Test of Aruba Networks APIN0204, APIN0205

To: FCC 47 CFR Part 15.247 & IC RSS-210

Test Report Serial No.: ARUB170-U3 Rev A





Test of Aruba Networks APIN0204, APIN0205

to

To FCC 47 CFR Part 15.247 & IC RSS-210

Test Report Serial No.: ARUB170-U3 Rev A

<u>Note:</u> this report contains data with regard to the 2400-2483.5 MHz and 5725-5850 MHz operational modes of the Aruba Networks APIN0204 and APIN0205 Wireless Access Point. Test data for the non-DFS Bands 5,150 - 5,250 is reported in MiCOM Labs ARUB170-U6 and 5,250 - 5,350 and 5,470-5,725 MHz data reported in MiCOM Labs test report ARUB170-U8

This report supersedes: NONE

Applicant: Aruba Networks 1344 Crossman Avenue Sunnyvale California 94089, USA

Product Function: Wireless LAN Access Point

Copy No: pdf Issue Date: 4th May 2014

This Test Report is Issued Under the Authority of;

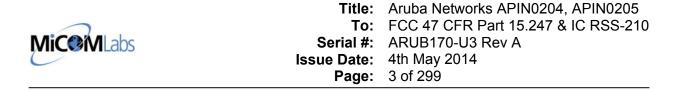
MiCOM Labs, Inc.

575 Boulder Court Pleasanton, CA 94566 USA Phone: +1 (925) 462-0304 Fax: +1 (925) 462-0306 www.micomlabs.com



MiCOM Labs is an ISO 17025 Accredited Testing Laboratory

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



This page has been left intentionally blank

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 Page: 4 of 299

TABLE OF CONTENTS

AC	CREDITATION, LISTINGS & RECOGNITION	5
	TESTING ACCREDITATION	
	RECOGNITION	
	PRODUCT CERTIFICATION	7
TES	ST RESULT CERTIFICATE	9
1.	REFERENCES AND MEASUREMENT UNCERTAINTY	
	1.1. Normative References	
	1.2. Test and Uncertainty Procedures	11
2.	PRODUCT DETAILS AND TEST CONFIGURATIONS	
	2.1. Technical Details	
	2.2. Scope of Test Program	
	2.3. Equipment Model(s) and Serial Number(s)	
	2.4. Antenna Details	
	2.5. Cabling and I/O Ports	
	2.6. Test Configurations2.7. Equipment Modifications	
	2.8. Deviations from the Test Standard	
3.	TEST EQUIPMENT CONFIGURATION(S)	
5.	3.1. Conducted RF Emission Test Set-up	
	3.2. Radiated Spurious Emission Test Set-up > 1 GHz	
	3.3. Digital Emissions Test Set-up (0.03 – 1 GHz)	
	3.4. ac Wireline Emission Test Set-up	
4.	TEST SUMMARY	
5.	TEST RESULTS	27
0.	5.1. Device Characteristics	
	5.1.1. Conducted Testing	
	5.1.2. Radiated Emission Testing	84
	5.1.3. AC Wireline Conducted Emissions (150 kHz – 30 MHz)	134
6.	PHOTOGRAPHS	137
	6.1. Conducted Test Setup	
	6.2. Test Setup - Digital Emissions > 1 GHz	
	6.3. Radiated Emissions Test Setup <1 GHz	
_	6.4. ac Wireline Test Setup >1 GHz	
7.	TEST EQUIPMENT	141
AP	PENDIX	142
Α.	SUPPORTING INFORMATION	
	A.1. CONDUCTED TEST PLOTS	
	A.1.1. 6 dB & 99% Bandwidth	
	A.1.2. Conducted Spurious Emissions	
	A.1.3. Power Spectral Density	257

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 5 of 299

ACCREDITATION, LISTINGS & RECOGNITION

TESTING ACCREDITATION

MiCOM Labs, Inc. is an accredited Electrical testing laboratory per the international standard EN ISO/IEC 17025. 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



This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:6 of 299

RECOGNITION

MiCOM Labs, Inc has widely recognized Electrical testing capabilities. Our international recognition includes Conformity Assessment Body designation by APEC MRA** countries. Our test reports are widely accepted for global type approvals.

Country	Recognition Body	Status	Phase	Identification No.
USA	Federal Communications Commission (FCC)	ТСВ	-	US0159 Listing #: 102167
Canada	Industry Canada (IC)	FCB	APEC MRA 2	US0159 Listing #: 4143A-2
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	
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	US0159
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	

**APEC MRA – Asia Pacific Economic Community Mutual Recognition Agreement.

Is a 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 N/A – Not Applicable

**EU MRA – European Union Mutual Recognition Agreement. Is a recognition agreement under which test lab is accredited to regulatory standards of the EU member countries.

**NB – Notified Body

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:7 of 299

PRODUCT CERTIFICATION

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



<u>United States of America – Telecommunication Certification Body (TCB)</u> TCB Identifier – US0159

Industry Canada – Certification Body CAB Identifier – US0159

<u>Europe – Notified Body</u> Notified Body Identifier - 2280

Japan – Recognized Certification Body (RCB) RCB Identifier - 210

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



DOCUMENT HISTORY

	Document History		
Revision	Date	Comments	
Draft			
Rev A	4 th May 2014	Initial release.	

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 9 of 299

TEST RESULT CERTIFICATE

Manufacturer:	Aruba Networks	Tested By:	MiCOM Labs, Inc.
	1344 Crossman Avenue		575 Boulder Court
	Sunnyvale		Pleasanton
	California 94089, USA		California, 94566, USA
EUT:	802.11a/b/g/n/ac Wireless LAN Access Point	Telephone:	+1 925 462 0304
Model(s):	APIN0204, APIN0205	Fax:	+1 925 462 0306
S/N's:	APIN0204: CM000392 APIN0205: CM000141		
Test Date(s):	17th February - 4th May 2014	Website:	www.micomlabs.com
S/N's:	Access Point APIN0204, APIN0205 APIN0204: CM000392 APIN0205: CM000141	Fax:	

STANDARD(S)

FCC 47 CFR Part 15.247 & IC RSS-210

TEST RESULTS

EQUIPMENT COMPLIES

ACCREDITED TESTING CERT #2381.01

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.

Approved & Released for MiCOM Labs, Inc. by:

Graeme Grieve Quality Manager MiCOM Labs,

Gordon Hurst President & CEO MiCOM Labs, Inc.

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:10 of 299

1. <u>REFERENCES AND MEASUREMENT UNCERTAINTY</u>

1.1. Normative References

REF.	PUBLICATION	YEAR	TITLE
i.	FCC 47 CFR Part 15, Subpart C	2010	Title 47: Telecommunication PART 15—RADIO FREQUENCY DEVICES Subpart C—Intentional Radiators
ii.	RSS-210 Annex 8	2010	Radio Standards Specification 210, Issue 8, Low- power License-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment
iii.	FCC OET KDB 662911	4 th April 2011	Emissions Testing of Transmitters with Multiple Outputs in the Same Band
iv.	DA 00-705	2000	FCC DA 00-705 "Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems" released March 30, 2000
v.	RSS-GEN	2010	Radio Standards Specification-Gen, Issue 3, General Requirements and Information for the Certification of Radiocommunication Equipment
vi.	FCC 47 CFR Part 15, Subpart B	2010	47 CFR Part 15, SubPart B; Unintentional Radiators
vii.	ICES-003	2004	Spectrum Management and Telecommunications Policy Interference-Causing Equipment Standard Digital Apparatus; Issue 4
viii.	ANSI C63.4	2009	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
ix.	CISPR 22/ EN 55022	2008 2006+A1:20 07	Limits and Methods of Measurements of Radio Disturbance Characteristics of Information Technology Equipment
х.	M 3003	Edition 1 Dec. 1997	Expression of Uncertainty and Confidence in Measurements
xi.	LAB34	Edition 1 Aug 2002	The expression of uncertainty in EMC Testing
xii.	ETSI TR 100 028	2001	Parts 1 and 2 Electromagnetic compatibility and Radio Spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics
xiii.	A2LA	July 2012	Reference to A2LA Accreditation Status – A2LA Advertising Policy

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Issue Date: 4th May 2014 Page: 11 of 299

Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A

1.2. **Test and Uncertainty Procedures**

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.

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 12 of 299

2. PRODUCT DETAILS AND TEST CONFIGURATIONS

.1. Technical Details	
Details	Description
Purpose:	Test of the Aruba Networks APIN0204, APIN0205 to
	FCC Part 15.247 and Industry Canada RSS-210
	regulations.
Applicant:	
	1344 Crossman Avenue,
	Sunnyvale, California 94089, USA
Manufacturer:	
Laboratory performing the tests:	MiCOM Labs, Inc.
	575 Boulder Court, Pleasanton, California 94566 USA
Test report reference number:	ARUB170-U3 Rev A
Date EUT received:	10 th January 2013
Standard(s) applied:	FCC 47 CFR Part 15.247 & IC RSS-210
Dates of test (from - to):	17th February - 4th May 2014
No of Units Tested:	Two APIN0204 and APIN0205
Type of Equipment:	802.11a/b/g/n/ac Wireless Access Point 2x2 Spatial
	Multiplexing MIMO configuration
Manufacturers Trade Name:	Wireless Access Point
Model(s):	
Location for use:	
Declared Frequency Range(s):	2400 - 2483.5 MHz; 5725 - 5850 MHz
Hardware Rev	Version P2
Software Rev	armv7nsrd_0127
Type of Modulation:	Per 802.11 –CCK, BPSK, QPSK, DSSS, OFDM
EUT Modes of Operation:	Legacy 802.11a/b/g/n/ac
Declared Nominal Average	2.4 GHz Operation 802.11b/g/n: +22 dBm
Output Power:	5 GHz Operation 802.11a/n/ac: +23 dB m
System Beam Forming:	APIN0204, APIN0205 has no capability for antenna
	beam forming
Transmit/Receive Operation:	Time Division Duplex
Rated Input Voltage and Current:	POE 56 Vdc 350 mA
Operating Temperature Depace	12 Vdc 1.5 A
Operating Temperature Range:	
ITU Emission Designator:	2400 – 2483.5 MHz 802.11b 11M9G1D 2400 – 2483.5 MHz 802.11g 16M6D1D
	2400 – 2483.5 MHz 802.11g T0M0D1D 2400 – 2483.5 MHz 802.11n – HT-20 17M7D1D
	2400 – 2483.5 MHz 802.11n – HT-40 36M4D1D
	5725 – 5850 MHz 802.11a 17M9D1D
	5725 – 5850 MHz 802.11n – HT-20 18M8D1D
	5725 – 5850 MHz 802.11n – HT-40 54M2D1D
	5725 – 5850 MHz 802.11VHT-80 77M9D1D
Equipment Dimensions:	150mmx150mmx40mm
Weight:	3 lbs
Primary function of equipment:	Wireless Access Point for transmitting data and voice.
	wincless Access I officior industriality data and volce.

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



2.2. Scope of Test Program

Aruba Networks APIN0204, APIN0205 Wireless Access Point

The scope of the test program was to test the Aruba Networks APIN0204, APIN0205, 2x2 Spatial Multiplexing MIMO configurations in the frequency ranges 2400 - 2483.5 MHz and 5725 – 5850 MHz for compliance against FCC 47 CFR Part 15.247 and Industry Canada RSS-210 specifications.

Model Identification

APIN0204: External Antenna (Reverse SMA) APIN0205: Integral Antenna

APIN0204 and APIN0205 Operational Modes

Client did not provide software capability for the following operational modes and claimed these were covered under 802.11n HT-20 and 802.11n HT-40.

i).. VHT-20 ii)..VHT-40

FCC OET KDB Implementation

This test program implements the following FCC KDB – 662911 4/4/2011; *Emissions Testing of Transmitters with Multiple Outputs in the Same Band*

The KDB document provides guidance for measurements of conducted output emissions of devices that employ a single transmitter with multiple outputs in the same band, with the outputs occupying the same or overlapping frequency ranges. It applies to EMC compliance measurements on devices that transmit on multiple antennas simultaneously in the same or overlapping frequency ranges through a coordinated process. Examples include, but are not limited to, devices employing beam forming or multiple-input and multiple-output (MIMO.) This guidance applies to both licensed and unlicensed devices wherever the FCC rules call for conducted output measurements. Guidance is provided for in-band, out-of-band and spurious emission measurements.

This guidance does not apply to the multiple transmitters included in a composite device, such as a device that combines an 802.11 modem with a cell phone in one enclosure with each driving its own antenna.

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 14 of 299

Aruba Networks Inc APIN0204 External Antenna 802.11 a/b/g/n/ac Wireless Access Point





This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 15 of 299

Aruba Networks Inc APIN0205 Integral Antenna 802.11 a/b/g/n/ac Wireless Access Point





This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 **Page:** 16 of 299

Aruba Networks Inc 802.11 a/b/g/n/ac Wireless Access Point (Rear)



This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:17 of 299

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

Type (EUT/ Support)	Equipment Description (Including Brand Name)	Mfr	Model No.	Serial No.
EUT	Wireless LAN Access Point	Aruba Networks	APIN0204	CM000392
EUT	Wireless LAN Access Point (Integral Antenna)	Aruba Networks	APIN0205	CM000141
Support	Laptop PC	IBM	Thinkpad	None

2.4. Antenna Details

3. APIN0204 External Antennas

Model	Tures	Gain	Freq. Band	Note
woder	Туре	dBi	MHz	Note
AP-ANT-1B	Omni	3.8	2400 - 2500	
AF-ANT-TD	Onini	5.8	4900 - 5875	
AP-ANT-13B	Omni	4.4	2400 - 2500	
AF-ANT-IJD	Onn	3.3	4900 - 5900	
AP-ANT-16	Omni	3.9	2400 - 2500	
AF-ANT-TO	Onin	4.7	4900 - 5900	
AP-ANT-17	17 Directional 120degr.	6.0	2400 - 2500	
		5.0	4900 - 5875	
AP-ANT-18	Directional	7.5	2400 - 2500	
AF-ANT-TO	60degr.	7.5	5150 - 5875	
AP-ANT-19	Omni	3.0	2400 - 2500	
AF-ANT-19	Onini	6.0	5150 - 5875	
AP-ANT-20	Omni	2.0	2400 - 2500	
	Onini	2.0	5150 - 5875	

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



APIN0205 Integral Antennas

Model	Tuno	Gain	Freq. Band	Note
Woder	Туре	dBi	MHz	Note
metal sheet	Omni	4.0	2400 - 2500	
metal sheet	Omni	4.5	5150 - 5875	

3.1. Cabling and I/O Ports

Number and type of I/O ports

- 1. 10/100/1000 Ethernet (POE)
- 2. Console Serial maintenance terminal
- 3. 12 Vdc, jack connector
- 4. RF Antenna Connectors (x3) Reverse SMA (APIN0204 Only)



3.2. Test Configurations

Testing was performed to determine the highest power level versus bit rate. The variant with the highest power was used to exercise the product.

Operational Mode(s) (802.11a/b/g/n/ac)	Variant	Data Rate with Highest Power	Frequencies (MHz)	
2.4 GHz				
b	Legacy	1 MBit/s	2,412	
g	Legacy	6 MBit/s	2,437	
	HT-20	6.5 (MCS 0)	2,462	
n	HT-40	13.5 (MCS 0)	2,422 2,437 2,452	
5.8 GHz				
а	Legacy	6 MBit/s	5,745 5,785	
n	HT-20	6.5 (MCS 0)	5,825	
11	HT-40	13.5 (MCS 0)	5,755	
ac	ac-40	13.5 (MCS 0)	5,795	
	ac-80	29.3 (MCS 0)	5,775	

Legacy – data rates for 802.11abg products

Results for the above configurations are provided in this report

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Antenna Test Configurations for Radiated Emissions

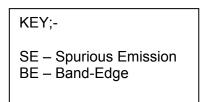
Results for the following configurations are provided in this report.

Radiated emissions testing was performed for all possible configurations on the integral antenna, the table below identifies all radiated testing completed on the device.

2,400 – 2483.5 MHz

15.247		
	SE 2412	
000 446 -	SE 2437	
802.11b,g, 802.11n HT-20	SE 2462	
002.111111-20	BE 2390	
	BE 2483.5	
	SE 2412	
	SE 2437	
802.11n HT-40	SE 2462	
	BE 2390	
	BE 2483.5	

15.247		
000.44	a SE 5745	
802.11a 802.11n HT-20	a SE 5785	
002.111111120	a SE 5825	
	SE 5755	
802.11n HT-40	SE 5795	
	BE 5460	
802.11ac-80	SE 5775	
	BE 5460	



3.3. Equipment Modifications

The following modifications were required to bring the equipment into compliance:

1. NONE

3.4. Deviations from the Test Standard

The following deviations from the test standard were required in order to complete the test program:

1. NONE

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

5,725 – 5850 MHz



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:21 of 299

4. TEST EQUIPMENT CONFIGURATION(S)

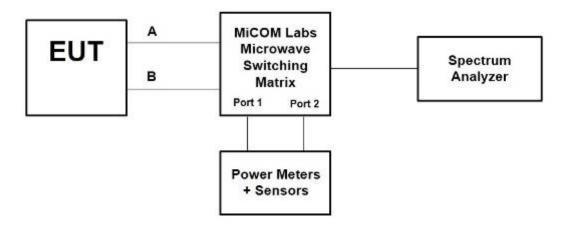
4.1. Conducted RF Emission Test Set-up

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

- 1. Section 6.1.1.1. 6 dB and 99% Bandwidth
- 2. Section 6.1.1.2. Peak Output Power
- 3. Section 6.1.1.3. Power Spectral Density
- 4. Section 6.1.1.4. Conducted Spurious Emissions

Conducted Test Set-Up Pictorial Representation

Test Measurement set up



Conducted Test Measurement Setup

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

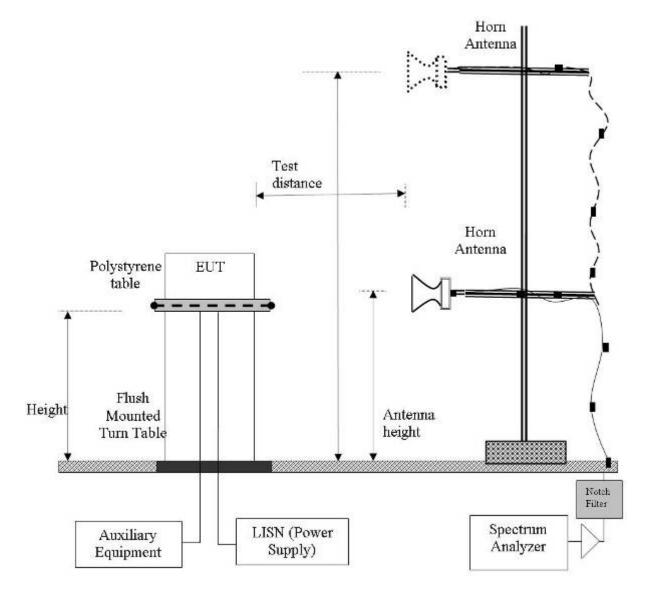


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:22 of 299

4.2. Radiated Spurious Emission Test Set-up > 1 GHz

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

Radiated Emission Measurement Setup – Above 1 GHz



This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

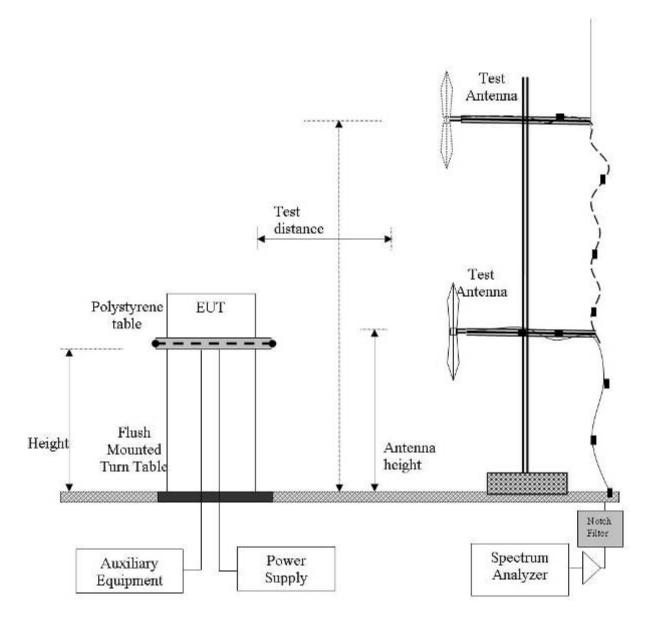


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:23 of 299

4.3. Digital Emissions Test Set-up (0.03 – 1 GHz)

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

Digital Emission Measurement Setup – Below 1 GHz



This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

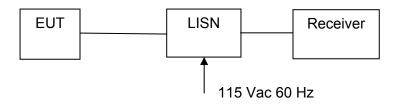


4.4. ac Wireline Emission Test Set-up

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

1. Section 5.1.3 ac Wireline Conducted Emissions

Test Measurement Set up



Measurement set up for AC Wireline Conducted Emissions Test

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:25 of 299

5. TEST SUMMARY

List of Measurements

The following table represents the list of measurements required under the FCC CFR47 Part 15.247 and Industry Canada RSS-210 and Industry Canada RSS-Gen.

Section(s)	Test Items	Description	Condition	Result	Test Report Section
15.247(a)(2) A8.2(1) 4.4	6 dB and 99 % Bandwidths	≥500 kHz	Conducted	Complies	5.1.1.1
15.247(b)(3) 15.31(e) A8.4(4)	Peak Output Power Voltage Variation	Shall not exceed 1W Variation of supply voltage 85 % -115 %	Conducted	Complies	5.1.1.2
15.247(e) A8.2	Peak Power Spectral Density	Shall not be greater than +8 dBm in any 3 kHz band	Conducted	Complies	5.1.1.3
15.247(d) 15.205 / 15.209 A8.5 2.2 4.7	Spurious Emissions (30MHz - 26 GHz b/g and 30 MHz – 40 GHz a)	The radiated emission in any 100 kHz of out- band shall be at least 20 dB below the highest in- band spectral density	Conducted	Complies	5.1.1.4

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 Page: 26 of 299

List of Measurements (continued)

The following table represents the list of measurements required under the FCC CFR47 Part 15.247, Industry Canada RSS-210, and Industry Canada RSS-Gen.

Section(s)	Test Items	Description	Condition	Result	Test Report Section
15.247(d) 15.205 / 15.209 A8.5 2.2 2.6 4.7	Radiated Emissions	Restricted Bands	Radiated	Complies	5.1.2
	Transmitter Radiated Spurious Emissions	Emissions above 1 GHz		Complies	
	Radiated Band Edge	Band-edge results Peak Emissions		Complies	
15.205 / 15.209 2.2	Radiated Spurious Emissions	Emissions <1 GHz (30M- 1 GHz)	Radiated	Complies	5.1.2.4
15.207 7.2.2	AC Wireline Conducted Emissions 150 kHz– 30 MHz	Conducted Emissions	Conducted	N/A EUT is POE powered - not shipped with equipment	5.1.3

Note 1: Test results reported in this document relate only to the items tested

Note 2: The required tests demonstrated compliance as per client declaration of test configuration, monitoring methodology and associated pass/fail criteria

Note 3: Section 3.7 Equipment Modifications highlights the equipment modifications that were required to bring the product into compliance with the above test matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:27 of 299

6. TEST RESULTS

6.1. Device Characteristics

6.1.1. Conducted Testing

6.1.1.1. 6 dB and 99 % Bandwidth

Conducted Test Conditions for 6 dB and 99% Bandwidth						
Standard:	FCC CFR 47:15.247	24.0 - 27.5				
Test Heading:	6 dB and 99 % Bandwidth	Rel. Humidity (%):	32 - 45			
Standard Section(s):	15.247 (a)(2)	Pressure (mBars):	999 - 1001			
Reference Document(s):	KDB 558074 - D01 DTS Measurement Guidance v01: Section 5.1 Emission Bandwidth					

Test Procedure for 6 dB and 99% Bandwidth Measurement

The bandwidth at 6 dB and 99 % was measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate center frequency.

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 28 of 299

Equipment Configuration for 6 dB & 99% Bandwidth

Variant:	802.11b	Duty Cycle (%):	100	
Data Rate:	1 Mbit/s	Antenna Gain (dBi):	Not Applicable	
Modulation:	CCK	Beam Forming Gain (Y):	Not Applicable	
TPC:	Not Applicable Tested By: SB			
Engineering Test Notes:	No software version found however, build number on AP boot 41365			

Test Measurement Results

Test Frequency	Me	easured 6 dB E Por	Bandwidth (MH t(s)	łz)	6 dB Bandy	width (MHz)	Limit	Lowest Margin
MHz	а	b	С	d	Highest	Lowest	KHz	MHz
2412.0	<u>9.138</u>	<u>8.657</u>			9.138	8.657	≥500.0	-8.16
2437.0	<u>8.657</u>	<u>8.257</u>			8.657	8.257	≥500.0	-7.76
2462.0	<u>8.657</u>	<u>8.657</u>			8.657	8.657	≥500.0	-8.16

Test	I	Measured 99% E	Bandwidth (MHz	Maximum		
Frequency		Por	t(s)	99% Bandwidth		
MHz	а	b	С	d	(MHz)	
2412.0	<u>11.864</u>	<u>11.623</u>			11.864	
2437.0	<u>11.623</u>	<u>11.463</u>			11.623	
2462.0	<u>11.623</u>	<u>11.463</u>			11.623	

Traceability to Industry Recognized Test Methodologies					
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK				
Measurement Uncertainty:	±2.81 dB				

Note: click the links in the above matrix to view the graphical image (plot).

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 29 of 299

Equipment Configuration for 6 dB & 99% Bandwidth							
Variant:	802.11g	Duty Cycle (%):	100				
Data Rate:	6 Mbit/s	Antenna Gain (dBi):	Not Applicable				
Modulation:	OFDM	OFDM Beam Forming Gain (Y):					
TPC:	Not Applicable	SB					
Engineering Test Notes:	No software version found however, build number on AP boot 41365						

Test Measurement Results

Test	M	easured 6 dB E	Bandwidth (MF	łz)	6 dB Bandwidth (MHz)		Limit	Lowest
Frequency		Por	t(s)		e ab balla	, , , , , , , , , , , , , , , , , , ,		Margin
MHz	а	b	С	d	Highest	Lowest	KHz	MHz
2412.0	<u>16.513</u>	<u>16.513</u>			16.513	16.513	≥500.0	-16.01
2437.0	<u>16.513</u>	<u>16.513</u>			16.513	16.513	≥500.0	-16.01
2462.0	<u>16.513</u>	<u>16.593</u>			16.593	16.513	≥500.0	-16.01

Test	Measured 99% Bandwidth (MHz) Maximum					
Frequency	Port(s)				99% Bandwidth	
MHz	а	b	С	d	(MHz)	
2412.0	<u>16.513</u>	<u>16.513</u>			16.513	
2437.0	<u>16.593</u>	<u>16.513</u>			16.593	
2462.0	<u>16.513</u>	<u>16.593</u>			16.593	

Traceability to Industry Recognized Test Methodologies					
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK				
Measurement Uncertainty:	±2.81 dB				

Note: click the links in the above matrix to view the graphical image (plot).

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 Page: 30 of 299

Equipment Configuration for 6 dB & 99% Bandwidth							
Variant:	802.11n HT-20	Duty Cycle (%):	93				
Data Rate:	6.5 Mbit/s	Antenna Gain (dBi):	Not Applicable				
Modulation:	OFDM	OFDM Beam Forming Gain (Y):					
TPC:	Not Applicable	SB					
Engineering Test Notes:	No software version found however, build number on AP boot 41365						

Test Measurement Results

Test	M	easured 6 dB E	Bandwidth (MH	łz)	6 dB Bandwidth (MHz)		Limit	Lowest
Frequency		Por	t(s)		o ab bana	(iiii 12)	Linit	Margin
MHz	а	b	С	d	Highest	Lowest	KHz	MHz
2412.0	<u>17.715</u>	<u>17.796</u>			17.796	17.715	≥500.0	-17.22
2437.0	<u>17.715</u>	<u>17.796</u>			17.796	17.715	≥500.0	-17.22
2462.0	<u>17.555</u>	<u>17.796</u>			17.796	17.555	≥500.0	-17.06

Test		Measured 99% E	Bandwidth (MHz	Maximum		
Frequency		Por	t(s)	99% Bandwidth		
MHz	а	b	С	d	(MHz)	
2412.0	<u>17.715</u>	<u>17.635</u>			17.715	
2437.0	<u>17.715</u>	<u>17.715</u>			17.715	
2462.0	<u>17.715</u>	<u>17.715</u>			17.715	

Traceability to Industry Recognized Test Methodologies						
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK					
Measurement Uncertainty:	±2.81 dB					

Note: click the links in the above matrix to view the graphical image (plot).

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 Page: 31 of 299

Equipment Configuration for 6 dB & 99% Bandwidth							
Variant:	802.11n HT-40	Duty Cycle (%):	90				
Data Rate:	13.5 Mbit/s	Antenna Gain (dBi):	Not Applicable				
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable				
TPC:	Not Applicable	Not Applicable Tested By:					
Engineering Test Notes:	No software version found however, build number on AP boot 41365						

Test Measurement Results

Test	Me	easured 6 dB E	Bandwidth (MH	łz)	6 dB Bandwidth (MHz)		Limit	Lowest
Frequency		Por	t(s)		o ub banu		Linit	Margin
MHz	а	b	С	d	Highest	Lowest	KHz	MHz
2422.0	<u>36.553</u>	<u>36.072</u>			36.553	36.072	≥500.0	-35.57
2437.0	<u>36.713</u>	<u>36.713</u>			36.713	36.713	≥500.0	-36.21
2452.0	<u>36.713</u>	<u>36.713</u>			36.713	36.713	≥500.0	-36.21

Test	I	Measured 99% E	Bandwidth (MHz	Maximum 99% Bandwidth		
Frequency		Por	t(s)			
MHz	а	b	С	d	(MHz)	
2422.0	<u>36.393</u>	<u>36.232</u>			36.393	
2437.0	<u>36.393</u>	<u>36.393</u>			36.393	
2452.0	<u>36.393</u>	<u>36.393</u>			36.393	

Traceability to Industry Recognized Test Methodologies						
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK					
Measurement Uncertainty:	±2.81 dB					

Note: click the links in the above matrix to view the graphical image (plot).

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 32 of 299

Equipment Configuration for 6 dB & 99% Bandwidth							
Variant:	802.11a	Duty Cycle (%):	98				
Data Rate:	6 Mbit/s	Antenna Gain (dBi):	Not Applicable				
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable				
TPC:	Not Applicable	SB					
Engineering Test Notes:	No software version found however, build number on AP boot 41365						

Test Measurement Results

Test Frequency	M	easured 6 dB E Por	Bandwidth (MH t(s)	łz)	6 dB Bandy	width (MHz)	Limit	Lowest Margin
MHz	а	b	С	d	Highest	Lowest	KHz	MHz
5745.0	<u>16.513</u>	<u>16.513</u>			16.513	16.513	≥500.0	-16.01
5785.0	<u>16.513</u>	<u>16.513</u>			16.513	16.513	≥500.0	-16.01
5825.0	<u>16.513</u>	<u>16.513</u>			16.513	16.513	≥500.0	-16.01

Test	I	Measured 99% E	Bandwidth (MHz	Maximum 99% Bandwidth		
Frequency		Por	t(s)			
MHz	а	b	С	d	(MHz)	
5745.0	<u>17.475</u>	<u>16.834</u>			17.475	
5785.0	<u>17.876</u>	<u>16.994</u>			17.876	
5825.0	<u>17.796</u>	<u>16.914</u>			17.796	

Traceability to Industry Recognized Test Methodologies						
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK					
Measurement Uncertainty:	±2.81 dB					

Note: click the links in the above matrix to view the graphical image (plot).

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Equipment Configuration for 6 dP 2 00% Pandwidth

Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 33 of 299

Equipment Configuration for 6 dB & 99% Bandwidth							
Variant:	802.11ac-80	Duty Cycle (%):	91				
Data Rate:	29.3 Mbit/s	Antenna Gain (dBi):	Not Applicable				
Modulation:	OFDM	OFDM Beam Forming Gain (Y):					
TPC:	Not Applicable	Tested By:	AH				
Engineering Test Notes:	No software version given however, on boot we were given product number 41365						
· · · · · · · · · · · · · · · · · · ·							

Test Measurement Results

Test	Measured 6 dB Bandwidth (MHz)				6 dB Bandwidth (MHz)		Limit	Lowest
Frequency	Port(s)			Margin				
MHz	а	b	С	d	Highest	Lowest	KHz	MHz
5775.0	<u>76.313</u>	<u>76.313</u>			76.313	76.313	≥500.0	-75.81

Test		Measured 99% E	Bandwidth (MHz	Maximum		
Frequency	Port(s)			99% Bandwidth		
MHz	а	b	C	d	(MHz)	
5775.0	<u>77.916</u>	<u>76.313</u>			77.916	

Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK
Measurement Uncertainty:	±2.81 dB

Note: click the links in the above matrix to view the graphical image (plot).

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 Page: 34 of 299

Equipment Configuration for 6 dB & 99% Bandwidth					
Variant:	802.11n HT-20	Duty Cycle (%):	94		
Data Rate:	6.5 Mbit/s	Antenna Gain (dBi):	Not Applicable		
Modulation:	OFDM	OFDM Beam Forming Gain (Y):			
TPC:	Not Applicable Tested By: SB				
Engineering Test Notes:	No software version found however, build number on AP boot 41365				

Test Measurement Results

Test Frequency	M	easured 6 dB E Por	Bandwidth (M⊦ t(s)	łz)	6 dB Bandy	width (MHz)	Limit	Lowest Margin
MHz	а	b	С	d	Highest	Lowest	KHz	MHz
5745.0	<u>17.715</u>	<u>17.715</u>			17.715	17.715	≥500.0	-17.22
5785.0	<u>17.715</u>	<u>17.715</u>			17.715	17.715	≥500.0	-17.22
5825.0	<u>17.715</u>	<u>17.715</u>			17.715	17.715	≥500.0	-17.22

Test		Measured 99% E	Bandwidth (MHz	Maximum		
Frequency		Por	t(s)	99% Bandwidth		
MHz	а	b	С	d	(MHz)	
5745.0	<u>18.517</u>	<u>17.956</u>			18.517	
5785.0	<u>18.838</u>	<u>17.956</u>			18.838	
5825.0	<u>18.677</u>	<u>18.036</u>			18.677	

Traceability to Industry Recognized Test Methodologies					
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK				
Measurement Uncertainty:	±2.81 dB				

Note: click the links in the above matrix to view the graphical image (plot).

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 Page: 35 of 299

Equipment Configuration for 6 dB & 99% Bandwidth							
Variant:	802.11n HT-40	Duty Cycle (%):	90				
Data Rate:	13.5 Mbit/s	Antenna Gain (dBi):	Not Applicable				
Modulation:	OFDM Beam Forming Gain (Y): Not Applicable						
TPC:	Not Applicable Tested By: AH						
Engineering Test Notes:	No software version given however, on boot we were given product number 41365						

Test Measurement Results

Test Frequency	Me		Bandwidth (M⊦ ⁺t(s)	łz)	6 dB Bandwidth (MHz)		Limit	Lowest Margin
MHz	а	b	С	d	Highest	Lowest	KHz	MHz
5755.0	<u>36.713</u>	<u>36.713</u>			36.713	36.713	≥500.0	-36.21
5795.0	<u>36.713</u>	<u>36.713</u>			36.713	36.713	≥500.0	-36.21

Test		Measured 99% E	Bandwidth (MHz	Maximum		
Frequency	Port(s)				99% Bandwidth	
MHz	а	b	с	d	(MHz)	
5755.0	<u>37.836</u>	<u>36.553</u>			37.836	
5795.0	<u>54.188</u>	<u>45.852</u>			54.188	

Traceability to Industry Recognized Test Methodologies					
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK				
Measurement Uncertainty:	±2.81 dB				

Note: click the links in the above matrix to view the graphical image (plot).

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:36 of 299

Specification

Limits

§15.247 (a)(2) & RSS-210 §A8.2(1)

The minimum 6 dB bandwidth shall be at least 500 kHz.

§ IC RSS-Gen 4.4.1 Occupied Bandwidth When an occupied bandwidth value is not specified in the applicable RSS, the transmitted signal bandwidth to be reported is to be its 99% emission bandwidth, as calculated or measured.

§ IC RSS-Gen 4.4.2 6 dB Bandwidth Where indicated, the 6 dB bandwidth is measured at the points when the spectral density of the signal is 6 dB down from the in –band spectral density of the modulated signal, with the transmitter modulated by a representative signal.

Traceability

Test Equipment Used

0158, 0287, 0252, 0313, 0314, 0070, 0116, 0117

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



6.1.1.2. Peak Output Power

Conducted Test Conditions for Fundamental Emission Output Power						
Standard:	FCC CFR 47:15.247	Ambient Temp. (°C):	24.0 - 27.5			
Test Heading:	Emission Output Power	Rel. Humidity (%):	32 - 45			
Standard Section(s):	15.247 (a)(2)	Pressure (mBars):	999 - 1001			
Reference Document(s):	KDB 558074 - D01 DTS Measurement Guidance v01: Section 5.2 Fundamental Emission Output Power KDB 662911 was implemented for In-band power measurements. The measure and sum technique was implemented in all cases.					

Test Procedure for Fundamental Emission Output Power Measurement

The transmitter terminal of EUT was connected to the input of the spectrum analyzer set to measure peak power. The resolution filter bandwidth was set to 6 dB, peak detector selected and the analyzer built-in power function was used to integrate peak power over the 20 dB bandwidth.

Supporting Information

Calculated Power = A + G + 10 log (1/x) dBm A = Total Power [10 Log10 ($10^{a/10} + 10^{b/10} + 10^{c/10} + 10^{d/10}$)], G = Antenna Gain,

x = Duty Cycle



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:38 of 299

15.247 (c) Operation with directional antenna gains greater than 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Uncorrelated Operation

2.4 GHz Uncorrelated Operation (MIMO)

Antenna	Gain	Max. Allowable Conducted Peak Power (dBm)		Maximum EIRP
(dB)	(dBi)	Uncorrelated	Max. Power Per	(dBm)
			Chain	
Integral	2.0	+30.0	+26.99	+32.0

5.8 GHz Uncorrelated Operation (MIMO)

Antenna	Gain	Max. Allowable Conducted Peak Power (dBm)		Maximum EIRP
(dB)	(dBi)	Uncorrelated	Max. Power Per	(dBm)
			Chain	
Integral	2.0	+30.0	+26.99	+32.0

Correlated Operation

2.4 GHz Correlated Operation (Non-MIMO i.e. Legacy)

Antenna	Gain dBi	Increase	Antenna Gain Increase V's No. Antenna Ports		Max. Allowable Conducted Peak Power	Maximum EIRP
(dB)		Ports dB dBi		dBi	∑ (dBm)	(dBm)
Integral	2.0	2	3.01	5.01	+30.0	+32.0

5.8 GHz Correlated Operation (Non-MIMO i.e. Legacy)

Antenna	Gain dBi	Increase	Antenna Gain Increase V's No. Antenna Ports		otal Max. Allowable Max ain Conducted E Peak Power	
(dB)		Ports dB		dBi	∑ (dBm)	(dBm)
Integral	2.0	2	3.01	5.01	+30.0	+32.0



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 Page: 39 of 299

Equipment Configuration for Average Output Power

Variant:	802.11b	Duty Cycle (%):	100.0	
Data Rate:	1 Mbit/s	Antenna Gain (dBi):	2.00	
Modulation:	ССК	Beam Forming Gain (Y):	Not Applicable	
TPC:	Not Applicable Tested By: SB			
Engineering Test Notes:	No software version found however, build number on AP boot 41365			

Test Measurement Results

Test Frequency	Measured Output Power (dBm) Port(s)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
MHz	а	b	С	d	dBm	dBm	dBm	-
2412.0	18.29	18.39			21.35	30.00	-8.65	19.00
2437.0	18.24	18.16			21.21	30.00	-8.79	19.00
2462.0	17.88	17.84			20.87	30.00	-9.13	19.00

Traceability to Industry Recognized Test Methodologies Work Instruction: WIL01 MEASURING RE OUTPUT POWER

vvork instruction:	WI-UT MEASURING RF OUTPUT POWER
Measurement Uncertainty:	±1.33 dB



Title: Aruba Networks APIN0204, APIN0205 **To:** FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 **Page:** 40 of 299

Equipment Configuration for Average Output Power						
Variant:	802.11g	Duty Cycle (%):	100.0			
Data Rate:	6 Mbit/s	Antenna Gain (dBi):	2.00			
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable			
TPC:	Not Applicable Tested By: SB					
Engineering Test Notes:	No software version found however, build number on AP boot 41365					

Test Measurement Results

Test Frequency	Measured Output Power (dBm) Port(s)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
MHz	а	b	С	d	dBm	dBm	dBm	-
2412.0	18.13	18.15			21.15	30.00	-8.85	19.00
2437.0	17.90	17.99			20.96	30.00	-9.04	19.00
2462.0	17.55	17.65			20.61	30.00	-9.39	19.00

Traceability to Industry Recognized Test Methodologies				
Work Instruction:	WI-01 MEASURING RF OUTPUT POWER			
Measurement Uncertainty:	±1.33 dB			

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 **Page:** 41 of 299

Equipment Configuration for Average Output Power							
Variant:	802.11n HT-20	Duty Cycle (%):	93.0				
Data Rate:	6.5 Mbit/s	Antenna Gain (dBi):	2.00				
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable				
TPC:	Not Applicable	Not Applicable Tested By: SB					
Engineering Test Notes:	No software version found however, build number on AP boot 41365						

Test Measurement Results

Test Frequency	Measured Output Power (dBm) Port(s)			Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting	
MHz	а	b	С	d	dBm	dBm	dBm	
2412.0	18.22	18.11			21.17	30.00	-8.83	19.00
2437.0	18.30	18.12			21.22	30.00	-8.78	19.00
2462.0	17.56	17.81			18.69	30.00	-11.31	19.00

Traceability to Industry Recognized Test Methodologies					
Work Instruction:	WI-01 MEASURING RF OUTPUT POWER				
Measurement Uncertainty:	±1.33 dB				

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 **Page:** 42 of 299

Equipment Configuration for Average Output Power						
Variant:	802.11n HT-40	Duty Cycle (%):	89.7			
Data Rate:	13.5 Mbit/s	Antenna Gain (dBi):	2.00			
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable			
TPC:	Not Applicable Tested By: SB					
Engineering Test Notes:	No software version found however, build number on AP boot 41365					
	•					

Test Measurement Results

Test Frequency	Measured Output Power (dBm) Port(s)			Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting	
MHz	а	b	С	d	dBm	dBm	dBm	
2422.0	18.61	18.63			21.63	30.00	-8.37	19.00
2437.0	18.47	18.52			21.51	30.00	-8.49	19.00
2452.0	18.36	18.11			21.25	30.00	-8.75	19.00

Traceability to Industry Recognized Test Methodologies					
Work Instruction:	WI-01 MEASURING RF OUTPUT POWER				
Measurement Uncertainty:	±1.33 dB				

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 **To:** FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 43 of 299

Equipment Configuration for Average Output Power						
Variant:	802.11a	Duty Cycle (%):	98.0			
Data Rate:	6 Mbit/s	Antenna Gain (dBi):	2.00			
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable			
TPC:	Not Applicable Tested By: SB					
Engineering Test Notes:	No software version found however, build number on AP boot 41365					

Test Measurement Results

Test Frequency	Measured Output Power (dBm) Port(s)			Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting	
MHz	а	b	С	d	dBm	dBm	dBm	
5745.0	19.10	19.05			22.08	30.00	-7.92	19.00
5785.0	19.10	19.05			22.08	30.00	-7.92	19.00
5825.0	19.21	19.16			22.19	30.00	-7.81	19.00

Traceability to Industry Recognized Test Methodologies					
Work Instruction:	WI-01 MEASURING RF OUTPUT POWER				
Measurement Uncertainty:	±1.33 dB				

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 **Page:** 44 of 299

Equipment Configuration for Average Output Power						
Variant:	802.11ac-80	Duty Cycle (%):	91.0			
Data Rate:	29.3 Mbit/s	Antenna Gain (dBi):	2.00			
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable			
TPC:	Not Applicable Tested By: AH					
Engineering Test Notes:	No software version given however, on boot we were given product number 41365					

Test Measurement Results

Test	Measured Output Power (dBm)				Calculated	Lingit		
Frequency	Port(s)			Total Power Σ Port(s)	Limit	Margin	EUT Power Setting	
MHz	а	b	С	d	dBm	dBm	dBm	
5775.0	19.02	18.68			21.86	30.00	-8.14	19.00

Traceability to Industry Recognized Test Methodologies					
Work Instructi	on: WI-01 MEASURING RF OUTPUT POWER				
Measurement Uncertair	ty: ±1.33 dB				

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 **Page:** 45 of 299

Equipment Configuration for Average Output Power						
Variant:	802.11n HT-20	Duty Cycle (%):	94.3			
Data Rate:	6.5 Mbit/s	Antenna Gain (dBi):	2.00			
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable			
TPC:	Not Applicable	Not Applicable Tested By: SB				
Engineering Test Notes:	No software version found however, build number on AP boot 41365					

Test Measurement Results

Test Frequency	Measured Output Power (dBm) Port(s)			Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting	
MHz	а	b	С	d	dBm	dBm	dBm	
5745.0	19.08	18.98			22.05	30.00	-7.95	19.00
5785.0	18.97	18.90			21.95	30.00	-8.05	19.00
5825.0	19.10	19.10			22.12	30.00	-7.88	19.00

Traceability to Industry Recognized Test Methodologies						
Work Instruction:	WI-01 MEASURING RF OUTPUT POWER					
Measurement Uncertainty:	±1.33 dB					

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 **Page:** 46 of 299

Equipment Configuration for Average Output Power							
Variant:	802.11n HT-40	Duty Cycle (%):	90.0				
Data Rate:	13.5 Mbit/s	Antenna Gain (dBi):	2.00				
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable				
TPC:	Not Applicable Tested By: AH						
Engineering Test Notes:	No software version given however, on boot we were given product number 41365						

Test Measurement Results

Test Frequency	N	Measured Output Power (dBm) Port(s)				Limit	Margin	EUT Power Setting
MHz	а	b	С	d	dBm	dBm	dBm	
5755.0	19.22	19.04			22.14	30.00	-7.86	19.00
5795.0	21.17	21.00			24.09	30.00	-5.91	19.00

Traceability to Industry Recognized Test Methodologies						
Work Instruction:	WI-01 MEASURING RF OUTPUT POWER					
Measurement Uncertainty:	±1.33 dB					

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Antenna Type V's Power Setting

The following **Antenna Types V's Power Setting** tables consolidates the results of all tests performed on the APIN0204 and APIN0205 to finalize the power setting for each antenna's tested;

Integral Antenna (APIN0205)

Channel		2.4	GHz		5.8 GHz				
Channer	b	g	HT-20	HT-40	а	HT-20	HT-40	ac-80	
Low	19	17	17	17	19	19	19	19	
Mid	19	19	19	19	19	19	19	19	
High	19	17	17	17	19	19	19	19	

Antenna AP-ANT-1B (APIN0204)

Channel		2.4	GHz		5.8 GHz				
Channel	b	g	HT-20	HT-40	а	HT-20	HT-40	ac-80	
Low	19	17	19	17	19	19	19	19	
Mid	19	19	19	19	19	19	19	19	
High	19	18	18	16	19	19	19	19	

Antenna AP-ANT-13B (APIN0204)

Channel		2.4	GHz		5.8 GHz				
Channel	b	g	HT-20	HT-40	а	HT-20	HT-40	ac-80	
Low	19	17	17	17	19	19	19	19	
Mid	19	19	19	19	19	19	19	19	
High	19	19	17	16	19	19	19	19	

Antenna AP-ANT-16 (APIN0204)

Channel		2.4	GHz		5.8 GHz				
Channel	b	g	HT-20	HT-40	а	HT-20	HT-40	ac-80	
Low	19	16	16	13	19	19	19	19	
Mid	19	19	19	19	19	19	19	19	
High	19	17	17	16	19	19	19	19	

Antenna AP-ANT-18 (APIN0204)

Channel		2.4 GHz				5.8 GHz				
Channel	b	g	HT-20	HT-40	а	HT-20	HT-40	ac-80		
Low	19	15	16	12	19	19	19	19		
Mid	19	19	19	19	19	19	19	19		
High	19	17	17	16	19	19	19	19		

Antenna AP-ANT-19 (APIN0204)

Channel 2.4 GHz				5.8 GHz				
Channel	b	g	HT-20	HT-40	а	HT-20	HT-40	ac-80
Low	19	18	18	18	19	19	19	19
Mid	19	19	19	19	19	19	19	19
High	19	17	17	16	19	19	19	19

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Specification

Limits

§15.247 (b) The maximum peak output power of the intentional radiator shall not exceed the following:

§15.247 (b) (3) For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz bands: 1.0 watt.

15.247 (b) (4) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

15.247 (c) Operation with directional antenna gains greater than 6 dBi.

- (1) Fixed point-to-point operation:
- (i) Systems operating in the 2400–2483.5 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.
- (ii) Systems operating in the 5725–5850 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted output power.

§15.31 (e) For intentional radiators, measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage. For battery operated equipment, the equipment tests shall be performed using a new battery.

§ RSS-210 A8.4(4) For systems employing digital modulation techniques operating in the 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz bands the maximum peak conducted power shall not exceed 1 watt.

Traceability

Method	Test Equipment Used
Measurements were made per work instruction WI-01 'Measuring RF Output Power'	0158, 0287, 0252, 0313, 0314, 0070, 0116, 0117



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:49 of 299

6.1.1.3. Power Spectral Density

Conducted Test Conditions for Power Spectral Density								
Standard:	FCC CFR 47:15.247	Ambient Temp. (°C):	24.0 - 27.5					
Test Heading:	Power Spectral Density	Rel. Humidity (%):	32 - 45					
Standard Section(s):	15.247 (e)	Pressure (mBars):	999 - 1001					
Reference Document(s):	KDB 558074 - D01 DTS Measurement Guidance v01: Section 5.3 Maximum Power Spectral Density Level in the Emission Bandwidth							

Test Procedure for Power Spectral Density

The transmitter output was connected to a spectrum analyzer and the maximum level in a 3 kHz bandwidth was measured. A peak value was found over the full emission bandwidth and the frequency span reduced to obtain enhanced resolution. Sweep time \geq span / 3 kHz with video averaging turned off. The Peak Power Spectral Density is the highest level found across the emission in a 3 kHz resolution bandwidth.

Supporting Information

Calculated Power = $A + 10 \log (1/x) dBm$

A = Total Power Spectral Density $[10 \text{ Log10} (10^{a_{10}} + 10^{b_{10}} + 10^{c_{10}} + 10^{d_{10}})]$

x = Duty Cycle

Limit Line: KDB 662911 was implemented for In-band power spectral density (PSD) measurements - Option (2) measure and subtract 10 log (N) dB from the limit for devices with multiple RF ports



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 Page: 50 of 299

Equipment Configuration for Power Spectral Density - Average										
Variant:	802.11b	Duty Cycle (%):	100							
Data Rate:	1 Mbit/s	Antenna Gain (dBi):	Not Applicable							
Modulation:	ССК	Beam Forming Gain (Y):	Not Applicable							
TPC:	Not Applicable	Tested By:	SB							
Engineering Test Notes:										

Test Measurement Results

Test Frequency	Measured Power Spectral Density (dBm) Port(s)				Spectra	Total Power I Density Bm	Limit	Margin
MHz	а	b	с	d	Σ Port(s) per 30kHz RBW	Conversion to 3 kHz RBW	dBm	dB
2412.0	<u>-0.699</u>	<u>-0.070</u>			2.637	-7.363	8.00	-15.36
2437.0	<u>-0.685</u>	<u>0.010</u>			2.687	-7.313	8.00	-15.31
2462.0	<u>-0.057</u>	<u>-1.246</u>			2.399	-7.601	8.00	-15.60

Traceability to Industry Recognized Test Methodologies

Work Instruction: WI-03 MEASURING RF SPECTRUM MASK Measurement Uncertainty: ±2.81 dB

Note: click the links in the above matrix to view the graphical image (plot).

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 Page: 51 of 299

Equipment Configuration for Power Spectral Density - Average									
Variant:	802.11g	Duty Cycle (%):	100						
Data Rate:	6 Mbit/s	Antenna Gain (dBi):	Not Applicable						
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable						
TPC:	Not Applicable	Tested By:	SB						
Engineering Test Notes:									

Test Measurement Results

Test Frequency	Measured Power Spectral Density (dBm) Port(s)				Spectra	Total Power I Density Bm	Limit	Margin
MHz	а	b	с	d	Σ Port(s) per 30kHz RBW	Conversion to 3 kHz RBW	dBm	dB
2412.0	<u>-6.111</u>	<u>-5.680</u>			-2.880	-12.880	8.00	-20.88
2437.0	<u>-3.717</u>	<u>-4.047</u>			-0.869	-10.869	8.00	-18.87
2462.0	<u>-6.023</u>	<u>-6.386</u>			-3.190	-13.190	8.00	-21.19

Traceability to Industry Recognized Test Methodologies

Work Instruction: WI-03 MEASURING RF SPECTRUM MASK Measurement Uncertainty: ±2.81 dB

Note: click the links in the above matrix to view the graphical image (plot).

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 Page: 52 of 299

Equipment Configuration for Power Spectral Density - Average										
Variant:	802.11n HT-20	Duty Cycle (%):	93							
Data Rate:	6.5 Mbit/s	Antenna Gain (dBi):	Not Applicable							
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable							
TPC:	Not Applicable	Tested By:	SB							
Engineering Test Notes:										

Test Measurement Results

Test Frequency	Measured Power Spectral Density (dBm) Port(s)			Spectra	Total Power I Density Bm	Limit	Margin	
MHz	а	b	с	d	Σ Port(s) per 30kHz RBW	Conversion to 3 kHz RBW	dBm	dB
2412.0	<u>-5.936</u>	<u>-5.635</u>			-2.773	-12.773	8.00	-20.77
2437.0	<u>-4.154</u>	<u>-3.816</u>			-0.971	-10.971	8.00	-18.97
2462.0	<u>-6.179</u>	<u>-6.889</u>			-3.509	-13.509	8.00	-21.51

Traceability to Industry Recognized Test Methodologies

Work Instruction: WI-03 MEASURING RF SPECTRUM MASK Measurement Uncertainty: ±2.81 dB

Note: click the links in the above matrix to view the graphical image (plot).

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 Page: 53 of 299

Equipment Configuration for Power Spectral Density - Average										
Variant:	802.11n HT-40	Duty Cycle (%):	90							
Data Rate:	13.5 Mbit/s	Antenna Gain (dBi):	Not Applicable							
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable							
TPC:	Not Applicable	Tested By:	SB							
Engineering Test Notes:										

Test Measurement Results

Test Frequency	Measured Power Spectral Density (dBm) Port(s)				Spectra	Total Power Density 3m	Limit	Margin
MHz	а	b	с	d	Σ Port(s) per 30kHz RBW	Conversion to 3 kHz RBW	dBm	dB
2422.0	<u>-8.300</u>	<u>-7.380</u>			-4.805	-14.805	8.00	-22.81
2437.0	<u>-8.233</u>	<u>-7.946</u>			-5.077	-15.077	8.00	-23.08
2452.0	<u>-8.408</u>	<u>-8.718</u>			-5.550	-15.550	8.00	-23.55

Traceability to Industry Recognized Test Methodologies

Work Instruction: WI-03 MEASURING RF SPECTRUM MASK Measurement Uncertainty: ±2.81 dB

Note: click the links in the above matrix to view the graphical image (plot).

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 Page: 54 of 299

Equipment Configuration for Power Spectral Density - Average									
Variant:	802.11a	Duty Cycle (%):	98						
Data Rate:	6 Mbit/s	Antenna Gain (dBi):	Not Applicable						
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable						
TPC:	Not Applicable	Tested By:	SB						
Engineering Test Notes:									

Test Measurement Results

Test Frequency	Measured Power Spectral Density (dBm) Port(s)				Spectral	Total Power Density 3m	Limit	Margin
MHz	а	b	с	d	Σ Port(s) per 30kHz RBW	Conversion to 3 kHz RBW	dBm	dB
5745.0	<u>-2.690</u>	<u>-3.023</u>			0.157	-9.843	8.00	-17.84
5785.0	<u>-2.868</u>	<u>-3.052</u>			0.051	-9.949	8.00	-17.95
5825.0	<u>-2.832</u>	<u>-3.263</u>			-0.032	-10.032	8.00	-18.03

Traceability to Industry Recognized Test Methodologies

Work Instruction: WI-03 MEASURING RF SPECTRUM MASK Measurement Uncertainty: ±2.81 dB

Note: click the links in the above matrix to view the graphical image (plot).

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 Page: 55 of 299

Equipment Configuration for Power Spectral Density - Average										
Variant:	802.11ac-80	Duty Cycle (%):	91							
Data Rate:	29.3 Mbit/s	Antenna Gain (dBi):	Not Applicable							
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable							
TPC:	Not Applicable	Tested By:	AH							
Engineering Test Notes:										

Test Measurement Results

Test Frequency	Measured Power Spectral Density (dBm)			Calculated Total Power Spectral Density		Limit	Margin	
Frequency		Por	t(s)		dE	Зm		
MHz	а	b	с	d	Σ Port(s) per 30kHz RBW	Conversion to 3 kHz RBW	dBm	dB
5775.0	<u>-12.525</u>	<u>-12.679</u>			-9.591	-19.591	8.00	-27.59

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK
Measurement Uncertainty:	±2.81 dB

Note: click the links in the above matrix to view the graphical image (plot).



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 56 of 299

Equipment Configuration for Power Spectral Density - Average					
Variant:	802.11n HT-20	Duty Cycle (%):	94		
Data Rate:	6.5 Mbit/s	Antenna Gain (dBi):	Not Applicable		
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable		
TPC:	Not Applicable	Tested By:	SB		
Engineering Test Notes:					

Test Measurement Results

Test Frequency	Measured Power Spectral Density (dBm) Port(s)			Calculated Total Power Spectral Density dBm		Limit	Margin	
MHz	а	b	с	d	Σ Port(s) per 30kHz RBW	Conversion to 3 kHz RBW	dBm	dB
5745.0	<u>-3.107</u>	<u>-2.835</u>			0.041	-9.959	8.00	-17.96
5785.0	<u>-3.074</u>	<u>-3.203</u>			-0.128	-10.128	8.00	-18.13
5825.0	<u>-3.395</u>	<u>-3.252</u>			-0.313	-10.313	8.00	-18.31

Traceability to Industry Recognized Test Methodologies

Work Instruction: WI-03 MEASURING RF SPECTRUM MASK Measurement Uncertainty: ±2.81 dB

Note: click the links in the above matrix to view the graphical image (plot).

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 Page: 57 of 299

Equipment Configuration for Power Spectral Density - Average					
Variant:	802.11n HT-40	Duty Cycle (%):	90		
Data Rate:	13.5 Mbit/s	Antenna Gain (dBi):	Not Applicable		
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable		
TPC:	Not Applicable	Tested By:	AH		
Engineering Test Notes:					

Test Measurement Results

Test	Measu	red Power Sp	ectral Density	(dBm)	Calculated Total Power Spectral Density dBm		Limit	Margin
Frequency		Por	t(s)					
MHz	а	b	с	d	Σ Port(s) per 30kHz RBW	Conversion to 3 kHz RBW	dBm	dB
5755.0	<u>-6.957</u>	<u>-7.513</u>			-4.216	-14.216	8.00	-22.22
5795.0	<u>-5.208</u>	<u>-5.213</u>			-2.200	-12.200	8.00	-20.20

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK
Measurement Uncertainty:	±2.81 dB

Note: click the links in the above matrix to view the graphical image (plot).

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:58 of 299

Specification Peak Power Spectral Density Limits

§15.247(e) For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than +8 dBm in any 3 kHz band during any time interval of continuous transmission

RSS-210 §A8.2(2) The transmitter power spectral density (into the antenna) shall not be greater than +8 dBm in any 3 kHz band during any time interval of continuous transmission or over 1.0 second if the transmission exceeds 1.0 second duration.

Traceability

Method	Test Equipment Used
Measurements were made per work instruction WI-01 'Measuring RF Output Power'	0158, 0287, 0252, 0313, 0314, 0070, 0116, 0117



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:59 of 299

6.1.1.4. Conducted Spurious Emissions

Conducted Test Conditions for Transmitter Conducted Spurious and Band-Edge Emissions			
Standard:	FCC CFR 47:15.247	Ambient Temp. (°C):	24.0 - 27.5
Test Heading:	Max Unwanted Emission Levels	Rel. Humidity (%):	32 - 45
Standard Section(s):	15.247 (d)	Pressure (mBars):	999 - 1001
Reference Document(s):	KDB 558074 - D01 DTS Measurement Guidance v01: Section 5.4 Maximum Unwanted Emission Levels		

Test Procedure for Transmitter Conducted Spurious and Band-Edge Emissions Measurement

Transmitter Conducted Spurious and Band-Edge emissions were measured at a limit of 20 dB below the highest in-band spectral density measured with a spectrum analyzer connected to the antenna terminal. Measurements were made while EUT was operating in transmit mode of operation at the appropriate centre frequency closest to the band-edge. Emissions were maximized during the measurement and limits derived from the peak spectral power and drawn on each plot.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 60 of 299

Equipment Configuration for Conducted Low Band-Edge Emissions - Average

Variant:	802.11b	Duty Cycle (%):	100	
Data Rate:	1 Mbit/s	Antenna Gain (dBi):	Not Applicable	
Modulation:	ССК	Beam Forming Gain (Y):	Not Applicable	
TPC:	Not Applicable	Tested By:	SB	
Engineering Test Notes:	o software version found however, build number on AP boot 41365			

Test Measurement Results

Channel Fr	requency: 2412.0	MHz				
Band-Edge Fr	requency: 2400.0	2400.0 MHz				
Test Frequence	cy Range: 2350.0	- 2422.0 MHz				
	Band	Edge Markers and	Limit	Amended Limit		Margin
Port(s)	M1 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)
а	<u>-55.78</u>	-29.13	2404.40			-4.400
b	<u>-53.44</u>	-28.65	2404.50			-4.500

Traceability to Industry Recognized Test Methodologies Work Instruction: WI-05 MEASUREMENT OF SPURIOUS EMISSIONS Measurement Uncertainty: ≤40 GHz ±2.37 dB, > 40 GHz ±4.6 dB

Note: click the links in the above matrix to view the graphical image (plot).

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 61 of 299

Equipment Confi	guration for Conducted	Low Band-Edge	Emissions - Average	
	ga.a			

Variant:	802.11g	Duty Cycle (%):	100		
Data Rate:	6 Mbit/s	Antenna Gain (dBi):	Not Applicable		
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable		
TPC:	Not Applicable	Tested By:	SB		
Engineering Test Notes:	No software version found however, build number on AP boot 41365				

Test Measurement Results

Channel Fr	requency: 2412.0	12.0 MHz					
Band-Edge Fr	requency: 2400.0)0.0 MHz					
Test Frequency Range: 2350.0 - 2422.0 MHz							
	Band-Edge Markers and Limit			Amend	Margin		
Port(s)	M1 Amplitude (dBm)			Amplitude (dBm)	M2A Frequency (MHz)	(MHz)	
а	<u>-44.50</u>	-34.87	2401.80			-1.800	
b	<u>-45.32</u>	-34.61	2401.90			-1.900	

Traceability to Industry Recognized Test Methodologies				
Work Instruction: WI-05 MEASUREMENT OF SPURIOUS EMISSIONS				
Measurement Uncertainty:	≤40 GHz ±2.37 dB, > 40 GHz ±4.6 dB			

Note: click the links in the above matrix to view the graphical image (plot).



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 Page: 62 of 299

Equipment Configuration for Conducted Low Band-Edge Emissions - Average						
Variant:	802.11n HT-20	Duty Cycle (%):	93			
Data Rate:	6.5 Mbit/s	Antenna Gain (dBi):	Not Applicable			
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable			
TPC:	TPC: Not Applicable Tested By: SB					
Engineering Test Notes:	gineering Test Notes: No software version found however, build number on AP boot 41365					

Test Measurement Results

Channel Fr	requency: 2412.0	12.0 MHz					
Band-Edge Fr	requency: 2400.0	0.0 MHz					
Test Frequence	Test Frequency Range: 2350.0 - 2422.0 MHz						
	Band	Band-Edge Markers and Limit			Amended Limit		
Port(s)	M1 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)	
а	<u>-44.50</u>	-35.33	2401.70			-1.700	
b	<u>-45.32</u>	-34.89	2401.80			-1.800	

Traceability to Industry Recognized Test Methodologies				
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS			
Measurement Uncertainty:	≤40 GHz ±2.37 dB, > 40 GHz ±4.6 dB			

Note: click the links in the above matrix to view the graphical image (plot).



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 Page: 63 of 299

Equ	Equipment Configuration for Conducted Low Band-Edge Emissions - Average						
Variant: 802.11n HT-40 Duty Cycle (%): 90							
Data Rate:	13.5 Mbit/s	Antenna Gain (dBi):	Not Applicable				
Modulation:	OFDM	DFDM Beam Forming Gain (Y):					
TPC:	TPC: Not Applicable Tested By: SB						
Engineering Test Notes:	es: No software version found however, build number on AP boot 41365						

Test Measurement Results

Channel Fr	requency: 2422.0	22.0 MHz					
Band-Edge Fr	requency: 2400.0	00.0 MHz					
Test Frequency Range: 2292.0 - 2442.0 MHz							
	Band	Band-Edge Markers and Limit		Amended Limit		Margin	
Port(s)	M1 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)	
а	<u>-38.78</u>	-36.51	2401.70			-1.700	
b	<u>-40.46</u>	-36.29	2402.30			-2.300	

Traceability to Industry Recognized Test Methodologies				
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS			
Measurement Uncertainty:	≤40 GHz ±2.37 dB, > 40 GHz ±4.6 dB			

Note: click the links in the above matrix to view the graphical image (plot).

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 64 of 299

Equipment Confi	guration for Conducted	Low Band-Edge Er	nissions - Average
	ga.a		

Variant:	802.11a	Duty Cycle (%):	98		
Data Rate:	6 Mbit/s	Antenna Gain (dBi):	Not Applicable		
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable		
TPC:	Not Applicable	Tested By:	SB		
Engineering Test Notes:	No software version found however, build number on AP boot 41365				

Test Measurement Results

Channel Fre	quency: 5745.0	45.0 MHz					
Band-Edge Fre	quency: 5725.0	5.0 MHz					
Test Frequency	ency Range: 5683.0 - 5755.0 MHz						
	Bar	Band-Edge Markers and Limit		Amended Limit		Margin	
Port(s)	M1 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)	
а	<u>-36.20</u>	-31.54	5727.20			-2.200	
b	<u>-37.80</u>	-31.61	5729.30			-4.300	

Traceability to Industry Recognized Test Methodologies				
Work Instruct	ion: WI-05 MEASUREMENT OF SPURIOUS EMISSIONS			
Measurement Uncertai	nty: ≤40 GHz ±2.37 dB, > 40 GHz ±4.6 dB			

Note: click the links in the above matrix to view the graphical image (plot).

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 65 of 299

Equipment Configuration for Conducted Low Band-Edge Emissions - Average						
Variant:	802.11ac-80	Duty Cycle (%):	91			
Data Rate:	29.3 Mbit/s	Antenna Gain (dBi):	Not Applicable			
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable			
TPC:	Not Applicable	Tested By:	AH			

Engineering Test Notes: No software version given however, on boot we were given product number 41365

Test Measurement Results

Channel Fr	requency: 5775.0	ncy: 5775.0 MHz				
Band-Edge Fr	e Frequency: 5725.0 MHz					
Test Frequence	cy Range: 5600.0	- 5900.0 MHz				
	Band	Band-Edge Markers and Limit			Amended Limit	
Port(s)	M1 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)
а	<u>-35.70</u>	-31.61	5735.90			-10.900
b	<u>-37.90</u>	-31.61	5735.90			-10.900

Traceability to Industry Recognized Test Methodologies				
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS			
Measurement Uncertainty:	≤40 GHz ±2.37 dB, > 40 GHz ±4.6 dB			

Note: click the links in the above matrix to view the graphical image (plot).

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 66 of 299

Equipment Configuration for Conducted Low Band-Edge Emissions - Average	
---	--

Variant:	802.11n HT-20	Duty Cycle (%):	94	
Data Rate:	6.5 Mbit/s	Antenna Gain (dBi):	Not Applicable	
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable	
TPC:	lot Applicable Tested By: SB			
Engineering Test Notes:	ing Test Notes: No software version found however, build number on AP boot 41365			

Test Measurement Results

Channel Fre	quency:	5745.0 N	1Hz				
Band-Edge Fre	quency:	5725.0 N	1Hz				
Test Frequency	t Frequency Range: 5683.0 - 5755.0 MHz						
		Band-Edge Markers and Limit Amended Limit Mar			Margin		
Port(s)	M1 Amp (dB		Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)
а	<u>-34</u> .	<u>64</u>	-32.19	5726.70			-1.700
b	<u>-37.</u>	<u>02</u>	-32.35	5729.60			-4.600

Traceability to Industry Recognized Test Methodologies				
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS			
Measurement Uncertainty:	≤40 GHz ±2.37 dB, > 40 GHz ±4.6 dB			

Note: click the links in the above matrix to view the graphical image (plot).



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 67 of 299

Equipment Configuration for Conducted Low Band-Edge Emissions - Average						
Variant:	802.11n HT-40	Duty Cycle (%):	90			
Data Rate:	13.5 Mbit/s	Antenna Gain (dBi):	Not Applicable			
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable			
TPC:	Not Applicable	lot Applicable Tested By: AH				
Engineering Test Notes:	No software version given however, on boot we were given product number 41365					

Test Measurement Results

Channel Fr	Channel Frequency: 5755.0 MHz					
Band-Edge Fr	requency: 5725.0	MHz				
Test Frequence	Test Frequency Range: 5625.0 - 5775.0 MHz					
	Band	Band-Edge Markers and Limit Amer			ed Limit	Margin
Port(s)	M1 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)
а	<u>-32.58</u>	-31.61	5726.60			-1.600
b	<u>-35.82</u>	-31.61	5735.30			-10.300

Traceability to Industry Recognized Test Methodologies				
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS			
Measurement Uncertainty:	≤40 GHz ±2.37 dB, > 40 GHz ±4.6 dB			

Note: click the links in the above matrix to view the graphical image (plot).



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 Page: 68 of 299

Equipment Configuration for Conducted High Band-Edge Emissions - Average

Variant:	802.11b	Duty Cycle (%):	100	
Data Rate:	1 Mbit/s	Antenna Gain (dBi):	Not Applicable	
Modulation:	ССК	Beam Forming Gain (Y):	Not Applicable	
TPC:	lot Applicable Tested By: SB			
Engineering Test Notes: No software version found however, build number on AP boot 41365				

Test Measurement Results

Channel Fre	quency: 2462.0 M	62.0 MHz					
Band-Edge Frequency: 2483.5 MHz							
Test Frequency	st Frequency Range: 2452.0 - 2524.0 MHz						
	Band	Band-Edge Markers and Limit		Amended Limit		Margin	
Port(s)	M3 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)	
а	<u>-57.76</u>	-29.23	2469.70			-13.800	
b	<u>-62.22</u>	-29.50	2469.60			-13.900	

Traceability to Industry Recognized Test Methodologies			
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS		
Measurement Uncertainty:	≤40 GHz ±2.37 dB, > 40 GHz ±4.6 dB		

Note: click the links in the above matrix to view the graphical image (plot).

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 69 of 299

Equipment Configuration for Conducted High Band-Edge Emissions - Average
--

Variant:	802.11g	Duty Cycle (%):	100
Data Rate:	6 Mbit/s	Antenna Gain (dBi):	Not Applicable
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable
TPC:	Not Applicable	Tested By:	SB
Engineering Test Notes:	No software version found however, build number on AP boot 41365		

Test Measurement Results

Channel Fr	requency: 2462.0	462.0 MHz				
Band-Edge Fr	requency: 2483.5	2483.5 MHz				
Test Frequence	Test Frequency Range: 2452.0 - 2524.0 MHz					
	Band	Band-Edge Markers and Limit		Amended Limit		Margin
Port(s)	M3 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)
а	<u>-54.67</u>	-35.07	2472.30			-11.200
b	<u>-57.36</u>	-35.22	2472.30			-11.200

Traceability to Industry Recognized Test Methodologies			
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS		
Measurement Uncertainty:	≤40 GHz ±2.37 dB, > 40 GHz ±4.6 dB		

Note: click the links in the above matrix to view the graphical image (plot).

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 70 of 299

Equipment Configuration for Conducted High Band-Edge Emissions - Average	

Variant:	802.11n HT-20	Duty Cycle (%):	93
Data Rate:	6.5 Mbit/s	Antenna Gain (dBi):	Not Applicable
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable
TPC:	Not Applicable	Tested By:	SB
Engineering Test Notes:	No software version found however, build number on AP boot 41365		

Test Measurement Results

Channel Fr	requency: 2462.0	62.0 MHz				
Band-Edge Fr	requency: 2483.5	483.5 MHz				
Test Frequence	Test Frequency Range: 2452.0 - 2524.0 MHz					
	Band	Band-Edge Markers and Limit		Amended Limit		Margin
Port(s)	M3 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)
а	<u>-53.84</u>	-35.60	2472.30			-11.200
b	<u>-58.70</u>	-36.03	2472.50			-11.000

Traceability to Industry Recognized Test Methodologies			
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS		
Measurement Uncertainty:	≤40 GHz ±2.37 dB, > 40 GHz ±4.6 dB		

Note: click the links in the above matrix to view the graphical image (plot).

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 71 of 299

Equipment Configuration for Conducted	I High Band-Edge Emission	s - Average
---------------------------------------	---------------------------	-------------

Variant:	802.11n HT-40	Duty Cycle (%):	90
Data Rate:	13.5 Mbit/s	Antenna Gain (dBi):	Not Applicable
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable
TPC:	Not Applicable	Tested By:	SB
Engineering Test Notes:	No software version found however, build number on AP boot 41365		

Test Measurement Results

Channel Fr	requency: 2452.0	2452.0 MHz				
Band-Edge Fr	requency: 2483.5	2483.5 MHz				
Test Frequence	Frequency Range: 2432.0 - 2582.0 MHz					
	Band	-Edge Markers and	Limit	Amended Limit		Margin
Port(s)	M3 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)
а	<u>-39.70</u>	-36.67	2473.20			-10.300
b	<u>-41.60</u>	-37.05	2472.30			-11.200

Traceability to Industry Recognized Test Methodologies			
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS		
Measurement Uncertainty:	≤40 GHz ±2.37 dB, > 40 GHz ±4.6 dB		

Note: click the links in the above matrix to view the graphical image (plot).



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 Page: 72 of 299

Equipment Configuration for Conducted High Band-Edge Emissions - Average

Variant:	802.11a	Duty Cycle (%):	98
Data Rate:	6 Mbit/s	Antenna Gain (dBi):	Not Applicable
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable
TPC:	Not Applicable	Tested By:	SB
Engineering Test Notes:	No software version found however, build number on AP boot 41365		

Test Measurement Results

Channel Fre	quency: 5825.0	5825.0 MHz					
Band-Edge Fre	quency: 5850.0	5850.0 MHz					
Test Frequency Range: 5815.0 - 5887.0 MHz							
	Bar	d-Edge Markers and	l Limit	Amended Limit		Margin	
Port(s)	M3 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)	
а	<u>-44.72</u>	-31.65	5843.60			-6.400	
b	<u>-45.36</u>	-31.62	5841.70			-8.300	

Traceability to Industry Recognized Test Methodologies			
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS		
Measurement Uncertainty:	≤40 GHz ±2.37 dB, > 40 GHz ±4.6 dB		

Note: click the links in the above matrix to view the graphical image (plot).



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 73 of 299

Variant:	802.11n HT-20	Duty Cycle (%):	94			
Data Rate:	6.5 Mbit/s	Antenna Gain (dBi):	Not Applicable			
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable			
TPC:	Not Applicable	Tested By:	SB			
Engineering Test Notes:	o software version found however, build number on AP boot 41365					

Test Measurement Results

Channel Fr	requency: 5825.0	25.0 MHz							
Band-Edge Fr	requency: 5850.0	0.0 MHz							
Test Frequence	Test Frequency Range: 5815.0 - 5887.0 MHz								
	Band	-Edge Markers and	l Limit	Amende	Amended Limit				
Port(s)	M3 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)			
а	<u>-42.87</u>	-32.42	5843.90			-6.100			
b	<u>-44.02</u>	-32.38	5842.00			-8.000			

Traceability to Industry Recognized Test Methodologies					
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS				
Measurement Uncertainty:	≤40 GHz ±2.37 dB, > 40 GHz ±4.6 dB				

Note: click the links in the above matrix to view the graphical image (plot).



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 Page: 74 of 299

Equipment Configuration for Conducted High Band-Edge Emissions - Average									
Variant: 802.11n HT-40 Duty Cycle (%): 90									
Data Rate:	13.5 Mbit/s	Antenna Gain (dBi):	Not Applicable						
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable						
TPC:	TPC: Not Applicable Tested By: AH								
Engineering Test Notes:	Engineering Test Notes: No software version given however, on boot we were given product number 41365								
Engineering Test Notes:	No software version given however,	on boot we were given product nu	mber 41365						

Test Measurement Results

Channel Fr	requency: 5795.0	'95.0 MHz							
Band-Edge Fr	requency: 5850.0	50.0 MHz							
Test Frequence	Test Frequency Range: 5775.0 - 5925.0 MHz								
	Band	-Edge Markers and	Limit	Amend	ed Limit	Margin			
Port(s)	M3 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)			
а	<u>-40.54</u>	-33.92	5841.70			-8.300			
b	<u>-43.13</u>	-33.79	5838.10			-11.900			

Traceability to Industry Recognized Test Methodologies					
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS				
Measurement Uncertainty:	≤40 GHz ±2.37 dB, > 40 GHz ±4.6 dB				

Note: click the links in the above matrix to view the graphical image (plot).



Title: Aruba Networks APIN0204, APIN0205 **To:** FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 75 of 299

Equipment Configuration for Transmitter Conducted Spurious Emissions								
Variant: 802.11b Duty Cycle (%): 100								
Data Rate:	1 Mbit/s	Mbit/s Antenna Gain (dBi): Not Applicable						
Modulation:	CCK	CK Beam Forming Gain (Y): Not Applicable						
TPC:	TPC: Not Applicable Tested By: SB							
Engineering Test Notes:	Engineering Test Notes: No software version found however, build number on AP boot 41365							

Test Measurement Results

Test	Frequency		Transmitter Conducted Spurious Emissions (dBm)							
Frequency	Range	P	Port a		Port a Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit	
2412.0	30.0 - 26000.0	<u>-70.002</u>	-45.62	<u>-68.663</u>	-45.58					
2437.0	30.0 - 26000.0	<u>-68.663</u>	-45.37	<u>-68.663</u>	-45.79					
2462.0	30.0 - 26000.0	<u>-70.002</u>	-46.17	<u>-68.663</u>	-46.13					
				•	•		-	-		

Traceability to Industry Recognized Test Methodologies					
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS				
Measurement Uncertainty:	≤40 GHz ±2.37 dB, > 40 GHz ±4.6 dB				

Note: click the links in the above matrix to view the graphical image (plot).



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 Page: 76 of 299

Equipment Configuration for Transmitter Conducted Spurious Emissions								
Variant: 802.11g Duty Cycle (%): 100								
Data Rate:	6 Mbit/s	Mbit/s Antenna Gain (dBi): Not Applicable						
Modulation:	OFDM	FDM Beam Forming Gain (Y): Not Applicable						
TPC:	PC: Not Applicable Tested By: SB							
Engineering Test Notes:	Engineering Test Notes: No software version found however, build number on AP boot 41365							

Test Measurement Results

Test	Frequency		Transmitter Conducted Spurious Emissions (dBm)							
Frequency	Range	P	Port a		Port a Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit	
2412.0	30.0 - 26000.0	<u>-70.002</u>	-46.49	<u>-68.663</u>	-46.51					
2437.0	30.0 - 26000.0	<u>-70.002</u>	-43.58	<u>-68.663</u>	-44.03					
2462.0	30.0 - 26000.0	<u>-70.002</u>	-46.41	<u>-68.663</u>	-46.40					
				•	•		-	-		

Traceability to Industry Recognized Test Methodologies						
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS					
Measurement Uncertainty:	≤40 GHz ±2.37 dB, > 40 GHz ±4.6 dB					

Note: click the links in the above matrix to view the graphical image (plot).



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 Page: 77 of 299

Equipment Configuration for Transmitter Conducted Spurious Emissions							
Variant: 802.11n HT-20 Duty Cycle (%): 93							
Data Rate:	6.5 Mbit/s	Antenna Gain (dBi):	Not Applicable				
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable				
TPC:	Not Applicable	Not Applicable Tested By: SB					
Engineering Test Notes:	Test Notes: No software version found however, build number on AP boot 41365						

Test Measurement Results

Test	Frequency			Transmitte	ter Conducted Spurious Emissions (dBm)				
Frequency	Range	Port a		Port a Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
2412.0	30.0 - 26000.0	<u>-70.002</u>	-46.75	<u>-68.663</u>	-46.67				
2437.0	30.0 - 26000.0	<u>-70.002</u>	-43.53	<u>-68.663</u>	-44.13				
2462.0	30.0 - 26000.0	<u>-70.002</u>	-46.30	<u>-68.663</u>	-46.67				
				·					

Traceability to Industry Recognized Test Methodologies						
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS					
Measurement Uncertainty:	≤40 GHz ±2.37 dB, > 40 GHz ±4.6 dB					

Note: click the links in the above matrix to view the graphical image (plot).



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 Page: 78 of 299

Equipment Configuration for Transmitter Conducted Spurious Emissions								
Variant: 802.11n HT-40 Duty Cycle (%): 90								
Data Rate:	13.5 Mbit/s	Antenna Gain (dBi):	Not Applicable					
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable					
TPC:	Not Applicable	Not Applicable Tested By: SB						
Engineering Test Notes:	Engineering Test Notes: No software version found however, build number on AP boot 41365							

Test Measurement Results

Test	Frequency	Transmitter Conducted Spurious Emissions (dBm)						n)	
Frequency	Range	Port a		Port a Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
2422.0	30.0 - 26000.0	<u>-70.002</u>	-45.44	<u>-68.663</u>	-45.38				
2437.0	30.0 - 26000.0	<u>-68.663</u>	-41.11	<u>-70.002</u>	-41.31				
2452.0	30.0 - 26000.0	<u>-70.002</u>	-41.23	<u>-68.663</u>	-41.55				
2-52.0	50.0 - 20000.0	-10.002	-+1.20	-00.000	-+1.55				

Traceability to Industry Recognized Test Methodologies					
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS				
Measurement Uncertainty:	≤40 GHz ±2.37 dB, > 40 GHz ±4.6 dB				

Note: click the links in the above matrix to view the graphical image (plot).

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 Page: 79 of 299

Equipment Configuration for Transmitter Conducted Spurious Emissions								
Variant:	nt: 802.11a Duty Cycle (%): 98							
Data Rate:	6 Mbit/s	Antenna Gain (dBi):	Not Applicable					
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable					
TPC:	Not Applicable Tested By: SB							
Engineering Test Notes:	No software version found however, build number on AP boot 41365							

Test Measurement Results

Test	Frequency	Transmitter Conducted Spurious Emissions (dBm)						n)	
Frequency	Range	Port a		Port a Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
5745.0	30.0 - 26000.0	<u>-62.643</u>	-46.41	<u>-62.643</u>	-46.63				
5785.0	30.0 - 26000.0	<u>-61.483</u>	-42.52	<u>-60.956</u>	-42.78				
5825.0	30.0 - 26000.0	<u>-62.044</u>	-42.37	<u>-61.483</u>	-42.65				

Traceability to Industry Recognized Test Methodologies						
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS					
Measurement Uncertainty:	≤40 GHz ±2.37 dB, > 40 GHz ±4.6 dB					

Note: click the links in the above matrix to view the graphical image (plot).



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 Page: 80 of 299

Equipment Configuration for Transmitter Conducted Spurious Emissions								
Variant: 802.11ac-80 Duty Cycle (%): 91								
Data Rate:	29.3 Mbit/s	Not Applicable						
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable					
TPC:	Not Applicable	Not Applicable Tested By: AH						
Engineering Test Notes:	No software version given however, on boot we were given product number 41365							

Test Measurement Results

Test	Frequency		Transmitter Conducted Spurious Emissions (dBm)						
Frequency	Range	Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
5775.0	30.0 - 26000.0	<u>-65.565</u>	-40.66	<u>-65.565</u>	-40.91				
	20000.0								

Traceability to Industry Recognized Test Methodologies								
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS							
Measurement Uncertainty:	≤40 GHz ±2.37 dB, > 40 GHz ±4.6 dB							

Note: click the links in the above matrix to view the graphical image (plot).

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 Page: 81 of 299

Equipr	Equipment Configuration for Transmitter Conducted Spurious Emissions										
Variant:	802.11n HT-20	Duty Cycle (%):	94								
Data Rate:	6.5 Mbit/s	Antenna Gain (dBi):	Not Applicable								
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable								
TPC:	Not Applicable	Tested By:	SB								
Engineering Test Notes:	No software version found howe	No software version found however, build number on AP boot 41365									

Test Measurement Results

Test	Frequency	Transmitter Conducted Spurious Emissions (dBm)									
Frequency	Range	Port a		Port b		Port c		Port d			
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit		
5745.0	30.0 - 26000.0	<u>-62.044</u>	-46.64	<u>-62.044</u>	-47.07						
5785.0	30.0 - 26000.0	<u>-61.483</u>	-42.57	<u>-61.483</u>	-43.20						
5825.0	30.0 - 26000.0	<u>-62.044</u>	-42.46	<u>-61.483</u>	-42.45						
				•							

Traceability to Industry Recognized Test Methodologies							
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS						
Measurement Uncertainty:	≤40 GHz ±2.37 dB, > 40 GHz ±4.6 dB						

Note: click the links in the above matrix to view the graphical image (plot).



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 82 of 299

Equipment Configuration for Transmitter Conducted Spurious Emissions											
Variant:	802.11n HT-40	Duty Cycle (%):	90								
Data Rate:	13.5 Mbit/s	Antenna Gain (dBi):	Not Applicable								
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable								
TPC:	Not Applicable	Tested By:	AH								
Engineering Test Notes:	No software version given however	No software version given however, on boot we were given product number 41365									

Test Measurement Results

Test	Frequency		Transmitter Conducted Spurious Emissions (dBm)								
Frequency	Range	Port a		Port b		Port c		Port d			
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit		
5755.0	30.0 - 26000.0	<u>-64.737</u>	-41.43	<u>-64.737</u>	-41.61						
5795.0	30.0 - 26000.0	<u>-64.737</u>	-42.96	<u>-65.565</u>	-43.48						

Traceability to Industry Recognized Test Methodologies							
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS						
Measurement Uncertainty:	≤40 GHz ±2.37 dB, > 40 GHz ±4.6 dB						

Note: click the links in the above matrix to view the graphical image (plot).

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:83 of 299

Specification

Limits Band-Edge

Lower Limit Band-edge	Upper Limit Band-edge	Limit below highest level of desired power				
2,400 MHz	2,483.5 MHz	≥ 20 dB				
5725 MHz	5850 MHz	220 uB				

§15.247(d) and RSS-210 §A8.5 In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

§15.247(d)

If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section §15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(a)).

RSS-210 §A8.5 If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under section A8.4(4), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Tables 2 and 3 is not required. In addition, radiated emissions which fall in the restricted bands of Table 1 must also comply with the radiated emission limits specified in Tables 2 and 3.

RSS-Gen §4.7

The search for unwanted emissions shall be from the lowest frequency internally generated or used in the device (local oscillator, intermediate of carrier frequency), or from 30 MHz, whichever is the lowest frequency, to the 5th harmonic of the highest frequency generated without exceeding 40 GHz.

Laboratory Measurement Uncertainty for Conducted Spurious Emissions

Measurement uncertainty	±2.37 dB
	±2.07 aD

Traceability

Method	Test Equipment Used
Measurements were made per work	0088, 0158, 0287, 0252, 0313, 0314, 0070,
instruction WI-05 'Measurement of	0116, 0117.
Spurious Emissions'	



6.1.2. Radiated Emission Testing

Transmitter Radiated Spurious Emissions (above 1 GHz); Peak Field Strength Measurements; and Radiated Band Edge Measurements – Restricted Bands

FCC, Part 15 Subpart C §15.247(d) 15.205; 15.209 Industry Canada RSS-210 §A8.5, §2.2, §2.6 Industry Canada RSS-Gen §4.7

Test Procedure

Radiated emissions 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.

All measurements on any frequency or frequencies over 1 MHz are based on the use of measurement instrumentation employing an average detector function. All measurements above 1 GHz were performed using a minimum resolution bandwidth of 1 MHz.

Operational Modes

Operational mode(s) tested for spurious emissions were the modes which delivered maximum spectral density 802.11b and 802.11a.



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

For example:

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

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

Conversion between dB μ V/m (or dB μ V) and μ V/m (or μ V) are done as:

Level (dB μ V/m) = 20 * Log (level (μ V/m))

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

NOTE: KDB 662911 was implemented for Out-of-Band measurements. Where necessary Option (2) Measure and add 10 log (N) dB was implemented



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:86 of 299

6.1.2.1. Integral antenna – Spurious and Band-Edge Emissions

Tes	t Freq.	2412 MH	z						Engineer	SB		
V	/ariant	802.11b; 1 Mbs					Temp (°C)			22		
Freq.	Range	1000 MH	z - 1800	00 MHz				Rel.	Hum.(%)	31		
Power S	Setting	19						Press	. (mBars)	1004		
Ar	ntenna	Integral	gral Duty Cycle (%) 100									
Test N	otes 1	S/N:CM0	000141									
Test N	otes 2	EUT Pos	sition Ho	orizontal; P	OE;							
Formally m				ssions program\arub	Vasona by EMis			10000.0 RE 1-11 fee 15.2	PK		m m Hz	
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comments
4824.066	49.3	5.7	-2.3	52.7	Peak Max	V	176	57	74.0	-21.3	Pass	
4824.066	44.1	5.7	-2.3	47.4	Average Max	V	176	57	54.0	-6.6	Pass	
Legend:	TX = T	ransmitter	Emissio	ons; DIG =	Digital Emissions	; FUN	D = Fu	ndamei	ntal; WB =	Wideband	Emissic	n
	RB = F	Restricted E	Band (1	5.209 Limit	s); NRB = Non F	Restrict	ed Ban	d, Limi	t is 20dB b	elow funda	amental	peak

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:87 of 299

les	t Freq.	2437 MH	z						Engineer	SB		
١	/ariant	802.11b; 1 Mbs						Т	emp (°C)	22		
Freq.	Range	1000 MH	z - 1800	00 MHz				Rel.	Hum.(%)	31		
Power S	Setting	19						Press	. (mBars)	1004		
Aı	ntenna	Integral						Duty (Cycle (%)	100		
Test N	lotes 1	S/N:CM0	S/N:CM0000141									
Test N	lotes 2	EUT Pos	sition Ho	orizontal; P	OE;							
		dBuV/m 800 700 600 500 400 300 200 100 10000 Radia Filen	ated Emi	mh	Vasona by EMi	Autor 10		10000.0 RE 1-11 foc 15.2	PK [2]		m m Hz	
Formally r	neasu Raw dBuV	Cable	AF dB	peaks Level dBuV/m	Measurement Type	Pol	Hgt	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comment
4874.079	49.1	5.7	-2.3	52.5	Peak Max	V	178	0	74.0	-21.5	Pass	
4874.079	43.0	5.7	-2.3	46.4	Average Max	V	178	0	54.0	-7.6	Pass	
			ı								•	.

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:88 of 299

Tes	st Freq.	2462 MH	z						Engineer	SB		
	Variant	802.11b;	1 Mbs					Т	ˈemp (ºC)	22		
Freq.	Range	1000 MH	z - 180	00 MHz				Rel.	Hum.(%)	31		
Power	Setting	19						Press	. (mBars)	1004		
А	ntenna	Integral						Duty (Cycle (%)	100		
Test N	Notes 1	S/N:CM0	000141							•		
Test N	Notes 2	EUT Pos	sition He	orizontal; P	DE;							
MiCOMLa	S	dBuV/m 80.0 70.0 60.0 50.0 40.0 30.0 20.0 10.0 1000.0 Radia	ated Emi	Å	alarub170 - apin02			10000.0 RE 1-11 fee 15.2	Px 24		m m Hz	
Formally	measu	red emis	ssion	peaks								
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comment
4924.023	51.0	5.7	-2.5	54.3	Peak Max	V	156	149	74.0	-19.7	Pass	
	46.0	5.7	-2.5	49.3	Average Max	V	156	149	54.0	-4.7	Pass	
4924.023	47.0	4.0	-5.2	46.4	Peak [Scan]	V	98	-1	54	-7.6	Pass	
4924.023 2451.120	47.6											
		ransmitter	Emisei	ons: DIG =	Digital Emissions	: FUN		ndamer	ntal: WR =	Widehand	Emissio	n

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:89 of 299

Test	t Freq.	5745 MHz	z (ch149	9)					Engineer	ЈМН		
	/ariant	802.11a;		,					Cemp (°C)	19		
Frea. l	Range	1000 MHz							Hum.(%)	30		
Power S		19		-					. (mBars)	1002		
	ntenna	Integral							Cycle (%)	100		
Test N	otes 1	S/N:CM00	000141					-				
Test N	otes 2	EUT mou	nted ver	rtically on te	est table, all ports	termin	ated a	nd activ	ve. Unit is p	ower via l	POE	
Formally m				isions rogram files	/asona by EMIS	Jim		0000.0 RE 1-180 grams\a	PK PK B M S Free 18000/		n n łz	
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comment
11488.759	53.1	9.4	4.7	67.2	Peak Max	V	99	313	74	-6.8	Pass	RB
11488.759	37.5	9.4	4.7	51.6	Average Max	V	99	313	54	-2.4	Pass	RB
5738.872	42.7	6.3	-1.9	47.1	Peak [Scan]	Н						FUND
Legend:		ransmitter Non-Restr			Digital Emissions;						Emissior	1

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 **To:** FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 90 of 299

100	st Freq.	5785 MHz	z (ch157	')					Engineer	JMH		
,	Variant	802.11a;	6 Mbit/s					Т	emp (°C)	19		
Freq.	Range	1000 MHz	z - 1800	0 MHz				Rel.	Hum.(%)	30		
Power	Setting	19						Press.	. (mBars)	1002		
А	ntenna	Integral						Duty (Cycle (%)	100		
Test	Notes 1	S/N:CM00	000141									
Test	Notes 2	EUT mou	nted ve	tically on te	est table, all ports	termina	ated ar	nd activ	e. Unit is p	ower via F	POE	
MiC@MLa		dBuV/m 80.0 70.0 60.0 50.0 40.0 30.0 20.0 10.0 10.0 10.0 10.0 8 dia Filena	ted Emis me: c:\p		asona by EMIS	Ĭi		+ 0000.0 2E 1-180 grams\a	PK +		n n tz	
Formally n	neasur	ed emis	sion	beaks								
	neasur Raw dBuV	red emis	Sion AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comment
Frequency MHz	Raw	Cable	AF	Level	Measurement Type Peak Max	Pol H	Hgt cm 142	-	-			Comment RB
Frequency MHz 11568.762	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Туре	_	cm	Deg	dBuV/m	dB	/Fail	
Frequency	Raw dBuV 52.2	Cable Loss 9.4	AF dB 4.8	Level dBuV/m 66.4	Type Peak Max	Н	cm 142	Deg 288	dBuV/m 74	dB -7.6	/ Fail Pass	RB
Frequency MHz 11568.762 11568.762	Raw dBuV 52.2 36.4	Cable Loss 9.4 9.4	AF dB 4.8 4.8	Level dBuV/m 66.4 50.7	Type Peak Max Average Max	Н	cm 142	Deg 288	dBuV/m 74	dB -7.6	/ Fail Pass	RB
Frequency MHz 11568.762 11568.762 5769.539	Raw dBuV 52.2 36.4 46.9 42.3	Cable Loss 9.4 9.4 6.3 6.6	AF dB 4.8 4.8 -1.8 -0.6	Level dBuV/m 66.4 50.7 51.4 48.3	Type Peak Max Average Max Peak [Scan]	H	cm 142 142	Deg 288 288	dBuV/m 74 54	dB -7.6 -3.3	/Fail Pass Pass	RB RB FUND NRB

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 **To:** FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 91 of 299

Tes	st Freq.	5825 MH	z (ch165	5)					Engineer	JMH		
	Variant	802.11a;	6 Mbit/s					Т	'emp (°C)	19		
Freq.	Range	1000 MH	z - 1800	0 MHz				Rel.	Hum.(%)	30		
Power	Setting	19						Press	. (mBars)	1002		
А	ntenna	Integral						Duty	Cycle (%)	100		
Test N	Notes 1	S/N:CM0	000141									
Test N	Notes 2	EUT mou	inted ve	rtically on te	est table, all ports	termin	ated ar	nd activ	e. Unit is p	ower via l	POE	
MiCOM	lbs	dBuV/m 80.0 70.0 60.0 50.0 40.0 30.0	نم	American	asona by EMiS	ioft Jun	4,000	+	12 I Px +	Mar 14 19:4 = [1] Horiz = [2] Verti = Pk Lmt = Av Lmt Debug	onta	
Formally n	neasur				emisoft - vasonaive	emplate esults\o		0000.0 RE 1-180 grams\a	5 Free 18000.0		n Iz	
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comment
11655.051	50.1	9.4	5.0	64.5	Peak Max	V	115	308	74	-9.5	Pass	RB
11655.051	36.5	9.4	5.0	50.9	Average Max	V	115	308	54	-3.1	Pass	RB
5803.607	50.4	6.3	-1.8	54.9	Peak [Scan]							FUND
6314.629	42.2	6.6	-0.6	48.3	Peak [Scan]	Н						NRB

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Band-Edge Integral Antenna

Peak Limit 74.0 dBµV/m, Average Limit 54.0 dBµV/m

2.4 GHz Frequency Band

	Restr	icted Band	l 2390 MHz	Restricted Band 2483.5 MHz					
	dBµ'	V/m	Dower Cotting	dBļ	ıV/m	Power			
Operational Mode	Peak	Average	Power Setting	Peak	Average	Setting			
b	54.21	43.23	19.0	50.02	37.52	19.0			
g	73.70	53.62	17.0	71.08	48.20	17.0			
n HT-20	73.90	51.85	17.0	72.72	49.85	17.0			
n HT-40	70.90	52.02	17.0	70.20	50.37	17.0			

5.8 GHz Frequency Band

	Rest	ricted Ban	d 5460 MHz
Operational Mode	Peak	Average	Power Setting
а	63.50	53.70	19.0
n HT-20	63.77	53.65	19.0
n HT-40	67.86	53.27	19.0
ac-80	67.64	53.11	19.0

All band-edge plots are kept on file by the laboratory



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:93 of 299

6.1.2.2. AP-ANT-1B – Spurious and Band-Edge Emissions

Tes	t Freq.	2412 MH	z						Engineer	SB		
١	Variant	802.11b;	1 Mbs					Т	emp (°C)	22		
Freq.	Range	1000 MH	z - 1800	00 MHz				Rel.	Hum.(%)	31		
Power S	Setting	19						Press	. (mBars)	1004		
Aı	ntenna	AP ANT	1B					Duty (Cycle (%)	100		
Test N	lotes 1	S/N:CM0	000392	; MAC:9C:′	1C:12:C7:DE:94;							
Test N	lotes 2	EUT Pos	sition Ve	ertical; Ante	nna Position 45 o	degree	s; POE	;				
Formally m				ssions program\arub	Vasona by EMis		100 FCC	10000.0 RE 1-11 foc 15.	PK		m m Hz	
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comments
4824.288	50.3	5.7	-2.3	53.6	Peak Max	V	99	230	74.0	-20.4	Pass	
4824.288	45.3	5.7	-2.3	48.7	Average Max	V	99	230	54.0	-5.3	Pass	
Legend:					Digital Emissions s); NRB = Non F							

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:94 of 299

Tes	t Freq.	2437 MH	z						Engineer	SB		
١	/ariant	802.11b;	1 Mbs					Т	emp (°C)	22		
Freq.	Range	1000 MH	z - 1800	00 MHz				Rel.	Hum.(%)	31		
Power	Setting	19						Press	. (mBars)	1004		
A	ntenna	AP ANT	1B					Duty (Cycle (%)	100		
Test N	lotes 1	S/N:CM0	000392	; MAC:9C:1	1C:12:C7:DE:94;					•		
Test N	lotes 2	EUT Pos	sition Ve	ertical; Ante	nna Position 45	degree	s; POE	;				
F arma 11				ssions program\arub	Vasona by EMi	448-00000		10000.0	PK		m m Hz	
Formally I Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Commen
4874.028	52.2	5.7	-2.3	55.6	Peak Max	V	99	221	74.0	-18.4	Pass	
4874.028	48.2	5.7	-2.3	51.6	Average Max	V	99	221	54.0	-2.4	Pass	
Legend:	TX = T	ransmitter	Emissio	ons; DIG =	Digital Emissions	: FUN	D = Fu	ndamei	ntal: WB = 1	Wideband	Emissic	on

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:95 of 299

						I						
Test	t Freq.	2462 MH	Z						Engineer	SB		
v	ariant	802.11b;	1 Mbs					٦	°C) emp	22		
Freq. I	Range	1000 MH	z - 1800	00 MHz				Rel.	Hum.(%)	31		
Power S	etting	19						Press	. (mBars)	1004		
An	itenna	AP ANT	1B					Duty	Cycle (%)	100		
Test N	otes 1	S/N:CM0	000392	; MAC:9C :1	IC:12:C7:DE:94;							
Test N	otes 2	EUT Pos	sition Ve	ertical; Ante	nna Position 45	degree	s; POE	;				
MiC®M Lak	DS	dBuV/m 80.0 70.0 60.0 50.0		N	/asona by EMi	Soft			02 FX	May 14 09: - [1] Horig - [2] Verbi - [2]	tonta	
		40.0 30.0 20.0 10.0 1000.0 Radia Fileno	sted Emil	ssions program\arub	a\arub170 - apin02	Templat 04 apin(10000.0 RE 1-11 foc 15.2	18000	/leas Dist 3 spec Dist 3 quency: Mi 0 210 an 8\da	m Hz	
Formally n	neasu	red emis	ssion	peaks					1			
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comments
4923.925	55.4	5.7	-2.5	58.7	Peak Max	V	100	227	74.0	-15.3	Pass	
4923.875	50.5	5.7	-2.5	53.8	Average Max	V	100	227	54.0	-0.2	Pass	
2446.284	41.1	4.0	-5.2	39.9	Peak [Scan]	V	98					FUND
Legend:					Digital Emissions s); NRB = Non F							

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:96 of 299

Tes	st Freq.	5745 MH	z						Engineer	SB		
	Variant	802.11a;	6.5 Mb	S				٦	'emp (°C)	22		
Freq.	Range	1000 MH	lz - 1800	00 MHz				Rel.	Hum.(%)	31		
Power	Setting	19						Press	. (mBars)	1004		
A	ntenna	AP ANT	1B					Duty	Cycle (%)	100		
Test	Notes 1	S/N:CM0	000392	; MAC:9C:1	1C:12:C7:DE:94;							
Test	Notes 2	EUT Po	sition Ve	ertical; Ante	nna Position 45	degree	s; POE	;				
MiCOMLa	CU	dBuV/m 80.0			vasona by EMi	Soft			02 PX	May 14 15: [1] Horig [2] Verbin Pk Lmt	tonta	
		60.0								- Av Lmt + Debug		
		50.0		-		1			Au [2]			
		40.0				Au		and				
		30.0	-	when	when whith the	A.						
		20.0								Aleas Dist 3 Spec Dist 3		
		10.0								equency: Mi		
Formally n	neasur	1000.0 Radii Filen			a∖arub170 - apin02	Templa 04 apin		10000.0 RE 1-11 foc 15.	18000 8GHz 247 & ic rss-	.0 210 an 8\da	ta\s	
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comment
5735.471	47.3	6.2	-1.9	51.6	Peak [Scan]	V	100					FUND
5266.982	41.2	5.9	-2.2	45.0	Peak [Scan]	V	98					NRB
	42.2	6.1	-2.1	46.2	Peak [Scan]	V	98					NRB
5557.276												
5557.276 Legend:	TX = 1	ransmitter	Emissi	ons; DIG =	Digital Emissions	s; FUN	D = Fu	ndame	ntal; WB =	Wideband	Emissio	n

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:97 of 299

Tes	st Freq.	5785 MH	z						Engineer	SB		
	Variant	802.11a;	6.5 Mb	3				Т	ſemp (ºC)	22		
Freq.	Range	1000 MH	z - 1800	0 MHz				Rel.	Hum.(%)	31		
Power	Setting	19						Press	. (mBars)	1004		
А	ntenna	AP ANT	1B					Duty (Cycle (%)	100		
Test	Notes 1	S/N:CM0	000392	; MAC:9C:1	IC:12:C7:DE:94;							
Test	Notes 2	EUT Po:	sition Ve	ertical; Ante	nna Position 45	degree	s; POE	;				
		dBuV/m 80.0 70.0 60.0 50.0 40.0 30.0 20.0 10.0 1000.0 Radi Filen	ated Emi	pronou	alarub170 - apin02	ājsī.	te: FCC 0205\u3	10000.0	PX 22		m m Hz	
Formally	measu Raw dBuV	red emis Cable Loss	AF dB	peaks Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comment
Frequency MHz			-2.0	43.8	Peak [Scan]	V	98					NRB
	39.9	6.0				V	98					NRB
MHz	39.9 39.2	6.0 6.1	-2.1	43.2	Peak [Scan]	v	00					ININD
MHz 5304.741			-2.1 -0.6	43.2 42.0	Peak [Scan] Peak [Scan]	V	98					NRB
MHz 5304.741 5521.818	39.2 36.0	6.1 6.6	-0.6	42.0		V	98	ndamo	ntal: W/P = 1	Widebard	Emissia	NRB

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:98 of 299

Tos	t Freg.	5825 MH	7						Engineer	SB		
	/ariant	802.11a;							emp (°C)	22		
		,							• • •			
	Range	1000 MH	z - 1800	JU MHZ					Hum.(%)	31		
Power	Setting	19						Press.	(mBars)	1004		
A	ntenna	AP ANT	1B					Duty (Cycle (%)	100		
Test N	lotes 1	S/N:CM0	000392	; MAC:9C:	1C:12:C7:DE:94;							
Test N	lotes 2	EUT Pos	sition Ve	ertical; Ante	nna Position 45	degree	s; POE	;				
Formally	neasu			ssions	Vasona by EMi Autoritation (1997) Nalarub170 - apin02	di Nema	1005/u3	10000.0 RE 1-19 fee 15.2	PX 2		m m Hz	
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comment
5973.948	44.1	6.4	-1.3	49.3	Peak [Scan]	Н	100					NRB
5323.638	42.1	6.0	-2.0	46.1	Peak [Scan]	V	98					NRB
Legend:					Digital Emissions s); NRB = Non F	-						

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Band-Edge Antenna AP-ANT-1B

Peak Limit 74.0 dBµV/m, Average Limit 54.0 dBµV/m

2.4 GHz Frequency Band

	Restr	icted Band	i 2390 MHz	Restricted Band 2483.5 MHz					
	dBµ'	V/m	Dower Cotting	dBµ	ıV/m	Power			
Operational Mode	Peak	Average	Power Setting	Peak	Average	Setting			
b	49.26	38.68	19	51.98	39.08	19			
g	71.41	52.78	19	72.57	51.12	18			
n HT-20	73.17	53.78	19	72.38	52.25	18			
n HT-40	68.65	52.90	17	69.80	50.26	16			

5.8 GHz Frequency Band

	Rest	ricted Ban	d 5460 MHz
Operational Mode	Peak	Average	Power Setting
а	55.81	42.40	21
n HT-20	53.06	39.21	21
n HT-40	52.50	39.21	21
ac-80	53.58	40.46	21

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:100 of 299

6.1.2.3. AP-ANT-13B – Spurious and Band-Edge Emissions

Tes	st Freq.	2412 MH	z						Engineer	SB		
,	Variant	802.11b;	1 Mbs					т	emp (°C)	22		
Freq.	Range	1000 MH	z - 1800	00 MHz				Rel.	Hum.(%)	31		
Power	Setting	19						Press	. (mBars)	1004		
А	ntenna	AP ANT	13B					Duty (Cycle (%)	100		
Test N	lotes 1	S/N:CM0	000392	; MAC:9C:1	IC:12:C7:DE:94;					•		
Test N	lotes 2	EUT Pos	sition Ho	orizontal PC	DE;							
MiCOMLa	bs	dBuV/m 80.0			asona by EMi	Soft			02		zonta	
		70.0 60.0							PX	 [2] Vert Pk Lmt Av Lmt Debug 	ical	
		50.0			+			-	Au [2]			
		40.0	~	source	mannenselver				,	/eas Dist 3	m	
		20.0							5	Spec Dist 3 equency: M	m	
		10.0 1000.0 Radia Filena	ated Emis ame: k:\g	ssions program\arub	a\arub170 - apin02	Templat 04 apin(e: FCC)205\u3-	10000.0 RE 1-11 fee 15.1	18000	0		
Formally n	neasur	ed emis	ssion	peaks								
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comment
4818.892	38.6	5.7	-2.3	48.0	Peak [Scan]	V	98	-1	54.0	-6.0	Pass	
Legend:	TX = T	ransmitter	Emissio	ons; DIG =	Digital Emissions	; FUN	D = Fu	ndamei	ntal; WB = '	Wideband	Emissio	on
	L											

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:101 of 299

Tes	t Freq.	2437 MH	Z						Engineer	SB		
١	Variant	802.11b;	1 Mbs					Г	ſemp (°C)	22		
Freq.	Range	1000 MH	z - 1800	00 MHz				Rel.	Hum.(%)	31		
Power \$	Setting	19						Press	. (mBars)	1004		
A	ntenna	AP ANT	13B					Duty	Cycle (%)	100		
Test N	lotes 1	S/N:CM0	000392	; MAC:9C:	1C:12:C7:DE:94;							
Test N	lotes 2	EUT Pos	sition Ho	orizontal PC	DE;							
				asions programiarub	Vasona by EMIS			10000.0 RE 1-11 foc 15.2	۲×		m m Hz	
Formally I Frequency MHz	Raw dBuV	Cable Loss	AF dB	peaks Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comment
4874.009	51.0	5.7	-2.3	54.4	Peak Max	V	103	40	74.0	-19.6	Pass	
4874.009	47.1	5.7	-2.3	50.5	Average Max	V	103	40	54.0	-3.5	Pass	
Legend:	TX = T	ransmitter	Emissio	ons; DIG =	Digital Emissions	; FUN	D = Fu	ndamei	ntal; WB =	Wideband	Emissic	n

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:102 of 299

Tes	t Freq.	2462 MH	z						Engineer	SB		
	Variant	802.11b;							emp (°C)	22		
	Range	1000 MH		0 MHz					Hum.(%)	31		
Power		19							. (mBars)	1004		
	ntenna	AP ANT	13B						Cycle (%)	100		
	lotes 1	S/N·CM0	000392	· MAC·9C·1	C:12:C7:DE:94;			,	- , (/ - ,			
	lotes 2			prizontal PC								
MiCOMLa	03	dBuV/m 80.0 70.0			/asona by EMi	Soft			02 PX	May 14 11: [1] Hori [2] Verb Pk Lmt	tonta	
		60.0		_			-			 Av Lmt Debug Formal 		
		50.0						العبد	H			
		40.0 30.0	~	m	concorrent o	and the second second				/eas Dist 3	m	
		20.0 10.0 1000.0						10000.0	5 Fre 18000	Spec Dist 3 quency: Mi	m	
Formally I Frequency MHz	measu Raw dBuV				a\arub170 - apin02 Measurement Type	Pol	Hgt	Azt Deg	Limit dBuV/m	210 an 8\da Margin dB	Pass /Fail	Comments
4924.018	53.3	5.7	-2.5	56.6	Peak Max	V	102	45	74.0	-17.4	Pass	
4924.018	50.1	5.7	-2.5	53.4	Average Max	V	102	45	54.0	-0.6	Pass	
2437.390	45.4	4.0	-5.3	44.1	Peak [Scan]	V	102				1	FUND
Legend:	TX = T	ransmitter	Emissio	ons; DIG =	Digital Emissions	; FUN	D = Fu	ndamei	ntal; WB = '	Wideband	Emissio	'n

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:103 of 299

100	st Freq.	5745 M	lHz						Engineer	SB		
١	Variant	802.11	a; 6 Mbs	6				Т	emp (°C)	22		
Freq.	Range	1000 M	lHz - 18	000 MHz				Rel.	Hum.(%)	31		
Power	Setting	19						Press	. (mBars)	1004		
А	ntenna	AP AN	Г 13В					Duty (Cycle (%)	100		
Test N	Notes 1	S/N:CM	1000039	92; MAC:9C	:1C:12:C7:DE:94	4;						
Test N	Notes 2	EUT P	osition I	Horizontal F	POE;							
MiC@MLa	abs dBu 30.0 70.0 60.0	V/m		Vasi	ona by EMiSoft			•		14 14:53 - 1] Horizonti 2] Vertical 2] Vertical k Lmt v Lmt bebug ormal		
	50.0 40.0	-			I.I.I	1	-	hand	Ê			
	30.0	-	and a	mon	mone to	The set of the set						
		~								Dist 3m		
	20.0					++				Dist 3m rcy: MHz		
					Tem; vb170 - apin0204 ap	olate: Fi oin0205	10000 CC RE \u3-foc		18000.0	an 8\data\s		
Formally n	licasul											
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comment
Frequency	Raw	Cable				Pol V						Comment RB
Frequency MHz	Raw dBuV	Cable Loss	dB	dBuV/m	Туре		cm	Deg	dBuV/m	dB	/Fail	
Frequency MHz 11492.986	Raw dBuV 44.8	Cable Loss 9.4	dB 4.7	dBuV/m 58.9	Type Peak Max	V	cm 111	Deg -1	dBuV/m 74.0	d B -15.1	/Fail Pass	RB
Frequency MHz 11492.986 11492.986	Raw dBuV 44.8 31.5	Cable Loss 9.4 9.4	dB 4.7 4.7	dBuV/m 58.9 45.6	Type Peak Max Average Max	V V	cm 111 111	Deg -1	dBuV/m 74.0	d B -15.1	/Fail Pass	RB RB
Frequency MHz 11492.986 11492.986 5735.471	Raw dBuV 44.8 31.5 46.5	Cable 0.4 9.4 6.2	dB 4.7 4.7 -1.9	dBuV/m 58.9 45.6 50.9	Type Peak Max Average Max Peak [Scan]	V V V	cm 111 111 100	Deg -1	dBuV/m 74.0	d B -15.1	/Fail Pass	RB RB FUND
MHz 11492.986 11492.986 5735.471 5565.130	Raw dBuV 44.8 31.5 46.5 44.8 42.8	Cable 9.4 9.4 6.2 6.1 6.6	dB 4.7 4.7 -1.9 -2.1 -0.6	dBuV/m 58.9 45.6 50.9 48.8 48.7	Type Peak Max Average Max Peak [Scan] Peak [Scan]	V V V V H	cm 111 111 100 100 100	Deg -1 -1	dBuV/m 74.0 54.0	dB -15.1 -8.4	/Fail Pass Pass	RB FUND NRB NRB

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:104 of 299

Tes	st Freq.	5785 MH	z						Engineer	SB		
١	Variant	802.11a;	6 Mbs					٦	emp (°C)	22		
Freq.	Range	1000 MH	z - 1800	00 MHz				Rel.	Hum.(%)	31		
Power	Setting	19						Press	. (mBars)	1004		
Α	ntenna	AP ANT	13B					Duty	Cycle (%)	100		
Test N	Notes 1	S/N:CM0	000392	; MAC:9C:1	IC:12:C7:DE:94;					•		
Test N	Notes 2	EUT Pos	sition Ho	orizontal PC	DE;							
Mic@MLa	lbs	dBuV/m 80.0 70.0 60.0 50.0 40.0 30.0 20.0 10.0 1000.0 Radiu Filen	ated Emi ame: k: v		/asona by EMi	a b d		10000.0 RE 1-11 Foc 15.	Fre 18000		m m Hz	
Formally	measu	red emis	ssion	peaks								
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comment
11561.122	44.8	9.4	4.7	58.9	Peak Max	V	111	-1	74.0	-15.1	Pass	RB
11561.122	31.5	9.4	4.7	45.6	Average Max	V	111	-1	54.0	-8.4	Pass	RB
5292.58517	44.6	6.0	-2.1	48.4	Peak [Scan]	Н	100					NRB
5565.130	44.8	6.1	-2.1	48.8	Peak [Scan]	V	100					NRB
6212.425	42.8	6.6	-0.6	48.7	Peak [Scan]	Н	100					NRB
Legend:					Digital Emission s); NRB = Non F							

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:105 of 299

Tes	st Freq.	5825 MH	z						Engineer	SB		
	Variant	802.11a;	6 Mbs					٦	emp (°C)	22		
Freq.	Range	1000 MH	lz - 1800	00 MHz				Rel.	Hum.(%)	31		
Power	Setting	19						Press	. (mBars)	1004		
A	ntenna	AP ANT	13B					Duty	Cycle (%)	100		
Test M	lotes 1	S/N:CM0	000392	; MAC:9C:1	IC:12:C7:DE:94;							
Test N	lotes 2	EUT Pos	sition Ho	orizontal PC	DE;							
MicomLa	lbs	dBuV/m 80.0			/asona by EMi	Soft			02 PX	May 14 15: [1] Hori [2] Vert Pk Lmt	tonta	
		60.0								- Av Lmt - Debug		
		50.0		_		t		+	Av [2]			
		40.0				Alle	Leve	and see	141			
		30.0	~	maron	- Carolan - and a state	4						
		20.0						_	A S	leas Dist 3 Spec Dist 3	nn nn	
		10.0						10000.0	Fre 18000	quency: M	Hz	
Formally Frequency MHz	measu Raw dBuV				a\arub170 - apin02 Measurement Type	04 apini Pol	Hgt	Azt Deg	Limit dBuV/m	210 an 8\da Margin dB	Pass /Fail	Comment
11665.559	44.8	9.4	4.7	58.9	Peak Max	V	111	-1	74.0	-15.1	Pass	RB
11665.559	31.5	9.4	4.7	45.6	Average Max	V	111	-1	54.0	-8.4	Pass	RB
7784.890	35.2	7.5	0.6	43.2	Peak [Scan]	V	98					NRB
5973.948	46.4	6.4	-1.3	51.5	Peak [Scan]	V	100					NRB
5326.65331	44.5	6.0	-1.9	48.6	Peak [Scan]	Н	100					NRB
			F unita ai		Digital Emissions	FUN				A /i d a h a m d		

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Band-Edge Antenna AP-ANT-13B

Peak Limit 74.0 dBµV/m, Average Limit 54.0 dBµV/m

2.4 GHz Frequency Band

	Restr	icted Band	i 2390 MHz	Restricted Band 2483.5 MHz					
	dBµ	V/m	Dower Cotting	dB	ıV/m	Power			
Operational Mode	Peak Average		Power Setting	Peak	Average	Setting			
b	50.87	38.68	19	52.44	41.43	19			
g	72.99	53.41	17	70.67	51.56	19			
n HT-20	69.77	52.72	17	69.73	47.45	17			
n HT-40	65.98	52.90	17	69.47	50.09	16			

5.8 GHz Frequency Band

	Rest	d 5460 MHz	
Operational Mode	Peak	Average	Power Setting
а	55.28	42.86	19
n HT-20	53.50	40.43	19
n HT-40	53.20	40.43	19
ac-80	53.65	40.43	19

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:107 of 299

6.1.2.4. AP-ANT-16 – Spurious and Band-Edge Emissions

Tes	t Freq.	2412 MH	z						Engineer	SB			
١	Variant	802.11b;	1 Mbs					Г	ˈemp (ºC)	22			
Freq.	Range	1000 MH	z - 1800	00 MHz				Rel.	Hum.(%)	31			
Power S	Setting	19						Press	. (mBars)	1004	1004		
A	ntenna	AP ANT	16					Duty	Cycle (%)	100			
Test N	lotes 1	S/N:CM0	000392	; MAC:9C:1	IC:12:C7:DE:94;					-			
Test N	lotes 2	EUT Pos	sition Ho	orizontal; P	DE;								
MicemLa	bs	dBuV/m			/asona by EMi	Soft			02	May 14 09:	47 -		
		80.0			asona by Ellin								
		70.0		-				-	PX	Pk Lmt Av Lmt			
		60.0		-				-	-	+ Debug + Formal			
		50.0			±								
		40.0			mounder	- harry	man	water .					
		30.0	mand and	www	0.0 0.0								
		20.0		_			_			Meas Dist 3 Spec Dist 3			
		10.0 1000.0							1.00	equency: M	Hz		
Formally n	neasur	Filen			a\arub170 - apin020	Templat 04 apin/		10000.0 RE 1-11 foc 15.3	18000 8GHz 247 & ic rss-		ita\s		
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comments	
4824.088	50.0	5.7	-2.3	53.4	Peak Max	V	102	35	74.0	-20.6	Pass		
4824.088	45.4	5.7	-2.3	48.8	Average Max	V	102	35	54.0	-5.3	Pass		
Legend:	TX = T	ransmitter	Emissi	ons; DIG =	Digital Emissions	; FUN	D = Fu	ndamei	ntal: WB =	Wideband	Emissio	n	
Legenu.													

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:108 of 299

Tes	st Freq.	2437 MH	z						Engineer	SB		
,	Variant	802.11b;	1 Mbs					Т	emp (°C)	22		
Freq.	Range	1000 MH	lz - 1800	00 MHz				Rel.	Hum.(%)	31		
Power	Setting	19						Press	. (mBars)	1004		
А	ntenna	AP ANT	16					Duty (Cycle (%)	100		
Test N	Notes 1	S/N:CM0	000392	; MAC:9C:	1C:12:C7:DE:94;							
Test N	Notes 2	EUT Po:	sition Ho	orizontal; P	OE;							
		dBuV/m 80.0 70.0 60.0 50.0 40.0 30.0 20.0 10.0 1000.0 Radii Filen		arent	Vasona by EMis	-		10000.0 RE 1-11 fee 15.	PX		m m Hz	
Formally	measu Raw dBuV	red emis Cable Loss	AF dB	peaks Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comment
4873.900	52.0	5.7	-2.3	55.4	Peak Max	V	100	34	74.0	-18.6	Pass	
4873.9	48.2	5.7	-2.3	51.6	Average Max	v	100	34	54.0	-2.4	Pass	
		•		0					00			
Legend:	TX = T	ransmitter	Emissi	ons; DIG =	Digital Emissions	; FUN	D = Fu	ndamer	ntal; WB =	Wideband	Emissio	n

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:109 of 299

										r		
Tes	t Freq.	2462 MH	Z						Engineer	SB		
	Variant	802.11b;	1 Mbs					Т	°C) (°C)	22		
Freq.	Range	1000 MH	z - 1800	00 MHz				Rel.	Hum.(%)	31		
Power	Setting	19						Press.	. (mBars)	1004		
A	ntenna	AP ANT	16					Duty 0	Cycle (%)	100		
Test N	lotes 1	S/N:CM0	000392	; MAC:9C:	1C:12:C7:DE:94;							
Test N	lotes 2	EUT Pos	sition Ho	orizontal; P	OE;							
MiC®iMLa	εu	dBuV/m 80.0 70.0 60.0 40.0 30.0 20.0 10.0 1000.0 Radiu Filen	ated Emi		Vasona by EMi Alarub170 - apin02		1205/u3-	10000.0 RE 1-11 Foo 15.2	PX 2		m m Hz	
Formally	measu _{Raw}	red emis	AF	peaks	Measurement		Hgt	Azt	Limit	Margin	Pass	
MHz	dBuV	Loss	dB	dBuV/m	Туре	Pol	cm	Deg	dBuV/m	dB	/Fail	Comments
4923.963	54.0	5.7	-2.5	57.2	Peak Max	V	99	42	74.0	-16.8	Pass	
4923.963	50.7	5.7	-2.5	54.0	Average Max	V	99	42	54.0	0.0	Pass	
				ons; DIG =								

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:110 of 299

Tes	st Freq.	5745 MH	z						Engineer	SB		
,	Variant	802.11a;	6 Mbs						emp (°C)	22		
Freq.	Range	1000 MH	z - 1800	00 MHz				Rel.	Hum.(%)	31		
Power		19						Press	. (mBars)	1004		
A	ntenna	AP ANT	16					Duty	Cycle (%)	100		
Test M	Notes 1	S/N:CM0	000392	; MAC:9C:	1C:12:C7:DE:94;					l		
Test N	Notes 2	EUT Pos	sition Ho	orizontal; P	OE;							
MiC@MLa				ssions	Vasona by EMi valarub170 - apin02	[†]		+ 10000.0 RE 1-11 fee 15.2	Fre 13000		m m Hz	
Formally n	Raw dBuV	Cable Loss	AF dB	Deaks Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comments
11492.986	49.0	9.4	4.7	63.1	Peak Max	Н	108	45	74.0	-10.9	Pass	RB
7659.991	49.3	7.4	0.2	56.9	Peak Max	н	120	314	74.0	-17.1	Pass	RB
11492.986	35.8	9.4	4.7	50.0	Average Max	Н	108	45	54	-4.1	Pass	RB
7659.991	44.2	7.4	0.2	51.8	Average Max	Н	120	314	54	-2.2	Pass	RB
5735.471	45.6	6.2	-1.9	50.0	Peak [Scan]	Н	100				1	FUND
6212.425	42.8	6.6	-0.6	48.7	Peak [Scan]	Н	100					NRB
	1					l	1					
		ronomittor	Emioni		Digital Emission					A.C I	- · ·	
Legend:	1 X = 1	Tansmiller	EIIIISSI	ons, dig =	Digital Emissions	S, FUN	D = Full	ndamei	ntal; WB =	vvideband	Emissic	n

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:111 of 299

	st Freq.	5785 MH	z						Engineer	SB		
	Variant	802.11a;	6 Mbs					Т	emp (°C)	22		
Freq.	Range	1000 MH	z - 1800	00 MHz				Rel.	Hum.(%)	31		
Power	Setting	19						Press	. (mBars)	1004		
Α	ntenna	AP ANT	16					Duty (Cycle (%)	100		
Test M	Notes 1	S/N:CM0	000392	; MAC:9C:1	IC:12:C7:DE:94;					•		
Test M	lotes 2	EUT Po:	sition Ho	orizontal; P	DE;							
MicemLa	bs	dBuV/m		,	asona by EMi	Soft			02	Мау 14 13:	50 -	
		80.0			Vasona by Livit	JUN				_ [1] Horig		
		70.0							PK	Pk Lmt Av Lmt	Cal	
		60.0		-			-			- Debug		
		50.0		_		+	-	1.	(H)			
		40.0										
		30.0	And	mos	inder a starter							
		20.0								Aleas Dist 3 Spec Dist 3		
									F			
		10.0						10000.0		quency: Mi o	HZ	
Formally	measu	1000.0 Radii Filen			a\arub170 - apin02i	Templat D4 apin		10000.0 RE 1-18 foc 15.	18000	0		
Formally Frequency MHz	measu Raw dBuV	1000.0 Radii Filen			alarub170 - apin020 Measurement Type	Templat D4 apin/ Pol			18000	0		Comment
Frequency	Raw	red emis	SSION	peaks	Measurement		Hgt	Azt	18000 3GHz 47 & ic rss-	0 210 an 8\da Margin	ta\s Pass	Comment
Frequency MHz	Raw dBuV	red emis	AF dB	peaks Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	18000 3GHz 247 & ic rss- Limit dBuV/m	0 210 an 8\da Margin dB	Pass /Fail	
Frequency MHz 11557.057	Raw dBuV 49.0	red emis Cable Loss 9.4	AF dB 4.7	peaks Level dBuV/m 63.1	Measurement Type Peak Max	Pol H	Hgt cm 108	Azt Deg 45	Limit dBuV/m 74.0	0 210 an 8ida Margin dB -10.9	Pass /Fail Pass	RB
Frequency MHz 11557.057 7713.142	Raw dBuV 49.0 49.3	red emis Cable Loss 9.4 7.4	AF dB 4.7 0.2	peaks Level dBuV/m 63.1 56.9	Measurement Type Peak Max Peak Max	Pol H H	Hgt cm 108 120	Azt Deg 45 314	18000 26Hz 247 & ic rss- dBuV/m 74.0 74.0	0 210 an 8\da Margin dB -10.9 -17.1	Pass /Fail Pass Pass	RB RB
Frequency MHz 11557.057 7713.142 11557.057	Raw dBuV 49.0 49.3 35.8	red emis Cable Loss 9.4 7.4 9.4	AF dB 4.7 0.2 4.7	Deaks Level dBuV/m 63.1 56.9 50.0	Measurement Type Peak Max Peak Max Average Max	Роі Н Н	Hgt cm 108 120 108	Azt Deg 45 314 45	18000 GHz 447 & ic rss- dBuV/m 74.0 74.0 54	0 210 an 8 da Margin dB -10.9 -17.1 -4.1	Pass /Fail Pass Pass Pass	RB RB
Frequency MHz 11557.057 7713.142 11557.057 7713.142	Raw dBuV 49.0 49.3 35.8 44.2 42.3	Cable Loss 9.4 7.4 9.4 7.4 9.4	AF dB 4.7 0.2 4.7 0.2 -0.6	Level dBuV/m 63.1 56.9 50.0 51.8 48.3	Measurement Type Peak Max Peak Max Average Max Average Max	Pol H H H H	Hgt cm 108 120 108 120 100	Azt Deg 45 314 45 314	Limit dBuV/m 74.0 74.0 54 54	0 210 an 8 da Margin dB -10.9 -17.1 -4.1 -2.2	Pass /Fail Pass Pass Pass Pass	RB RB RB RB NRB

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:112 of 299

Tes	st Freq.	5825 MH	z						Engineer	SB		
١	Variant	802.11a;	6 Mbs					٦	ſemp (ºC)	22		
Freq.	Range	1000 MH	lz - 1800	00 MHz				Rel.	Hum.(%)	31		
Power	Setting	19						Press	. (mBars)	1004		
A	ntenna	AP ANT	16					Duty	Cycle (%)	100		
Test N	lotes 1	S/N:CM0	000392	; MAC:9C:1	1C:12:C7:DE:94;							
Test N	lotes 2	EUT Po	sition Ho	orizontal; P	OE;							
MiC@MLa		dBuV/m 80.0 70.0 50.0 40.0 30.0 20.0 10.0 1000.0 Filen	ated Emi ame: k:\		Vasona by EMi	, jilin		10000.0 RE 1-11 foc 15.	FK 2		m n Hz	
Formally	measu	red emis	ssion	peaks								
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comment
5973.948	44.6	6.4	-1.3	49.7	Peak [Scan]	н	100					FUND
6314.62926	42.5	6.6	-0.6	48.6	Peak [Scan]	Н	100					NRB
7780.441	37.8	7.5	0.6	45.8	Peak [Scan]	Н	100					NRB
				210								
Legend:	TX = T	ransmitter	Emissi	ons; DIG =	Digital Emissions	s; FUN	D = Fu	ndame	ntal; WB =	Wideband	Emissio	n

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Antenna AP-ANT-16

Peak Limit 74.0 dBµV/m, Average Limit 54.0 dBµV/m

2.4 GHz Frequency Band

	Restr	ricted Band	l 2390 MHz	Restricted Band 2483.5 MHz				
	dBµ	V/m	Dower Cotting	dBļ	ıV/m	Power		
Operational Mode	Peak	Average	Power Setting	Peak	Average	Setting		
b	54.00	41.96	19	54.26	43.16	19		
g	72.21	53.04	16	70.52	48.52	17		
n HT-20	68.78	52.31	16	71.61	50.49	17		
n HT-40	67.28	53.86	13	72.38	52.96	16		

5.8 GHz Frequency Band

	Rest	ricted Ban	d 5460 MHz
Operational Mode	Peak	Average	Power Setting
а	55.64	42.86	21
n HT-20	53.12	39.81	21
n HT-40	52.62	39.81	21
ac-80	53.12	39.81	21

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:114 of 299

6.1.2.5. AP-ANT-18 – Spurious and Band-Edge Emissions

Tes	t Freq.	2412 MH	z						Engineer	SB		
١	/ariant	802.11b;	1 Mbs					٦	emp (°C)	22		
Freq.	Range	1000 MH	z - 1800	0 MHz				Rel.	Hum.(%)	31		
Power S	Setting	19						Press	. (mBars)	1004		
Aı	ntenna	AP ANT	18					Duty	Cycle (%)	100		
Test N	otes 1	S/N:CM0	000392	; MAC:9C:1	IC:12:C7:DE:94;							
Test N	otes 2	EUT Pos	sition Ho	orizontal; P	DE;							
MiCOMLa	22	dBuV/m 80.0 70.0 60.0 50.0 40.0 30.0 20.0 10.0 1000.0 Radiu Fildu	ated Emil	mh	Vasona by EMi		s terror	10000.0 RE 1-11 Foo 15.1	PK		m m Hz	
Formally m	Raw dBuV	ed emis Cable Loss	AF dB	peaks Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comment
4824.050	48.8	5.7	-2.3	52.1	Peak Max	Н	174	84	74.0	-21.9	Pass	
4824.05	42.4	5.7	-2.3	45.7	Average Max	Н	174	84	54.0	-8.3	Pass	
Legend:	TX = T	ransmitter	Emissio	ons; DIG =	Digital Emissions	s; FUN	D = Fu	ndamei	ntal; WB =	Wideband	Emissio	n
		TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission										

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:115 of 299

Test	Freq.	2437 MH	z						Engineer	SB		
V	ariant	802.11b;	1 Mbs					т	emp (°C)	22		
Freq. F	Range	1000 MH	z - 1800	0 MHz				Rel.	Hum.(%)	31		
Power Se	etting	19						Press	. (mBars)	1004		
An	tenna	AP ANT	18					Duty (Cycle (%)	100		
Test No	otes 1	S/N:CM0	000392	; MAC:9C:1	IC:12:C7:DE:94;					•		
Test No	otes 2	EUT Pos	sition Ho	orizontal; P	DE;							
MiC@MLab)S	dBuV/m 80.0 70.0 60.0 50.0 40.0 30.0	~~	mk	vasona by EMi	Soft			PX	May 14 11: 11 Hori 12 Verb PK Lmt Av Lmt Debug Formal	cal	
Formally m	neasu				a\arub170 - apin02	Templat 04 apin/		10000.0 RE 1-18 foc 15.2	5 Fre 18000		m Hz	
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comments
4873.918	50.3	5.7	-2.3	53.7	Peak Max	Н	142	86	74.0	-20.3	Pass	
4873.918	45.3	5.7	-2.3	48.7	Average Max	Н	142	86	54.0	-5.3	Pass	
2431.975	43.5	3.9	-5.3	42.1	Peak [Scan]	V	98					FUND
Legend:					Digital Emissions s); NRB = Non F							

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:116 of 299

T	4 F	0400 141	_			ĺ			F			
	t Freq.	2462 MH							Engineer	SB		
	Variant	802.11b;							ſemp (°C)	22		
Freq.	Range	1000 MH	z - 1800	00 MHz				Rel.	Hum.(%)	31		
Power	Setting	19						Press	. (mBars)	1004		
A	ntenna	AP ANT	18					Duty	Cycle (%)	100		
Test N	lotes 1	S/N:CM0	000392	; MAC:9C:1	IC:12:C7:DE:94;							
Test N	lotes 2	EUT Pos	sition Ho	orizontal; P	DE;							
MiC®MLa		dBuV/m 80.0 70.0 60.0 50.0 40.0 30.0 20.0 10.0 10.0 10.0 10.0 10.0 10.0 1	ated Emi	ĺ	vasona by EMi + 	*****	te: FCC 0205\u3	10000.0 RE 1-11 fee 15.2	PX [1]	May 14 11: [1] Horio [2] Verbin Pk Lmt Pk Lmt Pk Lmt Pk Debug Formal Meas Dist 3 Spec Dist 3 squency: Mi 0 210 an 8\da	m m Hz	
Formally I	measu _{Raw}	red emis	SSION	peaks	Measurement		Hgt	Azt	Limit	Margin	Pass	
MHz	dBuV	Loss	dB	dBuV/m	Туре	Pol	cm	Deg	dBuV/m	dB	/Fail	Comment
4924.059	52.5	5.7	-2.5	55.8	Peak Max	Н	191	84	74.0	-18.2	Pass	
4924.059	49.1	5.7	-2.5	52.4	Average Max	Н	191	84	54.0	-1.6	Pass	
2449.179	47.6	4.0	-5.2	46.4	Peak [Scan]	V						FUND
Legend:					Digital Emissions s); NRB = Non F							

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:117 of 299

	st Freq.	5745 MH	z						Engineer	SB		
	Variant	802.11a;	6 Mbs					Т	emp (°C)	22		
Freq.	Range	1000 MH	lz - 1800	00 MHz				Rel.	Hum.(%)	31		
Power	Setting	19						Press	. (mBars)	1004		
Α	ntenna	AP ANT	18					Duty (Cycle (%)	100		
Test	Notes 1	S/N:CM0	000392	; MAC:9C:	1C:12:C7:DE:94;					•		
Test	Notes 2	EUT Pos	sition Ho	orizontal; P	OE;							
Micem	abs	dBuV/m			Vasona by EMi	Soft			02	May 14 13:	06 -	
		80.0				CON				= [1] Hori		
		70.0							PK	- Pk Lmt - Av Lmt	100	
		60.0				-	-			+ Debug		
		50.0		-	1	÷.			AV DE			
		40.0				Allen	town	-				
		30.0	a	and the				_				
		20.0								Meas Dist 3 Spec Dist 3		
		1000							Fr	equency: M	Hz	
		10.0						10000.0	1800			
Frequency	Raw	red emis	SSION	peaks	Measurement	Templat 04 apin	Hgt	Azt	8GHz 247 & ic rss	-210 an 8ida Margin	Pass	Comment
Frequency MHz	Raw dBuV	red emis Cable Loss	AF dB	peaks Level dBuV/m	Measurement Type	Pol	Hgt cm	RE 1-11	8GHz 247 & ic rss	-210 an 8\da		
Frequency MHz 5735.471	Raw dBuV 46.3	red emis Cable Loss 6.2	AF dB -1.9	peaks Level dBuV/m 50.6	Measurement Type Peak [Scan]	Pol H	Hgt cm 100	Azt Deg	8GHz 247 & ic rss Limit dBuV/m	-210 an 8ida Margin dB	Pass /Fail	FUND
Frequency MHz 5735.471 7659.887	Raw dBuV 46.3 33.5	red emis Cable Loss 6.2 7.4	AF dB -1.9 0.2	peaks Level dBuV/m 50.6 47.1	Measurement Type Peak [Scan] Peak [Scan]	Pol H V	Hgt cm 100 98	Azt	8GHz 247 & ic rss	-210 an 8ida Margin	Pass	FUND
Frequency MHz 5735.471 7659.887 5263.947	Raw dBuV 46.3 33.5 42.6	red emis Cable Loss 6.2 7.4 5.9	AF dB -1.9 0.2 -2.2	Deaks Level dBuV/m 50.6 47.1 52.3	Measurement Type Peak [Scan] Peak [Scan] Peak [Scan]	Pol H V H	Hgt cm 100 98 98	Azt Deg	8GHz 247 & ic rss Limit dBuV/m	-210 an 8ida Margin dB	Pass /Fail	FUND RB NRB
Frequency MHz 5735.471 7659.887 5263.947 6214.095	Raw dBuV 46.3 33.5 42.6 40.0	Cable Loss 6.2 7.4 5.9 6.6	AF dB -1.9 0.2 -2.2 -0.6	Level dBuV/m 50.6 47.1 52.3 51.9	Measurement Type Peak [Scan] Peak [Scan] Peak [Scan] Peak [Scan]	Pol H V H	Hgt cm 100 98 98 98	Azt Deg	8GHz 247 & ic rss Limit dBuV/m	-210 an 8ida Margin dB	Pass /Fail	FUND RB NRB NRB
Frequency MHz 5735.471 7659.887 5263.947	Raw dBuV 46.3 33.5 42.6	red emis Cable Loss 6.2 7.4 5.9	AF dB -1.9 0.2 -2.2	Deaks Level dBuV/m 50.6 47.1 52.3	Measurement Type Peak [Scan] Peak [Scan] Peak [Scan]	Pol H V H	Hgt cm 100 98 98	Azt Deg	8GHz 247 & ic rss Limit dBuV/m	-210 an 8ida Margin dB	Pass /Fail	RB NRB
Frequency MHz 5735.471 7659.887 5263.947 6214.095	Raw dBuV 46.3 33.5 42.6 40.0 41.4	Cable Loss 6.2 7.4 5.9 6.6 6.1	AF dB -1.9 0.2 -2.2 -0.6 -2.1	Level dBuV/m 50.6 47.1 52.3 51.9 51.4	Measurement Type Peak [Scan] Peak [Scan] Peak [Scan] Peak [Scan]	Pol H ∨ H H H	Hgt cm 100 98 98 98 98 98	Azt Deg	Limit dBuV/m 54.0	-210 an 8ida Margin dB -6.9	Pass /Fail Pass	FUND RB NRB NRB NRB

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:118 of 299

	st Freq.	5785 MH	Z						Engineer	SB		
	Variant	802.11a;	6 Mbs					Т	ˈemp (ºC)	22		
Freq	. Range	1000 MH	z - 1800	00 MHz				Rel.	Hum.(%)	31		
Power	Setting	19						Press	. (mBars)	1004		
A	Antenna	AP ANT	18					Duty (Cycle (%)	100		
Test	Notes 1	S/N:CM0	000392	; MAC:9C:	IC:12:C7:DE:94;							
Test	Notes 2	EUT Pos	sition Ho	orizontal; P	ЭЕ;							
		dBuV/m 80.0 70.0 60.0 50.0 40.0 30.0 20.0 10.0 1000.0 Radiu Filen	ated Emi ame: k:\	annasa	Vasona by EMi alarub170 - apin02	a fritana	Ĵ	10000.0	Pk		m m Hz	
			ssion	peaks								
Formally	measu	rea emis			[T	1			1		
Formally Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Commen
Frequency MHz	Raw	Cable				Pol H	-		-			Commen RB
Frequency MHz	Raw dBuV	Cable Loss	dB	dBuV/m	Туре		cm	Deg	dBuV/m	dB	/Fail	
Frequency MHz 11568.828 7713.216	Raw dBuV 43.4	Cable Loss 9.4	dB 4.8	dBuV/m 57.7	Type Peak Max	Н	cm 112	Deg 110	dBuV/m 74.0	dB -16.3	/Fail Pass	RB
Frequency MHz 11568.828	Raw dBuV 43.4 47.7	Cable Loss 9.4 7.4	dB 4.8 0.4	dBuV/m 57.7 55.6	Type Peak Max Peak Max	H	cm 112 113	Deg 110 310	dBuV/m 74.0 74.0	dB -16.3 -18.5	/Fail Pass Pass	RB RB
Frequency MHz 11568.828 7713.216 11568.828	Raw dBuV 43.4 47.7 29.8	Cable Loss 9.4 7.4 9.4	dB 4.8 0.4 4.8	dBuV/m 57.7 55.6 44.1	Type Peak Max Peak Max Average Max	H H H	cm 112 113 112	Deg 110 310 110	dBuV/m 74.0 74.0 54	dB -16.3 -18.5 -10.0	/Fail Pass Pass Pass	RB RB RB
Frequency MHz 11568.828 7713.216 11568.828 7713.216	Raw dBuV 43.4 47.7 29.8 40.9	Cable Loss 9.4 7.4 9.4 7.4	dB 4.8 0.4 4.8 0.4	dBuV/m 57.7 55.6 44.1 48.7	Type Peak Max Peak Max Average Max Average Max	H H H H	cm 112 113 112 112 113	Deg 110 310 110	dBuV/m 74.0 74.0 54	dB -16.3 -18.5 -10.0	/Fail Pass Pass Pass	RB RB RB RB
Frequency MHz 11568.828 7713.216 11568.828 7713.216 5769.539	Raw dBuV 43.4 47.7 29.8 40.9 45.7	Cable 0.4 7.4 9.4 7.4 6.3	dB 4.8 0.4 4.8 0.4 -1.8	dBuV/m 57.7 55.6 44.1 48.7 50.2	Type Peak Max Peak Max Average Max Average Max Peak [Scan]	H H H H	cm 112 113 112 113 100	Deg 110 310 110	dBuV/m 74.0 74.0 54	dB -16.3 -18.5 -10.0	/Fail Pass Pass Pass	RB RB RB FUND
Frequency MHz 11568.828 7713.216 11568.828 7713.216 5769.539 5292.585	Raw dBuV 43.4 47.7 29.8 40.9 45.7 45.0 42.6	Cable 9.4 7.4 9.4 7.4 6.3 6.0 6.6	dB 4.8 0.4 4.8 0.4 -1.8 -2.1 -0.6	dBuV/m 57.7 55.6 44.1 48.7 50.2 48.8 48.6	Type Peak Max Peak Max Average Max Average Max Peak [Scan] Peak [Scan]	H H H H H V	cm 112 113 112 113 100 100 100	Deg 110 310 110 310	dBuV/m 74.0 54 54	dB -16.3 -18.5 -10.0 -5.3	/Fail Pass Pass Pass Pass	RB RB RB FUND NRB NRB

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:119 of 299

Tes	t Freq.	5825 MH	lz						Engineer	SB		
١	Variant	802.11a;	6 Mbs					Т	emp (°C)	22		
Freq.	Range	1000 MH	lz - 1800	00 MHz				Rel.	Hum.(%)	31		
Power	Setting	19						Press	. (mBars)	1004		
Α	ntenna	AP ANT	18					Duty (Cycle (%)	100		
Test N	lotes 1	S/N:CM	000392	; MAC:9C:1	1C:12:C7:DE:94;							
Test N	lotes 2	EUT Po	sition Ho	orizontal; P	OE;							
MiC®MLa	bs	dBuV/m 80.0 70.0 60.0 50.0 40.0 30.0	~~~	Va	asona by EMiS	oft	Ī		PX +	ay 14 13:22 [1] Horizo [2] Vertici PK Lmt Av Lmt Debug as Dist 3m	nti al	
Formally I		red emi	ssion	peaks	larub170 - apin0204	emplate apin02	FCC F		Freq 18000.0 3Hz 7 & ic rss-21		ı\s	
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comment
5973.948	46.2	6.4	-1.3	51.3	Peak [Scan]	Н	100					FUND
5326.65331	46.3	6.0	-1.9	50.4	Peak [Scan]	Н	100					NRB
6314.629	42.1	6.6	-0.6	48.1	Peak [Scan]	V	100					NRB
7783.453	36.5	7.5	0.6	44.5	Peak [Scan]	Н	98					NRB
Legend:	ту – т	ransmitte	Emissi		Digital Emissions						Emissis	2

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Antenna AP-ANT-18

Peak Limit 74.0 dBµV/m, Average Limit 54.0 dBµV/m

2.4 GHz Frequency Band

	Restr	icted Band	l 2390 MHz	Restri	cted Band	2483.5 MHz	
	dBµ'	V/m	Dower Cotting	dBµ	ıV/m	Power	
Operational Mode	Peak	Average	Power Setting	Peak	Average	Setting	
b	57.29	46.45	19	55.14	42.90	19	
g	48.26	36.22	15	73.43	51.20	17	
n HT-20	69.12	52.56	16	72.91	50.60	17	
n HT-40	68.08	53.86	12	72.62	52.18	16	

5.8 GHz Frequency Band

	Restricted Band 5460 MHz									
Operational Mode	Peak	Average	Power Setting							
а	55.93	43.12	19							
n HT-20	53.03	38.84	19							
n HT-40	51.85	38.84	19							
ac-80	53.12	39.34	19							

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:121 of 299

6.1.2.6. AP-ANT-19 – Spurious and Band-Edge Emissions

Tes	st Freq.	2412 MH	z						Engineer	SB		
,	Variant	802.11b;	1 Mbs					Г	emp (°C)	22		
Freq.	Range	1000 MH	z - 1800	00 MHz				Rel.	Hum.(%)	31		
Power	Setting	19						Press	. (mBars)	1004		
Α	ntenna	AP ANT	19					Duty	Cycle (%)	100		
Test N	Notes 1	S/N:CM0	000392	; MAC:9C:1	1C:12:C7:DE:94;							
Test N	lotes 2	EUT Pos	sition Ho	orizontal; P	OE;							
MiCOMLa		dBuV/m 80.0 70.0 60.0 50.0 40.0 20.0 20.0 10.0 1000.0 Radii		~~~~	Vasona by EMi			10000.0 RE 1-11	PK		m m Hz	
Formally n	neasur Raw dBuV				Measurement Type	Pol	Hgt	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comment
4824.066	49.3	5.7	-2.3	52.7	Peak Max	V	176	57	74.0	-21.3	Pass	
4824.066	49.3	5.7	-2.3	47.4	Average Max	V	176	57	54.0	-6.6	Pass	
1024.000		0.7	2.0	77.7	, worage max		1.10	0,	04.0	0.0	1 400	l
	1				D: :: 1 E · ·					AC 1 1 1	E	
Legend:	TX = T	ransmitter	Emissio	ons; DIG =	Digital Emissions	S; FUN	D = Fu	ndamei	ntal; WB =	vvideband	Emissic	n

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:122 of 299

Tes	st Freq.	2437 MH	z						Engineer	SB		
١	Variant	802.11b;	1 Mbs					Т	emp (°C)	22		
Freq.	Range	1000 MH	z - 1800	00 MHz				Rel.	Hum.(%)	31		
Power	Setting	19					Press. (mBars)			1004		
A	ntenna	AP ANT	19					Duty (Cycle (%)	100		
Test N	lotes 1	S/N:CM0	000392	; MAC:9C:	1C:12:C7:DE:94;							
Test N	lotes 2	EUT Pos	sition Ho	orizontal; P	OE;							
		dBuV/m 80.0 70.0 60.0 50.0 40.0 20.0 20.0 10.0 1000.0 Radii Filen	ated Emi ame: k:\	mh	vasona by EMi	Autor 1		10000.0 RE 1-13 foc 15.2	PK [2]		m m Hz	
Formally	Raw dBuV	Cable Loss	AF dB	peaks Level dBuV/m	Measurement	Pol	Hgt	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Commen
4874.079	49.1	5.7	-2.3	52.5	Type Peak Max	V	cm 178	0 Deg	74.0	-21.5	Pass	
4874.079	43.0	5.7	-2.3	46.4	Average Max	V	178	0	54.0	-7.6	Pass	
	40.0	5.1	-2.0	т . .т	/ werage wax	v	170	Ū	04.0	-7.0	1 433	
Legend:	TX = T	ransmitter	Emissi	ons; DIG =	Digital Emissions	s; FUN	D = Fu	ndamer	ntal; WB = \	Wideband	Emissic	n

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:123 of 299

Tos	t Freg.	2462 MH	7						Engineer	SB			
	Variant	802.11b;							emp (°C)	22			
		,							• • • •				
•	Range	1000 MH	z - 1800	JU MHZ					Hum.(%)	31			
Power	•	19	40						Press. (mBars) 1004				
	ntenna	AP ANT	-					Duty	Cycle (%)	100			
	lotes 1			,	IC:12:C7:DE:94;								
Test N	lotes 2	EUT Pos	sition Ho	prizontal; P	DE;								
Formally	measu			ssions	/asona by EMi 			10000.0 RE 1-13 fec 15.2	PK (1)		m m Hz		
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comment	
4924.023	51.0	5.7	-2.5	54.3	Peak Max	V	156	149	74.0	-19.7	Pass		
4924.023	46.0	5.7	-2.5	49.3	Average Max	V	156	149	54.0	-4.7	Pass		
2451.120	47.6	4.0	-5.2	46.4	Peak [Scan]	V	98	-1	54	-7.6	Pass		
Legend:		TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak											

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:124 of 299

Test	t Freq.	5745 MH	z						Engineer	SB		
v	/ariant	802.11a;	6 Mbs					Т	emp (°C)	22		
Freq. I	Range	1000 MH	z - 1800	0 MHz				Rel.	Hum.(%)	31		
Power S	Setting	19						Press. (mBars) 1004				
An	ntenna	AP ANT	19					Duty (Cycle (%)	100		
Test N	otes 1	S/N:CM0	000392	; MAC:9C:1	IC:12:C7:DE:94;							
Test N	otes 2	EUT Pos	sition Ho	orizontal; P	DE;							
MiCOMLak	OS	dBuV/m 80.0			/asona by EMi	Soft			02	May 14 14: 	toot	
		70.0 60.0						+	PX	 Pk Lmt Pk Lmt Av Lmt Debug Formal 	cal	
		50.0 40.0			م. مستعمد ومدم مدم	11mm	, de nor	menter	Av [2]			
		30.0	An							leas Dist 3 oec Dist 3		
		10.0	ated Emi ame: k:\g	ssions program\arub	a\arub170 - apin02	Templa 04 apin/		10000.0 RE 1-18 fcc 15.2	Fre 18000	quency: Mi	Hz	
Formally m	neasur	ed emis	ssion	peaks								
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comments
11492.986	46.2	9.4	4.7	60.3	Peak Max	V	102	44	74.0	-13.7	Pass	RB
11492.986	32.1	9.4	4.7	46.2	Average Max	V	102	44	54.0	-7.9	Pass	RB
5258.517	47.9	5.9	-2.2	51.7	Peak [Scan]	V	100					NRB
5565.130	46.7	6.1	-2.1	50.7	Peak [Scan]	V	100					NRB
5735.471	45.9	6.2	-1.9	50.3	Peak [Scan]	V	100					FUND
Legend:	TX = T	ransmitter	Emissio	ons; DIG =	Digital Emission	s; FUN	D = Fu	ndamer	ntal; WB =	Wideband	Emissio	n

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:125 of 299

Tes	st Freq.	5785 M⊦	z						Engineer	SB			
	Variant	802.11a;	6 Mbs					٦	emp (°C)	22			
Freq.	Range	1000 MH	lz - 1800	00 MHz				Rel.	Hum.(%)	31	31		
Power	Setting	19						Press	. (mBars)	1004			
Α	ntenna	AP ANT	19					Duty	Cycle (%)	100			
Test N	lotes 1	S/N:CM0	000392	; MAC:9C:1	IC:12:C7:DE:94;								
Test N	lotes 2	EUT Po	sition Ho	orizontal; P	DE;								
MiC@MLa	DS	dBuV/m 80.0 70.0 60.0 50.0 40.0 20.0 10.0 1000.0 Radi Filen	ated Emi ame: k:\r		Vasona by EMi www.www.u a\arub170 - apin02	Yl-		10000.0 RE 1-11 foc 15.2	PK Z		m m Hz		
Formally	Raw	Cable	AF	Level	Measurement	Pol	Hgt	Azt	Limit	Margin	Pass	Comment	
MHz 11574.497	dBuV 46.2	Loss 9.4	dB 4.7	dBuV/m 60.3	Type Peak Max	V	cm 102	Deg 44	dBuV/m 74.0	dB -13.7	/Fail Pass	RB	
11574.497	40.2 32.1	9.4 9.4	4.7	46.2	Average Max	V	102	44	74.0 54.0	-13.7	Pass	RB	
110/4.49/	47.4	9.4 6.0	-2.1	40.2 51.2	Peak [Scan]	V	102	-++	J 4 .0	-1.3	1 455	NRB	
5292 585	- ,, -		-2.1	44.1	Peak [Scan]	V	100	-1	54.0	-9.9	Pass	RB	
5292.585 7713 142	36.3	74		77.1		v	1 101	- 1	04.0	-5.5	1 035		
5292.585 7713.142	36.3	7.4	0.4										
				ons; DIG =	Digital Emissions	s; FUN	D = Fu	ndamei	ntal; WB = '	Wideband	Emissio	n	

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:126 of 299

Tes	t Freq.	5825 MH	z						Engineer	SB		
١	/ariant	802.11a;	6 Mbs					Т	emp (°C)	22		
Freq.	Range	1000 MH	z - 1800	00 MHz				Rel.	Hum.(%)	31		
Power S	Setting	19						Press	(mBars)	1004		
Ar	ntenna	AP ANT	AP ANT 19 Duty Cycle (%) 100									
Test N	lotes 1	S/N:CM0	000392	; MAC:9C:1	IC:12:C7:DE:94;	•						
Test N	lotes 2	EUT Pos	sition Ho	orizontal; P	DE;							
MiCOMLa	bs	dBuV/m 80.0 70.0 60.0 50.0 40.0 30.0 20.0 10.0 1000.0 Radiu Filen	ated Emilarme: k:\y	man	/asona by EMi	ył.		10000.0	PK [2]		m m Hz	
Formally r	neasu	red emis	ssion	peaks								
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comment
11657.632	46.2	9.4	4.7	60.3	Peak Max	V	102	44	74.0	-13.7	Pass	RB
11657.632	32.1	9.4	4.7	46.2	Average Max	V	102	44	54.0	-7.9	Pass	RB
7778.761	36.3	7.5	0.6	44.3	Peak [Scan]	V	101	-1	54.0	-9.7	Pass	NRB
5326.653	47.4	6.0	-1.9	51.5	Peak [Scan]	V	100	0	54	-2.5	Pass	NRB
5973.948	46.3	6.4	-1.3	51.4	Peak [Scan]	V	100	0	54	-2.6	Pass	NRB
Legend:		ransmitter Restricted I			Digital Emissions	s; FUN	D = Fu	ndamer	ntal; WB = V	Nideband	Emissio	n

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Antenna AP-ANT-19

Peak Limit 74.0 dBµV/m, Average Limit 54.0 dBµV/m

2.4 GHz Frequency Band

	Restr	ricted Band	i 2390 MHz	Restri	cted Band	2483.5 MHz	
	dBµ	V/m	Dower Cotting	dBļ	ıV/m	Power	
Operational Mode	Peak	Average	Power Setting	Peak	Average	Setting	
b	51.50	39.37	19	54.47	44.13	19	
g	70.27	51.78	18	70.81	49.44	17	
n HT-20	70.10	52.39	18	69.99	49.31	17	
n HT-40	67.76	52.88	18	71.71	52.09	16	

5.8 GHz Frequency Band

	Restricted Band 5460 MHz									
Operational Mode	Peak	Average	Power Setting							
а	55.64	43.12	19							
n HT-20	55.37	42.19	19							
n HT-40	54.74	41.47	19							
ac-80	54.82	41.84	19							

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Issue Date: 4th May 2014 Page: 128 of 299

Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A

Specification Limits

FCC §15.247(d) and RSS-210 §A8.5 In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

FCC §15.247(d)

If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section §15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(a)).

IC RSS-210 §A8.5 If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under section A8.4(4), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Tables 2 and 3 is not required. In addition, radiated emissions which fall in the restricted bands of Table 1 must also comply with the radiated emission limits specified in Tables 2 and 3.

IC RSS-Gen §4.7

The search for unwanted emissions shall be from the lowest frequency internally generated or used in the device (local oscillator, intermediate of carrier frequency), or from 30 MHz, whichever is the lowest frequency, to the 5th harmonic of the highest frequency generated without exceeding 40 GHz.

FCC §15.205 (a) Except as shown in paragraph (d) of 15.205 (a), only spurious emissions are permitted in any of the frequency bands listed.

FCC §15.205 (a) Except as shown 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 Section §15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

FCC §15.209 (a) Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table.

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



§15.209 (a) Limit Matrix

Frequency(MHz)	Field Strength (μV/m)	Field Strength (dBμV/m)	Measurement Distance (meters)
30-88	100	40.0	3
88-216	150	43.5	3
216-960	200	46.0	3
Above 960	500	54.0	3

Laboratory Measurement Uncertainty for Radiated Emissions

Measurement uncertainty	+5.6/ -4.5 dB
-------------------------	---------------

Traceability

Method	Test Equipment Used
Measurements were made per work instruction WI-03 'Measurement of Radiated Emissions'	0088, 0158, 0134, 0304, 0311, 0315, 0310, 0312

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



6.1.2.7. Digital Emissions (0.03-1 GHz)

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.

The EUT had two methods of powering on ac/dc converter and Power over Ethernet (POE). Both modes were tested for emissions below 1GHz.

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.

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 $51.5dB\mu V$; 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 = 36.3dBµV/m

Conversion between dB μ V/m (or dB μ V) and μ V/m (or μ V) are done as:

Level (dB μ V/m) = 20 * Log (level (μ V/m))

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

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:131 of 299

Tes	Test Freq. NA				Engineer			JMH				
١	/ariant	Digital Er	nissions				Temp (°C)			18		
Freq.	Range	30 - 1000	30 - 1000 MHz					Rel.	Hum.(%)	33		
Power S	Setting	Not Appli	Not Applicable					Press	. (mBars)	1007		
Aı	ntenna	External	APIN020	4								
Test N	lotes 1	POE 55	/dc									
Test N	lotes 2											
MiCOMLa		dBuV/m 60.0 50.0 20.0 20.0 10.0 0.0 30.0 Radia		30.0 330.0	430.0 530.0 (emisoft - vasona\re	2	730.0 CISPRient pro	830.0 22 RE [grams\ai	(2) (2) (2) (2) (2) (2) (2) (2)	lar 14 15:4 = [1] Horiz [2] Vertik - Opk Lmt Debug Formal eas Dist 3n pec Dist 3n puency: MH Hz] ata\DE 30-	n tz	
Formally n	neasur	red emis	sion p	eaks							1	
Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comments
30.606	43.9	3.5	-10.0	37.400	Quasi Max	V	99	225	40.5	-3.1	Pass	
128.993	47.2	4.3	-16.9	34.6	Quasi Max	н	393	283	40.5	-5.9	Pass	
97.306	51.3	4.1	-21.6	33.8	Quasi Max	V	111	302	40.5	-6.7	Pass	
144.896	47.1	4.3	-18.3	33.2	Peak [Scan]	н	98	-1	40.5	-7.3	Pass	
156.413	48.1	4.4	-18.5	34.0	Peak [Scan]	Н	98	-1	40.5	-6.5	Pass	
304.698	48.1	5.1	-16.8	36.4	Peak [Scan]	н	98	-1	47.5	-11.1	Pass	
Legend:		-			Transmitter Emis 20 dB below Fur							

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:132 of 299

	st Freq.	NA							Engineer	JMH		
	•		minaiana				Temp (°C)					
	Variant	Digital Er							• • • •	18		
	Range	30 - 1000 MHz							Hum.(%)	33		
Power	Setting	NA						Press	. (mBars)	1000		
Aı	ntenna	External	APIN020	4								
Test N	lotes 1	AC/DC P	owered 1	10Vac 60 I	Hz / 12 Vdc							
Test N	lotes 2	Digital Er	nissions									
With Vasona by EMISoft 13 Mar 14 08:28 - 14 Vertical Opt Lmnt Opt Company Opt												
		0.0 30.0							Free 930.0 1000.0	quency: MH	łz	
Formally	measu	0.0 30.0 Radia Filen	ated Emiss ame: c:\pr	sions ogram files\e					Free 930.0 1000.0	quency: MH	łz	
Formally r Frequency MHz	Raw dBuV	0.0 30.0 Radia Filen	ated Emiss ame: c:\pr	sions ogram files\e					Free 930.0 1000.0	quency: MH	łz	Comments
Frequency	Raw	0.0 30.0 Radia Filen red emis	ated Emissi ame: c:\pr ssion p AF	sions ogram files\e neaks Level	emisoft - vasona\re Measurement	emplate sults\c	CISPF lient pro	Azt	930.0 1000.0 30MHz - 1Gi rub170'raw d	quency: MH Hz] latā\de AC- Margin	Hz DC Pass	Comments
Frequency MHz	Raw dBuV	0.0 30.0 Radia Filen red emis Cable Loss	assion p	eaks Level dBuV/m	emisoft - vasona\re Measurement Type	Pol	Hgt cm	Azt Deg	Signal Free	Hz] Hz] Jata\de AC- Margin dB	Hz DC Pass /Fail	Comments
Frequency MHz 37.871	Raw dBuV 46.7 47.4 51.5	red emis Cable Loss 3.6 4.2 3.7	AF dB -15.6 -23.2	eaks Level dBuV/m 34.670	Measurement Type Quasi Max	Pol V	Hgt cm 105 133 156	Azt Deg 62 186 89	Limit dBuV/m 40.5 40.5	Hz] Hz] Margin dB -5.8	Hz DC Pass /Fail Pass	Comments
Frequency MHz 37.871 122.751	Raw dBuV 46.7 47.4	red emis Cable Loss 3.6 4.2	AF dB -15.6 -17.0	eaks Level dBuV/m 34.670 34.6	Measurement Type Quasi Max Quasi Max	Pol V V	Hgt cm 105 133	Azt Deg 62 186	Limit dBuV/m 40.5 40.5	Margin dB -5.8 -5.9	Hz DC Pass /Fail Pass Pass	Comments
Frequency MHz 37.871 122.751 52.159 65.446 143.372	Raw dBuV 46.7 47.4 51.5 51.9 45.5	red emis Cable Loss 3.6 4.2 3.7	AF dB -15.6 -23.2	eeaks Level dBuV/m 34.670 32.0	Measurement Type Quasi Max Quasi Max Quasi Max	Pol V V V V V	Hgt cm 105 133 156 189 99	Azt Deg 62 186 89	Limit dBuV/m 40.5 40.5	Margin dB -5.8 -5.9 -8.5	La pass /Fail Pass Pass Pass Pass Pass	Comments
Frequency MHz 37.871 122.751 52.159 65.446 143.372 91.769	Raw dBuV 46.7 47.4 51.5 51.9 45.5 49.6	Cable Loss 3.6 4.2 3.7 3.8 4.3 4.0	AF dB -15.6 -17.0 -23.2 -23.2 -18.2 -23.3	eaks Level dBuV/m 34.670 34.6 32.0 32.5 31.7 30.3	Measurement Type Quasi Max Quasi Max Quasi Max Quasi Max Quasi Max Quasi Max	Pol V V V V	Hgt cm 105 133 156 189 99	Azt Deg 62 186 89 50	Limit dBuV/m 40.5 40.5 40.5 40.5 40.5	Margin dB -5.8 -5.9 -8.5 -8.0	Le constante de la constante d	Comments
Frequency MHz 37.871 122.751 52.159 65.446 143.372	Raw dBuV 46.7 47.4 51.5 51.9 45.5	00 300 Radia Filen	AF dB -15.6 -17.0 -23.2 -23.2 -18.2	eaks Level dBuV/m 34.670 34.6 32.0 32.5 31.7	Measurement Type Quasi Max Quasi Max Quasi Max Quasi Max Quasi Max	Pol V V V V V	Hgt cm 105 133 156 189 99	22 RE grams a 62 186 89 50 10	Limit dBuV/m 40.5 40.5 40.5 40.5	Margin dB -5.8 -5.9 -8.5 -8.0 -8.9	La pass /Fail Pass Pass Pass Pass Pass	Comments
Frequency MHz 37.871 122.751 52.159 65.446 143.372 91.769	Raw dBuV 46.7 47.4 51.5 51.9 45.5 49.6 49.8	Cable Loss 3.6 4.2 3.7 3.8 4.3 4.0 4.1	AF dB -15.6 -17.0 -23.2 -23.2 -18.2 -23.3 -19.3	eaks Level dBuV/m 34.670 34.6 32.0 32.5 31.7 30.3 34.4	Measurement Type Quasi Max Quasi Max Quasi Max Quasi Max Quasi Max Quasi Max	Pol V V V V V V V	Hgt cm 105 133 156 189 99 99 100	Azt Deg 62 186 89 50 10 257 0	Limit dBuV/m 40.5 40.5 40.5 40.5 40.5 40.5 40.5 40.5	Margin dB -5.8 -5.9 -8.5 -8.0 -8.9 -10.2 -6.0	Le constante de la constante d	Comments

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:133 of 299

Specification

Limits

§15.205 (a) Except as shown in paragraph (d) of 15.205 (a), only spurious emissions are permitted in any of the frequency bands listed.

§15.205 (a) Except as shown 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 Section §15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

§15.209 (a) Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table.

§15.209 (a) and RSS-Gen §2.2 Limit Matrix

Frequency(MHz)	Field Strength (μV/m)	Field Strength (dBμV/m)	Measurement Distance (meters)
30-88	100	40.0	3
88-216	150	43.5	3
216-960	200	46.0	3
Above 960	500	54.0	3

Laboratory Measurement Uncertainty for Radiated Emissions

Measurement uncertainty	+5.6/ -4.5 dB
-------------------------	---------------

Traceability

Method	Test Equipment Used
Measurements were made per work instruction WI-03 'Measurement of Radiated Emissions'	0088, 0158, 0134, 0304, 0311, 0315, 0310, 0312

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:134 of 299

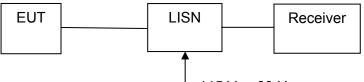
6.1.3. AC Wireline Conducted Emissions (150 kHz – 30 MHz)

FCC, Part 15 Subpart C §15.207 Industry Canada RSS-Gen §7.2.2

Test Procedure

The EUT is configured in accordance with ANSI C63.4. The conducted emissions are measured in a shielded room with a spectrum analyzer in peak hold in the first instance. Emissions closest to the limit are measured in the quasi-peak mode (QP) with the tuned receiver using a bandwidth of 9 kHz. The emissions are maximized further by cable manipulation. The highest emissions relative to the limit are listed.

Test Measurement Set up



115 Vac 60 Hz

Measurement set up for AC Wireline Conducted Emissions Test

Measurement Results for AC Wireline Conducted Emissions (150 kHz – 30 MHz)

Ambient conditions. Temperature: 17 to 23 °C Relative humidity: 31 to 57 % Pressure: 999 to 1012 mbar

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:135 of 299

ac/dc Adaptor Wireline Emissions

Tes	st Freq.	N/A					Engineer	JMH		
١	Variant	AC Line	Emissions			Temp (°C) 18				
Freq.	Range	0.150 MI	0.150 MHz - 30 MHz			Re	el. Hum.(%)	35		
Power	Setting	Not Appl	Not Applicable			Pres	s. (mBars)	1004		
A	ntenna	Not Appl	icable							
Test N	Notes 1	ac/dc Ad	aptor 110 \	/ac, 60 Hz	:					
Test N	Notes 2		•							
MiC®iMLa		dBuV Vasona by EMiSoft 13 Mar 14 12:28 12) Neutral Opk Limit Debug Av Limit Debug Frequency: MHz Beau Bower Line Conducted Emissions Filename: c:program files/emisoft - vasona/vesults/saruba/arub170/COND BM 1100/Jemi								
Formally n Frequency MHz	Raw dBuV	red emi Cable Loss	SSION PE	Level dBuV	Measurement Type	Line	Limit dBuV	Margin dB	Pass /Fail	Comments
0.175	23.7	9.9	0.1	33.7	Average	Neutral	54.72	-21.1	Pass	
0.175	40.3	9.9	0.1	50.3	Quasi Peak	Neutral	64.72	-14.5	Pass	
0.234	18.7	9.9	0.1	28.6	Average	Neutral	52.31	-23.7	Pass	
0.234	34.2	9.9	0.1	44.1	Quasi Peak	Neutral	62.31	-18.2	Pass	
0.415	36.2	9.9	0.1	46.1	Quasi Peak	Neutral	57.56	-11.4	Pass	
0.415	23.7	9.9	0.1	33.7	Average	Neutral	47.56	-13.9	Pass	
0.506	31.1	9.9	0.1	41.1	Quasi Peak	Neutral	56	-14.9	Pass	
0.506	17.7	9.9	0.1	27.7	Average	Neutral	46	-18.3	Pass	
0.579	17.5	9.9	0.1	27.6	Average	Neutral	46	-18.4	Pass	
0.579	31.4	9.9	0.1	41.5	Quasi Peak	Neutral	56	-14.6	Pass	
0.839	29.7	9.9			Quasi Peak		56	-16.3	Pass	
		99	0 1	20.0	A	Noutral	46	_170	Dace	1
0.839	19.0									

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:136 of 299

Specification

Limit

§15.207 (a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 $\mu\Omega$ line impedance stabilization network (LISN), see §15.207 (a) matrix below. Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal.

RSS-Gen §7.2.2

The radio frequency voltage that is conducted back into the AC power lines in the frequency range of 0.15 MHz to 30 MHz shall not exceed the limits shown in the table below. The tighter limit applies at the frequency range boundaries.

§15.207 (a) and RSS-Gen §7.2.2 Limit Matrix

The lower limit applies at the boundary between frequency ranges

Frequency of Emission (MHz)	Conducted Limit (dBµV)		
	Quasi-peak	Average	
0.15-0.5	66 to 56*	56 to 46*	
0.5-5	56	46	
5-30	60	50	

* Decreases with the logarithm of the frequency

Laboratory Measurement Uncertainty for Conducted Emissions

Measurement uncertainty	±2.64 dB

Traceability

Method	Test Equipment Used
Measurements were made per work instruction WI-EMC-01 'Measurement of Conducted Emissions'	0158, 0184, 0287, 0190, 0293, 0307

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:137 of 299

7. PHOTOGRAPHS

7.1. Conducted Test Setup

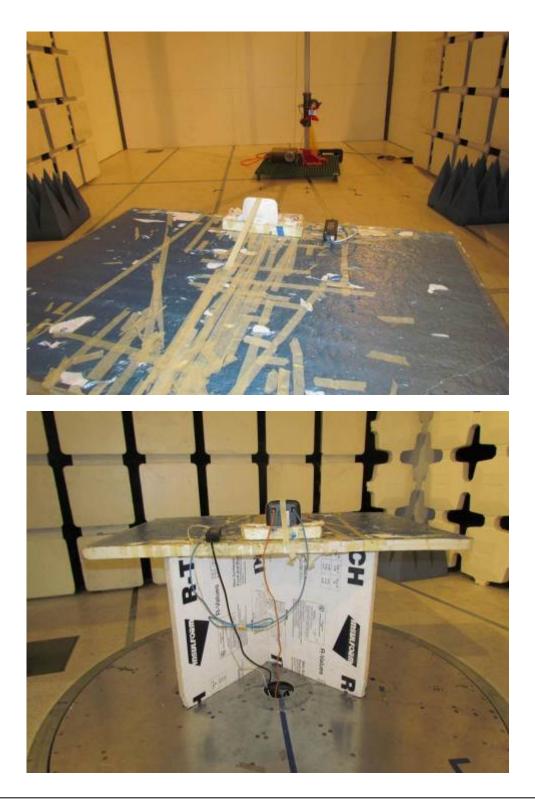


This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 138 of 299

Test Setup - Digital Emissions > 1 GHz 7.2.



This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 Page: 139 of 299

Radiated Emissions Test Setup <1 GHz 7.3.



This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A **Issue Date:** 4th May 2014 **Page:** 140 of 299

7.4. ac Wireline Test Setup >1 GHz



This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:141 of 299

8. TEST EQUIPMENT

Asset #	Instrument	Manufacturer	Part #	Serial #	Calibration Due Date
0117	Power Sensor	Hewlett Packard	8487D	3318A00371	18 th Oct 14
0223	Power Meter	Hewlett Packard	EPM-442A	US37480256	18 th Oct 14
0376	Power Sensor	Agilent	U2000A	MY51440005	28 th Oct 14
0390	Power Sensor	Agilent	U2002A	MY50000103	17 th Oct 14
0158	Barometer /Thermometer	Control Co.	4196	E2846	6 th Dec 14
0287	EMI Receiver	Rhode & Schwartz	ESIB40	100201	31 st Jul 14
0378	EMI Receiver	Rhode & Schwartz	ESIB40	100107/040	17 th Jul 14
0338	30 - 3000 MHz Antenna	Sunol	JB3	A052907	14 th Aug 14
0399	1-18 GHz Horn Antenna	EMCO	3117	00154575	10 th Oct 14
0252	SMA Cable	Megaphase	Sucoflex 104	None	N/A
0310	2m SMA Cable	Micro-Coax	UFA210A-0- 0787-3G03G0	209089-001	N/A
0312	3m SMA Cable	Micro-Coax	UFA210A-1- 1181-3G0300	209092-001	N/A
0314	30dB N-Type Attenuator	ARRA	N9444-30	1623	N/A
0359	DFS Test System	Aeroflex	PXI-1042	300001/004	21 st Oct 14
0299	DFS Test Software	Aeroflex	PXIModule	Version 7.1.0	N/A
0502	EMC Test Software	EMISoft	Vasona	5.0051	N/A
0503	RF Conducted Test Software	National Instruments	Labview	Version 8.2	N/A
0398	RF Conducted Test Software	MiCOM Labs ATS		Version 1.8	N/A
0380	RF Switch	MiCOM Labs	MIC001	MIC001	20 th March 14

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:142 of 299

APPENDIX

A. SUPPORTING INFORMATION

A.1. CONDUCTED TEST PLOTS

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



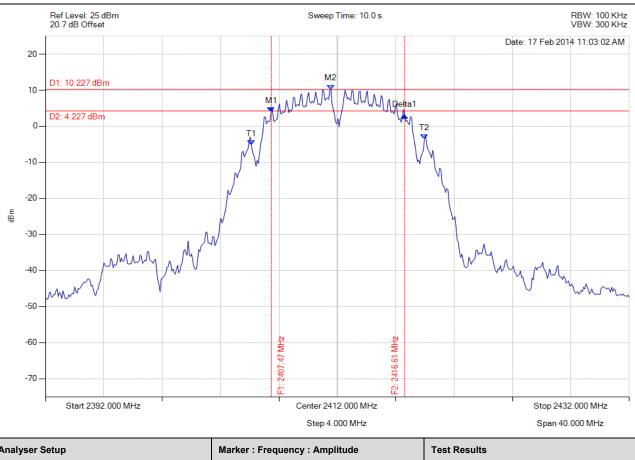
Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:143 of 299

A.1.1. 6 dB & 99% Bandwidth



6 dB & 99% BANDWIDTH

Variant: 802.11b, Channel: 2412.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2407.471 MHz : 4.002 dBm M2 : 2411.559 MHz : 10.227 dBm Delta1 : 9.138 MHz : -0.962 dB T1 : 2406.108 MHz : -5.154 dBm T2 : 2417.972 MHz : -3.568 dBm OBW : 11.864 MHz	Measured 6 dB Bandwidth: 9.138 MHz Limit: ≥500.0 kHz Margin: -8.64 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

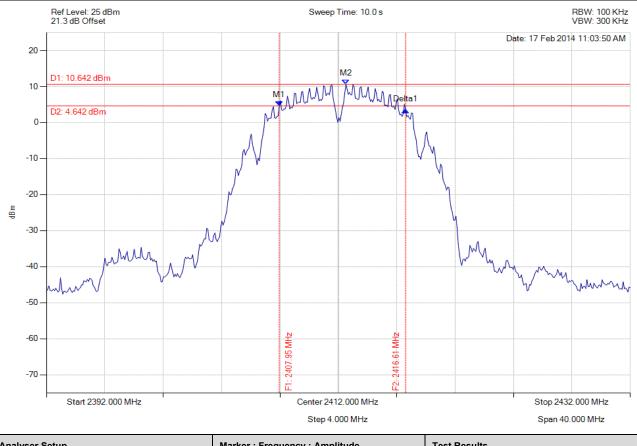


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:144 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11b, Channel: 2412.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2407.952 MHz : 4.628 dBm M2 : 2412.521 MHz : 10.642 dBm Delta1 : 8.657 MHz : -1.165 dB T1 : 0 Hz : 500.000 dBm T2 : 0 Hz : 500.000 dBm OBW : 11.623 MHz	Measured 6 dB Bandwidth: 8.657 MHz Limit: ≥500.0 kHz Margin: -8.16 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

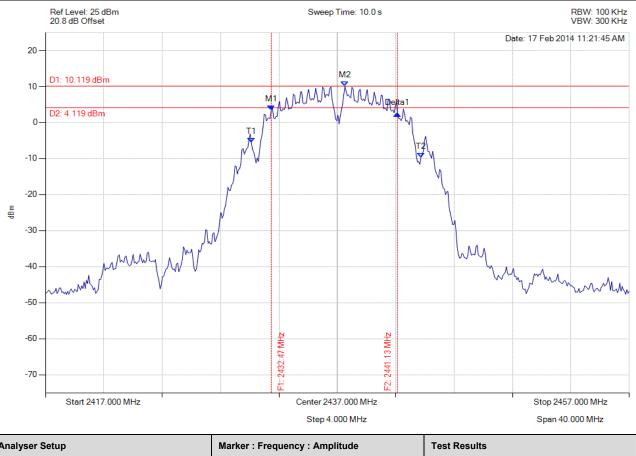


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:145 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11b, Channel: 2437.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2432.471 MHz : 3.520 dBm M2 : 2437.521 MHz : 10.119 dBm Delta1 : 8.657 MHz : -1.090 dB T1 : 2431.108 MHz : -5.545 dBm T2 : 2442.731 MHz : -9.669 dBm OBW : 11.623 MHz	Measured 6 dB Bandwidth: 8.657 MHz Limit: ≥500.0 kHz Margin: -8.16 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

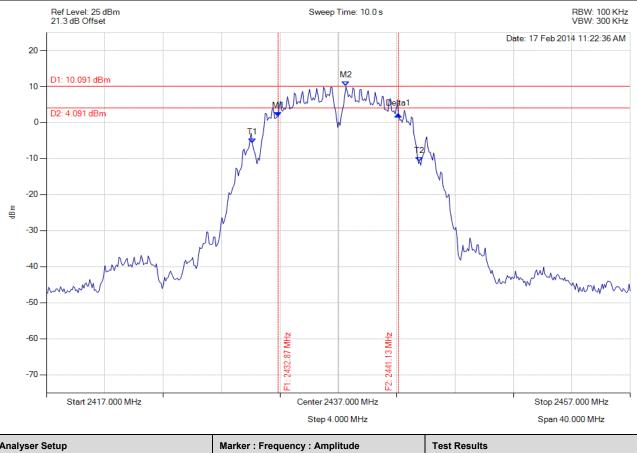


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:146 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11b, Channel: 2437.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2432.872 MHz : 1.610 dBm M2 : 2437.521 MHz : 10.091 dBm Delta1 : 8.257 MHz : 0.653 dB T1 : 2431.108 MHz : -5.734 dBm T2 : 2442.571 MHz : -10.859 dBm OBW : 11.463 MHz	Measured 6 dB Bandwidth: 8.257 MHz Limit: ≥500.0 kHz Margin: -7.76 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

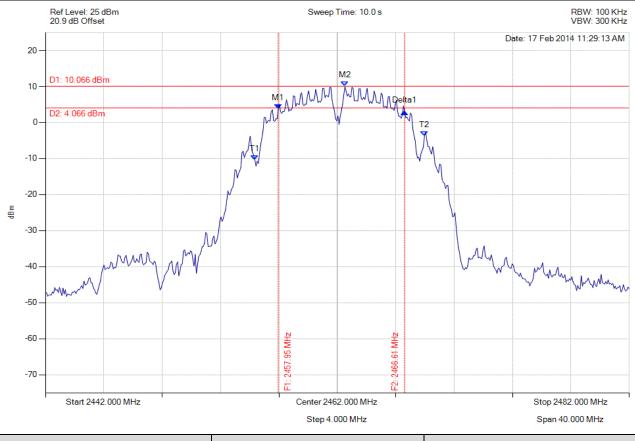


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:147 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11b, Channel: 2462.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2457.952 MHz : 3.745 dBm M2 : 2462.521 MHz : 10.066 dBm Delta1 : 8.657 MHz : -0.700 dB T1 : 2456.349 MHz : -10.347 dBm T2 : 2467.972 MHz : -3.651 dBm OBW : 11.623 MHz	Measured 6 dB Bandwidth: 8.657 MHz Limit: ≥500.0 kHz Margin: -8.16 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

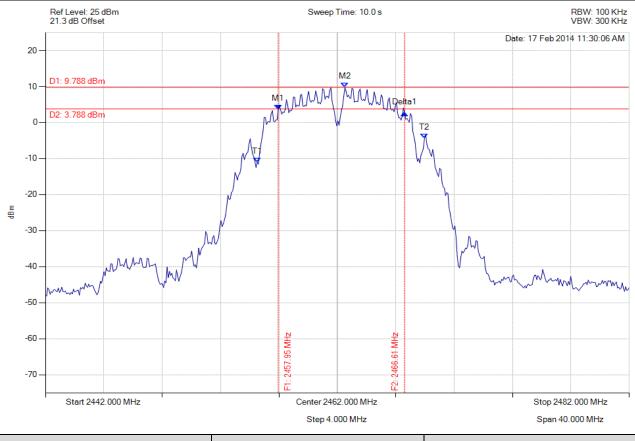


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:148 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11b, Channel: 2462.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2457.952 MHz : 3.581 dBm M2 : 2462.521 MHz : 9.788 dBm Delta1 : 8.657 MHz : -1.005 dB T1 : 2456.509 MHz : -10.989 dBm T2 : 2467.972 MHz : -4.316 dBm OBW : 11.463 MHz	Measured 6 dB Bandwidth: 8.657 MHz Limit: ≥500.0 kHz Margin: -8.16 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

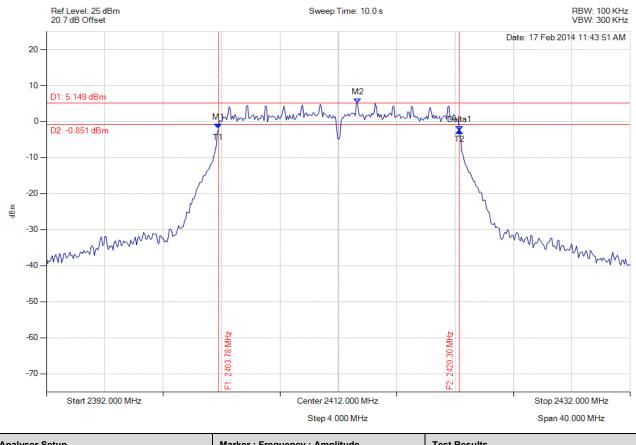


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:149 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11g, Channel: 2412.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2403.784 MHz : -1.935 dBm M2 : 2413.323 MHz : 5.149 dBm Delta1 : 16.513 MHz : -0.547 dB T1 : 2403.784 MHz : -1.935 dBm T2 : 2420.297 MHz : -2.482 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.513 MHz Limit: ≥500.0 kHz Margin: -16.01 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

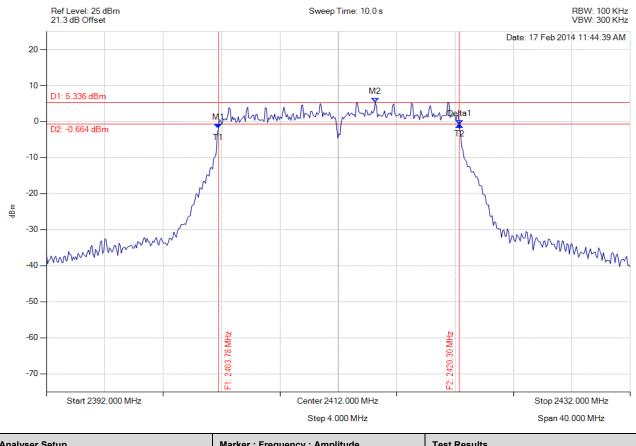


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:150 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11g, Channel: 2412.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2403.784 MHz : -1.925 dBm M2 : 2414.525 MHz : 5.336 dBm Delta1 : 16.513 MHz : 1.058 dB T1 : 2403.784 MHz : -1.925 dBm T2 : 2420.297 MHz : -0.867 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.513 MHz Limit: ≥500.0 kHz Margin: -16.01 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

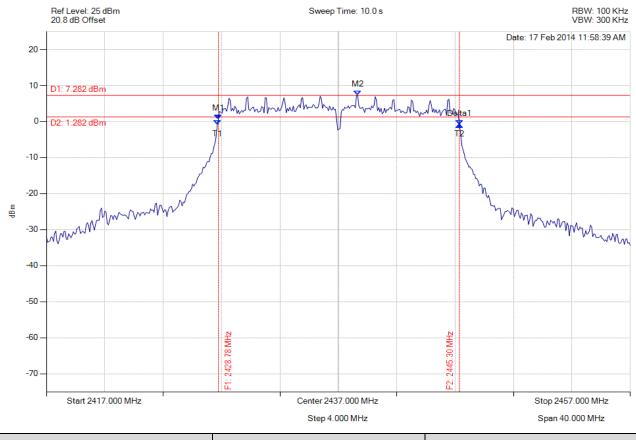


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:151 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11g, Channel: 2437.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2428.784 MHz : 0.693 dBm M2 : 2438.323 MHz : 7.282 dBm Delta1 : 16.513 MHz : -1.619 dB T1 : 2428.703 MHz : -0.877 dBm T2 : 2445.297 MHz : -0.926 dBm OBW : 16.593 MHz	Measured 6 dB Bandwidth: 16.513 MHz Limit: ≥500.0 kHz Margin: -16.01 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

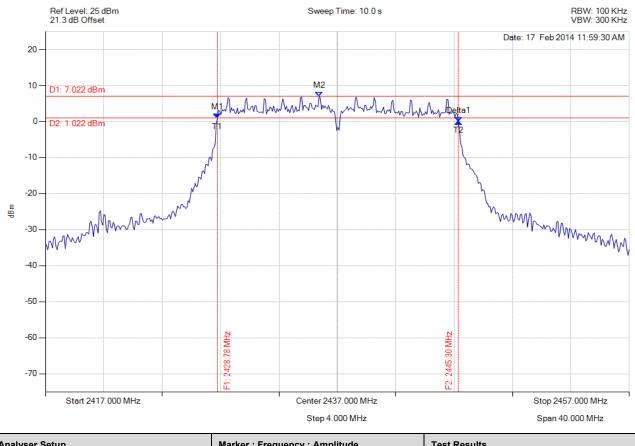


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:152 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11g, Channel: 2437.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2428.784 MHz : 1.004 dBm M2 : 2435.758 MHz : 7.022 dBm Delta1 : 16.513 MHz : -0.986 dB T1 : 2428.784 MHz : 1.004 dBm T2 : 2445.297 MHz : 0.017 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.513 MHz Limit: ≥500.0 kHz Margin: -16.01 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

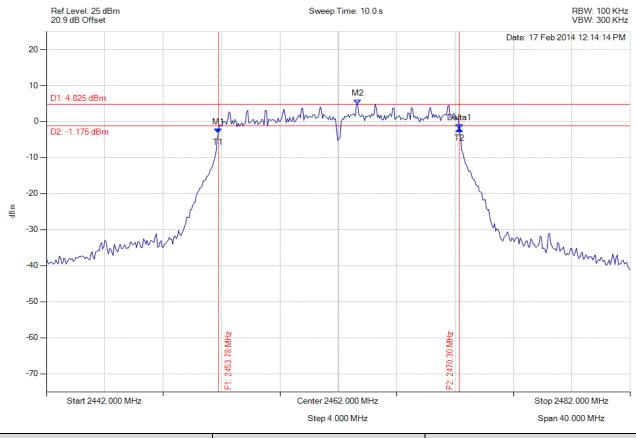


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:153 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11g, Channel: 2462.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2453.784 MHz : -3.196 dBm M2 : 2463.323 MHz : 4.825 dBm Delta1 : 16.513 MHz : 1.106 dB T1 : 2453.784 MHz : -3.196 dBm T2 : 2470.297 MHz : -2.089 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.513 MHz Limit: ≥500.0 kHz Margin: -16.01 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

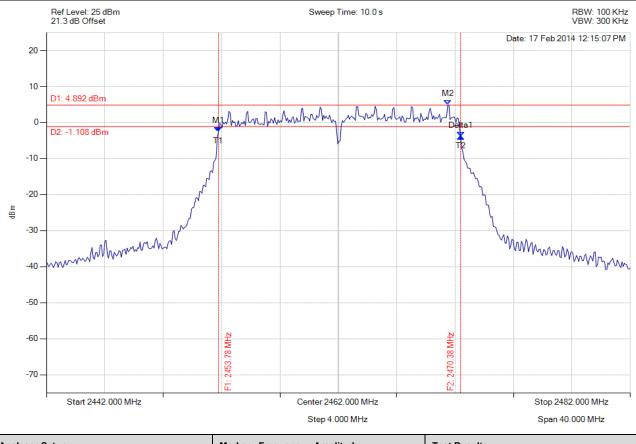


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:154 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11g, Channel: 2462.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2453.784 MHz : -2.610 dBm M2 : 2469.495 MHz : 4.892 dBm Delta1 : 16.593 MHz : -1.332 dB T1 : 2453.784 MHz : -2.610 dBm T2 : 2470.377 MHz : -3.942 dBm OBW : 16.593 MHz	Measured 6 dB Bandwidth: 16.593 MHz Limit: ≥500.0 kHz Margin: -16.09 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

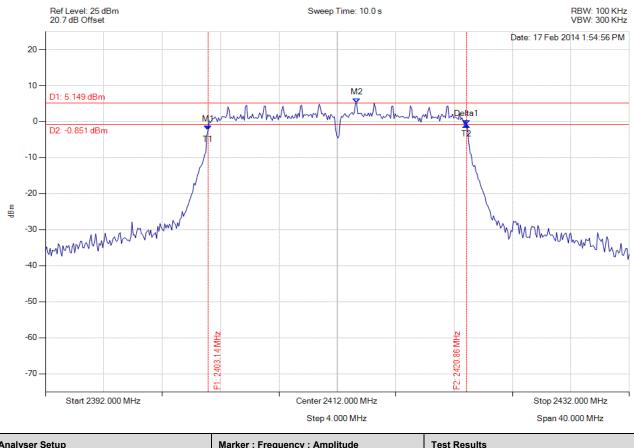


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:155 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 2412.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2403.142 MHz : -2.374 dBm M2 : 2413.323 MHz : 5.149 dBm Delta1 : 17.715 MHz : 1.476 dB T1 : 2403.142 MHz : -2.374 dBm T2 : 2420.858 MHz : -0.898 dBm OBW : 17.715 MHz	Measured 6 dB Bandwidth: 17.715 MHz Limit: ≥500.0 kHz Margin: -17.22 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

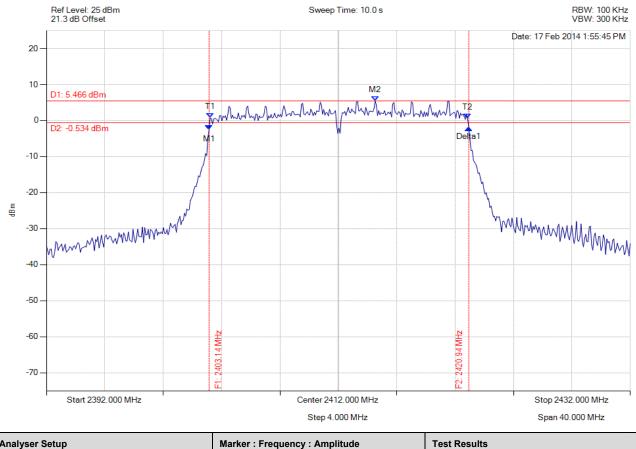


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:156 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 2412.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2403.142 MHz : -2.531 dBm M2 : 2414.525 MHz : 5.466 dBm Delta1 : 17.796 MHz : 0.551 dB T1 : 2403.222 MHz : 0.794 dBm T2 : 2420.858 MHz : 0.560 dBm OBW : 17.635 MHz	Measured 6 dB Bandwidth: 17.796 MHz Limit: ≥500.0 kHz Margin: -17.30 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

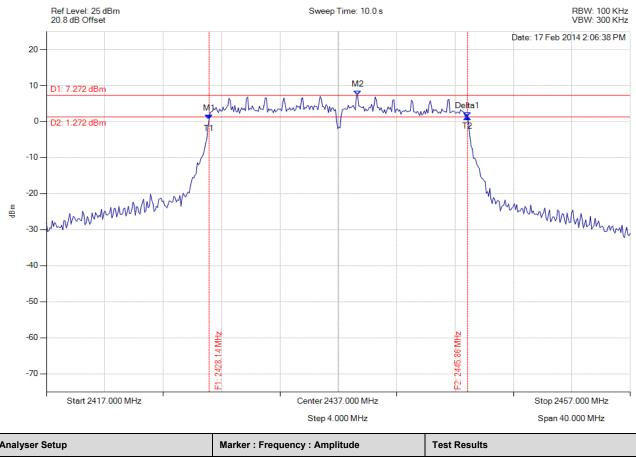


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:157 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 2437.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2428.142 MHz : 0.597 dBm M2 : 2438.323 MHz : 7.272 dBm Delta1 : 17.715 MHz : 0.657 dB T1 : 2428.142 MHz : 0.597 dBm T2 : 2445.858 MHz : 1.254 dBm OBW : 17.715 MHz	Measured 6 dB Bandwidth: 17.715 MHz Limit: ≥500.0 kHz Margin: -17.22 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

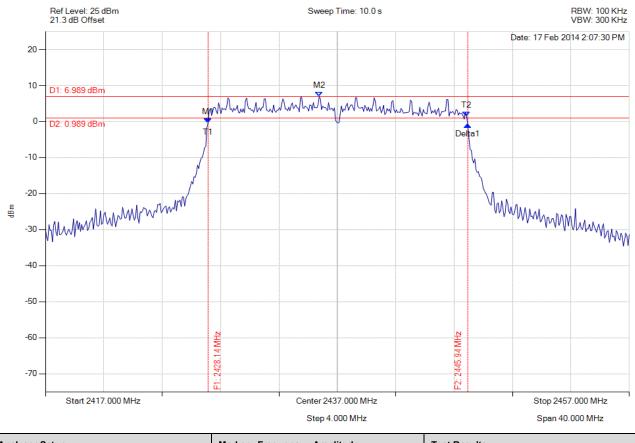


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:158 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 2437.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2428.142 MHz : -0.371 dBm M2 : 2435.758 MHz : 6.989 dBm Delta1 : 17.796 MHz : -0.529 dB T1 : 2428.142 MHz : -0.371 dBm T2 : 2445.858 MHz : 1.413 dBm OBW : 17.715 MHz	Measured 6 dB Bandwidth: 17.796 MHz Limit: ≥500.0 kHz Margin: -17.30 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

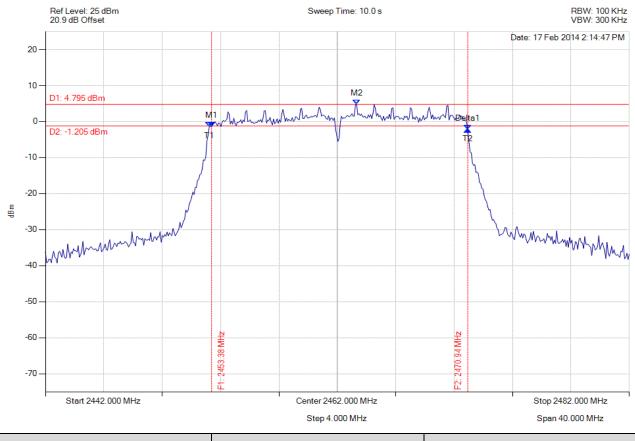


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:159 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2453.383 MHz : -1.429 dBm M2 : 2463.323 MHz : 4.795 dBm Delta1 : 17.555 MHz : -0.795 dB T1 : 2453.222 MHz : -1.431 dBm T2 : 2470.938 MHz : -2.224 dBm OBW : 17.715 MHz	Measured 6 dB Bandwidth: 17.555 MHz Limit: ≥500.0 kHz Margin: -17.06 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

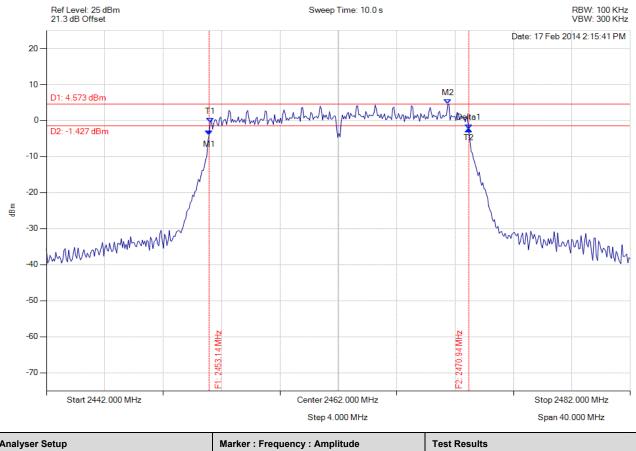


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:160 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2453.142 MHz : -4.028 dBm M2 : 2469.495 MHz : 4.573 dBm Delta1 : 17.796 MHz : 1.747 dB T1 : 2453.222 MHz : -0.538 dBm T2 : 2470.938 MHz : -2.281 dBm OBW : 17.715 MHz	Measured 6 dB Bandwidth: 17.796 MHz Limit: ≥500.0 kHz Margin: -17.30 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

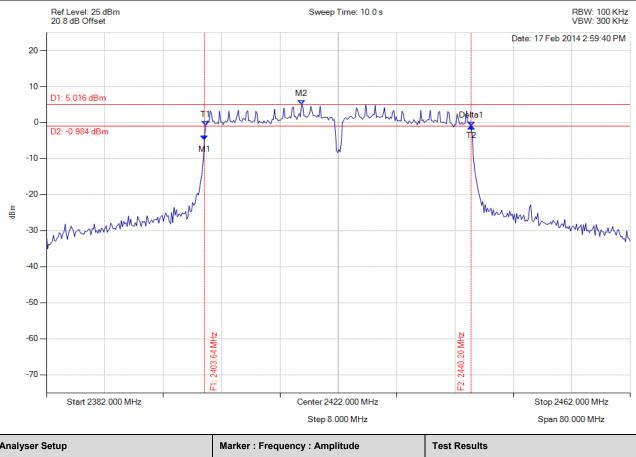


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:161 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2403.643 MHz : -4.872 dBm M2 : 2416.950 MHz : 5.016 dBm Delta1 : 36.553 MHz : 3.773 dB T1 : 2403.804 MHz : -0.875 dBm T2 : 2440.196 MHz : -1.099 dBm OBW : 36.393 MHz	Measured 6 dB Bandwidth: 36.553 MHz Limit: ≥500.0 kHz Margin: -36.05 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

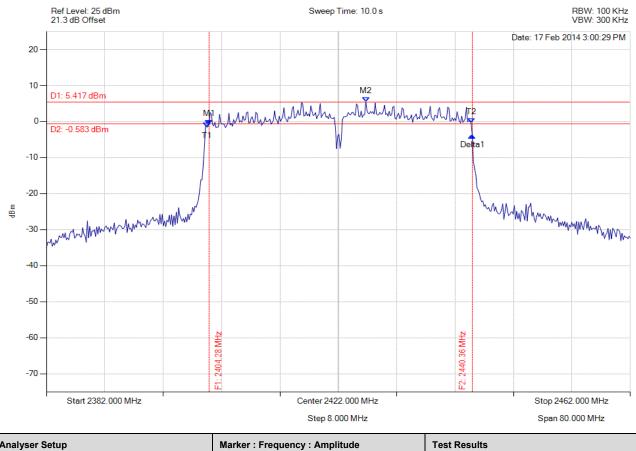


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:162 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2404.285 MHz : -0.818 dBm M2 : 2425.768 MHz : 5.417 dBm Delta1 : 36.072 MHz : -3.106 dB T1 : 2403.964 MHz : -1.465 dBm T2 : 2440.196 MHz : -0.371 dBm OBW : 36.232 MHz	Measured 6 dB Bandwidth: 36.072 MHz Limit: ≥500.0 kHz Margin: -35.57 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

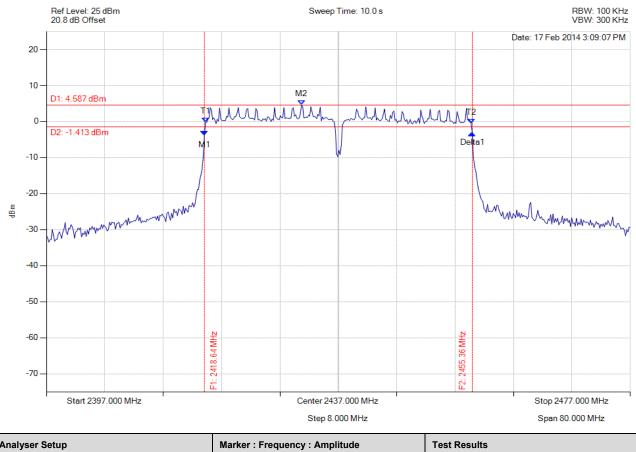


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:163 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 2437.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2418.643 MHz : -3.871 dBm M2 : 2431.950 MHz : 4.587 dBm Delta1 : 36.713 MHz : 0.681 dB T1 : 2418.804 MHz : -0.172 dBm T2 : 2455.196 MHz : -0.469 dBm OBW : 36.393 MHz	Measured 6 dB Bandwidth: 36.713 MHz Limit: ≥500.0 kHz Margin: -36.21 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

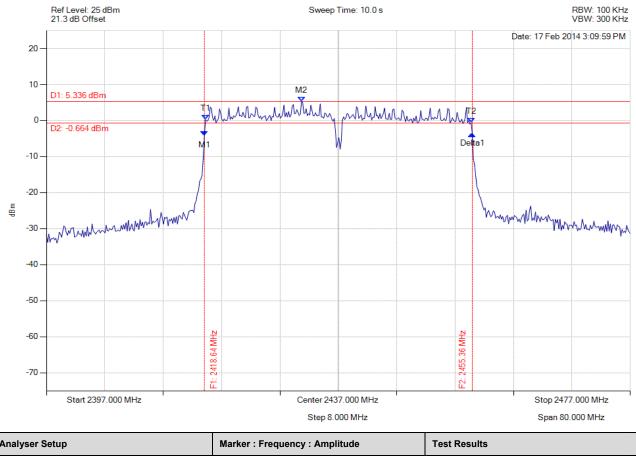


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:164 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 2437.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2418.643 MHz : -4.188 dBm M2 : 2431.950 MHz : 5.336 dBm Delta1 : 36.713 MHz : 0.492 dB T1 : 2418.804 MHz : 0.304 dBm T2 : 2455.196 MHz : -0.572 dBm OBW : 36.393 MHz	Measured 6 dB Bandwidth: 36.713 MHz Limit: ≥500.0 kHz Margin: -36.21 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

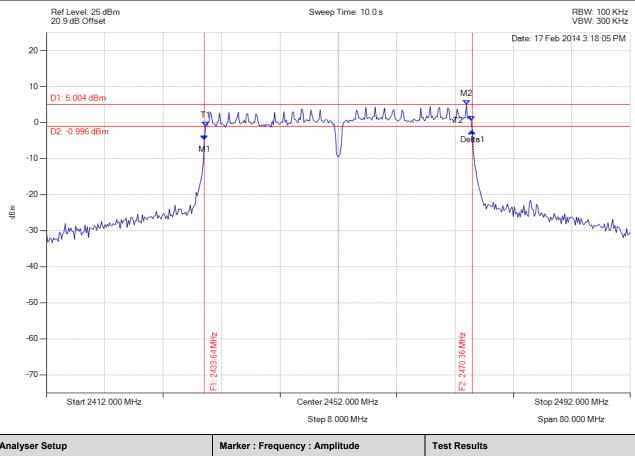


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:165 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2433.643 MHz : -4.849 dBm M2 : 2469.555 MHz : 5.004 dBm Delta1 : 36.713 MHz : 2.554 dB T1 : 2433.804 MHz : -0.977 dBm T2 : 2470.196 MHz : 0.504 dBm OBW : 36.393 MHz	Measured 6 dB Bandwidth: 36.713 MHz Limit: ≥500.0 kHz Margin: -36.21 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

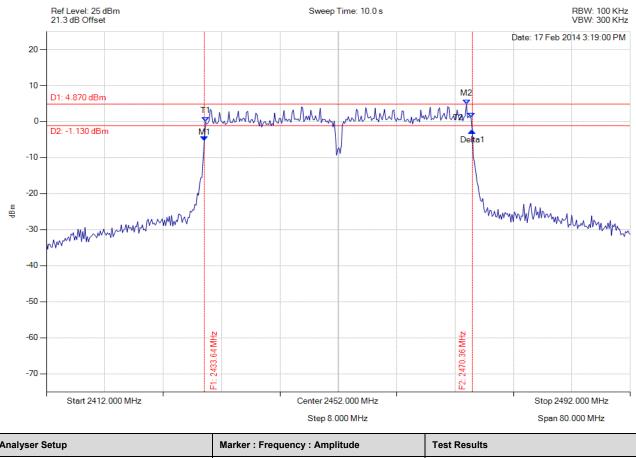


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:166 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2433.643 MHz : -5.421 dBm M2 : 2469.555 MHz : 4.870 dBm Delta1 : 36.713 MHz : 2.859 dB T1 : 2433.804 MHz : -0.052 dBm T2 : 2470.196 MHz : 1.085 dBm OBW : 36.393 MHz	Measured 6 dB Bandwidth: 36.713 MHz Limit: ≥500.0 kHz Margin: -36.21 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

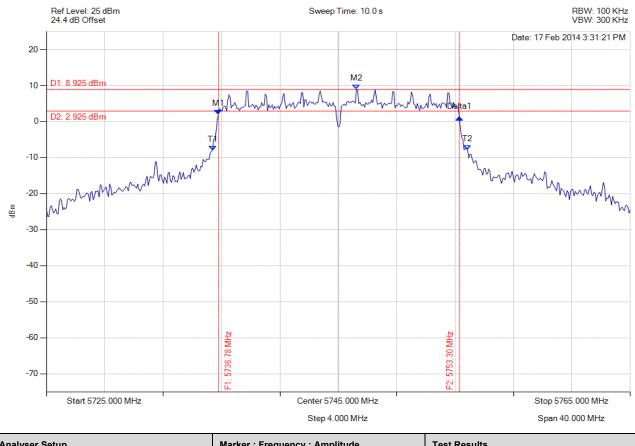


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:167 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5745.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5736.784 MHz : 1.958 dBm M2 : 5746.242 MHz : 8.925 dBm Delta1 : 16.513 MHz : -0.875 dB T1 : 5736.383 MHz : -7.981 dBm T2 : 5753.858 MHz : -7.855 dBm OBW : 17.475 MHz	Measured 6 dB Bandwidth: 16.513 MHz Limit: ≥500.0 kHz Margin: -16.01 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

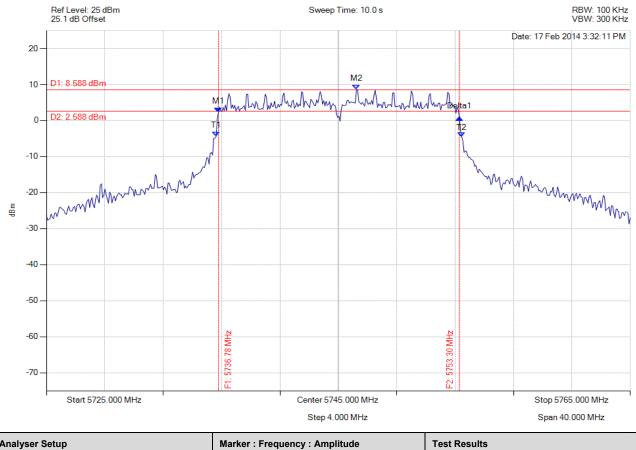


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:168 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5745.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5736.784 MHz : 2.240 dBm M2 : 5746.242 MHz : 8.588 dBm Delta1 : 16.513 MHz : -1.363 dB T1 : 5736.623 MHz : -4.404 dBm T2 : 5753.457 MHz : -4.463 dBm OBW : 16.834 MHz	Measured 6 dB Bandwidth: 16.513 MHz Limit: ≥500.0 kHz Margin: -16.01 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

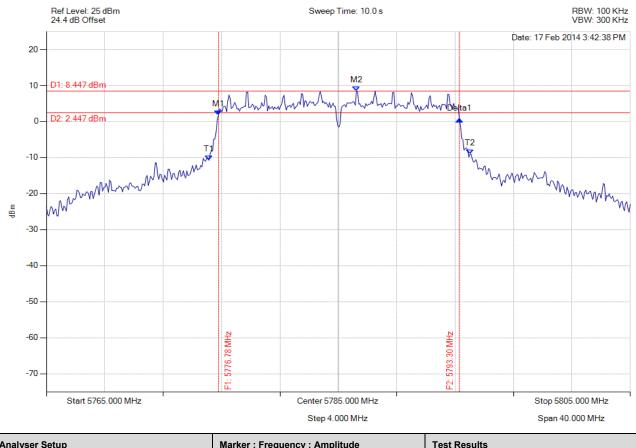


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:169 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5785.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5776.784 MHz : 1.803 dBm M2 : 5786.242 MHz : 8.447 dBm Delta1 : 16.513 MHz : -1.117 dB T1 : 5776.142 MHz : -10.747 dBm T2 : 5794.018 MHz : -9.112 dBm OBW : 17.876 MHz	Measured 6 dB Bandwidth: 16.513 MHz Limit: ≥500.0 kHz Margin: -16.01 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

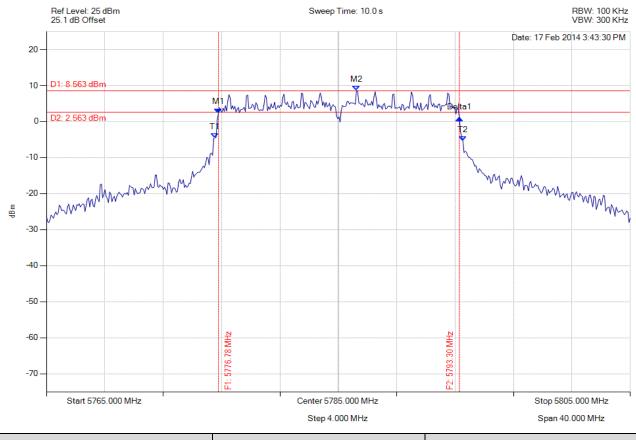


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:170 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5785.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5776.784 MHz : 2.389 dBm M2 : 5786.242 MHz : 8.563 dBm Delta1 : 16.513 MHz : -1.474 dB T1 : 5776.543 MHz : -4.522 dBm T2 : 5793.537 MHz : -5.433 dBm OBW : 16.994 MHz	Measured 6 dB Bandwidth: 16.513 MHz Limit: ≥500.0 kHz Margin: -16.01 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

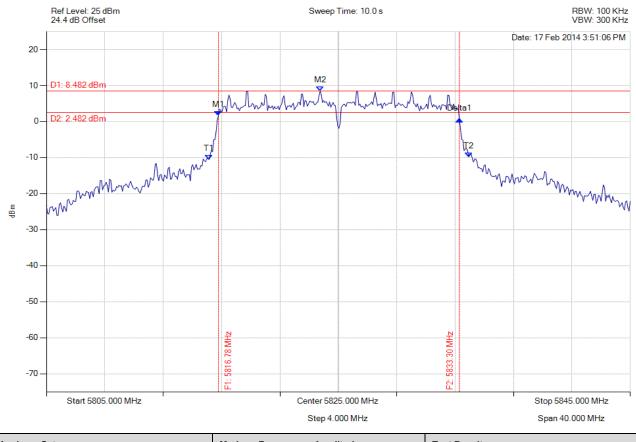


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:171 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5825.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5816.784 MHz : 1.689 dBm M2 : 5823.758 MHz : 8.482 dBm Delta1 : 16.513 MHz : -1.096 dB T1 : 5816.142 MHz : -10.574 dBm T2 : 5833.938 MHz : -9.854 dBm OBW : 17.796 MHz	Measured 6 dB Bandwidth: 16.513 MHz Limit: ≥500.0 kHz Margin: -16.01 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

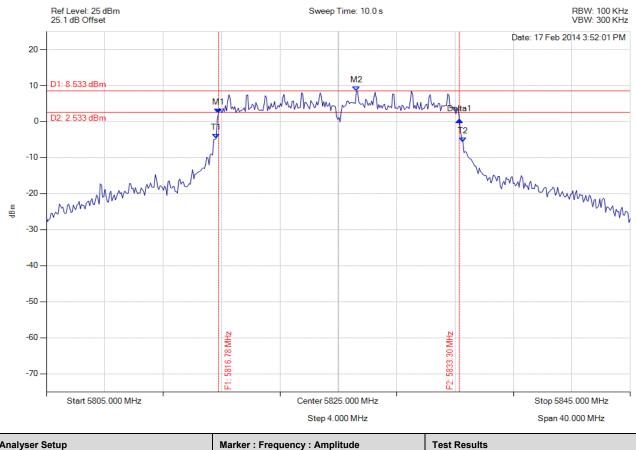


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:172 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5825.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5816.784 MHz : 2.305 dBm M2 : 5826.242 MHz : 8.533 dBm Delta1 : 16.513 MHz : -1.790 dB T1 : 5816.623 MHz : -4.709 dBm T2 : 5833.537 MHz : -5.764 dBm OBW : 16.914 MHz	Measured 6 dB Bandwidth: 16.513 MHz Limit: ≥500.0 kHz Margin: -16.01 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

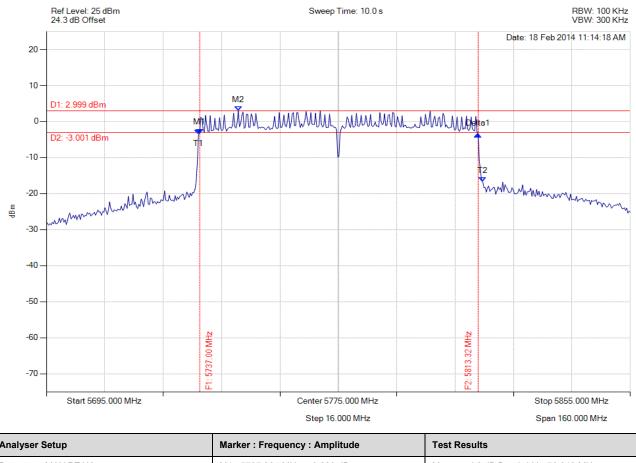


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:173 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5737.004 MHz : -3.289 dBm M2 : 5747.585 MHz : 2.999 dBm Delta1 : 76.313 MHz : -0.199 dB T1 : 5736.683 MHz : -3.603 dBm T2 : 5814.599 MHz : -16.739 dBm OBW : 77.916 MHz	Measured 6 dB Bandwidth: 76.313 MHz Limit: ≥500.0 kHz Margin: -75.81 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

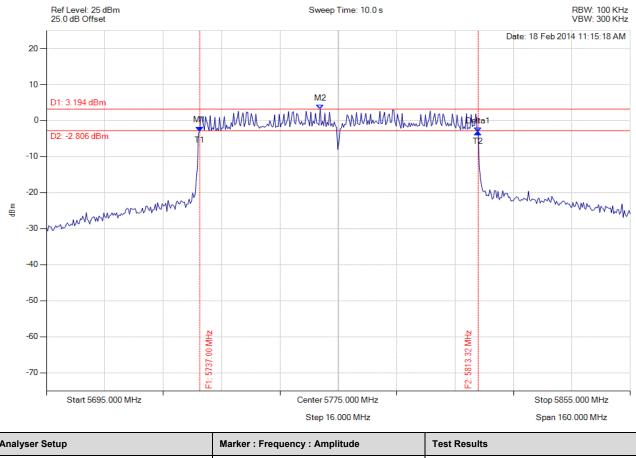


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:174 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5737.004 MHz : -2.948 dBm M2 : 5770.030 MHz : 3.194 dBm Delta1 : 76.313 MHz : -0.238 dB T1 : 5737.004 MHz : -2.948 dBm T2 : 5813.317 MHz : -3.186 dBm OBW : 76.313 MHz	Measured 6 dB Bandwidth: 76.313 MHz Limit: ≥500.0 kHz Margin: -75.81 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

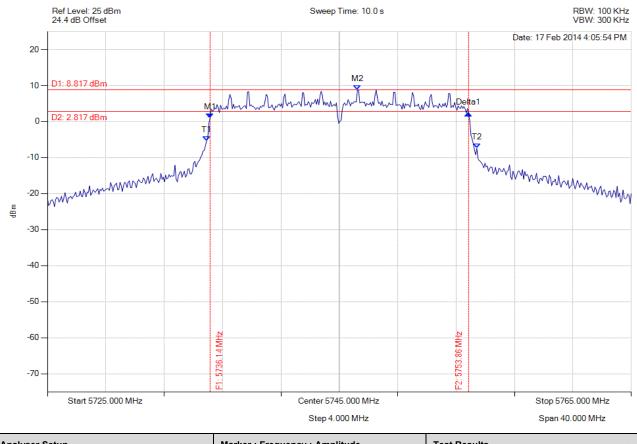


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:175 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5736.142 MHz : 1.032 dBm M2 : 5746.242 MHz : 8.817 dBm Delta1 : 17.715 MHz : 1.273 dB T1 : 5735.902 MHz : -5.421 dBm T2 : 5754.419 MHz : -7.430 dBm OBW : 18.517 MHz	Measured 6 dB Bandwidth: 17.715 MHz Limit: ≥500.0 kHz Margin: -17.22 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

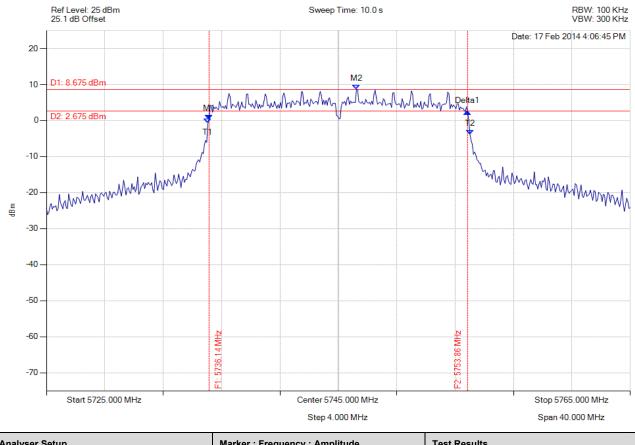


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:176 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5736.142 MHz : 0.365 dBm M2 : 5746.242 MHz : 8.675 dBm Delta1 : 17.715 MHz : 2.060 dB T1 : 5736.062 MHz : -0.739 dBm T2 : 5754.018 MHz : -3.820 dBm OBW : 17.956 MHz	Measured 6 dB Bandwidth: 17.715 MHz Limit: ≥500.0 kHz Margin: -17.22 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

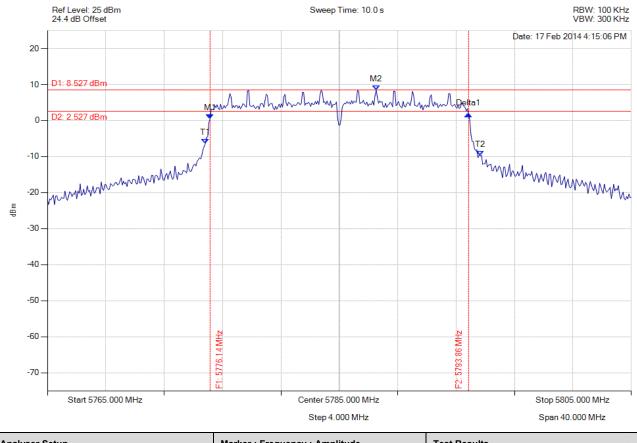


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:177 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5785.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5776.142 MHz : 0.518 dBm M2 : 5787.525 MHz : 8.527 dBm Delta1 : 17.715 MHz : 1.346 dB T1 : 5775.822 MHz : -6.344 dBm T2 : 5794.659 MHz : -9.761 dBm OBW : 18.838 MHz	Measured 6 dB Bandwidth: 17.715 MHz Limit: ≥500.0 kHz Margin: -17.22 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

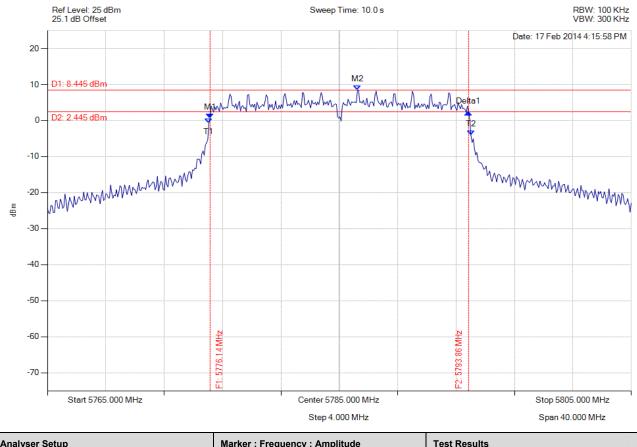


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:178 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5785.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5776.142 MHz : 0.571 dBm M2 : 5786.242 MHz : 8.445 dBm Delta1 : 17.715 MHz : 1.704 dB T1 : 5776.062 MHz : -0.637 dBm T2 : 5794.018 MHz : -4.087 dBm OBW : 17.956 MHz	Measured 6 dB Bandwidth: 17.715 MHz Limit: ≥500.0 kHz Margin: -17.22 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

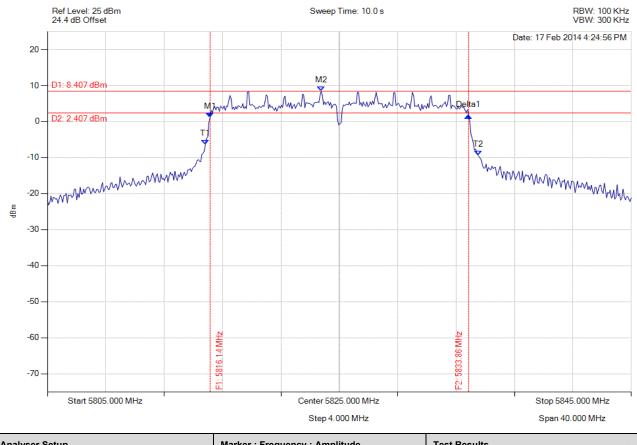


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:179 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5816.142 MHz : 1.132 dBm M2 : 5823.758 MHz : 8.407 dBm Delta1 : 17.715 MHz : 0.561 dB T1 : 5815.822 MHz : -6.379 dBm T2 : 5834.499 MHz : -9.330 dBm OBW : 18.677 MHz	Measured 6 dB Bandwidth: 17.715 MHz Limit: ≥500.0 kHz Margin: -17.22 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

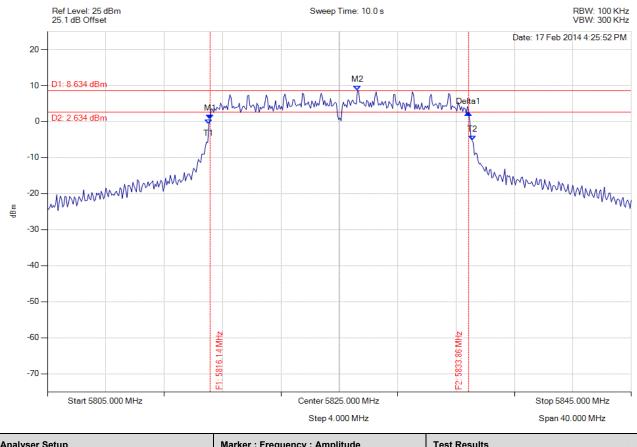


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:180 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5816.142 MHz : 0.583 dBm M2 : 5826.242 MHz : 8.634 dBm Delta1 : 17.715 MHz : 1.938 dB T1 : 5816.062 MHz : -0.729 dBm T2 : 5834.098 MHz : -5.207 dBm OBW : 18.036 MHz	Measured 6 dB Bandwidth: 17.715 MHz Limit: ≥500.0 kHz Margin: -17.22 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:181 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5736.643 MHz : -3.509 dBm M2 : 5758.768 MHz : 6.247 dBm Delta1 : 36.713 MHz : 1.025 dB T1 : 5736.643 MHz : -3.509 dBm T2 : 5774.479 MHz : -14.268 dBm OBW : 37.836 MHz	Measured 6 dB Bandwidth: 36.713 MHz Limit: ≥500.0 kHz Margin: -36.21 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

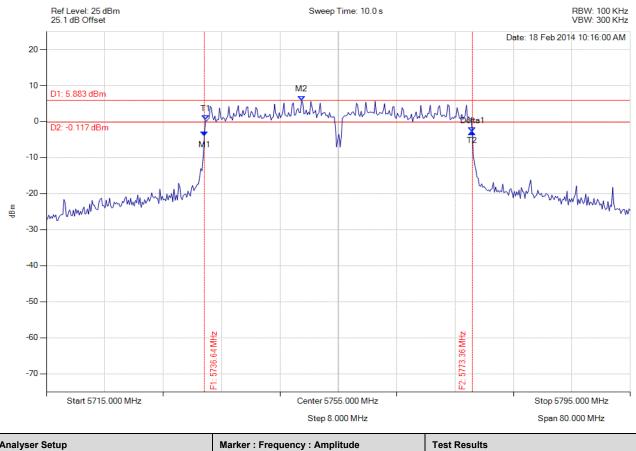


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:182 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5736.643 MHz : -3.961 dBm M2 : 5749.950 MHz : 5.883 dBm Delta1 : 36.713 MHz : 1.135 dB T1 : 5736.804 MHz : 0.512 dBm T2 : 5773.357 MHz : -2.826 dBm OBW : 36.553 MHz	Measured 6 dB Bandwidth: 36.713 MHz Limit: ≥500.0 kHz Margin: -36.21 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

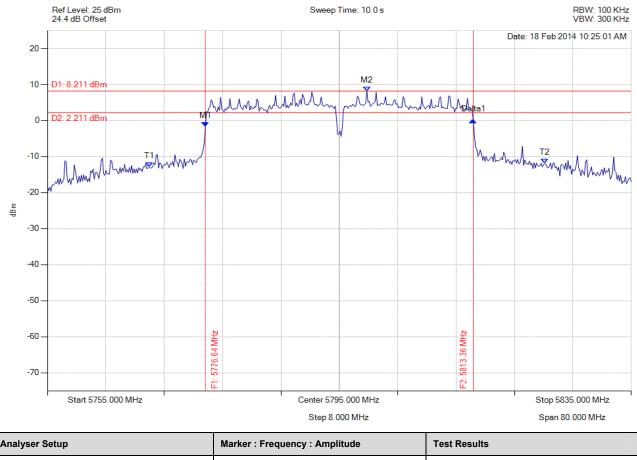


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:183 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5776.643 MHz : -1.719 dBm M2 : 5798.768 MHz : 8.211 dBm Delta1 : 36.713 MHz : 1.812 dB T1 : 5768.948 MHz : -12.854 dBm T2 : 5823.136 MHz : -11.878 dBm OBW : 54.188 MHz	Measured 6 dB Bandwidth: 36.713 MHz Limit: ≥500.0 kHz Margin: -36.21 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:184 of 299



6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5776.643 MHz : -2.094 dBm M2 : 5791.232 MHz : 7.860 dBm Delta1 : 36.713 MHz : 1.696 dB T1 : 5773.758 MHz : -12.752 dBm T2 : 5819.609 MHz : -13.487 dBm OBW : 45.852 MHz	Measured 6 dB Bandwidth: 36.713 MHz Limit: ≥500.0 kHz Margin: -36.21 MHz

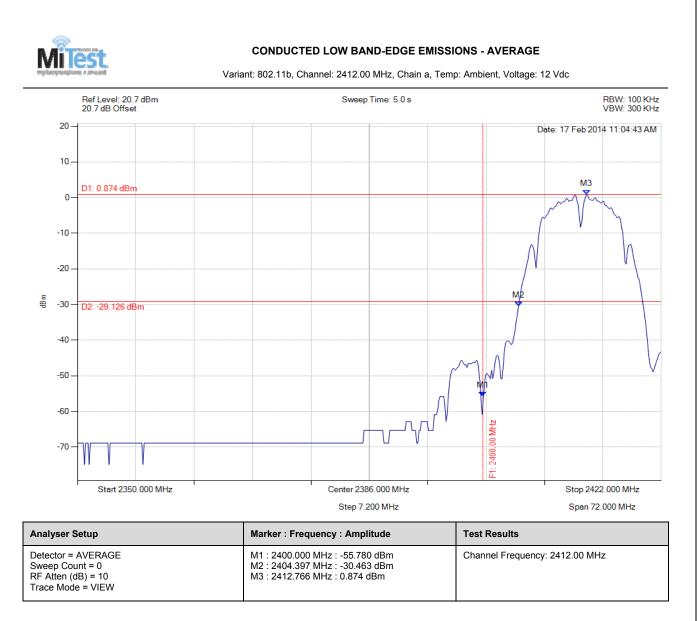
Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 185 of 299

A.1.2. Conducted Spurious Emissions



Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

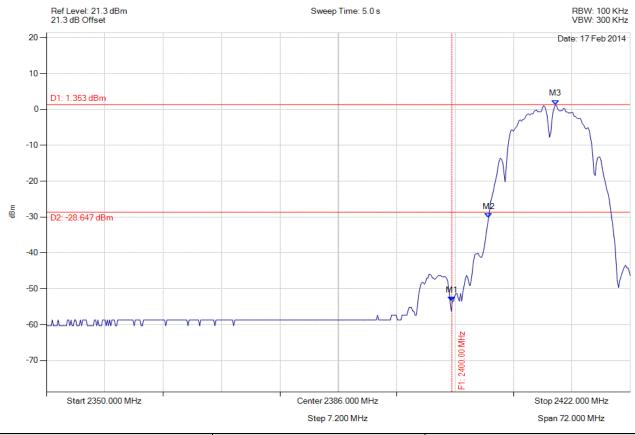


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:186 of 299



CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2412.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -53.437 dBm M2 : 2404.541 MHz : -30.183 dBm M3 : 2412.766 MHz : 1.353 dBm	Channel Frequency: 2412.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

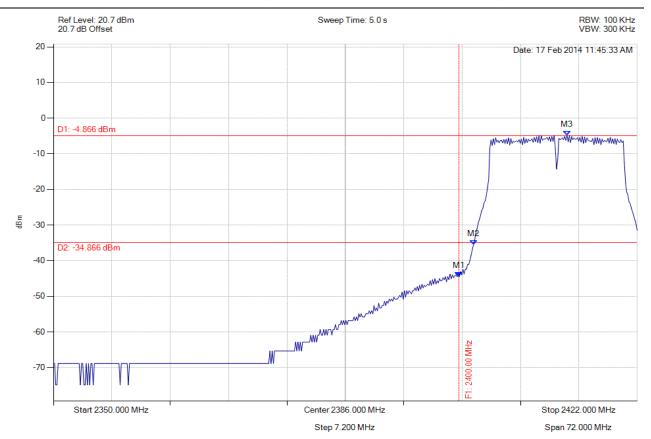


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:187 of 299

Milest

CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2412.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2400.000 MHz : -44.495 dBm M2 : 2401.800 MHz : -35.590 dBm M3 : 2413.343 MHz : -4.866 dBm	Channel Frequency: 2412.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

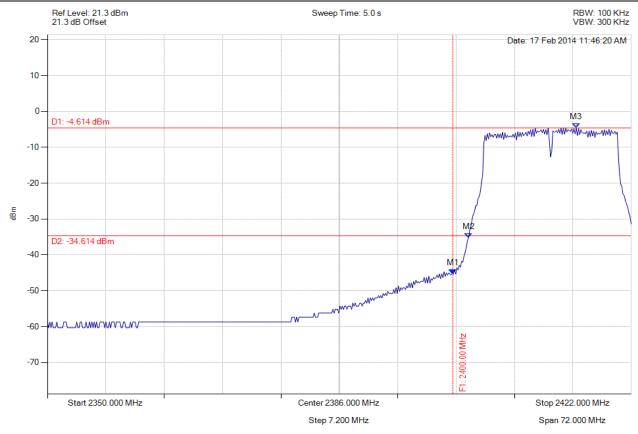


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 188 of 299



CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2412.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -45.322 dBm M2 : 2401.944 MHz : -35.180 dBm M3 : 2415.218 MHz : -4.614 dBm	Channel Frequency: 2412.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

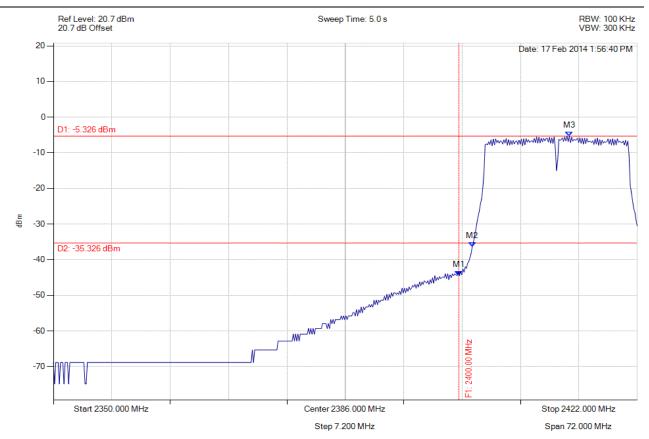


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:189 of 299

Milest

CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2412.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2400.000 MHz : -44.495 dBm M2 : 2401.655 MHz : -36.380 dBm M3 : 2413.631 MHz : -5.326 dBm	Channel Frequency: 2412.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

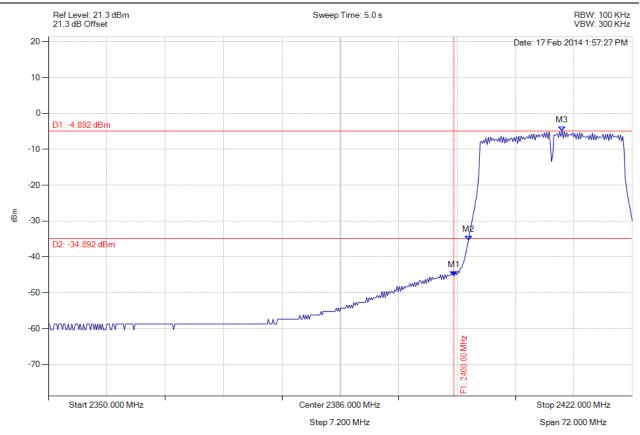


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:190 of 299



CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2412.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -45.322 dBm M2 : 2401.800 MHz : -35.475 dBm M3 : 2413.343 MHz : -4.892 dBm	Channel Frequency: 2412.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

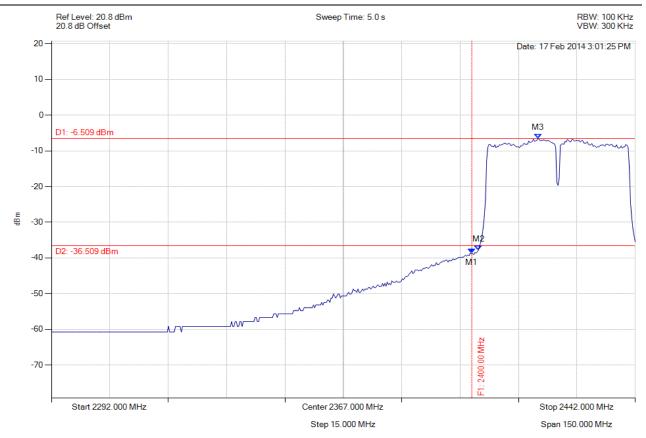


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:191 of 299



CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -38.779 dBm M2 : 2401.719 MHz : -37.863 dBm M3 : 2417.050 MHz : -6.509 dBm	Channel Frequency: 2422.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

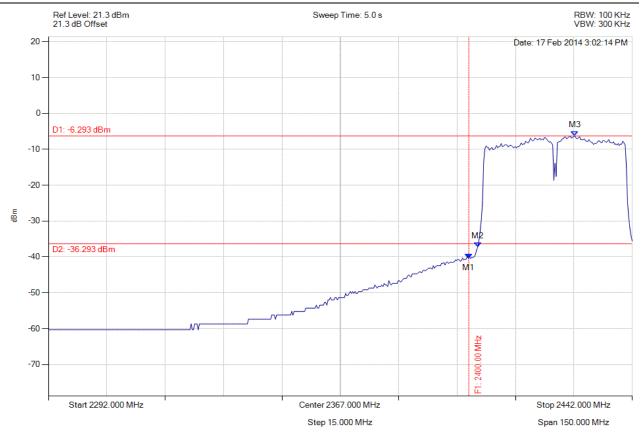


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:192 of 299



CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -40.461 dBm M2 : 2402.321 MHz : -37.240 dBm M3 : 2427.271 MHz : -6.293 dBm	Channel Frequency: 2422.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

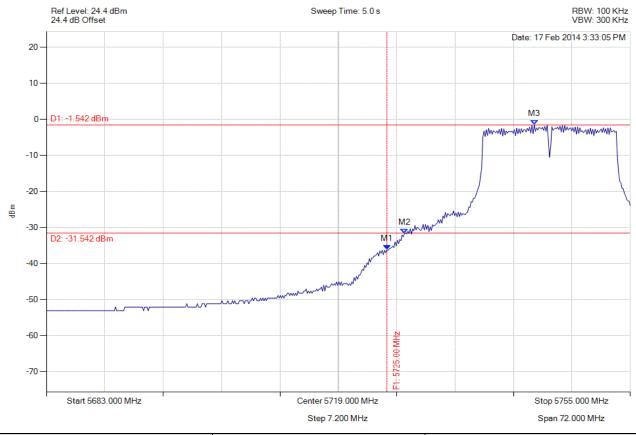


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:193 of 299



CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11a, Channel: 5745.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5725.000 MHz : -36.202 dBm M2 : 5727.152 MHz : -31.703 dBm M3 : 5743.168 MHz : -1.542 dBm	Channel Frequency: 5745.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

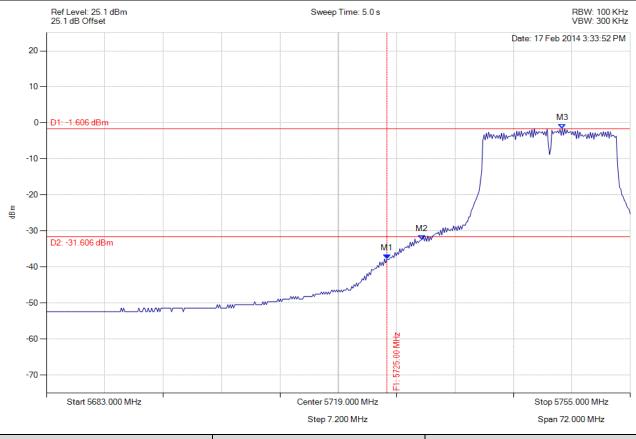


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:194 of 299



CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11a, Channel: 5745.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5725.000 MHz : -37.796 dBm M2 : 5729.317 MHz : -32.404 dBm M3 : 5746.631 MHz : -1.606 dBm	Channel Frequency: 5745.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

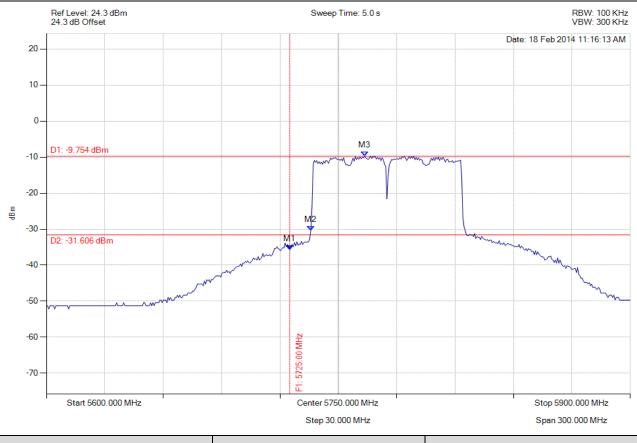


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 195 of 299



CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5725.000 MHz : -35.702 dBm M2 : 5735.872 MHz : -30.359 dBm M3 : 5763.527 MHz : -9.754 dBm	Channel Frequency: 5775.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

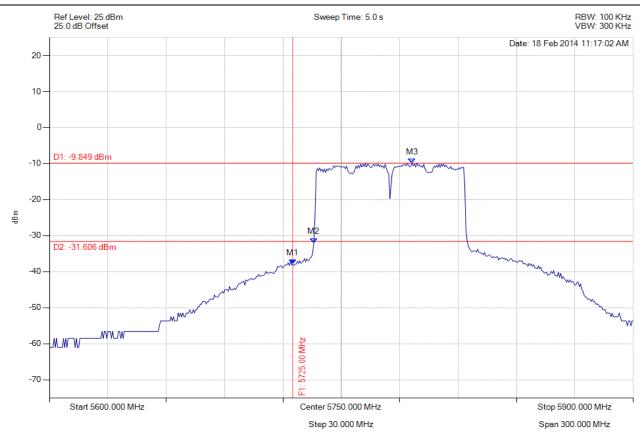


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:196 of 299



CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5725.000 MHz : -37.896 dBm M2 : 5735.872 MHz : -31.977 dBm M3 : 5786.373 MHz : -9.849 dBm	Channel Frequency: 5775.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

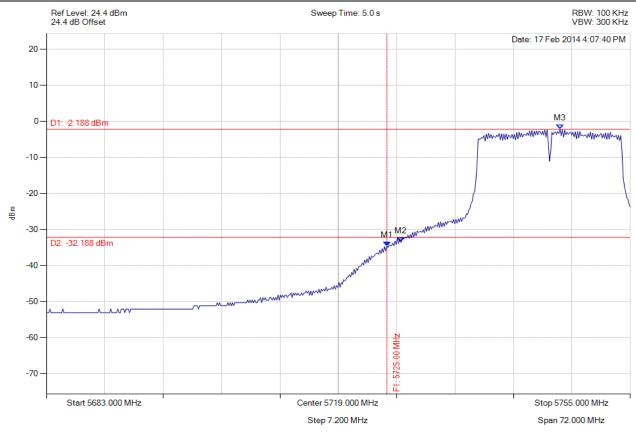


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:197 of 299



CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5725.000 MHz : -34.644 dBm M2 : 5726.719 MHz : -33.549 dBm M3 : 5746.343 MHz : -2.188 dBm	Channel Frequency: 5745.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

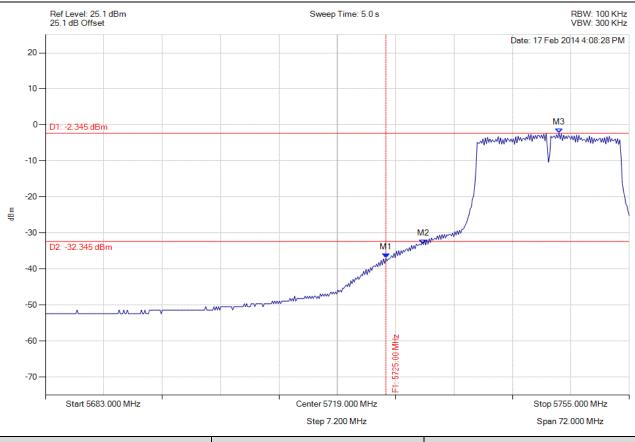


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:198 of 299

Milest

CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5725.000 MHz : -37.023 dBm M2 : 5729.605 MHz : -33.199 dBm M3 : 5746.343 MHz : -2.345 dBm	Channel Frequency: 5745.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

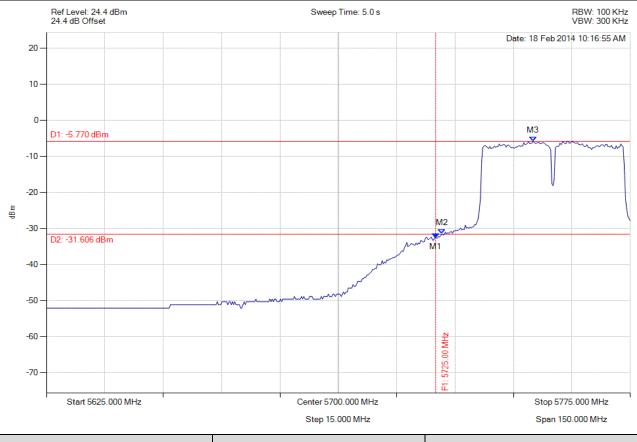


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:199 of 299



CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5725.000 MHz : -32.577 dBm M2 : 5726.603 MHz : -31.520 dBm M3 : 5750.050 MHz : -5.770 dBm	Channel Frequency: 5755.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

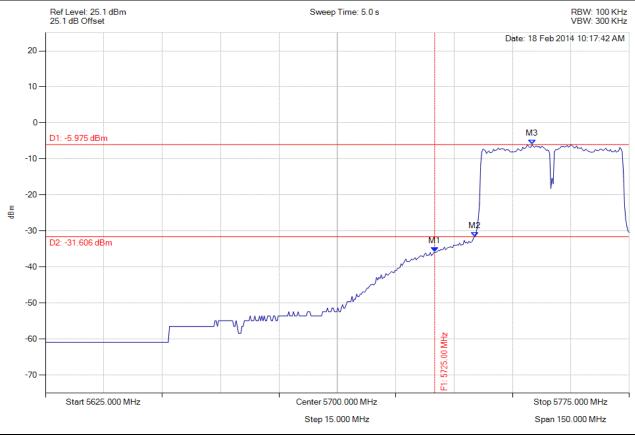


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:200 of 299



CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5725.000 MHz : -35.817 dBm M2 : 5735.321 MHz : -31.576 dBm M3 : 5750.050 MHz : -5.975 dBm	Channel Frequency: 5755.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

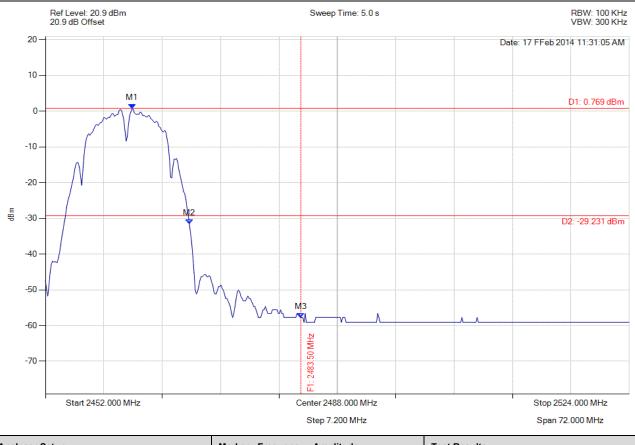


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:201 of 299

Milest

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2462.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1:2462.677 MHz:0.769 dBm M2:2469.747 MHz:-31.559 dBm M3:2483.500 MHz:-57.763 dBm	Channel Frequency: 2462.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

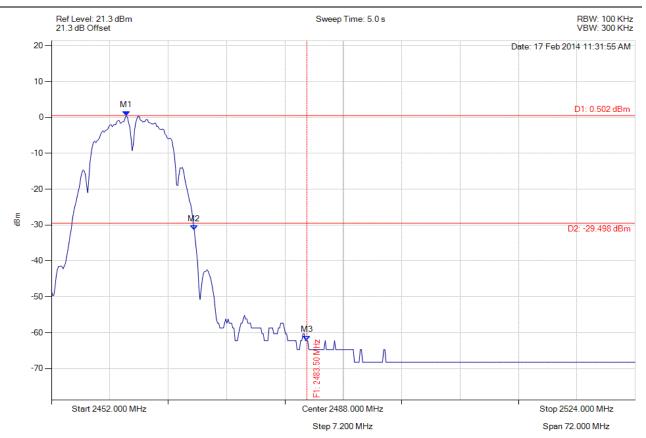


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:202 of 299

Milest

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2462.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2461.234 MHz : 0.502 dBm M2 : 2469.603 MHz : -31.405 dBm M3 : 2483.500 MHz : -62.224 dBm	Channel Frequency: 2462.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

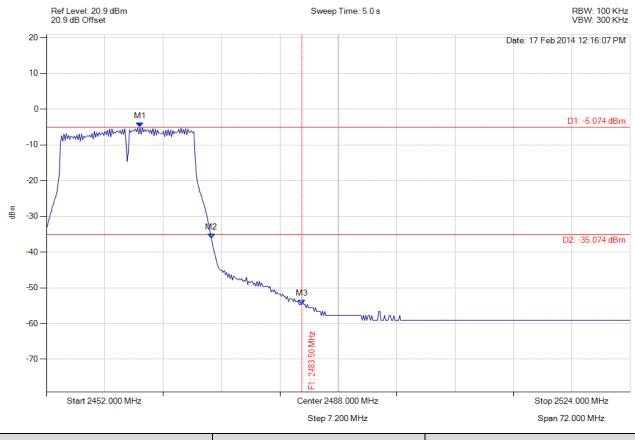


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:203 of 299



CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2462.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2463.543 MHz : -5.074 dBm M2 : 2472.345 MHz : -36.077 dBm M3 : 2483.500 MHz : -54.665 dBm	Channel Frequency: 2462.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

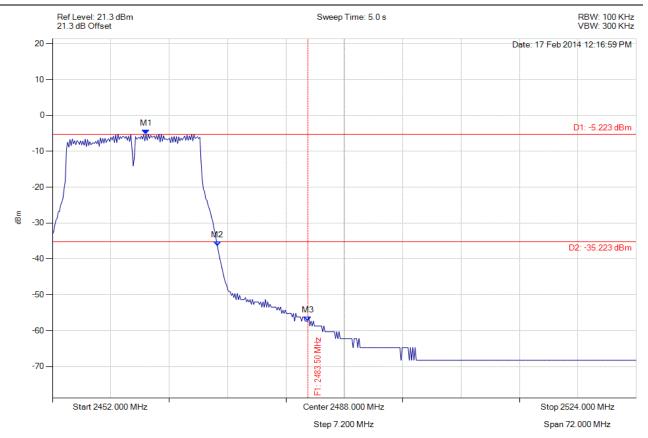


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:204 of 299



CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2462.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2463.543 MHz : -5.223 dBm M2 : 2472.345 MHz : -36.423 dBm M3 : 2483.500 MHz : -57.363 dBm	Channel Frequency: 2462.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

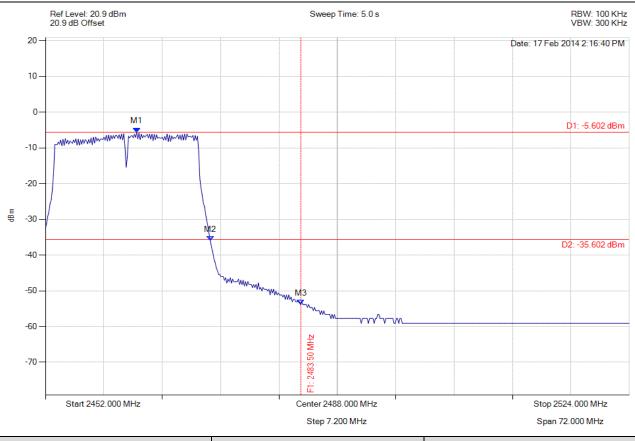


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 205 of 299



CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2463.255 MHz : -5.602 dBm M2 : 2472.345 MHz : -35.975 dBm M3 : 2483.500 MHz : -53.837 dBm	Channel Frequency: 2462.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

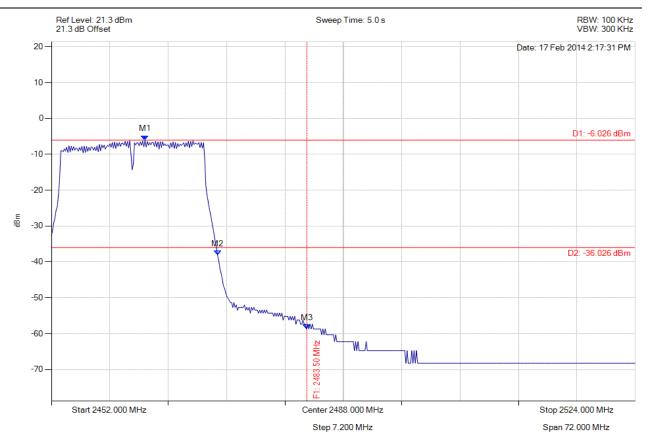


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 206 of 299

Milest

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2463.543 MHz : -6.026 dBm M2 : 2472.489 MHz : -38.142 dBm M3 : 2483.500 MHz : -58.702 dBm	Channel Frequency: 2462.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

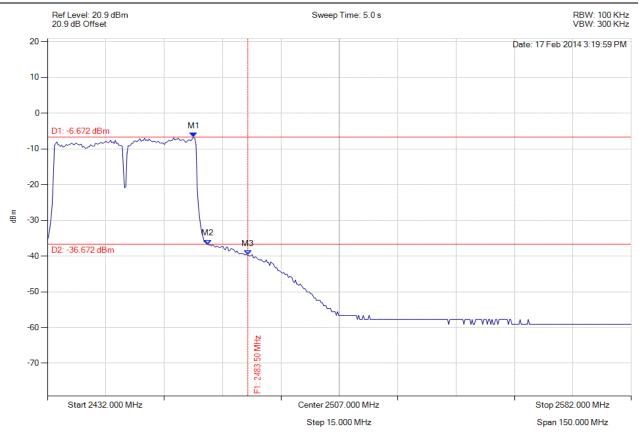


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:207 of 299

Milest

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2469.575 MHz : -6.672 dBm M2 : 2473.182 MHz : -36.713 dBm M3 : 2483.500 MHz : -39.702 dBm	Channel Frequency: 2452.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

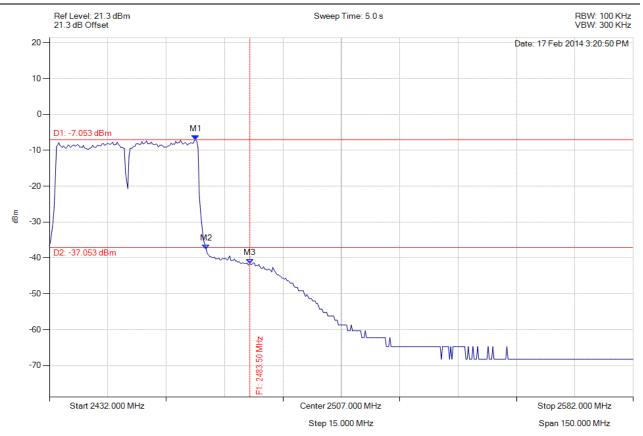


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:208 of 299



CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2469.575 MHz : -7.053 dBm M2 : 2472.281 MHz : -37.615 dBm M3 : 2483.500 MHz : -41.596 dBm	Channel Frequency: 2452.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

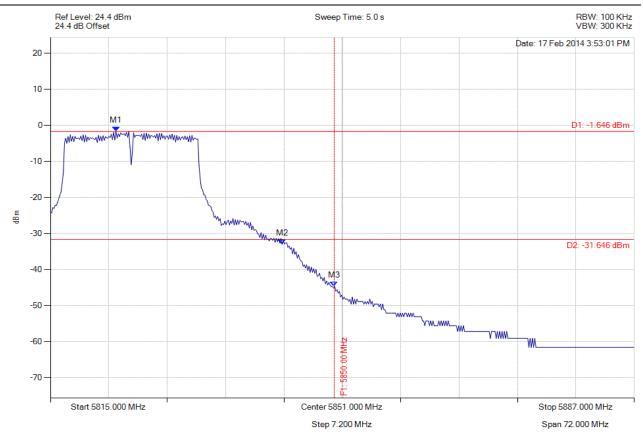


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:209 of 299

Milest

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11a, Channel: 5825.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5823.080 MHz : -1.646 dBm M2 : 5843.569 MHz : -32.996 dBm M3 : 5850.000 MHz : -44.721 dBm	Channel Frequency: 5825.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

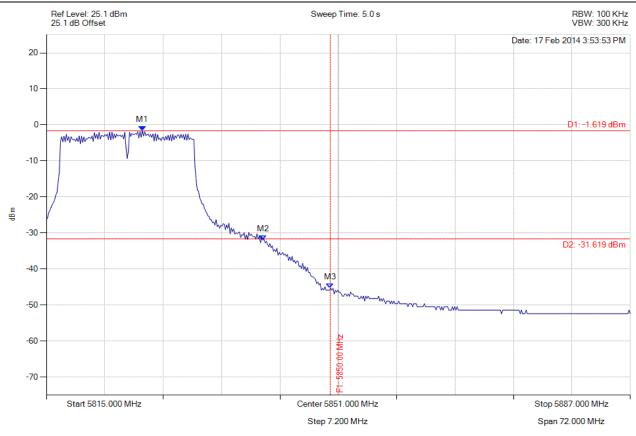


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:210 of 299

Milest

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11a, Channel: 5825.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5826.832 MHz : -1.619 dBm M2 : 5841.693 MHz : -31.980 dBm M3 : 5850.000 MHz : -45.360 dBm	Channel Frequency: 5825.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

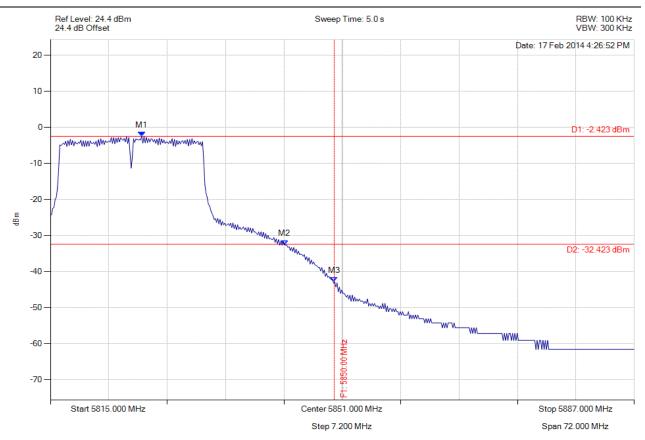


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:211 of 299



CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc

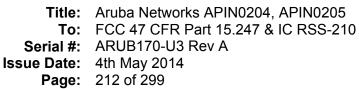


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5826.255 MHz : -2.423 dBm M2 : 5843.858 MHz : -32.577 dBm M3 : 5850.000 MHz : -42.866 dBm	Channel Frequency: 5825.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

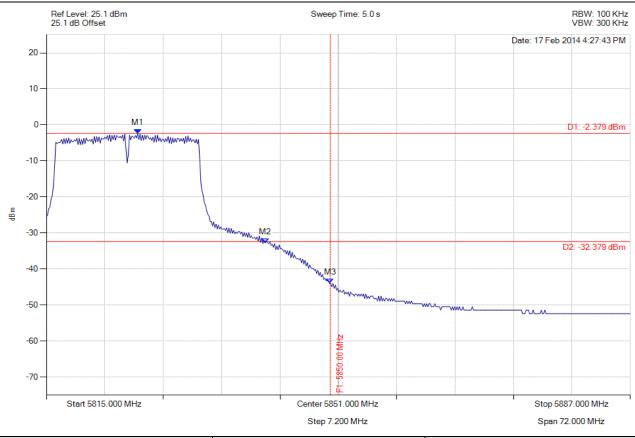






CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5826.255 MHz : -2.379 dBm M2 : 5841.982 MHz : -32.736 dBm M3 : 5850.000 MHz : -44.021 dBm	Channel Frequency: 5825.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



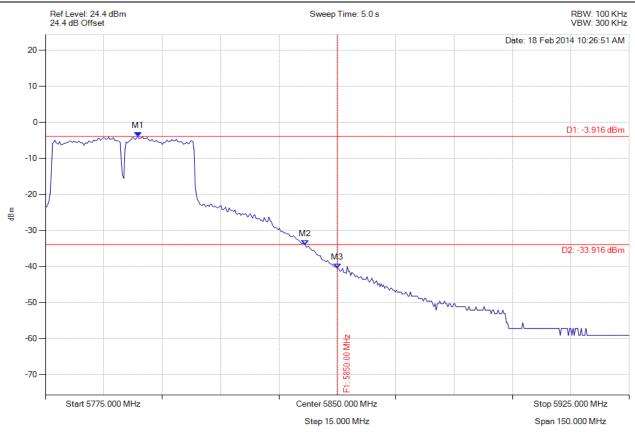
Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A

Issue Date: 4th May 2014 Page: 213 of 299



CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5798.747 MHz : -3.916 dBm M2 : 5841.733 MHz : -34.019 dBm M3 : 5850.000 MHz : -40.536 dBm	Channel Frequency: 5795.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

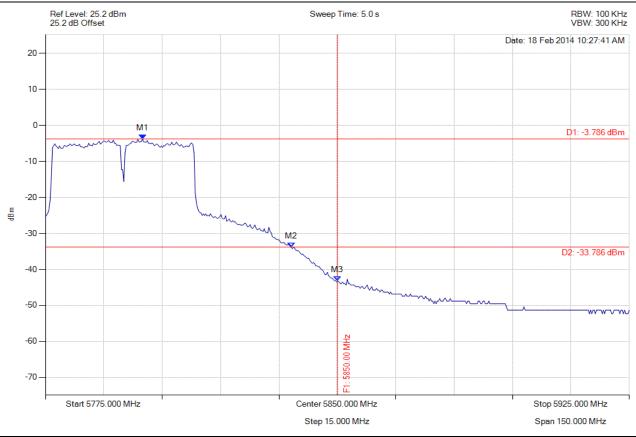


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:214 of 299



CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5799.950 MHz : -3.786 dBm M2 : 5838.126 MHz : -33.844 dBm M3 : 5850.000 MHz : -43.131 dBm	Channel Frequency: 5795.00 MHz

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

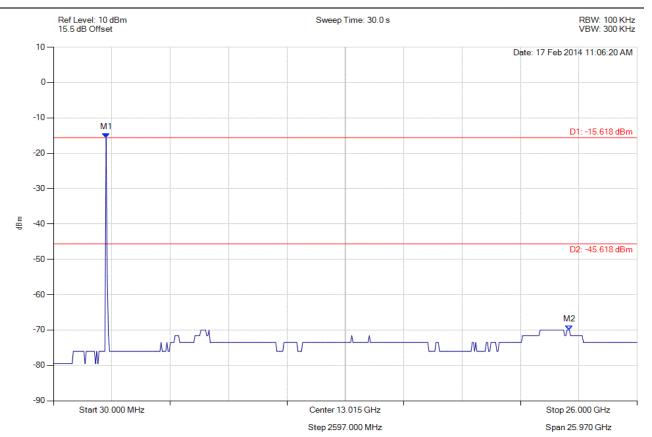


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:215 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2412.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2371.984 MHz : -15.618 dBm M2 : 22.981 GHz : -70.002 dBm	Limit: -45.62 dBm Margin: -24.38 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

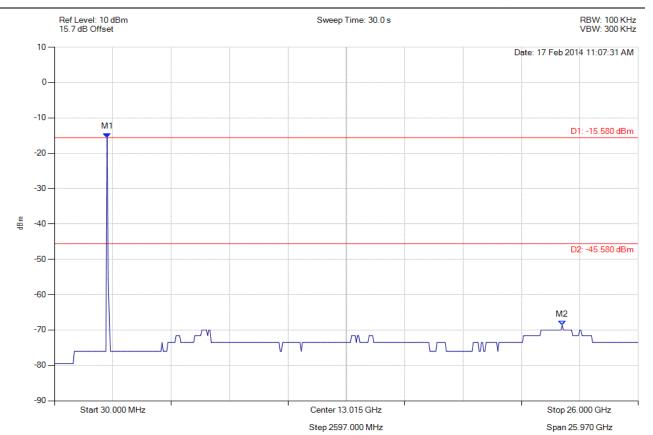


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:216 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2412.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2371.984 MHz : -15.580 dBm M2 : 22.617 GHz : -68.663 dBm	Limit: -45.58 dBm Margin: -23.08 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

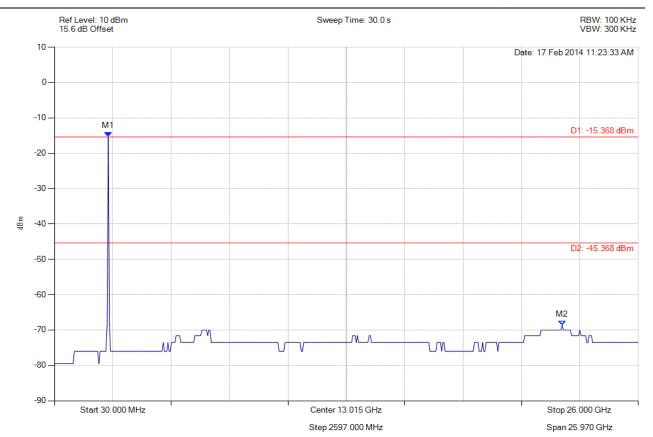


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:217 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2437.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -15.368 dBm M2 : 22.617 GHz : -68.663 dBm	Limit: -45.37 dBm Margin: -23.29 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

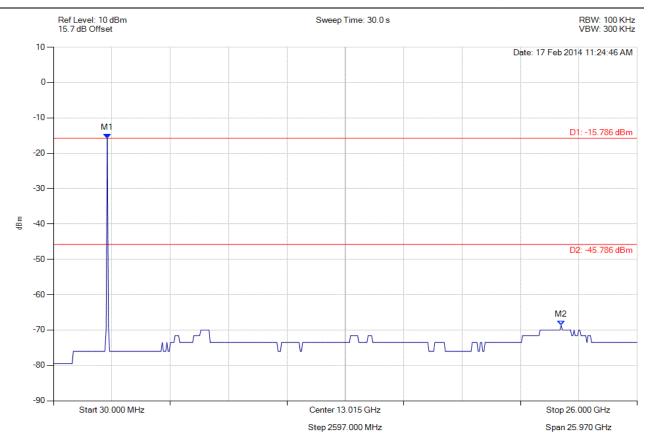


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:218 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2437.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -15.786 dBm M2 : 22.617 GHz : -68.663 dBm	Limit: -45.79 dBm Margin: -22.87 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

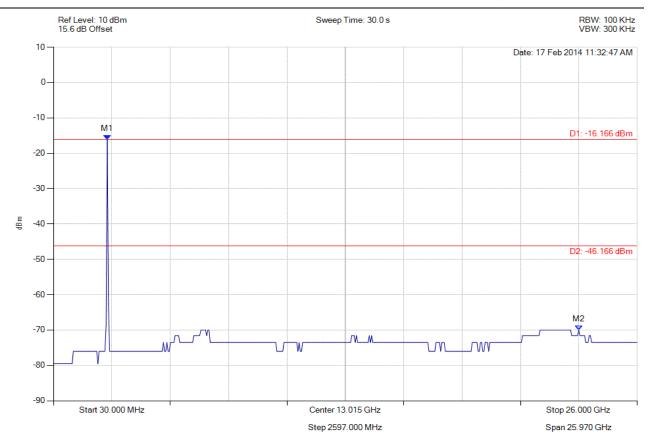


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:219 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2462.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -16.166 dBm M2 : 23.398 GHz : -70.002 dBm	Limit: -46.17 dBm Margin: -23.83 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

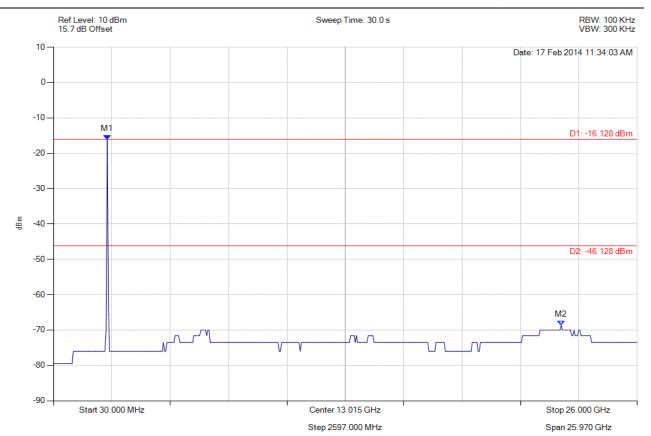


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:220 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2462.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -16.128 dBm M2 : 22.617 GHz : -68.663 dBm	Limit: -46.13 dBm Margin: -22.53 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

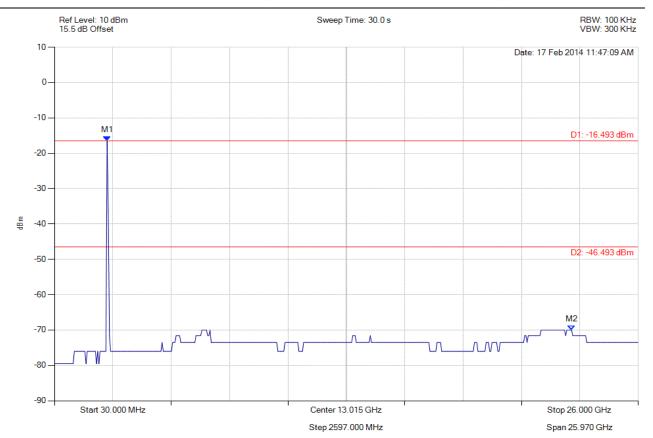


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:221 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2412.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2371.984 MHz : -16.493 dBm M2 : 23.033 GHz : -70.002 dBm	Limit: -46.49 dBm Margin: -23.51 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

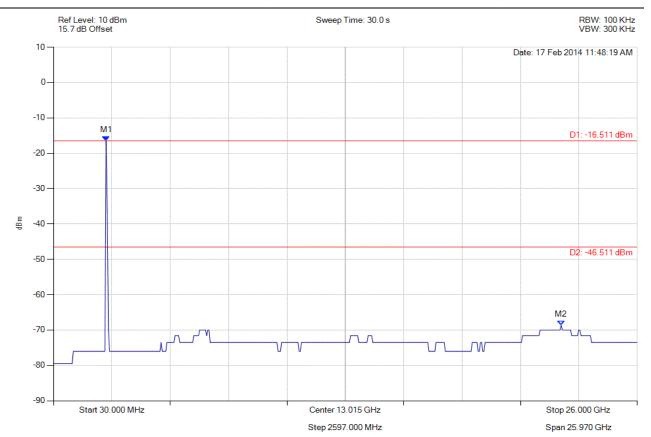


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:222 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2412.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2371.984 MHz : -16.511 dBm M2 : 22.617 GHz : -68.663 dBm	Limit: -46.51 dBm Margin: -22.15 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

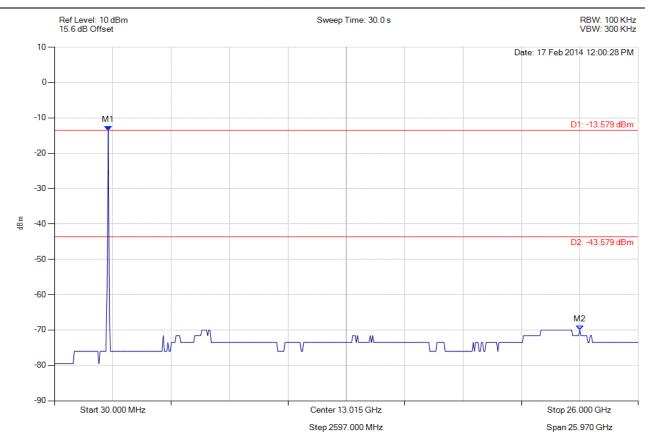


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:223 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2437.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -13.579 dBm M2 : 23.398 GHz : -70.002 dBm	Limit: -43.58 dBm Margin: -26.42 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

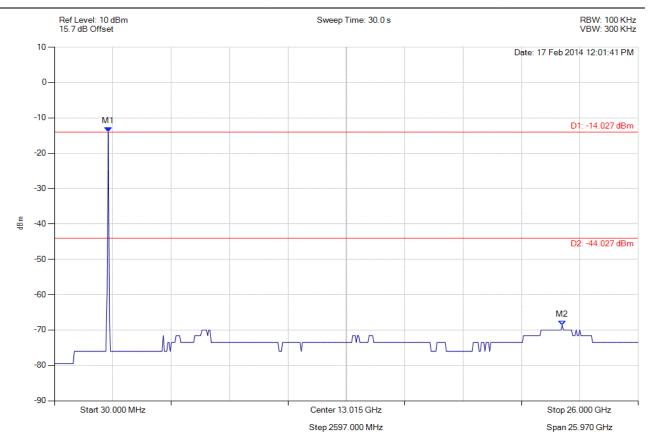


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:224 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2437.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -14.027 dBm M2 : 22.617 GHz : -68.663 dBm	Limit: -44.03 dBm Margin: -24.63 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

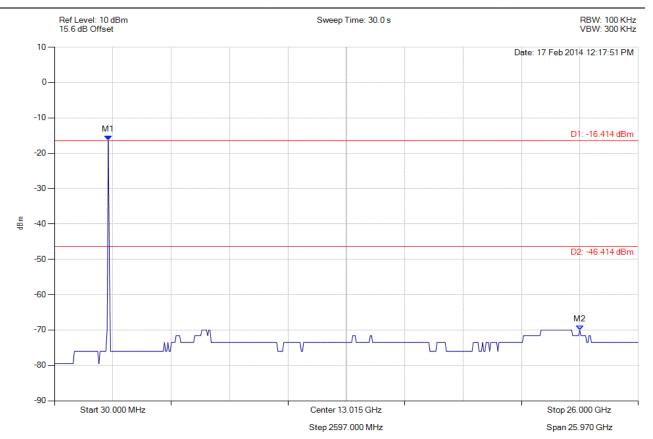


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 225 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2462.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -16.414 dBm M2 : 23.398 GHz : -70.002 dBm	Limit: -46.41 dBm Margin: -23.59 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

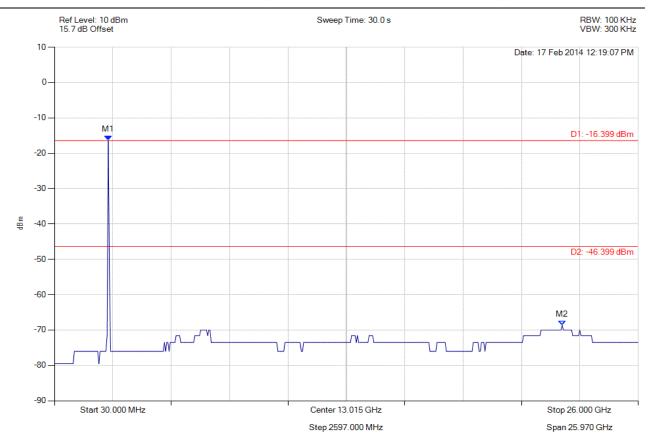


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 226 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2462.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -16.399 dBm M2 : 22.617 GHz : -68.663 dBm	Limit: -46.40 dBm Margin: -22.26 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

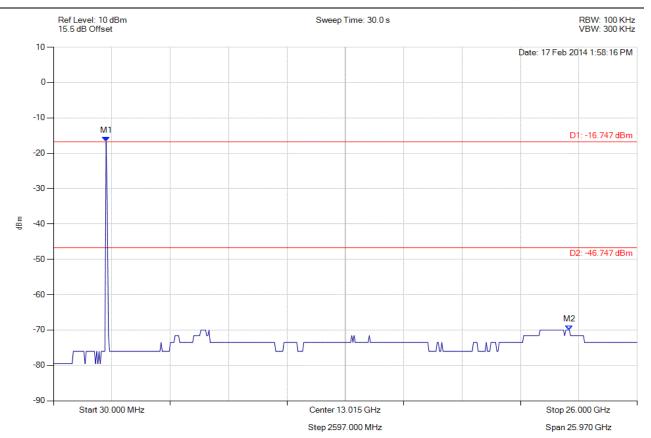


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 227 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2412.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2371.984 MHz : -16.747 dBm M2 : 22.981 GHz : -70.002 dBm	Limit: -46.75 dBm Margin: -23.25 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

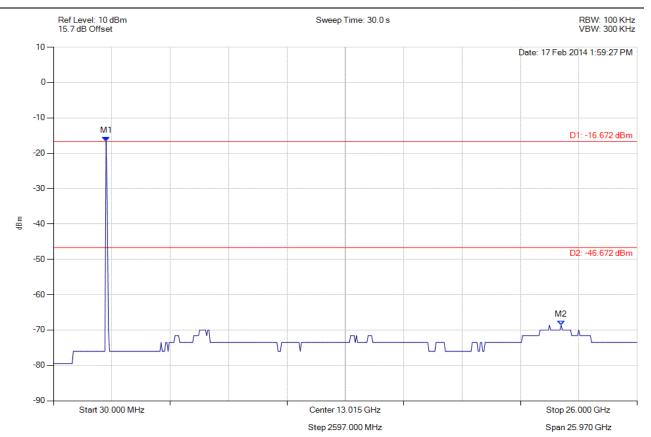


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 228 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2412.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2371.984 MHz : -16.672 dBm M2 : 22.617 GHz : -68.663 dBm	Limit: -46.67 dBm Margin: -21.99 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

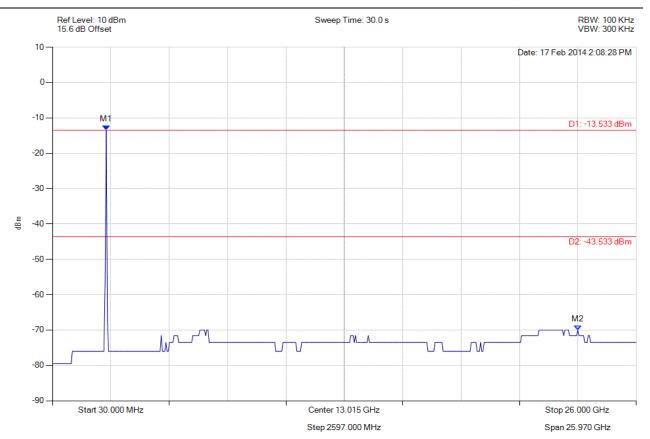


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:229 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2437.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -13.533 dBm M2 : 23.398 GHz : -70.002 dBm	Limit: -43.53 dBm Margin: -26.47 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

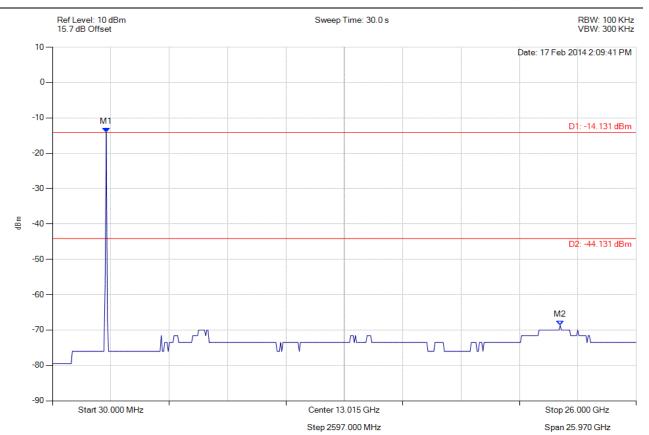


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:230 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2437.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -14.131 dBm M2 : 22.617 GHz : -68.663 dBm	Limit: -44.13 dBm Margin: -24.53 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

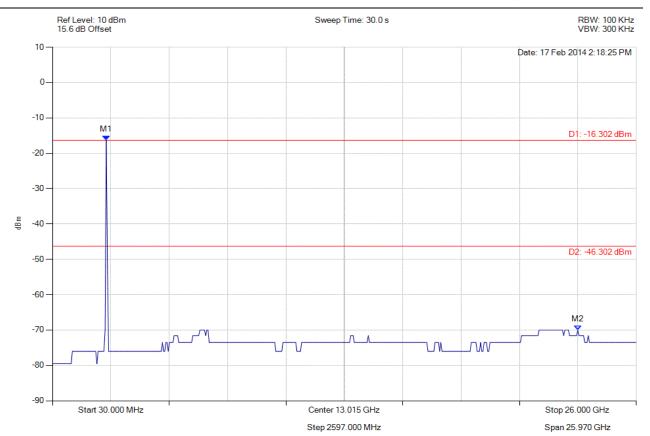


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:231 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -16.302 dBm M2 : 23.398 GHz : -70.002 dBm	Limit: -46.30 dBm Margin: -23.70 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

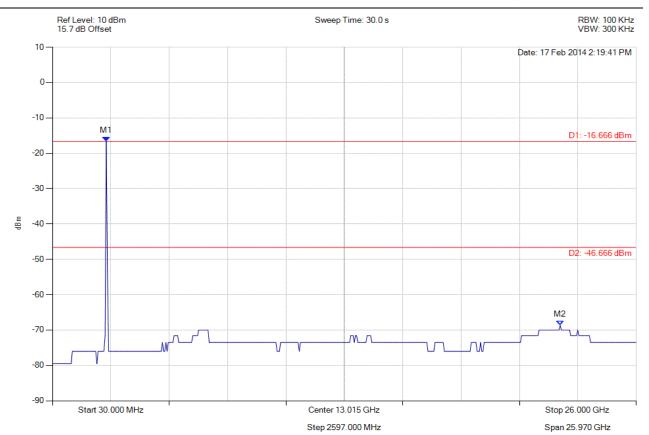


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:232 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -16.666 dBm M2 : 22.617 GHz : -68.663 dBm	Limit: -46.67 dBm Margin: -21.99 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

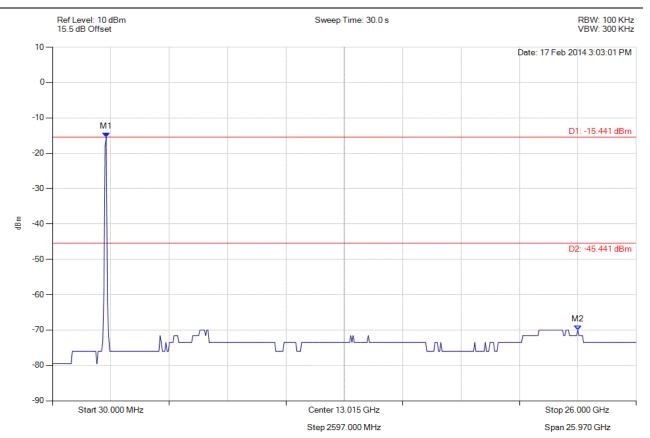


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:233 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -15.441 dBm M2 : 23.398 GHz : -70.002 dBm	Limit: -45.44 dBm Margin: -24.56 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

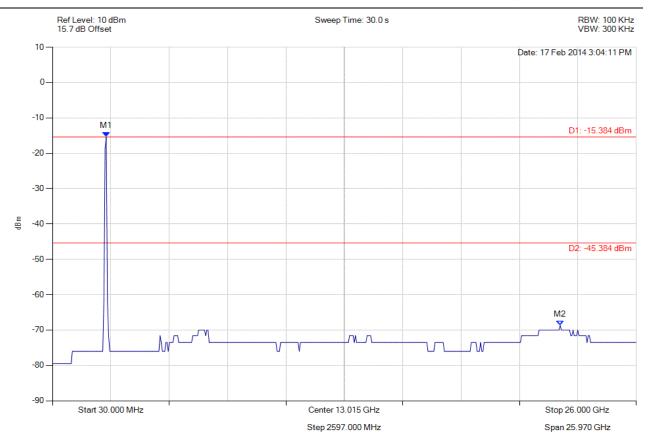


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:234 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -15.384 dBm M2 : 22.617 GHz : -68.663 dBm	Limit: -45.38 dBm Margin: -23.28 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

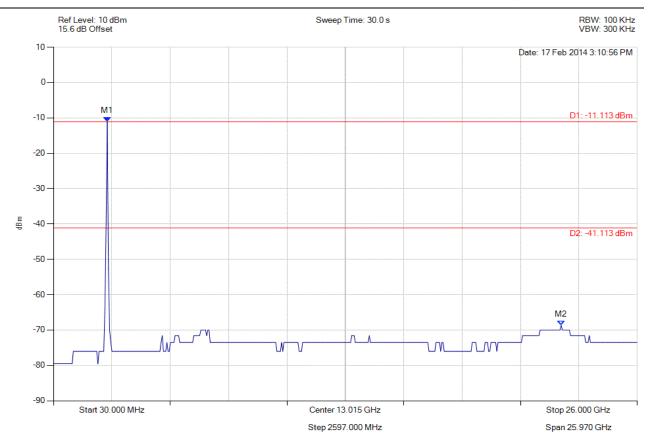


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:235 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2437.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -11.113 dBm M2 : 22.617 GHz : -68.663 dBm	Limit: -41.11 dBm Margin: -27.55 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

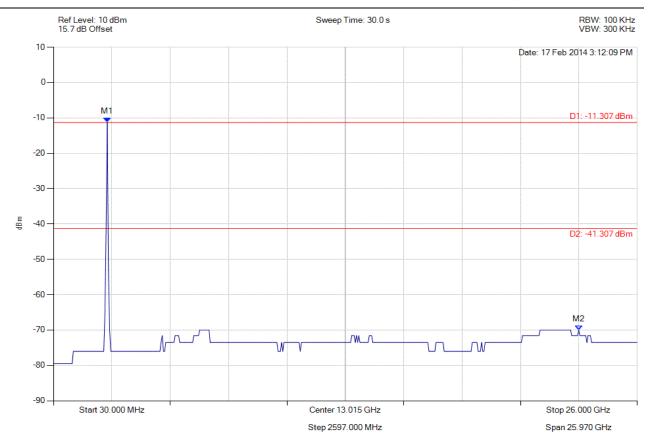


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:236 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2437.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -11.307 dBm M2 : 23.398 GHz : -70.002 dBm	Limit: -41.31 dBm Margin: -28.69 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

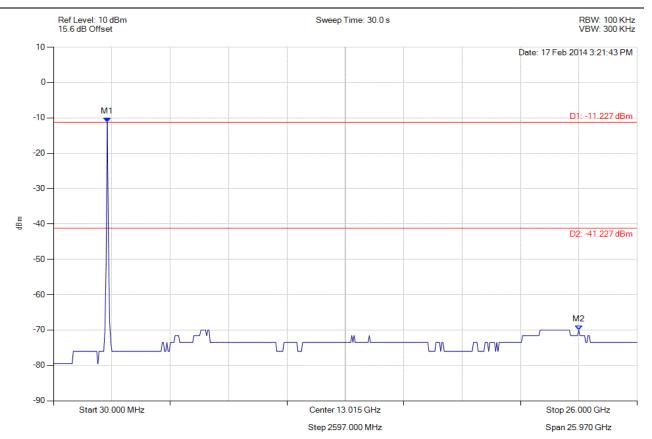


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:237 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -11.227 dBm M2 : 23.398 GHz : -70.002 dBm	Limit: -41.23 dBm Margin: -28.77 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

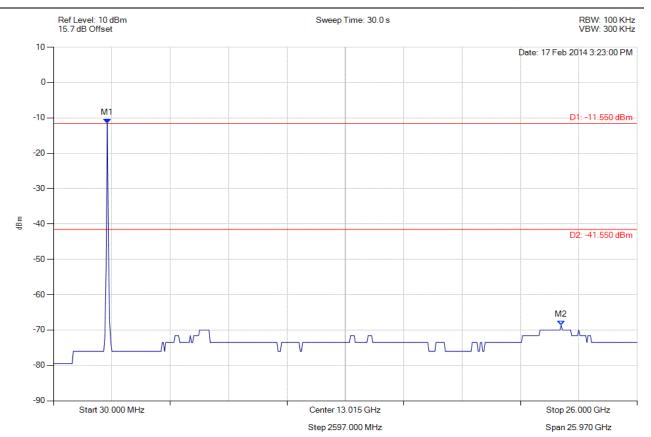


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:238 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -11.550 dBm M2 : 22.617 GHz : -68.663 dBm	Limit: -41.55 dBm Margin: -27.11 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

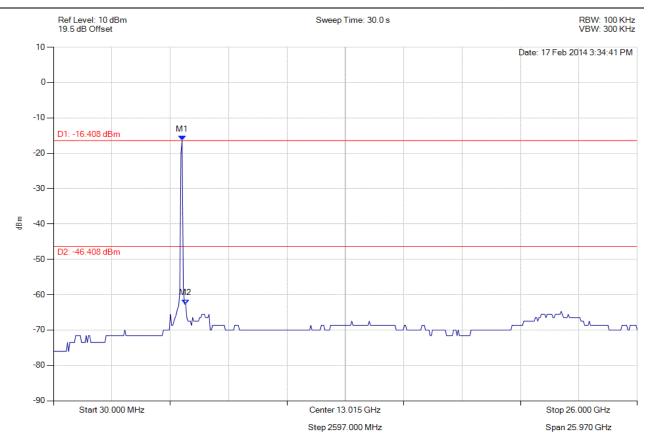


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:239 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11a, Channel: 5745.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5754.850 MHz : -16.408 dBm M2 : 5910.982 MHz : -62.643 dBm	Limit: -46.41 dBm Margin: -16.23 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

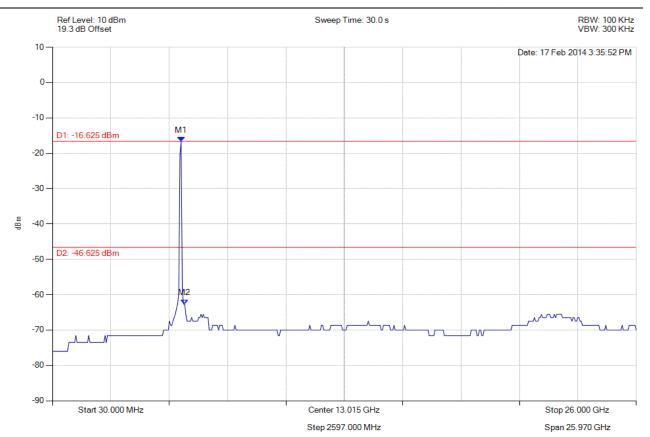


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 240 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11a, Channel: 5745.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5754.850 MHz : -16.625 dBm M2 : 5910.982 MHz : -62.643 dBm	Limit: -46.63 dBm Margin: -16.01 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

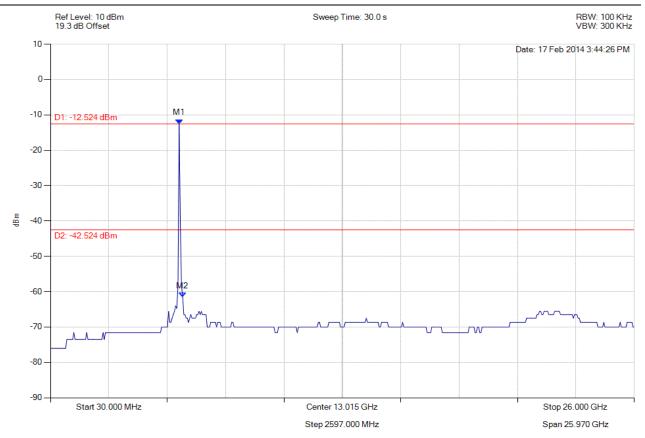


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:241 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11a, Channel: 5785.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5754.850 MHz : -12.524 dBm M2 : 5910.982 MHz : -61.483 dBm	Limit: -42.52 dBm Margin: -18.96 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

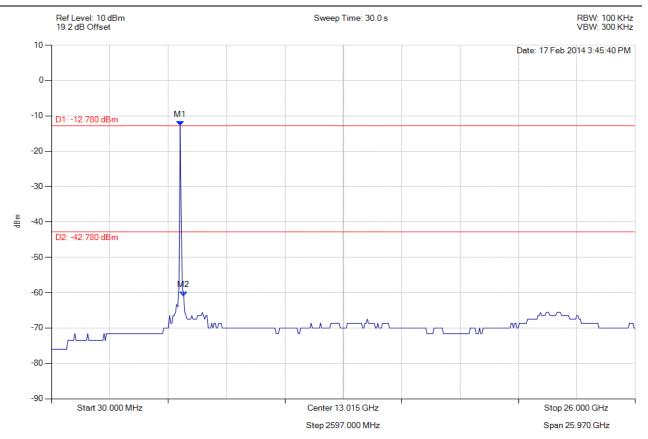


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 242 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11a, Channel: 5785.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5754.850 MHz : -12.780 dBm M2 : 5910.982 MHz : -60.956 dBm	Limit: -42.78 dBm Margin: -18.18 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

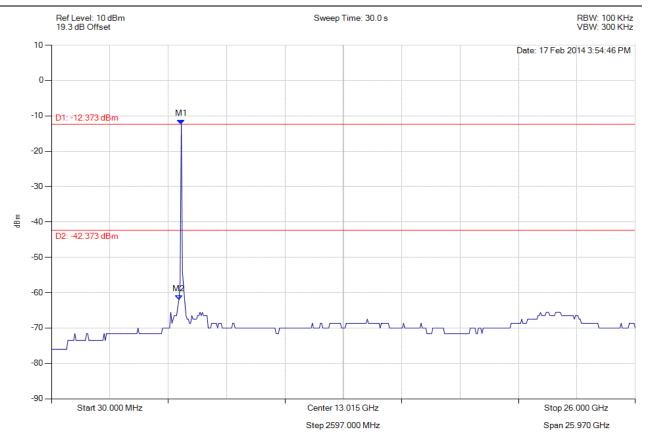


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:243 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11a, Channel: 5825.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5806.894 MHz : -12.373 dBm M2 : 5702.806 MHz : -62.044 dBm	Limit: -42.37 dBm Margin: -19.67 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

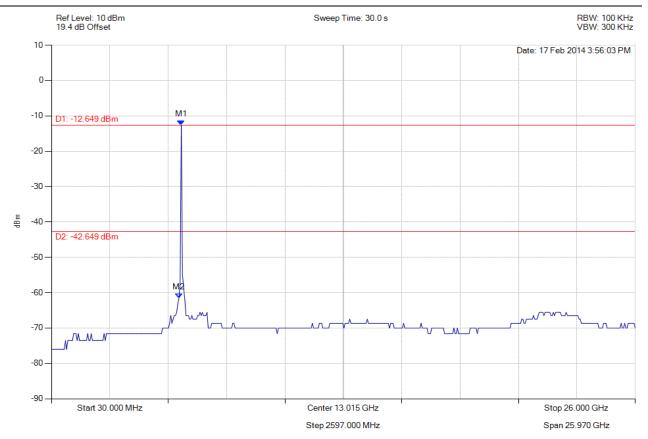


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:244 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11a, Channel: 5825.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5806.894 MHz : -12.649 dBm M2 : 5702.806 MHz : -61.483 dBm	Limit: -42.65 dBm Margin: -18.83 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

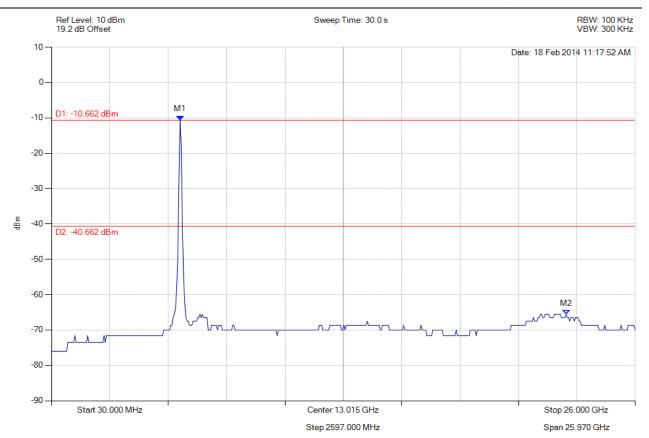


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:245 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5754.850 MHz : -10.662 dBm M2 : 22.929 GHz : -65.565 dBm	Limit: -40.66 dBm Margin: -24.91 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

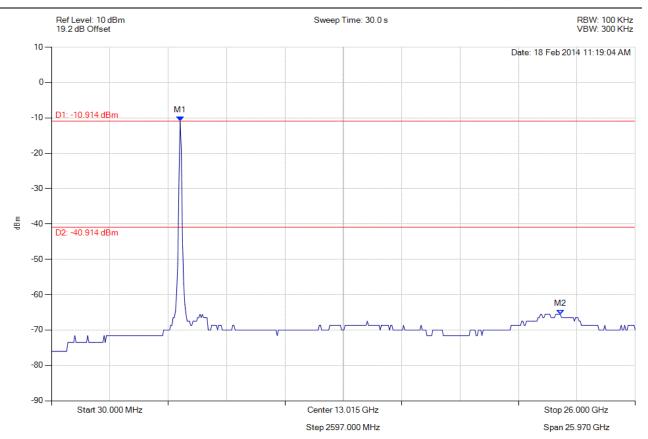


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 246 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5754.850 MHz : -10.914 dBm M2 : 22.669 GHz : -65.565 dBm	Limit: -40.91 dBm Margin: -24.66 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

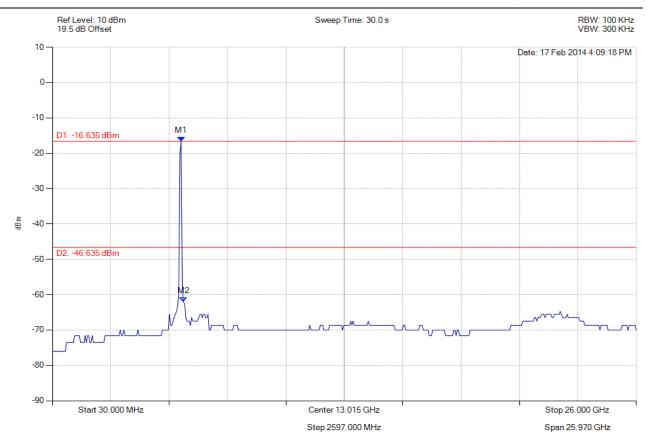


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:247 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5754.850 MHz : -16.635 dBm M2 : 5858.938 MHz : -62.044 dBm	Limit: -46.64 dBm Margin: -15.40 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

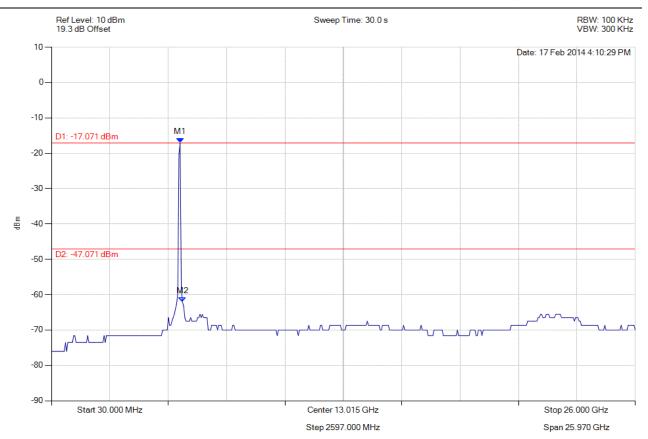


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:248 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5754.850 MHz : -17.071 dBm M2 : 5858.938 MHz : -62.044 dBm	Limit: -47.07 dBm Margin: -14.97 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

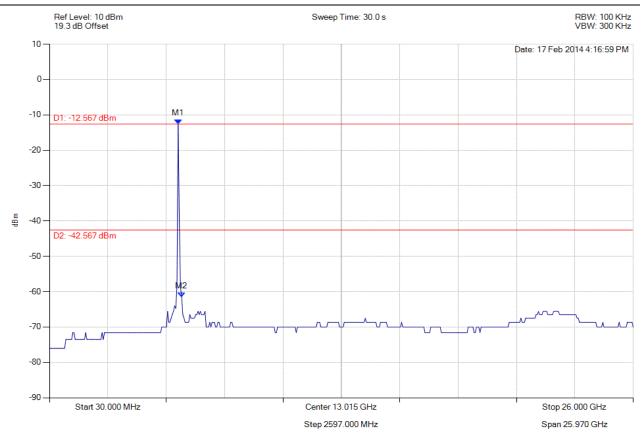


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:249 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 5785.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5754.850 MHz : -12.567 dBm M2 : 5910.982 MHz : -61.483 dBm	Limit: -42.57 dBm Margin: -18.91 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

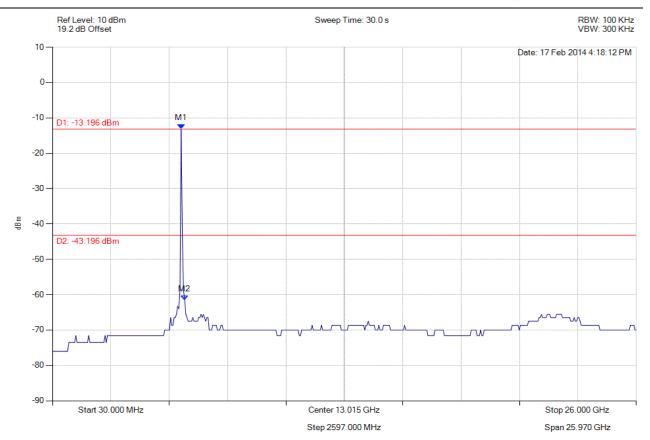


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:250 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 5785.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5754.850 MHz : -13.196 dBm M2 : 5910.982 MHz : -61.483 dBm	Limit: -43.20 dBm Margin: -18.28 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

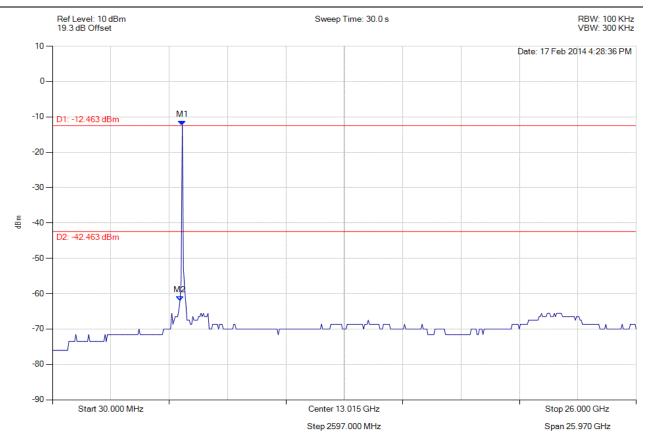


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 251 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5806.894 MHz : -12.463 dBm M2 : 5702.806 MHz : -62.044 dBm	Limit: -42.46 dBm Margin: -19.58 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

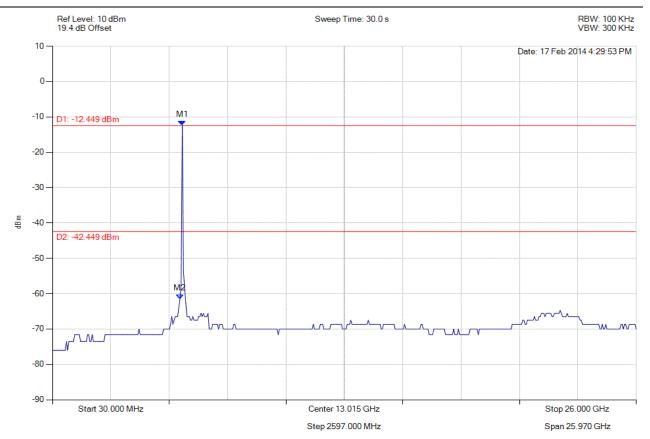


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:252 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5806.894 MHz : -12.449 dBm M2 : 5702.806 MHz : -61.483 dBm	Limit: -42.45 dBm Margin: -19.03 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

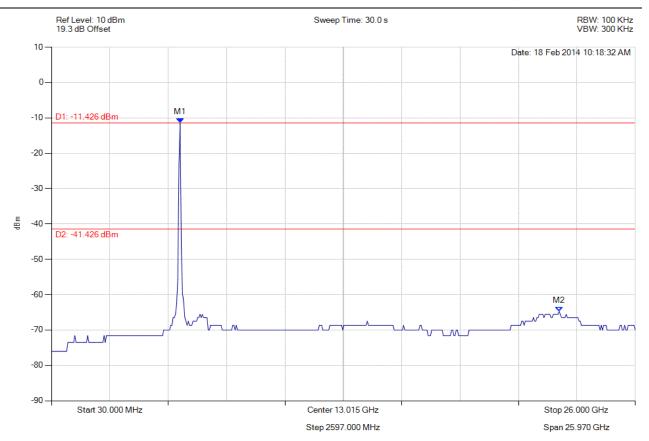


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:253 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5754.850 MHz : -11.426 dBm M2 : 22.617 GHz : -64.737 dBm	Limit: -41.43 dBm Margin: -23.31 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

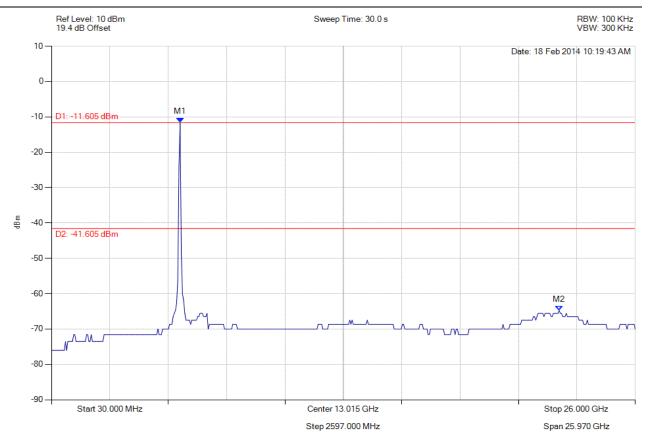


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:254 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5754.850 MHz : -11.605 dBm M2 : 22.617 GHz : -64.737 dBm	Limit: -41.61 dBm Margin: -23.13 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

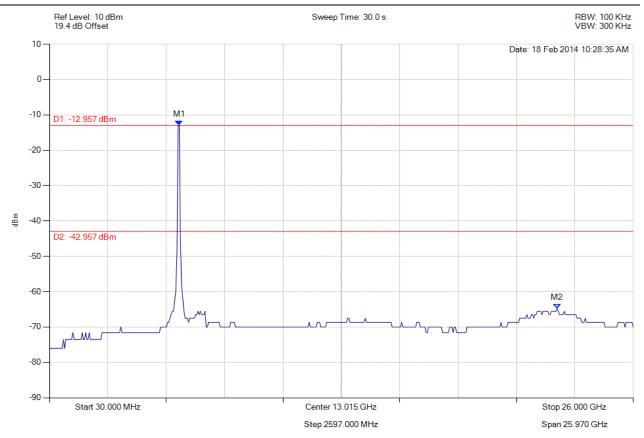


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:255 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5806.894 MHz : -12.957 dBm M2 : 22.617 GHz : -64.737 dBm	Limit: -42.96 dBm Margin: -21.78 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

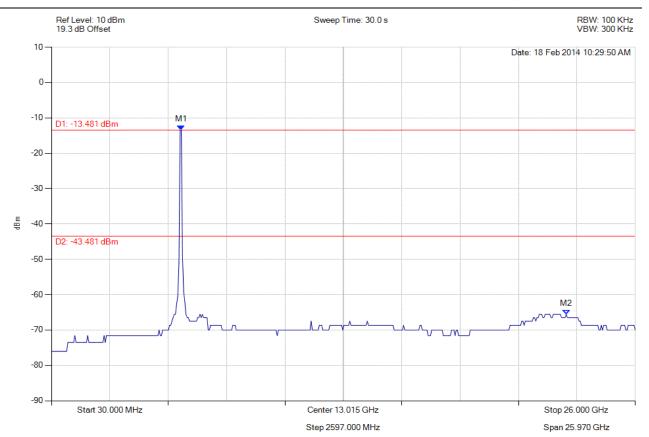


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 256 of 299



CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5806.894 MHz : -13.481 dBm M2 : 22.929 GHz : -65.565 dBm	Limit: -43.48 dBm Margin: -22.09 dB

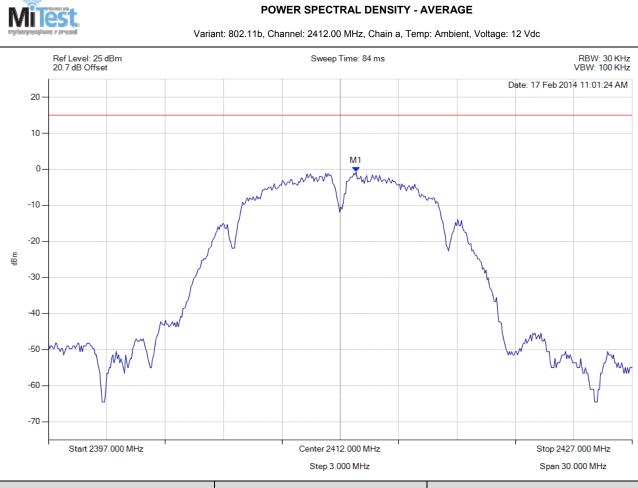
Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 257 of 299

A.1.3. Power Spectral Density



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2412.812 MHz : -0.699 dBm	Limit: ≤ 14.990 dBm Margin: -15.69 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

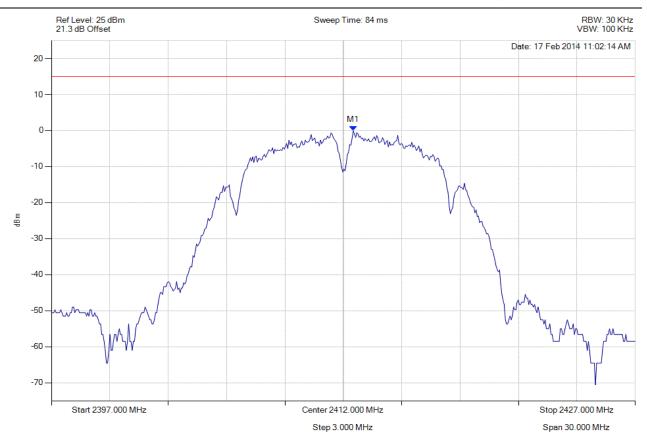


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 258 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11b, Channel: 2412.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2412.511 MHz : -0.070 dBm	Limit: ≤ 14.990 dBm Margin: -15.06 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

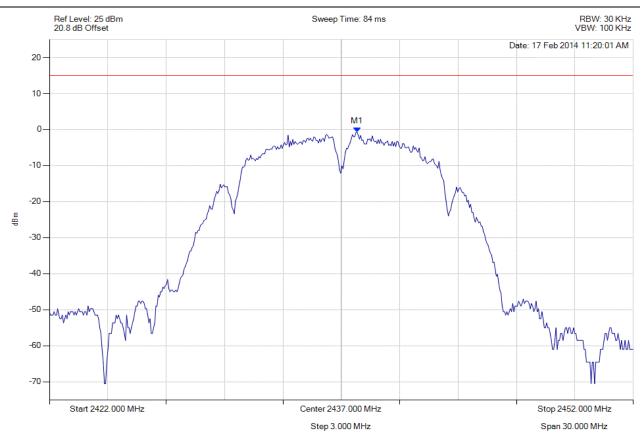


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:259 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11b, Channel: 2437.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2437.812 MHz : -0.685 dBm	Limit: ≤ 14.990 dBm Margin: -15.68 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

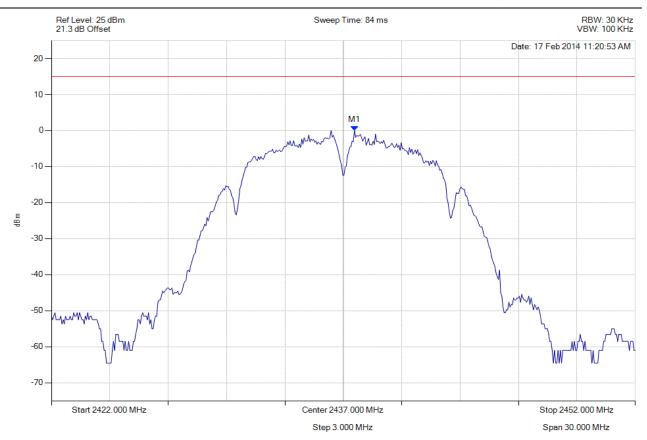


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 260 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11b, Channel: 2437.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2437.571 MHz : 0.010 dBm	Limit: ≤ 14.990 dBm Margin: -14.98 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

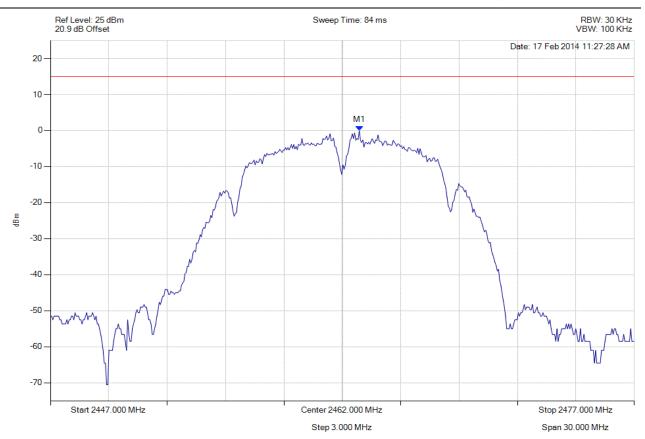


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:261 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11b, Channel: 2462.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2462.872 MHz : -0.057 dBm	Limit: ≤ 14.990 dBm Margin: -15.05 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

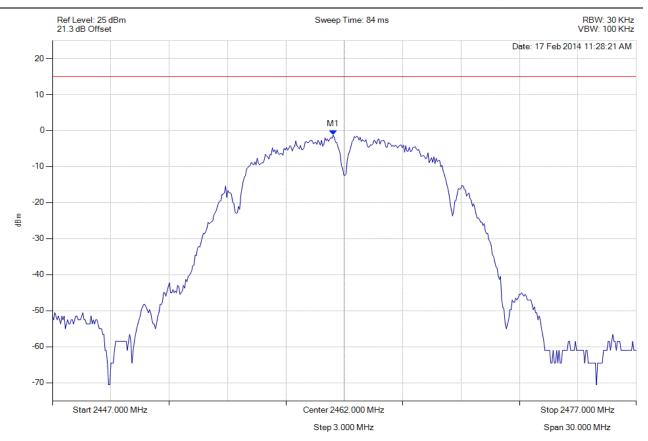


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:262 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11b, Channel: 2462.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2461.429 MHz : -1.246 dBm	Limit: ≤ 14.990 dBm Margin: -16.24 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

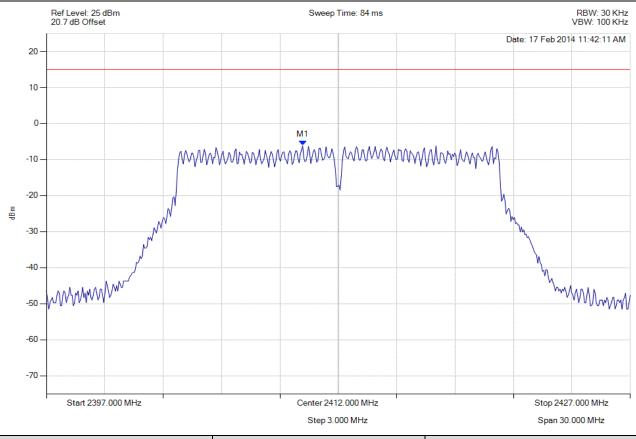


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:263 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11g, Channel: 2412.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2410.166 MHz : -6.111 dBm	Limit: ≤ 14.990 dBm Margin: -21.10 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

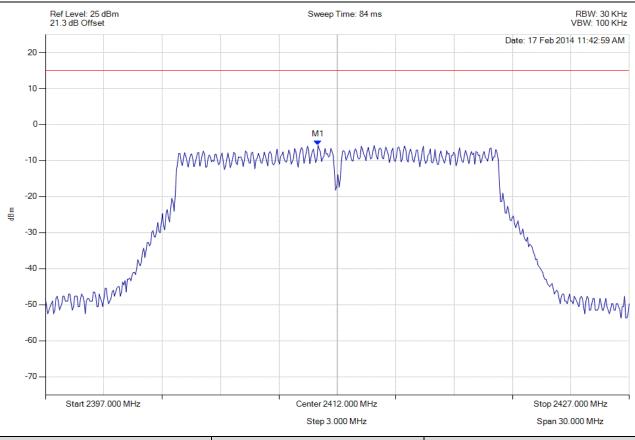


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:264 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11g, Channel: 2412.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2411.008 MHz : -5.680 dBm	Limit: ≤ 14.990 dBm Margin: -20.67 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:265 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11g, Channel: 2437.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc Ref Level: 25 dBm 20.8 dB Offset RBW: 30 KHz VBW: 100 KHz Sweep Time: 84 ms Date: 17 Feb 2014 11:56:57 AM 20 10 0--10 -20 đB -30 MMMMMM Muntur -40 -50 -60 -70 Start 2422.000 MHz Center 2437.000 MHz Stop 2452.000 MHz Step 3.000 MHz Span 30.000 MHz

Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2438.232 MHz : -3.717 dBm	Limit: ≤ 14.990 dBm Margin: -18.71 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 266 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11g, Channel: 2437.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc Ref Level: 25 dBm 21.3 dB Offset RBW: 30 KHz VBW: 100 KHz Sweep Time: 84 ms Date: 17 Feb 2014 11:57:48 AM 20 10 0--10 -20 4hy đB -30 mmm monter -40 -50 -60 -70 Start 2422.000 MHz Center 2437.000 MHz Stop 2452.000 MHz Step 3.000 MHz Span 30.000 MHz

Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2436.008 MHz : -4.047 dBm	Limit: ≤ 14.990 dBm Margin: -19.04 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

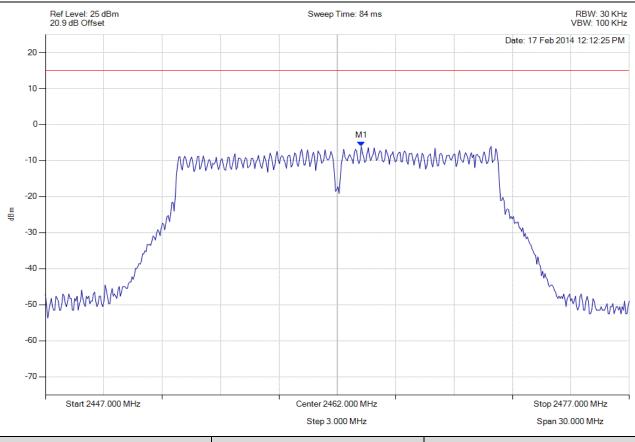


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:267 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11g, Channel: 2462.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2463.232 MHz : -6.023 dBm	Limit: ≤ 14.990 dBm Margin: -21.01 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

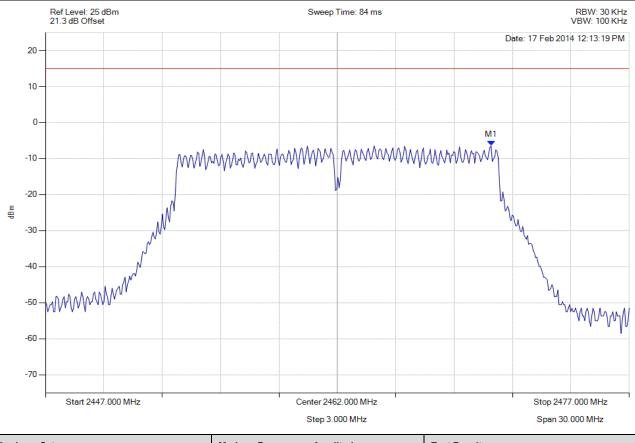


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:268 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11g, Channel: 2462.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2469.906 MHz : -6.386 dBm	Limit: ≤ 14.990 dBm Margin: -21.38 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

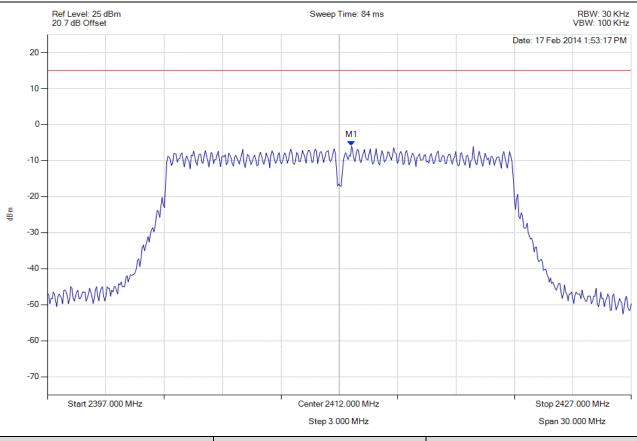


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:269 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 2412.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2412.631 MHz : -5.936 dBm	Limit: ≤ 14.990 dBm Margin: -20.93 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

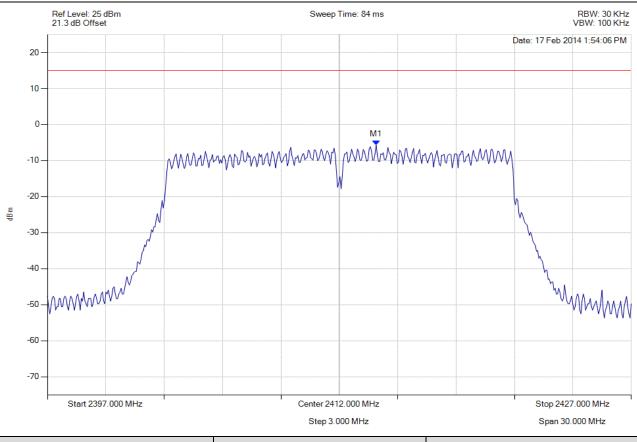


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 270 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 2412.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2413.894 MHz : -5.635 dBm	Limit: ≤ 14.990 dBm Margin: -20.63 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

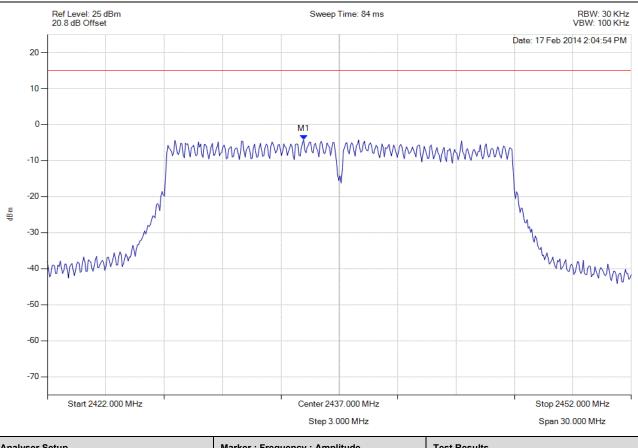


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 271 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 2437.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2435.166 MHz : -4.154 dBm	Limit: ≤ 14.990 dBm Margin: -19.14 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

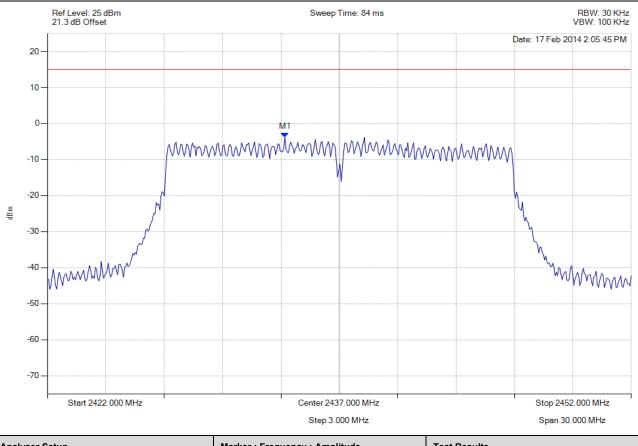


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 272 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 2437.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2434.204 MHz : -3.816 dBm	Limit: ≤ 14.990 dBm Margin: -18.81 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

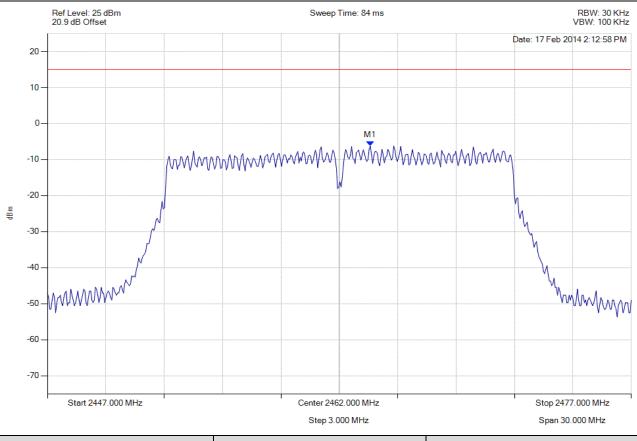


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:273 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2463.593 MHz : -6.179 dBm	Limit: ≤ 14.990 dBm Margin: -21.17 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

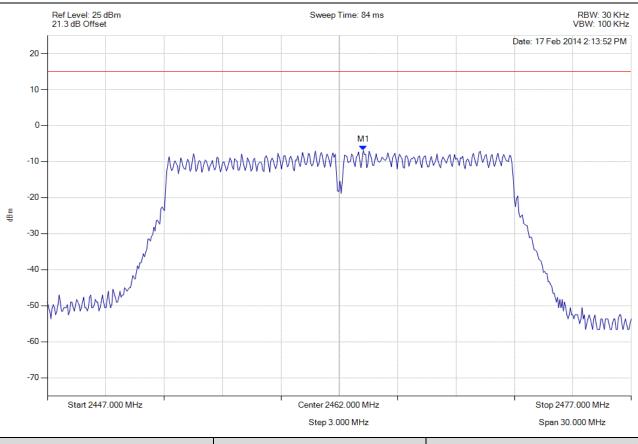


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:274 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2463.232 MHz : -6.889 dBm	Limit: ≤ 14.990 dBm Margin: -21.88 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

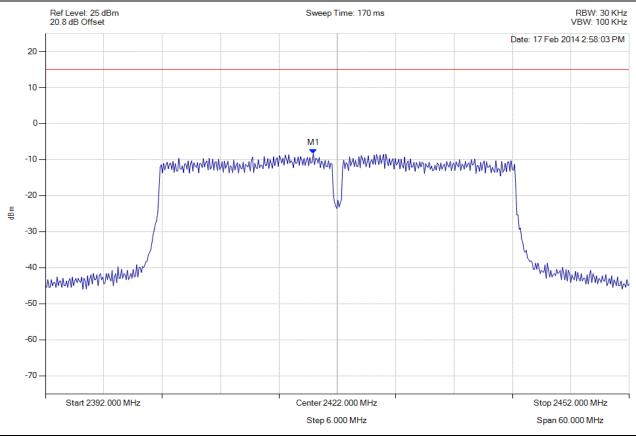


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 275 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2419.535 MHz : -8.300 dBm	Limit: ≤ 14.990 dBm Margin: -23.29 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

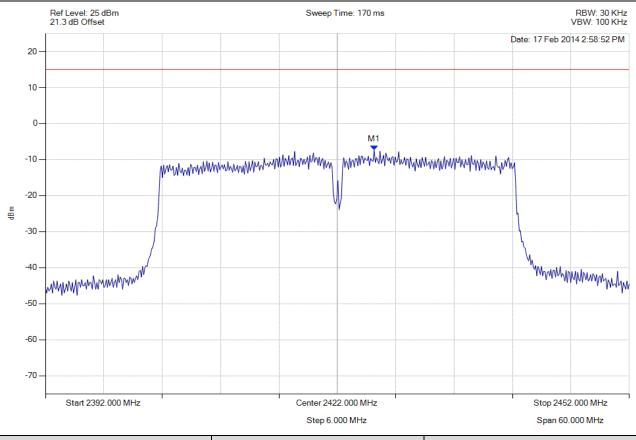


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 276 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2425.788 MHz : -7.380 dBm	Limit: ≤ 14.990 dBm Margin: -22.37 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

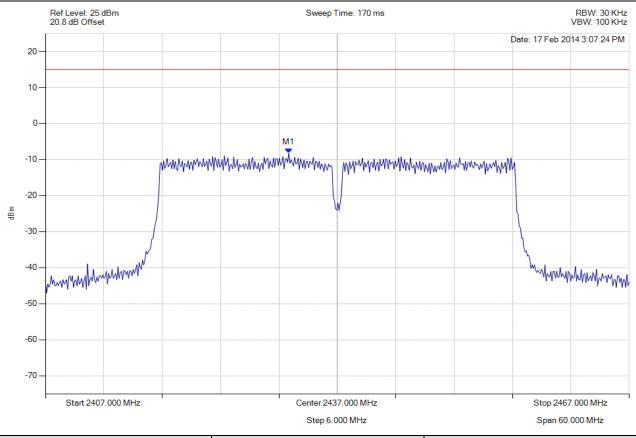


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 277 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 2437.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2432.010 MHz : -8.233 dBm	Limit: ≤ 14.990 dBm Margin: -23.22 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

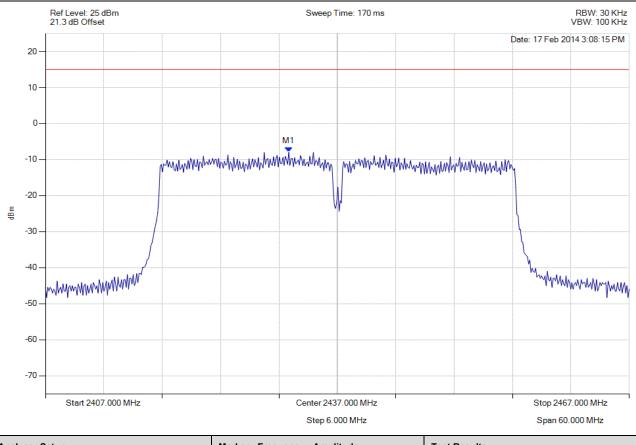


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 278 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 2437.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2432.010 MHz : -7.946 dBm	Limit: ≤ 14.990 dBm Margin: -22.94 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

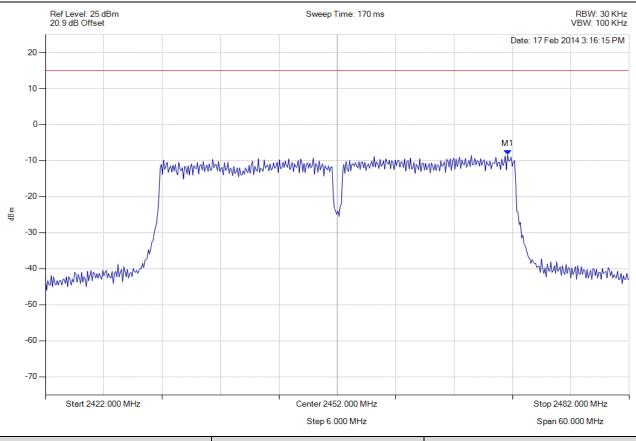


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:279 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2469.495 MHz : -8.408 dBm	Limit: ≤ 14.990 dBm Margin: -23.40 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

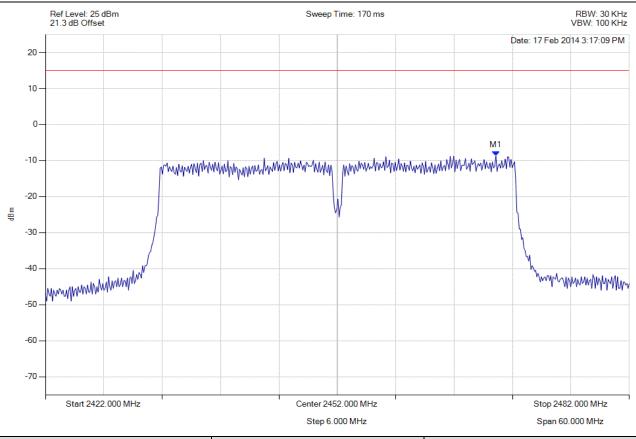


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 280 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2468.293 MHz : -8.718 dBm	Limit: ≤ 14.990 dBm Margin: -23.71 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

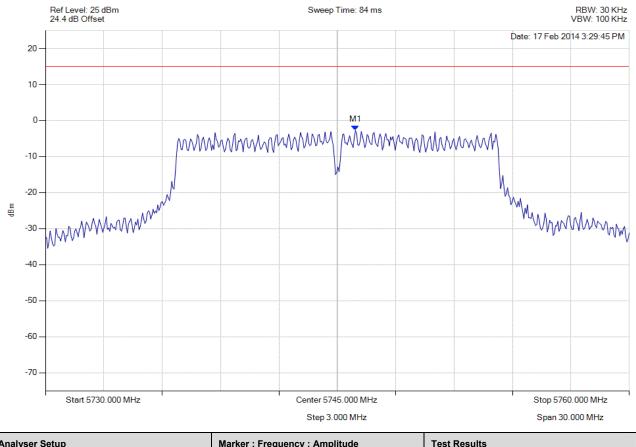


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:281 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11a, Channel: 5745.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5745.932 MHz : -2.690 dBm	Limit: ≤ 14.990 dBm Margin: -17.68 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:282 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11a, Channel: 5745.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc Ref Level: 25 dBm 25.1 dB Offset RBW: 30 KHz VBW: 100 KHz Sweep Time: 84 ms Date: 17 Feb 2014 3:30:31 PM 20 10 0--10 human NMMMMMMMM -20 dBm -30 -40 -50 -60 -70 Start 5730.000 MHz Center 5745.000 MHz Stop 5760.000 MHz Step 3.000 MHz Span 30.000 MHz

Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5745.932 MHz : -3.023 dBm	Limit: ≤ 14.990 dBm Margin: -18.01 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 283 of 299



POWER SPECTRAL DENSITY - AVERAGE Variant: 802.11a, Channel: 5785.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc Ref Level: 25 dBm 24.4 dB Offset RBW: 30 KHz VBW: 100 KHz Sweep Time: 84 ms Date: 17 Feb 2014 3:40:54 PM 20 10 0--10 humbern wwwwwww -20 dBm -30 -40 -50 -60 -70 Start 5770.000 MHz Center 5785.000 MHz Stop 5800.000 MHz Step 3.000 MHz Span 30.000 MHz

Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5785.932 MHz : -2.868 dBm	Limit: ≤ 14.990 dBm Margin: -17.86 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

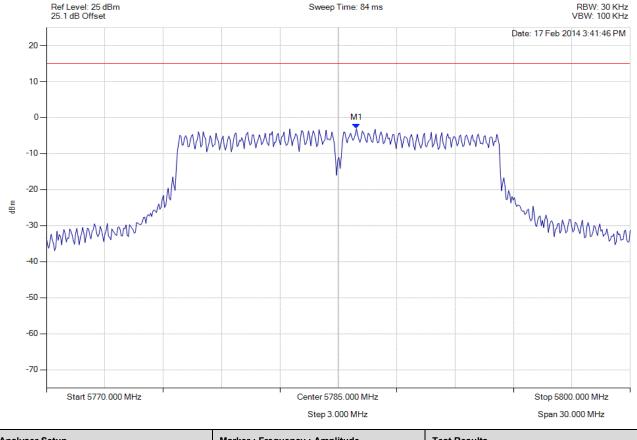


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:284 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11a, Channel: 5785.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5785.932 MHz : -3.052 dBm	Limit: ≤ 14.990 dBm Margin: -18.04 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

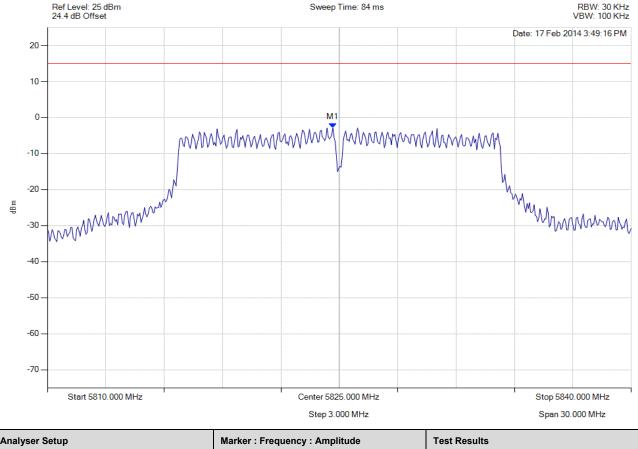


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 285 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11a, Channel: 5825.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5824.669 MHz : -2.832 dBm	Limit: ≤ 14.990 dBm Margin: -17.82 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 286 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11a, Channel: 5825.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc Ref Level: 25 dBm 25.1 dB Offset RBW: 30 KHz VBW: 100 KHz Sweep Time: 84 ms Date: 17 Feb 2014 3:50:10 PM 20 10 0--10 hummmun MMMMMMMMM -20 dBm -30 -40 -50 -60 -70 Start 5810.000 MHz Center 5825.000 MHz Stop 5840.000 MHz Step 3.000 MHz Span 30.000 MHz

Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5824.008 MHz : -3.263 dBm	Limit: ≤ 14.990 dBm Margin: -18.25 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

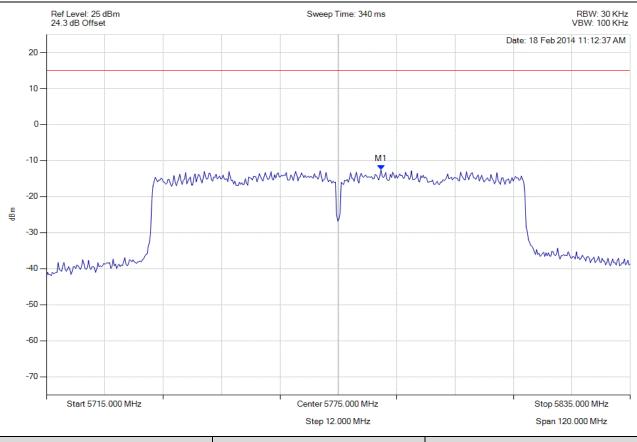


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:287 of 299

Milest

POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5783.778 MHz : -12.525 dBm	Limit: ≤ 14.990 dBm Margin: -27.52 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

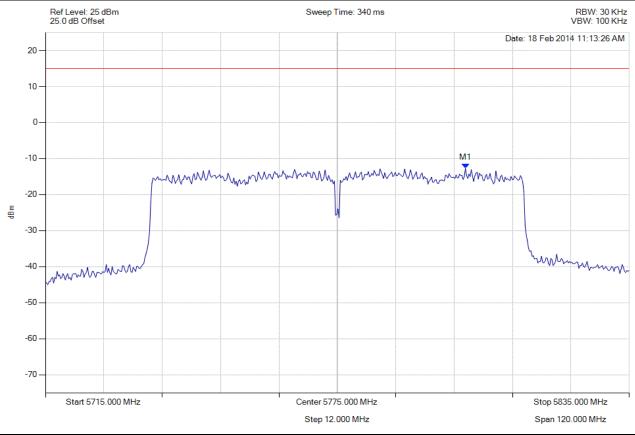


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 288 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5801.333 MHz : -12.679 dBm	Limit: ≤ 14.990 dBm Margin: -27.67 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

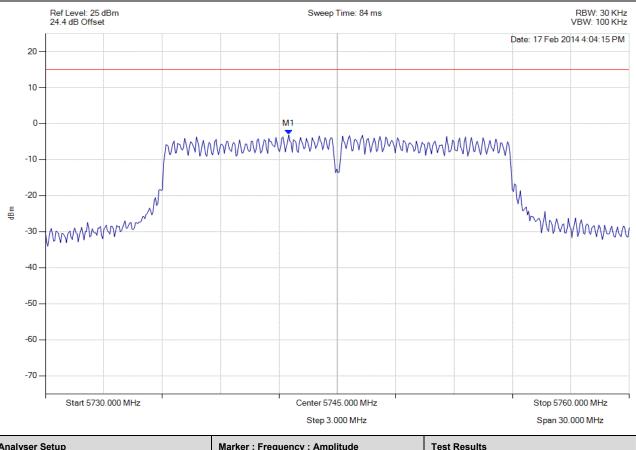


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 289 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5742.505 MHz : -3.107 dBm	Limit: ≤ 14.990 dBm Margin: -18.10 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

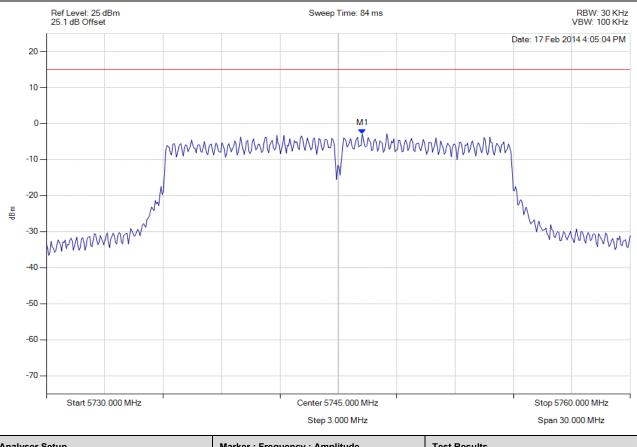


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:290 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5746.232 MHz : -2.835 dBm	Limit: ≤ 14.990 dBm Margin: -17.82 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

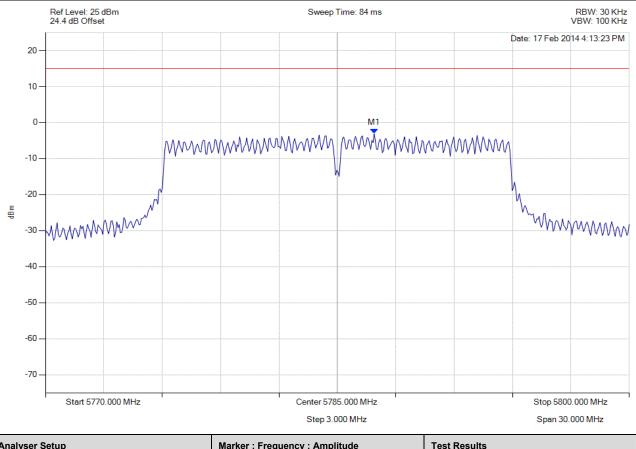


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 291 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 5785.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5786.894 MHz : -3.074 dBm	Limit: ≤ 14.990 dBm Margin: -18.06 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:292 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 5785.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc Ref Level: 25 dBm 25.1 dB Offset RBW: 30 KHz VBW: 100 KHz Sweep Time: 84 ms Date: 17 Feb 2014 4:14:15 PM 20 10 0--10 -20 MMMMMMMMMM đB MMMMMMM -30 -40 -50 -60 -70 Start 5770.000 MHz Center 5785.000 MHz Stop 5800.000 MHz Step 3.000 MHz Span 30.000 MHz

Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5784.669 MHz : -3.203 dBm	Limit: ≤ 14.990 dBm Margin: -18.19 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

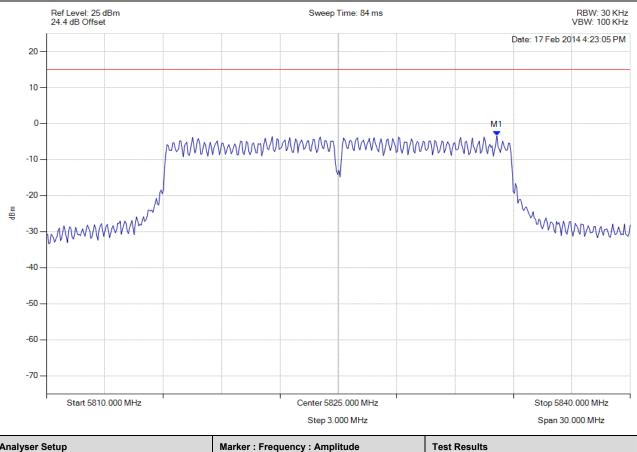


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:293 of 299

Milest

POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5833.146 MHz : -3.395 dBm	Limit: ≤ 14.990 dBm Margin: -18.39 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

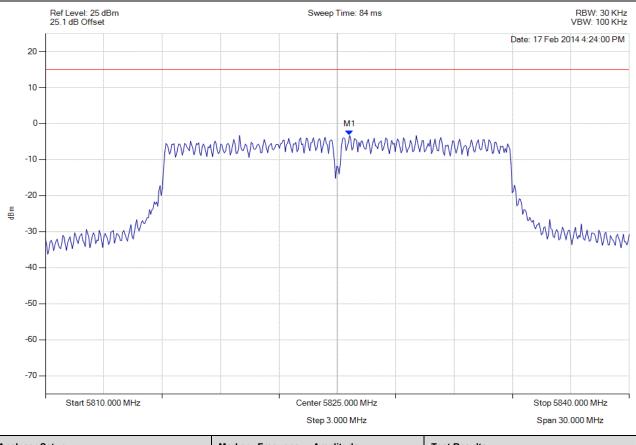


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:294 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5825.631 MHz : -3.252 dBm	Limit: ≤ 14.990 dBm Margin: -18.24 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

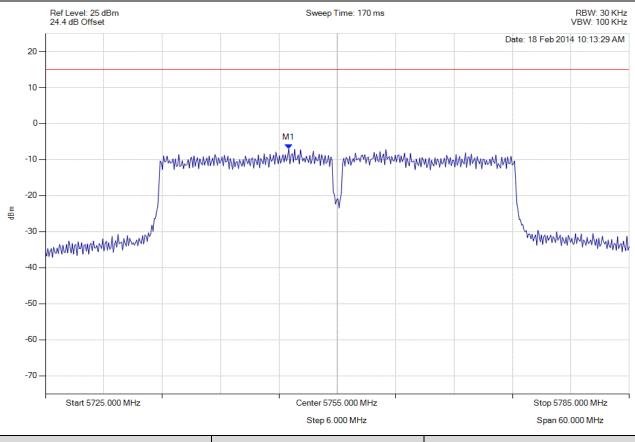


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:295 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5750.010 MHz : -6.957 dBm	Limit: ≤ 14.990 dBm Margin: -21.95 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

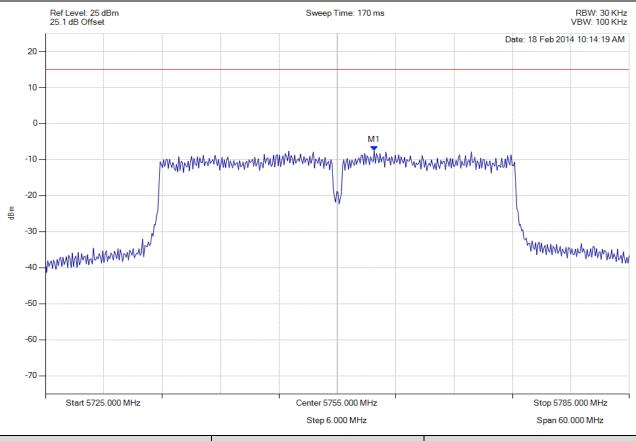


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 296 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5758.788 MHz : -7.513 dBm	Limit: ≤ 14.990 dBm Margin: -22.50 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

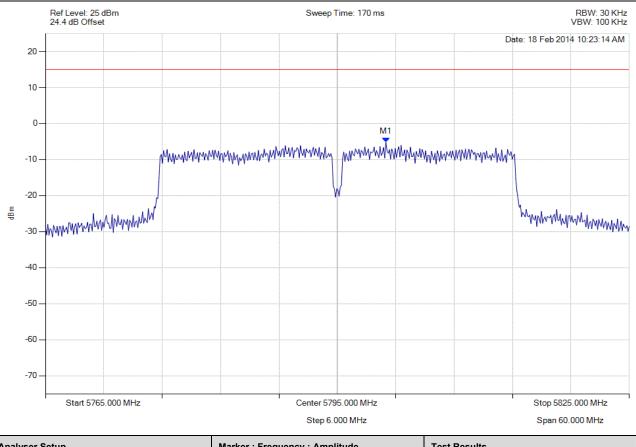


Title: Aruba Networks APIN0204, APIN0205 To: FCC 47 CFR Part 15.247 & IC RSS-210 Serial #: ARUB170-U3 Rev A Issue Date: 4th May 2014 Page: 297 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5799.990 MHz : -5.208 dBm	Limit: ≤ 14.990 dBm Margin: -20.20 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

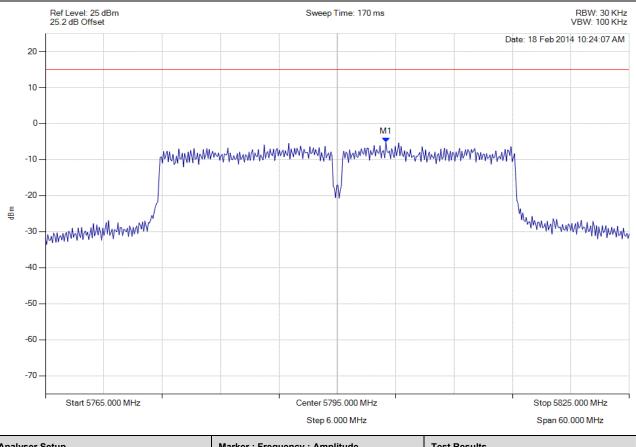


Title:Aruba Networks APIN0204, APIN0205To:FCC 47 CFR Part 15.247 & IC RSS-210Serial #:ARUB170-U3 Rev AIssue Date:4th May 2014Page:298 of 299



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5799.990 MHz : -5.213 dBm	Limit: ≤ 14.990 dBm Margin: -20.20 dB

Back to the Matrix

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.



575 Boulder Court Pleasanton, California 94566, USA Tel: 1.925.462.0304 Fax: 1.925.462.0306 www.micomlabs.com