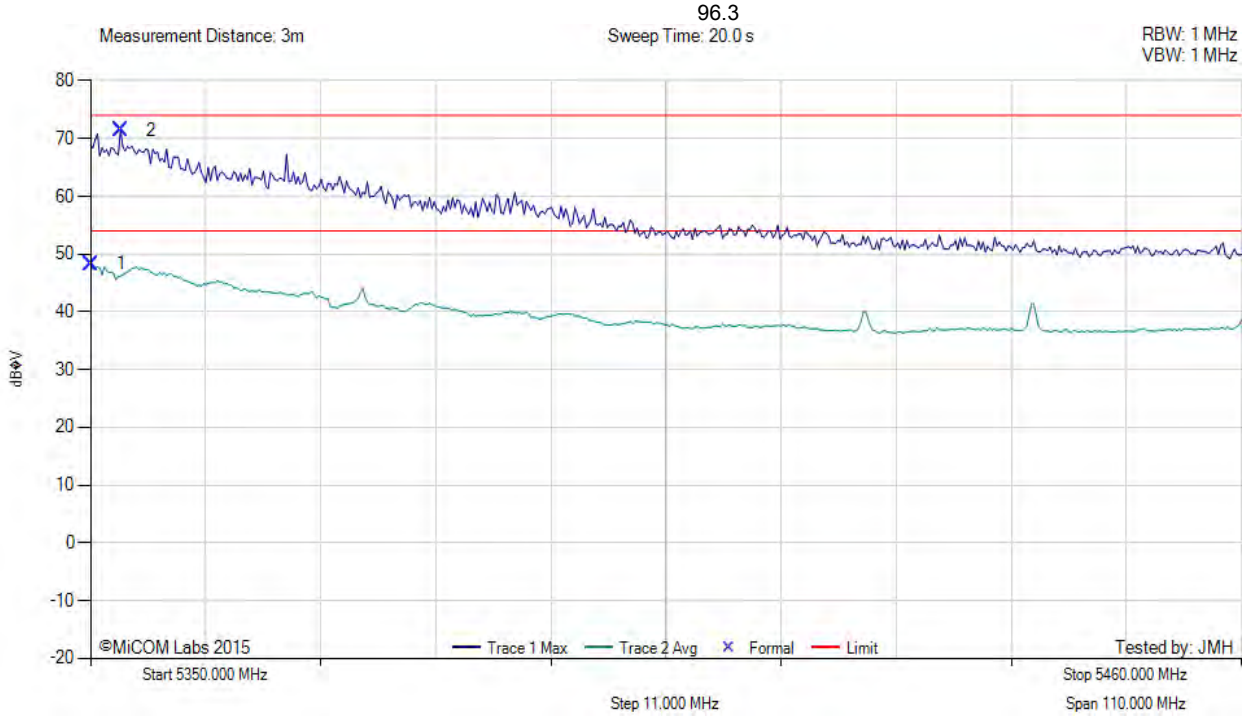
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5356.17	62.07	6.16	-11.04	57.19	Max Peak	Horizontal	124	330	74.0	-16.8	Pass
2	5439.94	48.30	6.23	-11.22	43.31	Max Avg	Horizontal	124	330	54.0	-10.7	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5310.00 MHz, Antenna: AP-ANT-20W, Power Setting: 16.0, Duty Cycle (%): 96.3

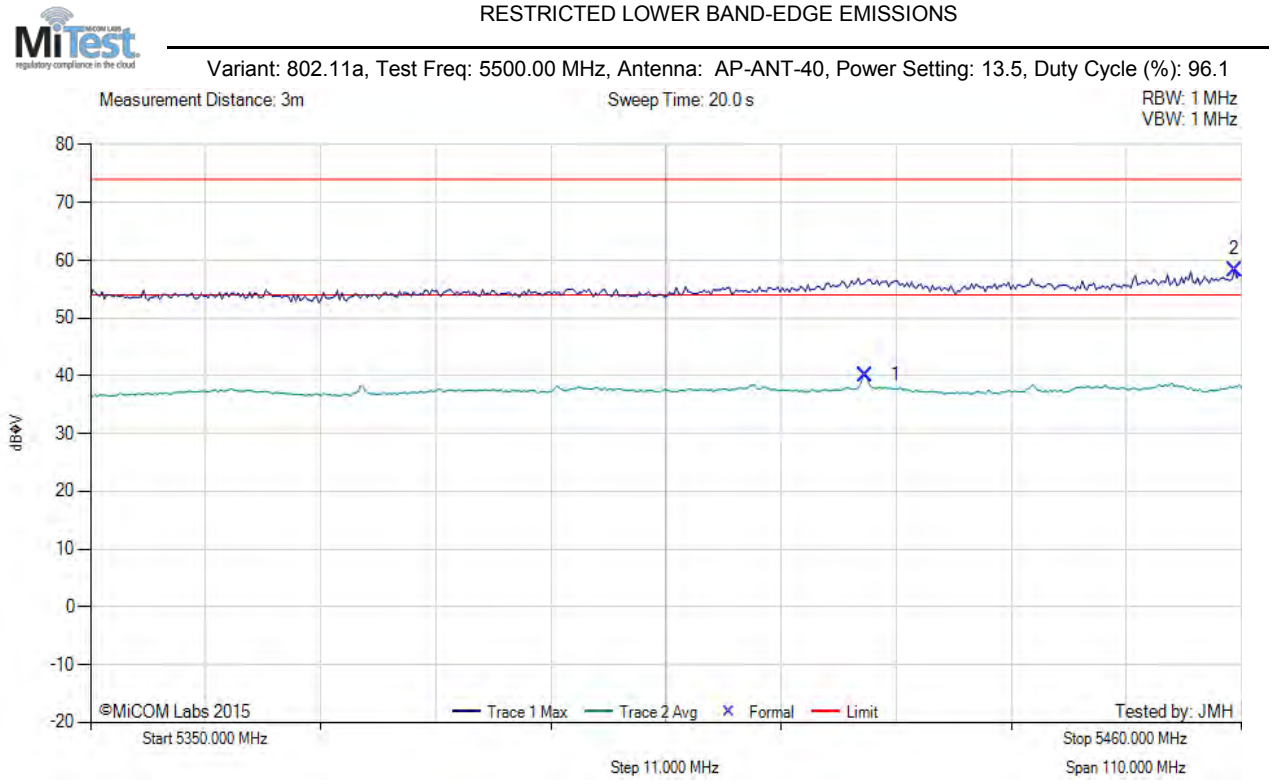


Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5350.00	53.14	6.16	-11.02	48.28	Max Avg	Horizontal	101	343	54.0	-5.7	Pass
2	5352.87	76.25	6.16	-11.04	71.37	Max Peak	Horizontal	101	343	74.0	-2.6	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

back to matrix

A.1.2.13. Aruba Networks AP-ANT-40



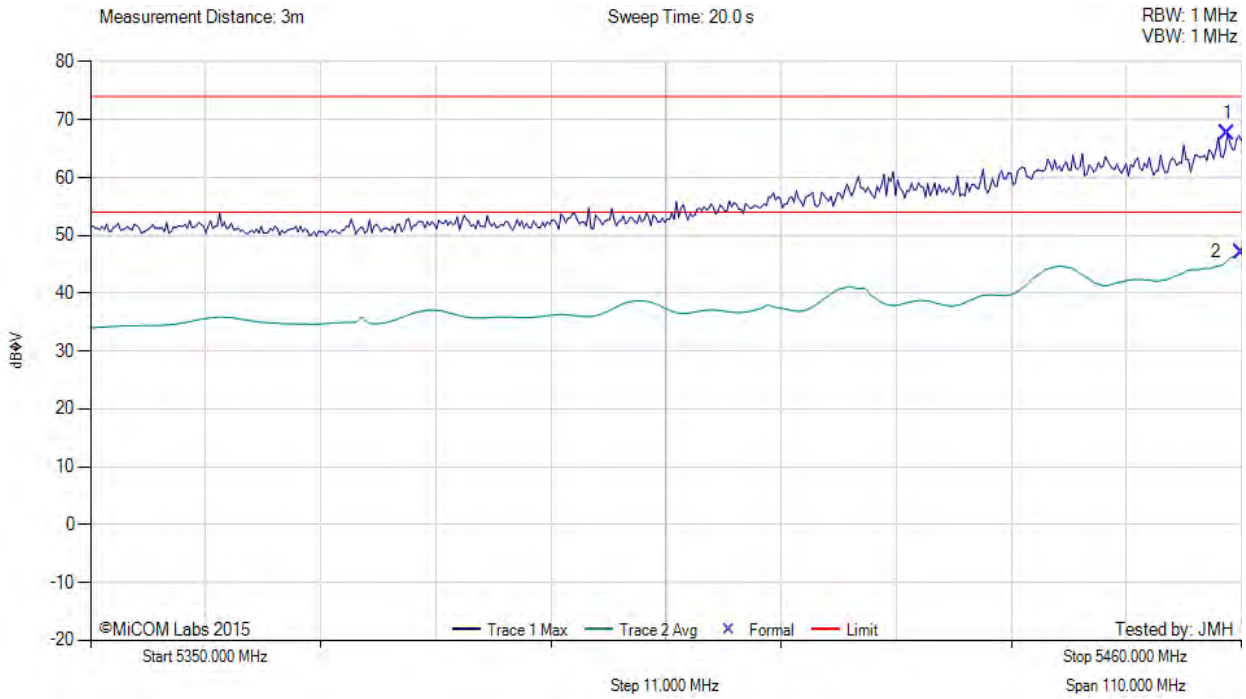
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5424.07	45.09	6.23	-11.19	40.13	Max Avg	Horizontal	141	324	54.0	-13.9	Pass
2	5459.34	63.32	6.26	-11.22	58.36	Max Peak	Horizontal	141	324	74.0	-15.6	Pass

Test Notes: EUT on table powered by AC/DC PS

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5530.00 MHz, Antenna: AP-ANT-40, Power Setting: 13.0, Duty Cycle (%): 91.2



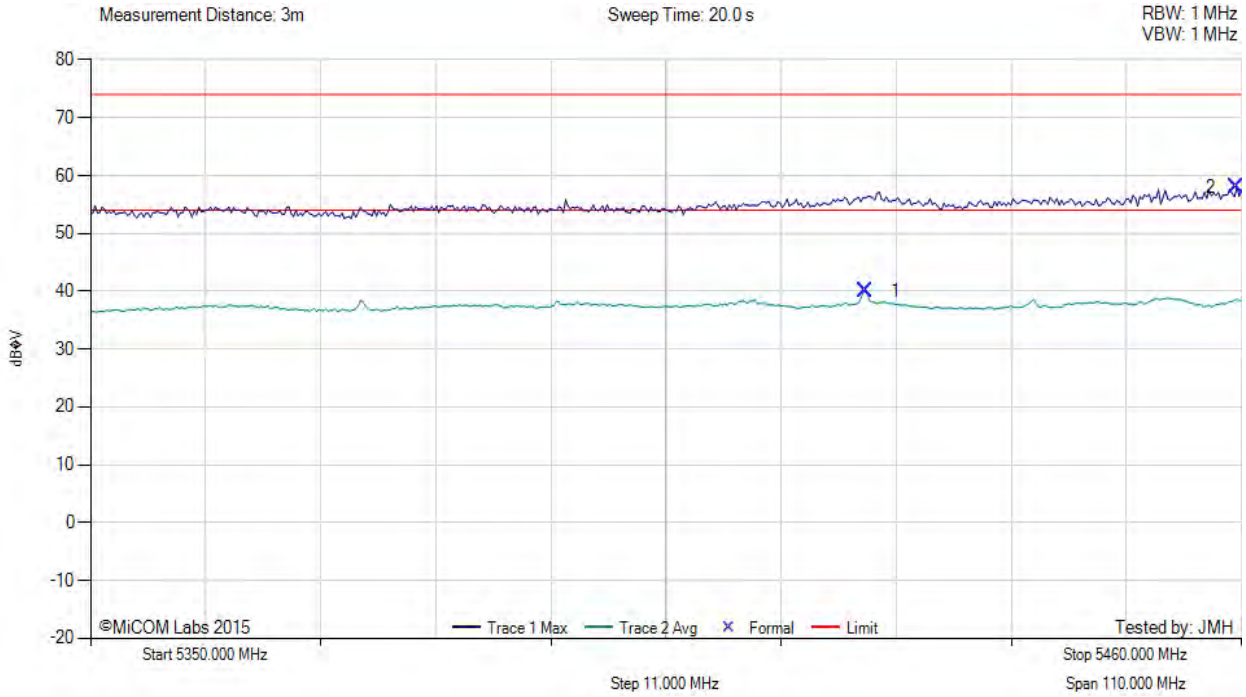
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5458.68	72.59	6.26	-11.22	67.63	Max Peak	Horizontal	141	324	74.0	-6.4	Pass
2	5460.00	52.05	6.26	-11.22	47.09	Max Avg	Horizontal	141	324	54.0	-6.9	Pass

Test Notes: EUT on table powered by AC/DC PS

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5500.00 MHz, Antenna: AP-ANT-40, Power Setting: 13.5, Duty Cycle (%): 98.3



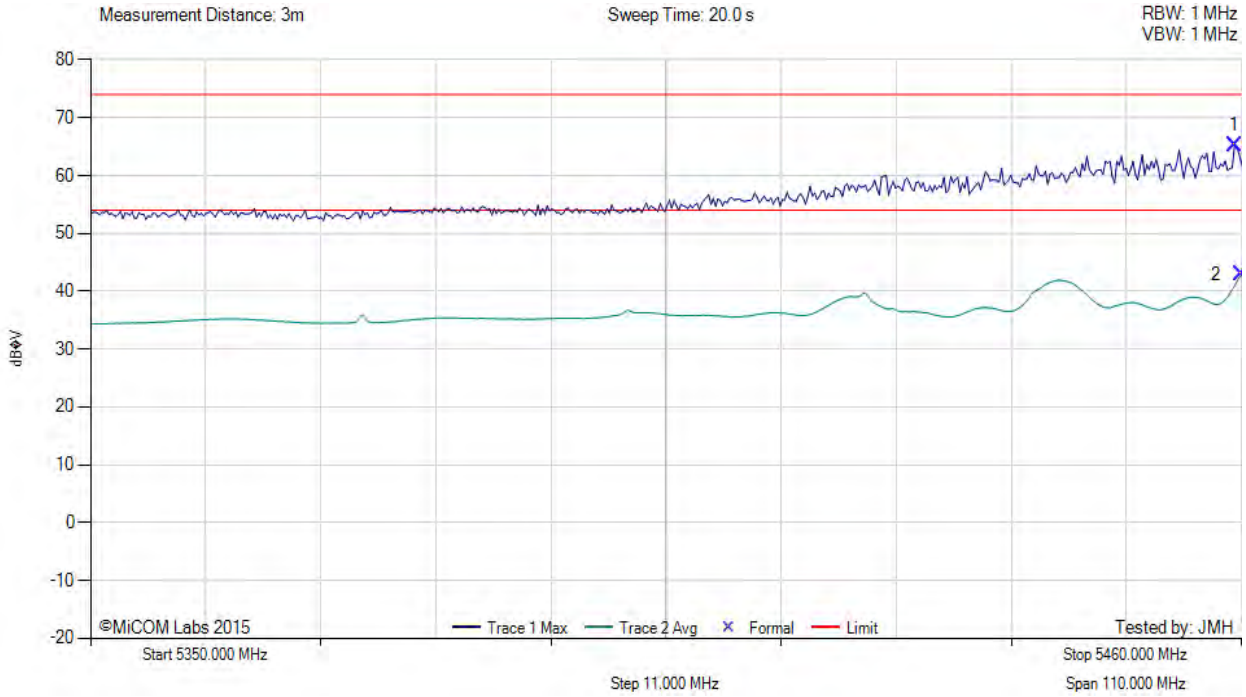
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5424.07	45.07	6.23	-11.19	40.11	Max Avg	Horizontal	141	324	54.0	-13.9	Pass
2	5459.56	62.94	6.26	-11.22	57.98	Max Peak	Horizontal	141	324	74.0	-16.0	Pass

Test Notes: EUT on table powered by AC/DC PS

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5510.00 MHz, Antenna: AP-ANT-40, Power Setting: 16.0, Duty Cycle (%): 96.3



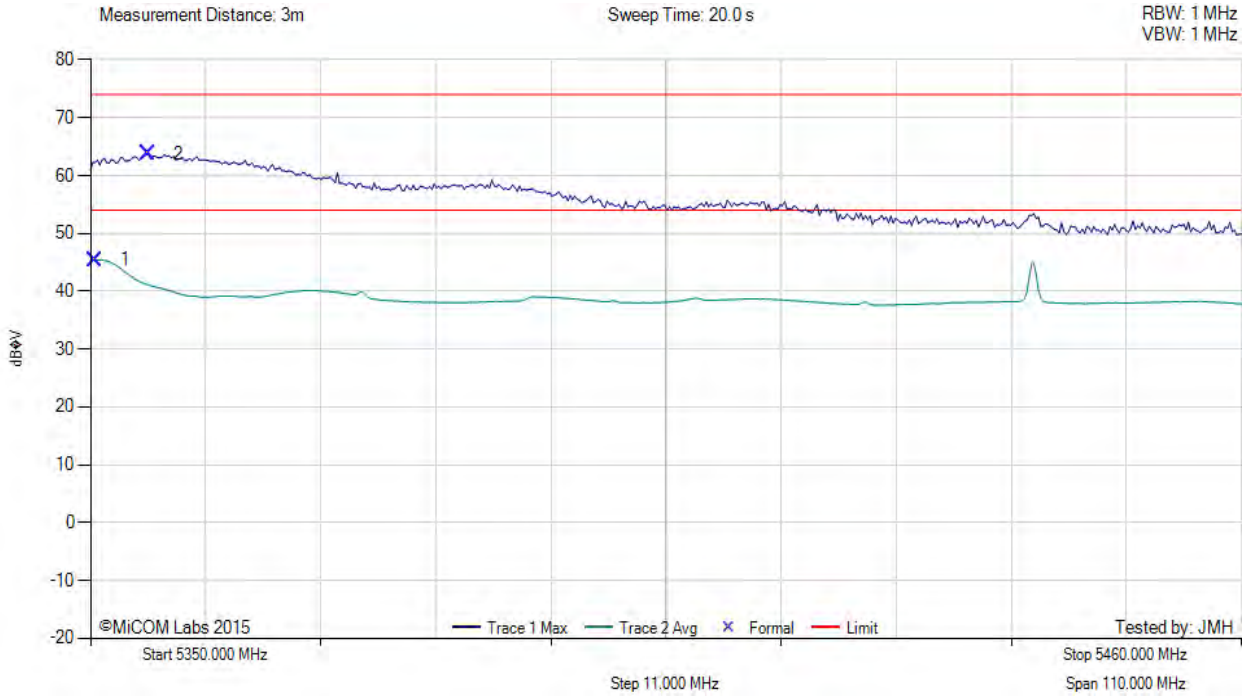
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5459.34	70.10	6.26	-11.22	65.14	Max Peak	Horizontal	141	324	74.0	-8.9	Pass
2	5460.00	47.90	6.26	-11.22	42.94	Max Avg	Horizontal	141	324	54.0	-11.1	Pass

Test Notes: EUT on table powered by AC/DC PS

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: AP-ANT-40, Power Setting: 13.5, Duty Cycle (%): 96.1



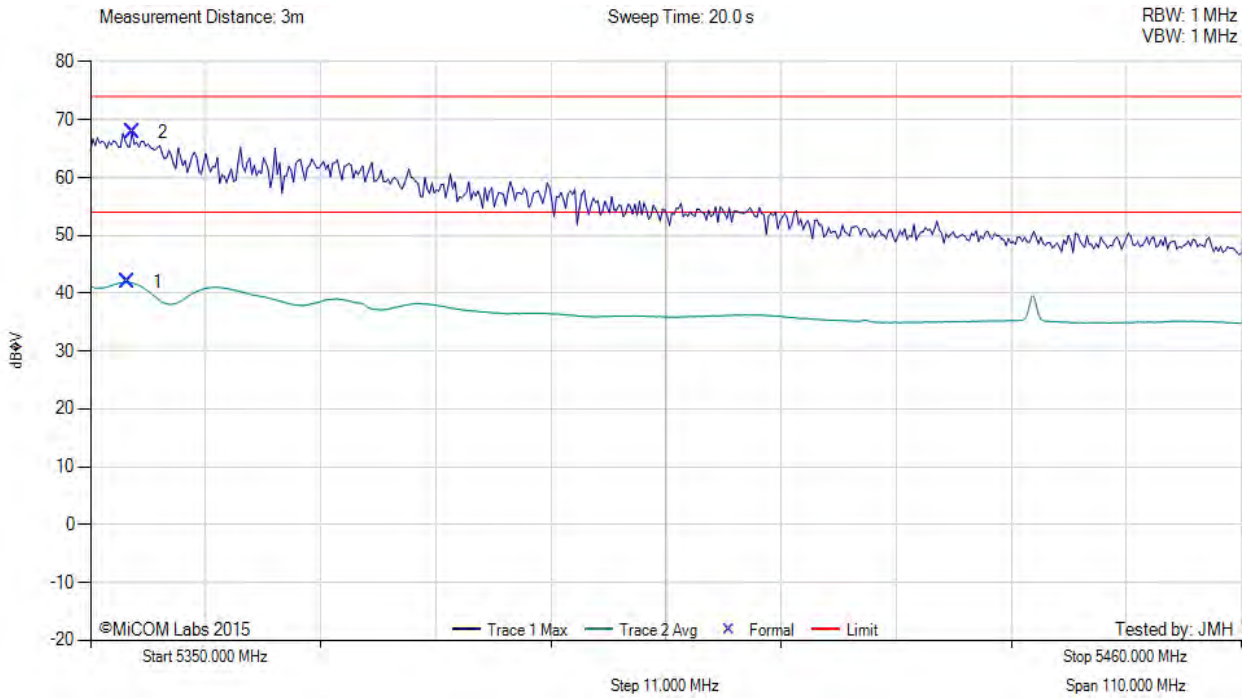
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5350.44	50.29	6.16	-11.02	45.43	Max Avg	Horizontal	100	326	54.0	-8.6	Pass
2	5355.51	68.62	6.16	-11.04	63.74	Max Peak	Horizontal	100	326	74.0	-10.3	Pass

Test Notes: EUT on table powered by AC/DC PS

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5290.00 MHz, Antenna: AP-ANT-40, Power Setting: 6.5, Duty Cycle (%): 91.2



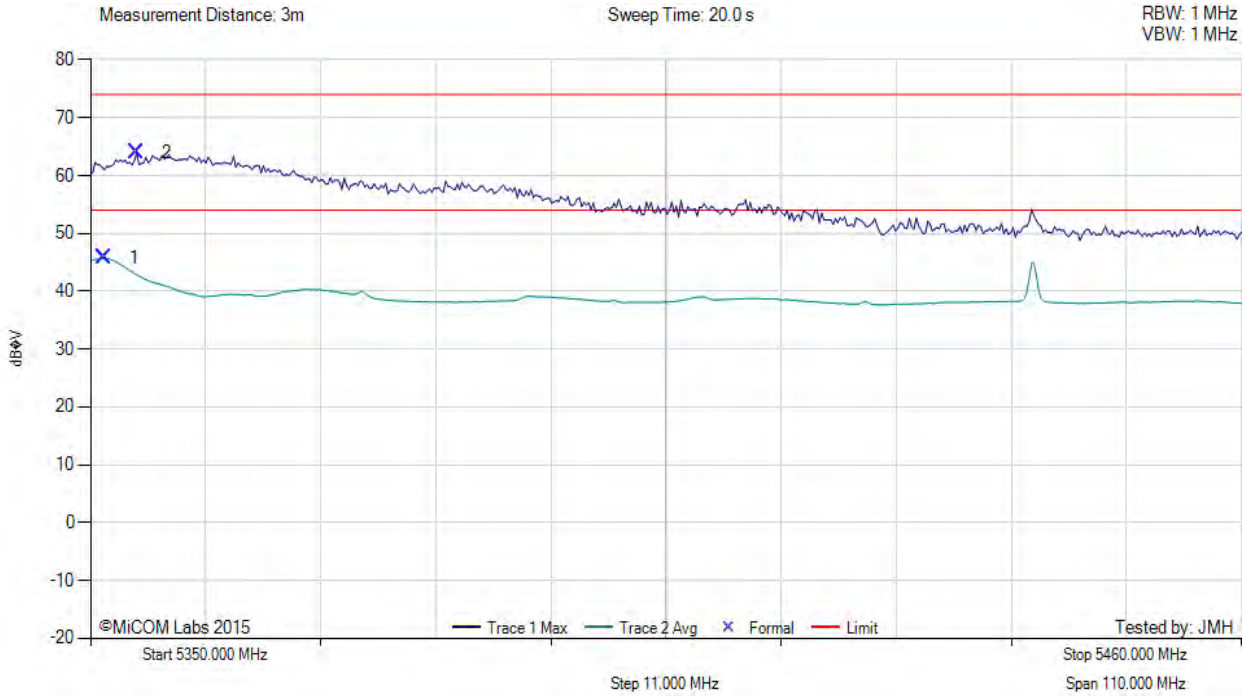
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5353.53	46.80	6.16	-11.04	41.92	Max Avg	Horizontal	100	326	54.0	-12.1	Pass
2	5353.97	72.67	6.16	-11.04	67.79	Max Peak	Horizontal	100	326	74.0	-6.2	Pass

Test Notes: EUT on table powered by AC/DC PS

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5320.00 MHz, Antenna: AP-ANT-40, Power Setting: 13.5, Duty Cycle (%): 98.3



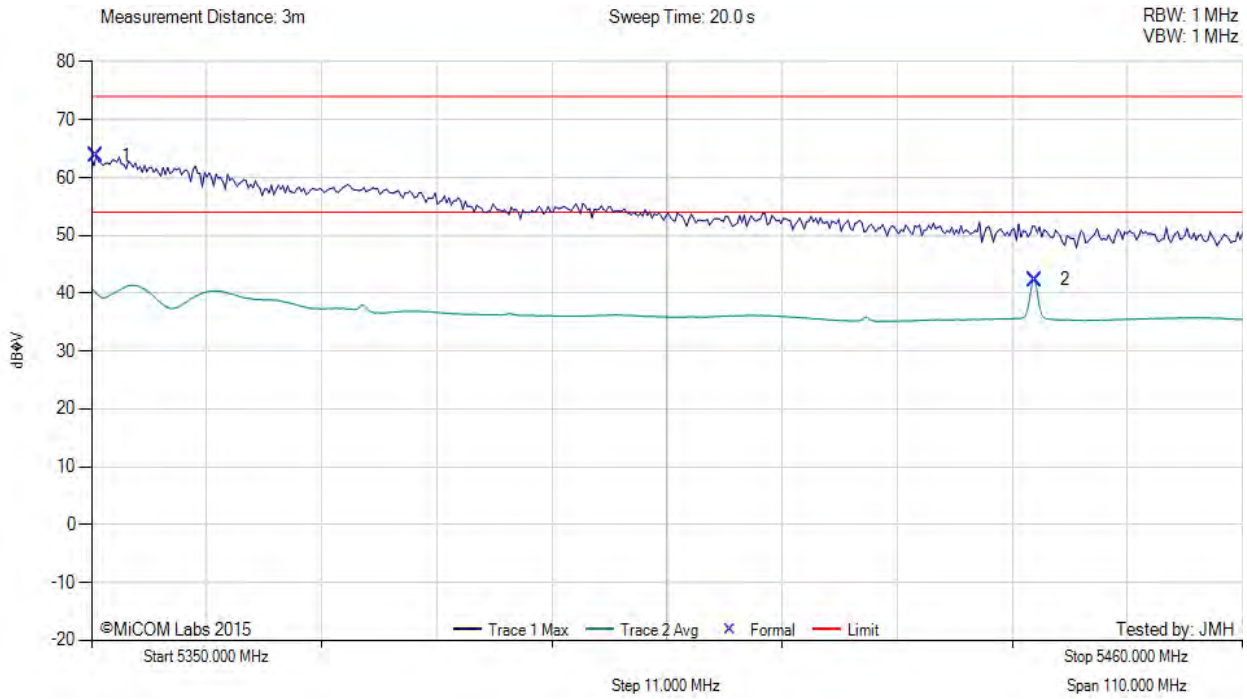
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5351.32	50.60	6.16	-11.03	45.73	Max Avg	Horizontal	100	326	54.0	-8.3	Pass
2	5354.41	68.83	6.16	-11.04	63.95	Max Peak	Horizontal	100	326	74.0	-10.1	Pass

Test Notes: EUT on table powered by AC/DC PS

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5310.00 MHz, Antenna: AP-ANT-40, Power Setting: 9.5, Duty Cycle (%): 96.3

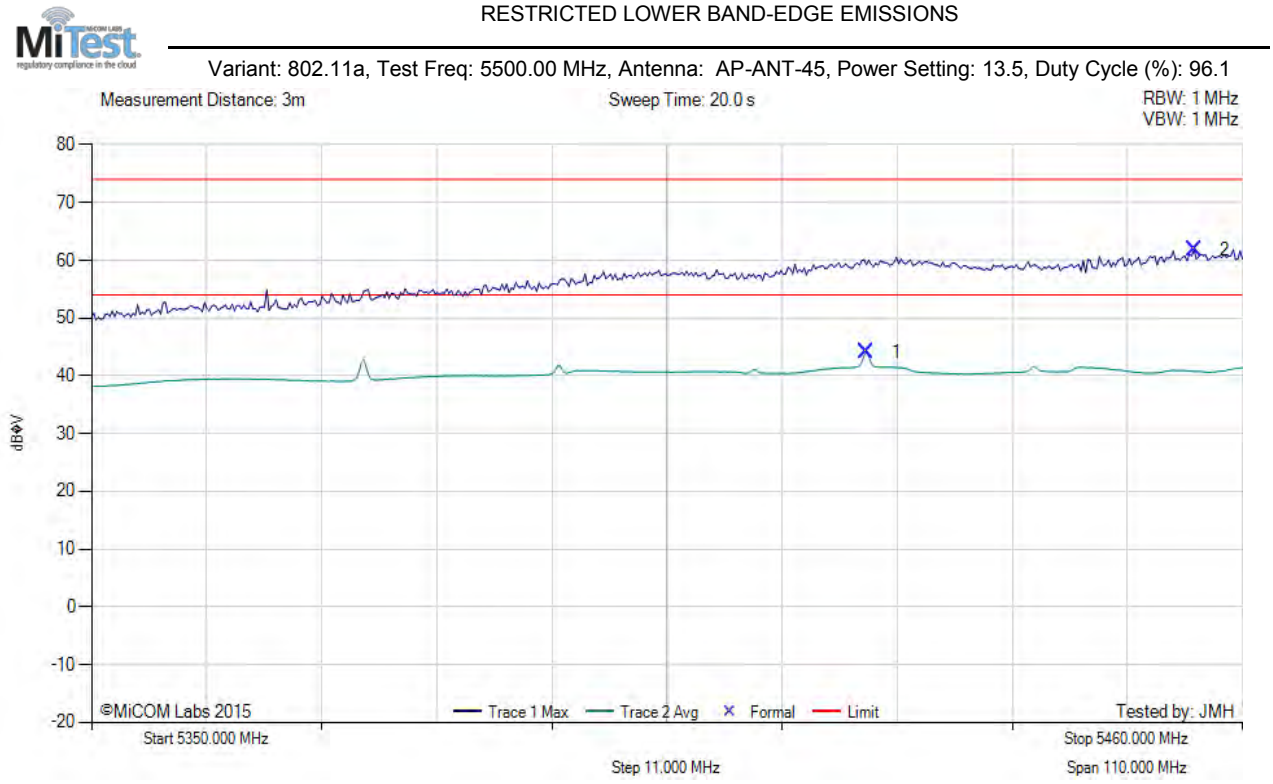


Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5350.44	68.63	6.16	-11.02	63.77	Max Peak	Horizontal	100	326	74.0	-10.2	Pass
2	5440.16	47.28	6.23	-11.22	42.29	Max Avg	Horizontal	100	326	54.0	-11.7	Pass

Test Notes: EUT on table powered by AC/DC PS

back to matrix

A.1.2.14. Aruba Networks AP-ANT-45



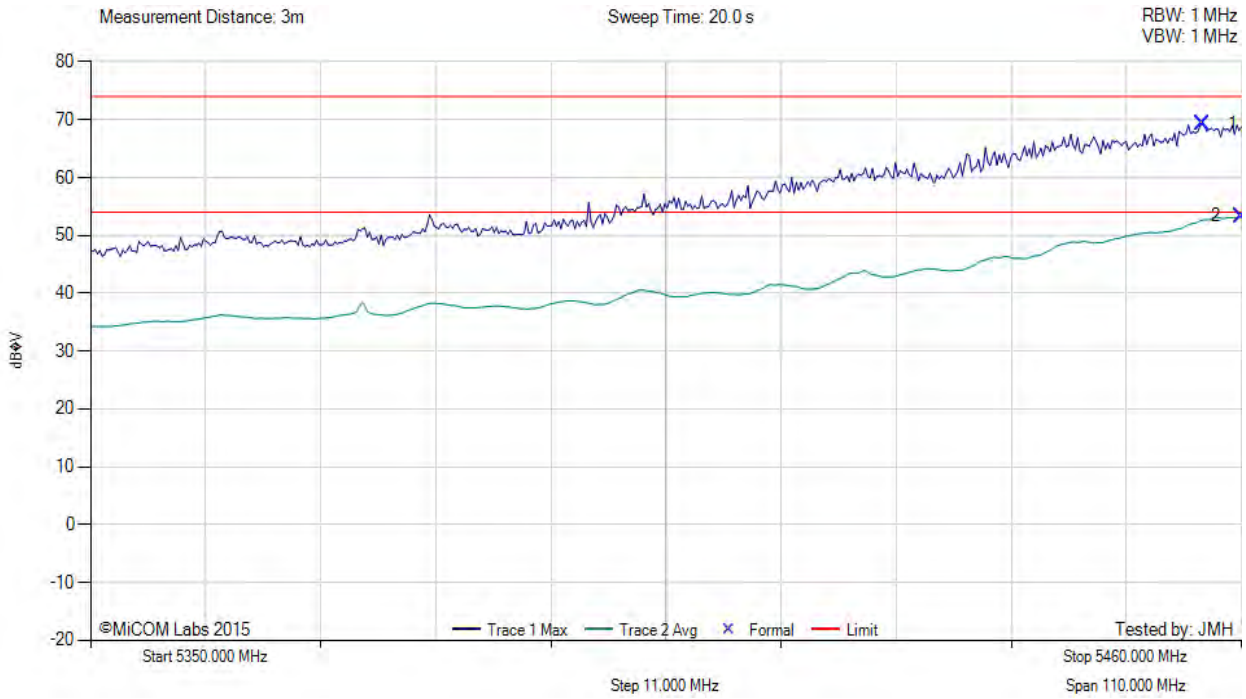
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5424.07	49.04	6.23	-11.19	44.08	Max Avg	Horizontal	104	30	54.0	-9.9	Pass
2	5455.37	66.80	6.26	-11.23	61.83	Max Peak	Horizontal	104	30	74.0	-12.2	Pass

Test Notes: EUT on table powered by AC/DC PS

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5530.00 MHz, Antenna: AP-ANT-45, Power Setting: 14.0, Duty Cycle (%): 91.2



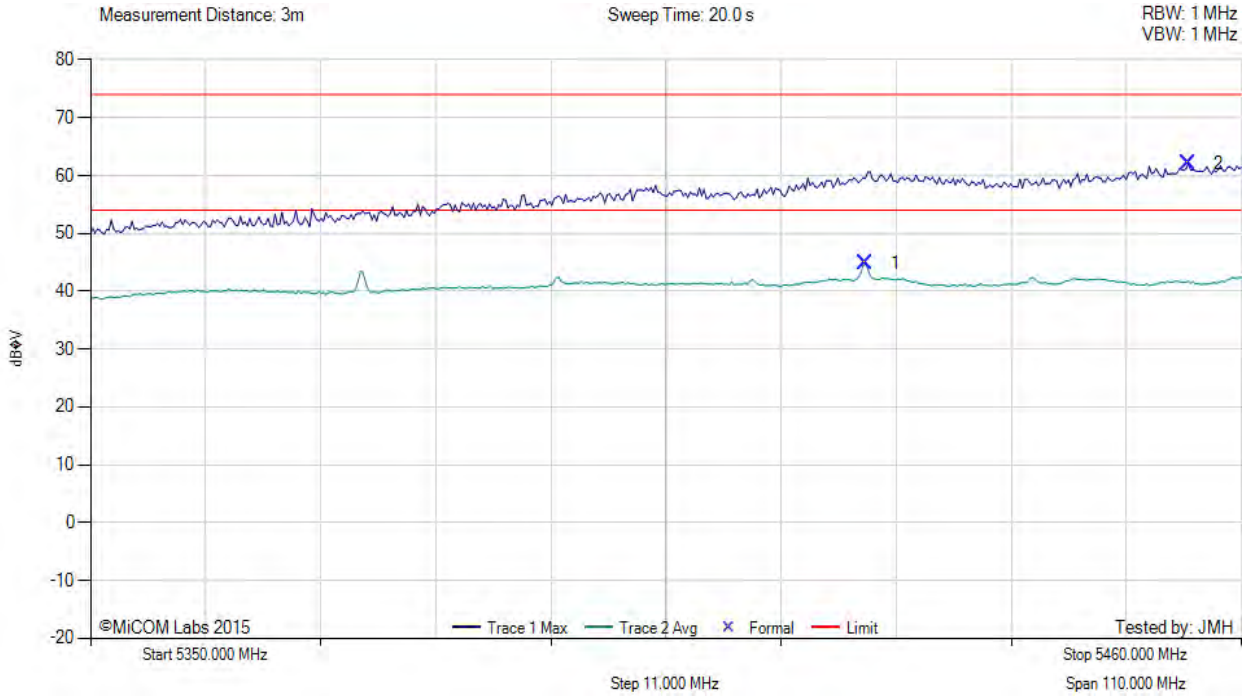
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5456.25	74.18	6.26	-11.23	69.21	Max Peak	Horizontal	105	30	74.0	-4.8	Pass
2	5460.00	58.26	6.26	-11.22	53.30	Max Avg	Horizontal	105	30	54.0	-0.7	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5500.00 MHz, Antenna: AP-ANT-45, Power Setting: 13.5, Duty Cycle (%): 96.1



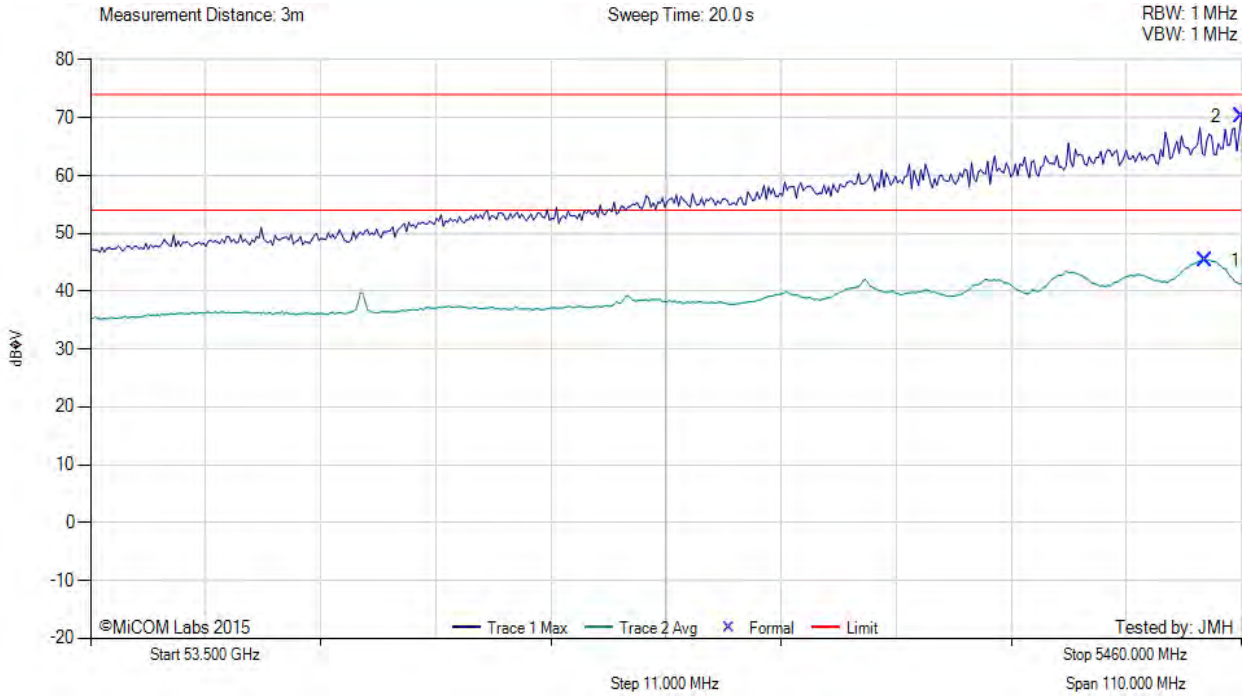
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5424.07	49.75	6.23	-11.19	44.79	Max Avg	Horizontal	104	30	54.0	-9.2	Pass
2	5454.93	67.07	6.26	-11.23	62.10	Max Peak	Horizontal	104	30	74.0	-11.9	Pass

Test Notes: EUT on table powered by AC/DC PS

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5510.00 MHz, Antenna: AP-ANT-45, Power Setting: 16.0, Duty Cycle (%): 96.3



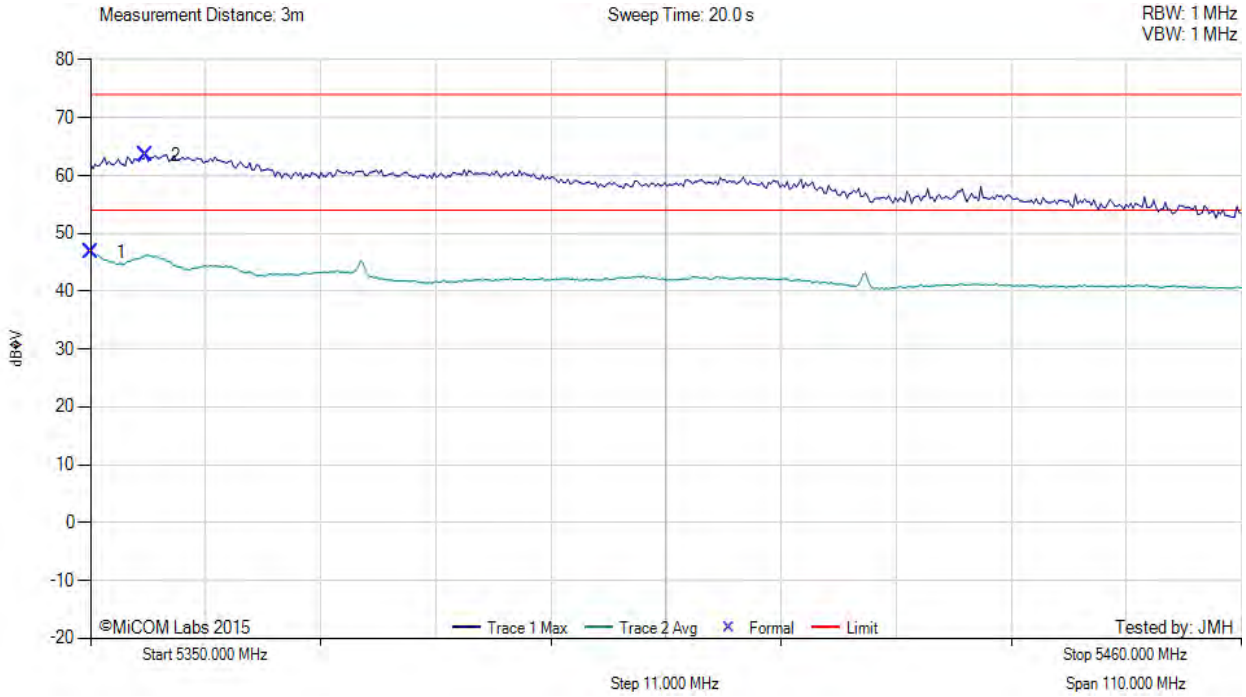
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5456.47	50.36	6.26	-11.23	45.39	Max Avg	Horizontal	105	30	54.0	-8.6	Pass
2	5460.00	75.16	6.26	-11.22	70.20	Max Peak	Horizontal	105	30	74.0	-3.8	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: AP-ANT-45, Power Setting: 13.5, Duty Cycle (%): 96.1



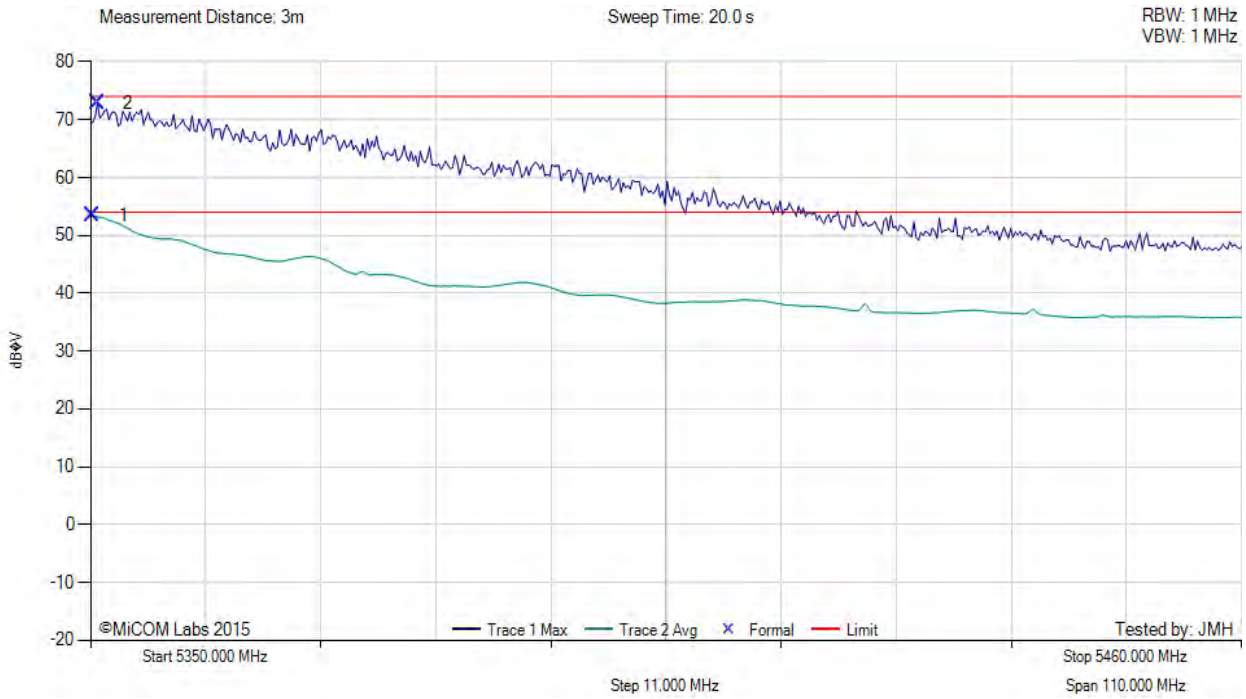
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5350.00	51.58	6.16	-11.02	46.72	Max Avg	Horizontal	102	18	54.0	-7.3	Pass
2	5355.29	68.37	6.16	-11.04	63.49	Max Peak	Horizontal	102	18	74.0	-10.5	Pass

Test Notes: EUT on table powered by AC/DC PS

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5290.00 MHz, Antenna: AP-ANT-45, Power Setting: 10.5, Duty Cycle (%): 91.2



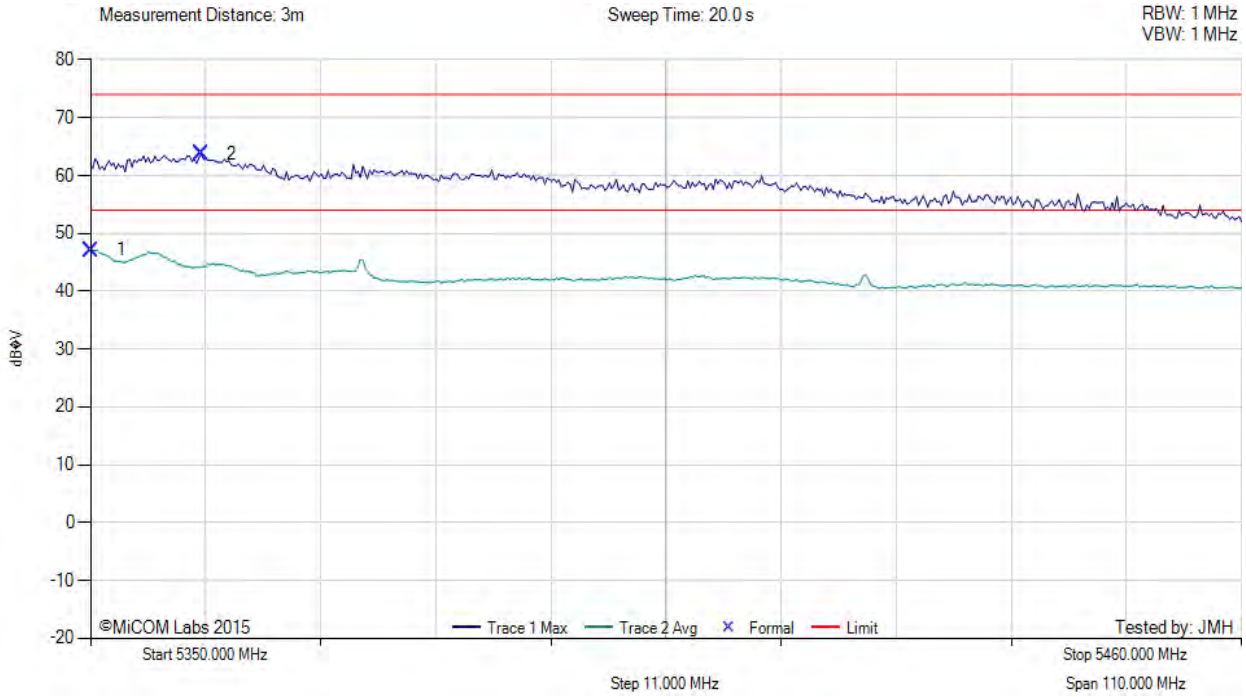
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5350.22	58.29	6.16	-11.02	53.43	Max Avg	Horizontal	105	18	54.0	-0.6	Pass
2	5350.66	77.69	6.16	-11.03	72.82	Max Peak	Horizontal	105	18	74.0	-1.2	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5320.00 MHz, Antenna: AP-ANT-45, Power Setting: 13.5, Duty Cycle (%): 96.1



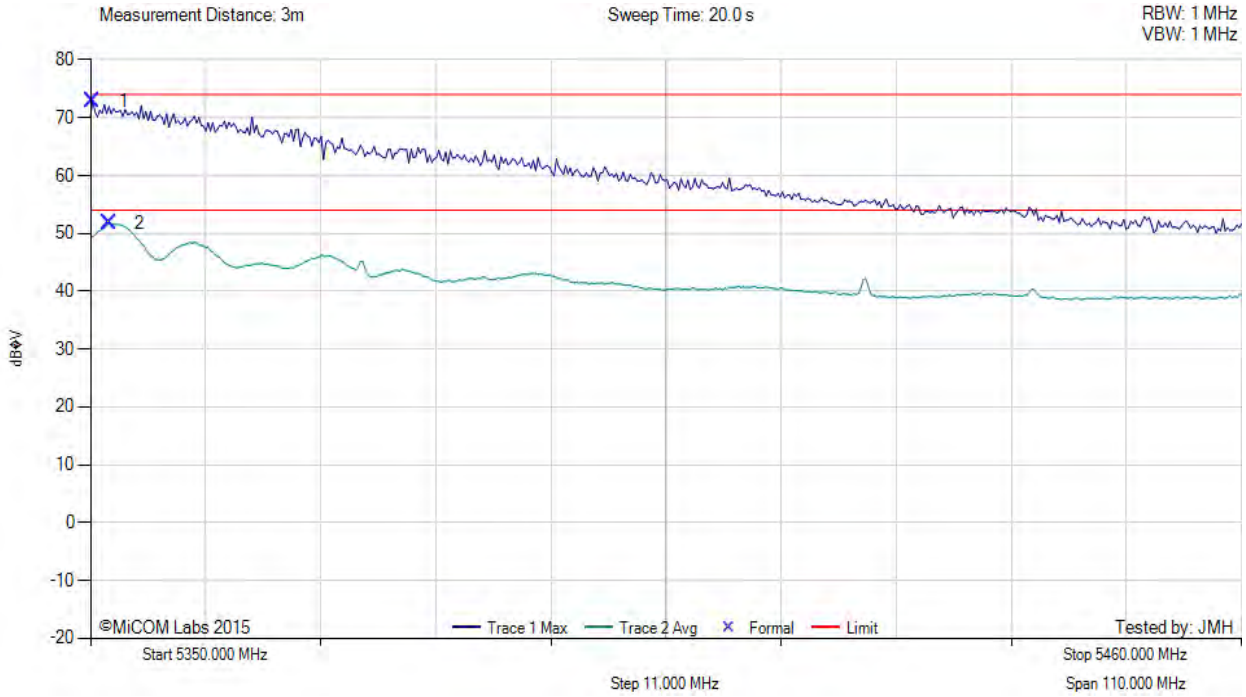
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5350.00	52.00	6.16	-11.02	47.14	Max Avg	Horizontal	102	18	54.0	-6.9	Pass
2	5360.58	68.59	6.17	-11.06	63.70	Max Peak	Horizontal	102	18	74.0	-10.3	Pass

Test Notes: EUT on table powered by AC/DC PS

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5310.00 MHz, Antenna: AP-ANT-45, Power Setting: 14.5, Duty Cycle (%): 96.3

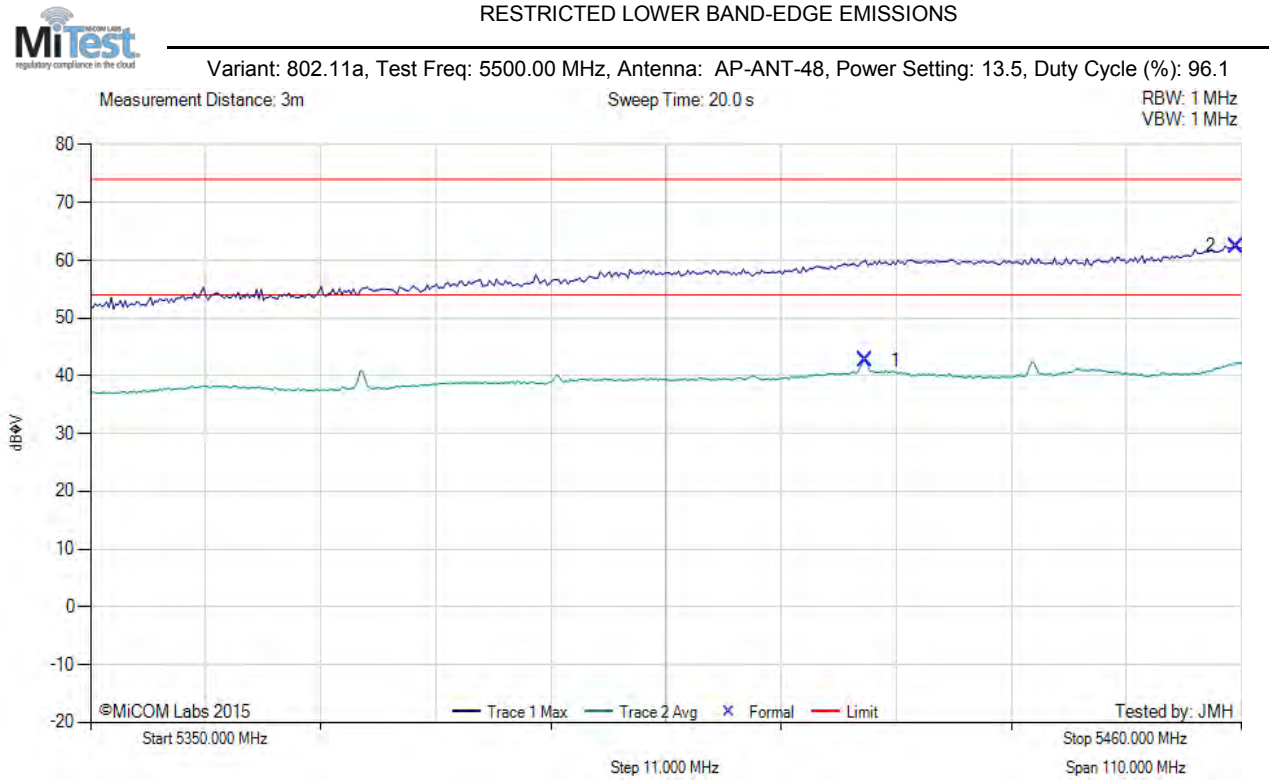


Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5350.22	77.79	6.16	-11.02	72.93	Max Peak	Horizontal	105	18	74.0	-1.1	Pass
2	5351.76	56.70	6.16	-11.03	51.83	Max Avg	Horizontal	105	18	54.0	-2.2	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

back to matrix

A.1.2.15. Aruba Networks AP-ANT-48



Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5424.07	47.61	6.23	-11.19	42.65	Max Avg	Horizontal	129	357	54.0	-11.4	Pass
2	5459.56	67.43	6.26	-11.22	62.47	Max Peak	Horizontal	129	357	74.0	-11.5	Pass

Test Notes: EUT on table with ENET and Console cables connected to laptop outside chamber

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5530.00 MHz, Antenna: AP-ANT-48, Power Setting: 12.0, Duty Cycle (%): 91.2

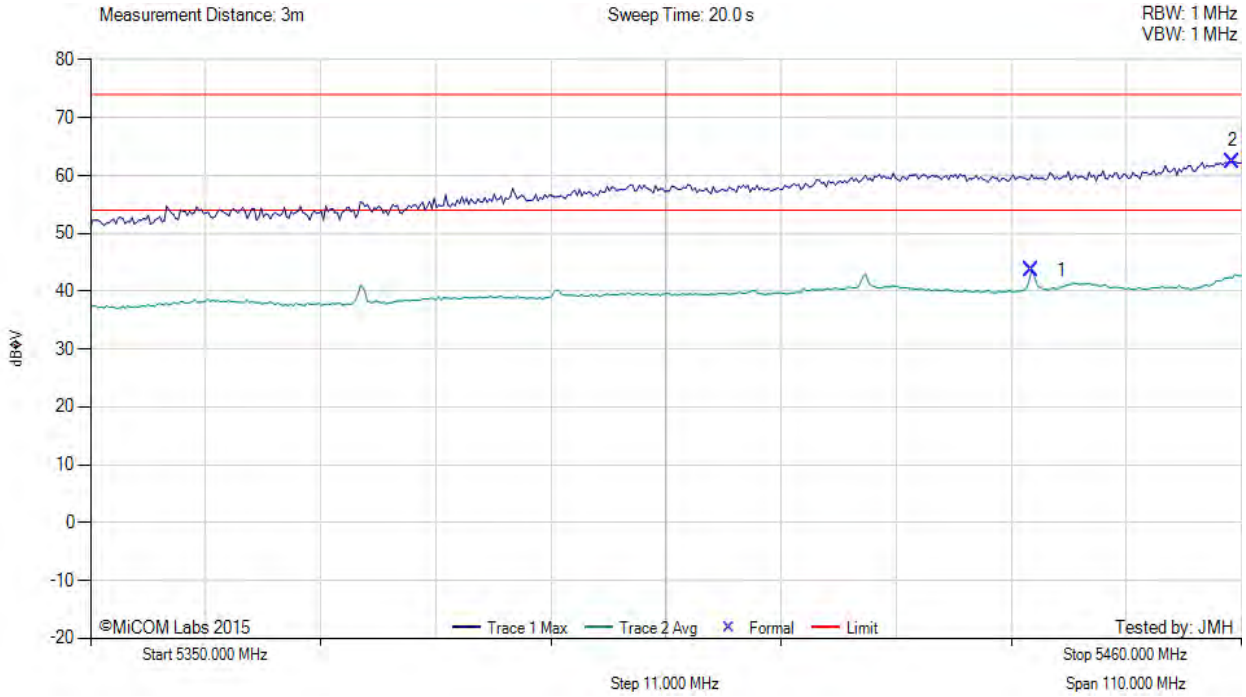
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5460.00	58.52	6.26	-11.22	53.56	Max Avg	Horizontal	100	357	54.0	-0.4	Pass
2	5460.00	73.75	6.26	-11.22	68.79	Max Peak	Horizontal	100	357	74.0	-5.2	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5500.00 MHz, Antenna: AP-ANT-48, Power Setting: 13.5, Duty Cycle (%): 98.3



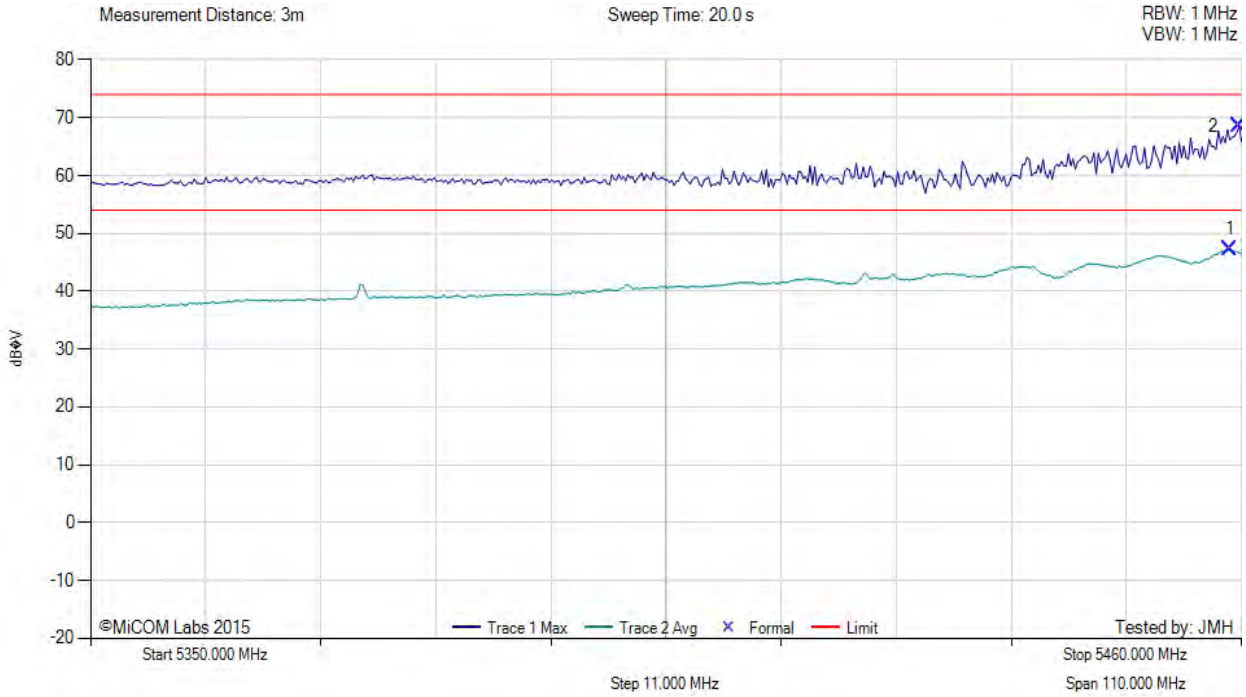
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5439.94	48.57	6.23	-11.22	43.58	Max Avg	Horizontal	129	357	54.0	-10.4	Pass
2	5459.12	67.38	6.26	-11.22	62.42	Max Peak	Horizontal	129	357	74.0	-11.6	Pass

Test Notes: EUT on table with ENET and Console cables connected to laptop outside chamber

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5510.00 MHz, Antenna: AP-ANT-48, Power Setting: 16.0, Duty Cycle (%): 96.3



Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5458.90	52.18	6.26	-11.22	47.22	Max Avg	Horizontal	100	357	54.0	-6.8	Pass
2	5459.78	73.46	6.26	-11.22	68.50	Max Peak	Horizontal	100	357	74.0	-5.5	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

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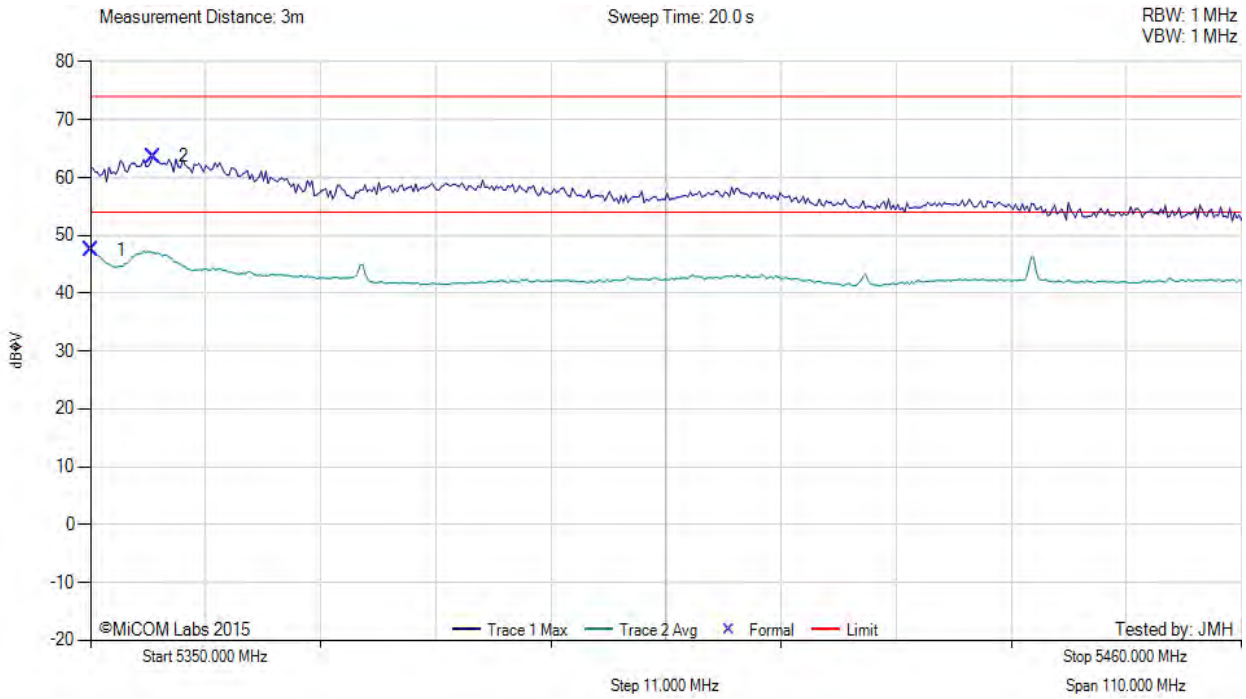
RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: AP-ANT-48, Power Setting: 13.5, Duty Cycle (%): 96.1



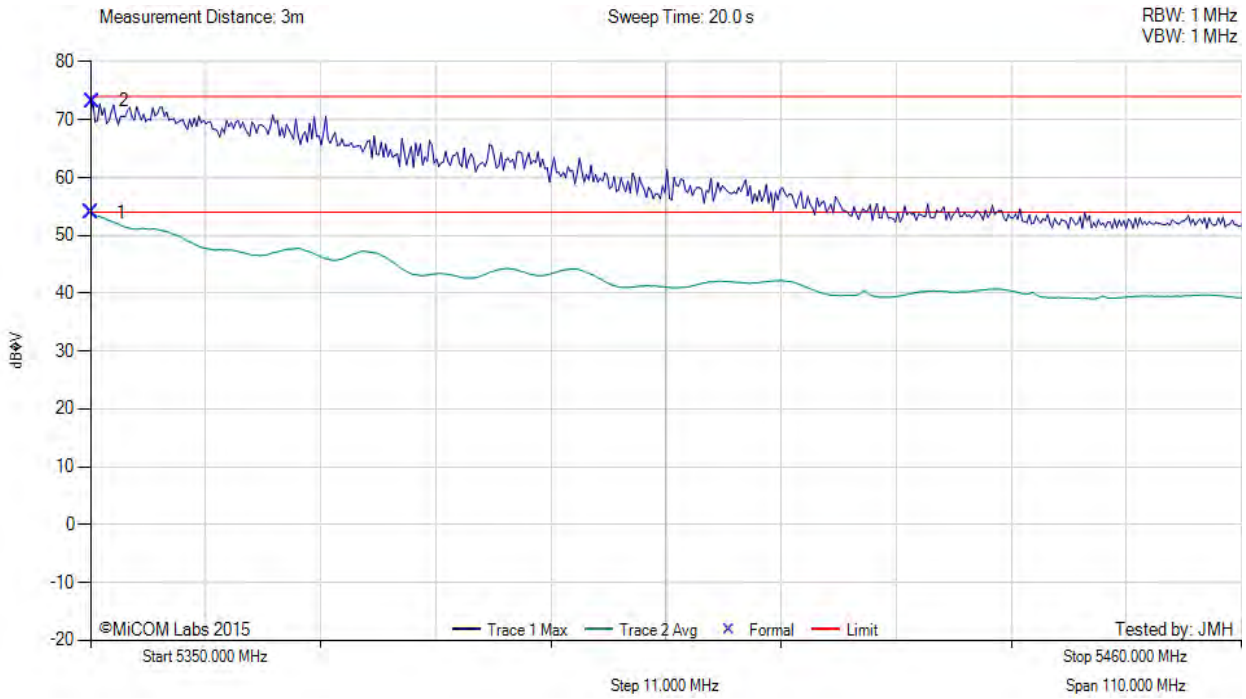
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5350.00	52.35	6.16	-11.02	47.49	Max Avg	Horizontal	100	359	54.0	-6.5	Pass
2	5355.95	68.55	6.16	-11.04	63.67	Max Peak	Horizontal	100	359	74.0	-10.3	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5290.00 MHz, Antenna: AP-ANT-48, Power Setting: 14.0, Duty Cycle (%): 91.2



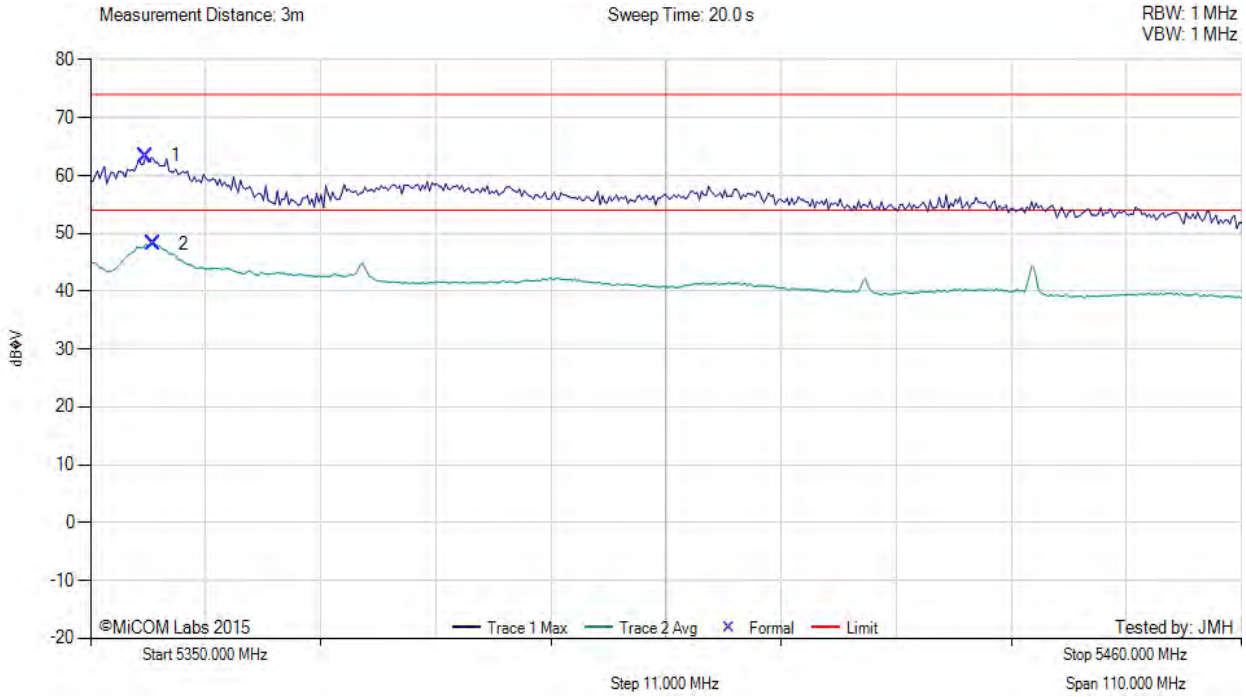
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5350.00	58.74	6.16	-11.02	53.88	Max Avg	Horizontal	101	359	54.0	-0.1	Pass
2	5350.22	78.11	6.16	-11.02	73.25	Max Peak	Horizontal	101	359	74.0	-0.8	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5320.00 MHz, Antenna: AP-ANT-48, Power Setting: 13.5, Duty Cycle (%): 98.3



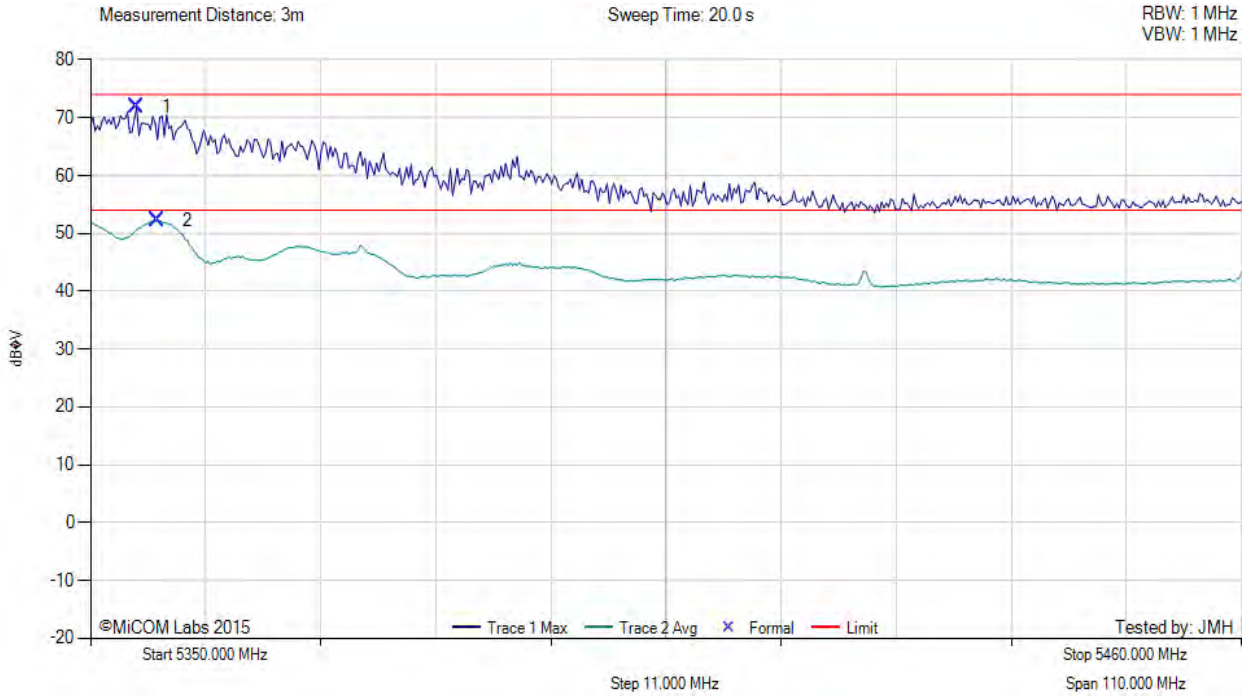
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5355.29	68.28	6.16	-11.04	63.40	Max Peak	Horizontal	100	359	74.0	-10.6	Pass
2	5355.95	53.04	6.16	-11.04	48.16	Max Avg	Horizontal	100	359	54.0	-5.8	Pass

Test Notes: AP324 on table with ENET and Console cables connected to laptop outside chamber

back to matrix

RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5310.00 MHz, Antenna: AP-ANT-48, Power Setting: 16.0, Duty Cycle (%): 96.3



Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5354.41	76.73	6.16	-11.04	71.85	Max Peak	Horizontal	101	359	74.0	-2.2	Pass
2	5356.39	57.12	6.16	-11.04	52.24	Max Avg	Horizontal	101	359	54.0	-1.8	Pass

Test Notes: AP324 on Table, powered by AC/DC PS

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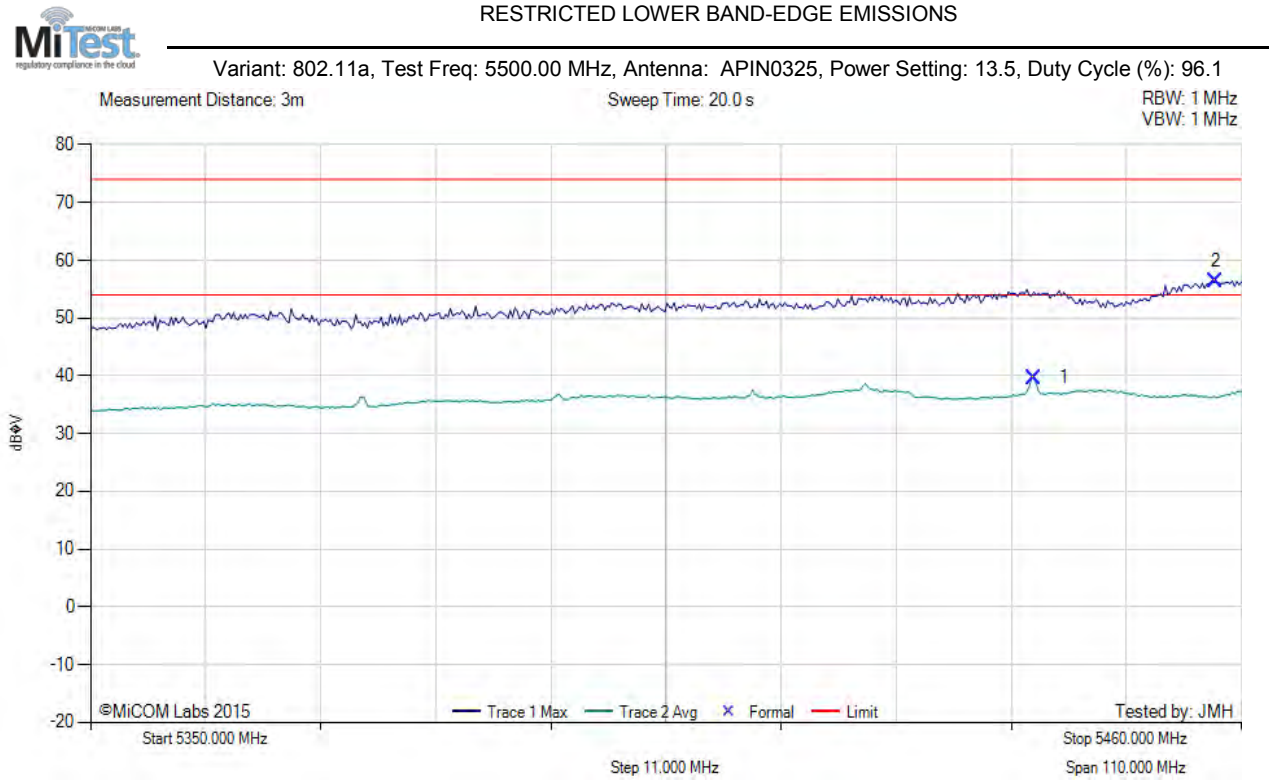
A.1.2.16. Aruba Networks APIN0325



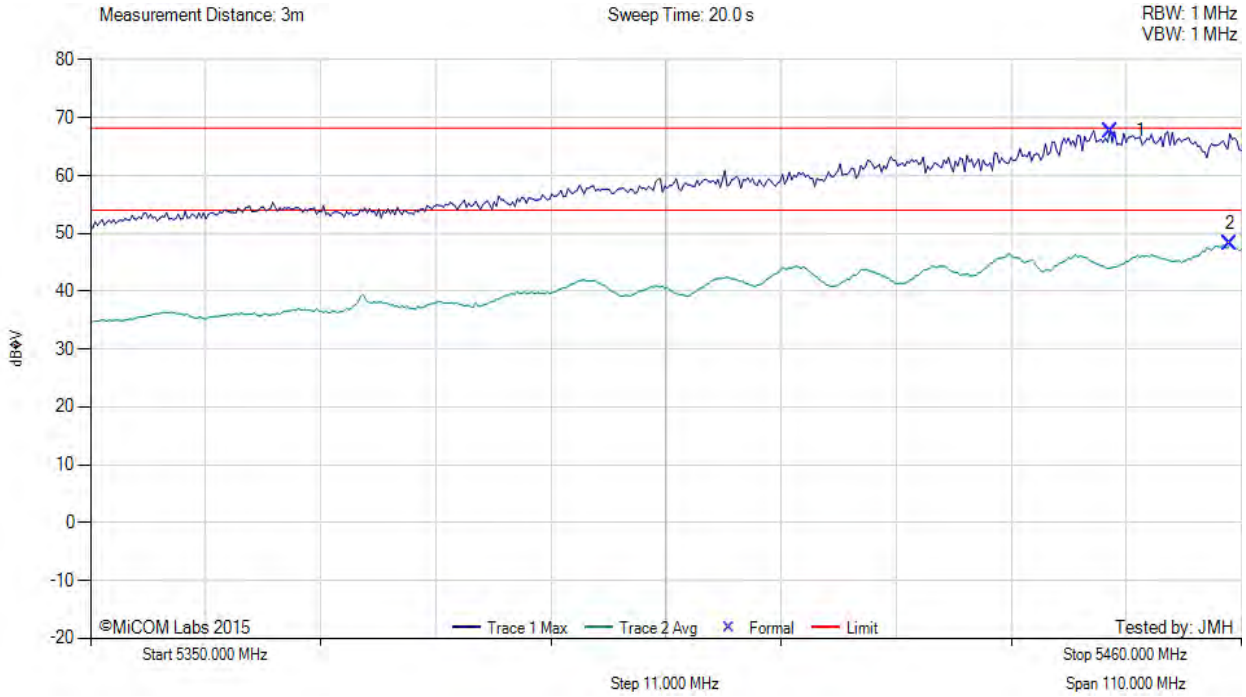
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5440.16	44.72	6.23	-11.22	39.73	Max Avg	Vertical	132	-4	54.0	-14.3	Pass
2	5457.58	61.38	6.26	-11.23	56.41	Max Peak	Vertical	132	-4	74.0	-17.6	Pass

Test Notes: AP325 on Table powered by AC/DC PS

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5530.00 MHz, Antenna: APIN0325, Power Setting: 16.0, Duty Cycle (%): 91.2



Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5447.43	72.74	6.24	-11.23	67.75	Max Peak	Vertical	132	-4	68.2	-0.5	Pass
2	5458.90	53.09	6.26	-11.22	48.13	Max Avg	Vertical	132	-4	54.0	-5.9	Pass

Test Notes: AP325 on Table powered by AC/DC PS

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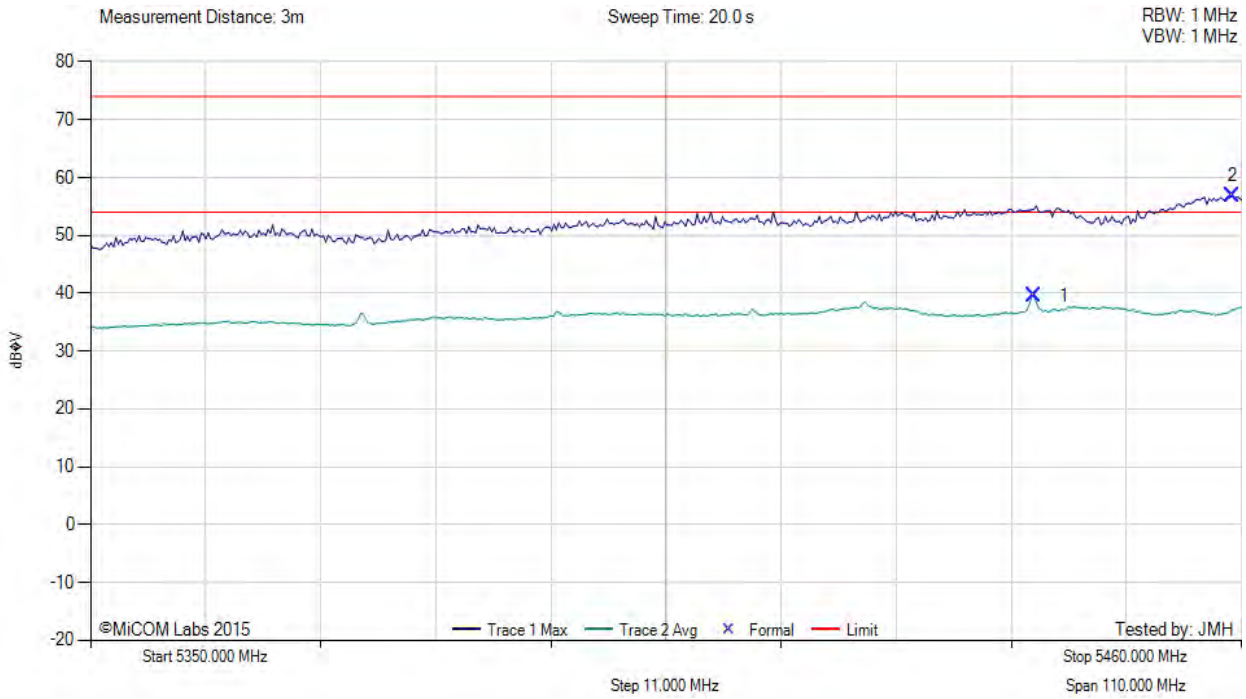
RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5500.00 MHz, Antenna: APIN0325, Power Setting: 13.5, Duty Cycle (%): 98.3



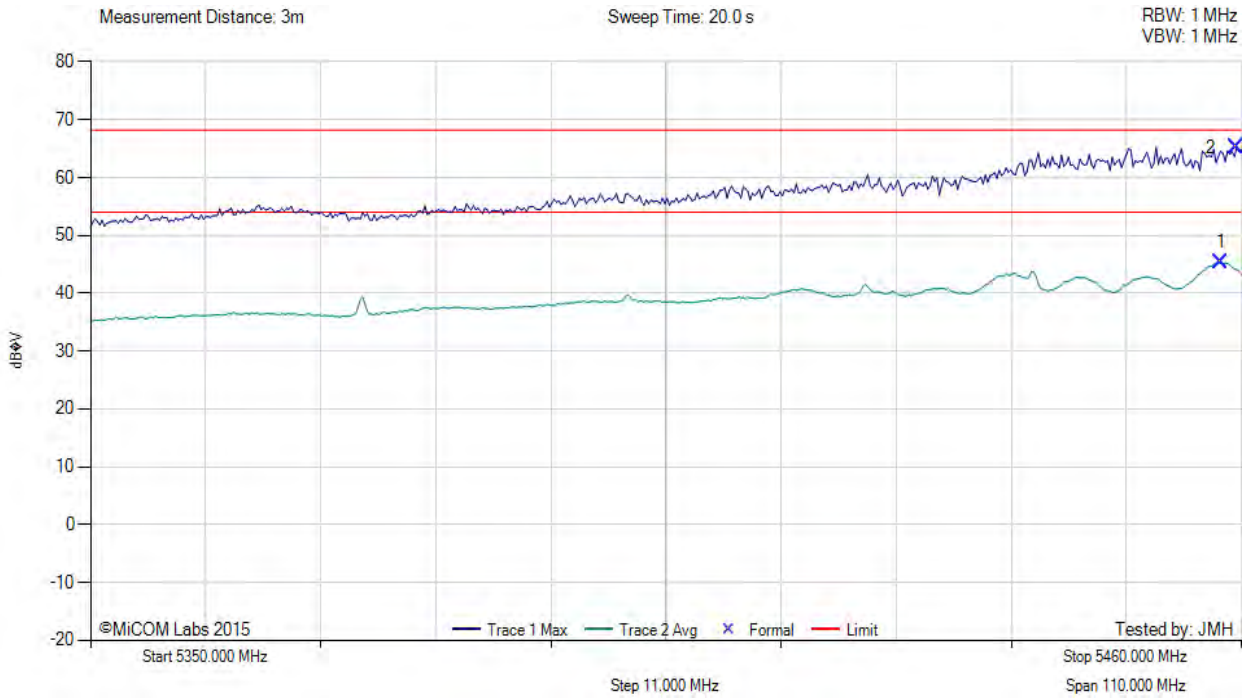
Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5440.16	44.63	6.23	-11.22	39.64	Max Avg	Vertical	132	-4	54.0	-14.4	Pass
2	5459.12	61.82	6.26	-11.22	56.86	Max Peak	Vertical	132	-4	74.0	-17.1	Pass

Test Notes: AP325 on Table powered by AC/DC PS

back to matrix

RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5510.00 MHz, Antenna: APIN0325, Power Setting: 16, Duty Cycle (%): 96.3



Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5458.02	50.28	6.26	-11.23	45.31	Max Avg	Vertical	132	-4	54.0	-8.7	Pass
2	5459.56	70.23	6.26	-11.22	65.27	Max Peak	Vertical	132	-4	68.2	-3.0	Pass

Test Notes: AP325 on Table powered by AC/DC PS

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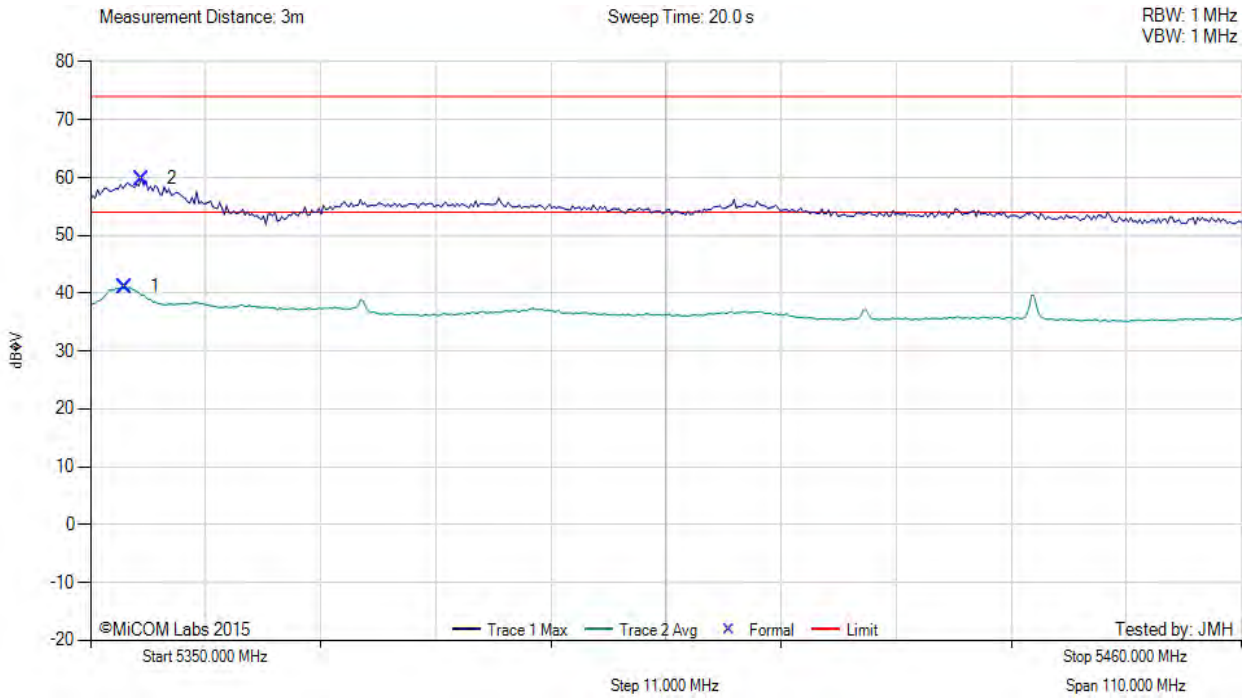
RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11a, Test Freq: 5320.00 MHz, Antenna: APIN0325, Power Setting: 13.5, Duty Cycle (%): 96.1



Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5353.31	46.01	6.16	-11.04	41.13	Max Avg	Vertical	122	353	54.0	-12.9	Pass
2	5354.85	64.68	6.16	-11.04	59.80	Max Peak	Vertical	122	353	74.0	-14.2	Pass

Test Notes: AP325 on Table powered by AC/DC PS

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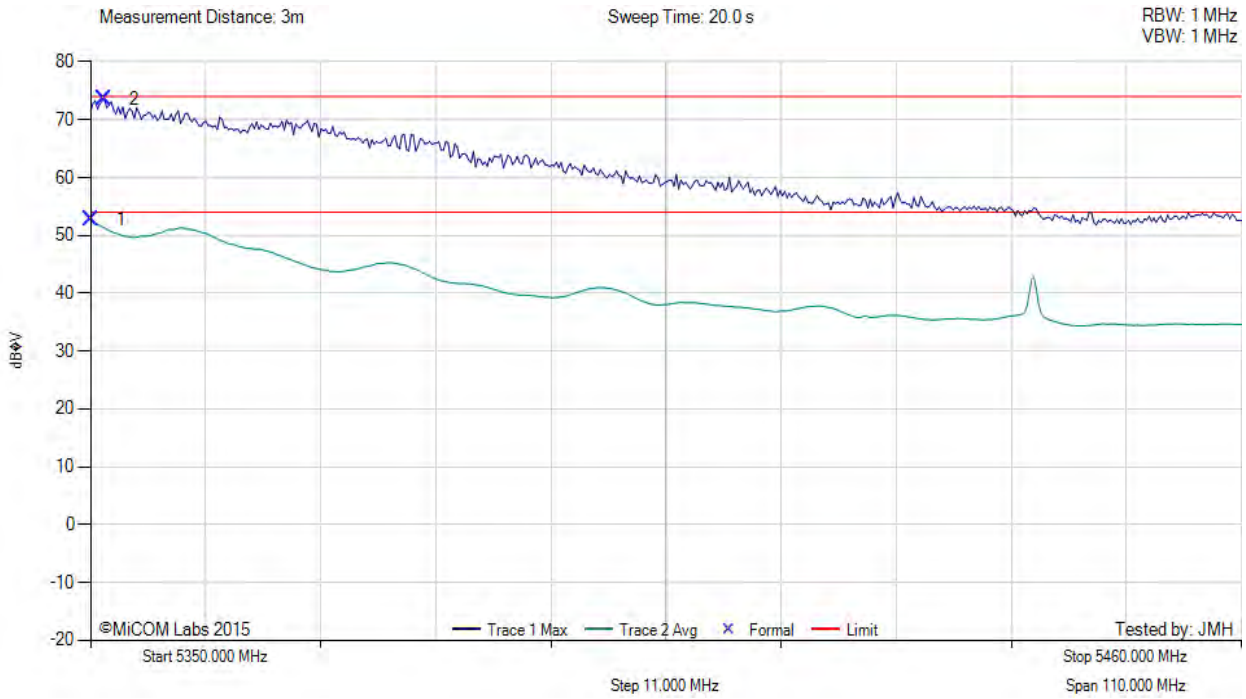
RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11ac-80, Test Freq: 5290.00 MHz, Antenna: APIN0325, Power Setting: 15.5, Duty Cycle (%): 91.2



Num	Frequency MHz	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	57.56	6.16	-11.02	52.70	Max Avg	Vertical	122	-8	54.0	-1.3	Pass
2	5351.32	78.46	6.16	-11.03	73.59	Max Peak	Vertical	122	-8	74.0	-0.4	Pass

Test Notes: AP325 on Table, powered by AC/DC PS

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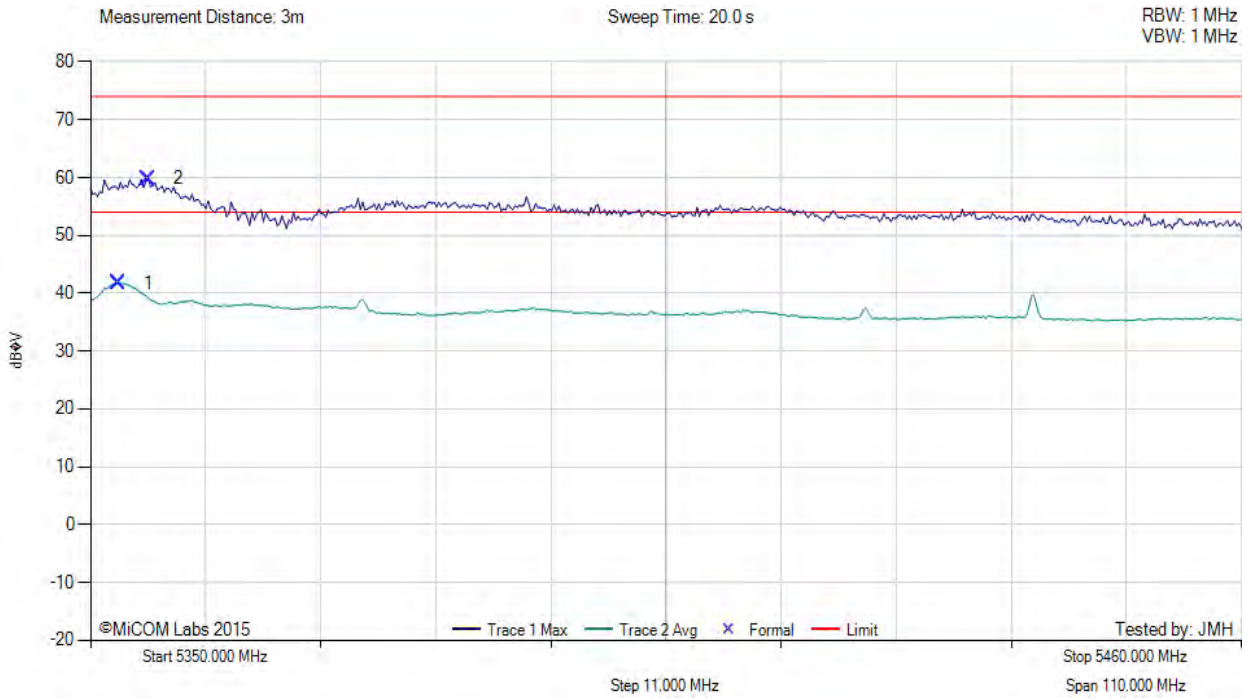
RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-20, Test Freq: 5320.00 MHz, Antenna: APIN0325, Power Setting: 13.5, Duty Cycle (%): 98.3



Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5352.65	46.61	6.16	-11.04	41.73	Max Avg	Vertical	122	353	54.0	-12.3	Pass
2	5355.51	64.73	6.16	-11.04	59.85	Max Peak	Vertical	122	353	74.0	-14.2	Pass

Test Notes: AP325 on Table powered by AC/DC PS

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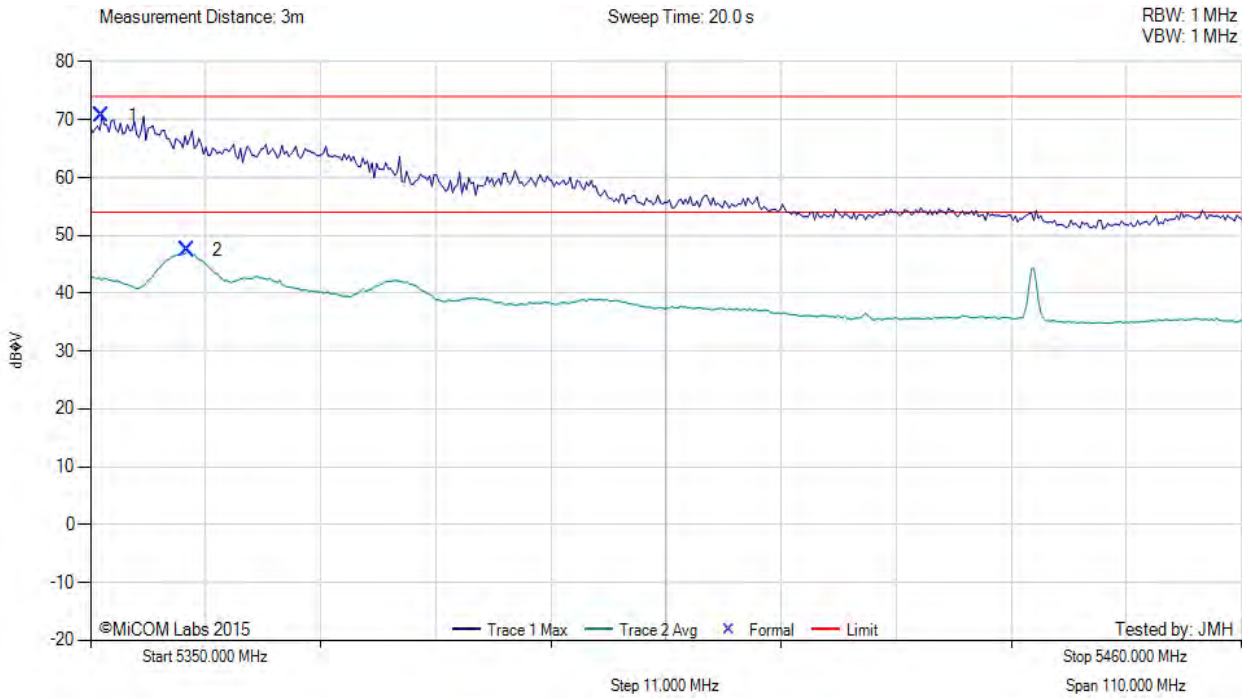
RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 802.11n HT-40, Test Freq: 5310.00 MHz, Antenna: APIN0325, Power Setting: 16, Duty Cycle (%): 96.3



Num	Frequency MHz	Raw dBµV	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	5351.10	75.53	6.16	-11.03	70.66	Max Peak	Vertical	122	-8	74.0	-3.3	Pass
2	5359.26	52.30	6.17	-11.05	47.42	Max Avg	Vertical	122	-8	54.0	-6.6	Pass

Test Notes: AP325 on Table, powered by AC/DC PS

back to matrix

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